# Volume 1 of 3 GR-01-041

## Km 1691.7 to 1717.3 Alaska Highway #1

## J.R. Paine & Associates (Rob Williamson) August 2004

# FIELD LOGS

1. Auger Drilling R.O.W. (CME75 Drill)

   Testholes 30000 to 30070
   30082 to 30136
   30148 to 30176

   * NOTE: There are no Testhole 30048, 30060 & 30071.

2. Rock Drilling R.O.W. (Reverse Circulation Air Rotary)

   Testholes 30084 R to 30093 R
   30096 R to 30097 R
   30100 R to 30107 R
   30111 R to 30118 R
   30121 R to 30122 R
   30126 R to 30127 R
   30129 R
   30131 R to 30136 R
   30149R to 30151 R
   30153 R to 30159 R

3. 1699+700 LHS Alaska Highway (Cat 318C Excavator)

   Test Pits 30177 to 30179

4. 1706+200 LHS Alaska Highway (Soldiers Summit Slide) (Hitachi 450EX Excavator)

   Test Pits 30072 to 30081

5. 1712+900 LHS Alaska Highway (Williscroft) (Hitachi 450EX Excavator / CME75 Drill)
   Pit ID# 115 G-12

   Test Pits 30137 to 30147

   Testholes 30142D, 30146D, & 654-2763D

ORIGINAL REPORT
Do Not Remove from Building
Please Return to File

Km 1691.7 to 1717.3 Alaska Highway #1

August 2004

J. R. Paine & Associates

Auger Hole Field Logs
(CME75 Drill)

| | |
|---|---|
| Testholes | 30000 to 30070 |
| | 30082 to 30136 |
| | 30148 to 30176 |

* NOTE: There are no Testhole 30048, 30060 & 30071.

HOGGAN ENGINEERING & TESTING (1980) LTD.
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# TEST HOLE LOG

Northing: 6767988
Easting: 644064

Project No: 8002-318 Test Hole No: #: 30000 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 16 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, trace silt | 352 ✓ | 0.3-0.9 | | | |
| | | - dry to damp, medium dense, brown | | | | | |
| 1.2 | 44 | Sandy Gravel | 353 ✓ | 1.8-2.4 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | EOH @ 3.0m | | | | | |

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# TEST HOLE LOG

Northing: 6768004
Easting: 693363

Project No: 8002-318 Test Hole No: #: 30001 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 16 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silty Sand/Sandy Silt | 354 ✓ | 0.6-1.2 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | - organic/roots noted to 1.0m depth | | | | | |
| | | - some gravels noted between 0.4-0.5m | | | | | |
| | | | | | | | |
| 1.5 | 50 | Sandy Gravel | 355 ✓ | 1.8-2.4 | | | |
| | | - damp, medium dense, brown | | | | | |
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| | | E.O.H. @ 3.0m | | | | | |
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# TEST HOLE LOG

Northing: 6768001
Easting: 643667

Project No: 8002-318 Test Hole No: #: 30002 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug 16 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, trace silt | | | | | |
| | | - dry, medium dense, brown | | | | | |
| 0.4 | SO | Silty Sand to Sandy, some silt | 356 | 0.4-0.7 | | | |
| | | - damp, medium dense, brown | | | | | |
| 0.7 | SO | Sandy Gravel | 357 | 2.1-2.7 | | | |
| | | - damp, dense, brown | | | | | |
| | | E 0.4, e 30m | | | | | |

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# TEST HOLE LOG

Northing: 6767987
Easting: 643448

Project No: 8002-318 Test Hole No: #: 30003 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 16 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, trace silt | 258 ✓ | 0.3-0.9 | | | |
| | | - dry to moist, medium dense, dark brown/grey | | | | | |
| 1.8 | do | Sandy Gravel, trace silt | 259 ✓ | 1.8-2.4 | | | |
| | | - dry to damp, loose, brown/grey | | | | | |
| | | - possible increase silt w/ depth | | | | | |
| | | | 260 ✓ | 3.4-4.0 | | | |
| | | E.O.H. @ 4.3 | | | | | |

# TEST HOLE LOG

Northing: 6768053
Easting: 643429

Project No: 8002-318 Test Hole No: #: 30004 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 16 2004

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**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel | 361 ✓ | 0.6-1.2 | | | |
| | | - damp, dense, brown/grey | | | | | |
| | | | | | | | |
| 1.8 | dg | Sandy Gravel, trace silt | 362 ✓ | 1.8-2.4 | | | |
| | | - damp, dense brown/grey | | | | | |
| | | | | | | | |
| | | | 363 ✓ | 3.4-4.0 | | | |
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| | | E.O.H. @ 4.4 | | | | | |
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| | | Refusal @ 1.5m - more North 2m | | | | | |
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# TEST HOLE LOG

Northing: 6768019
Easting: 468266

Project No: 8002-318 Test Hole No: #: 30005 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug 18 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, | 364 ✓ | 0.3-0.9 | | | |
| | | -dry, medium dense, brown | | | | | |
| 1.2 | do | Sandy Gravel, trace silt | 365 ✓ | 1.8-2.4 | | | |
| | | -damp, medium dense, brown | | | | | |
| | | | 366 ✓ | 3.4-4.0 | | | |
| | | E.O.H. @ 4.0m - Refusal | | | | | |



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# TEST HOLE LOG

Northing: 6768025
Easting: 642866

Project No: 8002-318 Test Hole No: #: 30006 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug 18 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, trace silt | 369 | 0.3-0.9 | | | |
| | | - dry to damp, medium dense, brown | | | | | |
| | | | | | | | |
| | | | 370 | 1.8-2.4 | | | |
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| | | End @ 3m | | | | | |
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# TEST HOLE LOG

Northing: 6768030
Easting: 642663

Project No: 8002-318 Test Hole No: #: 30007 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug .18 2004

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**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, trace silt | 371 | 0.3-0.9 | | | |
| | | - dry to damp, medium dense, brown | | | | | |
| | | | | | | | |
| | | 1 | 372 | 1.8-2.4 | | | |
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| | | E.O.H. @ 3.0m | | | | | |
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| | | Note: Less Gravel Recovery w/ Depth | | | | | |
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# TEST HOLE LOG

Northing: 6768033
Easting: 642463

Project No: 8002-318 Test Hole No: #: 30008 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 19 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel / Gravelly Sand, trace silt | 373 | 0.3-0.9 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | 374 | 1.8-2.4 | | | |
| | | E.O.H. @ 3.0m | | | | | |
| | | Note: Less Gravel Recovery w/ Depth | | | | | |

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# TEST HOLE LOG

Northing: 6768038
Easting: 642264

Project No: 8002-318 Test Hole No: #: 30009 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug 18 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel / Gravelly Sand, trace silt | 375 | 0.3-0.9 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | | | | | |
| | | | 376 | 1.8-2.4 | | | |
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| | | E.O.H. @ 3.0m | | | | | |
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| | | NOTE: Less Gravel Recovery w/ Depth | | | | | |
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# TEST HOLE LOG

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Northing: 6768040
Easting: 642066

Project No: 8002-318 Test Hole No: #: 30010 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 18 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel/Gravelly Sand, trace silt | 378 ✓ | 0.3-0.9 | | | |
| | | - dry to damp, medium dense, brown | | | | | |
| | | | | | | | |
| | | | 379 ✓ | 2.1-2.7 | | | |
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| | | E.O.H. @ 3.0m | | | | | |
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| | | Note: Less Gravel Recovery w/ depth. | | | | | |

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# TEST HOLE LOG

Northing: 6768044
Easting: 641864

Project No: 8002-318 Test Hole No: #: 5001 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug 18 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, trace silt | 379 | 0.3-0.9 | | | |
| | | - damp to moist, medium dense, brown/dark gray | | | | | |
| | | | | | | | |
| | | | 380 | 2.1-2.7 | | | |
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| | | E.O.H. @ 3.0m | | | | | |
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# TEST HOLE LOG

Northing: 6768049
Easting: 641666

Project No: 8002-318 Test Hole No: #: 30012 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 18 2004

## MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION

| 3" | 5mm | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | SI | LT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel | 381 | 0.3-0.9 | | | |
| | | - dry to damp, medium dense, brown | | | | | |
| 1.2 | No | As Above | 382 | 1.8-2.4 | | | |
| | | Ending | | | | | |
| | | End @ 3.0m | | | | | |

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# TEST HOLE LOG

Northing: 6768054
Easting: 641469

Project No: 8002-318 Test Hole No: #: 30013 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 18 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel - | 383 | 0.5-1.0 | | | |
| | | - dry to damp, medium dense, brown | | | | | |
| 1.5 | do | As Above | 384 | 2.1-2.7 | | | |
| | | - damp. | | | | | |
| | | E.O.H. @ 3.0m | | | | | |

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# TEST HOLE LOG

Northing: 6768036
Easting: 641286

Project No: 8002-318 Test Hole No: #: 30014 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 18 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, | 385 | 0.3-0.9 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | 386 | 1.8-2.4 | | | |
| | | E.O.H. @ 3.0m | | | | | |

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# TEST HOLE LOG

Northing: 6767939
Easting: 661051

Project No: 8002-318 Test Hole No: #: 30015 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 18 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

SAND | SI | LT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Gravelly Sand | | | | | |
| | | - damp to moist, medium dense, brown | | | | | |
| 0.3 | 50 | Silt, some sand to Sandy | 387 ✓ | .3-.8 | | | |
| | | - moist, soft, grey | | | | | |
| | | - organics noted | | | | | |
| .6 | 1.2 | Sandy Gravel | 388 ✓ | 1.8-2.4 | | | |
| | | - damp to moist, medium dense, brown | | | | | |
| .6 | 2.7 | Sandy Silt, some gravel | | | | | |
| | | - damp to moist, soft, grey/brown | | | | | |
| | | E.O.H. @ 3.0m | | | | | |
| | | NOTE: Plotted Vertical Plane ; GPS Location Not | | | | | |
| | | The Same. Positioned Hole @ South Inverts, U/S | | | | | |

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# TEST HOLE LOG

Northing: 6767966
Easting: 641011

Project No: 8002-318 Test Hole No: #: 30016 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug 18 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, trace silt | 389 | 0.0-0.4 | | | |
| | | - moist, medium dense, brown | | | | | |
| 0.4 | so | Silty Sand / Sandy Silt | | | | | |
| | | - moist to wet, soft, brown | | | | | |
| 0.8 | so | Sandy Gravel, trace silt | 390 | 2.1-2.4 | | | |
| | | - moist, medium dense, brown | | | | | |
| 2.8 | dc | Silty Sand, some gravel to Gravelly | | | | | |
| | | - moist, medium dense, brown | | | | | |
| | | E.O.H. @ 3.0m | | | | | |

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# TEST HOLE LOG

Northing: 6767834
Easting: 640871

Project No: 8002-318 Test Hole No: #: 30017 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 18 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel | 391 | 0.2-0.9 | | | |
| | | - dry to damp, medium dense, brown | | | | | |
| | | | | | | | |
| | | | 392 | 1.8-2.4 | | | |
| | | | | | | | |
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| | | E.O.H. @ 3.0m | | | | | |
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| | | Note: Within Shoulder of Existing Road | | | | | |
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# TEST HOLE LOG

Northing: 6716697
Easting: 640681

Project No: 8002-318 Test Hole No: #: 30018 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug 18 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| | SAND | | SI | LT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel | 393 | 0.3-0.9 | | | |
| | | - dry to damp, medium dense, brown | | | | | |
| | | | | | | | |
| 1.2 | do | Gravelly Sand / Sandy Gravel | 394 | 2.1-2.7 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 3.0m | | | | | |

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# TEST HOLE LOG

Northing: 6767579
Easting: 640524

Project No: 8002-318 Test Hole No: #: 30019 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: AUG 18 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Gravelly Sand / Sandy Gravel, trace silt | 395 | 0.3-0.9 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | - silt seam noted @ 0.9m (≈ 75mm thick) | | | | | |
| | | - silt seam noted @ 1.2m (≈ 100mm thick) | | | | | |
| 2.1 | do | Silty Sandy Gravel & Silty Gravelly Sand | 396 | 2.1-2.7 | | | |
| | | - damp to moist, medium dense, brown | | | | | |
| | | - silt present mostly in seams | | | | | |
| | | E.O.H. @ 3.0m | | | | | |

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# TEST HOLE LOG

Northing: 6767452
Easting: 640350

Project No: 8002-318 Test Hole No: #: 30020 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 18 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | | .002mm |
|---|---|---|---|---|
| COBBLE GRAVEL | SAND | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel / Gravelly Sand | 397 | 0.3-0.9 | | | |
| | | - dry to moist, medium dense, brown | | | | | |
| | | | | | | | |
| 0.9 | do | Sandy Gravel | | | | | |
| | | - wet to saturated | | | | | |
| | | - pea gravels | | | | | |
| | | | | | | | |
| 1.5 | ML | Silt, some sand | 398 | 1.8-2.4 | | | |
| | | - moist to wet, firm, grey | | | | | |
| | | - significant organics throughout (decomposed rootlets/grasses) | | | | | |
| | | | | | | | |
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| | | E.O.H @ 3.0m | | | | | |
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# TEST HOLE LOG

Northing: 6767341
Easting: 640193

Project No: 8002-318 Test Hole No: #: 30021 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug 18 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

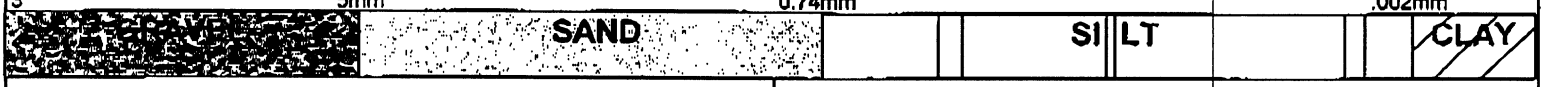
| | SAND | | SILT | | CLAY |
|---|---|---|---|---|---|

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silty Sand / Sandy Silt | 359 | 0.3-0.9 | | | |
| | | - damp to moist, medium dense, brown | | | | | |
| | | - variable silt & sand seams interbedded | | | | | |
| | | - organics noted throughout | | | | | |
| 1.4 | SO | Silt, some sand | 360 | 2.1-2.7 | | | |
| | | - moist to wet, soft to firm, grey | | | | | |
| | | - increase silt w/ depth | | | | | |
| | | - some interbedded organics | | | | | |
| | | E.O.H. @ 3.0m | | | | | |



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# TEST HOLE LOG

Northing: 6767232
Easting: 640041

Project No: 8002-318 Test Hole No: #: 30022 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: August 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration,TSF |
|---|---|---|---|---|---|---|---|
| 0 | | SILT, some sand to Sandy | 401 ✓ | 0.5-1.0 | | | |
| | | - moist to wet, soft to firm, brown | | | | | |
| | | - more sand present in seams to 75 mm thick | | | | | |
| | | - organics noted throughout | | | | | |
| 1.5 | SG | Sand, trace to some silt, trace gravel | 402 ✓ | 1.5-2.1 | | | |
| | | - wet, medium dense, brown | | | | | |
| 2.4 | SO | SILT, some clay | 403 ✓ | 2.6-2.9 | | | |
| | | - moist, firm, grey w/ blue hue | | | | | |
| | | - low plastic | | | | | |
| | | E.O.H. @ 3.0m | | | | | |

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# TEST HOLE LOG

Northing: 6767125
Easting: 639890

Project No: 8002-318 Test Hole No: #: 30023 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 18 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm
GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silty Sand / Sandy Silt | 404 ✓ | 0.3-0.9 | | | |
| | | - damp to moist, medium dense, brown | | | | | |
| | | - organics noted throughout | | | | | |
| 1.2 | SM | Silt, trace to some sand | 405 ✓ | 1.2-1.8 | | | |
| | | - damp to moist, firm, brown w/ some grey seams | | | | | |
| 2.1 | SM | Sand, trace to some silt | | | | | |
| | | - saturated, medium dense, brown | | | | | |
| 2.7 | CL | Silt, some clay | | | | | |
| | | - damp to moist, firm, grey w/ blue hue | | | | | |
| | | - low plastic | | | | | |
| | | E.O.H. @ 3.0m | | | | | |

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# TEST HOLE LOG

Northing: 6766983
Easting: 639687

Project No: 8002-318 Test Hole No: #: 30024 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 18 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silt, some sand | 406 | 0.3-0.9 | | | |
| | | - moist, soft to firm, brown | | | | | |
| 0.8 | SG | Gravelly Sand | | | | | |
| | | - wet, medium dense, brown | | | | | |
| 1.1 | SG | Silt, some sand | | | | | |
| | | - moist, soft to firm, brown | | | | | |
| 1.5 | SG | Gravelly Sand | 407 | 1.5-2.1 | | | |
| | | - saturated, medium dense, brown | | | | | |
| 2.1 | SG | Sandy Silt | 408 | 2.1-2.7 | | | |
| | | - wet, soft to firm, grey/brown | | | | | |
| | | E.O.H. @ 3.0m | | | | | |

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# TEST HOLE LOG

Northing: 6766805
Easting: 639558

Project No: 8002-318 Test Hole No: #: 30025 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 18 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SI | LT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Silt/Silty Sand | | | | | |
| | | - clay, medium dense, light brown | | | | | |
| 0.3 | SG | Gravelly Sand | 409 ✓ | 0.3-0.9 | | | |
| | | - damp, medium dense, brown | | | | | |
| 1.5 | SG | Silt, some sand | 410 ✓ | 1.8-2.4 | | | |
| | | - damp to moist, soft to firm, brown w/ grey & black seams | | | | | |
| | | - significant organic silts (black) | | | | | |
| 2.8 | SG | Silt, some sand, trace gravel | | | | | |
| | | - damp to moist, firm to stiff, brown | | | | | |
| | | - non to low plastic | | | | | |
| | | E.O.H. @ 3.0m | | | | | |

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# TEST HOLE LOG

Northing: 6766765
Easting: 439356

Project No: 8002-318 Test Hole No: #: 30026 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 18 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, trace silt | 411 ✓ | 0.3-0.9 | | | |
| | | - dry to damp, medium dense, brown | | | | | |
| 1.5 | | Sandy Silt / Silty Sand | 412 ✓ | 2.1-2.7 | | | |
| | | - dry, medium dense, light brown / gray | | | | | |
| | | - somewhat powdery | | | | | |
| | | EOH @ 3.0m | | | | | |

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# TEST HOLE LOG

Northing: 6766735
Easting: 639213

Project No: 8002-318 Test Hole No: #: 30027 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 19 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel / Gravelly Sand | #13 | 0.1-0.6 | | | |
| | | - saturated, medium dense, brown | | | | | |
| 1.2 | sa | Silty Sand / Sandy Silt | | | | | |
| | | - saturated, soft, grey | | | | | |
| 1.8 | da | Silt | #14 | 1.8-2.4 | | | |
| | | - moist, firm, brown w/ some black organic seams | | | | | |
| | | - some organic silts | | | | | |
| 2.7 | sa | Silty Gravelly Sand | | | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | E.O.H. @ 3.0m | | | | | |

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# TEST HOLE LOG

Northing: 6766708
Easting: 639228

Project No: 8002-318 Test Hole No: #: 30028 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 19 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Growing Soils | #15 ✓ | 0.3-0.9 | | | |
| | | - loose, medium dense, brown | | | | | |
| | | | | | | | |
| 2.4 | SM | Sandy Silt / Silty Sand | #16 ✓ | 2.4-3.0 | | | |
| | | - saturated, soft to firm, brown | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 3.0m | | | | | |

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# TEST HOLE LOG

Northing: 6766653
Easting: 639106

Project No: 8002-318 Test Hole No: #: 30029 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 19 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel | #17 ✓ | 0.3-0.9 | | | |
| | | - dry to damp, medium dense, brown | | | | | |
| 2.1 | SO | Gravelly Sand, some silt | #18 ✓ | 2.4-2.9 | | Slow Grinding Drilling @ 2.1m | |
| | | - dry, dense, light brown | | | | | |
| | | E.O.H. @ 3.0m - REFUSAL | | | | | |
| | | Refusal @ 2.9m - move North 2m | | | | | |
| | | Refusal @ 3.0m | | | | | |

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# TEST HOLE LOG

Northing: 6766548
Easting: 638909

Project No: 8002-318 Test Hole No: #: 20030 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 19 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel | 419 | 0.3-0.9 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | - cobbles to 200mm all over surface (creek wash) | | | | | |
| | | | | | | | |
| 1.5 | SM | Sandy Gravel | 420 | 1.8-2.4 | | | |
| | | - soil rooted, medium dense, brown | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 3.0m | | | | | |
| | | | | | | | |
| | | Testhole in Creek Bed - (Dry) | | | | | |
| | | | | | | | |
| | | | | | | | |
| | |

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# TEST HOLE LOG

Northing: 6766525
Easting: 638926

Project No: 8002-318 Test Hole No: #: 30031 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: AUG. 19 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, trace silt | 421 ✓ | 0.3-0.9 | | | |
| | | - stony, medium dense, brown | | | | | |
| 1.2 | 30 | Silty Sand | 422 ✓ | 1.2-1.5 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | - some decomposed wood | | | | | |
| 2.1 | 90 | Sandy Gravel, trace silt | 423 ✓ | 2.4-2.9 | | | |
| | | - moist, medium dense, brown | | | | | |
| | | 2.0 m. @ 30° | | | | | |
| | | Testhole in Creek Bed (Dry) | | | | | |

# TEST HOLE LOG

Northing: 6766403
Easting: 638807

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Project No: 8002-318 Test Hole No: #: 30032 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug.19 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel | 424 ✓ | 0.3-0.9 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | | | | | |
| 2.4 | SG | Silty Sand | 425 ✓ | 2.4-3.0 | | | |
| | | - moist, medium dense, brown | | | | | |
| | | - some decomposed organics (wood) | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 3.0m | | | | | |
| | | | | | | | |
| | | | | | | | |
| | |

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# TEST HOLE LOG

Northing: 6766235
Easting: 638653

Project No: 8002-318 Test Hole No: #: 30033 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 19 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel | 426 ✓ | 0.3-0.9 | | | |
| | | - damp, medium dense, brown | | | | | |
| 1.5 | sa | Silty Sand | 427 ✓ | 1.5-2.1 | | | |
| | | - damp, medium dense, brown w/ some black organic stains | | | | | |
| | | - some organic silts | | | | | |
| 2.1 | do | Gravelly Sand, trace silt | 428 ✓ | 2.1-2.7 | | | |
| | | - damp, loose/medium dense, brown | | | | | |
| | | EOH @ 3.0m | | | | | |

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# TEST HOLE LOG

Northing: 6766172
Easting: 638452

Project No: 8002-318 Test Hole No: #: 30034 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 19 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel / Gravelly Sand | 429 | 0.3-0.9 | | | |
| | | - damp, medium dense, brown | | | | | |
| 1.5 | ss | Organic Silt | | | | | |
| | | - damp to moist, soft, dark brown | | | | | |
| 1.7 | do | Sandy Gravel, trace silt | 430 | 1.8-2.4 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | E.O.H. @ 3.0m | | | | | |

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# TEST HOLE LOG

Northing: 6766094
Easting: 638287

Project No: 8002-318 Test Hole No: #: 30035 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 19 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

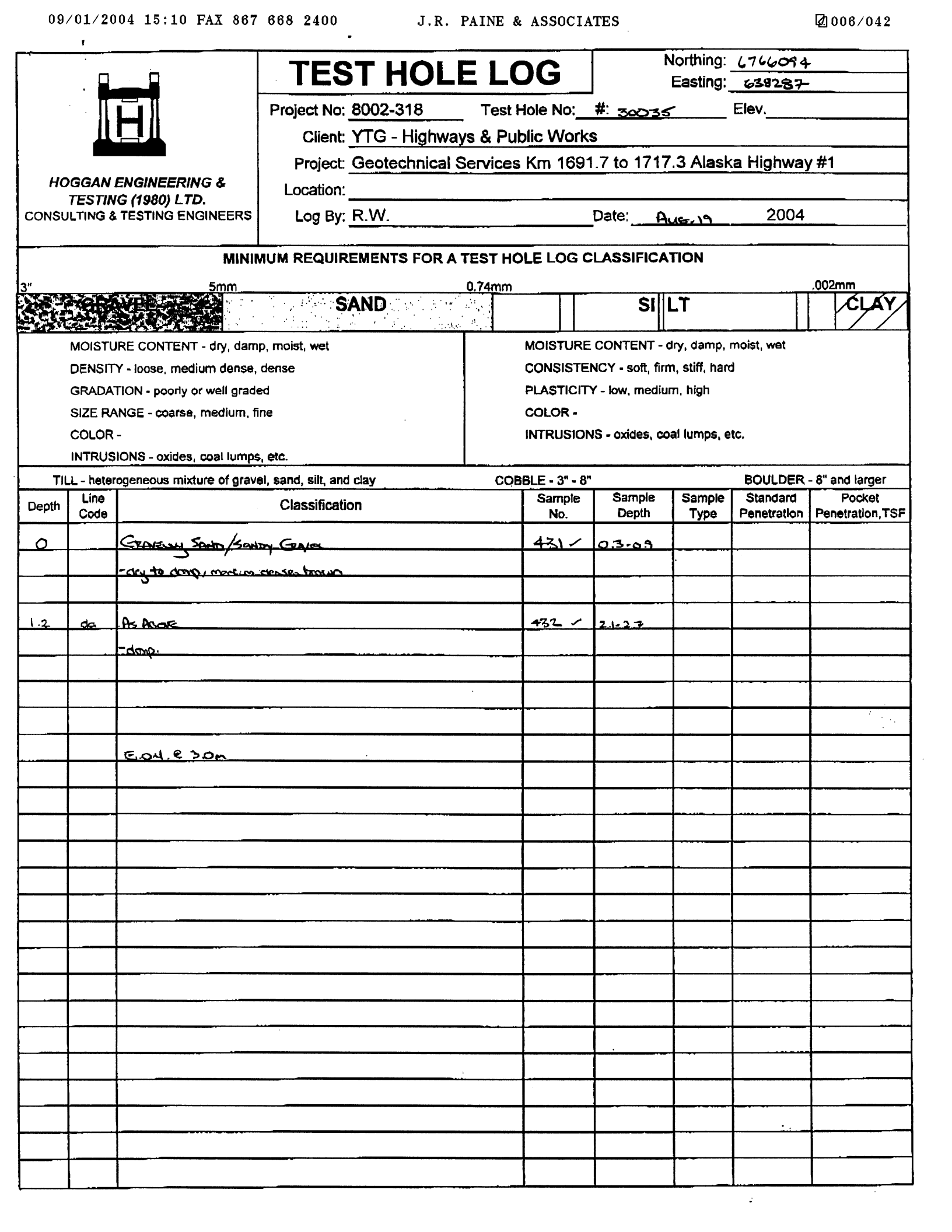
| 3" | 5mm | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Gravelly Sandy/Sandy Gravel | 431 ✓ | 0.3-0.9 | | | |
| | | -dry to damp, medium dense, brown | | | | | |
| 1.2 | do | As Above | 432 ✓ | 2.1-2.7 | | | |
| | | -damp. | | | | | |
| | | E.O.H. @ 3.0m | | | | | |



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# TEST HOLE LOG

Northing: 6766043
Easting: 638093

Project No: 8002-318 Test Hole No: #: 30036 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 19 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Gravelly Sand | 433 ✓ | 0.3-0.9 | | | |
| | | - damp, medium dense, brown | | | | | |
| 2.1 | So | Sand | 434 ✓ | 2.1-2.7 | | | |
| | | - wet, medium dense, brown | | | | | |
| | | E.O.H. @ 3.0m | | | | | |

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# TEST HOLE LOG

Northing: 6765969
Easting: 637902

Project No: 8002-318 Test Hole No: #: 30037 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 19 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm
GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silt, some sand to sandy, trace gravel | 435 | 0.3-0.9 | | | |
| | | - wet, soft, dark brown | | | | | |
| | | - some organic silt to 0.6m depth. | | | | | |
| | | | | | | | |
| 1.5 | da | Gravelly Silty Sand | 436 | 2.1-2.7 | | Sandy Gravelly Silt | |
| | | - wet, soft to firm, grey | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | 437 | 3.4-4.0 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 4.0m - Refusal | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Refusal @ 4.0m - Move 2m North | | | | | |
| | | Refusal @ 4.0m - E.O.H. | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

# TEST HOLE LOG

Northing: 6765930
Easting: 637704

Project No: 8002-318 Test Hole No: #: 300938 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: AUG. 19 2004

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**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy, some silt, trace gravel | 438 ✓ | 0.3-0.9 | | | |
| | | - damp, medium dense, brown | | | | | |
| 1.2 | dc | Gravelly Sand / Sandy Gravel, trace silt | 439 ✓ | 1.8-2.4 | | Grind Refusal @ 1.2m | |
| | | -damp, medium dense, brown | | | | | |
| 3.0 | sa | Sandy Gravel / Gravelly Sand | 440 ✓ | 3.2-3.6 | | | |
| | | -saturated, medium dense, brown | | | | | |
| | | - pea gravels | | | | | |
| | | E.O.H. @ 4.0m | | | | | |

TH 76.0 08/18/04

# TEST HOLE LOG

Northing: 6765818
Easting: 637562

Project No: 8002-318 Test Hole No: #: 30039 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 19 2004

HOGGAN ENGINEERING & TESTING (1980) LTD.
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**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silty Gravelly Sand | 441 ✓ | 0.3-0.9 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | 442 ✓ | 1.8-2.4 | | | |
| | | E.O.H. @ 2.4m - Refusal | | | | | |
| | | Refusal @ 2.4m - move west 2m | | | | | |
| | | Refusal @ 2.4m - E.O.H. | | | | | |

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# TEST HOLE LOG

Northing: 6765598
Easting: 637443

Project No: 8002-318 Test Hole No: #: 3004o Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 19 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel | 443 ✓ | 0-0.6 | | | |
| | | - saturated, loose, brown | | | | | |
| 0.6 | so | Sand, trace to some silt | 444 ✓ | 0.6-1.3 | | | |
| | | - saturated, loose, brown | | | | | |
| 1.5 | cla | Sand | 445 ✓ | 1.8-2.4 | | | |
| | | - saturated, medium stiff, dark grey | | | | | |
| 3.0 | so | Organics (peat) | 446 ✓ | 3.0-3.6 | | | |
| | | - saturated, dark brown | | | | | |
| | | - some intermixed sand seams | | | | | |
| | | E.O.H. @ 4.3m | | | | | |

# TEST HOLE LOG

Northing: 6765457
Easting: 637428

Project No: 8002-318 Test Hole No: #: 30041 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 20 2004

HOGGAN ENGINEERING & TESTING (1980) LTD.
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**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel / Gravelly Sand | 447 | 1.4m | SPT | | Pocket #1 |
| | | - dry to damp, medium dense, brown | | | | | |
| | | - 15, 26 - Refusal @ 10" | | | | | |
| | | ± 0.4 @ 2.4m - Refusal | | | | | |
| | | Auger Refusal @ 2.4m - Move 2m North | | | | | |
| | | " " @ 1.5m - " " " | | | | | |
| | | " " @ 1.8m - ± 0.4 | | | | | |

# TEST HOLE LOG

Northing: 6765198
Easting: 637411

Project No: 8002-318 Test Hole No: #: 30042 Elev.
Client: YTG - Highways & Public Works.
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 20 2004

HOGGAN ENGINEERING & TESTING (1980) LTD.
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**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm
GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sand, | 448 | 1.4m | | | 1 Photo |
| | | - saturated, medium dense, brown | | | | | |
| | | - 6,9,9 - Rock in end of barrel 7" recovery. | | | | | |
| 2.9 | | Silty Sand/Sandy Silt | 449 | 2.9m | | | 1 Photo |
| | | - saturated, medium dense, grey/brown | | | | | |
| | | - 3,3,4 - 15" Recovery (-3" sloughed) | | | | | |
| | | Silty Sand | 450 | 4.4m | | | 2 Photos |
| | | - saturated, medium dense, grey/brown | | | | | |
| | | - 1.5, 2.5, 3 - Recovery Unknown due to difficulty Removing Spoon from Rod | | | | | |
| | | Silty Sand | 451 | 5.9 | | | 12 Photos |
| | | - saturated, medium dense, brown | | | | | |
| | | - 11,8,7 - Recovery 15" - (-6" sloughed) See Photo | | | | | |
| | | Silty Sand/Sandy Silt | 452 | 7.5 | | | 1 Photo |
| | | - saturated, medium dense, brown | | | | | |
| | | - 2,3,4 - Recovery 8" - (Rest of Sample Liquid) | | | | | |
| | | Silty Sand/Sandy Silt, some gravel | 453 | 9.0 | | | 2 Photos |
| | | - damp to moist, dense, brown - some oxides | | | | | |
| | | - 14,23,27 - Recovery | | | | | |

Drill @ Lake x3 E.O.H. @ 9.9m - Refusal

# TEST HOLE LOG

Northing: 6767763
Easting: 636826

Project No: 8002-318 Test Hole No: #: 30043 PGW1 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 24 2004

HOGGAN ENGINEERING & TESTING (1980) LTD.
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**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silty Sandy Gravel to Silty Gravelly Sand | 454 | 1.4m | | | 1 Photo |
| | | - saturated, medium dense, brown | | | | | |
| | | - 10, 24, 35 - 7" Recovery | | | | | |
| | | - Lens of Gravel in Sample | | | | | |
| | | | | | | | |
| | | Silty Sand | 455 | 2.9m | | | 1 Photo |
| | | - saturated, medium dense, brown/grey | | | | | Wrecker Basket |
| | | - 2, 7, 9 - 7" Recovery | | | | | |
| | | | | | | | |
| | | Silt, trace to some clay | 456 | 4.4 | | | 1 Photo |
| | | - saturated, soft, grey | | | | | |
| | | - low to non plastic | | | | | |
| | | - 6, 2, 1 - 18" Recovery (-3" sloughed) | | | | | |
| | | | | | | | |
| | | Clayey Silt, some sand | 457 | 5.9 | | | No Photo |
| | | - saturated, soft, grey | | | | | |
| | | - 1, 2, 2 - 10" Recovery (remainder is liquid) | | | | | |
| | | - Weight of Hammer Pushed 5". | | | | | |
| | | - non to low plastic | | | | | |
| | | - Bottom 4" was Sandy Silt | | | | | |
| | | | | | | | 1 Photo |
| | | Sandy Silt | 458 | 7.5 | | | |
| | | - saturated, soft, grey | | | | | |
| | | 5, 7, 7 - 24" Recovery (-3" sloughed) Full Recovery | | | | | |
| | | | | | | | |

# TEST HOLE LOG

Northing:
Easting:

Project No: 8002-318 Test Hole No: #: 300A3 Pg.2 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug-21 2004

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**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Clayey Silt | 459 | 9.0 | | | 1.0+1.5+1.0 |
| | | - saturated, soft, grey - low plastic | | | | | |
| | | - Weight of Hammer Pushed Full Spoon (No Blows) | | | | | |
| | | - 15" Recovery | | | | | |
| | | - | | | | | |
| | | Clayey Silt / Silty Clay | 460 | 10.5 | | | 1.0+1.0 |
| | | - saturated, soft, grey - low plastic | | | | | |
| | | - Weight of Hammer Pushed Full Spoon (No Blows) | | | | | |
| | | - Full Recovery 24" | | | | | |
| | | - 100mm thick decomposed organic layer (black/dark grey) | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | End @ 11.1m | | | | | |
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# TEST HOLE LOG

Northing: 6764727
Easting: 1366683

Project No: 8002-318 Test Hole No: #: 30044 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 21 2004

HOGGAN ENGINEERING & TESTING (1980) LTD.
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**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy, trace silt | 461 ✓ | 0.3-0.9 | | | |
| | | - saturated, medium dense, grey | | | | | |
| 1.2 | do | Silty Gravelly Sand to Silty Sandy Gravel | 462 ✓ | 1.5-2.1 | | | |
| | | - saturated, medium dense, brown | | | | | |
| 2.4 | si | Silt, trace to some clay | 463 ✓ | 2.4-2.9 | | | |
| | | - wet, soft to firm, grey | | | | | |
| | | - non to low plastic | | | | | |
| 4.0 | ds | Silty Sand, trace to some gravel | 464 ✓ | 4.1-4.4 | | | |
| | | - saturated, medium dense, grey | | | | | |
| | | EOH @ 4.6m | | | | | |

# TEST HOLE LOG

Northing: 6764640
Easting: 636398

Project No: 8002-318 Test Hole No: #: 30045 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 21 2004

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**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sand | | | | | |
| | | - saturated, medium dense, grey | | | | | |
| 0.3 | sa | Gravelly Sand, some silt to Silty | 465 ✓ | 0.3-0.9 | | | |
| | | - saturated, medium dense, brown/grey | | | | | |
| 1.5 | sa | Sand, trace silt | 466 ✓ | 2.1-2.7 | | | |
| | | - saturated, medium dense, grey | | | | | |
| | | | 467 ✓ | 4.0-4.6 | | | |
| | | E.O.H. @ 4.6m | | | | | |

# TEST HOLE LOG

Northing: 6764571
Easting: 624229

Project No: 8002-318 Test Hole No: #: 30046 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 21 2004

HOGGAN ENGINEERING & TESTING (1980) LTD.
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**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, some silt to Silty | 468 | 1.4m | | | 1 Photo |
| | | - saturated, medium dense, grey/brown | | | | | |
| | | - 21, 21, 21 - 6" recovery | | | | | |
| | | | | | | | |
| | | Silt, trace to some Sand | 469 | 2.9 | | | 1 Photo |
| | | - wet, soft to firm, grey | | | | | |
| | | 6, 8, 11 - 15" recovery (~3" sluiced) | | | | | |
| | | | | | | | |
| | | Sand, some silt to Silty | 470 | 4.4 | | | 1 Photo |
| | | - wet, medium dense, brown/grey | | | | | |
| | | 2, 3, 4 - 6" recovery (Remainder of sand is found) | | | | | |
| | | | | | | | |
| | | Sand, some silt to Silty | 471 | 5.9 | | | 1 Photo |
| | | - wet, medium dense, grey | | | | | |
| | | - 3, 7, 5 - 16" recovery (Remainder of sand is found) | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 6.6m | | | | | |
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# TEST HOLE LOG

Northing: 6764453
Easting: 636077

Project No: 8002-318 Test Hole No: #: 30047 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 21 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff; hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, trace to some silt | 472 ✓ | 0.3-0.9 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | | 473 ✓ | 2.1-2.7 | | | |
| 3.6 | GS | Silty Sand, | 474 ✓ | 3.7-4.3 | | | |
| | | - saturated, medium dense, gray | | | | | |
| | | E.O.H.e. 4.6m | | | | | |

# TEST HOLE LOG

Northing: 6764453
Easting: 635652

Project No: 8002-318 Test Hole No: #: 30049 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: AUG. 21 2004

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**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silt | | | | | |
| | | - moist to wet, soft to firm, brown | | | | | |
| | | - decomposed organics to 0.3 | | | | | |
| | | | | | | | |
| 0.6 | SO | Clayey Silt | 475 ✓ | 0.6-1.2 | | | |
| | | - moist to wet, soft to firm, grey | | | | | |
| | | - low plastic | | | | | |
| | | | | | | | |
| 1.5 | do | Silt, some sand to Sandy | 476 ✓ | 1.8-2.4 | | | |
| | | - wet, soft to firm, grey | | | | | |
| | | - fine grained sands | | | | | |
| | | | | | | | |
| 2.5 | SO | Clayey Silt | 477 ✓ | 2.6-2.9 | | | |
| | | - wet, firm, grey | | | | | |
| | | - low plastic | | | | | |
| | | | | | | | |
| 3.7 | do | Silt, some sand to Sandy | 478 ✓ | 4.0-4.4 | | | |
| | | - moist to wet, firm, grey | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 4.6 | | | | | |
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# TEST HOLE LOG

Northing: 6764514
Easting: 635461

Project No: 8002-318 Test Hole No: #: 38050 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 21, 2004

HOGGAN ENGINEERING & TESTING (1980) LTD.
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**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silty Sand / Sandy Silt | | | | | |
| | | - damp, medium dense, brown | | | | | |
| | | - organics noted to 0.3m (rootlets / grasses) | | | | | |
| 0.6 | SG | Silt, trace to some clay | 479 ✓ | 0.6-1.2 | | | |
| | | - moist to wet, soft to firm, grey | | | | | |
| | | | 480 ✓ | 2.1-2.9 | | | |
| 3.0 | SG | Silt, some sand to Sandy | 481 ✓ | 3.2-3.6 | | | |
| | | - moist, soft to firm, grey | | | | | |
| | | - fine grained sands | | | | | |
| 3.6 | SG | Silt, some clay to Clayey | 482 ✓ | 4.0-4.4 | | | |
| | | - wet, soft, grey | | | | | |
| | | E.O.H. @ 4.6m | | | | | |

# TEST HOLE LOG

Northing: 6764643
Easting: 635300

HOGGAN ENGINEERING & TESTING (1980) LTD.
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Project No: 8002-318 Test Hole No: #: 30051 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 27 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Silt | 483 | 1.4 | | | 1 photo |
| | | - saturated, grey | | | | | |
| | | - 4,5,4 - 14" Recovery | | | | | |
| | | Silty Sand | 484 | 2.9 | | | 2 photo |
| | | - saturated, grey | | | | | 1 with 483 beg. in photo |
| | | - 1,2,4 - 10" Recovery (Rest of sand is Liquified) | | | | | |
| | | Silty Sand | 485 | 4.4 | | | 1 photo |
| | | - saturated, grey | | | | | |
| | | - Packer in 4" with weight of hammer | | | | | |
| | | - Weight + 1, 2, 3 - 8" Recovery (Remainder Liquified) | | | | | |
| | | Silty Sand | 486 | 5.9 | | | 1 photo |
| | | - saturated, grey | | | | | |
| | | 1, 1, 1 - 8" Recovery (Remainder Liquified) | | | | | |
| | | E.O.H. @ 6.4m | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6764793
Easting: 635196

Project No: 8002-318 Test Hole No: #: ~~30052~~ 30052 Elev.
ACCORDING TO GPS

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 25 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silty Sand | 487 | 1.4m | | | 1 Blow |
| | | - saturated, grey | | | | | |
| | | 3.4 to 10 - Firm Recovery | | | | | |
| | | No Sample from 2.9m - Hole Filled to 1.0m | | | | | |
| | | No Sample from 4.4m - Hole Heaved w/ Silts @ 1.0m | | | | | |
| | | E.O.H. @ 4.4m | | | | | |
| | | Attempt #1 - E.O.H. @ 2.5m - 1.0m of Silts Upon Hoist | | | | | |
| | | - move 4m North | | | | | |
| | | Attempt #2 - E.O.H. @ 4.4m - 1.0m of Silts Upon Hoist | | | | | |
| | | At 2.5m & 4.4m - E.O.H. | | | | | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: _____
Easting: _____

Project No: 8002-318 Test Hole No: #: 30053 Elev. _____

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location: _____

Log By: R.W. Date: Aug. 25 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Silty Sand | ~~488~~ | 1.4m | | | No Recov |
| | | - saturated, grey/brown | | | | | |
| | | - 2,3,2 - 14" recovery | | | | | |
| | | | | | | | |
| | | Silty Sand | 489 | 2.9m | | | |
| | | - saturated, grey/brown | | | | | |
| | | - 3,3,3 | | | | | |
| | | | | | | | |
| | | No Sample 4.4m - Cave in | | | | | |
| | | | | | | | |
| | | No Sample 5.9m - 2.4m Hole | | | | | |
| | | | | | | | |
| | | - Bit Stuck in Hole due to Silt/Sand Plug. | | | | | |
| | | | | | | | |
| | | E.O.H.e 5.9m | | | | | |
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HOGGAN ENGINEERING & TESTING (1980) LTD.
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# TEST HOLE LOG

Northing: _____
Easting: _____

Project No: 8002-318 Test Hole No: #: 30054 Elev. _____
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: _____
Log By: R.W. Date: AUG. 25 2004

## MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Sandy, Some silt | #30 | 1.4 | | | |
| | | - saturated, brownish grey | | | | | |
| | | - 1, 2, 6 - Full Recovery | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | No Sample From 2.9m - 0.8m Caved in hole | | | | | |
| | | | | | | | |
| | | E.O.H. @ 2.9m - Hollow | | | | | |
| | | | | | | | |
| | | - Move 3m down - Redrive Sample | | | | | |
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HOGGAN ENGINEERING & TESTING (1980) LTD.
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# TEST HOLE LOG

Northing: 6765115
Easting: 632941

Project No: 8002-318 Test Hole No: #: 30054 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 26 2004

## MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silt, some sand | 491 | 0.2-0.8 | | | |
| | | - moist to wet, soft to firm, brown | | | | | |
| | | - organics noted to 0.6m | | | | | |
| 0.9 | dg | Sand, some silt | 492 | 1.8-2.4 | | | |
| | | - saturated, medium dense, brown/grey | | | | | |
| | | | 493 | 3.7-4.3 | | | |
| | | | 494 | 4.8-5.5 | | | |
| 6.7 | dg | Silty Sand | 495 | 6.7-7.1 | | | |
| | | - saturated, medium dense, brown grey | | | | | |
| 7.9 | dg | Silty Sand w/2 Silt Seams to 0.3m thickness | 496 | 7.9-8.5 | | | |
| | | - saturated, soft, grey/brown | | | | | |
| 9.1 | dg | Silty Sand to Sand, some silt | 497 | 9.5-10.0 | | | |
| | | - saturated, medium dense, grey/brown | | | | | |
| | | E.O.H. @ 10.5m | | | | | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
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# TEST HOLE LOG

Northing: 6765279
Easting: 634837

Project No: 8002-318 Test Hole No: #: 30055 pg#1 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 26 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silt, some sand | 498 | 0.3-0.9 | | | |
| | | - moist to wet, soft to firm, brown w/ some grey seams | | | | | |
| | | - organics noted to 0.9m | | | | | |
| 1.2 | ds | Silt | 499 | 2.1-2.7 | | | |
| | | - wet to saturated, soft, grey | | | | | |
| 2.9 | sa | Silty Sand / Sandy Silt | 500 | 3.7-4.3 | | | |
| | | - saturated, soft, grey/brown | | | | | |
| | | - very soupy | | | | | |
| 4.9 | dc | Silty Sand / Sandy Silt | 501 | 4.9-5.5 | | | |
| | | - saturated, soft, grey/brown | | | | | |
| | | - 0.2m thick silt seam @ 5.2m - firm, low plastic | | | | | |
| 6.7 | dc | Silty Sand | 502 | 6.7-7.3 | | | |
| | | - saturated, medium dense, brown/grey | | | | | |
| | | | 505 | 7.9-8.5 | | | |
| 10.0 | dc | Silty Sand to Sand, some silt | 504 | 10.0-10.5 | | | |
| | | - saturated, medium dense, brown/grey | | | | | |
| | | - silt seam noted @ 11.0m = 0.2m thick - soft, low plastic | | | | | |
| | | | 505 | 11.3-11.7 | | | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
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# TEST HOLE LOG

Northing: 6765277
Easting: 634837

Project No: 8002-318 Test Hole No: #: 30055 PG # 2 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 26 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | - Silt seam @ 12.8m ≈ 200mm thick - soft, low plastic | S06 | 12.8 - 13.4 | | | |
| | | | | | | | |
| | | | S07 | 14.0 - 14.6 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 15.1m - | | | | | |
| | | | | | | | |
| | | NOTE: Too Sandy to Attempt Hand Vane | | | | | |
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# TEST HOLE LOG

Northing: 6765296
Easting: 634756

Project No: 8002-318 Test Hole No: #: 30056 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 27 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm
GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravelly Silt | 528 | 0.3-0.9 | | | |
| | | - saturated, medium dense, brown | | | | | |
| 1.5 | so | Sand, trace to some silt | 529 | 2.1-2.7 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | | 530 | 3.7-4.3 | | | |
| | | | 531 | 4.9-5.5 | | | |
| 6.4 | do | Sandy Silt / Silty Sand | 532 | 6.7-7.3 | | | |
| | | - saturated, soft, brown | | | | | |
| | | - some seams of silt to 300mm thick - soft, grey | | | | | |
| | | | 533 | 7.9-8.5 | | | |
| 9.1 | do | Sand, some silt | 534 | 9.8-10.4 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | | 535 | 11.0-11.6 | | | |
| 12.5 | do | Silty Sand | 536 | 12.8-13.4 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | - some silt seams to 200mm thick - soft, grey | | | | | |
| | | | 537 | 14.0-14.6 | | | |
| 15.9 | do | Sand, trace to some silt | | | | | |
| | | - saturated, medium dense, brown | | | | | |

= n.e 15.2 m

HOGGAN ENGINEERING & TESTING (1980) LTD.
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# TEST HOLE LOG

Northing: 6765406
Easting: 634728

Project No: 8002-318 Test Hole No: #: 30057 pg.1 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 26 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm
GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | SILT, some sand | 508 | 0.3-0.9 | | | |
| | | - saturated, soft, brown/grey | | | | | |
| | | - organics to 0.2m | | | | | |
| 1.2 | da | SAND, some silt to silty | 509 | 2.1-2.7 | | | |
| | | - saturated, medium dense, brown/grey | | | | | |
| | | | 510 | 3.7-4.3 | | | |
| 5.2 | da | SILT, | 511 | 5.2-5.8 | | | |
| | | - saturated, soft, grey | | | | | |
| | | | 512 | 6.7-7.3 | | | |
| | | | 513 | 7.9-8.5 | | | |
| 8.8 | da | SAND, some silt | 514 | 9.7-10.4 | | | |
| | | - saturated, medium dense, brown/grey | | | | | |
| | | - silt seam @ 10.7m ≈ 0.3m thick - soft, grey, low plastic | | | | | |
| 11.0 | da | SANDY SILT | 515 | 11.0-11.6 | | | |
| | | - saturated, soft, brown/grey | | | | | |
| | | - very fine grained sands | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6765406
Easting: 634728

Project No: 8002-318 Test Hole No: #: 30057 BG 2 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 26 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 12.8 | da | Sandy, some silt to silty. (poor sample) | 516 | 12.8-13.4 | | | |
| | | - saturated, medium dense, brn/grey | | | | | |
| | | | | | | | |
| | | | 517 | 14.0-14.6 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | 518 | 15.9-16.5 | | | |
| | | | | | — ENDED 08/26 (16.8m) | | |
| | | | | | — BEGAN 08/27 | | |
| | | | 519 | 17.1-17.7 | | | |
| | | | | | | | |
| | | | 520 | 18.9-19.5 | | | |
| | | | | | | | |
| | | | 521 | 20.0-20.7 | | | |
| | | | | | | | |
| 22' | so | Silt | 522 | 21.9-22.6 | | | |
| | | - saturated, soft, grey | | | | | |
| | | - contains low plastic | 523 | 23.2-23.8 | | | |
| | | | | | | | |
| 30' | da | Silt | 524 | 25-25.6 | | | |
| | | - saturated, soft to firm, grey | | | | | |
| | | - low plastic | 525 | 26.2-26.8 | | | |
| | | | 526 | 28.0-28.7 | | | |
| | | | 527 | 29.3-29.9 | | | |
| | | E.O.H. @ 30.3m | | | | | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
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# TEST HOLE LOG

Northing: 6765412
Easting: 634679

Project No: 8002-318 Test Hole No: #: 30058 Pg.1 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 27/28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silt, some sand | 538 | 0.3-0.9 | | | |
| | | - wet, soft to firm, grey/brown | | | | | |
| | | - organics to 0.6m depth | | | | | |
| 1.2 | Sa | Silty Gravelly sandy sand | 539 | 1.6-2.1 | | | |
| | | - saturated, soft, grey/brown | | | | | |
| | | - grindy drilling | | | | | |
| 2.1 | do | Sand, trace silt | 540 | 3.7-4.3 | | | |
| | | - saturated, medium dense, brown | | | | | |
| 4.9 | do | Silt, some clay | 541 | 5.2-5.8 | | | |
| | | - saturated, soft to firm, grey | | | | | |
| | | - low plastic to non plastic | | | | | |
| | | | | | END | 08/27 (5.5m) | |
| 5.9 | do | Sandy, trace silt | 542 | 6.7-7.3 | BEGIN | 08/28 | |
| | | - saturated, medium dense, brown | | | | | |
| | | | 543 | 7.9-8.5 | | | |
| | | | 544 | 9.8-10.4 | | | |
| | | | 545 | 11.0-11.6 | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6765412
Easting: 634679

Project No: 8002-318 Test Hole No: #: 30058 Rev 2 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 27/28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 11.6 | ds | Silty Sand / Sandy Silt | 546 | 12.8-13.4 | | | |
| | | - saturated, soft, brown/grey | | | | | |
| 13.7 | ds | Silt, trace to some sand, trace to some clay | 547 | 14.0-14.6 | | | |
| | | - saturated, soft, brown/grey | | | | | |
| | | - non to low plastic | | | | | |
| 15.4 | ds | Sand, some silt to Silty | 548 | 15.9-16.5 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | - some silt seams = 200mm thick, between 15.4 & 16.5m | | | | | |
| 17.4 | ds | Sand, trace to some silt | 549 | 17.4-18.0 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | | 550 | 18.9-19.5 | | | |
| | | | 551 | 20.0-20.7 | | | |
| 22.9 | ds | Silt | 552 | 23.8-24.1 | | | |
| | | - saturated, soft, grey | | | | | |
| | | - non to low plastic | | | | | |
| 24.4 | | Silt, trace to some clay | 552 | 25.0-25.6 | | | |
| | | - saturated, soft to firm, grey | | | | | |
| | | - low plastic | | | | | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6765412
Easting: 634679

Project No: 8002-318 Test Hole No: #: 30058 PG.#3 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 27/28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 25.9 | dc | Clayey Silt | 554 | 26.2-26.8 | | | |
| | | - wet to saturated, soft to firm, grey | | | | | |
| | | - low plastic | 555 | 28.0-28.7 | | | |
| | | | | | | | |
| | | | 556 | 29.3-29.9 | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H.e 30.5m | | | | | |
| | | | | | | | |
| | | | | | | | |
| | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6765507
Easting: 634609

Project No: 8002-318 Test Hole No: #: 30059 PGM1 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Silt | 557 | 0.3-0.9 | | | ∀ |
| | | - dry to damp, medium dense, light brown | | | | | |
| | | - boulder in fill | | | | | |
| | | - organics throughout | | | | | |
| | | - very grassy due to boulder fill | | | | | |
| 1.0 | do | Silt, some sand | 558 | 1.5-2.1 | | | |
| | | - wet to saturated, soft, brown/grey | | | | | |
| 2.7 | do | Sand, trace to some silt | 559 | 3.4-4.0 | | | |
| | | - saturated, medium dense, brown/grey | | | | | |
| 4.6 | do | Silt | 560 | 4.9-5.5 | | | |
| | | - saturated, soft, grey | | | | | |
| 7.1 | do | Sand | 561 | 7.6-8.8 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | - auger flights washed clean: minimal sample. | 562 | 9.8-10.4 | | | |
| 9.7 | do | Silt, trace to some clay | 563 | 11.0-11.6 | | | |
| | | - saturated, soft, grey | | | | | |
| | | - non to low plastic | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6765507
Easting: 634609

Project No: 8002-318 Test Hole No: #: 30059-PG-#2 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 12.2 | da | SAND, trace to some silt | 564 | 12.8-13.2 | | | |
| | | - saturated, medium dense, brown/grey | | | | | |
| | | - sample 564 misnumbered due to lockboard flights | | | | | |
| | | | 565 | 14.0-14.6 | | | |
| | | | 566 | 15.9-16.5 | | | |
| | | | 567 | 17.1-17.7 | | | |
| | | | 568 | 18.9-19.5 | | | |
| 20.1 | da | SILTY SAND / SANDY SILT | 569 | 20.1-20.7 | | | |
| | | - saturated, medium dense, brown/grey | | | | | |
| | | - more silty with depth | 570 | 21.9-22.6 | | | |
| 23.9 | da | SILT | 571 | 23.2-23.8 | | | |
| | | - saturated, soft, grey | | | | | |
| 25.4 | da | SILT | 572 | 25.0-25.6 | | | |
| | | - saturated, soft to firm, grey | | | | | |
| | | | 573 | 26.2-26.8 | | | |
| | | | 574 | 28.0-28.7 | | | |
| | | | 575 | 29.3-29.9 | | | |
| | | E.O.H. @ 30.3 | | | | | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6765862
Easting: 634610

Project No: 8002-318 Test Hole No: #: 3006 Pg. #1 Elev.
Client: YTG - Highways & Public Works ACCORDING TO GPS
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 29 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel / Gravelly Sand, trace to some silt | 576 | 0.3-0.6 | | | |
| | | - damp to moist, medium dense, brown | | | | | |
| 0.6 | SG | Silt, some sand to Sandy | 577 | 0.6-1.7 | | | |
| | | - moist to wet, soft, brown/grey | | | | | |
| 2.1 | SG | Sand, trace to some silt | 578 | 2.4-2.9 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | | 579 | 3.7-4.3 | | | |
| | | | 580 | 4.9-5.5 | | | |
| 6.1 | clc | Sand, some silt | 581 | 6.7-7.3 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | - fine grained sand | 582 | 7.9-8.5 | | | |
| | | | 583 | 9.5-10.1 | | | |
| 10.1 | clc | Silt | 584 | 11.0-11.6 | | | |
| | | - saturated, soft, grey | | | | | |
| | | - low to low plastic | | | | | |
| 12.2 | clg | Sand, some silt | 585 | 12.8-13.4 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | - fine grained sand | 586 | 14.0-14.6 | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6765562
Easting: 634610

Project No: 8002-318 Test Hole No: #: 300161 Rev. #2 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 25 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | | 587 | 15.6-16.5 | | | |
| | | | 588 | 17.1-17.7 | | | |
| | | | 589 | 18.9-19.5 | | | |
| 19.8 | da | Silt, trace to some clay | 590 | 20.1-20.7 | | | |
| | | -wet to saturated, soft, grey | | | | | |
| | | | 591 | 21.9-22.6 | | | |
| 23.2 | da | Sandy Silt / Silty Sand | 592 | 23.2-23.8 | | | |
| | | -saturated, soft, brown/grey | | | | | |
| | | - various silt & sand seams interwoven | | | | | |
| 25.0 | da | Silt, trace to some clay | | | | | |
| | | -wet to saturated, soft to firm, grey | 593 | 25.0-25.6 | | | |
| | | | 594 | 26.2-26.8 | | | |
| 28.0 | da | Sandy Silt | 595 | 28.0-28.7 | | | |
| | | -saturated, soft, grey/brown | | | | | |
| 28.7 | da | Silt, trace to some clay | 596 | 29.3-29.9 | | | |
| | | -wet to saturated, soft to firm, grey | | | | | |

E.O.H. @ 30.3

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6765721
Easting: 634494

Project No: 8002-318 Test Hole No: #: 30062 BGH1 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 29 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Sand, some silt to Silty | 597 | 0.3-0.6 | | | |
| | | - damp to moist, medium dense, brown | | | | | |
| 0.6 | SG | Silt, some sand to Sandy | | | | | |
| | | - damp, soft to firm, light brown | | | | | |
| 1.5 | do | As above | 598 | 1.6-2.1 | | | |
| | | - wet to saturated | | | | | |
| | | - sand seam = 200mm thick noted @ 2.1m - | | | | | |
| 2.4 | do | Silt | | | | | |
| | | - saturated, soft, grey | | | | | |
| 3.0 | do | Sand, trace silt | 599 | 3.7-4.3 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | - silt seam = 300mm thick @ 5.3m - soft, grey | | | | | |
| | | | 600 | 4.9-5.3 | | | |
| 6.1 | do | Silt | 601 | 6.7-7.3 | | | |
| | | - saturated, soft grey | | | | | |
| 7.6 | do | Sand, trace silt | 602 | 7.6-8.2 | | | |
| | | - saturated, medium dense, brown | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6765721
Easting: 634494

Project No: 8002-318 Test Hole No: #: 30062. Page 2 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 29 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration.TSF |
|---|---|---|---|---|---|---|---|
| 8.2 | do. | Silty Sand/Sandy Silt | 603 | 9.8-10.4 | | | |
| | | -saturated, soft, brown/grey | | | | | |
| | | -Varicolor Silt : Sand Seams | | | | | |
| 11.0 | do | Sand, trace to some silt | 604 | 11.0-11.6 | | | |
| | | -Saturated, medium dense, brown | | | | | |
| 12.2 | do | Sand, some silt to Silty | 605 | 12.8-13.4 | | | |
| | | -saturated, medium dense, brown | | | | | |
| | | | 606 | 14.0-14.6 | | | |
| | | E.O.H. @ 15.1m | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6765883
Easting: 634375

Project No: 8002-318 Test Hole No: #: 30063 PGW, Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 29 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sand, some silt to Silty | | | | | |
| | | - dry, medium dense, brown | | | | | |
| 0.5 | SO | Silt, some sand | 607 | 0.5-1.2 | | | |
| | | wet to saturated, soft to firm, brown | | | | | |
| 1.8 | do | Sand, trace silt | 608 | 1.0-2.4 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | | 609 | 3.7-4.3 | | | |
| | | | | | | | |
| | | | 610 | 4.9-5.5 | | | |
| 5.5 | do | Silt | 611 | 6.7-7.3 | | | |
| | | - saturated, soft, gray | | | | | |
| 7.6 | do | Silty Sand | 612 | 7.9-8.5 | | | |
| | | - saturated, medium dense, brown/gray | | | | | |
| 8.8 | do | Silt | 613 | 9.8-10.4 | | | |
| | | - saturated, soft, gray | | | | | |
| 9.5 | do | Silty Sand | 614 | 11.0-11.6 | | | |
| | | - saturated, medium dense, brown/gray | | | | | |
| | | | 615 | 12.8-13.4 | | | |

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6765083
Easting: 634375

Project No: 8002-318 Test Hole No: #: 300673 (6187 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 29 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 12.7 | dg | Silt w/ Sand seams | 6116 | 14.0 - 14.6 | | | |
| | | - saturated, soft, grey w/ brown sand | | | | | |
| | | - variable seams of silt & sands intermixed | | | | | |
| | | E.O.H. @ 15.1m | | | | | |

# TEST HOLE LOG

Northing: 6766041
Easting: 634253

Project No: 8002-318 Test Hole No: #: 30064 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 29 2004

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sand, some silt | | | | | |
| | | - damp, medium dense, brown | | | | | |
| 0.5 | SS | Silt, some sand | 617 | 0.5-1.2 | | | |
| | | - moist to wet, soft to firm, brown | | | | | |
| 2.1 | SS | Sand trace silt | 618 | 2.1-3.7 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | - decomposing organic seam @ 3.6m (≈200mm thick) dark grey | | | | | |
| | | - fine sands @ 6.5m | 619 | 4.0-4.4 | | | |
| | | | 620 | 4.9-5.5 | | | |
| | | | 621 | 6.7-7.3 | | | |
| | | | 622 | 7.9-8.5 | | | |
| | | | 623 | 9.9-10.4 | | | |
| | | E.O.H. @ 10.5m | | | | | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6766211
Easting: 634121

Project No: 8002-318 Test Hole No: #: 30065 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 30 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" GRAVEL 5mm SAND 0.74mm SILT .002mm CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sand, some gravel, some silt to Silty | | | | | |
| | | - damp, medium dense, brown | | | | | |
| 0.4 | SO | Silt trace to some sand | 624 | 0.6-1.2 | | | |
| | | - moist to wet, soft to firm, brown | | | | | |
| 1.2 | do | Sand, trace silt | 625 | 1.8-2.4 | | | |
| | | - moist, medium dense, brown | | | | | |
| | | | 626 | 3.7-4.3 | | | |
| 4.6 | do | Sand, trace to some silt | 627 | 4.9-5.5 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | | 628 | 6.7-7.3 | | | |
| 7.6 | do | Silty Sand / Sandy Silt | 629 | 7.9-8.5 | | | |
| | | - saturated, medium dense, brown / grey | | | | | |
| | | - variable seams of sand & silt | | | | | |
| 9.1 | do | Silt | 630 | 9.8-10.4 | | | |
| | | - saturated, soft, grey | | | | | |
| | | E.O.H. @ 10.5m | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6766381
Easting: 633992

Project No: 8002-318 Test Hole No: #: 30066 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 30 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sand, some gravel, some silt | | | | | |
| | | - damp, medium dense, brown | | | | | |
| 0.3 | sa | Silt, trace to some sand | 631 | 0.6-1.2 | | | |
| | | - damp to moist, soft to firm, brown | | | | | |
| 1.2 | da | Silt | 632 | 1.5-2.1 | | | |
| | | - moist to wet, soft to firm, grey | | | | | |
| 2.4 | da | Sand, trace silt | 633 | 3.7-4.3 | | | |
| | | - saturated, medium dense, brown/grey | | | | | |
| 4.4 | sa | Silt, some sand | 634 | 4.6-5.2 | | | |
| | | - saturated, soft, grey | | | | | |
| 5.3 | da | Sand, trace silt | 635 | 6.7-7.3 | | | |
| | | - saturated, medium dense, brown/grey | | | | | |
| 7.6 | da | Silt, trace to some clay | 636 | 7.9-8.5 | | | |
| | | - saturated, soft, grey | | | | | |
| | | | 637 | 9.8-10.4 | | | |
| | | E.O.H. @ 10.5m | | | | | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6766554
Easting: 633887

Project No: 8002-318 Test Hole No: #: 30067 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 30 2004

## MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silt, trace to some sand | 638 | 0.6-1.2 | | | |
| | | - moist, firm, brown | | | | | |
| 1.2 | SP | Silty Sand | | | | | |
| | | - damp, medium dense, brown | | | | | |
| 1.8 | SM | Silt, trace clay | | | | | |
| | | - moist to wet, soft to firm, grey | | | | | |
| 2.1 | SP | Sand, trace silt | 639 | 2.4-2.9 | | | |
| | | - moist to wet, medium dense, brown | | | | | |
| 3.0 | GP | Sand, some silt to silty | 640 | 3.7-4.3 | | | |
| | | - saturated, medium dense, brown/grey | | | | | |
| | | - fine grained sands | | | | | |
| | | | 641 | 4.9-5.5 | | | |
| | | E.O.H. @ 5.9m | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6766741
Easting: 633841

Project No: 8002-318 Test Hole No: #: 300-8 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 30 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silt, trace to some sand | 642 | 0.6-1.2 | | | |
| | | - damp to moist, soft to firm, brown | | | | | |
| 1.2 | GSO | Sandy Silt | | | | | |
| | | - damp to moist, medium dense, brown | | | | | |
| | | - fine grained sands | | | | | |
| 1.8 | SO | Sand, trace silt | 643 | 2.4-3.0 | | | |
| | | - moist to wet, medium dense, brown | | | | | |
| 3.0 | do | Sand, some silt | 644 | 3.4-4.0 | | | |
| | | - saturated, medium dense, brown/grey | | | | | |
| | | - fine grained sands | | | | | |
| 5.0 | do | Silt | 645 | 5.0-5.5 | | | |
| | | - saturated, soft, grey | | | | | |
| | | E.O.H. @ 5.9m | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6766937
Easting: 633865

Project No: 8002-318 Test Hole No: #: 30069 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 30 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm
GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | SILT | | | | | |
| | | - damp to moist, firm, grey | | | | | |
| | | | | | | | |
| 2.4 | SO | Sand, trace silt | 646 | 0.4-1.2 | | | |
| | | - damp to moist, medium dense, brown | | | | | |
| | | | | | | | |
| 1.2 | SO | SILT | | | | | |
| | | - moist, soft to firm, grey | | | | | |
| | | | | | | | |
| .9 | SO | Sand, trace to some silt | 647 | 1.8-2.4 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | | | | | | |
| | | | 648 | 3.7-4.3 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | 649 | 4.9-5.5 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 5.9m | | | | | |
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| | | | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6776128
Easting: 633921

Project No: 8002-318 Test Hole No: #: 30070 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 30 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silt, some sand | 650 | 0.6-1.2 | | | |
| | | - damp to moist, soft to firm, brown | | | | | |
| | | - organics noted to 0.2m | | | | | |
| 1.2 | GR | Gravel, some sand, trace to some silt | 651 | 2.1-2.7 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | - grindy drilling | | | | | |
| | | - silt contamination from side walls in sample #651 | | | | | |
| | | - broken rock, angular pieces to 40mm dia. | | | | | |
| 2.8 | GR | Sandy Silty Gravel | 652 | 3.7-4.3 | | | |
| | | - saturated, medium dense, brown/grey | | | | | |
| | | | 653 | 4.9-5.5 | | | |
| | | E.O.H. @ 5.9m | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6768923
Easting: 635759

Project No: 8002-318 Test Hole No: #: 30082 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 15 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silty Sandy, | | | | | |
| | | - damp, medium dense, brown w/ orange hue | | | | | |
| | | - organics to 0.2m | | | | | |
| | | | | | | | |
| 0.3 | SG | Sandy Gravel, trace silt | 348 ✓ | 0.6-1.2 | | Very Grindy Drilling @ 0.3m | |
| | | - dry to damp, dense, brown/grey | | | | | |
| | | | | | | | |
| 1.8 | GG | Gravelly Sandy, some silt to Silty | 349 ✓ | 1.8-2.4 | | Slow Grindy Drilling @ 1.8m | |
| | | - damp to moist, dense, brown | | | | | |
| | | | | | | | |
| | | | 350 ✓ | 3.4-4.0 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | 351 ✓ | 4.9-5.5 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 5.9m | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Refusal @ 8.6m - move 2m East | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

# TEST HOLE LOG

Northing: 6769180
Easting: 635169

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30083 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 15 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Organic Silts | | | | | |
| 0.3 | 3a | Silty Sandy Gravel | 344 ✓ | 0.6-1.2 | | Grundy Dynamic @ 0.300 - 3.2 | |
| | | - damp, medium dense, brown w/ some black organics | | | | | |
| | | - organic silts intermixed | | | | | |
| 1.5 | do. | Sandy Gravel, some silt | 345 ✓ | 1.8-2.4 | | | |
| | | - moist, dense, brown | | | | | |
| 3.2 | do. | Silt, some sand to Sandy | 346 ✓ | 3.4-4.0 | | | |
| | | - wet, soft, brown | | | | | |
| 16' | do. | Silty Gravelly Sand to Silty Sandy Gravel | 347 ✓ | 4.9-5.5 | | | |
| | | - saturated, dense, brown | | | | | |
| | | - possible silt contamination in sample from above | | | | | |
| | | E.O.H. @ 7.0 - REFUSAL | | | | | |
| | | REFUSAL @ 7.0 - E.O.H. No Second Attempt (No Indication) | | | | | |

# TEST HOLE LOG

Northing: 6769233
Easting: 635162

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30084 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 15 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silty Sand, | | | | | |
| | | - damp, medium dense, brown w/ orange hue | | | | | |
| | | - organics to 0.3m | | | | | |
| 0.6 | SG | Sandy Gravel/Gravelly Sand, some silt to Silty | 338 ✓ | 0.6-1.2 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | 339 ✓ | 1.8-2.4 | | | |
| 30 | SG | Sandy Silt/Silty Sand, some gravel to Gravelly. | 340 ✗ | 3.4-4.0 | | Sand, some silt, trace gravel | |
| | | - damp, dense, brown | | | | | |
| | | | 341 ✗ | 4.9-5.5 | | | |
| 20' | dc | Gravelly Silty Sand | 342 ✗ | 6.4-7.0 | | Gravelly Sand, some silt | |
| | | - damp, dense, brown | | | | | |
| | | | 343 ✗ | 7.6-8.1 | | | |
| | | E.O.H. @ 8.2 - REFUSAL | | | | | |
| | | REFUSAL @ 8.2 - E.O.H. - no 2nd Attempt. | | | | | |

# TEST HOLE LOG

Northing: 6769371
Easting: 635155

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30085 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 15 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Silt / Silty Sand | | | | | |
| | | - damp, medium dense, brown w/ orange hue | | | | | |
| | | - organics noted throughout | | | | | |
| | | | | | | | |
| 0.6 | sp | Sandy Gravel / Gravelly Sand, some silt to Silty | 334 ✓ | 0.6-1.2 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | | | | | |
| | | | 335 ✓ | 1.8-2.4 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | 336 ✓ | 3.4-4.0 | | | |
| | | | | | | | |
| | | | | | | | |
| 4.9 | da | Silty Sand, trace gravel | 337 ✓ | 4.9-5.5 | | Very Grindy @ 4.9 | Slow Drilling |
| | | - dry, dense, light grey w/ green hue | | | | | |
| | | - significant rock powder in sample. | | | | | |
| | | | | | | | |
| | | E.O.H. @ 5.5 - REFUSAL | | | | | |
| | | | | | | | |
| | | No - 2nd ATTEMPT. | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

# TEST HOLE LOG

Northing: 6769425
Easting: 635131

Project No: 8002-318 Test Hole No: #: 30086 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug 15 2004

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | ORGANIC SILTS | | | | | |
| 0.3 | SO | SILTY SAND, some gravel to GRAVELLY<br>- damp, medium dense, brown | 329 ✓ | 0.6-1.2 | | | |
| 1.8 | da | GRAVELLY SAND, some silt to SILTY<br>- frozen, no visible ice<br>- brown | 330 ✓ | 1.8-2.4 | | SLOW GRINDY DRILLING @ 1.8m | |
| 3.0 | da | SANDY GRAVEL / GRAVELLY SAND, some silt to SILTY<br>- FROZEN, no visible ice | 331 ✓ | 3.4-4.0 | | | |
| 4.5 | da | AS ABOVE<br>- very close<br>- Almost refusal 2 times between 6-7.6<br>* Poor sample - minimal mat'l on flights. | 332 ✓<br>333 ✓ | 4.9-5.5<br>6.7-7.3 | | VERY SLOW GRINDY DRILLING @ 4.5m | |
| | | E.O.H. @ 11.0 - REFUSAL (NO INDICATION) | | | | | |
| | | REFUSAL @ 11.0 - E.O.H.<br>* NO 2ND ATTEMPT - TO DENSE | | | | | |

# TEST HOLE LOG

Northing: 6769468
Easting: 635121

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30087 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 15 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Silt / Silty Sand | | | | | |
| | | - damp to moist, medium dense, brown/grey | | | | | |
| 0.6 | 30 | Sand, some silt to silty trace to some gravel | 325 ✓ | 0.6-1.7 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | 326 ✓ | 1.8-2.4 | | | |
| 3.0 | do | Gravelly Sand, some silt to silty | 327 ✓ | 3.4-4.0 | | Very slow caving Denning @ 3.0m | |
| | | damp, dense, brown | | | | | |
| | | | 328 ✓ | 4.9-5.5 | | | |
| | | E.O.H. @ 6.4 - Refusal | | | | | |
| | | Refusal @ 6.2 - move 2m South | | | | | |
| | | Refusal @ 6.4 - E.O.H. | | | | | |

# TEST HOLE LOG

Northing: 6769516
Easting: 635104

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30088 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 15 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silty Sand / Sandy Silt | | | | | |
| | | - damp, loose, brown w/ orange hue. | | | | | |
| | | - organics to 0.2m | | | | | |
| 0.9 | SO | Gravelly Sand, trace to some silt | 322 ✓ | 0.9-1.2 | | Grindy Drilling @ 0.9m | |
| | | - damp, medium dense, brown | | | | | |
| | | | 323 ✓ | 1.8-2.4 | | | |
| | | | 324 ✓ | 3.4-4.0 | | Slow Grindy Drilling @ 4.0 | |
| | | E.O.H. @ 5.2 - Refusal | | | | | |
| | | Refusal @ 5.0 - move 2m South | | | | | |
| | | Refusal @ 8.2 - E.O.H. | | | | | |
| | | (No Indication) | | | | | |

# TEST HOLE LOG

Northing: 6769606
Easting: 635078

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30089 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 15 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Silt/Silty Sand | 321 ✓ | 0.-0.6 | | | |
| | | - dry to damp, loose, brown w/ orange tint | | | | | |
| | | - organics noted to 0.2m | | | | | |
| | | E.O.H. @ 0.6m - Refusal | | | | | |
| | | Refusal @ 0.6m - move South 3m | | | | | |
| | | Refusal @ 0.6m - E.O.H. | | | | | |
| | | Probed twice at each location = .3m Apart (No indication) | | | | | |

# TEST HOLE LOG

Northing: 6769660
Easting: 635060

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30090 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 15 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Organic Silts | | | | | |
| 0.2 | SG | Silty Sand | | | | | |
| | | - damp, medium dense, brown | | | | | |
| 0.4 | SG | Gravelly Sand, some silt to Silty | 319 | 0.5-1.0 | | Grindy Drilling @ 0.4m | |
| | | - damp, medium dense, brown | | | | | |
| 1.2 | SG | Gravelly Sand, trace to some silt (Rock) | 320 | 1.2-1.5 | | Very Grindy @ 1.2m | Slow Drilling |
| | | - dry, dense, brown/grey | | | | | |
| | | - some rock powder in sample | | | | | |
| | | @ 0.4, @ 1.5m - Refusal | | | | | |
| | | Refusal @ 1.5m - move 2m South | | | | | |
| | | Refusal 0.9m - @ 0.4 | | | | | |

# TEST HOLE LOG

Northing: 6769701
Easting: 635044

Project No: 8002-318 Test Hole No: #: 30091 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug 15 2004

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Organic Silts | | | | | |
| | | | | | | | |
| 0.3 | SG | Gravelly Silty Sand | 318 | 0.5-0.9 | | Gravelly to some silt | Sand, trace |
| | | damp, medium dense, brown | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 1.4' - Refusal | | | | | |
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| | | Refusal @ 1.4m - poor sound 2m | | | | | |
| | | Refusal @ 1.2m - E.O.H. | | | | | |
| | | | | | | | |
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# TEST HOLE LOG

Northing: 6769764
Easting: 635000

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 80092 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 15 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Organic Silts | | | | | |
| 0.4 | so | Gravelly Silty Sand | 315 x | 0.4-1.0 | | | Silty Sand |
| | | - damp, medium dense, dark brown | | | | | |
| 1.8 | so | Sandy Silt, trace gravel | 316 x | 1.8-2.4 | | Caving Drilling @ 1.8m | |
| | | - frozen, no visible ice | | | | Silty Sand, some gravel | |
| | | - brown/grey | | | | | |
| 3.7 | so | Sandy Silt, some gravel | 317 | 3.7-4.3 | | Slow Caving Drilling @ 3.7 | |
| | | - frozen, no visible ice | | | | Sand, some gravel, some silt to silty | |
| | | - brown | | | | | |
| | | E.O.H. @ 5.0 - Refusal | | | | | |
| | | Refusal @ 4.7 - more Sand 2m | | | | | |
| | | Refusal @ 5.0 - End | | | | | |
| | | (No significant intrusion) | | | | | |

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6769809
Easting: 634966

Project No: 8002-318 Test Hole No: #: 30093 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 15 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Gravelly Sandy Silt to Gravelly Silty Sand | 310 ✓ | .3-.9 | | | |
| | | - moist, medium dense, brown w/ thick organic seams | | | | | |
| | | - organic silt seams throughout to 75mm thickness | | | | | |
| | | | | | | | |
| 1.8 | do | Silty Sand, some gravel to Gravelly | 311 ✓ | 1.8-2.4 | | Grinding Drilling @ 1.8m | |
| | | - frozen, no visible ice | | | | | |
| | | - brown/grey | | | | | |
| | | | | | | | |
| | | | 312 ✓ | 3.4-4.0 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | 313 ✓ | 4.9-5.5 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | 314 ✓ | 6.7-7.0 | | | |
| | | | | | | | |
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| | | | | | | | |
| | | E.O.H. @ 7.0 - REFUSAL | | | | | |
| | | | | | | | |
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| | | | | | | | |
| | | | | | | | |
| | | REFUSAL @ 7.0 - MORE SOUND 2m | | | | | |
| | | REFUSAL @ 2m MORE SOUND 2m } NO SIGNIFICANT INDICATION | | | | | |

# TEST HOLE LOG

Northing: 6769845
Easting: 6[illegible]

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30694 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: AUG 15 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Pad Fill | | | | | |
| 0.4 | so | Organic Silts | | | | | |
| 0.8 | so | Sandy Gravel / Gravelly Sand, trace silt | 306 ✓ | 0.8-1.3 | | | |
| | | - damp, medium dense, brown | | | | | |
| 1.8 | so | Silty Sandy Gravel | 307 ✓ | 1.8-2.4 | | | |
| | | - damp, medium dense, brown w/ black organic seams | | | | | |
| | | - some organic silts throughout (seams to 75mm) | | | | | |
| 3.0 | dg | Silty Sandy Gravel to Silty Gravelly Sand | 308 ✓ | 3.4-4.0 | | | |
| | | - dry to moist, dense, brown | | | | | |
| 5.2 | dg | As Above | 309 ✓ | 5.3-5.8 | | | |
| | | - increase moisture / increase silt. | | | | | |
| | | E.O.H. @ 5.8 | | | | | |

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6769885
Easting: 631904

Project No: 8002-318 Test Hole No: #: 30095 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 15 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Organic Silt | | | | | |
| 0.3 | SG | Sandy Silt, some gravel | 302 ✓ | 0.3-0.9 | | | |
| | | - damp to moist, firm, brown | | | | | |
| 1.2 | da | Gravelly Sand/Sandy Gravel, trace to some silt | 303 ✓ | 2.1-2.4 | | | |
| | | - damp, medium dense, brown | | | | | |
| 3.0 | da | Gravelly Sand/Sandy Gravel, trace silt | 304 ✓ | 3.4-4.0 | | | |
| | | - moist to wet, dense, brown | | | | | |
| | | | 305 ✓ | 4.9-5.5 | | | |
| | | E.O.H. @ 5.9 | | | | | |

# TEST HOLE LOG

Northing: 6769974
Easting: 634848

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30096 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 14 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Organic Silts | | | | | |
| | | | | | | | |
| | | | | | | | |
| 0.6 | SO | Gravelly Silty Sand | | | | | |
| | | - moist to wet, medium dense, brown | | | | | |
| | | | | | | | |
| 1.0 | do | As Above | 295 ✓ | 1.0-1.3 | | | |
| | | - Frozen | | | | | |
| | | - brown | | | | | |
| | | | | | | | |
| 1.8 | do | Gravelly Sand, some silt to Silty | 296 ✓ | 1.8-2.4 | | | |
| | | - Frozen | | | | | |
| | | - brown | | | | | |
| | | | | | | | |
| | | | 297 ✓ | 3.7-4.3 | | | |
| | | | | | | | |
| | | | 298 ✓ | 4.9-5.5 | | | |
| | | | | | | | |
| | | | 299 ✓ | 7.0-7.6 | | | |
| | | | | | | | |
| | | | 300 ✓ | 9.1-9.8 | | | |
| | | | | | | | |
| | | E.O.H. @ 11.3m - REFUSAL | 301 ✓ | 10.4-11.0 | | | |
| | | | | | | | |
| | | Refusal @ 8.7 - Move South 2m | | | | | |

# TEST HOLE LOG

Northing: 6770135
Easting: 634800

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30097 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: AUG. 14 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | ORGANIC SILTS | | | | | |
| | | | | | | | |
| 0.3 | 30 | SANDY GRAVEL, some silt | 293 ✓ | 0.6-1.2 | | | |
| | | -moist to wet, medium dense, brown | | | | | |
| | | | | | | | |
| 1.8 | do | SILTY SANDY GRAVEL / SILTY GRAVELLY SAND | 294 ✓ | 1.8-2.4 | | DIFFICULT DRILLING @ 1.8m | |
| | | -FROZEN, NO VISIBLE ICE | | | | | |
| | | -brown | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 3.4 | | | | | |
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| | | | | | | | |
| | | REFUSAL @ 3.4 - MOVE 2m SOUTH | | | | | |
| | | REFUSAL @ 3.2' - = 0.4. | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6770280
Easting: 634696

Project No: 8002-318 Test Hole No: #: 30098 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 14 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, trace to some silt | 290 ✓ | 0.3-0.9 | | | |
| | | - damp, medium dense, brown | | | | | |
| 1.8 | da | Gravelly Sand, trace silt | 291 ✓ | 1.8-2.4 | | | |
| | | - damp, medium dense, brown | | | | | |
| 3.0 | da | Sandy Gravel, trace silt | 292 ✓ | 3.4-4.0 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | E.O.H. @ 4.3 | | | | | |

# TEST HOLE LOG

Northing: 6770392
Easting: 634666

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30099 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 14 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, some silt | 286 ✓ | 0.3-0.9 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | - organics noted to 0.3 | | | | | |
| 0.9 | do | As Above | | | | | |
| | | moist to wet | | | | | |
| 1.8 | do | Gravelly Sand, trace silt | 287 ✓ | 1.8-2.4 | | | |
| | | - saturated, medium dense, brown | | | | | |
| 3.0 | so | Organic Silts | 288 ✓ | 3.0-3.7 | | | |
| | | - saturated, soft, black/brown | | | | | |
| 3.7 | do | Silty Sandy Gravel * poor sample | 289 ✓ | 4.1-4.1 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | E.O.H. @ 4.1m | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6770537
Easting: 634635

Project No: 8002-318 Test Hole No: #: 30100 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 14 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, trace to some silt | 279 ✓ | 0.6-1.2 | | | |
| | | - damp, dense, brown | | | | | |
| | | - boulders to 0.5m dia noted on surface nearby | | | | | |
| | | | | | | | |
| 1.8 | da | Sandy Gravel, some silt | 280 ✓ | 1.8-2.4 | | | |
| | | - damp to moist, dense, brown | | | | | |
| | | | | | | | |
| | | | | | | | |
| 2.7 | so | Organic Silts | | | | | |
| | | - damp, firm, dark brown | | | | | |
| | | | | | | | |
| 3.0 | so | Sandy Gravel, trace to some silt | 281 ✓ | 3.4-4.3 | | | |
| | | - damp, dense, brown | | | | | |
| | | | | | | | |
| 4.9 | da | Silty Sandy Gravel to Silty Gravelly Sand | 282 ✓ | 4.9-5.5 | | | |
| | | - wet, dense, brown | | | | | |
| | | | | | | | |
| | | * per sample | 283 ✓ | 6.1-7.3 | | | |
| | | | | | | | |
| 9 | da | Sandy Silt, some gravel | 284 ✓ | 8.2-8.8 | | | |
| | | - moist to wet, dense, grey w/ bluish hue | | | | | |
| | | | | | | | |
| 4 | da | Silty Sand, trace gravel | 285 ✓ | 9.4-10.1 | | | |
| | | - moist, dense, purple | | | | | |
| | | | | | | | |

E.O.H. @ 10.1 - REFUSAL

# TEST HOLE LOG

Northing: 6770650
Easting: 634650

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30101 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 14 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silty Sand | | | | | |
| | | - damp, medium dense, brown | | | | | |
| | | - organics to 0.3m | | | | | |
| 0.4 | dg | Gravelly Silty Sand | 277 x | 0.4-1.0 | | Gravelly Sand, trace to some silt | |
| | | - damp, medium dense, brown | | | | | |
| 1.8 | dg | Gravelly Silty Sand | 278* | 1.8-2.4 | | Gravelly Sand, some silt to silty | |
| | | - damp, dense, brown | | | | | |
| | | E.O.H. @ 3.2 - Refusal | | | | | |
| | | Refusal @ 3.0m - Move 2m East (No Indication) | | | | | |
| | | Refusal @ 3.2 - E.O.H. | | | | | |

# TEST HOLE LOG

Northing: 6770753
Easting: 634670

Project No: 8002-318 Test Hole No: #: 30102 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 14 2004

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Silt / Silty Sand | 275 | | | | |
| | | - damp, medium dense, brown w/ orange hue | | | | | |
| | | - organics to 0.3m noted | | | | | |
| | | | ? | | | | |
| 2.6 | do | Sandy Silt, trace gravel | 275 | 0.6-1.2 | | Silty Sand, trace gravel | |
| | | - damp, medium dense, brown | | | | | |
| | | | | | | | |
| .5m | do | Silty Sand, trace gravel | 276 ✓ | 2.1-3.0m | | Very Grindy Drilling @ 1.5m | |
| | | - dry, dense, light grey | | | | | |
| | | - significant rock powder in sample | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 3.0m - Refusal | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Refusal @ 3.0m - move North 2m | | | | | |
| | | Refusal @ 3.0m - E.O.H. | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
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| | | | | | | | |

# TEST HOLE LOG

Northing: 6770855
Easting: 634651

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30103 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 14 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silty Sand/Sandy Silt | | | | | |
| | | - damp, medium dense, brown | | | | | |
| | | - organics noted to 0.2m depth | | | | | |
| 0.6 | da | Gravelly Sandy, some silt to Silty | 272 ✓ | 0.6-1.2 | | | |
| | | - damp, medium dense, brown | | | | | |
| 1.0 | da | Gravelly Sand, some silt to Silty | 273 ✓ | 2.1-2.9 | | Very Grinding Drilling @ 2.0m | |
| | | - dry to damp, dense, light brown | | | | | |
| 1' | da | Silty Sand, trace to some gravel | 274 ✓ | 3.7-4.3 | | | |
| | | - dry, dense, light grey | | | | | |
| | | - significant rock powder in sample | | | | | |
| | | E.O.H. @ 4.3 - Refusal | | | | | |
| | | Refusal @ 4.3 - move South 2 meters | | | | | |
| | | Refusal @ 2.4m - E.O.H. | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6770965
Easting: 634613

Project No: 8002-318 Test Hole No: #: 30104 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug 13 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 6 | | Sand, some silt to silty | 268 ✓ | 0.3-0.9 | | | |
| | | - damp, loose, brown | | | | | |
| | | | | | | | |
| 6.9 | dg | Gravelly Sandy Silt | 269 ✓ | 1.8-2.4 | | Silty Sandy, trace to some gravel | |
| | | - damp, medium dense, brown | | | | | |
| | | | | | | | |
| 10 | | Silty Sand, trace to some gravel (Auger #1) Rock | 270 ✓ | 3.1-3.7 | | Difficult Drilling @ 3.0m | |
| | | - dry, dense, light grey | | | | | |
| | | - significant rock powder on sample | | | | | |
| | | | | | | | |
| | | Gravelly Sand, trace to some silt (Auger #2) | 271 ✓ | 3.7-4.3 | | | |
| | | - damp, dense, brown | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 4.9m | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Refusal @ 3.7 - move South 2m | | | | | |
| | | Refusal @ 4.9 ± @ 0 Az (Rock powder on bit... no sample) | | | | | |
| | | | | | | | |
| | | | | | | | |
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# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6771005
Easting: 604671

Project No: 8002-318 Test Hole No: #: 30105 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: AUG 13 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silty Sandy / Sandy Silt | | | | | |
| | | - damp, medium dense, brown | | • | | | |
| 0.9 | da | Gravelly Silty Sand | 262 ↗ | 0.9-1.2 | | Gravelly Sandy, trace to some silt | |
| | | - damp, medium dense, brown | | | | | |
| 1.8 | da | Sandy Silt, trace to some gravel | 263 ✓ | 1.8-2.4 | | | |
| | | - damp to moist, medium dense, brown | | | | | |
| 3.0 | da | Sandy Gravel / Gravelly Sand, some silt | 264 ✓ | 3.4-4.0 | | | |
| | | - damp, dense, brown | | | | | |
| | | E.O.H. @ 4.6m Refusal | | | | | |
| | | Refusal @ 4.6m-More Sand 2m | | | | | |
| | | Refusal @ 4.3m-@ 4.4 | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6771078
Easting: 634574

Project No: 8002-318 Test Hole No: #: 30106 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: AUG. 13 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SI | LT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silty Gravelly Sand | 266 | 0-0.6 | | | |
| | | - dry to damp, loose, brown w/ orange hue | | | | | |
| | | - organics to 0.2m | | | | | |
| 0.6 | SA | Silty Sand | 267 | 0.9-1.2 | | Very difficult drilling @ 0.9m | |
| | | - dry to damp, dense, light grey | | | | Gravelly Sand, some silt | |
| | | - significant rock powder in sample | | | | | |
| | | E.O.H. @ 0.9m - Refusal | | | | | |
| | | Refusal @ 0.9m - move 2m south | | | | | |
| | | Refusal @ 0.9m - E.O.H. | | | | | |

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6771149
Easting: 634528

Project No: 8002-318 Test Hole No: #: 30107 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 13 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

| GRAVEL | SAND | SILT | CLAY |
|---|---|---|---|

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Organic Silt | | | | | |
| 0.3 | SO | Silty Sand / Sandy Silt | | | | | |
| | | - damp, medium dense, brown | | | | | |
| 2.9 | SO | Sandy Gravel, some silt to silty | 265 ✓ | 0.9-1.2 | | DIFFICULT DRILLING @ 0.9m | |
| | | - dry to damp, dense, light brown/grey | | | | | |
| | | - rock powder in sample | | | | | |
| | | End @ 1.5m | | | | | |
| | | Refusal @ 1.5m - Move South 2m | | | | | |
| | | Refusal @ 1.5m - End | | | | | |

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: _____
Easting: _____

Project No: 8002-318 Test Hole No: #: 30108 Elev. _____
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: _____
Log By: R.W. Date: Aug 13 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Silt / Silty Sand, trace gravel | 258 ✓ | .6 - 1.2 | | | |
| | | - damp to moist, medium dense, brown | | | | | |
| .5 | do | Gravelly Sand, some silt to Silty | 259 ✓ | 1.5 - 2.1 | | | |
| | | - damp, medium dense, brown | | | | | |
| 2.4 | so | Silty Sand, some gravel (Possible Rock) | 260 ✓ | 3.0 - 3.7 | | Difficult | Refusal @ 2.4 |
| | | - dry, dense, light brown / grey | | | | | |
| | | - significant rock powder in sample | | | | | |
| | | | 261 ✓ | 4.9 - 5.5 | | | |
| | | E.O.H. @ 5.5m Very Slow Drilling | | | | | |

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HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6771427
Easting: 634465

Project No: 8002-318 Test Hole No: #: 30109 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 13 2004

MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION

| GRAVEL | SAND | SILT | CLAY |
|---|---|---|---|
| 5mm | 0.74mm | | .002mm |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Silt / Silty Sand | 255 ✓ | 0.6-1.2 | | | |
| | | - damp, medium dense, brown | | | | | |
| 5 | da | Gravelly Sand, some Silt to Silty | 256 ✓ | 1.8-2.4 | | | |
| | | - damp, dense, brown | | | | | |
| 10 | ca | Silty Sand, some gravel | 257 ✓ | 3.4-4.0 | | Very Difficult Drilling @ 3.0m | |
| | | - dry to damp, dense, light brown/grey | | | | | |
| | | - rock powder in sample | | | | | |
| | | E.O.H. @ 4.0 | | | | | |
| | | Refusal @ 3.0m - move 2m South | | | | | |
| | | Refusal @ 4.0 - E.O.H. | | | | | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6771567
Easting: 634456

Project No: 8002-318 Test Hole No: #: 30110 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 13 2004

MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Organic Soils | | | | | |
| | | | | | | | |
| 0.3 | SO | Gravelly Sandy Silty to Gravelly Silty Sand | 251 ✓ | 0.4-1.0 | | | |
| | | - frozen | | | | | |
| | | - brown | | | | | |
| | | | | | | | |
| | | | 252 ✓ | 1.8-2.4 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | 253 ✓ | 3.4-4.0 | | | |
| | | | | | | | |
| 5' | SO | Sand, some silt, trace gravel (Decomposed Granite?) | 254 ✓ | 4.9-5.5 | | Very Difficult Drilling Slow | |
| | | - depth damp, dense, brown w/ orange tint | | | | | |
| | | - more rock pulverized w/ depth (more intact w/ depth) | | | | | |
| | | | | | | | |
| | | E.O.H. @ 5.6m - Very Slow | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Refusal @ 2.1m - move west 2m (No intrusion/Powder) | | | | | |
| | | | | | | | |
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# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6776127
Easting: 634474

Project No: 8002-318 Test Hole No: #: 30111 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 13 2004

MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION

| " | 5mm | | 0.74mm | | | .002mm |
|---|---|---|---|---|---|---|
| GRAVEL | | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy, some silt to silty, trace to some gravel | 249 | 0.2-0.6 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | - light organics to 0.3m | | | | | |
| | | | | | | | |
| | | | | | | | |
| .0 | SD | Gravelly Sand, some silt to silty | 250 | 1.5-1.8 | | Very Difficult Drilling @ 1.2m | |
| | | - dry, dense, light brown/grey | | | | | |
| | | - rock powder in sample | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 1.8m - Refusal | | | | | |
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| | | | | | | | |
| | | | | | | | |
| | | Refusal @ 1.8m - Move East 1.5m | | | | | |
| | | Refusal @ 1.8m - E.O.H. | | | | | |
| | | | | | | | |
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# TEST HOLE LOG

Northing: 67[illegible]72
Easting: 63[illegible]67

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30112 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 13 2004

MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | ORGANIC SILTS | | | | | |
| | | | | | | | |
| 0.3 | 30 | SANDY SILT / SILTY SAND, trace to some gravel | 246 ✓ | 0.5-0.8 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | | | | | |
| 2 | do | GRAVELLY SAND, some silt to silty | 247 ✓ | 1.8-2.4 | | | 1 |
| | | - damp, medium dense, brown | | | | | |
| | | | | | | | |
| | | SILTY SAND, trace gravel | 248 ✓ | 3.0-3.4 | | DIFFICULT DRILLING @ 2.7m | |
| | | - dry to damp, dense, light brown/grey | | | | | |
| | | - rock powder in sample | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 3.4m - REFUSAL | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | REFUSAL @ 3.4m - MOVE 15m NORTH | | | | | |
| | | REFUSAL @ 3.4m - E.O.H. | | | | | |
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# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
NSULTING & TESTING ENGINEERS

Northing: 6771879
Easting: 634435

Project No: 8002-318 Test Hole No: #: 30113 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 12 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| th | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Organic Silts | | | | | |
| | | | | | | | |
| .6 | SG | Gravelly Sandy Silt | 244 ✓ | .6-1.2 | | | |
| | | - Frozen | | | | | |
| | | - brown | | | | | |
| | | | | | | | |
| | SG | Sand, some gravel to Gravelly, trace to some silt | 245 ✓ | 1.5-2.1 | | Difficult Drilling < 1.5m | |
| | | - dry to damp, dense, brown | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 2.4m - Refusal | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Refusal @ 2.1m - Move South 2m | | | | | |
| | | Refusal @ 2.4m - E.O.H. | | | | | |
| | | Rock Powder on Bit (Both Attempts) | | | | | |
| | | | | | | | |
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# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6772019
Easting: 634385

Project No: 8002-318 Test Hole No: #: 30114 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 12 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Organic Silts | | | | | |
| | | | | | | | |
| .3 | 30 | Gravelly Sand, trace to some silt | 242 ✓ | 0.6-1.2 | | | |
| | | - dry to damp, medium dense, brown | | | | | |
| | | | | | | | |
| | | | 243 ✓ | 1.8-2.4 | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 2.9m - Refusal | | | | | |
| | | | | | | | |
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| | | | | | | | |
| | | Refusal @ 1.8m Move 2m South | | | | | |
| | | Refusal @ 2.9m - E.O.H. | | | | | |
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# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6772105
Easting: 634338

Project No: 8002-318 Test Hole No: #: 30115 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 12 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel / Gravelly Sand, trace silt | 238 ✓ | .3-.9 | | | |
| | | - damp to moist, medium dense, light brown | | | | | |
| | | - increase moisture w/ depth to wet @ 1.2m | | | | | |
| | | | | | | | |
| .8 | SO | Silty Sand, trace gravel | 239 ✓ | 1.8-2.4 | | Difficult Drilling @ 1.8m | |
| | | - dry to damp, dense, light brown | | | | | |
| | | - some Rock Boulder in Sample | | | | | |
| | | | | | | | |
| | | | 240 ✓ | 3.7-4.3 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H @ 4.3 | | | | | |
| | | | | | | | |
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| | | | | | | | |
| | | | | | | | |
| | | Refusal @ 3.7 - move 2m South | | | | | |
| | | Refusal @ 4.3 - E.O.H | | | | | |
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# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6772111
Easting: 634312

Project No: 8002-318 Test Hole No: #: 30116 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: AUG.12 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | ORGANIC SILTS | | | | | |
| | | | | | | | |
| 1.3 | 30 | SANDY GRAVEL, some silt | 234 ✓ | 0.6 - 1.2 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | | | | | |
| | 50 | GRAVELLY SAND, some silt | 235 ✓ | 2.1 - 2.7 | | DIFFICULT DRILLING @ 1.8m | |
| | | - dry to damp, dense, light brown | | | | | |
| | | - SOME ROCK POWDER IN SAMPLE | | | | | |
| | | | | | | | |
| | | | 236 ✓ | 3.4 - 4.0 | | | |
| | | | | | | | |
| | | | | | | | |
| | | ROCK POWDER SAMPLE | 237 ✓ | 4.6 - 5.2 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 5.2 - REFUSAL | | | | | |
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# TEST HOLE LOG

Northing: 6772256
Easting: 634222

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 3012 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 12 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| GRAVEL | 5mm | SAND | 0.74mm | SILT | .002mm | CLAY |
|---|---|---|---|---|---|---|

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Sandy Silt, trace gravel | 232 ✓ | 0-0.6 | | | |
| | | - damp to moist, medium dense, brown | | | | | |
| | SO | Organic Silts | | | | | |
| | | - damp to moist, firm, dark brown/black | | | | | |
| | SO | Silty Sandy Gravel | 233 ✓ | 1.8-2.4 | | | |
| | | - damp to moist, medium dense, brown | | | | | |
| | SO | As Above | No Sample | | | | |
| | | - wet | | | | | |
| | | E.O.H. @ 3.7 | | | | | |
| | | Refusal 3.7 Move South 2m | | | | | |
| | | Refusal @ 2.1 - E.O.H. | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6772272
Easting: 634185

Project No: 8002-318 Test Hole No: #: 30118 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 12 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Organic Silts | | | | | |
| | | | | | | | |
| .3 | 50 | Silty Sand / Sandy Silt | | | | | |
| | | - damp, medium dense, light brown | | | | | |
| | | | | | | | |
| p | 50 | Silty Sand / Sandy Silt, trace to some gravel | 229 ✓ | 0.6 - 1.2 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | | | | | |
| | 90 | Sandy Gravel, some silt to silty | 230 | 1.8 - 2.4 | | | |
| | | - damp, dense, brown | | | | | |
| | | | | | | | |
| | | Silty Sand | 231 ✓ | 3.0 - 3.4 | | Very Difficult Drilling @ 2.7m | |
| | | - dry, very dense, light brown | | | | | |
| | | - Rock Powder in Sample | | | | | |
| | | | | | | | |
| | | E.O.H. @ 3.7m | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Refusal @ 3.7 move South 1.5m | | | | | |
| | | Refusal @ 3.7 - E.O.H. | | | | | |
| | | | | | | | |
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# TEST HOLE LOG

Northing: 6772380
Easting: 634108

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30119 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 12 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Silty Gravel | 226 ✓ | 0.1-0.6 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | 50 | Organic Silts | | | | | |
| | | - wet, soft to firm, black/dark brown | | | | | |
| | | Gravelly Sand/Sandy Gravel, trace to some silt | 227 ✓ | 2.1-2.7 | | | |
| | | - damp, medium dense, light brown | | | | | |
| | 90 | Sand, trace to some silt, trace gravel (Possible Rock) | 228 ✓ | 3.7-4.3 | | Difficult Drilling @ 3.0 | |
| | | - moist to wet, dense, light brown | | | | | |
| | | - increase moisture from seepage | | | | | |
| | | E.O.H. @ 4.6 | | | | | |
| | | Refusal @ 3.7 Move 2m North | | | | | |
| | | Refusal @ 4.6 - E.O.H. | | | | | |

# TEST HOLE LOG

Northing: 6772396
Easting: 634076

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30128 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: AUG. 12 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Organic Silts | | | | | |
| .3 | SO | Silty Sand, some gravel to Gravelly - damp, medium dense, brown | 222 ✓ | .3-.9 | | | |
| | SD | Sand, trace to some silt (Possible Rock) - damp, very dense, brown | 223 ✓ | 2.1-2.4 | | Very Difficult Drilling @ 2.1m | |
| | do | As Above - light brown (lighter w/ depth) | 224 ✓ | 3.7-4.3 | | | |
| | | Some Rock Powder in Sample | 225 ✓ | 4.9-5.3 | | | |
| | | E.O.H. @ 5.3 | | | | | |
| | | Refusal @ 2.4m - move North 2m | | | | | |
| | | E.O.H. @ 5.3m - Very Slow Drilling | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6772578
Easting: 633974

Project No: 8002-318 Test Hole No: #: 30121 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: AUG 12 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | ORGANIC SILTS | | | | | |
| 3 | SO | GRAVELLY SAND / SANDY GRAVEL, some silt to silty - comp, medium dense, brown | 219 ✓ | 0.6-1.2 | | | |
| | do | AS ABOVE - dense | 220 ✓ | 1.5-2.1 | | | |
| | SO | POSSIBLE ROCK (ROCK POWDER SAMPLE) - dry, very dense, light brown | 221 ✓ | 2.7-3.0 | | VERY DIFFICULT DRILLING 2.7m | |
| | | E.O.H. @ 3.2 - REFUSAL | | | | | |
| | | REFUSAL @ 3.0m MOVE 2m EAST | | | | | |
| | | REFUSAL @ 3.2m - E.O.H. | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6772688
Easting: 633916

Project No: 8002-318 Test Hole No: #: 30122 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 12 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| GRAVEL (5mm) | SAND (0.74mm) | SILT | CLAY (.002mm) |
|---|---|---|---|

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| pth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | ORGANIC SILTS | | | | | |
| 2.6 | SO | SILTY GRAVELLY SAND TO SANDY | 215 ✓ | 0.6-1.2 | | | |
| | | - WET, MEDIUM DENSE, DARK BROWN | | | | | |
| | da | SILTY SANDY GRAVEL TO SANDY SILTY GRAVEL | 216 ✓ | 1.6-2.4 | | | |
| | | - SATURATED, MEDIUM DENSE, DARK BROWN | | | | | |
| | | AS ABOVE | 217 ✓ | 3.4-4.0 | | | |
| | | - POOR SAMPLE RECOVERY DUE TO $H_2O$ | | | | | |
| | | | 218 ✓ | 4.6-5.2 | | | |
| | | E.O.H. @ 5.2 REFUSAL | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6772714
Easting: 633862

Project No: 8002-318 Test Hole No: #: 30123 PGE 1 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: AUG. 11 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| GRAVEL (5mm) | SAND (0.74mm) | SILT (.002mm) | CLAY |
|---|---|---|---|

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | SURFICIAL ORGANICS | | | | | |
| | | | | | | | |
| 2.3 | su | SAND, some silt to silty, some gravel | 205 ✓ | .6-1.2 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | | | | | |
| | da | GRAVELLY SAND, trace to some silt | 206 ✓ | 1.8-2.4 | | | |
| | | - frozen, no visible ice | | | | | |
| | | - brown | | | | | |
| | | | | | | | |
| 10 | da | SAND, some gravel to GRAVELLY, trace silt | 207 ✓ | 3.4-4.0 | | DIFFICULT DRIVING @ 3.0m | |
| | | - frozen, no visible ice | | | | | |
| | | - brown | | | | | |
| | | | 208 ✓ | 5.2-5.8 | | | |
| | | | | | | | |
| | | | 209 ✓ | 6.4-7.0 | | | |
| | | | | | | | |
| | | | 210 ✓ | 7.9-8.5 | | | |
| | | | | | | | |
| | da | GRAVELLY SAND, some silt | 211 ✓ | 9.4-10.1 | | | |
| | | WET/SATURATED, some, brown | | | | | |
| | | | | | | | |
| | | | 212 ✓ | 11.0-11.6 | | | |

# TEST HOLE LOG

Northing: 6772714
Easting: 633862

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 3023 PEACE Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: AUG-1 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| GRAVEL (5mm) | SAND (0.74mm) | SILT (.002mm) | CLAY |
|---|---|---|---|

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| th | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | | 213 ✓ | 13.1-13.7 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | 214 ✓ | 14.3-14.6 | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 15.1m | | | | | |
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| | | | | | | | |
| | | REFUSAL 4.9m - MOVE NORTH 1.5m | | | | | |
| | | E.O.H. @ 15.1m - ABOUT 2 | | | | | |
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# TEST HOLE LOG

Northing: 6772908
Easting: 633827

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 3024 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 11 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | ORGANIC SILTS | | | | | |
| .6 | SG | SILTY SANDY GRAVEL | 200 ✓ | 0.6-1.2 | | | |
| | | - moist, medium dense, brown | | | | | |
| | GG | SANDY SILT, some gravel | 201 ✓ | 1.8-2.4 | | GRAVELLY | SILTY SAND |
| | | - FROZEN | | | | | |
| | | - brown | | | | | |
| | GG | SILTY SAND (DECOMPOSED BEDROCK ... GRANITE) | 202 ✓ | 3.4-4.0 | | DIFFICULT DRILLING @ 3.6m | |
| | | - FROZEN | | | | | |
| | | - brown w/ orange hue | | | | | |
| .9 | GG | SILTY SAND (ROCK MORE INTACT) | 203 ✓ | 5.2-5.8 | | | |
| | | - dry to damp, dense, light brown w/ orange hue | | | | | |
| | GG | SILTY SAND (ROCK MORE INTACT) | 204 ✓ | 6.7-7.3 | | | |
| | | - light brown, very dense | | | | | |
| | | E.O.H. @ 7.5m - REFUSAL | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6773058
Easting: 632772

Project No: 8002-318 Test Hole No: #: 30125 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug. 11 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Surficial Organics | | | | | |
| 0.1 | SG | Sandy Gravel, trace silt<br>- dry to damp, medium dense, light brown | 193 ✓ | 0.3-0.9 | | | |
| | da | Sandy Gravel/Gravelly Sand, some silt to Silty<br>- damp, medium dense, brown | 194 ✓ | 1.8-2.4 | | | |
| 3.4 | da | Sandy Gravel/Gravelly Sand, some silt<br>- moist, medium dense, brown | 195 ✓ | 3.4-4.0 | | | |
| 4.3 | da | Silty Sandy Gravel<br>- moist to wet, medium dense, brown | 196 ✓ | 4.9-5.5 | | | |
| | da | Gravelly Silty Sand<br>- saturated, medium dense, brown | 197 ✓ | 6.1-7.0 | | | |
| | da | Silty Sand (Possible Decomposed Bedrock)<br>- moist, medium dense, grey | 198 ✓ | 7.9-8.5 | | | |
| | | | 199 ✓ | 10.4-10.7 | | Very Difficult Drilling @ 9.1m | |
| | | E.O.H. @ 10.7 | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6773199
Easting: 633699

Project No: 8002-318 Test Hole No: #: 30126 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: AUG. 10 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| GRAVEL | SAND | SILT | CLAY |
|---|---|---|---|
| 5mm | 0.74mm | | .002mm |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Organic Silts | | | | | |
| | | | | | | | |
| 1.4 | SG | Sandy Silt, trace to some gravel | 191 ✓ | 0.5-0.8 | | | |
| | | - damp to moist, medium dense, brown | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Silty Sand, trace to some gravel | 192 ✓ | 1.5-1.8 | | | |
| | | - dry to damp, dense, light brown | | | | | |
| | | - rock powder in sample | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 1.8m - REFUSAL | | | | | |
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| | | | | | | | |
| | | Refusal @ 1.8m - move South 2m | | | | | |
| | | Refusal @ 1.2m - E.O.H. | | | | | |
| | | | | | | | |
| | | | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6773331
Easting: 633618

Project No: 8002-318 Test Hole No: #: 30127 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: AUG 10 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | ORGANIC SILTS | | | | | |
| | | | | | | | |
| .3 | SG | GRAVELLY SAND, some silt to silty | 188 ✓ | 0.6-1.2 | | | |
| | | - frozen, no visible ice | | | | | |
| | | - brown | | | | | |
| | | | | | | | |
| | | | 189 ✓ | 2.1-2.9 | | | |
| | | | | | | | |
| | | | | | | | |
| .0 | da | SILTY SAND, trace gravel | 190 ✓ | 4.0-4.6 | | DIFFICULT DRILLING @ 4.0m | |
| | | - dry to damp, dense, light brown | | | | | |
| | | - powder to sample | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 4.6m REFUSAL | | | | | |
| | | | | | | | |
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| | | | | | | | |
| | | | | | | | |
| | | REFUSAL @ 4.6 - MOVE EAST 2m | | | | | |
| | | REFUSAL @ 4.4 - E.O.H. | | | | | |
| | | ROCK POWDER ON BIT (BOTH ATTEMPTS) | | | | | |
| | | | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6773445
Easting: 633550

Project No: 8002-318 Test Hole No: #: 30128 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 10 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | ORGANIC SILTS | | | | | |
| 0.3 | SG | SAND, some gravel to GRAVELLY, some silt<br>- dry to damp, medium dense, light brown | 184 ✓ | 0.4-0.9 | | | |
| 2m | SG | SAND, some silt to SILTY<br>- moist, dense, light brown w/ occ yellow/green tint<br>- H2O SEEPAGE AT 1.5m (APPROX.) | 185 ✓<br>186 ✓ | 2.1-2.9<br>3.7-4.3 | | DIFFICULT | DRIVING @ 1.5m |
| 6 | do | SANDY SILT / SILTY SAND<br>- moist, dense, light brown w/ occ yellow/green tint | 187 ✓ | 5.2-5.8 | | | |
| | | E.O.H. @ 5.9 | | | | | |
| | | NOTE: STANDING WATER IN TH = 100m BELOW SURFACE<br>DRILLING DRIVING @ 4.4 TO 4.7 | | | | | |

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6773473
Easting: 633531

Project No: 8002-318 Test Hole No: #: 30129 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 10 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm | 0.74mm | .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | ORGANIC SILTS | | | | | |
| 2' | SO | SANDY SILT | 181 ✓ | 0.6 - 1.2 | | | |
| | | - moist, soft to firm, brown w/ some black organic silts | | | | | |
| 5 | SO | SILTY GRAVELLY SAND TO SILTY SANDY GRAVEL | 182 ✓ | 1.8 - 2.4 | | | |
| | | - moist to wet, medium dense, brown | | | | | |
| 10 | | GRAVELLY SAND, some silt | 183 ✓ | 3.4 - 3.7 | | DIFFICULT DRIVING @ 3.0m | |
| | | - damp, dense, brown | | | | | |
| | | E.O.H. @ 4.0m - REFUSAL | | | | | |
| | | REFUSAL @ 3.7 - MOVE SOUTH 1.5m | | | | | |
| | | REFUSAL @ 4.0 - E.O.H | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6773537
Easting: 633472

Project No: 8002-318 Test Hole No: #: 30130 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 10 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | ORGANIC SILTS | | | | | |
| | | | | | | | |
| .6 | so | SANDY GRAVELLY SILT TO GRAVELLY SANDY SILT | 176 ✓ | .6-1.2 | | | |
| | | - FROZEN | | | | | |
| | | - brown | | | | | |
| | | - possible seepage zone 9-12' | | | | | |
| | | | 177 ✓ | 1.8-2.4 | | | |
| | | | | | | | |
| | dg | GRAVELLY SILTY SAND | 178 ✗ | 3.7-4.3 | | DIFFICULT DRILLING @ 3.7 | |
| | | - damp to moist, dense, brown | | | | SANDY SILTY GRAVEL | |
| | | | | | | | |
| | dg | SILTY SAND, trace gravel | 179 ✓ | 4.9-5.5 | | | |
| | | - damp, dense, brown | | | | | |
| | | | | | | | |
| | | SILTY SAND | 180 ✓ | 7.0-7.6 | | VERY DIFFICULT DRILLING @ 7.8m | |
| | | - dry to damp, dense, light brown | | | | | |
| | | - powdery sample | | | | | |
| | | | | | | | |
| | | E.O.H. @ 8.2 - REFUSAL | | | | | |
| | | | | | | | |
| | | REFUSAL @ 4.9 - MOVE NORTH 2m | | | | | |
| | | REFUSAL @ 8.2 - E.O.H. | | | | | |
| | | | | | | | |
| | | NOTE: VISIBLE H2O IN HOLE UPON AUGER WITHDRAWAL | | | | | |
| | | NO H2O NOTED IN ATTEMPT #2 | | | | | |

# TEST HOLE LOG

Northing: 6773651
Easting: 633422

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30131 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug. 10 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | ORGANIC SILTS | | | | | |
| | | | | | | | |
| 3m | sa | SANDY SILT, trace gravel | 173 X | .3 - .9 | | SILTY SAND, trace gravel | |
| | | - FROZEN | | | | | |
| | | - brown | | | | | |
| | | | | | | | |
| 5 | da | SILTY SAND, some gravel to GRAVELLY | 174 ✓ | 1.8 - 2.4 | | DIFFICULT DRILLING @ 2.4m | |
| | | - FROZEN | | | | | |
| | | - brown | | | | | |
| | | | | | | | |
| 3m | da | SILTY SAND, trace gravel | 175 ✓ | 3.4 - 3.7 | | | |
| | | - dry to damp, dense, light brown | | | | | |
| | | - rock powder in sample | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H @ 4.0m - REFUSAL | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | REFUSAL @ 4.0m - MOVE NORTH 2.5m | | | | | |
| | | REFUSAL @ 4.0m - E.O.H. | | | | | |
| | | - ROCK POWDER ON BIT @ REFUSAL - (BOTH ATTEMPTS) | | | | | |
| | | VISIBLE ROCK OUTCROPPING APPROX. 10m WEST OF TH | | | | | |
| | | | | | | | |
| | | | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6773786
Easting: 633337

Project No: 8002-318 Test Hole No: #: 30132 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 9 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Organic Silt | | | | | |
| | | | | | | | |
| | | | | | | | |
| .9 | SO | Sand, some silt to silty, trace to some gravel | 170 ✓ | .9-1.2 | | | |
| | | - Frozen | | | | | |
| | | - brown | | | | | |
| | | | | | | | |
| | | | 171 ✓ | 2.1-2.7 | | | |
| | | | | | | | |
| | | | | | | | |
| | SO | As Above | 172 ✓ | 3.4-4.0 | | | |
| | | - Unfrozen | | | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 4.0 - Refusal | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Refusal @ 0.9m - Move 5m South | | | | | |
| | | Refusal @ 4.0 - E.O.H. | | | | | |
| | | - Rock Powder on Bit (Coal Attempts) | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6773901
Easting: 633261

Project No: 8002-318 Test Hole No: #: 30133 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: AUG 9 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | 0.74mm | .002mm |
|---|---|---|
| GRAVEL | SAND | SILT / CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Organic Silts | | | | | |
| | | | | | | | |
| | | | | | | | |
| .6 | SG | Sandy Gravel, some silt to Silty - Frozen - brown | 168 ✓ | 0.9-1.2 | | Grinding Refusal @ 0.9m | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 3 | SG | Sand, some silt to Silty, trace gravel - orange, brown dense. | 169 ✓ | 1.8-2.4 | | Difficult Drilling @ 1.8m | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 2.7m | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Refusal @ 2.7m - move South 3m (Rock Powder on Bit) | | | | | |
| | | Refusal @ 2.6 - E.O.H. (Rock Powder on Bit) | | | | | |
| | | | | | | | |
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# TEST HOLE LOG

Northing: 6774008
Easting: 633158

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30134 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 9 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| GRAVEL (5mm) | SAND (0.74mm) | SILT | CLAY (.002mm) |
|---|---|---|---|

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Surficial Organics / Silt | | | | | |
| .9 | da | Sandy Gravel, some silt to Silty | 166 ✓ | .9-1.2 | | Grindy Drilling @ 0.9m | |
| | | - damp, medium dense, brown | | | | | |
| 1.8 | da | Silty Sand, trace gravel | 167 ✓ | 1.8-2.4 | | Difficult Penetration @ 1.8m | |
| | | - dry to damp, dense, light brown | | | | | |
| | | - powder noted | | | | | |
| | | E.O.H. @ 2.7m | | | | | |
| | | Refusal @ 2.7m - Move West 2m | | | | | |
| | | Refusal @ 1.5m - E.O.H | | | | | |
| | | Note: Some boulder on Bit (Keep Attention) | | | | | |

# TEST HOLE LOG

Northing: 6774137
Easting: 633067

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30135 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: AUG 9 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | SURFICIAL ORGANICS/SILTS | | | | | |
| | | - FROZEN | | | | | |
| | | | | | | | |
| .9 | SO | SILTY SAND, SOME GRAVEL TO GRAVELLY | 164 ✓ | .9-1.5 | | VERY DIFFICULT DRILLING @ 0.9m | |
| | | - FROZEN | | | | | |
| | | - BROWN | | | | | |
| | | | | | | | |
| 3.0 | SO | SILTY SAND | 165 ✓ | 2.1-3.0 | | SLOW STEADY DRILLING | |
| | | - DAMP | | | | | |
| | | - LIGHT BROWN | | | | | |
| | | | | | | | |
| | | E.O.H. @ 3.0m - SOME ROCK FLOUR ON BIT. | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | REFUSAL @ 1.5m - MOVE 2m SOUTH | | | | | |
| | | REFUSAL @ 3.0m - E.O.H. | | | | | |
| | | | | | | | |
| | | | | | | | |
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| | | | | | | | |

# TEST HOLE LOG

Northing: 6774206
Easting: 633003

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30136 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: AUG 9 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| " | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Surficial Organics | | | | | |
| | | | | | | | |
| 0.6 | SG | Sandy, some gravel, some silt | 162 X | .6-1.2 | | Difficult Drilling @ 1.5m | |
| | | - Frozen | | | | Gravelly Sand, some silt | |
| | | - brown | | | | | |
| | | | | | | | |
| 1.5 | CG | Silty Sand, trace gravel | 163 ✓ | 1.5-2.1 | | Poor Sample @ 163 | |
| | | - Frozen | | | | | |
| | | - brown | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 2.1m | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Refusal @ 2.1m - move South 2m | | | | | |
| | | Refusal @ 2.1m - E.O.H. | | | | | |
| | | - No indication | | | | | |
| | | | | | | | |
| | | | | | | | |

# TEST HOLE LOG

Northing: 6775739
Easting: 631923

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30150 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 3 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | ORGANIC SILTS (ACCESS TRAIL) | | | | | |
| | | | | | | | |
| | SO | SILTY SAND, trace to some gravel | 147 ✓ | 0.9-1.2 | | | |
| | | - FROZEN | | | | | |
| | | - brown/grey | | | | | |
| | | | | | | | |
| | SO | SILTY SAND, trace gravel | 148 ✓ | 1.8-2.4 | | DIFFICULT DRIVING @ 1.8m | |
| | | - FROZEN | | | | SILTY GRAVELLY SAND | |
| | | - brown | | | | | |
| | | | | | | | |
| | SO | SILTY SAND | 149 ✓ | 3.7-4.3 | | VERY SLOW DRILLING @ 3.7m | |
| | | - FROZEN | | | | SAND, some silt, some gravel | |
| | | - brown | | | | | |
| | | | | | | | |
| | | ROCK POWDER SAMPLE & REFUSAL | 150 | 5.3-5.5 | | | |
| | | - dry to damp, light brown | | | | | |
| | | | | | | | |
| | | SILTY SAND | 151 ✓ | 6.4-7.3 | | | |
| | | - damp, brown/grey | | | | | |
| | | - abt of fractured gravel ≤5mm | 152 ✓ | 7.9-8.5 | HOLE | ¥2 ATTEMPT | |
| | | | | | | | |
| | | e.o.h. @ 10.7m | 153 ✓ | 9.4-10.1 | | | |
| | | | | | | | |
| | | 1 PIEZO @ OVERLOOKING LAKE & DRILL | | | | | |
| | | | | | | | |

# TEST HOLE LOG

Northing: 6775939
Easting: 631868

Project No: 8002-318 Test Hole No: #: 30151 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Aug 3 2004


HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS


**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| GRAVEL (5mm) | SAND (0.74mm) | SILT (.002mm) | CLAY |
|---|---|---|---|

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Organic Silts (on access Trail) | | | | | |
| | | -Frozen | | | | | |
| | | | | | | | |
| | SO | Silty Sand, possible trace gravels | 144 ✓ | 0.9-1.2 | | | |
| | | -Frozen | | | | | |
| | | -brown | | | | | |
| | | | | | | | |
| | | | 145 ✓ | 1.5-2.1 | | Difficult Drilling @ 2.1m | |
| | | | | | | | |
| | | Rock Powder Samples @ Base | 146 | 3.0-3.2 | | | |
| | | -damp, light brown | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 4.0 | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Refusal @ 3.2m - Move South 2m - | | | | | |
| | | Refusal @ 4.0 - E.O.H. | | | | | |
| | | | | | | | |
| | | 1 Photo Overlooking Lake - Drill | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

# TEST HOLE LOG

Northing: 6775939
Easting: 631805

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30152 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 3 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | 0.74mm | .002mm |
|---|---|---|
| GRAVEL | SAND | SILT / CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Gravelly Sand, some silt (existing ditch) | 140 ✓ | 0.3-0.9 | | | |
| | | - damp, medium dense, brown/grey | | | | | |
| 2 | SO | Silty Sand, | 141 ✓ | 2.1-2.7 | | | |
| | | - damp, medium dense, brown w/ some dark organic silts | | | | | |
| 4 | do | Silty Sand, trace gravel | 142 ✓ | 3.4-4.0 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | Rock Powder Sample @ Refusal | 143 ✓ | 4.9-5.2 | | | |
| | | - dry to damp, light grey | | | | | |
| | | E.O.H @ 5.2m | | | | | |

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6776010
Easting: 631728

Project No: 8002-318 Test Hole No: #: 30153 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 3 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Superficial Organics (Previously Covered) | | | | | |
| 0.6 | SO | Sandy Silt / Silty Sand, some gravel<br>- moist, loose, brown<br>- organics to 0.6 | 135 ✓ | 0.6-1.2 | | | |
| 1.2 | SO | Silty Sand, some gravel to Gravelly<br>- frozen<br>- brown | 136 ✓ | 1.5-2.4 | | | |
| 3.0 | SO | Silty Sand, some gravel<br>- damp, loose, brown | 137 | 3.4-4.0 | | Difficult Drilling 3.0 | |
| 5.4 | SO | Silty Sand, possible trace gravel<br>- damp, medium dense, brown / dark grey<br>- easier drilling. Actual @ 5' | 138 ✓ | 5.2-5.8 | | | |
| | | Rock Powder Sample @ Refusal<br>- crystalline, light grey | 139 | 7.3-7.6 | | | |
| | | E.O.H. @ 7.6m | | | | | |
| | | Refusal @ 7.6m - Mkd 1m East | | | | | |

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6775613
Easting: 632037

Project No: 8002-318 Test Hole No: #: 30148 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 3 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Organic Silts | | | | | |
| | | | | | | | |
| 0.9 | 30 | Silty Sand/Sandy Silt | 158 ✓ | 0.9-1.5 | | | |
| | | - frozen | | | | | |
| | | - dark brown | | | | | |
| | | - some organic silts | | | | | |
| | | | | | | | |
| | 50 | Silty Sand, trace to some gravel | 159 ✓ | 2.1-2.7 | | | |
| | | - frozen | | | | | |
| | | - brown | | | | | |
| | | | | | | | |
| | | | 160 ✓ | 3.7-4.3 | | | |
| | | | | | | | |
| | | | | | | | |
| | | Rock Powder Sample & Refusal | 161 | 4.9-5.2 | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 5.2m-Refusal | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Refusal @ 5.2m move North 2m | | | | | |
| | | Refusal @ 5.2m - E.O.H. | | | | | |
| | | | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6775666
Easting: 631983

Project No: 8002-318 Test Hole No: #: 30149 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 3 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| GRAVEL | SAND | SILT | CLAY |
|---|---|---|---|
| 5mm | 0.74mm | | .002mm |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| th | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Organic Silts (Cleared Access) | | | | | |
| | | | | | | | |
| | so | Sandy Gravel, some silt to Silty | 154 ✓ | 0.9-1.4 | | | |
| | | - Frozen | | | | | |
| | | - brown | | | | | |
| | | | | | | | |
| | da | Sandy Gravel / Gravelly Sand, some silt to Silty | 155 ✓ | 2.1-2.7 | | Difficult Drilling @ 6' | |
| | | - Frozen | | | | | |
| | | - brown | | | | | |
| | | | | | | | |
| | da | Silty Sand, trace gravel | 156 ✓ | 4.0-4.6 | | Very Difficult Drilling @ 12' | |
| | | - Frozen | | | | | |
| | | - brown | | | | | |
| | | | | | | | |
| | | Rock Powder Sample @ Refusal | 157 | 5.3-5.5 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H @ 5.5m Try #2 | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Refusal @ 4.7m - Move North 2m | | | | | |
| | | Refusal @ 5.5m - E.O.H. | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6776060
Easting: 631698

Project No: 8002-318 Test Hole No: #: 30154 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: July 31 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Surficial Organics | | | | | |
| | | | | | | | |
| 3 | SG | Gravelly Silty Sand | 132 ✓ | 0.3-0.9 | | | |
| | | -Frozen | | | | | |
| | | -brown/grey | | | | | |
| | | | | | | | |
| 5 | SG | Sandy Silt, some gravel | 133 ✓ | 1.5-2.4 | | | |
| | | -Frozen | | | | | |
| | | -brown | | | | | |
| | | | | | | | |
| | dg | Gravelly Silty Sand | 134 ✓ | 3.4-4.0 | | | |
| | | -Frozen | | | | | |
| | | -brown | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H @ 5.3m - Refusal | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Refusal @ 5.3m - Move 1m East | | | | | |
| | | Refusal @ 2.4m - E.O.H. | | | | | |
| | | | | | | | |
| | | | | | | | |

# TEST HOLE LOG

Northing: 6776117
Easting: 631693

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30155 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: July 31 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION** PG #1

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | SUPERFICIAL ORGANICS (PREVIOUSLY CLEARED) | | | | | |
| 0.1 | so | ORGANIC SOILS | | | | | |
| | | - damp, firm, dark brown | | | | | |
| 0.8 | so | SILTY SANDY GRAVEL | 127 ✓ | 0.8-1.2m | | | |
| | | - damp to moist, medium dense, brown | | | | | |
| 1.5 | sh | SAND some silt to SILTY, some gravel to GRAVELLY | 128 ✓ | 1.5-2.0 | | VERY GRAVELLY TRENCHES @ 1.5m SILTY SANDY GRAVEL | |
| | | - FROZEN | | | | | |
| | | - brown | | | | | |
| | | | 129 ✓ | 2.4-2.9 | | | |
| | | | 130 ✓ | 3.4-4.0 | | | |
| 5.6 | sh | SILTY GRAVELLY SAND | 131 ✓ | 5.2-5.8 | | LESS GRAVELLY SANDY GRAVEL, some silt. | |
| | | - FROZEN | | | | | |
| | | - brown | | | | | |
| | | E.O.H. @ 7.0m - REFUSAL | | | | | |
| | | REFUSAL @ 3.0m - MOVE 1 m EAST | | | | | |
| | | REFUSAL @ 7.0m - MOVE 2 m EAST | | | | | |

# TEST HOLE LOG

Northing: 6776185
Easting: 631600

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 · Test Hole No: #: 30156 PG.1 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: July 31 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Fill - Access River Pad | | | | | |
| | | | | | | | |
| | | | | | | | |
| .05 | SO | Surficial Organics | | | | | |
| | | | | | | | |
| .8 | SO | Silty Gravelly Sand | 116 × | 0.9-1.5 | | Sandy Silt, some gravel | |
| | | - damp, loose, brown w/ dark brown organics | | | | | |
| | | - some organic silt. | | | | | |
| | | | | | | | |
| 1.5 | SG | Sandy Gravel / Gravelly Sand, some silt to silty | 117 ✓ | 1.5-2.4 | | Very Sandy Drilling | |
| | | - damp to moist, medium dense, brown | | | | Below 1.5m | |
| | | - minimal mat'l on flights 5-10' | | | | | |
| | | | | | | | |
| | | - minimal mat'l on flight 10-15' | 118 ✓ | 3.0-4.0 | | | |
| | | | | | | | |
| | | | | | | | |
| | | Silty Gravelly Sand / Silty Sandy Gravel | 119 ✓ | 4.9-5.5 | | | |
| | | - moist, medium dense, brown | | | | | |
| | | | | | | | |
| 4 | SG | Silty Sand, trace to some gravel | 120 ✓ | 6.4-7.0 | | | |
| | | - damp, medium dense, brown/grey | | | | | |
| | | | | | | | |
| | | | 121 ✓ | 7.9-8.5 | | | |
| | | | | | | | |
| | | | | | | | |

# TEST HOLE LOG

Northing: 6776185
Easting: 631600

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30156 PG.2 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Aug 31 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | | SILT | | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | da | Silty Sand, trace gravel | 122 ✓ | 9.4-10.1 | | | |
| | | - damp, medium dense, grey | | | | | |
| | | - some gravels noted between 10.4-11.0m | | | | | |
| | | | 123 ✓ | 10.4-11.0 | | | |
| | | | 124 ✓ | 11.3-11.9 | | | |
| | | | 125 ✓ | 12.5-13.4 | | | |
| | | | 126 ✓ | 13.7-14.6 | | | |
| | | EOH. @ 15.1m | | | | | |
| | | REFUSAL @ 5.2m - MOVE 2m NORTH | | | | | |

# TEST HOLE LOG

Northing: 6776190
Easting: 631655

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30157 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: July 31 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm — SAND — 0.74mm — SILT — .002mm — CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Surficial Organics (Previously Cleared Access Pad) | | | | | |
| 2.1 | SG | Sandy Gravel, some silt to Silty - dense, medium dense, brown | 111 ✓ | 0.3-0.9 | | | |
| | | | 112 ✓ | 1.5-2.1 | | Very Grindy Drilling Below 1.5m | |
| | | | 113 ✓ | 2.1-2.7 | | | |
| | | Poor Sample # 114 - Minimal Mat'l on Flighting | 114 ✓ | 3.0-4.3 | | | |
| | | Poor Sample #115 - Minimal Mat'l on Flighting | 115 ✓ | 4.9-5.5 | | | |
| | | E.O.H. @ 5.8m | | | | | |
| | | NOTE: Test Hole Not Done in Creek as Fully Was Too Significant Drilling Clearing | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6076272
Easting: 631563

Project No: 8002-318 Test Hole No: #: 30158 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: July 30 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm GRAVEL | SAND | 0.74mm | SILT | .002mm CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Fill Material (Pad Construction) | | | | | |
| | | | | | | | |
| 2.8 | SO | Organic Silts | 106 ✓ | 0.9-1.2 | | | |
| | | - Frozen, visible ice | | | | | |
| | | - black / dark brown | | | | | |
| | | | | | | | |
| 5 | SO | Silty Gravelly Sand | 107 ✓ | 1.5-2.1 | | Very Difficult Drilling | |
| | | - Frozen | | | | 1.5 to 2.1 | |
| | | - brown | | | | Sandy Gravel, some silt | |
| | | | | | | | |
| | do | Gravelly Sand, some silt | 108 ✓ | 2.7-3.4 | | | |
| | | - Frozen | | | | | |
| | | - brown | 109 ✓ | 3.7-4.3 | | | |
| | | | | | | | |
| | | | 110 ✓ | 4.6-5.2 | | | |
| | | | | | | | |
| | | Refusal @ 6.2 - Move North 2m | | | | | |
| | | Refusal @ 1.8 - move North 1m | | | | | |
| | | Refusal @ 1.5 - move South 6m - | | | | | |
| | | Refusal @ 4.0 - E.O.H | | | | | |

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6776361
Easting: 631517

Project No: 8002-318 Test Hole No: #: 30159 PGR 1 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: July 30 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| GRAVEL | 5mm | SAND | 0.74mm | SILT | .002mm | CLAY |
|---|---|---|---|---|---|---|

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, trace to some silt | 93 ✓ | 0.3-0.9 | | | |
| | | - dry to damp, loose, light brown | | | | | |
| | | - organics noted to 0.6 | | | | | |
| | | - some white coal inclusions | | | | | |
| 1.5 | da | Sandy Gravel / Gravelly Sand, trace silt | 94 ✓ | 1.5-2.1 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | 95 ✓ | 3.0-3.7 | | | |
| | | Some gravel loss on sample, 95+ due to auger action | 96 ✓ | 4.6-5.2 | | | |
| | | | 97 ✓ | 5.2-5.8 | | | |
| | | | 98 ✓ | 6.7-7.3 | | | |
| | | | 99 ✓ | 7.9-8.5 | | | |
| | | | 100 ✓ | 9.4-10.1 | | | |
| | | | 101 ✓ | 10.4-11.0 | | | |
| | | | 102 ✓ | 11.3-11.9 | | | |

# TEST HOLE LOG

Northing: 6776361
Easting: 631517

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30159 Page 2 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: July 30 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 8 | da | Silty Sandy, Some gravel | 103 | 12.8-13.4 | | | |
| | | - moist, medium dense, brown | | | | | |
| | | | | | Not Accurate | | |
| 7 | da | Sandy Gravel / Gravelly Sand, trace to some silt. | 104 | 12.7-14.0 | | - Drilling Action | |
| | | - damp, medium dense, brown | | | | changed @ 14.0 to a | |
| | | | 105 | 13.3-14.9 | | faster advance. | |
| | | | | | | Silt Content possibly | |
| | | | | | | due to sidewall mat'l. | |
| | | E.O.H. @ 14.9m | | | | 13.7+ may not be | |
| | | | | | | representative due to | |
| | | | | | | reverse action on | |
| | | | | | | withdrawal. Last 3.0m | |
| | | | | | | were reamed as | |
| | | | | | | required. Casing | |
| | | | | | | same load. | |

# TEST HOLE LOG

Northing: 6776506
Easting: 631499

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30160 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: July 29 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Sandy Gravel / Gravelly Sand, trace silt | 88 ✓ | 0.3-0.9 | | | |
| | | - damp, loose, brown/grey | | | | | |
| 1.7 | da | Silty Sand, some gravel | 89 ✓ | 1.8-2.1 | | | |
| | | - wet, medium dense, brown/grey | | | | | |
| 2.4 | da | Organic Silts | 90 ✓ | 2.4-2.9 | | | |
| | | - moist, soft to firm, dark brown w/ black inclusions | | | | | |
| | | - increase moisture to wet/saturated @ 10' | | | | | |
| 4 | da | Gravelly Sand, trace to some silt | 91 ✓ | 3.4-4.0 | | | |
| | | - saturated, medium dense, brown/grey | | | | | |
| | | | 92 ✓ | 4.9-5.5 | | | |
| | | E.O.H @ 6.1m | | | | | |

# TEST HOLE LOG

Northing: 6776711
Easting: 631512

Project No: 8002-318 Test Hole No: #: 3016 1 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: July 29 2004

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Surficial Organics | | | | | |
| 2 | do | Sandy Gravel, trace to some silt - damp to moist, loose, brown | 83 ✓ | 0.3-0.9 | | | |
| | do | As Above - medium dense | 84 ✓ | 1.5-2.1 | | | |
| | | | 85 ✓ | 3.0-3.7 | | | |
| 6 | do | Silty Sandy Gravel - moist, medium dense, brown | 86 ✓ | 4.0-4.3 | | | |
| 14 | do | Sandy Gravel, some silt - moist, medium dense, brown | 87 ✓ | 4.9-5.5 | | | |
| | | E.O.H. @ 5.8 | | | | | |

# TEST HOLE LOG

Northing: 6776914
Easting: 631538

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30162 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: July 29 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Sandy Gravel, trace to some silt | 77 ✓ | 0.3-0.6 | | | |
| | | - damp to moist, loose, brown | | | | | |
| | | | | | | | |
| 1 | dg | Gravelly Silty Sand | 78 ✓ | 1.5-2.1 | | | |
| | | - moist to wet, medium dense, brown | | | | | |
| | | | | | | | |
| 24 | so | Sandy Gravel, trace to some silt | 79 ✓ | 2.4-2.7 | | | |
| | | - moist, medium dense, brown | | | | | |
| | | | | | | | |
| | | | 80 ✓ | 3.0-4.6 | | | |
| | | | | | | | |
| 6 | dg | Silty Sandy Gravel | 81 ✓ | 4.6-5.2 | | | |
| | | - moist, medium dense, brown | | | | | |
| | | | | | | | |
| 2 | so | Sandy Gravel, trace to some silt | 82 ✓ | 5.2-5.8 | | | |
| | | - moist, medium dense, brown | | | | | |
| | | - possible some gravel loss on sample # 82 | | | | | |
| | | | | | | | |
| | | E.O.H. @ 5.8m | | | | | |
| | | | | | | | |
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# TEST HOLE LOG

Northing: 6776900
Easting: 631563

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30163 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: July 29 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, some silt to Silty | 72 ✓ | 0.3-0.9 | | | |
| | | - damp to moist, loose, brown | | | | | |
| | | - silt seam between 0.6-0.8m | | | | | |
| 1.5 | SO | Gravelly Silty Sand | 73 ✓ | 1.5-2.1 | | | |
| | | - moist, soft, brown | | | | | |
| | | - some organics noted (rootlets) | | | | | |
| 2.0 | SP | Sandy Gravel, trace silt | 74 ✓ | 2.1-2.7 | | | |
| | | - moist, medium dense, brown | | | | | |
| | | - some oxidation on gravels | | | | | |
| | | | 75 ✓ | 3.4-4.3 | | | |
| 5.2 | GS | Sandy Gravel, trace to some silt | 76 ✓ | 5.2-5.6 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | E.O.H. @ 5.8 | | | | | |

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6777031
Easting: 631579

Project No: 8002-318 Test Hole No: #: 30164 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: July 29 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm
GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Sandy Gravel | 66 ✓ | 0.2-0.6 | | | |
| | | - damp to moist, loose, brown | | | | | |
| | | | | | | | |
| | so | Organic Silts | 67 ✓ | 0.8-1.2 | | | |
| | | - moist, soft, brown | | | | | |
| | | | | | | | |
| | so | Sandy Gravel, trace to some silt | 68 ✓ | 1.5-2.1 | | | |
| | | - damp to moist, medium dense, brown | | | | | |
| | | | | | | | |
| | sg | Sandy Silt, trace gravel | 69 ✓ | 2.4-2.7 | | | |
| | | - damp to moist, soft to firm, brown w/ some black organic | | | | | |
| | | inclusions | | | | | |
| | | | | | | | |
| | da | Sandy Gravel, trace to some silt | 70 ✓ | 3.4-4.0 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | | | | | |
| | sg | Silty Sandy Gravel | 71 ✓ | 4.6-5.5 | | | |
| | | - moist, medium dense, brown w/ black organics | | | | | |
| | | - some organic silts | | | | | |
| | | - some organic intrusions (rootlets etc.) | | | | | |
| | | | | | | | |
| | | E.O.H @ 5.9m | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

# TEST HOLE LOG

Northing: 6777136
Easting: 631607

Project No: 8002-318 Test Hole No: #: 30165 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: July 29 2004

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Sandy Gravel, trace silt (Previously Grubbed Drainage Access Pit) | 61 ✓ | 0.3-0.9 | | | |
| | | - damp, brown, brown | | | | | |
| 2 | da | Sandy Gravel / Gravelly Sand, trace silt | 62 ✓ | 1.5-2.1 | | | |
| | | - dry to damp, medium dense, light brown | | | | | |
| | | - possibly some gravel loss on sample 62 | | | | | |
| 4 | da | Sandy Silt | 63 x | 3.4-4.0 | | Silty Sand | |
| | | - damp, medium dense, brown | | | | | |
| 11 | da | Gravelly Silty Sand to Silty Sandy Gravel | 64 ✓ | 4.1-4.4 | | | |
| | | - damp, medium dense, brown | | | | | |
| 16' | da | Sandy Silt, trace gravel | 65 x | 4.9-5.5 | | Silty Sandy Gravel | |
| | | - moist to wet, medium dense, brown | | | | | |
| | | - increase moisture to wet @ 5.5m | | | | | |
| | | EOH @ 5.8m | | | | | |

# TEST HOLE LOG

Northing: _____
Easting: _____

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30166 Elev. _____
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: _____
Log By: R.W. Date: July 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Superficial Organics | | | | | |
| | | | | | | | |
| 2.1 | SG | Sandy Gravel, trace silt | 56 ✓ | 0.3-0.9 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | | | | | |
| 5 | ds | Sandy Silt, trace gravel | 57 ✓ | 1.5-1.8 | | Silty Sand | |
| | | - damp, medium dense, brown | | | | | |
| | | | | | | | |
| 8 | dg | Sandy Gravel, some silt to Silty | 58 ✓ | 2.1-2.7 | | | |
| | | - damp to moist, medium dense, brown | | | | | |
| | | | | | | | |
| 13.0 | dg | Silty Sandy Gravel | 59 ✓ | 3.4-4.0 | | | |
| | | - moist, medium dense, brown | | | | | |
| | | - Silty Seams Throughout | | | | | |
| | | | | | | | |
| 18 | dg | Sandy Gravel, some silt to Silty | 60 ✓ | 4.9-5.5 | | | |
| | | - moist, medium dense, brown | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H @ 5.5 | | | | | |
| | | | | | | | |
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# TEST HOLE LOG

Northing: _____
Easting: _____

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30167 Elev. _____
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: _____
Log By: R.W. Date: July 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Surficial Organics | | | | | |
| | | | | | | | |
| .25 | so | Silty Sand, some gravel | | | | | |
| | | - damp, loose, brown | | | | | |
| | | - some organics noted | | | | | |
| | | | | | | | |
| .5 | so | Sandy Gravel, trace silt | S1 ✓ | 0.6-1.2 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | | | | | |
| 5 | dg | Sandy Silty Gravel | S2 × | 1.5-2.1 | | Silty Gravelly Sand | |
| | | - moist, medium dense, brown | | | | | |
| | | | | | | | |
| | dg | Sandy Gravel, trace to some silt | S3 ✓ | 2.3-2.7 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | | | | | | |
| | dg | Sandy Gravel, some silt to Silty | S4 ✓ | 3.4-4.3 | | | |
| | | - damp to moist, medium dense, brown | | | | | |
| | | - some oxidation noted | | | | | |
| | | | | | | | |
| | | | S5 ✓ | 4.9-5.5 | | | |
| | | | | | | | |
| | | E.O.H. @ 5.8 | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

# TEST HOLE LOG

Northing: 6777587
Easting: 631509

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30168 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: July 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| pth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Surficial Organics (previously Cleared) | | | | | |
| 2 | so | Silty Gravelly Sand<br>- damp, loose, brown | 45 x | 0.2-0.6 | | Silty Sand some gravel to Gravelly | |
| 4 | so | Sandy Gravel, trace silt<br>- damp, medium dense, brown | 46 ✓ | 0.6-1.2 | | | |
| 6 | da | Silty Gravelly Sand<br>- moist, medium dense, brown | 47 ✓ | 1.8-2.1 | | | |
| 8 | da | Sandy Gravel, some silt to Silty<br>- damp, medium dense, brown | 48 ✓ | 3.4-4.3 | | | |
| | | | 49 ✓ | 4.6-5.2 | | | |
| 10 | so | Silty Gravelly Silt<br>- moist, firm, light brown w/ some black organics<br>- some gravel in sample from above<br>e.o.h @ 5.8 | 50 x | 5.5-5.8 | | Sandy Silt some gravel | |

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing:
Easting:

Project No: 8002-318 Test Hole No: #: 30169 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: July 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| pth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Surficial Organics (Cleared During Access Prep) | | | | | |
| .2 | SG | Sandy Gravel, trace to some silt | 39 ✓ | 0.3-0.9 | | | |
| | | - Frozen | | | | | |
| | | - brown | | | | | |
| | | | 40 ✓ | 1.5-2.1 | | | |
| | | | 41 ✓ | 2.1-2.7 | | | |
| | | | 42 ✓ | 3.4-4.0 | | | |
| 0 | SG | Sandy Silt, some gravel (Mixture of materials) | 43 ✓ | 4.3-4.9 | | | |
| | | - Frozen | | | | | |
| | | - brown / light brown, some black organics | | | | | |
| | SG | Silty Sand, some gravel | 44 ✓ | 4.9-5.5 | | Sandy Gravel, some silt | |
| | | - Frozen | | | | | |
| | | - brown | | | | | |
| | | E.O.H. @ 5.8m | | | | | |

# TEST HOLE LOG

Northing: 6777845
Easting: 631413

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30170 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: July 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Superficial Organics | | | | | |
| 2 | SG | Gravelly Sand, some silt to Silty | 34 | 0.3-0.9 | | Sandy Gravel, trace silt | |
| | | - frozen | | | | | |
| | | - brown | | | | | |
| | | - some oxidation on gravels noted | | | | | |
| | | | 35 | 1.5-2.1 | | | |
| | | | 36 | 2.9-3.4 | | | |
| | | | 37 | 3.7-4.3 | | | |
| | | | 38 | 4.9-5.5 | | | |
| | | E.O.H. @ 5.8 | | | | | |

# TEST HOLE LOG

Northing: 677798
Easting: 631913

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30171 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: July 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Surficial Organics | | | | | |
| | | - | | | | | |
| -2 | 30 | Silty Gravelly Sand to Gravelly Silty Sand ✓ | 29 ✓ | 0.2-0.5 | | | |
| | | - Frozen | | | | | |
| | | - medium dense, brown | | | | | |
| | | | 30 ✓ | 0.6-1.2 | | | |
| | | | | | | | |
| | da | Silty Sand | 31 X | 1.8-2.4 | | Gravelly Silty Sand | |
| | | - Frozen | | | | | |
| | | - medium dense, brown | | | | | |
| | | - some organic silts noted | | | | | |
| | | | | | | | |
| | da | Sandy Silt, some gravel | 32 ✓ | 3.0-3.7 | | | |
| | | - Frozen, visible ice crystals to 1cm in clusters (ice rich) | | | | | |
| | | - | | | | | |
| | | | | | | | |
| | da | Sandy Silt, trace gravel | 33 ✓ | 4.6-5.2 | | | |
| | | - frozen no visible ice | | | | | |
| | | - brown & grey | | | | | |
| | | - some wood pieces noted | | | | | |
| | | | | | | | |
| | | E.O.H. @ 5.8m | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | * Real Mixture of Various Soils (Possible old Slide Area) | | | | | |

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
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# TEST HOLE LOG

Northing: 6778136
Easting: 631432

Project No: 8002-318 Test Hole No: #: 30172 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: July 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Surficial Organics | | | | | |
| 0.2 | SD | Silty Gravelly Sand<br>- moist to wet, loose, brown<br>- organics noted throughout | 23 ✓ | 0.3-0.9 | | | |
| 1.5 | da | Sandy Silt<br>- saturated, medium dense, brown | 24 ✗ | 1.5-1.8 | | Silty Sand | |
| | | | 25 ✗ | 2.1-2.7 | | | |
| 3.0 | da | Silty Sand to Sand, some silt<br>- saturated, medium dense, brown | 26 ✓ | 3.4-4.3 | | | |
| | da | Gravelly Silty Sand<br>- saturated, dense, grey w/ blue hue | 27 ✓ | 4.9-5.2 | | | |
| 5 | da | Sandy Silt to Silt, some sand<br>- moist, firm to stiff, grey w/ blue hue | 28 ✓ | 5.5-5.9 | | | |
| | | E.O.H. @ 5.9m | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: _____
Easting: _____

Project No: 8002-318 Test Hole No: #: 30173 Elev. _____
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: _____
Log By: R.W. Date: July 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| GRAVEL | SAND | SILT | CLAY |
|---|---|---|---|
| 5mm | 0.74mm | | .002mm |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Surficial Organics | | | | | |
| 0.2 | so | Silt<br>- saturated, soft, grey/brown<br>- moderate organics | 18 ✓ | 0.2-0.6 | | | |
| 0.8 | so | Silt, some sand<br>- Frozen, visible ice crystals to 3mm in clusters<br>- soft, grey/brown w/ some black organic silts | 19 ✓ | 0.8-1.2 | | | |
| 1.8 | so | Sandy Silt<br>- Frozen, no visible ice<br>- medium dense, grey/brown | 20 ✓ | 1.8-2.4 | | Sandy Gravelly Silt | |
| 3.7 | do | Sandy Silt<br>- Frozen<br>- medium dense, light brown | 21 ✓ | 3.7-4.3 | | | |
| 4.9 | do | As Above<br>- grey/brown | 22 ✓ | 4.9-5.5 | | | |
| | | E.O.H. @ 5.9m | | | | | |

# TEST HOLE LOG

Northing: _____
Easting: _____

**HOGGAN ENGINEERING & TESTING (1980) LTD.**
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30174 Elev. _____
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: _____
Log By: R.W. Date: July 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Silt, some sand | 12 ✓ | 0-0.6 | | | |
| | | - damp, firm, non plastic, grey | | | | | |
| | | - some oxidation | | | | | |
| | | - some organics throughout | | | | | |
| 0.6 | so | Organic Silts | 13 ✓ | 0.6-1.2 | | | |
| | | - saturated, soft, black/dark brown | | | | | |
| 1.5 | da | Silty Gravelly Sand to Gravelly Silty Sand | 14 ✓ | 1.8-2.7 | Hit mud & sample on augers | | |
| | | - saturated, medium dense, brown | | | | | |
| | | - some silt in sample 14 could be from top of hole | | | | | |
| 2.7 | da | Silty Sand | 15 ✓ | 3.7-4.0 | | | |
| | | - saturated, medium dense, grey | | | | | |
| 3.2 | so | Silt, trace to some sand | 16 ✓ | 4.0-4.4 | | | |
| | | - wet, firm, dark brown | | | | | |
| 4.6 | da | Silt, some sand to Sandy Silt | 17 ✓ | 4.9-5.5 | | | |
| | | - wet, firm, grey | | | | | |
| | | - odd interbedded gravels to 20mm | | | | | |
| | | - some organics noted | | | | | |
| | | - E.O.H. @ 5.9m | | | | | |
| | | Test hole 12m From Direct Intersection (Standing Water) | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6778568
Easting: 631597

Project No: 8002-318 Test Hole No: #: 30175 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: July 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Sandy Gravel, trace silt (Existing Road Shoulder) | 7 ✓ | 0.3-0.9 | | | |
| | | - damp, loose, brown | | | | | |
| | | | | | | | |
| 0 | do | Sandy Gravel, trace to some silt | 8 ✓ | 2.0-2.9 | | | |
| | | - saturated, medium dense, brown | | | | | |
| | | | | | | | |
| .0 | do | Gravelly Sand, trace to some silt. | 9 ✓ | 3.0-3.7 | | | |
| | | - Frozen | | | | | |
| | | - some decomposed organics noted between 3.0-4.6 (wood pieces) | | | | | |
| | | | | | | | |
| | | | 10 ✓ | 3.7-4.3 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | 11 ✓ | 4.9-5.5 | | | |
| | | | | | | | |
| | | E.O.H.e 5.9m | | | | | |

# TEST HOLE LOG

Northing: 6778670
Easting: 631642

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30176 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: July 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| GRAVEL (5mm) | SAND (0.74mm) | SILT | CLAY (.002mm) |
|---|---|---|---|

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | SANDY GRAVEL, some silt (EXISTING ROAD SHOULDER) | 1 ✓ | .2 - .5 | | | |
| | | - damp to moist, loose, brown | | | | | |
| 6 | so | ORGANIC SILTS (ORIGINAL GRADE) | 2 ✓ | .6 - 1.2 | | | |
| | | - damp, soft, dark brown | | | | | |
| 5 | so | GRAVELLY SAND, trace silt | 3 ✓ | 1.5 - 2.1 | | | |
| | | - moist to wet, medium dense, brown | | | | | |
| 4 | da | SILTY SAND, some gravel | 4 ✓ | 2.4 - 2.9 | | | |
| | | - wet, medium dense, brown | | | | | |
| | | - some sample contamination from above | | | | | |
| 4 | da | SILTY GRAVELLY SAND TO GRAVELLY SILTY SAND | 5 ✓ | 3.7 - 4.3 | | | |
| | | - FROZEN | | | | | |
| | | - medium dense, brown | | | | | |
| | | | 6 ✓ | 4.9 - 5.5 | | | |
| | | E.O.H @ 5.8m | | | | | |

Km 1691.7 to 1717.3 Alaska Highway #1

August 2004

J. R. Paine & Associates

Rock Drill Field Logs
(Reverse Circulation Air Rotary)

| | |
|---|---|
| Testholes | 30084 R to 30093 R |
| | 30096 R to 30097 R |
| | 30100 R to 30107 R |
| | 30111 R to 30118 R |
| | 30121 R to 30122 R |
| | 30126 R to 30127 R |
| | 30129 R |
| | 30131 R to 30136 R |
| | 30149R to 30151 R |
| | 30153 R to 30159 R |

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6769273
Easting: 635[illegible]

Project No: 8002-318 Test Hole No: #: 30084-Rock Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 22 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | As Per Soils Log 30084 | | | | | |
| | | Sand, some silt & Silty | [redacted] | 1.8 | | | |
| | | - dense, medium dense, brown | | | | | |
| | | - some rock chips and some gravel to Gravelly | | | | | |
| | | As Above | [redacted] | 3.4 | | | |
| | | - possibly denser @ 10' | | | | | |
| | | | [redacted] | 5.5 | | | |
| 6.1 | | Weathered Gravel | [redacted] | 6.4 | | | |
| | | - dense | | | | | |
| 6.9 | SD | Rock | #5 | 7.3 | Just | Powder Due to Drilling Some powder | |
| | | - dense, light beige/grey | | | | | |
| | | - fizzing powder | #6 | 8.5 | Grab | | |
| 9.9 | | E.O.H. @ 9.9 | | | | | |
| | | | | | | | |
| | | | | | | | |
| | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
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# TEST HOLE LOG

Northing: 6769366
Easting: 635154

Project No: 8002-318 Test Hole No: #: 30085 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: SEPT. 22 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" GRAVEL 5mm SAND 0.74mm SILT .002mm CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | As Per Same Log 30085 | | | | | |
| 0 | | Sand, some silt to Sandy | R7 | 3.0 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | - some rock chips (minimal) | | | | | |
| 3.8 | SB | Rock | [illegible] | 4.3 | | | |
| | | - dense, grey | | | | | |
| | | - rock chips to 20mm | | | | | |
| | | As Above | [illegible] | 5.2 | | | |
| | | - rock chips to 15mm | | | | | |
| | | As Above | R10 | 6.1 | | | |
| | | - rock chips to 5mm | | | | | |
| | | E.O.H. @ 7.0 | | | | | |
| | | HOLE IS SOUTH OF 30085 DUE TO ALIGN LOCAL DRAINAGE | | | | | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
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# TEST HOLE LOG

Northing: 6769428
Easting: 635135

Project No: 8002-318 Test Hole No: #: 30086 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept 22/23 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm
GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | As Per Sand Log 30086 | | | | | |
| | | Sand, some silt, some rock chips | | 1.15 | | | |
| | | - damp medium dense, brown | | | | | |
| 1.8 | | Sand, some silt to Silty, rock chips | | 3.7 | | | |
| | | - moist, dense, | | | | | |
| | | - Possibly Frozen | | | | | |
| | | - not going through air to well, plugging it | | | | | |
| | | Sand, trace to some silt | | 5.2 | | | |
| | | - moist, dense, | | | | | |
| | | - still going (possibly due to moisture) | | | | | |
| | | As Above | | 6.7 | | | |
| | | - trace silt, some rock chips | | | | | |
| 7.6 | | Sand/Silt (Bouldery) | | 7.6 | | | |
| | | - some rock chips & some rounded stone | | | | Tests 2 cobbles or boulders encountered | |
| | | - light beige, dry | | | | | |
| | | As Above | | 8.8 | | | |
| | | - dark grey | | | | | |
| | | | | 10.7 | | | |
| 12.5 | | Rock | B18 | 12.8 | | | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6765428
Easting: 635135

Project No: 8002-318 Test Hole No: #: 36086 R (PGW3) Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Sept. 22/23 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | As Above | B19 | 15.2 | | | |
| | | - minimal chips in sample due to bad diverter seal | | | | | |
| | | E.O.H. @ 15.5 | | | | | |
| | | NOTE: CHANGED FROM CASING B.H. @ 13.4. B.H. STEM + .6 OF 1ST STEM WAS WET. POSSIBLY GROUNDWATER OR BOREHOLE INTERFACE | | | | | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
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# TEST HOLE LOG

Northing: 6769474
Easting: 635128

Project No: 8002-318 Test Hole No: #: 30087 R Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Sept. 23 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | As per Soils Log 30087 | | | | | |
| | | Sandy, some silt, trace to some gravels | [illegible] | 2.4m | | | |
| | | - damp, brown | | | | | |
| | | Sandy some gravel to Gravelly, trace silt | [illegible] | 5.2 | | | |
| | | - damp, brown | | | | | |
| | | - some rock chips | | | | | |
| 6.1 | GC | Gravelly Sandy, trace silt | R22 | 6.7 | | | |
| | | - damp brown | | | | | |
| | | - rock chips | | | | | |
| | | | R23 | 8.5 | | | |
| 9.8 | So | Rock | R24 | 10.7 | | | |
| | | - dry, grey | | | | | |
| | | - mostly granular, some chips | R25 | 12.2 | | | |
| | | E.O.H. @ 12.8 | | | | | |
| | | NOTE: Water approx 7.3-10.4 Below: H2O / mud came out of hole | | | | | |
| | | Possible H2O seam near 7.3 | | | | | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
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# TEST HOLE LOG

Northing: 6769513
Easting: 635110

Project No: 8002-318 Test Hole No: #: 30088 & Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept 23, 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | | | | | No Samples - Top 3.0m | |
| | | As Per Soils Log 30088 | | | | Refusal on | Practical |
| | | | | | | | |
| | | Sandy Gravel: | [redacted] | [redacted] | | | |
| | | - damp, brown | | | | | |
| | | - rock chips | | | | | |
| | | | R27 | 5.5 | | | |
| | | | | | | | |
| 6.7 | SO | Rock | R28 | 7.3 | | | |
| | | - dry, grey | | | | | |
| | | - rock chips | | | | | |
| | | | R29 | 8.8 | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 9.8 | | | | | |

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# TEST HOLE LOG

Northing: 6769602
Easting: 635080

Project No: 8002-318 Test Hole No: #: 30089 B Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 24 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | | SAND | | SI LT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | As Per Sonic Log 30089 | | | | | |
| | | | | | | | |
| 0.5 | SS | Rock | R30 | 1.5m | - | | |
| | | - dry, grey | | | | | |
| | | | | | | | |
| | | | R31 | 2.7m | | | |
| | | | | | | | |
| | | E.O.H. @ 3.4m | | | | | |
| | | - Continue Diamond to 4670 Plus Casing | | | | | |
| | | | | | | | |
| | | | | | | | |
| | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
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# TEST HOLE LOG

Northing: 6769661
Easting: 635065

Project No: 8002-318 Test Hole No: #: 30090 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 12 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As per Soils Log 30090 | | | | | |
| 1.5 | SA | Rock | R32 | 2.1m | | Sample from Top of Hole Cyclone Dirt Inclusions | |
| | | - dry, grey | | | | | |
| | | | R33 | 3.7m | | | |
| | | E.O.H. @ 4.3 | | | | | |
| | | No Casing | | | | | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6769700
Easting: 635045

Project No: 8002-318 Test Hole No: #: 30091 Q Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 24 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soils Log 30091 | | | | | |
| | | | | | | | |
| 1.0 | So | Rock | B34 | 1.5' | | Top of Hole Sample | |
| | | - dry, grey | | | | | |
| | | | | | | | |
| | | | B35 | 3.0 | | Top of Hole Sample | |
| | | | | | | | |
| | | E.O.H. @ 4.0 | | | | | |
| | | | | | | | |
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| | | No Casing. | | | | | |
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HOGGAN ENGINEERING & TESTING (1980) LTD.
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# TEST HOLE LOG

Northing: 6769762
Easting: 634998

Project No: 8002-318 Test Hole No: #: 30092 B Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept 24, 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soils Log 30092 | | | | | |
| 4.9 | SA | Rock | R36 | 55 | | | |
| | | - dry, grey | | | | | |
| | | | R37 | 70 | | | |
| | | E.O.H. @ 7.9 | | | | | |

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# TEST HOLE LOG

Northing: 6769812
Easting: 634965

Project No: 8002-318 Test Hole No: #: 30093 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 24 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As per Soils Log 30093 | | | | | |
| | | Sandy Silt / Silty Sand, some gravel | [illegible] | 2.4m | | | |
| | | - moist, brown | | | | | |
| | | Sandy, trace to some silt, some gravel | [illegible] | 7.6m | | | |
| | | - damp to moist, brown | | | | | |
| | | - some rock chips | | | | | |
| 7.6 | 50 | Possibly Rock | | | | | |
| | | - some rock chips, some sand, minor gravel/silt. | | | | | |
| 8.5 | 50 | Rock | R40 | 8.8 | | | |
| | | - dry, grey | | | | | |
| | | | R41 | 10.4 | | | |
| | | E.O.H.E 10.7 | | | | | |

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# TEST HOLE LOG

Northing: 6769886
Easting: 634897

Project No: 8002-318 Test Hole No: #: 30096 E Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Sept 24 2004

MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soils Log 30096 | | | | | |
| | | | | | | No Sample Wash core | |
| | | | | | | - Too wet/mud. | |
| | | Gravelly Silty Sand | [redacted] | 7.0 | | | |
| | | - moist to wet, brown | | | | | |
| | | Gravelly Sand, some silt | [redacted] | 10.1 | | | |
| | | - some, brown | | | | | |
| 10.7 | | Very Dense - Very Sand. No interpretation of Rock | | | | | |
| | | Gravelly Silty Sand to Silty Gravelly Sand | B44 | 12.5 | | | |
| | | - more to moist, brown | | | | | |
| 13.7 | | Possibly Rock or Gravel/Cobble Seams | B45 | 14.3 | | | |
| | | - moist, brown | | | | | |
| | | - Bit Refusal at (Dense Boulders) | | | | | |
| | | - Some rounded stone (presumably for not Bedrock) | | | | | |
| | | - minimal powder out core | | | | | |
| | | E.O.H. @ 14.3 | | | | | |

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# TEST HOLE LOG

Northing: 6770133
Easting: 634803

Project No: 8002-318 Test Hole No: #: 30097 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 24 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soils Log 30097 | | | | No Sample due to Plugged Sides | |
| | | Rock Boulder at TP 10'-12' | | | | | |
| | | Gravelly Sandy Silt to Gravelly Silt Sand - wet, brown - some rock chips | R46 | 6.7 | | | |
| | | | R47 | 9.1 | | | |
| 9.8 | dg | Gravelly Sand, some silt to Silty - damp to moist, brown | R48 | 10.4 | | | |
| 12.5 | dg | Sandy Gravel, trace to some silt - damp, brown | R49 | 12.8 | | | |
| | | | R50 | 14.9 | | | |
| | | E.O.H.@ 15.2 | | | | | |

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# TEST HOLE LOG

Northing: 6770540
Easting: 634627

Project No: 8002-318 Test Hole No: #: 30100 R Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Sept. 25 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soil Log: 30100 | | | | | |
| 12.2 | da | Rock | RS1 | 14.0 | | | |
| | | - soft, dark brown w/ purple hue | | | | | |
| 14.9 | da | Rock | RS2 | 15.8 | | | |
| | | - hard, grey w/ purple hue | | | | | |
| | | E.O.H. @ 16.2 | | | | | |
| | | Air hose ruptured @ 13.1m. Stopped to change Air Hose. Broken section (Air Lock). | | | | | |

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# TEST HOLE LOG

Northing: 6770659
Easting: 634653

Project No: 8002-318 Test Hole No: #: 30101R Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Sept. 25 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soils Log 30101 | | | | | |
| | | | | | | | |
| 2.4 | Sa | Rock | R53 | 4.0 | | (Top of Hole Sample) | |
| | | -dry, grey | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 4.6m | | | | | |

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# TEST HOLE LOG

Northing: 6770744
Easting: 634647

Project No: 8002-318 Test Hole No: #: 30102 B Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Sept. 25 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soil Log | | | | | |
| 1.2 | 3a | Rock | RS4 | 1.8 | | | |
| | | - dry, grey | | | | | |
| | | | RS5 | 3.4 | | | |
| | | E.O.H. @ 3.4 | | | | | |

# TEST HOLE LOG

Northing: 6770854
Easting: 639648

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Project No: 8002-318 Test Hole No: #: 30103 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 25 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

| GRAVEL | SAND | SILT | CLAY |
|---|---|---|---|

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | At Pond Survey Loc 30103 | | | | | |
| 3.4 | SO | Rock | R56 | 4.0 | | | |
| | | - dry, grey | | | | | |
| | | | R57 | 55 | | | |
| | | E.O.H.e 7.3 | | | | | |

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# TEST HOLE LOG

Northing: 6770967
Easting: 634604

Project No: 8002-318 Test Hole No: #: 30104 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 25 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soil Log 30104 | | | | | |
| 4.0 | 50 | Rock | RSB | 4.6 | | Top of Hole Sample | |
| | | - dry, grey | | | | | |
| | | | RS7 | 6.1 | | Core Sample | |
| | | End @ 7.0 | | | | | |

# TEST HOLE LOG

Northing: 6771151
Easting: 634529

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Project No: 8002-318 Test Hole No: #: 30105 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 26 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soils Log 30105 | | | | | |
| | | | | | | | |
| | | | | | | | |
| 4.9 | SO | Rock | R64 | 5.2 | | | |
| | | - dry, grey | | | | | |
| | | | | | | | |
| | | | R65 | 6.7 | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 7.6 | | | | | |

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# TEST HOLE LOG

Northing: 6711014
Easting: 634672

Project No: 8002-318 Test Hole No: #: 30106 R Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Sept 26 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As per Soils Log 30106 | | | | | |
| | | | | | | | |
| 1.2 | Sa | Rock (possibly fractured/broken to 1.5m) | R60 | 2.1 | | Core Sample | |
| | | - dry, grey | | | | | |
| | | | | | | | |
| | | | R61 | 3.7 | | Core Sample | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 4.6 | | | | | |

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# TEST HOLE LOG

Northing: 6771070
Easting: 634575

Project No: 8002-318 Test Hole No: #: 30107 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 26 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | | .002mm |
|---|---|---|---|---|---|---|
| GRAVEL | | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soils Log 30107 | | | | | |
| 1.2 | So | Rock | R62 | 2.1 | | Core Sample | |
| | | - dry, grey | | | | | |
| | | | R63 | 3.1 | | Core Sample | |
| | | E.O.H. @ 4.3 | | | | | |

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# TEST HOLE LOG

Northing: 6771629
Easting: 634480

Project No: 8002-318 Test Hole No: #: 3011 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 26 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 0.9 | | Rock | R66 | 1.8 | | Top of hole | |
| | | - very. grey | | | | | |
| | | | R67 | 3.4 | | Top of hole | |
| | | | | | | | |
| | | | | | | | |
| | | Cont. to 40 | | | | | |
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# TEST HOLE LOG

Northing: 6771772
Easting: 634470

Project No: 8002-318 Test Hole No: #: 30112 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept 26 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm
GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Sample 30112 | | | | | |
| 3.0 | SD | Rock (Possibly Fractured & Broken) Some Sand in Between - dry/grey | | | | | |
| | | - Intact @ 4.0 | R66 | 4.3 | | | |
| | | E.O.H. @ 4.6 | | | | | |

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# TEST HOLE LOG

Northing: 6771880
Easting: 634441

Project No: 8002-318 Test Hole No: #: 30113 B Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 26 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As per Soils Log 30113 | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1.8 | SO | Rock | | | | | |
| | | | | | | | |
| 2.4 | SO | Intact | R69 | 4.0 | | Jar = Hard | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 4.6 | | | | | |

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# TEST HOLE LOG

Northing: 677 2023
Easting: 634886

Project No: 8002-318 . Test Hole No: #: 30114 8 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 27, 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm
GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soils Log 30114 | | | | | |
| 3.0 | 30 | Rock | | | | | |
| | | -Possibly fractured w/ some sand in-fill | | | | | |
| | | - medium dense | | | | | |
| 4.0 | | Rock | R70 | 4.3 | | | |
| | | -intact | | | | | |
| | | E.O.H. @ 4.6m | | | | | |

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# TEST HOLE LOG

Northing: 6772108
Easting: 634337

Project No: 8002-318 Test Hole No: #: 30115 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 27 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Test Hole 30115 | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1.8 | SP | Brown Gravelly / Cobbles | | | | | |
| | | - light brown / grey | | | | | |
| | | - | | | | | |
| | | | | | | | |
| 3.4 | SP | Rock | R73 | 3.7 | | | |
| | | - Some powder (not fine) | | | | | |
| | | - Some sand in sample | | | | | |
| | | - water on stem when withdrawn | | | | | |
| | | - medium dense rock | | | | | |
| | | | | | | | |
| | | E.O.H. @ 4.6 | | | | | |

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# TEST HOLE LOG

Northing: 6772107
Easting: 634309

Project No: 8002-318 Test Hole No: #: 30116 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 27 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Dr. Sand Loc 30116 | | | | | |
| | | - natural gravels & rock chips @ 1.5m | | | | | |
| | | | | | | | |
| 1.5 | SI | Base in Formation To = 3.0 | B71 | 40 | | | |
| | | - still some sand coming out core/up hole. | | | | | |
| | | - dry, grey. | | | | | |
| | | - medium dense rock. | | | | | |
| | | E.O.H. @ 4.6m | | | | | |

# TEST HOLE LOG

Northing: 6772253
Easting: 634224

Project No: 8002-318 Test Hole No: #: 30117 R Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Sept. 27 2004

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**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Survey Log 30117 | | | | | |
| | | | | | | | |
| | | | | | | | |
| 34 | SA | Rock or Gravel Strata | R72 | 6.1 | | | |
| | | - brown dry | | | | | |
| | | - not much powder, possibly soft rock | | | | | |
| | | - some conglomerate in sample (not frozen) | | | | | |
| | | | | | | | |
| | | E.O.H. @ 6.7 | | | | | |
| | | | | | | | |
| | | | | | | | |
| | |

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# TEST HOLE LOG

Northing: 6772274
Easting: 634185

Project No: 8002-318 Test Hole No: #: 30118' R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 27 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soil Log 30118 | | | | | |
| | | | | | | | |
| | | | | | | | |
| 3.0 | 30 | Rock | 1274 | 4.3 | | Top of hole Sample | |
| | | - Primarily grey dry | | | | | |
| | | - lots of rock chips | | | | | |
| | | | | | | | |
| | | E.O.H. @ 4.6 | | | | | |

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# TEST HOLE LOG

Northing: As Per 30121 Soils
Easting:

Project No: 8002-318 Test Hole No: #: 30121 R Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Sept 27 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soils Log 30121 | | | | | |
| | | | | | | | |
| | | | | | | | |
| 3.0 | SC | Rock | R75 | 4.6 | | | |
| | | - Shy, Grey | | | | | |
| | | - some Powder | | | | | |
| | | - medium dense rock | R76 | 7.0 | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 7.6 | | | | | |
| | | | | | | | |
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# TEST HOLE LOG

Northing: 6772688
Easting: 633923

Project No: 8002-318 Test Hole No: #: 30122 R Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Sept. 27 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Sons Log 30122 | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Silty Sandy Gravel | 877 | 6.7 | | Top of Hole Samples - Contained Cuttings | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | EOH @ 7.6m No Rock | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Rock Fragments Approx 1m thick Elevated Due To | | | | | |
| | | Creek Nose Bedrock Soft ? With Gravel Possibly | | | | | |
| | | Solid Wash Cuttings Sampled. | | | | | |
| | | | | | | | |
| | | | | | | | |
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| | |

# TEST HOLE LOG

Northing: 6773197
Easting: 633699

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Project No: 8002-318 Test Hole No: #: 30126 B Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: SEPT 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Sonic Log 30126 | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1.8 | So | Rock | R78 | 3.0 | | | |
| | | • dry, grey | | | | | |
| | | • medium dense to dense rock. | | | | | |
| | | | R79 | 4.3 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 4.6m | | | | | |
| | | | | | | | |
| | | | | | | | |
| | |

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# TEST HOLE LOG

Northing: 6773336
Easting: 633614

Project No: 8002-318 Test Hole No: #: 30127 12 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: SEPT. 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soils Log 30127 | | | | | |
| 3.7 | >> | Silty Sand (Cannot Determine Rock) | RBO | 4.9 | | | |
| | | - dry to damp, brown / grey | | | | | |
| | | - minimal chips in sample | | | | | |
| | | - matrix has minimal boulder, more fine sands | RB1 | 7.0 | | | |
| | | - drill advanced steadily - No hard drilling | | | | | |
| | | EOH: 27.6 | | | | | |

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# TEST HOLE LOG

Northing: 6773477
Easting: 633527

Project No: 8002-318 Test Hole No: #: 30129 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As per Soil Log 30129 | | | | | |
| 3.7 | SG | Sandy Gravel (Not Recovered if Frozen) | R82 | 5.2 | | | |
| | | - dry, brown/grey | | | | | |
| | | - some clay, min mst present | | | | | |
| | | - steady drilling. | | | | | |
| 7.0 | SG | Rock | R83 | 7.3 | | | |
| | | - slightly moist | | | | | |
| | | - grey, dry | | | | | |
| | | Entire 7.6 | | | | | |

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# TEST HOLE LOG

Northing: 6773655
Easting: 633418

Project No: 8002-318 Test Hole No: #: 30131 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept 28- 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

| GRAVEL | SAND | | SILT | CLAY |
|---|---|---|---|---|

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soil Log 30131 | | | | | |
| | | | | | | | |
| | | | | | | | |
| 3.4 | SG | Rock | RB4 | 4.0 | | | |
| | | - dry, grey | | | | | |
| | | - significant powder | | | | | |
| | | - minimal rock chips | | | | | |
| | | | | | | | |
| 4.9 | | As Above | RB5 | 5.8 | | | |
| | | - increase fuel chips | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 6.1 | | | | | |
| | | | | | | | |
| | | | | | | | |
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# TEST HOLE LOG

Northing: 6773786
Easting: 633333

Project No: 8002-318 Test Hole No: #: 30132 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept.28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soils Log 30132. | | | | | |
| | | | | | | | |
| | | | | | | | |
| 3.4 | SO | Rock - (Possibly Fractured) | | | | | |
| | | - clay, grey w/ odd brown seam | | | | | |
| | | | | | | | |
| 4.6 | do | Rock (Intact) | R82 | 4.6 | | | |
| | | - dry, grey | | | | | |
| | | - significant fracture | | | | | |
| | | - rock chips | | | | | |
| | | | R83 | 6.1 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | EOH @ 6.1 | | | | | |
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# TEST HOLE LOG

Northing: 6773908
Easting: 633264

Project No: 8002-318 Test Hole No: #: 30133 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soil Log 30133 | | | | | |
| | | | | | | | |
| | | | | | | | |
| 2.4 | so | Rock | R88 | 4.0 | | | |
| | | - dry, grey | | | | | |
| | | - significant powder | | | | | |
| | | - rock chips | | | | | |
| | | - more intact (slower drilling w/ depth) | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | ∈ 0.4 - 4.6 | | | | | |
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# TEST HOLE LOG

Northing: 6714009
Easting: 63355

Project No: 8002-318 Test Hole No: #: 30134 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soil Log 30134. | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1.2 | SO. | Rock | R89 | 2.1 | | Too Soft to Take Sample Properly | |
| | | - dry, grey | | | | | |
| | | - significant powder. | | | | | |
| | | - rock chips | R90 | 4.0 | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 4.0 | | | | | |
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# TEST HOLE LOG

Northing: 6774140
Easting: 633064

Project No: 8002-318 Test Hole No: #: 30135 R Elev. -

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: SEPT 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As per Soil Log 30135 | | | | | |
| | | | | | | | |
| | | | | | | | |
| 2.4 | SS | Rock | | | | | |
| | | - Possibly fractured (some brownish zones/powder zones) | | | | | |
| | | - some powder | | | | | |
| | | | | | | | |
| 3.7 | BS | Rock | B51 | 40 | | Too of Hole | Samples |
| | | - intact | | | | - mostly | Chips |
| | | - powdery / rock chips | | | | | |
| | | - dry, grey | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 4.6 | | | | | |
| | | | | | | | |
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# TEST HOLE LOG

