GEOTECHNICAL INVESTIGATIONS

Highway Construction
km 1691.6 to 1700.4
Alaska Highway #1
Yukon, 2006-2007
Volume 1 of 3

Yukon
Highways and Public Works
Transportation Engineering Branch

Geotechnical Services

BOX 2703, WHITEHORSE, YUKON
PHONE 867-667-8820 FAX 867-393-6447

ORIGINAL - Do Not Remove From File

Highway Construction
km 1691.6 to 1700.4
Alaska Highway #1
Yukon, 2006-2007
Volume 1 of 3

This Data Package prepared for project viewing:

May, 2006

Transportation Engineering Branch
Geotechnical Services
461 Range Road
Whitehorse, Yukon

CONTENTS

Volume 1 of 3

INTRODUCTION

Investigation notes, classification methods and legends.

CENTRELINE TESTING km 1691.6 to 1700.4 Alaska Highway

Subsurface Exploration and Test Report Sheets are provided.
The reports for the Centreline testing holes are arranged according to project location, starting at km 1691+525 and increasing to km 1700+250.

2000	TEST HOLES 1602 to 1639	shown with prefix 558-
2004	TEST HOLES 30000 to 30046	shown with no prefix
2004	TEST HOLES 30177 to 30179	shown with no prefix

CONTENTS (continued)

Volume 2 of 3

CENTRELINE TESTING km 1691.6 to 1700.4 Alaska Highway

Laboratory Testing Result Sheets are provided.
The reports for the centreline holes are arranged according to test hole number, starting at 558-1602 and increasing to 30179.

2000	TEST HOLES 1602 to 1639	shown with prefix 558-
2004	TEST HOLES 30000 to 30046	shown with no prefix
2004	TEST HOLES 30177 to 30179	shown with no prefix

CONTENTS (continued)

Volume 3 of 3

GRANULAR SOURCE km 1635.8 RHS ALASKA HIGHWAY Pit ID 115 G-07

NOTE: There is a kilometre chainage correction at km 1636.6 back and km 1694.0 ahead. Pit 115 G-07 is located at km 1635.8 back and km 1691 ahead.

A production history, location plans, photographs, and subsurface exploration and testing report sheets are provided.

Auger Testing

2001	TEST HOLES 1510 to 1514	shown with prefix 581-
2001	TEST HOLES 1515, 1517, 1518	shown with prefix 582-

Test Pit Testing

1991	TEST PITS 06 to 08	shown with prefix 152-
1992	TEST PITS 19 to 23	shown with prefix EBA-
2001	TEST PITS 1524 to 1528, 1541, & 1542	shown with prefix 583-
2001	TEST PITS 1544 to 1549 & 1552	shown with prefix 584-

INTRODUCTION

GEOTECHNICAL INVESTIGATION DATA

This geotechnical investigation data is provided to assist in the interpretation of soil conditions encountered within this project area. The data presented was prepared solely for Departmental designing and estimating purposes.

The description of material / soil description shown on the Subsurface Exploration & Test Reports is a textural description based on identification of retrieved material by the field drilling technician at the time of investigation. This description may be modified following laboratory testing and classification of selected samples. The system used is based on the ASTM standards for identification and classification of soils. Permafrost classifications and groundwater levels are indicated as detected at time of drilling, unless otherwise noted. Changes in moisture or frost conditions should be anticipated depending on the season, time lapse or amount of development work done since the date of investigation.

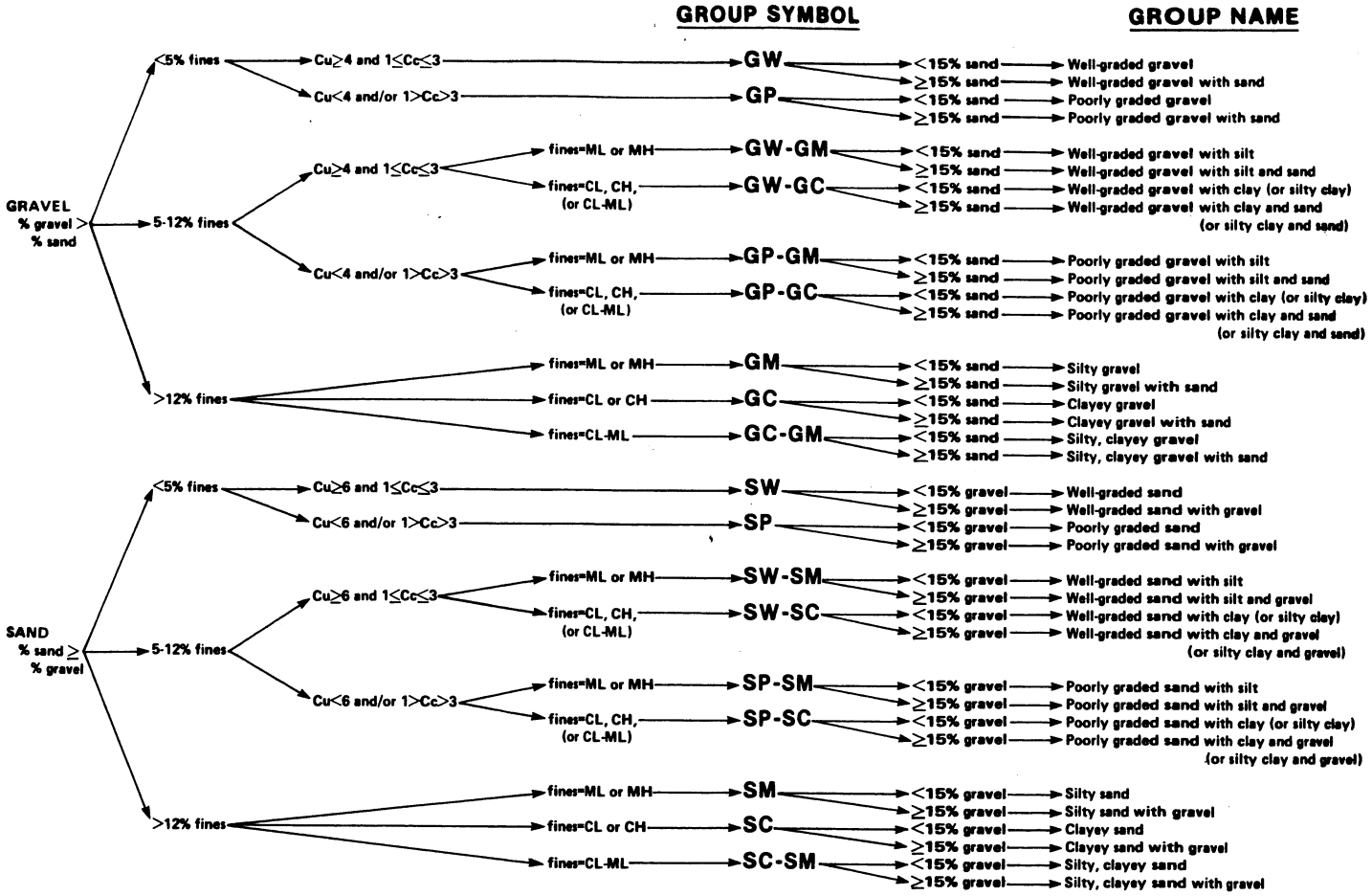
The sample laboratory testing data is provided to give detailed physical properties of selected retrieved samples within the subsurface profile. ***These tests may be conducted on disturbed samples and may exhibit properties different from the native materials. The sample classification may also vary from the soil description due to variations within the sampled strata or because of changes resulting from the sampling method, excavation equipment used or testing preparation procedures.***

History of Aggregate Production Averages shown provide an unweighted average of the total individual quality control tests performed during the production of the indicated stockpiles. Individual test results may fall outside of the material type specification limit. Fracture tests may not have been performed on all samples collected.

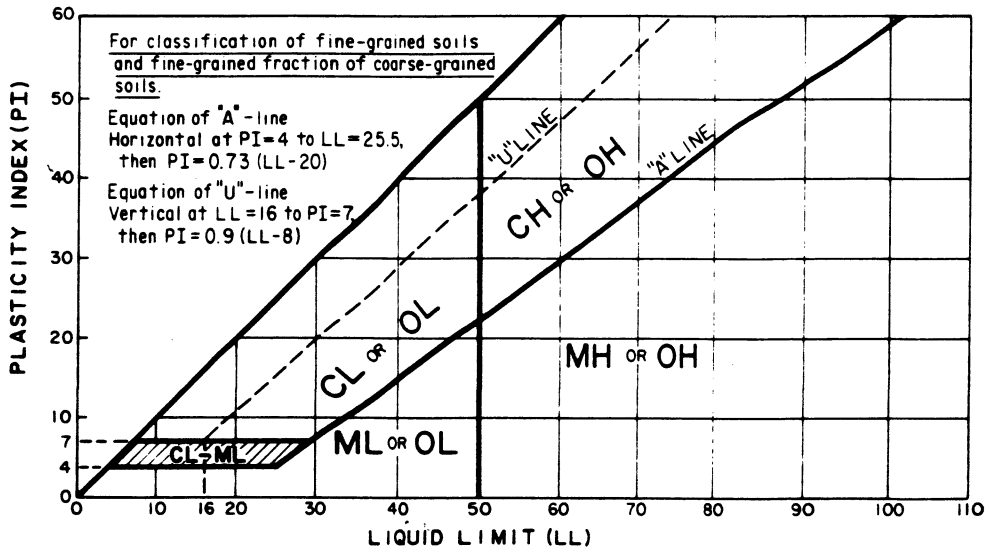
These descriptions and averages are not intended to be conclusive as to the nature of any material encountered, or to conditions between or around the test borings/pits.

Note: Development work may have taken place since the time of geotechnical investigation.

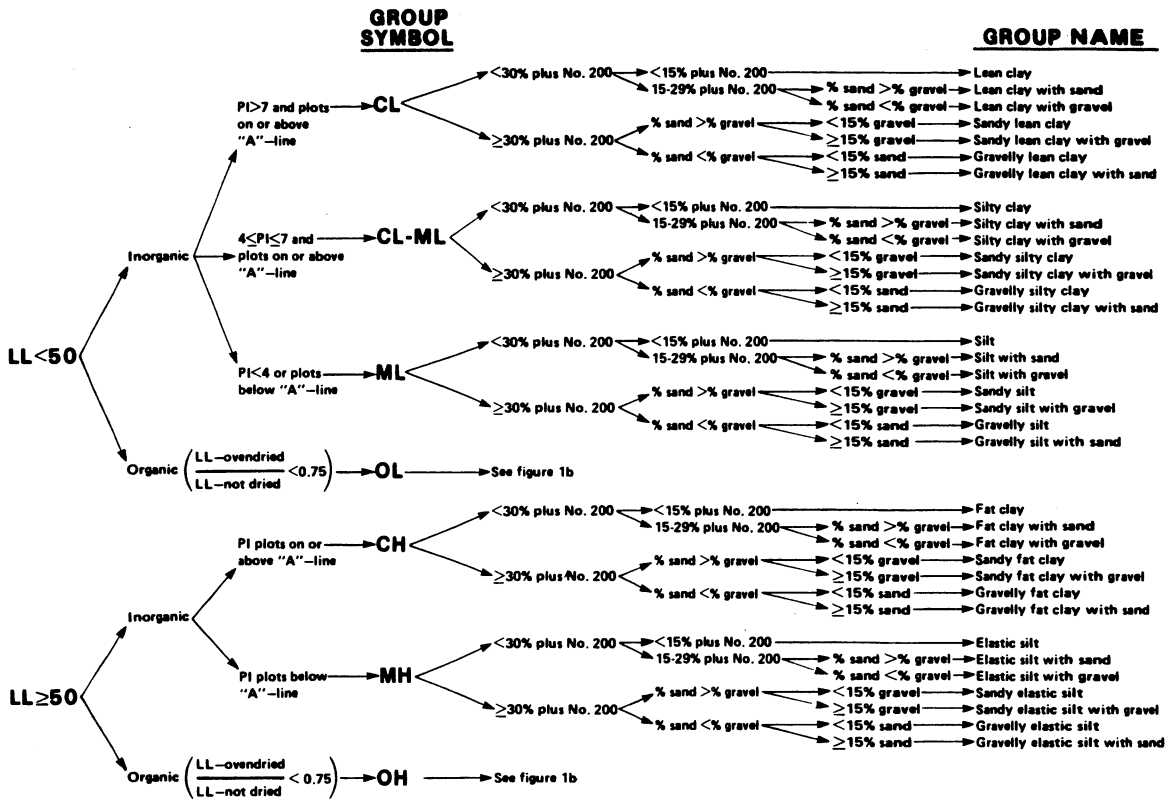
It is recommended that a site inspection, combined with consideration of the regional geology and climatic conditions be conducted. An evaluation of the investigation methods and development work done since the time of investigation should be done prior to interpreting the subsurface conditions at the site for construction purposes.



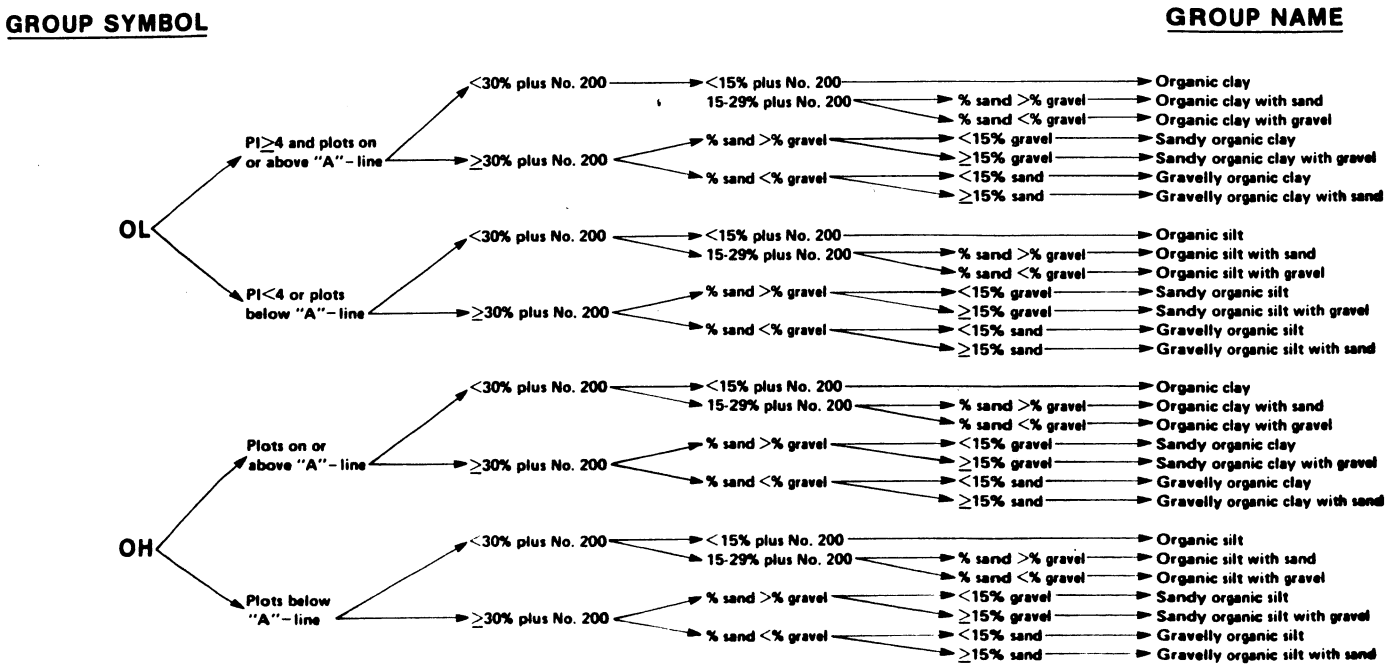
Flow chart for classifying coarse-grained soil.



Plasticity chart.



Flow chart for classifying fine-grained soil.



Flow chart for classifying organic soil.

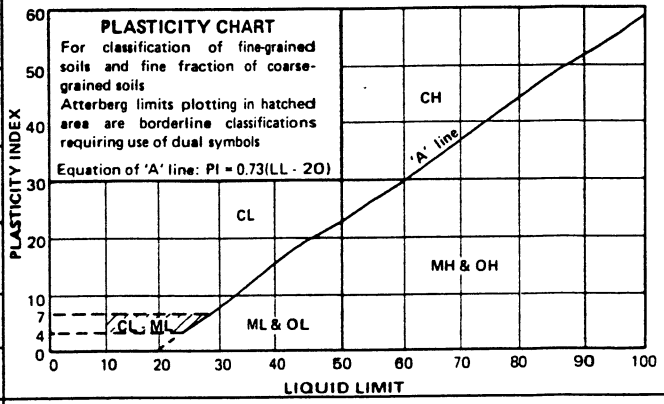
CRITERIA FOR ASSIGNING GROUP SYMBOLS AND GROUP NAMES USING LABORATORY TESTS [a]				SOIL CLASSIFICATION	
				GROUP SYMBOL	GROUP NAME [b]
COARSE-GRAINED SOILS more than 50% retained on No. 200 sieve	GRAVELS More than 50% of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS Less than 5% fines [c]	$C_u \geq 4$ and $1 \leq C_c \leq 3$ [e]	GW	Well-graded gravel [f]
			$C_u < 4$ and/or $1 > C_c > 3$ [e]	GP	Poorly graded gravel [f]
		GRAVELS WITH FINES More than 12% fines [c]	Fines classify as ML or MH	GM	Silty gravel [f,g,h]
			Fines classify as CL or CH	GC	Clayey gravel [f,g,h]
	SANDS 50% or more of coarse fraction passes No. 4 sieve	CLEAN SANDS Less than 5% fines [d]	$C_u \geq 6$ and $1 \leq C_c \leq 3$ [e]	SW	Well-graded sand [i]
			$C_u < 6$ and/or $1 > C_c > 3$ [e]	SP	Poorly graded sand [i]
		SANDS WITH FINES More than 12% fines [d]	Fines classify as ML or MH	SM	Silty sand [g,h,i]
			Fines classify as CL or CH	SC	Clayey sand [g,h,i]
FINE-GRAINED SOILS 50% or more passed the No. 200 sieve	SILTS AND CLAYS Liquid limit less than 50%	inorganic	PI > 7 and plots on or above "A" line [j]	CL	Lean clay [k,l,m]
			PI < 4 or plots below "A" line [j]	ML	Silt [k,l,m]
		organic	$\frac{\text{Liquid limit - oven dried}}{\text{Liquid limit - not dried}} < 0.75$	OL	Organic clay [k, l, m, n] Organic silt [k, l, m, o]
	SILTS AND CLAYS Liquid limit 50% or more	inorganic	PI plots on or above "A" line	CH	Fat clay [k,l,m]
			PI plots below "A" line	MH	Elastic silt [k,l,m]
		organic	$\frac{\text{Liquid limit - oven dried}}{\text{Liquid limit - not dried}} < 0.75$	OH	Organic clay [k, l, m, p] Organic silt [k, l, m, q]
Highly organic soils		Primarily organic matter, dark in color, and organic odor		PT	Peat

a. Based on the material passing the 3-in (75-mm) sieve.
b. If field sample contained cobbles and/or boulders, add "with cobbles and/or boulders" to group name.
c. Gravels with 5 to 12% fines require dual symbols
   GW-GM well graded gravel with silt
   GW-GC well graded gravel with clay
   GP-GM poorly graded gravel with silt
   GP-GC poorly graded gravel with clay
d. Sands with 5 to 12% fines require dual symbols
   SW-SM well graded sand with silt
   SW-SC well graded sand with clay
   SP-SM poorly graded sand with silt
   SP-SC poorly graded sand with clay
e. $C_u = D_{60}/D_{10}$ $\quad C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$
f. If soil contains $\geq$ 15% sand, add "with sand" to group name.
g. If fines classify as CL-ML, use dual symbol GC-GM, SC-SM.
h. If fines are organic, add "with organic fines" to group name.
i. If soil contains $\geq$ 15% gravel, add "with gravel" to group name.
j. If Atterberg limits plot in hatched area, soil is a CL-ML, silty clay.
k. If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel" whichever is predominant.
l. If soil contains $\geq$ 30% plus No. 200, predominantly sand, add "sandy" to group name.
m. If soil contains $\geq$ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.
n. PI $\geq$ 4 and plots on or above "A" line.
o. PI $<$ 4 or plots below "A" line.
p. PI plots on or above "A" line.
q. PI plots below "A" line.

Soil classification chart

UNIFIED SOIL CLASSIFICATION†

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES	CLASSIFICATION CRITERIA
COARSE-GRAINED SOILS More than 50% retained on No. 200 sieve*	GRAVELS 50% or more of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines	Classification on basis of percentage of fines: Less than 5% pass No. 200 sieve GW, GP, SW, SP; More than 12% pass No. 200 sieve GM, GC, SM, SC; 5% to 12% pass No. 200 sieve Borderline classification requiring use of dual symbols. $C_u = D_{60}/D_{10}$ Greater than 4; $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3
			GP	Poorly-graded gravels and gravel-sand mixtures, little or no fines	Not meeting both criteria for GW
		GRAVELS WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures	Atterberg limits plot below 'A' line or plasticity index less than 4 — Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
			GC	Clayey gravels, gravel-sand clay mixtures	Atterberg limits plot above 'A' line and plasticity index greater than 7 — Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
	SANDS More than 50% of coarse fraction passes No. 4 sieve	CLEAN SANDS	SW	Well-graded sands and gravelly sands, little or no fines	$C_u = D_{60}/D_{10}$ Greater than 6; $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3
			SP	Poorly-graded sands and gravelly sands, little or no fines	Not meeting both criteria for SW
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures	Atterberg limits plot below 'A' line or plasticity index less than 4 — Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
			SC	Clayey sands, sand-clay mixtures	Atterberg limits plot above 'A' line and plasticity index greater than 7 — Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
FINE-GRAINED SOILS 50% or more passes No. 200 sieve*	SILTS AND CLAYS Liquid limit 50% or less		ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands	
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	
			OL	Organic silts and organic silty clays of low plasticity	
	SILTS AND CLAYS Liquid limit greater than 50%		MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts	
			CH	Inorganic clay of high plasticity, fat clays	
			OH	Organic clays of medium to high plasticity	
HIGHLY ORGANIC SOILS			PT	Peat, muck and other highly organic soils	



*Based on the material passing the 3 in. (75 mm) sieve
†ASTM Designation D 2487, for identification procedure see D 2488

GROUND ICE DESCRIPTION

ICE NOT VISIBLE

GROUP SYMBOLS	SYMBOLS	SUBGROUP DESCRIPTION	
N	Nf	Poorly-bonded or friable	
	Nbn	No excess ice, well-bonded	
	Nbe	Excess ice, well-bonded	

NOTE:
1. *Dual symbols are used to indicate borderline or mixed ice classifications*
2. *Visual estimates of ice contents indicated on borehole logs ± 5%*
3. *This system of ground ice description has been modified from NRC Technical Memo 79, Guide to the Field Description of Permafrost for Engineering Purposes*

LEGEND
Soil  Ice 

VISIBLE ICE LESS THAN 50% BY VOLUME

GROUP SYMBOLS	SYMBOLS	SUBGROUP DESCRIPTION	
V	Vx	Individual ice crystals or inclusions	
	Vc	Ice coatings on particles	
	Vr	Random or irregularly oriented ice formations	
	Vs	Stratified or distinctly oriented ice formations	

VISIBLE ICE GREATER THAN 50% BY VOLUME

ICE	ICE + Soil Type	Ice with soil inclusions	
	ICE	Ice without soil inclusions (greater than 25 mm (1 in.) thick)	

	BOUNDARY LINES ON DRILL LOGS	TEST HOLE NO: 3
ENGINEERING–CAPITAL		Project No:
		ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	BOUNDARY LINES							0.0
	A solid line is used when a definite soil change is logged and a depth is known.							
1.0	A dashed line is used when a definite soil change is noted either by the field log or the sample test results and the depth of change is unknown.							1.0
2.0	A dotted line is used when a gradual or gradational change is noted by field notes and sample test results.							2.0
3.0	A triangle over two lines indicates water level detected at the time of drilling, unless otherwise noted							3.0
4.0								4.0
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY:	COMPLETION DEPTH: 6.0 m
REVIEWED BY:	COMPLETE: / /
Fig. No:	Page 1 of 1

99/12/16 11:10AM

CENTRELINE TESTING
1691.6 to 1700.4
ALASKA HIGHWAY

Subsurface Exploration
and
Test Report Sheets

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1639
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1691+525 06M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■PERCENT GRAVEL■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	WELL-GRADED SAND WITH SILT & GRAVEL(SW-SM) -brown -saturated to free water							
1.0		⊠	1052	▲ ●	SW-SM		■ ◆	1.0
2.0	SILTY SAND WITH GRAVEL (SM) -brown -wet							2.0
3.0		⊠	1053	● ▲	SM		■ ◆	3.0
4.0								4.0
		⊠	1054	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/30
Fig. No:	Page 1 of 1

00/11/08 01:23PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1638
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1691+595 20M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SAND, GRAVEL, SILT & ORGANIC							
1.0	SILTY SAND WITH GRAVEL (SM) -brown -saturated	⊠	1049	●	SM		■ ◆	1.0
2.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -brown -saturated							2.0
3.0		⊠	1050	◆	SW-SM		■ ◆	3.0
4.0	SILTY SAND WITH GRAVEL (SM) -brown -frozen (Nf)							4.0
		⊠	1051	● ▲	SM		■ ◆	
5.0	END HOLE @ 4.7m Note: Test Hole in culvert outlet							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/29
	Fig. No:	Page 1 of 1

00/11/09 08:56AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558–1636
ENGINEERING CAPITAL	KM 1664.5–1692.6 A/H	Project No: 092–202101–0363
B40–L MOBILE DRILL 6"AUGER	LOCATION: 1691+600 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SILT & ORGANIC							0.0
	WELL–GRADED SAND WITH SILT & GRAVEL TO POORLY GRADED GRAVEL WITH SILT & SAND TO SILTY SAND WITH GRAVEL (SW–SM)–(GP–GM)–(SM) –brown –saturated –grindy drilling	⊠	1044	◆ ▲	SW–SM		◆ ■	
1.0								1.0
2.0								2.0
3.0		⊠	1045	◆	GP–GM		◆ ■	3.0
4.0	–moist below 4.0m							4.0
		⊠	1046	◆ ▲	SM		■ ◆	
5.0	END HOLE @ 4.7m Note: Test hole is in culvert inlet							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/29
	Fig. No:	Page 1 of 1

00/11/08 01:23PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1635
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1691+675 11M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -brown -moist -maximum 75mm material -grindy drilling	⊠	1041	● ▲	SW-SM		◆ ■	0.0
1.0								1.0
2.0	SANDY SILT TO SILTY SAND WITH GRAVEL (ML)-(SM) -brown -saturated -smoother drilling							2.0
3.0		⊠	1042	● ▲	ML		■ ◆	3.0
4.0	-more +5mm material below 4.0m							4.0
		⊠	1043	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/29
Fig. No:	Page 1 of 1

00/11/09 08:56AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558–1634
ENGINEERING CAPITAL	KM 1664.5–1692.6 A/H	Project No: 092–202101–0363
B40–L MOBILE DRILL 6"AUGER	LOCATION: 1691+775 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	WELL–GRADED SAND WITH SILT & GRAVEL (SW–SM) –brown –moist –grindy drilling							0.0
1.0		⊠	1038	● ▲	SW–SM		■ ◆	1.0
2.0								2.0
	SILTY SAND TO SILTY SAND WITH GRAVEL (SM) –brown –saturated –some +5mm material –smooth easy drilling							
3.0		⊠	1039	● ▲	SM		■ ◆	3.0
4.0	–more +5mm material below 4.0m							4.0
		⊠	1040	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/29
	Fig. No:	Page 1 of 1

00/11/08 01:23PM

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 -dry to damp, medium dense, brown		352 ▲		GW			0.0
1.0								-1.0
	SANDY GRAVEL, trace silt 1.2m -damp, medium dense, brown							
2.0			353 ●▲		GW-GM			-2.0
3.0	3.0m 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: 158	COMPLETION DEPTH: 3 m COMPLETE: 08/16/04 Page 1 of 1

05/02/21 08:11AM (YTG_HWYS)

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1633
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1691+875 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▥ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	POORLY GRADED GRAVEL WITH SILT & SAND TO WELL-GRADED SAND WITH SILT & GRAVEL (GP-GM)-(SM) -brown -moist -maximum 75mm material -grindy drilling							0.0
1.0		☒	1035	● ▲	GP-GM		◆ ■	1.0
2.0								2.0
3.0		☒	1036	● ▲	GP-GM		◆ ■	3.0
4.0								4.0
		☒	1037	● ▲	SW-SM		■ ◆	
5.0	END HOLE @ 4.7m Note: Test hole in gravelly cut area							5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/29
Fig. No:	Page 1 of 1

00/11/09 08:56AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558–1637
ENGINEERING CAPITAL	KM 1664.5–1692.6 A/H	Project No: 092-202101-0363
B40–L MOBILE DRILL 6"AUGER	LOCATION: 1691+984 20M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SANDY GRAVEL –brown –moist –grindy drilling							0.0
1.0	ORGANIC & SILT –brown & black –smooth drilling							1.0
2.0	SILTY GRAVEL WITH SAND (GM) –brown –moist –grindy drilling	⊠	1047	● ▲	GM		■	2.0
3.0	–very difficult slow hard drilling @ 2.4m – more rock							3.0
4.0		⊠	1048	● ▲	GM		◆ ■	4.0
	END HOLE @ 4.0m –refusal Note: Test hole in culvert outlet							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.0 m
	REVIEWED BY:	COMPLETE: 00/06/29
	Fig. No:	Page 1 of 1

00/11/09 09:22AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1632
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1691+984 17M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SILTY GRAVEL WITH SAND (GM) -brown -moist -maximum 75mm material -grindy drilling -very difficult slow grindy drilling							0.0
1.0		⊠	1034	● ▲	GM		◆ ■	1.0
2.0	-refusal # 1 @ 1.8m - moved 2m upchain							2.0
3.0	END HOLE @ 3.0m -2nd refusal Note: Test hole in culvert inlet							3.0
4.0								4.0
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 00/06/29
Fig. No:	Page 1 of 1

00/11/09 08:56AM

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

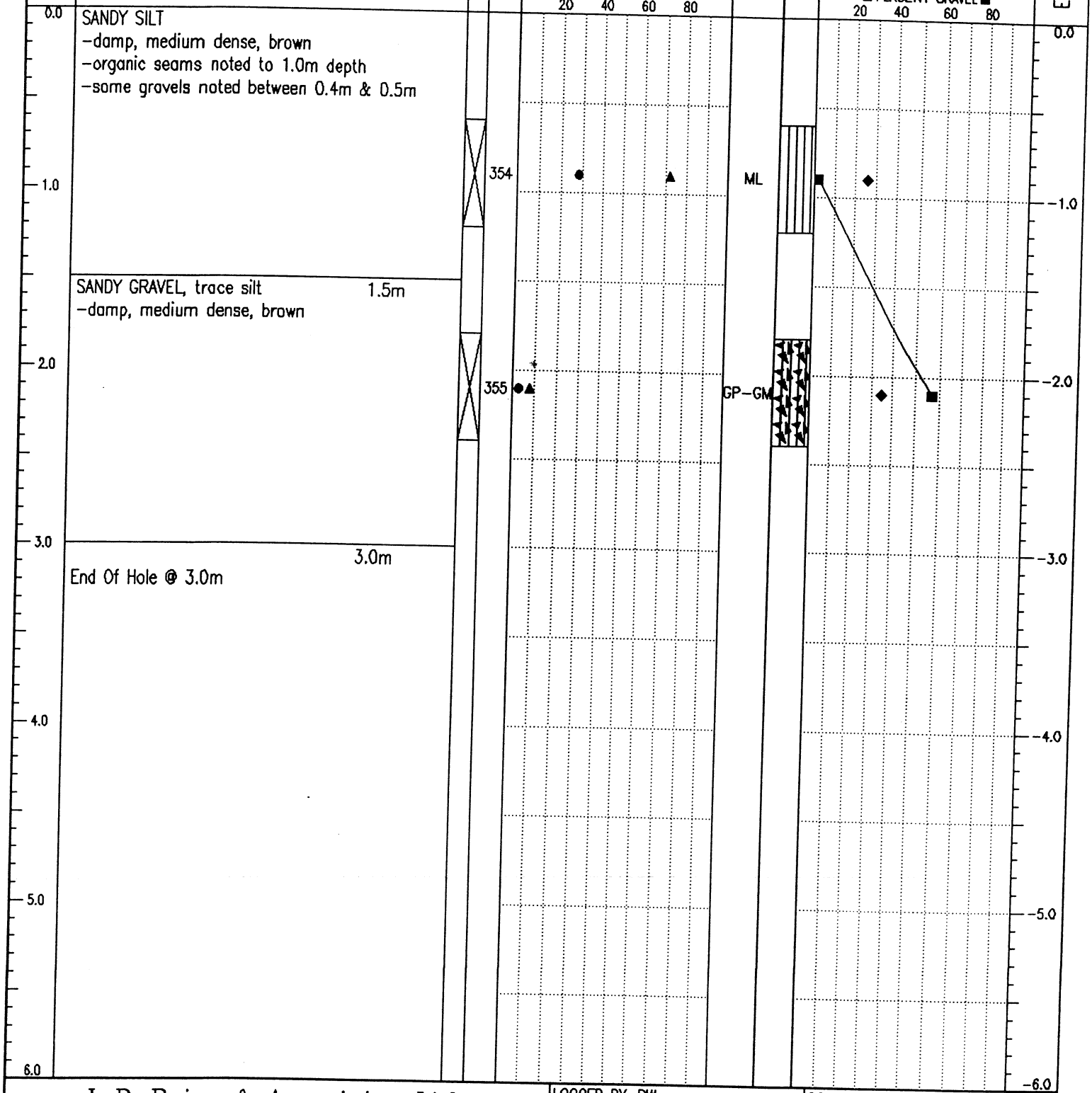
SOIL DESCRIPTION

SANDY SILT
- damp, medium dense, brown
- organic seams noted to 1.0m depth
- some gravels noted between 0.4m & 0.5m

SANDY GRAVEL, trace silt 1.5m
- damp, medium dense, brown

3.0m

End Of Hole @ 3.0m



J. R. Paine & Associates Ltd.	LOGGED BY: RW	COMPLETION DEPTH: 3 m
Whitehorse, Yukon	REVIEWED BY: -	COMPLETE: 08/16/04
	Fig. No: 159	Page 1 of 1

05/02/23 02:24PM (YTC_HWYS)

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1631
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1692+050 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	GRAVEL							0.0
	SANDY SILT -brown -moist							
1.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -damp -maximum 50mm material	⊠	1033	●▲	GP-GM		◆ ■	1.0
2.0	END HOLE @ 1.9m -1st refusal @ 1.9m -replaced bit & shank -2nd refusal @ 1.4m							2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 1.9 m
REVIEWED BY:	COMPLETE: 00/06/29
Fig. No:	Page 1 of 1

00/11/09 08:56AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1630
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1692+150 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -damp -maximum 50mm material -grindy drilling							0.0
1.0		⊠	1031	● ▲	GP-GM		◆ ■	1.0
2.0	-difficult slow grindy drilling @ 1.8m							2.0
3.0	-more rock below 2.5m	⊠	1032	● ▲	GP-GM		◆ ■	3.0
	END HOLE @ 3.2m -refusal -moved 2m upchain -2nd refusal @ 2.0m							
4.0								4.0
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 3.2 m
REVIEWED BY:	COMPLETE: 00/06/29
Fig. No:	Page 1 of 1

00/11/08 01:22PM

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 -dry, medium dense, brown								0.0
	SILTY SAND, some gravel -damp, medium dense, brown	0.4m	⊠	356	● ▲	SM		◆ ■	
	SANDY GRAVEL, some silt -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 (YTC_HWYS)

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558–1629
ENGINEERING CAPITAL	KM 1664.5–1692.6 A/H	Project No: 092-202101-0363
B40–L MOBILE DRILL 6"AUGER	LOCATION: 1692+250 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SANDY GRAVEL –some silt –brown –moist –grindy drilling							0.0
1.0	SILT WITH SAND (ML) –brown –moist –smooth easy drilling –grindy drilling	⊠	1028	● ▲	ML	▥	■ ◆	1.0
2.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)–(GM) –brown –moist							2.0
3.0		⊠	1029	● ▲	SM	▤	■ ◆	3.0
4.0								4.0
		⊠	1030	● ▲	GM	▤	◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/29
	Fig. No:	Page 1 of 1

00/11/08 01:22PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558–1628
ENGINEERING CAPITAL	KM 1664.5–1692.6 A/H	Project No: 092-202101-0363
B40–L MOBILE DRILL 6"AUGER	LOCATION: 1692+350 12M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	POORLY GRADED GRAVEL WITH SILT & SAND TO SILTY SAND WITH GRAVEL (GP–GM)–(SM) –brown –damp –maximum 50mm material	⊠	1025	● ▲	GP–GM		◆ ■	0.0
1.0								1.0
2.0								2.0
3.0		⊠	1026	● ▲	SM		◆	3.0
4.0								4.0
		⊠	1027	● ▲	SM		■ ◆	
	END HOLE @ 4.5m –refusal							
5.0								5.0
6.0								6.0

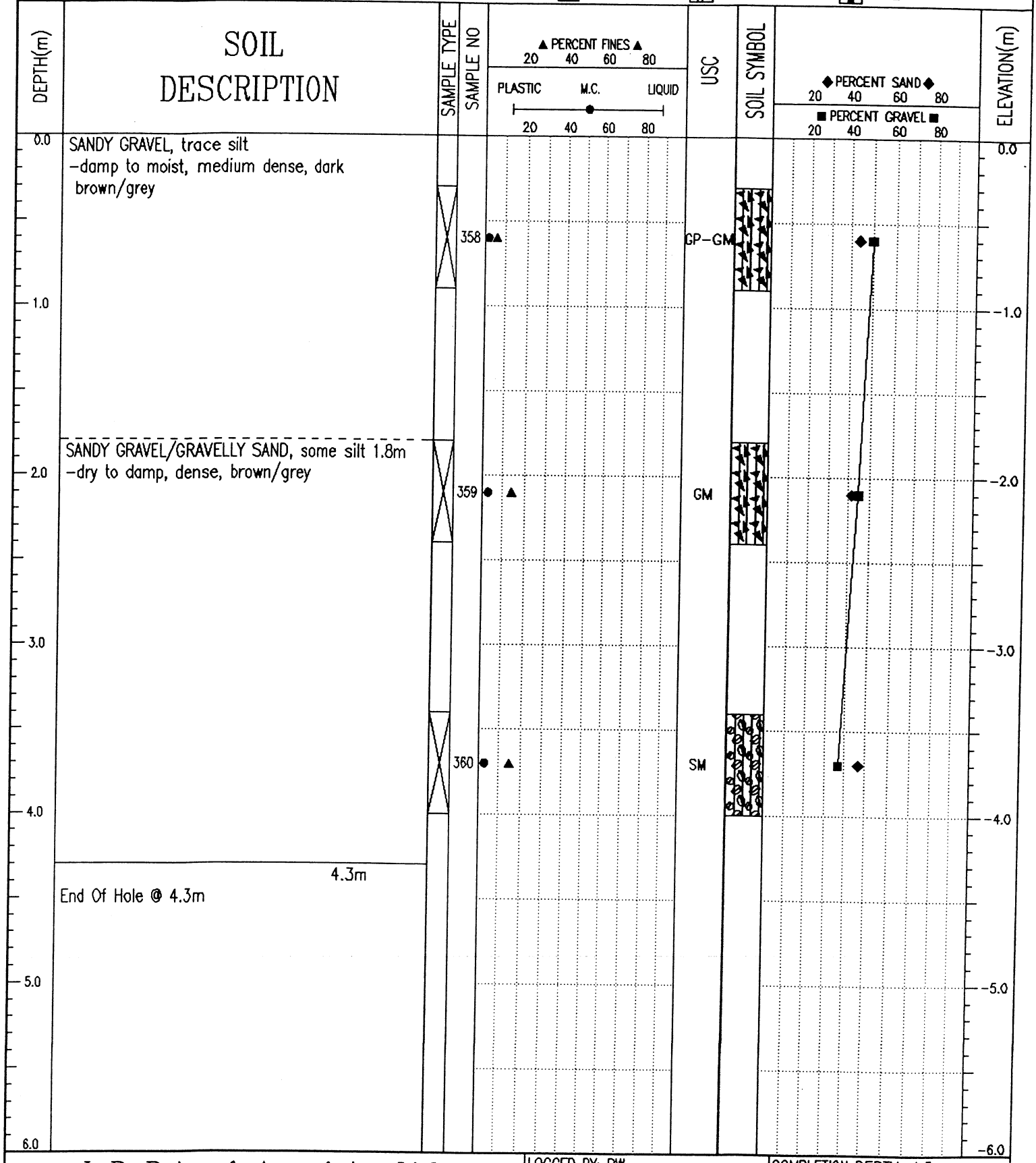
Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 00/06/29
Fig. No:	Page 1 of 1

00/11/09 08:56AM

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

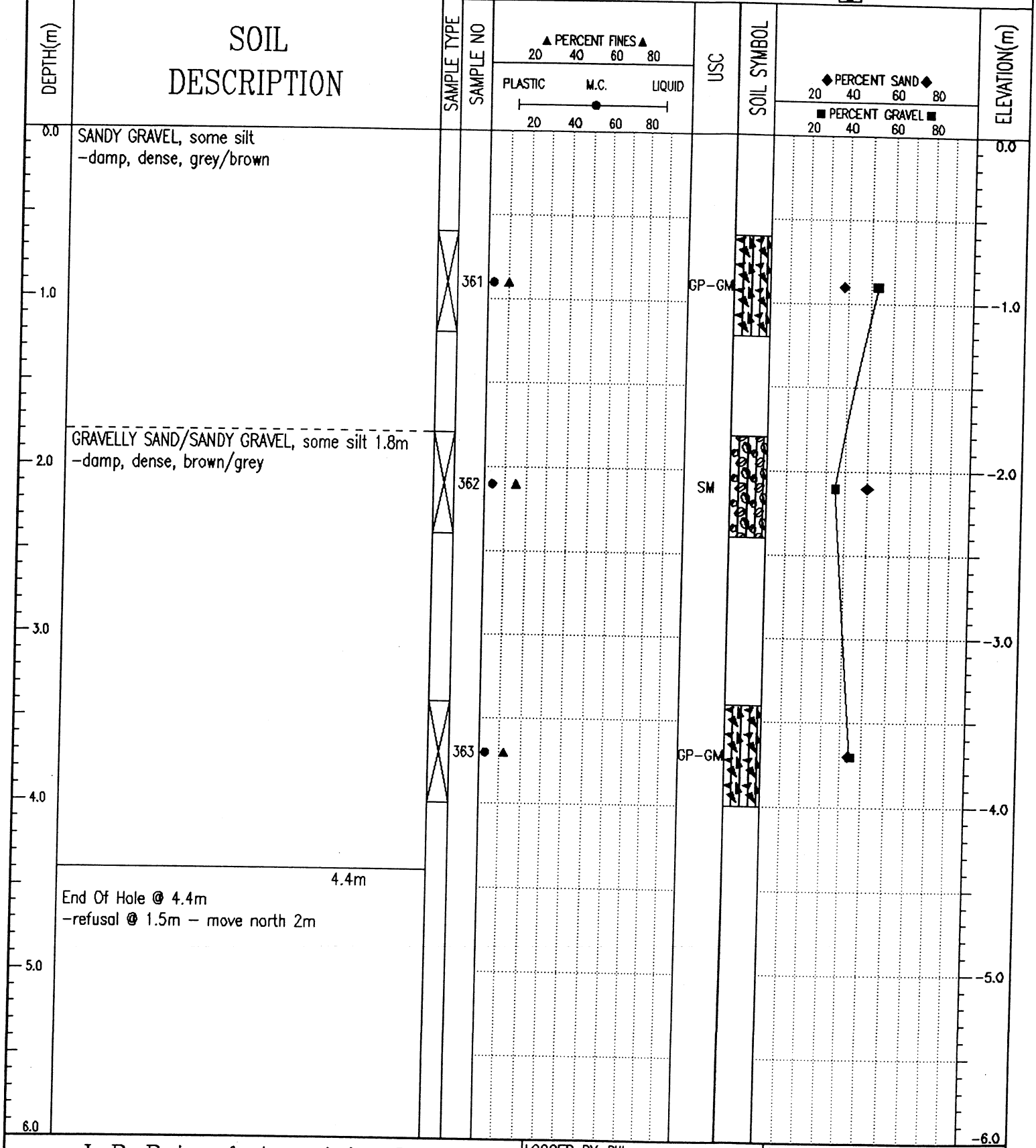


J. R. Paine & Associates Ltd. Whitehorse, Yukon	LOGGED BY: RW	COMPLETION DEPTH: 4.3 m
	REVIEWED BY: -	COMPLETE: 08/16/04
	Fig. No: 161	Page 1 of 1

05/02/21 08:12AM (YIC_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



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 (YTC_HWYS)

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1623
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1692+500 11M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	POORLY GRADED GRAVEL (GP) -brown -damp -grindy drilling -maximum 75mm material -1st refusal @ .7m - moved 2m downchain							0.0
1.0								1.0
2.0								2.0
3.0	END HOLE @ 3.0m	⊠	1014 ▲		GP	▨	◆ ■	3.0
4.0								4.0
5.0								5.0
6.0								6.0

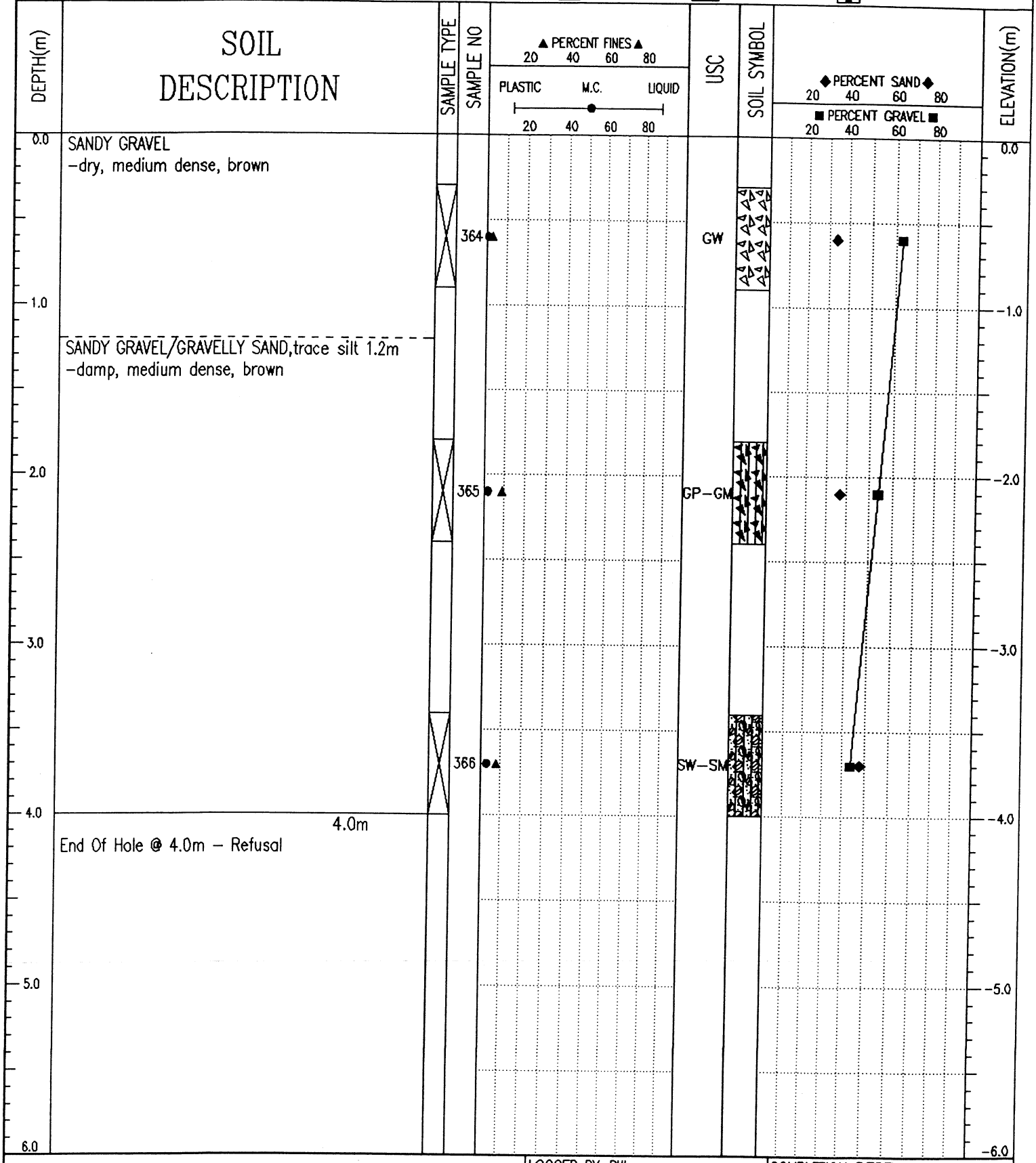
Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 00/06/28
Fig. No:	Page 1 of 1

00/11/09 08:56AM

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



J. R. Paine & Associates Ltd.	LOGGED BY: RW	COMPLETION DEPTH: 4 m
Whitehorse, Yukon	REVIEWED BY: -	COMPLETE: 08/18/04
	Fig. No: 163	Page 1 of 1

05/02/23 02:28PM (YTC_HWYS)

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558–1622
ENGINEERING CAPITAL	KM 1664.5–1692.6 A/H	Project No: 092–202101–0363
B40–L MOBILE DRILL 6"AUGER	LOCATION: 1692+600 14M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP–GM) –brown –damp –maximum 75mm material –grindy drilling							0.0
1.0								1.0
		⊠	1013 ●▲		GP–GM		◆■	
2.0								2.0
3.0	–no sample recovered							3.0
4.0	END HOLE @ 4.0m –refusal							4.0
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.0 m
REVIEWED BY:	COMPLETE: 00/06/27
Fig. No:	Page 1 of 1

00/11/09 09:20AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558–1621
ENGINEERING CAPITAL	KM 1664.5–1692.6 A/H	Project No: 092–202101–0363
B40–L MOBILE DRILL 6"AUGER	LOCATION: 1692+750 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	POORLY TO WELL–GRADED GRAVEL WITH SILT & SAND (GP–GM)–(GW–GM) –grey –damp –maximum 75mm material –grindy drilling							0.0
1.0								1.0
		⊠	1011 ● ▲		GP–GM		◆ ■	
2.0								2.0
3.0								3.0
4.0								4.0
		⊠	1012 ● ▲		GW–GM		◆ ■	
	END hOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/27
Fig. No:	Page 1 of 1

00/11/09 10:46AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1620
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1692+850 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ☰ BULK ▯ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -grey -damp -maximum 75mm material -grindy drilling							0.0
1.0								1.0
		⊠	1009	● ▲	GP-GM		◆ ■	
2.0								2.0
3.0								3.0
4.0								4.0
		⊠	1010	● ▲	GP-GM		◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/27
	Fig. No:	Page 1 of 1

00/11/09 08:56AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1619
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1692+950 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	WELL TO POORLY GRADED GRAVEL WITH SILT & SAND (GW-GM)-(GP-GM) -grey -moist -maximum 75mm material -grindy drilling							0.0
1.0		⊠	1007	● ▲	GW-GM		◆ ■	1.0
2.0								2.0
3.0								3.0
4.0		⊠	1008	● ▲	GP-GM		◆ ■	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/27
	Fig. No:	Page 1 of 1

00/11/09 08:55AM

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 -dry to damp, medium dense, brown	⊠	369		GP-GM			0.0
1.0								-1.0
	SILTY GRAVELLY SAND 1.5m -dry to damp, medium dense, brown	⊠	370		SM			
2.0								-2.0
3.0	3.0m End Of Hole @ 3.0m -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 (YIC_HWYS)

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558–1618
ENGINEERING CAPITAL	KM 1664.5–1692.6 A/H	Project No: 092-202101-0363
B40–L MOBILE DRILL 6"AUGER	LOCATION: 1693+050 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	POORLY TO WELL–GRADED GRAVEL WITH SILT & SAND (GP–GM) –brown –damp –maximum 75mm material –grindy drilling							
1.0		⊠	1005	● ▲	GP–GM		◆ ■	1.0
2.0								2.0
3.0								3.0
4.0		⊠	1006	▲	GW–GM		◆ ■	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/27
Fig. No:	Page 1 of 1

00/11/08 01:21PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558–1617
ENGINEERING CAPITAL	KM 1664.5–1692.6 A/H	Project No: 092–202101–0363
B40–L MOBILE DRILL 6"AUGER	LOCATION: 1693+150 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP–GM) –brown –damp –75mm material –grindy drilling							0.0
1.0								1.0
		⊠	1003 ●▲		GP–GM		◆ ■	
2.0								2.0
3.0								3.0
4.0								4.0
		⊠	1004 ●▲		GP–GM		◆ ■	
	END HOLE @ 4.4m –refusal							
5.0								5.0
6.0								6.0

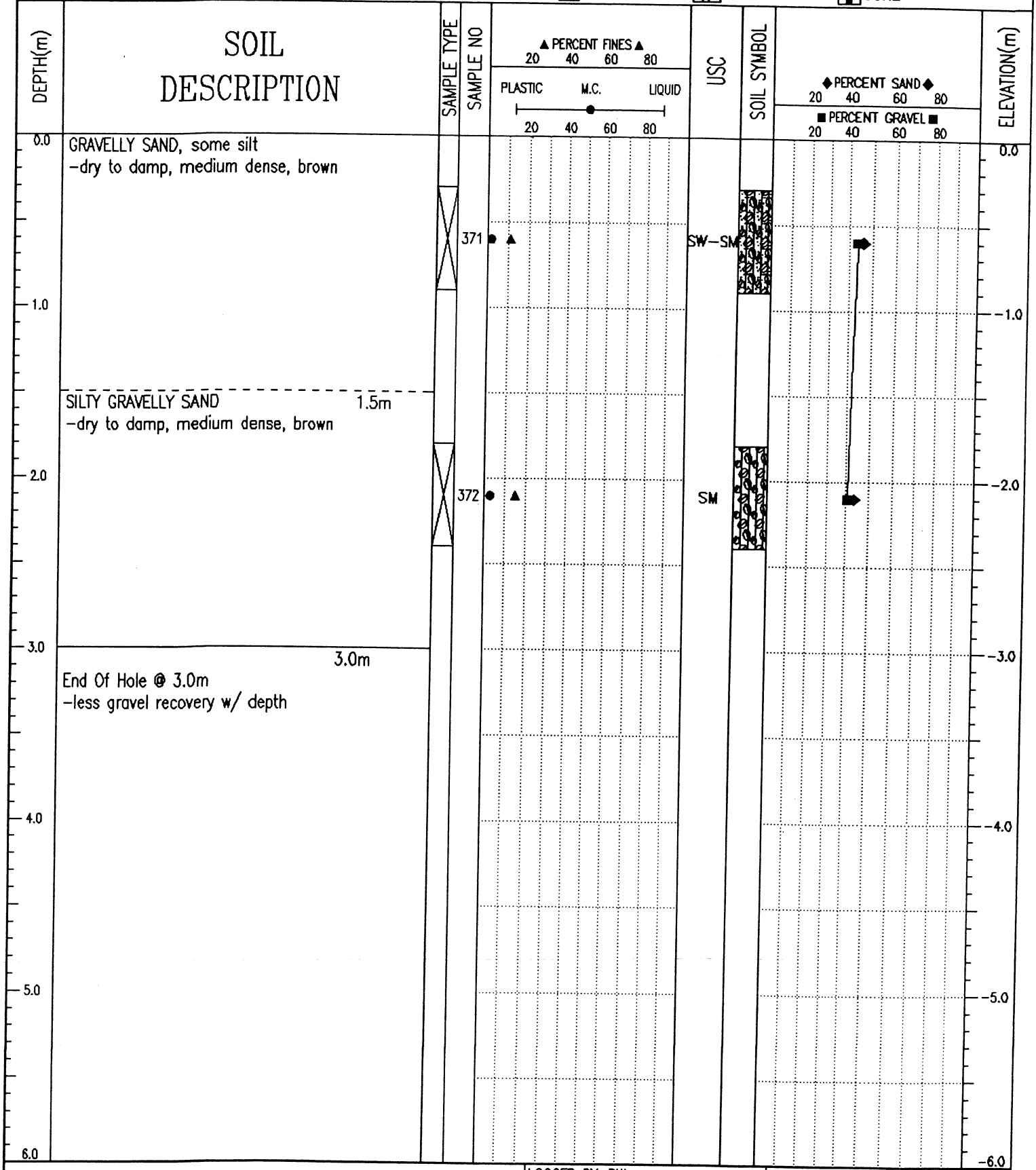
Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.4 m
REVIEWED BY:	COMPLETE: 00/06/27
Fig. No:	Page 1 of 1

00/11/08 01:21PM

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



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)

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558–1616
ENGINEERING CAPITAL	KM 1664.5–1692.6 A/H	Project No: 092-202101-0363
B40–L MOBILE DRILL 6"AUGER	LOCATION: 1693+250 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	WELL-GRADED GRAVEL WITH SILT & SAND TO SILTY GRAVEL WITH SAND (GW-GM)-(GM) -brown -damp -maximum 75mm material -grindy drilling	⊠	1001	● ▲	GW-GM		◆ ■	0.0
1.0								1.0
2.0								2.0
3.0		⊠	1002	● ▲	GM		◆ ■	3.0
4.0	END HOLE @ 4.0m -refusal							4.0
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.0 m
	REVIEWED BY:	COMPLETE: 00/06/27
	Fig. No:	Page 1 of 1

00/11/09 09:20AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1615
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1693+350 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ☰ BULK ▯ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -grey -moist -maximum 75mm material -grindy drilling							
1.0		⊠	999	● ▲	GP-GM		●	1.0
	-replaced lead auger & bit.							
2.0								2.0
3.0								3.0
4.0	SILTY SAND WITH GRAVEL (SM) -brown -saturated -easier drilling	⊠	1000	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/27
	Fig. No:	Page 1 of 1

00/11/09 08:55AM

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

DEPTH(m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC 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 to SILTY –damp, medium dense, brown –increase silt w/ depth		373	● ▲	SW–SM		■ ◆	0.0
1.0								-1.0
2.0			374	● ▲	SM		■ ◆	-2.0
3.0	3.0m End Of Hole @ 3.0m –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: 167	Page 1 of 1

05/02/23 02:35PM (YTG_HWYS)

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558–1614
ENGINEERING CAPITAL	KM 1664.5–1692.6 A/H	Project No: 092-202101-0363
B40–L MOBILE DRILL 6"AUGER	LOCATION: 1693+450 12M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) –brown –damp –maximum 75mm material –grindy drilling							0.0
1.0		⊠	996	● ▲	GP-GM		◆ ■	1.0
2.0	–moist below 2.5m							2.0
3.0		⊠	997	▲	GP-GM		◆ ■	3.0
4.0	SILTY SAND WITH GRAVEL (SM) –brown –moist –easier drilling							4.0
		⊠	998	● ▲	SM		■ ◆	
5.0	END HOLE @ 4.6m							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.6 m
	REVIEWED BY:	COMPLETE: 00/06/27
	Fig. No:	Page 1 of 1

00/11/09 09:20AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1613
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1693+550 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -grey -moist -maximum 75mm material -grindy drilling	⊠	993	● ▲	GP-GM		◆ ■	0.0
1.0								1.0
2.0	ORGANIC -smooth easy drilling							2.0
	SILT WITH SAND TO SILTY SAND WITH GRAVEL (ML)-(SM) -brown -saturated -some +5mm material	⊠	994	● ▲	ML		■ ◆	
3.0	-dark brown below 3.5m -moist below 3.5m -more +5mm material below 3.5m	⊠	995	● ▲	SM		■ ◆	3.0
4.0	SANDY GRAVEL -grindy drilling							4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

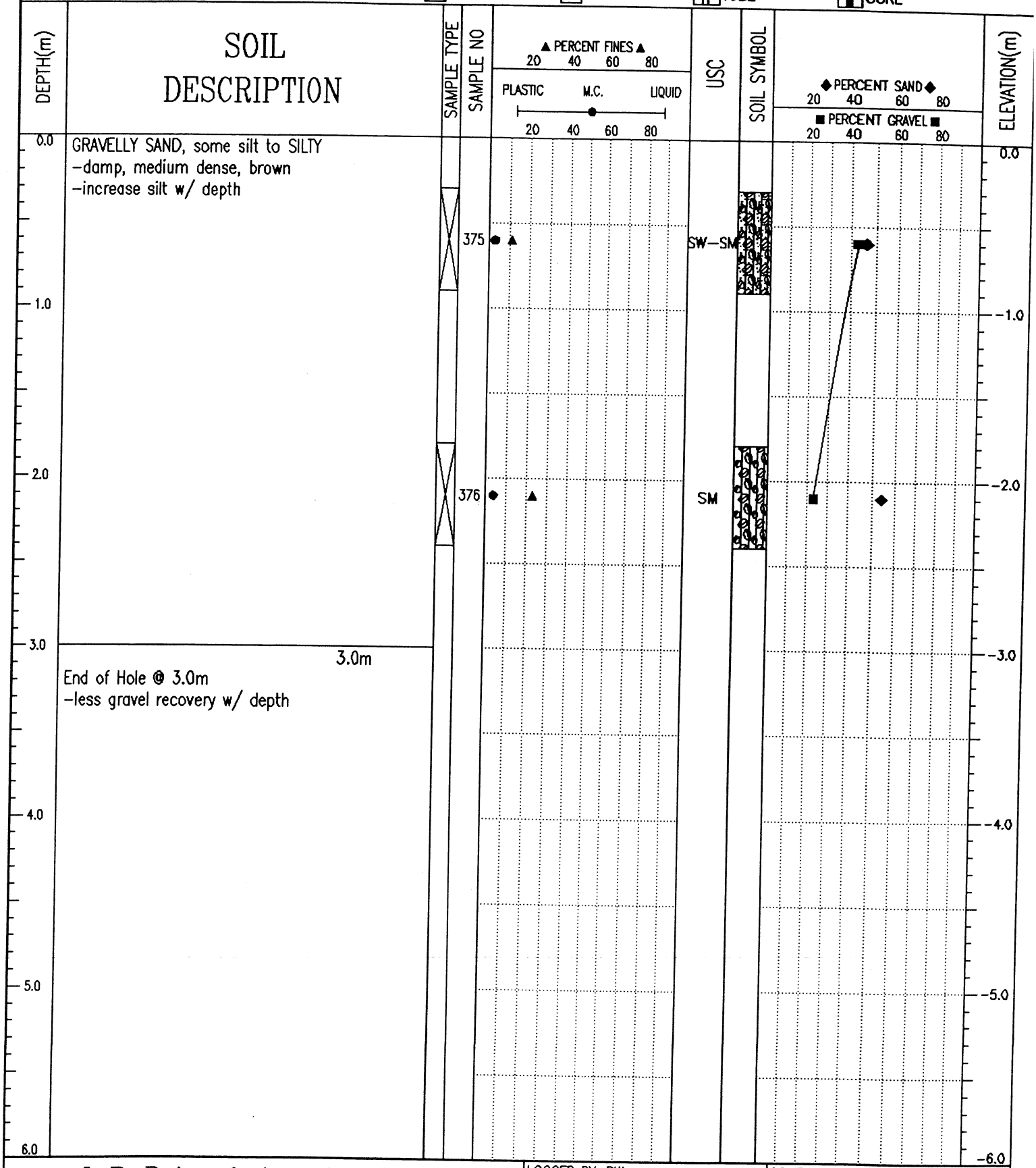
Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 00/06/26
Fig. No:	Page 1 of 1

00/11/08 01:21PM

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 (YIC_HWYS)

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1612
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1693+650 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	WELL-GRADED SAND WITH SILT & GRAVEL TO SILTY SAND WITH GRAVEL (SW-SM)-(SM)							
	-grey							
	-damp							
	-maximum 75mm material							
1.0	-grindy drilling							1.0
		⊠	991	● ▲	SW-SM		■ ◆	
	-refusal @ 1.7m - moved 2m downchain							
2.0								2.0
3.0								3.0
4.0								4.0
		⊠	992	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/26
	Fig. No:	Page 1 of 1

00/11/09 08:55AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1611
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1693+750 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -grey -damp -maximum 75mm material -grindy drilling							0.0
1.0		⊠	989	● ▲	GP-GM		◆ ■	1.0
2.0								2.0
3.0								3.0
4.0	-moist below 4.0m	⊠	990	● ▲	GP-GM		◆ ■	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/26
Fig. No:	Page 1 of 1

00/11/08 01:21PM

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

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	GRAVELLY SAND, some silt -dry to damp, medium dense, brown	⊠	377	● ▲	SM		■ ◆	0.0
1.0								-1.0
2.0	SANDY GRAVEL, trace silt 2.0m -dry to damp, medium dense, brown	⊠	378	● ▲	GP-GM		■ ◆	-2.0
3.0	3.0m 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 Page 1 of 1

05/02/21 08:13AM (YIC_HWYS)

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1610
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1693+850 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SILTY SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SILT & SAND (SM)-(GP-GM) -grey -damp -maximum 75mm material -grindy drilling	⊠	986	● ▲	SM		■ ◆	0.0
1.0								1.0
2.0								2.0
3.0		⊠	987	● ▲	SM		■ ◆	3.0
4.0								4.0
		⊠	988	● ▲	GP-GM		●	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/26
	Fig. No:	Page 1 of 1

00/11/08 01:21PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1609
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1693+950 11M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	POOLRY GRADED GRAVEL WITH SILT & SAND TO SILTY SAND WITH GRAVEL (GP-GM)-(SM) -brown -moist -maximum 75mm material							0.0
1.0	-hard slow grindy drilling							1.0
		⊠	984	● ▲	GP-GM		◆	
2.0								2.0
3.0								3.0
4.0								4.0
		⊠	985	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/26
	Fig. No:	Page 1 of 1

00/11/09 08:56AM

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 -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 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: 171	Page 1 of 1

05/02/23 02:33PM (YIC_HWYS)

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1608
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1694+050 15M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	WELL-GRADED SAND WITH SILT & GRAVEL TO POORLY GRADED GRAVEL WITH SILT & SAND (SW-SM)-(GP-GM)							
	-grey							
	-damp							
1.0	-maximum 50mm material							1.0
	-grindy drilling	⊠	982	● ▲	SW-SM		■ ◆	
2.0								2.0
3.0								3.0
	-hard slow grindy drilling							
4.0								4.0
		⊠	983	● ▲	GP-GM		◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/26
	Fig. No:	Page 1 of 1

00/11/08 01:21PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1607
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1694+150 13M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -grey -damp -maximum 50mm material -grindy drilling							
1.0								1.0
		⊠	980	● ▲	GP-GM		◆ ■	
2.0								2.0
3.0								3.0
4.0								4.0
		⊠	981	● ▲	GP-GM		◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

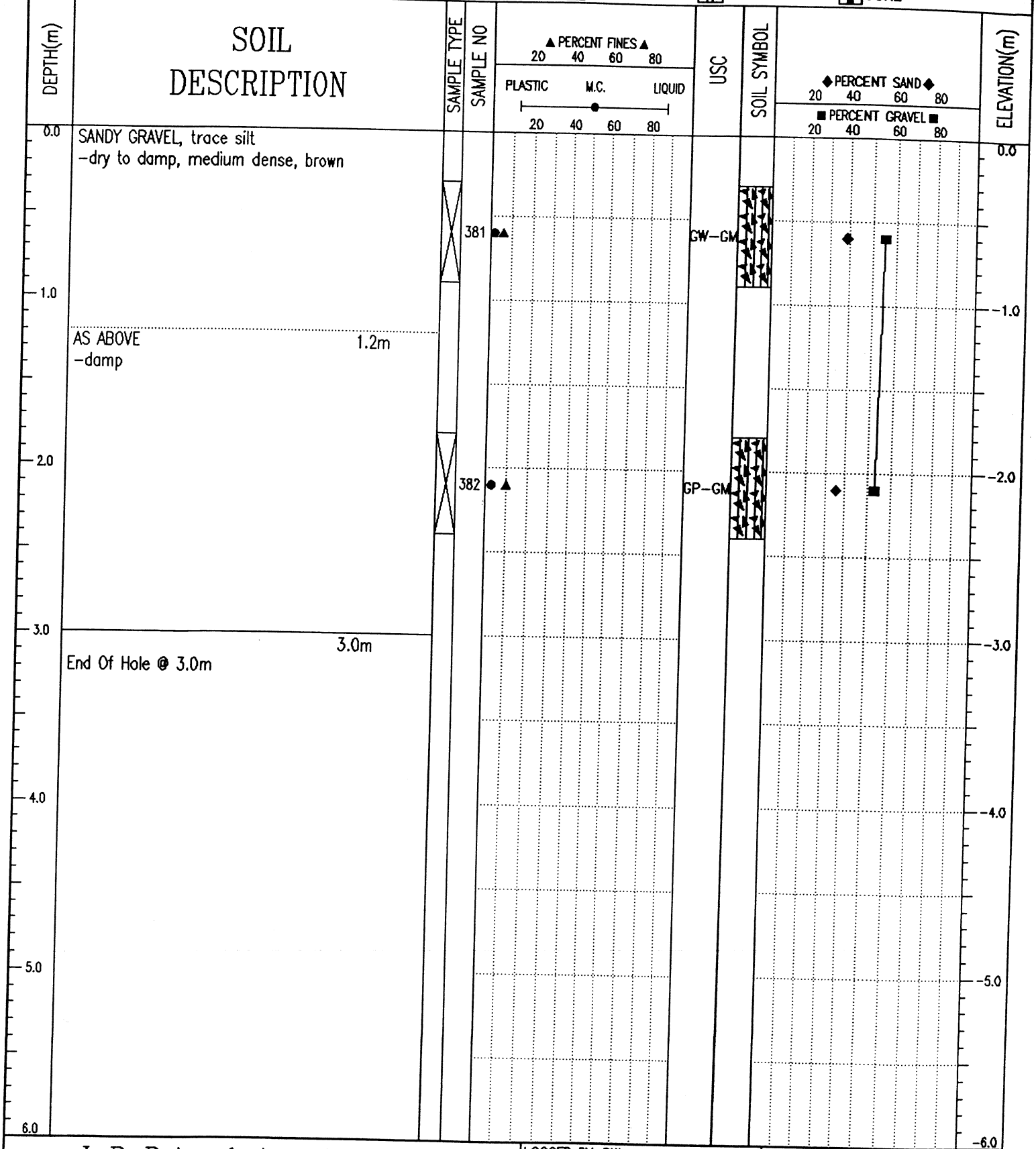
Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/26
Fig. No:	Page 1 of 1

00/11/08 01:21PM

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



J. R. Paine & Associates Ltd. Whitehorse, Yukon	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 (YIC_HWTS)

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1606
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1694+250 11M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	WELL-GRADED SAND WITH SILT & GRAVEL TO POORLY GRADED GRAVEL WITH SILT & SAND (SW-SM)-GP-GM)							
	-grey							
	-damp							
1.0	-grindy drilling							1.0
	-maximum 50mm material							
		⊠	978	● ▲	SW-SM		■ ◆	
2.0								2.0
	-hard slow grindy drilling below 2.1m							
3.0								3.0
4.0	-more +5mm material below 4.0m							4.0
		⊠	979	● ▲	GP-GM		◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/26
Fig. No:	Page 1 of 1

