GEOTECHNICAL INVESTIGATIONS

Highway Construction
Km 1684.0 to 1691.8
Alaska Highway #1
Yukon 2001-2002
Volume 1 of 2

Yukon
Community and Transportation Services
Transportation Engineering Branch

Geotechnical Services

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Highway Construction
Km 1684.0 to 1691.8
Alaska Highway #1
Yukon 2001-2002
Volume 1 of 2

This Data Package prepared for project viewing:

March, 2001

Transportation Engineering Branch
Geotechnical Services
461 Range Road
Whitehorse, Yukon

CONTENTS

Volume 1 of 2

INTRODUCTION

Investigation notes, classification methods and legends.

2000 CENTRELINE TESTING ALASKA HIGHWAY

Subsurface Exploration and Testing Report Sheets are provided.
The reports for the centreline holes are arranged according to project location, starting at Km 1683+950 and increasing to Km 1691+875.

Laboratory Testing Result Sheets are provided.
The reports for the centreline holes are arranged according to test hole number, starting at 558-1633 and increasing to 564-1748.

2000	TEST HOLES 1633 to 1636, 1638 to 1648	shown with prefix 558-
	TEST HOLES 1649 to 1677	shown with prefix 559-
	TEST HOLES 1678 to 1700	shown with prefix 560-
	TEST HOLES 1701 to 1714	shown with prefix 561-
	TEST HOLES 1715 to 1747	shown with prefix 563-
	TEST HOLES 1748	shown with prefix 564-
	TEST HOLES 888 to 892	shown with prefix 576-

NOTE: 2000 Centreline Test Hole locations on the Subsurface Exploration and Testing Report Sheets are approximate. Actual Test Hole locations, compiled by GPS survey, are indicated on project plans.

CONTENTS (continued)

Volume 2 of 2

1978 CENTRELINE TESTING ALASKA HIGHWAY

A Test Hole Location Reference Table and Subsurface Exploration and Testing Report Sheets are provided.
The reports for the centreline holes are arranged according to project location, starting at Km 1683+938 and increasing to Km 1690+062.

1978	TEST HOLES 1 to 16, 20 to 24, 51, 52, and 296 to 327	shown with no prefix

IMPORTANT NOTE: Due to alignment revisions subsequent to the 1978 centreline testing the test hole locations indicated on the 1978 Subsurface Exploration and Testing Report sheets are invalid. Utilize the Test Hole Location Reference Table provided in order to determine the test hole locations relevant to the current alignment.

GRANULAR SOURCE Km 1691.3 RHS ALASKA HIGHWAY (Silver Creek)

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

Backhoe Testing

* 1991	TEST PITS 01 to 08	shown with prefix 152-
* 1992	TEST PITS 15 to 23	shown with prefix EBA-
2001	TEST PITS 1519 to 1543	shown with prefix 583-
2001	TEST PITS 1544 to 1552	shown with prefix 584

* **NOTE:** For subsurface exploration and testing report sheets refer to:
GRANULAR SOURCE INVESTIGATION REPORT,
Km 1693, North Alaska Highway, Yukon
0201-10992, April 1992

Auger Testing

2001	TEST HOLES 1505 to 1514	shown with prefix 581-
2001	TEST HOLES 1515 to 1518	shown with prefix 582-

INTRODUCTION

GEOTECHNICAL INVESTIGATION DATA

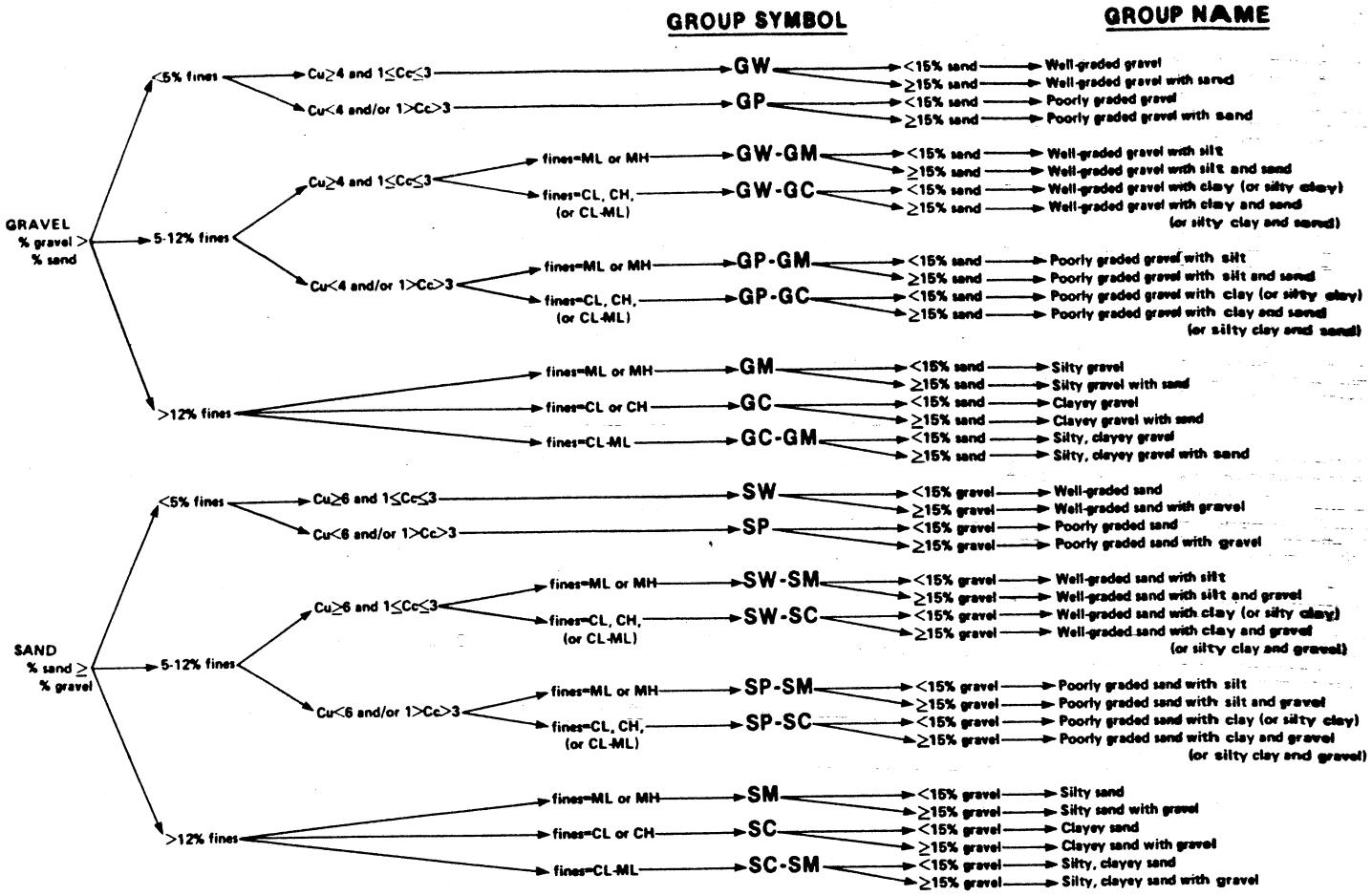
This geotechnical investigation data is provided to assist in the interpretation of soil conditions encountered within this project area. The data presented was prepared solely for Departmental designing and estimating purposes.

The description of material / soil description shown on the subsurface exploration and 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.

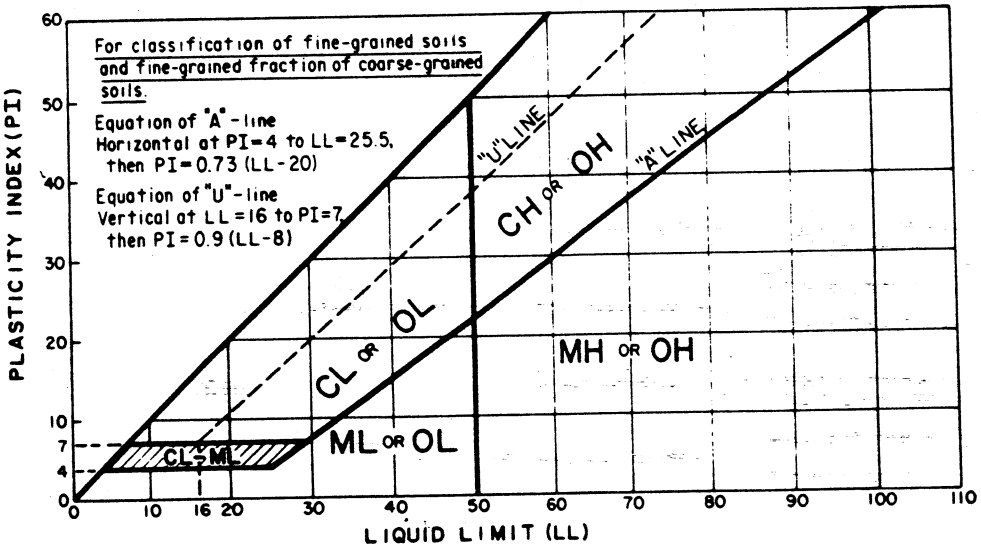
The sample identification and laboratory testing data is provided to give detailed physical properties of selected retrieved samples within the subsurface profile. ***These tests may be conducted on disturbed samples and may exhibit properties different from the native materials. The sample classification 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.***

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

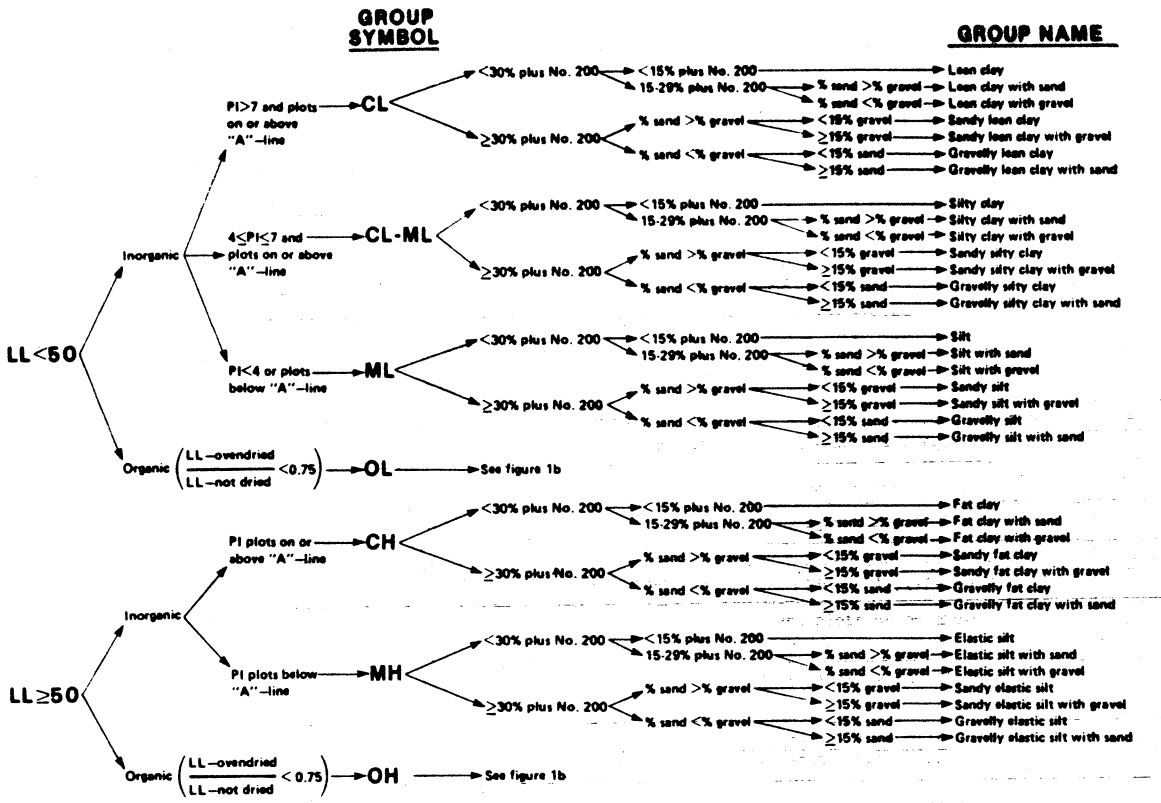
It is recommended that a site inspection, combined with consideration of the regional geology and climatic conditions be conducted. An evaluation of the investigation methods and development work done since the time of investigation should be done prior to interpreting the subsurface conditions at the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



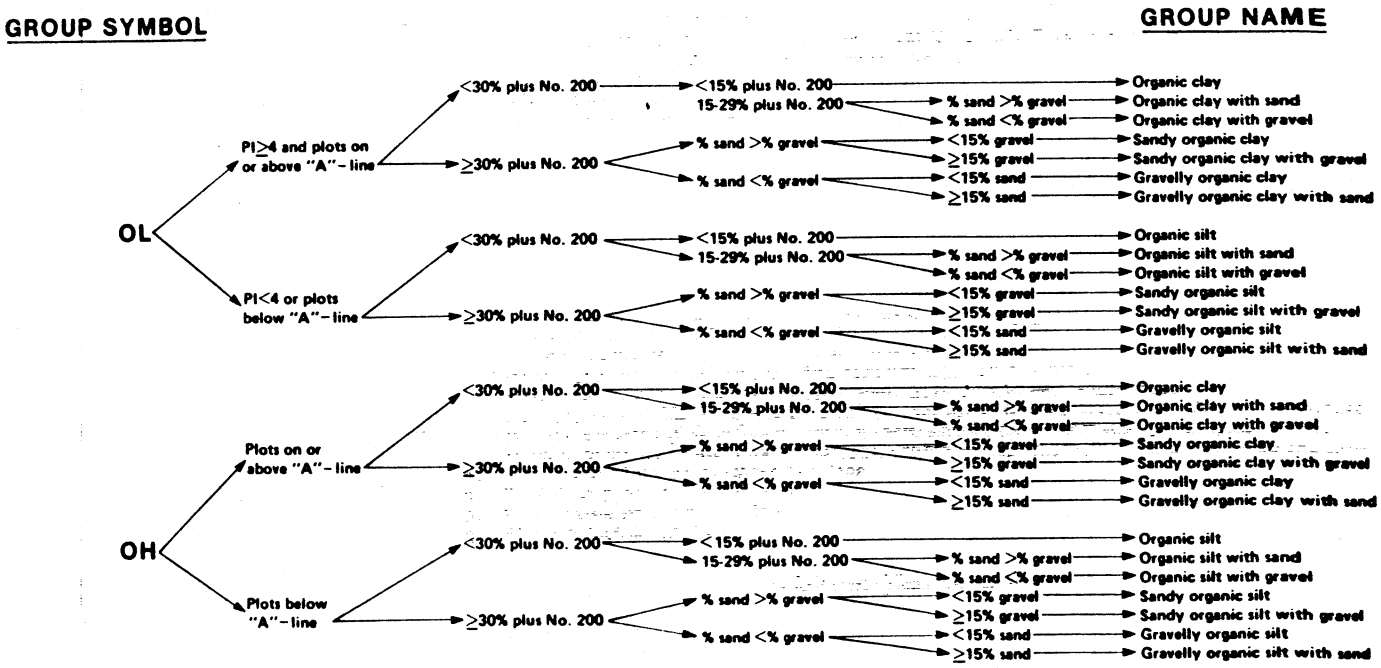
Flow chart for classifying coarse-grained soil.



Plasticity chart.



Flow chart for classifying fine-grained soil.



Flow chart for classifying organic soil.

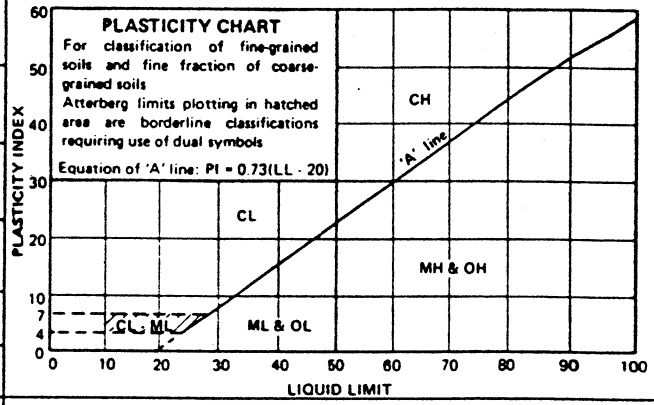
CRITERIA FOR ASSIGNING GROUP SYMBOLS AND GROUP NAMES USING LABORATORY TESTS [a]				SOIL CLASSIFICATION	
				GROUP SYMBOL	GROUP NAME [b]
COARSE-GRAINED SOILS more than 50% retained on No. 200 sieve	GRAVELS More than 50% of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS Less than 5% fines [c]	$C_u \geq 4$ 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 plot above 'A' line and plasticity index greater than 7 — Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
			GC	Clayey gravels, gravel-sand clay mixtures		
	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 plot above 'A' line and plasticity index greater than 7 — Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
			SC	Clayey sands, sand-clay mixtures		
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	

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)	

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

	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

SOIL DESCRIPTION

DEPTH (m) | SAMPLE TYPE | SAMPLE NO | ▲ PERCENT FINES ▲ 20 40 60 80 | PLASTIC M.C. LIQUID 20 40 60 80 | USC | SOIL SYMBOL | ◆ PERCENT SAND ◆ 20 40 60 80 | ■ PERCENT GRAVEL ■ 20 40 60 80 | DEPTH (m)

0.0

BOUNDARY LINES

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.

2.0

A dotted line is used when a gradual or gradational change is noted by field notes and sample test results.

3.0

▼

A triangle over two lines indicates water level detected at the time of drilling, unless otherwise noted

4.0

5.0

6.0

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	REVIEWED BY:	COMPLETE: / /
	Fig. No:	Page 1 of 1

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2000 CENTRELINE TESTING
1683+950 to 1691+875
ALASKA HIGHWAY

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 564-1748
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1683+950 2M 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	SILT TO SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (ML)-(GM)-(SM) -brown -damp -some +5mm material -grindy drilling	⊠	1467	● ▲	ML		■ ◆	0.0
1.0								1.0
2.0								2.0
	-more +5mm material below 2.5m -more grindy drilling below 2.5m	⊠	1468	● ▲	GM		◆	
3.0								3.0
4.0		⊠	1469	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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LOGGED BY: D.T	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 00/07/31
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00/10/27 07:48AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563–1747
ENGINEERING CAPITAL	KM 1664.5–1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1684+050 5M 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	SILTY SAND TO SILTY SAND WITH GRAVEL (SM) –brown –moist							0.0
1.0		⊠	1464	● ▲	SM		■ ◆	1.0
2.0								2.0
3.0		⊠	1465	● ▲	SM		■ ◆	3.0
4.0		⊠	1466	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.5m Note: large boulders (+1.0m) & exposed scrap metal in this area.							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1746
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1684+150 5M 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	SILTY SAND WITH GRAVEL TO SANDY SILT (SM)-(ML) -brown -moist							0.0
1.0		☒	1461	● ▲	SM		■ ◆	1.0
2.0								2.0
3.0		☒	1462	● ▲	SM		■ ◆	3.0
4.0	-less +5mm material below 4.0	☒	1463	● ▲	ML		■ ◆	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563—1745
ENGINEERING CAPITAL	KM 1664.5–1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1684+250 5M 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	SILTY SAND TO SANDY SILT (SM)–(ML) –brown –moist	⊠	1458	● ▲	SM		■ ◆	0.0
1.0								1.0
2.0								2.0
3.0		⊠	1459	● ▲	ML		■ ◆	3.0
4.0		⊠	1460	● ▲	ML		■ ◆	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

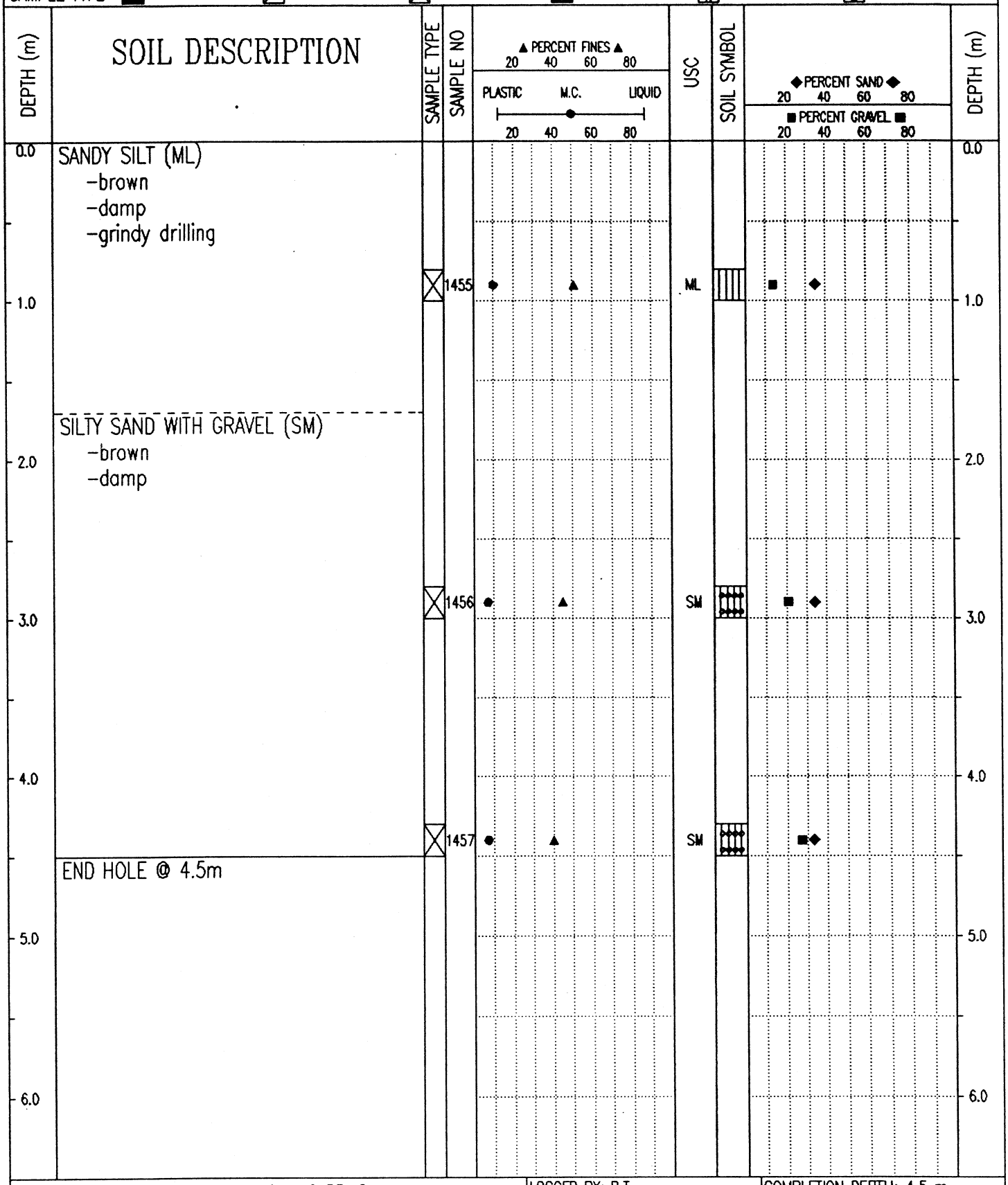
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563–1744
ENGINEERING CAPITAL	KM 1664.5–1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1684+350 5M RT	ELEVATION: 0.00 (m)

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



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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1743
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1684+450 7M RT	ELEVATION: 0.00 (m)

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

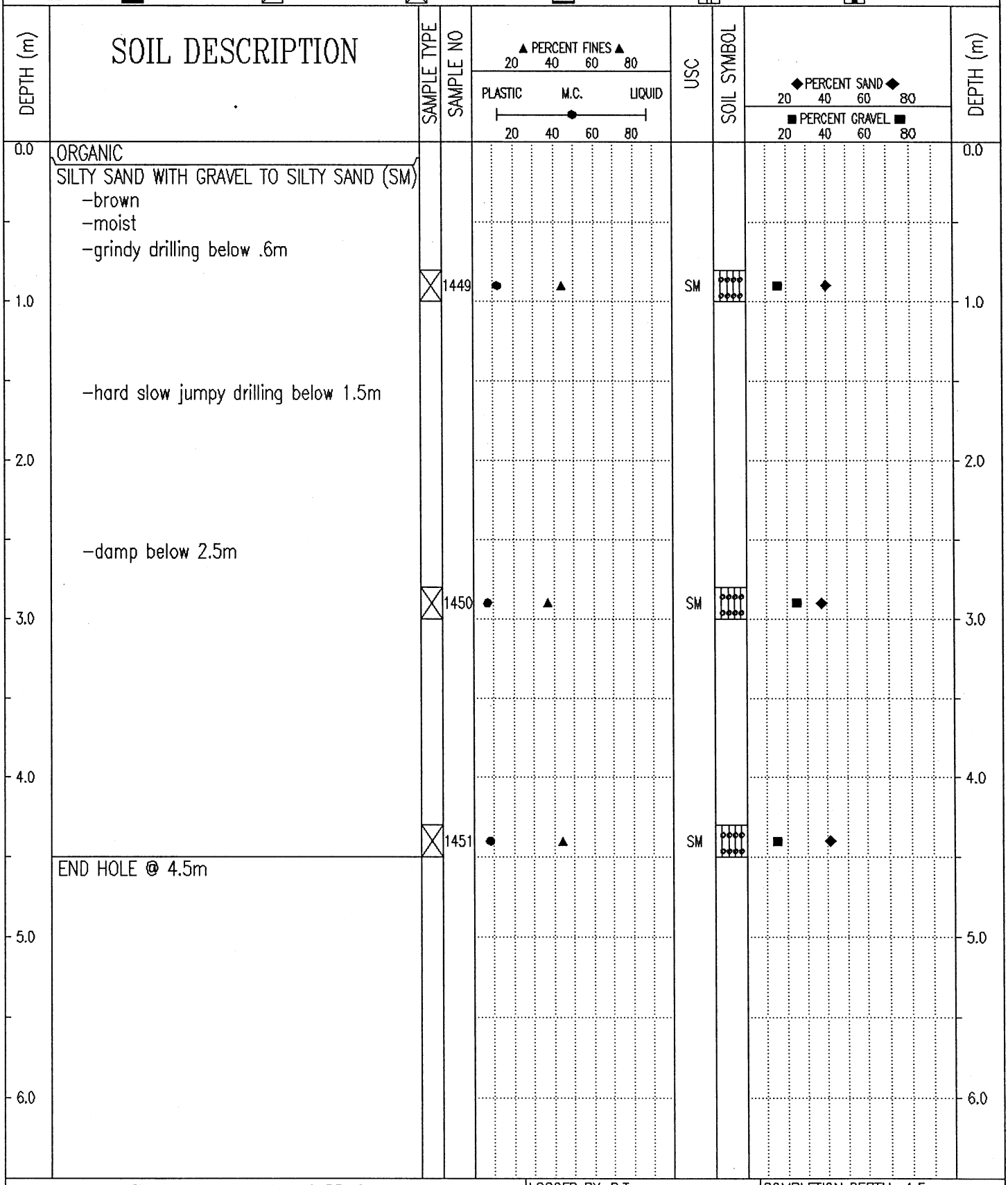
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SANDY SILT TO SILTY SAND WITH GRAVEL (ML)-(SM)							
	-some organic							
	-brown							
	-moist	⊠	1452	● ▲	ML		■ ◆	
1.0	-grindy drilling below .6m							1.0
2.0								2.0
	-damp to moist below 2.5m							
		⊠	1453	● ▲	SM		■ ◆	
3.0								3.0
	-damp below 2.5m							
4.0								4.0
		⊠	1454	● ▲	SM		■ ◆	
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1742
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1684+550 3M RT	ELEVATION: 0.00 (m)

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

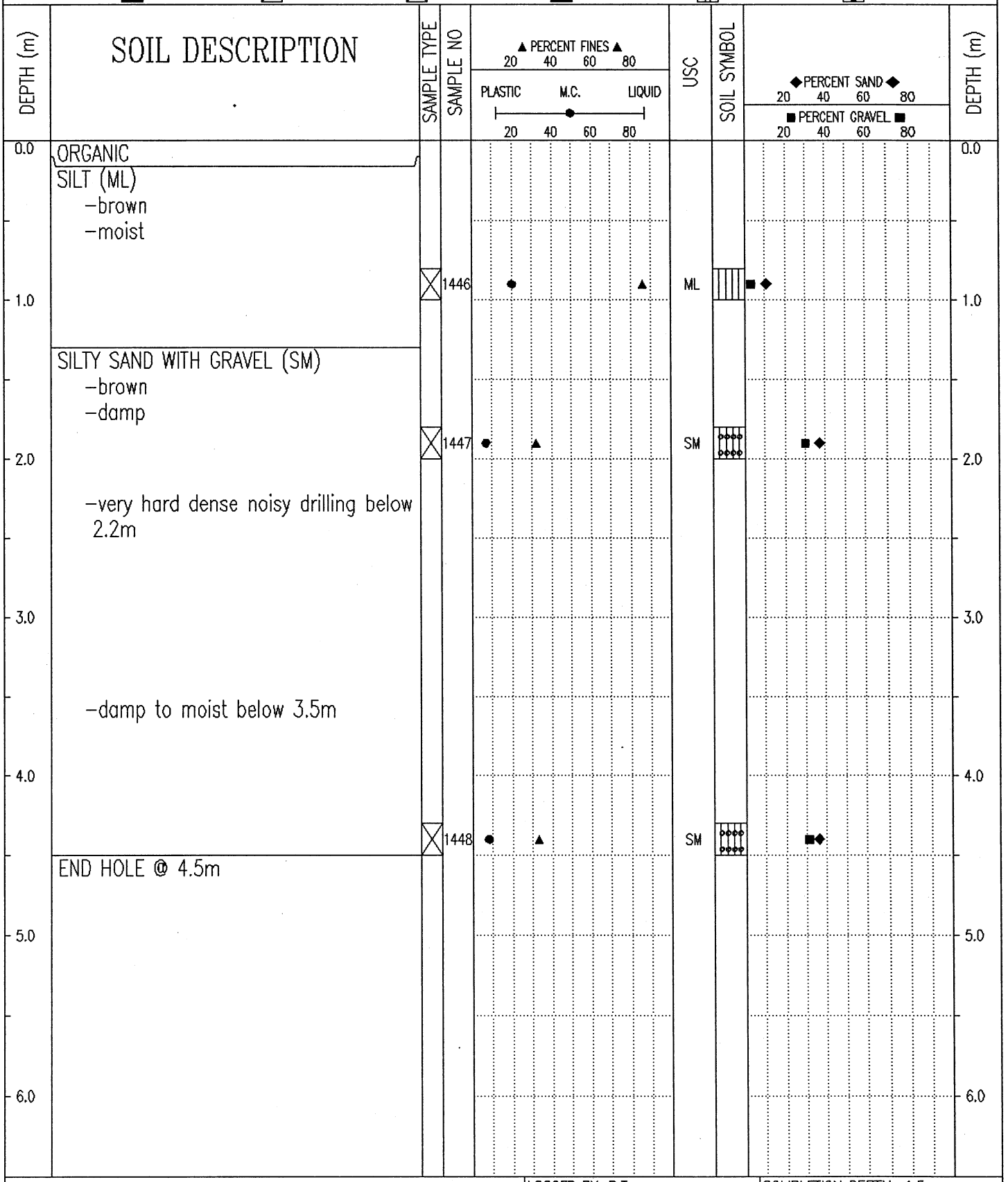


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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1741
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1684+610 20M RT	ELEVATION: 0.00 (m)

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

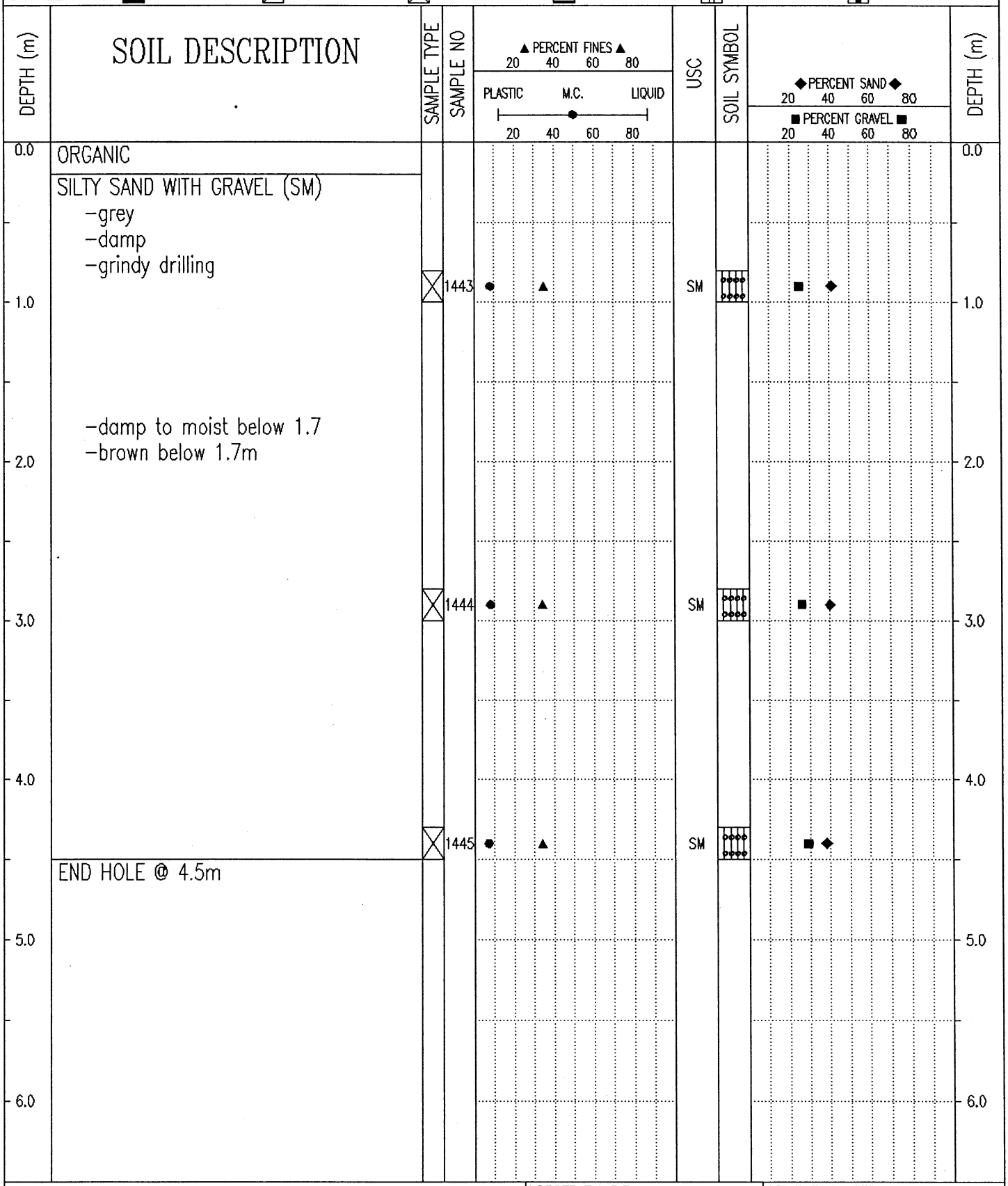


Government of Yukon Transportation Engineering	LOGGED BY: D.T	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 00/07/28
	Fig. No:	Page 1 of 1

00/10/27 01:49PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1740
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1684+650 4M RT	ELEVATION: 0.00 (m)

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



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	REVIEWED BY:	COMPLETE: 00/07/27
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00/10/26 01:39PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563–1739
ENGINEERING CAPITAL	KM 1664.5–1692.6	Project No: 092–202101–0363
MOBILE B40 L 6" AUGER	LOCATION: 1684+725 40M 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
	SILTY SAND WITH GRAVEL (SM) –brown –moist –grindy drilling	⊠	1441	● ▲	SM		■ ◆	
1.0								1.0
	SILTY GRAVEL WITH SAND (GM) –brown –damp – moist –hard jumpy grindy drilling –very hard material to drill @ 3.4m							
2.0								2.0
		⊠	1442	● ▲	GM		◆ ■	
3.0								3.0
4.0	END HOLE @ 4.0m –refusal							4.0
5.0								5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 00/07/27
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563–1738
ENGINEERING CAPITAL	KM 1664.5–1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1684+800 10M 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
	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)–(GM)							
1.0	–brown –damp	⊠	1437	◆ ▲	SM		■ ◆	1.0
	–grindy drilling @ 1.4m –2nd refusal @ 1.4m							
2.0								2.0
	–1st refusal crooked hole – redrill 2m down chain	⊠	1438	● ▲	GM		◆	
3.0								3.0
4.0	–much tougher material to drill							4.0
		⊠	1439	● ▲	GM		◆ ■	
5.0								5.0
6.0								6.0
		⊠	1440	● ▲	GM		◆ ■	
	END HOLE @ 6.7m –refusal							
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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REVIEWED BY:	COMPLETE: 00/07/27
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563–1737
ENGINEERING CAPITAL	KM 1664.5–1692.6	Project No: 092–202101–0363
MOBILE B40 L 6" AUGER	LOCATION: 1684+850 35M 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
	SILTY SAND WITH GRAVEL (SM) –brown –moist –some grindy drilling	⊠	1433	● ▲	SM		■ ◆	
1.0								1.0
2.0								2.0
	–damp below 2.5m	⊠	1434	● ▲	SM		■ ◆	
3.0								3.0
	SILTY GRAVEL WITH SAND (GM) –light brown –damp –very hard slow jumpy grindy drilling							
4.0								4.0
		⊠	1435	● ▲	GM		◆ ■	
5.0								5.0
6.0								6.0
7.0								7.0
	SANDY SILT (ML) –damp –most difficult material to drill							
8.0		⊠	1436	● ▲	ML		■ ◆	8.0
	END HOLE @ 8.4m –refusal							
9.0								9.0
10.0								10.0

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REVIEWED BY:	COMPLETE: 00/07/27
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1736
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1684+900 25M 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
	SILTY SAND (SM) -brown -damp - moist	⊠	1428B	● ▲	SM		■ ◆	
1.0								1.0
2.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (GM)-(SM)-(GM) -brown -damp -very hard slow jumpy gindy drilling below 2.4m							2.0
3.0		⊠	1429	● ▲	GM		◆ ■	3.0
4.0								4.0
		⊠	1430	● ▲	SM		◆	
5.0	-lost new bit - re-drill test hole 1 m downchain							5.0
6.0		⊠	1431	● ▲	GM		◆ ■	6.0
7.0								7.0
		⊠	1432	● ▲	GM		◆ ■	
8.0	-1st & 2nd refusal @ 7.6m - moved 2m down chain							8.0
	END HOLE @ 8.1m -3rd refusal							
9.0								9.0
10.0								10.0

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LOGGED BY: D.T	COMPLETION DEPTH: 8.1 m
REVIEWED BY:	COMPLETE: 00/07/27
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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-889
ENGINEERING CAPITAL	CHRISTMAS CREEK	Project No: 092-202101-0363
AIR ROTARY	LOCATION: 1685+100 30M 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	SILT –brown –damp							0.0
1.0								1.0
2.0								2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0
11.0								11.0
12.0	END HOLE @ 12.2m							12.0
13.0								13.0
14.0								14.0
15.0								15.0
16.0								16.0

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LOGGED BY: G.C.	COMPLETION DEPTH: 12.2 m
REVIEWED BY:	COMPLETE: 00/09/05
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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-888
ENGINEERING CAPITAL	CHRISTMAS CREEK	Project No: 092-202101-0363
AIR ROTARY	LOCATION: 1685+200 30M 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	SILT -1st steel -brown -damp							0.0
1.0								1.0
2.0								2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0
7.0	-2nd steel -small boulder - couple of rock chips							7.0
8.0								8.0
9.0								9.0
10.0								10.0
11.0								11.0
12.0	-3rd steel							12.0
13.0								13.0
14.0	END HOLE @ 13.7m -refusal Note: air would not clear hole - no rock 0 to 13.7m							14.0
15.0								15.0
16.0								16.0

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LOGGED BY: G.C.	COMPLETION DEPTH: 13.7 m
REVIEWED BY:	COMPLETE: 00/09/05
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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-890
ENGINEERING CAPITAL	CHRISTMAS CREEK	Project No: 092-202101-0363
AIR ROTARY	LOCATION: 1685+250 2M 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	SILT -brown -damp -moist to wet							0.0
1.0								1.0
2.0								2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0	-dryer below 6.1m							6.0
7.0								7.0
8.0	-boulder @ 8.1m							8.0
9.0								9.0
10.0								10.0
11.0								11.0
12.0								12.0
13.0	END HOLE @ 12.8m Note Between 10.4 - 12.2m some rock chips with silt. Difficult to pull steel from this area. -Driller does not believe we hit rock, only boulder -lost all head pressure @ 10.4m							13.0
14.0								14.0
15.0								15.0
16.0								16.0

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LOGGED BY: G.C.	COMPLETION DEPTH: 12.8 m
REVIEWED BY:	COMPLETE: 00/09/05
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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-891
ENGINEERING CAPITAL	CHRISTMAS CREEK	Project No: 092-202101-0363
AIR ROTARY	LOCATION: 1685+375 40M 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	SILT -brown -damp-moist							0.0
1.0								1.0
2.0								2.0
3.0								3.0
4.0								4.0
5.0	-moist to wet below 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	END HOLE @ 11.0m -no headway -no rock 0 to 11.0m							11.0
12.0								12.0
13.0								13.0
14.0								14.0
15.0								15.0
16.0								16.0

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LOGGED BY: G.C.	COMPLETION DEPTH: 11.0 m
REVIEWED BY:	COMPLETE: 00/09/05
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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-892
ENGINEERING CAPITAL	CHRISTMAS CREEK	Project No: 092-202101-0363
AIR ROTARY	LOCATION: 1685+425 30M 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	SILT –brown –damp to moist							0.0
1.0								1.0
2.0								2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0
11.0	END HOLE @ 10.4m –Air not blowing silt – plug every inch –No rock 0 to 10..4m							11.0
12.0								12.0
13.0								13.0
14.0								14.0
15.0								15.0
16.0								16.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563–1734
ENGINEERING CAPITAL	KM 1664.5–1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1685+500 25M 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
	SILT WITH SAND TO SANDY SILT WITH GRAVEL (ML)							
	–olive							
	–some organic							
1.0		⊠	1428A	● ▲	ML	▥	■ ◆	1.0
2.0								2.0
3.0		⊠	1428B	● ▲	ML	▥	■ ◆	3.0
4.0								4.0
		⊠	1425C	● ▲	ML	▥	●	
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

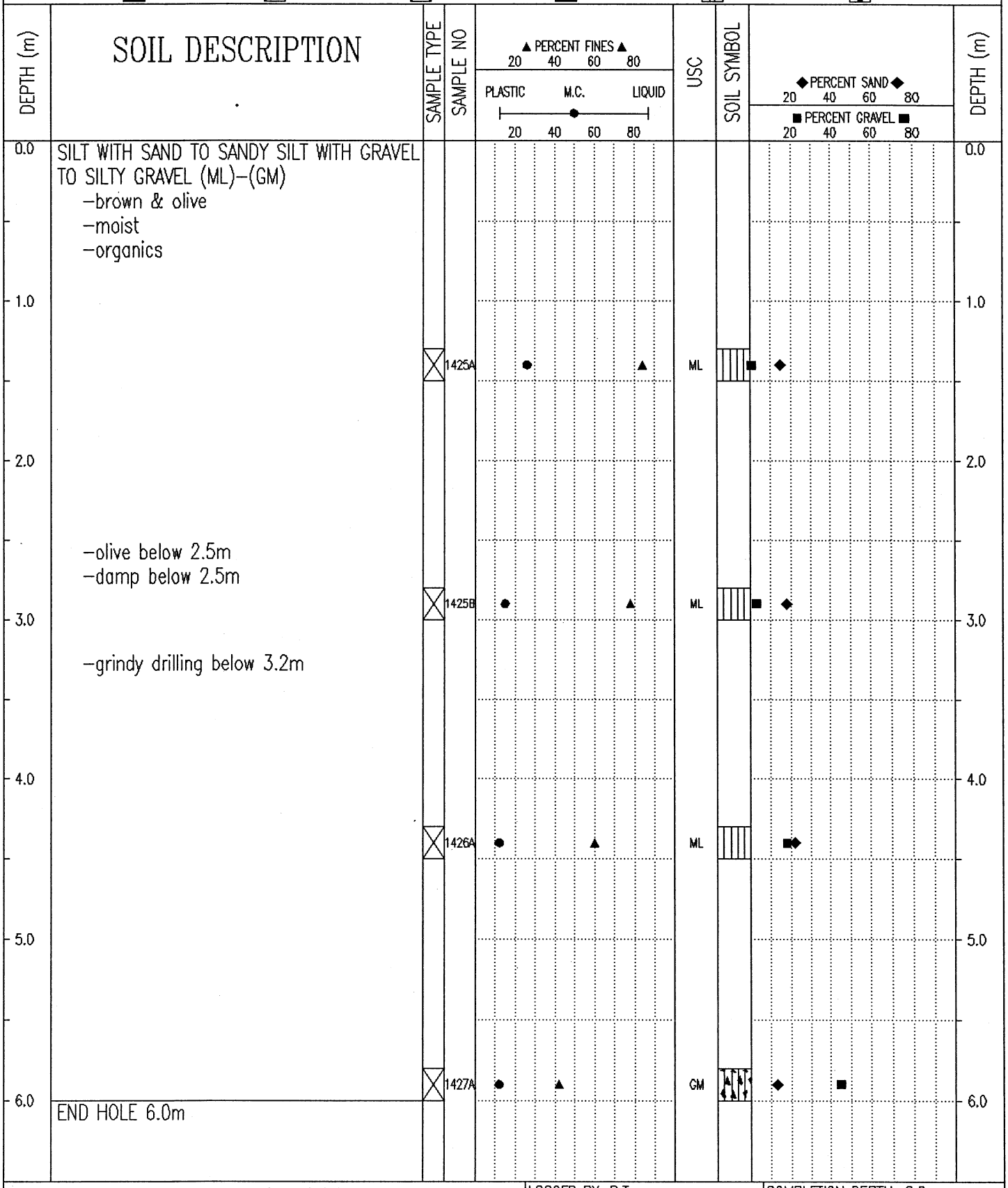
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1733
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1685+555 CENTERLINE	ELEVATION: 0.00 (m)

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

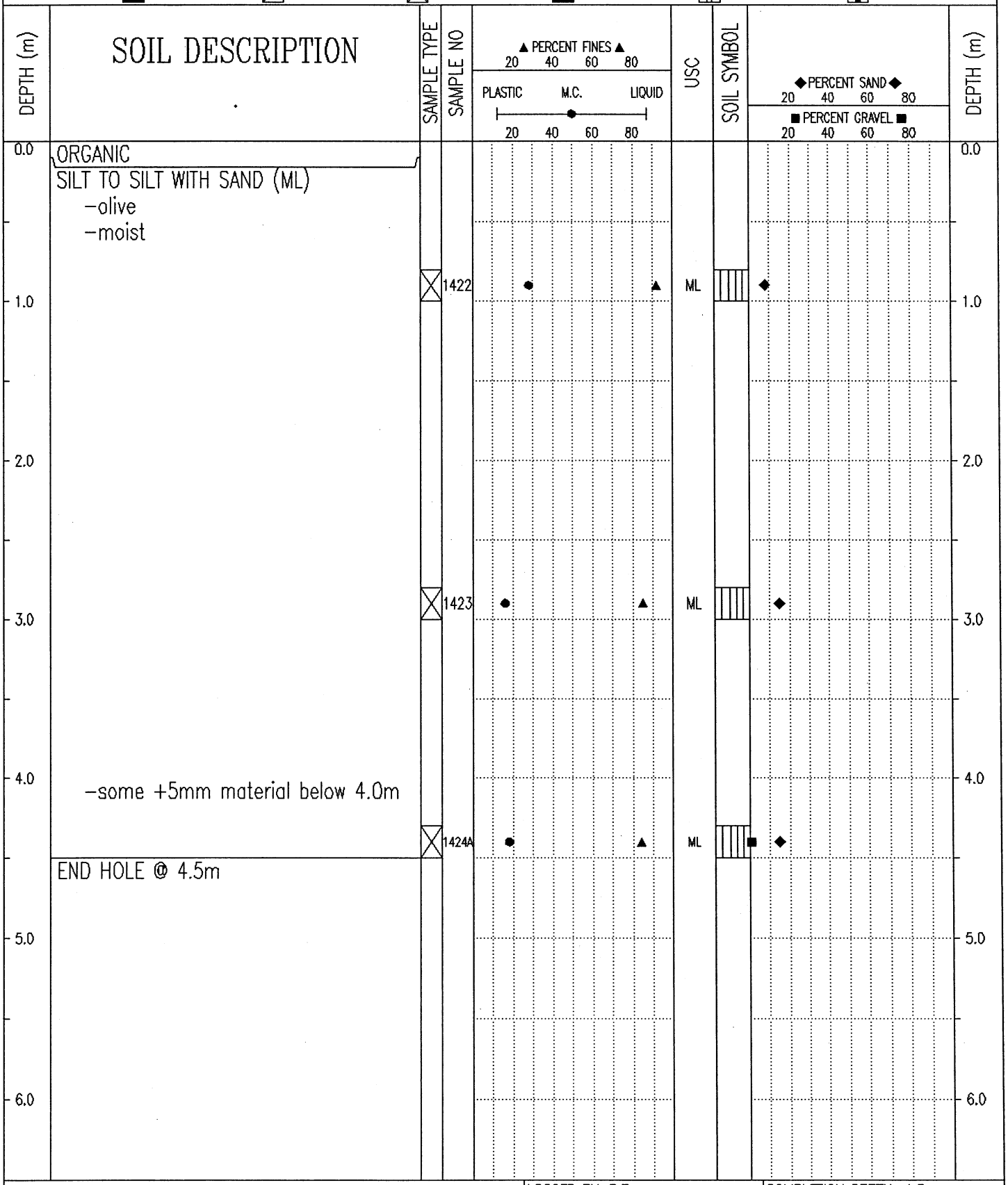


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00/10/30 10:00AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1732
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1685+575 25M LT	ELEVATION: 0.00 (m)

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

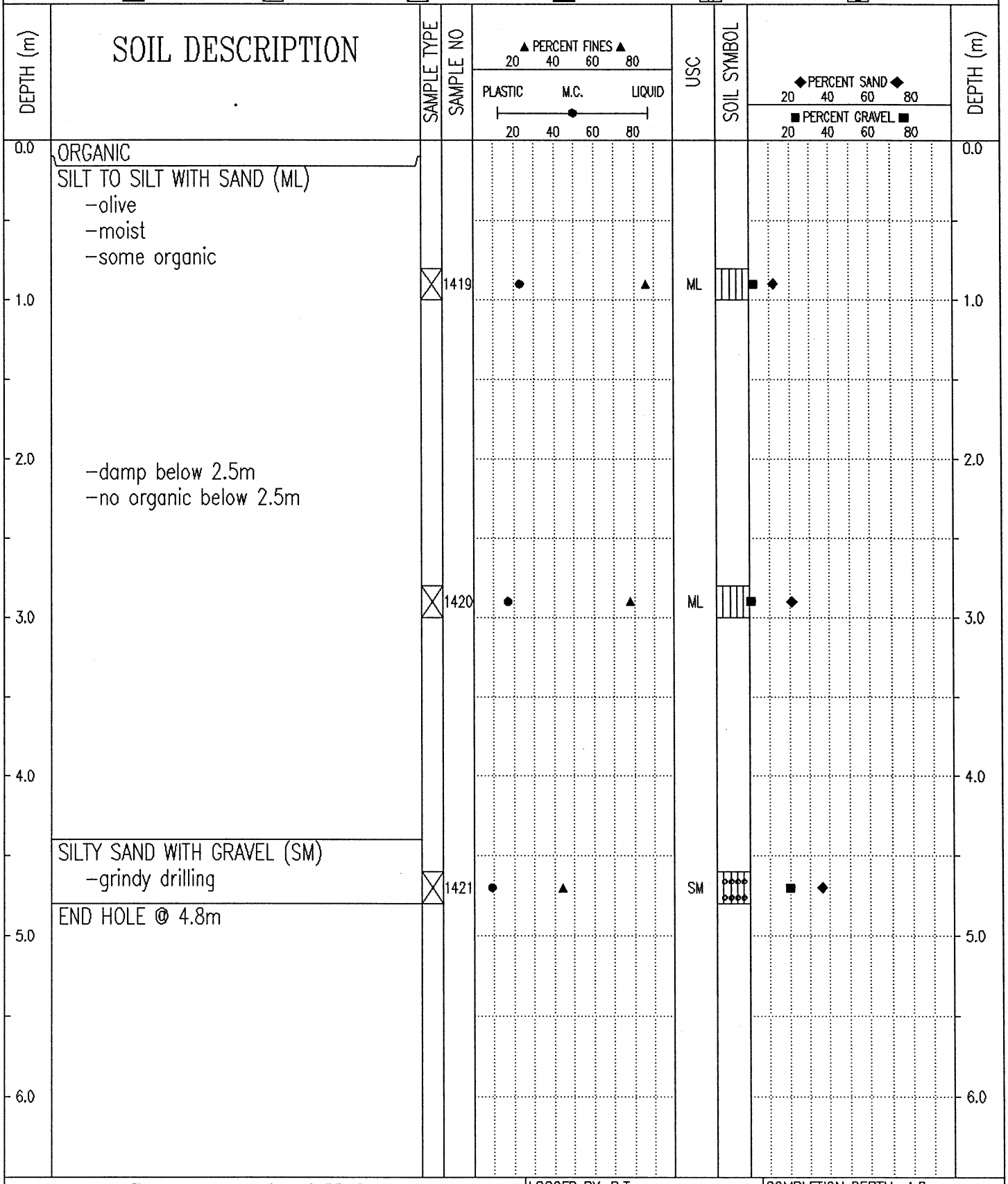


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	REVIEWED BY:	COMPLETE: 00/07/26
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1731
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1685+600 30M LT	ELEVATION: 0.00 (m)

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

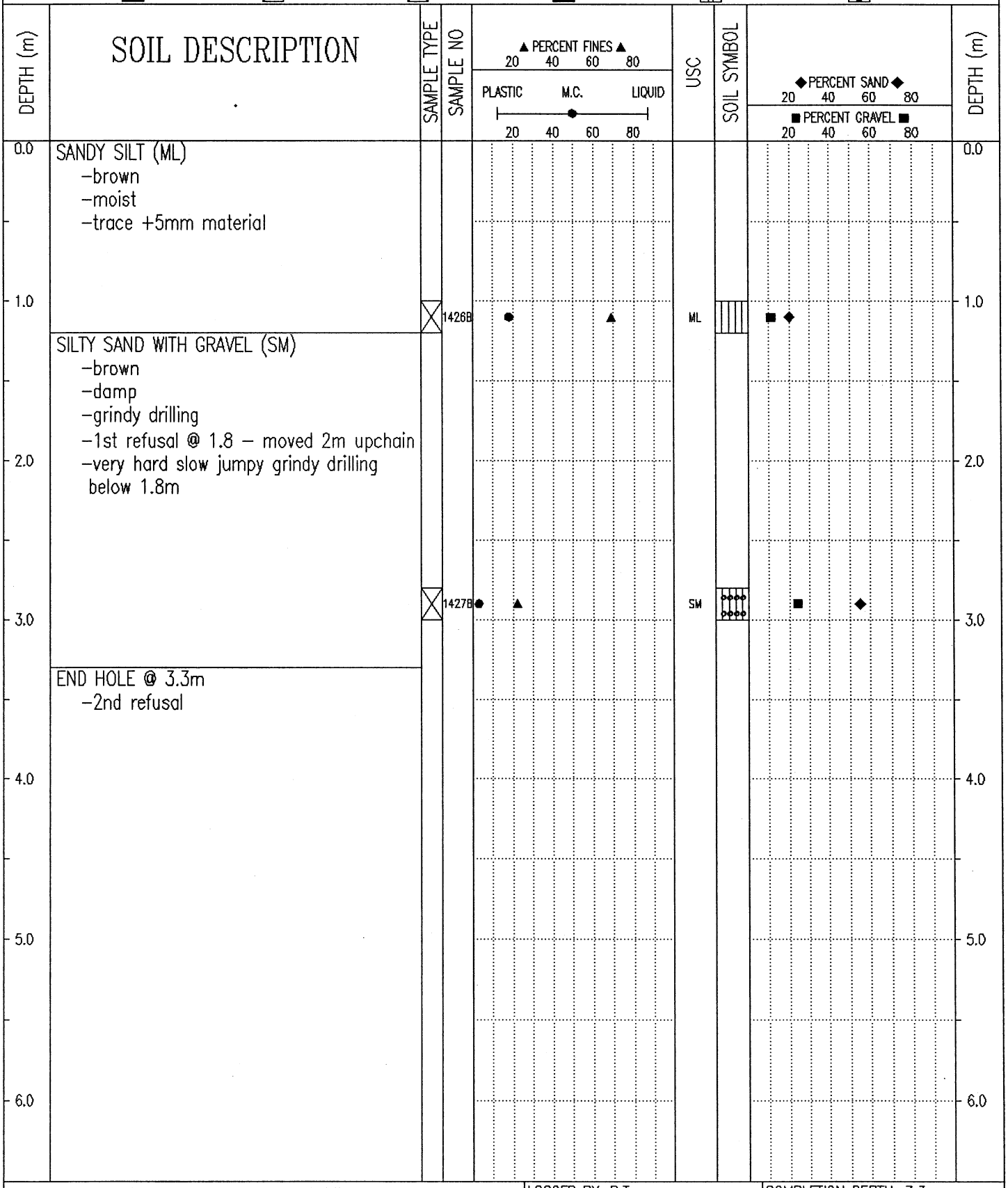


Government of Yukon Transportation Engineering	LOGGED BY: D.T	COMPLETION DEPTH: 4.8 m
	REVIEWED BY:	COMPLETE: 00/07/25
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1735
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1685+618 70M LT	ELEVATION: 0.00 (m)

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

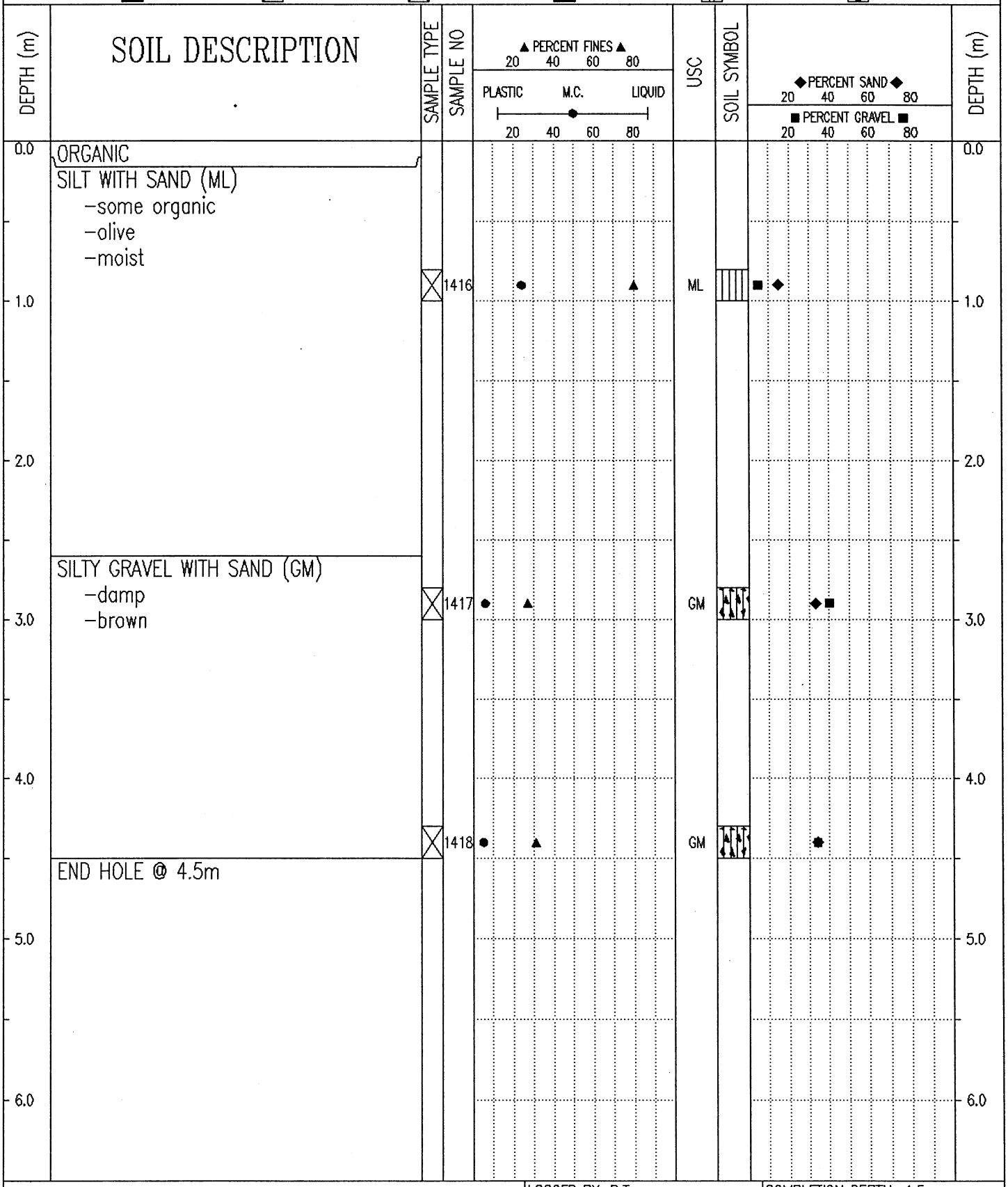


Government of Yukon Transportation Engineering	LOGGED BY: D.T	COMPLETION DEPTH: 3.3 m
	REVIEWED BY:	COMPLETE: 00/07/26
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00/10/30 10:00AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1730
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1685+625 20M RT	ELEVATION: 0.00 (m)

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

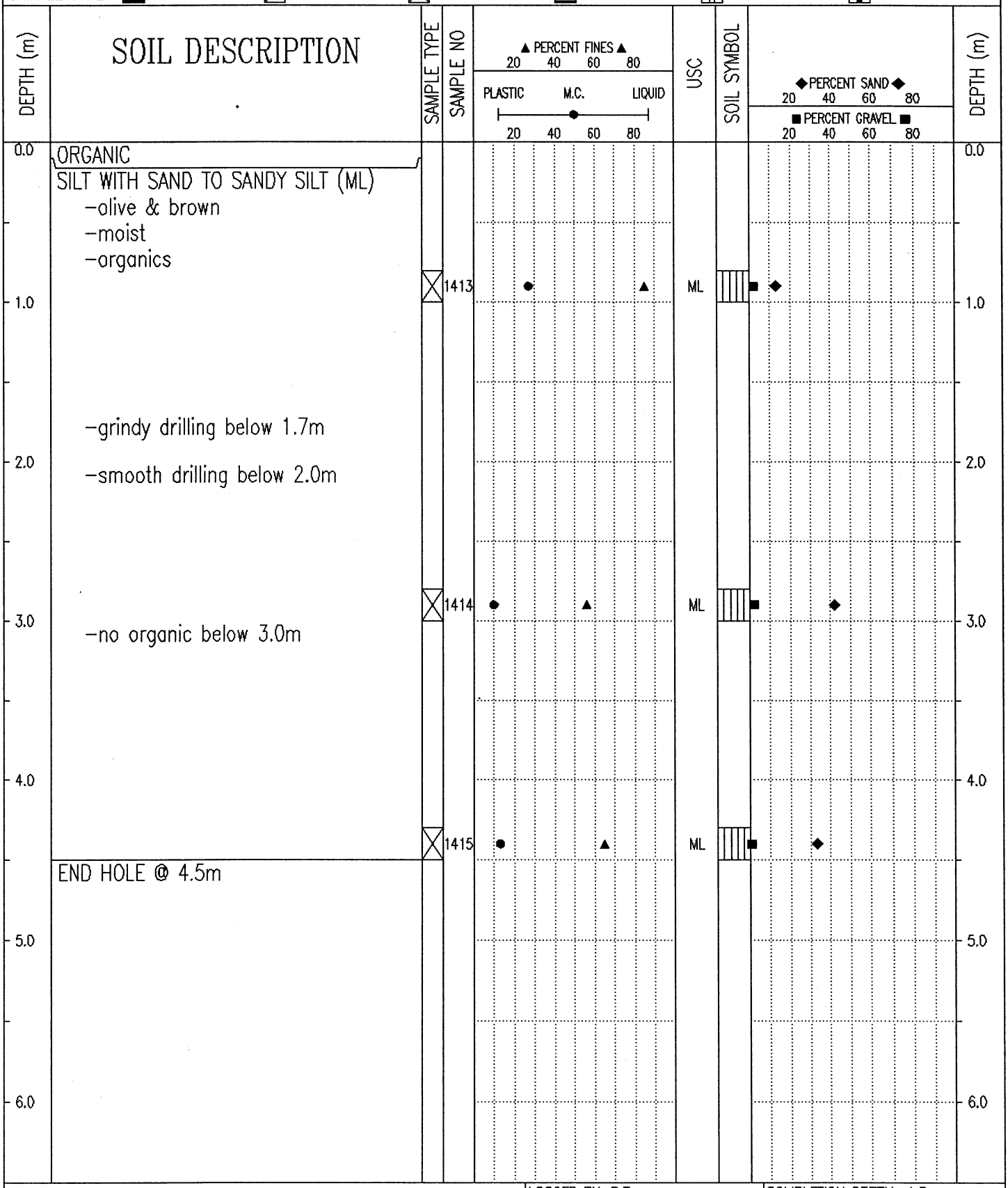


Government of Yukon Transportation Engineering	LOGGED BY: D.T	COMPLETION DEPTH: 4.5 m
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563–1729
ENGINEERING CAPITAL	KM 1664.5–1692.6	Project No: 092–202101–0363
MOBILE B40 L 6" AUGER	LOCATION: 1685+675 5M RT	ELEVATION: 0.00 (m)

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

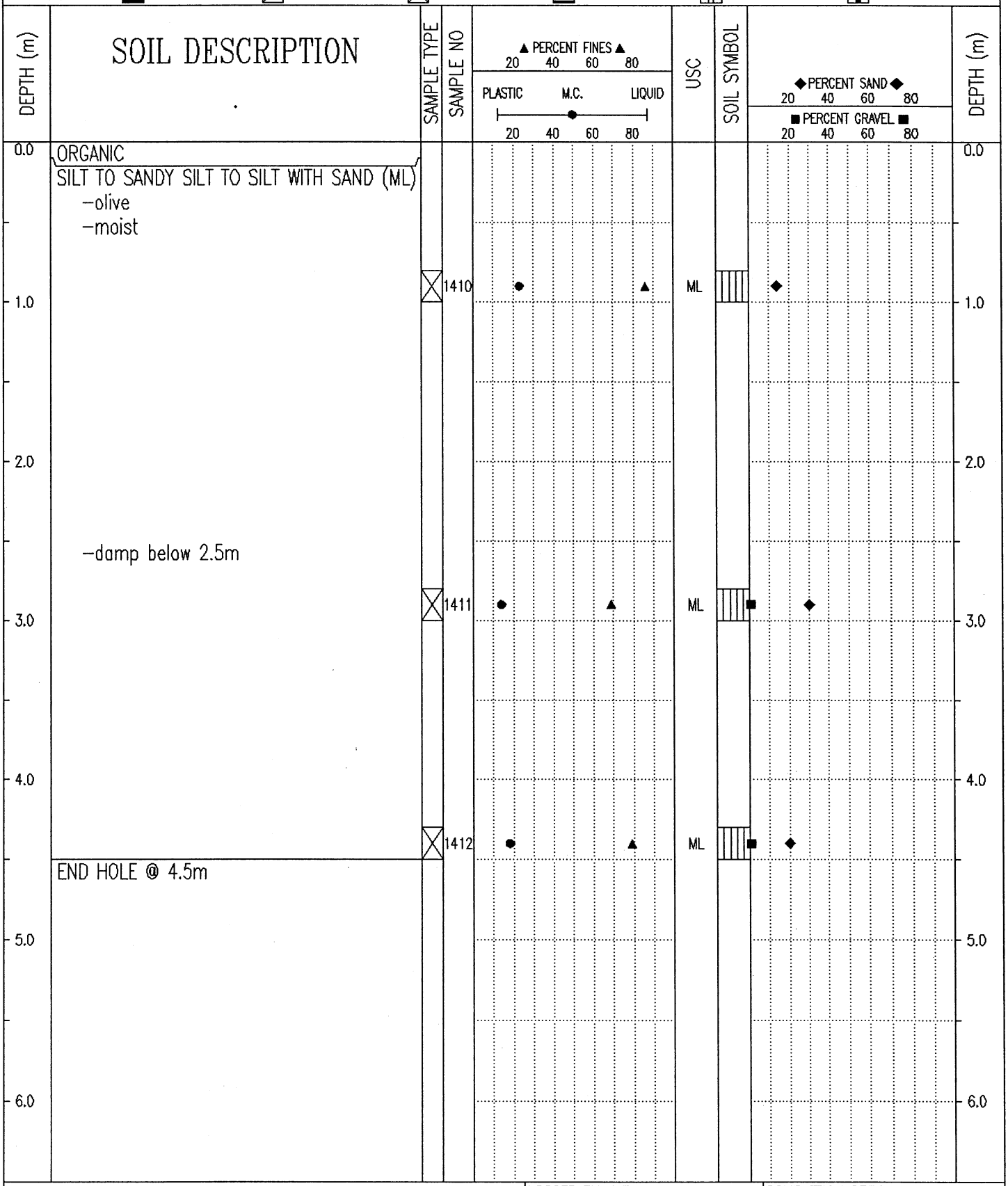


Government of Yukon Transportation Engineering	LOGGED BY: D.T	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 00/07/25
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563–1728
ENGINEERING CAPITAL	KM 1664.5–1692.6	Project No: 092–202101–0363
MOBILE B40 L 6" AUGER	LOCATION: 1685+750 2M LT	ELEVATION: 0.00 (m)

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

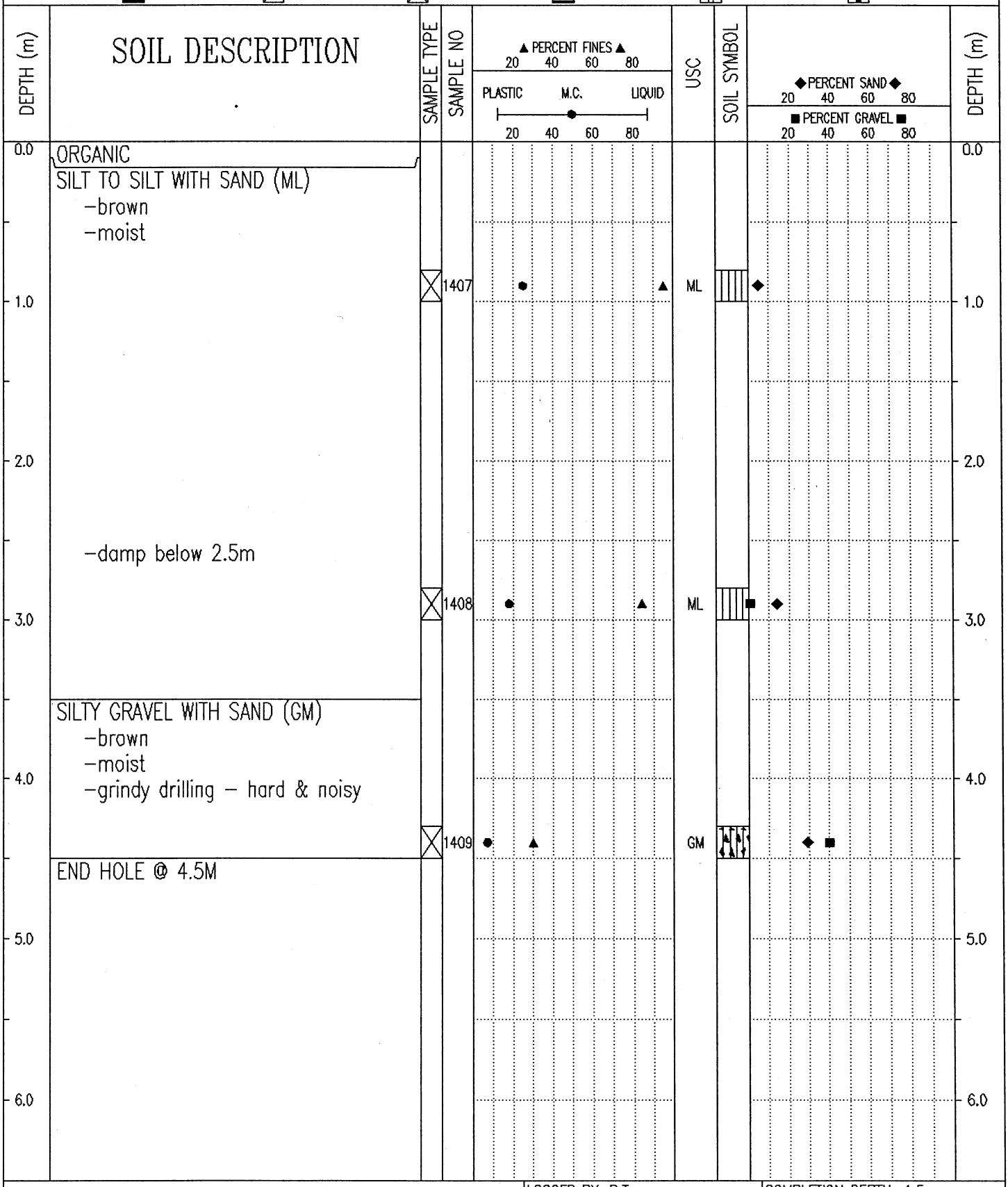


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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1727
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1685+850 2M LT	ELEVATION: 0.00 (m)

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



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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563–1726
ENGINEERING CAPITAL	KM 1664.5–1692.6	Project No: 092–202101–0363
MOBILE B40 L 6" AUGER	LOCATION: 1685+950 4M 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
	SANDY SILT TO SANDY SILT WITH GRAVEL (ML) –some +5mm material –brown –moist –grindy drilling below .5m	⊠	1404	● ▲	ML		■ ◆	
1.0								1.0
2.0								2.0
	–more +5mm material below 2.5m	⊠	1405	● ▲	ML		■ ◆	
3.0								3.0
4.0	SILTY GRAVEL (GM) –brown –moist –difficult grindy drilling	⊠	1406	● ▲	GM		◆ ■	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

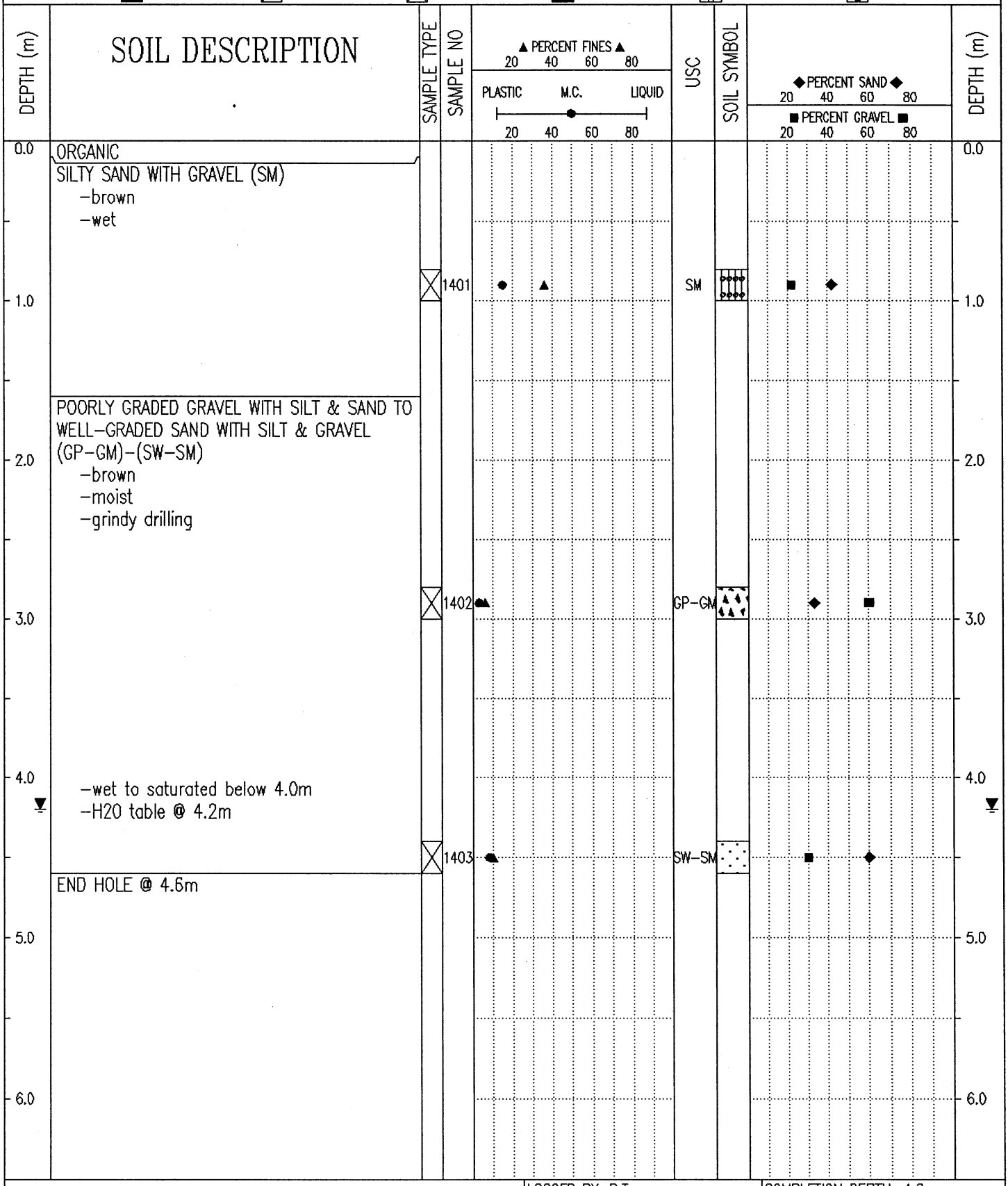
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1725
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1686+050 4M RT	ELEVATION: 0.00 (m)

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

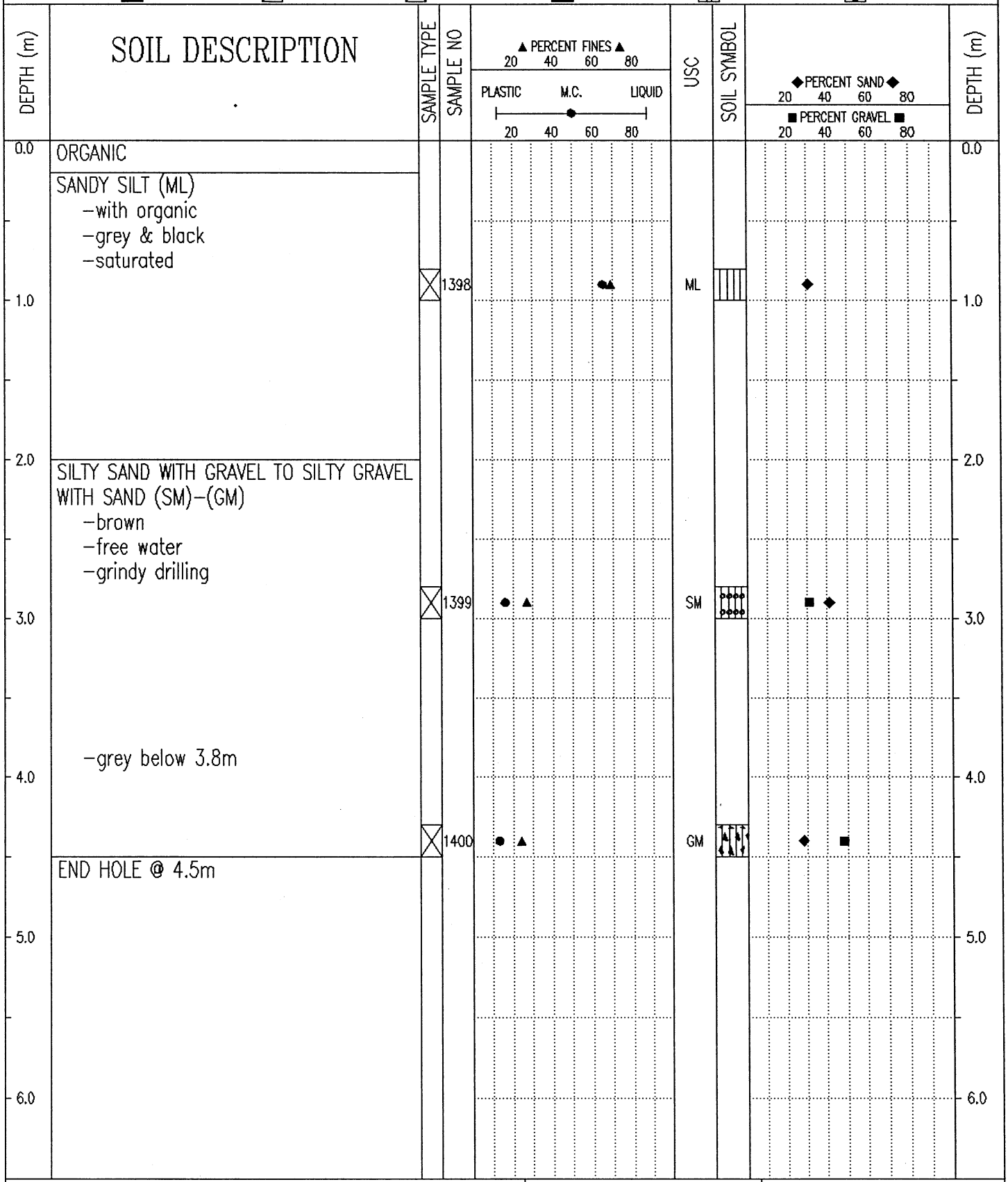


Government of Yukon Transportation Engineering	LOGGED BY: D.T	COMPLETION DEPTH: 4.6 m
	REVIEWED BY:	COMPLETE: 00/07/25
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1724
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1686+100 2M RT	ELEVATION: 0.00 (m)

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

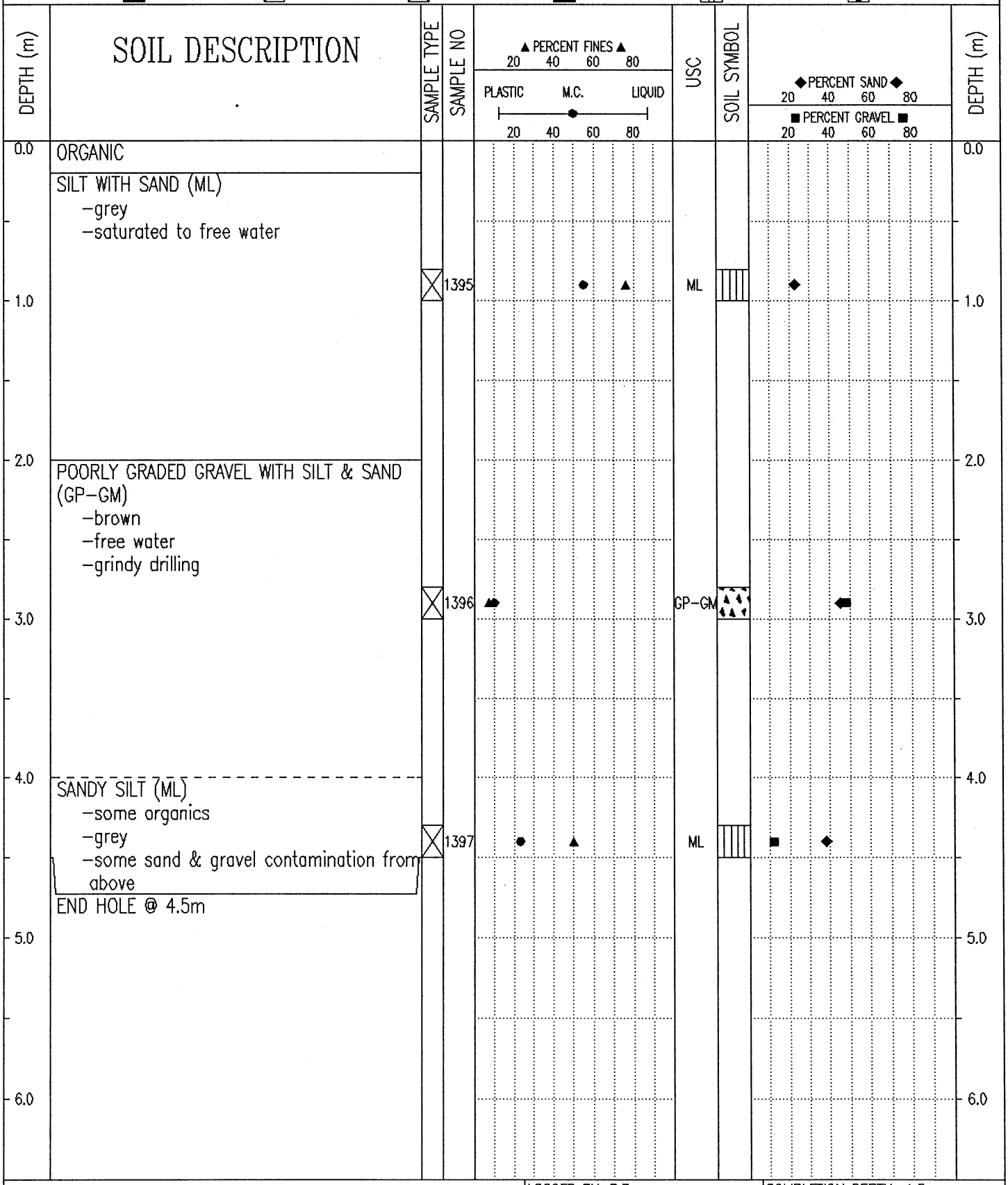


Government of Yukon Transportation Engineering	LOGGED BY: D.T	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 00/07/25
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1723
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1686+175 2M RT	ELEVATION: 0.00 (m)

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



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00/10/30 10:00AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1721
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1686+212 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	ORGANIC							0.0
	SANDY SILT (ML) -with organic -grey -saturated	⊠	1385	● ▲	ML		◆	
1.0								1.0
	SILTY SAND (SM) -brown -free water	⊠	1386	▲ ●	SM		◆	
2.0								2.0
	POORLY GRADED SAND WITH SILT & GRAVEL (SP-SM) -brown -free water -grindy drilling -no large +5mm material augered up	⊠	1387	▲ ●	SP-SM		■ ◆	
3.0								3.0
4.0								4.0
	SILT TO SANDY SILT (ML) -grey -trace sand -smooth drilling -moist to wet	⊠	1388	● ▲	ML		■ ◆	
5.0	-some organic below 5.0m -some +5mm contamination from above							5.0
		⊠	1389	● ▲	ML		■ ◆	
6.0	END HOLE @ 6.0m Note: Culvert inlet							6.0

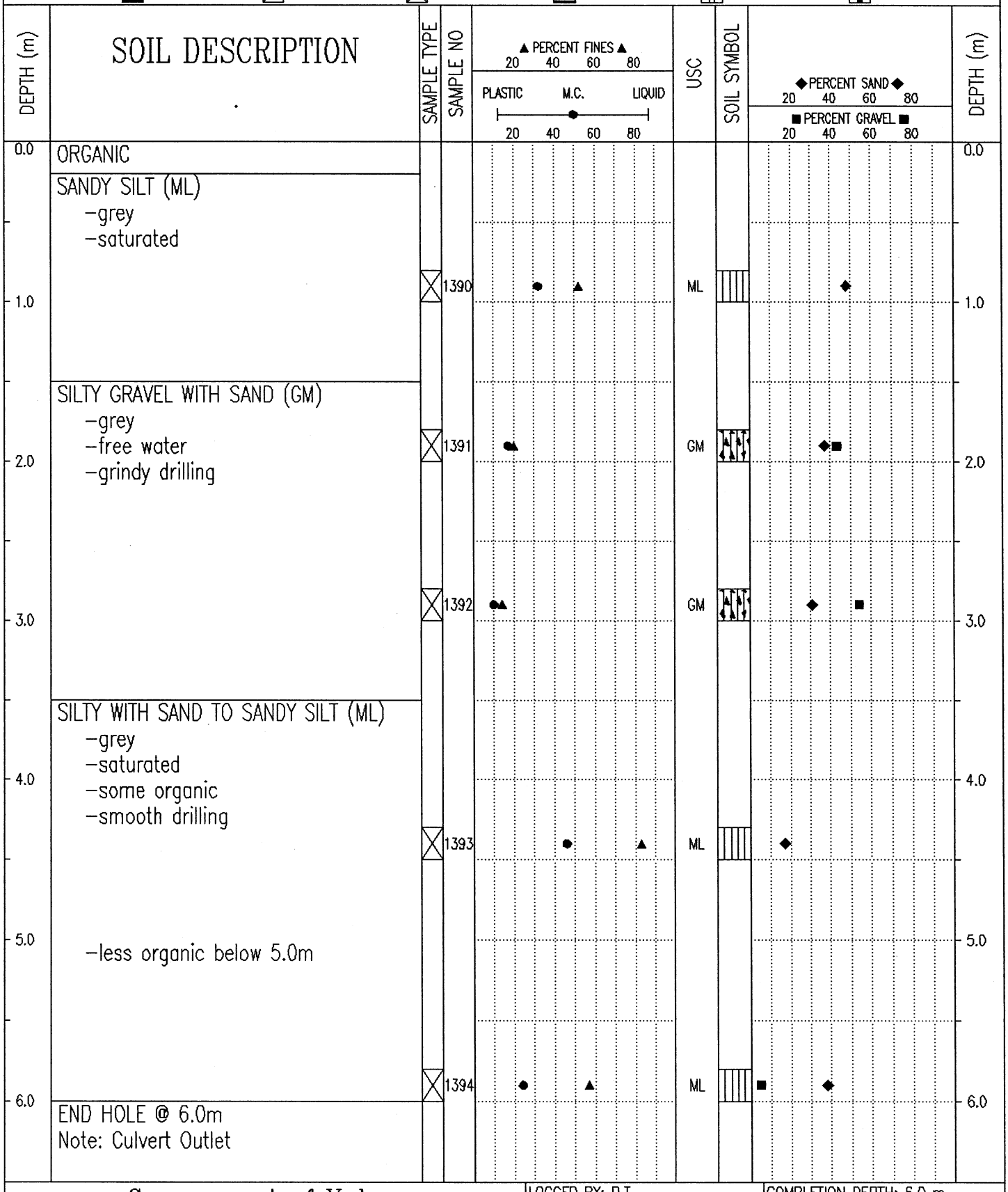
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REVIEWED BY:	COMPLETE: 00/07/25
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1722
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1686+230 20M RT	ELEVATION: 0.00 (m)

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



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	REVIEWED BY:	COMPLETE: 00/07/25
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1720
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1686+325 2M LT	ELEVATION: 0.00 (m)

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

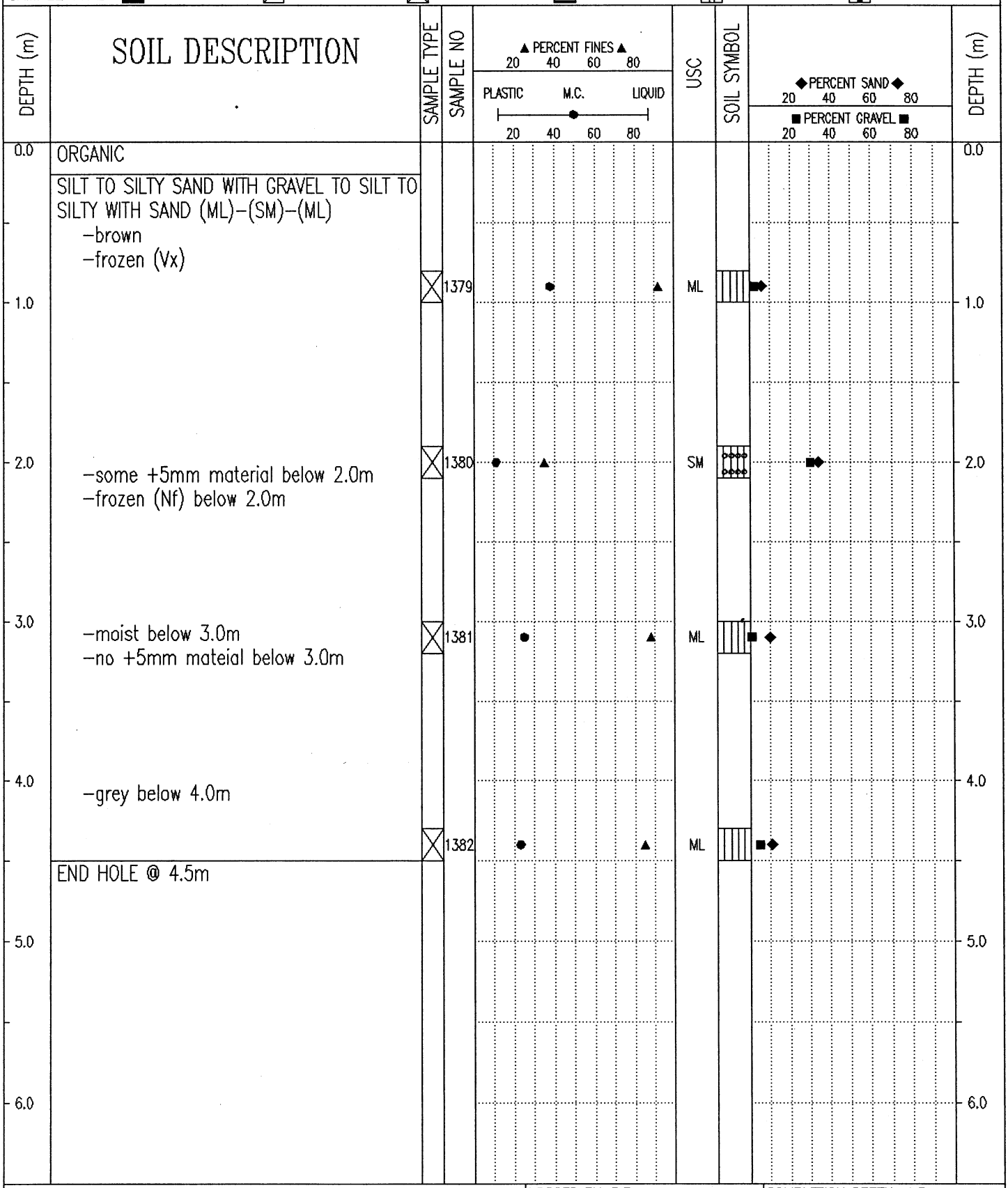
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SILT (ML) -some organic -grey	⊠	1383	● ▲	ML	▥	◆	
1.0								1.0
2.0								2.0
	-no organic below 2.6m	⊠	1384	● ▲	ML	▥	◆	
3.0								3.0
4.0	-some gravelly material observed @ 4m -no sample recovered @ 4m -material washed off auger							4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 00/07/24
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1719
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1686+400 2M LT	ELEVATION: 0.00 (m)

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



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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1718
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1686+470 CENTERLINE	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
	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -brown -moist -maximum 75mm material -grindy drilling	⊠	1377	● ▲	GM		◆	
1.0								1.0
2.0								2.0
		⊠	1378	● ▲	SM		■ ◆	
3.0	-H20 level @ 3.2m							3.0
4.0	END HOLE @ 4.0m -refusal							4.0
5.0								5.0
6.0								6.0

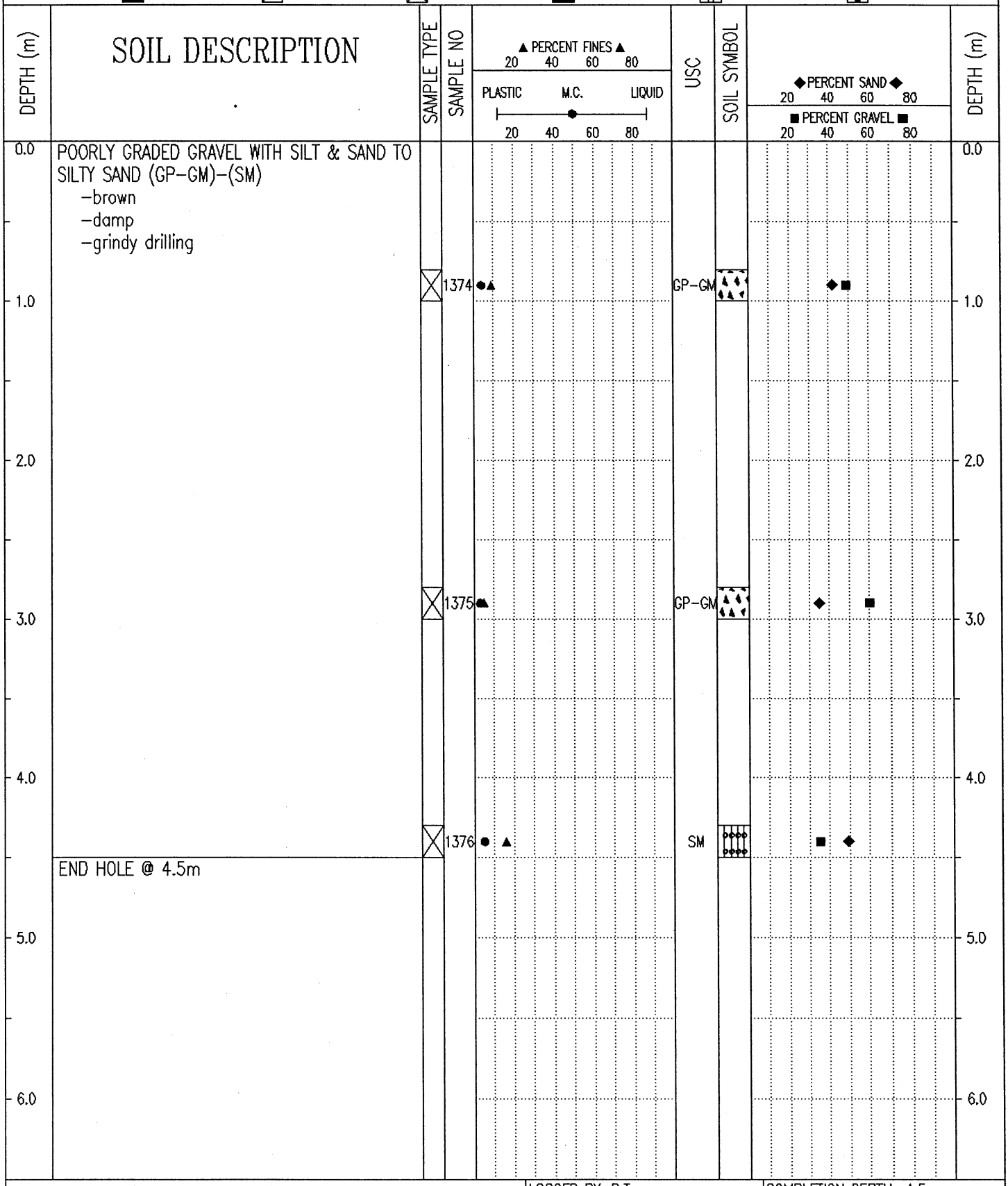
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563–1717
ENGINEERING CAPITAL	KM 1664.5–1692.6	Project No: 092–202101–0363
MOBILE B40 L 6" AUGER	LOCATION: 1686+565 CENTERLINE	ELEVATION: 0.00 (m)