Northing: 6774199
Easting: 633004

Project No: 8002-318 Test Hole No: #: 30136 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept 28 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soil Log 30136 | | | | | |
| 2.4 | 50 | Rock | R98 | 3.0 | | | |
| | | - dry, grey | | | | | |
| | | - more intact w/ depth | | | | | |
| | | - significant powder, rock chips | | | | | |
| | | | R98 | 4.3 | | | |
| | | E 0.4 @ 4.6 | | | | | |

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# TEST HOLE LOG

Northing: 6775671
Easting: 623981

Project No: 8002-318 Test Hole No: #: 30149 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 30 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Sample Log 30149 | | | | | |
| 4.9 | | Rock | RT | 5.2 | | | |
| | | - dry - grey | | | | | |
| | | - significant boulder, rock chips | | | | | |
| | | - slow steady drilling | | | | | |
| | | | 125 | 7.6 | | | |
| | | E.O.H. @ 7.6 | | | | | |

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# TEST HOLE LOG

Northing: 6775744
Easting: 631923

Project No: 8002-318 Test Hole No: #: 30150 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 30 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Sonic Log 30150 | | | | | |
| 11.3 | | Silty Sand, some gravel | | 11.6 | | | |
| | | - dry to damp, grey/brown | | | | | |
| 13.7 | | Silty some sand (Powder) [Possible rock] | R123 | 13.7 | | | |
| | | - dry, grey | | | | | |
| | | - steady drilling | | | | | |
| | | - minimal chips, mostly powder. | R123 | 16.5 | | | |
| | | E.O.H. @ 16.5 | | | | | |

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# TEST HOLE LOG

Northing: 6775818
Easting: 631865

Project No: 8002-318 Test Hole No: #: 30151 E Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 30 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soils Log 30151 | | | | | |
| 4.3 | | Sand, some silt to silty, some gravel - damp, brown | R112 | 4.3 | | | |
| 5.2 | | Gravelly Sand, some silt - dry, brown | | | | | |
| 6.1 | | Sand, some silt - dry to damp, brown | R113 | 6.1 | | | |
| 7.3 | | Sand, some gravel, some silt - dry to damp, brown | R114 | 8.5 | | | |
| 9.1 | | Sand, trace to some silt, trace gravel - damp, brown | R115 | 10.1 | | | |
| 10.4 | | Sandy Gravel, trace silt - damp, brown | | | | | |
| 11.3 | | Gravelly Sand, some silt to silty - damp, brown | | | | | |

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# TEST HOLE LOG

Northing: 6775818
Easting: 631865

Project No: 8002-318 Test Hole No: #: 3015) & 8002 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: 2004

## MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 11.3 | | Silty Sand / Sandy Silt | R116 | 11.9 | | | |
| | | - dry, brown | | | | | |
| | | - powdery | | | | | |
| 12.8 | | Sand some silt to Silty (Possibly the same as above but not pulverized and direct from compressor | R117 | 13.1 | | | |
| | | - damp, dark brown | | | | | |
| 13.7 | | Silty Sand / Sandy Silt, (Possible rock?) - No | R118 | 14.6 | | | |
| | | - dry, grey | | | | | |
| | | - minimal drops (if at all), almost pure powder / fine sand | | | | | |
| 14.9 | | Sand, some silt to Silty | R119 | 15.2 | | | |
| | | - dry to damp, grey | | | | | |
| 15.8 | | Silty Sand, some gravel (CANNOT DETERMINE IF ROCK) | R120 | 18.3 | | | |
| | | - dry, grey | | | | | |
| | | - some power, some rock chips | | | | | |
| | | - easy drilling, lots of discharge | | | | | |
| | | E.O.H. @ 19.8 | | | | | |
| | | NOTE: STEPS WET BELOW 13.4' DUE TO WATER | | | | | |

# TEST HOLE LOG

Northing: 6776014
Easting: 631723

Project No: 8002-318 Test Hole No: #: 30153 R Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Sept. 30 2004

HOGGAN ENGINEERING & TESTING (1980) LTD.
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**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Sonic Log 30153 | | | | | |
| | | | | | | | |
| | | | | | | | |
| 7.9 | | Sand, some silt | R108 | 8.2 | | | |
| | | - dry to damp, light brown | | | | | |
| | | | | | | | |
| | | Silty Sand | R109 | 10.1 | | | |
| | | - dry, light grey/brown | | | | | |
| | | - some powder, no chips | | | | | |
| | | | | | | | |
| 11.3 | SS | Silt, some sand ? | R110 | 12.2 | | | |
| | | - dry, dark brown | | | | | |
| | | - powdery | | | | | |
| | | - easy drilling | | | | | |
| | | | | | | | |
| 14.9 | SS | Poor | R111 | 15.2 | | | |
| | | - dry, grey | | | | | |
| | | - steady drilling | | | | | |
| | | - significant powder, rock chips | | | | | |
| | | | | | | | |
| | | E.O.H. @ 16.2 | | | | | |
| | | | | | | | |
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# TEST HOLE LOG

Northing: As Per 30154 Sam
Easting:

Project No: 8002-318 Test Hole No: #: 30154 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 29 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm
GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Sam Log 30154 | | | | | |
| 10.7 | | Silty Sand, to Sand, some silt | R105 | 11.0 | | | |
| | | - dry to damp, brown | | | | | |
| | | - slow drilling | | | | | |
| 12.8 | sa | Rock (Potential Boulder / Fractured Bedrock) | R106 | 13.1 | | | |
| | | - dry, grey | | | | | |
| | | - significant powder / chips | | | | | |
| | | - steady drilling | | | | | |
| 14.6 | sa | Sand, some silt | 907 | 14.6 | | | |
| | | - dry + dense, brown | | | | | |
| | | E.O.H. @ 15.2 | | | | | |

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# TEST HOLE LOG

Northing: 6776114
Easting: 631648

Project No: 8002-318 Test Hole No: #: 30155 R Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 29 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soils Log 30155 | | | | | |
| | | Sandy Gravel, trace to some silt | R101 | 8.5 | | | |
| | | - damp to moist, brown | | | | | |
| 10.4 | da | Gravelly Sand, some silt | R102 | 10.7 | | | |
| | | - damp, brown | | | | | |
| 11.6 | da | Sand, some silt to Silty, some gravel | R103 | 12.8 | | | |
| | | - damp, brown (grey) | | | | | |
| | | - very slow drilling (hammer plugging) | | | | | |
| 14.6 | da | Sand, some silt to Silty | R104 | 15.2 | | | |
| | | - damp, brown | | | | | |
| | | - very slow drilling (hammer plugging) | | | | | |
| | | E.O.H. @ 15.2 | | | | | |
| | | NO INDICATION OF ROCK | | | | | |

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# TEST HOLE LOG

Northing: 6776190
Easting: 631591

Project No: 8002-318 Test Hole No: #: 30156 R Elev:
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location:
Log By: R.W. Date: Sept. 29 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soils Log 30156 | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 13.1 | | Silty Sand. | R99 | 14.6 | | Depth may be off as hole was plugged. | |
| | | - damp, grey | | | | | |
| | | - steady drilling | R100 | 16.8 | | | |
| | | - no significant rock chips or gravel. | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. = 19.8 | | | | | |
| | | | | | | | |
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# TEST HOLE LOG

Northing: 6776191
Easting: 631651

Project No: 8002-318 Test Hole No: #: 30157-8 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Sept. 29 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | .002mm |
|---|---|---|---|
| GRAVEL | SAND | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soils Log 30157 | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Sandy Gravel, trace silt. | R98 | 6.7 | | | |
| | | - dry, brown/grey | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H.E 7.0 | | | | | |
| | | | | | | | |
| | | | | | | | |
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# TEST HOLE LOG

Northing: 6776260
Easting: 631560

Project No: 8002-318 Test Hole No: #: 30158 R Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Sept. 29 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | SAND | | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Some Log 30158 | | | | | |
| | | | | | | | |
| | | | | | | | |
| 3.0 | | Gravelly Sand, trace silt | B94 | 7.0 | | | |
| | | - moist to wet (Frozen), brown | | | | | |
| | | | | | | | |
| | | | B95 | 9.1 | | | |
| | | | | | | | |
| 10.4 | SO | Sand, trace to some silt | B96 | 11.3 | | | |
| | | - dry to damp, brown | | | | | |
| | | - steady drilling | | | | | |
| | | | | | | | |
| | | | B97 | 13.7 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H.C 13.7m | | | | | |
| | | | | | | | |
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HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6776361
Easting: 631515

Project No: 8002-318 Test Hole No: #: 30159 R Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location:

Log By: R.W. Date: Sept. 29 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| GRAVEL | | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | As Per Soils Log 30159 | | | | | |
| | | | | | | | 45 45 |
| | | | | | | | |
| | | NOTE: @ 9.8 Stem Pushed in w/ minimal Hammering | | | | | |
| | | For @ 11.2 | | | | | |
| | | | | | | | |
| | | @ 12.5 Stem pushed in w/ minimal Hammering | | | | | |
| | | | | | | | |
| | | E.O.H. @ 13.7 - Last 10' Stem had pushed Thereon | | | | | |

# Km 1699+700 LHS Alaska Highway

August 2004

J. R. Paine & Associates

Test Pit Field Logs
(Car 318C Excavator)

Test Pits 30177 to 30179

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6764604
Easting: 620645

Project No: 8002-318 Test Hole No: #: 30177 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location: 1699+700 LHS

Log By: R.W. Date: Aug 10 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy Gravel, trace to some silt | TP1 ✓ | 0.8-1.3 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | - cobbles & boulders 20-40% vol | | | | | |
| | | - boulders to 0.75m | | | | | |
| | | - organics noted throughout | | | | | |
| | | | TP2 ✓ | 2.0-2.4 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | TP3 ✓ | 3.0-3.3 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | TP4 ✓ | 4.5-4.8 | | | |
| | | * Mostly a Granitic Type Rock. Very Sound. | | | | | |
| | | White w/ Black Spots | | | | | |
| | | | | | | | |
| | | E.O.H. @ 4.8m | | | | | |
| | | | | | | | |
| | | 2 Photos of Exc Base | | | | | |
| | | 1 Photo Sample Piles | | | | | |
| | | 2 Rock Photos | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6764616
Easting: 636697

Project No: 8002-318 Test Hole No: #: 30178 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: Km 1699+700 LHS
Log By: R.W. Date: AUG. 10 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy GRAVEL, trace to some silt | TP5 ✓ | 0.8-1.3 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | - cobble & boulders - 10 - 30% Vol | | | | | |
| | | - boulders to 0.6m dia | | | | | |
| | | - organics noted throughout | | | | | |
| | | | TP6 ✓ | 2.2-2.5 | | | |
| 8 | cb | AS ABOVE | TP7 ✓ | 3.0-3.5 | | | |
| | | - damp. | | | | | |
| 9 | da | Sandy GRAVEL, some silt. | TP8 ✓ | 4.3-4.8 | | | |
| | | - damp, to moist, medium dense, brown | | | | | |
| | | - slight increase in fine sands & silts | | | | | |
| | | E.O.H. @ 4.9m | | | | | |
| | | 2 photos exc. Base | | | | | |
| | | 1 photo Sample Pile | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6764619
Easting: 636749

Project No: 8002-318 Test Hole No: #: 30179 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: 1699+700 LHS
Log By: R.W. Date: AUG 10 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Sandy GRAVEL, trace to some silt | TP9 ✓ | 0.5-1.0 | | | |
| | | - dense, medium dense, brown | | | | | |
| | | - cobbles & boulders 10-30% Vol | | | | | |
| | | - boulders to 0.6m dia | | | | | |
| | | - organics noted throughout | | | | | |
| | | | TP10 ✓ | 1.8-2.3 | | | |
| 2 | do | AS ABOVE | TP11 ✓ | 3.2-3.5 | | | |
| | | - slight decrease silt (minimal) | | | | | |
| | | | TP12 ✓ | 4.5-5.0 | | | |
| | | E.O.H. 5.0m | | | | | |
| | | 2 PHOTOS OF EXC. BASE | | | | | |
| | | 1 PHOTO OF SAMPLE PILES | | | | | |

# Km 1706+200 LHS Alaska Highway
# (Soldier's Summit Slide)

August 2004

J. R. Paine & Associates

Test Pit Field Logs
(Hitachi 450EX Excavator)

Test Pits 30072 to 30081

# TEST HOLE LOG

Northing: 6768366
Easting: 634882

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30072 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location: Soldier Summit

Log By: R.W. Date: July 24, 2004

## MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0' | | Cobbles & Boulders, trace to some silt & sand | | | | | |
| | | - boulders to 1.0m dia encountered | | | | | |
| | | - fracturing rock | | | | | |
| | | - boulders to 3.0m dia visible near surface | | | | | |
| | | E.O.H. @ 5.3m | | | | | |
| | | 1 Photo @ 1.0m 30072.jpg | | | | | |
| | | 1 Photo @ 1.5m 30072 (1).jpg | | | | | |
| | | 1 Photo Large Boulder Beyond 30072 (2).jpg | | | | | |
| | | 1 Photo @ 5.3m - exc. Base 30072 (3).jpg | | | | | |
| | | 1 Photo of Spill Pile 30072 (4).jpg. | | | | | |

# TEST HOLE LOG

Northing: 6768366
Easting: 634882

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30073 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: Soldier Summit
Log By: ~~R.W.~~ M.F. Date: July 29, 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| pth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | boulders - cobbles - some surficial organics | | | | | |
| | | | | | | | |
| .3 | SO | boulders - cobbles - trace to some sand/silt | | | | | |
| | | - boulders to 0.5m in dia. | | | | | |
| | | - boulders to 30-40% by vol. | | | | | |
| | | | | | | | |
| 3 | | | | | | | |
| | | E.O.H @ 5.3m | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Photos ① 1.0m | | | | | |
| | | ② 2.5m | | | | | |
| | | ③ 4.3m - boulders | | | | | |
| | | ④ 5.3m | | | | | |
| | | ⑤ photo sample from 2.5m | | | | | |
| | | | | | | | |
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HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6768449
Easting: 634943

Project No: 8002-318 Test Hole No: #: 30074 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location: Soldier Summit

Log By: ~~R.W.~~ M.F. Date: July 29, 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | boulders - cobbles / some surficial organics | | | | | |
| | | | | | | | |
| 3.3 | SO | boulders · cobbles / trace to some silt | | | | | |
| | | - boulders encountered to 1.0m in dia. | | | | | |
| | | - boulders and cobbles to 40-50% by vol. | | | | | |
| | | | | | | | |
| 5.2 | | | | | | | |
| | | E.O.H @ 5.2 | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Photos - ① 1.5m | | | | | |
| | | ② 3.0m | | | | | |
| | | ③ 5.2m | | | | | |
| | | ④ boulder / spill pile | | | | | |

# TEST HOLE LOG

Northing: 6768519
Easting: 634961

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30075 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: Soldiers Summit
Log By: ~~R.W.~~ M.F. Date: July 29, 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | boulders - cobbles / some surficial organics | | | | | |
| | | | | | | | |
| 1.3 | SO | boulders - cobbles / trace silt and sand | | | | | |
| | | - boulders encountered to 1.0m in dia. | | | | | |
| | | - boulder and cobbles to 40-50% by vol. | | | | | |
| | | | | | | | |
| 4 | | | | | | | |
| | | E.O.H @ 5.4 | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Photos - ① 1.5m | | | | | |
| | | ② 3.0m & spill pile | | | | | |
| | | ③ 5.4m | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6768523
Easting: 635054

Project No: 8002-318 Test Hole No: #: 30076 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: Soldier Summit
Log By: ~~R.W.~~ M.F. Date: July 29, 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm | 0.74mm | .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | boulders - cobbles / some surficial organics | | | | | |
| | | | | | | | |
| 1.3 | so | boulders - cobbles / some sand and silt | | | | | |
| | | - boulders to 1.0m in dia. | | | | | |
| | | - boulders to 30-40% by vol. | | | | | |
| | | | | | | | |
| 3.6 | da | sandy gravel, trace to some silt | SI | 3.6-4.2 | | | |
| | | - damp, dense, brown grey | | | | | |
| | | - boulders to 20-30% by vol. | | | | | |
| | | | | | | | |
| 5.4 | | | | | | | |
| | | E.O.H @ 5.4m | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Photos ① 1.0m | | | | | |
| | | ② spillp.k | | | | | |
| | | ③ 3.0m | | | | | |
| | | ④ 5.4m | | | | | |

# TEST HOLE LOG

Northing: 6768551
Easting: 634972

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30077 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location: Soldier Summit

Log By: ~~R.W.~~ M.F Date: July 31 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | boulders - cobbles / surficial organics | | | | | |
| | | | | | | | |
| 0.2 | SO | boulders - cobbles - some sand and silt. | | | | | |
| | | - boulders to 1.0m in dia. | | | | | |
| | | - boulders to 30-40% in vol. | | | | | |
| | | | | | | | |
| 1 | | | | | | | |
| | | E.O.H @ 5.1m | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Photos ① 1.0m | | | | | |
| | | ② 2.5m | | | | | |
| | | ③ 3.5m | | | | | |
| | | ④ 4.2m | | | | | |
| | | ⑤ spill pile | | | | | |

# TEST HOLE LOG

Northing: 6768663
Easting: 634997

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30078 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: Soldier Summit
Log By: ~~R.W.~~ M.F. Date: July 31 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| pth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | boulders - cobbles / heavy organics | | | | | |
| | | | | | | | |
| .3 | SG | silty gravel - some sand and boulders | | | | | |
| | | - boulders to 1.5m in dia. | | | | | |
| | | - boulders to 50% by vol. | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H @ 5.0 | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Photos ① 1.5m | | | | | |
| | | ② 3.0m | | | | | |
| | | ③ 4.5m | | | | | |
| | | ④ spill pile | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6768745
Easting: 635028

Project No: 8002-318 Test Hole No: #: 30079 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location: Soldier Summit

Log By: ~~R.W.~~ M.F. Date: July 31, 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| pth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | boulders-cobbles/surficial organics | | | | | |
| .3 | SO | silty sandy gravels; some boulders-cobbles | | | | | |
| | | -boulders to 20% by vol. | S2 | 3.5-4.0 | | | |
| | | -boulders to 1.0m in dia. | | | | | |
| .1 | | | | | | | |
| | | E.O.H. @ 5.1 | | | | | |
| | | Photos ① 1.5m | | | | | |
| | | ② 2.5m | | | | | |
| | | ③ 4.4m | | | | | |
| | | ④ spill pile | | | | | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6768798
Easting: 635046

Project No: 8002-318 Test Hole No: #: 30090 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: Soldier Summit
Log By: ~~R.W.~~ M.F. Date: July 31, 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | boulders - cobbles, some sand, trace silts | | | | | |
| | | - boulders to 60-70% by vol. | | | | | |
| .0 | SO | boulder - cobbles, sandy silty gravel | | | | | |
| | | - boulders to 0.5 m dia. | | | | | |
| | | - boulders to 30-40% by vol. | | | | | |
| | | | | | | | |
| 0 | | | | | | | |
| | | E.O.H. @ 5.0m | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Photos ① 1.0m | | | | | |
| | | ② 2.0m - spill pile | | | | | |
| | | ③ 3.0m | | | | | |
| | | ④ 4.0m | | | | | |
| | | ⑤ spill pile | | | | | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6768752
Easting: 635160

Project No: 8002-318 Test Hole No: #: 30081 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: Soldier Summit
Log By: ~~R.W.~~ M.F. Date: July 31 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm
GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | boulders - cobbles - surficial organics | | | | | |
| | | | | | | | |
| .3 | SO | boulders - cobbles, some sand and silt | | | | | |
| | | - boulders to 60-70% by vol. | | | | | |
| | | - boulders to 1.0m dia. | | | | | |
| 5 | SO | sandy silty gravels - some boulders/cobbles | | | | | |
| | | - boulders to 20-30% by vol. | S3 | 4.5-5.0 | | | |
| | | | | | | | |
| 0 | | | | | | | |
| | | E.O.H. @ 5.0m | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Photos ① 1.0m | | | | | |
| | | ② 2.0m | | | | | |
| | | ③ 4.5m | | | | | |
| | | ④ spill pile | | | | | |

Km 1712+900 LHS Alaska Highway
Pit ID# 115 G-12
(Williscroft Creek)

August 2004

J. R. Paine & Associates

Test Pit Field Logs
(Hitachi 450EX Excavator)

Test Pits 30137 to 30147

Auger Hole Field Logs
(CME75 Drill)

Testholes 30142D, 30146D, & 654-2763D

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Northing: 6775028
Easting: 638523

Project No: 8002-318 Test Hole No: #: 30137 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: Williscroft Creek
Log By: R.W. Date: July 31 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 3" | 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|---|
| | GRAVEL | SAND | SI | LT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | SURFICIAL ORGANICS | | | | | |
| 3 | SG | SANDY GRAVEL, trace to some silt - damp, medium dense, brown | W1 ✓ | .3 - 0.9 | | | |
| | do | AS ABOVE - FROZEN | W2 ✓ | 2.0-2.4 | | VERY DIFFICULT DIGGING | |
| | | | W3 | 3.2-3.5 | | | |
| | | | W4 | 4.2-4.4 | | | |
| | | E.O.H. @ 5.0m | | | | | |
| | | 1 PHOTO : TP & DEPTH | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6775066
Easting: 632578

Project No: 8002-318 Test Hole No: #: 30138 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: Williscroft Creek
Log By: R.W. Date: Aug 1 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm
SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Surficial Organics | | | | | |
| | | | | | | | |
| .3 | SG | Sandy Gravel | W5 | 1.5-2.0 | | Silty Sandy Gravel | |
| | | - damp, loose, brown | | | | | |
| | | - roots & moss organics to 1.0m | | | | | |
| | | | | | | | |
| .7 | SG | Sandy Gravel, trace silt | W6 ✓ | 2.5-3.0 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | - boulders to 300mm 5-15% Vol | | | | | |
| | | | | | | | |
| | | | W7 ✓ | 3.8-4.2m | | | |
| | | | | | | | |
| | | | | | | | |
| | | | W8 ✓ | 4.8-5.3 | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 5.3m | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | 2 photos - 1 TP @ depth | | | | | |
| | | 1 sample pile | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6775122
Easting: 632665

Project No: 8002-318 Test Hole No: #: 30139 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: Willscroft Creek
Log By: R.W. Date: Aug 01 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Surficial Organics | | | | | |
| | | | | | | | |
| | SG | Sandy Gravel, trace silt | W9 ✓ | 1.0-1.5 | | | |
| | | - damp, loose, brown | | | | | |
| | | - organics noted to 1.0m | | | | | |
| | | - some organic silt noted between 1.0-1.5m | | | | | |
| | | - boulders to 300mm 5-15% Vol | W10 ✓ | 2.0-2.5 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | W11 ✓ | 3.5-4.0 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | W12 ✓ | 5.0-5.5 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 5.5m | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | 2 Photos | | | | | |
| | | 1 @ EXP. BASE - HOLE SLOUGHED IN | | | | | |
| | | 1 OF SAMPLE PILES | | | | | |
| | | | | | | | |
| | | | | | | | |

# TEST HOLE LOG

Northing: 6775097
Easting: 632440

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30140 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: Williscroft Creek
Log By: R.W. Date: Aug 01 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Surficial Organics | | | | | |
| | | | | | | | |
| | SG | Sandy Gravel, trace silt | W13 ✓ | 1.0-1.5 | | | |
| | | - damp, loose, brown | | | | | |
| | | - organics noted to 0.8m | | | | | |
| | | - boulders to 300mm, 5-15% vol | | | | | |
| | | | W14 ✓ | 2-2.5 | | | |
| | | | | | | | |
| | | | | | | | |
| | SG | Sandy Gravel, trace silt | W15 ✓ | 3.2-3.6 | | Difficult Digging | |
| | | - frozen | | | | | |
| | | - brown | | | | | |
| | | | | | | | |
| | SG | Sandy Gravel, trace to some silt | W16 ✓ | 4.8-5.1 | | Very Difficult Digging | |
| | | - frozen, some visible ice | | | | | |
| | | - brown | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 5.1m | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | Photos - | | | | | |
| | | 1 @ exc. face | | | | | |
| | | 1 @ sample piles | | | | | |
| | | | | | | | |

HOGGAN ENGINEERING & TESTING (1980) LTD.
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# TEST HOLE LOG

Northing: 6775140
Easting: 632495

Project No: 8002-318 Test Hole No: #: 30141 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: Winscroft Creek
Log By: R.W. Date: Aug 01 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Surficial Organics | | | | | |
| | | | | | | | |
| 3 | so | Sandy Gravel, trace silt | W17 ✓ | 0.5-1.0 | | | |
| | | - damp, loose, brown | | | | | |
| | | - organics noted to 0.5m | | | | | |
| | | - boulders to 300mm 5-15% Vol | | | | | |
| | | | | | | | |
| | da | Sandy Gravel, trace silt | W18 ✓ | 1.0-2.3 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | - boulders to 300mm 5-15% vol | | | | | |
| | | | | | | | |
| 2 | da | Sandy Gravel, trace to some silt | W19 ✓ | 3.2-3.6 | | Very Difficult Digging | |
| | | - frozen | | | | | |
| | | - brown | | | | | |
| | | | | | | | |
| | | | W20 ✓ | 4.7-5.0 | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 5.0m | | | | | |
| | | | | | | | |
| | | Photos - | | | | | |
| | | 1 @ Exc. Base | | | | | |
| | | 1 @ Sample Piles | | | | | |
| | | | | | | | |
| | | | | | | | |

# TEST HOLE LOG

Northing: 6775194
Easting: 632545

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30142 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: Williscroft Creek
Log By: R.W. Date: Aug. 01 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| pth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Surficial Organics | | | | | |
| | | | | | | | |
| 3 | so | Sandy Gravel, trace silt | | | | | |
| | | - damp, loose, brown | | | | | |
| | | - organics to 0.6m | | | | | |
| | | - boulders to 300mm 5-15% vol. | | | | | |
| | | | | | | | |
| m | do | As Above | W21 ✓ | 1.0-1.5 | | | |
| | | - medium dense | | | | | |
| | | | | | | | |
| | | | W22 ✓ | 2.5-3.0 | | | |
| | | | | | | | |
| | do | Sandy Gravel, trace to some silt | W23 ✓ | 3.2-3.8 | | Difficult Digging @ 3.2m | |
| | | - Frozen | | | | | |
| | | | | | | | |
| | do | Sandy Gravel, some silt, to Silty. | W24 ✓ | 4.6-5.0 | | Very Difficult Digging @ 3.8m | |
| | | - Frozen | ↳ Frozen Pieces | | (Higher Silt Content) | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 5.0m | | | | | |
| | | | | | | | |
| | | Photos - 1 @ ex. Bottom | | | | | |
| | | 1 @ Sample Piles | | | | | |
| | | | | | | | |
| | | | | | | | |

# TEST HOLE LOG

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Northing: 6775245
Easting: 6326619

Project No: 8002-318 Test Hole No: #: 30143 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: Winscom Creek
Log By: R.W. Date: Aug 01 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Surficial Organics | | | | | |
| | | | | | | | |
| .3 | SO | Sandy Gravel, trace silt | W25 ✓ | .5-1.0 | | | |
| | | -damp, loose, brown | | | | | |
| | | -organics to 0.5m | | | | | |
| | | -boulders to 300mm 5-15% Vol | | | | | |
| | | | | | | | |
| | SO | Gravelly Sand, trace Silt | W26 x | 2.2-2.7 | | Difficult @ 2.0m | Difficult |
| | | -Frozen, visible ice crystals to 5mm in clusters | | | | Silty Gravelly Sand | |
| | | -brown | | | | | |
| | | | | | | | |
| 5m | SO | Sandy Gravel, trace silt | W27 ✓ | 3.6-3.9 | | Normal Digging @ 3.5m | |
| | | -moist, medium dense, brown | | | | | |
| | | | | | | | |
| | | | | | | | |
| | SO | Gravelly Sand, trace to some silt | W28 ✓ | 4.6-5.0 | | | |
| | | -moist, medium dense, brown | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 5.0m | | | | | |
| | | | | | | | |
| | | Photos | | | | | |
| | | -1 of Frozen matl. Sample W23 | | | | | |
| | | -1 @ Exc. Base | | | | | |
| | | 1 @ Sample Piles | | | | | |

# TEST HOLE LOG

Northing: 6775254
Easting: 632503

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30144 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: Willoughby Creek
Log By: R.W. Date: Aug 2 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Surficial Organics | | | | | |
| | So | Sandy Gravel/Gravelly Sand, trace to some silt - damp, loose, brown | | | | | |
| | So | Sandy Gravel, trace to some silt - saturated, medium dense, brown | W29 ✓ | 1.4 - 1.8 | | $H_2O$ Seepage @ 1.4m | |
| | do | As Above - moist | W30 ✓ | 2.5 - 2.8 | | Very Difficult Digging | |
| | | | W31 ✓ | 3.6 - 3.9 | | | |
| | | | W32 ✓ | 4.8 - 5.0 | | | |
| | | E.O.H. @ 5.0 | | | | | |
| | | Photos<br>1 @ ex. Base<br>1 @ Sample Pits | | | | | |

# TEST HOLE LOG

Northing: 6775287
Easting: 632345

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30145 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: Willscroft Creek
Log By: R.W. Date: Aug 2 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Surficial Organics | | | | | |
| 5 | so | Gravelly Sandy, trace silt | | | | | |
| | | - damp, loose, brown | | | | | |
| | | - organics noted to 0.8m | | | | | |
| .0 | da | Sandy Gravel, trace to some silt | W33 ✓ | 1.0-1.4 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | - cobbles to 200mm 0-10% | | | | | |
| | db | As above | W34 ✓ | 2.0-2.3 | | Very Difficult Digging | |
| | | - Frozen | | | | @ 1.9m | |
| 3 | da | Sandy Gravel, some silt to Silty | W35 ✓ | 3.0-3.3 | | | |
| | | - Frozen | | | | | |
| | | - brown | | | | | |
| | | | W36 ✓ | 4.6-4.8m | | | |
| | | E.O.H. @ 4.8m | | | | | |
| | | Photos | | | | | |
| | | 1 Photo @ Exc. Base | | | | | |
| | | 1 " Sample Piles | | | | | |

# TEST HOLE LOG

Northing: 6775326
Easting: 632400

Project No: 8002-318 Test Hole No: #: 30146 Elev.

Client: YTG - Highways & Public Works

Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1

Location: Williscroft Creek

Log By: R.W. Date: Aug 02 2004

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

5mm 0.74mm .002mm

| GRAVEL | SAND | | SILT | CLAY |
|---|---|---|---|---|

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

455

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | SURFICIAL ORGANICS | | | | | |
| | | | | | | | |
| | SG | SANDY GRAVEL, trace silt | | | | | |
| | | - damp, brown, organics noted to 0.8m | | | | | |
| | | - boulders to 300mm 5-10% VOL | | | | | |
| | | | | | | | |
| | do | AS ABOVE | W37 ✓ | 1.0-1.5 | | | |
| | | - medium dense | | | | | |
| | | | | | | | |
| | | | W38 ✓ | 2.6-2.9 | | DIFFICULT DIGGING @ 2.3m | |
| | | | | | | | |
| | | | | | | | |
| | SG | SANDY GRAVEL, some silt | W39 ✓ | 3.5-3.8 | | VERY DIFFICULT DIGGING @ 3.3m | |
| | | - FROZEN | | | | | |
| | | - brown | | | | | |
| | | - cobbles to 200mm 5-10% VOL | | | | | |
| | | | | | | | |
| | | | W40 ✓ | 4.5-4.8 | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 4.8m | | | | | |
| | | PHOTOS | | | | | |
| | | - 1 @ EXC. BASE | | | | | |
| | | - 1 @ SAMPLE PILES | | | | | |
| | | | | | | | |

# TEST HOLE LOG

Northing: 6775365
Easting: 632400

HOGGAN ENGINEERING & TESTING (1980) LTD.
CONSULTING & TESTING ENGINEERS

Project No: 8002-318 Test Hole No: #: 30147 Elev.
Client: YTG - Highways & Public Works
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Highway #1
Location: Williscroft Creek
Log By: R.W. Date: Aug 2 2004

**MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION**

3" 5mm 0.74mm .002mm

GRAVEL | SAND | SILT | CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Depth | Line Code | Classification | Sample No. | Sample Depth | Sample Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| 0 | | Surficial Organics | | | | | |
| | | | | | | | |
| 0.4 | SD | Sandy Gravel / Gravelly Sand, trace silt | W41 ✓ | 0.6-1.1 | | | |
| | | - damp, loose, brown | | | | | |
| | | | | | | | |
| 1.0 | do | As Above | W42 ✓ | 2.3-2.8 | | | |
| | | - medium dense | | | | | |
| | | - boulders to 300mm 0-10% Vol | | | | | |
| | | | | | | Difficult Digging @ 3.0m | |
| 3.5 | SD | Sandy Gravel, some silt | W43 ✓ | 3.7-4.1 | | Very Difficult @ 3.5m | |
| | | - frozen | | | | | |
| | | - brown | | | | | |
| | | - boulders to 300mm 0-10% Vol. | | | | | |
| | | | | | | | |
| | | | W44 ✓ | 4.6-4.8 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H @ 4.8m | | | | | |
| | | | | | | | |
| | | Plans - | | | | | |
| | | 1 of 8x Bore | | | | | |
| | | 1 of Sample Pits | | | | | |
| | | | | | | | |
| | | | | | | | |

# TEST HOLE LOG

J.R. Paine & Associates Ltd.
CONSULTING & TESTING ENGINEERS

Project No: 8002-38 Test Hole No: 30142 Drill Elev. 813m
Client: YTG - Highways & Public Works, Trans Ave. Branch
Project: Geotechnical Services Km 1691.7 to 1717.3 Alaska Hwy #1
Location: Williscroft Creek
Log By: RW Date: 11/01/2002

MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | SILT | | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

N: 6775193
E: 632558

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Zone | Group Symbol | Classification | Sample No. | Depth | Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Sandy Gravel | WS5 | 0.5-1.0 | | | |
| | | - dry to damp, medium dense, brown | | | | | |
| | | - max size encl. 50mm | | | | | |
| | | | WS6 | 1.8-2.1 | | | |
| | da | Gravelly Sand, some silt to Silty (Frozen) | WS7 | 3.4-4.0 | | | |
| | | - damp to moist, dense brown | | | | | |
| | | E.O.H. @ 8.2m - REFUSAL | WS8 | 4.9-5.5 | | | |
| | | 8.7 - REFUSAL - Move 1m South | | | | | |
| | | 8.2 - REFUSAL - Move 1m South (Lost 3 stems in hole) | | | | | |
| | | 5.2m - REFUSAL - E.O.H. | | | | | |

# TEST HOLE LOG

J.R. Paine & Associates Ltd.
CONSULTING & TESTING ENGINEERS

Project No: 8502-318 Test Hole No: 30146 Dam Elev. 807m
Client: YTG - Highways & Public Works, Trans. Eng. Branch
Project: Geotechnical Services KM 1691.7 to 1717.3 Alc Hwy #1
Location: Williscroft Creek
Log By: RW Date: Nov. 1, 2001

MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION

5mm — GRAVEL — 0.74mm — SAND — .002mm — SILT — CLAY

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

N: 6775322
E: 632406

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Zone | Group Symbol | Classification | Sample No. | Depth | Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Sandy Gravel, trace to some silt | W45 | 0.3-0.9 | | | |
| | | - damp, medium dense, dark brown | | | | | |
| | | - some coaal pieces noted | | | | | |
| 3m | GG | Sandy Gravel, trace to some silt | W46 | 1.8-2.1 | | | |
| | | - damp, medium dense, brown | | | | | |
| | | - gravel loss due to auger grinding | | | | | |
| | | - some broken gravels | | | | | |
| | | - max size encl. 50mm | | | | 3.0m Very Dense Gravel Drilling | |
| | | | | | | Loss of Rock augered up. | |
| 6 | SG | Sandy Gravel, some silt (Frozen) | W47 | 3.4-4.0 | | | |
| | | - damp to moist, dense to very dense, brown | | | | | |
| | | - max size encl. 60mm | | | | | |
| | | | W48 | 5.2-5.8 | | | |
| 5 | SG | Silty Sandy Gravel | W49 | 7.3-7.6 | | Packed Textron Augers | |
| | | - damp to moist, dense, brown | | | | | |
| 2 | GG | Sandy Gravel/Gravelly Sand, some silt to Silty | W50 | 8.2-8.8 | | Grinding Drilling | |
| | | - dry to damp, dense, brown | | | | | |
| | | - possibly gravel loss due to auger action | W51 | 9.8-10.4 | | | |
| | | - gravel/sample loss 30-40% due to reverse action on pulling | | | | | |
| | | | W52 | 11.0-11.6 | | | |
| | | | | | | | |

J.R. Paine & Associates Ltd.
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Project No: 8002.3B Test Hole No: 30196 Drill Elev.
Client: YTG: HIGHWAYS & PUBLIC WORKS, TRANS ENG. BRANCH PG #2
Project: GEOTECHNICAL SERVICES KM 1691.7 to 1717.3 AK Hwy # 1
Location: WINNISKOFT CREEK
Log By: RW Date: NOV. 1, 2004

MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| Zone | Group Symbol | Classification | Sample No. | Depth | Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | GP | GRAVELLY SAND / SANDY GRAVEL, some silt to silty | W53 | 12.8-13.4 | | | |
| | | - dry to damp, dense, brown | | | | | |
| | | - difficult to obtain sample due to reverse auger action | | | | | |
| | | | W54 | 14.-14.6 | | | |
| | | | | | | | |
| | | E.O.H. @ 17.4m - AUGERS BINDING TOO MUCH / REFUSAL | | | | | |
| | | - NO SAMPLE DUE TO AUGERING OUT OF HOLE | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | AUGERS BINDING | | | | | |

J.R. Paine & Associates Ltd.
CONSULTING & TESTING ENGINEERS

# TEST HOLE LOG

Project No: 8002-318 Test Hole No: 654-2763 Drill Elev. 805
Client: YTG - HIGHWAYS ! PUBLIC WORKS, MANS ENG. BRANCH
Project: GEOTECHNICAL SERVICES KM 1691.7 to 1717.3 AK. Hwy # 1
Location: WILLISCROFT CREEK
Log By: RW Date: 11/01/04

## MINIMUM REQUIREMENTS FOR A TEST HOLE LOG CLASSIFICATION

| 5mm | | 0.74mm | | .002mm |
|---|---|---|---|---|
| GRAVEL | SAND | | SILT | CLAY |

MOISTURE CONTENT - dry, damp, moist, wet
DENSITY - loose, medium dense, dense
GRADATION - poorly or well graded
SIZE RANGE - coarse, medium, fine
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

N: 6774951
E: 632672

MOISTURE CONTENT - dry, damp, moist, wet
CONSISTENCY - soft, firm, stiff, hard
PLASTICITY - low, medium, high
COLOR -
INTRUSIONS - oxides, coal lumps, etc.

TILL - heterogeneous mixture of gravel, sand, silt, and clay COBBLE - 3" - 8" BOULDER - 8" and larger

| ne | Group Symbol | Classification | Sample No. | Depth | Type | Standard Penetration | Pocket Penetration, TSF |
|---|---|---|---|---|---|---|---|
| | | Sandy Gravel | W59 | .5-1.0 | | | |
| | | - dry, medium dense, brown | | | | | |
| | | - various Boulders to 400mm on surface. | | | | | |
| | | | | | | | |
| | | | W60 | 1.8-2.4 | | Very Dense Driving | Grinding @ 1.8m |
| | | | | | | | |
| ? | dg | Sandy Gravel / Gravelly Sand, trace to some silt | W61 | 3.4-4.0 | | | |
| | | - damp to dry, dense, brown | | | | | |
| | | - max size encl. 50mm | | | | | |
| | | | W62 | 5.2-5.8 | | ATTEMPT # 2 | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | E.O.H. @ 6.7m - REFUSAL | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | REFUSAL @ 5.2m - MOVE 1m WEST | | | | | |
| | | REFUSAL @ 4.9m - MOVE 1m WEST | | | | | |
| | | REFUSAL @ 6.7m - E.O.H. | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

# Volume 2 of 3 GR-01-041

## Km 1691.7 to 1717.3 Alaska Highway #1

## J.R. Paine & Associates (Rob Williamson) August 2004

# ESEBASE LOGS

1. Auger Drilling R.O.W. (CME75 Drill)

   Testholes 30000 to 30070
   30082 to 30136
   30148 to 30176

   * NOTE: There are no Testhole 30048, 30060 & 30071.

2. Rock Drilling R.O.W. (Reverse Circulation Air Rotary)

   Testholes 30084 R to 30093 R
   30096 R to 30097 R
   30100 R to 30107 R
   30111 R to 30118 R
   30121 R to 30122 R
   30126 R to 30127 R
   30129 R
   30131 R to 30136 R

   * NOTE: Consultant not required to provide EseBase Logs for 30149R to 30151R & 30153R to 30159R. Section constructed summer 2005.

3. 1699+700 LHS Alaska Highway (Cat 318C Excavator)

   Test Pits 30177 to 30179

4. 1706+200 LHS Alaska Highway (Soldiers Summit Slide) (Hitachi 450EX Excavator)

   Test Pits 30072 to 30081

5. 1712+900 LHS Alaska Highway (Williscroft) (Hitachi 450EX Excavator / CME75 Drill)
   Pit ID# 115 G-12

   * NOTE: See Pit File 115 G-12 for Test Pits 30137 to 30147 and Testholes 30142D, 30146D, & 654-2763D

ORIGINAL REPORT
Do Not Remove from Building
Please Return to File

Km 1691.7 to 1717.3 Alaska Highway #1

August 2004

J. R. Paine & Associates

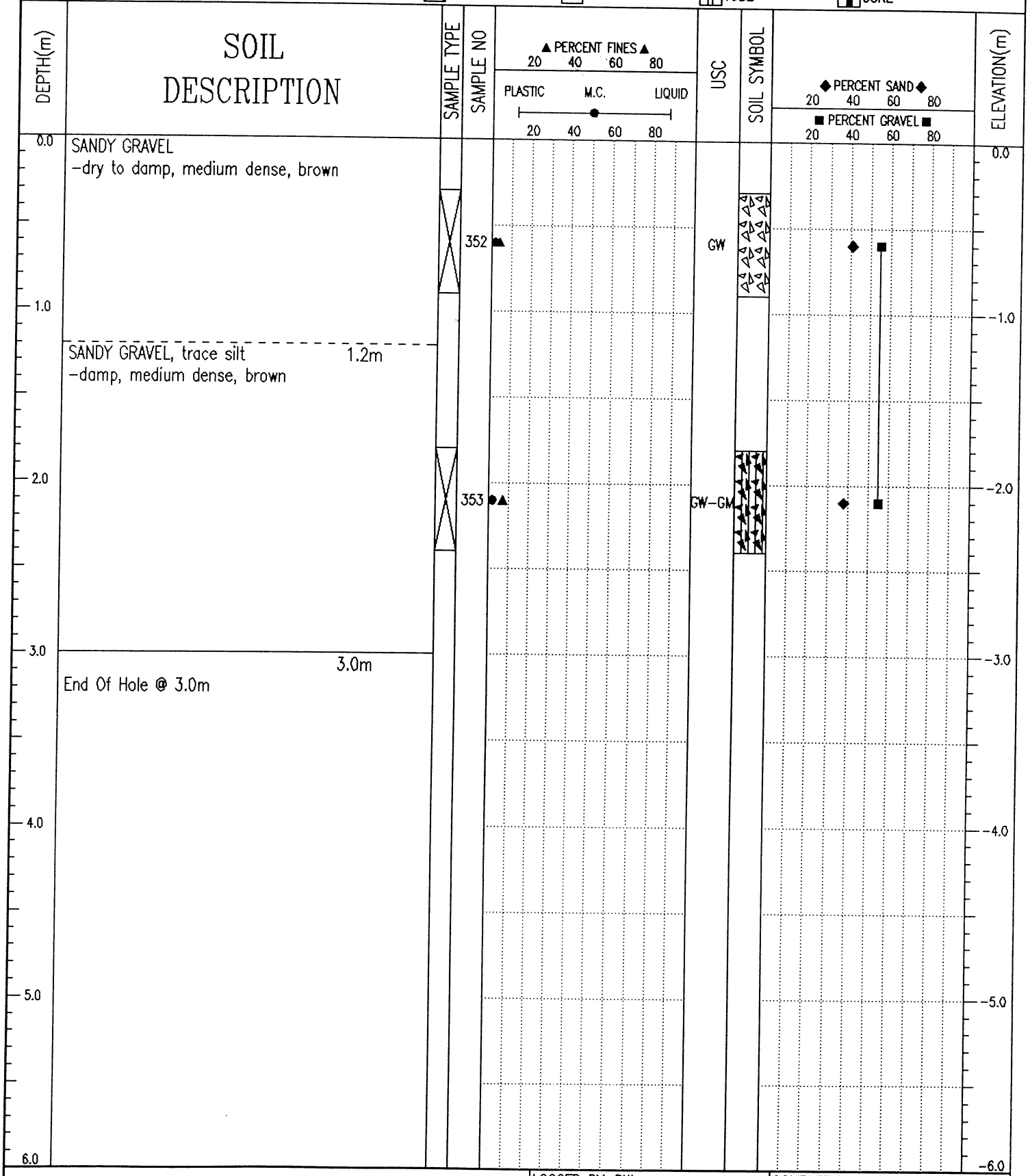
Auger Hole EseBase Logs
(CME75 Drill)

| | |
|---|---|
| Testholes | 30000 to 30070 |
| | 30082 to 30136 |
| | 30148 to 30176 |

* NOTE: There are no Testhole 30048, 30060 & 30071.

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30000 |
| Donjek Services Ltd. | UTM ZONE: - N6767988 E644064 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| | REVIEWED BY: - | COMPLETE: 08/16/04 |
| | Fig. No: 158 | Page 1 of 1 |

05/02/21 08:11AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30001 |
| Donjek Services Ltd. | UTM ZONE: - N6768004 E643863 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT<br>-damp, medium dense, brown<br>-organic seams noted to 1.0m depth<br>-some gravels noted between 0.4m & 0.5m | | 354 | | ML | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 1.5m | SANDY GRAVEL, trace silt<br>-damp, medium dense, brown | | 355 | | GP-GM | | | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 3.0m | End Of Hole @ 3.0m | | | | | | | |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: - | COMPLETE: 08/16/04 |
| Fig. No: 159 | Page 1 of 1 |

05/02/23 02:24PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30002 |
| Donjek Services Ltd. | UTM ZONE: – N6768001 E643667 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>–dry, medium dense, brown | | | | | | | | 0.0 |
| | SILTY SAND, some gravel<br>–damp, medium dense, brown | 0.4m | ⊠ | 356 | ● ▲ | SM | | ■ ◆ | |
| | SANDY GRAVEL, some silt<br>–damp, dense, brown | 0.7m | | | | | | | |
| 1.0 | | | | | | | | | –1.0 |
| 2.0 | | | | | | | | | –2.0 |
| | | | | 357 | ● ▲ | GM | | ■ ◆ | |
| 3.0 | | 3.0m | | | | | | | –3.0 |
| | End Of Hole @ 3.0m | | | | | | | | |
| 4.0 | | | | | | | | | –4.0 |
| 5.0 | | | | | | | | | –5.0 |
| 6.0 | | | | | | | | | –6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/16/04 |
| Fig. No: 160 | Page 1 of 1 |

05/02/23 02:25PM (YIG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30003 |
| Donjek Services Ltd. | UTM ZONE: - N6767987 E643448 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>-damp to moist, medium dense, dark brown/grey | | 358 | ● ▲ | GP-GM | | ◆ ■ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | SANDY GRAVEL/GRAVELLY SAND, some silt 1.8m<br>-dry to damp, dense, brown/grey | | 359 | ● ▲ | GM | | ◆ ■ | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | 360 | ● ▲ | SM | | ■ ◆ | -4.0 |
| | 4.3m<br>End Of Hole @ 4.3m | | | | | | | |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4.3 m |
| REVIEWED BY: - | COMPLETE: 08/16/04 |
| Fig. No: 161 | Page 1 of 1 |

05/02/21 08:12AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30004 |
| Donjek Services Ltd. | UTM ZONE: – N6768053 E643430 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, some silt<br>–damp, dense, grey/brown | | | | | | | 0.0 |
| 1.0 | | | 361 ● ▲ | | GP-GM | | ◆ ■ | -1.0 |
| 1.8 | GRAVELLY SAND/SANDY GRAVEL, some silt 1.8m<br>–damp, dense, brown/grey | | | | | | | |
| 2.0 | | | 362 ● ▲ | | SM | | ◆ ■ | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| | | | 363 ● ▲ | | GP-GM | | ◆ ■ | |
| 4.0 | | | | | | | | -4.0 |
| 4.4 | End Of Hole @ 4.4m<br>–refusal @ 1.5m – move north 2m | | | | | | | |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.4 m |
| | REVIEWED BY: - | COMPLETE: 08/16/04 |
| | Fig. No: 162 | Page 1 of 1 |

05/02/23 02:25PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30005 |
| Donjek Services Ltd. | UTM ZONE: - N6768019 E648267 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▦ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES / PLASTIC M.C. LIQUID | USC | SOIL SYMBOL | PERCENT SAND / PERCENT GRAVEL | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL<br>-dry, medium dense, brown | | 364 | | GW | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | SANDY GRAVEL/GRAVELLY SAND,trace silt 1.2m<br>-damp, medium dense, brown | | | | | | | |
| 2.0 | | | 365 | | GP-GM | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| | | | 366 | | SW-SM | | | |
| 4.0 | 4.0m<br>End Of Hole @ 4.0m - Refusal | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

PERCENT FINES: 20 40 60 80 | PLASTIC M.C. LIQUID: 20 40 60 80 | PERCENT SAND: 20 40 60 80 | PERCENT GRAVEL: 20 40 60 80

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4 m |
| | REVIEWED BY: - | COMPLETE: 08/18/04 |
| | Fig. No: 163 | Page 1 of 1 |

05/02/23 02:28PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30006 |
| Donjek Services Ltd. | UTM ZONE: – N6768025 E642866 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, some silt<br>-dry to damp, medium dense, brown | | 369 | | GP-GM | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | SILTY GRAVELLY SAND 1.5m<br>-dry to damp, medium dense, brown | | 370 | | SM | | | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m<br>-less gravel recovery w/ depth | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/18/04 |
| Fig. No: 165 | Page 1 of 1 |

05/02/23 02:34PM (YIC_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30007 |
| Donjek Services Ltd. | UTM ZONE: - N6768030 E642664 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND, some silt<br>-dry to damp, medium dense, brown | | 371 ● ▲ | | SW-SM | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | SILTY GRAVELLY SAND 1.5m<br>-dry to damp, medium dense, brown | | | | | | | |
| 2.0 | | | 372 ● ▲ | | SM | | | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m<br>-less gravel recovery w/ depth | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

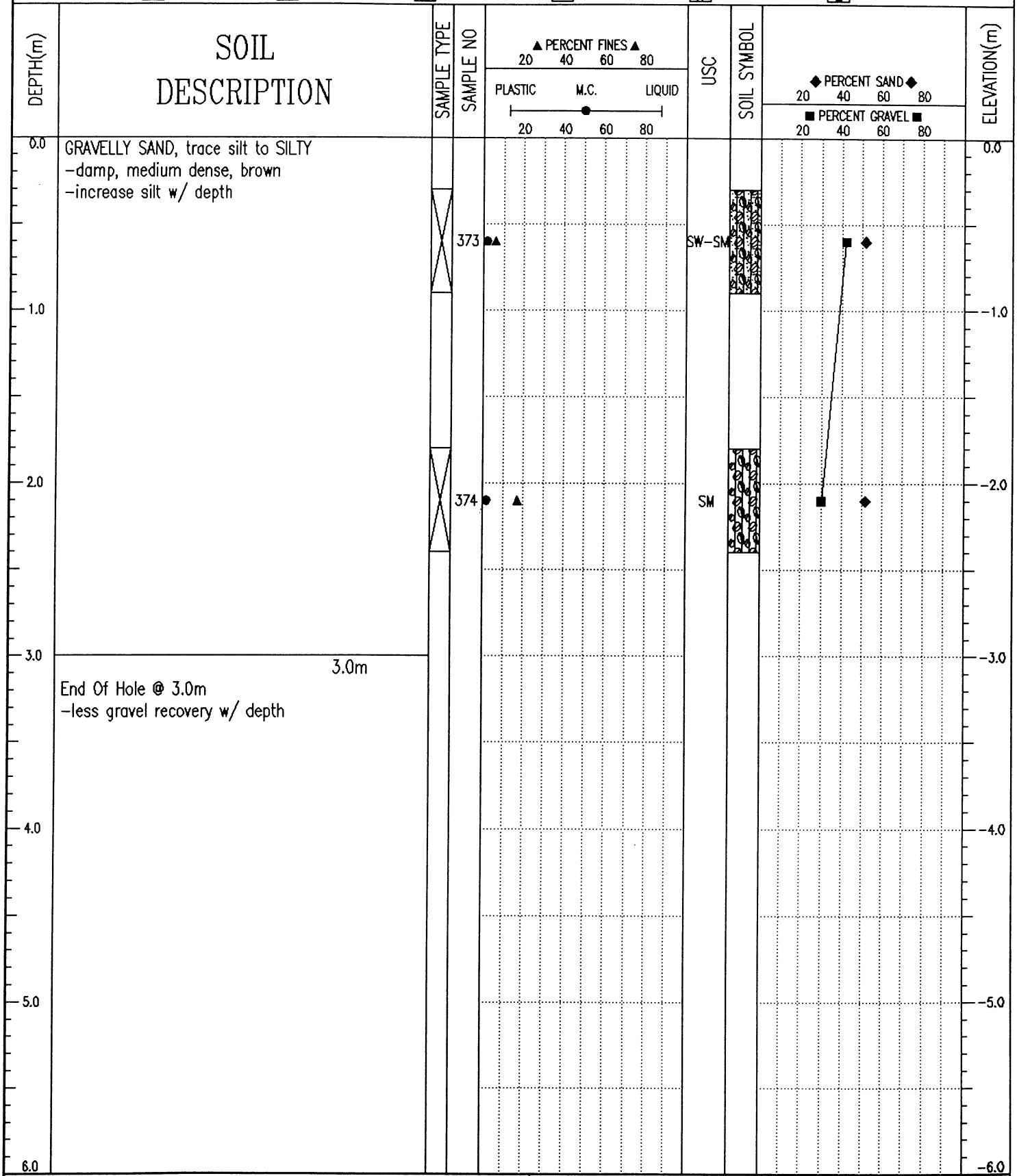
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/18/04 |
| Fig. No: 166 | Page 1 of 1 |

05/02/23 02:35PM (YTC_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30008 |
| Donjek Services Ltd. | UTM ZONE: – N6768033 E642462 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| | REVIEWED BY: | COMPLETE: 08/18/04 |
| | Fig. No: 167 | Page 1 of 1 |

05/02/23 02:35PM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30009 |
| Donjek Services Ltd. | UTM ZONE: - N6768038 E642265 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND, some silt to SILTY<br>-damp, medium dense, brown<br>-increase silt w/ depth | AUGER | 375 | SW-SM | | 0.0 |
| 1.0 | | | | | | -1.0 |
| 2.0 | | AUGER | 376 | SM | | -2.0 |
| 3.0 | 3.0m<br>End of Hole @ 3.0m<br>-less gravel recovery w/ depth | | | | | -3.0 |
| 4.0 | | | | | | -4.0 |
| 5.0 | | | | | | -5.0 |
| 6.0 | | | | | | -6.0 |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

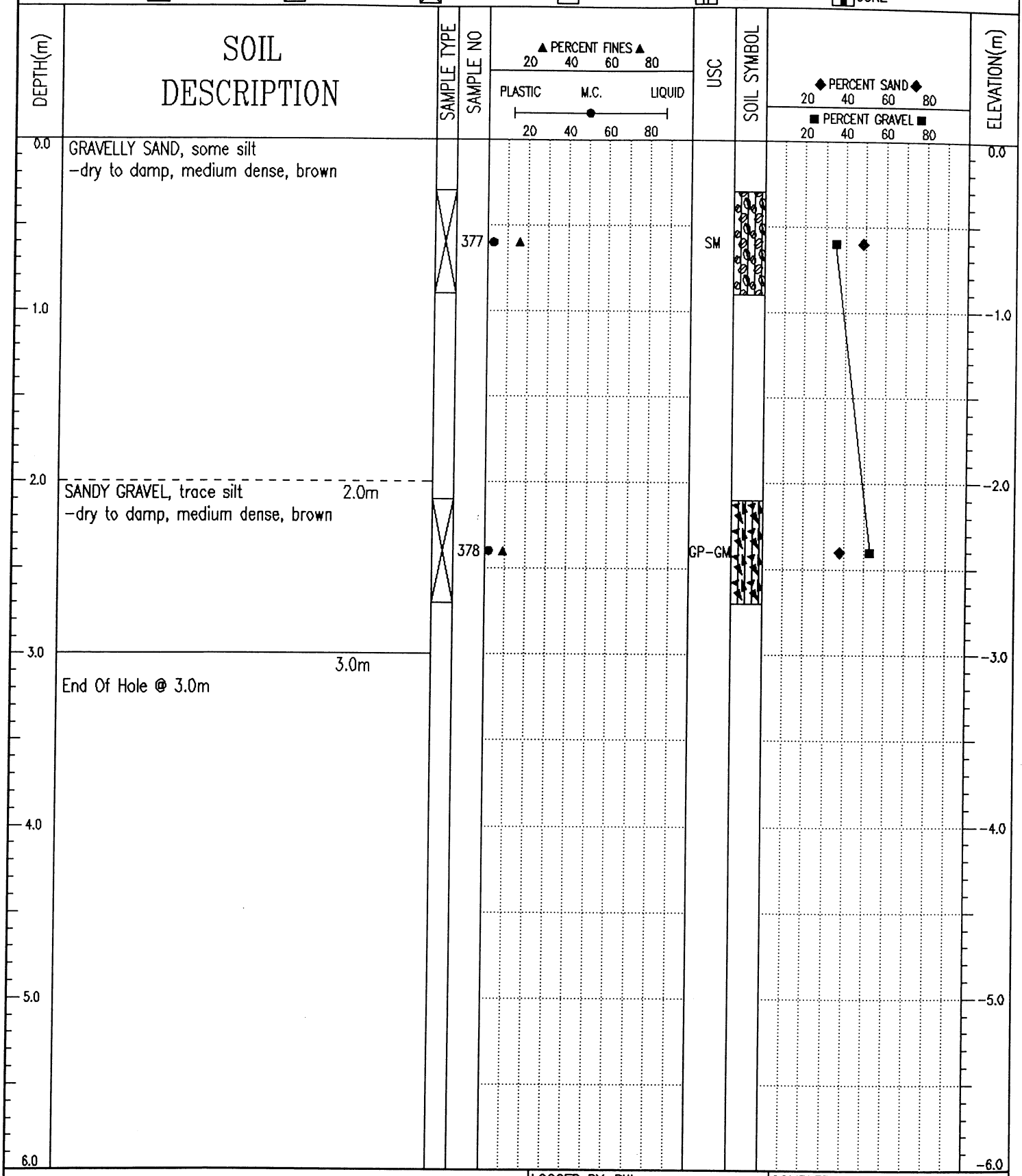
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/18/04 |
| Fig. No: 169 | Page 1 of 1 |

05/02/23 02:35PM (YTC_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30010 |
| Donjek Services Ltd. | UTM ZONE: – N6768040 E642066 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| | REVIEWED BY: | COMPLETE: 08/18/04 |
| | Fig. No: 170 | Page 1 of 1 |

05/02/21 08:13AM (YIC_HWTS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30011 |
| Donjek Services Ltd. | UTM ZONE: - N6768044 E641865 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>-damp to moist, medium dense, brown/dark grey | | | | | | | 0.0 |
| | | | 379 | ▲ | GW-GM | | ◆ ■ | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | 380 | ▲ | GW-GM | | ◆ ■ | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/18/04 |
| Fig. No: 171 | Page 1 of 1 |

05/02/23 02:35PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30012 |
| Donjek Services Ltd. | UTM ZONE: - N6768049 E641666 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>-dry to damp, medium dense, brown | | 381 ●▲ | | GW-GM | | ◆ ■ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | AS ABOVE 1.2m<br>-damp | | | | | | | |
| 2.0 | | | 382 ● ▲ | | GP-GM | | ◆ ■ | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 172 | COMPLETION DEPTH: 3 m<br>COMPLETE: 08/18/04<br>Page 1 of 1 |

05/02/21 08:13AM (YTG_HWTS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30013 |
| Donjek Services Ltd. | UTM ZONE: - N6768054 E641469 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES (20 40 60 80) / PLASTIC M.C. LIQUID (20 40 60 80) | USC | SOIL SYMBOL | PERCENT SAND (20 40 60 80) / PERCENT GRAVEL (20 40 60 80) | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>-dry to damp, medium dense, brown | | | | | | | 0.0 |
| 1.0 | | | 383 | | GW-GM | | | -1.0 |
| | AS ABOVE 1.5m<br>-damp | | | | | | | |
| 2.0 | | | 384 | | GW-GM | | | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW
REVIEWED BY: -
Fig. No: 173

COMPLETION DEPTH: 3 m
COMPLETE: 08/18/04



05/02/21 08:13AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30014 |
| Donjek Services Ltd. | UTM ZONE: – N6768036 E641287 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>–damp, medium dense, brown | | | | | | | 0.0 |
| | | | 385 ●▲ | | GW-GM | | ◆ ■ | |
| 1.0 | | | | | | | | -1.0 |
| | | | 386 ● ▲ | | GP-GM | | ◆ ■ | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: - | COMPLETE: 08/18/04 |
| Fig. No: 174 | Page 1 of 1 |

05/02/23 02:35PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30015 |
| Donjek Services Ltd. | UTM ZONE: - N6767939 E641051 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND<br>-damp to moist, medium dense, brown | | | | | | | 0.0 |
| | SANDY SILT 0.3m<br>-moist, soft, grey<br>-organics noted | | 387 | | ML | | | |
| 1.0 | | | | | | | | -1.0 |
| | SANDY GRAVEL, trace silt 1.2m<br>-damp to moist, medium dense, brown | | | | | | | |
| 2.0 | | | 388 | | GW-GM | | | -2.0 |
| | SANDY SILT, some gravel 2.7m<br>-damp to moist, soft, grey/brown | | | | | | | |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 175 | COMPLETION DEPTH: 3 m<br>COMPLETE: 08/18/04<br>Page 1 of 1 |

05/02/21 08:14AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30016 |
| Donjek Services Ltd. | UTM ZONE: - N6767966 E641012 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>-moist, medium dense, brown | | 389 | GW-GM | |
| | SILTY SAND/SANDY SILT 0.4m<br>-moist to wet, soft, brown | | | | |
| 1.0 | GRAVELLY SAND, trace silt 0.8m<br>-moist, medium dense, brown | | | | |
| 2.0 | | | 390 | SW-SM | |
| | SILTY SAND, some gravel to GRAVELLY 2.8m<br>-moist medium dense, brown | | | | |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | |
| 4.0 | | | | | |
| 5.0 | | | | | |
| 6.0 | | | | | |

▲ PERCENT FINES ▲ (20 40 60 80)

PLASTIC M.C. LIQUID (20 40 60 80)

◆ PERCENT SAND ◆ (20 40 60 80)

■ PERCENT GRAVEL ■ (20 40 60 80)

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0

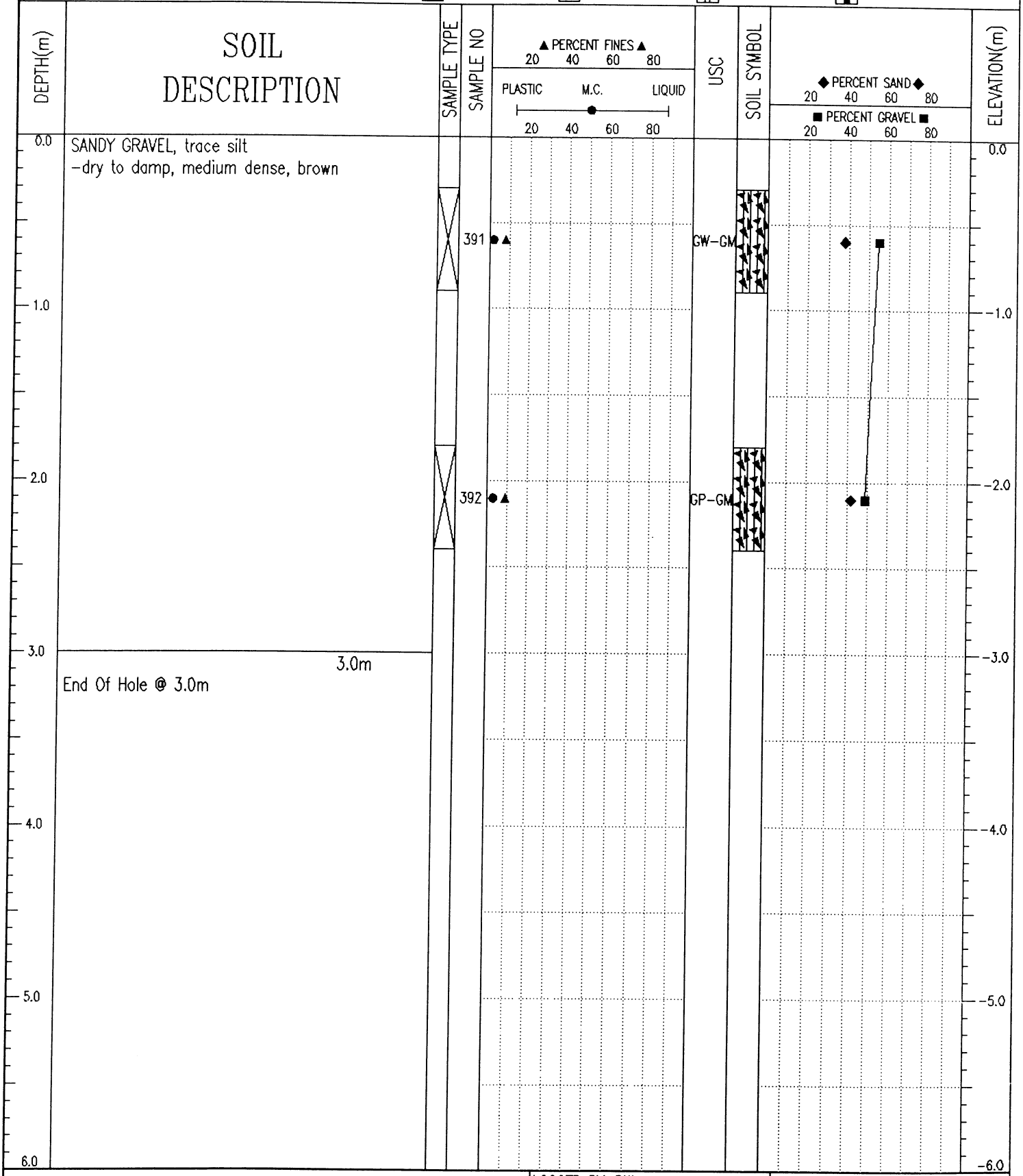
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/18/04 |
| Fig. No: 176 | Page 1 of 1 |

05/02/23 02:38PM (YTC_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30017 |
| Donjek Services Ltd. | UTM ZONE: - N6767834 E640871 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| | REVIEWED BY: - | COMPLETE: 08/18/04 |
| | Fig. No: 177 | Page 1 of 1 |

05/02/21 08:14AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30018 |
| Donjek Services Ltd. | UTM ZONE: - N6767697 E640691 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>-dry to damp, medium dense, brown | | 393 ●▲ | | GP-GM | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | GRAVELLY SAND, trace silt 1.2m<br>-damp, medium dense, brown | | | | | | | |
| 2.0 | | | 394 ●▲ | | SW-SM | | | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: - | COMPLETE: 08/18/04 |
| Fig. No: 178 | Page 1 of 1 |

05/02/21 08:14AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30019 |
| Donjek Services Ltd. | UTM ZONE: - N6767579 E640524 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND, some silt<br>-damp, medium dense, brown<br>-silt seam noted @ 0.4m depth (approx. 75mm thick)<br>-silt seam noted @ 1.2m depth (approx. 100mm thick) | | 395 | ● ▲ | SW-SM | | ■ ◆ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | SILTY GRAVELLY SAND 2.1m<br>-damp to moist, medium dense, brown<br>-silt present mostly in seams | | 396 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 179 | COMPLETION DEPTH: 3 m<br>COMPLETE: 08/18/04<br>Page 1 of 1 |

05/02/23 02:36PM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30020 |
| Donjek Services Ltd. | UTM ZONE: - N6767452 E640351 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND, trace silt<br>-damp to moist, medium dense, brown | | 397 | ▲ | SW-SM | | ◆ | 0.0 |
| 1.0 | SANDY GRAVEL 0.9m<br>-wet to saturated<br>-pea gravels | | | | | | | -1.0 |
| | SILT, some sand 1.5m<br>-moist to wet, firm, grey<br>-significant organics throughout<br>(decomposed rootlets/grasses etc.) | | 398 | ● ▲ | ML | | ■ ◆ | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

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| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| | REVIEWED BY: - | COMPLETE: 08/18/04 |
| | Fig. No: 180 | Page 1 of 1 |

05/02/23 02:36PM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30021 |
| Donjek Services Ltd. | UTM ZONE: – N6767340 E640194 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT<br>-damp to moist, medium dense, brown<br>-variable silt & sand seams intermixed<br>-organics noted throughout | ⊠ | 399 | ● ▲ | ML | ■ | ■ ◆ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 1.4m | SILT, trace sand<br>-moist to wet, soft to firm, grey<br>-increase silt w/ depth<br>-some organics noted | | | | | | | |
| 2.0 | | ⊠ | 400 | ● ▲ | ML | ■ ◆ | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 3.0m | End Of Hole @ 3.0m | | | | | | | |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/18/04 |
| Fig. No: 181 | Page 1 of 1 |

05/02/23 02:38PM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30022 |
| Donjek Services Ltd. | UTM ZONE: - N6767232 E640041 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT<br>-moist to wet, soft to firm, brown<br>-most sand present in seams to 75mm thick<br>-organics noted throughout | ⊠ | 401 | ● ▲ | ML | | ◆ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | SAND, some silt, trace gravel 1.5m<br>-wet, medium dense, brown | ⊠ | 402 | ● | SM | | ◆ | |
| 2.0 | | | | | | | | -2.0 |
| | SILT, trace sand 2.4m<br>-moist, firm, grey w/ blue hue<br>-non to low plastic | ⊠ | 403 | ● ▲ | ML | | ■ ◆ | |
| 3.0 | 3.0m<br>-End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: - | COMPLETE: 08/18/04 |
| Fig. No: 182 | Page 1 of 1 |

05/02/21 08:15AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30023 |
| Donjek Services Ltd. | UTM ZONE: - N6767125 E639890 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES / PLASTIC / M.C. / LIQUID | USC | SOIL SYMBOL | PERCENT SAND / PERCENT GRAVEL | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT<br>-damp to moist, medium dense, brown<br>-organics noted throughout | | 404 | | ML | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | SANDY SILT 1.2m<br>-damp to moist, firm, brown w/ some grey seams | | 405 | | ML | | | |
| 2.0 | | | | | | | | -2.0 |
| | SAND, trace to some silt 2.1m<br>-saturated, medium dense, brown | | | | | | | |
| | SILT, some clay 2.7m<br>-damp to moist, firm, grey w/ blue hue<br>-non to low plastic | | | | | | | |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

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| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 183 | COMPLETION DEPTH: 3 m<br>COMPLETE: 08/18/04<br>Page 1 of 1 |

05/02/21 08:15AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30024 |
| Donjek Services Ltd. | UTM ZONE: - N6766983 E639688 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES / PLASTIC M.C. LIQUID | USC | SOIL SYMBOL | PERCENT SAND / PERCENT GRAVEL | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT, some sand, trace gravel<br>-moist, soft to firm, brown | | 406 | | ML | | | 0.0 |
| 1.0 | GRAVELLY SAND 0.8m<br>-wet, medium dense, brown | | | | | | | -1.0 |
| | SILT, some sand 1.1m<br>-moist, soft to firm, brown | | | | | | | |
| 2.0 | SAND, some gravel, trace silt 1.5m<br>-saturated, medium dense, brown | | 407 | | SW-SM | | | -2.0 |
| | SANDY SILT 2.1m<br>-wet, soft to firm, grey/brown | | 408 | | ML | | | |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

PERCENT FINES: 20 40 60 80

PLASTIC M.C. LIQUID: 20 40 60 80

PERCENT SAND: 20 40 60 80

PERCENT GRAVEL: 20 40 60 80

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: - | COMPLETE: 08/18/04 |
| Fig. No: 184 | Page 1 of 1 |

05/02/23 02:37PM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30025 |
| Donjek Services Ltd. | UTM ZONE: - N6766885 E639558 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT/SILTY SAND<br>-dry, medium dense, light brown | | | | | | | 0.0 |
| | GRAVELLY SAND, trace silt 0.3m<br>-damp, medium dense, brown | | 409 | ●▲ | SW-SM | | ■ ◆ | |
| 1.0 | | | | | | | | -1.0 |
| | SANDY SILT, trace gravel 1.5m<br>-damp to moist, soft to firm, brown w/ grey & black seams<br>-significant organic silts (black) | | 410 | ● ▲ | ML | | ■ ◆ | |
| 2.0 | | | | | | | | -2.0 |
| | SILT, some sand, trace gravel 2.8m<br>-damp to moist, firm to stiff, brown<br>-non to low plastic | | | | | | | |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

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| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 185 | COMPLETION DEPTH: 3 m<br>COMPLETE: 08/18/04<br>Page 1 of 1 |

05/02/21 08:15AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30026 |
| Donjek Services Ltd. | UTM ZONE: – N6766769 E639356 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND, trace silt<br>–dry to damp, medium dense, brown | | 411 ● ▲ | | SW–SM | | ■ ◆ | 0.0 |
| 1.0 | | | | | | | | –1.0 |
| | SILTY SAND 1.5m<br>–dry, medium dense, light brown/grey<br>–powder like | | 412 ● ▲ | | SM | | ■ ◆ | |
| 2.0 | | | | | | | | –2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | –3.0 |
| 4.0 | | | | | | | | –4.0 |
| 5.0 | | | | | | | | –5.0 |
| 6.0 | | | | | | | | –6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/18/04 |
| Fig. No: 186 | Page 1 of 1 |

05/02/23 02:37PM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30027 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6766735 E639213 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND<br>-saturated, medium dense, brown | | 413 | ▲ ◆ | SW | | ■ ◆ | 0.0 |
| 1.0 | SILTY SAND/SANDY SILT 1.2m<br>-saturated, soft, grey | | | | | | | -1.0 |
| 2.0 | SILT, trace sand 1.8m<br>-moist, firm brown w/ some organic seams<br>-some organic silts | | 414 | ◆ ▲ | ML | | ■ ◆ | -2.0 |
| 3.0 | SILTY GRAVELLY SAND 2.7m<br>-saturated, medium dense, brown | | | | | | | -3.0 |
| | 3.0m<br>End Of Hole @ 3.0m | | | | | | | |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

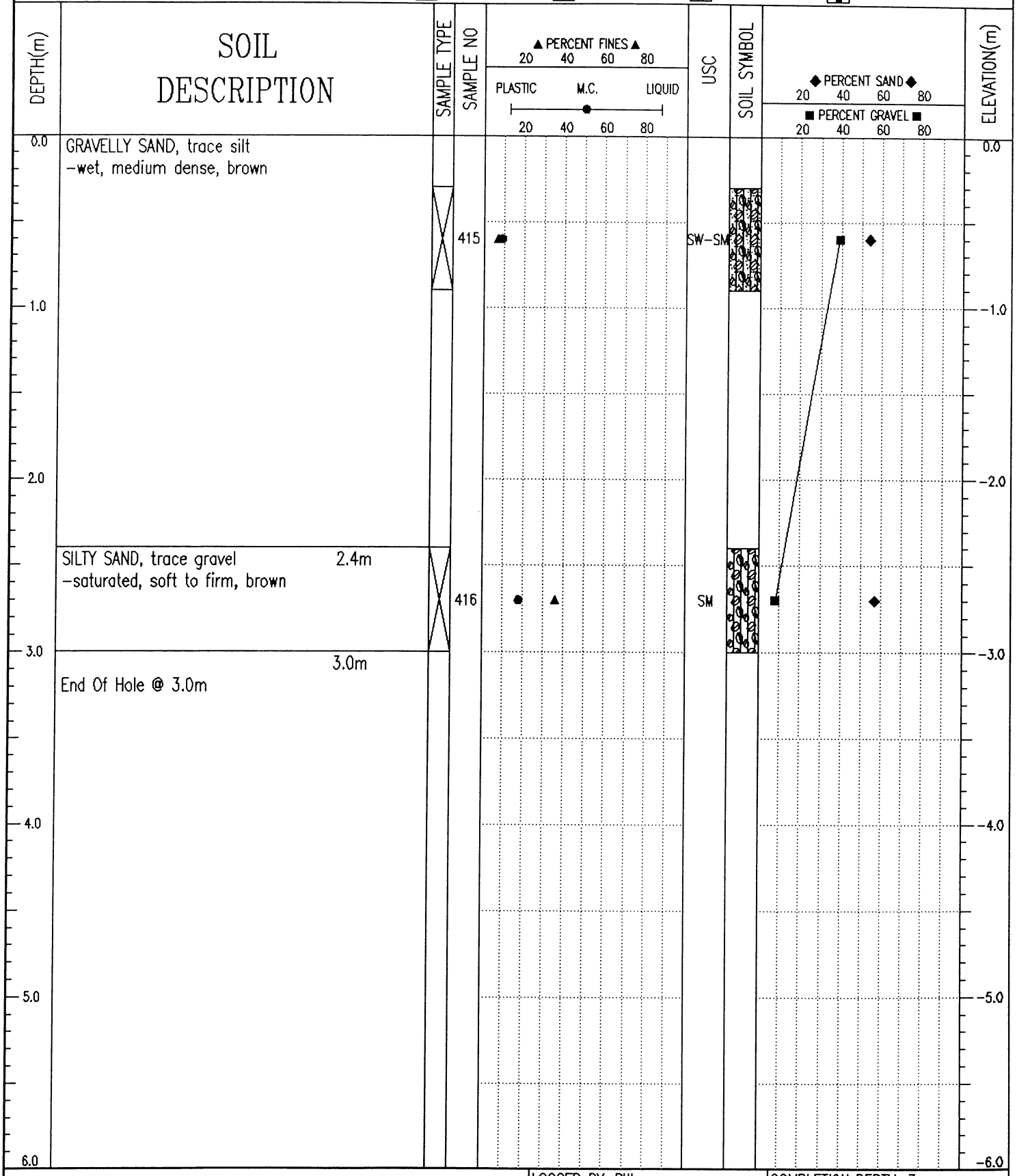
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
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| REVIEWED BY: - | COMPLETE: 08/19/04 |
| Fig. No: 187 | Page 1 of 1 |

05/02/21 08:16AM (YTG_HWYS)

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| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30028 |
| Donjek Services Ltd. | UTM ZONE: – N6766708 E639229 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

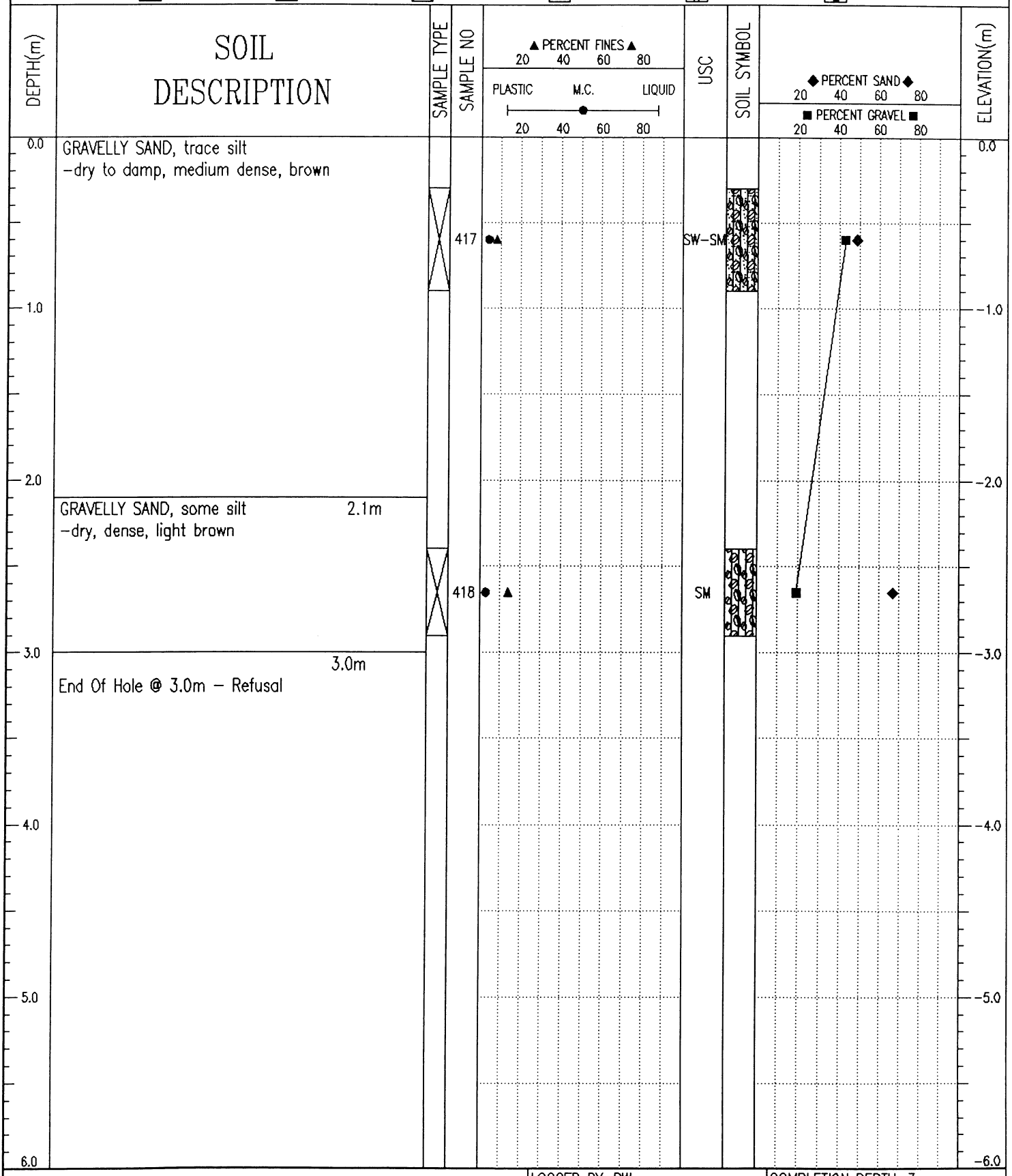



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| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| | REVIEWED BY: | COMPLETE: 08/19/04 |
| | Fig. No: 188 | Page 1 of 1 |

05/02/23 02:37PM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30029 |
| Donjek Services Ltd. | UTM ZONE: - N6766653 E639106 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| | REVIEWED BY: - | COMPLETE: 08/19/04 |
| | Fig. No: 189 | Page 1 of 1 |

05/02/23 02:37PM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30030 |
| Donjek Services Ltd. | UTM ZONE: - N6766547 E638909 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL<br>-damp, medium dense, brown<br>-cobbles to 200mm at surface (creek bottom) | | 419 | | GW | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | GRAVELLY SAND, trace silt 1.5m<br>-saturated, medium dense, brown | | 420 | | SW-SM | | | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

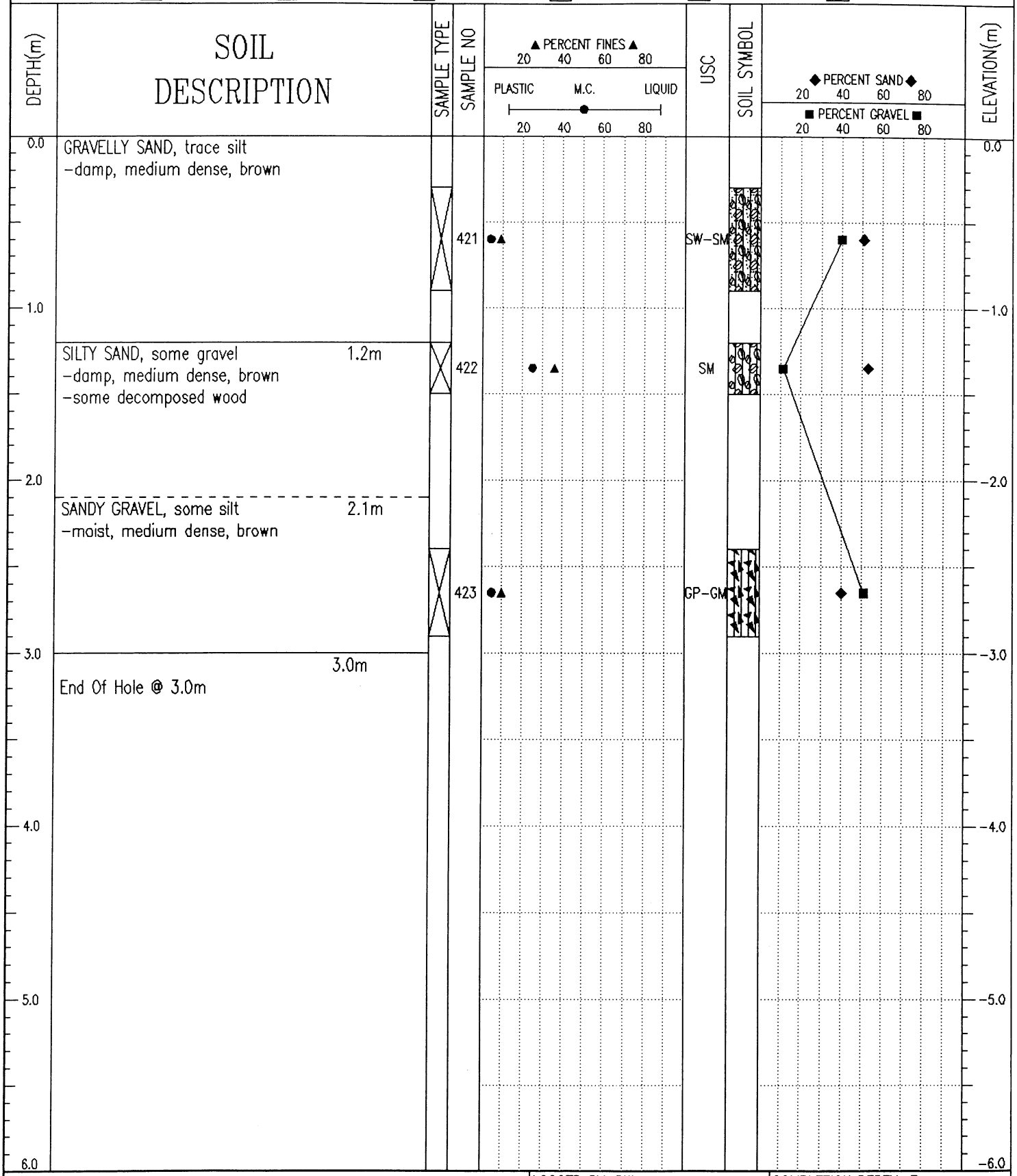
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/19/04 |
| Fig. No: 190 | Page 1 of 1 |

05/02/23 02:37PM (YTC_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30031 |
| Donjek Services Ltd. | UTM ZONE: – N6766525 E638926 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE




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|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| | REVIEWED BY: - | COMPLETE: 08/19/04 |
| | Fig. No: 191 | Page 1 of 1 |

05/02/21 08:17AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30032 |
| Donjek Services Ltd. | UTM ZONE: - N6766403 E638808 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>-damp, medium dense, brown | | 424 ▲ | | GW-GM | | ◆ ■ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| | SILTY SAND, trace gravel 2.4m<br>-moist, medium dense, brown<br>-some decomposed organics (wood) | | 425 ● ▲ | | SM | | ■ ◆ | |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

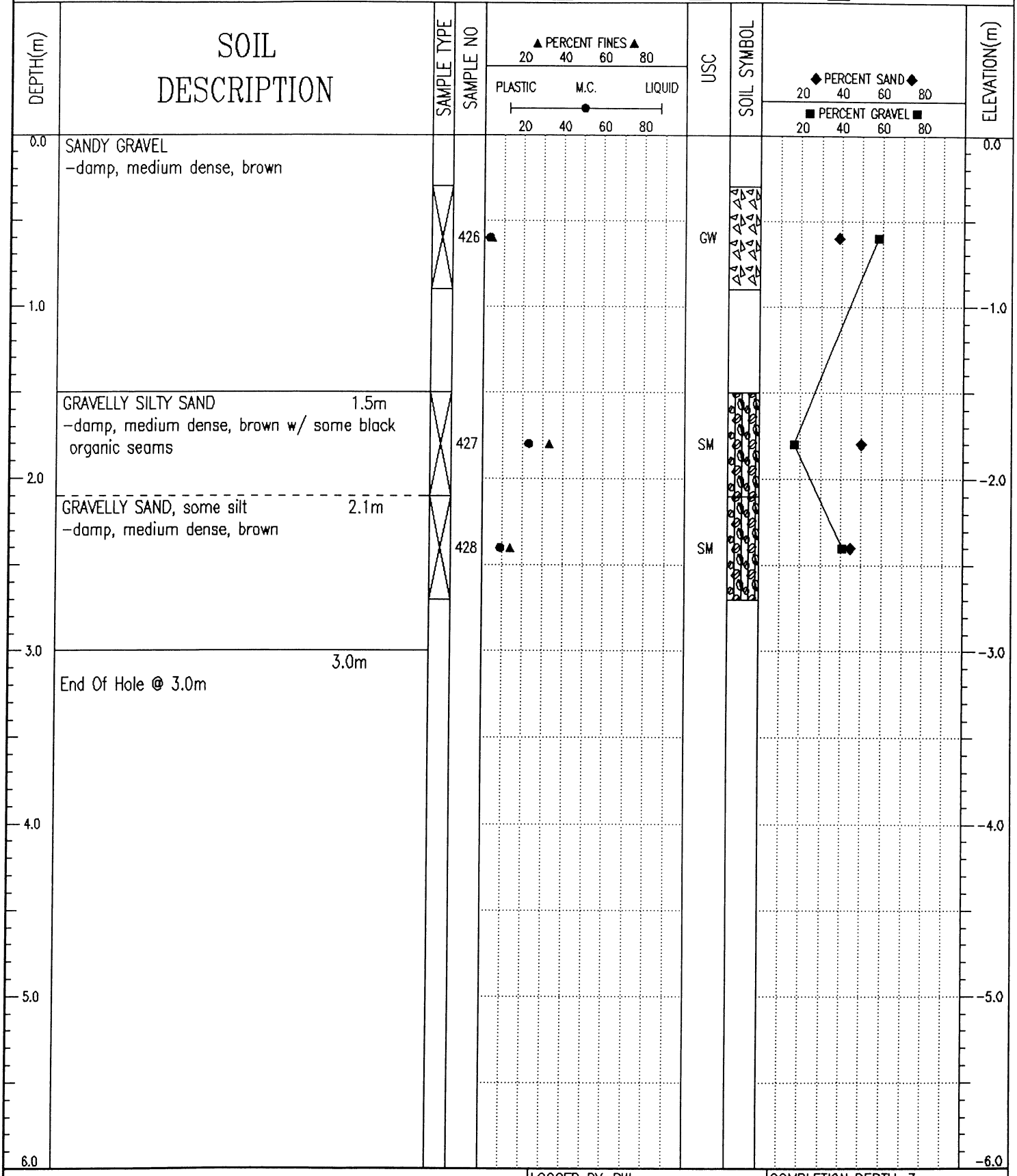
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Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: - | COMPLETE: 08/19/04 |
| Fig. No: 192 | Page 1 of 1 |

05/02/23 02:38PM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30033 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6766235 E638653 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE




| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
|---|---|---|
| | REVIEWED BY: - | COMPLETE: 08/19/04 |
| | Fig. No: 193 | Page 1 of 1 |

05/02/23 02:38PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30034 |
| Donjek Services Ltd. | UTM ZONE: - N6766172 E638452 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND<br>-damp, medium dense, brown | | | | |
| | | | 429 | SW | |
| 1.0 | | | | | |
| | ORGANIC SILTS 1.5m<br>-damp to moist, soft, dark brown | | | | |
| | GRAVELLY SAND, trace silt 1.7m<br>-saturated, medium dense, brown | | | | |
| 2.0 | | | 430 | SW-SM | |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | |
| 4.0 | | | | | |
| 5.0 | | | | | |
| 6.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0

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Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: - | COMPLETE: 08/19/04 |
| Fig. No: 194 | Page 1 of 1 |

05/02/21 08:17AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30035 |
| Donjek Services Ltd. | UTM ZONE: - N6766094 E638287 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▯ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLEY SAND, trace silt<br>-dry to damp, medium dense, brown | | 431 ●▲ | | SW-SM | | ■ ◆ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | GRAVELLY SAND 1.2m<br>-damp, medium dense, brown | | | | | | | |
| 2.0 | | | 432 ● | | SW | | ■ ◆ | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| | REVIEWED BY: - | COMPLETE: 08/19/04 |
| | Fig. No: 195 | Page 1 of 1 |

05/02/21 08:17AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30036 |
| Donjek Services Ltd. | UTM ZONE: – N6766043 E638094 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND<br>–damp, medium dense, brown | | 433 | | SP | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | SAND 2.1m<br>–wet, medium dense, brown | | 434 | | SW | | | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/19/04 |
| Fig. No: 196 | Page 1 of 1 |

05/02/23 02:38PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30037 |
| Donjek Services Ltd. | UTM ZONE: - N6765969 E637902 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|
| 0.0 | | | | |
| SILTY SAND, some gravel<br>-wet, soft, dark brown<br>-some organic silts to 0.6m depth | | 435 | SM | |
| 1.0 | | | | |
| GRAVELLY SILTY SAND 1.5m<br>-wet, soft to firm, grey | | 436 | SM | |
| 2.0 | | | | |
| 3.0 | | 437 | SM | |
| 4.0 | | | | |
| 4.0m<br>End Of Hole @ 4.0m - Refusal<br>-refusal @ 4.0m - move north 2m | | | | |
| 5.0 | | | | |
| 6.0 | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0

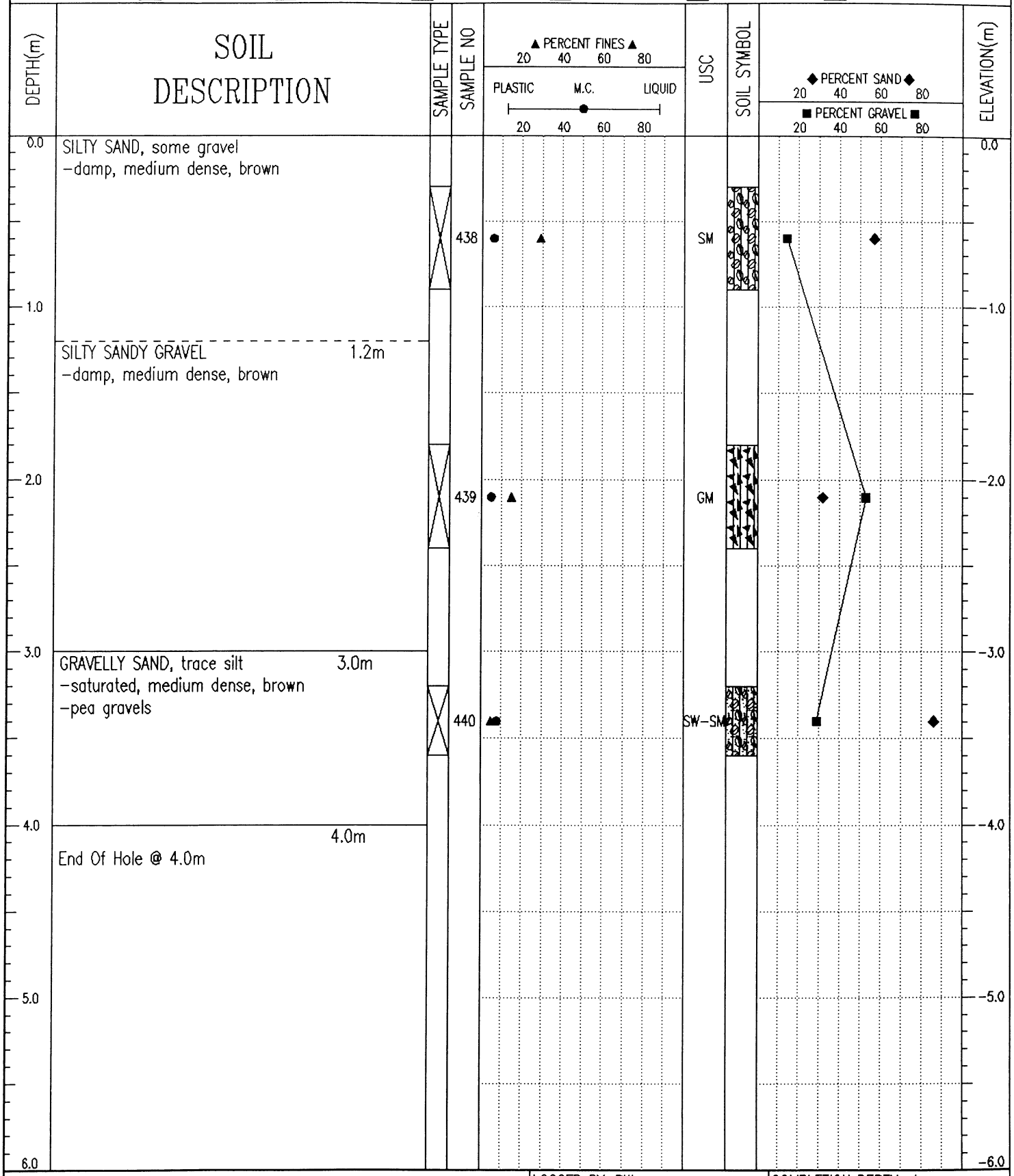
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4 m |
| REVIEWED BY: | COMPLETE: 08/19/04 |
| Fig. No: 197 | Page 1 of 1 |

05/02/21 08:18AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30038 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6765920 E637704 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE




| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4 m |
|---|---|---|
| | REVIEWED BY: - | COMPLETE: 08/19/04 |
| | Fig. No: 198 | Page 1 of 1 |

05/02/21 08:18AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30039 |
| Donjek Services Ltd. | UTM ZONE: - N6765818 E637563 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SILTY SAND<br>-damp, medium dense, brown | | 441 | | SM | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | 442 | | SM | | | -2.0 |
| | 2.4m<br>End Of Hole @ 2.4m | | | | | | | |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

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Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 2.4 m |
| REVIEWED BY: - | COMPLETE: 08/19/04 |
| Fig. No: 199 | Page 1 of 1 |

05/02/23 02:38PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30040 |
| Donjek Services Ltd. | UTM ZONE: - N6765598 E637444 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND<br>-saturated, loose, brown | | 443 | SW | | 0.0 |
| 0.6m | SAND, some silt<br>-saturated, loose, brown | | 444 | SM | | 1.0 |
| 1.5m | SAND, trace silt<br>-saturated, medium dense, dark grey | | 445 | SW-SM | | 2.0 |
| 3.0m | GRAVELLY SANDY SILT<br>-saturated, dark brown<br>-some intermixed sand seams | | 446 | ML | | 3.0 |
| 4.3m | End Of Hole @ 4.3m | | | | | 4.0 |
| 6.0 | | | | | | 5.0 |
| | | | | | | 6.0 |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 200 | COMPLETION DEPTH: 4.3 m<br>COMPLETE: 08/19/04<br>Page 1 of 1 |

05/02/23 02:38PM (YTC_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30041 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6765452 E637429 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | SPT(N) | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | | | | | | | | | 0.0 |
| 1.0 | | | | | | | | | -1.0 |
| | SPT (N) @ 1.4m: 41+ | ⊘ | 447 | | ● | GP | | | |
| | -refusal at 10" | | | | | | | | |
| 2.0 | SANDY GRAVEL/GRAVELLY SAND | | | | | | | | -2.0 |
| | -dry to damp, medium dense, brown | | | | | | | | |
| | 2.4m | | | | | | | | |
| | End Of Hole @ 2.4m – Refusal | | | | | | | | |
| 3.0 | -refusal @ 2.4m – move north 2m | | | | | | | | -3.0 |
| | -refusal @ 1.5m – move north 2m | | | | | | | | |
| | -refusal @ 1.8m – EOH | | | | | | | | |
| 4.0 | | | | | | | | | -4.0 |
| 5.0 | | | | | | | | | -5.0 |
| 6.0 | | | | | | | | | -6.0 |
| 7.0 | | | | | | | | | -7.0 |
| 8.0 | | | | | | | | | -8.0 |
| 9.0 | | | | | | | | | -9.0 |
| 10.0 | | | | | | | | | -10.0 |
| 11.0 | | | | | | | | | -11.0 |
| 12.0 | | | | | | | | | -12.0 |

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| LOGGED BY: RW | COMPLETION DEPTH: 2.4 m |
|---|---|
| REVIEWED BY: - | COMPLETE: 08/20/04 |
| Fig. No: 201 | Page 1 of 1 |

05/02/23 04:55PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30042 |
| Donjek Services Ltd. | UTM ZONE: - N6765198 E637411 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | SPT(N) | USC | SOIL SYMBOL |
|---|---|---|---|---|---|---|
| 0.0 | | | | | | |
| 1.0 | | | | | | |
| 2.0 | SPT (N) @ 1.4m: 18<br>GRAVELLY SAND, trace silt<br>-saturated, medium dense, brown | S.P.T. | 448 | 18 | SW-SM | |
| 3.0 | SPT (N) @ 2.9m: 7<br>SILTY SAND<br>-saturated, medium dense, grey/brown | S.P.T. | 449 | 7 | SM | |
| 4.0 | | | | | | |
| 5.0 | SPT (N) @ 4.4m: 6<br>SILTY SAND<br>-saturated, medium dense, grey/brown | S.P.T. | 450 | 6 | SM | |
| 6.0 | SPT (N) @ 5.9m: 15<br>SILTY SAND, trace gravel<br>-saturated, medium dense, brown | S.P.T. | 451 | 15 | SM | |
| 7.0 | | | | | | |
| 8.0 | SPT (N) @ 7.5m: 7<br>GRAVELLY SILTY SAND<br>-saturated, medium dense, brown | S.P.T. | 452 | 7 | SM | |
| 9.0 | SPT (N) @ 9.0m: 50<br>GRAVELLY SILTY SAND<br>-damp to moist, dense, brown<br>-some oxidation | S.P.T. | 453 | 50 | SM | |
| 10.0 | 9.9m<br>End Of Hole @ 9.9m - Refusal | | | | | |
| 11.0 | | | | | | |
| 12.0 | | | | | | |

PERCENT FINES: 20 40 60 80
PLASTIC M.C. LIQUID: 20 40 60 80
PERCENT SAND: 20 40 60 80
PERCENT GRAVEL: 20 40 60 80
ELEVATION(m): 0.0 -1.0 -2.0 -3.0 -4.0 -5.0 -6.0 -7.0 -8.0 -9.0 -10.0 -11.0 -12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 9.9 m |
| | REVIEWED BY: | COMPLETE: 08/20/04 |
| | Fig. No: 202 | Page 1 of 1 |

05/02/23 04:55PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30043 |
| Donjek Services Ltd. | UTM ZONE: – N6764763 E636827 | PROJECT NO: 1002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⧄ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | SPT(N) | USC | SOIL SYMBOL |
|---|---|---|---|---|---|---|
| 0.0 | | | | | | |
| 1.0 | | | | | | |
| 2.0 | SPT (N) @ 1.4m: 69<br>-7" recovry due to gravels<br>SANDY GRAVEL, some silt<br>-saturated, medium dense, brown | ⧄ | 454 | 69 | GM | |
| 3.0 | SPT (N) @ 2.9m: 16<br>SANDY SILT<br>-saturated, medium dense, brown/grey | ⧄ | 455 | 16 | ML | |
| 4.0 | | | | | | |
| 5.0 | SPT (N) @ 4.4m: 3<br>SILT, trace to some clay<br>-saturated, soft, grey | ⧄ | 456 | 3 | ML | |
| 6.0 | SPT (N) @ 5.9m: 4<br>SANDY SILT, some clay, trace gravel<br>-saturated, soft, grey<br>-non to low plastic | ⧄ | 457 | 4 | ML | |
| 7.0 | | | | | | |
| 8.0 | SPT (N) @ 7.5m: 9<br>SILT, trace sand<br>-saturated, soft, grey | ⧄ | 458 | 9 | ML | |
| 9.0 | SPT (N) @ 9.0m: No (N) Value.<br>-spoon pushed entire depth under weight of hammer.<br>CLAYEY SILT<br>-saturated, soft, grey | ⧄ | 459 | | ML | |
| 10.0 | | | | | | |
| 11.0 | SPT (N) @ 10.5m: No (N) Value.<br>-spoon pushed entire depth under weight of hammer.<br>CLAYEY SILT<br>-saturated, soft, grey | ⧄ | 460 | | ML | |
| 12.0 | | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 11.1 m |
| REVIEWED BY: _ | COMPLETE: 08/21/04 |
| Fig. No: 203 | Page 1 of 1 |

05/02/23 04:55PM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30044 |
| Donjek Services Ltd. | UTM ZONE: – N6764727 E636668 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SILTY SAND, trace gravel<br>–saturated, medium dense, grey | ⊠ | 461 | SM | | 0.0 |
| 1.0 | SILTY GRAVELLY SAND 1.2m<br>–saturated, medium dense, brown | ⊠ | 462 | SM | | -1.0 |
| 2.0 | | | | | | -2.0 |
| 3.0 | SILT, some sand, trace gravel 2.4m<br>–wet, soft to firm, grey<br>–non to low plastic | ⊠ | 462 | ML | | -3.0 |
| 4.0 | SILTY SAND, some gravel 4.0m<br>–saturated, medium dense, grey | ⊠ | 463 | SM | | -4.0 |
| 5.0 | 4.6m<br>End Of Hole @ 4.6m | | | | | -5.0 |
| 6.0 | | | | | | -6.0 |
| 7.0 | | | | | | -7.0 |
| 8.0 | | | | | | -8.0 |
| 9.0 | | | | | | -9.0 |
| 10.0 | | | | | | -10.0 |
| 11.0 | | | | | | -11.0 |
| 12.0 | | | | | | -12.0 |

▲ PERCENT FINES ▲ 20 40 60 80
PLASTIC M.C. LIQUID 20 40 60 80
◆ PERCENT SAND ◆ 20 40 60 80
■ PERCENT GRAVEL ■ 20 40 60 80

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Whitehorse, Yukon

LOGGED BY: RW
REVIEWED BY: -
Fig. No: 204

COMPLETION DEPTH: 4.6 m
COMPLETE: 08/21/04
Page 1 of 1

05/02/23 04:57PM (YIC_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30045 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6764640 E636398 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SAND<br>–saturated, medium dense, grey | ⊠ | 465 | ◆ ▲ | SM | | ■ ◆ | 0.0 |
| 1.0 | SILTY GRAVELLY SAND 0.3m<br>–saturated, medium dense, brown/grey | | | | | | | -1.0 |
| 2.0 | SAND, trace to some silt 1.5m<br>–saturated, medium dense, grey | ⊠ | 466 | ▲ ● | SW-SM | | ■ ◆ | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | SAND, some silt, trace gravel 4.0m<br>–saturated, medium dense, grey | ⊠ | 467 | ● | SM | | ■ ◆ | -4.0 |
| 5.0 | 4.6m<br>End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
|---|---|
| REVIEWED BY: | COMPLETE: 08/21/04 |
| Fig. No: 205 | Page 1 of 1 |

05/02/23 04:58PM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30046 |
| Donjek Services Ltd. | UTM ZONE: - N6764571 E636230 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | SPT(N) | USC | SOIL SYMBOL |
|---|---|---|---|---|---|---|
| 0.0 | | | | | | |
| 1.0 | | | | | | |
| 2.0 | SPT (N) @ 1.4m: 42<br>-6" recovery to gravels<br>SILTY GRAVELLY SAND<br>-saturated, medium dense, grey/brown | ▨ | 468 | 42 | SM | |
| 3.0 | SPT (N) @ 2.9m: 19<br>SANDY SILT<br>-wet, soft to firm, grey | ▨ | 469 | 19 | ML | |
| 4.0 | | | | | | |
| 5.0 | SPT (N) @ 4.4m: 6<br>SILTY SAND, some gravel<br>-wet, medium dense, brown/grey | ▨ | 470 | 6 | SM | |
| 6.0 | SPT (N) @ 5.9m: 12<br>SILTY SAND<br>-wet, medium dense, grey | ▨ | 471 | 12 | SM | |
| 6.6m | | | | | | |
| 7.0 | End Of Hole @ 6.6m | | | | | |
| 8.0 | | | | | | |
| 9.0 | | | | | | |
| 10.0 | | | | | | |
| 11.0 | | | | | | |
| 12.0 | | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 6.6 m |
| REVIEWED BY: | COMPLETE: 08/21/04 |
| Fig. No: 206 | Page 1 of 1 |

05/02/23 04:55PM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30047 |
| Donjek Services Ltd. | UTM ZONE: - N6764452 E636077 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND, trace to some silt<br>-saturated, medium dense, brown | ⊠ | 472 | SW-SM | | 0.0 |
| 1.0 | | | | | | -1.0 |
| 2.0 | | ⊠ | 473 | SW-SM | | -2.0 |
| 3.0 | | | | | | -3.0 |
| 3.6m | SILTY SAND<br>-saturated, medium dense, grey | ⊠ | 474 | SM | | -4.0 |
| 4.0 | | | | | | |
| 4.6m | End Of Hole @ 4.6m | | | | | -5.0 |
| 5.0 | | | | | | |
| 6.0 | | | | | | -6.0 |
| 7.0 | | | | | | -7.0 |
| 8.0 | | | | | | -8.0 |
| 9.0 | | | | | | -9.0 |
| 10.0 | | | | | | -10.0 |
| 11.0 | | | | | | -11.0 |
| 12.0 | | | | | | -12.0 |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| | REVIEWED BY: - | COMPLETE: 08/21/04 |
| | Fig. No: 207 | Page 1 of 1 |

05/02/23 04:58PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30049 |
| Donjek Services Ltd. | UTM ZONE: - N6764453 E635652 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT<br>-moist to wet, soft to firm, brown<br>-decomposed organics to 0.3m depth | | | | | | | 0.0 |
| 1.0 | CLAYEY SILT 0.6m<br>-moist to wet, soft to firm, grey<br>-low plastic | ⊠ | 475 | ● ▲ | ML | | ◆ | -1.0 |
| 2.0 | SILT, trace sand 1.5m<br>-wet, soft to firm, grey<br>-fine grained sands | ⊠ | 476 | ● ▲ | ML | | ■ ◆ | -2.0 |
| 3.0 | CLAYEY SILT, trace sand 2.5m<br>-wet, firm, grey<br>-low plastic | ⊠ | 477 | ● ▲ | ML | | ■ ◆ | -3.0 |
| 4.0 | SANDY SILT 3.7m<br>-moist to wet, firm, grey | ⊠ | 478 | ● ▲ | ML | | ■ ◆ | -4.0 |
| 5.0 | 4.6m<br>End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| REVIEWED BY: - | COMPLETE: 08/21/04 |
| Fig. No: 208 | Page 1 of 1 |

05/02/23 04:58PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30050 |
| Donjek Services Ltd. | UTM ZONE: - N6764514 E635462 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES (20 40 60 80) / PLASTIC M.C. LIQUID (20 40 60 80) | USC | SOIL SYMBOL | PERCENT SAND (20 40 60 80) / PERCENT GRAVEL (20 40 60 80) | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILTY SAND/SANDY SILT<br>-damp, medium dense, brown<br>-organics noted to 0.3m (rootlets/grasses) | | | | | | | 0.0 |
| 1.0 | SILT, trace sand 0.6m<br>-moist to wet, soft to firm, grey | | 479 | | ML | | | -1.0 |
| 2.0 | | | 480 | | ML | | | -2.0 |
| 3.0 | SANDY SILT 3.0m<br>-moist, soft to firm, grey<br>-fine grained sands | | 481 | | ML | | | -3.0 |
| 4.0 | SILT, trace sand 3.6m<br>-wet, soft, grey | | 482 | | ML | | | -4.0 |
| 5.0 | 4.6m<br>End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| REVIEWED BY: - | COMPLETE: 08/21/04 |
| Fig. No: 209 | Page 1 of 1 |

05/02/23 04:58PM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30051 |
| Donjek Services Ltd. | UTM ZONE: - N6764643 E635301 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | SPT(N) | USC | SOIL SYMBOL |
|---|---|---|---|---|---|---|
| 0.0 | | | | | | |
| 1.0 | | | | | | |
| 2.0 | SPT (N) @ 1.4m: 9<br>SANDY SILT<br>-saturated, grey | ▨ | 483 | 9 | ML | |
| 3.0 | SPT (N) @ 2.9m: 6<br>SILTY SAND<br>-saturated, grey | ▨ | 484 | 6 | SM | |
| 4.0 | | | | | | |
| 5.0 | SPT (N) @ 4.4m: 5<br>SILTY SAND<br>-saturated, grey | ▨ | 485 | 5 | SM | |
| 6.0 | SPT (N) @ 5.9m: 2<br>SILTY SAND<br>-saturated, grey | ▨ | 486 | 2 | SM | |
| | 6.4m | | | | | |
| 7.0 | End Of Hole @ 6.4m | | | | | |
| 8.0 | | | | | | |
| 9.0 | | | | | | |
| 10.0 | | | | | | |
| 11.0 | | | | | | |
| 12.0 | | | | | | |

PERCENT FINES ▲ (20 40 60 80) — PLASTIC — M.C. — LIQUID (20 40 60 80)

PERCENT SAND ◆ (20 40 60 80)

PERCENT GRAVEL ■ (20 40 60 80)

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 6.4 m |
| REVIEWED BY: - | COMPLETE: 08/22/04 |
| Fig. No: 210 | Page 1 of 1 |

05/02/23 04:35PM (YTG_NWTS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30052 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6764793 E635196 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | SPT(N) | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | | | | | | | | | 0.0 |
| 1.0 | | | | | | | | | -1.0 |
| | SPT (N) @ 1.4m: 14<br>SILTY SAND<br>-saturated, grey | ⊘ | 487 | 14 | ● | SM | | | |
| 2.0 | | | | | | | | | -2.0 |
| 3.0 | SPT (N) @ 2.9m: No sample. Hollow stem infilled >1.0m | | | | | | | | -3.0 |
| 4.0 | SPT (N) @ 4.4m: No sample. Hollow stem infilled >1.0m | | | | | | | | -4.0 |
| | 4.4m | | | | | | | | |
| 5.0 | End Of Hole @ 4.4m<br>-hollows infilled @ 2.9m – move north 4m<br>-hollows infilled @ 2.9 and 4.4m – EOH | | | | | | | | -5.0 |
| 6.0 | | | | | | | | | -6.0 |
| 7.0 | | | | | | | | | -7.0 |
| 8.0 | | | | | | | | | -8.0 |
| 9.0 | | | | | | | | | -9.0 |
| 10.0 | | | | | | | | | -10.0 |
| 11.0 | | | | | | | | | -11.0 |
| 12.0 | | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 4.4 m |
|---|---|
| REVIEWED BY: - | COMPLETE: 08/25/04 |
| Fig. No: 211 | Page 1 of 1 |

05/02/23 04:58PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30053 |
| Donjek Services Ltd. | UTM ZONE: - N6764972 E635055 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | SPT(N) | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | | | | | | | | | 0.0 |
| 1.0 | | | | | | | | | -1.0 |
| | SPT (N) @ 1.4m: 5<br>SILTY SAND<br>-saturated, grey/brown | ⊘ | 488 | | ● | SM | | | |
| 2.0 | | | | | | | | | -2.0 |
| 3.0 | SPT (N) @ 2.9m: 6<br>SILTY SAND<br>-saturated, grey/brown | ⊘ | 489 | | ● | SM | | | -3.0 |
| 4.0 | | | | | | | | | -4.0 |
| | SPT (N) @ 4.4m: No sample. Hollow stem infilled >1.0m | | | | | | | | |
| 5.0 | | | | | | | | | -5.0 |
| 6.0 | SPT (N) @ 5.0m: No sample. Hollow stem infilled 2.4m | | | | | | | | -6.0 |
| | 5.9m<br>End Of Hole @ 5.9m<br>-Bit stuck in hollow due due to silt/sand plug infill | | | | | | | | |
| 7.0 | | | | | | | | | -7.0 |
| 8.0 | | | | | | | | | -8.0 |
| 9.0 | | | | | | | | | -9.0 |
| 10.0 | | | | | | | | | -10.0 |
| 11.0 | | | | | | | | | -11.0 |
| 12.0 | | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| | REVIEWED BY: | COMPLETE: 08/25/04 |
| | Fig. No: 212 | Page 1 of 1 |

05/02/23 04:56PM (YTC_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30054 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6765115 E634942 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | SPT(N) | USC | SOIL SYMBOL |
|---|---|---|---|---|---|---|
| 0.0 | | | | | | |
| 1.0 | | | | | | |
| 2.0 | SPT (N) @ 1.4m: 8<br>SAND, some silt<br>-saturated, brown/grey | | 490 | | SM | |
| 3.0 | SPT (N) @ 2.9m: No sample. Hollow stem infilled 0.8m<br>2.9m | | | | | |
| 4.0 | End Of Hole @ 2.9m<br>-move north 3m (redrill with solid stem) | | | | | |
| 5.0 | | | | | | |
| 6.0 | | | | | | |
| 7.0 | | | | | | |
| 8.0 | | | | | | |
| 9.0 | | | | | | |
| 10.0 | | | | | | |
| 11.0 | | | | | | |
| 12.0 | | | | | | |

▲ PERCENT FINES ▲ (20 40 60 80)

PLASTIC M.C. LIQUID (20 40 60 80)

◆ PERCENT SAND ◆ (20 40 60 80)

■ PERCENT GRAVEL ■ (20 40 60 80)

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 2.9 m |
|---|---|
| REVIEWED BY: - | COMPLETE: 08/25/04 |
| Fig. No: 213 | Page 1 of 1 |

05/02/23 04:58PM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30055 |
| Donjek Services Ltd. | UTM ZONE: - N6765279 E634837 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES (20 40 60 80) / PLASTIC M.C. LIQUID (20 40 60 80) | USC | SOIL SYMBOL | PERCENT SAND (20 40 60 80) / PERCENT GRAVEL (20 40 60 80) | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT, some sand<br>-moist to wet, soft to firm, brown w/ some grey seams<br>-organics noted to 0.9m depth | | 498 | | ML | | | 0.0 |
| 1.0 | SILT 1.2m<br>-wet to saturated, soft, grey | | | | | | | -1.0 |
| 2.0 | | | 499 | | ML | | | -2.0 |
| 3.0 | SILTY SAND/SANDY SILT 2.9m<br>-saturated, soft, grey/brown<br>-very soupy | | | | | | | -3.0 |
| 4.0 | | | 500 | | ML | | | -4.0 |
| 5.0 | SILTY SAND/SANDY SILT 4.9m<br>-saturated, soft, grey/brown<br>-silt seam noted @ 5.2m (200mm thick) | | 501 | | ML | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | SILTY SAND 6.7m<br>-saturated, medium dense, brown/grey | | 502 | | SM | | | -7.0 |
| 8.0 | | | 503 | | SM | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | SILTY SAND to SAND, some silt 10.0m<br>-saturated, medium dense, brown/grey<br>-silt seam noted @ 11.0m (200mm thick)<br>-silt seam noted @ 12.8m (200mm thick) | | 504 | | SM | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | 505 | | SM | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 15.1 m |
| REVIEWED BY: - | COMPLETE: 08/26/04 |
| Fig. No: 215 | Page 1 of 2 |

05/02/23 04:58PM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30055 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6765279 E634837 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | | | | | | | 12.0 |
| 13.0 | | | 506 | | SM | | | 13.0 |
| 14.0 | | | 507 | | SM | | | 14.0 |
| 15.0 | 15.1m<br>End Of Hole @ 15.1m | | | | | | | 15.0 |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 15.1 m |
|---|---|---|
| | REVIEWED BY: - | COMPLETE: 08/26/04 |
| | Fig. No: 215 | Page 2 of 2 |

05/02/23 04:59PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30056 |
| Donjek Services Ltd. | UTM ZONE: - N6765296 E634757 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVELLY SILT<br>-saturated, medium dense, brown | ⊠ | 528 | ● | ML | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | SAND, trace to some silt 1.5m<br>-saturated, medium dense, brown | | | | | | | |
| 2.0 | | ⊠ | 529 | ● | SP-SM | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | ⊠ | 530 | ● | SP-SM | | | -4.0 |
| 5.0 | | ⊠ | 531 | ◆ | SP-SM | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| | SANDY SILT/SILTY SAND 6.4m<br>-saturated, soft, brown<br>-some silt seams to 300mm thick | | | | | | | |
| 7.0 | | ⊠ | 532 | ● | ML | | | -7.0 |
| 8.0 | | ⊠ | 533 | ● | ML | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| | SAND, some silt 9.1m<br>-saturated, medium dense, brown | | | | | | | |
| 10.0 | | ⊠ | 534 | ● | SM | | | -10.0 |
| 11.0 | | ⊠ | 535 | ● | SM | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 15.2 m |
| REVIEWED BY: - | COMPLETE: 08/27/04 |
| Fig. No: 216 | Page 1 of 2 |

05/02/23 04:26PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30056 |
| Donjek Services Ltd. | UTM ZONE: - N6765296 E634757 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | | | | | | | 12.0 |
| | SILTY SAND 12.5m<br>-saturated, medium dense, brown<br>-some silt seams to 200mm thick | ⊠ | 536 | ● | SM | | | |
| 13.0 | | | | | | | | 13.0 |
| 14.0 | SAND, trace to some silt 13.9m<br>-saturated, medium dense, brown | ⊠ | 537 | ● | SP-SM | | | 14.0 |
| 15.0 | | | | | | | | 15.0 |
| | 15.2m<br>End of Hole @ 15.2m | | | | | | | |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 216 | COMPLETION DEPTH: 15.2 m<br>COMPLETE: 08/27/04<br>Page 2 of 2 |

05/02/23 04:59PM (YTG_HWTS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30057 |
| Donjek Services Ltd. | UTM ZONE: – N6765406 E634728 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SILT, some sand<br>–saturated, soft, grey/brown<br>–organics noted to 0.2m depth | ⊠ | 508 | ML | |
| 1.2m | SAND, some silt to SILTY<br>–saturated, medium dense, brown/grey | ⊠ | 509 | SM | |
| | | ⊠ | 510 | SM | |
| 5.2m | SILT<br>–saturated, soft, grey | ⊠ | 511 | ML | |
| | | ⊠ | 512 | ML | |
| | | ⊠ | 513 | ML | |
| 8.8m | SAND, some silt<br>–saturated, medium dense, brown/grey<br>–silt seam @ 10.7m (300mm thick) | ⊠ | 514 | SM | |
| 11.0m | SANDY SILT<br>–saturated, soft, brown/grey<br>–very fine grained sands | ⊠ | 515 | ML | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY:<br>Fig. No: 217 | COMPLETION DEPTH: 30.3 m<br>COMPLETE: 08/26/04<br>Page 1 of 3 |

05/02/23 04:59PM (YIC_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30057 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6765406 E634728 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▯ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | | | | | | | -12.0 |
| 13.0 | SAND, some silt to SILTY 12.8m<br>–saturated, medium dense, brown/grey | ⊠ | 516 | ● | SM | | | -13.0 |
| 14.0 | | ⊠ | 517 | ● | SM | | | -14.0 |
| 15.0 | | | | | | | | -15.0 |
| 16.0 | | ⊠ | 518 | ● | SM | | | -16.0 |
| 17.0 | | ⊠ | 519 | ● | SM | | | -17.0 |
| 18.0 | | | | | | | | -18.0 |
| 19.0 | | ⊠ | 520 | ● | SM | | | -19.0 |
| 20.0 | | ⊠ | 521 | ● | SM | | | -20.0 |
| 21.0 | | | | | | | | -21.0 |
| 22.0 | SILT 21.9m<br>–saturated, soft, grey<br>–non to low plastic | ⊠ | 522 | ● | ML | | | -22.0 |
| 23.0 | | ⊠ | 523 | ● | ML | | | -23.0 |
| 24.0 | | | | | | | | -24.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 30.3 m |
|---|---|
| REVIEWED BY: | COMPLETE: 08/26/04 |
| Fig. No: 217 | Page 2 of 3 |

05/02/23 04:58PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30057 |
| Donjek Services Ltd. | UTM ZONE: - N6765406 E634728 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 24.0 | | | | | | | | 24.0 |
| | SILT 24.4m<br>-saturated, soft to firm, grey<br>-low plastic | | | | | | | |
| 25.0 | | ⊠ | 524 | ● | ML | | | 25.0 |
| 26.0 | | ⊠ | 525 | ● | ML | | | 26.0 |
| 27.0 | | | | | | | | 27.0 |
| 28.0 | | ⊠ | 526 | ● | ML | | | 28.0 |
| 29.0 | | | | | | | | 29.0 |
| 30.0 | | ⊠ | 527 | ● | ML | | | 30.0 |
| | 30.3m<br>End Of Hole @ 30.3m | | | | | | | |
| 31.0 | | | | | | | | 31.0 |
| 32.0 | | | | | | | | 32.0 |
| 33.0 | | | | | | | | 33.0 |
| 34.0 | | | | | | | | 34.0 |
| 35.0 | | | | | | | | 35.0 |
| 36.0 | | | | | | | | 36.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW
REVIEWED BY: -
Fig. No: 217

COMPLETION DEPTH: 30.3 m
COMPLETE: 08/26/04



05/02/23 04:58PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30058 |
| Donjek Services Ltd. | UTM ZONE: - N6765412 E634679 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SILT, some sand<br>-wet, soft to firm, grey/brown<br>-organics noted to 0.6m depth | | 538 | ML | | 0.0 |
| 1.2 | SILTY GRAVEL, some sand<br>-saturated, soft, grey/brown<br>-grindy drilling | | 539 | GM | | -1.0 |
| 2.1 | SAND, trace silt<br>-saturated, medium dense, brown | | 540 | SP-SM | | -2.0 |
| 4.9 | SILT, some clay<br>-saturated, soft to firm, grey<br>-non to low plastic | | 541 | ML | | -3.0 |
| 5.9 | SAND, trace silt<br>-saturated, medium dense, brown | | 542 | SP-SM | | -4.0 |
| | | | 543 | SP-SM | | -5.0 |
| | | | 544 | SP-SM | | -6.0 |
| | | | 545 | SP-SM | | -7.0 |
| 11.6 | SILTY SAND/SANDY SILT | | | | | -8.0 |
| 12.0 | | | | | | -9.0 |
| | | | | | | -10.0 |
| | | | | | | -11.0 |
| | | | | | | -12.0 |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW
REVIEWED BY: -
Fig. No: 218

COMPLETION DEPTH: 30.5 m
COMPLETE: 08/28/04



05/02/23 05:00PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30058 |
| Donjek Services Ltd. | UTM ZONE: - N6765412 E634679 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES (20 40 60 80) / PLASTIC M.C. LIQUID (20 40 60 80) | USC | SOIL SYMBOL | PERCENT SAND (20 40 60 80) / PERCENT GRAVEL (20 40 60 80) | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | -saturated, soft, brown/grey | | | | | | | 12.0 |
| 13.0 | | AUGER | 546 | | ML | | | 13.0 |
| | SILT, trace to some sand, some clay 13.7m<br>-saturated, soft, brown/grey<br>-non to low plastic | | | | | | | |
| 14.0 | | AUGER | 547 | | ML | | | 14.0 |
| 15.0 | | | | | | | | 15.0 |
| | SAND, some silt to SILTY 15.4m<br>-saturated, medium dense, brown<br>-some silt seams (200mm thick) | | | | | | | |
| 16.0 | | AUGER | 548 | | SM | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| | SAND, trace to some silt 17.4m<br>-saturated, medium dense, brown | | | | | | | |
| 18.0 | | AUGER | 549 | | SP-SM | | | 18.0 |
| 19.0 | | AUGER | 550 | | SP-SM | | | 19.0 |
| 20.0 | | AUGER | 551 | | SP-SM | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | SILT 22.9m<br>-saturated, soft, grey<br>-non to low plastic | | | | | | | 23.0 |
| 24.0 | | AUGER | 552 | | ML | | | 24.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW
REVIEWED BY: -
Fig. No: 218

COMPLETION DEPTH: 30.5 m
COMPLETE: 08/28/04



05/02/23 05:00PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30058 |
| Donjek Services Ltd. | UTM ZONE: – N6765412 E634679 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 24.0 | | ⊠ | 552 | ● | ML | | | -24.0 |
| | SILT, trace to some clay 24.4m<br>-saturated, soft to firm, grey<br>-low plastic | | | | | | | |
| 25.0 | | ⊠ | 553 | ● | ML | | | -25.0 |
| 26.0 | CLAYEY SILT 25.9m<br>-wet to saturated, soft to firm, grey<br>-low plastic | ⊠ | 554 | ● | ML | | | -26.0 |
| 27.0 | | | | | | | | -27.0 |
| 28.0 | | ⊠ | 555 | ● | ML | | | -28.0 |
| 29.0 | | | | | | | | -29.0 |
| 30.0 | | ⊠ | 556 | ● | ML | | | -30.0 |
| | 30.5m<br>End Of Hole @ 30.5m | | | | | | | |
| 31.0 | | | | | | | | -31.0 |
| 32.0 | | | | | | | | -32.0 |
| 33.0 | | | | | | | | -33.0 |
| 34.0 | | | | | | | | -34.0 |
| 35.0 | | | | | | | | -35.0 |
| 36.0 | | | | | | | | -36.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 30.5 m |
| REVIEWED BY: - | COMPLETE: 08/28/04 |
| Fig. No: 218 | Page 3 of 3 |

05/02/23 05:00PM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30059 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6765507 E634609 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT<br>–dry to damp, medium dense, light brown<br>–boulder fill along river bank<br>–organics throughout | ⊠ | 557 | • | ML | | | 0.0 |
| 1.0 | –very grindy due to boulder fill<br>SILT, some sand 1.0m<br>–wet to saturated, soft, brown/grey | ⊠ | 558 | • | ML | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | SAND, trace to some silt 2.4m<br>–saturated, medium dense, brown/grey | ⊠ | 559 | • | SM | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | SILT 4.6m<br>–saturated, soft, grey | ⊠ | 560 | • | ML | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | SAND 6.1m<br>–saturated, medium dense, brown<br>–minimal material on flights for samples<br>#561 & #562 (flights washed clean) | ⊠ | 561 | • | SP | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | ⊠ | 562 | • | SP | | | -10.0 |
| 11.0 | SILT, trace to some clay 10.7m<br>–saturated, soft, grey<br>–non to low plastic | ⊠ | 563 | • | ML | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 30.3 m |
|---|---|
| REVIEWED BY: | COMPLETE: 08/28/04 |
| Fig. No: 219 | Page 1 of 3 |

05/02/23 05:00PM (YTC_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30059 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6765507 E634609 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▭ BULK ▯ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | SAND, trace to some silt 12.2m<br>–saturated, medium dense, brown/grey<br>–minimal material on flights for sample #564 (flights washed clean) | ⊠ | 564 | ● | SP-SM | | | 12.0 |
| 13.0 | | | | | | | | 13.0 |
| 14.0 | | ⊠ | 565 | ● | SP-SM | | | 14.0 |
| 15.0 | | | | | | | | 15.0 |
| 16.0 | | ⊠ | 566 | ● | SP-SM | | | 16.0 |
| 17.0 | | ⊠ | 567 | ● | SP-SM | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | ⊠ | 568 | ● | SP-SM | | | 19.0 |
| 20.0 | SILTY SAND/SANDY SILT 20.1m<br>–saturated, medium dense, brown/grey<br>–increase silt w/ depth | ⊠ | 569 | ● | ML | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | ⊠ | 570 | ● | ML | | | 22.0 |
| 23.0 | SILT 22.9m<br>–saturated, soft, grey | ⊠ | 571 | ● | ML | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 30.3 m |
|---|---|
| REVIEWED BY: | COMPLETE: 08/28/04 |
| Fig. No: 219 | Page 2 of 3 |

05/02/23 05:00PM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30059 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6765507 E634609 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES / PLASTIC M.C. LIQUID | USC | SOIL SYMBOL | PERCENT SAND / PERCENT GRAVEL | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 24.0 | SILT 24.4m<br>-saturated, soft to firm, grey | | | | | | | 24.0 |
| 25.0 | | AUGER | 572 | | ML | | | 25.0 |
| 26.0 | | AUGER | 573 | | ML | | | 26.0 |
| 27.0 | | | | | | | | 27.0 |
| 28.0 | | AUGER | 574 | | ML | | | 28.0 |
| 29.0 | | | | | | | | 29.0 |
| 30.0 | | AUGER | 575 | | ML | | | 30.0 |
| | 30.3m<br>End Of Hole @ 30.3 | | | | | | | |
| 31.0 | | | | | | | | 31.0 |
| 32.0 | | | | | | | | 32.0 |
| 33.0 | | | | | | | | 33.0 |
| 34.0 | | | | | | | | 34.0 |
| 35.0 | | | | | | | | 35.0 |
| 36.0 | | | | | | | | 36.0 |

PERCENT FINES: 20 40 60 80 | PLASTIC M.C. LIQUID: 20 40 60 80 | PERCENT SAND: 20 40 60 80 | PERCENT GRAVEL: 20 40 60 80

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 30.3 m |
|---|---|
| REVIEWED BY: - | COMPLETE: 08/28/04 |
| Fig. No: 219 | Page 3 of 3 |

05/02/23 05:00PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30061 |
| Donjek Services Ltd. | UTM ZONE: - N6765562 E634611 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL/GRAVELLY SAND, some silt<br>-damp to moist, medium dense, brown | ⊠ | 576 | ● | GP-GM | | | 0.0 |
| 1.0 | SILT, some sand to SANDY 0.6m<br>-moist to wet, soft, brown/grey | ⊠ | 577 | ● | ML | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | SAND, trace to some silt 2.4m<br>-saturated, medium dense, brown | ⊠ | 578 | ● | SP-SM | | | -3.0 |
| 4.0 | | ⊠ | 579 | ● | SP-SM | | | -4.0 |
| 5.0 | | ⊠ | 580 | ● | SP-SM | | | -5.0 |
| 6.0 | SAND, some silt 6.1m<br>-saturated, medium dense, brown<br>-fine grained sands | | | | | | | -6.0 |
| 7.0 | | ⊠ | 581 | ● | SM | | | -7.0 |
| 8.0 | | ⊠ | 582 | ● | SM | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | ⊠ | 583 | ● | SM | | | -10.0 |
| 11.0 | SILT 10.1m<br>-saturated, soft, grey<br>-non to low plastic | ⊠ | 584 | ● | ML | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 30.3 m |
| REVIEWED BY: - | COMPLETE: 08/29/04 |
| Fig. No: 220 | Page 1 of 3 |

05/02/23 05:00PM (YTC_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30061 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6765562 E634611 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | SAND, some silt 12.2m<br>-saturated, medium dense, brown<br>-fine grained sands | | | | | | | 12.0 |
| 13.0 | | | 585 | | SM | | | 13.0 |
| 14.0 | | | 586 | | SM | | | 14.0 |
| 15.0 | | | | | | | | 15.0 |
| 16.0 | | | 587 | | SM | | | 16.0 |
| 17.0 | | | 588 | | SM | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | 589 | | SM | | | 19.0 |
| 20.0 | SILT, trace to some clay 19.8m<br>-wet to saturated, soft, grey | | 590 | | ML | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | 591 | | ML | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | SANDY SILT/SILTY SAND 23.2m<br>-saturated, soft, brown/grey<br>-silt & sand seams intermixed | | 592 | | ML | | | 24.0 |

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LOGGED BY: RW | COMPLETION DEPTH: 30.3 m
REVIEWED BY: - | COMPLETE: 08/29/04
Fig. No: 220 | Page 2 of 3

05/02/23 05:01PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30061 |
| Donjek Services Ltd. | UTM ZONE: - N6765562 E634611 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|
| 24.0 | | | | | | | 24.0 |
| 25.0 | | | | | | | 25.0 |
| SILT, trace to some clay 25.0m<br>-wet to saturated, soft to firm, grey | ⊠ | 593 | ● | ML | | | |
| 26.0 | | | | | | | 26.0 |
| | ⊠ | 594 | ● | ML | | | |
| 27.0 | | | | | | | 27.0 |
| 28.0 | | | | | | | 28.0 |
| SANDY SILT 28.0m<br>-saturated, soft, grey | ⊠ | 595 | ◆ | ML | | | |
| SILT, trace to some clay 28.7m<br>-wet to saturated, soft to firm, grey | | | | | | | |
| 29.0 | | | | | | | 29.0 |
| | ⊠ | 596 | ● | ML | | | |
| 30.0 | | | | | | | 30.0 |
| 30.3m<br>End Of Hole @ 30.3m | | | | | | | |
| 31.0 | | | | | | | 31.0 |
| 32.0 | | | | | | | 32.0 |
| 33.0 | | | | | | | 33.0 |
| 34.0 | | | | | | | 34.0 |
| 35.0 | | | | | | | 35.0 |
| 36.0 | | | | | | | 36.0 |

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| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 30.3 m |
| REVIEWED BY: | COMPLETE: 08/29/04 |
| Fig. No: 220 | Page 3 of 3 |

05/02/23 05:01PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30062 |
| Donjek Services Ltd. | UTM ZONE: - N6765721 E634495 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SAND, some silt to SILTY<br>-damp to moist, medium dense, brown | ⊠ | 597 | ● | SM | | | 0.0 |
| 1.0 | SILT, some sand to SANDY 0.6m<br>-damp, soft to firm, light brown | | | | | | | -1.0 |
| 2.0 | AS ABOVE 1.5m<br>-wet to saturated<br>-sand seam noted @ 2.1m (200mm thick) | ⊠ | 598 | ● | ML | | | -2.0 |
| | SILT 2.4m<br>-saturated, soft, grey | | | | | | | |
| 3.0 | SAND, trace silt 3.0m<br>-saturated, medium dense, brown<br>-silt seam noted @ 5.3m (300mm thick) | | | | | | | -3.0 |
| 4.0 | | ⊠ | 599 | ● | SP-SM | | | -4.0 |
| 5.0 | | ⊠ | 600 | ● | SP-SM | | | -5.0 |
| 6.0 | SILT 6.1m<br>-saturated, soft, grey | | | | | | | -6.0 |
| 7.0 | | ⊠ | 601 | ● | ML | | | -7.0 |
| 8.0 | SAND, trace silt 7.6m<br>-saturated, medium dense, brown | ⊠ | 602 | ● | SP-SM | | | -8.0 |
| 9.0 | SILTY SAND/SANDY SILT 8.2m<br>-saturated, soft, brown/grey<br>-variable silt and sand seams | | | | | | | -9.0 |
| 10.0 | | ⊠ | 603 | ● | ML | | | -10.0 |
| 11.0 | SAND, trace to some silt 11.0m<br>-saturated, medium dense, brown | ⊠ | 604 | ● | SP-SM | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 15.1 m |
| REVIEWED BY: - | COMPLETE: 08/29/04 |
| Fig. No: 221 | Page 1 of 2 |

05/02/23 05:01PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30062 |
| Donjek Services Ltd. | UTM ZONE: – N6765721 E634495 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | SAND, some silt to SILTY 12.2m<br>–saturated, medium dense, brown | ⊠ | 605 | ● | SM | | | 12.0 |
| 13.0 | | | | | | | | 13.0 |
| 14.0 | | ⊠ | 606 | ● | SM | | | 14.0 |
| 15.0 | 15.1m<br>End Of Hole @ 15.1m | | | | | | | 15.0 |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 15.1 m |
| REVIEWED BY: | COMPLETE: 08/29/04 |
| Fig. No: 221 | Page 2 of 2 |

05/02/23 05:01PM (YIC_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30063 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6765883 E634376 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲PERCENT FINES▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆PERCENT SAND◆ 20 40 60 80 / ■PERCENT GRAVEL■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SAND, some silt to SILTY<br>-damp, medium dense, brown | | | | | | | 0.0 |
| 1.0 | SILT, some sand 0.5m<br>-wet to saturated, soft to firm, brown | | 607 | | ML | | | -1.0 |
| 2.0 | SAND, trace silt 1.8m<br>-saturated, medium dense, brown | | 608 | | SP-SM | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | 609 | | SP-SM | | | -4.0 |
| 5.0 | | | 610 | | SP-SM | | | -5.0 |
| 6.0 | SILT 5.5m<br>-saturated, soft, grey | | | | | | | -6.0 |
| 7.0 | | | 611 | | ML | | | -7.0 |
| 8.0 | SILTY SAND 7.6m<br>-saturated, medium dense, brown/grey | | 612 | | SM | | | -8.0 |
| 9.0 | SILT 8.8m<br>-saturated, soft, grey | | | | | | | -9.0 |
| 10.0 | SILTY SAND 9.5m<br>-saturated, medium dense, brown/grey | | 613 | | SM | | | -10.0 |
| 11.0 | | | 614 | | SM | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 15.1 m |
|---|---|
| REVIEWED BY: - | COMPLETE: 08/29/04 |
| Fig. No: 222 | Page 1 of 2 |

05/02/23 05:01PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30063 |
| Donjek Services Ltd. | UTM ZONE: - N6765883 E634376 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

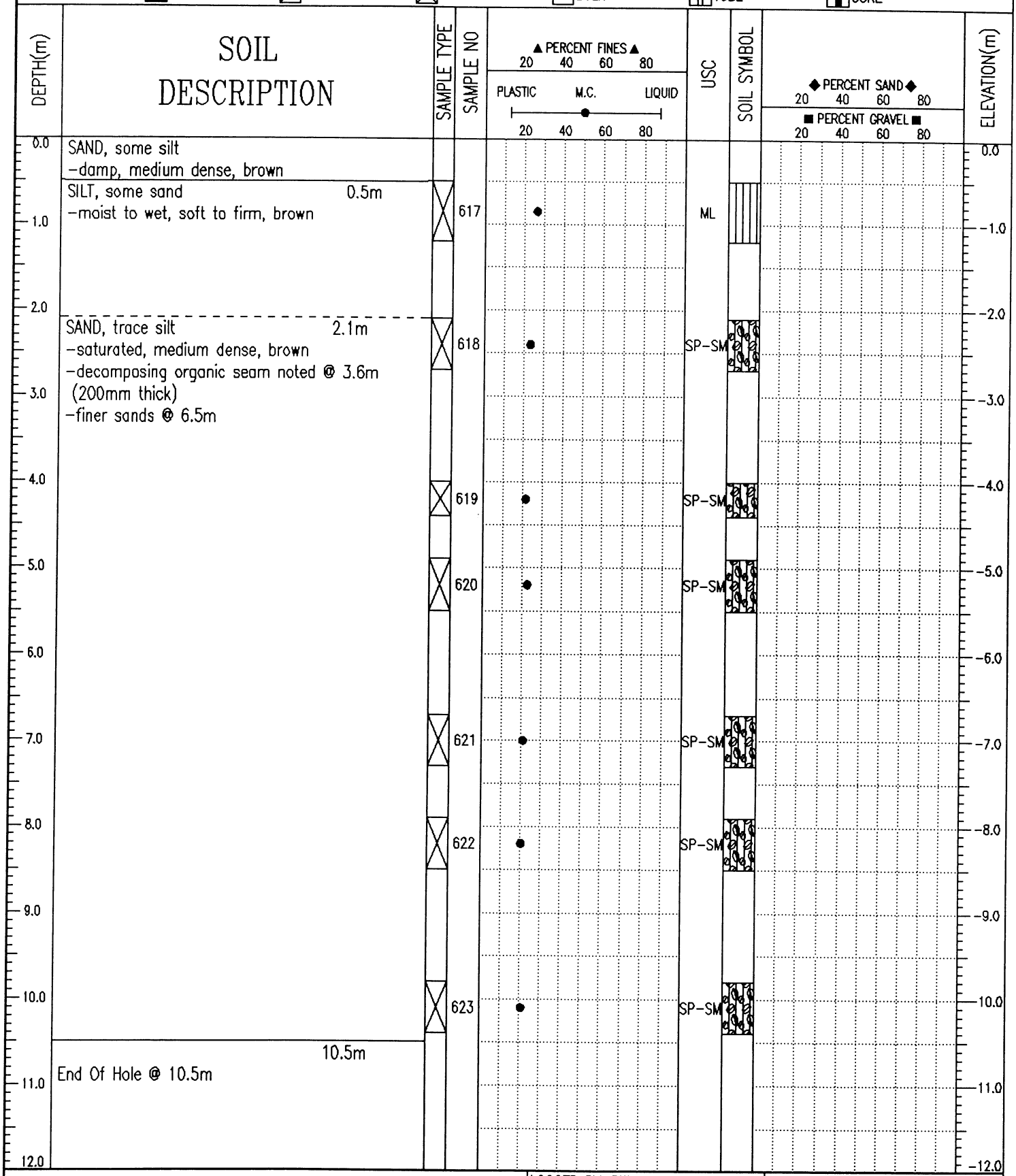
| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | | | | | | | 12.0 |
| 13.0 | | ⊠ | 615 | ● | SM | | | 13.0 |
| 14.0 | SILT, some sand to SILTY 13.7m<br>-saturated, soft, grey w/ brown<br>-varibale seams of silts and sands intermixed | ⊠ | 616 | ● | ML | | | 14.0 |
| 15.0 | 15.1m<br>End Of Hole @ 15.1m | | | | | | | 15.0 |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 222 | COMPLETION DEPTH: 15.1 m<br>COMPLETE: 08/29/04<br>Page 2 of 2 |

05/02/23 05:01PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30064 |
| Donjek Services Ltd. | UTM ZONE: – N6766041 E634253 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 10.5 m |
| | REVIEWED BY: - | COMPLETE: 08/29/04 |
| | Fig. No: 223 | Page 1 of 1 |

05/02/23 05:02PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30065 |
| Donjek Services Ltd. | UTM ZONE: - N6766211 E634121 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES / PLASTIC M.C. LIQUID | USC | SOIL SYMBOL | PERCENT SAND / PERCENT GRAVEL | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SAND, some gravel, some silt to SILTY<br>-damp, medium dense, brown | | | | | | | 0.0 |
| 0.4m | SILT, trace to some sand<br>-moist to wet, soft to firm, brown | | 624 | | ML | | | -1.0 |
| 1.2m | SAND, trace silt<br>-moist, medium dense, brown | | 625 | | SP-SM | | | -2.0 |
| | | | 626 | | SP-SM | | | -4.0 |
| 4.6m | SAND, trace to some silt<br>-saturated, medium dense, brown | | 627 | | SM | | | -5.0 |
| | | | 628 | | SM | | | -7.0 |
| 7.6m | SILTY SAND/SANDY SILT<br>-saturated, medium dense, brown/grey<br>-variable seams of silt & sand | | 629 | | SM | | | -8.0 |
| 9.1m | SILT<br>-saturated, soft, grey | | 630 | | ML | | | -10.0 |
| 10.5m | End Of Hole @ 10.5m | | | | | | | -12.0 |

PERCENT FINES: 20 40 60 80

PLASTIC M.C. LIQUID: 20 40 60 80

PERCENT SAND: 20 40 60 80

PERCENT GRAVEL: 20 40 60 80

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 10.5 m |
| | REVIEWED BY: - | COMPLETE: 08/30/04 |
| | Fig. No: 224 | Page 1 of 1 |

05/02/23 05:02PM (YTC_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30066 |
| Donjek Services Ltd. | UTM ZONE: - N6766381 E633993 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES (20 40 60 80); PLASTIC M.C. LIQUID (20 40 60 80) | USC | SOIL SYMBOL | PERCENT SAND (20 40 60 80); PERCENT GRAVEL (20 40 60 80) | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SAND, some gravel, some silt<br>-damp, medium dense, brown | | | | | | | 0.0 |
| | SILT, trace to some sand 0.3m<br>-damp to moist, soft to firm, brown | AUGER | 631 | | ML | | | |
| 1.0 | | | | | | | | -1.0 |
| | SILT 1.2m<br>-moist to wet, soft to firm, grey | AUGER | 632 | | ML | | | |
| 2.0 | | | | | | | | -2.0 |
| | SAND, trace silt 2.4m<br>-saturated, medium dense, brown/grey | | | | | | | |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | AUGER | 633 | | SP-SM | | | -4.0 |
| | SILT, some sand 4.4m<br>-saturated, soft, grey | AUGER | 634 | | ML | | | |
| 5.0 | | | | | | | | -5.0 |
| | SAND, trace silt 5.2m<br>-satruated, medium dense, brown/grey | | | | | | | |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | AUGER | 635 | | SP-SM | | | -7.0 |
| | SILT, trace to some clay 7.6m<br>-saturated, soft, grey | AUGER | 636 | | ML | | | |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | AUGER | 637 | | ML | | | -10.0 |
| | 10.5m | | | | | | | |
| 11.0 | End Of Hole @ 10.5m | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 10.5 m |
| REVIEWED BY: - | COMPLETE: 08/30/04 |
| Fig. No: 225 | Page 1 of 1 |

05/02/23 05:02PM (YTC_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30067 |
| Donjek Services Ltd. | UTM ZONE: - N6766554 E633887 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT, trace to some sand<br>-moist, firm, brown | | | | | | | 0.0 |
| 1.0 | | ⊠ | 638 | ● | ML | | | -1.0 |
| | SILTY SAND 1.2m<br>-damp, medium dense, brown | | | | | | | |
| 2.0 | SILT, trace clay 1.8m<br>-moist to wet, soft to firm, grey | | | | | | | -2.0 |
| | SAND, trace silt 2.1m<br>-moist to wet, medium dense, brown | ⊠ | 639 | ● | SP-SM | | | |
| 3.0 | SAND, some silt to SILTY 3.0m<br>-saturated, medium dense, brown/grey<br>-fine grained sands | | | | | | | -3.0 |
| 4.0 | | ⊠ | 640 | ● | SM | | | -4.0 |
| 5.0 | | ⊠ | 641 | ● | SM | | | -5.0 |
| 6.0 | 5.9m<br>End Of Hole @ 5.9m | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 226 | COMPLETION DEPTH: 5.9 m<br>COMPLETE: 08/30/04<br>Page 1 of 1 |

05/02/23 05:02PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30068 |
| Donjek Services Ltd. | UTM ZONE: - N6766749 E633842 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT, trace to some sand<br>-damp to moist, soft to firm, brown | ⊠ | 642 | ● | ML | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | SANDY SILT 1.2m<br>-damp to moist, medium dense, brown<br>-fine grained sands | | | | | | | |
| 2.0 | SAND, trace silt 1.8m<br>-moist to wet, medium dense, brown | ⊠ | 643 | ● | SP-SM | | | -2.0 |
| 3.0 | SAND, some silt 3.0m<br>-saturated, medium dense, brown/grey<br>-fine grained sands | ⊠ | 644 | ● | SM | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | SILT 5.0m<br>-saturated, soft, grey | ⊠ | 645 | ● | ML | | | -5.0 |
| 6.0 | 5.9m<br>End Of Hole @ 5.9m | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| REVIEWED BY: - | COMPLETE: 08/30/04 |
| Fig. No: 227 | Page 1 of 1 |

05/02/23 05:02PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30069 |
| Donjek Services Ltd. | UTM ZONE: - N6766937 E633865 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT<br>-damp to moist, firm, grey | | | | | | | 0.0 |
| 0.4m | SAND, trace silt<br>-damp to moist, medium dense, brown | ⊠ | 646 | ◆ | SP-SM | | | -1.0 |
| 1.2m | SILT<br>-moist, soft to firm, grey | | | | | | | |
| 1.7m | SAND, trace to some silt<br>-saturated, medium dense, brown | ⊠ | 647 | ◆ | SM | | | -2.0 |
| | | | | | | | | -3.0 |
| | | ⊠ | 648 | ◆ | SM | | | -4.0 |
| | | ⊠ | 649 | ◆ | SM | | | -5.0 |
| 5.9m | End Of Hole @ 5.9m | | | | | | | -6.0 |
| | | | | | | | | -7.0 |
| | | | | | | | | -8.0 |
| | | | | | | | | -9.0 |
| | | | | | | | | -10.0 |
| | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| REVIEWED BY: - | COMPLETE: 08/30/04 |
| Fig. No: 228 | Page 1 of 1 |

05/02/23 05:02PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30070 |
| Donjek Services Ltd. | UTM ZONE: - N6767128 E633921 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT, some sand<br>-damp to moist, soft to firm, brown<br>-organics noted to 0.3m depth | ⊠ | 650 | ● | ML | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | GRAVEL, some sand, some silt 1.2m<br>-saturated, medium dense, brown<br>-grindy drilling<br>-silt contamination from sidewalls<br>-broken/angular gravels to 40mm dia. | | | | | | | |
| 2.0 | | ⊠ | 651 | ● | GM | | | -2.0 |
| 3.0 | SANDY SILTY GRAVEL 2.8m<br>-saturated, medium dense, brown/grey | | | | | | | -3.0 |
| 4.0 | | ⊠ | 652 | ● | GM | | | -4.0 |
| 5.0 | | ⊠ | 653 | ● | GM | | | -5.0 |
| 6.0 | 5.9m<br>End Of Hole @ 5.9m | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| REVIEWED BY: - | COMPLETE: 08/30/04 |
| Fig. No: 229 | Page 1 of 1 |

05/02/23 05:03PM (YTC_JWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30082 |
| Donjek Services Ltd. | UTM ZONE: – N6768928 E635159 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|
| 0.0 | | | | |
| SILTY SAND<br>–damp, medium dense, brown w/ orange hue<br>–organics noted to 0.2m depth | | | | |
| 0.3m | | | | |
| SANDY GRAVEL, some silt<br>–dry to damp, dense, brown/grey | ⊠ | 348 | GM | |
| 1.8m | | | | |
| SILTY GRAVELLY SAND<br>–damp to moist, dense, brown | ⊠ | 349 | SM | |
| | ⊠ | 350 | SM | |
| | ⊠ | 351 | SM | |
| 5.9m | | | | |
| End Of Hole @ 5.9m – Refusal<br>–refusal @ 0.6m – move east 2m<br>–refuaal @ 5.9m – EOH | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, –1.0, –2.0, –3.0, –4.0, –5.0, –6.0, –7.0, –8.0, –9.0, –10.0, –11.0, –12.0

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Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| REVIEWED BY: | COMPLETE: 08/15/04 |
| Fig. No: 84 | Page 1 of 1 |

05/02/10 07:24AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30083 |
| Donjek Services Ltd. | UTM ZONE: - N6769180 E635170 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | |
| | SILTY SANDY GRAVEL 0.3m<br>-damp, medium dense, brown w/ some black organics<br>-organic silts intermixed | ⊠ | 344 | GM | |
| 1.0 | | | | | |
| | SILTY GRAVELLY SAND 1.5m<br>-moist, dense, brown | ⊠ | 345 | SM | |
| 2.0 | | | | | |
| 3.0 | | | | | |
| | SANDY SILT, trace gravel 3.2m<br>-wet, soft, brown | ⊠ | 346 | ML | |
| 4.0 | | | | | |
| 5.0 | SILTY GRAVELLY SAND 4.9m<br>-saturated, dense, brown<br>-possible silt contamination in sample #347 from above | ⊠ | 347 | SM | |
| 6.0 | | | | | |
| 7.0 | 7.0m<br>End Of Hole @ 7.0m – Refusal | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m)

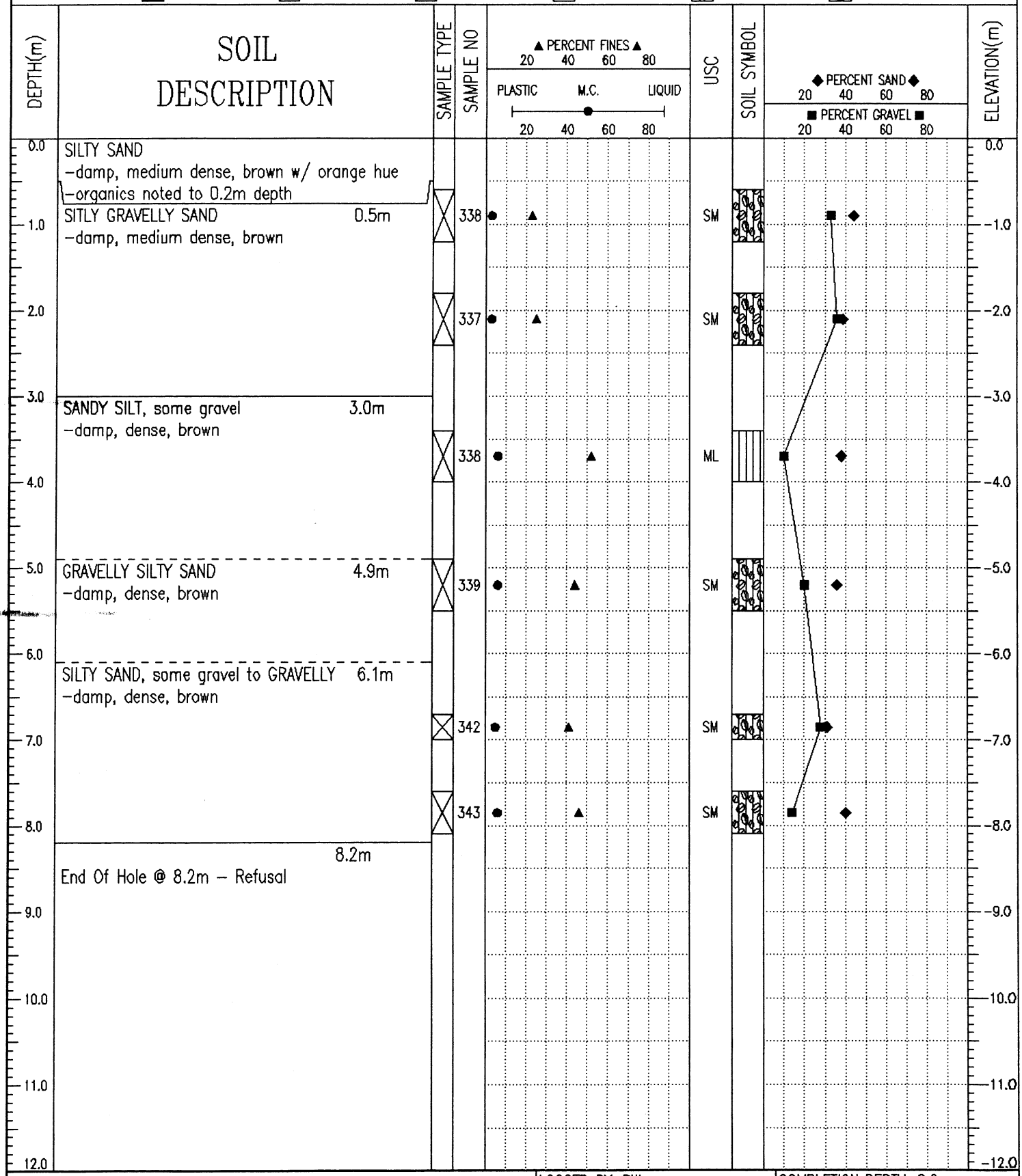
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 7 m |
| REVIEWED BY: | COMPLETE: 08/15/04 |
| Fig. No: 83 | Page 1 of 1 |

05/02/10 07:24AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30084 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6769233 E635162 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

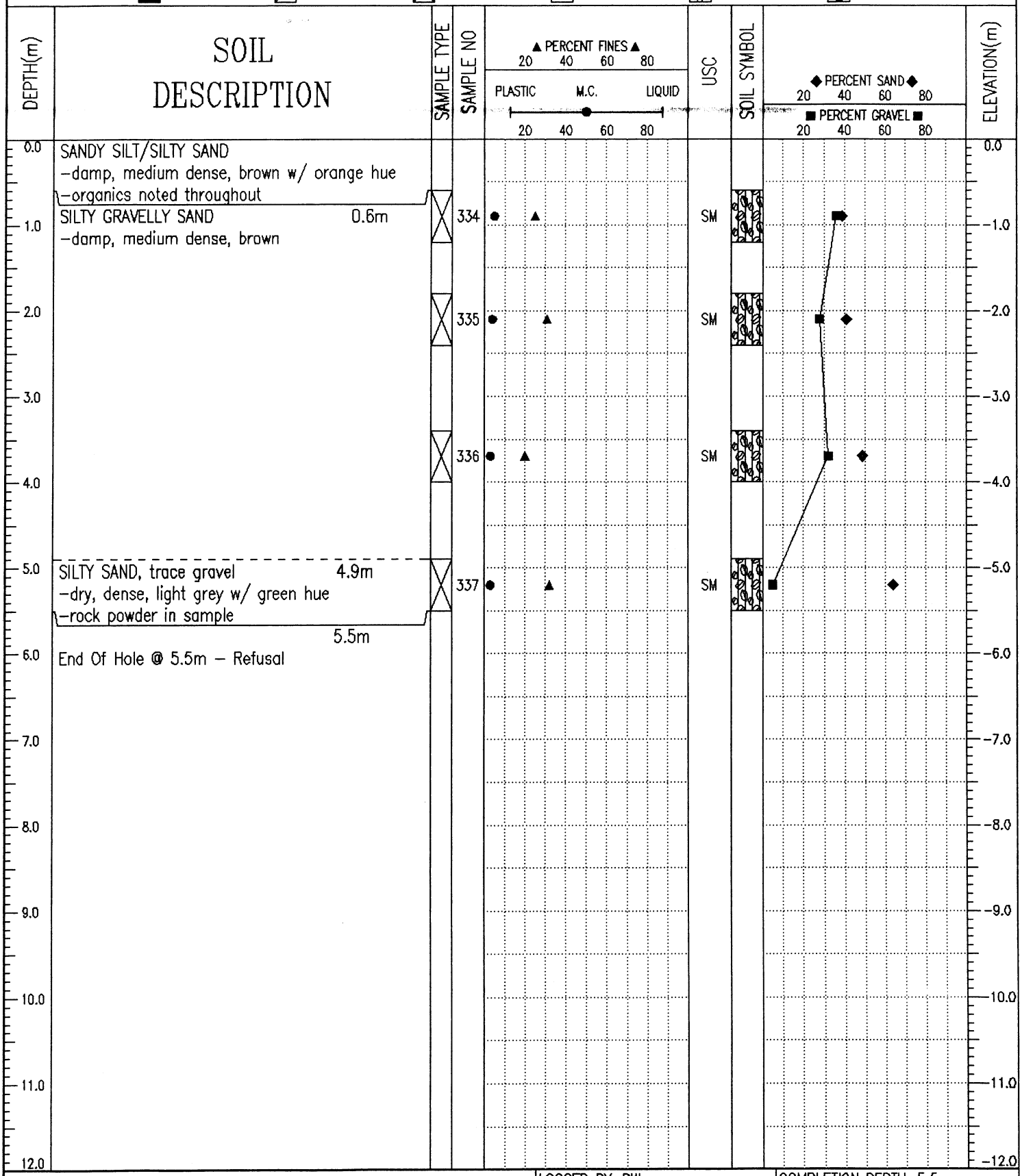



| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 8.2 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 08/15/04 |
| | Fig. No: 82 | Page 1 of 1 |

05/02/10 07:24AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30085 |
| Donjek Services Ltd. | UTM ZONE: – N6769371 E635155 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.5 m |
| | REVIEWED BY: | COMPLETE: 08/15/04 |
| | Fig. No: 81 | Page 1 of 1 |

05/02/10 07:25AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30086 |
| Donjek Services Ltd. | UTM ZONE: - N6769425 E635131 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | SANDY SILTY GRAVEL 0.3m<br>-damp, medium dense, brown | ⊠ | 329 | ● ▲ | GM | | ◆ ■ | -1.0 |
| 1.0 | | | | | | | | |
| 2.0 | GRAVELLY SILTY SAND 1.8m<br>-Frozen, no visible ice<br>-brown | ⊠ | 330 | ● ▲ | SM | | ◆ ■ | -2.0 |
| 3.0 | GRAVELLY SILTY SAND 3.0m<br>Frozen, no visible ice | ⊠ | 331 | ● ▲ | SM | | ◆ ■ | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| | AS ABOVE<br>-very dense | ⊠ | 332 | ● ▲ | SM | | ◆ ■ | -5.0 |
| 5.0 | | | | | | | | |
| 6.0 | | | | | | | | -6.0 |
| | minimal recovery on sample #333 | ⊠ | 333 | ● ▲ | SM | | ■ ◆ | -7.0 |
| 7.0 | | | | | | | | |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | 11.0m<br>End Of Hole @ 11.0m - Refusal | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY:<br>Fig. No: 80 | COMPLETION DEPTH: 11 m<br>COMPLETE: 08/15/04<br>Page 1 of 1 |

05/02/10 07:25AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30087 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6769468 E635121 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES / PLASTIC M.C. LIQUID | USC | SOIL SYMBOL | PERCENT SAND / PERCENT GRAVEL | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT/SILTY SAND<br>-damp to moist, medium dense, brown/grey | | | | | | | 0.0 |
| 1.0 | GRAVELLY SILTY SAND 0.6m<br>-damp, medium dense, brown | ⊠ | 325 | ● ▲ | SM | | ■ ◆ | -1.0 |
| 2.0 | | ⊠ | 326 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | SILTY GRAVELLY SAND 3.0m<br>-damp, dense, brown | ⊠ | 327 | ● ▲ | SM | | ■ ◆ | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | ⊠ | 328 | ● ▲ | SM | | ■ ◆ | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| | 6.4m | | | | | | | |
| 7.0 | End Of Hole @ 6.4m - Refusal<br>-refusal @ 6.2m - move south 2m<br>-refusal @ 6.4m - EOH | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

PERCENT FINES ▲ 20 40 60 80; PLASTIC M.C. LIQUID 20 40 60 80; PERCENT SAND ◆ 20 40 60 80; PERCENT GRAVEL ■ 20 40 60 80

| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 6.4 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 08/15/04 |
| | Fig. No: 79 | Page 1 of 1 |

05/02/10 07:26AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30088 |
| Donjek Services Ltd. | UTM ZONE: – N6769516 E635104 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILTY SAND/SANDY SILT<br>-damp, loose, brown w/ orange hue<br>-organics noted to 0.2m depth | | | | | | | 0.0 |
| 1.0 | SILTY GRAVELLY SAND 0.9m<br>-damp, medium dense, brown | ⊠ | 322 | ● ▲ | SM | | | -1.0 |
| 2.0 | | ⊠ | 323 | ● ▲ | SM | | | -2.0 |
| 3.0 | | ⊠ | 324 | ● ▲ | SM | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | 5.2m | | | | | | | -5.0 |
| 6.0 | End Of Hole @ 5.2m – Refusal<br>-refusal @ 5.0m – move south 2m<br>-refusal @ 5.2m – EOH | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 5.2 m |
| REVIEWED BY: | COMPLETE: 08/15/04 |
| Fig. No: 78 | Page 1 of 1 |

05/02/10 07:27AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30089 |
| Donjek Services Ltd. | UTM ZONE: - N6769606 E635078 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT, some sand<br>-dry to damp, loose, brown /w orange hue<br>-organics noted to 0.2m | ☒ | 321 | ● ▲ | ML | | ■ ◆ | 0.0 |
| 0.6 | 0.6m<br>End Of Hole @ 0.6m – Refusal<br>-refusal @ 0.6m – move south 2m<br>-refusal @ 0.6m – EOH | | | | | | | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 0.6 m |
| REVIEWED BY: | COMPLETE: 08/15/04 |
| Fig. No: 77 | Page 1 of 1 |

05/02/10 07:27AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30090 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6769660 E635061 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | SILTY SAND 0.2m<br>–damp, medium dense, brown | ⊠ | 319 | ● ▲ | SM | | ◆ ■ | |
| 1.0 | GRAVELLY SILTY SAND 0.4m<br>–damp, medium dense, brown | | | | | | | 1.0 |
| | GRAVELLY SILTY SAND 1.2m<br>–dry, dense, brown/grey<br>–some rock powder in sample #320 | ⊠ | 320 | ● ▲ | SM | | ■ ◆ | |
| 2.0 | 1.5m | | | | | | | 2.0 |
| | End Of Hole @ 1.5m – Refusal<br>–refusal @ 1.5m – move south 2m<br>–refusal @ 0.9m – EOH | | | | | | | |
| 3.0 | | | | | | | | 3.0 |
| 4.0 | | | | | | | | 4.0 |
| 5.0 | | | | | | | | 5.0 |
| 6.0 | | | | | | | | 6.0 |
| 7.0 | | | | | | | | 7.0 |
| 8.0 | | | | | | | | 8.0 |
| 9.0 | | | | | | | | 9.0 |
| 10.0 | | | | | | | | 10.0 |
| 11.0 | | | | | | | | 11.0 |
| 12.0 | | | | | | | | 12.0 |

| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 1.5 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 08/15/04 |
| | Fig. No: 76 | Page 1 of 1 |

05/02/10 07:28AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30091 |
| Donjek Services Ltd. | UTM ZONE: – N6769701 E635044 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | GRAVELLY SILTY SAND 0.3m<br>–damp, medium dense, brown | ⊠ | 318 | ● ▲ | SM | | ■ ◆ | |
| 1.0 | | | | | | | | -1.0 |
| | 1.4m | | | | | | | |
| | End Of Hole @ 1.4m – Refusal<br>–refusal @ 1.4m – move south 2m<br>–refusal @ 1.2m – EOH | | | | | | | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

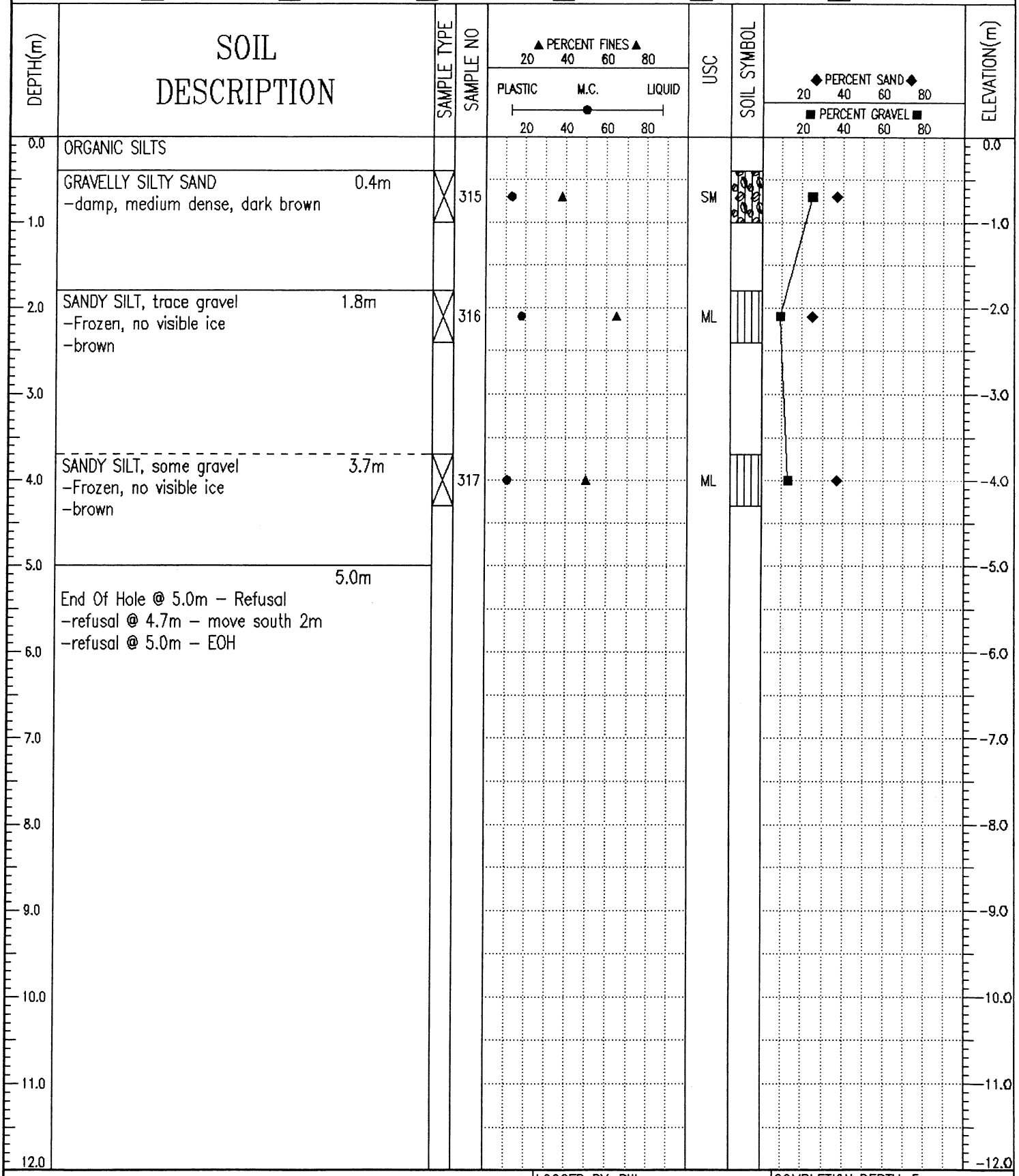
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 1.4 m |
| REVIEWED BY: | COMPLETE: 08/15/04 |
| Fig. No: 75 | Page 1 of 1 |

05/02/10 07:28AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30092 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6769764 E635000 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

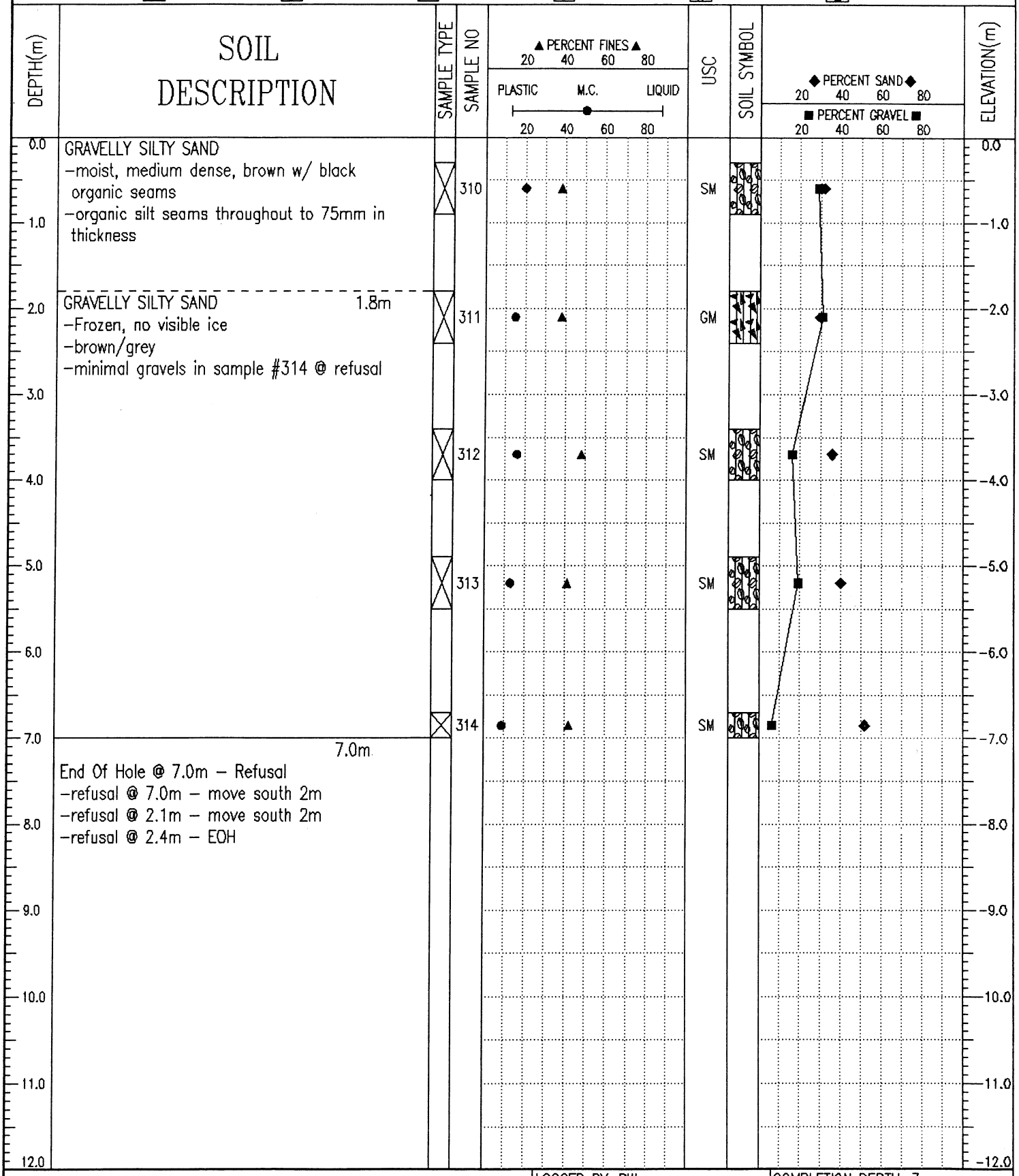



| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 08/15/04 |
| | Fig. No: 74 | Page 1 of 1 |

05/02/10 07:28AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30093 |
| Donjek Services Ltd. | UTM ZONE: – N6769809 E634966 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 7 m |
| | REVIEWED BY: | COMPLETE: 08/15/04 |
| | Fig. No: 73 | Page 1 of 1 |

05/02/10 07:29AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30094 |
| Donjek Services Ltd. | UTM ZONE: - N6769845 E634943 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|---|
| 0.0 | DRILL PAD FILL | | | | | |
| | ORGANIC SILTS | 0.4m | | | | |
| 1.0 | SANDY GRAVEL, some silt<br>-damp, medium dense, brown | 0.8m | ⊠ | 306 | GM | |
| 2.0 | SILTY SANDY GRAVEL<br>-damp, medium dense, brown w/ black organic seams<br>-some organic silts throughout (seams to 75mm) | 1.8m | ⊠ | 307 | GM | |
| 3.0 | GRAVELLY SILTY SAND<br>-damp to moist, dense, brown | 3.0m | ⊠ | 308 | SM | |
| 5.0 | AS ABOVE<br>-increase moisture/increase silt | 5.2m | ⊠ | 309 | SM | |
| 6.0 | End Of Hole @ 5.8m | 5.8m | | | | |
| 7.0 | | | | | | |
| 8.0 | | | | | | |
| 9.0 | | | | | | |
| 10.0 | | | | | | |
| 11.0 | | | | | | |
| 12.0 | | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m) 0.0 -1.0 -2.0 -3.0 -4.0 -5.0 -6.0 -7.0 -8.0 -9.0 -10.0 -11.0 -12.0

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| REVIEWED BY: | COMPLETE: 08/15/04 |
| Fig. No: 72 | Page 1 of 1 |

05/02/10 07:29AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30095 |
| Donjek Services Ltd. | UTM ZONE: – N6769885 E634905 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | | 0.0 |
| | GRAVELLY SANDY SILT<br>–damp to moist, firm, brown | 0.3m | ⊠ | 302 | ● ▲ | ML | | ■ ◆ | |
| 1.0 | | | | | | | | | -1.0 |
| | SILTY SANDY GRAVEL<br>–damp, medium dense, brown | 1.2m | | | | | | | |
| 2.0 | | | ⊠ | 303 | ● ▲ | GM | | ■ ◆ | -2.0 |
| 3.0 | GRAVELLY SAND, some silt<br>–moist to wet, dense, brown | 3.0m | | | | | | | -3.0 |
| | | | ⊠ | 304 | ● ▲ | SM | | ■ ◆ | |
| 4.0 | | | | | | | | | -4.0 |
| 5.0 | | | ⊠ | 305 | ● ▲ | SW-SM | | ■ ◆ | -5.0 |
| 6.0 | | 5.9m | | | | | | | -6.0 |
| | End Of Hole @ 5.9m | | | | | | | | |
| 7.0 | | | | | | | | | -7.0 |
| 8.0 | | | | | | | | | -8.0 |
| 9.0 | | | | | | | | | -9.0 |
| 10.0 | | | | | | | | | -10.0 |
| 11.0 | | | | | | | | | -11.0 |
| 12.0 | | | | | | | | | -12.0 |