00/11/08 01:21PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1605
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1694+350 11M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	WELL-GRADED SAND WITH SILT & GRAVEL TO SILTY GRAVEL WITH SAND (SW-SM)-(GM) -grey -damp -grindy drilling -maximum 75mm material							0.0
1.0		⊠	976	● ▲	SW-SM		■ ◆	1.0
	-hard slow grindy drilling below 1.7m							
2.0								2.0
3.0								3.0
4.0	-more +5mm material below 4.0m							4.0
		⊠	977	● ▲	GM		◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/26
Fig. No:	Page 1 of 1

00/11/09 08:55AM

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 -dry to damp, medium dense, brown	⊠	383 ●▲		GW-GM			0.0
1.0								-1.0
	AS ABOVE 1.5m -damp							
2.0		⊠	384 ●▲		GW-GM			-2.0
3.0	3.0m 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: 173	Page 1 of 1

05/02/21 08:15AM (YHC_HWYS)

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1604
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1694+450 18M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SILTY SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SILT & SAND TO SILTY GRAVEL WITH SAND (SM)-(GP-GM)-(GM) -brown -damp -grindy drilling							0.0
1.0								1.0
		⊠	973	● ▲	SM		◆	
2.0								2.0
3.0		⊠	974	● ▲	GP-GM		◆ ■	3.0
4.0								4.0
		⊠	975	● ▲	GM		◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/26
	Fig. No:	Page 1 of 1

00/11/08 01:20PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1603
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1694+550 20M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	POORLY GRADED GRAVEL WITH SILT & SAND TO SILTY GRAVEL WITH SAND (GP-GM)-(GM) -brown -trace organic -moist -maximum 75mm material -grindy drilling							0.0
1.0								1.0
		⊠	970	● ▲	GP-GM		◆ ■	
2.0								2.0
	-no organic below 2.5m							
3.0		⊠	971	● ▲	GP-GM		◆ ■	3.0
4.0	-damp below 4.0m							4.0
		⊠	972	● ▲	GM		◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

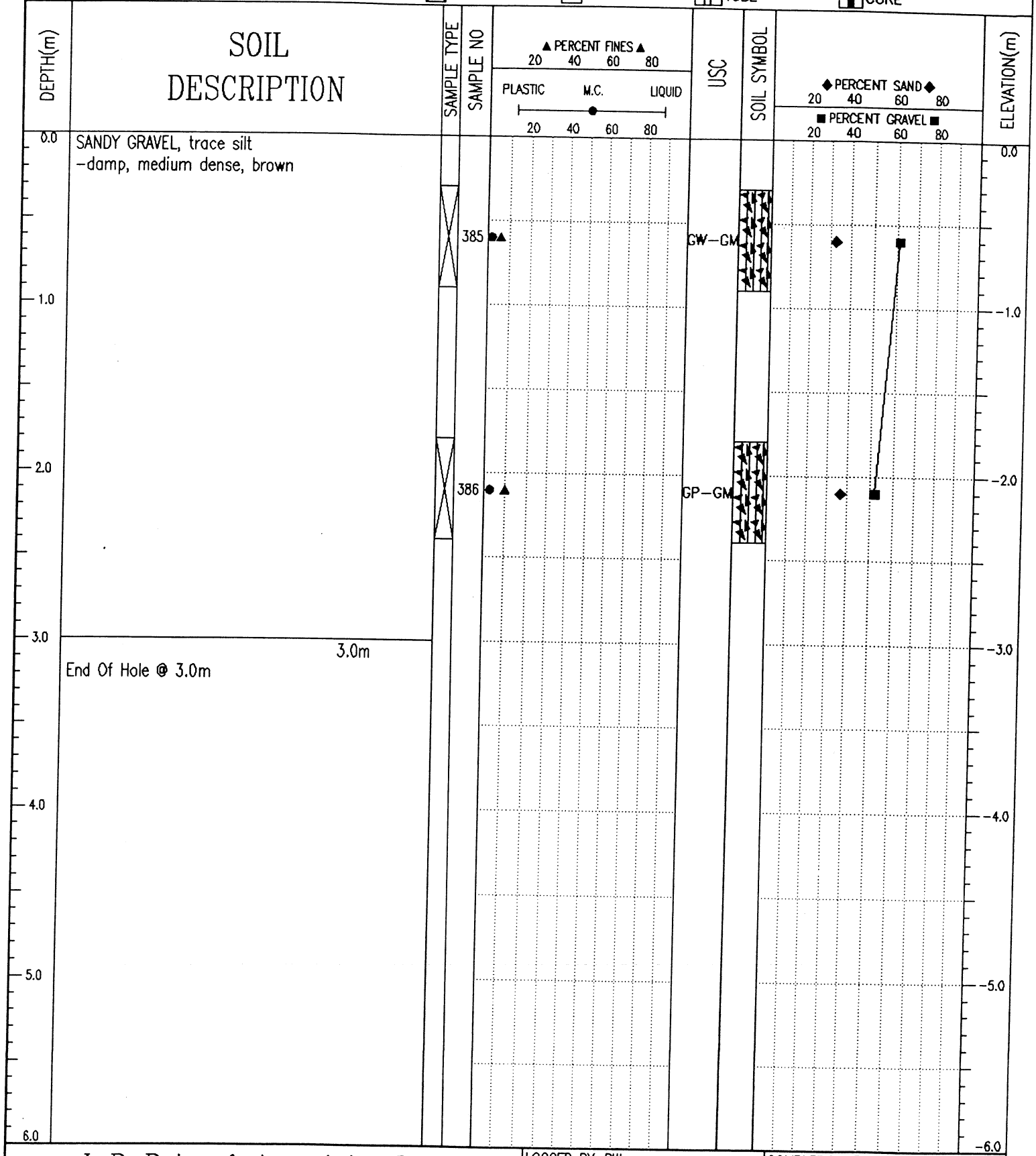
Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/26
Fig. No:	Page 1 of 1

00/11/08 01:20PM

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.	LOGGED BY: RW	COMPLETION DEPTH: 3 m
Whitehorse, Yukon	REVIEWED BY:	COMPLETE: 08/18/04
	Fig. No: 174	Page 1 of 1

05/02/23 02:35PM (YTC_HWYS)

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1602
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1694+650 18M LT	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -dark grey -wet -grindy drilling -some organic							0.0
1.0		⊠	967	● ▲	GP-GM		◆ ■	1.0
2.0								2.0
3.0	-moist below 2.8m -less organic below 2.8m	⊠	968	● ▲	GP-GM		◆ ■	3.0
4.0								4.0
		⊠	969	● ▲	GP-GM		◆ ■	
5.0	END HOLE @ 4.7m Note: Test hole in Totenham Creek Channel.							5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/26
Fig. No:	Page 1 of 1

00/11/08 01:20PM

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 -damp to moist, medium dense, brown							0.0
	SANDY SILT 0.3m -moist, soft, grey -organics noted	⊠	387	● ▲	ML		■ ◆	
1.0								-1.0
	SANDY GRAVEL, trace silt 1.2m -damp to moist, medium dense, brown							
2.0		⊠	388	▲	GW-GM		◆ ■	-2.0
	SANDY SILT, some gravel 2.7m -damp to moist, soft, grey/brown							
3.0	3.0m 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: 175	COMPLETION DEPTH: 3 m COMPLETE: 08/18/04 Page 1 of 1

05/02/21 08:14AM (YTC_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

SOIL DESCRIPTION

DEPTH(m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL
0.0	SANDY GRAVEL, trace silt -moist, medium dense, brown	☒	389	GW-GM	
	SILTY SAND/SANDY SILT 0.4m -moist to wet, soft, brown				
1.0	GRAVELLY SAND, trace silt 0.8m -moist, medium dense, brown				
2.0		☒	390	SW-SM	
	SILTY SAND, some gravel to GRAVELLY 2.8m -moist medium dense, brown				
3.0	3.0m 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

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)

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

DEPTH(m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC 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 -dry to damp, medium dense, brown		391 ● ▲		GW-GM			0.0
1.0								-1.0
2.0			392 ● ▲		GP-GM			-2.0
3.0	3.0m 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: 177	Page 1 of 1

05/02/21 GE144M (YTG_HWYS)

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 –dry to damp, medium dense, brown		393 ●▲		GP–GM			0.0
1.0								-1.0
	GRAVELLY SAND, trace silt 1.2m –damp, medium dense, brown							
2.0			394 ●▲		SW–SM			-2.0
3.0	3.0m 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: 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 –damp, medium dense, brown –silt seam noted @ 0.4m depth (approx. 75mm thick) –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 –damp to moist, medium dense, brown –silt present mostly in seams	⊠	396	● ▲	SM		■ ◆	
3.0	3.0m 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: 179	Page 1 of 1

05/02/23 02:36PM (YIC_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	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC 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 -damp to moist, medium dense, brown	⊠	397	▲	SW—SM		◆ ■	0.0
1.0	SANDY GRAVEL 0.9m -wet to saturated -pea gravels							-1.0
	SILT, some sand 1.5m -moist to wet, firm, grey -significant organics throughout (decomposed rootlets/grasses etc.)	⊠	398	● ▲	ML		◆ ■	
2.0								-2.0
3.0	3.0m 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: 180	COMPLETION DEPTH: 3 m COMPLETE: 08/18/04 Page 1 of 1

05/02/23 02:36PM (YTC_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

SOIL DESCRIPTION

SANDY SILT
- damp to moist, medium dense, brown
- variable silt & sand seams intermixed
- organics noted throughout

SILT, trace sand 1.4m
- moist to wet, soft to firm, grey
- increase silt w/ depth
- some organics noted

3.0m

End Of Hole @ 3.0m

SAMPLE NO: 399, 400

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

USC: ML, ML

◆ 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

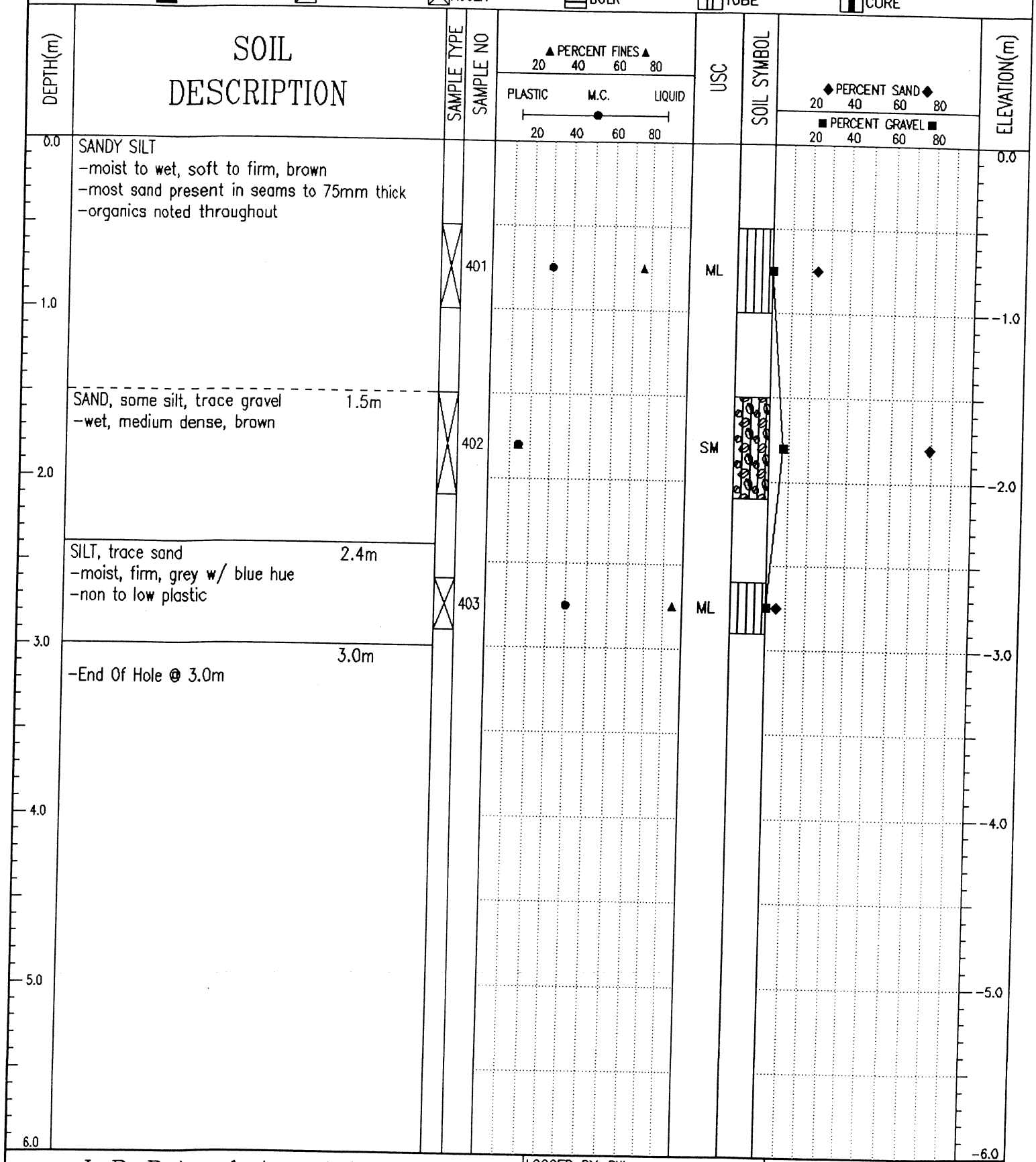
ELEVATION(m): 0.0, -1.0, -2.0, -3.0, -4.0, -5.0, -6.0

J. R. Paine & Associates Ltd. Whitehorse, Yukon	LOGGED BY: RW	COMPLETION DEPTH: 3 m
	REVIEWED BY:	COMPLETE: 08/18/04
	Fig. No: 181	Page 1 of 1

05/02/23 02:36PM (YTC_HWYS)

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



J. R. Paine & Associates Ltd. Whitehorse, Yukon	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

DEPTH(m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲PERCENT FINES▲ 20 40 60 80 / PLASTIC 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 -damp to moist, medium dense, brown -organics noted throughout	⊠	404	● ▲	ML		■ ◆	0.0
1.0	SANDY SILT 1.2m -damp to moist, firm, brown w/ some grey seams	⊠	405	● ▲	ML		■ ◆	-1.0
2.0	SAND, trace to some silt 2.1m -saturated, medium dense, brown							-2.0
3.0	SILT, some clay 2.7m -damp to moist, firm, grey w/ blue hue -non to low plastic 3.0m 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: 183	COMPLETION DEPTH: 3 m COMPLETE: 08/18/04 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	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC 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, trace gravel -moist, soft to firm, brown			406		ML			0.0
1.0	GRAVELLY SAND -wet, medium dense, brown	0.8m							-1.0
	SILT, some sand -moist, soft to firm, brown	1.1m							
2.0	SAND, some gravel, trace silt -saturated, medium dense, brown	1.5m		407		SW-SM			-2.0
	SANDY SILT -wet, soft to firm, grey/brown	2.1m		408		ML			
3.0	End Of Hole @ 3.0m	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: 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 –dry, medium dense, light brown							0.0
	GRAVELLY SAND, trace silt 0.3m –damp, medium dense, brown	⊠	409	● ▲	SW–SM		■ ◆	
1.0								–1.0
	SANDY SILT, trace gravel 1.5m –damp to moist, soft to firm, brown w/ grey & black seams –significant organic silts (black)	⊠	410	● ▲	ML		■ ◆	
2.0								–2.0
	SILT, some sand, trace gravel 2.8m –damp to moist, firm to stiff, brown –non to low plastic							
3.0	3.0m 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: 185	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: 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 -dry to damp, medium dense, brown		411	● ▲	SW-SM		■ ◆	0.0
1.0								-1.0
	SILTY SAND 1.5m -dry, medium dense, light brown/grey -powder like							
2.0			412	● ▲	SM		■ ◆	-2.0
3.0	3.0m 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: 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 –saturated, medium dense, brown	▨	413 ▲ ●		SW			0.0
1.0								-1.0
	SILTY SAND/SANDY SILT 1.2m –saturated, soft, grey							
	SILT, trace sand 1.8m –moist, firm brown w/ some organic seams –some organic silts	▨	414 ◆ ▲		ML		■ ◆	
2.0								-2.0
	SILTY GRAVELLY SAND 2.7m –saturated, medium dense, brown							
3.0	3.0m End Of Hole @ 3.0m							-3.0
4.0								-4.0
5.0								-5.0
6.0								-6.0

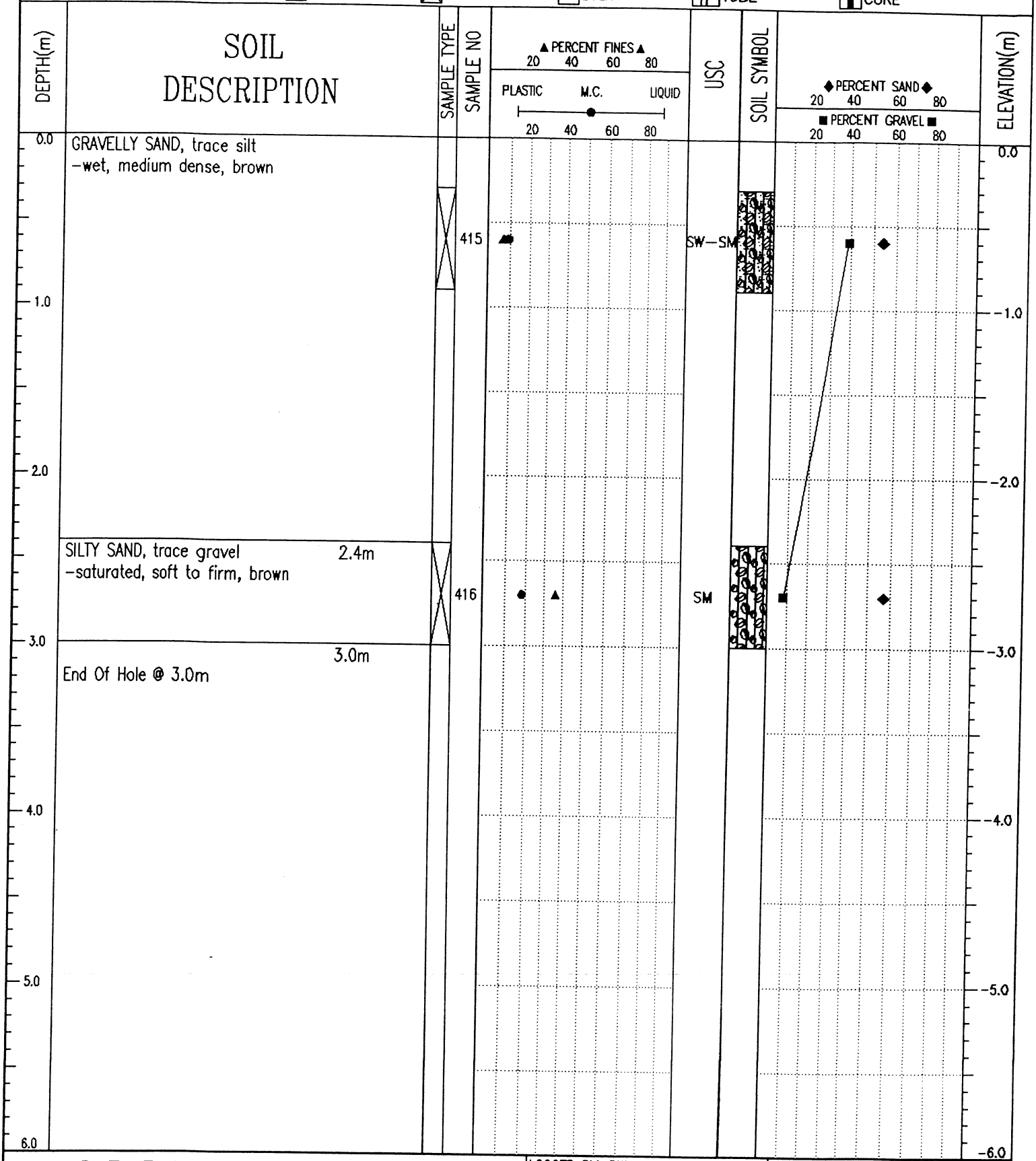
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW	COMPLETION DEPTH: 3 m
REVIEWED BY:	COMPLETE: 08/19/04
Fig. No: 187	Page 1 of 1

05/02/21 08:16AM (YTG_HWYS)

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

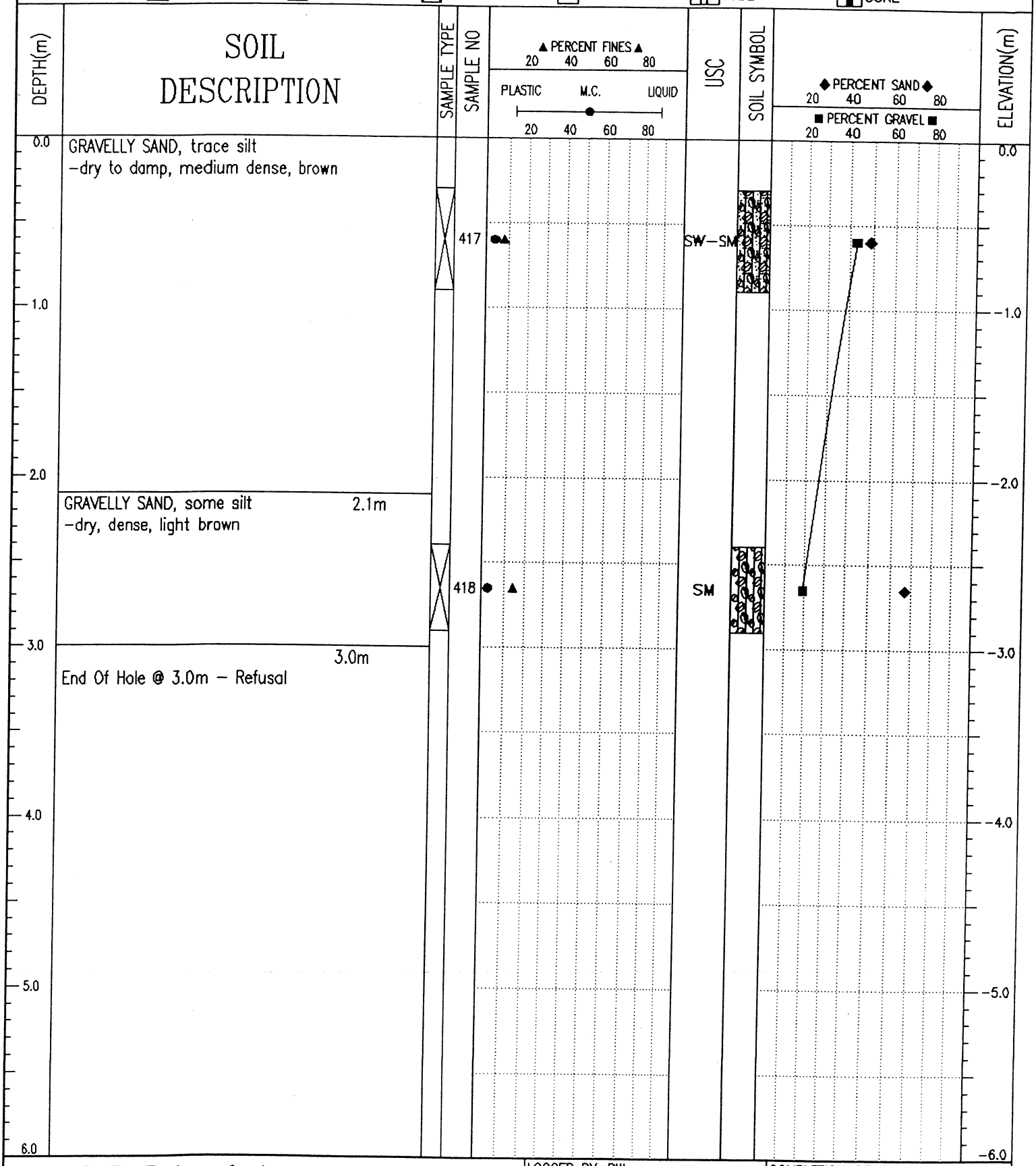


J. R. Paine & Associates Ltd. Whitehorse, Yukon	LOGGED BY: RW	COMPLETION DEPTH: 3 m
	REVIEWED BY:	COMPLETE: 08/19/04
	Fig. No: 188	Page 1 of 1

05/02/23 02:37PM (YTC_HWYS)

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 (YTC_HWYS)

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 -damp, medium dense, brown -cobbles to 200mm at surface (creek bottom)		419		GW			0.0
1.0								-1.0
	GRAVELLY SAND, trace silt 1.5m -saturated, medium dense, brown		420		SW-SM			
2.0								-2.0
3.0	3.0m 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: 08/19/04
	Fig. No: 190	Page 1 of 1

05/02/23 02:37PM (YTC_HWYS)

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 –damp, medium dense, brown		421	●▲	SW–SM			0.0
1.0								-1.0
	SILTY SAND, some gravel 1.2m –damp, medium dense, brown –some decomposed wood		422	● ▲	SM			
2.0								-2.0
	SANDY GRAVEL, some silt 2.1m –moist, medium dense, brown		423	●▲	GP–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: 08/19/04
	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

DEPTH(m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC 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 –damp, medium dense, brown		424 ▲		GW–GM		◆ ■	0.0
1.0								-1.0
2.0								-2.0
	SILTY SAND, trace gravel 2.4m –moist, medium dense, brown –some decomposed organics (wood)		425 ● ▲		SM		■ ◆	
3.0	3.0m 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: 08/19/04
Fig. No: 192	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: 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 -damp, medium dense, brown		426		GW			0.0
1.0								-1.0
	GRAVELLY SILTY SAND 1.5m -damp, medium dense, brown w/ some black organic seams		427		SM			
2.0								-2.0
	GRAVELLY SAND, some silt 2.1m -damp, medium dense, brown		428		SM			
3.0	3.0m 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: 08/19/04
	Fig. No: 193	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: 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 -damp, medium dense, brown		429 ▲		SW		◆ ■	0.0
1.0								-1.0
	ORGANIC SILTS 1.5m -damp to moist, soft, dark brown							
	GRAVELLY SAND, trace silt 1.7m -saturated, medium dense, brown							
2.0			430 ●		SW-SM		◆ ■	-2.0
3.0	3.0m 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: 08/19/04
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 –dry to damp, medium dense, brown		431	▲	SW–SM		■ ◆	0.0
1.0								-1.0
	GRAVELLY SAND 1.2m –damp, medium dense, brown							
2.0			432		SW		■ ◆	-2.0
3.0	3.0m 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: 08/19/04
	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	USC	SOIL SYMBOL
0.0	GRAVELLY SAND –damp, medium dense, brown		433	SP	
2.1m	SAND –wet, medium dense, brown		434	SW	
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

J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW
REVIEWED BY:
Fig. No: 196

COMPLETION DEPTH: 3 m
COMPLETE: 08/19/04

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 –wet, soft, dark brown –some organic silts to 0.6m depth		435	SM		0.0
1.0						-1.0
	GRAVELLY SILTY SAND 1.5m –wet, soft to firm, grey					
2.0			436	SM		-2.0
3.0						-3.0
			437	SM		
4.0	4.0m End Of Hole @ 4.0m – Refusal –refusal @ 4.0m – move north 2m					-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: 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

DEPTH(m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC 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, some gravel –damp, medium dense, brown	⊠	438	● ▲	SM		■ ◆	0.0
1.0								-1.0
	SILTY SANDY GRAVEL 1.2m –damp, medium dense, brown							
2.0		⊠	439	● ▲	GM		■ ◆	-2.0
3.0	GRAVELLY SAND, trace silt 3.0m –saturated, medium dense, brown –pea gravels	⊠	440	▲	SW-SM		■ ◆	-3.0
4.0	4.0m End Of Hole @ 4.0m							-4.0
5.0								-5.0
6.0								-6.0

J. R. Paine & Associates Ltd. Whitehorse, Yukon	LOGGED BY: RW REVIEWED BY: - Fig. No: 198	COMPLETION DEPTH: 4 m COMPLETE: 08/19/04 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 -damp, medium dense, brown		441		SM			0.0
1.0								-1.0
2.0			442		SM			-2.0
	2.4m End Of Hole @ 2.4m							
3.0								-3.0
4.0								-4.0
5.0								-5.0
6.0								-6.0

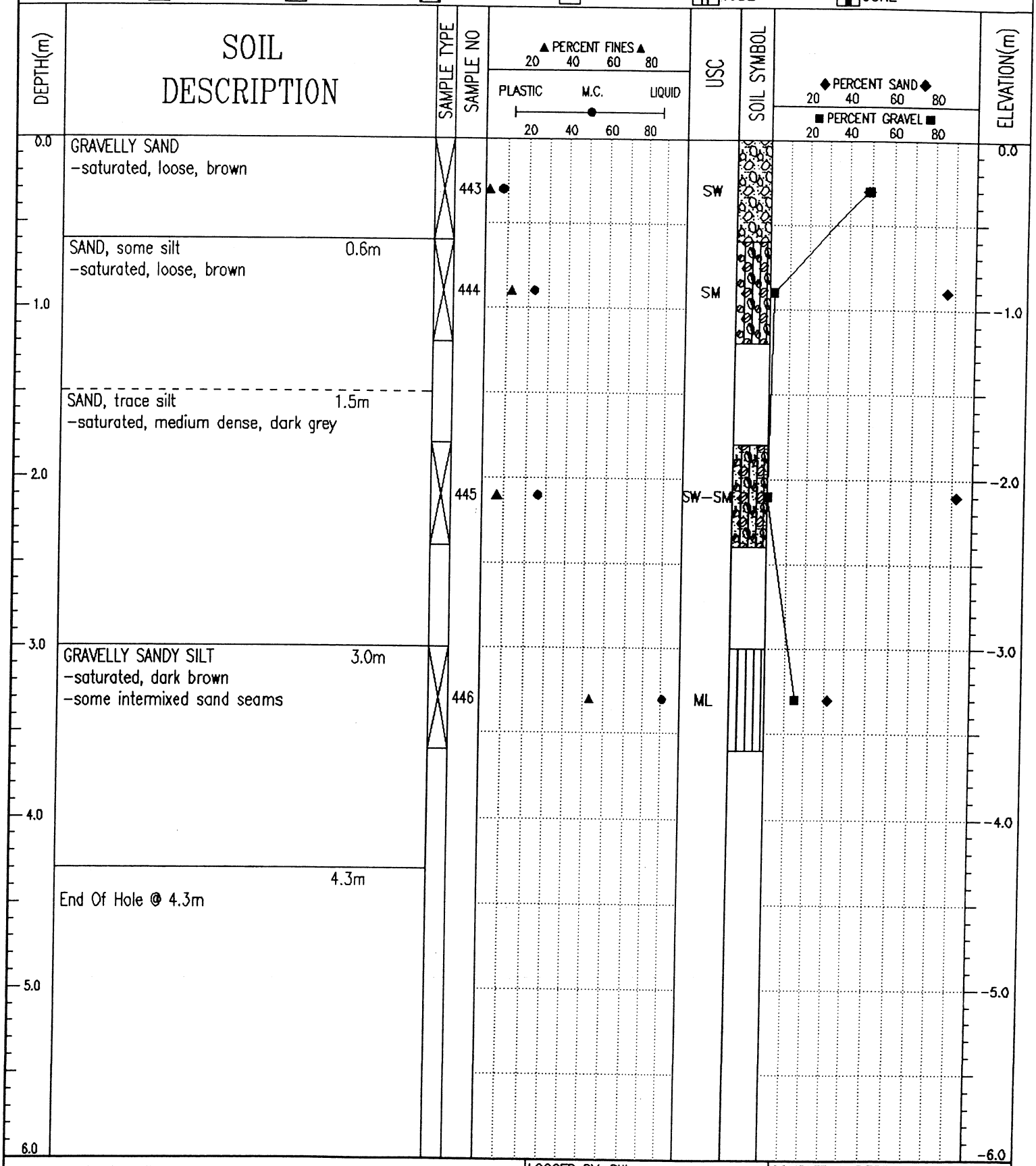
J. R. Paine & Associates Ltd.
Whitehorse, Yukon

LOGGED BY: RW	COMPLETION DEPTH: 2.4 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



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 (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			
2.0	-refusal at 10"								-2.0
	SANDY GRAVEL/GRAVELLY SAND								
	-dry to damp, medium dense, brown								
	2.4m								
3.0	End Of Hole @ 2.4m – Refusal								-3.0
	-refusal @ 2.4m – move north 2m								
	-refusal @ 1.5m – move north 2m								
4.0	-refusal @ 1.8m – 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: 2.4 m
REVIEWED BY:	COMPLETE: 08/20/04
Fig. No: 201	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: 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 GRAVELLY SAND, trace silt -saturated, medium dense, brown	▨	448	18	SW-SM	
3.0	SPT (N) @ 2.9m: 7 SILTY SAND -saturated, medium dense, grey/brown	▨	449	7	SM	
4.0						
5.0	SPT (N) @ 4.4m: 6 SILTY SAND -saturated, medium dense, grey/brown	▨	450	6	SM	
6.0	SPT (N) @ 5.9m: 15 SILTY SAND, trace gravel -saturated, medium dense, brown	▨	451	15	SM	
7.0						
8.0	SPT (N) @ 7.5m: 7 GRAVELLY SILTY SAND -saturated, medium dense, brown	▨	452	7	SM	
9.0	SPT (N) @ 9.0m: 50 GRAVELLY SILTY SAND -damp to moist, dense, brown -some oxidation	▨	453	50	SM	
10.0	9.9m 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. Whitehorse, Yukon	LOGGED BY: RW REVIEWED BY: Fig. No: 202	COMPLETION DEPTH: 9.9 m COMPLETE: 08/20/04 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: 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 -7" recovry due to gravels SANDY GRAVEL, some silt -saturated, medium dense, brown	⧄	454	69	GM	
3.0	SPT (N) @ 2.9m: 16 SANDY SILT -saturated, medium dense, brown/grey	⧄	455	16	ML	
4.0						
5.0	SPT (N) @ 4.4m: 3 SILT, trace to some clay -saturated, soft, grey	⧄	456	3	ML	
6.0	SPT (N) @ 5.9m: 4 SANDY SILT, some clay, trace gravel -saturated, soft, grey -non to low plastic	⧄	457	4	ML	
7.0						
8.0	SPT (N) @ 7.5m: 9 SILT, trace sand -saturated, soft, grey	⧄	458	9	ML	
9.0						
10.0	SPT (N) @ 9.0m: No (N) Value. -spoon pushed entire depth under weight of hammer. CLAYEY SILT -saturated, soft, grey	⧄	459		ML	
11.0	SPT (N) @ 10.5m: No (N) Value. -spoon pushed entire depth under weight of hammer. CLAYEY SILT -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

J. R. Paine & Associates Ltd.
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 (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	▲PERCENT FINES▲ 20 40 60 80 / PLASTIC 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, trace gravel –saturated, medium dense, grey	⊠	461	▲	SM		◆ ■	0.0
1.0								-1.0
	SILTY GRAVELLY SAND 1.2m –saturated, medium dense, brown	⊠	462	● ▲	SM		◆ ■	
2.0								-2.0
	SILT, some sand, trace gravel 2.4m –wet, soft to firm, grey –non to low plastic	⊠	462	● ▲	ML		◆ ■	
3.0								-3.0
4.0	SILTY SAND, some gravel 4.0m –saturated, medium dense, grey	⊠	463	● ▲	SM		◆ ■	-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: 08/21/04
Fig. No: 204	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								0.0
	-saturated, medium dense, grey								
	SILTY GRAVELLY SAND	0.3m							
1.0	-saturated, medium dense, brown/grey			465	◆ ▲	SM			-1.0
	SAND, trace to some silt	1.5m							
2.0	-saturated, medium dense, grey								-2.0
				466	▲ ●	SW-SM			
3.0									-3.0
4.0									-4.0
	SAND, some silt, trace gravel	4.0m		467	●	SM			
	-saturated, medium dense, grey								
		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.	LOGGED BY: RW	COMPLETION DEPTH: 4.6 m
Whitehorse, Yukon	REVIEWED BY:	COMPLETE: 08/21/04
	Fig. No: 205	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: 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	SPT (N) @ 1.4m: 42 -6" recovery to gravels SILTY GRAVELLY SAND -saturated, medium dense, grey/brown	⊘	468	42	SM	
2.0						
3.0	SPT (N) @ 2.9m: 19 SANDY SILT -wet, soft to firm, grey	⊘	469	19	ML	
4.0						
5.0	SPT (N) @ 4.4m: 6 SILTY SAND, some gravel -wet, medium dense, brown/grey	⊘	470	6	SM	
6.0	SPT (N) @ 5.9m: 12 SILTY SAND -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)

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 04:35PM (YTC_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

DEPTH(m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC 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 -damp, medium dense, brown -cobbles & boulders 20-40% by Vol. -boulders to .75m dia. -organics noted throughout -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. Whitehorse, Yukon	LOGGED BY: RW REVIEWED BY: _ Fig. No: 230	COMPLETION DEPTH: 4.8 m COMPLETE: 08/10/04 Page 1 of 1

05/02/24 08:42AM (YIC_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	USC	SOIL SYMBOL	ELEVATION(m)
0.0	SANDY GRAVEL, trace to some silt -damp, medium dense, brown -cobbles & bouders 10–30% by Vol. -boulders to 0.6m dia. -organics noted throughout -mostly sound granite rock					0.0
1.0			TP5	GW		-1.0
2.0			TP6	GP-GM		-2.0
3.0	AS ABOVE 2.8m -damp to moist		TP7	GM		-3.0
4.0	SANDY GRAVEL, some silt 4.3m -damp to moist, medium dense, brown -slight increase in fine sands & silts		TP8	GM		-4.0
	4.8m					
5.0	End Of Hole @ 4.8m					-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: 231

COMPLETION DEPTH: 4.8 m
COMPLETE: 08/10/04

05/02/24 08:42AM (YKC_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 -damp, medium dense, brown -cobbles & boulders 10-30% by Vol. -boulders to 0.6m dia. -organics noted throughout -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 End Of Hole @ 5.0m		TP12	● ▲	GP-GM		◆ ■	-5.0
6.0								-6.0

J. R. Paine & Associates Ltd. Whitehorse, Yukon	LOGGED BY: RW REVIEWED BY: Fig. No: 232	COMPLETION DEPTH: 5 m COMPLETE: 08/10/04 Page 1 of 1

05/02/24 08:42AM (YKE_HWYS)

GEOTECHNICAL INVESTIGATIONS

Highway Construction
km 1691.6 to 1700.4
Alaska Highway #1
Yukon, 2006-2007
Volume 2 of 3

Yukon
Highways and Public Works
Transportation Engineering Branch

Geotechnical Services

BOX 2703, WHITEHORSE, YUKON
PHONE 867-667-8820 FAX 867-393-6447

ORIGINAL - Do Not Remove From File

Highway Construction
km 1691.6 to 1700.4
Alaska Highway #1
Yukon, 2006-2007
Volume 2 of 3

This Data Package prepared for project viewing:

May, 2006

Transportation Engineering Branch
Geotechnical Services
461 Range Road
Whitehorse, Yukon

CONTENTS

Volume 1 of 3

INTRODUCTION

Investigation notes, classification methods and legends.

CENTRELINE TESTING km 1691.6 to 1700.4 Alaska Highway

Subsurface Exploration and Test Report Sheets are provided.
The reports for the Centreline testing holes are arranged according to project location, starting at km 1691+525 and increasing to km 1700+250.

2000	TEST HOLES 1602 to 1639	shown with prefix 558-
2004	TEST HOLES 30000 to 30046	shown with no prefix
2004	TEST HOLES 30177 to 30179	shown with no prefix

CONTENTS (continued)

Volume 2 of 3

CENTRELINE TESTING km 1691.6 to 1700.4 Alaska Highway

Laboratory Testing Result Sheets are provided.
The reports for the centreline holes are arranged according to test hole number, starting at 558-1602 and increasing to 30179.

2000	TEST HOLES 1602 to 1639	shown with prefix 558-
2004	TEST HOLES 30000 to 30046	shown with no prefix
2004	TEST HOLES 30177 to 30179	shown with no prefix

CONTENTS (continued)

Volume 3 of 3

GRANULAR SOURCE km 1635.8 RHS ALASKA HIGHWAY Pit ID 115 G-07

NOTE: There is a kilometre chainage correction at km 1636.6 back and km 1694.0 ahead. Pit 115 G-07 is located at km 1635.8 back and km 1691 ahead.

A production history, location plans, photographs, and subsurface exploration and testing report sheets are provided.

Auger Testing

2001	TEST HOLES 1510 to 1514	shown with prefix 581-
2001	TEST HOLES 1515, 1517, 1518	shown with prefix 582-

Test Pit Testing

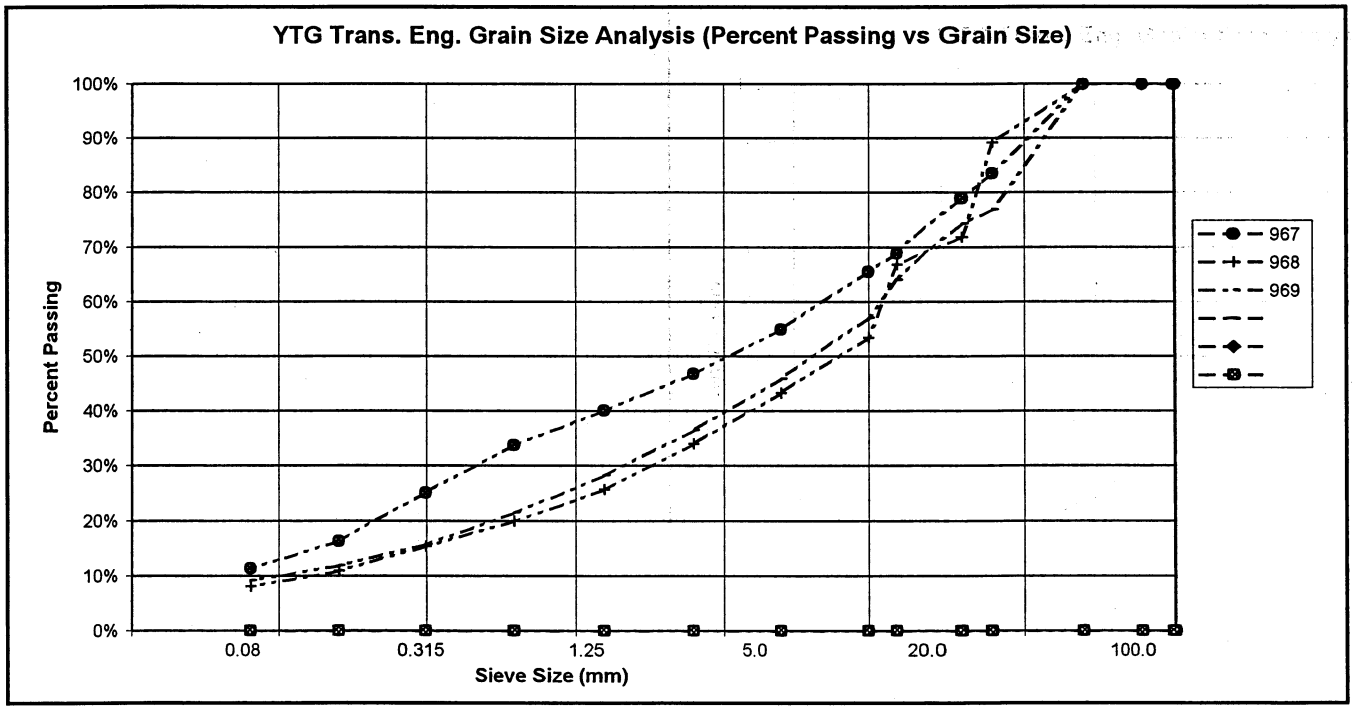
1991	TEST PITS 06 to 08	shown with prefix 152-
1992	TEST PITS 19 to 23	shown with prefix EBA-
2001	TEST PITS 1524 to 1528, 1541, & 1542	shown with prefix 583-
2001	TEST PITS 1544 to 1549 & 1552	shown with prefix 584-

CENTRELINE TESTING
1691.6 to 1700.4
ALASKA HIGHWAY

Laboratory Testing Result Sheets

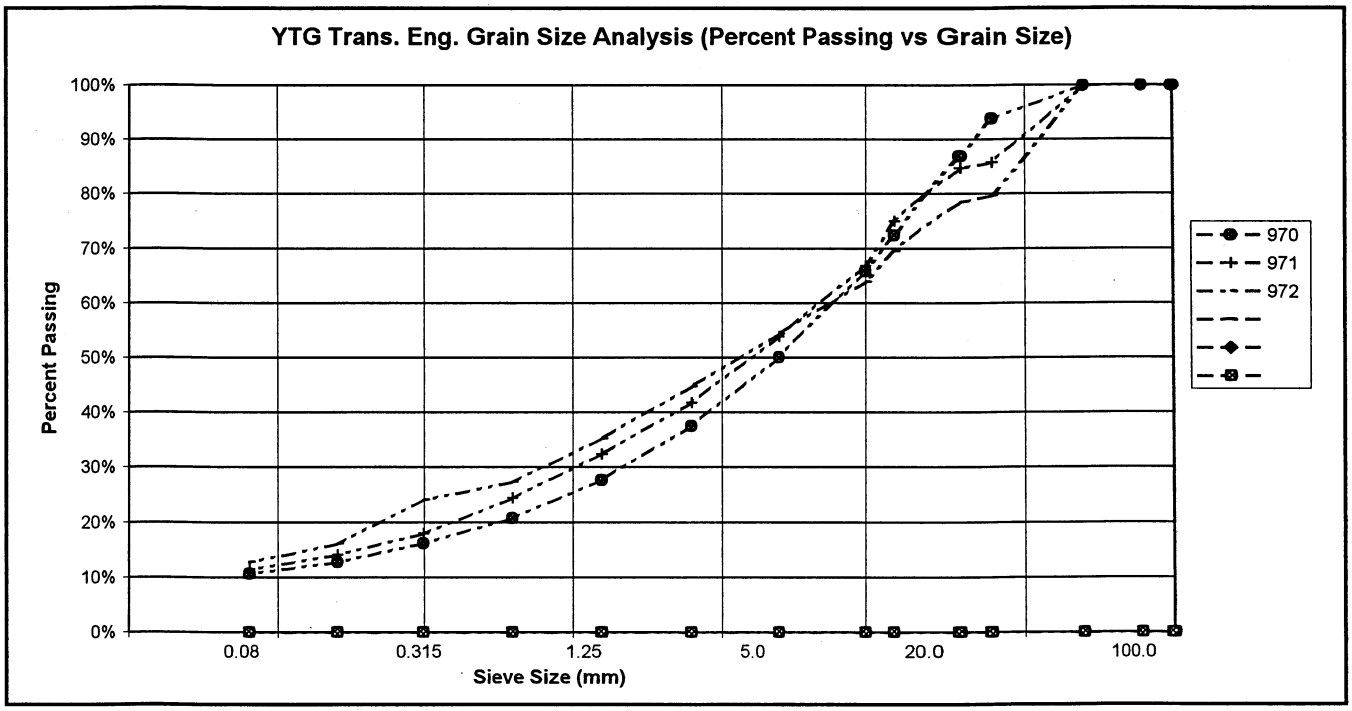
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1602
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1694+650 18M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/26

FIELD NO:	967	968	969			
LAB NO:	1369	1370	1371			
DEPTH:	1.3-1.5	3.0-3.2	4.5-4.7			
TYPE:	AUGER	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	84%	89%	77%			
20.0	79%	72%	74%			
12.5	69%	67%	64%			
10.0	65%	53%	57%			
5.0	55%	43%	46%			
2.5	47%	34%	37%			
1.25	40%	26%	28%			
0.630	34%	20%	22%			
0.315	25%	15%	16%			
0.160	16%	11%	12%			
0.080	11%	8%	9%			
M.C.(%):	8%	4%	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:	45	57	54			
% SAND:	44	35	37			
% FINES:	11	8	9			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			



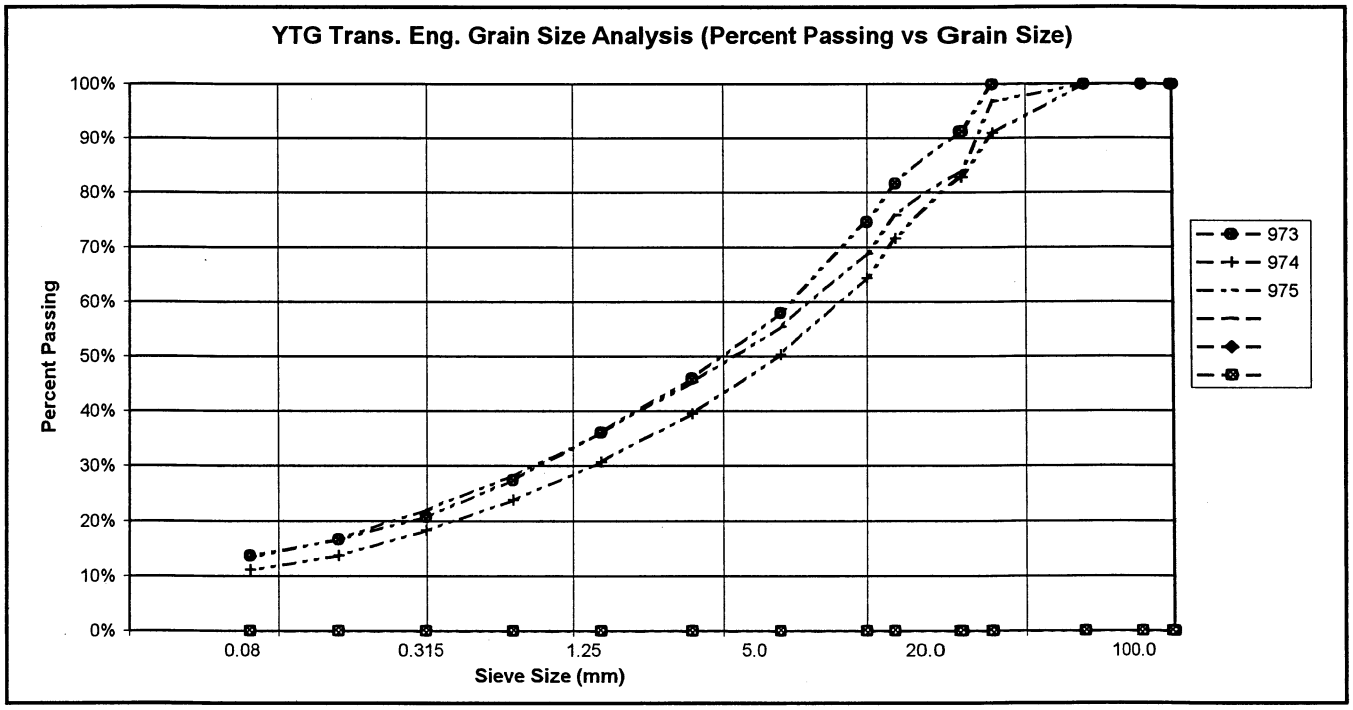
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1603
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1694+550 20M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/26

FIELD NO:	970	971	972			
LAB NO:	1372	1373	1374			
DEPTH:	1.4-1.6	2.9-3.1	4.5-4.7			
TYPE:	AUGER	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%	86%	80%			
20.0	87%	85%	78%			
12.5	72%	75%	69%			
10.0	66%	67%	64%			
5.0	50%	54%	54%			
2.5	38%	42%	45%			
1.25	28%	32%	35%			
0.630	21%	24%	27%			
0.315	16%	18%	24%			
0.160	13%	14%	16%			
0.080	11%	11%	13%			
M.C.(%):	4%	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	46	46			
% SAND:	39	42	42			
% FINES:	11	11	13			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY GRAVEL WITH SAND (GM)			



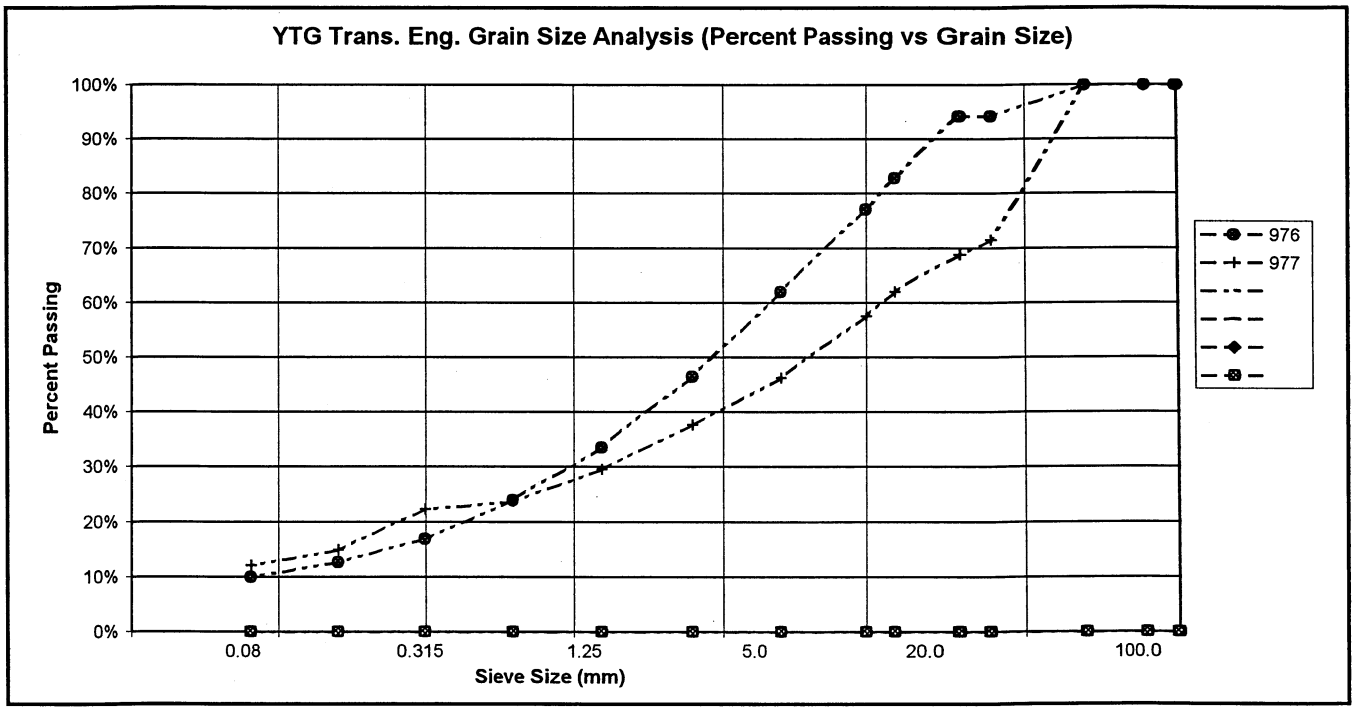
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1604
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1694+450 18M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/26

FIELD NO:	973	974	975			
LAB NO:	1375	1376	1377			
DEPTH:	1.4-1.6	2.9-3.1	4.5-4.7			
TYPE:	AUGER	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%	91%	97%			
20.0	91%	83%	84%			
12.5	82%	72%	76%			
10.0	75%	64%	69%			
5.0	58%	50%	55%			
2.5	46%	40%	45%			
1.25	36%	31%	36%			
0.630	27%	24%	28%			
0.315	21%	18%	22%			
0.160	17%	14%	17%			
0.080	14%	11%	13%			
M.C.(%):	3%	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:	42	50	45			
% SAND:	44	39	42			
% FINES:	14	11	13			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY GRAVEL WITH SAND (GM)			



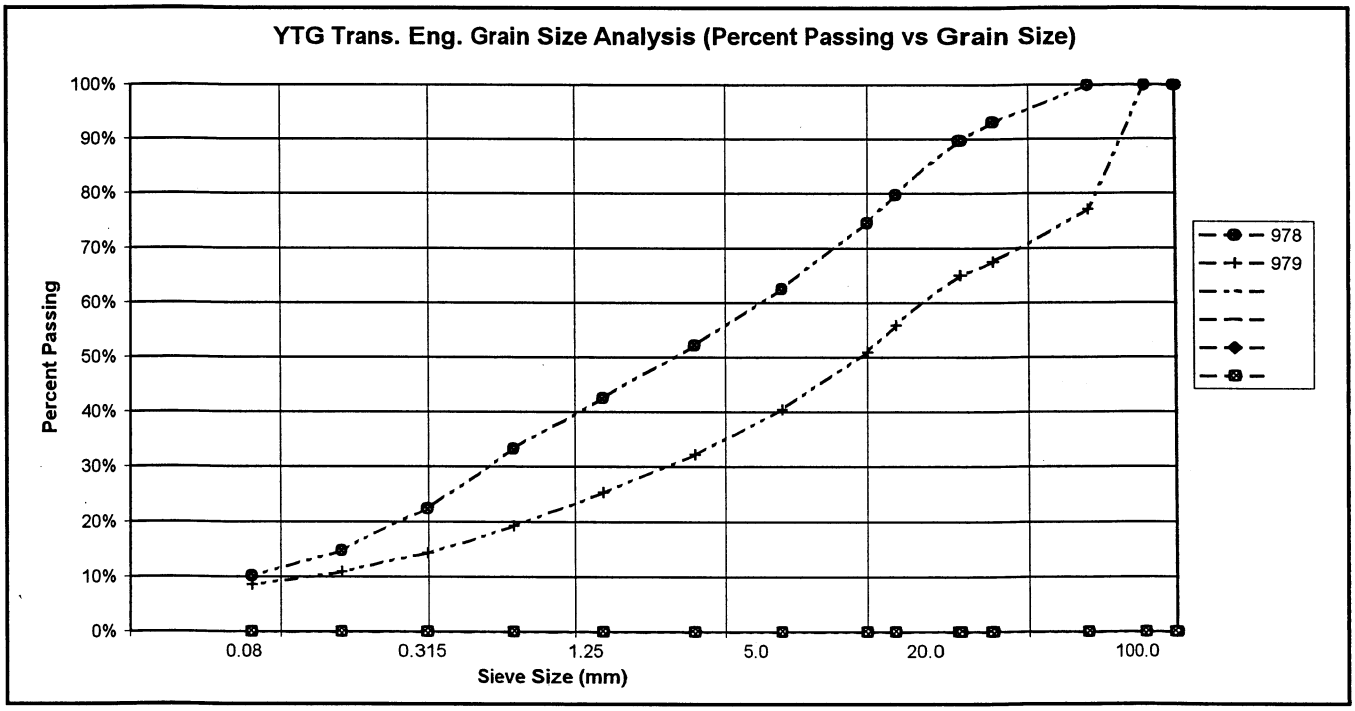
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1605
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1694+350 11M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/26

FIELD NO:	976	977				
LAB NO:	1378	1379				
DEPTH:	1.3-1.5	4.5-4.7				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	94%	71%				
20.0	94%	69%				
12.5	83%	62%				
10.0	77%	58%				
5.0	62%	46%				
2.5	47%	38%				
1.25	34%	30%				
0.630	24%	24%				
0.315	17%	22%				
0.160	13%	15%				
0.080	10%	12%				
M.C.(%):	2%	2%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	38	54				
% SAND:	52	34				
% FINES:	10	12				
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW SM)	SILTY GRAVEL WITH SAND (GM)				



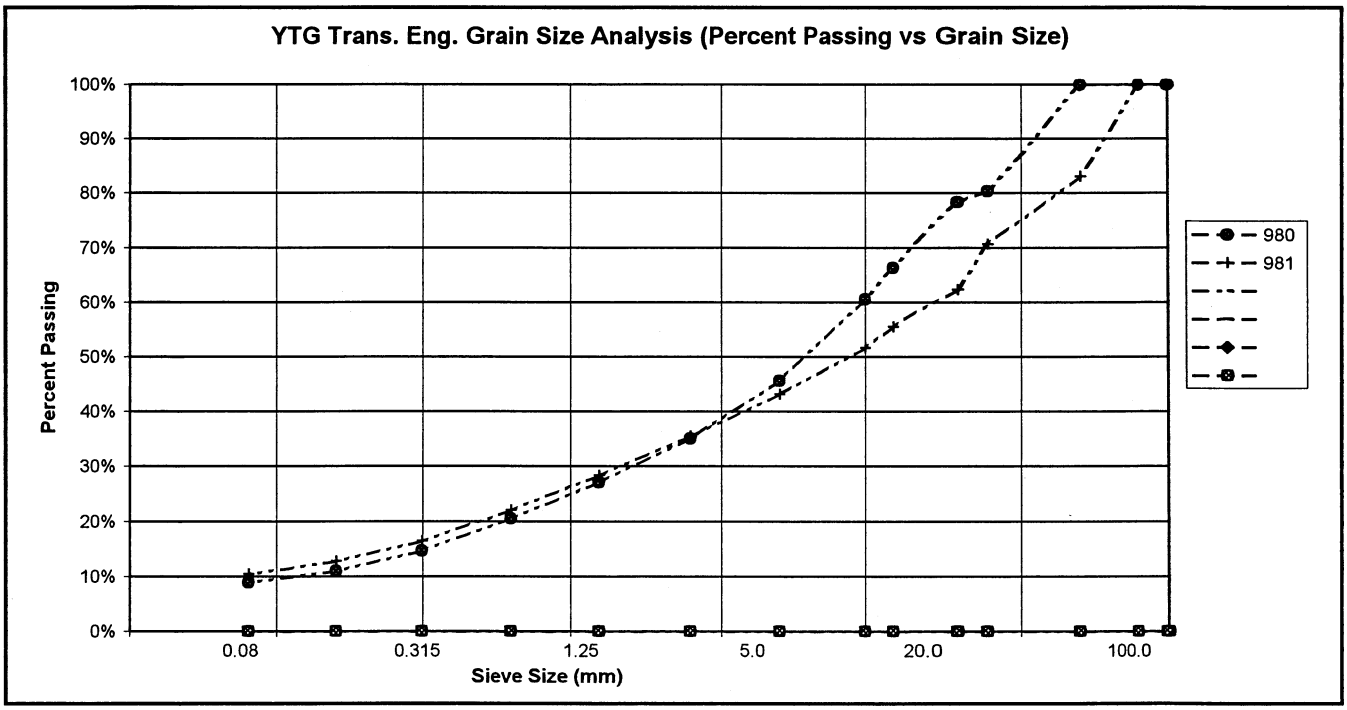
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1606
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1694+250 11M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/26

FIELD NO:	978	979				
LAB NO:	1380	1381				
DEPTH:	1.5-1.7	4.5-4.7				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	77%				
25.0	93%	68%				
20.0	90%	65%				
12.5	80%	56%				
10.0	75%	51%				
5.0	63%	40%				
2.5	52%	32%				
1.25	43%	25%				
0.630	33%	19%				
0.315	22%	14%				
0.160	15%	11%				
0.080	10%	9%				
M.C.(%):	3%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	37	60				
% SAND:	52	32				
% FINES:	10	9				
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				



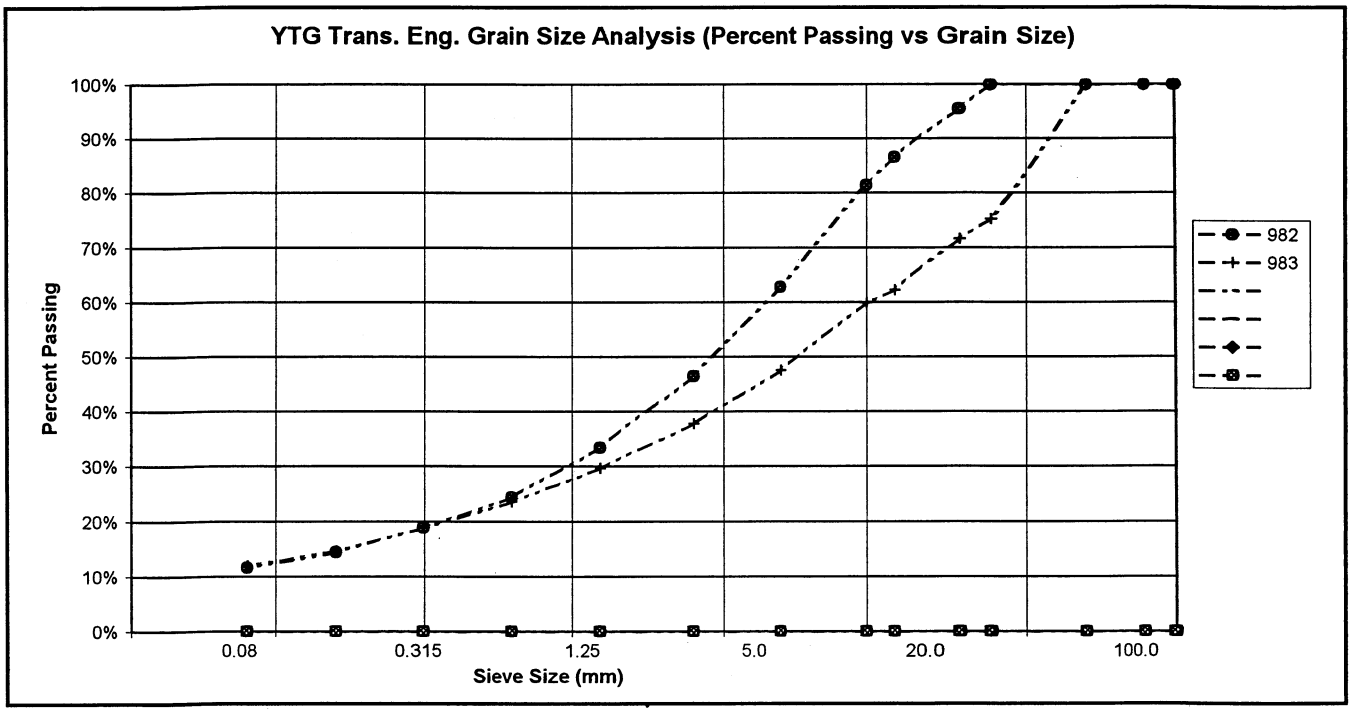
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1607
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1694+150 13M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/26

FIELD NO:	980	981				
LAB NO:	1382	1383				
DEPTH:	1.5-1.7	4.5-4.7				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	83%				
25.0	80%	71%				
20.0	78%	62%				
12.5	66%	56%				
10.0	61%	52%				
5.0	46%	43%				
2.5	35%	36%				
1.25	27%	28%				
0.630	20%	22%				
0.315	15%	16%				
0.160	11%	13%				
0.080	9%	10%				
M.C.(%):	2%	2%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	54	57				
% SAND:	37	33				
% FINES:	9	10				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				



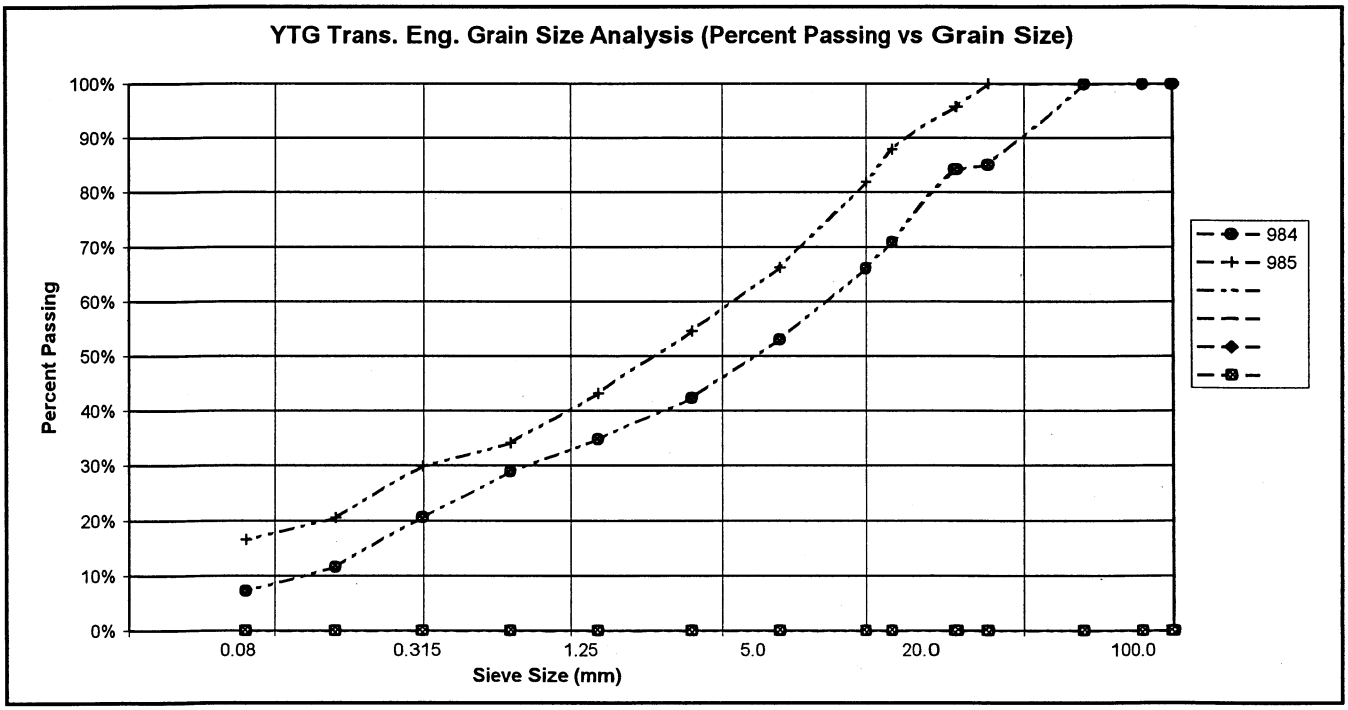
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1608
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1694+050 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/26

FIELD NO:	982	983				
LAB NO:	1384	1385				
DEPTH:	1.3-1.5	4.5-4.7				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	75%				
20.0	96%	72%				
12.5	87%	62%				
10.0	82%	60%				
5.0	63%	47%				
2.5	46%	38%				
1.25	33%	30%				
0.630	24%	24%				
0.315	19%	19%				
0.160	14%	15%				
0.080	12%	12%				
M.C.(%):	2%	2%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	37	53				
% SAND:	51	36				
% FINES:	12	12				
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				



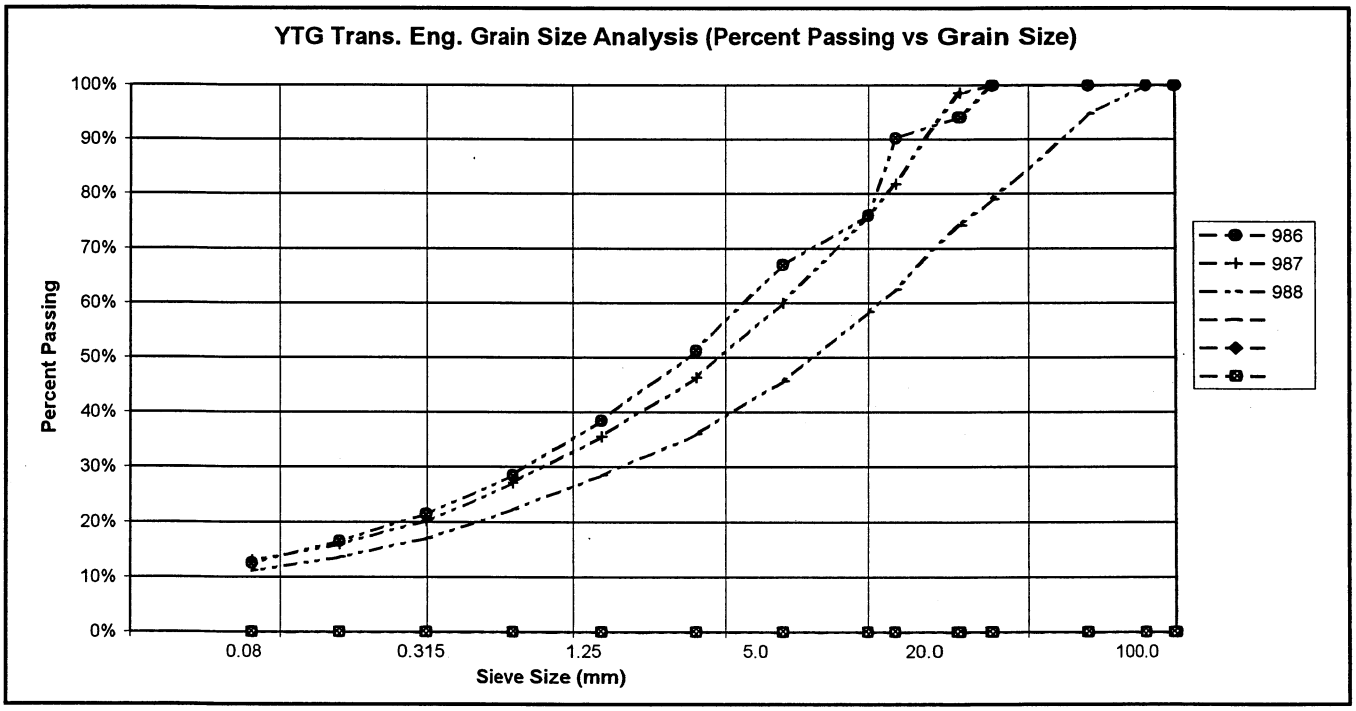
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1609
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1693+950 11M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/26

FIELD NO:	984	985				
LAB NO:	1386	1387				
DEPTH:	1.5-1.7	4.5-4.7				
TYPE:	AUGER	AUGER	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	84%	96%				
12.5	71%	88%				
10.0	66%	82%				
5.0	53%	66%				
2.5	42%	55%				
1.25	35%	43%				
0.630	29%	34%				
0.315	21%	30%				
0.160	12%	21%				
0.080	7%	16%				
M.C.(%):	3%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	47	34				
% SAND:	46	50				
% FINES:	7	16				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)				



PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1610
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1693+850 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/26

FIELD NO:	986	987	988			
LAB NO:	1388	1389	1390			
DEPTH:	1.4-1.6	2.8-3.0	4.5-4.7			
TYPE:	AUGER	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%	95%			
25.0	100%	100%	79%			
20.0	94%	99%	74%			
12.5	90%	82%	62%			
10.0	76%	76%	58%			
5.0	67%	60%	46%			
2.5	51%	46%	36%			
1.25	39%	36%	29%			
0.630	29%	27%	22%			
0.315	21%	20%	17%			
0.160	17%	16%	14%			
0.080	13%	13%	11%			
M.C.(%):	2%	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:	33	40	54			
% SAND:	54	47	34			
% FINES:	13	13	11			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

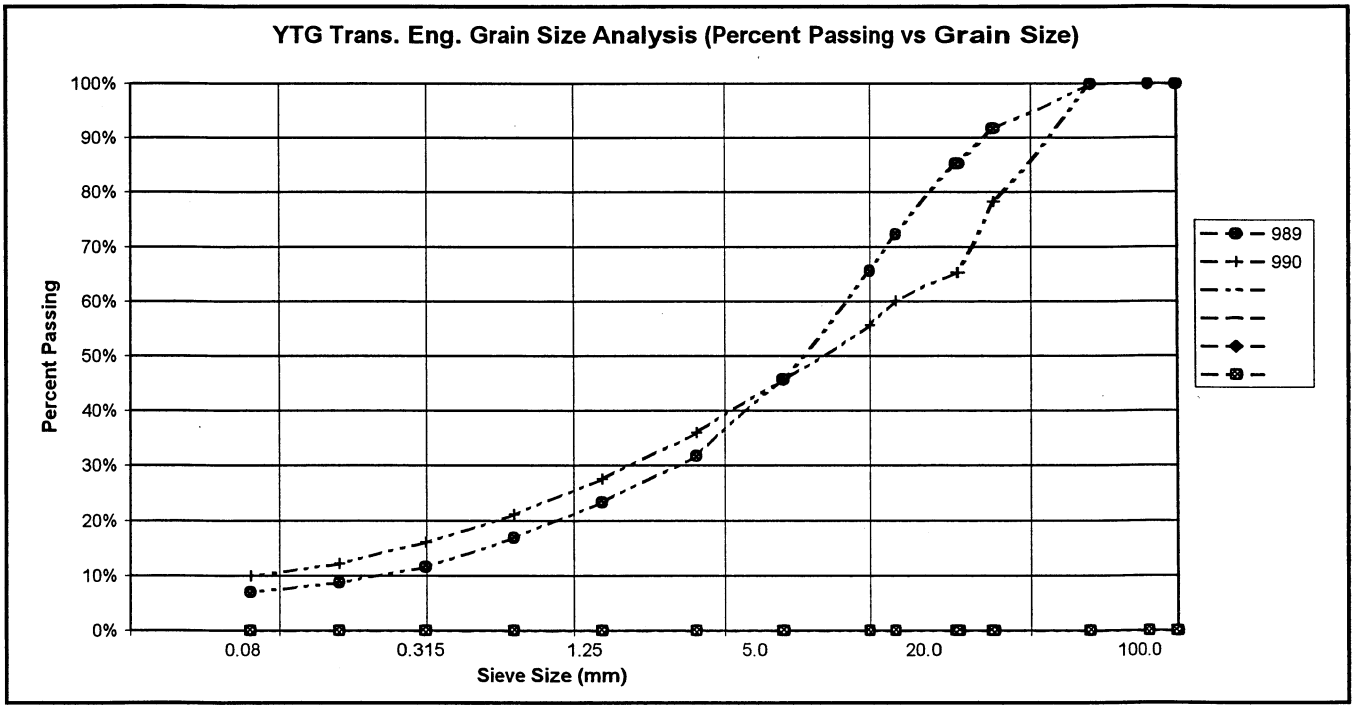


PROJECT NUMBER: 092-202101-0363
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SEGMENT 9
PROJECT LOCATION: KM 1664-1692 A/H
DRILL UNIT: B 40 L
HOLE LOCATION: 1693+750 15M LT
LOGGED BY: D.T.