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



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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1716
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1686+725 10M 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	CULVERT WASH OUT MATERIAL							0.0
	SILT WITH SAND TO SANDY SILT TO SILT (ML) -some organic -brown & black -wet to saturated							
1.0		⊠	1370	● ▲	ML		◆	1.0
2.0		⊠	1371	● ▲	ML		■ ◆	2.0
3.0	-less organic below 3.0m	⊠	1372	● ▲	ML		■ ◆	3.0
4.0		⊠	1373	● ▲	ML		◆	4.0
	END HOLE @ 4.5m Note: Culvert outlet							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 563-1715
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1686+808 12M 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	PUSH PILE DEBRIS							0.0
	SANDY SILT TO SILT TO SILTY GRAVEL WITH SAND (ML)-(GM) -brown -wet to saturated -some grindy drilling							
1.0		⊠	1367	● ▲	ML	▥	■ ◆	1.0
2.0								2.0
	-grey below 2.5m -moist below 2.5m -less +5mm material below 2.5m	⊠	1368	● ▲	ML	▥	◆	
3.0								3.0
	-grindy hard drilling below 3.2m -more +5mm material below 3.2m							
4.0								4.0
5.0		⊠	1369	● ▲	GM	▨	◆ ■	5.0
	END HOLE 5.0m							
6.0								6.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 561-1714
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1686+850 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	ORGANIC							0.0
	SILTY GRAVEL WITH SAND TO SILT WITH SAND TO SANDY SILT (GM)-(ML)							
	-brown	⊠	1363	● ▲	GM		◆ ■	
1.0	-saturated							1.0
2.0	-frozen (Nb) below 2.0m	⊠	1364	● ▲	ML		■ ◆	2.0
3.0	-frozen (Nf) below 3.0m	⊠	1365	● ▲	ML		■ ◆	3.0
	-wet below 3.6m							
4.0								4.0
	SILTY GRAVEL WITH SAND (GM)							
	-brown							
	-wet	⊠	1366	● ▲	GM		◆ ■	
5.0	-grindy drilling							5.0
	END HOLE @ 5.0m							
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 561-1713
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1686+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	ORGANIC							0.0
	SILT TO SILTY SAND TO SANDY SILT (ML)-(SM)-(ML)							
1.0	-some organic -grey -frozen (Vx)	⊠	1359	▲ ●	ML	▥	◆	1.0
2.0	-brown below 2.0m -frozen (Vr) below 2.0m	⊠	1360	● ▲	SM	▥	■ ◆	2.0
3.0	-frozen (Nf) below 3.0m	⊠	1361	● ▲	ML	▥	■ ◆	3.0
4.0								4.0
5.0		⊠	1362	● ▲	ML	▥	■ ◆	5.0
	END HOLE @ 5.0m							
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 561-1712
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1687+050 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	ORGANIC							0.0
	SILT & ORGANIC -frozen (Vx)							
1.0	SILTY SAND WITH GRAVEL TO SANDY SILT TO SILT (SM)-(ML) -brown -frozen (Nb) -grindy drilling	⊠	1355	● ▲	SM		■ ◆	1.0
2.0								2.0
3.0	-frozen (Vx) below 3.0m	⊠	1356	● ▲	SM		■ ◆	3.0
4.0		⊠	1357	● ▲	ML		■ ◆	4.0
5.0								5.0
		⊠	1358	● ▲	ML		◆	
6.0	END HOLE @ 5.7m Note: Test hole @ culvert inlet							6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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REVIEWED BY:	COMPLETE: 00/07/21
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 561–1711
ENGINEERING CAPITAL	KM 1664.5–1692.6	Project No: 092–202101–0363
MOBILE B40 L 6" AUGER	LOCATION: 1687+130 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
	SILTY SAND TO SILT WITH SAND (SM)–(ML)							
	–brown							
1.0	–frozen (Nb)	⊠	1350	● ▲	SM		■ ◆	1.0
	–some organic contamination							
	–smoother drilling below 1.2m							
2.0		⊠	1351	● ▲	ML		■ ◆	2.0
	SILTY SAND TO SILT (ML)							
	–brown							
3.0	–frozen (Nf)	⊠	1352	● ▲	SM		■ ◆	3.0
4.0	–frozen (Nb) below 4.0m	⊠	1353	● ▲	SM		■ ◆	4.0
5.0	–frozen (Vx) below 5.0m							5.0
		⊠	1354	● ▲	ML		◆	
	END HOLE @ 5.6m							
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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LOGGED BY: D.T	COMPLETION DEPTH: 5.6 m
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 561-1710
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1687+210 8M 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
	SANDY SILT TO SANDY SILT WITH GRAVEL TO SILTY SAND WITH GRAVEL (ML)-(SM) -brown -frozen (Nb) -grindy drilling below 1.0m	⊠	1346	● ▲	ML		■ ◆	
1.0								1.0
2.0		⊠	1347	● ▲	ML		■ ◆	2.0
3.0		⊠	1348	● ▲	SM		■ ◆	3.0
4.0								4.0
5.0	END HOLE 5.0m	⊠	1349	● ▲	SM		■ ◆	5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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LOGGED BY: D.T	COMPLETION DEPTH: 5.0 m
REVIEWED BY:	COMPLETE: 00/07/21
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 561-1709
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1687+250 10M 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
	SILT & ORGANIC -brown & black -wet	⊠	1342	● ▲	SM		■ ◆	1.0
2.0	SILTY SAND WITH GRAVEL TO SANDY SILT (SM)-(ML) -brown -frozen (Nb) -grindy drilling	⊠	1343	● ▲	SM		■ ◆	2.0
3.0		⊠	1344	● ▲	ML		■ ◆	3.0
4.0	-trace easier drilling below 4.5m							4.0
5.0	-moist to wet below 5.0m	⊠	1345	● ▲	ML		■ ◆	5.0
6.0	END HOLE @ 5.5m Note: H20 flowing out of hillside at 87+230 lt							6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 561-1708
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1687+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
	SILTY SAND WITH GRAVEL (SM) -brown -moist -grindy drilling	☒	1336	● ▲	SM		■ ◆	1.0
	SILT (ML) -brown -moist -smooth drilling -trace +5mm material	☒	1337	● ▲	ML		◆	2.0
3.0	-no +5mm material below 3.0m	☒	1338	● ▲	ML		◆	3.0
4.0	-frozen (Vr) below 4.0m							4.0
5.0		☒	1339	● ▲	ML		◆	5.0
6.0	-grey below 6.0m -moist below 6.0m -very smooth quiet drilling easy drilling							6.0
7.0		☒	1340	● ▲	ML		◆	7.0
8.0								8.0
9.0								9.0
		☒	1341	● ▲	ML		■ ◆	
10.0	END HOLE @ 9.8m							10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 561-1707
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1687+400 25M 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
	SILTY SAND WITH GRAVEL (SM) -brown -frozen (Nb) -grindy drilling							
1.0		AUGER	1331		SM			1.0
2.0		AUGER	1332		SM			2.0
3.0		AUGER	1333		SM			3.0
	SILT (ML) -brown -frozen (Nb) -hard drilling,trace grindy below 3.7m -trace +5mm material below 4.0m							
4.0								4.0
5.0		AUGER	1334		ML			5.0
	-hard smooth quiet drilling below 5.4m							
6.0								6.0
	-easy smooth quiet drilling below 6.5m -grey -moist to wet below 6.5m							
7.0								7.0
8.0								8.0
9.0								9.0
		AUGER	1335		ML			
10.0	END HOLE @ 9.8m							10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 561-1706
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1687+450 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	ORGANIC							0.0
	SILTY SAND WITH GRAVEL TO SANDY SILT WITH GRAVEL (SM)-(ML)							
	-brown							
1.0	-wet 0 to .6m	⊠	1325	● ▲	SM		■ ◆	1.0
	-frozen (Vx) below .6m							
2.0	-frozen (Nb) below 2.0m	⊠	1326	● ▲	ML		■ ◆	2.0
	SILT WITH SAND TO SILT (ML)							
3.0	-hard smooth drilling - trace grindy	⊠	1327	● ▲	ML		◆	3.0
4.0								4.0
5.0		⊠	1328	● ▲	ML		◆	5.0
6.0	-dark grey below 6.0m							6.0
	-moist below 6.0m							
		⊠	1329	● ▲	ML		◆	
7.0								7.0
8.0	-some grindy drilling below 8.2m							8.0
	-smooth drilling below 8.7m							
9.0								9.0
		⊠	1330	● ▲	ML		■ ◆	
10.0	END HOLE @ 9.8m							10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560–1700
ENGINEERING CAPITAL	KM 1664.5–1692.6 A/H	Project No: 092–202101–0363
B40–L MOBILE DRILL 6"AUGER	LOCATION: 1687+500 25M 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
	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)–(GM)							
	–brown	⊠	1298	● ▲	SM		■ ◆	
1.0	–frozen (Nf)							1.0
2.0		⊠	1299	● ▲	SM		■ ◆	2.0
3.0		⊠	1300	● ▲	SM		■ ◆	3.0
4.0	–more +5mm material below 4.0m							4.0
5.0		⊠	1301	● ▲	GM		◆ ■	5.0
6.0	SILTY SAND WITH GRAVEL (SM)							6.0
	–trace +5mm material							
	–brown							
7.0	–frozen (Nf)	⊠	1302	● ▲	SM		■ ◆	7.0
	END HOLE @ 7.0m							
	Note: test hole @ culvert inlet – flowing water 2m upchain							
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1699
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1687+550 25M 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
	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (SM)-(GM)-(SM)							
1.0	-brown	⊠	1293	● ▲	SM		■ ◆	1.0
	-frozen (Nf)							
2.0	-grindy drilling below 0.7m	⊠	1294	● ▲	SM		■ ◆	2.0
3.0		⊠	1295	● ▲	GM		◆ ■	3.0
4.0								4.0
5.0		⊠	1296	● ▲	SM		■	5.0
6.0								6.0
7.0		⊠	1297	● ▲	SM		■ ◆	7.0
	END HOLE @ 7.0m							
	Note: test hole @ culvert inlet							
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1698
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1687+600 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	ORGANIC							0.0
	SANDY SILT (ML) -brown -frozen (Vr)	⊠	1288	● ▲	ML		■ ◆	
1.0								1.0
	SILTY SAND WITH GRAVEL (SM) -brown -frozen (Nf)	⊠	1289	● ▲	SM		■ ◆	
2.0								2.0
3.0		⊠	1290	● ▲	SM		■ ◆	3.0
	-very hard slow jumpy grindy drilling @ 3.4m							
4.0								4.0
5.0		⊠	1291	● ▲	SM		■ ◆	5.0
6.0	-easier drilling @ 6.0m -less +5mm material below 6.0m							6.0
7.0		⊠	1292	● ▲	SM		■ ◆	7.0
	END HOLE @ 7.0m							
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 561-1701
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1687+625 30M LT	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				
	SILT (ML) -brown -frozen (Vr) -grindy drilling	AUGER	1303	ML	
	SILTY GRAVEL WITH SAND TO SILTY GRAVEL SAND WITH GRAVEL (GM)-(SM) -some organic contamination to 2m -hard jumpy gindy drilling 1.2m to 1.8m -refusal @ 1.8m moved 1.5m to centreline -more +5mm material below 2.0m	AUGER	1304	GM	
		AUGER	1305	SM	
		AUGER	1306	SM	
	SILTY SAND TO SANDY SILT (SM)-(ML) -trace easier drilling -less +5mm material -hard smooth drilling	AUGER	1307	SM	
		AUGER	1308	ML	
	END HOLE @ 8.5m				

PERCENT FINES: 20 40 60 80
PLASTIC M.C. LIQUID: 20 40 60 80
PERCENT SAND: 20 40 60 80
PERCENT GRAVEL: 20 40 60 80

DEPTH (m): 0.0 1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1697
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1687+650 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	ORGANIC							0.0
	SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -brown -frozen (Nf) -no +5mm material between 0.2-1.0m -grindy drilling below 1.0Mm	☒	1284	● ▲	SM		■ ◆	
1.0								1.0
2.0								2.0
	-more sand below 2.5m	☒	1285	● ▲	SM		■ ◆	
3.0								3.0
4.0								4.0
	SANDY SILT TO SILT WITH SAND (ML)	☒	1286	● ▲	ML		■ ◆	
5.0								5.0
6.0	-grey below 6.0m -frozen (VX) below 6.0m							6.0
7.0	END HOLE @ 7.0m	☒	1287	● ▲	ML		■ ◆	7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1696
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1687+700 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
	SILTY SAND WITH GRAVEL TO SILTY SAND (SM)							
	-brown							
	-frozen (Nf)	⊠	1279	● ▲ ■ ◆	SM			1.0
2.0		⊠	1280	● ▲ ■ ◆	SM			2.0
	-frozen (Vx) below 2.8m							
3.0		⊠	1281	● ▲ ■ ◆	SM			3.0
	-frozen (Nf) below 4.0m							
5.0		⊠	1282	● ▲ ■ ◆	SM			5.0
	-trace +5mm material below 7.0m							
7.0		⊠	1283	● ▲ ■ ◆	SM			7.0
	END HOLE @ 7.0							
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 561-1702
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1687+725 35M 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
	SILTY SAND TO SILTY SAND WITH GRAVEL (SM) -brown -frozen (Nf)	⊠	1309	● ▲	SM		■ ◆	1.0
2.0		⊠	1310	● ▲	SM		■ ◆	2.0
	END HOLE @ 2.5m -refusal 2nd refusal @ 1.7m 3rd refusal @ 2.0m							3.0
4.0								4.0
5.0								5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1695
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1687+750 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	ORGANIC							0.0
	SILTY SAND WITH GRAVEL (SM)							
	-brown							
1.0	-frozen (Nf)	⊠	1274	● ▲	SM		■ ◆	1.0
	-easy grindy drilling							
2.0		⊠	1275	●	SM		■ ◆	2.0
3.0		⊠	1276	▲	SM		■ ◆	3.0
4.0	-less +5mm material below 4.0m							4.0
5.0		⊠	1277	▲	SM		■ ◆	5.0
6.0								6.0
7.0		⊠	1278	▲	SM		■ ◆	7.0
	END HOLE @ 7.0m							
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1694
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1687+800 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
	SILTY SAND TO SILTY SAND WITH GRAVEL (SM)							
	-brown							
	-saturated	⊠	1271	● ▲	SM		■ ◆	
1.0								1.0
		⊠	1272	● ▲	SM		■ ◆	
2.0	-free water @ 2.0m							2.0
	-sample # 1272 contaminated from H20 above							
	-difficult hard slow jumpy grindy drilling below 2.2m	⊠	1273	◆ ▲	SM		■ ◆	
3.0	-frozen (Nf) @ 3.0m							3.0
	-some H20 contamiation @ 3.0m							
	-refusal #1 @ 3.1m - moved 2m upchain							
4.0	-replaced broken/lost bit @ 3.7m							4.0
	-re-drill testhole 2m upchain							
	END HOLE @ 3.7m							
	-refusal							
5.0								5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 3.7 m
REVIEWED BY:	COMPLETE: 00/07/14
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 561-1703
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1687+835 35M 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
	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM)							
1.0	-brown -saturated -grindy drilling	⊠	1311	● ▲	SM		■ ◆	1.0
2.0	-wet below 2.0m	⊠	1312	● ▲	SM		■ ◆	2.0
3.0	-wet below 3.0m	⊠	1313	● ▲	GM		◆ ■	3.0
4.0	-hard jumpy grindy drilling below 4.0m							4.0
5.0		⊠	1314	● ▲	GM		◆ ■	5.0
6.0								6.0
7.0								7.0
8.0								8.0
	-smoother drilling below 8m							
9.0	-wet to saturated below 9.0m							9.0
		⊠	1315	● ▲	GM		◆ ■	
	END HOLE @ 9.5m							
10.0								10.0

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LOGGED BY: D.T	COMPLETION DEPTH: 9.5 m
REVIEWED BY:	COMPLETE: 00/07/17
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1693
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1687+850 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	ORGANIC							0.0
	SILT WITH SAND TO SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (ML)-(GM)-(SM)							
	-brown							
1.0	-frozen (Vr)	⊠	1266	● ▲	ML		■ ◆	1.0
	-grindy drilling							
	-very difficult slow jumpy drilling below 1.3m							
2.0	-frozen (Nf) below 1.3m	⊠	1267	● ▲	GM		◆ ■	2.0
	-refusal @ 2.5m - moved 2m upchain							
3.0		⊠	1268	● ▲	GM		◆ ■	3.0
4.0								4.0
5.0		⊠	1269	● ▲	SM		■ ◆	5.0
6.0	-smooth drilling @ 5.9m							6.0
	-saturated below 5.9m							
7.0		⊠	1270	● ▲	SM		■ ◆	7.0
	END HOLE @ 7.0m							
8.0								8.0
9.0								9.0
10.0								10.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 7.0 m
REVIEWED BY:	COMPLETE: 00/07/13
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1692
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1687+895 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	ORGANIC							0.0
	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM)							
1.0	-brown -wet	⊠	1261	● ▲	SM		■ ◆	1.0
2.0	-saturated below 1.8m	⊠	1262	● ▲	SM		■ ◆	2.0
3.0	-wet below 3.0m	⊠	1263	● ▲	SM		■ ◆	3.0
4.0	-saturated below 4.0m	⊠	1264	● ▲	SM		■ ◆	4.0
5.0	END HOLE @ 5.0m Note: testhole on old pipeline	⊠	1265	● ▲	GM		◆	5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 561-1704
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1687+925 30M 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
	SILTY SAND WITH GRAVEL (SM)							
	-brown							
1.0	-frozen (Vr)	☒	1316	● ▲	SM		■ ◆	1.0
2.0		☒	1317	● ▲	SM		■ ◆	2.0
3.0		☒	1318	● ▲	SM		■ ◆	3.0
4.0								4.0
5.0		☒	1319	● ▲	SM		■ ◆	5.0
6.0		☒	1320	● ▲	SM		◆	6.0
	END HOLE @ 6.0m							
	-refusal - rock dust on bit							
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1691
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1687+950 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	ORGANIC							0.0
	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -brown -frozen (Nf) -grindy drilling	⊠	1256	● ▲	GM		◆ ■	1.0
2.0		⊠	1257	● ▲	SM		■ ◆	2.0
3.0		⊠	1258	● ▲	SM		■ ◆	3.0
4.0								4.0
5.0		⊠	1259	● ▲	SM		■ ◆	5.0
6.0	SILTY SAND (SM) -damp to moist -easier drilling							6.0
7.0		⊠	1260	● ▲	SM		■ ◆	7.0
	END HOLE @ 7.6m -refusal							
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 561-1705
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: 1687+975 35M 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	ORGNANIC							0.0
	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (SM)-(GM)-(SM)							
1.0	-brown -frozen (Nb)	⊠	1321	▲ ●	SM		■ ◆	1.0
2.0	-very difficult slow grindy drilling	⊠	1322	● ▲	SM		■ ◆	2.0
3.0	-2nd refusal @ 3.3m -_moved 6m upchain -1st refusal @ 3.5m - moved 2m upchain	⊠	1323	● ▲	GM		◆ ■	3.0
4.0	-trace easier drilling @ 4.2m							4.0
5.0	END HOLE @ 5.0m -refusal #3	⊠	1324	● ▲	SM		■ ◆	5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1690
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+000 20 M LT	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 -frozen				
	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM)				
1.0	-brown -frozen(Nf) -refusal @ 1.4m - moved 2m downchain. -rock dust on bit	⊠	1250	GM	
2.0		⊠	1251	SM	
3.0		⊠	1252	SM	
4.0					
5.0		⊠	1253	SM	
6.0	-easier drilling below 5.6m -less +5mm material below 5.6m				
7.0		⊠	1254	SM	
8.0	-more difficult grindy drilling @ 7.2m				
9.0	-wet below 9.0				
10.0		⊠	1255	SM	
	END HOLE @ 10.0m				

▲ 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

DEPTH (m)

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1689
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+050 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	ORGANIC							0.0
	SILTY SAND WITH GRAVEL TO SILTY SAND TO SILTY SAND WITH GRAVEL (SM)							
	-brown							
1.0	-wet to saturated	⊠	1245	● ▲	SM		■ ◆	1.0
2.0	-moist below 2.0m							2.0
	-more grindy below 2.0m							
3.0		⊠	1246	● ▲	SM		■◆	3.0
4.0		⊠	1247	● ▲	SM		◆	4.0
	-1st refusal @ 4.0m -moved 3m downchain							
	-2nd refusal @ 3.0m - moved 3m down chain							
	-3rd refusal @ 3.8m -moved 2m downchain							
5.0	-rock dust on bit							5.0
	-damp to moist below 5.0m	⊠	1248	● ▲	SM		■ ◆	
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0	END HOLE @ 10.0m	⊠	1249	● ▲	SM		■ ◆	10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1688
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+100 3M 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
	SANDY SILT (ML) -brown -wet	AUGER	1241		ML			1.0
	SILTY SAND WITH GRAVEL (SM) -brown -moist -grindy drilling							2.0
3.0		AUGER	1242		SM			3.0
4.0	-refusal @ 4.0m - move 2m upchain							4.0
5.0	-smooth drilling @ 4.8M -grindy jumpy drilling below 5.2m	AUGER	1243		SM			5.0
6.0	-trace smoother drilling below 6.4m							6.0
7.0	-finer +5mm material below 7.4m							7.0
8.0		AUGER	1244		SM			8.0
	END HOLE @ 8.5m							
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1687
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+150 3M 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
	SILTY SAND TO SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -brown -moist to wet -grindy drilling	⊠	1236		SM			1.0
2.0								2.0
3.0		⊠	1237		SM			3.0
4.0	-more +5mm material below 4.0m							4.0
		⊠	1238		GM			5.0
	-damp to moist below 5.0m	⊠	1239		GM			6.0
7.0	SILTY SAND (SM) -brown -moist -trace +5mm material -smoother driling							7.0
8.0		⊠	1240		SM			8.0
	END HOLE @ 8.6m							9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1686
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+200 15M LT	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 -black -wet				
1.0	SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -brown -frozen (Nb) -grindy drilling	⊠	1233	SM	
2.0	-very hard jumpy grindy drilling below 1.9m -refusal @ 1.9 - moved 2m towards centreline	⊠	1234	SM	
3.0	-broke off lead auger - moved 2m towards centreline	⊠	1235	SM	
4.0	END HOLE @ 3.4m -refusal Note: Culvert Inlet				
5.0					
6.0					
7.0					
8.0					
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)

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1685
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+200 11M RT	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 -black -damp to moist					0.0
1.0	SILTY SAND WITH GRAVEL TO SANDY SILT (SM)-(ML) -brown -moist -grindy drilling	AUGER	1229	SM		1.0
2.0						2.0
3.0	-some +5mm material below 2.8m	AUGER	1230	SM		3.0
4.0	-moist to wet below 3.8m -more sand below 4.4m	AUGER	1231	SM		4.0
5.0	END HOLE @ 5.0m	AUGER	1232	ML		5.0
6.0						6.0
7.0						7.0
8.0						8.0
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

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1684
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+250 2M 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
	SILTY SAND WITH GRAVEL (SM)							
	-brown							
1.0	-moist	⊠	1223	● ▲	SM		■ ◆	1.0
2.0		⊠	1224	● ▲	SM		■ ◆	2.0
3.0	-damp to moist below 2.8m	⊠	1225	● ▲	SM		■ ◆	3.0
4.0	-more sand below 4.0m	⊠	1226	● ▲	SM		■ ◆	4.0
5.0	-damp below 5.0m	⊠	1227	● ▲	SM		■ ◆	5.0
6.0								6.0
7.0		⊠	1228	● ▲	SM		■ ◆	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: D.T.	COMPLETION DEPTH: 7.0 m
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1683
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+325 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	ORGANIC -wet							0.0
	SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -brown	⊠	1218	● ▲	SM		■ ◆	
1.0	-frozen (Nf) below .4m							1.0
2.0		⊠	1219	● ▲	SM		■ ◆	2.0
3.0		⊠	1220	● ▲	SM		◆	3.0
4.0		⊠	1221	● ▲	SM		■ ◆	4.0
	-hard slow jumpy drilling below 4.3m							
5.0	-moist to wet below 5.0m	⊠	1222	● ▲	SM		■ ◆	5.0
6.0	END HOLE @ 6.0m -refusal							6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1682
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+400 2M 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
	SILTY SAND WITH GRAVEL TO SILTY SAND TO SILTY SAND WITH GRAVEL (SM)							
1.0	-brown -moist	⊠	1212	● ▲	SM		■ ◆	1.0
	-wet below 1.3m							
2.0		⊠	1213	● ▲	SM		■ ◆	2.0
	-moist below 2.6m							
3.0		⊠	1214	● ▲	SM		■ ◆	3.0
4.0	-more +5mm material below 3.8m	⊠	1215	● ▲	SM		■ ◆	4.0
	▼ -wet below 4.4m							▼
5.0	-wet to saturated below 5.0m	⊠	1216	● ▲	SM		■ ◆	5.0
6.0	SILT WITH SAND (ML)							6.0
	-brown -moist							
7.0	-some sand & H20 contamination -smooth drilling	⊠	1217	● ▲	ML		■ ◆	7.0
	END HOLE @ 7.0m							
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1681
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+475 27M 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 -wet							0.0
	SILTY SAND WITH GRAVEL (SM) -brown -frozen (Nf) -harder drilling below .4m -very hard slow drilling below 1.1m -refusal @ 1.3m - moved 2m upchain	⊠	1209	● ▲	SM		■ ◆	
1.0								1.0
2.0	-lost sample # 1210 -some +5mm material below 2.5m	⊠	1210	●				2.0
3.0		⊠	1211	● ▲	SM		■ ◆	3.0
	END HOLE @ 3.5m -refusal							
4.0								4.0
5.0								5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1680
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+550 1M 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
	SILT WITH SAND TO SILTY SAND WITH GRAVEL TO SILT WITH SAND (ML)-(SM)-(ML)							
1.0	-brown -moist -some +5mm material	⊠	1202	● ▲	ML		■ ◆	1.0
2.0	-more sand @ 2.0m	⊠	1203	● ▲	SM		■ ◆	2.0
3.0	-less +5mm material below 3.0m	⊠	1204	● ▲	ML		■ ◆	3.0
4.0		⊠	1205	● ▲	ML		■ ◆	4.0
5.0		⊠	1206	● ▲	ML		■ ◆	5.0
6.0	-moist below 6.0m	⊠	1207	● ▲	ML		■ ◆	6.0
7.0	-moist to wet below 6.8m	⊠	1208	● ▲	ML		◆	7.0
	END HOLE @ 7.0m							
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1675
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+625 25M 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 -frozen							0.0
	SILTY SAND TO SILTY SAND WITH GRAVEL TO SILTY SAND TO SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -brown -frozen (Vx) -refusal @ 1.6m - moved 2m upchain	⊠	1182	● ▲	SM		■ ◆	
1.0								1.0
2.0	-very difficult hard slow grindy drilling below 2.0m	⊠	1183	● ▲	SM		■ ◆	2.0
3.0	-frozen (Nf) below 3.0m	⊠	1184	● ▲	SM		■ ◆	3.0
4.0		⊠	1185	● ▲	SM		■ ◆	4.0
5.0	-frozen (Vx) below 5.0m	⊠	1186	● ▲	SM		■ ◆	5.0
	-smooth hard drilling below 5.5m -frozen (Nf) below 5.5m							
6.0								6.0
7.0		⊠	1187	● ▲	SM		■ ◆	7.0
	END HOLE @ 7.0m							
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1676
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+650 16M 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
	SILTY SAND WITH GRAVEL (SM) -brown -moist	⊠	1188	● ▲	SM		■ ◆	
1.0								1.0
2.0	SILTY SAND (SM) -brown -damp							2.0
3.0	-smoother drilling	⊠	1189	● ▲	SM		◆	3.0
4.0	SANDY SILT (ML) -brown -damp							4.0
5.0	END HOLE @ 5.0m	⊠	1190	● ▲	ML		■ ◆	5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1674
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+700 7M 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
	SILTY SAND TO SILTY SAND WITH GRAVEL TO SILTY SAND (SM)							
	-brown	⊠	1176	● ▲	SM		■ ◆	
1.0	-moist to wet							1.0
	-damp to moist elow 1.8m	⊠	1177	● ▲	SM		■ ◆	
2.0								2.0
		⊠	1178	● ▲	SM		■ ◆	
3.0								3.0
		⊠	1179	● ▲	SM		■ ◆	
4.0								4.0
		⊠	1180	● ▲	SM		■ ◆	
5.0								5.0
	-trace easier drilling below 5.9m							
6.0	-more sand below 5.9m							6.0
		⊠	1181	● ▲	SM		■ ◆	
7.0	END HOLE @ 7.0m							7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1677
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+750 12M 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
	SILTY SAND TO SILTY SAND WITH GRAVEL (SM)							
	-brown							
	-moist							
1.0	-grindy drilling below.4m							1.0
		☒	1191	● ▲	SM		■ ◆	
2.0								2.0
	-more rock below 2.5m							
3.0		☒	1192	● ▲	SM		■ ◆	3.0
4.0								4.0
		☒	1193	● ▲	SM		■ ◆	
5.0	END HOLE @ 5.0m							5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1678
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+750 18M 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 & ROAD DEBRIS -damp							0.0
	SILTY SAND TO SILTY SAND WITH GRAVEL (SM) -brown -damp -some +5mm material	⊠	1194	● ▲	SM		■ ◆	1.0
2.0		⊠	1195	● ▲	SM		■ ◆	2.0
3.0		⊠	1196	● ▲	SM		■ ◆	3.0
4.0								4.0
5.0		⊠	1197	● ▲	SM		■ ◆	5.0
	END HOLE @ 5.0m							
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1673
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+750 30M 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
	SILTY SAND WITH GRAVEL TO SILTY SAND TO SILTY SAND WITH GRAVEL TO SILTY SAND (SM)							
	-brown	⊠	1171		SM			
1.0	-frozen (Vx) below .4m							1.0
	-replace lost bit @ 1.4m							
	-moved 2m downchain							
2.0	-frozen (Nf) below 2.0m	⊠	1172		SM			2.0
3.0		⊠	1173		SM			3.0
	-very slow difficult hard slow grindy drilling below 3.2m							
4.0	-replaced lost bit @ 3.9m	⊠	1174		SM			4.0
	-moved 7m downchain							
5.0	-moist to wet below 5.0m	⊠	1175		SM			5.0
	END HOLE @ 5.4m							
	-refusal							
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1672
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+800 10M 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
	SILTY SAND TO SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (SM)-(GM)-(SM)							
	-brown							
1.0	-moist	⊠	1165	● ▲	SM		■ ◆	1.0
2.0		⊠	1166	● ▲	SM		■ ◆	2.0
3.0	-damp to moist below 2.8m	⊠	1167	● ▲	GM		◆ ■	3.0
4.0	-damp below 3.8m -more sand below 3.8m	⊠	1168	● ▲	GM		◆ ■	4.0
5.0		⊠	1169	● ▲	GM		◆ ■	5.0
6.0	-very difficult hard slow grindy drilling below 5.6m							6.0
7.0		⊠	1170	● ▲	SM		■ ◆	7.0
	END HOLE @ 7.0m							
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1671
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+850 25M 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 SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -brown -frozen (Nf)							0.0
1.0	-grindy drilling	⊠	1159		SM			1.0
2.0	-moist below 1.8m -more sand below 1.8m	⊠	1160		SM			2.0
3.0	-less sand below 2.8m	⊠	1161		SM			3.0
4.0		⊠	1162		SM			4.0
	-very difficult hard slow grindy drilling below 4.4m							
5.0	-replace lost bit @ 5.0m - moved 2m down chain	⊠	1163		SM			5.0
6.0								6.0
7.0	END HOLE @ 7.0m	⊠	1164		ML			7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1670
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+900 08M 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
	SILTY SAND TO SILTY SAND WITH GRAVEL TO SILTY SAND TO SILTY SAND WITH GRAVEL (SM)							
	-brown	⊠	1153	● ▲	SM		■ ◆	
1.0	-wet							1.0
	-grindy drilling							
	-replaced bit @ .6m							
	-moist below 1.8m	⊠	1154	● ▲	SM		■ ◆	
2.0								2.0
		⊠	1155	● ▲	SM		■ ◆	
3.0								3.0
		⊠	1156	● ▲	SM		■ ◆	
4.0								4.0
		⊠	1157	● ▲	SM		■ ◆	
5.0	-very difficult hard slow grindy drilling below 5.0m							5.0
6.0	-damp below 6.0m							6.0
		⊠	1158	● ▲	SM		■ ◆	
7.0	END HOLE @ 7.0m							7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 560-1679
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+950 18M 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
	SILTY SAND (SM) -brown -damp -some +5mm material	⊠	1198	● ▲	SM		■ ◆	
1.0								1.0
	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND TO SILTY SAND (SM)-(GM)-(SM) -brown -damp	⊠	1199	● ▲	SM		■ ◆	
2.0								2.0
3.0		⊠	1200	● ▲	GM		◆ ■	3.0
4.0								4.0
5.0		⊠	1201	● ▲	SM		■ ◆	5.0
	END HOLE @ 5.0m							
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1669
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1688+950 28M 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
	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL TO SANDY SILT (SM)-(GM)-(SM)-(GM)-(SM)-(ML)							
1.0	-brown -frozen (Nf) to 1.0m	⊠	1147	● ▲	SM		■ ◆	1.0
2.0	-moist to wet below 1.0m -wet to sat below 2.0m	⊠	1148	● ▲	GM		■ ◆	2.0
3.0	-moist below 2.8m	⊠	1149	● ▲	SM		■ ◆	3.0
4.0	-refusal @ 3.3m - moved 2m upchain	⊠	1150	● ▲	GM		●	4.0
5.0	-very difficult slow grindy drilling below 5.2m	⊠	1151	● ▲	SM		■ ◆	5.0
6.0	-damp below 6.0m							6.0
		⊠	1152	● ▲	ML		■ ◆	
7.0	END HOLE @ 6.7m -refusal							7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1668
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1689+000 10M 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
	SILTY SAND TO SILTY SAND WITH GRAVEL (SM)							
	-brown							
	-moist to wet							
1.0								1.0
		⊠	1144	● ▲	SM		■ ◆	
2.0								2.0
	-wet to saturated below 2.5m							
3.0		⊠	1145	● ▲	SM		■ ◆	3.0
4.0	-moist below 4.0m							4.0
		⊠	1146	● ▲	SM		■ ◆	
5.0	END HOLE @ 4.9m							5.0
	-refusal							
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1667
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1689+050 28M 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
	SANDY SILT TO SILTY SAND WITH GRAVEL (ML)-(SM)							
	-brown	⊠	1140	● ▲	ML		■ ◆	
1.0	-frozen (Vx)							1.0
	-frozen (Nf) below 1.6m	⊠	1141	● ▲	SM		■ ◆	
2.0								2.0
	-moist below 2.5m	⊠	1142	● ▲	SM		■ ◆	
3.0								3.0
	-very difficult hard slow grindy drilling below 3.2m							
4.0	-damp to moist below 3.8m	⊠	1143	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.5m							
5.0	-refusal							5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1666
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1689+125 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	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -brown -damp -grindy drilling	⊠	1136	● ▲	SW-SM	⋰	■ ◆	0.0
1.0								1.0
	SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -brown -moist to wet -trace easier drilling							
2.0								2.0
3.0		⊠	1137	● ▲	SM	▤	■ ◆	3.0
4.0								4.0
5.0		⊠	1138	● ▲	SM	▤	■ ◆	5.0
6.0	-more sand below 6.0m -moist below 6.0m							6.0
7.0		⊠	1139	● ▲	SM	▤	■ ◆	7.0
	END HOLE @ 7.0m							
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1665
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1689+200 16M 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
	SILT -trace sand -brown -moist							
1.0								1.0
	SANDY GRAVEL -brown -moist -grindy drilling	⊠	1133	● ▲	SM		■ ◆	
2.0								2.0
	SILTY SAND TO SILTY GRAVEL WITH SAND TO SILTY SAND (SM)-(GM)-(SM) -brown -moist -trace easier drilling -more difficult grindy drilling below 2.5m	⊠	1134	● ▲	GM		◆ ■	
3.0								3.0
4.0								4.0
5.0	END HOLE @ 5.0m -refusal	⊠	1135	● ▲	SM		■ ◆	5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1664
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1689+275 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	ORGANIC							0.0
	SILT -some organic -brown -moist							
1.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -brown -damp -grindy drilling	⊠	1130	● ▲	SW-SM		■ ◆	1.0
2.0								2.0
	SILTY SAND TO SILTY SAND WITH GRAVEL (SM) -brown -moist -trace easier drilling	⊠	1131	● ▲	SM		■ ◆	
3.0								3.0
4.0	-damp to moist below 4.0m							4.0
5.0	END HOLE @ 5.0m	⊠	1132	● ▲	SM		■ ◆	5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1663
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1689+350 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	ORGANIC -brown							0.0
1.0	ORGANIC & SILT -brown & black -moist							1.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown	⊠	1127	● ▲	GP-GM		◆ ■	
2.0	-damp -some organic contamination							2.0
	SILTY SAND TO SILTY SAND WITH GRAVEL (SM) -brown -moist	⊠	1128	● ▲	SM		■ ◆	
3.0	-trace smoother drilling							3.0
4.0	-more sand below 4.0m							4.0
5.0		⊠	1129	● ▲	SM		■ ◆	5.0
	END HOLE @ 5.0m							
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1662
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1689+425 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	GRAVEL ROAD DEBRIS							0.0
	ORGANIC							
	ORGANIC & SILT							
1.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)							1.0
	-brown	⊠	1124	◆▲	GP-GM		◆ ■	
	-damp							
	-grindy drilling							
2.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM)							2.0
	-brown							
	-moist-wet	⊠	1125	● ▲	SM		■ ◆	
3.0	-trace smooth drilling							3.0
	-more rock below 3.4m							
	-harder grindy drilling below 3.4m							
4.0	-damp to moist below 4.0m							4.0
		⊠	1126	● ▲	GM		◆ ■	
5.0	END HOLE @ 5.0m							5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1661
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1689+500 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
	ORGANIC							
1.0	SILTY GRAVEL WITH SAND (GM) -brown -damp -grindy drilling	⊠	1122	● ▲	GM		◆ ■	1.0
2.0								2.0
	SILTY SAND WITH GRAVEL (SM) -brown -moist	⊠	1123	● ▲	SM		■ ◆	
3.0								3.0
4.0	-very hard slow grindy drilling below 4.7m -broke off lead auger.							4.0
5.0	END HOLE @ 5.0m							5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1660
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1689+600 10M 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 (SM) -brown -moist -grindy drilling							0.0
1.0								1.0
		⊠	1119	● ▲	SM		■ ◆	
2.0								2.0
3.0		⊠	1120	● ▲	SM		■ ◆	3.0
4.0								4.0
5.0		⊠	1121	● ▲	SM		■ ◆	5.0
	END HOLE @ 5.0m							
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1659
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1689+700 05M 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 SAND WITH GRAVEL (SW-SM)-(SM) -brown -damp -grindy drilling -smoother drilling	⊠	1116	● ▲	SW-SM		■ ◆	0.0
1.0								1.0
2.0								2.0
3.0		⊠	1117	● ▲	SM		■ ◆	3.0
4.0								4.0
5.0	END HOLE @ 5.0m	⊠	1118	● ▲	SM		■ ◆	5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1658
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1689+800 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 TO SILTY SAND WITH GRAVEL (SW-SM)-(GP-GM)-(SM)							
1.0	-brown							1.0
	-damp	⊠	1113	● ▲	SW-SM		■ ◆	
	-grindy drilling							
2.0								2.0
3.0		⊠	1114	● ▲	GP-GM		◆ ■	3.0
4.0								4.0
5.0		⊠	1115	● ▲	SM		■ ◆	5.0
	END HOLE @ 5.0m							
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559–1657
ENGINEERING CAPITAL	KM 1664.5–1692.6 A/H	Project No: 092–202101–0363
B40–L MOBILE DRILL 6"AUGER	LOCATION: 1689+900 9M 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 –damp –grindy drilling							0.0
1.0								1.0
		⊠	1110	● ▲	GM		◆ ■	
2.0	SILTY SAND WITH GRAVEL (SM) –brown –damp							2.0
3.0		⊠	1111	● ▲	SM		■ ◆	3.0
	–very hard slow grindy drilling below 3.4m							
4.0	–dense below 4.0m							4.0
5.0	END HOLE @ 5.0m	⊠	1112	● ▲	SM		■ ◆	5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1656
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1690+000 7M 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 SAND WITH GRAVEL (SW-SM)-(SM)							0.0
	-brown							
	-damp							
1.0	-grindy drilling							1.0
		☒	1107	● ▲	SW-SM		■ ◆	
2.0								2.0
		☒	1108	● ▲	SM		■ ◆	
3.0								3.0
4.0								4.0
	-more +5mm material below 4.5m							
		☒	1109	● ▲	SM		■ ◆	
5.0	END HOLE @ 5.0m							5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1655
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1690+100 05M 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
	ORGANIC & SILT							
	SILTY SAND WITH GRAVEL TO SILTY SAND (SM)							
	-brown							
1.0	-damp	⊠	1104	● ▲	SM		■ ◆	1.0
	-grindy drilling							
	-easier drilling below 1.4m							
2.0								2.0
3.0		⊠	1105	● ▲	SM		■ ◆	3.0
	-very hard slow grindy drilling below 3.5m							
4.0	-dense material below 3.5							4.0
5.0		⊠	1106	● ▲	SM		■ ◆	5.0
	END HOLE @ 5.0m							
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1654
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1690+200 07M 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 TO SANDY SILT (SM)-(ML) -brown -damp -grindy drilling							0.0
1.0		⊠	1101	● ▲	SM		■ ◆	1.0
2.0								2.0
3.0		⊠	1102	● ▲	SM		■ ◆	3.0
4.0	-more grindy drilling below 3.6m -very slow hard grindy drilling below 4.2m							4.0
5.0		⊠	1103	● ▲	ML		■ ◆	5.0
	END HOLE @ 5.0m -refusal							
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1653
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1690+300 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	ORGANIC							0.0
	SILT & ORGANIC							
1.0	SILTY SAND WITH GRAVEL TO SANDY SILT (SM)-(ML)							1.0
	-brown							
	-moist	⊠	1098	● ▲	SM		■ ◆	
2.0	-grindy drilling							2.0
3.0		⊠	1099	● ▲	SM		■ ◆	3.0
4.0								4.0
5.0		⊠	1100	● ▲	ML		■ ◆	5.0
	END HOLE @ 5.0m							
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1652
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1690+400 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	SANDY SILTY GRAVEL -(old Alaska Hwy road bed) -grindy drilling							0.0
1.0	ORGANIC -smooth drilling							1.0
	SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -brown -damp -some grindy drilling	⊠	1095	● ▲	SM		■ ◆	
2.0	-less +5mm material below 2.6m							2.0
3.0		⊠	1096	● ▲	SM		■ ◆	3.0
4.0								4.0
5.0		⊠	1097	● ▲	SM		■ ◆	5.0
	END HOLE @ 5.0m							
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1651
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1690+500 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
	SILT & ORGANIC							
	SILTY GRAVEL WITH SAND TO SANDY SILT (GM)-(ML)							
1.0	-brown							1.0
	-moist	⊠	1092	● ▲	GM		◆ ■	
	-grindy drilling							
2.0								2.0
	-more +5mm material below 2.5m							
3.0		⊠	1093	● ▲	GM		◆ ■	3.0
4.0								4.0
5.0		⊠	1094	● ▲	ML		■ ◆	5.0
	END HOLE @ 5.0m							
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1650
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1690+575 25M LT	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				
	SANDY GRAVELLY SILT -brown -moist -grindy drilling				
1.0					
	SILTY GRAVEL WITH SAND (GM) -brown -moist -harder grindy drilling	☒	1088	GM	
2.0					
	SILTY SAND WITH GRAVEL TO SANDY SILT TO SILTY SAND WITH GRAVEL (SM)-(ML)-(SM) -brown -moist -easier drilling -damp below 3.4m	☒	1089	SM	
3.0					
		☒	1090	ML	
4.0					
5.0	-more dense material below 5.0m				
6.0					
7.0		☒	1091	SM	
	END HOLE @ 7.0m Note: 0.5m surface boulders in this area.				
8.0					
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)

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 559-1649
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1690+625 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	SANDY GRAVEL -some silt -grindy drilling							0.0
1.0	SANDY SILT TO SILTY GRAVEL WITH SAND (ML)-(GM) -brown -moist -some +5mm material -smoother drilling	⊠	1085	● ▲	ML	▥	■ ◆	1.0
2.0	-harder drilling below 2.5m -damp below 2.5m -dense below 2.5m							2.0
3.0		⊠	1086	● ▲	ML	▥	■ ◆	3.0
4.0								4.0
5.0	END HOLE @ 5.0m	⊠	1087	● ▲	GM	▥	◆ ■	5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1648
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: Y92-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1690+675 25M 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 & SILT							0.0
	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -brown -moist -grindy drilling	⊠	1080	● ▲	SW-SM		■ ◆	
1.0								1.0
2.0	SILTY SAND TO SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -brown -moist -some +5mm material -easier drilling	⊠	1081	● ▲	SM		■ ◆	2.0
3.0	-sample # 1081 & 1082 have some course sand contamination	⊠	1082	● ▲	SM		■ ◆	3.0
4.0	-hard slow drilling - less grindy below 3.7m -more rock below 3.7m	⊠	1083	● ▲	SM		■ ◆	4.0
5.0								5.0
6.0	-more dense below 6.0m	⊠	1084	● ▲	SM		■ ◆	6.0
	END HOLE @ 6.7m							
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1647
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: Y92-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1690+725 19M 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
	SILT							
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -damp -grindy drilling	⊠	1077	●▲	GP-GM		◆ ■	
1.0								1.0
	SANDY SILT WITH GRAVEL (ML) -brown -moist -easier drilling	⊠	1078	● ▲	ML		■ ◆	
2.0								2.0
3.0	-more rock below 3.0m							3.0
	SILTY GRAVEL WITH SAND (GM) -brown -moist -very hard slow grindy drilling	⊠	1079	● ▲	GM		■	
4.0	END HOLE @ 4.0m -refusal							4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1646
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: Y92-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1690+825 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
	SILT -brown -moist							
1.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -damp -maximum 75mm material -grindy drilling	⊠	1074	● ▲	GP-GM	▨	◆ ■	1.0
2.0								2.0
3.0		⊠	1075	● ▲	GP-GM	▨	◆ ■	3.0
4.0								4.0
		⊠	1076	● ▲	GP-GM	▨	◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1645
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: Y92-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1690+925 10M 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)-(SW-SM) -brown -damp -grindy drilling							0.0
1.0		⊠	1071	● ▲	GP-GM		◆ ■	1.0
2.0	-more rock below 2.5m							2.0
3.0		⊠	1072	● ▲	GP-GM		◆ ■	3.0
4.0	-wet below 4.0m							4.0
		⊠	1073	● ▲	SW-SM		◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1644
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: Y92-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1691+025 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 & SILT -with +5mm material -brown & black							0.0
1.0	SILTY GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GM)-(GP-GM) -brown -damp -grindy drilling	⊠	1068	● ▲	GM		●	1.0
2.0								2.0
3.0		⊠	1069	● ▲	GM		●	3.0
	-more rock below 3.5m -diffucult hard slow grindy drilling below 3.5m							
4.0		⊠	1070	● ▲	GP-GM		◆ ■	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1643
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: Y92-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1691+125 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 & SILT -brown & black -moist							0.0
1.0	SILTY SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SILT & SAND TO SILTY SAND WITH GRAVEL (SM)-(GP-GM)-(SM) -brown -damp -maximum 75mm material -grindy drilling -refusal @ 1.1m - moved 2m downchain	⊠	1065	● ▲	SM		■ ◆	1.0
2.0								2.0
3.0		⊠	1066	● ▲	GP-GM		■	3.0
4.0	-moist below 4.0m							4.0
		⊠	1067	● ▲	SM		■ ◆	
5.0	END HOLE @ 4.7m							5.0
6.0								6.0

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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1642
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: Y92-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1691+225 08M 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 -damp -grindy drilling							0.0
1.0		⊠	1061	● ▲	GM		◆ ■	1.0
2.0	SILTY SAND WITH GRAVEL (ML) -brown -damp -some +5mm material	⊠	1062	● ▲	SM		■ ◆	2.0
3.0	SANDY SILT TO SILTY SAND WITH GRAVEL (ML)-(SM) -brown -moist -some +5mm material	⊠	1063	● ▲	ML		■ ◆	3.0
4.0	-more +5mm material below 4.0m	⊠	1064	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/30
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1641
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: Y92-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1691+325 10M 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 -brown & black -moist							0.0
1.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -damp -maximum 50mm material -grindy drilling	⊠	1058	● ▲	GP-GM		●	1.0
2.0	SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -brown -moist							2.0
3.0		⊠	1059	● ▲	SM		■ ◆	3.0
4.0								4.0
		⊠	1060	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/30
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SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 9	TEST HOLE NO: 558-1640
ENGINEERING CAPITAL	KM 1664.5-1692.6 A/H	Project No: 092-202101-0363
B40-L MOBILE DRILL 6"AUGER	LOCATION: 1691+425 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 -some silt -wet							0.0
1.0	SILTY SAND WITH GRAVEL (SM) -brown -saturated -grindy drilling	⊠	1055	●▲	SM		■◆	1.0
2.0								2.0
3.0		⊠	1056	● ▲	SM		■ ◆	3.0
4.0	-frozen (Nf) below 4.0m -harder drilling below 4.3m	⊠	1057	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/30
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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

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LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/30
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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	⊠	1050	▲	SW-SM		■ ◆	2.0
3.0								3.0
4.0	SILTY SAND WITH GRAVEL (SM) -brown -frozen (Nf)	⊠	1051	● ▲	SM		■ ◆	4.0
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
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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

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REVIEWED BY:	COMPLETE: 00/06/29
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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

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	REVIEWED BY:	COMPLETE: 00/06/29
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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

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LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/29
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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								1.0
		⊠	1035	● ▲	GP-GM		◆ ■	
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

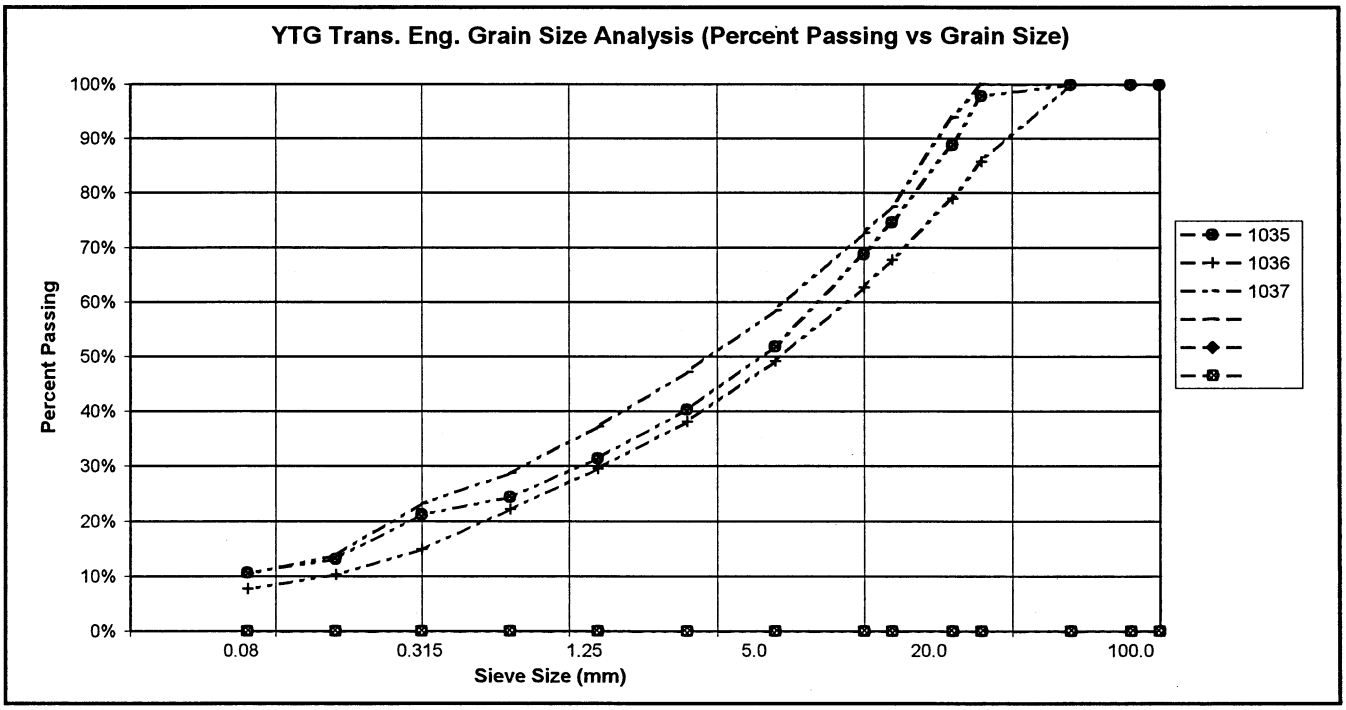
Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/29
	Fig. No:	Page 1 of 1

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2000 CENTRELINE TESTING (cont'd)
1683+950 to 1691+875
ALASKA HIGHWAY

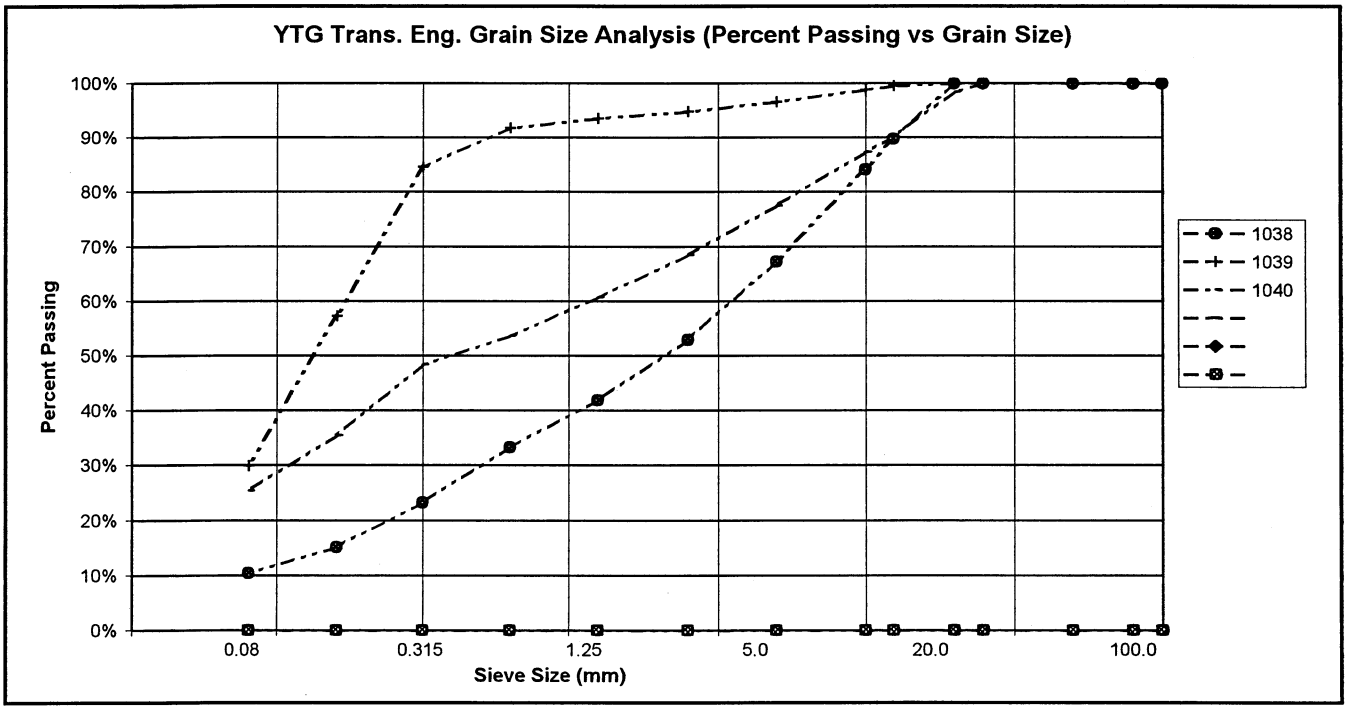
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CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1691+875 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/29

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)			



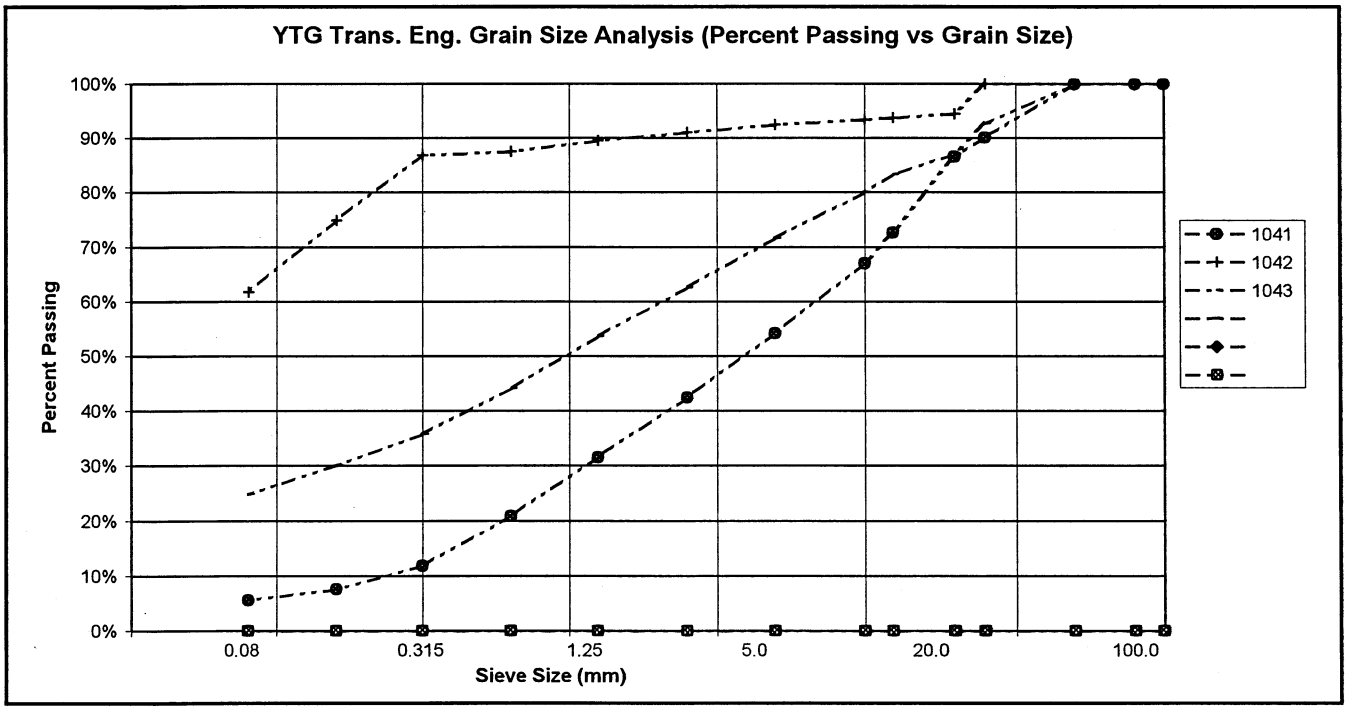
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CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1691+775 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/29

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)			



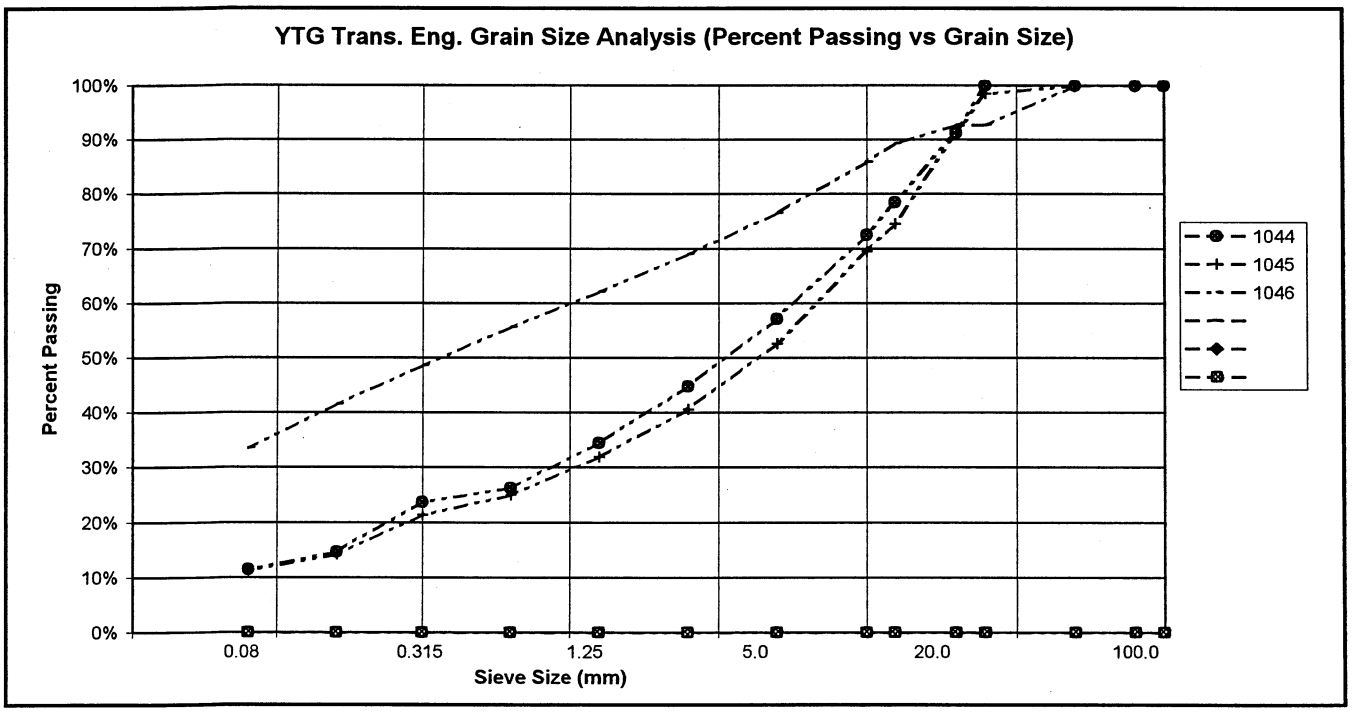
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CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1691+675 11M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/29

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)			



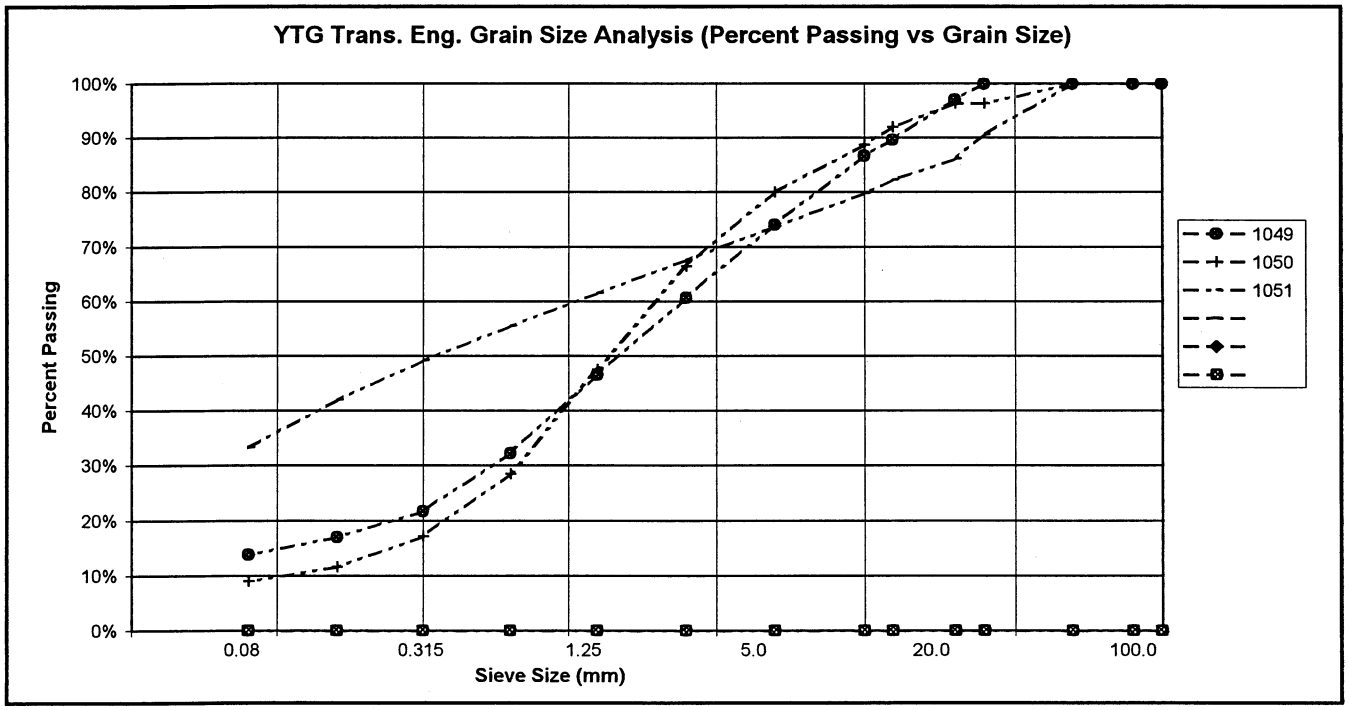
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CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1691+600 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/29

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)			



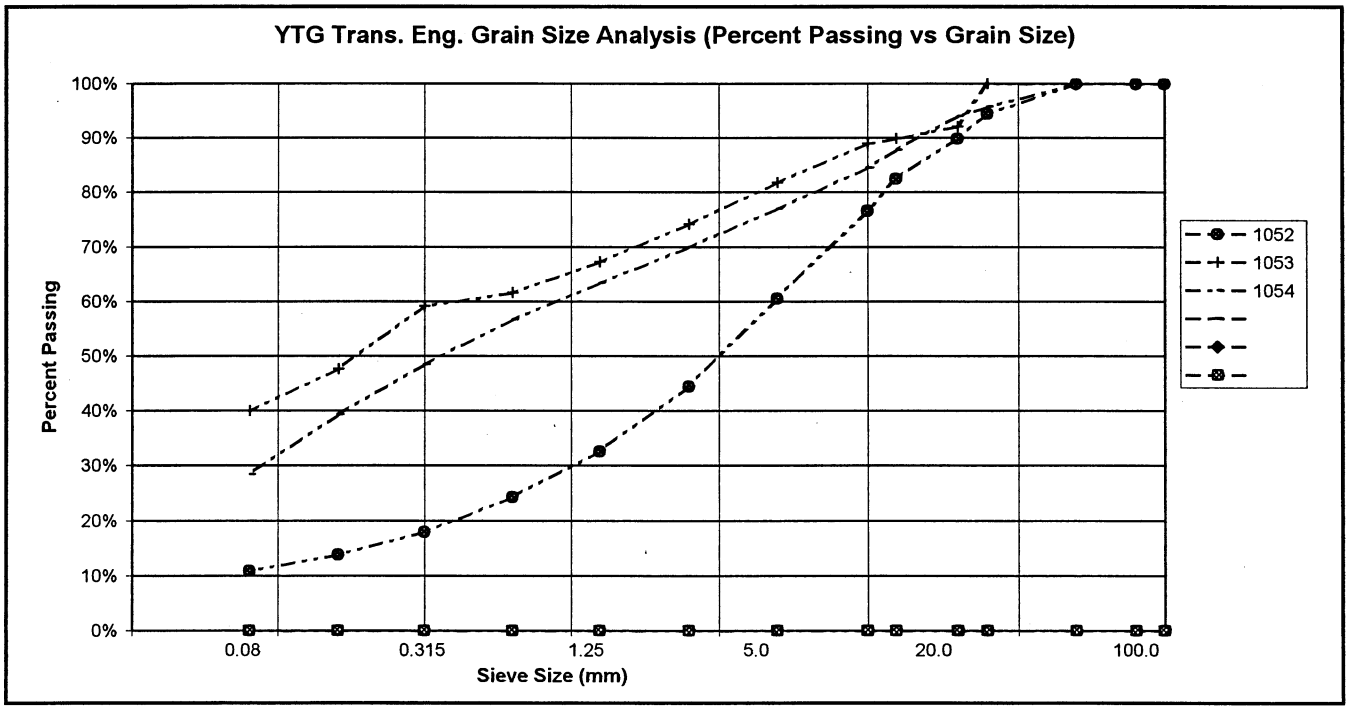
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CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1691+595 20M RT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/29

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)			



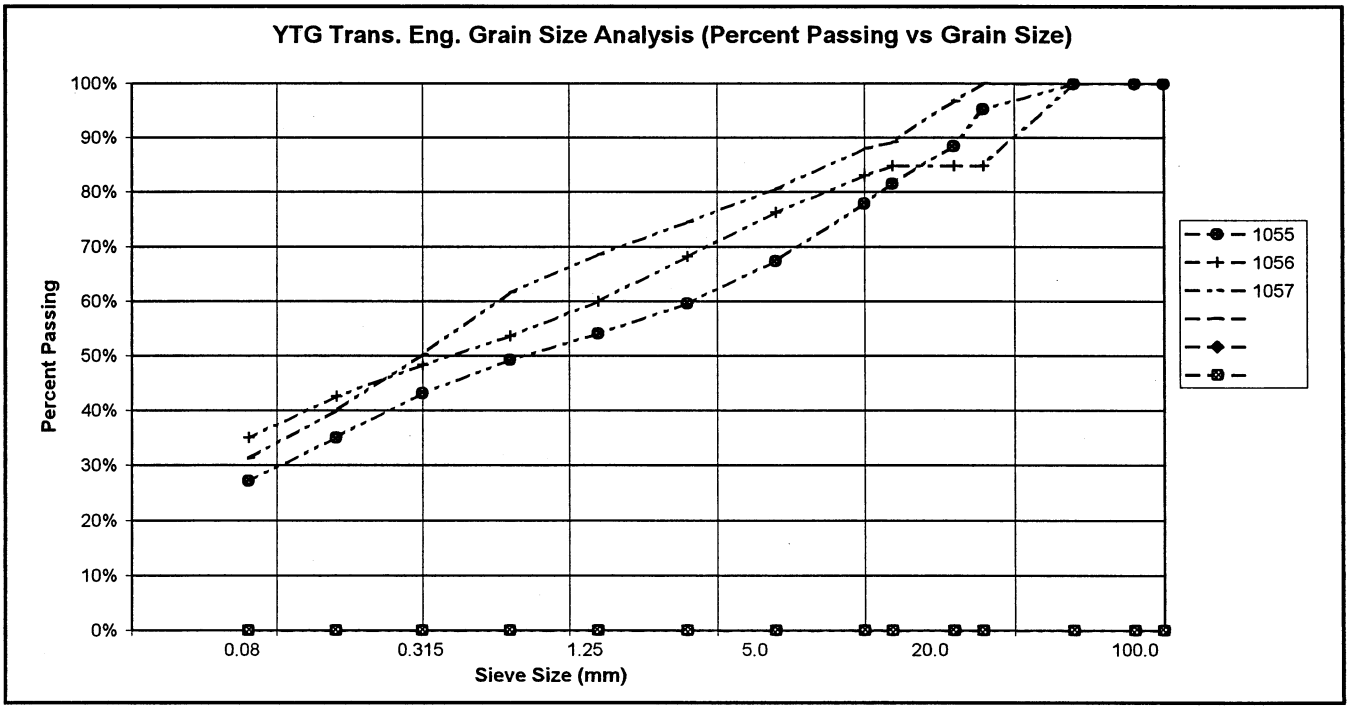
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1639
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1691+525 6M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/30

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)			



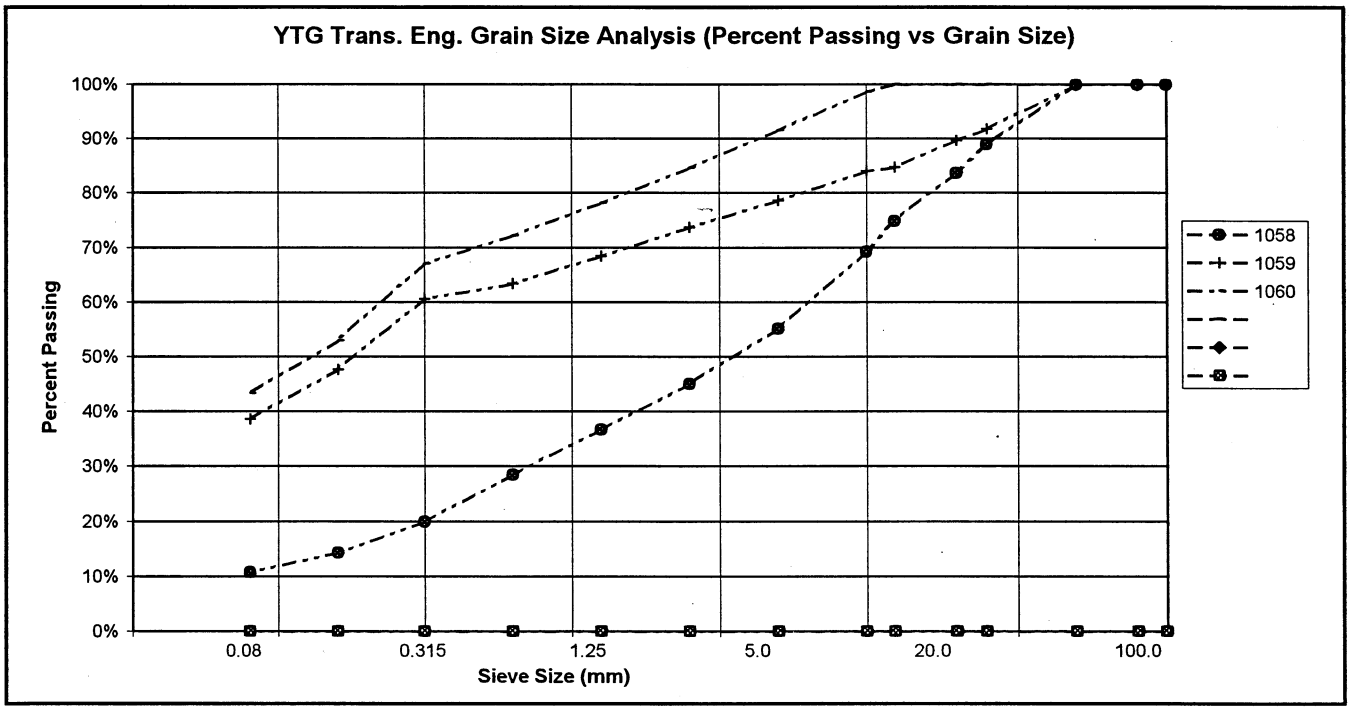
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1640
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1691+425 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/30

FIELD NO:	1055	1056	1057			
LAB NO:	1457	1458	1459			
DEPTH:	1.5-1.7	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	95%	85%	100%			
20.0	88%	85%	97%			
12.5	82%	85%	89%			
10.0	78%	83%	88%			
5.0	67%	76%	81%			
2.5	60%	68%	74%			
1.25	54%	60%	69%			
0.630	49%	54%	62%			
0.315	43%	48%	50%			
0.160	35%	43%	40%			
0.080	27%	35%	31%			
M.C.(%):	22%	13%	14%			
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	24	19			
% SAND:	40	41	49			
% FINES:	27	35	31			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



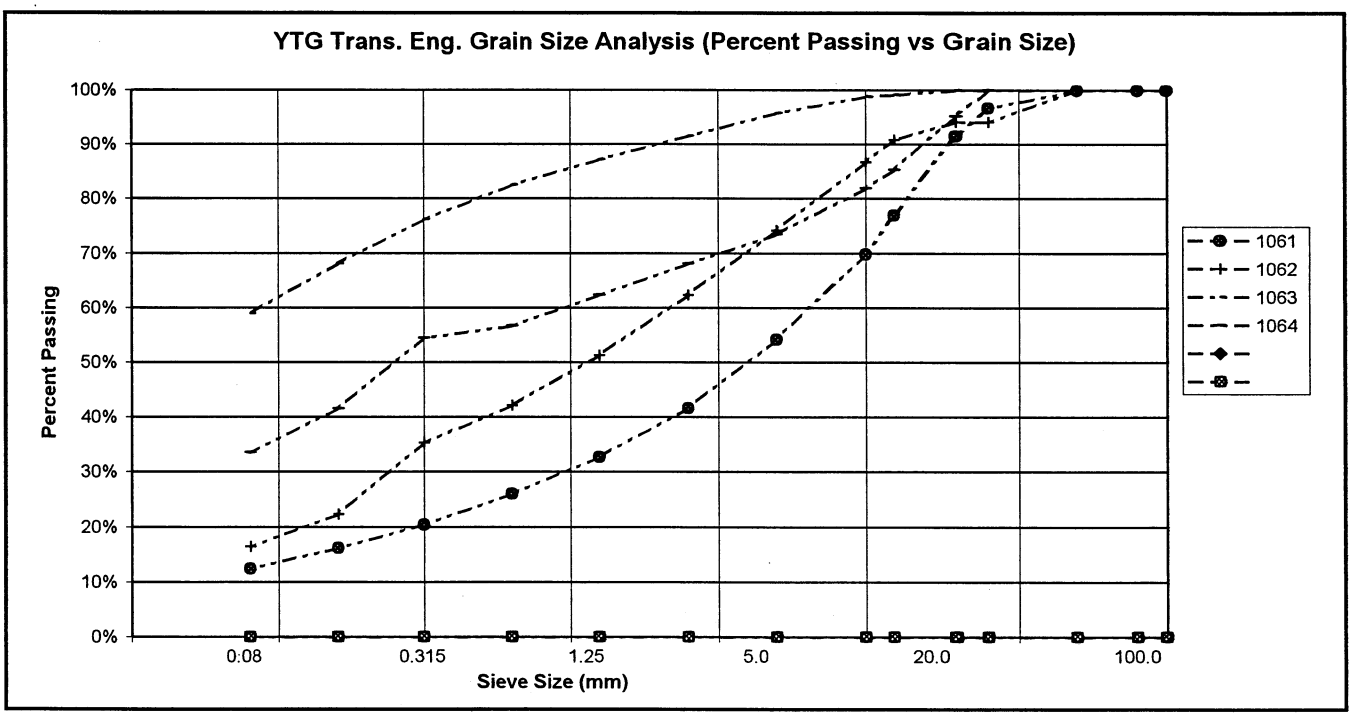
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1641
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1691+325 10M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/30

FIELD NO:	1058	1059	1060			
LAB NO:	1460	1461	1462			
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	89%	92%	100%			
20.0	84%	90%	100%			
12.5	75%	85%	100%			
10.0	69%	84%	99%			
5.0	55%	79%	92%			
2.5	45%	74%	85%			
1.25	37%	68%	78%			
0.630	28%	63%	72%			
0.315	20%	61%	67%			
0.160	14%	48%	53%			
0.080	11%	39%	43%			
M.C.(%):	3%	10%	11%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	45	21	8			
% SAND:	44	40	48			
% FINES:	11	39	43			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)			



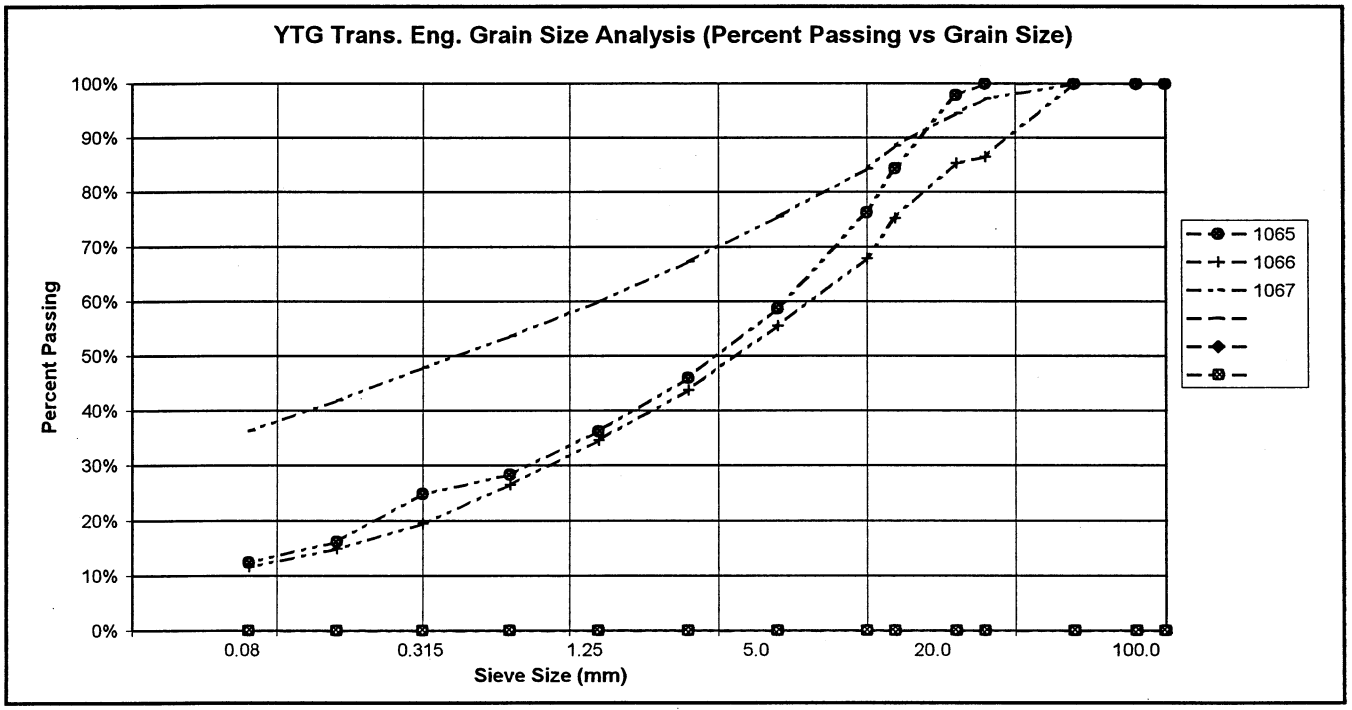
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1642
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1691+225 8M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/30

FIELD NO:	1061	1062	1063	1064		
LAB NO:	1463	1464	1465	1466		
DEPTH:	1.4-1.6	2.2-2.4	3.3-3.5	4.5-4.7		
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	97%	94%	100%	100%		
20.0	92%	94%	100%	95%		
12.5	77%	91%	99%	85%		
10.0	70%	87%	99%	82%		
5.0	54%	74%	96%	73%		
2.5	42%	62%	92%	68%		
1.25	33%	51%	87%	62%		
0.630	26%	42%	83%	57%		
0.315	20%	35%	76%	54%		
0.160	16%	22%	68%	42%		
0.080	12%	16%	59%	34%		
M.C.(%):	3%	3%	13%	8%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	46	26	4	27		
% SAND:	42	58	37	40		
% FINES:	12	16	59	34		
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)		



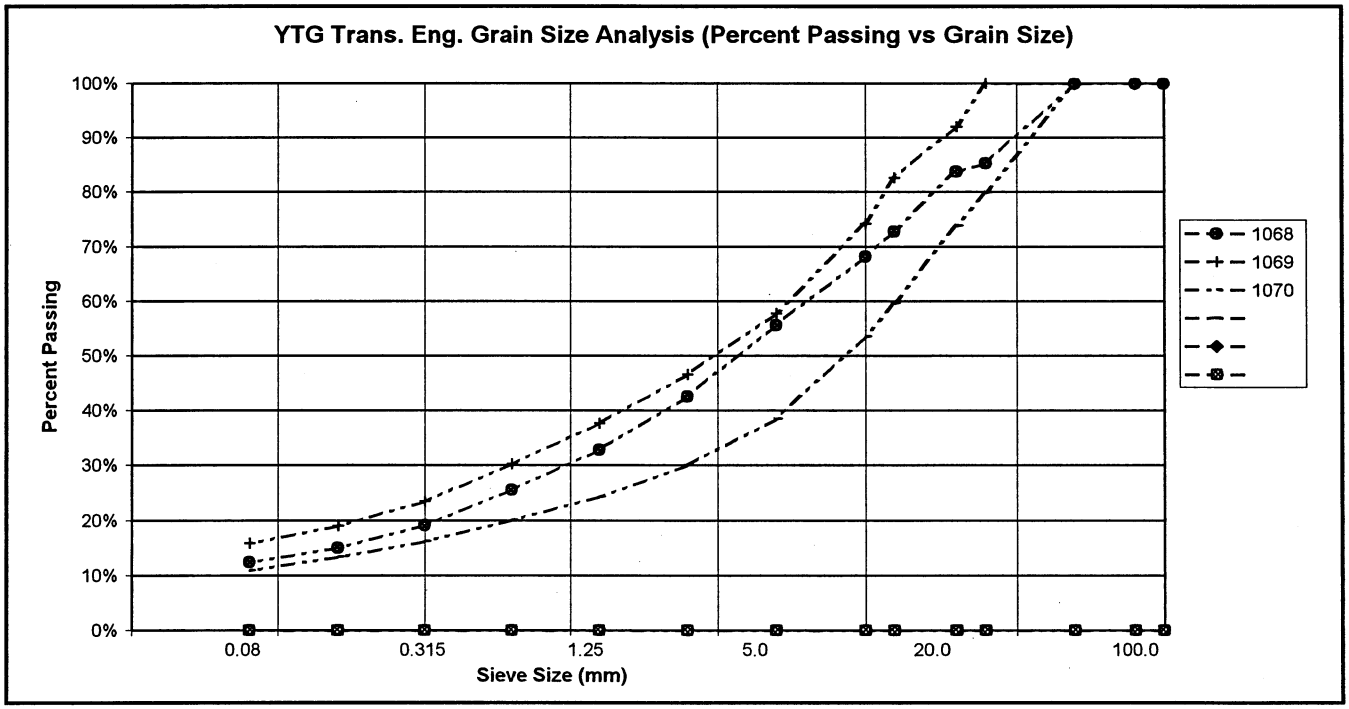
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1643
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1691+125 6M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/30

FIELD NO:	1065	1066	1067			
LAB NO:	1467	1468	1469			
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	100%	86%	97%			
20.0	98%	85%	94%			
12.5	84%	75%	88%			
10.0	76%	68%	84%			
5.0	59%	56%	76%			
2.5	46%	44%	67%			
1.25	36%	35%	60%			
0.630	28%	27%	54%			
0.315	25%	19%	48%			
0.160	16%	15%	42%			
0.080	12%	12%	36%			
M.C.(%):	4%	4%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	41	44	24			
% SAND:	46	44	39			
% FINES:	12	12	36			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)			



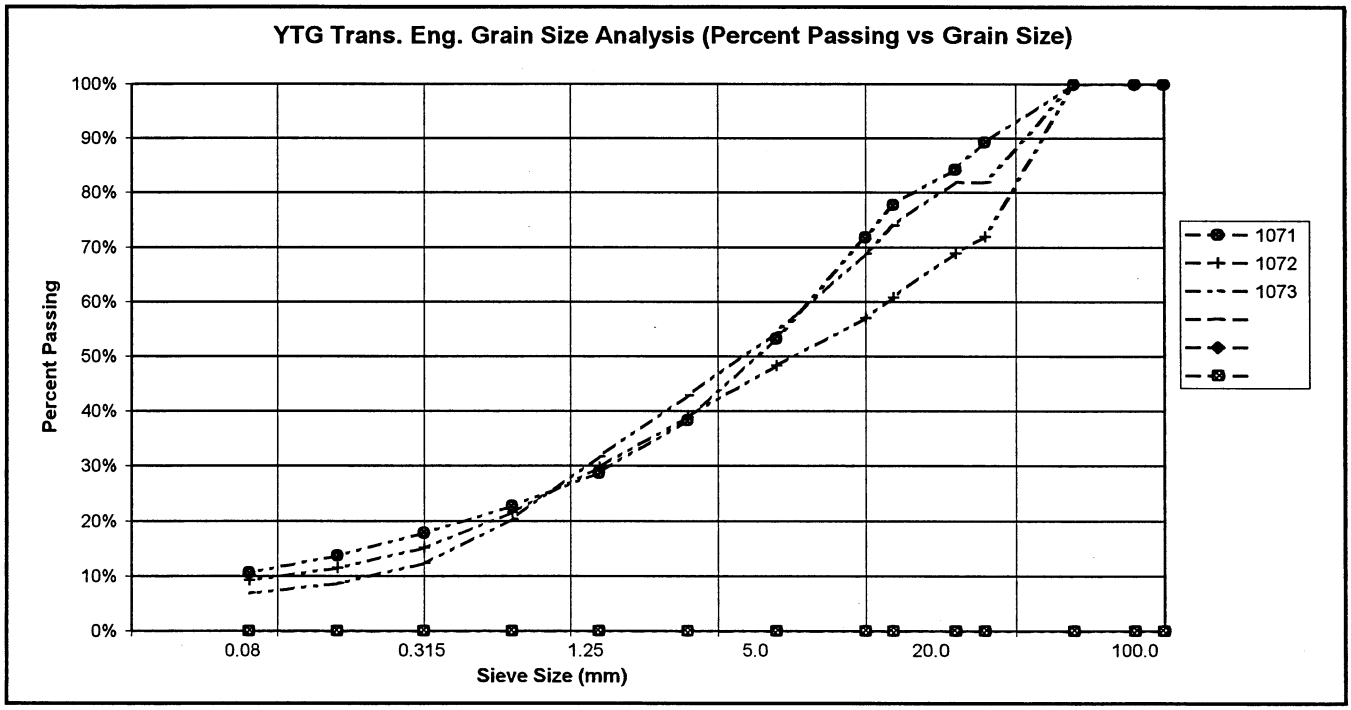
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1644
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1691+025 6M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/30

FIELD NO:	1068	1069	1070			
LAB NO:	1470	1471	1472			
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	85%	100%	80%			
20.0	84%	92%	74%			
12.5	73%	83%	60%			
10.0	68%	74%	53%			
5.0	56%	58%	38%			
2.5	43%	47%	30%			
1.25	33%	38%	24%			
0.630	26%	30%	20%			
0.315	19%	24%	16%			
0.160	15%	19%	13%			
0.080	12%	16%	11%			
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:	44	42	62			
% SAND:	43	42	28			
% FINES:	12	16	11			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			



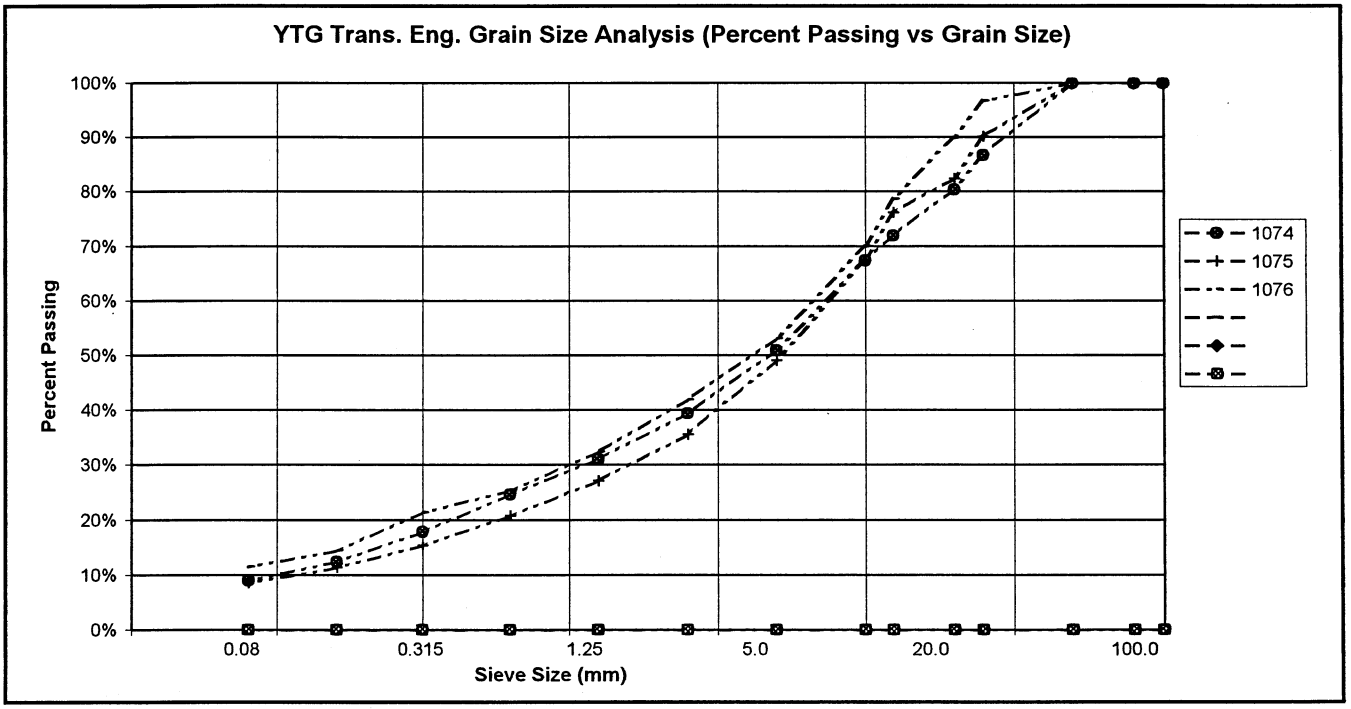
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1645
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1690+925 10M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/30

FIELD NO:	1071	1072	1073			
LAB NO:	1473	1474	1475			
DEPTH:	1.2-1.4	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	89%	72%	82%			
20.0	84%	69%	82%			
12.5	78%	61%	74%			
10.0	72%	57%	69%			
5.0	53%	48%	54%			
2.5	38%	39%	43%			
1.25	29%	30%	32%			
0.630	23%	22%	20%			
0.315	18%	15%	12%			
0.160	14%	11%	9%			
0.080	11%	9%	7%			
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:	47	52	46			
% SAND:	43	39	47			
% FINES:	11	9	7			
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		HOLE No.: 558-1646
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1690+825 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/30

FIELD NO:	1074	1075	1076			
LAB NO:	1476	1477	1478			
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	87%	90%	97%			
20.0	80%	82%	90%			
12.5	72%	76%	79%			
10.0	67%	67%	70%			
5.0	51%	49%	53%			
2.5	39%	36%	42%			
1.25	31%	27%	32%			
0.630	25%	21%	25%			
0.315	18%	15%	21%			
0.160	12%	11%	14%			
0.080	9%	9%	11%			
M.C.(%):	2%	2%	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:	49	51	47			
% SAND:	42	41	42			
% FINES:	9	9	11			
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)			

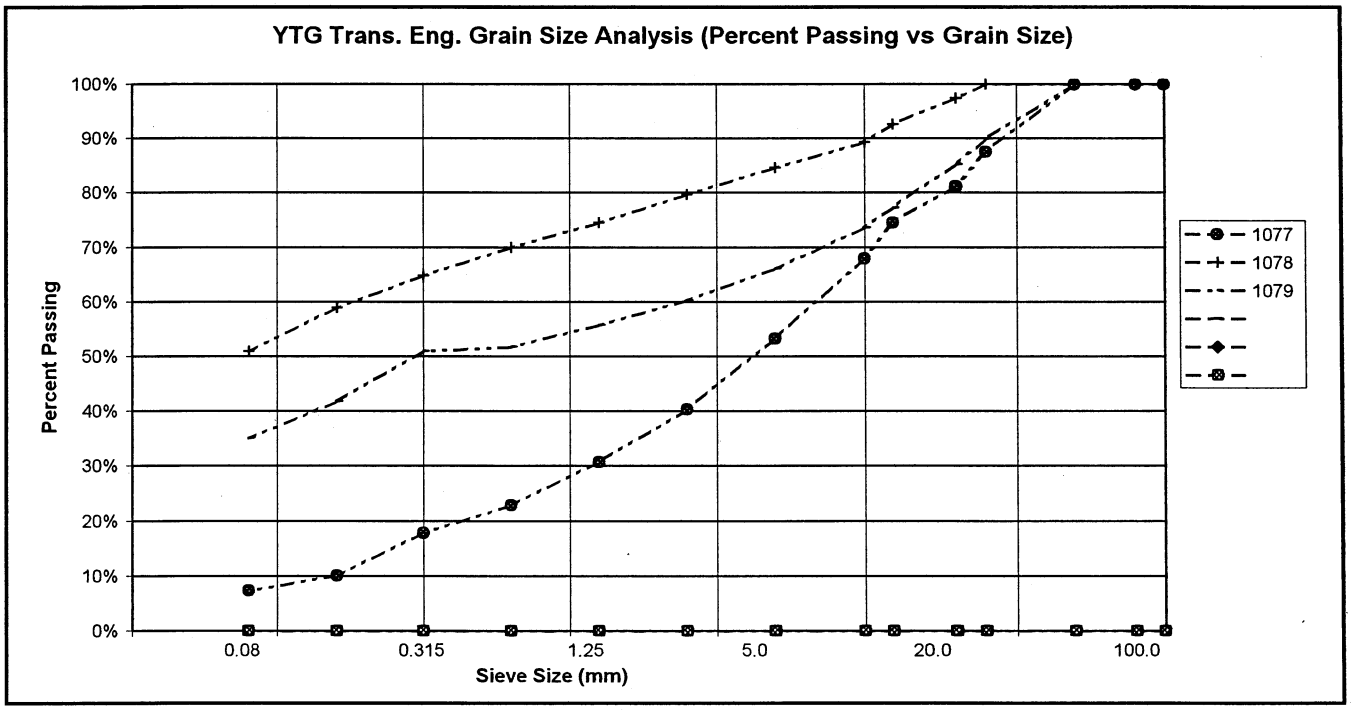


PROJECT NUMBER: 092-202101-0363
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SEGMENT 9
PROJECT LOCATION: KM 1664-1692 A/H
DRILL UNIT: B 40 L
HOLE LOCATION: 1690+725 19M LT
LOGGED BY: D.T.