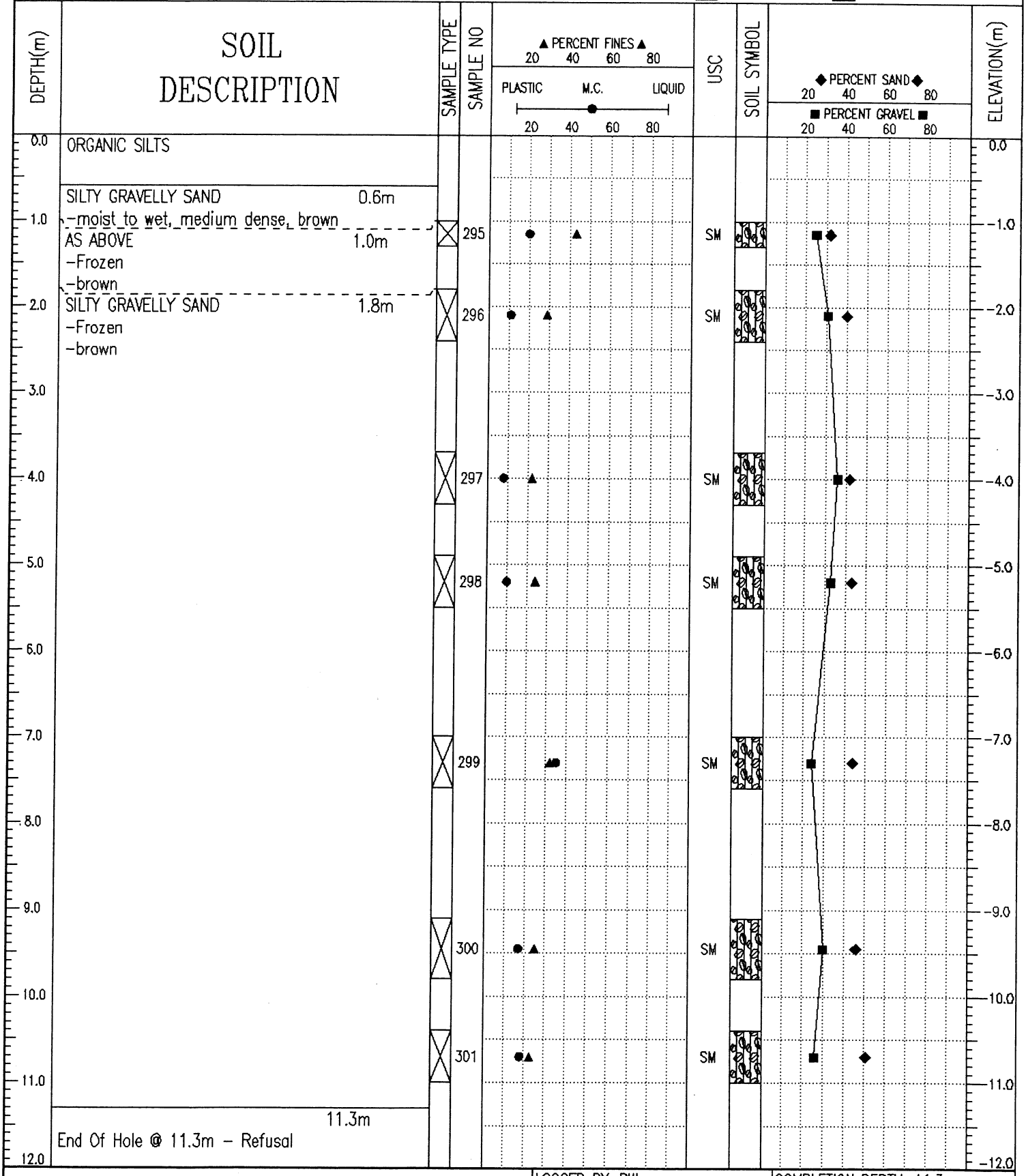
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| REVIEWED BY: | COMPLETE: 08/15/04 |
| Fig. No: 71 | Page 1 of 1 |

05/02/10 07:29AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30096 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6769994 E634847 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE




| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 11.3 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 08/14/04 |
| | Fig. No: 70 | Page 1 of 1 |

05/02/10 07:30AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30097 |
| Donjek Services Ltd. | UTM ZONE: - N6770135 E634800 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | SILTY SANDY GRAVEL 0.2m<br>-moist to wet, medium dense, brown | ⊠ | 293 | ● ▲ | GM | | ◆ ■ | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | GRAVELLY SILTY SAND 1.8m<br>-Frozen, no visible ice<br>-brown | ⊠ | 294 | ● ▲ | SM | | ◆ ◆ | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| | 3.4m | | | | | | | |
| 4.0 | End Of Hole @ 3.4m - Refusal<br>-refusal @ 3.4m - move south 2m<br>-refusal @ 3.2m - EOH | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3.4 m |
| | REVIEWED BY: | COMPLETE: 08/14/04 |
| | Fig. No: 69 | Page 1 of 1 |

05/02/10 07:30AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30098 |
| Donjek Services Ltd. | UTM ZONE: - N6770279 E634696 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>-damp, medium dense, brown | ⊠ | 290 | ● ▲ | GP-GM | | ◆ ■ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | GRAVELLY SAND, trace silt 1.8m<br>-damp, medium dense, brown | ⊠ | 291 | ● ▲ | SW-SM | | ◆ ■ ◆ | -2.0 |
| 3.0 | GRAVELLY SAND, some silt 3.0m<br>-saturated, medium dense, brown | ⊠ | 292 | ● ▲ | SW-SM | | ◆ ■ ◆ | -3.0 |
| 4.0 | 4.3m<br>End Of Hole @ 4.3m | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

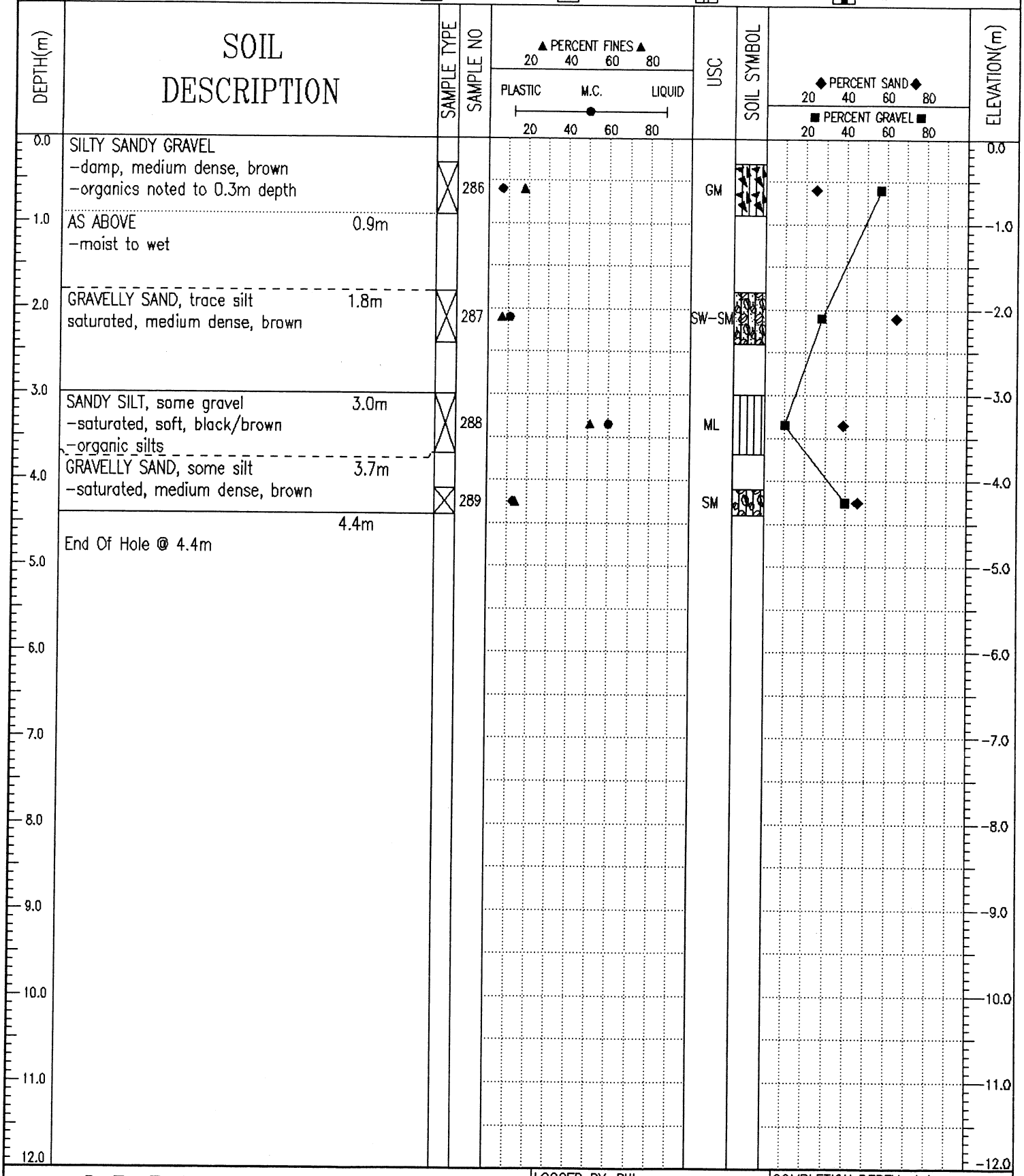
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 4.3 m |
| REVIEWED BY: | COMPLETE: 08/14/04 |
| Fig. No: 68 | Page 1 of 1 |

05/02/10 07:31AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30099 |
| Donjek Services Ltd. | UTM ZONE: – N6770392 E634666 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.4 m |
| | REVIEWED BY: | COMPLETE: 08/14/04 |
| | Fig. No: 67 | Page 1 of 1 |

05/02/10 07:31AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30100 |
| Donjek Services Ltd. | UTM ZONE: – N6770537 E634636 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, some silt<br>–damp, dense, brown<br>–boulders to 0.5m dia. noted on surface | ⊠ | 279 | GM | |
| 1.8m | SILTY SANDY GRAVEL<br>–damp to moist, dense, brown | ⊠ | 280 | GM | |
| 2.7m | ORGANIC SILTS<br>–damp, firm, dark brown | | | | |
| 3.0m | SILTY SANDY GRAVEL<br>–damp, dense, brown | ⊠ | 281 | GM | |
| 4.9m | SILTY SANDY GRAVEL<br>–wet, dense, brown<br>–sample #283 poor recovery | ⊠ | 282 | GM | |
| | | ⊠ | 283 | SM | |
| 7.9m | GRAVELLY SILTY SAND<br>–moist to wet, dense, grey w/ blueish hue | ⊠ | 284 | SM | |
| 9.4m | SILTY SAND, trace gravel<br>–moist, dense, purple | ⊠ | 285 | SM | |
| 10.1m | End of Hole @ 10.1m – Refusal | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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| LOGGED BY: RW | COMPLETION DEPTH: 10.1 m |
| REVIEWED BY: | COMPLETE: 08/14/04 |
| Fig. No: 66 | Page 1 of 1 |

05/02/10 07:31AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30101 |
| Donjek Services Ltd. | UTM ZONE: – N6770650 E634650 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILTY SAND<br>–damp, medium dense, brown<br>–organics noted to 0.3m depth | ⊠ | 277 | ● ▲ | SM | | ■ ◆ | 0.0 |
| 1.0 | GRAVELLY SILTY SAND 0.4m<br>–damp, medium dense, brown | | | | | | | –1.0 |
| 2.0 | GRAVELLY SILTY SAND 1.8m<br>–damp, dense, brown | ⊠ | 278 | ● ▲ | SM | | ■ ◆ | –2.0 |
| 3.0 | 3.2m<br>End Of Hole @ 3.2m – Refusal<br>–refusal @ 3.0m – move east 2m<br>–refusal @ 3.2m – EOH | | | | | | | –3.0 |
| 4.0 | | | | | | | | –4.0 |
| 5.0 | | | | | | | | –5.0 |
| 6.0 | | | | | | | | –6.0 |
| 7.0 | | | | | | | | –7.0 |
| 8.0 | | | | | | | | –8.0 |
| 9.0 | | | | | | | | –9.0 |
| 10.0 | | | | | | | | –10.0 |
| 11.0 | | | | | | | | –11.0 |
| 12.0 | | | | | | | | –12.0 |

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| LOGGED BY: RW | COMPLETION DEPTH: 3.2 m |
| REVIEWED BY: | COMPLETE: 08/14/04 |
| Fig. No: 65 | Page 1 of 1 |

05/02/10 07:32AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30102 |
| Donjek Services Ltd. | UTM ZONE: – N6770753 E634670 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT/SILTY SAND<br>-damp, medium dense, brown w/ orange hue<br>-organics noted to 0.3m depth | | | | | 0.0 |
| 1.0 | SANDY SILT, trace gravel 0.6m<br>-damp, medium dense, brown | ⊠ | 275 | ML | ▥ | -1.0 |
| 2.0 | SILTY SAND 1.5m<br>-dry, dense, light grey<br>-rock powder in sample #276 | ⊠ | 276 | SM | ▨ | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m – Refusal<br>-refusal @ 1.0m – move north 2m<br>-refusal @ 3.0m – EOH | | | | | -3.0 |
| 4.0 | | | | | | -4.0 |
| 5.0 | | | | | | -5.0 |
| 6.0 | | | | | | -6.0 |
| 7.0 | | | | | | -7.0 |
| 8.0 | | | | | | -8.0 |
| 9.0 | | | | | | -9.0 |
| 10.0 | | | | | | -10.0 |
| 11.0 | | | | | | -11.0 |
| 12.0 | | | | | | -12.0 |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/14/04 |
| Fig. No: 64 | Page 1 of 1 |

05/02/10 07:32AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30103 |
| Donjek Services Ltd. | UTM ZONE: – N6770855 E634651 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|
| 0.0 | | | | | 0.0 |
| SILTY SAND/SANDY SILT<br>–damp, medium dense, brown<br>–organics noted to 0.7m depth | | | | | |
| 0.6m<br>GRAVELLY SILTY SAND<br>–damp, medium dense, brown | ⊠ | 272 | SM | | |
| 1.0 | | | | | -1.0 |
| 2.0 | | | | | -2.0 |
| 2.0m<br>SILTY GRAVELLY SAND<br>–dry to damp, dense, light brown | ⊠ | 273 | SM | | |
| 3.0 | | | | | -3.0 |
| 3.7m<br>SILTY SAND<br>–dry, dense, light grey<br>–rock powder in sample #274 | ⊠ | 274 | SM | | |
| 4.0 | | | | | -4.0 |
| 4.3m<br>End Of Hole @ 4.3m – Refusal<br>–refusal @ 4.3m – move south 2m<br>–refusal @ 2.4m – EOH | | | | | |
| 5.0 | | | | | -5.0 |
| 6.0 | | | | | -6.0 |
| 7.0 | | | | | -7.0 |
| 8.0 | | | | | -8.0 |
| 9.0 | | | | | -9.0 |
| 10.0 | | | | | -10.0 |
| 11.0 | | | | | -11.0 |
| 12.0 | | | | | -12.0 |

▲ PERCENT FINES ▲ (20 40 60 80)

PLASTIC M.C. LIQUID (20 40 60 80)

◆ PERCENT SAND ◆ (20 40 60 80)

■ PERCENT GRAVEL ■ (20 40 60 80)

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW
REVIEWED BY:
Fig. No: 63

COMPLETION DEPTH: 4.3 m
COMPLETE: 08/14/04
Page 1 of 1

05/02/10 07:33AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30104 |
| Donjek Services Ltd. | UTM ZONE: – N6770965 E634614 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|
| 0.0 | SILTY SAND<br>–damp, loose, brown | 268 | SM | |
| 0.9m | GRAVELLY SANDY SILT<br>–damp, medium dense, brown | 269 | ML | |
| 3.0m | GRAVELLY SILTY SAND<br>–dry, dense, light grey<br>–rock powder in sample #270 (attempt 1)<br>–rock powder in sample #271 (attempt 2) | 270<br>271 | SM<br>SM | |
| 4.9m | End Of Hole @ 4.9m – Refusal<br>–refusal @ 3.7m – move south 2m<br>–refusal @ 4.9m – EOH | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 4.9 m |
| REVIEWED BY: | COMPLETE: 08/13/04 |
| Fig. No: 62 | Page 1 of 1 |

05/02/10 07:33AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30105 |
| Donjek Services Ltd. | UTM ZONE: – N6771005 E604672 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILTY SAND/SANDY SILT<br>–damp, medium dense, brown | | | | | | | 0.0 |
| 1.0 | GRAVELLY SILTY SAND 0.9m<br>–damp, medium dense, brown | ⊠ | 262 | ● ▲ | SM | | ■ ◆ | -1.0 |
| 2.0 | SANDY SILT, trace gravel 1.8m<br>–damp to moist, medium dense, brown | ⊠ | 263 | ● ▲ | ML | | ■ ◆ | -2.0 |
| 3.0 | SILTY SANDY GRAVEL 3.0m<br>–damp, dense, brown | ⊠ | 264 | ● ▲ | GM | | ■ ◆ | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| | 4.6m | | | | | | | |
| 5.0 | End Of Hole @ 4.6m – Refusal | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| REVIEWED BY: | COMPLETE: 08/13/04 |
| Fig. No: 61 | Page 1 of 1 |

05/02/10 07:33AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30106 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6771078 E634574 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILTY SANDY GRAVEL<br>–dry to damp, loose, brown w/ orange hue<br>–organics to 0.2m | ⊠ | 266 ● ▲ | | GM | | ◆ ■ | 0.0 |
| 0.6m | SILTY SAND<br>–dry to damp, dense, light grey<br>–rock powder in sample #267 | ⊠ | 267 ● ▲ | | SM | | ■ ◆ | 1.0 |
| 0.9m | End Of Hole @ 0.9m – Refusal<br>–refusal @ 0.9m – move south 2m<br>–refusal @ 0.9m – EOH | | | | | | | 2.0 |
| 3.0 | | | | | | | | 3.0 |
| 4.0 | | | | | | | | 4.0 |
| 5.0 | | | | | | | | 5.0 |
| 6.0 | | | | | | | | 6.0 |
| 7.0 | | | | | | | | 7.0 |
| 8.0 | | | | | | | | 8.0 |
| 9.0 | | | | | | | | 9.0 |
| 10.0 | | | | | | | | 10.0 |
| 11.0 | | | | | | | | 11.0 |
| 12.0 | | | | | | | | 12.0 |

| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 0.9 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 08/13/04 |
| | Fig. No: 60 | Page 1 of 1 |

05/02/10 07:34AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30107 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6771149 E634529 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | SILTY SAND/SANDY SILT 0.3m<br>-damp, medium dense, brown | | | | | | | |
| 1.0 | GRAVELLY SAND, some silt 0.9m<br>-dry to damp, dense, light brown/grey<br>-rock powder in sample #265 | ⊠ | 265 | ● ▲ | SM | | ■◆ | -1.0 |
| | 1.5m | | | | | | | |
| 2.0 | End Of Hole @ 2.5m - Refusal<br>-refusal @ 1.5m - move 2m south<br>-refusal @ 1.5m - EOH | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 1.5 m |
|---|---|
| REVIEWED BY: | COMPLETE: 08/13/04 |
| Fig. No: 59 | Page 1 of 1 |

05/02/10 07:34AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30108 |
| Donjek Services Ltd. | UTM ZONE: – N6771278 E634528 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT, trace gravel<br>–damp to moist, medium dense, brown | ⊠ | 258 | ● ▲ | ML | | ■ ◆ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | GRAVELLY SILTY SAND 1.5m<br>–damp, medium dense, brown | ⊠ | 259 | ● ▲ | SM | | ■ ◆ | |
| 2.0 | | | | | | | | -2.0 |
| | GRAVELLY SAND, some silt 2.4m<br>–dry, dense, light brown/grey<br>–rock powder in samples #260 & #261 | ⊠ | 260 | ● ▲ | SM | | ■ ◆ | |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | ⊠ | 261 | ● ▲ | SM | | ■ ◆ | -5.0 |
| | 5.5m<br>End Of Hole @ 5.5m – Very slow drilling | | | | | | | |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.5 m |
| | REVIEWED BY: | COMPLETE: 08/13/04 |
| | Fig. No: 58 | Page 1 of 1 |

05/02/10 07:35AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30109 |
| Donjek Services Ltd. | UTM ZONE: – N6771427 E634466 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT<br>–damp, medium dense, brown | ⊠ | 256 | ● ▲ | ML | | ■ ◆ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | GRAVELLY SILTY SAND 1.5m<br>–damp, dense, brown | ⊠ | 257 | ● ▲ | SM | | ■ ◆ | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | SILTY SAND, trace gravel 3.0m<br>–dry to damp, dense, light brown/grey<br>–rock powder in sample #257 | ⊠ | 258 | ● ▲ | SM | | ■ ◆ | -3.0 |
| 4.0 | 4.0m<br>End Of Sample @ 4.0m – Refusal<br>–refusal @ 3.0m – move south 2m<br>–refusal @ 4.0m – EOH | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
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| LOGGED BY: RW | COMPLETION DEPTH: 4 m |
| REVIEWED BY: | COMPLETE: 08/13/04 |
| Fig. No: 57 | Page 1 of 1 |

05/02/10 07:35AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30110 |
| Donjek Services Ltd. | UTM ZONE: – N6771567 E634457 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | |
| | SANDY SILT/SILTY SAND, some gravel 0.3m<br>–Frozen<br>–brown | ⊠ | 251 | ML | |
| | | ⊠ | 252 | ML | |
| | | ⊠ | 253 | SM | |
| | SILTY SAND 4.6m<br>–dry to damp, dense, brown w/ orange hue<br>–more rock powder w/ depth | ⊠ | 254 | SM | |
| | 5.6m<br>End Of Hole @ 5.6m – Very slow drilling<br>–refusal @ 2.1m – move west 2m<br>–very slow drilling @ 5.6m – EOH | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.6 m |
| REVIEWED BY: | COMPLETE: 08/13/04 |
| Fig. No: 56 | Page 1 of 1 |

05/02/10 07:35AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30111 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6776127 E634475 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SILTY SAND<br>–damp, medium dense, brown<br>–light organics to 0.3m | ⊠ | 249 | ● ▲ | SM | | ■ ◆ | 0.0 |
| 1.0 | SILTY GRAVELLY SAND 1.0m<br>–dry, dense, light brown/grey<br>–rock powder in sample #250 | ⊠ | 250 | ● ▲ | SM | | ■ ◆ | -1.0 |
| 2.0 | 1.8m<br>End Of Hole @ 1.8m – Refusal<br>–refusal @ 1.8m – move east 1.5m<br>–refusal @ 1.8m – EOH | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 1.8 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 08/13/04 |
| | Fig. No: 55 | Page 1 of 1 |

05/02/10 07:35AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30112 |
| Donjek Services Ltd. | UTM ZONE: – N6771772 E634467 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|
| 0.0 | | | | |
| ORGANIC SILTS | | | | |
| SANDY SILT, some gravel 0.3m<br>–damp, medium dense, brown | ⊠ | 246 | ML | |
| 1.0 | | | | |
| GRAVELLY SILTY SAND 1.2m<br>–damp, medium dense, brown | ⊠ | 247 | SM | |
| 2.0 | | | | |
| 3.0 | | | | |
| SILTY SAND, some gravel 3.0m<br>–dry to damp, dense, light brown/grey<br>–rock powder in sample #248 | ⊠ | 248 | SM | |
| 3.4m | | | | |
| End Of Hole @ 3.4m – Refusal<br>–refusal @ 3.4m – move north 1.5m<br>–refusal @ 3.4m – EOH | | | | |
| 4.0 | | | | |
| 5.0 | | | | |
| 6.0 | | | | |
| 7.0 | | | | |
| 8.0 | | | | |
| 9.0 | | | | |
| 10.0 | | | | |
| 11.0 | | | | |
| 12.0 | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY:<br>Fig. No: 54 | COMPLETION DEPTH: 3.4 m<br>COMPLETE: 08/13/04<br>Page 1 of 1 |

05/02/10 07:35AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30113 |
| Donjek Services Ltd. | UTM ZONE: – N6771879 E634435 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| 1.0 | GRAVELLY SANDY SILT 0.6m<br>-Frozen<br>-brown | ⊠ | 244 | ● ▲ | ML | | ■ ◆ | -1.0 |
| 2.0 | GRAVELLY SILTY SAND 1.5m<br>-dry to damp, dense, brown | ⊠ | 245 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | 2.4m<br>End Of Hole @ 2.4m – Refusal<br>-refusal @ 2.1m – move south 2m<br>-refusal @ 2.4m – EOH<br>-rock powder on bit at refusal on both attempts | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY:<br>Fig. No: 53 | COMPLETION DEPTH: 2.4 m<br>COMPLETE: 08/12/04<br>Page 1 of 1 |

05/02/10 07:36AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30114 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6772019 E634386 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | GRAVELLY SAND, trace to some silt 0.3m<br>–dry to damp, medium dense, brown | ⊠ | 242 | ▲ | SW–SM | | ■ ◆ | |
| 1.0 | | | | | | | | –1.0 |
| 2.0 | | ⊠ | 243 | ● ▲ | SW–SM | | ■ ◆ | –2.0 |
| 3.0 | 2.9m<br>End Of Hole @ 2.9m<br>–refusal @ 1.8m – move south 2m<br>–refusal @ 2.9m – EOH | | | | | | | –3.0 |
| 4.0 | | | | | | | | –4.0 |
| 5.0 | | | | | | | | –5.0 |
| 6.0 | | | | | | | | –6.0 |
| 7.0 | | | | | | | | –7.0 |
| 8.0 | | | | | | | | –8.0 |
| 9.0 | | | | | | | | –9.0 |
| 10.0 | | | | | | | | –10.0 |
| 11.0 | | | | | | | | –11.0 |
| 12.0 | | | | | | | | –12.0 |

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Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 2.9 m |
|---|---|
| REVIEWED BY: | COMPLETE: 08/12/04 |
| Fig. No: 52 | Page 1 of 1 |

05/02/10 07:36AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30115 |
| Donjek Services Ltd. | UTM ZONE: – N6772105 E634338 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>–damp to moist, medium dense, light brown<br>–increase moisture w/ depth | ⊠ | 238 | GP-GM | |
| 1.0 | | | | | |
| 2.0 | SILTY GRAVELLY SAND to SILTY SAND 1.8m<br>–dry to damp, dense, light brown | ⊠ | 239 | SM | |
| 3.0 | | | | | |
| 4.0 | | ⊠ | 240 | SM | |
| | 4.3m | | | | |
| 5.0 | End Of Hole @ 4.3m – Refusal<br>–refusal @ 3.7m – move south 2m<br>–refusal @ 4.3m – EOH | | | | |
| 6.0 | | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4.3 m |
| REVIEWED BY: | COMPLETE: 08/12/04 |
| Fig. No: 51 | Page 1 of 1 |

05/02/10 07:37AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30116 |
| Donjek Services Ltd. | UTM ZONE: – N6672111 E634312 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES / PLASTIC M.C. LIQUID | USC | SOIL SYMBOL | PERCENT SAND / PERCENT GRAVEL | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | SANDY GRAVEL, some silt 0.3m<br>–damp, medium dense, brown | ⊠ | 234 | ● ▲ | GM | | ◆ ■ | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | GRAVELLY SAND, some silt 1.8m<br>–dry to damp, dense, light brown<br>–some rock powder in samples | ⊠ | 235 | ● ▲ | SW-SM | | ◆ ■ | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | ⊠ | 236 | ● ▲ | SW-SM | | ◆ ■ | -4.0 |
| | Pulverized rock sample @ refusal | ⊠ | 237 | ● ▲ | SM | | ◆ ■ | |
| 5.0 | 5.2m | | | | | | | -5.0 |
| | End Of Hole @ 5.2m – Refusal | | | | | | | |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

PERCENT FINES ▲ 20 40 60 80 | PLASTIC M.C. LIQUID 20 40 60 80 | PERCENT SAND ◆ 20 40 60 80 | PERCENT GRAVEL ■ 20 40 60 80

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.2 m |
| REVIEWED BY: | COMPLETE: 08/12/04 |
| Fig. No: 50 | Page 1 of 1 |

05/02/10 07:37AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30117 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6772256 E634222 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT, some gravel<br>–damp to moist, medium dense, brown | ⊠ | 232 | ● ▲ | ML | | ■ ◆ | 0.0 |
| 1.0 | ORGANIC SILTS 0.6m<br>–damp to moist, medium dense, brown | | | | | | | –1.0 |
| 2.0 | SILTY SANDY GRAVEL 1.5m<br>–damp to moist, medium dense, brown | ⊠ | 234 | ● ▲ | GM | | ◆ ■ | –2.0 |
| 3.0 | | | | | | | | –3.0 |
| 4.0 | AS ABOVE 3.7m<br>End Of Hole @ 3.0m – Refusal<br>–refusal @ 3.7m – move south 2m<br>–refusal @ 2.1m – EOH | | | | | | | –4.0 |
| 5.0 | | | | | | | | –5.0 |
| 6.0 | | | | | | | | –6.0 |
| 7.0 | | | | | | | | –7.0 |
| 8.0 | | | | | | | | –8.0 |
| 9.0 | | | | | | | | –9.0 |
| 10.0 | | | | | | | | –10.0 |
| 11.0 | | | | | | | | –11.0 |
| 12.0 | | | | | | | | –12.0 |

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| LOGGED BY: RW | COMPLETION DEPTH: 3.7 m |
|---|---|
| REVIEWED BY: | COMPLETE: 08/12/04 |
| Fig. No: 49 | Page 1 of 1 |

05/02/10 07:37AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30118 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6772272 E634185 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | 0.0 |
| | SILTY SAND/SANDY SILT 0.3m<br>–damp, medium dense, light brown | | | | | |
| 1.0 | SANDY SILT, trace gravel 0.6m<br>–damp, medium dense, brown | ⊠ | 229 | ML | | -1.0 |
| | SANDY SILTY GRAVEL 1.2m<br>–damp, dense, brown | | | | | |
| 2.0 | | ⊠ | 230 | GM | | -2.0 |
| | SILTY SAND, trace gravel 2.7m<br>–dry, very dense, light brown<br>–rock powder in sample | | | | | |
| 3.0 | | ⊠ | 231 | SM | | -3.0 |
| | 3.7m<br>End Of Hole @ 3.7m – Refusal<br>–refusal @ 3.7m – move south 1.5m<br>–refusal @ 3.7m – EOH | | | | | |
| 4.0 | | | | | | -4.0 |
| 5.0 | | | | | | -5.0 |
| 6.0 | | | | | | -6.0 |
| 7.0 | | | | | | -7.0 |
| 8.0 | | | | | | -8.0 |
| 9.0 | | | | | | -9.0 |
| 10.0 | | | | | | -10.0 |
| 11.0 | | | | | | -11.0 |
| 12.0 | | | | | | -12.0 |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

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| LOGGED BY: RW | COMPLETION DEPTH: 3.7 m |
|---|---|
| REVIEWED BY: | COMPLETE: 08/12/04 |
| Fig. No: 48 | Page 1 of 1 |

05/02/10 07:38AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30119 |
| Donjek Services Ltd. | UTM ZONE: – N6772380 E634109 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SILTY SANDY GRAVEL<br>–saturated, medium dense, brown | ⊠ | 226 | GM | |
| 0.6m | ORGANIC SILTS<br>–wet, soft to firm, black/dark brown | | | | |
| 0.9m | GRAVELLY SAND, trace silt<br>–damp, medium dense, light brown | ⊠ | 227 | SW–SM | |
| 3.0m | SAND, some silt, trace gravel<br>–moist to wet, dense, light brown<br>–increase moisture from seepage | ⊠ | 228 | SM | |
| 4.6m | End Of Hole @ 4.6m – Refusal<br>–refusal @ 3.7m – move north 2m<br>–refusal @ 4.6m – EOH | | | | |

▲ PERCENT FINES ▲ (20 40 60 80)

PLASTIC M.C. LIQUID (20 40 60 80)

◆ PERCENT SAND ◆ (20 40 60 80)

■ PERCENT GRAVEL ■ (20 40 60 80)

ELEVATION(m): 0.0, –1.0, –2.0, –3.0, –4.0, –5.0, –6.0, –7.0, –8.0, –9.0, –10.0, –11.0, –12.0

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| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| REVIEWED BY: | COMPLETE: 08/12/04 |
| Fig. No: 47 | Page 1 of 1 |

05/02/10 07:38AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30120 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6772396 E634076 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | GRAVELLY SILTY SAND 0.3m<br>-damp, medium dense, brown | ⊠ | 222 | ◆ ▲ | SM | | ■ ◆ | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| | SILTY SAND 2.1m<br>-damp, very dense, brown | ⊠ | 223 | ● ▲ | SM | | ■ ◆ | |
| 3.0 | | | | | | | | -3.0 |
| | AS ABOVE 3.0m<br>-light brown (lighter with depth) | | | | | | | |
| 4.0 | | ⊠ | 224 | ● ▲ | SM | | ■ ◆ | -4.0 |
| 5.0 | some rock powder in sample #225 | ⊠ | 225 | ● ▲ | SM | | ■ ◆ | -5.0 |
| | 5.3m<br>End Of Hole @ 5.3m - Very Slow Drilling<br>-refusal @ 2.4m - move north 2m<br>-very slow drilling at 5.3m - EOH | | | | | | | |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.3 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 08/12/04 |
| | Fig. No: 46 | Page 1 of 1 |

05/02/10 07:38AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30121 |
| Donjek Services Ltd. | UTM ZONE: – N6772578 E633974 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES / PLASTIC M.C. LIQUID | USC | SOIL SYMBOL | PERCENT SAND / PERCENT GRAVEL | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | GRAVELLY SILTY SAND 0.3m<br>–damp, medium dense, brown | ⊠ | 219 | | SM | | | |
| 1.0 | | | | | | | | -1.0 |
| | SILTY SANDY GRAVEL 1.5m<br>–dense | ⊠ | 220 | | GM | | | |
| 2.0 | | | | | | | | -2.0 |
| | SILTY SAND 2.7m<br>–dry, very dense, light brown<br>–rock powder in sample | ⊠ | 221 | | SM | | | |
| 3.0 | 3.2m | | | | | | | -3.0 |
| | End Of Hole @ 3.2m – Refusal<br>–refusal @ 3.0m – move east 2m<br>–refusal @ 3.2m – EOH | | | | | | | |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

PERCENT SAND ◆ 20 40 60 80

PERCENT GRAVEL ■ 20 40 60 80

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW
REVIEWED BY:
Fig. No: 45

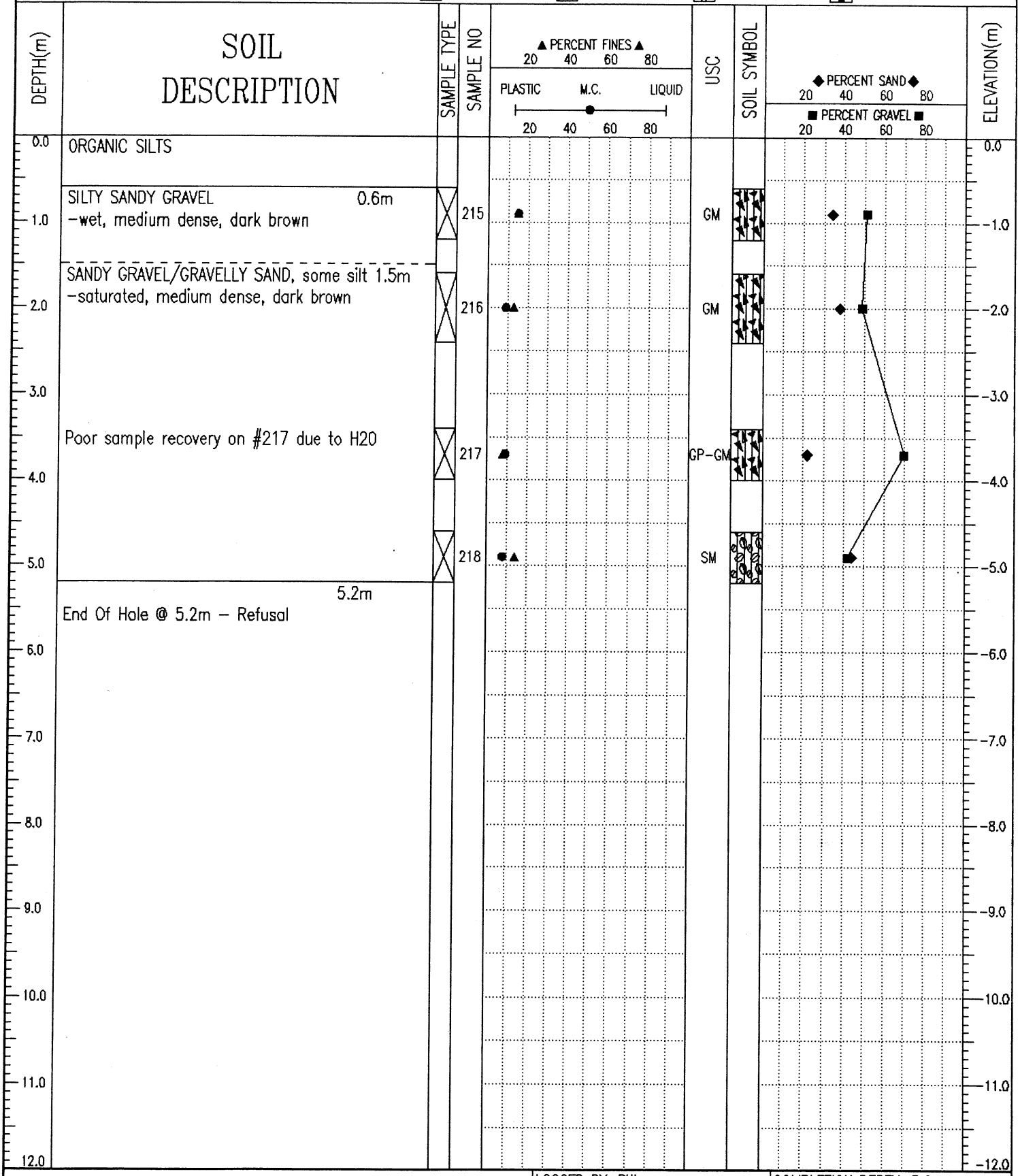
COMPLETION DEPTH: 3.2 m
COMPLETE: 08/12/04



05/02/10 07:38AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30122 |
| Donjek Services Ltd. | UTM ZONE: - N6772688 E633916 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE




J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.2 m |
| REVIEWED BY: | COMPLETE: 08/12/04 |
| Fig. No: 44 | Page 1 of 1 |

05/02/10 07:39AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30123 |
| Donjek Services Ltd. | UTM ZONE: – N6772714 E633863 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | |
| | GRAVELLY SILTY SAND 0.3m<br>–damp, medium dense, brown | AUGER | 205 | SM | |
| 1.0 | | | | | |
| | SILTY GRAVELLY SAND 1.5m<br>–Frozen, no visible ice<br>–brown | AUGER | 206 | SM | |
| 2.0 | | | | | |
| 3.0 | GRAVELLY SAND, some silt 3.0m<br>–Frozen, no visible ice<br>–brown | AUGER | 207 | SM | |
| 4.0 | | | | | |
| 5.0 | | AUGER | 208 | SM | |
| 6.0 | | | | | |
| | SILTY SAND, some gravel 6.4m<br>–Frozen, no visible ice<br>–brown | AUGER | 209 | SM | |
| 7.0 | | | | | |
| 8.0 | | AUGER | 210 | SM | |
| 9.0 | | | | | |
| | SILTY GRAVELLY SAND 9.4m<br>–wet to saturated, dense, brown | AUGER | 211 | SM | |
| 10.0 | | | | | |
| 11.0 | | AUGER | 212 | SM | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ (20 40 60 80)

PLASTIC M.C. LIQUID (20 40 60 80)

◆ PERCENT SAND ◆ (20 40 60 80)

■ PERCENT GRAVEL ■ (20 40 60 80)

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 15.1 m |
| | REVIEWED BY: | COMPLETE: 08/11/04 |
| | Fig. No: 43 | Page 1 of 2 |

05/02/10 07:39AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30123 |
| Donjek Services Ltd. | UTM ZONE: – N6772714 E633863 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | | | | | | | 12.0 |
| 13.0 | | ⊠ | 213 | ● ▲ | SM | | ■ ◆ | 13.0 |
| 14.0 | | ⊠ | 214 | ● ▲ | SM | | ■ ◆ | 14.0 |
| 15.0 | 15.1m<br>End Of Hole @ 15.1m<br>-refusal @ 4.9m – move north 1.5m | | | | | | | 15.0 |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

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| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 15.1 m |
| REVIEWED BY: | COMPLETE: 08/11/04 |
| Fig. No: 43 | Page 2 of 2 |

05/02/10 07:39AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30124 |
| Donjek Services Ltd. | UTM ZONE: - N6772909 E633827 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | | 0.0 |
| 1.0 | SILTY SANDY GRAVEL<br>-moist, medium dense, brown | 0.6m | ⊠ | 200 | ● ▲ | GM | | ◆ ■ | -1.0 |
| 2.0 | SANDY SILT, some gravel<br>-Frozen<br>-brown | 1.5m | ⊠ | 201 | ● ▲ | ML | | ◆ ■ | -2.0 |
| 3.0 | SILTY SAND<br>-Frozen<br>-brown w/ orange hue<br>-decomposed rock | 3.0m | ⊠ | 202 | ● ▲ | SM | | ◆ ■ | -3.0 |
| 4.0 | | | | | | | | | -4.0 |
| 5.0 | SILTY SAND<br>-dry to damp, dense, light brown w/ orange hue<br>-more intact rock with depth | 4.9m | ⊠ | 203 | ● ▲ | SM | | ◆ ■ | -5.0 |
| 6.0 | | | | | | | | | -6.0 |
| 7.0 | SILTY SAND, trace gravel<br>-light brown, very dense | 6.4m | ⊠ | 204 | ● ▲ | SM | | ◆ ■ | -7.0 |
| 8.0 | End Of Hole @ 7.5m – Refusal | 7.5m | | | | | | | -8.0 |
| 9.0 | | | | | | | | | -9.0 |
| 10.0 | | | | | | | | | -10.0 |
| 11.0 | | | | | | | | | -11.0 |
| 12.0 | | | | | | | | | -12.0 |

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| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 7.5 m |
| REVIEWED BY: | COMPLETE: 08/11/04 |
| Fig. No: 42 | Page 1 of 1 |

05/02/10 07:40AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30125 |
| Donjek Services Ltd. | UTM ZONE: – N6773058 E633772 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | | |
| | SANDY GRAVEL, trace silt | 0.1m | ⊠ | 193 | GW–GM | |
| 1.0 | –dry to damp, medium dense, light brown | | | | | |
| | SILTY GRAVELLY SAND | 1.5m | | | | |
| 2.0 | –damp, medium dense, brown | | ⊠ | 194 | SM | |
| 3.0 | | | | | | |
| | SILTY GRAVELLY SAND | 3.4m | | | | |
| 4.0 | –moist, medium dense, brown | | ⊠ | 195 | SM | |
| | SILTY GRAVELLY SAND | 4.3m | | | | |
| 5.0 | –moist to wet, medium desne, brown | | ⊠ | 196 | SM | |
| 6.0 | | | | | | |
| | GRAVELLY SILTY SAND | 6.1m | | | | |
| 7.0 | –saturated, medium dense, brown | | ⊠ | 197 | SM | |
| 8.0 | | | | | | |
| | SILTY SAND, trace gravel | 7.9m | | | | |
| 9.0 | –moist, medium dense, grey | | ⊠ | 198 | SM | |
| 10.0 | | | | | | |
| | | | ⊠ | 199 | SM | |
| 11.0 | | 10.7m | | | | |
| | End Of Hole @ 10.7m | | | | | |
| 12.0 | | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 10.7 m |
| REVIEWED BY: | COMPLETE: 08/11/04 |
| Fig. No: 41 | Page 1 of 1 |

05/02/10 07:40AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30126 |
| Donjek Services Ltd. | UTM ZONE: – N6773199 E633699 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | SANDY SILT, trace gravel 0.4m<br>–damp to moist, medium dense, brown | ⊠ | 191 | ● ▲ | ML | | ■ ◆ | |
| 1.0 | | | | | | | | –1.0 |
| | SILTY SAND, some gravel 1.5m<br>–dry to damp, dense, light brown<br>–rock powder in sample | ⊠ | 192 | ● ▲ | SM | | ■ ◆ | |
| 2.0 | 1.8m | | | | | | | –2.0 |
| | End Of Hole @ 1.8m – refusal<br>–refusal @ 1.8m – move south 2m<br>–refusal @ 1.8m – EOH | | | | | | | |
| 3.0 | | | | | | | | –3.0 |
| 4.0 | | | | | | | | –4.0 |
| 5.0 | | | | | | | | –5.0 |
| 6.0 | | | | | | | | –6.0 |
| 7.0 | | | | | | | | –7.0 |
| 8.0 | | | | | | | | –8.0 |
| 9.0 | | | | | | | | –9.0 |
| 10.0 | | | | | | | | –10.0 |
| 11.0 | | | | | | | | –11.0 |
| 12.0 | | | | | | | | –12.0 |

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| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 1.8 m |
| REVIEWED BY: | COMPLETE: 08/10/04 |
| Fig. No: 40 | Page 1 of 1 |

05/02/10 07:40AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30127 |
| Donjek Services Ltd. | UTM ZONE: – N6773331 E633619 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | |
| | GRAVELLY SILTY SAND 0.3m<br>–Frozen, no visible ice<br>–brown | ⊠ | 188 | SM | |
| 2.0 | | ⊠ | 189 | SM | |
| 4.0 | SILTY SAND 4.0m<br>–dry to damp, dense, light brown<br>–powder in sample | ⊠ | 190 | SM | |
| 5.0 | 4.6m<br>End Of Hole @ 4.6m – Refusal<br>–refusal @ 4.6m – move east 2m<br>–refusal @ 4.4m – EOH<br>–rock powder on bit at refusal on both attempts | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| | REVIEWED BY: | COMPLETE: 08/10/04 |
| | Fig. No: 39 | Page 1 of 1 |

05/02/10 07:40AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30128 |
| Donjek Services Ltd. | UTM ZONE: – N6773445 E633550 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | GRAVELLY SAND, some silt 0.3m<br>–dry to damp, medium dense, light brown | ⊠ | 184 | ● ▲ | SW-SM | | ■ ◆ | |
| 1.0 | | | | | | | | -1.0 |
| | SILTY SAND 1.5m<br>–moist, dense, light brown with odd yellow/green hue<br>–water seepage at approx. 1.5m | ⊠ | 185 | ● ▲ | SM | | ■ ◆ | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | ⊠ | 186 | ● ▲ | SM | | ■ ◆ | -4.0 |
| | SILTY SAND 4.6m<br>–moist, dense, light brown with odd yellow/green hue | | | | | | | |
| 5.0 | | ⊠ | 187 | ● ▲ | SM | | ■ ◆ | -5.0 |
| 6.0 | 5.9m<br>End Of Hole @ 5.9m<br>–standing water in testhole approx. 100mm below surface during drilling of 4.4 to 4.7m | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| REVIEWED BY: | COMPLETE: 08/10/04 |
| Fig. No: 38 | Page 1 of 1 |

05/02/10 07:41AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30129 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6773473 E633531 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | |
| 1.0 | SANDY SILT 0.6m<br>–moist, soft to firm, brown with some black organic silts | AUGER | 181 | ML | |
| 2.0 | SILTY GRAVELLY SAND 1.5m<br>–moist to wet, medium dense, brown | AUGER | 182 | SM | |
| 3.0 | SILTY SAND, some gravel 3.0m<br>–damp, dense, brown | AUGER | 183 | SM | |
| 4.0 | 4.0m<br>End Of Hole @ 4.0m – Refusal<br>–refusal @ 3.7m – move south 1.5m<br>–refusal @ 4.0m – EOH | | | | |
| 5.0 | | | | | |
| 6.0 | | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 08/10/04 |
| | Fig. No: 37 | Page 1 of 1 |

05/02/10 07:41AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30130 |
| Donjek Services Ltd. | UTM ZONE: - N6773537 E633472 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| 1.0 | GRAVELLY SILTY SAND 0.6m<br>-Frozen<br>-brown<br>-possible water seepage 2.7m to 3.7m | ⊠ | 176 | ● ▲ | SM | | ■ ◆ | -1.0 |
| 2.0 | | ⊠ | 177 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | GRAVELLY SILTY SAND 3.7m<br>-damp to moist, dense, brown | | | | | | | -4.0 |
| 5.0 | SILTY SAND, trace gravel 4.9m<br>-damp, dense, brown | ⊠ | 178 | ● ▲ | SM | | ■ ◆ | -5.0 |
| 6.0 | SILTY SAND 5.8m<br>-dry to damp, dense, light brown<br>-powder like sample<br>-very slow drilling | | | | | | | -6.0 |
| 7.0 | | ⊠ | 179 | ● ▲ | SM | | ■ ◆ | -7.0 |
| 8.0 | 8.2m | | | | | | | -8.0 |
| 9.0 | End Of Hole @ 8.2m - Refusal<br>-refusal @ 4.9m - move north 2m<br>-refusal @ 8.2m - EOH<br>-Visible water in hole upon auger withdrawl of attempt #1. | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY:<br>Fig. No: 36 | COMPLETION DEPTH: 8.2 m<br>COMPLETE: 08/10/04<br>Page 1 of 1 |

05/02/10 07:41AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30131 |
| Donjek Services Ltd. | UTM ZONE: - N6773651 E633423 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | | 0.0 |
| | SANDY SILT, trace gravel<br>-Frozen<br>-brown | 0.3m | ⊠ | 173 | ● ▲ | ML | | ■ ◆ | |
| 1.0 | | | | | | | | | -1.0 |
| | SILTY SAND, some gravel<br>-Frozen<br>-brown | 1.5m | ⊠ | 174 | ● ▲ | SM | | ■ ◆ | |
| 2.0 | | | | | | | | | -2.0 |
| 3.0 | | | | | | | | | -3.0 |
| | SILTY SAND<br>-dry to damp, dense, light brown<br>-rock powder in sample | 3.4m | ⊠ | 175 | ● ▲ | SM | | ■ ◆ | |
| 4.0 | | 4.0m | | | | | | | -4.0 |
| | End Of Hole @ 4.0m - Refusal<br>-refusal @ 4.0m - move north 2.5m<br>-refusal @ 4.0m - EOH<br>-rock powder on bit at refusal on both attempts<br>-visible rock outcropping approx. 10m west of testhole | | | | | | | | |
| 5.0 | | | | | | | | | -5.0 |
| 6.0 | | | | | | | | | -6.0 |
| 7.0 | | | | | | | | | -7.0 |
| 8.0 | | | | | | | | | -8.0 |
| 9.0 | | | | | | | | | -9.0 |
| 10.0 | | | | | | | | | -10.0 |
| 11.0 | | | | | | | | | -11.0 |
| 12.0 | | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4 m |
| REVIEWED BY: | COMPLETE: 08/10/04 |
| Fig. No: 35 | Page 1 of 1 |

05/02/10 07:42AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30132 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6773786 E633337 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| 1.0 | SILTY SAND, trace to some gravel 0.9m<br>–Frozen<br>–brown | ⊠ | 170 | ● ▲ | SM | | ■ ◆ | -1.0 |
| 2.0 | | ⊠ | 171 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | AS ABOVE 3.2m<br>–Unfrozen<br>–damp, medium dense, brown | ⊠ | 172 | ● ▲ | SM | | ■ ◆ | -3.0 |
| 4.0 | 4.0m<br>End Of Hole @ 4.0m – Refusal<br>–refusal @ 0.9m – move south 5m<br>–refusal @ 4.0m – EOH<br>–rock powder on bit at refusal on both attempts | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 4 m |
|---|---|
| REVIEWED BY: | COMPLETE: 08/09/04 |
| Fig. No: 34 | Page 1 of 1 |

05/02/10 07:47AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30133 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6673901 E633261 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| 1.0 | SILTY GRAVELLY SAND 0.6m<br>–Frozen<br>–brown | ⊠ | 168 | ● ▲ | SM | | ■ ◆ | -1.0 |
| 2.0 | SILTY SAND 1.8m<br>–damp, dense, brown | ⊠ | 169 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | 2.7m<br>End Of Hole @ 2.7m – Refusal<br>–refusal @ 2.7m – move south 3m<br>–refusal @ 2.6m – EOH<br>–rock powder on bit at refusal on both attempts | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 2.7 m |
|---|---|
| REVIEWED BY: | COMPLETE: 08/09/04 |
| Fig. No: 33 | Page 1 of 1 |

05/02/10 07:47AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30134 |
| Donjek Services Ltd. | UTM ZONE: - N6674008 E633158 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | | | | 0.0 |
| 1.0 | SILTY GRAVELLY SAND 0.9m<br>-damp, medium dense, brown | ⊠ | 166 | ● ▲ | SM | | ■ ◆ | -1.0 |
| 2.0 | SILTY SAND, trace gravel 1.8m<br>-dry to damp, dense, light brown | ⊠ | 167 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | 2.7m<br>End Of Hole @ 2.7m - Refusal<br>-refusal @ 2.7m - move west 2m<br>-refusal @ 1.5m - EOH<br>-rock powder on bit at refusal on both attempts | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 2.7 m |
| REVIEWED BY: | COMPLETE: 08/09/04 |
| Fig. No: 32 | Page 1 of 1 |

05/02/10 07:48AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30135 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6674137 E633067 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SURFICAL ORGANICS<br>-Frozen | | | | | | | 0.0 |
| 1.0 | SILTY SAND, some gravel 0.9m<br>-Frozen<br>-brown | ⊠ | 164 | ● ▲ | SM | | ■ ◆ | -1.0 |
| 2.0 | SILTY SAND 1.8m<br>-damp<br>-light brown | ⊠ | 165 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m – Refusal<br>-Some rock powder on bit at depth<br>-refusal @ 1.5m – move south 2m<br>-refusal @ 3.0m – EOH | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
|---|---|
| REVIEWED BY: | COMPLETE: 08/09/04 |
| Fig. No: 31 | Page 1 of 1 |

05/02/10 07:48AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30136 |
| Donjek Services Ltd. | UTM ZONE: – N6674206 E633003 | PROJECT NO: 9002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | | 0.0 |
| | SILTY SAND, some gravel 0.6m<br>–Frozen<br>–brown | | 162 | SM | | |
| 1.0 | | | | | | -1.0 |
| | SILTY SAND 1.5m<br>–Frozen<br>–brown | | 163 | SM | | |
| 2.0 | | | | | | -2.0 |
| | 2.1m<br>End Of Hole @ 2.1m – Refusal<br>–refusal @ 2.1m – move 2m south<br>–refusal @ 2.1m – EOH | | | | | |
| 3.0 | | | | | | -3.0 |
| 4.0 | | | | | | -4.0 |
| 5.0 | | | | | | -5.0 |
| 6.0 | | | | | | -6.0 |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 2.1 m |
| REVIEWED BY: | COMPLETE: 08/09/04 |
| Fig. No: 30 | Page 1 of 1 |

05/02/10 09:20AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30148 |
| Donjek Services Ltd. | UTM ZONE: - N6775613 E632037 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| 1.0 | SILTY SAND, some gravel 0.9m<br>-Frozen<br>-dark brown<br>-some organic silts | ⊠ | 158 | ● ▲ | SM | | ■ ◆ | -1.0 |
| 2.0 | SILTY SAND, some gravel to GRAVELLY 1.8m<br>-Frozen<br>-brown | ⊠ | 159 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | ⊠ | 160 | ● ▲ | SM | | ■ ◆ | -4.0 |
| 5.0 | Pulverized rock sample @ refusal | ⊠ | 161 | ● | | | | -5.0 |
| | 5.2m<br>End Of Hole @ 5.2m - Refusal<br>-refusal @ 5.2m - move north 2m<br>-refusal @ 5.2m - EOH | | | | | | | |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.2 m |
| REVIEWED BY: | COMPLETE: 08/03/04 |
| Fig. No: 29 | Page 1 of 1 |

05/02/10 07:57AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30149 |
| Donjek Services Ltd. | UTM ZONE: – N6775666 E631983 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | |
| 1.0 | SILTY GRAVELLY SAND 0.9m<br>–Frozen<br>–brown | ⊠ | 154 | SM | |
| 2.0 | GRAVELLY SILTY SAND<br>–Frozen<br>–brown | ⊠ | 155 | SM | |
| 3.0 | | | | | |
| 4.0 | SILTY SAND, trace gravel 3.7m<br>–Frozen<br>–brown | ⊠ | 156 | SM | |
| 5.0 | | | | | |
| | Pulverized rock powder sample @ refusal 5.5m | ⊠ | 157 | | |
| 6.0 | End Of Hole @ 5.5m – Refusal<br>–refusal @ 4.7m – move north 2m<br>–refusal @ 5.5m – EOH | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.5 m |
| | REVIEWED BY: | COMPLETE: 08/03/04 |
| | Fig. No: 28 | Page 1 of 1 |

05/02/09 11:52AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30150 |
| Donjek Services Ltd. | UTM ZONE: – N6775739 E631923 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | |
| | SILTY GRAVELLY SAND 0.6m<br>–Frozen<br>–brown/grey | ⊠ | 147 | SM | |
| 2.0 | SILTY SAND, trace gravel 1.8m<br>–Frozen<br>–brown | ⊠ | 148 | SM | |
| 4.0 | SILTY SAND 3.7m<br>–Frozen<br>–brown | ⊠ | 149 | SM | |
| 5.0 | Pulverized rock powder sample @ 5.5m<br>refusal | ⊠ | 150 | | |
| 7.0 | | ⊠ | 151 | SM | |
| 8.0 | | ⊠ | 152 | SM | |
| 9.0 | | | | | |
| 10.0 | | ⊠ | 153 | SM | |
| 11.0 | 10.7m<br>End Of Hole @ 10.7m<br>–refusal @ 5.5m – move north 2m | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 10.7 m |
| REVIEWED BY: | COMPLETE: 08/03/04 |
| Fig. No: 27 | Page 1 of 1 |

05/02/09 02:19PM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30151 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6775813 E631868 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES / PLASTIC M.C. LIQUID | USC | SOIL SYMBOL | PERCENT SAND / PERCENT GRAVEL | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS<br>–Frozen | | | | | | | 0.0 |
| 1.0 | SILTY SAND, trace gravel 0.9m<br>–Frozen<br>–brown | AUGER | 144 | | SM | | | -1.0 |
| 2.0 | | AUGER | 145 | | SM | | | -2.0 |
| 3.0 | Pulverized rock sample @ refusal<br>–damp, light brown | AUGER | 146 | | | | | -3.0 |
| 4.0 | 4.0m<br>End Of Hole @ 4.0m – Refusal<br>–refusal @ 3.2m – move south 2m<br>–refusal @ 4.0m – EOH | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 4 m |
|---|---|
| REVIEWED BY: | COMPLETE: 08/03/04 |
| Fig. No: 26 | Page 1 of 1 |

05/02/09 02:20PM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30152 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6775939 E631805 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND, some silt<br>–damp, medium dense, brown/grey | ⊠ | 140 | ● ▲ | SW–SM | | ■ ◆ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | SILTY SAND 2.1m<br>–damp, medium dense, brown w/ some dark organic silts | ⊠ | 141 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | SANDY SILT 3.0m<br>–damp, medium dense, brown | ⊠ | 142 | ● ▲ | ML | | ■ ◆ | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | Pulveized rock sample @ refusal<br>–dry to damp, light grey | ⊠ | 143 | ● ▲ | SM | | ■ ◆ | -5.0 |
| | 5.2m | | | | | | | |
| 6.0 | End Of Hole @ 5.2m – Refusal<br>Testhole located in existing ditch | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 5.2 m |
|---|---|
| REVIEWED BY: | COMPLETE: 08/03/04 |
| Fig. No: 25 | Page 1 of 1 |

05/02/09 11:53AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30153 |
| Donjek Services Ltd. | UTM ZONE: – N6776010 E631728 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SURFICAL ORGANICS | | | | | | | 0.0 |
| | SILTY SAND, some gravel 0.15m<br>–moist, loose, brown<br>–organics noted to 0.6m depth | ⊠ | 135 | ● ▲ | SM | | ■ ◆ | |
| 1.0 | | | | | | | | -1.0 |
| | SILTY SAND, trace gravel 1.2m<br>–Frozen<br>–brown | ⊠ | 136 | ● ▲ | SM | | ■ ◆ | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | SILTY SAND, some gravel 3.0m<br>–damp, dense, brown | ⊠ | 137 | ● | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| | SANDY SILT 5.2m<br>–damp, medium dense, brown/dark grey<br>–easier drilling @ 5.2m | ⊠ | 138 | ● ▲ | ML | | ■ ◆ | |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| | Pulverized rock sample @ refusal<br>–dry, damp, light grey 7.6m | ⊠ | 139 | ● | | | | |
| 8.0 | End Of Hole @ 7.6m – Refusal<br>–refusal @ 7.6m – move east 1m<br>–refusal @ 3.7m – EOH | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 7.6 m |
| | REVIEWED BY: | COMPLETE: 08/03/04 |
| | Fig. No: 24 | Page 1 of 1 |

05/02/09 11:53AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30154 |
| Donjek Services Ltd. | UTM ZONE: - N6776060 E631698 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | | | | 0.0 |
| | GRAVELLY SILTY SAND 0.3m<br>-Frozen<br>-brown/grey | ⊠ | 132 | ▲ | SM | | ■ ◆ | |
| 1.0 | | | | | | | | -1.0 |
| | SILTY SAND 1.5m<br>-Frozen<br>-brown | ⊠ | 133 | ● ▲ | SM | | ■ ◆ | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | GRAVELLY SILTY SAND 3.0m<br>-Frozen<br>-brown | ⊠ | 134 | ● ▲ | SM | | ■ ◆ | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| | 5.3m<br>End Of Hole @ 5.3m - Refusal<br>-refusal @ 5.3m - move east 1m<br>-refusal @ 2.4m - EOH | | | | | | | |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.3 m |
| REVIEWED BY: | COMPLETE: 07/31/04 |
| Fig. No: 23 | Page 1 of 1 |

05/02/09 11:53AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30155 |
| Donjek Services Ltd. | UTM ZONE: – N6776117 E631643 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SURFICAL ORGANICS | | | | |
| | ORGANIC SILTS 0.1m<br>–damp, firm, dark brown | | | | |
| 1.0 | SILTY GRAVELLY SAND 0.8m<br>–damp to moist, medium dense, brown | ⊠ | 127 | SM | |
| | GRAVELLY SAND, some silt to SILTY 1.5m<br>–Frozen<br>–brown | ⊠ | 128 | SM | |
| 2.0 | | ⊠ | 129 | SM | |
| 3.0 | | ⊠ | 130 | SM | |
| 4.0 | | | | | |
| | SILTY GRAVELLY SAND 4.6m<br>–Frozen<br>–brown | | | | |
| 5.0 | | ⊠ | 131 | SM | |
| 6.0 | | | | | |
| 7.0 | 7.0m<br>End Of Hole @ 7.0m – Refusal<br>–refusal 3.0m – move east 1m<br>–refusal 7.0m – move east 2m<br>–refusal 4.0m – EOH | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

PERCENT FINES ▲ (20 40 60 80)
PLASTIC M.C. LIQUID (20 40 60 80)
PERCENT SAND ◆ (20 40 60 80)
PERCENT GRAVEL ■ (20 40 60 80)
ELEVATION(m): 0.0 -1.0 -2.0 -3.0 -4.0 -5.0 -6.0 -7.0 -8.0 -9.0 -10.0 -11.0 -12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 7 m |
| | REVIEWED BY: | COMPLETE: 07/31/04 |
| | Fig. No: 22 | Page 1 of 1 |

05/02/09 11:53AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30156 |
| Donjek Services Ltd. | UTM ZONE: – N6776185 E631600 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | FILL – Access trail prep/pad contstruction | | | | |
| | SURFICIAL ORGANICS 0.5m | | | | |
| 1.0 | SILTY GRAVELLY SAND 0.8m<br>–damp, loose, brown w/ dark brown organics<br>–some organic silts | ⊠ | 116 | SM | |
| 2.0 | GRAVELLY SAND, some silt to SILTY 1.5m<br>–damp to moist, medium dense, brown<br>–minimal mat'l on flighting from 1.5m to 4.6m (poor samples) | ⊠ | 117 | SM | |
| 3.0 | | ⊠ | 118 | SM | |
| 4.0 | | | | | |
| 5.0 | | ⊠ | 119 | GM | |
| 6.0 | | | | | |
| | SILTY SAND, trace gravel 6.4m<br>–damp, medium dense, brown/grey | ⊠ | 120 | SM | |
| 7.0 | | | | | |
| 8.0 | | ⊠ | 121 | SM | |
| 9.0 | | | | | |
| | SILTY SAND, trace to some gravel 9.1m<br>–damp, medium dense, grey<br>–some gravels noted between 10.4 to 11.0m | ⊠ | 122 | SM | |
| 10.0 | | ⊠ | 123 | SM | |
| 11.0 | | ⊠ | 124 | SM | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ (20 40 60 80)

PLASTIC M.C. LIQUID (20 40 60 80)

◆ PERCENT SAND ◆ (20 40 60 80)

■ PERCENT GRAVEL ■ (20 40 60 80)

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 15.1 m |
| | REVIEWED BY: | COMPLETE: 07/31/04 |
| | Fig. No: 21 | Page 1 of 2 |

05/02/09 11:53AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30156 |
| Donjek Services Ltd. | UTM ZONE: - N6776185 E631600 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | | | | | | | 12.0 |
| 13.0 | | | 125 | ● ▲ | SM | | ■ ◆ | 13.0 |
| 14.0 | | | 126 | ● ▲ | SM | | ■ ◆ | 14.0 |
| 15.0 | 15.1m | | | | | | | 15.0 |
| | End Of Hole @ 15.1m | | | | | | | |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 15.1 m |
| REVIEWED BY: | COMPLETE: 07/31/04 |
| Fig. No: 21 | Page 2 of 2 |

05/02/09 11:54AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30157 |
| Donjek Services Ltd. | UTM ZONE: – N6776190 E631655 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

# SOIL DESCRIPTION

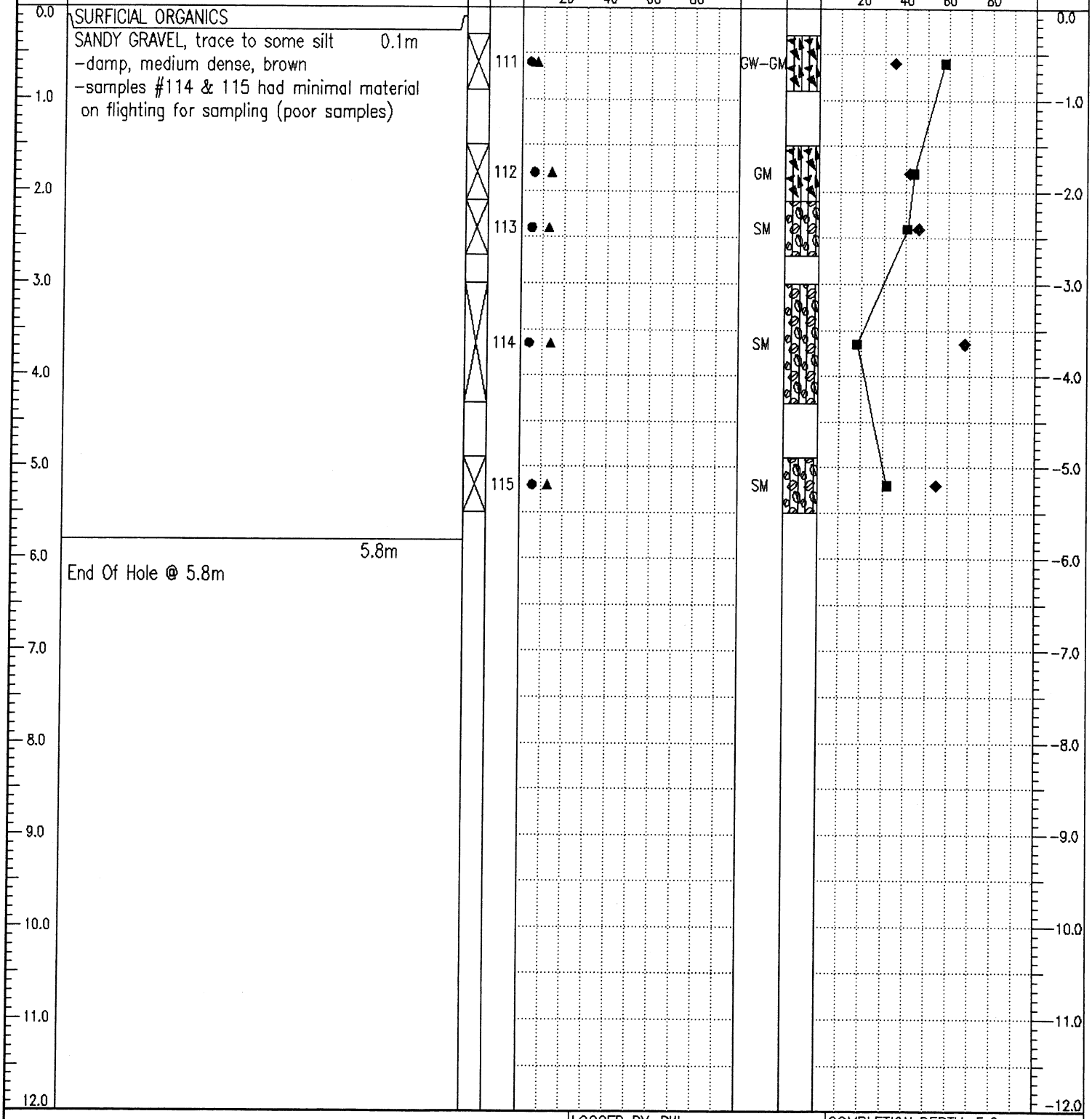
**SURFICIAL ORGANICS**

SANDY GRAVEL, trace to some silt 0.1m
–damp, medium dense, brown
–samples #114 & 115 had minimal material on flighting for sampling (poor samples)

5.8m

End Of Hole @ 5.8m

| SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|
| 111 | GW–GM | |
| 112 | GM | |
| 113 | SM | |
| 114 | SM | |
| 115 | SM | |




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| | REVIEWED BY: | COMPLETE: 07/30/04 |
| | Fig. No: 20 | Page 1 of 1 |

05/02/09 11:54AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30158 |
| Donjek Services Ltd. | UTM ZONE: - N6776272 E631563 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | FILL – Access trail prep/pad construction | | | | | | | 0.0 |
| 1.0 | ORGANIC SILTS 0.8m<br>–Frozen<br>–no visible ice<br>–black/dark brown | ⊠ | 106 | ▲ ● | ML | | ◆ ■ | -1.0 |
| 2.0 | SILTY GRAVELLY SAND 1.5m<br>–Frozen<br>–brown | ⊠ | 107 | ● ▲ | SM | | ◆ ■ | -2.0 |
| 3.0 | GRAVELLY SAND, some silt to SILTY 3.0m<br>–Frozen<br>–brown | ⊠ | 108 | ● ▲ | SM | | ◆ ■ | -3.0 |
| 4.0 | | ⊠ | 109 | ● ▲ | SM | | ◆ ■ | -4.0 |
| 5.0 | | ⊠ | 110 | ● ▲ | SM | | ◆ ■ | -5.0 |
| 6.0 | 6.2m<br>End Of Hole @ 6.2m – Refusal<br>–refusal @ 6.2m – move north 2m<br>–resusal @ 1.8m – move north 1m<br>–refusal @ 1.5m – move south 1.5m<br>–refusal @ 4.0m – EOH | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 6.2 m |
| REVIEWED BY: | COMPLETE: 07/30/04 |
| Fig. No: 19 | Page 1 of 1 |

05/02/09 02:22PM (YTG_HWYS)

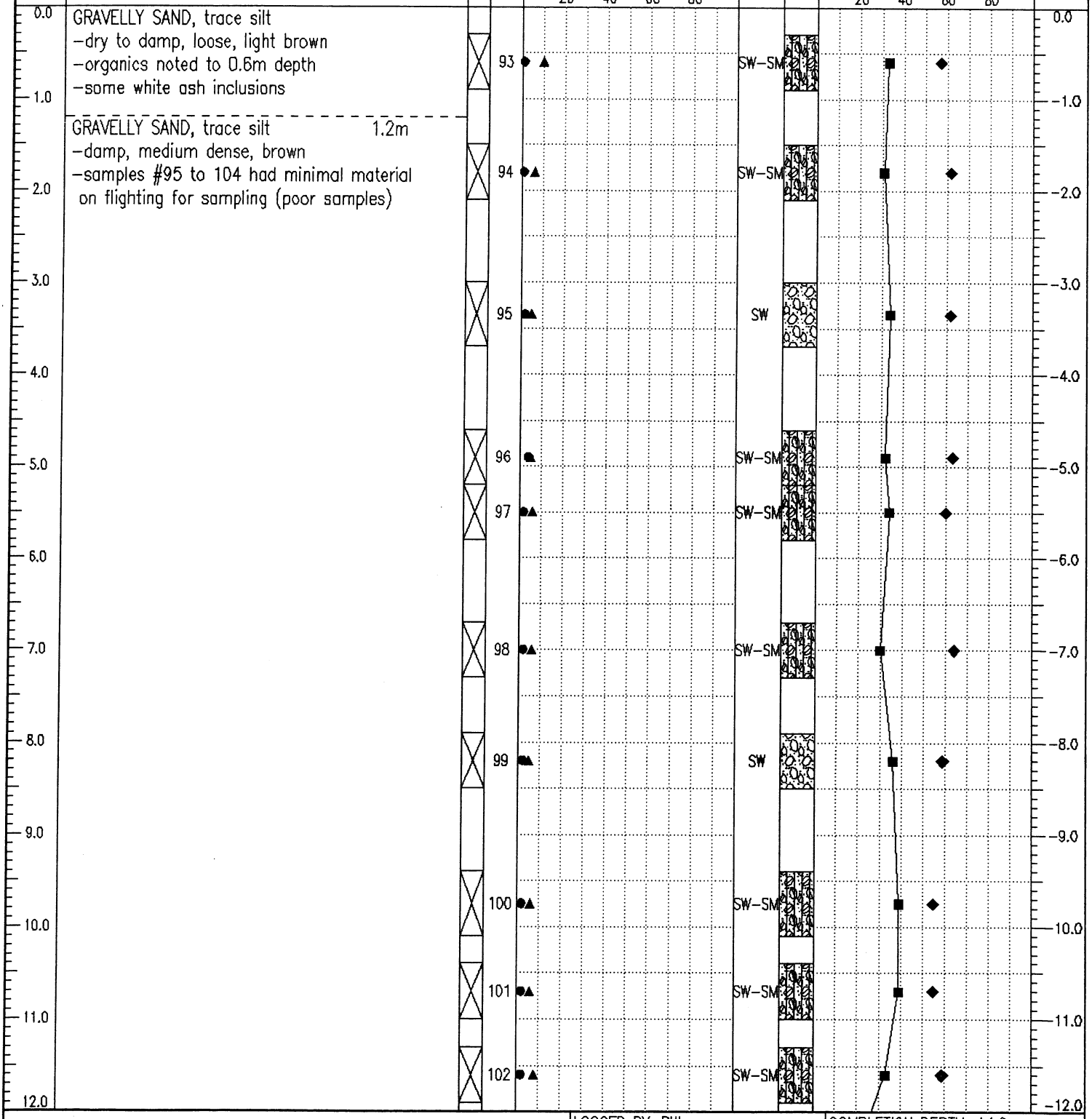
| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30159 |
| Donjek Services Ltd. | UTM ZONE: – N6776361 E631517 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

# SOIL DESCRIPTION

GRAVELLY SAND, trace silt
–dry to damp, loose, light brown
–organics noted to 0.6m depth
–some white ash inclusions

GRAVELLY SAND, trace silt 1.2m
–damp, medium dense, brown
–samples #95 to 104 had minimal material on flighting for sampling (poor samples)




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 14.9 m |
| | REVIEWED BY: | COMPLETE: 07/30/04 |
| | Fig. No: 18 | Page 1 of 2 |

05/02/09 11:54AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30159 |
| Donjek Services Ltd. | UTM ZONE: - N6776361 E631517 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | | | | | | | 12.0 |
| 13.0 | SILTY SAND, some gravel 12.8m<br>-moist, medium dense, brown | ⊠ | 103 | ● ▲ | SM | | ◆ ■ | 13.0 |
| 14.0 | GRAVELLY SAND, some silt 13.7m<br>-damp, medium dense, brown | ⊠ | 104 | ● ▲ | SW-SM | | ◆ ■ | 14.0 |
| | | ⊠ | 105 | ● ▲ | SW-SM | | ◆ ■ | |
| 15.0 | 14.9m<br>End Of Hole @ 14.9m | | | | | | | 15.0 |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

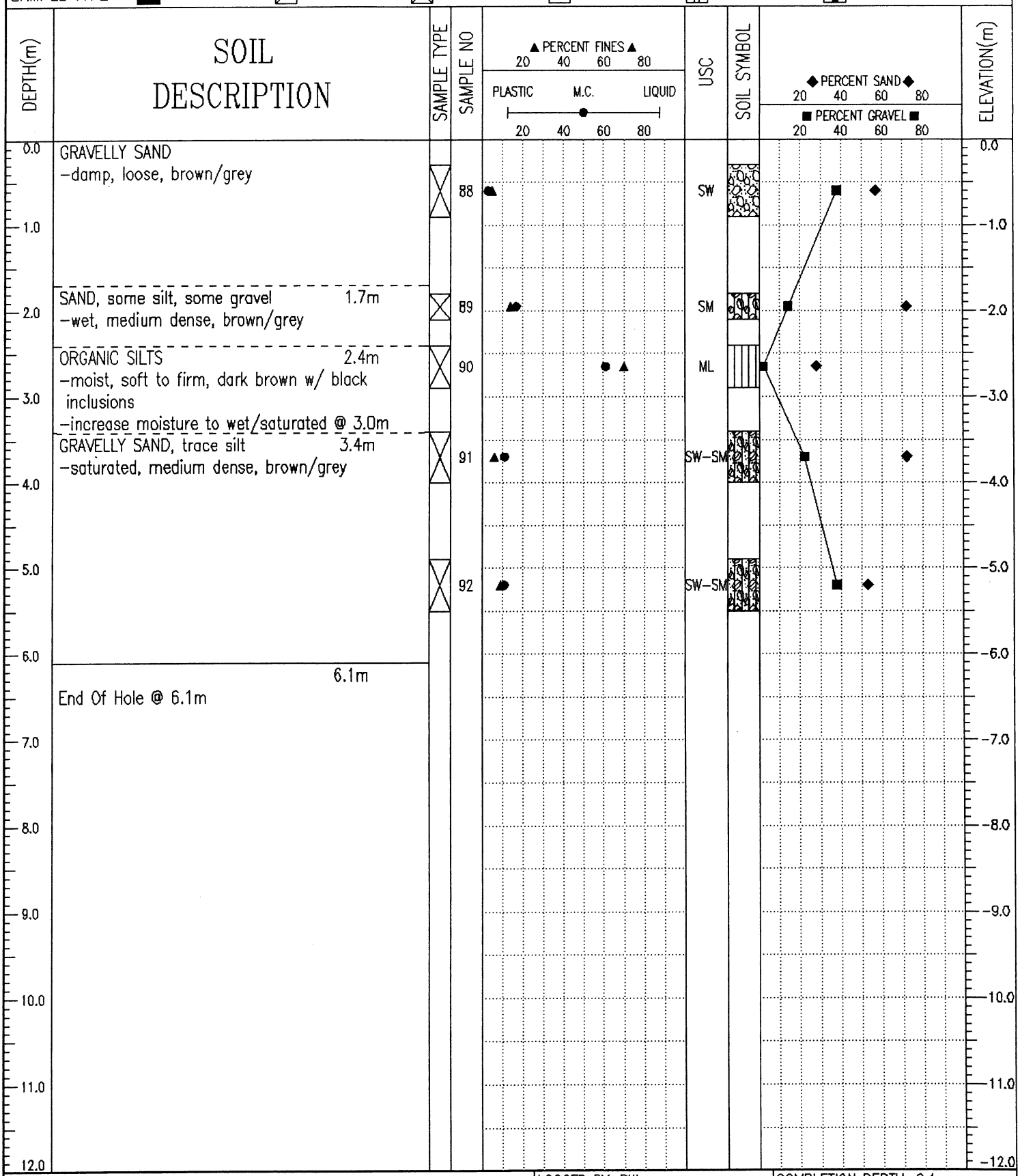
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 14.9 m |
| REVIEWED BY: | COMPLETE: 07/30/04 |
| Fig. No: 18 | Page 2 of 2 |

05/02/09 11:54AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30160 |
| Donjek Services Ltd. | UTM ZONE: - N6776506 E631499 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 6.1 m |
| | REVIEWED BY: | COMPLETE: 07/29/04 |
| | Fig. No: 17 | Page 1 of 1 |

05/02/09 11:55AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30161 |
| Donjek Services Ltd. | UTM ZONE: - N6776711 E631513 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SURFICAL ORGANCIS | | | | | | | 0.0 |
| | SANDY GRAVEL, trace silt 0.2m<br>-damp to moist, loose, brown | ⊠ | 83 | ● ▲ | GP-GM | | ◆ ■ | |
| 1.0 | SANDY GRAVEL/GRAVELLY SAND,trace silt 1.0m<br>-moist, medium dense, brown | | | | | | | -1.0 |
| 2.0 | | ⊠ | 84 | ● ▲ | GP-GM | | ◆ ■ | -2.0 |
| 3.0 | | ⊠ | 85 | ● ▲ | SW-SM | | ◆ ■ | -3.0 |
| 4.0 | SILTY SANDY GRAVEL 4.0m<br>-moist, medium dense, brown | ⊠ | 86 | ● ▲ | GM | | ◆ ■ | -4.0 |
| | GRAVELLY SAND, some silt 4.4m<br>-moist, medium dense, brown | | | | | | | |
| 5.0 | | ⊠ | 87 | ● ▲ | SM | | ◆ ■ | -5.0 |
| 6.0 | 5.8m<br>End Of Hole @ 5.8m | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

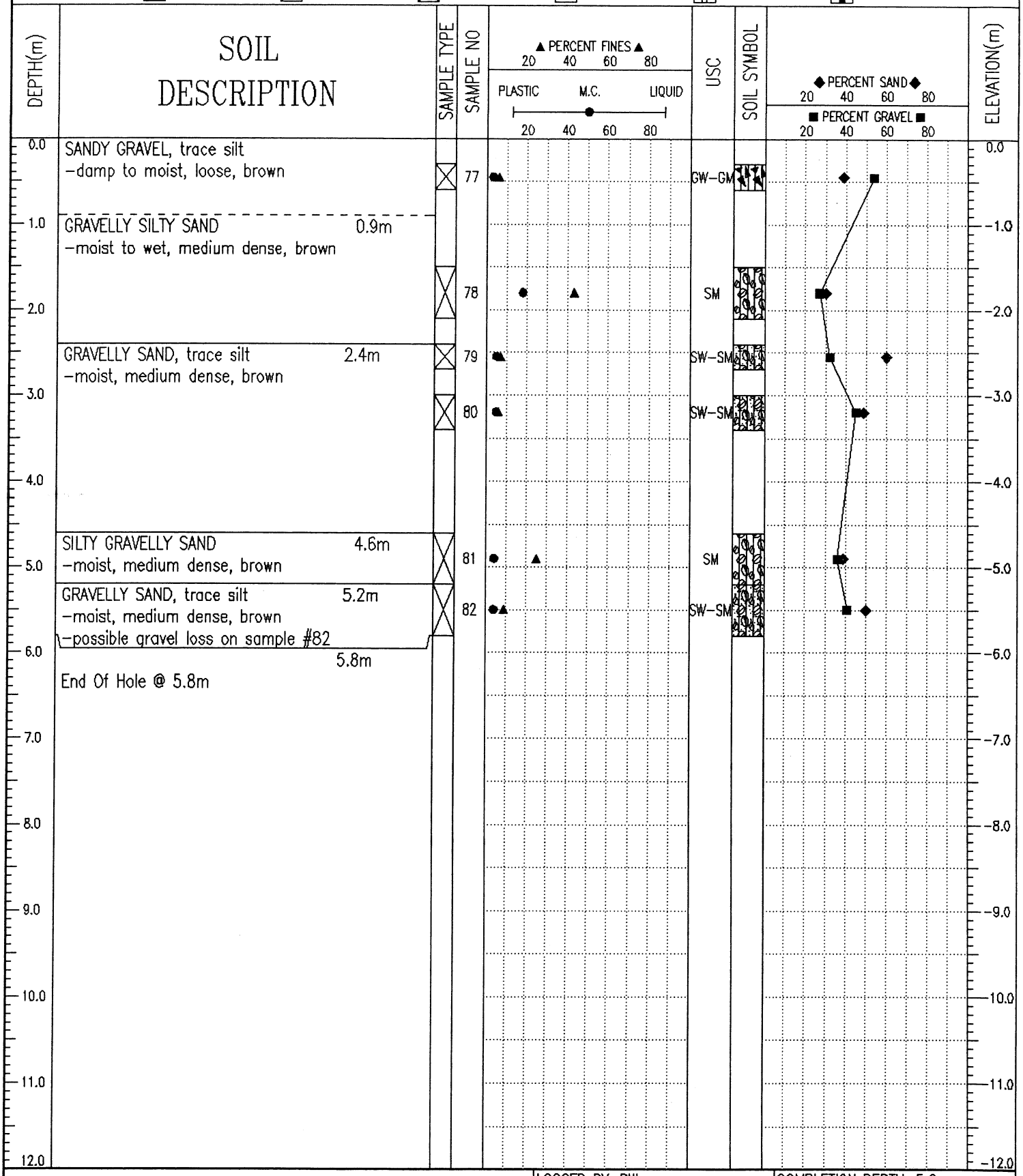
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| REVIEWED BY: | COMPLETE: 07/29/04 |
| Fig. No: 16 | Page 1 of 1 |

05/02/09 02:20PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30162 |
| Donjek Services Ltd. | UTM ZONE: – N6776914 E631538 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| | REVIEWED BY: | COMPLETE: 07/29/04 |
| | Fig. No: 15 | Page 1 of 1 |

05/02/09 11:55AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30163 |
| Donjek Services Ltd. | UTM ZONE: - N6776900 E631563 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, some silt<br>-damp to moist, loose, brown<br>-silt seam noted between 0.6 & 0.8m | AUGER | 72 | SM | |
| 1.5m | GRAVELLY SILTY SAND<br>-moist, soft, brown<br>-some organics noted (rootlets) | AUGER | 73 | SM | |
| 2.0m | SANDY GRAVEL/GRAVELLY SAND,trace silt<br>-moist, medium dense, brown<br>-some oxidation on gravels | AUGER | 74 | SM | |
| | | AUGER | 75 | GW-GM | |
| 5.2m | GRAVELLY SAND, trace silt<br>-saturated, medium dense, brown | AUGER | 76 | SW-SM | |
| 5.8m | End Of Hole @ 5.8m | | | | |

PERCENT FINES: 20 40 60 80

PLASTIC M.C. LIQUID: 20 40 60 80

PERCENT SAND: 20 40 60 80

PERCENT GRAVEL: 20 40 60 80

ELEVATION(m): 0.0 -1.0 -2.0 -3.0 -4.0 -5.0 -6.0 -7.0 -8.0 -9.0 -10.0 -11.0 -12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| | REVIEWED BY: | COMPLETE: 07/29/04 |
| | Fig. No: 14 | Page 1 of 1 |

05/02/09 02:20PM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30164 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6777031 E631579 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL<br>-damp to moist, loose, brown | | 66 | GW | |
| 1.0 | ORGANIC SILTS 0.8m<br>-moist, soft, brown | | 67 | ML | |
| 2.0 | SANDY GRAVEL, trace silt 1.4m<br>-damp to moist, medium dense, brown | | 68 | GW-GM | |
| 3.0 | SILTY SAND, trace gravel 2.4m<br>-damp to moist, soft to firm, brown w/ some black organics | | 69 | SM | |
| | GRAVELLY SAND, trace silt 3.0m<br>-damp, medium dense, brown | | 70 | SW-SM | |
| 5.0 | SILTY SANDY GRAVEL 4.6m<br>-moist, medium dense, brown w/ black organics<br>-some organic silts<br>-some organic intrusions (rootlets etc.) | | 71 | GM | |
| 6.0 | 5.9m<br>End Of Hole @ 5.9m | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
|---|---|
| REVIEWED BY: | COMPLETE: 07/29/04 |
| Fig. No: 13 | Page 1 of 1 |

05/02/09 02:20PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30165 |
| Donjek Services Ltd. | UTM ZONE: - N6777126 E631607 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>-damp, loose, brown | ⊠ | 61 | GP-GM | |
| 1.2m | GRAVELLY SAND, trace silt<br>-dry to damp, medium dense, light brown<br>-possibe gravel loss on sample #62 | ⊠ | 62 | SW-SM | |
| 3.4m | SANDY SILT, trace gravel<br>-damp, medium dense, brown | ⊠ | 63 | ML | |
| 4.1m | SILTY GRAVELLY SAND<br>-damp, medium dense, brown | ⊠ | 64 | SM | |
| 4.9m | SANDY SILT, trace gravel<br>-moist to wet, medium dense, brown<br>-increase moisture to wet @ 5.5m | ⊠ | 65 | ML | |
| 5.8m | End Of Hole @ 5.8m | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

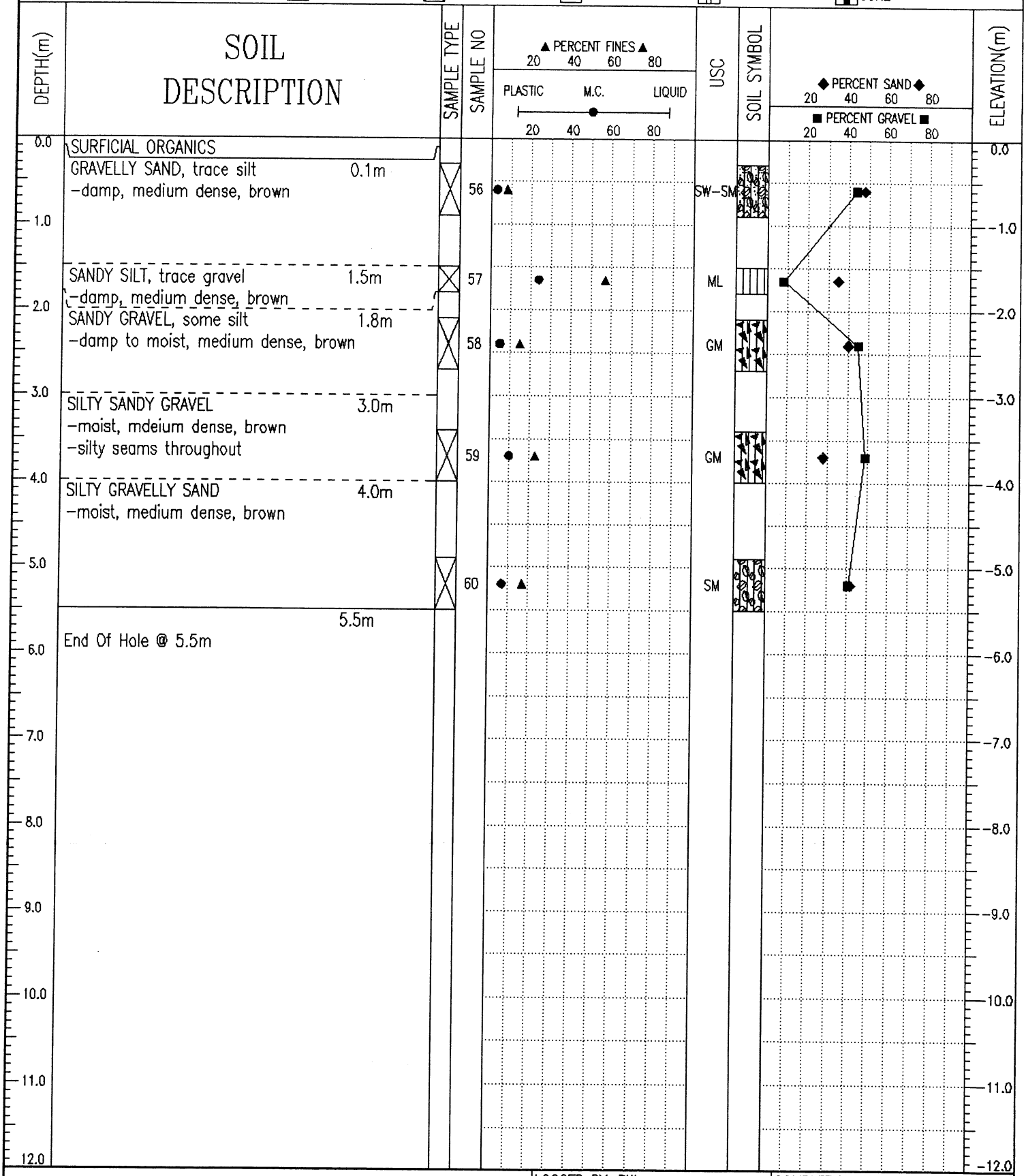
ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| | REVIEWED BY: | COMPLETE: 07/29/04 |
| | Fig. No: 12 | Page 1 of 1 |

05/02/09 11:55AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30166 |
| Donjek Services Ltd. | UTM ZONE: – N6777139 E631583 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.5 m |
| | REVIEWED BY: | COMPLETE: 07/28/04 |
| | Fig. No: 11 | Page 1 of 1 |

05/02/09 11:56AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30167 |
| Donjek Services Ltd. | UTM ZONE: - N6777298 E631589 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SURFICAL ORGANICS | | | | |
| | SILTY SAND, some gravel 0.05m<br>-damp, loose, brown<br>-some organics noted | | | | |
| 1.0 | SANDY GRAVEL, trace silt 0.5m<br>-damp, medium dense, brown | ⊠ | 51 | GW-GM | |
| | SANDY SILTY GRAVEL 1.5m<br>-moist, medium dense, brown | ⊠ | 52 | GM | |
| 2.0 | SANDY GRAVEL, trace silt 2.3m<br>-damp, medium dense, brown | ⊠ | 53 | GP-GM | |
| 3.0 | | | | | |
| | SANDY GRAVEL/GRAVELLY SAND, some silt 3.4m<br>-damp to moist, medium dense, brown<br>-some oxidation noted | ⊠ | 54 | SM | |
| 4.0 | | | | | |
| 5.0 | | ⊠ | 55 | GM | |
| | 5.8m | | | | |
| 6.0 | End Of Hole @ 5.8m | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ (20 40 60 80)

PLASTIC M.C. LIQUID (20 40 60 80)

◆ PERCENT SAND ◆ (20 40 60 80)

■ PERCENT GRAVEL ■ (20 40 60 80)

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
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| LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| REVIEWED BY: | COMPLETE: 07/28/04 |
| Fig. No: 10 | Page 1 of 1 |

05/02/09 02:20PM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30168 |
| Donjek Services Ltd. | UTM ZONE: - N6777587 E631509 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | | 0.0 |
| | SILTY GRAVELLY SAND 0.2m<br>-damp, loose, brown | AUGER | 45 | SM | | |
| 1.0 | SANDY GRAVEL, trace silt 0.6m<br>-damp, medium dense, brown | AUGER | 46 | GP-GM | | -1.0 |
| 2.0 | SILTY SANDY GRAVEL 1.8m<br>-moist, medium dense, brown | AUGER | 47 | GM | | -2.0 |
| 3.0 | GRAVELLY SAND, trace to some silt 2.7m<br>-damp, medium dense, brown | | | | | -3.0 |
| 4.0 | | AUGER | 48 | SM | | -4.0 |
| 5.0 | | AUGER | 49 | SW-SM | | -5.0 |
| | SANDY GRAVELLY SILT 5.5m<br>-moist, firm, light brown w/ some black organics<br>-some gravel in sample #50 is from top of hole | AUGER | 50 | ML | | |
| 6.0 | 5.8m | | | | | -6.0 |
| 7.0 | End Of Hole @ 5.8m | | | | | -7.0 |
| 8.0 | | | | | | -8.0 |
| 9.0 | | | | | | -9.0 |
| 10.0 | | | | | | -10.0 |
| 11.0 | | | | | | -11.0 |
| 12.0 | | | | | | -12.0 |

PERCENT FINES: 20 40 60 80

PLASTIC M.C. LIQUID: 20 40 60 80

PERCENT SAND: 20 40 60 80

PERCENT GRAVEL: 20 40 60 80

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| REVIEWED BY: | COMPLETE: 07/28/04 |
| Fig. No: 9 | Page 1 of 1 |

05/02/09 11:56AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30169 |
| Donjek Services Ltd. | UTM ZONE: – N6777708 E631458 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | |
| | GRAVELLY SAND, trace to some silt 0.2m<br>-Frozen<br>-brown | ⊠ | 39 | SM | |
| 1.0 | | | | | |
| 2.0 | | ⊠ | 40 | SW-SM | |
| | | ⊠ | 41 | SM | |
| 3.0 | | | | | |
| 4.0 | | ⊠ | 42 | SW-SM | |
| | SANDY SILT, some gravel 4.0m<br>-Frozen<br>-brown/light brown, some black organics | ⊠ | 43 | ML | |
| 5.0 | GRAVELLY SILTY SAND 4.9m<br>-Frozen<br>-brown | ⊠ | 44 | SM | |
| | 5.8m | | | | |
| 6.0 | End Of Hole @ 5.8m | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| REVIEWED BY: | COMPLETE: 07/28/04 |
| Fig. No: 8 | Page 1 of 1 |

05/02/09 02:21PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30170 |
| Donjek Services Ltd. | UTM ZONE: - N6777845 E631414 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | | | | 0.0 |
| | GRAVELLY SAND, some silt 0.2m<br>-Frozen<br>-brown<br>-some oxidation on gravels noted | ⊠ | 34 | ● ▲ | SW-SM | | ■ ◆ | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | ⊠ | 35 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | | ⊠ | 36 | ● ▲ | SM | | ■ ◆ | -3.0 |
| 4.0 | | ⊠ | 37 | ● ▲ | SM | | ■ ◆ | -4.0 |
| 5.0 | | ⊠ | 38 | ● ▲ | SM | | ■ ◆ | -5.0 |
| 6.0 | 5.8m<br>End Of Hole @ 5.8m | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| REVIEWED BY: | COMPLETE: 07/28/04 |
| Fig. No: 7 | Page 1 of 1 |

05/02/09 11:56AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30171 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6777998 E631414 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | | | | 0.0 |
| | SILTY SAND, some gravel 0.2m<br>–Frozen<br>–medium dense, brown | ⊠ | 29 | ● ▲ | SM | | ■ ◆ | |
| 1.0 | | ⊠ | 30 | ● ▲ | SM | | ■ ◆ | -1.0 |
| | SILTY SAND 1.5m<br>–Frozen<br>–medium dense, brown<br>–some organic silts noted | ⊠ | 31 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | SANDY SILT, trace gravel 2.7m<br>–Frozen<br>–visible ice crystals to 10mm in clusters | ⊠ | 32 | ● ▲ | ML | | ■ ◆ | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| | SANDY SILT 4.3m<br>–Frozen<br>–no visible ice<br>–brown & grey<br>–some wood pieces noted | ⊠ | 33 | ● ▲ | ML | | ■ ◆ | |
| 6.0 | 5.8m<br>End Of Hole @ 5.8m | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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| LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
|---|---|
| REVIEWED BY: | COMPLETE: 07/28/04 |
| Fig. No: 6 | Page 1 of 1 |

05/02/09 11:57AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30172 |
| Donjek Services Ltd. | UTM ZONE: – N6778136 E631432 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | |
| | GRAVELLY SILTY SAND 0.2m<br>–moist to wet, loose, brown<br>–organics noted throughout | ⊠ | 23 | SM | |
| 1.0 | | | | | |
| | SANDY SILT, trace gravel 1.5m<br>–saturated, firm, brown | ⊠ | 24 | ML | |
| 2.0 | | ⊠ | 25 | ML | |
| 3.0 | SILTY SAND, trace gravel 3.0m<br>–saturated, medium dense, brown | ⊠ | 26 | SM | |
| 4.0 | | | | | |
| 5.0 | GRAVELLY SILTY SAND 4.9m<br>–saturated, dense, grey w/ blue hue | ⊠ | 27 | SM | |
| | SILT, some sand 5.5m<br>–moist, firm to stiff, grey w/ blue hue | ⊠ | 28 | ML | |
| 6.0 | 5.9m<br>End Of Hole @ 5.9m | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| REVIEWED BY: | COMPLETE: 07/28/04 |
| Fig. No: 5 | Page 1 of 1 |

05/02/09 11:57AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30173 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6778189 E631425 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | | | | | 0.0 |
| | SILT | 0.2m | ⊠ | 18 | ● ▲ | ML | | ■ ◆ | |
| | –saturated, soft, grey/brown | | | | | | | | |
| 1.0 | –moderate organics | | | | | | | | 1.0 |
| | SILT, some sand | 0.8m | ⊠ | 19 | ● ▲ | ML | | ■ ◆ | |
| | –Frozen, visible ice crystals to 3mm in clusters | | | | | | | | |
| 2.0 | –grey/brown with black organic silts | | | | | | | | 2.0 |
| | SANDY SILT | 1.8m | ⊠ | 20 | ● ▲ | ML | | ■ ◆ | |
| | –Frozen | | | | | | | | |
| | –medium dense, grey/brown | | | | | | | | |
| 3.0 | | | | | | | | | 3.0 |
| | SANDY SILT | 3.0m | | | | | | | |
| | –Frozen | | | | | | | | |
| | –medium dense, light brown | | | | | | | | |
| 4.0 | | | ⊠ | 21 | ● ▲ | ML | | ■ ◆ | 4.0 |
| | AS ABOVE | 4.6m | | | | | | | |
| 5.0 | –grey/brown | | ⊠ | 22 | ● ▲ | ML | | ■ ◆ | 5.0 |
| 6.0 | | 5.9m | | | | | | | 6.0 |
| | End Of Hole @ 5.9m | | | | | | | | |
| 7.0 | | | | | | | | | 7.0 |
| 8.0 | | | | | | | | | 8.0 |
| 9.0 | | | | | | | | | 9.0 |
| 10.0 | | | | | | | | | 10.0 |
| 11.0 | | | | | | | | | 11.0 |
| 12.0 | | | | | | | | | 12.0 |

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| LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
|---|---|
| REVIEWED BY: | COMPLETE: 07/28/04 |
| Fig. No: 4 | Page 1 of 1 |

05/02/09 11:57AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30174 |
| Donjek Services Ltd. | UTM ZONE: - N6778370 E631499 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SILT, trace sand<br>-damp, firm, non plastic, grey<br>-some oxidation<br>-some organics throughout | AUGER | 12 | ML | |
| 1.0 | ORGANIC SILTS 0.6m<br>-saturated, soft, black/dark brown | AUGER | 13 | ML | |
| 1.5 | SILTY GRAVELLY SAND<br>-saturated, medium dense, brown<br>-some silt in sample #14 could be contamination from top of hole | AUGER | 14 | SM | |
| 3.7 | SILTY SAND<br>-saturated, medium dense, grey | AUGER | 15 | SM | |
| 4.0 | SANDY SILT<br>-wet, firm, dark brown | AUGER | 16 | ML | |
| 4.6 | SANDY SILT<br>-wet, firm, grey<br>-odd interbedded gravels to 20mm dia.<br>-some organics noted | AUGER | 17 | ML | |
| 5.9 | End Of Hole @ 5.9m<br>-testhole 12m from interceptor ditch with standing water. | | | | |

▲ PERCENT FINES ▲ (20 40 60 80)

PLASTIC M.C. LIQUID (20 40 60 80)

◆ PERCENT SAND ◆ (20 40 60 80)

■ PERCENT GRAVEL ■ (20 40 60 80)

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| REVIEWED BY: | COMPLETE: 07/28/04 |
| Fig. No: 3 | Page 1 of 1 |

05/02/09 11:57AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30175 |
| Donjek Services Ltd. | UTM ZONE: - N6778568 E631598 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

# SOIL DESCRIPTION

**SANDY GRAVEL, trace silt**
-damp, loose, brown

**GRAVELLY SAND, trace silt** 2.0m
-saturated, medium dense, brown

**SILTY GRAVELLY SAND** 3.0m
-Frozen
-some decomposed organics noted between 3.0 & 4.6m (wood pieces)

5.9m
End of Hole @ 5.9m

| SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|
| 7 | GP-GM | |
| 8 | SW-SM | |
| 9 | SM | |
| 10 | SM | |
| 11 | SM | |

▲ PERCENT FINES ▲ 20 40 60 80
PLASTIC M.C. LIQUID 20 40 60 80
◆ PERCENT SAND ◆ 20 40 60 80
■ PERCENT GRAVEL ■ 20 40 60 80

DEPTH(m): 0.0, 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0
ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| REVIEWED BY: | COMPLETE: 07/28/04 |
| Fig. No: 2 | Page 1 of 1 |

05/02/09 11:57AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30176 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6778670 E631642 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SILTY SANDY GRAVEL<br>–damp to moist, loose, brown | ⊠ | 1 | GM | |
| 0.6m | ORGANIC SILTS/SANDS<br>–damp, soft, dark brown | ⊠ | 2 | SM | |
| 1.5m | GRAVELLY SAND, trace silt<br>–moist to wet, medium dense, brown | ⊠ | 3 | SW–SM | |
| 2.4m | GRAVELLY SILTY SAND<br>–wet, medium dense, brown<br>–some sample contamination from above | ⊠ | 4 | SM | |
| 3.4m | GRAVELLY SILTY SAND<br>–Frozen<br>–medium dense, brown | ⊠ | 5 | SM | |
| | | ⊠ | 6 | SM | |
| 5.8m | End Of Hole @ 5.8m<br>–testhole within existing road shoulder | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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| LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
|---|---|
| REVIEWED BY: | COMPLETE: 07/28/04 |
| Fig. No: 1 | Page 1 of 1 |

05/02/09 11:57AM (YTG_HWYS)

Km 1691.7 to 1717.3 Alaska Highway #1

August 2004

J. R. Paine & Associates

Rock Drill EseBase Logs
(Reverse Circulation Air Rotary)

| | |
|---|---|
| Testholes | 30084 R to 30093 R |
| | 30096 R to 30097 R |
| | 30100 R to 30107 R |
| | 30111 R to 30118 R |
| | 30121 R to 30122 R |
| | 30126 R to 30127 R |
| | 30129 R |
| | 30131 R to 30136 R |

* NOTE: Consultant not required to provide EseBase Logs for 30149R to 30151R & 30153R to 30159R.
Section constructed summer 2005.

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30084R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6769273 E635167 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ☰ BULK ▯ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30084<br>-refusal @ 8.2m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | R1 | | | | | -2.0 |
| 3.0 | | | R2 | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | R3 | | | | | -5.0 |
| 6.0 | | | R4 | | | | | -6.0 |
| 7.0 | ROCK 6.9m<br>-dense, light grey/biege<br>-mostly powder<br>-minimal chips | | R5 | | ROCK | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | R6 | | ROCK | | | -9.0 |
| 10.0 | 9.9m<br>End Of Hole @ 9.9m | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 9.9 m |
| REVIEWED BY: | COMPLETE: 09/22/04 |
| Fig. No: 99 | Page 1 of 1 |

05/02/10 07:24AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30085R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6769366 E635154 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30085<br>-refusal @ 5.5m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | R7 | ● | | | | -3.0 |
| 4.0 | ROCK 3.8m<br>-dense, grey<br>-rock chips to 20mm in size | | R8 | | ROCK | | | -4.0 |
| 5.0 | AS ABOVE 5.2m<br>-rock chips to 15mm in size | | R9 | | ROCK | | | -5.0 |
| 6.0 | AS ABOVE 6.1m<br>-rock chips to 5mm in size | | R10 | ● | ROCK | | | -6.0 |
| 7.0 | 7.0m<br>End Of Hole @ 7.0m | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 7 m |
| REVIEWED BY: | COMPLETE: 09/22/04 |
| Fig. No: 100 | Page 1 of 1 |

05/02/10 07:25AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30086R |
| Midnight Sun Drilling Ltd. | UTM ZONE: – N6769428 E635135 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30086<br>–refusal @ 11.0m | | | | | | | 0.0 |
| 1.0 | | | R11 | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | R12 | | | | | -4.0 |
| 5.0 | | | R13 | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | R14 | | | | | -7.0 |
| 8.0 | SANDY SILT 7.6m<br>–powder<br>–some rock chips and some rounded stone<br>–dry, light beige | | R15 | | | | | -8.0 |
| 9.0 | | | R16 | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | R17 | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 15.5 m |
| REVIEWED BY: | COMPLETE: 09/23/04 |
| Fig. No: 101 | Page 1 of 2 |

05/02/10 07:25AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30086R |
| Midnight Sun Drilling Ltd. | UTM ZONE: – N6769428 E635135 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | | | | | | | 12.0 |
| | ROCK 12.5m | | R18 | | ROCK | | | |
| 13.0 | | | | | | | | 13.0 |
| 14.0 | | | | | | | | 14.0 |
| 15.0 | | | R19 | | ROCK | | | 15.0 |
| | 15.5m End Of Hole @ 15.5m | | | | | | | |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

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Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 15.5 m |
| REVIEWED BY: | COMPLETE: 09/23/04 |
| Fig. No: 101 | Page 2 of 2 |

05/02/10 07:26AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30087R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6769474 E635128 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30087<br>-refusal @ 6.4m & 6.2m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | R20 | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | R21 | | | | | -5.0 |
| 6.0 | GRAVELLY SAND, trace silt 6.1m<br>-damp, brown<br>-rock chips noted | | R22 | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | R23 | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | ROCK 9.8m<br>-dry, grey<br>-mostly powder<br>-some rock chips | | R24 | | ROCK | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY:<br>Fig. No: 102 | COMPLETION DEPTH: 12.8 m<br>COMPLETE: 09/23/04<br>Page 1 of 2 |

05/02/10 07:25AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30087R |
| Midnight Sun Drilling Ltd. | UTM ZONE: – N6769474 E635128 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ☒ S.P.T. ☒ AUGER ☰ BULK ▯▯ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | | R25 ● | | ROCK | | | 12.0 |
| | 12.8m | | | | | | | |
| 13.0 | End Of Hole @ 12.8m | | | | | | | 13.0 |
| | –note: when adding 7.3m to 10.4m stem, H20/mud came out of cone. Possibly water seepage near 7.4m | | | | | | | |
| 14.0 | | | | | | | | 14.0 |
| 15.0 | | | | | | | | 15.0 |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 12.8 m |
| | REVIEWED BY: | COMPLETE: 09/23/04 |
| | Fig. No: 102 | Page 2 of 2 |

05/02/10 07:26AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30088R |
| Midnight Sun Drilling | UTM ZONE: – N6769513 E635110 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30088<br>–refusal at 5.0m & 5.2m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | R26 | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| | | | R27 | | | | | |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | ROCK 6.7m<br>–dry, grey<br>–rock chips noted | | R28 | | ROCK | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | R29 | | ROCK | | | -9.0 |
| 10.0 | 9.8m<br>End Of Hole @ 9.8m | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 9.8 m |
| REVIEWED BY: | COMPLETE: 09/23/04 |
| Fig. No: 103 | Page 1 of 1 |

05/02/10 07:27AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30089R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6769602 E635080 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotaty Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30089 | | | | | | | 0.0 |
| | ROCK 0.5m<br>-dry, grey | | | | | | | |
| 1.0 | | | | | | | | -1.0 |
| | | | R30 | | ROCK | | | |
| 2.0 | | | | | | | | -2.0 |
| | | | R31 | | ROCK | | | |
| 3.0 | | | | | | | | -3.0 |
| | 3.4m<br>End Of Hole @ 3.4m<br>-continue drilling to 4.6m to allow casing to be pulled | | | | | | | |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3.4 m |
| | REVIEWED BY: | COMPLETE: 09/24/04 |
| | Fig. No: 104 | Page 1 of 1 |

05/02/10 07:27AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30090R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6769661 E635065 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotaty Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30090<br>-refusal @ 1.5m & 0.9m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 1.5m | ROCK<br>-dry, grey | | | | | | | |
| 2.0 | | | R32 | | ROCK | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| | | | R33 | | ROCK | | | |
| 4.0 | | | | | | | | -4.0 |
| 4.3m | End Of Hole @ 4.3m<br>-no casing used | | | | | | | |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.3 m |
| | REVIEWED BY: | COMPLETE: 09/24/04 |
| | Fig. No: 105 | Page 1 of 1 |

05/02/10 07:28AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30091R |
| Midnight Sun Drilling Ltd. | UTM ZONE: – N6769700 E635045 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30091<br>–refusal @ 1.2m & 1.4m | | | | | | | 0.0 |
| 1.0 | ROCK 1.0m<br>–dry, grey | | R34 | | ROCK | | | 1.0 |
| 2.0 | | | | | | | | 2.0 |
| 3.0 | | | R35 | | ROCK | | | 3.0 |
| 4.0 | 4.0m<br>End Of Hole @ 4.0m<br>–no casing used | | | | | | | 4.0 |
| 5.0 | | | | | | | | 5.0 |
| 6.0 | | | | | | | | 6.0 |
| 7.0 | | | | | | | | 7.0 |
| 8.0 | | | | | | | | 8.0 |
| 9.0 | | | | | | | | 9.0 |
| 10.0 | | | | | | | | 10.0 |
| 11.0 | | | | | | | | 11.0 |
| 12.0 | | | | | | | | 12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4 m |
| REVIEWED BY: | COMPLETE: 09/24/04 |
| Fig. No: 106 | Page 1 of 1 |

05/02/10 07:28AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30092R |
|---|---|---|
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6769762 E634998 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG<br>-refusal @ 4.7m & 5.0m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | ROCK 4.9m<br>-dry, grey | | R36 | | ROCK | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | R37 | | ROCK | | | -7.0 |
| 8.0 | 7.9m<br>End Of Hole @ 7.9m | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 7.9 m |
|---|---|
| REVIEWED BY: | COMPLETE: 09/24/04 |
| Fig. No: 107 | Page 1 of 1 |

05/02/10 07:29AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30093R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6769812 E634965 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES / PLASTIC M.C. LIQUID | USC | SOIL SYMBOL | PERCENT SAND / PERCENT GRAVEL | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30093<br>-refusal @ 7.0m, 2.1m & 2.4m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | SANDY SILT/SILTY SAND, some gravel<br>-moist, brown | | R38 | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | POSSIBLY ROCK 7.6m<br>-some rock chips noted<br>-some sand<br>-minimal powder or dust | | R39 | | | | | -8.0 |
| 9.0 | ROCK 8.5m<br>-dry, grey | | R40 | | ROCK | | | -9.0 |
| 10.0 | | | R41 | | ROCK | | | -10.0 |
| 11.0 | 10.7m<br>End Of Hole @ 10.7m<br>-no casing used | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 10.7 m |
| REVIEWED BY: | COMPLETE: 09/24/04 |
| Fig. No: 108 | Page 1 of 1 |

05/02/10 07:29AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30096R |
|---|---|---|
| Midnight Sun Drilling ltd. | UTM ZONE: - N6769986 E634847 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES (20 40 60 80) / PLASTIC M.C. LIQUID (20 40 60 80) | USC | SOIL SYMBOL | PERCENT SAND (20 40 60 80) / PERCENT GRAVEL (20 40 60 80) | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | GRAVELLY SILTY SAND<br>-damp to moist, brown | | R44 | | | | | 12.0 |
| 13.0 | | | | | | | | 13.0 |
| 14.0 | POSSIBLY ROCK or GRAVEL/COBBLE LAYER 13.7m<br>-moist, brown<br>-bit freezing/plugging up (not pounding)<br>-some rounded stone<br>-minimal powder from cone | | R45 | | | | | 14.0 |
| 15.0 | 14.3m<br>End Of Hole 14.3m | | | | | | | 15.0 |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 14.3 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 09/24/04 |
| | Fig. No: 109 | Page 2 of 2 |

05/02/10 07:30AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30097R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6770133 E634803 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30097<br>-refusal @ 3.4m & 3.2m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | GRAVELLY SANDY SILT to GRAVELLY SILTY SAND<br>-wet, brown<br>-some rock chips | | R46 | ● | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | R47 | ● | | | | -9.0 |
| 10.0 | GRAVELLY SAND, some silt to silty 9.8m<br>-damp to moist, brown | | R48 | ● | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW
REVIEWED BY:
Fig. No: 110

COMPLETION DEPTH: 15.2 m
COMPLETE: 09/24/04



05/02/10 07:30AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30097R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6770133 E634803 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⧄ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | | | | | | | 12.0 |
| | SANDY GRAVEL, trace to some silt 12.5m<br>-damp, brown | | R49 ◆ | | | | | |
| 13.0 | | | | | | | | 13.0 |
| 14.0 | | | | | | | | 14.0 |
| 15.0 | | | R50 ◆ | | | | | 15.0 |
| | 15.2m<br>End Of Hole @ 15.2m<br>-bit was plugged from 0.0 to 6.7m depth<br>-no indication of rock | | | | | | | |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

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| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 15.2 m |
| | REVIEWED BY: | COMPLETE: 09/24/04 |
| | Fig. No: 110 | Page 2 of 2 |

05/02/10 07:31AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30100R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6770540 E634627 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30100<br>-refusal @ 10.1m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 16.2 m |
| REVIEWED BY: | COMPLETE: 09/25/04 |
| Fig. No: 111 | Page 1 of 2 |

05/02/10 07:31AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30100R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6770540 E634627 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ☰ BULK ▯ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | ROCK 12.2m<br>-soft, damp, brown w/ purple hue | | | | | | | 12.0 |
| 13.0 | | | | | | | | 13.0 |
| 14.0 | | | R51 ● | | ROCK | | | 14.0 |
| 15.0 | ROCK 14.9m<br>-dry, grey w/ purple hue | | | | | | | 15.0 |
| 16.0 | | | R52 ● | | ROCK | | | 16.0 |
| | 16.2m<br>End Of Hole @ 16.2m | | | | | | | |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 16.2 m |
| | REVIEWED BY: | COMPLETE: 09/25/04 |
| | Fig. No: 111 | Page 2 of 2 |

05/02/10 07:32AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30101R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6770659 E634653 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30101<br>-refusal @ 3.0m & 3.2m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| | ROCK 2.4m<br>-dry, grey | | | | | | | |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | R53 ● | | ROCK | | | -4.0 |
| | 4.6m | | | | | | | |
| 5.0 | End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| REVIEWED BY: | COMPLETE: 09/25/04 |
| Fig. No: 112 | Page 1 of 1 |

05/02/10 07:32AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30102R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6770744 E634667 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30102<br>-refusal @ 3.0m & 1.0m | | | | | | | 0.0 |
| 1.0 | ROCK 1.0m<br>-dry, grey | | | | | | | -1.0 |
| 2.0 | | | R54 ● | | ROCK | | | -2.0 |
| 3.0 | | | R55 ● | | ROCK | | | -3.0 |
| 4.0 | 4.3m<br>End Of Hole @ 4.3m | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.3 m |
| | REVIEWED BY: | COMPLETE: 09/25/04 |
| | Fig. No: 113 | Page 1 of 1 |

05/02/10 07:32AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30103R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6770854 E634648 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30103<br>-refusal @ 4.3m & 2.4m | | | | | | | 0.0 |
| 3.4m | ROCK<br>-dry, grey | | R56 | | ROCK | | | -4.0 |
| | | | R57 | | ROCK | | | -5.0 |
| 7.3m | End of Hole @ 7.3m | | | | | | | -8.0 |

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| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 7.3 m |
| | REVIEWED BY: | COMPLETE: 09/25/04 |
| | Fig. No: 114 | Page 1 of 1 |

05/02/10 07:33AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30104R |
| Midnight Sun Drilling Ltd. | UTM ZONE: – N6770967 E634604 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ☰ BULK ▯ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30104<br>–refusal @ 3.7m & 4.9m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | ROCK 4.0m<br>–dry, grey | | | | | | | -4.0 |
| 5.0 | | | R58 | | ROCK | | | -5.0 |
| 6.0 | | | R59 | | ROCK | | | -6.0 |
| 7.0 | 7.0m<br>End Of Hole @ 7.0m | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 7 m |
| | REVIEWED BY: | COMPLETE: 09/25/04 |
| | Fig. No: 115 | Page 1 of 1 |

05/02/10 07:33AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30105R |
| Midnight Sun Drilling Ltd. | UTM ZONE: – N6771014 E634672 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30105<br>–refusal @ 4.6m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | ROCK 4.9m<br>–dry, grey | | R64 | | ROCK | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | R65 | | ROCK | | | -7.0 |
| 8.0 | 7.6m<br>End Of Hole @ 7.6m | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 7.6 m |
| REVIEWED BY: | COMPLETE: 09/26/04 |
| Fig. No: 116 | Page 1 of 1 |

05/02/10 07:34AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30106R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6771070 E634575 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30106<br>-refusal @ 0.9m both attempts | | | | | | | 0.0 |
| 1.0 | ROCK (possibly fractured) 1.2m<br>-dry, grey | | | | | | | -1.0 |
| 2.0 | ROCK 1.8m<br>-dry, grey | | R60 | | ROCK | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | R61 | | ROCK | | | -4.0 |
| 5.0 | 4.6m<br>End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| REVIEWED BY: | COMPLETE: 09/26/04 |
| Fig. No: 117 | Page 1 of 1 |

05/02/10 07:34AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30107R |
| Midnight Sun Drilling Ltd. | UTM ZONE: – N6771151 E634529 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30107<br>–refusal @ 1.5m both attempts | | | | | | | 0.0 |
| 1.0 | ROCK 1.2m<br>–dry, grey | | | | | | | -1.0 |
| 2.0 | | | R62 | | ROCK | | | -2.0 |
| 3.0 | | | R63 | | ROCK | | | -3.0 |
| 4.0 | 4.3m<br>End Of Hole @ 4.3m | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.3 m |
| | REVIEWED BY: | COMPLETE: 09/26/04 |
| | Fig. No: 132 | Page 1 of 1 |

05/02/10 07:34AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30111R |
| Midnight Sun Drilling Ltd. | UTM ZONE: – N6771629 E634480 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30111<br>–refusal @ 1.8m both attempts | | | | | | | 0.0 |
| 1.0 | ROCK 0.9m<br>–dry, grey | | | | | | | -1.0 |
| 2.0 | | | R66 ◆ | | ROCK | | | -2.0 |
| 3.0 | | | R67 ◆ | | ROCK | | | -3.0 |
| 4.0 | 4.0m<br>End Of Hole @ 4.0m | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 4 m |
| REVIEWED BY: | COMPLETE: 09/26/04 |
| Fig. No: 118 | Page 1 of 1 |

05/02/10 07:35AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30112R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6771772 E634470 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30112<br>-refusal @ 3.4m both attempts | | | | | | 0.0 |
| 3.0 | ROCK (possibly fractured) 3.0m<br>-dry, grey<br>-some sand infill | | | | | | -3.0 |
| 4.0 | ROCK 4.0m<br>-dry, grey | | R68 | | ROCK | | -4.0 |
| 4.6 | End Of Hole @ 4.6m | | | | | | -4.6 |
| 5.0 | | | | | | | -5.0 |
| 6.0 | | | | | | | -6.0 |
| 7.0 | | | | | | | -7.0 |
| 8.0 | | | | | | | -8.0 |
| 9.0 | | | | | | | -9.0 |
| 10.0 | | | | | | | -10.0 |
| 11.0 | | | | | | | -11.0 |
| 12.0 | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| REVIEWED BY: | COMPLETE: 09/26/04 |
| Fig. No: 119 | Page 1 of 1 |

05/02/10 07:36AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30113R |
| Midnight Sun Drilling Ltd. | UTM ZONE: – N6771880 E634441 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30113 --refusal @ 2.4m & 2.1m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | ROCK (possibly fractured) 1.8m | | | | | | | -2.0 |
| | ROCK 2.4m –intact | | | | | | | |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | R69 ● | | ROCK | | | -4.0 |
| | 4.6m | | | | | | | |
| 5.0 | End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| | REVIEWED BY: | COMPLETE: 09/26/04 |
| | Fig. No: 120 | Page 1 of 1 |

05/02/10 07:36AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30114R |
|---|---|---|
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6772023 E634386 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30114<br>-refusal @ 1.8m & 2.9m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | ROCK (possibly fractured) 3.0m<br>-medium dense<br>-some sand infill | | | | | | | -3.0 |
| 4.0 | ROCK 4.0m<br>-intact | | R70 | | ROCK | | | -4.0 |
| 5.0 | 4.6m<br>End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
|---|---|
| REVIEWED BY: | COMPLETE: 09/27/04 |
| Fig. No: 121 | Page 1 of 1 |

05/02/10 07:36AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30115R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6772108 E634337 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30115<br>-refusal @ 3.7m & 4.3m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | ROCK or COBBLES/BOULDERS 1.8m<br>-light brown/grey | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | ROCK 3.4m<br>-some powder (not fine)<br>-some sand in sample<br>-water on stem after withdrawl<br>-medium dense | | R73 | | ROCK | | | -4.0 |
| 5.0 | 4.6m<br>End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| | REVIEWED BY: | COMPLETE: 09/27/04 |
| | Fig. No: 122 | Page 1 of 1 |

05/02/10 07:37AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30116R |
| Midnight Sun Drilling Ltd. | UTM ZONE: – N6772107 E634309 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30116<br>–refusal @ 5.2m | | | | | | 0.0 |
| 1.0 | | | | | | | -1.0 |
| 2.0 | ROCK (possibly fractured) 1.5m<br>–dry, grey<br>–medium dense<br>–some sand in powder | | | | | | -2.0 |
| 3.0 | ROCK 3.0m<br>–dry, grey | | | | | | -3.0 |
| 4.0 | | | R71 | | ROCK | | -4.0 |
| 5.0 | 4.6m<br>End Of Hole @ 4.6m | | | | | | -5.0 |
| 6.0 | | | | | | | -6.0 |
| 7.0 | | | | | | | -7.0 |
| 8.0 | | | | | | | -8.0 |
| 9.0 | | | | | | | -9.0 |
| 10.0 | | | | | | | -10.0 |
| 11.0 | | | | | | | -11.0 |
| 12.0 | | | | | | | -12.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY:<br>Fig. No: 123 | COMPLETION DEPTH: 4.6 m<br>COMPLETE: 09/27/04<br>Page 1 of 1 |

05/02/10 07:37AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30117R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6772253 E634224 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30117<br>-refusal 2.1m @ 3.7m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 3.4m | ROCK or GRAVEL STRATA<br>-dry, brown<br>-not much powder<br>-some round stone in sample | | | | | | | |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | R72 ● | | | | | -6.0 |
| 6.7m | End Of Hole @ 6.7m | | | | | | | |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 6.7 m |
| | REVIEWED BY: | COMPLETE: 09/27/04 |
| | Fig. No: 124 | Page 1 of 1 |

05/02/10 07:37AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30118R |
|---|---|---|
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6772274 E634188 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30118<br>-refusal @ 3.7m both attempts | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | ROCK 3.0m<br>-dry, grey<br>-very powdery<br>-significant rock chips | | | | | | | -3.0 |
| 4.0 | | | R74 | | ROCK | | | -4.0 |
| | 4.6m | | | | | | | |
| 5.0 | End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
|---|---|
| REVIEWED BY: | COMPLETE: 09/27/04 |
| Fig. No: 125 | Page 1 of 1 |

05/02/10 07:38AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30121R |
|---|---|---|
| Midnight Sun Drilling Ltd. | UTM ZONE: – N6772578 E633974 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30121<br>–refusal @ 3.2m & 3.0m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | ROCK 3.0m<br>–dry, grey<br>–some powder<br>–medium dense rock | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| | | | R75 | | ROCK | | | |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | R76 | | ROCK | | | -7.0 |
| | 7.6m | | | | | | | |
| 8.0 | End Of Hole @ 7.6m | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 7.6 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 09/27/04 |
| | Fig. No: 126 | Page 1 of 1 |

05/02/10 07:39AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30122R |
| Midnight Sun Drilling Ltd. | UTM ZONE: – N6772688 E633923 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▯ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30122<br>–refusal @ 5.2m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | R77 | ● | | | | -7.0 |
| 8.0 | 7.6m<br>End Of Hole @ 7.6m – No Rock Encountered | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 7.6 m |
| REVIEWED BY: | COMPLETE: 09/27/04 |
| Fig. No: 127 | Page 1 of 1 |

05/02/10 07:39AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30126R |
|---|---|---|
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6773197 E633699 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30126<br>-refusal @ 1.8m both attempts | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | ROCK 1.8m<br>-dry, grey<br>-medium dense to dense rock | | | | | | | -2.0 |
| 3.0 | | | R78 ● | | ROCK | | | -3.0 |
| 4.0 | | | R79 ● | | ROCK | | | -4.0 |
| 5.0 | 4.6m<br>End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
|---|---|
| REVIEWED BY: | COMPLETE: 09/28/04 |
| Fig. No: 128 | Page 1 of 1 |

05/02/10 07:40AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30127R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6773336 E633614 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30127<br>-refusal @ 4.6m & 4.4m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | SILTY SAND 3.7m<br>-dry to damp, brown/grey<br>-minimal chips in sample<br>-minimal powder, more fine sands<br>-drill advanced steadily<br>-not hard drilling | | | | | | | -4.0 |
| 5.0 | | | R80 | ● | SM | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | R81 | ● | SM | | | -7.0 |
| 8.0 | 7.6m<br>End Of Hole @ 7.6m - Cannot Determine Rock | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 7.6 m |
| REVIEWED BY: | COMPLETE: 09/28/04 |
| Fig. No: 129 | Page 1 of 1 |

05/02/10 07:41AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30129R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6773477 E633527 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30129<br>-refusal @ 3.7m & 4.0m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | SANDY GRAVEL (Cannot Determine Rock) 3.7m<br>-dry, brown/grey<br>-some rock chips<br>-minimal powder<br>-steady drilling | | | | | | | -4.0 |
| 5.0 | | | R82 ● | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | ROCK 7.0m<br>-dry, grey<br>-significant powder | | R83 ● | | ROCK | | | -7.0 |
| 8.0 | 7.6m<br>End Of Hole @ 7.6m | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 7.6 m |
| REVIEWED BY: | COMPLETE: 09/29/04 |
| Fig. No: 130 | Page 1 of 1 |

05/02/10 07:41AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30131R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6773655 E633418 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOGS 30131<br>-refusal @ 4.0m both attempts | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | ROCK 3.4m<br>-dry, grey<br>-significant powder<br>-minimal rock chips | | R84 | | ROCK | | | -4.0 |
| 5.0 | AS ABOVE 4.9m<br>-increase rock chips | | | | | | | -5.0 |
| 6.0 | | | R85 | | ROCK | | | -6.0 |
| | 6.1m<br>End Of Hole @ 6.1m | | | | | | | |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 6.1 m |
| REVIEWED BY: | COMPLETE: 09/29/04 |
| Fig. No: 131 | Page 1 of 1 |

05/02/10 07:42AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30132R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6773786 E633333 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30132<br>-refusal @ 0.9m & 4.0m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 3.4 | ROCK (possibly fractured)<br>-dry, grey w/ odd brown seam | | | | | | | |
| 4.0 | | | | | | | | -4.0 |
| 4.6 | ROCK<br>-dry, grey<br>-significant powder<br>-rock chips | | R86 | | ROCK | | | |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | R87 | | ROCK | | | -6.0 |
| 6.4 | End Of Hole @ 6.4m | | | | | | | |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 6.4 m |
| | REVIEWED BY: | COMPLETE: 09/28/04 |
| | Fig. No: 133 | Page 1 of 1 |

05/02/10 07:42AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30133R |
| Midnight Sun Drilling Ltd. | UTM ZONE: – N6773908 E633264 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▯ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30133<br>–refusal @ 2.7m & 2.6m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| | ROCK 2.4m<br>–dry, grey<br>–significant powder<br>–rock chips<br>–more intact w/ depth | | | | | | | |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | R88 | | ROCK | | | -4.0 |
| | 4.6m | | | | | | | |
| 5.0 | End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| | REVIEWED BY: | COMPLETE: 09/28/04 |
| | Fig. No: 134 | Page 1 of 1 |

05/02/10 07:43AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30134R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6774009 E633155 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30134<br>-refusal @ 2.7m & 1.5m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | ROCK 1.2m<br>-dry, grey<br>-significant powder<br>-rock chips | | | | | | | |
| 2.0 | | | R89 | | ROCK | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | R90 | | ROCK | | | -4.0 |
| | 4.0m<br>End Of Hole @ 4.0m | | | | | | | |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 4 m |
| REVIEWED BY: | COMPLETE: 09/28/04 |
| Fig. No: 135 | Page 1 of 1 |

05/02/10 09:19AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30135R |
| Midnight Sun Drilling Ltd. | UTM ZONE: – N6674140 E633064 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30135<br>–refusal @ 1.5m & 3.0m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | ROCK 2.4m<br>–possibly fractured<br>–some brown sand infill<br>–some powder | | | | | | | -3.0 |
| 4.0 | ROCK 3.7m<br>–dry, grey<br>–significant powder<br>–rock chips<br>–intact | | R91 | | ROCK | | | -4.0 |
| 5.0 | 4.6m<br>End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| REVIEWED BY: | COMPLETE: 09/28/04 |
| Fig. No: 136 | Page 1 of 1 |

05/02/10 07:43AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30136R |
| Midnight Sun Drilling Ltd. | UTM ZONE: – N6774199 E633004 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30136<br>–refusal @ 2.1m both attempts | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| | ROCK 2.4m<br>–dry, grey<br>–significant powder<br>–rock chips<br>–more intact w/ depth | | | | | | | |
| 3.0 | | | R92 | | ROCK | | | -3.0 |
| 4.0 | | | R93 | | ROCK | | | -4.0 |
| | 4.6m<br>End Of Hole @ 4.6m | | | | | | | |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY:<br>Fig. No: 137 | COMPLETION DEPTH: 4.6 m<br>COMPLETE: 09/28/04<br>Page 1 of 1 |

05/02/10 07:44AM (YTG_HWYS)

# Km 1706+200 LHS Alaska Highway
# (Soldier's Summit Slide)

August 2004

J. R. Paine & Associates

Test Pit EseBase Logs
(Hitachi 450EX Excavator)

Test Pits 30072 to 30081

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30072 |
| Glacier Drilling | UTM ZONE: – N6768366 E634882 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | Cobbles & Boulders, some silt, some sand<br>–boulders to 1.0m dia. encountered<br>–fracturing rock<br>–boulders to 3.0m dia. adjacent to testpit on surface | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 5.3m | End Of Hole @ 5.3m | | | | | | | |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.3 m |
| REVIEWED BY: | COMPLETE: 07/26/04 |
| Fig. No: 148 | Page 1 of 1 |

05/02/10 10:25AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30073 |
| Glacier Drilling | UTM ZONE: - N6768367 E635014 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | BOULDERS/COBBLES<br>-some surficial organics | | | | | | | 0.0 |
| | BOULDERS/COBBLES, some sand & silt 0.3m<br>-boulders to 0.5m in dia.<br>-boulders 30 to 40% by Vol. | | | | | | | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| | 5.3m<br>End Of Hole @ 5.3m | | | | | | | |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: MF | COMPLETION DEPTH: 5.3 m
REVIEWED BY: | COMPLETE: 07/29/04
Fig. No: 149 | Page 1 of 1

05/02/10 10:25AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30074 |
| Glacier Drilling | UTM ZONE: - N6768449 E634943 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | BOULDERS/COBBLES<br>-some surficial organics | | | | | | | 0.0 |
| | BOULDERS/COBBLES, some silt 0.3m<br>-boulders encountered to 1.0m in dia.<br>-boulders and cobbles 40 to 50% by Vol. | | | | | | | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| | 5.2m<br>End Of Hole @ 5.2m | | | | | | | |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: MF
REVIEWED BY:
Fig. No: 150

COMPLETION DEPTH: 5.2 m
COMPLETE: 07/29/04


05/02/10 11:25AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30075 |
|---|---|---|
| Glacier Drilling | UTM ZONE: - N6768519 E634961 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | BOULDERS/COBBLES<br>-some surficial organics | | | | | | | 0.0 |
| | BOULDERS/COBBLES, trace silt & sand 0.3m<br>-boulders encountered to 1.0m in dia.<br>-boulders and cobbles 40 to 50% by Vol. | | | | | | | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| | 5.4m<br>End Of Hole @ 5.4m | | | | | | | |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: MF
REVIEWED BY:
Fig. No: 151

COMPLETION DEPTH: 5.4 m
COMPLETE: 07/29/04


05/02/10 10:25AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30076 |
| Glacier Drilling | UTM ZONE: - N6768523 E635054 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | BOULDERS/COBBLES<br>-some surficial organics | | | | | | | 0.0 |
| | BOULDERS/COBBLES, some silt & sand 0.3m<br>-boulders encountered to 1.0m in dia.<br>-boulders and cobbles 30 to 40% by Vol. | | | | | | | |
| 1.0 | | | | | | | | -1.0 |
| | SANDY GRAVEL, trace to some silt 1.5m<br>-damp, dense, brown/grey<br>-boulders 20 to 30% by Vol. | | | | | | | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| | | | S1 | ▲ | GP-GM | | ◆ ■ | |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| | 5.4m<br>End Of Hole @ 5.4m | | | | | | | |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: MF | COMPLETION DEPTH: 5.4 m |
| REVIEWED BY: | COMPLETE: 07/29/04 |
| Fig. No: 152 | Page 1 of 1 |

05/02/10 10:26AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30077 |
| Glacier Drilling | UTM ZONE: - N6768591 E634972 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | BOULDERS/COBBLES<br>-some surficial organics<br>BOULDERS/COBBLES, some silt & sand 0.2m<br>-boulders encountered to 1.0m in dia.<br>-boulders and cobbles 30 to 40% by Vol. | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | 5.1m<br>End Of Hole @ 5.1m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: MF | COMPLETION DEPTH: 5.1 m |
| REVIEWED BY: | COMPLETE: 07/31/04 |
| Fig. No: 153 | Page 1 of 1 |

05/02/10 10:25AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30078 |
| Glacier Drilling | UTM ZONE: – N6768663 E634997 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | BOULDERS/COBBLES<br>-some surficial organics | | | | | | | 0.0 |
| | SILTY GRAVEL, some sand 0.3m<br>-boulders encountered to 1.5m in dia.<br>-boulders and cobbles 50% by Vol. | | | | | | | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | 5.0m<br>End Of Hole @ 5.0m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: MF | COMPLETION DEPTH: 5 m |
| REVIEWED BY: | COMPLETE: 07/31/04 |
| Fig. No: 154 | Page 1 of 1 |

05/02/10 10:32AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30079 |
| Glacier Drilling | UTM ZONE: – N6768745 E635028 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | BOULDERS/COBBLES<br>–surficial organics | | | | | | | 0.0 |
| | SILTY SAND GRAVEL 0.3m<br>–boulders encountered to 1.5m in dia.<br>–boulders and cobbles 20% by Vol.<br>–sample #S2 lost in transport | | | | | | | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| | | | S2 | | | | | |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| | 5.1m<br>End Of Hole 5.1m | | | | | | | |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: MF | COMPLETION DEPTH: 5.1 m |
| REVIEWED BY: | COMPLETE: 07/31/04 |
| Fig. No: 155 | Page 1 of 1 |

05/02/10 10:26AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30080 |
| Glacier Drilling | UTM ZONE: - N6768798 E635046 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | BOULDERS/COBBLES, some sand, trace silt<br>-boulders & cobbles 60 to 70% by Vol. | | | | | | | 0.0 |
| 1.0 | SANDY SILTY GRAVEL 0.3m<br>-boulders encountered to 0.5m in dia.<br>-boulders and cobbles 30 to 40% by Vol. | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | 5.0m<br>End Of Hole 5.0m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: MF | COMPLETION DEPTH: 5 m |
| REVIEWED BY: | COMPLETE: 07/31/04 |
| Fig. No: 156 | Page 1 of 1 |

05/02/10 10:26AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30081 |
| Glacier Drilling | UTM ZONE: – N6768752 E635160 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | BOULDERS/COBBLES<br>-surficial organics | | | | | | | 0.0 |
| | BOULDERS/COBBLES, some silt & sand 0.3m<br>-boulders encountered to 1.0m in dia.<br>-boulders and cobbles 60 to 70% by Vol. | | | | | | | |
| 1.0 | | | | | | | | -1.0 |
| | SANDY SILTY GRAVEL 1.5m<br>-boulders encounterd to 1.0m in dia.<br>-boulders and cobbles 20 to 30% by Vol. | | | | | | | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| | | | S3 ●▲ | | GP-GM | | ◆ ■ | |
| 5.0 | 5.0m | | | | | | | -5.0 |
| | End Of Hole 5.0m | | | | | | | |
| 6.0 | | | | | | | | -6.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: MF | COMPLETION DEPTH: 5 m |
| | REVIEWED BY: | COMPLETE: 07/31/04 |
| | Fig. No: 157 | Page 1 of 1 |

05/02/10 10:26AM (YTG_HWYS)

# Km 1699+700 LHS Alaska Highway

August 2004

J. R. Paine & Associates

Test Pit EseBase Logs
(Car 318C Excavator)

Test Pits 30177 to 30179

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30177 |
| Donjek Services Ltd. | UTM ZONE: - N6764614 E636646 | PROJECT NO: 8002-318 |
| CAT 318C Excavator | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace to some silt<br>-damp, medium dense, brown<br>-cobbles & boulders 20-40% by Vol.<br>-boulders to .75m dia.<br>-organics noted throughout<br>-mostly sound granite rock | | | | | | | 0.0 |
| 1.0 | | | TP1 | ● ▲ | GM | | ◆ ■ | -1.0 |
| 2.0 | | | TP2 | ● ▲ | GM | | ◆ ■ | -2.0 |
| 3.0 | | | TP3 | ● ▲ | GM | | ◆ ■ | -3.0 |
| 4.0 | | | TP4 | ● ▲ | GP-GM | | ◆ ■ | -4.0 |
| | 4.8m | | | | | | | |
| 5.0 | End Of Hole @ 4.8m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: _<br>Fig. No: 230 | COMPLETION DEPTH: 4.8 m<br>COMPLETE: 08/10/04<br>Page 1 of 1 |

05/02/24 08:42AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30178 |
| Donjek Services Ltd. | UTM ZONE: - N6764616 E636697 | PROJECT NO: 8002-318 |
| CAT 318C Excavator | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace to some silt<br>-damp, medium dense, brown<br>-cobbles & bouders 10-30% by Vol.<br>-boulders to 0.6m dia.<br>-organics noted throughout<br>-mostly sound granite rock | | | | | | | 0.0 |
| 1.0 | | | TP5 | | GW | | | -1.0 |
| 2.0 | | | TP6 | | GP-GM | | | -2.0 |
| | AS ABOVE 2.8m<br>-damp to moist | | | | | | | |
| 3.0 | | | TP7 | | GM | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| | SANDY GRAVEL, some silt 4.3m<br>-damp to moist, medium dense, brown<br>-slight increase in fine sands & silts | | TP8 | | GM | | | |
| | 4.8m | | | | | | | |
| 5.0 | End Of Hole @ 4.8m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4.8 m |
| REVIEWED BY: | COMPLETE: 08/10/04 |
| Fig. No: 231 | Page 1 of 1 |

05/02/24 08:42AM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30179 |
| Donjek Services Ltd. | UTM ZONE: – N6764619 E636749 | PROJECT NO: 8002-318 |
| CAT 318C Excavator | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲PERCENT FINES▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆PERCENT SAND◆ 20 40 60 80 / ■PERCENT GRAVEL■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace to some silt<br>–damp, medium dense, brown<br>–cobbles & boulders 10–30% by Vol.<br>–boulders to 0.6m dia.<br>–organics noted throughout<br>–mostly sound granite rock | | TP9 | ● ▲ | GP-GM | | ◆ ■ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | TP10 | ● ▲ | GM | | ◆ ■ | -2.0 |
| 3.0 | | | TP11 | ● ▲ | GM | | ◆ ■ | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | 5.0m<br>End Of Hole @ 5.0m | | TP12 | ● ▲ | GP-GM | | ◆ ■ | -5.0 |
| 6.0 | | | | | | | | -6.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY:<br>Fig. No: 232 | COMPLETION DEPTH: 5 m<br>COMPLETE: 08/10/04<br>Page 1 of 1 |

05/02/24 08:42AM (YTG_HWYS)

# Volume 3 of 3 GR-01-041

## Km 1691.7 to 1717.3 Alaska Highway #1

## J.R. Paine & Associates (Rob Williamson) August 2004

## SIEVE ANALYSIS

1. Auger Drilling R.O.W. (CME75 Drill)

   Testholes 30000 to 30051
   30082 to 30136
   30148 to 30176

   * NOTE: There are no Testhole 30048, 30060 & 30071.
   Consultant not required to do Sieve Analysis on 30052 to 30070.

2. Rock Drilling R.O.W. (Reverse Circulation Air Rotary)

   * NOTE: No Sieve Analysis done on rock drilling samples.

3. 1699+700 LHS Alaska Highway (Cat 318C Excavator)

   Test Pits 30177 to 30179

4. 1706+200 LHS Alaska Highway (Soldiers Summit Slide) (Hitachi 450EX Excavator)

   Test Pits 30076 & 30081

   * NOTE: No samples taken from Test Pits 30072 to 30075, 30077, 30078, & 30080.
   Sample taken from Test Pit 30079 but no sieve analysis done.

5. 1712+900 LHS Alaska Highway (Williscroft) (Hitachi 450EX Excavator / CME75 Drill)
   Pit ID# 115 G-12

   * NOTE: See Pit File 115 G-12 for Test Pits 30137 to 30147 and
   Testholes 30142D, 30146D, & 654-2763D

ORIGINAL REPORT
Do not remove from Building
Please Return to File

Km 1691.7 to 1717.3 Alaska Highway #1

August 2004

J. R. Paine & Associates

Auger Hole Sieve Sheets
(CME75 Drill)

| | |
|---|---|
| Testholes | 30000 to 30051 |
| | 30082 to 30136 |
| | 30148 to 30176 |

* NOTE: There are no Testhole 30048, 30060 & 30071.
Consultant not required to do Sieve Analysis on
30052 to 30070.

# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. H. Fairey & Associates Ltd.

TRANSPORTATION ENGINEERING, S-3

SEP 0 3 2004

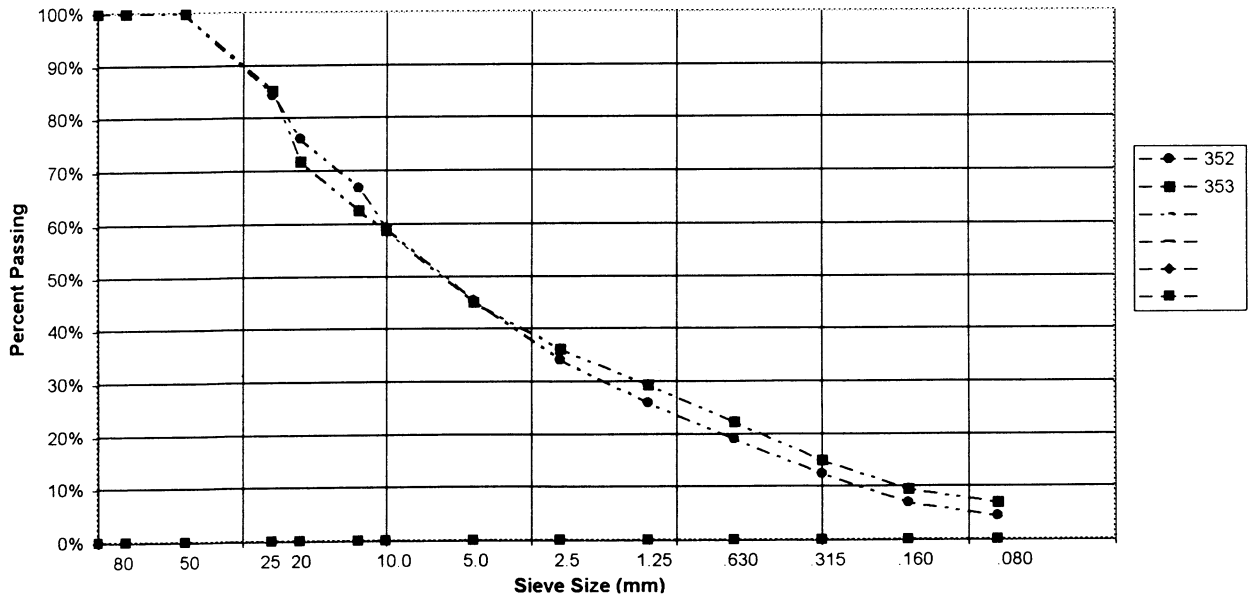
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 644064-6767988
LOGGED BY: RW

HOLE No.: 30000

DATE COMP: 08/16/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 352 | 353 | | | | |
| LAB NO: | 352 | 353 | | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 84% | 85% | | | | |
| 20.0 | 76% | 72% | | | | |
| 12.5 | 67% | 63% | | | | |
| 10.0 | 59% | 59% | | | | |
| 5.0 | 45% | 45% | | | | |
| 2.5 | 34% | 36% | | | | |
| 1.25 | 26% | 29% | | | | |
| 0.630 | 19% | 22% | | | | |
| 0.315 | 12% | 15% | | | | |
| 0.160 | 7% | 10% | | | | |
| 0.080 | 4% | 7% | | | | |
| M.C.(%): | 2% | 2% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 55 | 55 | | | | |
| % SAND: | 41 | 38 | | | | |
| % FINES: | 4 | 7 | | | | |
| CLASSIFICATION | WELL-GRADED GRAVEL WITH SAND (GW) | WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) | | | | |

**Grain Size Analysis (Percent Passing vs Grain Size)**



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

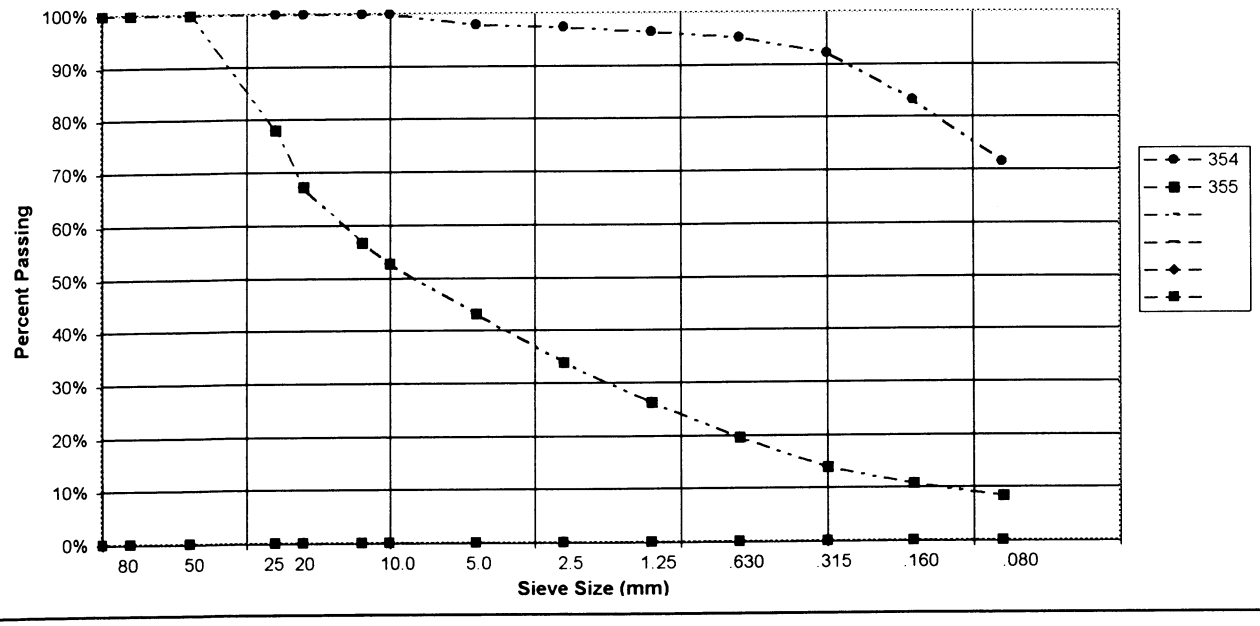
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 643863-6768004
LOGGED BY: RW

HOLE No.: 30001

DATE COMP: 08/16/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 354 | 355 | | | | |
| LAB NO: | 354 | 355 | | | | |
| DEPTH: | 0.6-1.2 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 78% | | | | |
| 20.0 | 100% | 67% | | | | |
| 12.5 | 100% | 57% | | | | |
| 10.0 | 100% | 53% | | | | |
| 5.0 | 98% | 43% | | | | |
| 2.5 | 97% | 34% | | | | |
| 1.25 | 97% | 26% | | | | |
| 0.630 | 95% | 20% | | | | |
| 0.315 | 92% | 14% | | | | |
| 0.160 | 83% | 11% | | | | |
| 0.080 | 72% | 8% | | | | |
| M.C.(%): | 28% | 3% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 2 | 57 | | | | |
| % SAND: | 26 | 35 | | | | |
| % FINES: | 72 | 8 | | | | |
| CLASSIFICATION | SILT WITH SAND (ML) | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

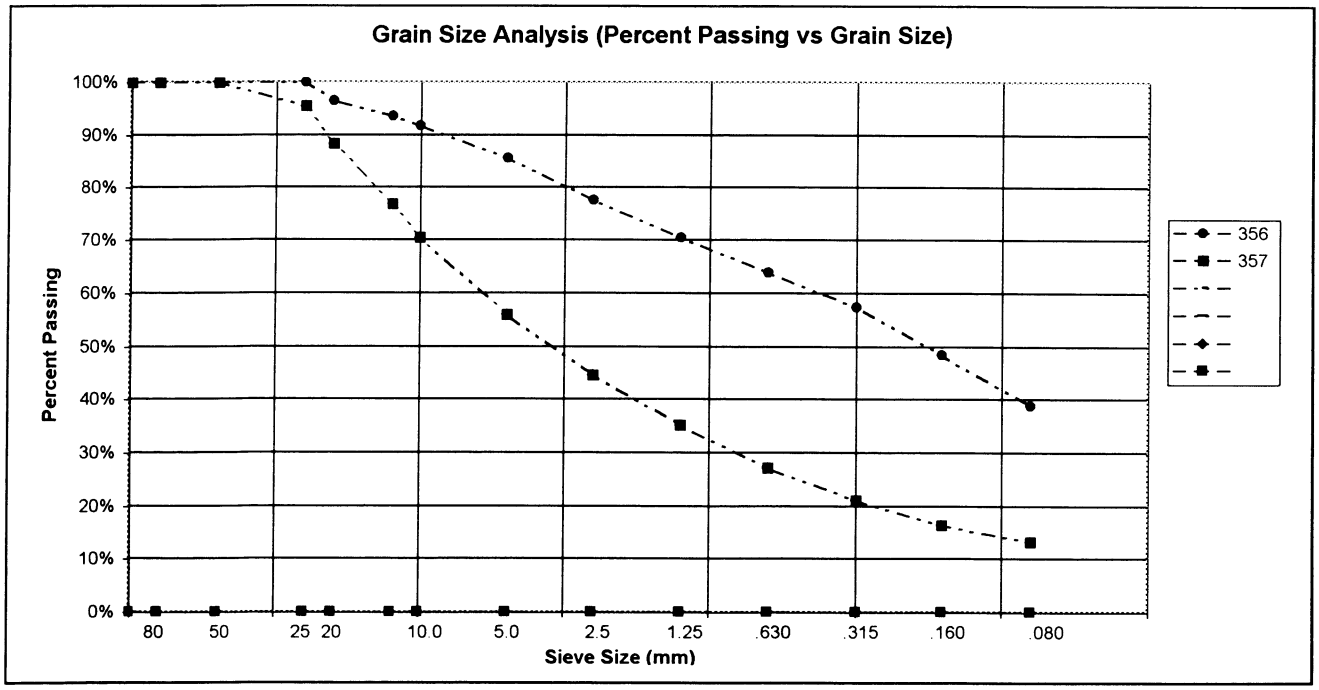
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 643667-6768001
LOGGED BY: RW

HOLE No.: 30002

DATE COMP: 08/16/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 356 | 357 | | | | |
| LAB NO: | 356 | 357 | | | | |
| DEPTH: | 0.4-0.7 | 2.1-2.7 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 96% | | | | |
| 20.0 | 97% | 88% | | | | |
| 12.5 | 94% | 77% | | | | |
| 10.0 | 92% | 70% | | | | |
| 5.0 | 86% | 56% | | | | |
| 2.5 | 78% | 45% | | | | |
| 1.25 | 71% | 35% | | | | |
| 0.630 | 64% | 27% | | | | |
| 0.315 | 57% | 21% | | | | |
| 0.160 | 49% | 16% | | | | |
| 0.080 | 39% | 13% | | | | |
| M.C.(%): | 11% | 3% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 14 | 44 | | | | |
| % SAND: | 47 | 43 | | | | |
| % FINES: | 39 | 13 | | | | |
| CLASSIFICATION | SILTY SAND (SM) | SILTY GRAVEL WITH SAND (GM) | | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

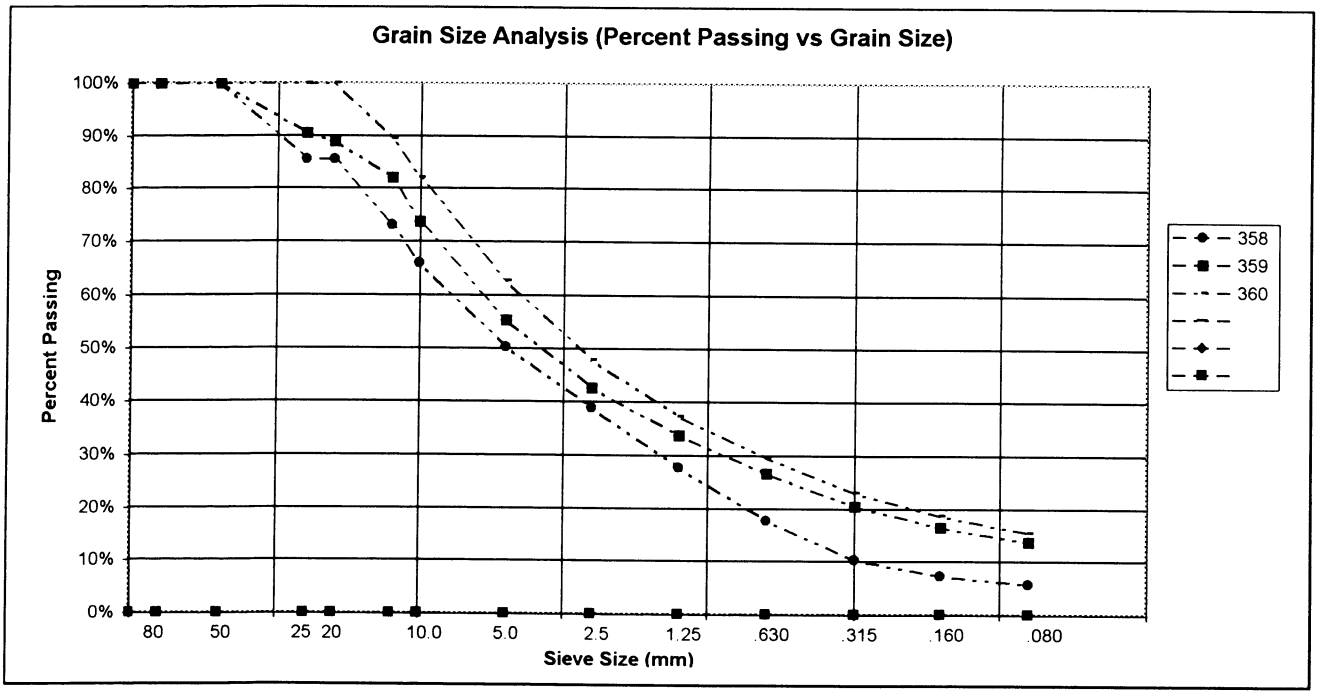
An Affiliate of J. H. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 643448-6767987
LOGGED BY: RW

HOLE No.: 30003

DATE COMP: 08/16/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 358 | 359 | 360 | | | |
| LAB NO: | 358 | 359 | 360 | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | 3.4-4.0 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 86% | 91% | 100% | | | |
| 20.0 | 86% | 89% | 100% | | | |
| 12.5 | 73% | 82% | 89% | | | |
| 10.0 | 66% | 74% | 82% | | | |
| 5.0 | 50% | 55% | 63% | | | |
| 2.5 | 39% | 43% | 48% | | | |
| 1.25 | 28% | 34% | 37% | | | |
| 0.630 | 18% | 27% | 30% | | | |
| 0.315 | 10% | 21% | 23% | | | |
| 0.160 | 7% | 17% | 19% | | | |
| 0.080 | 6% | 14% | 15% | | | |
| M.C.(%): | 2% | 3% | 3% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 50 | 45 | 37 | | | |
| % SAND: | 44 | 42 | 47 | | | |
| % FINES: | 6 | 14 | 15 | | | |
| CLASSIFICATION | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | SILTY GRAVEL WITH SAND (GM) | SILTY SAND WITH GRAVEL (SM) | | | |

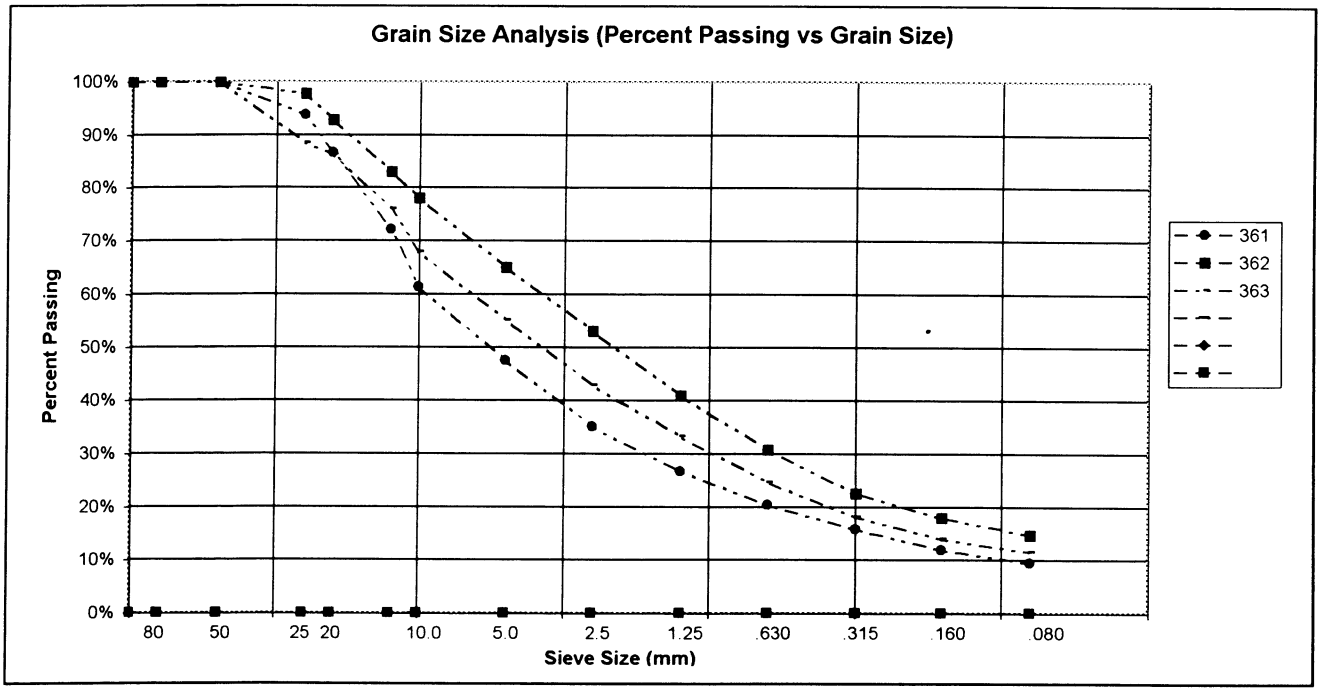


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | | |
|---|---|---|---|
| PROJECT NUMBER: | 8002-318 | | HOLE No.: 30004 |
| CLIENT: | YTG, Transportation & Engineering | | |
| PROJECT NAME: | Geotechnical Services | | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | | |
| DRILL UNIT: | CME75 | | |
| HOLE LOCATION: | 643430-6768053 | | |
| LOGGED BY: | RW | | DATE COMP: 08/16/2004 |

| FIELD NO: | 361 | 362 | 363 | | | |
|---|---|---|---|---|---|---|
| LAB NO: | 361 | 362 | 363 | | | |
| DEPTH: | 0.6-1.2 | 1.8-2.4 | 3.4-4.0 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| **SIEVE SIZE** | **PERCENT PASSING** | **PERCENT PASSING** | **PERCENT PASSING** | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 94% | 98% | 88% | | | |
| 20.0 | 87% | 93% | 86% | | | |
| 12.5 | 72% | 83% | 76% | | | |
| 10.0 | 61% | 78% | 68% | | | |
| 5.0 | 47% | 65% | 55% | | | |
| 2.5 | 35% | 53% | 43% | | | |
| 1.25 | 27% | 41% | 33% | | | |
| 0.630 | 20% | 31% | 25% | | | |
| 0.315 | 16% | 23% | 18% | | | |
| 0.160 | 12% | 18% | 14% | | | |
| 0.080 | 10% | 15% | 12% | | | |
| M.C.(%): | 3% | 4% | 3% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 53 | 35 | 45 | | | |
| % SAND: | 38 | 50 | 44 | | | |
| % FINES: | 10 | 15 | 12 | | | |
| CLASSIFICATION | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | SILTY SAND WITH GRAVEL (SM) | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

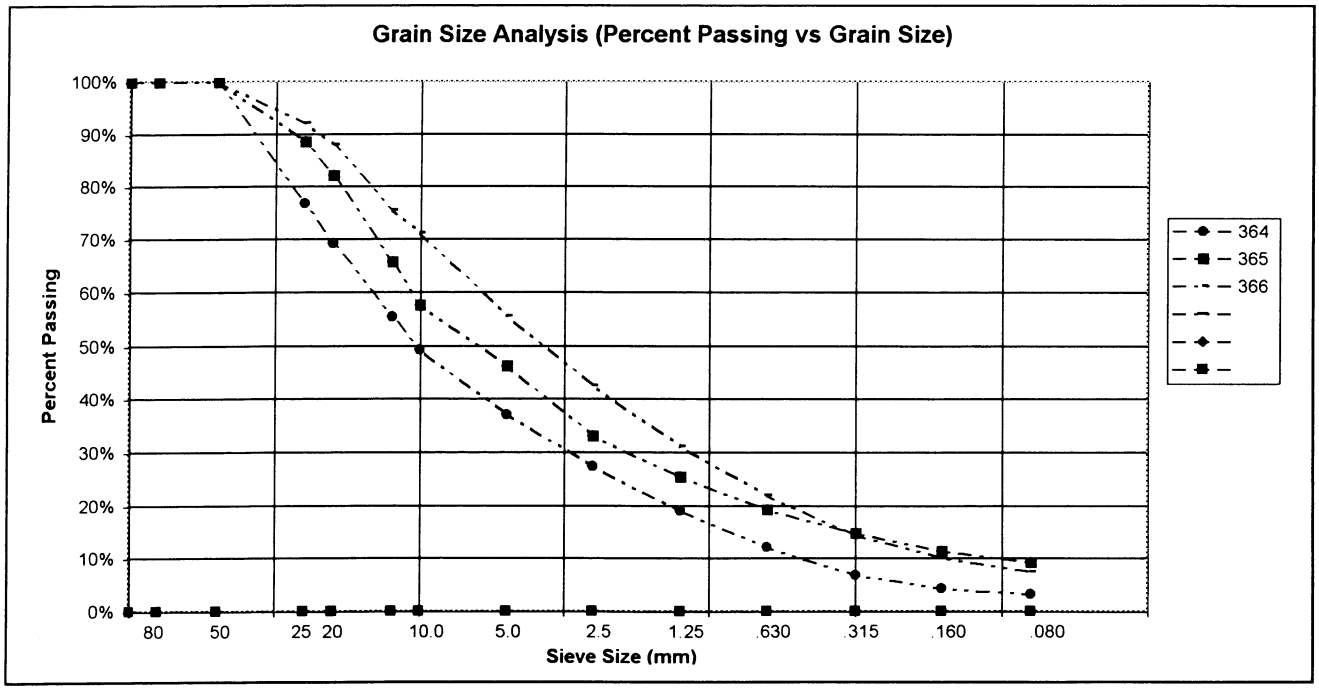
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 643267-6768019
LOGGED BY: RW

HOLE No.: 30005

DATE COMP: 08/18/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 364 | 365 | 366 | | | |
| LAB NO: | 364 | 365 | 366 | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | 3.4-4.0 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 77% | 89% | 92% | | | |
| 20.0 | 69% | 82% | 88% | | | |
| 12.5 | 55% | 66% | 76% | | | |
| 10.0 | 49% | 58% | 71% | | | |
| 5.0 | 37% | 46% | 56% | | | |
| 2.5 | 27% | 33% | 43% | | | |
| 1.25 | 19% | 26% | 31% | | | |
| 0.630 | 12% | 19% | 22% | | | |
| 0.315 | 7% | 15% | 15% | | | |
| 0.160 | 4% | 11% | 10% | | | |
| 0.080 | 3% | 9% | 8% | | | |
| M.C.(%): | 1% | 2% | 3% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 63 | 54 | 44 | | | |
| % SAND: | 34 | 37 | 48 | | | |
| % FINES: | 3 | 9 | 8 | | | |
| CLASSIFICATION | WELL-GRADED GRAVEL WITH SAND (GW) | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | | | |



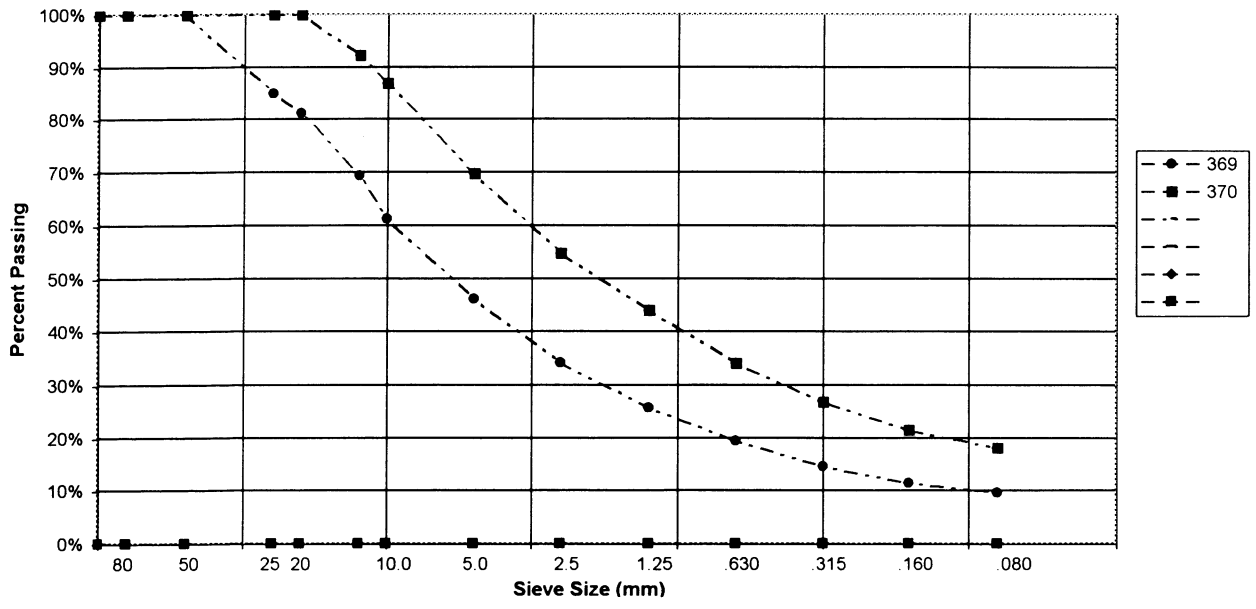
# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | | |
|---|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: | 30006 |
| CLIENT: | YTG, Transportation & Engineering | | |
| PROJECT NAME: | Geotechnical Services | | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | | |
| DRILL UNIT: | CME75 | | |
| HOLE LOCATION: | 642866-6768025 | | |
| LOGGED BY: | RW | DATE COMP: | 08/18/2004 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 369 | 370 | | | | |
| LAB NO: | 369 | 370 | | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 85% | 100% | | | | |
| 20.0 | 81% | 100% | | | | |
| 12.5 | 69% | 92% | | | | |
| 10.0 | 61% | 87% | | | | |
| 5.0 | 46% | 70% | | | | |
| 2.5 | 34% | 55% | | | | |
| 1.25 | 26% | 44% | | | | |
| 0.630 | 20% | 34% | | | | |
| 0.315 | 15% | 27% | | | | |
| 0.160 | 11% | 22% | | | | |
| 0.080 | 10% | 18% | | | | |
| M.C.(%): | 3% | 3% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 54 | 30 | | | | |
| % SAND: | 37 | 52 | | | | |
| % FINES: | 10 | 18 | | | | |
| CLASSIFICATION | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | SILTY SAND WITH GRAVEL (SM) | | | | |

**Grain Size Analysis (Percent Passing vs Grain Size)**



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

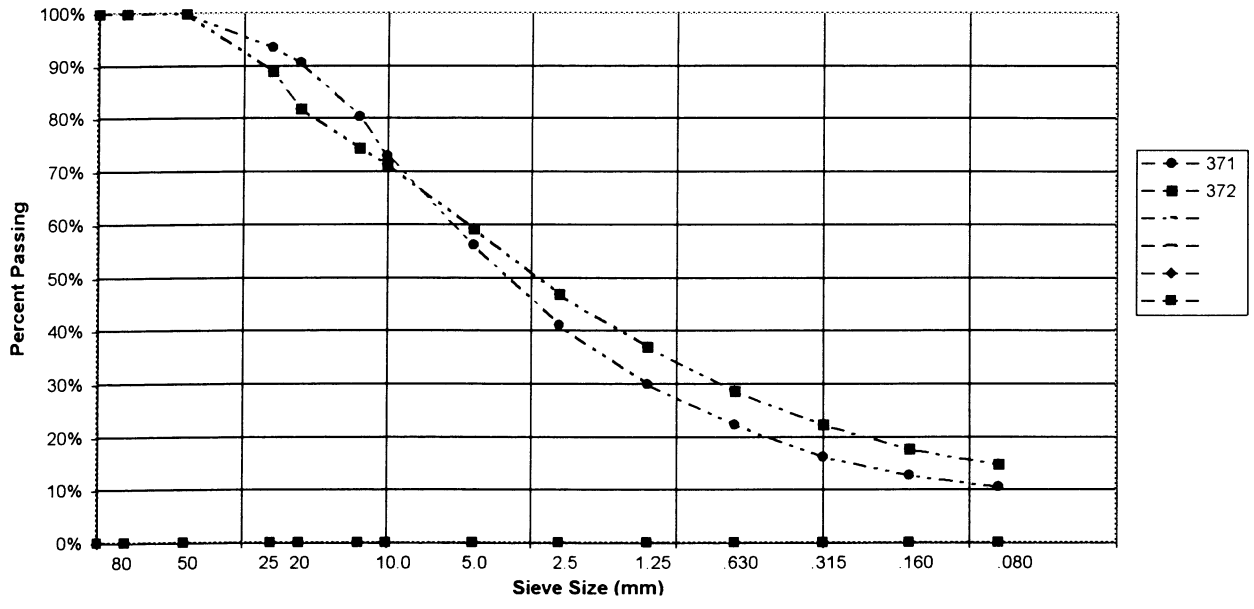
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 642664-6768030
LOGGED BY: RW

HOLE No.: 30007

DATE COMP: 08/18/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 371 | 372 | | | | |
| LAB NO: | 371 | 372 | | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 94% | 89% | | | | |
| 20.0 | 91% | 82% | | | | |
| 12.5 | 80% | 74% | | | | |
| 10.0 | 73% | 71% | | | | |
| 5.0 | 56% | 59% | | | | |
| 2.5 | 41% | 47% | | | | |
| 1.25 | 30% | 37% | | | | |
| 0.630 | 22% | 29% | | | | |
| 0.315 | 16% | 22% | | | | |
| 0.160 | 13% | 18% | | | | |
| 0.080 | 11% | 15% | | | | |
| M.C.(%): | 2% | 3% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 44 | 41 | | | | |
| % SAND: | 46 | 44 | | | | |
| % FINES: | 11 | 15 | | | | |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY SAND WITH GRAVEL (SM) | | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

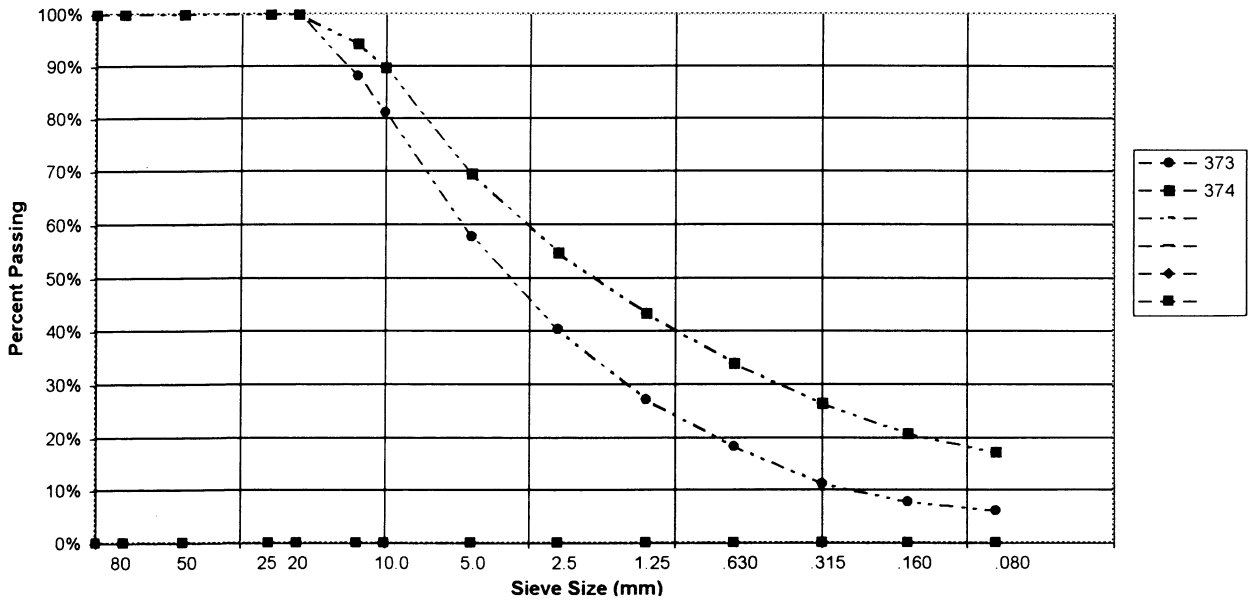
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 642463-6768033
LOGGED BY: RW