HOLE No.: 558-1611

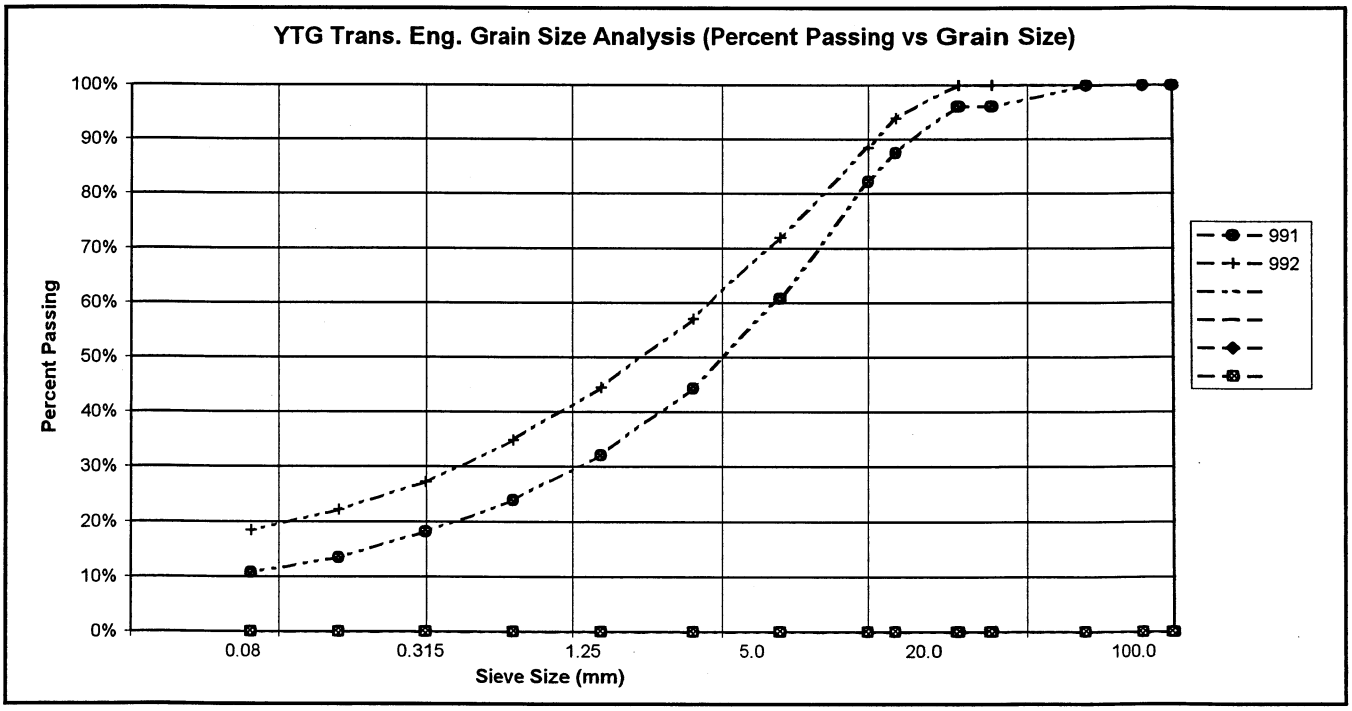
DATE COMP: 2000/06/26

FIELD NO:	989	990				
LAB NO:	1391	1392				
DEPTH:	1.4-1.6	4.5-4.7				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	92%	78%				
20.0	85%	65%				
12.5	72%	60%				
10.0	66%	56%				
5.0	46%	46%				
2.5	32%	36%				
1.25	23%	28%				
0.630	17%	21%				
0.315	12%	16%				
0.160	9%	12%				
0.080	7%	10%				
M.C.(%):	3%	4%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	54	54				
% SAND:	39	35				
% FINES:	7	10				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				



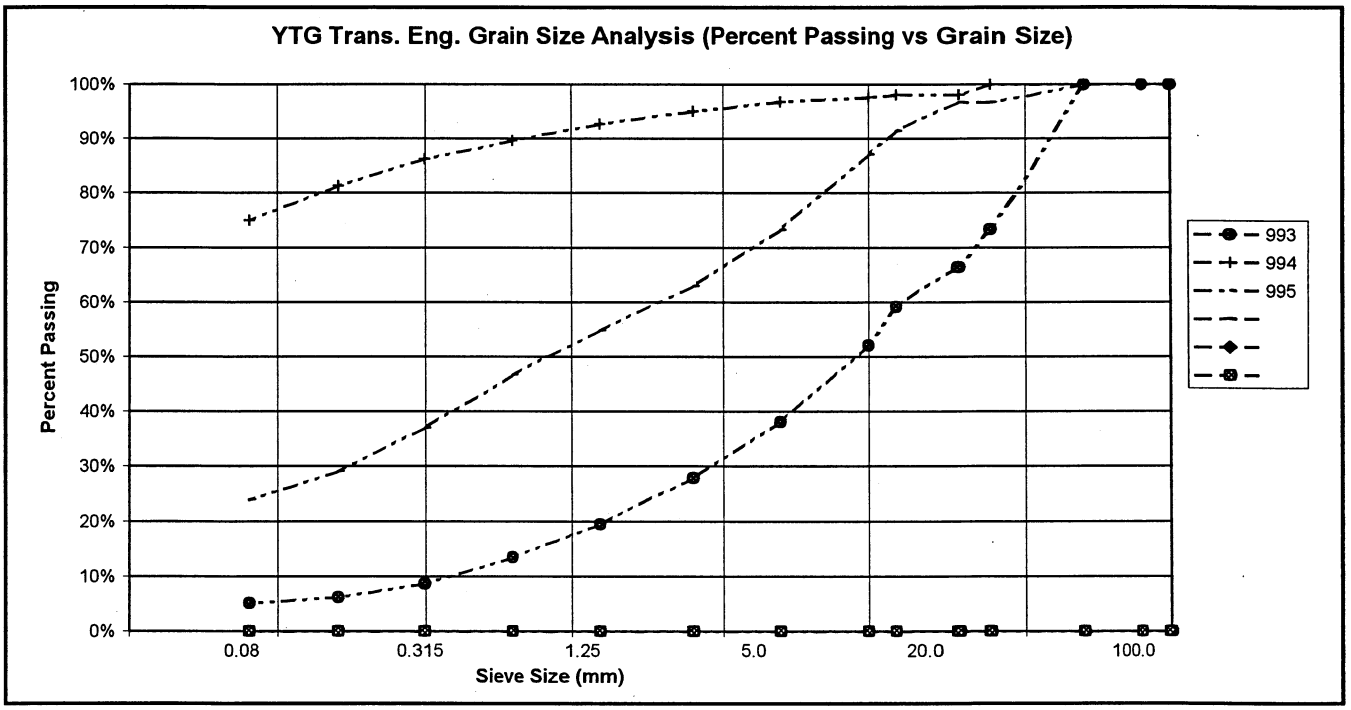
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1612
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1693+650 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/26

FIELD NO:	991	992				
LAB NO:	1393	1394				
DEPTH:	1.4-1.6	4.5-4.7				
TYPE:	AUGER	AUGER	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	96%	100%				
12.5	88%	94%				
10.0	82%	89%				
5.0	61%	72%				
2.5	44%	57%				
1.25	32%	44%				
0.630	24%	35%				
0.315	18%	27%				
0.160	13%	22%				
0.080	11%	18%				
M.C.(%):	3%	4%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	39	28				
% SAND:	50	54				
% FINES:	11	18				
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)				



PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1613
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1693+550 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/26

FIELD NO:	993	994	995			
LAB NO:	1395	1396	1397			
DEPTH:	1.4-1.6	2.6-2.8	3.8-4.0			
TYPE:	AUGER	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	73%	100%	97%			
20.0	66%	98%	97%			
12.5	59%	98%	91%			
10.0	52%	98%	87%			
5.0	38%	97%	73%			
2.5	28%	95%	63%			
1.25	20%	93%	55%			
0.630	14%	90%	47%			
0.315	9%	86%	37%			
0.160	6%	81%	29%			
0.080	5%	75%	24%			
M.C.(%):	3%	25%	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:	62	3	27			
% SAND:	33	22	49			
% FINES:	5	75	24			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)			

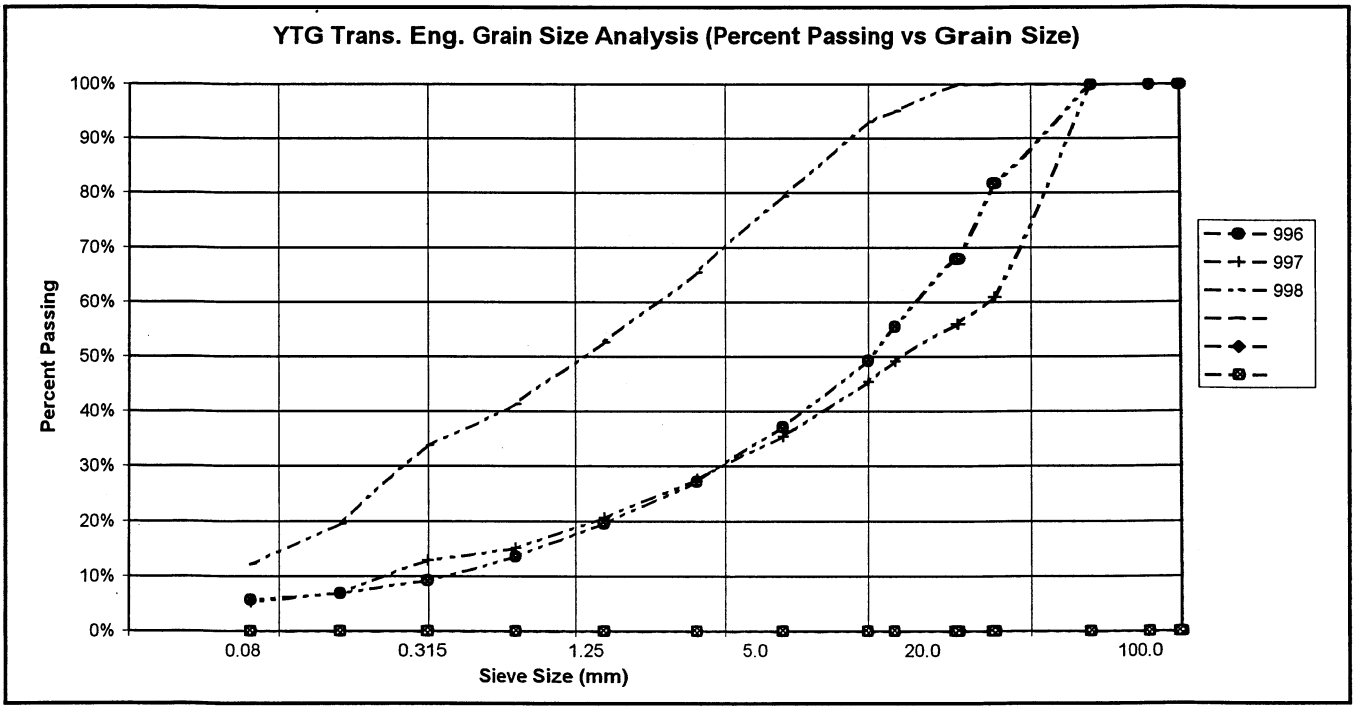


PROJECT NUMBER: 092-202101-0363
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SEGMENT 9
PROJECT LOCATION: KM 1664-1692 A/H
DRILL UNIT: B 40 L
HOLE LOCATION: 1693+450 12M LT
LOGGED BY: D.T.

HOLE No.: 558-1614

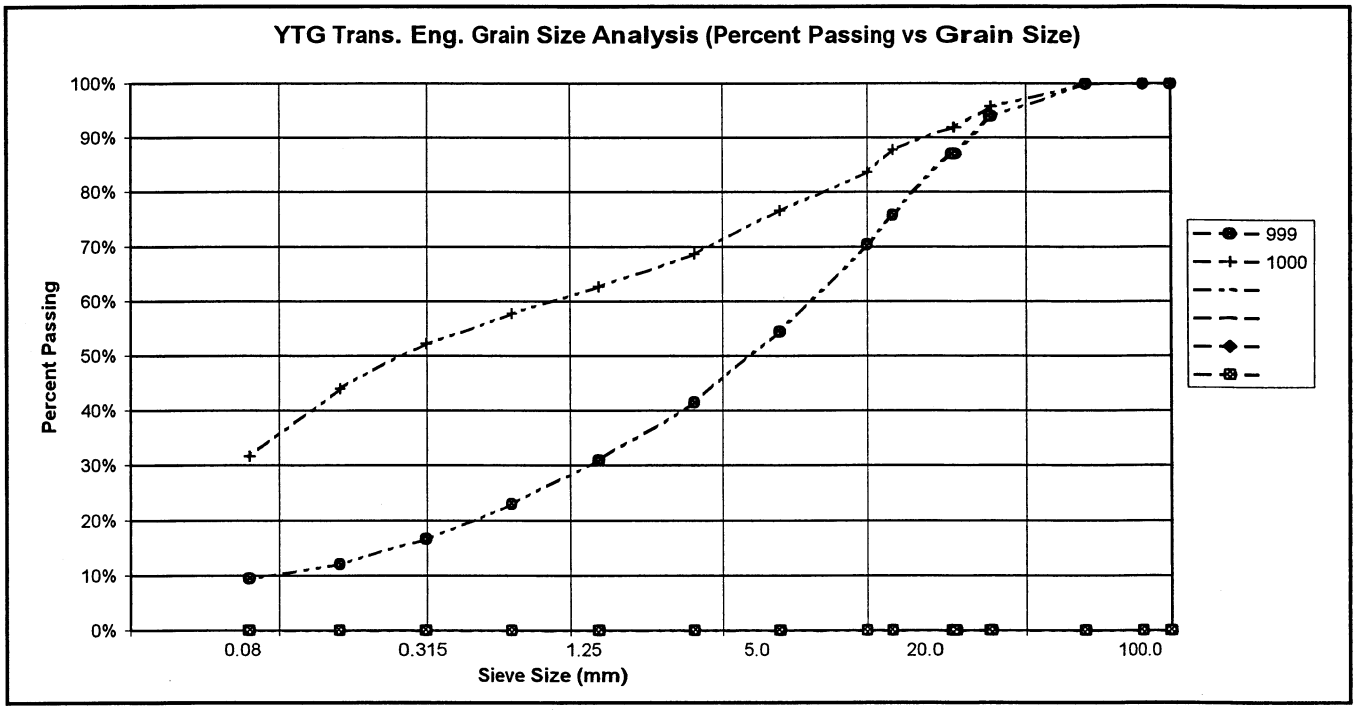
DATE COMP: 2000/06/26

FIELD NO:	996	997	998			
LAB NO:	1398	1399	1400			
DEPTH:	1.4-1.6	2.8-3.0	4.4-4.6			
TYPE:	AUGER	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	82%	61%	100%			
20.0	68%	56%	100%			
12.5	56%	49%	95%			
10.0	49%	45%	93%			
5.0	37%	35%	79%			
2.5	27%	28%	65%			
1.25	20%	21%	53%			
0.630	14%	15%	41%			
0.315	9%	13%	34%			
0.160	7%	7%	19%			
0.080	6%	5%	12%			
M.C.(%):	2%	3%	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:	63	65	21			
% SAND:	32	30	67			
% FINES:	6	5	12			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)			



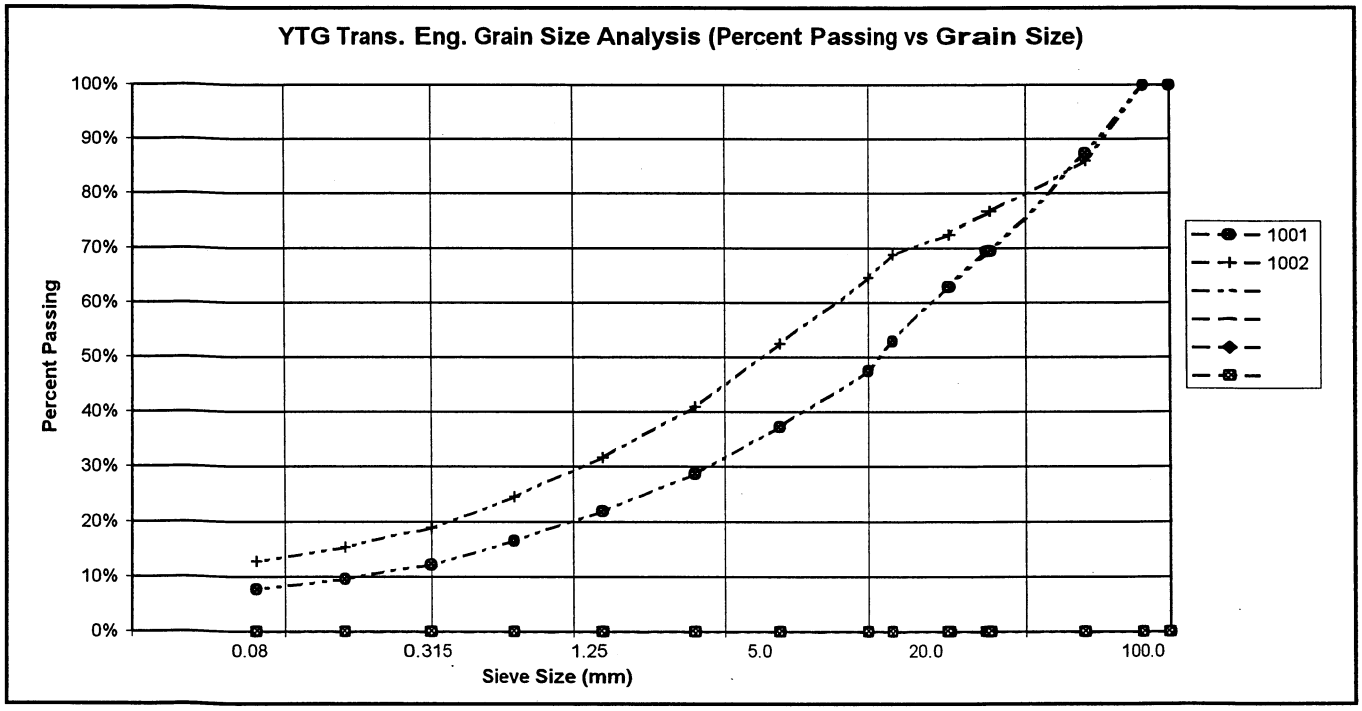
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1615
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1693+350 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/26

FIELD NO:	999	1000				
LAB NO:	1401	1402				
DEPTH:	1.4-1.6	4.5-4.7				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	94%	96%				
20.0	87%	92%				
12.5	76%	88%				
10.0	70%	84%				
5.0	54%	77%				
2.5	42%	69%				
1.25	31%	63%				
0.630	23%	58%				
0.315	17%	52%				
0.160	12%	44%				
0.080	10%	32%				
M.C.(%):	3%	14%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	46	23				
% SAND:	45	45				
% FINES:	10	32				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)				



PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1616
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1693+250 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/26

FIELD NO:	1001	1002				
LAB NO:	1403	1404				
DEPTH:	1.5-1.7	3.4-3.6				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	87%	86%				
25.0	69%	77%				
20.0	63%	72%				
12.5	53%	69%				
10.0	48%	65%				
5.0	37%	52%				
2.5	29%	41%				
1.25	22%	32%				
0.630	17%	25%				
0.315	12%	19%				
0.160	10%	15%				
0.080	8%	13%				
M.C.(%):	2%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	63	48				
% SAND:	30	40				
% FINES:	8	13				
CLASSIFICATION	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	SILTY GRAVEL WITH SAND (GM)				

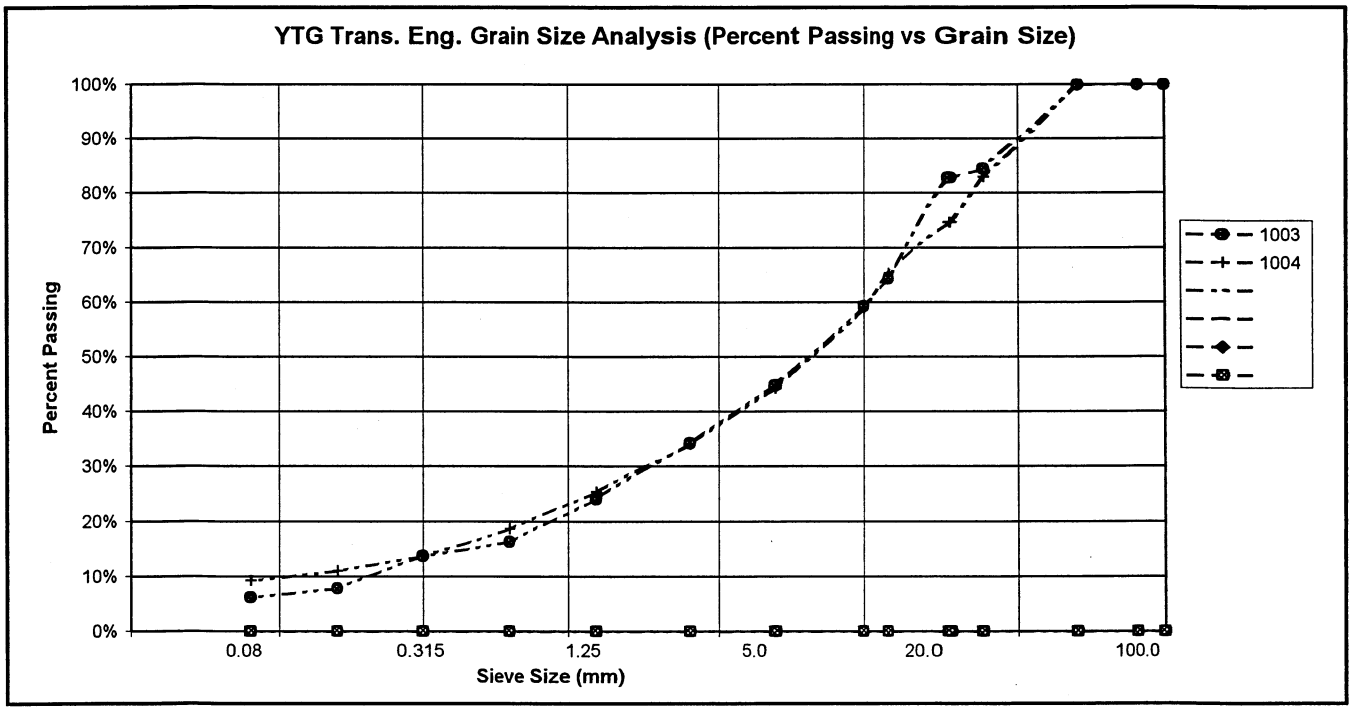


PROJECT NUMBER: 092-202101-0363
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SEGMENT 9
PROJECT LOCATION: KM 1664-1692 A/H
DRILL UNIT: B 40 L
HOLE LOCATION: 1693+150 15M LT
LOGGED BY: D.T.

HOLE No.: 558-1617

DATE COMP: 2000/06/27

FIELD NO:	1003	1004				
LAB NO:	1405	1406				
DEPTH:	1.5-1.7	4.2-4.4				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	85%	83%				
20.0	83%	75%				
12.5	64%	65%				
10.0	59%	59%				
5.0	45%	44%				
2.5	34%	34%				
1.25	24%	25%				
0.630	16%	19%				
0.315	14%	14%				
0.160	8%	11%				
0.080	6%	9%				
M.C.(%):	2%	4%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	55	56				
% SAND:	39	35				
% FINES:	6	9				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

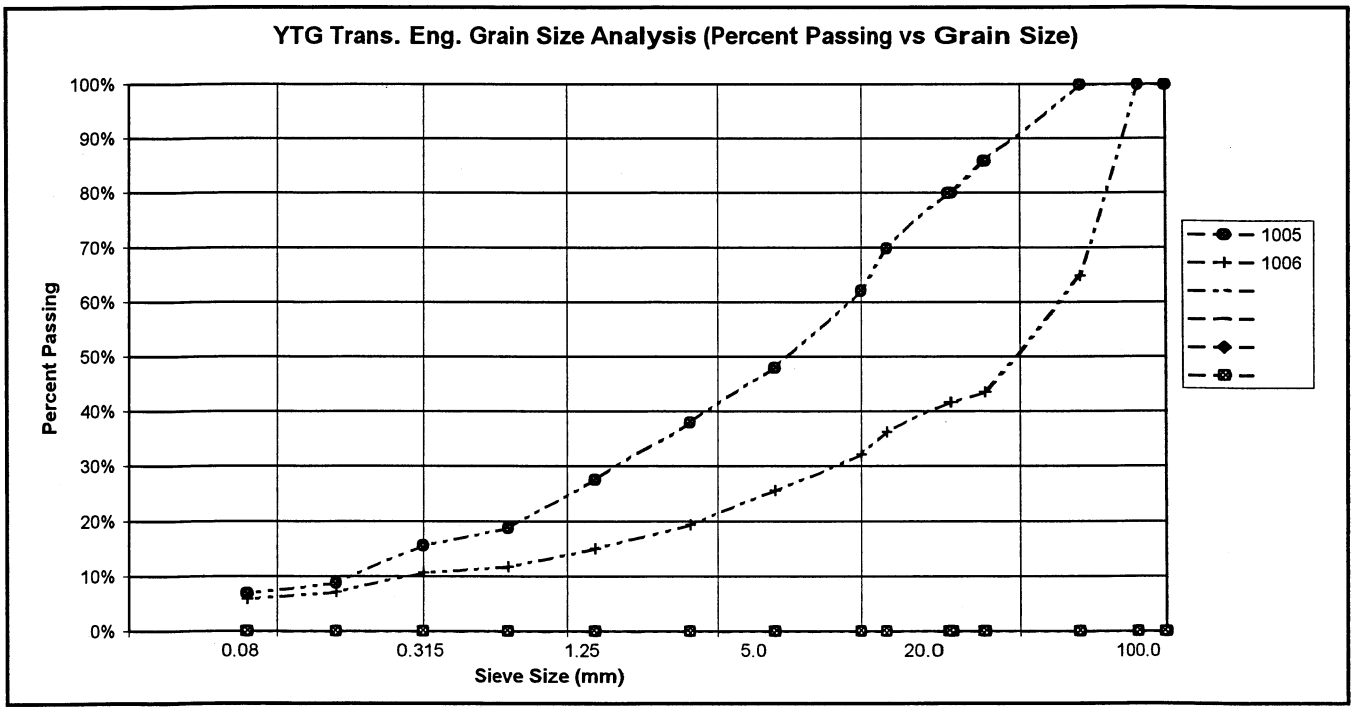


PROJECT NUMBER: 092-202101-0363
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SEGMENT 9
PROJECT LOCATION: KM 1664-1692 A/H
DRILL UNIT: B 40 L
HOLE LOCATION: 1693+050 15M LT
LOGGED BY: D.T.

HOLE No.: 558-1618

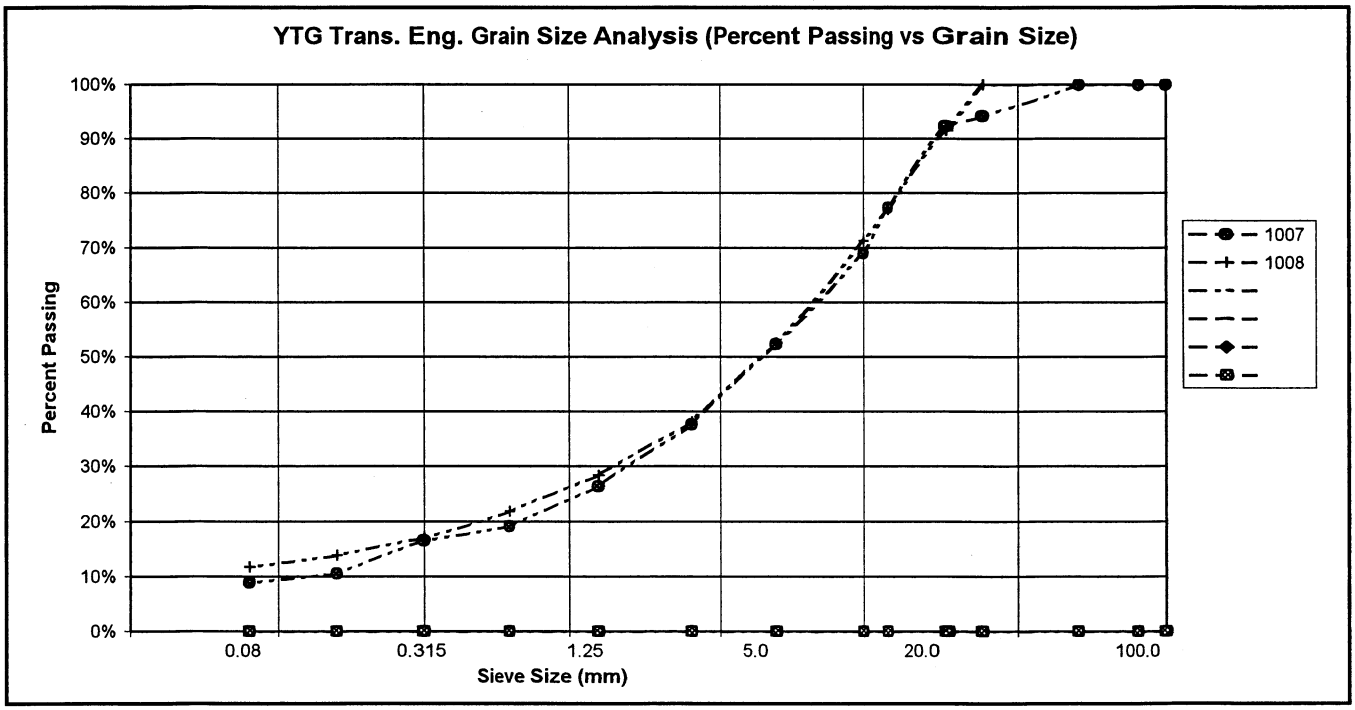
DATE COMP: 2000/06/27

FIELD NO:	1005	1006				
LAB NO:	1407	1408				
DEPTH:	1.3-1.5	4.5-4.7				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	65%				
25.0	86%	44%				
20.0	80%	42%				
12.5	70%	36%				
10.0	62%	32%				
5.0	48%	26%				
2.5	38%	19%				
1.25	28%	15%				
0.630	19%	12%				
0.315	16%	11%				
0.160	9%	7%				
0.080	7%	6%				
M.C.(%):	2%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	52	74				
% SAND:	41	20				
% FINES:	7	6				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)				



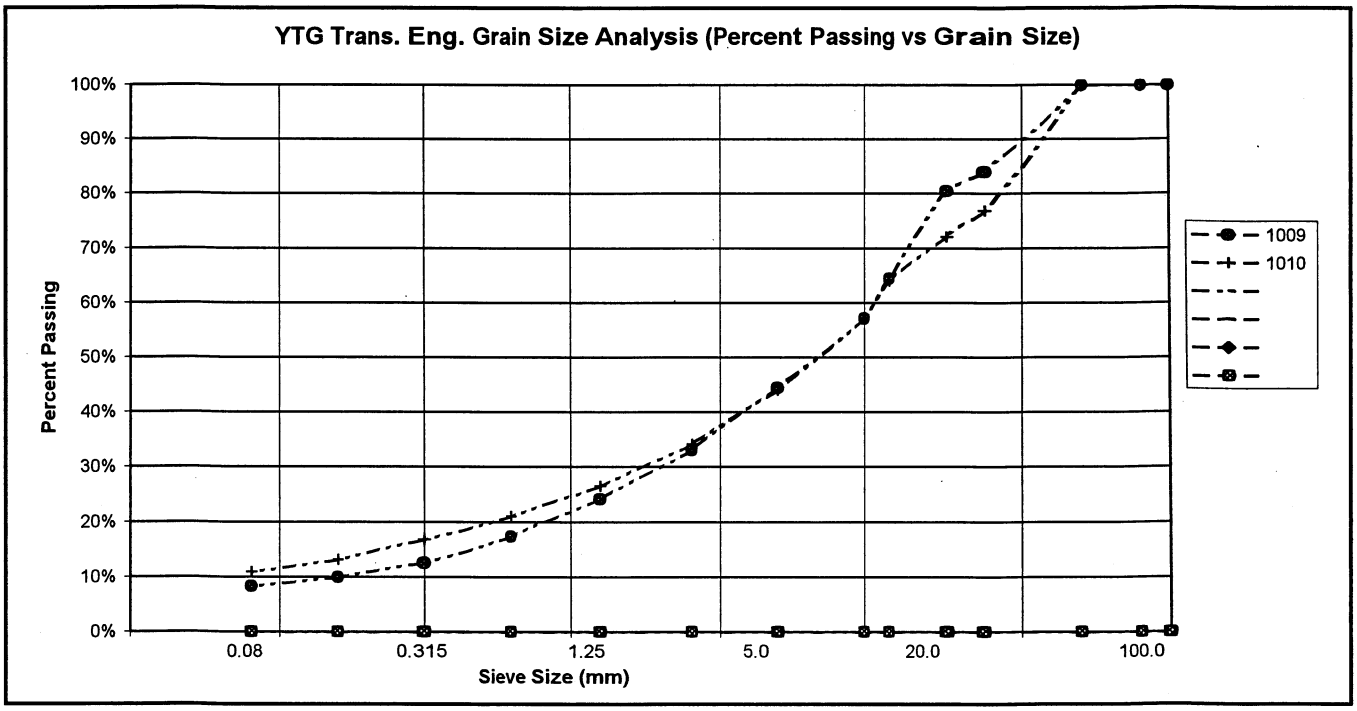
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1619
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1692+950 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/27

FIELD NO:	1007	1008				
LAB NO:	1409	1410				
DEPTH:	1.4-1.6	4.5-4.7				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	94%	100%				
20.0	92%	92%				
12.5	77%	77%				
10.0	69%	71%				
5.0	52%	53%				
2.5	38%	38%				
1.25	26%	28%				
0.630	19%	22%				
0.315	17%	17%				
0.160	11%	14%				
0.080	9%	12%				
M.C.(%):	3%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	48	47				
% SAND:	43	41				
% FINES:	9	12				
CLASSIFICATION	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				



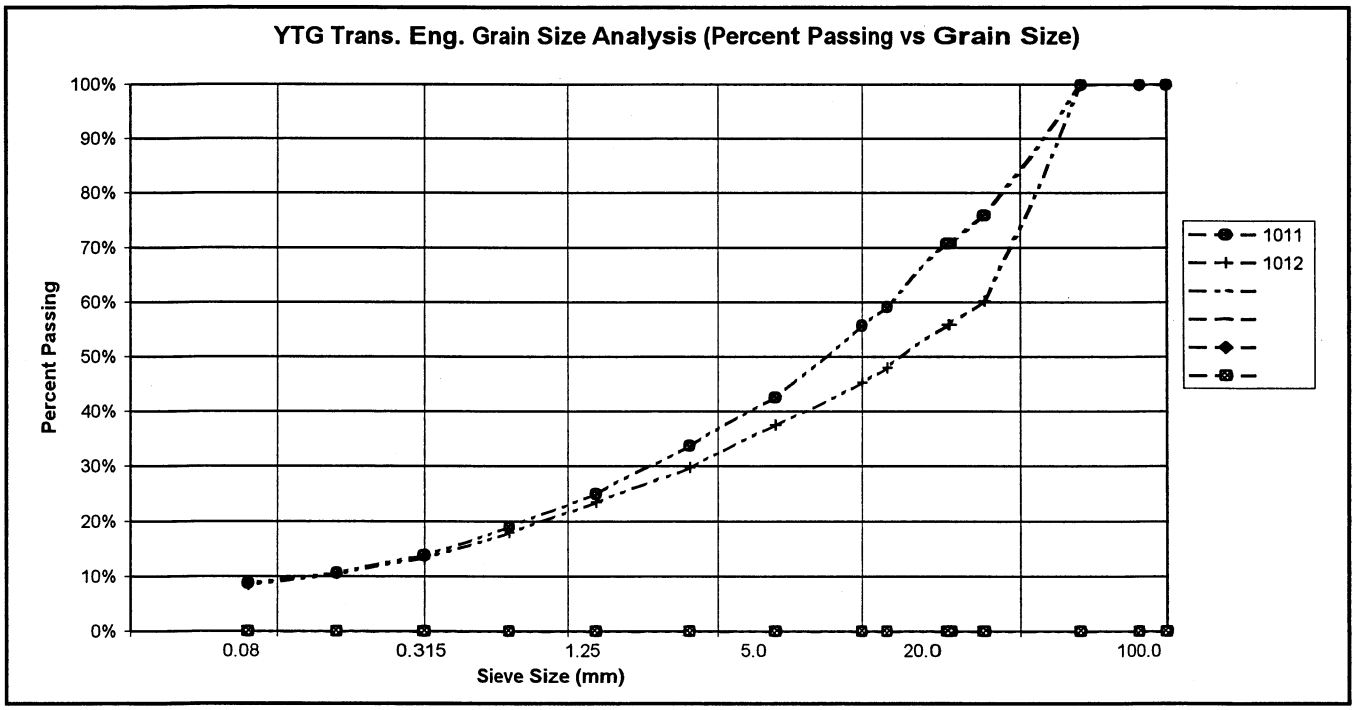
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1620
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1692+850 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/27

FIELD NO:	1009	1010				
LAB NO:	1411	1412				
DEPTH:	1.5-1.7	4.5-4.7				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	84%	77%				
20.0	80%	72%				
12.5	64%	64%				
10.0	57%	57%				
5.0	44%	44%				
2.5	33%	34%				
1.25	24%	26%				
0.630	17%	21%				
0.315	13%	17%				
0.160	10%	13%				
0.080	8%	11%				
M.C.(%):	2%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	56	56				
% SAND:	36	33				
% FINES:	8	11				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				



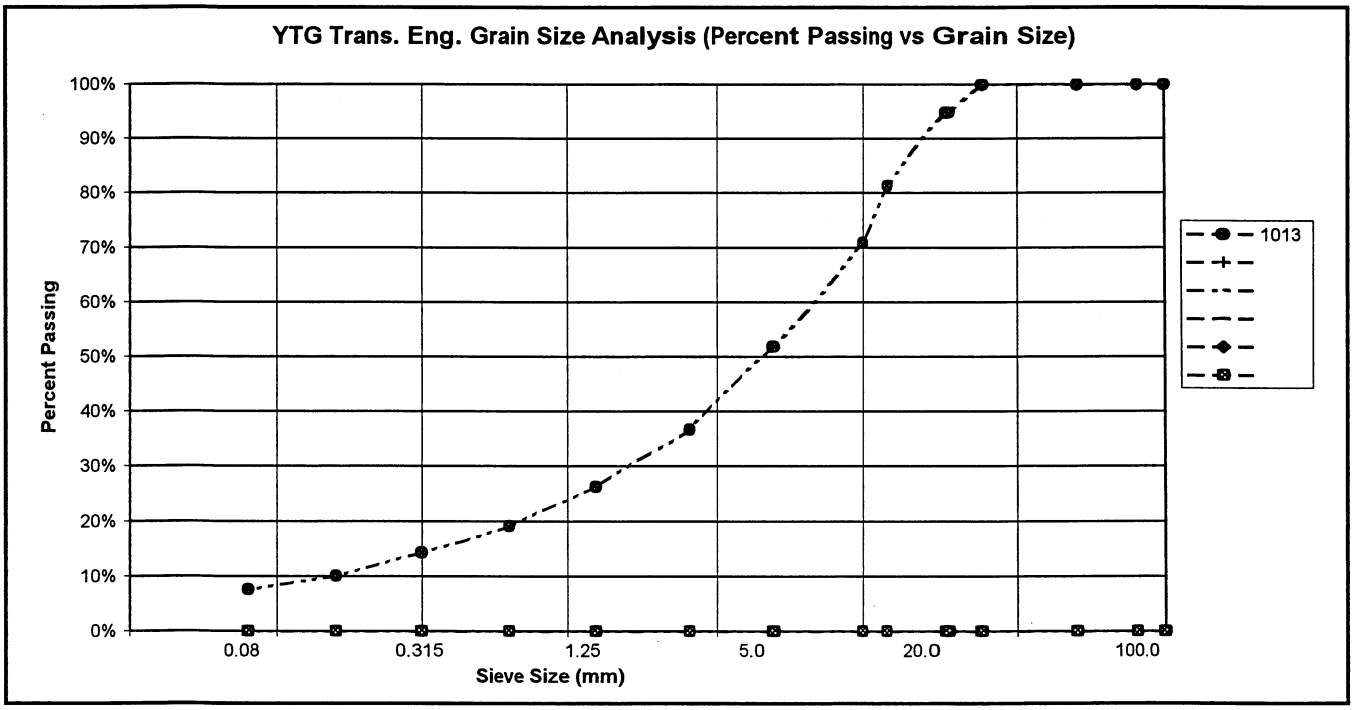
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1621
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1692+750 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/27

FIELD NO:	1011	1012				
LAB NO:	1413	1414				
DEPTH:	1.6-1.8	4.5-4.7				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	76%	60%				
20.0	71%	56%				
12.5	59%	48%				
10.0	56%	45%				
5.0	43%	38%				
2.5	34%	30%				
1.25	25%	23%				
0.630	19%	18%				
0.315	14%	13%				
0.160	11%	10%				
0.080	9%	8%				
M.C.(%):	3%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	57	62				
% SAND:	34	29				
% FINES:	9	8				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)				



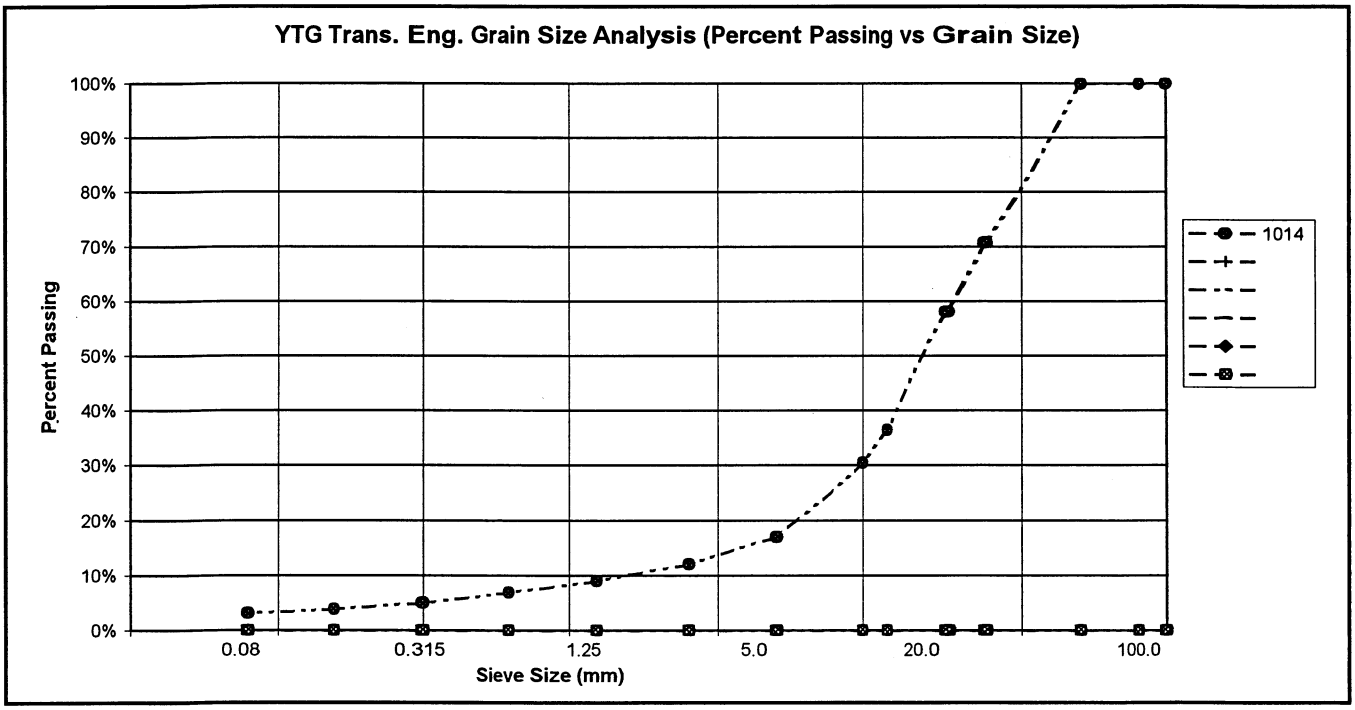
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1622
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1692+600 14M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/27

FIELD NO:	1013					
LAB NO:	1415					
DEPTH:	1.5-1.7					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	100%					
20.0	95%					
12.5	81%					
10.0	71%					
5.0	52%					
2.5	37%					
1.25	26%					
0.630	19%					
0.315	14%					
0.160	10%					
0.080	8%					
M.C.(%):	3%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	48					
% SAND:	44					
% FINES:	8					
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)					



PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1623
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1692+500 11M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/28

FIELD NO:	1014					
LAB NO:	1416					
DEPTH:	2.8-3.0					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	71%					
20.0	58%					
12.5	36%					
10.0	31%					
5.0	17%					
2.5	12%					
1.25	9%					
0.630	7%					
0.315	5%					
0.160	4%					
0.080	3%					
M.C.(%):	2%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	83					
% SAND:	14					
% FINES:	3					
CLASSIFICATION	POORLY GRADED GRAVEL (GP)					

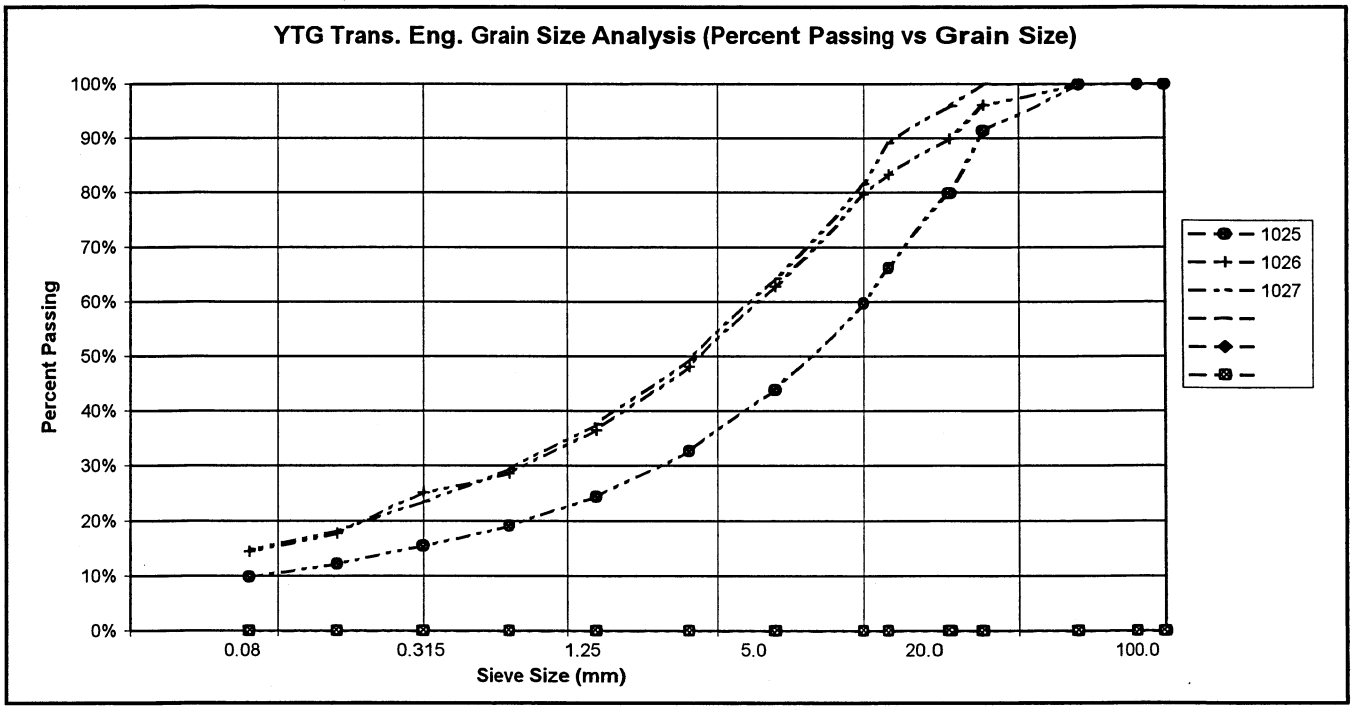


PROJECT NUMBER: 092-202101-0363
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SEGMENT 9
PROJECT LOCATION: KM 1664-1692 A/H
DRILL UNIT: B 40 L
HOLE LOCATION: 1692+350 12M LT
LOGGED BY: D.T.

HOLE No.: 558-1628

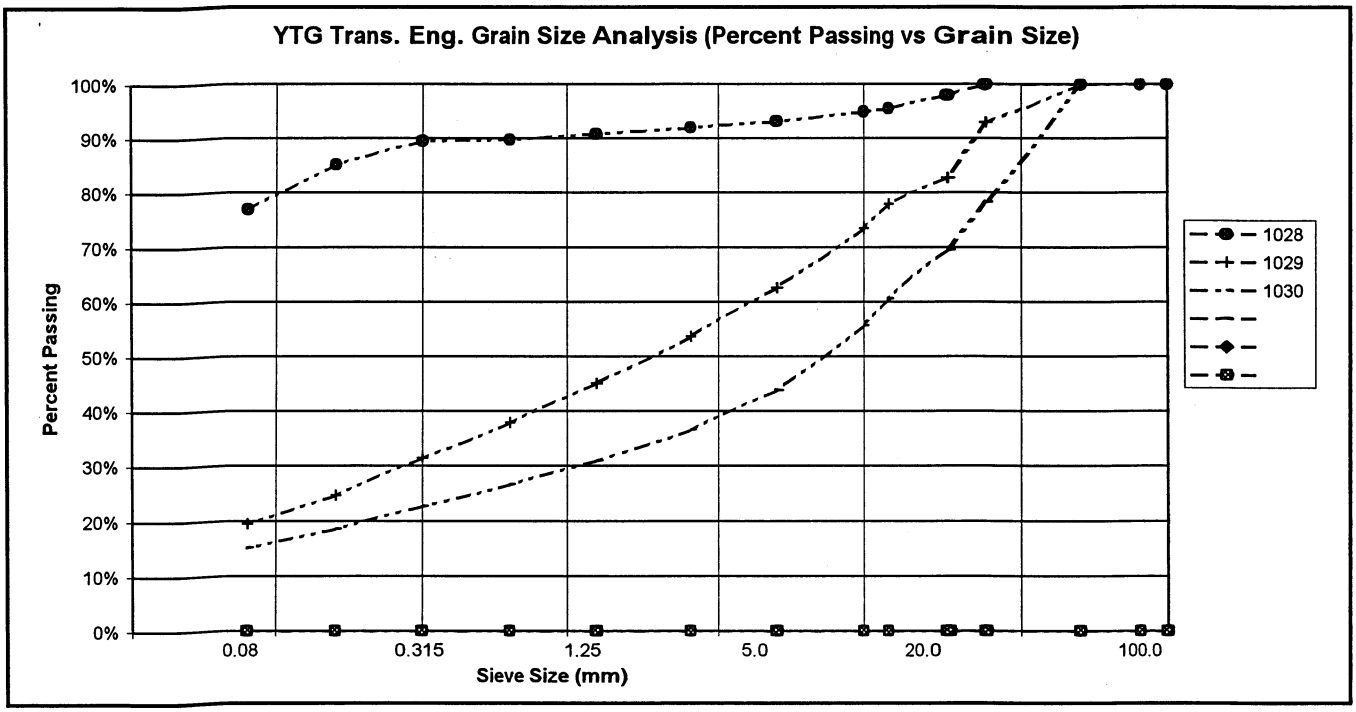
DATE COMP: 2000/06/29

FIELD NO:	1025	1026	1027			
LAB NO:	1427	1428	1429			
DEPTH:	1.4-1.6	2.9-3.1	4.3-4.5			
TYPE:	AUGER	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	91%	96%	100%			
20.0	80%	90%	96%			
12.5	66%	83%	89%			
10.0	60%	80%	82%			
5.0	44%	63%	64%			
2.5	33%	48%	49%			
1.25	24%	36%	38%			
0.630	19%	29%	29%			
0.315	15%	25%	23%			
0.160	12%	18%	18%			
0.080	10%	14%	15%			
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:	56	37	36			
% SAND:	34	48	49			
% FINES:	10	14	15			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



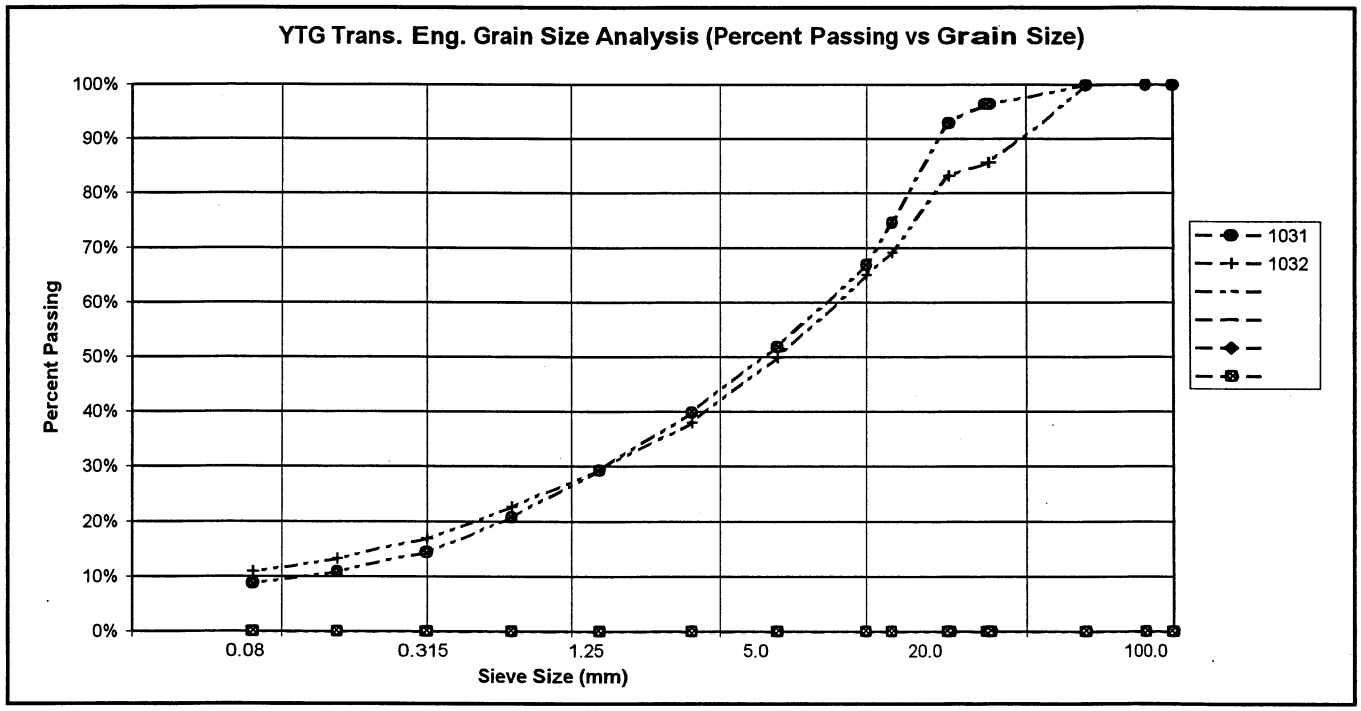
PROJECT NUMBER:	092-202101-0363	HOLE No.: 558-1629
CLIENT:	ENGINEERING CAPITAL	
PROJECT NAME:	SEGMENT 9	
PROJECT LOCATION:	KM 1664-1692 A/H	
DRILL UNIT:	B 40 L	
HOLE LOCATION:	1692+250 15M LT	
LOGGED BY:	D.T.	DATE COMP: 2000/06/29

FIELD NO:	1028	1029	1030			
LAB NO:	1430	1431	1432			
DEPTH:	1.3-1.5	3.0-3.2	4.5-4.7			
TYPE:	AUGER	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%	78%			
20.0	98%	83%	69%			
12.5	96%	78%	61%			
10.0	95%	73%	56%			
5.0	93%	63%	44%			
2.5	92%	54%	37%			
1.25	91%	45%	31%			
0.630	90%	38%	27%			
0.315	90%	31%	23%			
0.160	85%	25%	19%			
0.080	77%	19%	15%			
M.C.(%):	30%	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:	7	37	56			
% SAND:	16	43	29			
% FINES:	77	19	15			
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)			



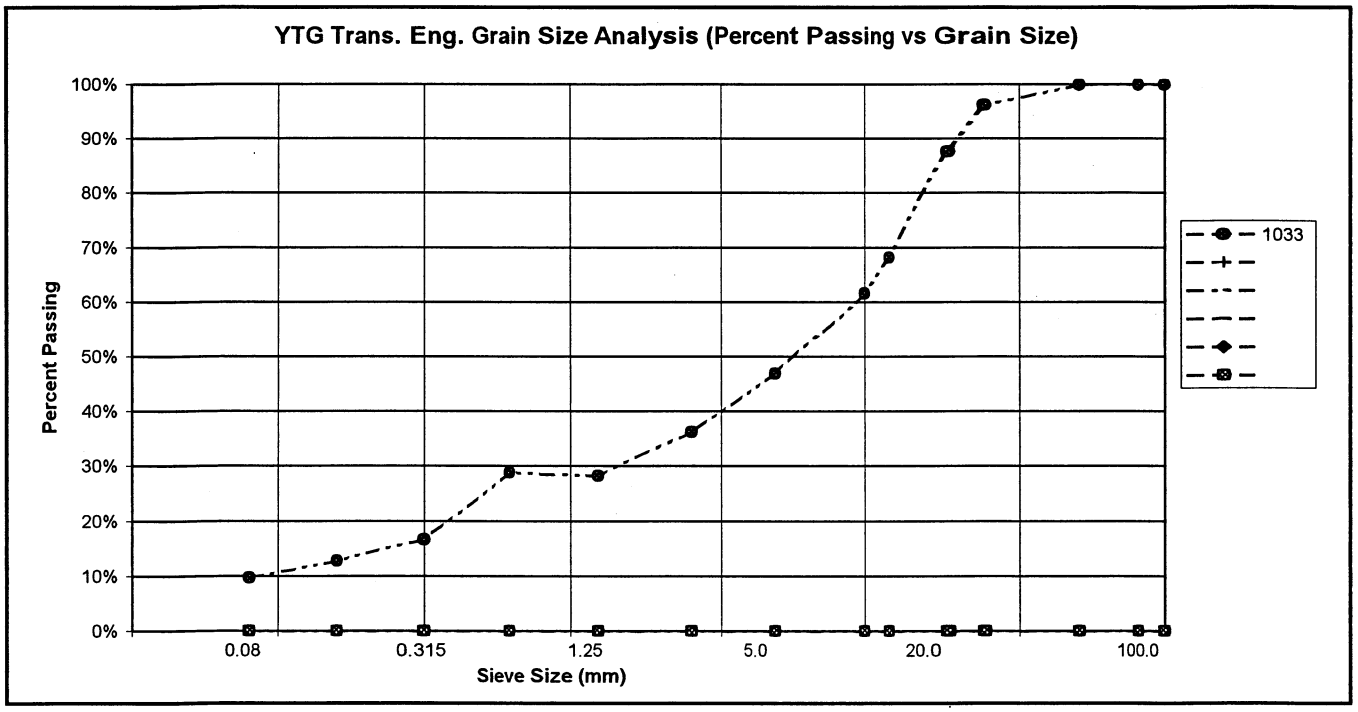
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1630
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1692+150 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/29

FIELD NO:	1031	1032				
LAB NO:	1433	1434				
DEPTH:	1.4-1.6	3.0-3.2				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	96%	86%				
20.0	93%	83%				
12.5	75%	69%				
10.0	67%	65%				
5.0	52%	50%				
2.5	40%	38%				
1.25	29%	29%				
0.630	21%	23%				
0.315	14%	17%				
0.160	11%	13%				
0.080	9%	11%				
M.C.(%):	3%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	48	50				
% SAND:	43	39				
% FINES:	9	11				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				



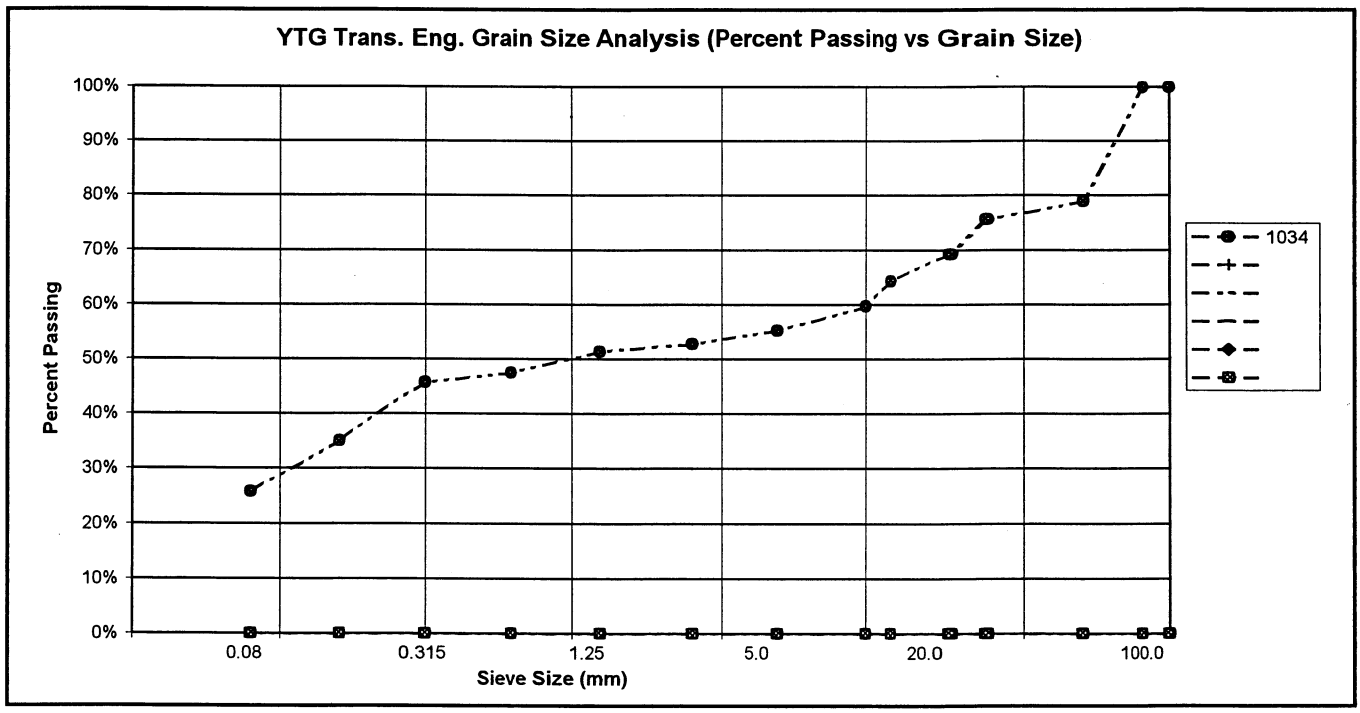
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1631
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1692+050 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/29

FIELD NO:	1033					
LAB NO:	1435					
DEPTH:	1.3-1.5					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	96%					
20.0	88%					
12.5	68%					
10.0	62%					
5.0	47%					
2.5	36%					
1.25	28%					
0.630	29%					
0.315	17%					
0.160	13%					
0.080	10%					
M.C.(%):	4%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	53					
% SAND:	37					
% FINES:	10					
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)					



PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1632
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1691+984 17M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/29

FIELD NO:	1034					
LAB NO:	1436					
DEPTH:	1.4-1.6					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING					
100.0	100%					
80.0	100%					
50.0	79%					
25.0	76%					
20.0	69%					
12.5	64%					
10.0	60%					
5.0	55%					
2.5	53%					
1.25	51%					
0.630	48%					
0.315	46%					
0.160	35%					
0.080	26%					
M.C.(%):	14%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	45					
% SAND:	30					
% FINES:	26					
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)					

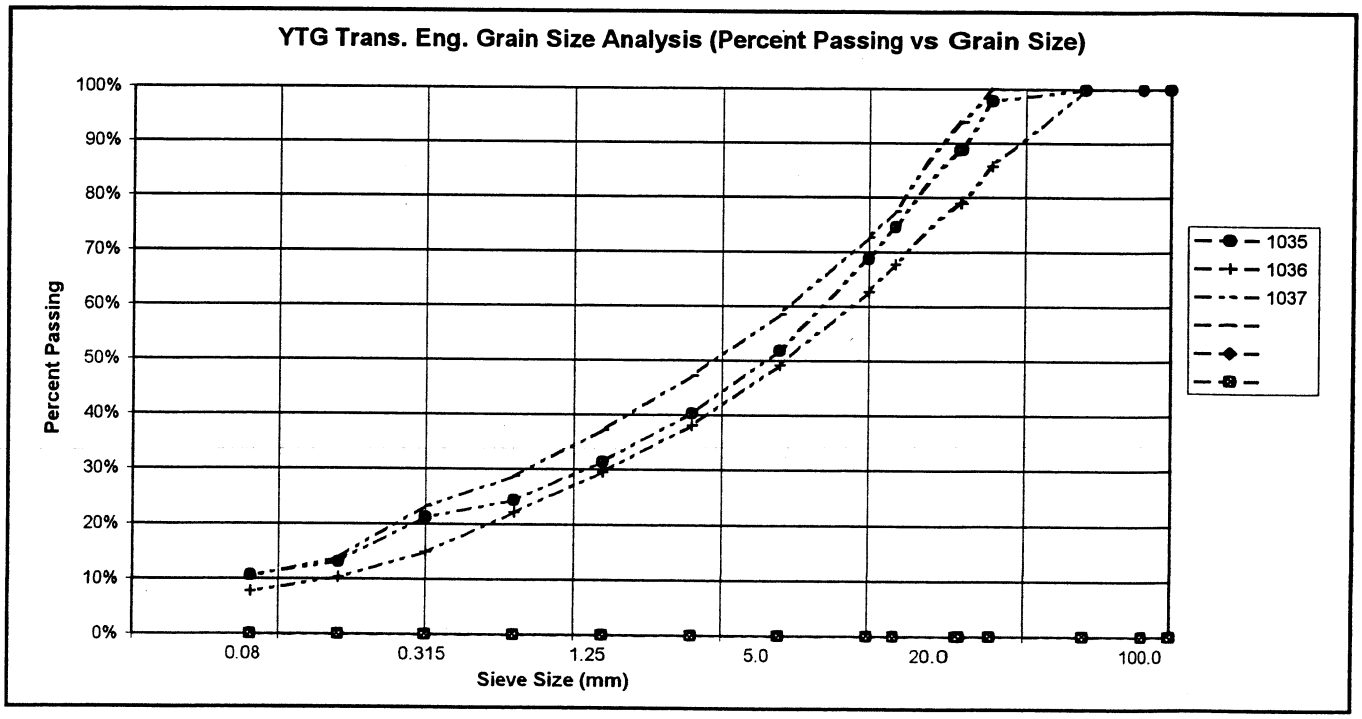


PROJECT NUMBER: 092-202101-0363
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SEGMENT 9
PROJECT LOCATION: KM 1664-1692 A/H
DRILL UNIT: B 40 L
HOLE LOCATION: 1691+875 15M LT
LOGGED BY: D.T.