HOLE No.: 558-1647

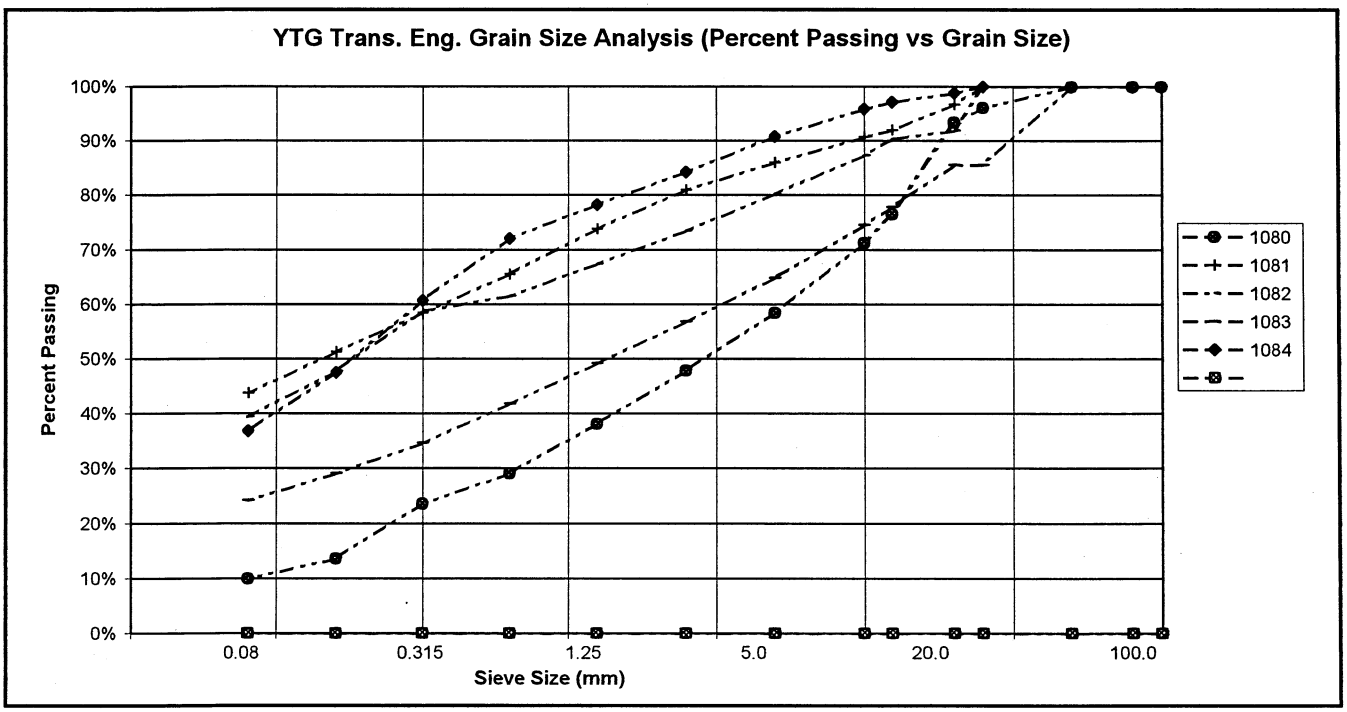
DATE COMP: 2000/06/30

FIELD NO:	1077	1078	1079			
LAB NO:	1479	1480	1481			
DEPTH:	1.0-1.2	1.6-1.8	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	88%	100%	90%			
20.0	81%	97%	85%			
12.5	75%	93%	77%			
10.0	68%	89%	74%			
5.0	53%	85%	66%			
2.5	40%	80%	60%			
1.25	31%	75%	56%			
0.630	23%	70%	52%			
0.315	18%	65%	51%			
0.160	10%	59%	42%			
0.080	7%	51%	35%			
M.C.(%):	3%	11%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	47	15	34			
% SAND:	46	34	31			
% FINES:	7	51	35			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SANDY SILT WITH GRAVEL (ML)	SILTY GRAVEL WITH SAND (GM)			



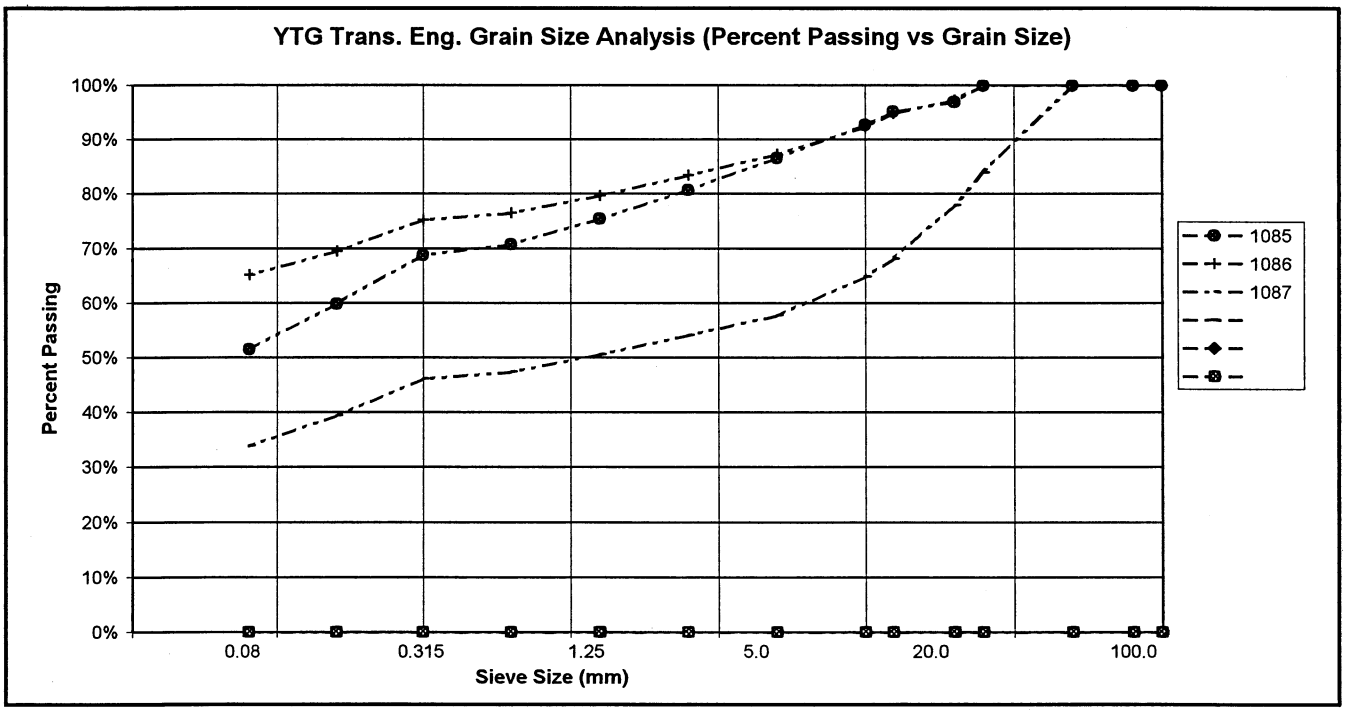
PROJECT NUMBER:	092-202101-0363		HOLE No.: 558-1648
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	B 40 L		
HOLE LOCATION:	1690+675 25M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/30

FIELD NO:	1080	1081	1082	1083	1084	
LAB NO:	1482	1483	1484	1485	1486	
DEPTH:	1.3-1.5	2.0-2.2	3.0-3.2	3.9-4.1	6.3-6.5	
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	96%	100%	100%	86%	100%	
20.0	93%	97%	92%	86%	99%	
12.5	76%	92%	90%	78%	97%	
10.0	71%	91%	87%	75%	96%	
5.0	58%	86%	80%	65%	91%	
2.5	48%	81%	73%	57%	84%	
1.25	38%	74%	67%	49%	78%	
0.630	29%	66%	61%	42%	72%	
0.315	24%	58%	59%	35%	61%	
0.160	14%	51%	48%	29%	48%	
0.080	10%	44%	39%	24%	37%	
M.C.(%):	4%	12%	8%	5%	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:	42	14	20	35	9	
% SAND:	48	42	41	41	54	
% FINES:	10	44	39	24	37	
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW SM)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	



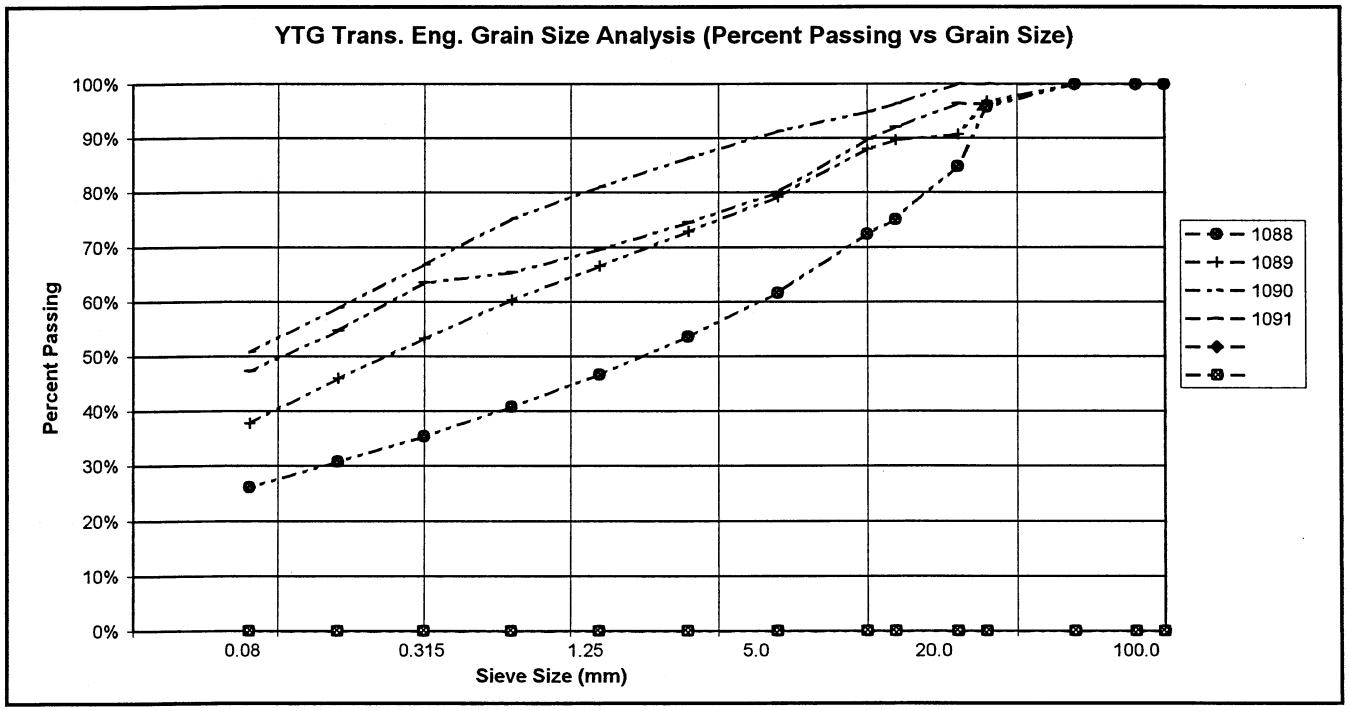
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1649
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1690+625 12M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/04

FIELD NO:	1085	1086	1087			
LAB NO:	1487	1488	1489			
DEPTH:	1.2-1.4	2.9-3.1	4.8-5.0			
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	100%	100%	84%			
20.0	97%	97%	78%			
12.5	95%	95%	68%			
10.0	93%	92%	65%			
5.0	87%	87%	58%			
2.5	81%	83%	54%			
1.25	75%	80%	51%			
0.630	71%	76%	47%			
0.315	69%	75%	46%			
0.160	60%	69%	39%			
0.080	52%	65%	34%			
M.C.(%):	11%	7%	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:	13	13	42			
% SAND:	35	22	24			
% FINES:	52	65	34			
CLASSIFICATION	SANDY SILT (ML)	SANDY SILT (ML)	SILTY GRAVEL WITH SAND (GM)			



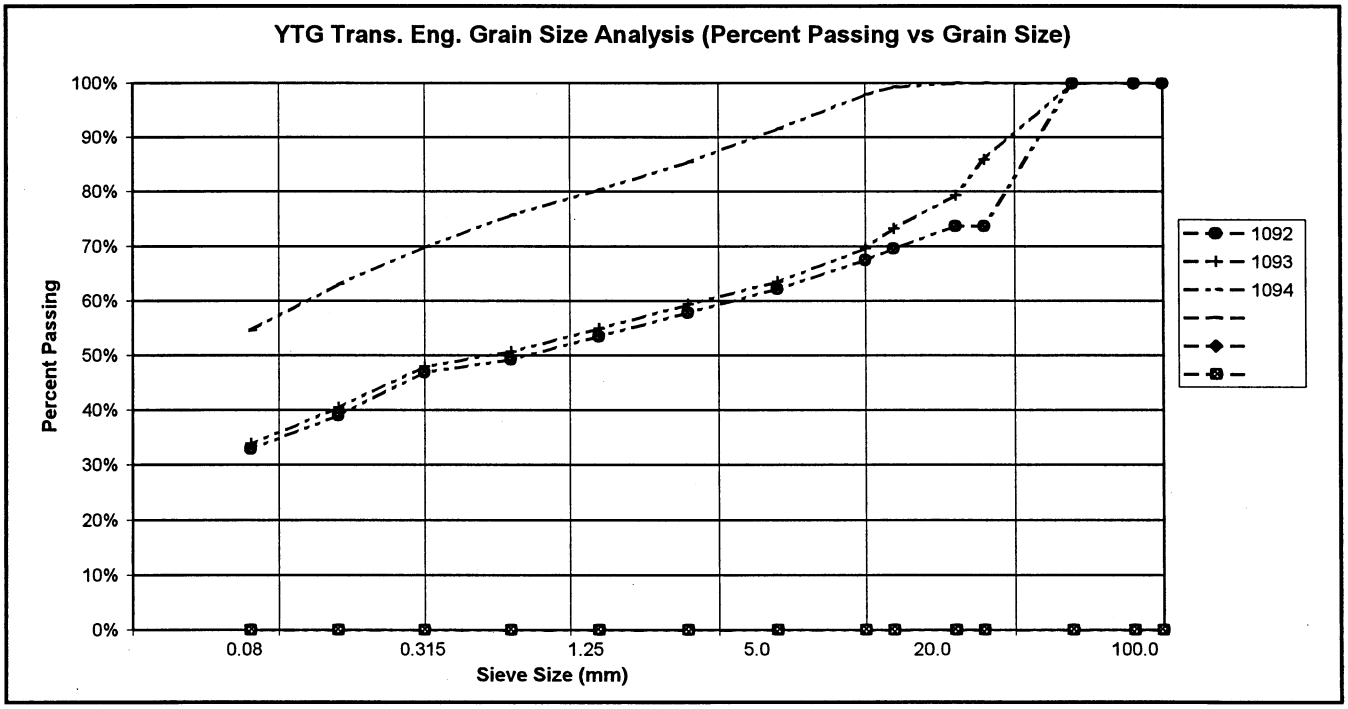
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1650
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1690+575 25M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/04

FIELD NO:	1088	1089	1090	1091		
LAB NO:	1490	1491	1492	1493		
DEPTH:	1.4-1.6	2.3-2.5	3.8-4.0	6.8-7.0		
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	96%	97%	100%	96%		
20.0	85%	91%	100%	96%		
12.5	75%	90%	96%	92%		
10.0	72%	88%	95%	90%		
5.0	62%	79%	91%	80%		
2.5	54%	73%	86%	74%		
1.25	47%	67%	81%	70%		
0.630	41%	60%	75%	65%		
0.315	35%	53%	67%	64%		
0.160	31%	46%	59%	55%		
0.080	26%	38%	51%	47%		
M.C.(%):	7%	9%	10%	7%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	38	21	9	20		
% SAND:	35	41	40	33		
% FINES:	26	38	51	47		
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)		



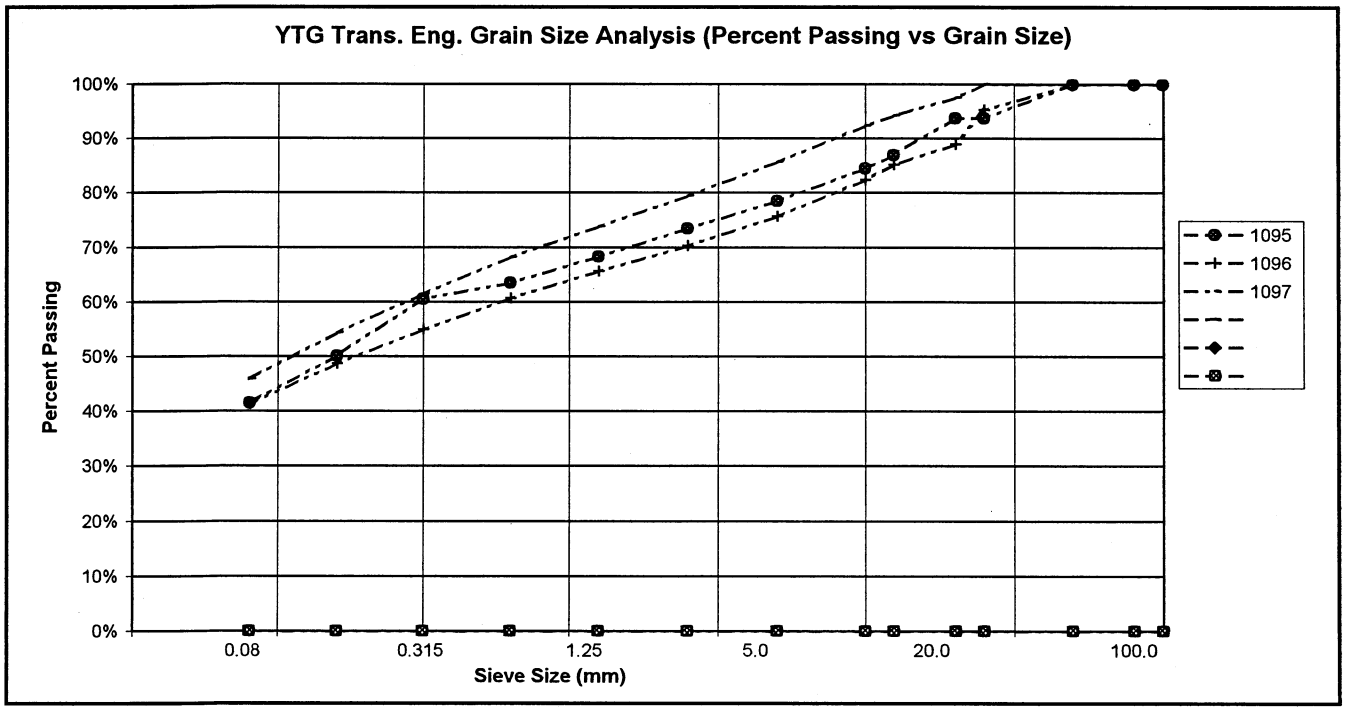
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1651
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1690+500 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/04

FIELD NO:	1092	1093	1094			
LAB NO:	1494	1495	1496			
DEPTH:	1.4-1.6	2.9-3.1	4.8-5.0			
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	74%	86%	100%			
20.0	74%	79%	100%			
12.5	70%	73%	99%			
10.0	67%	70%	98%			
5.0	62%	64%	92%			
2.5	58%	59%	85%			
1.25	54%	55%	80%			
0.630	49%	51%	76%			
0.315	47%	48%	70%			
0.160	39%	40%	63%			
0.080	33%	34%	55%			
M.C.(%):	7%	5%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	38	36	8			
% SAND:	29	30	37			
% FINES:	33	34	55			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)	SANDY SILT (ML)			



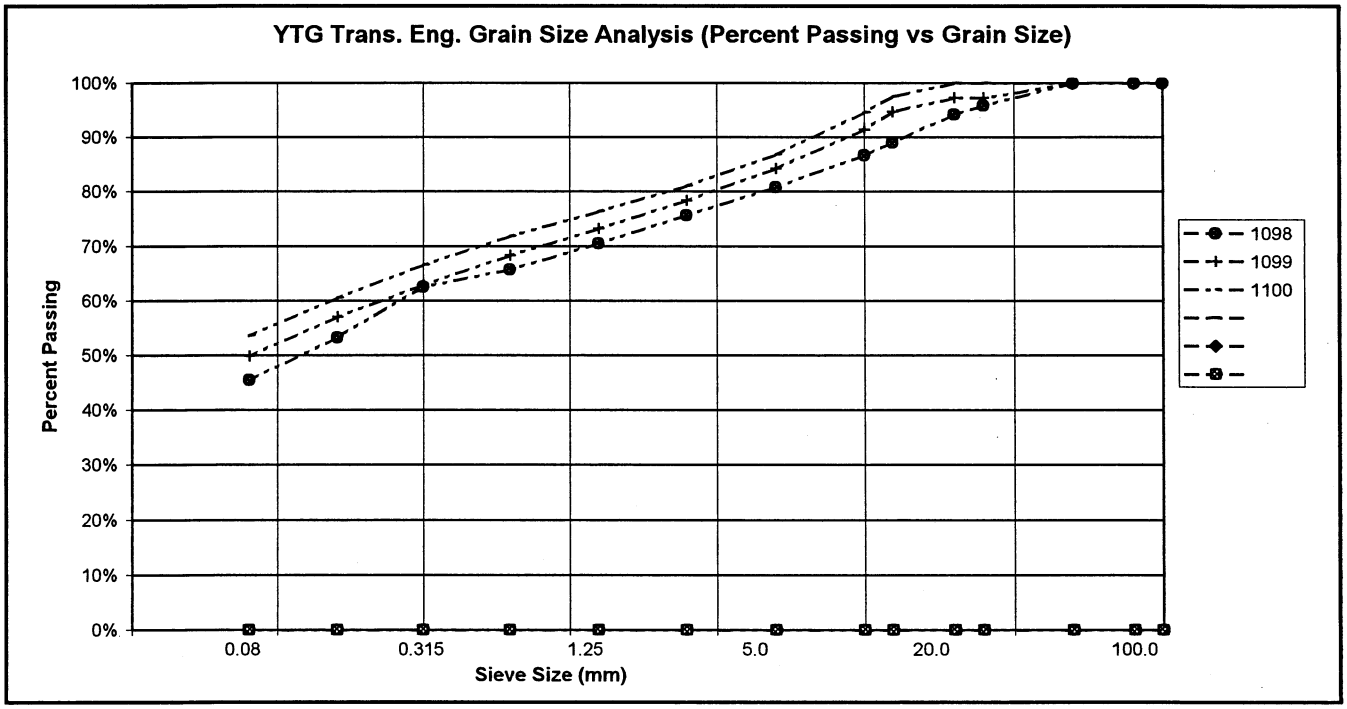
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1652
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1690+400 18M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/04

FIELD NO:	1095	1096	1097			
LAB NO:	1497	1498	1499			
DEPTH:	1.5-1.7	3.0-3.2	4.8-5.0			
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	94%	95%	100%			
20.0	94%	89%	98%			
12.5	87%	85%	94%			
10.0	85%	82%	92%			
5.0	79%	76%	86%			
2.5	74%	70%	79%			
1.25	68%	66%	74%			
0.630	64%	61%	68%			
0.315	61%	55%	62%			
0.160	50%	49%	54%			
0.080	42%	41%	46%			
M.C.(%):	9%	7%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	22	24	14			
% SAND:	37	34	40			
% FINES:	42	41	46			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)			



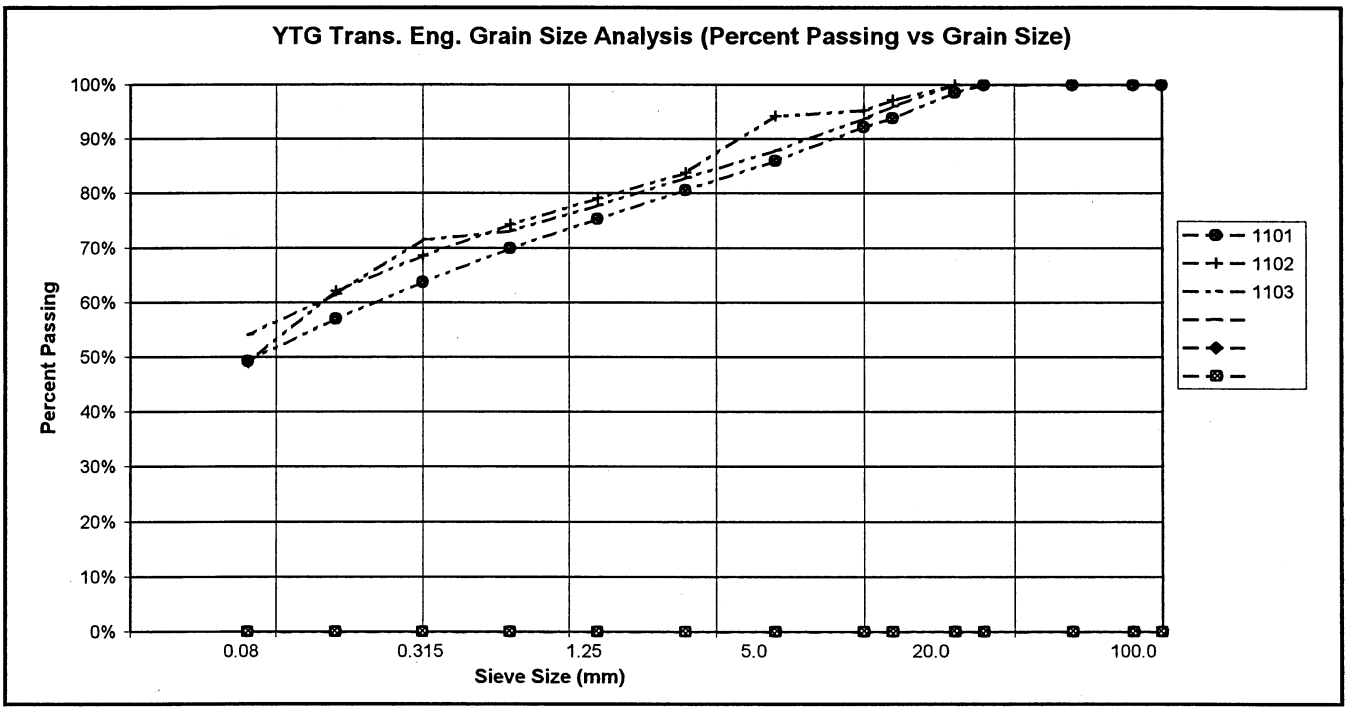
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1653
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1690+300 12M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/04

FIELD NO:	1098	1099	1100			
LAB NO:	1500	1501	1502			
DEPTH:	1.4-1.6	2.8-3.0	4.5-5.0			
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	96%	97%	100%			
20.0	94%	97%	100%			
12.5	89%	95%	98%			
10.0	87%	91%	95%			
5.0	81%	84%	87%			
2.5	76%	78%	81%			
1.25	71%	73%	76%			
0.630	66%	68%	72%			
0.315	63%	63%	67%			
0.160	53%	57%	61%			
0.080	46%	50%	54%			
M.C.(%):	8%	7%	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:	19	16	13			
% SAND:	35	34	33			
% FINES:	46	50	54			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)			



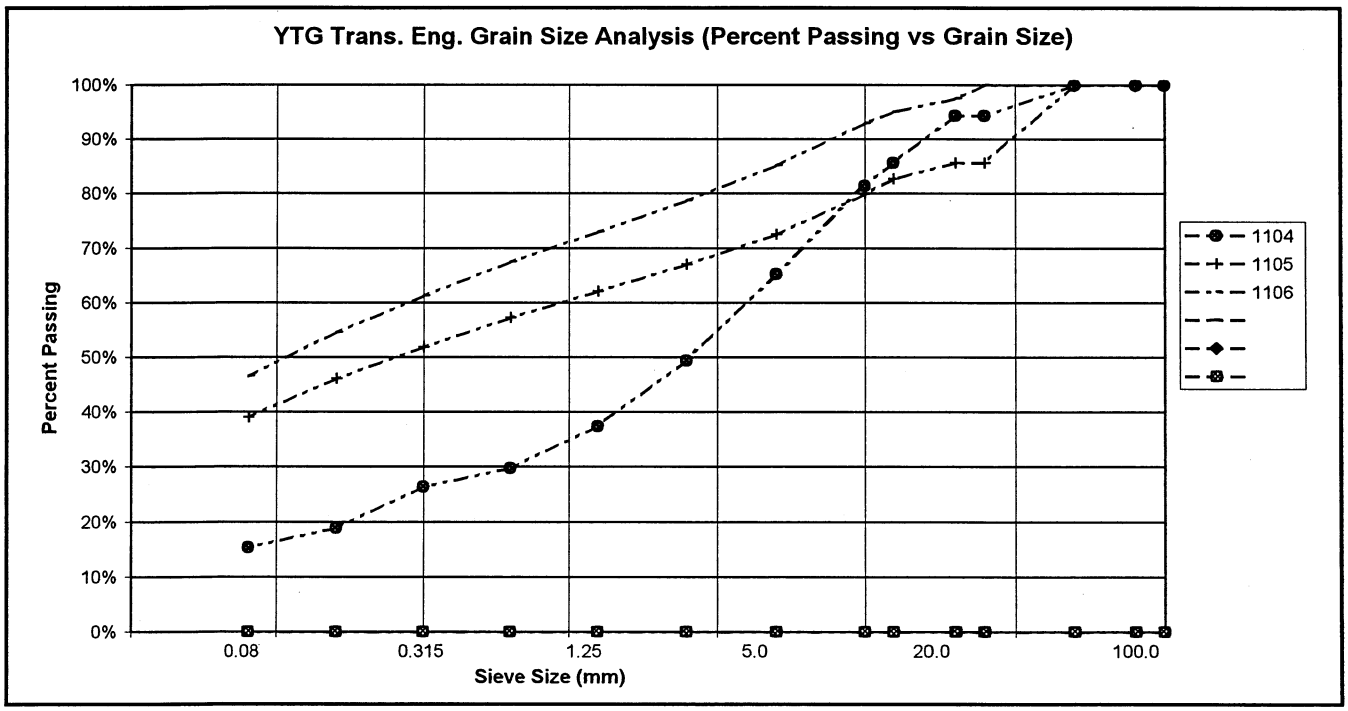
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1654
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1690+200 7M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/04

FIELD NO:	1101	1102	1103			
LAB NO:	1503	1504	1505			
DEPTH:	1.4-1.6	2.9-3.1	4.8-5.0			
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	100%	100%	100%			
20.0	99%	100%	100%			
12.5	94%	97%	96%			
10.0	92%	95%	94%			
5.0	86%	94%	88%			
2.5	81%	84%	83%			
1.25	75%	79%	78%			
0.630	70%	74%	73%			
0.315	64%	69%	72%			
0.160	57%	62%	62%			
0.080	49%	49%	54%			
M.C.(%):	9%	8%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	14	6	12			
% SAND:	37	45	34			
% FINES:	49	49	54			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND (SM)	SANDY SILT (ML)			



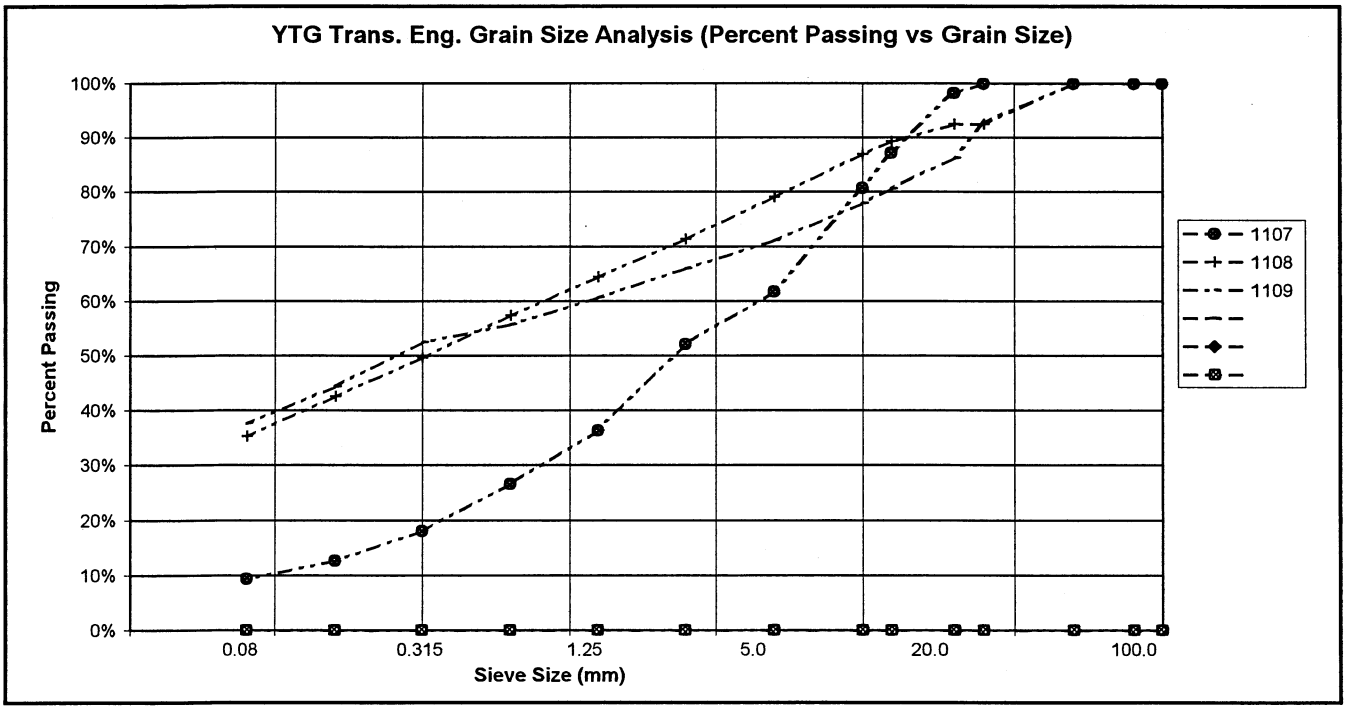
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1655
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1690+100 5M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/04

FIELD NO:	1104	1105	1106			
LAB NO:	1506	1507	1508			
DEPTH:	1.0-1.2	2.8-3.0	4.8-5.0			
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	94%	86%	100%			
20.0	94%	86%	98%			
12.5	86%	83%	95%			
10.0	81%	80%	93%			
5.0	65%	73%	85%			
2.5	49%	67%	79%			
1.25	37%	62%	73%			
0.630	30%	57%	67%			
0.315	26%	52%	61%			
0.160	19%	46%	55%			
0.080	15%	39%	47%			
M.C.(%):	4%	7%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	35	27	15			
% SAND:	50	33	39			
% FINES:	15	39	47			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)			



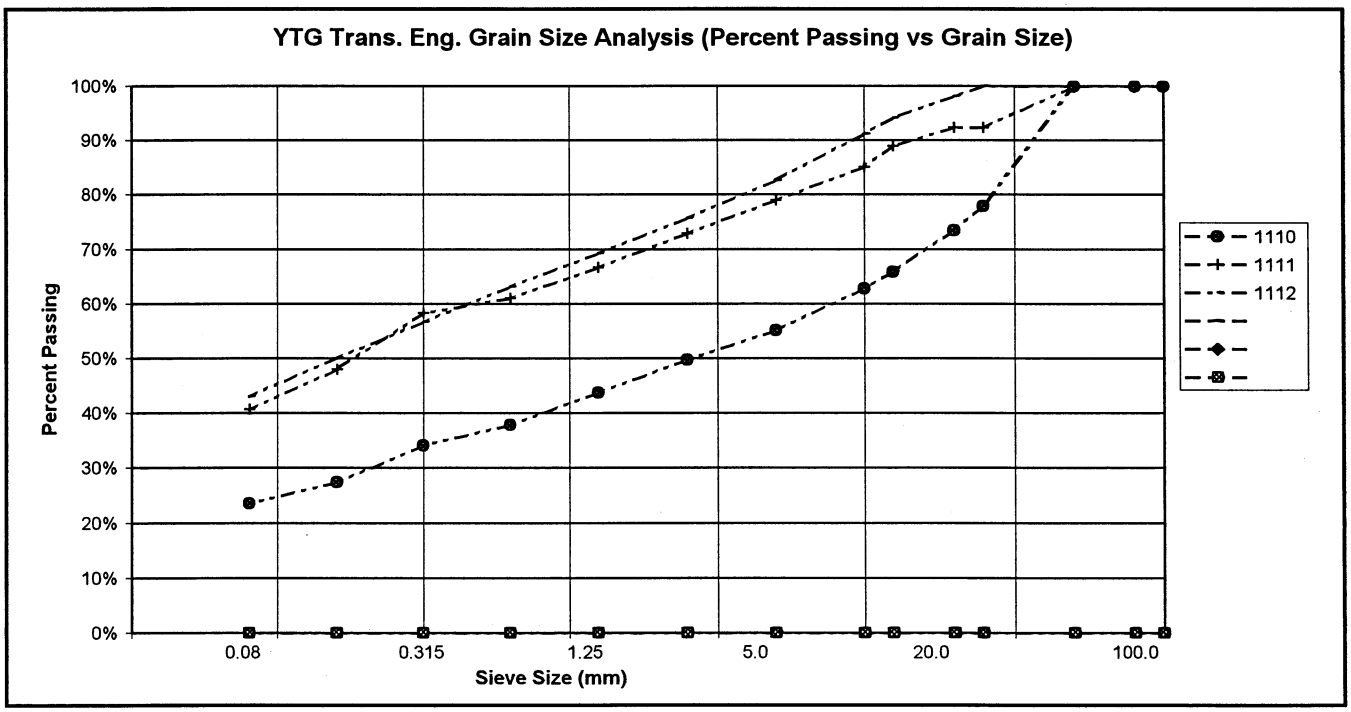
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1656
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1690+000 7M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/04

FIELD NO:	1107	1108	1109			
LAB NO:	1509	1510	1511			
DEPTH:	1.3-1.5	2.8-3.0	4.8-5.0			
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	100%	92%	93%			
20.0	98%	92%	86%			
12.5	87%	89%	81%			
10.0	81%	87%	78%			
5.0	62%	79%	71%			
2.5	52%	71%	66%			
1.25	36%	64%	61%			
0.630	27%	57%	56%			
0.315	18%	50%	53%			
0.160	13%	43%	44%			
0.080	9%	35%	38%			
M.C.(%):	3%	6%	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:	38	21	29			
% SAND:	52	44	34			
% FINES:	9	35	38			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



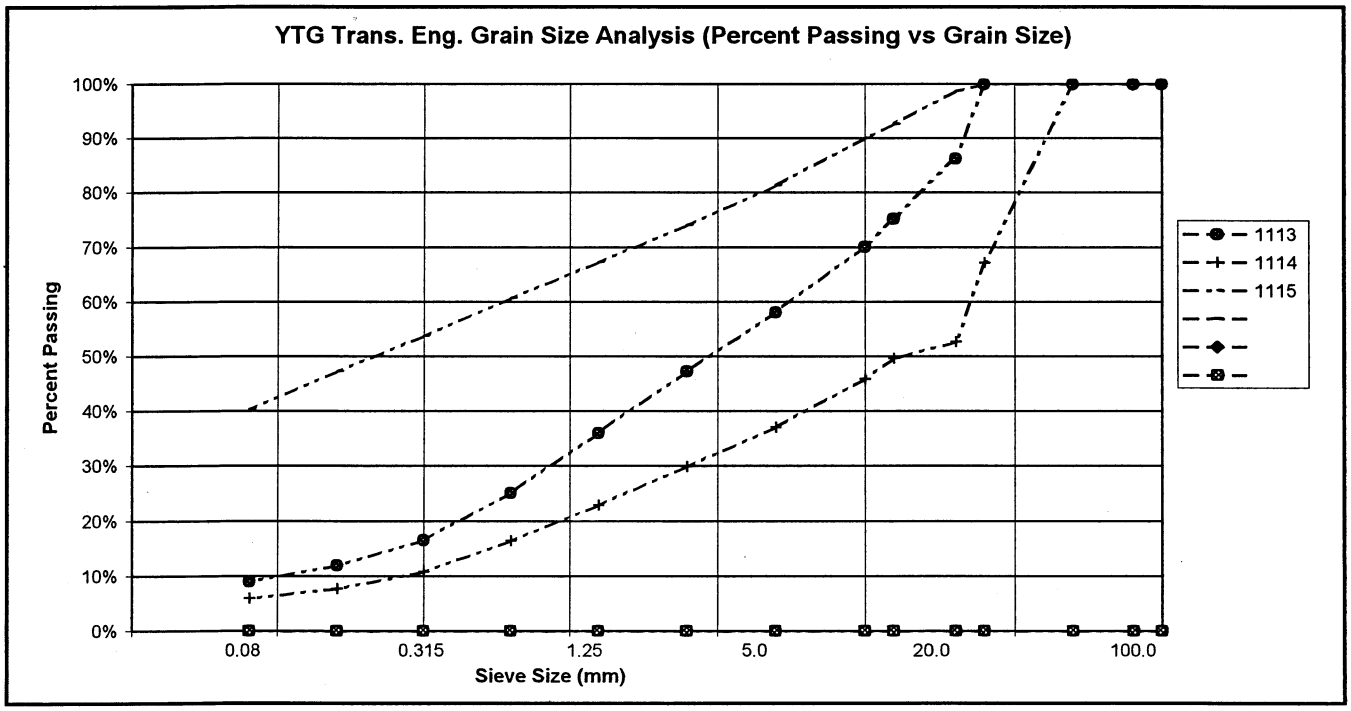
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1657
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1689+900 9M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/04

FIELD NO:	1110	1111	1112			
LAB NO:	1512	1513	1514			
DEPTH:	1.5-1.7	2.9-3.1	4.8-5.0			
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	78%	92%	100%			
20.0	73%	92%	98%			
12.5	66%	89%	94%			
10.0	63%	85%	91%			
5.0	55%	79%	83%			
2.5	50%	73%	76%			
1.25	44%	67%	69%			
0.630	38%	61%	63%			
0.315	34%	58%	57%			
0.160	27%	48%	50%			
0.080	24%	41%	43%			
M.C.(%):	5%	7%	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:	45	21	17			
% SAND:	32	38	40			
% FINES:	24	41	43			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



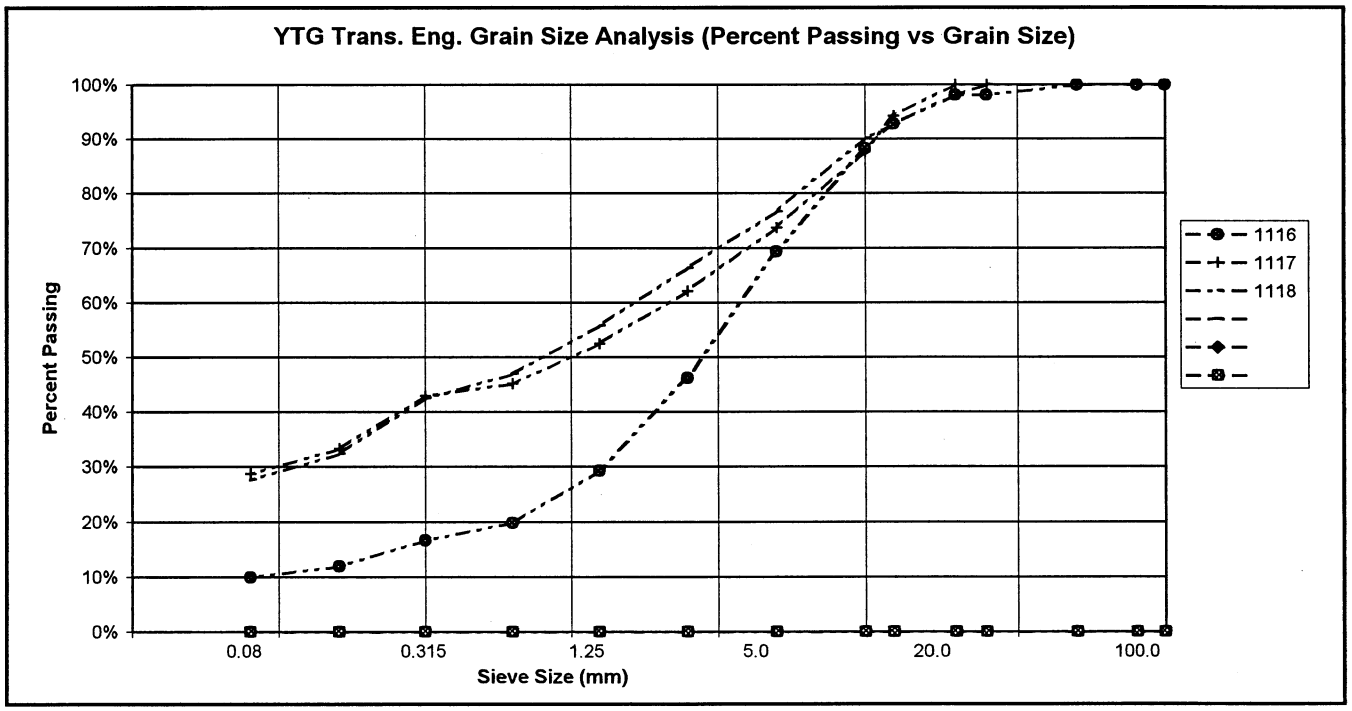
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1658
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1689+800 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/04

FIELD NO:	1113	1114	1115			
LAB NO:	1515	1516	1517			
DEPTH:	1.4-1.6	2.9-3.1	4.8-5.0			
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	100%	67%	100%			
20.0	86%	53%	99%			
12.5	75%	50%	93%			
10.0	70%	46%	90%			
5.0	58%	37%	81%			
2.5	47%	30%	74%			
1.25	36%	23%	67%			
0.630	25%	16%	61%			
0.315	17%	11%	54%			
0.160	12%	8%	47%			
0.080	9%	6%	40%			
M.C.(%):	4%	2%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	42	63	19			
% SAND:	49	31	41			
% FINES:	9	6	40			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)			



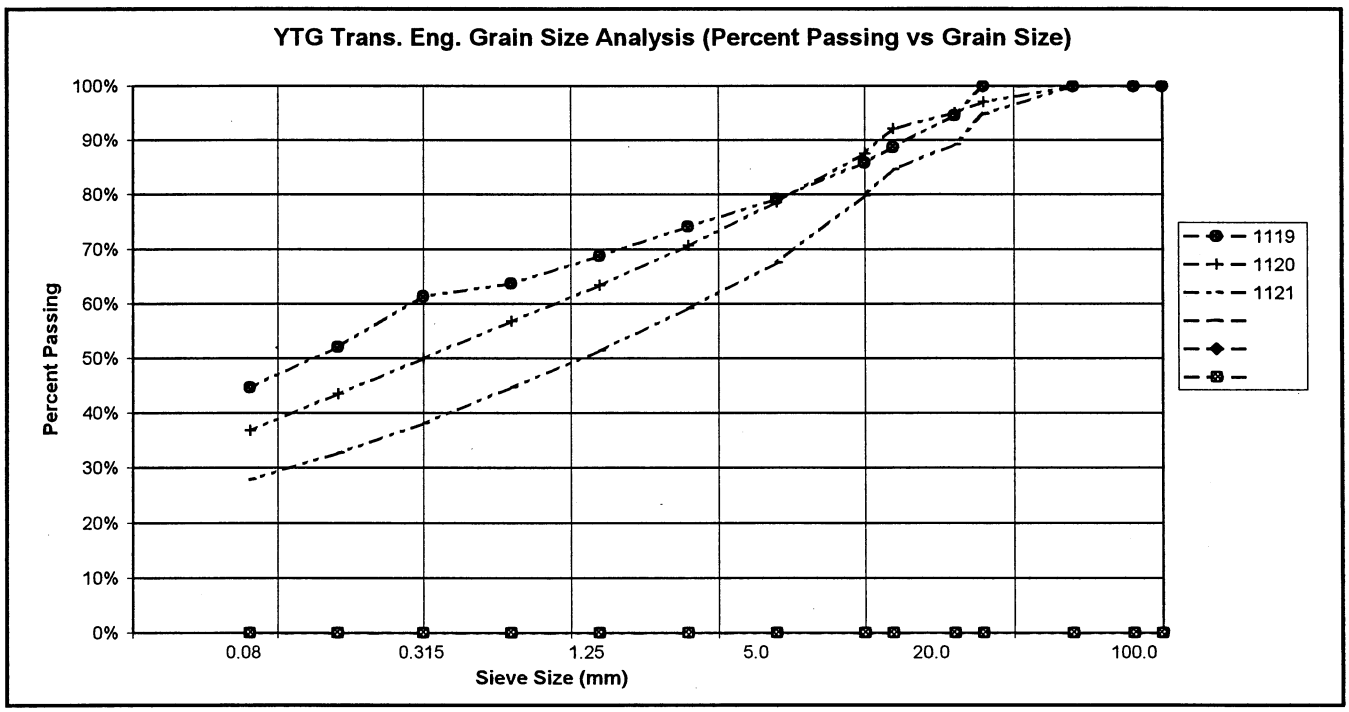
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1659
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1689+700 5M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/04

FIELD NO:	1116	1117	1118			
LAB NO:	1518	1519	1520			
DEPTH:	1.0-1.2	2.8-3.0	4.8-5.0			
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	98%	100%	100%			
20.0	98%	100%	98%			
12.5	93%	94%	93%			
10.0	88%	88%	90%			
5.0	69%	74%	77%			
2.5	46%	62%	66%			
1.25	29%	52%	56%			
0.630	20%	45%	47%			
0.315	17%	43%	42%			
0.160	12%	33%	32%			
0.080	10%	29%	28%			
M.C.(%):	4%	5%	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:	31	26	23			
% SAND:	59	45	49			
% FINES:	10	29	28			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



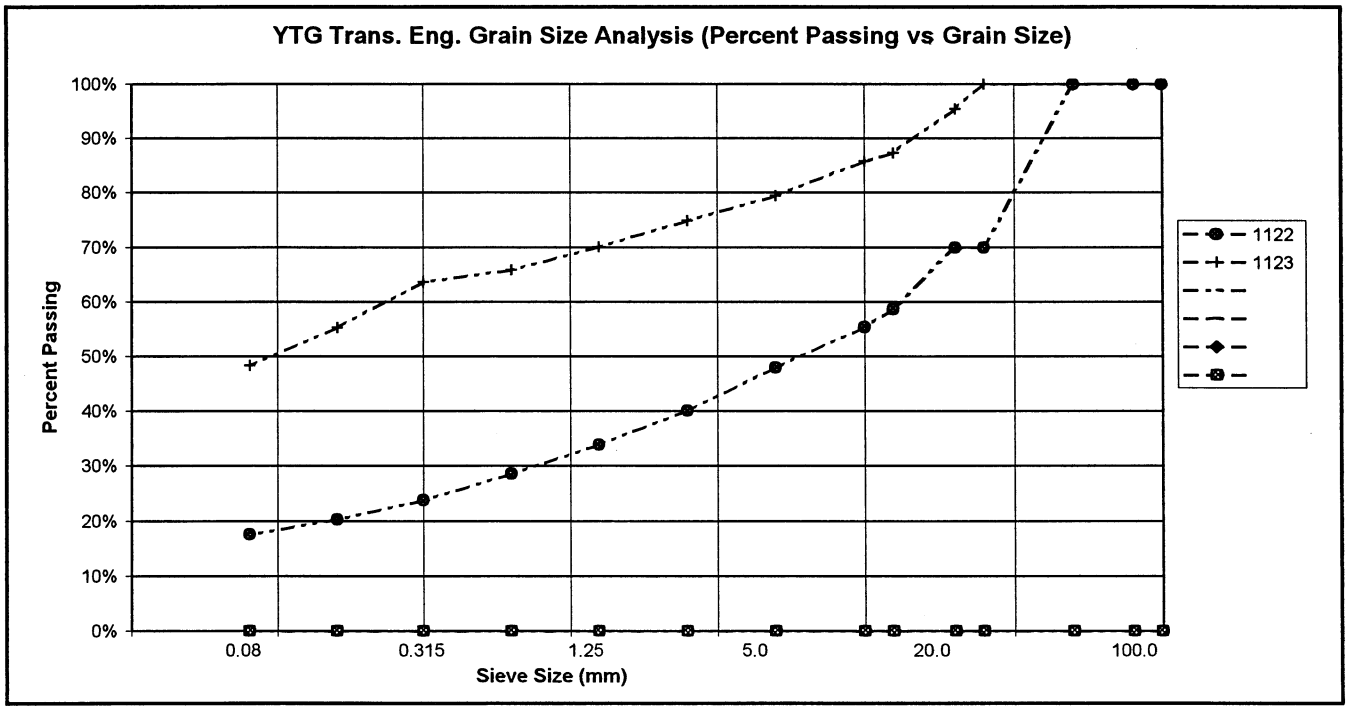
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1660
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1689+600 10M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/04

FIELD NO:	1119	1120	1121			
LAB NO:	1521	1522	1523			
DEPTH:	1.4-1.6	2.9-3.1	4.8-5.0			
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	100%	97%	95%			
20.0	95%	95%	89%			
12.5	89%	92%	85%			
10.0	86%	88%	80%			
5.0	79%	79%	68%			
2.5	74%	71%	59%			
1.25	69%	63%	51%			
0.630	64%	57%	45%			
0.315	61%	50%	38%			
0.160	52%	44%	33%			
0.080	45%	37%	28%			
M.C.(%):	9%	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:	21	21	32			
% SAND:	34	42	40			
% FINES:	45	37	28			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



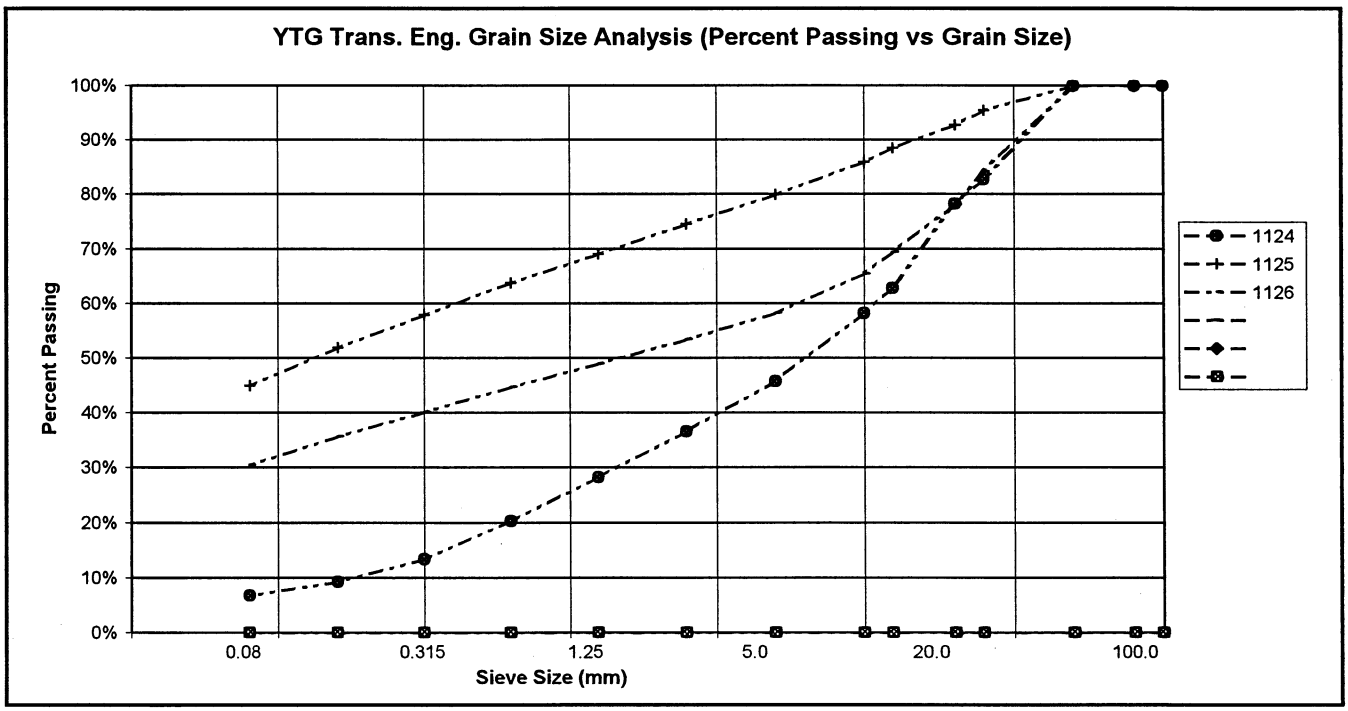
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1661
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1689+500 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/04

FIELD NO:	1122	1123				
LAB NO:	1524	1525				
DEPTH:	1.6-1.8	2.8-3.0				
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	70%	100%				
20.0	70%	95%				
12.5	59%	87%				
10.0	55%	86%				
5.0	48%	80%				
2.5	40%	75%				
1.25	34%	70%				
0.630	29%	66%				
0.315	24%	64%				
0.160	20%	55%				
0.080	18%	48%				
M.C.(%):	5%	10%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	52	20				
% SAND:	30	31				
% FINES:	18	48				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)				



PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1662
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1689+425 20M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/04

FIELD NO:	1124	1125	1126			
LAB NO:	1526	1527	1528			
DEPTH:	1.3-1.5	2.8-3.0	4.8-5.0			
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	83%	95%	84%			
20.0	78%	93%	78%			
12.5	63%	89%	69%			
10.0	58%	86%	65%			
5.0	46%	80%	58%			
2.5	37%	74%	53%			
1.25	28%	69%	49%			
0.630	20%	64%	45%			
0.315	13%	58%	40%			
0.160	9%	52%	36%			
0.080	7%	45%	31%			
M.C.(%):	3%	9%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	54	20	42			
% SAND:	39	35	28			
% FINES:	7	45	31			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)			

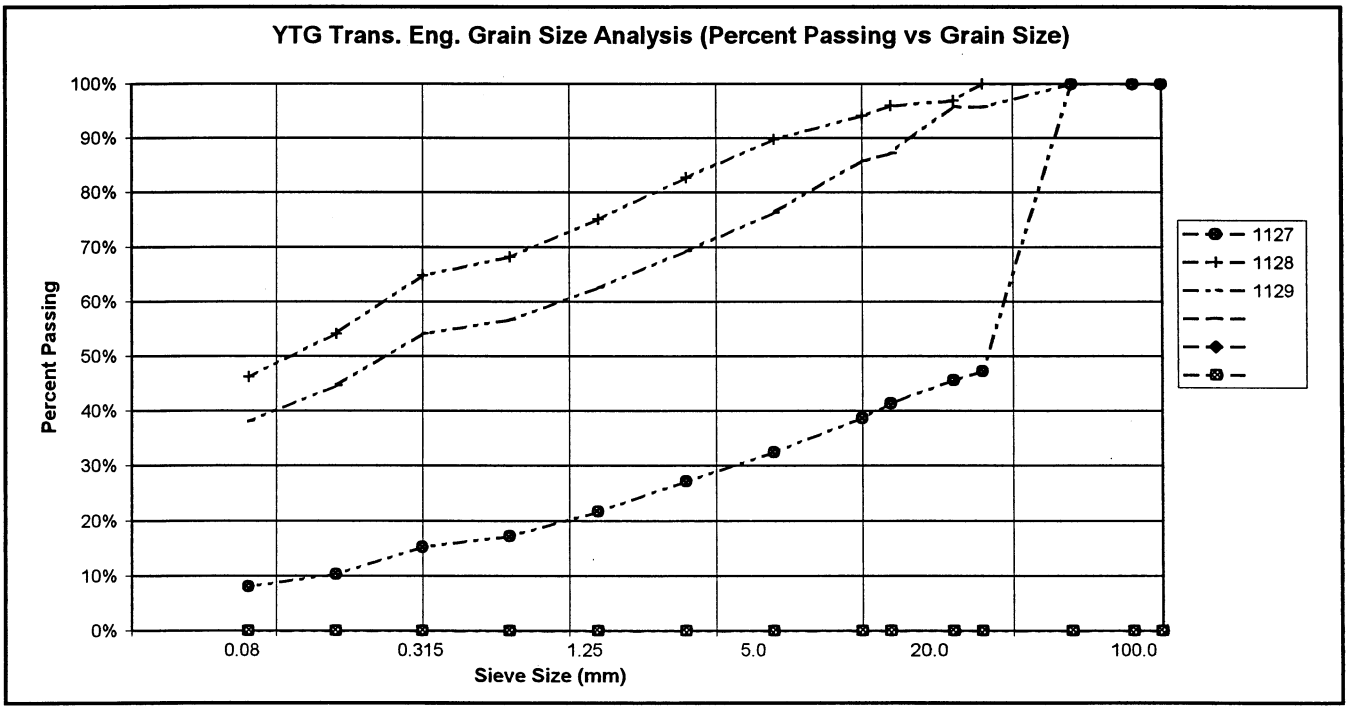


PROJECT NUMBER: 092-202101-0363
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SEGMENT 9
PROJECT LOCATION: KM 1664-1692 A/H
DRILL UNIT: MOBILE B 40 L
HOLE LOCATION: 1689+350 20M LT
LOGGED BY: D.T.

HOLE No.: 559-1663

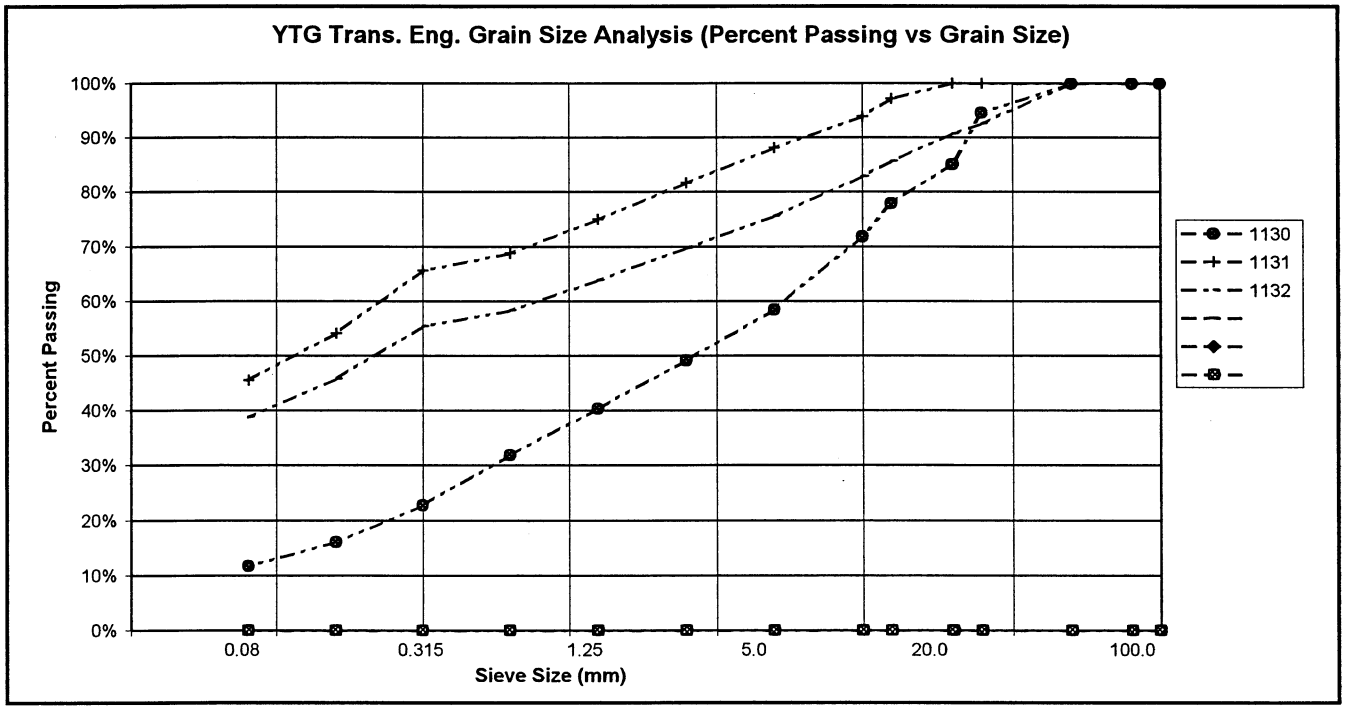
DATE COMP: 2000/07/05

FIELD NO:	1127	1128	1129			
LAB NO:	1529	1530	1531			
DEPTH:	1.5-1.7	2.9-3.1	4.8-5.0			
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	47%	100%	96%			
20.0	46%	97%	96%			
12.5	41%	96%	87%			
10.0	39%	94%	86%			
5.0	32%	90%	76%			
2.5	27%	83%	69%			
1.25	22%	75%	63%			
0.630	17%	68%	57%			
0.315	15%	65%	54%			
0.160	10%	54%	45%			
0.080	8%	46%	38%			
M.C.(%):	2%	9%	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:	68	10	24			
% SAND:	24	44	38			
% FINES:	8	46	38			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)			



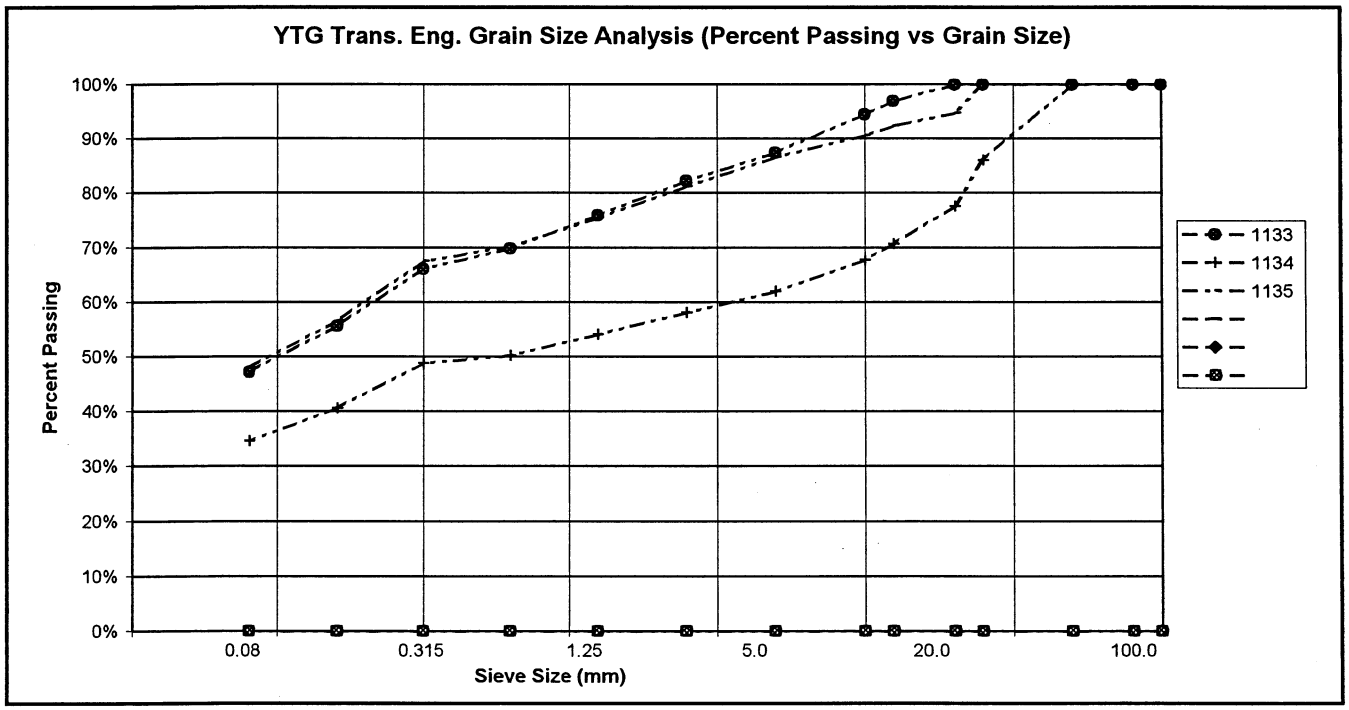
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1664
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1689+275 14M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/05

FIELD NO:	1130	1131	1132			
LAB NO:	1532	1533	1534			
DEPTH:	1.4-1.6	2.8-3.0	4.8-5.0			
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	95%	100%	93%			
20.0	85%	100%	91%			
12.5	78%	97%	86%			
10.0	72%	94%	83%			
5.0	58%	88%	76%			
2.5	49%	82%	70%			
1.25	40%	75%	64%			
0.630	32%	69%	58%			
0.315	23%	66%	55%			
0.160	16%	54%	46%			
0.080	12%	45%	39%			
M.C.(%):	4%	8%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	42	12	24			
% SAND:	47	43	37			
% FINES:	12	45	39			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)			



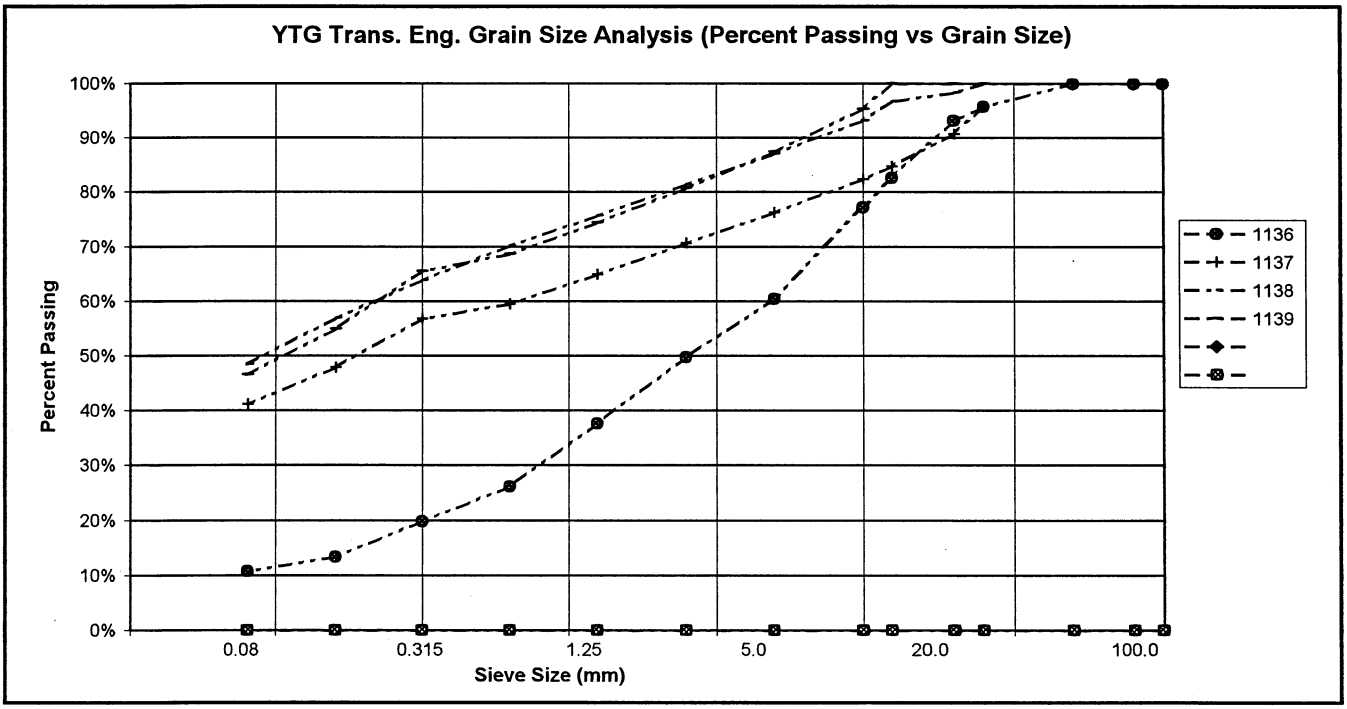
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1665
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1689+200 16M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/05

FIELD NO:	1133	1134	1135			
LAB NO:	1535	1536	1537			
DEPTH:	1.5-1.7	2.8-3.0	4.8-5.0			
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	100%	86%	100%			
20.0	100%	78%	95%			
12.5	97%	71%	92%			
10.0	94%	68%	91%			
5.0	87%	62%	87%			
2.5	82%	58%	81%			
1.25	76%	54%	75%			
0.630	70%	50%	70%			
0.315	66%	49%	68%			
0.160	56%	41%	57%			
0.080	47%	35%	48%			
M.C.(%):	9%	7%	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:	13	38	13			
% SAND:	40	27	39			
% FINES:	47	35	48			
CLASSIFICATION	SILTY SAND (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND (SM)			



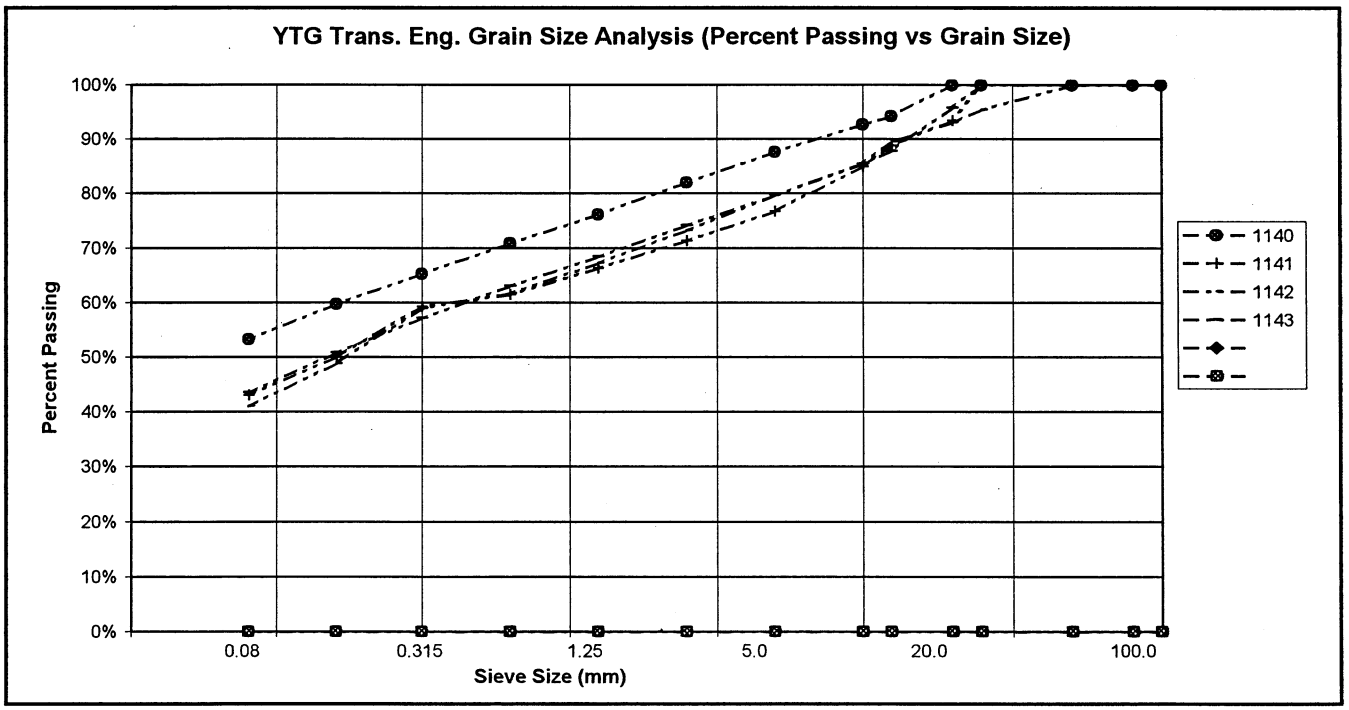
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1666
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1689+125 18M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/05

FIELD NO:	1136	1137	1138	1139		
LAB NO:	1538	1539	1540	1541		
DEPTH:	1.0-1.2	2.8-3.0	4.8-5.0	6.8-7.0		
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	96%	96%	100%	100%		
20.0	93%	91%	98%	100%		
12.5	83%	85%	97%	100%		
10.0	77%	82%	93%	95%		
5.0	60%	76%	87%	87%		
2.5	50%	71%	81%	81%		
1.25	38%	65%	76%	74%		
0.630	26%	59%	70%	69%		
0.315	20%	57%	64%	65%		
0.160	13%	48%	57%	55%		
0.080	11%	41%	48%	47%		
M.C.(%):	4%	10%	10%	9%		
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:	40	24	13	13		
% SAND:	50	35	39	41		
% FINES:	11	41	48	47		
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	SILTY SAND (SM)		



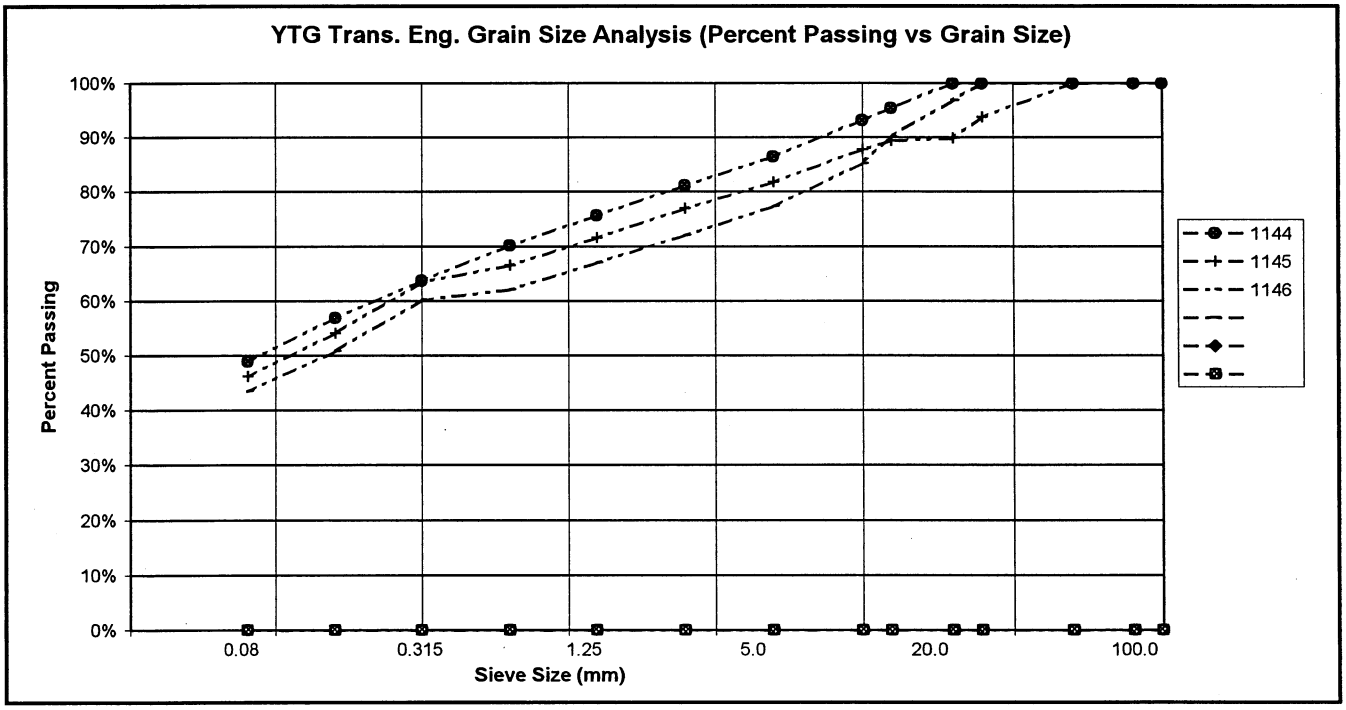
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1667
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1689+050 28M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/05

FIELD NO:	1140	1141	1142	1143		
LAB NO:	1542	1543	1544	1545		
DEPTH:	0.8-1.0	1.8-2.0	2.8-3.0	4.3-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	95%	100%		
20.0	100%	93%	93%	96%		
12.5	94%	89%	90%	88%		
10.0	93%	85%	86%	85%		
5.0	88%	77%	80%	80%		
2.5	82%	71%	73%	74%		
1.25	76%	66%	67%	68%		
0.630	71%	61%	62%	63%		
0.315	65%	59%	59%	57%		
0.160	60%	50%	49%	51%		
0.080	53%	43%	41%	43%		
M.C.(%):	15%	9%	6%	7%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	12	23	20	20		
% SAND:	34	34	39	36		
% FINES:	53	43	41	43		
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		



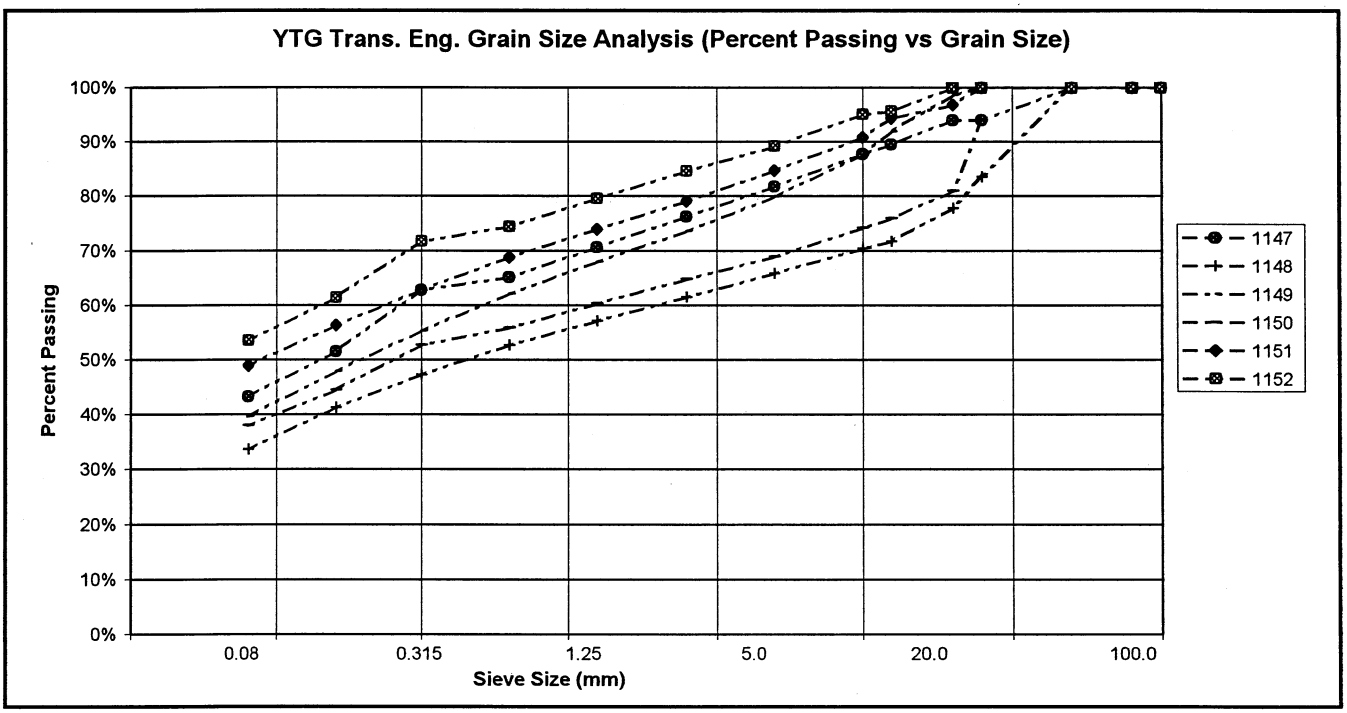
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1668
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1689+000 10M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/05

FIELD NO:	1144	1145	1146			
LAB NO:	1564	1547	1548			
DEPTH:	1.4-1.6	2.8-3.0	4.7-4.9			
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%	94%	100%			
20.0	100%	90%	97%			
12.5	95%	89%	90%			
10.0	93%	88%	85%			
5.0	87%	82%	77%			
2.5	81%	77%	72%			
1.25	76%	72%	67%			
0.630	70%	67%	62%			
0.315	64%	63%	60%			
0.160	57%	54%	51%			
0.080	49%	46%	44%			
M.C.(%):	10%	11%	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:	13	18	23			
% SAND:	38	36	34			
% FINES:	49	46	44			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1669
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1688+950 28M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/06

FIELD NO:	1147	1148	1149	1150	1151	1152
LAB NO:	1549	1550	1551	1552	1553	1554
DEPTH:	1.2-1.4	2.0-2.2	2.9-3.1	3.8-4.0	5.0-5.2	6.5-6.7
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING
100.0	100%	100%	100%	100%	100%	100%
80.0	100%	100%	100%	100%	100%	100%
50.0	100%	100%	100%	100%	100%	100%
25.0	94%	84%	100%	94%	100%	100%
20.0	94%	78%	99%	81%	97%	100%
12.5	90%	72%	92%	76%	94%	96%
10.0	88%	70%	88%	74%	91%	95%
5.0	82%	66%	80%	69%	85%	89%
2.5	76%	61%	74%	65%	79%	85%
1.25	71%	57%	68%	60%	74%	80%
0.630	65%	53%	62%	56%	69%	74%
0.315	63%	47%	55%	53%	63%	72%
0.160	52%	41%	48%	45%	56%	61%
0.080	43%	34%	40%	38%	49%	53%
M.C.(%):	10%	10%	11%	9%	10%	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:	18	34	20	31	15	11
% SAND:	38	32	40	31	36	36
% FINES:	43	34	40	38	49	53
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)

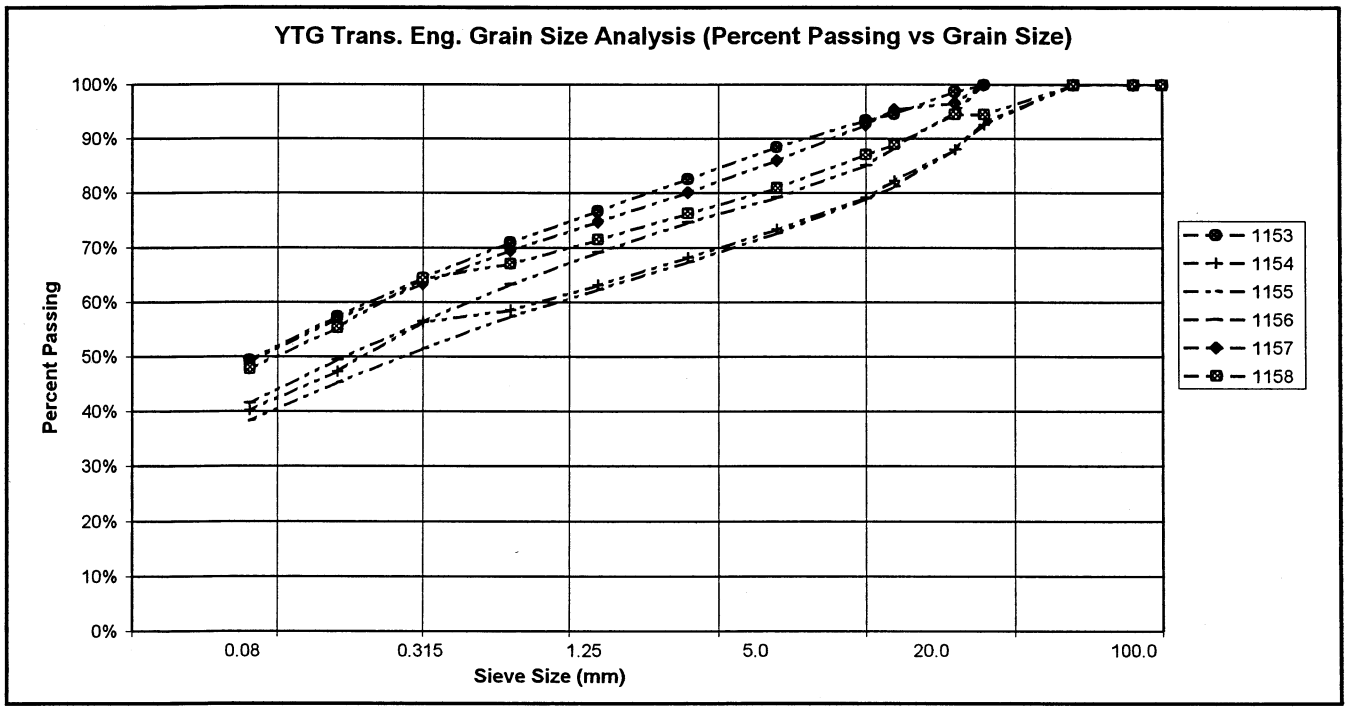


PROJECT NUMBER: 092-202101-0363
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SEGMENT 9
PROJECT LOCATION: KM 1664-1692 A/H
DRILL UNIT: MOBILE B 40 L
HOLE LOCATION: 1688+900 8M LT
LOGGED BY: D.T.

HOLE No.: 559-1670

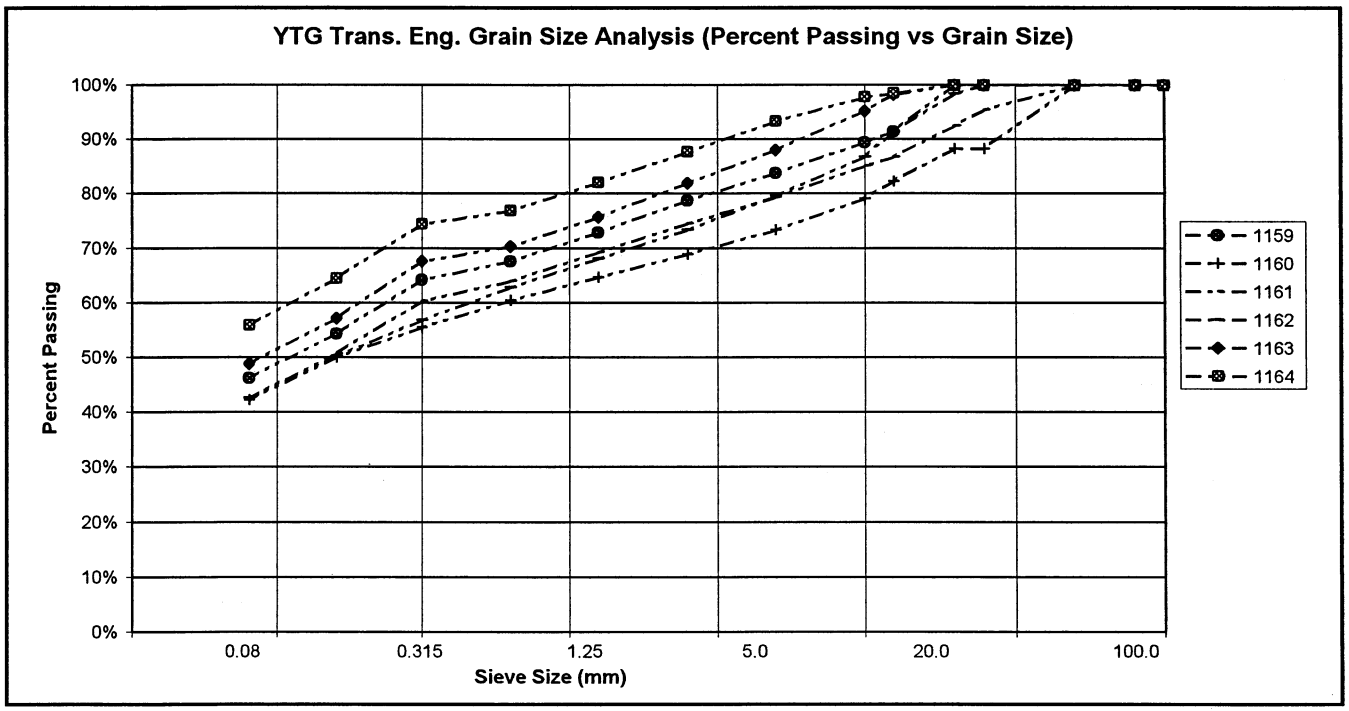
DATE COMP: 2000/07/06

FIELD NO:	1153	1154	1155	1156	1157	1158
LAB NO:	1555	1556	1557	1558	1559	1560
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	3.9-4.1	4.8-5.0	6.8-7.0
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING
100.0	100%	100%	100%	100%	100%	100%
80.0	100%	100%	100%	100%	100%	100%
50.0	100%	100%	100%	100%	100%	100%
25.0	100%	93%	93%	100%	100%	94%
20.0	99%	88%	88%	95%	97%	94%
12.5	95%	82%	81%	88%	95%	89%
10.0	93%	79%	79%	85%	93%	87%
5.0	88%	73%	73%	79%	86%	81%
2.5	83%	68%	67%	75%	80%	76%
1.25	77%	63%	62%	69%	75%	72%
0.630	71%	59%	57%	63%	69%	67%
0.315	64%	56%	52%	56%	63%	64%
0.160	57%	47%	45%	49%	57%	55%
0.080	49%	40%	38%	42%	49%	48%
M.C.(%):	11%	8%	8%	8%	8%	7%
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	0.0
% GRAVEL:	12	27	27	21	14	19
% SAND:	39	33	34	38	37	33
% FINES:	49	40	38	42	49	48
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)



PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1671
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1688+850 25M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/06

FIELD NO:	1159	1160	1161	1162	1163	1164
LAB NO:	1561	1562	1563	1564	1565	1566
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	3.8-4.0	5.0-5.2	6.8-7.0
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING
100.0	100%	100%	100%	100%	100%	100%
80.0	100%	100%	100%	100%	100%	100%
50.0	100%	100%	100%	100%	100%	100%
25.0	100%	88%	95%	100%	100%	100%
20.0	100%	88%	92%	98%	100%	100%
12.5	91%	82%	87%	91%	98%	98%
10.0	89%	79%	85%	87%	95%	98%
5.0	84%	73%	79%	80%	88%	93%
2.5	79%	69%	75%	73%	82%	88%
1.25	73%	65%	69%	68%	76%	82%
0.630	68%	60%	64%	63%	70%	77%
0.315	64%	56%	60%	57%	68%	74%
0.160	54%	50%	51%	50%	57%	64%
0.080	46%	42%	43%	43%	49%	56%
M.C.(%):	12%	8%	9%	8%	10%	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:	16	27	21	20	12	7
% SAND:	38	31	37	37	39	37
% FINES:	46	42	43	43	49	56
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	SANDY SILT (ML)

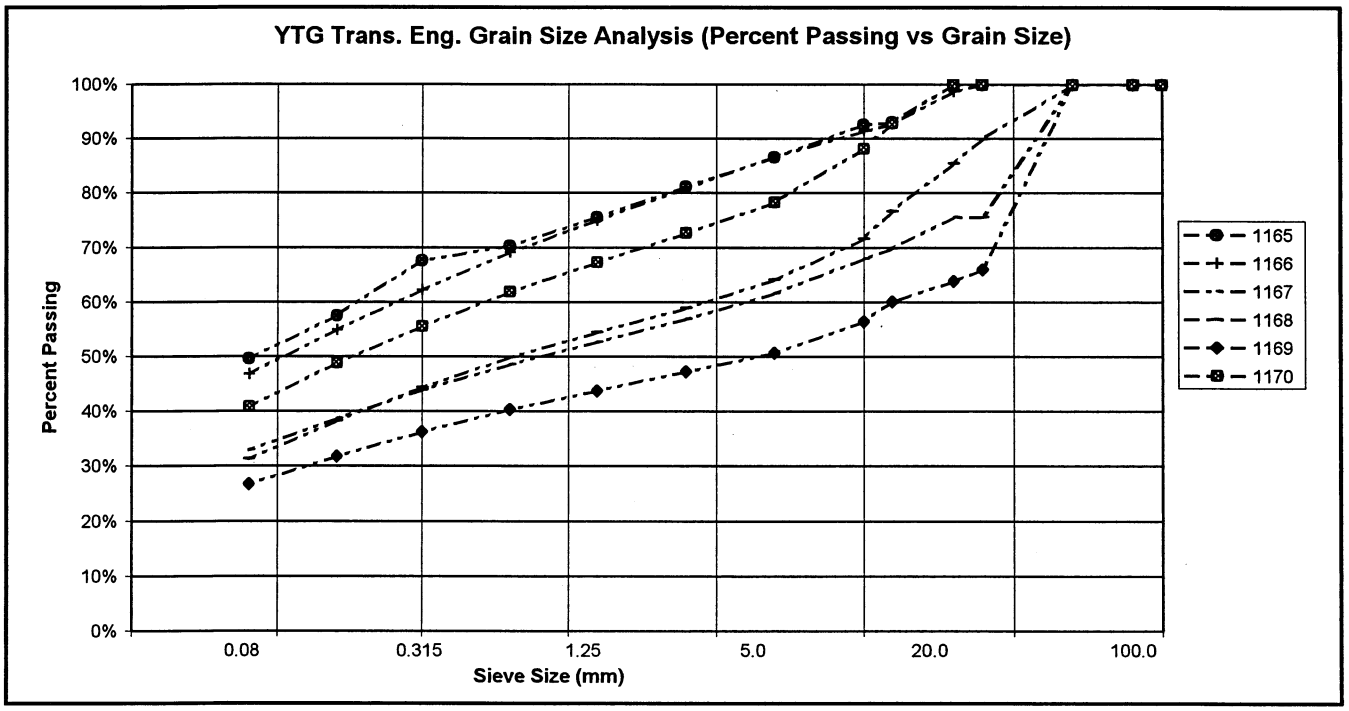


PROJECT NUMBER: 092-202101-0363
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SEGMENT 9
PROJECT LOCATION: KM 1664-1692 A/H
DRILL UNIT: MOBILE B 40 L
HOLE LOCATION: 1688+800 10M LT
LOGGED BY: D.T.