HOLE No.: 30008

DATE COMP: 08/18/2004

| FIELD NO: | 373 | 374 | | | | |
|---|---|---|---|---|---|---|
| LAB NO: | 373 | 374 | | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 100% | | | | |
| 20.0 | 100% | 100% | | | | |
| 12.5 | 88% | 94% | | | | |
| 10.0 | 81% | 90% | | | | |
| 5.0 | 58% | 70% | | | | |
| 2.5 | 40% | 55% | | | | |
| 1.25 | 27% | 43% | | | | |
| 0.630 | 18% | 34% | | | | |
| 0.315 | 11% | 26% | | | | |
| 0.160 | 8% | 21% | | | | |
| 0.080 | 6% | 17% | | | | |
| M.C.(%): | 2% | 2% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 42 | 30 | | | | |
| % SAND: | 52 | 52 | | | | |
| % FINES: | 6 | 17 | | | | |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY SAND WITH GRAVEL (SM) | | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

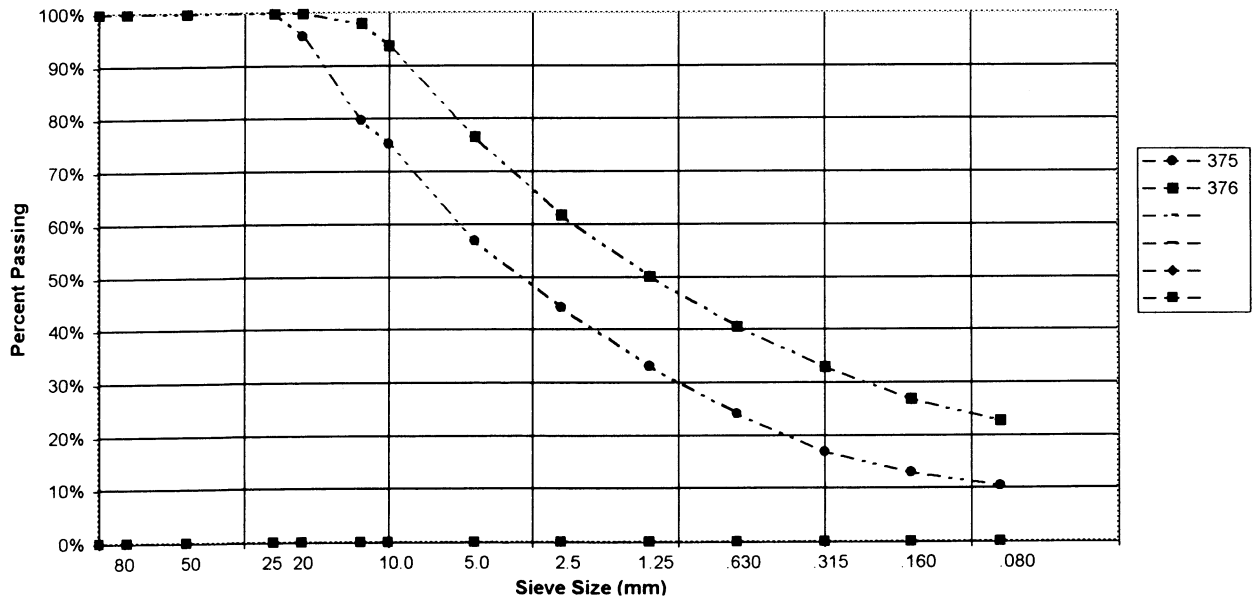
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 642265-6768038
LOGGED BY: RW

HOLE No.: 30009

DATE COMP: 08/18/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 375 | 376 | | | | |
| LAB NO: | 375 | 376 | | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 100% | | | | |
| 20.0 | 96% | 100% | | | | |
| 12.5 | 80% | 98% | | | | |
| 10.0 | 75% | 94% | | | | |
| 5.0 | 57% | 77% | | | | |
| 2.5 | 44% | 62% | | | | |
| 1.25 | 33% | 50% | | | | |
| 0.630 | 24% | 41% | | | | |
| 0.315 | 17% | 33% | | | | |
| 0.160 | 13% | 27% | | | | |
| 0.080 | 11% | 23% | | | | |
| M.C.(%): | 3% | 4% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 43 | 23 | | | | |
| % SAND: | 46 | 54 | | | | |
| % FINES: | 11 | 23 | | | | |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY SAND WITH GRAVEL (SM) | | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

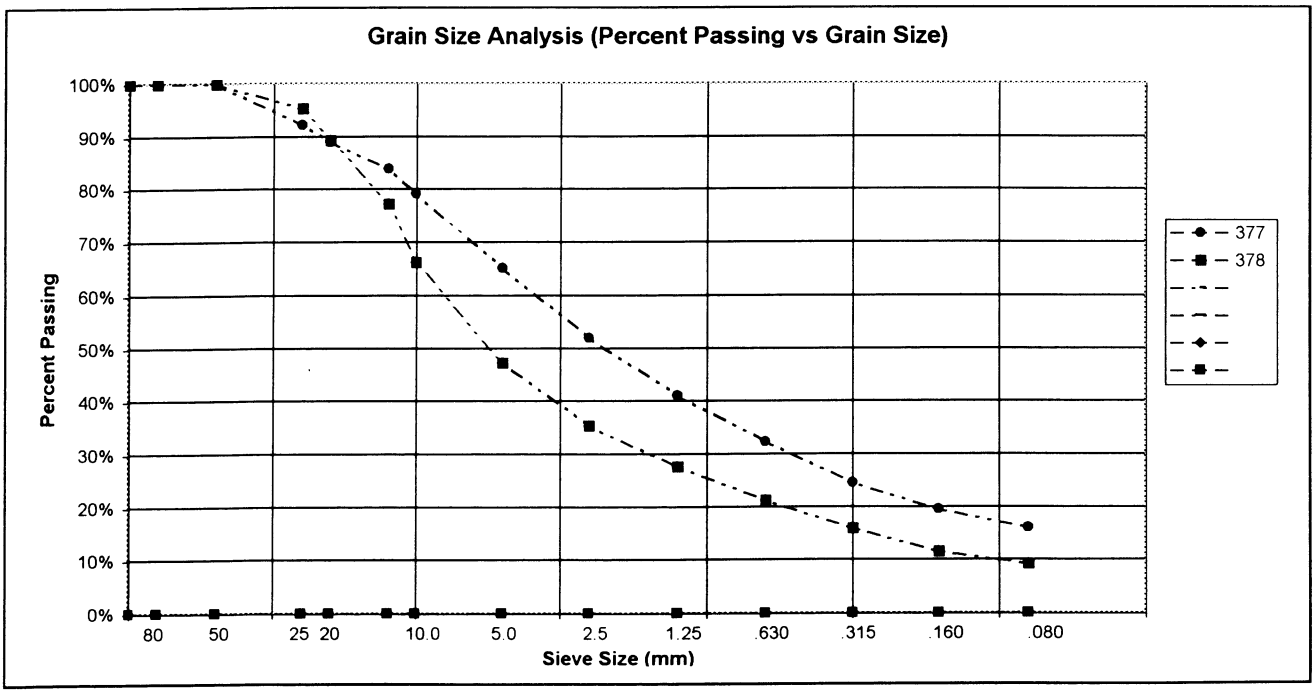
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 642066-6768040
LOGGED BY: RW

HOLE No.: 30010

DATE COMP: 08/18/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 377 | 378 | | | | |
| LAB NO: | 377 | 378 | | | | |
| DEPTH: | 0.3-0.9 | 2.1-2.7 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 92% | 95% | | | | |
| 20.0 | 89% | 89% | | | | |
| 12.5 | 84% | 77% | | | | |
| 10.0 | 79% | 66% | | | | |
| 5.0 | 65% | 47% | | | | |
| 2.5 | 52% | 35% | | | | |
| 1.25 | 41% | 28% | | | | |
| 0.630 | 32% | 21% | | | | |
| 0.315 | 25% | 16% | | | | |
| 0.160 | 20% | 12% | | | | |
| 0.080 | 16% | 9% | | | | |
| M.C.(%): | 3% | 2% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 35 | 53 | | | | |
| % SAND: | 49 | 38 | | | | |
| % FINES: | 16 | 9 | | | | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

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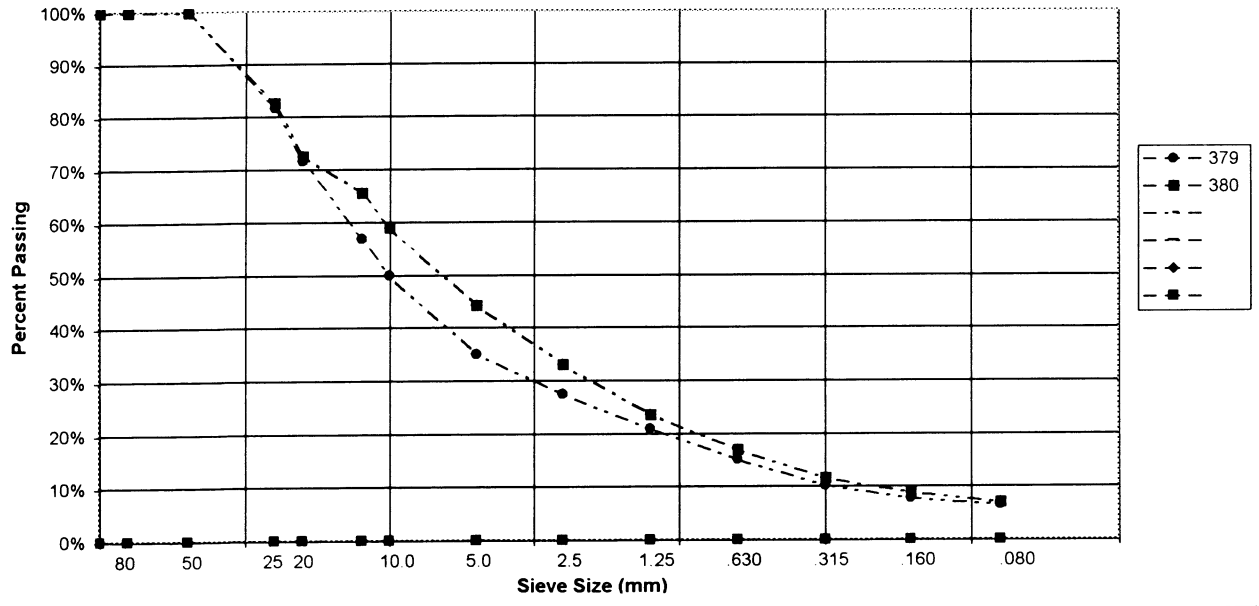
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 641865-6768044
LOGGED BY: RW

HOLE No.: 30011

DATE COMP: 08/18/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 379 | 380 | | | | |
| LAB NO: | 379 | 380 | | | | |
| DEPTH: | 0.3-0.9 | 2.1-2.7 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 82% | 83% | | | | |
| 20.0 | 72% | 73% | | | | |
| 12.5 | 57% | 66% | | | | |
| 10.0 | 50% | 59% | | | | |
| 5.0 | 35% | 44% | | | | |
| 2.5 | 28% | 33% | | | | |
| 1.25 | 21% | 24% | | | | |
| 0.630 | 15% | 17% | | | | |
| 0.315 | 10% | 12% | | | | |
| 0.160 | 8% | 9% | | | | |
| 0.080 | 7% | 7% | | | | |
| M.C.(%): | 3% | 3% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 65 | 56 | | | | |
| % SAND: | 28 | 37 | | | | |
| % FINES: | 7 | 7 | | | | |
| CLASSIFICATION | WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) | WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) | | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

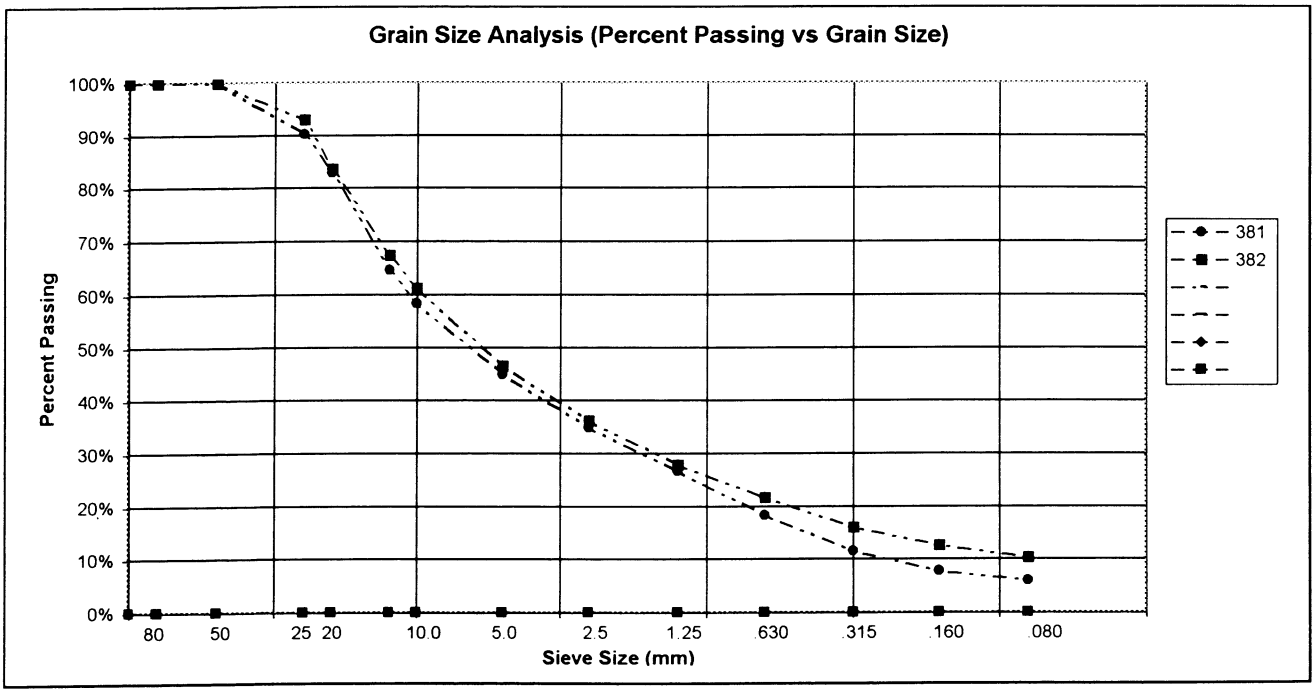
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 641666-6768049
LOGGED BY: RW

HOLE No.: 30012

DATE COMP: 08/18/2004

| FIELD NO: | 381 | 382 | | | | |
|---|---|---|---|---|---|---|
| LAB NO: | 381 | 382 | | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 90% | 93% | | | | |
| 20.0 | 83% | 84% | | | | |
| 12.5 | 65% | 67% | | | | |
| 10.0 | 58% | 61% | | | | |
| 5.0 | 45% | 47% | | | | |
| 2.5 | 35% | 36% | | | | |
| 1.25 | 27% | 28% | | | | |
| 0.630 | 18% | 22% | | | | |
| 0.315 | 12% | 16% | | | | |
| 0.160 | 8% | 13% | | | | |
| 0.080 | 6% | 10% | | | | |
| M.C.(%): | 2% | 3% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 55 | 53 | | | | |
| % SAND: | 39 | 36 | | | | |
| % FINES: | 6 | 10 | | | | |
| CLASSIFICATION | WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

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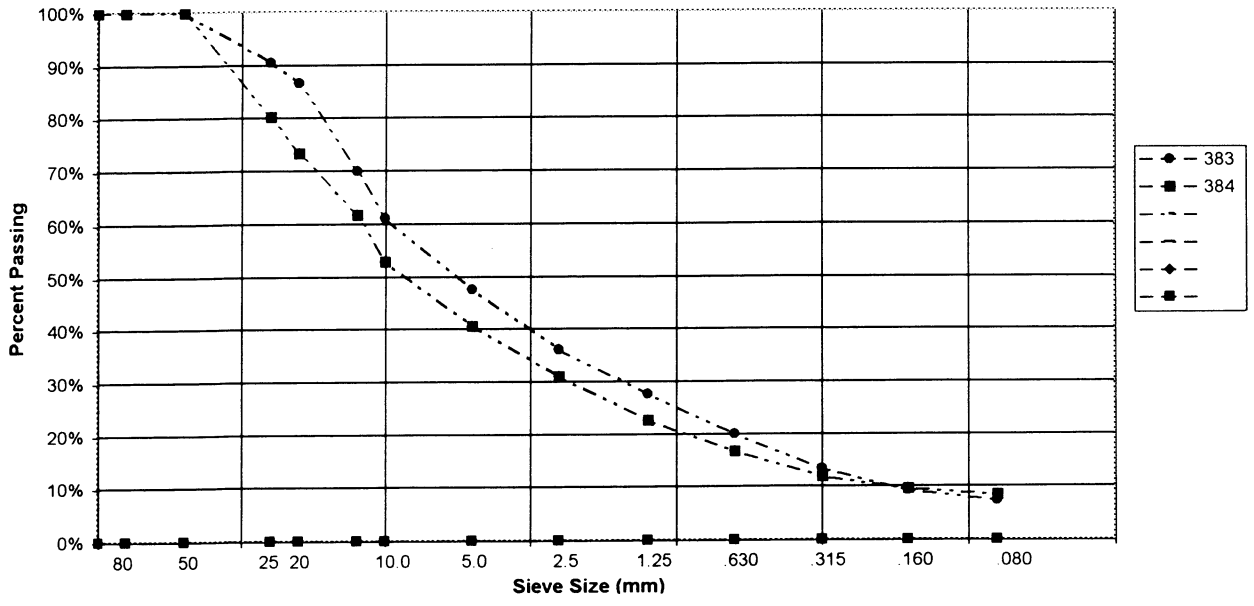
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 641469-6768054
LOGGED BY: RW

HOLE No.: 30013

DATE COMP: 08/18/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 383 | 384 | | | | |
| LAB NO: | 383 | 384 | | | | |
| DEPTH: | 0.5-1.0 | 2.1-2.7 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 91% | 80% | | | | |
| 20.0 | 87% | 73% | | | | |
| 12.5 | 70% | 62% | | | | |
| 10.0 | 61% | 53% | | | | |
| 5.0 | 48% | 41% | | | | |
| 2.5 | 36% | 31% | | | | |
| 1.25 | 28% | 23% | | | | |
| 0.630 | 20% | 17% | | | | |
| 0.315 | 13% | 12% | | | | |
| 0.160 | 9% | 10% | | | | |
| 0.080 | 7% | 8% | | | | |
| M.C.(%): | 2% | 3% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 52 | 59 | | | | |
| % SAND: | 40 | 32 | | | | |
| % FINES: | 7 | 8 | | | | |
| CLASSIFICATION | WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) | WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) | | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

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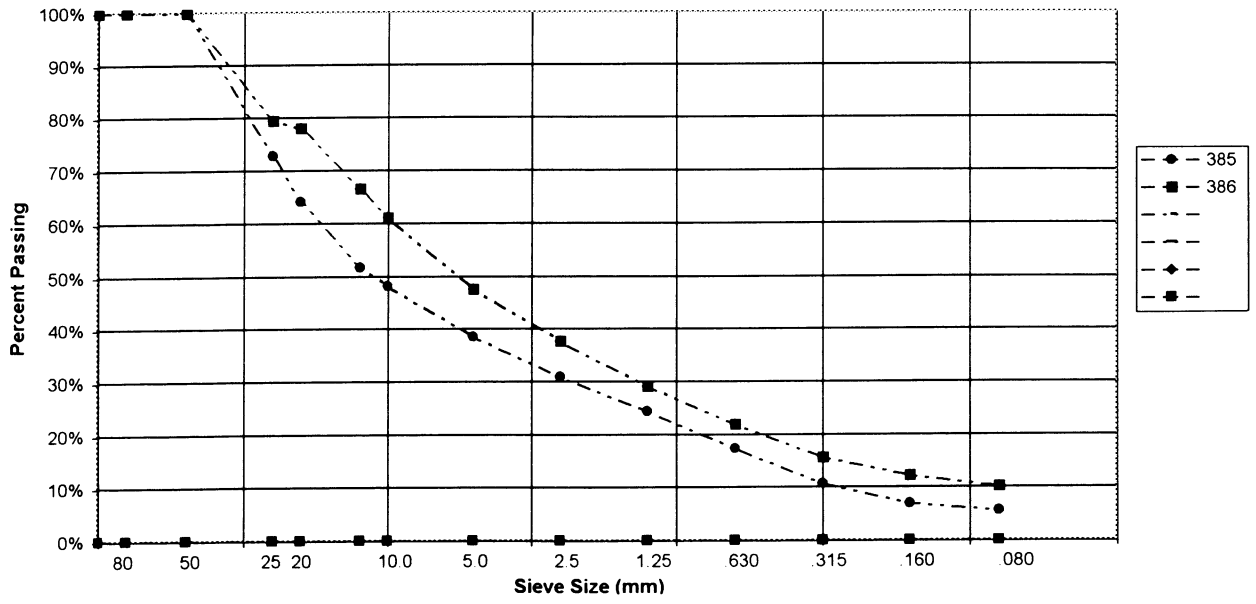
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 641287-6768036
LOGGED BY: RW

HOLE No.: 30014

DATE COMP: 08/18/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 385 | 386 | | | | |
| LAB NO: | 385 | 386 | | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 73% | 80% | | | | |
| 20.0 | 64% | 78% | | | | |
| 12.5 | 52% | 67% | | | | |
| 10.0 | 48% | 61% | | | | |
| 5.0 | 39% | 48% | | | | |
| 2.5 | 31% | 38% | | | | |
| 1.25 | 24% | 29% | | | | |
| 0.630 | 17% | 22% | | | | |
| 0.315 | 11% | 16% | | | | |
| 0.160 | 7% | 12% | | | | |
| 0.080 | 6% | 10% | | | | |
| M.C.(%): | 2% | 3% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 61 | 52 | | | | |
| % SAND: | 33 | 37 | | | | |
| % FINES: | 6 | 10 | | | | |
| CLASSIFICATION | WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

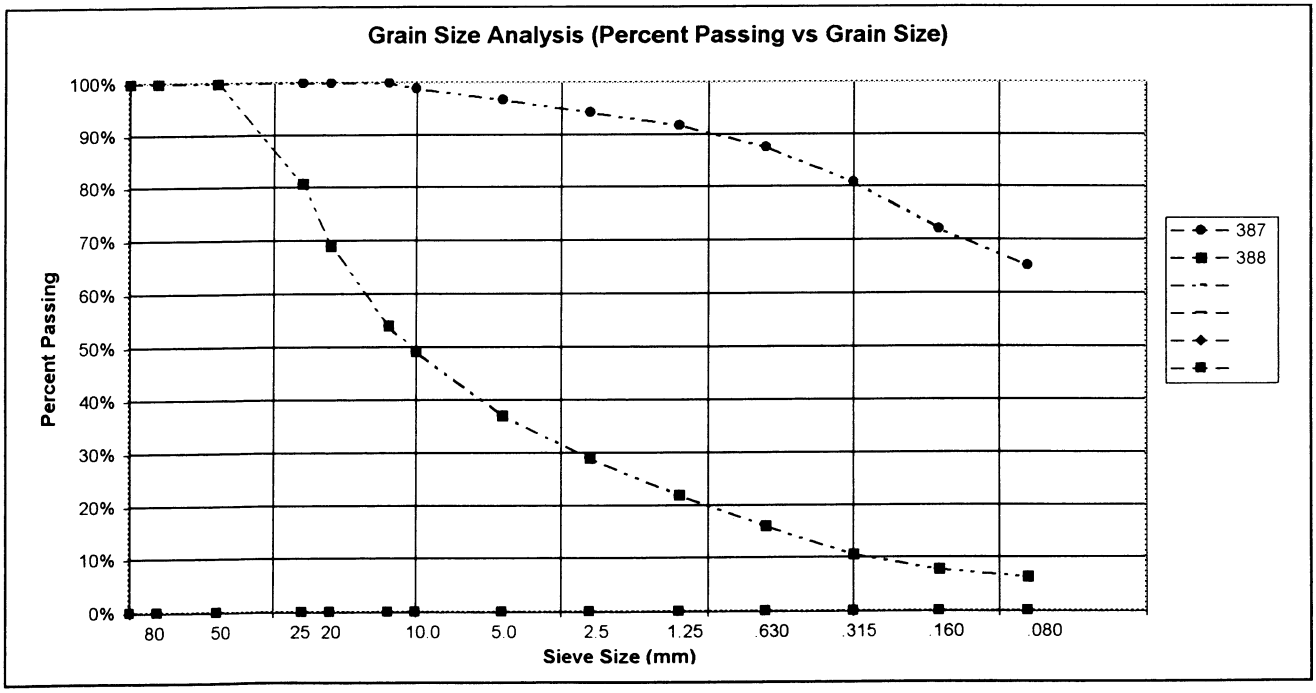
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 641051-6767939
LOGGED BY: RW

HOLE No.: 30015

DATE COMP: 08/18/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 387 | 388 | | | | |
| LAB NO: | 387 | 388 | | | | |
| DEPTH: | 0.3-0.8 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 81% | | | | |
| 20.0 | 100% | 69% | | | | |
| 12.5 | 100% | 54% | | | | |
| 10.0 | 99% | 49% | | | | |
| 5.0 | 97% | 37% | | | | |
| 2.5 | 94% | 29% | | | | |
| 1.25 | 92% | 22% | | | | |
| 0.630 | 88% | 16% | | | | |
| 0.315 | 81% | 11% | | | | |
| 0.160 | 72% | 8% | | | | |
| 0.080 | 65% | 6% | | | | |
| M.C.(%): | 43% | 3% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 3 | 63 | | | | |
| % SAND: | 32 | 31 | | | | |
| % FINES: | 65 | 6 | | | | |
| CLASSIFICATION | SANDY SILT (ML) | WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) | | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

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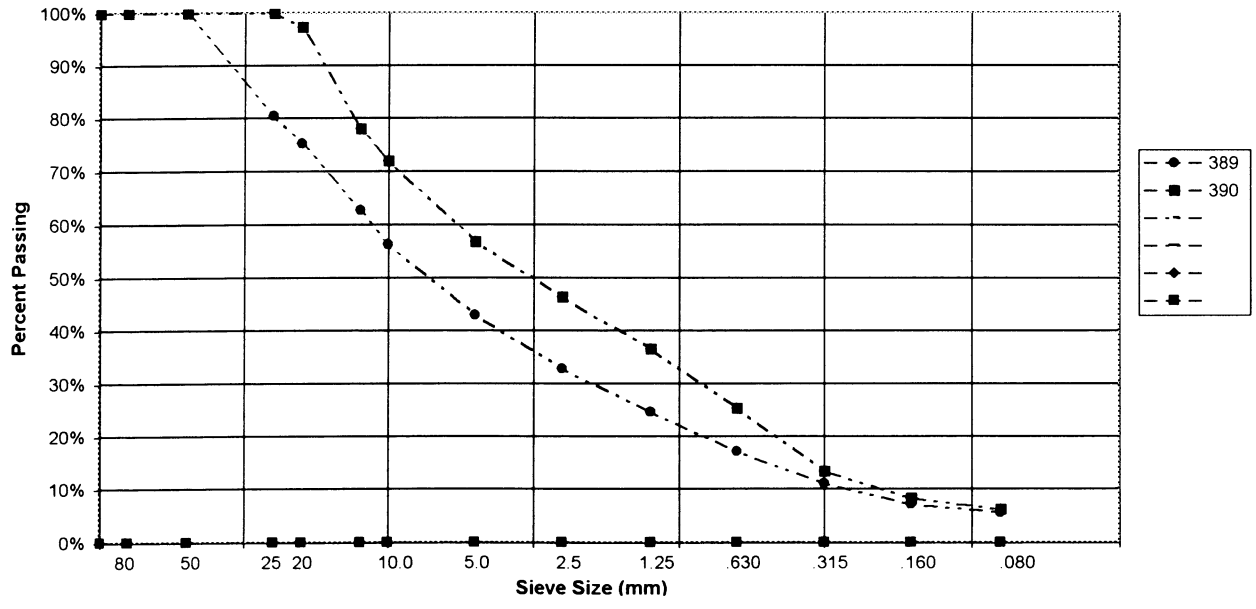
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 641012-6767966
LOGGED BY: RW

HOLE No.: 30016

DATE COMP: 08/18/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 389 | 390 | | | | |
| LAB NO: | 389 | 390 | | | | |
| DEPTH: | 0.0-0.4 | 2.1-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 80% | 100% | | | | |
| 20.0 | 75% | 97% | | | | |
| 12.5 | 63% | 78% | | | | |
| 10.0 | 56% | 72% | | | | |
| 5.0 | 43% | 57% | | | | |
| 2.5 | 33% | 46% | | | | |
| 1.25 | 25% | 37% | | | | |
| 0.630 | 17% | 25% | | | | |
| 0.315 | 11% | 13% | | | | |
| 0.160 | 7% | 8% | | | | |
| 0.080 | 6% | 6% | | | | |
| M.C.(%): | 3% | 5% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 57 | 43 | | | | |
| % SAND: | 37 | 50 | | | | |
| % FINES: | 6 | 6 | | | | |
| CLASSIFICATION | WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)

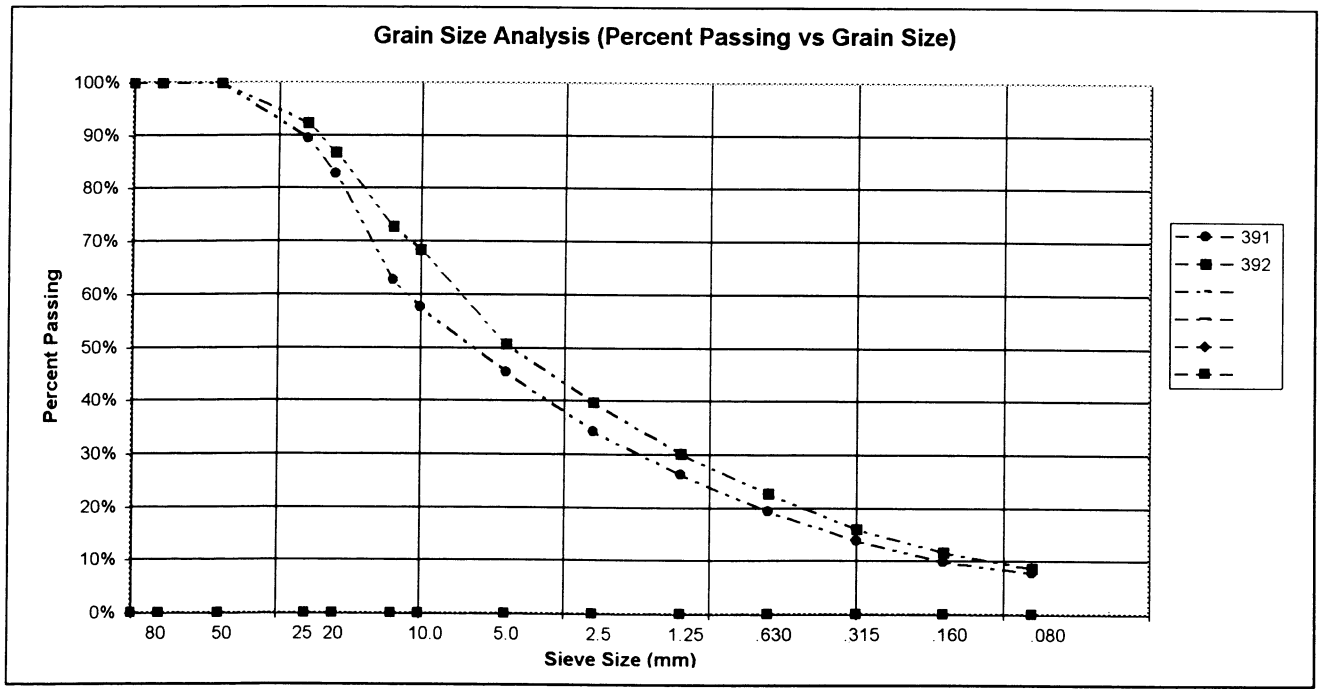


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30017 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 640871-6767834 | |
| LOGGED BY: | RW | DATE COMP: 08/18/2004 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 391 | 392 | | | | |
| LAB NO: | 391 | 392 | | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 89% | 92% | | | | |
| 20.0 | 83% | 87% | | | | |
| 12.5 | 63% | 73% | | | | |
| 10.0 | 58% | 69% | | | | |
| 5.0 | 45% | 51% | | | | |
| 2.5 | 34% | 40% | | | | |
| 1.25 | 26% | 30% | | | | |
| 0.630 | 19% | 23% | | | | |
| 0.315 | 14% | 16% | | | | |
| 0.160 | 10% | 12% | | | | |
| 0.080 | 8% | 9% | | | | |
| M.C.(%): | 2% | 3% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 55 | 49 | | | | |
| % SAND: | 38 | 42 | | | | |
| % FINES: | 8 | 9 | | | | |
| CLASSIFICATION | WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

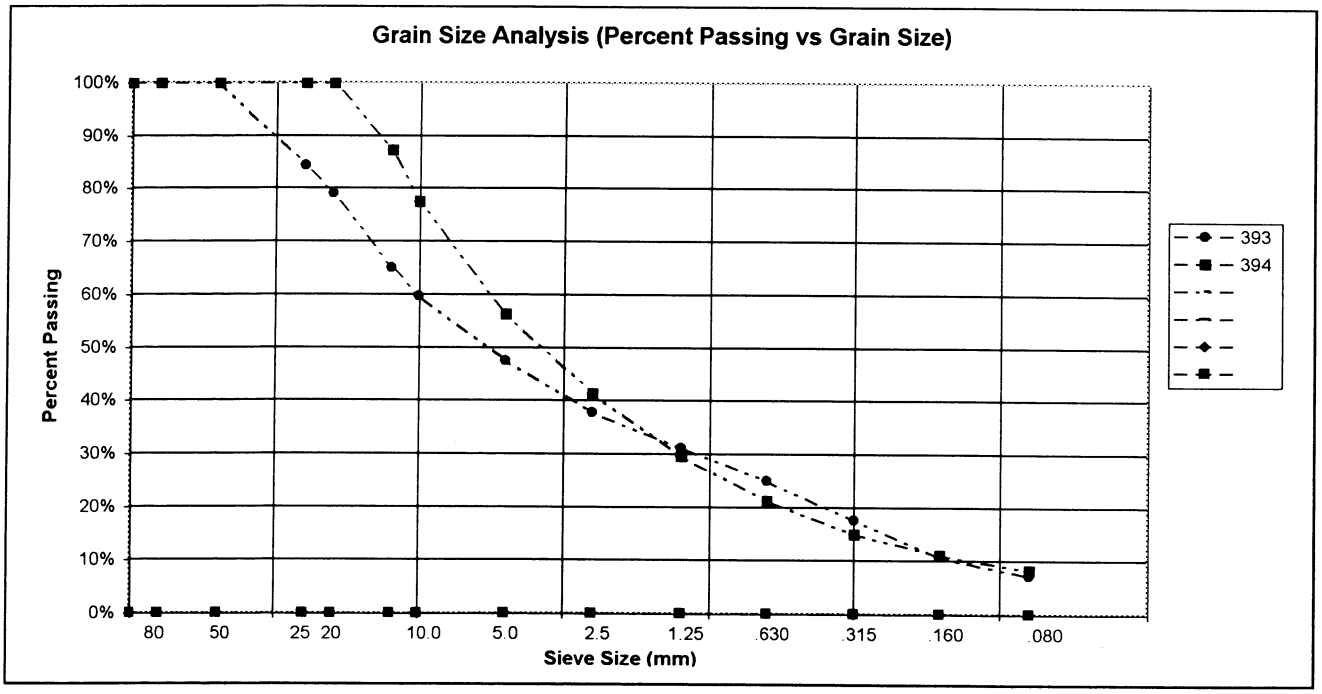
An Affiliate of J. H. Paine & Associates Ltd.

| | |
|---|---|
| PROJECT NUMBER: | 8002-318 |
| CLIENT: | YTG, Transportation & Engineering |
| PROJECT NAME: | Geotechnical Services |
| PROJECT LOCATION: | Km 1691.7-1717.3 |
| DRILL UNIT: | CME75 |
| HOLE LOCATION: | 640691-6767697 |
| LOGGED BY: | RW |

HOLE No.: 30018

DATE COMP: 08/18/2004

| FIELD NO: | 393 | 394 | | | | |
|---|---|---|---|---|---|---|
| LAB NO: | 393 | 394 | | | | |
| DEPTH: | 0.3-0.9 | 2.1-2.7 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 84% | 100% | | | | |
| 20.0 | 79% | 100% | | | | |
| 12.5 | 65% | 87% | | | | |
| 10.0 | 60% | 78% | | | | |
| 5.0 | 48% | 56% | | | | |
| 2.5 | 38% | 41% | | | | |
| 1.25 | 31% | 30% | | | | |
| 0.630 | 25% | 21% | | | | |
| 0.315 | 18% | 15% | | | | |
| 0.160 | 11% | 11% | | | | |
| 0.080 | 7% | 8% | | | | |
| M.C.(%): | 1% | 3% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 52 | 44 | | | | |
| % SAND: | 40 | 48 | | | | |
| % FINES: | 7 | 8 | | | | |
| CLASSIFICATION | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | | | | |

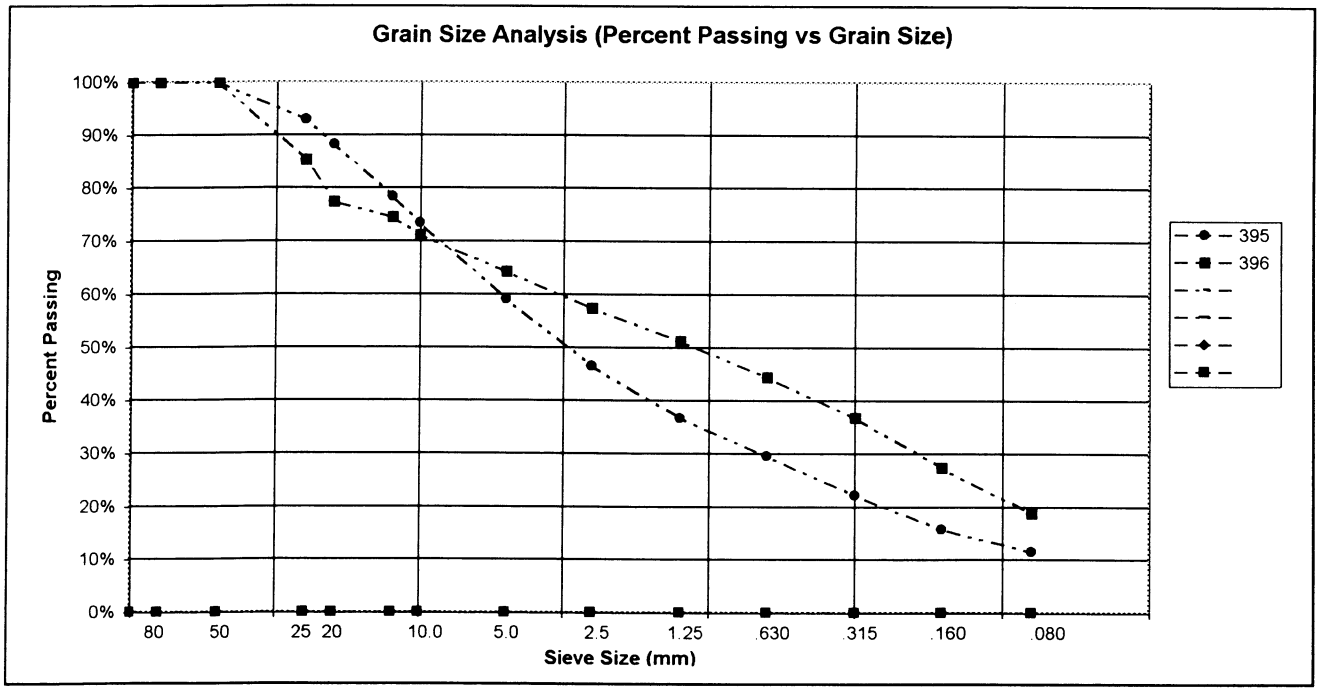


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. H. Paine & Associates Ltd.

| | | | |
|---|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: | 30019 |
| CLIENT: | YTG, Transportation & Engineering | | |
| PROJECT NAME: | Geotechnical Services | | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | | |
| DRILL UNIT: | CME75 | | |
| HOLE LOCATION: | 640524-6767579 | | |
| LOGGED BY: | RW | DATE COMP: | 08/18/2004 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 395 | 396 | | | | |
| LAB NO: | 395 | 396 | | | | |
| DEPTH: | 0.3-0.9 | 2.1-2.7 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 93% | 85% | | | | |
| 20.0 | 88% | 77% | | | | |
| 12.5 | 78% | 75% | | | | |
| 10.0 | 74% | 71% | | | | |
| 5.0 | 59% | 64% | | | | |
| 2.5 | 47% | 57% | | | | |
| 1.25 | 37% | 51% | | | | |
| 0.630 | 30% | 44% | | | | |
| 0.315 | 22% | 37% | | | | |
| 0.160 | 16% | 27% | | | | |
| 0.080 | 12% | 19% | | | | |
| M.C.(%): | 5% | 8% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 41 | 36 | | | | |
| % SAND: | 48 | 45 | | | | |
| % FINES: | 12 | 19 | | | | |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY SAND WITH GRAVEL (SM) | | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

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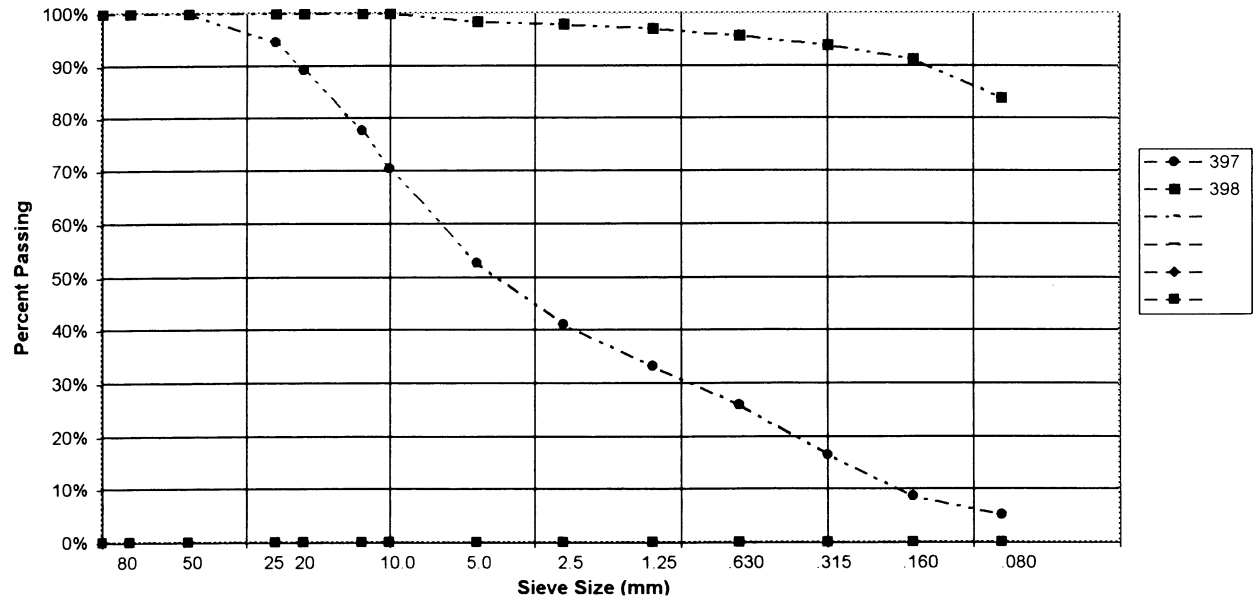
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 640351-6767452
LOGGED BY: RW

HOLE No.: 30020

DATE COMP: 08/18/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 397 | 398 | | | | |
| LAB NO: | 397 | 398 | | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 95% | 100% | | | | |
| 20.0 | 89% | 100% | | | | |
| 12.5 | 78% | 100% | | | | |
| 10.0 | 70% | 100% | | | | |
| 5.0 | 53% | 98% | | | | |
| 2.5 | 41% | 98% | | | | |
| 1.25 | 33% | 97% | | | | |
| 0.630 | 26% | 96% | | | | |
| 0.315 | 17% | 94% | | | | |
| 0.160 | 9% | 91% | | | | |
| 0.080 | 5% | 84% | | | | |
| M.C.(%): | 7% | 38% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 47 | 2 | | | | |
| % SAND: | 48 | 14 | | | | |
| % FINES: | 5 | 84 | | | | |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILT WITH SAND (ML) | | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. H. Paine & Associates Ltd.

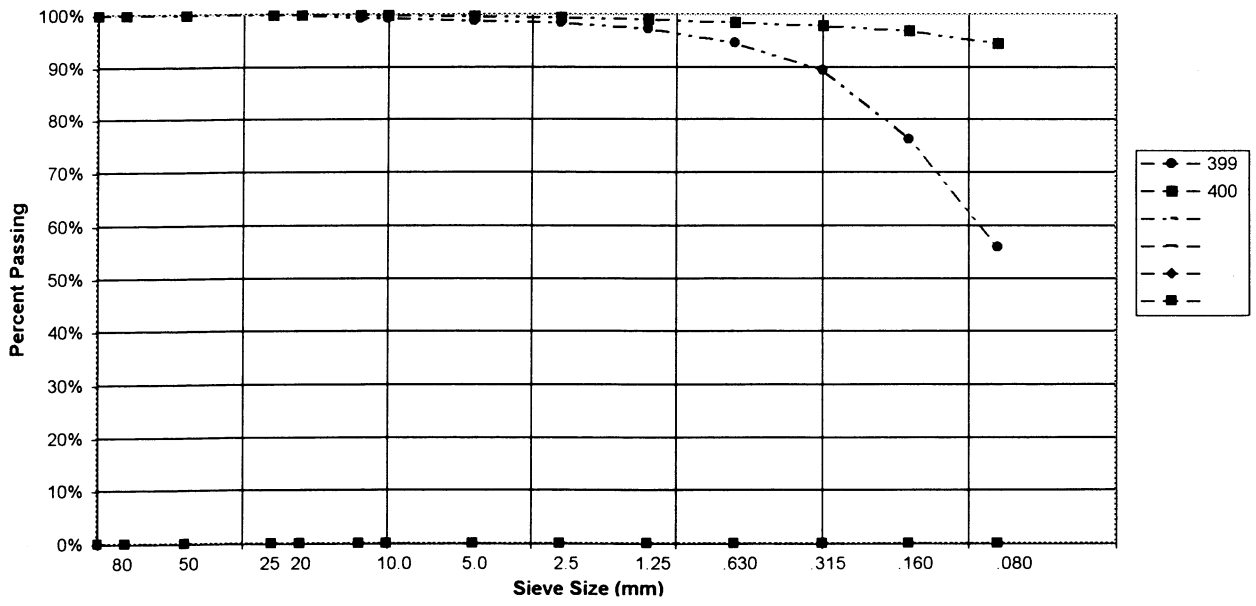
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 640194-6767340
LOGGED BY: RW

HOLE No.: 30021

DATE COMP: 08/18/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 399 | 400 | | | | |
| LAB NO: | 399 | 400 | | | | |
| DEPTH: | 0.3-0.9 | 2.1-2.7 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 100% | | | | |
| 20.0 | 100% | 100% | | | | |
| 12.5 | 99% | 100% | | | | |
| 10.0 | 99% | 100% | | | | |
| 5.0 | 99% | 100% | | | | |
| 2.5 | 99% | 100% | | | | |
| 1.25 | 97% | 99% | | | | |
| 0.630 | 95% | 99% | | | | |
| 0.315 | 89% | 98% | | | | |
| 0.160 | 76% | 97% | | | | |
| 0.080 | 56% | 95% | | | | |
| M.C.(%): | 35% | 38% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 1 | 0 | | | | |
| % SAND: | 43 | 5 | | | | |
| % FINES: | 56 | 95 | | | | |
| CLASSIFICATION | SANDY SILT (ML) | SILT (ML) | | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)

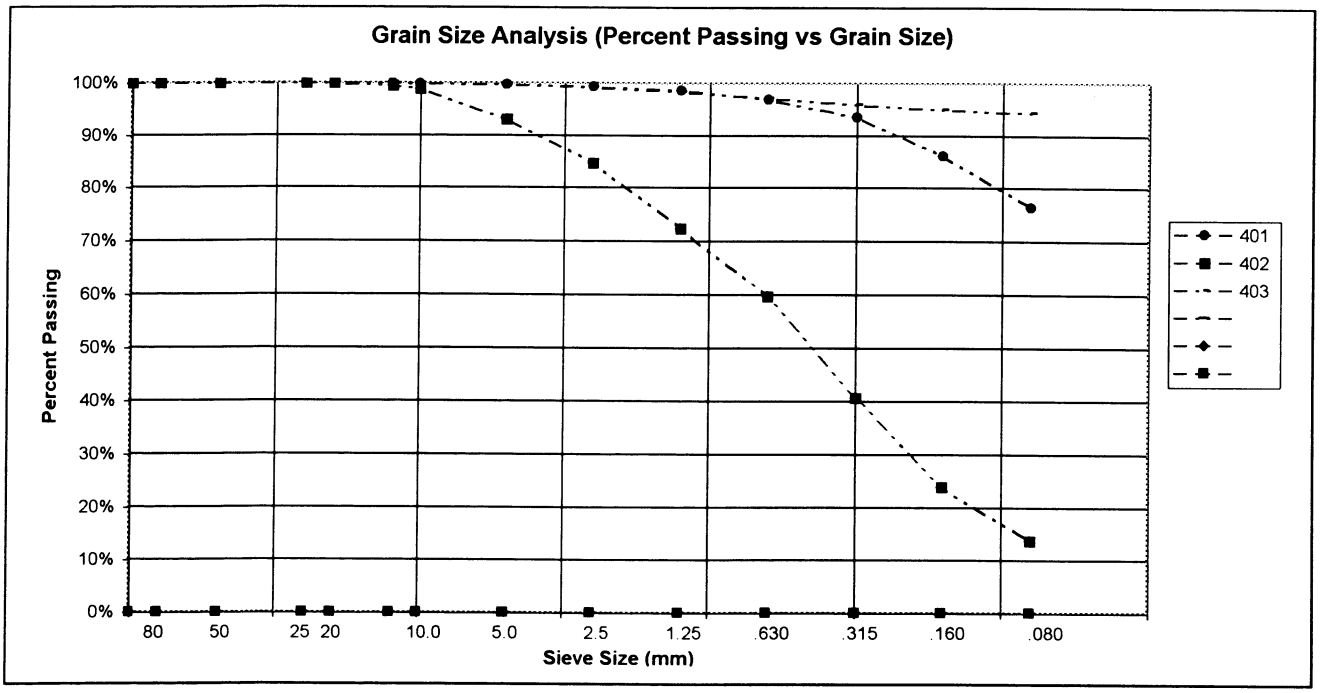


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30022 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 640041-6767232 | |
| LOGGED BY: | RW | DATE COMP: 08/18/2004 |

| FIELD NO: | 401 | 402 | 403 | | | |
|---|---|---|---|---|---|---|
| LAB NO: | 401 | 402 | 403 | | | |
| DEPTH: | 0.5-1.0 | 1.5-2.1 | 2.6-2.9 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| **SIEVE SIZE** | **PERCENT PASSING** | **PERCENT PASSING** | **PERCENT PASSING** | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 100% | 100% | 100% | | | |
| 20.0 | 100% | 100% | 100% | | | |
| 12.5 | 100% | 100% | 100% | | | |
| 10.0 | 100% | 99% | 100% | | | |
| 5.0 | 100% | 93% | 100% | | | |
| 2.5 | 99% | 85% | 99% | | | |
| 1.25 | 99% | 72% | 98% | | | |
| 0.630 | 97% | 60% | 97% | | | |
| 0.315 | 94% | 41% | 96% | | | |
| 0.160 | 86% | 24% | 95% | | | |
| 0.080 | 76% | 14% | 94% | | | |
| M.C.(%): | 30% | 14% | 40% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 0 | 7 | 0 | | | |
| % SAND: | 23 | 79 | 5 | | | |
| % FINES: | 76 | 14 | 94 | | | |
| CLASSIFICATION | SILT WITH SAND (ML) | SILTY SAND (SM) | SILT (ML) | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

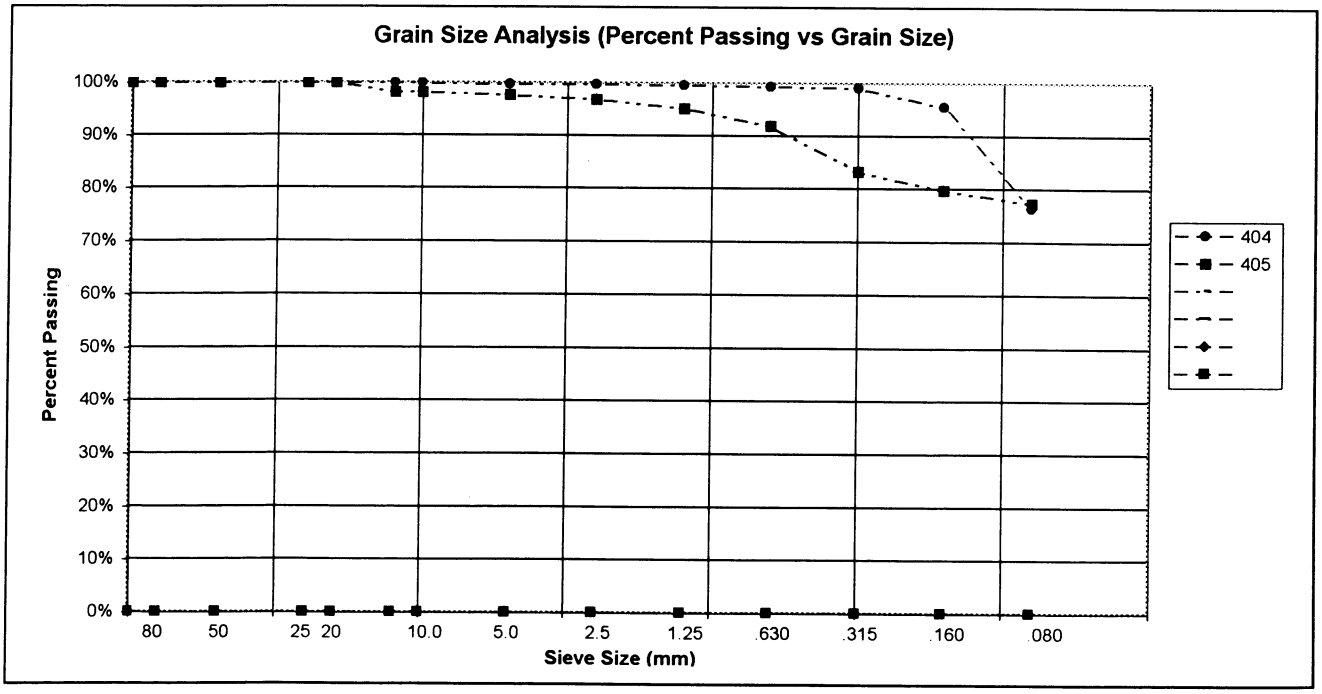
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 639890-6767125
LOGGED BY: RW

HOLE No.: 30023

DATE COMP: 08/18/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 404 | 405 | | | | |
| LAB NO: | 404 | 405 | | | | |
| DEPTH: | 0.3-0.9 | 1.2-1.8 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 100% | | | | |
| 20.0 | 100% | 100% | | | | |
| 12.5 | 100% | 98% | | | | |
| 10.0 | 100% | 98% | | | | |
| 5.0 | 100% | 98% | | | | |
| 2.5 | 100% | 97% | | | | |
| 1.25 | 100% | 95% | | | | |
| 0.630 | 99% | 92% | | | | |
| 0.315 | 99% | 83% | | | | |
| 0.160 | 95% | 80% | | | | |
| 0.080 | 76% | 77% | | | | |
| M.C.(%): | 29% | 35% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 0 | 2 | | | | |
| % SAND: | 23 | 20 | | | | |
| % FINES: | 76 | 77 | | | | |
| CLASSIFICATION | SILT WITH SAND (ML) | SILT WITH SAND (ML) | | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

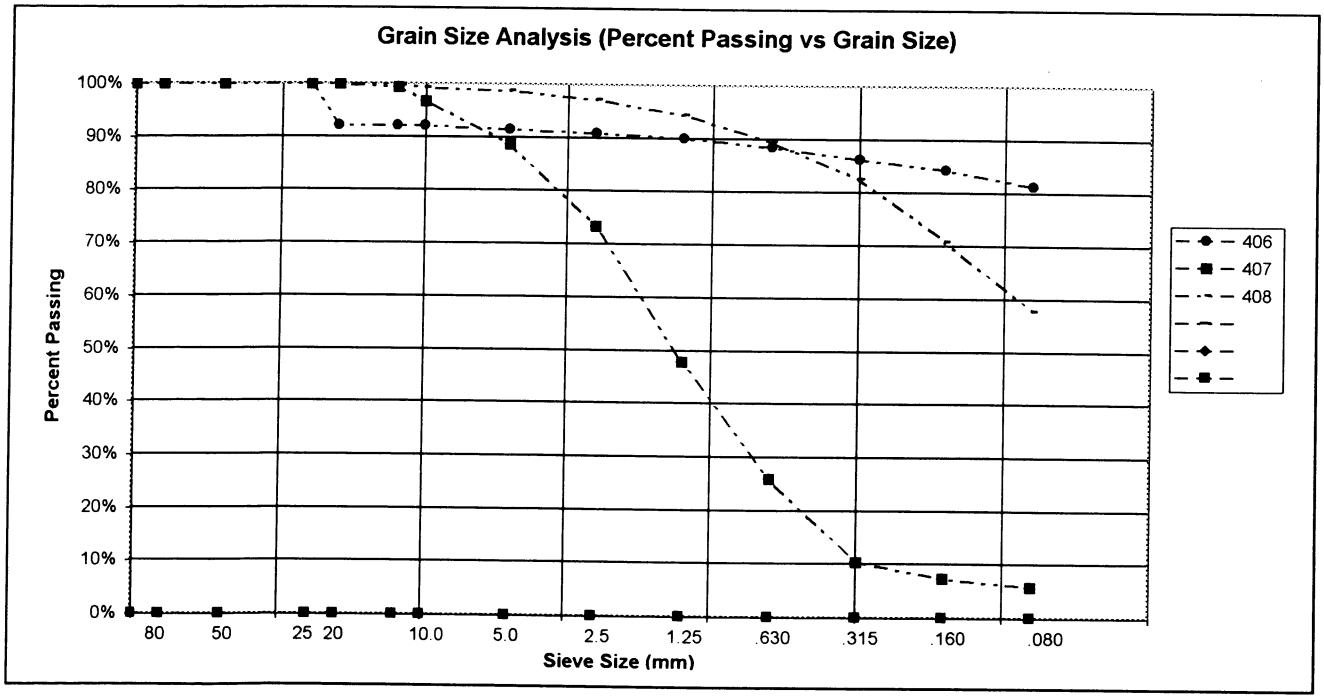
An Affiliate of J. H. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 639688-6766983
LOGGED BY: RW

HOLE No.: 30024

DATE COMP: 08/18/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 406 | 407 | 408 | | | |
| LAB NO: | 406 | 407 | 408 | | | |
| DEPTH: | 0.3-0.9 | 1.5-2.1 | 2.1-2.7 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 100% | 100% | 100% | | | |
| 20.0 | 92% | 100% | 100% | | | |
| 12.5 | 92% | 99% | 100% | | | |
| 10.0 | 92% | 97% | 99% | | | |
| 5.0 | 92% | 89% | 99% | | | |
| 2.5 | 91% | 73% | 97% | | | |
| 1.25 | 90% | 48% | 94% | | | |
| 0.630 | 88% | 26% | 89% | | | |
| 0.315 | 86% | 10% | 83% | | | |
| 0.160 | 84% | 7% | 71% | | | |
| 0.080 | 81% | 6% | 58% | | | |
| M.C.(%): | 37% | 13% | 28% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 8 | 11 | 1 | | | |
| % SAND: | 10 | 83 | 41 | | | |
| % FINES: | 81 | 6 | 58 | | | |
| CLASSIFICATION | SILT WITH SAND (ML) | WELL-GRADED SAND WITH SILT (SW-SM) | SANDY SILT (ML) | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

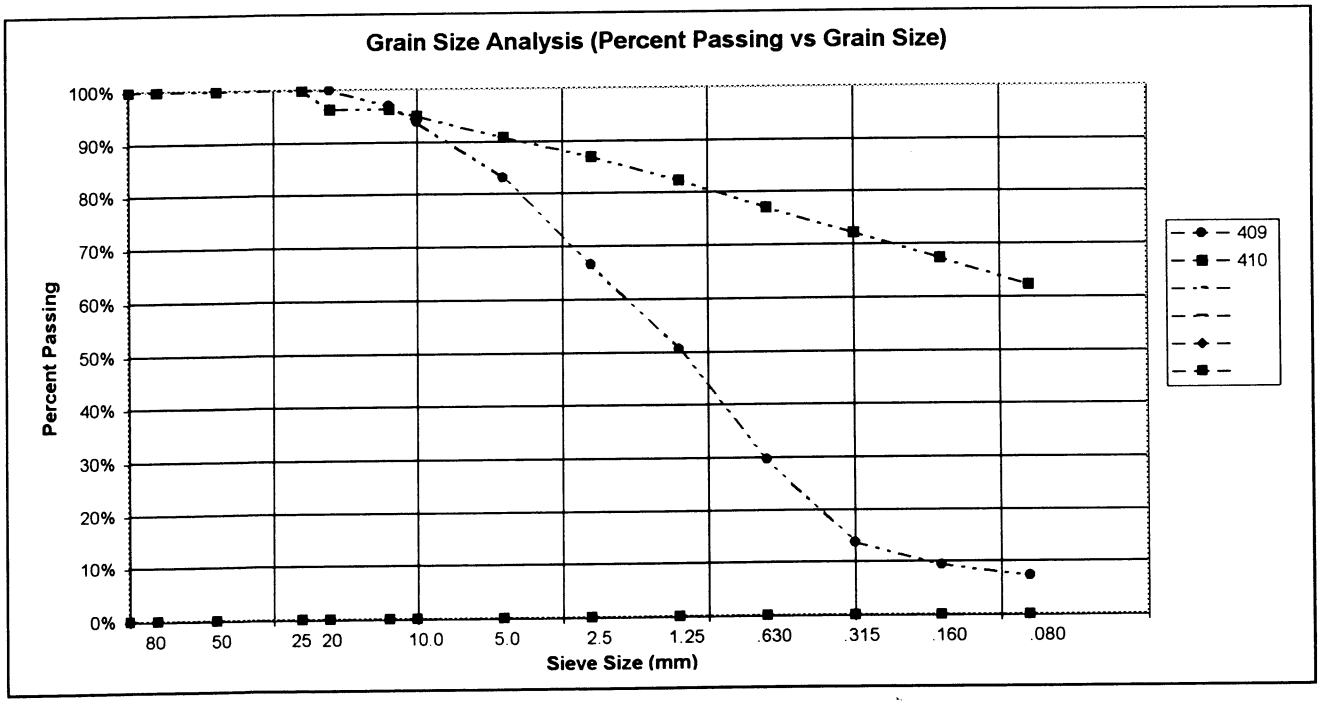
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 639558-6766885
LOGGED BY: RW

HOLE No.: 30025

DATE COMP: 08/18/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 409 | 410 | | | | |
| LAB NO: | 409 | 410 | | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 100% | | | | |
| 20.0 | 100% | 96% | | | | |
| 12.5 | 97% | 96% | | | | |
| 10.0 | 94% | 95% | | | | |
| 5.0 | 83% | 91% | | | | |
| 2.5 | 67% | 87% | | | | |
| 1.25 | 51% | 82% | | | | |
| 0.630 | 30% | 77% | | | | |
| 0.315 | 14% | 72% | | | | |
| 0.160 | 9% | 68% | | | | |
| 0.080 | 7% | 62% | | | | |
| M.C.(%): | 2% | 26% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 17 | 9 | | | | |
| % SAND: | 76 | 28 | | | | |
| % FINES: | 7 | 62 | | | | |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SANDY SILT (ML) | | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

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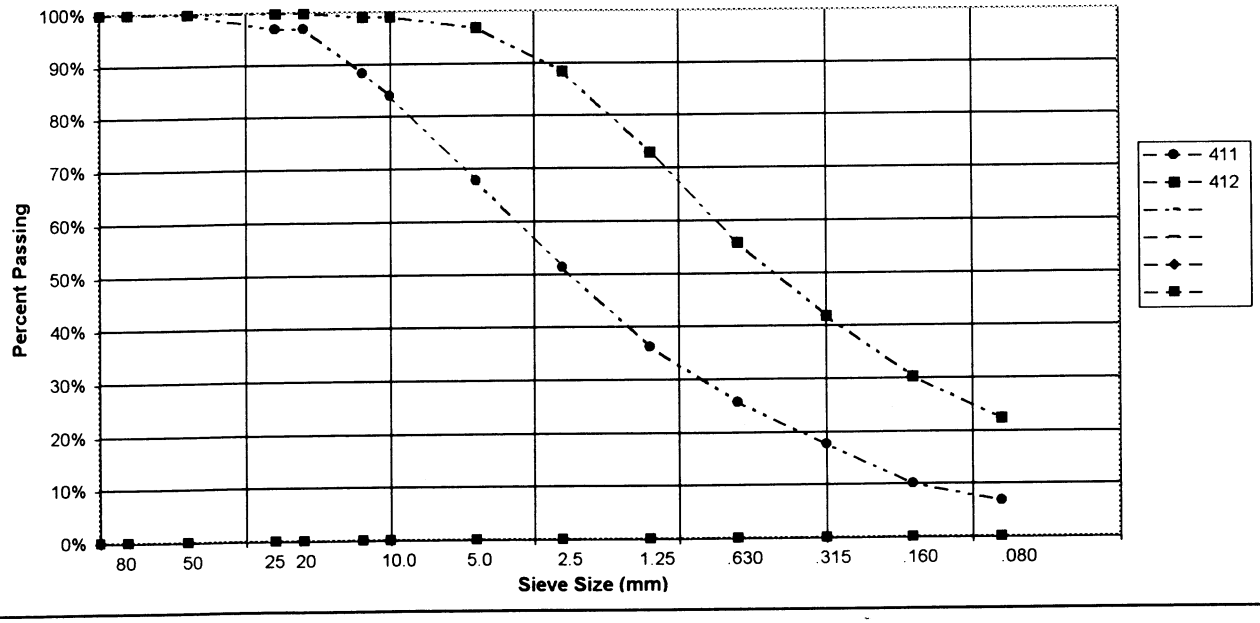
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 639356-6766769
LOGGED BY: RW

HOLE No.: 30026

DATE COMP: 08/18/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 411 | 412 | | | | |
| LAB NO: | 411 | 412 | | | | |
| DEPTH: | 0.3-0.9 | 2.1-2.7 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 97% | 100% | | | | |
| 20.0 | 97% | 100% | | | | |
| 12.5 | 88% | 99% | | | | |
| 10.0 | 84% | 99% | | | | |
| 5.0 | 68% | 97% | | | | |
| 2.5 | 51% | 89% | | | | |
| 1.25 | 36% | 73% | | | | |
| 0.630 | 26% | 56% | | | | |
| 0.315 | 18% | 42% | | | | |
| 0.160 | 10% | 30% | | | | |
| 0.080 | 7% | 23% | | | | |
| M.C.(%): | 2% | 4% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 32 | 3 | | | | |
| % SAND: | 61 | 74 | | | | |
| % FINES: | 7 | 23 | | | | |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY SAND (SM) | | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

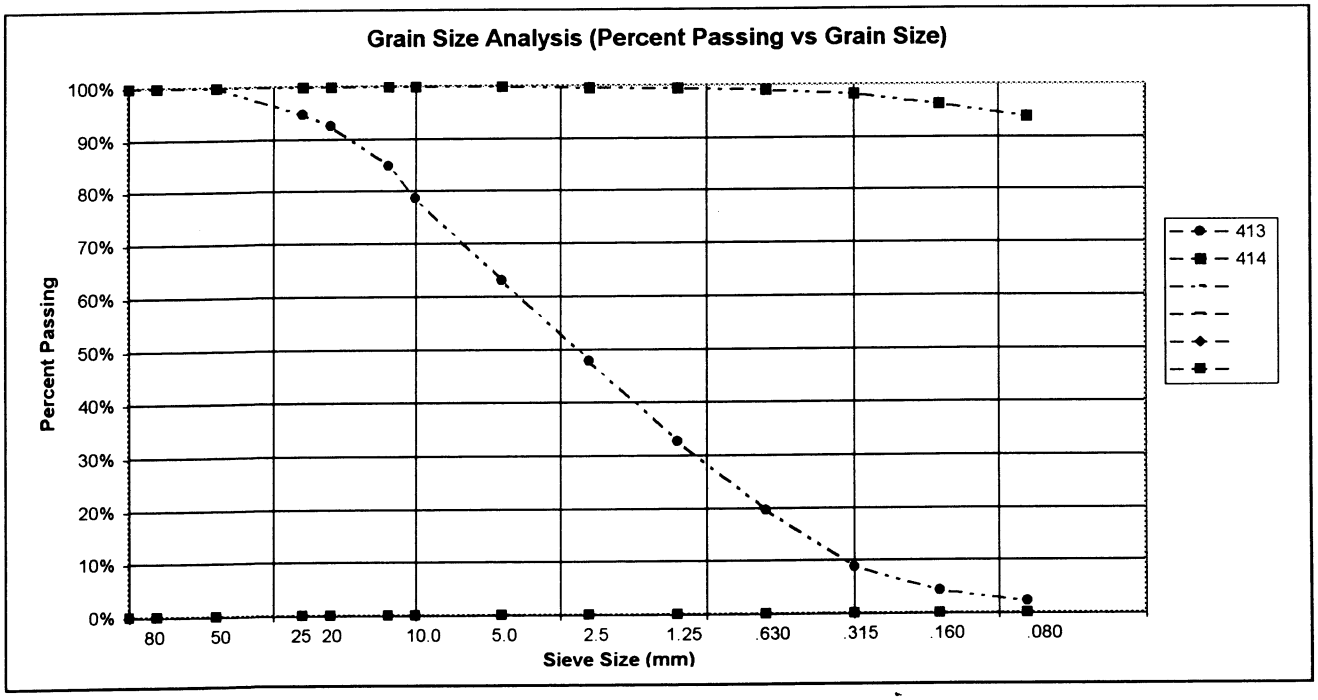
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 639213-6766735
LOGGED BY: RW

HOLE No.: 30027

DATE COMP: 08/19/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 413 | 414 | | | | |
| LAB NO: | 413 | 414 | | | | |
| DEPTH: | 0.1-0.6 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 95% | 100% | | | | |
| 20.0 | 93% | 100% | | | | |
| 12.5 | 85% | 100% | | | | |
| 10.0 | 79% | 100% | | | | |
| 5.0 | 63% | 100% | | | | |
| 2.5 | 48% | 100% | | | | |
| 1.25 | 33% | 99% | | | | |
| 0.630 | 20% | 99% | | | | |
| 0.315 | 9% | 98% | | | | |
| 0.160 | 4% | 96% | | | | |
| 0.080 | 2% | 94% | | | | |
| M.C.(%): | 9% | 39% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 37 | 0 | | | | |
| % SAND: | 61 | 6 | | | | |
| % FINES: | 2 | 94 | | | | |
| CLASSIFICATION | WELL-GRADED SAND WITH GRAVEL (SW) | SILT (ML) | | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

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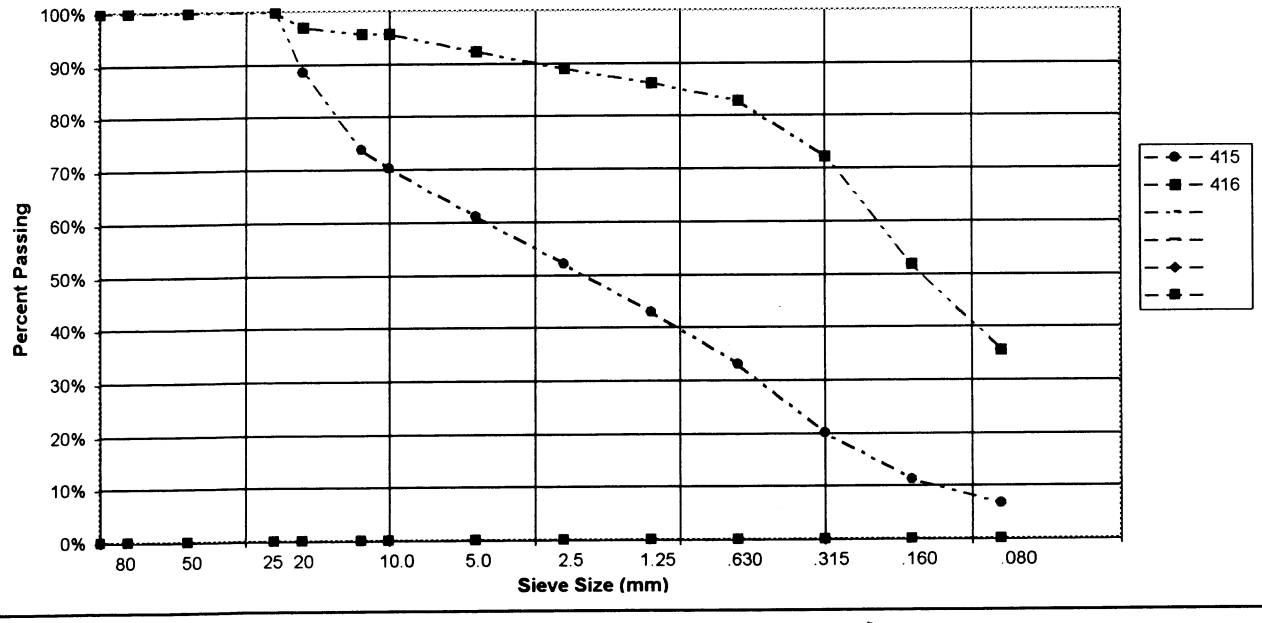
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 639229-6766708
LOGGED BY: RW

HOLE No.: 30028

DATE COMP: 08/19/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 415 | 416 | | | | |
| LAB NO: | 415 | 416 | | | | |
| DEPTH: | 0.3-0.9 | 2.4-3.0 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 100% | | | | |
| 20.0 | 89% | 97% | | | | |
| 12.5 | 74% | 96% | | | | |
| 10.0 | 70% | 96% | | | | |
| 5.0 | 61% | 92% | | | | |
| 2.5 | 52% | 89% | | | | |
| 1.25 | 43% | 86% | | | | |
| 0.630 | 33% | 83% | | | | |
| 0.315 | 20% | 72% | | | | |
| 0.160 | 11% | 52% | | | | |
| 0.080 | 7% | 36% | | | | |
| M.C.(%): | 9% | 18% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 39 | 8 | | | | |
| % SAND: | 54 | 57 | | | | |
| % FINES: | 7 | 36 | | | | |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY SAND (SM) | | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

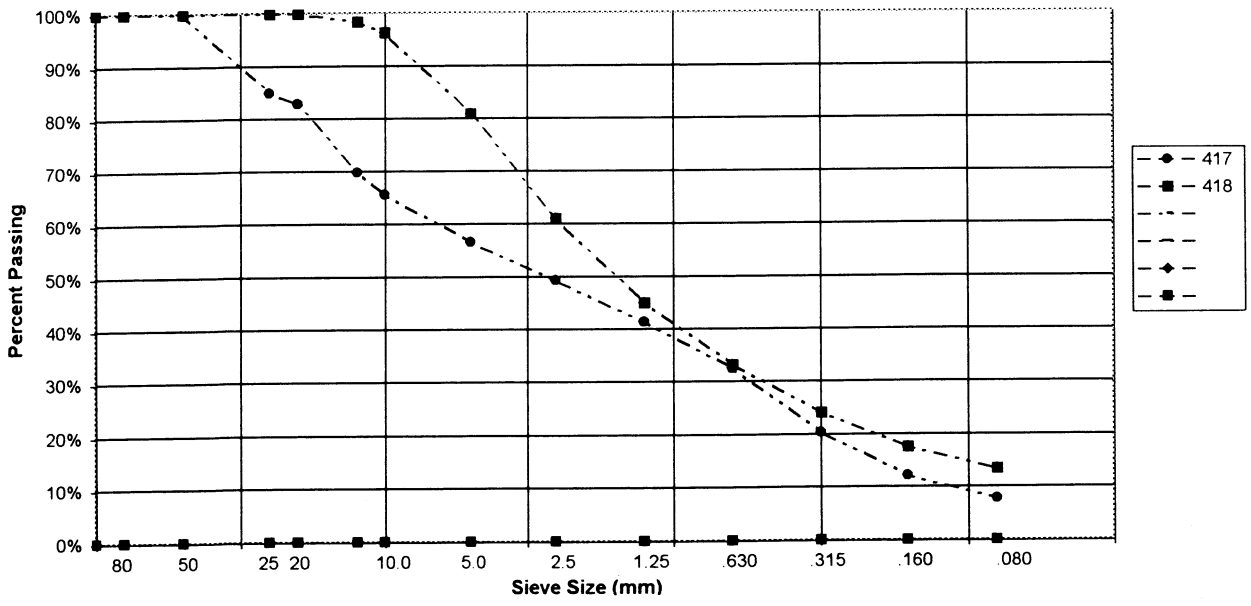
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 639106-6766653
LOGGED BY: RW

HOLE No.: 30029

DATE COMP: 08/19/2004

| FIELD NO: | 417 | 418 | | | | |
|---|---|---|---|---|---|---|
| LAB NO: | 417 | 418 | | | | |
| DEPTH: | 0.3-0.9 | 2.4-2.9 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 85% | 100% | | | | |
| 20.0 | 83% | 100% | | | | |
| 12.5 | 70% | 98% | | | | |
| 10.0 | 66% | 96% | | | | |
| 5.0 | 57% | 81% | | | | |
| 2.5 | 49% | 61% | | | | |
| 1.25 | 41% | 45% | | | | |
| 0.630 | 32% | 33% | | | | |
| 0.315 | 20% | 24% | | | | |
| 0.160 | 12% | 18% | | | | |
| 0.080 | 8% | 14% | | | | |
| M.C.(%): | 4% | 3% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 43 | 19 | | | | |
| % SAND: | 49 | 67 | | | | |
| % FINES: | 8 | 14 | | | | |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY SAND WITH GRAVEL (SM) | | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

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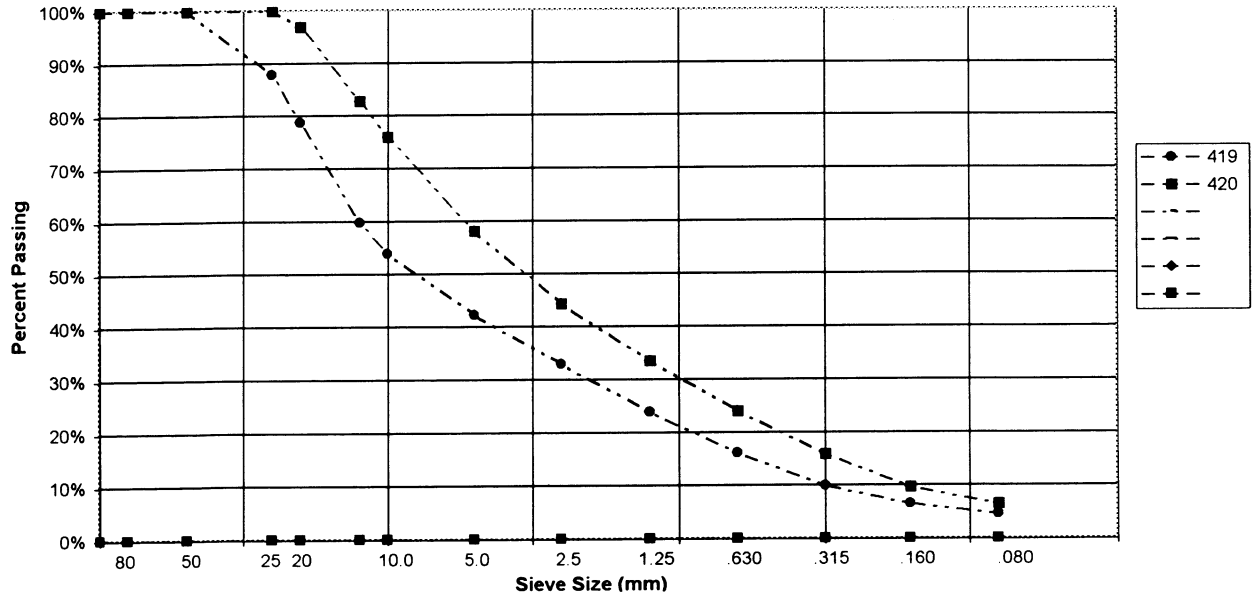
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 638909-6766547
LOGGED BY: RW

HOLE No.: 30030

DATE COMP: 08/19/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 419 | 420 | | | | |
| LAB NO: | 419 | 420 | | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 88% | 100% | | | | |
| 20.0 | 79% | 97% | | | | |
| 12.5 | 60% | 83% | | | | |
| 10.0 | 54% | 76% | | | | |
| 5.0 | 42% | 58% | | | | |
| 2.5 | 33% | 44% | | | | |
| 1.25 | 24% | 34% | | | | |
| 0.630 | 16% | 24% | | | | |
| 0.315 | 10% | 16% | | | | |
| 0.160 | 7% | 10% | | | | |
| 0.080 | 5% | 7% | | | | |
| M.C.(%): | 4% | 8% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 58 | 42 | | | | |
| % SAND: | 38 | 52 | | | | |
| % FINES: | 5 | 7 | | | | |
| CLASSIFICATION | WELL-GRADED GRAVEL WITH SAND (GW) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

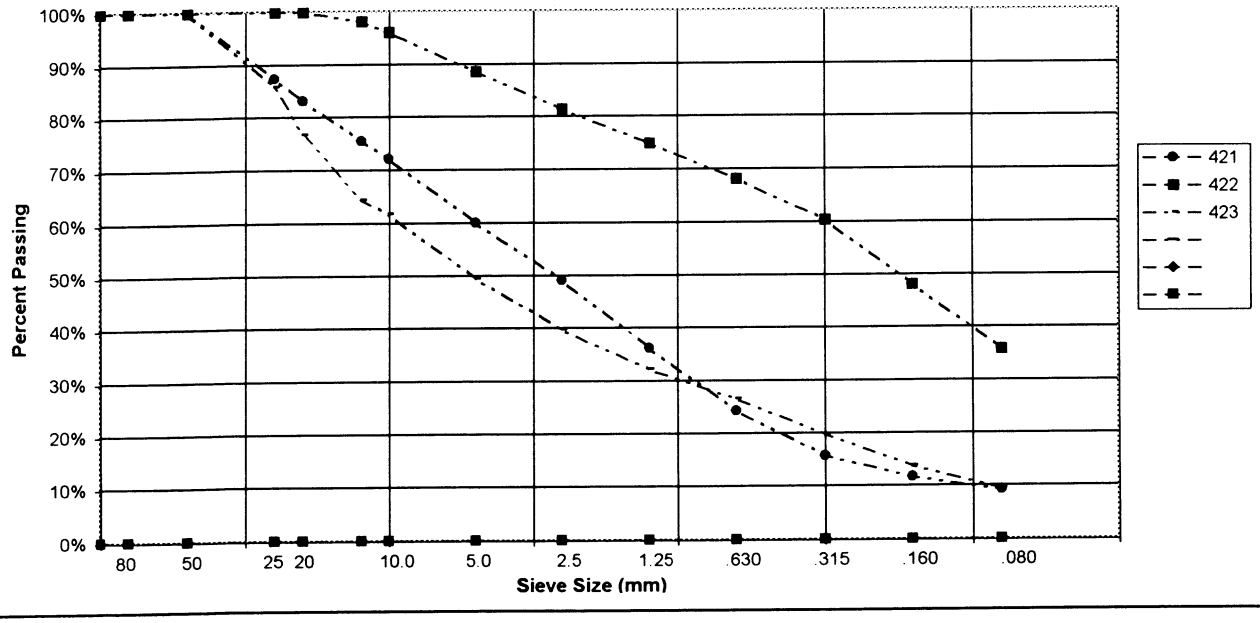
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 638926-6766525
LOGGED BY: RW

HOLE No.: 30031

DATE COMP: 08/19/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 421 | 422 | 423 | | | |
| LAB NO: | 421 | 422 | 423 | | | |
| DEPTH: | 0.3-0.9 | 1.2-1.5 | 2.4-2.9 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 87% | 100% | 86% | | | |
| 20.0 | 83% | 100% | 77% | | | |
| 12.5 | 76% | 98% | 64% | | | |
| 10.0 | 72% | 96% | 62% | | | |
| 5.0 | 60% | 89% | 49% | | | |
| 2.5 | 49% | 81% | 40% | | | |
| 1.25 | 36% | 75% | 32% | | | |
| 0.630 | 24% | 68% | 27% | | | |
| 0.315 | 16% | 60% | 20% | | | |
| 0.160 | 12% | 48% | 14% | | | |
| 0.080 | 9% | 36% | 10% | | | |
| M.C.(%): | 4% | 25% | 5% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 40 | 11 | 51 | | | |
| % SAND: | 51 | 53 | 40 | | | |
| % FINES: | 9 | 36 | 10 | | | |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY SAND (SM) | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

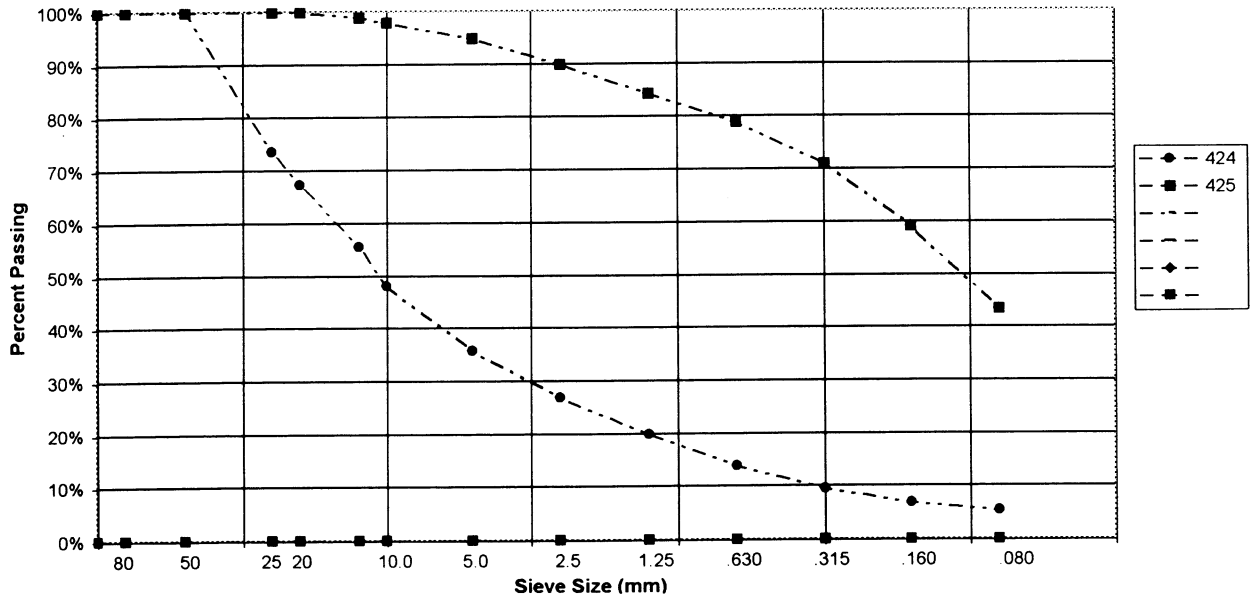
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 638808-6766403
LOGGED BY: RW

HOLE No.: 30032

DATE COMP: 08/19/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 424 | 425 | | | | |
| LAB NO: | 424 | 425 | | | | |
| DEPTH: | 0.3-0.9 | 2.4-3.0 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 74% | 100% | | | | |
| 20.0 | 67% | 100% | | | | |
| 12.5 | 56% | 99% | | | | |
| 10.0 | 48% | 98% | | | | |
| 5.0 | 36% | 95% | | | | |
| 2.5 | 27% | 90% | | | | |
| 1.25 | 20% | 84% | | | | |
| 0.630 | 14% | 79% | | | | |
| 0.315 | 10% | 71% | | | | |
| 0.160 | 7% | 59% | | | | |
| 0.080 | 5% | 44% | | | | |
| M.C.(%): | 2% | 23% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 64 | 5 | | | | |
| % SAND: | 30 | 51 | | | | |
| % FINES: | 5 | 44 | | | | |
| CLASSIFICATION | WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) | SILTY SAND (SM) | | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

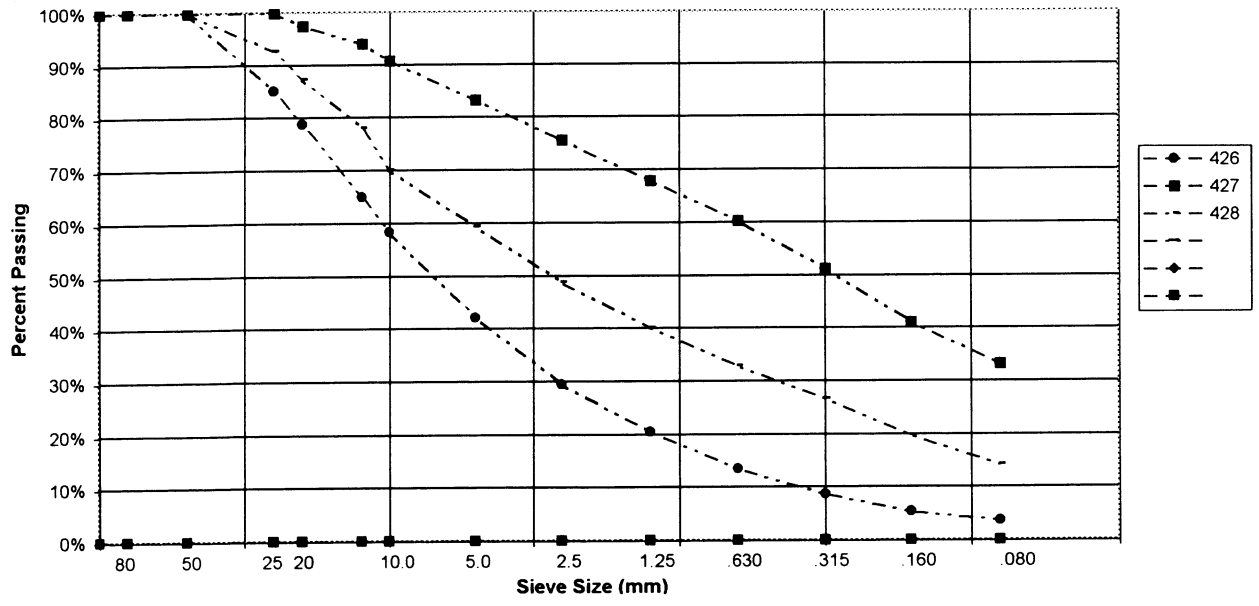
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 638653-6766235
LOGGED BY: RW

HOLE No.: 30033

DATE COMP: 08/19/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 426 | 427 | 428 | | | |
| LAB NO: | 426 | 427 | 428 | | | |
| DEPTH: | 0.3-0.9 | 1.5-2.1 | 2.1-2.7 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 85% | 100% | 93% | | | |
| 20.0 | 79% | 97% | 87% | | | |
| 12.5 | 65% | 94% | 78% | | | |
| 10.0 | 58% | 91% | 70% | | | |
| 5.0 | 42% | 83% | 59% | | | |
| 2.5 | 29% | 76% | 49% | | | |
| 1.25 | 21% | 68% | 40% | | | |
| 0.630 | 14% | 60% | 33% | | | |
| 0.315 | 9% | 51% | 27% | | | |
| 0.160 | 5% | 41% | 20% | | | |
| 0.080 | 4% | 33% | 14% | | | |
| M.C.(%): | 3% | 23% | 9% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 58 | 17 | 41 | | | |
| % SAND: | 39 | 50 | 45 | | | |
| % FINES: | 4 | 33 | 14 | | | |
| CLASSIFICATION | WELL-GRADED GRAVEL WITH SAND (GW) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. H. Paine & Associates Ltd.

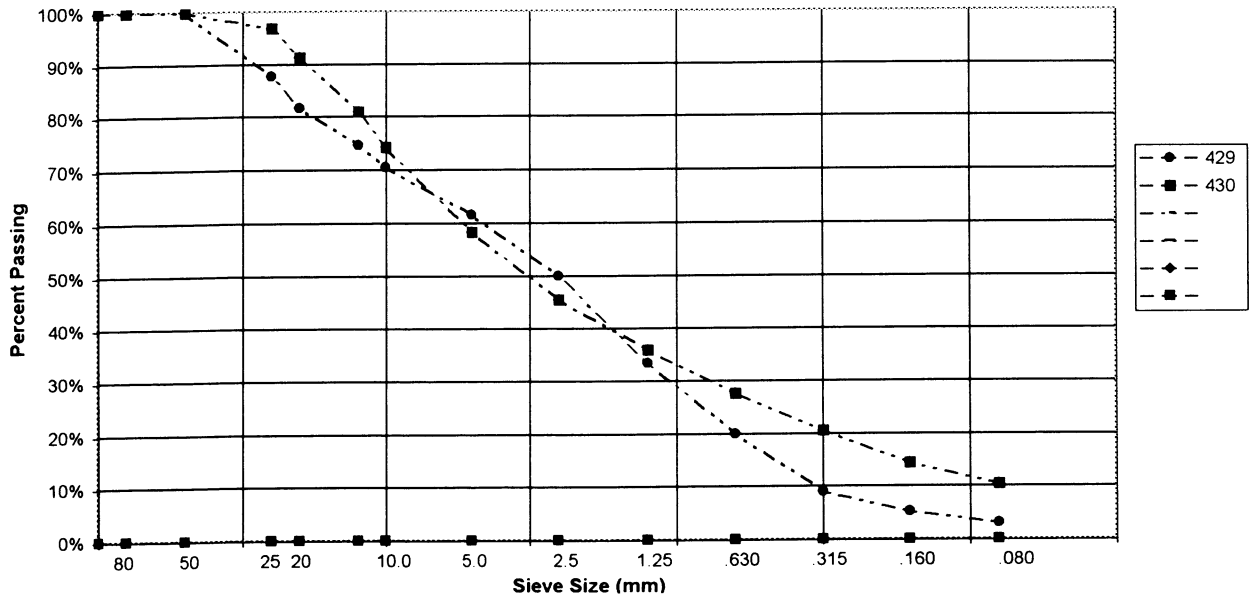
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 638452-6766172
LOGGED BY: RW

HOLE No.: 30034

DATE COMP: 08/19/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 429 | 430 | | | | |
| LAB NO: | 429 | 430 | | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 88% | 97% | | | | |
| 20.0 | 82% | 91% | | | | |
| 12.5 | 75% | 81% | | | | |
| 10.0 | 71% | 74% | | | | |
| 5.0 | 62% | 58% | | | | |
| 2.5 | 50% | 46% | | | | |
| 1.25 | 33% | 36% | | | | |
| 0.630 | 20% | 28% | | | | |
| 0.315 | 9% | 21% | | | | |
| 0.160 | 5% | 15% | | | | |
| 0.080 | 3% | 11% | | | | |
| M.C.(%): | 2% | 8% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 38 | 42 | | | | |
| % SAND: | 59 | 48 | | | | |
| % FINES: | 3 | 11 | | | | |
| CLASSIFICATION | WELL-GRADED SAND WITH GRAVEL (SW) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | | | | |

**Grain Size Analysis (Percent Passing vs Grain Size)**



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

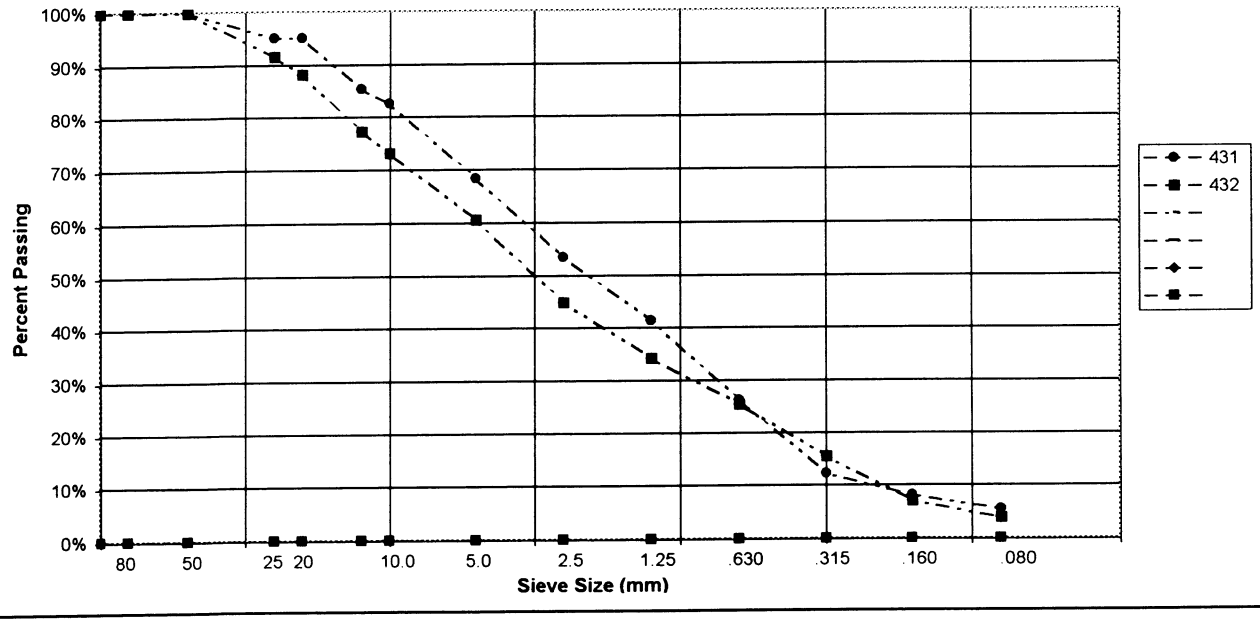
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 638287-6766094
LOGGED BY: RW

HOLE No.: 30035

DATE COMP: 08/19/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 431 | 432 | | | | |
| LAB NO: | 431 | 432 | | | | |
| DEPTH: | 0.3-0.9 | 2.1-2.7 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 95% | 92% | | | | |
| 20.0 | 95% | 88% | | | | |
| 12.5 | 85% | 77% | | | | |
| 10.0 | 83% | 73% | | | | |
| 5.0 | 68% | 61% | | | | |
| 2.5 | 54% | 45% | | | | |
| 1.25 | 41% | 34% | | | | |
| 0.630 | 26% | 25% | | | | |
| 0.315 | 12% | 16% | | | | |
| 0.160 | 8% | 7% | | | | |
| 0.080 | 6% | 4% | | | | |
| M.C.(%): | 2% | 3% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 32 | 39 | | | | |
| % SAND: | 63 | 57 | | | | |
| % FINES: | 6 | 4 | | | | |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | WELL-GRADED SAND WITH GRAVEL (SW) | | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

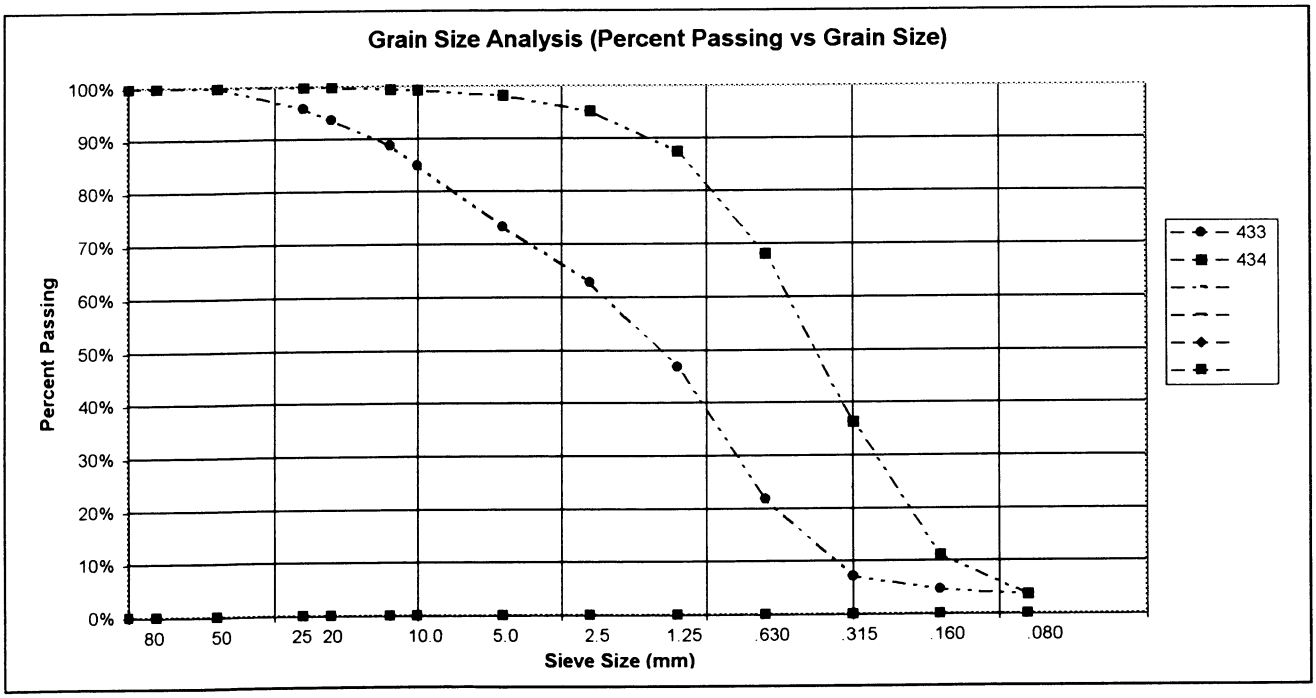
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 638094-6766043
LOGGED BY: RW

HOLE No.: 30036

DATE COMP: 08/19/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 433 | 434 | | | | |
| LAB NO: | 433 | 434 | | | | |
| DEPTH: | 0.3-0.9 | 2.1-2.7 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 96% | 100% | | | | |
| 20.0 | 94% | 100% | | | | |
| 12.5 | 89% | 100% | | | | |
| 10.0 | 85% | 99% | | | | |
| 5.0 | 73% | 98% | | | | |
| 2.5 | 63% | 95% | | | | |
| 1.25 | 47% | 88% | | | | |
| 0.630 | 22% | 68% | | | | |
| 0.315 | 7% | 36% | | | | |
| 0.160 | 5% | 11% | | | | |
| 0.080 | 4% | 4% | | | | |
| M.C.(%): | 2% | 7% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 27 | 2 | | | | |
| % SAND: | 70 | 95 | | | | |
| % FINES: | 4 | 4 | | | | |
| CLASSIFICATION | POORLY GRADED SAND WITH GRAVEL (SP) | WELL-GRADED SAND (SW) | | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

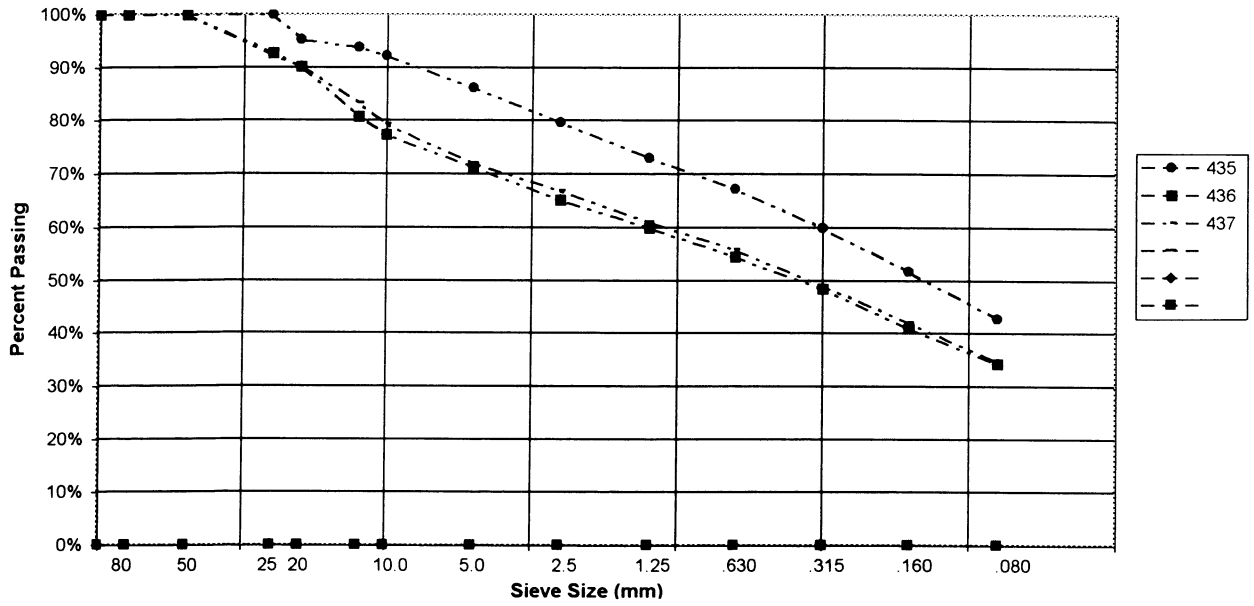
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 637902-6765969
LOGGED BY: RW

HOLE No.: 30037

DATE COMP: 08/19/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 435 | 436 | 437 | | | |
| LAB NO: | 435 | 436 | 437 | | | |
| DEPTH: | 0.3-0.9 | 2.1-2.7 | 3.4-4.0 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 100% | 93% | 92% | | | |
| 20.0 | 95% | 90% | 90% | | | |
| 12.5 | 94% | 81% | 83% | | | |
| 10.0 | 92% | 77% | 79% | | | |
| 5.0 | 86% | 71% | 72% | | | |
| 2.5 | 80% | 65% | 67% | | | |
| 1.25 | 73% | 60% | 61% | | | |
| 0.630 | 67% | 55% | 56% | | | |
| 0.315 | 60% | 49% | 49% | | | |
| 0.160 | 52% | 41% | 42% | | | |
| 0.080 | 43% | 34% | 35% | | | |
| M.C.(%): | 26% | 9% | 9% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 14 | 29 | 28 | | | |
| % SAND: | 43 | 37 | 37 | | | |
| % FINES: | 43 | 34 | 35 | | | |
| CLASSIFICATION | SILTY SAND (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

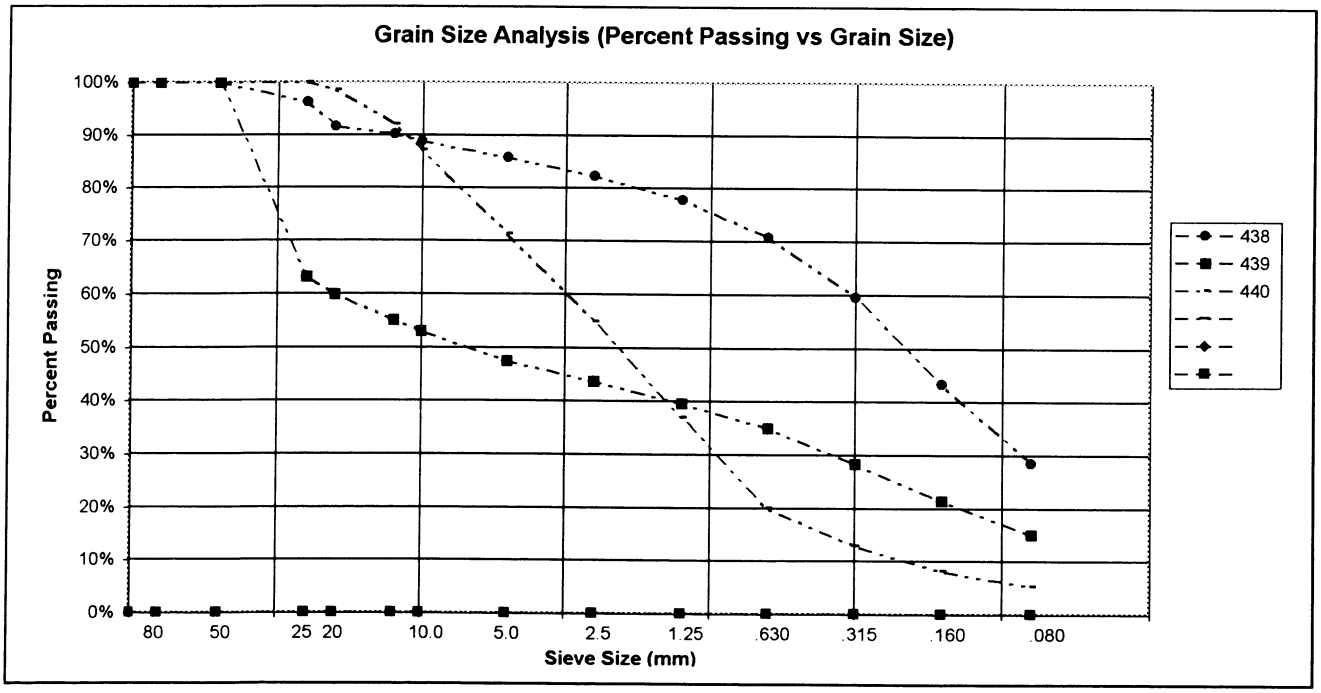
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 637704-6765920
LOGGED BY: RW

HOLE No.: 30038

DATE COMP: 08/19/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 438 | 439 | 440 | | | |
| LAB NO: | 438 | 439 | 440 | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | 3.2-3.6 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 96% | 63% | 100% | | | |
| 20.0 | 92% | 60% | 99% | | | |
| 12.5 | 90% | 55% | 92% | | | |
| 10.0 | 89% | 53% | 87% | | | |
| 5.0 | 86% | 47% | 71% | | | |
| 2.5 | 82% | 44% | 55% | | | |
| 1.25 | 78% | 40% | 37% | | | |
| 0.630 | 71% | 35% | 20% | | | |
| 0.315 | 60% | 28% | 13% | | | |
| 0.160 | 43% | 21% | 8% | | | |
| 0.080 | 29% | 15% | 5% | | | |
| M.C.(%): | 6% | 5% | 8% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 14 | 53 | 29 | | | |
| % SAND: | 57 | 32 | 66 | | | |
| % FINES: | 29 | 15 | 5 | | | |
| CLASSIFICATION | SILTY SAND (SM) | SILTY GRAVEL WITH SAND (GM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | | | |

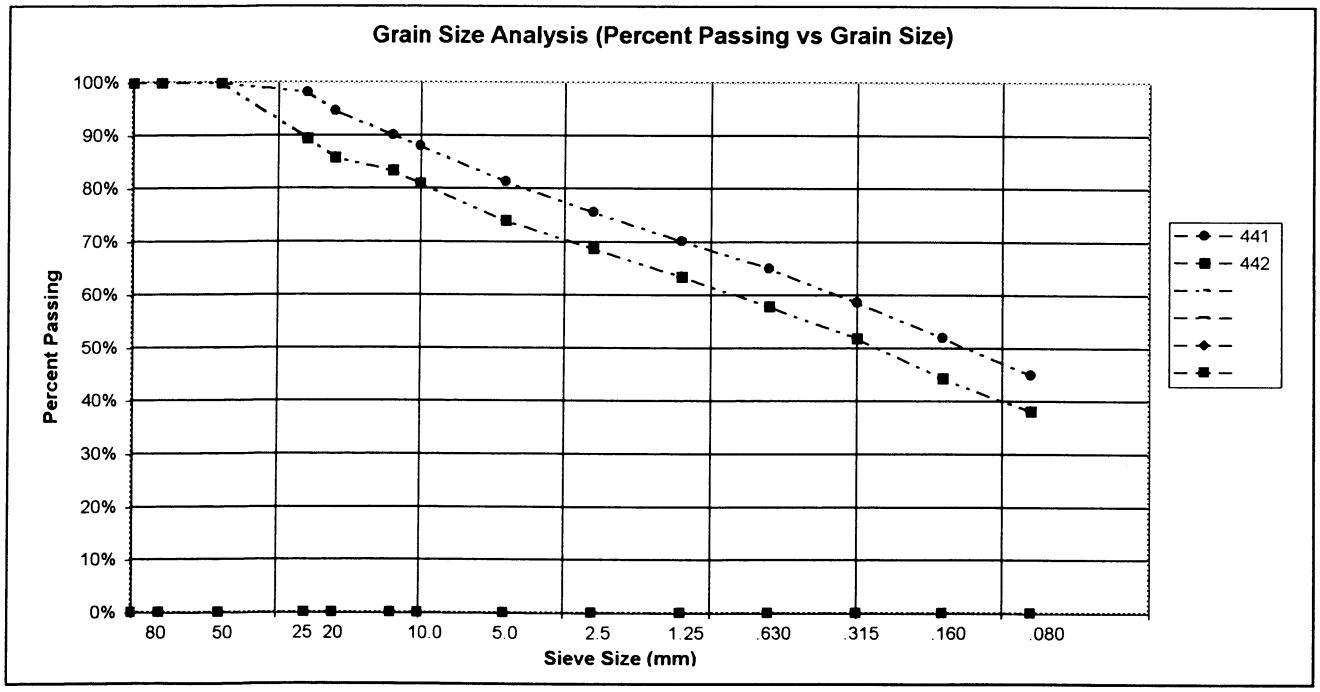


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | | |
|---|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: | 30039 |
| CLIENT: | YTG, Transportation & Engineering | | |
| PROJECT NAME: | Geotechnical Services | | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | | |
| DRILL UNIT: | CME75 | | |
| HOLE LOCATION: | 637563-6765818 | | |
| LOGGED BY: | RW | DATE COMP: | 08/19/2004 |

| FIELD NO: | 441 | 442 | | | | |
|---|---|---|---|---|---|---|
| LAB NO: | 441 | 442 | | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| **SIEVE SIZE** | **PERCENT PASSING** | **PERCENT PASSING** | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 98% | 89% | | | | |
| 20.0 | 95% | 86% | | | | |
| 12.5 | 90% | 83% | | | | |
| 10.0 | 88% | 81% | | | | |
| 5.0 | 81% | 74% | | | | |
| 2.5 | 76% | 69% | | | | |
| 1.25 | 70% | 64% | | | | |
| 0.630 | 65% | 58% | | | | |
| 0.315 | 59% | 52% | | | | |
| 0.160 | 52% | 44% | | | | |
| 0.080 | 45% | 38% | | | | |
| M.C.(%): | 9% | 7% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 19 | 26 | | | | |
| % SAND: | 36 | 36 | | | | |
| % FINES: | 45 | 38 | | | | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | | | | |

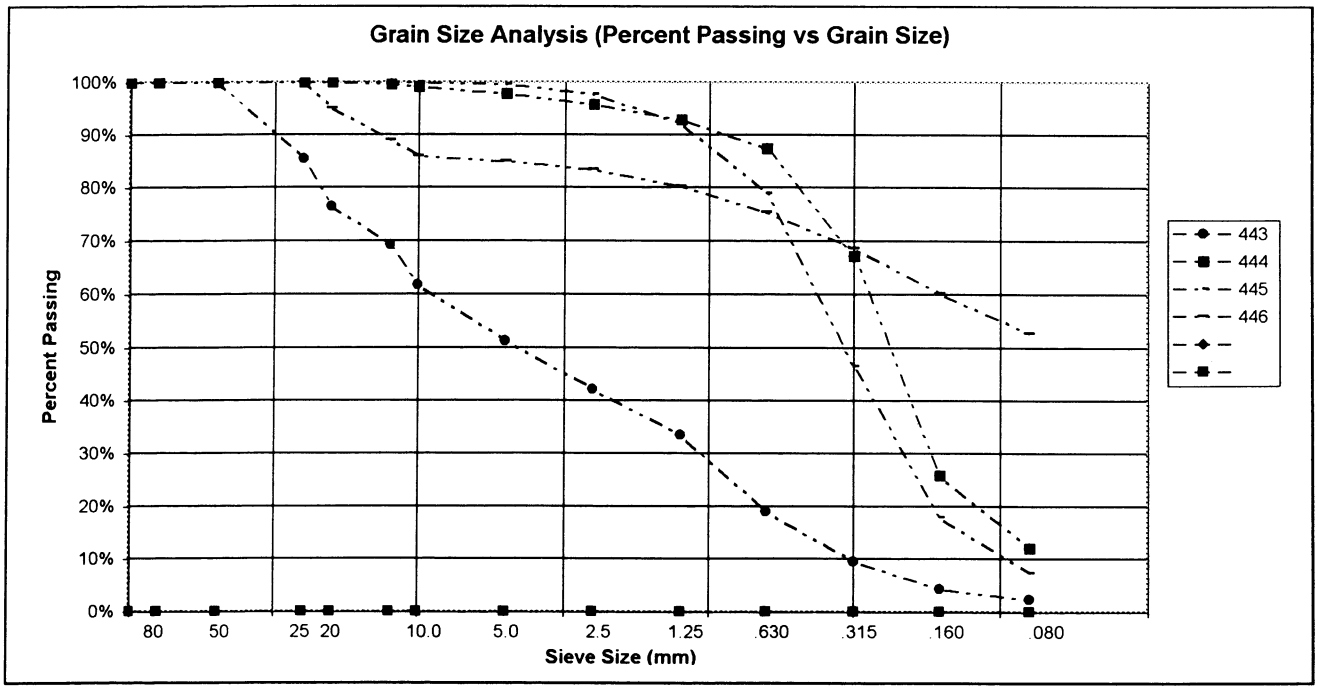


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | | |
|---|---|---|---|
| PROJECT NUMBER: | 8002-318 | | HOLE No.: 30040 |
| CLIENT: | YTG, Transportation & Engineering | | |
| PROJECT NAME: | Geotechnical Services | | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | | |
| DRILL UNIT: | CME75 | | |
| HOLE LOCATION: | 637444-6765598 | | |
| LOGGED BY: | RW | | DATE COMP: 08/19/2004 |

| FIELD NO: | 443 | 444 | 445 | 446 | | |
|---|---|---|---|---|---|---|
| LAB NO: | 443 | 444 | 445 | 446 | | |
| DEPTH: | 0.0-0.6 | 0.6-1.2 | 1.8-2.4 | 3.0-3.6 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| **SIEVE SIZE** | **PERCENT PASSING** | **PERCENT PASSING** | **PERCENT PASSING** | **PERCENT PASSING** | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 85% | 100% | 100% | 100% | | |
| 20.0 | 76% | 100% | 100% | 95% | | |
| 12.5 | 69% | 100% | 100% | 89% | | |
| 10.0 | 62% | 99% | 100% | 86% | | |
| 5.0 | 51% | 98% | 100% | 85% | | |
| 2.5 | 42% | 96% | 98% | 83% | | |
| 1.25 | 33% | 93% | 92% | 80% | | |
| 0.630 | 19% | 87% | 79% | 75% | | |
| 0.315 | 10% | 67% | 47% | 69% | | |
| 0.160 | 4% | 26% | 18% | 60% | | |
| 0.080 | 2% | 12% | 7% | 53% | | |
| M.C.(%): | 8% | 23% | 26% | 91% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 49 | 2 | 0 | 15 | | |
| % SAND: | 49 | 86 | 92 | 32 | | |
| % FINES: | 2 | 12 | 7 | 53 | | |
| CLASSIFICATION | WELL-GRADED SAND WITH GRAVEL (SW) | SILTY SAND (SM) | WELL-GRADED SAND WITH SILT (SW-SM) | SANDY SILT (ML) | | |

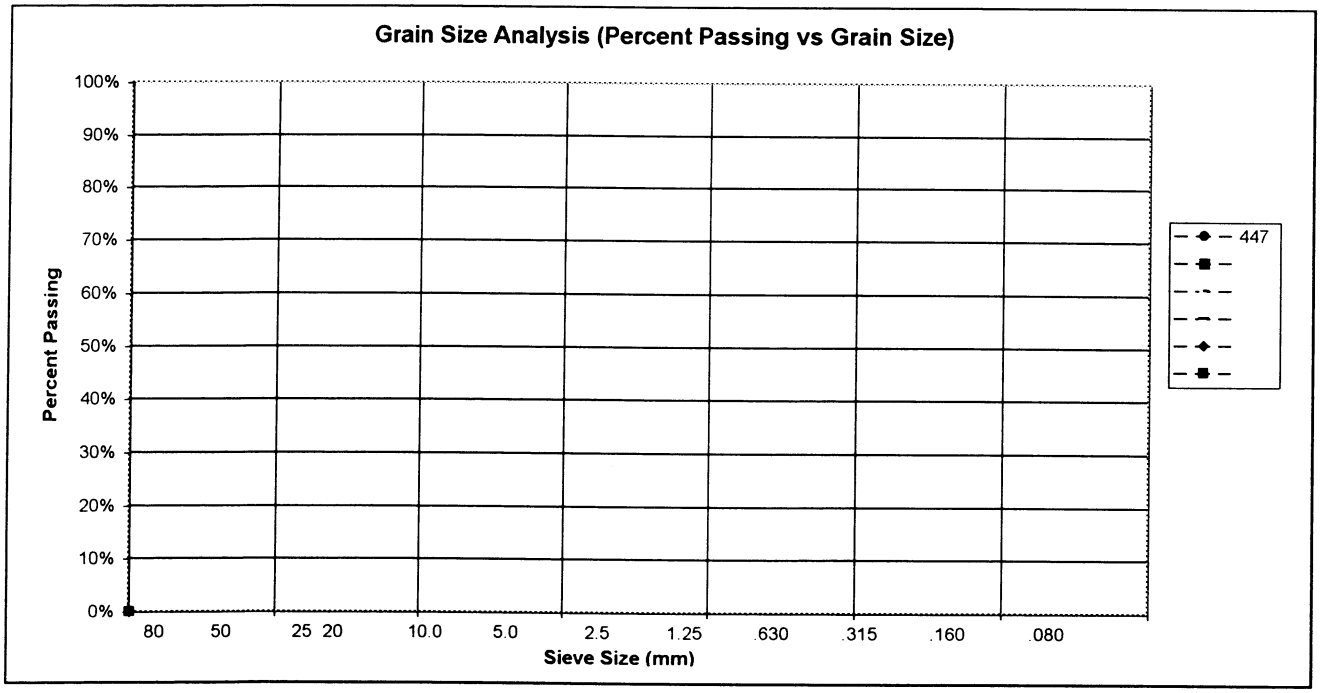


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | | |
|---|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: | 30041 |
| CLIENT: | YTG, Transportation & Engineering | | |
| PROJECT NAME: | Geotechnical Services | | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | | |
| DRILL UNIT: | CME75 | | |
| HOLE LOCATION: | 637429-6765452 | | |
| LOGGED BY: | RW | DATE COMP: | 08/20/2004 |

| | |
|---|---|
| FIELD NO: | 447 |
| LAB NO: | 447 |
| DEPTH: | 1.4 |
| TYPE: | S.P.T. |
| **SIEVE SIZE** | **PERCENT PASSING** |
| 100.0 | |
| 80.0 | |
| 50.0 | |
| 25.0 | |
| 20.0 | |
| 12.5 | |
| 10.0 | |
| 5.0 | |
| 2.5 | |
| 1.25 | |
| 0.630 | |
| 0.315 | |
| 0.160 | |
| 0.080 | |
| M.C.(%): | 8% |
| LIQUID LIMIT: | 0.0 |
| PLASTIC LIMIT: | 0.0 |
| PLASTIC INDEX.: | 0.0 |
| % GRAVEL: | #VALUE! |
| % SAND: | #VALUE! |
| % FINES: | #VALUE! |
| CLASSIFICATION | #VALUE! |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

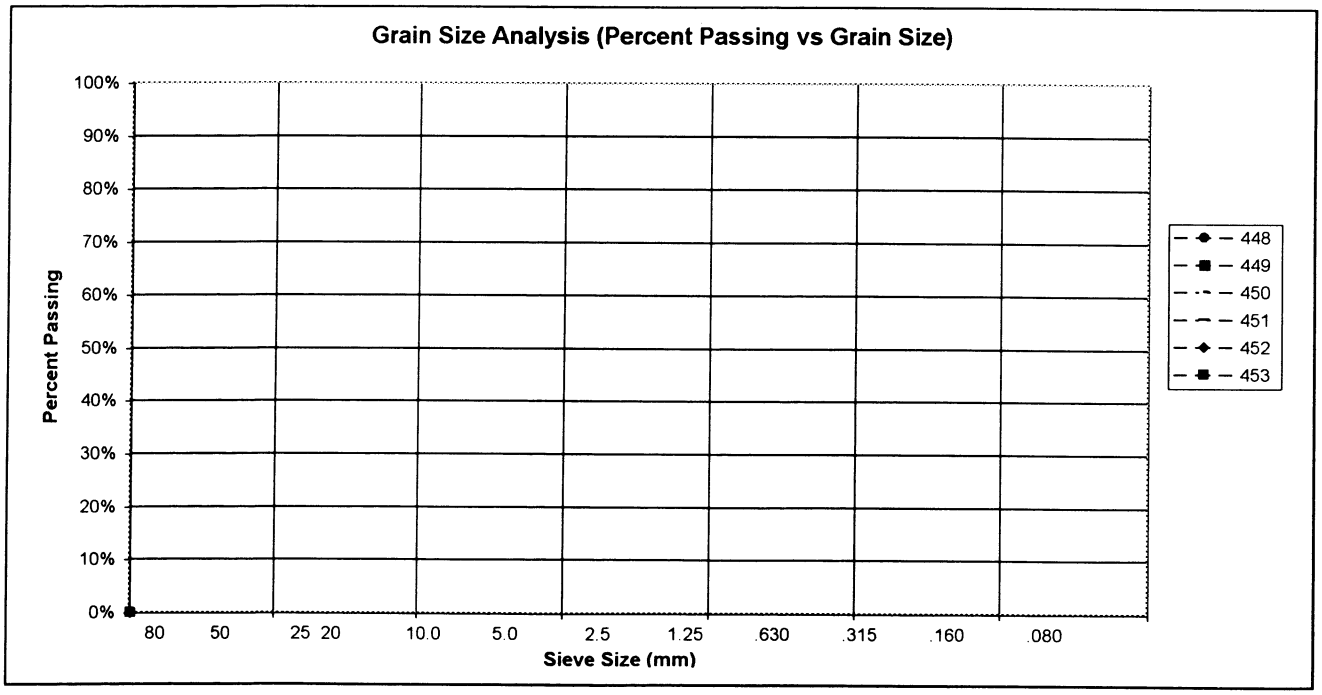
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 637411-6765198
LOGGED BY: RW

HOLE No.: 30042

DATE COMP: 08/20/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 448 | 449 | 450 | 451 | 452 | 453 |
| LAB NO: | 448 | 449 | 450 | 451 | 452 | 453 |
| DEPTH: | 1.4 | 2.9 | 4.4 | 5.9 | 7.5 | 9 |
| TYPE: | S.P.T. | S.P.T. | S.P.T. | S.P.T. | S.P.T. | S.P.T. |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING |
| 100.0 | | | | | | |
| 80.0 | | | | | | |
| 50.0 | | | | | | |
| 25.0 | | | | | | |
| 20.0 | | | | | | |
| 12.5 | | | | | | |
| 10.0 | | | | | | |
| 5.0 | | | | | | |
| 2.5 | | | | | | |
| 1.25 | | | | | | |
| 0.630 | | | | | | |
| 0.315 | | | | | | |
| 0.160 | | | | | | |
| 0.080 | | | | | | |
| M.C.(%): | 7% | 22% | 21% | 13% | 12% | 9% |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| % GRAVEL: | #VALUE! | #VALUE! | #VALUE! | #VALUE! | #VALUE! | #VALUE! |
| % SAND: | #VALUE! | #VALUE! | #VALUE! | #VALUE! | #VALUE! | #VALUE! |
| % FINES: | #VALUE! | #VALUE! | #VALUE! | #VALUE! | #VALUE! | #VALUE! |
| CLASSIFICATION | #VALUE! | #VALUE! | #VALUE! | #VALUE! | #VALUE! | #VALUE! |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

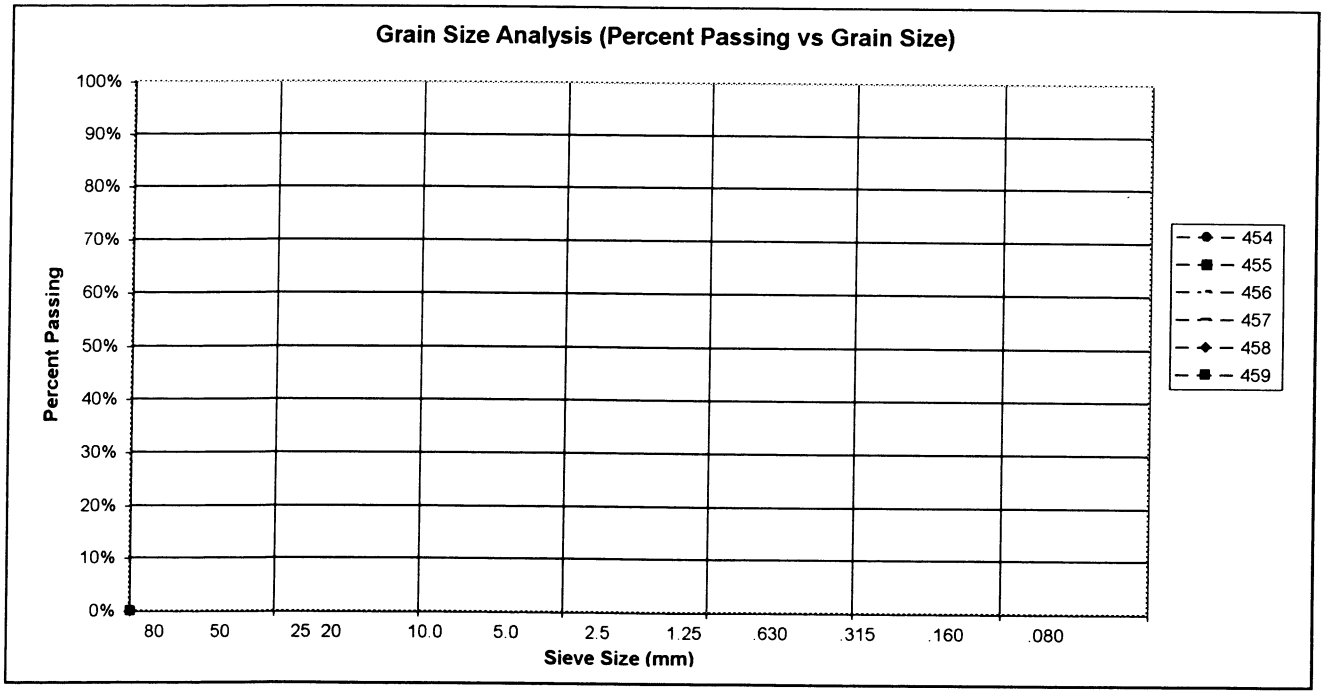
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 636827-6764763
LOGGED BY: RW

HOLE No.: 30043

DATE COMP: 08/20/2004

| FIELD NO: | 454 | 455 | 456 | 457 | 458 | 459 |
|---|---|---|---|---|---|---|
| LAB NO: | 454 | 455 | 456 | 457 | 458 | 459 |
| DEPTH: | 1.4 | 2.9 | 4.4 | 5.9 | 7.5 | 9 |
| TYPE: | S.P.T. | S.P.T. | S.P.T. | S.P.T. | S.P.T. | S.P.T. |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING |
| 100.0 | | | | | | |
| 80.0 | | | | | | |
| 50.0 | | | | | | |
| 25.0 | | | | | | |
| 20.0 | | | | | | |
| 12.5 | | | | | | |
| 10.0 | | | | | | |
| 5.0 | | | | | | |
| 2.5 | | | | | | |
| 1.25 | | | | | | |
| 0.630 | | | | | | |
| 0.315 | | | | | | |
| 0.160 | | | | | | |
| 0.080 | | | | | | |
| M.C.(%): | 6% | 19% | 23% | 25% | 21% | 32% |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| % GRAVEL: | #VALUE! | #VALUE! | #VALUE! | #VALUE! | #VALUE! | #VALUE! |
| % SAND: | #VALUE! | #VALUE! | #VALUE! | #VALUE! | #VALUE! | #VALUE! |
| % FINES: | #VALUE! | #VALUE! | #VALUE! | #VALUE! | #VALUE! | #VALUE! |
| CLASSIFICATION | #VALUE! | #VALUE! | #VALUE! | #VALUE! | #VALUE! | #VALUE! |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. H. Paine & Associates Ltd.

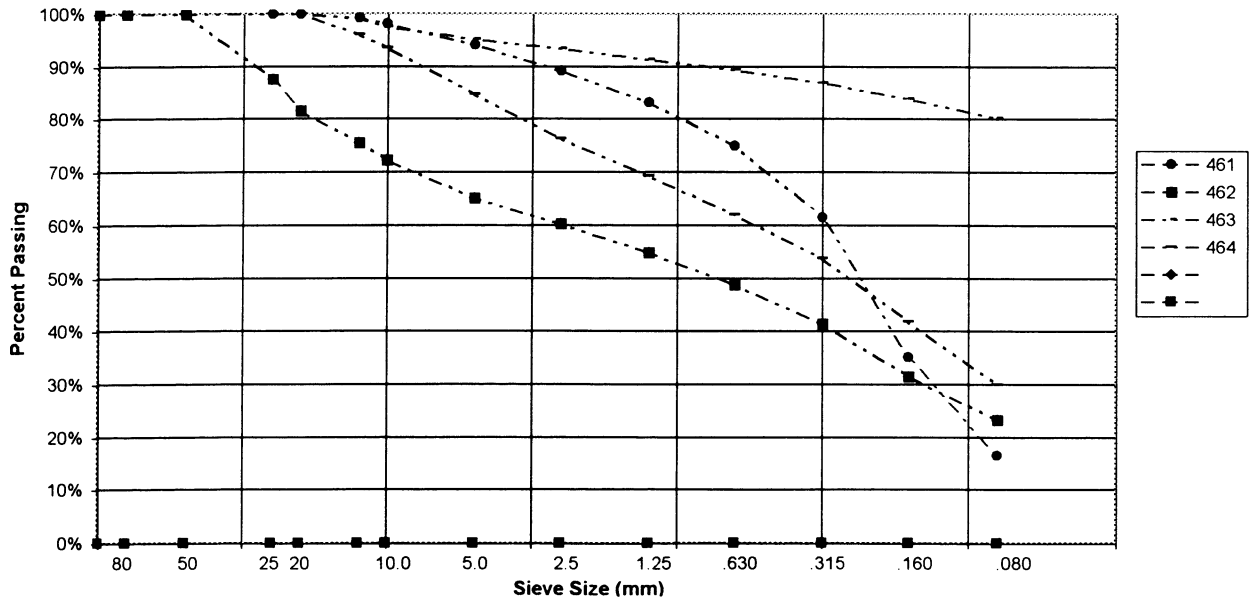
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 636668-6764727
LOGGED BY: RW

HOLE No.: 30044

DATE COMP: 08/21/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 461 | 462 | 463 | 464 | | |
| LAB NO: | 461 | 462 | 463 | 464 | | |
| DEPTH: | 0.3-0.9 | 1.5-2.1 | 2.4-2.9 | 4.1-4.4 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 100% | 88% | 100% | 100% | | |
| 20.0 | 100% | 82% | 100% | 100% | | |
| 12.5 | 99% | 76% | 99% | 96% | | |
| 10.0 | 98% | 72% | 98% | 94% | | |
| 5.0 | 94% | 65% | 95% | 85% | | |
| 2.5 | 89% | 60% | 93% | 76% | | |
| 1.25 | 83% | 55% | 91% | 69% | | |
| 0.630 | 75% | 49% | 89% | 62% | | |
| 0.315 | 62% | 41% | 87% | 54% | | |
| 0.160 | 35% | 32% | 84% | 42% | | |
| 0.080 | 17% | 23% | 80% | 30% | | |
| M.C.(%): | 18% | 10% | 20% | 14% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 6 | 35 | 5 | 15 | | |
| % SAND: | 78 | 42 | 15 | 55 | | |
| % FINES: | 17 | 23 | 80 | 30 | | |
| CLASSIFICATION | SILTY SAND (SM) | SILTY SAND WITH GRAVEL (SM) | SILT WITH SAND (ML) | SILTY SAND WITH GRAVEL (SM) | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

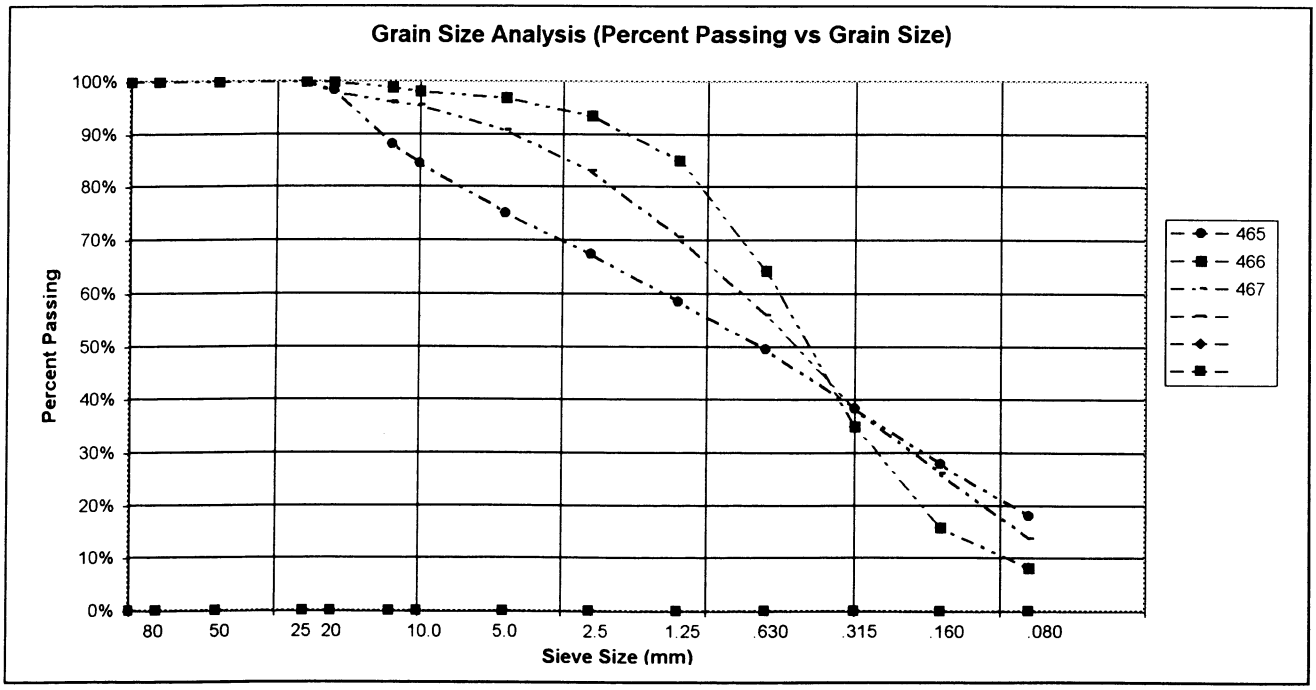
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 636398-6764640
LOGGED BY: RW

HOLE No.: 30045

DATE COMP: 08/21/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 465 | 466 | 467 | | | |
| LAB NO: | 465 | 466 | 467 | | | |
| DEPTH: | 0.3-0.9 | 2.1-2.7 | 4.0-4.4 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 100% | 100% | 100% | | | |
| 20.0 | 98% | 100% | 98% | | | |
| 12.5 | 88% | 99% | 96% | | | |
| 10.0 | 85% | 98% | 96% | | | |
| 5.0 | 75% | 97% | 91% | | | |
| 2.5 | 68% | 94% | 83% | | | |
| 1.25 | 59% | 85% | 71% | | | |
| 0.630 | 50% | 64% | 56% | | | |
| 0.315 | 39% | 35% | 38% | | | |
| 0.160 | 28% | 16% | 26% | | | |
| 0.080 | 18% | 8% | 14% | | | |
| M.C.(%): | 10% | 14% | 15% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 25 | 3 | 9 | | | |
| % SAND: | 57 | 89 | 77 | | | |
| % FINES: | 18 | 8 | 14 | | | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | WELL-GRADED SAND WITH SILT (SW-SM) | SILTY SAND (SM) | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

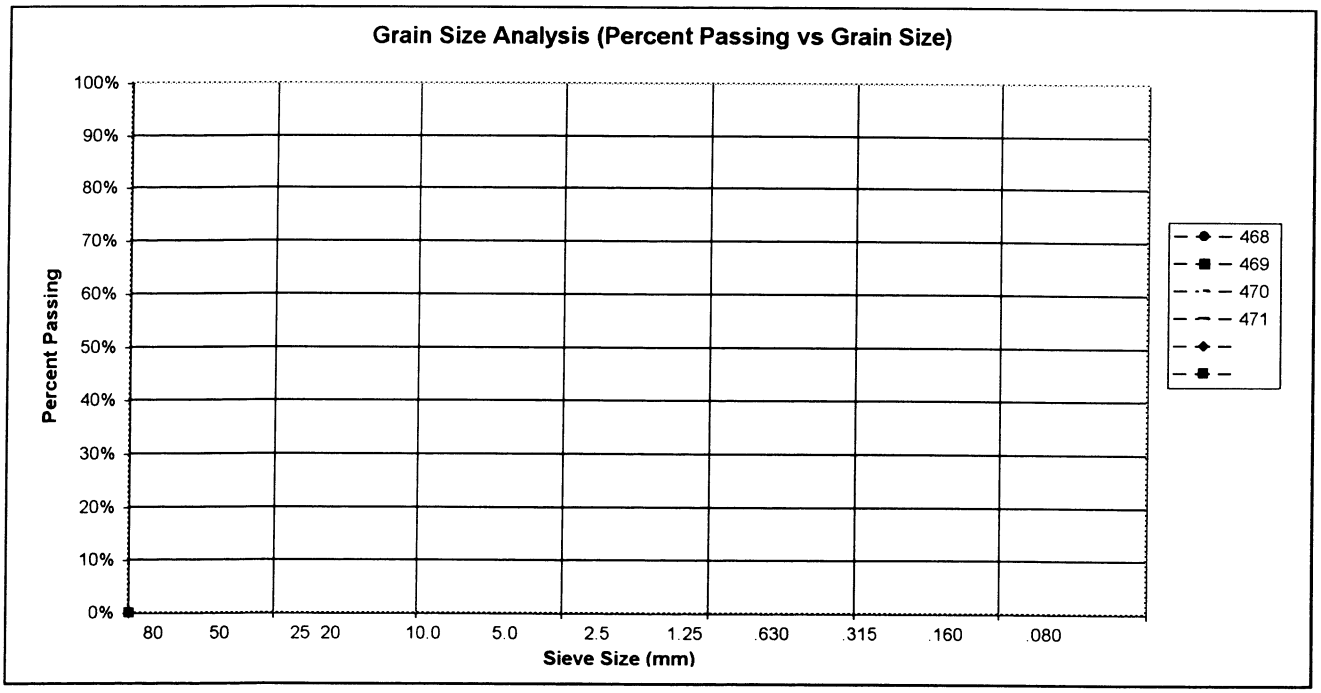
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 636230-6764571
LOGGED BY: RW

HOLE No.: 30046

DATE COMP: 08/21/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 468 | 469 | 470 | 471 | | |
| LAB NO: | 468 | 469 | 470 | 471 | | |
| DEPTH: | 1.4 | 2.9 | 4.4 | 5.9 | | |
| TYPE: | S.P.T. | S.P.T. | S.P.T. | S.P.T. | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | | | | | | |
| 80.0 | | | | | | |
| 50.0 | | | | | | |
| 25.0 | | | | | | |
| 20.0 | | | | | | |
| 12.5 | | | | | | |
| 10.0 | | | | | | |
| 5.0 | | | | | | |
| 2.5 | | | | | | |
| 1.25 | | | | | | |
| 0.630 | | | | | | |
| 0.315 | | | | | | |
| 0.160 | | | | | | |
| 0.080 | | | | | | |
| M.C.(%): | 9% | 17% | 17% | 17% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | #VALUE! | #VALUE! | #VALUE! | #VALUE! | | |
| % SAND: | #VALUE! | #VALUE! | #VALUE! | #VALUE! | | |
| % FINES: | #VALUE! | #VALUE! | #VALUE! | #VALUE! | | |
| CLASSIFICATION | #VALUE! | #VALUE! | #VALUE! | #VALUE! | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

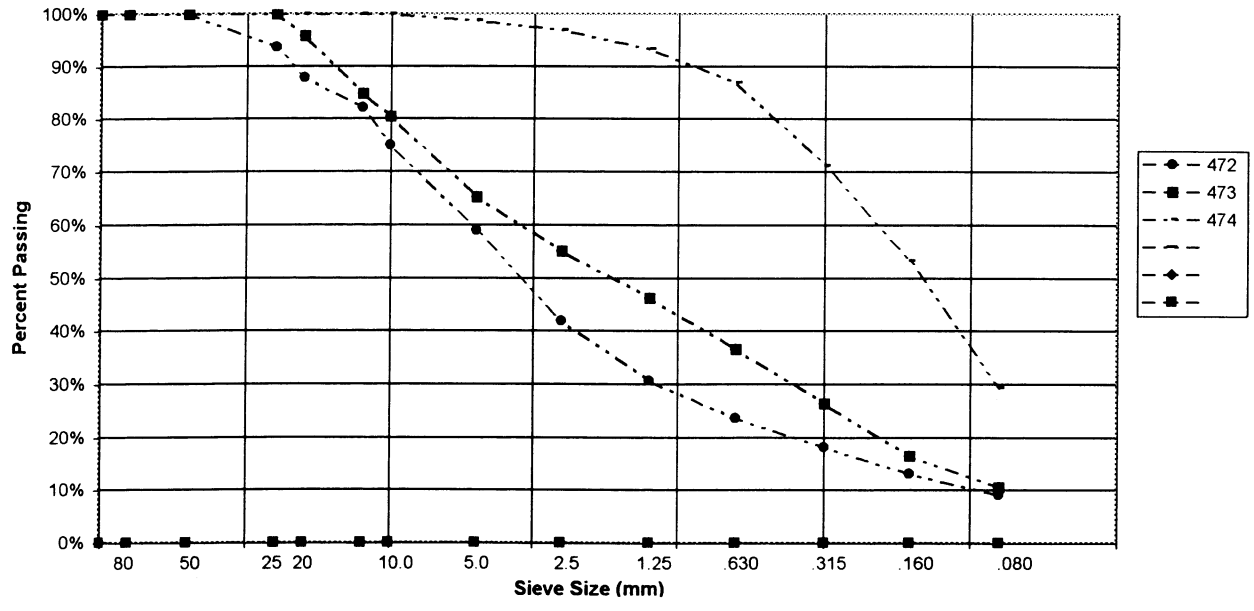
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 636077-6764452
LOGGED BY: RW

HOLE No.: 30047

DATE COMP: 08/21/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 472 | 473 | 474 | | | |
| LAB NO: | 472 | 473 | 474 | | | |
| DEPTH: | 0.3-0.9 | 2.1-2.7 | 3.7-4.3 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 94% | 100% | 100% | | | |
| 20.0 | 88% | 96% | 100% | | | |
| 12.5 | 82% | 85% | 100% | | | |
| 10.0 | 75% | 80% | 100% | | | |
| 5.0 | 59% | 65% | 99% | | | |
| 2.5 | 42% | 55% | 97% | | | |
| 1.25 | 31% | 46% | 93% | | | |
| 0.630 | 24% | 37% | 87% | | | |
| 0.315 | 18% | 27% | 71% | | | |
| 0.160 | 13% | 17% | 53% | | | |
| 0.080 | 9% | 11% | 29% | | | |
| M.C.(%): | 7% | 10% | 18% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 41 | 35 | 1 | | | |
| % SAND: | 50 | 55 | 69 | | | |
| % FINES: | 9 | 11 | 29 | | | |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY SAND (SM) | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

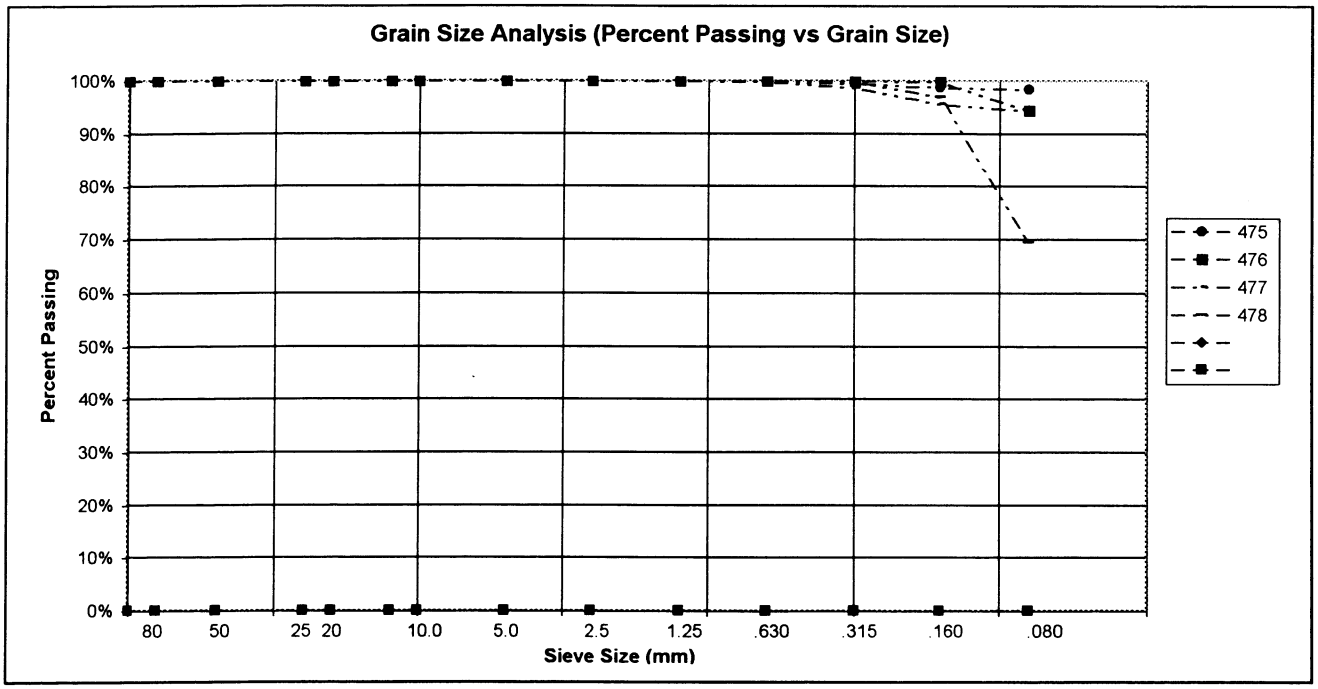
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 635653-6764453
LOGGED BY: RW

HOLE No.: 30049

DATE COMP: 08/21/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 475 | 476 | 477 | 478 | | |
| LAB NO: | 475 | 476 | 477 | 478 | | |
| DEPTH: | 0.6-1.2 | 1.8-2.4 | 2.6-2.9 | 4.0-4.4 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 100% | 100% | 100% | 100% | | |
| 20.0 | 100% | 100% | 100% | 100% | | |
| 12.5 | 100% | 100% | 100% | 100% | | |
| 10.0 | 100% | 100% | 100% | 100% | | |
| 5.0 | 100% | 100% | 100% | 100% | | |
| 2.5 | 100% | 100% | 100% | 100% | | |
| 1.25 | 100% | 100% | 100% | 100% | | |
| 0.630 | 100% | 100% | 100% | 100% | | |
| 0.315 | 99% | 100% | 99% | 100% | | |
| 0.160 | 99% | 100% | 96% | 97% | | |
| 0.080 | 98% | 94% | 94% | 70% | | |
| M.C.(%): | 28% | 21% | 31% | 19% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 0 | 0 | 0 | 0 | | |
| % SAND: | 2 | 6 | 6 | 30 | | |
| % FINES: | 98 | 94 | 94 | 70 | | |
| CLASSIFICATION | SILT (ML) | SILT (ML) | SILT (ML) | SANDY SILT (ML) | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

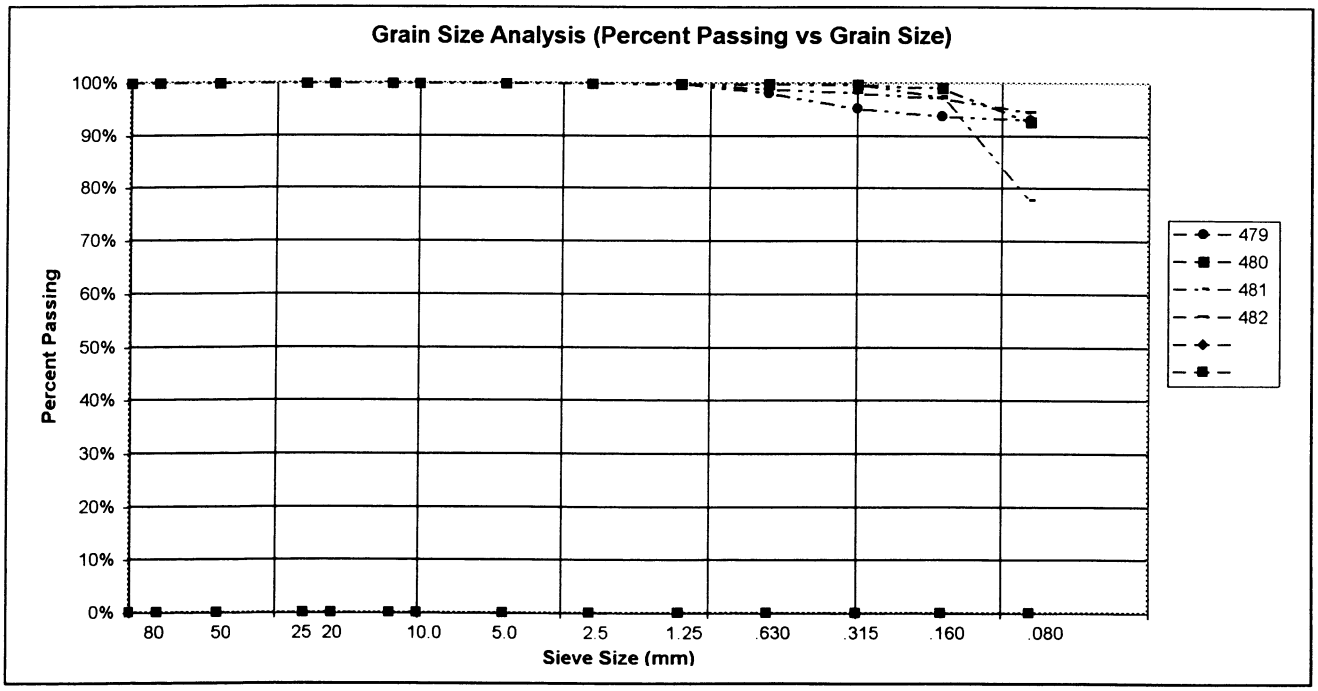
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 635462-6764514
LOGGED BY: RW

HOLE No.: 30050

DATE COMP: 08/21/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 479 | 480 | 481 | 482 | | |
| LAB NO: | 479 | 480 | 481 | 482 | | |
| DEPTH: | 0.6-1.2 | 2.1-2.9 | 3.2-3.6 | 4.0-4.4 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 100% | 100% | 100% | 100% | | |
| 20.0 | 100% | 100% | 100% | 100% | | |
| 12.5 | 100% | 100% | 100% | 100% | | |
| 10.0 | 100% | 100% | 100% | 100% | | |
| 5.0 | 100% | 100% | 100% | 100% | | |
| 2.5 | 100% | 100% | 100% | 100% | | |
| 1.25 | 100% | 100% | 100% | 100% | | |
| 0.630 | 98% | 100% | 100% | 99% | | |
| 0.315 | 95% | 100% | 100% | 98% | | |
| 0.160 | 94% | 99% | 97% | 97% | | |
| 0.080 | 93% | 93% | 78% | 95% | | |
| M.C.(%): | 29% | 23% | 20% | 29% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 0 | 0 | 0 | 0 | | |
| % SAND: | 7 | 7 | 22 | 5 | | |
| % FINES: | 93 | 93 | 78 | 95 | | |
| CLASSIFICATION | SILT (ML) | SILT (ML) | SILT WITH SAND (ML) | SILT (ML) | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

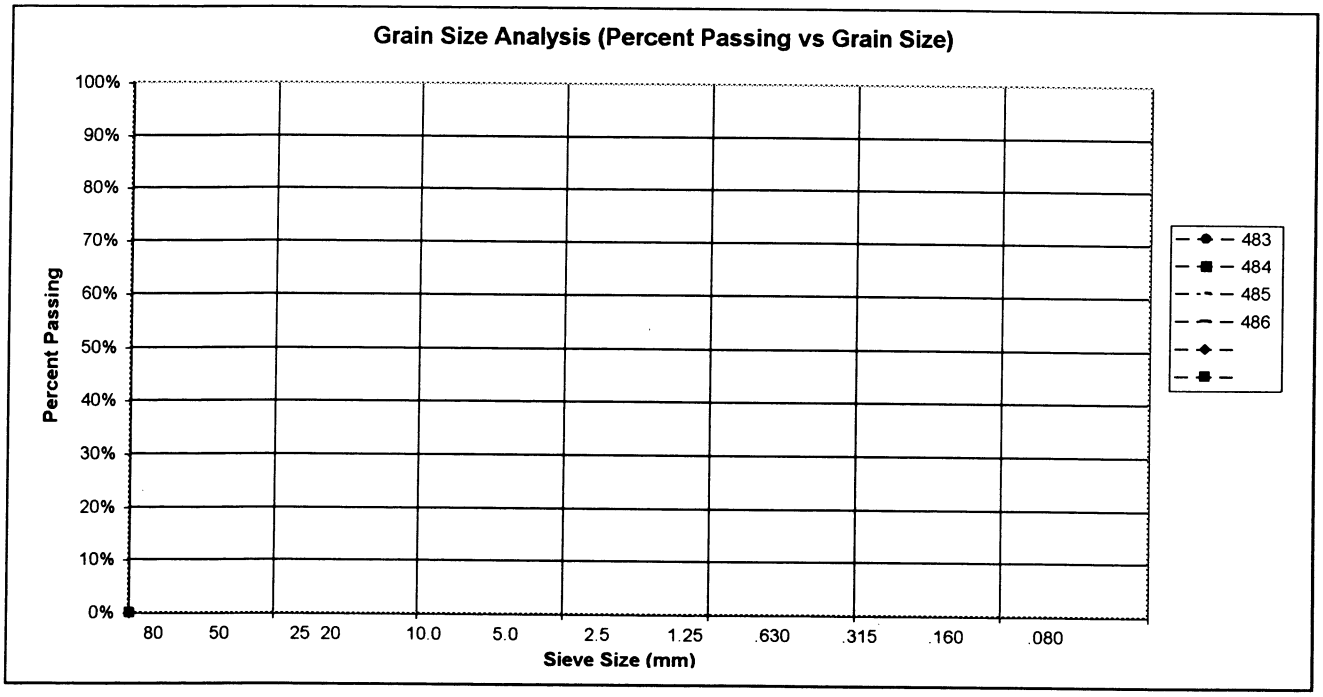
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 635301-6764643
LOGGED BY: RW

HOLE No.: 30051

DATE COMP: 08/22/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 483 | 484 | 485 | 486 | | |
| LAB NO: | 483 | 484 | 485 | 486 | | |
| DEPTH: | 1.4 | 2.9 | 4.4 | 5.9 | | |
| TYPE: | S.P.T. | S.P.T. | S.P.T. | S.P.T. | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | | | | | | |
| 80.0 | | | | | | |
| 50.0 | | | | | | |
| 25.0 | | | | | | |
| 20.0 | | | | | | |
| 12.5 | | | | | | |
| 10.0 | | | | | | |
| 5.0 | | | | | | |
| 2.5 | | | | | | |
| 1.25 | | | | | | |
| 0.630 | | | | | | |
| 0.315 | | | | | | |
| 0.160 | | | | | | |
| 0.080 | | | | | | |
| M.C.(%): | 23% | 19% | 23% | 28% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | #VALUE! | #VALUE! | #VALUE! | #VALUE! | | |
| % SAND: | #VALUE! | #VALUE! | #VALUE! | #VALUE! | | |
| % FINES: | #VALUE! | #VALUE! | #VALUE! | #VALUE! | | |
| CLASSIFICATION | #VALUE! | #VALUE! | #VALUE! | #VALUE! | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

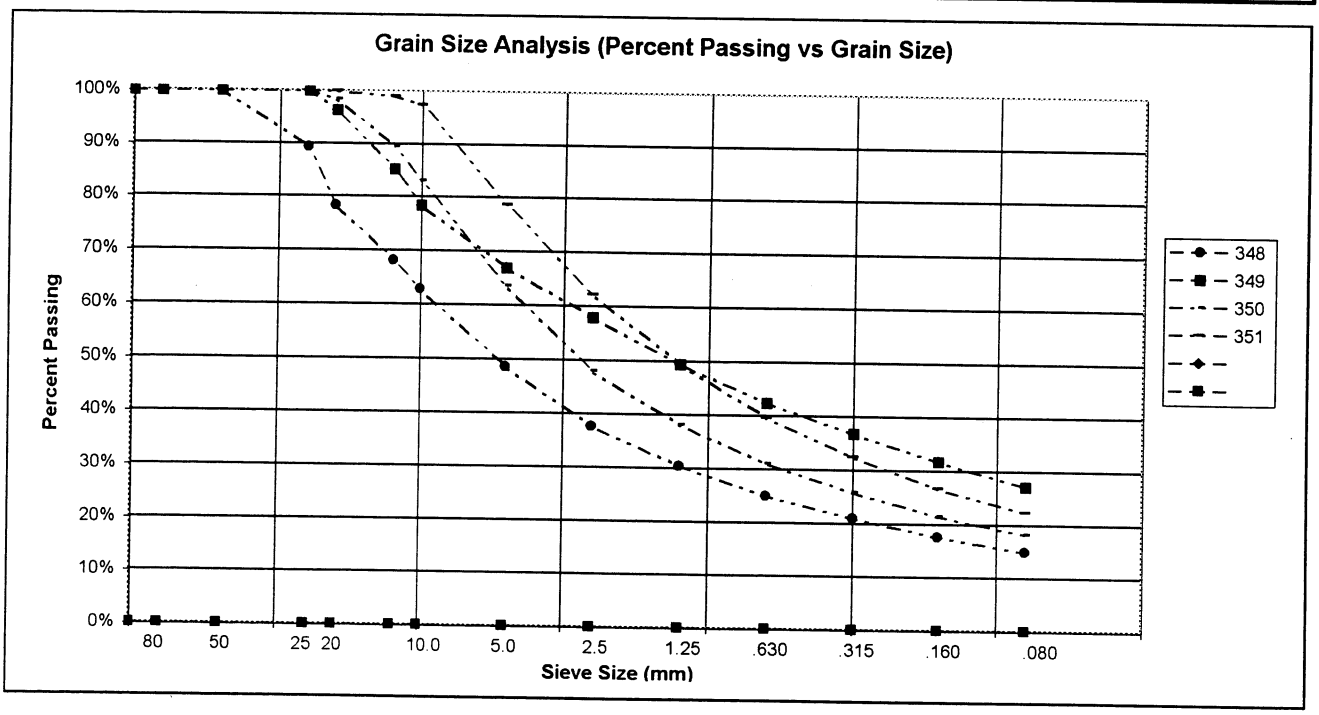
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633550-6773445
LOGGED BY: RW

HOLE No.: 30082

DATE COMP: 08/15/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 348 | 349 | 350 | 351 | | |
| LAB NO: | 348 | 349 | 350 | 351 | | |
| DEPTH: | 0.6-1.2 | 1.8-2.4 | 3.4-4.0 | 4.9-5.5 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 89% | 100% | 100% | 100% | | |
| 20.0 | 78% | 96% | 98% | 100% | | |
| 12.5 | 68% | 85% | 89% | 99% | | |
| 10.0 | 63% | 78% | 83% | 97% | | |
| 5.0 | 49% | 67% | 64% | 79% | | |
| 2.5 | 38% | 58% | 48% | 62% | | |
| 1.25 | 31% | 49% | 38% | 49% | | |
| 0.630 | 25% | 42% | 31% | 40% | | |
| 0.315 | 21% | 37% | 26% | 33% | | |
| 0.160 | 18% | 32% | 22% | 27% | | |
| 0.080 | 15% | 27% | 18% | 22% | | |
| M.C.(%): | 3% | 8% | 4% | 7% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 51 | 33 | 36 | 21 | | |
| % SAND: | 34 | 40 | 45 | 56 | | |
| % FINES: | 15 | 27 | 18 | 22 | | |
| CLASSIFICATION | SILTY GRAVEL WITH SAND (GM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

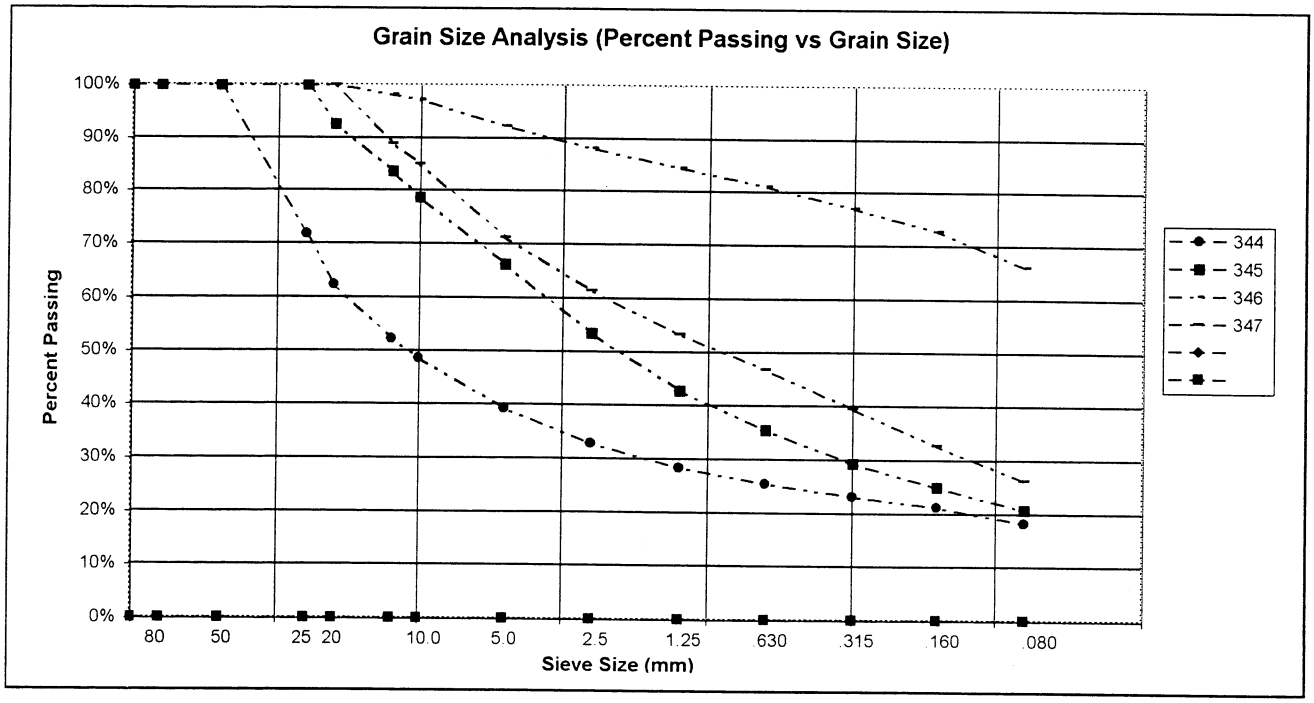
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633530-6773484
LOGGED BY: RW

HOLE No.: 30083

DATE COMP: 08/15/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 344 | 345 | 346 | 347 | | |
| LAB NO: | 344 | 345 | 346 | 347 | | |
| DEPTH: | 0.6-1.2 | 1.8-2.4 | 3.4-4.0 | 4.9-5.5 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE: | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 72% | 100% | 100% | 100% | | |
| 20.0 | 62% | 93% | 100% | 100% | | |
| 12.5 | 52% | 84% | 98% | 89% | | |
| 10.0 | 49% | 79% | 97% | 85% | | |
| 5.0 | 39% | 66% | 92% | 71% | | |
| 2.5 | 33% | 53% | 88% | 61% | | |
| 1.25 | 28% | 43% | 84% | 53% | | |
| 0.630 | 26% | 35% | 81% | 47% | | |
| 0.315 | 23% | 29% | 77% | 40% | | |
| 0.160 | 21% | 25% | 73% | 33% | | |
| 0.080 | 18% | 21% | 66% | 26% | | |
| M.C.(%): | 7% | 7% | 21% | 10% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 61 | 34 | 8 | 29 | | |
| % SAND: | 21 | 45 | 26 | 45 | | |
| % FINES: | 18 | 21 | 66 | 26 | | |
| CLASSIFICATION | SILTY GRAVEL WITH SAND (GM) | SILTY SAND WITH GRAVEL (SM) | SANDY SILT (ML) | SILTY SAND WITH GRAVEL (SM) | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

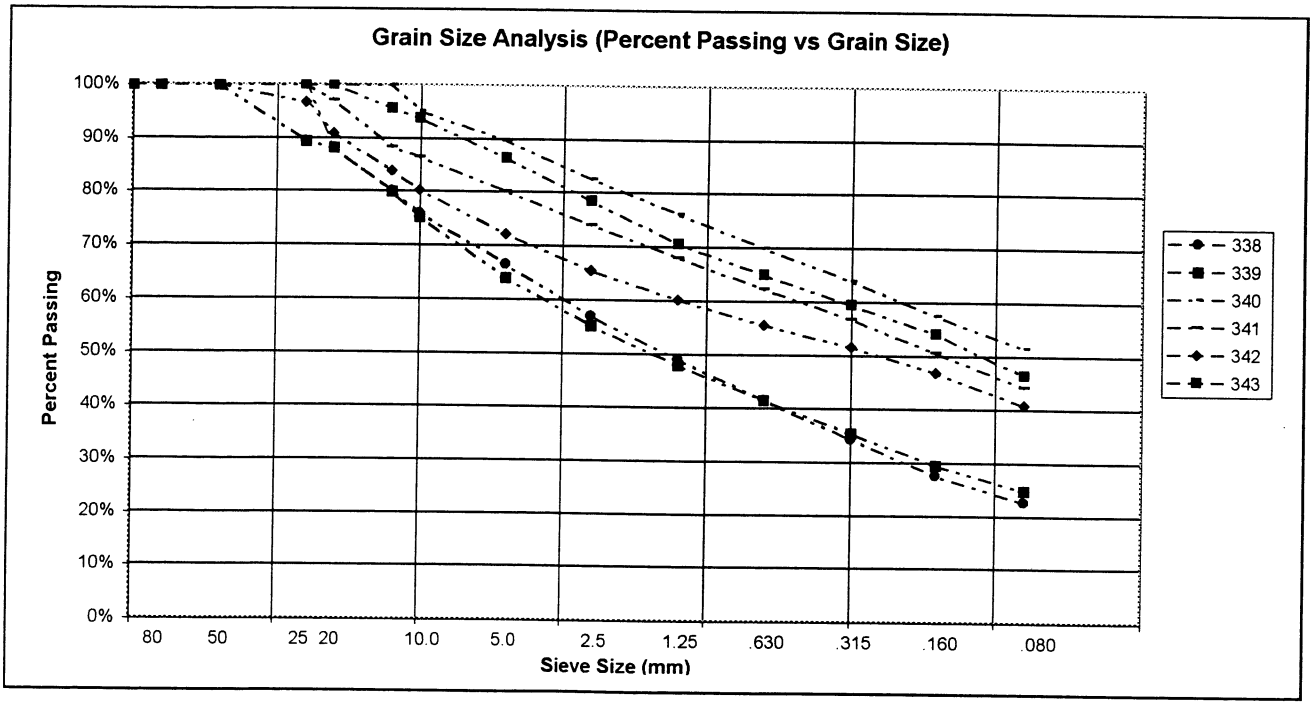
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633531-6773473
LOGGED BY: RW

HOLE No.: 30084

DATE COMP: 08/15/2004

| FIELD NO: | 338 | 339 | 340 | 341 | 342 | 343 |
|---|---|---|---|---|---|---|
| LAB NO: | 338 | 339 | 340 | 341 | 342 | 343 |
| DEPTH: | 0.6-1.2 | 1.8-2.4 | 3.4-4.0 | 4.9-5.5 | 6.7-7.0 | 7.6-8.1 |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 80.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 50.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 25.0 | 100% | 89% | 100% | 100% | 97% | 100% |
| 20.0 | 88% | 88% | 100% | 97% | 91% | 100% |
| 12.5 | 80% | 80% | 100% | 88% | 84% | 96% |
| 10.0 | 76% | 75% | 95% | 87% | 80% | 94% |
| 5.0 | 67% | 64% | 90% | 80% | 72% | 86% |
| 2.5 | 57% | 55% | 83% | 74% | 66% | 78% |
| 1.25 | 49% | 48% | 76% | 68% | 60% | 71% |
| 0.630 | 42% | 42% | 70% | 62% | 56% | 65% |
| 0.315 | 34% | 36% | 64% | 57% | 52% | 59% |
| 0.160 | 28% | 30% | 58% | 51% | 47% | 54% |
| 0.080 | 23% | 25% | 52% | 44% | 41% | 46% |
| M.C.(%): | 3% | 3% | 6% | 6% | 5% | 6% |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| % GRAVEL: | 33 | 36 | 10 | 20 | 28 | 14 |
| % SAND: | 44 | 39 | 38 | 36 | 31 | 40 |
| % FINES: | 23 | 25 | 52 | 44 | 41 | 46 |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SANDY SILT (ML) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

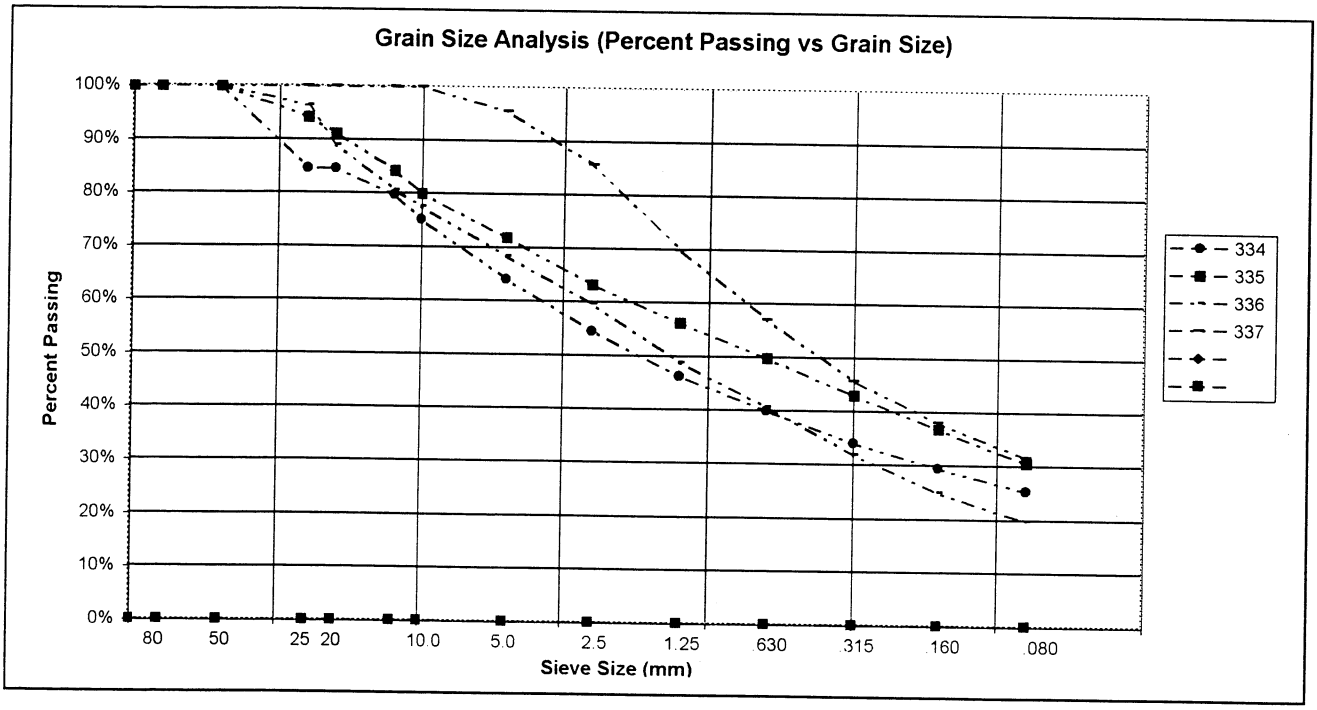
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633471-6773546
LOGGED BY: RW

HOLE No.: 30085

DATE COMP: 08/15/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 334 | 335 | 336 | 337 | | |
| LAB NO: | 334 | 335 | 336 | 337 | | |
| DEPTH: | 0.6-1.2 | 1.8-2.4 | 3.4-4.0 | 4.9-5.5 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 85% | 94% | 96% | 100% | | |
| 20.0 | 85% | 91% | 89% | 100% | | |
| 12.5 | 80% | 84% | 81% | 100% | | |
| 10.0 | 75% | 80% | 78% | 100% | | |
| 5.0 | 64% | 72% | 68% | 95% | | |
| 2.5 | 55% | 63% | 60% | 86% | | |
| 1.25 | 46% | 56% | 49% | 70% | | |
| 0.630 | 40% | 50% | 41% | 57% | | |
| 0.315 | 34% | 43% | 32% | 46% | | |
| 0.160 | 30% | 37% | 25% | 38% | | |
| 0.080 | 25% | 31% | 20% | 32% | | |
| M.C.(%): | 5% | 4% | 3% | 3% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 36 | 28 | 32 | 5 | | |
| % SAND: | 39 | 41 | 49 | 64 | | |
| % FINES: | 25 | 31 | 20 | 32 | | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

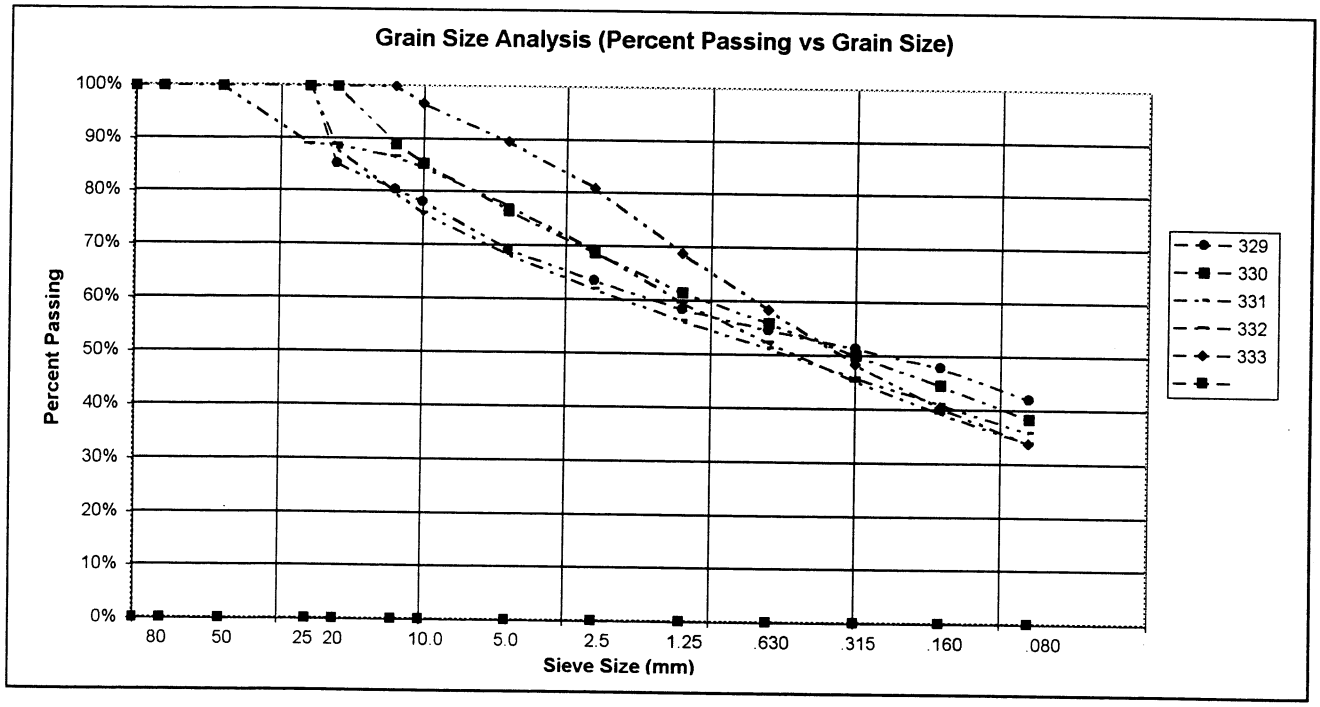
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633472-6773537
LOGGED BY: RW