HOLE No.: 558-1633

DATE COMP: 2000/06/29

FIELD NO:	1035	1036	1037			
LAB NO:	1437	1438	1439			
DEPTH:	1.4-1.6	3.0-3.2	4.5-4.7			
TYPE:	AUGER	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	98%	86%	100%			
20.0	89%	79%	94%			
12.5	75%	68%	77%			
10.0	69%	63%	73%			
5.0	52%	49%	59%			
2.5	40%	38%	47%			
1.25	31%	30%	37%			
0.630	24%	22%	29%			
0.315	21%	15%	23%			
0.160	13%	10%	14%			
0.080	11%	8%	10%			
M.C.(%):	4%	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:	48	51	41			
% SAND:	41	41	48			
% FINES:	11	8	10			
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)			

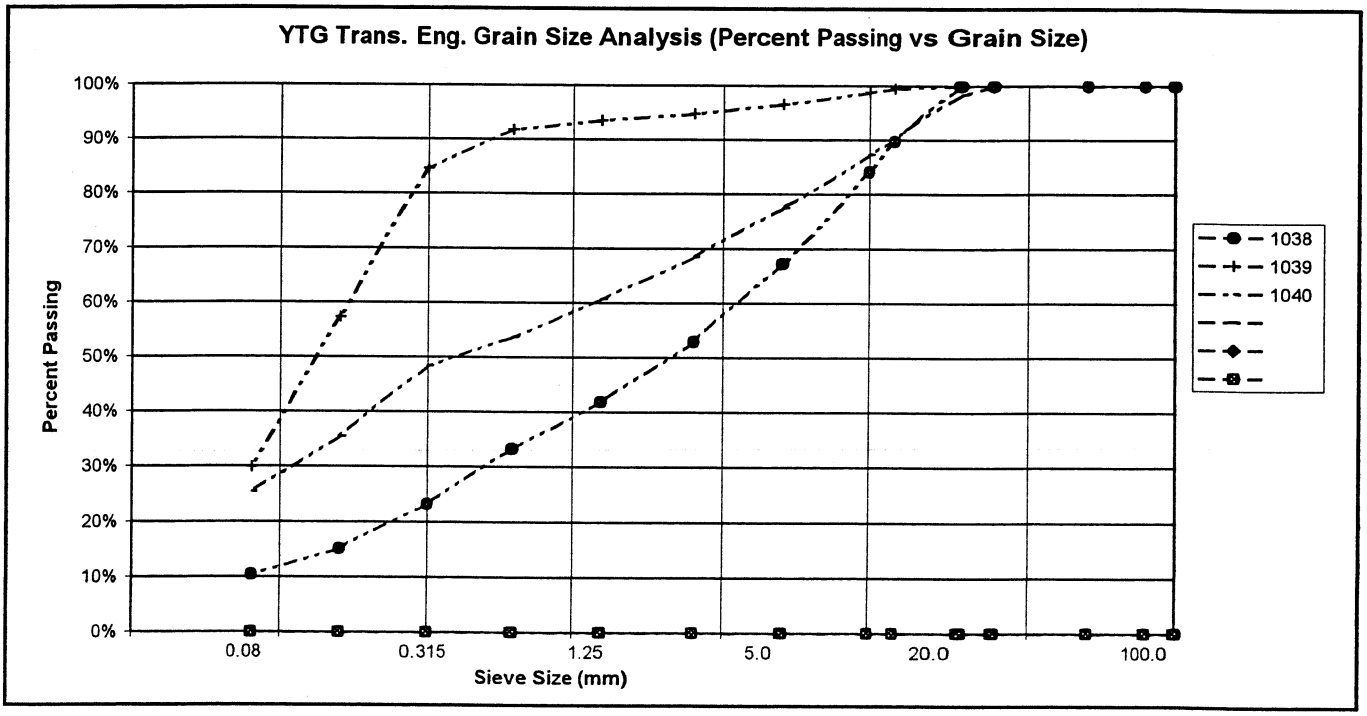


PROJECT NUMBER: 092-202101-0363
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SEGMENT 9
PROJECT LOCATION: KM 1664-1692 A/H
DRILL UNIT: B 40 L
HOLE LOCATION: 1691+775 15M LT
LOGGED BY: D.T.

HOLE No.: 558-1634

DATE COMP: 2000/06/29

FIELD NO:	1038	1039	1040			
LAB NO:	1440	1441	1442			
DEPTH:	1.3-1.5	2.9-3.1	4.5-4.7			
TYPE:	AUGER	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%	98%			
12.5	90%	100%	90%			
10.0	84%	99%	87%			
5.0	67%	97%	77%			
2.5	53%	95%	68%			
1.25	42%	93%	61%			
0.630	33%	92%	54%			
0.315	23%	85%	48%			
0.160	15%	57%	35%			
0.080	10%	30%	25%			
M.C.(%):	3%	18%	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:	33	3	23			
% SAND:	57	67	52			
% FINES:	10	30	25			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW SM)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)			

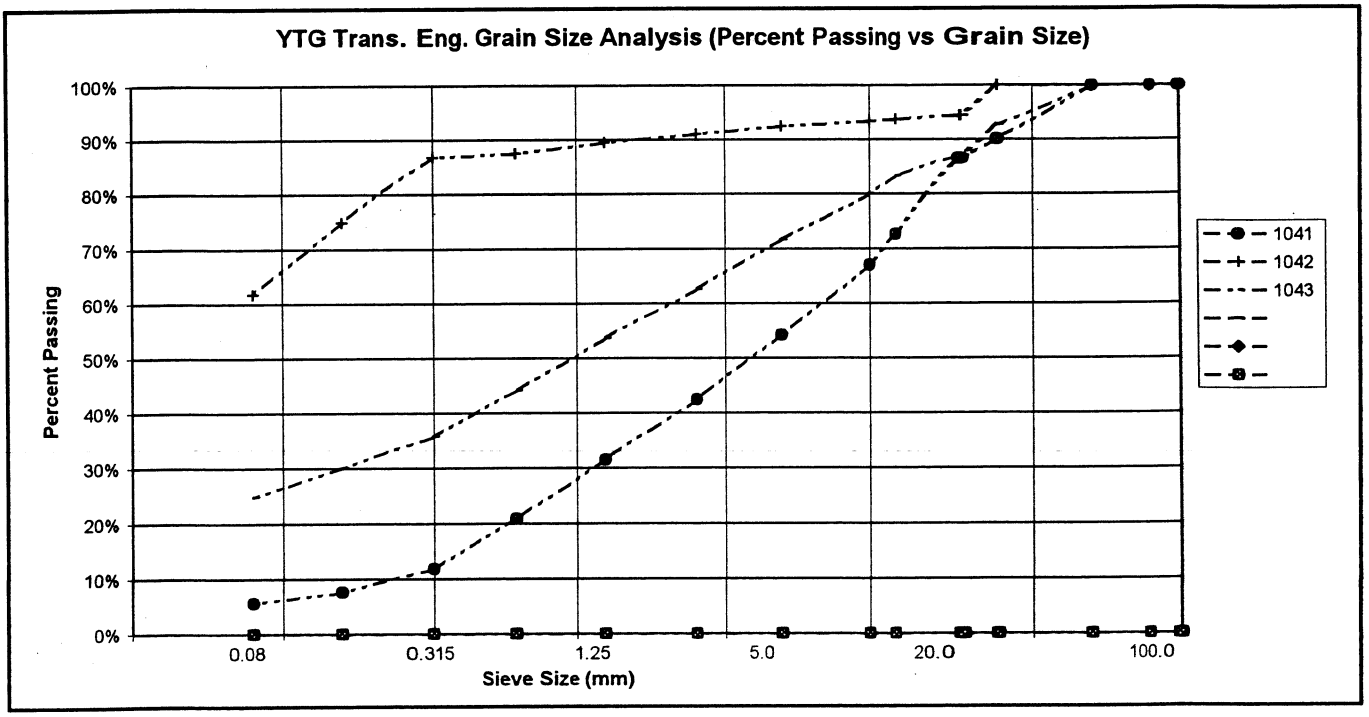


PROJECT NUMBER: 092-202101-0363
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SEGMENT 9
PROJECT LOCATION: KM 1664-1692 A/H
DRILL UNIT: B 40 L
HOLE LOCATION: 1691+675 11M LT
LOGGED BY: D.T.

HOLE No.: 558-1635

DATE COMP: 2000/06/29

FIELD NO:	1041	1042	1043			
LAB NO:	1443	1444	1445			
DEPTH:	1.4-1.6	2.8-3.0	4.5-4.7			
TYPE:	AUGER	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	90%	100%	93%			
20.0	87%	95%	87%			
12.5	73%	94%	83%			
10.0	67%	93%	80%			
5.0	54%	92%	72%			
2.5	42%	91%	63%			
1.25	32%	90%	54%			
0.630	21%	88%	44%			
0.315	12%	87%	36%			
0.160	8%	75%	30%			
0.080	6%	62%	25%			
M.C.(%):	3%	16%	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:	46	8	28			
% SAND:	49	31	47			
% FINES:	6	62	25			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW SM)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)			

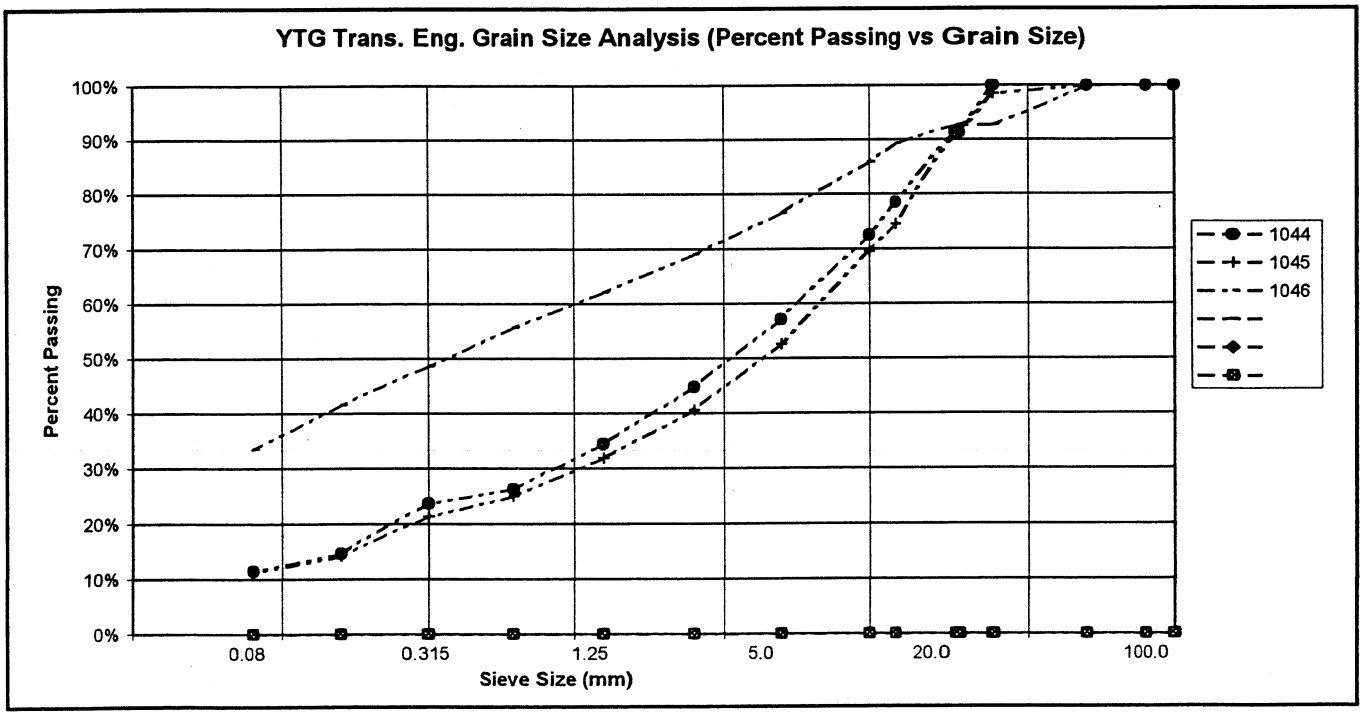


PROJECT NUMBER: 092-202101-0363
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SEGMENT 9
PROJECT LOCATION: KM 1664-1692 A/H
DRILL UNIT: B 40 L
HOLE LOCATION: 1691+600 15M LT
LOGGED BY: D.T.

HOLE No.: 558-1636

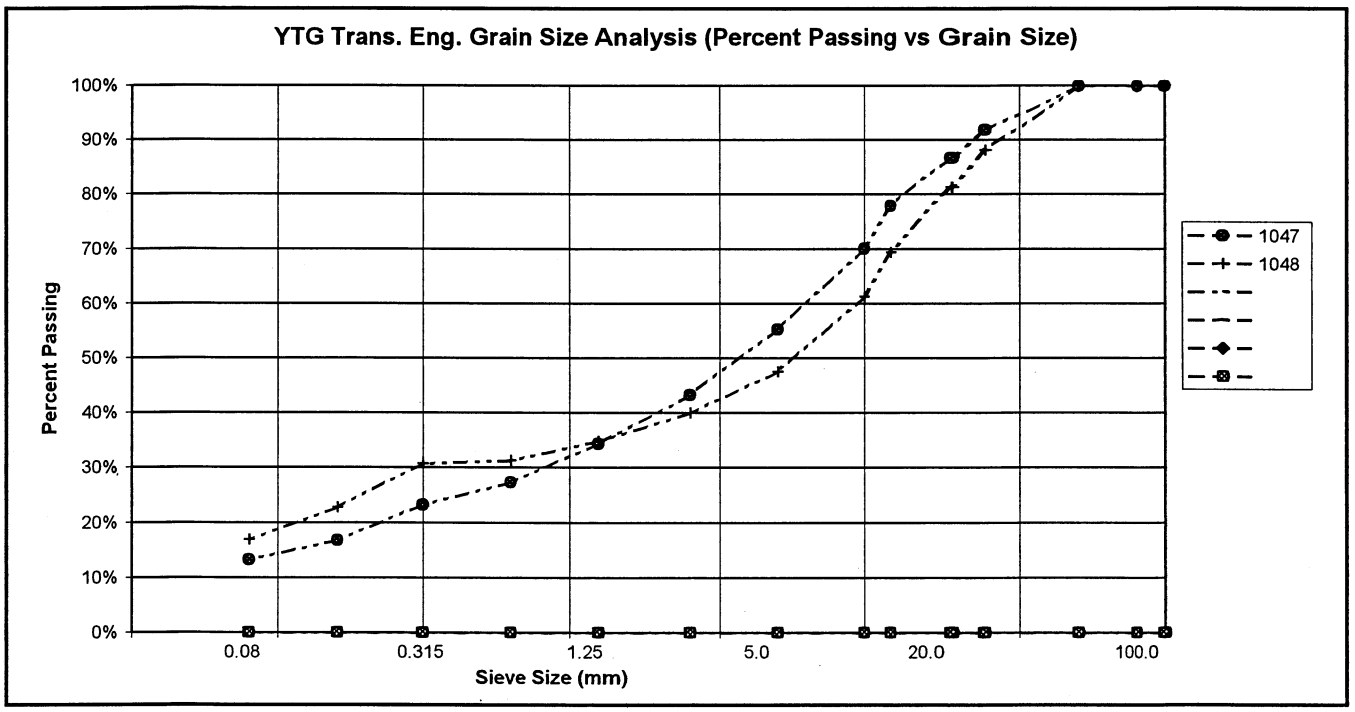
DATE COMP: 2000/06/29

FIELD NO:	1044	1045	1046			
LAB NO:	1446	1447	1448			
DEPTH:	1.4-1.6	2.9-3.1	4.5-4.7			
TYPE:	AUGER	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%	98%	93%			
20.0	91%	91%	93%			
12.5	78%	74%	89%			
10.0	73%	70%	86%			
5.0	57%	53%	76%			
2.5	45%	41%	69%			
1.25	34%	32%	62%			
0.630	26%	25%	56%			
0.315	24%	21%	49%			
0.160	15%	14%	41%			
0.080	12%	11%	34%			
M.C.(%):	9%	8%	10%			
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:	43	47	24			
% SAND:	46	41	43			
% FINES:	12	11	34			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1637
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1691+984 20M RT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/29

FIELD NO:	1047	1048				
LAB NO:	1449	1450				
DEPTH:	1.9-2.1	3.8-4.0				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	92%	88%				
20.0	87%	81%				
12.5	78%	69%				
10.0	70%	61%				
5.0	55%	48%				
2.5	43%	40%				
1.25	34%	35%				
0.630	27%	31%				
0.315	23%	31%				
0.160	17%	23%				
0.080	13%	17%				
M.C.(%):	6%	7%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	45	52				
% SAND:	42	31				
% FINES:	13	17				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)				

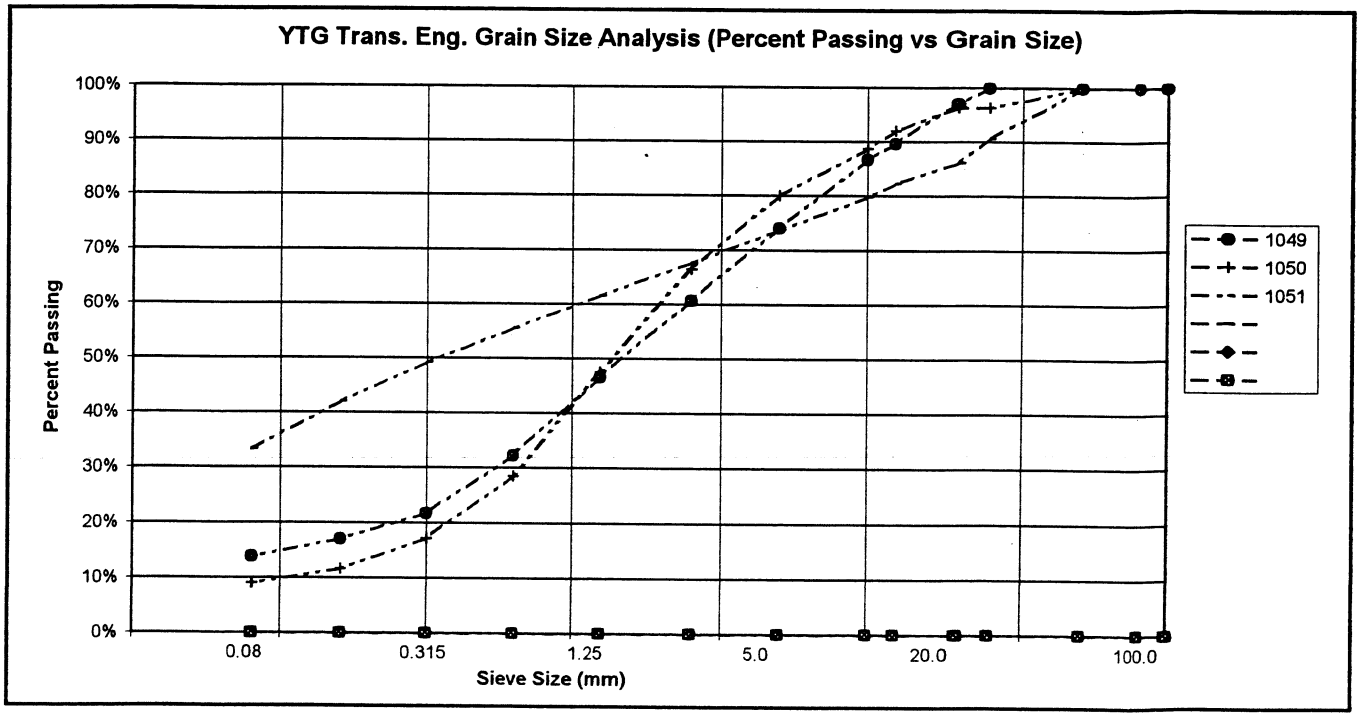


PROJECT NUMBER: 092-202101-0363
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SEGMENT 9
PROJECT LOCATION: KM 1664-1692 A/H
DRILL UNIT: B 40 L
HOLE LOCATION: 1691+595 20M RT
LOGGED BY: D.T.

HOLE No.: 558-1638

DATE COMP: 2000/06/29

FIELD NO:	1049	1050	1051			
LAB NO:	1451	1452	1453			
DEPTH:	1.4-1.6	3.0-3.2	4.5-4.7			
TYPE:	AUGER	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%	96%	91%			
20.0	97%	96%	86%			
12.5	90%	92%	82%			
10.0	87%	89%	80%			
5.0	74%	80%	74%			
2.5	61%	66%	68%			
1.25	47%	48%	62%			
0.630	32%	28%	55%			
0.315	22%	17%	49%			
0.160	17%	12%	42%			
0.080	14%	9%	33%			
M.C.(%):	13%	10%	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:	26	20	26			
% SAND:	60	71	40			
% FINES:	14	9	33			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW SM)	SILTY SAND WITH GRAVEL (SM)			

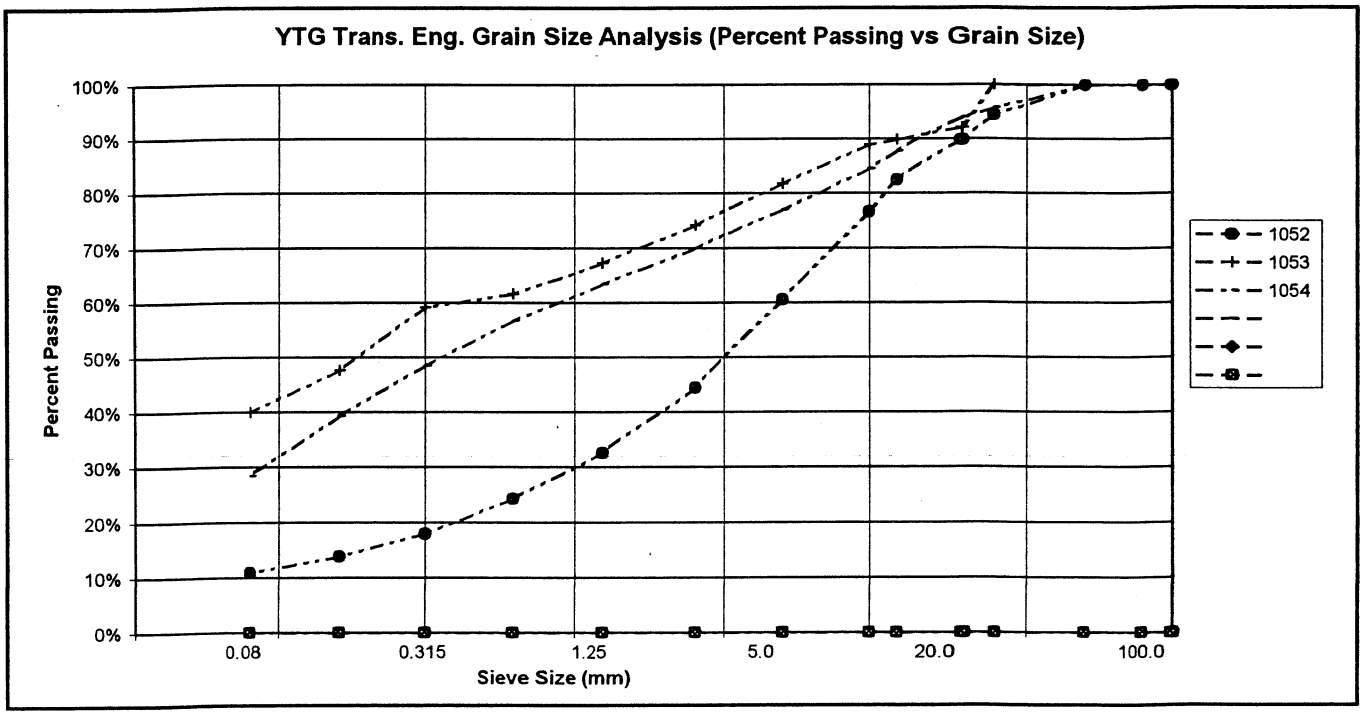


PROJECT NUMBER: 092-202101-0363
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SEGMENT 9
PROJECT LOCATION: KM 1664-1692 A/H
DRILL UNIT: B 40 L
HOLE LOCATION: 1691+525 6M LT
LOGGED BY: D.T.

HOLE No.: 558-1639

DATE COMP: 2000/06/30

FIELD NO:	1052	1053	1054			
LAB NO:	1454	1455	1456			
DEPTH:	1.3-1.5	2.8-3.0	4.5-4.7			
TYPE:	AUGER	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%	100%	96%			
20.0	90%	92%	94%			
12.5	83%	90%	88%			
10.0	77%	89%	84%			
5.0	61%	82%	77%			
2.5	44%	74%	70%			
1.25	33%	67%	63%			
0.630	24%	62%	57%			
0.315	18%	59%	48%			
0.160	14%	48%	39%			
0.080	11%	40%	28%			
M.C.(%):	8%	12%	10%			
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:	39	18	23			
% SAND:	50	42	49			
% FINES:	11	40	28			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. H. Paine & Associates Ltd.

TRANSPORTATION ENGINEERING, S-3

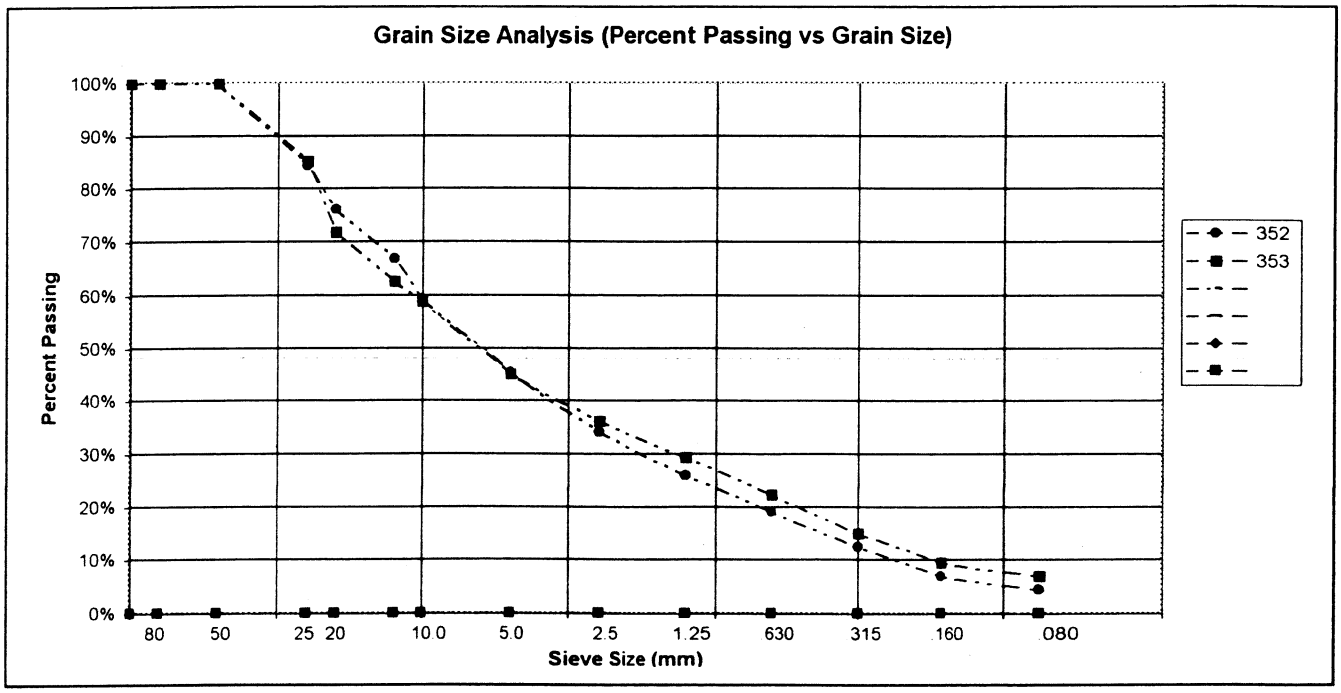
SEP 0 3 2004

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)				



HOGGAN ENGINEERING & TESTING (1980) LTD.

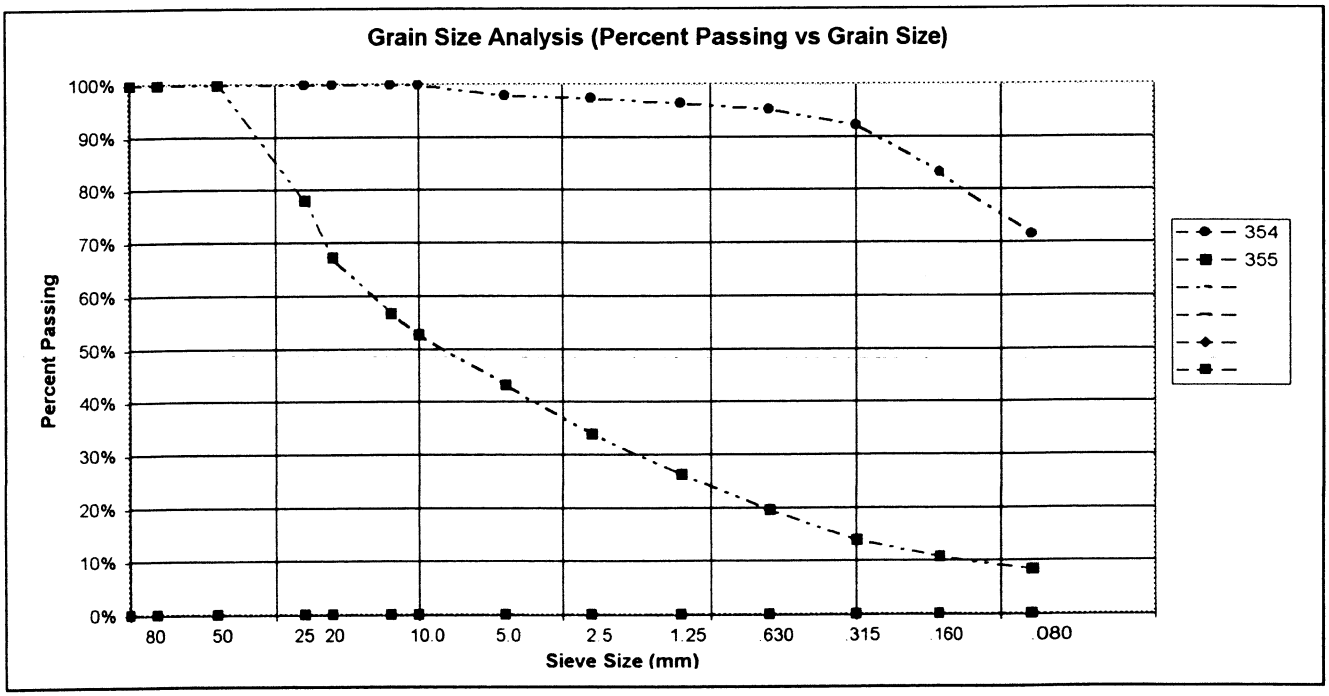
An Affiliate of J. R. Paine & Associates Ltd.

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)				



HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

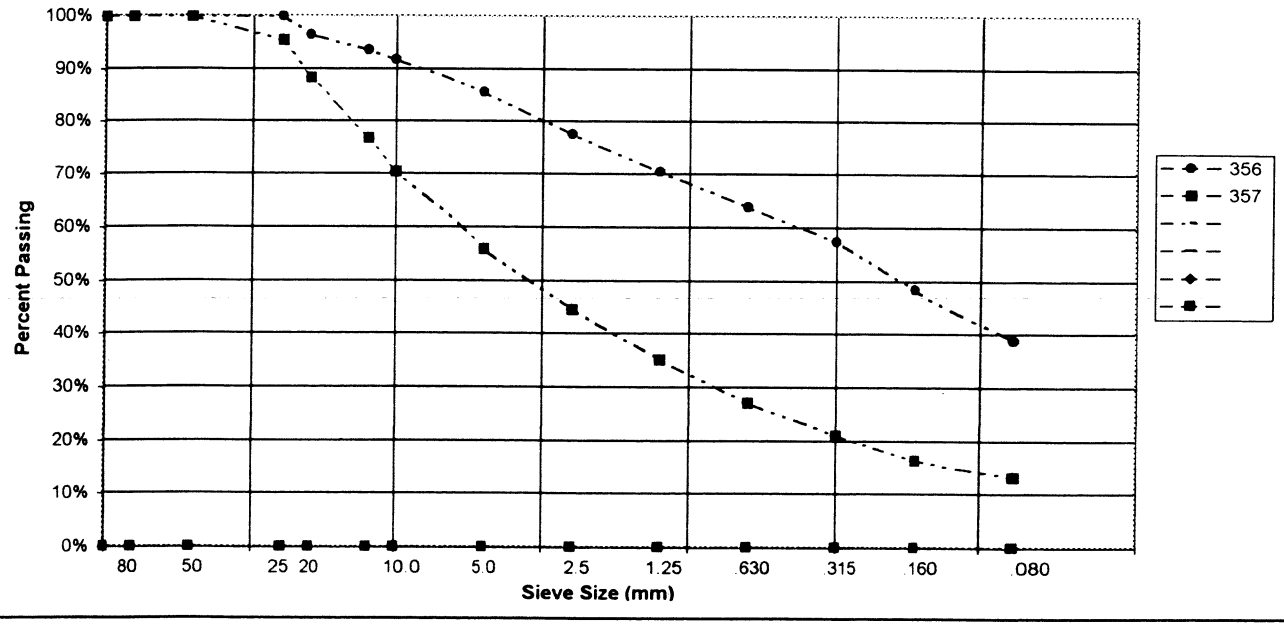
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 643667-6768001
LOGGED BY: RW

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)				

Grain Size Analysis (Percent Passing vs Grain Size)



HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

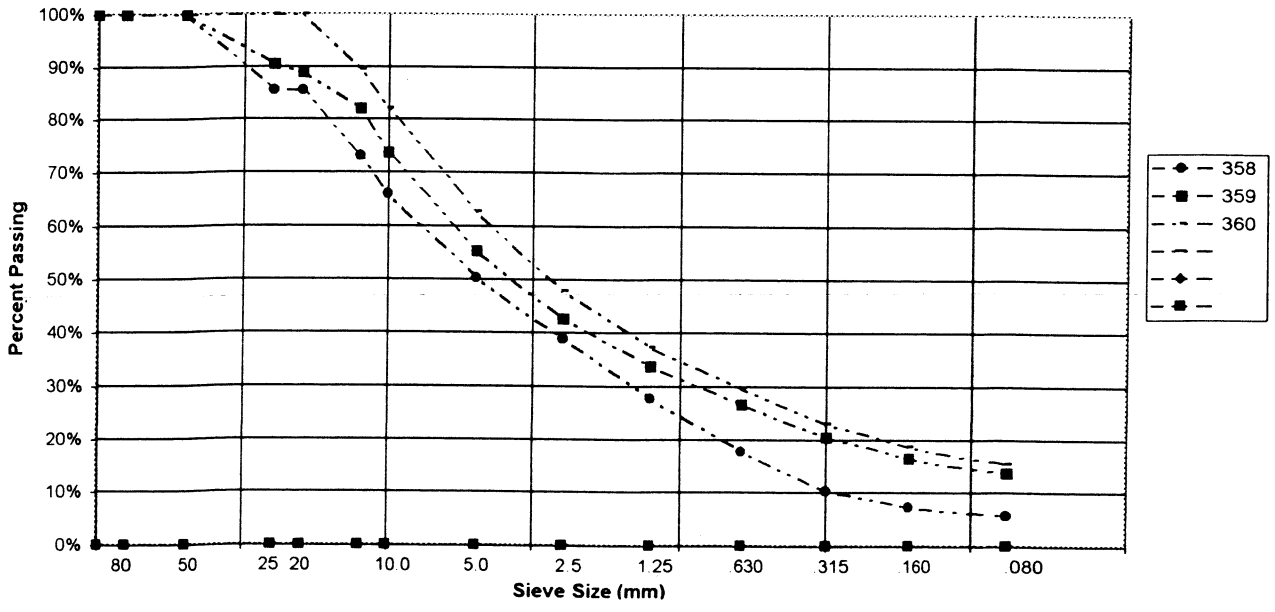
PROJECT NUMBER:	8002-318
CLIENT:	YTG, Transportation & Engineering
PROJECT NAME:	Geotechnical Services
PROJECT LOCATION:	Km 1691.7-1717.3
DRILL UNIT:	CME75
HOLE LOCATION:	643448-6767987
LOGGED BY:	RW

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)			

Grain Size Analysis (Percent Passing vs Grain Size)



HOGGAN ENGINEERING & TESTING (1980) LTD.

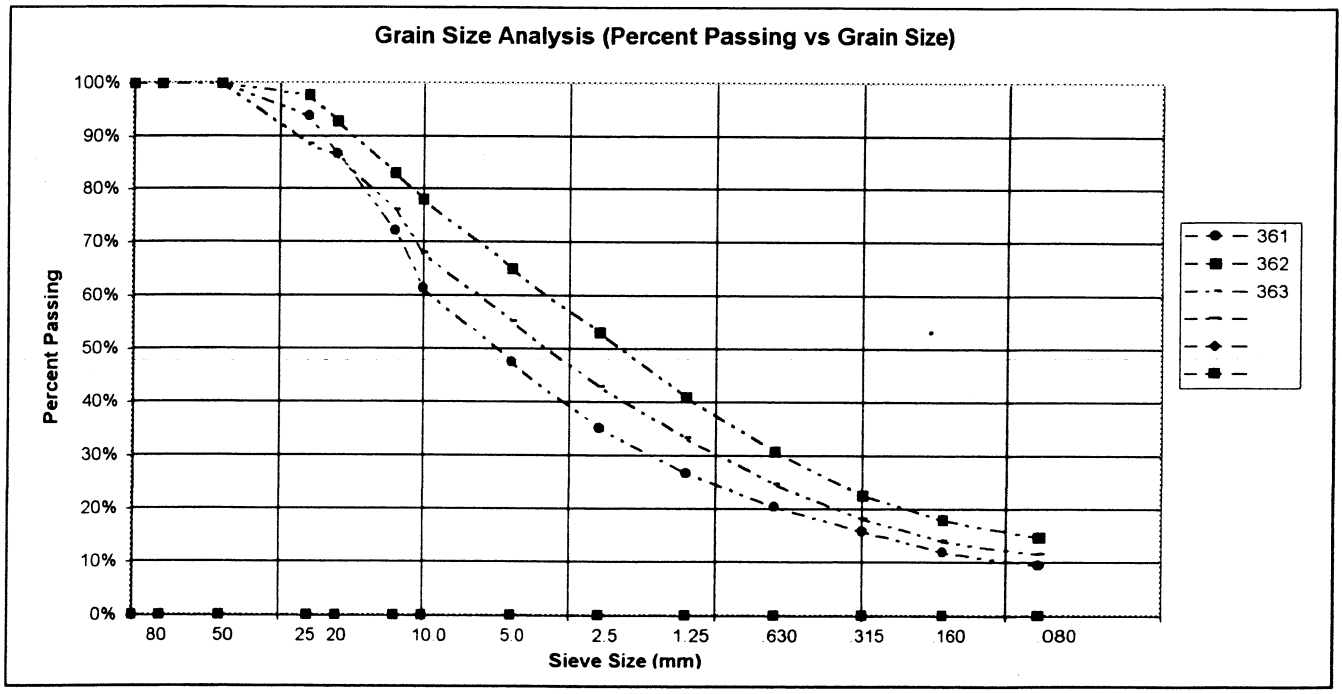
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 643430-6768053
LOGGED BY: RW

HOLE No.: 30004

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)			

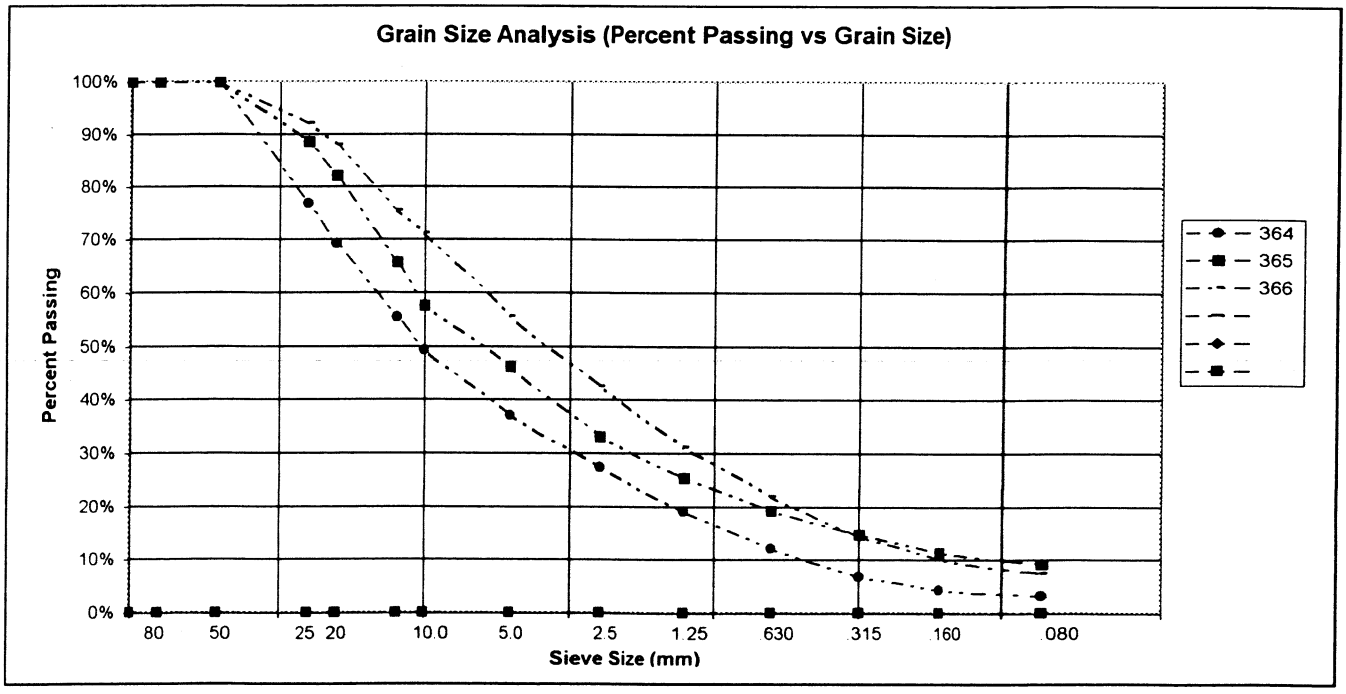


HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER:	8002-318		HOLE No.: 30005
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		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)			

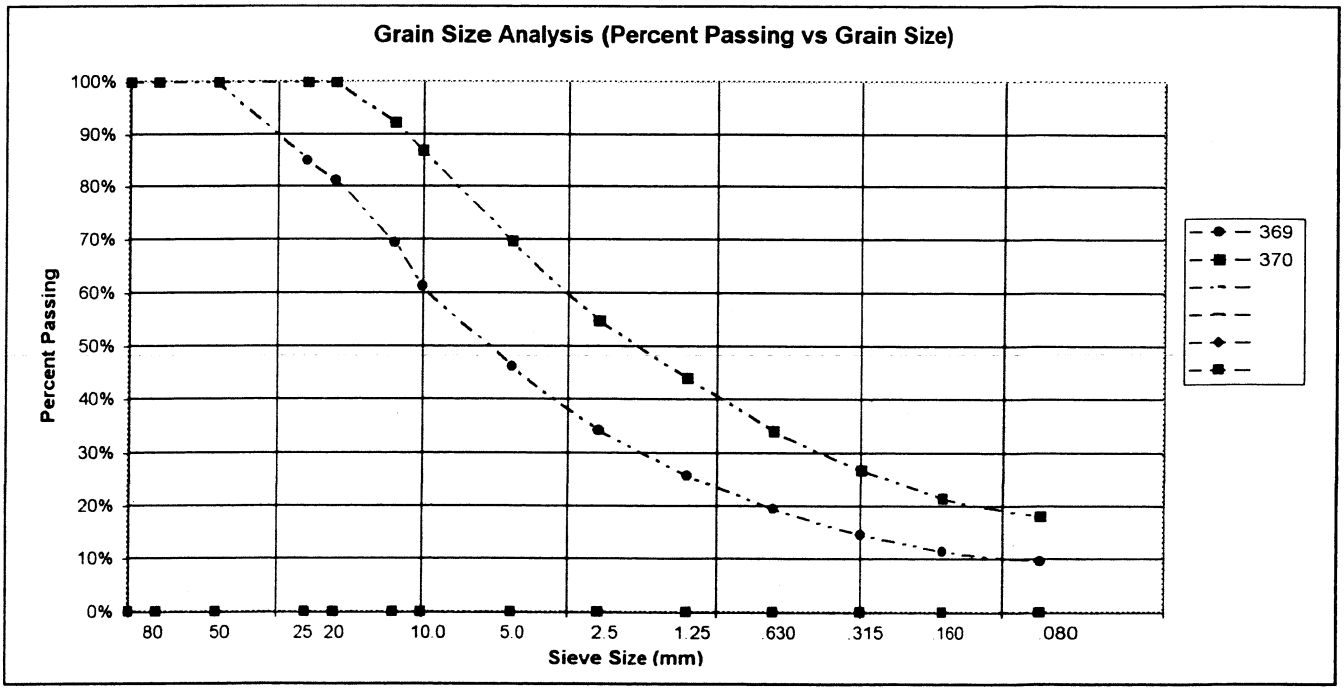


HOGGAN ENGINEERING & TESTING (1980) LTD.

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)				



HOGGAN ENGINEERING & TESTING (1980) LTD.

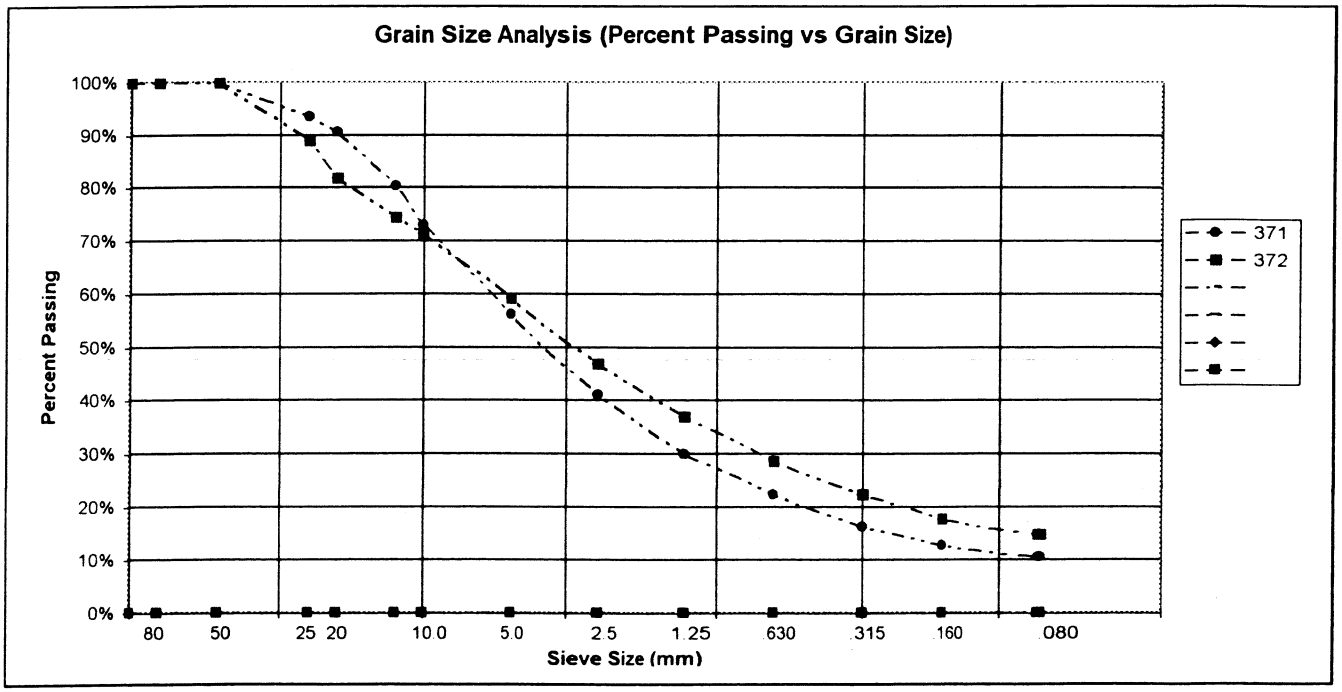
An Affiliate of J. R. Paine & Associates Ltd.

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)				

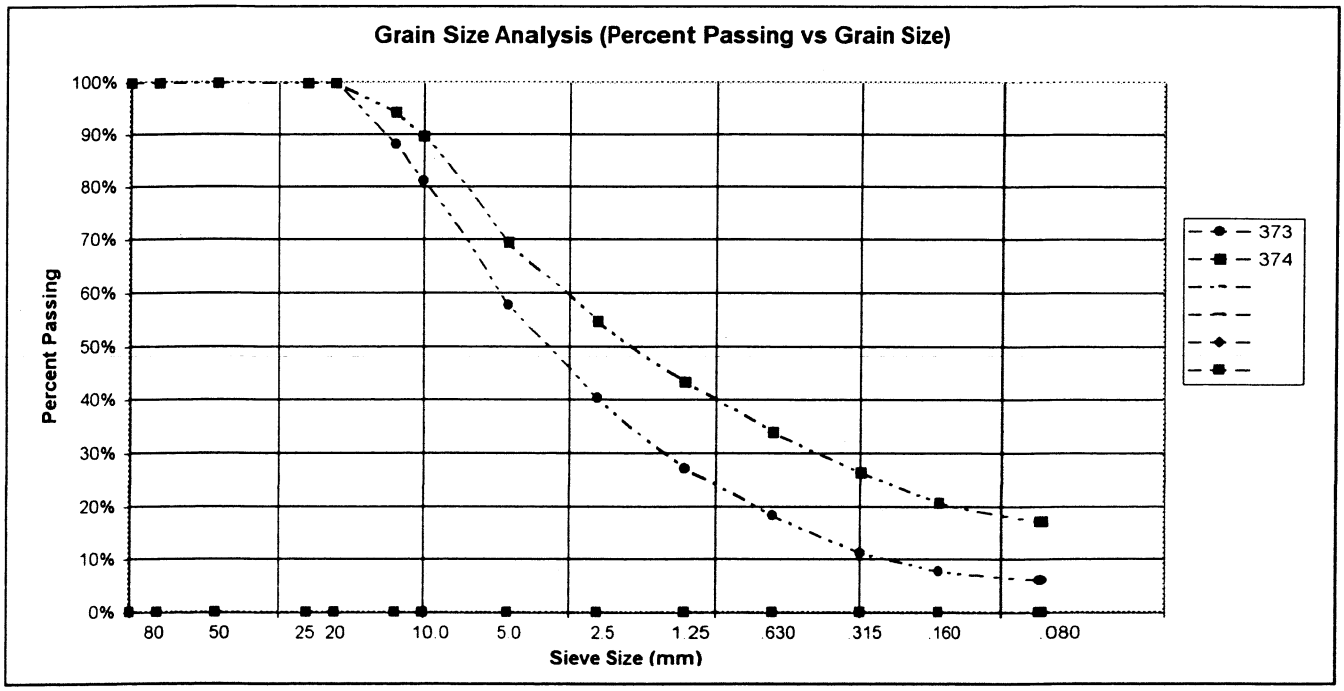


HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER:	8002-318		HOLE No.: 30008
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		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)				



HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

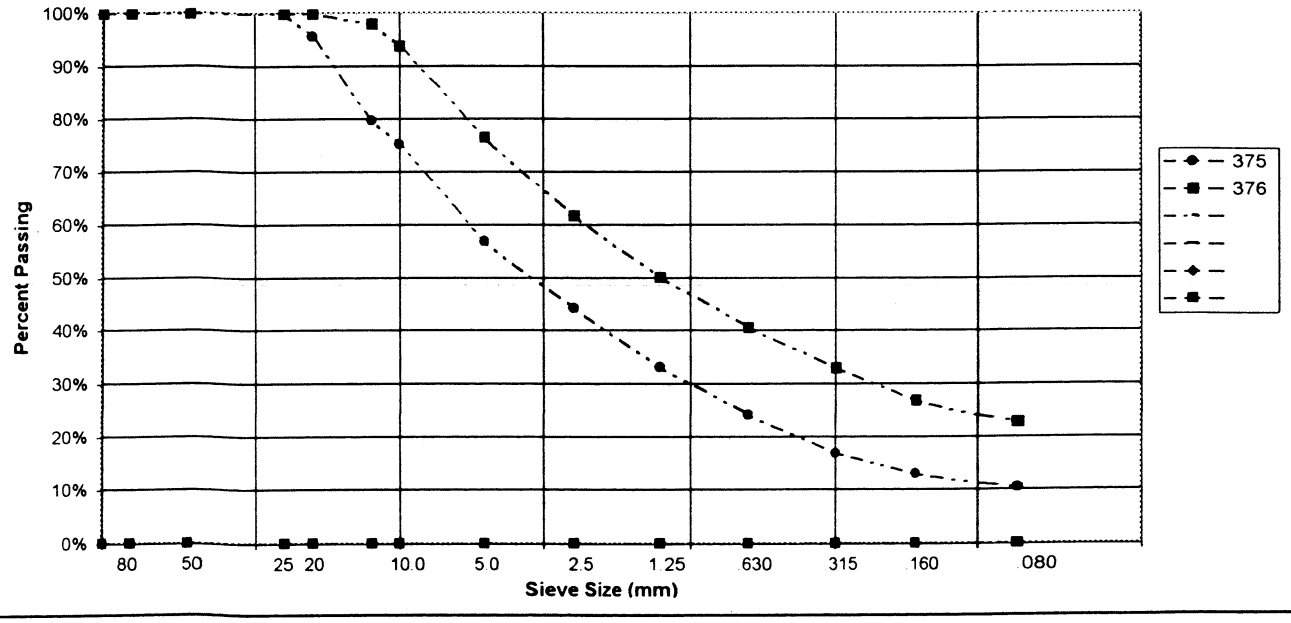
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 642265-6768038
LOGGED BY: RW

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)



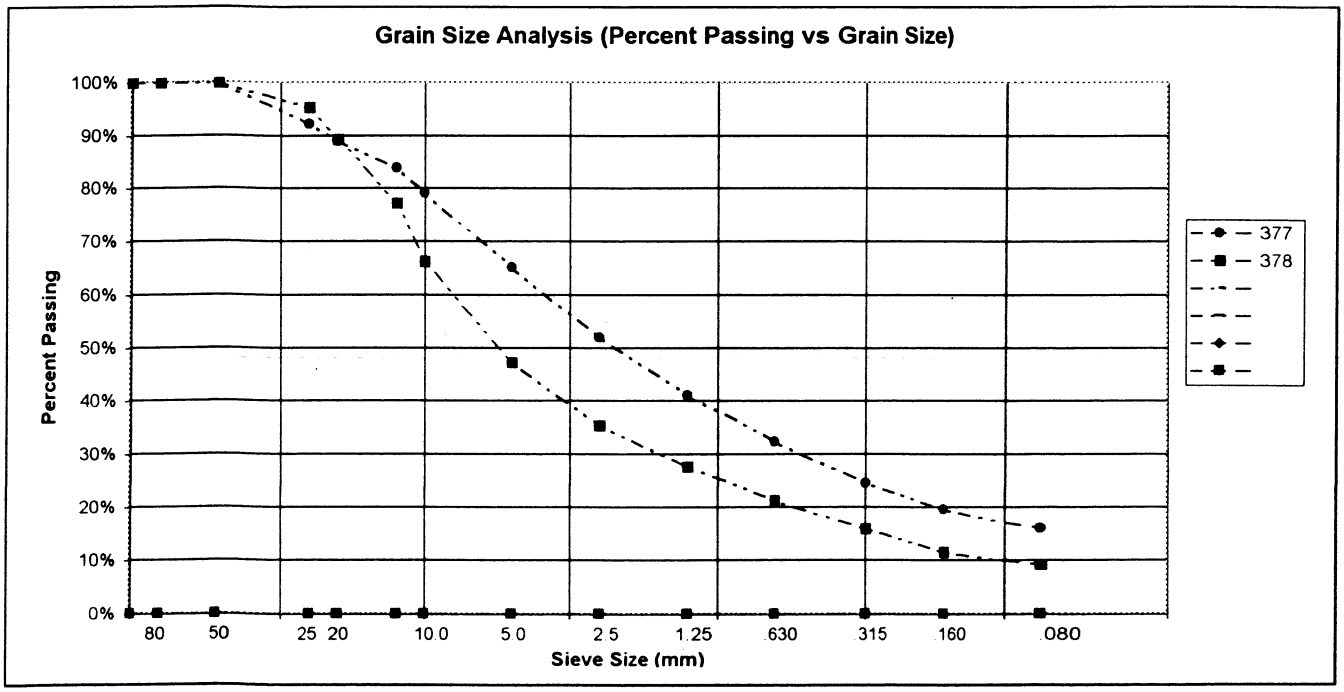
HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. 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: 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.

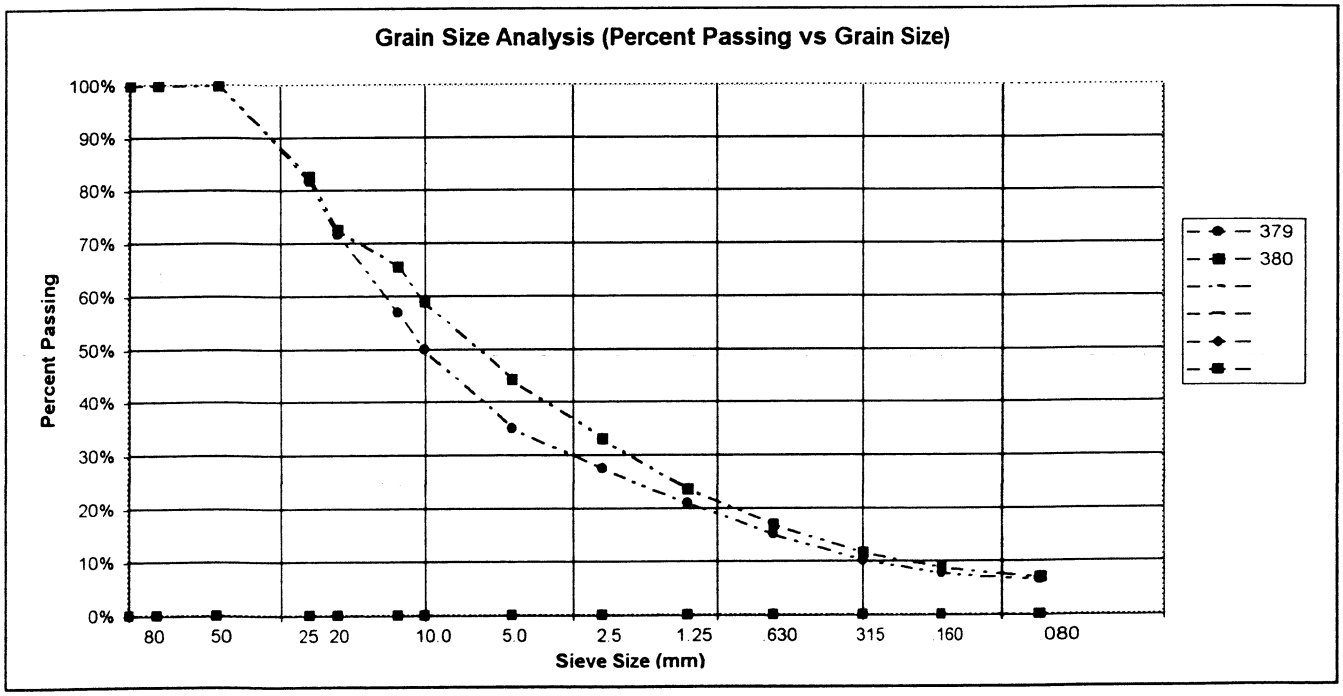
An Affiliate of J. H. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 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)				



HOGGAN ENGINEERING & TESTING (1980) LTD.

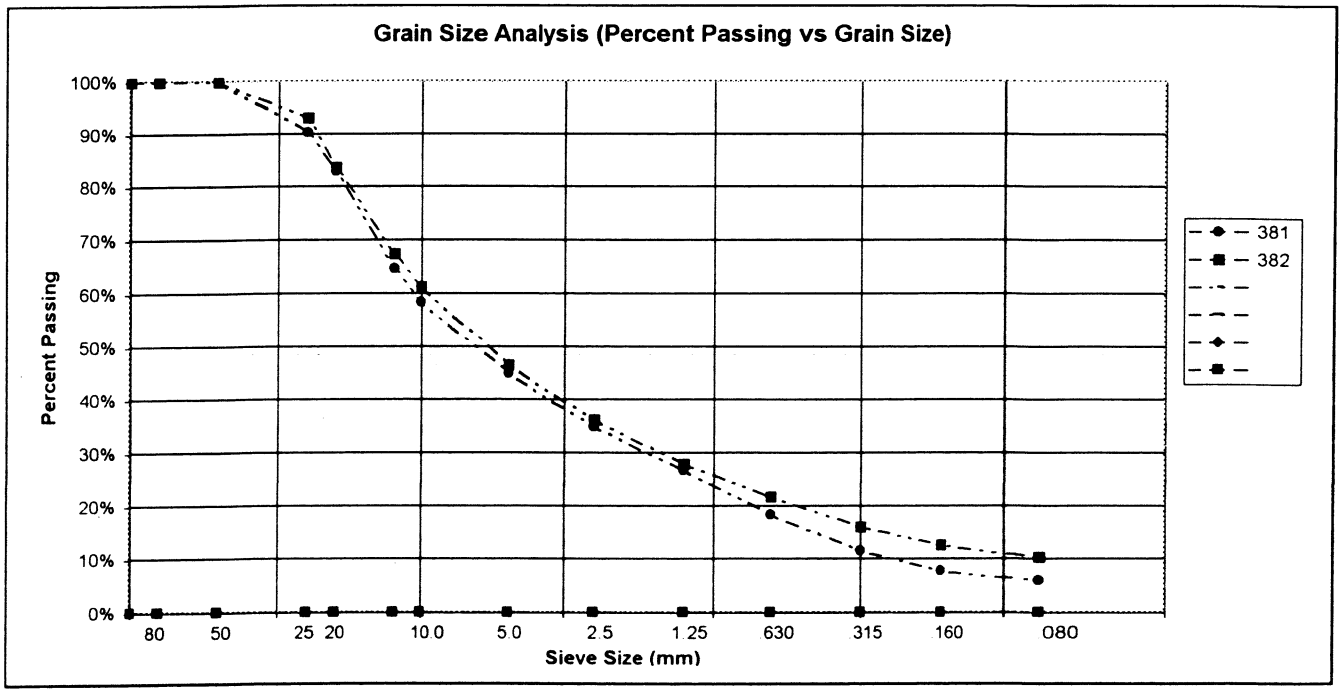
An Affiliate of J. R. Paine & Associates Ltd.

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.

An Affiliate of J. R. Paine & Associates Ltd.

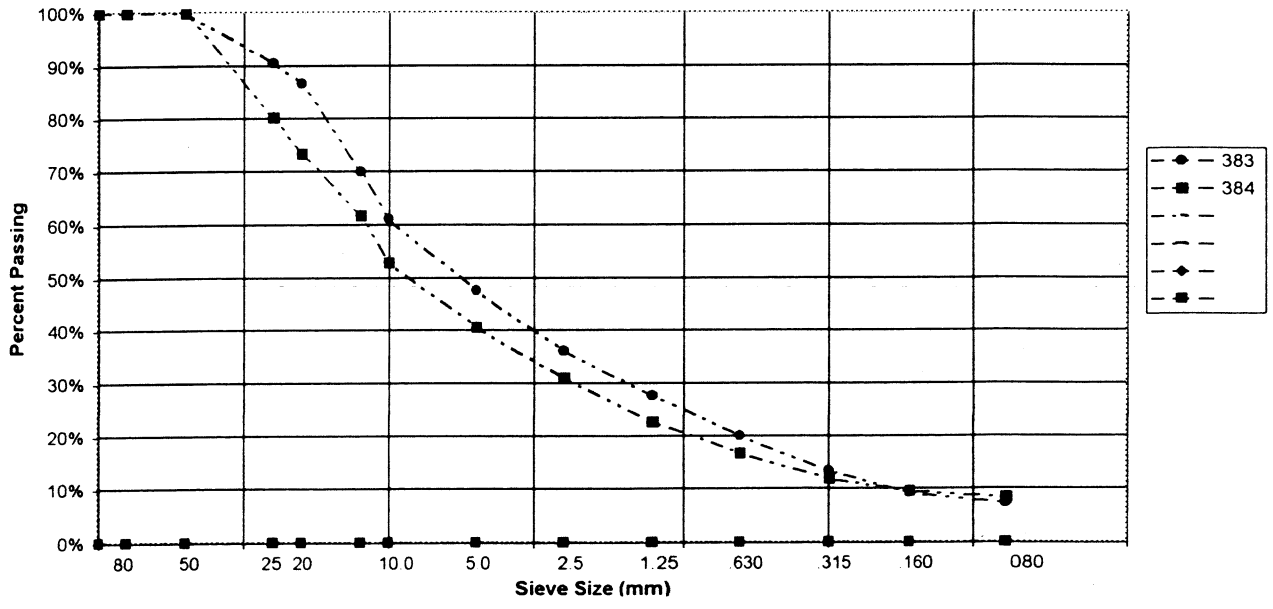
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 641469-6768054
LOGGED BY: RW

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.

An Affiliate of J. R. Paine & Associates Ltd.

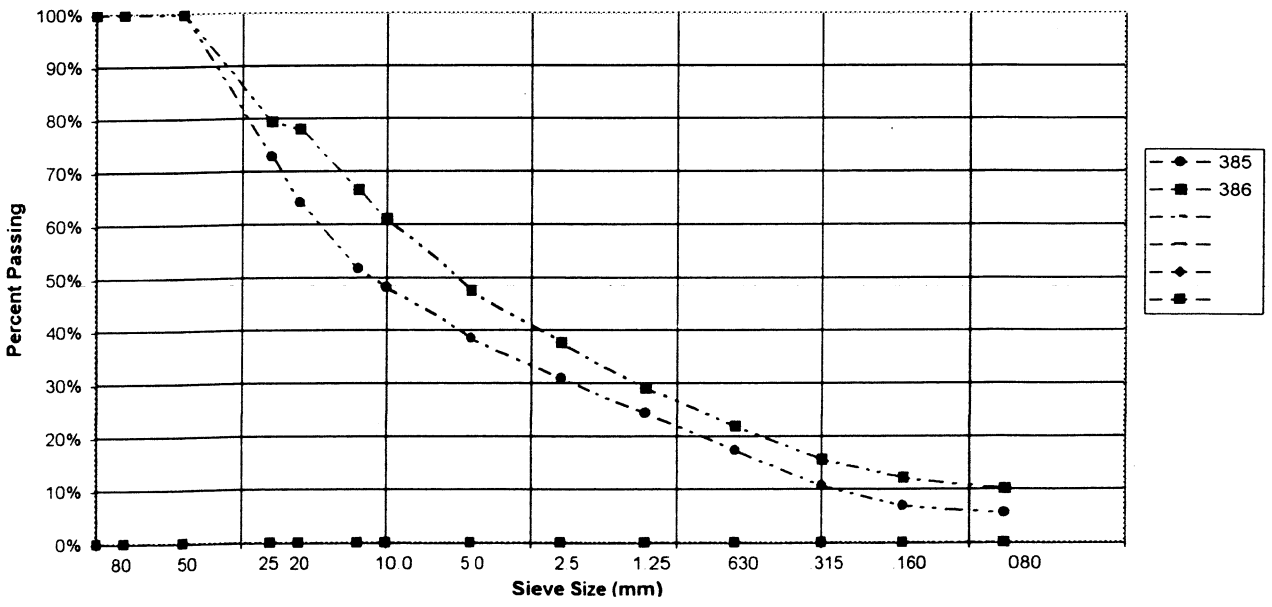
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 641287-6768036
LOGGED BY: RW

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.