HOLE No.: 559-1672

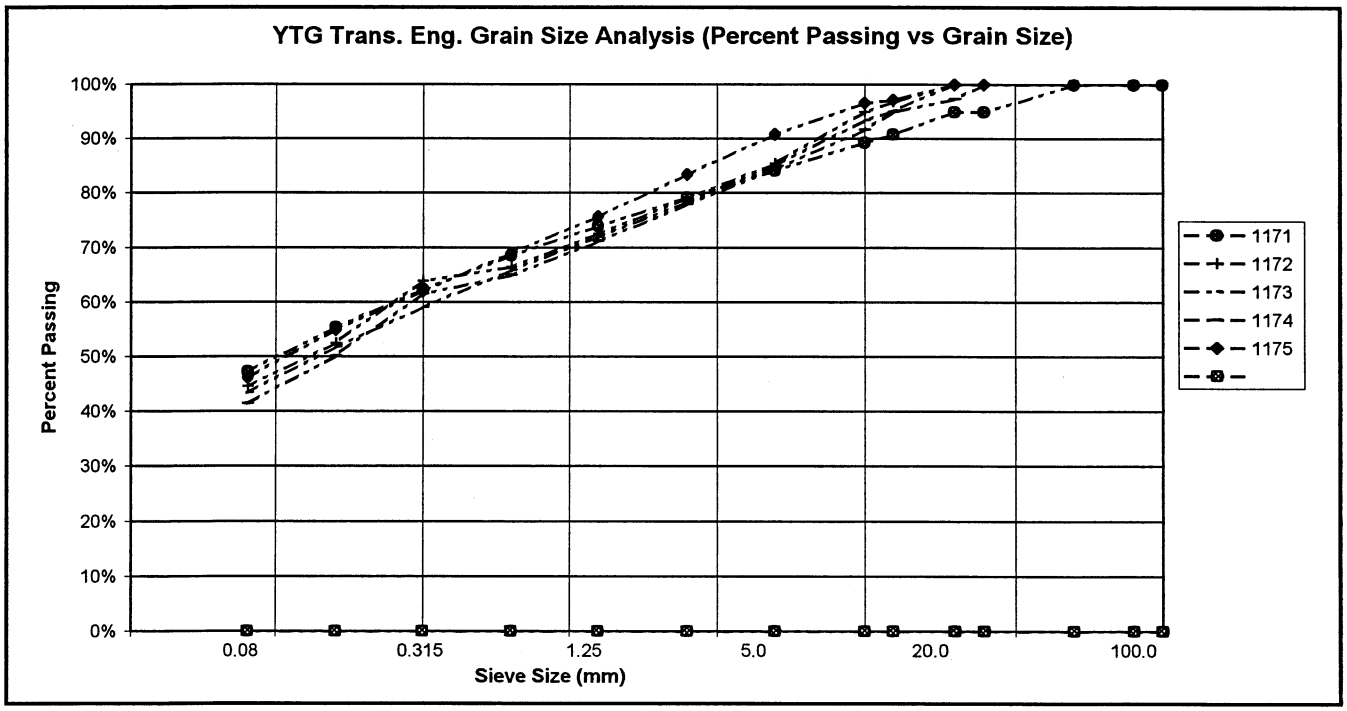
DATE COMP: 2000/07/06

FIELD NO:	1165	1166	1167	1168	1169	1170
LAB NO:	1567	1568	1569	1570	1571	1572
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	3.9-4.1	5.0-5.2	6.8-7.0
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING
100.0	100%	100%	100%	100%	100%	100%
80.0	100%	100%	100%	100%	100%	100%
50.0	100%	100%	100%	100%	100%	100%
25.0	100%	100%	76%	90%	66%	100%
20.0	100%	99%	76%	85%	64%	100%
12.5	93%	93%	70%	77%	60%	93%
10.0	93%	91%	68%	72%	56%	88%
5.0	87%	87%	62%	64%	51%	78%
2.5	81%	81%	57%	59%	47%	73%
1.25	76%	75%	53%	54%	44%	67%
0.630	70%	69%	49%	50%	40%	62%
0.315	68%	62%	44%	44%	36%	56%
0.160	58%	55%	39%	38%	32%	49%
0.080	50%	47%	33%	31%	27%	41%
M.C.(%):	12%	9%	7%	7%	6%	7%
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	0.0
% GRAVEL:	13	13	38	36	49	22
% SAND:	37	40	29	33	24	37
% FINES:	50	47	33	31	27	41
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)



PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1673
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1688+750 30M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/07

FIELD NO:	1171	1172	1173	1174	1175	
LAB NO:	1573	1574	1575	1576	1577	
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.0-4.2	4.9-5.1	
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	95%	100%	100%	100%	100%	
20.0	95%	100%	100%	97%	100%	
12.5	91%	97%	95%	95%	97%	
10.0	89%	95%	93%	92%	97%	
5.0	84%	85%	85%	84%	91%	
2.5	79%	79%	78%	78%	83%	
1.25	74%	73%	72%	71%	76%	
0.630	69%	66%	66%	65%	69%	
0.315	62%	64%	59%	62%	62%	
0.160	55%	52%	52%	50%	55%	
0.080	47%	45%	43%	41%	46%	
M.C.(%):	18%	14%	11%	9%	10%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	16	15	15	16	9	
% SAND:	37	41	42	43	45	
% FINES:	47	45	43	41	46	
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	

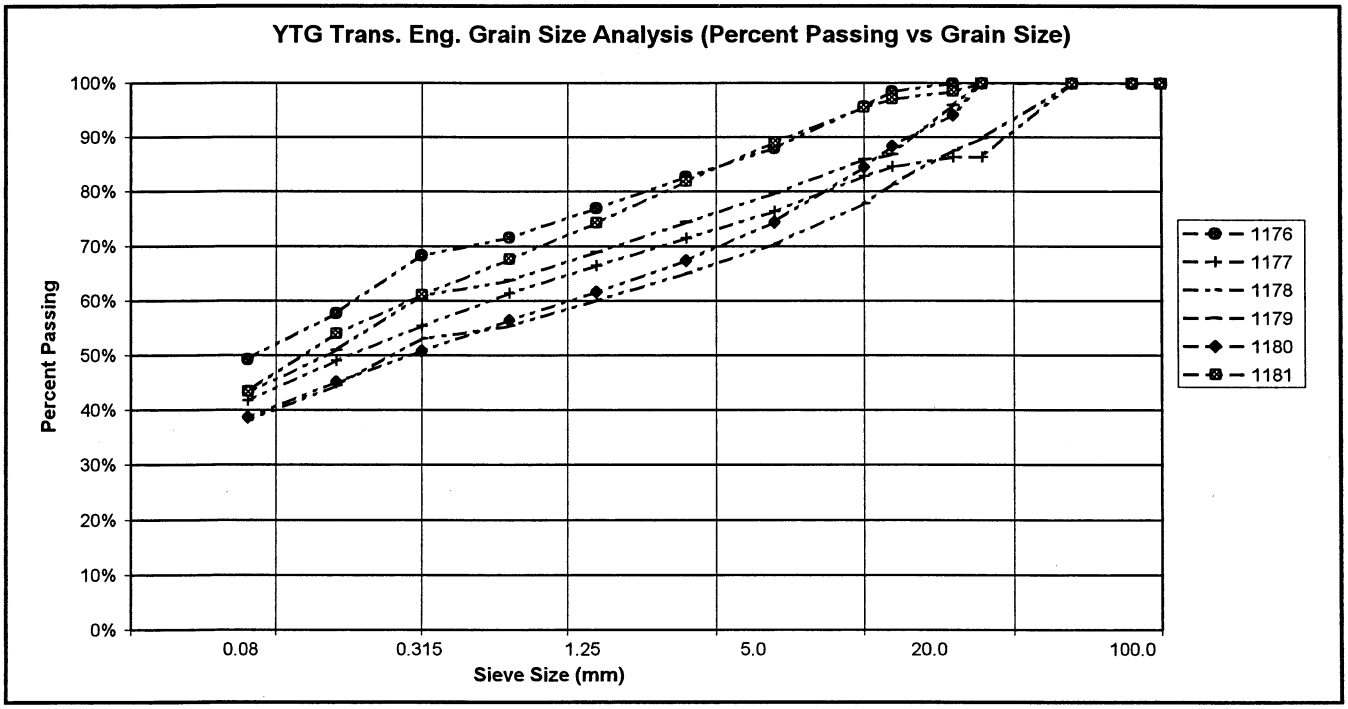


PROJECT NUMBER: 092-202101-0363
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SEGMENT 9
PROJECT LOCATION: KM 1664-1692 A/H
DRILL UNIT: MOBILE B 40 L
HOLE LOCATION: 1688+700 7M LT
LOGGED BY: D.T.

HOLE No.: 559-1674

DATE COMP: 2000/07/07

FIELD NO:	1176	1177	1178	1179	1180	1181
LAB NO:	1578	1579	1580	1571	1582	1583
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	3.8-4.0	4.8-5.0	6.8-7.0
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING
100.0	100%	100%	100%	100%	100%	100%
80.0	100%	100%	100%	100%	100%	100%
50.0	100%	100%	100%	100%	100%	100%
25.0	100%	86%	90%	100%	100%	100%
20.0	100%	86%	88%	96%	94%	98%
12.5	98%	85%	81%	87%	88%	97%
10.0	96%	83%	78%	86%	85%	96%
5.0	88%	76%	70%	80%	74%	89%
2.5	83%	71%	65%	74%	67%	82%
1.25	77%	66%	60%	69%	62%	74%
0.630	72%	61%	55%	64%	56%	68%
0.315	68%	55%	53%	61%	51%	61%
0.160	58%	49%	45%	51%	45%	54%
0.080	49%	42%	38%	43%	39%	43%
M.C.(%):	10%	8%	8%	9%	8%	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:	12	24	30	20	26	11
% SAND:	39	35	32	36	36	46
% FINES:	49	42	38	43	39	43
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)

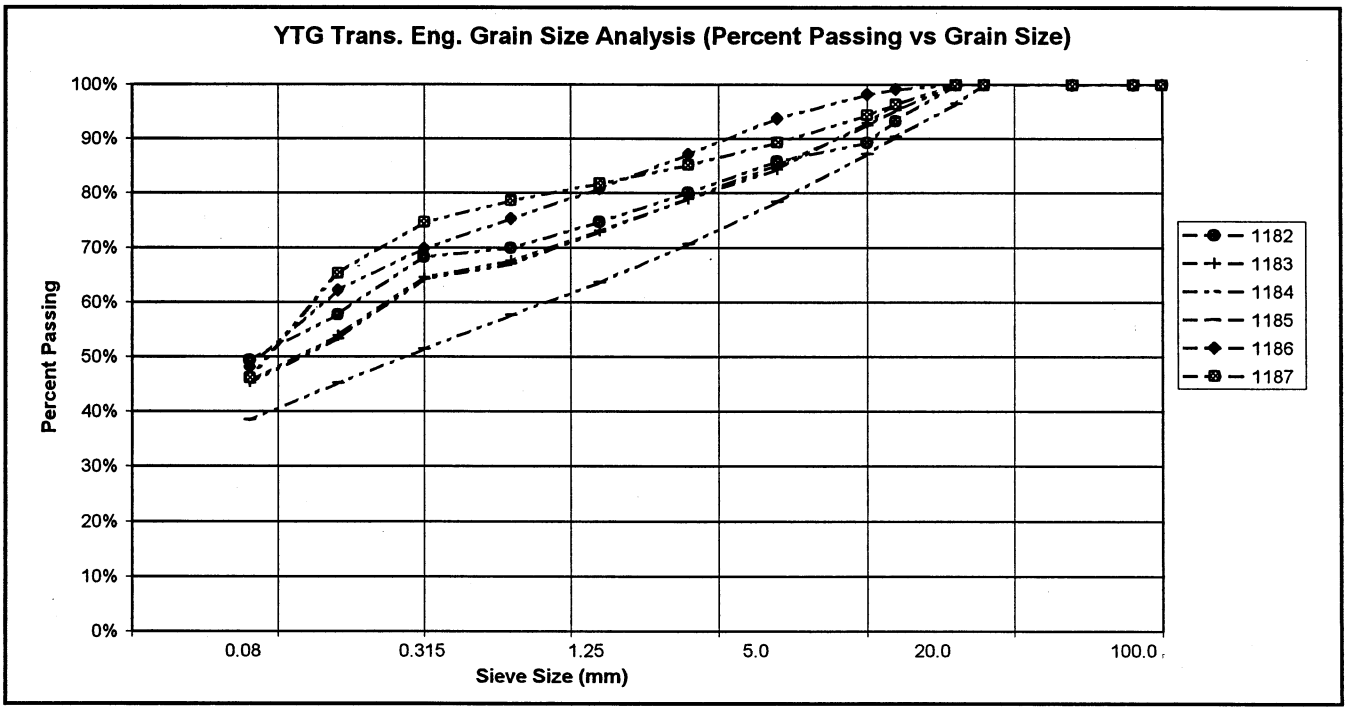


PROJECT NUMBER: 092-202101-0363
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SEGMENT 9
PROJECT LOCATION: KM 1664-1692 A/H
DRILL UNIT: MOBILE B 40 L
HOLE LOCATION: 1688+625 25M LT
LOGGED BY: D.T.

HOLE No.: 559-1675

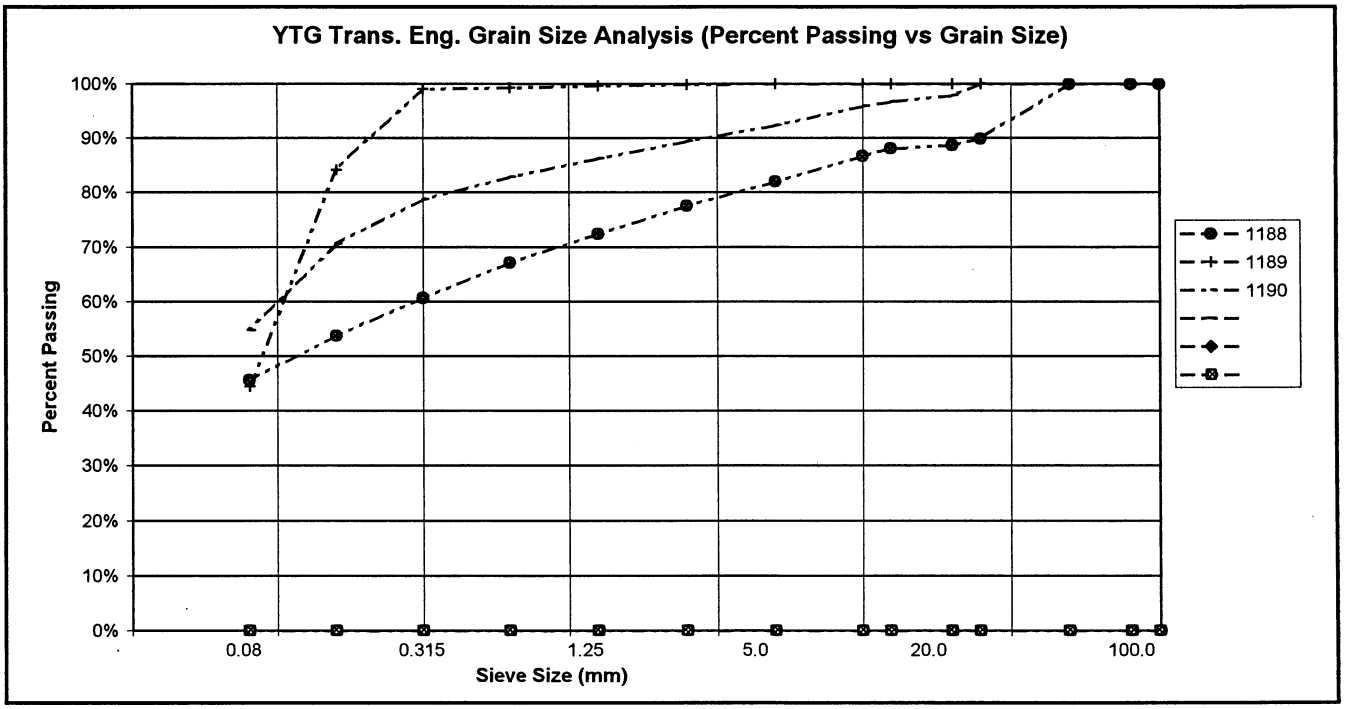
DATE COMP: 2000/07/07

FIELD NO:	1182	1183	1184	1185	1186	1187
LAB NO:	1584	1585	1586	1587	1588	1589
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	3.9-4.1	5.0-5.2	6.8-7.0
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING
100.0	100%	100%	100%	100%	100%	100%
80.0	100%	100%	100%	100%	100%	100%
50.0	100%	100%	100%	100%	100%	100%
25.0	100%	100%	100%	100%	100%	100%
20.0	100%	100%	100%	97%	100%	100%
12.5	93%	97%	95%	90%	99%	96%
10.0	89%	93%	92%	87%	98%	94%
5.0	86%	84%	85%	78%	94%	89%
2.5	80%	79%	79%	71%	87%	85%
1.25	75%	73%	73%	64%	81%	82%
0.630	70%	68%	67%	58%	75%	79%
0.315	68%	65%	64%	51%	70%	75%
0.160	58%	54%	53%	45%	62%	65%
0.080	49%	45%	45%	38%	48%	46%
M.C.(%):	31%	16%	14%	12%	13%	11%
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	0.0
% GRAVEL:	14	16	15	22	6	11
% SAND:	37	39	40	40	46	43
% FINES:	49	45	45	38	48	46
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	SILTY SAND (SM)



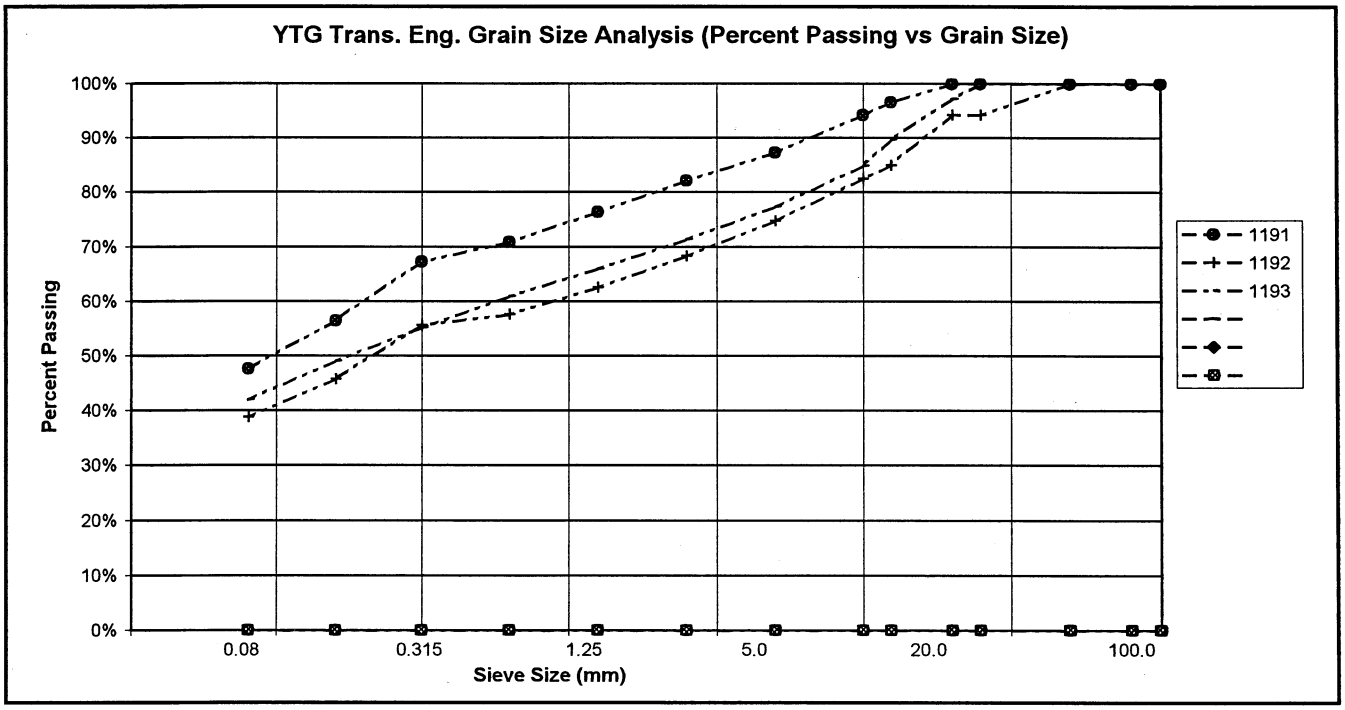
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1676
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1688+650 16M RT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/07

FIELD NO:	1188	1189	1190			
LAB NO:	1590	1591	1592			
DEPTH:	1.4-1.6	2.8-3.0	4.8-5.0			
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	90%	100%	100%			
20.0	89%	100%	98%			
12.5	88%	100%	97%			
10.0	87%	100%	96%			
5.0	82%	100%	92%			
2.5	78%	100%	89%			
1.25	72%	100%	86%			
0.630	67%	99%	83%			
0.315	61%	99%	79%			
0.160	54%	84%	71%			
0.080	46%	45%	55%			
M.C.(%):	17%	9%	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:	18	0	8			
% SAND:	36	55	38			
% FINES:	46	45	55			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	SANDY SILT (ML)			



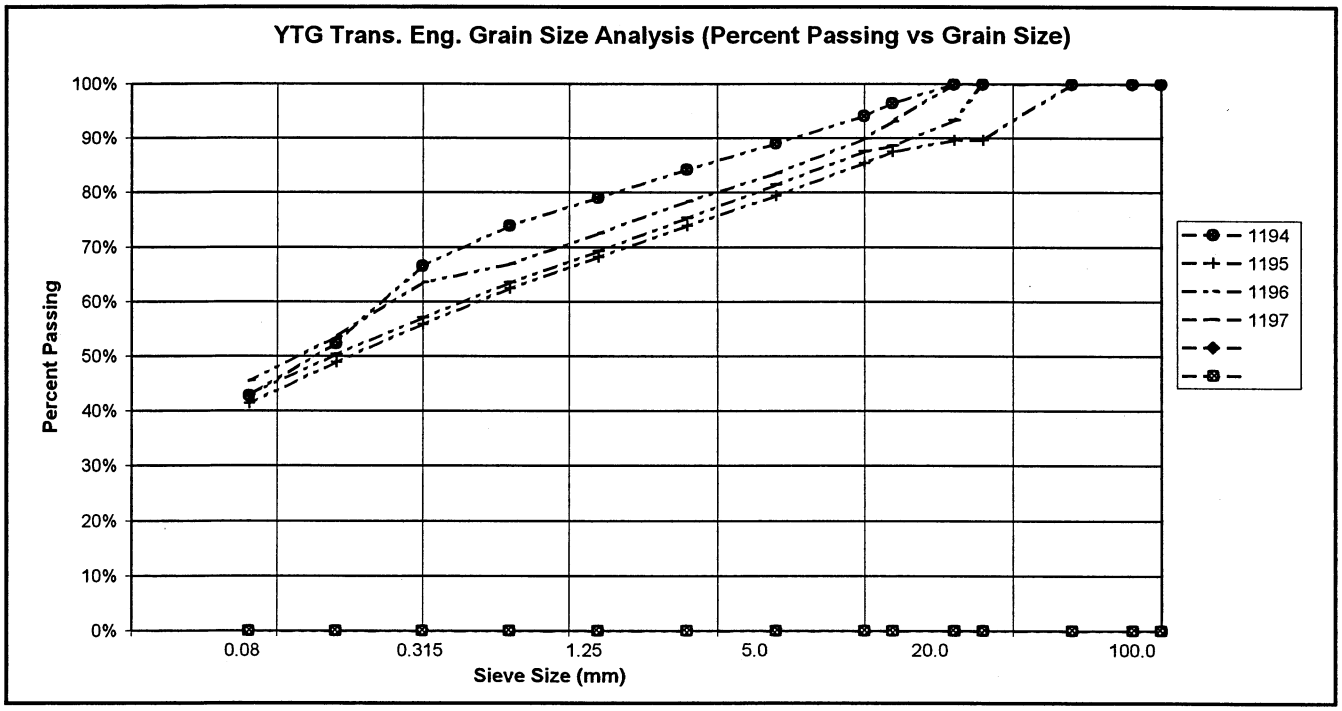
PROJECT NUMBER:	092-202101-0363		HOLE No.: 559-1677
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SEGMENT 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	MOBILE B 40 L		
HOLE LOCATION:	1688+750 12 M RT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/07

FIELD NO:	1191	1192	1193			
LAB NO:	1593	1594	1595			
DEPTH:	1.5-1.7	2.9-3.1	4.8-5.0			
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	100%	94%	100%			
20.0	100%	94%	97%			
12.5	97%	85%	90%			
10.0	94%	83%	85%			
5.0	87%	75%	77%			
2.5	82%	68%	71%			
1.25	76%	63%	66%			
0.630	71%	58%	61%			
0.315	67%	56%	55%			
0.160	56%	46%	49%			
0.080	48%	39%	42%			
M.C.(%):	10%	6%	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:	13	25	23			
% SAND:	40	36	35			
% FINES:	48	39	42			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



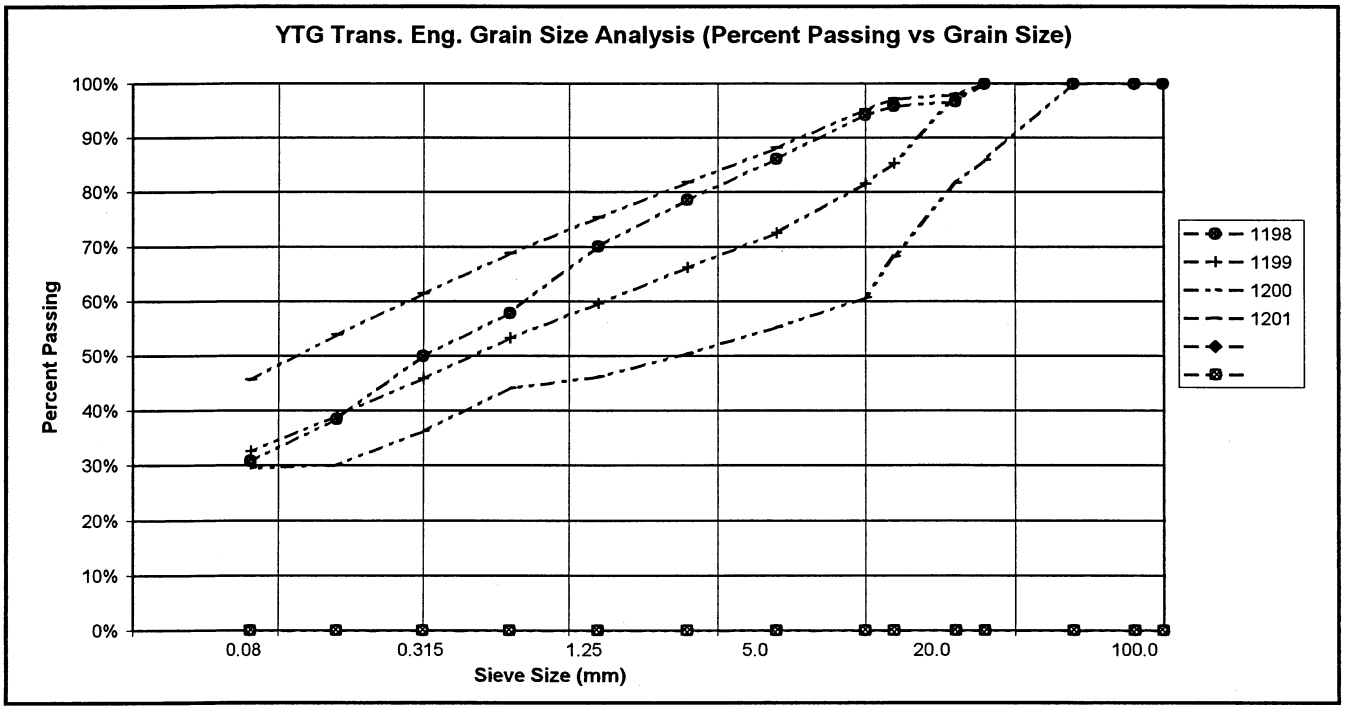
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1678
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1688+750		
LOGGED BY:	D.T.		DATE COMP: 2000/07/10

FIELD NO:	1194	1195	1196	1197		
LAB NO:	1596	1597	1598	1599		
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0		
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%	90%	100%	100%		
20.0	100%	90%	100%	93%		
12.5	96%	88%	93%	89%		
10.0	94%	85%	90%	88%		
5.0	89%	79%	84%	81%		
2.5	84%	74%	78%	75%		
1.25	79%	68%	72%	69%		
0.630	74%	62%	67%	63%		
0.315	67%	56%	63%	57%		
0.160	52%	49%	53%	50%		
0.080	43%	41%	46%	43%		
M.C.(%):	12%	9%	9%	8%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	11	21	16	19		
% SAND:	46	38	38	38		
% FINES:	43	41	46	43		
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		



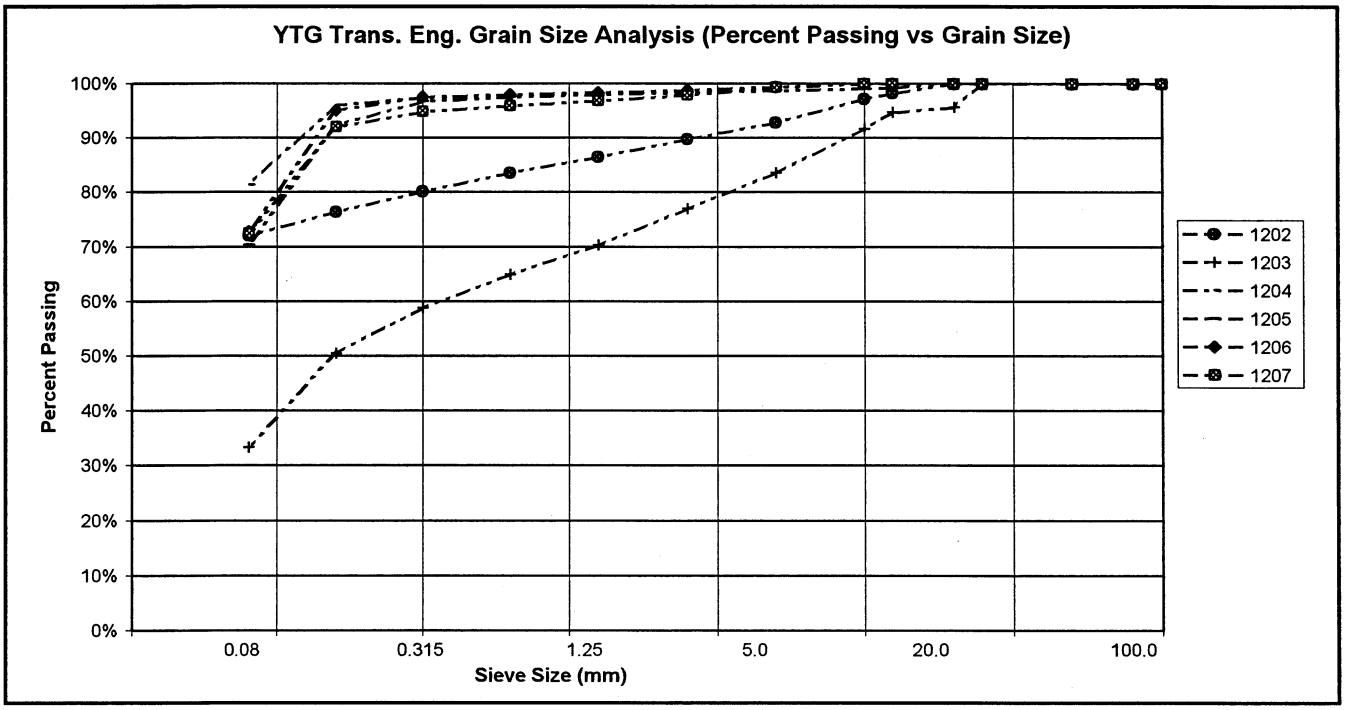
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1679
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1688+950 18M RT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/10

FIELD NO:	1198	1199	1200	1201		
LAB NO:	1600	1601	1602	1603		
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	86%	100%		
20.0	97%	97%	82%	98%		
12.5	96%	85%	68%	97%		
10.0	94%	82%	61%	95%		
5.0	86%	73%	55%	88%		
2.5	79%	66%	50%	82%		
1.25	70%	60%	46%	75%		
0.630	58%	53%	44%	69%		
0.315	50%	46%	36%	61%		
0.160	38%	39%	30%	54%		
0.080	31%	33%	30%	46%		
M.C.(%):	8%	7%	5%	8%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	14	27	45	12		
% SAND:	55	40	26	42		
% FINES:	31	33	30	46		
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND (SM)		



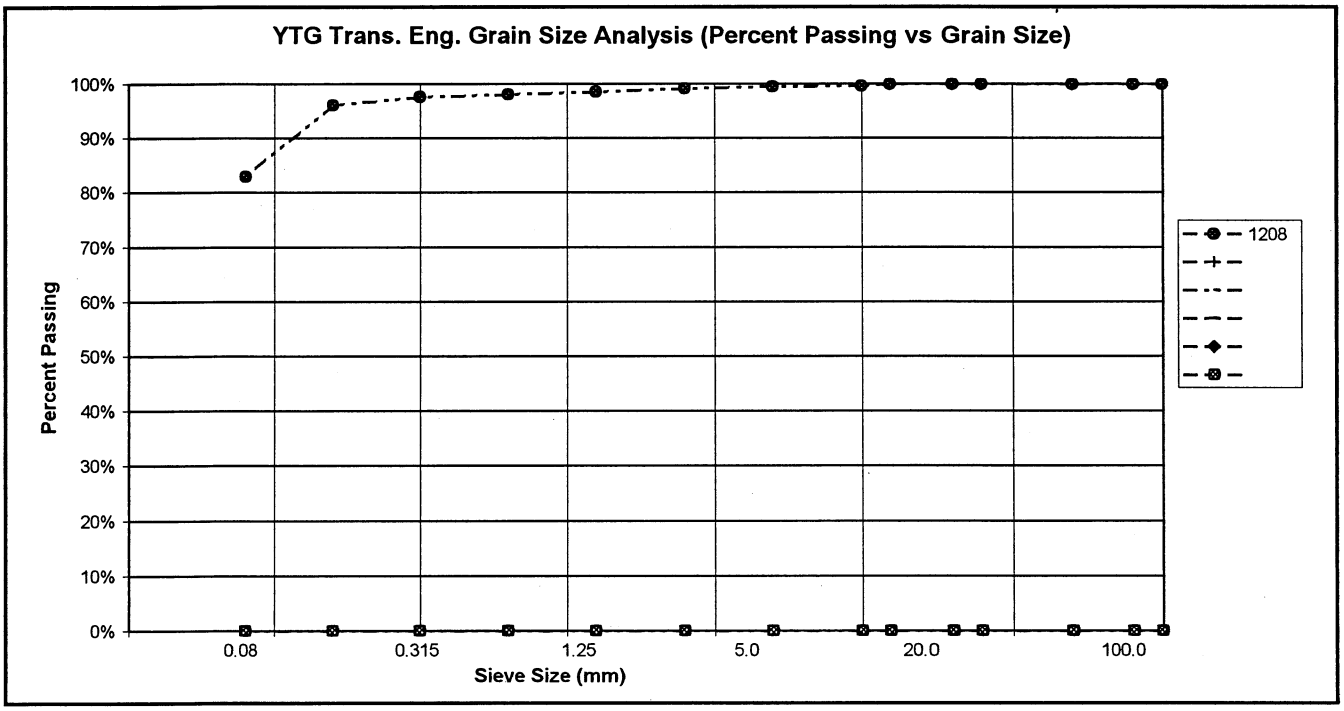
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1680
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1688+550 1M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/10

FIELD NO:	1202	1203	1204	1205	1206	1207
LAB NO:	1604	1605	1606	1607	1608	1609
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	3.8-4.0	5.0-5.2	6.0-6.2
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING
100.0	100%	100%	100%	100%	100%	100%
80.0	100%	100%	100%	100%	100%	100%
50.0	100%	100%	100%	100%	100%	100%
25.0	100%	100%	100%	100%	100%	100%
20.0	100%	96%	100%	100%	100%	100%
12.5	98%	95%	100%	99%	100%	100%
10.0	97%	92%	100%	99%	100%	100%
5.0	93%	84%	99%	99%	99%	99%
2.5	90%	77%	99%	98%	99%	98%
1.25	87%	70%	98%	98%	98%	97%
0.630	84%	65%	98%	98%	98%	96%
0.315	80%	59%	97%	97%	98%	95%
0.160	76%	51%	96%	92%	95%	92%
0.080	72%	33%	81%	70%	73%	72%
M.C.(%):	15%	8%	15%	17%	17%	16%
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:	7	16	1	1	1	1
% SAND:	21	50	18	28	27	27
% FINES:	72	33	81	70	73	72
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILT WITH SAND (ML)	SILT WITH SAND (ML)	SILT WITH SAND (ML)	SILT WITH SAND (ML)



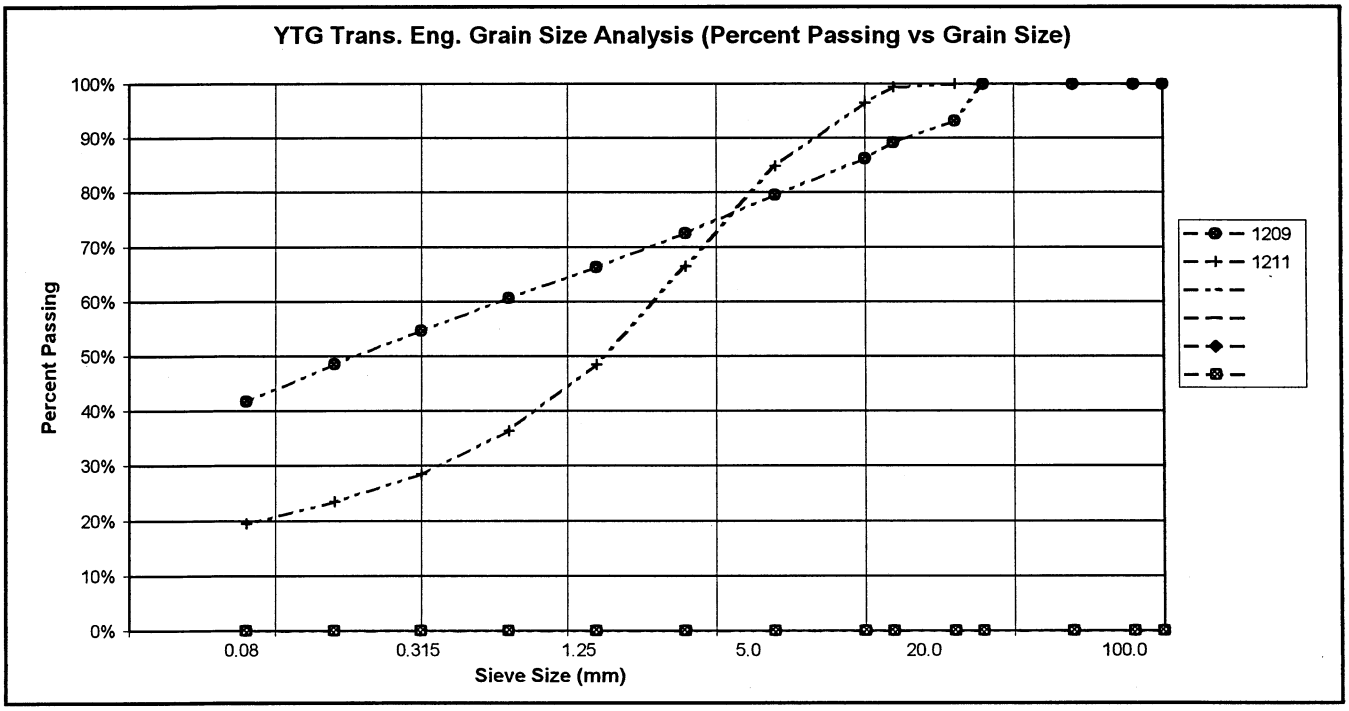
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1680A
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1688+550 1M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/10

FIELD NO:	1208					
LAB NO:	1610					
DEPTH:	6.8-7.0					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	100%					
20.0	100%					
12.5	100%					
10.0	100%					
5.0	100%					
2.5	99%					
1.25	99%					
0.630	98%					
0.315	98%					
0.160	96%					
0.080	83%					
M.C.(%):	20%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	0					
% SAND:	17					
% FINES:	83					
CLASSIFICATION	SILT WITH SAND (ML)					



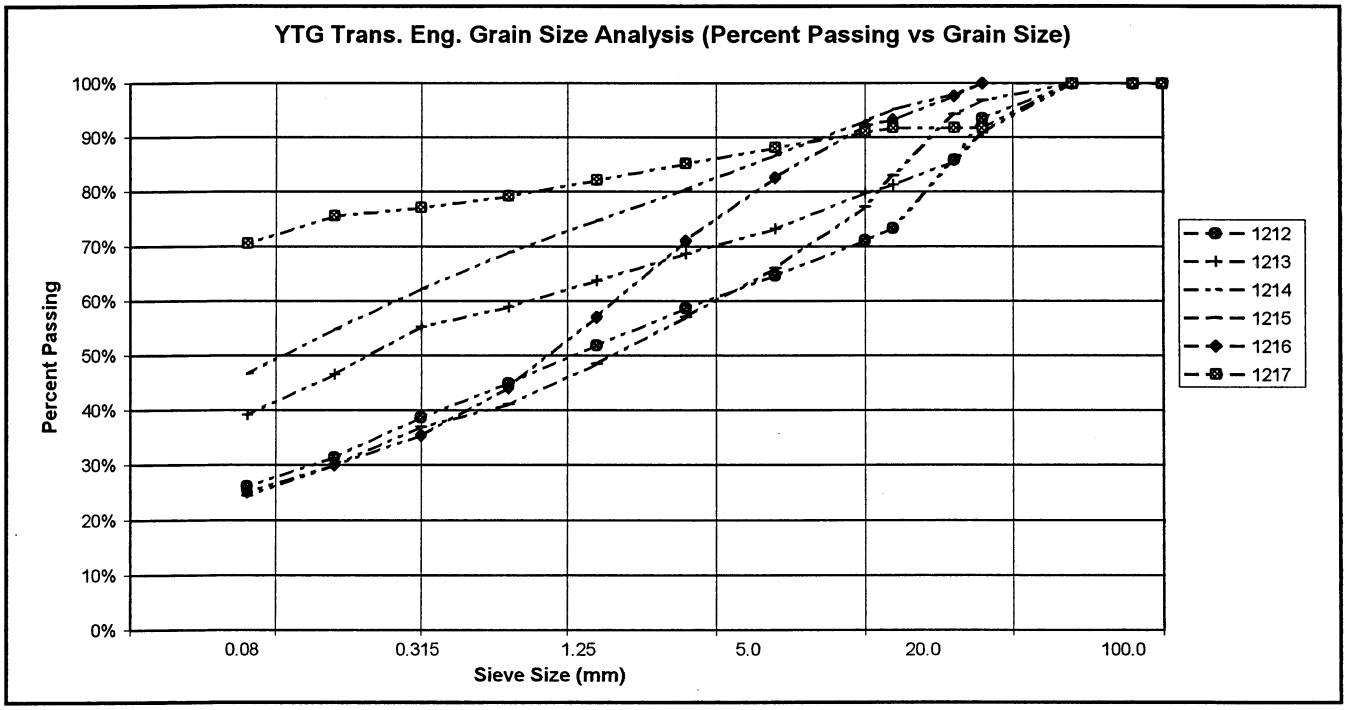
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1681
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1688+475 27M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/11

FIELD NO:	1209	1211				
LAB NO:	1611	1613				
DEPTH:	0.8-1.0	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	100%	100%				
20.0	93%	100%				
12.5	89%	99%				
10.0	86%	97%				
5.0	80%	85%				
2.5	73%	66%				
1.25	66%	49%				
0.630	61%	36%				
0.315	55%	29%				
0.160	49%	23%				
0.080	42%	19%				
M.C.(%):	21%	9%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	20	15				
% SAND:	38	65				
% FINES:	42	19				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				



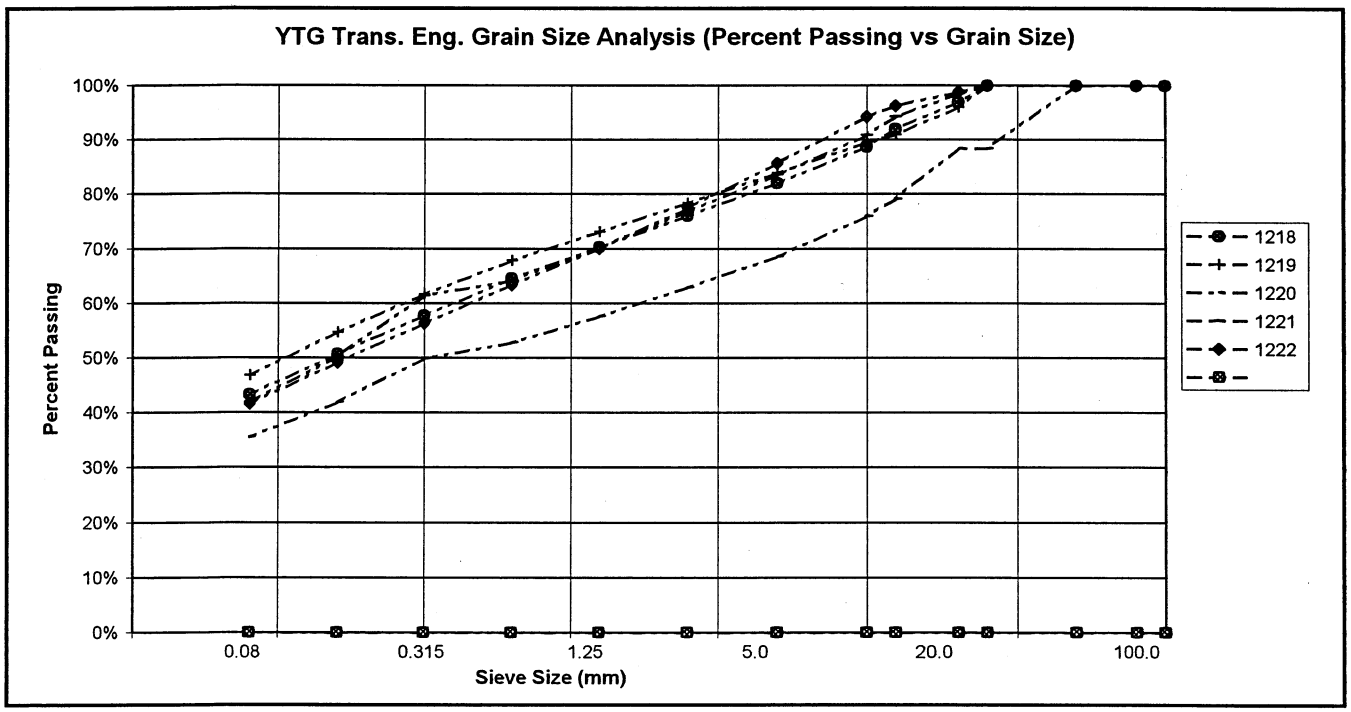
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1682
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1688+400 2M RT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/11

FIELD NO:	1212	1213	1214	1215	1216	1217
LAB NO:	1614	1615	1616	1617	1618	1619
DEPTH:	0.8-1.0	1.8-2.0	3.0-3.2	3.9-4.1	5.1-5.3	6.8-7.0
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING
100.0	100%	100%	100%	100%	100%	100%
80.0	100%	100%	100%	100%	100%	100%
50.0	100%	100%	100%	100%	100%	100%
25.0	94%	91%	100%	97%	100%	92%
20.0	86%	86%	98%	94%	98%	92%
12.5	73%	81%	95%	83%	93%	92%
10.0	71%	80%	93%	77%	92%	91%
5.0	65%	73%	87%	66%	83%	88%
2.5	59%	69%	81%	57%	71%	85%
1.25	52%	64%	75%	49%	57%	82%
0.630	45%	59%	69%	41%	44%	79%
0.315	39%	55%	62%	37%	35%	77%
0.160	32%	47%	55%	30%	30%	76%
0.080	26%	39%	47%	24%	25%	71%
M.C.(%):	8%	10%	10%	6%	9%	18%
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:	35	27	13	34	17	12
% SAND:	38	34	40	42	57	18
% FINES:	26	39	47	24	25	71
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILT WITH SAND (ML)



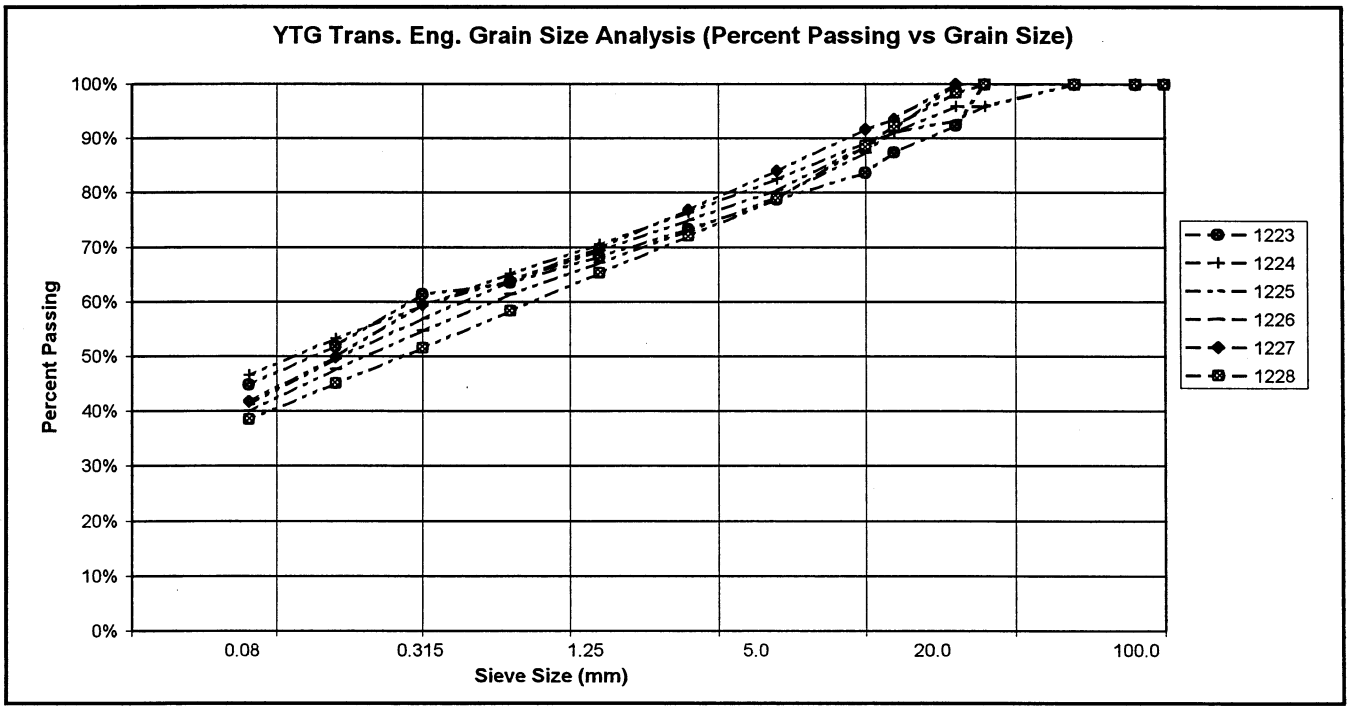
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1683
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1688+325 20M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/11

FIELD NO:	1218	1219	1220	1221	1222	
LAB NO:	1620	1621	1622	1623	1624	
DEPTH:	0.8-1.0	1.9-2.0	3.0-3.2	4.0-4.2	5.1-5.3	
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	100%	100%	88%	100%	100%	
20.0	97%	96%	88%	98%	99%	
12.5	92%	91%	79%	94%	96%	
10.0	89%	90%	76%	91%	94%	
5.0	82%	84%	68%	84%	86%	
2.5	76%	78%	63%	77%	77%	
1.25	70%	73%	58%	70%	70%	
0.630	65%	68%	53%	64%	63%	
0.315	58%	62%	50%	61%	56%	
0.160	51%	55%	42%	50%	49%	
0.080	43%	47%	36%	42%	42%	
M.C.(%):	12%	12%	9%	10%	10%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	18	16	32	16	14	
% SAND:	39	37	33	42	44	
% FINES:	43	47	36	42	42	
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	



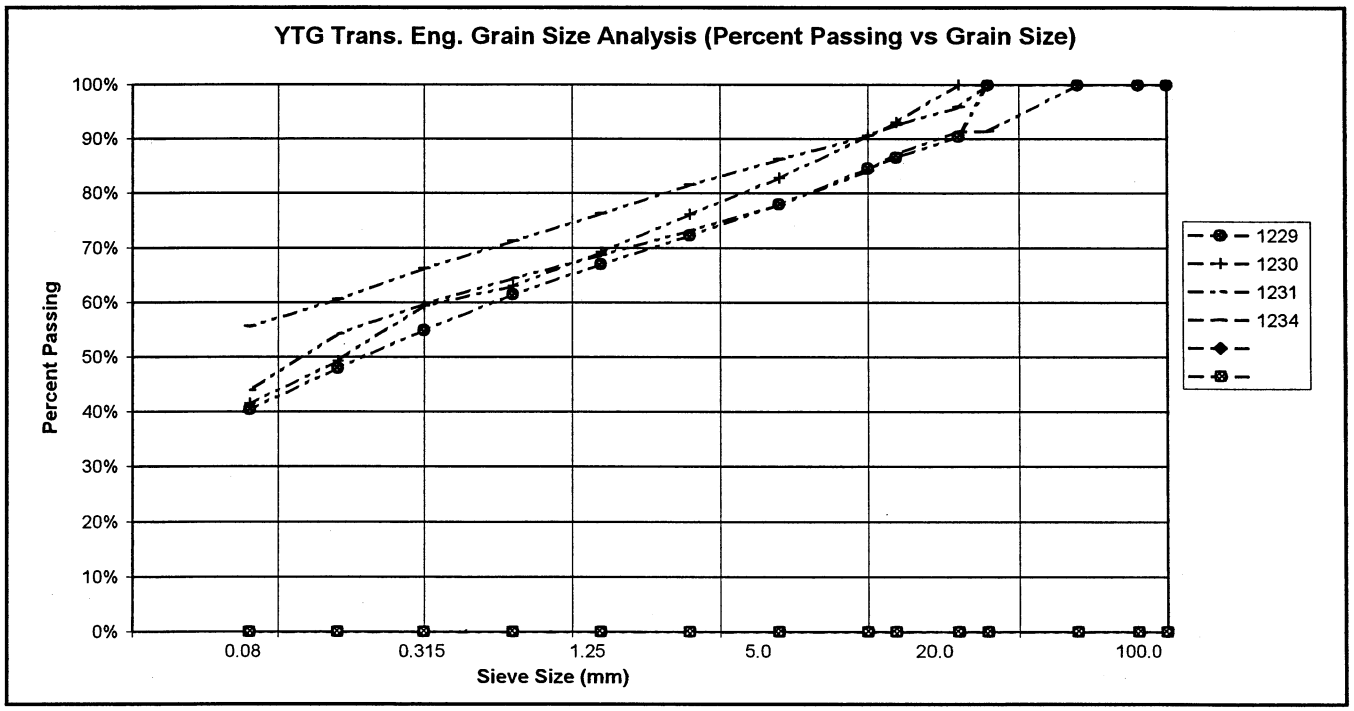
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1684
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1688+250 2M RT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/11

FIELD NO:	1223	1224	1225	1226	1227	1228
LAB NO:	1625	1626	1627	1628	1629	1630
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.0-4.2	5.0-5.2	6.8-7.0
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING
100.0	100%	100%	100%	100%	100%	100%
80.0	100%	100%	100%	100%	100%	100%
50.0	100%	100%	100%	100%	100%	100%
25.0	100%	96%	96%	100%	100%	100%
20.0	92%	96%	93%	100%	100%	98%
12.5	87%	91%	91%	92%	94%	92%
10.0	84%	89%	88%	87%	92%	89%
5.0	79%	82%	81%	79%	84%	79%
2.5	73%	76%	75%	73%	77%	72%
1.25	68%	71%	69%	67%	70%	65%
0.630	64%	65%	64%	61%	64%	58%
0.315	61%	59%	57%	55%	60%	51%
0.160	52%	53%	50%	48%	50%	45%
0.080	45%	47%	41%	40%	42%	39%
M.C.(%):	10%	11%	9%	8%	9%	7%
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	0.0
% GRAVEL:	21	18	19	21	16	21
% SAND:	34	36	39	39	42	40
% FINES:	45	47	41	40	42	39
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)



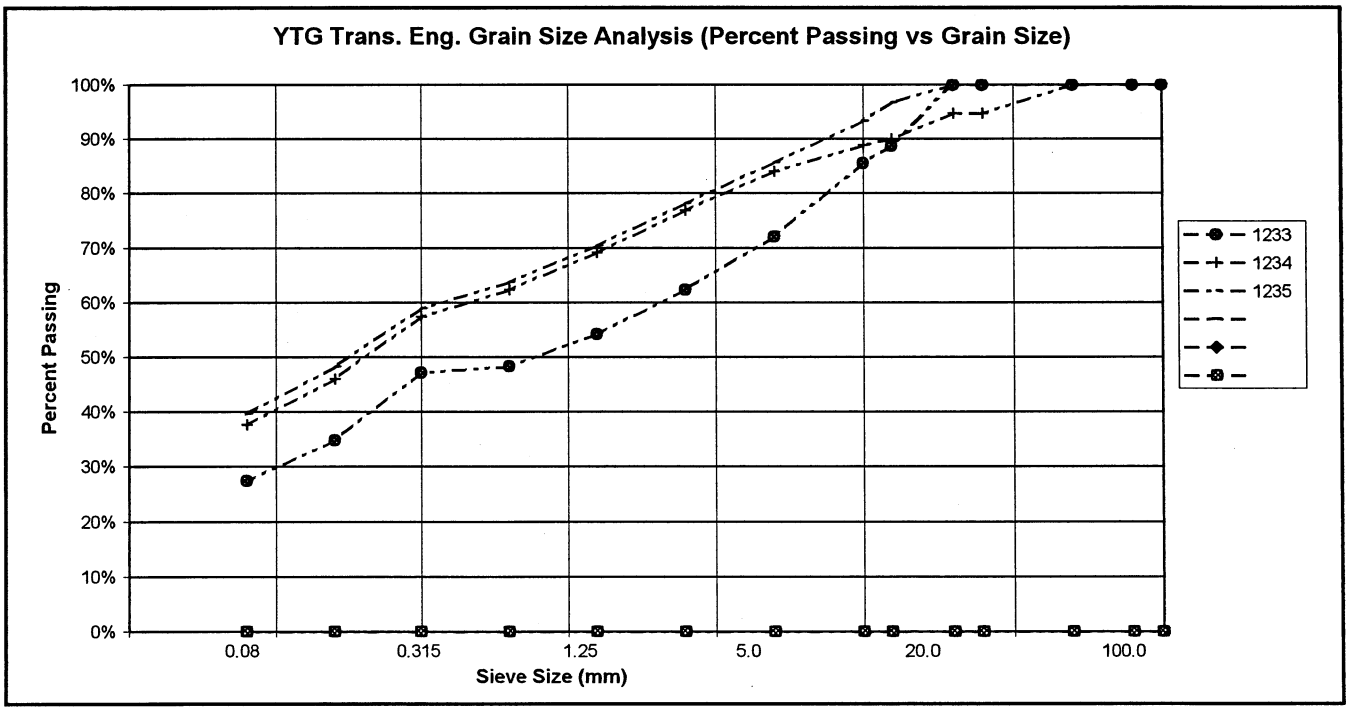
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1685
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1688+200 11M RT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/11

FIELD NO:	1229	1230	1231	1234		
LAB NO:	1631	1632	1633	1634		
DEPTH:	1.8-2.0	2.9-3.1	3.9-4.1	4.8-5.0		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	91%	100%		
20.0	90%	100%	91%	96%		
12.5	87%	93%	87%	93%		
10.0	85%	91%	84%	91%		
5.0	78%	83%	78%	86%		
2.5	72%	76%	73%	82%		
1.25	67%	69%	69%	76%		
0.630	61%	63%	64%	71%		
0.315	55%	59%	60%	66%		
0.160	48%	49%	54%	61%		
0.080	41%	42%	44%	56%		
M.C.(%):	10%	10%	12%	10%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	22	17	22	14		
% SAND:	37	41	34	31		
% FINES:	41	42	44	56		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)		



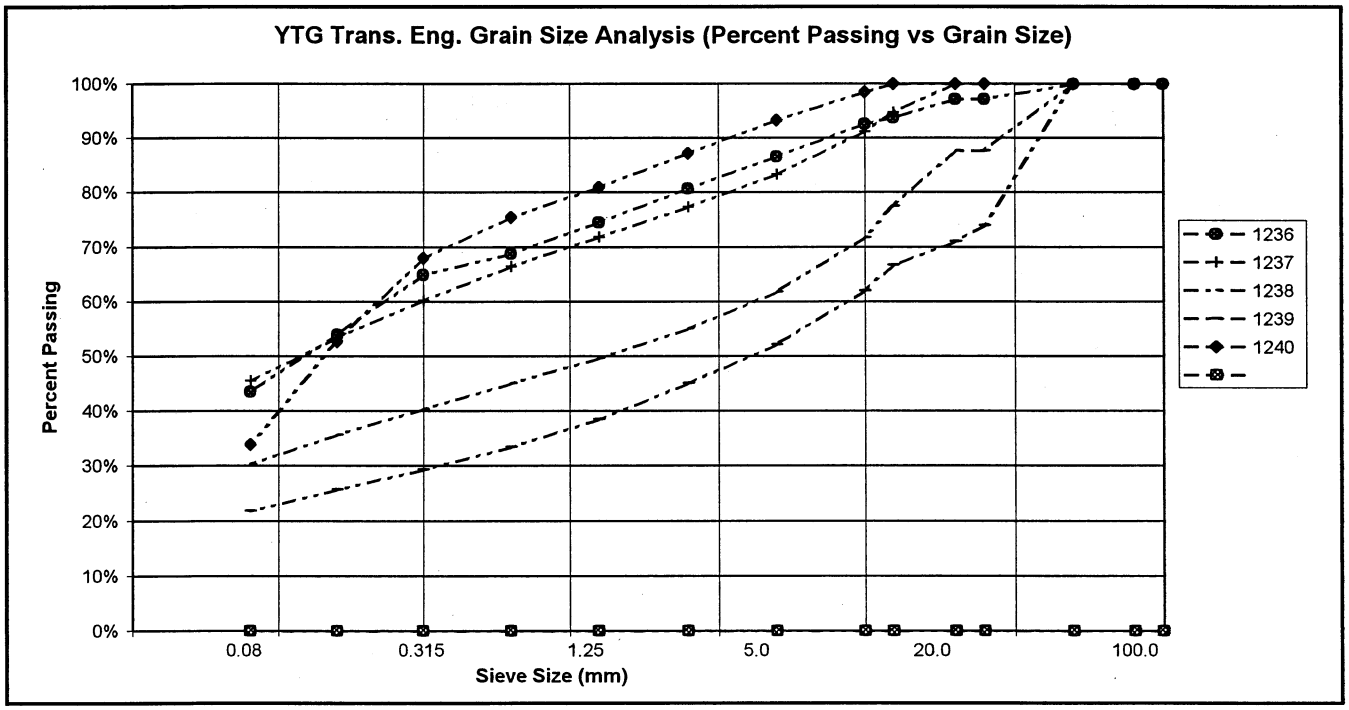
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1686
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1688+200 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/11

FIELD NO:	1233	1234	1235			
LAB NO:	1635	1636	1637			
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2			
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	100%	95%	100%			
20.0	100%	95%	100%			
12.5	89%	90%	97%			
10.0	86%	89%	93%			
5.0	72%	84%	86%			
2.5	62%	77%	78%			
1.25	54%	69%	70%			
0.630	48%	62%	64%			
0.315	47%	57%	59%			
0.160	35%	46%	48%			
0.080	27%	38%	40%			
M.C.(%):	25%	10%	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:	28	16	14			
% SAND:	45	46	46			
% FINES:	27	38	40			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)			



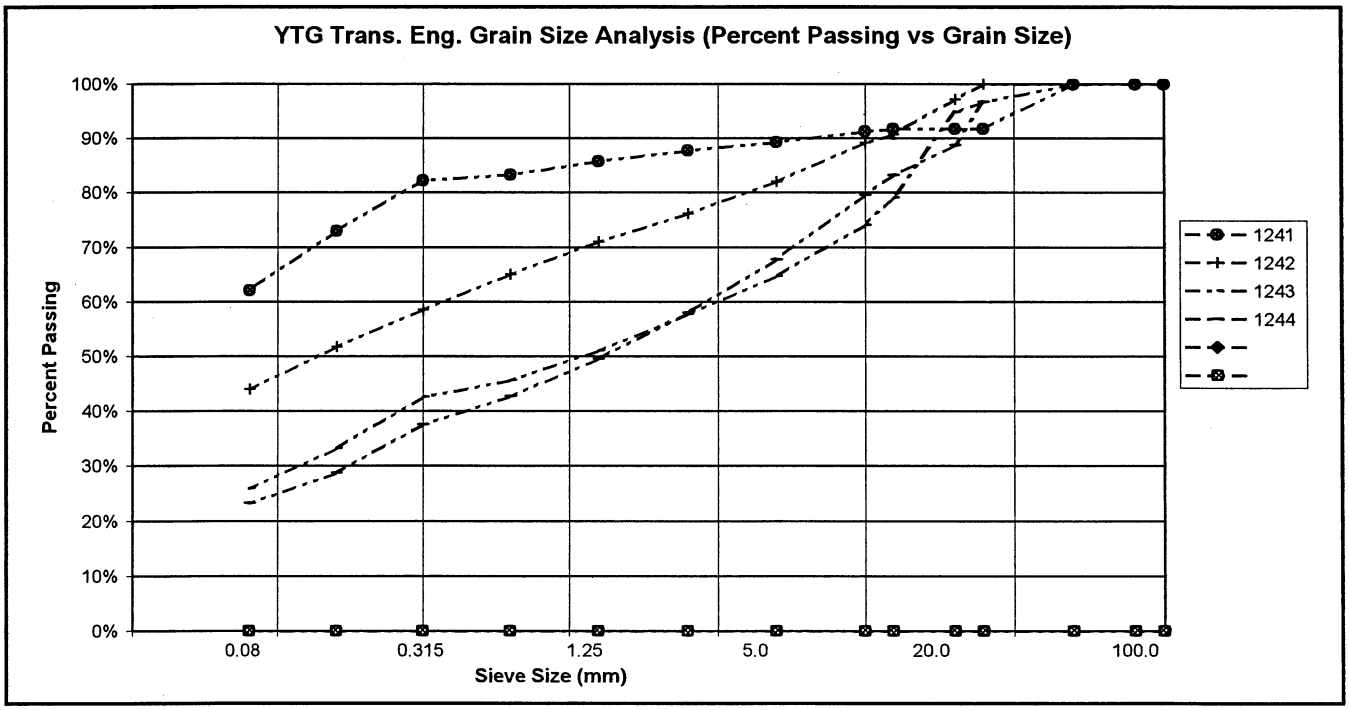
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 561-1687
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1688+150 3M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/11

FIELD NO:	1236	1237	1238	1239	1240	
LAB NO:	1638	1639	1640	1641	1642	
DEPTH:	1.3-1.5	2.8-3.0	4.6-4.8	5.4-5.6	8.4-8.6	
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	97%	100%	88%	74%	100%	
20.0	97%	100%	88%	71%	100%	
12.5	94%	95%	77%	67%	100%	
10.0	93%	91%	72%	62%	99%	
5.0	87%	83%	62%	52%	93%	
2.5	81%	77%	55%	45%	87%	
1.25	75%	72%	50%	38%	81%	
0.630	69%	66%	45%	33%	75%	
0.315	65%	60%	40%	29%	68%	
0.160	54%	53%	36%	26%	53%	
0.080	44%	46%	30%	22%	34%	
M.C.(%):	10%	10%	8%	6%	11%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	13	17	38	48	7	
% SAND:	43	38	31	30	59	
% FINES:	44	46	30	22	34	
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND (SM)	



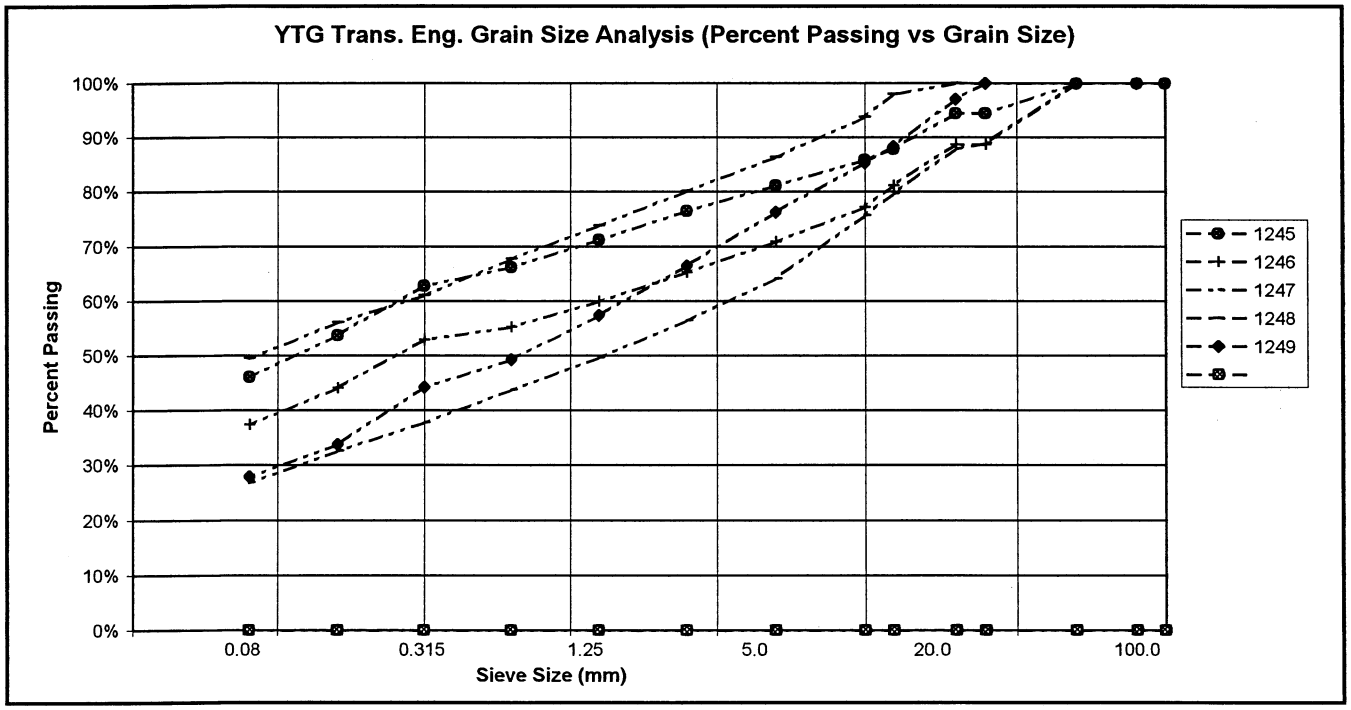
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1688
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1688+100 3 M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/11

FIELD NO:	1241	1242	1243	1244		
LAB NO:	1643	1644	1645	1646		
DEPTH:	0.8-1.0	2.9-3.1	5.4-5.6	8.3-8.5		
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	92%	100%	97%	97%		
20.0	92%	97%	95%	89%		
12.5	92%	91%	79%	83%		
10.0	91%	89%	74%	80%		
5.0	89%	82%	65%	68%		
2.5	88%	76%	58%	58%		
1.25	86%	71%	51%	50%		
0.630	83%	65%	46%	43%		
0.315	82%	59%	43%	38%		
0.160	73%	52%	33%	29%		
0.080	62%	44%	26%	23%		
M.C.(%):	22%	9%	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:	11	18	35	32		
% SAND:	27	38	39	44		
% FINES:	62	44	26	23		
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		



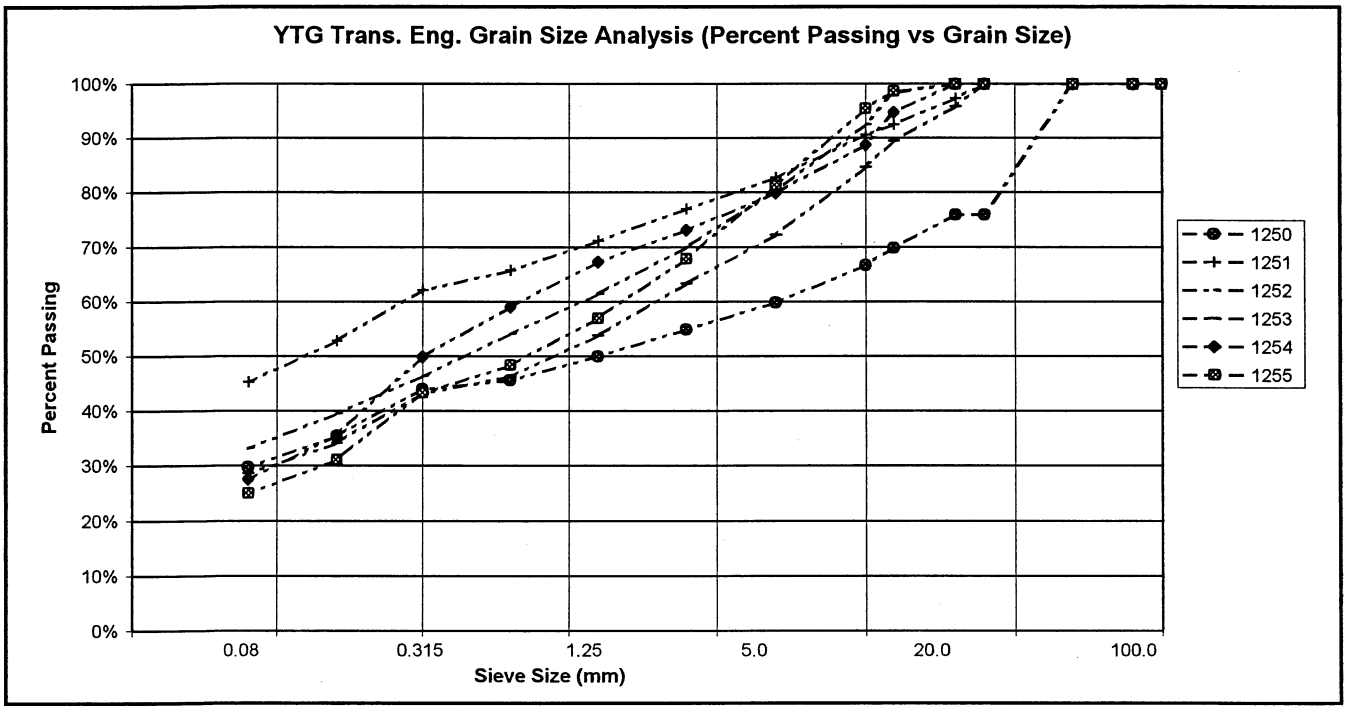
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1689
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1688+050 12M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/11

FIELD NO:	1245	1246	1247	1248	1249	
LAB NO:	1647	1648	1649	1650	1651	
DEPTH:	0.8-1.0	2.8-3.0	3.8-4.0	5.2-5.4	9.8-10.0	
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	94%	89%	89%	100%	100%	
20.0	94%	89%	88%	100%	97%	
12.5	88%	81%	80%	98%	88%	
10.0	86%	77%	76%	94%	85%	
5.0	81%	71%	64%	86%	76%	
2.5	77%	65%	56%	80%	66%	
1.25	71%	60%	50%	74%	57%	
0.630	66%	55%	44%	68%	49%	
0.315	63%	53%	38%	61%	44%	
0.160	54%	44%	33%	56%	34%	
0.080	46%	37%	27%	50%	28%	
M.C.(%):	13%	6%	6%	9%	6%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	19	29	36	14	24	
% SAND:	35	33	37	37	48	
% FINES:	46	37	27	50	28	
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	



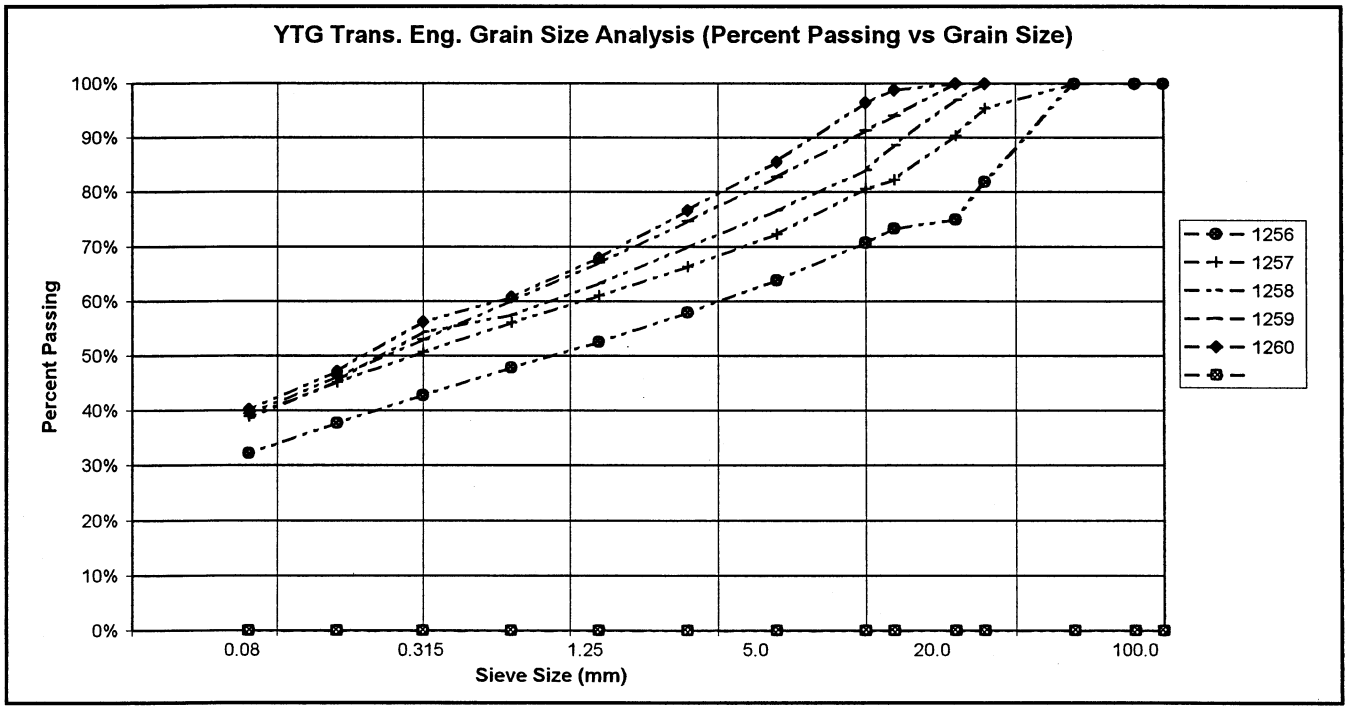
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1690
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1688+000 20M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/13

FIELD NO:	1250	1251	1252	1253	1254	1255
LAB NO:	1652	1653	1654	1655	1656	1657
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0	6.8-7.0	9.8-10.0
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING
100.0	100%	100%	100%	100%	100%	100%
80.0	100%	100%	100%	100%	100%	100%
50.0	100%	100%	100%	100%	100%	100%
25.0	76%	100%	100%	100%	100%	100%
20.0	76%	97%	100%	96%	100%	100%
12.5	70%	92%	98%	89%	95%	99%
10.0	67%	91%	93%	85%	89%	95%
5.0	60%	83%	80%	72%	80%	81%
2.5	55%	77%	70%	63%	73%	68%
1.25	50%	71%	61%	54%	67%	57%
0.630	46%	66%	54%	46%	59%	48%
0.315	44%	62%	46%	43%	50%	43%
0.160	35%	53%	40%	34%	36%	31%
0.080	30%	45%	33%	29%	28%	25%
M.C.(%):	17%	16%	15%	11%	14%	10%
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	0.0
% GRAVEL:	40	17	20	28	20	19
% SAND:	30	37	47	44	52	56
% FINES:	30	45	33	29	28	25
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)



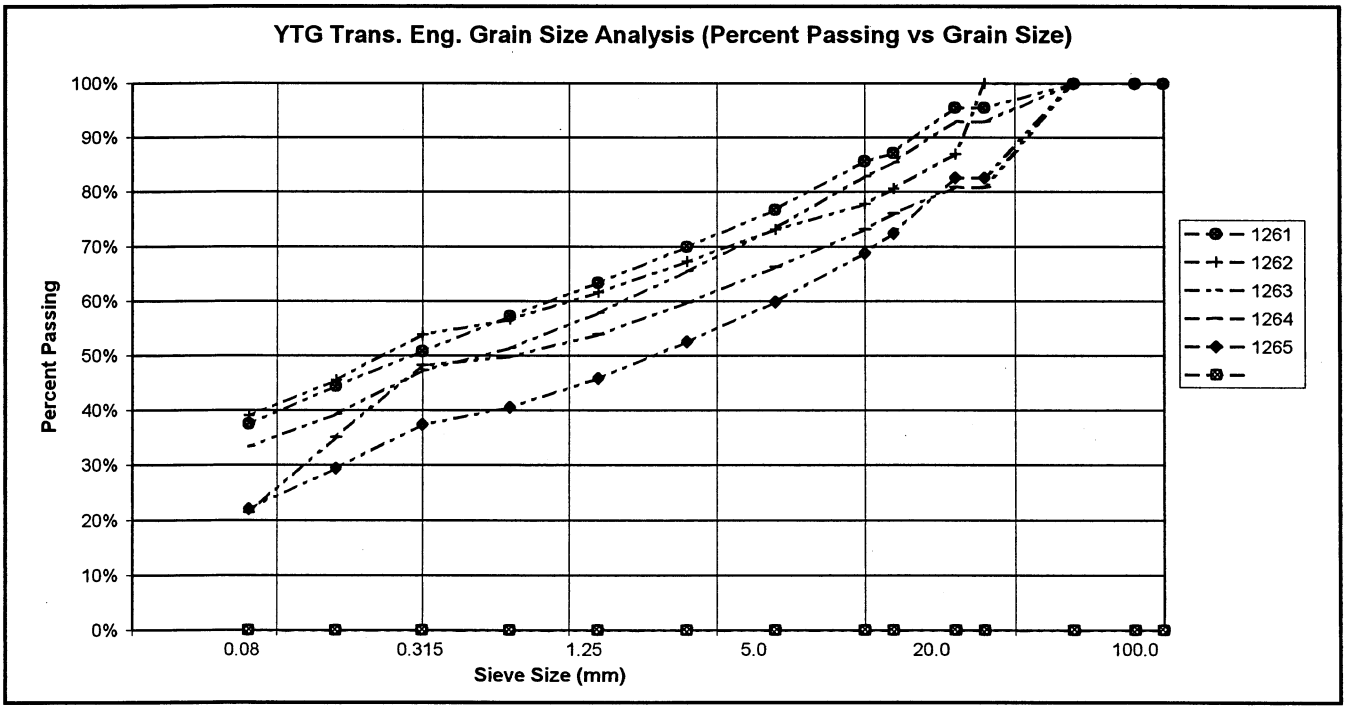
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1691
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1687+950 20M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/13

FIELD NO:	1256	1257	1258	1259	1260	
LAB NO:	1658	1659	1660	1661	1662	
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0	6.8-7.0	
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	82%	95%	100%	100%	100%	
20.0	75%	90%	97%	100%	100%	
12.5	73%	82%	89%	94%	99%	
10.0	71%	81%	84%	91%	96%	
5.0	64%	72%	77%	83%	86%	
2.5	58%	66%	70%	75%	77%	
1.25	53%	61%	63%	67%	68%	
0.630	48%	56%	58%	60%	61%	
0.315	43%	51%	54%	53%	56%	
0.160	38%	45%	45%	46%	47%	
0.080	32%	39%	39%	39%	40%	
M.C.(%):	17%	14%	12%	10%	9%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	36	28	23	17	14	
% SAND:	32	33	38	43	45	
% FINES:	32	39	39	39	40	
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	



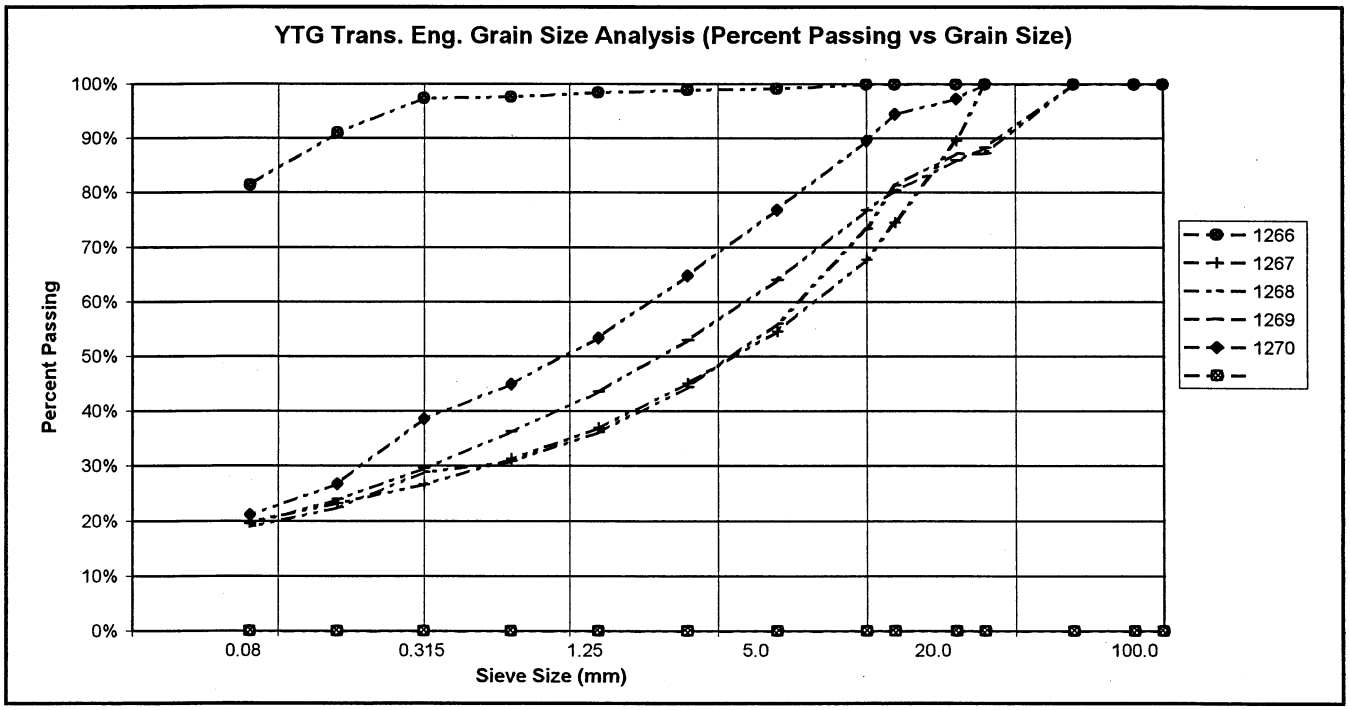
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1692
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1687+895 10M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/13

FIELD NO:	1261	1262	1263	1264	1265	
LAB NO:	1663	1664	1665	1666	1667	
DEPTH:	0.8-1.0	1.8-2.0	3.0-3.2	3.9-4.1	4.8-5.0	
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	96%	100%	93%	81%	83%	
20.0	96%	87%	93%	81%	83%	
12.5	87%	81%	85%	76%	72%	
10.0	86%	78%	83%	73%	69%	
5.0	77%	73%	73%	66%	60%	
2.5	70%	67%	66%	60%	53%	
1.25	63%	62%	58%	54%	46%	
0.630	57%	57%	51%	50%	41%	
0.315	51%	54%	47%	48%	37%	
0.160	44%	46%	39%	35%	29%	
0.080	38%	39%	33%	21%	22%	
M.C.(%):	9%	10%	8%	9%	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:	23	27	27	34	40	
% SAND:	39	34	40	45	38	
% FINES:	38	39	33	21	22	
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	



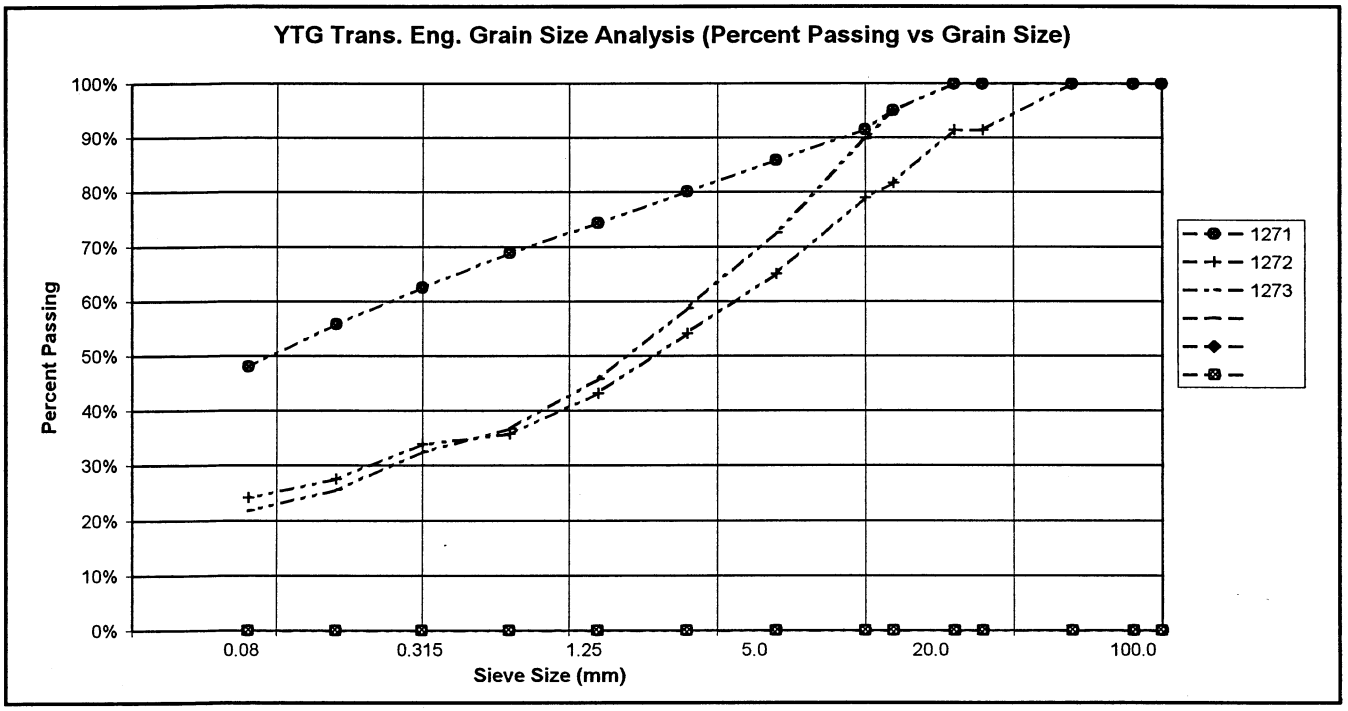
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1693
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1687+850 20M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/13

FIELD NO:	1266	1267	1268	1269	1270	
LAB NO:	1668	1669	1670	1671	1672	
DEPTH:	0.8-1.1	1.9-2.1	3.0-3.2	4.8-5.0	6.8-7.0	
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	100%	100%	87%	88%	100%	
20.0	100%	90%	87%	86%	97%	
12.5	100%	75%	81%	80%	95%	
10.0	100%	68%	73%	77%	90%	
5.0	99%	55%	56%	64%	77%	
2.5	99%	45%	44%	53%	65%	
1.25	98%	37%	36%	44%	53%	
0.630	98%	31%	31%	36%	45%	
0.315	97%	27%	29%	30%	39%	
0.160	91%	23%	22%	24%	27%	
0.080	81%	20%	19%	20%	21%	
M.C.(%):	33%	11%	9%	9%	9%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	1	45	44	36	23	
% SAND:	18	35	37	44	56	
% FINES:	81	20	19	20	21	
CLASSIFICATION	SILT WITH SAND (ML)	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	



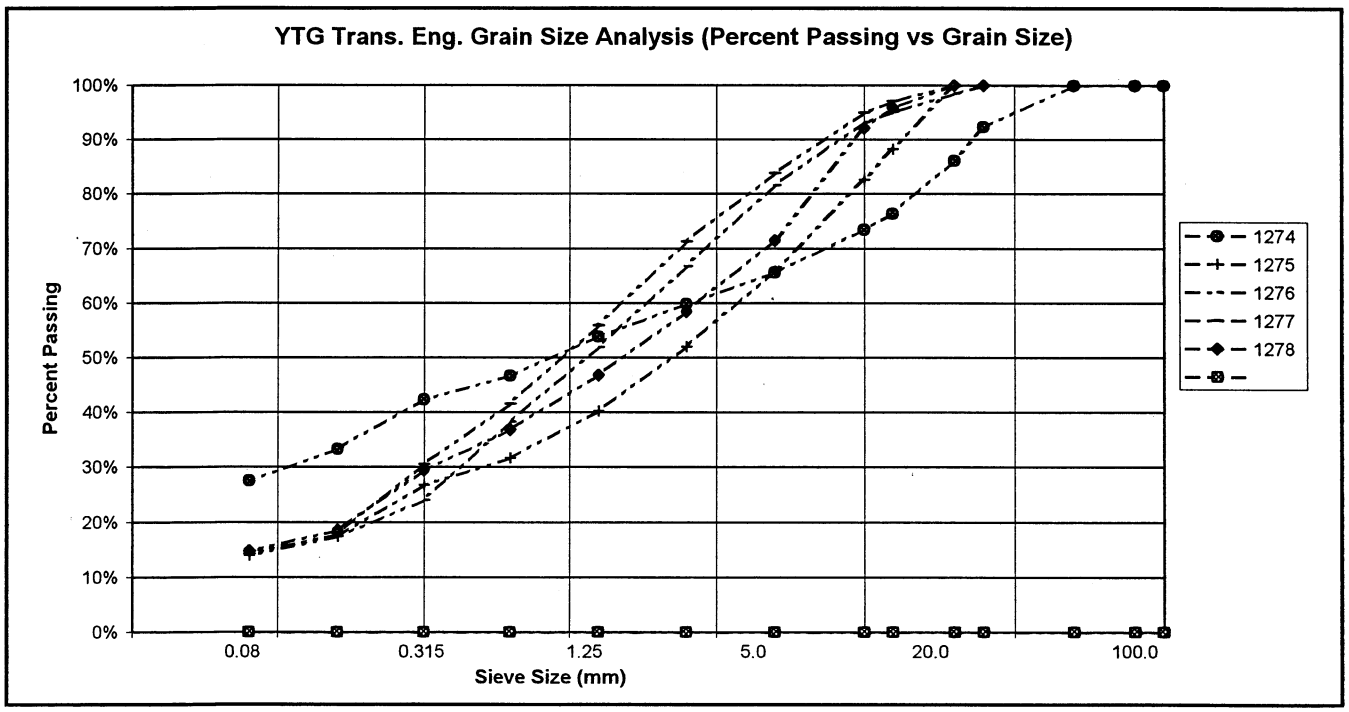
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1694
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1687+800 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/13

FIELD NO:	1271	1272	1273			
LAB NO:	1673	1674	1675			
DEPTH:	0.8-1.0	1.8-2.0	2.9-3.1			
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%	100%			
20.0	100%	91%	100%			
12.5	95%	82%	95%			
10.0	92%	79%	90%			
5.0	86%	65%	73%			
2.5	80%	54%	59%			
1.25	74%	43%	46%			
0.630	69%	36%	37%			
0.315	63%	34%	32%			
0.160	56%	28%	26%			
0.080	48%	24%	22%			
M.C.(%):	13%	14%	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:	14	35	27			
% SAND:	38	41	51			
% FINES:	48	24	22			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1695
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1687+750 20M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/14

FIELD NO:	1274	1275	1276	1277	1278	
LAB NO:	1676	1677	1678	1679	1680	
DEPTH:	.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0	6.8-7.0	
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	92%	100%	100%	100%	100%	
20.0	86%	100%	99%	100%	100%	
12.5	76%	88%	95%	97%	96%	
10.0	74%	83%	93%	95%	92%	
5.0	66%	66%	82%	84%	71%	
2.5	60%	52%	67%	71%	58%	
1.25	54%	40%	52%	56%	47%	
0.630	47%	32%	38%	42%	37%	
0.315	42%	27%	24%	30%	29%	
0.160	33%	17%	17%	18%	19%	
0.080	28%	14%	15%	14%	15%	
M.C.(%):	21%	13%	12%	12%	12%	
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:	34	34	18	16	29	
% SAND:	38	52	67	70	57	
% FINES:	28	14	15	14	15	
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	

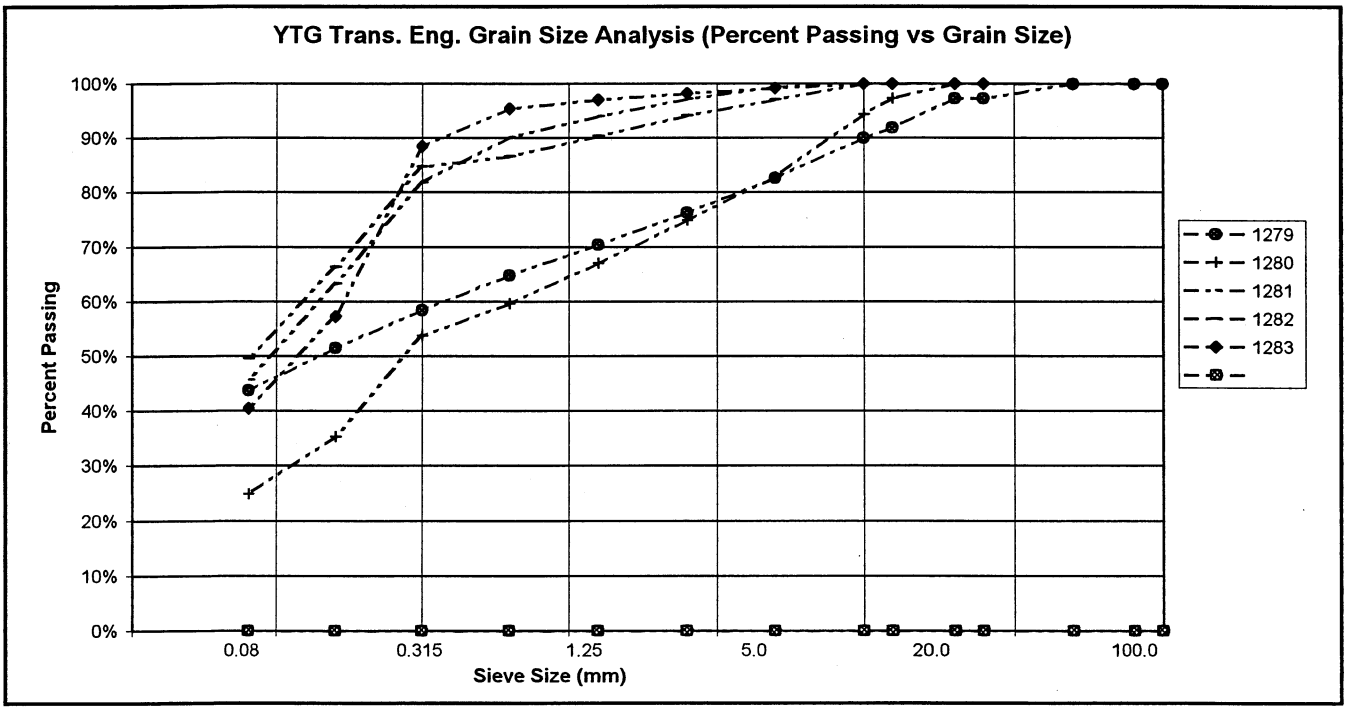


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 9
PROJECT LOCATION: KM 1664 - 1692 A/H
DRILL UNIT: MOBILE B 40L
HOLE LOCATION: 1687+700 15M LT
LOGGED BY: D.T.