HOLE No.: 30086

DATE COMP: 08/15/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 329 | 330 | 331 | 332 | 333 | |
| LAB NO: | 329 | 330 | 331 | 332 | 333 | |
| DEPTH: | 0.6-1.2 | 1.8-2.4 | 3.4-4.0 | 4.9-5.5 | 6.7-7.3 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | 100% | 100% | 100% | |
| 80.0 | 100% | 100% | 100% | 100% | 100% | |
| 50.0 | 100% | 100% | 100% | 100% | 100% | |
| 25.0 | 100% | 100% | 100% | 89% | 100% | |
| 20.0 | 85% | 100% | 88% | 89% | 100% | |
| 12.5 | 80% | 89% | 80% | 87% | 100% | |
| 10.0 | 78% | 85% | 76% | 85% | 97% | |
| 5.0 | 69% | 77% | 68% | 78% | 90% | |
| 2.5 | 64% | 69% | 62% | 69% | 81% | |
| 1.25 | 58% | 62% | 56% | 60% | 69% | |
| 0.630 | 55% | 56% | 51% | 52% | 58% | |
| 0.315 | 51% | 50% | 46% | 45% | 48% | |
| 0.160 | 48% | 45% | 41% | 39% | 40% | |
| 0.080 | 42% | 38% | 36% | 34% | 34% | |
| M.C.(%): | 15% | 10% | 10% | 9% | 9% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 31 | 23 | 32 | 22 | 10 | |
| % SAND: | 27 | 38 | 32 | 44 | 56 | |
| % FINES: | 42 | 38 | 36 | 34 | 34 | |
| CLASSIFICATION | SILTY GRAVEL WITH SAND (GM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

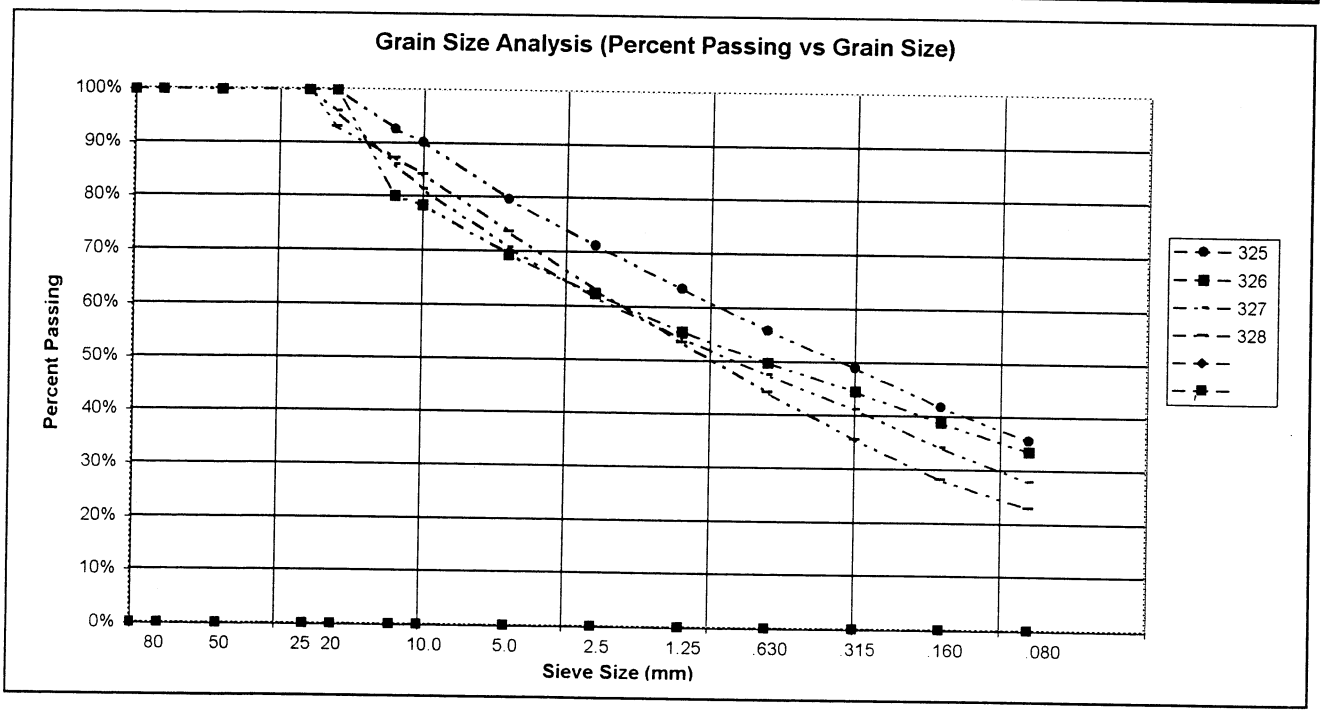
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633417-6773660
LOGGED BY: RW

HOLE No.: 30087

DATE COMP: 08/15/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 325 | 326 | 327 | 328 | | |
| LAB NO: | 325 | 326 | 327 | 328 | | |
| DEPTH: | 0.6-1.2 | 1.8-2.4 | 3.4-4.0 | 4.9-5.5 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 100% | 100% | 100% | 100% | | |
| 20.0 | 100% | 100% | 96% | 93% | | |
| 12.5 | 93% | 80% | 86% | 87% | | |
| 10.0 | 90% | 78% | 81% | 84% | | |
| 5.0 | 80% | 69% | 71% | 74% | | |
| 2.5 | 71% | 62% | 62% | 63% | | |
| 1.25 | 64% | 56% | 54% | 53% | | |
| 0.630 | 56% | 50% | 47% | 44% | | |
| 0.315 | 49% | 45% | 41% | 36% | | |
| 0.160 | 42% | 39% | 34% | 28% | | |
| 0.080 | 36% | 34% | 28% | 23% | | |
| M.C.(%): | 6% | 6% | 4% | 5% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 20 | 31 | 29 | 26 | | |
| % SAND: | 44 | 36 | 43 | 51 | | |
| % FINES: | 36 | 34 | 28 | 23 | | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

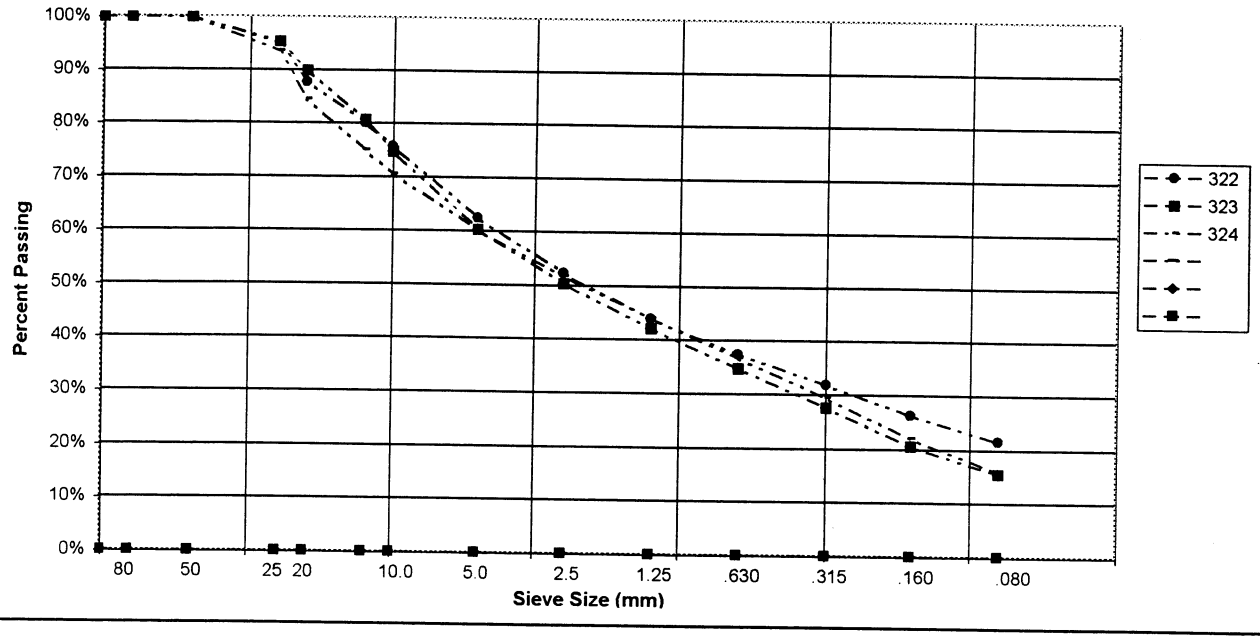
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633423-6773651
LOGGED BY: RW

HOLE No.: 30088

DATE COMP: 08/15/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 322 | 323 | 324 | | | |
| LAB NO: | 322 | 323 | 324 | | | |
| DEPTH: | 0.9-1.2 | 1.8-2.4 | 3.4-4.0 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 95% | 95% | 94% | | | |
| 20.0 | 88% | 90% | 84% | | | |
| 12.5 | 80% | 81% | 75% | | | |
| 10.0 | 76% | 75% | 71% | | | |
| 5.0 | 62% | 60% | 60% | | | |
| 2.5 | 52% | 50% | 52% | | | |
| 1.25 | 44% | 42% | 44% | | | |
| 0.630 | 37% | 35% | 37% | | | |
| 0.315 | 32% | 28% | 30% | | | |
| 0.160 | 26% | 21% | 22% | | | |
| 0.080 | 22% | 16% | 16% | | | |
| M.C.(%): | 4% | 3% | 2% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 38 | 40 | 40 | | | |
| % SAND: | 41 | 45 | 44 | | | |
| % FINES: | 22 | 16 | 16 | | | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

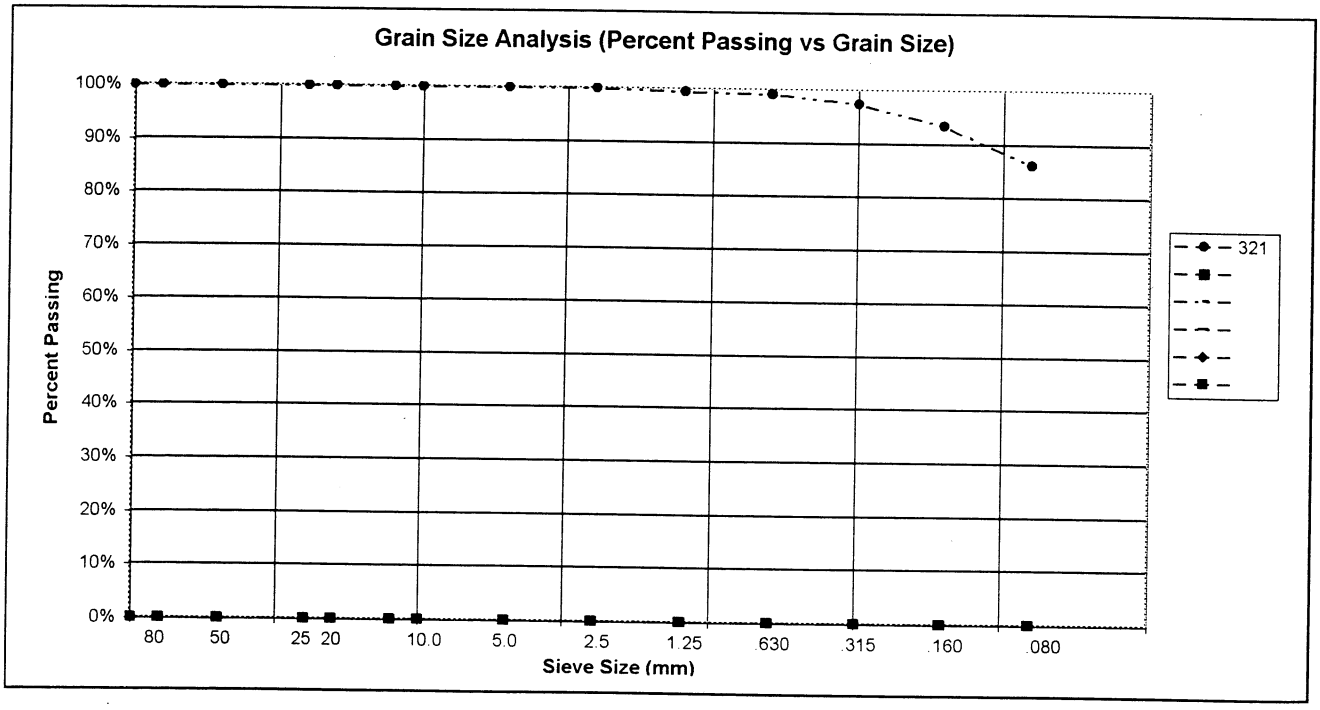
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633338-6773776
LOGGED BY: RW

HOLE No.: 30089

DATE COMP: 08/15/2004

| | |
|---|---|
| FIELD NO: | 321 |
| LAB NO: | 321 |
| DEPTH: | 0.0-0.6 |
| TYPE: | AUGER |
| **SIEVE SIZE** | **PERCENT PASSING** |
| 100.0 | 100% |
| 80.0 | 100% |
| 50.0 | 100% |
| 25.0 | 100% |
| 20.0 | 100% |
| 12.5 | 100% |
| 10.0 | 100% |
| 5.0 | 100% |
| 2.5 | 100% |
| 1.25 | 100% |
| 0.630 | 99% |
| 0.315 | 97% |
| 0.160 | 93% |
| 0.080 | 86% |
| M.C.(%): | 13% |
| LIQUID LIMIT: | 0.0 |
| PLASTIC LIMIT: | 0.0 |
| PLASTIC INDEX.: | 0.0 |
| % GRAVEL: | 0 |
| % SAND: | 14 |
| % FINES: | 86 |
| CLASSIFICATION | SILT (ML) |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

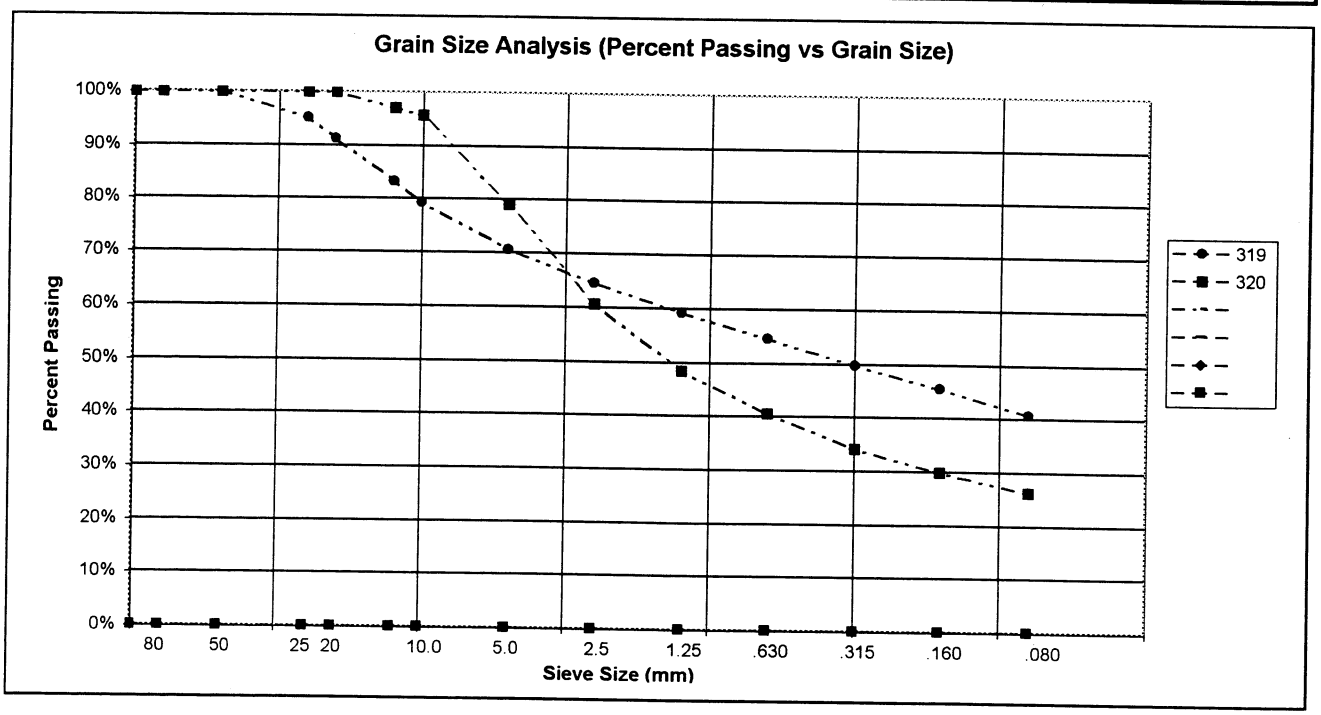
An Affiliate of J. H. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633337-6773786
LOGGED BY: RW

HOLE No.: 30090

DATE COMP: 08/15/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 319 | 320 | | | | |
| LAB NO: | 319 | 320 | | | | |
| DEPTH: | 0.5-1.0 | 1.2-1.5 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 95% | 100% | | | | |
| 20.0 | 91% | 100% | | | | |
| 12.5 | 83% | 97% | | | | |
| 10.0 | 79% | 96% | | | | |
| 5.0 | 71% | 79% | | | | |
| 2.5 | 65% | 61% | | | | |
| 1.25 | 59% | 48% | | | | |
| 0.630 | 55% | 41% | | | | |
| 0.315 | 50% | 34% | | | | |
| 0.160 | 46% | 30% | | | | |
| 0.080 | 41% | 26% | | | | |
| M.C.(%): | 6% | 3% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 29 | 21 | | | | |
| % SAND: | 30 | 53 | | | | |
| % FINES: | 41 | 26 | | | | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | | | | |

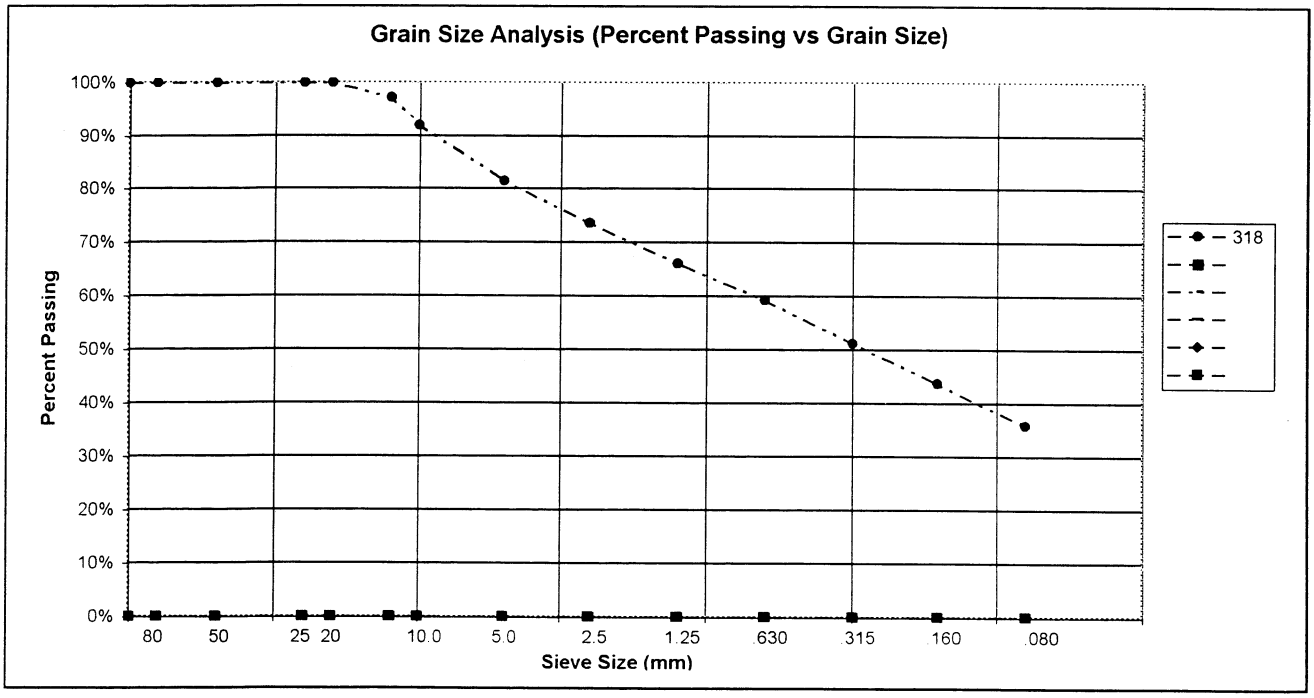


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30091 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 633259-6773906 | |
| LOGGED BY: | RW | DATE COMP: 08/15/2004 |

| | |
|---|---|
| FIELD NO: | 318 |
| LAB NO: | 318 |
| DEPTH: | 0.5-0.9 |
| TYPE: | AUGER |
| **SIEVE SIZE** | **PERCENT PASSING** |
| 100.0 | 100% |
| 80.0 | 100% |
| 50.0 | 100% |
| 25.0 | 100% |
| 20.0 | 100% |
| 12.5 | 97% |
| 10.0 | 92% |
| 5.0 | 82% |
| 2.5 | 74% |
| 1.25 | 66% |
| 0.630 | 59% |
| 0.315 | 51% |
| 0.160 | 44% |
| 0.080 | 36% |
| M.C.(%): | 5% |
| LIQUID LIMIT: | 0.0 |
| PLASTIC LIMIT: | 0.0 |
| PLASTIC INDEX.: | 0.0 |
| % GRAVEL: | 18 |
| % SAND: | 46 |
| % FINES: | 36 |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) |



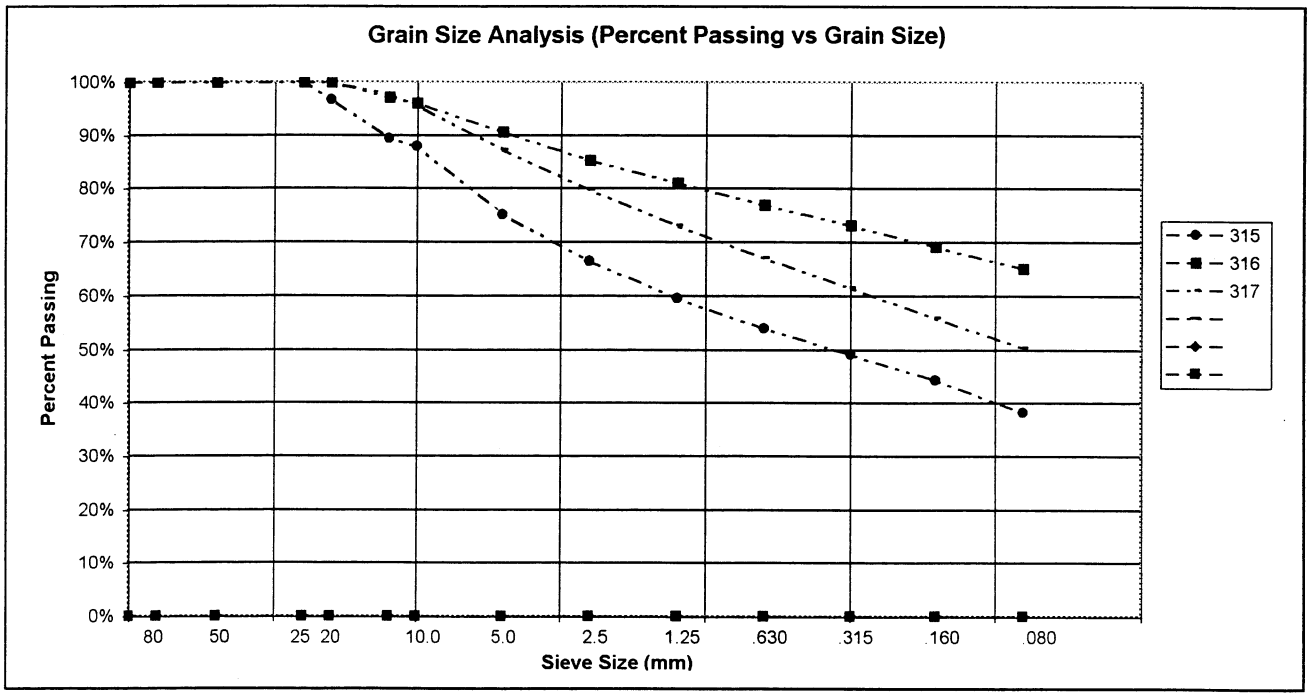
# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633261-6773901
LOGGED BY: RW

HOLE No.: 30092
DATE COMP: 08/15/2004

| FIELD NO: | 315 | 316 | 317 | | | |
|---|---|---|---|---|---|---|
| LAB NO: | 315 | 316 | 317 | | | |
| DEPTH: | 0.4-1.0 | 1.8-2.4 | 3.7-4.3 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 100% | 100% | 100% | | | |
| 20.0 | 97% | 100% | 100% | | | |
| 12.5 | 89% | 97% | 98% | | | |
| 10.0 | 88% | 96% | 96% | | | |
| 5.0 | 75% | 91% | 87% | | | |
| 2.5 | 67% | 85% | 80% | | | |
| 1.25 | 60% | 81% | 73% | | | |
| 0.630 | 54% | 77% | 67% | | | |
| 0.315 | 49% | 73% | 62% | | | |
| 0.160 | 44% | 69% | 56% | | | |
| 0.080 | 38% | 65% | 50% | | | |
| M.C.(%): | 13% | 18% | 11% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 25 | 9 | 13 | | | |
| % SAND: | 37 | 25 | 37 | | | |
| % FINES: | 38 | 65 | 50 | | | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SANDY SILT (ML) | SANDY SILT (ML) | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

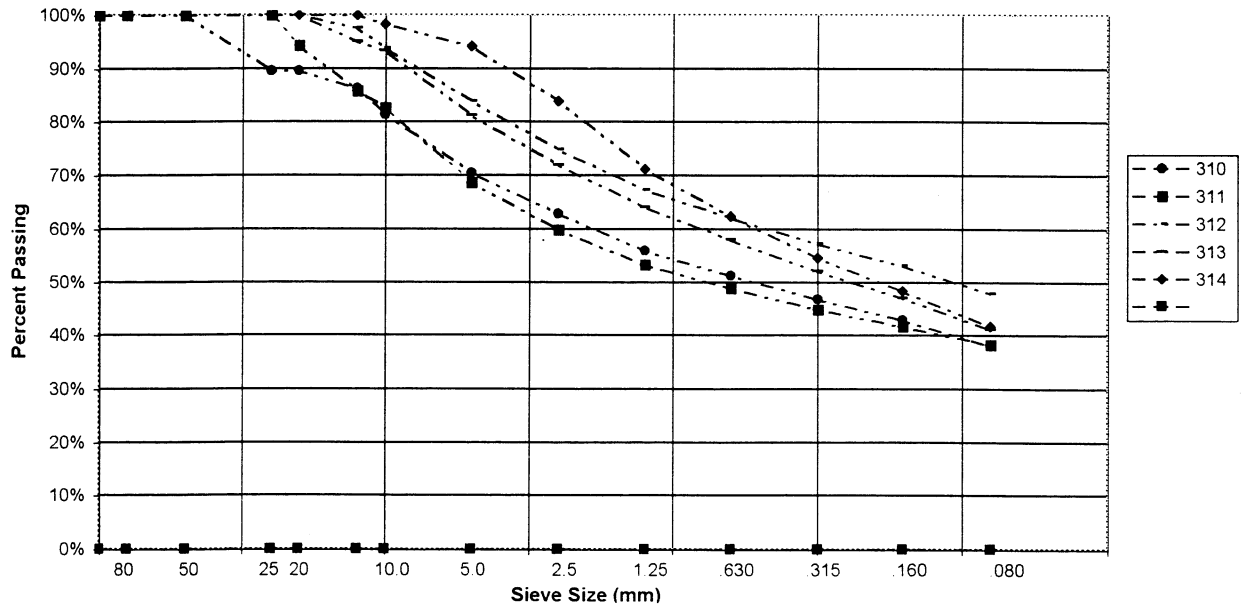
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633168-6774005
LOGGED BY: RW

HOLE No.: 30093
DATE COMP: 08/15/2004

| FIELD NO: | 310 | 311 | 312 | 313 | 314 | |
|---|---|---|---|---|---|---|
| LAB NO: | 310 | 311 | 312 | 313 | 314 | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | 3.4-4.0 | 4.9-5.5 | 6.7-7.0 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | 100% | 100% | 100% | |
| 80.0 | 100% | 100% | 100% | 100% | 100% | |
| 50.0 | 100% | 100% | 100% | 100% | 100% | |
| 25.0 | 90% | 100% | 100% | 100% | 100% | |
| 20.0 | 90% | 94% | 100% | 100% | 100% | |
| 12.5 | 86% | 86% | 98% | 95% | 100% | |
| 10.0 | 81% | 83% | 94% | 93% | 98% | |
| 5.0 | 71% | 69% | 84% | 81% | 94% | |
| 2.5 | 63% | 60% | 75% | 72% | 84% | |
| 1.25 | 56% | 53% | 67% | 64% | 71% | |
| 0.630 | 51% | 49% | 62% | 58% | 62% | |
| 0.315 | 47% | 45% | 57% | 52% | 55% | |
| 0.160 | 43% | 42% | 53% | 47% | 48% | |
| 0.080 | 38% | 38% | 48% | 41% | 42% | |
| M.C.(%): | 20% | 15% | 16% | 13% | 9% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 29 | 31 | 16 | 19 | 6 | |
| % SAND: | 32 | 30 | 36 | 40 | 52 | |
| % FINES: | 38 | 38 | 48 | 41 | 42 | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY GRAVEL WITH SAND (GM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | |

## Grain Size Analysis (Percent Passing vs Grain Size)



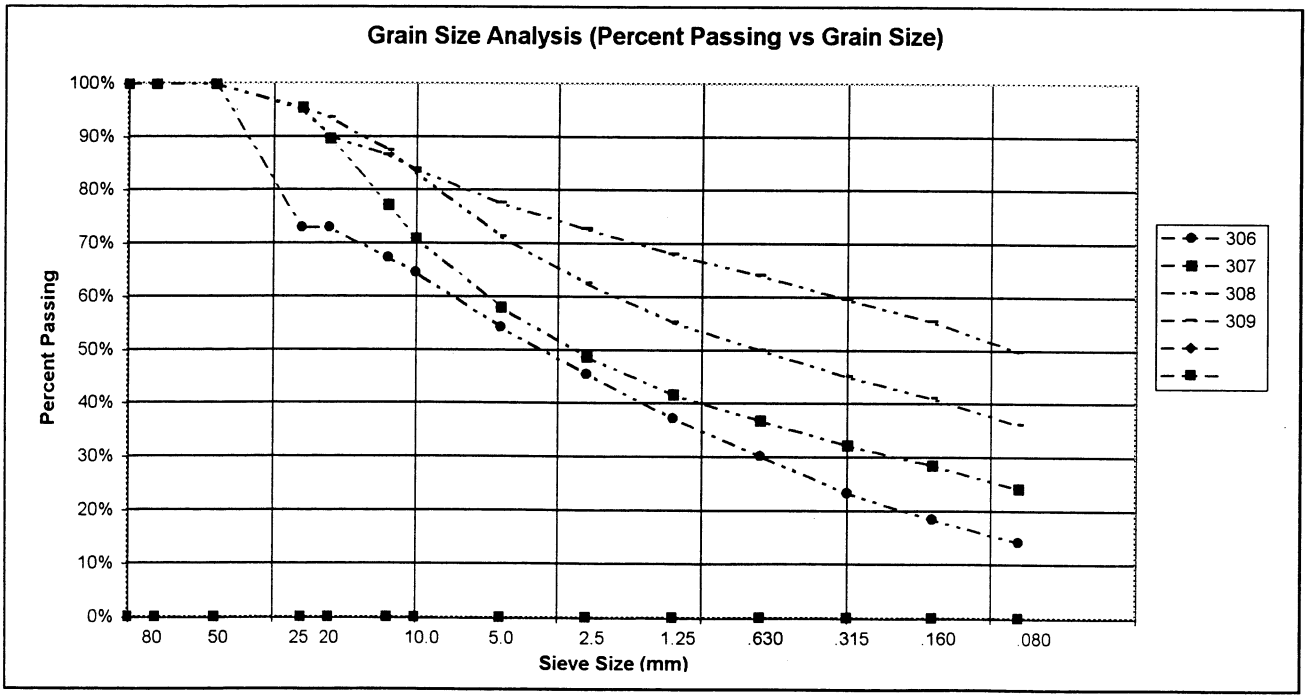
# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633158-6774008
LOGGED BY: RW

HOLE No.: 30094
DATE COMP: 08/15/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 306 | 307 | 308 | 309 | | |
| LAB NO: | 306 | 307 | 308 | 309 | | |
| DEPTH: | 0.8-1.3 | 1.8-2.4 | 3.4-4.0 | 5.3-5.8 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 73% | 95% | 96% | 95% | | |
| 20.0 | 73% | 90% | 94% | 90% | | |
| 12.5 | 67% | 77% | 87% | 87% | | |
| 10.0 | 65% | 71% | 83% | 84% | | |
| 5.0 | 54% | 58% | 71% | 78% | | |
| 2.5 | 45% | 49% | 63% | 73% | | |
| 1.25 | 37% | 42% | 55% | 68% | | |
| 0.630 | 30% | 37% | 50% | 64% | | |
| 0.315 | 23% | 32% | 45% | 60% | | |
| 0.160 | 19% | 29% | 41% | 56% | | |
| 0.080 | 14% | 24% | 36% | 50% | | |
| M.C.(%): | 5% | 8% | 11% | 13% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 46 | 42 | 29 | 22 | | |
| % SAND: | 40 | 34 | 35 | 28 | | |
| % FINES: | 14 | 24 | 36 | 50 | | |
| CLASSIFICATION | SILTY GRAVEL WITH SAND (GM) | SILTY GRAVEL WITH SAND (GM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | | |



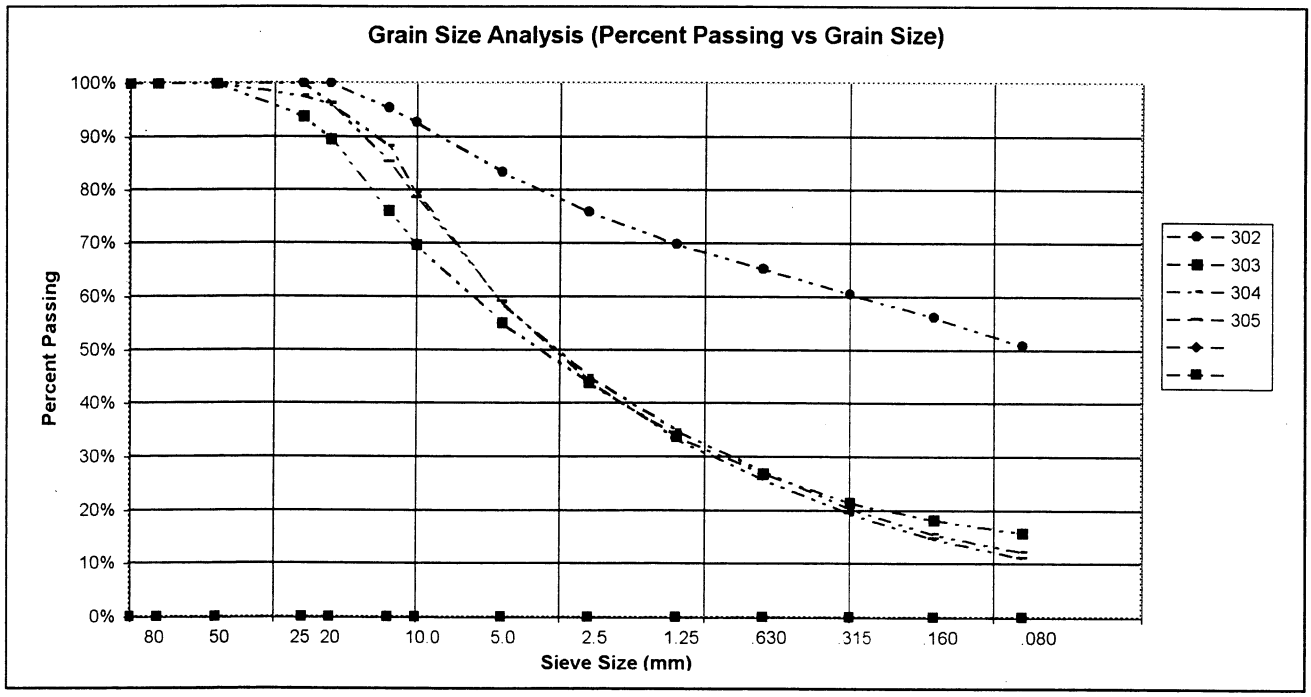
# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. H. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633072-6774135
LOGGED BY: RW

HOLE No.: 30095
DATE COMP: 08/15/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 302 | 303 | 304 | 305 | | |
| LAB NO: | 302 | 303 | 304 | 305 | | |
| DEPTH: | 0.3-0.9 | 2.1-2.4 | 3.4-4.0 | 4.9-5.5 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 100% | 94% | 98% | 100% | | |
| 20.0 | 100% | 90% | 96% | 96% | | |
| 12.5 | 95% | 76% | 88% | 85% | | |
| 10.0 | 93% | 70% | 80% | 79% | | |
| 5.0 | 83% | 55% | 59% | 59% | | |
| 2.5 | 76% | 44% | 45% | 44% | | |
| 1.25 | 70% | 34% | 35% | 33% | | |
| 0.630 | 65% | 27% | 27% | 26% | | |
| 0.315 | 61% | 22% | 20% | 19% | | |
| 0.160 | 56% | 18% | 16% | 15% | | |
| 0.080 | 51% | 16% | 12% | 11% | | |
| M.C.(%): | 18% | 5% | 7% | 6% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 17 | 45 | 41 | 41 | | |
| % SAND: | 32 | 39 | 47 | 48 | | |
| % FINES: | 51 | 16 | 12 | 11 | | |
| CLASSIFICATION | SANDY SILT WITH GRAVEL (ML) | SILTY GRAVEL WITH SAND (GM) | SILTY SAND WITH GRAVEL (SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

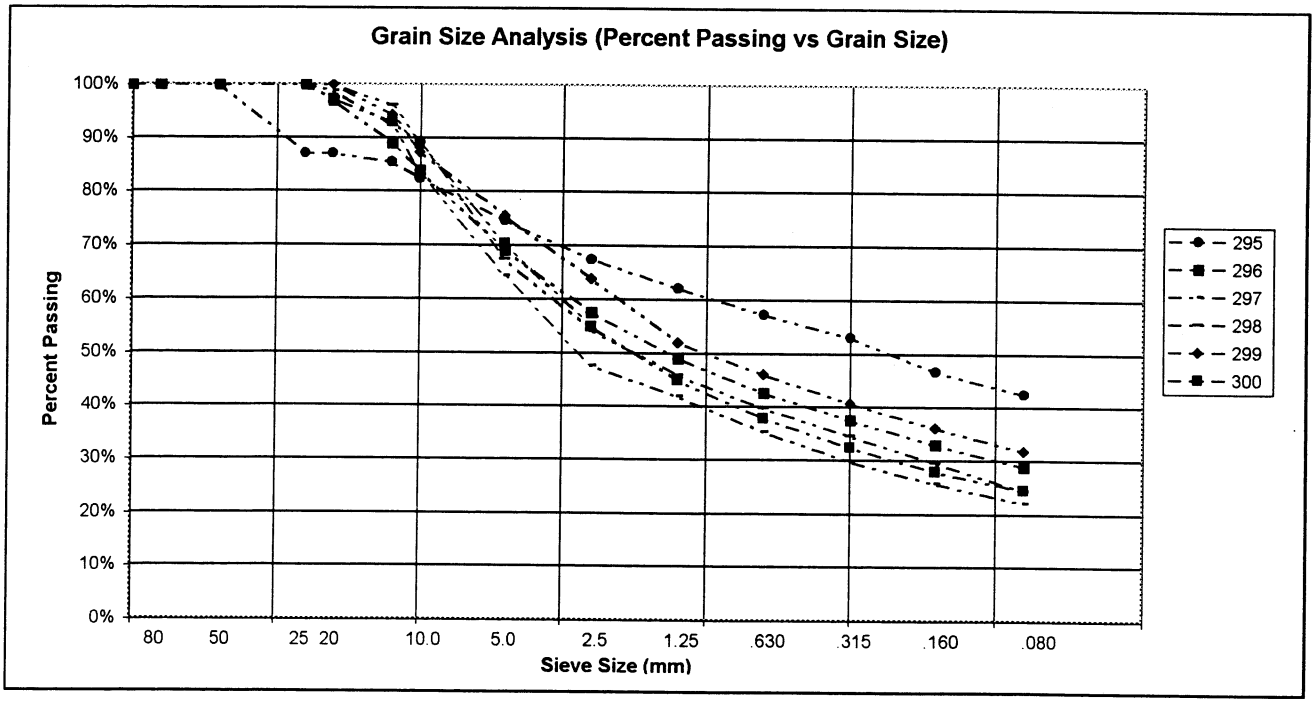
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633067-6774137
LOGGED BY: RW

HOLE No.: 30096

DATE COMP: 08/14/2004

| FIELD NO: | 295 | 296 | 297 | 298 | 299 | 300 |
|---|---|---|---|---|---|---|
| LAB NO: | 295 | 296 | 297 | 298 | 299 | 300 |
| DEPTH: | 1.0-1.3 | 1.8-2.4 | 3.7-4.3 | 4.9-5.5 | 7.0-7.6 | 9.1-9.8 |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 80.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 50.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 25.0 | 87% | 100% | 100% | 100% | 100% | 100% |
| 20.0 | 87% | 97% | 99% | 100% | 100% | 97% |
| 12.5 | 85% | 89% | 92% | 96% | 94% | 93% |
| 10.0 | 83% | 84% | 83% | 89% | 87% | 89% |
| 5.0 | 75% | 69% | 64% | 67% | 76% | 70% |
| 2.5 | 67% | 58% | 48% | 54% | 64% | 55% |
| 1.25 | 62% | 49% | 42% | 46% | 52% | 45% |
| 0.630 | 57% | 43% | 35% | 40% | 46% | 38% |
| 0.315 | 53% | 38% | 30% | 35% | 41% | 32% |
| 0.160 | 47% | 33% | 26% | 30% | 36% | 28% |
| 0.080 | 43% | 29% | 22% | 24% | 32% | 25% |
| M.C.(%): | 20% | 11% | 8% | 10% | 35% | 17% |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| % GRAVEL: | 25 | 31 | 36 | 33 | 24 | 30 |
| % SAND: | 32 | 40 | 42 | 43 | 44 | 46 |
| % FINES: | 43 | 29 | 22 | 24 | 32 | 25 |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) |

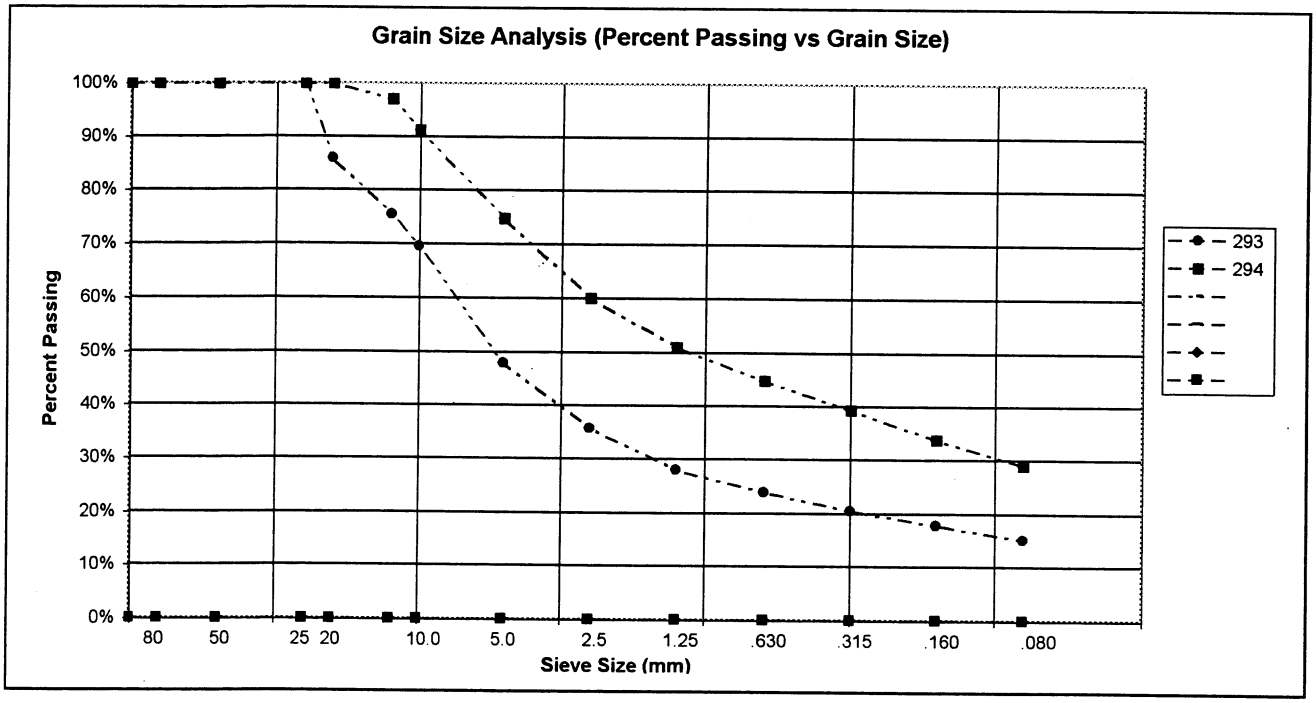


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30097 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 633007-6774212 | |
| LOGGED BY: | RW | DATE COMP: 08/14/2004 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 293 | 294 | | | | |
| LAB NO: | 293 | 294 | | | | |
| DEPTH: | 0.6-1.2 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 100% | | | | |
| 20.0 | 86% | 100% | | | | |
| 12.5 | 76% | 97% | | | | |
| 10.0 | 70% | 91% | | | | |
| 5.0 | 48% | 75% | | | | |
| 2.5 | 36% | 60% | | | | |
| 1.25 | 28% | 51% | | | | |
| 0.630 | 24% | 45% | | | | |
| 0.315 | 21% | 39% | | | | |
| 0.160 | 18% | 34% | | | | |
| 0.080 | 15% | 29% | | | | |
| M.C.(%): | 7% | 14% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 52 | 25 | | | | |
| % SAND: | 33 | 46 | | | | |
| % FINES: | 15 | 29 | | | | |
| CLASSIFICATION | SILTY GRAVEL WITH SAND (GM) | SILTY SAND WITH GRAVEL (SM) | | | | |

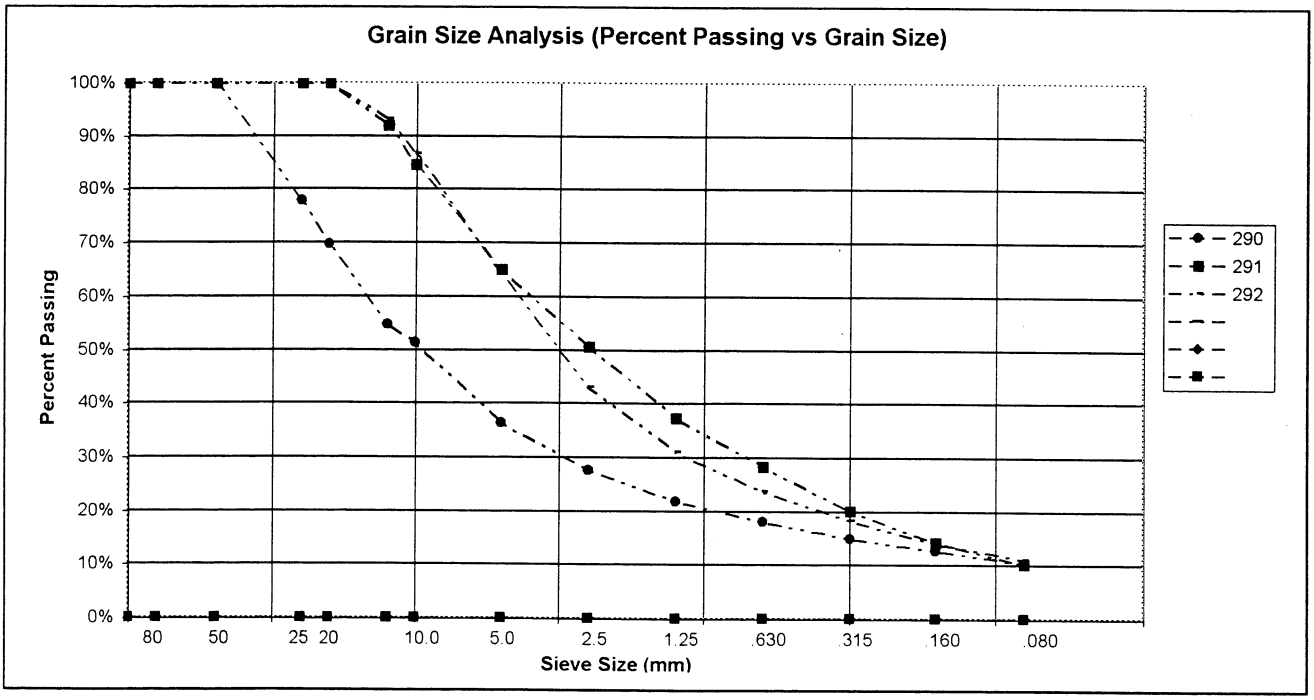


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. H. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30098 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 633003-6774206 | |
| LOGGED BY: | RW | DATE COMP: 08/14/2004 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 290 | 291 | 292 | | | |
| LAB NO: | 290 | 291 | 292 | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | 3.4-4.0 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 78% | 100% | 100% | | | |
| 20.0 | 70% | 100% | 100% | | | |
| 12.5 | 55% | 92% | 93% | | | |
| 10.0 | 51% | 85% | 87% | | | |
| 5.0 | 36% | 65% | 64% | | | |
| 2.5 | 28% | 51% | 43% | | | |
| 1.25 | 22% | 37% | 31% | | | |
| 0.630 | 18% | 28% | 24% | | | |
| 0.315 | 15% | 20% | 18% | | | |
| 0.160 | 13% | 14% | 14% | | | |
| 0.080 | 10% | 10% | 11% | | | |
| M.C.(%): | 3% | 5% | 6% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 64 | 35 | 36 | | | |
| % SAND: | 26 | 55 | 53 | | | |
| % FINES: | 10 | 10 | 11 | | | |
| CLASSIFICATION | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

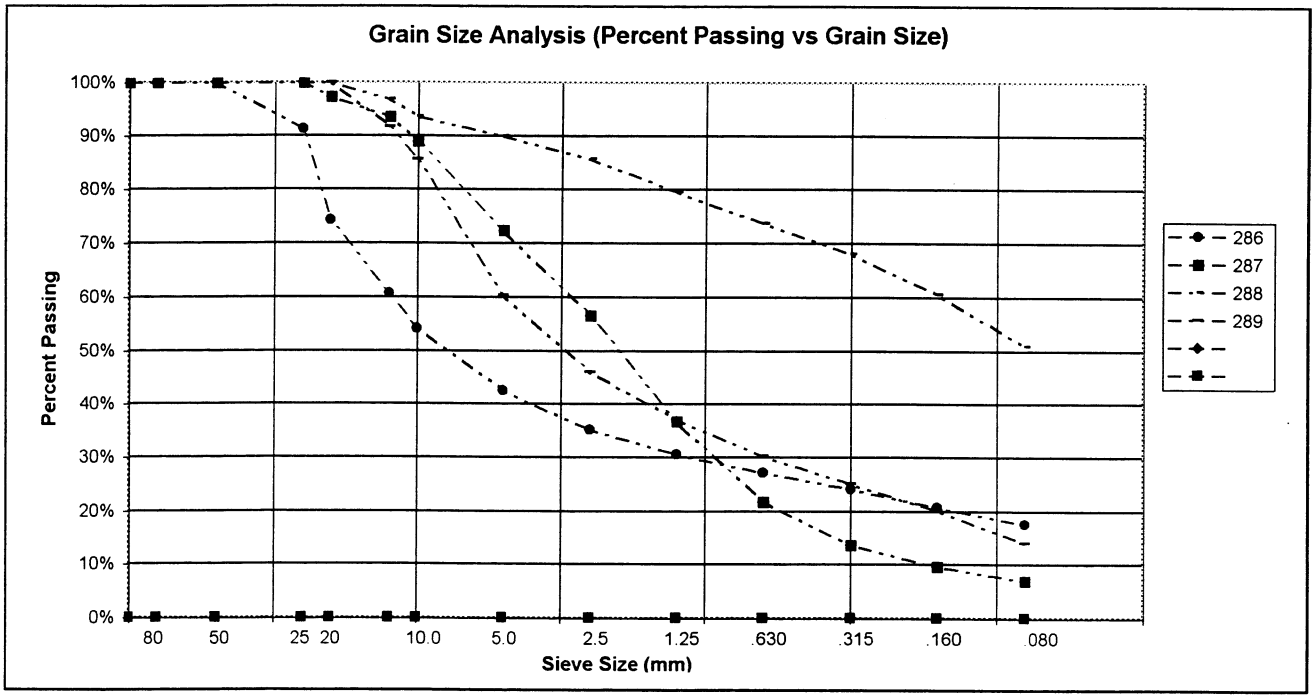
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 632521-6775027
LOGGED BY: RW

HOLE No.: 30099

DATE COMP: 08/14/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 286 | 287 | 288 | 289 | | |
| LAB NO: | 286 | 287 | 288 | 289 | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | 3.0-3.7 | 4.1-4.4 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 91% | 100% | 100% | 100% | | |
| 20.0 | 74% | 97% | 100% | 100% | | |
| 12.5 | 61% | 94% | 97% | 92% | | |
| 10.0 | 54% | 89% | 94% | 86% | | |
| 5.0 | 43% | 72% | 90% | 60% | | |
| 2.5 | 35% | 57% | 86% | 46% | | |
| 1.25 | 31% | 37% | 80% | 37% | | |
| 0.630 | 27% | 22% | 74% | 30% | | |
| 0.315 | 24% | 14% | 68% | 25% | | |
| 0.160 | 21% | 10% | 61% | 20% | | |
| 0.080 | 18% | 7% | 51% | 14% | | |
| M.C.(%): | 7% | 11% | 60% | 13% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 57 | 28 | 10 | 40 | | |
| % SAND: | 25 | 65 | 39 | 46 | | |
| % FINES: | 18 | 7 | 51 | 14 | | |
| CLASSIFICATION | SILTY GRAVEL WITH SAND (GM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SANDY SILT (ML) | SILTY SAND WITH GRAVEL (SM) | | |



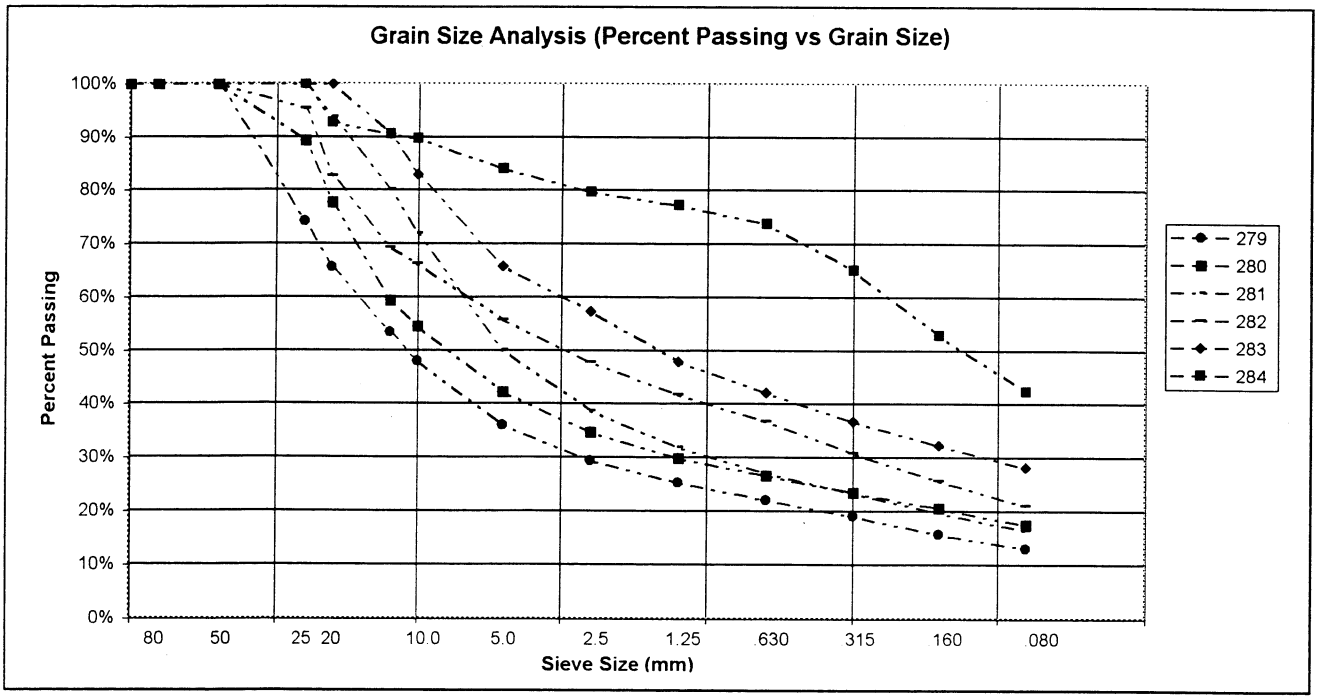
# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 632523-6775028
LOGGED BY: RW

HOLE No.: 30100
DATE COMP: 08/14/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 279 | 280 | 281 | 282 | 283 | 284 |
| LAB NO: | 279 | 280 | 281 | 282 | 283 | 284 |
| DEPTH: | 0.6-1.2 | 1.8-2.4 | 3.4-4.3 | 4.9-5.5 | 6.4-7.3 | 8.2-8.8 |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 80.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 50.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 25.0 | 74% | 89% | 100% | 95% | 100% | 100% |
| 20.0 | 66% | 78% | 94% | 83% | 100% | 93% |
| 12.5 | 53% | 59% | 80% | 69% | 91% | 91% |
| 10.0 | 48% | 55% | 72% | 66% | 83% | 90% |
| 5.0 | 36% | 42% | 50% | 56% | 66% | 84% |
| 2.5 | 29% | 35% | 39% | 48% | 57% | 80% |
| 1.25 | 25% | 30% | 32% | 42% | 48% | 77% |
| 0.630 | 22% | 27% | 27% | 37% | 42% | 74% |
| 0.315 | 19% | 23% | 23% | 31% | 37% | 65% |
| 0.160 | 16% | 21% | 20% | 26% | 32% | 53% |
| 0.080 | 13% | 18% | 16% | 21% | 28% | 42% |
| M.C.(%): | 7% | 7% | 6% | 10% | 12% | 13% |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| % GRAVEL: | 64 | 58 | 50 | 44 | 34 | 16 |
| % SAND: | 23 | 25 | 34 | 35 | 38 | 42 |
| % FINES: | 13 | 18 | 16 | 21 | 28 | 42 |
| CLASSIFICATION | SILTY GRAVEL WITH SAND (GM) | SILTY GRAVEL WITH SAND (GM) | SILTY GRAVEL WITH SAND (GM) | SILTY GRAVEL WITH SAND (GM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) |

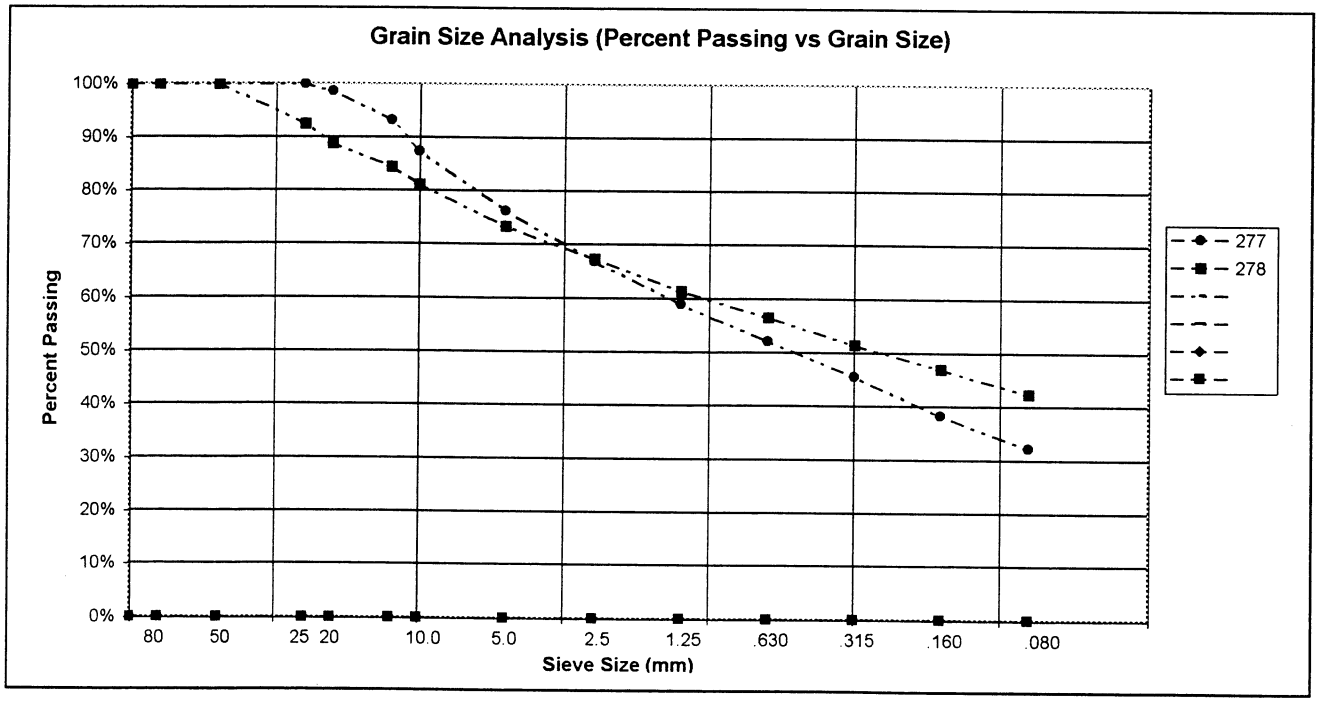


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30101 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 632580-6775069 | |
| LOGGED BY: | RW | DATE COMP: 08/14/2004 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 277 | 278 | | | | |
| LAB NO: | 277 | 278 | | | | |
| DEPTH: | 0.4-1.0 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 93% | | | | |
| 20.0 | 99% | 89% | | | | |
| 12.5 | 93% | 85% | | | | |
| 10.0 | 87% | 81% | | | | |
| 5.0 | 76% | 73% | | | | |
| 2.5 | 67% | 67% | | | | |
| 1.25 | 59% | 61% | | | | |
| 0.630 | 52% | 57% | | | | |
| 0.315 | 46% | 51% | | | | |
| 0.160 | 38% | 47% | | | | |
| 0.080 | 32% | 42% | | | | |
| M.C.(%): | 4% | 6% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 24 | 27 | | | | |
| % SAND: | 44 | 31 | | | | |
| % FINES: | 32 | 42 | | | | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

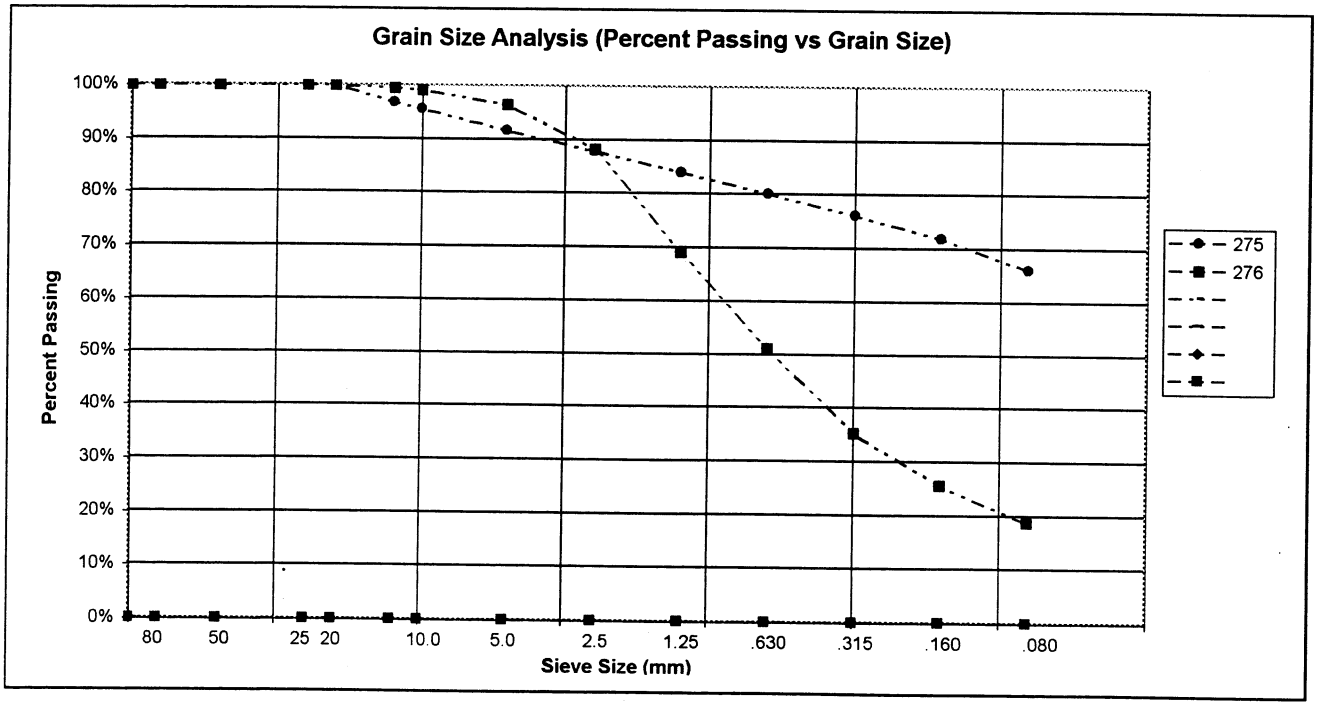
An Affiliate of J. H. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 632578-6775066
LOGGED BY: RW

HOLE No.: 30102

DATE COMP: 08/14/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 275 | 276 | | | | |
| LAB NO: | 275 | 276 | | | | |
| DEPTH: | 0.6-1.2 | 2.4-3.0 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 100% | | | | |
| 20.0 | 100% | 100% | | | | |
| 12.5 | 97% | 100% | | | | |
| 10.0 | 96% | 99% | | | | |
| 5.0 | 92% | 97% | | | | |
| 2.5 | 88% | 88% | | | | |
| 1.25 | 84% | 69% | | | | |
| 0.630 | 80% | 51% | | | | |
| 0.315 | 76% | 35% | | | | |
| 0.160 | 72% | 26% | | | | |
| 0.080 | 66% | 19% | | | | |
| M.C.(%): | 12% | 1% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 8 | 3 | | | | |
| % SAND: | 26 | 78 | | | | |
| % FINES: | 66 | 19 | | | | |
| CLASSIFICATION | SANDY SILT (ML) | SILTY SAND (SM) | | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

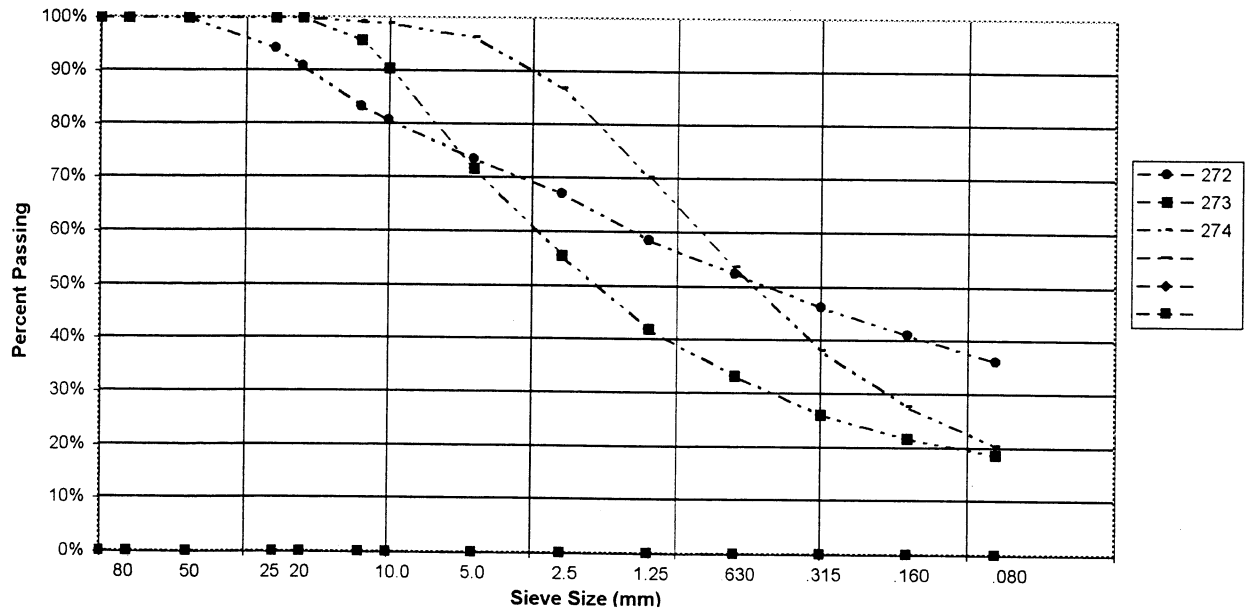
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 632657-6775120
LOGGED BY: RW

HOLE No.: 30103

DATE COMP: 08/14/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 272 | 273 | 274 | | | |
| LAB NO: | 272 | 273 | 274 | | | |
| DEPTH: | 0.6-1.2 | 2.1-2.9 | 3.7-4.3 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 94% | 100% | 100% | | | |
| 20.0 | 91% | 100% | 100% | | | |
| 12.5 | 83% | 96% | 99% | | | |
| 10.0 | 81% | 90% | 99% | | | |
| 5.0 | 73% | 72% | 96% | | | |
| 2.5 | 67% | 56% | 87% | | | |
| 1.25 | 59% | 42% | 70% | | | |
| 0.630 | 52% | 33% | 54% | | | |
| 0.315 | 46% | 26% | 38% | | | |
| 0.160 | 41% | 22% | 28% | | | |
| 0.080 | 36% | 19% | 20% | | | |
| M.C.(%): | 4% | 5% | 2% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 27 | 28 | 4 | | | |
| % SAND: | 37 | 53 | 76 | | | |
| % FINES: | 36 | 19 | 20 | | | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

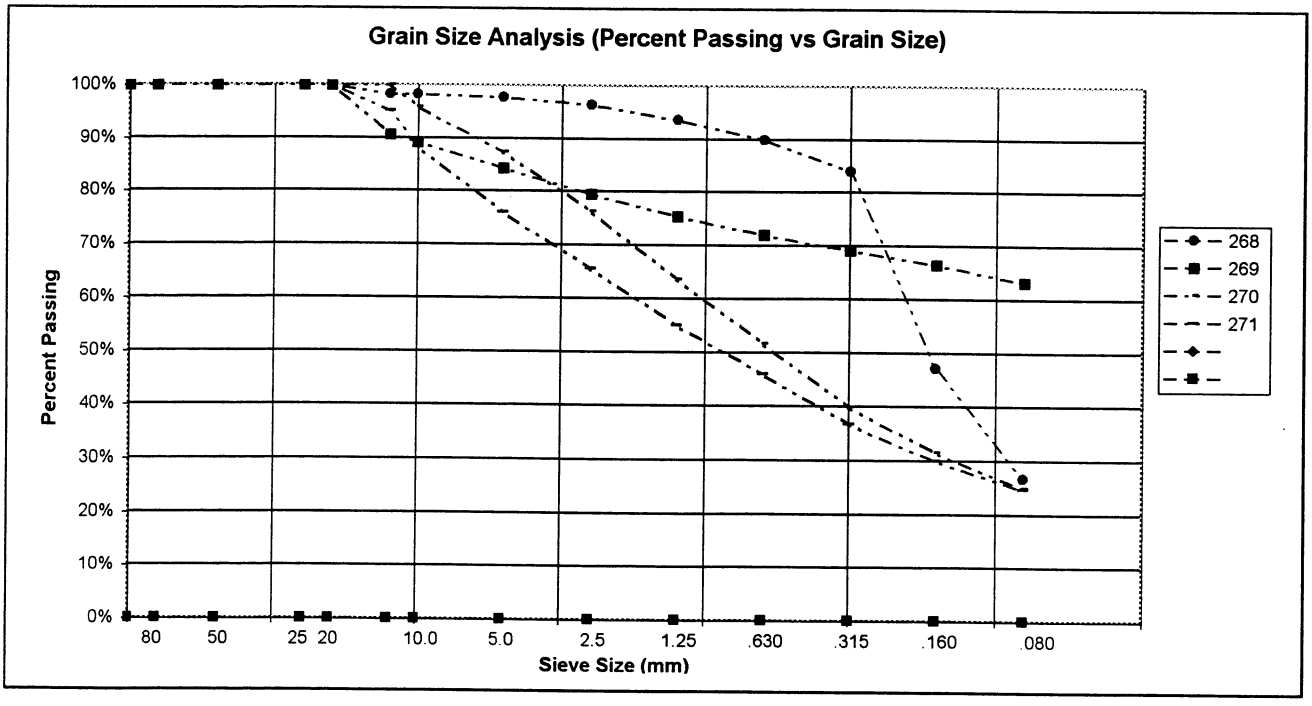
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 632665-6775122
LOGGED BY: RW

HOLE No.: 30104

DATE COMP: 08/13/2004

| FIELD NO: | 268 | 269 | 270 | 271 | | |
|---|---|---|---|---|---|---|
| LAB NO: | 268 | 269 | 270 | 271 | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | 3.4-3.7 | 3.7-4.3 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 100% | 100% | 100% | 100% | | |
| 20.0 | 100% | 100% | 100% | 100% | | |
| 12.5 | 98% | 91% | 100% | 95% | | |
| 10.0 | 98% | 89% | 96% | 88% | | |
| 5.0 | 98% | 84% | 87% | 76% | | |
| 2.5 | 96% | 80% | 76% | 66% | | |
| 1.25 | 94% | 75% | 64% | 55% | | |
| 0.630 | 90% | 72% | 52% | 46% | | |
| 0.315 | 84% | 69% | 40% | 37% | | |
| 0.160 | 47% | 66% | 32% | 30% | | |
| 0.080 | 27% | 63% | 25% | 25% | | |
| M.C.(%): | 3% | 8% | 2% | 3% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 2 | 16 | 13 | 24 | | |
| % SAND: | 71 | 21 | 63 | 51 | | |
| % FINES: | 27 | 63 | 25 | 25 | | |
| CLASSIFICATION | SILTY SAND (SM) | SANDY SILT WITH GRAVEL (ML) | SILTY SAND (SM) | SILTY SAND WITH GRAVEL (SM) | | |



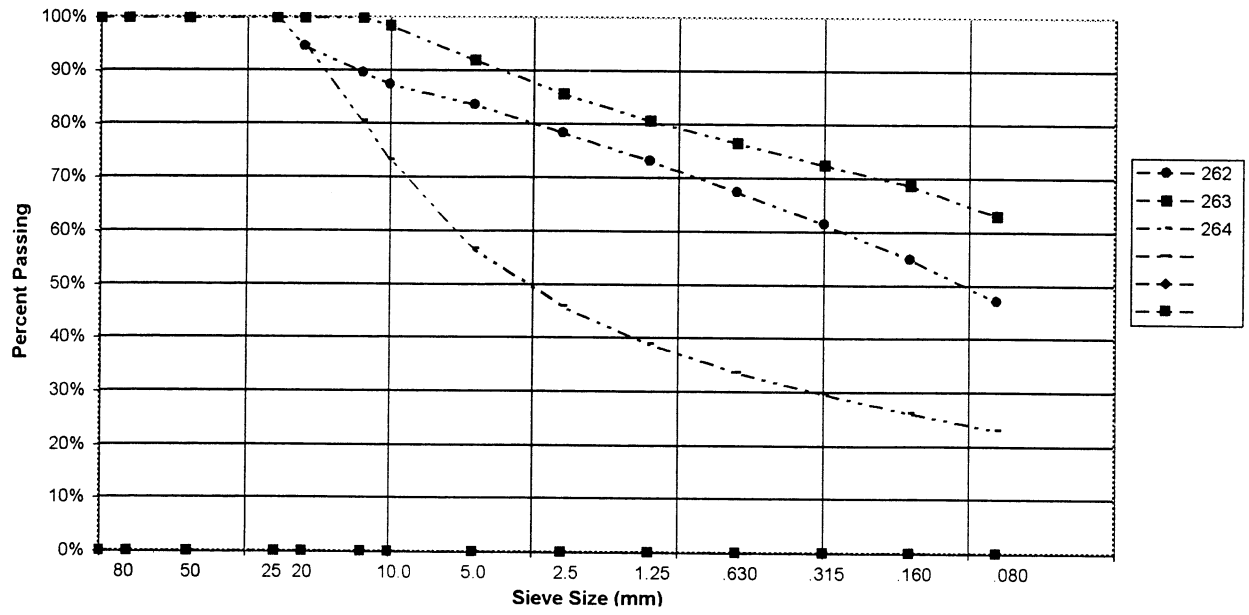
# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30105 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 632436-6775099 | |
| LOGGED BY: | RW | DATE COMP: 08/13/2004 |

| FIELD NO: | 262 | 263 | 264 | | | |
|---|---|---|---|---|---|---|
| LAB NO: | 262 | 263 | 264 | | | |
| DEPTH: | 0.9-1.2 | 1.8-2.4 | 3.4-4.0 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 100% | 100% | 100% | | | |
| 20.0 | 95% | 100% | 95% | | | |
| 12.5 | 90% | 100% | 80% | | | |
| 10.0 | 87% | 99% | 73% | | | |
| 5.0 | 84% | 92% | 57% | | | |
| 2.5 | 78% | 86% | 46% | | | |
| 1.25 | 73% | 81% | 39% | | | |
| 0.630 | 67% | 77% | 34% | | | |
| 0.315 | 62% | 73% | 30% | | | |
| 0.160 | 55% | 69% | 26% | | | |
| 0.080 | 47% | 63% | 23% | | | |
| M.C.(%): | 7% | 11% | 4% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 16 | 8 | 43 | | | |
| % SAND: | 37 | 29 | 34 | | | |
| % FINES: | 47 | 63 | 23 | | | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SANDY SILT (ML) | SILTY GRAVEL WITH SAND (GM) | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)

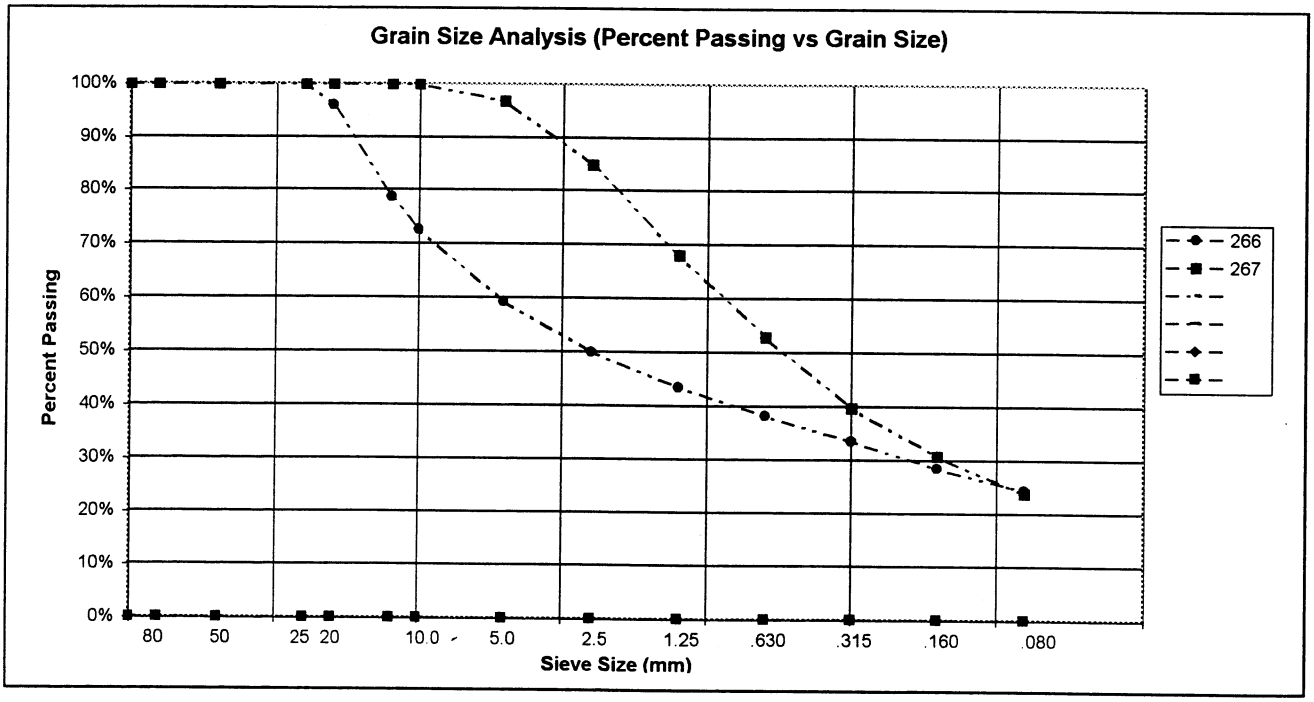


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | | |
|---|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: | 30106 |
| CLIENT: | YTG, Transportation & Engineering | | |
| PROJECT NAME: | Geotechnical Services | | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | | |
| DRILL UNIT: | CME75 | | |
| HOLE LOCATION: | 632440-6775097 | | |
| LOGGED BY: | RW | DATE COMP: | 08/13/2004 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 266 | 267 | | | | |
| LAB NO: | 266 | 267 | | | | |
| DEPTH: | 0.0-0.6 | 0.9-1.2 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 100% | | | | |
| 20.0 | 96% | 100% | | | | |
| 12.5 | 79% | 100% | | | | |
| 10.0 | 73% | 100% | | | | |
| 5.0 | 59% | 97% | | | | |
| 2.5 | 50% | 85% | | | | |
| 1.25 | 44% | 68% | | | | |
| 0.630 | 38% | 53% | | | | |
| 0.315 | 34% | 40% | | | | |
| 0.160 | 29% | 31% | | | | |
| 0.080 | 24% | 24% | | | | |
| M.C.(%): | 5% | 3% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 41 | 3 | | | | |
| % SAND: | 35 | 73 | | | | |
| % FINES: | 24 | 24 | | | | |
| CLASSIFICATION | SILTY GRAVEL WITH SAND (GM) | SILTY SAND (SM) | | | | |

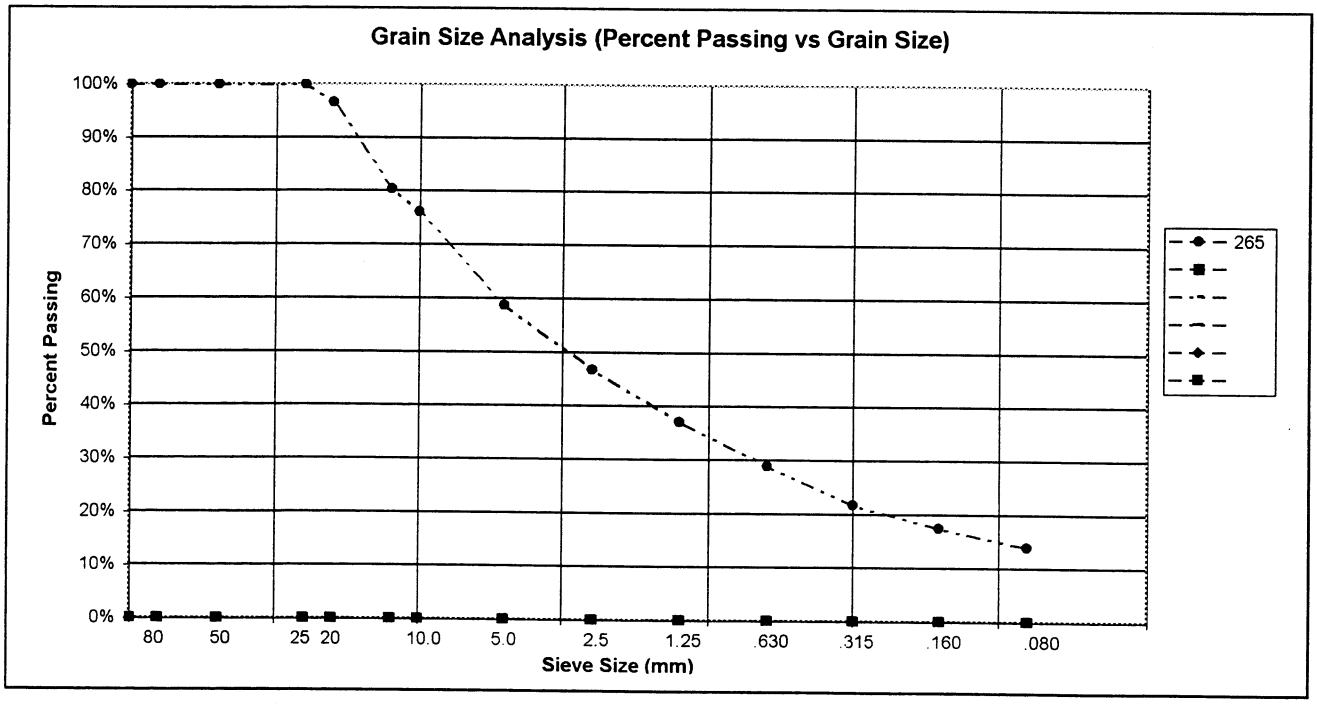


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | | |
|---|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: | 30107 |
| CLIENT: | YTG, Transportation & Engineering | | |
| PROJECT NAME: | Geotechnical Services | | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | | |
| DRILL UNIT: | CME75 | | |
| HOLE LOCATION: | 632487-6775136 | | |
| LOGGED BY: | RW | DATE COMP: | 08/13/2004 |

| | |
|---|---|
| FIELD NO: | 265 |
| LAB NO: | 265 |
| DEPTH: | 0.9-1.2 |
| TYPE: | AUGER |
| **SIEVE SIZE** | **PERCENT PASSING** |
| 100.0 | 100% |
| 80.0 | 100% |
| 50.0 | 100% |
| 25.0 | 100% |
| 20.0 | 97% |
| 12.5 | 80% |
| 10.0 | 76% |
| 5.0 | 59% |
| 2.5 | 47% |
| 1.25 | 37% |
| 0.630 | 29% |
| 0.315 | 22% |
| 0.160 | 17% |
| 0.080 | 14% |
| M.C.(%): | 2% |
| LIQUID LIMIT: | 0.0 |
| PLASTIC LIMIT: | 0.0 |
| PLASTIC INDEX.: | 0.0 |
| % GRAVEL: | 41 |
| % SAND: | 45 |
| % FINES: | 14 |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

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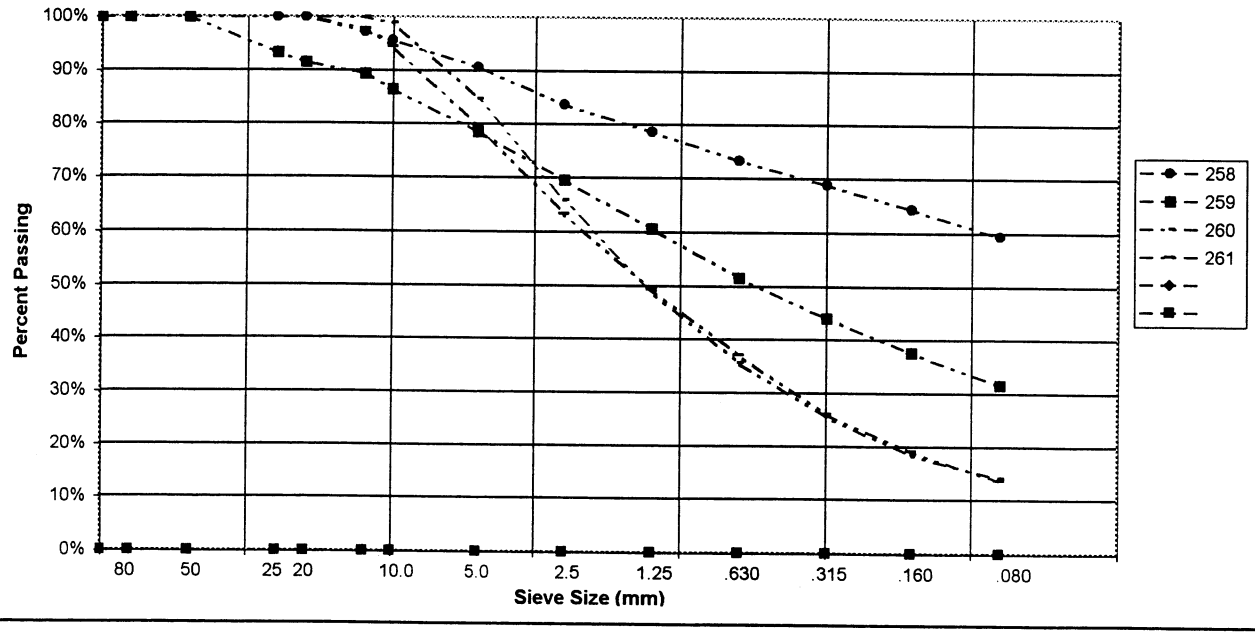
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 632495-6775140
LOGGED BY: RW

HOLE No.: 30108

DATE COMP: 08/13/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 258 | 259 | 260 | 261 | | |
| LAB NO: | 258 | 259 | 260 | 261 | | |
| DEPTH: | 0.6-1.2 | 1.5-2.1 | 3.0-3.7 | 4.9-5.5 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 100% | 93% | 100% | 100% | | |
| 20.0 | 100% | 92% | 100% | 100% | | |
| 12.5 | 97% | 89% | 100% | 98% | | |
| 10.0 | 96% | 87% | 99% | 94% | | |
| 5.0 | 91% | 79% | 85% | 80% | | |
| 2.5 | 84% | 70% | 66% | 63% | | |
| 1.25 | 79% | 61% | 49% | 49% | | |
| 0.630 | 73% | 52% | 36% | 37% | | |
| 0.315 | 69% | 44% | 26% | 26% | | |
| 0.160 | 64% | 38% | 19% | 19% | | |
| 0.080 | 60% | 32% | 14% | 14% | | |
| M.C.(%): | 12% | 6% | 1% | 2% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 9 | 21 | 15 | 20 | | |
| % SAND: | 31 | 47 | 71 | 66 | | |
| % FINES: | 60 | 32 | 14 | 14 | | |
| CLASSIFICATION | SANDY SILT (ML) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

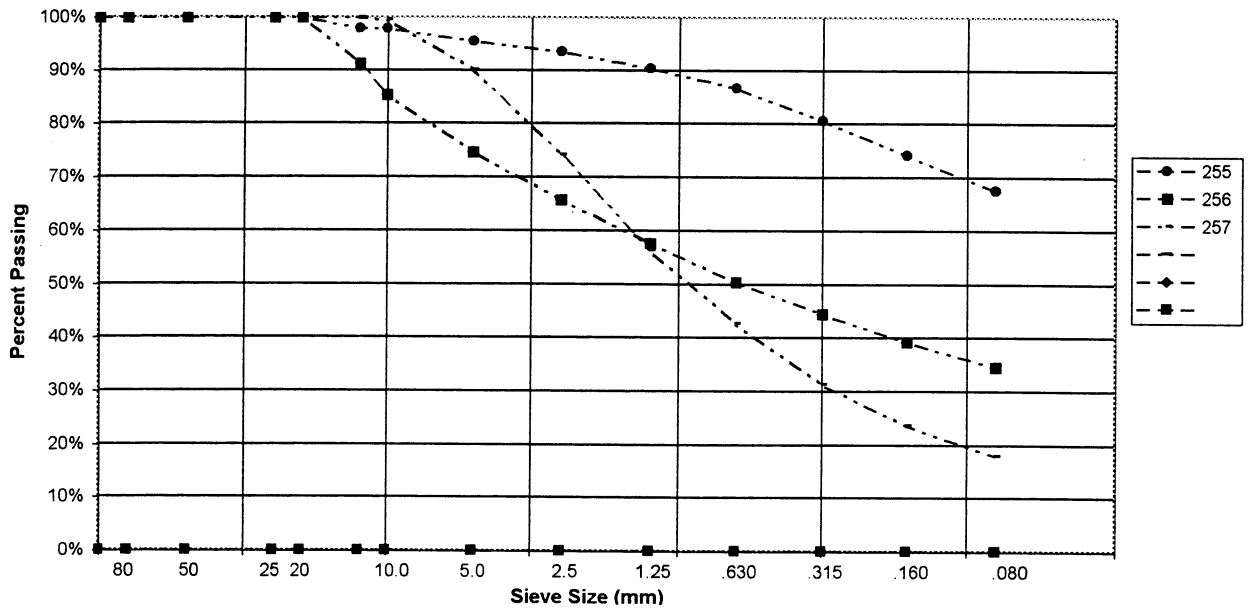
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 632545-6775189
LOGGED BY: RW

HOLE No.: 30109
DATE COMP: 08/13/2004

| FIELD NO: | 255 | 256 | 257 | | | |
|---|---|---|---|---|---|---|
| LAB NO: | 255 | 256 | 257 | | | |
| DEPTH: | 0.6-1.2 | 1.8-2.4 | 3.4-4.0 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 100% | 100% | 100% | | | |
| 20.0 | 100% | 100% | 100% | | | |
| 12.5 | 98% | 91% | 100% | | | |
| 10.0 | 98% | 85% | 100% | | | |
| 5.0 | 96% | 75% | 90% | | | |
| 2.5 | 94% | 66% | 74% | | | |
| 1.25 | 90% | 58% | 56% | | | |
| 0.630 | 87% | 50% | 43% | | | |
| 0.315 | 81% | 44% | 31% | | | |
| 0.160 | 74% | 39% | 24% | | | |
| 0.080 | 68% | 35% | 18% | | | |
| M.C.(%): | 13% | 5% | 3% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 4 | 25 | 10 | | | |
| % SAND: | 28 | 40 | 72 | | | |
| % FINES: | 68 | 35 | 18 | | | |
| CLASSIFICATION | SANDY SILT (ML) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)

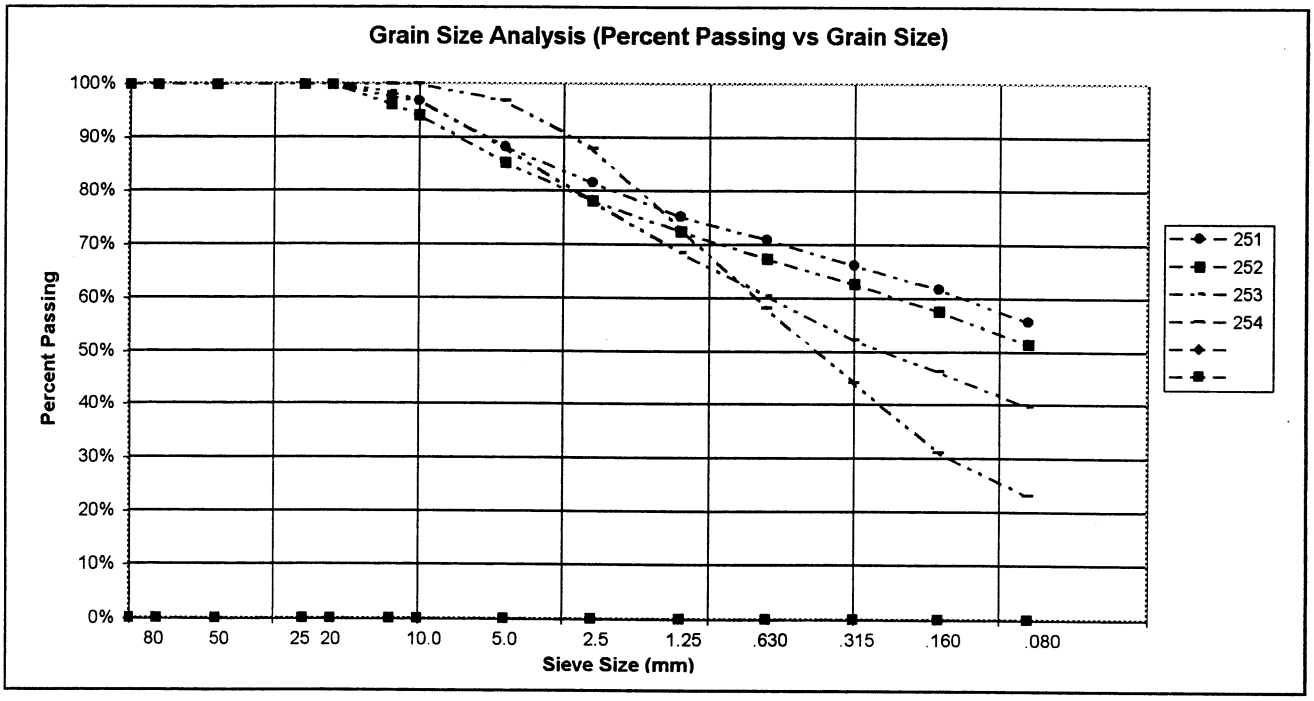


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30110 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 632545-6775194 | |
| LOGGED BY: | RW | DATE COMP: 08/13/2004 |

| FIELD NO: | 251 | 252 | 253 | 254 | | |
|---|---|---|---|---|---|---|
| LAB NO: | 251 | 252 | 253 | 254 | | |
| DEPTH: | 0.4-1.0 | 1.8-2.4 | 3.4-4.0 | 4.8-5.5 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 100% | 100% | 100% | 100% | | |
| 20.0 | 100% | 100% | 100% | 100% | | |
| 12.5 | 98% | 96% | 99% | 100% | | |
| 10.0 | 97% | 94% | 97% | 100% | | |
| 5.0 | 88% | 85% | 88% | 97% | | |
| 2.5 | 82% | 78% | 78% | 88% | | |
| 1.25 | 75% | 73% | 69% | 73% | | |
| 0.630 | 71% | 67% | 60% | 58% | | |
| 0.315 | 66% | 63% | 52% | 44% | | |
| 0.160 | 62% | 58% | 46% | 31% | | |
| 0.080 | 56% | 51% | 40% | 23% | | |
| M.C.(%): | 22% | 12% | 11% | 5% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 12 | 15 | 12 | 3 | | |
| % SAND: | 32 | 34 | 48 | 74 | | |
| % FINES: | 56 | 51 | 40 | 23 | | |
| CLASSIFICATION | SANDY SILT (ML) | SANDY SILT (ML) | SILTY SAND (SM) | SILTY SAND (SM) | | |

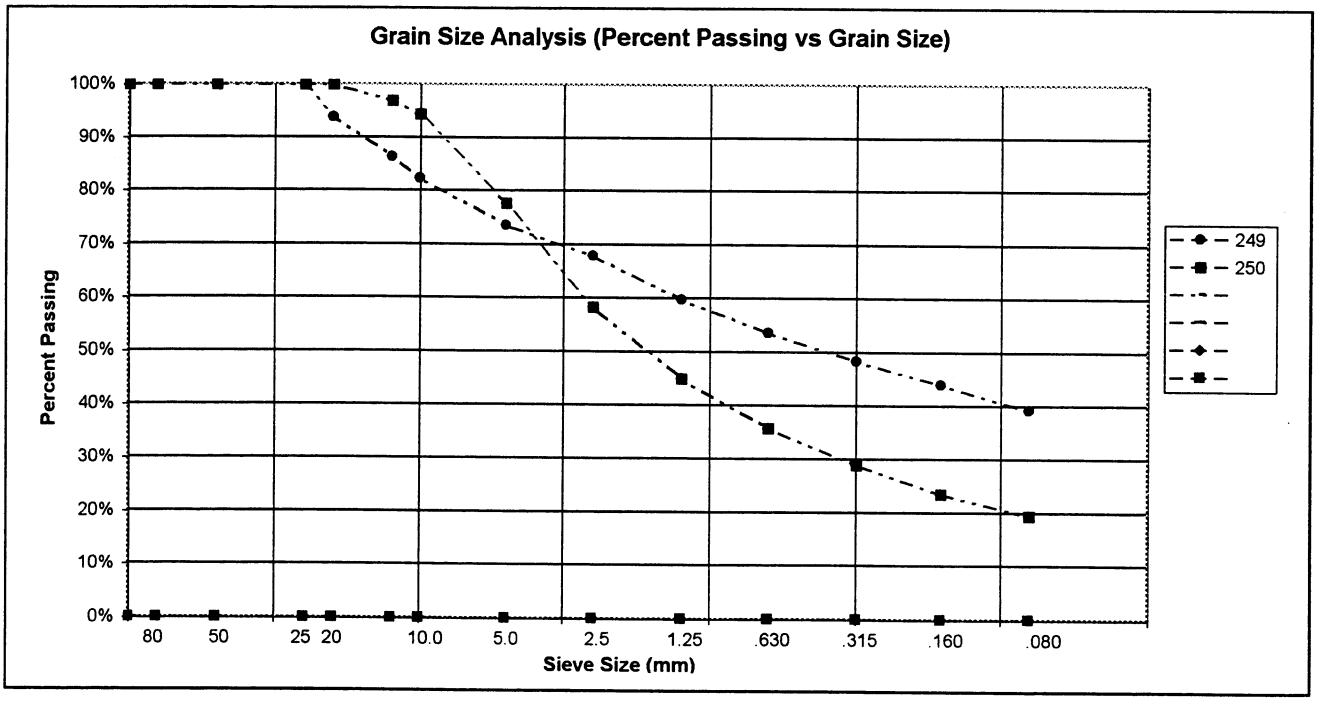


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30111 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 632610-6775244 | |
| LOGGED BY: | RW | DATE COMP: 08/13/2004 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 249 | 250 | | | | |
| LAB NO: | 249 | 250 | | | | |
| DEPTH: | 0.2-0.6 | 1.5-1.8 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 100% | | | | |
| 20.0 | 94% | 100% | | | | |
| 12.5 | 86% | 97% | | | | |
| 10.0 | 82% | 94% | | | | |
| 5.0 | 74% | 78% | | | | |
| 2.5 | 68% | 58% | | | | |
| 1.25 | 60% | 45% | | | | |
| 0.630 | 54% | 36% | | | | |
| 0.315 | 48% | 29% | | | | |
| 0.160 | 44% | 23% | | | | |
| 0.080 | 39% | 19% | | | | |
| M.C.(%): | 5% | 2% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 26 | 22 | | | | |
| % SAND: | 34 | 58 | | | | |
| % FINES: | 39 | 19 | | | | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | | | | |

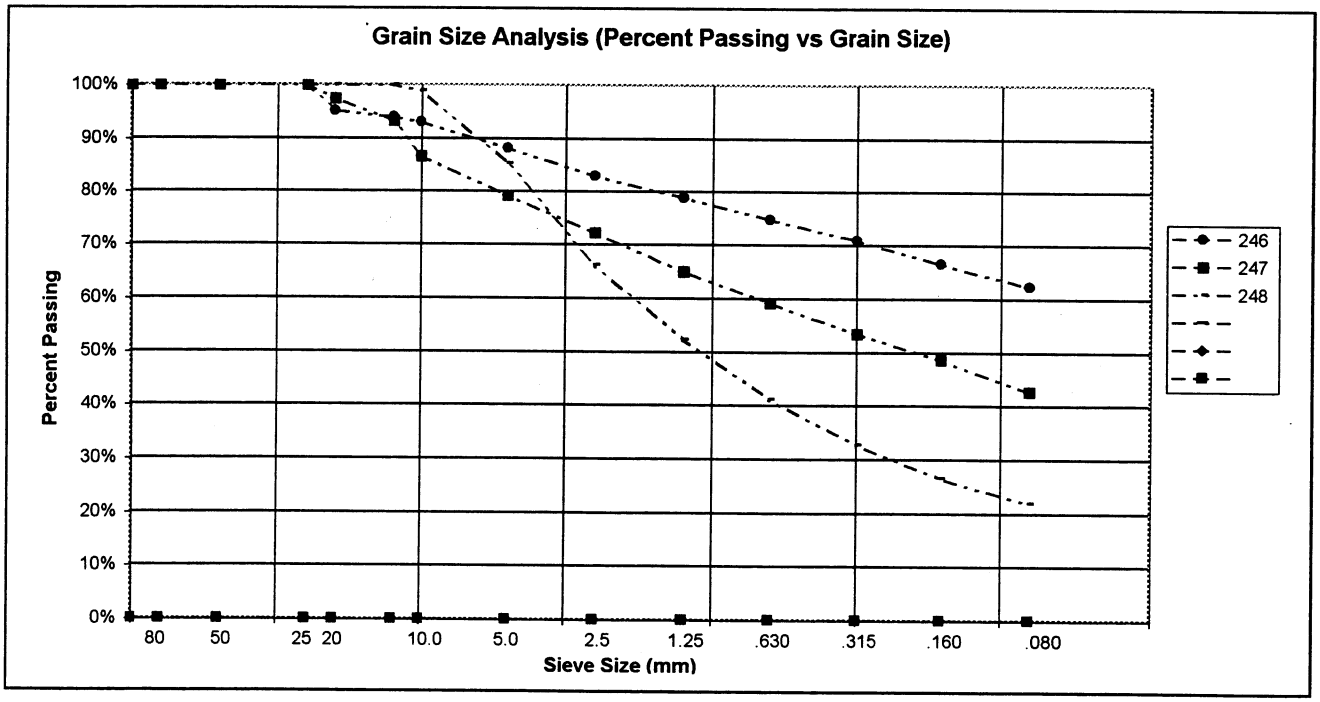


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30112 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 632619-6775245 | |
| LOGGED BY: | RW | DATE COMP: 08/13/2004 |

| FIELD NO: | 246 | 247 | 248 | | | |
|---|---|---|---|---|---|---|
| LAB NO: | 246 | 247 | 248 | | | |
| DEPTH: | 0.5-0.8 | 1.8-2.4 | 3.0-3.4 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 100% | 100% | 100% | | | |
| 20.0 | 95% | 97% | 100% | | | |
| 12.5 | 94% | 93% | 100% | | | |
| 10.0 | 93% | 87% | 99% | | | |
| 5.0 | 88% | 79% | 85% | | | |
| 2.5 | 83% | 72% | 66% | | | |
| 1.25 | 79% | 65% | 52% | | | |
| 0.630 | 75% | 59% | 41% | | | |
| 0.315 | 71% | 54% | 33% | | | |
| 0.160 | 67% | 49% | 27% | | | |
| 0.080 | 62% | 43% | 22% | | | |
| M.C.(%): | 13% | 7% | 3% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 12 | 21 | 15 | | | |
| % SAND: | 26 | 37 | 63 | | | |
| % FINES: | 62 | 43 | 22 | | | |
| CLASSIFICATION | SANDY SILT (ML) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

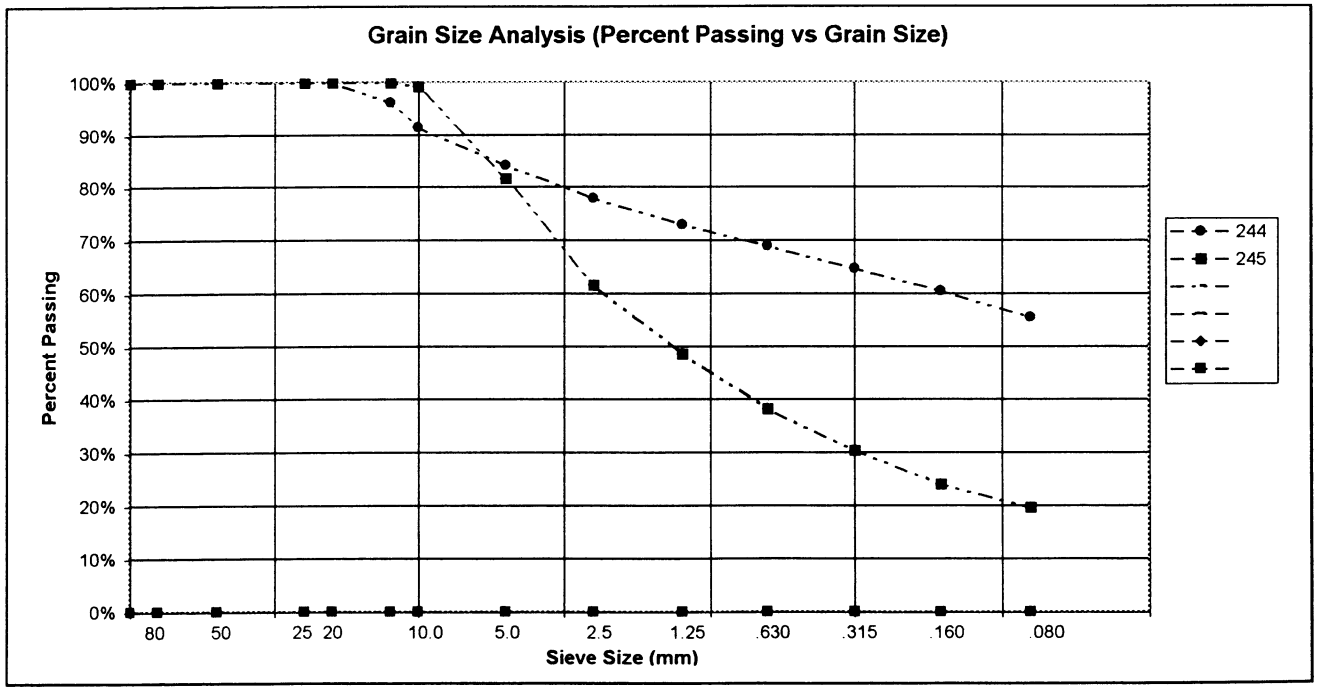
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 632619-6775245
LOGGED BY: RW

HOLE No.: 30113

DATE COMP: 08/12/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 244 | 245 | | | | |
| LAB NO: | 244 | 245 | | | | |
| DEPTH: | 0.6-1.2 | 1.5-2.1 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 100% | | | | |
| 20.0 | 100% | 100% | | | | |
| 12.5 | 96% | 100% | | | | |
| 10.0 | 92% | 99% | | | | |
| 5.0 | 84% | 82% | | | | |
| 2.5 | 78% | 62% | | | | |
| 1.25 | 73% | 49% | | | | |
| 0.630 | 69% | 38% | | | | |
| 0.315 | 65% | 30% | | | | |
| 0.160 | 61% | 24% | | | | |
| 0.080 | 56% | 20% | | | | |
| M.C.(%): | 17% | 5% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 16 | 18 | | | | |
| % SAND: | 29 | 62 | | | | |
| % FINES: | 56 | 20 | | | | |
| CLASSIFICATION | SANDY SILT WITH GRAVEL (ML) | SILTY SAND WITH GRAVEL (SM) | | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

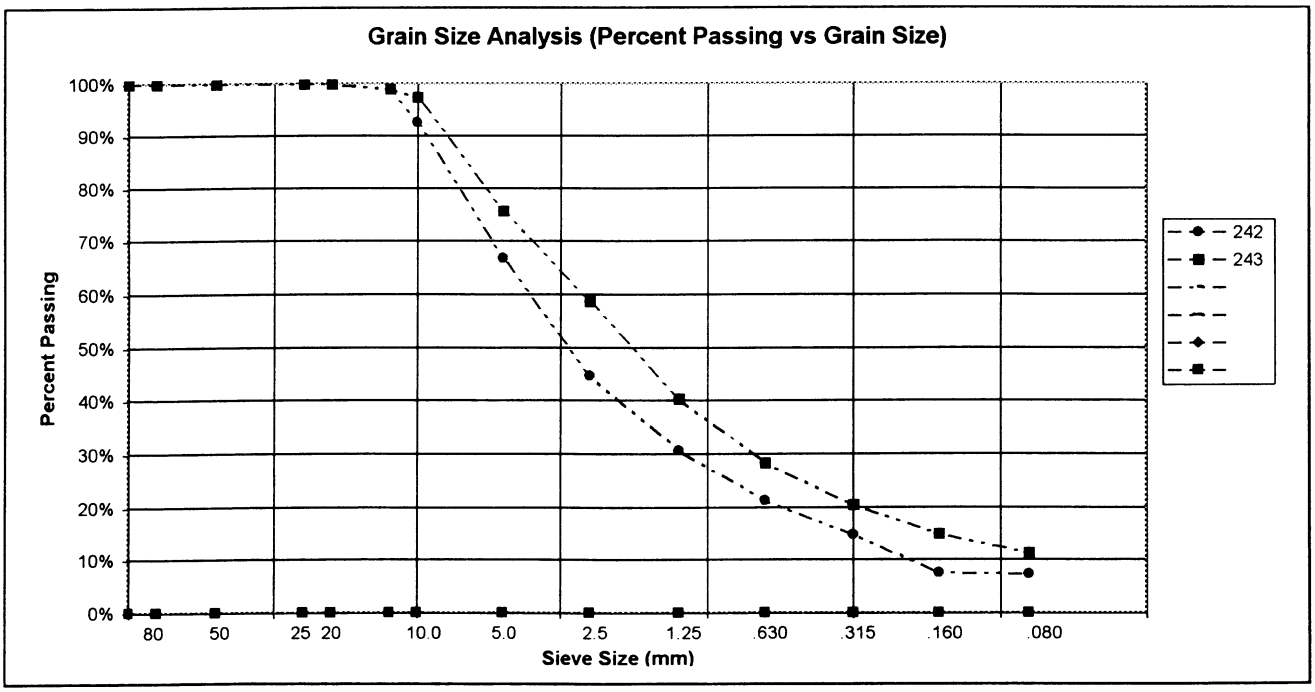
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 632295-6775252
LOGGED BY: RW

HOLE No.: 30114

DATE COMP: 08/12/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 242 | 243 | | | | |
| LAB NO: | 242 | 243 | | | | |
| DEPTH: | 0.6-1.2 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 100% | | | | |
| 20.0 | 100% | 100% | | | | |
| 12.5 | 99% | 99% | | | | |
| 10.0 | 93% | 97% | | | | |
| 5.0 | 67% | 76% | | | | |
| 2.5 | 45% | 59% | | | | |
| 1.25 | 31% | 40% | | | | |
| 0.630 | 21% | 28% | | | | |
| 0.315 | 15% | 21% | | | | |
| 0.160 | 8% | 15% | | | | |
| 0.080 | 7% | 11% | | | | |
| M.C.(%): | 3% | 2% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 33 | 24 | | | | |
| % SAND: | 60 | 65 | | | | |
| % FINES: | 7 | 11 | | | | |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

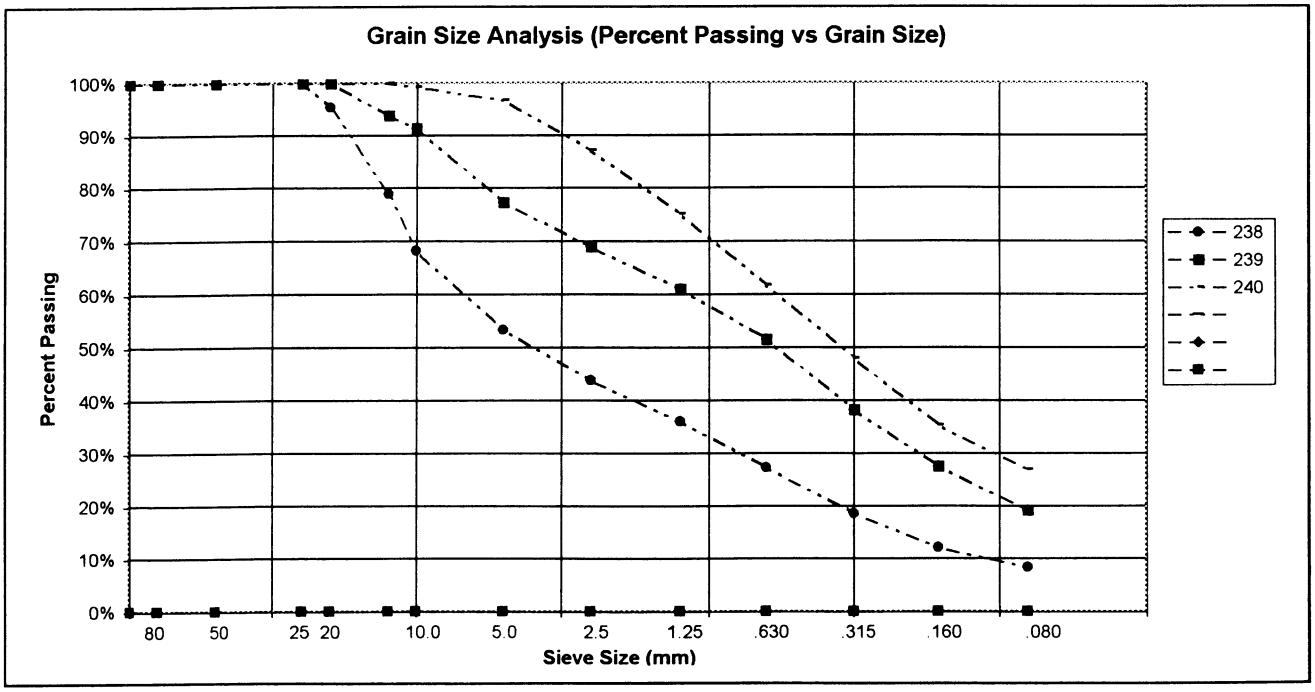
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 632303-6775254
LOGGED BY: RW

HOLE No.: 30115

DATE COMP: 08/12/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 238 | 239 | 240 | | | |
| LAB NO: | 238 | 239 | 240 | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | 3.7-4.3 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 100% | 100% | 100% | | | |
| 20.0 | 95% | 100% | 100% | | | |
| 12.5 | 79% | 94% | 100% | | | |
| 10.0 | 68% | 91% | 99% | | | |
| 5.0 | 53% | 77% | 97% | | | |
| 2.5 | 44% | 69% | 87% | | | |
| 1.25 | 36% | 61% | 75% | | | |
| 0.630 | 27% | 51% | 62% | | | |
| 0.315 | 19% | 38% | 48% | | | |
| 0.160 | 12% | 28% | 35% | | | |
| 0.080 | 9% | 19% | 27% | | | |
| M.C.(%): | 4% | 3% | 6% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 47 | 23 | 3 | | | |
| % SAND: | 45 | 58 | 70 | | | |
| % FINES: | 9 | 19 | 27 | | | |
| CLASSIFICATION | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

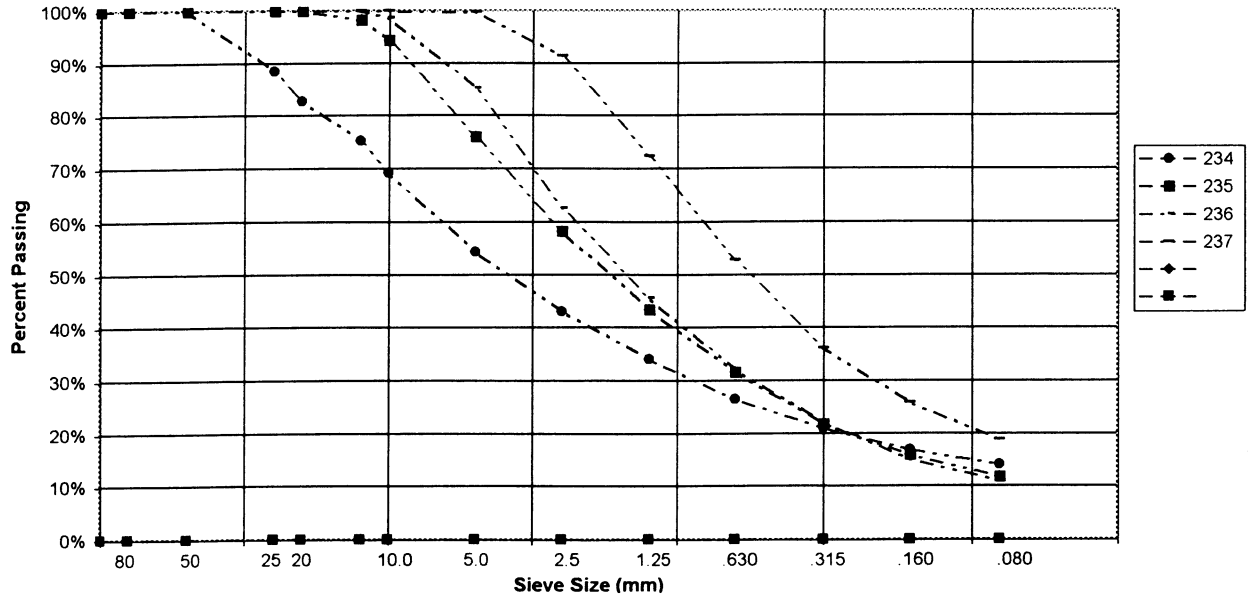
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 632345-6775288
LOGGED BY: RW

HOLE No.: 30116

DATE COMP: 08/12/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 234 | 235 | 236 | 237 | | |
| LAB NO: | 234 | 235 | 236 | 237 | | |
| DEPTH: | 0.6-1.2 | 2.1-2.7 | 3.4-4.0 | 4.6-5.2 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 89% | 100% | 100% | 100% | | |
| 20.0 | 83% | 100% | 100% | 100% | | |
| 12.5 | 75% | 98% | 100% | 100% | | |
| 10.0 | 69% | 94% | 99% | 100% | | |
| 5.0 | 54% | 76% | 85% | 100% | | |
| 2.5 | 43% | 58% | 63% | 91% | | |
| 1.25 | 34% | 43% | 46% | 72% | | |
| 0.630 | 27% | 32% | 32% | 53% | | |
| 0.315 | 21% | 22% | 22% | 36% | | |
| 0.160 | 17% | 16% | 15% | 26% | | |
| 0.080 | 14% | 12% | 11% | 19% | | |
| M.C.(%): | 4% | 3% | 2% | 2% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 46 | 24 | 15 | 0 | | |
| % SAND: | 40 | 64 | 74 | 81 | | |
| % FINES: | 14 | 12 | 11 | 19 | | |
| CLASSIFICATION | SILTY GRAVEL WITH SAND (GM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | WELL-GRADED SAND WITH SILT (SW-SM) | SILTY SAND (SM) | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



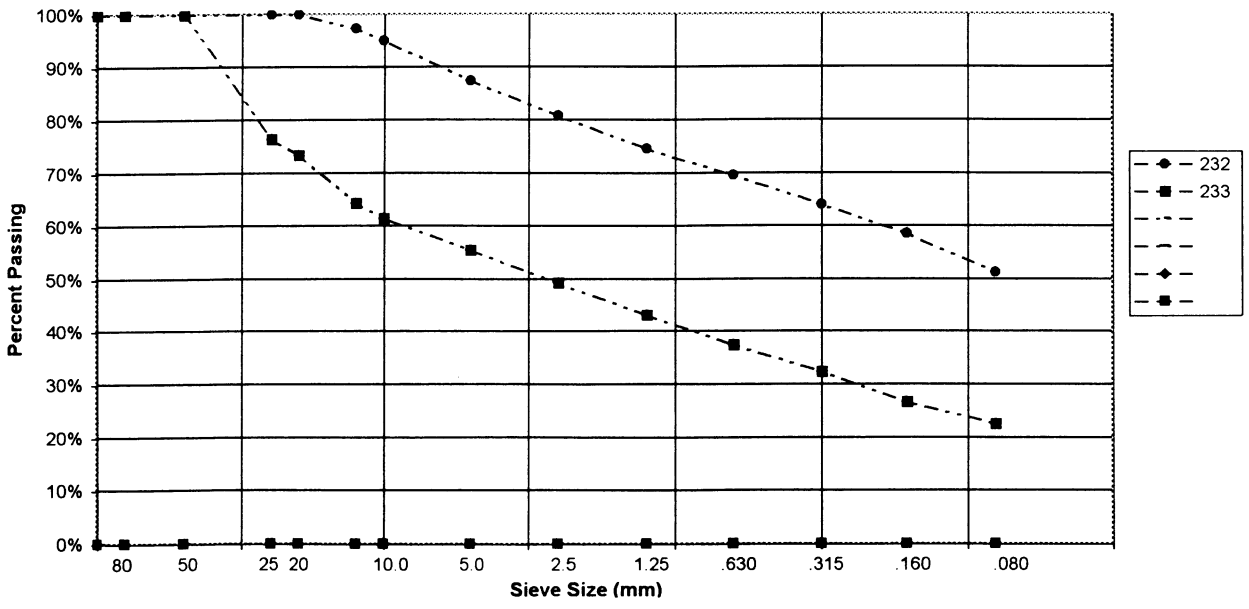
# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | | |
|---|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: | 30117 |
| CLIENT: | YTG, Transportation & Engineering | | |
| PROJECT NAME: | Geotechnical Services | | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | | |
| DRILL UNIT: | CME75 | | |
| HOLE LOCATION: | 632345-6775287 | | |
| LOGGED BY: | RW | DATE COMP: | 08/12/2004 |

| FIELD NO: | 232 | 233 | | | | |
|---|---|---|---|---|---|---|
| LAB NO: | 232 | 233 | | | | |
| DEPTH: | 0.0-0.6 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 77% | | | | |
| 20.0 | 100% | 73% | | | | |
| 12.5 | 97% | 64% | | | | |
| 10.0 | 95% | 61% | | | | |
| 5.0 | 87% | 56% | | | | |
| 2.5 | 81% | 49% | | | | |
| 1.25 | 75% | 43% | | | | |
| 0.630 | 70% | 38% | | | | |
| 0.315 | 64% | 32% | | | | |
| 0.160 | 59% | 27% | | | | |
| 0.080 | 51% | 23% | | | | |
| M.C.(%): | 14% | 9% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 13 | 44 | | | | |
| % SAND: | 36 | 33 | | | | |
| % FINES: | 51 | 23 | | | | |
| CLASSIFICATION | SANDY SILT (ML) | SILTY GRAVEL WITH SAND (GM) | | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

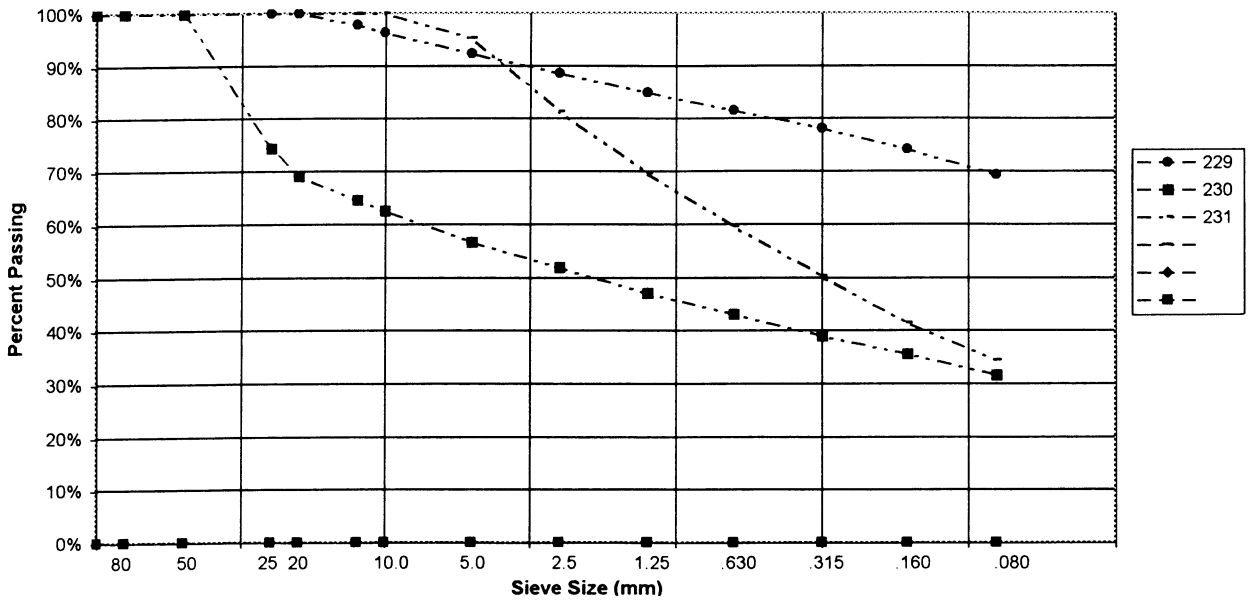
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 632398-6775330
LOGGED BY: RW

HOLE No.: 30118

DATE COMP: 08/12/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 229 | 230 | 231 | | | |
| LAB NO: | 229 | 230 | 231 | | | |
| DEPTH: | 0.6-1.2 | 1.8-2.4 | 3.0-3.4 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 100% | 74% | 100% | | | |
| 20.0 | 100% | 69% | 100% | | | |
| 12.5 | 98% | 65% | 100% | | | |
| 10.0 | 96% | 63% | 100% | | | |
| 5.0 | 92% | 57% | 95% | | | |
| 2.5 | 89% | 52% | 81% | | | |
| 1.25 | 85% | 47% | 70% | | | |
| 0.630 | 82% | 43% | 60% | | | |
| 0.315 | 78% | 39% | 50% | | | |
| 0.160 | 74% | 36% | 42% | | | |
| 0.080 | 69% | 32% | 34% | | | |
| M.C.(%): | 16% | 5% | 3% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 8 | 43 | 5 | | | |
| % SAND: | 23 | 25 | 61 | | | |
| % FINES: | 69 | 32 | 34 | | | |
| CLASSIFICATION | SANDY SILT (ML) | SILTY GRAVEL WITH SAND (GM) | SILTY SAND (SM) | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

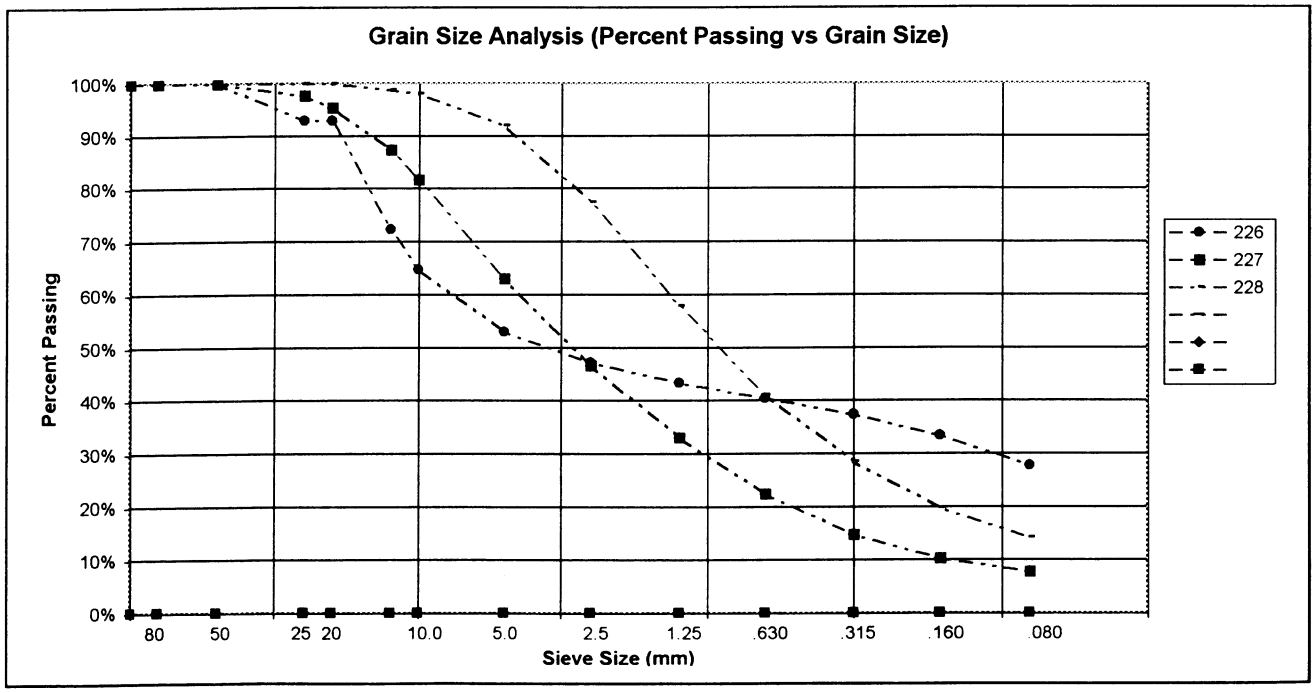
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 632400-6775326
LOGGED BY: RW

HOLE No.: 30119

DATE COMP: 08/12/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 226 | 227 | 228 | | | |
| LAB NO: | 226 | 227 | 228 | | | |
| DEPTH: | 0.1-0.6 | 2.1-2.7 | 3.7-4.3 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 93% | 98% | 100% | | | |
| 20.0 | 93% | 95% | 100% | | | |
| 12.5 | 72% | 87% | 99% | | | |
| 10.0 | 65% | 82% | 98% | | | |
| 5.0 | 53% | 63% | 92% | | | |
| 2.5 | 47% | 47% | 78% | | | |
| 1.25 | 43% | 33% | 58% | | | |
| 0.630 | 41% | 23% | 41% | | | |
| 0.315 | 38% | 15% | 29% | | | |
| 0.160 | 33% | 10% | 20% | | | |
| 0.080 | 28% | 8% | 14% | | | |
| M.C.(%): | 16% | 3% | 12% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 47 | 37 | 8 | | | |
| % SAND: | 25 | 55 | 78 | | | |
| % FINES: | 28 | 8 | 14 | | | |
| CLASSIFICATION | SILTY GRAVEL WITH SAND (GM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY SAND (SM) | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

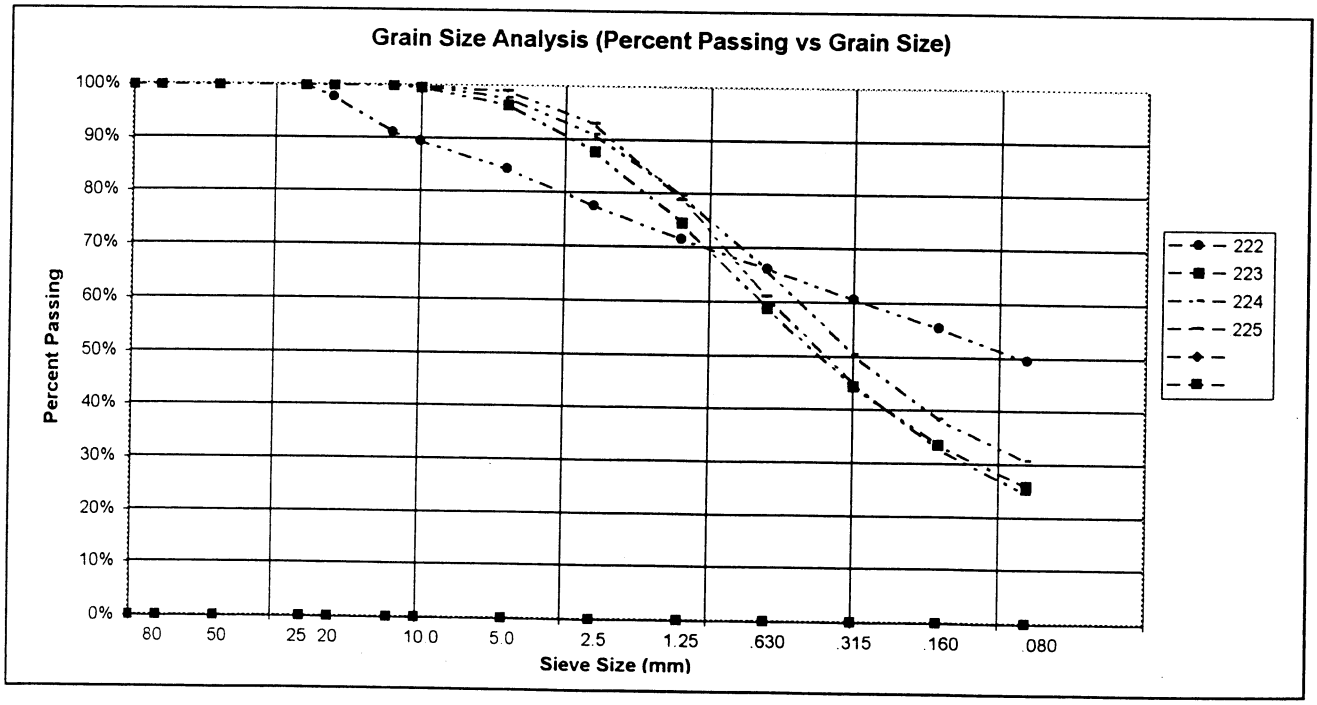
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 632440-6775367
LOGGED BY: RW

HOLE No.: 30120

DATE COMP: 08/12/2004

| FIELD NO: | 222 | 223 | 224 | 225 | | |
|---|---|---|---|---|---|---|
| LAB NO: | 222 | 223 | 224 | 225 | | |
| DEPTH: | 0.3-0.9 | 2.1-2.4 | 3.7-4.3 | 4.9-5.3 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 100% | 100% | 100% | 100% | | |
| 20.0 | 98% | 100% | 100% | 100% | | |
| 12.5 | 91% | 100% | 100% | 100% | | |
| 10.0 | 90% | 100% | 100% | 100% | | |
| 5.0 | 84% | 96% | 98% | 99% | | |
| 2.5 | 78% | 88% | 91% | 93% | | |
| 1.25 | 72% | 75% | 80% | 79% | | |
| 0.630 | 66% | 59% | 66% | 61% | | |
| 0.315 | 61% | 44% | 50% | 45% | | |
| 0.160 | 56% | 34% | 38% | 33% | | |
| 0.080 | 50% | 26% | 31% | 25% | | |
| M.C.(%): | 10% | 7% | 5% | 3% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 16 | 4 | 2 | 1 | | |
| % SAND: | 35 | 70 | 67 | 75 | | |
| % FINES: | 50 | 26 | 31 | 25 | | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | SILTY SAND (SM) | SILTY SAND (SM) | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

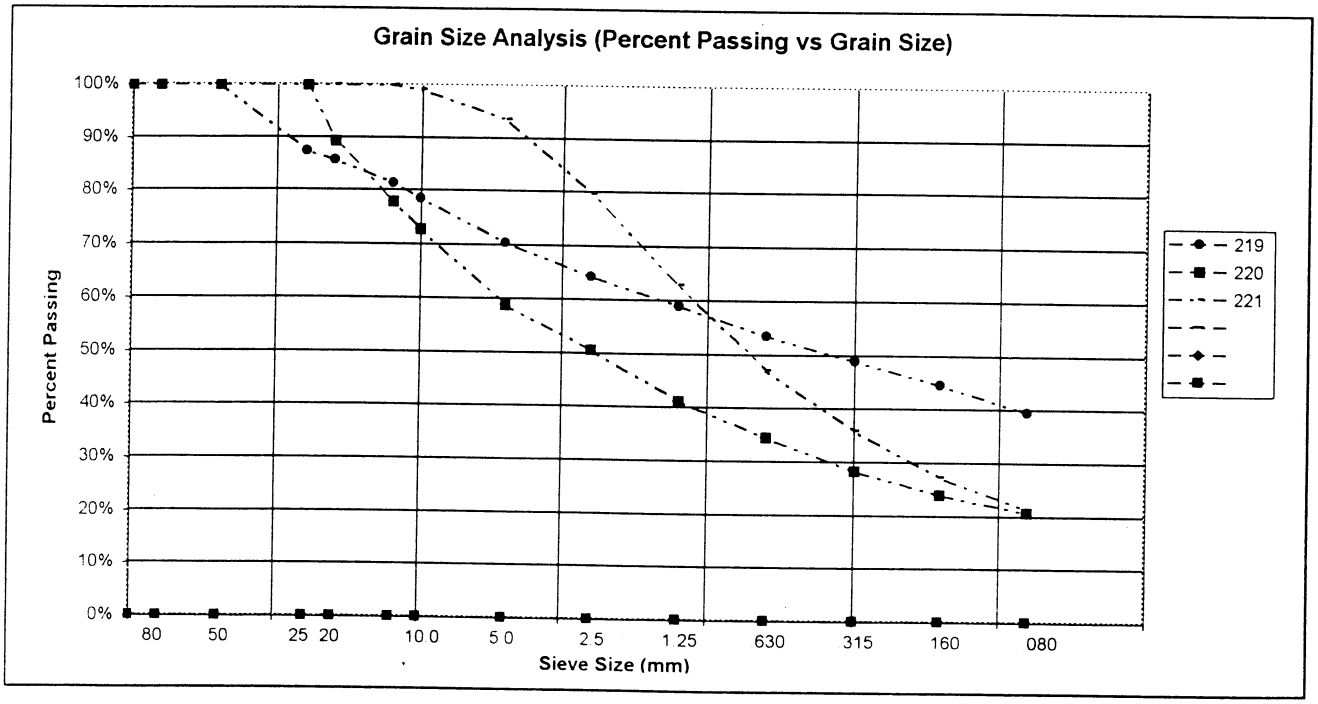
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 632444-6775365
LOGGED BY: RW

HOLE No.: 30121

DATE COMP: 08/12/2004

| FIELD NO: | 219 | 220 | 221 | | | |
|---|---|---|---|---|---|---|
| LAB NO: | 219 | 220 | 221 | | | |
| DEPTH: | 0.6-1.2 | 1.5-2.1 | 2.7-3.0 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 87% | 100% | 100% | | | |
| 20.0 | 86% | 89% | 100% | | | |
| 12.5 | 81% | 78% | 100% | | | |
| 10.0 | 79% | 73% | 99% | | | |
| 5.0 | 71% | 59% | 94% | | | |
| 2.5 | 64% | 51% | 80% | | | |
| 1.25 | 59% | 41% | 63% | | | |
| 0.630 | 54% | 35% | 47% | | | |
| 0.315 | 49% | 28% | 36% | | | |
| 0.160 | 45% | 24% | 27% | | | |
| 0.080 | 40% | 21% | 21% | | | |
| M.C.(%): | 7% | 4% | 2% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 29 | 41 | 6 | | | |
| % SAND: | 31 | 38 | 72 | | | |
| % FINES: | 40 | 21 | 21 | | | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY GRAVEL WITH SAND (GM) | SILTY SAND (SM) | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

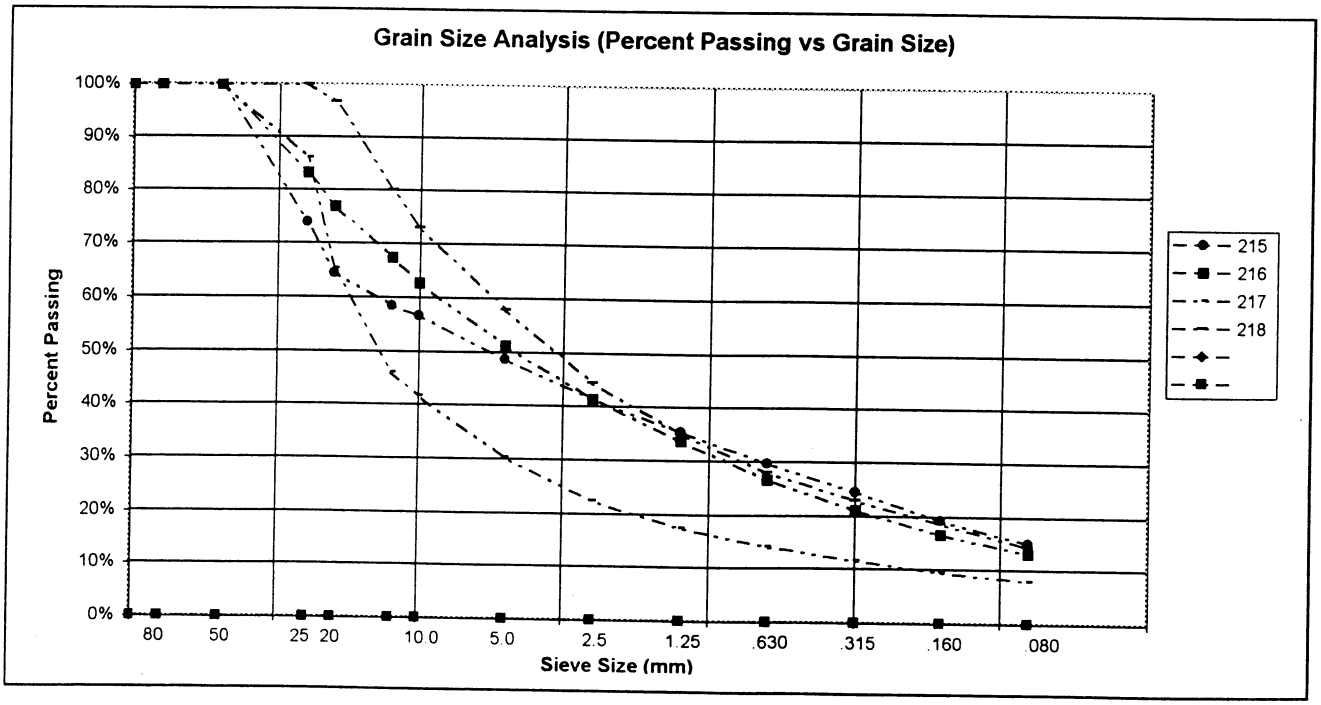
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 632049-6775597
LOGGED BY: RW

HOLE No.: 30122

DATE COMP: 08/12/2004

| FIELD NO: | 215 | 216 | 217 | 218 | | |
|---|---|---|---|---|---|---|
| LAB NO: | 215 | 216 | 217 | 218 | | |
| DEPTH: | 0.6-1.2 | 1.6-2.4 | 3.4-4.0 | 4.6-5.2 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 74% | 83% | 86% | 100% | | |
| 20.0 | 64% | 77% | 65% | 97% | | |
| 12.5 | 59% | 68% | 46% | 80% | | |
| 10.0 | 57% | 63% | 42% | 73% | | |
| 5.0 | 49% | 51% | 30% | 58% | | |
| 2.5 | 41% | 41% | 23% | 44% | | |
| 1.25 | 35% | 34% | 18% | 35% | | |
| 0.630 | 30% | 27% | 14% | 28% | | |
| 0.315 | 25% | 21% | 12% | 23% | | |
| 0.160 | 19% | 17% | 10% | 19% | | |
| 0.080 | 15% | 13% | 8% | 14% | | |
| M.C.(%): | 15% | 9% | 9% | 8% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 51 | 49 | 70 | 42 | | |
| % SAND: | 34 | 38 | 22 | 44 | | |
| % FINES: | 15 | 13 | 8 | 14 | | |
| CLASSIFICATION | SILTY GRAVEL WITH SAND (GM) | SILTY GRAVEL WITH SAND (GM) | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | SILTY SAND WITH GRAVEL (SM) | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

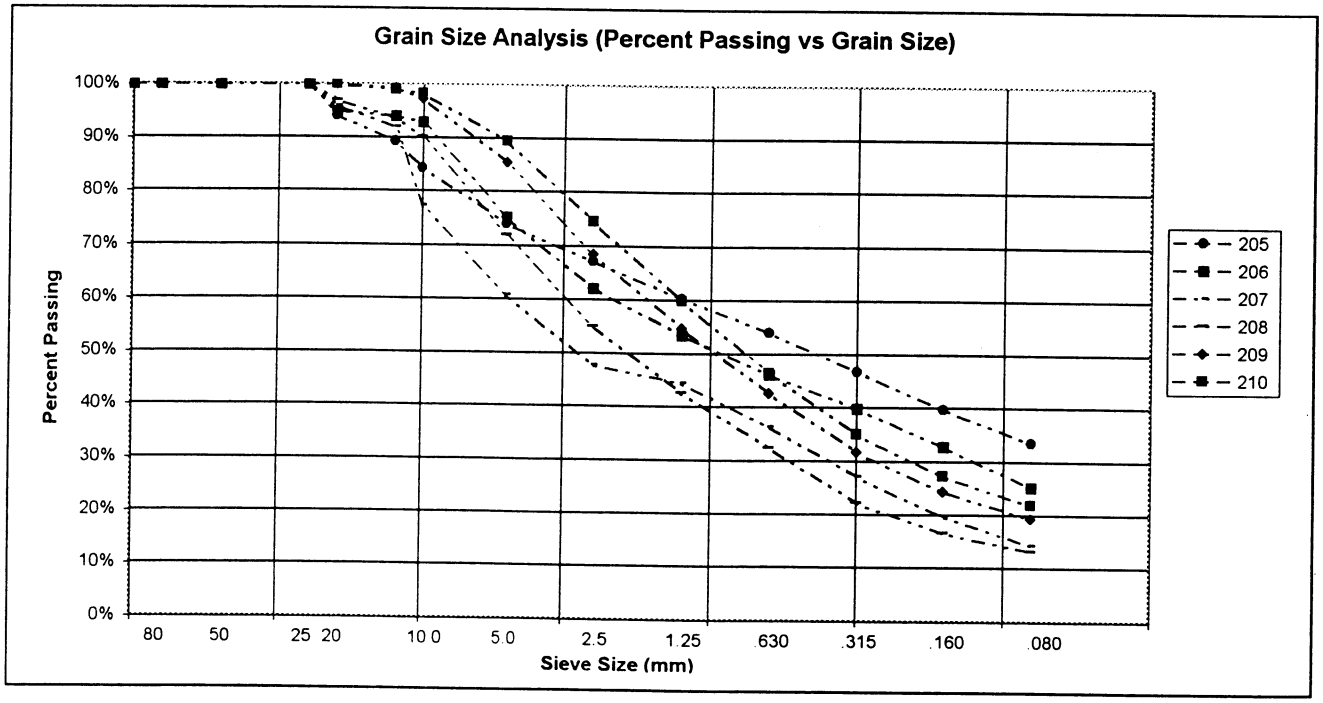
An Affiliate of J. H. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 632037-6775613
LOGGED BY: RW

HOLE No.: 30123

DATE COMP: 08/11/2004

| FIELD NO: | 205 | 206 | 207 | 208 | 209 | 210 |
|---|---|---|---|---|---|---|
| LAB NO: | 205 | 206 | 207 | 208 | 209 | 210 |
| DEPTH: | 0.6-1.2 | 1.8-2.4 | 3.4-4.0 | 5.2-5.8 | 6.4-7.0 | 7.9-8.5 |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 80.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 50.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 25.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 20.0 | 94% | 95% | 96% | 97% | 100% | 100% |
| 12.5 | 89% | 94% | 92% | 94% | 99% | 99% |
| 10.0 | 84% | 93% | 77% | 90% | 97% | 98% |
| 5.0 | 74% | 75% | 61% | 72% | 85% | 89% |
| 2.5 | 67% | 62% | 48% | 55% | 69% | 75% |
| 1.25 | 60% | 53% | 44% | 43% | 55% | 60% |
| 0.630 | 54% | 46% | 36% | 32% | 43% | 46% |
| 0.315 | 47% | 40% | 27% | 22% | 32% | 35% |
| 0.160 | 40% | 33% | 20% | 17% | 24% | 27% |
| 0.080 | 34% | 25% | 14% | 13% | 19% | 22% |
| M.C.(%): | 6% | 6% | 5% | 5% | 7% | 7% |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| % GRAVEL: | 26 | 25 | 39 | 28 | 15 | 11 |
| % SAND: | 40 | 50 | 46 | 59 | 66 | 68 |
| % FINES: | 34 | 25 | 14 | 13 | 19 | 22 |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | SILTY SAND (SM) |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

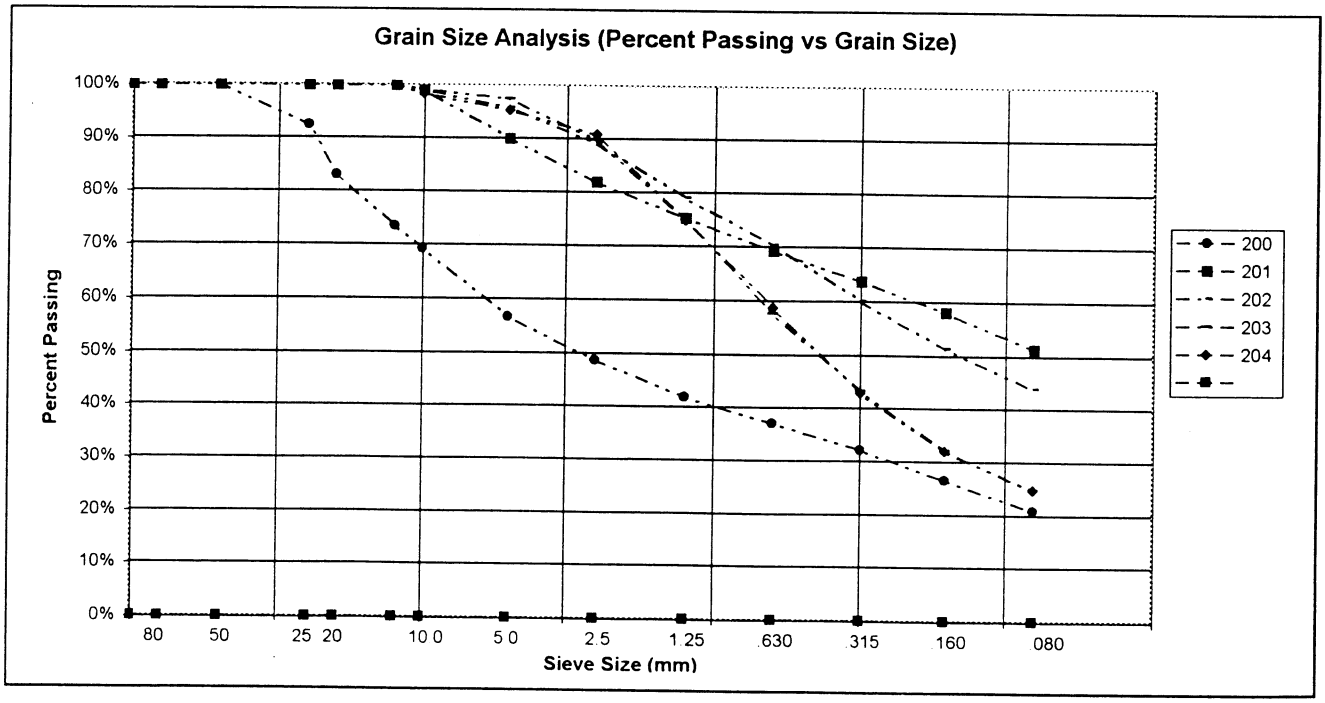
An Affiliate of J. H. Paine & Associates Ltd.