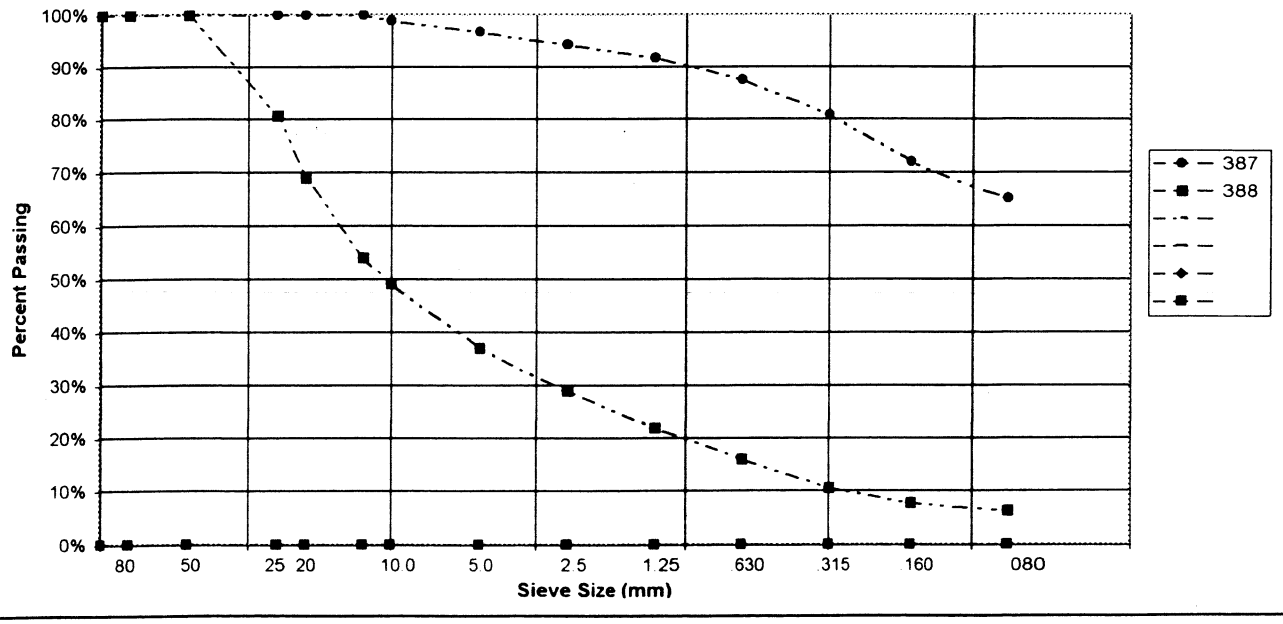
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 641051-6767939
LOGGED BY: RW

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)				

Grain Size Analysis (Percent Passing vs Grain Size)

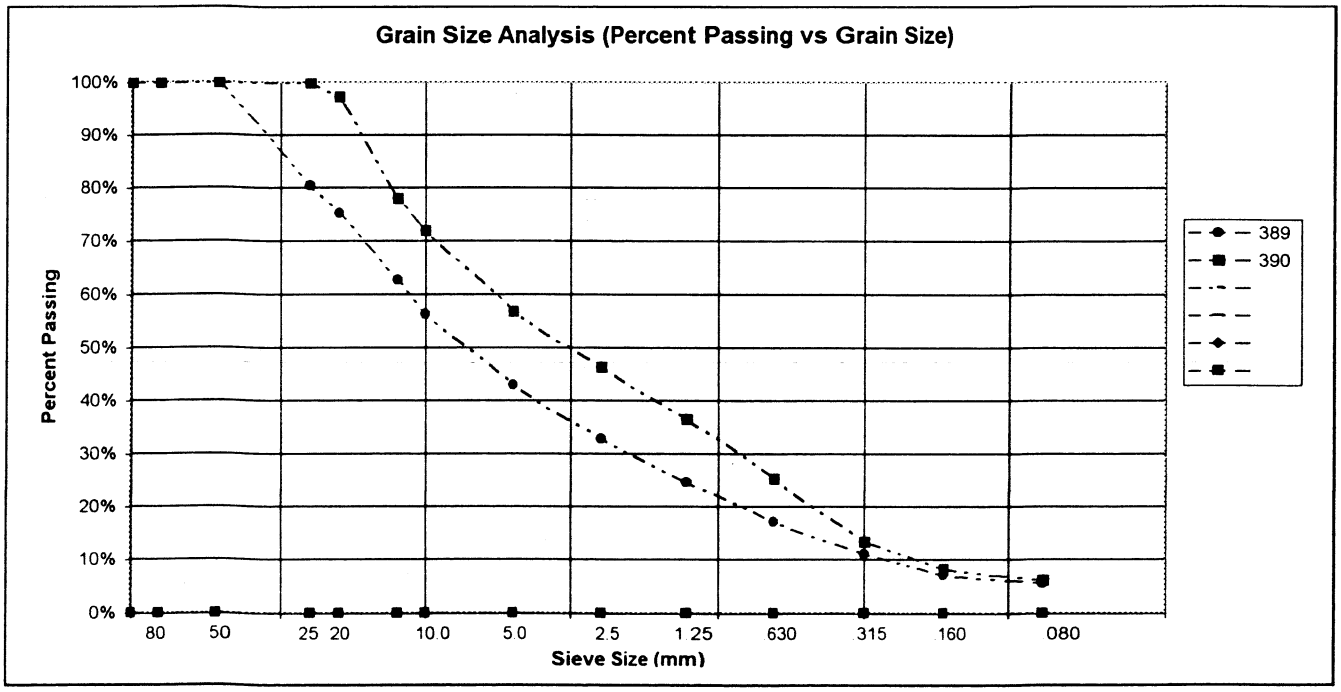


HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER:	8002-318	HOLE No.:	30016
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	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)				

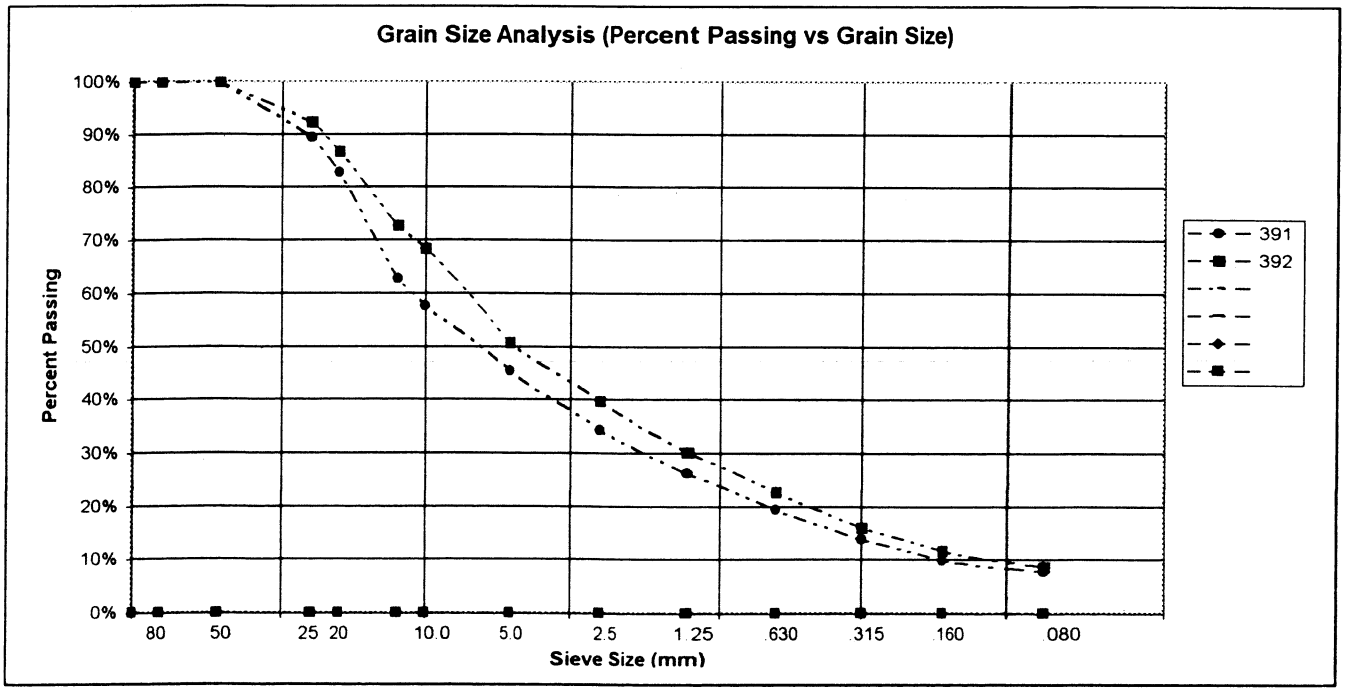


HOGGAN ENGINEERING & TESTING (1980) LTD.

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.

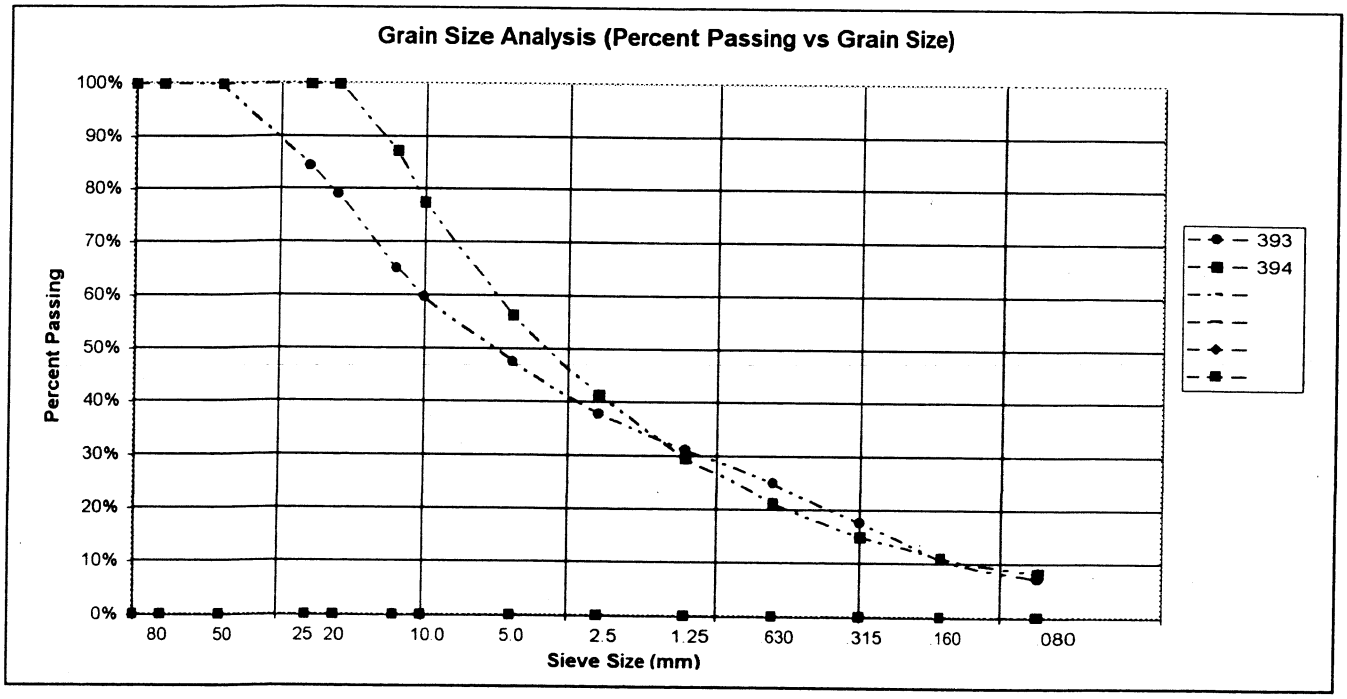
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 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. R. Paine & Associates Ltd.

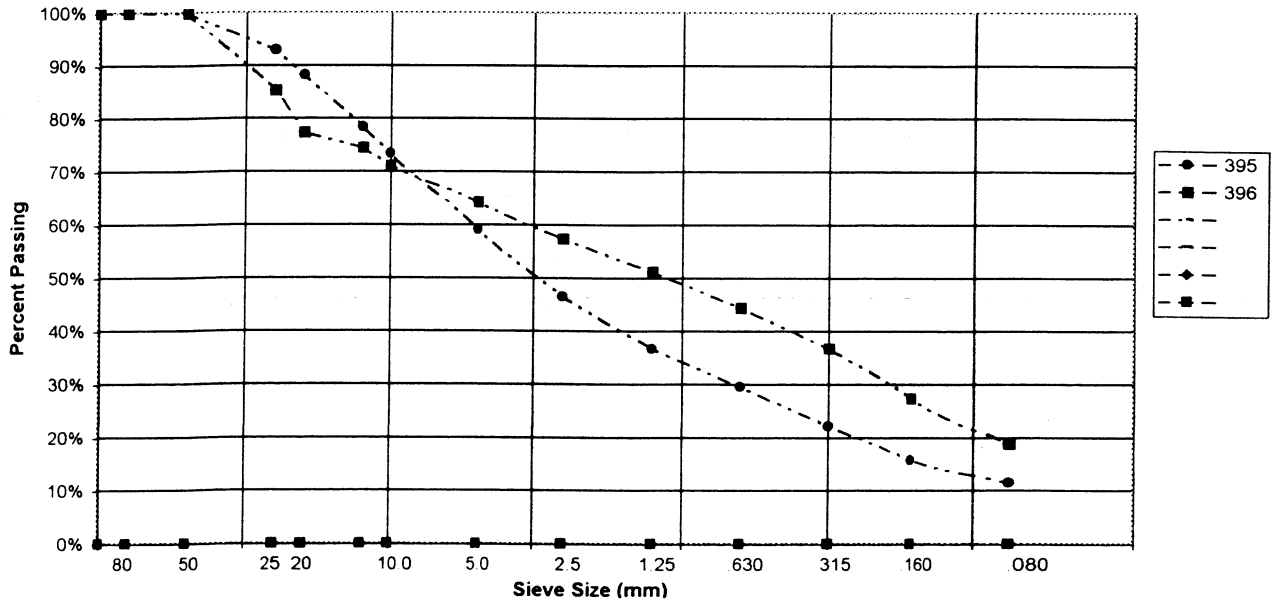
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 640524-6767579
LOGGED BY: RW

HOLE No.: 30019

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)				

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.:	30020
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	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.

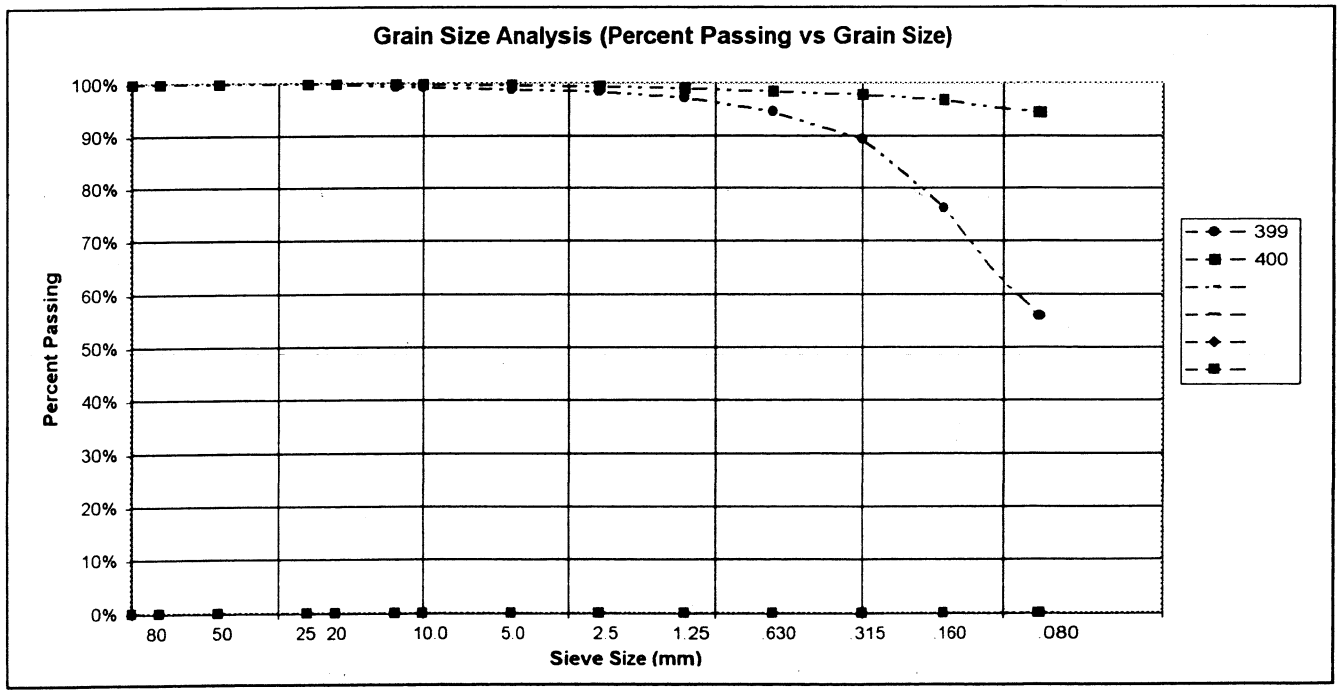
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 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)				



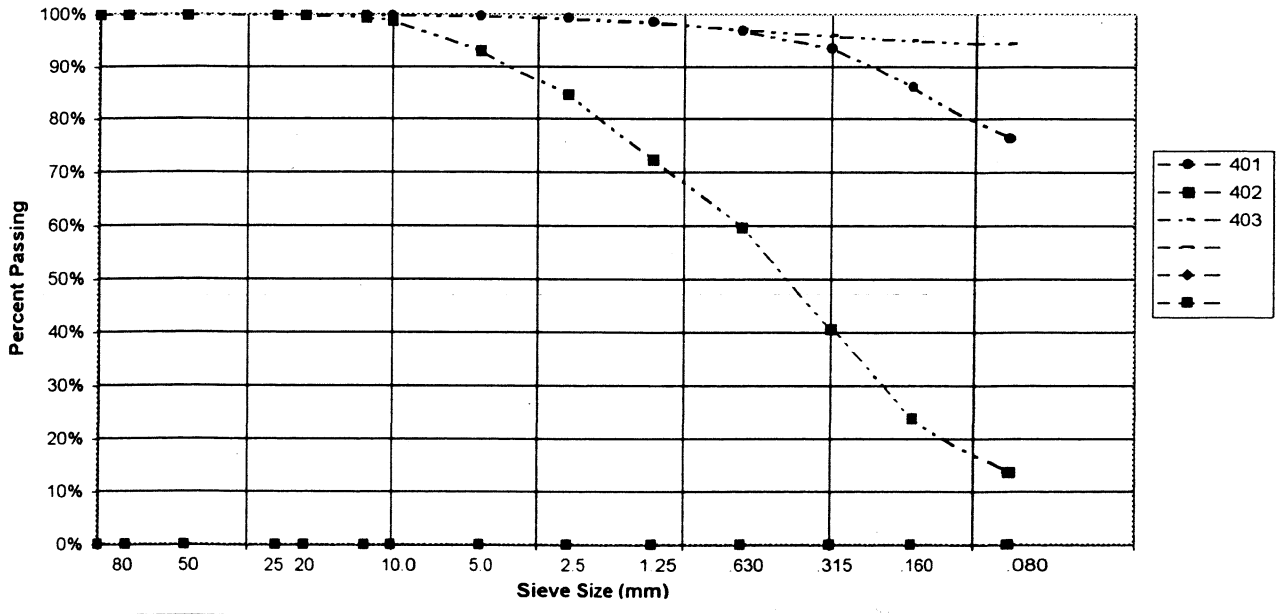
HOGGAN ENGINEERING & TESTING (1980) LTD.

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)			

Grain Size Analysis (Percent Passing vs Grain Size)



HOGGAN ENGINEERING & TESTING (1980) LTD.

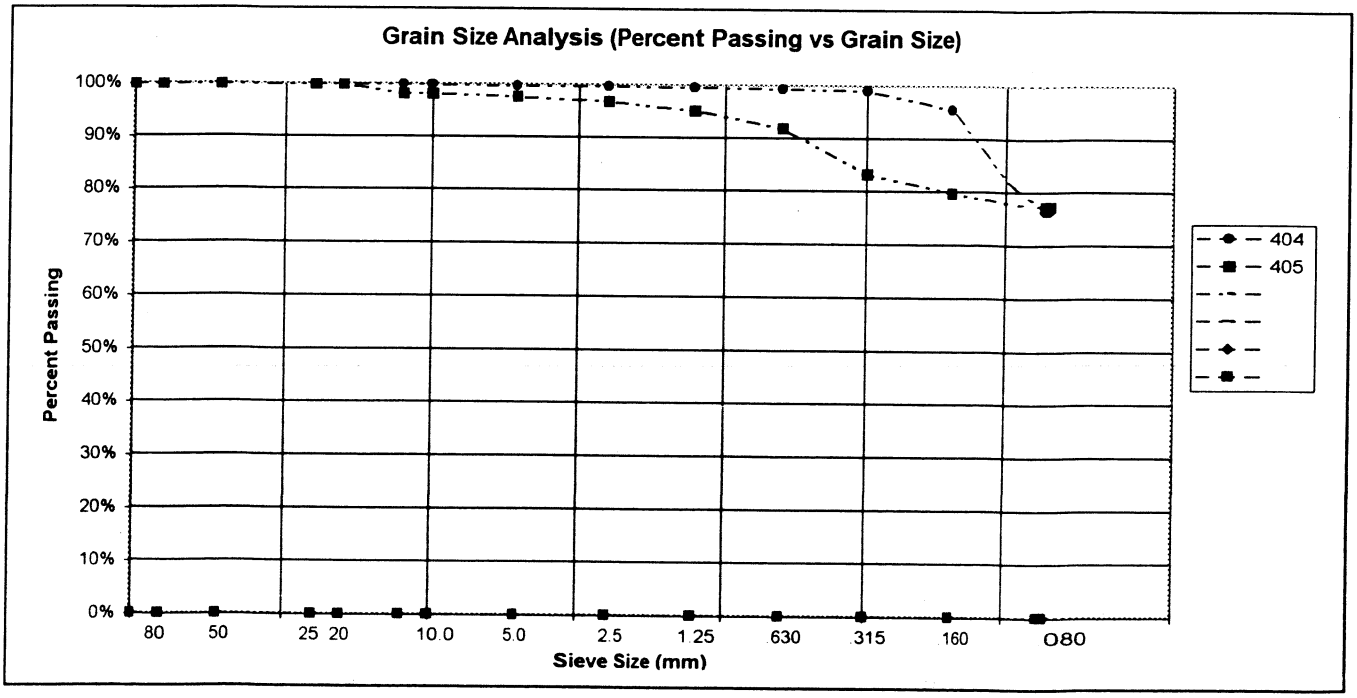
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER:	8002-318
CLIENT:	YTG, Transportation & Engineering
PROJECT NAME:	Geotechnical Services
PROJECT LOCATION:	Km 1691.7-1717.3
DRILL UNIT:	CME75
HOLE LOCATION:	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.

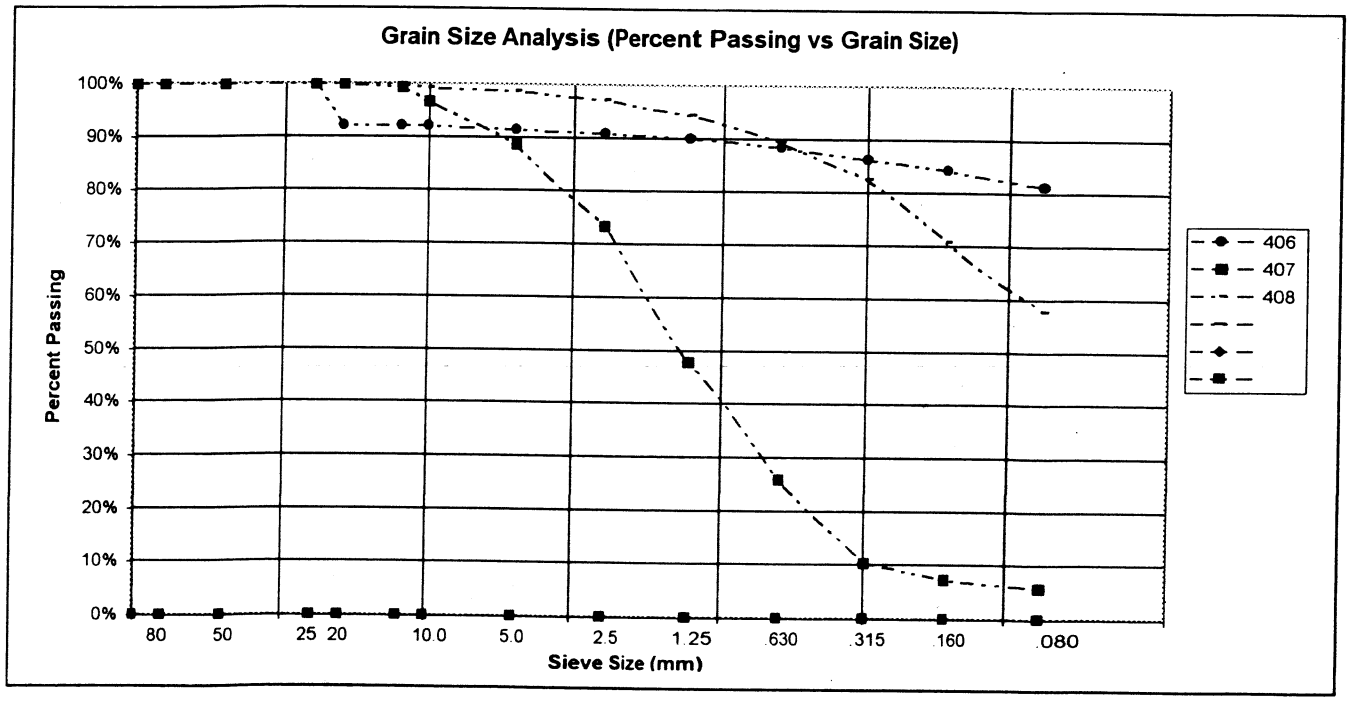
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 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.

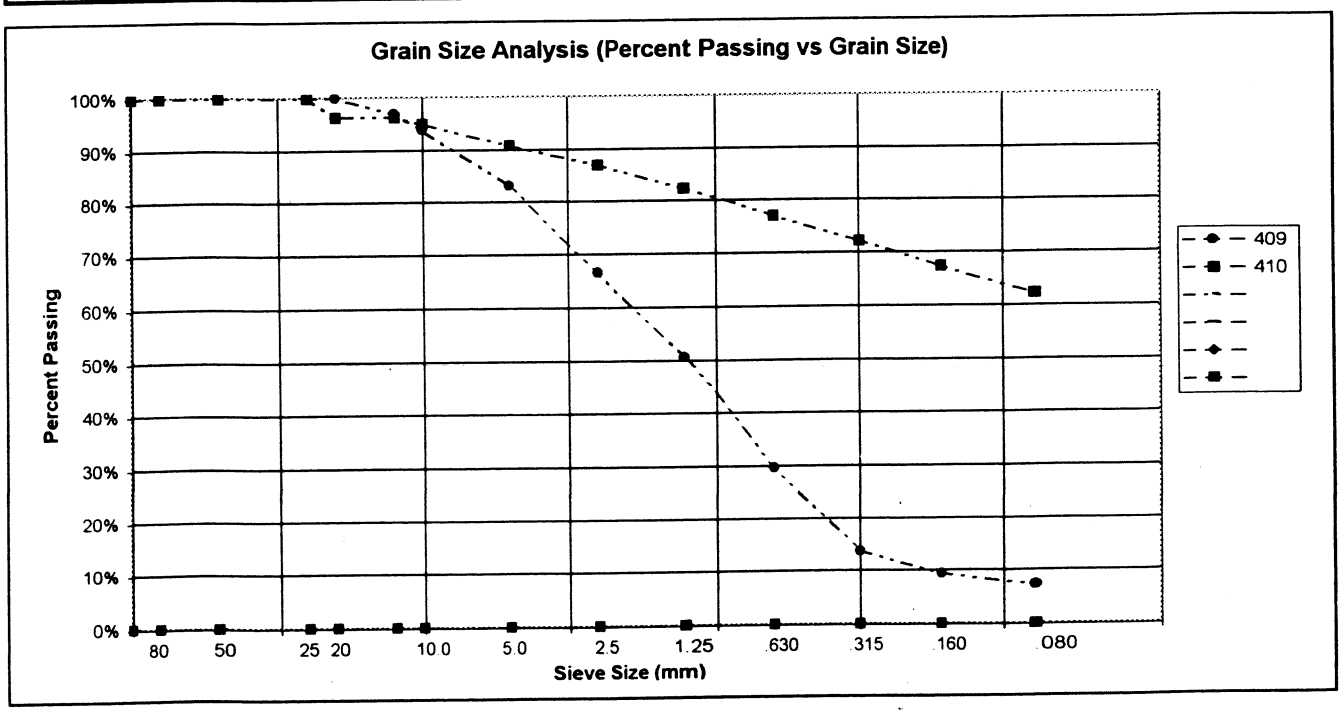
An Affiliate of J. R. Paine & Associates Ltd.

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.

An Affiliate of J. R. Paine & Associates Ltd.

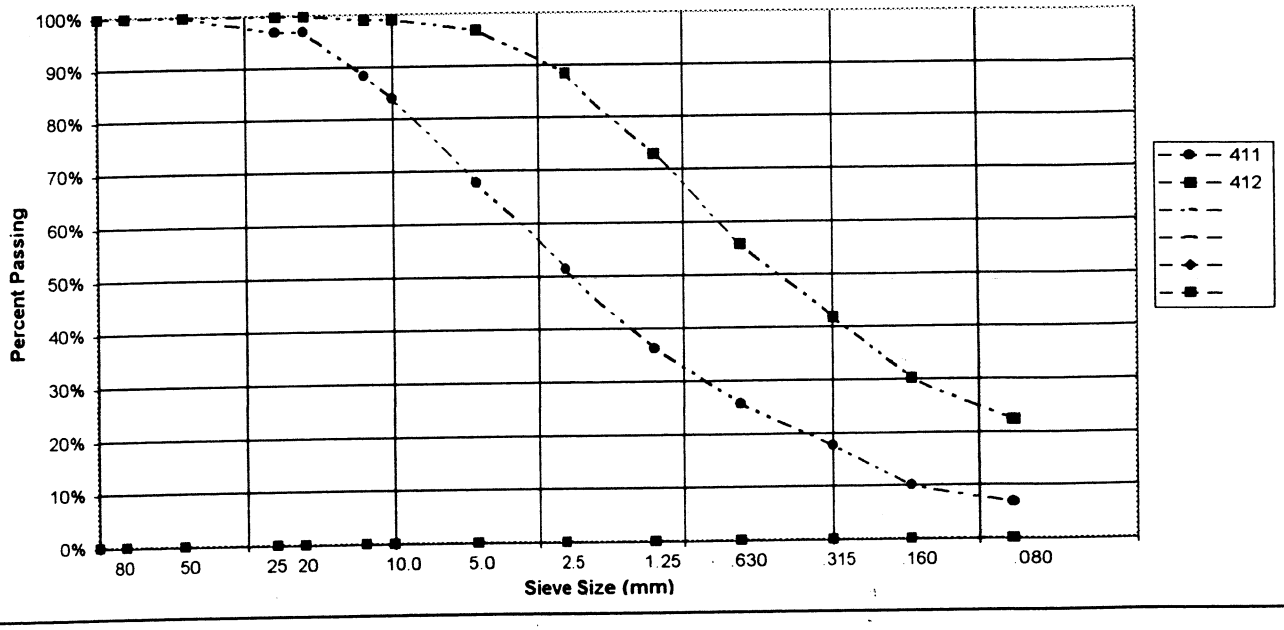
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 639356-6766769
LOGGED BY: RW

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.

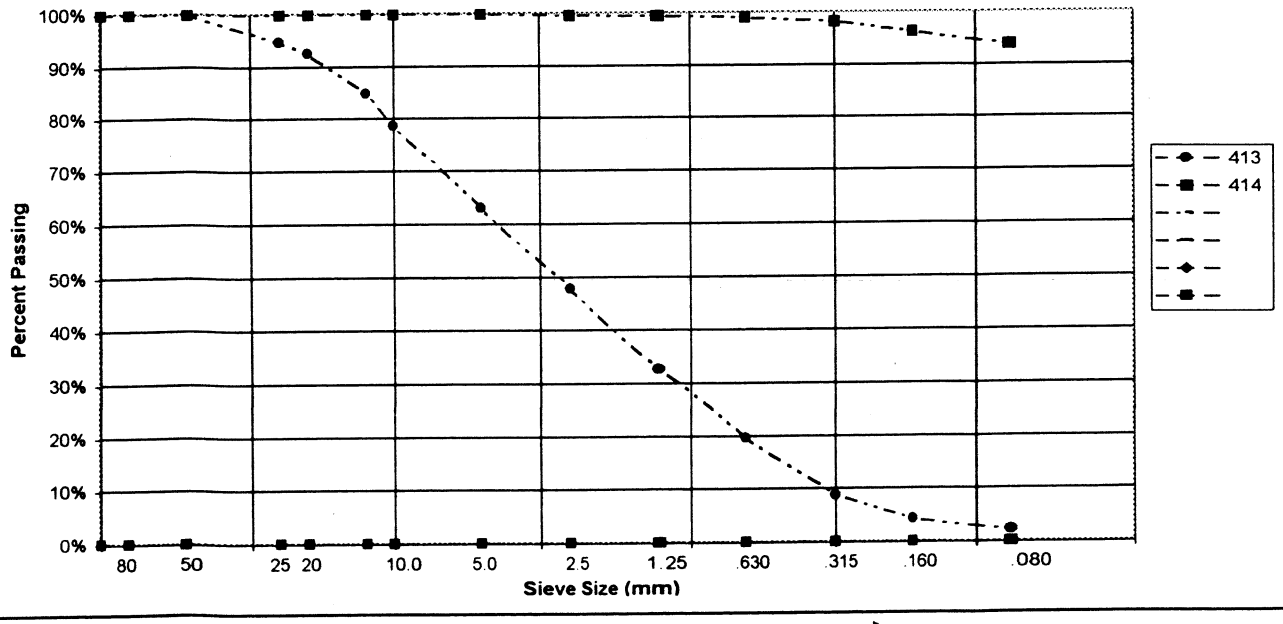
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 639213-6766735
LOGGED BY: RW

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)				

Grain Size Analysis (Percent Passing vs Grain Size)



HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

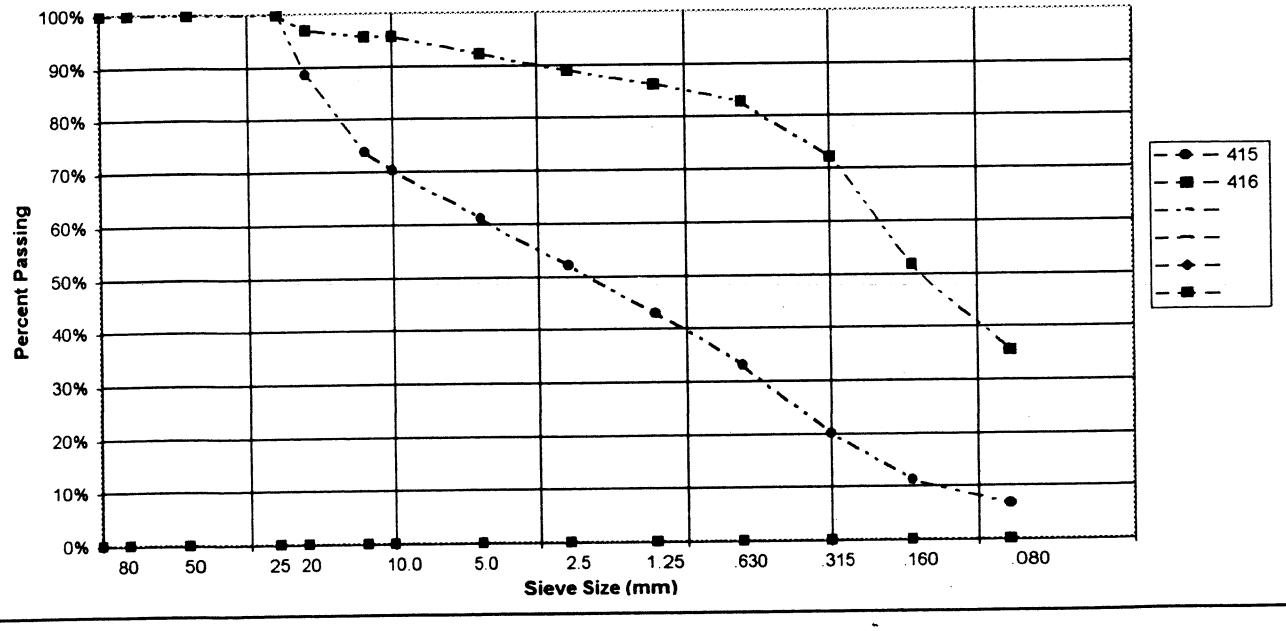
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 639229-6766708
LOGGED BY: RW

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.

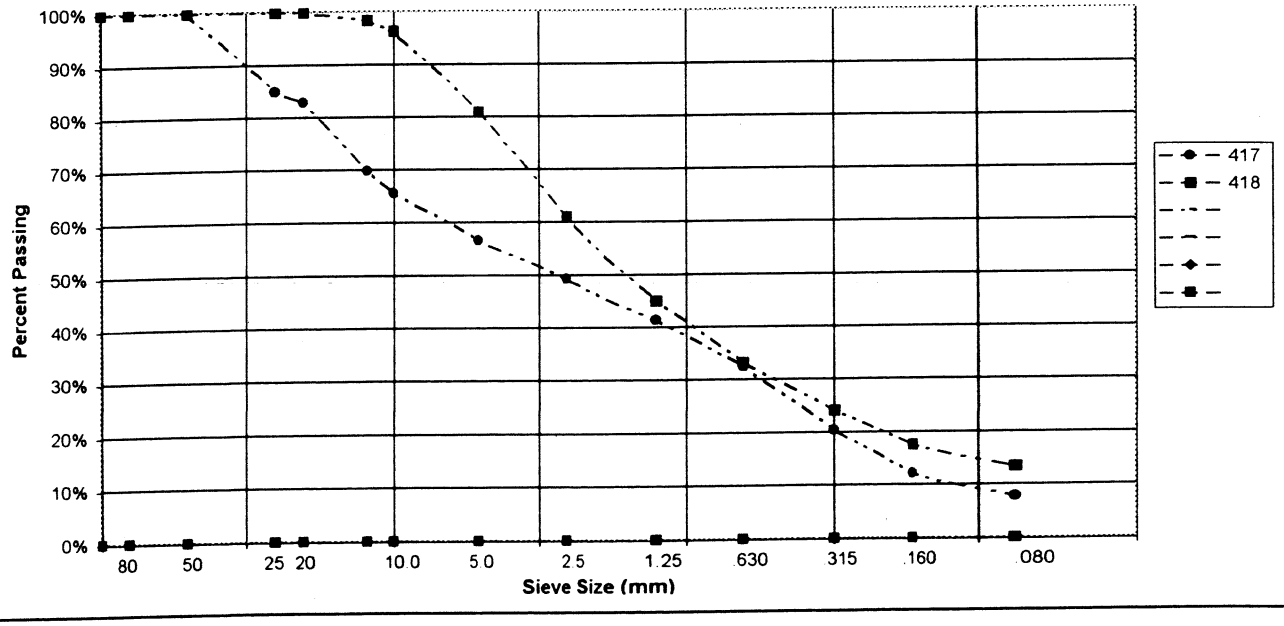
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 639106-6766653
LOGGED BY: RW

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.

An Affiliate of J. R. Paine & Associates Ltd.

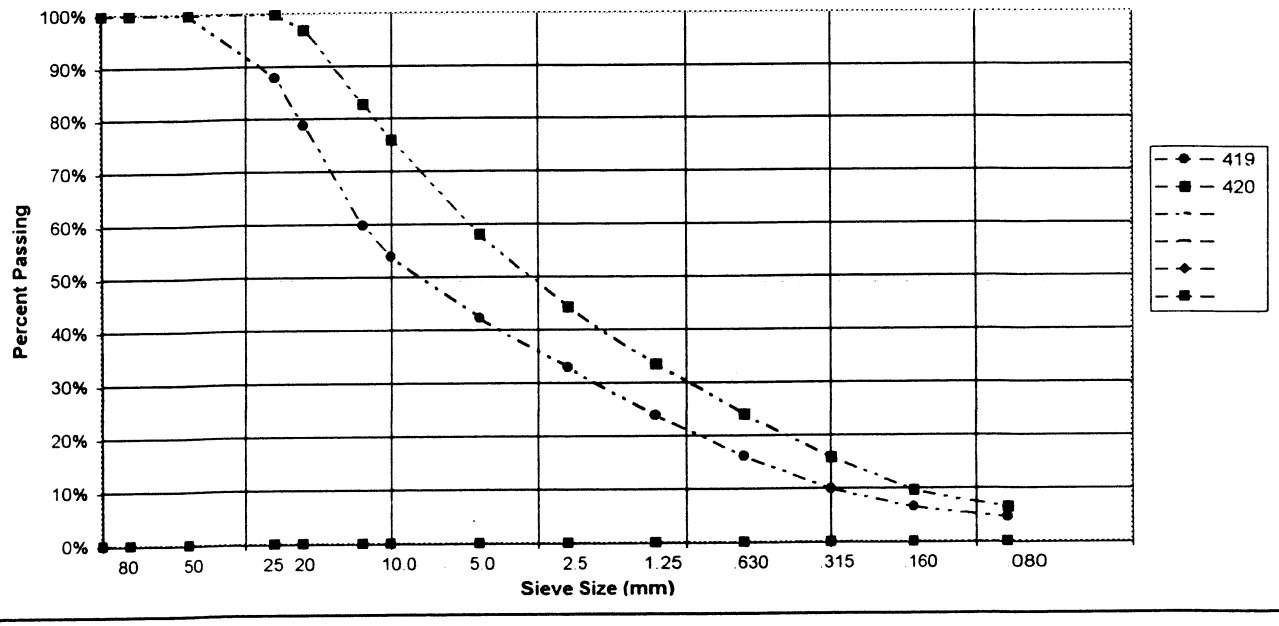
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 638909-6766547
LOGGED BY: RW

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.

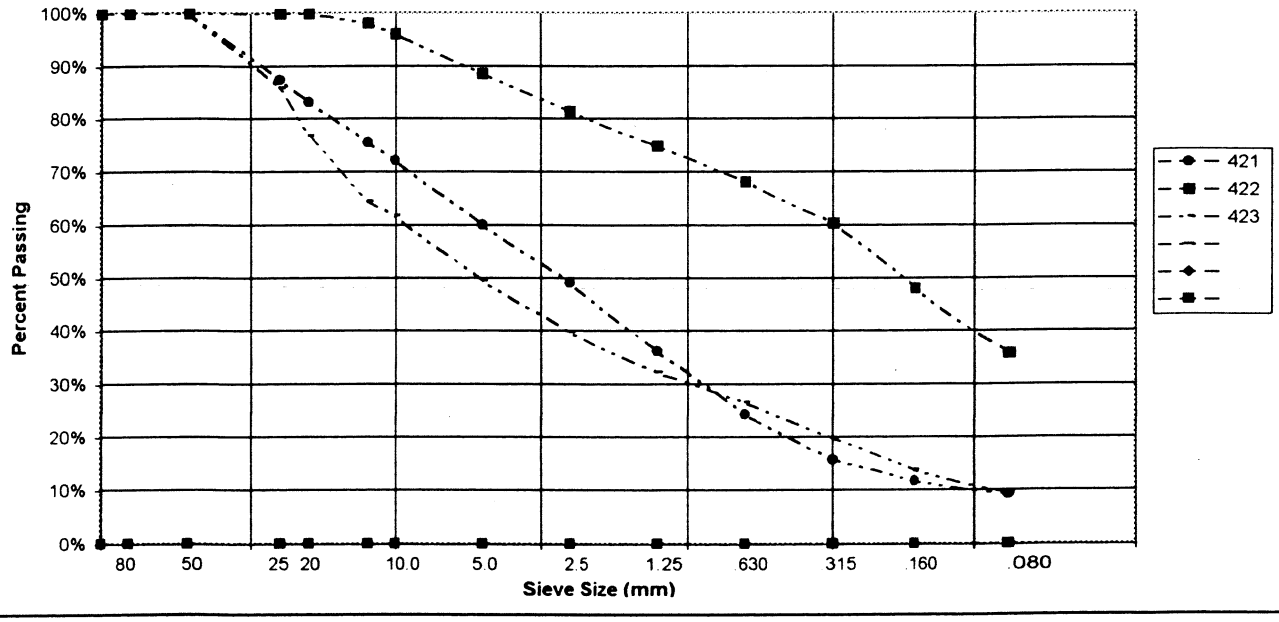
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 638926-6766525
LOGGED BY: RW

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.

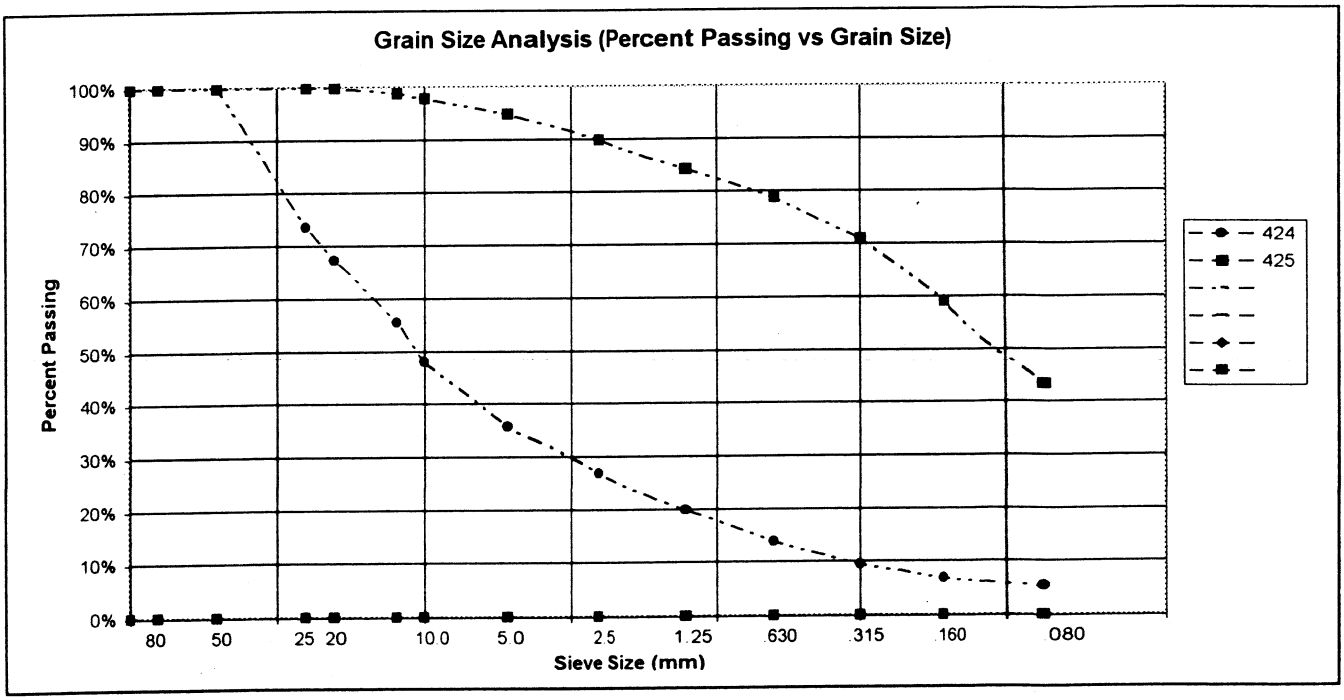
An Affiliate of J. R. Paine & Associates Ltd.

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)				



HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

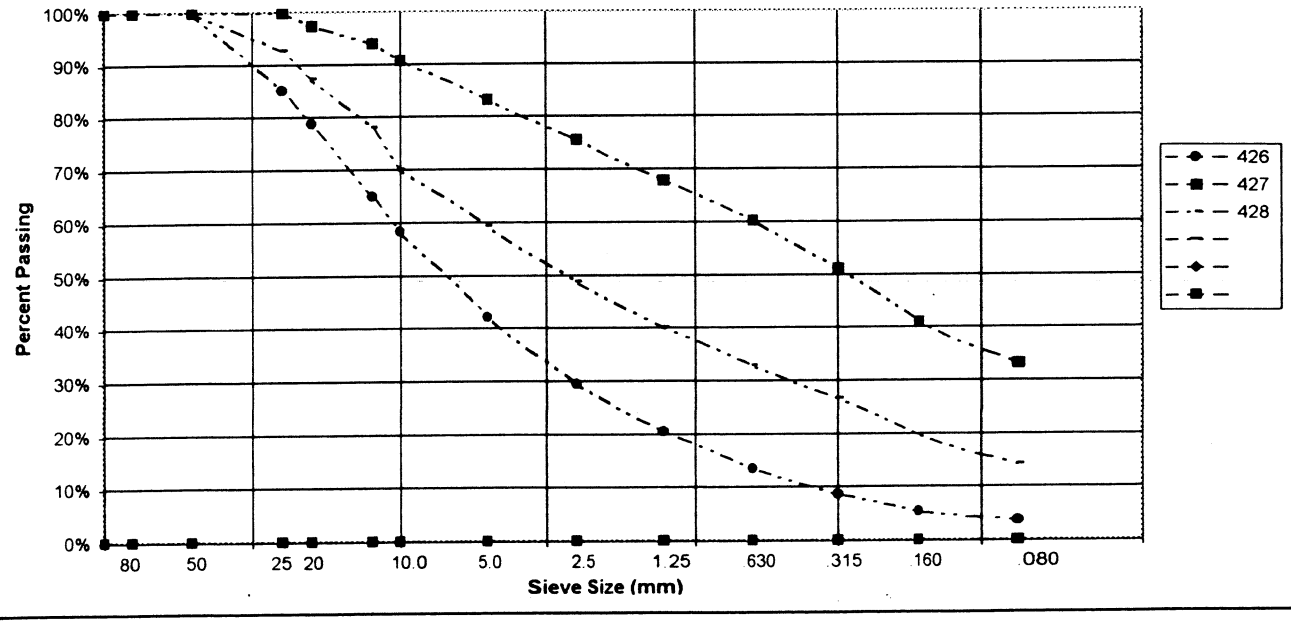
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 638653-6766235
LOGGED BY: RW

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.

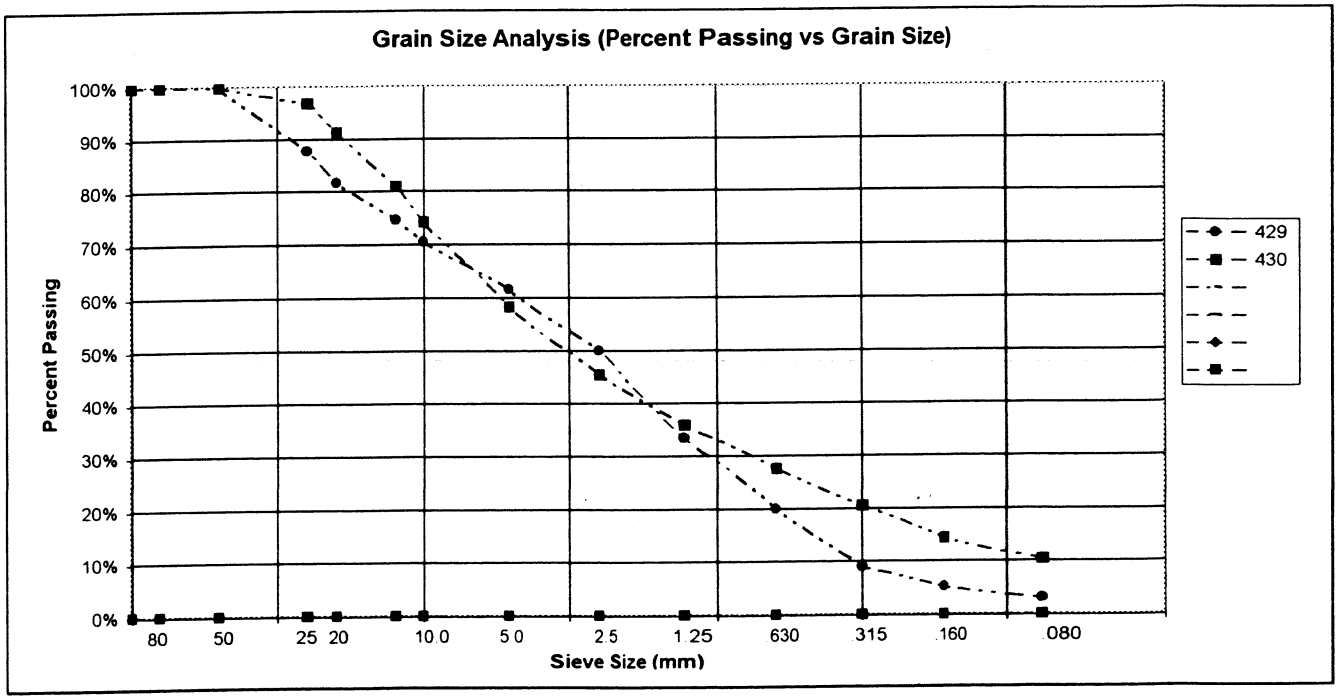
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 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)				



HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

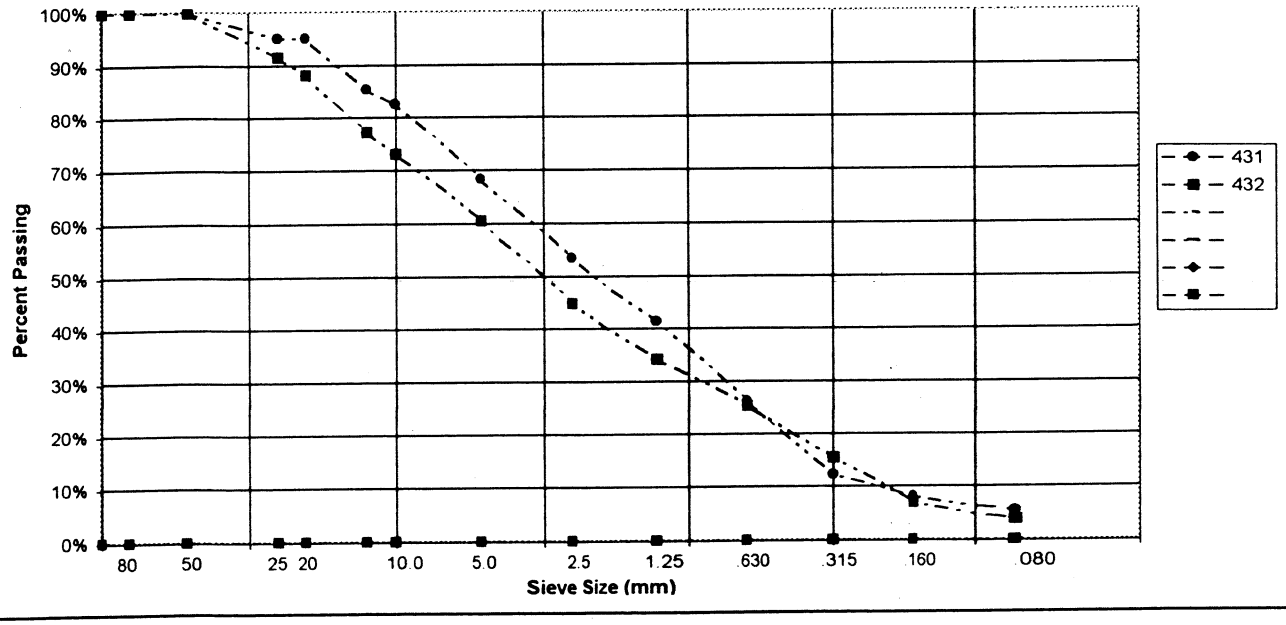
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 638287-6766094
LOGGED BY: RW

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.

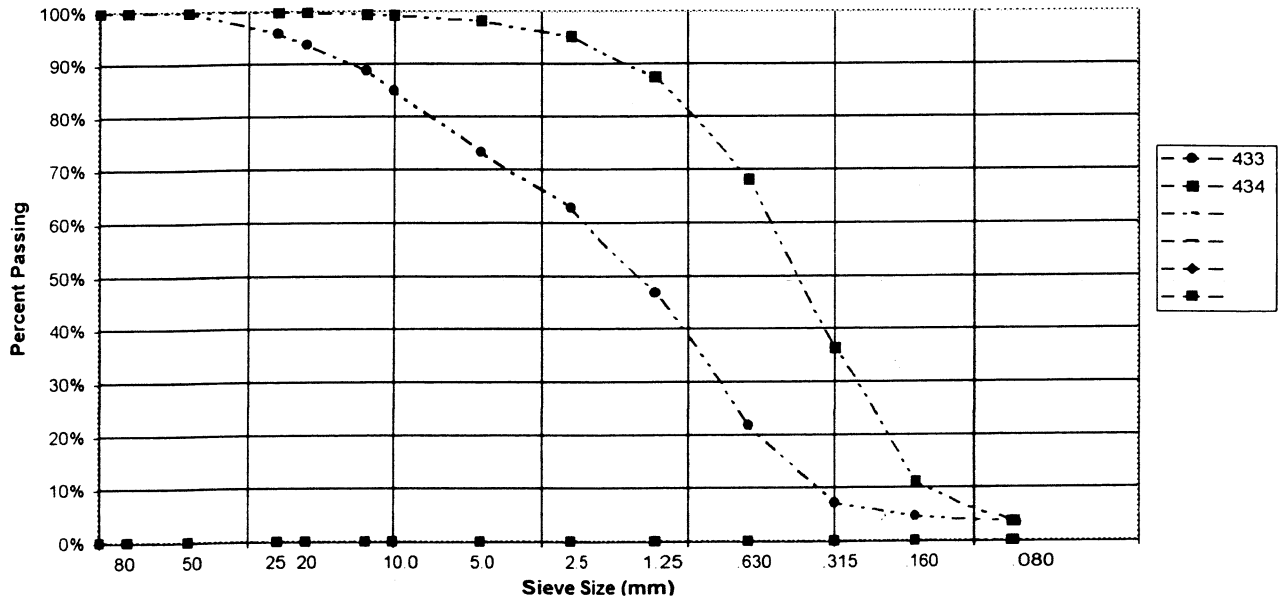
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 638094-6766043
LOGGED BY: RW

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)				

Grain Size Analysis (Percent Passing vs Grain Size)

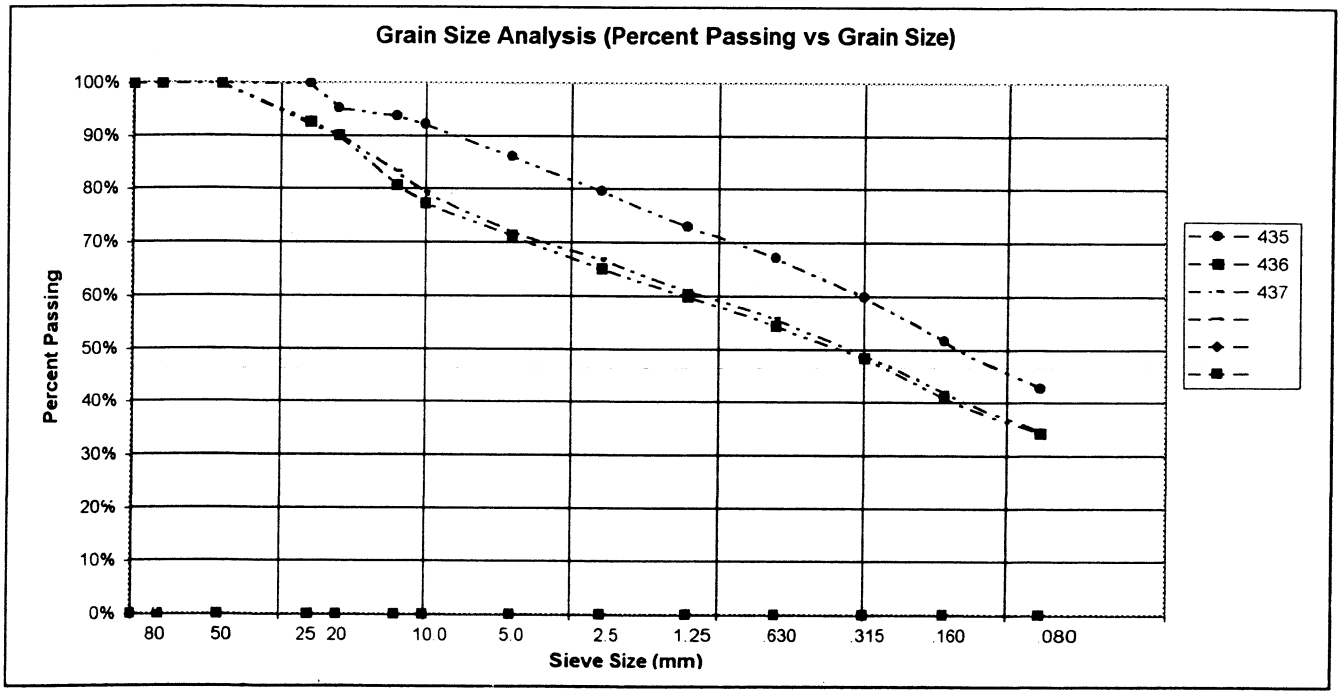


HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER:	8002-318		HOLE No.: 30037
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		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)			



HOGGAN ENGINEERING & TESTING (1980) LTD.

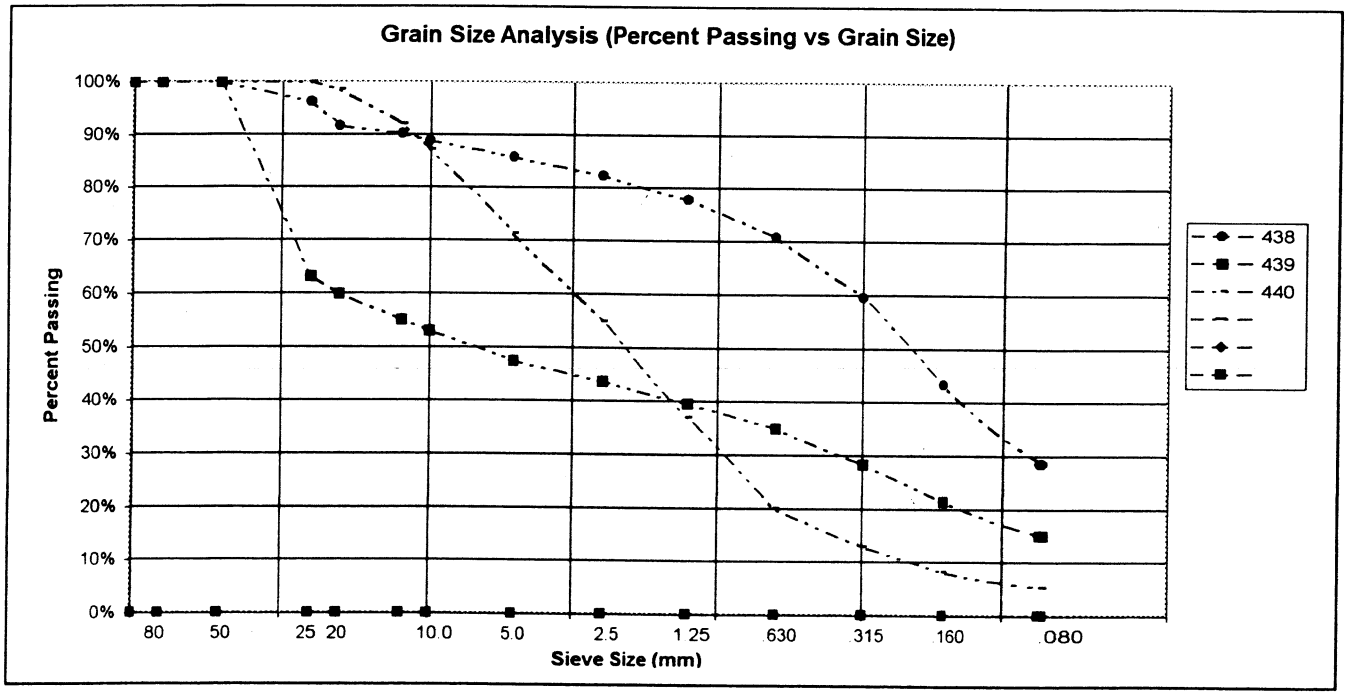
An Affiliate of J. R. Paine & Associates Ltd.

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.

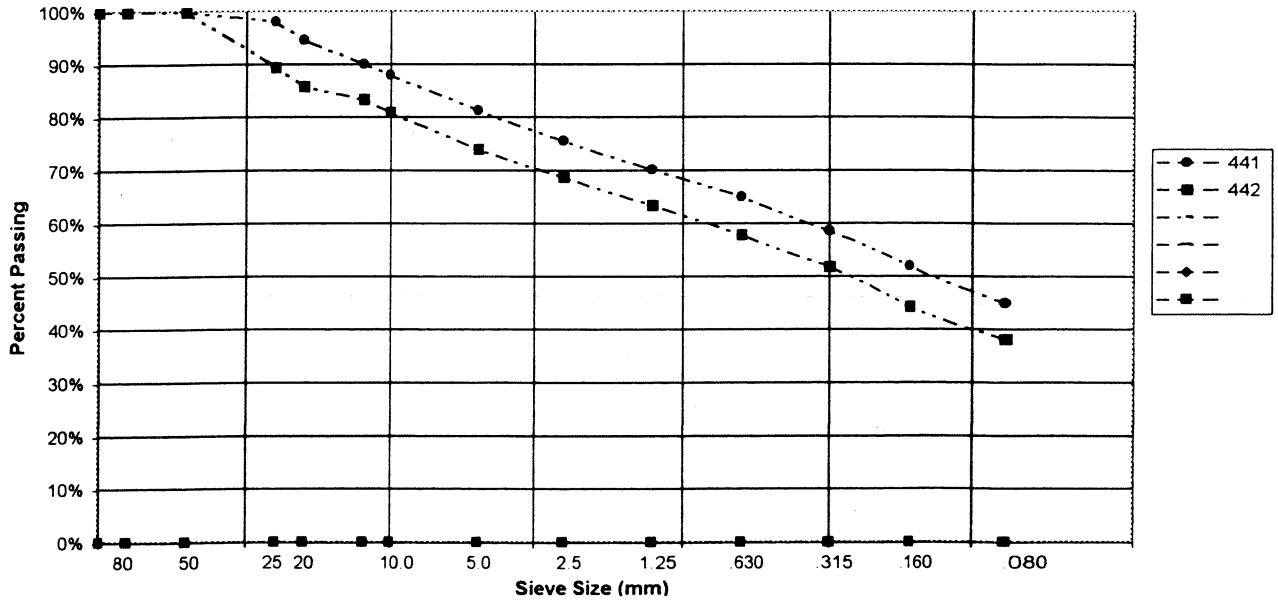
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 637563-6765818
LOGGED BY: RW

HOLE No.: 30039

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)				

Grain Size Analysis (Percent Passing vs Grain Size)



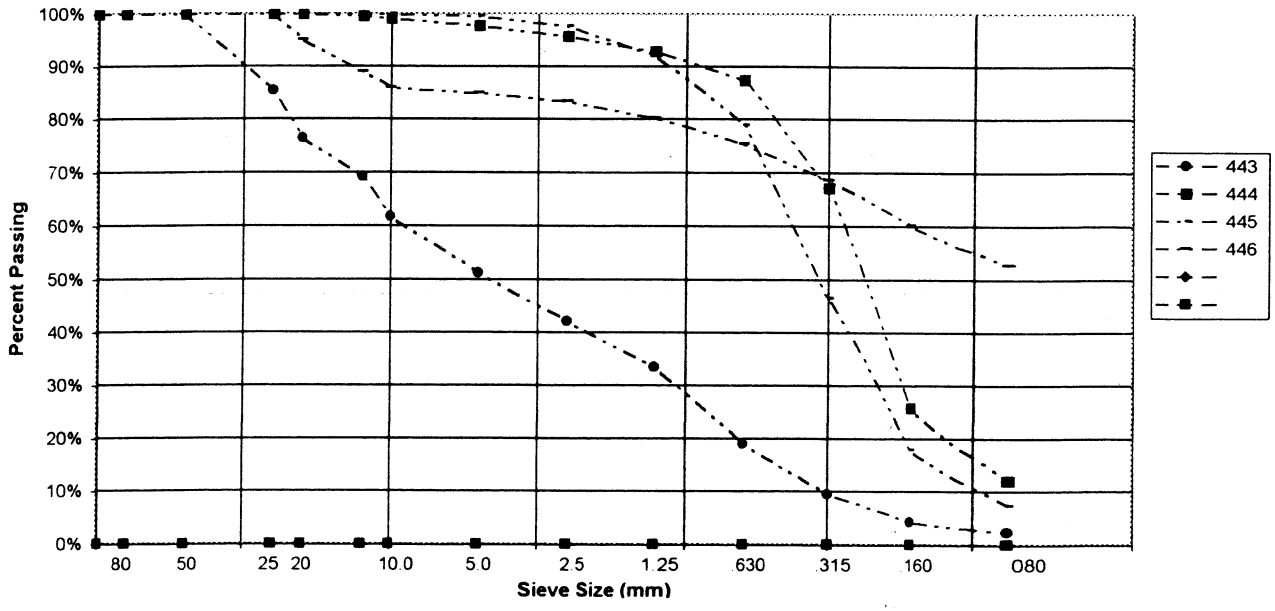
HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER:	8002-318		HOLE No.: 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)		

Grain Size Analysis (Percent Passing vs Grain Size)

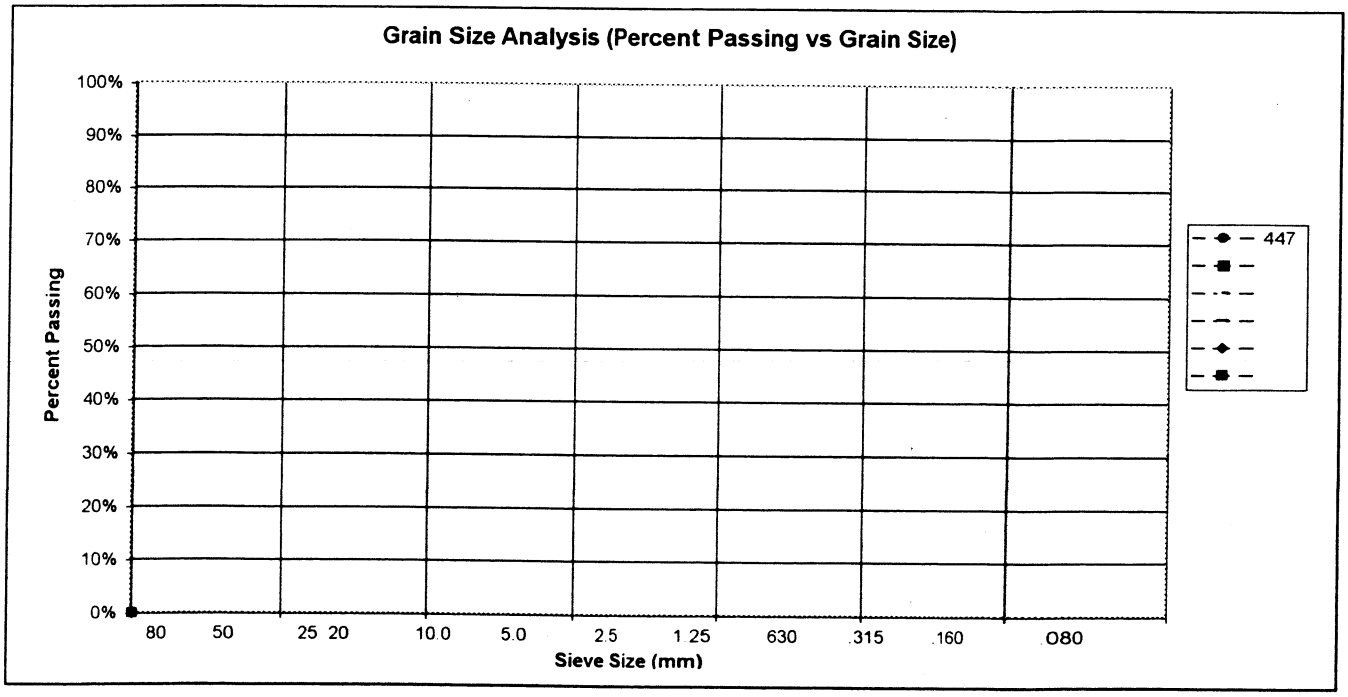


HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER:	8002-318	HOLE No.: 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.