HOLE No.: 560-1696

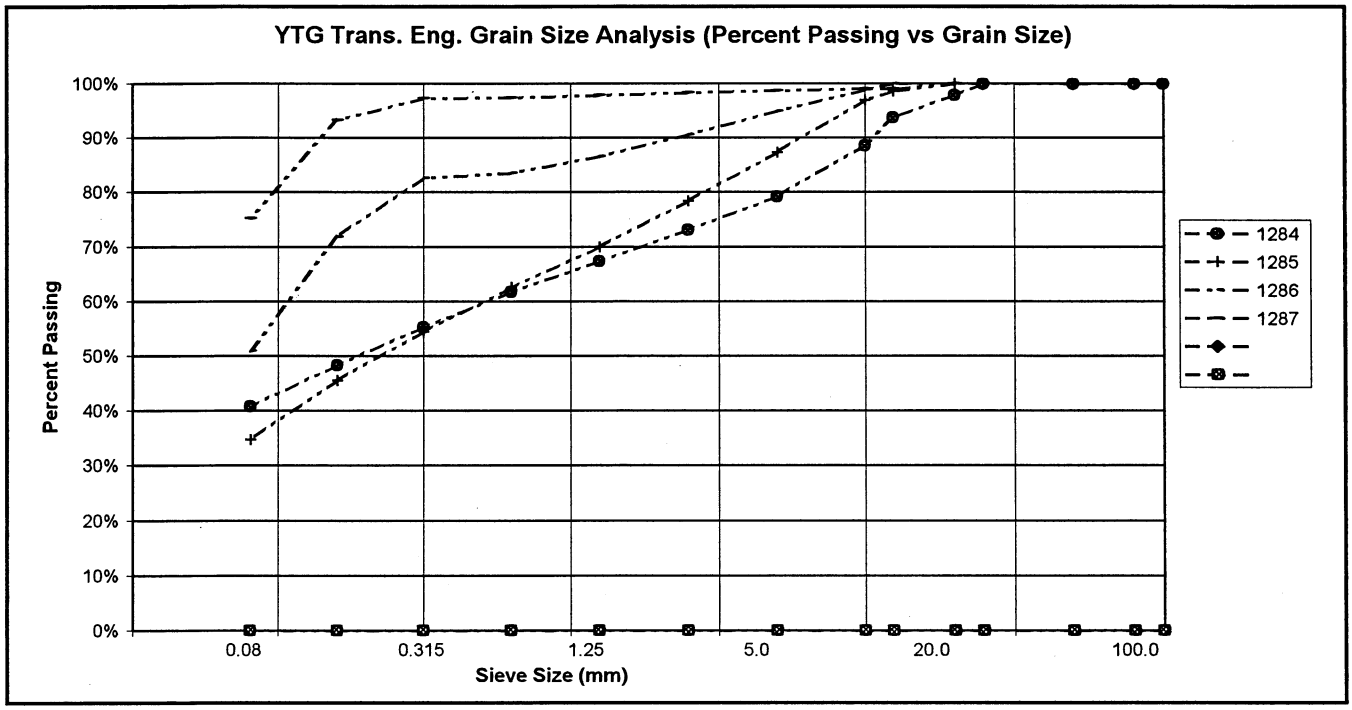
DATE COMP: 2000/07/14

FIELD NO:	1279	1280	1281	1282	1283	
LAB NO:	1681	1682	1683	1684	1685	
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0	6.8-7.0	
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	97%	100%	100%	100%	100%	
20.0	97%	100%	100%	100%	100%	
12.5	92%	97%	100%	100%	100%	
10.0	90%	94%	100%	100%	100%	
5.0	83%	83%	99%	97%	99%	
2.5	76%	75%	97%	94%	98%	
1.25	70%	67%	94%	90%	97%	
0.630	65%	60%	90%	87%	95%	
0.315	58%	54%	82%	85%	89%	
0.160	52%	35%	63%	66%	57%	
0.080	44%	25%	46%	50%	41%	
M.C.(%):	12%	20%	20%	27%	22%	
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:	17	17	1	3	1	
% SAND:	39	58	54	48	59	
% FINES:	44	25	46	50	41	
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	SILTY SAND (SM)	SILTY SAND (SM)	



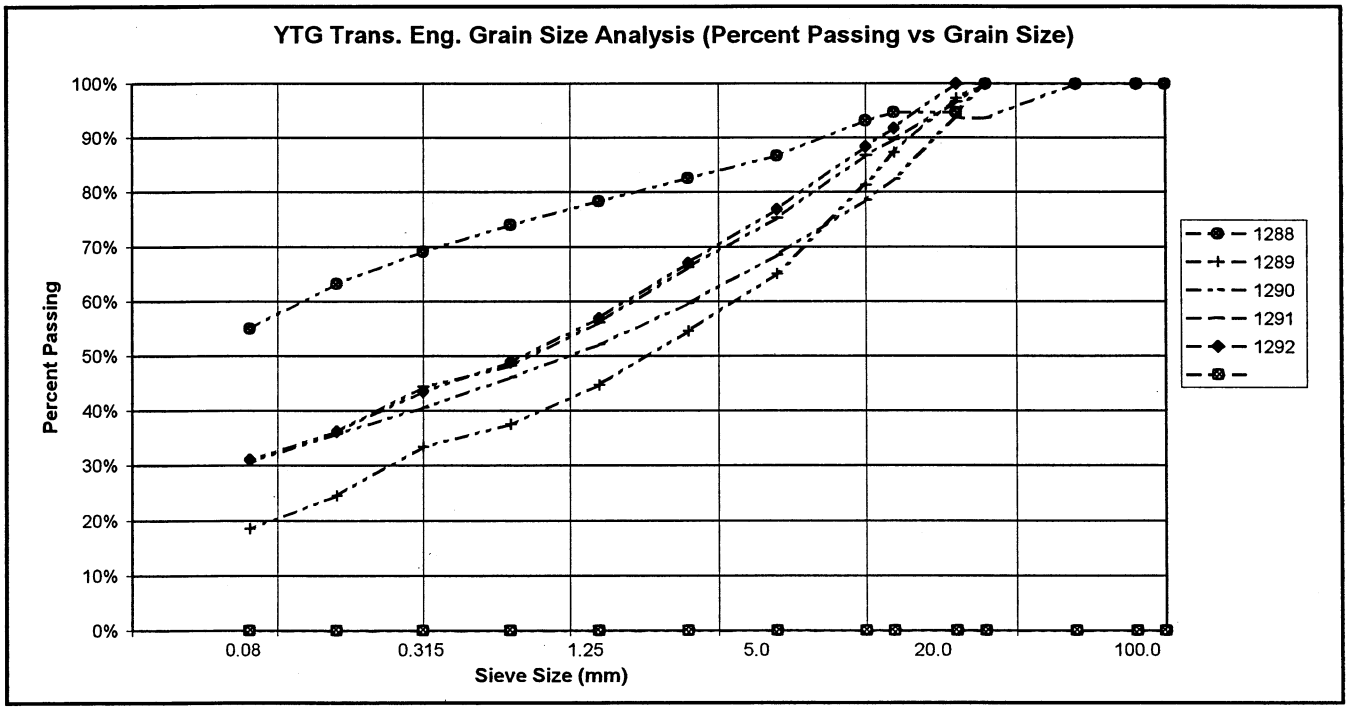
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1697
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1687+650 20 LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/14

FIELD NO:	1284	1285	1286	1287		
LAB NO:	1686	1687	1688	1689		
DEPTH:	1.4-1.6	2.8-3.0	4.8-5.0	6.8-7.0		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	98%	100%	100%	100%		
12.5	94%	99%	100%	99%		
10.0	89%	97%	99%	99%		
5.0	79%	87%	95%	99%		
2.5	73%	78%	91%	98%		
1.25	67%	70%	87%	98%		
0.630	62%	63%	84%	97%		
0.315	55%	54%	83%	97%		
0.160	48%	46%	72%	93%		
0.080	41%	35%	51%	75%		
M.C.(%):	11%	14%	20%	23%		
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:	21	13	5	1		
% SAND:	38	53	44	23		
% FINES:	41	35	51	75		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	SANDY SILT (ML)	SILT WITH SAND (ML)		



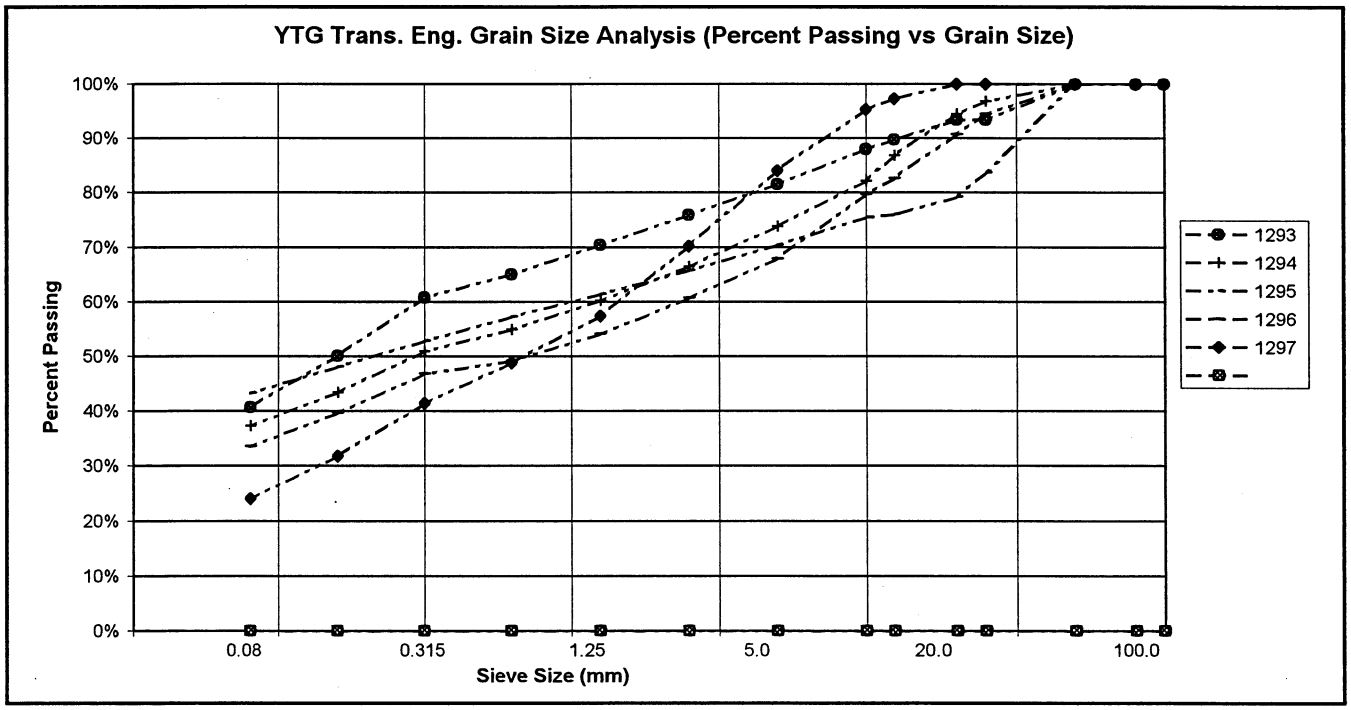
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1698
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1687+600 20M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/14

FIELD NO:	1288	1289	1290	1291	1292	
LAB NO:	1690	1691	1692	1693	1694	
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0	6.8-7.0	
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	100%	100%	94%	100%	100%	
20.0	95%	97%	94%	97%	100%	
12.5	95%	87%	82%	90%	92%	
10.0	93%	81%	79%	87%	88%	
5.0	87%	65%	68%	75%	77%	
2.5	83%	55%	60%	66%	67%	
1.25	78%	45%	52%	56%	57%	
0.630	74%	38%	46%	48%	49%	
0.315	69%	33%	41%	44%	44%	
0.160	63%	25%	36%	36%	36%	
0.080	55%	19%	31%	31%	31%	
M.C.(%):	24%	8%	11%	12%	11%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	13	35	32	25	23	
% SAND:	32	46	38	44	46	
% FINES:	55	19	31	31	31	
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 560-1699
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664 - 1692 A/H		
DRILL UNIT:	MOBILE B 40L		
HOLE LOCATION:	1687+550 25M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/14

FIELD NO:	1293	1294	1295	1296	1297	
LAB NO:	1695	1696	1697	1698	1699	
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0	6.8-7.0	
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	93%	97%	84%	94%	100%	
20.0	93%	95%	79%	91%	100%	
12.5	90%	87%	76%	83%	97%	
10.0	88%	82%	75%	80%	95%	
5.0	82%	74%	70%	68%	84%	
2.5	76%	66%	66%	61%	70%	
1.25	70%	60%	61%	54%	57%	
0.630	65%	55%	57%	49%	49%	
0.315	61%	51%	53%	47%	41%	
0.160	50%	43%	48%	40%	32%	
0.080	41%	37%	43%	34%	24%	
M.C.(%):	11%	13%	13%	13%	14%	
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:	18	26	30	32	16	
% SAND:	41	37	27	34	60	
% FINES:	41	37	43	34	24	
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	

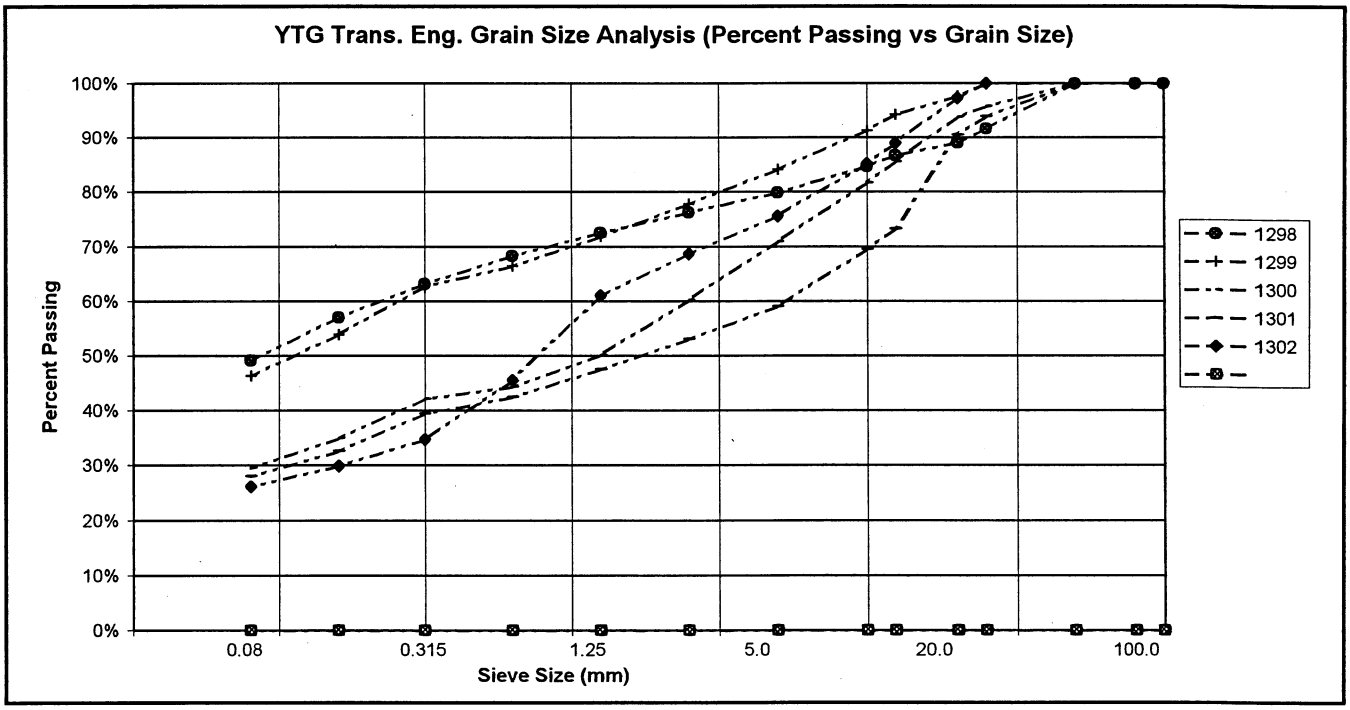


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 9
PROJECT LOCATION: KM 1664 - 1692 A/H
DRILL UNIT: MOBILE B 40L
HOLE LOCATION: 1687+500 25M LT
LOGGED BY: D.T.

HOLE No.: 560-1700

DATE COMP: 2000/07/14

FIELD NO:	1298	1299	1300	1301	1302	
LAB NO:	1700	1701	1702	1703	1704	
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0	6.8-7.0	
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	92%	100%	96%	94%	100%	
20.0	89%	98%	94%	91%	97%	
12.5	87%	94%	86%	73%	89%	
10.0	85%	91%	82%	69%	85%	
5.0	80%	84%	71%	59%	76%	
2.5	76%	78%	60%	53%	69%	
1.25	73%	72%	50%	48%	61%	
0.630	68%	66%	44%	42%	46%	
0.315	63%	63%	42%	39%	35%	
0.160	57%	54%	35%	33%	30%	
0.080	49%	46%	30%	28%	26%	
M.C.(%):	17%	12%	9%	10%	8%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	20	16	29	41	24	
% SAND:	31	38	41	31	49	
% FINES:	49	46	30	28	26	
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	

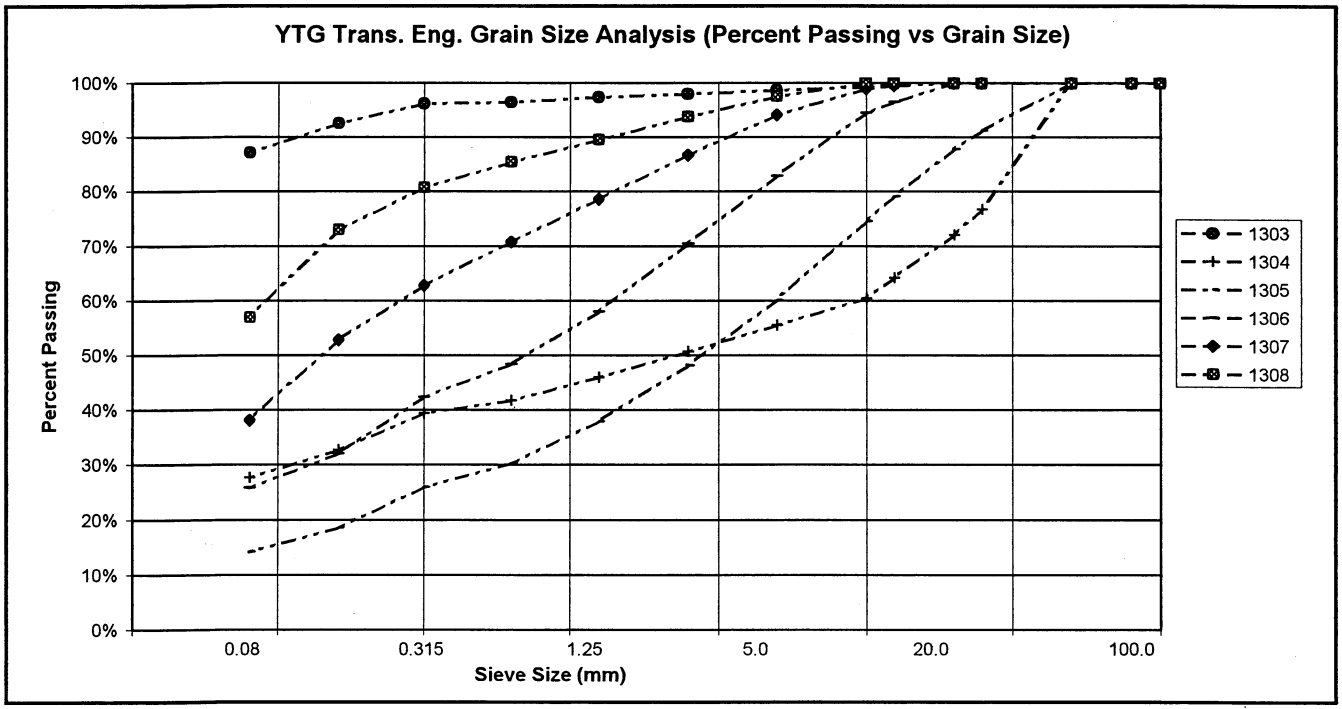


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Shakwak Seg 9
PROJECT LOCATION: Km 1687 - 1686 A/H
DRILL UNIT: Mobile B 40-L
HOLE LOCATION: 1687+625 30 M LT
LOGGED BY: D.T.

HOLE No.: 561-1701

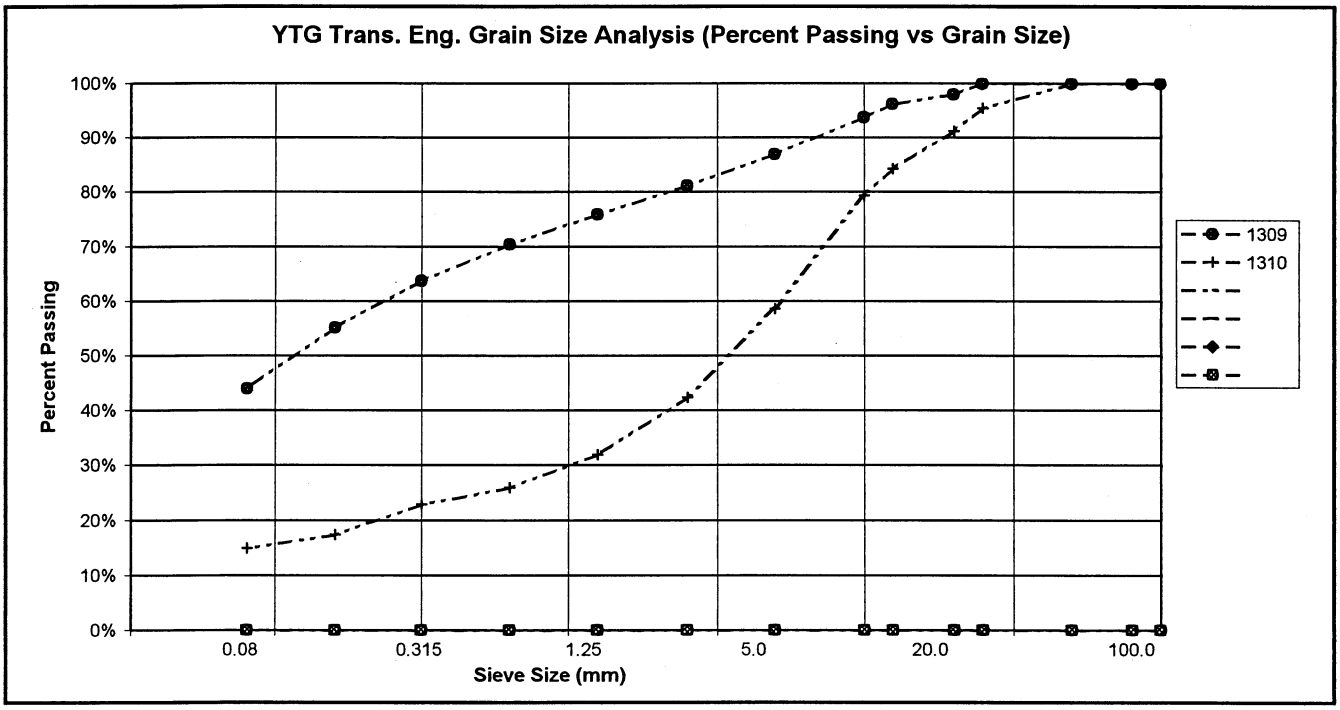
DATE COMP: 2000/07/17

FIELD NO:	1303	1304	1305	1306	1307	1308
LAB NO:	1705	1706	1707	1708	1709	1710
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0	6.8-7.0	8.3-8.5
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING
100.0	100%	100%	100%	100%	100%	100%
80.0	100%	100%	100%	100%	100%	100%
50.0	100%	100%	100%	100%	100%	100%
25.0	100%	77%	91%	100%	100%	100%
20.0	100%	72%	88%	100%	100%	100%
12.5	100%	64%	79%	96%	100%	100%
10.0	99%	60%	75%	95%	99%	100%
5.0	99%	56%	60%	83%	94%	98%
2.5	98%	51%	48%	70%	87%	94%
1.25	97%	46%	38%	58%	79%	90%
0.630	96%	42%	30%	48%	71%	85%
0.315	96%	39%	26%	42%	63%	81%
0.160	93%	33%	18%	32%	53%	73%
0.080	87%	28%	14%	26%	38%	57%
M.C.(%):	45%	9%	8%	11%	16%	19%
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	0.0
% GRAVEL:	1	44	40	17	6	2
% SAND:	12	28	46	57	56	41
% FINES:	87	28	14	26	38	57
CLASSIFICATION	SILT (ML)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	SANDY SILT (ML)



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 561-1702
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	Shakwak Seg 9		
PROJECT LOCATION:	Km 1687 - 1686 A/H		
DRILL UNIT:	Mobile B 40-L		
HOLE LOCATION:	1687+725 35M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/17

FIELD NO:	1309	1310				
LAB NO:	1711	1712				
DEPTH:	0.8-1.0	1.9-2.1				
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%	95%				
20.0	98%	91%				
12.5	96%	84%				
10.0	94%	79%				
5.0	87%	59%				
2.5	81%	42%				
1.25	76%	32%				
0.630	70%	26%				
0.315	64%	23%				
0.160	55%	17%				
0.080	44%	15%				
M.C.(%):	16%	9%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	13	41				
% SAND:	43	44				
% FINES:	44	15				
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)				

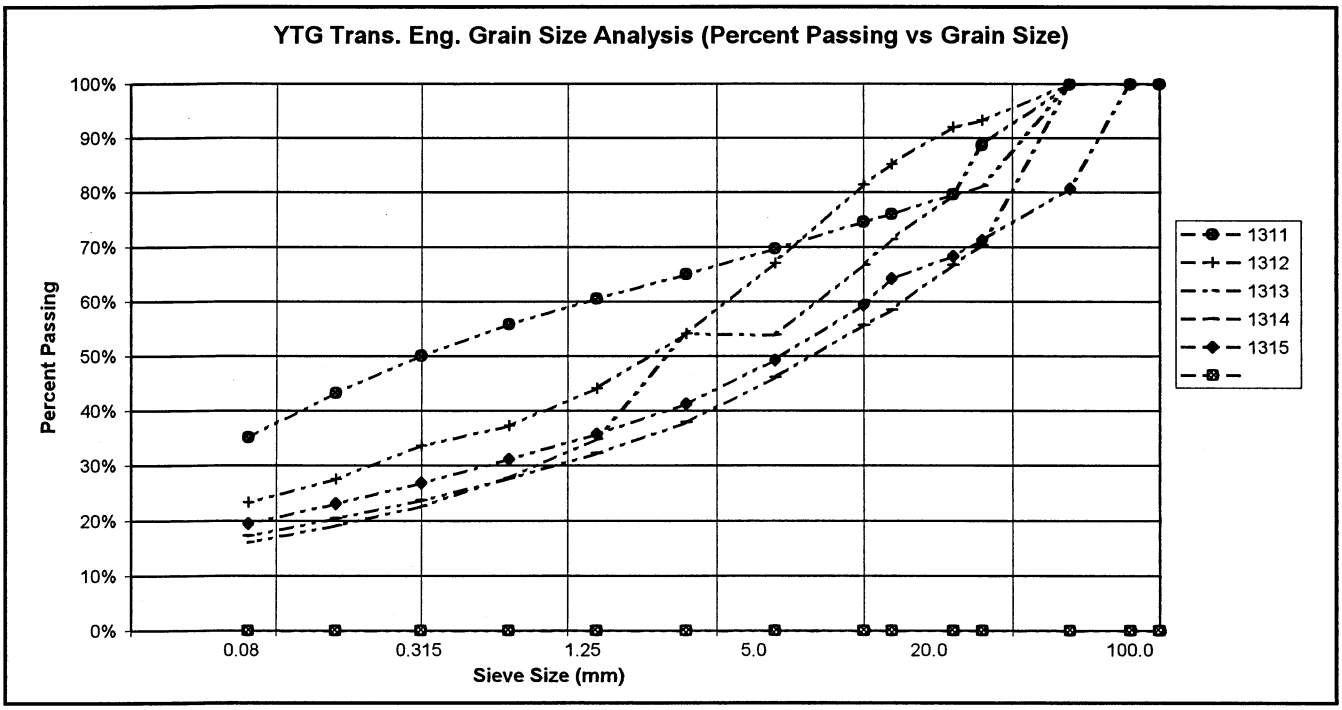


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Shakwak Seg 9
PROJECT LOCATION: Km 1687 - 1686 A/H
DRILL UNIT: Mobile B 40-L
HOLE LOCATION: 1687+835 35M LT
LOGGED BY: D.T.

HOLE No.: 561-1703

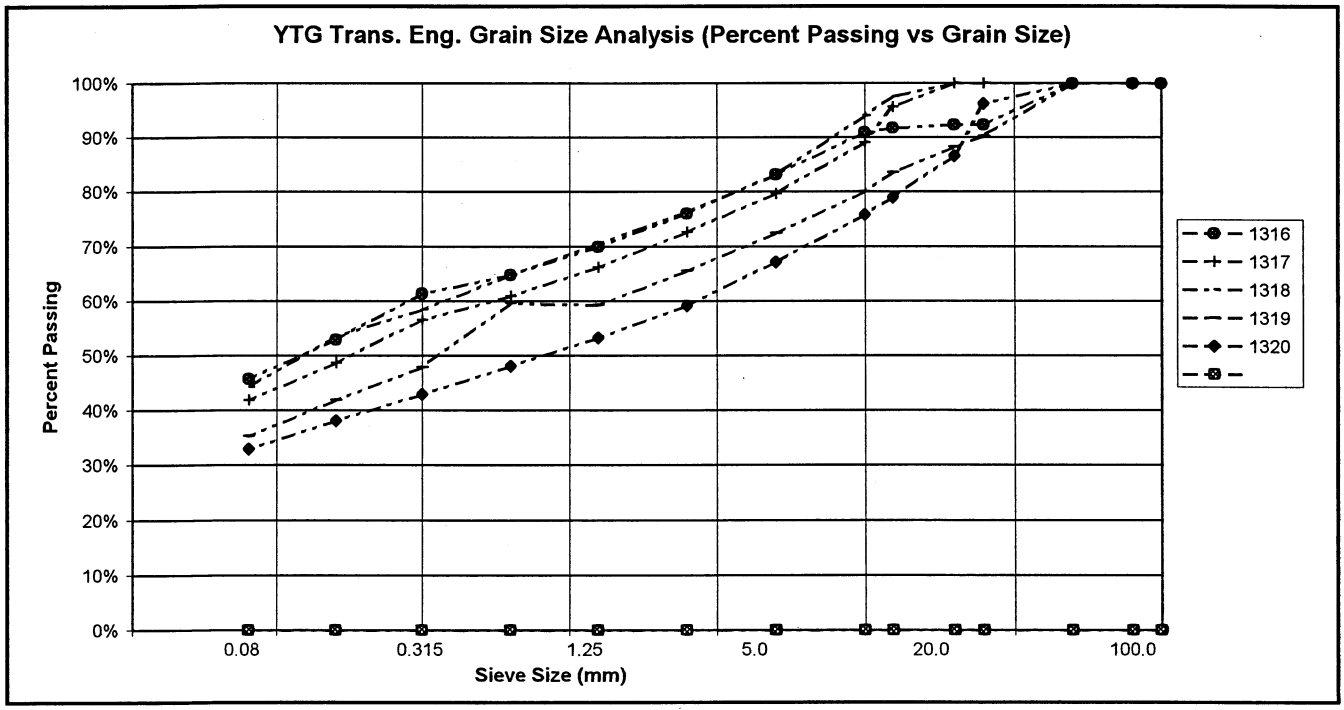
DATE COMP: 2000/0817

FIELD NO:	1311	1312	1313	1314	1315	
LAB NO:	1713	1714	1715	1716	1717	
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0	9.3-9.5	
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%	81%	
25.0	89%	93%	81%	70%	71%	
20.0	80%	92%	79%	67%	68%	
12.5	76%	85%	71%	58%	64%	
10.0	75%	82%	67%	56%	59%	
5.0	70%	67%	54%	46%	49%	
2.5	65%	54%	54%	38%	41%	
1.25	61%	44%	35%	32%	36%	
0.630	56%	37%	28%	28%	31%	
0.315	50%	34%	23%	24%	27%	
0.160	43%	28%	19%	20%	23%	
0.080	35%	23%	16%	17%	19%	
M.C.(%):	8%	7%	5%	5%	5%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	30	33	46	54	51	
% SAND:	35	44	38	29	30	
% FINES:	35	23	16	17	19	
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)	



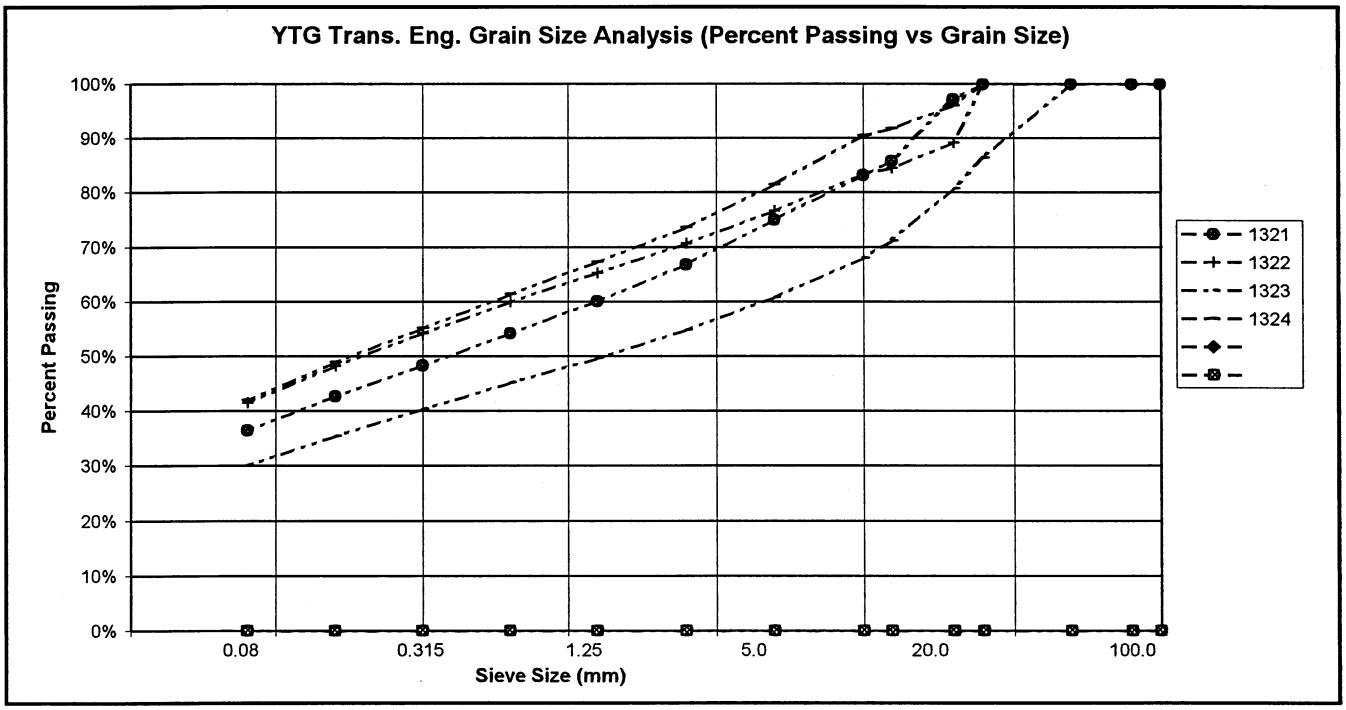
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 561-1704
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	Shakwak Seg 9		
PROJECT LOCATION:	Km 1687 - 1686 A/H		
DRILL UNIT:	Mobile B 40-L		
HOLE LOCATION:	1687+925 30M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/17

FIELD NO:	1316	1317	1318	1319	1320	
LAB NO:	1718	1719	1720	1721	1722	
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0	5.8-6.0	
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	92%	100%	100%	90%	96%	
20.0	92%	100%	100%	88%	87%	
12.5	92%	96%	98%	84%	79%	
10.0	91%	89%	94%	80%	76%	
5.0	83%	80%	83%	72%	67%	
2.5	76%	73%	76%	65%	59%	
1.25	70%	66%	71%	59%	53%	
0.630	65%	61%	65%	60%	48%	
0.315	61%	57%	58%	48%	43%	
0.160	53%	49%	53%	42%	38%	
0.080	46%	42%	44%	35%	33%	
M.C.(%):	18%	13%	11%	9%	9%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	17	20	17	28	33	
% SAND:	37	38	39	37	34	
% FINES:	46	42	44	35	33	
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 561-1705
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	Shakwak Seg 9		
PROJECT LOCATION:	Km 1687 - 1686 A/H		
DRILL UNIT:	Mobile B 40-L		
HOLE LOCATION:	1687+975 35M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/20

FIELD NO:	1321	1322	1323	1324		
LAB NO:	1723	1724	1725	1726		
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	86%	100%		
20.0	97%	89%	81%	96%		
12.5	86%	85%	71%	92%		
10.0	83%	83%	68%	90%		
5.0	75%	77%	61%	82%		
2.5	67%	71%	55%	74%		
1.25	60%	65%	50%	67%		
0.630	54%	60%	45%	61%		
0.315	48%	54%	40%	55%		
0.160	43%	48%	35%	49%		
0.080	36%	42%	30%	42%		
M.C.(%):	51%	13%	7%	10%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	25	23	39	18		
% SAND:	39	35	31	39		
% FINES:	36	42	30	42		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)		

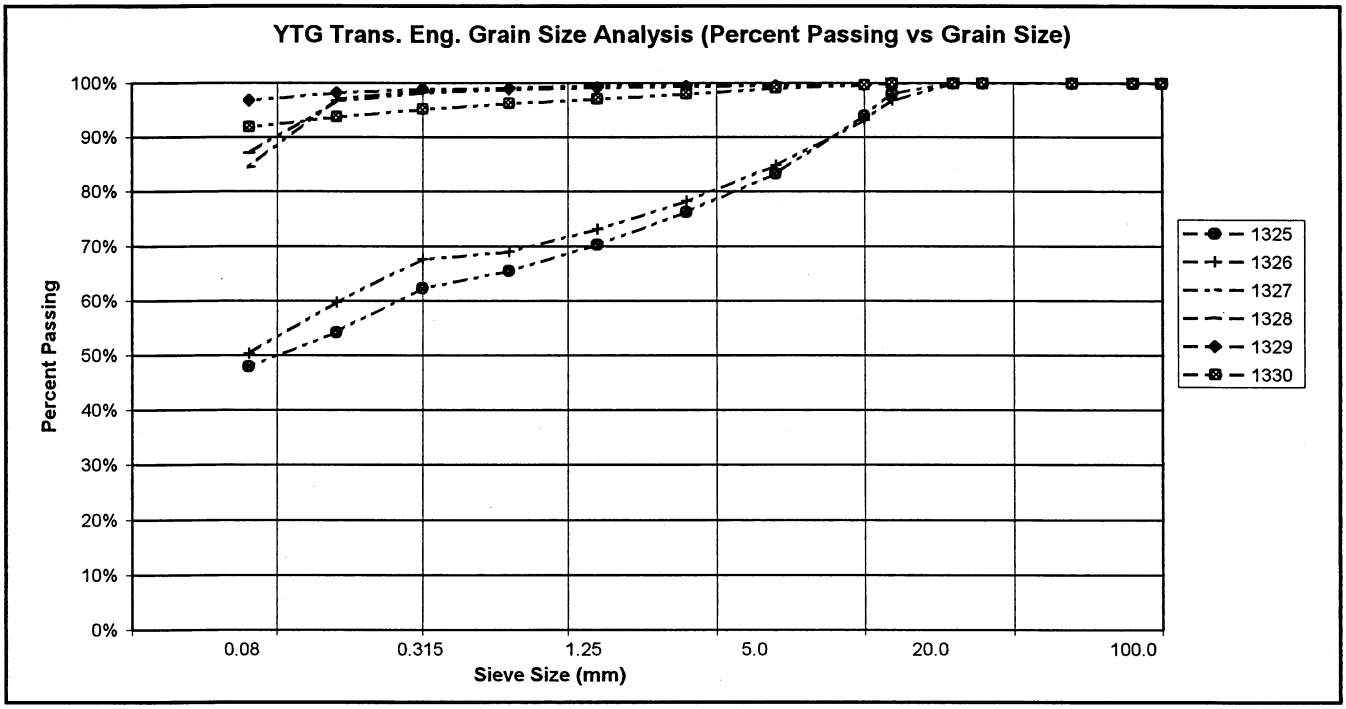


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Shakwak Seg 9
PROJECT LOCATION: Km 1687 - 1686 A/H
DRILL UNIT: Mobile B 40-L
HOLE LOCATION: 1687+450 20M lt
LOGGED BY: D.T.

HOLE No.: 561-1706

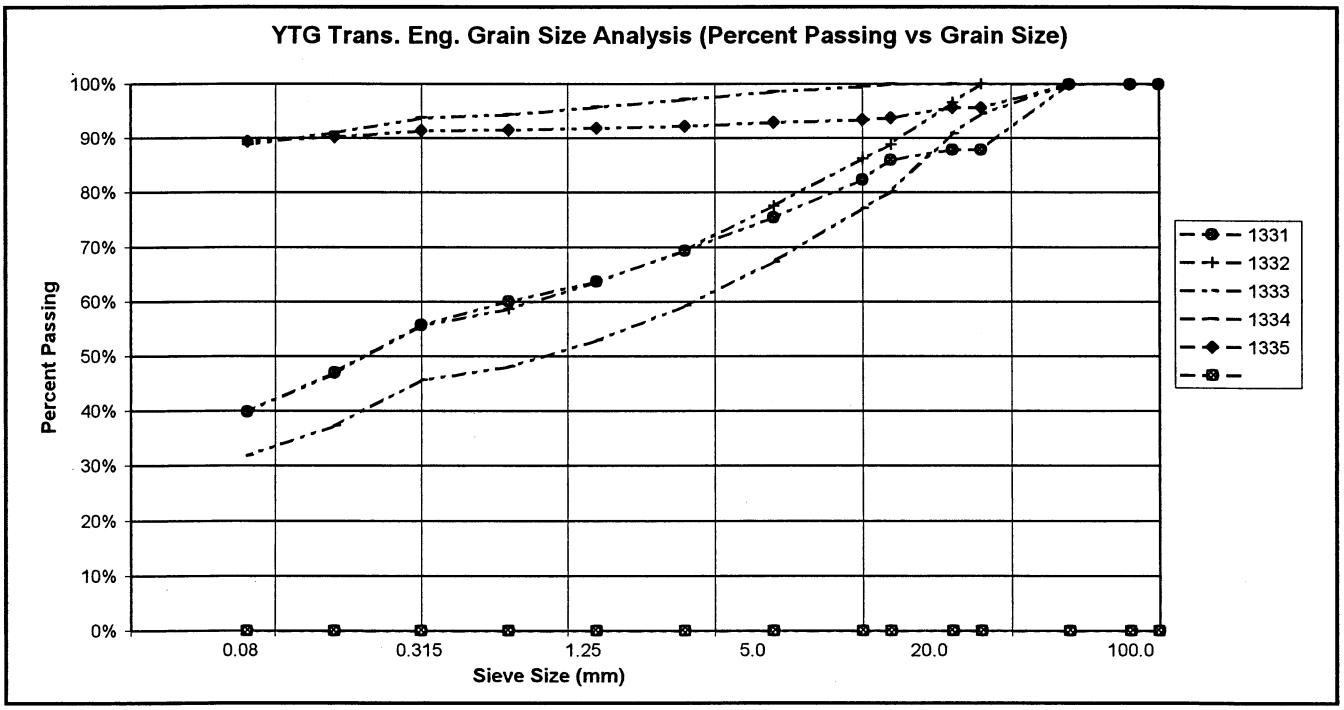
DATE COMP: 2000/07/20

FIELD NO:	1325	1326	1327	1328	1329	1330
LAB NO:	1727	1728	1729	1730	1731	1732
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0	6.5-6.7	9.6-9.8
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING
100.0	100%	100%	100%	100%	100%	100%
80.0	100%	100%	100%	100%	100%	100%
50.0	100%	100%	100%	100%	100%	100%
25.0	100%	100%	100%	100%	100%	100%
20.0	100%	100%	100%	100%	100%	100%
12.5	98%	97%	100%	100%	100%	100%
10.0	94%	93%	100%	100%	100%	100%
5.0	83%	85%	100%	100%	100%	99%
2.5	76%	78%	100%	99%	99%	98%
1.25	70%	73%	100%	99%	99%	97%
0.630	66%	69%	99%	99%	99%	96%
0.315	62%	68%	99%	98%	99%	95%
0.160	54%	60%	97%	97%	98%	94%
0.080	48%	50%	85%	87%	97%	92%
M.C.(%):	16%	20%	23%	22%	16%	18%
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:	17	15	0	0	0	1
% SAND:	35	34	15	13	3	7
% FINES:	48	50	85	87	97	92
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SANDY SILT WITH GRAVEL (ML)	SILT WITH SAND (ML)	SILT (ML)	SILT (ML)	SILT (ML)



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 561-1707
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	Shakwak Seg 9		
PROJECT LOCATION:	Km 1687 - 1686 A/H		
DRILL UNIT:	Mobile B 40-L		
HOLE LOCATION:	1687+400 25M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/20

FIELD NO:	1331	1332	1333	1334	1335	
LAB NO:	1733	1734	1735	1736	1737	
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0	9.6-9.8	
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%	100%	94%	100%	96%	
20.0	88%	97%	91%	100%	96%	
12.5	86%	89%	80%	100%	94%	
10.0	82%	86%	77%	100%	93%	
5.0	75%	78%	67%	99%	93%	
2.5	69%	70%	59%	97%	92%	
1.25	64%	64%	53%	96%	92%	
0.630	60%	59%	48%	94%	92%	
0.315	56%	56%	46%	94%	91%	
0.160	47%	47%	37%	91%	90%	
0.080	40%	40%	32%	89%	89%	
M.C.(%):	11%	13%	14%	18%	18%	
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:	25	22	33	1	7	
% SAND:	35	38	35	10	3	
% FINES:	40	40	32	89	89	
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILT (ML)	SILT (ML)	

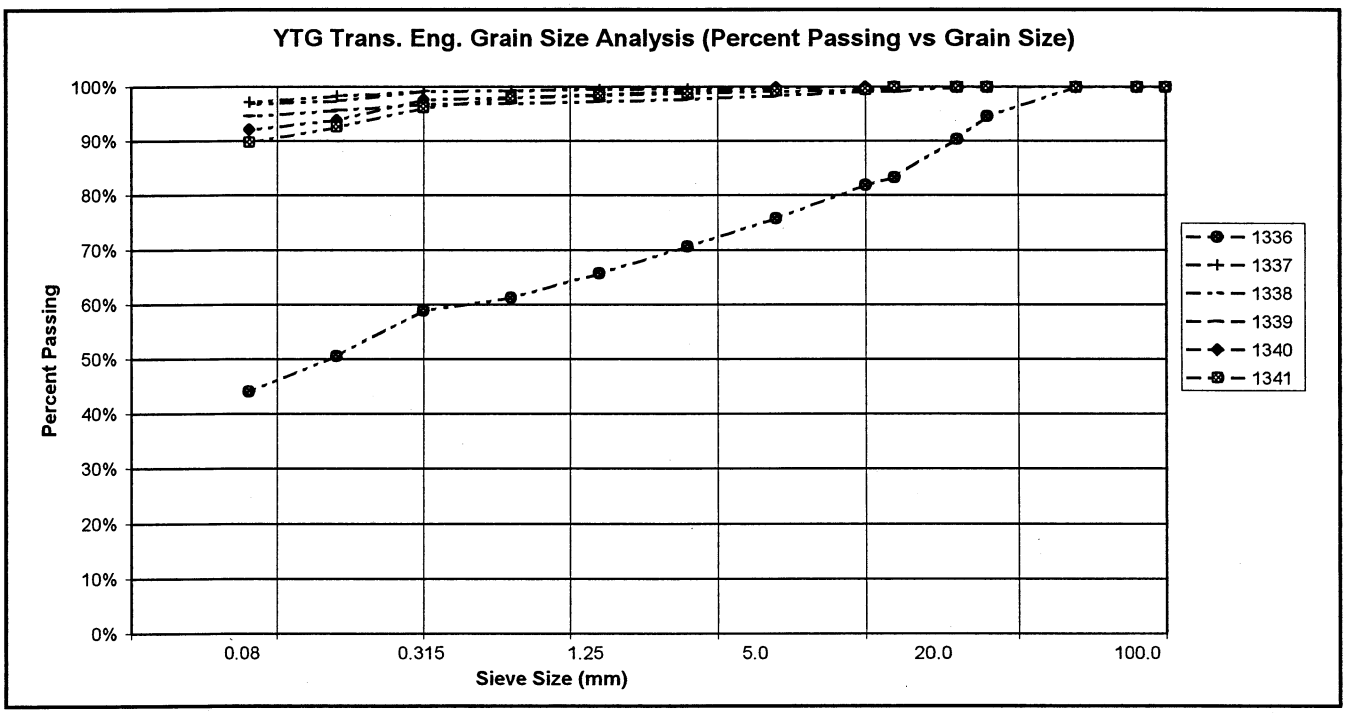


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Shakwak Seg 9
PROJECT LOCATION: Km 1687 - 1686 A/H
DRILL UNIT: Mobile B 40-L
HOLE LOCATION: 1687+350 15M LT
LOGGED BY: D.T.

HOLE No.: 561-1708

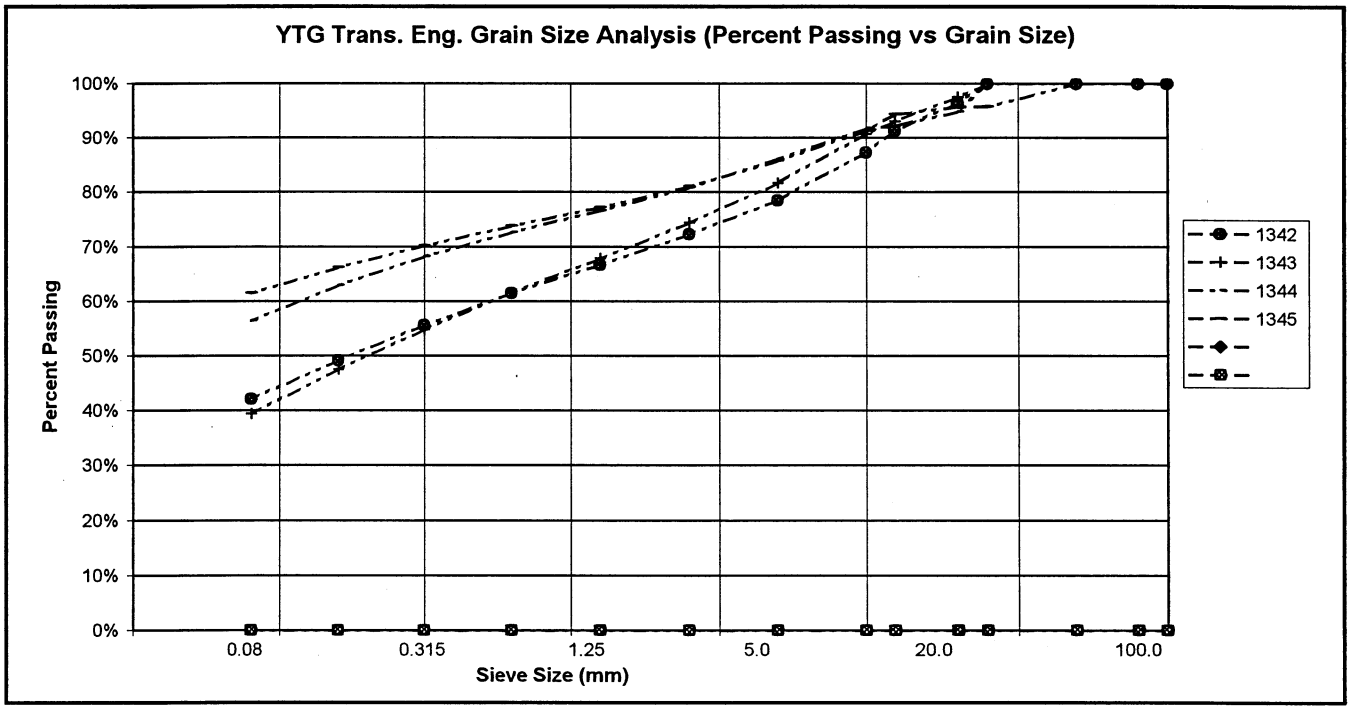
DATE COMP: 2000/08/21

FIELD NO:	1336	1337	1338	1339	1340	1341
LAB NO:	1738	1739	1740	1741	1742	1743
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0	7.1-7.3	9.6-9.8
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING
100.0	100%	100%	100%	100%	100%	100%
80.0	100%	100%	100%	100%	100%	100%
50.0	100%	100%	100%	100%	100%	100%
25.0	95%	100%	100%	100%	100%	100%
20.0	90%	100%	100%	100%	100%	100%
12.5	83%	100%	100%	99%	100%	100%
10.0	82%	100%	100%	99%	100%	99%
5.0	76%	100%	100%	98%	100%	99%
2.5	71%	100%	100%	98%	99%	99%
1.25	66%	100%	100%	97%	99%	99%
0.630	61%	99%	99%	97%	98%	98%
0.315	59%	99%	99%	97%	98%	96%
0.160	51%	98%	97%	96%	94%	93%
0.080	44%	97%	97%	95%	92%	90%
M.C.(%):	10%	21%	17%	17%	19%	20%
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	0.0
% GRAVEL:	24	0	0	2	0	1
% SAND:	32	3	3	4	8	9
% FINES:	44	97	97	95	92	90
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILT (ML)	SILT (ML)	SILT (ML)	SILT (ML)	SILT (ML)



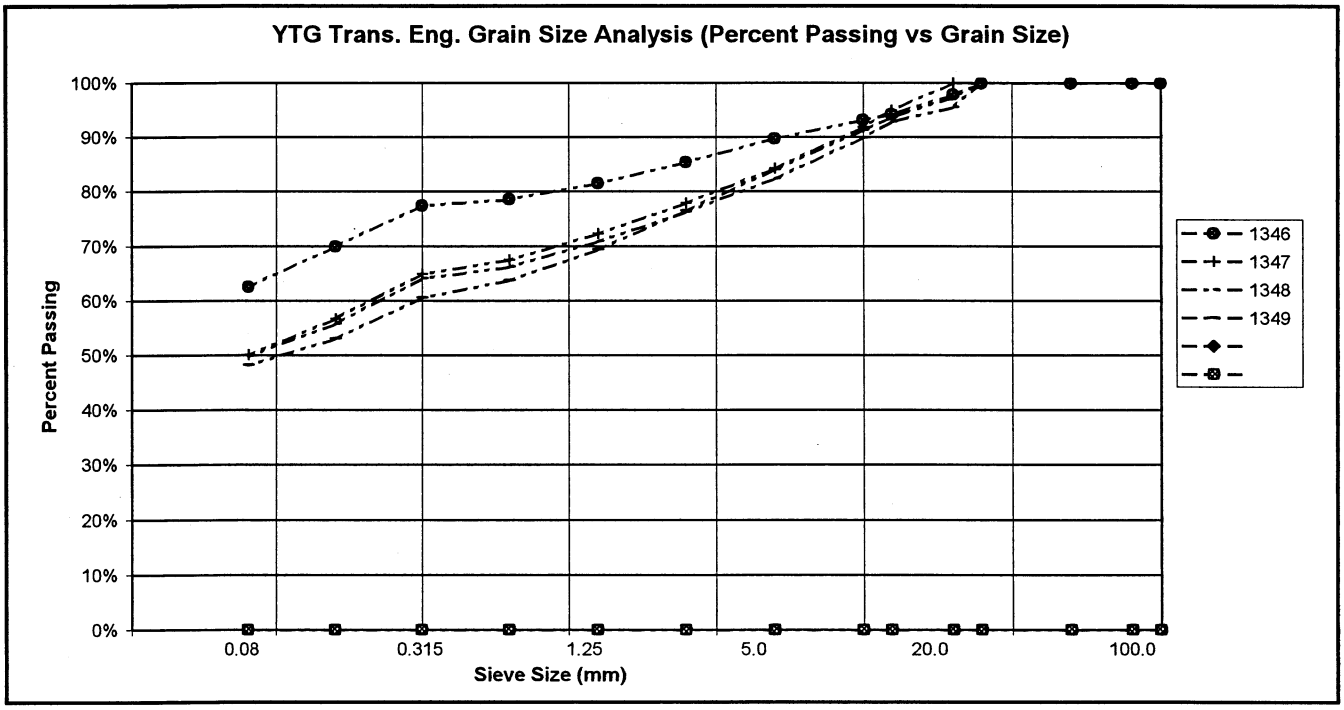
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 561-1709
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	Shakwak Seg 9		
PROJECT LOCATION:	Km 1687 - 1686 A/H		
DRILL UNIT:	Mobile B 40-L		
HOLE LOCATION:	1687+250 10M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/21

FIELD NO:	1342	1343	1344	1345		
LAB NO:	1744	1745	1746	1747		
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	5.3-5.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	96%		
20.0	96%	98%	95%	96%		
12.5	91%	93%	92%	94%		
10.0	87%	91%	92%	91%		
5.0	79%	82%	86%	86%		
2.5	72%	74%	81%	81%		
1.25	67%	68%	77%	77%		
0.630	62%	62%	73%	74%		
0.315	56%	55%	68%	70%		
0.160	49%	48%	63%	66%		
0.080	42%	39%	56%	61%		
M.C.(%):	12%	10%	13%	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:	21	18	14	14		
% SAND:	36	42	30	24		
% FINES:	42	39	56	61		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)	SANDY SILT (ML)		



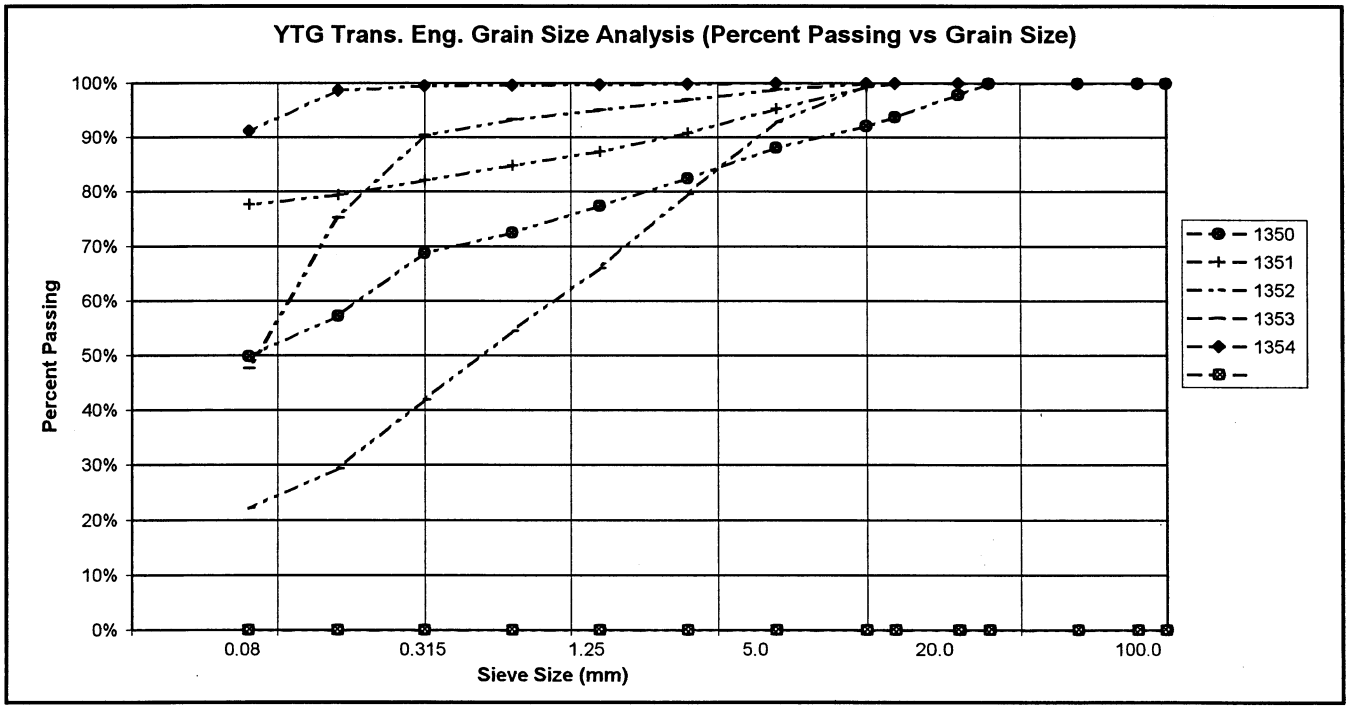
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 561-1710
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	Shakwak Seg 9		
PROJECT LOCATION:	Km 1687 - 1686 A/H		
DRILL UNIT:	Mobile B 40-L		
HOLE LOCATION:	1687+210 8M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/21

FIELD NO:	1346	1347	1348	1349		
LAB NO:	1748	1749	1750	1751		
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	98%	100%	96%	97%		
12.5	94%	95%	93%	94%		
10.0	93%	92%	90%	91%		
5.0	90%	84%	82%	84%		
2.5	85%	78%	76%	77%		
1.25	82%	72%	71%	69%		
0.630	79%	67%	66%	64%		
0.315	77%	65%	64%	61%		
0.160	70%	57%	56%	53%		
0.080	63%	50%	50%	48%		
M.C.(%):	19%	16%	14%	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:	10	16	18	16		
% SAND:	27	34	33	36		
% FINES:	63	50	50	48		
CLASSIFICATION	SANDY SILT (ML)	SANDY SILT WITH GRAVEL (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		



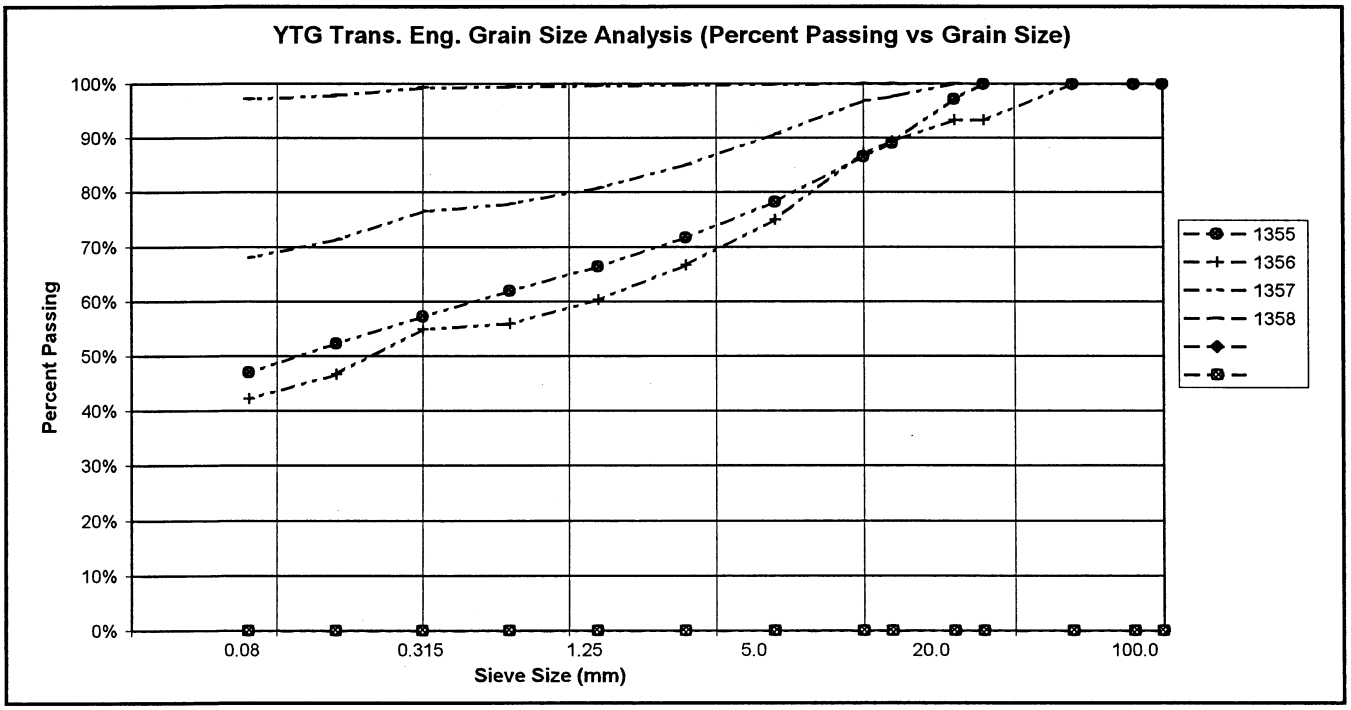
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 561-1711
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	Shakwak Seg 9		
PROJECT LOCATION:	Km 1687 - 1686 A/H		
DRILL UNIT:	Mobile B 40-L		
HOLE LOCATION:	1687+130 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/21

FIELD NO:	1350	1351	1352	1353	1354	
LAB NO:	1752	1753	1754	1755	1756	
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	3.9-4.1	5.4-5.6	
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	100%	100%	100%	100%	100%	
20.0	98%	100%	100%	100%	100%	
12.5	94%	100%	100%	100%	100%	
10.0	92%	99%	99%	100%	100%	
5.0	88%	95%	93%	99%	100%	
2.5	83%	91%	80%	97%	100%	
1.25	77%	87%	66%	95%	100%	
0.630	73%	85%	54%	93%	100%	
0.315	69%	82%	42%	90%	100%	
0.160	57%	80%	29%	75%	99%	
0.080	50%	78%	22%	48%	91%	
M.C.(%):	17%	19%	16%	24%	21%	
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:	12	5	7	1	0	
% SAND:	38	18	71	51	9	
% FINES:	50	78	22	48	91	
CLASSIFICATION	SILTY SAND (SM)	SILT WITH SAND (ML)	SILTY SAND (SM)	SILTY SAND (SM)	SILT (ML)	



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 561-1712
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	Shakwak Seg 9		
PROJECT LOCATION:	Km 1687 - 1686 A/H		
DRILL UNIT:	Mobile B 40-L		
HOLE LOCATION:	1787+050 20M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/21

FIELD NO:	1355	1356	1357	1358		
LAB NO:	1757	1758	1759	1760		
DEPTH:	1.4-1.6	3.0-3.2	4.0-4.2	5.5-5.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	93%	100%	100%		
20.0	97%	93%	100%	100%		
12.5	89%	89%	98%	100%		
10.0	87%	87%	97%	100%		
5.0	78%	75%	91%	100%		
2.5	72%	67%	85%	100%		
1.25	66%	60%	81%	100%		
0.630	62%	56%	78%	99%		
0.315	57%	55%	76%	99%		
0.160	52%	47%	71%	98%		
0.080	47%	42%	68%	97%		
M.C.(%):	15%	17%	17%	19%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	22	25	9	0		
% SAND:	31	33	23	3		
% FINES:	47	42	68	97		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)	SILT (ML)		

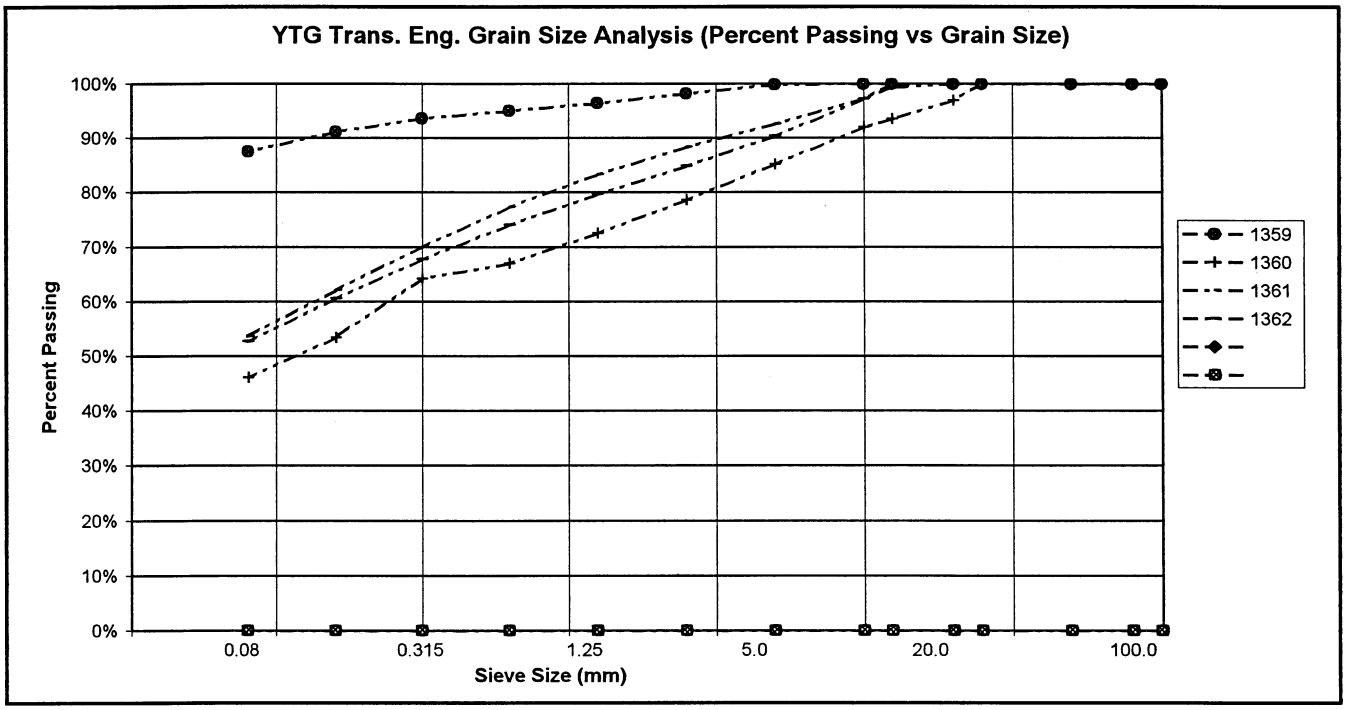


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Shakwak Seg 9
PROJECT LOCATION: Km 1687 - 1686 A/H
DRILL UNIT: Mobile B 40-L
HOLE LOCATION: 1686+950 15M LT
LOGGED BY: D.T.

HOLE No.: 561-1713

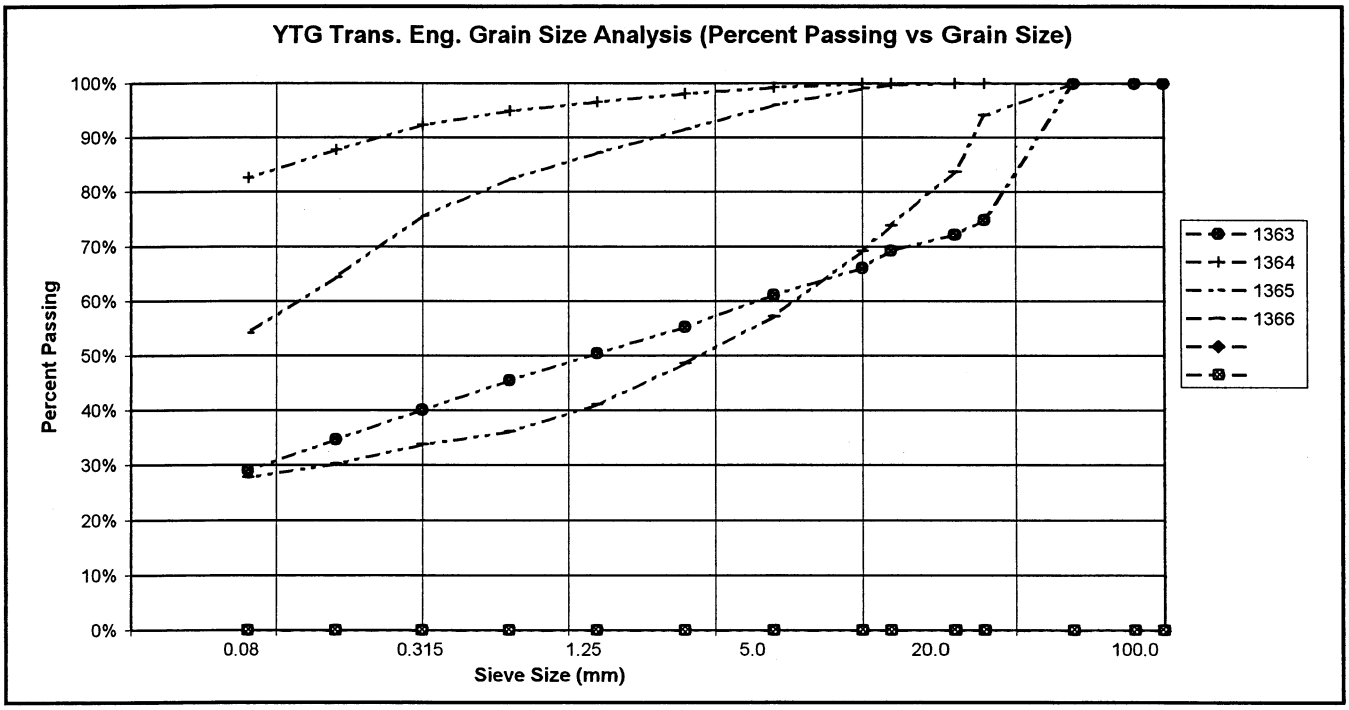
DATE COMP: 2000/07/21

FIELD NO:	1359	1360	1361	1362		
LAB NO:	1761	1762	1763	1764		
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	97%	100%	100%		
12.5	100%	94%	99%	100%		
10.0	100%	92%	97%	97%		
5.0	100%	85%	93%	90%		
2.5	98%	79%	88%	85%		
1.25	96%	73%	83%	80%		
0.630	95%	67%	77%	74%		
0.315	94%	64%	70%	68%		
0.160	91%	53%	62%	61%		
0.080	88%	46%	54%	53%		
M.C.(%):	110%	21%	20%	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:	0	15	7	10		
% SAND:	12	39	39	38		
% FINES:	88	46	54	53		
CLASSIFICATION	SILT (ML)	SILTY SAND (SM)	SANDY SILT (ML)	SANDY SILT (ML)		

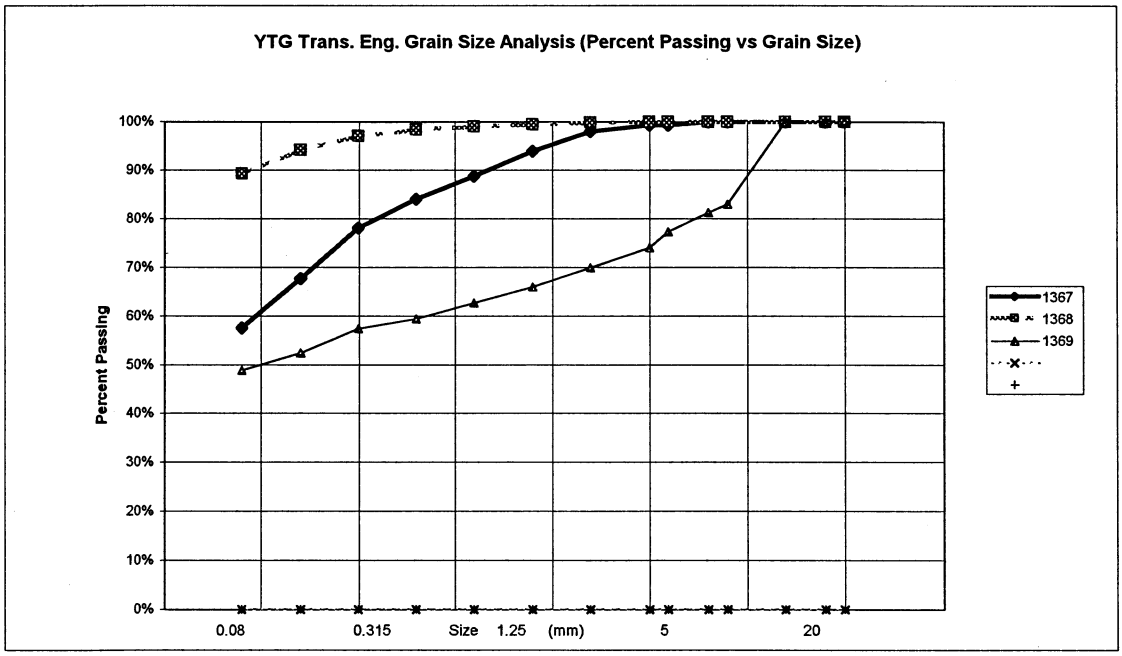


PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 561-1714
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	Shakwak Seg 9		
PROJECT LOCATION:	Km 1687 - 1686 A/H		
DRILL UNIT:	Mobile B 40-L		
HOLE LOCATION:	1686+850 20M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/07/21

FIELD NO:	1363	1364	1365	1366		
LAB NO:	1765	1766	1767	1768		
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.8-5.0		
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	75%	100%	100%	94%		
20.0	72%	100%	100%	84%		
12.5	69%	100%	100%	74%		
10.0	66%	100%	99%	69%		
5.0	61%	99%	96%	57%		
2.5	55%	98%	92%	49%		
1.25	50%	97%	87%	41%		
0.630	46%	95%	82%	36%		
0.315	40%	92%	76%	34%		
0.160	35%	88%	64%	30%		
0.080	29%	83%	54%	28%		
M.C.(%):	14%	12%	12%	10%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	39	1	4	43		
% SAND:	32	17	42	29		
% FINES:	29	83	54	28		
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILT WITH SAND (ML)	SANDY SILT (ML)	SILTY GRAVEL WITH SAND (GM)		

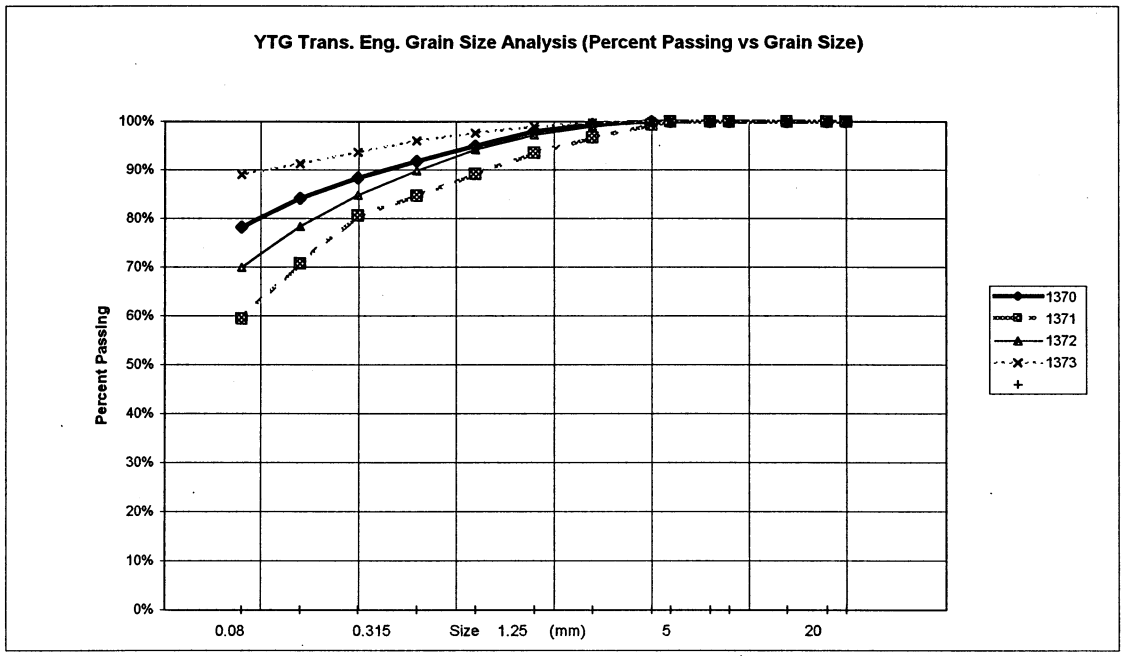


PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1715
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1686+808 12M RT					DATE COM	2000/07/24
FIELD NO:	1367	FIELD No.	1368	FIELD No:	1369		
LAB NO:	1807	LAB No.	1808	LAB No:	1809		
DEPTH:	1.4-1.6	DEPTH	2.8-3.0	DEPTH:	4.8-5.0		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	100%	25.0	83%		
20.0	100%	20.0	100%	20.0	81%		
12.5	99%	12.5	100%	12.5	77%		
10.0	99%	10.0	100%	10.0	74%		
5.0	98%	5.0	100%	5.0	70%		
2.5	94%	2.5	99%	2.5	66%		
1.25	89%	1.25	99%	1.25	63%		
0.630	84%	0.630	98%	0.630	59%		
0.315	78%	0.315	97%	0.315	57%		
0.160	68%	0.160	94%	0.160	52%		
0.080	58%	0.080	89%	0.080	49%		
M.C.(%):	18%	M.C.(%):	25%	M.C.(%):	18%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	2	% GRAVEL	0	% GRAVEL	30		
% SAND:	40	% SAND:	10	% SAND:	21		
% FINES:	58	% FINES:	89	% FINES:	49		
CLASSIFICATION:	SANDY SILT (ML)	CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)		

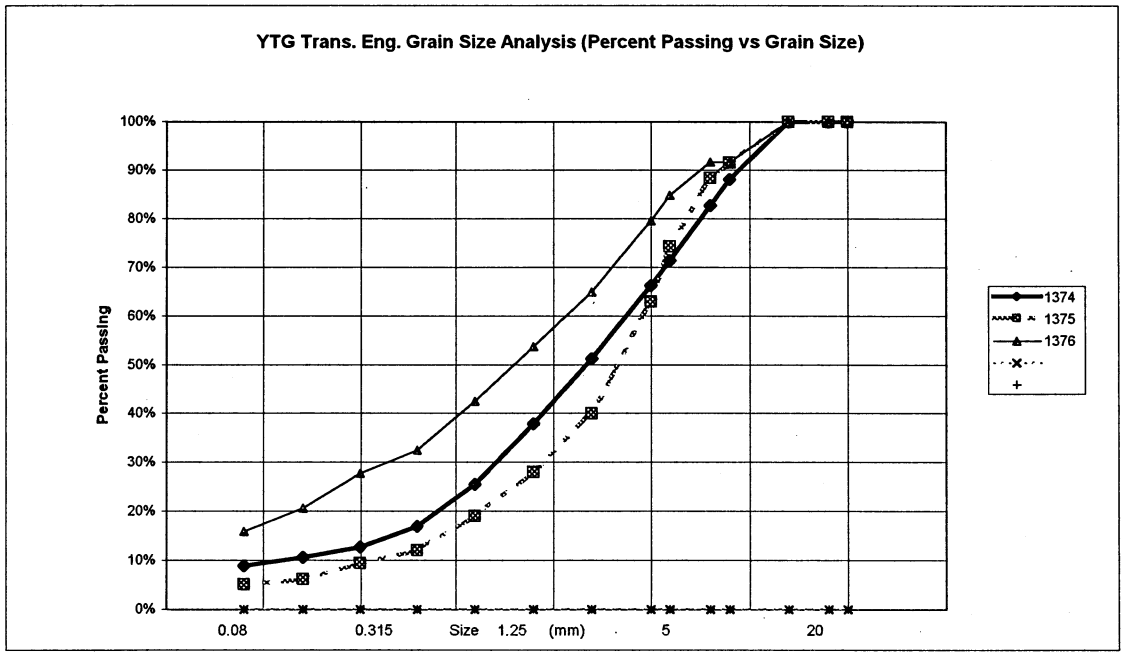


PROJECT NUMBER:	091-202101-0363-1		HOLE No.: 563-1716
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	Mobile B 40 L		
LOGGED BY:	Doug Trim		
HOLE LOCATION:	1686+725 10M RT		DATE COM 2000/07/24

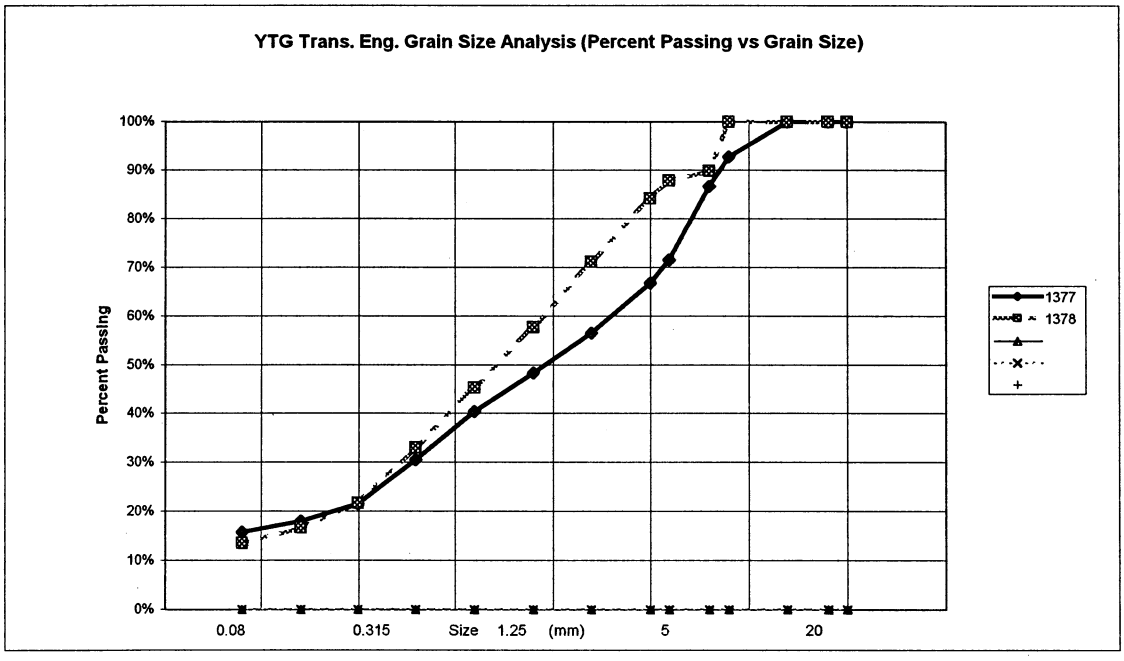
FIELD NO:	1370	FIELD No.	1371	FIELD No:	1372	FIELD No:	1373
LAB NO:	1810	LAB No.	1811	LAB No:	1812	LAB No:	1813
DEPTH:	1.3-1.5	DEPTH	2.0-2.2	DEPTH:	3.0-3.2	DEPTH:	4.3-4.5
TYPE:	AUGER	TYPE	AUGER	TYPE:	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	100%	25.0	100%
20.0	100%	20.0	100%	20.0	100%	20.0	100%
12.5	100%	12.5	100%	12.5	100%	12.5	100%
10.0	100%	10.0	99%	10.0	100%	10.0	100%
5.0	100%	5.0	97%	5.0	99%	5.0	100%
2.5	98%	2.5	93%	2.5	97%	2.5	99%
1.25	95%	1.25	89%	1.25	94%	1.25	98%
0.630	92%	0.630	85%	0.630	90%	0.630	96%
0.315	88%	0.315	81%	0.315	85%	0.315	94%
0.160	84%	0.160	71%	0.160	78%	0.160	91%
0.080	78%	0.080	59%	0.080	70%	0.080	89%
M.C.(%):	53%	M.C.(%):	26%	M.C.(%):	22%	M.C.(%):	28%
LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL	0	% GRAVEL	3	% GRAVEL	1	% GRAVEL	0
% SAND:	21	% SAND:	37	% SAND:	29	% SAND:	11
% FINES:	78	% FINES:	59	% FINES:	70	% FINES:	89
CLASSIFICATION:	SILT WITH SAND (ML)	CLASSIFICATION:	SANDY SILT (ML)	CLASSIFICATION:	SANDY SILT (ML)	CLASSIFICATION:	SILT (ML)



PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1717
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1686+565 CENTRELINE					DATE COM	2000/07/24
FIELD NO:	1374	FIELD No.	1375	FIELD No:	1376		
LAB NO:	1814	LAB No.	1815	LAB No:	1816		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	88%	25.0	92%	25.0	92%		
20.0	83%	20.0	88%	20.0	92%		
12.5	71%	12.5	74%	12.5	85%		
10.0	66%	10.0	63%	10.0	80%		
5.0	51%	5.0	40%	5.0	65%		
2.5	38%	2.5	28%	2.5	54%		
1.25	26%	1.25	19%	1.25	43%		
0.630	17%	0.630	12%	0.630	33%		
0.315	13%	0.315	9%	0.315	28%		
0.160	11%	0.160	6%	0.160	21%		
0.080	9%	0.080	5%	0.080	16%		
M.C.(%):	4%	M.C.(%):	3%	M.C.(%):	5%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	49	% GRAVEL	60	% GRAVEL	35		
% SAND:	42	% SAND:	35	% SAND:	49		
% FINES:	9	% FINES:	5	% FINES:	16		
CLASSIFICATION:	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	CLASSIFICATION:	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)		



PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1718
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1686+470 CENTRELINE					DATE COM	2000/07/24
FIELD NO:	1377	FIELD No.	1378				
LAB NO:	1817	LAB No.	1818				
DEPTH:	0.8-1.0	DEPTH	2.8-3.0				
TYPE:	AUGER	A	AUGER				
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING				
100.0	100%	100.0	100%				
80.0	100%	80.0	100%				
50.0	100%	50.0	100%				
25.0	93%	25.0	100%				
20.0	87%	20.0	90%				
12.5	72%	12.5	88%				
10.0	67%	10.0	84%				
5.0	56%	5.0	71%				
2.5	48%	2.5	58%				
1.25	40%	1.25	45%				
0.630	31%	0.630	33%				
0.315	22%	0.315	22%				
0.160	18%	0.160	17%				
0.080	16%	0.080	14%				
M.C.(%):	8%	M.C.(%):	7%				
LIMITS		LIMITS					
LIQUID:	0.0	LIQUID:	0.0				
PLASTIC:	0.0	PLASTIC:	0.0				
P.I.:	0.0	P.I.:	0.0				
% GRAVEL	44	% GRAVEL	29				
% SAND:	41	% SAND:	58				
% FINES:	16	% FINES:	14				
CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)				

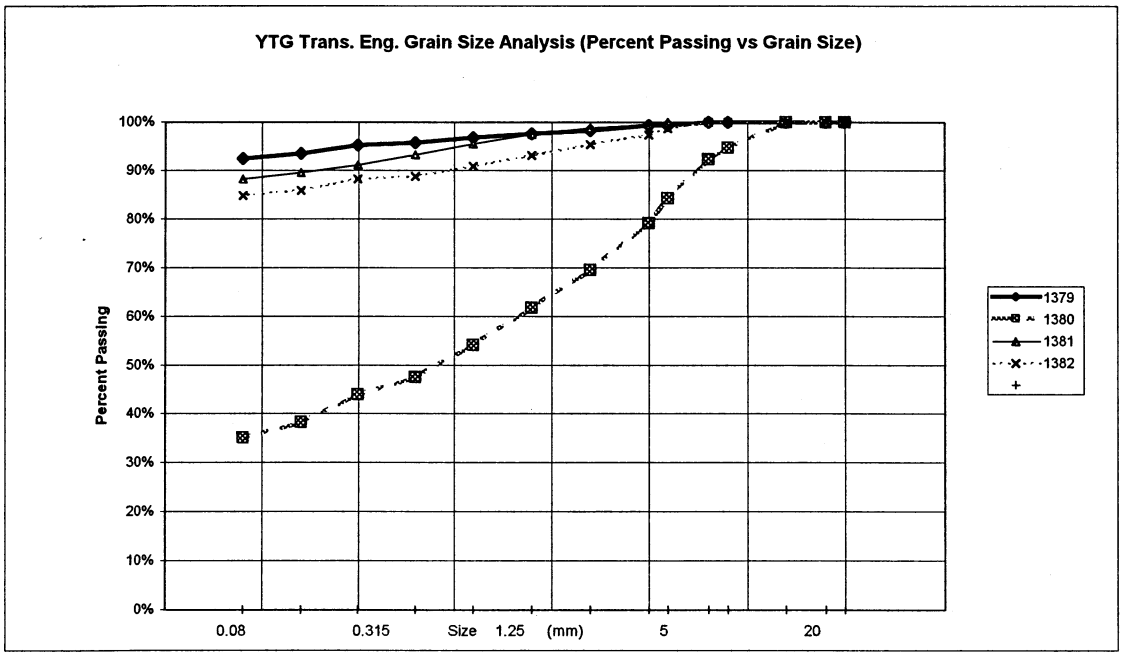


PROJECT NUMBER:	091-202101-0363-1		HOLE No.: 563-1719
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	Mobile B 40 L		
LOGGED BY:	Doug Trim		
HOLE LOCATION:	1686+400 2M LT		DATE COM 2000/07/24

FIELD NO:	1379	FIELD No.	1380	FIELD No:	1381	FIELD No:	1382
LAB NO:	1819	LAB No.	1820	LAB No:	1821	LAB No:	1822
DEPTH:	0.8-1.0	DEPTH	1.9-2.1	DEPTH:	3.0-3.2	DEPTH:	4.3-4.5
TYPE:	AUGER	A	AUGER	TYPE:	AUGER	TYPE:	AUGER

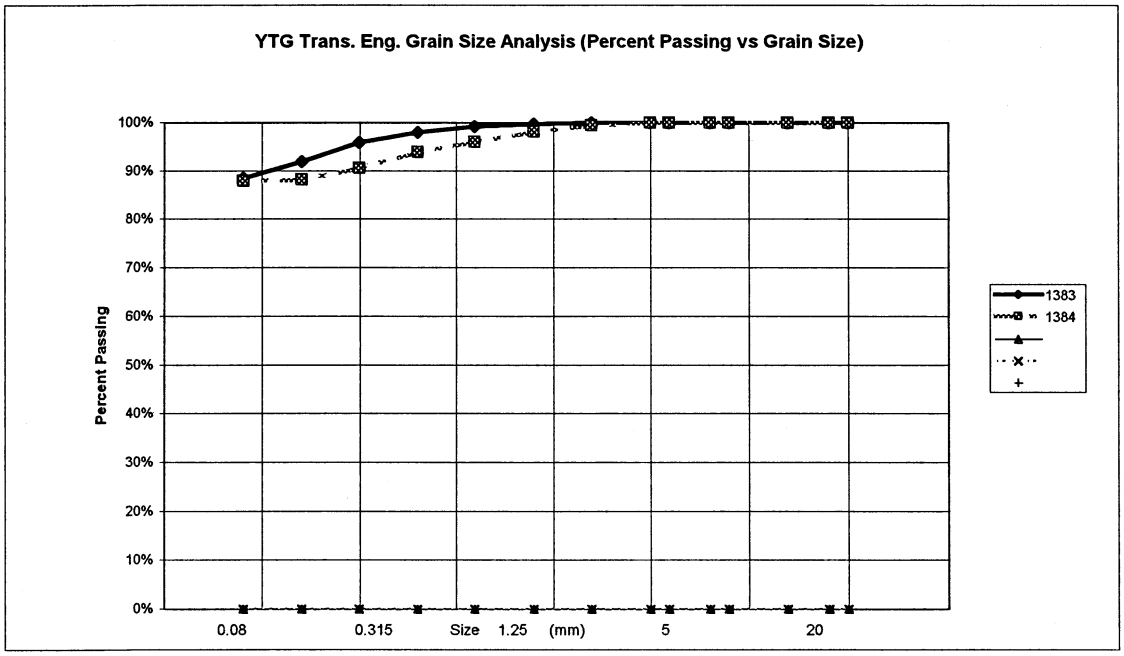
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	95%	25.0	100%	25.0	100%
20.0	100%	20.0	92%	20.0	100%	20.0	100%
12.5	99%	12.5	84%	12.5	100%	12.5	99%
10.0	99%	10.0	79%	10.0	100%	10.0	97%
5.0	98%	5.0	70%	5.0	99%	5.0	95%
2.5	98%	2.5	62%	2.5	97%	2.5	93%
1.25	97%	1.25	54%	1.25	96%	1.25	91%
0.630	96%	0.630	47%	0.630	93%	0.630	89%
0.315	95%	0.315	44%	0.315	91%	0.315	88%
0.160	94%	0.160	38%	0.160	90%	0.160	86%
0.080	92%	0.080	35%	0.080	88%	0.080	85%

M.C.(%):	38%	M.C.(%):	11%	M.C.(%):	25%	M.C.(%):	23%
LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL	2	% GRAVEL	30	% GRAVEL	1	% GRAVEL	5
% SAND:	6	% SAND:	34	% SAND:	10	% SAND:	11
% FINES:	92	% FINES:	35	% FINES:	88	% FINES:	85
CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILT WITH SAND (ML)



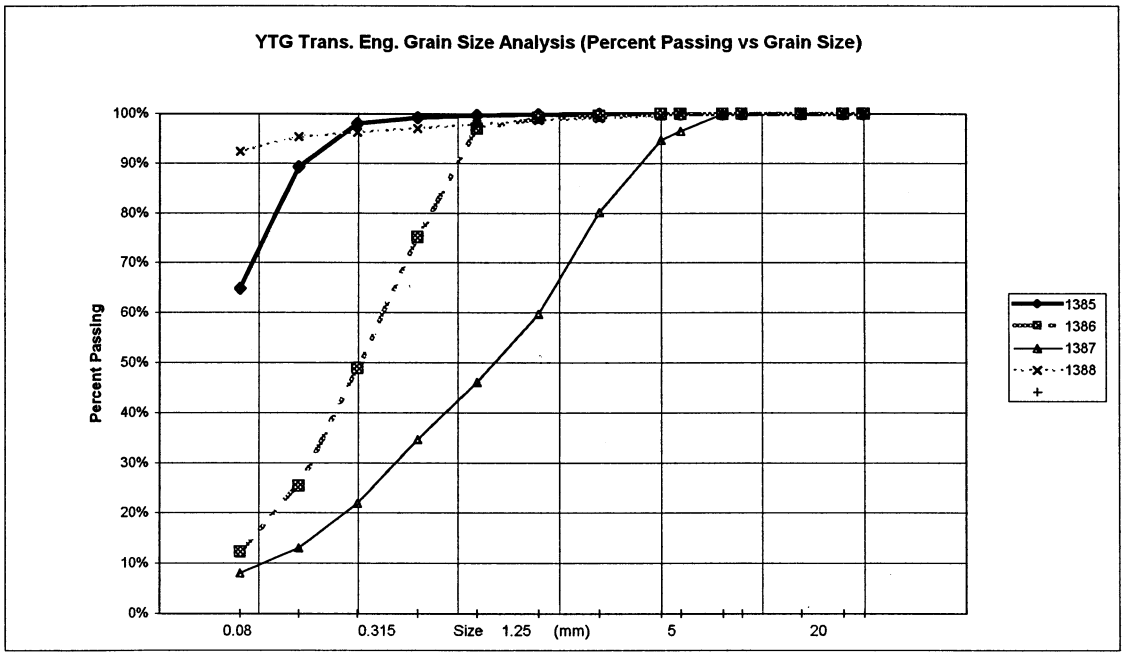
PROJECT NUMBER:	091-202101-0363-1		HOLE No.: 563-1720
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	Mobile B 40 L		
LOGGED BY:	Doug Trim		
HOLE LOCATION:	1686+325 2m lt		DATE COM 2000/07/24