PROJECT NUMBER: 3002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631989-6775669
LOGGED BY: RW

HOLE No.: 30124

DATE COMP: 08/11/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 200 | 201 | 202 | 203 | 204 | |
| LAB NO: | 200 | 201 | 202 | 203 | 204 | |
| DEPTH: | 0.6-1.2 | 1.8-2.4 | 3.4-4.0 | 5.2-5.8 | 6.7-7.3 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | 100% | 100% | 100% | |
| 80.0 | 100% | 100% | 100% | 100% | 100% | |
| 50.0 | 100% | 100% | 100% | 100% | 100% | |
| 25.0 | 92% | 100% | 100% | 100% | 100% | |
| 20.0 | 83% | 100% | 100% | 100% | 100% | |
| 12.5 | 74% | 100% | 100% | 100% | 100% | |
| 10.0 | 69% | 99% | 99% | 99% | 98% | |
| 5.0 | 57% | 90% | 96% | 97% | 95% | |
| 2.5 | 49% | 82% | 89% | 90% | 91% | |
| 1.25 | 42% | 75% | 79% | 75% | 75% | |
| 0.630 | 37% | 69% | 70% | 58% | 59% | |
| 0.315 | 32% | 64% | 60% | 43% | 43% | |
| 0.160 | 27% | 58% | 51% | 32% | 32% | |
| 0.080 | 21% | 51% | 44% | 25% | 25% | |
| M.C.(%): | 9% | 17% | 14% | 4% | 2% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 43 | 10 | 4 | 3 | 5 | |
| % SAND: | 36 | 39 | 52 | 73 | 70 | |
| % FINES: | 21 | 51 | 44 | 25 | 25 | |
| CLASSIFICATION | SILTY GRAVEL WITH SAND (GM) | SANDY SILT (ML) | SILTY SAND (SM) | SILTY SAND (SM) | SILTY SAND (SM) | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

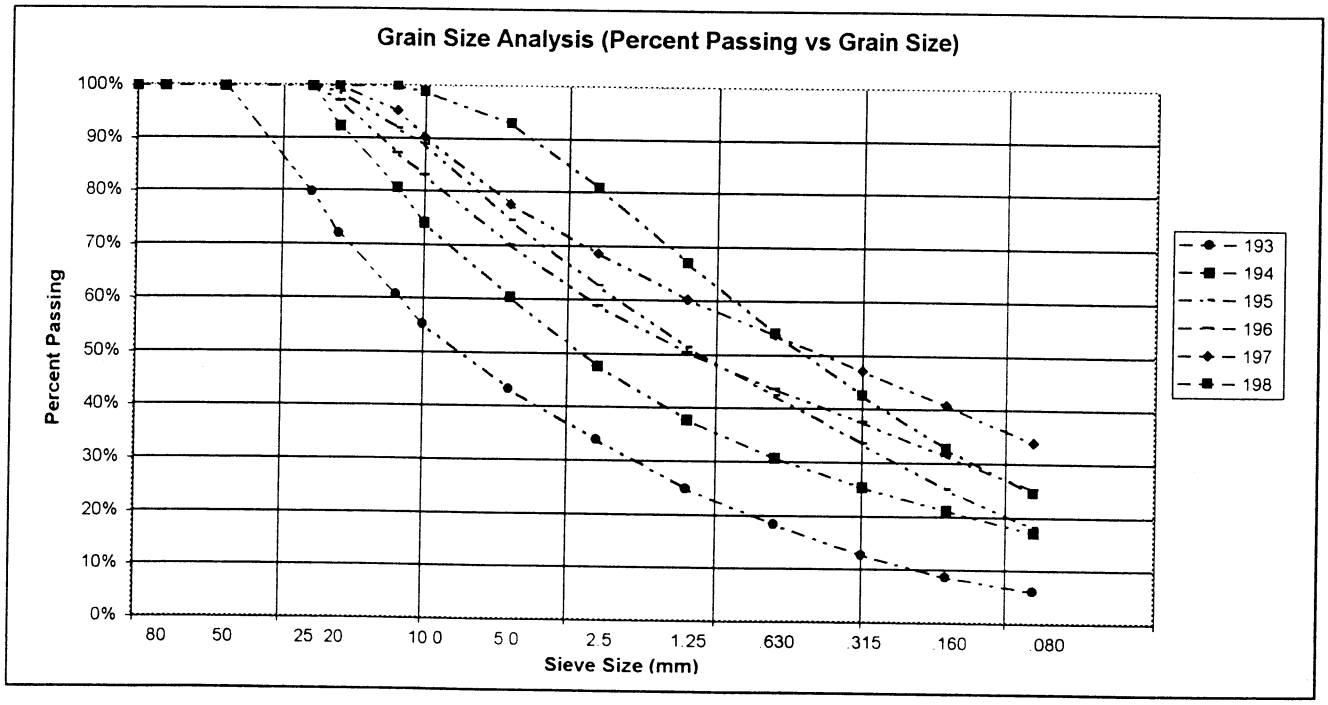
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631983-6775666
LOGGED BY: RW

HOLE No.: 30125

DATE COMP: 08/11/2004

| FIELD NO: | 193 | 194 | 195 | 196 | 197 | 198 |
|---|---|---|---|---|---|---|
| LAB NO: | 193 | 194 | 195 | 196 | 197 | 198 |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | 3.4-4.0 | 4.9-5.5 | 6.4-7.0 | 7.9-8.5 |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 80.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 50.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 25.0 | 80% | 100% | 100% | 100% | 100% | 100% |
| 20.0 | 72% | 92% | 99% | 97% | 100% | 100% |
| 12.5 | 61% | 81% | 92% | 87% | 95% | 100% |
| 10.0 | 55% | 74% | 89% | 83% | 90% | 99% |
| 5.0 | 43% | 60% | 75% | 70% | 78% | 93% |
| 2.5 | 34% | 48% | 63% | 59% | 69% | 81% |
| 1.25 | 25% | 38% | 51% | 50% | 60% | 67% |
| 0.630 | 19% | 31% | 42% | 44% | 54% | 54% |
| 0.315 | 13% | 26% | 34% | 38% | 47% | 43% |
| 0.160 | 9% | 21% | 25% | 31% | 41% | 33% |
| 0.080 | 6% | 17% | 18% | 25% | 34% | 25% |
| M.C.(%): | 2% | 8% | 10% | 8% | 11% | 11% |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| % GRAVEL: | 57 | 40 | 25 | 30 | 22 | 7 |
| % SAND: | 37 | 43 | 56 | 45 | 44 | 68 |
| % FINES: | 6 | 17 | 18 | 25 | 34 | 25 |
| CLASSIFICATION | WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) |

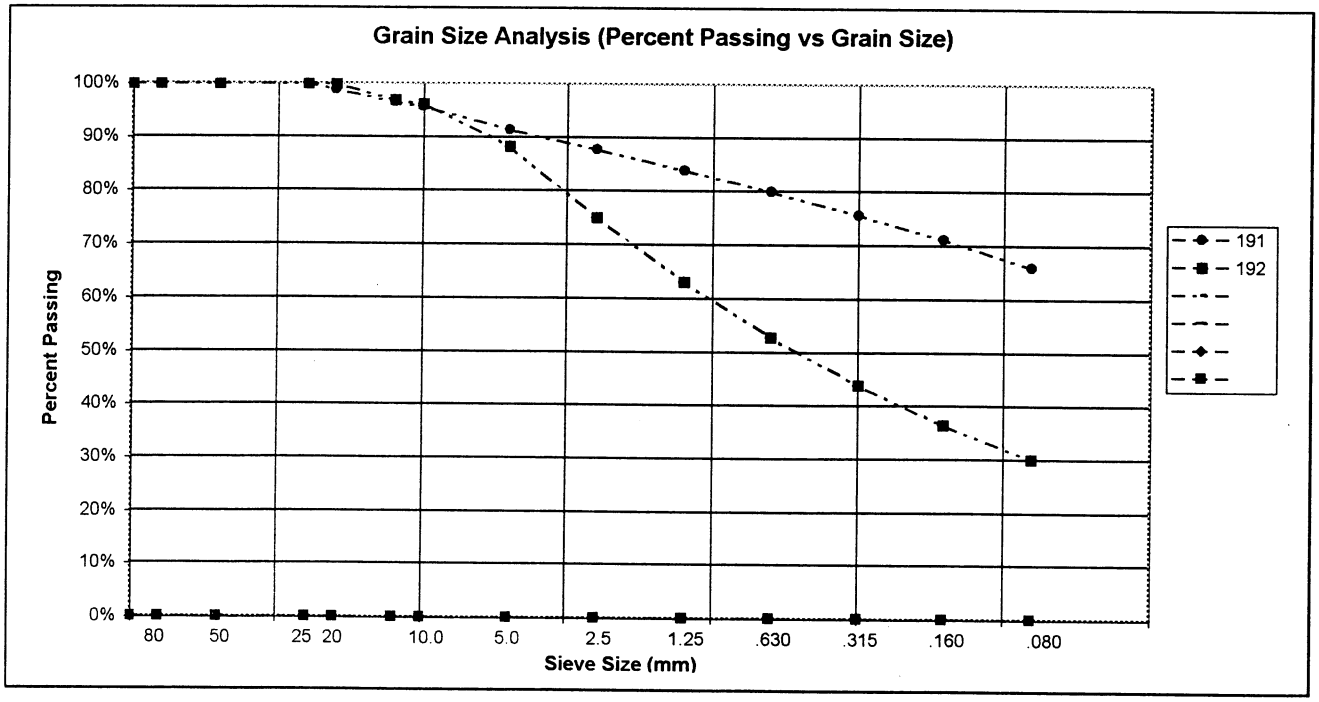


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30126 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 633699-6773199 | |
| LOGGED BY: | RW | DATE COMP: 08/10/2004 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 191 | 192 | | | | |
| LAB NO: | 191 | 192 | | | | |
| DEPTH: | 0.5-0.8 | 1.5-1.8 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 100% | | | | |
| 20.0 | 99% | 100% | | | | |
| 12.5 | 97% | 97% | | | | |
| 10.0 | 96% | 96% | | | | |
| 5.0 | 91% | 88% | | | | |
| 2.5 | 88% | 75% | | | | |
| 1.25 | 84% | 63% | | | | |
| 0.630 | 80% | 53% | | | | |
| 0.315 | 76% | 44% | | | | |
| 0.160 | 71% | 37% | | | | |
| 0.080 | 66% | 30% | | | | |
| M.C.(%): | 13% | 4% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 9 | 12 | | | | |
| % SAND: | 25 | 58 | | | | |
| % FINES: | 66 | 30 | | | | |
| CLASSIFICATION | SANDY SILT (ML) | SILTY SAND (SM) | | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

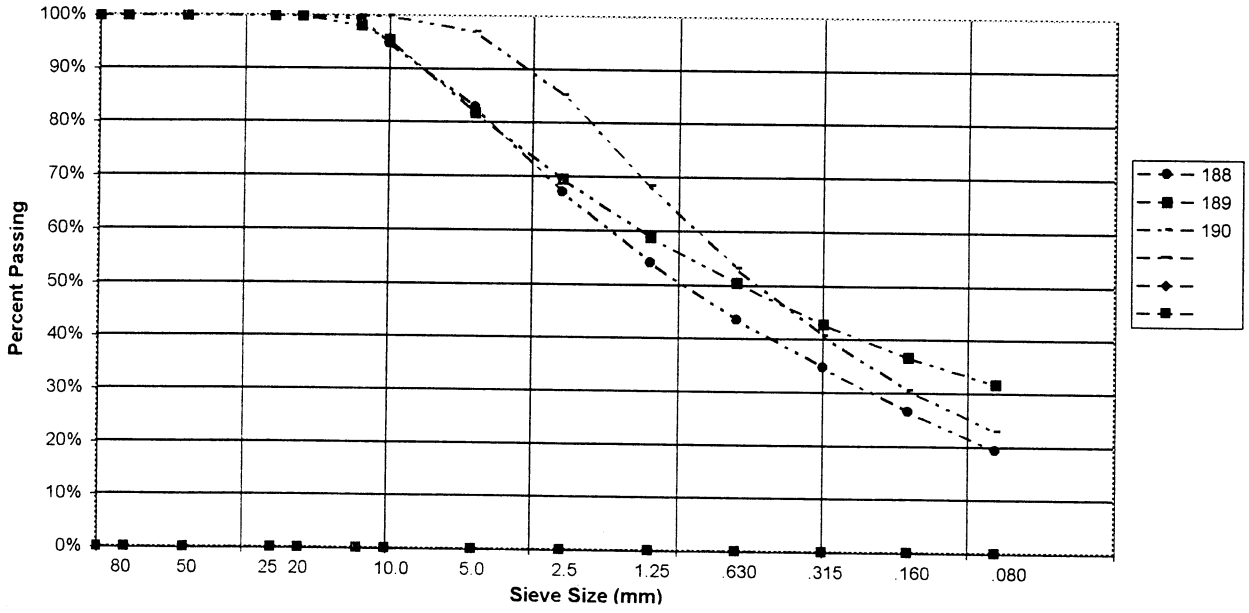
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633619-6773331
LOGGED BY: RW

HOLE No.: 30127

DATE COMP: 08/10/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 188 | 189 | 190 | | | |
| LAB NO: | 188 | 189 | 190 | | | |
| DEPTH: | 0.6-1.2 | 2.1-2.9 | 4.0-4.6 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 100% | 100% | 100% | | | |
| 20.0 | 100% | 100% | 100% | | | |
| 12.5 | 99% | 98% | 100% | | | |
| 10.0 | 95% | 95% | 100% | | | |
| 5.0 | 83% | 82% | 97% | | | |
| 2.5 | 67% | 70% | 85% | | | |
| 1.25 | 54% | 59% | 68% | | | |
| 0.630 | 44% | 51% | 53% | | | |
| 0.315 | 35% | 43% | 41% | | | |
| 0.160 | 27% | 37% | 31% | | | |
| 0.080 | 20% | 32% | 23% | | | |
| M.C.(%): | 16% | 12% | 3% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 17 | 18 | 3 | | | |
| % SAND: | 64 | 50 | 74 | | | |
| % FINES: | 20 | 32 | 23 | | | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

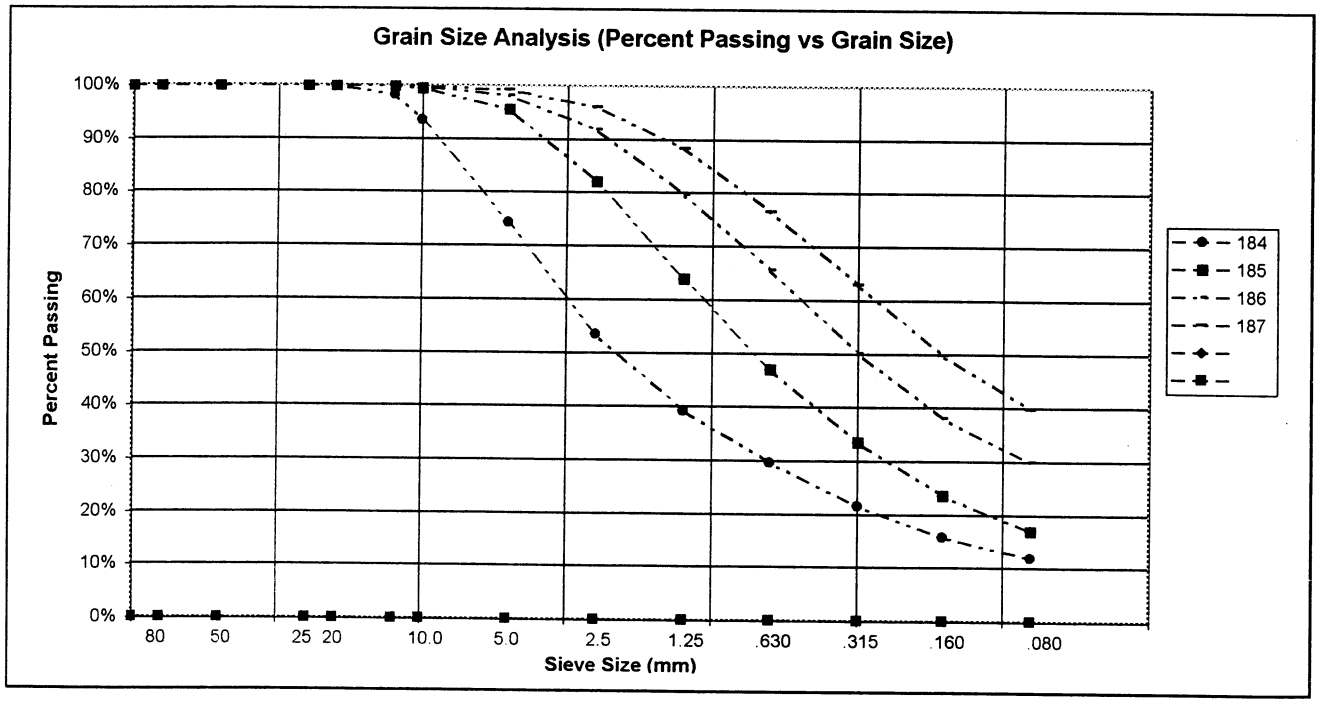
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633550-6773445
LOGGED BY: RW

HOLE No.: 30128

DATE COMP: 08/10/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 184 | 185 | 186 | 187 | | |
| LAB NO: | 184 | 185 | 186 | 187 | | |
| DEPTH: | 0.4-0.9 | 2.1-2.9 | 3.7-4.3 | 5.2-5.8 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 100% | 100% | 100% | 100% | | |
| 20.0 | 100% | 100% | 100% | 100% | | |
| 12.5 | 98% | 100% | 100% | 100% | | |
| 10.0 | 94% | 100% | 100% | 100% | | |
| 5.0 | 74% | 96% | 98% | 99% | | |
| 2.5 | 54% | 82% | 92% | 96% | | |
| 1.25 | 39% | 64% | 80% | 88% | | |
| 0.630 | 30% | 47% | 66% | 77% | | |
| 0.315 | 22% | 34% | 50% | 63% | | |
| 0.160 | 16% | 24% | 38% | 50% | | |
| 0.080 | 12% | 17% | 30% | 40% | | |
| M.C.(%): | 2% | 9% | 9% | 10% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 26 | 4 | 2 | 1 | | |
| % SAND: | 62 | 79 | 68 | 60 | | |
| % FINES: | 12 | 17 | 30 | 40 | | |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY SAND (SM) | SILTY SAND (SM) | SILTY SAND (SM) | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

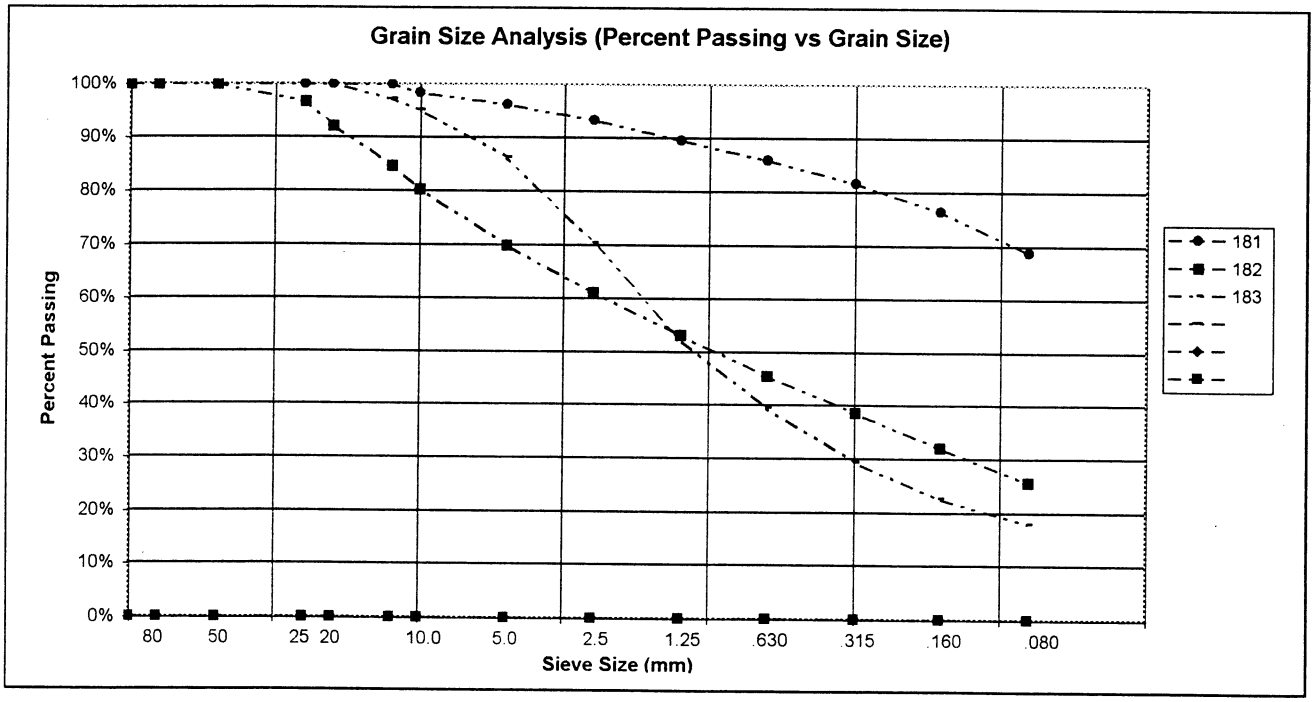
An Affiliate of J. H. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633531-6773473
LOGGED BY: RW

HOLE No.: 30129

DATE COMP: 08/10/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 181 | 182 | 183 | | | |
| LAB NO: | 181 | 182 | 183 | | | |
| DEPTH: | 0.6-1.2 | 1.8-2.4 | 3.4-3.7 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 100% | 97% | 100% | | | |
| 20.0 | 100% | 92% | 100% | | | |
| 12.5 | 100% | 85% | 97% | | | |
| 10.0 | 98% | 80% | 95% | | | |
| 5.0 | 96% | 70% | 86% | | | |
| 2.5 | 93% | 61% | 70% | | | |
| 1.25 | 90% | 53% | 52% | | | |
| 0.630 | 86% | 46% | 39% | | | |
| 0.315 | 82% | 39% | 29% | | | |
| 0.160 | 76% | 32% | 23% | | | |
| 0.080 | 69% | 26% | 18% | | | |
| M.C.(%): | 34% | 9% | 5% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 4 | 30 | 14 | | | |
| % SAND: | 27 | 44 | 68 | | | |
| % FINES: | 69 | 26 | 18 | | | |
| CLASSIFICATION | SANDY SILT (ML) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | | | |

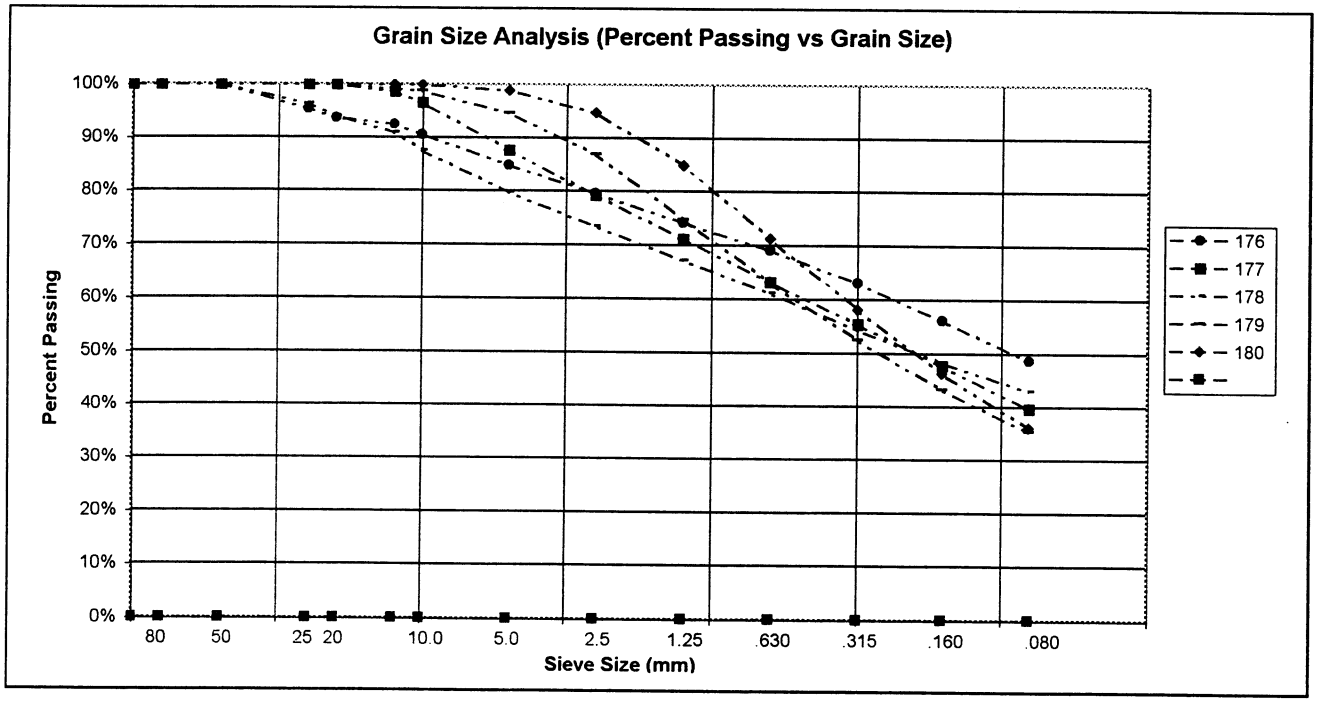


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30130 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 633472-6773537 | |
| LOGGED BY: | RW | DATE COMP: 08/10/2004 |

| FIELD NO: | 176 | 177 | 178 | 179 | 180 | |
|---|---|---|---|---|---|---|
| LAB NO: | 176 | 177 | 178 | 179 | 180 | |
| DEPTH: | 0.6-1.2 | 1.8-2.4 | 3.7-4.3 | 4.9-5.5 | 7.0-7.6 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | 100% | 100% | 100% | |
| 80.0 | 100% | 100% | 100% | 100% | 100% | |
| 50.0 | 100% | 100% | 100% | 100% | 100% | |
| 25.0 | 95% | 100% | 96% | 100% | 100% | |
| 20.0 | 94% | 100% | 94% | 100% | 100% | |
| 12.5 | 93% | 99% | 91% | 99% | 100% | |
| 10.0 | 91% | 97% | 87% | 99% | 100% | |
| 5.0 | 85% | 88% | 80% | 95% | 99% | |
| 2.5 | 80% | 79% | 74% | 87% | 95% | |
| 1.25 | 74% | 71% | 67% | 75% | 85% | |
| 0.630 | 69% | 63% | 61% | 63% | 71% | |
| 0.315 | 63% | 55% | 54% | 53% | 58% | |
| 0.160 | 56% | 48% | 48% | 43% | 46% | |
| 0.080 | 49% | 40% | 43% | 35% | 36% | |
| M.C.(%): | 13% | 10% | 9% | 5% | 4% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 15 | 12 | 20 | 5 | 1 | |
| % SAND: | 36 | 48 | 37 | 59 | 63 | |
| % FINES: | 49 | 40 | 43 | 35 | 36 | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | SILTY SAND (SM) | |



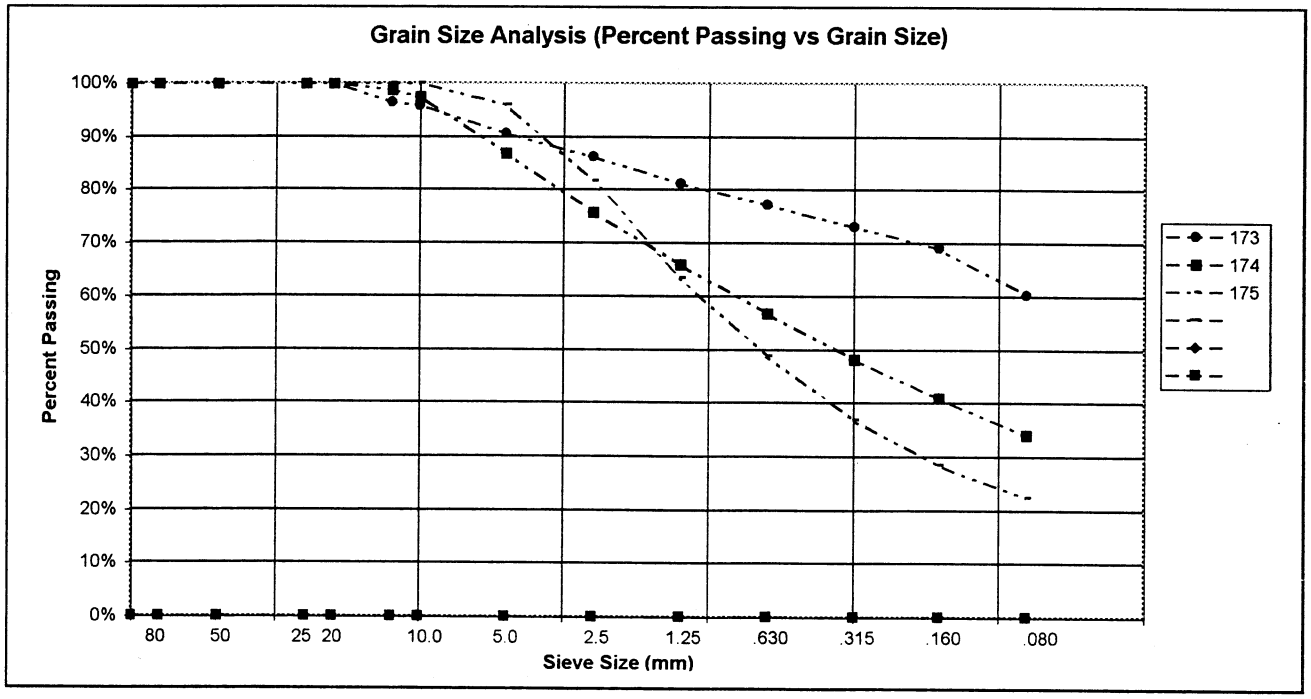
# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633423-6773651
LOGGED BY: RW

HOLE No.: 30131
DATE COMP: 08/10/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 173 | 174 | 175 | | | |
| LAB NO: | 173 | 174 | 175 | | | |
| DEPTH: | 0.3-0.9 | 1.8-2.4 | 3.4-3.7 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 100% | 100% | 100% | | | |
| 20.0 | 100% | 100% | 100% | | | |
| 12.5 | 96% | 99% | 100% | | | |
| 10.0 | 96% | 98% | 100% | | | |
| 5.0 | 91% | 87% | 96% | | | |
| 2.5 | 86% | 76% | 82% | | | |
| 1.25 | 81% | 66% | 63% | | | |
| 0.630 | 77% | 57% | 49% | | | |
| 0.315 | 73% | 48% | 37% | | | |
| 0.160 | 69% | 41% | 29% | | | |
| 0.080 | 60% | 34% | 22% | | | |
| M.C.(%): | 31% | 7% | 3% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 9 | 13 | 4 | | | |
| % SAND: | 30 | 53 | 74 | | | |
| % FINES: | 60 | 34 | 22 | | | |
| CLASSIFICATION | SANDY SILT (ML) | SILTY SAND (SM) | SILTY SAND (SM) | | | |

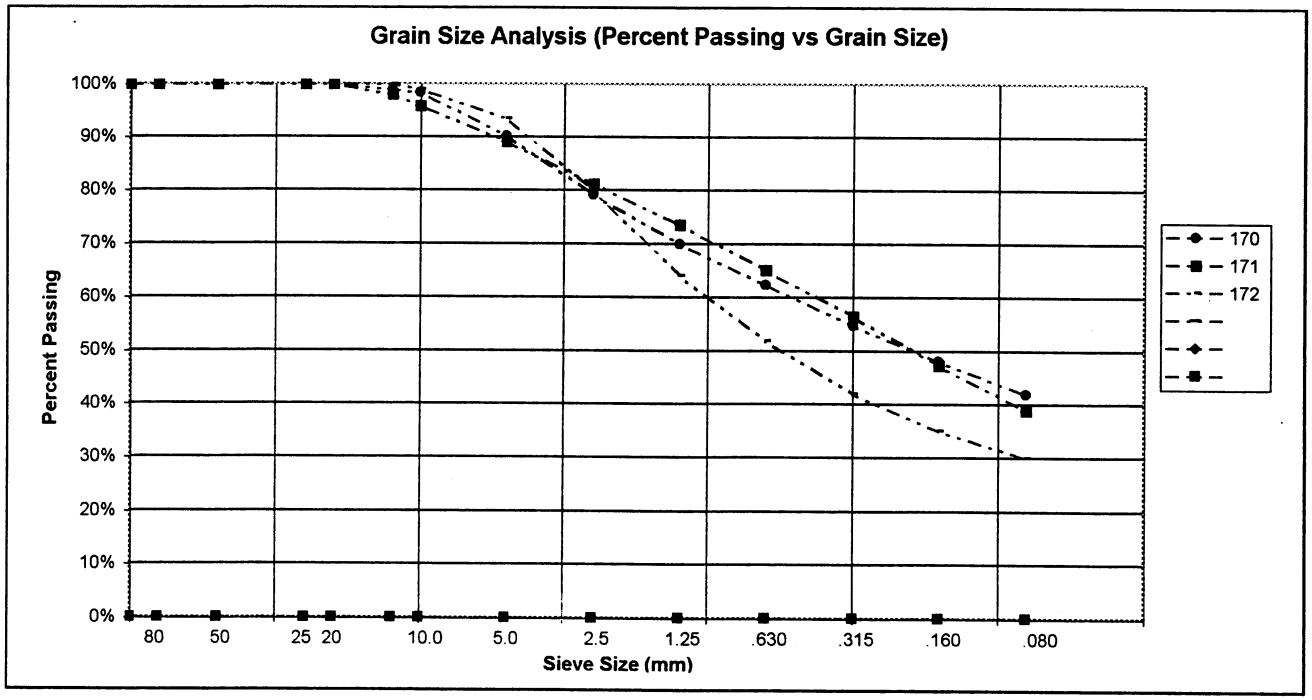


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. H. Paine & Associates Ltd.

| | | | |
|---|---|---|---|
| PROJECT NUMBER: | 8002-318 | | HOLE No.: 30132 |
| CLIENT: | YTG, Transportation & Engineering | | |
| PROJECT NAME: | Geotechnical Services | | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | | |
| DRILL UNIT: | CME75 | | |
| HOLE LOCATION: | 633337-6773786 | | |
| LOGGED BY: | RW | | DATE COMP: 08/09/2004 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 170 | 171 | 172 | | | |
| LAB NO: | 170 | 171 | 172 | | | |
| DEPTH: | 0.9-1.2 | 2.1-2.7 | 3.4-4.0 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 100% | 100% | 100% | | | |
| 20.0 | 100% | 100% | 100% | | | |
| 12.5 | 99% | 98% | 100% | | | |
| 10.0 | 98% | 96% | 99% | | | |
| 5.0 | 90% | 89% | 93% | | | |
| 2.5 | 79% | 81% | 80% | | | |
| 1.25 | 70% | 74% | 64% | | | |
| 0.630 | 62% | 65% | 52% | | | |
| 0.315 | 55% | 56% | 42% | | | |
| 0.160 | 48% | 47% | 35% | | | |
| 0.080 | 42% | 39% | 30% | | | |
| M.C.(%): | 10% | 9% | 6% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 10 | 11 | 7 | | | |
| % SAND: | 48 | 50 | 63 | | | |
| % FINES: | 42 | 39 | 30 | | | |
| CLASSIFICATION | SILTY SAND (SM) | SILTY SAND (SM) | SILTY SAND (SM) | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

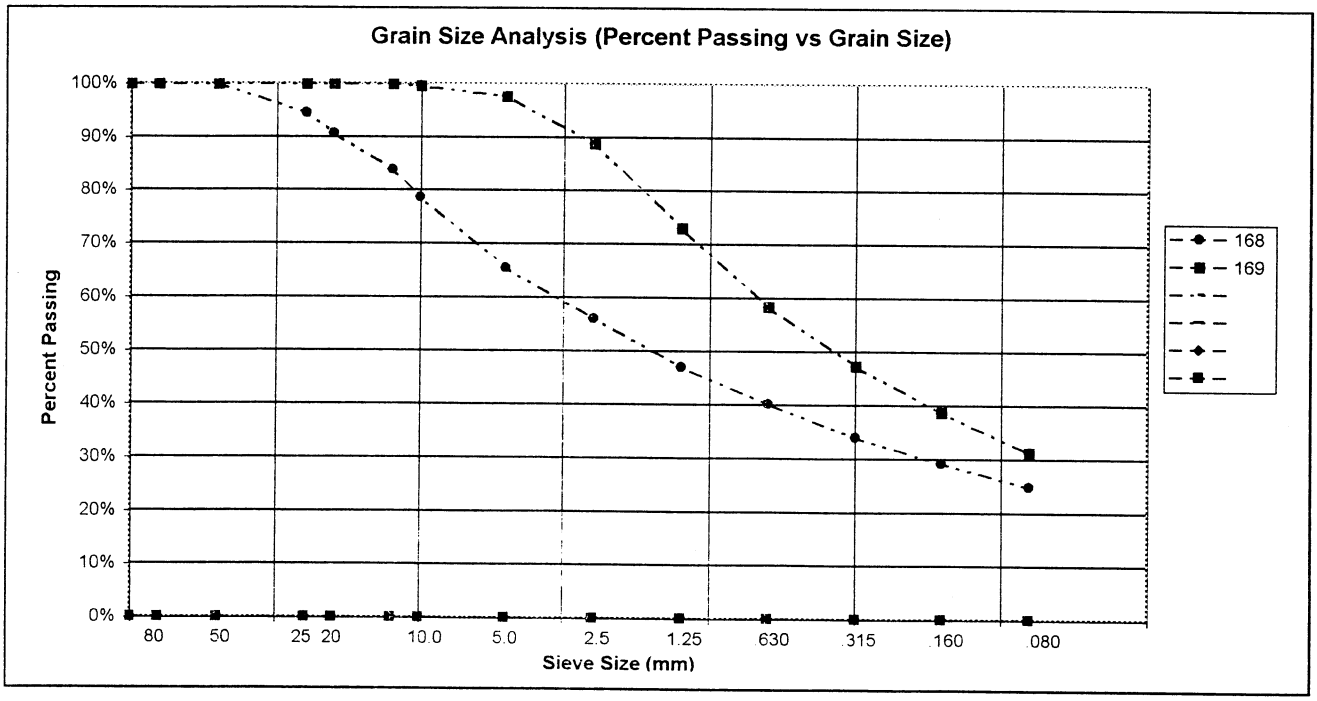
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 633261-6773901
LOGGED BY: RW

HOLE No.: 30133

DATE COMP: 08/09/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 168 | 169 | | | | |
| LAB NO: | 168 | 169 | | | | |
| DEPTH: | 0.9-1.2 | 1.8-2.4 | | | | |
| TYPE: | AUGER | AUGER | | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 95% | 100% | | | | |
| 20.0 | 91% | 100% | | | | |
| 12.5 | 84% | 100% | | | | |
| 10.0 | 79% | 100% | | | | |
| 5.0 | 65% | 98% | | | | |
| 2.5 | 56% | 89% | | | | |
| 1.25 | 47% | 73% | | | | |
| 0.630 | 40% | 58% | | | | |
| 0.315 | 34% | 47% | | | | |
| 0.160 | 29% | 39% | | | | |
| 0.080 | 25% | 31% | | | | |
| M.C.(%): | 7% | 8% | | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | | | | |
| % GRAVEL: | 35 | 2 | | | | |
| % SAND: | 41 | 66 | | | | |
| % FINES: | 25 | 31 | | | | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | | | | |



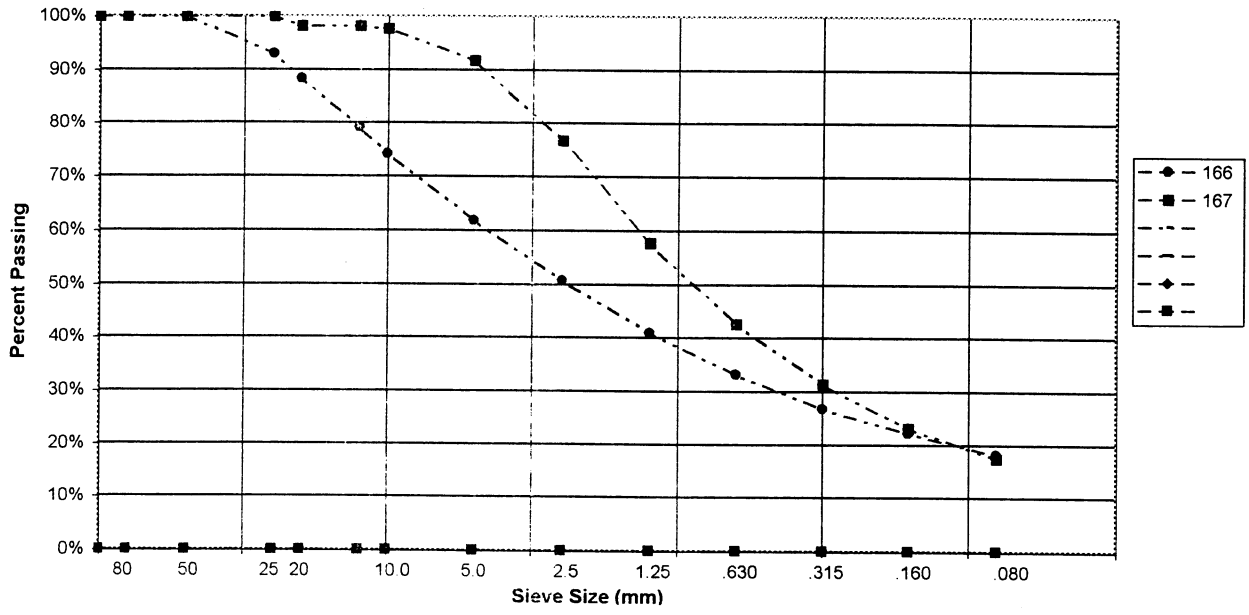
# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30134 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 633158-6774008 | |
| LOGGED BY: | RW | DATE COMP: 08/09/2004 |

| | | |
|---|---|---|
| FIELD NO: | 166 | 167 |
| LAB NO: | 166 | 167 |
| DEPTH: | 0.9-1.2 | 1.8-2.4 |
| TYPE: | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% |
| 80.0 | 100% | 100% |
| 50.0 | 100% | 100% |
| 25.0 | 93% | 100% |
| 20.0 | 88% | 98% |
| 12.5 | 79% | 98% |
| 10.0 | 74% | 98% |
| 5.0 | 62% | 92% |
| 2.5 | 51% | 77% |
| 1.25 | 41% | 58% |
| 0.630 | 33% | 43% |
| 0.315 | 27% | 31% |
| 0.160 | 22% | 23% |
| 0.080 | 18% | 18% |
| M.C.(%): | 8% | 1% |
| LIQUID LIMIT: | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 |
| % GRAVEL: | 38 | 8 |
| % SAND: | 44 | 74 |
| % FINES: | 18 | 18 |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) |

## Grain Size Analysis (Percent Passing vs Grain Size)

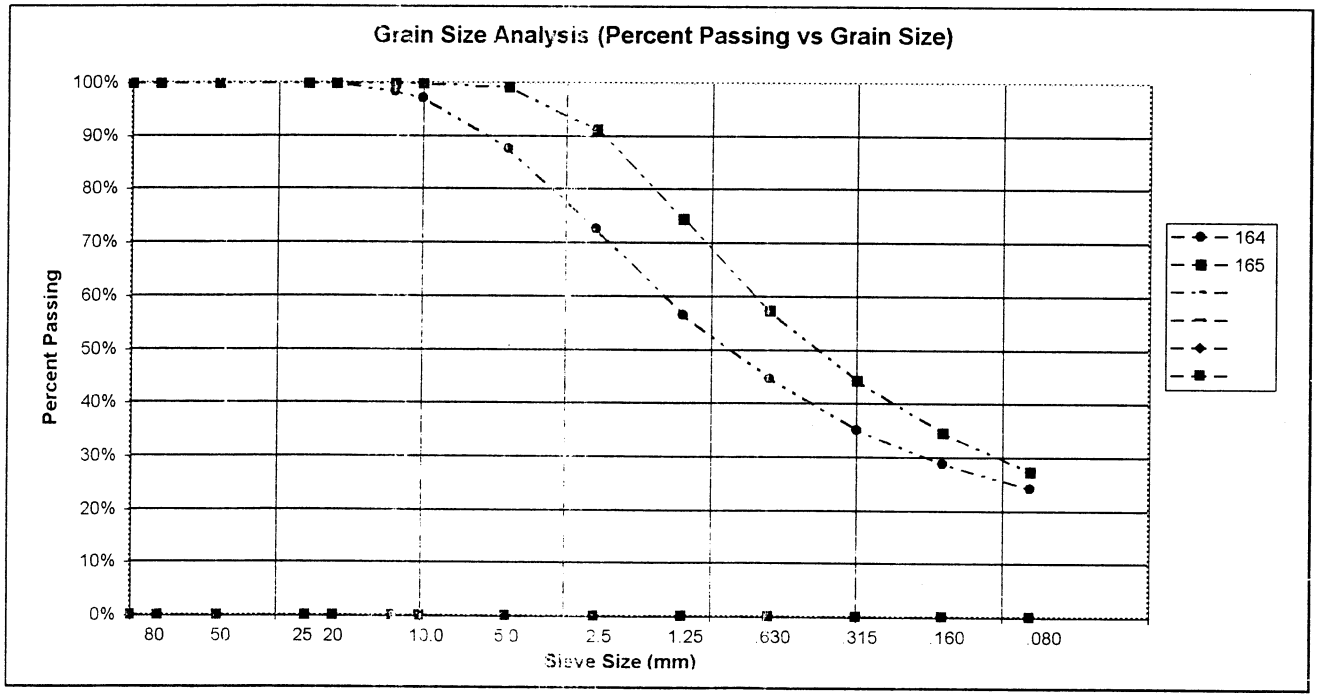


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. H. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30135 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 633067-6774137 | |
| LOGGED BY: | RW | DATE COMP: 08/09/2004 |

| | | |
|---|---|---|
| FIELD NO: | 164 | 165 |
| LAB NO: | 164 | 165 |
| DEPTH: | 0.9-1.5 | 2.1-3.0 |
| TYPE: | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% |
| 80.0 | 100% | 100% |
| 50.0 | 100% | 100% |
| 25.0 | 100% | 100% |
| 20.0 | 100% | 100% |
| 12.5 | 98% | 100% |
| 10.0 | 97% | 100% |
| 5.0 | 88% | 99% |
| 2.5 | 73% | 91% |
| 1.25 | 57% | 74% |
| 0.630 | 45% | 57% |
| 0.315 | 35% | 44% |
| 0.160 | 29% | 35% |
| 0.080 | 24% | 27% |
| M.C.(%): | 10% | 9% |
| LIQUID LIMIT: | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 |
| % GRAVEL: | 12 | 1 |
| % SAND: | 63 | 72 |
| % FINES: | 24 | 27 |
| CLASSIFICATION | SILTY SAND (SM) | SILTY SAND (SM) |

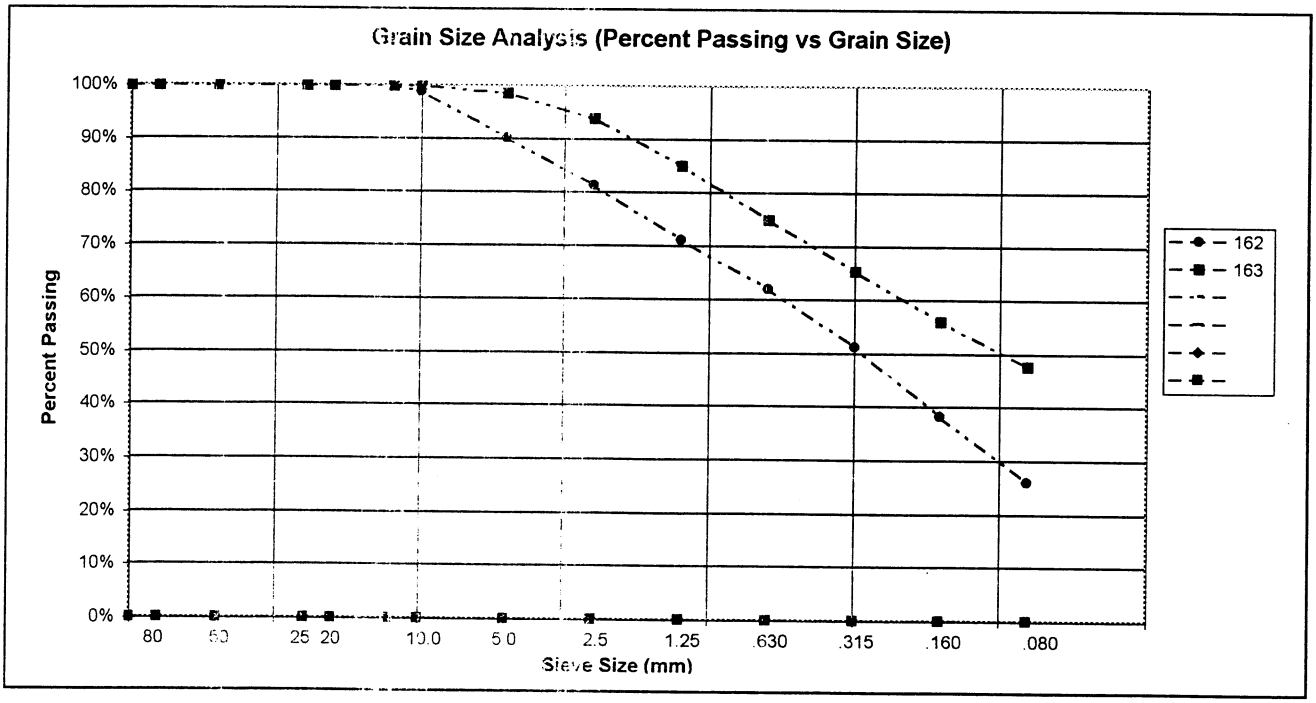


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30136 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 633003-6774206 | |
| LOGGED BY: | RW | DATE COMP: 08/09/2004 |

| | | |
|---|---|---|
| FIELD NO: | 162 | 163 |
| LAB NO: | 162 | 163 |
| DEPTH: | 0.6-1.2 | 1.5-2.1 |
| TYPE: | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% |
| 80.0 | 100% | 100% |
| 50.0 | 100% | 100% |
| 25.0 | 100% | 100% |
| 20.0 | 100% | 100% |
| 12.5 | 100% | 100% |
| 10.0 | 99% | 100% |
| 5.0 | 90% | 99% |
| 2.5 | 81% | 94% |
| 1.25 | 71% | 85% |
| 0.630 | 62% | 75% |
| 0.315 | 51% | 65% |
| 0.160 | 38% | 56% |
| 0.080 | 26% | 48% |
| M.C.(%): | 11% | 14% |
| LIQUID LIMIT: | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 |
| % GRAVEL: | 10 | 1 |
| % SAND: | 64 | 51 |
| % FINES: | 26 | 48 |
| CLASSIFICATION | SILTY SAND (SM) | SILTY SAND (SM) |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

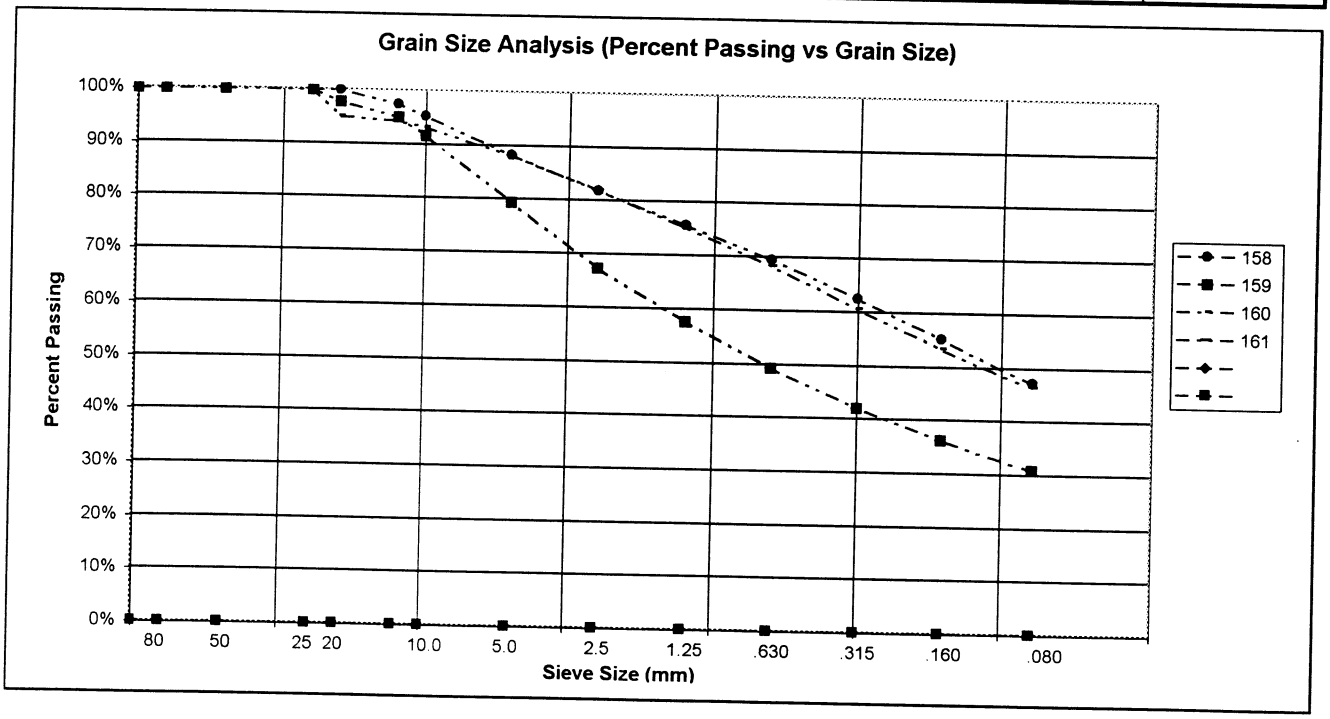
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 632037-6775613
LOGGED BY: RW

HOLE No.: 30148

DATE COMP: 08/03/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 158 | 159 | 160 | 161 | | |
| LAB NO: | 158 | 159 | 160 | 161 | | |
| DEPTH: | 0.9-1.5 | 2.1-2.7 | 3.7-4.3 | 4.9-5.2 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 100% | 100% | 100% | | | |
| 20.0 | 100% | 98% | 95% | | | |
| 12.5 | 98% | 95% | 94% | | | |
| 10.0 | 95% | 92% | 93% | | | |
| 5.0 | 88% | 79% | 88% | | | |
| 2.5 | 82% | 67% | 82% | | | |
| 1.25 | 76% | 58% | 75% | | | |
| 0.630 | 70% | 49% | 68% | | | |
| 0.315 | 63% | 42% | 61% | | | |
| 0.160 | 55% | 36% | 53% | | | |
| 0.080 | 47% | 31% | 46% | | | |
| M.C.(%): | 25% | 11% | 16% | 5% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 12 | 21 | 12 | #VALUE! | | |
| % SAND: | 41 | 49 | 42 | #VALUE! | | |
| % FINES: | 47 | 31 | 46 | #VALUE! | | |
| CLASSIFICATION | SILTY SAND (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | #VALUE! | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

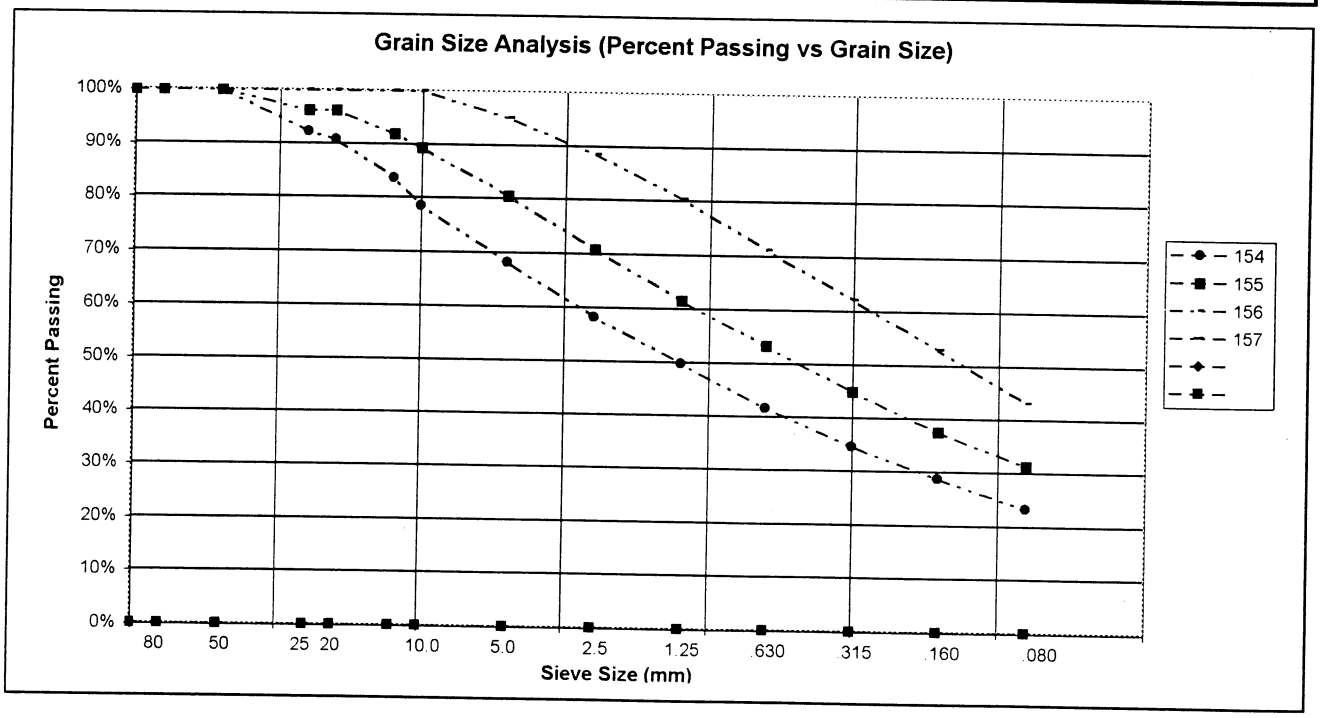
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631983-6775666
LOGGED BY: RW

HOLE No.: 30149

DATE COMP: 08/03/2004

| FIELD NO: | 154 | 155 | 156 | 157 | | |
|---|---|---|---|---|---|---|
| LAB NO: | 154 | 155 | 156 | 157 | | |
| DEPTH: | 0.9-1.4 | 2.1-2.7 | 4.0-4.6 | 5.3-5.5 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 92% | 96% | 100% | | | |
| 20.0 | 91% | 96% | 100% | | | |
| 12.5 | 84% | 92% | 100% | | | |
| 10.0 | 79% | 89% | 100% | | | |
| 5.0 | 68% | 81% | 95% | | | |
| 2.5 | 58% | 71% | 88% | | | |
| 1.25 | 50% | 62% | 80% | | | |
| 0.630 | 42% | 53% | 71% | | | |
| 0.315 | 35% | 45% | 62% | | | |
| 0.160 | 29% | 38% | 53% | | | |
| 0.080 | 23% | 31% | 43% | | | |
| M.C.(%): | 10% | 12% | 15% | 5% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 32 | 19 | 5 | #VALUE! | | |
| % SAND: | 45 | 49 | 52 | #VALUE! | | |
| % FINES: | 23 | 31 | 43 | #VALUE! | | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | #VALUE! | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

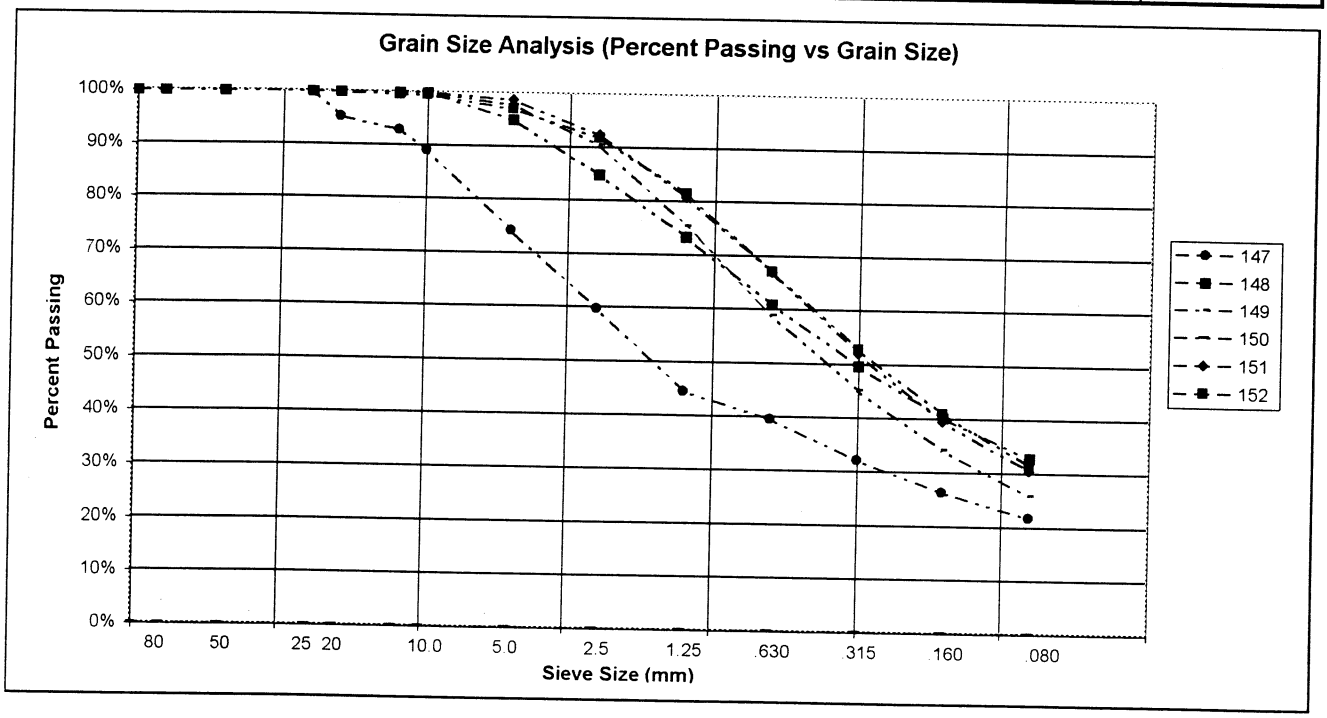
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631923-6775739
LOGGED BY: RW

HOLE No.: 30150

DATE COMP: 08/03/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 147 | 148 | 149 | 150 | 151 | 152 |
| LAB NO: | 147 | 148 | 149 | 150 | 151 | 152 |
| DEPTH: | 0.9-1.2 | 1.8-2.4 | 3.7-4.3 | 5.3-5.5 | 6.4-7.3 | 7.9-8.5 |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% | 100% | | 100% | 100% |
| 80.0 | 100% | 100% | 100% | | 100% | 100% |
| 50.0 | 100% | 100% | 100% | | 100% | 100% |
| 25.0 | 100% | 100% | 100% | | 100% | 100% |
| 20.0 | 95% | 100% | 100% | | 100% | 100% |
| 12.5 | 93% | 100% | 100% | | 100% | 100% |
| 10.0 | 89% | 100% | 100% | | 100% | 100% |
| 5.0 | 74% | 95% | 98% | | 99% | 97% |
| 2.5 | 60% | 85% | 90% | | 92% | 92% |
| 1.25 | 45% | 73% | 75% | | 81% | 81% |
| 0.630 | 40% | 61% | 59% | | 67% | 67% |
| 0.315 | 32% | 50% | 45% | | 52% | 53% |
| 0.160 | 26% | 40% | 34% | | 40% | 41% |
| 0.080 | 22% | 33% | 26% | | 30% | 32% |
| M.C.(%): | 15% | 3% | 14% | 7% | 5% | 7% |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| % GRAVEL: | 26 | 5 | 2 | #VALUE! | 1 | 3 |
| % SAND: | 52 | 62 | 72 | #VALUE! | 68 | 66 |
| % FINES: | 22 | 33 | 26 | #VALUE! | 30 | 32 |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | SILTY SAND (SM) | #VALUE! | SILTY SAND (SM) | SILTY SAND (SM) |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

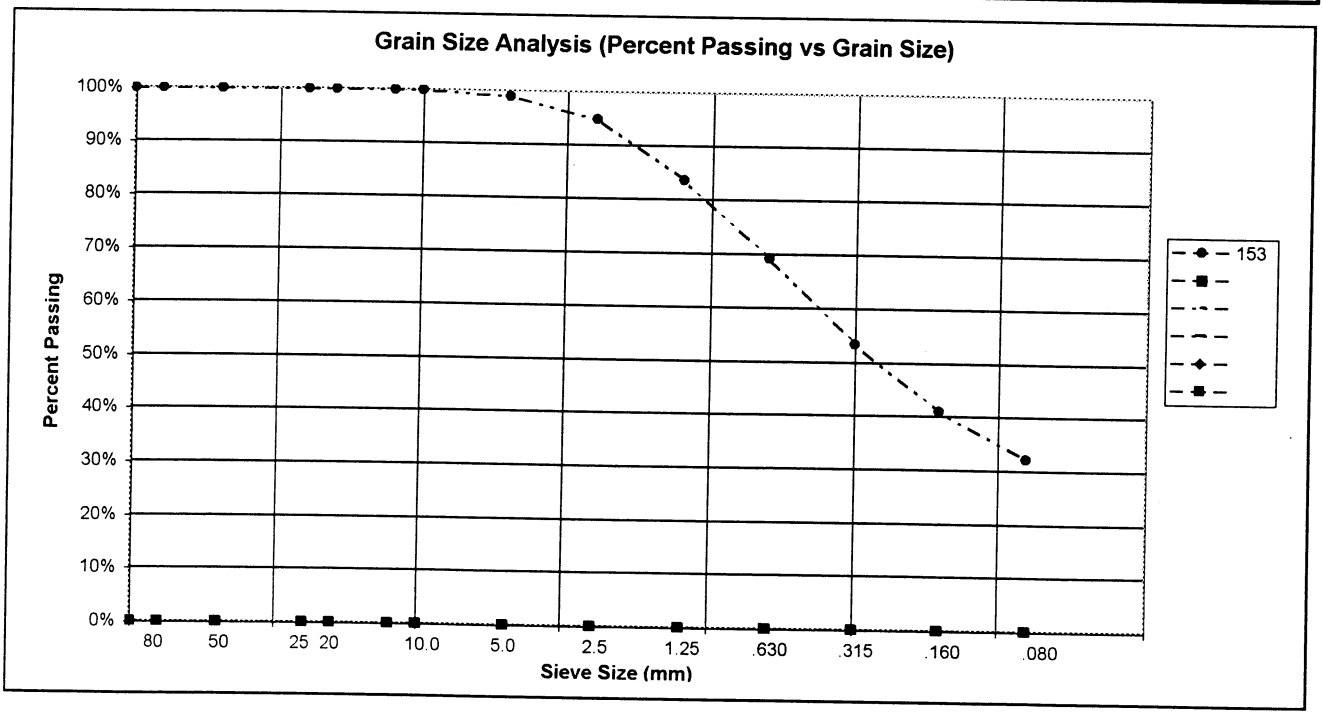
An Affiliate of J. H. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631923-6775739
LOGGED BY: RW

HOLE No.: 30150

DATE COMP: 08/03/2004

| | |
|---|---|
| FIELD NO: | 153 |
| LAB NO: | 153 |
| DEPTH: | 9.4-10.1 |
| TYPE: | AUGER |
| **SIEVE SIZE** | **PERCENT PASSING** |
| 100.0 | 100% |
| 80.0 | 100% |
| 50.0 | 100% |
| 25.0 | 100% |
| 20.0 | 100% |
| 12.5 | 100% |
| 10.0 | 100% |
| 5.0 | 99% |
| 2.5 | 95% |
| 1.25 | 84% |
| 0.630 | 69% |
| 0.315 | 53% |
| 0.160 | 41% |
| 0.080 | 32% |
| M.C.(%): | 5% |
| LIQUID LIMIT: | 0.0 |
| PLASTIC LIMIT: | 0.0 |
| PLASTIC INDEX.: | 0.0 |
| % GRAVEL: | 1 |
| % SAND: | 67 |
| % FINES: | 32 |
| CLASSIFICATION | SILTY SAND (SM) |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

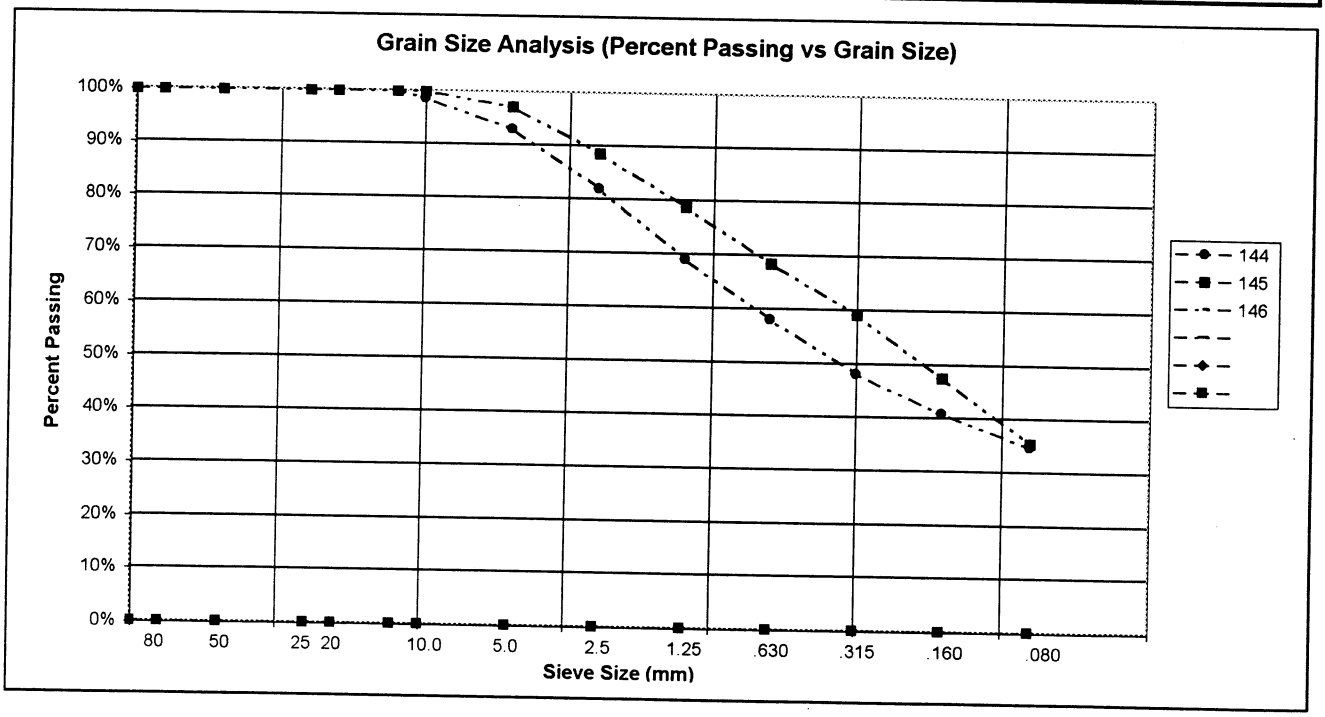
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631868-6775813
LOGGED BY: RW

HOLE No.: 30151

DATE COMP: 08/03/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 144 | 145 | 146 | | | |
| LAB NO: | 144 | 145 | 146 | | | |
| DEPTH: | 0.9-1.2 | 1.5-2.1 | 3.0-3.2 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | | | | |
| 80.0 | 100% | 100% | | | | |
| 50.0 | 100% | 100% | | | | |
| 25.0 | 100% | 100% | | | | |
| 20.0 | 100% | 100% | | | | |
| 12.5 | 100% | 100% | | | | |
| 10.0 | 99% | 100% | | | | |
| 5.0 | 93% | 97% | | | | |
| 2.5 | 82% | 89% | | | | |
| 1.25 | 69% | 79% | | | | |
| 0.630 | 58% | 68% | | | | |
| 0.315 | 48% | 59% | | | | |
| 0.160 | 41% | 48% | | | | |
| 0.080 | 35% | 35% | | | | |
| M.C.(%): | 22% | 11% | 7% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 7 | 3 | #VALUE! | | | |
| % SAND: | 58 | 62 | #VALUE! | | | |
| % FINES: | 35 | 35 | #VALUE! | | | |
| CLASSIFICATION | SILTY SAND (SM) | SILTY SAND (SM) | #VALUE! | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

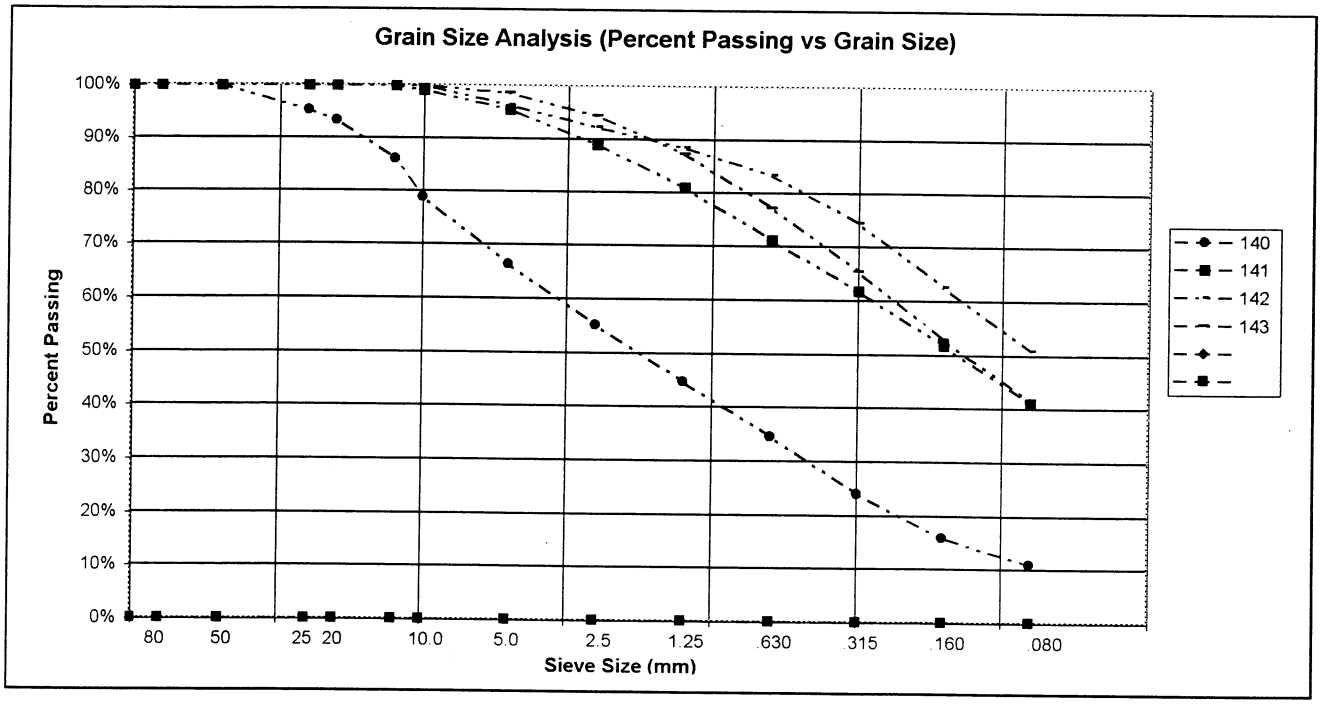
An Affiliate of J. H. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631805-6775939
LOGGED BY: RW

HOLE No.: 30152

DATE COMP: 08/03/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 140 | 141 | 142 | 143 | | |
| LAB NO: | 140 | 141 | 142 | 143 | | |
| DEPTH: | 0.3-0.9 | 2.1-2.7 | 3.4-4.0 | 4.9-5.2 | | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 100% | 100% | 100% | | |
| 25.0 | 95% | 100% | 100% | 100% | | |
| 20.0 | 93% | 100% | 100% | 100% | | |
| 12.5 | 86% | 100% | 100% | 100% | | |
| 10.0 | 79% | 99% | 100% | 100% | | |
| 5.0 | 66% | 96% | 96% | 99% | | |
| 2.5 | 55% | 89% | 92% | 94% | | |
| 1.25 | 45% | 81% | 88% | 87% | | |
| 0.630 | 35% | 71% | 83% | 77% | | |
| 0.315 | 24% | 62% | 74% | 65% | | |
| 0.160 | 16% | 52% | 63% | 53% | | |
| 0.080 | 11% | 41% | 51% | 41% | | |
| M.C.(%): | 3% | 9% | 9% | 6% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 34 | 4 | 4 | 1 | | |
| % SAND: | 55 | 54 | 45 | 57 | | |
| % FINES: | 11 | 41 | 51 | 41 | | |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY SAND (SM) | SANDY SILT (ML) | SILTY SAND (SM) | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

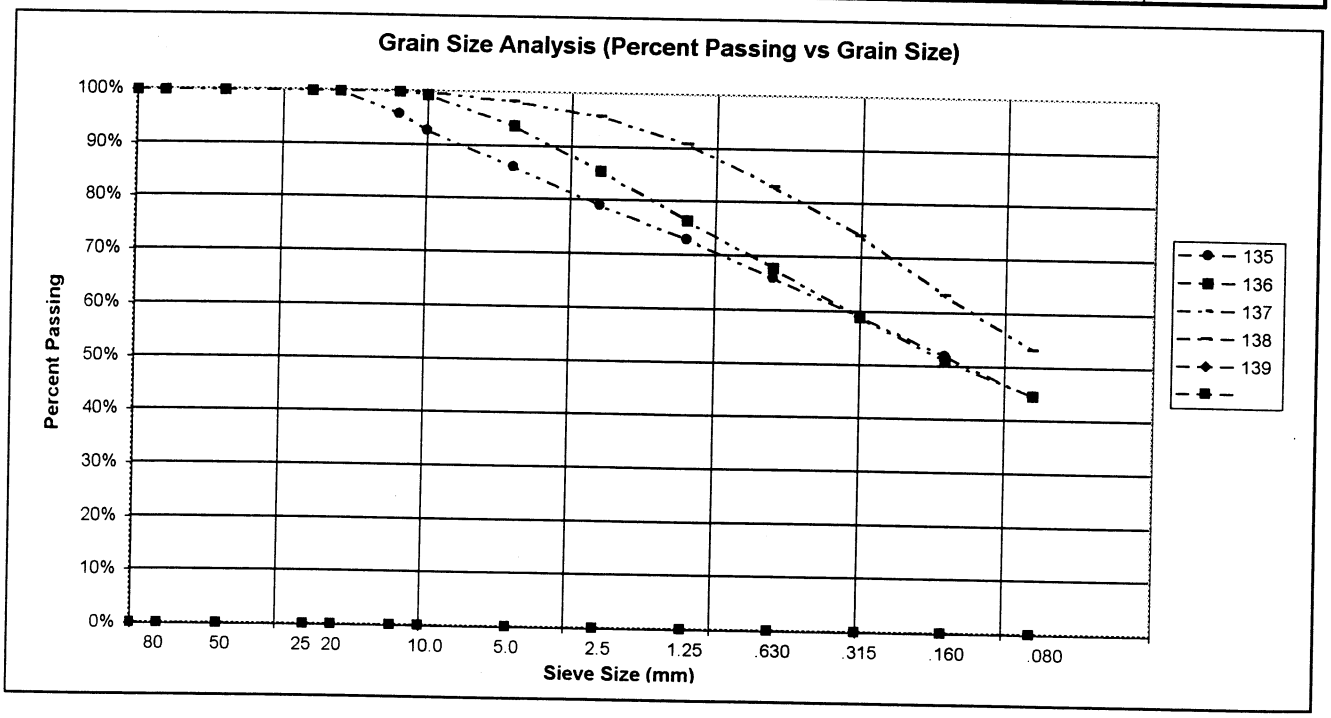
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631728-6776010
LOGGED BY: RW

HOLE No.: 30153

DATE COMP: 08/03/2004

| FIELD NO: | 135 | 136 | 137 | 138 | 139 | |
|---|---|---|---|---|---|---|
| LAB NO: | 135 | 136 | 137 | 138 | 139 | |
| DEPTH: | 0.6-1.2 | 1.5-2.4 | 3.4-4.0 | 5.2-5.8 | 7.3-7.6 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | | 100% | | |
| 80.0 | 100% | 100% | | 100% | | |
| 50.0 | 100% | 100% | | 100% | | |
| 25.0 | 100% | 100% | | 100% | | |
| 20.0 | 100% | 100% | | 100% | | |
| 12.5 | 96% | 100% | | 100% | | |
| 10.0 | 93% | 99% | | 100% | | |
| 5.0 | 86% | 94% | | 98% | | |
| 2.5 | 79% | 86% | | 96% | | |
| 1.25 | 73% | 76% | | 91% | | |
| 0.630 | 66% | 68% | | 83% | | |
| 0.315 | 59% | 59% | | 74% | | |
| 0.160 | 52% | 51% | | 63% | | |
| 0.080 | 44% | 45% | | 53% | | |
| M.C.(%): | 11% | 12% | 7% | 10% | 5% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 14 | 6 | #VALUE! | 2 | #VALUE! | |
| % SAND: | 42 | 49 | #VALUE! | 45 | #VALUE! | |
| % FINES: | 44 | 45 | #VALUE! | 53 | #VALUE! | |
| CLASSIFICATION | SILTY SAND (SM) | SILTY SAND (SM) | #VALUE! | SANDY SILT (ML) | #VALUE! | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

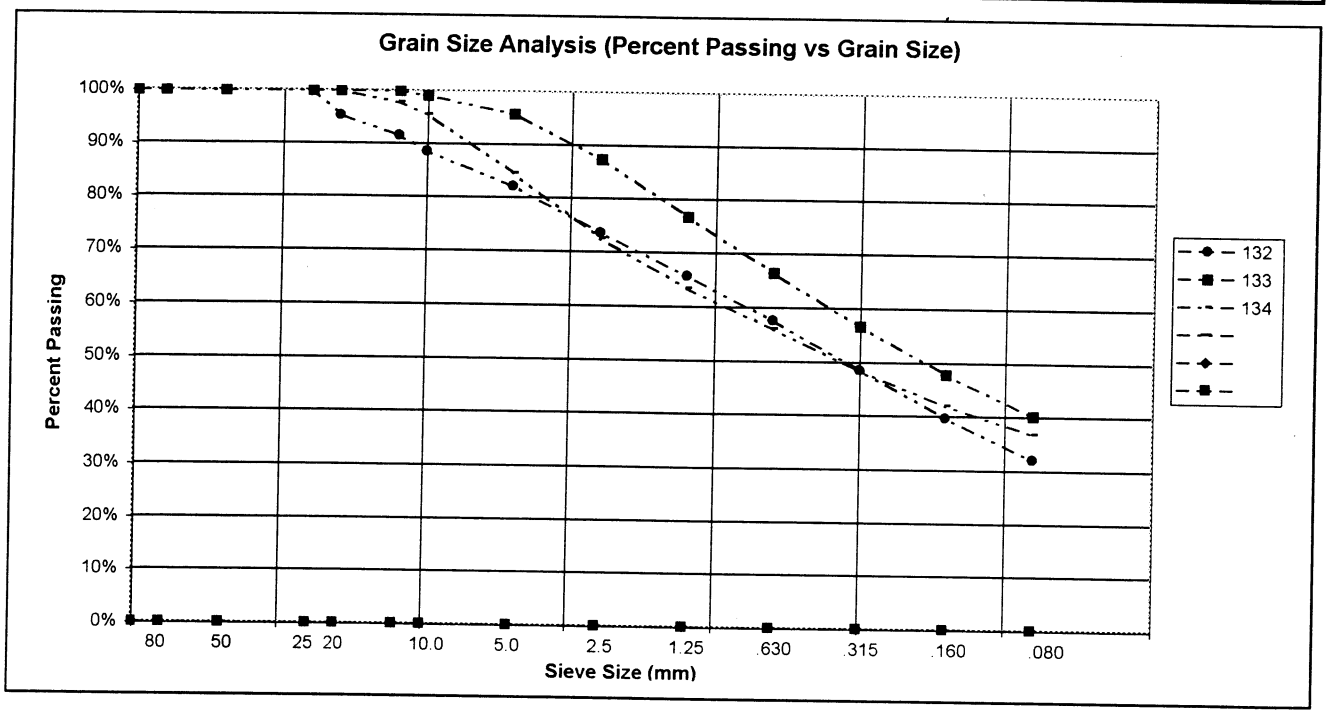
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631698-6776060
LOGGED BY: RW

HOLE No.: 30154

DATE COMP: 07/31/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 132 | 133 | 134 | | | |
| LAB NO: | 132 | 133 | 134 | | | |
| DEPTH: | 0.3-0.9 | 1.5-2.4 | 3.4-4.0 | | | |
| TYPE: | AUGER | AUGER | AUGER | | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | | |
| 100.0 | 100% | 100% | 100% | | | |
| 80.0 | 100% | 100% | 100% | | | |
| 50.0 | 100% | 100% | 100% | | | |
| 25.0 | 100% | 100% | 100% | | | |
| 20.0 | 95% | 100% | 100% | | | |
| 12.5 | 92% | 100% | 98% | | | |
| 10.0 | 89% | 99% | 96% | | | |
| 5.0 | 82% | 96% | 85% | | | |
| 2.5 | 74% | 87% | 73% | | | |
| 1.25 | 66% | 77% | 64% | | | |
| 0.630 | 58% | 67% | 56% | | | |
| 0.315 | 49% | 57% | 48% | | | |
| 0.160 | 40% | 48% | 42% | | | |
| 0.080 | 32% | 40% | 37% | | | |
| M.C.(%): | 30% | 19% | 13% | | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | | | |
| % GRAVEL: | 18 | 4 | 15 | | | |
| % SAND: | 50 | 55 | 48 | | | |
| % FINES: | 32 | 40 | 37 | | | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | SILTY SAND WITH GRAVEL (SM) | | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

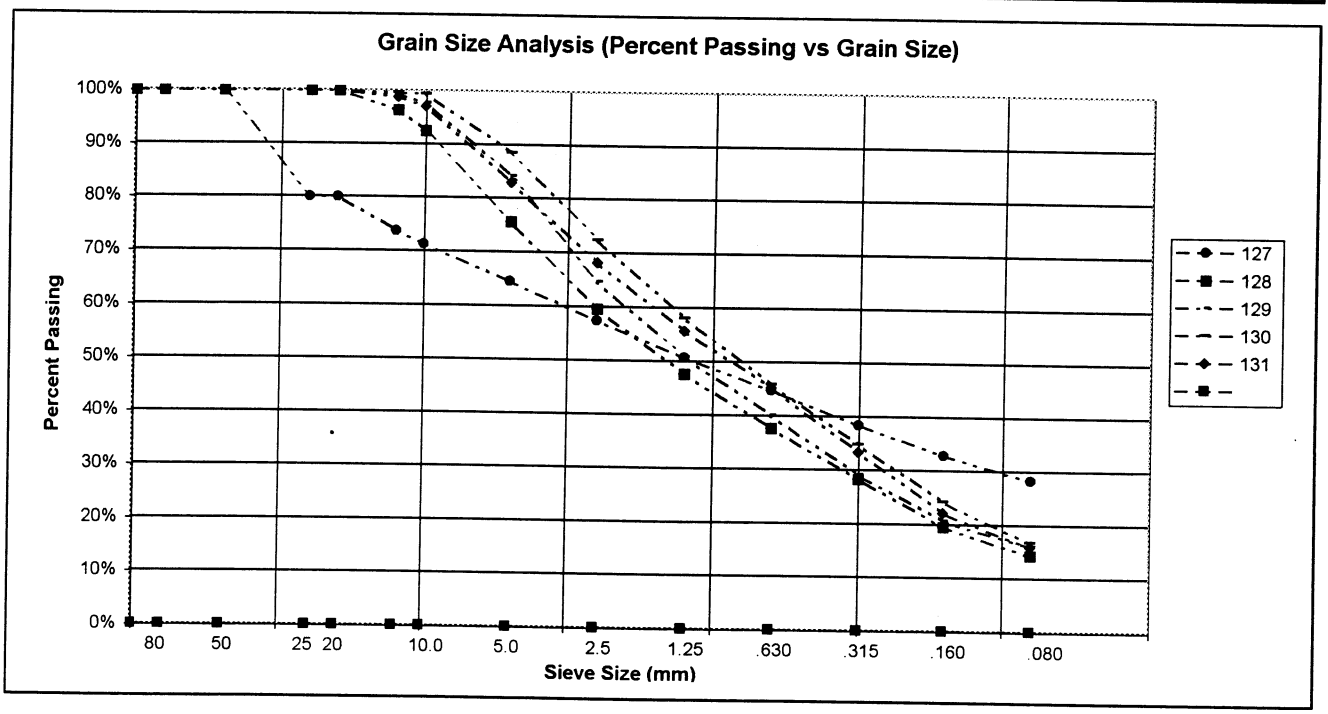
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631643-6776117
LOGGED BY: RW

HOLE No.: 30155

DATE COMP: 07/31/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 127 | 128 | 129 | 130 | 131 | |
| LAB NO: | 127 | 128 | 129 | 130 | 131 | |
| DEPTH: | 0.8-1.2 | 1.5-2.0 | 2.4-2.9 | 3.4-4.0 | 5.2-5.8 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | 100% | 100% | 100% | |
| 80.0 | 100% | 100% | 100% | 100% | 100% | |
| 50.0 | 100% | 100% | 100% | 100% | 100% | |
| 25.0 | 80% | 100% | 100% | 100% | 100% | |
| 20.0 | 80% | 100% | 100% | 100% | 100% | |
| 12.5 | 74% | 96% | 99% | 100% | 99% | |
| 10.0 | 71% | 93% | 98% | 99% | 97% | |
| 5.0 | 65% | 76% | 84% | 88% | 83% | |
| 2.5 | 57% | 60% | 65% | 72% | 68% | |
| 1.25 | 51% | 48% | 51% | 58% | 56% | |
| 0.630 | 45% | 38% | 40% | 46% | 45% | |
| 0.315 | 38% | 28% | 29% | 35% | 33% | |
| 0.160 | 33% | 20% | 21% | 24% | 22% | |
| 0.080 | 28% | 14% | 16% | 17% | 16% | |
| M.C.(%): | 9% | 8% | 8% | 9% | 10% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 35 | 24 | 16 | 12 | 17 | |
| % SAND: | 36 | 61 | 68 | 72 | 67 | |
| % FINES: | 28 | 14 | 16 | 17 | 16 | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | SILTY SAND WITH GRAVEL (SM) | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

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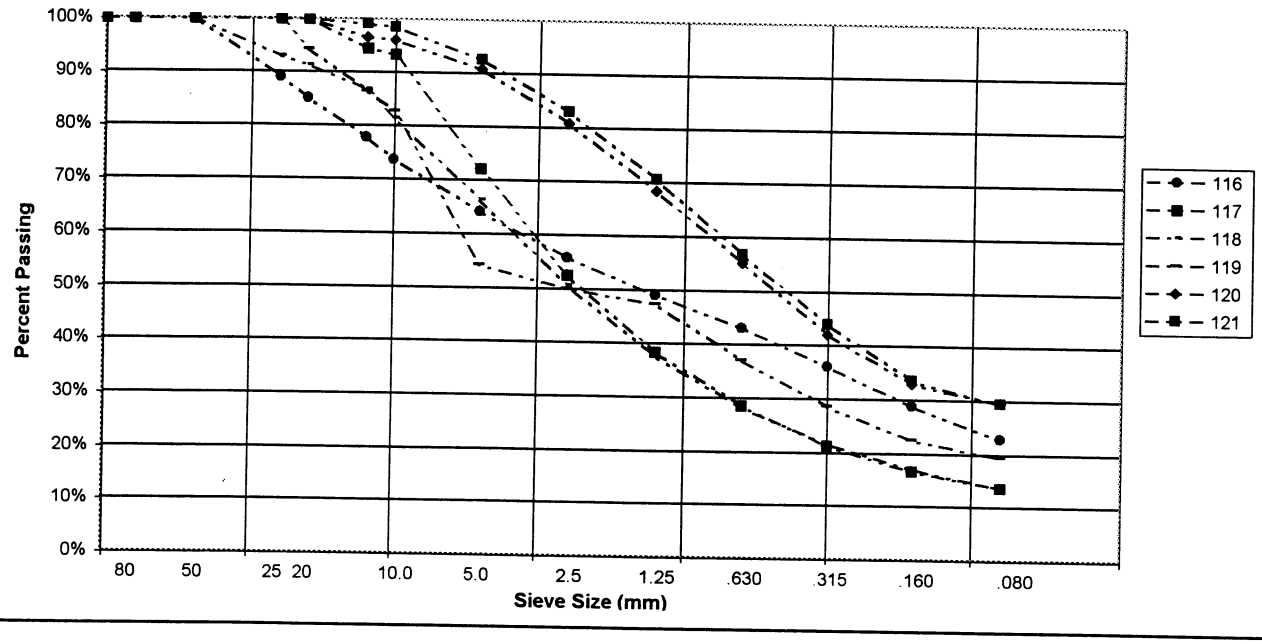
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631600-6776185
LOGGED BY: RW

HOLE No.: 30156

DATE COMP: 07/31/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 116 | 117 | 118 | 119 | 120 | 121 |
| LAB NO: | 116 | 117 | 118 | 119 | 120 | 121 |
| DEPTH: | 0.9-1.5 | 1.5-2.4 | 3.0-4.0 | 4.9-5.5 | 6.4-7.0 | 7.9-8.5 |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 80.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 50.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 25.0 | 89% | 100% | 93% | 100% | 100% | 100% |
| 20.0 | 85% | 100% | 91% | 94% | 100% | 100% |
| 12.5 | 78% | 95% | 87% | 87% | 97% | 99% |
| 10.0 | 74% | 93% | 82% | 83% | 96% | 99% |
| 5.0 | 64% | 72% | 66% | 54% | 91% | 93% |
| 2.5 | 56% | 53% | 51% | 50% | 81% | 83% |
| 1.25 | 49% | 38% | 38% | 47% | 68% | 71% |
| 0.630 | 43% | 29% | 28% | 37% | 55% | 57% |
| 0.315 | 36% | 21% | 22% | 29% | 42% | 44% |
| 0.160 | 29% | 17% | 17% | 23% | 33% | 34% |
| 0.080 | 23% | 14% | 14% | 19% | 30% | 29% |
| M.C.(%): | 24% | 7% | 7% | 7% | 6% | 6% |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| % GRAVEL: | 36 | 28 | 34 | 46 | 9 | 7 |
| % SAND: | 41 | 58 | 53 | 35 | 61 | 63 |
| % FINES: | 23 | 14 | 14 | 19 | 30 | 29 |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY GRAVEL WITH SAND (GM) | SILTY SAND (SM) | SILTY SAND (SM) |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

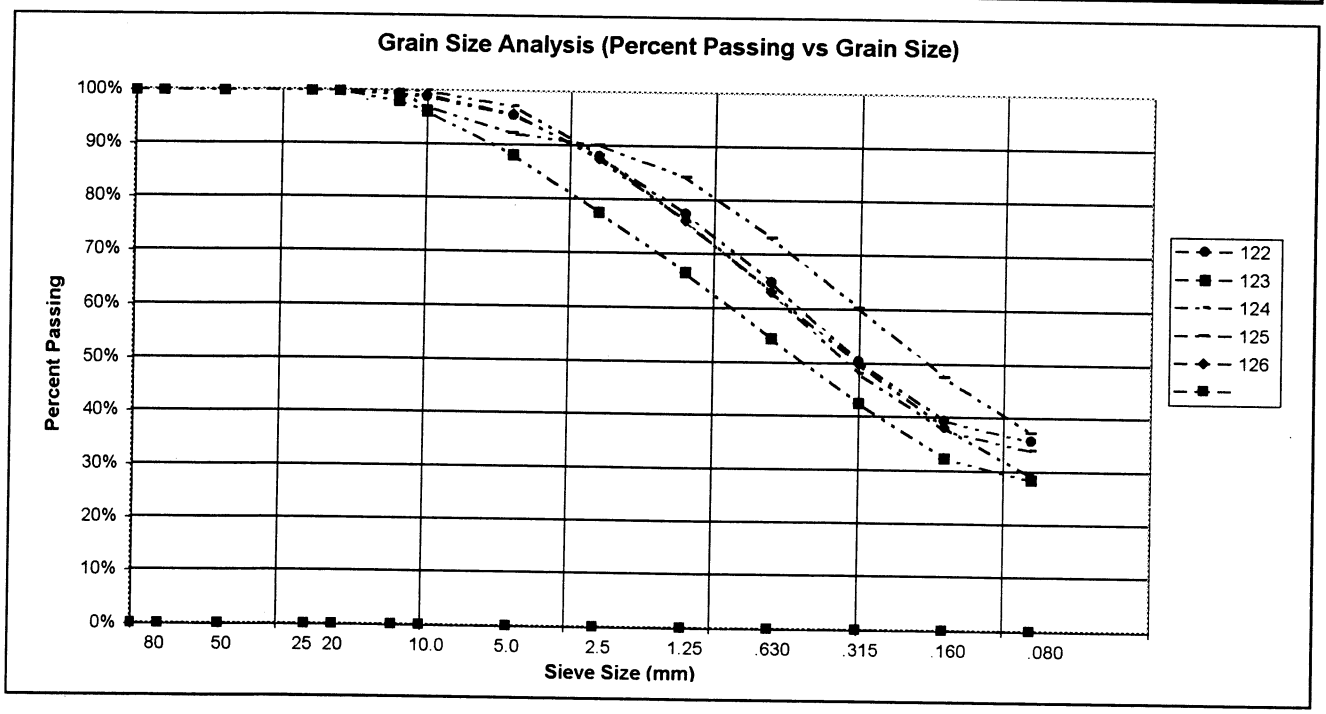
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631600-6776185
LOGGED BY: RW

HOLE No.: 30156

DATE COMP: 07/31/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 122 | 123 | 124 | 125 | 126 | |
| LAB NO: | 122 | 123 | 124 | 125 | 126 | |
| DEPTH: | 9.4-10.1 | 10.4-11.0 | 11.3-11.9 | 12.5-13.4 | 13.7-14.6 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | 100% | 100% | 100% | |
| 80.0 | 100% | 100% | 100% | 100% | 100% | |
| 50.0 | 100% | 100% | 100% | 100% | 100% | |
| 25.0 | 100% | 100% | 100% | 100% | 100% | |
| 20.0 | 100% | 100% | 100% | 100% | 100% | |
| 12.5 | 99% | 98% | 100% | 100% | 99% | |
| 10.0 | 99% | 96% | 100% | 97% | 99% | |
| 5.0 | 96% | 88% | 97% | 92% | 96% | |
| 2.5 | 88% | 78% | 88% | 90% | 88% | |
| 1.25 | 77% | 67% | 76% | 84% | 76% | |
| 0.630 | 65% | 55% | 63% | 73% | 63% | |
| 0.315 | 50% | 43% | 48% | 60% | 50% | |
| 0.160 | 39% | 32% | 38% | 48% | 38% | |
| 0.080 | 36% | 29% | 34% | 37% | 29% | |
| M.C.(%): | 5% | 4% | 5% | 6% | 5% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 4 | 12 | 3 | 8 | 4 | |
| % SAND: | 60 | 60 | 63 | 55 | 67 | |
| % FINES: | 36 | 29 | 34 | 37 | 29 | |
| CLASSIFICATION | SILTY SAND (SM) | SILTY SAND (SM) | SILTY SAND (SM) | SILTY SAND (SM) | SILTY SAND (SM) | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. H. Paine & Associates Ltd.

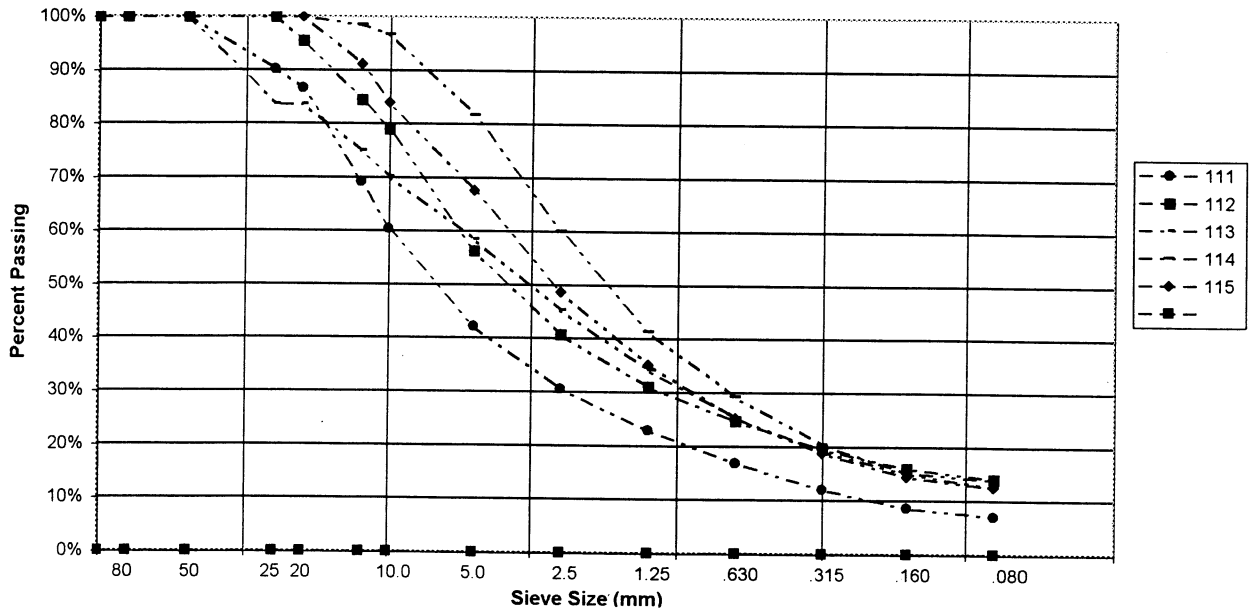
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631655-6776190
LOGGED BY: RW

HOLE No.: 30157

DATE COMP: 07/31/2004

| FIELD NO: | 111 | 112 | 113 | 114 | 115 | |
|---|---|---|---|---|---|---|
| LAB NO: | 111 | 112 | 113 | 114 | 115 | |
| DEPTH: | 0.3-0.9 | 1.5-2.1 | 2.1-2.7 | 3.0-4.3 | 4.9-5.5 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | 100% | 100% | 100% | |
| 80.0 | 100% | 100% | 100% | 100% | 100% | |
| 50.0 | 100% | 100% | 100% | 100% | 100% | |
| 25.0 | 90% | 100% | 84% | 100% | 100% | |
| 20.0 | 87% | 96% | 84% | 100% | 100% | |
| 12.5 | 69% | 85% | 75% | 99% | 91% | |
| 10.0 | 60% | 79% | 70% | 97% | 84% | |
| 5.0 | 42% | 56% | 59% | 82% | 68% | |
| 2.5 | 31% | 41% | 45% | 60% | 49% | |
| 1.25 | 23% | 31% | 34% | 41% | 35% | |
| 0.630 | 17% | 25% | 25% | 29% | 25% | |
| 0.315 | 12% | 20% | 19% | 20% | 19% | |
| 0.160 | 9% | 16% | 15% | 15% | 14% | |
| 0.080 | 7% | 14% | 13% | 14% | 13% | |
| M.C.(%): | 4% | 6% | 5% | 4% | 6% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 58 | 44 | 41 | 18 | 32 | |
| % SAND: | 35 | 42 | 46 | 68 | 55 | |
| % FINES: | 7 | 14 | 13 | 14 | 13 | |
| CLASSIFICATION | WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) | SILTY GRAVEL WITH SAND (GM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | |

## Grain Size Analysis (Percent Passing vs Grain Size)

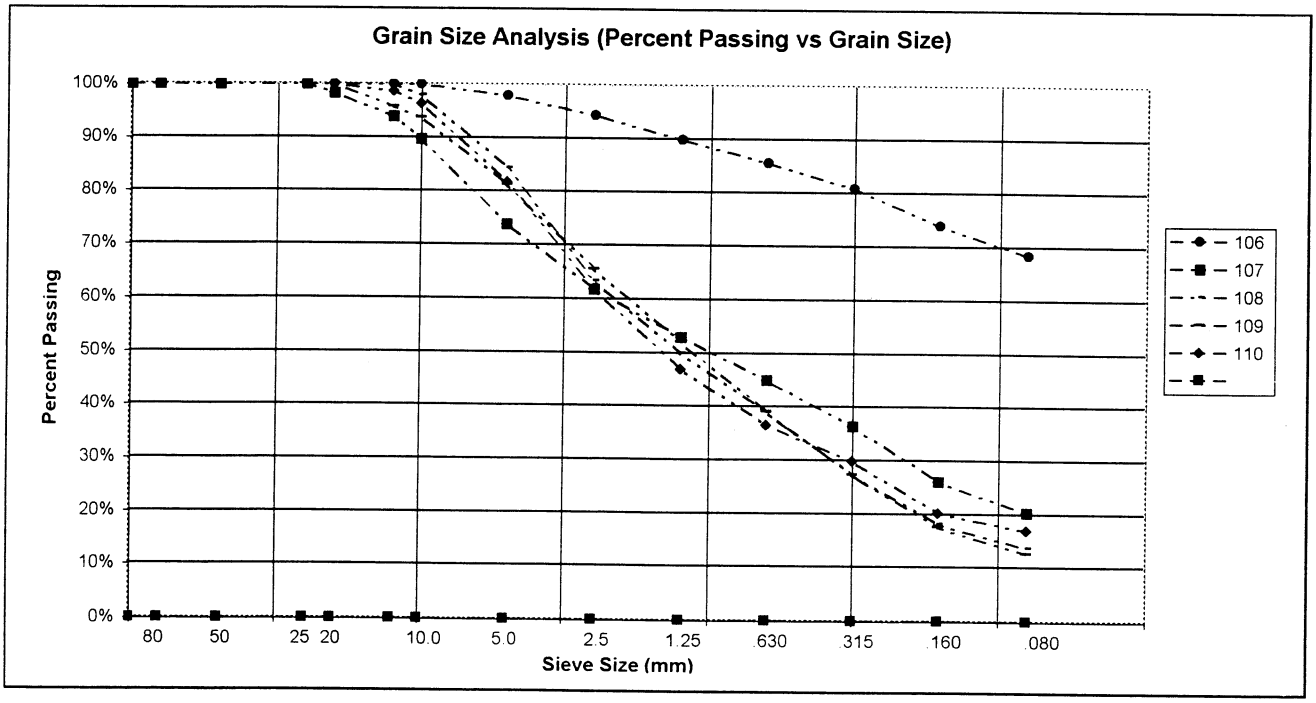


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. H. Paine & Associates Ltd.

| | | | |
|---|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: | 30158 |
| CLIENT: | YTG, Transportation & Engineering | | |
| PROJECT NAME: | Geotechnical Services | | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | | |
| DRILL UNIT: | CME75 | | |
| HOLE LOCATION: | 631563-6776272 | | |
| LOGGED BY: | RW | DATE COMP: | 07/30/2004 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 106 | 107 | 108 | 109 | 110 | |
| LAB NO: | 106 | 107 | 108 | 109 | 110 | |
| DEPTH: | 0.9-1.2 | 1.5-2.4 | 2.7-3.4 | 3.7-4.3 | 4.6-5.2 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | 100% | 100% | 100% | |
| 80.0 | 100% | 100% | 100% | 100% | 100% | |
| 50.0 | 100% | 100% | 100% | 100% | 100% | |
| 25.0 | 100% | 100% | 100% | 100% | 100% | |
| 20.0 | 100% | 98% | 100% | 100% | 100% | |
| 12.5 | 100% | 94% | 100% | 96% | 99% | |
| 10.0 | 100% | 90% | 98% | 94% | 96% | |
| 5.0 | 98% | 74% | 84% | 81% | 82% | |
| 2.5 | 94% | 62% | 63% | 66% | 62% | |
| 1.25 | 90% | 53% | 50% | 52% | 47% | |
| 0.630 | 86% | 45% | 39% | 39% | 37% | |
| 0.315 | 81% | 36% | 27% | 27% | 30% | |
| 0.160 | 74% | 26% | 18% | 18% | 20% | |
| 0.080 | 68% | 20% | 14% | 13% | 17% | |
| M.C.(%): | 93% | 11% | 9% | 8% | 8% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 2 | 26 | 16 | 19 | 18 | |
| % SAND: | 30 | 54 | 71 | 69 | 65 | |
| % FINES: | 68 | 20 | 14 | 13 | 17 | |
| CLASSIFICATION | SANDY SILT (ML) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

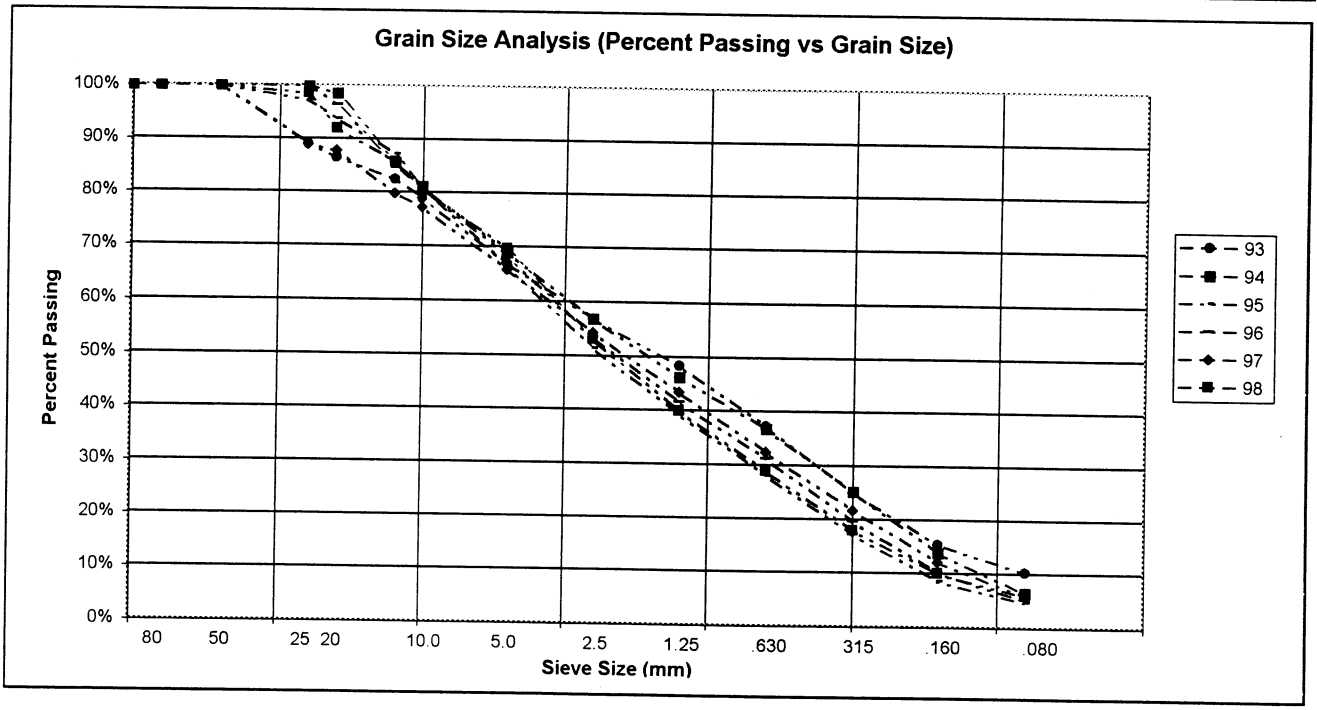
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631517-6776361
LOGGED BY: RW

HOLE No.: 30159

DATE COMP: 07/30/2004

| FIELD NO: | 93 | 94 | 95 | 96 | 97 | 98 |
|---|---|---|---|---|---|---|
| LAB NO: | 93 | 94 | 95 | 96 | 97 | 98 |
| DEPTH: | 0.3-0.9 | 1.5-2.1 | 3.0-3.7 | 4.6-5.2 | 5.2-5.8 | 6.7-7.3 |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 80.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 50.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 25.0 | 89% | 100% | 97% | 100% | 89% | 99% |
| 20.0 | 87% | 99% | 94% | 96% | 88% | 92% |
| 12.5 | 83% | 86% | 87% | 85% | 80% | 86% |
| 10.0 | 79% | 81% | 81% | 81% | 77% | 81% |
| 5.0 | 67% | 69% | 66% | 68% | 66% | 70% |
| 2.5 | 57% | 57% | 51% | 53% | 54% | 53% |
| 1.25 | 48% | 46% | 39% | 42% | 43% | 40% |
| 0.630 | 37% | 37% | 28% | 31% | 32% | 29% |
| 0.315 | 25% | 25% | 17% | 20% | 22% | 18% |
| 0.160 | 15% | 14% | 9% | 10% | 12% | 10% |
| 0.080 | 10% | 6% | 5% | 5% | 6% | 6% |
| M.C.(%): | 1% | 1% | 2% | 4% | 2% | 2% |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| % GRAVEL: | 33 | 31 | 34 | 32 | 34 | 30 |
| % SAND: | 57 | 62 | 62 | 63 | 60 | 64 |
| % FINES: | 10 | 6 | 5 | 5 | 6 | 6 |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | WELL-GRADED SAND WITH GRAVEL (SW) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

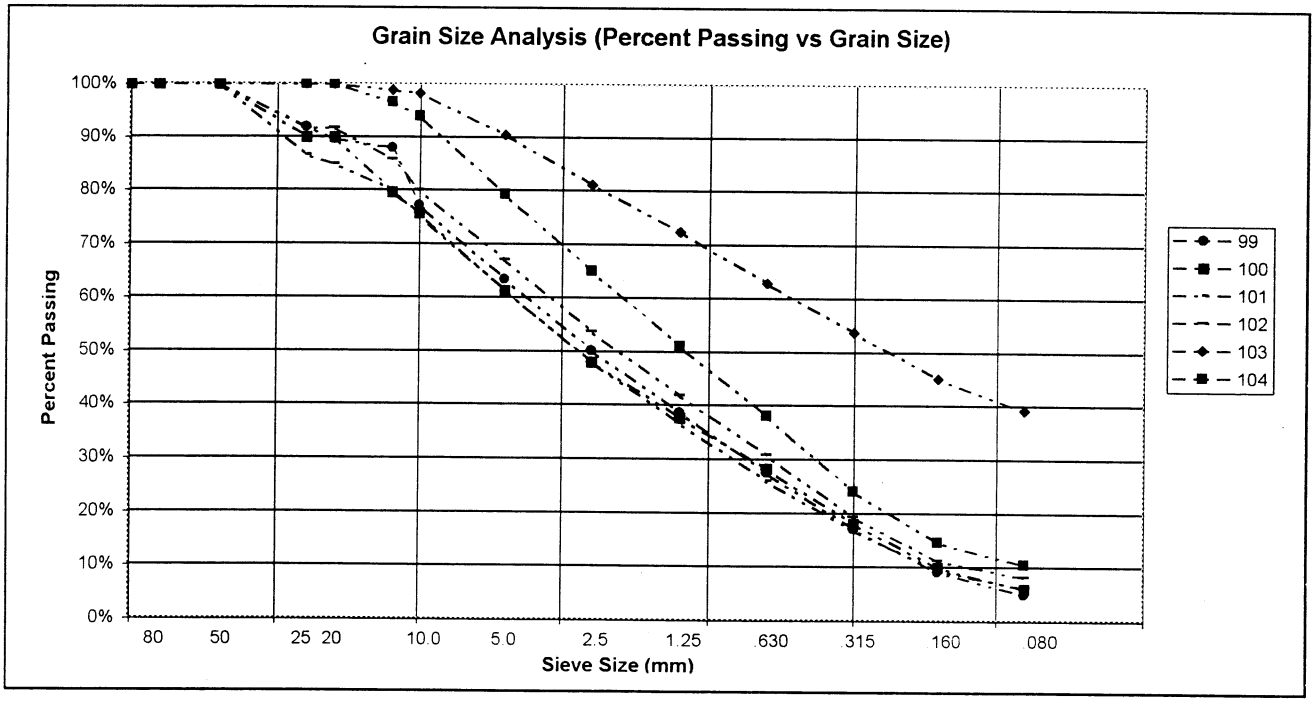
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631517-6776361
LOGGED BY: RW

HOLE No.: 30159

DATE COMP: 07/30/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 99 | 100 | 101 | 102 | 103 | 104 |
| LAB NO: | 99 | 100 | 101 | 102 | 103 | 104 |
| DEPTH: | 7.9-8.5 | 9.4-10.1 | 10.4-11.0 | 11.3-11.9 | 12.8-13.4 | 13.7-14.0 |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 80.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 50.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 25.0 | 92% | 90% | 87% | 92% | 100% | 100% |
| 20.0 | 90% | 90% | 85% | 92% | 100% | 100% |
| 12.5 | 88% | 80% | 80% | 86% | 99% | 97% |
| 10.0 | 77% | 76% | 75% | 80% | 98% | 94% |
| 5.0 | 64% | 61% | 61% | 67% | 90% | 79% |
| 2.5 | 50% | 48% | 48% | 54% | 81% | 65% |
| 1.25 | 39% | 38% | 37% | 42% | 72% | 51% |
| 0.630 | 28% | 28% | 26% | 31% | 63% | 38% |
| 0.315 | 17% | 18% | 17% | 19% | 54% | 24% |
| 0.160 | 9% | 10% | 10% | 11% | 45% | 15% |
| 0.080 | 5% | 6% | 6% | 8% | 39% | 11% |
| M.C.(%): | 2% | 2% | 2% | 2% | 7% | 3% |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| % GRAVEL: | 36 | 39 | 39 | 33 | 10 | 21 |
| % SAND: | 59 | 55 | 55 | 59 | 51 | 69 |
| % FINES: | 5 | 6 | 6 | 8 | 39 | 11 |
| CLASSIFICATION | WELL-GRADED SAND WITH GRAVEL (SW) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY SAND (SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) |

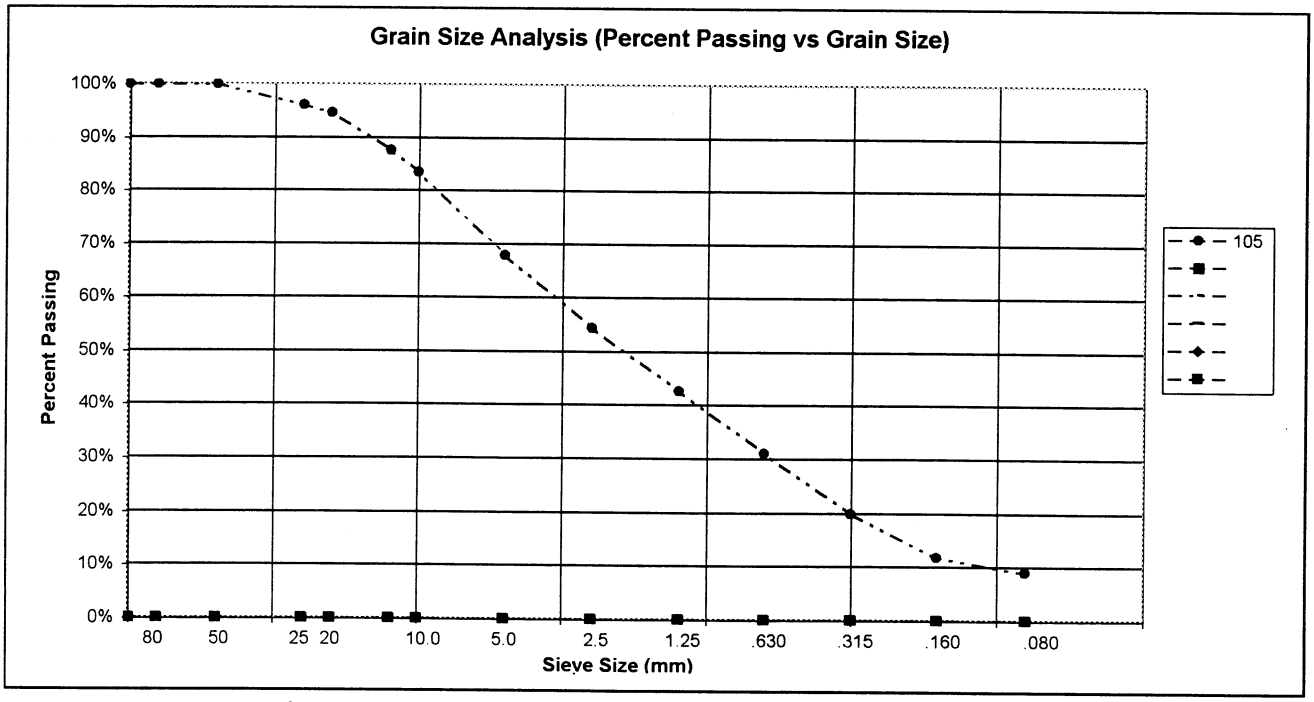


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30159 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 631517-6776361 | |
| LOGGED BY: | RW | DATE COMP: 07/30/2004 |

| | |
|---|---|
| FIELD NO: | 105 |
| LAB NO: | 105 |
| DEPTH: | 14.3-14.9 |
| TYPE: | AUGER |
| **SIEVE SIZE** | **PERCENT PASSING** |
| 100.0 | 100% |
| 80.0 | 100% |
| 50.0 | 100% |
| 25.0 | 96% |
| 20.0 | 95% |
| 12.5 | 88% |
| 10.0 | 83% |
| 5.0 | 68% |
| 2.5 | 54% |
| 1.25 | 43% |
| 0.630 | 31% |
| 0.315 | 20% |
| 0.160 | 12% |
| 0.080 | 9% |
| M.C.(%): | 3% |
| LIQUID LIMIT: | 0.0 |
| PLASTIC LIMIT: | 0.0 |
| PLASTIC INDEX.: | 0.0 |
| % GRAVEL: | 32 |
| % SAND: | 59 |
| % FINES: | 9 |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

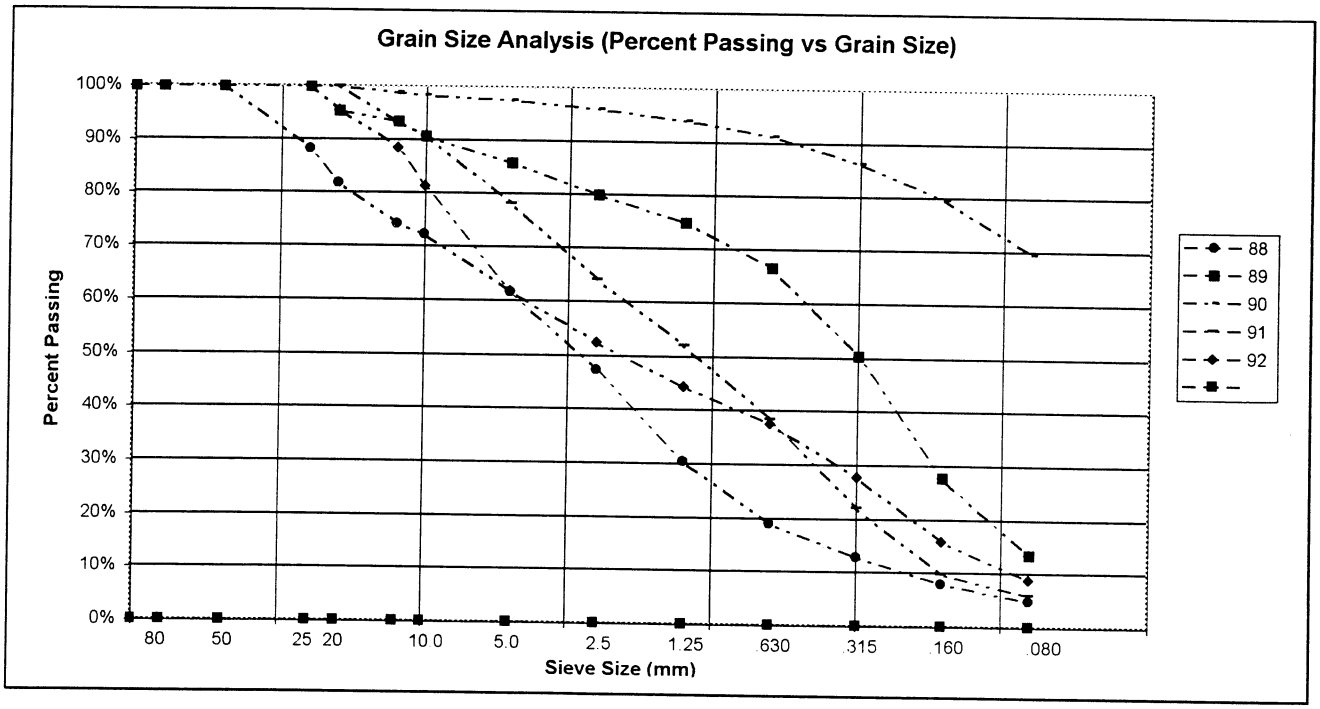
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631499-6776506
LOGGED BY: RW

HOLE No.: 30160

DATE COMP: 07/29/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 88 | 89 | 90 | 91 | 92 | |
| LAB NO: | 88 | 89 | 90 | 91 | 92 | |
| DEPTH: | 0.3-0.9 | 1.8-2.1 | 2.4-2.9 | 3.4-4.0 | 4.9-5.5 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | 100% | 100% | 100% | |
| 80.0 | 100% | 100% | 100% | 100% | 100% | |
| 50.0 | 100% | 100% | 100% | 100% | 100% | |
| 25.0 | 88% | 100% | 100% | 100% | 100% | |
| 20.0 | 82% | 95% | 100% | 100% | 96% | |
| 12.5 | 74% | 94% | 99% | 93% | 88% | |
| 10.0 | 72% | 91% | 98% | 91% | 81% | |
| 5.0 | 62% | 86% | 98% | 78% | 62% | |
| 2.5 | 47% | 80% | 96% | 64% | 53% | |
| 1.25 | 30% | 75% | 94% | 52% | 44% | |
| 0.630 | 19% | 67% | 91% | 38% | 38% | |
| 0.315 | 13% | 50% | 86% | 22% | 28% | |
| 0.160 | 8% | 28% | 80% | 10% | 16% | |
| 0.080 | 5% | 14% | 70% | 6% | 9% | |
| M.C.(%): | 3% | 17% | 61% | 11% | 11% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 38 | 14 | 2 | 22 | 38 | |
| % SAND: | 57 | 72 | 28 | 72 | 53 | |
| % FINES: | 5 | 14 | 70 | 6 | 9 | |
| CLASSIFICATION | WELL-GRADED SAND WITH GRAVEL (SW) | SILTY SAND (SM) | SANDY SILT (ML) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

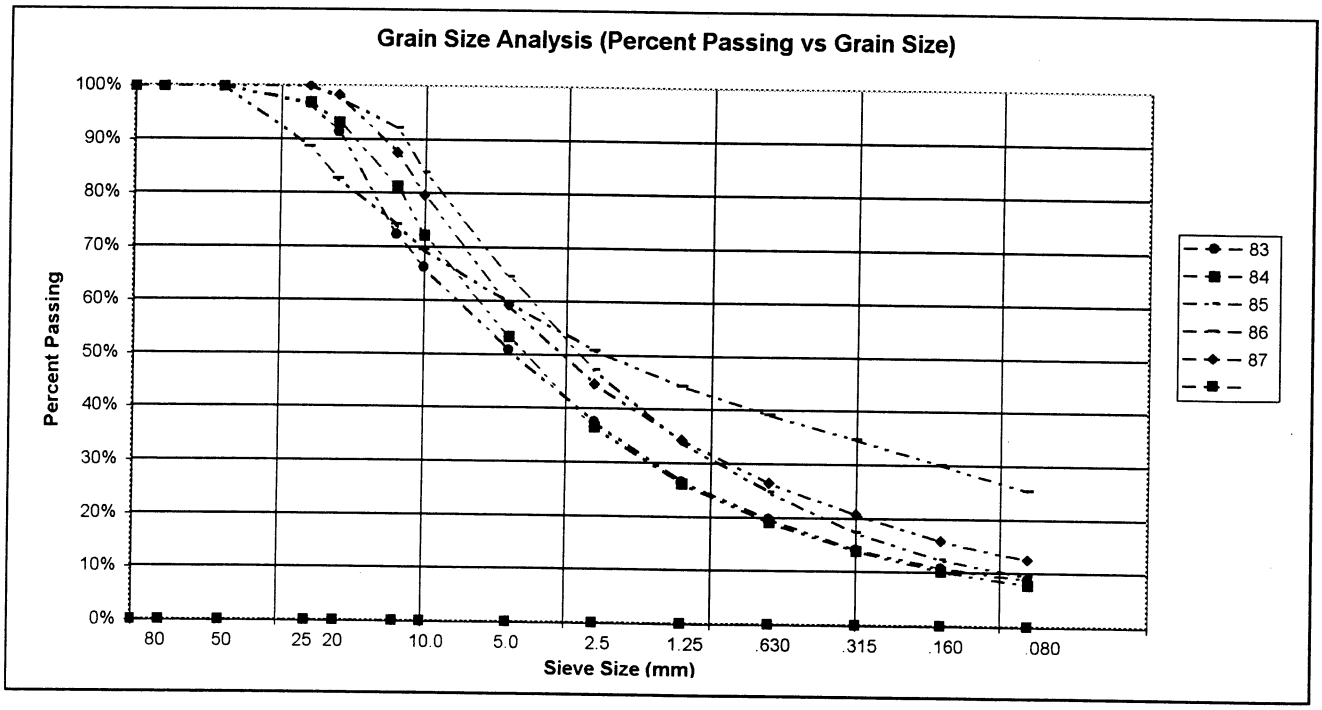
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631513-6776711
LOGGED BY: RW

HOLE No.: 30161

DATE COMP: 07/29/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 83 | 84 | 85 | 86 | 87 | |
| LAB NO: | 83 | 84 | 85 | 86 | 87 | |
| DEPTH: | 0.3-0.9 | 1.5-2.1 | 3.0-3.7 | 4.0-4.3 | 4.9-5.5 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | 100% | 100% | 100% | |
| 80.0 | 100% | 100% | 100% | 100% | 100% | |
| 50.0 | 100% | 100% | 100% | 100% | 100% | |
| 25.0 | 97% | 97% | 100% | 89% | 100% | |
| 20.0 | 91% | 93% | 98% | 83% | 98% | |
| 12.5 | 72% | 81% | 92% | 74% | 88% | |
| 10.0 | 66% | 72% | 84% | 70% | 80% | |
| 5.0 | 51% | 53% | 65% | 60% | 59% | |
| 2.5 | 38% | 37% | 47% | 51% | 45% | |
| 1.25 | 27% | 26% | 34% | 44% | 34% | |
| 0.630 | 20% | 19% | 25% | 39% | 26% | |
| 0.315 | 14% | 14% | 17% | 35% | 21% | |
| 0.160 | 11% | 10% | 12% | 30% | 16% | |
| 0.080 | 9% | 8% | 9% | 25% | 13% | |
| M.C.(%): | 5% | 5% | 4% | 12% | 6% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 49 | 47 | 35 | 40 | 41 | |
| % SAND: | 42 | 45 | 55 | 34 | 47 | |
| % FINES: | 9 | 8 | 9 | 25 | 13 | |
| CLASSIFICATION | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY GRAVEL WITH SAND (GM) | SILTY SAND WITH GRAVEL (SM) | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

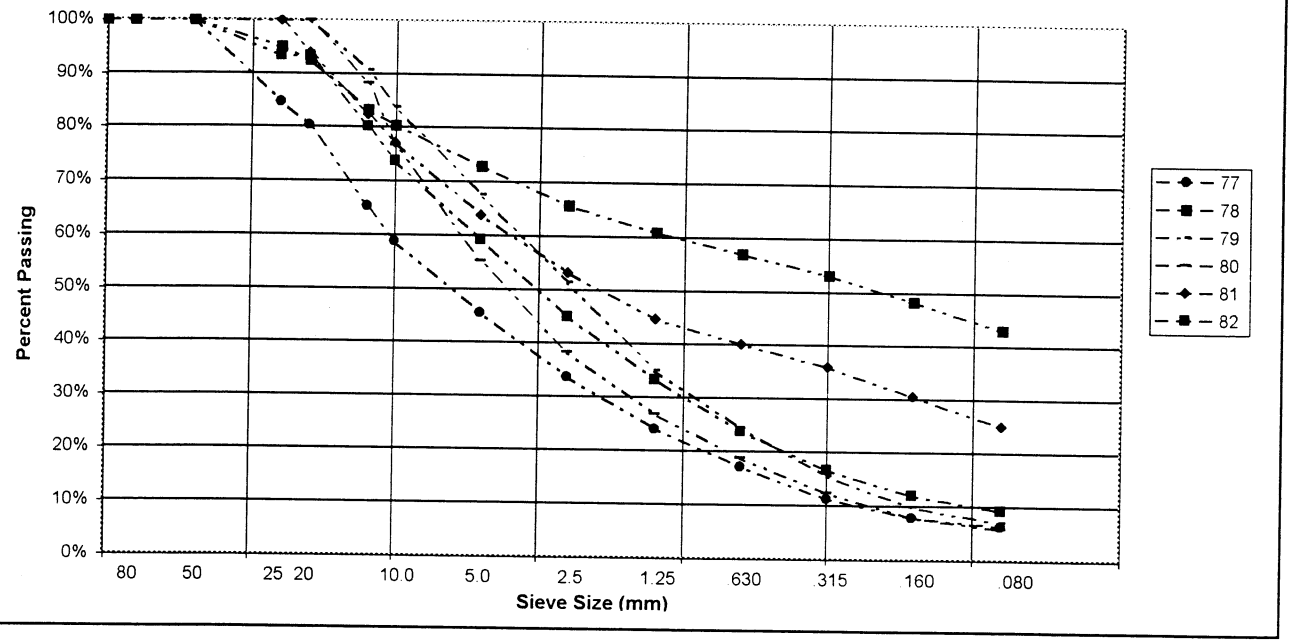
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631538-6776914
LOGGED BY: RW

HOLE No.: 30162

DATE COMP: 07/29/2004

| FIELD NO: | 77 | 78 | 79 | 80 | 81 | 82 |
|---|---|---|---|---|---|---|
| LAB NO: | 77 | 78 | 79 | 80 | 81 | 82 |
| DEPTH: | 0.3-0.6 | 1.5-2.1 | 2.4-2.7 | 3.0-4.0 | 4.6-5.2 | 5.2-5.8 |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 80.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 50.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 25.0 | 85% | 95% | 100% | 100% | 100% | 93% |
| 20.0 | 80% | 93% | 100% | 100% | 94% | 93% |
| 12.5 | 65% | 83% | 91% | 88% | 82% | 80% |
| 10.0 | 59% | 80% | 84% | 77% | 77% | 74% |
| 5.0 | 46% | 73% | 68% | 55% | 64% | 59% |
| 2.5 | 34% | 66% | 51% | 38% | 53% | 45% |
| 1.25 | 24% | 61% | 35% | 27% | 45% | 33% |
| 0.630 | 17% | 57% | 24% | 19% | 40% | 24% |
| 0.315 | 11% | 53% | 16% | 12% | 36% | 17% |
| 0.160 | 8% | 48% | 10% | 8% | 31% | 12% |
| 0.080 | 6% | 43% | 7% | 6% | 25% | 9% |
| M.C.(%): | 3% | 18% | 5% | 4% | 10% | 4% |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| % GRAVEL: | 54 | 27 | 32 | 45 | 36 | 41 |
| % SAND: | 39 | 30 | 60 | 49 | 39 | 50 |
| % FINES: | 6 | 43 | 7 | 6 | 25 | 9 |
| CLASSIFICATION | WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) | SILTY SAND WITH GRAVEL (SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY SAND WITH GRAVEL (SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

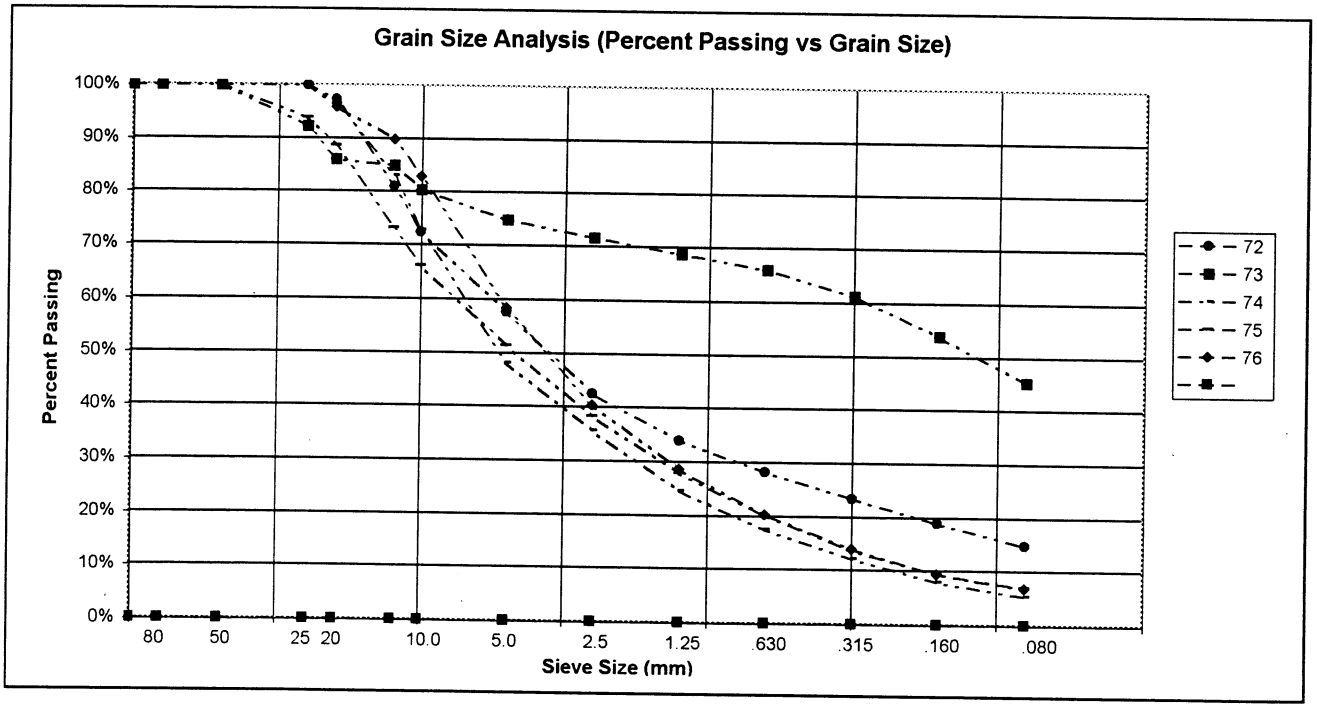
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631563-6776900
LOGGED BY: RW

HOLE No.: 30163

DATE COMP: 07/29/2004

| FIELD NO: | 72 | 73 | 74 | 75 | 76 | |
|---|---|---|---|---|---|---|
| LAB NO: | 72 | 73 | 74 | 75 | 76 | |
| DEPTH: | 0.3-0.9 | 1.5-2.1 | 2.1-2.7 | 3.4-4.3 | 5.2-5.6 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | 100% | 100% | 100% | |
| 80.0 | 100% | 100% | 100% | 100% | 100% | |
| 50.0 | 100% | 100% | 100% | 100% | 100% | |
| 25.0 | 100% | 92% | 100% | 94% | 100% | |
| 20.0 | 97% | 86% | 97% | 89% | 96% | |
| 12.5 | 81% | 85% | 83% | 73% | 90% | |
| 10.0 | 72% | 80% | 73% | 66% | 83% | |
| 5.0 | 58% | 75% | 48% | 51% | 58% | |
| 2.5 | 43% | 72% | 36% | 38% | 40% | |
| 1.25 | 34% | 69% | 25% | 28% | 29% | |
| 0.630 | 28% | 66% | 17% | 20% | 20% | |
| 0.315 | 24% | 61% | 12% | 14% | 14% | |
| 0.160 | 19% | 54% | 8% | 9% | 9% | |
| 0.080 | 15% | 45% | 5% | 7% | 7% | |
| M.C.(%): | 6% | 24% | 4% | 4% | 7% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 42 | 25 | 52 | 49 | 42 | |
| % SAND: | 43 | 29 | 43 | 44 | 52 | |
| % FINES: | 15 | 45 | 5 | 7 | 7 | |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) | WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

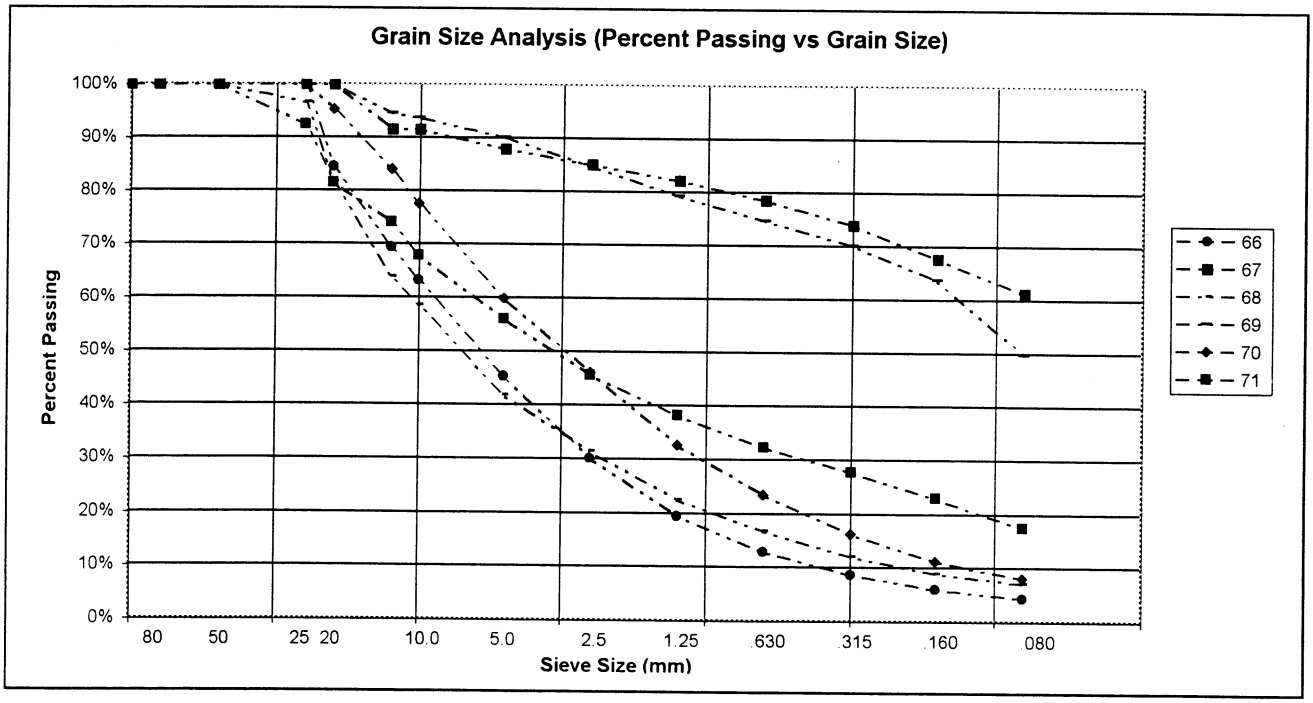
An Affiliate of J. H. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631580-6777031
LOGGED BY: RW

HOLE No.: 30164

DATE COMP: 07/29/2004

| FIELD NO: | 66 | 67 | 68 | 69 | 70 | 71 |
|---|---|---|---|---|---|---|
| LAB NO: | 66 | 67 | 68 | 69 | 70 | 71 |
| DEPTH: | 0.2-0.6 | 0.8-1.2 | 1.5-2.1 | 2.4-2.7 | 3.4-4.0 | 4.6-5.5 |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 80.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 50.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 25.0 | 100% | 100% | 97% | 100% | 100% | 92% |
| 20.0 | 85% | 100% | 82% | 100% | 95% | 81% |
| 12.5 | 69% | 91% | 64% | 95% | 84% | 74% |
| 10.0 | 63% | 91% | 59% | 94% | 78% | 68% |
| 5.0 | 45% | 88% | 42% | 90% | 60% | 56% |
| 2.5 | 30% | 85% | 31% | 85% | 46% | 46% |
| 1.25 | 19% | 82% | 22% | 79% | 33% | 38% |
| 0.630 | 13% | 79% | 17% | 75% | 24% | 32% |
| 0.315 | 9% | 74% | 12% | 70% | 16% | 28% |
| 0.160 | 6% | 68% | 9% | 64% | 11% | 23% |
| 0.080 | 4% | 61% | 7% | 50% | 8% | 18% |
| M.C.(%): | 3% | 43% | 3% | 19% | 3% | 9% |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| % GRAVEL: | 55 | 12 | 58 | 10 | 40 | 44 |
| % SAND: | 41 | 27 | 35 | 40 | 52 | 38 |
| % FINES: | 4 | 61 | 7 | 50 | 8 | 18 |
| CLASSIFICATION | WELL-GRADED GRAVEL WITH SAND (GW) | SANDY SILT (ML) | WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) | SILTY SAND (SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY GRAVEL WITH SAND (GM) |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

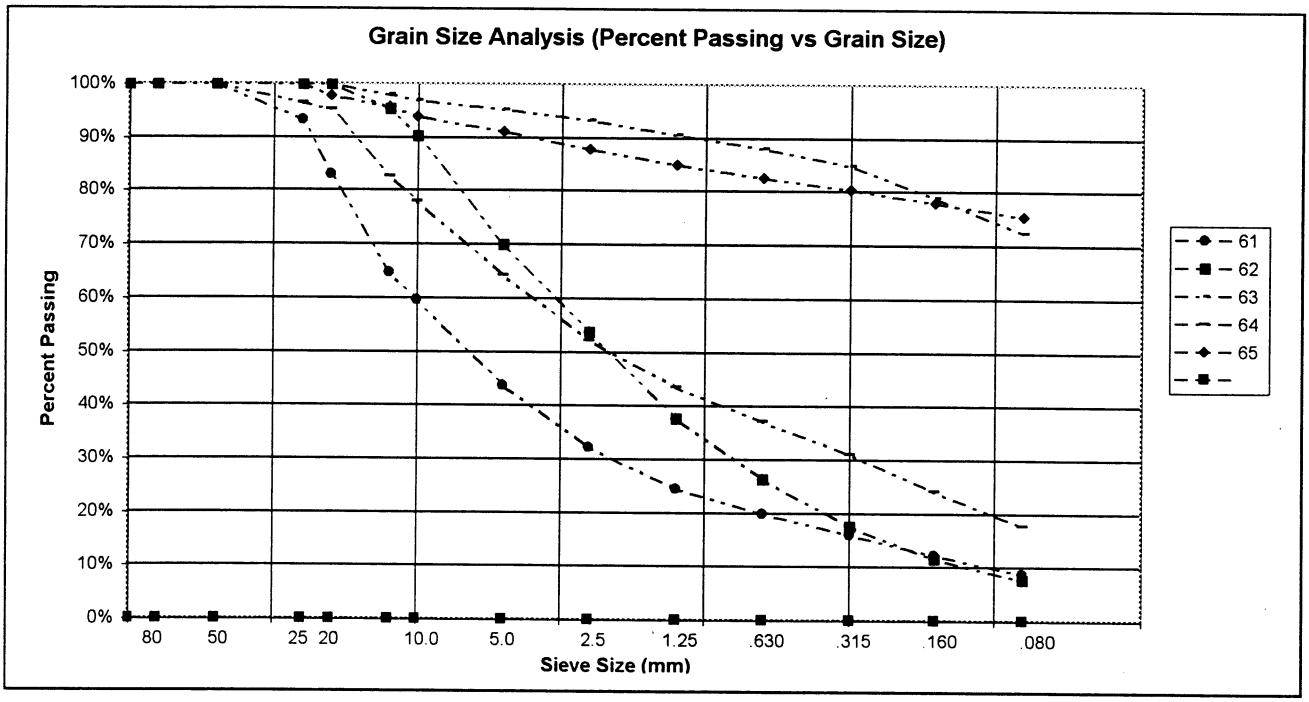
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631607-6777126
LOGGED BY: RW

HOLE No.: 30165

DATE COMP: 07/29/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 61 | 62 | 63 | 64 | 65 | |
| LAB NO: | 61 | 62 | 63 | 64 | 65 | |
| DEPTH: | 0.3-0.9 | 1.5-2.1 | 3.4-4.0 | 4.1-4.4 | 4.9-5.5 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | 100% | 100% | 100% | |
| 80.0 | 100% | 100% | 100% | 100% | 100% | |
| 50.0 | 100% | 100% | 100% | 100% | 100% | |
| 25.0 | 93% | 100% | 100% | 97% | 100% | |
| 20.0 | 83% | 100% | 100% | 95% | 98% | |
| 12.5 | 65% | 95% | 98% | 83% | 96% | |
| 10.0 | 60% | 90% | 97% | 78% | 94% | |
| 5.0 | 44% | 70% | 95% | 64% | 91% | |
| 2.5 | 32% | 54% | 93% | 52% | 88% | |
| 1.25 | 25% | 38% | 91% | 43% | 85% | |
| 0.630 | 20% | 26% | 88% | 37% | 83% | |
| 0.315 | 16% | 18% | 85% | 31% | 80% | |
| 0.160 | 12% | 12% | 79% | 24% | 78% | |
| 0.080 | 9% | 8% | 72% | 18% | 75% | |
| M.C.(%): | 3% | 2% | 13% | 5% | 20% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 56 | 30 | 5 | 36 | 9 | |
| % SAND: | 35 | 62 | 23 | 47 | 16 | |
| % FINES: | 9 | 8 | 72 | 18 | 75 | |
| CLASSIFICATION | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILT WITH SAND (ML) | SILTY SAND WITH GRAVEL (SM) | SILT WITH SAND (ML) | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

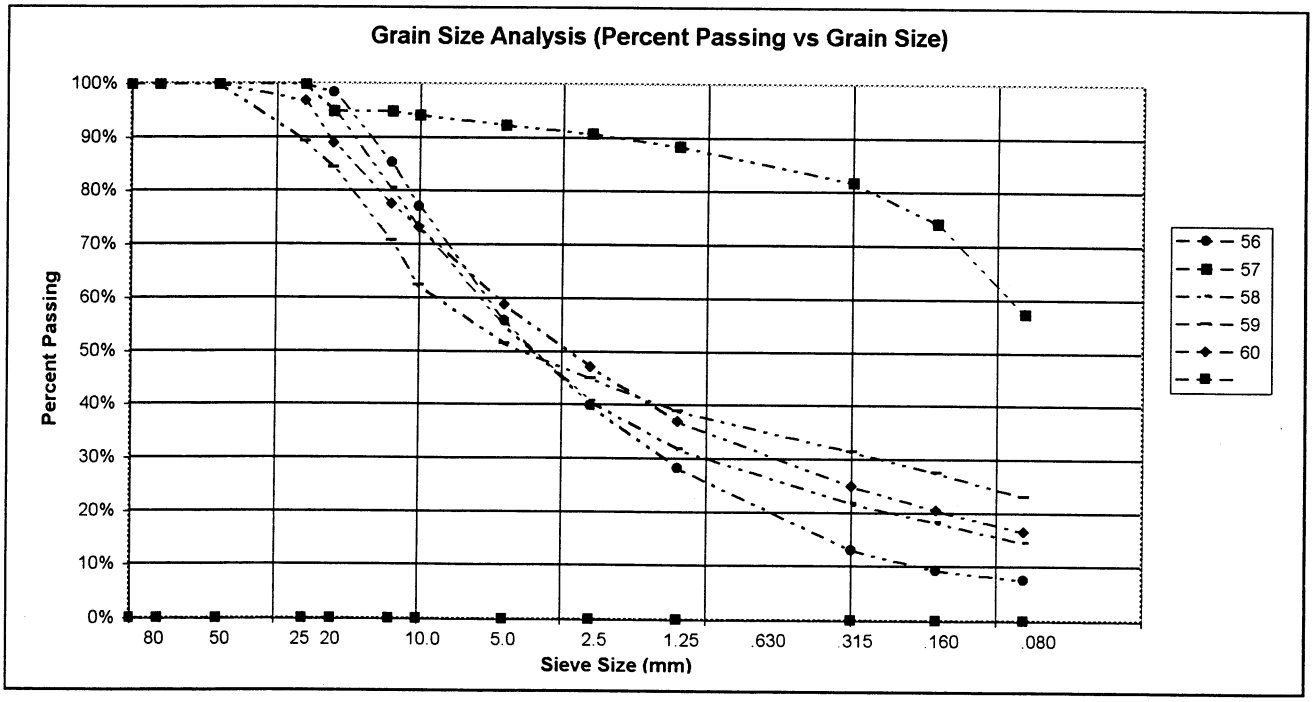
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631583-6777139
LOGGED BY: RW

HOLE No.: 30166

DATE COMP: 07/28/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 56 | 57 | 58 | 59 | 60 | |
| LAB NO: | 56 | 57 | 58 | 59 | 60 | |
| DEPTH: | 0.3-0.9 | 1.5-1.8 | 2.1-2.7 | 3.4-4.0 | 4.9-5.5 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | 100% | 100% | 100% | |
| 80.0 | 100% | 100% | 100% | 100% | 100% | |
| 50.0 | 100% | 100% | 100% | 100% | 100% | |
| 25.0 | 100% | 100% | 100% | 89% | 97% | |
| 20.0 | 98% | 95% | 95% | 84% | 89% | |
| 12.5 | 85% | 95% | 81% | 71% | 78% | |
| 10.0 | 77% | 94% | 73% | 62% | 73% | |
| 5.0 | 56% | 92% | 55% | 51% | 59% | |
| 2.5 | 40% | 91% | 41% | 45% | 47% | |
| 1.25 | 28% | 89% | 32% | 39% | 37% | |
| 0.630 | | | | 35% | 30% | |
| 0.315 | 13% | 82% | 22% | 31% | 25% | |
| 0.160 | 9% | 74% | 18% | 28% | 21% | |
| 0.080 | 8% | 57% | 15% | 23% | 17% | |
| M.C.(%): | 3% | 24% | 5% | 10% | 7% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 44 | 8 | 45 | 49 | 41 | |
| % SAND: | 48 | 35 | 40 | 28 | 42 | |
| % FINES: | 8 | 57 | 15 | 23 | 17 | |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SANDY SILT (ML) | SILTY GRAVEL WITH SAND (GM) | SILTY GRAVEL WITH SAND (GM) | SILTY SAND WITH GRAVEL (SM) | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

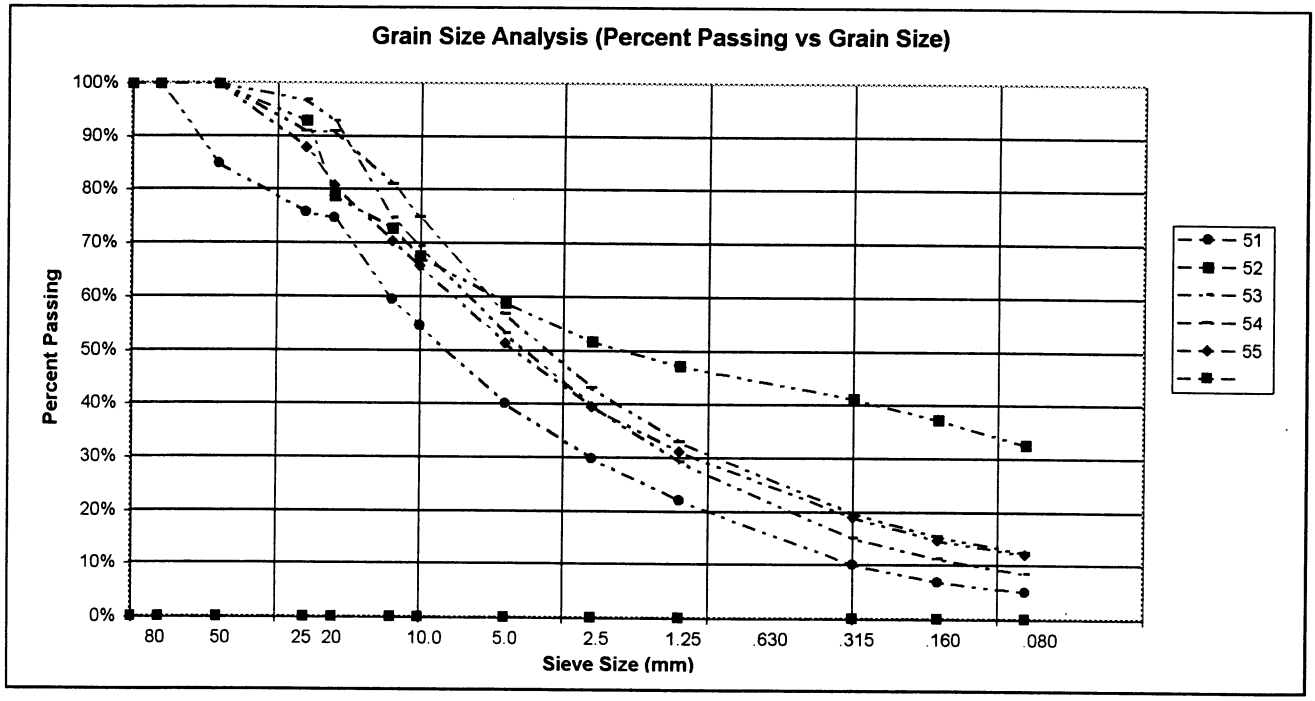
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631589-6777298
LOGGED BY: RW

HOLE No.: 30167

DATE COMP: 07/28/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 51 | 52 | 53 | 54 | 55 | |
| LAB NO: | 51 | 52 | 53 | 54 | 55 | |
| DEPTH: | 0.6-1.2 | 1.5-2.1 | 2.3-2.7 | 3.4-4.3 | 4.9-5.5 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | 100% | 100% | 100% | |
| 80.0 | 100% | 100% | 100% | 100% | 100% | |
| 50.0 | 85% | 100% | 100% | 100% | 100% | |
| 25.0 | 76% | 93% | 97% | 91% | 88% | |
| 20.0 | 75% | 79% | 93% | 91% | 81% | |
| 12.5 | 60% | 73% | 75% | 81% | 70% | |
| 10.0 | 55% | 68% | 69% | 75% | 66% | |
| 5.0 | 40% | 59% | 53% | 57% | 51% | |
| 2.5 | 30% | 52% | 40% | 43% | 40% | |
| 1.25 | 22% | 47% | 29% | 33% | 31% | |
| 0.630 | | | | | | |
| 0.315 | 10% | 41% | 15% | 20% | 19% | |
| 0.160 | 7% | 37% | 11% | 15% | 15% | |
| 0.080 | 5% | 33% | 8% | 12% | 12% | |
| M.C.(%): | 3% | 15% | 4% | 6% | 5% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 60 | 41 | 47 | 43 | 49 | |
| % SAND: | 35 | 26 | 45 | 44 | 39 | |
| % FINES: | 5 | 33 | 8 | 12 | 12 | |
| CLASSIFICATION | WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) | SILTY GRAVEL WITH SAND (GM) | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | SILTY SAND WITH GRAVEL (SM) | SILTY GRAVEL WITH SAND (GM) | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

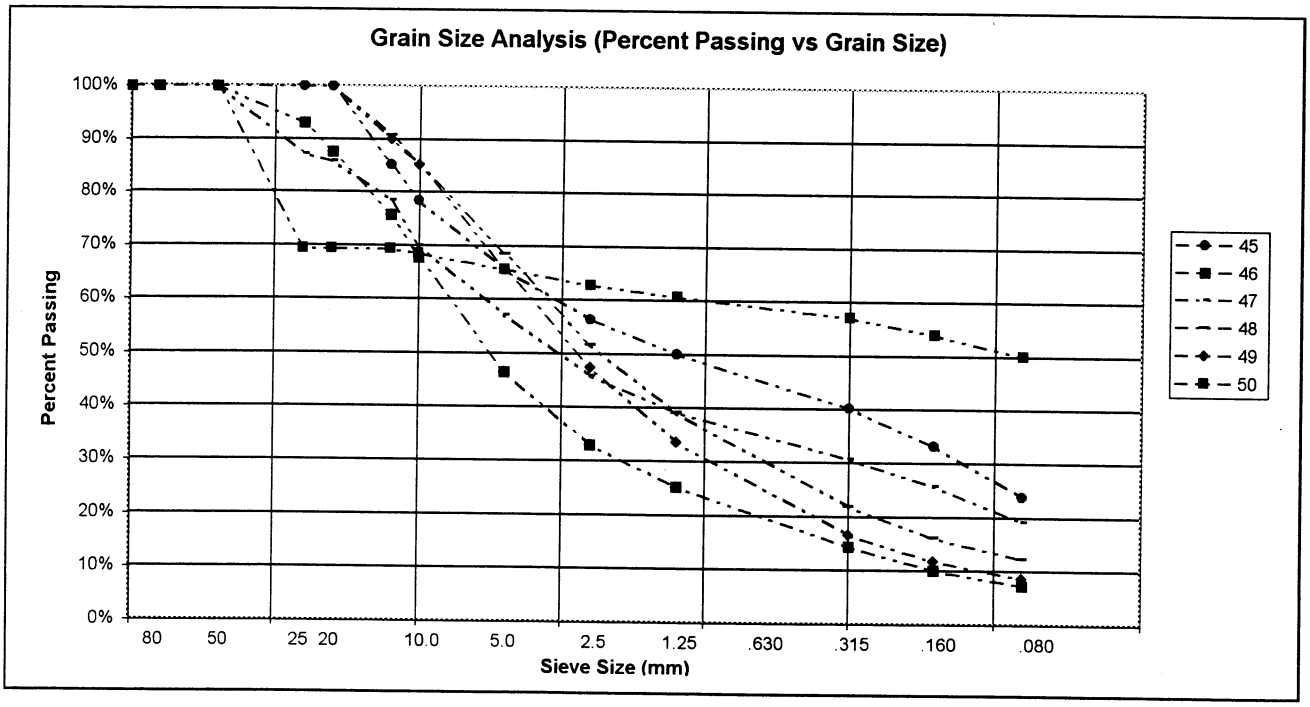
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631509-6777587
LOGGED BY: RW

HOLE No.: 30168

DATE COMP: 07/28/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 45 | 46 | 47 | 48 | 49 | 50 |
| LAB NO: | 45 | 46 | 47 | 48 | 49 | 50 |
| DEPTH: | 0.2-0.6 | 0.6-1.2 | 1.8-2.1 | 3.4-4.3 | 4.6-5.2 | 5.5-5.8 |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 80.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 50.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 25.0 | 100% | 93% | 87% | 100% | 100% | 69% |
| 20.0 | 100% | 88% | 86% | 100% | 100% | 69% |
| 12.5 | 85% | 76% | 79% | 91% | 90% | 69% |
| 10.0 | 79% | 68% | 70% | 85% | 85% | 69% |
| 5.0 | 66% | 46% | 57% | 69% | 66% | 66% |
| 2.5 | 56% | 33% | 46% | 52% | 48% | 63% |
| 1.25 | 50% | 25% | 39% | 39% | 34% | 61% |
| 0.630 | | | | | | |
| 0.315 | 40% | 14% | 31% | 22% | 17% | 57% |
| 0.160 | 33% | 10% | 26% | 16% | 12% | 54% |
| 0.080 | 24% | 7% | 19% | 12% | 9% | 50% |
| M.C.(%): | 6% | 4% | 8% | 5% | 3% | 23% |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| % GRAVEL: | 34 | 54 | 43 | 31 | 34 | 34 |
| % SAND: | 42 | 39 | 38 | 56 | 57 | 16 |
| % FINES: | 24 | 7 | 19 | 12 | 9 | 50 |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | SILTY GRAVEL WITH SAND (GM) | SILTY SAND WITH GRAVEL (SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | GRAVELLY SILT WITH SAND (ML) |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

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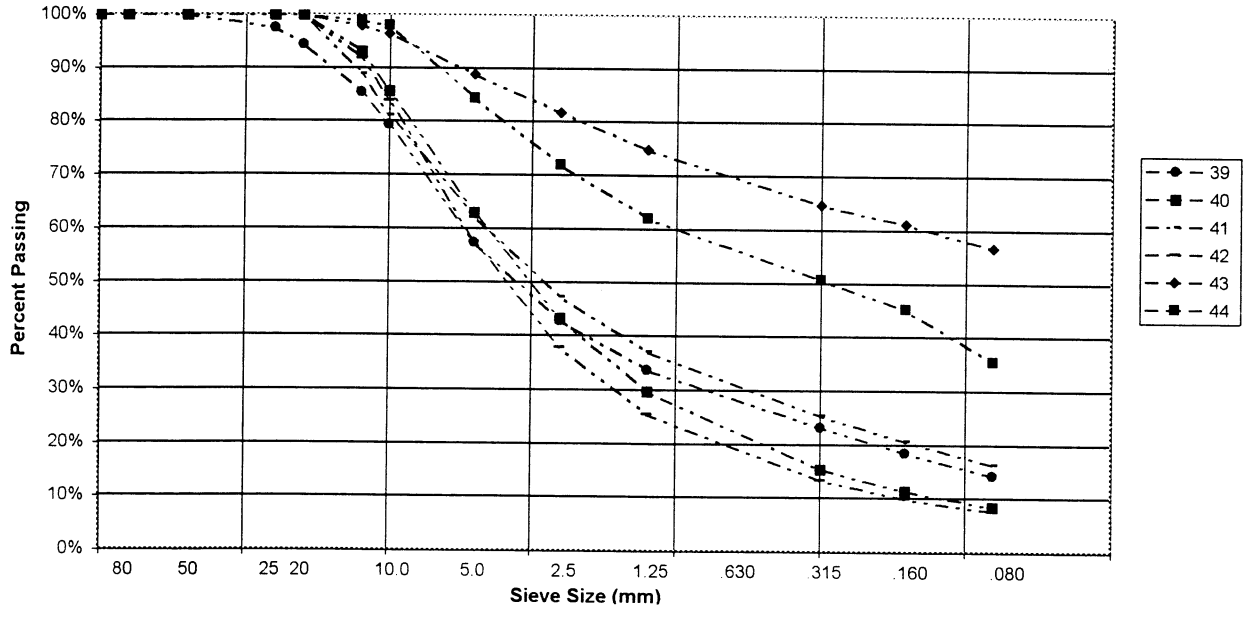
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631458-6777708
LOGGED BY: RW

HOLE No.: 30169

DATE COMP: 07/28/2004

| FIELD NO: | 39 | 40 | 41 | 42 | 43 | 44 |
|---|---|---|---|---|---|---|
| LAB NO: | 39 | 40 | 41 | 42 | 43 | 44 |
| DEPTH: | 0.3-0.9 | 1.5-2.1 | 2.1-2.7 | 3.4-4.0 | 4.3-4.9 | 4.9-5.5 |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 80.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 50.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 25.0 | 98% | 100% | 100% | 100% | 100% | 100% |
| 20.0 | 94% | 100% | 100% | 100% | 100% | 100% |
| 12.5 | 85% | 93% | 89% | 92% | 98% | 99% |
| 10.0 | 79% | 86% | 81% | 84% | 96% | 98% |
| 5.0 | 57% | 63% | 63% | 58% | 89% | 84% |
| 2.5 | 43% | 43% | 47% | 38% | 82% | 72% |
| 1.25 | 34% | 30% | 37% | 26% | 75% | 62% |
| 0.630 | | | | | | |
| 0.315 | 23% | 15% | 25% | 13% | 65% | 51% |
| 0.160 | 19% | 11% | 21% | 10% | 61% | 45% |
| 0.080 | 14% | 9% | 16% | 8% | 57% | 35% |
| M.C.(%): | 8% | 6% | 9% | 6% | 21% | 13% |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| % GRAVEL: | 43 | 37 | 37 | 42 | 11 | 16 |
| % SAND: | 43 | 54 | 46 | 50 | 32 | 49 |
| % FINES: | 14 | 9 | 16 | 8 | 57 | 35 |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY SAND WITH GRAVEL (SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SANDY SILT (ML) | SILTY SAND WITH GRAVEL (SM) |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

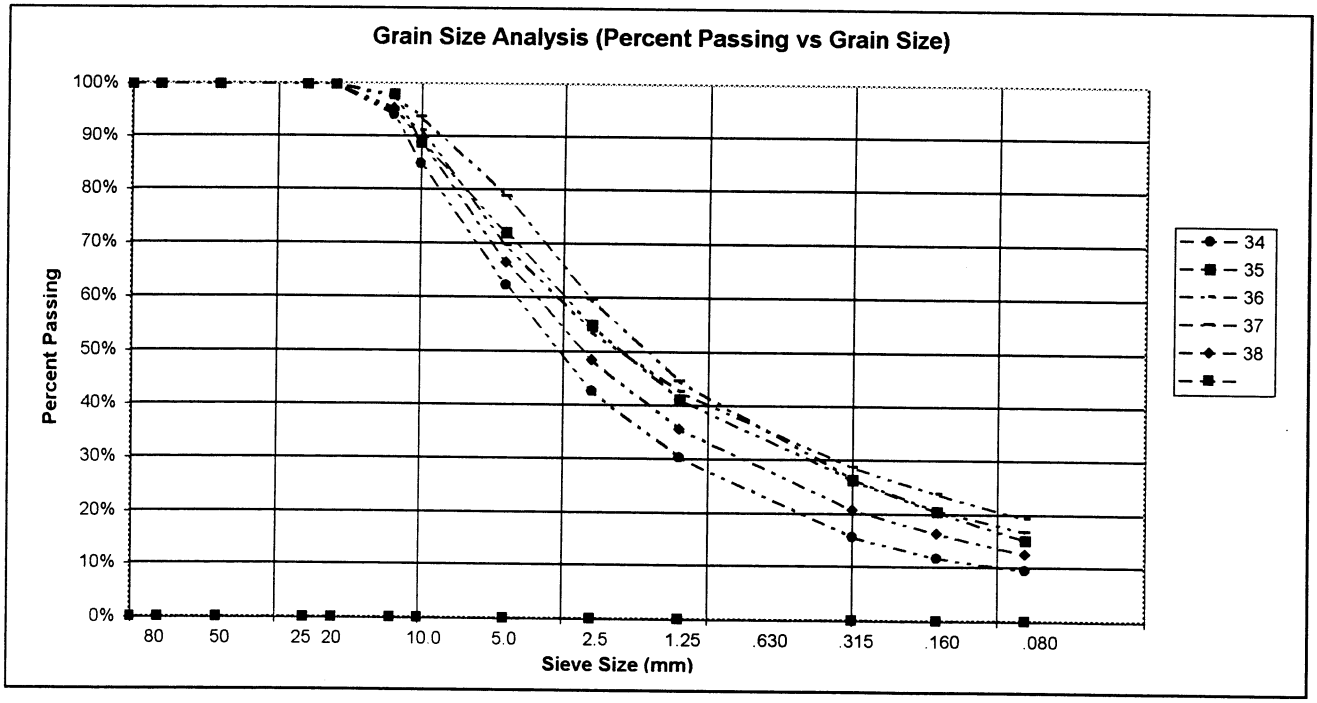
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631414-6777845
LOGGED BY: RW

HOLE No.: 30170

DATE COMP: 07/28/2004

| FIELD NO: | 34 | 35 | 36 | 37 | 38 | |
|---|---|---|---|---|---|---|
| LAB NO: | 34 | 35 | 36 | 37 | 38 | |
| DEPTH: | 0.3-0.9 | 1.5-2.1 | 2.9-3.4 | 3.7-4.3 | 4.9-5.5 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | 100% | 100% | 100% | |
| 80.0 | 100% | 100% | 100% | 100% | 100% | |
| 50.0 | 100% | 100% | 100% | 100% | 100% | |
| 25.0 | 100% | 100% | 100% | 100% | 100% | |
| 20.0 | 100% | 100% | 100% | 100% | 100% | |
| 12.5 | 94% | 98% | 95% | 98% | 95% | |
| 10.0 | 85% | 89% | 91% | 94% | 89% | |
| 5.0 | 62% | 72% | 70% | 79% | 66% | |
| 2.5 | 43% | 55% | 54% | 60% | 48% | |
| 1.25 | 30% | 41% | 43% | 45% | 36% | |
| 0.630 | | | | | | |
| 0.315 | 16% | 26% | 29% | 26% | 21% | |
| 0.160 | 12% | 21% | 24% | 21% | 16% | |
| 0.080 | 10% | 15% | 19% | 17% | 13% | |
| M.C.(%): | 9% | 10% | 11% | 10% | 8% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 38 | 28 | 30 | 21 | 34 | |
| % SAND: | 53 | 57 | 50 | 62 | 54 | |
| % FINES: | 10 | 15 | 19 | 17 | 13 | |
| CLASSIFICATION | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | |

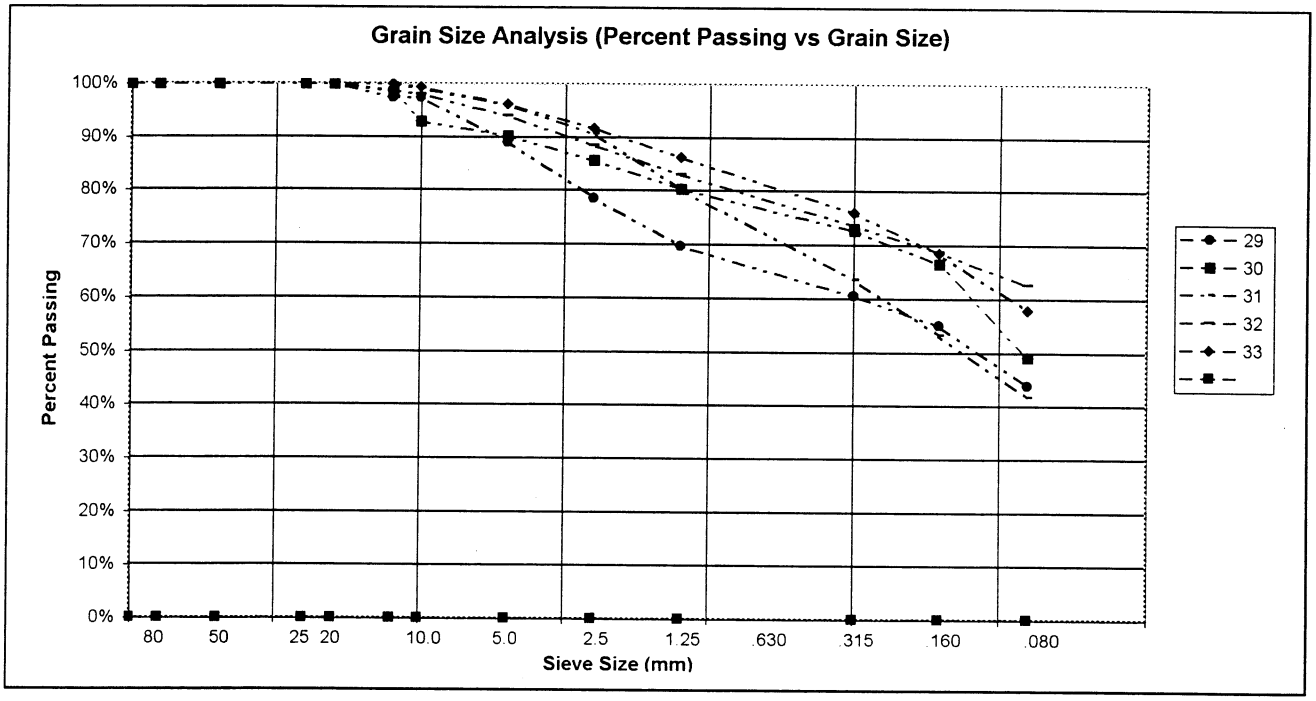


# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30171 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 631414-6777998 | |
| LOGGED BY: | RW | DATE COMP: 07/28/2004 |

| FIELD NO: | 29 | 30 | 31 | 32 | 33 | |
|---|---|---|---|---|---|---|
| LAB NO: | 29 | 30 | 31 | 32 | 33 | |
| DEPTH: | 0.2-0.5 | 0.6-1.2 | 1.8-2.4 | 3.0-3.7 | 4.6 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | 100% | 100% | 100% | |
| 80.0 | 100% | 100% | 100% | 100% | 100% | |
| 50.0 | 100% | 100% | 100% | 100% | 100% | |
| 25.0 | 100% | 100% | 100% | 100% | 100% | |
| 20.0 | 100% | 100% | 100% | 100% | 100% | |
| 12.5 | 97% | 99% | 100% | 99% | 100% | |
| 10.0 | 97% | 93% | 99% | 98% | 99% | |
| 5.0 | 89% | 90% | 96% | 94% | 96% | |
| 2.5 | 79% | 86% | 91% | 88% | 92% | |
| 1.25 | 70% | 80% | 80% | 83% | 86% | |
| 0.630 | | | | | | |
| 0.315 | 61% | 73% | 64% | 74% | 76% | |
| 0.160 | 55% | 67% | 53% | 69% | 69% | |
| 0.080 | 44% | 49% | 42% | 63% | 58% | |
| M.C.(%): | 18% | 28% | 35% | 31% | 28% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 11 | 10 | 4 | 6 | 4 | |
| % SAND: | 45 | 41 | 54 | 31 | 38 | |
| % FINES: | 44 | 49 | 42 | 63 | 58 | |
| CLASSIFICATION | SILTY SAND (SM) | SILTY SAND (SM) | SILTY SAND (SM) | SANDY SILT (ML) | SANDY SILT (ML) | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

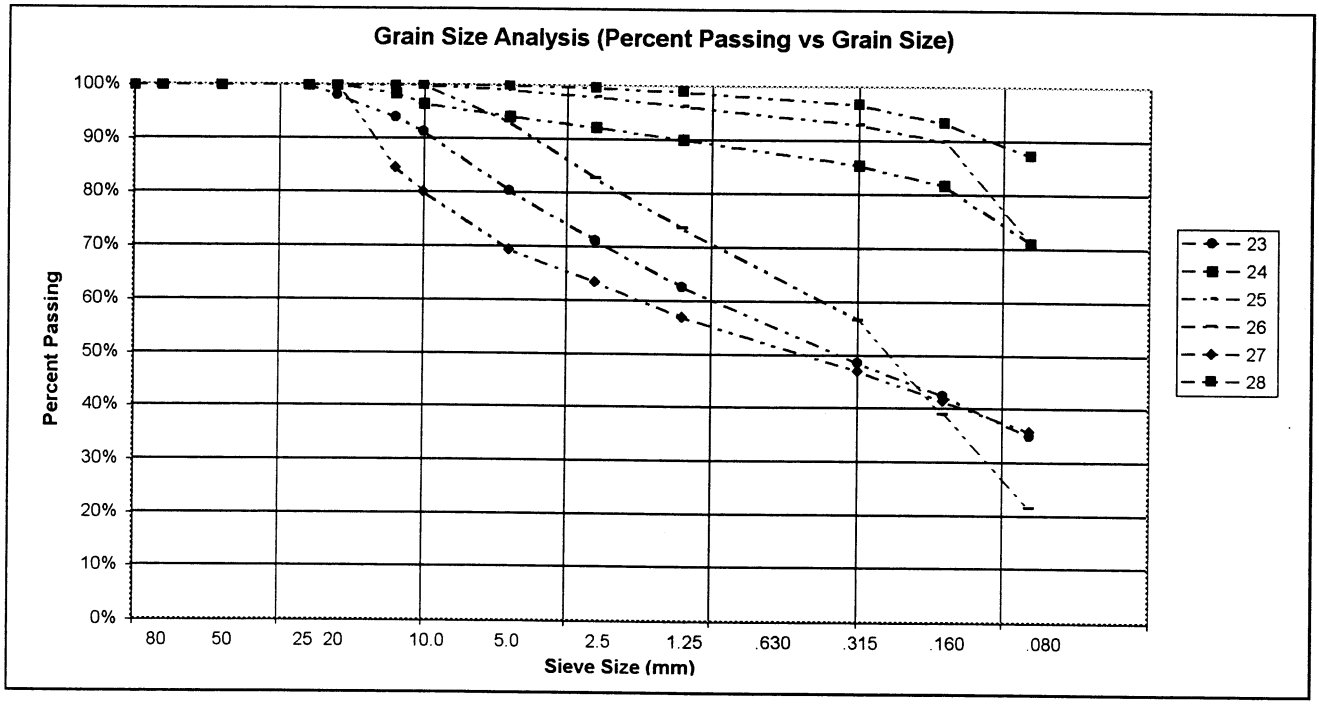
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631432-6778136
LOGGED BY: RW

HOLE No.: 30172

DATE COMP: 07/28/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 23 | 24 | 25 | 26 | 27 | 28 |
| LAB NO: | 23 | 24 | 25 | 26 | 27 | 28 |
| DEPTH: | 0.3-0.9 | 1.5-1.8 | 2.1-2.7 | 3.4-4.3 | 4.9-5.2 | 5.5-5.9 |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 80.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 50.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 25.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 20.0 | 98% | 100% | 100% | 100% | 100% | 100% |
| 12.5 | 94% | 98% | 100% | 100% | 85% | 100% |
| 10.0 | 91% | 96% | 100% | 100% | 80% | 100% |
| 5.0 | 80% | 94% | 99% | 93% | 69% | 100% |
| 2.5 | 71% | 92% | 98% | 83% | 63% | 100% |
| 1.25 | 63% | 90% | 96% | 74% | 57% | 99% |
| 0.630 | | | | | | |
| 0.315 | 49% | 85% | 93% | 57% | 47% | 97% |
| 0.160 | 42% | 82% | 90% | 39% | 41% | 93% |
| 0.080 | 35% | 71% | 71% | 22% | 36% | 87% |
| M.C.(%): | 15% | 17% | 16% | 11% | 8% | 19% |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| % GRAVEL: | 20 | 6 | 1 | 7 | 31 | 0 |
| % SAND: | 45 | 23 | 28 | 72 | 34 | 13 |
| % FINES: | 35 | 71 | 71 | 22 | 36 | 87 |
| CLASSIFICATION | SILTY SAND WITH GRAVEL (SM) | SILT WITH SAND (ML) | SILT WITH SAND (ML) | SILTY SAND (SM) | SILTY SAND WITH GRAVEL (SM) | SILT (ML) |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

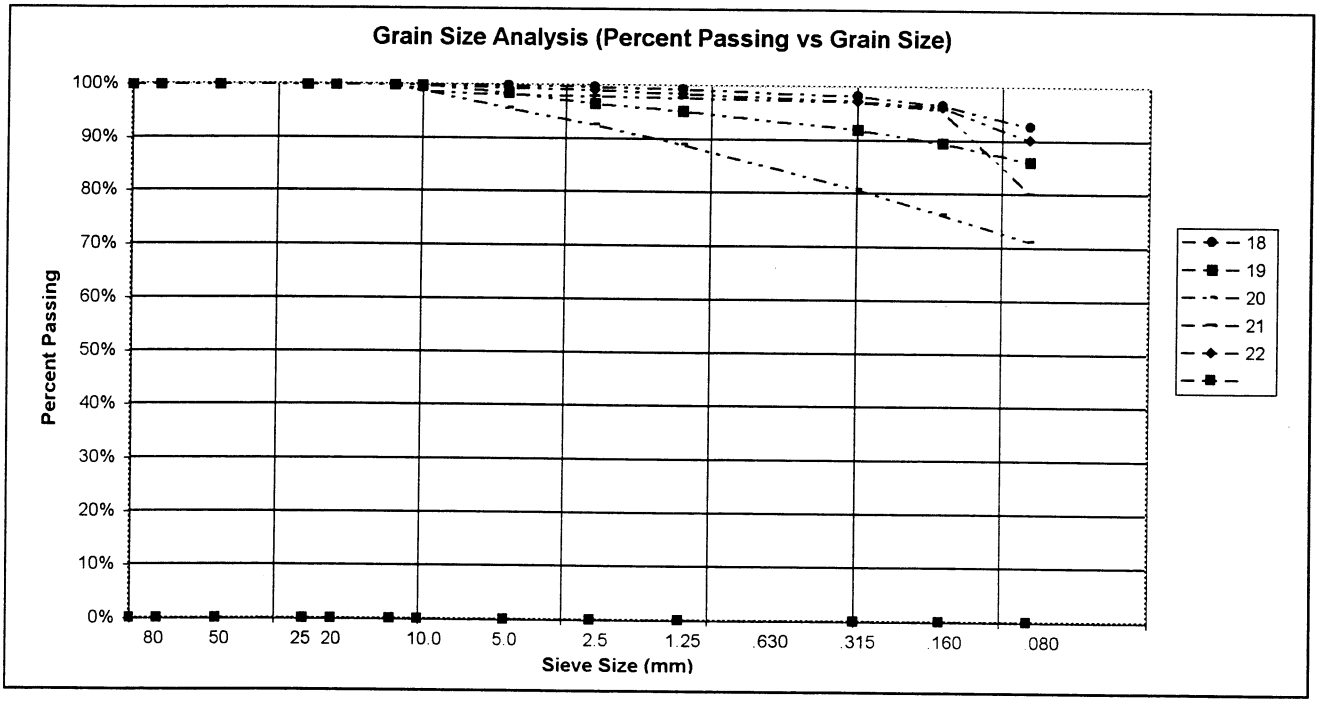
An Affiliate of J. H. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631425-6778189
LOGGED BY: RW

HOLE No.: 30173

DATE COMP: 07/28/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 18 | 19 | 20 | 21 | 22 | |
| LAB NO: | 18 | 19 | 20 | 21 | 22 | |
| DEPTH: | 0.2-0.6 | 0.8-1.2 | 1.8-2.4 | 3.7-4.3 | 4.9-5.5 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | 100% | 100% | 100% | |
| 80.0 | 100% | 100% | 100% | 100% | 100% | |
| 50.0 | 100% | 100% | 100% | 100% | 100% | |
| 25.0 | 100% | 100% | 100% | 100% | 100% | |
| 20.0 | 100% | 100% | 100% | 100% | 100% | |
| 12.5 | 100% | 100% | 100% | 100% | 100% | |
| 10.0 | 100% | 100% | 99% | 99% | 100% | |
| 5.0 | 100% | 99% | 96% | 98% | 100% | |
| 2.5 | 100% | 97% | 93% | 98% | 99% | |
| 1.25 | 99% | 95% | 89% | 98% | 99% | |
| 0.630 | | | | | | |
| 0.315 | 98% | 92% | 81% | 97% | 97% | |
| 0.160 | 97% | 90% | 76% | 96% | 96% | |
| 0.080 | 93% | 86% | 71% | 80% | 90% | |
| M.C.(%): | 28% | 40% | 16% | 18% | 19% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 0 | 1 | 4 | 2 | 0 | |
| % SAND: | 7 | 12 | 24 | 18 | 9 | |
| % FINES: | 93 | 86 | 71 | 80 | 90 | |
| CLASSIFICATION | SILT (ML) | SILT (ML) | SILT WITH SAND (ML) | SILT WITH SAND (ML) | SILT (ML) | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

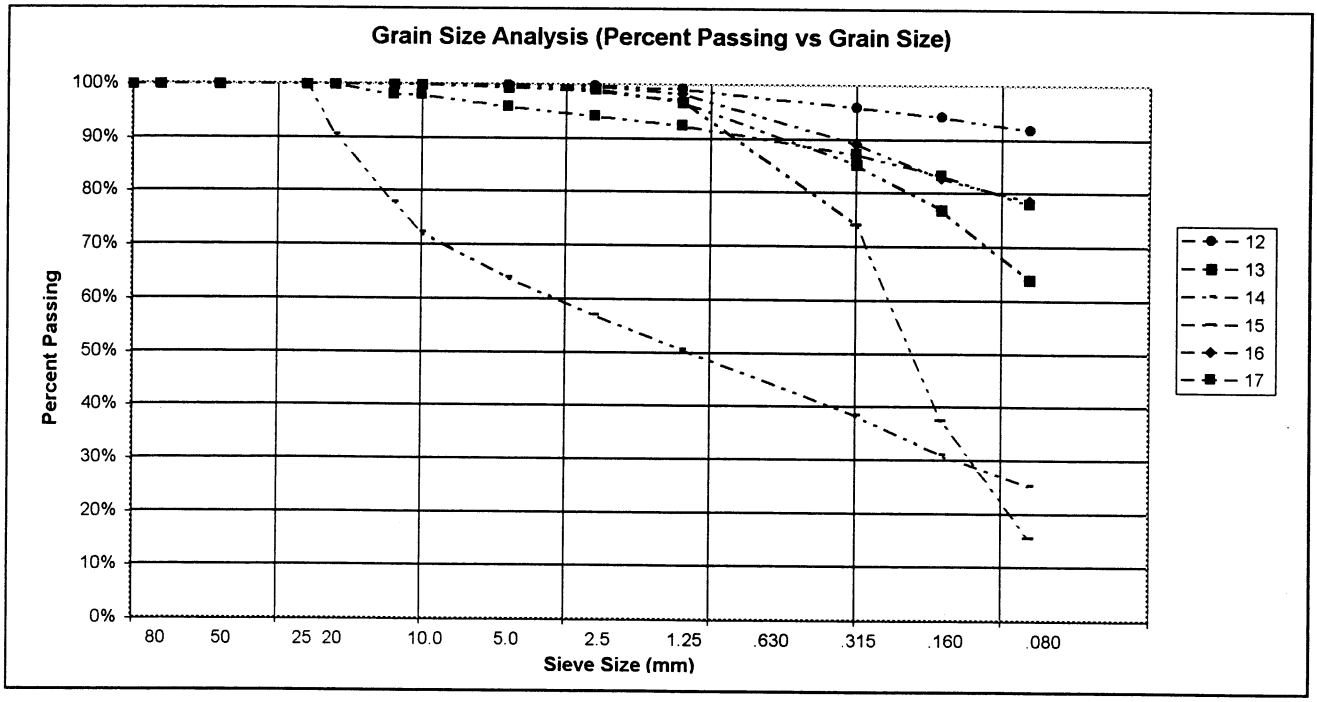
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631499-6778370
LOGGED BY: RW

HOLE No.: 30174

DATE COMP: 07/28/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 12 | 13 | 14 | 15 | 16 | 17 |
| LAB NO: | 12 | 13 | 14 | 15 | 16 | 17 |
| DEPTH: | 0.0-0.6 | 0.6-1.2 | 1.8-2.7 | 3.7-4.0 | 4.0-4.4 | 4.9-5.5 |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 80.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 50.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 25.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 20.0 | 100% | 100% | 91% | 100% | 100% | 100% |
| 12.5 | 100% | 100% | 78% | 100% | 100% | 98% |
| 10.0 | 100% | 100% | 72% | 100% | 100% | 98% |
| 5.0 | 100% | 100% | 64% | 100% | 100% | 96% |
| 2.5 | 100% | 99% | 57% | 99% | 100% | 94% |
| 1.25 | 99% | 97% | 51% | 97% | 98% | 93% |
| 0.630 | | | | | | |
| 0.315 | 96% | 85% | 38% | 74% | 89% | 87% |
| 0.160 | 94% | 77% | 31% | 37% | 83% | 83% |
| 0.080 | 92% | 64% | 25% | 16% | 79% | 78% |
| M.C.(%): | 31% | 50% | 12% | 17% | 45% | 20% |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| % GRAVEL: | 0 | 0 | 36 | 0 | 0 | 4 |
| % SAND: | 8 | 36 | 39 | 84 | 21 | 18 |
| % FINES: | 92 | 64 | 25 | 16 | 79 | 78 |
| CLASSIFICATION | SILT (ML) | SANDY SILT (ML) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) | SILT WITH SAND (ML) | SILT WITH SAND (ML) |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

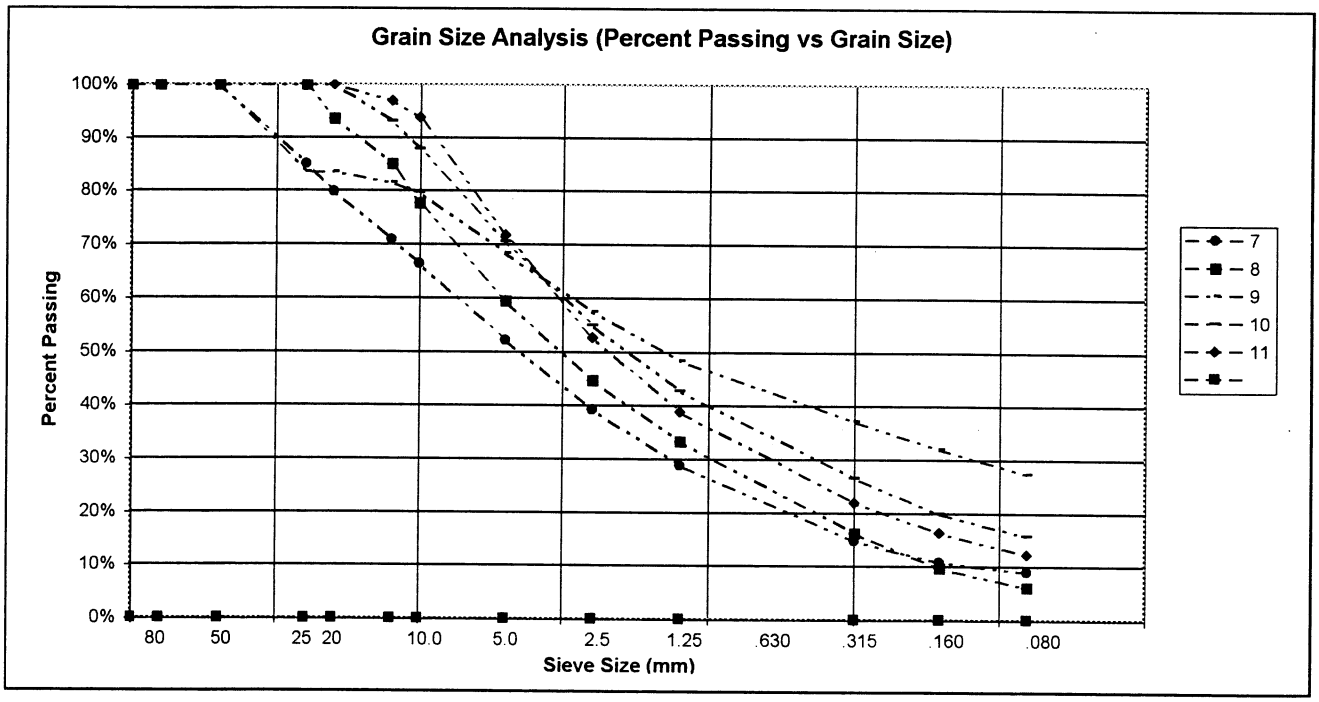
An Affiliate of J. H. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631598-6778568
LOGGED BY: RW

HOLE No.: 30175

DATE COMP: 07/28/2004

| FIELD NO: | 7 | 8 | 9 | 10 | 11 | |
|---|---|---|---|---|---|---|
| LAB NO: | 7 | 8 | 9 | 10 | 11 | |
| DEPTH: | 0.3-0.9 | 2.0-2.9 | 3.0-3.7 | 3.7-4.3 | 4.9-5.5 | |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | #N/A |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | |
| 100.0 | 100% | 100% | 100% | 100% | 100% | |
| 80.0 | 100% | 100% | 100% | 100% | 100% | |
| 50.0 | 100% | 100% | 100% | 100% | 100% | |
| 25.0 | 85% | 100% | 84% | 100% | 100% | |
| 20.0 | 80% | 94% | 84% | 100% | 100% | |
| 12.5 | 71% | 85% | 82% | 93% | 97% | |
| 10.0 | 66% | 78% | 80% | 88% | 94% | |
| 5.0 | 52% | 60% | 68% | 71% | 72% | |
| 2.5 | 39% | 45% | 58% | 55% | 53% | |
| 1.25 | 29% | 33% | 49% | 43% | 39% | |
| 0.630 | | | | | | |
| 0.315 | 15% | 16% | 37% | 27% | 22% | |
| 0.160 | 11% | 10% | 32% | 20% | 16% | |
| 0.080 | 9% | 6% | 27% | 16% | 12% | |
| M.C.(%): | 6% | 7% | 16% | 11% | 9% | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| % GRAVEL: | 48 | 40 | 32 | 29 | 28 | |
| % SAND: | 43 | 53 | 41 | 55 | 60 | |
| % FINES: | 9 | 6 | 27 | 16 | 12 | |
| CLASSIFICATION | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

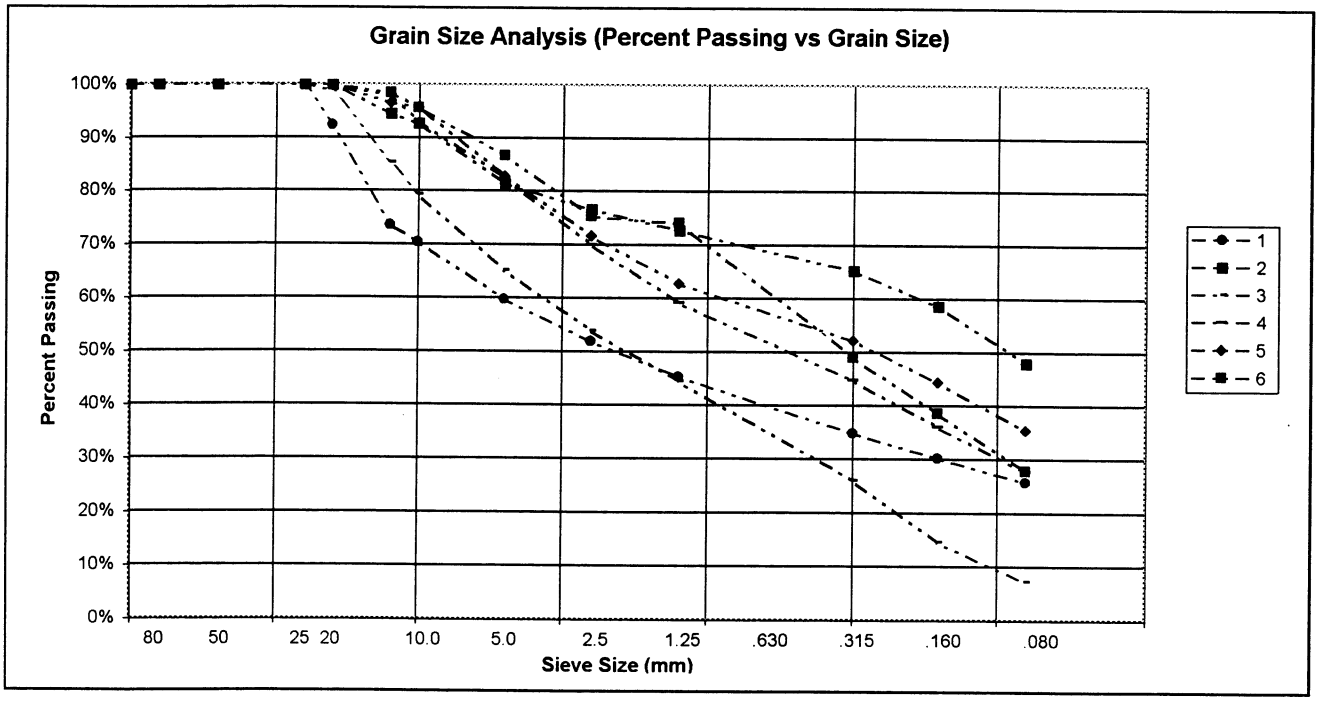
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 631642-6778670
LOGGED BY: RW

HOLE No.: 30176

DATE COMP: 07/28/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | 1 | 2 | 3 | 4 | 5 | 6 |
| LAB NO: | 1 | 2 | 3 | 4 | 5 | 6 |
| DEPTH: | 0.2-0.5 | 0.6-1.2 | 1.5-2.1 | 2.4-2.9 | 3.7-4.3 | 4.9-5.5 |
| TYPE: | AUGER | AUGER | AUGER | AUGER | AUGER | AUGER |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING |
| 100.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 80.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 50.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 25.0 | 100% | 100% | 100% | 100% | 100% | 100% |
| 20.0 | 92% | 100% | 99% | 100% | 100% | 100% |
| 12.5 | 74% | 95% | 85% | 98% | 97% | 98% |
| 10.0 | 71% | 93% | 79% | 93% | 96% | 96% |
| 5.0 | 60% | 81% | 65% | 82% | 83% | 87% |
| 2.5 | 52% | 77% | 54% | 70% | 72% | 75% |
| 1.25 | 45% | 73% | 45% | 59% | 63% | 74% |
| 0.630 | | | | | | |
| 0.315 | 35% | 65% | 26% | 45% | 52% | 49% |
| 0.160 | 30% | 59% | 15% | 36% | 44% | 39% |
| 0.080 | 26% | 48% | 7% | 28% | 35% | 28% |
| M.C.(%): | 8% | 27% | 8% | 16% | 14% | 15% |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| % GRAVEL: | 40 | 19 | 35 | 18 | 17 | 13 |
| % SAND: | 34 | 33 | 58 | 55 | 47 | 59 |
| % FINES: | 26 | 48 | 7 | 28 | 35 | 28 |
| CLASSIFICATION | SILTY GRAVEL WITH SAND (GM) | SILTY SAND WITH GRAVEL (SM) | WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND WITH GRAVEL (SM) | SILTY SAND (SM) |



Km 1699+700 LHS Alaska Highway

August 2004

J. R. Paine & Associates

Test Pit Sieve Sheets
(Car 318C Excavator)

Test Pits 30177 to 30179

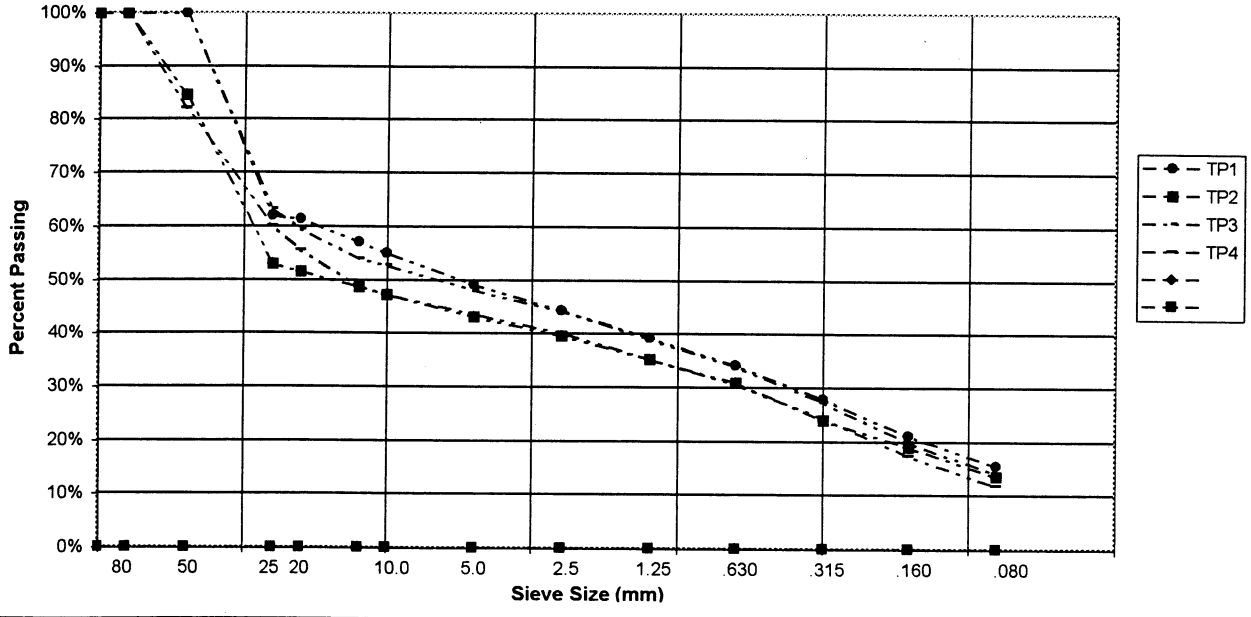
# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30177 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 636646-6764614 | |
| LOGGED BY: | RW | DATE COMP: 08/10/2004 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | TP1 | TP2 | TP3 | TP4 | | |
| LAB NO: | TP1 | TP2 | TP3 | TP4 | | |
| DEPTH: | 0.8-1.3 | 2.0-2.4 | 3.0-3.3 | 4.5-4.8 | | |
| TYPE: | BULK | BULK | BULK | BULK | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 85% | 100% | 82% | | |
| 25.0 | 62% | 53% | 63% | 60% | | |
| 20.0 | 61% | 52% | 60% | 56% | | |
| 12.5 | 57% | 49% | 54% | 49% | | |
| 10.0 | 55% | 47% | 53% | 47% | | |
| 5.0 | 49% | 43% | 48% | 44% | | |
| 2.5 | 44% | 40% | 44% | 40% | | |
| 1.25 | 39% | 35% | 39% | 35% | | |
| 0.630 | 34% | 31% | 34% | 31% | | |
| 0.315 | 28% | 24% | 27% | 24% | | |
| 0.160 | 21% | 19% | 20% | 17% | | |
| 0.080 | 16% | 14% | 14% | 12% | | |
| M.C.(%): | 4% | 5% | 5% | 5% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 51 | 57 | 52 | 56 | | |
| % SAND: | 34 | 29 | 34 | 32 | | |
| % FINES: | 16 | 14 | 14 | 12 | | |
| CLASSIFICATION | SILTY GRAVEL WITH SAND (GM) | SILTY GRAVEL WITH SAND (GM) | SILTY GRAVEL WITH SAND (GM) | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

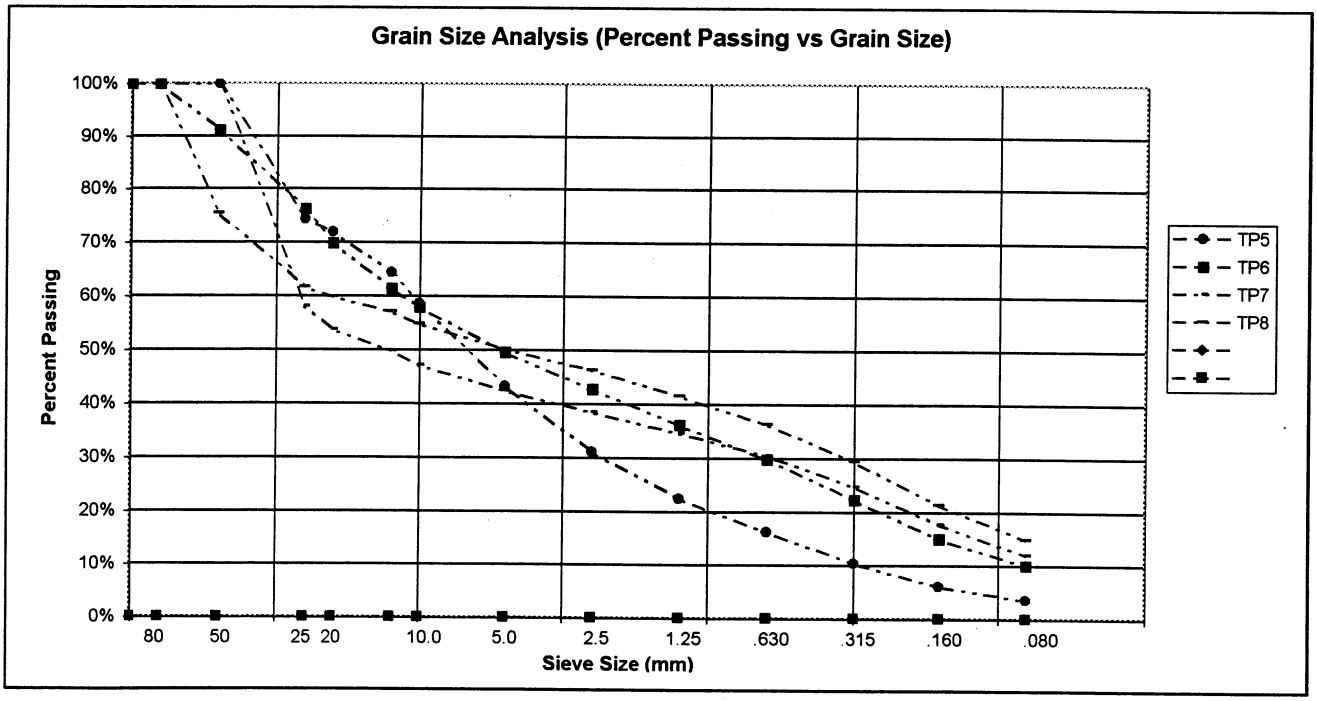
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 636697-6764616
LOGGED BY: RW

HOLE No.: 30178

DATE COMP: 08/10/2004

| | | | | | | |
|---|---|---|---|---|---|---|
| FIELD NO: | TP5 | TP6 | TP7 | TP8 | | |
| LAB NO: | TP5 | TP6 | TP7 | TP8 | | |
| DEPTH: | 0.8-1.3 | 2.2-2.5 | 3.0-3.5 | 4.3-4.8 | | |
| TYPE: | BULK | BULK | BULK | BULK | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 100% | 91% | 100% | 75% | | |
| 25.0 | 74% | 76% | 58% | 62% | | |
| 20.0 | 72% | 70% | 54% | 60% | | |
| 12.5 | 64% | 61% | 50% | 57% | | |
| 10.0 | 59% | 58% | 47% | 55% | | |
| 5.0 | 43% | 50% | 42% | 50% | | |
| 2.5 | 31% | 43% | 39% | 46% | | |
| 1.25 | 22% | 36% | 35% | 42% | | |
| 0.630 | 16% | 30% | 31% | 36% | | |
| 0.315 | 11% | 22% | 25% | 30% | | |
| 0.160 | 6% | 15% | 18% | 21% | | |
| 0.080 | 4% | 10% | 12% | 15% | | |
| M.C.(%): | 1% | 3% | 5% | 6% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 57 | 50 | 58 | 50 | | |
| % SAND: | 40 | 39 | 30 | 35 | | |
| % FINES: | 4 | 10 | 12 | 15 | | |
| CLASSIFICATION | WELL-GRADED GRAVEL WITH SAND (GW) | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | SILTY GRAVEL WITH SAND (GM) | SILTY GRAVEL WITH SAND (GM) | | |



# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

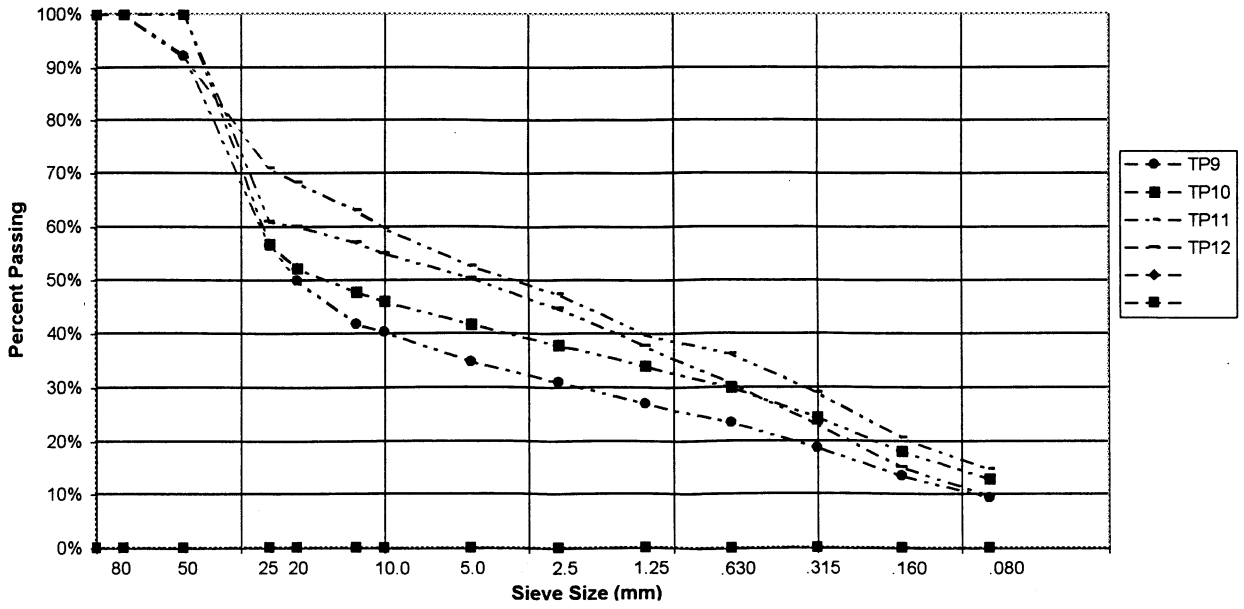
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 636749-6764619
LOGGED BY: RW

HOLE No.: 30179

DATE COMP: 08/10/2004

| FIELD NO: | TP9 | TP10 | TP11 | TP12 | | |
|---|---|---|---|---|---|---|
| LAB NO: | TP9 | TP10 | TP11 | TP12 | | |
| DEPTH: | 0.5-1.0 | 1.8-2.3 | 3.2-3.5 | 4.5-5.0 | | |
| TYPE: | BULK | BULK | BULK | BULK | | |
| SIEVE SIZE | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | PERCENT PASSING | | |
| 100.0 | 100% | 100% | 100% | 100% | | |
| 80.0 | 100% | 100% | 100% | 100% | | |
| 50.0 | 92% | 100% | 92% | 100% | | |
| 25.0 | 57% | 57% | 71% | 61% | | |
| 20.0 | 50% | 52% | 68% | 60% | | |
| 12.5 | 42% | 48% | 63% | 57% | | |
| 10.0 | 40% | 46% | 60% | 55% | | |
| 5.0 | 35% | 42% | 53% | 50% | | |
| 2.5 | 31% | 38% | 47% | 45% | | |
| 1.25 | 27% | 34% | 40% | 38% | | |
| 0.630 | 23% | 30% | 36% | 31% | | |
| 0.315 | 19% | 24% | 29% | 23% | | |
| 0.160 | 14% | 18% | 21% | 15% | | |
| 0.080 | 9% | 13% | 15% | 10% | | |
| M.C.(%): | 3% | 6% | 7% | 6% | | |
| LIQUID LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC LIMIT: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PLASTIC INDEX.: | 0.0 | 0.0 | 0.0 | 0.0 | | |
| % GRAVEL: | 65 | 58 | 47 | 50 | | |
| % SAND: | 25 | 29 | 38 | 40 | | |
| % FINES: | 9 | 13 | 15 | 10 | | |
| CLASSIFICATION | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | SILTY GRAVEL WITH SAND (GM) | SILTY GRAVEL WITH SAND (GM) | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) | | |

## Grain Size Analysis (Percent Passing vs Grain Size)



Km 1706+200 LHS Alaska Highway
(Soldier's Summit Slide)

August 2004

J. R. Paine & Associates

Test Pit Sieve Sheets
(Hitachi 450EX Excavator)

Test Pits 30076 & 30081

* NOTE: No samples taken from Test Pits 30072 to 30075, 30077, 30078, & 30080. Sample taken from Test Pit 30079 but no sieve analysis done.