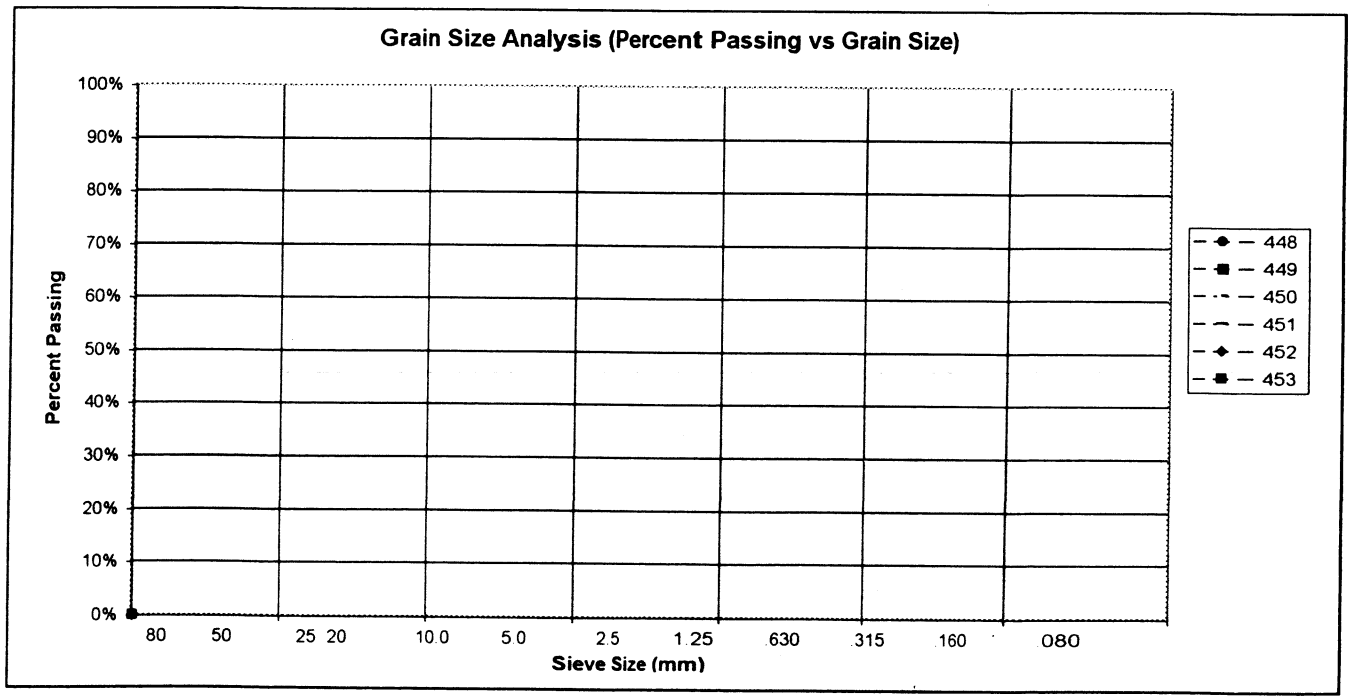
An Affiliate of J. R. Paine & Associates Ltd.

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!

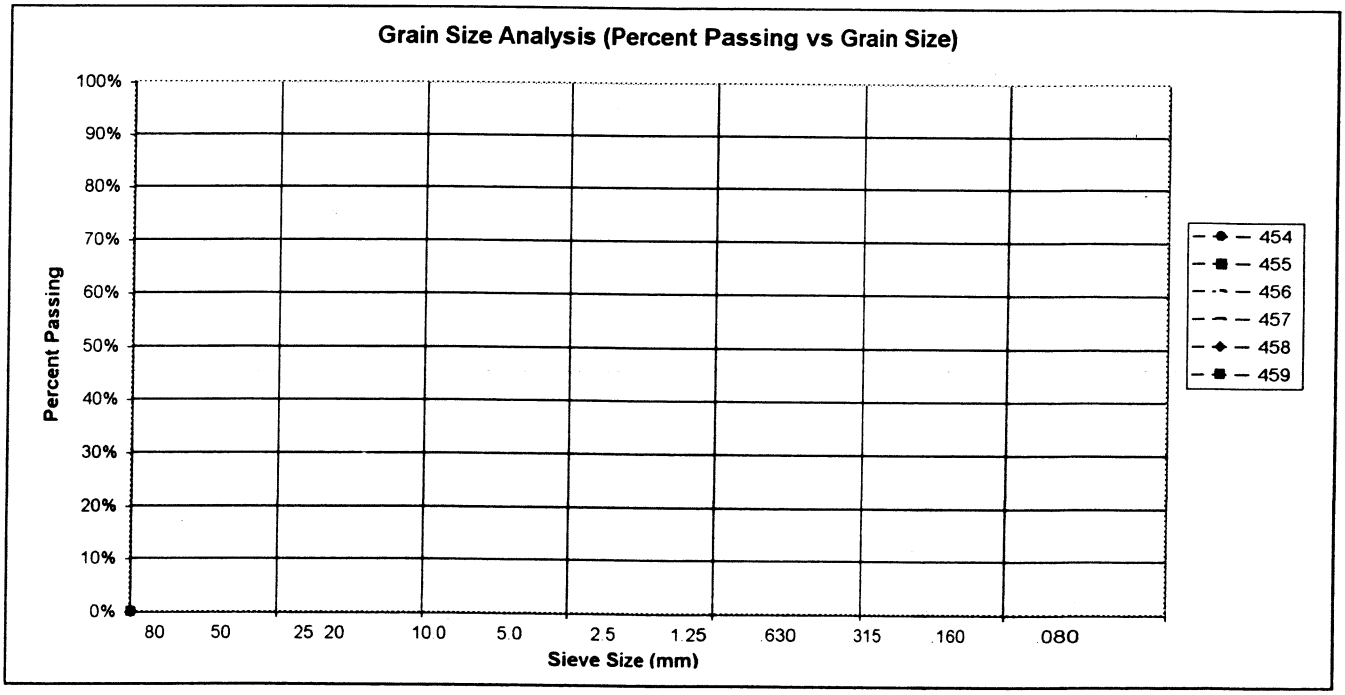


HOGGAN ENGINEERING & TESTING (1980) LTD.

An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER:	8002-318		HOLE No.: 30043
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		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. R. Paine & Associates Ltd.

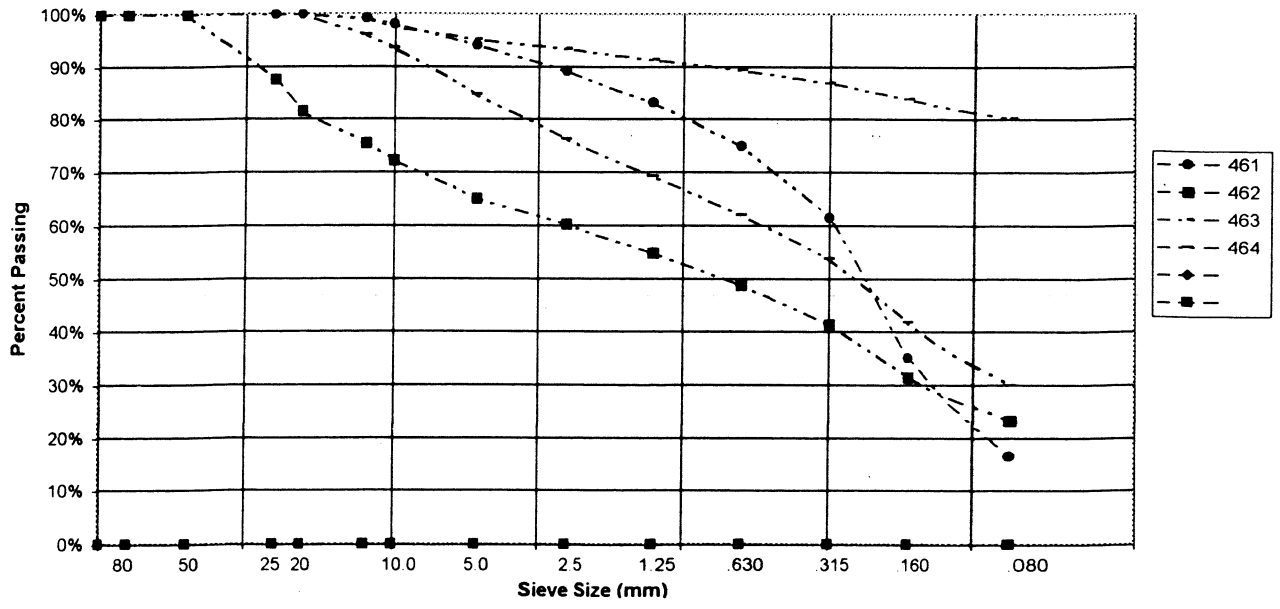
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 636668-6764727
LOGGED BY: RW

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.

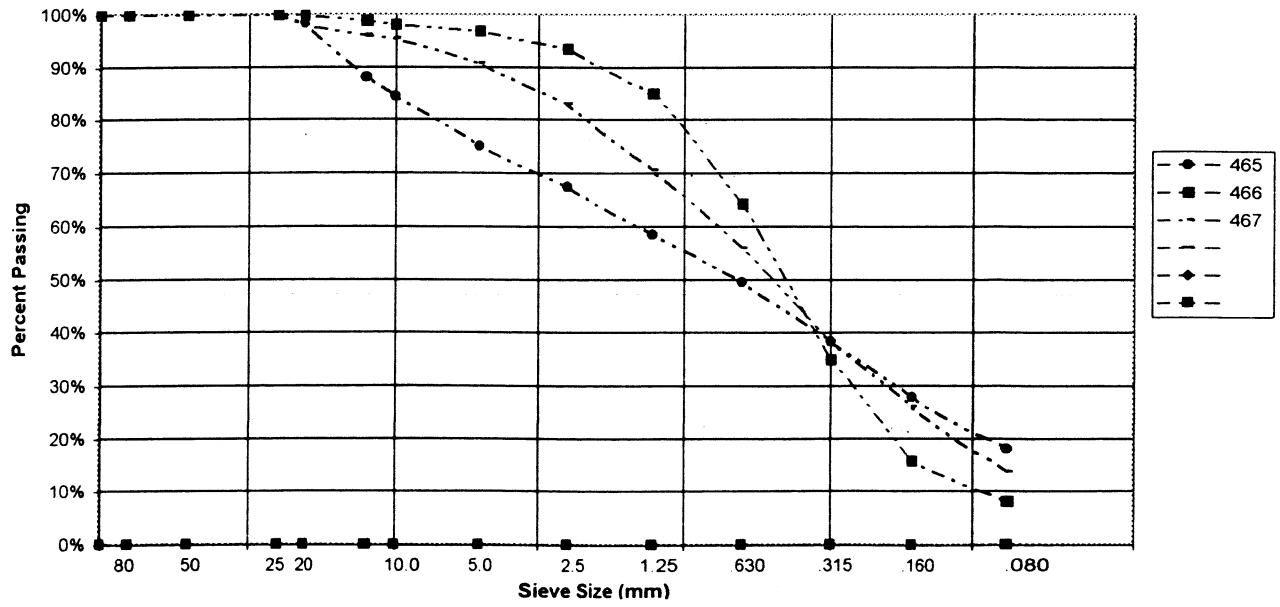
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 636398-6764640
LOGGED BY: RW

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)			

Grain Size Analysis (Percent Passing vs Grain Size)



HOGGAN ENGINEERING & TESTING (1980) LTD.

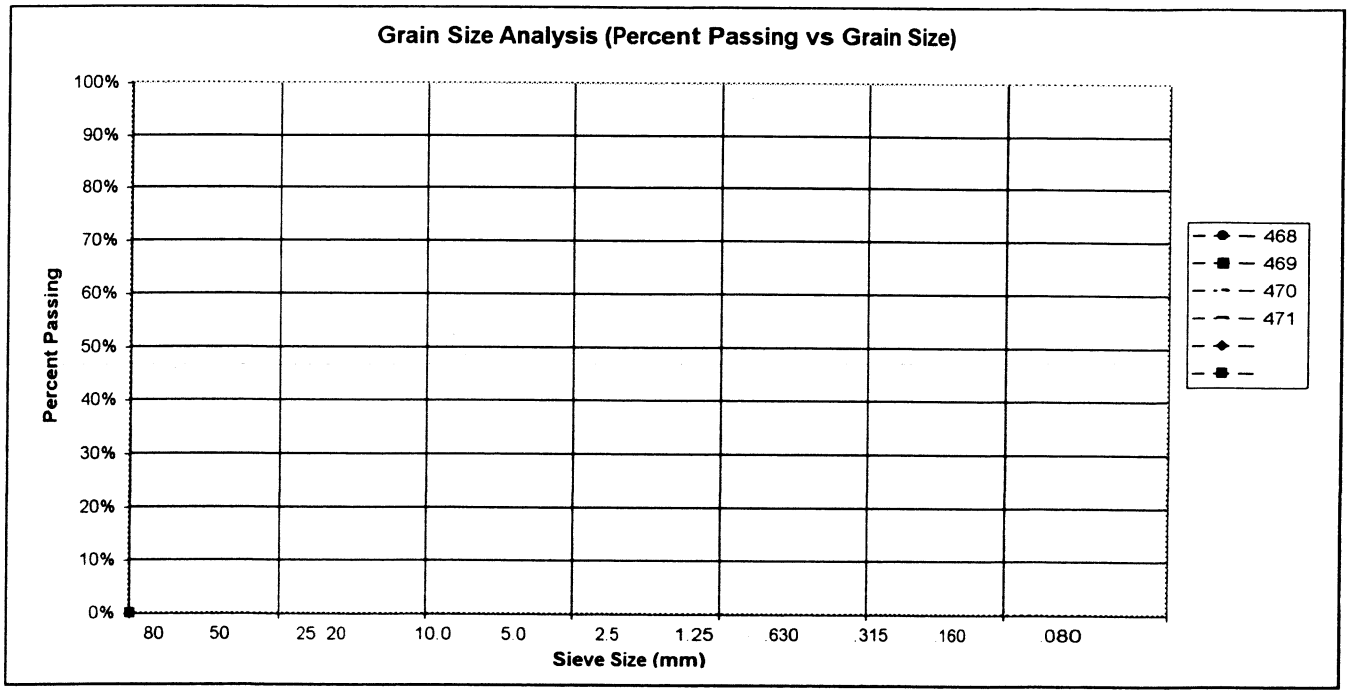
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 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.

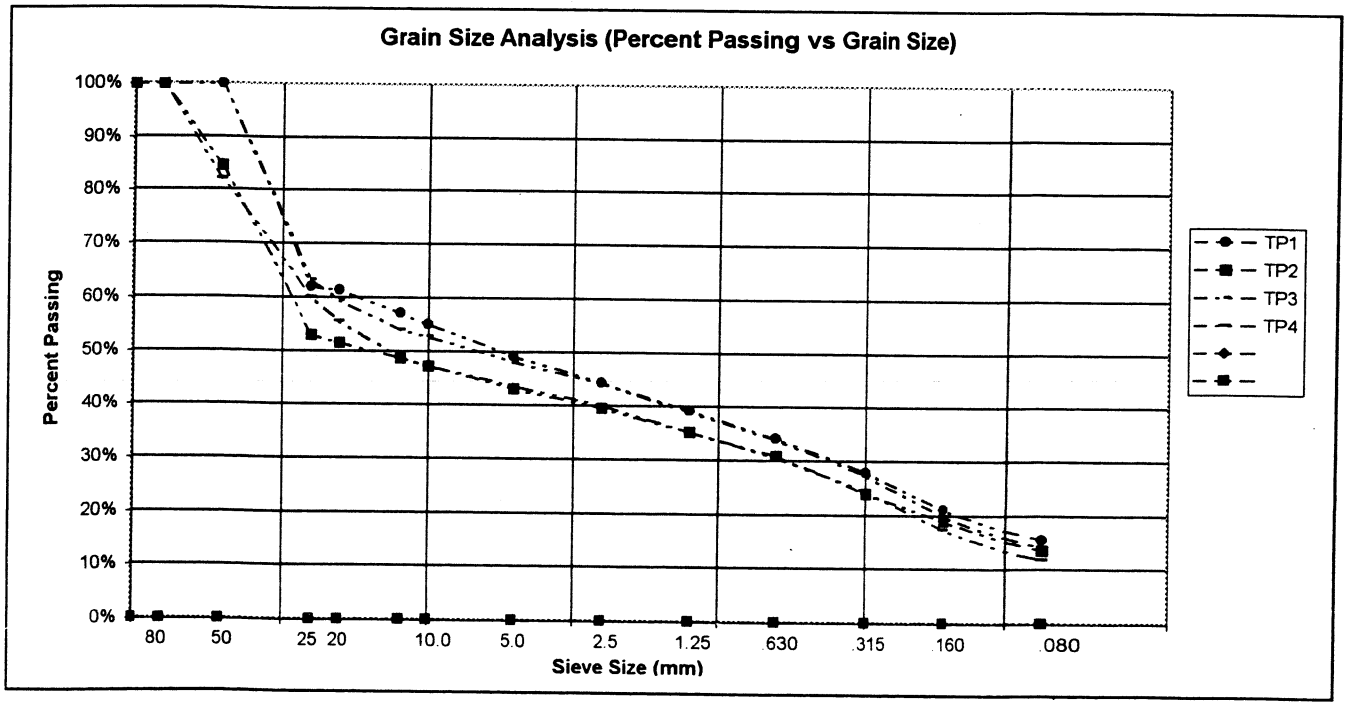
An Affiliate of J. R. Paine & Associates Ltd.

PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 636646-6764614
LOGGED BY: RW

HOLE No.: 30177

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)		



HOGGAN ENGINEERING & TESTING (1980) LTD.

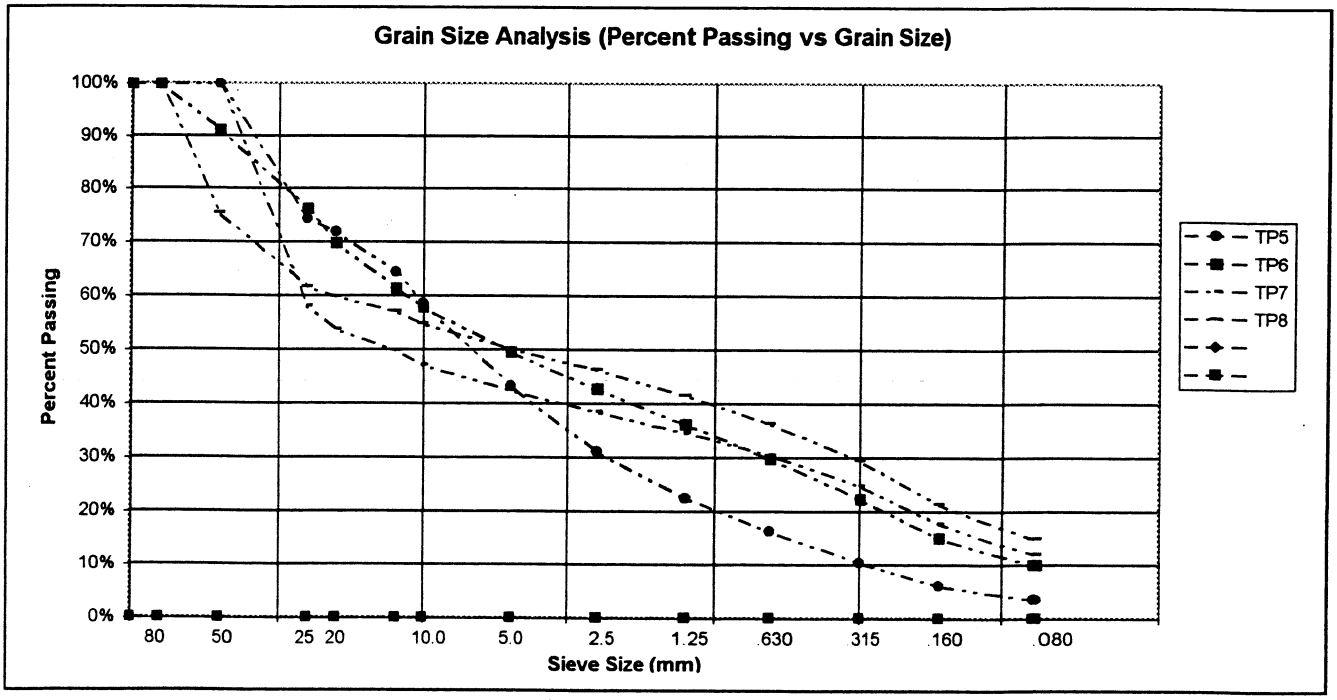
An Affiliate of J. R. Paine & Associates Ltd.

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.

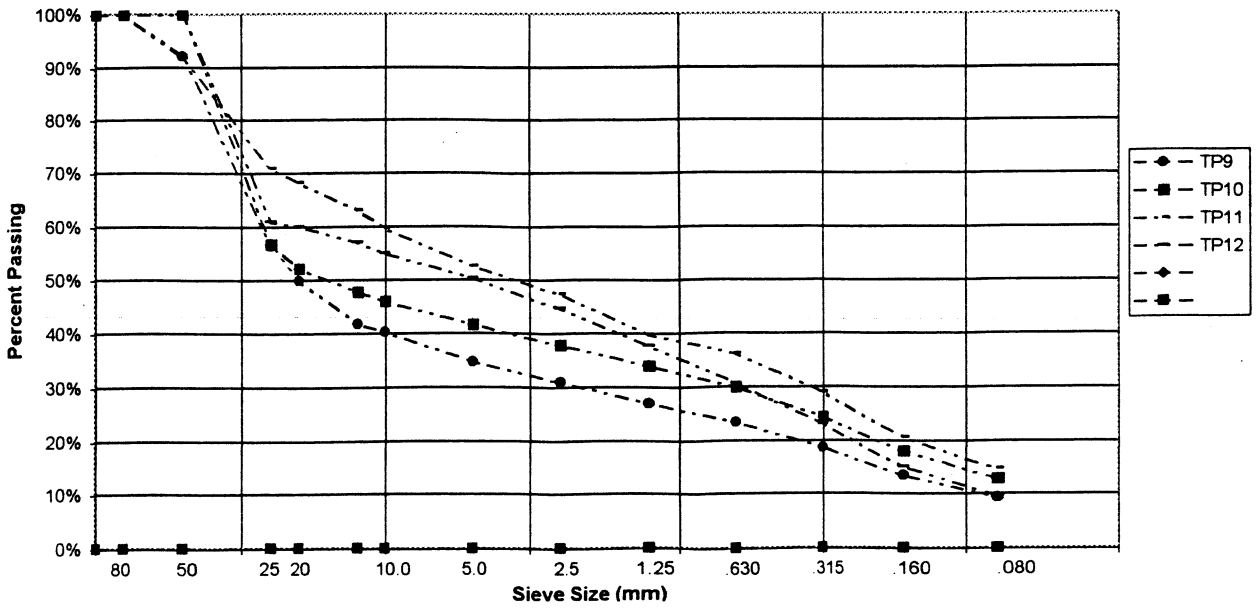
PROJECT NUMBER: 8002-318
CLIENT: YTG, Transportation & Engineering
PROJECT NAME: Geotechnical Services
PROJECT LOCATION: Km 1691.7-1717.3
DRILL UNIT: CME75
HOLE LOCATION: 636749-6764619
LOGGED BY: RW

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)



GEOTECHNICAL INVESTIGATIONS

Highway Construction
km 1691.6 to 1700.4
Alaska Highway #1
Yukon, 2006-2007
Volume 3 of 3

Yukon
Highways and Public Works
Transportation Engineering Branch

Geotechnical Services

BOX 2703, WHITEHORSE, YUKON
PHONE 867-667-8820 FAX 867-393-6447

ORIGINAL - Do Not Remove From File

Highway Construction
km 1691.6 to 1700.4
Alaska Highway #1
Yukon, 2006-2007
Volume 3 of 3

This Data Package prepared for project viewing:

May, 2006

Transportation Engineering Branch
Geotechnical Services
461 Range Road
Whitehorse, Yukon

CONTENTS

Volume 1 of 3

INTRODUCTION

Investigation notes, classification methods and legends.

CENTRELINE TESTING km 1691.6 to 1700.4 Alaska Highway

Subsurface Exploration and Test Report Sheets are provided.
The reports for the Centreline testing holes are arranged according to project location, starting at km 1691+525 and increasing to km 1700+250.

2000	TEST HOLES 1602 to 1639	shown with prefix 558-
2004	TEST HOLES 30000 to 30046	shown with no prefix
2004	TEST HOLES 30177 to 30179	shown with no prefix

CONTENTS (continued)

Volume 2 of 3

CENTRELINE TESTING km 1691.6 to 1700.4 Alaska Highway

Laboratory Testing Result Sheets are provided.
The reports for the centreline holes are arranged according to test hole number, starting at 558-1602 and increasing to 30179.

2000	TEST HOLES 1602 to 1639	shown with prefix 558-
2004	TEST HOLES 30000 to 30046	shown with no prefix
2004	TEST HOLES 30177 to 30179	shown with no prefix

CONTENTS (continued)

Volume 3 of 3

GRANULAR SOURCE km 1635.8 RHS ALASKA HIGHWAY Pit ID 115 G-07

NOTE: There is a kilometre chainage correction at km 1636.6 back and km 1694.0 ahead. Pit 115 G-07 is located at km 1635.8 back and km 1691 ahead.

A production history, location plans, photographs, and subsurface exploration and testing report sheets are provided.

Auger Testing

2001	TEST HOLES 1510 to 1514	shown with prefix 581-
2001	TEST HOLES 1515, 1517, 1518	shown with prefix 582-

Test Pit Testing

1991	TEST PITS 06 to 08	shown with prefix 152-
1992	TEST PITS 19 to 23	shown with prefix EBA-
2001	TEST PITS 1524 to 1528, 1541, & 1542	shown with prefix 583-
2001	TEST PITS 1544 to 1549 & 1552	shown with prefix 584-

GRANULAR SOURCE TESTING
km 1635.8 RHS Back
km 1691 RHS Ahead
(Silver City)
ALASKA HIGHWAY

HISTORY OF AGGREGATE PRODUCTION

Alaska Highway Km 1635.8 RHS
Pit ID. 115 G-07 (Silver City)

Average Crusher Run Characteristics of Material Produced

File Number --- 2142-5-70 Contractor --- Nuway Crushing Ltd.
Stockpile ID --- n/a Commenced --- 92-06-04 Completed --- 92-06-05
Type of aggregate --- 20 mm B.S.T. Aggregate Type II
Amount Produced --- ± 2,500 m³ No. of tests --- 11

Sieve Size mm	- 20.0	12.5	10.0	5.00	2.50	1.25	0.315	0.080
Percent Passing	- 100	83.4	--	49.4	35.6	26.4	10.8	4.8

Moisture Content - 2.1 % Standard Proctor
Fracture - 70.9 % Kg/m³ @ % moisture

File Number --- 2142-5-70 Contractor --- Nuway Crushing Ltd.
Stockpile ID --- n/a Commenced --- 92-06-04 Completed --- 92-06-06
Type of aggregate --- Granular A" Base Course
Amount Produced --- ± 4,800 m³ No. of tests --- 22

Sieve Size mm	- 20.0	12.5	10.0	5.00	2.50	1.25	0.315	0.080
Percent Passing	- 99.9	83.0	--	50.3	34.7	27.0	11.3	5.2

Moisture Content - 2.7 % Standard Proctor
Fracture - 64.3 % Kg/m³ @ % moisture

File Number --- 2145-4 Contractor --- Nuway Crushing Ltd.
Stockpile ID --- n/a Commenced --- 94-03-22 Completed --- 94-03-26
Type of aggregate --- Granular "A" Base Course
Amount Produced --- 10,252 m³ No. of tests --- 36

Sieve Size mm	- 20.0	12.5	10.0	5.00	2.50	1.25	0.315	0.080
Percent Passing	- 100	85.5	--	59.0	--	34.4	13.8	5.9

Moisture Content - 2.4 % Standard Proctor
Fracture - 65.2 % Kg/m³ @ % moisture

File Number --- 2145-4 Contractor --- Nuway Crushing Ltd.
Stockpile ID --- 1994-27 Commenced --- 94-03-26 Completed --- 94-03-31
Type of aggregate --- 20 mm B.S.T. Aggregate
Amount Produced --- 9,307 m³ No. of tests --- 40

Sieve Size mm	- 20.0	12.5	10.0	5.00	2.50	1.25	0.315	0.080
Percent Passing	- 100	72.6	--	36.3	26.2	19.0	6.4	4.8

Moisture Content - 1.6 % Standard Proctor
Fracture - 69.5 % Kg/m³ @ % moisture

115 G-07 cont'd

File Number --- 2550-22/01-24 Contractor --- North American Roads (Nuway)
Stockpile ID --- n/a Commenced --- 01-07-14 Completed --- 01-08-02
Type of aggregate --- Granular "A" Base Course
Amount Produced --- ± 44,500 m³ No. of tests --- 105

Sieve Size mm	- 20.0	12.5	10.0	5.00	2.50	1.25	0.315	0.080
Percent Passing	- 100	87.2	--	52.9	38.5	28.4	11.7	5.9

Moisture Content - 2.2 % Standard Proctor
Fracture - 63.4 % 2246 Kg/m³ @ 7.4 % moisture

==========

File Number --- 2550-22/01-24 Contractor --- North American Roads (Nuway)
Stockpile ID --- 2001-28 Commenced --- 01-07-26 Completed --- 01-08-01
Type of aggregate --- 20 mm B.S.T. Aggregate
Amount Produced --- ± 10,900 m³ No. of tests --- 38

Sieve Size mm	- 20.0	12.5	10.0	5.00	2.50	1.25	0.315	0.080
Percent Passing	- 100	83.3	--	41.4	28.3	20.4	9.0	4.4

Moisture Content - 1.5 % Standard Proctor
Fracture - 61.6 % Kg/m³ @ % moisture

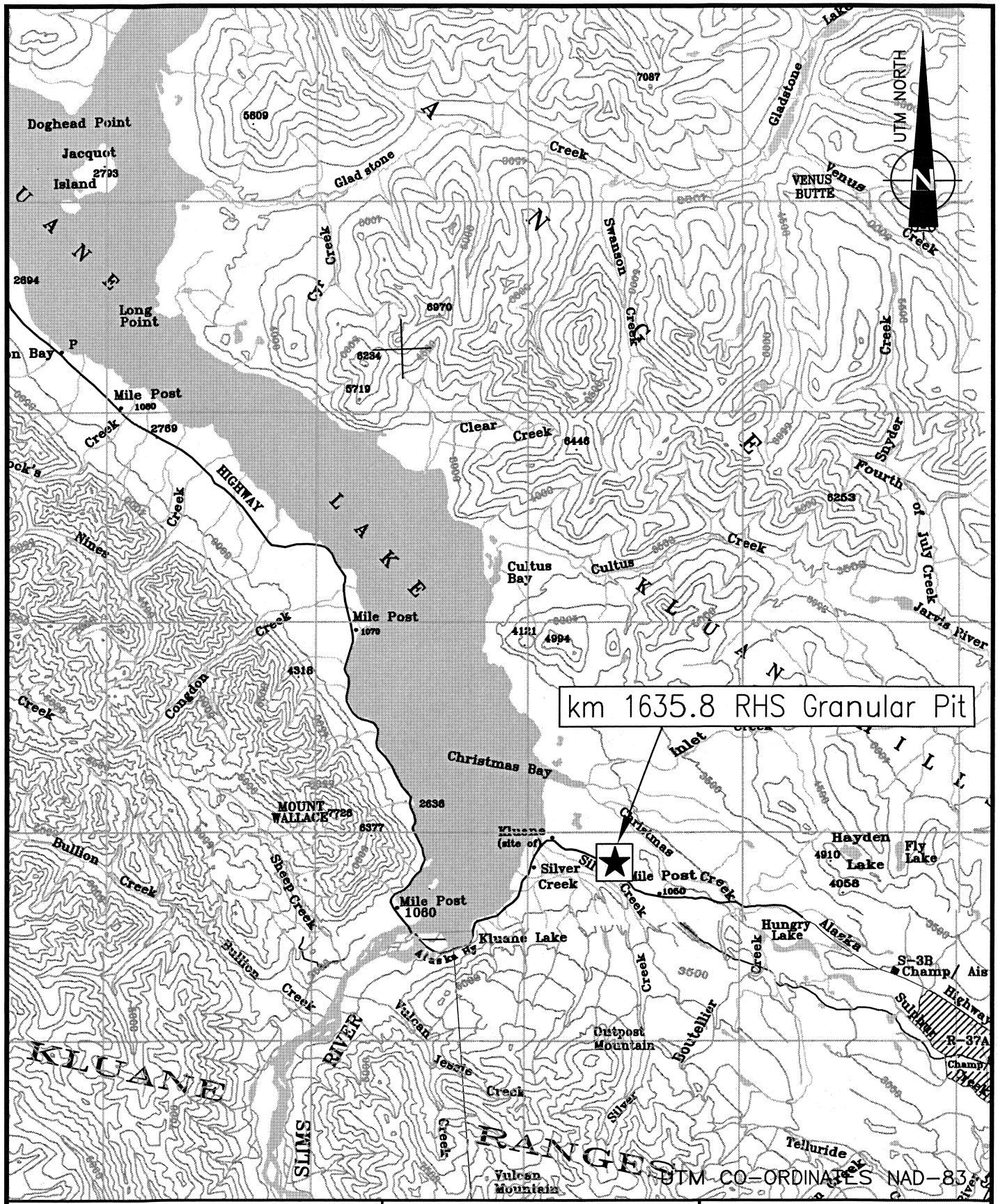
==========

File Number --- 2550-22/01-24 Contractor --- North American Roads (Nuway
Stockpile ID --- 2001-29 Commenced --- 01-10-10 Completed --- 02-06-01
Type of aggregate --- Granular "A" Base Course
Amount Produced --- ± 37,200 m³ No. of tests --- 144

Sieve Size mm	- 20.0	12.5	10.0	5.00	2.50	1.25	0.315	0.080
Percent Passing	- 100	83.0	--	48.0	--	24.6	10.2	4.9

Moisture Content - 2.2 % Standard Proctor
Fracture - 66.1 % Kg/m³ @ % moisture
** 18,200 m³ produced in Fall 2001; 19,000 m³ produced in spring 2002

==========

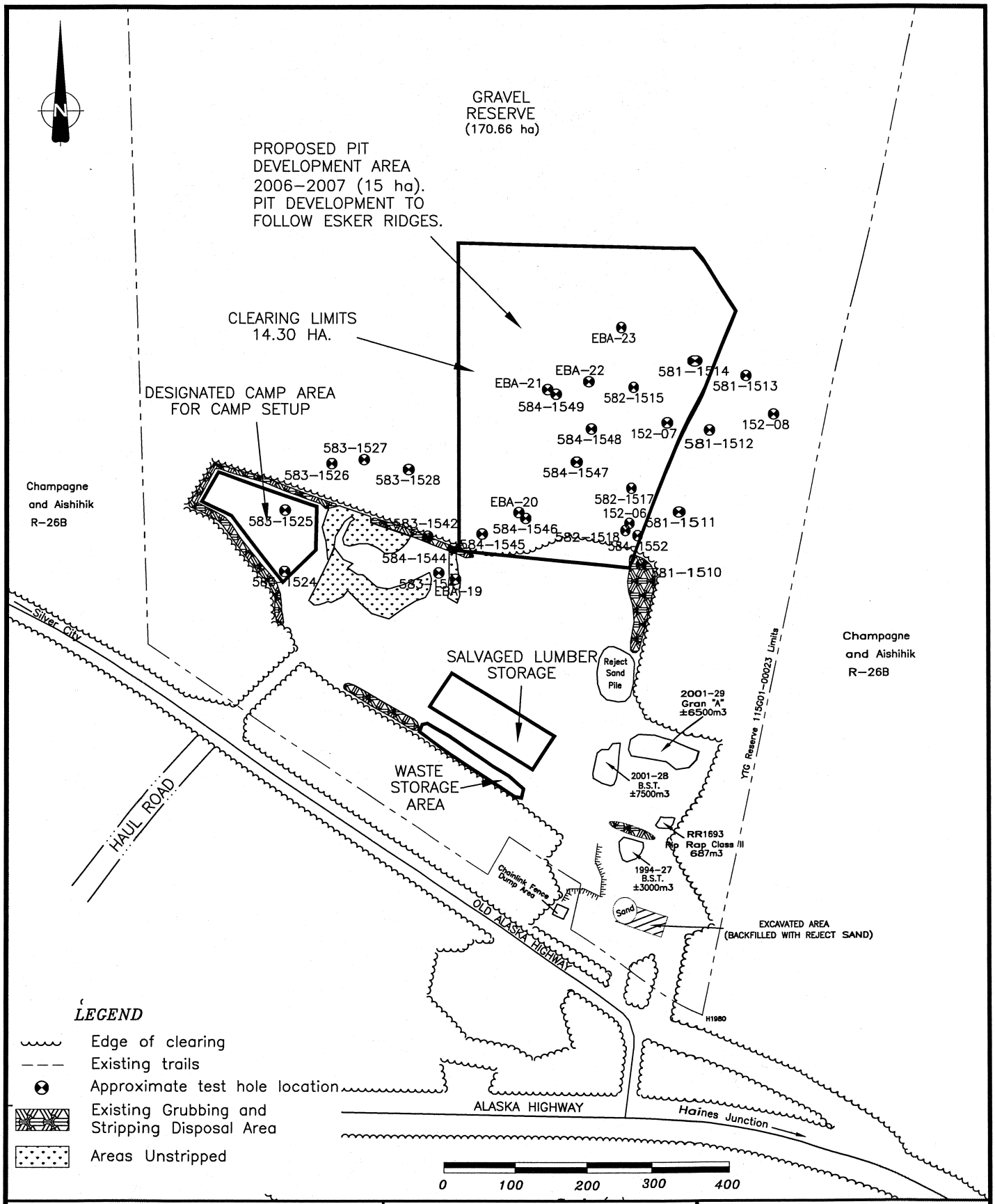


Yukon
Highways and Public Works

Transportation Engineering Branch

KEY PLAN
GRANULAR PIT
km 1635.8 RHS
(Silver City)
ALASKA HWY. YUKON

pit file:	115 G-07
quad:	115G/01
drawn:	JJM
date:	2006-02-01
scale:	1: 250,000
drwg:	115g-07K



Yukon
Highways and Public Works

Transportation Engineering Branch

SITE PLAN
GRANULAR PIT
Km 1635.8 RHS
(Silver City)
ALASKA HWY. YUKON

pit file:	115 G–07
revision:	2006–Proposed
drawn:	JJM
date:	2006–04–27
scale:	1:7500
drwg:	115g–07S

115-07 KM 1493 9/A R.H.S. 91-11-05



HOLE 05



HOLE 06



AOLE 07



AOLE 08

km 1693 R.H.S.



TP 92-019E



TP 92-020E

km 1693 R.H.S.



TP 92-023E



:SKER COMPLEX CONTINUING NORTH TOWARDS KLUANE LAKE

GRANULAR INVESTIGATION

Km 1693.0 RHS Alaska Highway #1
Pit Ident. 115 G-07
March 2001
TEST PIT # 583-1523



TEST PIT # 583-1524



GRANULAR INVESTIGATION

Km 1693.0 RHS Alaska Highway #1
Pit Ident. 115 G-07
March 2001
TEST PIT # 583-1525



TEST PIT # 583-1526



GRANULAR INVESTIGATION

Km 1693.0 RHS Alaska Highway #1
Pit Ident. 115 G-07
March 2001
TEST PIT # 583-1527



TEST PIT # 583-1530



GRANULAR INVESTIGATION

Km 1693.0 RHS Alaska Highway #1
Pit Ident. 115 G-07
March 2001
TEST PIT # 583-1541

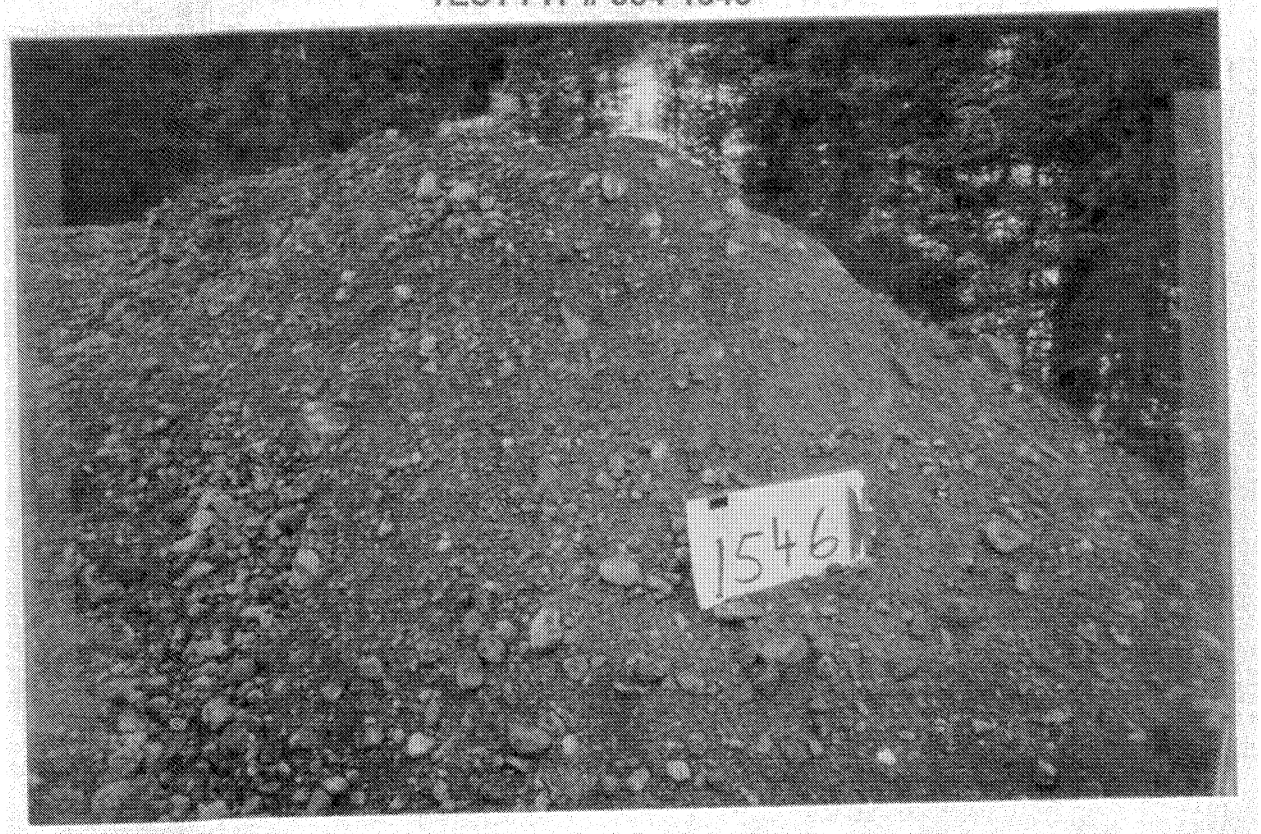


TEST PIT # 583-1542



GRANULAR INVESTIGATION

Km 1693.0 RHS Alaska Highway #1
Pit Ident. 115 G-07
March 2001
TEST PIT # 584-1546

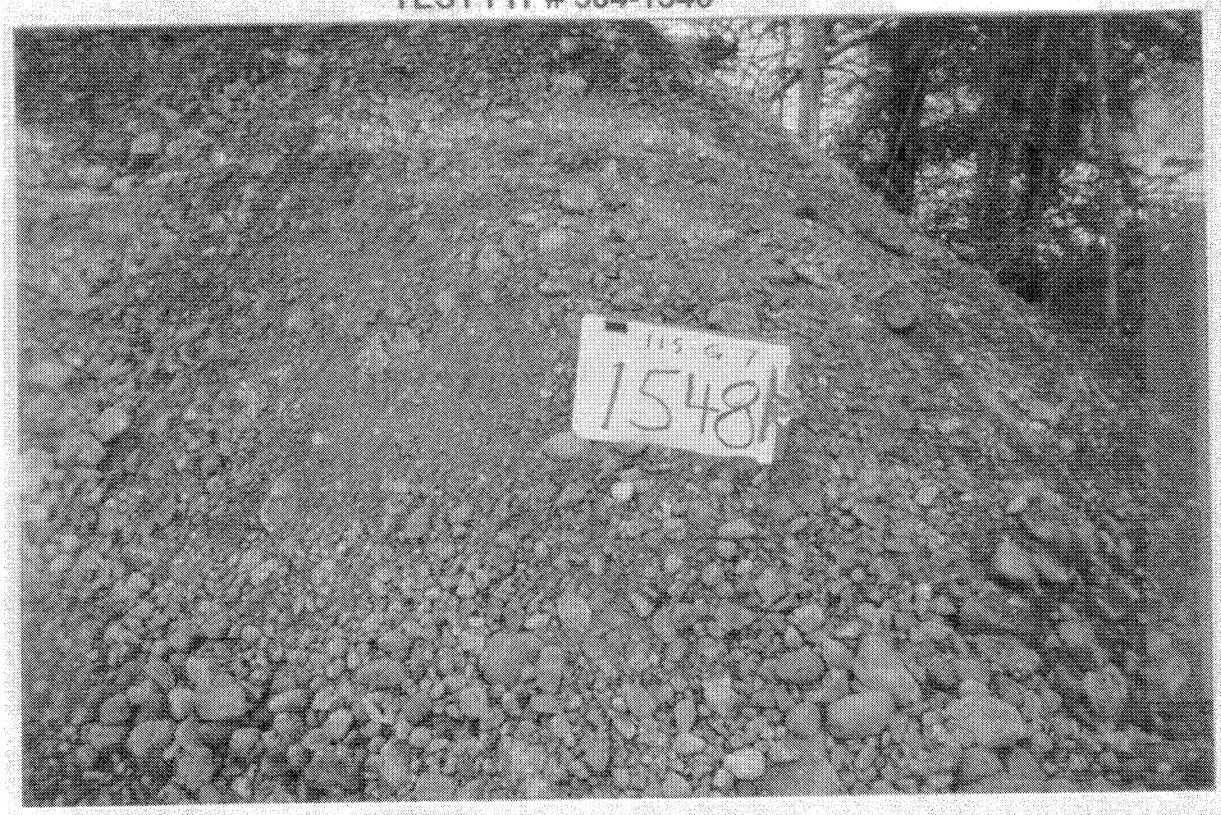


TEST PIT # 584-1547



GRANULAR INVESTIGATION

Km 1693.0 RHS Alaska Highway #1
Pit Ident. 115 G-07
March 2001
TEST PIT # 584-1548



TEST PIT # 584-1549



GRANULAR INVESTIGATION

Km 1693.0 RHS Alaska Highway #1
Pit Ident. 115 G-07
March 2001
TEST PIT # 584-1552



TEST PIT # 584-1552



Pit Ident. 115 G-07
Km 1635.8 RHS Alaska Highway #1
(Silver City)

February 2001
Book # 581 & 582

Yukon Territorial Government

Auger Hole Logs

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST HOLE NO: 581-1510
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
D-4 CAT B40 L	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

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 -brown -damp				
1.0	SILTY GRAVEL WITH SAND (GM) -brown -damp -grindy drilling	⊠	15	GM	
2.0	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) -brown -damp -grindier drilling -maximum 60-80mm material augered up				
3.0					
4.0		⊠	16	GW-GM	
5.0	-easier grindy drilling below 4.5m				
6.0	SILTY SAND (SM) -brown -moist -dense grindy drilling -wet below 6.5m, hard tight drilling				
7.0		⊠	17	SM	
8.0	END HOLE @ 7.3m Note: Spruce,willow cover				
9.0					
10.0					

▲ 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

DEPTH (m)

Government of Yukon
Transportation Engineering

LOGGED BY: JM	COMPLETION DEPTH: 7.3 m
REVIEWED BY:	COMPLETE: 01/02/21
Fig. No: 115-G-07	Page 1 of 1

01/03/06 11:57AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST HOLE NO: 581-1511
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
D-4 CAT B40 L	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SANDY SILT -brown -damp							0.0
1.0								1.0
2.0	SILTY GRAVEL WITH SAND (GM) -brown -damp -grindy drilling	⊠	18	● ▲	GM		◆ ■	2.0
3.0	-coarse grindier drilling below 3.0m -maximum 80mm material augered up							3.0
4.0								4.0
5.0								5.0
6.0	-wet to saturated below 6.0m -tight grindy drilling							6.0
7.0		⊠	19	● ▲	GM		◆ ■	7.0
	END HOLE @ 7.3m Note: Moss cover only							
8.0								8.0
9.0								9.0
10.0								10.0

Government of Yukon
Transportation Engineering

LOGGED BY: JM	COMPLETION DEPTH: 7.3 m
REVIEWED BY:	COMPLETE: 01/02/21
Fig. No: 115-G-07	Page 1 of 1

01/03/06 11:57AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST HOLE NO: 581-1512
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
D-4 CAT B40 L	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SANDY SILT -brown -damp							0.0
1.0	SILTY GRAVEL WITH SAND (GM) -brown -damp -grindy drilling -maximum 100mm material augered up	☒	20	● ▲	GM		■	1.0
2.0								2.0
3.0	-damp to moist below 3.3m -harder grindy drilling							3.0
4.0		☒	21	● ▲	GM		◆ ■	4.0
5.0								5.0
6.0	-moist below 6.0m -very hard rough drilling							6.0
7.0		☒	22	● ▲	GM		◆ ■	7.0
	END HOLE @ 7.0m							
8.0								8.0
9.0								9.0
10.0								10.0

Government of Yukon Transportation Engineering	LOGGED BY: JM	COMPLETION DEPTH: 7.0 m
	REVIEWED BY:	COMPLETE: 01/02/21
	Fig. No: 115-G-07	Page 1 of 1

01/03/06 11:57AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST HOLE NO: 581-1513
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
D-4 CAT B40 L	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	DEPTH (m)
0.0	SANDY SILT –brown –damp					0.0
1.0	WELL-GRADED SAND WITH SILT & GRAVEL TO SILTY SAND WITH GRAVEL (SW-SM)-(SM) –brown –damp –easy grindy drilling	⊠	23	SW-SM		1.0
2.0	–maximum 50mm material augered up					2.0
3.0						3.0
4.0	–damp to moist below 3.3m –grindier drilling below 3.5m –maximum 75mm material augered up	⊠	24	SM		4.0
5.0						5.0
6.0	SANDY SILT (ML) –brown –damp to moist					6.0
7.0	–rough, hard grindy drilling					7.0
8.0	–very hard grindy drilling	⊠	25	ML		8.0
	END HOLE @ 8.2m –not refusal, but to hard / dense to continue. Note: Spruce,willow cover					
9.0						9.0
10.0						10.0

▲ 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

Government of Yukon Transportation Engineering	LOGGED BY: JM	COMPLETION DEPTH: 8.2 m
	REVIEWED BY:	COMPLETE: 01/02/21
	Fig. No: 115-G-07	Page 1 of 1

01/03/06 11:58AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST HOLE NO: 581-1514
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
D-4 CAT B40 L	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ☰ BULK ▯ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SILT, MOSS							0.0
1.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -damp -grindy drilling	⊠	26	● ▲	GP-GM		◆ ■	1.0
2.0	-75mm material augered up							2.0
3.0	POORLY GRADED GRAVEL WITH SAND (GP) -brown, damp							3.0
4.0	-easier drilling below 3.4m	⊠	27	▲	GP		◆ ■	4.0
5.0	SILTY SAND (SM) -brown -damp -easy drilling							5.0
6.0	-some gravel, slightly grindy drilling	⊠	28	● ▲	SM		■ ◆	6.0
7.0								7.0
8.0	SANDY SILT (ML) -brown -moist							8.0
9.0		⊠	29	● ▲	ML		■ ◆	9.0
10.0								10.0
11.0	SILTY SAND WITH GRAVEL (SM) -brown -moist -tighter drilling, denser material							11.0
12.0	-some grindy drilling							12.0
13.0		⊠	30	● ▲	SM		■ ◆	13.0
14.0	END HOLE @ 14.3m Note: Hole drilled on top of esker near end. Spruce cover.							14.0
15.0								15.0
16.0								16.0

Government of Yukon Transportation Engineering	LOGGED BY: JM	COMPLETION DEPTH: 14.3 m
	REVIEWED BY:	COMPLETE: 01/02/21
	Fig. No: 115-G-07	Page 1 of 1

01/03/06 01:34PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST HOLE NO: 582-1515
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
D-4 CAT B40 L	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -damp -sub-angular -grindy drilling	☒	31	● ▲	GP-GM		◆ ■	
1.0								1.0
2.0								2.0
3.0								3.0
4.0		☒	32	▲	GP-GM		◆ ■	4.0
	SILTY SAND WITH GRAVEL TO WELL-GRADED SAND WITH SILT (SM)-(SW-SM) -brown -damp -smooth drilling							
5.0								5.0
6.0		☒	33	● ▲	SM		■ ◆	6.0
7.0								7.0
8.0								8.0
9.0		☒	34	● ▲	SW-SM		■ ◆	9.0
	END HOLE @ 9.5m							
10.0								10.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 9.5 m
	REVIEWED BY:	COMPLETE: 01/02/28
	Fig. No: 115-G-07	Page 1 of 1

01/03/29 09:20AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST HOLE NO: 582-1517
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
D-4 CAT B40 L	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▥ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)							
1.0	-brown	☒	39	●▲	GP-GM		◆■	1.0
	-damp							
2.0	-maximum 50mm material							2.0
3.0		☒	40	▲	GP-GM		◆ ■	3.0
4.0								4.0
5.0	SAND							5.0
	-smooth drilling below 5.0m							
6.0								6.0
7.0								7.0
8.0	-no samples recovered - material vibrated off augers on retreival							8.0
9.0								9.0
10.0								10.0
11.0	-some coarse sand observed on last auger flights.							11.0
12.0	-no indication of change in moisture content							12.0
13.0	END HOLE @ 13.0m							13.0
14.0								14.0
15.0								15.0
16.0								16.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 13.0 m
REVIEWED BY:	COMPLETE: 01/02/28
Fig. No: 115-G-07	Page 1 of 1

01/03/27 03:50PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST HOLE NO: 582-1518
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
D-4 CAT B40 L	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)							
	-brown							
1.0	-damp							1.0
	-grindy drilling	☒	41	●	GP-GM	▲▲	◆ ■	
2.0	-coarser material below 1.8m							2.0
3.0	-no fines augering up below 1.8m - just maximum 50mm sub-angular gravels							3.0
4.0								4.0
5.0								5.0
	SAND							
6.0	-smooth easy drilling below 5.4m							6.0
	-no sample recovered - material vibrated off flight							
7.0	-no evidance of change in moisture content							7.0
	END HOLE @ 7.6m							
8.0								8.0
9.0								9.0
10.0								10.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 7.6 m
	REVIEWED BY:	COMPLETE: 01/02/28
	Fig. No: 115-G-07	Page 1 of 1

01/03/27 03:50PM

Pit Ident. 115 G-07
Km 1635.8 RHS Alaska Highway #1
(Silver City)

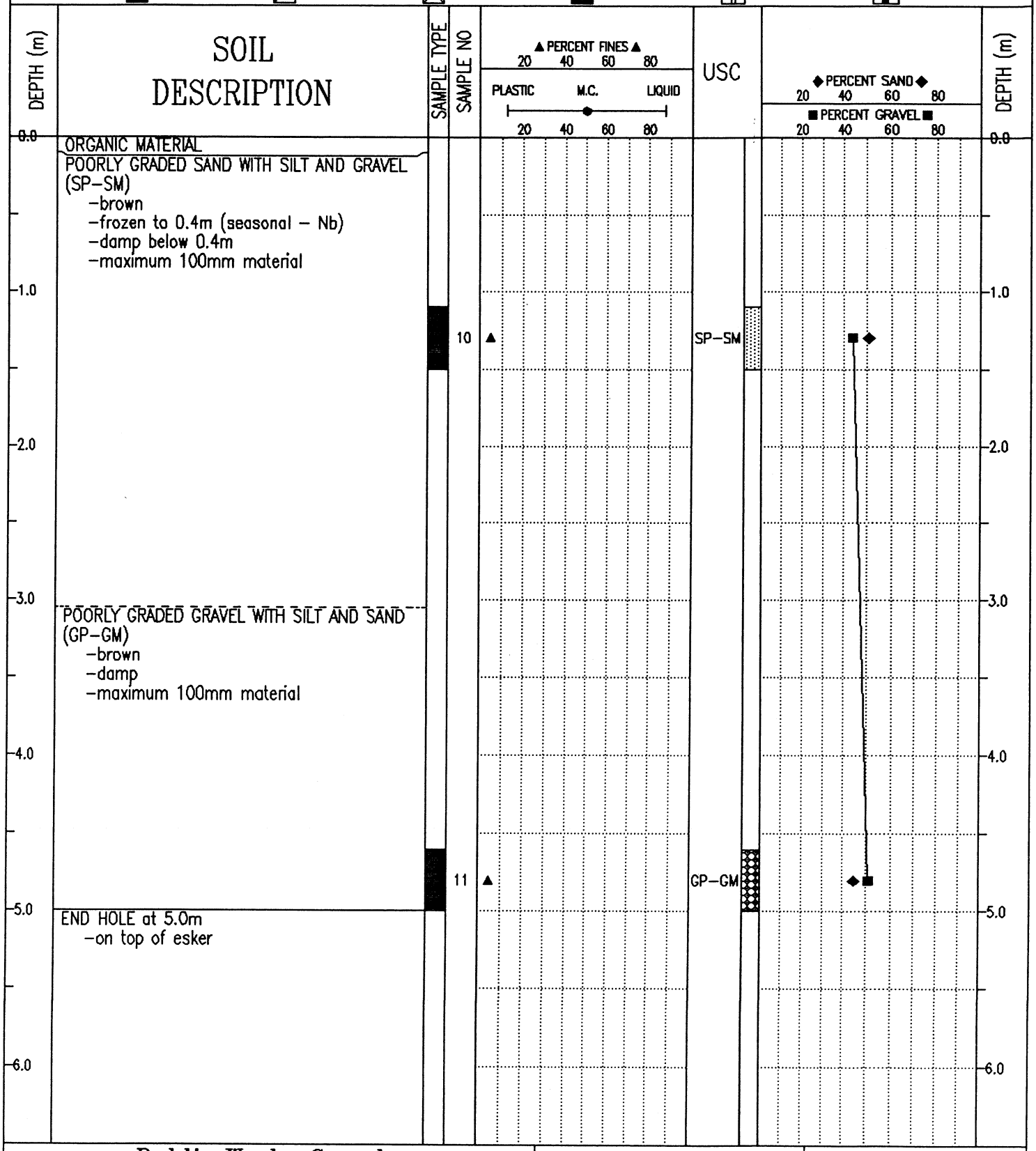
November 1991
Book # 152

Yukon Territorial Government

Test Pit Logs

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY GRANULAR INVESTIGATION	BOREHOLE No. 152-06
PWC/O&M YUKON	A/H KM 1692 RHS	Project No: 859167
BACKHOE: CASE 688	LOCATION: See Plan	ELEVATION 0.000 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ■ BULK ▯ TUBE ▮ CORE



Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 5.0 m	COMPLETE 91/11/05
	LOGGED BY DT	DWG NO.
		Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY GRANULAR INVESTIGATION	BOREHOLE No. 152-07
PWC/O&M YUKON	A/H KM 1692 RHS	Project No: 859167
BACKHOE: CASE 688	LOCATION: See Plan	ELEVATION 0.000 (m)

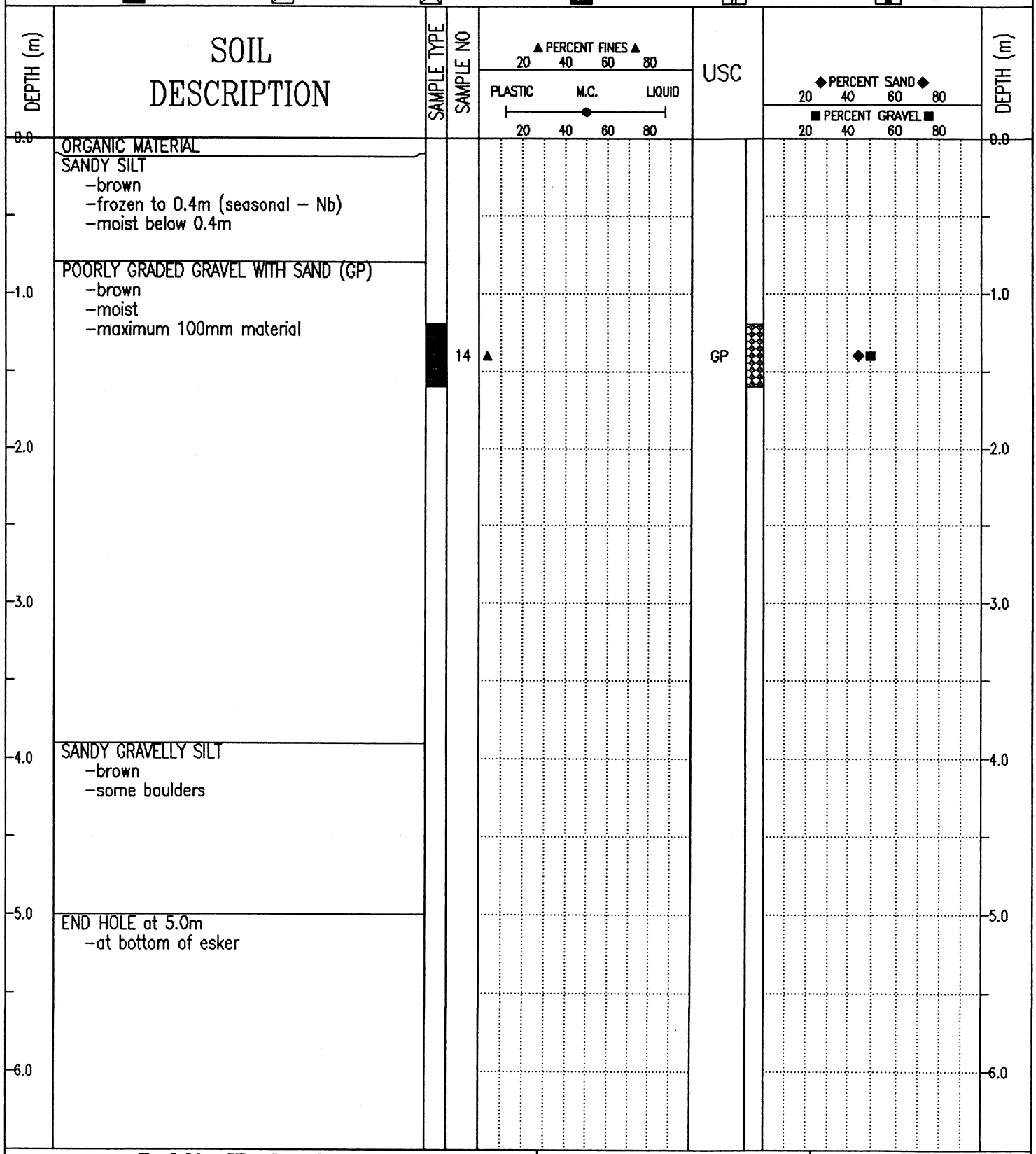
SAMPLE TYPE ■ RETURN ⟋ S.P.T. ☒ AUGER ■ BULK ▯ TUBE ◨ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	WELL-GRADED GRAVEL WITH SAND (GW) -brown -frozen to 0.4m (seasonal - Nb) -humid below 0.4m -maximum 100mm material	■	12 ▲		GW	◆ ■	
1.0							1.0
2.0							2.0
3.0							3.0
4.0	POORLY GRADED SAND WITH GRAVEL (SP) -brown -damp	■	13 ▲		SP	■ ◆	4.0
5.0	END HOLE at 5.0m -on top of esker						5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 5.0 m	COMPLETE 91/11/07
	LOGGED BY DT	DWG NO.
		Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY GRANULAR INVESTIGATION	BOREHOLE No. 152-08
PWC/O&M YUKON	A/H KM 1692 RHS	Project No: 859167
BACKHOE: CASE 688	LOCATION: See Plan	ELEVATION 0.000 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ■ BULK ▯ TUBE ▮ CORE



Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 5.0 m	COMPLETE 91/11/07
	LOGGED BY DT	DWG NO.	Page 1 of 1

Pit Ident. 115 G-07
Km 1635.8 RHS Alaska Highway #1
(Silver City)

April 1992
Report # GR-01-013

EBA Engineering Consultants Ltd.