FIELD NO:	1383	FIELD No.	1384				
LAB NO:	1823	LAB No.	1824				
DEPTH:	0.8-1.0	DEPTH	2.9-3.1				
TYPE:	AUGER	A	AUGER				
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING				
100.0	100%	100.0	100%				
80.0	100%	80.0	100%				
50.0	100%	50.0	100%				
25.0	100%	25.0	100%				
20.0	100%	20.0	100%				
12.5	100%	12.5	100%				
10.0	100%	10.0	100%				
5.0	100%	5.0	100%				
2.5	100%	2.5	98%				
1.25	99%	1.25	96%				
0.630	98%	0.630	94%				
0.315	96%	0.315	91%				
0.160	92%	0.160	88%				
0.080	88%	0.080	88%				
M.C.(%):	45%	M.C.(%):	44%				
LIMITS		LIMITS					
LIQUID:	0.0	LIQUID:	0.0				
PLASTIC:	0.0	PLASTIC:	0.0				
P.I.:	0.0	P.I.:	0.0				
% GRAVEL	0	% GRAVEL	0				
% SAND:	12	% SAND:	12				
% FINES:	88	% FINES:	88				
CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILT (ML)				



PROJECT NUMBER:	091-202101-0363-1		HOLE No.: 563-1721
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	Mobile B 40 L		
LOGGED BY:	Doug Trim		
HOLE LOCATION:	1686+212 20M LT		DATE COM 2000/07/25

FIELD NO:	1385	FIELD No.	1386	FIELD No:	1387	FIELD No:	1388
LAB NO:	1825	LAB No.	1826	LAB No:	1827	LAB No:	1828
DEPTH:	0.8-1.0	DEPTH	1.8-2.0	DEPTH:	2.8-3.0	DEPTH:	4.4-4.6
TYPE:	AUGER	A	AUGER	TYPE:	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	100%	25.0	100%
20.0	100%	20.0	100%	20.0	100%	20.0	100%
12.5	100%	12.5	100%	12.5	97%	12.5	100%
10.0	100%	10.0	100%	10.0	95%	10.0	100%
5.0	100%	5.0	100%	5.0	80%	5.0	99%
2.5	100%	2.5	99%	2.5	60%	2.5	99%
1.25	100%	1.25	97%	1.25	46%	1.25	98%
0.630	99%	0.630	75%	0.630	35%	0.630	97%
0.315	98%	0.315	49%	0.315	22%	0.315	96%
0.160	89%	0.160	25%	0.160	13%	0.160	95%
0.080	65%	0.080	12%	0.080	8%	0.080	92%
M.C.(%):	38%	M.C.(%):	21%	M.C.(%):	13%	M.C.(%):	31%
LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL	0	% GRAVEL	0	% GRAVEL	20	% GRAVEL	1
% SAND:	35	% SAND:	87	% SAND:	72	% SAND:	7
% FINES:	65	% FINES:	12	% FINES:	8	% FINES:	92
CLASSIFICATION:	SANDY SILT (ML)	CLASSIFICATION:	SILTY SAND (SM)	CLASSIFICATION:	POORLY GRADED SAND WITH SILT & GRAVEL (SP-SM)	CLASSIFICATION:	SILT (ML)



PROJECT NUMBER:	091-202101-0363-1	HOLE No.:	563-1721
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	Mobile B 40 L		
LOGGED BY:	Doug Trim		
HOLE LOCATION:	1686+212 20M LT	DATE COM	2000/07/25

FIELD NO: 1389
LAB NO: 1829
DEPTH: 5.8-6.0
TYPE: AUGER

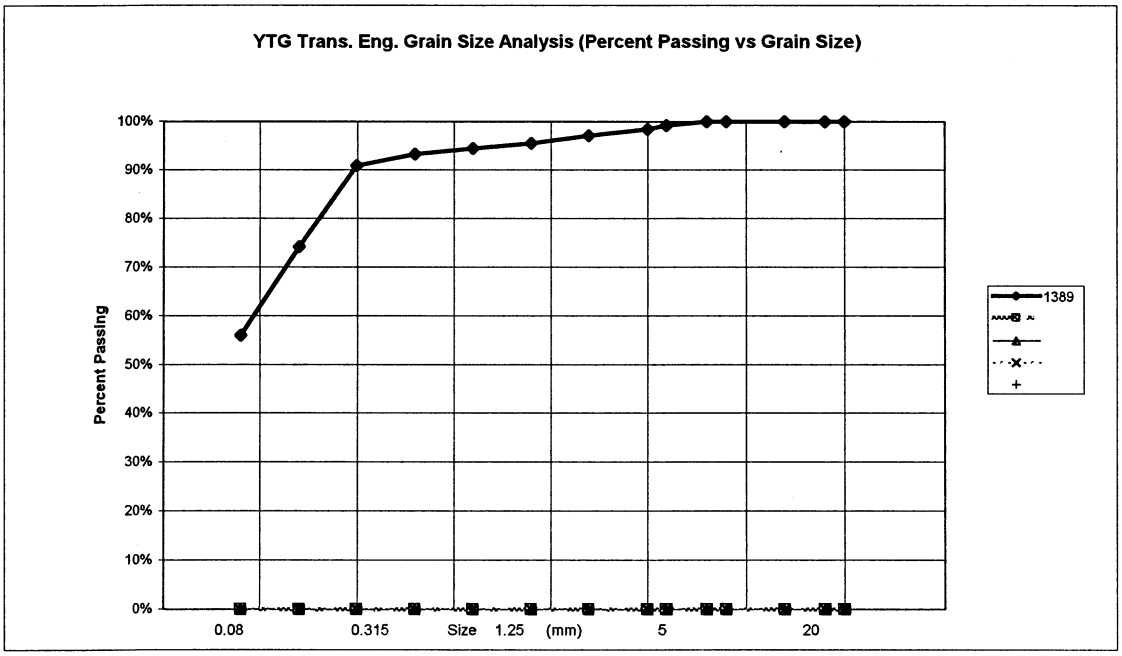
SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	100%
12.5	99%
10.0	98%
5.0	97%
2.5	96%
1.25	94%
0.630	93%
0.315	91%
0.160	74%
0.080	56%

M.C.(%): 38%

LIMITS
LIQUID: 0.0
PLASTIC: 0.0
P.I.: 0.0

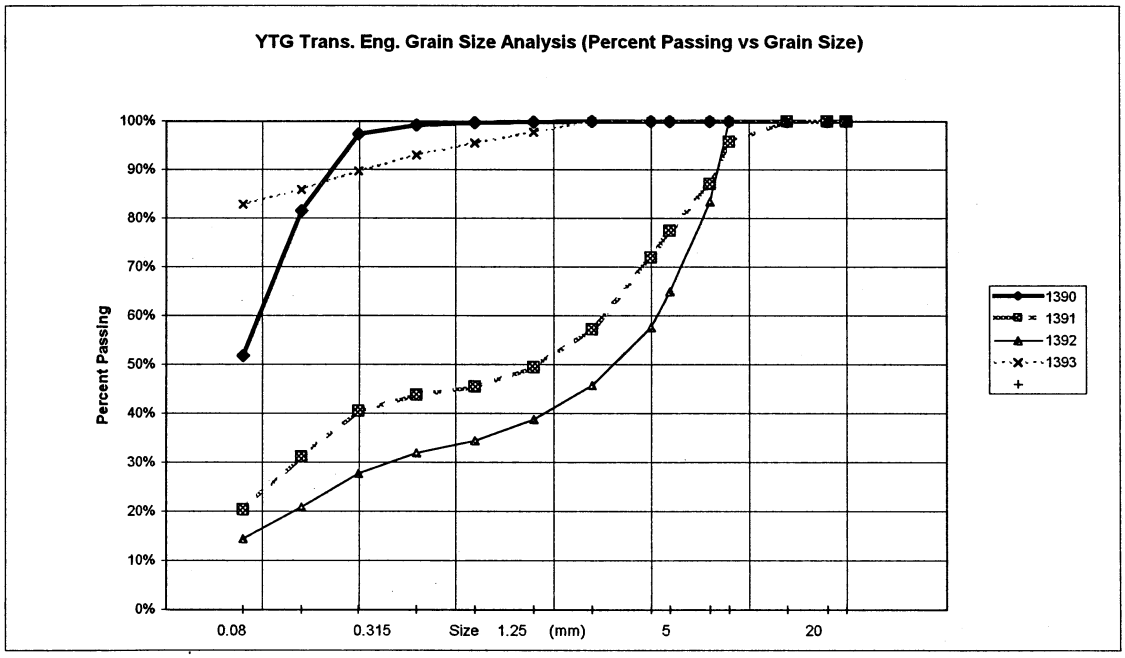
% GRAVEL 3
% SAND: 41
% FINES: 56

CLASSIFICATION:
SANDY SILT (ML)



PROJECT NUMBER:	091-202101-0363-1		HOLE No.: 563-1722
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	Mobile B 40 L		
LOGGED BY:	Doug Trim		
HOLE LOCATION:	1630+230 20M RT		DATE COM 2000/07/25

FIELD NO:	1390	FIELD No.	1391	FIELD No:	1392	FIELD No:	1393
LAB NO:	1830	LAB No.	1831	LAB No:	1832	LAB No:	1833
DEPTH:	0.8-1.0	DEPTH	1.8-2.0	DEPTH:	2.8-3.0	DEPTH:	4.3-4.5
TYPE:	AUGER	A	AUGER	TYPE:	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	96%	25.0	100%	25.0	100%
20.0	100%	20.0	87%	20.0	83%	20.0	100%
12.5	100%	12.5	77%	12.5	65%	12.5	100%
10.0	100%	10.0	72%	10.0	58%	10.0	100%
5.0	100%	5.0	57%	5.0	46%	5.0	100%
2.5	100%	2.5	49%	2.5	39%	2.5	98%
1.25	100%	1.25	46%	1.25	35%	1.25	96%
0.630	99%	0.630	44%	0.630	32%	0.630	93%
0.315	97%	0.315	40%	0.315	28%	0.315	90%
0.160	82%	0.160	31%	0.160	21%	0.160	86%
0.080	52%	0.080	20%	0.080	14%	0.080	83%
M.C.(%):	32%	M.C.(%):	17%	M.C.(%):	10%	M.C.(%):	46%
LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL	0	% GRAVEL	43	% GRAVEL	54	% GRAVEL	0
% SAND:	48	% SAND:	37	% SAND:	31	% SAND:	17
% FINES:	52	% FINES:	20	% FINES:	14	% FINES:	83
CLASSIFICATION:	SANDY SILT (ML)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION:	SILT WITH SAND (ML)



PROJECT NUMBER:	091-202101-0363-1	HOLE No.:	563-1722
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	Mobile B 40 L		
LOGGED BY:	Doug Trim		
HOLE LOCATION:	1630+230 20M RT	DATE COM	2000/07/25

FIELD NO: 1394
LAB NO: 1834
DEPTH: 5.8-6.0
TYPE: AUGER

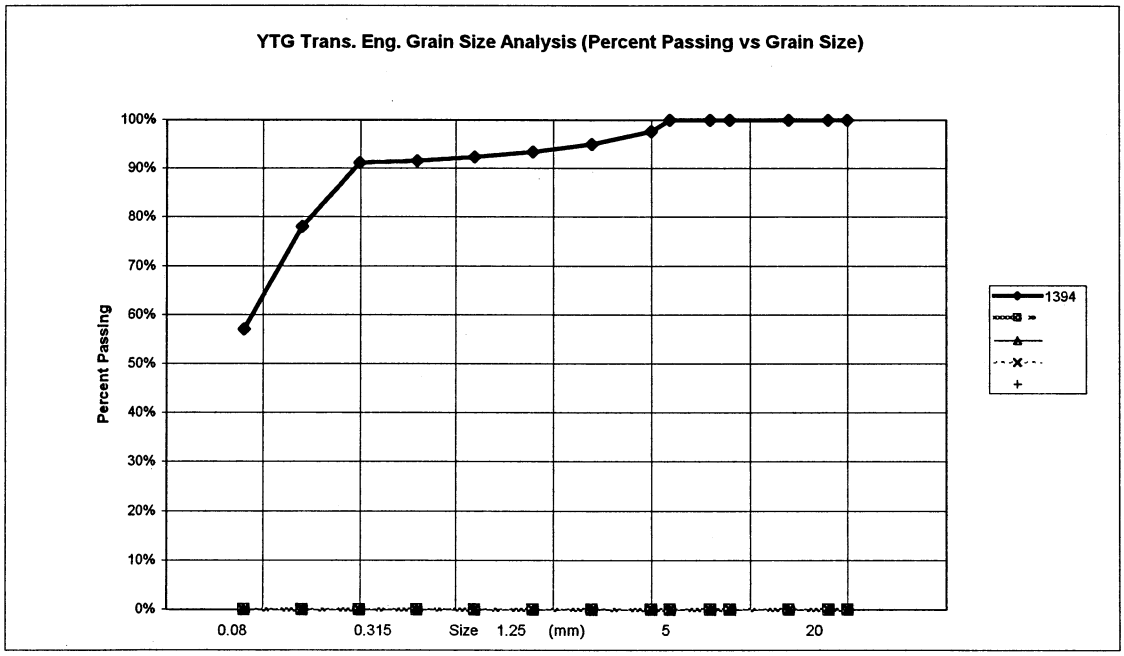
SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	100%
12.5	100%
10.0	98%
5.0	95%
2.5	93%
1.25	92%
0.630	92%
0.315	91%
0.160	78%
0.080	57%

M.C.(%): 24%

LIMITS
LIQUID: 0.0
PLASTIC: 0.0
P.I.: 0.0

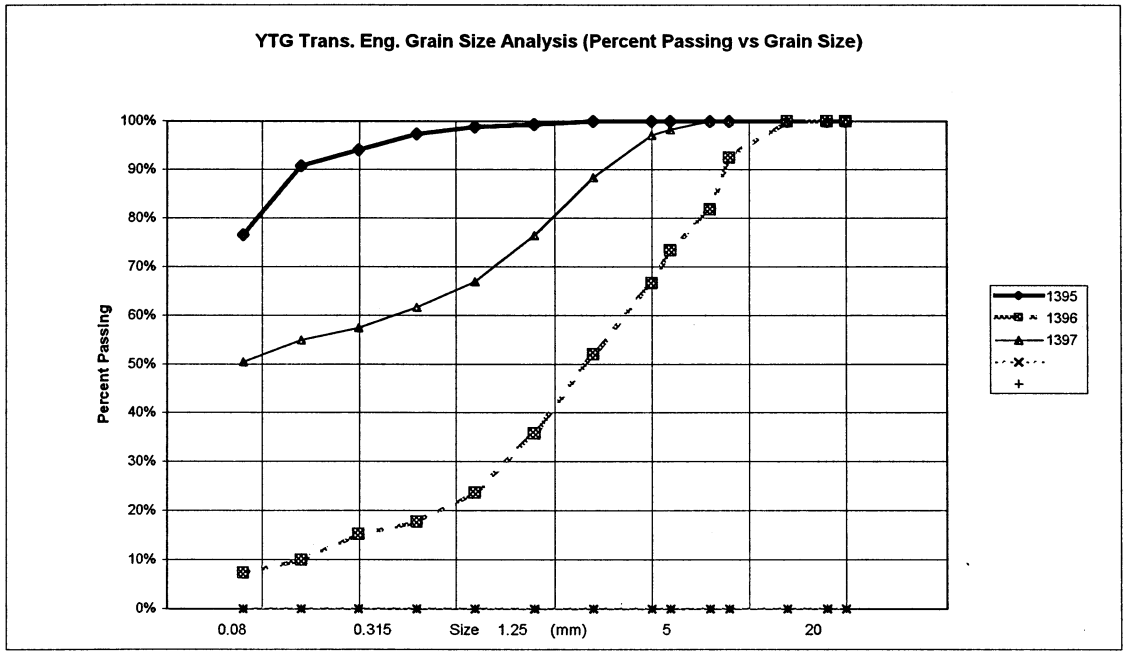
% GRAVEL 5
% SAND: 38
% FINES: 57

CLASSIFICATION:
SANDY SILT (ML)



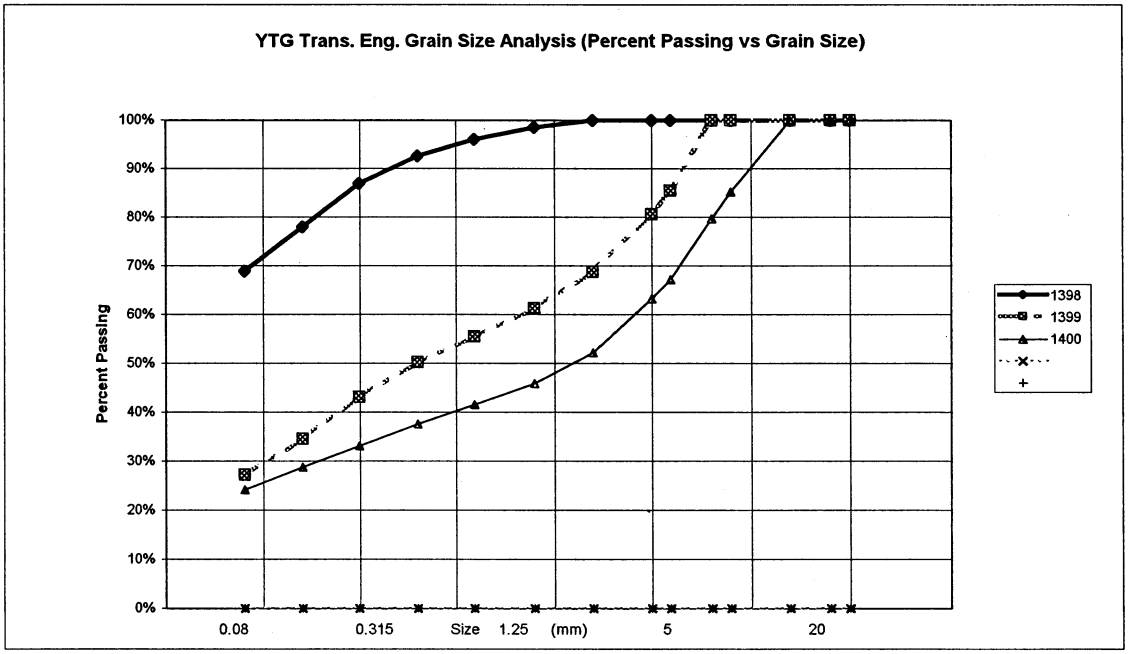
PROJECT NUMBER:	091-202101-0363-1		HOLE No.: 563-1723
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	Mobile B 40 L		
LOGGED BY:	Doug Trim		
HOLE LOCATION:	1686+175 2M RT		DATE COM 2000/07/25

FIELD NO:	1395	FIELD No.	1396	FIELD No:	1397		
LAB NO:	1835	LAB No.	1836	LAB No:	1837		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	92%	25.0	100%		
20.0	100%	20.0	82%	20.0	100%		
12.5	100%	12.5	73%	12.5	98%		
10.0	100%	10.0	67%	10.0	97%		
5.0	100%	5.0	52%	5.0	88%		
2.5	99%	2.5	36%	2.5	76%		
1.25	99%	1.25	24%	1.25	67%		
0.630	97%	0.630	18%	0.630	62%		
0.315	94%	0.315	15%	0.315	57%		
0.160	91%	0.160	10%	0.160	55%		
0.080	76%	0.080	7%	0.080	50%		
M.C.(%):	55%	M.C.(%):	10%	M.C.(%):	23%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	0	% GRAVEL	48	% GRAVEL	12		
% SAND:	23	% SAND:	45	% SAND:	38		
% FINES:	76	% FINES:	7	% FINES:	50		
CLASSIFICATION:	SILT WITH SAND (ML)	CLASSIFICATION:	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	CLASSIFICATION:	SANDY SILT (ML)		

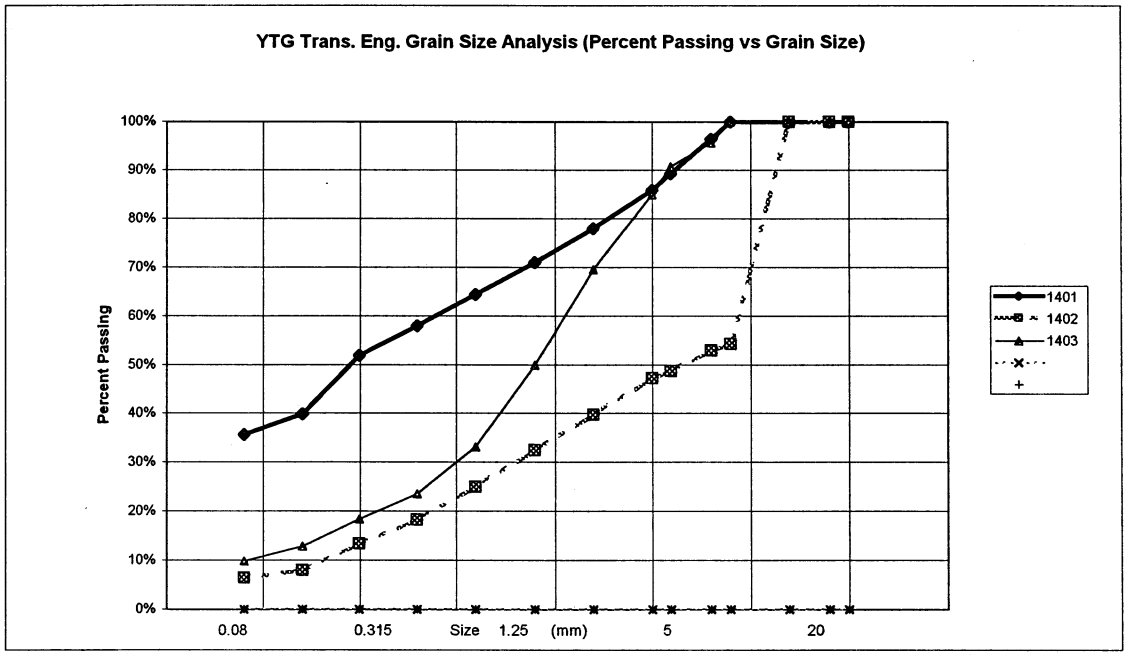


PROJECT NUMBER:	091-202101-0363-1		HOLE No.: 563-1724
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	Mobile B 40 L		
LOGGED BY:	Doug Trim		
HOLE LOCATION:	1686+100 2M RT		DATE COM 2000/07/25

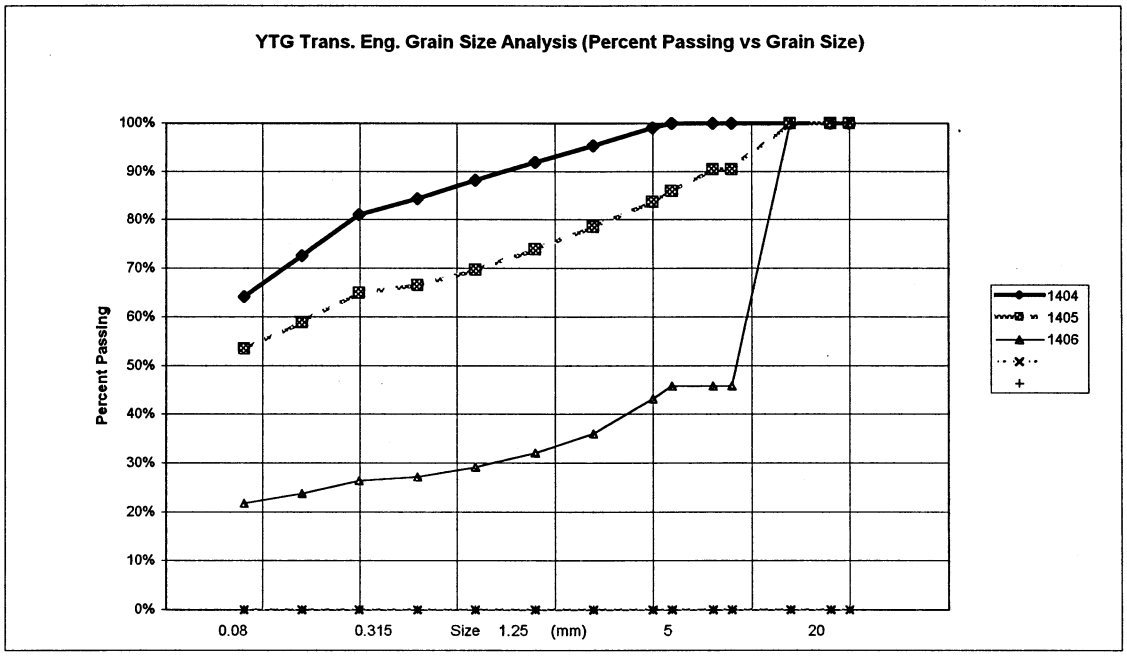
FIELD NO:	1398	FIELD No.	1399	FIELD No:	1400		
LAB NO:	1838	LAB No.	1839	LAB No:	1840		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	100%	25.0	85%		
20.0	100%	20.0	100%	20.0	80%		
12.5	100%	12.5	86%	12.5	67%		
10.0	100%	10.0	81%	10.0	63%		
5.0	100%	5.0	69%	5.0	52%		
2.5	99%	2.5	61%	2.5	46%		
1.25	96%	1.25	56%	1.25	42%		
0.630	93%	0.630	50%	0.630	38%		
0.315	87%	0.315	43%	0.315	33%		
0.160	78%	0.160	35%	0.160	29%		
0.080	69%	0.080	27%	0.080	24%		
M.C.(%):	65%	M.C.(%):	16%	M.C.(%):	13%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	0	% GRAVEL	31	% GRAVEL	48		
% SAND:	31	% SAND:	41	% SAND:	28		
% FINES:	69	% FINES:	27	% FINES:	24		
CLASSIFICATION:	SANDY SILT (ML)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)		



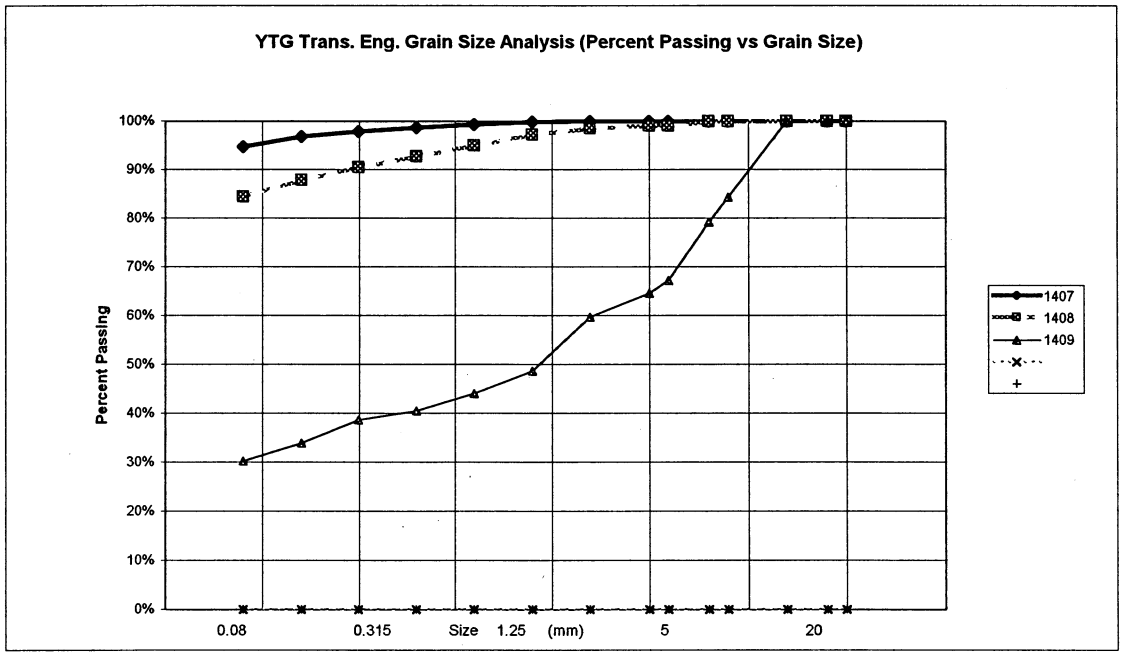
PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1725
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1686+050 4M RT					DATE COM	2000/07/25
FIELD NO:	1401	FIELD No.	1402	FIELD No:	1403		
LAB NO:	1841	LAB No.	1842	LAB No:	1843		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.4-4.6		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	54%	25.0	100%		
20.0	96%	20.0	53%	20.0	96%		
12.5	89%	12.5	49%	12.5	91%		
10.0	86%	10.0	47%	10.0	85%		
5.0	78%	5.0	40%	5.0	70%		
2.5	71%	2.5	33%	2.5	50%		
1.25	64%	1.25	25%	1.25	33%		
0.630	58%	0.630	18%	0.630	24%		
0.315	52%	0.315	13%	0.315	18%		
0.160	40%	0.160	8%	0.160	13%		
0.080	36%	0.080	6%	0.080	10%		
M.C.(%):	15%	M.C.(%):	3%	M.C.(%):	8%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	22	% GRAVEL	60	% GRAVEL	30		
% SAND:	42	% SAND:	33	% SAND:	60		
% FINES:	36	% FINES:	6	% FINES:	10		
CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	CLASSIFICATION:	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)		



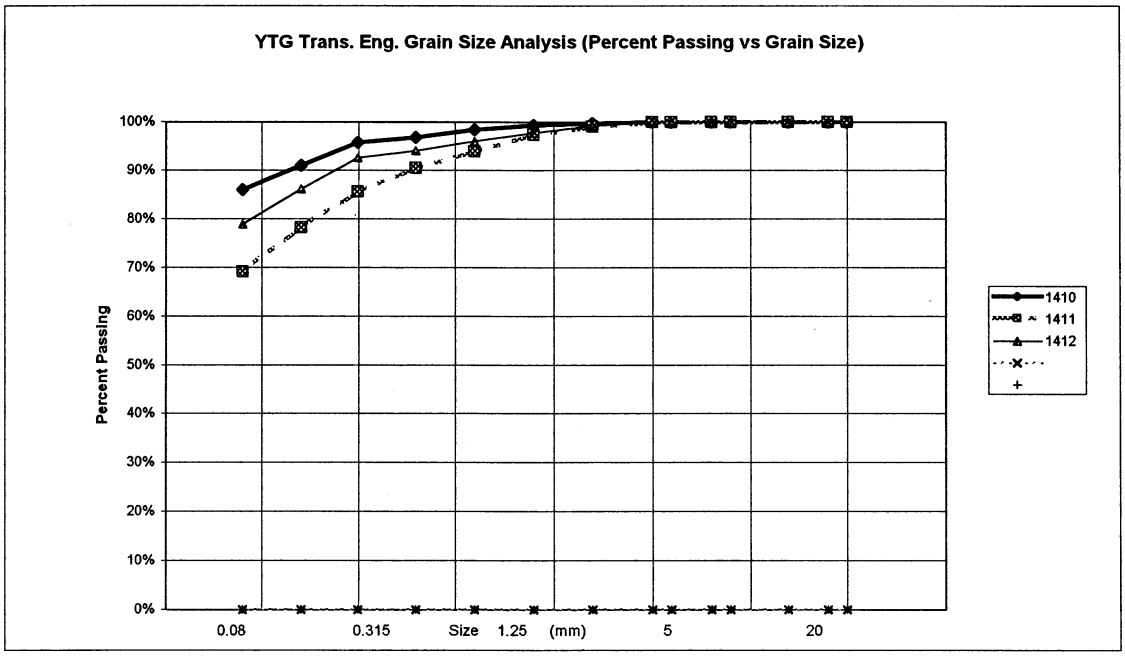
PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1726
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1685+950 4M RT					DATE COM	2000/07/25
FIELD NO:	1404	FIELD No.	1405	FIELD No:	1406		
LAB NO:	1844	LAB No.	1845	LAB No:	1846		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	90%	25.0	46%		
20.0	100%	20.0	90%	20.0	46%		
12.5	100%	12.5	86%	12.5	46%		
10.0	99%	10.0	84%	10.0	43%		
5.0	95%	5.0	79%	5.0	36%		
2.5	92%	2.5	74%	2.5	32%		
1.25	88%	1.25	70%	1.25	29%		
0.630	84%	0.630	67%	0.630	27%		
0.315	81%	0.315	65%	0.315	26%		
0.160	73%	0.160	59%	0.160	24%		
0.080	64%	0.080	54%	0.080	22%		
M.C.(%):	15%	M.C.(%):	14%	M.C.(%):	16%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	5	% GRAVEL	21	% GRAVEL	64		
% SAND:	31	% SAND:	25	% SAND:	14		
% FINES:	64	% FINES:	54	% FINES:	22		
CLASSIFICATION:	SANDY SILT (ML)	CLASSIFICATION:	SANDY SILT WITH GRAVEL (ML)	CLASSIFICATION:	SILTY GRAVEL (GM)		



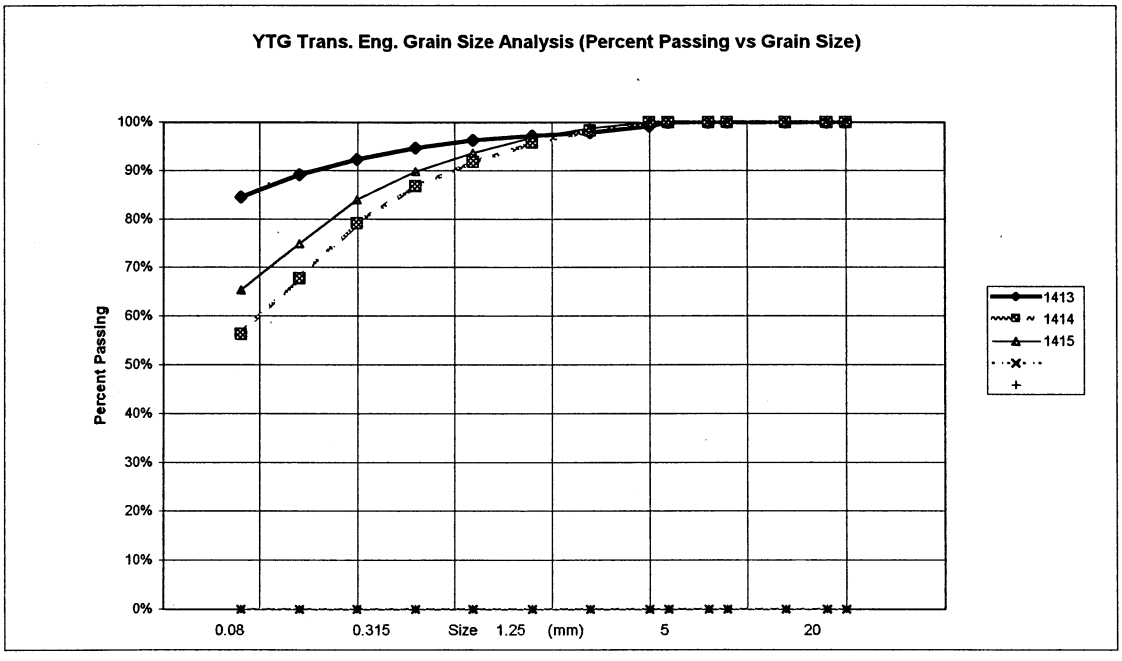
PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1727
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1685+850 2M LT					DATE COM	2000/07/25
FIELD NO:	1407	FIELD No.	1408	FIELD No:	1409		
LAB NO:	1847	LAB No.	1848	LAB No:	1849		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	100%	25.0	84%		
20.0	100%	20.0	100%	20.0	79%		
12.5	100%	12.5	99%	12.5	67%		
10.0	100%	10.0	99%	10.0	65%		
5.0	100%	5.0	99%	5.0	60%		
2.5	100%	2.5	97%	2.5	49%		
1.25	99%	1.25	95%	1.25	44%		
0.630	99%	0.630	93%	0.630	41%		
0.315	98%	0.315	90%	0.315	39%		
0.160	97%	0.160	88%	0.160	34%		
0.080	95%	0.080	84%	0.080	30%		
M.C.(%):	25%	M.C.(%):	18%	M.C.(%):	7%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	0	% GRAVEL	1	% GRAVEL	40		
% SAND:	5	% SAND:	14	% SAND:	29		
% FINES:	95	% FINES:	84	% FINES:	30		
CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILT WITH SAND (ML)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)		



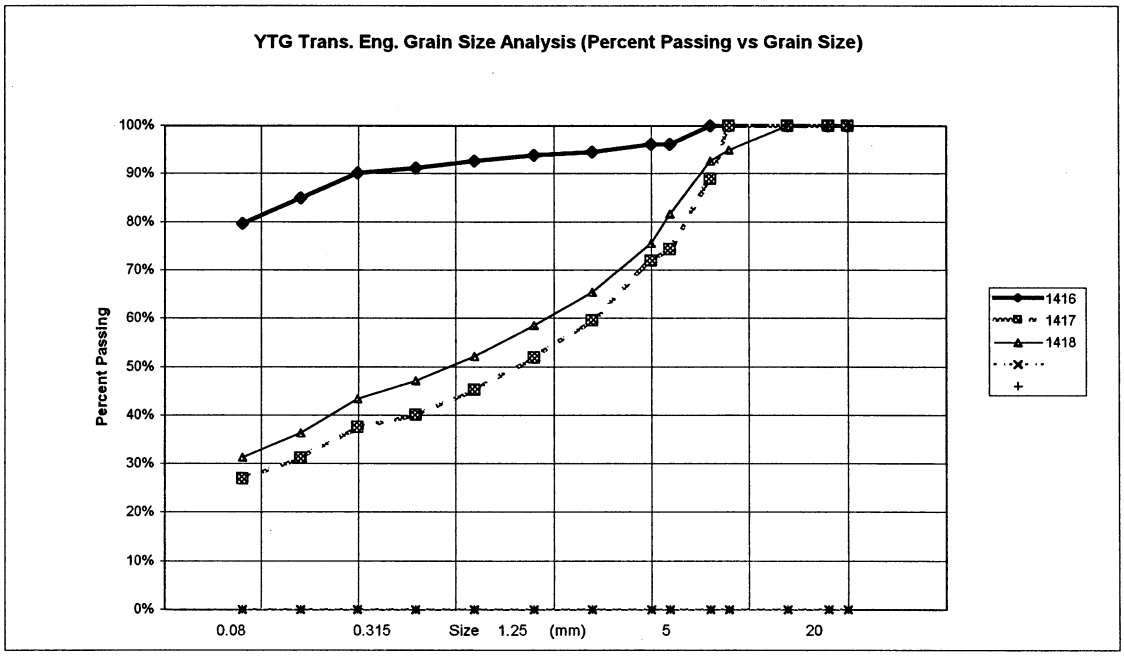
PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1728
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1685+750 2M LT					DATE COM	2000/07/25
FIELD NO:	1410	FIELD No.	1411	FIELD No:	1412		
LAB NO:	1850	LAB No.	1851	LAB No:	1852		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	100%	25.0	100%		
20.0	100%	20.0	100%	20.0	100%		
12.5	100%	12.5	100%	12.5	100%		
10.0	100%	10.0	100%	10.0	100%		
5.0	100%	5.0	99%	5.0	99%		
2.5	99%	2.5	97%	2.5	98%		
1.25	98%	1.25	94%	1.25	96%		
0.630	97%	0.630	91%	0.630	94%		
0.315	96%	0.315	86%	0.315	93%		
0.160	91%	0.160	78%	0.160	86%		
0.080	86%	0.080	69%	0.080	79%		
M.C.(%):	23%	M.C.(%):	14%	M.C.(%):	18%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	0	% GRAVEL	1	% GRAVEL	1		
% SAND:	14	% SAND:	30	% SAND:	20		
% FINES:	86	% FINES:	69	% FINES:	79		
CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SANDY SILT (ML)	CLASSIFICATION:	SILT WITH SAND (ML)		



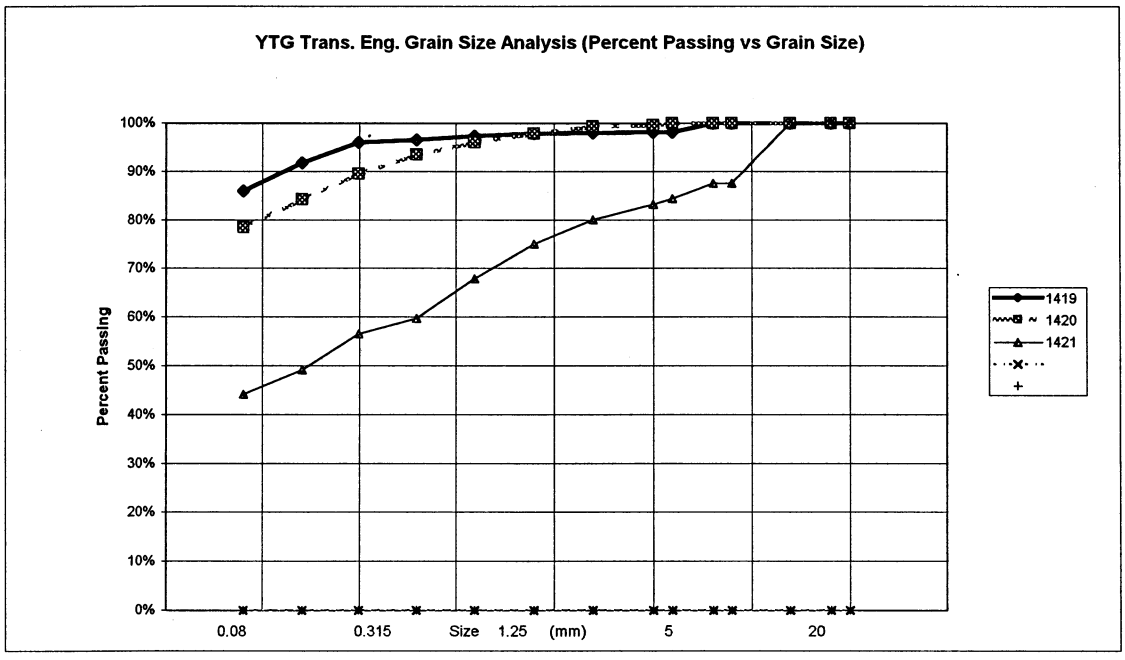
PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1729
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1685+675 5M RT					DATE COM	2000/07/25
FIELD NO:	1413	FIELD No.	1414	FIELD No:	1415		
LAB NO:	1853	LAB No.	1854	LAB No:	1855		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	100%	25.0	100%		
20.0	100%	20.0	100%	20.0	100%		
12.5	100%	12.5	100%	12.5	100%		
10.0	99%	10.0	100%	10.0	100%		
5.0	98%	5.0	98%	5.0	99%		
2.5	97%	2.5	96%	2.5	97%		
1.25	96%	1.25	92%	1.25	94%		
0.630	95%	0.630	87%	0.630	90%		
0.315	92%	0.315	79%	0.315	84%		
0.160	89%	0.160	68%	0.160	75%		
0.080	85%	0.080	56%	0.080	65%		
M.C.(%):	27%	M.C.(%):	10%	M.C.(%):	13%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	2	% GRAVEL	2	% GRAVEL	1		
% SAND:	13	% SAND:	42	% SAND:	33		
% FINES:	85	% FINES:	56	% FINES:	65		
CLASSIFICATION:	SILT WITH SAND (ML)	CLASSIFICATION:	SANDY SILT (ML)	CLASSIFICATION:	SANDY SILT (ML)		



PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1730
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1685+625 20M RT					DATE COM	2000/07/25
FIELD NO:	1416	FIELD No.	1417	FIELD No:	1418		
LAB NO:	1856	LAB No.	1857	LAB No:	1858		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	100%	25.0	95%		
20.0	100%	20.0	89%	20.0	93%		
12.5	96%	12.5	74%	12.5	82%		
10.0	96%	10.0	72%	10.0	76%		
5.0	95%	5.0	60%	5.0	66%		
2.5	94%	2.5	52%	2.5	59%		
1.25	93%	1.25	45%	1.25	52%		
0.630	91%	0.630	40%	0.630	47%		
0.315	90%	0.315	38%	0.315	43%		
0.160	85%	0.160	31%	0.160	36%		
0.080	80%	0.080	27%	0.080	31%		
M.C.(%):	24%	M.C.(%):	6%	M.C.(%):	5%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	5	% GRAVEL	40	% GRAVEL	34		
% SAND:	15	% SAND:	33	% SAND:	34		
% FINES:	80	% FINES:	27	% FINES:	31		
CLASSIFICATION:	SILT WITH SAND (ML)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)		

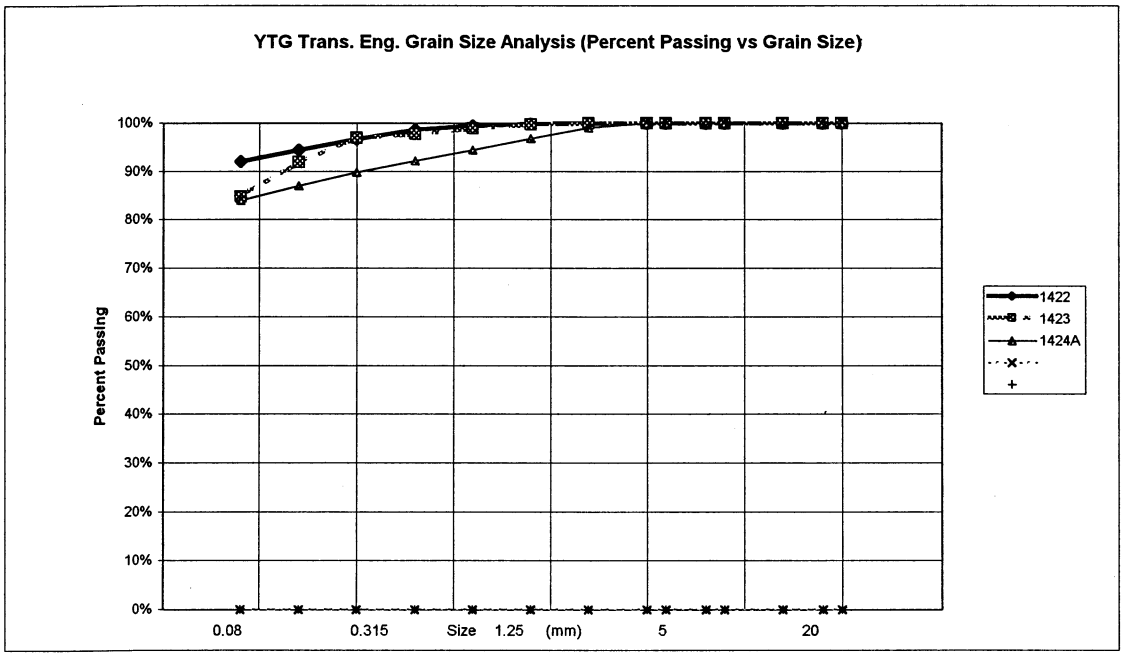


PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1731
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1685+600 30M LT					DATE COM	2000/07/25
FIELD NO:	1419	FIELD No.	1420	FIELD No:	1421		
LAB NO:	1859	LAB No.	1860	LAB No:	1861		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.6-4.8		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	100%	25.0	88%		
20.0	100%	20.0	100%	20.0	88%		
12.5	98%	12.5	100%	12.5	84%		
10.0	98%	10.0	100%	10.0	83%		
5.0	98%	5.0	99%	5.0	80%		
2.5	98%	2.5	98%	2.5	75%		
1.25	97%	1.25	96%	1.25	68%		
0.630	97%	0.630	94%	0.630	60%		
0.315	96%	0.315	90%	0.315	57%		
0.160	92%	0.160	84%	0.160	49%		
0.080	86%	0.080	78%	0.080	44%		
M.C.(%):	23%	M.C.(%):	17%	M.C.(%):	9%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	2	% GRAVEL	1	% GRAVEL	20		
% SAND:	12	% SAND:	21	% SAND:	36		
% FINES:	86	% FINES:	78	% FINES:	44		
CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILT WITH SAND (ML)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)		



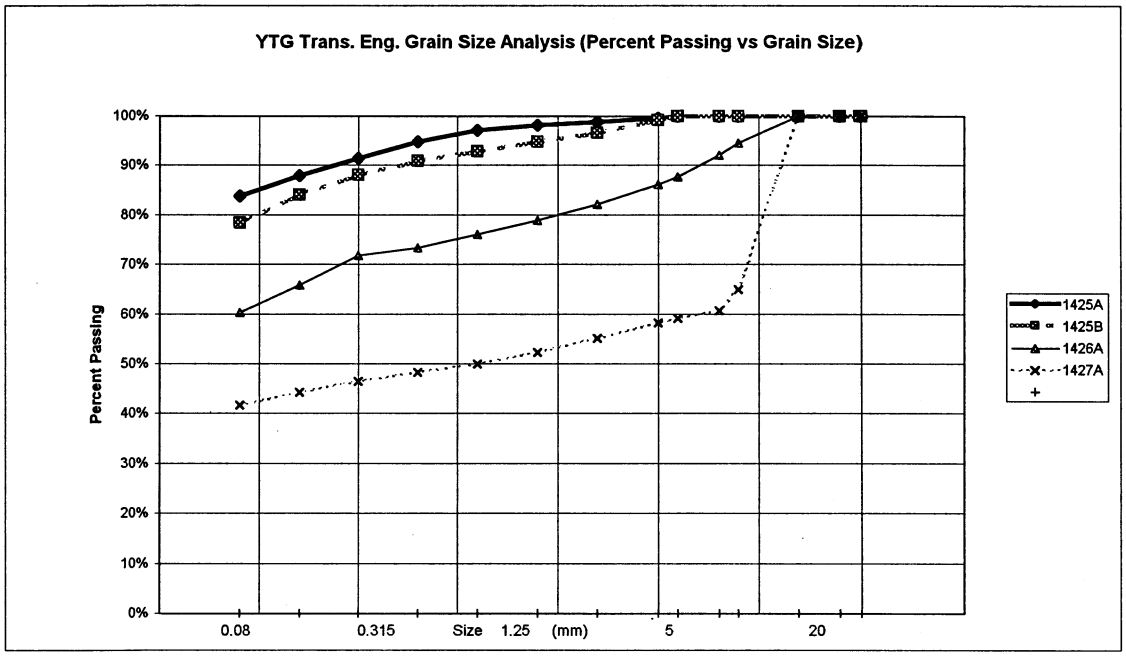
PROJECT NUMBER:	091-202101-0363-1		HOLE No.: 563-1732
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	Mobile B 40 L		
LOGGED BY:	Doug Trim		
HOLE LOCATION:	1685+575 25M LT		DATE COM 2000/07/26

FIELD NO:	1422	FIELD No.	1423	FIELD No:	1424A		
LAB NO:	1862	LAB No.	1863	LAB No:	1864		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	100%	25.0	100%		
20.0	100%	20.0	100%	20.0	100%		
12.5	100%	12.5	100%	12.5	100%		
10.0	100%	10.0	100%	10.0	100%		
5.0	100%	5.0	100%	5.0	99%		
2.5	100%	2.5	100%	2.5	97%		
1.25	99%	1.25	99%	1.25	94%		
0.630	99%	0.630	98%	0.630	92%		
0.315	97%	0.315	97%	0.315	90%		
0.160	95%	0.160	92%	0.160	87%		
0.080	92%	0.080	85%	0.080	84%		
M.C.(%):	28%	M.C.(%):	16%	M.C.(%):	18%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	0	% GRAVEL	0	% GRAVEL	1		
% SAND:	8	% SAND:	15	% SAND:	15		
% FINES:	92	% FINES:	85	% FINES:	84		
CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILT WITH SAND (ML)	CLASSIFICATION:	SILT WITH SAND (ML)		

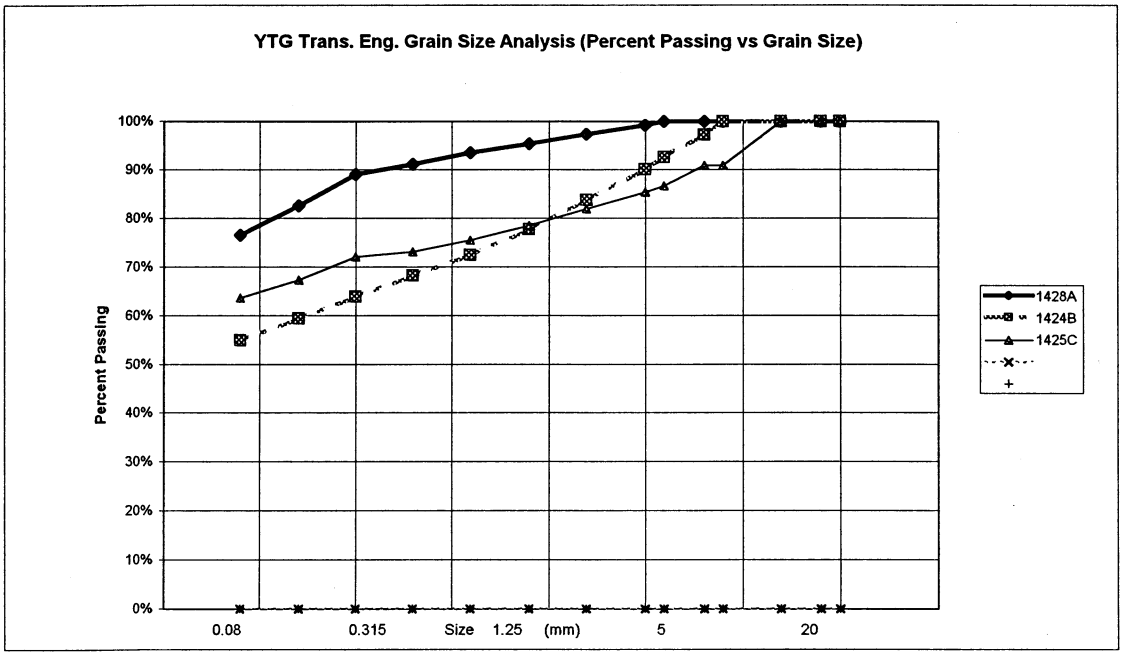


PROJECT NUMBER:	091-202101-0363-1		HOLE No.: 563-1733
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	Mobile B 40 L		
LOGGED BY:	Doug Trim		
HOLE LOCATION:	1685+555 CENTRELINE		DATE COM 2000/07/26

FIELD NO:	1425A	FIELD No.	1425B	FIELD No:	1426A	FIELD No:	1427A
LAB NO:	1865	LAB No.	1866	LAB No:	1867	LAB No:	1868
DEPTH:	1.3-1.5	DEPTH	2.8-3.0	DEPTH:	4.3-4.5	DEPTH:	5.6-6.0
TYPE:	AUGER	TYPE	AUGER	TYPE:	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	95%	25.0	65%
20.0	100%	20.0	100%	20.0	92%	20.0	61%
12.5	100%	12.5	100%	12.5	88%	12.5	59%
10.0	100%	10.0	99%	10.0	86%	10.0	58%
5.0	99%	5.0	97%	5.0	82%	5.0	55%
2.5	98%	2.5	95%	2.5	79%	2.5	52%
1.25	97%	1.25	93%	1.25	76%	1.25	50%
0.630	95%	0.630	91%	0.630	73%	0.630	48%
0.315	91%	0.315	88%	0.315	72%	0.315	47%
0.160	88%	0.160	84%	0.160	66%	0.160	44%
0.080	84%	0.080	78%	0.080	60%	0.080	42%
M.C.(%):	26%	M.C.(%):	15%	M.C.(%):	12%	M.C.(%):	12%
LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL	1	% GRAVEL	3	% GRAVEL	18	% GRAVEL	45
% SAND:	15	% SAND:	18	% SAND:	22	% SAND:	13
% FINES:	84	% FINES:	78	% FINES:	60	% FINES:	42
CLASSIFICATION:	SILT WITH SAND (ML)	CLASSIFICATION:	SILT WITH SAND (ML)	CLASSIFICATION:	SANDY SILT WITH GRAVEL (ML)	CLASSIFICATION:	SILTY GRAVEL (GM)



PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1734
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1685+500 25M LT					DATE COM	2000/07/26
FIELD NO:	1428A	FIELD No.	1424B	FIELD No:	1425C		
LAB NO:	1869	LAB No.	1870	LAB No:	1871		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	100%	25.0	91%		
20.0	100%	20.0	97%	20.0	91%		
12.5	100%	12.5	93%	12.5	87%		
10.0	99%	10.0	90%	10.0	85%		
5.0	97%	5.0	84%	5.0	82%		
2.5	95%	2.5	78%	2.5	79%		
1.25	94%	1.25	72%	1.25	75%		
0.630	91%	0.630	68%	0.630	73%		
0.315	89%	0.315	64%	0.315	72%		
0.160	83%	0.160	59%	0.160	67%		
0.080	77%	0.080	55%	0.080	64%		
M.C.(%):	10%	M.C.(%):	11%	M.C.(%):	16%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	3	% GRAVEL	16	% GRAVEL	18		
% SAND:	21	% SAND:	29	% SAND:	18		
% FINES:	77	% FINES:	55	% FINES:	64		
CLASSIFICATION:	SILT WITH SAND (ML)	CLASSIFICATION:	SANDY SILT WITH GRAVEL (ML)	CLASSIFICATION:	SANDY SILT WITH GRAVEL (ML)		

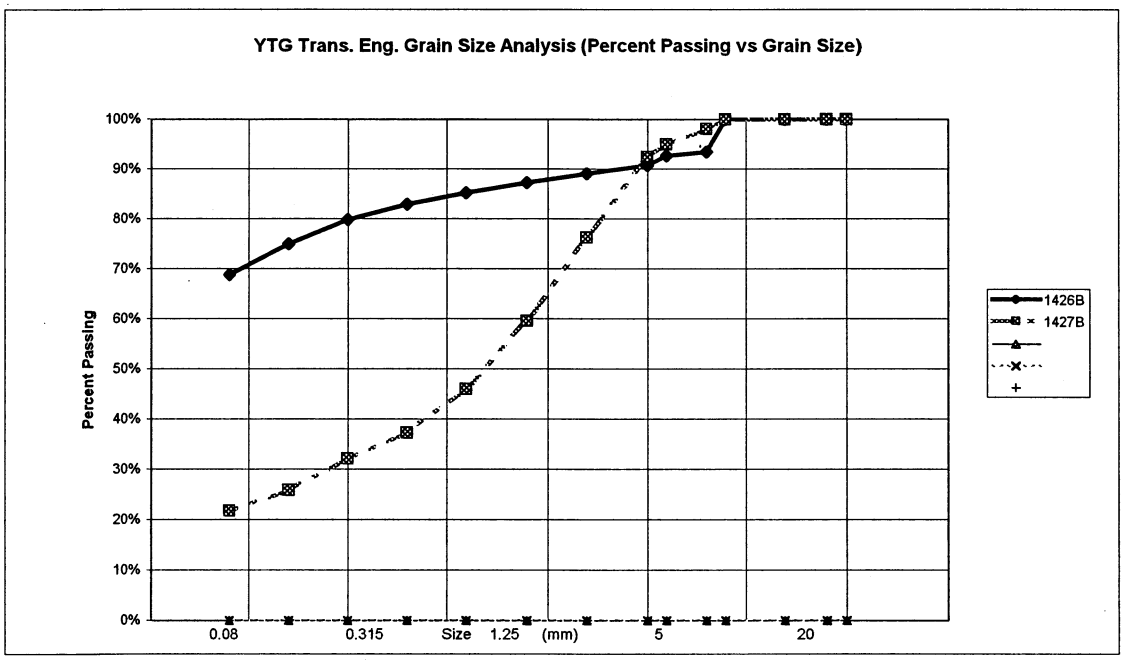


PROJECT NUMBER:	091-202101-0363-1		HOLE No.: 563-1735
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	Mobile B 40 L		
LOGGED BY:	Doug Trim		
HOLE LOCATION:	1685 618 70M LT		DATE COM 2000/07/26

FIELD NO:	1426B	FIELD No.	1427B
LAB NO:	1872	LAB No.	1873
DEPTH:	1.0-1.2	DEPTH	2.8-3.0
TYPE:	AUGER	A	AUGER

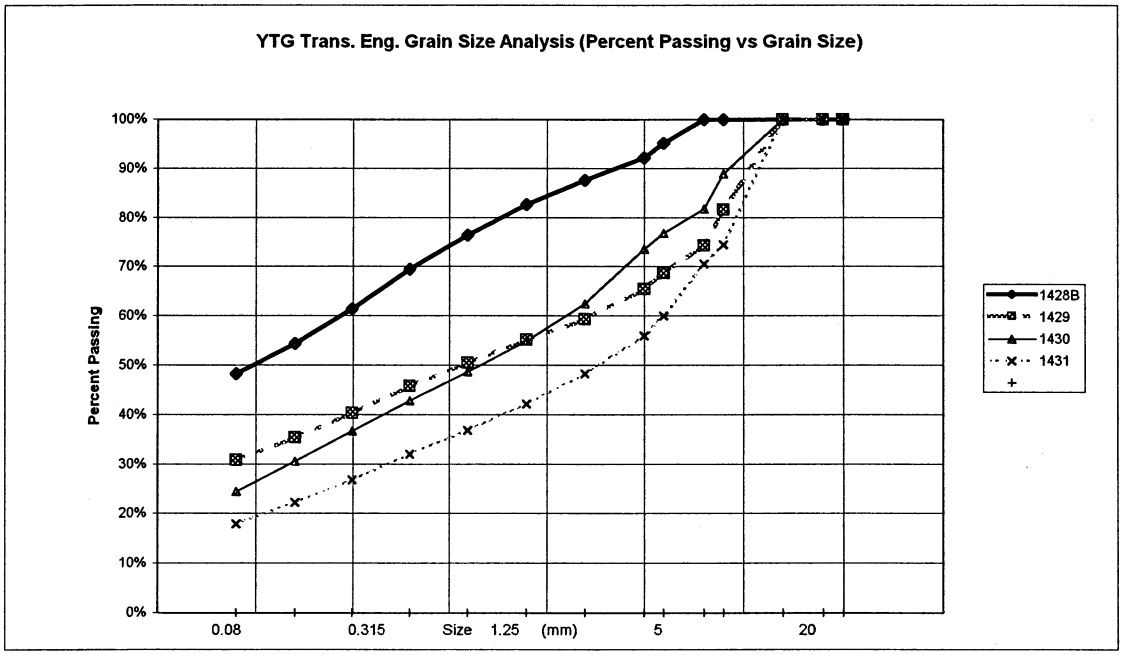
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	93%	20.0	98%
12.5	93%	12.5	95%
10.0	91%	10.0	92%
5.0	89%	5.0	76%
2.5	87%	2.5	60%
1.25	85%	1.25	46%
0.630	83%	0.630	37%
0.315	80%	0.315	32%
0.160	75%	0.160	26%
0.080	69%	0.080	22%

M.C.(%):	18%	M.C.(%):	3%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL	11	% GRAVEL	24
% SAND:	20	% SAND:	55
% FINES:	69	% FINES:	22
CLASSIFICATION:	SANDY SILT (ML)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)



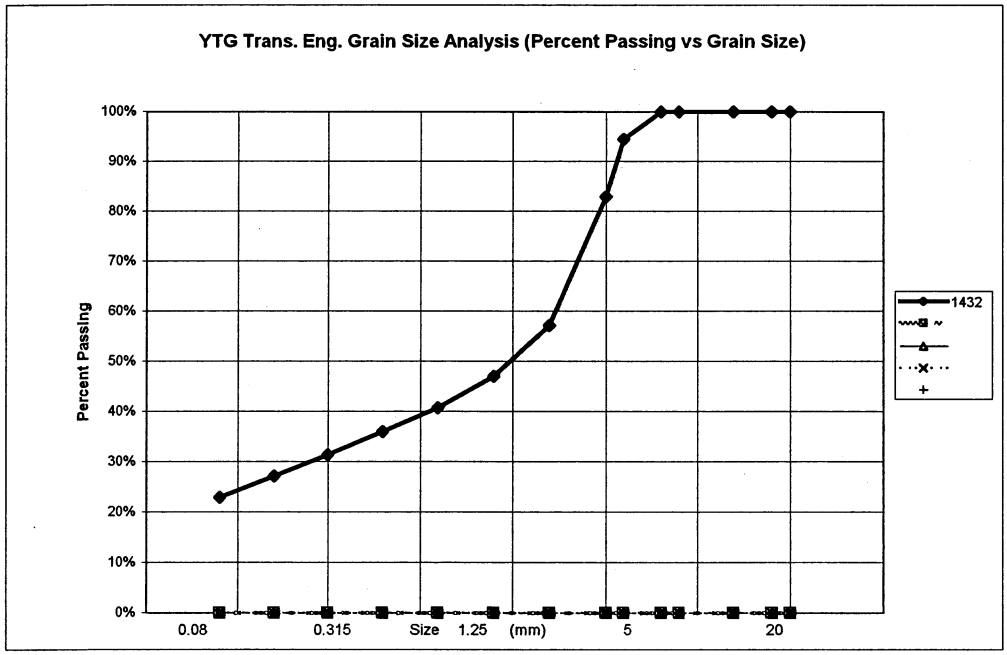
PROJECT NUMBER:	091-202101-0363-1		HOLE No.: 563-1736
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	Mobile B 40 L		
LOGGED BY:	Doug Trim		
HOLE LOCATION:	1684+900 25M RT		DATE COM 2000/07/26

FIELD NO:	1428B	FIELD No.	1429	FIELD No:	1430	FIELD No:	1431
LAB NO:	1874	LAB No.	1875	LAB No:	1876	LAB No:	1877
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5	DEPTH:	5.6-5.8
TYPE:	AUGER	A	AUGER	TYPE:	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	82%	25.0	89%	25.0	75%
20.0	100%	20.0	74%	20.0	82%	20.0	71%
12.5	95%	12.5	69%	12.5	77%	12.5	60%
10.0	92%	10.0	66%	10.0	74%	10.0	56%
5.0	88%	5.0	59%	5.0	62%	5.0	48%
2.5	83%	2.5	55%	2.5	55%	2.5	42%
1.25	76%	1.25	51%	1.25	49%	1.25	37%
0.630	70%	0.630	46%	0.630	43%	0.630	32%
0.315	62%	0.315	40%	0.315	37%	0.315	27%
0.160	54%	0.160	35%	0.160	31%	0.160	22%
0.080	48%	0.080	31%	0.080	25%	0.080	18%
M.C.(%):	11%	M.C.(%):	6%	M.C.(%):	2%	M.C.(%):	3%
LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL	12	% GRAVEL	41	% GRAVEL	38	% GRAVEL	52
% SAND:	39	% SAND:	29	% SAND:	38	% SAND:	30
% FINES:	48	% FINES:	31	% FINES:	25	% FINES:	18
CLASSIFICATION:	SILTY SAND (SM)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)



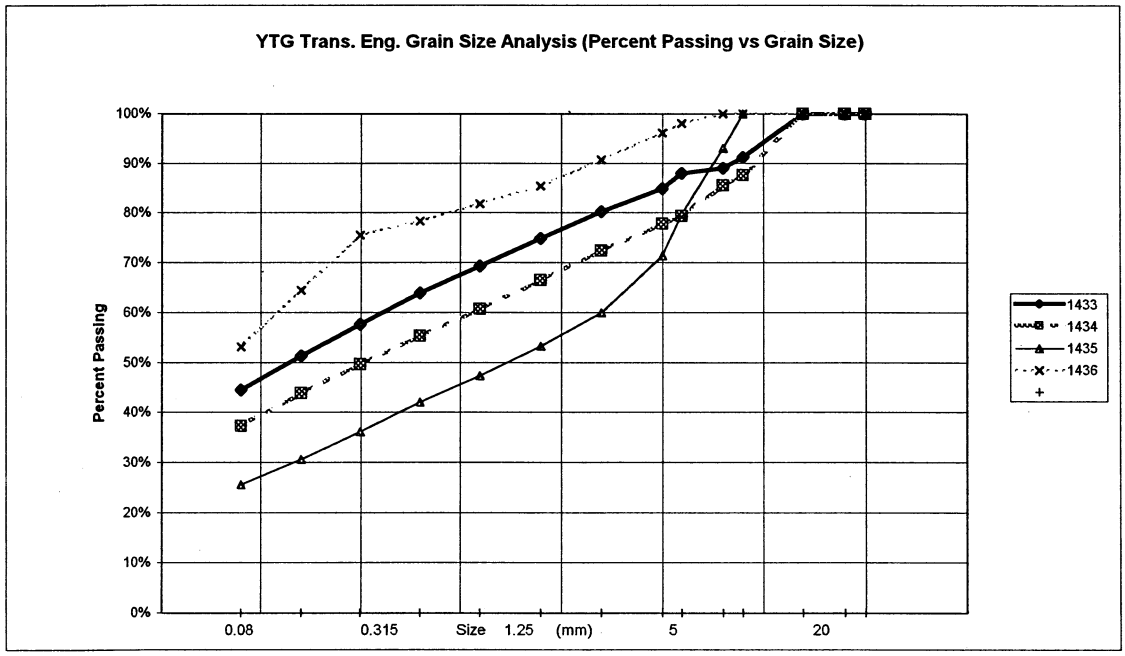
PROJECT NUMBER:	091-202101-0363-1					HOLE No.	563-1736
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATIO	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1684+900 25M RT					DATE CO	2000/07/26

FIELD N	1432						
LAB NO:	1878						
DEPTH:	7.4-7.6						
TYPE:	AUGER						
SIEVE SIZE	PERCEN PASSING						
100.0	100%						
80.0	100%						
50.0	100%						
25.0	100%						
20.0	100%						
12.5	94%						
10.0	83%						
5.0	57%						
2.5	47%						
1.25	41%						
0.630	36%						
0.315	31%						
0.160	27%						
0.080	23%						
M.C.(%):	3%						
LIMITS							
LIQUID:	0.0						
PLASTIC:	0.0						
P.I.:	0.0						
% GRAV	43						
% SAND:	34						
% FINES:	23						
CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)							

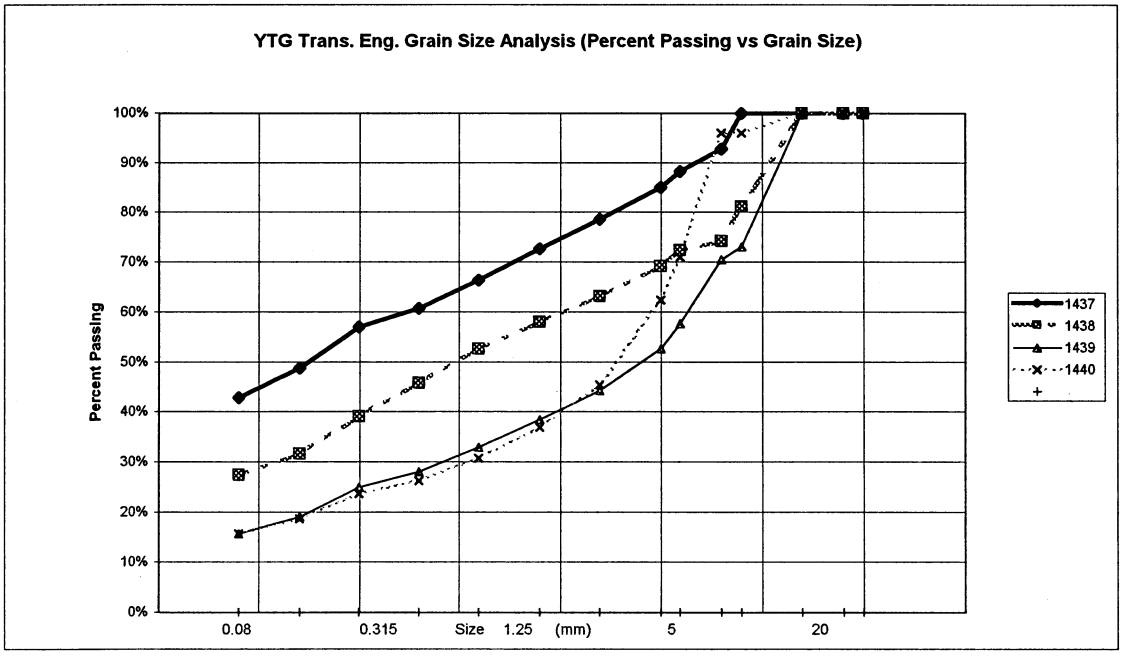


PROJECT NUMBER:	091-202101-0363-1		HOLE No.: 563-1737
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	Mobile B 40 L		
LOGGED BY:	Doug Trim		
HOLE LOCATION:	1684+850 35M RT		DATE COM 2000/07/27

FIELD NO:	1433	FIELD No.	1434	FIELD No:	1435	FIELD No:	1436
LAB NO:	1879	LAB No.	1880	LAB No:	1881	LAB No:	1882
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.8-5.0	DEPTH:	8.2-8.4
TYPE:	AUGER	A	AUGER	TYPE:	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	91%	25.0	88%	25.0	100%	25.0	100%
20.0	89%	20.0	86%	20.0	93%	20.0	100%
12.5	88%	12.5	79%	12.5	80%	12.5	98%
10.0	85%	10.0	78%	10.0	71%	10.0	96%
5.0	80%	5.0	72%	5.0	60%	5.0	91%
2.5	75%	2.5	67%	2.5	53%	2.5	85%
1.25	69%	1.25	61%	1.25	47%	1.25	82%
0.630	64%	0.630	55%	0.630	42%	0.630	78%
0.315	58%	0.315	50%	0.315	36%	0.315	76%
0.160	51%	0.160	44%	0.160	31%	0.160	65%
0.080	45%	0.080	37%	0.080	26%	0.080	53%
M.C.(%):	11%	M.C.(%):	7%	M.C.(%):	4%	M.C.(%):	8%
LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL	20	% GRAVEL	28	% GRAVEL	40	% GRAVEL	9
% SAND:	36	% SAND:	35	% SAND:	34	% SAND:	38
% FINES:	45	% FINES:	37	% FINES:	26	% FINES:	53
CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION:	SANDY SILT (ML)

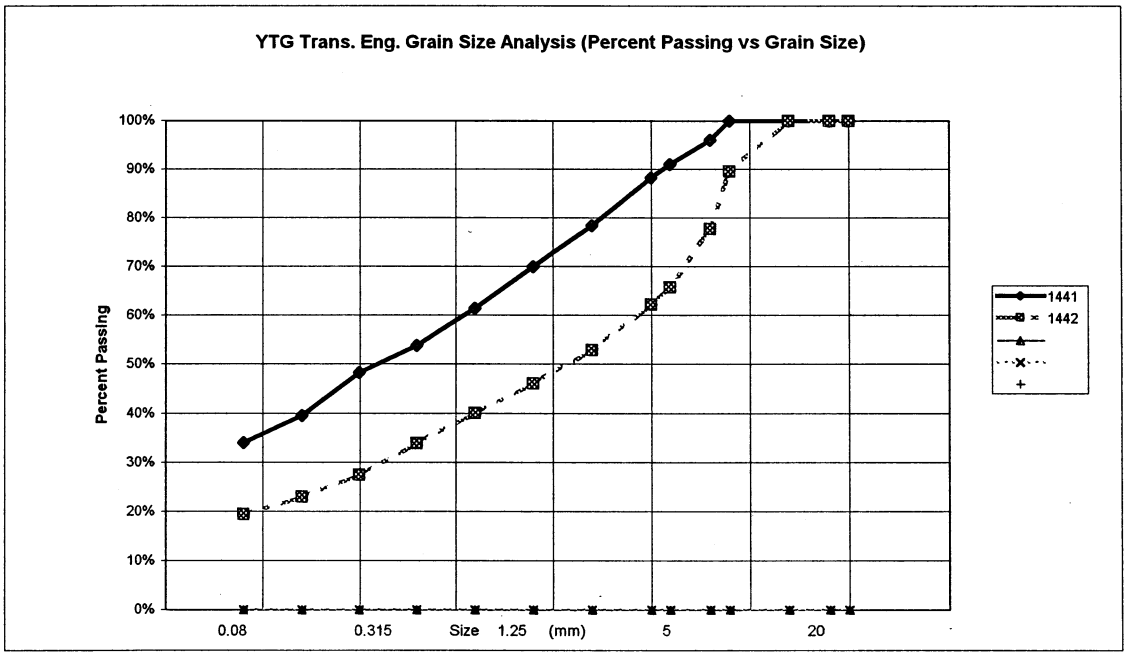


PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1738
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1684+800 10M RT					DATE COM	2000/07/27
FIELD NO:	1437	FIELD No.	1438	FIELD No:	1439	FIELD No:	1440
LAB NO:	1883	LAB No.	1884	LAB No:	1885	LAB No:	1886
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.5-5.0	DEPTH:	6.5-6.7
TYPE:	AUGER	A	AUGER	TYPE:	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	81%	25.0	73%	25.0	96%
20.0	93%	20.0	74%	20.0	70%	20.0	96%
12.5	88%	12.5	72%	12.5	58%	12.5	71%
10.0	85%	10.0	69%	10.0	53%	10.0	62%
5.0	79%	5.0	63%	5.0	44%	5.0	45%
2.5	73%	2.5	58%	2.5	38%	2.5	37%
1.25	66%	1.25	53%	1.25	33%	1.25	31%
0.630	61%	0.630	46%	0.630	28%	0.630	26%
0.315	57%	0.315	39%	0.315	25%	0.315	24%
0.160	49%	0.160	32%	0.160	19%	0.160	19%
0.080	43%	0.080	27%	0.080	16%	0.080	16%
M.C.(%):	10%	M.C.(%):	6%	M.C.(%):	3%	M.C.(%):	3%
LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL	21	% GRAVEL	37	% GRAVEL	56	% GRAVEL	55
% SAND:	36	% SAND:	36	% SAND:	29	% SAND:	30
% FINES:	43	% FINES:	27	% FINES:	16	% FINES:	16
CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)

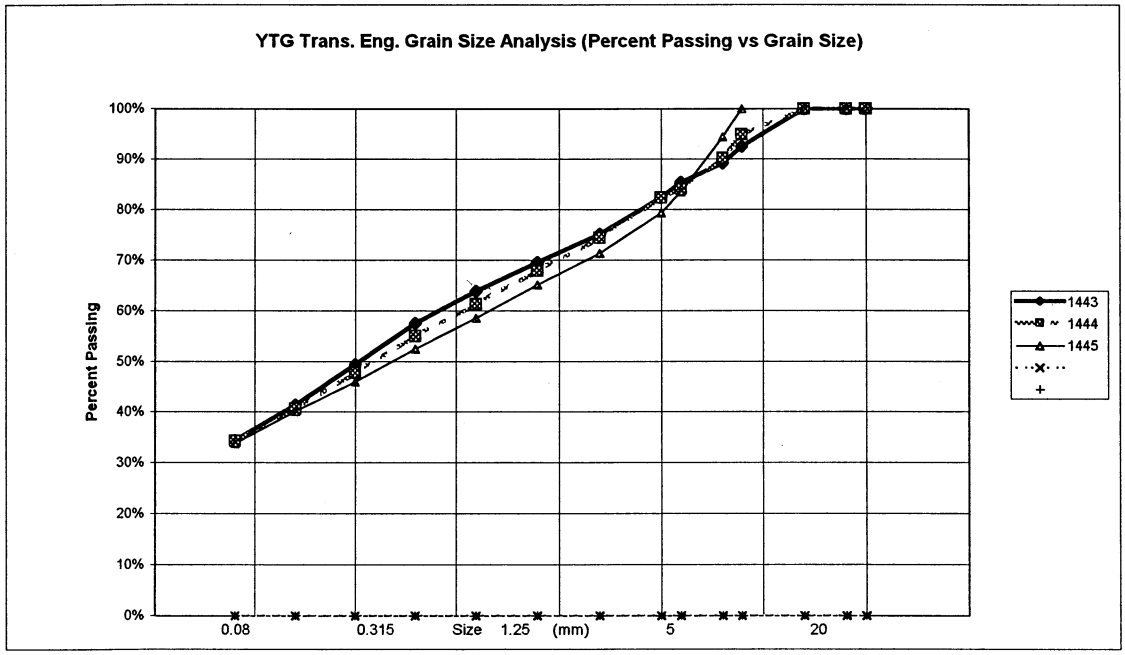


PROJECT NUMBER:	091-202101-0363-1		HOLE No.: 563-1739
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	Mobile B 40 L		
LOGGED BY:	Doug Trim		
HOLE LOCATION:	1684+725 40M RT		DATE COM 2000/07/27

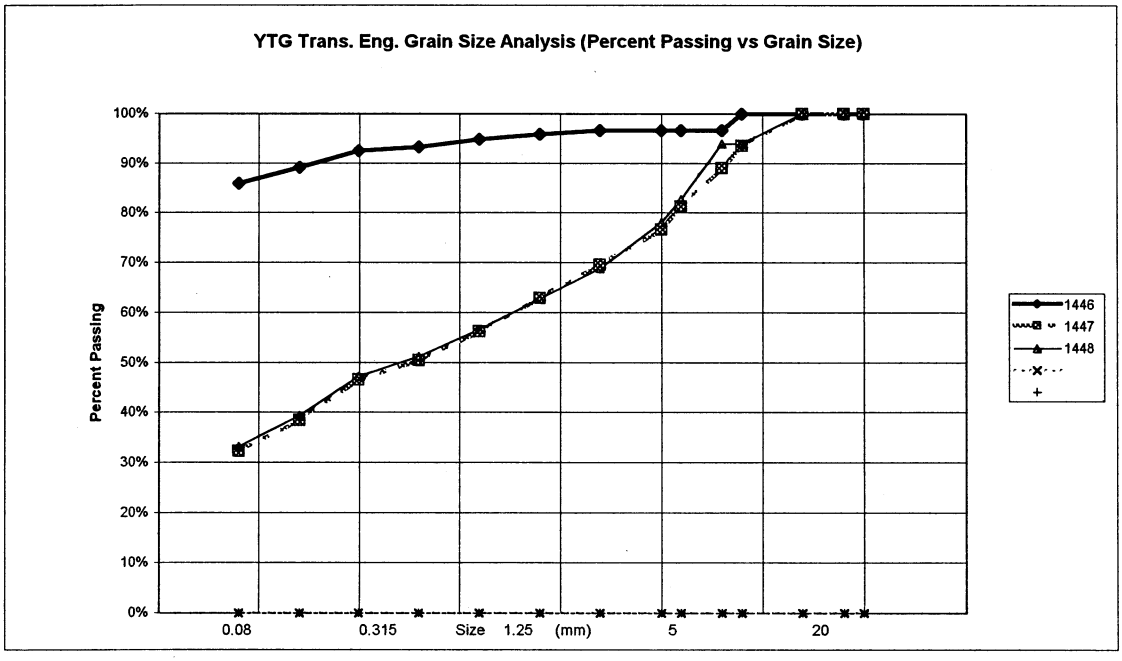
FIELD NO:	1441	FIELD No.	1442
LAB NO:	1887	LAB No.	1888
DEPTH:	0.8-1.0	DEPTH	2.8-3.0
TYPE:	AUGER	A	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	90%
20.0	96%	20.0	78%
12.5	91%	12.5	66%
10.0	88%	10.0	62%
5.0	78%	5.0	53%
2.5	70%	2.5	46%
1.25	62%	1.25	40%
0.630	54%	0.630	34%
0.315	48%	0.315	28%
0.160	39%	0.160	23%
0.080	34%	0.080	20%
M.C.(%):	7%	M.C.(%):	5%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL	22	% GRAVEL	47
% SAND:	44	% SAND:	33
% FINES:	34	% FINES:	20
CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)



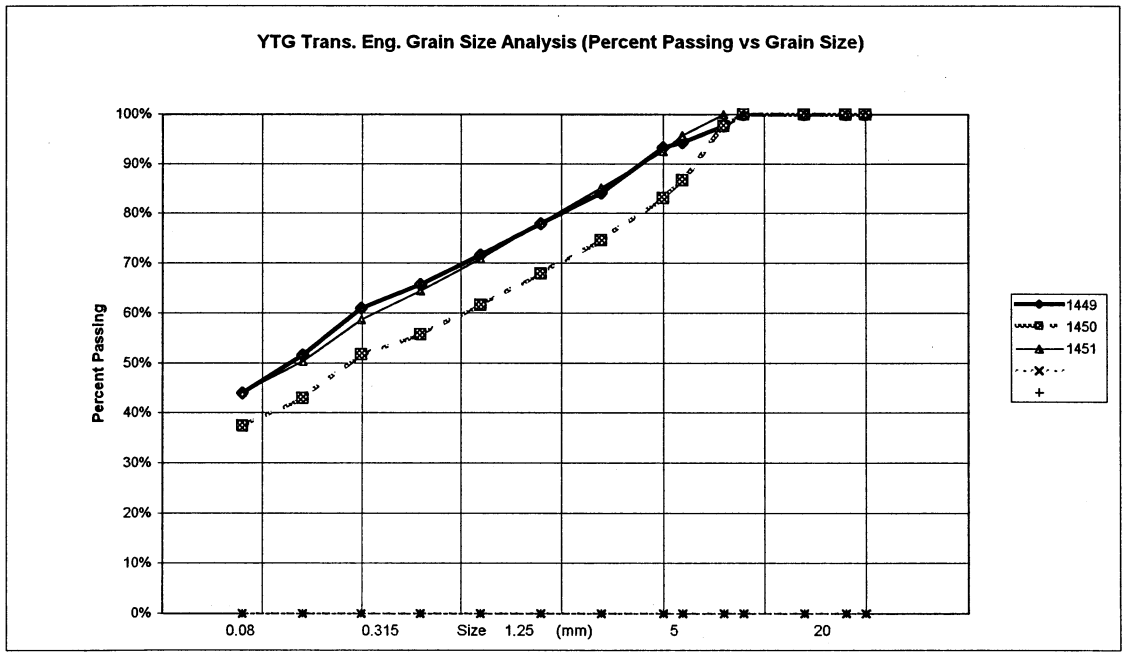
PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1740
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1684+650 4M RT					DATE COM	2000/07/27
FIELD NO:	1443	FIELD No.	1444	FIELD No:	1445		
LAB NO:	1889	LAB No.	1890	LAB No:	1891		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	92%	25.0	95%	25.0	100%		
20.0	89%	20.0	90%	20.0	94%		
12.5	85%	12.5	84%	12.5	84%		
10.0	82%	10.0	82%	10.0	79%		
5.0	75%	5.0	74%	5.0	71%		
2.5	70%	2.5	68%	2.5	65%		
1.25	64%	1.25	61%	1.25	59%		
0.630	58%	0.630	55%	0.630	52%		
0.315	49%	0.315	48%	0.315	46%		
0.160	41%	0.160	41%	0.160	40%		
0.080	35%	0.080	34%	0.080	34%		
M.C.(%):	8%	M.C.(%):	8%	M.C.(%):	7%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	25	% GRAVEL	26	% GRAVEL	29		
% SAND:	41	% SAND:	40	% SAND:	38		
% FINES:	35	% FINES:	34	% FINES:	34		
CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)		



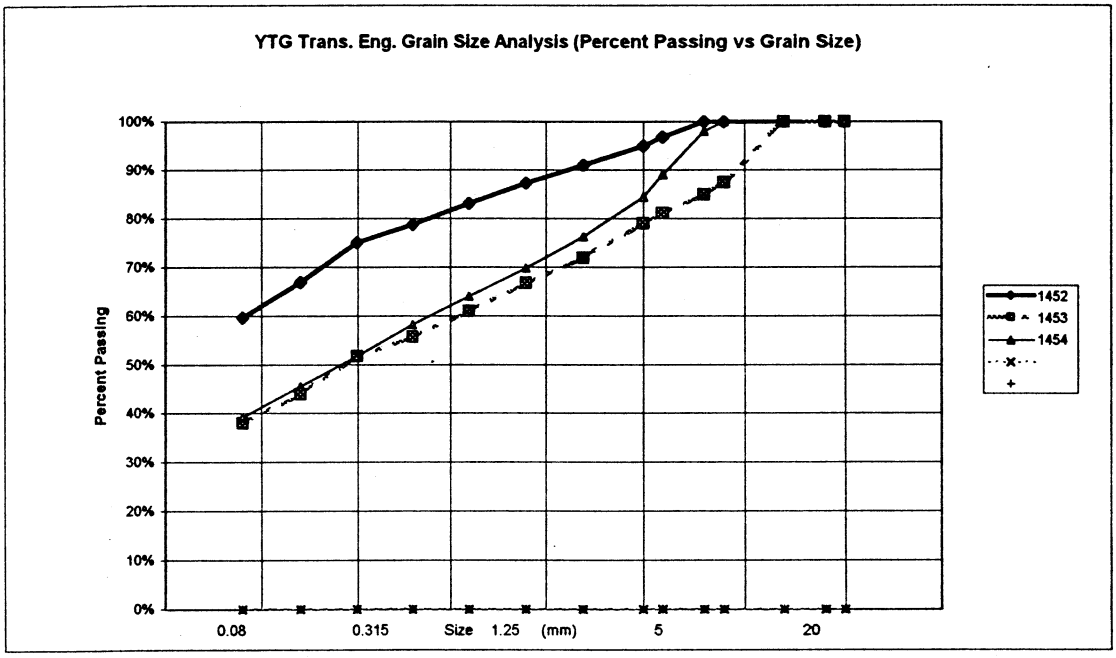
PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1741
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1684+610 20M RT					DATE COM	2000/07/28
FIELD NO:	1446	FIELD No.	1447	FIELD No:	1448		
LAB NO:	1892	LAB No.	1893	LAB No:	1894		
DEPTH:	0.8-1.0	DEPTH	1.8-2.0	DEPTH:	4.3-4.5		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	94%	25.0	94%		
20.0	97%	20.0	89%	20.0	94%		
12.5	97%	12.5	81%	12.5	83%		
10.0	97%	10.0	77%	10.0	78%		
5.0	97%	5.0	70%	5.0	69%		
2.5	96%	2.5	63%	2.5	63%		
1.25	95%	1.25	56%	1.25	57%		
0.630	93%	0.630	51%	0.630	51%		
0.315	93%	0.315	47%	0.315	47%		
0.160	89%	0.160	38%	0.160	39%		
0.080	86%	0.080	32%	0.080	33%		
M.C.(%):	20%	M.C.(%):	7%	M.C.(%):	8%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	3	% GRAVEL	30	% GRAVEL	31		
% SAND:	11	% SAND:	37	% SAND:	36		
% FINES:	86	% FINES:	32	% FINES:	33		
CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)		



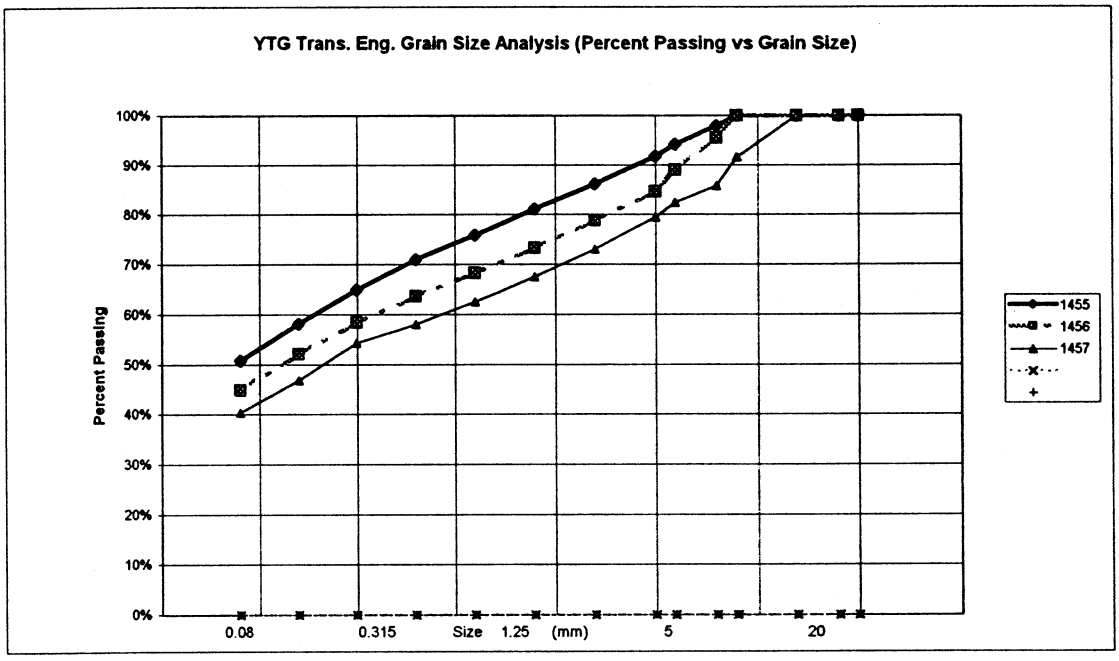
PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1742
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1684+550 3M RT					DATE COM	2000/07/28
FIELD NO:	1449	FIELD No.	1450	FIELD No:	1451		
LAB NO:	1895	LAB No.	1896	LAB No:	1897		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	100%	25.0	100%		
20.0	98%	20.0	98%	20.0	100%		
12.5	94%	12.5	87%	12.5	96%		
10.0	93%	10.0	83%	10.0	93%		
5.0	84%	5.0	75%	5.0	85%		
2.5	78%	2.5	68%	2.5	78%		
1.25	72%	1.25	62%	1.25	71%		
0.630	66%	0.630	56%	0.630	64%		
0.315	61%	0.315	52%	0.315	59%		
0.160	52%	0.160	43%	0.160	50%		
0.080	44%	0.080	37%	0.080	44%		
M.C.(%):	12%	M.C.(%):	7%	M.C.(%):	8%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	16	% GRAVEL	25	% GRAVEL	15		
% SAND:	40	% SAND:	37	% SAND:	41		
% FINES:	44	% FINES:	37	% FINES:	44		
CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY SAND (SM)		



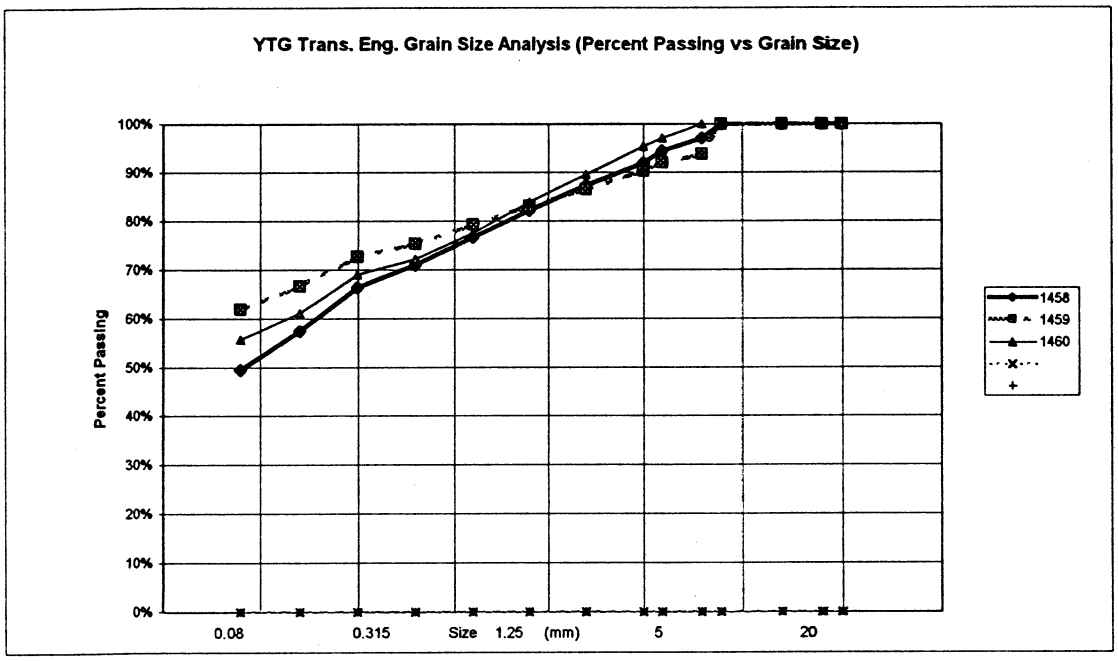
PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1743
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1684+450 7M RT					DATE COM	2000/07/28
FIELD NO:	1452	FIELD No.	1453	FIELD No:	1454		
LAB NO:	1898	LAB No.	1899	LAB No:	1900		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	88%	25.0	100%		
20.0	100%	20.0	85%	20.0	98%		
12.5	97%	12.5	81%	12.5	89%		
10.0	95%	10.0	79%	10.0	84%		
5.0	91%	5.0	72%	5.0	76%		
2.5	87%	2.5	67%	2.5	70%		
1.25	83%	1.25	61%	1.25	64%		
0.630	79%	0.630	56%	0.630	58%		
0.315	75%	0.315	52%	0.315	52%		
0.160	67%	0.160	44%	0.160	46%		
0.080	60%	0.080	38%	0.080	39%		
M.C.(%):	16%	M.C.(%):	8%	M.C.(%):	7%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	9	% GRAVEL	28	% GRAVEL	24		
% SAND:	31	% SAND:	34	% SAND:	37		
% FINES:	60	% FINES:	38	% FINES:	39		
CLASSIFICATION:	SANDY SILT (ML)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)		



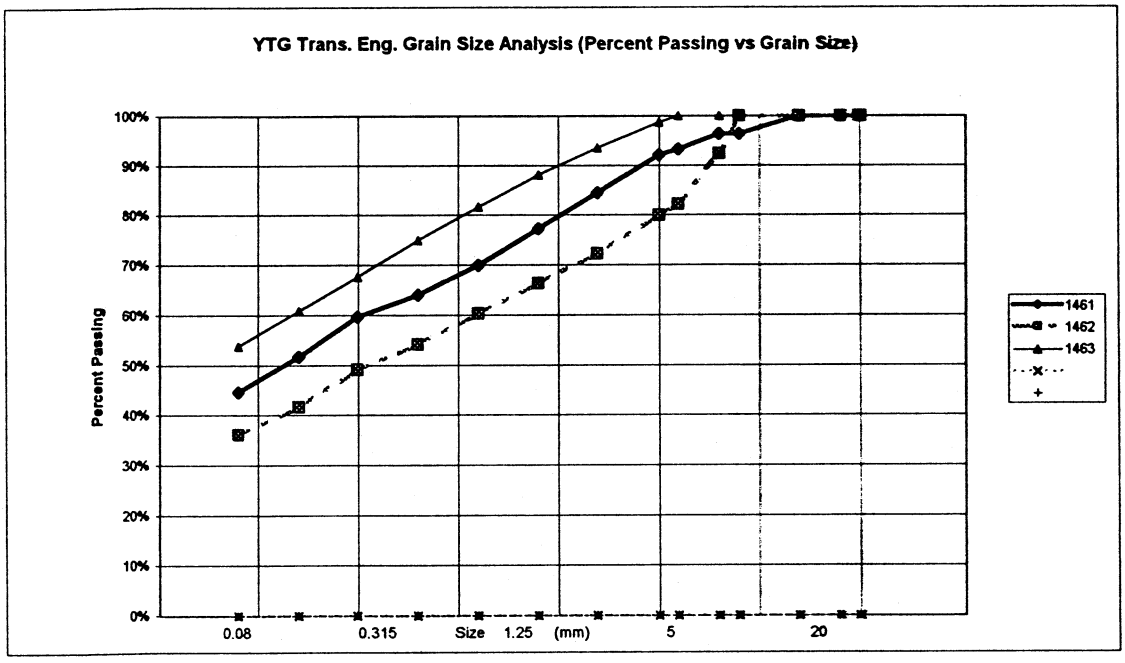
PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1744
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1684+350 5M RT					DATE COM	2000/07/28
FIELD NO:	1455	FIELD No.	1456	FIELD No:	1457		
LAB NO:	1901	LAB No.	1902	LAB No:	1903		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	100%	25.0	92%		
20.0	98%	20.0	96%	20.0	86%		
12.5	94%	12.5	89%	12.5	83%		
10.0	92%	10.0	85%	10.0	80%		
5.0	86%	5.0	79%	5.0	73%		
2.5	81%	2.5	73%	2.5	68%		
1.25	76%	1.25	68%	1.25	63%		
0.630	71%	0.630	64%	0.630	58%		
0.315	65%	0.315	58%	0.315	54%		
0.160	58%	0.160	52%	0.160	47%		
0.080	51%	0.080	45%	0.080	40%		
M.C.(%):	10%	M.C.(%):	7%	M.C.(%):	7%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	14	% GRAVEL	21	% GRAVEL	27		
% SAND:	35	% SAND:	34	% SAND:	33		
% FINES:	51	% FINES:	45	% FINES:	40		
CLASSIFICATION:	SANDY SILT (ML)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)		



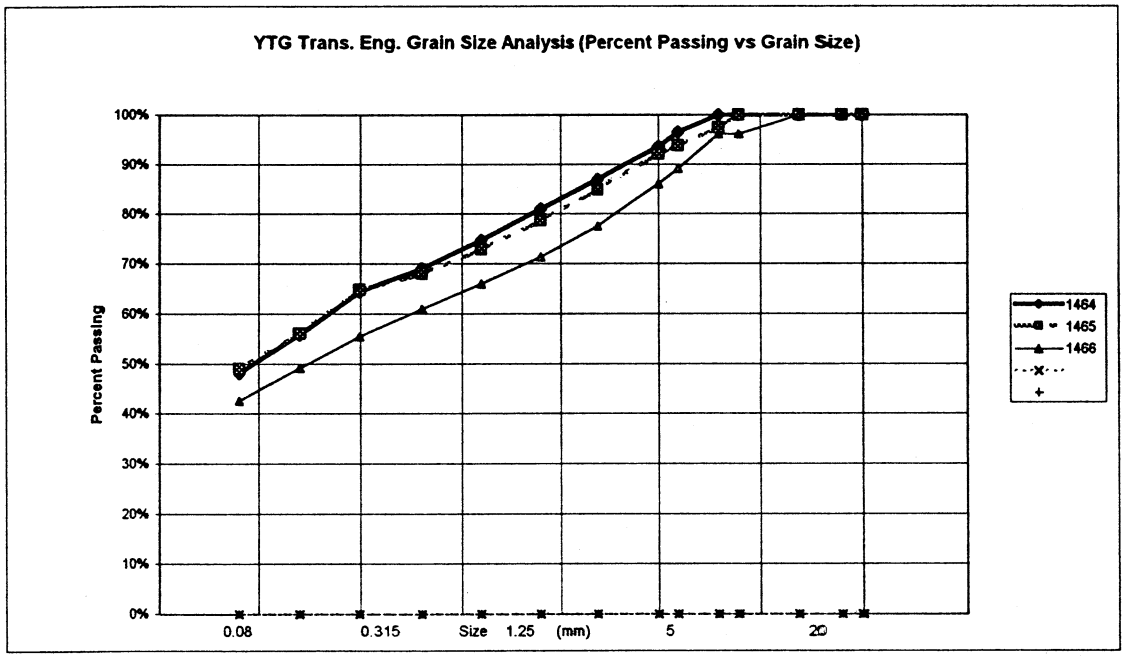
PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1745
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1684+250 5M RT					DATE COM	2000/07/28
FIELD NO:	1458	FIELD No.	1459	FIELD No:	1460		
LAB NO:	1904	LAB No.	1905	LAB No:	1906		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5		
TYPE:	AUGER .	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	100%	25.0	100%		
20.0	97%	20.0	94%	20.0	100%		
12.5	95%	12.5	92%	12.5	97%		
10.0	92%	10.0	90%	10.0	95%		
5.0	87%	5.0	87%	5.0	90%		
2.5	82%	2.5	83%	2.5	84%		
1.25	77%	1.25	79%	1.25	78%		
0.630	71%	0.630	75%	0.630	72%		
0.315	66%	0.315	73%	0.315	69%		
0.160	57%	0.160	67%	0.160	61%		
0.080	50%	0.080	62%	0.080	56%		
M.C.(%):	13%	M.C.(%):	14%	M.C.(%):	10%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	13	% GRAVEL	13	% GRAVEL	10		
% SAND:	38	% SAND:	25	% SAND:	34		
% FINES:	50	% FINES:	62	% FINES:	56		
CLASSIFICATION:	SILTY SAND (SM)	CLASSIFICATION:	SANDY SILT (ML)	CLASSIFICATION:	SANDY SILT (ML)		



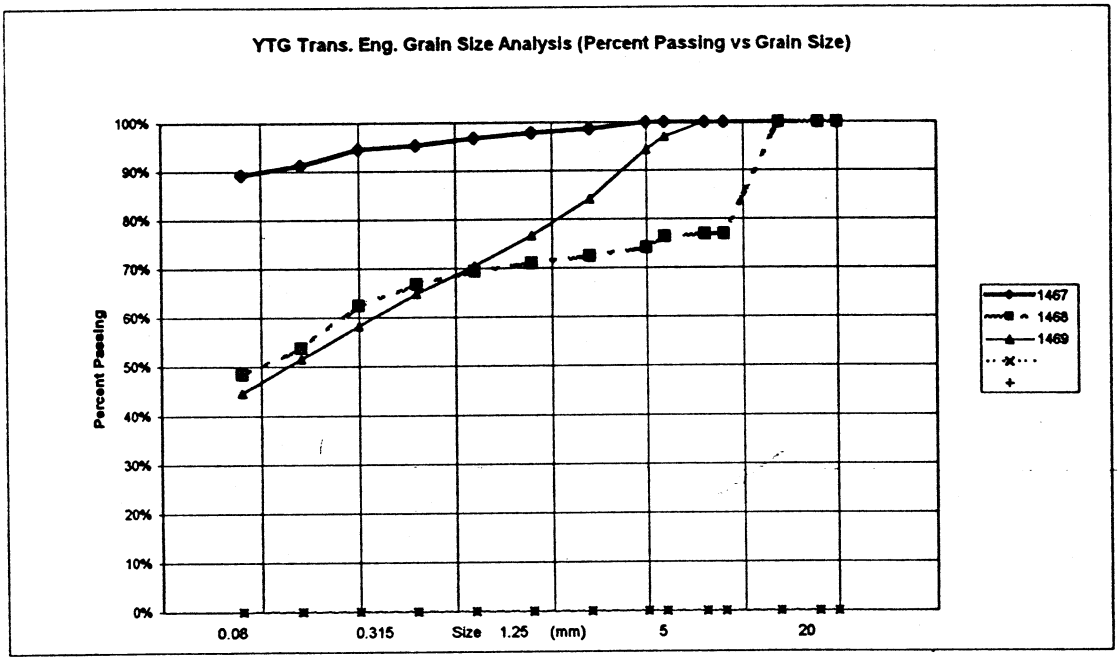
PROJECT NUMBER:	091-202101-0363-1					HOLE No.	563-1746
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1684+150 5M RT					DATE COM	2000/07/28
FIELD NO:	1461	FIELD No.	1462	FIELD No:	1463		
LAB NO:	1907	LAB No.	1908	LAB No:	1909		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	96%	25.0	100%	25.0	100%		
20.0	96%	20.0	92%	20.0	100%		
12.5	93%	12.5	82%	12.5	100%		
10.0	92%	10.0	80%	10.0	99%		
5.0	85%	5.0	72%	5.0	94%		
2.5	77%	2.5	66%	2.5	88%		
1.25	70%	1.25	60%	1.25	82%		
0.630	64%	0.630	54%	0.630	75%		
0.315	60%	0.315	49%	0.315	68%		
0.160	52%	0.160	42%	0.160	61%		
0.080	45%	0.080	36%	0.080	54%		
M.C.(%):	11%	M.C.(%):	7%	M.C.(%):	10%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	15	% GRAVEL	28	% GRAVEL	6		
% SAND:	40	% SAND:	36	% SAND:	40		
% FINES:	45	% FINES:	36	% FINES:	54		
CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SANDY SILT (ML)		



PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1747
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1684+050 5m rt					DATE COM	2000/07/28
FIELD NO:	1464	FIELD No.	1465	FIELD No:	1466		
LAB NO:	1910	LAB No.	1911	LAB No:	1912		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	100%	25.0	96%		
20.0	100%	20.0	97%	20.0	96%		
12.5	96%	12.5	94%	12.5	89%		
10.0	94%	10.0	92%	10.0	86%		
5.0	87%	5.0	85%	5.0	78%		
2.5	81%	2.5	79%	2.5	71%		
1.25	75%	1.25	73%	1.25	66%		
0.630	69%	0.630	68%	0.630	61%		
0.315	64%	0.315	65%	0.315	55%		
0.160	56%	0.160	56%	0.160	49%		
0.080	48%	0.080	49%	0.080	43%		
M.C.(%):	11%	M.C.(%):	9%	M.C.(%):	9%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	13	% GRAVEL	15	% GRAVEL	22		
% SAND:	39	% SAND:	36	% SAND:	35		
% FINES:	48	% FINES:	49	% FINES:	43		
CLASSIFICATION:	SILTY SAND (SM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)		



PROJECT NUMBER:	092-202101-0363-1					HOLE No.:	564-1748
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1683 ALASKA HWY						
DRILL UNIT:	MOBILE B 40-L						
LOGGED BY:	DOUG TRIM						
HOLE LOCATION:	1683+950 2M RT					DATE COM	2000/07/31
FIELD NO:	1467	FIELD No.	1468	FIELD No	1469		
LAB NO:	1913	LAB No.	1914	LAB No:	1915		
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4 3-4.5		
TYPE:	AUGER	A	AUGER	TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING		
100.0	100%	100.0	100%	100.0	100%		
80.0	100%	80.0	100%	80.0	100%		
50.0	100%	50.0	100%	50.0	100%		
25.0	100%	25.0	77%	25.0	100%		
20.0	100%	20.0	77%	20.0	100%		
12.5	100%	12.5	76%	12.5	97%		
10.0	100%	10.0	74%	10.0	94%		
5.0	99%	5.0	73%	5.0	84%		
2.5	98%	2.5	71%	2.5	77%		
1.25	97%	1.25	70%	1.25	71%		
0.630	95%	0.630	67%	0.630	65%		
0.315	95%	0.315	63%	0.315	58%		
0.160	91%	0.160	54%	0.160	52%		
0.080	89%	0.080	49%	0.080	45%		
M.C.(%):	21%	M.C.(%):	15%	M.C.(%):	9%		
LIMITS		LIMITS		LIMITS			
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0		
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0		
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0		
% GRAVEL	1	% GRAVEL	27	% GRAVEL	16		
% SAND:	9	% SAND:	24	% SAND:	40		
% FINES:	89	% FINES:	49	% FINES:	45		
CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)		



GEOTECHNICAL INVESTIGATIONS

Highway Construction
Km 1684.0 to 1691.8
Alaska Highway #1
Yukon 2001-2002
Volume 2 of 2

Yukon
Community and Transportation Services
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 1684.0 to 1691.8
Alaska Highway #1
Yukon 2001-2002
Volume 2 of 2

This Data Package prepared for project viewing:

March, 2001

Transportation Engineering Branch
Geotechnical Services
461 Range Road
Whitehorse, Yukon

CONTENTS

Volume 1 of 2

INTRODUCTION

Investigation notes, classification methods and legends.