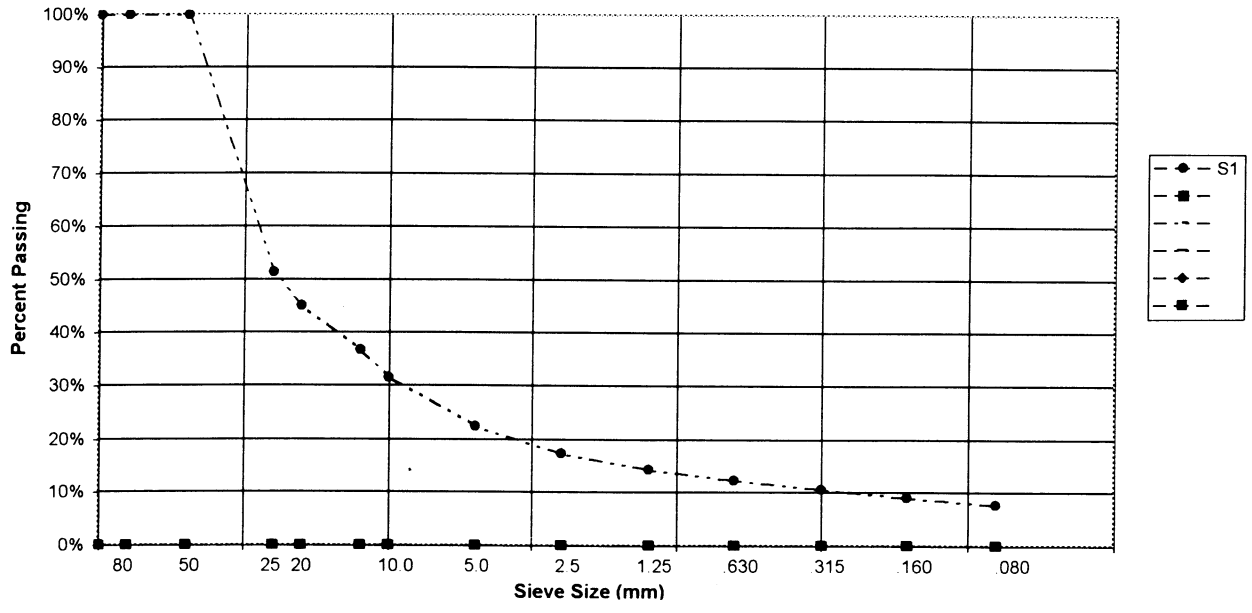
# HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30076 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 635054-6768523 | |
| LOGGED BY: | RW | DATE COMP: 07/29/2004 |

| | |
|---|---|
| FIELD NO: | S1 |
| LAB NO: | S1 |
| DEPTH: | 3.6-4.2 |
| TYPE: | BULK |
| **SIEVE SIZE** | **PERCENT PASSING** |
| 100.0 | 100% |
| 80.0 | 100% |
| 50.0 | 100% |
| 25.0 | 51% |
| 20.0 | 45% |
| 12.5 | 37% |
| 10.0 | 32% |
| 5.0 | 23% |
| 2.5 | 17% |
| 1.25 | 14% |
| 0.630 | 12% |
| 0.315 | 11% |
| 0.160 | 9% |
| 0.080 | 8% |
| M.C.(%): | 4% |
| LIQUID LIMIT: | 0.0 |
| PLASTIC LIMIT: | 0.0 |
| PLASTIC INDEX.: | 0.0 |
| % GRAVEL: | 77 |
| % SAND: | 15 |
| % FINES: | 8 |
| CLASSIFICATION | POORLY GRADED GRAVEL WITH SILT (GP-GM) |

## Grain Size Analysis (Percent Passing vs Grain Size)



# HOGGAN ENGINEERING & TESTING (1980) LTD.

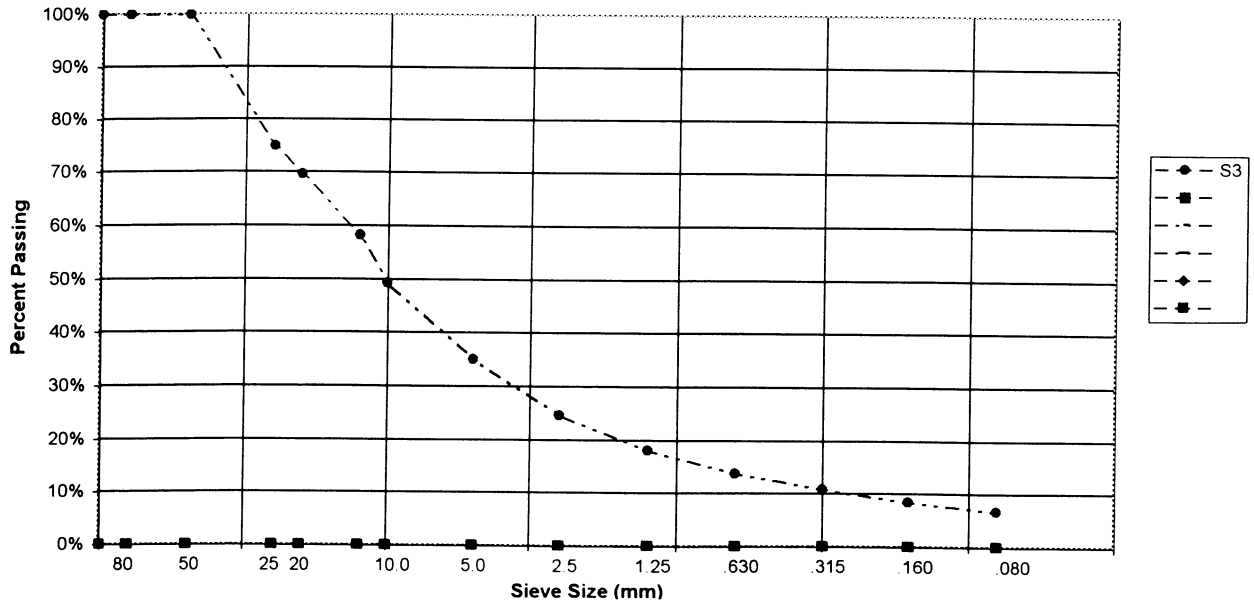
An Affiliate of J. H. Paine & Associates Ltd.

| | | |
|---|---|---|
| PROJECT NUMBER: | 8002-318 | HOLE No.: 30081 |
| CLIENT: | YTG, Transportation & Engineering | |
| PROJECT NAME: | Geotechnical Services | |
| PROJECT LOCATION: | Km 1691.7-1717.3 | |
| DRILL UNIT: | CME75 | |
| HOLE LOCATION: | 635160-6768752 | |
| LOGGED BY: | RW | DATE COMP: 07/31/2004 |

| | |
|---|---|
| FIELD NO: | S3 |
| LAB NO: | S3 |
| DEPTH: | 4.5-5.0 |
| TYPE: | BULK |

| SIEVE SIZE | PERCENT PASSING |
|---|---|
| 100.0 | 100% |
| 80.0 | 100% |
| 50.0 | 100% |
| 25.0 | 75% |
| 20.0 | 70% |
| 12.5 | 58% |
| 10.0 | 49% |
| 5.0 | 35% |
| 2.5 | 25% |
| 1.25 | 18% |
| 0.630 | 14% |
| 0.315 | 11% |
| 0.160 | 9% |
| 0.080 | 7% |
| M.C.(%): | 2% |
| LIQUID LIMIT: | 0.0 |
| PLASTIC LIMIT: | 0.0 |
| PLASTIC INDEX.: | 0.0 |
| % GRAVEL: | 65 |
| % SAND: | 28 |
| % FINES: | 7 |
| CLASSIFICATION | POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) |

## Grain Size Analysis (Percent Passing vs Grain Size)



Original Report

Do Not Remove from Building
Please Return to File

# Geotechnical Services
# Km 1691.7 to 1717.3, Alaska Highway #1
# Yukon, 2004

## Volume 3
## ESEBASE SOILS LOGS

HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd

EDMONTON ● GRANDE PRAIRIE ● PEACE RIVER ● WHITEHORSE

**Geotechnical Services**
**Km 1691.7 to 1717.3, Alaska Highway #1**
**Yukon, 2004**

**Volume 3**
**ESEBASE SOILS LOGS**

*HOGGAN ENGINEERING & TESTING (1980) LTD.*

**Volume 3**

**ESEBASE SOILS LOGS**

.... ESEBASE SOILS LOGS 30000 to 30179 (NUMERICAL ORDER)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30000 |
| Donjek Services Ltd. | UTM ZONE: – N6767988 E644064 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL<br>–dry to damp, medium dense, brown | | 352 ▲ | | GW | | ◆ ■ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | SANDY GRAVEL, trace silt 1.2m<br>–damp, medium dense, brown | | | | | | | |
| 2.0 | | | 353 ● ▲ | | GW–GM | | ◆ ■ | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/16/04 |
| Fig. No: 158 | Page 1 of 1 |

05/02/21 08:11AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30001 |
| Donjek Services Ltd. | UTM ZONE: – N6768004 E643863 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT<br>–damp, medium dense, brown<br>–organic seams noted to 1.0m depth<br>–some gravels noted between 0.4m & 0.5m | | 354 | | ML | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 1.5m | SANDY GRAVEL, trace silt<br>–damp, medium dense, brown | | 355 | | GP-GM | | | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 3.0m | End Of Hole @ 3.0m | | | | | | | |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| | REVIEWED BY: | COMPLETE: 08/16/04 |
| | Fig. No: 159 | Page 1 of 1 |

05/02/23 02:24PM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30002 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6768001 E643667 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>–dry, medium dense, brown | | | | | | | 0.0 |
| | SILTY SAND, some gravel 0.4m<br>–damp, medium dense, brown | | 356 | | SM | | | |
| 1.0 | SANDY GRAVEL, some silt 0.7m<br>–damp, dense, brown | | | | | | | -1.0 |
| 2.0 | | | 357 | | GM | | | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
|---|---|
| REVIEWED BY: | COMPLETE: 08/16/04 |
| Fig. No: 160 | Page 1 of 1 |

05/02/23 02:25PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30003 |
| Donjek Services Ltd. | UTM ZONE: – N6767987 E643448 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>–damp to moist, medium dense, dark brown/grey | ⊠ | 358 | GP-GM | |
| 1.0 | | | | | |
| 1.8 | SANDY GRAVEL/GRAVELLY SAND, some silt<br>–dry to damp, dense, brown/grey | ⊠ | 359 | GM | |
| 3.0 | | | | | |
| 4.0 | | ⊠ | 360 | SM | |
| 4.3 | End Of Hole @ 4.3m | | | | |
| 5.0 | | | | | |
| 6.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4.3 m |
| REVIEWED BY: | COMPLETE: 08/16/04 |
| Fig. No: 161 | Page 1 of 1 |

05/02/21 08:12AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30004 |
| Donjek Services Ltd. | UTM ZONE: – N6768053 E643430 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, some silt<br>–damp, dense, grey/brown | | | | | | | 0.0 |
| 1.0 | | | 361 | ● ▲ | GP-GM | | ◆ ■ | -1.0 |
| 2.0 | GRAVELLY SAND/SANDY GRAVEL, some silt 1.8m<br>–damp, dense, brown/grey | | 362 | ● ▲ | SM | | ◆ ■ | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | 363 | ● ▲ | GP-GM | | ◆ ■ | -4.0 |
| | 4.4m<br>End Of Hole @ 4.4m<br>–refusal @ 1.5m – move north 2m | | | | | | | |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4.4 m |
| REVIEWED BY: | COMPLETE: 08/16/04 |
| Fig. No: 162 | Page 1 of 1 |

05/02/23 02:25PM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30005 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6768019 E648267 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES / PLASTIC M.C. LIQUID | USC | SOIL SYMBOL | PERCENT SAND / PERCENT GRAVEL | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL<br>–dry, medium dense, brown | | 364 | | GW | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | SANDY GRAVEL/GRAVELLY SAND,trace silt 1.2m<br>–damp, medium dense, brown | | | | | | | |
| 2.0 | | | 365 | | GP-GM | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| | | | 366 | | SW-SM | | | |
| 4.0 | 4.0m<br>End Of Hole @ 4.0m – Refusal | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

PERCENT FINES: 20 40 60 80

PLASTIC M.C. LIQUID: 20 40 60 80

PERCENT SAND: 20 40 60 80

PERCENT GRAVEL: 20 40 60 80

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW
REVIEWED BY:
Fig. No: 163

COMPLETION DEPTH: 4 m
COMPLETE: 08/18/04
Page 1 of 1

05/02/23 02:26PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30005B |
| Donjek Services Ltd. | UTM ZONE: – N6768022 E643035 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, some silt<br>–dry to damp, medium dense, brown | | | | | | | 0.0 |
| 1.0 | | | 367 | ● ▲ | GP-GM | | ◆ ■ | -1.0 |
| 2.0 | | | 368 | ● ▲ | GP-GM | | ◆ ■ | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/18/04 |
| Fig. No: 164 | Page 1 of 1 |

05/02/23 02:34PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30006 |
| Donjek Services Ltd. | UTM ZONE: – N6768025 E642866 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, some silt<br>–dry to damp, medium dense, brown | | 369 | | GP-GM | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | SILTY GRAVELLY SAND 1.5m<br>–dry to damp, medium dense, brown | | 370 | | SM | | | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m<br>–less gravel recovery w/ depth | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/18/04 |
| Fig. No: 165 | Page 1 of 1 |

05/02/23 02:34PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30007 |
| Donjek Services Ltd. | UTM ZONE: – N6768030 E642664 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND, some silt<br>–dry to damp, medium dense, brown | | 371 | ● ▲ | SW–SM | | ◆ ■ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | SILTY GRAVELLY SAND 1.5m<br>–dry to damp, medium dense, brown | | | | | | | |
| 2.0 | | | 372 | ● ▲ | SM | | ◆ ■ | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m<br>–less gravel recovery w/ depth | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

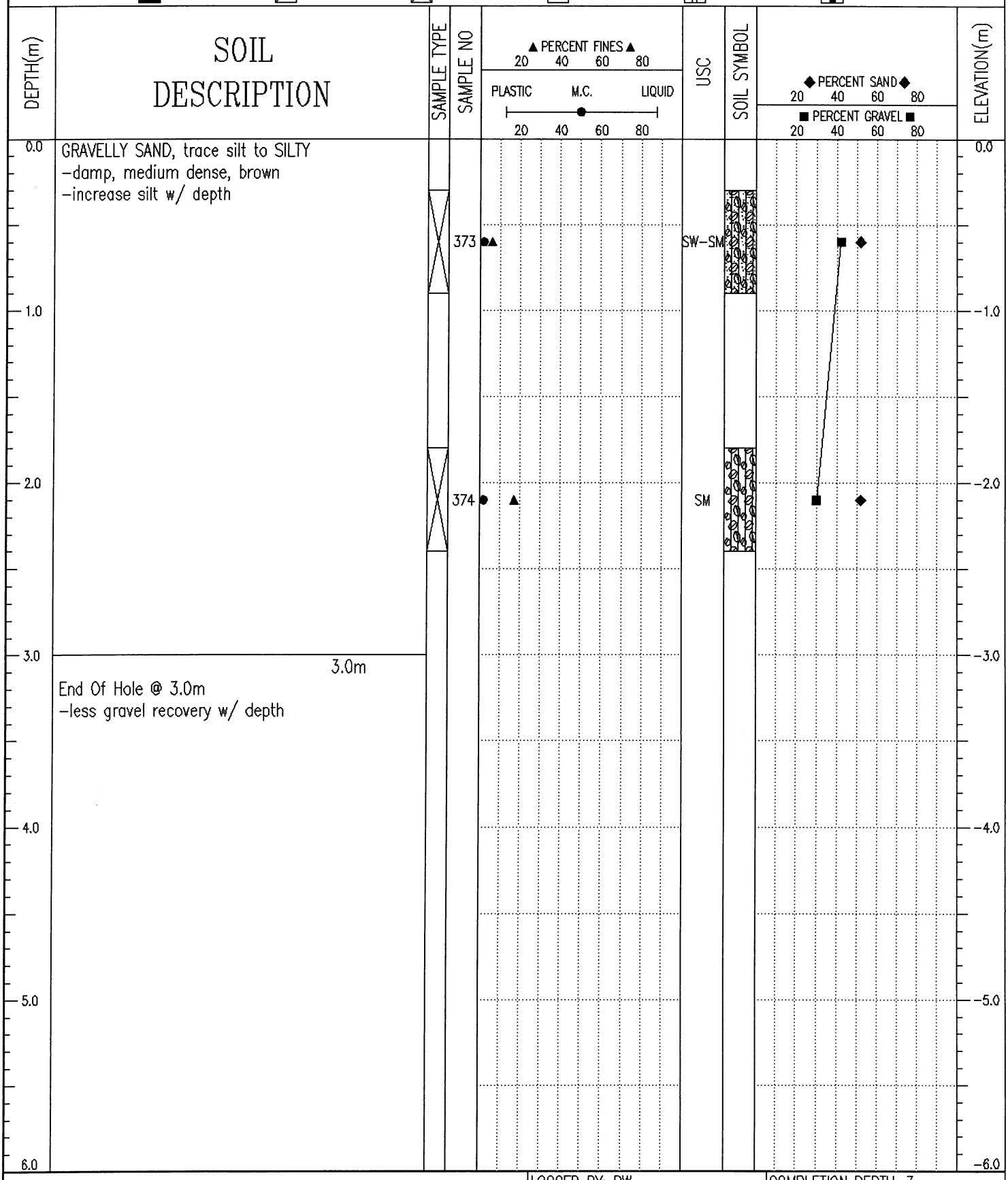
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/18/04 |
| Fig. No: 166 | Page 1 of 1 |

05/02/23 02:35PM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30008 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6768033 E642462 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

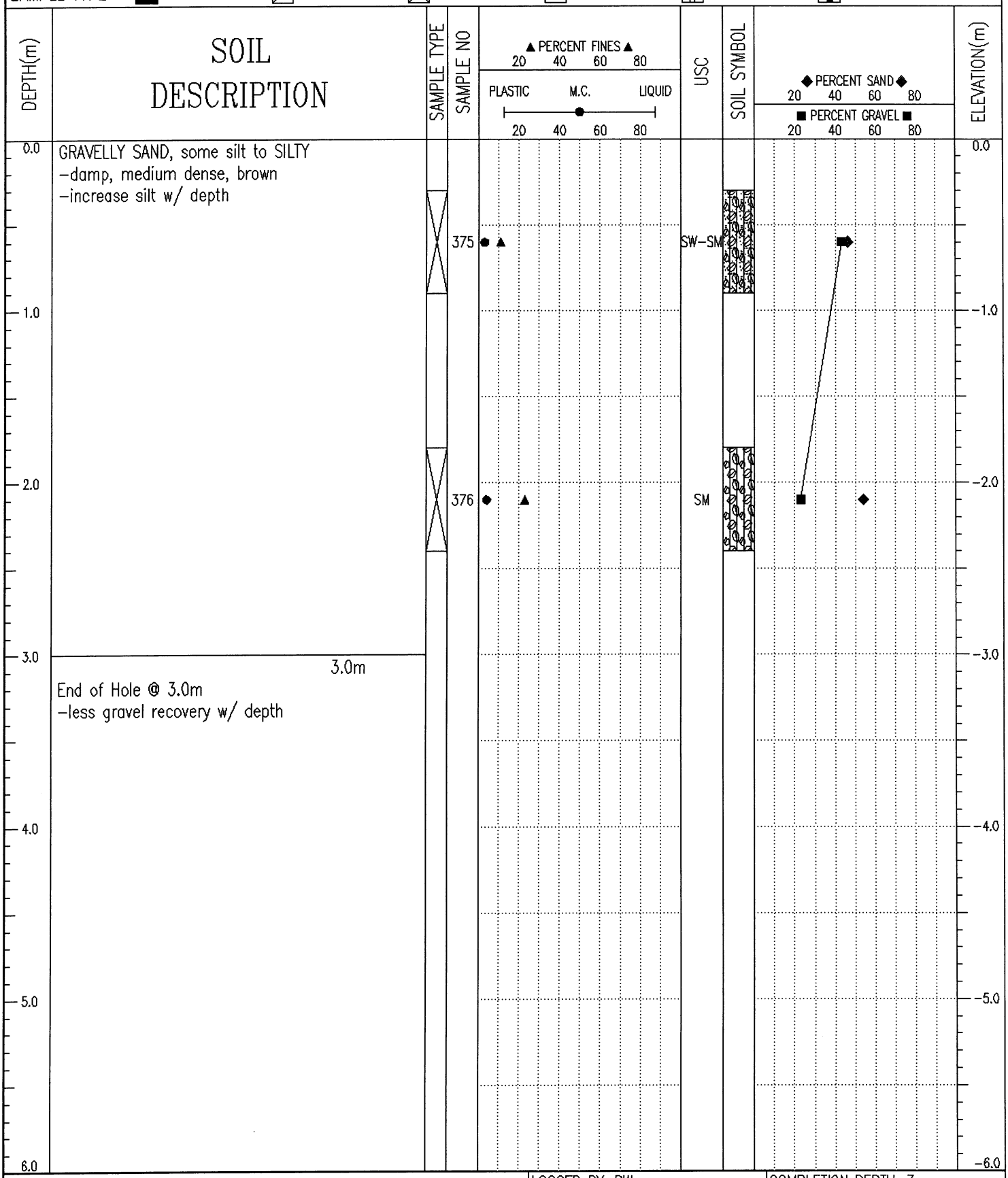



| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 08/18/04 |
| | Fig. No: 167 | Page 1 of 1 |

05/02/23 02:35PM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30009 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6768038 E642265 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE




| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 08/18/04 |
| | Fig. No: 169 | Page 1 of 1 |

05/02/23 02:35PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30010 |
| Donjek Services Ltd. | UTM ZONE: – N6768040 E642066 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND, some silt<br>–dry to damp, medium dense, brown | | 377 | ● ▲ | SM | | ◆ ■ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | SANDY GRAVEL, trace silt 2.0m<br>–dry to damp, medium dense, brown | | 378 | ● ▲ | GP-GM | | ◆ ■ | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW
REVIEWED BY:
Fig. No: 170

COMPLETION DEPTH: 3 m
COMPLETE: 08/18/04



05/02/21 08:13AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30011 |
| Donjek Services Ltd. | UTM ZONE: – N6768044 E641865 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>–damp to moist, medium dense, brown/dark grey | | 379 | GW–GM | | 0.0 |
| 1.0 | | | | | | -1.0 |
| 2.0 | | | 380 | GW–GM | | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | -3.0 |
| 4.0 | | | | | | -4.0 |
| 5.0 | | | | | | -5.0 |
| 6.0 | | | | | | -6.0 |

PERCENT FINES: 20 40 60 80

PLASTIC M.C. LIQUID: 20 40 60 80

PERCENT SAND: 20 40 60 80

PERCENT GRAVEL: 20 40 60 80

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW
REVIEWED BY:
Fig. No: 171

COMPLETION DEPTH: 3 m
COMPLETE: 08/18/04



05/02/23 02:35PM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30012 |
| Donjek Services Ltd. | UTM ZONE: – N6768049 E641666 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>–dry to damp, medium dense, brown | | 381 ●▲ | | GW–GM | | ◆ ■ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | AS ABOVE 1.2m<br>–damp | | | | | | | |
| 2.0 | | | 382 ● ▲ | | GP–GM | | ◆ ■ | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/18/04 |
| Fig. No: 172 | Page 1 of 1 |

05/02/21 08:13AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30013 |
| Donjek Services Ltd. | UTM ZONE: – N6768054 E641469 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

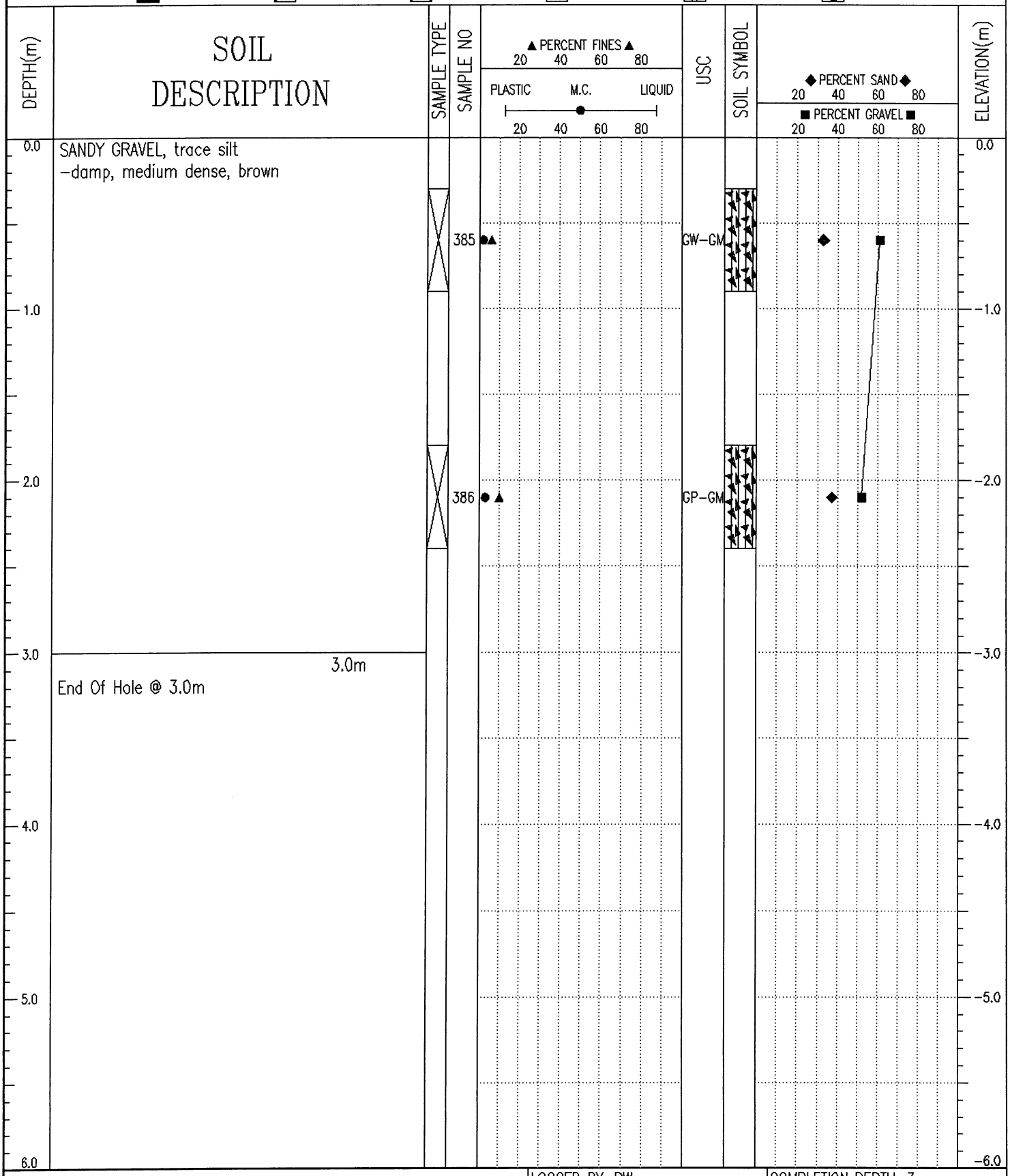
| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>–dry to damp, medium dense, brown | | | | | | | 0.0 |
| | | | 383 ●▲ | | GW-GM | | | |
| 1.0 | | | | | | | | -1.0 |
| | AS ABOVE 1.5m<br>–damp | | | | | | | |
| 2.0 | | | | | | | | -2.0 |
| | | | 384 ●▲ | | GW-GM | | | |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| | REVIEWED BY: | COMPLETE: 08/18/04 |
| | Fig. No: 173 | Page 1 of 1 |

05/02/21 08:13AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30014 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6768036 E641287 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE




| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 08/18/04 |
| | Fig. No: 174 | Page 1 of 1 |

05/02/23 02:35PM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30015 |
| Donjek Services Ltd. | UTM ZONE: – N6767939 E641051 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND<br>–damp to moist, medium dense, brown | | | | |
| | SANDY SILT 0.3m<br>–moist, soft, grey<br>–organics noted | ⊠ | 387 | ML | |
| 1.0 | | | | | |
| | SANDY GRAVEL, trace silt 1.2m<br>–damp to moist, medium dense, brown | ⊠ | 388 | GW–GM | |
| 2.0 | | | | | |
| | SANDY SILT, some gravel 2.7m<br>–damp to moist, soft, grey/brown | | | | |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | |
| 4.0 | | | | | |
| 5.0 | | | | | |
| 6.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, –1.0, –2.0, –3.0, –4.0, –5.0, –6.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| | REVIEWED BY: | COMPLETE: 08/18/04 |
| | Fig. No: 175 | Page 1 of 1 |

05/02/21 08:14AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30016 |
| Donjek Services Ltd. | UTM ZONE: – N6767966 E641012 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>–moist, medium dense, brown | | 389 | GW–GM | | 0.0 |
| | SILTY SAND/SANDY SILT 0.4m<br>–moist to wet, soft, brown | | | | | |
| 1.0 | GRAVELLY SAND, trace silt 0.8m<br>–moist, medium dense, brown | | | | | -1.0 |
| 2.0 | | | 390 | SW–SM | | -2.0 |
| | SILTY SAND, some gravel to GRAVELLY 2.8m<br>–moist medium dense, brown | | | | | |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | -3.0 |
| 4.0 | | | | | | -4.0 |
| 5.0 | | | | | | -5.0 |
| 6.0 | | | | | | -6.0 |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

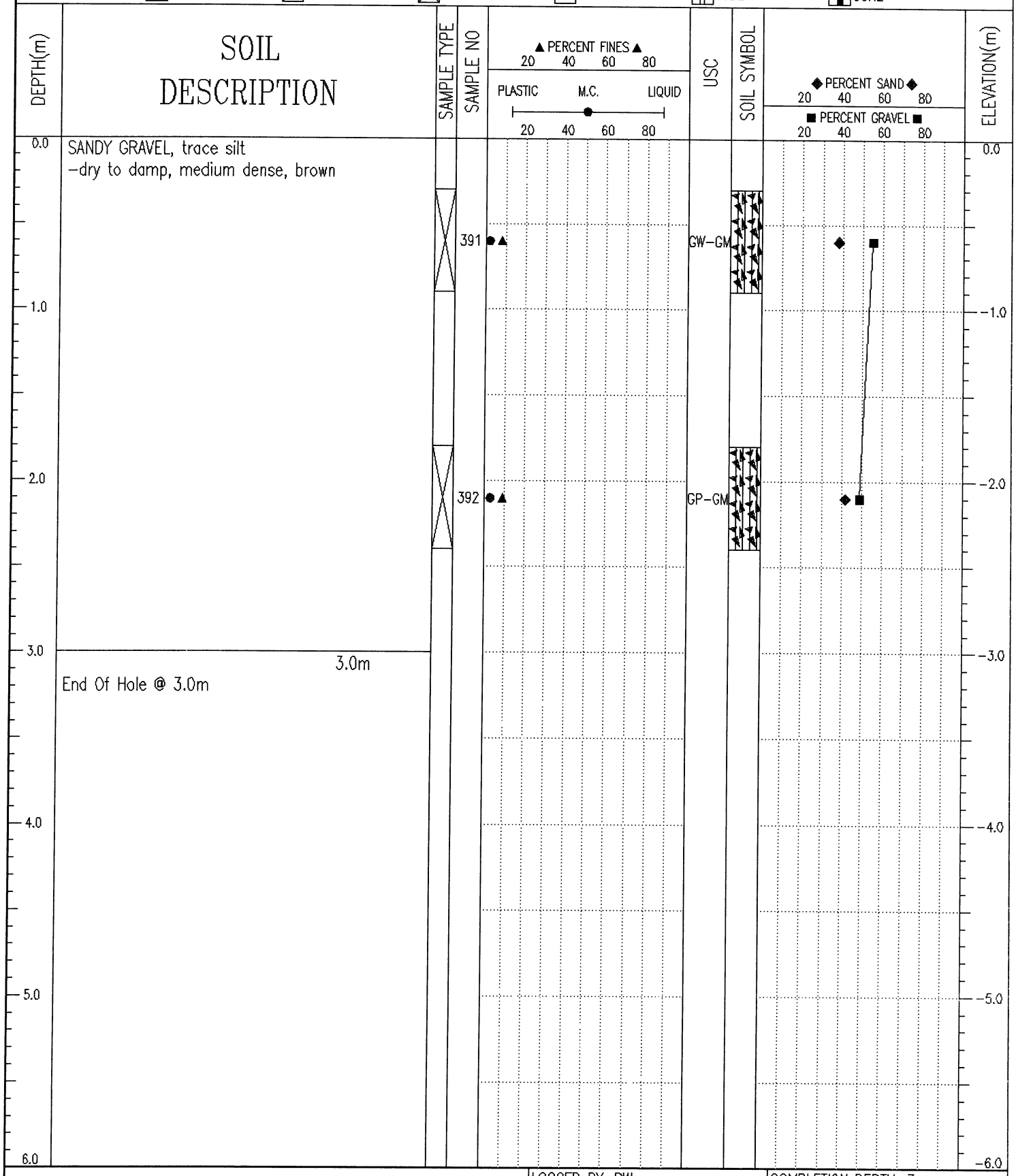
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/18/04 |
| Fig. No: 176 | Page 1 of 1 |

05/02/23 02:38PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30017 |
| Donjek Services Ltd. | UTM ZONE: – N6767834 E640871 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| | REVIEWED BY: | COMPLETE: 08/18/04 |
| | Fig. No: 177 | Page 1 of 1 |

05/02/21 08:14AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30018 |
| Donjek Services Ltd. | UTM ZONE: – N6767697 E640691 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>–dry to damp, medium dense, brown | | 393 ● ▲ | | GP-GM | | ◆ ■ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | GRAVELLY SAND, trace silt 1.2m<br>–damp, medium dense, brown | | | | | | | |
| 2.0 | | | 394 ● ▲ | | SW-SM | | ◆ ■ | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/18/04 |
| Fig. No: 178 | Page 1 of 1 |

05/02/21 08:14AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30019 |
| Donjek Services Ltd. | UTM ZONE: – N6767579 E640524 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND, some silt<br>–damp, medium dense, brown<br>–silt seam noted @ 0.4m depth (approx. 75mm thick)<br>–silt seam noted @ 1.2m depth (approx. 100mm thick) | ⊠ | 395 | ● ▲ | SW–SM | | ■ ◆ | 0.0 |
| 1.0 | | | | | | | | –1.0 |
| 2.0 | | | | | | | | –2.0 |
| | SILTY GRAVELLY SAND 2.1m<br>–damp to moist, medium dense, brown<br>–silt present mostly in seams | ⊠ | 396 | ● ▲ | SM | | ■ ◆ | |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | –3.0 |
| 4.0 | | | | | | | | –4.0 |
| 5.0 | | | | | | | | –5.0 |
| 6.0 | | | | | | | | –6.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| | REVIEWED BY: | COMPLETE: 08/18/04 |
| | Fig. No: 179 | Page 1 of 1 |

05/02/23 02:36PM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30020 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6767452 E640351 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND, trace silt<br>–damp to moist, medium dense, brown | | 397 | SW-SM | | 0.0 |
| 1.0 | SANDY GRAVEL 0.9m<br>–wet to saturated<br>–pea gravels | | | | | -1.0 |
| | SILT, some sand 1.5m<br>–moist to wet, firm, grey<br>–significant organics throughout<br>(decomposed rootlets/grasses etc.) | | 398 | ML | | |
| 2.0 | | | | | | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | -3.0 |
| 4.0 | | | | | | -4.0 |
| 5.0 | | | | | | -5.0 |
| 6.0 | | | | | | -6.0 |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW | COMPLETION DEPTH: 3 m
REVIEWED BY: | COMPLETE: 08/18/04
Fig. No: 180 | Page 1 of 1

05/02/23 02:38PM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30021 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6767340 E640194 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT<br>-damp to moist, medium dense, brown<br>-variable silt & sand seams intermixed<br>-organics noted throughout | | 399 | ● ▲ | ML | | ■ ◆ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | SILT, trace sand 1.4m<br>-moist to wet, soft to firm, grey<br>-increase silt w/ depth<br>-some organics noted | | | | | | | |
| 2.0 | | | 400 | ● ▲ | ML | | ■ ◆ | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
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| REVIEWED BY: | COMPLETE: 08/18/04 |
| Fig. No: 181 | Page 1 of 1 |

05/02/23 02:36PM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30022 |
| Donjek Services Ltd. | UTM ZONE: – N6767232 E640041 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT<br>–moist to wet, soft to firm, brown<br>–most sand present in seams to 75mm thick<br>–organics noted throughout | ⊠ | 401 | ● ▲ | ML | | ■ ◆ | 0.0 |
| 1.0 | | | | | | | | –1.0 |
| | SAND, some silt, trace gravel 1.5m<br>–wet, medium dense, brown | ⊠ | 402 | ● | SM | | ■ ◆ | |
| 2.0 | | | | | | | | –2.0 |
| | SILT, trace sand 2.4m<br>–moist, firm, grey w/ blue hue<br>–non to low plastic | ⊠ | 403 | ● ▲ | ML | | ■ ◆ | |
| 3.0 | 3.0m<br>–End Of Hole @ 3.0m | | | | | | | –3.0 |
| 4.0 | | | | | | | | –4.0 |
| 5.0 | | | | | | | | –5.0 |
| 6.0 | | | | | | | | –6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/18/04 |
| Fig. No: 182 | Page 1 of 1 |

05/02/21 08:15AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30023 |
| Donjek Services Ltd. | UTM ZONE: – N6767125 E639890 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

# SOIL DESCRIPTION

**SANDY SILT**
–damp to moist, medium dense, brown
–organics noted throughout

**SANDY SILT** 1.2m
–damp to moist, firm, brown w/ some grey seams

**SAND, trace to some silt** 2.1m
–saturated, medium dense, brown

**SILT, some clay** 2.7m
–damp to moist, firm, grey w/ blue hue
–non to low plastic

3.0m

End Of Hole @ 3.0m

| DEPTH(m) | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|
| 0.0 | | | | | | | 0.0 |
| | | 404 | | ML | | | |
| 1.0 | | | | | | | -1.0 |
| | | 405 | | ML | | | |
| 2.0 | | | | | | | -2.0 |
| 3.0 | | | | | | | -3.0 |
| 4.0 | | | | | | | -4.0 |
| 5.0 | | | | | | | -5.0 |
| 6.0 | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/18/04 |
| Fig. No: 183 | Page 1 of 1 |

05/02/21 08:15AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30024 |
| Donjek Services Ltd. | UTM ZONE: – N6766983 E639688 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SILT, some sand, trace gravel<br>–moist, soft to firm, brown | AUGER | 406 | ML | | 0.0 |
| 1.0 | GRAVELLY SAND 0.8m<br>–wet, medium dense, brown | | | | | -1.0 |
| | SILT, some sand 1.1m<br>–moist, soft to firm, brown | | | | | |
| | SAND, some gravel, trace silt 1.5m<br>–saturated, medium dense, brown | AUGER | 407 | SW-SM | | |
| 2.0 | SANDY SILT 2.1m<br>–wet, soft to firm, grey/brown | AUGER | 408 | ML | | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | -3.0 |
| 4.0 | | | | | | -4.0 |
| 5.0 | | | | | | -5.0 |
| 6.0 | | | | | | -6.0 |

PERCENT FINES: 20 40 60 80

PLASTIC M.C. LIQUID

20 40 60 80

PERCENT SAND: 20 40 60 80

PERCENT GRAVEL: 20 40 60 80

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/18/04 |
| Fig. No: 184 | Page 1 of 1 |

05/02/23 02:37PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30025 |
| Donjek Services Ltd. | UTM ZONE: – N6766885 E639558 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT/SILTY SAND<br>–dry, medium dense, light brown | | | | | | | 0.0 |
| | GRAVELLY SAND, trace silt 0.3m<br>–damp, medium dense, brown | | 409 | ●▲ | SW–SM | | ■ ◆ | |
| 1.0 | | | | | | | | –1.0 |
| | SANDY SILT, trace gravel 1.5m<br>–damp to moist, soft to firm, brown w/ grey & black seams<br>–significant organic silts (black) | | 410 | ◆ ▲ | ML | | ■ ◆ | |
| 2.0 | | | | | | | | –2.0 |
| | SILT, some sand, trace gravel 2.8m<br>–damp to moist, firm to stiff, brown<br>–non to low plastic | | | | | | | |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | –3.0 |
| 4.0 | | | | | | | | –4.0 |
| 5.0 | | | | | | | | –5.0 |
| 6.0 | | | | | | | | –6.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| | REVIEWED BY: | COMPLETE: 08/18/04 |
| | Fig. No: 185 | Page 1 of 1 |

05/02/21 08:15AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30026 |
| Donjek Services Ltd. | UTM ZONE: – N6766769 E639356 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND, trace silt<br>-dry to damp, medium dense, brown | | 411 ●▲ | | SW-SM | | ■ ◆ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | SILTY SAND 1.5m<br>-dry, medium dense, light brown/grey<br>-powder like | | | | | | | |
| 2.0 | | | 412 ● ▲ | | SM | | ■ ◆ | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/18/04 |
| Fig. No: 186 | Page 1 of 1 |

05/02/23 02:37PM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30027 |
| Donjek Services Ltd. | UTM ZONE: – N6766735 E639213 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES / PLASTIC M.C. LIQUID | USC | SOIL SYMBOL | PERCENT SAND / PERCENT GRAVEL | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND<br>–saturated, medium dense, brown | | 413 | | SW | | | 0.0 |
| 1.0 | SILTY SAND/SANDY SILT 1.2m<br>–saturated, soft, grey | | | | | | | -1.0 |
| 2.0 | SILT, trace sand 1.8m<br>–moist, firm brown w/ some organic seams<br>–some organic silts | | 414 | | ML | | | -2.0 |
| 3.0 | SILTY GRAVELLY SAND 2.7m<br>–saturated, medium dense, brown | | | | | | | -3.0 |
| | 3.0m<br>End Of Hole @ 3.0m | | | | | | | |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/19/04 |
| Fig. No: 187 | Page 1 of 1 |

05/02/21 08:16AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30028 |
| Donjek Services Ltd. | UTM ZONE: – N6766708 E639229 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND, trace silt<br>–wet, medium dense, brown | ⊠ | 415 | SW–SM | |
| 2.4m | SILTY SAND, trace gravel<br>–saturated, soft to firm, brown | ⊠ | 416 | SM | |
| 3.0m | End Of Hole @ 3.0m | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, –1.0, –2.0, –3.0, –4.0, –5.0, –6.0

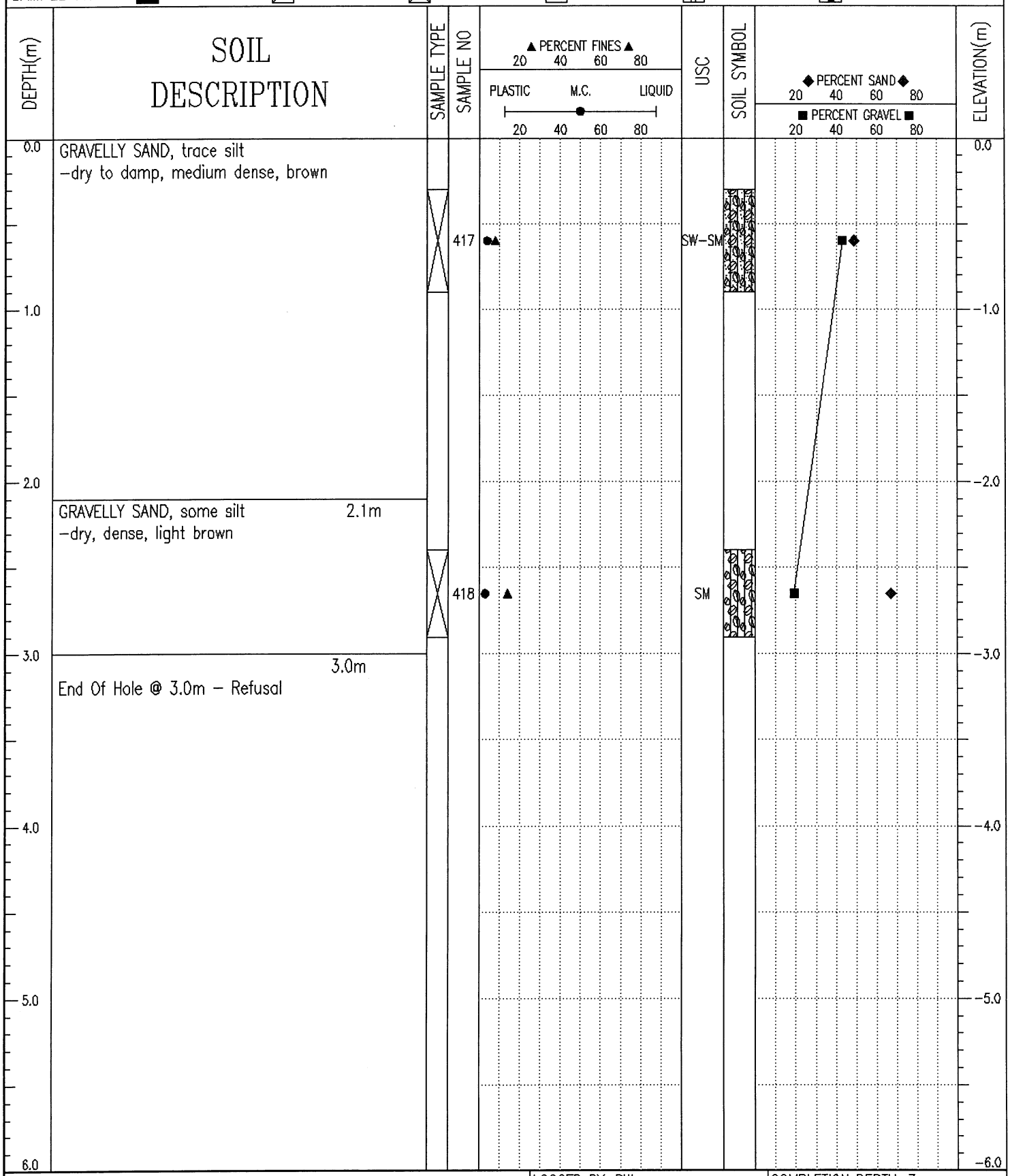
DEPTH(m): 0.0, 1.0, 2.0, 3.0, 4.0, 5.0, 6.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| | REVIEWED BY: | COMPLETE: 08/19/04 |
| | Fig. No: 188 | Page 1 of 1 |

05/02/23 02:37PM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30029 |
| Donjek Services Ltd. | UTM ZONE: - N6766653 E639106 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE




| | | |
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| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| | REVIEWED BY: | COMPLETE: 08/19/04 |
| | Fig. No: 189 | Page 1 of 1 |

05/02/23 02:37PM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30030 |
| Donjek Services Ltd. | UTM ZONE: – N6766547 E638909 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL<br>–damp, medium dense, brown<br>–cobbles to 200mm at surface (creek bottom) | ⊠ | 419 | ● | GW | | ◆ ■ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | GRAVELLY SAND, trace silt 1.5m<br>–saturated, medium dense, brown | ⊠ | 420 | ● | SW–SM | | ■ ◆ | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

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| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY:<br>Fig. No: 190 | COMPLETION DEPTH: 3 m<br>COMPLETE: 08/19/04<br>Page 1 of 1 |

05/02/23 02:37PM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30031 |
| Donjek Services Ltd. | UTM ZONE: – N6766525 E638926 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND, trace silt<br>–damp, medium dense, brown | ⊠ | 421 | ●▲ | SW–SM | | ■ ◆ | 0.0 |
| 1.0 | | | | | | | | –1.0 |
| | SILTY SAND, some gravel 1.2m<br>–damp, medium dense, brown<br>–some decomposed wood | ⊠ | 422 | ● ▲ | SM | | ■ ◆ | |
| 2.0 | | | | | | | | –2.0 |
| | SANDY GRAVEL, some silt 2.1m<br>–moist, medium dense, brown | ⊠ | 423 | ●▲ | GP–GM | | ■ ◆ | |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | –3.0 |
| 4.0 | | | | | | | | –4.0 |
| 5.0 | | | | | | | | –5.0 |
| 6.0 | | | | | | | | –6.0 |

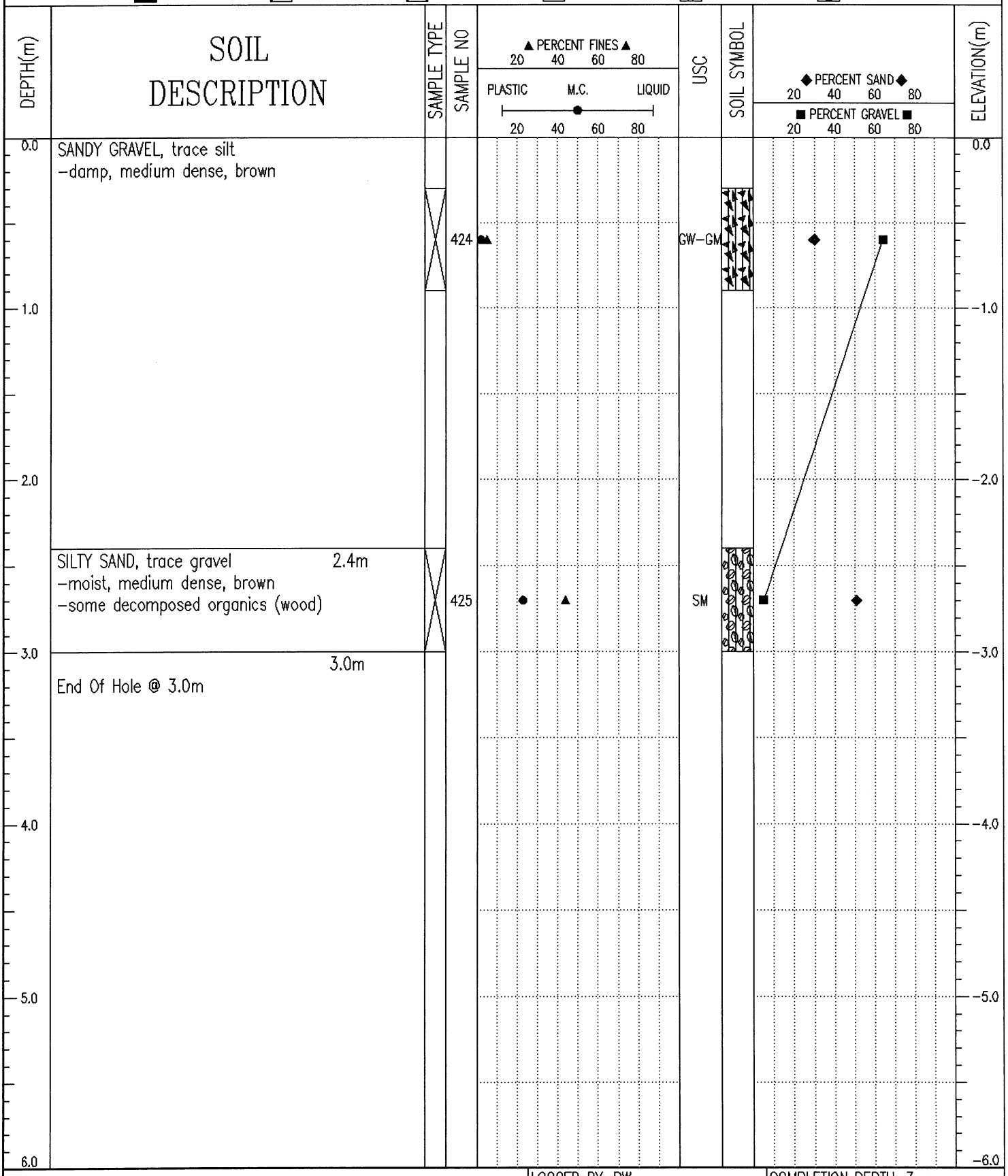
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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/19/04 |
| Fig. No: 191 | Page 1 of 1 |

05/02/21 08:17AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30032 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6766403 E638808 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE




| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 08/19/04 |
| | Fig. No: 192 | Page 1 of 1 |

05/02/23 02:38PM (YTG_HWYS)

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| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30033 |
| Donjek Services Ltd. | UTM ZONE: – N6766235 E638653 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL<br>–damp, medium dense, brown | | 426 | ● | GW | | ◆ ■ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | GRAVELLY SILTY SAND 1.5m<br>–damp, medium dense, brown w/ some black organic seams | | 427 | ● ▲ | SM | | ◆ ■ | |
| 2.0 | | | | | | | | -2.0 |
| | GRAVELLY SAND, some silt 2.1m<br>–damp, medium dense, brown | | 428 | ● ▲ | SM | | ◆ ■ | |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/19/04 |
| Fig. No: 193 | Page 1 of 1 |

05/02/23 02:38PM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30034 |
| Donjek Services Ltd. | UTM ZONE: – N6766172 E638452 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND<br>–damp, medium dense, brown | | 429 | ▲ | SW | | ■ ◆ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | ORGANIC SILTS 1.5m<br>–damp to moist, soft, dark brown | | | | | | | |
| | GRAVELLY SAND, trace silt 1.7m<br>–saturated, medium dense, brown | | 430 | ▲ | SW–SM | | ■ ◆ | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/19/04 |
| Fig. No: 194 | Page 1 of 1 |

05/02/21 08:17AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30035 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6766094 E638287 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLEY SAND, trace silt<br>–dry to damp, medium dense, brown | | 431 ●▲ | | SW–SM | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | GRAVELLY SAND 1.2m<br>–damp, medium dense, brown | | | | | | | |
| 2.0 | | | 432 ● | | SW | | | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
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| REVIEWED BY: | COMPLETE: 08/19/04 |
| Fig. No: 195 | Page 1 of 1 |

05/02/21 08:17AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30036 |
| Donjek Services Ltd. | UTM ZONE: – N6766043 E638094 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND<br>–damp, medium dense, brown | | 433 | | SP | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | SAND 2.1m<br>–wet, medium dense, brown | | 434 | | SW | | | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

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| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: | COMPLETE: 08/19/04 |
| Fig. No: 196 | Page 1 of 1 |

05/02/23 02:38PM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30037 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6765969 E637902 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SILTY SAND, some gravel<br>–wet, soft, dark brown<br>–some organic silts to 0.6m depth | AUGER | 435 | SM | | 0.0 |
| 1.0 | | | | | | -1.0 |
| 1.5m | GRAVELLY SILTY SAND<br>–wet, soft to firm, grey | | | | | |
| 2.0 | | AUGER | 436 | SM | | -2.0 |
| 3.0 | | | | | | -3.0 |
| | | AUGER | 437 | SM | | |
| 4.0 | | | | | | -4.0 |
| 4.0m | End Of Hole @ 4.0m – Refusal<br>–refusal @ 4.0m – move north 2m | | | | | |
| 5.0 | | | | | | -5.0 |
| 6.0 | | | | | | -6.0 |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

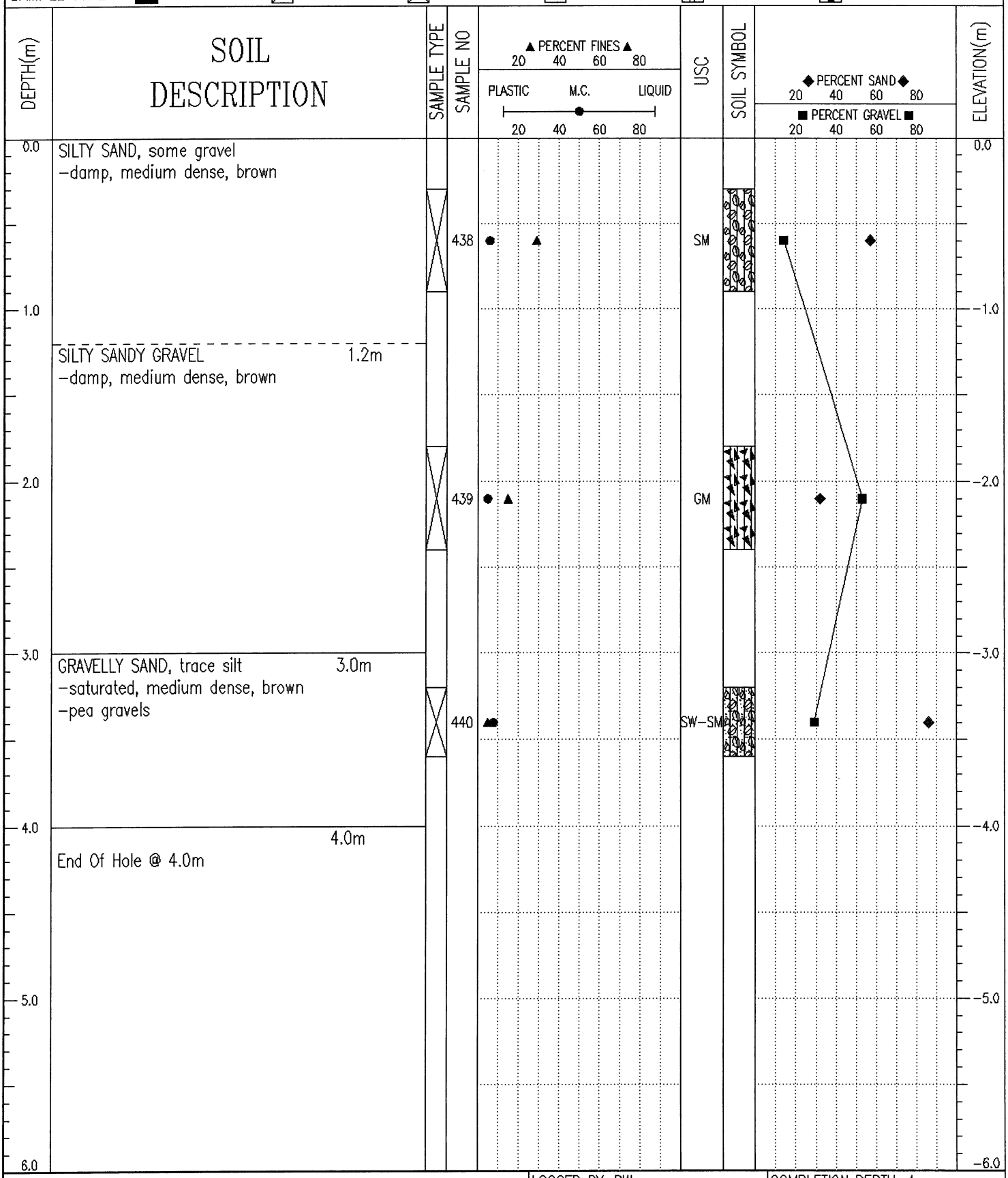
■ PERCENT GRAVEL ■ 20 40 60 80

| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 08/19/04 |
| | Fig. No: 197 | Page 1 of 1 |

05/02/21 08:18AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30038 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6765920 E637704 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

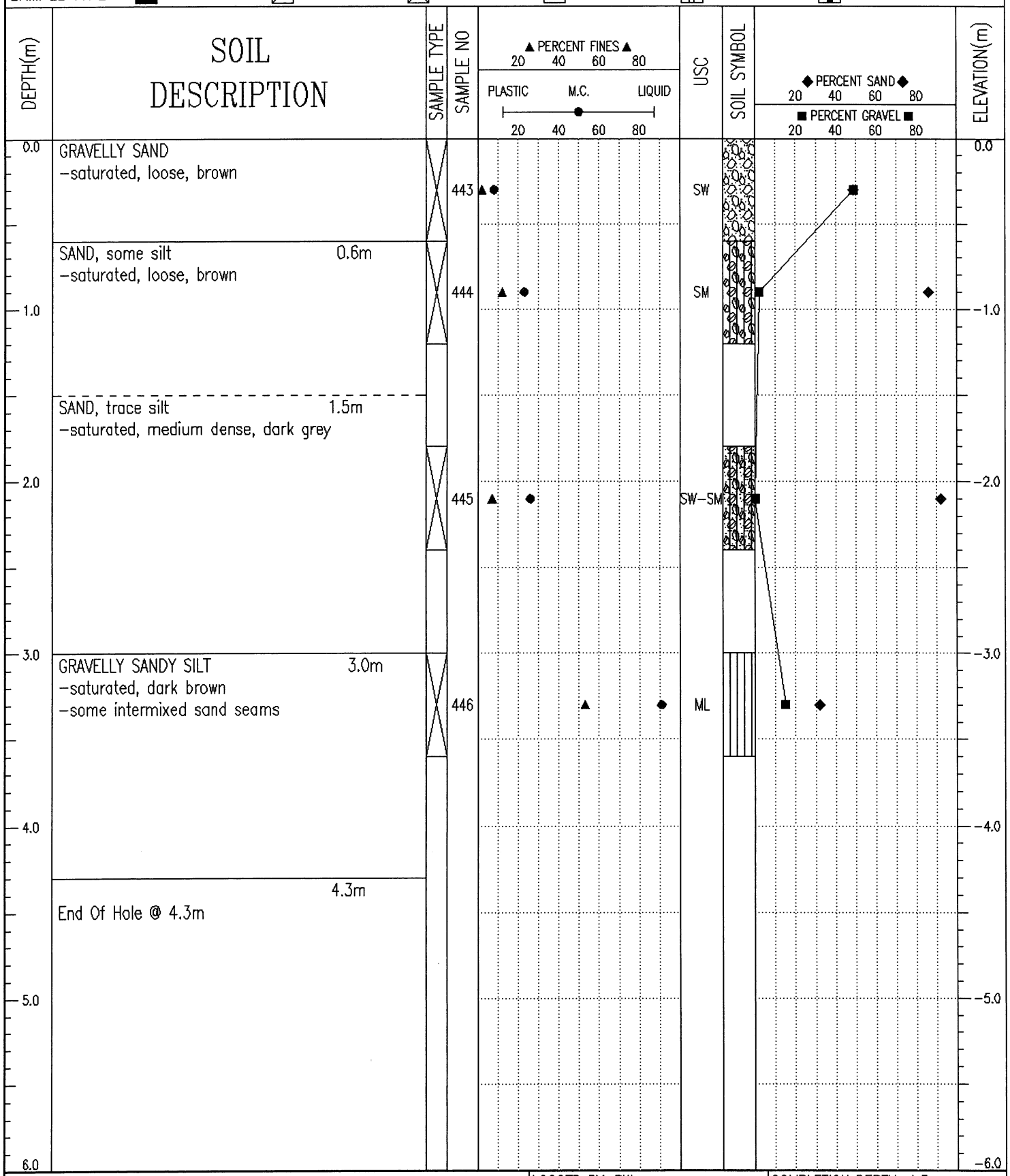



| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 08/19/04 |
| | Fig. No: 198 | Page 1 of 1 |

05/02/21 08:18AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30040 |
| Donjek Services Ltd. | UTM ZONE: – N6765598 E637444 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.3 m |
| | REVIEWED BY: | COMPLETE: 08/19/04 |
| | Fig. No: 200 | Page 1 of 1 |

05/02/23 02:38PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30041 |
| Donjek Services Ltd. | UTM ZONE: – N6765452 E637429 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⧄ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | SPT(N) | ▲PERCENT FINES▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆PERCENT SAND◆ 20 40 60 80 / ■PERCENT GRAVEL■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | | | | | | | | | 0.0 |
| 1.0 | | | | | | | | | -1.0 |
| 2.0 | SPT (N) @ 1.4m: 41+<br>–refusal at 10"<br>SANDY GRAVEL/GRAVELLY SAND<br>–dry to damp, medium dense, brown | ⧄ | 447 | | ● | GP | | | -2.0 |
| | 2.4m | | | | | | | | |
| 3.0 | End Of Hole @ 2.4m – Refusal<br>–refusal @ 2.4m – move north 2m<br>–refusal @ 1.5m – move north 2m<br>–refusal @ 1.8m – EOH | | | | | | | | -3.0 |
| 4.0 | | | | | | | | | -4.0 |
| 5.0 | | | | | | | | | -5.0 |
| 6.0 | | | | | | | | | -6.0 |
| 7.0 | | | | | | | | | -7.0 |
| 8.0 | | | | | | | | | -8.0 |
| 9.0 | | | | | | | | | -9.0 |
| 10.0 | | | | | | | | | -10.0 |
| 11.0 | | | | | | | | | -11.0 |
| 12.0 | | | | | | | | | -12.0 |

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| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 2.4 m |
| REVIEWED BY: | COMPLETE: 08/20/04 |
| Fig. No: 201 | Page 1 of 1 |

05/02/23 04:55PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30042 |
| Donjek Services Ltd. | UTM ZONE: – N6765198 E637411 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | SPT(N) | USC | SOIL SYMBOL |
|---|---|---|---|---|---|---|
| 0.0 | | | | | | |
| 1.0 | | | | | | |
| 2.0 | SPT (N) @ 1.4m: 18<br>GRAVELLY SAND, trace silt<br>–saturated, medium dense, brown | ▨ | 448 | 18 | SW–SM | |
| 3.0 | SPT (N) @ 2.9m: 7<br>SILTY SAND<br>–saturated, medium dense, grey/brown | ▨ | 449 | 7 | SM | |
| 4.0 | | | | | | |
| 5.0 | SPT (N) @ 4.4m: 6<br>SILTY SAND<br>–saturated, medium dense, grey/brown | ▨ | 450 | 6 | SM | |
| 6.0 | SPT (N) @ 5.9m: 15<br>SILTY SAND, trace gravel<br>–saturated, medium dense, brown | ▨ | 451 | 15 | SM | |
| 7.0 | | | | | | |
| 8.0 | SPT (N) @ 7.5m: 7<br>GRAVELLY SILTY SAND<br>–saturated, medium dense, brown | ▨ | 452 | 7 | SM | |
| 9.0 | SPT (N) @ 9.0m: 50<br>GRAVELLY SILTY SAND<br>–damp to moist, dense, brown<br>–some oxidation | ▨ | 453 | 50 | SM | |
| 10.0 | 9.9m<br>End Of Hole @ 9.9m – Refusal | | | | | |
| 11.0 | | | | | | |
| 12.0 | | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 9.9 m |
| REVIEWED BY: | COMPLETE: 08/20/04 |
| Fig. No: 202 | Page 1 of 1 |

05/02/23 04:55PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30043 |
| Donjek Services Ltd. | UTM ZONE: – N6764763 E636827 | PROJECT NO: 1002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | SPT(N) | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | | | | | | | | | 0.0 |
| 1.0 | | | | | | | | | -1.0 |
| 2.0 | SPT (N) @ 1.4m: 69<br>–7" recovry due to gravels<br>SANDY GRAVEL, some silt<br>–saturated, medium dense, brown | ▨ | 454 | 69 | ● ▲ | GM | | ◆ ■ | -2.0 |
| 3.0 | SPT (N) @ 2.9m: 16<br>SANDY SILT<br>–saturated, medium dense, brown/grey | ▨ | 455 | 16 | ● ▲ | ML | | ◆ ■ | -3.0 |
| 4.0 | | | | | | | | | -4.0 |
| 5.0 | SPT (N) @ 4.4m: 3<br>SILT, trace to some clay<br>–saturated, soft, grey | ▨ | 456 | 3 | ● ▲ | ML | | ■ ◆ | -5.0 |
| 6.0 | SPT (N) @ 5.9m: 4<br>SANDY SILT, some clay, trace gravel<br>–saturated, soft, grey<br>–non to low plastic | ▨ | 457 | 4 | ● ▲ | ML | | ■ ◆ | -6.0 |
| 7.0 | | | | | | | | | -7.0 |
| 8.0 | SPT (N) @ 7.5m: 9<br>SILT, trace sand<br>–saturated, soft, grey | ▨ | 458 | 9 | ● ▲ | ML | | ■ ◆ | -8.0 |
| 9.0 | SPT (N) @ 9.0m: No (N) Value.<br>–spoon pushed entire depth under weight of hammer.<br>CLAYEY SILT<br>–saturated, soft, grey | ▨ | 459 | | ● ▲ | ML | | ■ ◆ | -9.0 |
| 10.0 | | | | | | | | | -10.0 |
| 11.0 | SPT (N) @ 10.5m: No (N) Value.<br>–spoon pushed entire depth under weight of hammer.<br>CLAYEY SILT<br>–saturated, soft, grey | ▨ | 460 | | ● ▲ | ML | | ■ ◆ | -11.0 |
| 12.0 | | | | | | | | | -12.0 |

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Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 11.1 m |
| REVIEWED BY: | COMPLETE: 08/21/04 |
| Fig. No: 203 | Page 1 of 1 |

05/02/23 04:55PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30044 |
| Donjek Services Ltd. | UTM ZONE: – N6764727 E636668 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SILTY SAND, trace gravel<br>–saturated, medium dense, grey | ⊠ | 461 | SM | | 0.0 |
| 1.2 | SILTY GRAVELLY SAND<br>–saturated, medium dense, brown | ⊠ | 462 | SM | | -1.0 |
| 2.4 | SILT, some sand, trace gravel<br>–wet, soft to firm, grey<br>–non to low plastic | ⊠ | 462 | ML | | -2.0 |
| 4.0 | SILTY SAND, some gravel<br>–saturated, medium dense, grey | ⊠ | 463 | SM | | -3.0 |
| 4.6 | End Of Hole @ 4.6m | | | | | -4.0 |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| | REVIEWED BY: | COMPLETE: 08/21/04 |
| | Fig. No: 204 | Page 1 of 1 |

05/02/23 04:57PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30045 |
| Donjek Services Ltd. | UTM ZONE: - N6764640 E636398 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SAND<br>-saturated, medium dense, grey | ⊠ | 465 | ◆ ▲ | SM | | ■ ◆ | 0.0 |
| 1.0 | SILTY GRAVELLY SAND 0.3m<br>-saturated, medium dense, brown/grey | | | | | | | -1.0 |
| 2.0 | SAND, trace to some silt 1.5m<br>-saturated, medium dense, grey | ⊠ | 466 | ▲ ● | SW-SM | | ■ ◆ | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | SAND, some silt, trace gravel 4.0m<br>-saturated, medium dense, grey | ⊠ | 467 | ◆ | SM | | ■ ◆ | -4.0 |
| 5.0 | 4.6m<br>End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| REVIEWED BY: | COMPLETE: 08/21/04 |
| Fig. No: 205 | Page 1 of 1 |

05/02/23 04:58PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30046 |
| Donjek Services Ltd. | UTM ZONE: – N6764571 E636230 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | SPT(N) | USC | SOIL SYMBOL |
|---|---|---|---|---|---|---|
| 0.0 | | | | | | |
| 1.0 | | | | | | |
| 2.0 | SPT (N) @ 1.4m: 42<br>-6" recovery to gravels<br>SILTY GRAVELLY SAND<br>-saturated, medium dense, grey/brown | S.P.T. | 468 | 42 | SM | |
| 3.0 | SPT (N) @ 2.9m: 19<br>SANDY SILT<br>-wet, soft to firm, grey | S.P.T. | 469 | 19 | ML | |
| 4.0 | | | | | | |
| 5.0 | SPT (N) @ 4.4m: 6<br>SILTY SAND, some gravel<br>-wet, medium dense, brown/grey | S.P.T. | 470 | 6 | SM | |
| 6.0 | SPT (N) @ 5.9m: 12<br>SILTY SAND<br>-wet, medium dense, grey | S.P.T. | 471 | 12 | SM | |
| 7.0 | 6.6m<br>End Of Hole @ 6.6m | | | | | |
| 8.0 | | | | | | |
| 9.0 | | | | | | |
| 10.0 | | | | | | |
| 11.0 | | | | | | |
| 12.0 | | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 6.6 m |
| REVIEWED BY: | COMPLETE: 08/21/04 |
| Fig. No: 206 | Page 1 of 1 |

05/02/23 04:55PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30047 |
| Donjek Services Ltd. | UTM ZONE: - N6764452 E636077 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND, trace to some silt<br>-saturated, medium dense, brown | ⊠ | 472 | SW-SM | |
| 1.0 | | | | | |
| 2.0 | | ⊠ | 473 | SW-SM | |
| 3.0 | | | | | |
| 3.6m | SILTY SAND<br>-saturated, medium dense, grey | ⊠ | 474 | SM | |
| 4.0 | | | | | |
| 4.6m | End Of Hole @ 4.6m | | | | |
| 5.0 | | | | | |
| 6.0 | | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| | REVIEWED BY: - | COMPLETE: 08/21/04 |
| | Fig. No: 207 | Page 1 of 1 |

05/02/23 04:58PM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30049 |
| Donjek Services Ltd. | UTM ZONE: - N6764453 E635652 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES / PLASTIC M.C. LIQUID | USC | SOIL SYMBOL | PERCENT SAND / PERCENT GRAVEL | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT<br>-moist to wet, soft to firm, brown<br>-decomposed organics to 0.3m depth | | | | | | | 0.0 |
| 0.6m | CLAYEY SILT<br>-moist to wet, soft to firm, grey<br>-low plastic | ⊠ | 475 | | ML | | | -1.0 |
| 1.5m | SILT, trace sand<br>-wet, soft to firm, grey<br>-fine grained sands | ⊠ | 476 | | ML | | | -2.0 |
| 2.5m | CLAYEY SILT, trace sand<br>-wet, firm, grey<br>-low plastic | ⊠ | 477 | | ML | | | -3.0 |
| 3.7m | SANDY SILT<br>-moist to wet, firm, grey | ⊠ | 478 | | ML | | | -4.0 |
| 4.6m | End Of Hole @ 4.6m | | | | | | | -5.0 |
| 5.0 | | | | | | | | -6.0 |
| 6.0 | | | | | | | | -7.0 |
| 7.0 | | | | | | | | -8.0 |
| 8.0 | | | | | | | | -9.0 |
| 9.0 | | | | | | | | -10.0 |
| 10.0 | | | | | | | | -11.0 |
| 11.0 | | | | | | | | -12.0 |
| 12.0 | | | | | | | | |

PERCENT FINES ▲ 20 40 60 80 — PLASTIC M.C. LIQUID — 20 40 60 80

PERCENT SAND ◆ 20 40 60 80 — PERCENT GRAVEL ■ 20 40 60 80

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| | REVIEWED BY: - | COMPLETE: 08/21/04 |
| | Fig. No: 208 | Page 1 of 1 |

05/02/23 04:58PM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30050 |
| Donjek Services Ltd. | UTM ZONE: - N6764514 E635462 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILTY SAND/SANDY SILT<br>-damp, medium dense, brown<br>-organics noted to 0.3m (rootlets/grasses) | | | | | | | 0.0 |
| 1.0 | SILT, trace sand 0.6m<br>-moist to wet, soft to firm, grey | ⊠ | 479 | ● ▲ | ML | | ■ ◆ | -1.0 |
| 2.0 | | ⊠ | 480 | ● ▲ | ML | | ■ ◆ | -2.0 |
| 3.0 | SANDY SILT 3.0m<br>-moist, soft to firm, grey<br>-fine grained sands | ⊠ | 481 | ● ▲ | ML | | ■ ◆ | -3.0 |
| 4.0 | SILT, trace sand 3.6m<br>-wet, soft, grey | ⊠ | 482 | ● ▲ | ML | | ■ ◆ | -4.0 |
| 5.0 | 4.6m<br>End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| REVIEWED BY: - | COMPLETE: 08/21/04 |
| Fig. No: 209 | Page 1 of 1 |

05/02/23 04:58PM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30051 |
| Donjek Services Ltd. | UTM ZONE: - N6764643 E635301 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | SPT(N) | USC | SOIL SYMBOL |
|---|---|---|---|---|---|---|
| 0.0 | | | | | | |
| 1.0 | | | | | | |
| 2.0 | SPT (N) @ 1.4m: 9<br>SANDY SILT<br>-saturated, grey | ▨ | 483 | 9 | ML | |
| 3.0 | SPT (N) @ 2.9m: 6<br>SILTY SAND<br>-saturated, grey | ▨ | 484 | 6 | SM | |
| 4.0 | | | | | | |
| 5.0 | SPT (N) @ 4.4m: 5<br>SILTY SAND<br>-saturated, grey | ▨ | 485 | 5 | SM | |
| 6.0 | SPT (N) @ 5.9m: 2<br>SILTY SAND<br>-saturated, grey | ▨ | 486 | 2 | SM | |
| | 6.4m | | | | | |
| 7.0 | End Of Hole @ 6.4m | | | | | |
| 8.0 | | | | | | |
| 9.0 | | | | | | |
| 10.0 | | | | | | |
| 11.0 | | | | | | |
| 12.0 | | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 6.4 m |
| REVIEWED BY: - | COMPLETE: 08/22/04 |
| Fig. No: 210 | Page 1 of 1 |

05/02/23 04:55PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30052 |
| Donjek Services Ltd. | UTM ZONE: - N6764793 E635196 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | SPT(N) | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | | | | | | | | | 0.0 |
| 1.0 | | | | | | | | | -1.0 |
| | SPT (N) @ 1.4m: 14<br>SILTY SAND<br>-saturated, grey | ⊘ | 487 | 14 | ● | SM | | | |
| 2.0 | | | | | | | | | -2.0 |
| 3.0 | SPT (N) @ 2.9m: No sample. Hollow stem infilled >1.0m | | | | | | | | -3.0 |
| 4.0 | SPT (N) @ 4.4m: No sample. Hollow stem infilled >1.0m | | | | | | | | -4.0 |
| | 4.4m | | | | | | | | |
| 5.0 | End Of Hole @ 4.4m<br>-hollows infilled @ 2.9m – move north 4m<br>-hollows infilled @ 2.9 and 4.4m – EOH | | | | | | | | -5.0 |
| 6.0 | | | | | | | | | -6.0 |
| 7.0 | | | | | | | | | -7.0 |
| 8.0 | | | | | | | | | -8.0 |
| 9.0 | | | | | | | | | -9.0 |
| 10.0 | | | | | | | | | -10.0 |
| 11.0 | | | | | | | | | -11.0 |
| 12.0 | | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW
REVIEWED BY: -
Fig. No: 211

COMPLETION DEPTH: 4.4 m
COMPLETE: 08/25/04



05/02/23 04:56PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30053 |
| Donjek Services Ltd. | UTM ZONE: - N6764972 E635055 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | SPT(N) | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | | | | | | | | | 0.0 |
| 1.0 | | | | | | | | | -1.0 |
| | SPT (N) @ 1.4m: 5<br>SILTY SAND<br>-saturated, grey/brown | ▨ | 488 | | ● | SM | | | |
| 2.0 | | | | | | | | | -2.0 |
| 3.0 | SPT (N) @ 2.9m: 6<br>SILTY SAND<br>-saturated, grey/brown | ▨ | 489 | | ● | SM | | | -3.0 |
| 4.0 | | | | | | | | | -4.0 |
| | SPT (N) @ 4.4m: No sample. Hollow stem infilled >1.0m | | | | | | | | |
| 5.0 | | | | | | | | | -5.0 |
| 6.0 | SPT (N) @ 5.0m: No sample. Hollow stem infilled 2.4m | | | | | | | | -6.0 |
| | 5.9m<br>End Of Hole @ 5.9m<br>-Bit stuck in hollow due due to silt/sand plug infill | | | | | | | | |
| 7.0 | | | | | | | | | -7.0 |
| 8.0 | | | | | | | | | -8.0 |
| 9.0 | | | | | | | | | -9.0 |
| 10.0 | | | | | | | | | -10.0 |
| 11.0 | | | | | | | | | -11.0 |
| 12.0 | | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| | REVIEWED BY: - | COMPLETE: 08/25/04 |
| | Fig. No: 212 | Page 1 of 1 |

05/02/23 04:58PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30054 |
| Donjek Services Ltd. | UTM ZONE: - N6765115 E634942 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | SPT(N) | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | | | | | | | | | 0.0 |
| 1.0 | | | | | | | | | -1.0 |
| | SPT (N) @ 1.4m: 8<br>SAND, some silt<br>-saturated, brown/grey | ▨ | 490 | | | SM | | | |
| 2.0 | | | | | | | | | -2.0 |
| | SPT (N) @ 2.9m: No sample. Hollow stem infilled 0.8m | | | | | | | | |
| 3.0 | 2.9m | | | | | | | | -3.0 |
| | End Of Hole @ 2.9m<br>-move north 3m (redrill with solid stem) | | | | | | | | |
| 4.0 | | | | | | | | | -4.0 |
| 5.0 | | | | | | | | | -5.0 |
| 6.0 | | | | | | | | | -6.0 |
| 7.0 | | | | | | | | | -7.0 |
| 8.0 | | | | | | | | | -8.0 |
| 9.0 | | | | | | | | | -9.0 |
| 10.0 | | | | | | | | | -10.0 |
| 11.0 | | | | | | | | | -11.0 |
| 12.0 | | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 2.9 m |
| | REVIEWED BY: - | COMPLETE: 08/25/04 |
| | Fig. No: 213 | Page 1 of 1 |

05/02/23 04:58PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30055 |
| Donjek Services Ltd. | UTM ZONE: - N6765279 E634837 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲PERCENT FINES▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆PERCENT SAND◆ 20 40 60 80 / ■PERCENT GRAVEL■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT, some sand<br>-moist to wet, soft to firm, brown w/ some grey seams<br>-organics noted to 0.9m depth | ⊠ | 498 | ◆ | ML | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | SILT 1.2m<br>-wet to saturated, soft, grey | | | | | | | |
| 2.0 | | ⊠ | 499 | ◆ | ML | | | -2.0 |
| 3.0 | SILTY SAND/SANDY SILT 2.9m<br>-saturated, soft, grey/brown<br>-very soupy | | | | | | | -3.0 |
| 4.0 | | ⊠ | 500 | ◆ | ML | | | -4.0 |
| 5.0 | SILTY SAND/SANDY SILT 4.9m<br>-saturated, soft, grey/brown<br>-silt seam noted @ 5.2m (200mm thick) | ⊠ | 501 | ◆ | ML | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | SILTY SAND 6.7m<br>-saturated, medium dense, brown/grey | ⊠ | 502 | ◆ | SM | | | -7.0 |
| 8.0 | | ⊠ | 503 | ◆ | SM | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | SILTY SAND to SAND, some silt 10.0m<br>-saturated, medium dense, brown/grey<br>-silt seam noted @ 11.0m (200mm thick)<br>-silt seam noted @ 12.8m (200mm thick) | ⊠ | 504 | ◆ | SM | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | ⊠ | 505 | ◆ | SM | | | -12.0 |

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Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 15.1 m |
| REVIEWED BY: - | COMPLETE: 08/26/04 |
| Fig. No: 215 | Page 1 of 2 |

05/02/23 04:58PM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30055 |
| Donjek Services Ltd. | UTM ZONE: - N6765279 E634837 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | | | | | | | 12.0 |
| 13.0 | | ⊠ | 506 | ● | SM | | | 13.0 |
| 14.0 | | ⊠ | 507 | ● | SM | | | 14.0 |
| 15.0 | 15.1m<br>End Of Hole @ 15.1m | | | | | | | 15.0 |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 15.1 m |
| REVIEWED BY: - | COMPLETE: 08/26/04 |
| Fig. No: 215 | Page 2 of 2 |

05/02/23 04:56PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30056 |
| Donjek Services Ltd. | UTM ZONE: - N6765296 E634757 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVELLY SILT<br>-saturated, medium dense, brown | ⊠ | 528 | ● | ML | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | SAND, trace to some silt 1.5m<br>-saturated, medium dense, brown | | | | | | | |
| 2.0 | | ⊠ | 529 | ● | SP-SM | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | ⊠ | 530 | ● | SP-SM | | | -4.0 |
| 5.0 | | ⊠ | 531 | ● | SP-SM | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| | SANDY SILT/SILTY SAND 6.4m<br>-saturated, soft, brown<br>-some silt seams to 300mm thick | | | | | | | |
| 7.0 | | ⊠ | 532 | ● | ML | | | -7.0 |
| 8.0 | | ⊠ | 533 | ● | ML | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| | SAND, some silt 9.1m<br>-saturated, medium dense, brown | | | | | | | |
| 10.0 | | ⊠ | 534 | ● | SM | | | -10.0 |
| 11.0 | | ⊠ | 535 | ● | SM | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 216 | COMPLETION DEPTH: 15.2 m<br>COMPLETE: 08/27/04<br>Page 1 of 2 |

05/02/23 04:50PM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30056 |
| Donjek Services Ltd. | UTM ZONE: – N6765296 E634757 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | | | | | | | 12.0 |
| | SILTY SAND 12.5m<br>–saturated, medium dense, brown<br>–some silt seams to 200mm thick | ⊠ | 536 | ● | SM | | | |
| 13.0 | | | | | | | | 13.0 |
| 14.0 | SAND, trace to some silt 13.9m<br>–saturated, medium dense, brown | ⊠ | 537 | ● | SP-SM | | | 14.0 |
| 15.0 | | | | | | | | 15.0 |
| | 15.2m<br>End of Hole @ 15.2m | | | | | | | |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY:<br>Fig. No: 216 | COMPLETION DEPTH: 15.2 m<br>COMPLETE: 08/27/04<br>Page 2 of 2 |

05/02/23 04:58PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30057 |
| Donjek Services Ltd. | UTM ZONE: - N6765406 E634728 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT, some sand<br>-saturated, soft, grey/brown<br>-organics noted to 0.2m depth | ⊠ | 508 | ● | ML | | | 0.0 |
| 1.0 | SAND, some silt to SILTY 1.2m<br>-saturated, medium dense, brown/grey | | | | | | | -1.0 |
| 2.0 | | ⊠ | 509 | ● | SM | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | ⊠ | 510 | ● | SM | | | -4.0 |
| 5.0 | SILT 5.2m<br>-saturated, soft, grey | | | | | | | -5.0 |
| 6.0 | | ⊠ | 511 | ● | ML | | | -6.0 |
| 7.0 | | ⊠ | 512 | ● | ML | | | -7.0 |
| 8.0 | | ⊠ | 513 | ● | ML | | | -8.0 |
| 9.0 | SAND, some silt 8.8m<br>-saturated, medium dense, brown/grey<br>-silt seam @ 10.7m (300mm thick) | | | | | | | -9.0 |
| 10.0 | | ⊠ | 514 | ● | SM | | | -10.0 |
| 11.0 | SANDY SILT 11.0m<br>-saturated, soft, brown/grey<br>-very fine grained sands | ⊠ | 515 | ● | ML | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 30.3 m |
| REVIEWED BY: | COMPLETE: 08/26/04 |
| Fig. No: 217 | Page 1 of 3 |

05/02/23 04:56PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30057 |
| Donjek Services Ltd. | UTM ZONE: – N6765406 E634728 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | | | | | | | -12.0 |
| 13.0 | SAND, some silt to SILTY 12.8m<br>-saturated, medium dense, brown/grey | ⊠ | 516 | ● | SM | | | -13.0 |
| 14.0 | | ⊠ | 517 | ● | SM | | | -14.0 |
| 15.0 | | | | | | | | -15.0 |
| 16.0 | | ⊠ | 518 | ● | SM | | | -16.0 |
| 17.0 | | ⊠ | 519 | ● | SM | | | -17.0 |
| 18.0 | | | | | | | | -18.0 |
| 19.0 | | ⊠ | 520 | ● | SM | | | -19.0 |
| 20.0 | | ⊠ | 521 | ● | SM | | | -20.0 |
| 21.0 | | | | | | | | -21.0 |
| 22.0 | SILT 21.9m<br>-saturated, soft, grey<br>-non to low plastic | ⊠ | 522 | ● | ML | | | -22.0 |
| 23.0 | | ⊠ | 523 | ● | ML | | | -23.0 |
| 24.0 | | | | | | | | -24.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 30.3 m |
| REVIEWED BY: | COMPLETE: 08/26/04 |
| Fig. No: 217 | Page 2 of 3 |

05/02/23 04:58PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30057 |
| Donjek Services Ltd. | UTM ZONE: - N6765406 E634728 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 24.0 | | | | | | | | 24.0 |
| | SILT 24.4m<br>-saturated, soft to firm, grey<br>-low plastic | | | | | | | |
| 25.0 | | ⊠ | 524 | ● | ML | | | 25.0 |
| 26.0 | | ⊠ | 525 | ● | ML | | | 26.0 |
| 27.0 | | | | | | | | 27.0 |
| 28.0 | | ⊠ | 526 | ● | ML | | | 28.0 |
| 29.0 | | | | | | | | 29.0 |
| | | ⊠ | 527 | ● | ML | | | |
| 30.0 | | | | | | | | 30.0 |
| | 30.3m<br>End Of Hole @ 30.3m | | | | | | | |
| 31.0 | | | | | | | | 31.0 |
| 32.0 | | | | | | | | 32.0 |
| 33.0 | | | | | | | | 33.0 |
| 34.0 | | | | | | | | 34.0 |
| 35.0 | | | | | | | | 35.0 |
| 36.0 | | | | | | | | 36.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 30.3 m |
| | REVIEWED BY: - | COMPLETE: 08/26/04 |
| | Fig. No: 217 | Page 3 of 3 |

05/02/23 04:56PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30058 |
| Donjek Services Ltd. | UTM ZONE: - N6765412 E634679 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT, some sand<br>-wet, soft to firm, grey/brown<br>-organics noted to 0.6m depth | | ⊠ | 538 | • | ML | | | 0.0 |
| 1.0 | | | | | | | | | -1.0 |
| | SILTY GRAVEL, some sand<br>-saturated, soft, grey/brown<br>-grindy drilling | 1.2m | ⊠ | 539 | • | GM | | | |
| 2.0 | | | | | | | | | -2.0 |
| | SAND, trace silt<br>-saturated, medium dense, brown | 2.1m | | | | | | | |
| 3.0 | | | | | | | | | -3.0 |
| 4.0 | | | ⊠ | 540 | • | SP-SM | | | -4.0 |
| 5.0 | SILT, some clay<br>-saturated, soft to firm, grey<br>-non to low plastic | 4.9m | ⊠ | 541 | • | ML | | | -5.0 |
| 6.0 | SAND, trace silt<br>-saturated, medium dense, brown | 5.9m | | | | | | | -6.0 |
| 7.0 | | | ⊠ | 542 | • | SP-SM | | | -7.0 |
| 8.0 | | | ⊠ | 543 | • | SP-SM | | | -8.0 |
| 9.0 | | | | | | | | | -9.0 |
| 10.0 | | | ⊠ | 544 | • | SP-SM | | | -10.0 |
| 11.0 | | | ⊠ | 545 | • | SP-SM | | | -11.0 |
| 12.0 | SILTY SAND/SANDY SILT | 11.6m | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 30.5 m |
| REVIEWED BY: - | COMPLETE: 08/28/04 |
| Fig. No: 218 | Page 1 of 3 |

05/02/23 05:00PM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30058 |
| Donjek Services Ltd. | UTM ZONE: - N6765412 E634679 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | -saturated, soft, brown/grey | | | | | | | -12.0 |
| 13.0 | | ⊠ | 546 | ● | ML | | | -13.0 |
| 14.0 | SILT, trace to some sand, some clay 13.7m<br>-saturated, soft, brown/grey<br>-non to low plastic | ⊠ | 547 | ● | ML | | | -14.0 |
| 15.0 | | | | | | | | -15.0 |
| 16.0 | SAND, some silt to SILTY 15.4m<br>-saturated, medium dense, brown<br>-some silt seams (200mm thick) | ⊠ | 548 | ● | SM | | | -16.0 |
| 17.0 | | | | | | | | -17.0 |
| 18.0 | SAND, trace to some silt 17.4m<br>-saturated, medium dense, brown | ⊠ | 549 | ● | SP-SM | | | -18.0 |
| 19.0 | | ⊠ | 550 | ● | SP-SM | | | -19.0 |
| 20.0 | | ⊠ | 551 | ● | SP-SM | | | -20.0 |
| 21.0 | | | | | | | | -21.0 |
| 22.0 | | | | | | | | -22.0 |
| 23.0 | SILT 22.9m<br>-saturated, soft, grey<br>-non to low plastic | | | | | | | -23.0 |
| 24.0 | | ⊠ | 552 | ● | ML | | | -24.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 218 | COMPLETION DEPTH: 30.5 m<br>COMPLETE: 08/28/04<br>Page 2 of 3 |

05/02/23 05:00PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30058 |
| Donjek Services Ltd. | UTM ZONE: - N6765412 E634679 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 24.0 | | ⊠ | 552 | ● | ML | | | 24.0 |
| | SILT, trace to some clay 24.4m<br>-saturated, soft to firm, grey<br>-low plastic | | | | | | | |
| 25.0 | | ⊠ | 553 | ● | ML | | | 25.0 |
| 26.0 | CLAYEY SILT 25.9m<br>-wet to saturated, soft to firm, grey<br>-low plastic | ⊠ | 554 | ● | ML | | | 26.0 |
| 27.0 | | | | | | | | 27.0 |
| 28.0 | | ⊠ | 555 | ● | ML | | | 28.0 |
| 29.0 | | | | | | | | 29.0 |
| 30.0 | | ⊠ | 556 | ● | ML | | | 30.0 |
| | 30.5m | | | | | | | |
| 31.0 | End Of Hole @ 30.5m | | | | | | | 31.0 |
| 32.0 | | | | | | | | 32.0 |
| 33.0 | | | | | | | | 33.0 |
| 34.0 | | | | | | | | 34.0 |
| 35.0 | | | | | | | | 35.0 |
| 36.0 | | | | | | | | 36.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 218 | COMPLETION DEPTH: 30.5 m<br>COMPLETE: 08/28/04<br>Page 3 of 3 |

05/02/23 05:00PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30059 |
| Donjek Services Ltd. | UTM ZONE: - N6765507 E634609 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT<br>-dry to damp, medium dense, light brown<br>-boulder fill along river bank<br>-organics throughout<br>-very grindy due to boulder fill | | 557 | ML | | 0.0 |
| 1.0 | SILT, some sand 1.0m<br>-wet to saturated, soft, brown/grey | | 558 | ML | | -1.0 |
| 2.0 | | | | | | -2.0 |
| 3.0 | SAND, trace to some silt 2.4m<br>-saturated, medium dense, brown/grey | | 559 | SM | | -3.0 |
| 4.0 | | | | | | -4.0 |
| 5.0 | SILT 4.6m<br>-saturated, soft, grey | | 560 | ML | | -5.0 |
| 6.0 | | | | | | -6.0 |
| 7.0 | SAND 6.1m<br>-saturated, medium dense, brown<br>-minimal material on flights for samples #561 & #562 (flights washed clean) | | 561 | SP | | -7.0 |
| 8.0 | | | | | | -8.0 |
| 9.0 | | | | | | -9.0 |
| 10.0 | | | 562 | SP | | -10.0 |
| 11.0 | SILT, trace to some clay 10.7m<br>-saturated, soft, grey<br>-non to low plastic | | 563 | ML | | -11.0 |
| 12.0 | | | | | | -12.0 |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 30.3 m |
| REVIEWED BY: - | COMPLETE: 08/28/04 |
| Fig. No: 219 | Page 1 of 3 |

05/02/23 05:00PM (YTC_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30059 |
| Donjek Services Ltd. | UTM ZONE: - N6765507 E634609 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | SAND, trace to some silt 12.2m<br>-saturated, medium dense, brown/grey<br>-minimal material on flights for sample #564 (flights washed clean) | | | | | | | 12.0 |
| 13.0 | | | 564 | | SP-SM | | | 13.0 |
| 14.0 | | | 565 | | SP-SM | | | 14.0 |
| 15.0 | | | | | | | | 15.0 |
| 16.0 | | | 566 | | SP-SM | | | 16.0 |
| 17.0 | | | 567 | | SP-SM | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | 568 | | SP-SM | | | 19.0 |
| 20.0 | SILTY SAND/SANDY SILT 20.1m<br>-saturated, medium dense, brown/grey<br>-increase silt w/ depth | | 569 | | ML | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | 570 | | ML | | | 22.0 |
| 23.0 | SILT 22.9m<br>-saturated, soft, grey | | 571 | | ML | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

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Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 30.3 m |
| REVIEWED BY: | COMPLETE: 08/28/04 |
| Fig. No: 219 | Page 2 of 3 |

05/02/23 05:00PM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30059 |
| Donjek Services Ltd. | UTM ZONE: - N6765507 E634609 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 24.0 | | | | | | | | -24.0 |
| | SILT 24.4m<br>-saturated, soft to firm, grey | | | | | | | |
| 25.0 | | ⊠ | 572 | ● | ML | | | -25.0 |
| 26.0 | | ⊠ | 573 | ● | ML | | | -26.0 |
| 27.0 | | | | | | | | -27.0 |
| 28.0 | | ⊠ | 574 | ● | ML | | | -28.0 |
| 29.0 | | | | | | | | -29.0 |
| | | ⊠ | 575 | ● | ML | | | |
| 30.0 | | | | | | | | -30.0 |
| | 30.3m<br>End Of Hole @ 30.3 | | | | | | | |
| 31.0 | | | | | | | | -31.0 |
| 32.0 | | | | | | | | -32.0 |
| 33.0 | | | | | | | | -33.0 |
| 34.0 | | | | | | | | -34.0 |
| 35.0 | | | | | | | | -35.0 |
| 36.0 | | | | | | | | -36.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 219 | COMPLETION DEPTH: 30.3 m<br>COMPLETE: 08/28/04<br>Page 3 of 3 |

05/02/23 05:00PM (YTC_JWTS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30061 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6765562 E634611 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL/GRAVELLY SAND, some silt<br>-damp to moist, medium dense, brown | | 576 | GP-GM | |
| 0.6m | SILT, some sand to SANDY<br>-moist to wet, soft, brown/grey | | 577 | ML | |
| 2.4m | SAND, trace to some silt<br>-saturated, medium dense, brown | | 578 | SP-SM | |
| | | | 579 | SP-SM | |
| | | | 580 | SP-SM | |
| 6.1m | SAND, some silt<br>-saturated, medium dense, brown<br>-fine grained sands | | 581 | SM | |
| | | | 582 | SM | |
| | | | 583 | SM | |
| 10.1m | SILT<br>-saturated, soft, grey<br>-non to low plastic | | 584 | ML | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 30.3 m |
|---|---|---|
| | REVIEWED BY: - | COMPLETE: 08/29/04 |
| | Fig. No: 220 | Page 1 of 3 |

05/02/23 05:00PM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30061 |
| Donjek Services Ltd. | UTM ZONE: - N6765562 E634611 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | SAND, some silt 12.2m<br>-saturated, medium dense, brown<br>-fine grained sands | ⊠ | 585 | ● | SM | | | 12.0 |
| 13.0 | | | | | | | | 13.0 |
| 14.0 | | ⊠ | 586 | ● | SM | | | 14.0 |
| 15.0 | | | | | | | | 15.0 |
| 16.0 | | ⊠ | 587 | ● | SM | | | 16.0 |
| 17.0 | | ⊠ | 588 | ● | SM | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | ⊠ | 589 | ● | SM | | | 19.0 |
| 20.0 | SILT, trace to some clay 19.8m<br>-wet to saturated, soft, grey | ⊠ | 590 | ● | ML | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | ⊠ | 591 | ● | ML | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | SANDY SILT/SILTY SAND 23.2m<br>-saturated, soft, brown/grey<br>-silt & sand seams intermixed | ⊠ | 592 | ● | ML | | | 24.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 220 | COMPLETION DEPTH: 30.3 m<br>COMPLETE: 08/29/04<br>Page 2 of 3 |

05/02/23 05:01PM (YIC_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30061 |
| Donjek Services Ltd. | UTM ZONE: - N6765562 E634611 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 24.0 | | | | | | | | 24.0 |
| 25.0 | SILT, trace to some clay 25.0m<br>-wet to saturated, soft to firm, grey | ⊠ | 593 | ● | ML | | | 25.0 |
| 26.0 | | ⊠ | 594 | ● | ML | | | 26.0 |
| 27.0 | | | | | | | | 27.0 |
| 28.0 | SANDY SILT 28.0m<br>-saturated, soft, grey | ⊠ | 595 | ◆ | ML | | | 28.0 |
| 29.0 | SILT, trace to some clay 28.7m<br>-wet to saturated, soft to firm, grey | ⊠ | 596 | ● | ML | | | 29.0 |
| 30.0 | 30.3m<br>End Of Hole @ 30.3m | | | | | | | 30.0 |
| 31.0 | | | | | | | | 31.0 |
| 32.0 | | | | | | | | 32.0 |
| 33.0 | | | | | | | | 33.0 |
| 34.0 | | | | | | | | 34.0 |
| 35.0 | | | | | | | | 35.0 |
| 36.0 | | | | | | | | 36.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 30.3 m |
| REVIEWED BY: - | COMPLETE: 08/29/04 |
| Fig. No: 220 | Page 3 of 3 |

05/02/23 05:01PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30062 |
| Donjek Services Ltd. | UTM ZONE: - N6765721 E634495 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SAND, some silt to SILTY<br>-damp to moist, medium dense, brown | AUGER | 597 | SM | | 0.0 |
| 0.6m | SILT, some sand to SANDY<br>-damp, soft to firm, light brown | | | | | |
| 1.5m | AS ABOVE<br>-wet to saturated<br>-sand seam noted @ 2.1m (200mm thick) | AUGER | 598 | ML | | |
| 2.4m | SILT<br>-saturated, soft, grey | | | | | |
| 3.0m | SAND, trace silt<br>-saturated, medium dense, brown<br>-silt seam noted @ 5.3m (300mm thick) | AUGER | 599 | SP-SM | | |
| | | AUGER | 600 | SP-SM | | |
| 6.1m | SILT<br>-saturated, soft, grey | AUGER | 601 | ML | | |
| 7.6m | SAND, trace silt<br>-saturated, medium dense, brown | AUGER | 602 | SP-SM | | |
| 8.2m | SILTY SAND/SANDY SILT<br>-saturated, soft, brown/grey<br>-variable silt and sand seams | AUGER | 603 | ML | | |
| 11.0m | SAND, trace to some silt<br>-saturated, medium dense, brown | AUGER | 604 | SP-SM | | |
| 12.0 | | | | | | -12.0 |

PERCENT FINES: 20 40 60 80 | PLASTIC M.C. LIQUID: 20 40 60 80 | PERCENT SAND: 20 40 60 80 | PERCENT GRAVEL: 20 40 60 80

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 221 | COMPLETION DEPTH: 15.1 m<br>COMPLETE: 08/29/04<br>Page 1 of 2 |

05/02/23 05:01PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30062 |
| Donjek Services Ltd. | UTM ZONE: - N6765721 E634495 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | SAND, some silt to SILTY 12.2m<br>-saturated, medium dense, brown | | | | | | | 12.0 |
| 13.0 | | ⊠ | 605 | ● | SM | | | 13.0 |
| 14.0 | | ⊠ | 606 | ● | SM | | | 14.0 |
| 15.0 | 15.1m<br>End Of Hole @ 15.1m | | | | | | | 15.0 |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 15.1 m |
| REVIEWED BY: - | COMPLETE: 08/29/04 |
| Fig. No: 221 | Page 2 of 2 |

05/02/23 05:01PM (YTC_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30063 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6765883 E634376 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SAND, some silt to SILTY<br>-damp, medium dense, brown | | | | | | | 0.0 |
| 1.0 | SILT, some sand 0.5m<br>-wet to saturated, soft to firm, brown | | 607 | | ML | | | -1.0 |
| 2.0 | SAND, trace silt 1.8m<br>-saturated, medium dense, brown | | 608 | | SP-SM | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | 609 | | SP-SM | | | -4.0 |
| 5.0 | | | 610 | | SP-SM | | | -5.0 |
| 6.0 | SILT 5.5m<br>-saturated, soft, grey | | | | | | | -6.0 |
| 7.0 | | | 611 | | ML | | | -7.0 |
| 8.0 | SILTY SAND 7.6m<br>-saturated, medium dense, brown/grey | | 612 | | SM | | | -8.0 |
| 9.0 | SILT 8.8m<br>-saturated, soft, grey | | | | | | | -9.0 |
| 10.0 | SILTY SAND 9.5m<br>-saturated, medium dense, brown/grey | | 613 | | SM | | | -10.0 |
| 11.0 | | | 614 | | SM | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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LOGGED BY: RW | COMPLETION DEPTH: 15.1 m
REVIEWED BY: - | COMPLETE: 08/29/04
Fig. No: 222 | Page 1 of 2

05/02/23 05:01PM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30063 |
| Donjek Services Ltd. | UTM ZONE: - N6765883 E634376 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | | | | | | | 12.0 |
| 13.0 | | ⊠ | 615 | ● | SM | | | 13.0 |
| | SILT, some sand to SILTY 13.7m<br>-saturated, soft, grey w/ brown<br>-varibale seams of silts and sands intermixed | | | | | | | |
| 14.0 | | ⊠ | 616 | ● | ML | | | 14.0 |
| 15.0 | 15.1m<br>End Of Hole @ 15.1m | | | | | | | 15.0 |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

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Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 15.1 m |
| REVIEWED BY: - | COMPLETE: 08/29/04 |
| Fig. No: 222 | Page 2 of 2 |

05/02/23 05:01PM (YIC_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30064 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6766041 E634253 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

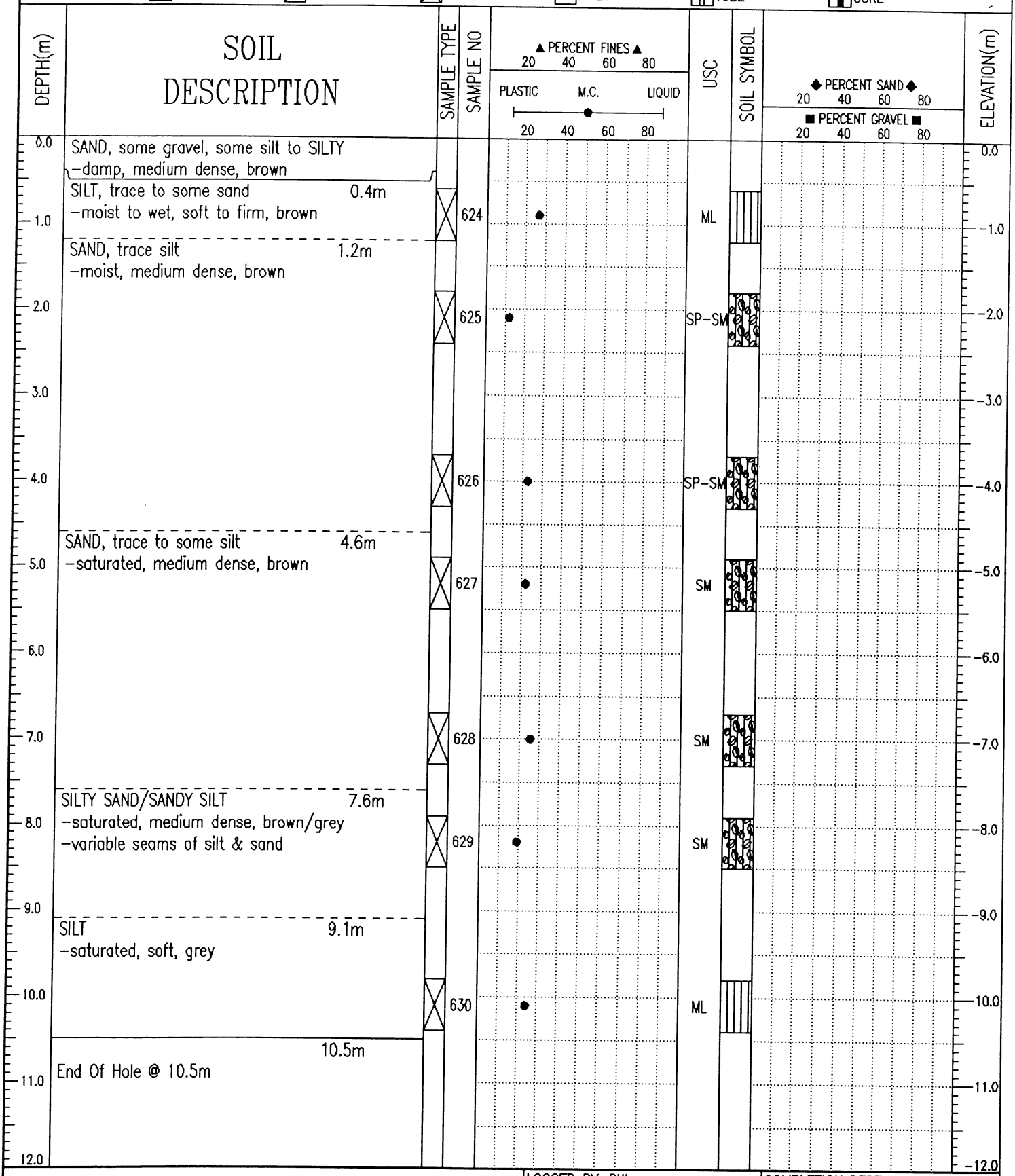
| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SAND, some silt<br>-damp, medium dense, brown | | | | | | | 0.0 |
| 1.0 | SILT, some sand 0.5m<br>-moist to wet, soft to firm, brown | ⊠ | 617 | ● | ML | | | -1.0 |
| 2.0 | SAND, trace silt 2.1m<br>-saturated, medium dense, brown<br>-decomposing organic seam noted @ 3.6m (200mm thick)<br>-finer sands @ 6.5m | ⊠ | 618 | ● | SP-SM | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | ⊠ | 619 | ● | SP-SM | | | -4.0 |
| 5.0 | | ⊠ | 620 | ● | SP-SM | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | ⊠ | 621 | ● | SP-SM | | | -7.0 |
| 8.0 | | ⊠ | 622 | ● | SP-SM | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | ⊠ | 623 | ● | SP-SM | | | -10.0 |
| 11.0 | 10.5m<br>End Of Hole @ 10.5m | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 10.5 m |
|---|---|---|
| | REVIEWED BY: - | COMPLETE: 08/29/04 |
| | Fig. No: 223 | Page 1 of 1 |

05/02/23 08:02PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30065 |
| Donjek Services Ltd. | UTM ZONE: - N6766211 E634121 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 10.5 m |
| | REVIEWED BY: | COMPLETE: 08/30/04 |
| | Fig. No: 224 | Page 1 of 1 |

05/02/23 05:02PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30066 |
| Donjek Services Ltd. | UTM ZONE: - N6766381 E633993 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SAND, some gravel, some silt<br>-damp, medium dense, brown | | | | |
| | SILT, trace to some sand 0.3m<br>-damp to moist, soft to firm, brown | AUGER | 631 | ML | |
| 1.0 | | | | | |
| | SILT 1.2m<br>-moist to wet, soft to firm, grey | AUGER | 632 | ML | |
| 2.0 | | | | | |
| | SAND, trace silt 2.4m<br>-saturated, medium dense, brown/grey | | | | |
| 3.0 | | | | | |
| 4.0 | | AUGER | 633 | SP-SM | |
| | SILT, some sand 4.4m<br>-saturated, soft, grey | AUGER | 634 | ML | |
| 5.0 | | | | | |
| | SAND, trace silt 5.2m<br>-satruated, medium dense, brown/grey | | | | |
| 6.0 | | | | | |
| 7.0 | | AUGER | 635 | SP-SM | |
| | SILT, trace to some clay 7.6m<br>-saturated, soft, grey | AUGER | 636 | ML | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | AUGER | 637 | ML | |
| | 10.5m | | | | |
| 11.0 | End Of Hole @ 10.5m | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ (20 40 60 80)

PLASTIC M.C. LIQUID (20 40 60 80)

◆ PERCENT SAND ◆ (20 40 60 80)

■ PERCENT GRAVEL ■ (20 40 60 80)

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 10.5 m |
| REVIEWED BY: - | COMPLETE: 08/30/04 |
| Fig. No: 225 | Page 1 of 1 |

05/02/23 05:02PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30067 |
| Donjek Services Ltd. | UTM ZONE: - N6766554 E633887 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT, trace to some sand<br>-moist, firm, brown | AUGER | 638 | ◆ | ML | | | 0.0 |
| 1.0 | SILTY SAND 1.2m<br>-damp, medium dense, brown | | | | | | | 1.0 |
| 2.0 | SILT, trace clay 1.8m<br>-moist to wet, soft to firm, grey | | | | | | | 2.0 |
| | SAND, trace silt 2.1m<br>-moist to wet, medium dense, brown | AUGER | 639 | ◆ | SP-SM | | | |
| 3.0 | SAND, some silt to SILTY 3.0m<br>-saturated, medium dense, brown/grey<br>-fine grained sands | AUGER | 640 | ◆ | SM | | | 3.0 |
| 4.0 | | | | | | | | 4.0 |
| 5.0 | | AUGER | 641 | ◆ | SM | | | 5.0 |
| 6.0 | 5.9m<br>End Of Hole @ 5.9m | | | | | | | 6.0 |
| 7.0 | | | | | | | | 7.0 |
| 8.0 | | | | | | | | 8.0 |
| 9.0 | | | | | | | | 9.0 |
| 10.0 | | | | | | | | 10.0 |
| 11.0 | | | | | | | | 11.0 |
| 12.0 | | | | | | | | 12.0 |

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LOGGED BY: RW
REVIEWED BY: -
Fig. No: 226

COMPLETION DEPTH: 5.9 m
COMPLETE: 08/30/04


05/02/23 05:02PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30068 |
| Donjek Services Ltd. | UTM ZONE: - N6766749 E633842 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SILT, trace to some sand<br>-damp to moist, soft to firm, brown | | 642 | ML | | 0.0 |
| 1.2m | SANDY SILT<br>-damp to moist, medium dense, brown<br>-fine grained sands | | | | | |
| 1.8m | SAND, trace silt<br>-moist to wet, medium dense, brown | | 643 | SP-SM | | |
| 3.0m | SAND, some silt<br>-saturated, medium dense, brown/grey<br>-fine grained sands | | 644 | SM | | |
| 5.0m | SILT<br>-saturated, soft, grey | | 645 | ML | | |
| 5.9m | End Of Hole @ 5.9m | | | | | |

▲ PERCENT FINES ▲ (20 40 60 80)

PLASTIC — M.C. — LIQUID (20 40 60 80)

◆ PERCENT SAND ◆ (20 40 60 80)

■ PERCENT GRAVEL ■ (20 40 60 80)

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 227 | COMPLETION DEPTH: 5.9 m<br>COMPLETE: 08/30/04<br>Page 1 of 1 |

05/02/23 05:02PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30069 |
| Donjek Services Ltd. | UTM ZONE: - N6766937 E633865 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT<br>-damp to moist, firm, grey | | | | | | | 0.0 |
| 1.0 | SAND, trace silt 0.4m<br>-damp to moist, medium dense, brown | | 646 | ◆ | SP-SM | | | -1.0 |
| | SILT 1.2m<br>-moist, soft to firm, grey | | | | | | | |
| 2.0 | SAND, trace to some silt 1.7m<br>-saturated, medium dense, brown | | 647 | ◆ | SM | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | 648 | ◆ | SM | | | -4.0 |
| 5.0 | | | 649 | ◆ | SM | | | -5.0 |
| 6.0 | 5.9m<br>End Of Hole @ 5.9m | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| REVIEWED BY: - | COMPLETE: 08/30/04 |
| Fig. No: 228 | Page 1 of 1 |

05/02/23 05:02PM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30070 |
| Donjek Services Ltd. | UTM ZONE: - N6767128 E633921 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT, some sand<br>-damp to moist, soft to firm, brown<br>-organics noted to 0.3m depth | ⊠ | 650 | ● | ML | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | GRAVEL, some sand, some silt 1.2m<br>-saturated, medium dense, brown<br>-grindy drilling<br>-silt contamination from sidewalls<br>-broken/angular gravels to 40mm dia. | ⊠ | 651 | ● | GM | | | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | SANDY SILTY GRAVEL 2.8m<br>-saturated, medium dense, brown/grey | | | | | | | -3.0 |
| 4.0 | | ⊠ | 652 | ● | GM | | | -4.0 |
| 5.0 | | ⊠ | 653 | ● | GM | | | -5.0 |
| 6.0 | 5.9m<br>End Of Hole @ 5.9m | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| REVIEWED BY: | COMPLETE: 08/30/04 |
| Fig. No: 229 | Page 1 of 1 |

05/02/23 05:03PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30072 |
| Glacier Drilling | UTM ZONE: - N6768366 E634882 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | Cobbles & Boulders, some silt, some sand<br>-boulders to 1.0m dia. encountered<br>-fracturing rock<br>-boulders to 3.0m dia. adjacent to testpit on surface | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 5.3m | End Of Hole @ 5.3m | | | | | | | |
| 6.0 | | | | | | | | -6.0 |

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Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.3 m |
| REVIEWED BY: - | COMPLETE: 07/26/04 |
| Fig. No: 148 | Page 1 of 1 |

05/02/10 10:25AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30073 |
| Glacier Drilling | UTM ZONE: – N6768367 E635014 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | BOULDERS/COBBLES<br>–some surficial organics | | | | | | | 0.0 |
| | BOULDERS/COBBLES, some sand & silt 0.3m<br>–boulders to 0.5m in dia.<br>–boulders 30 to 40% by Vol. | | | | | | | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| | 5.3m<br>End Of Hole @ 5.3m | | | | | | | |
| 6.0 | | | | | | | | -6.0 |

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| | |
|---|---|
| LOGGED BY: MF | COMPLETION DEPTH: 5.3 m |
| REVIEWED BY: | COMPLETE: 07/29/04 |
| Fig. No: 149 | Page 1 of 1 |

05/02/10 10:25AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30074 |
| Glacier Drilling | UTM ZONE: - N6768449 E634943 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | BOULDERS/COBBLES<br>-some surficial organics | | | | | | | 0.0 |
| | BOULDERS/COBBLES, some silt 0.3m<br>-boulders encountered to 1.0m in dia.<br>-boulders and cobbles 40 to 50% by Vol. | | | | | | | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| | 5.2m<br>End Of Hole @ 5.2m | | | | | | | |
| 6.0 | | | | | | | | -6.0 |

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| | |
|---|---|
| LOGGED BY: MF | COMPLETION DEPTH: 5.2 m |
| REVIEWED BY: - | COMPLETE: 07/29/04 |
| Fig. No: 150 | Page 1 of 1 |

05/02/10 11:25AM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30075 |
| Glacier Drilling | UTM ZONE: - N6768519 E634961 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ☰ BULK ▯ TUBE ◨ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | BOULDERS/COBBLES<br>-some surficial organics | | | | | | | 0.0 |
| | BOULDERS/COBBLES, trace silt & sand 0.3m<br>-boulders encountered to 1.0m in dia.<br>-boulders and cobbles 40 to 50% by Vol. | | | | | | | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| | 5.4m<br>End Of Hole @ 5.4m | | | | | | | |
| 6.0 | | | | | | | | -6.0 |

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| | |
|---|---|
| LOGGED BY: MF | COMPLETION DEPTH: 5.4 m |
| REVIEWED BY: - | COMPLETE: 07/29/04 |
| Fig. No: 151 | Page 1 of 1 |

05/02/10 10:25AM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30076 |
| Glacier Drilling | UTM ZONE: - N6768523 E635054 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | BOULDERS/COBBLES<br>-some surficial organics | | | | | | | 0.0 |
| | BOULDERS/COBBLES, some silt & sand 0.3m<br>-boulders encountered to 1.0m in dia.<br>-boulders and cobbles 30 to 40% by Vol. | | | | | | | |
| 1.0 | | | | | | | | -1.0 |
| | SANDY GRAVEL, trace to some silt 1.5m<br>-damp, dense, brown/grey<br>-boulders 20 to 30% by Vol. | | | | | | | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | S1 | ●▲ | GP-GM | | ◆ ■ | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| | 5.4m<br>End Of Hole @ 5.4m | | | | | | | |
| 6.0 | | | | | | | | -6.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: MF | COMPLETION DEPTH: 5.4 m |
| | REVIEWED BY: - | COMPLETE: 07/29/04 |
| | Fig. No: 152 | Page 1 of 1 |

05/02/10 10:26AM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30077 |
| Glacier Drilling | UTM ZONE: - N6768591 E634972 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | BOULDERS/COBBLES<br>-some surficial organics | | | | | | | 0.0 |
| | BOULDERS/COBBLES, some silt & sand 0.2m<br>-boulders encountered to 1.0m in dia.<br>-boulders and cobbles 30 to 40% by Vol. | | | | | | | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | 5.1m<br>End Of Hole @ 5.1m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: MF | COMPLETION DEPTH: 5.1 m |
| REVIEWED BY: - | COMPLETE: 07/31/04 |
| Fig. No: 153 | Page 1 of 1 |

05/02/10 10:28AM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30078 |
| Glacier Drilling | UTM ZONE: - N6768663 E634997 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | BOULDERS/COBBLES<br>-some surficial organics | | | | | | | 0.0 |
| | SILTY GRAVEL, some sand 0.3m<br>-boulders encountered to 1.5m in dia.<br>-boulders and cobbles 50% by Vol. | | | | | | | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | 5.0m<br>End Of Hole @ 5.0m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: MF | COMPLETION DEPTH: 5 m |
| REVIEWED BY: - | COMPLETE: 07/31/04 |
| Fig. No: 154 | Page 1 of 1 |

05/02/10 10:32AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30079 |
| Glacier Drilling | UTM ZONE: - N6768745 E635028 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | BOULDERS/COBBLES<br>-surficial organics | | | | | | | 0.0 |
| | SILTY SAND GRAVEL 0.3m<br>-boulders encountered to 1.5m in dia.<br>-boulders and cobbles 20% by Vol.<br>-sample #S2 lost in transport | | | | | | | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| | | | S2 | | | | | |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| | 5.1m<br>End Of Hole 5.1m | | | | | | | |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: MF | COMPLETION DEPTH: 5.1 m |
| REVIEWED BY: | COMPLETE: 07/31/04 |
| Fig. No: 155 | Page 1 of 1 |

05/02/10 11:28AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30080 |
| Glacier Drilling | UTM ZONE: - N6768798 E635046 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | BOULDERS/COBBLES, some sand, trace silt<br>-boulders & cobbles 60 to 70% by Vol. | | | | | | | 0.0 |
| 1.0 | SANDY SILTY GRAVEL 0.3m<br>-boulders encountered to 0.5m in dia.<br>-boulders and cobbles 30 to 40% by Vol. | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | 5.0m<br>End Of Hole 5.0m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: MF
REVIEWED BY:
Fig. No: 156

COMPLETION DEPTH: 5 m
COMPLETE: 07/31/04
Page 1 of 1

05/02/10 11:25AM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30081 |
| Glacier Drilling | UTM ZONE: - N6768752 E635160 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | Soldier Summit | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | BOULDERS/COBBLES<br>-surficial organics | | | | | | | 0.0 |
| | BOULDERS/COBBLES, some silt & sand 0.3m<br>-boulders encountered to 1.0m in dia.<br>-boulders and cobbles 60 to 70% by Vol. | | | | | | | |
| 1.0 | | | | | | | | -1.0 |
| | SANDY SILTY GRAVEL 1.5m<br>-boulders encounterd to 1.0m in dia.<br>-boulders and cobbles 20 to 30% by Vol. | | | | | | | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | S3 | ●▲ | GP-GM | | ◆ ■ | -4.0 |
| 5.0 | 5.0m<br>End Of Hole 5.0m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: MF
REVIEWED BY:
Fig. No: 157

COMPLETION DEPTH: 5 m
COMPLETE: 07/31/04
Page 1 of 1

05/02/10 10:26AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30082 |
| Donjek Services Ltd. | UTM ZONE: - N6768928 E635159 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ☰ BULK ▯▯ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SILTY SAND<br>-damp, medium dense, brown w/ orange hue<br>-organics noted to 0.2m depth | | | | |
| 1.0 | SANDY GRAVEL, some silt 0.3m<br>-dry to damp, dense, brown/grey | ⊠ | 348 | GM | |
| 2.0 | SILTY GRAVELLY SAND 1.8m<br>-damp to moist, dense, brown | ⊠ | 349 | SM | |
| 3.0 | | | | | |
| 4.0 | | ⊠ | 350 | SM | |
| 5.0 | | ⊠ | 351 | SM | |
| 6.0 | 5.9m<br>End Of Hole @ 5.9m - Refusal<br>-refusal @ 0.6m - move east 2m<br>-refuaal @ 5.9m - EOH | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

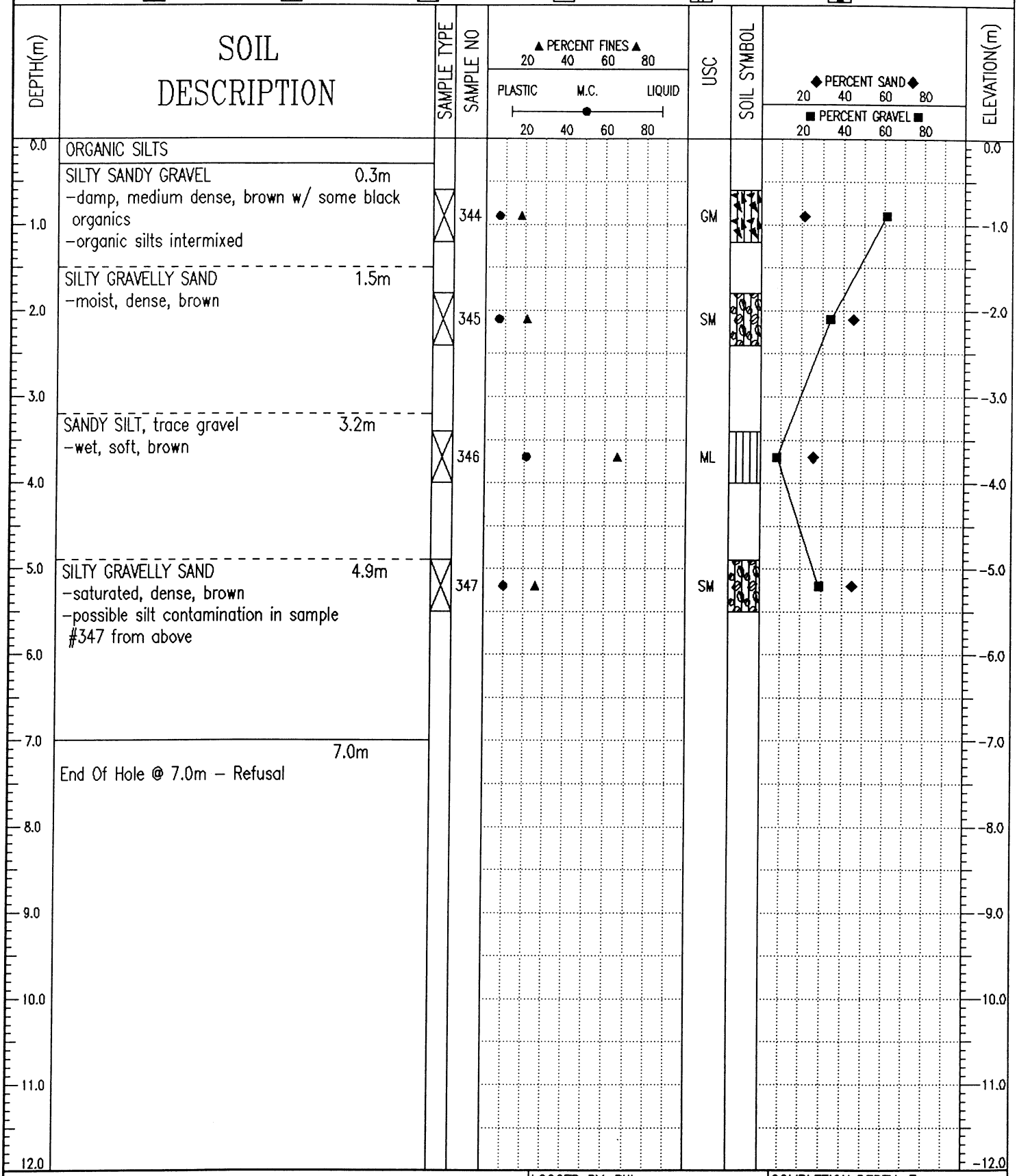
ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| | REVIEWED BY: | COMPLETE: 08/15/04 |
| | Fig. No: 84 | Page 1 of 1 |

05/02/10 07:24AM (YIC_HWTS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30083 |
| Donjek Services Ltd. | UTM ZONE: – N6769180 E635170 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 7 m |
| | REVIEWED BY: | COMPLETE: 08/15/04 |
| | Fig. No: 83 | Page 1 of 1 |

05/02/10 07:24AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30084 |
| Donjek Services Ltd. | UTM ZONE: - N6769233 E635162 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILTY SAND<br>-damp, medium dense, brown w/ orange hue<br>-organics noted to 0.2m depth | | | | | | | 0.0 |
| 0.5m | SITLY GRAVELLY SAND<br>-damp, medium dense, brown | ⊠ | 338 | ● ▲ | SM | | ◆ ■ | -1.0 |
| 1.0 | | | | | | | | |
| 2.0 | | ⊠ | 337 | ● ▲ | SM | | ◆ ■ | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 3.0m | SANDY SILT, some gravel<br>-damp, dense, brown | ⊠ | 338 | ● ▲ | ML | | ◆ ■ | -4.0 |
| 4.0 | | | | | | | | |
| 4.9m | GRAVELLY SILTY SAND<br>-damp, dense, brown | ⊠ | 339 | ● ▲ | SM | | ◆ ■ | -5.0 |
| 5.0 | | | | | | | | |
| 6.0 | | | | | | | | -6.0 |
| 6.1m | SILTY SAND, some gravel to GRAVELLY<br>-damp, dense, brown | ⊠ | 342 | ● ▲ | SM | | ◆ ■ | -7.0 |
| 7.0 | | | | | | | | |
| 8.0 | | ⊠ | 343 | ● ▲ | SM | | ◆ ■ | -8.0 |
| 8.2m | End Of Hole @ 8.2m – Refusal | | | | | | | -9.0 |
| 9.0 | | | | | | | | |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 8.2 m |
| | REVIEWED BY: - | COMPLETE: 08/15/04 |
| | Fig. No: 82 | Page 1 of 1 |

05/02/10 07:24AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30084R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6769273 E635167 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30084<br>-refusal @ 8.2m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | R1 | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | R2 | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | R3 | | | | | -6.0 |
| 7.0 | ROCK 6.9m<br>-dense, light grey/biege<br>-mostly powder<br>-minimal chips | | R4 | | | | | -7.0 |
| 8.0 | | | R5 | | ROCK | | | -8.0 |
| 9.0 | | | R6 | | ROCK | | | -9.0 |
| 10.0 | 9.9m<br>End Of Hole @ 9.9m | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 9.9 m |
| | REVIEWED BY: - | COMPLETE: 09/22/04 |
| | Fig. No: 99 | Page 1 of 1 |

05/02/10 07:24AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30085 |
| Donjek Services Ltd. | UTM ZONE: – N6769371 E635155 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SANDY SILT/SILTY SAND<br>–damp, medium dense, brown w/ orange hue<br>–organics noted throughout | | | | |
| 0.6 | SILTY GRAVELLY SAND<br>–damp, medium dense, brown | AUGER | 334 | SM | |
| 2.0 | | AUGER | 335 | SM | |
| 3.0 | | | | | |
| 3.6 | | AUGER | 336 | SM | |
| 4.0 | | | | | |
| 4.9 | SILTY SAND, trace gravel<br>–dry, dense, light grey w/ green hue<br>–rock powder in sample | AUGER | 337 | SM | |
| 5.5 | End Of Hole @ 5.5m – Refusal | | | | |
| 6.0 | | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.5 m |
| REVIEWED BY: | COMPLETE: 08/15/04 |
| Fig. No: 81 | Page 1 of 1 |

05/02/10 07:25AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30085R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6769366 E635154 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲PERCENT FINES▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆PERCENT SAND◆ 20 40 60 80 / ■PERCENT GRAVEL■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30085<br>-refusal @ 5.5m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | R7 | ● | | | | -3.0 |
| 4.0 | ROCK 3.8m<br>-dense, grey<br>-rock chips to 20mm in size | | R8 | | ROCK | | | -4.0 |
| 5.0 | AS ABOVE 5.2m<br>-rock chips to 15mm in size | | R9 | | ROCK | | | -5.0 |
| 6.0 | AS ABOVE 6.1m<br>-rock chips to 5mm in size | | R10 | ● | ROCK | | | -6.0 |
| 7.0 | 7.0m<br>End Of Hole @ 7.0m | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 7 m |
| REVIEWED BY: | COMPLETE: 09/22/04 |
| Fig. No: 100 | Page 1 of 1 |

05/02/10 07:25AM (YIG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30086 |
| Donjek Services Ltd. | UTM ZONE: - N6769425 E635131 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | |
| | SANDY SILTY GRAVEL 0.3m<br>-damp, medium dense, brown | AUGER | 329 | GM | |
| 1.8 | GRAVELLY SILTY SAND 1.8m<br>-Frozen, no visible ice<br>-brown | AUGER | 330 | SM | |
| 3.0 | GRAVELLY SILTY SAND 3.0m<br>Frozen, no visible ice | AUGER | 331 | SM | |
| 4.0 | AS ABOVE<br>-very dense | AUGER | 332 | SM | |
| 7.0 | minimal recovery on sample #333 | AUGER | 333 | SM | |
| 11.0 | 11.0m<br>End Of Hole @ 11.0m - Refusal | | | | |
| 12.0 | | | | | |

PERCENT FINES: 20 40 60 80
PLASTIC M.C. LIQUID: 20 40 60 80
PERCENT SAND: 20 40 60 80
PERCENT GRAVEL: 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY:<br>Fig. No: 80 | COMPLETION DEPTH: 11 m<br>COMPLETE: 08/15/04<br>Page 1 of 1 |

05/02/10 07:25AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30086R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6769428 E635135 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30086<br>-refusal @ 11.0m | | | | | | | 0.0 |
| 1.0 | | | R11 | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | R12 | | | | | -4.0 |
| 5.0 | | | R13 | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | R14 | | | | | -7.0 |
| 8.0 | SANDY SILT 7.6m<br>-powder<br>-some rock chips and some rounded stone<br>-dry, light beige | | R15 | | | | | -8.0 |
| 9.0 | | | R16 | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | R17 | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 15.5 m |
| REVIEWED BY: | COMPLETE: 09/23/04 |
| Fig. No: 101 | Page 1 of 2 |

05/02/10 07:25AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30086R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6769428 E635135 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | | | | | | | -12.0 |
| | ROCK 12.5m | | R18 | | ROCK | | | |
| 13.0 | | | | | | | | -13.0 |
| 14.0 | | | | | | | | -14.0 |
| 15.0 | | | R19 | | ROCK | | | -15.0 |
| | 15.5m End Of Hole @ 15.5m | | | | | | | |
| 16.0 | | | | | | | | -16.0 |
| 17.0 | | | | | | | | -17.0 |
| 18.0 | | | | | | | | -18.0 |
| 19.0 | | | | | | | | -19.0 |
| 20.0 | | | | | | | | -20.0 |
| 21.0 | | | | | | | | -21.0 |
| 22.0 | | | | | | | | -22.0 |
| 23.0 | | | | | | | | -23.0 |
| 24.0 | | | | | | | | -24.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 15.5 m |
| | REVIEWED BY: | COMPLETE: 09/23/04 |
| | Fig. No: 101 | Page 2 of 2 |

05/02/10 07:26AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30087 |
| Donjek Services Ltd. | UTM ZONE: - N6769468 E635121 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT/SILTY SAND<br>-damp to moist, medium dense, brown/grey | | | | | 0.0 |
| 1.0 | GRAVELLY SILTY SAND 0.6m<br>-damp, medium dense, brown | AUGER | 325 | SM | | -1.0 |
| 2.0 | | AUGER | 326 | SM | | -2.0 |
| 3.0 | SILTY GRAVELLY SAND 3.0m<br>-damp, dense, brown | | | | | -3.0 |
| 4.0 | | AUGER | 327 | SM | | -4.0 |
| 5.0 | | AUGER | 328 | SM | | -5.0 |
| 6.0 | | | | | | -6.0 |
| | 6.4m | | | | | |
| 7.0 | End Of Hole @ 6.4m - Refusal<br>-refusal @ 6.2m - move south 2m<br>-refusal @ 6.4m - EOH | | | | | -7.0 |
| 8.0 | | | | | | -8.0 |
| 9.0 | | | | | | -9.0 |
| 10.0 | | | | | | -10.0 |
| 11.0 | | | | | | -11.0 |
| 12.0 | | | | | | -12.0 |

PERCENT FINES: 20 40 60 80

PLASTIC M.C. LIQUID: 20 40 60 80

PERCENT SAND: 20 40 60 80

PERCENT GRAVEL: 20 40 60 80

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW
REVIEWED BY: -
Fig. No: 79

COMPLETION DEPTH: 6.4 m
COMPLETE: 08/15/04
Page 1 of 1

05/02/10 07:26AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30087R |
|---|---|---|
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6769474 E635128 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▦ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30087<br>-refusal @ 6.4m & 6.2m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | R20 | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | R21 | | | | | -5.0 |
| 6.0 | GRAVELLY SAND, trace silt 6.1m<br>-damp, brown<br>-rock chips noted | | | | | | | -6.0 |
| 7.0 | | | R22 | ● | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | R23 | ● | | | | -9.0 |
| 10.0 | ROCK 9.8m<br>-dry, grey<br>-mostly powder<br>-some rock chips | | | | | | | -10.0 |
| 11.0 | | | R24 | ● | ROCK | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 12.8 m |
|---|---|---|
| | REVIEWED BY: - | COMPLETE: 09/23/04 |
| | Fig. No: 102 | Page 1 of 2 |

05/02/10 07:25AM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30087R |
| Midnight Sun Drilling Ltd. | UTM ZONE: – N6769474 E635128 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | | R25 | | ROCK | | | -12.0 |
| | 12.8m | | | | | | | |
| 13.0 | End Of Hole @ 12.8m<br>-note: when adding 7.3m to 10.4m stem, H20/mud came out of cone. Possibly water seepage near 7.4m | | | | | | | -13.0 |
| 14.0 | | | | | | | | -14.0 |
| 15.0 | | | | | | | | -15.0 |
| 16.0 | | | | | | | | -16.0 |
| 17.0 | | | | | | | | -17.0 |
| 18.0 | | | | | | | | -18.0 |
| 19.0 | | | | | | | | -19.0 |
| 20.0 | | | | | | | | -20.0 |
| 21.0 | | | | | | | | -21.0 |
| 22.0 | | | | | | | | -22.0 |
| 23.0 | | | | | | | | -23.0 |
| 24.0 | | | | | | | | -24.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW
REVIEWED BY: -
Fig. No: 102

COMPLETION DEPTH: 12.8 m
COMPLETE: 09/23/04



05/02/10 07:26AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30088 |
| Donjek Services Ltd. | UTM ZONE: - N6769516 E635104 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SILTY SAND/SANDY SILT<br>-damp, loose, brown w/ orange hue<br>-organics noted to 0.2m depth | | | | |
| 1.0 | SILTY GRAVELLY SAND 0.9m<br>-damp, medium dense, brown | AUGER | 322 | SM | |
| 2.0 | | AUGER | 323 | SM | |
| 3.0 | | | | | |
| 4.0 | | AUGER | 324 | SM | |
| 5.0 | | | | | |
| | 5.2m<br>End Of Hole @ 5.2m - Refusal<br>-refusal @ 5.0m - move south 2m<br>-refusal @ 5.2m - EOH | | | | |
| 6.0 | | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ (20 40 60 80)

PLASTIC M.C. LIQUID (20 40 60 80)

◆ PERCENT SAND ◆ (20 40 60 80)

■ PERCENT GRAVEL ■ (20 40 60 80)

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.2 m |
| REVIEWED BY: - | COMPLETE: 08/15/04 |
| Fig. No: 78 | Page 1 of 1 |

05/02/10 07:27AM (YIG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30088R |
| Midnight Sun Drilling | UTM ZONE: - N6769513 E635110 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30088<br>-refusal at 5.0m & 5.2m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | R26 | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | R27 | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 6.7 | ROCK<br>-dry, grey<br>-rock chips noted | | R28 | | ROCK | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | R29 | | ROCK | | | -9.0 |
| 9.8 | End Of Hole @ 9.8m | | | | | | | -10.0 |
| 10.0 | | | | | | | | -11.0 |
| 11.0 | | | | | | | | -12.0 |
| 12.0 | | | | | | | | |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 9.8 m |
| REVIEWED BY: - | COMPLETE: 09/23/04 |
| Fig. No: 103 | Page 1 of 1 |

05/02/10 07:27AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30089 |
| Donjek Services Ltd. | UTM ZONE: - N6769606 E635078 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILT, some sand<br>-dry to damp, loose, brown /w orange hue<br>-organics noted to 0.2m | ⊠ | 321 | ● ▲ | ML | | ■ ◆ | 0.0 |
| 0.6m | | | | | | | | |
| 1.0 | End Of Hole @ 0.6m - Refusal<br>-refusal @ 0.6m - move south 2m<br>-refusal @ 0.6m - EOH | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 0.6 m |
| REVIEWED BY: - | COMPLETE: 08/15/04 |
| Fig. No: 77 | Page 1 of 1 |

05/02/10 07:27AM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30089R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6769602 E635080 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotaty Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30089 | | | | | | | 0.0 |
| | ROCK 0.5m<br>-dry, grey | | R30 | | ROCK | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| | | | R31 | | ROCK | | | -3.0 |
| | 3.4m<br>End Of Hole @ 3.4m<br>-continue drilling to 4.6m to allow casing to be pulled | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3.4 m |
| | REVIEWED BY: - | COMPLETE: 09/24/04 |
| | Fig. No: 104 | Page 1 of 1 |

05/02/10 07:27AM (YTC_HWTS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30090 |
| Donjek Services Ltd. | UTM ZONE: - N6769660 E635061 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | SILTY SAND 0.2m<br>-damp, medium dense, brown | ⊠ | 319 | ● ▲ | SM | | ◆ | |
| 1.0 | GRAVELLY SILTY SAND 0.4m<br>-damp, medium dense, brown | | | | | | | -1.0 |
| | GRAVELLY SILTY SAND 1.2m<br>-dry, dense, brown/grey<br>-some rock powder in sample #320 | ⊠ | 320 | ● ▲ | SM | | ■ ◆ | |
| 2.0 | 1.5m<br>End Of Hole @ 1.5m - Refusal<br>-refusal @ 1.5m - move south 2m<br>-refusal @ 0.9m - EOH | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 1.5 m |
| REVIEWED BY: - | COMPLETE: 08/15/04 |
| Fig. No: 76 | Page 1 of 1 |

05/02/10 07:28AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30090R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6769661 E635065 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotaty Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30090<br>-refusal @ 1.5m & 0.9m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | ROCK 1.5m<br>-dry, grey | | | | | | | |
| 2.0 | | | R32 ● | | ROCK | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | R33 ● | | ROCK | | | -4.0 |
| | 4.3m<br>End Of Hole @ 4.3m<br>-no casing used | | | | | | | |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.3 m |
| | REVIEWED BY: - | COMPLETE: 09/24/04 |
| | Fig. No: 105 | Page 1 of 1 |

05/02/10 07:28AM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30091 |
| Donjek Services Ltd. | UTM ZONE: - N6769701 E635044 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▦ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | GRAVELLY SILTY SAND 0.3m<br>-damp, medium dense, brown | ⊠ | 318 | ● ▲ | SM | | ■ ◆ | |
| 1.0 | | | | | | | | -1.0 |
| | 1.4m<br>End Of Hole @ 1.4m – Refusal<br>-refusal @ 1.4m – move south 2m<br>-refusal @ 1.2m – EOH | | | | | | | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 1.4 m |
| REVIEWED BY: - | COMPLETE: 08/15/04 |
| Fig. No: 75 | Page 1 of 1 |

05/02/10 07:28AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30091R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6769700 E635045 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30091<br>-refusal @ 1.2m & 1.4m | | | | | | | 0.0 |
| 1.0 | ROCK 1.0m<br>-dry, grey | | R34 | | ROCK | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | R35 | | ROCK | | | -3.0 |
| 4.0 | 4.0m<br>End Of Hole @ 4.0m<br>-no casing used | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

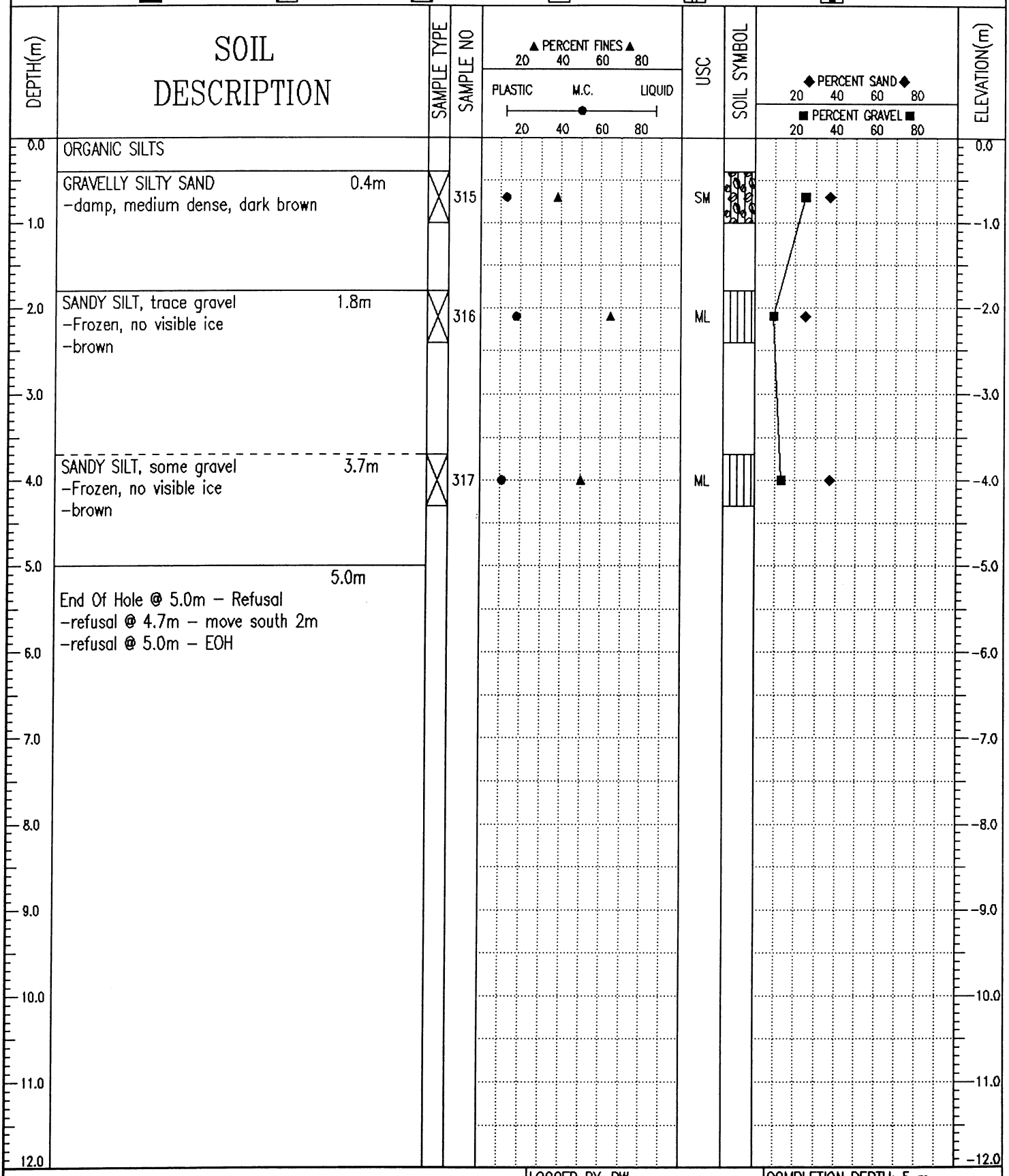
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4 m |
| REVIEWED BY: - | COMPLETE: 09/24/04 |
| Fig. No: 106 | Page 1 of 1 |

05/02/10 07:28AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30092 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6769764 E635000 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE




| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5 m |
|---|---|---|
| | REVIEWED BY: - | COMPLETE: 08/15/04 |
| | Fig. No: 74 | Page 1 of 1 |

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30092R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6769762 E634998 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG<br>-refusal @ 4.7m & 5.0m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | ROCK 4.9m<br>-dry, grey | | R36 | | ROCK | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | R37 | | ROCK | | | -7.0 |
| 8.0 | 7.9m<br>End Of Hole @ 7.9m | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 7.9 m |
| | REVIEWED BY: - | COMPLETE: 09/24/04 |
| | Fig. No: 107 | Page 1 of 1 |

05/02/10 07:29AM (YTG_HWTS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30093R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6769812 E634965 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30093<br>-refusal @ 7.0m, 2.1m & 2.4m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | SANDY SILT/SILTY SAND, some gravel<br>-moist, brown | | R38 | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| | POSSIBLY ROCK 7.6m<br>-some rock chips noted<br>-some sand<br>-minimal powder or dust | | R39 | | | | | |
| 8.0 | ROCK 8.5m<br>-dry, grey | | R40 | | ROCK | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| | | | R41 | | ROCK | | | |
| 11.0 | 10.7m<br>End Of Hole @ 10.7m<br>-no casing used | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 10.7 m |
| REVIEWED BY: - | COMPLETE: 09/24/04 |
| Fig. No: 108 | Page 1 of 1 |

05/02/10 07:20AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30094 |
| Donjek Services Ltd. | UTM ZONE: - N6769845 E634943 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | DRILL PAD FILL | | | | |
| | ORGANIC SILTS 0.4m | | | | |
| 1.0 | SANDY GRAVEL, some silt 0.8m<br>-damp, medium dense, brown | ⊠ | 306 | GM | |
| 2.0 | SILTY SANDY GRAVEL 1.8m<br>-damp, medium dense, brown w/ black organic seams<br>-some organic silts throughout (seams to 75mm) | ⊠ | 307 | GM | |
| 3.0 | GRAVELLY SILTY SAND 3.0m<br>-damp to moist, dense, brown | ⊠ | 308 | SM | |
| 4.0 | | | | | |
| 5.0 | AS ABOVE 5.2m<br>-increase moisture/increase silt | ⊠ | 309 | SM | |
| 6.0 | 5.8m<br>End Of Hole @ 5.8m | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| REVIEWED BY: - | COMPLETE: 08/15/04 |
| Fig. No: 72 | Page 1 of 1 |

05/02/10 07:29AM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30095 |
| Donjek Services Ltd. | UTM ZONE: - N6769885 E634905 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | GRAVELLY SANDY SILT 0.3m<br>-damp to moist, firm, brown | ⊠ | 302 | ● ▲ | ML | | ◆ ■ | |
| 1.0 | | | | | | | | -1.0 |
| | SILTY SANDY GRAVEL 1.2m<br>-damp, medium dense, brown | | | | | | | |
| 2.0 | | ⊠ | 303 | ● ▲ | GM | | ◆ ■ | -2.0 |
| 3.0 | GRAVELLY SAND, some silt 3.0m<br>-moist to wet, dense, brown | | | | | | | -3.0 |
| | | ⊠ | 304 | ● ▲ | SM | | ◆ ■ | |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | ⊠ | 305 | ● ▲ | SW-SM | | | -5.0 |
| 6.0 | 5.9m<br>End Of Hole @ 5.9m | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| | REVIEWED BY: - | COMPLETE: 08/15/04 |
| | Fig. No: 71 | Page 1 of 1 |

05/02/10 07:29AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30096 |
| Donjek Services Ltd. | UTM ZONE: - N6769994 E634847 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | |
| | SILTY GRAVELLY SAND 0.6m | | | | |
| 1.0 | -moist to wet, medium dense, brown | ⊠ | 295 | SM | |
| | AS ABOVE 1.0m | | | | |
| | -Frozen | | | | |
| | -brown | | | | |
| 2.0 | SILTY GRAVELLY SAND 1.8m | ⊠ | 296 | SM | |
| | -Frozen | | | | |
| | -brown | | | | |
| 3.0 | | | | | |
| 4.0 | | ⊠ | 297 | SM | |
| 5.0 | | ⊠ | 298 | SM | |
| 6.0 | | | | | |
| 7.0 | | ⊠ | 299 | SM | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| | | ⊠ | 300 | SM | |
| 10.0 | | | | | |
| | | ⊠ | 301 | SM | |
| 11.0 | | | | | |
| | 11.3m | | | | |
| 12.0 | End Of Hole @ 11.3m - Refusal | | | | |

PERCENT FINES (20 40 60 80)

PLASTIC M.C. LIQUID (20 40 60 80)

PERCENT SAND (20 40 60 80)

PERCENT GRAVEL (20 40 60 80)

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 11.3 m |
| | REVIEWED BY: - | COMPLETE: 08/14/04 |
| | Fig. No: 70 | Page 1 of 1 |

05/02/10 07:30AM (YIG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30096R |
| Midnight Sun Drilling ltd. | UTM ZONE: - N6769986 E634847 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30096<br>-refusal @ 11.3m & 8.7m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | GRAVELLY SILTY SAND 7.0m<br>-moist to wet, brown | | R42 | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | GRAVELLY SAND, some silt 10.1m<br>-damp, brown | | R43 | | | | | -10.0 |
| 11.0 | Very dense slow drilling<br>-no indictaion of rock | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 14.3 m |
| REVIEWED BY: - | COMPLETE: 09/24/04 |
| Fig. No: 109 | Page 1 of 2 |

05/02/10 07:30AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30096R |
| Midnight Sun Drilling ltd. | UTM ZONE: – N6769986 E634847 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | GRAVELLY SILTY SAND<br>–damp to moist, brown | | R44 ● | | | | | 12.0 |
| 13.0 | | | | | | | | 13.0 |
| 14.0 | POSSIBLY ROCK or GRAVEL/COBBLE LAYER 13.7m<br>–moist, brown<br>–bit freezing/plugging up (not pounding)<br>–some rounded stone<br>–minimal powder from cone | | R45 ● | | | | | 14.0 |
| 15.0 | 14.3m<br>End Of Hole 14.3m | | | | | | | 15.0 |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 109 | COMPLETION DEPTH: 14.3 m<br>COMPLETE: 09/24/04<br>Page 2 of 2 |

05/02/10 07:30AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30097 |
| Donjek Services Ltd. | UTM ZONE: - N6770135 E634800 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | SILTY SANDY GRAVEL 0.2m | | | | | | | |
| 1.0 | -moist to wet, medium dense, brown | ⊠ | 293 | ◆ ▲ | GM | | ◆ ■ | -1.0 |
| 2.0 | GRAVELLY SILTY SAND 1.8m | ⊠ | 294 | ● ▲ | SM | | ◆ ◆ | -2.0 |
| 3.0 | -Frozen, no visible ice | | | | | | | -3.0 |
| | -brown | | | | | | | |
| | 3.4m | | | | | | | |
| 4.0 | End Of Hole @ 3.4m – Refusal | | | | | | | -4.0 |
| | -refusal @ 3.4m – move south 2m | | | | | | | |
| 5.0 | -refusal @ 3.2m – EOH | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3.4 m |
| | REVIEWED BY: - | COMPLETE: 08/14/04 |
| | Fig. No: 69 | Page 1 of 1 |

05/02/10 07:30AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30097R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6770133 E634803 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30097<br>-refusal @ 3.4m & 3.2m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | GRAVELLY SANDY SILT to GRAVELLY SILTY SAND<br>-wet, brown<br>-some rock chips | | R46 | ● | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | R47 | ● | | | | -9.0 |
| 10.0 | GRAVELLY SAND, some silt to silty 9.8m<br>-damp to moist, brown | | R48 | ● | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 15.2 m |
| REVIEWED BY: - | COMPLETE: 09/24/04 |
| Fig. No: 110 | Page 1 of 2 |

05/02/10 07:30AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30097R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6770133 E634803 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | SANDY GRAVEL, trace to some silt 12.5m<br>-damp, brown | | R49 ◆ | | | | | 12.0 |
| 13.0 | | | | | | | | 13.0 |
| 14.0 | | | | | | | | 14.0 |
| 15.0 | | | R50 ◆ | | | | | 15.0 |
| | 15.2m<br>End Of Hole @ 15.2m<br>-bit was plugged from 0.0 to 6.7m depth<br>-no indication of rock | | | | | | | |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 15.2 m |
| REVIEWED BY: - | COMPLETE: 09/24/04 |
| Fig. No: 110 | Page 2 of 2 |

05/02/10 07:31AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30098 |
| Donjek Services Ltd. | UTM ZONE: - N6770279 E634696 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⧄ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>-damp, medium dense, brown | ⊠ | 290 | GP-GM | |
| 1.8m | GRAVELLY SAND, trace silt<br>-damp, medium dense, brown | ⊠ | 291 | SW-SM | |
| 3.0m | GRAVELLY SAND, some silt<br>-saturated, medium dense, brown | ⊠ | 292 | SW-SM | |
| 4.3m | End Of Hole @ 4.3m | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m)

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.3 m |
| | REVIEWED BY: - | COMPLETE: 08/14/04 |
| | Fig. No: 68 | Page 1 of 1 |

05/02/10 07:31AM (YIG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30099 |
| Donjek Services Ltd. | UTM ZONE: - N6770392 E634666 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SILTY SANDY GRAVEL<br>-damp, medium dense, brown<br>-organics noted to 0.3m depth | | 286 | GM | |
| 1.0 | AS ABOVE 0.9m<br>-moist to wet | | | | |
| 2.0 | GRAVELLY SAND, trace silt 1.8m<br>saturated, medium dense, brown | | 287 | SW-SM | |
| 3.0 | SANDY SILT, some gravel 3.0m<br>-saturated, soft, black/brown<br>-organic silts | | 288 | ML | |
| 4.0 | GRAVELLY SAND, some silt 3.7m<br>-saturated, medium dense, brown | | 289 | SM | |
| | 4.4m | | | | |
| 5.0 | End Of Hole @ 4.4m | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 67 | COMPLETION DEPTH: 4.4 m<br>COMPLETE: 08/14/04<br>Page 1 of 1 |

05/02/10 07:31AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30100 |
| Donjek Services Ltd. | UTM ZONE: - N6770537 E634636 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, some silt<br>-damp, dense, brown<br>-boulders to 0.5m dia. noted on surface | AUGER | 279 | GM | | 0.0 |
| 1.8 | SILTY SANDY GRAVEL<br>-damp to moist, dense, brown | AUGER | 280 | GM | | -2.0 |
| 2.7 | ORGANIC SILTS<br>-damp, firm, dark brown | | | | | |
| 3.0 | SILTY SANDY GRAVEL<br>-damp, dense, brown | AUGER | 281 | GM | | -4.0 |
| 4.9 | SILTY SANDY GRAVEL<br>-wet, dense, brown<br>-sample #283 poor recovery | AUGER | 282 | GM | | -5.0 |
| | | AUGER | 283 | SM | | -7.0 |
| 7.9 | GRAVELY SILTY SAND<br>-moist to wet, dense, grey w/ blueish hue | AUGER | 284 | SM | | -8.0 |
| 9.4 | SILTY SAND, trace gravel<br>-moist, dense, purple | AUGER | 285 | SM | | -10.0 |
| 10.1 | End of Hole @ 10.1m - Refusal | | | | | -12.0 |

PERCENT FINES: 20 40 60 80 | PLASTIC M.C. LIQUID: 20 40 60 80 | PERCENT SAND: 20 40 60 80 | PERCENT GRAVEL: 20 40 60 80

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW | COMPLETION DEPTH: 10.1 m
REVIEWED BY: - | COMPLETE: 08/14/04
Fig. No: 66 | Page 1 of 1

05/02/10 07:31AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30100R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6770540 E634627 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30100<br>-refusal @ 10.1m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 16.2 m |
| REVIEWED BY: - | COMPLETE: 09/25/04 |
| Fig. No: 111 | Page 1 of 2 |

05/02/10 07:31AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30100R |
|---|---|---|
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6770540 E634627 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | ROCK 12.2m<br>-soft, damp, brown w/ purple hue | | | | | | | 12.0 |
| 13.0 | | | | | | | | 13.0 |
| 14.0 | | | R51 ● | | ROCK | | | 14.0 |
| 15.0 | ROCK 14.9m<br>-dry, grey w/ purple hue | | | | | | | 15.0 |
| 16.0 | | | R52 ● | | ROCK | | | 16.0 |
| | 16.2m<br>End Of Hole @ 16.2m | | | | | | | |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 16.2 m |
|---|---|---|
| | REVIEWED BY: - | COMPLETE: 09/25/04 |
| | Fig. No: 111 | Page 2 of 2 |

05/02/10 07:32AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30101 |
| Donjek Services Ltd. | UTM ZONE: - N6770650 E634650 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILTY SAND<br>-damp, medium dense, brown<br>-organics noted to 0.3m depth | ⊠ | 277 | ● ▲ | SM | | ■ ◆ | 0.0 |
| 1.0 | GRAVELLY SILTY SAND 0.4m<br>-damp, medium dense, brown | | | | | | | -1.0 |
| 2.0 | GRAVELLY SILTY SAND 1.8m<br>-damp, dense, brown | ⊠ | 278 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | 3.2m<br>End Of Hole @ 3.2m – Refusal<br>-refusal @ 3.0m – move east 2m<br>-refusal @ 3.2m – EOH | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 3.2 m |
| | REVIEWED BY: - | COMPLETE: 08/14/04 |
| | Fig. No: 65 | Page 1 of 1 |

05/02/10 07:32AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30101R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6770659 E634653 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▯ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30101<br>-refusal @ 3.0m & 3.2m | | | | | | | 0.0 |
| 2.4m | ROCK<br>-dry, grey | | R53 | | ROCK | | | -4.0 |
| 4.6m | End Of Hole @ 4.6m | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY:<br>Fig. No: 112 | COMPLETION DEPTH: 4.6 m<br>COMPLETE: 09/25/04<br>Page 1 of 1 |

05/02/10 07:32AM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30102 |
| Donjek Services Ltd. | UTM ZONE: - N6770753 E634670 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT/SILTY SAND<br>-damp, medium dense, brown w/ orange hue<br>-organics noted to 0.3m depth | ⊠ | 275 | ● ▲ | ML | | ■ ◆ | 0.0 |
| 1.0 | SANDY SILT, trace gravel 0.6m<br>-damp, medium dense, brown | | | | | | | -1.0 |
| 2.0 | SILTY SAND 1.5m<br>-dry, dense, light grey<br>-rock powder in sample #276 | ⊠ | 276 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m – Refusal<br>-refusal @ 1.0m – move north 2m<br>-refusal @ 3.0m – EOH | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
| REVIEWED BY: - | COMPLETE: 08/14/04 |
| Fig. No: 64 | Page 1 of 1 |

05/02/10 07:32AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30102R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6770744 E634667 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30102<br>-refusal @ 3.0m & 1.0m | | | | | | | 0.0 |
| 1.0 | ROCK 1.0m<br>-dry, grey | | | | | | | -1.0 |
| 2.0 | | | R54 ◆ | | ROCK | | | -2.0 |
| 3.0 | | | R55 ◆ | | ROCK | | | -3.0 |
| 4.0 | 4.3m<br>End Of Hole @ 4.3m | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 113 | COMPLETION DEPTH: 4.3 m<br>COMPLETE: 09/25/04<br>Page 1 of 1 |

05/02/10 07:32AM (YIC_HWTS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30103 |
| Donjek Services Ltd. | UTM ZONE: - N6770855 E634651 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILTY SAND/SANDY SILT<br>-damp, medium dense, brown<br>-organics noted to 0.7m depth | | | | | | | 0.0 |
| 1.0 | GRAVELLY SILTY SAND 0.6m<br>-damp, medium dense, brown | ⊠ | 272 | ● ▲ | SM | | ■ ◆ | -1.0 |
| 2.0 | SILTY GRAVELLY SAND 2.0m<br>-dry to damp, dense, light brown | ⊠ | 273 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | SILTY SAND 3.7m<br>-dry, dense, light grey<br>-rock powder in sample #274 | ⊠ | 274 | ● ▲ | SM | | ■ ◆ | -4.0 |
| 5.0 | 4.3m<br>End Of Hole @ 4.3m - Refusal<br>-refusal @ 4.3m - move south 2m<br>-refusal @ 2.4m - EOH | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4.3 m |
| REVIEWED BY: - | COMPLETE: 08/14/04 |
| Fig. No: 63 | Page 1 of 1 |

05/02/10 07:33AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30103R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6770854 E634648 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30103<br>-refusal @ 4.3m & 2.4m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 3.4 | ROCK<br>-dry, grey | | | | | | | |
| 4.0 | | | R56 | | ROCK | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 5.6 | | | R57 | | ROCK | | | |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 7.3 | End of Hole @ 7.3m | | | | | | | |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

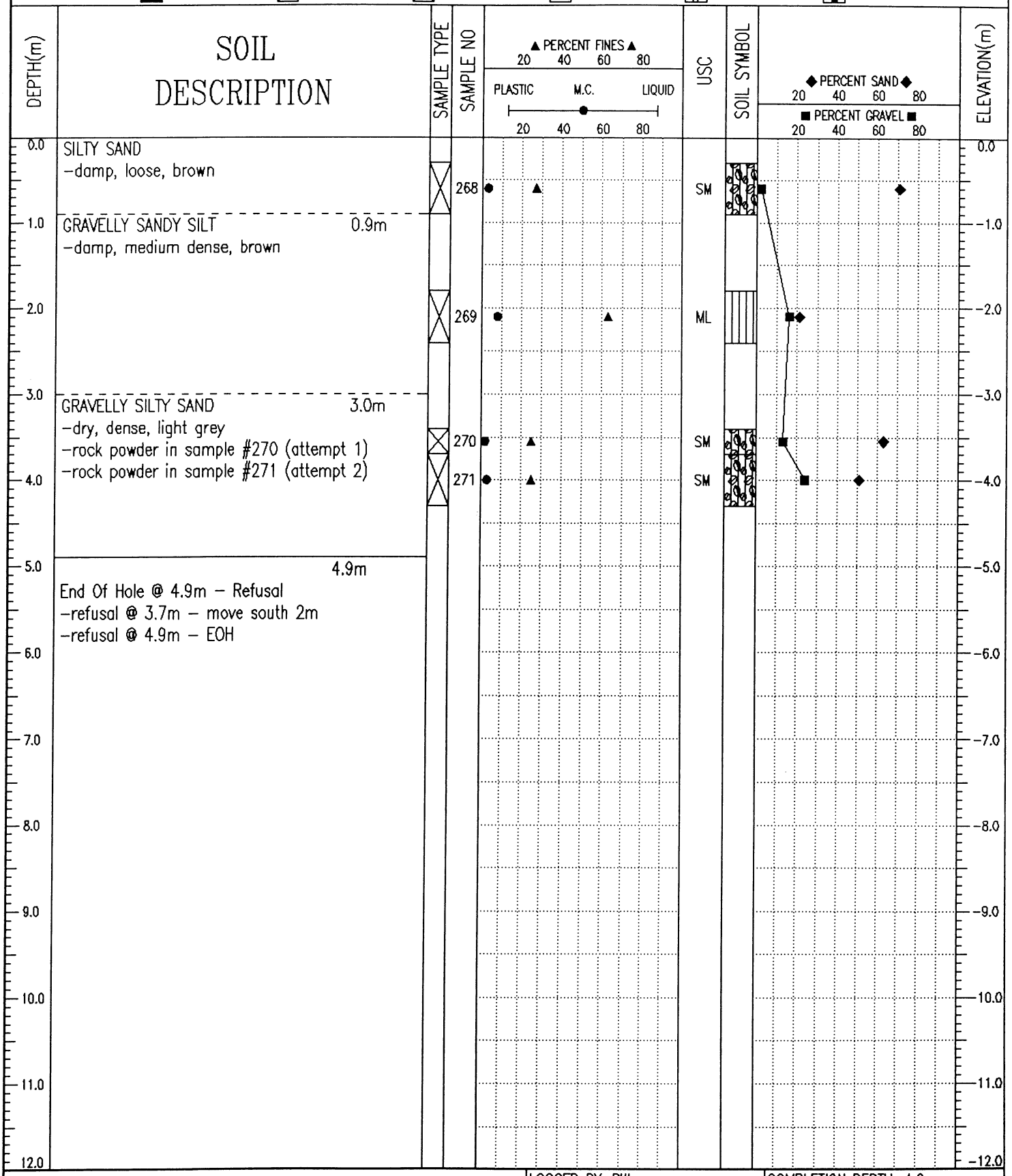
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 7.3 m |
| REVIEWED BY: - | COMPLETE: 09/25/04 |
| Fig. No: 114 | Page 1 of 1 |

05/02/10 07:33AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30104 |
| Donjek Services Ltd. | UTM ZONE: – N6770965 E634614 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.9 m |
| | REVIEWED BY: - | COMPLETE: 08/13/04 |
| | Fig. No: 62 | Page 1 of 1 |

05/02/10 07:33AM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30104R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6770967 E634604 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▭ BULK ▯ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30104<br>-refusal @ 3.7m & 4.9m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | ROCK 4.0m<br>-dry, grey | | | | | | | -4.0 |
| 5.0 | | | R58 | | ROCK | | | -5.0 |
| 6.0 | | | R59 | | ROCK | | | -6.0 |
| 7.0 | 7.0m<br>End Of Hole @ 7.0m | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 7 m |
| REVIEWED BY: - | COMPLETE: 09/25/04 |
| Fig. No: 115 | Page 1 of 1 |