Test Pit Logs

GRANULAR SOURCE EVALUATION km 1693	CLIENT: YTG - TRANSPORTATION ENG.	BOREHOLE No: 92-019E
SILVER CITY AREA	HOE: CAT 225 TRACKED BACKHOE	Project No: 0201-10922
NORTH ALASKA HIGHWAY	UTM ZONE: 7 N6768572.00 E644108.00	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ GRAB SAMPLE ⊘ NO RECOVERY ⊠ STANDARD PEN. ☰ 75 mm SPOON ▥ CRREL BARREL ▮▮

DEPTH (m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						SPARSE GRASS GROUND COVER ORGANIC SILT–rootlets throughout, seasonally frozen, olive brown
		1		GP/GM		POORLY GRADED GRAVEL WITH SILT AND SAND–rootlets to 1.3 m, subangular, up to 100 mm maximum size, seasonally frozen to 1.0 m, damp, medium brown
1.0		2		GP		POORLY GRADED GRAVEL WITH SAND–occasional cobble to 150 mm, gravel is well graded, sand is well graded, damp, medium greyish brown
2.0		3		SP		–finer from 2.0 – 2.5 m
3.0		4		GP		–siltier below 3.2 m
4.0		5		GM		SILTY GRAVEL WITH SAND–gravel is fine to 40 mm, moist, olive
						END OF TESTPIT 4.5 m
5.0						
6.0						
7.0						

■ STANDARD PENETRATION ■ 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

■ PERCENT GRAVEL ■ 20 40 60 80

● PERCENT SAND ● 20 40 60 80

▲ PERCENT SILT OR FINES ▲ 20 40 60 80

◆ PERCENT CLAY ◆ 20 40 60 80

DEPTH (ft) 0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0 22.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: MCP	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 92/04/22
	Fig. No:	Page 1 of 1

GRANULAR SOURCE EVALUATION km 1693	CLIENT: YTG - TRANSPORTATION ENG.	BOREHOLE No: 92-023E
SILVER CITY AREA	HOE: CAT 225 TRACKED BACKHOE	Project No: 0201-10922
NORTH ALASKA HIGHWAY	UTM ZONE: 7 N6769148.00 E644316.00	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ GRAB SAMPLE ▨ NO RECOVERY ⊠ STANDARD PEN. ☰ 75 mm SPOON ▯ CRREL BARREL

DEPTH (m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						SPARSE GRASS GROUND COVER
						SILT WITH SAND AND GRAVEL–rootlets throughout, dark brown
						SILT WITH SAND AND GRAVEL–rootlets throughout, damp, olive brown
1.0	■	1		GW		WELL GRADED GRAVEL WITH SAND–trace of silt, rootlets to 1.3 m, occasional cobble to 150 mm, less than 5% over 100 mm, interbedded with finer grained material, damp, medium brown
2.0	■	2		GP		POORLY GRADED GRAVEL WITH SAND–trace of silt, occasional cobble to 150 mm, damp, medium brown
3.0	■	3		GP		–sand lens from 3.2 to 3.4 m –GRAVEL is cleaner below 3.4 m, greyish brown
4.0	■	4		GP		
5.0						END OF TESTPIT 4.8 m NOTE: Hole sloughing badly
6.0						
7.0						

■ STANDARD PENETRATION ■ 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

■ PERCENT GRAVEL ■ 20 40 60 80

● PERCENT SAND ● 20 40 60 80

▲ PERCENT SILT OR FINES ▲ 20 40 60 80

◆ PERCENT CLAY ◆ 20 40 60 80

DEPTH (ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0, 18.0, 20.0, 22.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: MCP	COMPLETION DEPTH: 4.8 m
	REVIEWED BY:	COMPLETE: 92/04/22
	Fig. No:	Page 1 of 1

Pit Ident. 115 G-07
Km 1635.8 RHS Alaska Highway #1
(Silver City)

March 2001
Book # 583 & 584

Yukon Territorial Government

Test Pit Logs

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583–1524
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC –seasonal frozen							0.0
	SANDY SILT WITH ORGANIC –brown –frozen (Nb)							
1.0	POORLY GRADED GRAVEL WITH SAND (GP) –brown –frozen (Nf)to 2.0m –maximum 150mm material –estimate 1% +100mm material		56 ▲		GP		◆ ■	1.0
2.0	–thawed, damp to moist below 2.0m –estimate 5% +100mm material		57 ▲		GP		◆ ■	2.0
3.0								3.0
4.0								4.0
5.0			58 ▲		GP		◆ ■	5.0
	END HOLE @ 5.0m							
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/03/12
	Fig. No: 115-G-07	Page 1 of 1

01/03/27 04:47PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1525
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC –seasonal frozen							0.0
	SANDY SILT –brown –frozen (Nb) to 2.0m							
1.0	POORLY GRADED GRAVEL WITH SAND (GP) –brown –frozen (Nf) –maximum 100mm material		59 ▲		GP			1.0
2.0	–thawed, damp to moist below 2.0m		60 ▲		GP			2.0
3.0								3.0
4.0								4.0
	–moist below 4.5m		61 ▲		GP			
5.0	END HOLE @ 5.0m							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/03/12
	Fig. No: 115-G-07	Page 1 of 1

01/03/27 04:47PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583–1526
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC –seasonal frozen							0.0
	SANDY SILT & ORGANIC –frozen (Nb)to 2.1m							
	POORLY GRADED GRAVEL WITH SILT & SAND TO WELL-GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (GP-GM)-(SW)-(GP) –brown –frozen (Nb) –maximum 150mm material –estimate 5% +100mm material		62	▲	GP-GM		◆ ■	
1.0								1.0
2.0	–thawed, damp to moist below 2.1m							2.0
			63	▲	SW		◆ ■	
3.0								3.0
	–frozen (Vx) below 3.5m –hard digging		64	▲	GP		◆ ■	
4.0	END HOLE @ 3.9m							4.0
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 3.9 m
REVIEWED BY:	COMPLETE: 01/03/12
Fig. No: 115-G-07	Page 1 of 1

01/03/27 04:47PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583–1527
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092–202101–0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL
0.0	ORGANIC –seasonal frozen				
	SANDY SILT –brown –frozen (Nb)to 2.2m				
	WELL–GRADED SAND WITH GRAVEL (SW) –brown –frozen (Nf) –maximum 100mm material		65	SW	
1.0					
2.0					
	POORLY GRADED GRAVEL WITH SILT & SAND TO POORLY GRADED GRAVEL WITH SAND (GP–GM)–(GP) –brown –damp to moist –easy digging		66	GP–GM	
3.0					
	–frozen (Vc) below 3.4m –very hard digging below 3.4m				
4.0			67	GP	
	END HOLE @ 4.2m				
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

DEPTH (m) 0.0 1.0 2.0 3.0 4.0 5.0 6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.2 m
REVIEWED BY:	COMPLETE: 01/03/13
Fig. No: 115–G–07	Page 1 of 1

01/03/27 04:47PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1528
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC -black -seasonal frozen (Vx)							0.0
1.0	SILT -trace sand -brown -moist to wet -smooth easy digging							1.0
2.0								2.0
3.0	SILTY GRAVEL WITH SAND (GM) -brown -frozen (Vc)below 2.4m -maximum 100mm material -very hard digging		68	▲	GM		◆ ■	3.0
	END HOLE @ 3.2m							
4.0								4.0
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 3.2 m
	REVIEWED BY:	COMPLETE: 01/03/13
	Fig. No: 115-G-07	Page 1 of 1

01/03/27 04:47PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583–1541
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC –seasonal frozen							0.0
	POORLY GRADED GRAVEL WITH SILT & SAND TO POORLY GRADED GRAVEL WITH SAND (GP–GM)–(GP) –brown –frozen (Nf)to 1.6m –trace organic contamination		100 ▲		GP–GM			
1.0								1.0
	–thawed below 1.6m							
2.0	–maximum 150mm material below 2.0m –estimate 5% +100mm material							2.0
			101 ▲		GP			
3.0								3.0
4.0	–estimate 10% +100mm material below 4m							4.0
			102 ▲		GP			
5.0	END HOLE @ 5.0m NOTE: located on esker ridge							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/03/13
	Fig. No: 115-G-07	Page 1 of 1

01/03/28 08:15AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583–1542
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC –seasonal frozen							0.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP–GM) –brown –frozen (Nf)to 1.6m –maximum 100mm material		103	▲	GP–GM		◆ ■	
1.0								1.0
	–thawed, damp below 1.6m							
2.0								2.0
			104	▲	GW–GM		◆ ■	
3.0								3.0
4.0								4.0
			05	▲	GP–GM		◆ ■	
5.0	END HOLE @ 5.0m NOTE: located on top of esker							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/03/13
	Fig. No: 115-G-07	Page 1 of 1

01/03/28 08:15AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 584-1544
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC –seasonal frozen –very hard digging							0.0
	GRAVEL, COBBLES, SAND, SILT & ORGANIC –dark grey –frozen (Nb)to 0.7m							
1.0	SILTY SAND WITH GRAVEL (SM) –brown –moist –easy digging		109	▲	SM		■ ◆	1.0
2.0	POORLY GRADED GRAVEL WITH SILT & SAND GP-GM) –brown –moist to wet –maximum 100mm material		110	▲	GP-GM		◆ ■	2.0
3.0								3.0
4.0	–H20 flowing into hole @ 3.9m							4.0
	SANDY SILT –brown –moist to wet							
5.0	END HOLE @ 5.0m NOTE: located in low area between eskers							5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
REVIEWED BY:	COMPLETE: 01/03/15
Fig. No: 115-G-07	Page 1 of 1

01/03/28 08:15AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 584–1545
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC –seasonal frozen –hard digging							0.0
	WELL TO POORLY GRADED GRAVEL WITH SILT & SAND TO WELL-GRADED SAND WITH SILT & GRAVEL (GW-GM)–(GP-GM)–(SW-SM) –brown –frozen (Nf) –maximum 200mm material –estimate 5% +100mm material		111	▲	GW-GM		◆ ■	
1.0								1.0
2.0	–thawed, damp below 2.0m –maximum 100mm material							2.0
			112	▲	GP-GM		◆ ■	
3.0								3.0
4.0								4.0
			113	▲	SW-SM		■ ◆	
5.0	END HOLE @ 5.0m NOTE: on esker above TP1544							5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
REVIEWED BY:	COMPLETE: 01/03/15
Fig. No: 115-G-07	Page 1 of 1

01/03/28 08:15AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 584–1546
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE NO
0.0	ORGANIC –seasonal frozen	
	WELL–GRADED SAND WITH SILT & GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SW–SM)–(GP) –brown –frozen (Nf)to 1.8m –maximum 100mm material	114
1.0		
	–thawed, damp below 1.8m	
2.0		
		115
3.0		
4.0		
		116
5.0	END HOLE @ 5.0m	
6.0		

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

USC	SOIL SYMBOL
SW–SM	
GP	
GP	

◆ 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

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
REVIEWED BY:	COMPLETE: 01/03/15
Fig. No: 115-G-07	Page 1 of 1

01/03/28 08:15AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 584–1547
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ☒ S.P.T. ☒ AUGER ☰ BULK ▥ TUBE ▥ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC –seasonal frozen							0.0
	POORLY GRADED GRAVEL WITH SAND TO WELL–GRADED SAND WITH GRAVEL (GP)–(SW) –brown –frozen (Nf)to 3.3m –maximum 200mm material –estimate 5% +100mm material		117 ▲		GP			
1.0								1.0
2.0								2.0
			118 ▲		GP		◆	
3.0	–thawed below 3.3m							3.0
4.0								4.0
			119 ▲		SW		◆	
5.0	END HOLE @ 5.0m							5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
REVIEWED BY:	COMPLETE: 01/03/15
Fig. No: 115-G-07	Page 1 of 1

01/03/28 08:15AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 584–1548
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC –seasonal frozen							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) –brown –frozen (Nf)to 2.7m –maximum 150mm material –estimate 5% +100mm material		120 ▲		GP			
1.0								1.0
2.0			121 ▲		GP			2.0
	–thawed, damp below 2.7m							
3.0								3.0
4.0								4.0
			122 ▲		GP			
5.0	END HOLE @ 5.0m							5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
REVIEWED BY:	COMPLETE: 01/03/15
Fig. No: 115-G-07	Page 1 of 1

01/03/28 08:15AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 584–1549
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092–202101–0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	DEPTH (m)
0.0	ORGANIC –seasonal frozen					0.0
	WELL–GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SW)–(GP) –brown –frozen (Nf)to 2.1m –maximum 100mm material		123	SW		
1.0						1.0
2.0	–thawed, damp below 2.1m		124	SW		2.0
3.0						3.0
4.0			125	GP		4.0
5.0	END HOLE @ 5.0m					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

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/03/15
	Fig. No: 115–G–07	Page 1 of 1

01/03/28 08:15AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 584–1552
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■PERCENT GRAVEL■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SANDY GRAVEL & SILT –brown –frozen (Nf)							
	WELL–GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SW)–(GP) –brown –damp –frozen (Nf) –maximum 100mm material							
1.0								1.0
			135 ▲		SW			
2.0								2.0
3.0								3.0
	–maximum 200mm material below 3.8m –estimate 5% +100mm material below 3.8m							
4.0			136 ▲		GP			4.0
5.0			137 ▲		GP			5.0
	END HOLE @ 5.5m NOTE: hole dug on side of esker, part way up slope, below hole 1518							
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 5.5 m
REVIEWED BY:	COMPLETE: 01/03/15
Fig. No: 115-G-07	Page 1 of 1

01/03/28 08:16AM

Pit Ident. 115 G-07
Km 1635.8 RHS Alaska Highway #1
(Silver City)

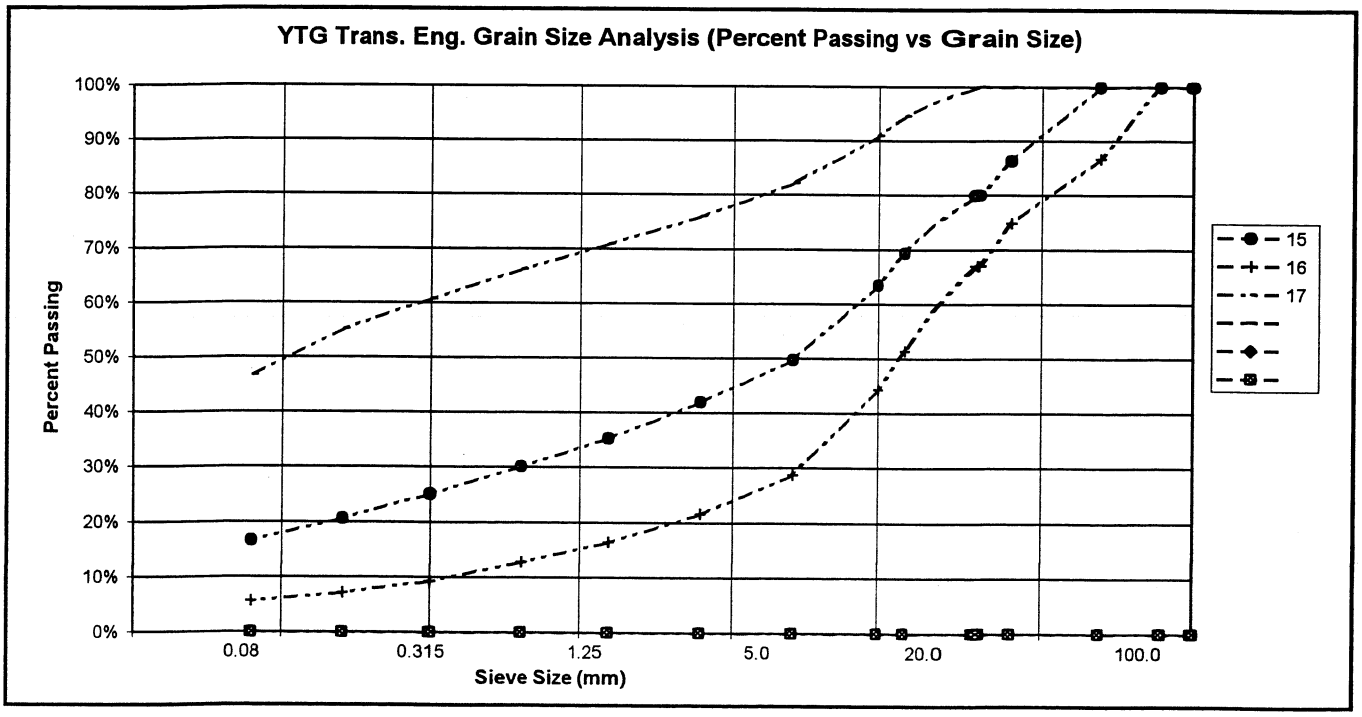
February 2001
Book # 581 & 582

Yukon Territorial Government

Auger Sample Results

PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 581-1510
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Silver Creek Reserve Km 1694 A/H		
DRILL UNIT:	MOBILE B40 L - D-4 CAT		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	J.M.		DATE COMP: 2000/02/20

FIELD NO:	15	16	17			
LAB NO:	15	16	17			
DEPTH:	0.9-1.2	3.6-4.1	6.8-7.2			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	87%	100%			
25.0	86%	75%	100%			
20.0	80%	67%	100%			
12.5	69%	51%	95%			
10.0	64%	44%	91%			
5.0	50%	29%	82%			
2.5	42%	22%	76%			
1.25	35%	16%	71%			
0.630	30%	13%	66%			
0.315	25%	9%	61%			
0.160	21%	7%	55%			
0.080	17%	6%	47%			
M.C.(%):	4%	2%	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:	50	71	18			
% SAND:	33	23	35			
% FINES:	17	6	47			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	SILTY SAND WITH GRAVEL (SM)			

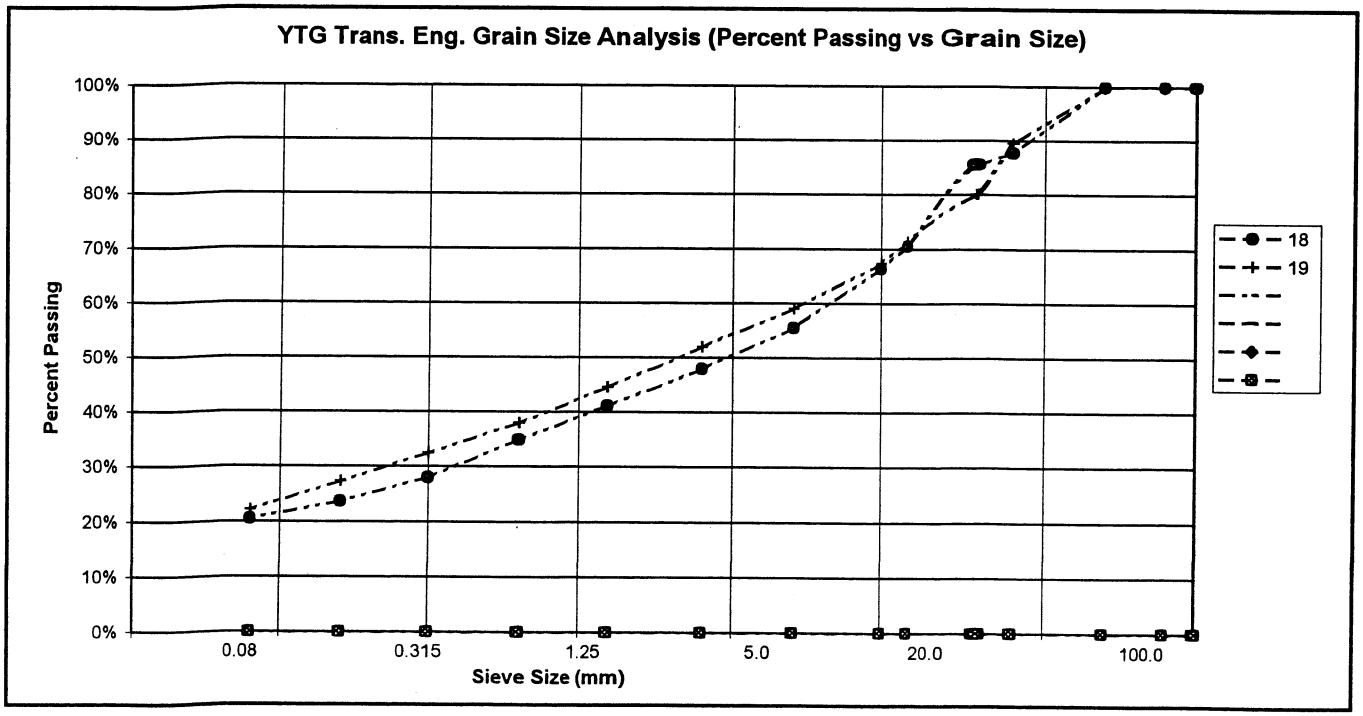


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Silver Creek Reserve Km 1694 A/H
DRILL UNIT: MOBILE B40 L - D-4 CAT
HOLE LOCATION: SEE PLAN
LOGGED BY: J.M.

HOLE No.: 581-1511

DATE COMP: 2000/02/20

FIELD NO:	18	19				
LAB NO:	18	19				
DEPTH:	2.3-2.7	6.8-7.3				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	88%	90%				
20.0	86%	80%				
12.5	71%	71%				
10.0	66%	67%				
5.0	55%	59%				
2.5	48%	52%				
1.25	41%	45%				
0.630	35%	38%				
0.315	28%	32%				
0.160	24%	27%				
0.080	20%	22%				
M.C.(%):	6%	9%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	45	41				
% SAND:	35	37				
% FINES:	20	22				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)				

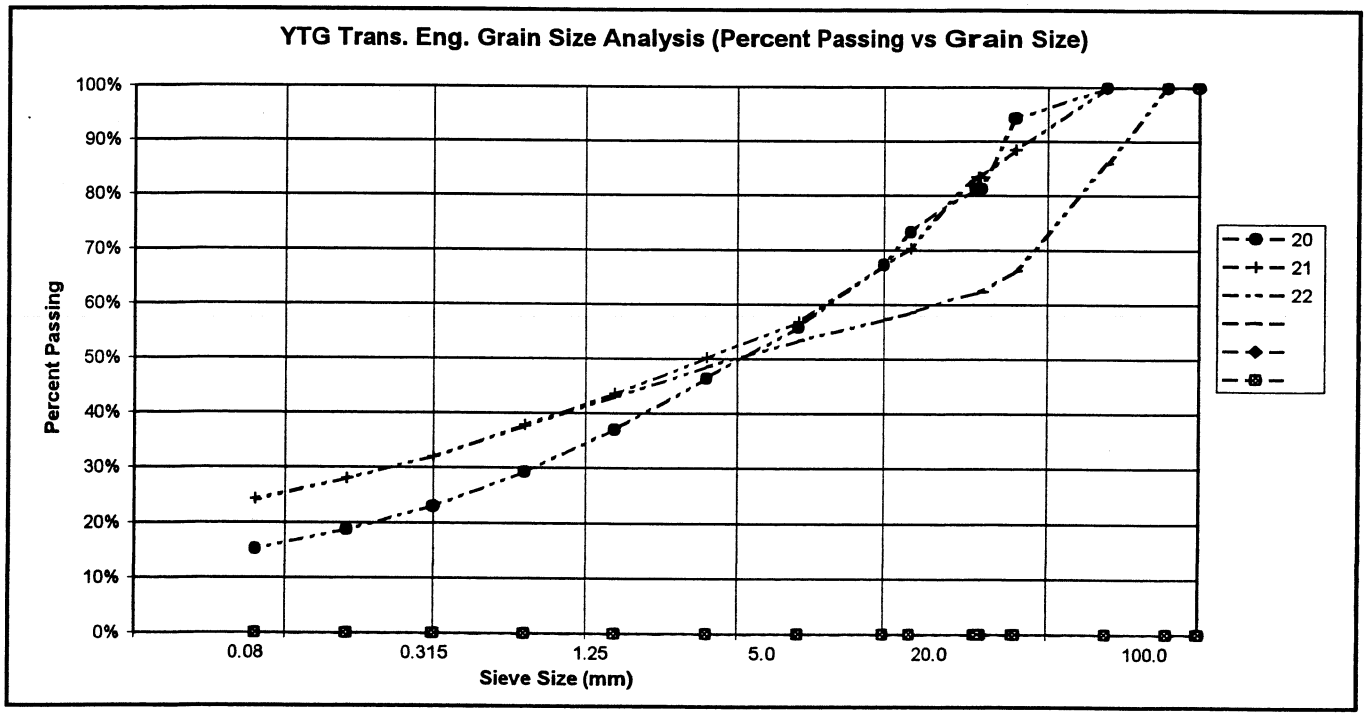


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Silver Creek Reserve Km 1694 A/H
DRILL UNIT: MOBILE B40 L - D-4 CAT
HOLE LOCATION: SEE PLAN
LOGGED BY: J.M.

HOLE No.: 581-1512

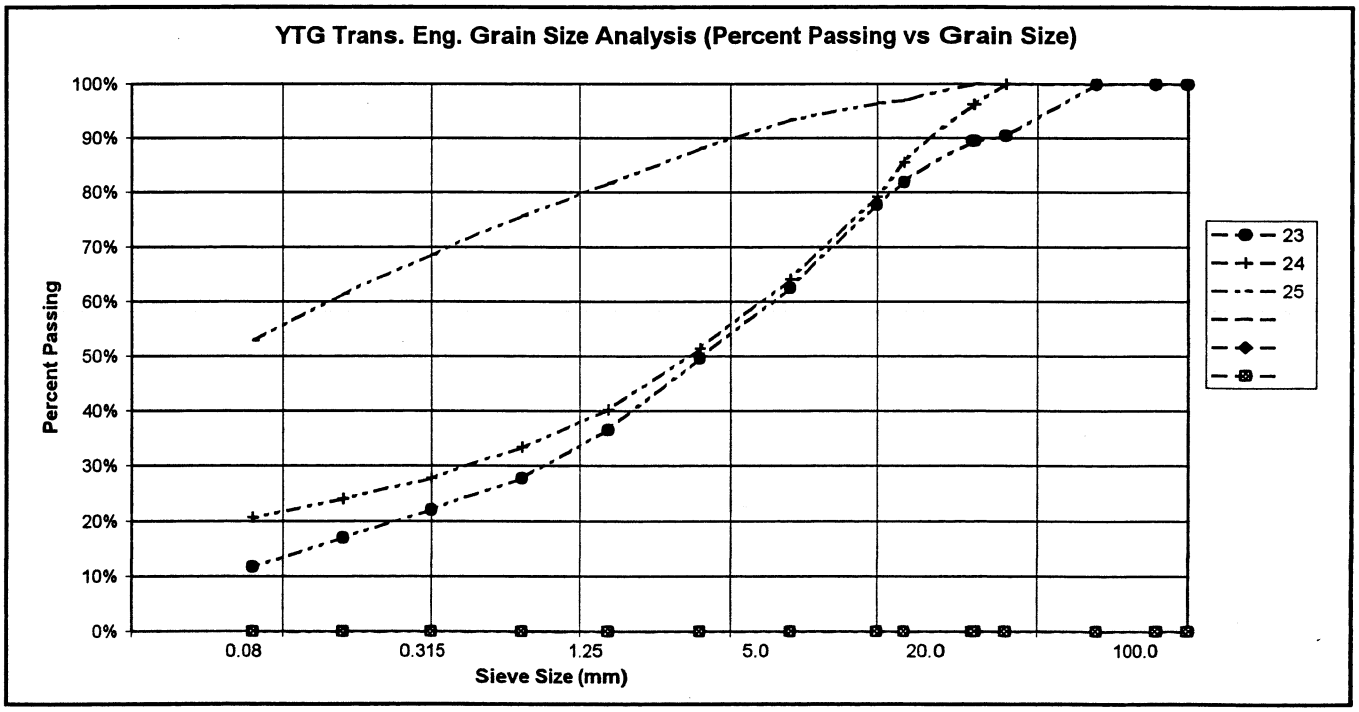
DATE COMP: 2000/02/20

FIELD NO:	20	21	22			
LAB NO:	20	21	22			
DEPTH:	1.0-1.3	3.9-4.3	6.6-7.0			
TYPE:	AUGER	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%	86%			
25.0	94%	89%	66%			
20.0	81%	83%	62%			
12.5	73%	70%	59%			
10.0	67%	67%	57%			
5.0	56%	57%	53%			
2.5	46%	50%	49%			
1.25	37%	44%	43%			
0.630	29%	38%	38%			
0.315	23%	32%	32%			
0.160	19%	28%	28%			
0.080	15%	24%	24%			
M.C.(%):	4%	6%	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:	44	43	47			
% SAND:	41	33	29			
% FINES:	15	24	24			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)			



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 581-1513
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Silver Creek Reserve Km 1694 A/H		
DRILL UNIT:	MOBILE B40 L - D-4 CAT		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	J.M.		DATE COMP: 2000/02/20

FIELD NO:	23	24	25			
LAB NO:	23	24	25			
DEPTH:	0.8-1.2	4.0-4.3	7.7-8.2			
TYPE:	AUGER	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	90%	100%	100%			
20.0	90%	96%	100%			
12.5	82%	86%	97%			
10.0	78%	79%	96%			
5.0	63%	64%	93%			
2.5	50%	51%	88%			
1.25	37%	40%	82%			
0.630	28%	33%	76%			
0.315	22%	28%	69%			
0.160	17%	24%	61%			
0.080	12%	21%	53%			
M.C.(%):	3%	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:	37	36	7			
% SAND:	51	43	41			
% FINES:	12	21	53			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)			

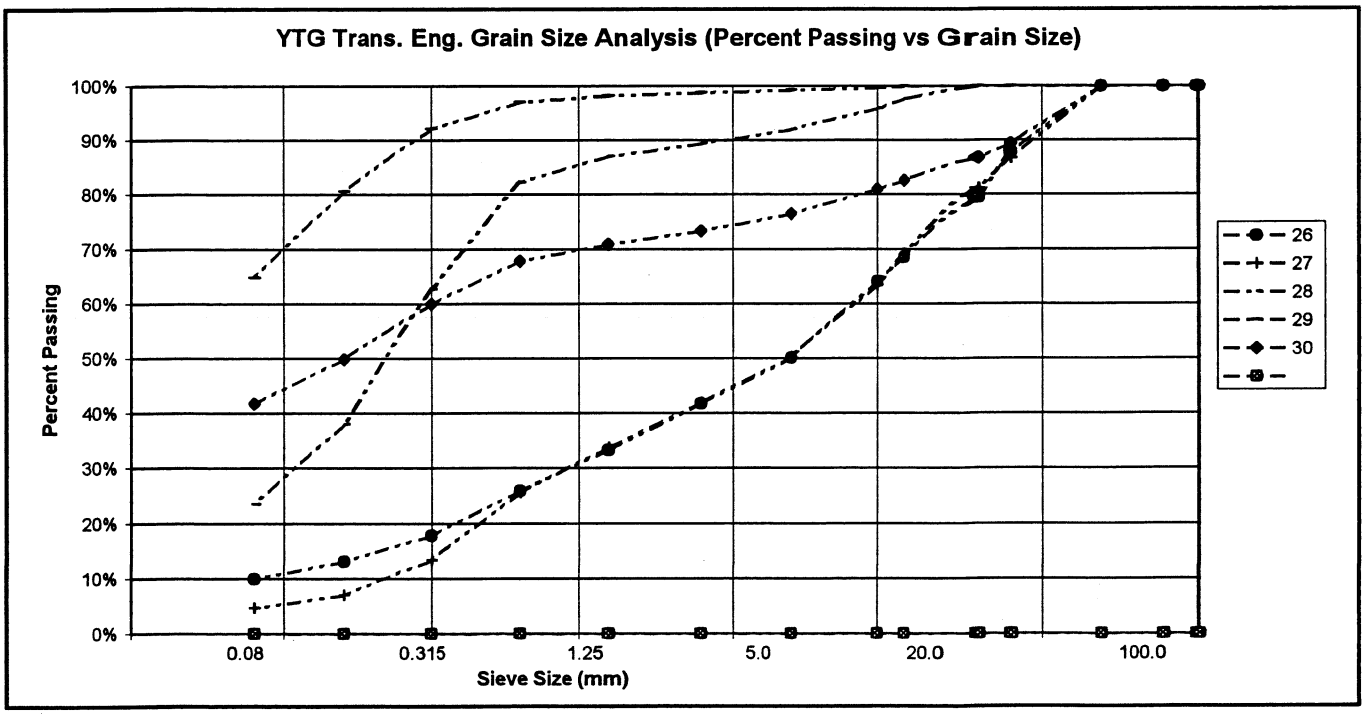


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Silver Creek Reserve Km 1694 A/H
DRILL UNIT: MOBILE B40 L - D-4 CAT
HOLE LOCATION: SEE PLAN
LOGGED BY: J.M.

HOLE No.: 581-1514

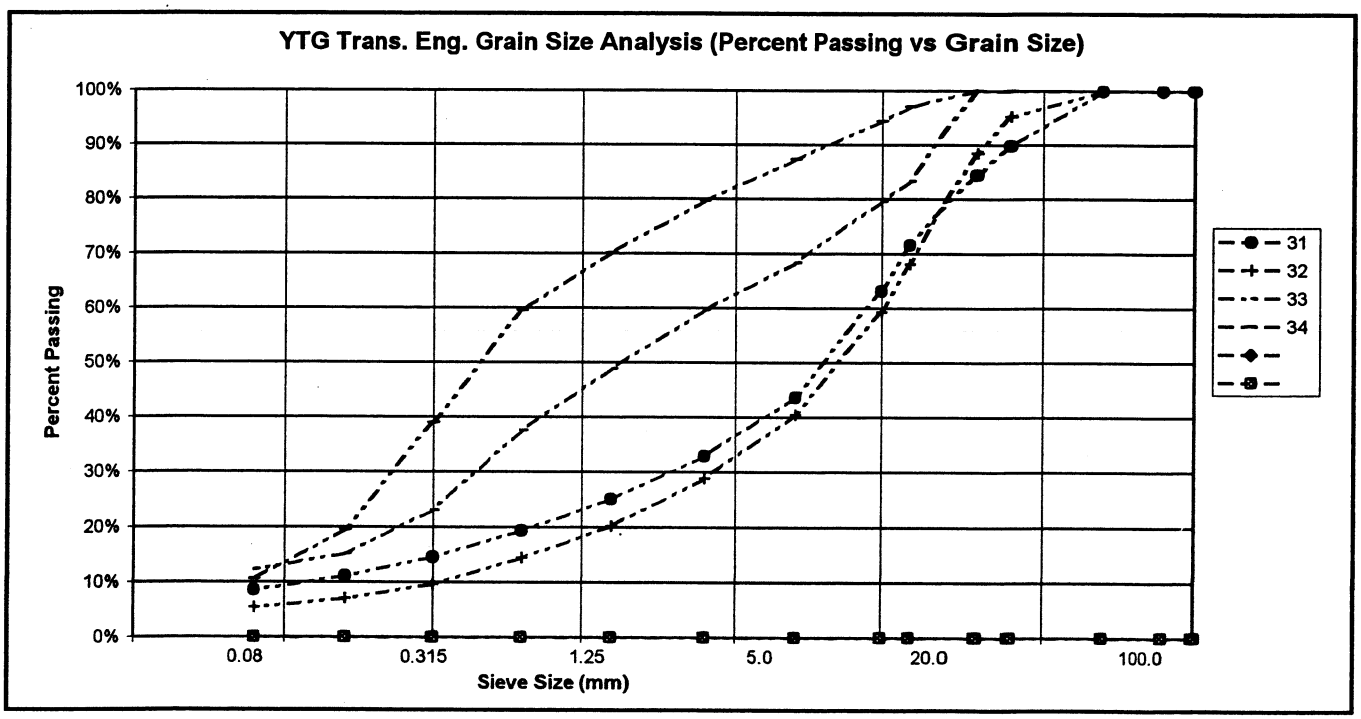
DATE COMP: 2000/02/20

FIELD NO:	26	27	28	29	30	
LAB NO:	26	27	28	29	30	
DEPTH:	0.8-1.0	3.4-4.0	5.8-6.4	9.0-9.8	13.0-14.0	
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
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%	87%	100%	100%	89%	
20.0	80%	81%	100%	100%	87%	
12.5	69%	69%	98%	100%	83%	
10.0	64%	63%	96%	100%	81%	
5.0	50%	50%	92%	99%	77%	
2.5	42%	42%	89%	99%	73%	
1.25	33%	34%	87%	98%	71%	
0.630	26%	26%	82%	97%	68%	
0.315	18%	13%	63%	92%	60%	
0.160	13%	7%	38%	81%	50%	
0.080	10%	5%	23%	65%	42%	
M.C.(%):	3%	2%	4%	11%	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:	50	50	8	1	23	
% SAND:	40	46	69	35	35	
% FINES:	10	5	23	65	42	
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND (SM)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 582-1515
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Silver Cr Reserve Km 1694 A/H		
DRILL UNIT:	D-4 CAT		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/02/28

FIELD NO:	31	32	33	34		
LAB NO:	31	32	33	34		
DEPTH:	0.8-1.0	4.1-4.3	6.0-6.2	9.2-9.5		
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	90%	95%	100%	100%		
20.0	85%	89%	100%	100%		
12.5	72%	68%	83%	97%		
10.0	63%	59%	80%	94%		
5.0	44%	41%	68%	87%		
2.5	33%	29%	60%	80%		
1.25	25%	20%	49%	70%		
0.630	19%	14%	38%	60%		
0.315	15%	10%	23%	39%		
0.160	11%	7%	15%	19%		
0.080	9%	5%	12%	11%		
M.C.(%):	3%	2%	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:	56	59	32	13		
% SAND:	35	35	56	77		
% FINES:	9	5	12	11		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED SAND WITH SILT (SW-SM)		

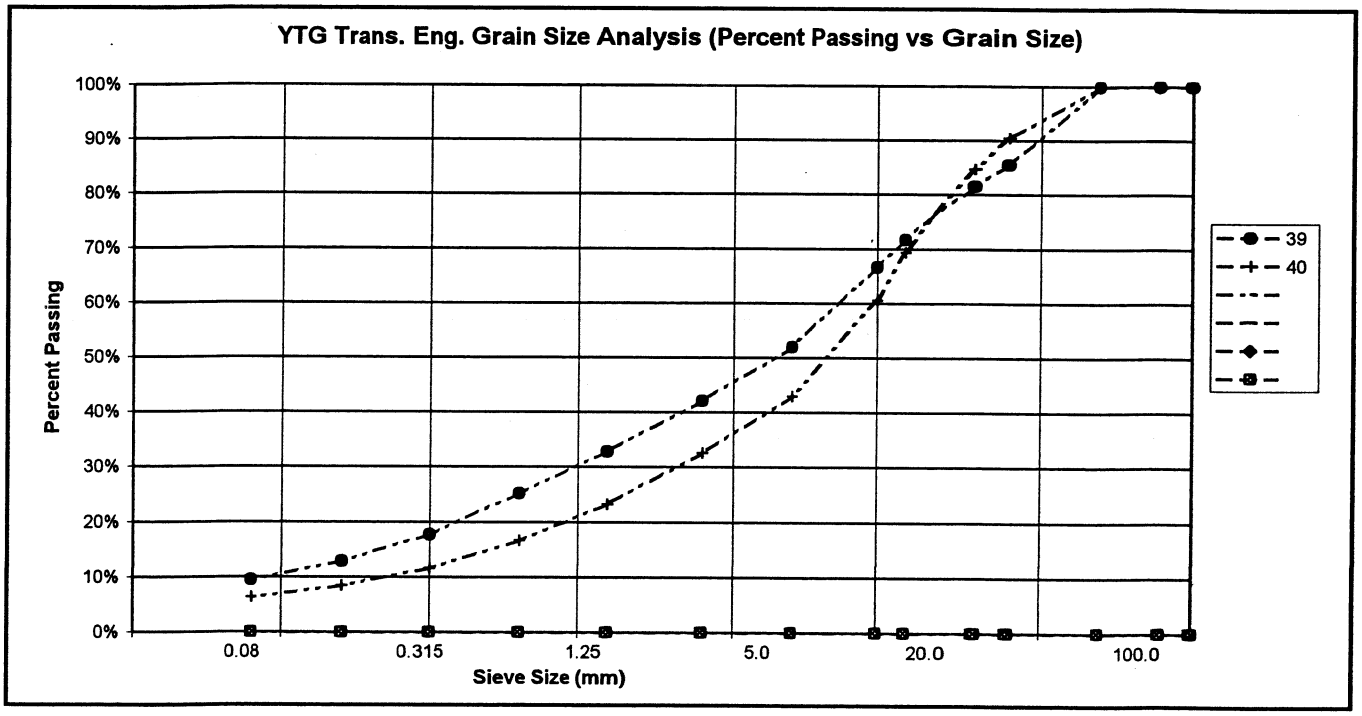


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Silver Cr Reserve Km 1694 A/H
DRILL UNIT:	D-4 CAT
HOLE LOCATION:	SEE PLAN
LOGGED BY:	D.T.

HOLE No.: 582-1517

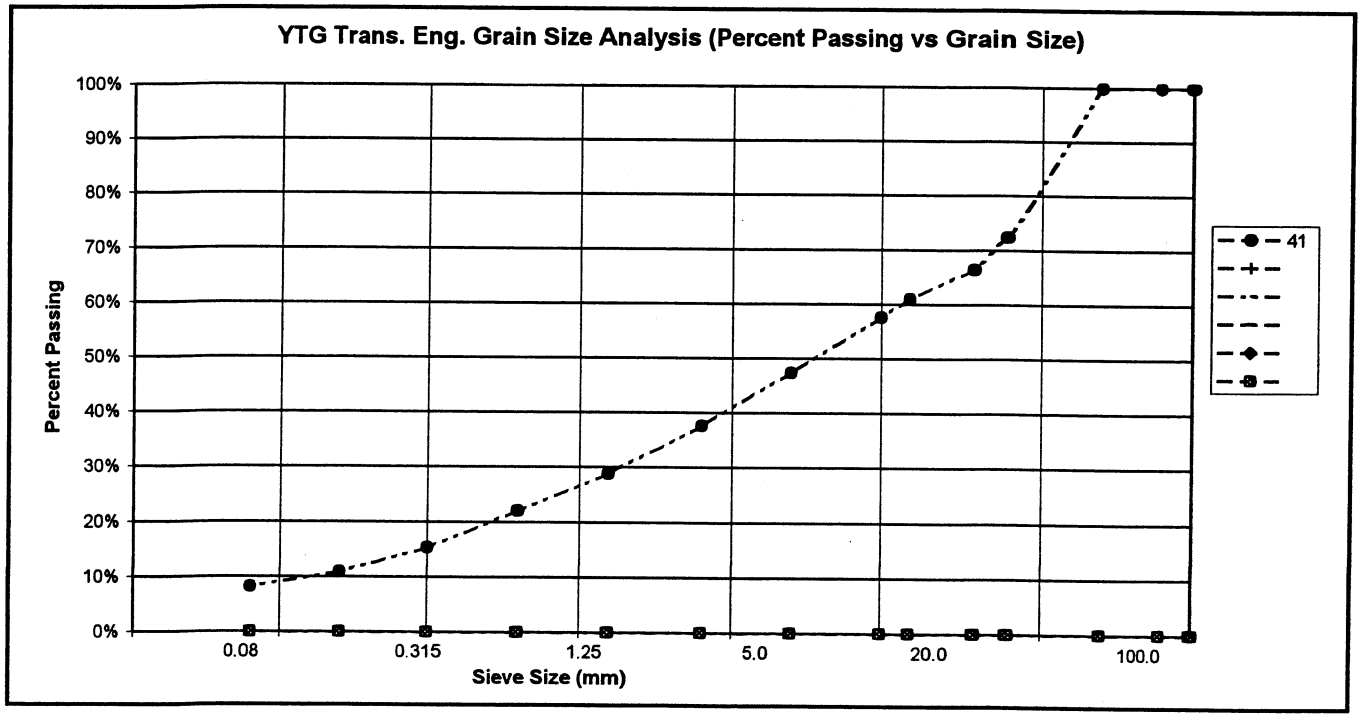
DATE COMP: 2001/02/28

FIELD NO:	39	40				
LAB NO:	39	40				
DEPTH:	1.1-1.3	2.6-2.8				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	86%	91%				
20.0	82%	85%				
12.5	72%	69%				
10.0	67%	61%				
5.0	52%	43%				
2.5	42%	33%				
1.25	33%	23%				
0.630	25%	17%				
0.315	18%	12%				
0.160	13%	8%				
0.080	10%	6%				
M.C.(%):	5%	2%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	48	57				
% SAND:	42	37				
% FINES:	10	6				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 582-1518
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Silver Cr Reserve Km 1694 A/H		
DRILL UNIT:	D-4 CAT		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/02/28

FIELD NO:	41					
LAB NO:	41					
DEPTH:	1.1-1.3					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	72%					
20.0	66%					
12.5	61%					
10.0	58%					
5.0	47%					
2.5	38%					
1.25	29%					
0.630	22%					
0.315	15%					
0.160	11%					
0.080	8%					
M.C.(%):	5%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	53					
% SAND:	39					
% FINES:	8					
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)					



Pit Ident. 115 G-07
Km 1635.8 RHS Alaska Highway #1
(Silver City)

November 1991
Book # 152

Yukon Territorial Government

Pit Run Sample Results

PROJECT NUMBER:	859167	HOLE NUMBER:	152-06
CLIENT:	PWC/O&M YUKON		
PROJECT NAME:	ALASKA HIGHWAY GRANULAR INVESTIGATION		
PROJECT LOCATION:	115-G-07		
DRILL UNIT:	BACKHOE: CASE 688		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	DT	DATE COMPLETED:	91.11.05

FIELD NO:	10
LAB NO:	5408
DEPTH:	1.1-1.5
TYPE:	BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	97
25.4	90
19.0	82
12.7	76
9.5	69
4.76	56
2.38	--
2.00	40
1.19	--
0.841	27
0.595	--
0.42	16
0.297	--
0.177	--
0.149	6
0.074	5

M.C.(%):	--
LIMITS	
LIQUID:	--
PLASTIC:	--
P.I.:	N.P.
% GRAVEL:	44
% SAND:	51
% FINES:	5

CLASSIFICATION:
POORLY GRADED SAND WITH SILT & GRAVEL (SP-SM)

FIELD NO:	11
LAB NO:	5409
DEPTH:	4.6-5.0
TYPE:	BULK

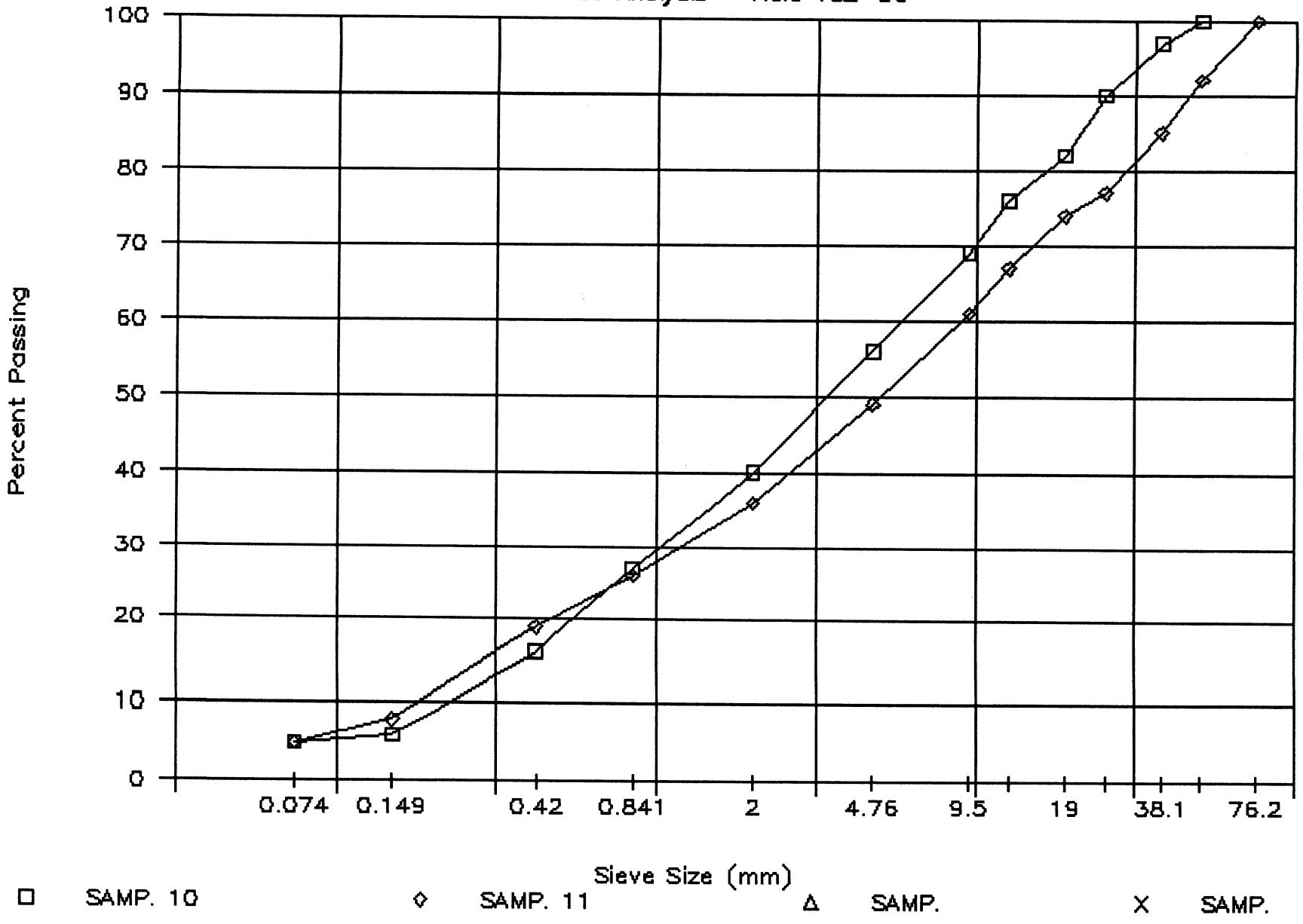
SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	92
38.1	85
25.4	77
19.0	74
12.7	67
9.5	61
4.76	49
2.38	--
2.00	36
1.19	--
0.841	26
0.595	--
0.42	19
0.297	--
0.177	--
0.149	8
0.074	5

M.C.(%):	--
LIMITS	
LIQUID:	--
PLASTIC:	--
P.I.:	N.P.
% GRAVEL:	51
% SAND:	45
% FINES:	5

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

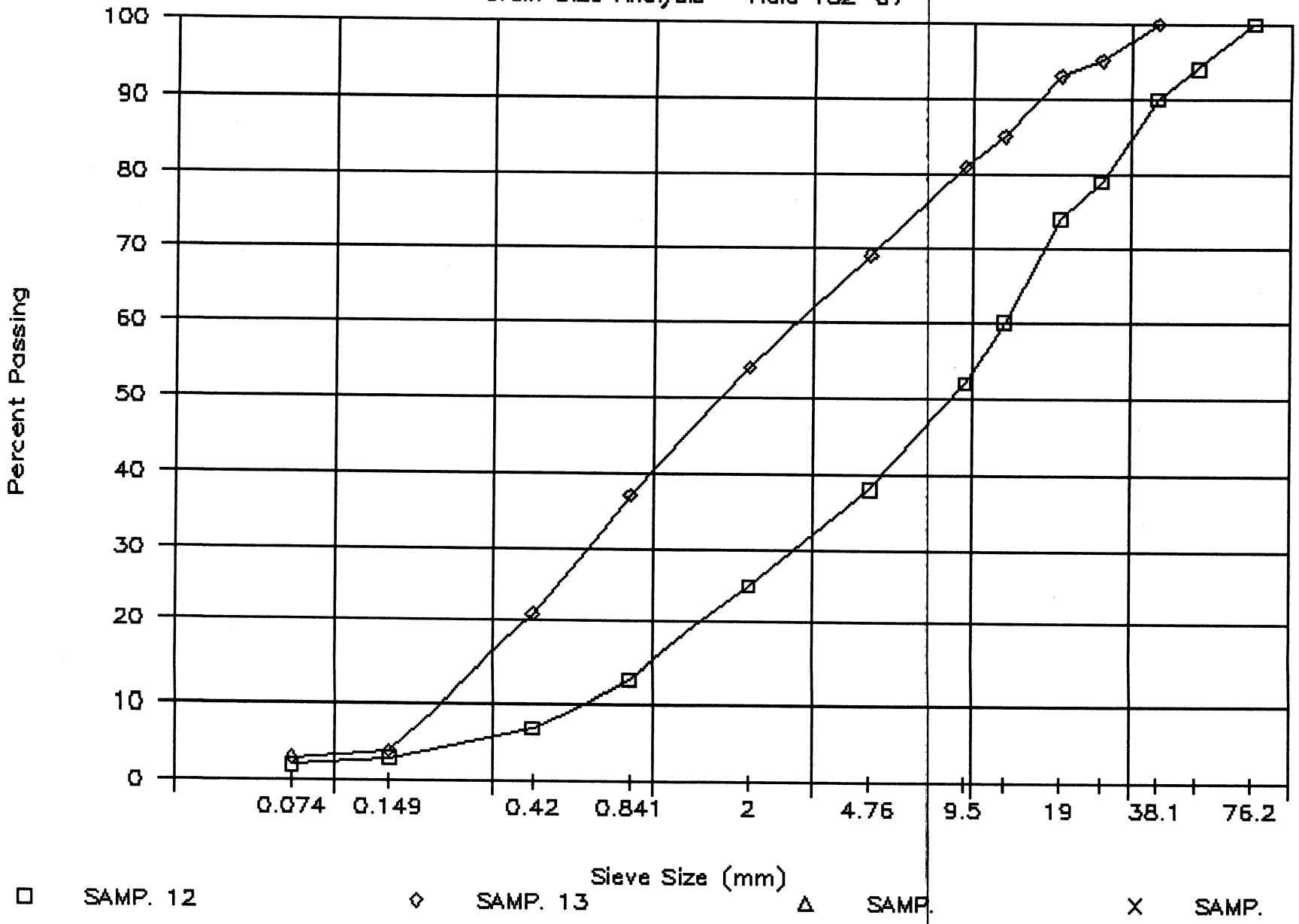
Grain Size Analysis — Hole 152–06



PROJECT NUMBER:	859167	HOLE NUMBER:	152-07
CLIENT:	PWC/O&M YUKON		
PROJECT NAME:	ALASKA HIGHWAY GRANULAR INVESTIGATION		
PROJECT LOCATION:	115-G-07		
DRILL UNIT:	BACKHOE: CASE 688		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	DT	DATE COMPLETED:	91.11.07

FIELD NO: 12		FIELD NO: 13	
LAB NO: 5410		LAB NO: 5411	
DEPTH: 0.8-1.2		DEPTH: 4.5-4.9	
TYPE: BULK		TYPE: BULK	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--
76.2	100	76.2	--
50.8	94	50.8	--
38.1	90	38.1	100
25.4	79	25.4	95
19.0	74	19.0	93
12.7	60	12.7	85
9.5	52	9.5	81
4.76	38	4.76	69
2.38	--	2.38	--
2.00	25	2.00	54
1.19	--	1.19	--
0.841	13	0.841	37
0.595	--	0.595	--
0.42	7	0.42	21
0.297	--	0.297	--
0.177	--	0.177	--
0.149	3	0.149	4
0.074	2	0.074	3
M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	62	% GRAVEL:	31
% SAND:	36	% SAND:	66
% FINES:	2	% FINES:	3
CLASSIFICATION:		CLASSIFICATION:	
WELL-GRADED GRAVEL WITH SAND (GW)		POORLY GRADED SAND WITH GRAVEL (SP)	

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.



PROJECT NUMBER:	859167	HOLE NUMBER:	152-08
CLIENT:	PWC/O&M YUKON		
PROJECT NAME:	ALASKA HIGHWAY GRANULAR INVESTIGATION		
PROJECT LOCATION:	115-G-07		
DRILL UNIT:	BACKHOE: CASE 688		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	DT	DATE COMPLETED:	91.11.07

FIELD NO: 14
LAB NO: 5412
DEPTH: 1.2-1.6
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	89
38.1	89
25.4	82
19.0	75
12.7	69
9.5	63
4.76	50
2.38	--
2.00	36
1.19	--
0.841	24
0.595	--
0.42	15
0.297	--
0.177	--
0.149	7
0.074	4

M.C.(%): --

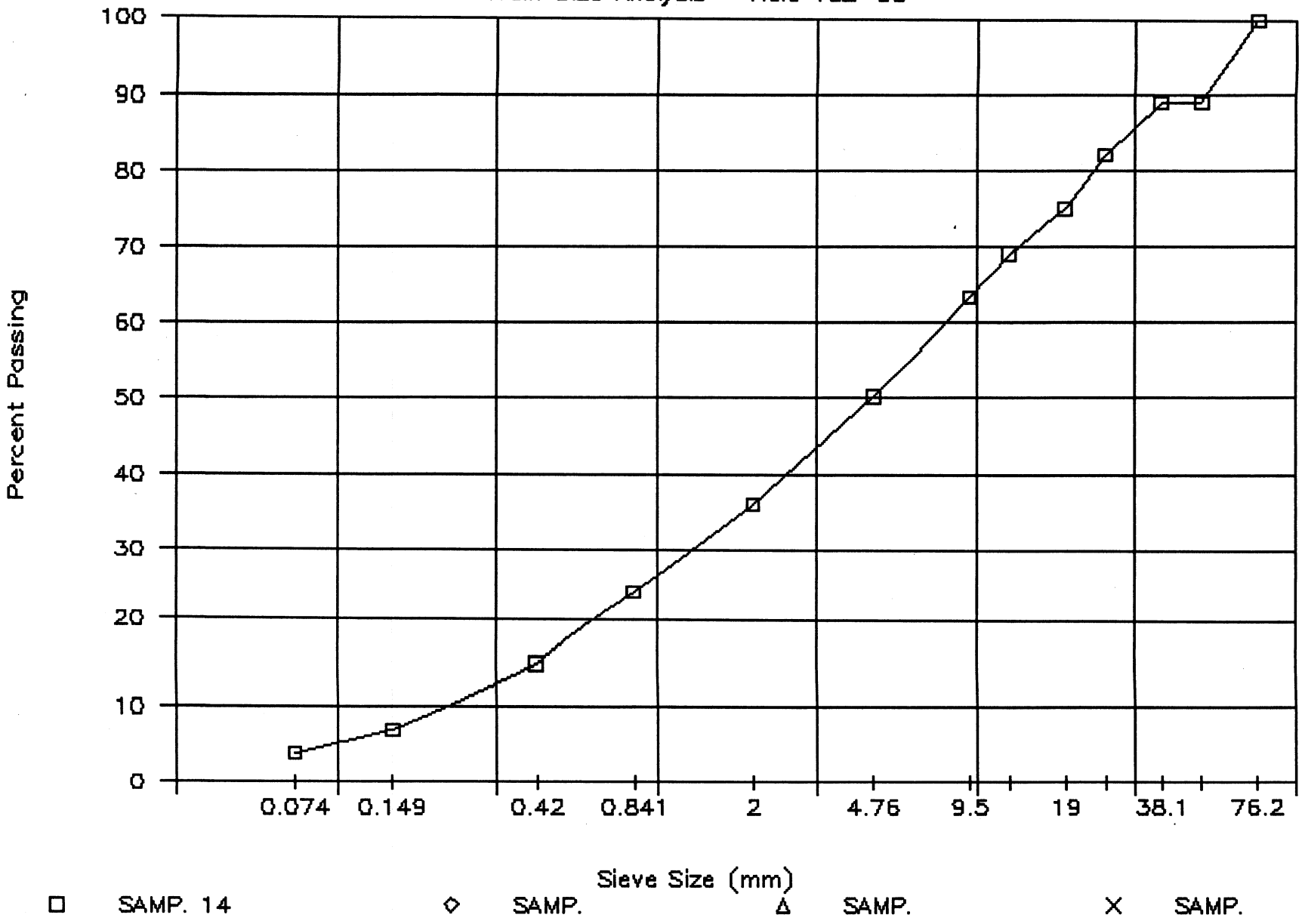
LIMITS
LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 50
% SAND: 45
% FINES: 4

CLASSIFICATION:
POORLY GRADED GRAVEL WITH SAND (GP)

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 152–08



Pit Ident. 115 G-07
Km 1635.8 RHS Alaska Highway #1
(Silver City)

April 1992
Report # GR-01-013

EBA Engineering Consultants Ltd.

Pit Run Sample Results

EBA Engineering Consultants Ltd.

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway, Yukon

Project Number: 0201-10922

Date Tested: 92-04-29

Borehole Number: 92-019E

Depth: 0.5 m

Soil Description: POORLY GRADED GRAVEL WITH SILT & SAND (GP/GM)

Cu: 115

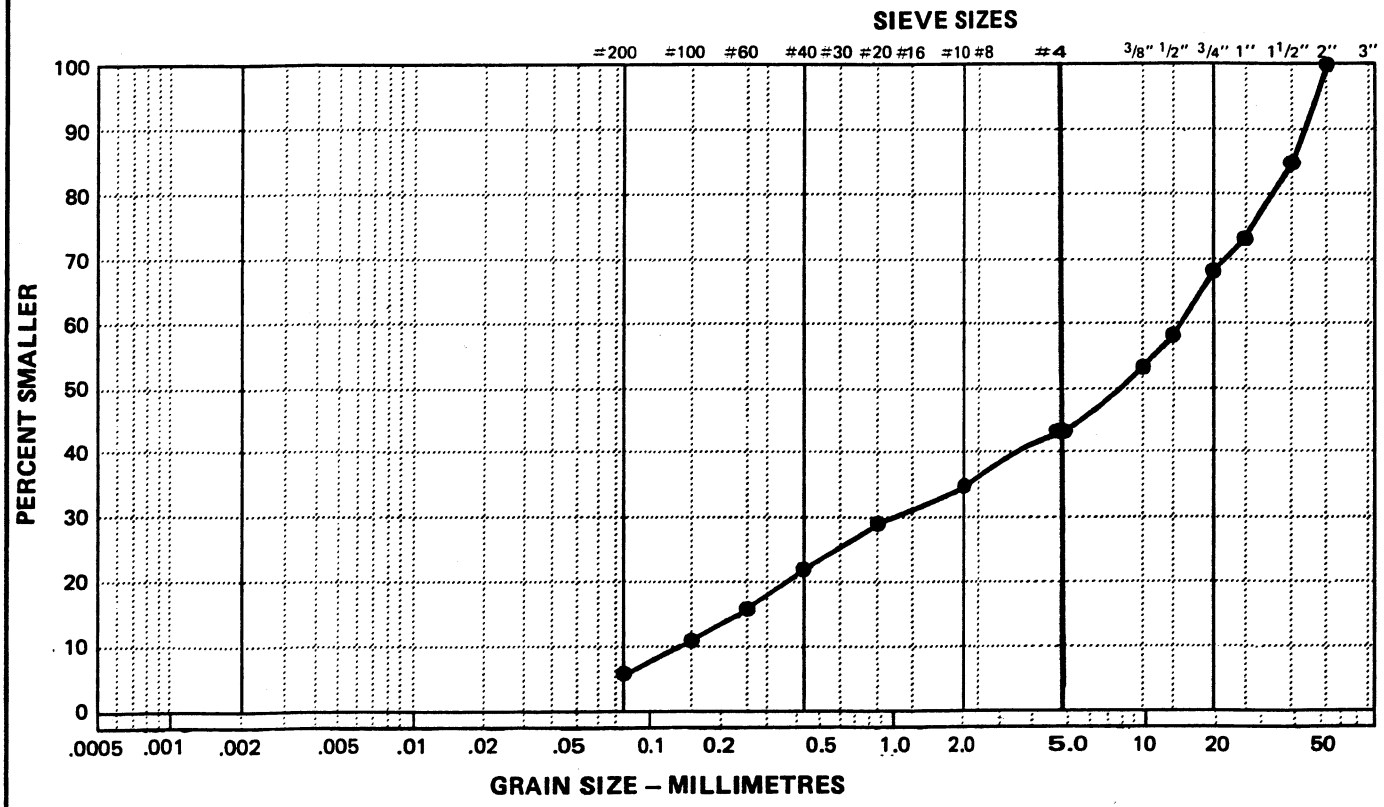
Cc: 0.5

Natural Moisture Content: 5.5 %

Remarks: Gravel 57.1%
Sand 36.6%
Silt 6.3%

SIEVE	PERCENTAGE PASSING
3"	
2"	100.0
1 1/2"	85.0
1"	73.2
3/4"	68.1
3/8"	53.4
No. 4	42.9
No. 10	35.3
No. 20	29.1
No. 40	22.2
No. 60	15.6
No. 100	10.5
No. 200	6.3

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

EBA Engineering Consultants Ltd.

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway

Project Number: 0201-10922

Date Tested: 92-04-29

Borehole Number: 92-019E

Depth: 1.0 m

Soil Description: POORLY GRADED GRAVEL WITH SAND (GP)

Cu: 40

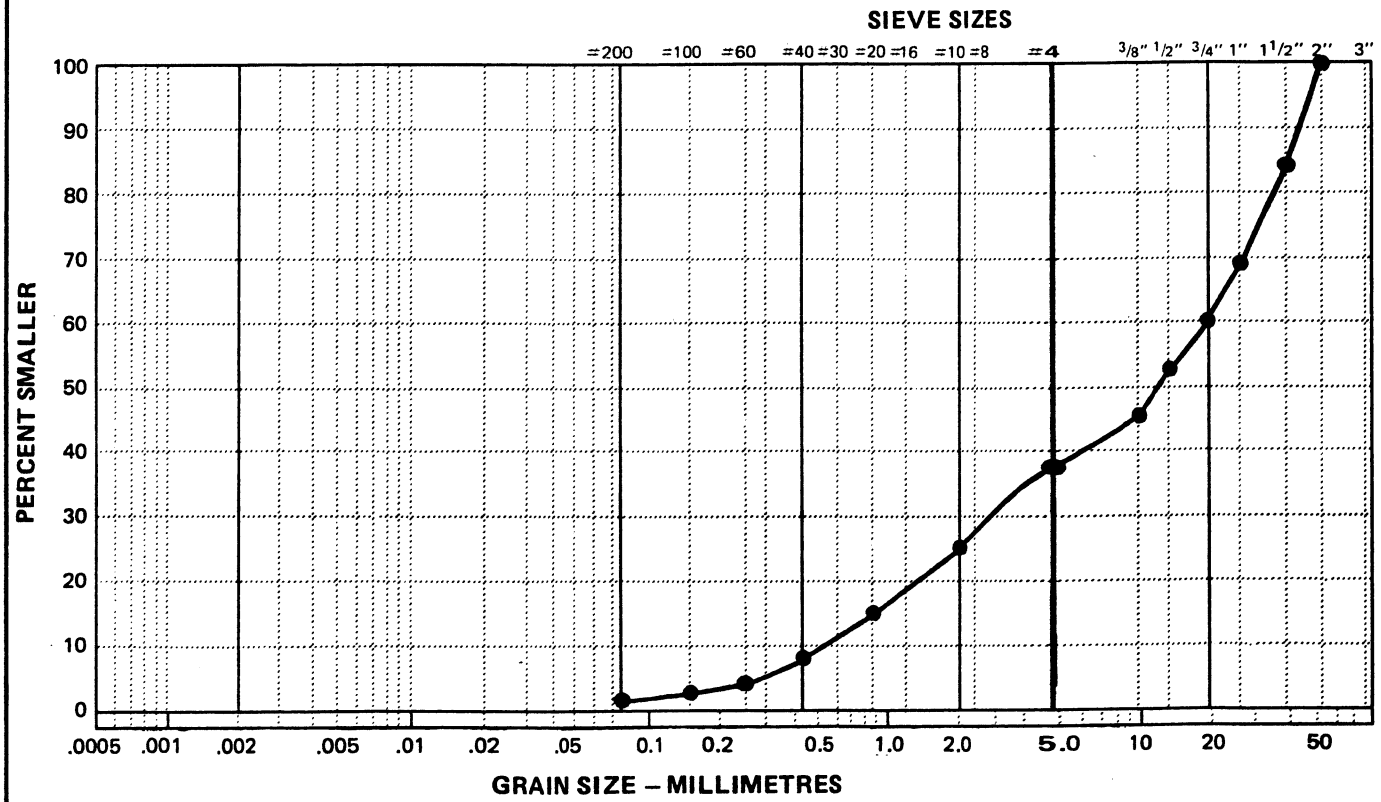
Cc: 0.9

Natural Moisture Content: 1.5 %

Remarks: Gravel 64.4%
Sand 33.6%
Silt 2.0%

SIEVE	PERCENTAGE PASSING
3"	
2"	100.0
1 1/2"	83.9
1"	69.4
3/4"	60.4
3/8"	45.8
No. 4	35.6
No. 10	24.9
No. 20	15.4
No. 40	7.9
No. 60	4.4
No. 100	2.7
No. 200	2.0

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

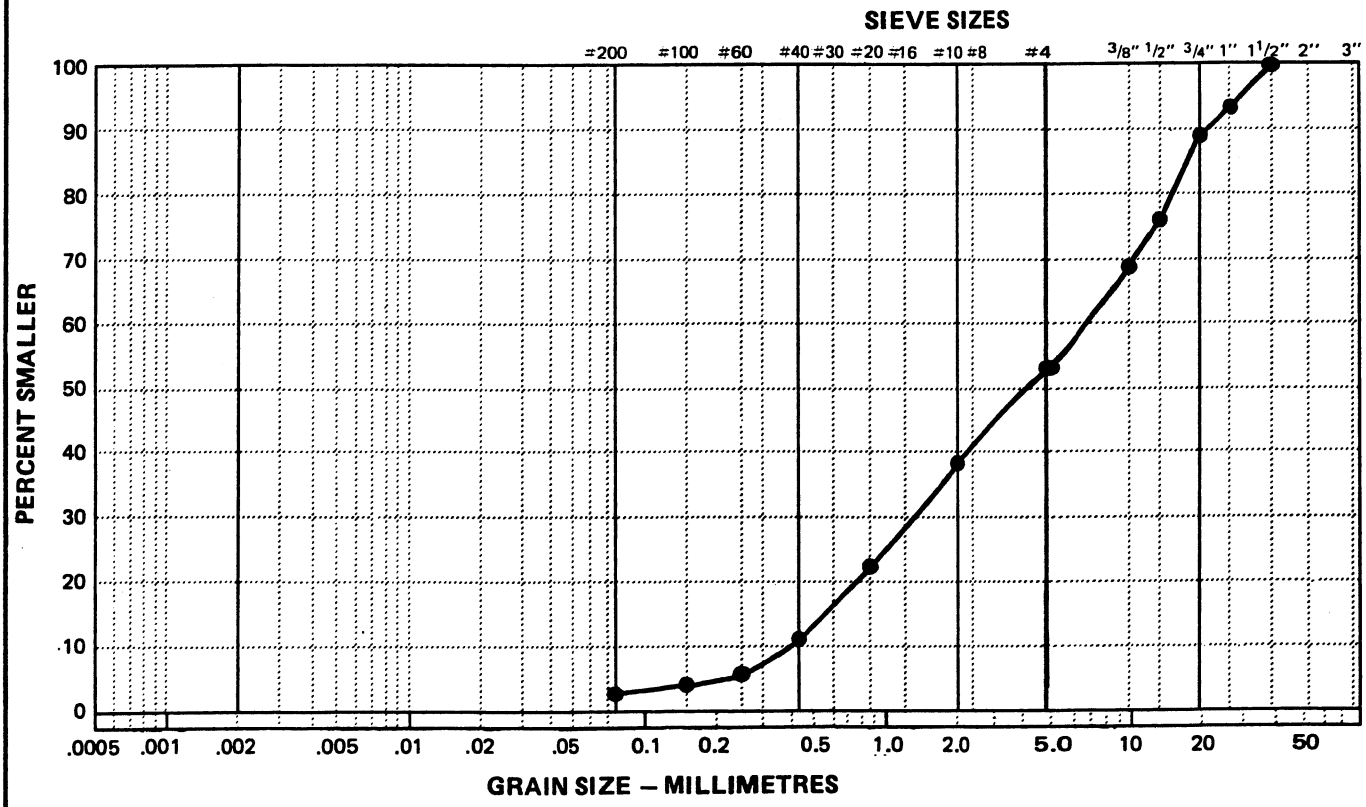
EBA Engineering Consultants Ltd.

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway, Yukon
Project Number: 0201-10922
Date Tested: 92-04-29
Borehole Number: 92-019E
Depth: 2.0 m
Soil Description: POORLY GRADED SAND WITH GRAVEL (SP)
Cu: 16.3
Cc: 0.9
Natural Moisture Content: 2.0 %
Remarks: Gravel 46.6%
Sand 50.2%
Silt 3.2%

SIEVE	PERCENTAGE PASSING
3"	
2"	
1 1/2"	100.0
1"	92.7
3/4"	88.6
3/8"	68.5
No. 4	53.4
No. 10	36.8
No. 20	22.2
No. 40	11.4
No. 60	6.4
No. 100	4.2
No. 200	3.2

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

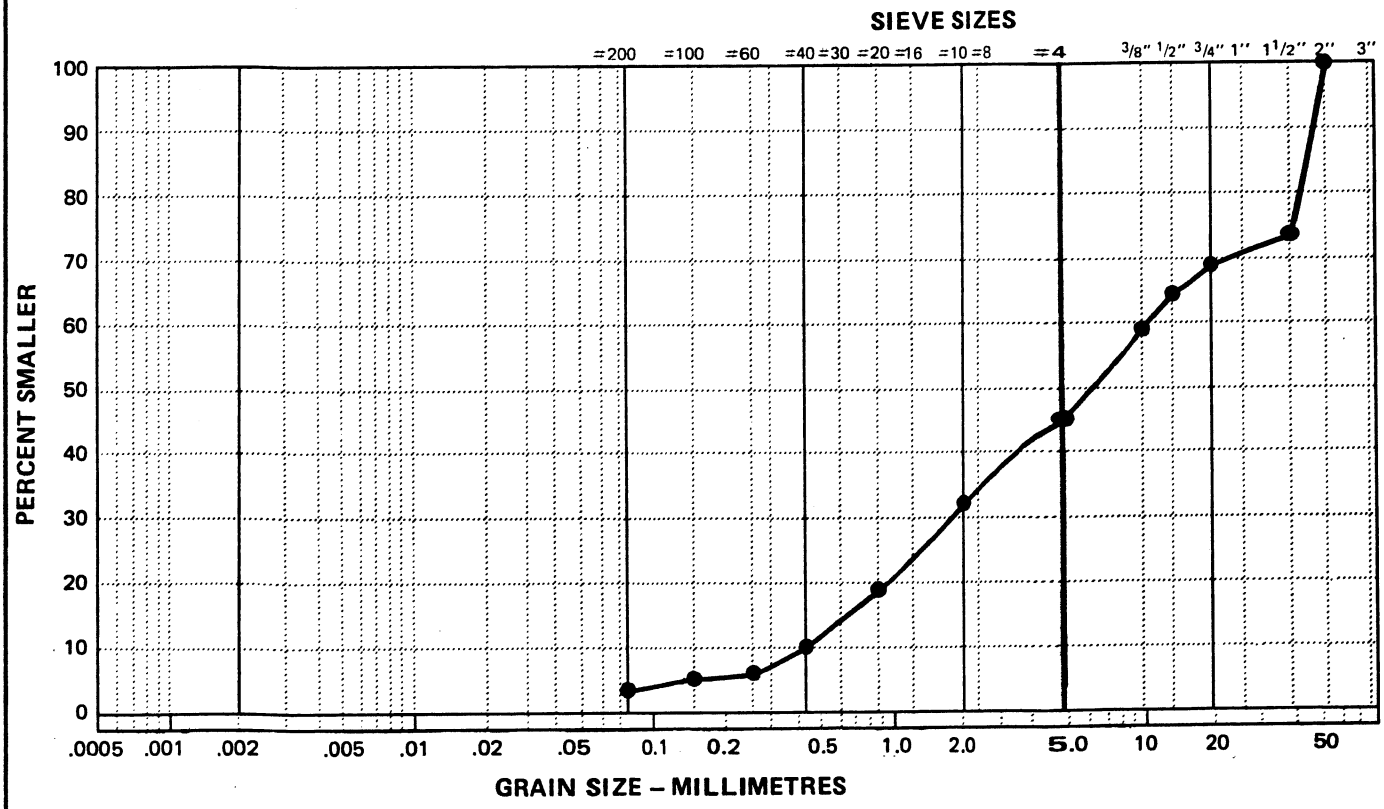
EBA Engineering Consultants Ltd.

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway, Yukon
Project Number: 0201-10922
Date Tested: 92-04-29
Borehole Number: 92-019E
Depth: 3.0 m
Soil Description: POORLY GRADED GRAVEL WITH SAND (GP)
Cu: 22.2
Cc: 0.7
Natural Moisture Content: 1.8 %
Remarks: Gravel 58.1%
Sand 41.1%
Silt 4.3%

SIEVE	PERCENTAGE PASSING
3"	
2"	100.0
1 1/2"	72.7
1"	
3/4"	69.1
3/8"	58.9
No. 4	45.4
No. 10	31.7
No. 20	19.1
No. 40	9.9
No. 60	6.3
No. 100	4.8
No. 200	4.3

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

EBA Engineering Consultants Ltd.