2000 CENTRELINE TESTING ALASKA HIGHWAY

Subsurface Exploration and Testing Report Sheets are provided.
The reports for the centreline holes are arranged according to project location, starting at Km 1683+950 and increasing to Km 1691+875.

Laboratory Testing Result Sheets are provided.
The reports for the centreline holes are arranged according to test hole number, starting at 558-1633 and increasing to 564-1748.

2000	TEST HOLES 1633 to 1636, 1638 to 1648	shown with prefix 558-
	TEST HOLES 1649 to 1677	shown with prefix 559-
	TEST HOLES 1678 to 1700	shown with prefix 560-
	TEST HOLES 1701 to 1714	shown with prefix 561-
	TEST HOLES 1715 to 1747	shown with prefix 563-
	TEST HOLES 1748	shown with prefix 564-
	TEST HOLES 888 to 892	shown with prefix 576-

NOTE: 2000 Centreline Test Hole locations on the Subsurface Exploration and Testing Report Sheets are approximate. Actual Test Hole locations, compiled by GPS survey, are indicated on project plans.

CONTENTS (continued)

Volume 2 of 2

1978 CENTRELINE TESTING ALASKA HIGHWAY

A Test Hole Location Reference Table and Subsurface Exploration and Testing Report Sheets are provided.
The reports for the centreline holes are arranged according to project location, starting at Km 1683+938 and increasing to Km 1690+062.

1978	TEST HOLES 1 to 16, 20 to 24, 51, 52, and 296 to 327	shown with no prefix

IMPORTANT NOTE: Due to alignment revisions subsequent to the 1978 centreline testing the test hole locations indicated on the 1978 Subsurface Exploration and Testing Report sheets are invalid. Utilize the Test Hole Location Reference Table provided in order to determine the test hole locations relevant to the current alignment.

GRANULAR SOURCE Km 1691.3 RHS ALASKA HIGHWAY (Silver Creek)

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

Backhoe Testing

* 1991	TEST PITS 01 to 08	shown with prefix 152-
* 1992	TEST PITS 15 to 23	shown with prefix EBA-
2001	TEST PITS 1519 to 1543	shown with prefix 583-
2001	TEST PITS 1544 to 1552	shown with prefix 584

* **NOTE:** For subsurface exploration and testing report sheets refer to:
GRANULAR SOURCE INVESTIGATION REPORT,
Km 1693, North Alaska Highway, Yukon
0201-10992, April 1992

Auger Testing

2001	TEST HOLES 1505 to 1514	shown with prefix 581-
2001	TEST HOLES 1515 to 1518	shown with prefix 582-

1978 CENTRELINE TESTING
1683+938 to 1690+062
ALASKA HIGHWAY

TEST HOLE LOCATION REFERENCE TABLE

Km 1684.0 to 1692.9

TEST HOLE #	DRILL LOG LOCATION		CURRENT LOCATION	
	STATION	OFFSET	STATION	OFFSET
296	1684+010	C.L.	1683+938	5.7 m Lt
297	1684+088	C.L.	1684+016	5.6 m Lt
298	1684+172	C.L.	1684+100	5.7 m Lt
299	1684+252	C.L.	1684+181	6.7 m Lt
300	1684+368	C.L.	1684+296	5.9 m Lt
301	1684+487	C.L.	1684+415	6.1 m Lt
302	1684+602	C.L.	1684+530	6.2 m Lt
303	1684+776	C.L.	1684+704	6.4 m Lt
21	1686+260	C.L.	1686+184	30.2 m Lt
52	1686+260	42.0 m Rt	1686+185	11.8 m Rt
51	1686+320	35.0 m Rt	1686+245	4.4 m Rt
20	1686+320	C.L.	1686+245	31.0 m Lt
1	1686+360	C.L.	1686+285	30.7 m Lt
2	1686+462	C.L.	1686+387	31.2 m Lt
3	1686+536	C.L.	1686+461	31.4 m Lt
4	1686+646	C.L.	1686+571	27.0 m Lt
5	1686+714	C.L.	1686+638	19.6 m Lt
6	1686+782	C.L.	1686+705	9.9 m Lt
22	1686+804	31.5 m Lt	1686+730	38.3 m Lt
7	1686+852	C.L.	1686+774	1.2 m Lt
8	1686+923	C.L.	1686+845	6.1 m Rt
9	1686+992	C.L.	1686+914	11.7 m Rt
10	1687+060	C.L.	1686+983	15.7 m Rt
23	1687+098	34.0 m Lt	1687+023	16.8 m Lt
11	1687+131	C.L.	1687+055	18.2 m Rt
12	1687+221	C.L.	1687+145	21.2 m Rt
13	1687+300	C.L.	1687+224	23.1 m Rt
24	1687+346	29.0 m Lt	1687+269	6.1 m Lt
14	1687+370	C.L.	1687+293	22.7 m Rt
15	1687+450	C.L.	1687+371	21.5 m Rt
16	1687+530	C.L.	1687+450	19.8 m Rt
304	1688+000	C.L.	1687+917	8.9 m Rt
305	1688+112	C.L.	1688+028	9.8 m Rt
306	1688+188	C.L.	1688+103	12.5 m Rt

TEST HOLE #	DRILL LOG LOCATION		CURRENT LOCATION	
	STATION	OFFSET	STATION	OFFSET
307	1688+291	C.L.	1688+206	21.4 m Rt
308	1688+354	C.L.	1688+270	24.5 m Rt
309	1688+450	C.L.	1688+369	23.5 m Rt
310	1688+543	C.L.	1688+464	18.4 m Rt
311	1688+617	C.L.	1688+538	12.7 m Rt
312	1688+715	C.L.	1688+636	9.3 m Rt
313	1688+813	C.L.	1688+734	8.7 m Rt
314	1688+914	C.L.	1688+835	8.3 m Rt
315	1689+000	C.L.	1688+921	7.6 m Rt
316	1689+082	C.L.	1689+003	7.5 m Rt
317	1689+183	C.L.	1689+104	7.0 m Rt
318	1689+328	C.L.	1689+249	6.2 m Rt
319	1689+408	C.L.	1689+329	5.8 m Rt
320	1689+498	C.L.	1689+419	5.4 m Rt
321	1689+572	C.L.	1689+493	5.0 m Rt
322	1689+661	C.L.	1689+582	4.6 m Rt
323	1689+748	C.L.	1689+669	4.2 m Rt
324	1689+845	C.L.	1689+766	5.0 m Rt
325	1689+942	C.L.	1689+864	8.0 m Rt
326	1690+021	C.L.	1689+944	9.1 m Rt
327	1690+138	C.L.	1690+062	8.5 m Rt

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9		HOLE No. 296
HOLE LOCATION 1684+010	ELEV.	DEPTH TO G.W.L.
DATE DRILLED 78-11-08	DRILL UNIT	TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	2306	SM	9	44		
2										
3			A/P	2	2263	ML	0	16	61	
4	REFUSAL.									
5										
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ TRACE X

⊙ TRACE X

Public Works Canada

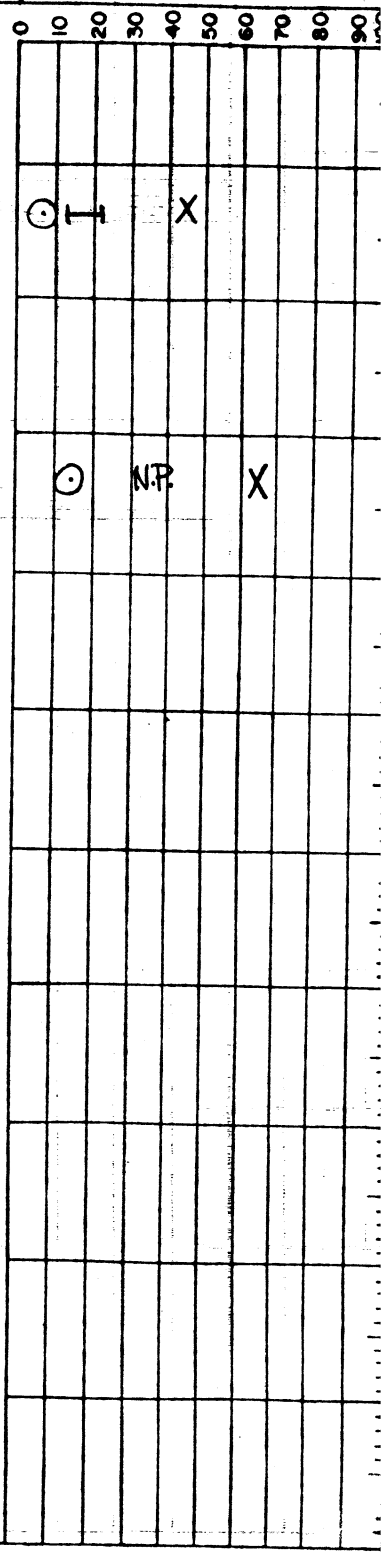
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 297.
HOLE LOCATION 1684+088 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.08 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1			A/P	1	2375	SC	25	31		
2										
3			A/P	2	2226	ML	11	24	37	
4										
5	END HOLE									
6										
7										
8										
9										
10										

0 - % MOISTURE CONTENT
x - % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

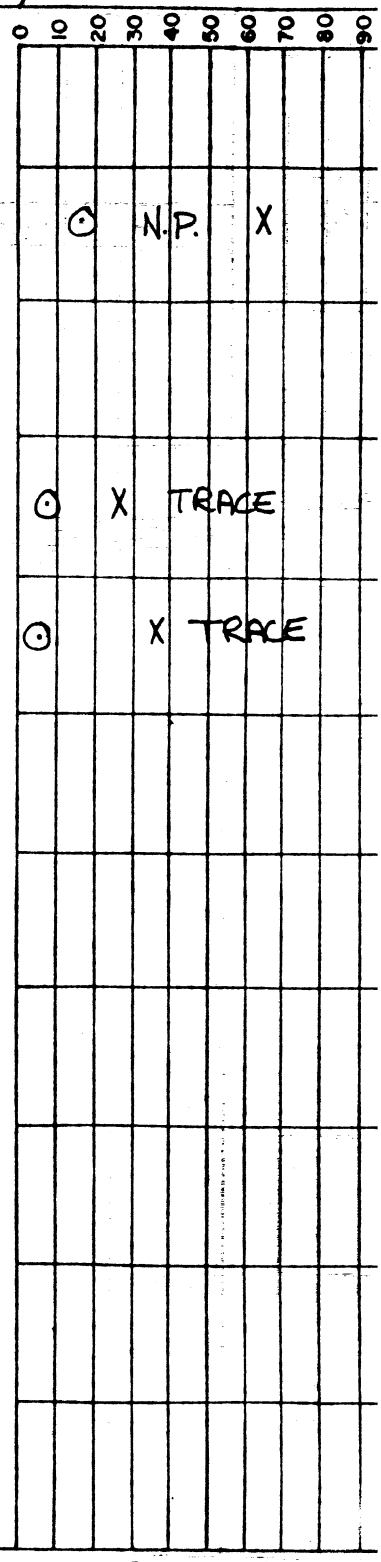
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 298
HOLE LOCATION	1684+172	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.08	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1			A/P	1	2471	ML	3	33	11	
2										
3			A/P	2	2243	SM	27	44		
4			A/P	3	2257	SM	28	35	11	
5	END HOLE									
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Dwg No 60-253c

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 299
HOLE LOCATION	1684+252	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.08	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1			A/P	1	2300	GM	0	0		
2										
3			A/P	2	2602	SM	22	37	13	
4										
5										
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90 100

⊙ TRACE

⊙ TRACE X

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

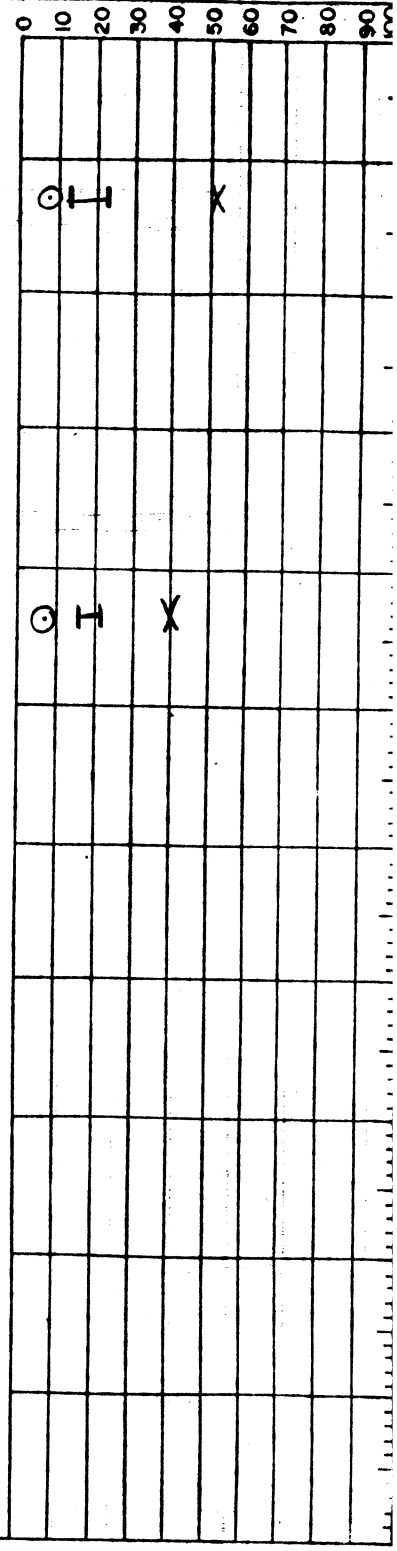
PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 300

HOLE LOCATION 1684+368 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED 78.11.08 — DRILL UNIT — TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1										
2			A/P	1	2167	CL	12	36		
3										
4			A/P	2	2261	GC-GM	30	30	10	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 301

HOLE LOCATION 1684 + 487 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.08 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2		A	P	1	2211	SAMPLE LOST.				
3										
4		A	P	2	2355	SM	14	46	4	
5	END HOLE									
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ TRACE X

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 302
HOLE LOCATION	1684+602	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-11-08	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1	REFUSAL									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 303
HOLE LOCATION 1684+776 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.08 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
		A/P	1		2171	SM	21	37		
		A/P	2		2504	SM	24.5	37.5	13.6	
	REFUSAL									

SAMPLE DATA

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊣ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ N.P. X
⊙ X N.P.

1 2 3 4 5 6 7 8 9 10

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 21
HOLE LOCATION	1686+260	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-18	DRILL UNIT B 40 L	TECHNICIAN H.R.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
6			A/P	1	1754	OL	1	12	--	
8			T/K	2	1755	SP-SM	0	90		
9			S/P	3	1756	SP-SM	12	76		

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

N.P. N.P.

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MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 21
HOLE LOCATION	1686+260	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-19	DRILL UNIT B 40 L	TECHNICIAN H.R.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
10										
11										
12										
13	END HOLE									
14										
5										
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

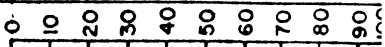
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 52
HOLE LOCATION	1686+260	ELEV. ~42m Rt	DEPTH TO G.W.L.
DATE DRILLED	78-11-30	DRILL UNIT B 40 L	TECHNICIAN C.B.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
			H/S	1	2794	GP	65	34		
			H/S	2	2795	SM	28	44	5	
			H/S	3	2796	SP	26	69		
			H/S	4	2797	SM	18	66		
			H/S	5	2798	SP-SM	13	81		
			H/S	6	2799	SP-SM	33	61		
			H/S	7	2800	SP	0	97		
	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



N.P.

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MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

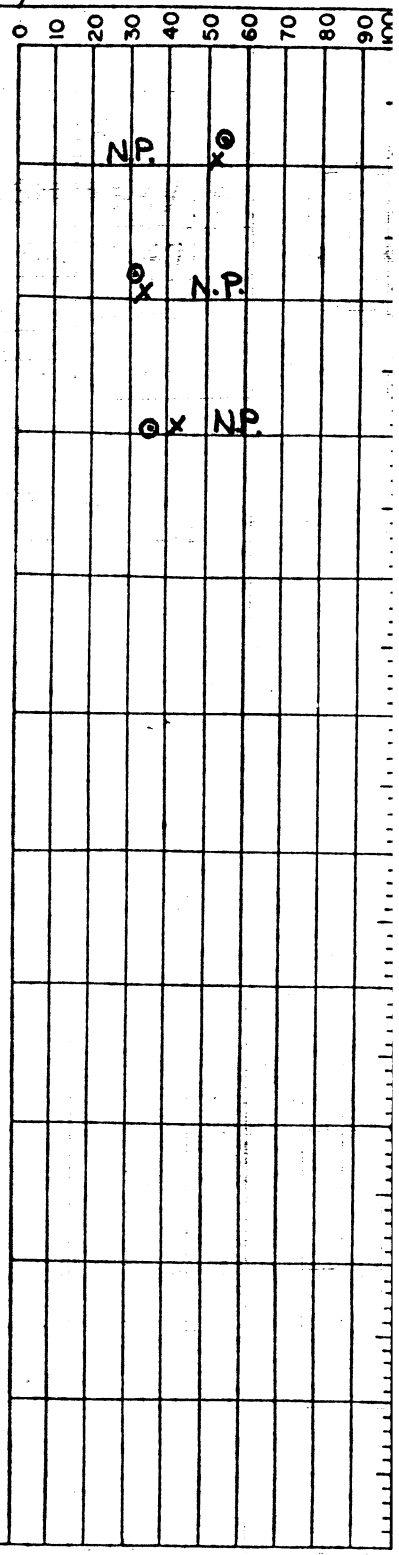
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9	HOLE No.	51
HOLE LOCATION	1686+320	ELEV. ~~%~~ 35 ft	DEPTH TO G.W.L.
DATE DRILLED	78-11-29	DRILL UNIT B 40 L	TECHNICIAN C.B.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
1			S/P	1	2790	ML	0	49	10	
2			S/P	2	2791	SM	13	54	7	
3			S/P	3	2792	SM	2	56	9	
	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



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MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

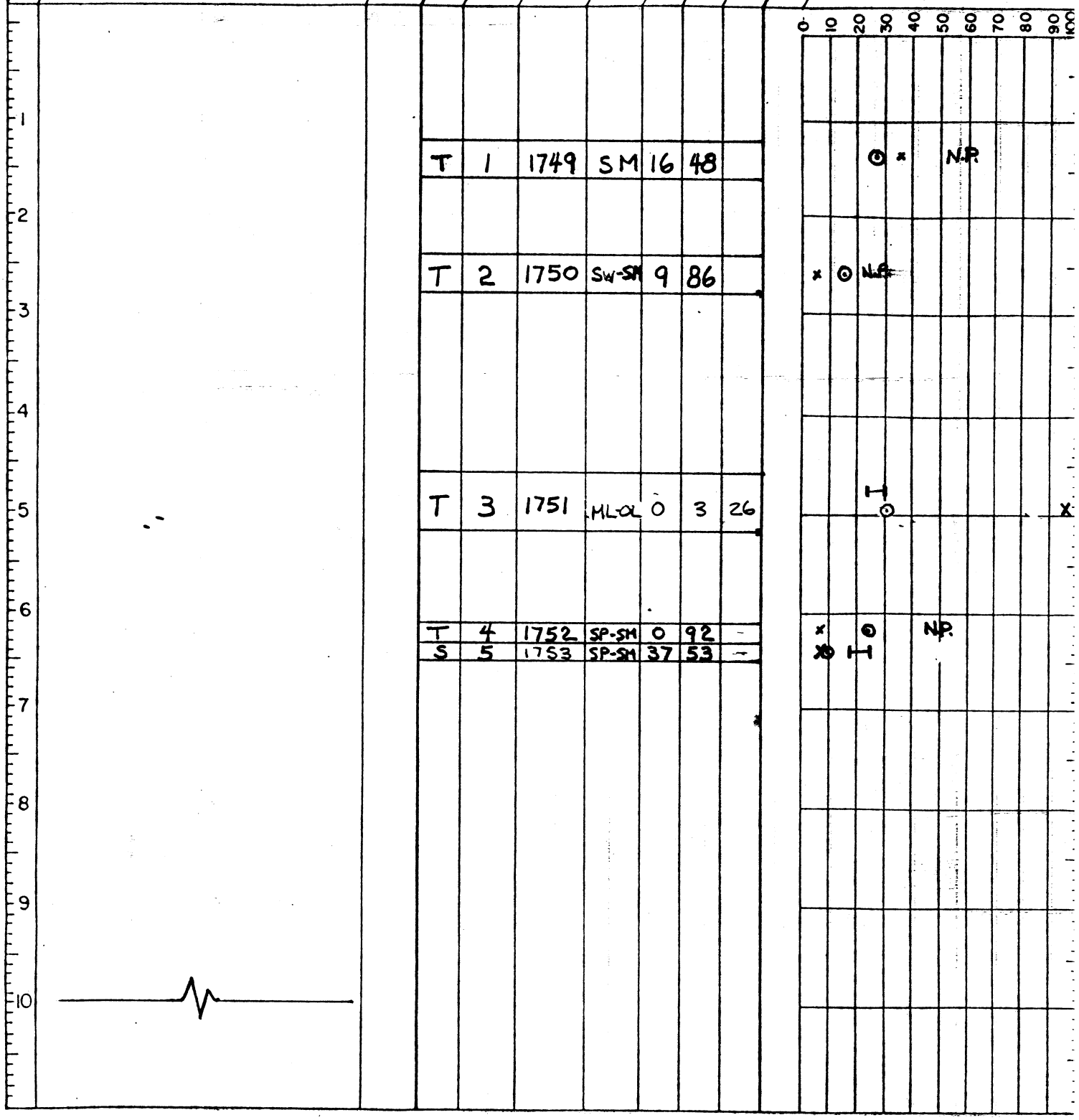
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 20
HOLE LOCATION	1686+320	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-17	DRILL UNIT B 40 L	TECHNICIAN H.R.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
			T	1	1749	SM	16	48		
			T	2	1750	SW-SM	9	86		
			T	3	1751	ML-OL	0	3	26	
			T	4	1752	SP-SM	0	92		
			S	5	1753	SP-SM	37	53		

SAMPLE DATA

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



Dwg. No. 60-253-a

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MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 20
HOLE LOCATION		ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78 10-17	DRILL UNIT B 40 L	TECHNICIAN H.R.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
10										
11										
12										
13										
14	END HOLE									
15										
16										
17										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90 100

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 1
HOLE LOCATION	1686+360	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-19	DRILL UNIT B 40 L	TECHNICIAN H.R.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
1			A/P	1	1778	CL	5.5	19.7	30.1	
2										
3										
4										
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90 100

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MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

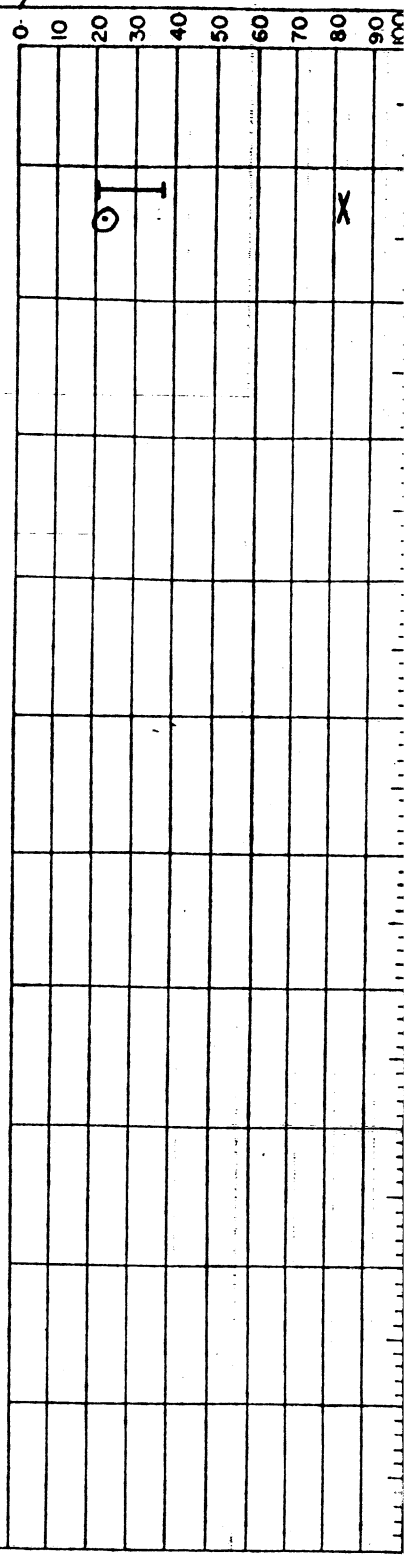
PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 2

HOLE LOCATION 1686+462 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78-10-19 | DRILL UNIT B 40 L | TECHNICIAN H.R.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
1										
2			A/P	1	1779	CL	2.0	16.3		
3										
4	END HOLE									
5										
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 3
HOLE LOCATION	1686+536	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-19	DRILL UNIT B 40 L	TECHNICIAN H.R.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD PENETRATION BLOWS/300mm
3			A/P	1	1780	GPGM	65	23	3	
	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

3 0 x TRACE

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MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 4
HOLE LOCATION	1686+646	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-19	DRILL UNIT B 40 L	TECHNICIAN H.R.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
3	END HOLE									

SAMPLE DATA

0 – % MOISTURE CONTENT
x – % < .074mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90 100

1 2 3 4 5 6 7 8 9 10

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

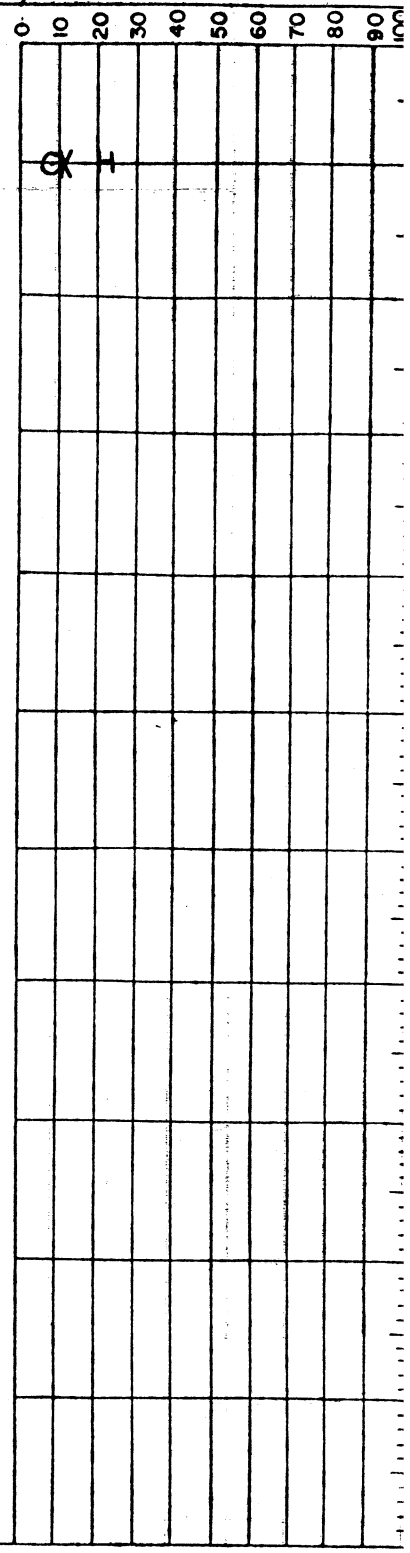
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 5
HOLE LOCATION	1686+714	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-20	DRILL UNIT B40L	TECHNICIAN T.F.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	1781	GP-GM	44.9	44.1	-	
2	END HOLE									
3										
4										
5										
6										
7										
8										
9										
10										

0 - % MOISTURE CONTENT
x - % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 6
HOLE LOCATION	1686+782	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-20	DRILL UNIT B 40 L	TECHNICIAN T.F.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: FIELD No.	SAMPLE DATA: LAB No.	SAMPLE DATA: UNIFIED CLASSIFICATION	SAMPLE DATA: % GRAVEL	SAMPLE DATA: % SAND	SAMPLE DATA: % < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
	REFUSAL									
2										
3										
4										
5										
6										
7										
8										
9										
10										

0 - % MOISTURE CONTENT
x - % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90 100

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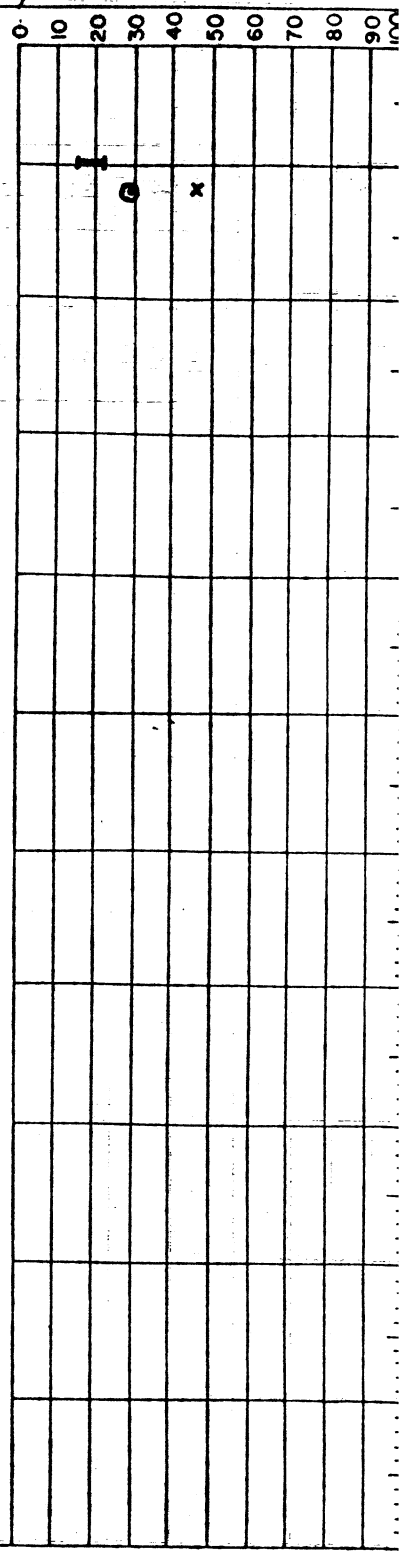
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 22
HOLE LOCATION	1686+804	~~ELEV.~~ % 31.5 m LT	DEPTH TO G.W.L.
DATE DRILLED	78-10-19	DRILL UNIT B 40 L	TECHNICIAN H.R.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	1757	SC.	17	37	20	
2										
3	REFUSAL									
4										
5										
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

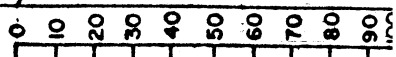
SUBSURFACE EXPLORATION AND TESTING REPORT

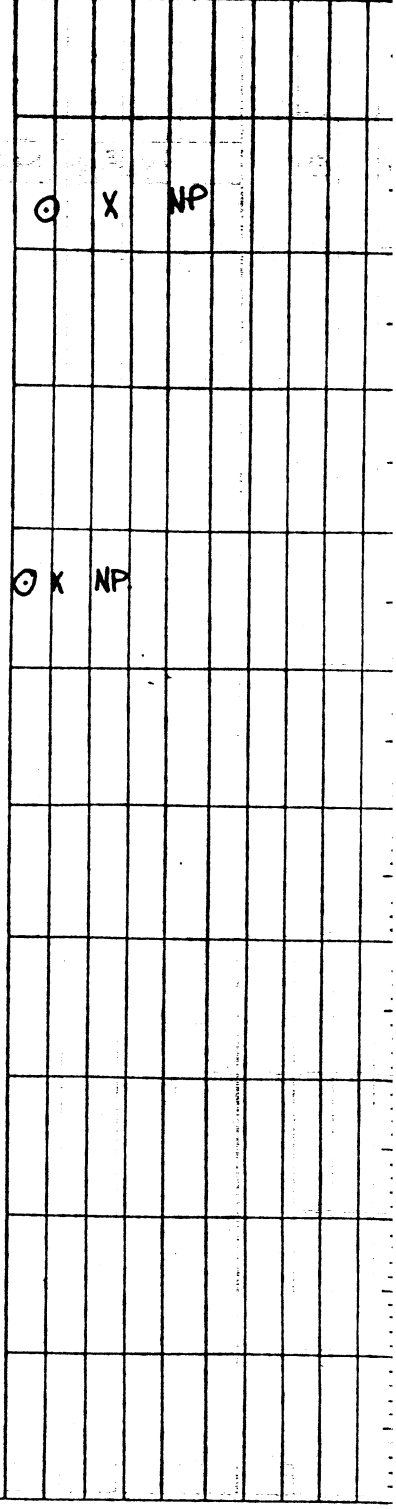
PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 7
HOLE LOCATION	1686+852	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-20	DRILL UNIT B40 L	TECHNICIAN T.F.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1										
2			A/P	1	1783	GM	41.0	33.9	7.0	
3										
4			A/P	2	1782	GP-GM	57.1	31.0	—	
5	END HOLE									
6										
7										
8										
9										
10										

SAMPLE DATA

0 – % MOISTURE CONTENT
x – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT





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MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 8
HOLE LOCATION	1686+923	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-20	DRILL UNIT B40 L	TECHNICIAN T.F.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	1784	GM	44.3	33.6	⊙	X
2										TRACE
3										
4			A/P	2	1786	GM	48.1	36.3	⊙	X
5	END HOLE									NP
6										
7										
8										
9										
10										

⊙ – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90 100

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MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 9

HOLE LOCATION 1686+992 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78-10-20 | DRILL UNIT B 40 L | TECHNICIAN T.F.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
1										
2			A/P	1	1785	ML	5.6	31.4		
3										
4			A/P	2	1787	SM	11.1	61.2	7.5	
	END HOLE									
5										
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90 100

NP. ○ x

○ x TRACE

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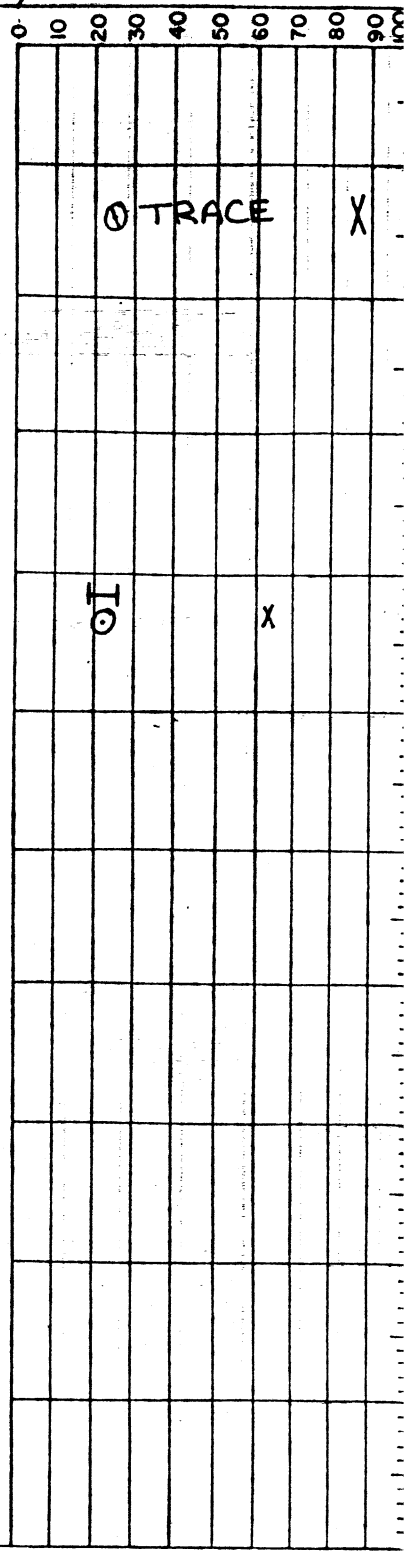
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 10
HOLE LOCATION	1687+060	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-20	DRILL UNIT B 40 L	TECHNICIAN T.F.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	1788	ML	0[3]	13.4		
2										
3										
4			A/P	2	1789	CL-ML	15[9]	21.4	21[0]	
5	END HOLE									
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



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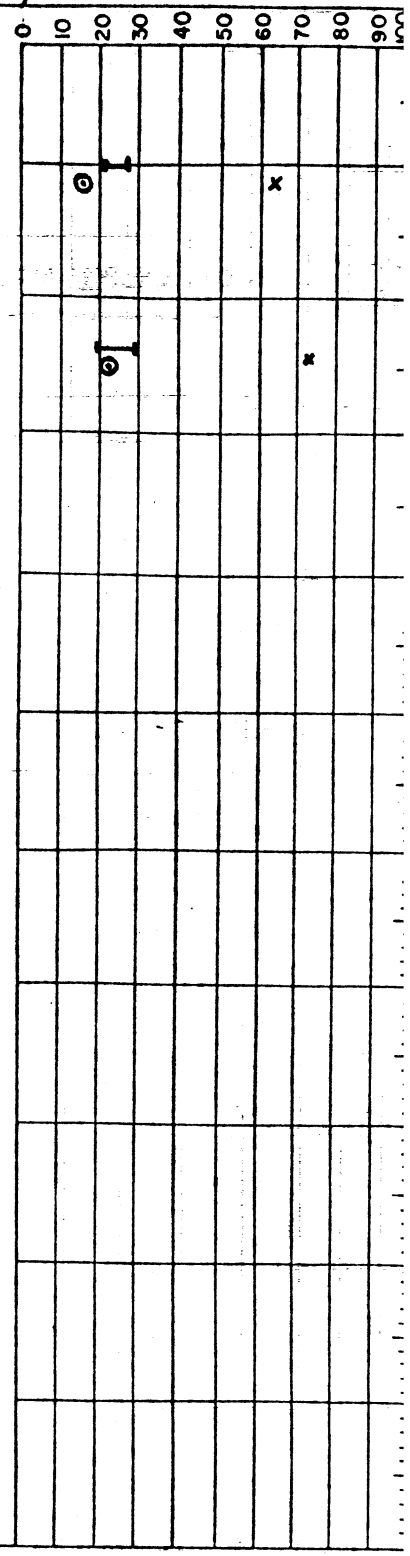
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 23
HOLE LOCATION	1687+098	~~ELEV.~~ % 34 m Lt	DEPTH TO G.W.L.
DATE DRILLED	78-10-19	DRILL UNIT B 40 L	TECHNICIAN H.R.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	1758	CL	12	24	29	
2										
3			A/P	2	1759	CL	7	20	34	
6	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

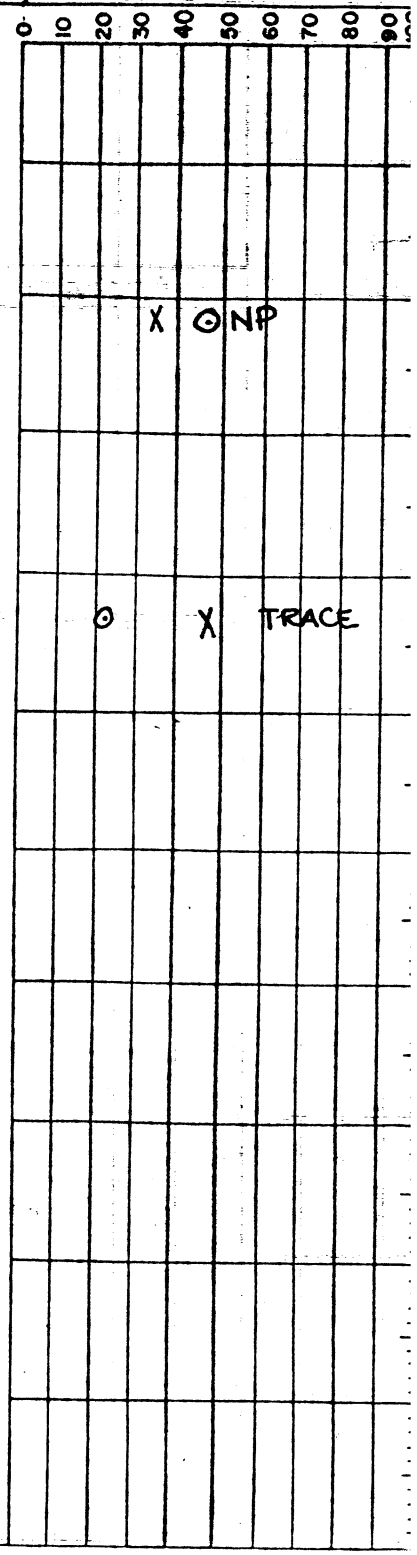
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 11
HOLE LOCATION	1687+131	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-20	DRILL UNIT B40L	TECHNICIAN T.F.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
2			A/P	1	1790	GM	43°	23.5		
4			A/P	2	1791	SM	17.5	35.0	16.1	
5	END HOLE									

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊣ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 12

HOLE LOCATION 1687+221 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78-10-20 | DRILL UNIT B40L | TECHNICIAN T.F.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
2			A/P	1	1792	CL	3.4	12.9		
4			A/P	2	1793	CL	5.2	18.5	32.6	
5	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90 100

1 2 3 4 5 6 7 8 9 10

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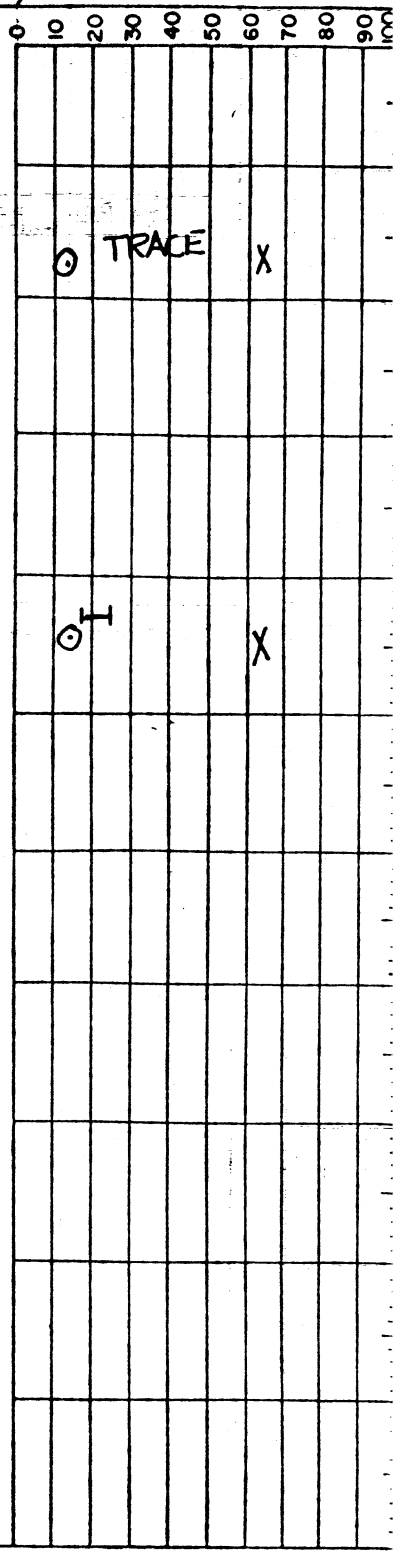
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 13
HOLE LOCATION	1687+300	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-20	DRILL UNIT B 40 L	TECHNICIAN T.F.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1										
2			A/P	1	1794	ML	8.3	28.8		
3										
4			A/P	2	1795	CL-ML	9.1	28.2	22.2	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

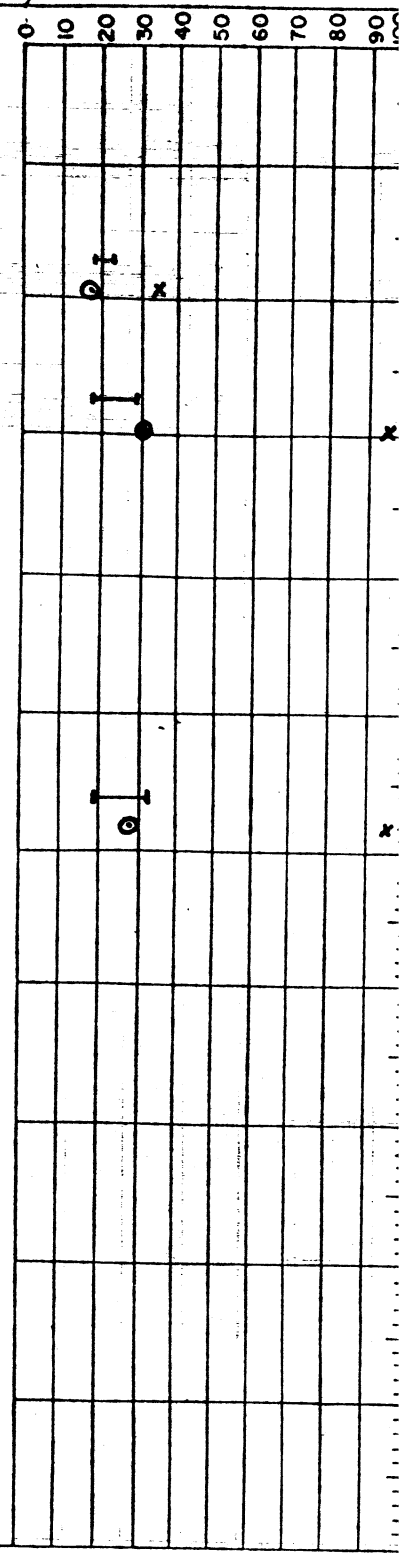
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9	HOLE No.	24
HOLE LOCATION	1687+346 ~~REV.~~ % 29 m Lt	DEPTH TO G.W.L.	
DATE DRILLED	78-10-19	DRILL UNIT	B40L
TECHNICIAN	H.R.		

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
			A/P	1	1760	SM	28	37	10	
			A/P	2	1761	CL	0	4	47	
			A/P	3	1762	CL	1	3	58	
	END HOLE									

SAMPLE DATA

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



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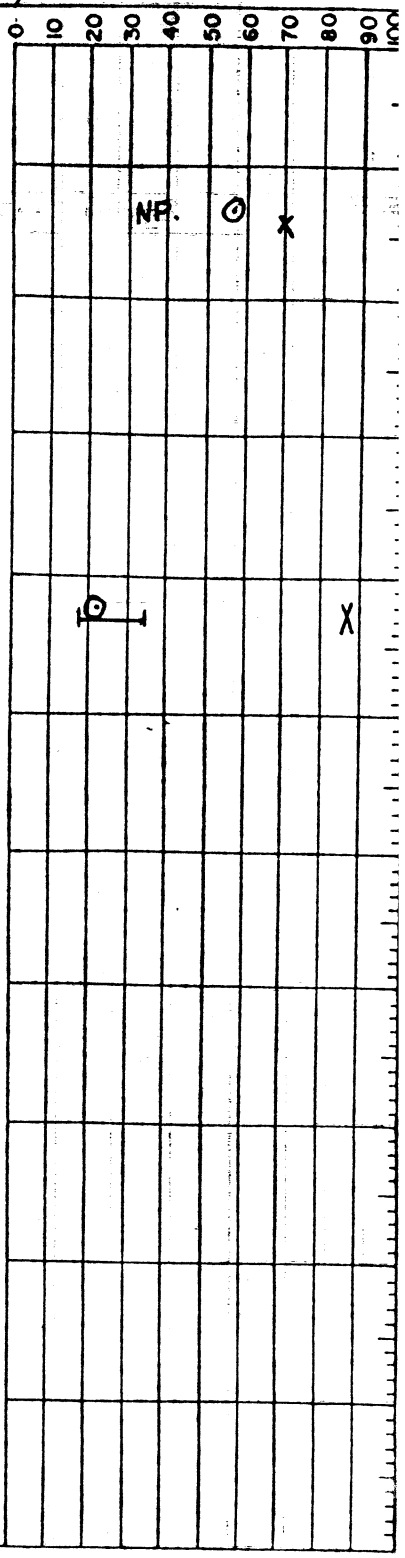
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 14
HOLE LOCATION	1687+370	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-20	DRILE UNIT B 40 L	TECHNICIAN T.F.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	1796	ML	4.9	25.1		
2										
3										
4			A/P	2	1797	CL	1.8	40.1	52.6	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



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MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

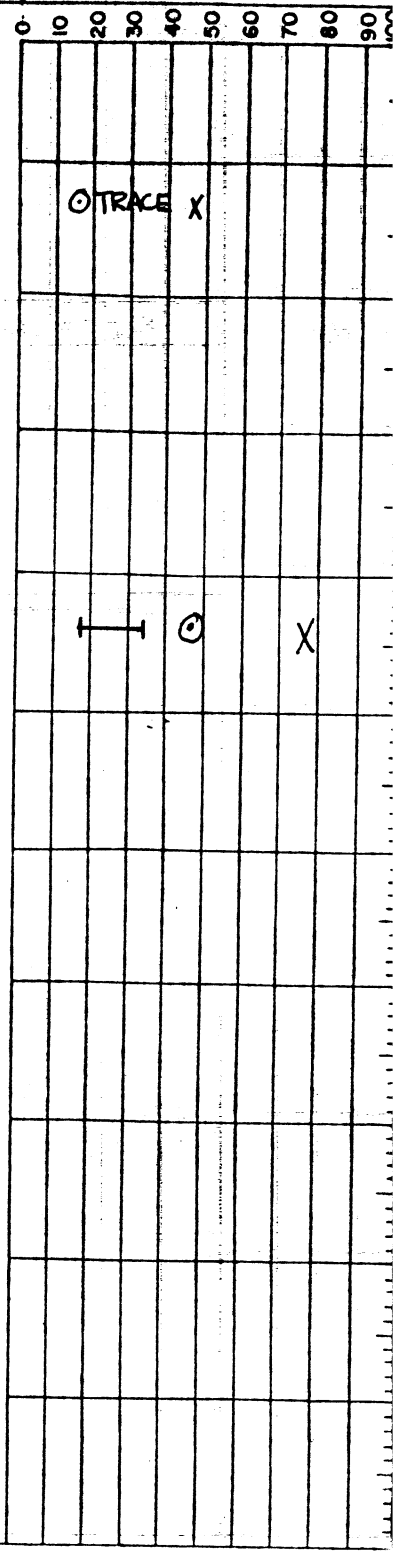
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 15
HOLE LOCATION	1687+450	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-20	DRILL UNIT B40L	TECHNICIAN T.F.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
			A/P	1	1798	SM	21.0	32.8		
			A/P	2	1799	CL	0.0	21.2		
	END HOLE									

SAMPLE DATA

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



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MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

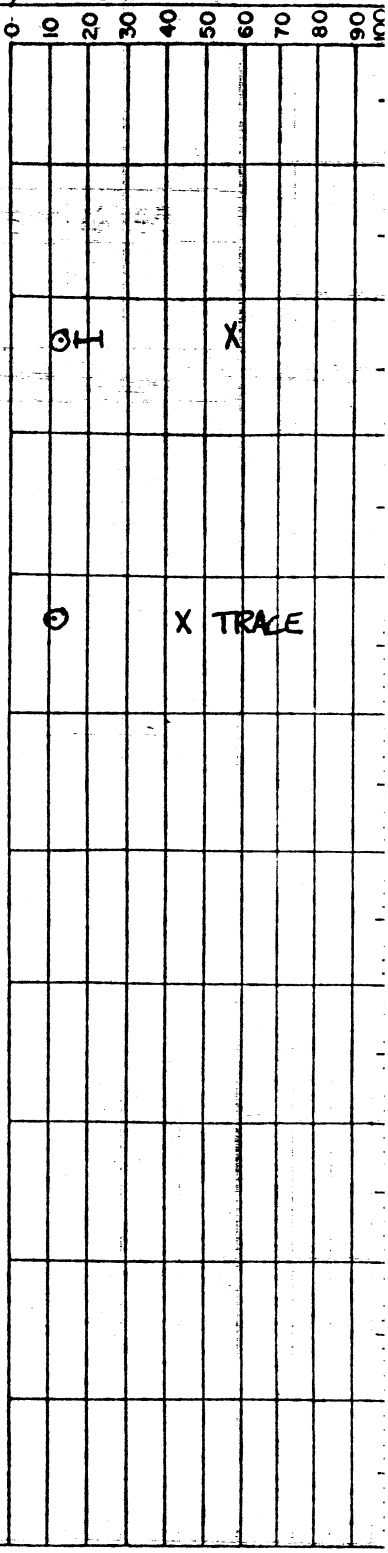
PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 16
HOLE LOCATION	1687+530	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-20	DRILL UNIT B 40 L	TECHNICIAN T.F.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
2			A/P	1	1800	CL-ML	12.0	30.3		
4			A/P	2	1801	SM	18.2	36.0	13.6	
5	END HOLE									

SAMPLE DATA

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90 100



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MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

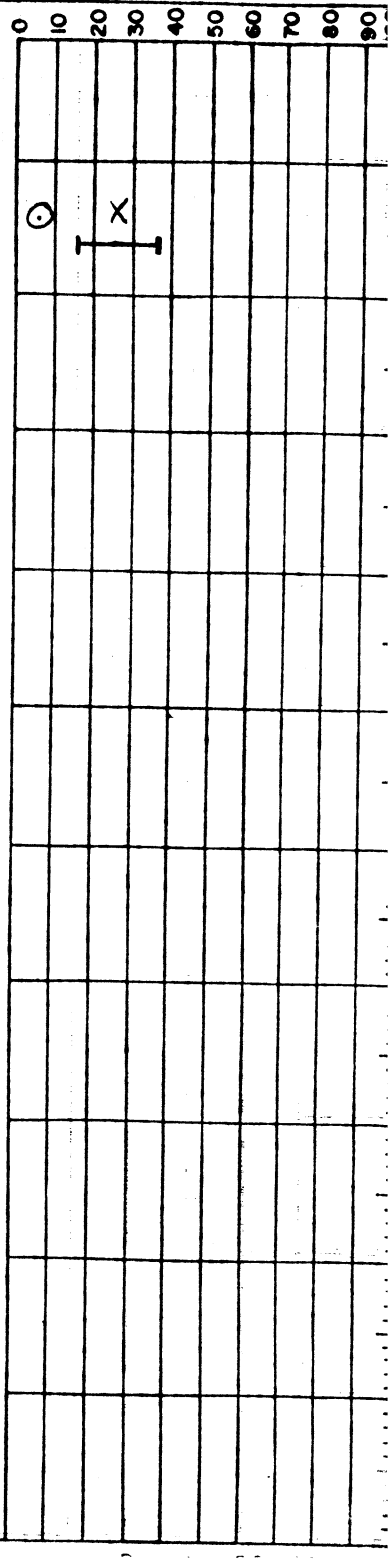
PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 304

HOLE LOCATION 1688+000 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED 78-11-08 — DRILL UNIT — TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1			A/P	1	2363	SC	21	50	9	
2	REFUSAL									
3										
4										
5										
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 305
HOLE LOCATION	1688 + 112	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.08	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm	0 – % MOISTURE CONTENT; x – % < .074 mm; LIQUID LIMIT ⊢ PLASTIC LIMIT (0 10 20 30 40 50 60 70 80 90)
	REFUSAL										
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 306
HOLE LOCATION	1688 + 188	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.08	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2			A|P	1	2303	SM	29	36		
3										
4			A|P	2	2366	SC	22	38	13	
5	END HOLE									
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ X TRACE

⊙ X

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

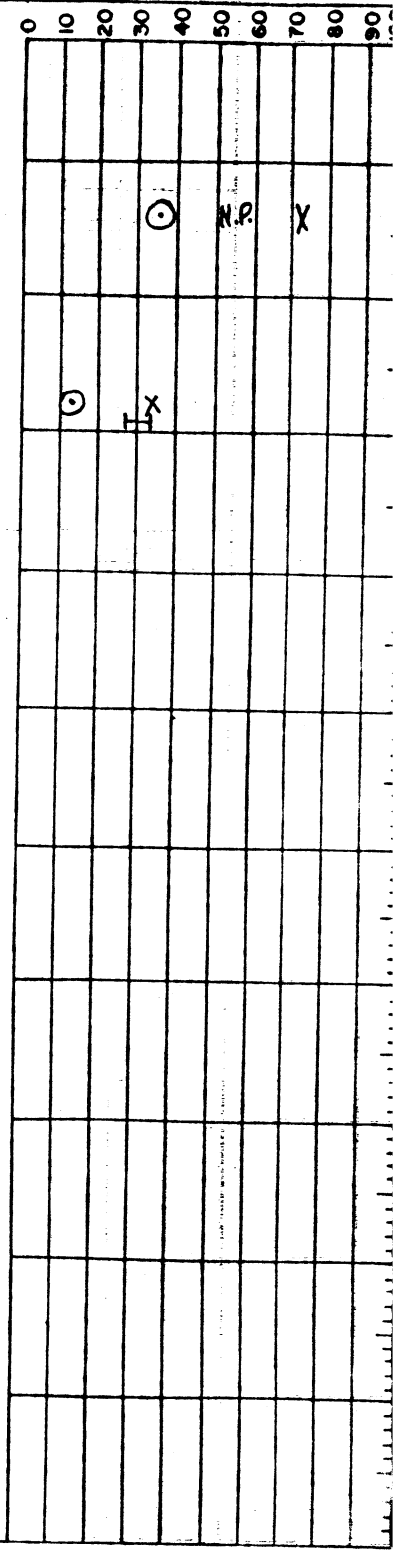
PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 307

HOLE LOCATION 1688+294 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.08 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1			A|P	1	2166	ML	8	20	12	
2										
3			A|P	2	2227	SM	31	35		
			A|P	3						
4	REFUSAL									
5										
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



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MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 308
HOLE LOCATION 1688+354 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.08 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
			A/P	1	2239	SM	14	63		
			A/P	2	2358	GM	39	33	9	
	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊣ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

1 ⊙ x N.P.
2
3
4 ⊙ x N.P.
5
6
7
8
9
10

Public Works Canada

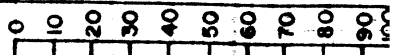
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 309
HOLE LOCATION 1688+540 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78·11·09 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2		A/P	1	2252	SM	24	41	6		
3										
4		A/P	2	2364	SM	31	33			
5	END HOLE									
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



⊙ X TRACE

⊙ X TRACE

Public Works Canada

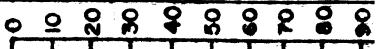
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

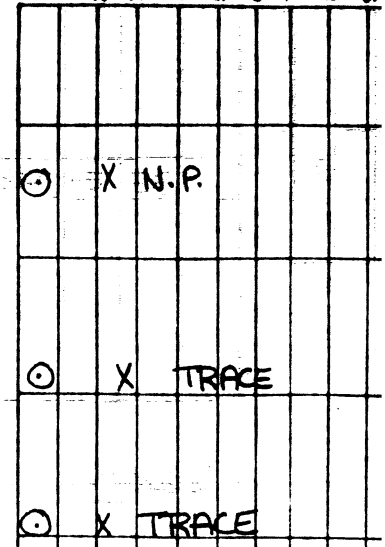
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9		HOLE No. 310
HOLE LOCATION 1688 + 543	ELEV.	DEPTH TO G.W.L.
DATE DRILLED 78.11.09	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	2486	GM	41	37	6	
2										
3			A/P	2	2207	SM	35	36		
4	REFUSAL		A/P	3	2258	GM	58	20		
5										
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT





Dwg No 60-253-

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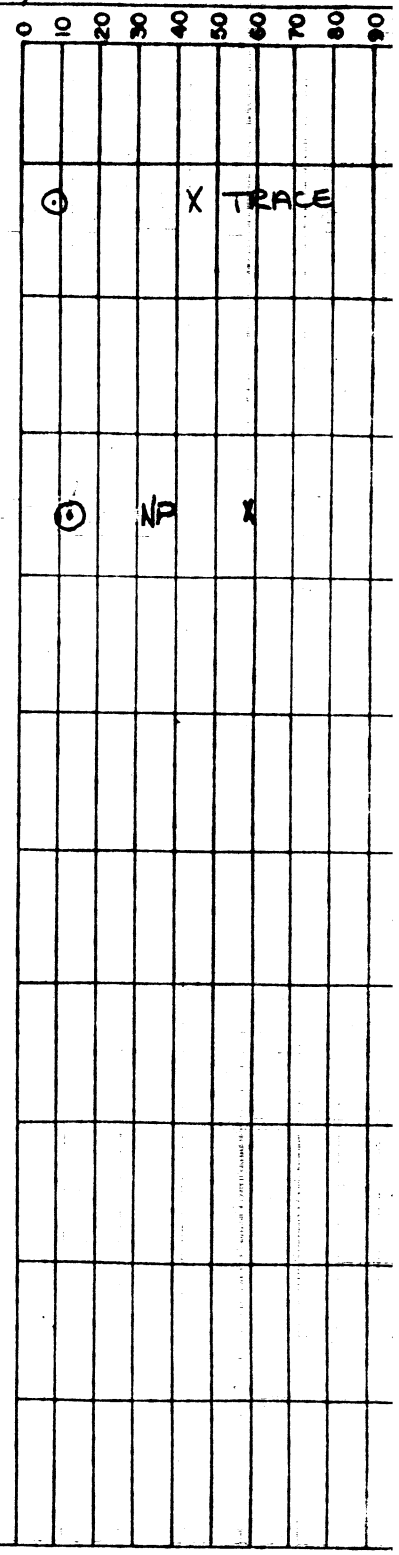
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 311
HOLE LOCATION	1688 +617	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.09	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1			A|P	1	2307	SM	19	38		
2										
3			A|P	2	2484	ML	1.0	39.4	9.7	
4										
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 312
HOLE LOCATION 1688+715 — ELEV. — DEPTH TO G.W.L.
DATE DRILLED 78.11.09 — DRILL UNIT — TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
		AlP	1	2254	GM	37	33			
		AlP	2	2304	SM	10	57	4		
	END HOLE									

SAMPLE DATA

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90 100

1 2 3 4 5 6 7 8 9 10

⊙ X N.P.

⊙ X N.P.

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 313

HOLE LOCATION 1688+813 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm	0 – % MOISTURE CONTENT; X – % < .074mm; LIQUID LIMIT ⊢ PLASTIC LIMIT
1											
2			A|P	1	2188	SM	20	61			⊙ X N.P.
3											
3			A|P	2	2373	SM	23	41	10		⊙ X TRACE
4	REFUSAL										
5											
6											
7											
8											
9											
10											

0 10 20 30 40 50 60 70 80 90

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 314

HOLE LOCATION 1688+914 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED 78.11.09. — DRILL UNIT — TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
2			A/P	1	2301	SM	17	41	11.	
3			A/P	2	2354	SM	31	34	-	
	REFUSAL									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ TRACE X

⊙ N.P. X

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 315
HOLE LOCATION 1689+000 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
			A/P	1	2255	SM	16	40	12	
			A/P	2	2259	SM	26	38		
4	REFUSAL									

SAMPLE DATA

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ TRACE x
⊙ N.P. x

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 316
HOLE LOCATION 1689+082 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.09 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1										
2		A|P	1		2256	ML	4	36		
3										
4		A|P	2		2368	SM	20	36	11	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ TRACE X
⊙ N.P. X

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 317

HOLE LOCATION 1689+183 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78·11·09 | DRILL UNIT | TECHNICIAN SC.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2			A/P	1	2170	SM	21	43	8	
3										
4	REFUSAL									
5										
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ N.P. X

Dwg No 60-253-

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 318
HOLE LOCATION	1689+328	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.09	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2			A/P	1	2369	SM	24	34	9	
3			A/P	2	2370	GM	45	33		
4	REFUSAL									
5										
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

1: ⊙ X TRACE
2:
3: ⊙ X N.P.

Dwg No 60-253-

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 319
HOLE LOCATION	1689+408	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.09	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
0			A/P	1	2374	GM	44	41		
3			A/P	2						
4	REFUSAL.									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ x N.P.

Dwg No 60-253-

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 320

HOLE LOCATION 1689+498 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.9 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: FIELD No.	SAMPLE DATA: LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1	REFUSAL									

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

1 2 3 4 5 6 7 8 9 10

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 321
HOLE LOCATION 1689+572 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm	0 – % MOISTURE CONTENT; X – % < .074 mm; LIQUID LIMIT ⊢ PLASTIC LIMIT
1			A/P	1	2482	GM	46	36	2		⊙ X N.P.
2											
3			A/P	2	2472	SM	30	38			⊙ TRACE X
4											
5	END HOLE										
6											
7											
8											
9											
10											

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 322
HOLE LOCATION	1689+661	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-11-09	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1										
2			A/P	1	2253	SAMPLE LOST.				
3										
4			A/P	2	2161	SM	24	42	8	
5	END HOLE									
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ x TRACE

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 323
HOLE LOCATION	1689 + 748	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78·11·10	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
3			A/P	1	2242	SAMPLE LOST.				
5	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

Dwg No 60-253-

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 324
HOLE LOCATION	1689+845	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.10	DRILL UNIT	TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2		A/P	1	2361	GP-GM	63	27			
3										
4		A/P	2	2158	SM	14	42			
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

O X N.P.
O TRACE X

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

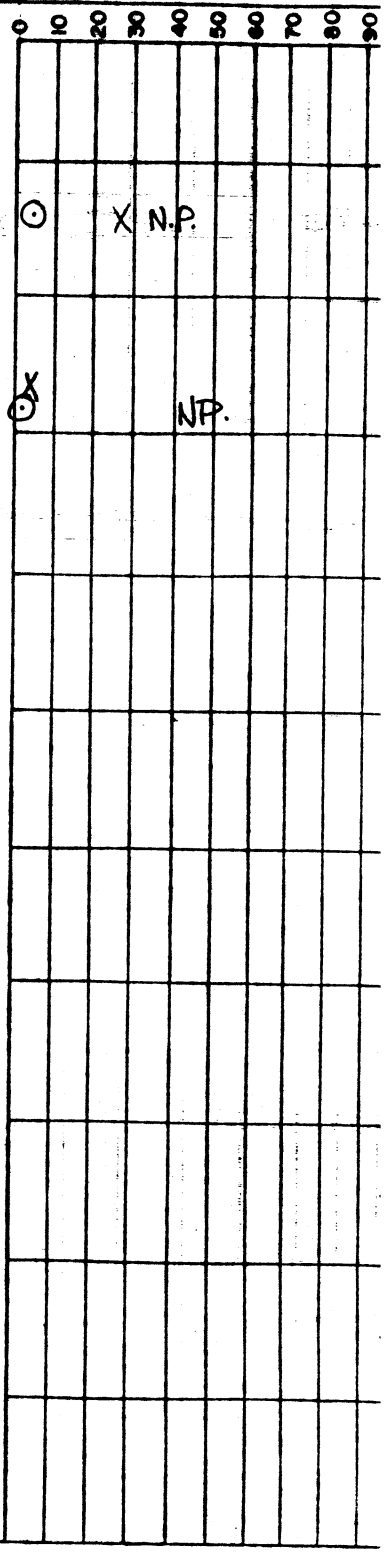
PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 325

HOLE LOCATION 1689+942 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.10 | DRILL UNIT | TECHNICIAN S.C

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2		A/P	1	2360	SM	34	39	6		
3	REFUSAL	A/P	2	2483	GP.	80.5	14.7	4.8		
4										
5										
6										
7										
8										
9										
10										

0 - % MOISTURE CONTENT
X - % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 326
HOLE LOCATION 1690+021 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.10 | DRILL UNIT | TECHNICIAN SC.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
			A/P	1	2238	GW-GM	57	33	1	
			A/P	2	2584	GW-GM	60	31		
	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

1 ⊙ x N. P.
3 x ⊙ N. P.

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9		HOLE No. 327
HOLE LOCATION 1690 + 138	ELEV.	DEPTH TO G.W.L.
DATE DRILLED 78. 11.10	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm	0 – % MOISTURE CONTENT; x – % < .074 mm; LIQUID LIMIT ⊢ PLASTIC LIMIT (0 10 20 30 40 50 60 70 80 90)
1	REFUSAL										
2											
3											
4											
5											
6											
7											
8											
9											
10											

Dwg No 60-257

GRANULAR SOURCE TESTING
Km 1691.3 RHS
ALASKA HIGHWAY

HISTORY OF AGGREGATE PRODUCTION

Alaska Highway Km 1693 R.H.S.
115 G-07

Average Crusher Run Characteristics of Material Produced

File Number --- 2142-5-70 Contractor --- Nuway Crushing Ltd.
Commenced --- 92-06-04 Completed --- 92-06-05 No. of tests --- 11
Type of aggregate --- 20 mm B.S.T. Aggregate Type II
Amount Produced --- ??? m³

Sieve Size mm	20.0	12.5	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.
Commenced --- 92-06-04 Completed --- 92-06-06 No. of tests --- 22
Type of aggregate --- 20 mm Granular A"
Amount Produced --- ??? m³

Sieve Size mm	20.0	12.5	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.
Commenced --- 94-03-22 Completed --- 94-03-26 No. of tests --- 36
Type of aggregate --- 20 mm Granular "A"
Amount Produced --- 10,032 m³

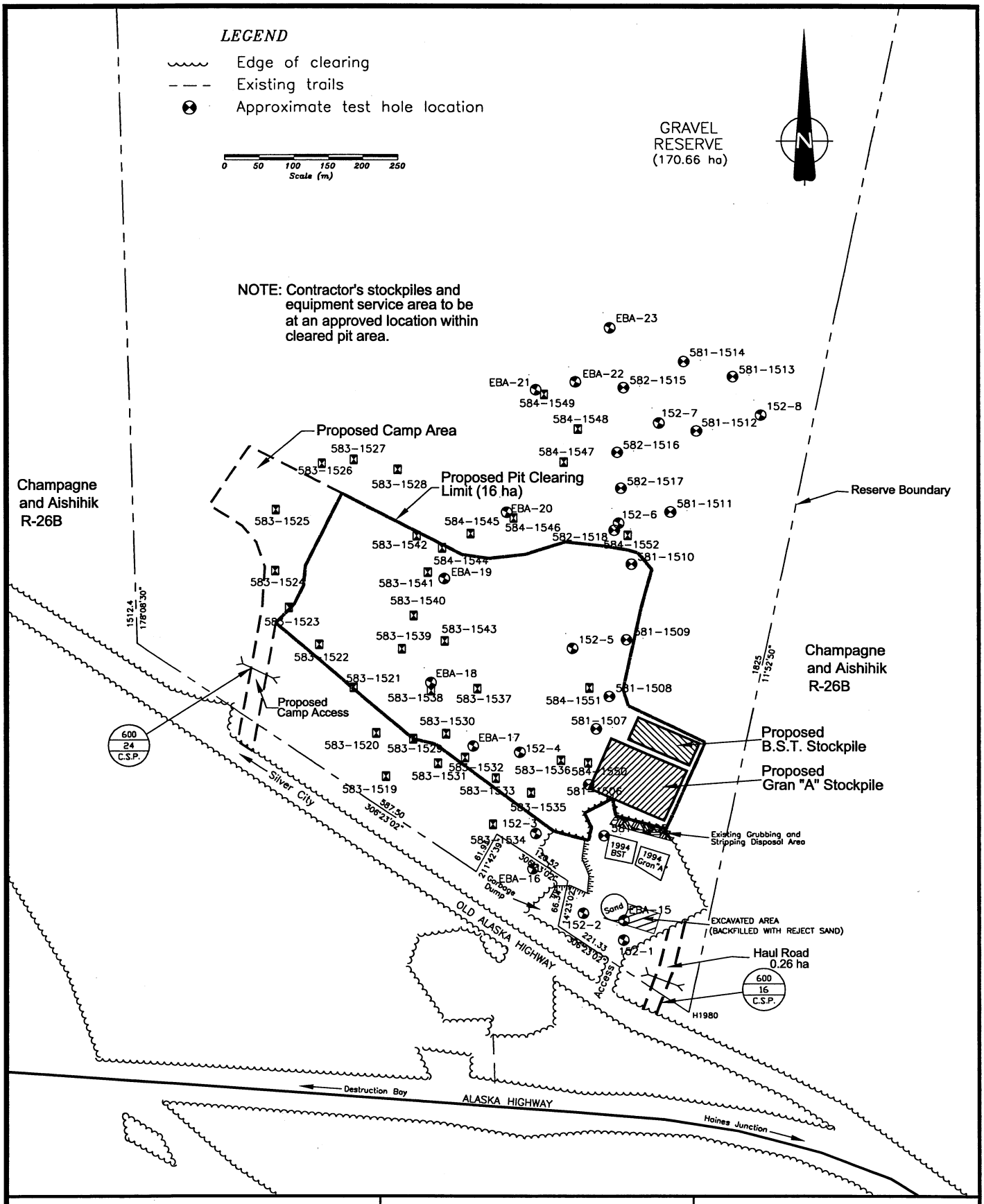
Sieve Size mm	20.0	12.5	5.00	2.50	1.25	0.315	0.080
Percent Passing	100	85.5	59.0	-	34.4	13.8	5.9

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

File Number --- 2145-4 Contractor --- Nuway Crushing Ltd.
Commenced --- 94-03-26 Completed --- 94-03-31 No. of tests --- 40
Type of aggregate --- 20 mm B.S.T. Aggregate
Amount Produced --- 8,930 m³

Sieve Size mm	20.0	12.5	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



Yukon Community and Transportation Services Transportation Engineering Branch	SITE PLAN GRANULAR & BORROW SOURCE Km 1691.3 R.H.S. (Silver City) ALASKA HWY. YUKON	pit file: 115 G-07 revision: drawn: JJM date: 01-03-20 scale: 1: 7500 drwg: 115G-07S

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST HOLE NO: 581-1505
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	GRAVEL -old stock pile base -seasonal frost to 0.6m -grindy drilling							0.0
1.0	SANDY SILT -brown, moist -smooth drilling	⊠	1	● ▲	GP-GM		◆ ■	1.0
2.0	POORLY TO WELL-GRADED GRAVEL WITH SILT & SAND (GP-GM)-(GW-GM) -brown -moist -grindy drilling							2.0
3.0	-coarser from 3 to 3.8m -maximum 100mm material augered up							3.0
4.0	-easier drilling from 3.8 to 4.8m -maximum 80mm material augered up							4.0
5.0	-smoother drilling below 4.8m							5.0
		⊠	2	● ▲	GW-GM		◆ ■	
6.0	SILTY SAND WITH GRAVEL (SM) -brown -wet -easy drilling							6.0
7.0								7.0
8.0	-saturated below 8.0m -smooth tight drilling below 8.2m -H20 @ 8.2m	⊠	3	● ▲	SM		■ ◆	8.0
9.0	END HOLE @ 8.8m							9.0
10.0								10.0

Government of Yukon Transportation Engineering	LOGGED BY: JM	COMPLETION DEPTH: 8.8 m
	REVIEWED BY:	COMPLETE: 01/02/20
	Fig. No: 115-G-07	Page 1 of 1

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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST HOLE NO: 581-1506
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	GRAVELLY SANDY SILT -light brown -damp -easy - some grindy -grindy drilling below 0.9m							0.0
1.0	SILTY GRAVEL WITH SAND (GM) -brown -damp -rough grindy drilling							1.0
2.0	-maximum 80mm material auger up	⊠	4	● ▲	GM		◆ ■	2.0
3.0								3.0
4.0	-easier grindy drilling below 4.5m							4.0
5.0	-moist below 5.0m	⊠	5	● ▲	GM		◆ ■	5.0
6.0	END HOLE @ 5.8m Note: Spruce, willow cover							6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

Government of Yukon
Transportation Engineering

LOGGED BY: JM	COMPLETION DEPTH: 5.8 m
REVIEWED BY:	COMPLETE: 01/02/20
Fig. No: 115-G-07	Page 1 of 1

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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST HOLE NO: 581-1507
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							0.0
	POORLY GRADED GRAVEL WITH SILT & SAND TO POORLY GRADED GRAVEL WITH SAND (GP-GM)-(GP) -brown -damp -grindy drilling	⊠	6	▲ ◆	GP-GM		◆ ■	
1.0								1.0
2.0								2.0
3.0	-maximum 100mm material augered up							3.0
4.0		⊠	7	▲ ◆	GP		◆ ■	4.0
5.0	-maximum 70mm material augered up from below 5.0m							5.0
6.0								6.0
7.0								7.0
8.0	SILTY SAND WITH GRAVEL (SM) -wet -easier grindy drilling	⊠	8	◆ ▲	SM		■ ◆	8.0
9.0	END HOLE @ 8.8m Note: Spruce,poplar,willow cover							9.0
10.0								10.0

Government of Yukon Transportation Engineering	LOGGED BY: JM	COMPLETION DEPTH: 8.8 m
	REVIEWED BY:	COMPLETE: 01/02/20
	Fig. No: 115-G-07	Page 1 of 1

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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST HOLE NO: 581–1508
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 OVERBURDEN							0.0
	SILTY GRAVEL WITH SAND (GM) -brown -damp	⊠	10	◆ ▲	GM		◆ ■	
1.0	-grindy drilling, coarser with depth							1.0
2.0	-maximum 70mm material augered up below 2.0m							2.0
3.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -damp							3.0
4.0	-maximum 100mm material augered up	⊠	11	▲	GP-GM		◆ ■	4.0
5.0	-grindier drilling below 5.0m							5.0
	SILTY SAND WITH GRAVEL (SM) -brown -wet to saturated							
6.0		⊠	12	● ▲	SM		■ ◆	6.0
7.0	END HOLE @ 6.9m -refusal Note: Spruce,willow cover							7.0
8.0								8.0
9.0								9.0
10.0								10.0

Government of Yukon Transportation Engineering	LOGGED BY: JM	COMPLETION DEPTH: 6.9 m
	REVIEWED BY:	COMPLETE: 01/02/20
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST HOLE NO: 581-1509
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 -moist							0.0
1.0	SILTY GRAVEL WITH SAND (GM) -brown -damp to moist -grindy drilling	⊠	12	◆ ▲	GM		◆ ■	1.0
2.0	WELL-GRADED GRAVEL WITH SAND (GW) -brown -damp							2.0
3.0	-coarser grindier drilling below 2.8m -maximum 100mm material augered up							3.0
4.0		⊠	13	■ ▲	GW		◆ ■	4.0
5.0	-grindy drilling below 5.0m -maximum 75mm material augered up							5.0
6.0								6.0
7.0	SILTY SAND WITH GRAVEL (SM) -grey -moist (some wet layers) -dense grindy drilling							7.0
8.0	-very hard drilling @ 8.0m	⊠	14	● ▲	SM		■ ◆	8.0
	END HOLE @ 8.1m Note: Spruce,willow cover							
9.0								9.0
10.0								10.0

Government of Yukon Transportation Engineering	LOGGED BY: JM	COMPLETION DEPTH: 8.1 m
	REVIEWED BY:	COMPLETE: 01/02/21
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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	▲ PERCENT FINES ▲ 20 40 60 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	⊠	15	● ▲	GM		◆ ■	1.0
2.0	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) -brown -damp -grindier drilling							2.0
3.0	-maximum 60-80mm material augered up							3.0
4.0		⊠	16	●▲	GW-GM		◆ ■	4.0
5.0	-easier grindy drilling below 4.5m							5.0
6.0	SILTY SAND (SM) -brown -moist -dense grindy drilling							6.0
7.0	-wet below 6.5m, hard tight drilling	⊠	17	● ▲	SM		■ ◆	7.0
8.0	END HOLE @ 7.3m Note: Spruce,willow cover							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
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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

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LOGGED BY: JM	COMPLETION DEPTH: 7.3 m
REVIEWED BY:	COMPLETE: 01/02/21
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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

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LOGGED BY: JM	COMPLETION DEPTH: 7.0 m
REVIEWED BY:	COMPLETE: 01/02/21
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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	▲ PERCENT FINES ▲ 20 40 60 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	WELL-GRADED SAND WITH SILT & GRAVEL TO SILTY SAND WITH GRAVEL (SW-SM)-(SM) -brown -damp -easy grindy drilling -maximum 50mm material augered up	⊠	23	◆ ▲	SW-SM		■ ◆	1.0
2.0								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 -rough, hard grindy drilling							6.0
7.0								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

Government of Yukon Transportation Engineering	LOGGED BY: JM	COMPLETION DEPTH: 8.2 m
	REVIEWED BY:	COMPLETE: 01/02/21
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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 -75mm material augered up	⊠	26	● ▲	GP-GM		◆ ■	1.0
2.0								2.0
3.0	POORLY GRADED GRAVEL WITH SAND (GP) -brown, damp -easier drilling below 3.4m	⊠	27	▲	GP		◆ ■	3.0
4.0								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								8.0
9.0	SANDY SILT (ML) -brown -moist	⊠	29	● ▲	ML		■ ◆	9.0
10.0								10.0
11.0								11.0
12.0	SILTY SAND WITH GRAVEL (SM) -brown -moist -tighter drilling, denser material -some grindy drilling							12.0
13.0		⊠	30	● ▲	SM		■ ◆	13.0
14.0								14.0
15.0	END HOLE @ 14.3m Note: Hole drilled on top of esker near end. Spruce cover.							15.0
16.0								16.0

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LOGGED BY: JM	COMPLETION DEPTH: 14.3 m
REVIEWED BY:	COMPLETE: 01/02/21
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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								9.0
		⊠	34	● ▲	SW-SM		■ ◆	
	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
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST HOLE NO: 582-1516
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
	WELL-GRADED SAND WITH SILT & GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SW-SM)-(GP)							
1.0	-brown -damp	⊠	35	● ▲	SW-SM		■ ◆	1.0
2.0								2.0
		⊠	36	▲	GP		◆ ■	
3.0								3.0
4.0								4.0
	SILTY SAND WITH GRAVEL TO SILTY SAND (SM)							
5.0	-brown -damp -smooth drilling							5.0
6.0								6.0
		⊠	37	● ▲	SM		■ ◆	
7.0								7.0
8.0								8.0
9.0								9.0
		⊠	38	● ▲	SM		■ ◆	
10.0	END HOLE @ 9.8m							10.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 9.8 m
	REVIEWED BY:	COMPLETE: 01/02/28
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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
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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		◆ ■	
	-coarser material below 1.8m							
2.0								2.0
	-no fines augering up below 1.8m - just maximum 50mm sub-angular gravels							
3.0								3.0
4.0								4.0
5.0								5.0
	SAND							
	-smooth easy drilling below 5.4m							
6.0	-no sample recovered - material vibrated off flight							6.0
	-no evidance of change in moisture content							
7.0								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
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583–1519
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 frost to 0.5m SILT & ORGANIC –black –frozen (Vx) above 0.5 & below 1.3m							0.0
1.0								1.0
2.0	WELL–GRADED GRAVEL WITH SILT & SAND TO SILTY GRAVEL WITH SAND (GW–GM)–(GM) –brown –frozen (Vx) –maximum 150mm material –estimate 1% +100mm material –very difficult noisy digging		42	▲	GW–GM		◆ ■	2.0
3.0			43	▲	GM		■	3.0
4.0	END HOLE @ 3.4m NOTE – hole in old channel depression							4.0
5.0								5.0
6.0								6.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 3.4 m
REVIEWED BY:	COMPLETE: 01/03/12
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1520
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	SAND, SILT & ORGANIC -light brown -seasonal frozen to 0.2m				
	POORLY TO WELL-GRADED GRAVEL WITH SAND (GP)-(GW) -brown -damp				
1.0	-maximum 100mm material		44	GP	
2.0	-moist below 2.0m -maximum 200 mm material -estimate 5% +100mm material below 2.0m		45	GP	
3.0					
4.0					
5.0	END HOLE @ 5.0m		46	GW	
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)

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1521
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 (Nb) to 0.3m				
	SANDY SILT -brown -frozen				
	WELL-GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SW)-(GP) -brown -damp -maximum 100mm material -some frozen lumps		47	SW	
2.0			48	GP	
3.0	-very hard digging below 3.7m -frozen below 3.7m (Nb)				
4.0			49	GP	
	END HOLE @ 4.6m				
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: 4.6 m
	REVIEWED BY:	COMPLETE: 01/03/12
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583–1522
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 –some organic				
	POORLY GRADED GRAVEL WITH SILT & SAND TO WELL–GRADED SAND WITH GRAVEL (GP–GM)–(SW) –brown –frozen (NF)to 2.3m –easy digging 0 to 2.3m –low moisture content –maximum 100mm material		50	GP–GM	
1.0					
2.0	–maximum 150mm material below 2.3m –damp below 2.3m –estimate 1% +100mm material		51	SW	
3.0					
4.0	–moist below 4.5m		52	GP–GM	
5.0	END HOLE @ 5.0m				
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

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LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
REVIEWED BY:	COMPLETE: 01/03/12
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1523
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 –some brown organic							
	POORLY GRADED GRAVEL WITH SAND (GP) –brown –frozen (Nf)to 2.3m –maximum 150mm material –estimate 1% +100mm material		53 ▲		GP			
1.0								1.0
2.0								2.0
	–thawed, moist below 2.3m –estimate 5% +100mm material		54 ▲		GP			
3.0								3.0
4.0								4.0
			55 ▲		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
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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	USC	SOIL SYMBOL
0.0	ORGANIC -seasonal frozen				
	SANDY SILT WITH ORGANIC -brown -frozen (Nb)				
	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	
3.0					
4.0					
			58	GP	
5.0	END HOLE @ 5.0m				
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

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LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
REVIEWED BY:	COMPLETE: 01/03/12
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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

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Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
REVIEWED BY:	COMPLETE: 01/03/12
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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	USC	SOIL SYMBOL
0.0	ORGANIC -seasonal frozen				
	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					
2.0	-thawed, damp to moist below 2.1m		63	SW	
3.0	-frozen (Vx) below 3.5m -hard digging		64	GP	
4.0	END HOLE @ 3.9m				
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)

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 3.9 m
	REVIEWED BY:	COMPLETE: 01/03/12
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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	▲ PERCENT FINES ▲ 20 40 60 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 2.2m							
1.0	WELL-GRADED SAND WITH GRAVEL (SW) -brown -frozen (Nf) -maximum 100mm material		65 ▲		SW			1.0
2.0								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								3.0
	-frozen (Vc) below 3.4m -very hard digging below 3.4m							
4.0			67 ▲		GP			4.0
	END HOLE @ 4.2m							
5.0								5.0
6.0								6.0

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Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.2 m
REVIEWED BY:	COMPLETE: 01/03/13
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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

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LOGGED BY: D.T.	COMPLETION DEPTH: 3.2 m
REVIEWED BY:	COMPLETE: 01/03/13
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1529
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 -frozen (Nb)							0.0
	SILT (ML) -brown -moist							
1.0								1.0
2.0								2.0
3.0								3.0
4.0			69	▲	ML		◆	4.0
	END HOLE @ 4.4m NOTE: in low area betwen eskers							
5.0								5.0
6.0								6.0