05/02/10 07:33AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30105 |
| Donjek Services Ltd. | UTM ZONE: - N6771005 E604672 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SILTY SAND/SANDY SILT<br>-damp, medium dense, brown | | | | |
| 1.0 | GRAVELLY SILTY SAND 0.9m<br>-damp, medium dense, brown | ⊠ | 262 | SM | |
| 2.0 | SANDY SILT, trace gravel 1.8m<br>-damp to moist, medium dense, brown | ⊠ | 263 | ML | |
| 3.0 | SILTY SANDY GRAVEL 3.0m<br>-damp, dense, brown | ⊠ | 264 | GM | |
| 4.0 | 4.6m | | | | |
| 5.0 | End Of Hole @ 4.6m – Refusal | | | | |
| 6.0 | | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| REVIEWED BY: - | COMPLETE: 08/13/04 |
| Fig. No: 61 | Page 1 of 1 |

05/02/10 07:33AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30105R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6771014 E634672 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30105<br>-refusal @ 4.6m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | ROCK 4.9m<br>-dry, grey | | R64 ◆ | | ROCK | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | R65 ◆ | | ROCK | | | -7.0 |
| 8.0 | 7.6m<br>End Of Hole @ 7.6m | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 7.6 m |
| REVIEWED BY: - | COMPLETE: 09/26/04 |
| Fig. No: 116 | Page 1 of 1 |

05/02/10 07:34AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30106 |
| Donjek Services Ltd. | UTM ZONE: - N6771078 E634574 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▦ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SILTY SANDY GRAVEL<br>-dry to damp, loose, brown w/ orange hue<br>-organics to 0.2m | ⊠ | 266 | ● ▲ | GM | | ◆ ■ | 0.0 |
| 0.6 | SILTY SAND<br>-dry to damp, dense, light grey<br>-rock powder in sample #267 | ⊠ | 267 | ● ▲ | SM | | ◆ ■ | -0.6 |
| 0.9 | End Of Hole @ 0.9m - Refusal<br>-refusal @ 0.9m - move south 2m<br>-refusal @ 0.9m - EOH | | | | | | | -0.9 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 0.9 m |
| REVIEWED BY: - | COMPLETE: 08/13/04 |
| Fig. No: 60 | Page 1 of 1 |

05/02/10 07:34AM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30106R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6771070 E634575 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30106<br>-refusal @ 0.9m both attempts | | | | | | | 0.0 |
| 1.0 | ROCK (possibly fractured) 1.2m<br>-dry, grey | | | | | | | -1.0 |
| 2.0 | ROCK 1.8m<br>-dry, grey | | R60 | | ROCK | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | R61 | | ROCK | | | -4.0 |
| 5.0 | 4.6m<br>End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| REVIEWED BY: - | COMPLETE: 09/26/04 |
| Fig. No: 117 | Page 1 of 1 |

05/02/10 07:34AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30107 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6771149 E634529 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | SILTY SAND/SANDY SILT 0.3m<br>-damp, medium dense, brown | | | | | | | |
| 1.0 | GRAVELLY SAND, some silt 0.9m<br>-dry to damp, dense, light brown/grey<br>-rock powder in sample #265 | ⊠ | 265 | ● ▲ | SM | | ■ ◆ | -1.0 |
| | 1.5m | | | | | | | |
| 2.0 | End Of Hole @ 2.5m - Refusal<br>-refusal @ 1.5m - move 2m south<br>-refusal @ 1.5m - EOH | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 1.5 m |
|---|---|---|
| | REVIEWED BY: - | COMPLETE: 08/13/04 |
| | Fig. No: 59 | Page 1 of 1 |

05/02/10 07:34AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30107R |
|---|---|---|
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6771151 E634529 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

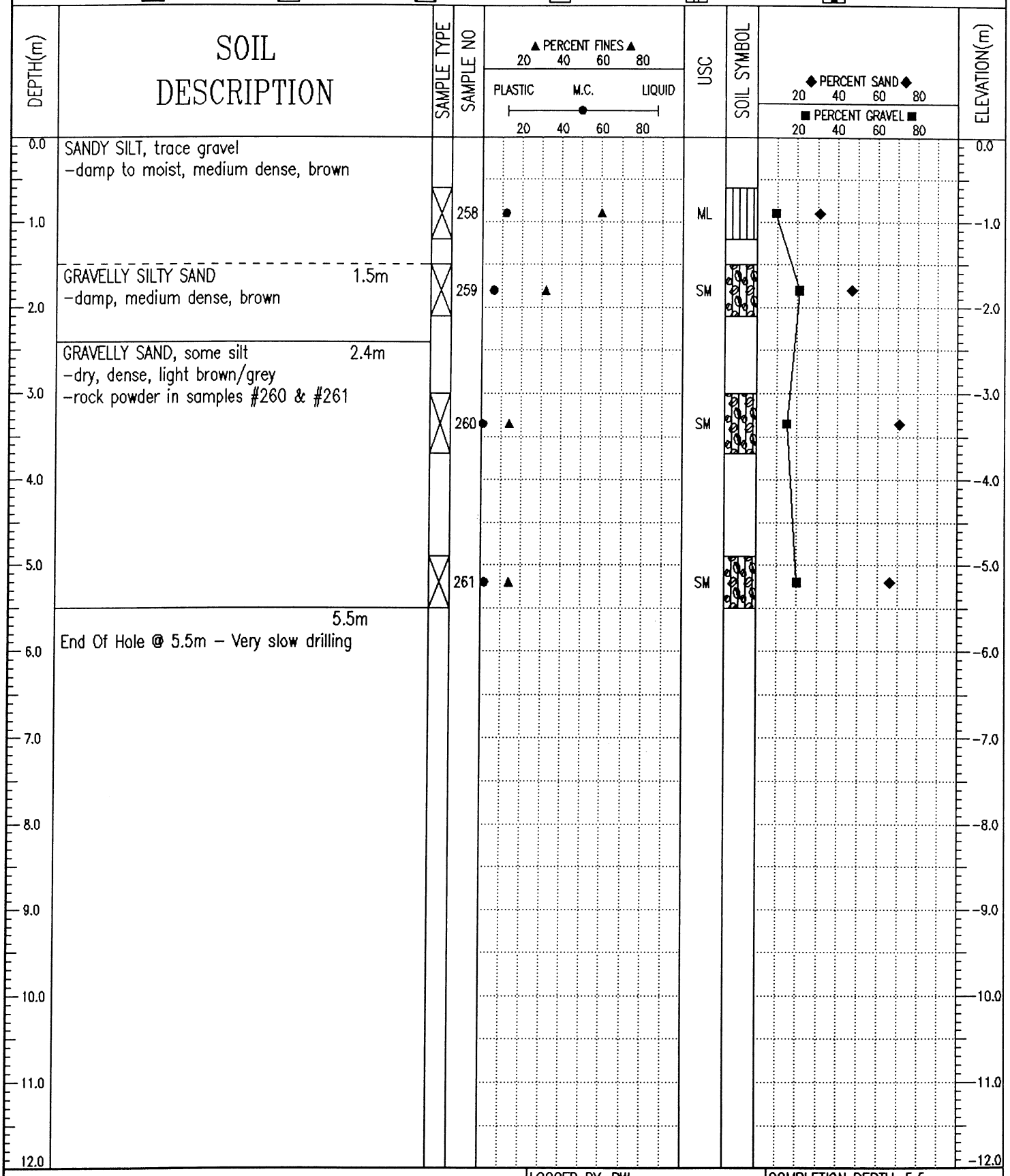
| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30107<br>-refusal @ 1.5m both attempts | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | ROCK 1.2m<br>-dry, grey | | | | | | | |
| 2.0 | | | R62 | | ROCK | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| | | | R63 | | ROCK | | | |
| 4.0 | | | | | | | | -4.0 |
| | 4.3m<br>End Of Hole @ 4.3m | | | | | | | |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.3 m |
|---|---|---|
| | REVIEWED BY: - | COMPLETE: 09/26/04 |
| | Fig. No: 132 | Page 1 of 1 |

05/02/10 07:34AM (YIC_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30108 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6771278 E634528 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE




| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.5 m |
|---|---|---|
| | REVIEWED BY: - | COMPLETE: 08/13/04 |
| | Fig. No: 58 | Page 1 of 1 |

05/02/10 07:35AM (YIC_HWTS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30109 |
| Donjek Services Ltd. | UTM ZONE: - N6771427 E634466 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT<br>-damp, medium dense, brown | | | | | 0.0 |
| | | | 256 | ML | | |
| 1.5m | GRAVELLY SILTY SAND<br>-damp, dense, brown | | 257 | SM | | |
| 3.0m | SILTY SAND, trace gravel<br>-dry to damp, dense, light brown/grey<br>-rock powder in sample #257 | | 258 | SM | | |
| 4.0m | End Of Sample @ 4.0m - Refusal<br>-refusal @ 3.0m - move south 2m<br>-refusal @ 4.0m - EOH | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

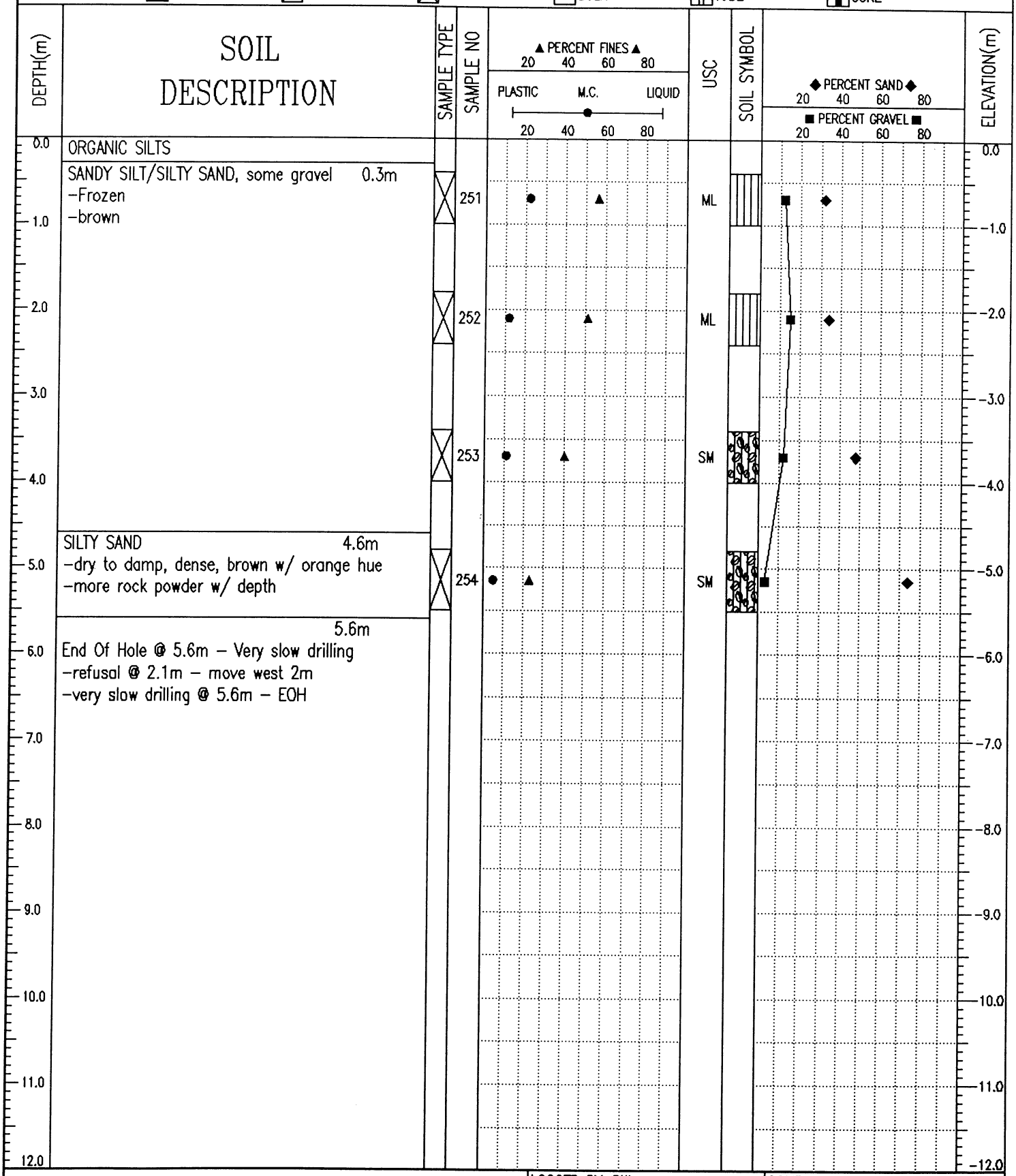
1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4 m |
| | REVIEWED BY: - | COMPLETE: 08/13/04 |
| | Fig. No: 57 | Page 1 of 1 |

05/02/10 07:35AM (YIC_HWTS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30110 |
| Donjek Services Ltd. | UTM ZONE: - N6771567 E634457 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.6 m |
| | REVIEWED BY: - | COMPLETE: 08/13/04 |
| | Fig. No: 56 | Page 1 of 1 |

05/02/10 07:35AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30111 |
| Donjek Services Ltd. | UTM ZONE: - N6776127 E634475 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SILTY SAND<br>-damp, medium dense, brown<br>-light organics to 0.3m | ⊠ | 249 | ● ▲ | SM | | ■ ◆ | 0.0 |
| 1.0 | SILTY GRAVELLY SAND 1.0m<br>-dry, dense, light brown/grey<br>-rock powder in sample #250 | ⊠ | 250 | ● ▲ | SM | | ■ ◆ | -1.0 |
| 2.0 | 1.8m<br>End Of Hole @ 1.8m - Refusal<br>-refusal @ 1.8m - move east 1.5m<br>-refusal @ 1.8m - EOH | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 1.8 m |
| REVIEWED BY: - | COMPLETE: 08/13/04 |
| Fig. No: 55 | Page 1 of 1 |

05/02/10 07:35AM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30111R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6771629 E634480 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▯▯ TUBE ▮▯ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30111<br>-refusal @ 1.8m both attempts | | | | | | | 0.0 |
| 1.0 | ROCK 0.9m<br>-dry, grey | | | | | | | -1.0 |
| 2.0 | | | R66 ◆ | | ROCK | | | -2.0 |
| 3.0 | | | R67 ◆ | | ROCK | | | -3.0 |
| 4.0 | 4.0m<br>End Of Hole @ 4.0m | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4 m |
| REVIEWED BY: | COMPLETE: 09/26/04 |
| Fig. No: 118 | Page 1 of 1 |

05/02/10 07:35AM (YIC_HWTS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30093 |
| Donjek Services Ltd. | UTM ZONE: - N6769809 E634966 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | GRAVELLY SILTY SAND<br>-moist, medium dense, brown w/ black organic seams<br>-organic silt seams throughout to 75mm in thickness | ⊠ | 310 | SM | |
| 1.8m | GRAVELLY SILTY SAND<br>-Frozen, no visible ice<br>-brown/grey<br>-minimal gravels in sample #314 @ refusal | ⊠ | 311 | GM | |
| | | ⊠ | 312 | SM | |
| | | ⊠ | 313 | SM | |
| | | ⊠ | 314 | SM | |
| 7.0m | End Of Hole @ 7.0m – Refusal<br>-refusal @ 7.0m – move south 2m<br>-refusal @ 2.1m – move south 2m<br>-refusal @ 2.4m – EOH | | | | |

▲ PERCENT FINES ▲ 20 40 60 80
PLASTIC M.C. LIQUID 20 40 60 80
◆ PERCENT SAND ◆ 20 40 60 80
■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 73 | COMPLETION DEPTH: 7 m<br>COMPLETE: 08/15/04<br>Page 1 of 1 |

05/02/10 07:28AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30112 |
| Donjek Services Ltd. | UTM ZONE: - N6771772 E634467 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | SANDY SILT, some gravel 0.3m<br>-damp, medium dense, brown | ⊠ | 246 | ● ▲ | ML | | ■ ◆ | |
| 1.0 | | | | | | | | -1.0 |
| | GRAVELLY SILTY SAND 1.2m<br>-damp, medium dense, brown | | | | | | | |
| 2.0 | | ⊠ | 247 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| | SILTY SAND, some gravel 3.0m<br>-dry to damp, dense, light brown/grey<br>-rock powder in sample #248 | ⊠ | 248 | ● ▲ | SM | | ■ ◆ | |
| | 3.4m | | | | | | | |
| 4.0 | End Of Hole @ 3.4m - Refusal<br>-refusal @ 3.4m - move north 1.5m<br>-refusal @ 3.4m - EOH | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 54 | COMPLETION DEPTH: 3.4 m<br>COMPLETE: 08/13/04<br>Page 1 of 1 |

05/02/10 07:35AM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30112R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6771772 E634470 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▯ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30112<br>-refusal @ 3.4m both attempts | | | | | | | 0.0 |
| 3.0 | ROCK (possibly fractured) 3.0m<br>-dry, grey<br>-some sand infill | | | | | | | -3.0 |
| 4.0 | ROCK 4.0m<br>-dry, grey | | R68 | | ROCK | | | -4.0 |
| | 4.6m | | | | | | | |
| 5.0 | End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 119 | COMPLETION DEPTH: 4.6 m<br>COMPLETE: 09/26/04<br>Page 1 of 1 |

05/02/10 07:36AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30113 |
| Donjek Services Ltd. | UTM ZONE: - N6771879 E634435 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| 1.0 | GRAVELLY SANDY SILT 0.6m<br>-Frozen<br>-brown | ⊠ | 244 | ● ▲ | ML | | ■ ◆ | -1.0 |
| 2.0 | GRAVELLY SILTY SAND 1.5m<br>-dry to damp, dense, brown | ⊠ | 245 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | 2.4m<br>End Of Hole @ 2.4m – Refusal<br>-refusal @ 2.1m – move south 2m<br>-refusal @ 2.4m – EOH<br>-rock powder on bit at refusal on both attempts | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 2.4 m |
| REVIEWED BY: - | COMPLETE: 08/12/04 |
| Fig. No: 53 | Page 1 of 1 |

05/02/10 07:36AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30113R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6771880 E634441 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30113 | | | | | | | 0.0 |
| | --refusal @ 2.4m & 2.1m | | | | | | | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | ROCK (possibly fractured) | 1.8m | | | | | | -2.0 |
| | ROCK | 2.4m | | | | | | |
| | -intact | | | | | | | |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | R69 | | ROCK | | -4.0 |
| | | 4.6m | | | | | | |
| 5.0 | End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd. | LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| Whitehorse, Yukon | REVIEWED BY: | COMPLETE: 09/26/04 |
| | Fig. No: 120 | Page 1 of 1 |

05/02/10 07:38AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30114 |
| Donjek Services Ltd. | UTM ZONE: - N6772019 E634386 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | GRAVELLY SAND, trace to some silt 0.3m<br>-dry to damp, medium dense, brown | ⊠ | 242 | ▲ | SW-SM | | ■ ◆ | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | ⊠ | 243 | ● ▲ | SW-SM | | ■ ◆ | -2.0 |
| 3.0 | 2.9m<br>End Of Hole @ 2.9m<br>-refusal @ 1.8m - move south 2m<br>-refusal @ 2.9m - EOH | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 52 | COMPLETION DEPTH: 2.9 m<br>COMPLETE: 08/12/04<br>Page 1 of 1 |

05/02/10 07:36AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30114R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6772023 E634386 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30114<br>-refusal @ 1.8m & 2.9m | | | | | | 0.0 |
| 3.0 | ROCK (possibly fractured) 3.0m<br>-medium dense<br>-some sand infill | | | | | | -3.0 |
| 4.0 | ROCK 4.0m<br>-intact | | R70 ● | | ROCK | | -4.0 |
| | 4.6m | | | | | | |
| 5.0 | End Of Hole @ 4.6m | | | | | | -5.0 |
| 12.0 | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| | REVIEWED BY: - | COMPLETE: 09/27/04 |
| | Fig. No: 121 | Page 1 of 1 |

05/02/10 07:36AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30115 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6772105 E634338 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>-damp to moist, medium dense, light brown<br>-increase moisture w/ depth | ⊠ | 238 | ●▲ | GP-GM | | ◆ ■ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | SILTY GRAVELLY SAND to SILTY SAND 1.8m<br>-dry to damp, dense, light brown | ⊠ | 239 | ● ▲ | SM | | ◆ | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | ⊠ | 240 | ● ▲ | SM | | ■ ◆ | -4.0 |
| | 4.3m | | | | | | | |
| 5.0 | End Of Hole @ 4.3m - Refusal<br>-refusal @ 3.7m - move south 2m<br>-refusal @ 4.3m - EOH | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.3 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 08/12/04 |
| | Fig. No: 51 | Page 1 of 1 |

05/02/10 07:37AM (YTG_HWYS)

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| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30115R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6772108 E634337 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30115<br>-refusal @ 3.7m & 4.3m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | ROCK or COBBLES/BOULDERS 1.8m<br>-light brown/grey | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | ROCK 3.4m<br>-some powder (not fine)<br>-some sand in sample<br>-water on stem after withdrawl<br>-medium dense | | R73 | | ROCK | | | -4.0 |
| 5.0 | 4.6m<br>End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 122 | COMPLETION DEPTH: 4.6 m<br>COMPLETE: 09/27/04<br>Page 1 of 1 |

05/02/10 07:37AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30116 |
| Donjek Services Ltd. | UTM ZONE: - N6672111 E634312 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | SANDY GRAVEL, some silt 0.3m<br>-damp, medium dense, brown | ⊠ | 234 | ● ▲ | GM | | ◆ ■ | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | GRAVELLY SAND, some silt 1.8m<br>-dry to damp, dense, light brown<br>-some rock powder in samples | ⊠ | 235 | ● ▲ | SW-SM | | ◆ | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | ⊠ | 236 | ● ▲ | SW-SM | | ◆ | -4.0 |
| | Pulverized rock sample @ refusal | ⊠ | 237 | ● ▲ | SM | | ■ ◆ | |
| 5.0 | 5.2m | | | | | | | -5.0 |
| | End Of Hole @ 5.2m - Refusal | | | | | | | |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 5.2 m |
| REVIEWED BY: - | COMPLETE: 08/12/04 |
| Fig. No: 50 | Page 1 of 1 |

05/02/10 07:37AM (YIC_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30116R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6772107 E634309 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30116<br>-refusal @ 5.2m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 1.5m | ROCK (possibly fractured)<br>-dry, grey<br>-medium dense<br>-some sand in powder | | | | | | | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 3.0m | ROCK<br>-dry, grey | | | | | | | |
| 4.0 | | | R71 | | ROCK | | | -4.0 |
| 4.6m | End Of Hole @ 4.6m | | | | | | | |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| | REVIEWED BY: - | COMPLETE: 09/27/04 |
| | Fig. No: 123 | Page 1 of 1 |

05/02/10 07:57AM (YIG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30117 |
| Donjek Services Ltd. | UTM ZONE: - N6772256 E634222 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SANDY SILT, some gravel<br>-damp to moist, medium dense, brown | | 232 | ML | | 0.0 |
| 1.0 | ORGANIC SILTS 0.6m<br>-damp to moist, medium dense, brown | | | | | -1.0 |
| 2.0 | SILTY SANDY GRAVEL 1.5m<br>-damp to moist, medium dense, brown | | 234 | GM | | -2.0 |
| 3.0 | | | | | | -3.0 |
| 4.0 | AS ABOVE 3.7m<br>End Of Hole @ 3.0m - Refusal<br>-refusal @ 3.7m - move south 2m<br>-refusal @ 2.1m - EOH | | | | | -4.0 |
| 5.0 | | | | | | -5.0 |
| 6.0 | | | | | | -6.0 |
| 7.0 | | | | | | -7.0 |
| 8.0 | | | | | | -8.0 |
| 9.0 | | | | | | -9.0 |
| 10.0 | | | | | | -10.0 |
| 11.0 | | | | | | -11.0 |
| 12.0 | | | | | | -12.0 |

PERCENT FINES: 20 40 60 80
PLASTIC M.C. LIQUID
20 40 60 80
PERCENT SAND: 20 40 60 80
PERCENT GRAVEL: 20 40 60 80

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW
REVIEWED BY: -
Fig. No: 49

COMPLETION DEPTH: 3.7 m
COMPLETE: 08/12/04
Page 1 of 1

05/02/10 07:37AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30117R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6772253 E634224 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▭ BULK ▯ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30117<br>-refusal 2.1m @ 3.7m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 3.4m | ROCK or GRAVEL STRATA<br>-dry, brown<br>-not much powder<br>-some round stone in sample | | | | | | | |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | R72 ● | | | | | -6.0 |
| 6.7m | End Of Hole @ 6.7m | | | | | | | |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 6.7 m |
| REVIEWED BY: - | COMPLETE: 09/27/04 |
| Fig. No: 124 | Page 1 of 1 |

05/02/10 07:37AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30118 |
| Donjek Services Ltd. | UTM ZONE: – N6772272 E634185 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | |
| | SILTY SAND/SANDY SILT 0.3m<br>–damp, medium dense, light brown | | | | |
| 1.0 | SANDY SILT, trace gravel 0.6m<br>–damp, medium dense, brown | ⊠ | 229 | ML | |
| | SANDY SILTY GRAVEL 1.2m<br>–damp, dense, brown | | | | |
| 2.0 | | ⊠ | 230 | GM | |
| | SILTY SAND, trace gravel 2.7m<br>–dry, very dense, light brown<br>–rock powder in sample | | | | |
| 3.0 | | ⊠ | 231 | SM | |
| | 3.7m | | | | |
| 4.0 | End Of Hole @ 3.7m – Refusal<br>–refusal @ 3.7m – move south 1.5m<br>–refusal @ 3.7m – EOH | | | | |
| 5.0 | | | | | |
| 6.0 | | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 3.7 m |
| REVIEWED BY: - | COMPLETE: 08/12/04 |
| Fig. No: 48 | Page 1 of 1 |

05/02/10 07:38AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30118R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6772274 E634188 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▯ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30118<br>-refusal @ 3.7m both attempts | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | ROCK 3.0m<br>-dry, grey<br>-very powdery<br>-significant rock chips | | | | | | | -3.0 |
| 4.0 | | | R74 | | ROCK | | | -4.0 |
| | 4.6m | | | | | | | |
| 5.0 | End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| REVIEWED BY: - | COMPLETE: 09/27/04 |
| Fig. No: 125 | Page 1 of 1 |

05/02/10 07:38AM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30119 |
| Donjek Services Ltd. | UTM ZONE: - N6772380 E634109 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SILTY SANDY GRAVEL<br>-saturated, medium dense, brown | AUGER | 226 | GM | | 0.0 |
| 0.6m | ORGANIC SILTS<br>-wet, soft to firm, black/dark brown | | | | | |
| 0.9m | GRAVELLY SAND, trace silt<br>-damp, medium dense, light brown | AUGER | 227 | SW-SM | | -2.0 |
| 3.0m | SAND, some silt, trace gravel<br>-moist to wet, dense, light brown<br>-increase moisture from seepage | AUGER | 228 | SM | | -4.0 |
| 4.6m | End Of Hole @ 4.6m - Refusal<br>-refusal @ 3.7m - move north 2m<br>-refusal @ 4.6m - EOH | | | | | |

▲ PERCENT FINES ▲ (20 40 60 80)

PLASTIC M.C. LIQUID (20 40 60 80)

◆ PERCENT SAND ◆ (20 40 60 80)

■ PERCENT GRAVEL ■ (20 40 60 80)

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 47 | COMPLETION DEPTH: 4.6 m<br>COMPLETE: 08/12/04<br>Page 1 of 1 |

05/02/10 07:38AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30120 |
| Donjek Services Ltd. | UTM ZONE: - N6772396 E634076 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | 0.0 |
| | GRAVELLY SILTY SAND 0.3m<br>-damp, medium dense, brown | ⊠ | 222 | SM | | |
| 1.0 | | | | | | -1.0 |
| 2.0 | SILTY SAND 2.1m<br>-damp, very dense, brown | ⊠ | 223 | SM | | -2.0 |
| 3.0 | AS ABOVE 3.0m<br>-light brown (lighter with depth) | | | | | -3.0 |
| 4.0 | | ⊠ | 224 | SM | | -4.0 |
| 5.0 | some rock powder in sample #225 | ⊠ | 225 | SM | | -5.0 |
| | 5.3m<br>End Of Hole @ 5.3m - Very Slow Drilling<br>-refusal @ 2.4m - move north 2m<br>-very slow drilling at 5.3m - EOH | | | | | |
| 6.0 | | | | | | -6.0 |
| 7.0 | | | | | | -7.0 |
| 8.0 | | | | | | -8.0 |
| 9.0 | | | | | | -9.0 |
| 10.0 | | | | | | -10.0 |
| 11.0 | | | | | | -11.0 |
| 12.0 | | | | | | -12.0 |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.3 m |
| | REVIEWED BY: - | COMPLETE: 08/12/04 |
| | Fig. No: 46 | Page 1 of 1 |

05/02/10 07:38AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30121 |
| Donjek Services Ltd. | UTM ZONE: - N6772578 E633974 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▯ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | GRAVELLY SILTY SAND 0.3m<br>-damp, medium dense, brown | ⊠ | 219 | ◆ ▲ | SM | | ◆ | |
| 1.0 | | | | | | | | -1.0 |
| | SILTY SANDY GRAVEL 1.5m<br>-dense | ⊠ | 220 | ◆ ▲ | GM | | ■ | |
| 2.0 | | | | | | | | -2.0 |
| | SILTY SAND 2.7m<br>-dry, very dense, light brown<br>-rock powder in sample | ⊠ | 221 | ● ▲ | SM | | ◆ ■ | |
| 3.0 | 3.2m | | | | | | | -3.0 |
| | End Of Hole @ 3.2m – Refusal<br>-refusal @ 3.0m – move east 2m<br>-refusal @ 3.2m – EOH | | | | | | | |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 45 | COMPLETION DEPTH: 3.2 m<br>COMPLETE: 08/12/04<br>Page 1 of 1 |

05/02/10 07:38AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30121R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6772578 E633974 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30121<br>-refusal @ 3.2m & 3.0m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | ROCK 3.0m<br>-dry, grey<br>-some powder<br>-medium dense rock | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| | | | R75 | | ROCK | | | |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | R76 | | ROCK | | | -7.0 |
| | 7.6m | | | | | | | |
| 8.0 | End Of Hole @ 7.6m | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

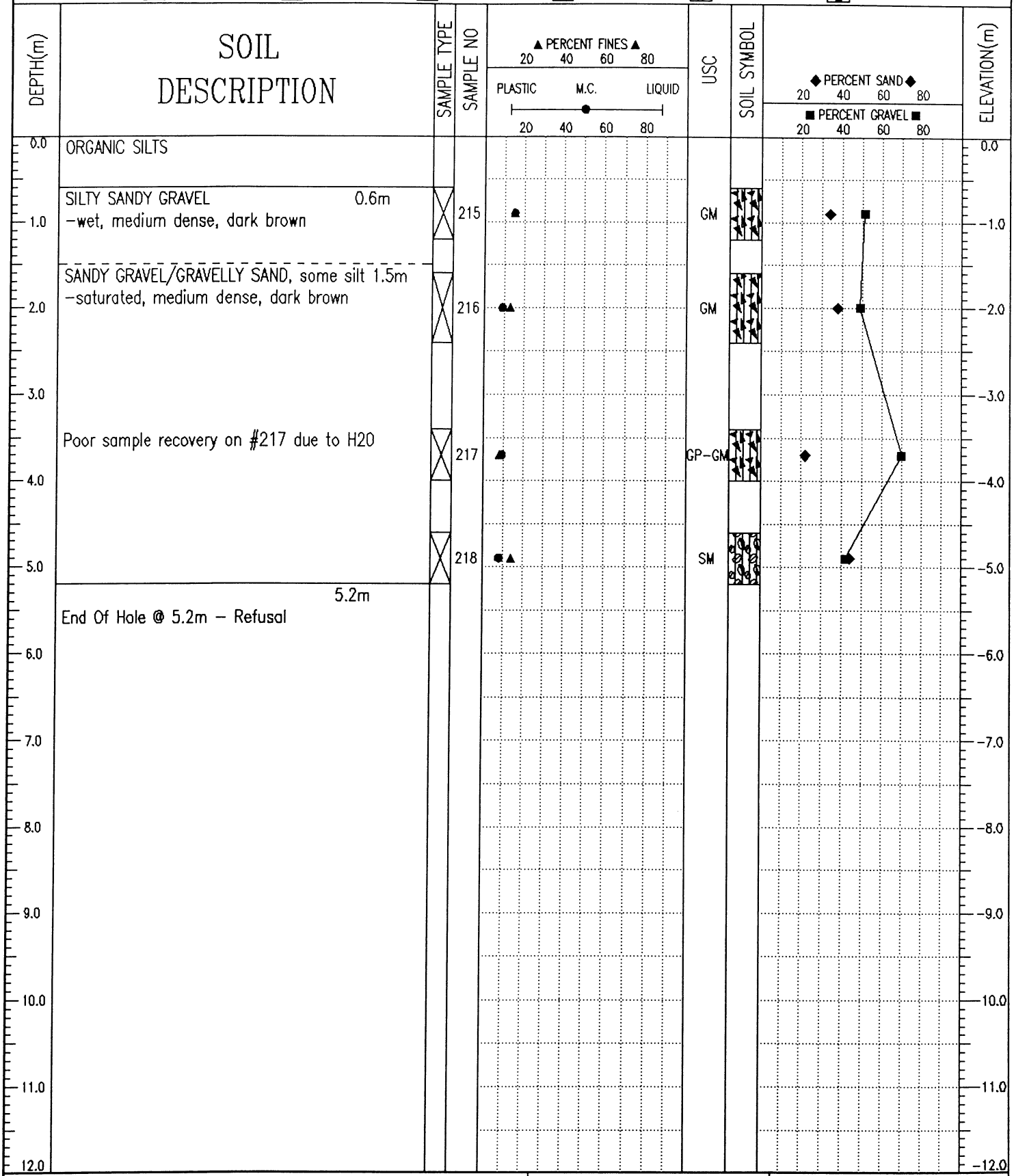
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 7.6 m |
| REVIEWED BY: | COMPLETE: 09/27/04 |
| Fig. No: 126 | Page 1 of 1 |

05/02/10 07:30AM (YTC_HWTS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30122 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6772688 E633916 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE




| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.2 m |
|---|---|---|
| | REVIEWED BY: - | COMPLETE: 08/12/04 |
| | Fig. No: 44 | Page 1 of 1 |

05/02/10 07:30AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30122R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6772688 E633923 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

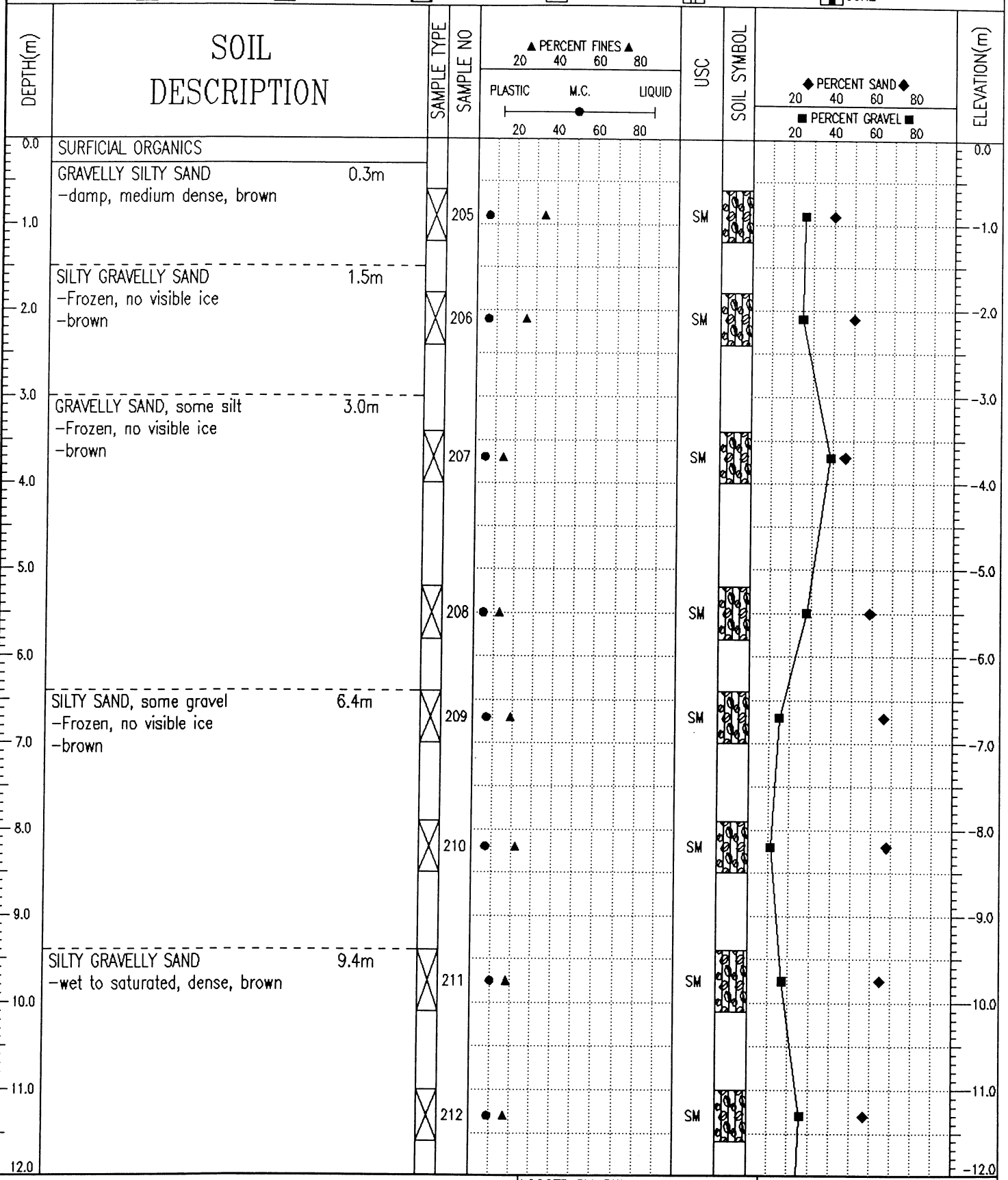
| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30122<br>-refusal @ 5.2m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | R77 ● | | | | | -7.0 |
| 8.0 | 7.6m<br>End Of Hole @ 7.6m - No Rock Encountered | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 7.6 m |
| | REVIEWED BY: - | COMPLETE: 09/27/04 |
| | Fig. No: 127 | Page 1 of 1 |

05/02/10 07:30AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30123 |
| Donjek Services Ltd. | UTM ZONE: - N6772714 E633863 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▥ TUBE ▮ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 15.1 m |
| | REVIEWED BY: - | COMPLETE: 08/11/04 |
| | Fig. No: 43 | Page 1 of 2 |

05/02/10 07:39AM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30123 |
| Donjek Services Ltd. | UTM ZONE: - N6772714 E633863 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | | | | | | | 12.0 |
| 13.0 | | ⊠ | 213 | ● ▲ | SM | | ■ ◆ | 13.0 |
| 14.0 | | ⊠ | 214 | ● ▲ | SM | | ■ ◆ | 14.0 |
| 15.0 | 15.1m<br>End Of Hole @ 15.1m<br>-refusal @ 4.9m – move north 1.5m | | | | | | | 15.0 |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

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Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 15.1 m |
| REVIEWED BY: - | COMPLETE: 08/11/04 |
| Fig. No: 43 | Page 2 of 2 |

05/02/10 07:30AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30124 |
| Donjek Services Ltd. | UTM ZONE: - N6772909 E633827 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | | 0.0 |
| 1.0 | SILTY SANDY GRAVEL<br>-moist, medium dense, brown | 0.6m | ⊠ | 200 | ● ▲ | GM | | ◆ ■ | -1.0 |
| 2.0 | SANDY SILT, some gravel<br>-Frozen<br>-brown | 1.5m | ⊠ | 201 | ● ▲ | ML | | ◆ ■ | -2.0 |
| 3.0 | SILTY SAND<br>-Frozen<br>-brown w/ orange hue<br>-decomposed rock | 3.0m | ⊠ | 202 | ● ▲ | SM | | ◆ ■ | -3.0 |
| 4.0 | | | | | | | | | -4.0 |
| 5.0 | SILTY SAND<br>-dry to damp, dense, light brown w/ orange hue<br>-more intact rock with depth | 4.9m | ⊠ | 203 | ● ▲ | SM | | ◆ ■ | -5.0 |
| 6.0 | | | | | | | | | -6.0 |
| 7.0 | SILTY SAND, trace gravel<br>-light brown, very dense | 6.4m | ⊠ | 204 | ● ▲ | SM | | ◆ ■ | -7.0 |
| 8.0 | End Of Hole @ 7.5m – Refusal | 7.5m | | | | | | | -8.0 |
| 9.0 | | | | | | | | | -9.0 |
| 10.0 | | | | | | | | | -10.0 |
| 11.0 | | | | | | | | | -11.0 |
| 12.0 | | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 7.5 m |
| REVIEWED BY: - | COMPLETE: 08/11/04 |
| Fig. No: 42 | Page 1 of 1 |

05/02/10 07:40AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30125 |
| Donjek Services Ltd. | UTM ZONE: - N6773058 E633772 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | | | | 0.0 |
| | SANDY GRAVEL, trace silt 0.1m<br>-dry to damp, medium dense, light brown | ⊠ | 193 | ● ▲ | GW-GM | | ◆ ■ | |
| 1.0 | | | | | | | | -1.0 |
| | SILTY GRAVELLY SAND 1.5m<br>-damp, medium dense, brown | ⊠ | 194 | ● ▲ | SM | | ◆ ■ | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| | SILTY GRAVELLY SAND 3.4m<br>-moist, medium dense, brown | ⊠ | 195 | ● ▲ | SM | | ◆ ■ | |
| 4.0 | | | | | | | | -4.0 |
| | SILTY GRAVELLY SAND 4.3m<br>-moist to wet, medium desne, brown | | | | | | | |
| 5.0 | | ⊠ | 196 | ● ▲ | SM | | ◆ ■ | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| | GRAVELLY SILTY SAND 6.1m<br>-saturated, medium dense, brown | ⊠ | 197 | ● ▲ | SM | | ◆ ■ | |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | SILTY SAND, trace gravel 7.9m<br>-moist, medium dense, grey | ⊠ | 198 | ● ▲ | SM | | ◆ ■ | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| | | ⊠ | 199 | ● ▲ | SM | | ◆ ■ | |
| 11.0 | 10.7m<br>End Of Hole @ 10.7m | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 10.7 m |
| REVIEWED BY: - | COMPLETE: 08/11/04 |
| Fig. No: 41 | Page 1 of 1 |

05/02/10 07:40AM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30126 |
| Donjek Services Ltd. | UTM ZONE: - N6773199 E633699 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES / PLASTIC / M.C. / LIQUID | USC | SOIL SYMBOL | PERCENT SAND / PERCENT GRAVEL | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | SANDY SILT, trace gravel 0.4m<br>-damp to moist, medium dense, brown | AUGER | 191 | | ML | | | |
| 1.0 | | | | | | | | -1.0 |
| | SILTY SAND, some gravel 1.5m<br>-dry to damp, dense, light brown<br>-rock powder in sample | AUGER | 192 | | SM | | | |
| 2.0 | 1.8m | | | | | | | -2.0 |
| | End Of Hole @ 1.8m - refusal<br>-refusal @ 1.8m - move south 2m<br>-refusal @ 1.8m - EOH | | | | | | | |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

PERCENT FINES: 20 40 60 80
PLASTIC M.C. LIQUID: 20 40 60 80
PERCENT SAND: 20 40 60 80
PERCENT GRAVEL: 20 40 60 80

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 1.8 m |
| REVIEWED BY: | COMPLETE: 08/10/04 |
| Fig. No: 40 | Page 1 of 1 |

05/02/10 07:40AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30126R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6773197 E633699 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30126<br>-refusal @ 1.8m both attempts | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | ROCK 1.8m<br>-dry, grey<br>-medium dense to dense rock | | | | | | | -2.0 |
| 3.0 | | | R78 | | ROCK | | | -3.0 |
| 4.0 | | | R79 | | ROCK | | | -4.0 |
| | 4.6m | | | | | | | |
| 5.0 | End Of Hole @ 4.6m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 128 | COMPLETION DEPTH: 4.6 m<br>COMPLETE: 09/28/04<br>Page 1 of 1 |

05/02/10 07:40AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30127 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6773331 E633619 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES (20 40 60 80) / PLASTIC M.C. LIQUID (20 40 60 80) | USC | SOIL SYMBOL | PERCENT SAND (20 40 60 80) / PERCENT GRAVEL (20 40 60 80) | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | GRAVELLY SILTY SAND 0.3m<br>-Frozen, no visible ice<br>-brown | | | | | | | |
| 1.0 | | | 188 | | SM | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| | | | 189 | | SM | | | |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | SILTY SAND 4.0m<br>-dry to damp, dense, light brown<br>-powder in sample | | 190 | | SM | | | -4.0 |
| | 4.6m | | | | | | | |
| 5.0 | End Of Hole @ 4.6m - Refusal<br>-refusal @ 4.6m - move east 2m<br>-refusal @ 4.4m - EOH<br>-rock powder on bit at refusal on both attempts | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
|---|---|---|
| | REVIEWED BY: - | COMPLETE: 08/10/04 |
| | Fig. No: 39 | Page 1 of 1 |

05/02/10 07:40AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30127R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6773336 E633614 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30127<br>-refusal @ 4.6m & 4.4m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | SILTY SAND 3.7m<br>-dry to damp, brown/grey<br>-minimal chips in sample<br>-minimal powder, more fine sands<br>-drill advanced steadily<br>-not hard drilling | | | | | | | -4.0 |
| 5.0 | | | R80 | | SM | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | R81 | | SM | | | -7.0 |
| 8.0 | 7.6m<br>End Of Hole @ 7.6m – Cannot Determine Rock | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 7.6 m |
| REVIEWED BY: - | COMPLETE: 09/28/04 |
| Fig. No: 129 | Page 1 of 1 |

05/02/10 07:41AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30128 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6773445 E633550 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES (20 40 60 80) / PLASTIC – M.C. – LIQUID (20 40 60 80) | USC | SOIL SYMBOL | PERCENT SAND (20 40 60 80) / PERCENT GRAVEL (20 40 60 80) | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | GRAVELLY SAND, some silt 0.3m<br>–dry to damp, medium dense, light brown | | 184 | | SW–SM | | | |
| 1.0 | | | | | | | | -1.0 |
| | SILTY SAND 1.5m<br>–moist, dense, light brown with odd yellow/green hue<br>–water seepage at approx. 1.5m | | 185 | | SM | | | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | 186 | | SM | | | -4.0 |
| | SILTY SAND 4.6m<br>–moist, dense, light brown with odd yellow/green hue | | | | | | | |
| 5.0 | | | | | | | | -5.0 |
| | | | 187 | | SM | | | |
| 6.0 | 5.9m<br>End Of Hole @ 5.9m<br>–standing water in testhole approx. 100mm below surface during drilling of 4.4 to 4.7m | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
|---|---|---|
| | REVIEWED BY: - | COMPLETE: 08/10/04 |
| | Fig. No: 38 | Page 1 of 1 |

05/02/10 07:41AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30129 |
| Donjek Services Ltd. | UTM ZONE: – N6773473 E633531 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| 1.0 | SANDY SILT 0.6m<br>–moist, soft to firm, brown with some black organic silts | ⊠ | 181 | ● ▲ | ML | | ■ ◆ | -1.0 |
| 2.0 | SILTY GRAVELLY SAND 1.5m<br>–moist to wet, medium dense, brown | ⊠ | 182 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | SILTY SAND, some gravel 3.0m<br>–damp, dense, brown | ⊠ | 183 | ● ▲ | SM | | ■ ◆ | -3.0 |
| 4.0 | 4.0m<br>End Of Hole @ 4.0m – Refusal<br>–refusal @ 3.7m – move south 1.5m<br>–refusal @ 4.0m – EOH | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4 m |
| | REVIEWED BY: - | COMPLETE: 08/10/04 |
| | Fig. No: 37 | Page 1 of 1 |

05/02/10 07:41AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30129R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6773477 E633527 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30129<br>-refusal @ 3.7m & 4.0m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | SANDY GRAVEL (Cannot Determine Rock) 3.7m<br>-dry, brown/grey<br>-some rock chips<br>-minimal powder<br>-steady drilling | | | | | | | -4.0 |
| 5.0 | | | R82 ● | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | ROCK 7.0m<br>-dry, grey<br>-significant powder | | R83 ● | | ROCK | | | -7.0 |
| 8.0 | 7.6m<br>End Of Hole @ 7.6m | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

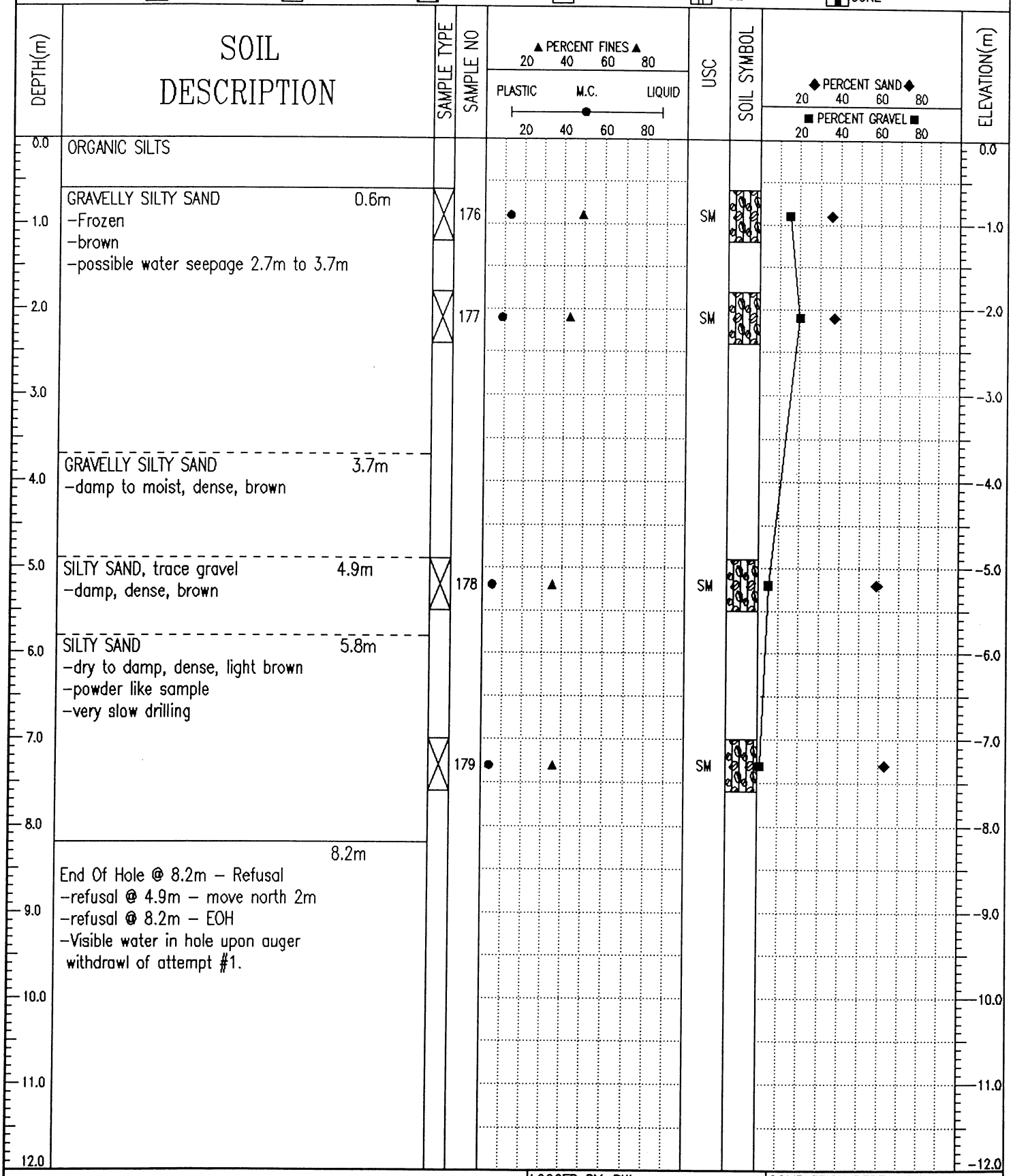
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 7.6 m |
| REVIEWED BY: - | COMPLETE: 09/29/04 |
| Fig. No: 130 | Page 1 of 1 |

05/02/10 07:41AM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30130 |
| Donjek Services Ltd. | UTM ZONE: - N6773537 E633472 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▥ TUBE ▥ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 8.2 m |
| | REVIEWED BY: - | COMPLETE: 08/10/04 |
| | Fig. No: 36 | Page 1 of 1 |

05/02/10 07:41AM (YIC_HWS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30131 |
| Donjek Services Ltd. | UTM ZONE: - N6773651 E633423 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | SANDY SILT, trace gravel 0.3m<br>-Frozen<br>-brown | ☒ | 173 | ● ▲ | ML | | ■ ◆ | |
| 1.0 | | | | | | | | -1.0 |
| | SILTY SAND, some gravel 1.5m<br>-Frozen<br>-brown | ☒ | 174 | ● ▲ | SM | | ■ ◆ | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| | SILTY SAND 3.4m<br>-dry to damp, dense, light brown<br>-rock powder in sample | ☒ | 175 | ● ▲ | SM | | ■ ◆ | |
| 4.0 | 4.0m | | | | | | | -4.0 |
| | End Of Hole @ 4.0m - Refusal<br>-refusal @ 4.0m - move north 2.5m<br>-refusal @ 4.0m - EOH<br>-rock powder on bit at refusal on both attempts<br>-visible rock outcropping approx. 10m west of testhole | | | | | | | |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4 m |
| REVIEWED BY: | COMPLETE: 08/10/04 |
| Fig. No: 35 | Page 1 of 1 |

05/02/10 07:42AM (YIC_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30131R |
|---|---|---|
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6773655 E633418 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOGS 30131<br>-refusal @ 4.0m both attempts | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | ROCK 3.4m<br>-dry, grey<br>-significant powder<br>-minimal rock chips | | R84 | | ROCK | | | -4.0 |
| 5.0 | AS ABOVE 4.9m<br>-increase rock chips | | | | | | | -5.0 |
| 6.0 | | | R85 | | ROCK | | | -6.0 |
| | 6.1m<br>End Of Hole @ 6.1m | | | | | | | |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 6.1 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 09/29/04 |
| | Fig. No: 131 | Page 1 of 1 |

05/02/10 07:42AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30132 |
| Donjek Services Ltd. | UTM ZONE: - N6773786 E633337 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | |
| 1.0 | SILTY SAND, trace to some gravel 0.9m<br>-Frozen<br>-brown | ⊠ | 170 | SM | |
| 2.0 | | ⊠ | 171 | SM | |
| 3.0 | AS ABOVE 3.2m<br>-Unfrozen<br>-damp, medium dense, brown | ⊠ | 172 | SM | |
| 4.0 | 4.0m<br>End Of Hole @ 4.0m - Refusal<br>-refusal @ 0.9m - move south 5m<br>-refusal @ 4.0m - EOH<br>-rock powder on bit at refusal on both attempts | | | | |
| 5.0 | | | | | |
| 6.0 | | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ (20 40 60 80)

PLASTIC M.C. LIQUID (20 40 60 80)

◆ PERCENT SAND ◆ (20 40 60 80)

■ PERCENT GRAVEL ■ (20 40 60 80)

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

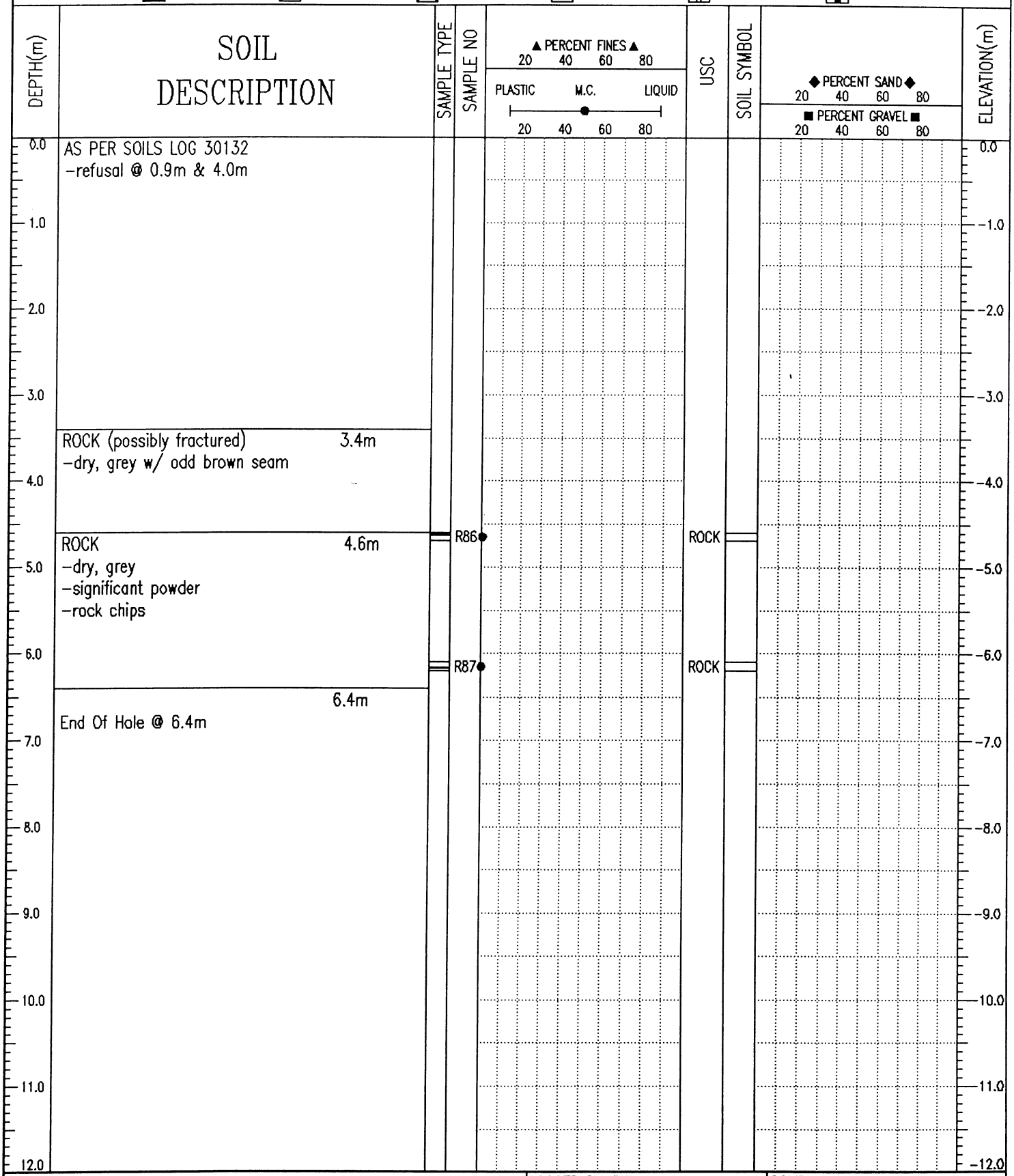
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4 m |
| REVIEWED BY: - | COMPLETE: 08/09/04 |
| Fig. No: 34 | Page 1 of 1 |

05/02/10 07:47AM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30132R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6773786 E633333 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 6.4 m |
| | REVIEWED BY: - | COMPLETE: 09/28/04 |
| | Fig. No: 133 | Page 1 of 1 |

05/02/10 07:42AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30133 |
| Donjek Services Ltd. | UTM ZONE: - N6673901 E633261 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | SILTY GRAVELLY SAND 0.6m<br>-Frozen<br>-brown | ⊠ | 168 | ● ▲ | SM | | ■ ◆ | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | SILTY SAND 1.8m<br>-damp, dense, brown | ⊠ | 169 | ● ▲ | SM | | ■ ◆ | -2.0 |
| | 2.7m | | | | | | | |
| 3.0 | End Of Hole @ 2.7m - Refusal<br>-refusal @ 2.7m - move south 3m<br>-refusal @ 2.6m - EOH<br>-rock powder on bit at refusal on both attempts | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 2.7 m |
| REVIEWED BY: - | COMPLETE: 08/09/04 |
| Fig. No: 33 | Page 1 of 1 |

05/02/10 07:47AM (YTC_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30133R |
|---|---|---|
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6773908 E633264 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▯ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30133<br>-refusal @ 2.7m & 2.6m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | | | | | | | | -2.0 |
| 2.4m | ROCK<br>-dry, grey<br>-significant powder<br>-rock chips<br>-more intact w/ depth | | | | | | | |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | R88 ● | | ROCK | | | -4.0 |
| 4.6m | End Of Hole @ 4.6m | | | | | | | |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
|---|---|
| REVIEWED BY: - | COMPLETE: 09/28/04 |
| Fig. No: 134 | Page 1 of 1 |

05/02/10 07:43AM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30134 |
| Donjek Services Ltd. | UTM ZONE: - N6674008 E633158 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | | | | 0.0 |
| 1.0 | SILTY GRAVELLY SAND 0.9m<br>-damp, medium dense, brown | ⊠ | 166 | ● ▲ | SM | | ■ ◆ | -1.0 |
| 2.0 | SILTY SAND, trace gravel 1.8m<br>-dry to damp, dense, light brown | ⊠ | 167 | ● ▲ | SM | | ■ ◆ | -2.0 |
| | 2.7m | | | | | | | |
| 3.0 | End Of Hole @ 2.7m - Refusal<br>-refusal @ 2.7m - move west 2m<br>-refusal @ 1.5m - EOH<br>-rock powder on bit at refusal on both attempts | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 2.7 m |
| REVIEWED BY: | COMPLETE: 08/09/04 |
| Fig. No: 32 | Page 1 of 1 |

05/02/10 07:48AM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30134R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6774009 E633155 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30134<br>-refusal @ 2.7m & 1.5m | | | | | | | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | ROCK 1.2m<br>-dry, grey<br>-significant powder<br>-rock chips | | | | | | | |
| 2.0 | | | R89 | | ROCK | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | 4.0m<br>End Of Hole @ 4.0m | | R90 | | ROCK | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: -<br>Fig. No: 135 | COMPLETION DEPTH: 4 m<br>COMPLETE: 09/28/04<br>Page 1 of 1 |

05/02/10 08:19AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30135 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6674137 E633067 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SURFICAL ORGANICS<br>-Frozen | | | | | | | 0.0 |
| 1.0 | SILTY SAND, some gravel 0.9m<br>-Frozen<br>-brown | ⊠ | 164 | ● ▲ | SM | | ■ ◆ | -1.0 |
| 2.0 | SILTY SAND 1.8m<br>-damp<br>-light brown | ⊠ | 165 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | 3.0m<br>End Of Hole @ 3.0m – Refusal<br>-Some rock powder on bit at depth<br>-refusal @ 1.5m – move south 2m<br>-refusal @ 3.0m – EOH | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 3 m |
|---|---|
| REVIEWED BY: - | COMPLETE: 08/09/04 |
| Fig. No: 31 | Page 1 of 1 |

05/02/10 07:48AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30135R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6674140 E633064 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30135<br>-refusal @ 1.5m & 3.0m | | | | | | 0.0 |
| 2.4 | ROCK 2.4m<br>-possibly fractured<br>-some brown sand infill<br>-some powder | | | | | | -2.4 |
| 3.7 | ROCK 3.7m<br>-dry, grey<br>-significant powder<br>-rock chips<br>-intact | | R91 ● | | ROCK | | -3.7 |
| 4.6 | End Of Hole @ 4.6m | | | | | | -4.6 |
| 12.0 | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| REVIEWED BY: - | COMPLETE: 09/28/04 |
| Fig. No: 136 | Page 1 of 1 |

05/02/10 07:43AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30136 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6674206 E633003 | PROJECT NO: 9002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES / PLASTIC / M.C. / LIQUID | USC | SOIL SYMBOL | PERCENT SAND / PERCENT GRAVEL | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | | | | 0.0 |
| | SILTY SAND, some gravel 0.6m<br>-Frozen<br>-brown | | 162 | | SM | | | |
| 1.0 | | | | | | | | -1.0 |
| | SILTY SAND 1.5m<br>-Frozen<br>-brown | | 163 | | SM | | | |
| 2.0 | | | | | | | | -2.0 |
| | 2.1m<br>End Of Hole @ 2.1m - Refusal<br>-refusal @ 2.1m - move 2m south<br>-refusal @ 2.1m - EOH | | | | | | | |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| LOGGED BY: RW | COMPLETION DEPTH: 2.1 m |
|---|---|
| REVIEWED BY: - | COMPLETE: 08/09/04 |
| Fig. No: 30 | Page 1 of 1 |

05/02/10 09:20AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30136R |
| Midnight Sun Drilling Ltd. | UTM ZONE: - N6774199 E633004 | PROJECT NO: 8002-318 |
| Reverse Circulation Air Rotary Drill | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | AS PER SOILS LOG 30136<br>-refusal @ 2.1m both attempts | | | | | | | 0.0 |
| 2.4m | ROCK<br>-dry, grey<br>-significant powder<br>-rock chips<br>-more intact w/ depth | | R92 | | ROCK | | | -3.0 |
| | | | R93 | | ROCK | | | -4.0 |
| 4.6m | End Of Hole @ 4.6m | | | | | | | -5.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4.6 m |
| REVIEWED BY: - | COMPLETE: 09/28/04 |
| Fig. No: 137 | Page 1 of 1 |

05/02/10 07:44AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 654-2763D |
| Donjek Services Ltd. | UTM ZONE: - N6774951 E632672 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

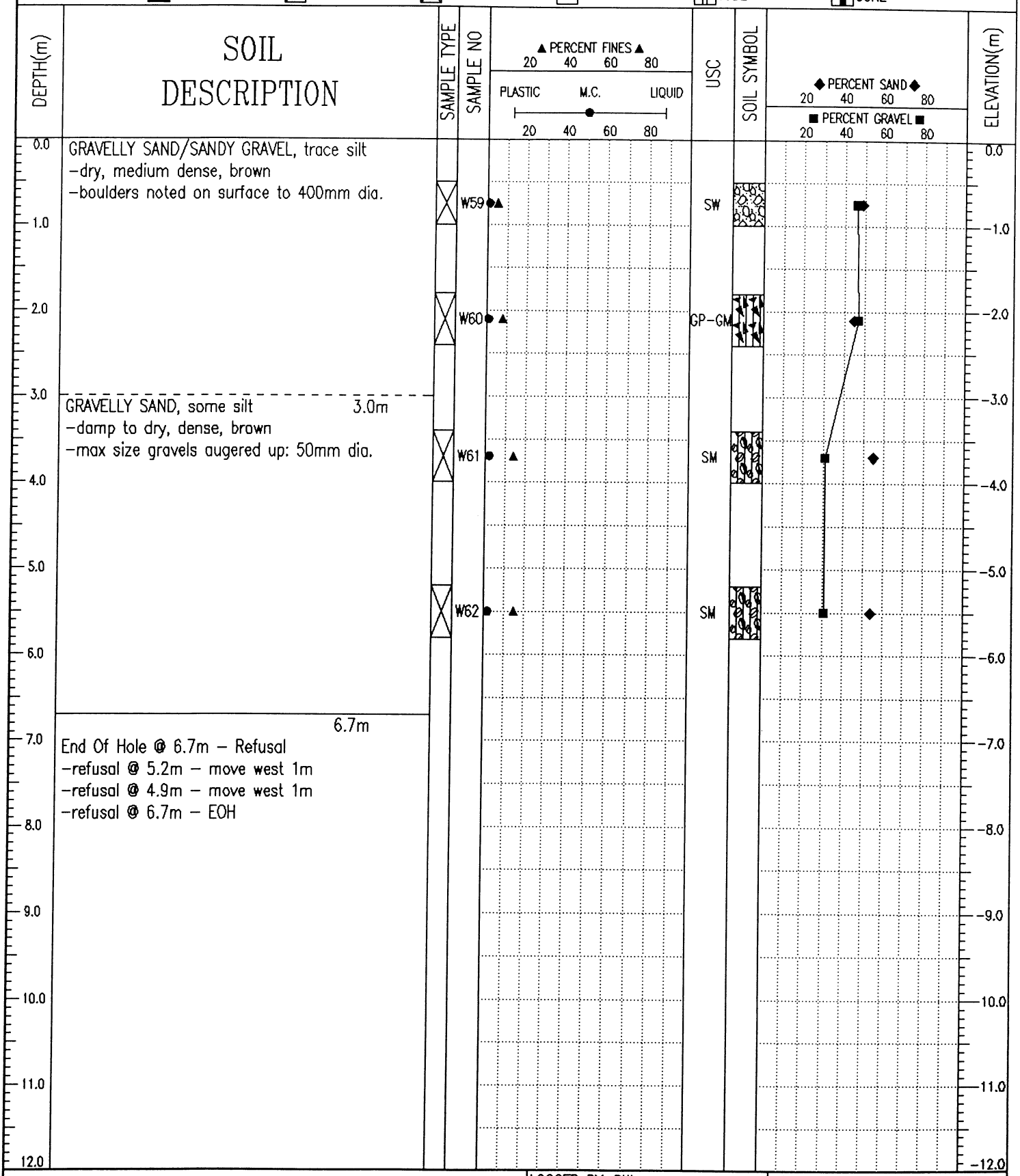
SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

# SOIL DESCRIPTION

GRAVELLY SAND/SANDY GRAVEL, trace silt
-dry, medium dense, brown
-boulders noted on surface to 400mm dia.

GRAVELLY SAND, some silt 3.0m
-damp to dry, dense, brown
-max size gravels augered up: 50mm dia.

6.7m
End Of Hole @ 6.7m - Refusal
-refusal @ 5.2m - move west 1m
-refusal @ 4.9m - move west 1m
-refusal @ 6.7m - EOH

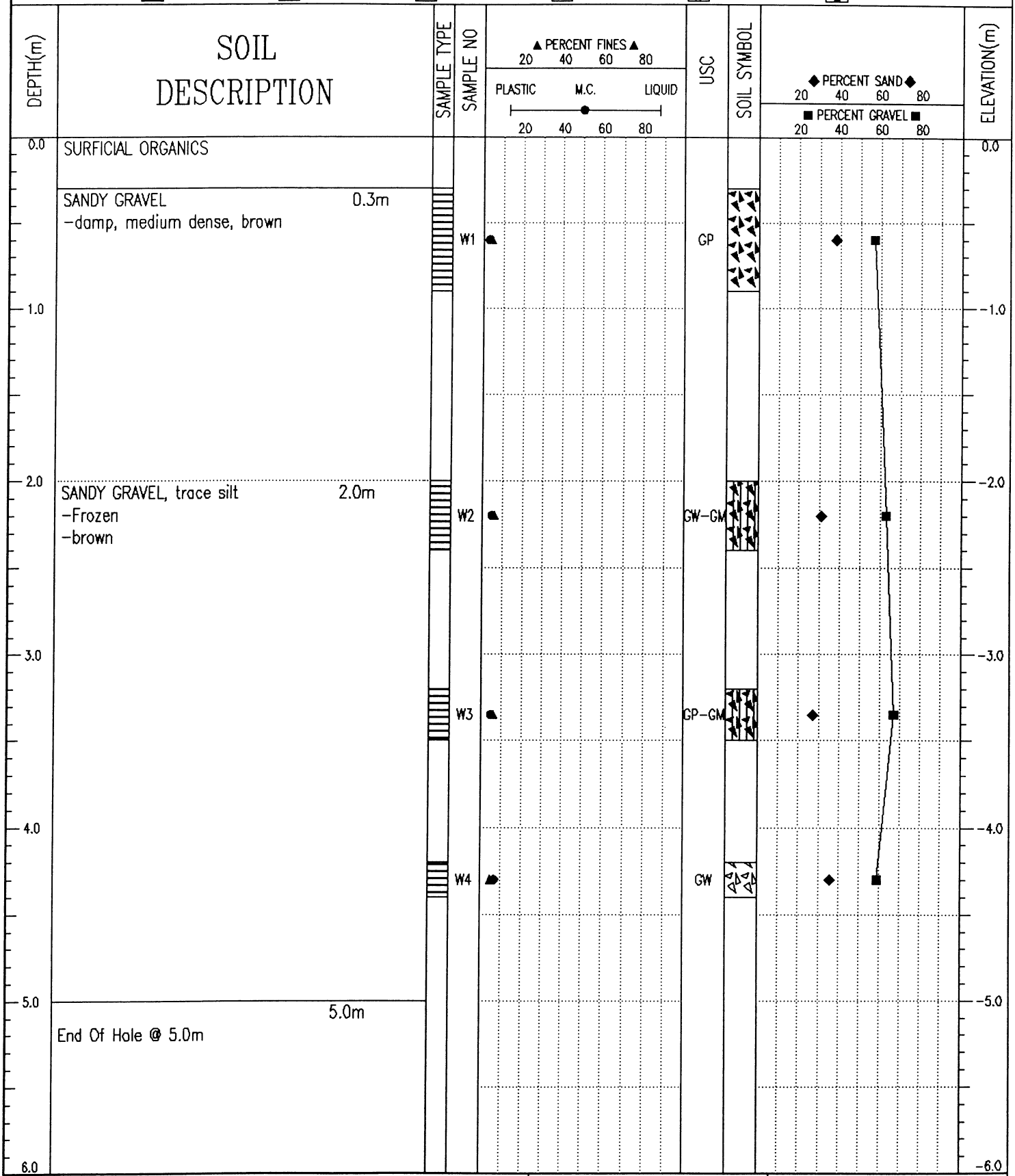



| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 6.7 m |
| | REVIEWED BY: - | COMPLETE: 11/01/04 |
| | Fig. No: 98 | Page 1 of 1 |

05/02/10 08:11AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30137 |
| Glacier Drilling | UTM ZONE: - N6775028 E632523 | PROJECT NO: 8002-318 |
| Hitachi EX450 Tracked Hoe | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5 m |
| | REVIEWED BY: - | COMPLETE: 07/31/04 |
| | Fig. No: 95 | Page 1 of 1 |

05/02/10 07:50AM (YIG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30138 |
|---|---|---|
| Glacier Drilling | UTM ZONE: - N6775066 E632578 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | | 0.0 |
| | SANDY GRAVEL 0.3m<br>-damp, loose, brown<br>-organics noted to 1.0m depth | | | | | |
| 1.0 | SANDY GRAVEL 0.7m<br>-damp, medium dense, brown<br>-boulders to 300mm 5-15% by Vol. | | W5 | GP | | -1.0 |
| 2.0 | | | | | | -2.0 |
| 3.0 | | | W6 | GW | | -3.0 |
| 4.0 | | | W7 | GP | | -4.0 |
| 5.0 | | | W8 | GW | | -5.0 |
| | 5.3m<br>End Of Hole @ 5.3m | | | | | |
| 6.0 | | | | | | -6.0 |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

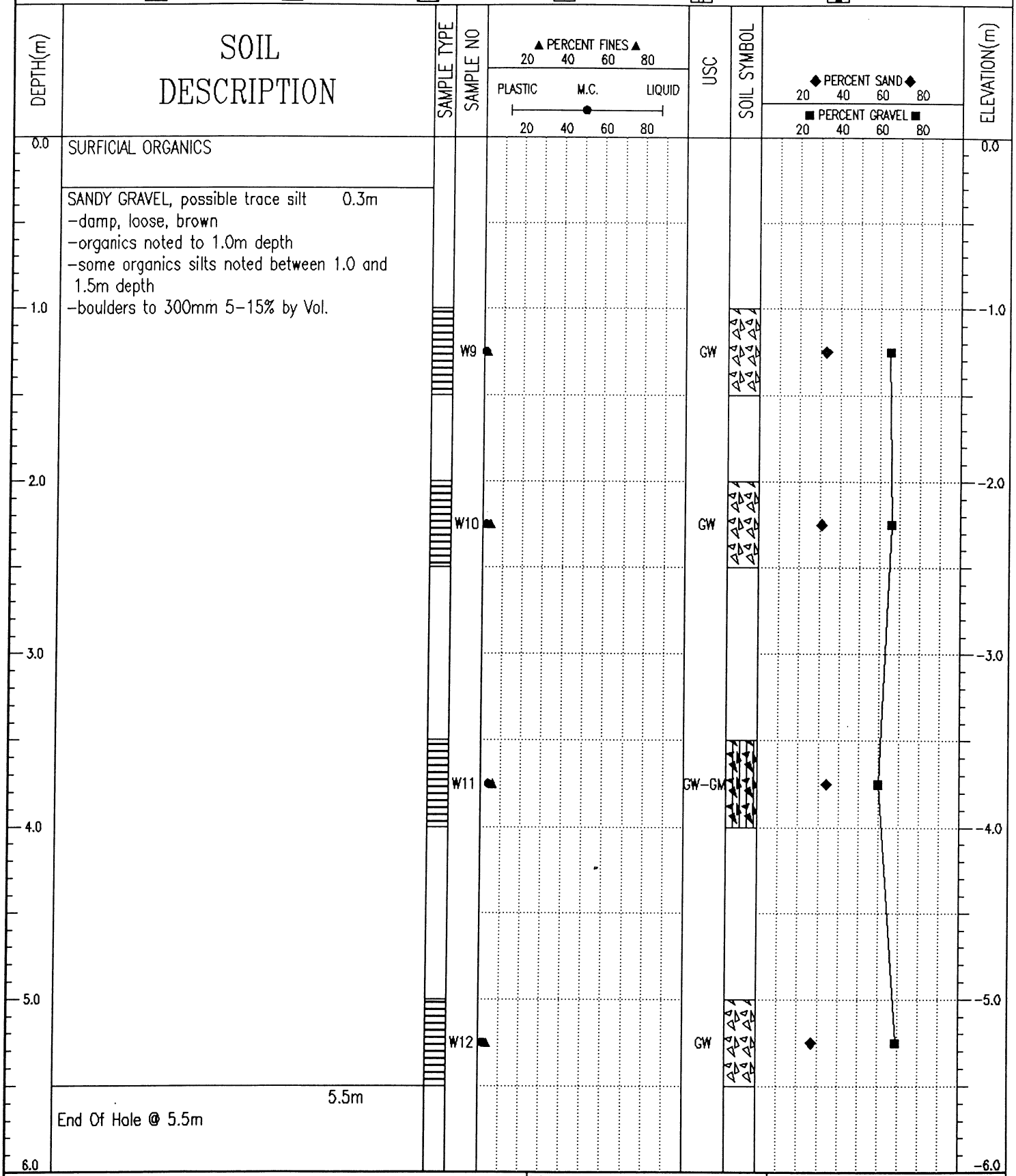
■ PERCENT GRAVEL ■ 20 40 60 80

| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.3 m |
|---|---|---|
| | REVIEWED BY: - | COMPLETE: 08/01/04 |
| | Fig. No: 94 | Page 1 of 1 |

05/02/10 07:50AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30139 |
| Glacier Drilling | UTM ZONE: – N6775122 E632665 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

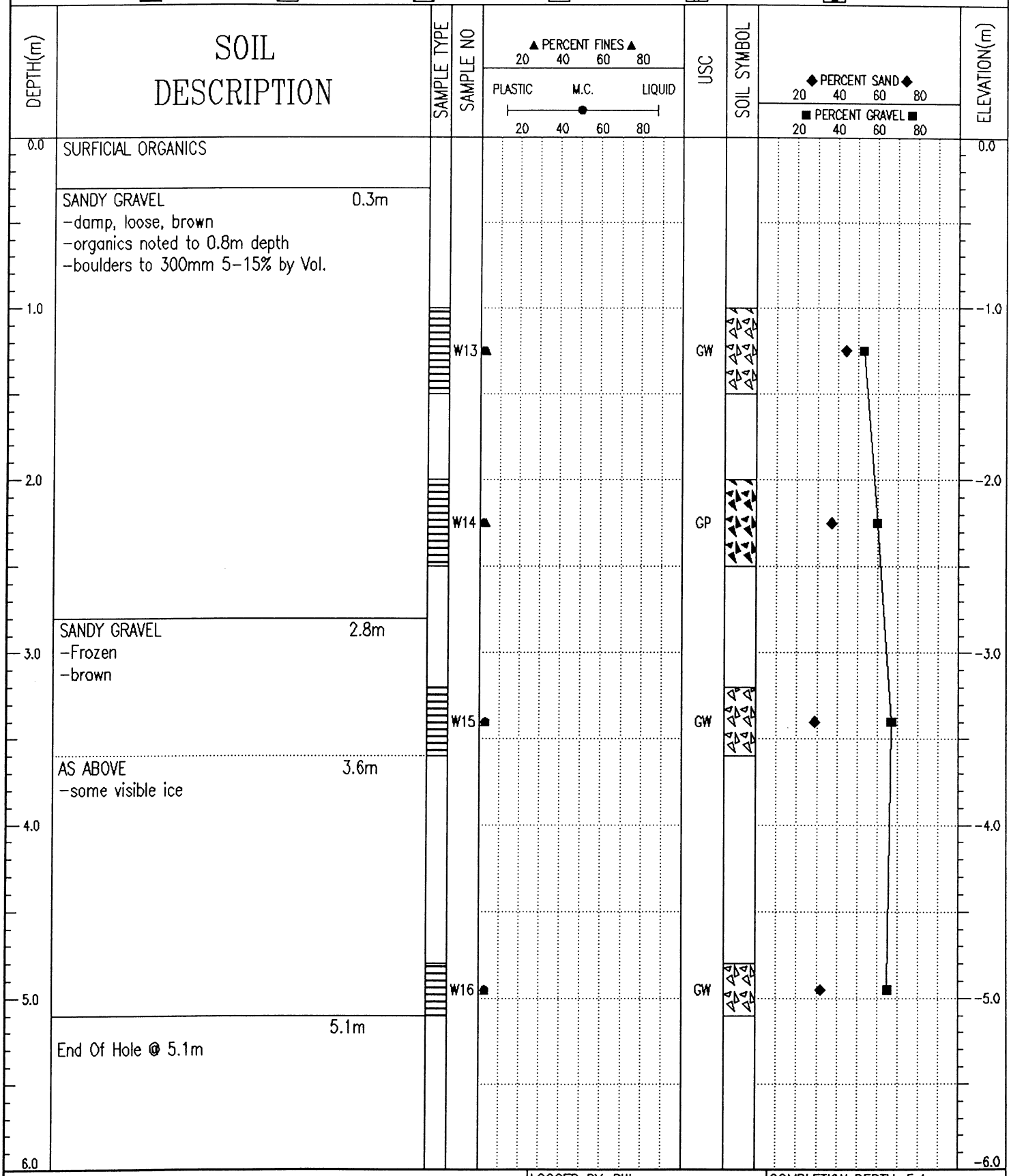



| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.5 m |
| | REVIEWED BY: | COMPLETE: 08/01/04 |
| | Fig. No: 93 | Page 1 of 1 |

05/02/10 07:50AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30140 |
| Glacier Drilling | UTM ZONE: - N6775097 E632440 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

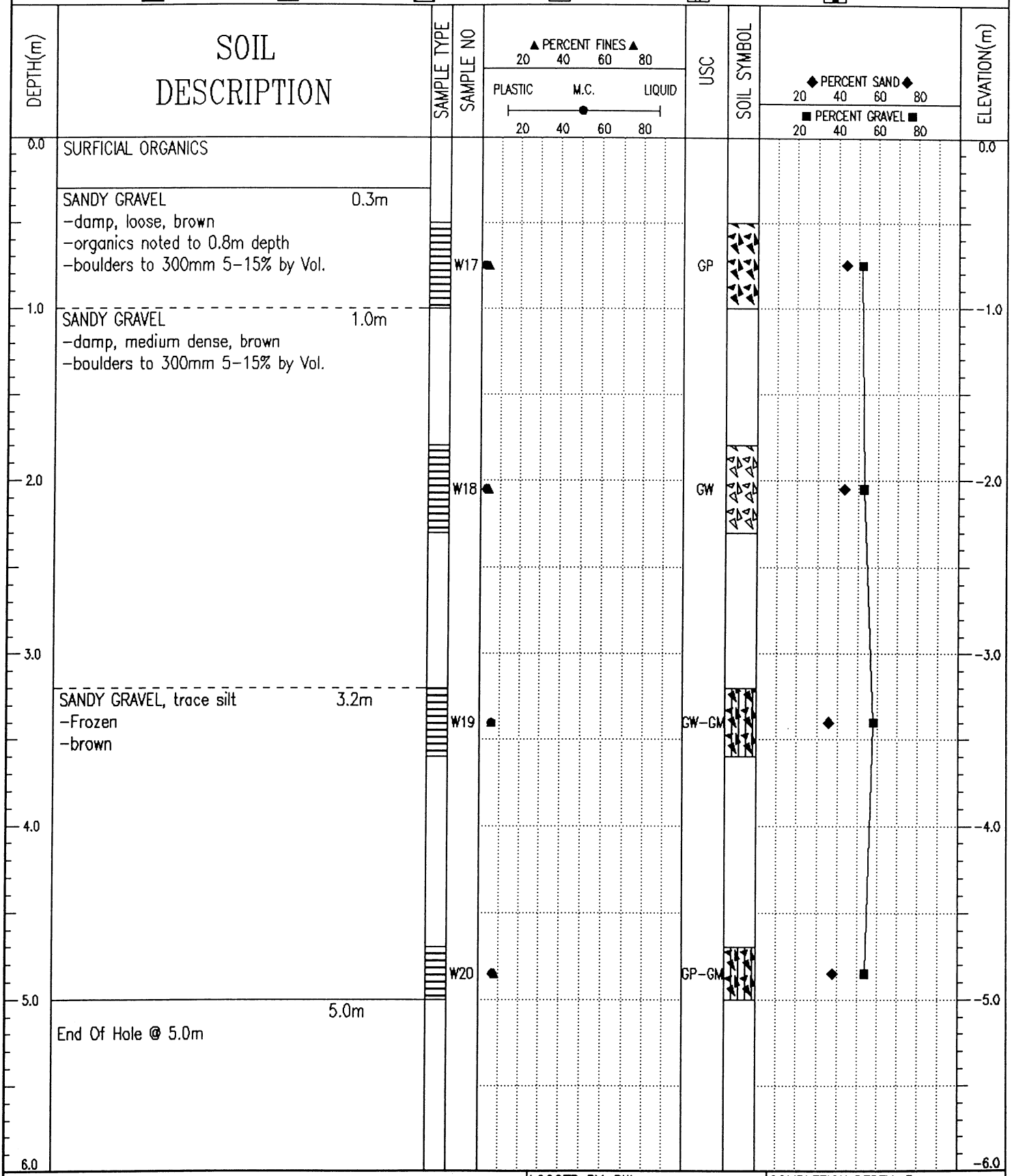



| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.1 m |
| | REVIEWED BY: | COMPLETE: 08/01/04 |
| | Fig. No: 92 | Page 1 of 1 |

05/02/10 07:50AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30141 |
| Glacier Drilling | UTM ZONE: – N6775140 E632495 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

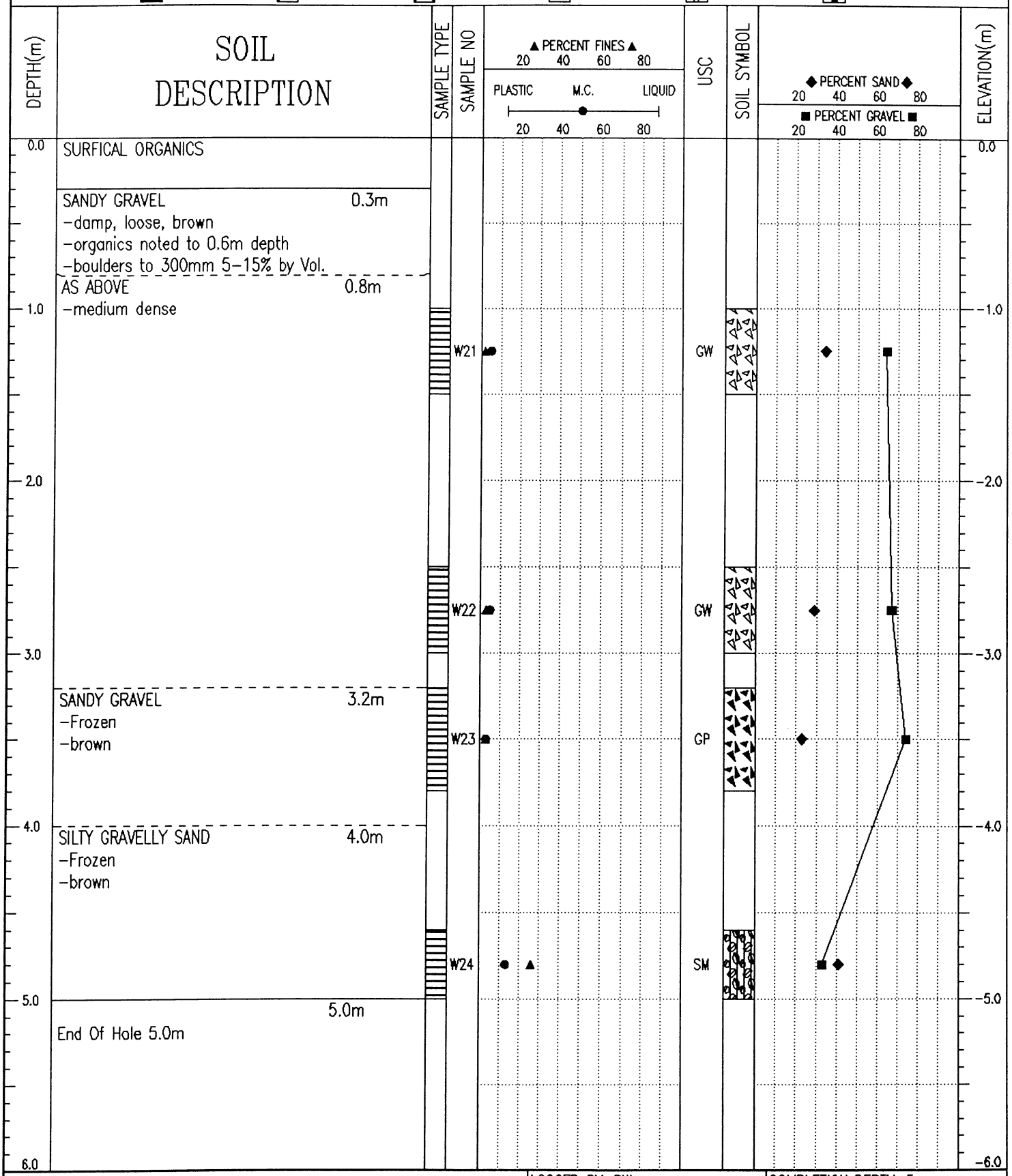



| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5 m |
| | REVIEWED BY: | COMPLETE: 08/01/04 |
| | Fig. No: 91 | Page 1 of 1 |

05/02/10 07:50AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30142 |
| Glacier Drilling | UTM ZONE: - N6775194 E632545 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

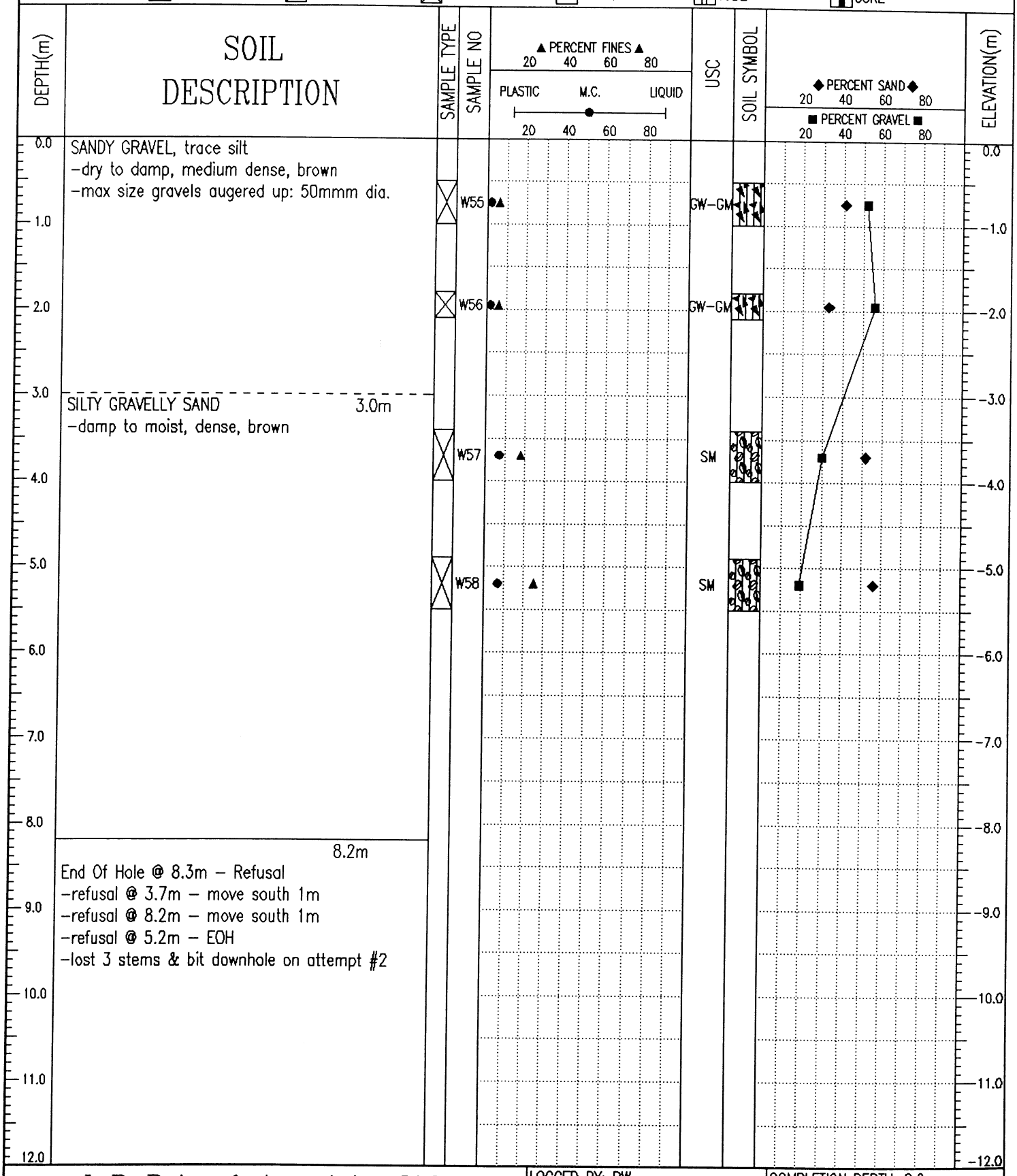



| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5 m |
| | REVIEWED BY: | COMPLETE: 08/01/04 |
| | Fig. No: 90 | Page 1 of 1 |

05/02/10 07:50AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30142D |
| Donjek Services Ltd. | UTM ZONE: - N6775193 E632558 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

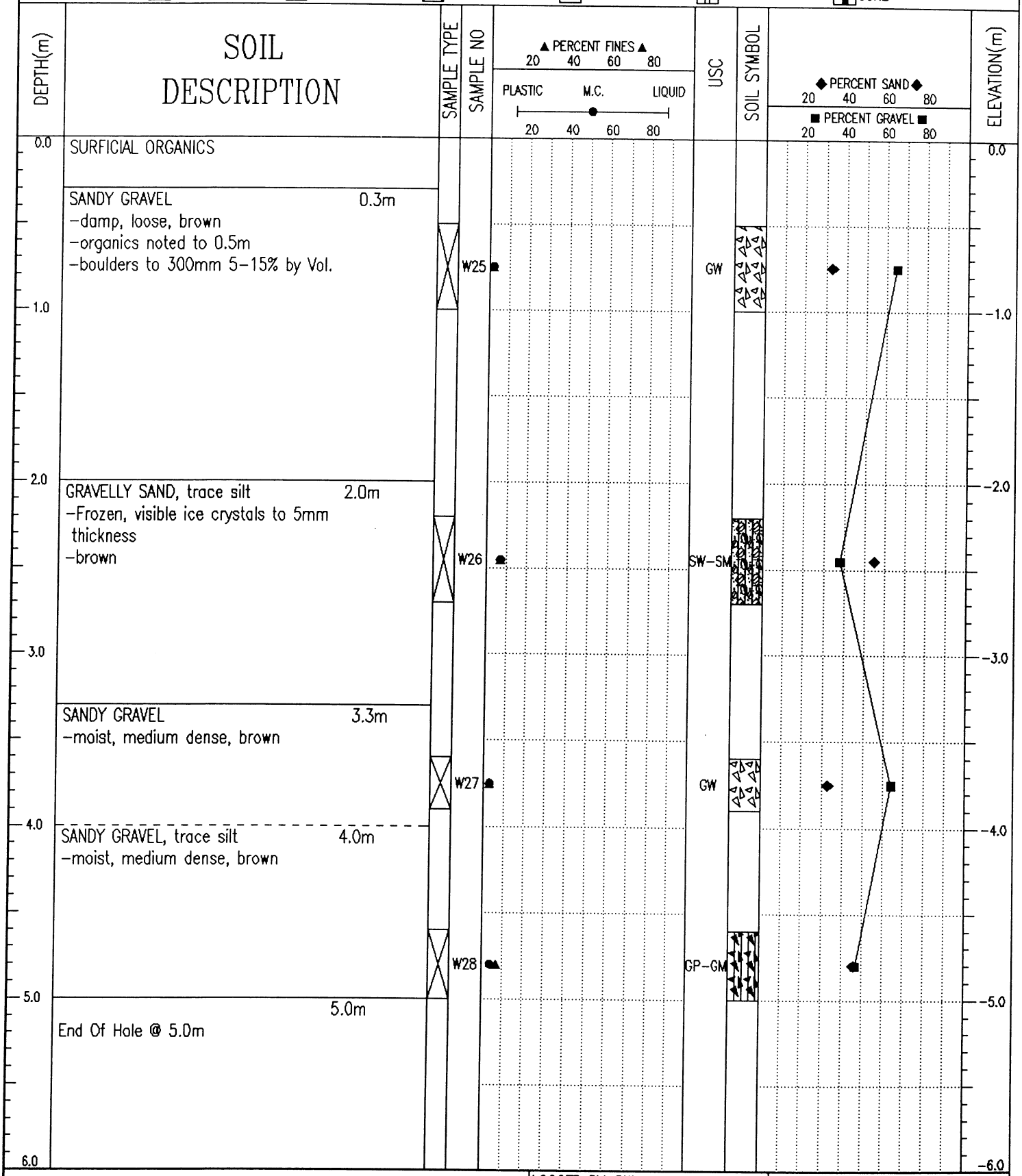



| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. | LOGGED BY: RW | COMPLETION DEPTH: 8.2 m |
| Whitehorse, Yukon | REVIEWED BY: - | COMPLETE: 11/01/04 |
| | Fig. No: 97 | Page 1 of 1 |

05/02/10 08:11AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30143 |
| Glacier Drilling | UTM ZONE: - N6775245 E632619 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

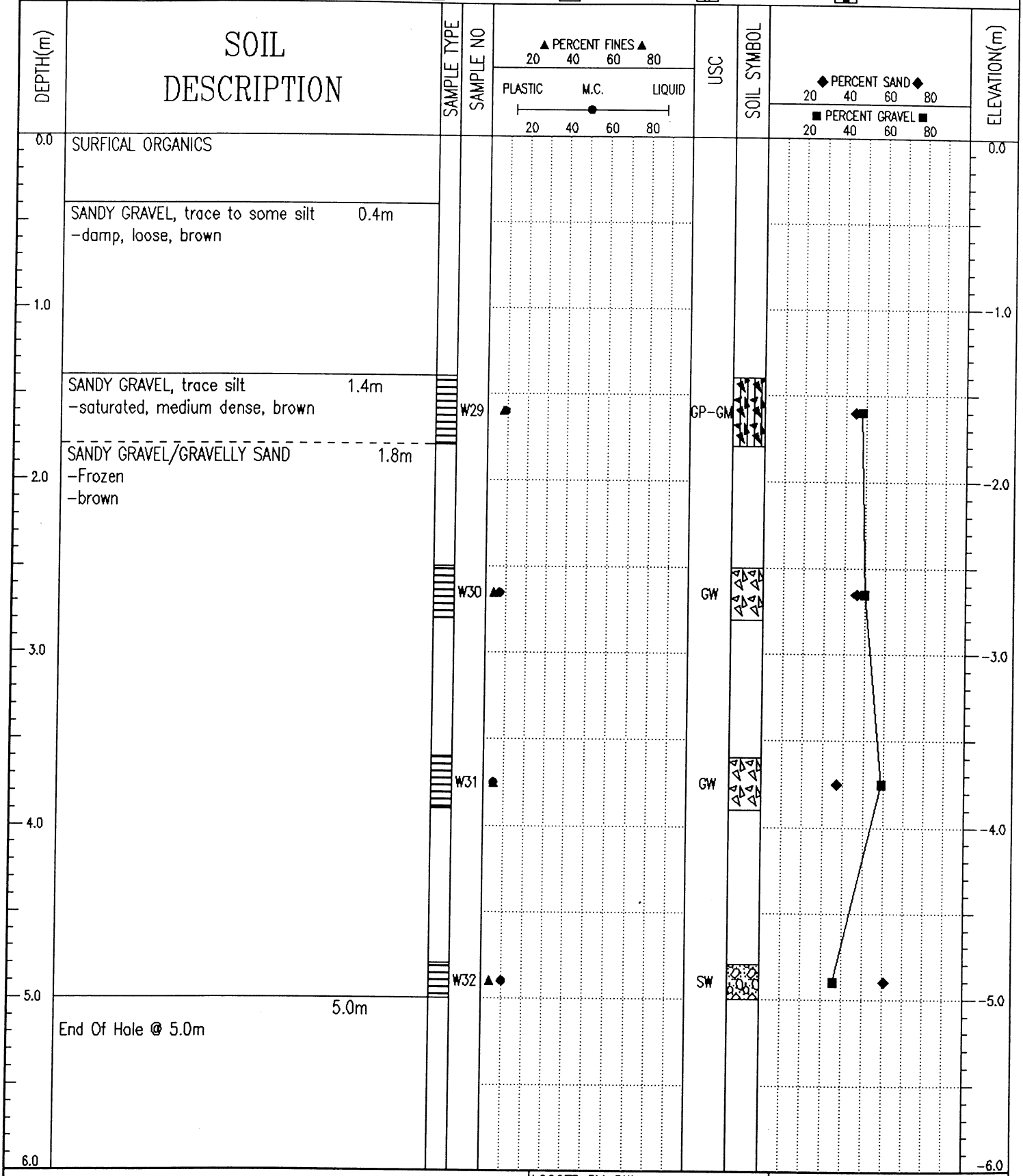



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|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5 m |
| | REVIEWED BY: - | COMPLETE: 08/02/04 |
| | Fig. No: 89 | Page 1 of 1 |

05/02/10 08:33AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30144 |
| Glacier Drilling | UTM ZONE: - N6775254 E632303 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

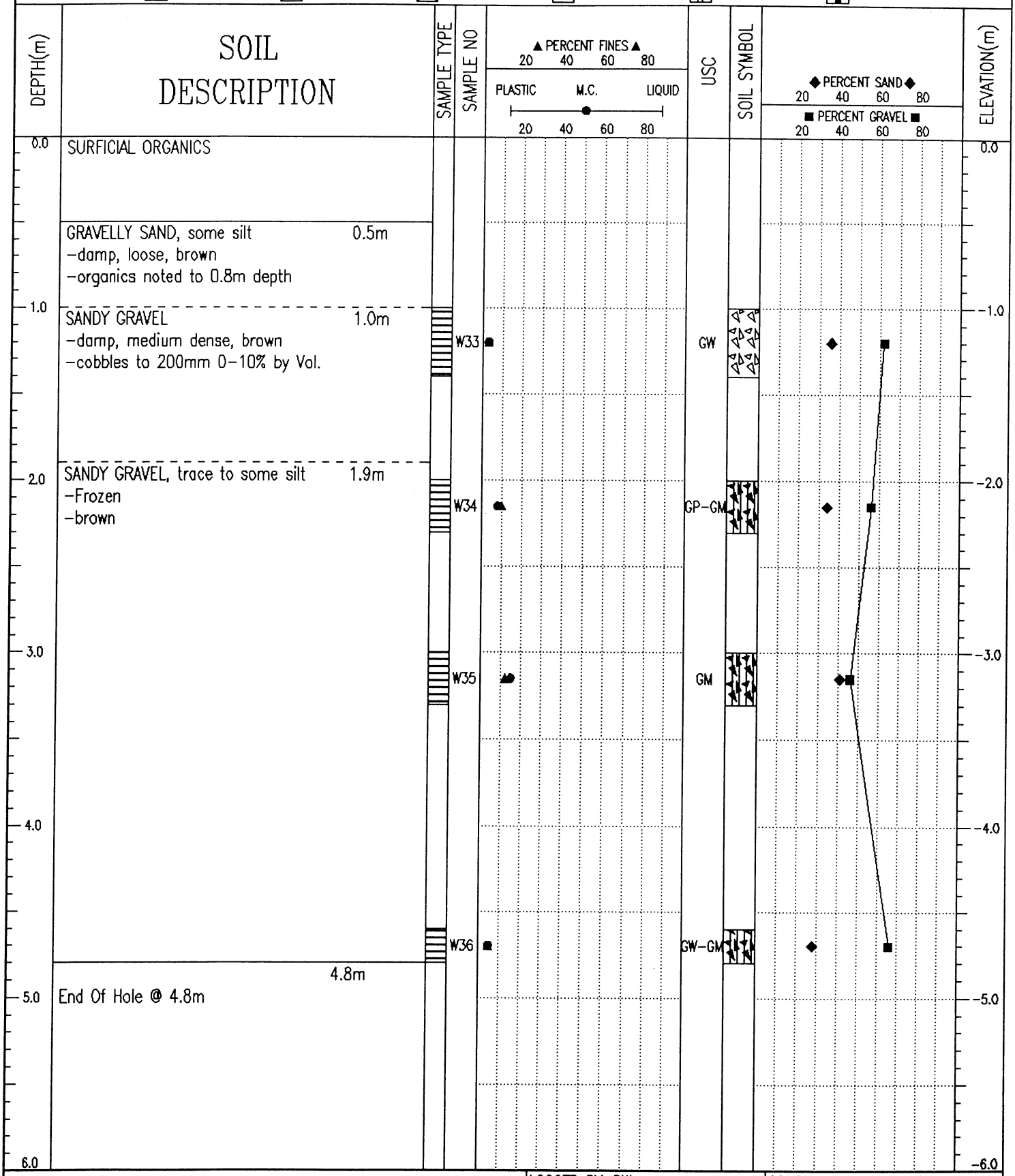



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|---|---|---|
| J. R. Paine & Associates Ltd. | LOGGED BY: RW | COMPLETION DEPTH: 5 m |
| Whitehorse, Yukon | REVIEWED BY: - | COMPLETE: 08/02/04 |
| | Fig. No: 88 | Page 1 of 1 |

05/02/10 08:12AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30145 |
| Glacier Drilling | UTM ZONE: - N6775287 E632345 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

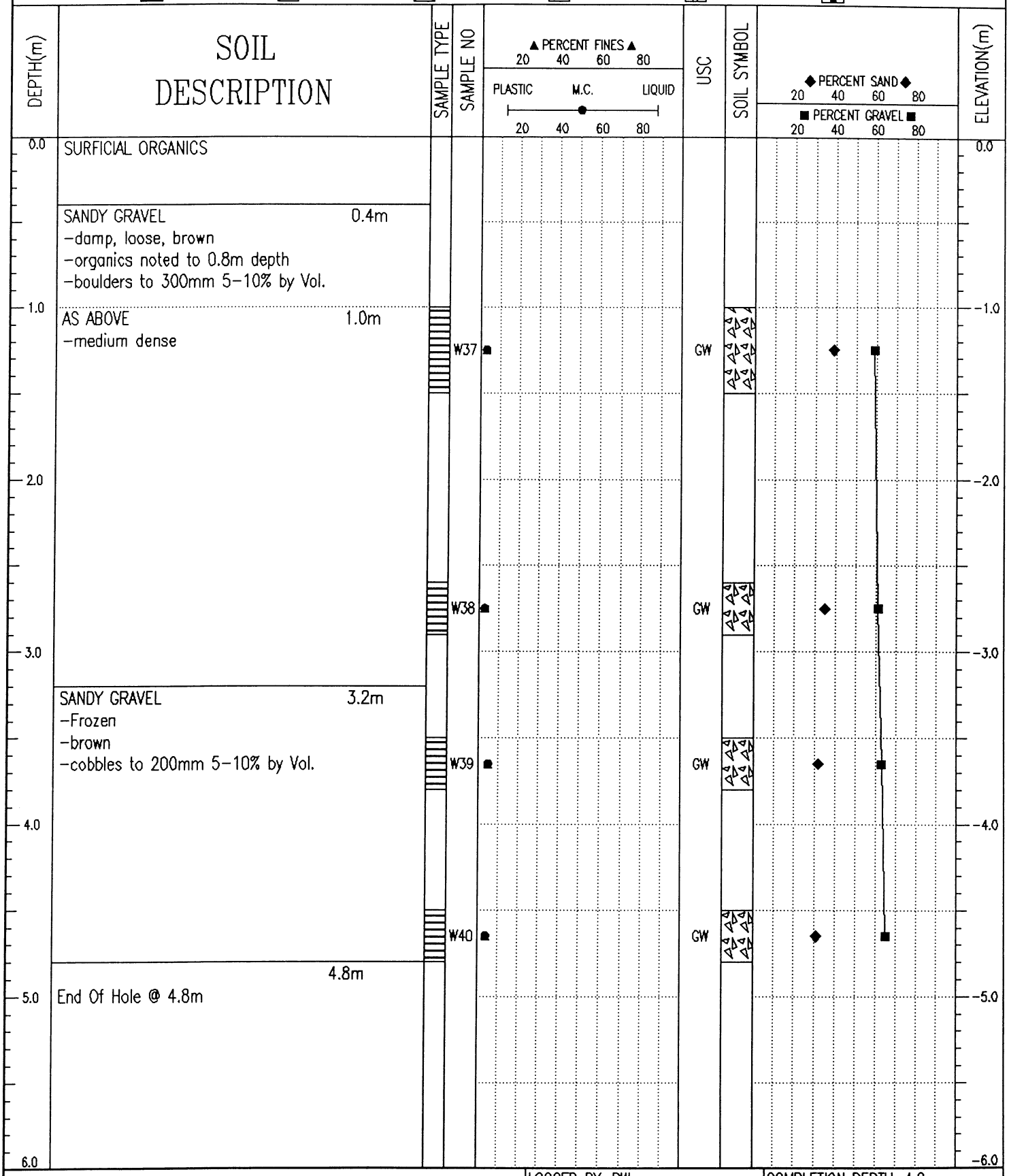



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|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.8 m |
| | REVIEWED BY: - | COMPLETE: 08/02/04 |
| | Fig. No: 87 | Page 1 of 1 |

05/02/10 07:51AM (YIG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30146 |
| Glacier Drilling | UTM ZONE: - N6775326 E632400 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.8 m |
| | REVIEWED BY: - | COMPLETE: 08/02/04 |
| | Fig. No: 86 | Page 1 of 1 |

05/02/10 07:51AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30146D |
| Donjek Services Ltd. | UTM ZONE: - N6775322 E632406 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>-damp, medium dense, dark brown<br>-some wood pieces noted | ⊠ | W45 | ▲ | GW-GM | | ◆ ■ | 0.0 |
| 1.0 | | | | | | | | -1.0 |
| | GRAVELLY SAND, some silt 1.2m<br>-damp, medium dense, brown<br>-gravel loss due to auger grinding<br>-some broken gravels<br>-max size gravels augered up: 50mm dia. | ⊠ | W46 | ● ▲ | SM-SM | | ◆ ■ | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | GRAVELLY SAND, some silt 3.0m<br>-Frozen<br>-brown<br>-max size gravels augered up: 60mm dia. | ⊠ | W47 | ● ▲ | SM | | ◆ ■ | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| | | ⊠ | W48 | ● ▲ | SM | | ◆ ■ | |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| | SILTY GRAVELLY SAND 7.3m<br>-damp to moist, dense, brown | ⊠ | W49 | ● ▲ | SM | | ◆ ■ | |
| 8.0 | GRAVELLY SAND, some silt to SILTY 8.2m<br>-dry to damp, dense, brown<br>-possible gravel loss due to auger action | ⊠ | W50 | ● ▲ | SM | | ◆ ■ | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | ⊠ | W51 | ● ▲ | SM | | ◆ ■ | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| | | ⊠ | W52 | ● ▲ | SM | | ◆ ■ | |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 17.4 m |
| REVIEWED BY: - | COMPLETE: 11/01/04 |
| Fig. No: 96 | Page 1 of 2 |

05/02/10 08:32AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30146D |
| Donjek Services Ltd. | UTM ZONE: – N6775322 E632406 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | SILTY GRAVELLY SAND 12.2m<br>–dry to damp, dense, brown<br>–difficult to obtain sample due to revserse auger action on withdrawl | ⊠ | W53 | ● ▲ | SM | | ■ ◆ | 12.0 |
| 13.0 | | | | | | | | 13.0 |
| 14.0 | | ⊠ | W54 | ● ▲ | SM | | ■ ◆ | 14.0 |
| 15.0 | | | | | | | | 15.0 |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | 17.4m<br>End Of Hole @ 17.4m – Augers Binding<br>–no sample beyond 14.6m due to reverse auger from 17.4m to 14.6m | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

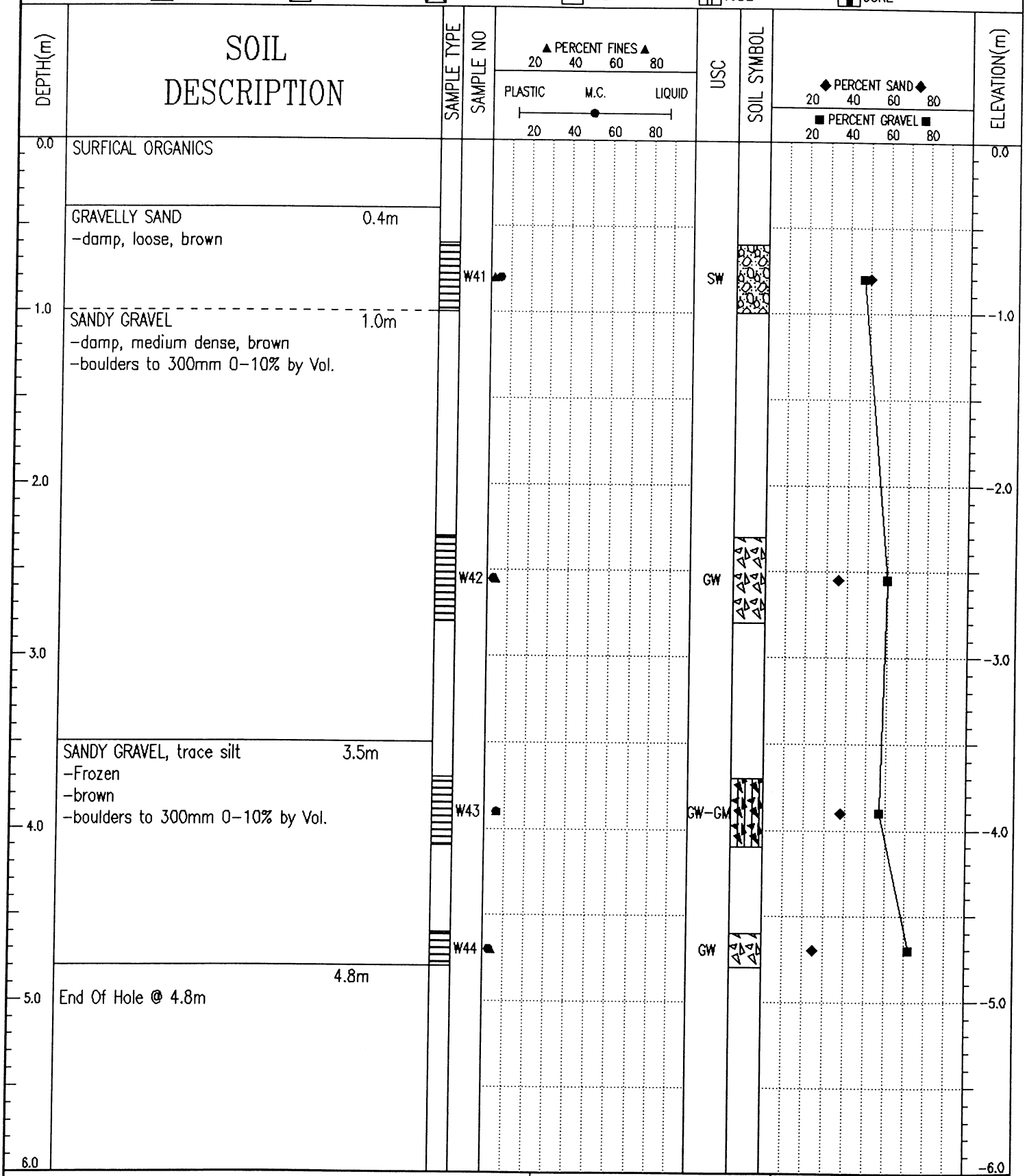
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 17.4 m |
| REVIEWED BY: - | COMPLETE: 11/01/04 |
| Fig. No: 96 | Page 2 of 2 |

05/02/10 08:32AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30147 |
| Glacier Drilling | UTM ZONE: - N6775365 E632444 | PROJECT NO: 8002-318 |
| Hitachi 450EX Tracked Hoe | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4.8 m |
| | REVIEWED BY: - | COMPLETE: 08/02/04 |
| | Fig. No: 85 | Page 1 of 1 |

05/02/10 08:33AM (YIG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30148 |
| Donjek Services Ltd. | UTM ZONE: – N6775613 E632037 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| 1.0 | SILTY SAND, some gravel 0.9m<br>–Frozen<br>–dark brown<br>–some organic silts | ⊠ | 158 | ● ▲ | SM | | ■ ◆ | -1.0 |
| 2.0 | SILTY SAND, some gravel to GRAVELLY 1.8m<br>–Frozen<br>–brown | ⊠ | 159 | ● ▲ | SM | | ■ ◆ | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | | ⊠ | 160 | ● ▲ | SM | | ■ ◆ | -4.0 |
| 5.0 | Pulverized rock sample @ refusal | ⊠ | 161 | ● | | | | -5.0 |
| | 5.2m<br>End Of Hole @ 5.2m – Refusal<br>–refusal @ 5.2m – move north 2m<br>–refusal @ 5.2m – EOH | | | | | | | |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY: | COMPLETION DEPTH: 5.2 m<br>COMPLETE: 08/03/04 |
| | Fig. No: 29 | Page 1 of 1 |

05/02/10 07:57AM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30149 |
| Donjek Services Ltd. | UTM ZONE: - N6775666 E631983 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | 0.0 |
| 1.0 | SILTY GRAVELLY SAND 0.9m<br>-Frozen<br>-brown | | 154 | SM | | -1.0 |
| 2.0 | GRAVELLY SILTY SAND<br>-Frozen<br>-brown | | 155 | SM | | -2.0 |
| 3.0 | | | | | | -3.0 |
| 4.0 | SILTY SAND, trace gravel 3.7m<br>-Frozen<br>-brown | | 156 | SM | | -4.0 |
| 5.0 | | | 157 | | | -5.0 |
| 5.5 | Pulverized rock powder sample @ refusal 5.5m | | | | | |
| 6.0 | End Of Hole @ 5.5m - Refusal<br>-refusal @ 4.7m - move north 2m<br>-refusal @ 5.5m - EOH | | | | | -6.0 |
| 7.0 | | | | | | -7.0 |
| 8.0 | | | | | | -8.0 |
| 9.0 | | | | | | -9.0 |
| 10.0 | | | | | | -10.0 |
| 11.0 | | | | | | -11.0 |
| 12.0 | | | | | | -12.0 |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.5 m |
| REVIEWED BY: - | COMPLETE: 08/03/04 |
| Fig. No: 28 | Page 1 of 1 |

05/02/09 11:52AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30150 |
| Donjek Services Ltd. | UTM ZONE: - N6775739 E631923 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

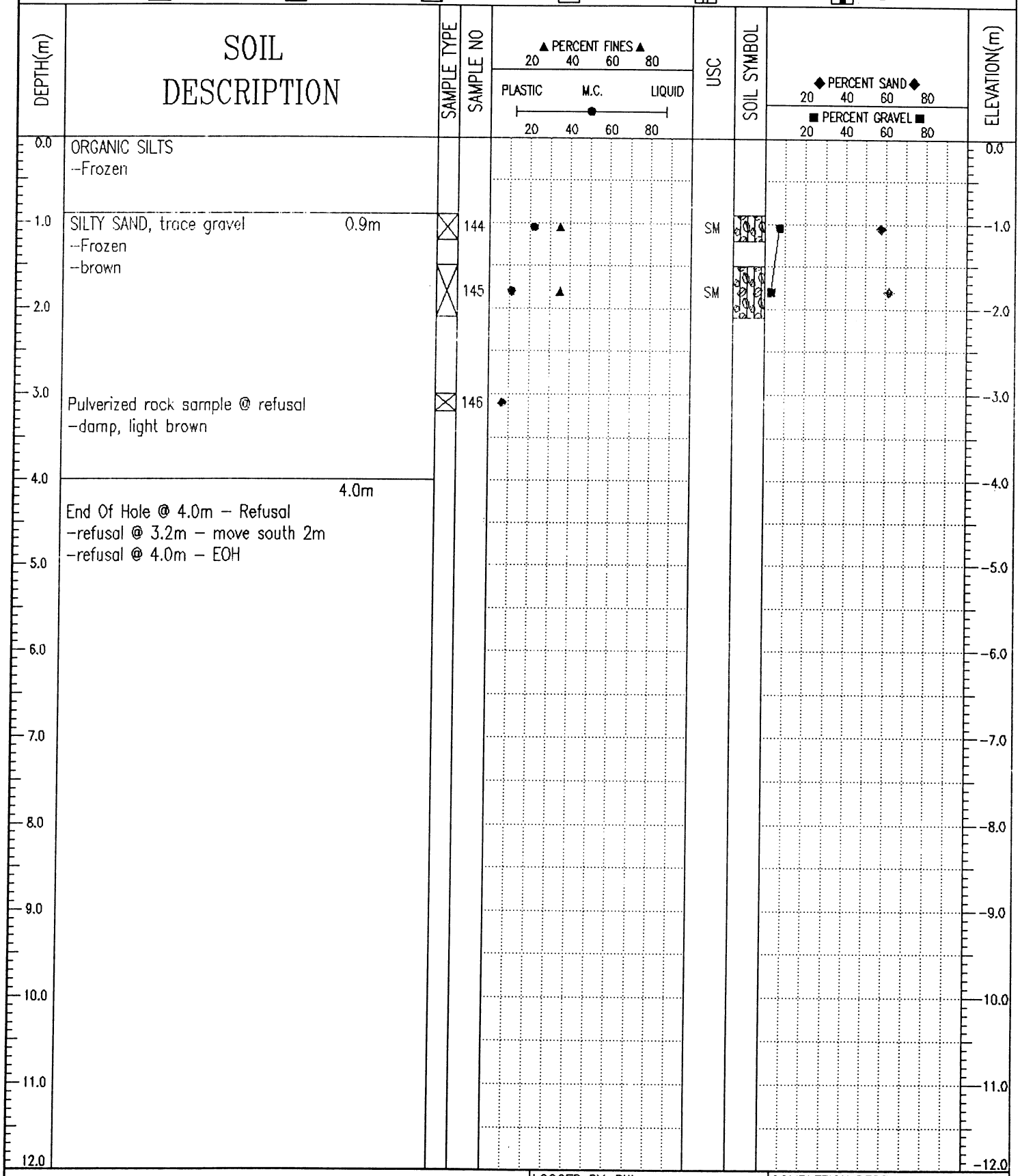
| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | ORGANIC SILTS | | | | | | | 0.0 |
| | SILTY GRAVELLY SAND 0.6m<br>-Frozen<br>-brown/grey | ⊠ | 147 | | SM | | | |
| 1.0 | | | | | | | | -1.0 |
| 2.0 | SILTY SAND, trace gravel 1.8m<br>-Frozen<br>-brown | ⊠ | 148 | | SM | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| 4.0 | SILTY SAND 3.7m<br>-Frozen<br>-brown | ⊠ | 149 | | SM | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| | Pulverized rock powder sample @ 5.5m<br>refusal | ⊠ | 150 | | | | | |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | ⊠ | 151 | | SM | | | -7.0 |
| 8.0 | | ⊠ | 152 | | SM | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | ⊠ | 153 | | SM | | | -10.0 |
| 11.0 | 10.7m<br>End Of Hole @ 10.7m<br>-refusal @ 5.5m - move north 2m | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 10.7 m |
| | REVIEWED BY: - | COMPLETE: 08/03/04 |
| | Fig. No: 27 | Page 1 of 1 |

05/02/09 02:19PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30151 |
| Donjek Services Ltd. | UTM ZONE: - N6775813 E631868 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

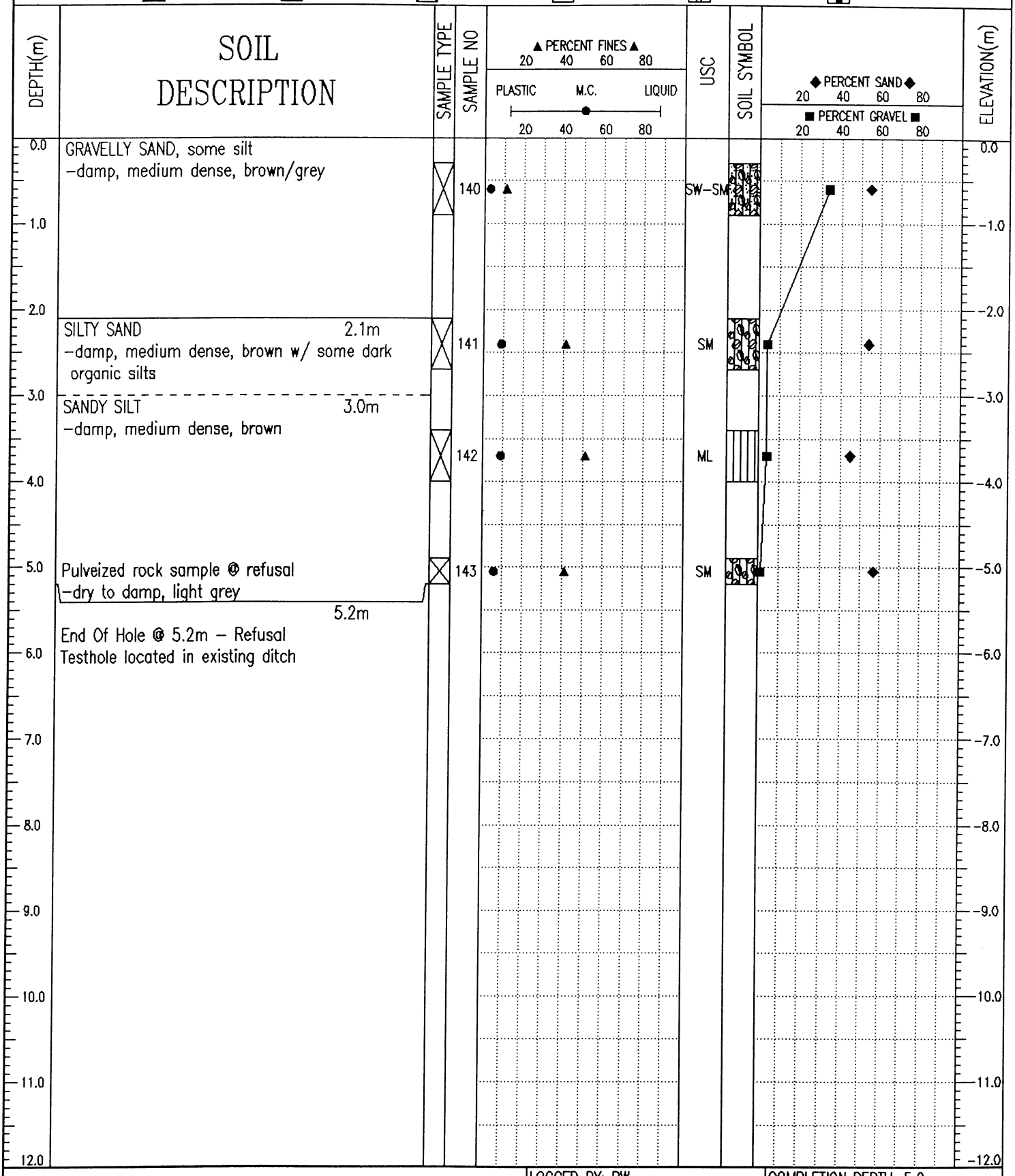



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|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 4 m |
| | REVIEWED BY: | COMPLETE: 08/03/04 |
| | Fig. No: 26 | Page 1 of 1 |

05/02/09 02:20PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30152 |
| Donjek Services Ltd. | UTM ZONE: - N6775939 E631805 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

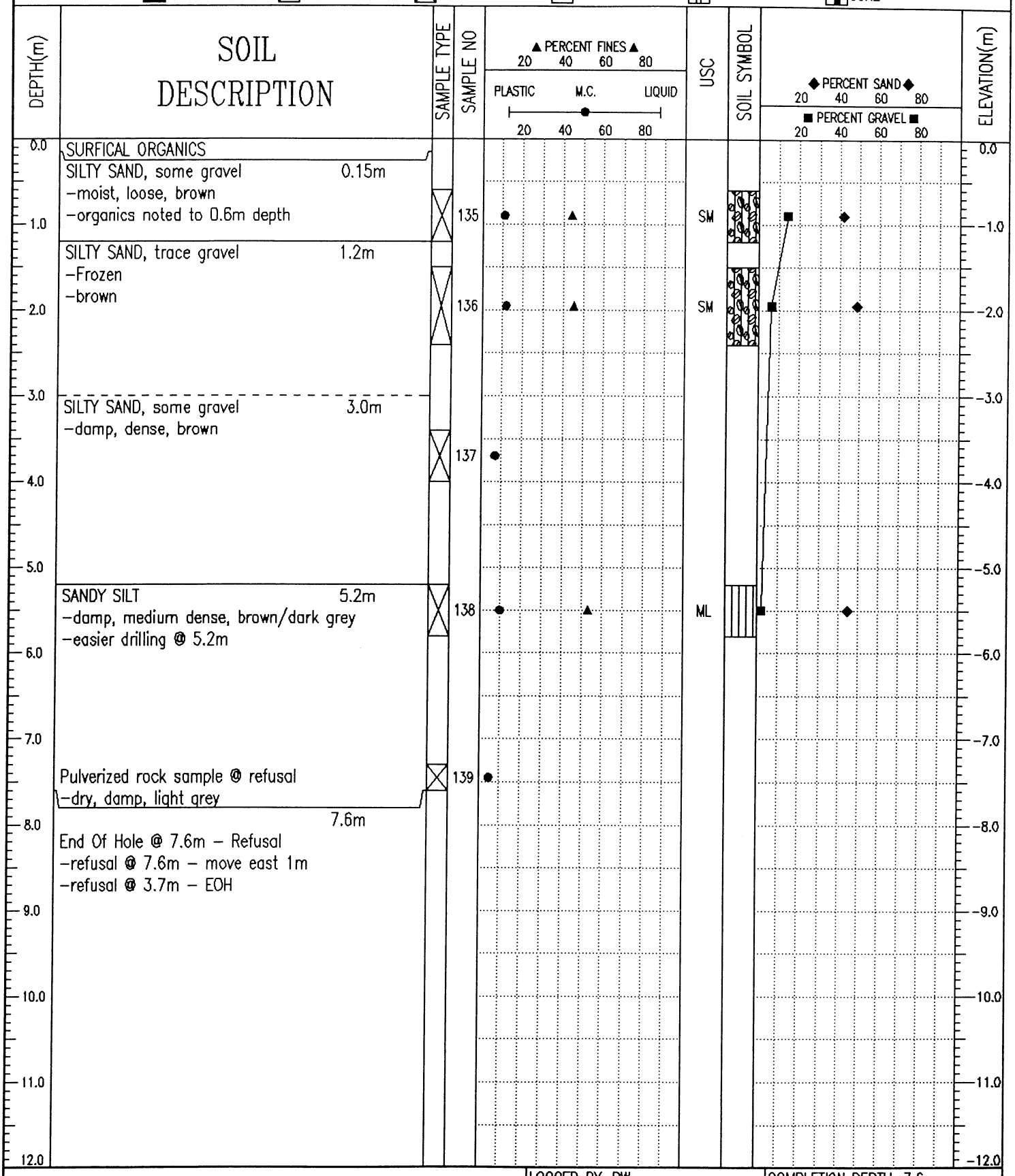



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|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.2 m |
| | REVIEWED BY: - | COMPLETE: 08/03/04 |
| | Fig. No: 25 | Page 1 of 1 |

05/02/19 11:53AM (YTC_HWTS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30153 |
| Donjek Services Ltd. | UTM ZONE: - N6776010 E631728 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▯ TUBE ▮ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 7.6 m |
| | REVIEWED BY: - | COMPLETE: 08/03/04 |
| | Fig. No: 24 | Page 1 of 1 |

05/02/09 11:53AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30154 |
| Donjek Services Ltd. | UTM ZONE: - N6776060 E631698 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | | | | 0.0 |
| | GRAVELLY SILTY SAND 0.3m<br>-Frozen<br>-brown/grey | ⊠ | 132 | | SM | | | |
| 1.0 | | | | | | | | -1.0 |
| | SILTY SAND 1.5m<br>-Frozen<br>-brown | ⊠ | 133 | | SM | | | |
| 2.0 | | | | | | | | -2.0 |
| 3.0 | | | | | | | | -3.0 |
| | GRAVELLY SILTY SAND 3.0m<br>-Frozen<br>-brown | ⊠ | 134 | | SM | | | |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | | | | | | | -5.0 |
| | 5.3m<br>End Of Hole @ 5.3m - Refusal<br>-refusal @ 5.3m - move east 1m<br>-refusal @ 2.4m - EOH | | | | | | | |
| 6.0 | | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 5.3 m |
| REVIEWED BY: | COMPLETE: 07/31/04 |
| Fig. No: 23 | Page 1 of 1 |

05/02/09 11:53AM (YTG_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30155 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: – N6776117 E631643 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SURFICAL ORGANICS | | | | |
| | ORGANIC SILTS 0.1m<br>–damp, firm, dark brown | | | | |
| 1.0 | SILTY GRAVELLY SAND 0.8m<br>–damp to moist, medium dense, brown | ⊠ | 127 | SM | |
| 2.0 | GRAVELLY SAND, some silt to SILTY 1.5m<br>–Frozen<br>–brown | ⊠ | 128 | SM | |
| 3.0 | | ⊠ | 129 | SM | |
| 4.0 | | ⊠ | 130 | SM | |
| 5.0 | SILTY GRAVELLY SAND 4.6m<br>–Frozen<br>–brown | ⊠ | 131 | SM | |
| 6.0 | | | | | |
| 7.0 | 7.0m<br>End Of Hole @ 7.0m – Refusal<br>–refusal 3.0m – move east 1m<br>–refusal 7.0m – move east 2m<br>–refusal 4.0m – EOH | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 7 m |
|---|---|---|
| | REVIEWED BY: - | COMPLETE: 07/31/04 |
| | Fig. No: 22 | Page 1 of 1 |

05/02/09 11:53AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30156 |
| Donjek Services Ltd. | UTM ZONE: - N6776185 E631600 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | FILL – Access trail prep/pad contstruction | | | | | 0.0 |
| | SURFICIAL ORGANICS 0.5m | | | | | |
| 1.0 | SILTY GRAVELLY SAND 0.8m<br>–damp, loose, brown w/ dark brown organics<br>–some organic silts | | 116 | SM | | -1.0 |
| 2.0 | GRAVELLY SAND, some silt to SILTY 1.5m<br>–damp to moist, medium dense, brown<br>–minimal mat'l on flighting from 1.5m to 4.6m (poor samples) | | 117 | SM | | -2.0 |
| 3.0 | | | | | | -3.0 |
| 4.0 | | | 118 | SM | | -4.0 |
| 5.0 | | | 119 | GM | | -5.0 |
| 6.0 | | | | | | -6.0 |
| 7.0 | SILTY SAND, trace gravel 6.4m<br>–damp, medium dense, brown/grey | | 120 | SM | | -7.0 |
| 8.0 | | | 121 | SM | | -8.0 |
| 9.0 | SILTY SAND, trace to some gravel 9.1m<br>–damp, medium dense, grey<br>–some gravels noted between 10.4 to 11.0m | | | | | -9.0 |
| 10.0 | | | 122 | SM | | -10.0 |
| 11.0 | | | 123 | SM | | -11.0 |
| 12.0 | | | 124 | SM | | -12.0 |

PERCENT FINES (20 40 60 80); PLASTIC M.C. LIQUID (20 40 60 80); PERCENT SAND (20 40 60 80); PERCENT GRAVEL (20 40 60 80)

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 15.1 m |
| | REVIEWED BY: - | COMPLETE: 07/31/04 |
| | Fig. No: 21 | Page 1 of 2 |

05/02/09 11:53AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30156 |
| Donjek Services Ltd. | UTM ZONE: - N6776185 E631600 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | ⊠ | 125 | ● ▲ | SM | | ■ ◆ | 12.0 |
| 13.0 | | | | | | | | 13.0 |
| 14.0 | | ⊠ | 126 | ● ▲ | SM | | ■ ◆ | 14.0 |
| 15.0 | 15.1m<br>End Of Hole @ 15.1m | | | | | | | 15.0 |
| 16.0 | | | | | | | | 16.0 |
| 17.0 | | | | | | | | 17.0 |
| 18.0 | | | | | | | | 18.0 |
| 19.0 | | | | | | | | 19.0 |
| 20.0 | | | | | | | | 20.0 |
| 21.0 | | | | | | | | 21.0 |
| 22.0 | | | | | | | | 22.0 |
| 23.0 | | | | | | | | 23.0 |
| 24.0 | | | | | | | | 24.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY:<br>Fig. No: 21 | COMPLETION DEPTH: 15.1 m<br>COMPLETE: 07/31/04<br>Page 2 of 2 |

05/02/09 11:54AM (YTC_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30157 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6776190 E631655 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | | 0.0 |
| | SANDY GRAVEL, trace to some silt 0.1m<br>-damp, medium dense, brown<br>-samples #114 & 115 had minimal material on flighting for sampling (poor samples) | AUGER | 111 | GW-GM | | |
| 1.0 | | | | | | -1.0 |
| 2.0 | | AUGER | 112 | GM | | -2.0 |
| | | AUGER | 113 | SM | | |
| 3.0 | | | | | | -3.0 |
| 4.0 | | AUGER | 114 | SM | | -4.0 |
| 5.0 | | AUGER | 115 | SM | | -5.0 |
| 6.0 | 5.8m<br>End Of Hole @ 5.8m | | | | | -6.0 |
| 7.0 | | | | | | -7.0 |
| 8.0 | | | | | | -8.0 |
| 9.0 | | | | | | -9.0 |
| 10.0 | | | | | | -10.0 |
| 11.0 | | | | | | -11.0 |
| 12.0 | | | | | | -12.0 |

PERCENT FINES: 20 40 60 80
PLASTIC M.C. LIQUID
20 40 60 80
PERCENT SAND: 20 40 60 80
PERCENT GRAVEL: 20 40 60 80

| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
|---|---|---|
| | REVIEWED BY: | COMPLETE: 07/30/04 |
| | Fig. No: 20 | Page 1 of 1 |

05/02/09 11:54AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30158 |
| Donjek Services Ltd. | UTM ZONE: - N6776272 E631563 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | FILL – Access trail prep/pad construction | | | | |
| 1.0 | ORGANIC SILTS 0.8m<br>–Frozen<br>–no visible ice<br>–black/dark brown | ⊠ | 106 | ML | |
| 2.0 | SILTY GRAVELLY SAND 1.5m<br>–Frozen<br>–brown | ⊠ | 107 | SM | |
| 3.0 | GRAVELLY SAND, some silt to SILTY 3.0m<br>–Frozen<br>–brown | ⊠ | 108 | SM | |
| 4.0 | | ⊠ | 109 | SM | |
| 5.0 | | ⊠ | 110 | SM | |
| 6.0 | 6.2m<br>End Of Hole @ 6.2m – Refusal<br>–refusal @ 6.2m – move north 2m<br>–resusal @ 1.8m – move north 1m<br>–refusal @ 1.5m – move south 1.5m<br>–refusal @ 4.0m – EOH | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 6.2 m |
| REVIEWED BY: - | COMPLETE: 07/30/04 |
| Fig. No: 19 | Page 1 of 1 |

05/02/09 02:22PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30159 |
| Donjek Services Ltd. | UTM ZONE: – N6776361 E631517 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND, trace silt<br>–dry to damp, loose, light brown<br>–organics noted to 0.6m depth<br>–some white ash inclusions | ⊠ | 93 | ● ▲ | SW-SM | | ■ ◆ | 0.0 |
| 1.0 | GRAVELLY SAND, trace silt 1.2m<br>–damp, medium dense, brown<br>–samples #95 to 104 had minimal material on flighting for sampling (poor samples) | | | | | | | -1.0 |
| 2.0 | | ⊠ | 94 | ● ▲ | SW-SM | | ■ ◆ | -2.0 |
| 3.0 | | ⊠ | 95 | ● ▲ | SW | | ■ ◆ | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 5.0 | | ⊠ | 96 | ● | SW-SM | | ■ ◆ | -5.0 |
| 6.0 | | ⊠ | 97 | ● ▲ | SW-SM | | ■ ◆ | -6.0 |
| 7.0 | | ⊠ | 98 | ● ▲ | SW-SM | | ■ ◆ | -7.0 |
| 8.0 | | ⊠ | 99 | ● ▲ | SW | | ■ ◆ | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | ⊠ | 100 | ● ▲ | SW-SM | | ■ ◆ | -10.0 |
| 11.0 | | ⊠ | 101 | ● ▲ | SW-SM | | ■ ◆ | -11.0 |
| 12.0 | | ⊠ | 102 | ● ▲ | SW-SM | | ■ ◆ | -12.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 14.9 m |
| REVIEWED BY: | COMPLETE: 07/30/04 |
| Fig. No: 18 | Page 1 of 2 |

05/02/09 11:54AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30159 |
| Donjek Services Ltd. | UTM ZONE: - N6776361 E631517 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⧄ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80 | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 12.0 | | | | | | | | -12.0 |
| 13.0 | SILTY SAND, some gravel 12.8m<br>-moist, medium dense, brown | ⊠ | 103 | ● ▲ | SM | | ■ ◆ | -13.0 |
| 14.0 | GRAVELLY SAND, some silt 13.7m<br>-damp, medium dense, brown | ⊠ | 104 | ● ▲ | SW-SM | | ■ ◆ | -14.0 |
| | | ⊠ | 105 | ● ▲ | SW-SM | | ■ ◆ | |
| 15.0 | 14.9m<br>End Of Hole @ 14.9m | | | | | | | -15.0 |
| 16.0 | | | | | | | | -16.0 |
| 17.0 | | | | | | | | -17.0 |
| 18.0 | | | | | | | | -18.0 |
| 19.0 | | | | | | | | -19.0 |
| 20.0 | | | | | | | | -20.0 |
| 21.0 | | | | | | | | -21.0 |
| 22.0 | | | | | | | | -22.0 |
| 23.0 | | | | | | | | -23.0 |
| 24.0 | | | | | | | | -24.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 14.9 m |
| REVIEWED BY: | COMPLETE: 07/30/04 |
| Fig. No: 18 | Page 2 of 2 |

05/02/09 11:54AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30160 |
| Donjek Services Ltd. | UTM ZONE: – N6776506 E631499 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | GRAVELLY SAND<br>–damp, loose, brown/grey | ⊠ | 88 | SW | |
| 1.7m | SAND, some silt, some gravel<br>–wet, medium dense, brown/grey | ⊠ | 89 | SM | |
| 2.4m | ORGANIC SILTS<br>–moist, soft to firm, dark brown w/ black inclusions<br>–increase moisture to wet/saturated @ 3.0m | ⊠ | 90 | ML | |
| 3.4m | GRAVELLY SAND, trace silt<br>–saturated, medium dense, brown/grey | ⊠ | 91 | SW–SM | |
| 6.1m | End Of Hole @ 6.1m | ⊠ | 92 | SW–SM | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 6.1 m |
| | REVIEWED BY: - | COMPLETE: 07/29/04 |
| | Fig. No: 17 | Page 1 of 1 |

05/02/09 11:55AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30161 |
| Donjek Services Ltd. | UTM ZONE: - N6776711 E631513 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SURFICAL ORGANCIS | | | | |
| | SANDY GRAVEL, trace silt 0.2m<br>-damp to moist, loose, brown | ⊠ | 83 | GP-GM | |
| 1.0 | SANDY GRAVEL/GRAVELLY SAND,trace silt 1.0m<br>-moist, medium dense, brown | ⊠ | 84 | GP-GM | |
| 2.0 | | | | | |
| 3.0 | | ⊠ | 85 | SW-SM | |
| 4.0 | SILTY SANDY GRAVEL 4.0m<br>-moist, medium dense, brown | ⊠ | 86 | GM | |
| | GRAVELLY SAND, some silt 4.4m<br>-moist, medium dense, brown | | | | |
| 5.0 | | ⊠ | 87 | SM | |
| 6.0 | 5.8m<br>End Of Hole @ 5.8m | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

PERCENT FINES: 20 40 60 80

PLASTIC M.C. LIQUID: 20 40 60 80

PERCENT SAND: 20 40 60 80

PERCENT GRAVEL: 20 40 60 80

ELEVATION(m): 0.0 -1.0 -2.0 -3.0 -4.0 -5.0 -6.0 -7.0 -8.0 -9.0 -10.0 -11.0 -12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW<br>REVIEWED BY:<br>Fig. No: 16 | COMPLETION DEPTH: 5.8 m<br>COMPLETE: 07/29/04<br>Page 1 of 1 |

05/02/19 02:20PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30162 |
| Donjek Services Ltd. | UTM ZONE: - N6776914 E631538 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>-damp to moist, loose, brown | ⊠ | 77 | GW-GM | |
| 0.9m | GRAVELLY SILTY SAND<br>-moist to wet, medium dense, brown | ⊠ | 78 | SM | |
| 2.4m | GRAVELLY SAND, trace silt<br>-moist, medium dense, brown | ⊠ | 79 | SW-SM | |
| | | ⊠ | 80 | SW-SM | |
| 4.6m | SILTY GRAVELLY SAND<br>-moist, medium dense, brown | ⊠ | 81 | SM | |
| 5.2m | GRAVELLY SAND, trace silt<br>-moist, medium dense, brown<br>-possible gravel loss on sample #82 | ⊠ | 82 | SW-SM | |
| 5.8m | End Of Hole @ 5.8m | | | | |

▲ PERCENT FINES ▲ (20 40 60 80)
PLASTIC M.C. LIQUID (20 40 60 80)
◆ PERCENT SAND ◆ (20 40 60 80)
■ PERCENT GRAVEL ■ (20 40 60 80)

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| REVIEWED BY: - | COMPLETE: 07/29/04 |
| Fig. No: 15 | Page 1 of 1 |

05/02/09 11:55AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30163 |
| Dorijek Services Ltd. | UTM ZONE: – N6776900 E631563 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⧄ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, some silt<br>–damp to moist, loose, brown<br>–silt seam noted between 0.6 & 0.8m | ⊠ | 72 | SM | |
| 1.0 | | | | | |
| 1.5m | GRAVELLY SILTY SAND<br>–moist, soft, brown<br>–some organics noted (rootlets) | ⊠ | 73 | SM | |
| 2.0 | SANDY GRAVEL/GRAVELLY SAND,trace silt 2.0m<br>–moist, medium dense, brown<br>–some oxidation on gravels | ⊠ | 74 | SM | |
| 3.0 | | | | | |
| 4.0 | | ⊠ | 75 | GW–GM | |
| 5.0 | | | | | |
| 5.2m | GRAVELLY SAND, trace silt<br>–saturated, medium dense, brown | ⊠ | 76 | SW–SM | |
| 5.8m | End Of Hole @ 5.8m | | | | |
| 6.0 | | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| | REVIEWED BY: | COMPLETE: 07/29/04 |
| | Fig. No: 14 | Page 1 of 1 |

05/02/09 02:20PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30164 |
| Donjek Services Ltd. | UTM ZONE: – N6777031 E631579 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL<br>–damp to moist, loose, brown | ⊠ | 66 | GW | |
| 1.0 | ORGANIC SILTS 0.8m<br>–moist, soft, brown | ⊠ | 67 | ML | |
| | SANDY GRAVEL, trace silt 1.4m<br>–damp to moist, medium dense, brown | ⊠ | 68 | GW–GM | |
| 2.0 | | | | | |
| | SILTY SAND, trace gravel 2.4m<br>–damp to moist, soft to firm, brown w/ some black organics | ⊠ | 69 | SM | |
| 3.0 | GRAVELLY SAND, trace silt 3.0m<br>–damp, medium dense, brown | ⊠ | 70 | SW–SM | |
| 4.0 | | | | | |
| | SILTY SANDY GRAVEL 4.6m<br>–moist, medium dense, brown w/ black organics<br>–some organic silts<br>–some organic intrusions (rootlets etc.) | ⊠ | 71 | GM | |
| 5.0 | | | | | |
| 6.0 | 5.9m<br>End Of Hole @ 5.9m | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

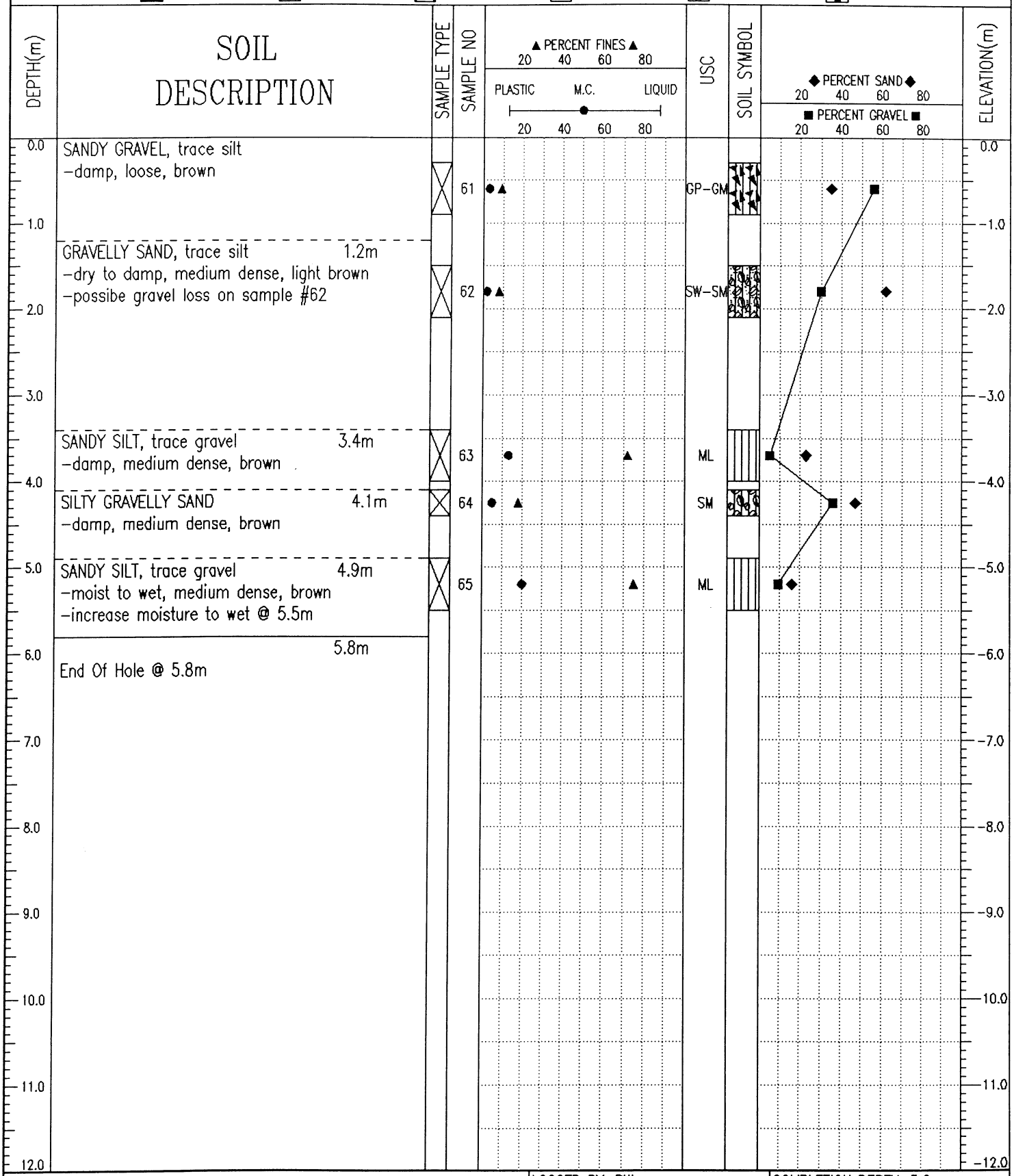
ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| | REVIEWED BY: | COMPLETE: 07/29/04 |
| | Fig. No: 13 | Page 1 of 1 |

05/02/09 02:20PM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30165 |
| Donjek Services Ltd. | UTM ZONE: – N6777126 E631607 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| | REVIEWED BY: | COMPLETE: 07/29/04 |
| | Fig. No: 12 | Page 1 of 1 |

05/02/09 11:55AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30166 |
| Donjek Services Ltd. | UTM ZONE: – N6777139 E631583 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

# SOIL DESCRIPTION

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | |
| | GRAVELLY SAND, trace silt 0.1m<br>–damp, medium dense, brown | AUGER | 56 | SW–SM | |
| 1.5 | SANDY SILT, trace gravel 1.5m<br>–damp, medium dense, brown | AUGER | 57 | ML | |
| 1.8 | SANDY GRAVEL, some silt 1.8m<br>–damp to moist, medium dense, brown | AUGER | 58 | GM | |
| 3.0 | SILTY SANDY GRAVEL 3.0m<br>–moist, mdeium dense, brown<br>–silty seams throughout | AUGER | 59 | GM | |
| 4.0 | SILTY GRAVELLY SAND 4.0m<br>–moist, medium dense, brown | AUGER | 60 | SM | |
| 5.5 | End Of Hole @ 5.5m | | | | |

▲ PERCENT FINES ▲ (20 40 60 80)

PLASTIC — M.C. — LIQUID (20 40 60 80)

◆ PERCENT SAND ◆ (20 40 60 80)

■ PERCENT GRAVEL ■ (20 40 60 80)

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

J. R. Paine & Associates Ltd.
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| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.5 m |
| REVIEWED BY: - | COMPLETE: 07/28/04 |
| Fig. No: 11 | Page 1 of 1 |

05/02/09 11:58AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30167 |
| Donjek Services Ltd. | UTM ZONE: – N6777298 E631589 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SURFICAL ORGANICS | | | | |
| | SILTY SAND, some gravel 0.05m<br>–damp, loose, brown<br>–some organics noted | AUGER | 51 | GW-GM | |
| 1.0 | SANDY GRAVEL, trace silt 0.5m<br>–damp, medium dense, brown | | | | |
| | SANDY SILTY GRAVEL 1.5m<br>–moist, medium dense, brown | AUGER | 52 | GM | |
| 2.0 | SANDY GRAVEL, trace silt 2.3m<br>–damp, medium dense, brown | AUGER | 53 | GP-GM | |
| 3.0 | | | | | |
| | SANDY GRAVEL/GRAVELLY SAND, some silt 3.4m<br>–damp to moist, medium dense, brown<br>–some oxidation noted | AUGER | 54 | SM | |
| 4.0 | | | | | |
| 5.0 | | AUGER | 55 | GM | |
| | 5.8m<br>End Of Hole @ 5.8m | | | | |
| 6.0 | | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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Whitehorse, Yukon

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|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| REVIEWED BY: | COMPLETE: 07/28/04 |
| Fig. No: 10 | Page 1 of 1 |

05/02/09 02:20PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30168 |
| Donjek Services Ltd. | UTM ZONE: - N6777587 E631509 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | |
| | SILTY GRAVELLY SAND 0.2m<br>-damp, loose, brown | AUGER | 45 | SM | |
| 1.0 | SANDY GRAVEL, trace silt 0.6m<br>-damp, medium dense, brown | AUGER | 46 | GP-GM | |
| 2.0 | SILTY SANDY GRAVEL 1.8m<br>-moist, medium dense, brown | AUGER | 47 | GM | |
| 3.0 | GRAVELLY SAND, trace to some silt 2.7m<br>-damp, medium dense, brown | AUGER | 48 | SM | |
| 4.0 | | | | | |
| 5.0 | | AUGER | 49 | SW-SM | |
| 6.0 | SANDY GRAVELLY SILT 5.5m<br>-moist, firm, light brown w/ some black organics<br>-some gravel in sample #50 is from top of hole | AUGER | 50 | ML | |
| 7.0 | 5.8m<br>End Of Hole @ 5.8m | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ (20 40 60 80)

PLASTIC M.C. LIQUID (20 40 60 80)

◆ PERCENT SAND ◆ (20 40 60 80)

■ PERCENT GRAVEL ■ (20 40 60 80)

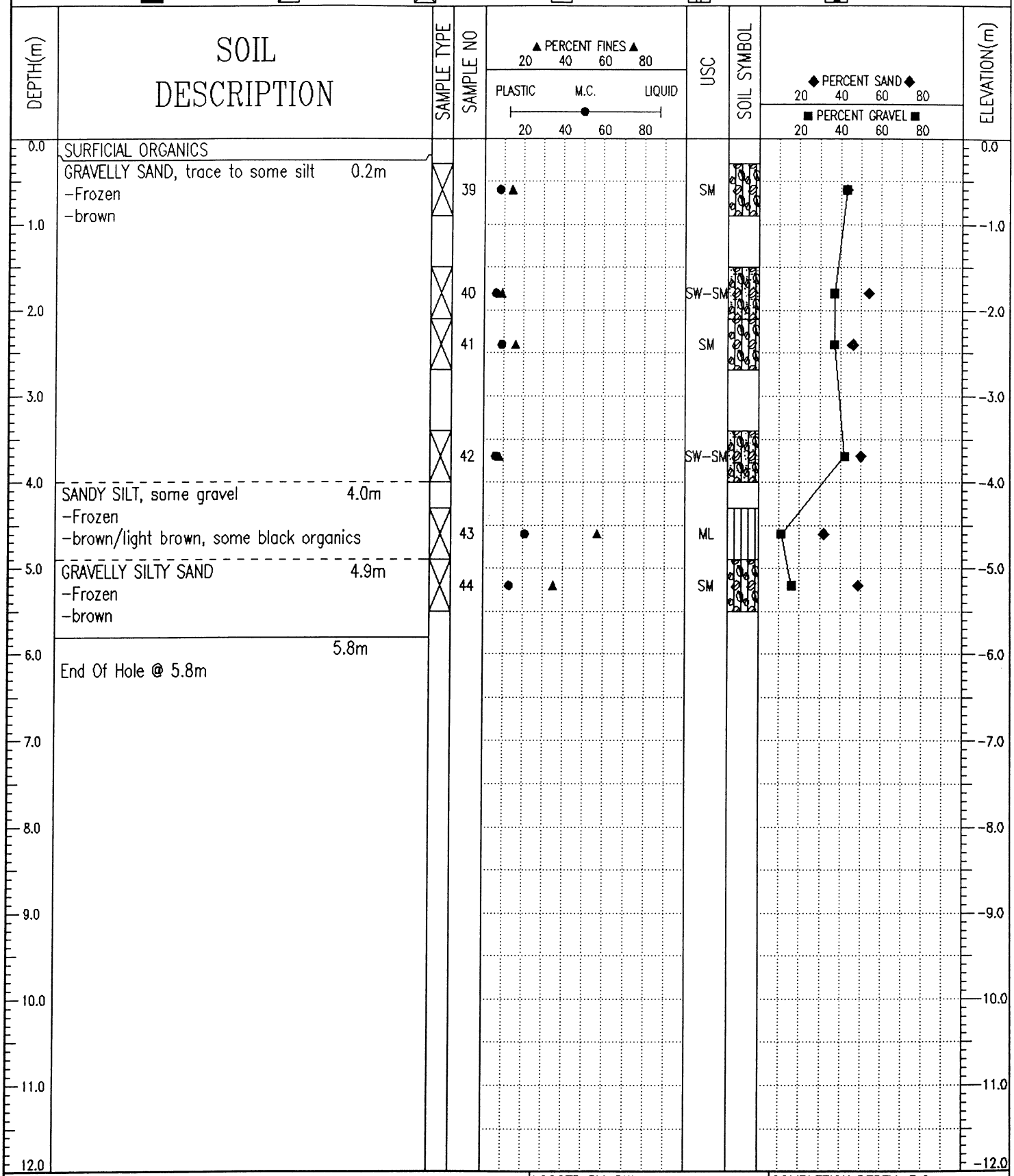
ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| | REVIEWED BY: - | COMPLETE: 07/28/04 |
| | Fig. No: 9 | Page 1 of 1 |

05/02/09 11:56AM (YTC_HWYS)

| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30169 |
|---|---|---|
| Donjek Services Ltd. | UTM ZONE: - N6777708 E631458 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⧄ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE




| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
|---|---|---|
| | REVIEWED BY: - | COMPLETE: 07/28/04 |
| | Fig. No: 8 | Page 1 of 1 |

05/02/09 02:21PM (YTC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30170 |
| Donjek Services Ltd. | UTM ZONE: - N6777845 E631414 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES / PLASTIC M.C. LIQUID | USC | SOIL SYMBOL | PERCENT SAND / PERCENT GRAVEL | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | | | | 0.0 |
| | GRAVELLY SAND, some silt 0.2m | | | | | | | |
| | -Frozen | | 34 | | SW-SM | | | |
| 1.0 | -brown | | | | | | | -1.0 |
| | -some oxidation on gravels noted | | 35 | | SM | | | |
| 2.0 | | | | | | | | -2.0 |
| | | | 36 | | SM | | | |
| 3.0 | | | | | | | | -3.0 |
| | | | 37 | | SM | | | |
| 4.0 | | | | | | | | -4.0 |
| | | | 38 | | SM | | | |
| 5.0 | | | | | | | | -5.0 |
| | 5.8m | | | | | | | |
| 6.0 | End Of Hole @ 5.8m | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

PERCENT FINES: 20 40 60 80 | PLASTIC M.C. LIQUID: 20 40 60 80 | PERCENT SAND: 20 40 60 80 | PERCENT GRAVEL: 20 40 60 80

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| | REVIEWED BY: - | COMPLETE: 07/28/04 |
| | Fig. No: 7 | Page 1 of 1 |

05/02/09 11:56AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30171 |
| Donjek Services Ltd. | UTM ZONE: - N6777998 E631414 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES (20 40 60 80) / PLASTIC M.C. LIQUID (20 40 60 80) | USC | SOIL SYMBOL | PERCENT SAND (20 40 60 80) / PERCENT GRAVEL (20 40 60 80) | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | | | | 0.0 |
| | SILTY SAND, some gravel 0.2m<br>-Frozen<br>-medium dense, brown | ⊠ | 29 | | SM | | | |
| 1.0 | | ⊠ | 30 | | SM | | | -1.0 |
| | SILTY SAND 1.5m<br>-Frozen<br>-medium dense, brown<br>-some organic silts noted | ⊠ | 31 | | SM | | | -2.0 |
| 3.0 | SANDY SILT, trace gravel 2.7m<br>-Frozen<br>-visible ice crystals to 10mm in clusters | ⊠ | 32 | | ML | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| | SANDY SILT 4.3m<br>-Frozen<br>-no visible ice<br>-brown & grey<br>-some wood pieces noted | ⊠ | 33 | | ML | | | |
| 5.0 | | | | | | | | -5.0 |
| 6.0 | 5.8m<br>End Of Hole @ 5.8m | | | | | | | -6.0 |
| 7.0 | | | | | | | | -7.0 |
| 8.0 | | | | | | | | -8.0 |
| 9.0 | | | | | | | | -9.0 |
| 10.0 | | | | | | | | -10.0 |
| 11.0 | | | | | | | | -11.0 |
| 12.0 | | | | | | | | -12.0 |

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|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| | REVIEWED BY: - | COMPLETE: 07/28/04 |
| | Fig. No: 6 | Page 1 of 1 |

05/02/09 11:57AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30172 |
| Donjek Services Ltd. | UTM ZONE: - N6778136 E631432 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | |
| | GRAVELLY SILTY SAND 0.2m<br>-moist to wet, loose, brown<br>-organics noted throughout | ⊠ | 23 | SM | |
| 1.5 | SANDY SILT, trace gravel 1.5m<br>-saturated, firm, brown | ⊠ | 24 | ML | |
| 2.0 | | ⊠ | 25 | ML | |
| 3.0 | SILTY SAND, trace gravel 3.0m<br>-saturated, medium dense, brown | ⊠ | 26 | SM | |
| 4.0 | | | | | |
| 4.9 | GRAVELLY SILTY SAND 4.9m<br>-saturated, dense, grey w/ blue hue | ⊠ | 27 | SM | |
| 5.5 | SILT, some sand 5.5m<br>-moist, firm to stiff, grey w/ blue hue | ⊠ | 28 | ML | |
| 5.9 | End Of Hole @ 5.9m | | | | |

▲ PERCENT FINES ▲ (20 40 60 80)

PLASTIC M.C. LIQUID (20 40 60 80)

◆ PERCENT SAND ◆ (20 40 60 80)

■ PERCENT GRAVEL ■ (20 40 60 80)

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| REVIEWED BY: - | COMPLETE: 07/28/04 |
| Fig. No: 5 | Page 1 of 1 |

05/02/09 11:57AM (YTG_HWYS)

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|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30173 |
| Donjek Services Ltd. | UTM ZONE: - N6778189 E631425 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | | SAMPLE TYPE | SAMPLE NO | PERCENT FINES (20 40 60 80) / PLASTIC M.C. LIQUID (20 40 60 80) | USC | SOIL SYMBOL | PERCENT SAND (20 40 60 80) / PERCENT GRAVEL (20 40 60 80) | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | SURFICIAL ORGANICS | | | | | | | | 0.0 |
| | SILT | 0.2m | | 18 | | ML | | | |
| | -saturated, soft, grey/brown | | | | | | | | |
| 1.0 | -moderate organics | | | 19 | | ML | | | -1.0 |
| | SILT, some sand | 0.8m | | | | | | | |
| | -Frozen, visible ice crystals to 3mm in clusters | | | | | | | | |
| 2.0 | -grey/brown with black organic silts | | | 20 | | ML | | | -2.0 |
| | SANDY SILT | 1.8m | | | | | | | |
| | -Frozen | | | | | | | | |
| 3.0 | -medium dense, grey/brown | | | | | | | | -3.0 |
| | SANDY SILT | 3.0m | | | | | | | |
| | -Frozen | | | | | | | | |
| | -medium dense, light brown | | | 21 | | ML | | | |
| 4.0 | | | | | | | | | -4.0 |
| | AS ABOVE | 4.6m | | | | | | | |
| 5.0 | -grey/brown | | | 22 | | ML | | | -5.0 |
| 6.0 | | 5.9m | | | | | | | -6.0 |
| | End Of Hole @ 5.9m | | | | | | | | |
| 7.0 | | | | | | | | | -7.0 |
| 8.0 | | | | | | | | | -8.0 |
| 9.0 | | | | | | | | | -9.0 |
| 10.0 | | | | | | | | | -10.0 |
| 11.0 | | | | | | | | | -11.0 |
| 12.0 | | | | | | | | | -12.0 |

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| | REVIEWED BY: - | COMPLETE: 07/28/04 |
| | Fig. No: 4 | Page 1 of 1 |

05/02/09 11:57AM (YIC_HWTS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30174 |
| Donjek Services Ltd. | UTM ZONE: - N6778370 E631499 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SILT, trace sand<br>-damp, firm, non plastic, grey<br>-some oxidation<br>-some organics throughout | | 12 | ML | |
| 1.0 | ORGANIC SILTS 0.6m<br>-saturated, soft, black/dark brown | | 13 | ML | |
| 2.0 | SILTY GRAVELLY SAND 1.5m<br>-saturated, medium dense, brown<br>-some silt in sample #14 could be contamination from top of hole | | 14 | SM | |
| 3.0 | | | | | |
| 4.0 | SILTY SAND 3.7m<br>-saturated, medium dense, grey | | 15 | SM | |
| | SANDY SILT 4.0m<br>-wet, firm, dark brown | | 16 | ML | |
| 5.0 | SANDY SILT 4.6m<br>-wet, firm, grey<br>-odd interbedded gravels to 20mm dia.<br>-some organics noted | | 17 | ML | |
| 6.0 | 5.9m<br>End Of Hole @ 5.9m<br>-testhole 12m from interceptor ditch with standing water. | | | | |
| 7.0 | | | | | |
| 8.0 | | | | | |
| 9.0 | | | | | |
| 10.0 | | | | | |
| 11.0 | | | | | |
| 12.0 | | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

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Whitehorse, Yukon

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| LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| REVIEWED BY: - | COMPLETE: 07/28/04 |
| Fig. No: 3 | Page 1 of 1 |

05/02/09 11:57AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30175 |
| Donjek Services Ltd. | UTM ZONE: - N6778568 E631598 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL |
|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace silt<br>-damp, loose, brown | | 7 | GP-GM | |
| 2.0 | GRAVELLY SAND, trace silt 2.0m<br>-saturated, medium dense, brown | | 8 | SW-SM | |
| 3.0 | SILTY GRAVELLY SAND 3.0m<br>-Frozen<br>-some decomposed organics noted between 3.0 & 4.6m (wood pieces) | | 9 | SM | |
| 4.0 | | | 10 | SM | |
| 5.0 | | | 11 | SM | |
| 6.0 | 5.9m<br>End of Hole @ 5.9m | | | | |

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0, -7.0, -8.0, -9.0, -10.0, -11.0, -12.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd.<br>Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5.9 m |
| | REVIEWED BY: | COMPLETE: 07/28/04 |
| | Fig. No: 2 | Page 1 of 1 |

05/02/09 11:57AM (YIC_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30176 |
| Donjek Services Ltd. | UTM ZONE: - N6778670 E631642 | PROJECT NO: 8002-318 |
| CME75 Drill on FN60 Flextrac Nodwell | | ELEVATION: |

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | USC | SOIL SYMBOL | ELEVATION(m) |
|---|---|---|---|---|---|---|
| 0.0 | SILTY SANDY GRAVEL<br>-damp to moist, loose, brown | AUGER | 1 | GM | | 0.0 |
| 1.0 | ORGANIC SILTS/SANDS 0.6m<br>-damp, soft, dark brown | AUGER | 2 | SM | | -1.0 |
| 2.0 | GRAVELLY SAND, trace silt 1.5m<br>-moist to wet, medium dense, brown | AUGER | 3 | SW-SM | | -2.0 |
| 3.0 | GRAVELLY SILTY SAND 2.4m<br>-wet, medium dense, brown<br>-some sample contamination from above | AUGER | 4 | SM | | -3.0 |
| 4.0 | GRAVELLY SILTY SAND 3.4m<br>-Frozen<br>-medium dense, brown | AUGER | 5 | SM | | -4.0 |
| 5.0 | | AUGER | 6 | SM | | -5.0 |
| 6.0 | 5.8m<br>End Of Hole @ 5.8m<br>-testhole within existing road shoulder | | | | | -6.0 |
| 7.0 | | | | | | -7.0 |
| 8.0 | | | | | | -8.0 |
| 9.0 | | | | | | -9.0 |
| 10.0 | | | | | | -10.0 |
| 11.0 | | | | | | -11.0 |
| 12.0 | | | | | | -12.0 |

PERCENT FINES ▲ (20 40 60 80)
PLASTIC M.C. LIQUID (20 40 60 80)
◆ PERCENT SAND ◆ (20 40 60 80)
■ PERCENT GRAVEL ■ (20 40 60 80)

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 5.8 m |
| REVIEWED BY: - | COMPLETE: 07/28/04 |
| Fig. No: 1 | Page 1 of 1 |

05/02/09 11:57AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30177 |
| Donjek Services Ltd. | UTM ZONE: - N6764614 E636646 | PROJECT NO: 8002-318 |
| CAT 318C Excavator | | ELEVATION: |

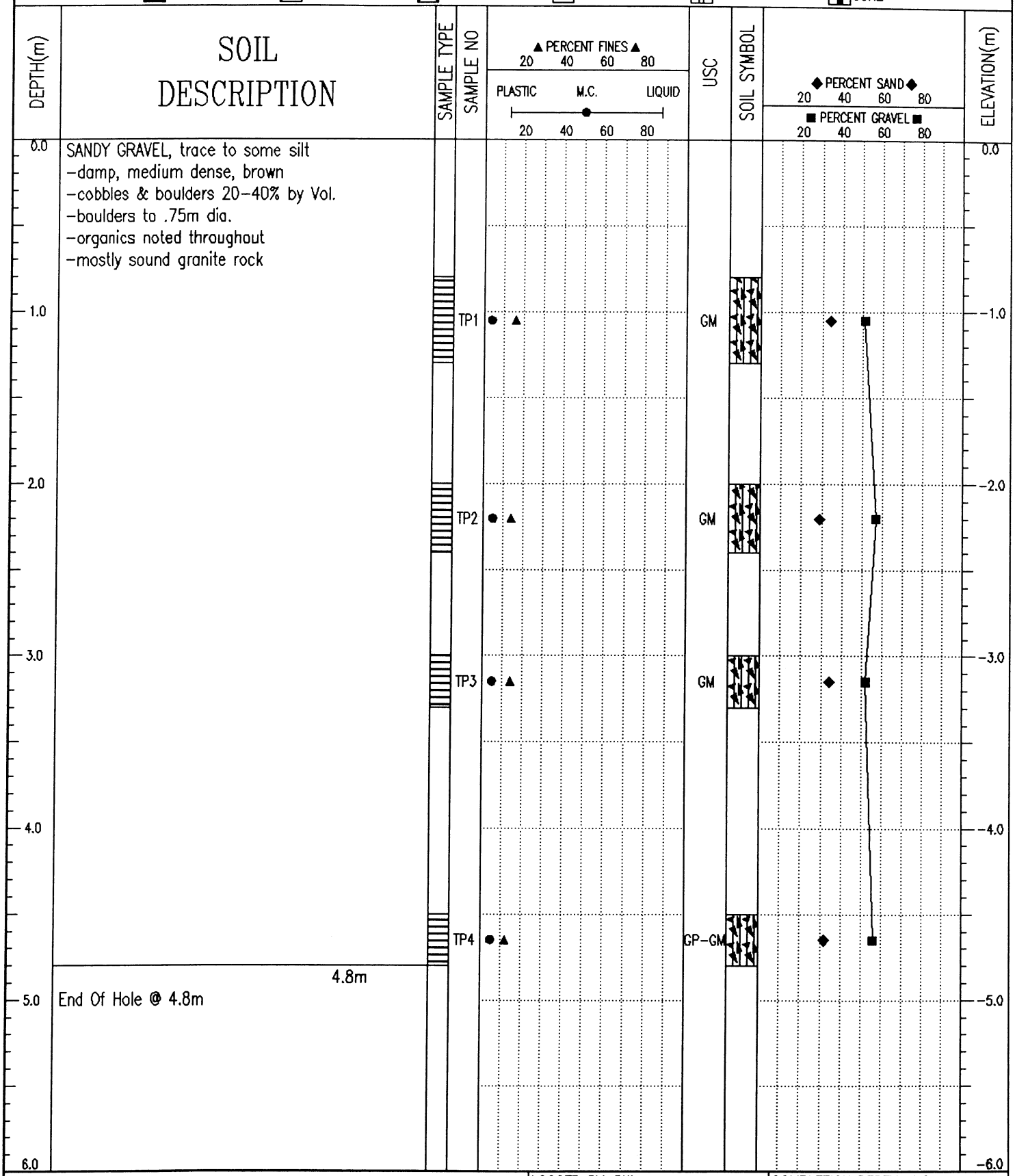
SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

# SOIL DESCRIPTION

SANDY GRAVEL, trace to some silt
-damp, medium dense, brown
-cobbles & boulders 20-40% by Vol.
-boulders to .75m dia.
-organics noted throughout
-mostly sound granite rock

4.8m

End Of Hole @ 4.8m




| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. | LOGGED BY: RW | COMPLETION DEPTH: 4.8 m |
| Whitehorse, Yukon | REVIEWED BY: - | COMPLETE: 08/10/04 |
| | Fig. No: 230 | Page 1 of 1 |

05/02/24 08:42AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30178 |
| Donjek Services Ltd. | UTM ZONE: – N6764616 E636697 | PROJECT NO: 8002-318 |
| CAT 318C Excavator | | ELEVATION: |

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

| DEPTH(m) | SOIL DESCRIPTION | SAMPLE TYPE | SAMPLE NO | PERCENT FINES / PLASTIC M.C. LIQUID | USC | SOIL SYMBOL | PERCENT SAND / PERCENT GRAVEL | ELEVATION(m) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | SANDY GRAVEL, trace to some silt<br>–damp, medium dense, brown<br>–cobbles & bouders 10–30% by Vol.<br>–boulders to 0.6m dia.<br>–organics noted throughout<br>–mostly sound granite rock | | | | | | | 0.0 |
| 1.0 | | | TP5 | | GW | | | -1.0 |
| 2.0 | | | TP6 | | GP-GM | | | -2.0 |
| 2.8m | AS ABOVE<br>–damp to moist | | | | | | | |
| 3.0 | | | TP7 | | GM | | | -3.0 |
| 4.0 | | | | | | | | -4.0 |
| 4.3m | SANDY GRAVEL, some silt<br>–damp to moist, medium dense, brown<br>–slight increase in fine sands & silts | | TP8 | | GM | | | |
| 4.8m | | | | | | | | |
| 5.0 | End Of Hole @ 4.8m | | | | | | | -5.0 |
| 6.0 | | | | | | | | -6.0 |

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

| | |
|---|---|
| LOGGED BY: RW | COMPLETION DEPTH: 4.8 m |
| REVIEWED BY: - | COMPLETE: 08/10/04 |
| Fig. No: 231 | Page 1 of 1 |

05/02/24 08:42AM (YTG_HWYS)

| | | |
|---|---|---|
| Geotechnical Services | Km 1691.7 to 1717.3 Alaska Highway #1 | TEST PIT NO: 30179 |
| Donjek Services Ltd. | UTM ZONE: – N6764619 E636749 | PROJECT NO: 8002-318 |
| CAT 318C Excavator | | ELEVATION: |

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

# SOIL DESCRIPTION

SANDY GRAVEL, trace to some silt
-damp, medium dense, brown
-cobbles & boulders 10-30% by Vol.
-boulders to 0.6m dia.
-organics noted throughout
-mostly sound granite rock

5.0m

End Of Hole @ 5.0m

TP9 TP10 TP11 TP12

GP-GM GM GM GP-GM

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

DEPTH(m) 0.0 1.0 2.0 3.0 4.0 5.0 6.0

ELEVATION(m) 0.0 -1.0 -2.0 -3.0 -4.0 -5.0 -6.0

| | | |
|---|---|---|
| J. R. Paine & Associates Ltd. Whitehorse, Yukon | LOGGED BY: RW | COMPLETION DEPTH: 5 m |
| | REVIEWED BY: | COMPLETE: 08/10/04 |
| | Fig. No: 232 | Page 1 of 1 |

05/02/24 08:42AM (YIC_HWYS)