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway, Yukon

Project Number: 0201-10922

Date Tested: 92-04-29

Borehole Number: 92-019E

Depth: 4.0 m

Soil Description: SILTY GRAVEL WITH SAND (GM)

Cu:

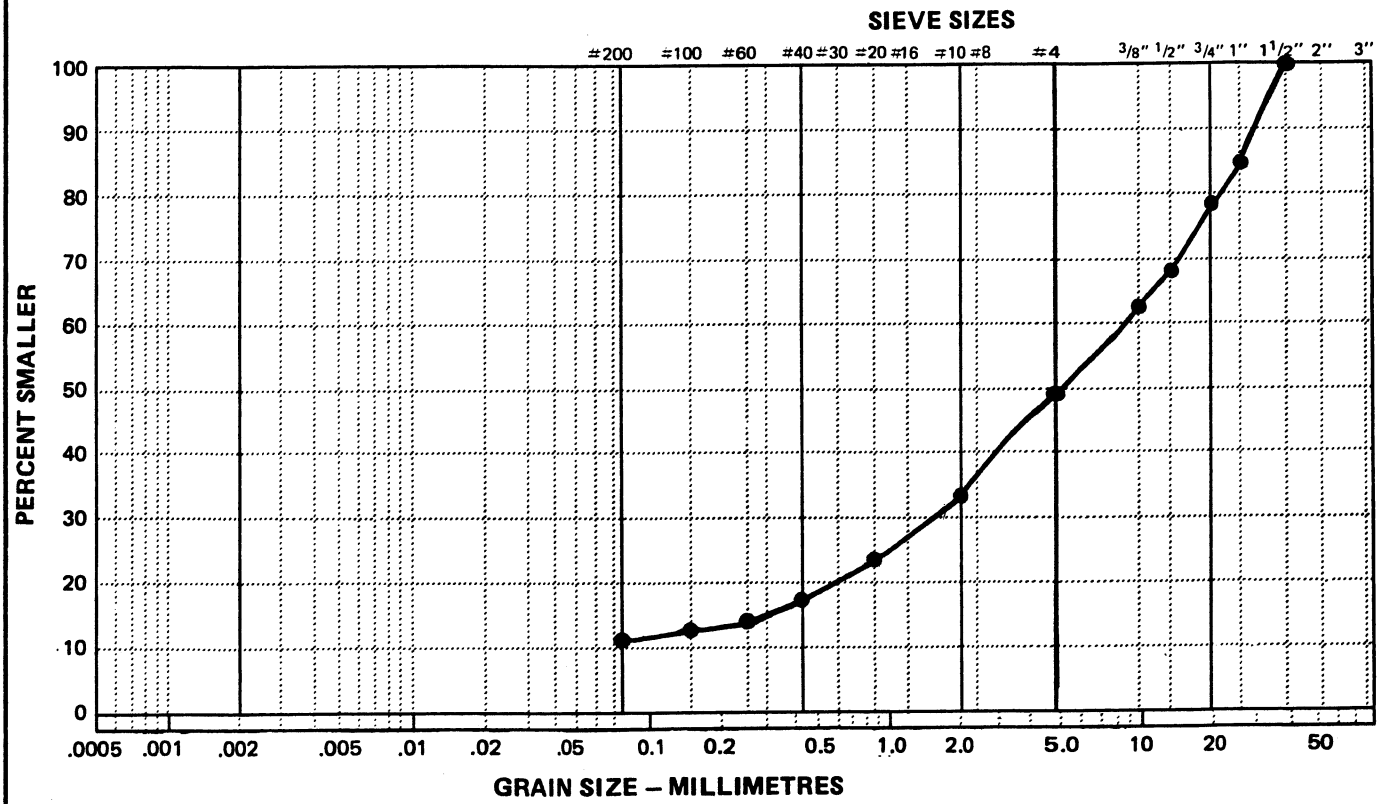
Cc:

Natural Moisture Content: 3.2 %

Remarks: Gravel 51.2%
Sand 36.7%
Silt 12.1%

SIEVE	PERCENTAGE PASSING
3"	
2"	
1 1/2"	100.0
1"	84.0
3/4"	78.3
3/8"	62.2
No. 4	48.8
No. 10	33.3
No. 20	23.1
No. 40	16.5
No. 60	13.8
No. 100	12.7
No. 200	12.1

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

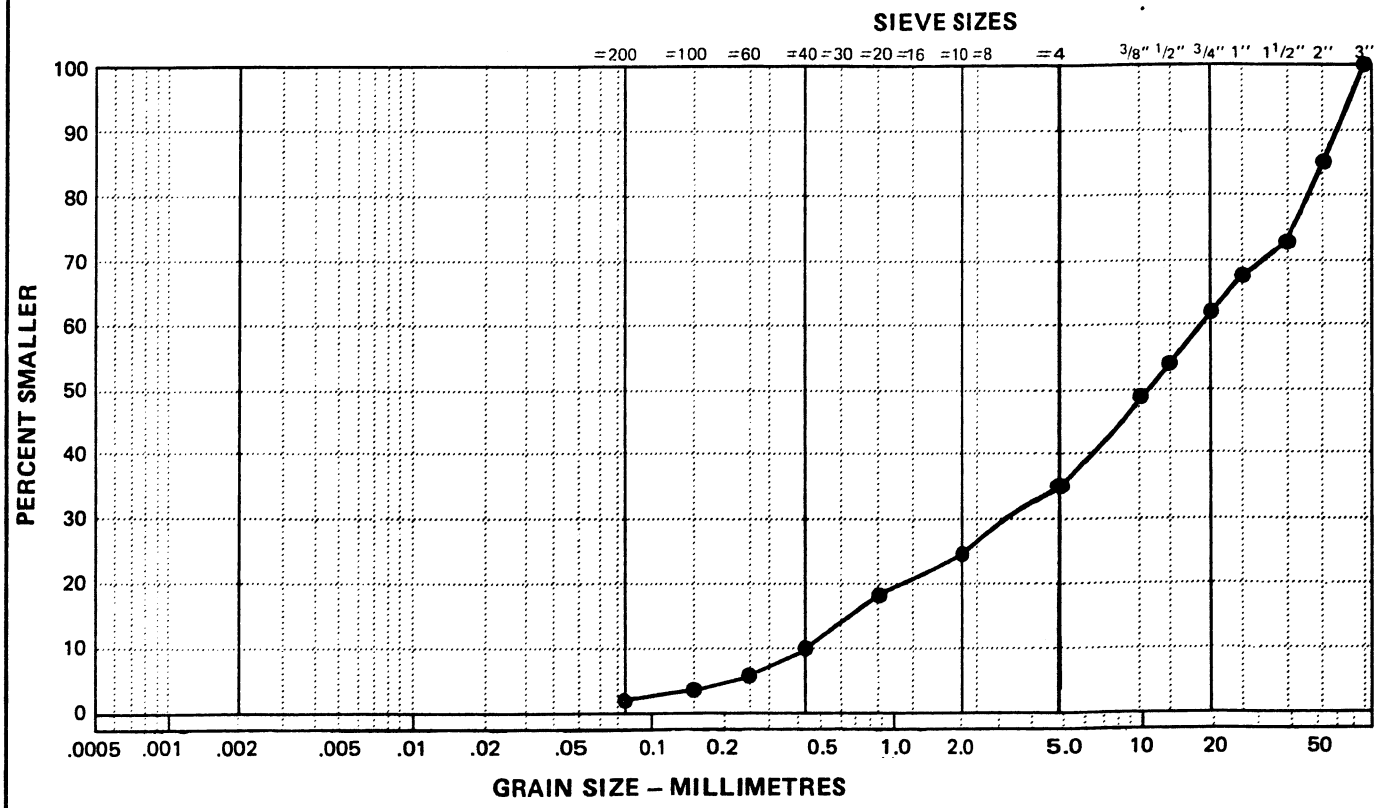
EBA Engineering Consultants Ltd.

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway, Yukon
Project Number: 0201-10922
Date Tested: 92-04-30
Borehole Number: 92-023E
Depth: 1.0 m
Soil Description: WELL GRADED GRAVEL WITH SAND (GW)
Cu: 40.0
Cc: 1.1
Natural Moisture Content: 1.3 %
Remarks: Gravel 63.8%
Sand 33.5%
Silt 2.7%

SIEVE	PERCENTAGE PASSING
3"	100.0
2"	84.7
1 1/2"	72.3
1"	67.3
3/4"	62.0
3/8"	48.7
No. 4	36.2
No. 10	25.7
No. 20	17.9
No. 40	10.3
No. 60	6.1
No. 100	3.9
No. 200	2.7

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

EBA Engineering Consultants Ltd.

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway, Yukon

Project Number: 0201-10922

Date Tested: 92-04-30

Borehole Number: 92-023E

Depth: 2.0 m

Soil Description: POORLY GRADED GRAVEL WITH SAND (GP)

Cu: 33.3

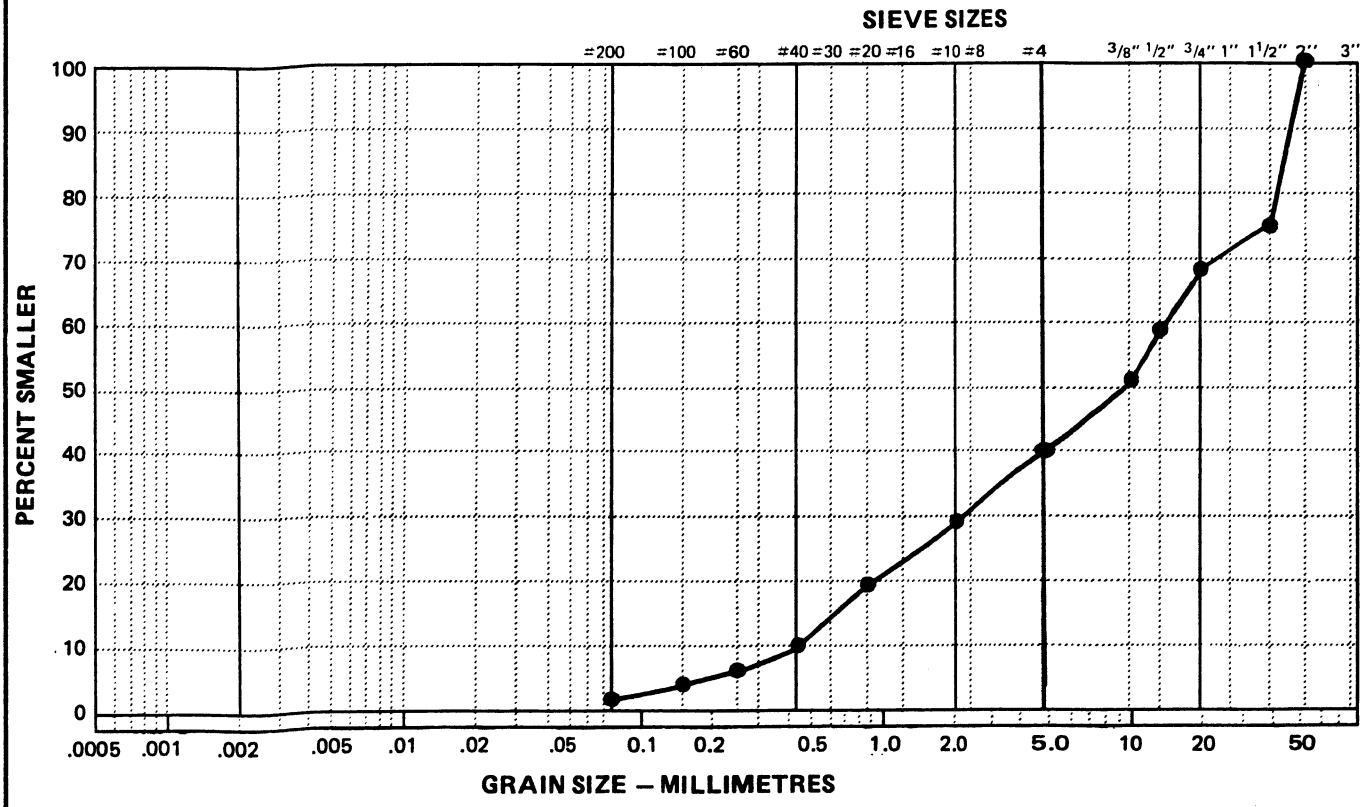
Cc: 0.9

Natural Moisture Content: 1.5 %

Remarks: Gravel 59.6%
Sand 38.0%
Silt 2.4%

SIEVE	PERCENTAGE PASSING
3"	
2"	100.0
1 1/2"	74.6
1"	
3/4"	68.4
3/8"	51.3
No. 4	40.4
No. 10	29.1
No. 20	19.0
No. 40	10.1
No. 60	5.7
No. 100	3.6
No. 200	2.4

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

EBA Engineering Consultants Ltd.

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway

Project Number: 0201-10922

Date Tested: 92-04-30

Borehole Number: 92-023E

Depth: 3.0 m

Soil Description: POORLY GRADED GRAVEL WITH SAND (GP)

Cu: 24.0

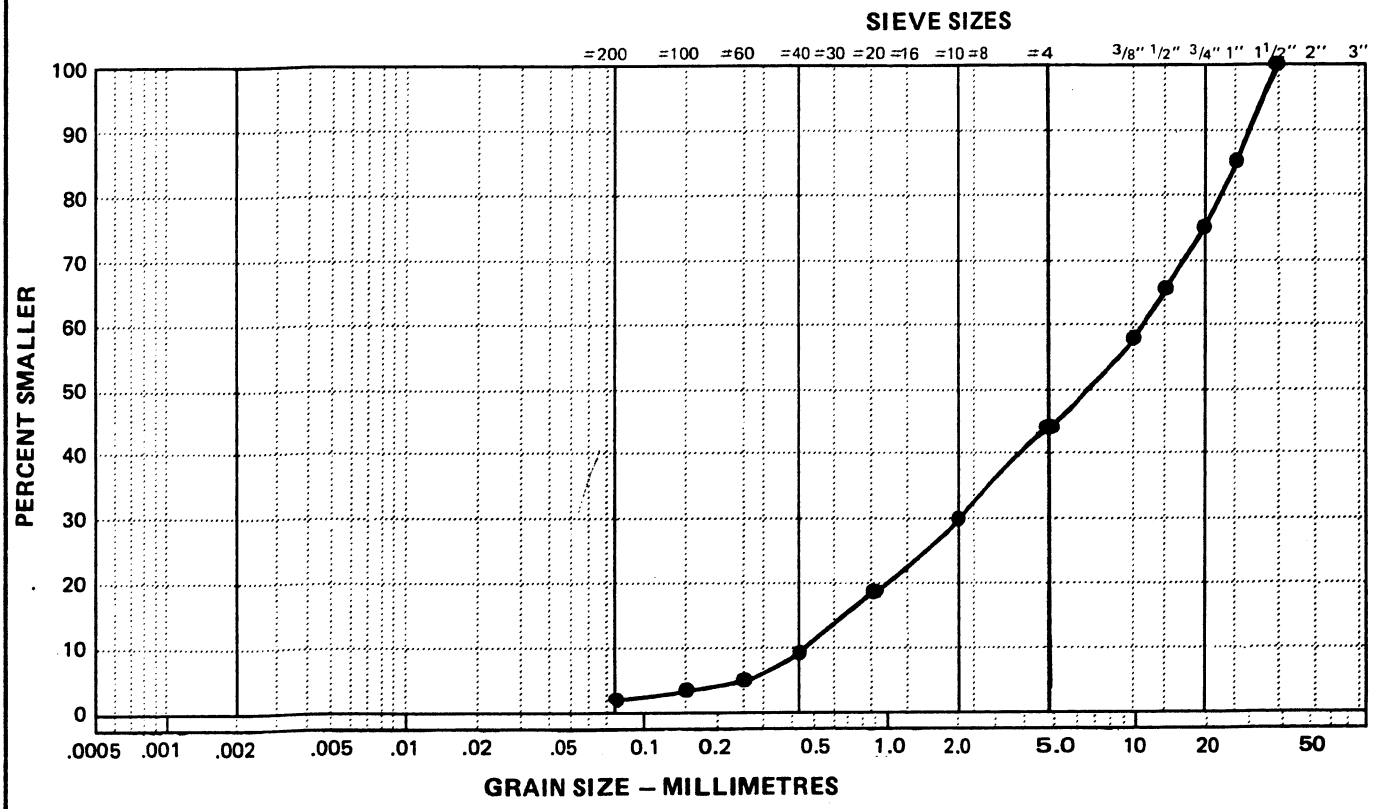
Cc: 0.7

Natural Moisture Content: 1.6 %

Remarks: Gravel 56.1%
Sand 41.4%
Silt 2.5%

SIEVE	PERCENTAGE PASSING
3"	
2"	
1 1/2"	100.0
1"	86.1
3/4"	74.7
3/8"	57.5
No. 4	43.9
No. 10	29.6
No. 20	17.9
No. 40	9.2
No. 60	5.2
No. 100	3.5
No. 200	2.5

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

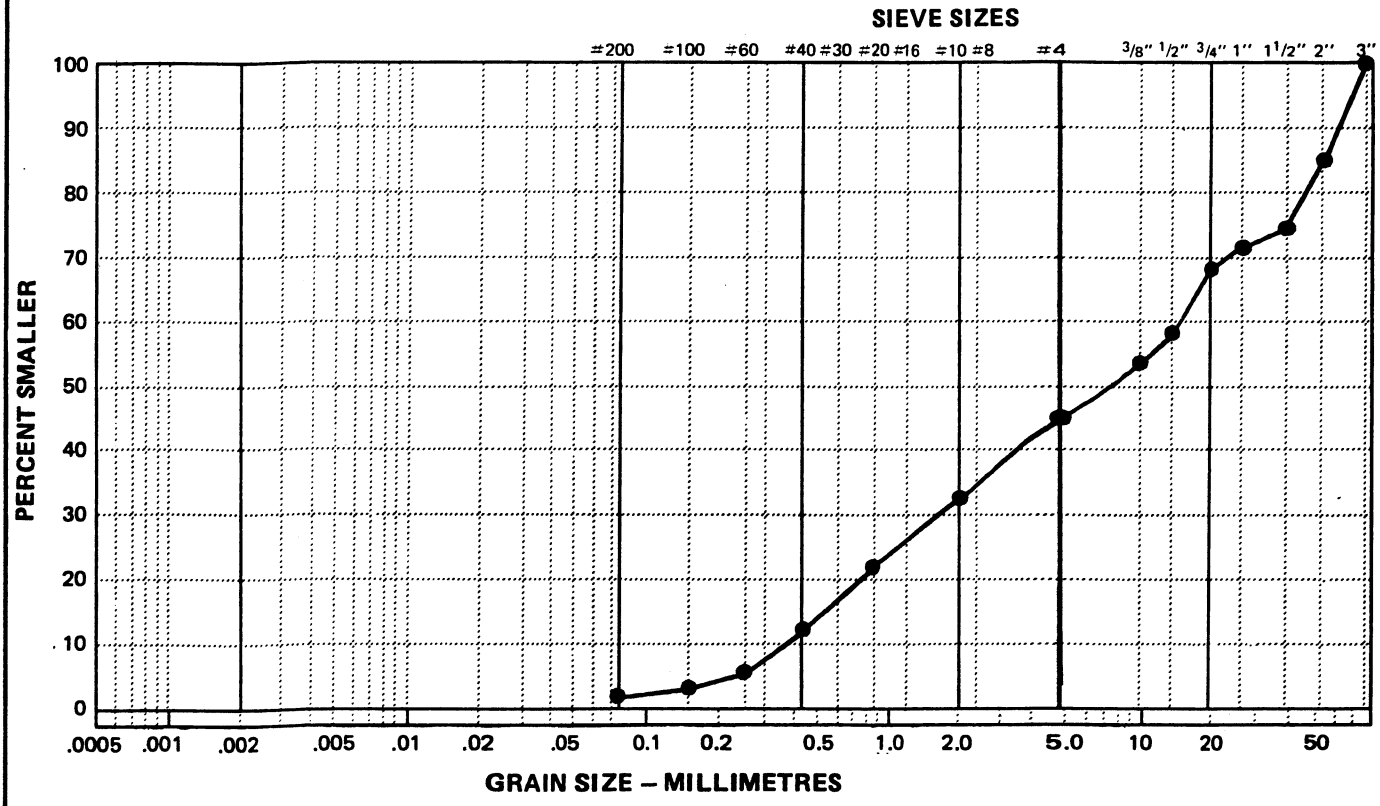
EBA Engineering Consultants Ltd.

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway
Project Number: 0201-10922
Date Tested: 92-04-30
Borehole Number: 92-023E
Depth: 4.0 m
Soil Description: POORLY GRADED GRAVEL WITH SAND (GP)
Cu: 40.0
Cc: 0.3
Natural Moisture Content: 1.4 %
Remarks: Gravel 55.3%
Sand 42.9%
Silt 1.8%

SIEVE	PERCENTAGE PASSING
3"	100.0
2"	84.7
1 1/2"	74.6
1"	71.5
3/4"	67.4
3/8"	54.4
No. 4	44.7
No. 10	33.1
No. 20	22.2
No. 40	11.8
No. 60	5.6
No. 100	2.9
No. 200	1.8

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

Pit Ident. 115 G-07
Km 1635.8 RHS Alaska Highway #1
(Silver City)

March 2001
Book # 583 & 584

Yukon Territorial Government

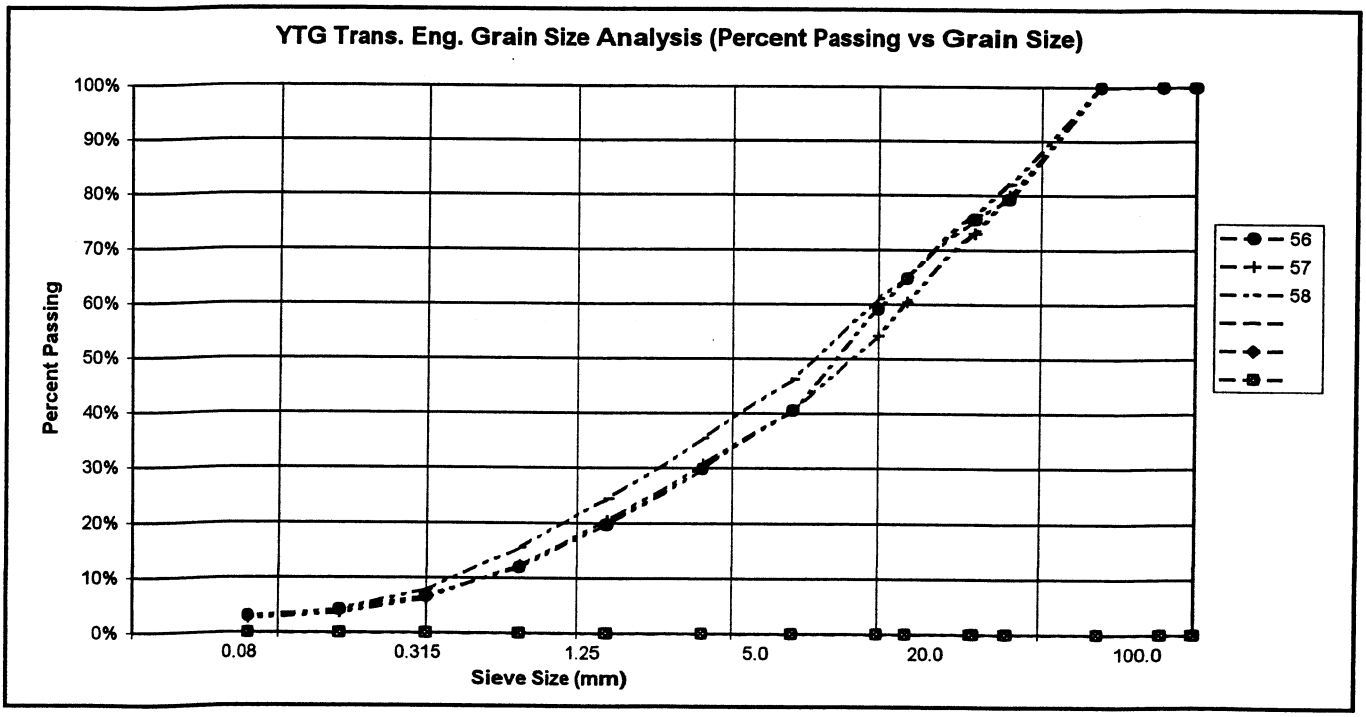
Pit Run Sample Results

PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1694 A/H Silver Creek
DRILL UNIT:	Cat 320 Excavator
HOLE LOCATION:	SEE PLAN
LOGGED BY:	D.T.

HOLE No.: 583-1524

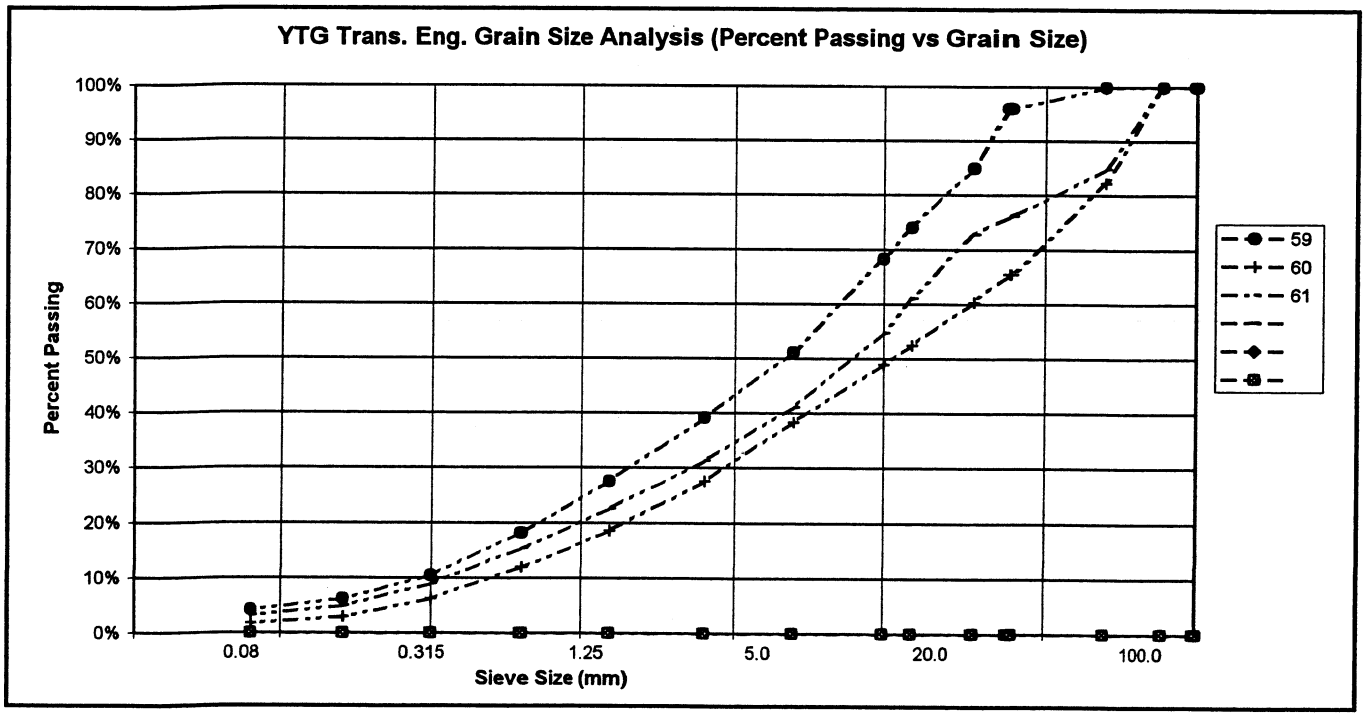
DATE COMP: 2001/03/12

FIELD NO:	56	57	58			
LAB NO:	56	57	58			
DEPTH:	0.7-1.0	2.2-2.6	4.7-5.0			
TYPE:	BULK	BULK	BULK	BULK		
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	79%	80%	82%			
20.0	76%	73%	76%			
12.5	65%	60%	65%			
10.0	59%	54%	61%			
5.0	41%	40%	46%			
2.5	30%	31%	35%			
1.25	20%	20%	24%			
0.630	12%	12%	16%			
0.315	7%	6%	8%			
0.160	4%	4%	4%			
0.080	3%	3%	3%			
M.C.(%):						
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:	59	60	54			
% SAND:	38	38	44			
% FINES:	3	3	3			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			



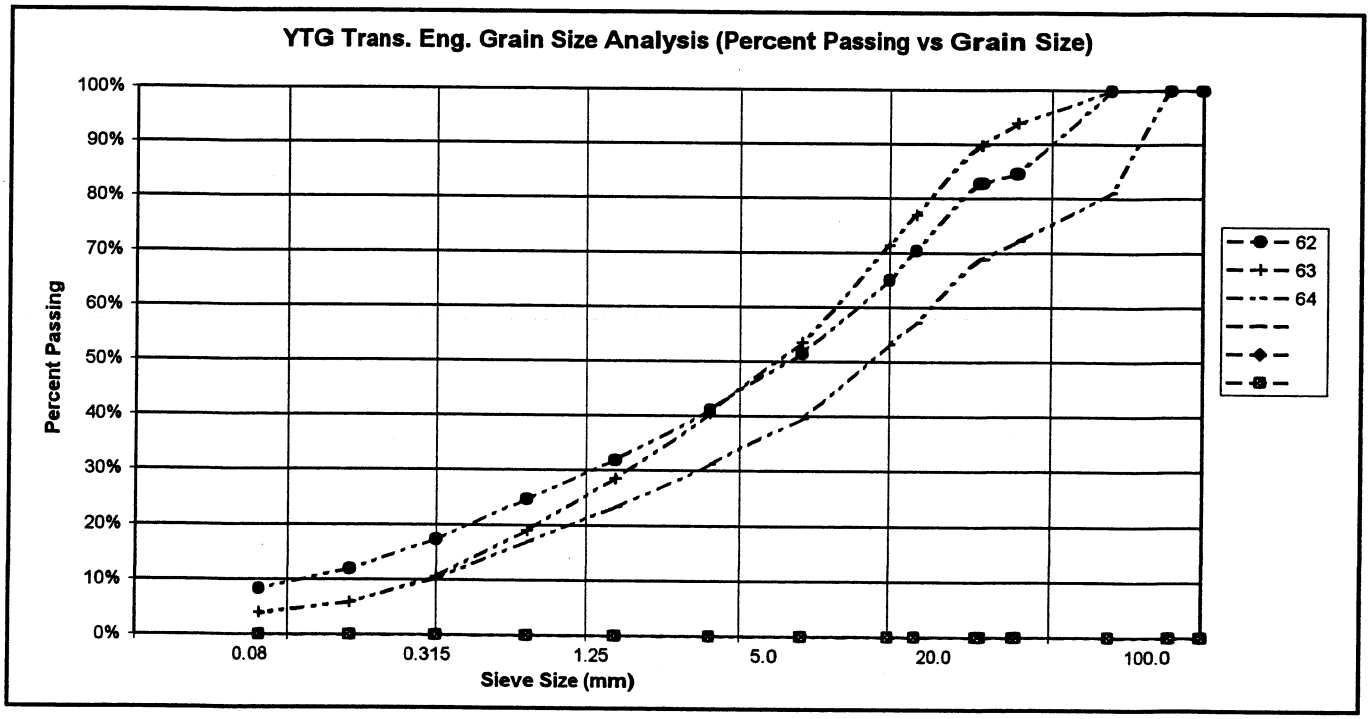
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 583-1525
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H Silver Creek		
DRILL UNIT:	Cat 320 Excavator		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/12

FIELD NO:	59	60	61			
LAB NO:	59	60	61			
DEPTH:	0.8-1.1	2.3-2.7	4.7-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	82%	85%			
25.0	96%	65%	76%			
20.0	85%	60%	73%			
12.5	74%	52%	61%			
10.0	68%	49%	55%			
5.0	51%	38%	41%			
2.5	39%	28%	31%			
1.25	28%	19%	23%			
0.630	18%	12%	15%			
0.315	10%	6%	9%			
0.160	6%	3%	5%			
0.080	4%	2%	3%			
M.C.(%):						
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:	49	62	59			
% SAND:	47	37	38			
% FINES:	4	2	3			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			



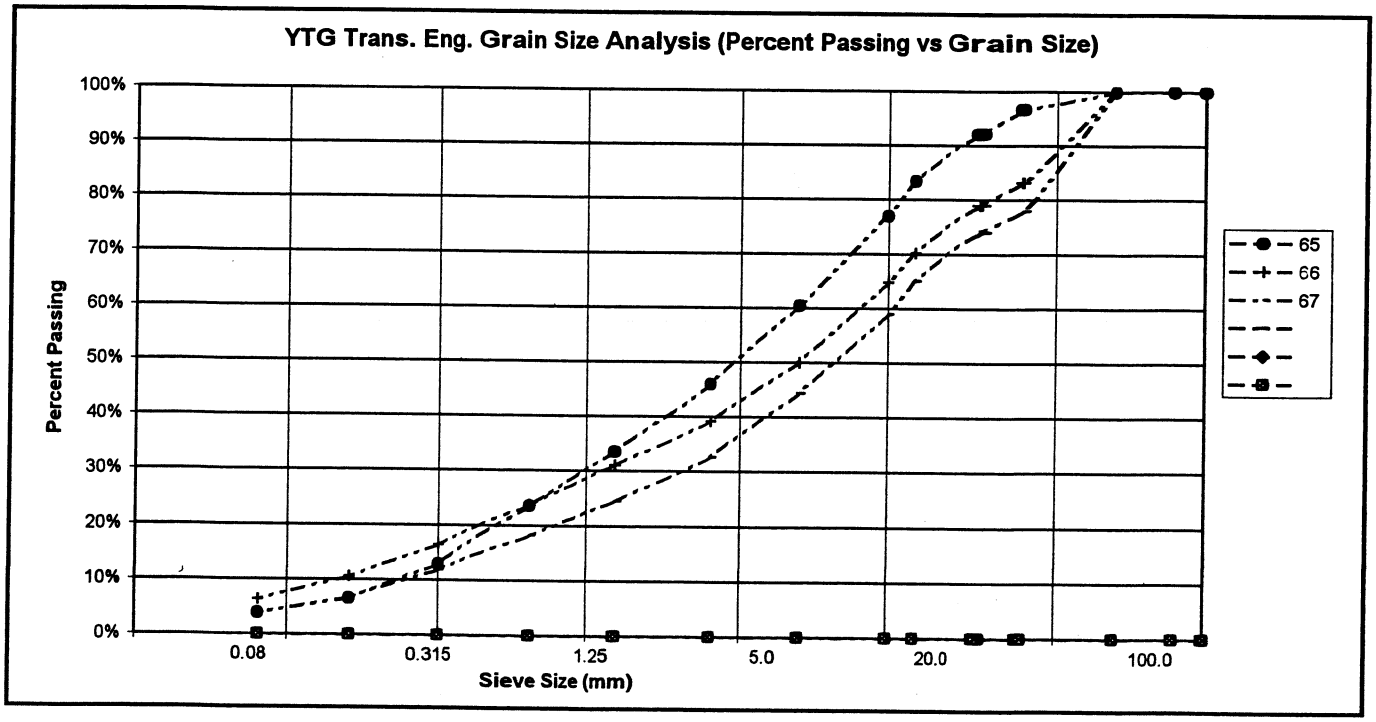
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 583-1526
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H Silver Creek		
DRILL UNIT:	Cat 320 Excavator		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/12

FIELD NO:	62	63	64			
LAB NO:	62	63	64			
DEPTH:	0.6-0.8	2.6-3.0	3.7-3.9			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	81%			
25.0	85%	94%	72%			
20.0	83%	90%	69%			
12.5	70%	77%	57%			
10.0	65%	71%	53%			
5.0	52%	54%	39%			
2.5	41%	41%	31%			
1.25	32%	29%	23%			
0.630	25%	19%	17%			
0.315	17%	11%	10%			
0.160	12%	6%	6%			
0.080	8%	4%	4%			
M.C.(%):						
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:	49	46	61			
% SAND:	43	50	36			
% FINES:	8	4	4			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SAND (GP)			



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 583-1527
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H Silver Creek		
DRILL UNIT:	Cat 320 Excavator		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/13

FIELD NO:	65	66	67			
LAB NO:	65	66	67			
DEPTH:	0.9-1.2	2.4-2.8	4.0-4.2			
TYPE:	BULK	BULK	BULK	BULK		
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	97%	83%	78%			
20.0	92%	79%	74%			
12.5	83%	70%	65%			
10.0	77%	65%	59%			
5.0	61%	50%	44%			
2.5	46%	39%	33%			
1.25	34%	31%	25%			
0.630	24%	24%	18%			
0.315	13%	16%	12%			
0.160	7%	11%	7%			
0.080	4%	6%	4%			
M.C.(%):						
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:	39	50	56			
% SAND:	57	44	40			
% FINES:	4	6	4			
CLASSIFICATION	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)			

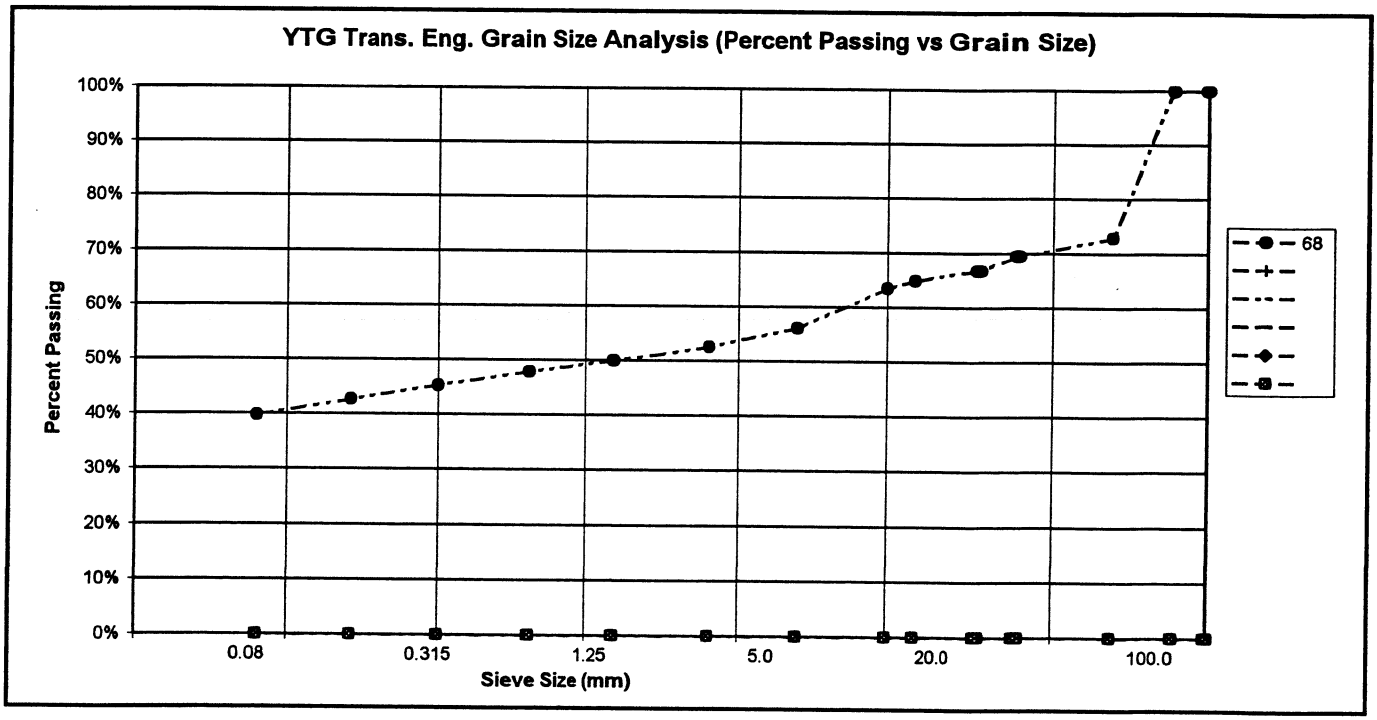


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1694 A/H Silver Creek
DRILL UNIT:	Cat 320 Excavator
HOLE LOCATION:	SEE PLAN
LOGGED BY:	D.T.

HOLE No.: 583-1528

DATE COMP: 2001/03/13

FIELD NO:	68					
LAB NO:	68					
DEPTH:	3.0-3.2					
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING					
100.0	100%					
80.0	100%					
50.0	73%					
25.0	69%					
20.0	67%					
12.5	65%					
10.0	63%					
5.0	56%					
2.5	53%					
1.25	50%					
0.630	48%					
0.315	45%					
0.160	43%					
0.080	40%					
M.C.(%):						
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	44					
% SAND:	16					
% FINES:	40					
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)					

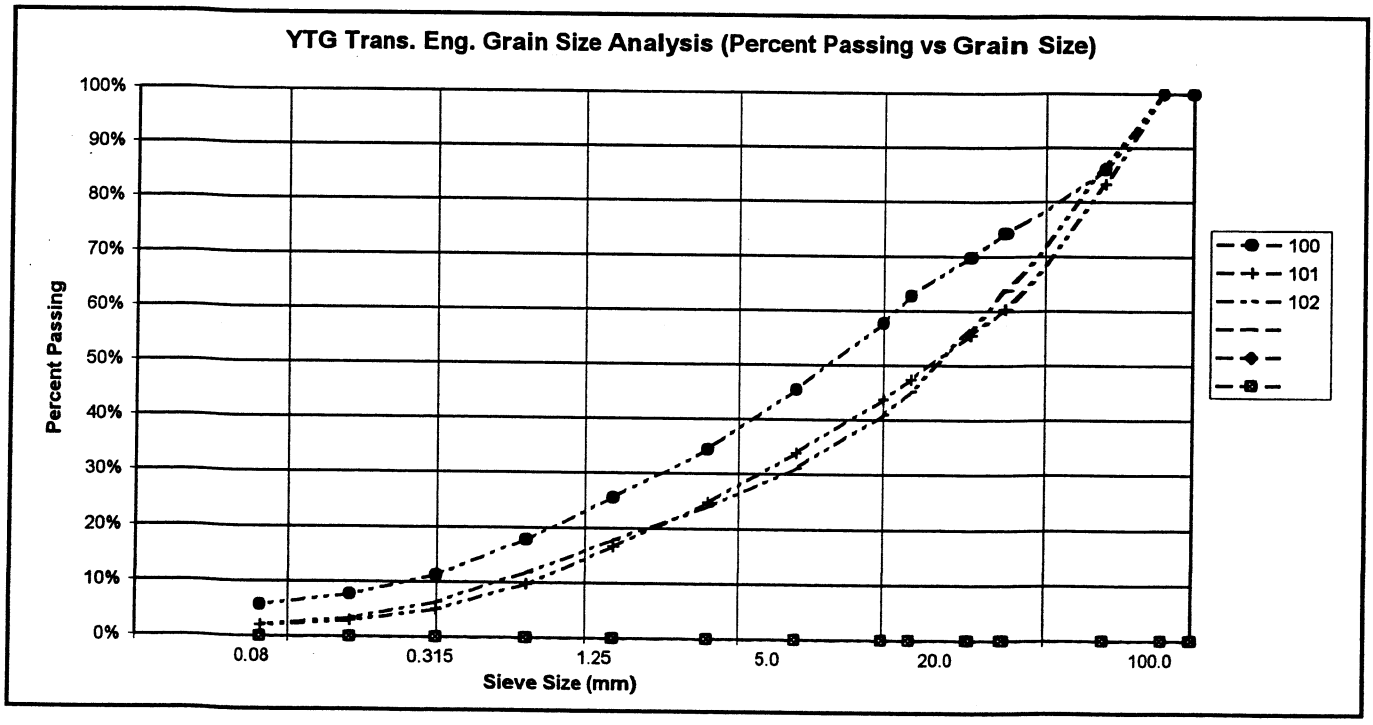


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H Silver Creek
DRILL UNIT: Cat 320 Excavator
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 583-1541

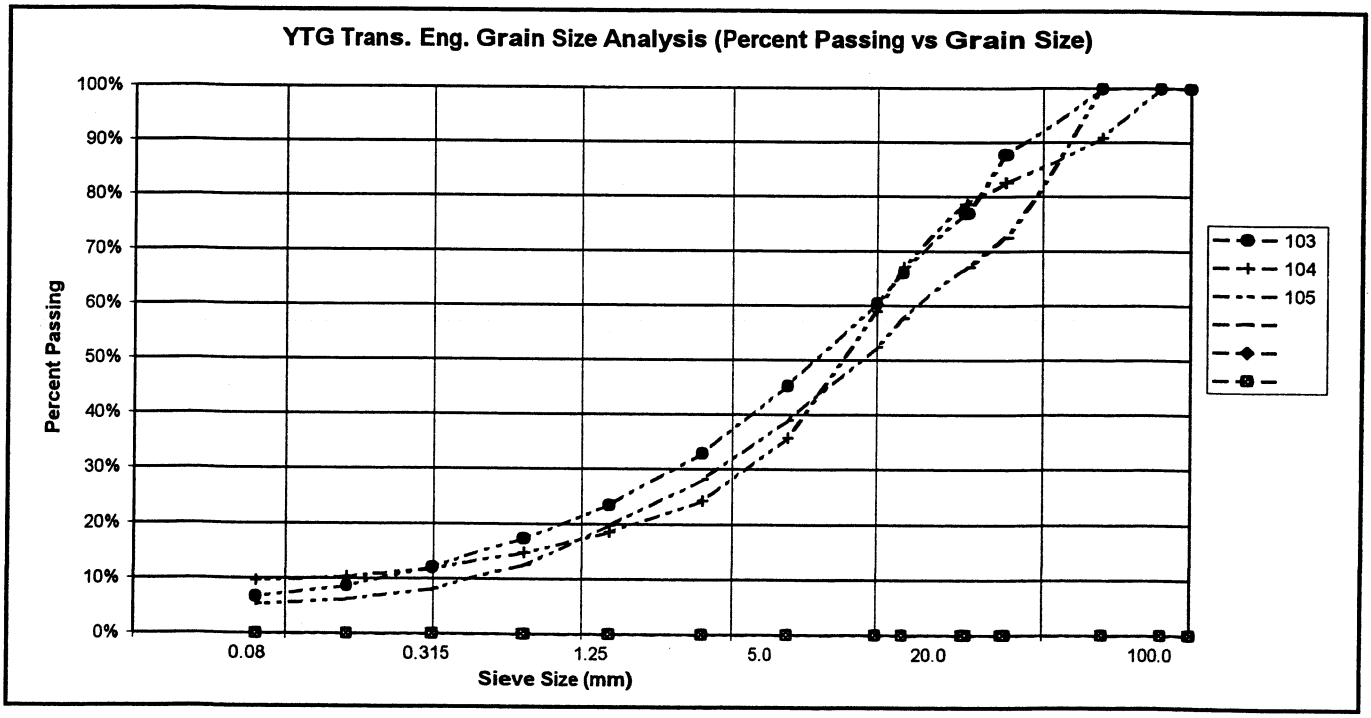
DATE COMP: 2001/03/14

FIELD NO:	100	101	102			
LAB NO:	100	101	102			
DEPTH:	0.3-0.6	2.2-2.6	4.6-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	86%	83%	87%			
25.0	74%	60%	64%			
20.0	70%	56%	56%			
12.5	63%	47%	45%			
10.0	58%	44%	41%			
5.0	46%	34%	31%			
2.5	35%	25%	24%			
1.25	26%	17%	18%			
0.630	18%	10%	12%			
0.315	11%	5%	6%			
0.160	8%	3%	3%			
0.080	6%	2%	2%			
M.C.(%):			#VALUE!			
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:	54	66	69			
% SAND:	40	32	29			
% FINES:	6	2	2			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 583-1542
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H Silver Creek		
DRILL UNIT:	Cat 320 Excavator		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/14

FIELD NO:	103	104	105			
LAB NO:	103	104	105			
DEPTH:	0.4-0.7	2.6-3.0	4.6-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	91%	100%			
25.0	88%	83%	72%			
20.0	77%	79%	67%			
12.5	66%	67%	58%			
10.0	60%	59%	52%			
5.0	45%	36%	39%			
2.5	33%	24%	28%			
1.25	23%	19%	20%			
0.630	17%	15%	13%			
0.315	12%	12%	8%			
0.160	9%	10%	6%			
0.080	7%	10%	5%			
M.C.(%):						
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:	55	64	61			
% SAND:	39	26	34			
% FINES:	7	10	5			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

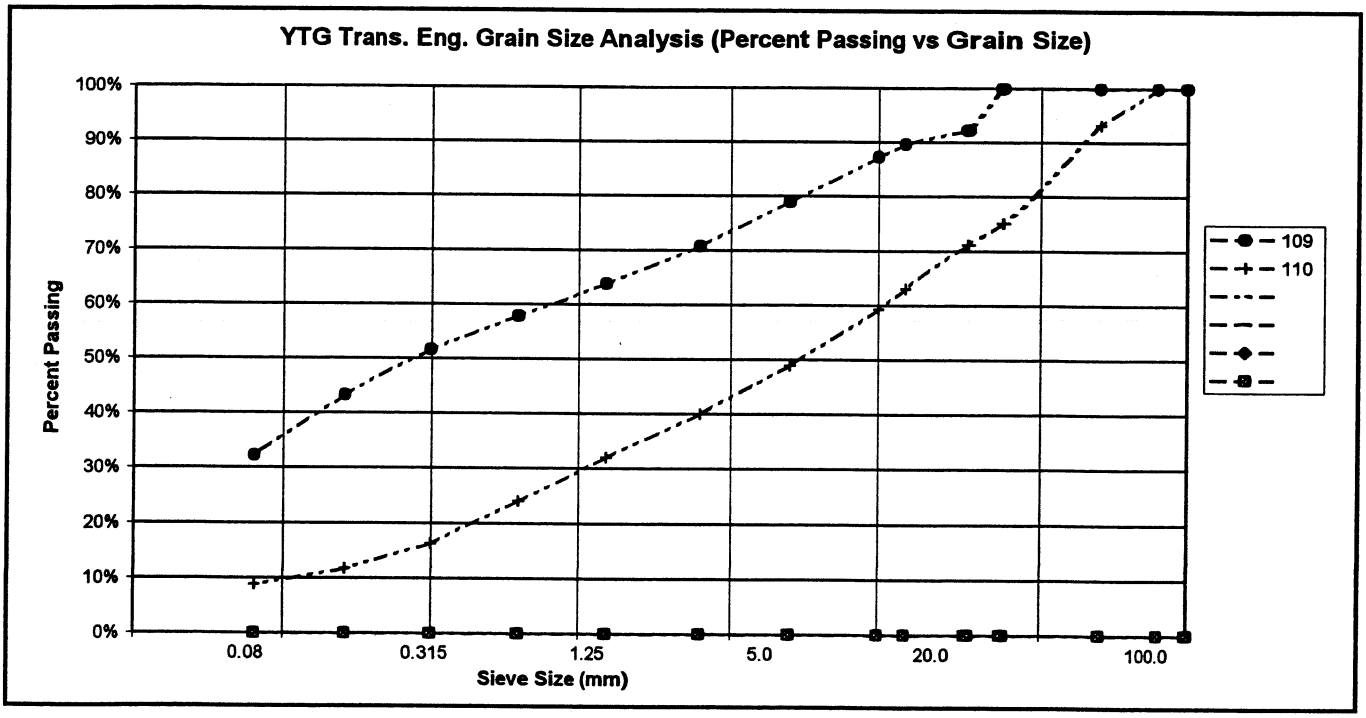


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1694 A/H
DRILL UNIT:	CAT 320 L EXCAVATOR
HOLE LOCATION:	SEE PLAN
LOGGED BY:	D.T.

HOLE No.: 584-1544

DATE COMP: 2001/03/15

FIELD NO:	109	110				
LAB NO:	109	110				
DEPTH:	1.1-1.5	2.4-2.7				
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	93%				
25.0	100%	75%				
20.0	92%	71%				
12.5	90%	63%				
10.0	87%	59%				
5.0	79%	49%				
2.5	71%	40%				
1.25	64%	32%				
0.630	58%	24%				
0.315	52%	16%				
0.160	43%	12%				
0.080	32%	9%				
M.C.(%):						
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	21	51				
% SAND:	47	40				
% FINES:	32	9				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

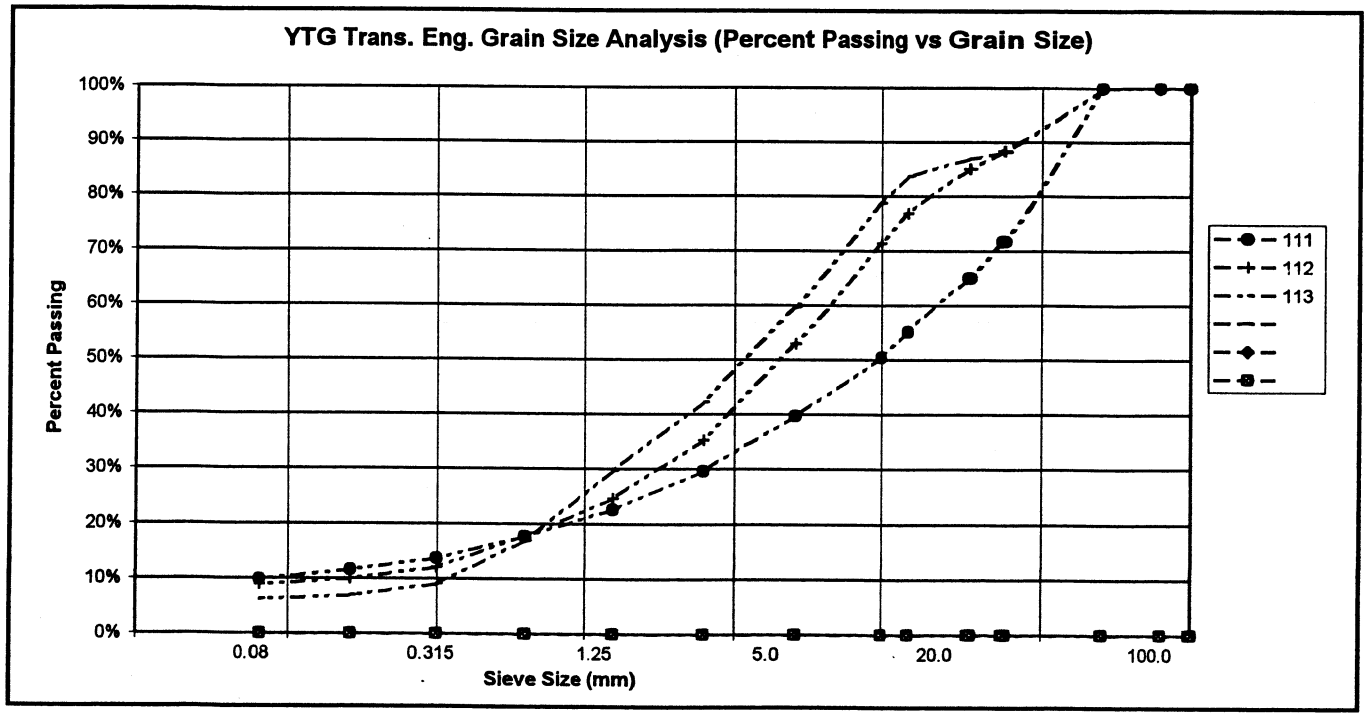


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H
DRILL UNIT: CAT 320 L EXCAVATOR
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 584-1545

DATE COMP: 2001/03/15

FIELD NO:	111	112	113			
LAB NO:	111	112	113			
DEPTH:	0.3-0.6	2.6-3.0	4.6-5.0			
TYPE:	BULK	BULK	BULK	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	72%	88%	88%			
20.0	65%	85%	87%			
12.5	55%	77%	84%			
10.0	50%	71%	79%			
5.0	40%	53%	60%			
2.5	30%	35%	42%			
1.25	23%	25%	30%			
0.630	18%	18%	17%			
0.315	14%	12%	9%			
0.160	12%	10%	7%			
0.080	10%	9%	6%			
M.C.(%):						
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:	60	47	40			
% SAND:	30	44	53			
% FINES:	10	9	6			
CLASSIFICATION	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)			

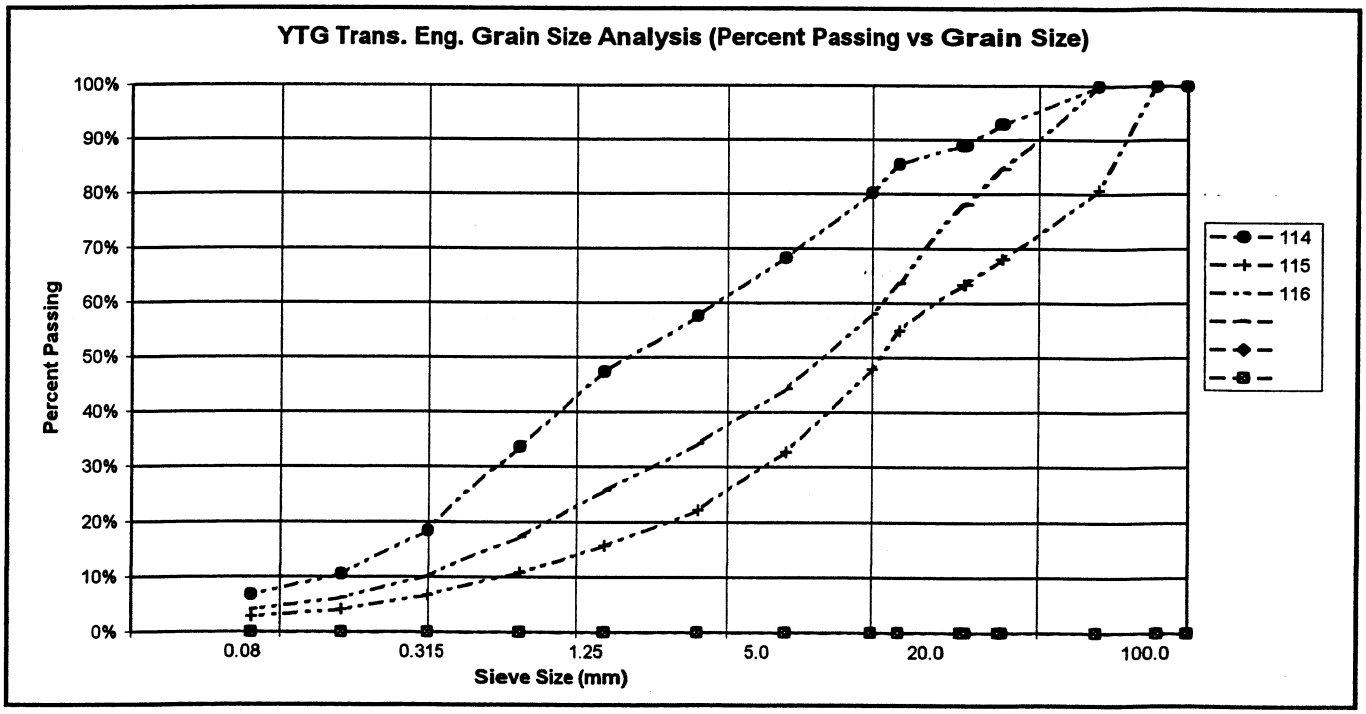


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H
DRILL UNIT: CAT 320 L EXCAVATOR
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 584-1546

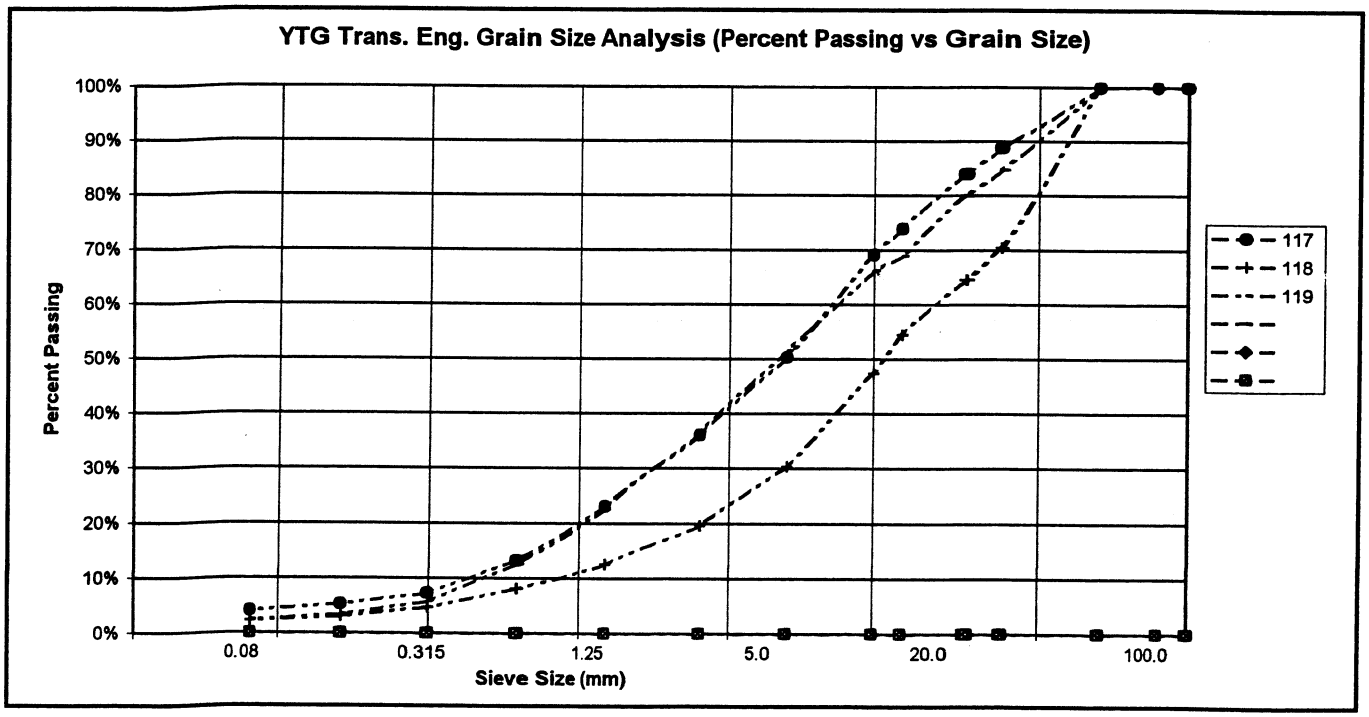
DATE COMP: 2001/03/15

FIELD NO:	114	115	116			
LAB NO:	114	115	116			
DEPTH:	0.3-0.6	2.5-2.9	4.6-5.0			
TYPE:	BULK	BULK	BULK	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	81%	100%			
25.0	93%	68%	85%			
20.0	89%	63%	78%			
12.5	86%	55%	64%			
10.0	80%	48%	58%			
5.0	68%	33%	44%			
2.5	58%	22%	34%			
1.25	47%	16%	26%			
0.630	34%	11%	17%			
0.315	18%	7%	10%			
0.160	11%	4%	6%			
0.080	7%	3%	4%			
M.C.(%):						
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:	32	67	56			
% SAND:	61	30	40			
% FINES:	7	3	4			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			



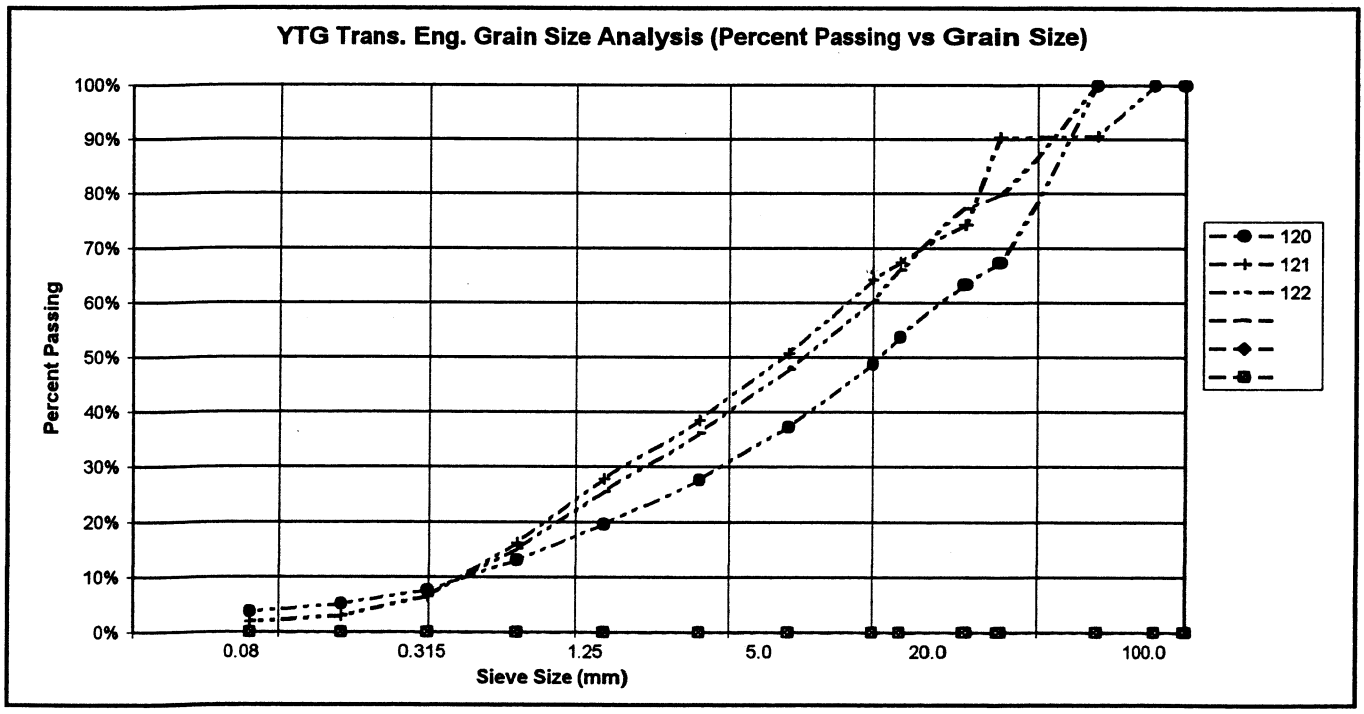
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 584-1547
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H		
DRILL UNIT:	CAT 320 L EXCAVATOR		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/15

FIELD NO:	117	118	119			
LAB NO:	117	118	119			
DEPTH:	0.2-0.5	2.6-3.0	4.6-5.0			
TYPE:	BULK	BULK	BULK	BULK		
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	89%	70%	85%			
20.0	84%	65%	80%			
12.5	74%	54%	69%			
10.0	69%	47%	66%			
5.0	50%	30%	52%			
2.5	36%	20%	37%			
1.25	23%	13%	23%			
0.630	13%	8%	13%			
0.315	7%	5%	6%			
0.160	5%	3%	3%			
0.080	4%	2%	2%			
M.C.(%):						
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	70	48			
% SAND:	46	28	49			
% FINES:	4	2	2			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH GRAVEL (SW)			



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 584-1548
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H		
DRILL UNIT:	CAT 320 L EXCAVATOR		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/15

FIELD NO:	120	121	122			
LAB NO:	120	121	122			
DEPTH:	0.3-0.6	2.1-2.5	4.6-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	91%	100%			
25.0	67%	90%	80%			
20.0	63%	74%	77%			
12.5	54%	67%	66%			
10.0	49%	64%	60%			
5.0	37%	51%	48%			
2.5	28%	38%	36%			
1.25	20%	28%	25%			
0.630	13%	16%	15%			
0.315	8%	6%	7%			
0.160	5%	3%	3%			
0.080	4%	2%	2%			
M.C.(%):						
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	49	52			
% SAND:	34	49	46			
% FINES:	4	2	2			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			

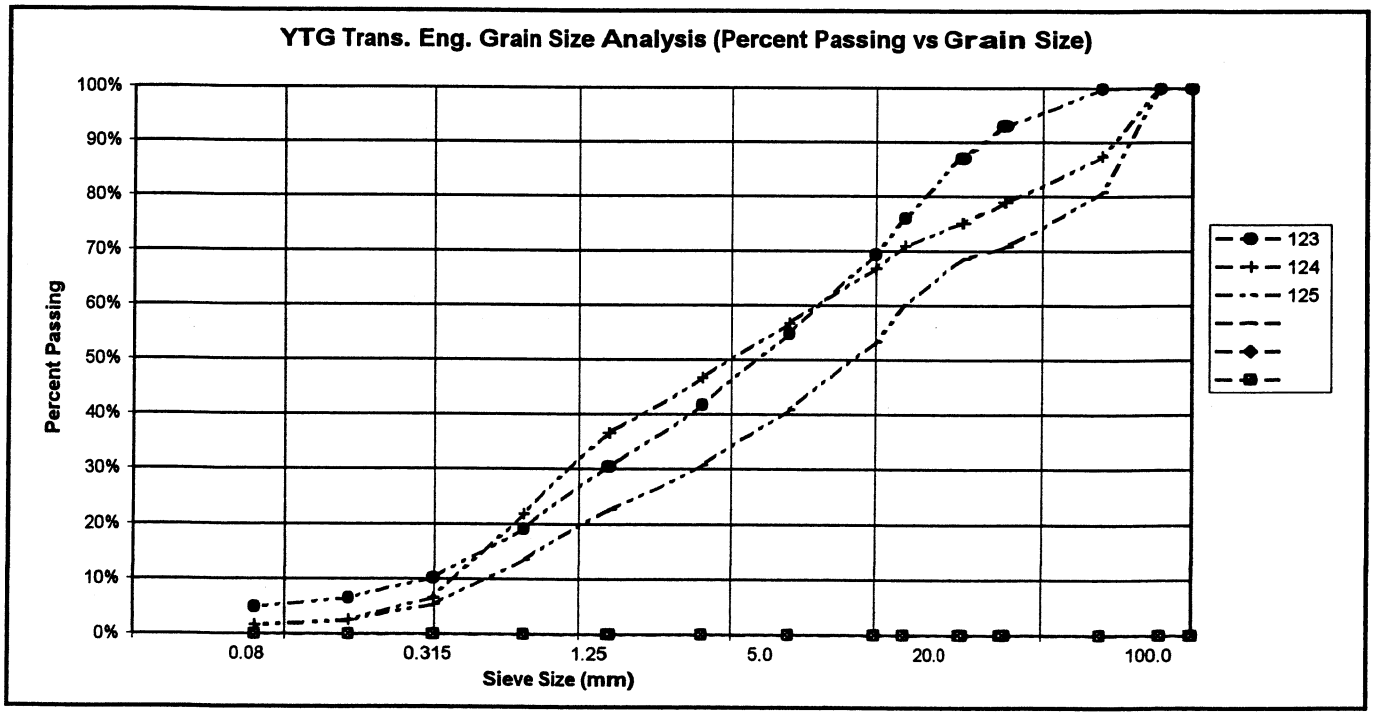


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1694 A/H
DRILL UNIT:	CAT 320 L EXCAVATOR
HOLE LOCATION:	SEE PLAN
LOGGED BY:	D.T.

HOLE No.: 584-1549

DATE COMP: 2001/03/15

FIELD NO:	123	124	125			
LAB NO:	123	124	125			
DEPTH:	0.4-0.7	2.2-2.6	4.6-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	87%	81%			
25.0	93%	79%	71%			
20.0	87%	75%	69%			
12.5	76%	71%	60%			
10.0	69%	67%	53%			
5.0	55%	57%	41%			
2.5	42%	47%	31%			
1.25	31%	37%	23%			
0.630	19%	22%	14%			
0.315	10%	7%	5%			
0.160	7%	3%	2%			
0.080	5%	2%	2%			
M.C.(%):						
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:	45	43	59			
% SAND:	50	55	39			
% FINES:	5	2	2			
CLASSIFICATION	WELL-GRADED SAND WITH GRAVEL (SW)	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SAND (GP)			



PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H
DRILL UNIT: CAT 320 L EXCAVATOR
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 584-1552

DATE COMP: 2001/03/15

FIELD NO:	135	136	137			
LAB NO:	135	136	137			
DEPTH:	1.5-1.9	4.1-4.5	5.1-5.5			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	91%	100%			
25.0	89%	77%	89%			
20.0	85%	75%	83%			
12.5	74%	63%	71%			
10.0	70%	57%	64%			
5.0	55%	43%	50%			
2.5	43%	32%	38%			
1.25	31%	23%	28%			
0.630	21%	16%	19%			
0.315	11%	8%	10%			
0.160	6%	4%	6%			
0.080	4%	3%	4%			
M.C.(%):						
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:	45	57	50			
% SAND:	51	41	46			
% FINES:	4	3	4			
CLASSIFICATION	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			