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Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.4 m
REVIEWED BY:	COMPLETE: 01/03/13
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1530
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 2.2m -maximum 200mm material -estimate 5% +100mm material		70	▲	GP		◆ ■	
1.0								1.0
2.0	-thawed, damp below 2.2m							2.0
			71	▲	GP		◆ ■	
3.0								3.0
4.0								4.0
			72	▲	GP		■	
5.0	END HOLE @ 5.0							5.0
6.0								6.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
REVIEWED BY:	COMPLETE: 01/03/13
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1531
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 –season frozen							0.0
	POORLY GRADED GRAVEL WITH SILT & SAND TO POORLY GRADED GRAVEL WITH SAND (GP–GM)–(GP) –some organic in top metre –brown –frozen (Nf)to 1.4m –maximum 200mm material –estimate +100mm material –thawed, damp below 1.4m –easier digging below 1.4m		73	▲	GP–GM		◆ ■	
1.0								1.0
2.0			74	▲	GP		◆ ■	2.0
3.0								3.0
4.0								4.0
5.0			75	▲	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
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583–1532
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
	SILT –some sand –brown, moist							
1.0	POORLY GRADED GRAVEL WITH SAND (GP) –brown –damp –maximum 200mm material –estimate 5% +100mm material		76 ▲		GP		◆ ■	1.0
2.0								2.0
3.0			77 ▲		GP		◆ ■	3.0
4.0								4.0
5.0			78 ▲		GP		◆ ■	5.0
	END HOLE @ 5.0m NOTE: located in hole between eskers							
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/03/13
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583–1533
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 frost							0.0
	POORLY GRADED GRAVEL WITH SAND TO WELL–GRADED SAND WITH GRAVEL (GP)–(SW) –brown –frozen (Nf) to 2.0m –maximum 150mm material –estimate 5% +100 material		79	▲	GP		◆ ■	
1.0								1.0
2.0	–thawed below 2.0m		80	▲	SW		◆ ■	2.0
3.0								3.0
4.0								4.0
			81	▲	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: 01/03/13
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583–1534
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)							
1.0	POORLY GRADED GRAVEL WITH SILT & SAND TO POOLRY GRADED GRAVEL WITH SAND (GP-GM)-(GP) –brown –frozen (Nb)to 1.1m –damp below 1.1m –maximum 200mm material –estimate 5% +100 material		82 ▲		GP-GM			1.0
2.0								2.0
3.0								3.0
4.0								4.0
5.0			83 ▲		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: 01/03/13
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1535
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 WELL-GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (GP-GM)-(SW)-(GP) -brown -frozen (Nb)to 2.0m -maximum 200mm material -estimate 10% +100 material		84 ▲		GP-GM			
1.0								1.0
2.0	-thawed below 2.0m -damp below 2.0m							2.0
			85 ▲		SW			
3.0								3.0
4.0	-maximum 100mm material below 4.0m -estimate 1% +100mm material below 4m							4.0
			86 ▲		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
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583–1536
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 1.9m –maximum 150mm material –estimate 5% +100mm material		87	▲	GP-GM		◆ ■	
1.0								1.0
2.0	–thawed & easier digging below 1.9m							2.0
3.0								3.0
4.0	–damp below 4.0m		88	▲	GP-GM		◆ ■	4.0
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
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1537
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 / PLASTIC M.C. LIQUID	USC	SOIL SYMBOL	PERCENT SAND / PERCENT GRAVEL	DEPTH (m)
0.0	ORGANIC -seasonal frozen							0.0
	POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP)-(GP-GM) -some organic -brown		89		GP			
1.0	-frozen (Nf)to 1.7m -maximum 100mm material							1.0
	-thawed below 1.7m -damp below 1.7m							
2.0	-maximum 200mm material below 1.7m -estimate 5% +100mm material below 1.7m							2.0
			90		GP-GM			
3.0								3.0
4.0	-maximum 250mm material below 4.0m -estimate 10% +100mm material below 4m							4.0
			91		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
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1538
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
	WELL-GRADED SAND WITH SILT & GRAVEL TO WELLL-GRADED SAND WITH GRAVEL (SW-SM) – (SW) –brown –frozen (Nf)to 1.2m –maximum 100mm material –thawed, damp below 1.2m		92	▲	SW-SM		◆ ■	
1.0								1.0
2.0								2.0
			93	▲	SW			
3.0	SILT (TRACE SAND AND GRAVEL) –brown –moist –smooth easy digging							3.0
4.0								4.0
5.0	END HOLE @ 5.0m NOTE: located in-between eskers							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1539
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
	WELL-GRADED SAND WITH SILT & GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SW-SM)-(GP)							
	-brown							
	-frozen (Nf)to 1.9m		94	△	SW-SM			
1.0	-maximum 100mm material							1.0
	-some organic contamination							
2.0	-thawed, damp from 1.9m							2.0
	-no organic contamination below 1.9m		95	▲	GP		◆ ■	
3.0								3.0
4.0								4.0
			96	▲	GP		◆ ■	
5.0	END HOLE @ 5.0m							5.0
	NOTE: located on top of esker							
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1540
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 1.9m -maximum 200mm material -estimate 5% +100 material		97 ▲		GP		◆ ■	
1.0								1.0
2.0	-thawed, damp below 1.9m -estimate 10% +100mm material below 1.9							2.0
			98 ▲		GP		◆ ■	
3.0								3.0
4.0								4.0
			99 ▲		GP		◆ ■	
5.0	END HOLE @ 5.0m NOTE: located at intersection of 2 eskers							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
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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	USC	SOIL SYMBOL
0.0	ORGANIC –seasonal frozen				
	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					
	–thawed below 1.6m				
2.0	–maximum 150mm material below 2.0m –estimate 5% +100mm material		101	GP	
3.0					
4.0	–estimate 10% +100mm material below 4m		102	GP	
5.0	END HOLE @ 5.0m NOTE: located on esker ridge				
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: 5.0 m
	REVIEWED BY:	COMPLETE: 01/03/13
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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-G		◆ ■	
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
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1543
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 2.0m –maximum 100mm material		106 ▲		GP–GM			
1.0								1.0
2.0	POORLY TO WELL GRADED SAND WITH GRAVEL (SP) – (SW) –brown –thawed, damp –maximum 100mm material		107 ▲		SP			2.0
3.0								3.0
4.0	–frozen below 4.0m (Vc) –hard digging below 4.0m		108 ▲		SW			4.0
	END HOLE @ 4.6m NOTE: located on small esker							
5.0								5.0
6.0								6.0

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Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.6 m
REVIEWED BY:	COMPLETE: 01/03/13
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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
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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
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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

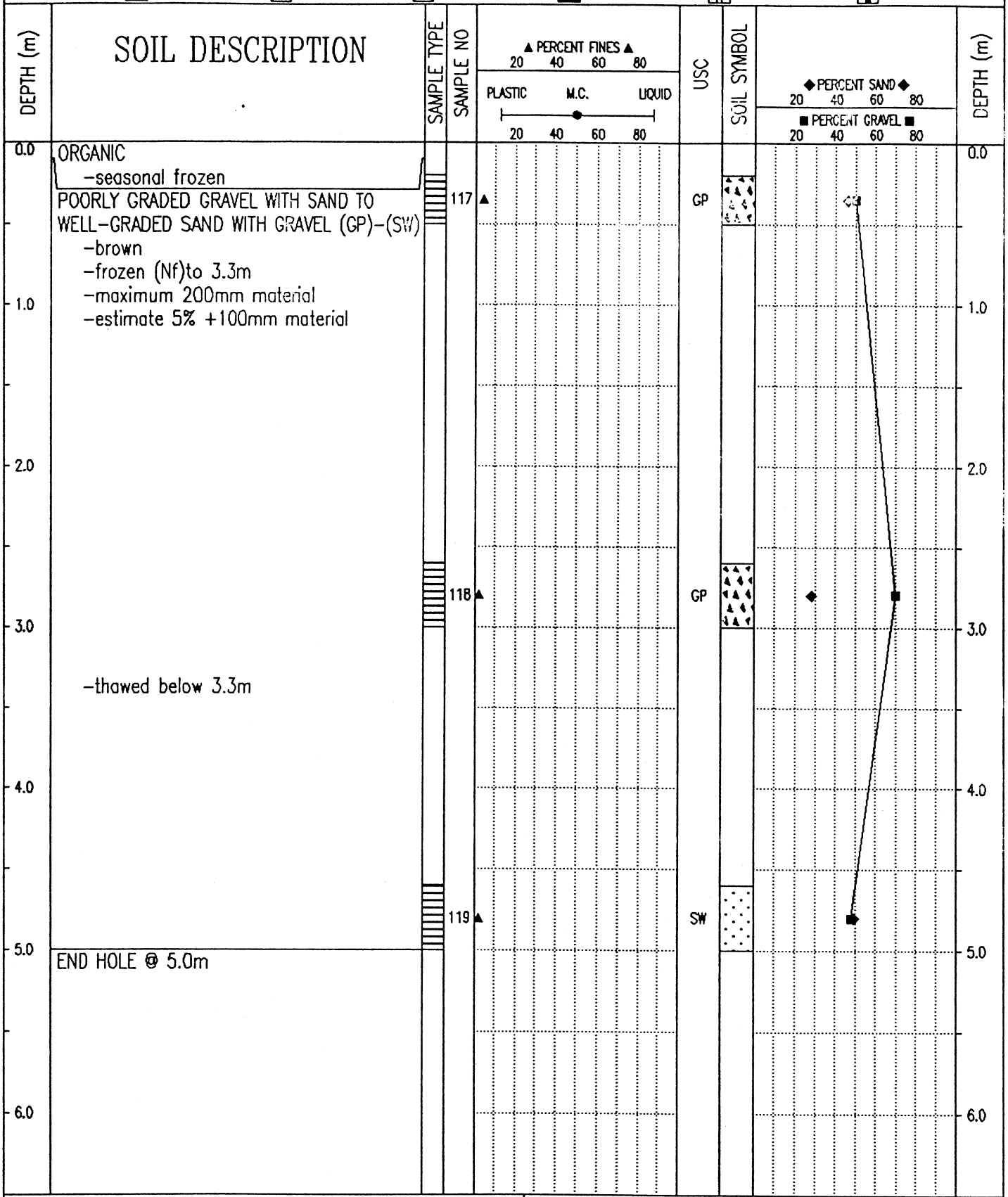
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / PERCENT GRAVEL 20 40 60 80	DEPTH (m)
0.0	ORGANIC –seasonal frozen							0.0
	WELL–GRADED SAND WITH SILT & GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SW–SM)–(GP) –brown –frozen (Nf)to 1.8m –maximum 100mm material		114 ▲		SW–SM			
1.0								1.0
	–thawed, damp below 1.8m							
2.0								2.0
			115 ▲		GP			
3.0								3.0
4.0								4.0
			116 ▲		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
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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



Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
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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
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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	▲ PERCENT FINES ▲ 20 40 60 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
	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								4.0
			125		GP			
5.0	END HOLE @ 5.0m							5.0
6.0								6.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
REVIEWED BY:	COMPLETE: 01/03/15
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 584-1550
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
	SILTY GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GM)-(GP-GM) -brown -moist							
1.0								1.0
2.0			129	▲	GM		◇ ■	2.0
3.0								3.0
			130	▲	GM		◇ ■	
4.0								4.0
			131	▲	GP-GM		◇ ■	
5.0								5.0
6.0	SILTY SAND WITH GRAVEL (SM) -brown -moist							6.0
			126	▲	SM		◇ ■	
7.0								7.0
			127	▲	SM		◇ ■	
8.0								8.0
9.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -brown -moist		128	▲	SW-SM		◇ ■	9.0
	END HOLE @ 9.3m NOTE: hole dug in 2 stages up side of esker							
10.0								10.0
11.0								11.0
12.0								12.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 9.3 m
REVIEWED BY:	COMPLETE: 01/03/15
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 584-1551
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 SILT WITH GRAVEL –brown –damp							
1.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) –brown –damp –maximum 200mm material –estimate 5% +100mm material							1.0
2.0			132	▲	GP-GM		◆ ■	2.0
3.0								3.0
4.0			133	▲	GP-GM		◆ ■	4.0
5.0								5.0
6.0	END HOLE @ 6.0m NOTE: hole dug into side of esker		134	▲	GP-GM		◆ ■	6.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 6.0 m
REVIEWED BY:	COMPLETE: 01/03/15
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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)							
1.0	WELL-GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SW)-(GP) -brown -damp -frozen (Nf) -maximum 100mm material		135 ▲		SW			1.0
2.0								2.0
3.0								3.0
4.0	-maximum 200mm material below 3.8m -estimate 5% +100mm material below 3.8m		136 ▲		GP			4.0
5.0			137 ▲		GP			5.0
6.0	END HOLE @ 5.5m NOTE: hole dug on side of esker, part way up slope, below hole 1518							6.0

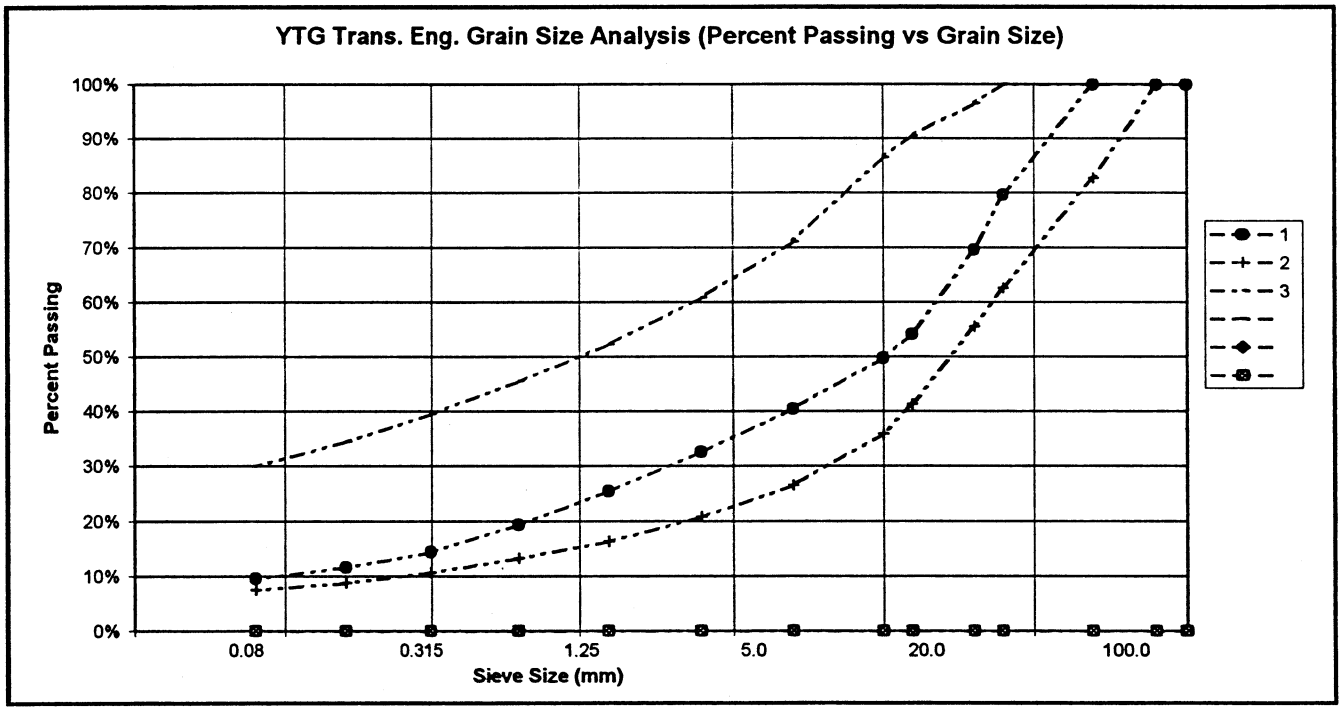
Government of Yukon
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LOGGED BY: D.T.	COMPLETION DEPTH: 5.5 m
REVIEWED BY:	COMPLETE: 01/03/15
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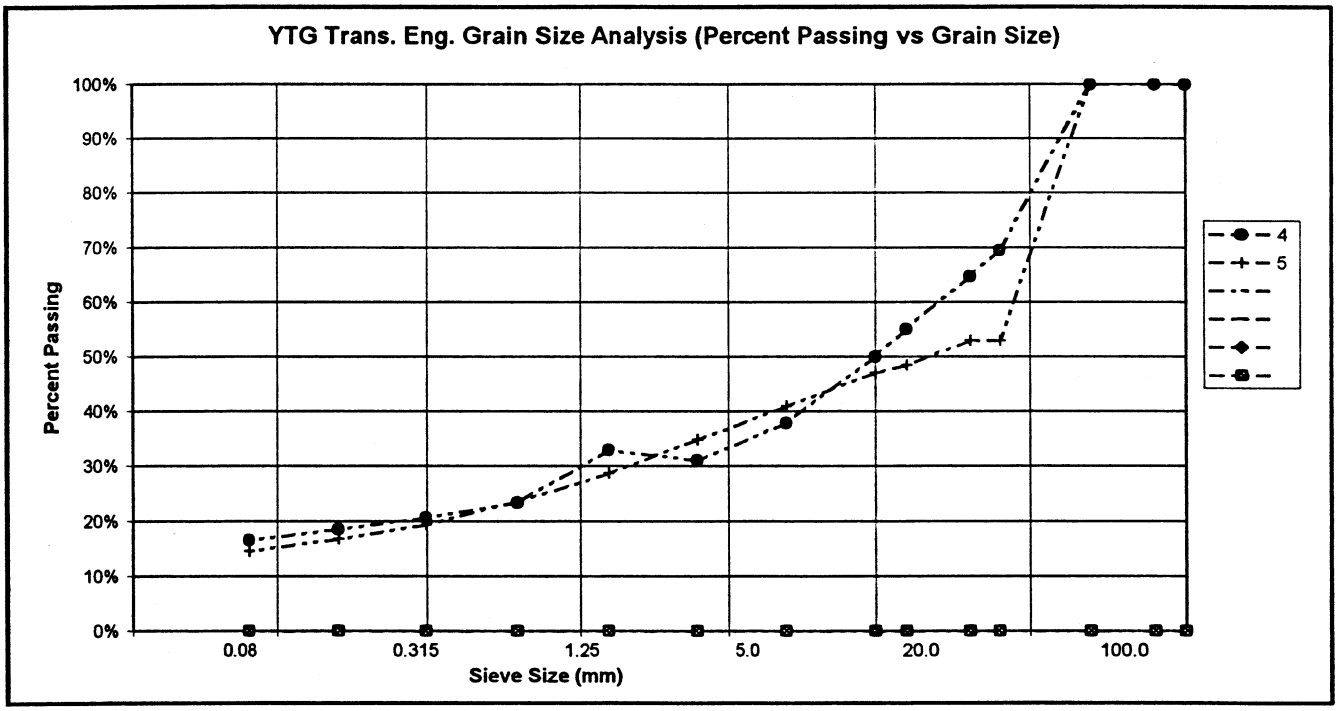
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 581-1505
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Silver Creek Reserve Km 1694 A/H		
DRILL UNIT:	MOBILE B40 L - D-4 CAT		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	J.M.		DATE COMP: 2000/02/20

FIELD NO:	1	2	3			
LAB NO:	1	2	3			
DEPTH:	1.0-1.2	5.2-5.8	8.2-8.8			
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%	83%	100%			
25.0	80%	63%	100%			
20.0	70%	55%	96%			
12.5	54%	41%	91%			
10.0	50%	36%	86%			
5.0	41%	26%	71%			
2.5	33%	21%	61%			
1.25	25%	16%	52%			
0.630	19%	13%	46%			
0.315	14%	11%	40%			
0.160	12%	9%	35%			
0.080	10%	8%	30%			
M.C.(%):	3%	2%	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:	59	74	29			
% SAND:	31	19	41			
% FINES:	10	8	30			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	SILTY SAND WITH GRAVEL (SM)			



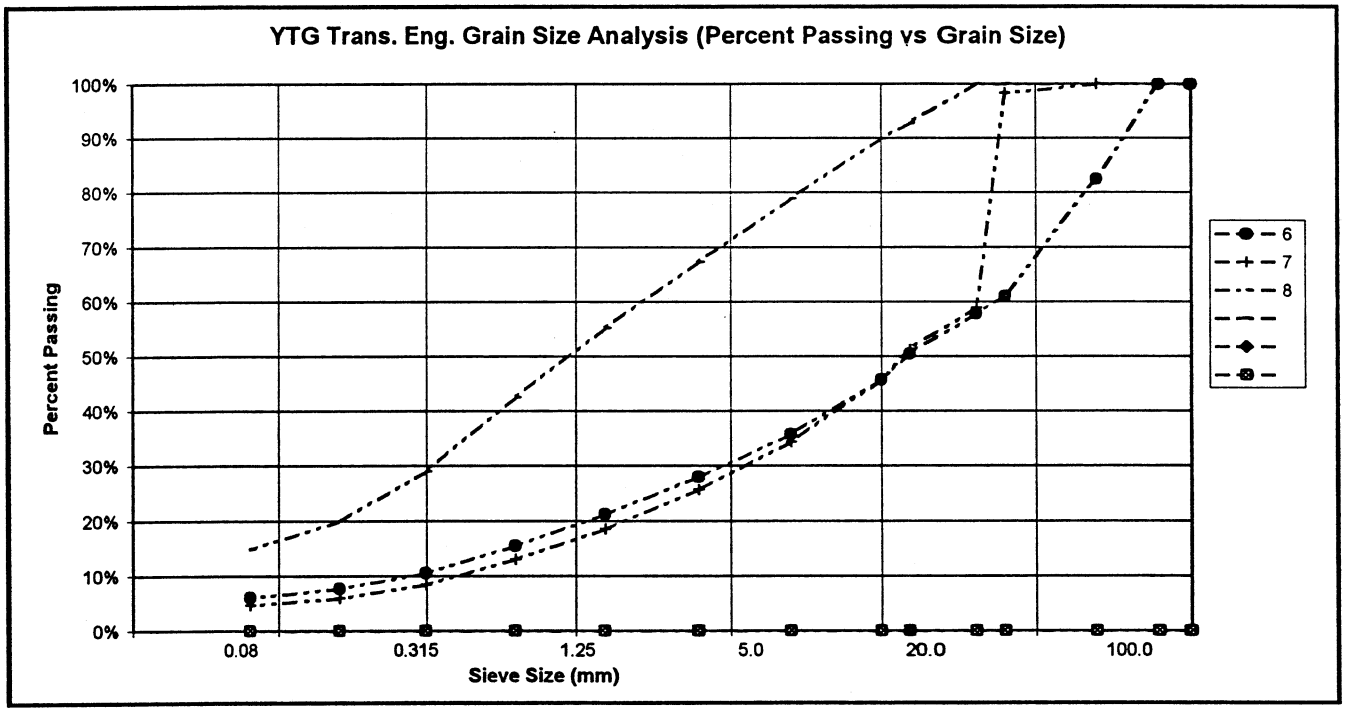
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 581-1506
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Silver Creek Reserve Km 1694 A/H		
DRILL UNIT:	MOBILE B40 L - D-4 CAT		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	J.M.		DATE COMP: 2000/02/20

FIELD NO:	4	5				
LAB NO:	4	5				
DEPTH:	2.3-2.7	5.2-5.8				
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	69%	53%				
20.0	65%	53%				
12.5	55%	48%				
10.0	50%	47%				
5.0	38%	41%				
2.5	31%	35%				
1.25	33%	29%				
0.630	23%	24%				
0.315	21%	19%				
0.160	19%	17%				
0.080	17%	15%				
M.C.(%):	4%	4%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	62	59				
% SAND:	21	26				
% FINES:	17	15				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)				



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 581-1507
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:	6	7	8			
LAB NO:	6	7	8			
DEPTH:	0.8-1.2	3.6-4.3	8.2-8.8			
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	83%	100%	100%			
25.0	61%	98%	100%			
20.0	58%	59%	100%			
12.5	50%	51%	93%			
10.0	46%	46%	90%			
5.0	36%	34%	79%			
2.5	28%	26%	67%			
1.25	21%	19%	55%			
0.630	15%	13%	43%			
0.315	11%	8%	29%			
0.160	8%	6%	20%			
0.080	6%	5%	15%			
M.C.(%):	2%	2%	6%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	64	66	21			
% SAND:	30	30	64			
% FINES:	6	5	15			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND WITH GRAVEL (SM)			

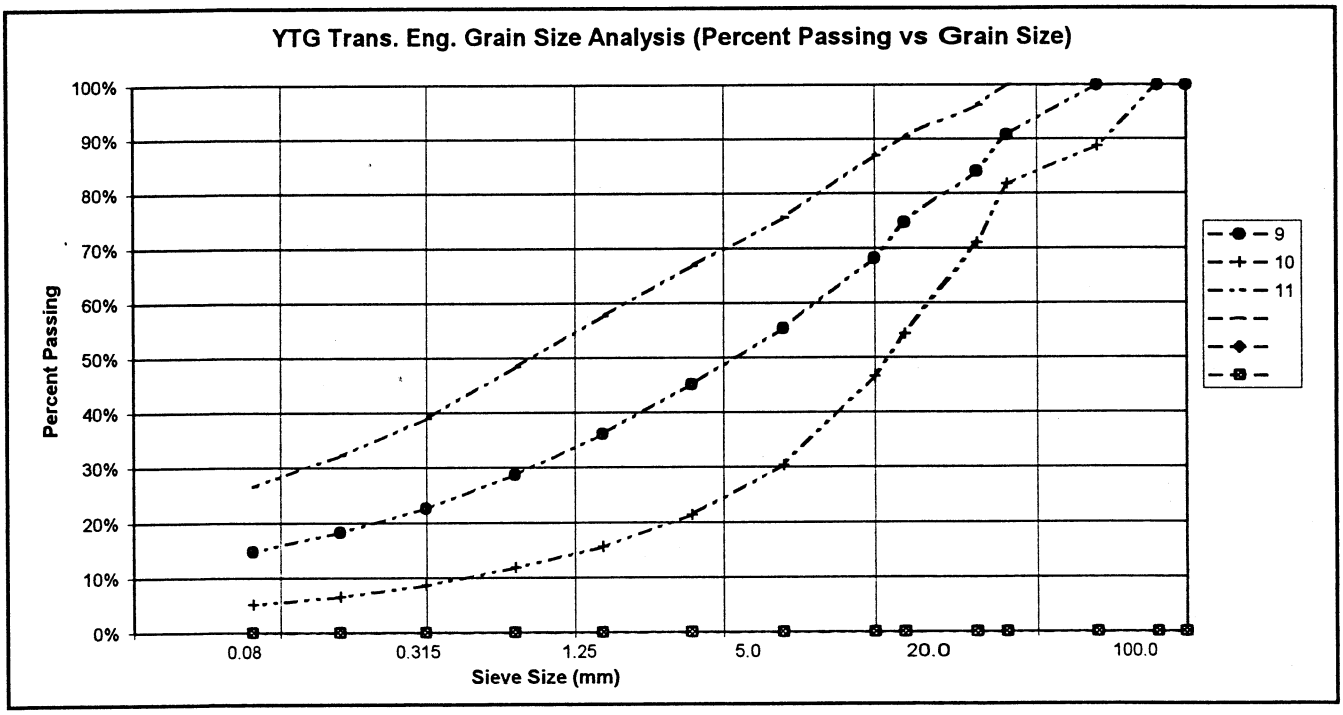


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Silver Creek Reserve Km 1694 A/H
DRILL UNIT: MOBILE B40 L - D-4 CAT
HOLE LOCATION: SEE PLAN
LOGGED BY: J.M.

HOLE No.: 581-1508

DATE COMP: 2000/02/20

FIELD NO:	9	10	11			
LAB NO:	9	10	11			
DEPTH:	0.8-1.2	3.8-4.0	6.2-6.9			
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%	89%	100%			
25.0	91%	82%	100%			
20.0	84%	71%	96%			
12.5	75%	54%	90%			
10.0	68%	47%	87%			
5.0	55%	30%	76%			
2.5	45%	21%	67%			
1.25	36%	16%	58%			
0.630	29%	12%	48%			
0.315	23%	9%	39%			
0.160	18%	7%	32%			
0.080	15%	5%	27%			
M.C.(%):	3%	2%	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:	45	70	24			
% SAND:	41	25	49			
% FINES:	15	5	27			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)			

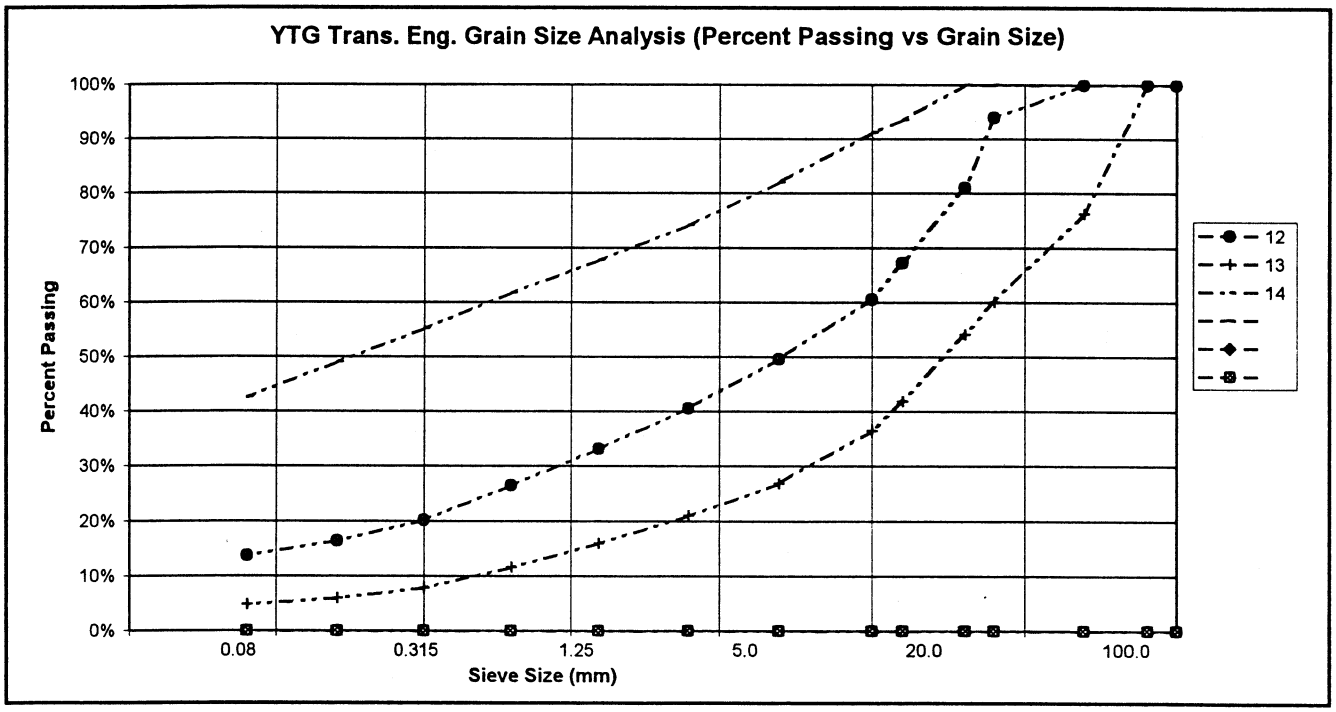


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Silver Creek Reserve Km 1694 A/H
DRILL UNIT: MOBILE B40 L - D-4 CAT
HOLE LOCATION: SEE PLAN
LOGGED BY: J.M.

HOLE No.: 581-1509

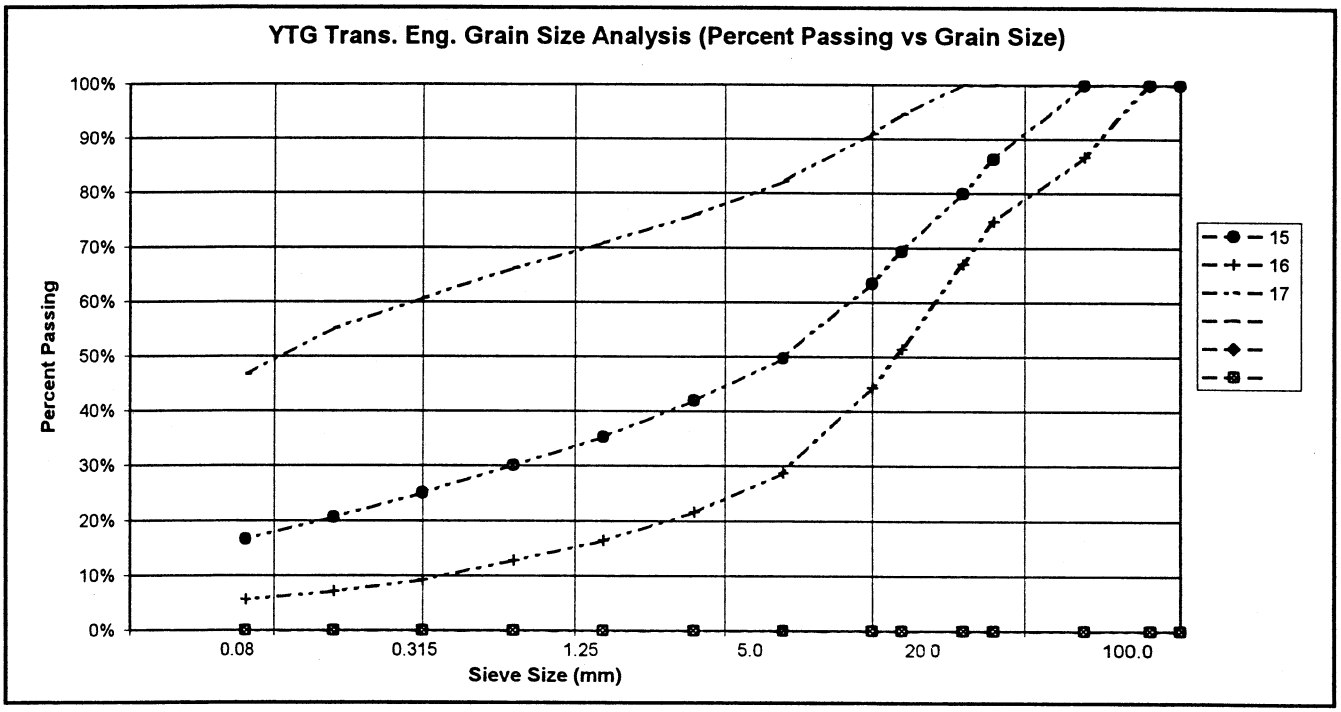
DATE COMP: 2000/02/20

FIELD NO:	12	13	14			
LAB NO:	12	13	14			
DEPTH:	0.8-1.2	3.6-4.3	7.6-8.1			
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%	76%	100%			
25.0	94%	60%	100%			
20.0	81%	54%	100%			
12.5	67%	42%	94%			
10.0	61%	36%	91%			
5.0	50%	27%	82%			
2.5	41%	21%	74%			
1.25	33%	16%	68%			
0.630	26%	12%	62%			
0.315	20%	8%	55%			
0.160	16%	6%	49%			
0.080	14%	5%	43%			
M.C.(%):	4%	2%	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:	50	73	18			
% SAND:	36	22	39			
% FINES:	14	5	43			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	WELL-GRADED GRAVEL WITH SAND (GW)	SILTY SAND WITH GRAVEL (SM)			



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)			

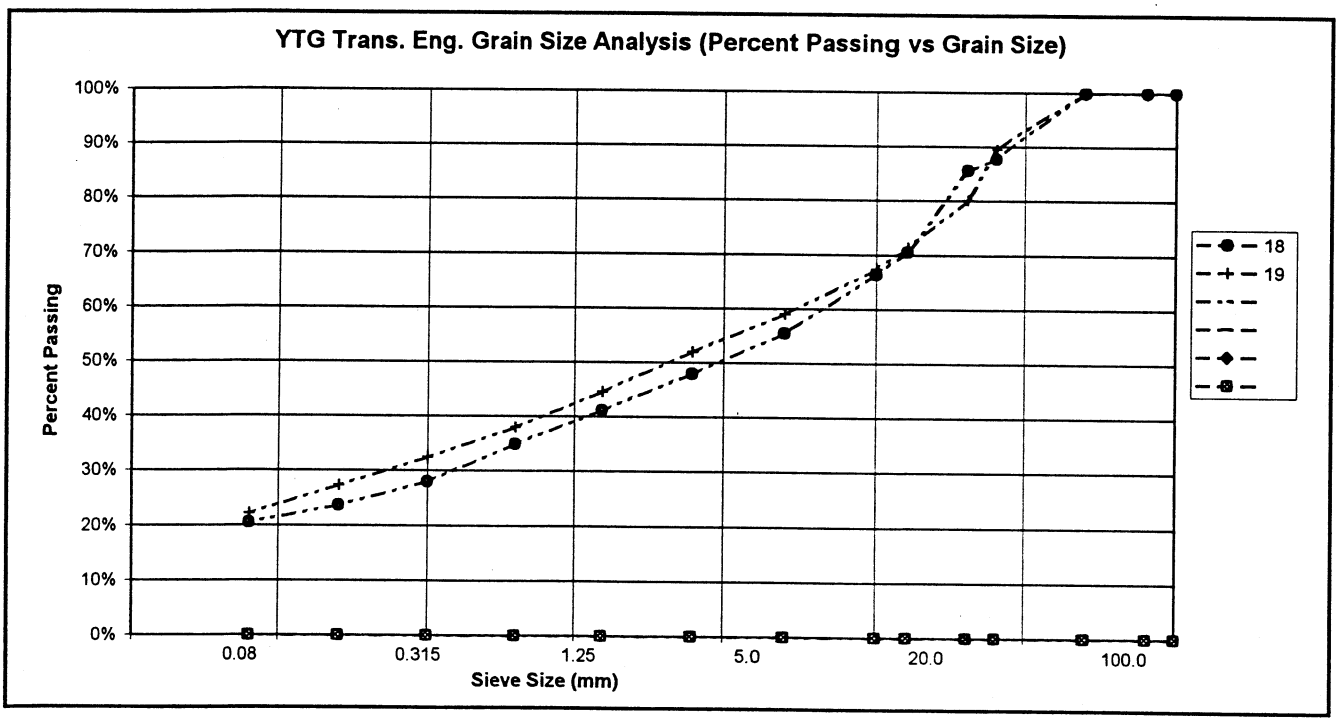


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Silver Creek Reserve Km 1694 A/H
DRILL UNIT:	MOBILE B40 L - D-4 CAT
HOLE LOCATION:	SEE PLAN
LOGGED BY:	J.M.

HOLE No.: 581-1511

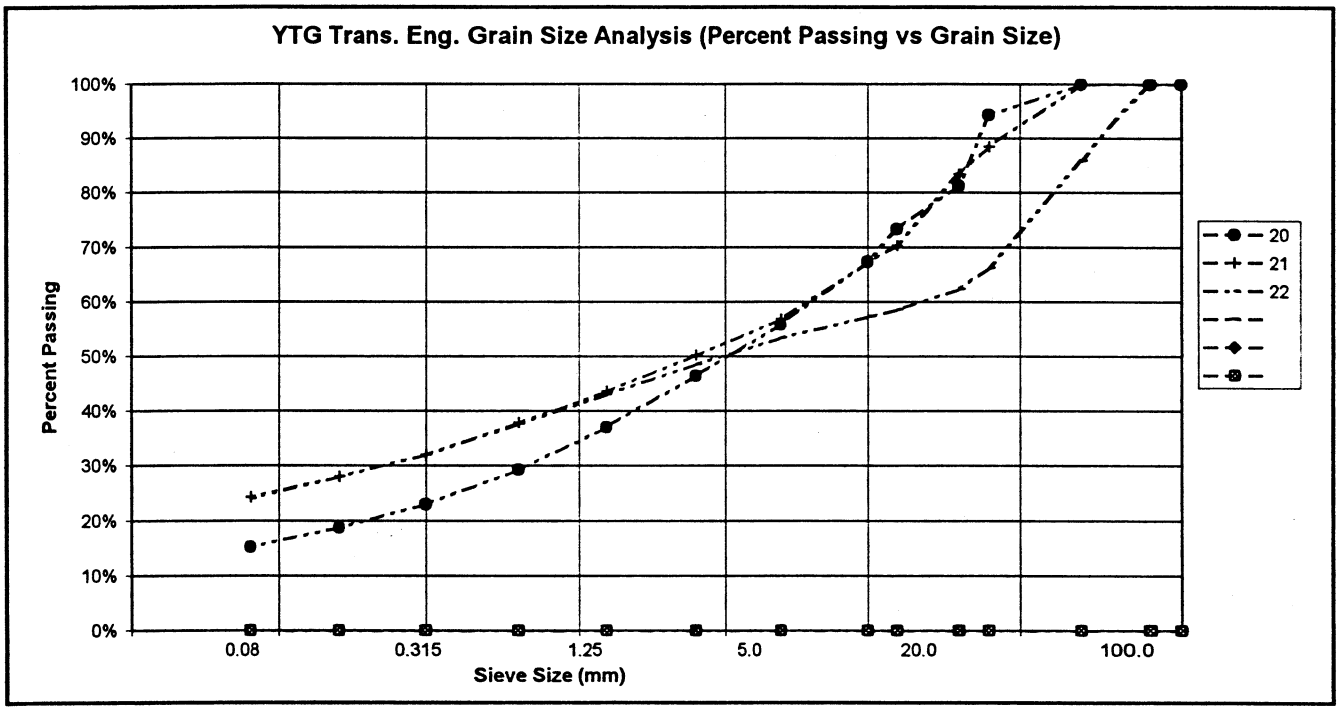
DATE COMP: 2000/02/20

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)				



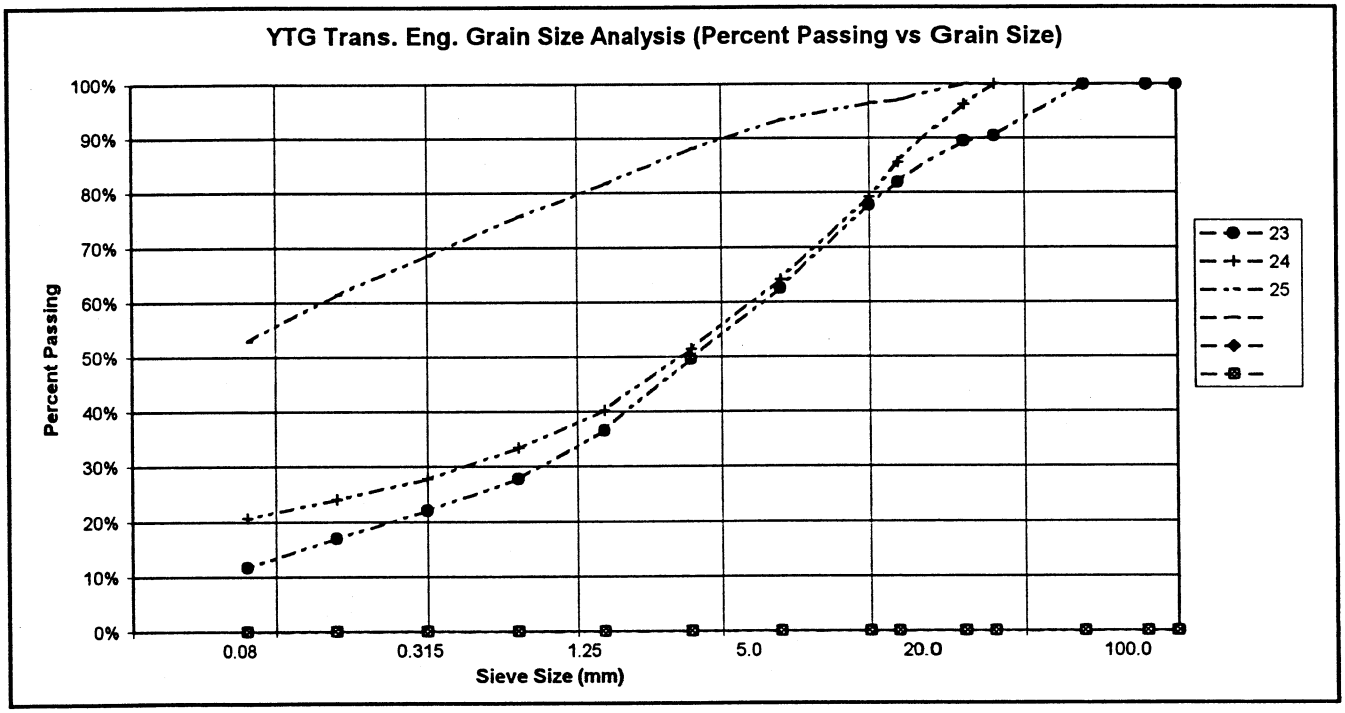
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 581-1512
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Silver Creek Reserve Km 1694 A/H		
DRILL UNIT:	MOBILE B40 L - D-4 CAT		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	J.M.		DATE COMP: 2000/02/20

FIELD NO:	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)			

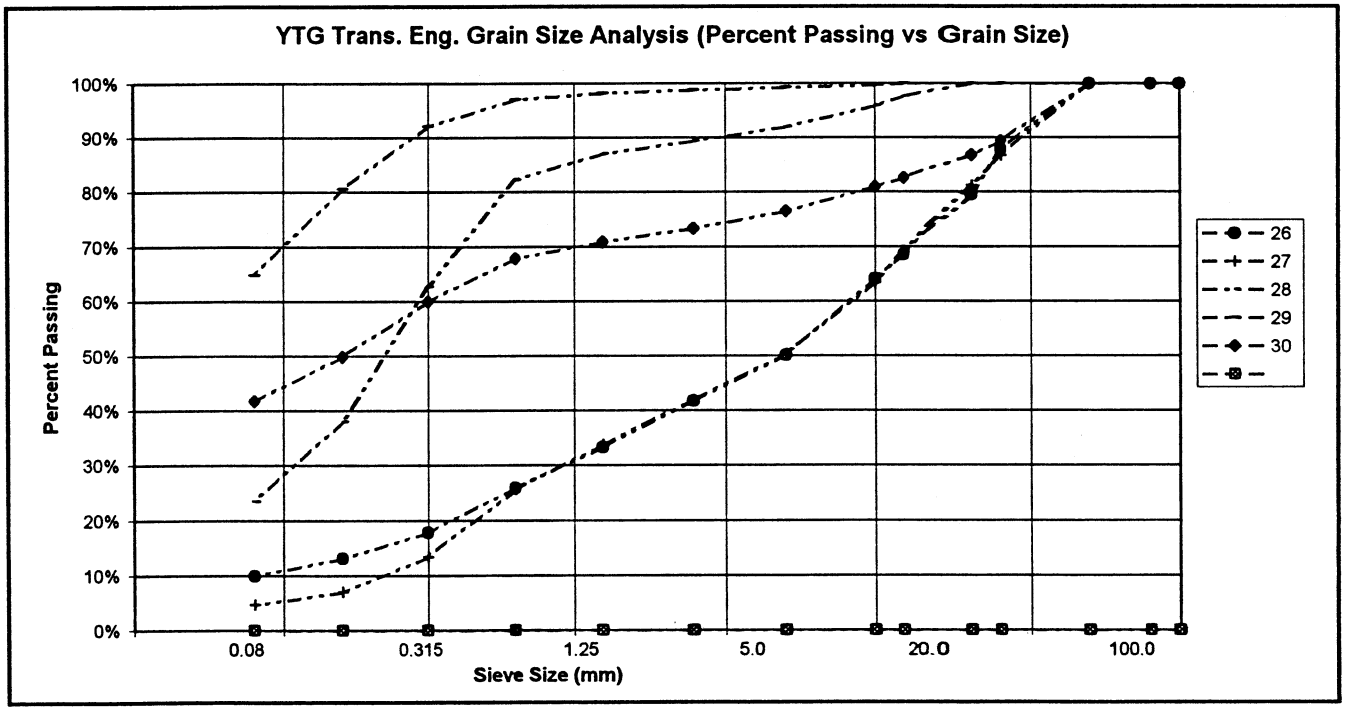


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Silver Creek Reserve Km 1694 A/H
DRILL UNIT: MOBILE B40 L - D-4 CAT
HOLE LOCATION: SEE PLAN
LOGGED BY: J.M.

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)	

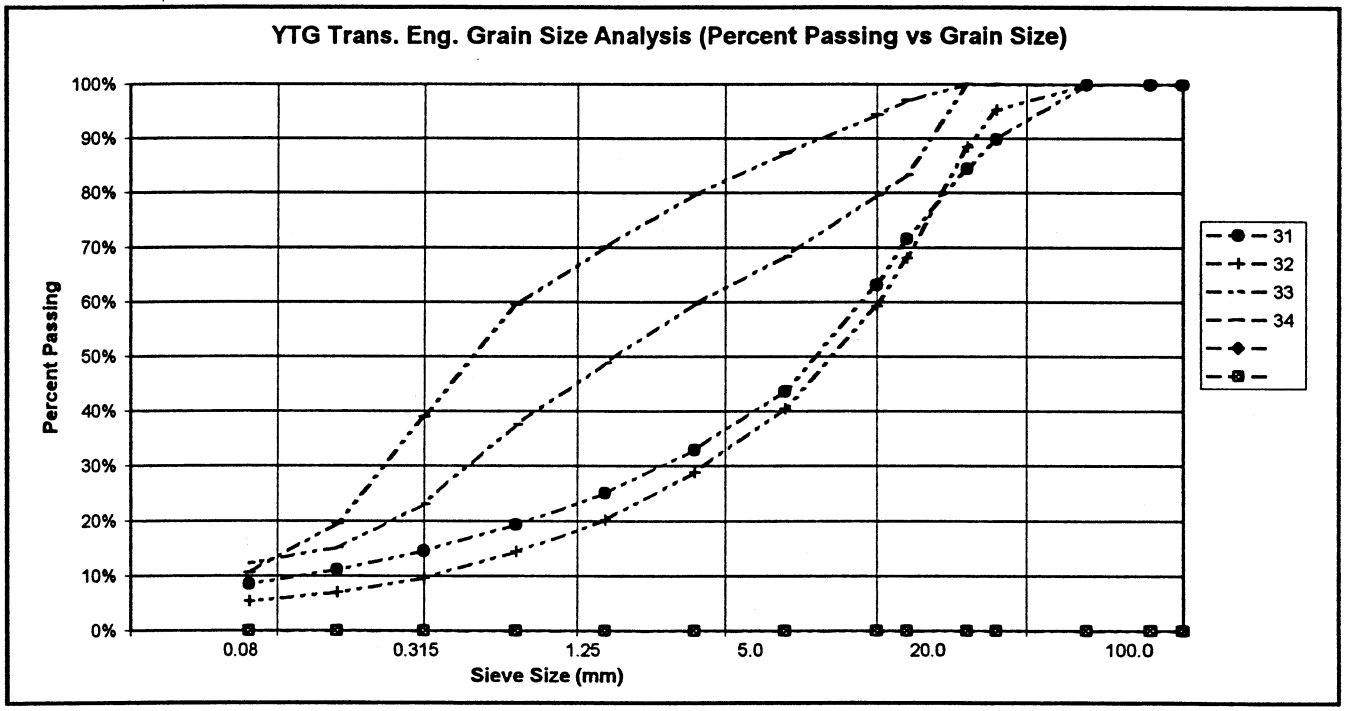


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Silver Cr Reserve Km 1694 A/H
DRILL UNIT: D-4 CAT
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 582-1515

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)		

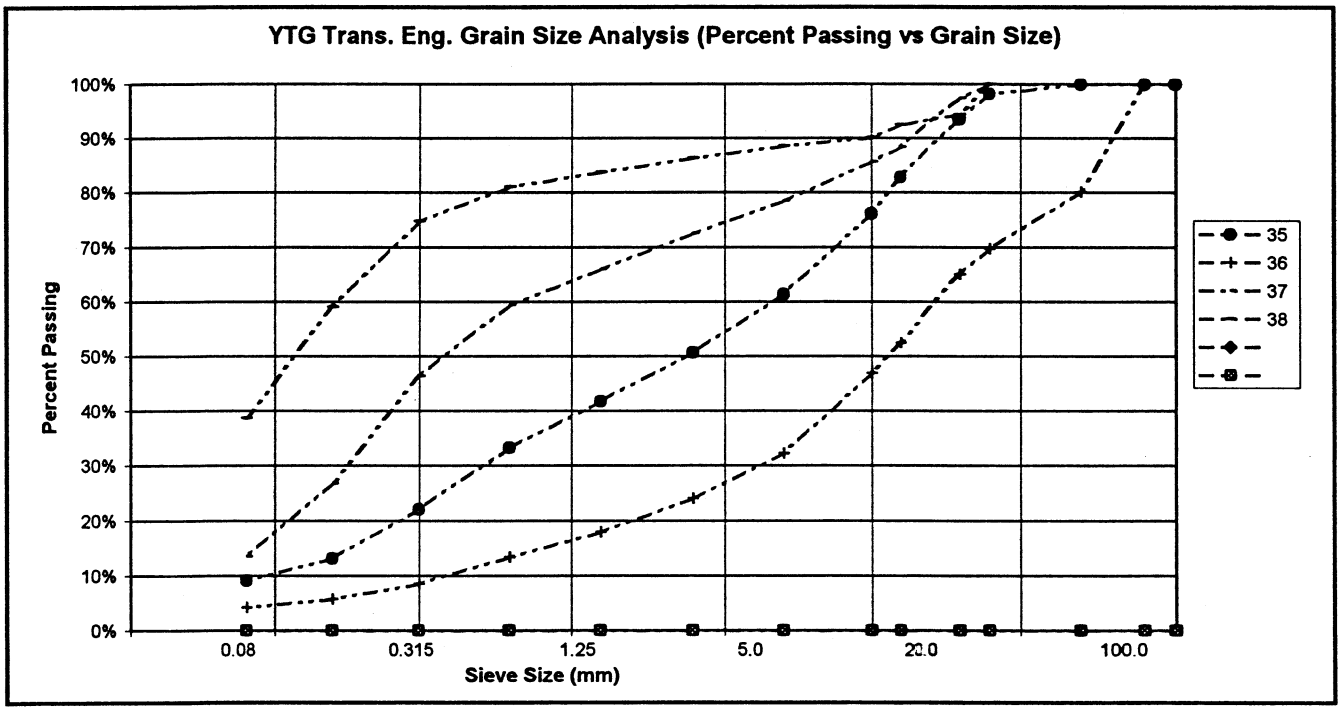


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Silver Cr Reserve Km 1694 A/H
DRILL UNIT: D-4 CAT
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 582-1516

DATE COMP: 2001/02/28

FIELD NO:	35	36	37	38		
LAB NO:	35	36	37	38		
DEPTH:	1.1-1.3	2.4-2.6	6.3-6.5	9.3-9.6		
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%	80%	100%	100%		
25.0	98%	70%	100%	100%		
20.0	94%	65%	97%	94%		
12.5	83%	52%	88%	92%		
10.0	76%	47%	86%	90%		
5.0	61%	32%	79%	89%		
2.5	51%	24%	73%	86%		
1.25	42%	18%	66%	84%		
0.630	33%	13%	59%	81%		
0.315	22%	9%	46%	75%		
0.160	13%	6%	27%	59%		
0.080	9%	4%	14%	39%		
M.C.(%):	3%	2%	3%	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:	39	68	21	11		
% SAND:	52	28	65	50		
% FINES:	9	4	14	39		
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)		

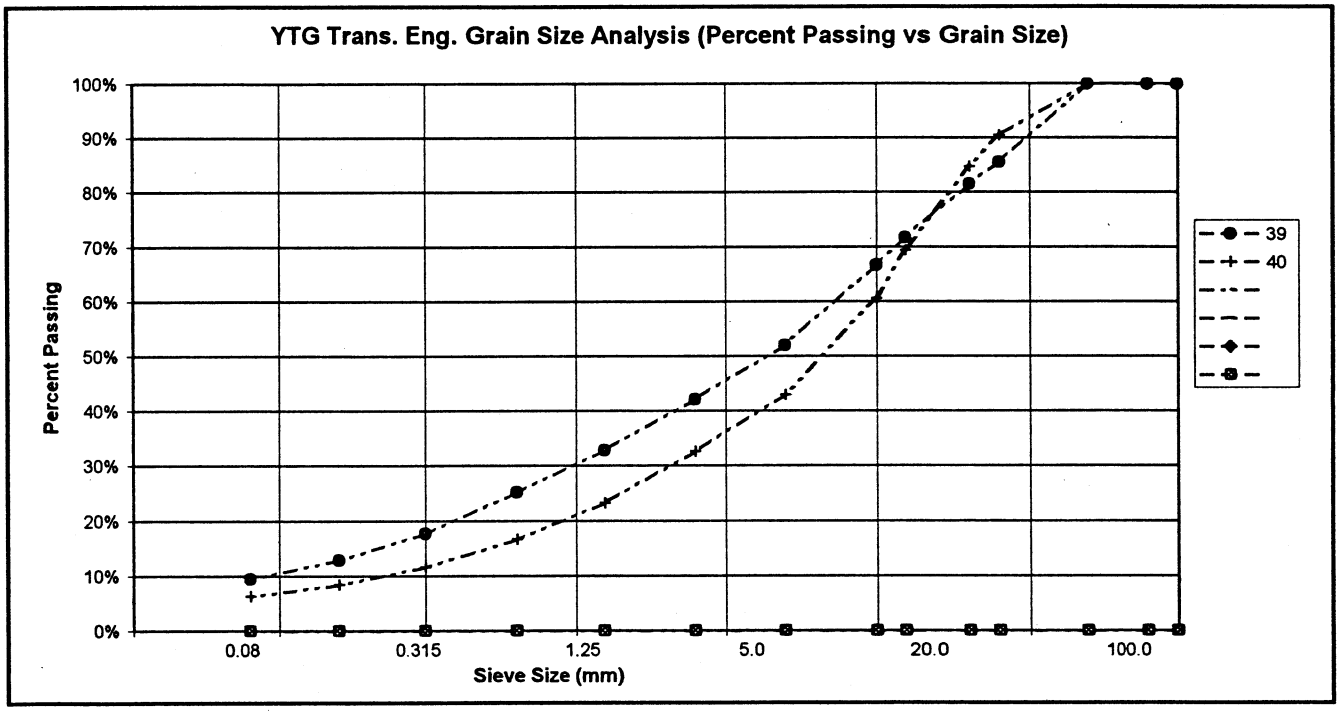


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Silver Cr Reserve Km 1694 A/H
DRILL UNIT:	D-4 CAT
HOLE LOCATION:	SEE PLAN
LOGGED BY:	D.T.

HOLE No.: 582-1517

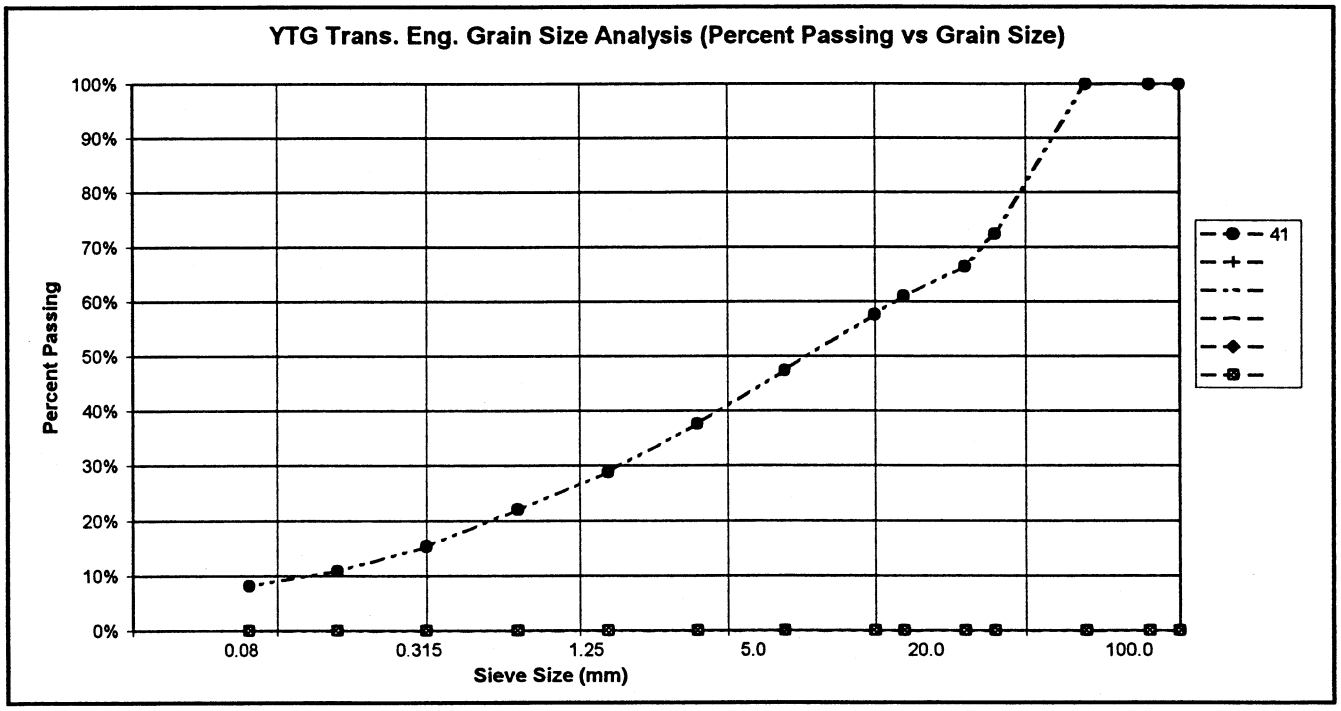
DATE COMP: 2001/02/28

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)					

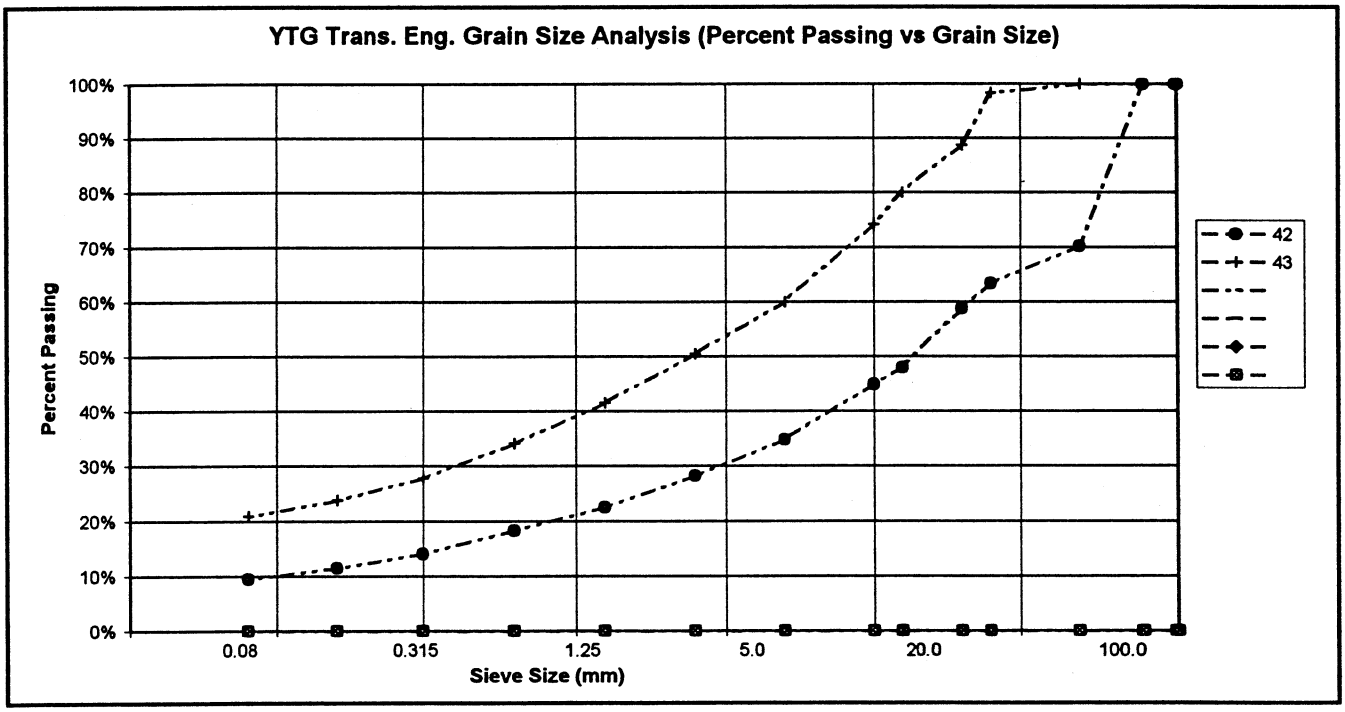


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1694 A/H Silver Creek
DRILL UNIT:	Cat 320 Excavator
HOLE LOCATION:	SEE PLAN
LOGGED BY:	D.T.

HOLE No.: 583-1519

DATE COMP: 2001/03/12

FIELD NO:	42	43				
LAB NO:	42	43				
DEPTH:	2.1-2.3	3.2-3.4				
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	70%	100%				
25.0	63%	98%				
20.0	59%	89%				
12.5	48%	80%				
10.0	45%	74%				
5.0	35%	60%				
2.5	28%	50%				
1.25	23%	42%				
0.630	18%	34%				
0.315	14%	28%				
0.160	12%	24%				
0.080	10%	21%				
M.C.(%):						
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	65	40				
% SAND:	25	39				
% FINES:	10	21				
CLASSIFICATION	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	SILTY GRAVEL WITH SAND (GM)				

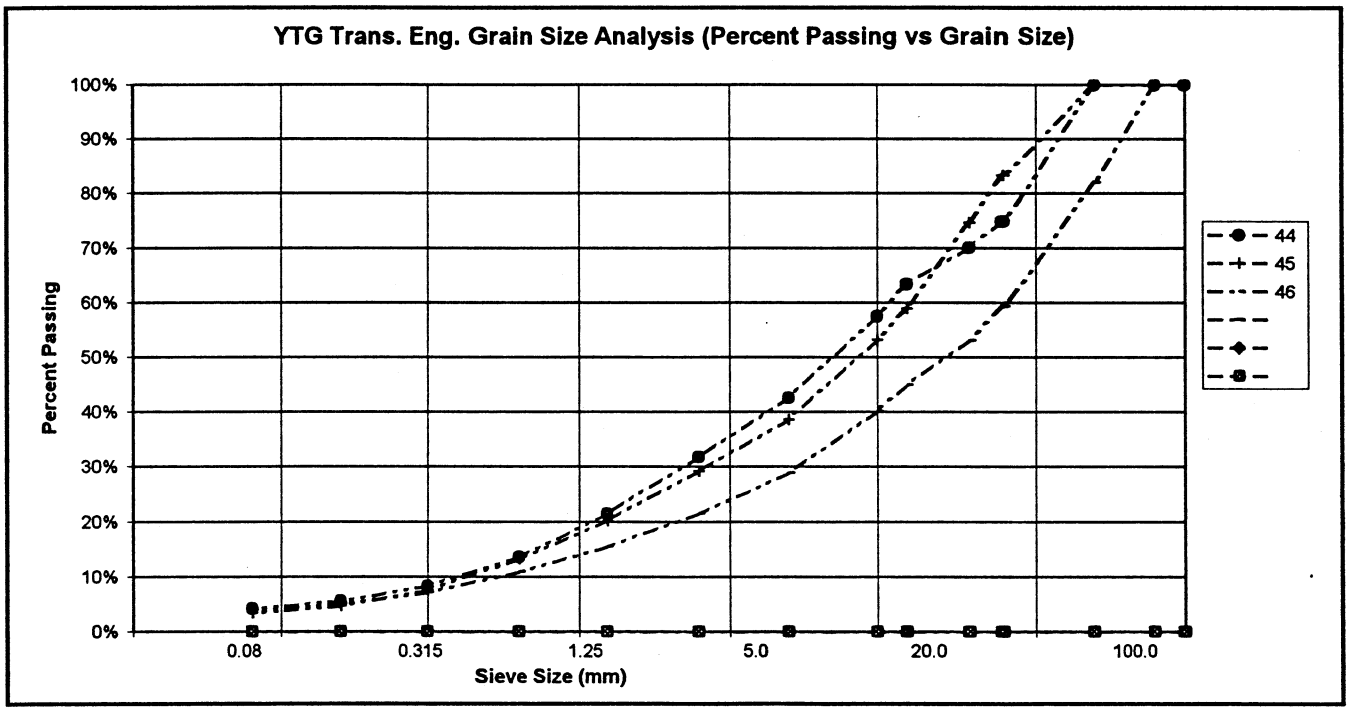


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H Silver Creek
DRILL UNIT: Cat 320 Excavator
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 583-1520

DATE COMP: 2001/03/12

FIELD NO:	44	45	46			
LAB NO:	44	45	46			
DEPTH:	0.8-1.2	2.5-2.8	4.8-5.0			
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%	82%			
25.0	75%	83%	59%			
20.0	70%	75%	53%			
12.5	63%	59%	45%			
10.0	58%	53%	40%			
5.0	43%	39%	29%			
2.5	32%	29%	21%			
1.25	22%	20%	16%			
0.630	14%	13%	11%			
0.315	8%	8%	7%			
0.160	6%	5%	5%			
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:	57	61	71			
% SAND:	38	35	25			
% FINES:	4	3	4			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED GRAVEL WITH SAND (GW)			

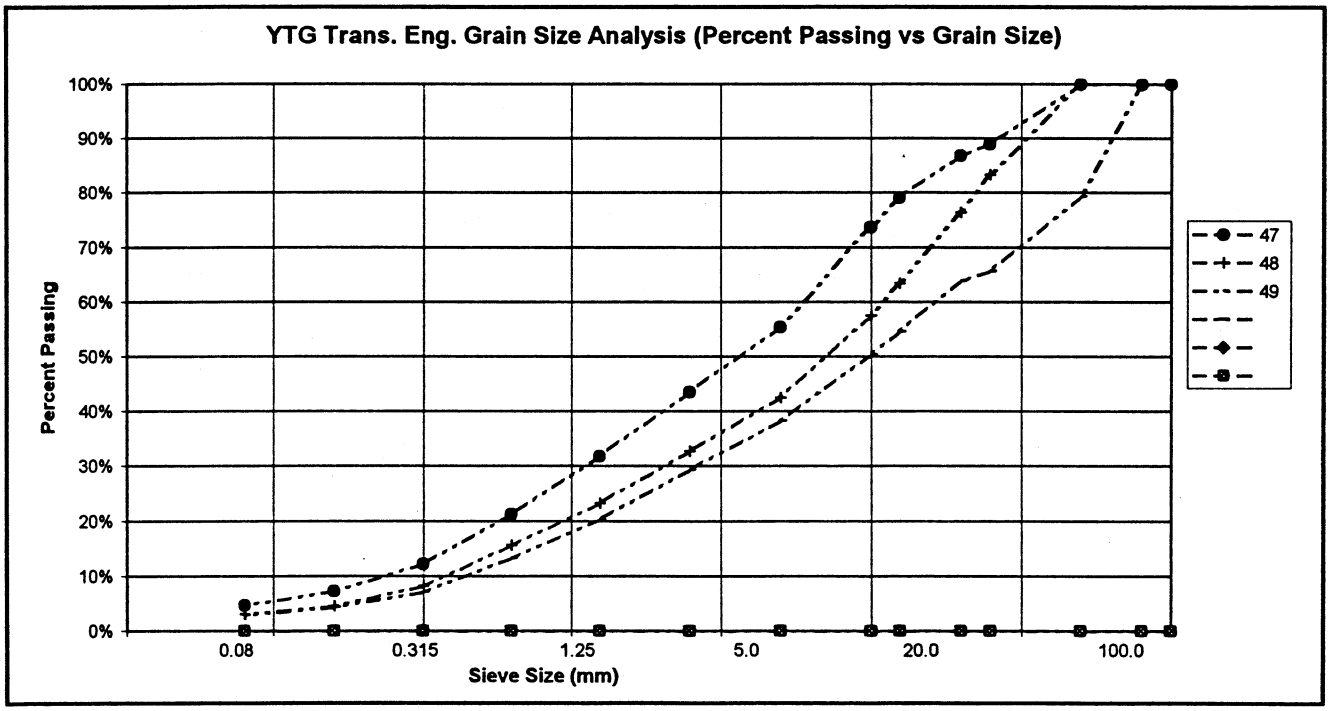


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H Silver Creek
DRILL UNIT: Cat 320 Excavator
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 583-1521

DATE COMP: 2001/03/12

FIELD NO:	47	48	49			
LAB NO:	47	48	49			
DEPTH:	0.9-1.3	2.3-2.7	4.4-4.6			
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%	79%			
25.0	89%	83%	66%			
20.0	87%	76%	64%			
12.5	79%	63%	55%			
10.0	74%	58%	50%			
5.0	55%	42%	38%			
2.5	44%	33%	29%			
1.25	32%	23%	20%			
0.630	21%	16%	13%			
0.315	12%	8%	7%			
0.160	7%	5%	4%			
0.080	5%	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:	45	58	62			
% SAND:	51	39	35			
% FINES:	5	3	3			
CLASSIFICATION	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			

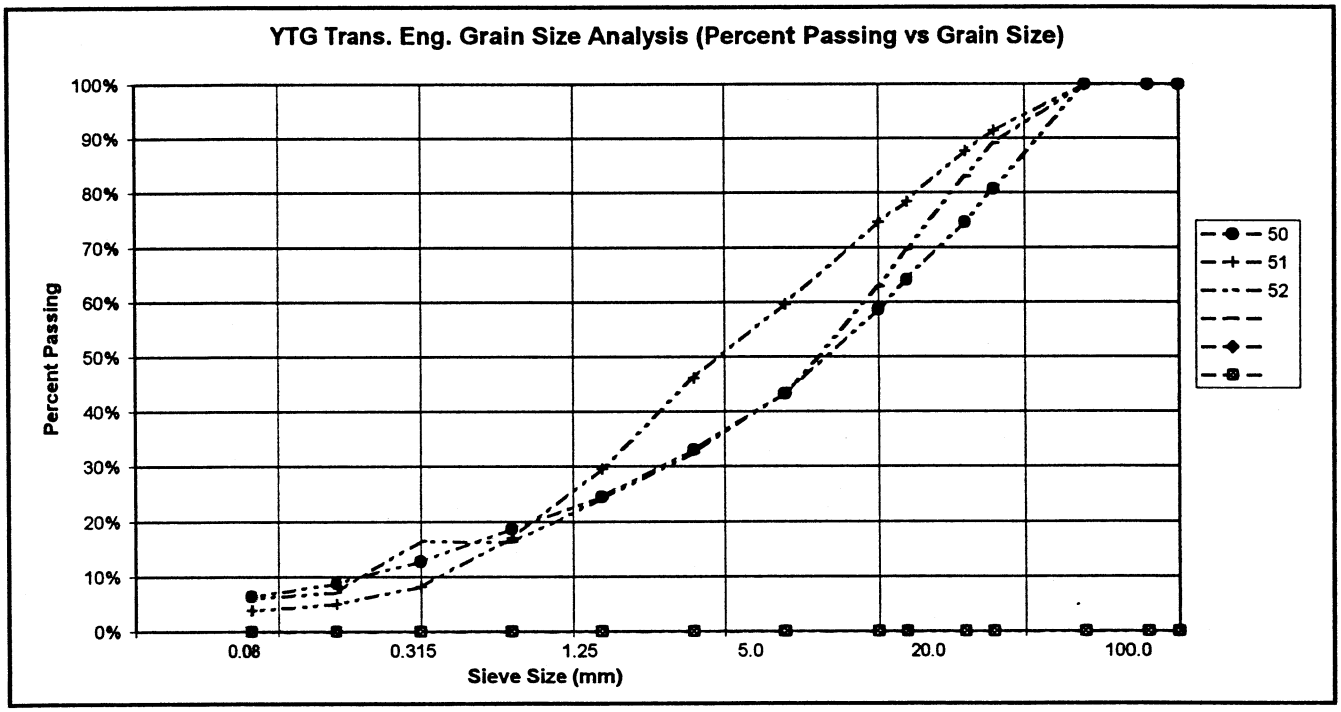


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H Silver Creek
DRILL UNIT: Cat 320 Excavator
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 583-1522

DATE COMP: 2001/03/12

FIELD NO:	50	51	52			
LAB NO:	50	51	52			
DEPTH:	0.7-1.0	2.4-2.8	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	81%	91%	89%			
20.0	75%	88%	83%			
12.5	64%	78%	70%			
10.0	59%	75%	63%			
5.0	43%	60%	43%			
2.5	33%	46%	33%			
1.25	25%	30%	24%			
0.630	19%	17%	16%			
0.315	13%	8%	16%			
0.160	9%	5%	7%			
0.080	6%	4%	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:	57	40	57			
% SAND:	37	56	37			
% FINES:	6	4	6			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

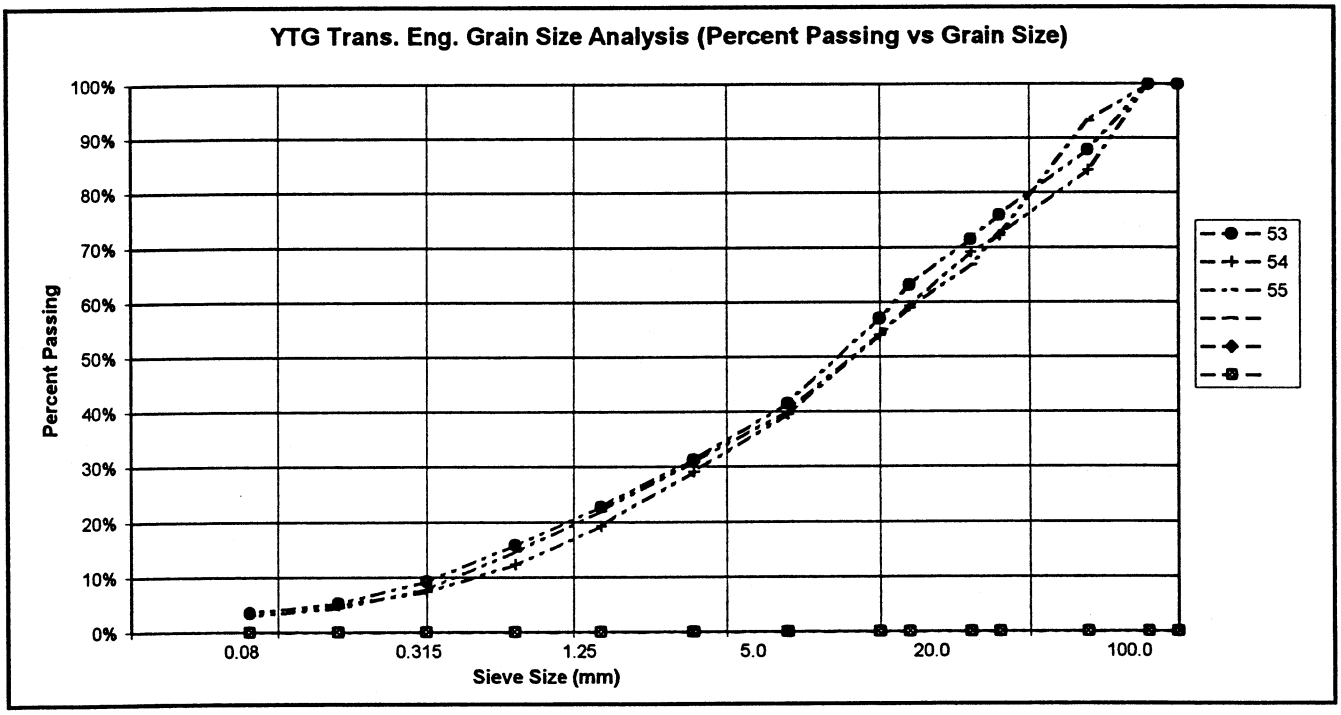


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H Silver Creek
DRILL UNIT: Cat 320 Excavator
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 583-1523

DATE COMP: 2001/03/12

FIELD NO:	53	54	55			
LAB NO:	53	54	55			
DEPTH:	0.7-1.0	2.6-3.0	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	88%	84%	93%			
25.0	76%	72%	73%			
20.0	71%	69%	67%			
12.5	63%	59%	59%			
10.0	57%	54%	54%			
5.0	42%	40%	40%			
2.5	31%	29%	31%			
1.25	23%	19%	22%			
0.630	16%	12%	15%			
0.315	9%	7%	8%			
0.160	5%	5%	4%			
0.080	4%	4%	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:	58	60	60			
% SAND:	38	36	37			
% FINES:	4	4	3			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			

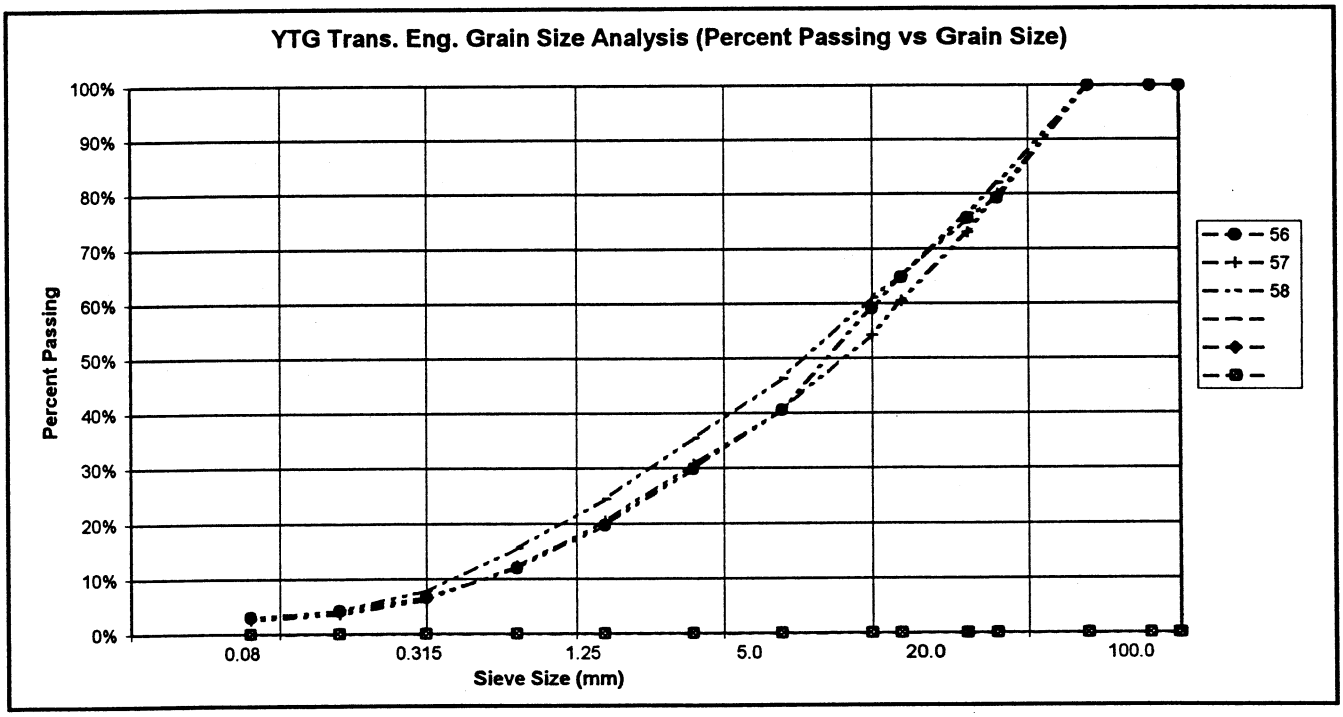


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H Silver Creek
DRILL UNIT: Cat 320 Excavator
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

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)			

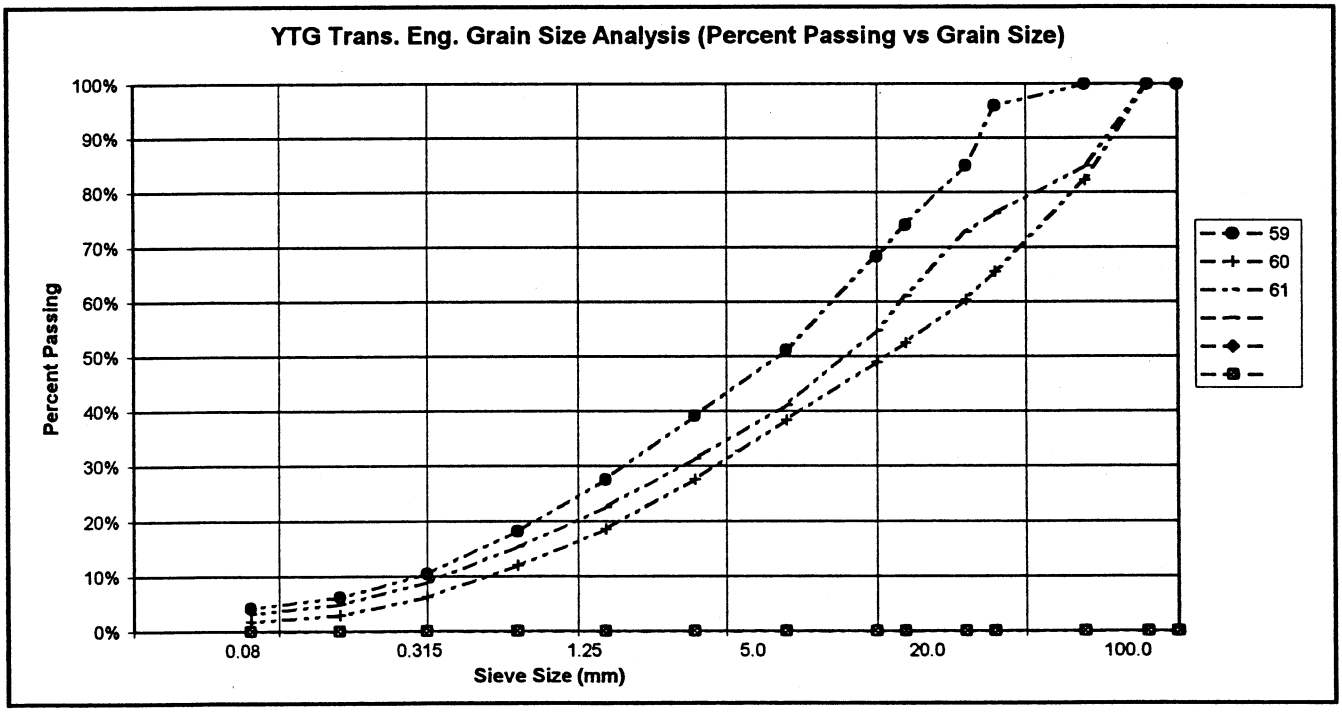


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H Silver Creek
DRILL UNIT: Cat 320 Excavator
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 583-1525

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)			

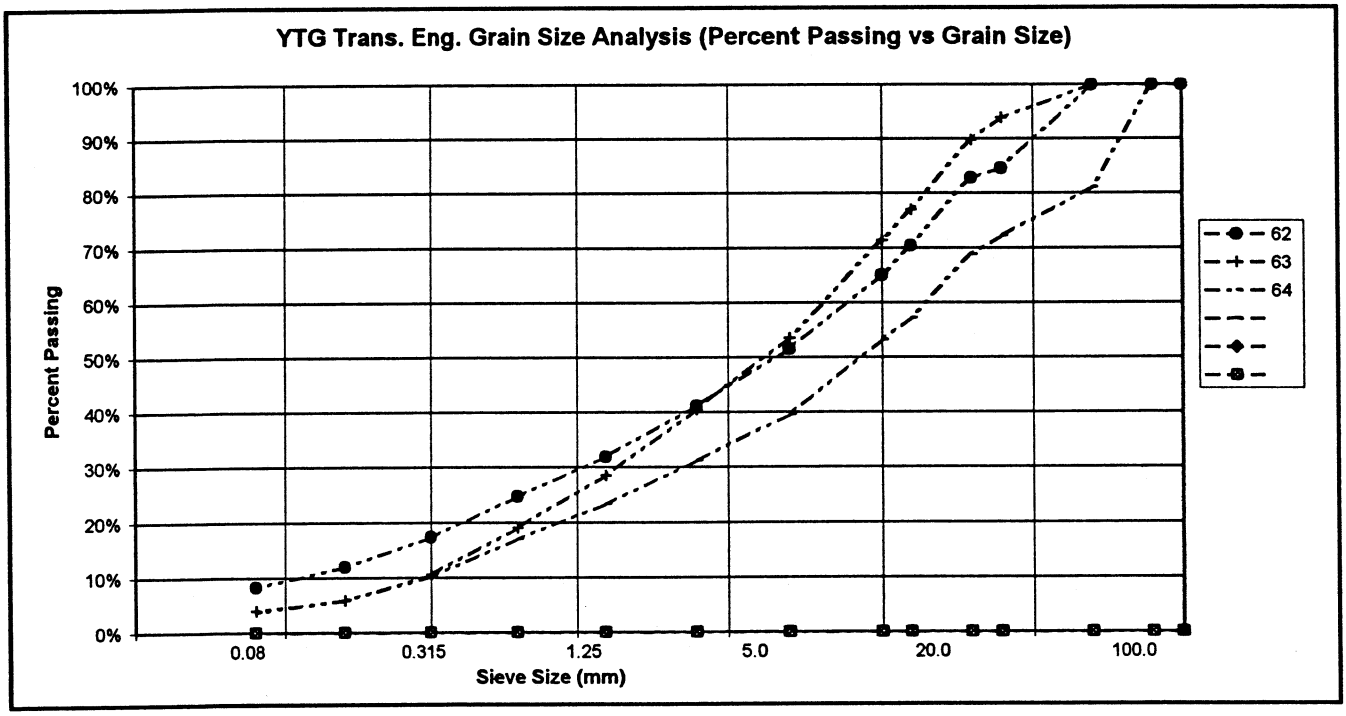


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1694 A/H Silver Creek
DRILL UNIT:	Cat 320 Excavator
HOLE LOCATION:	SEE PLAN
LOGGED BY:	D.T.

HOLE No.: 583-1526

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)			

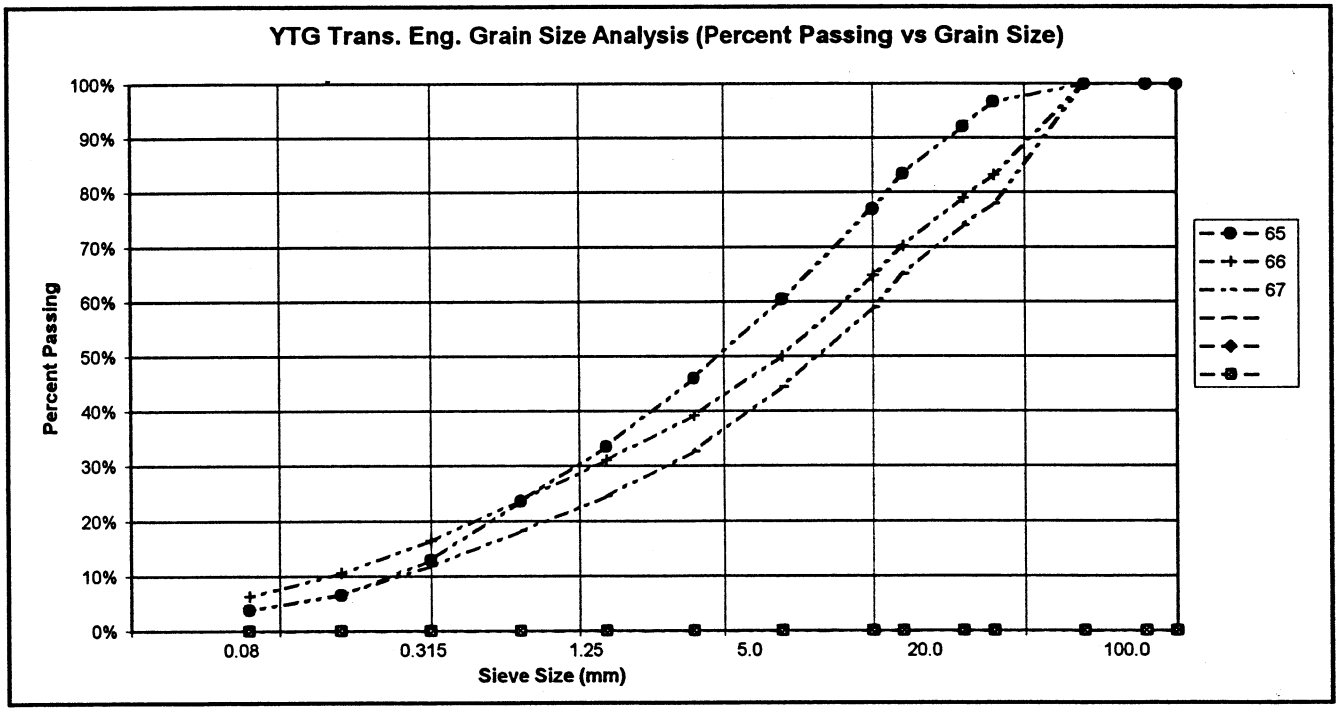


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H Silver Creek
DRILL UNIT: Cat 320 Excavator
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 583-1527

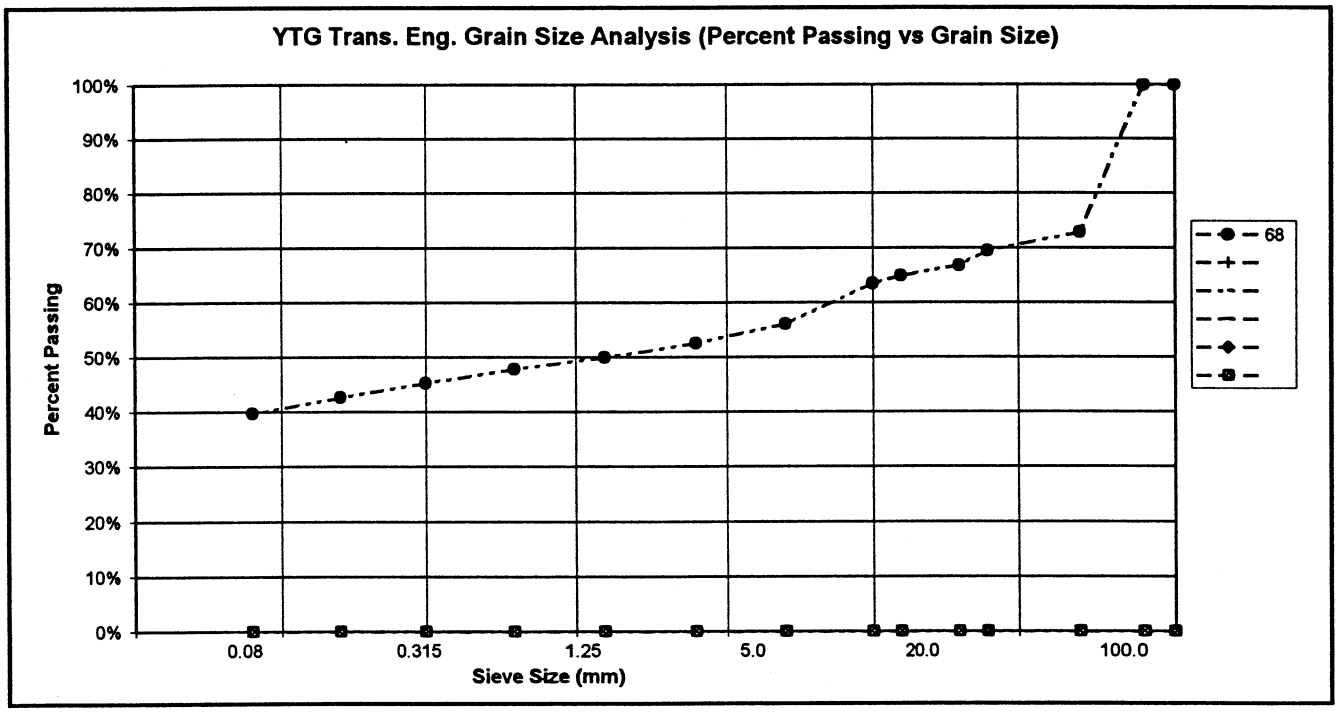
DATE COMP: 2001/03/13

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	HOLE No.:	583-1528
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:	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)					

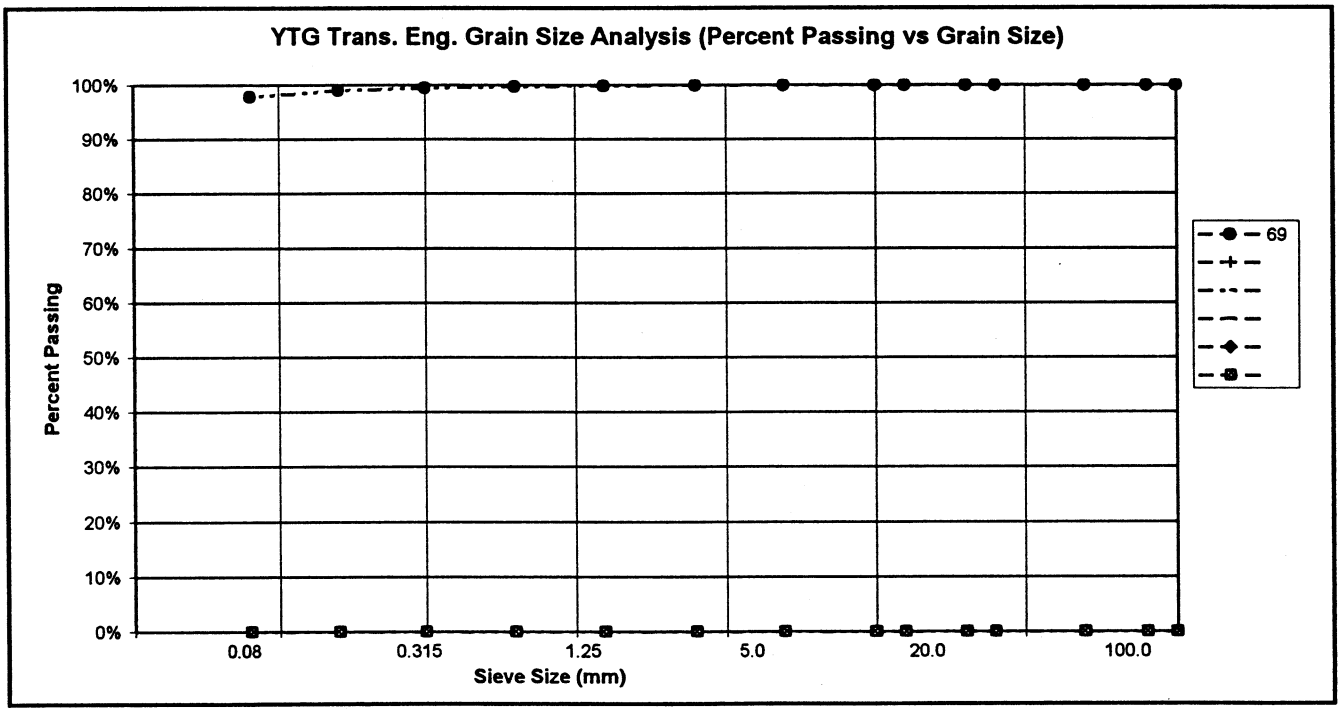


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1694 A/H Silver Creek
DRILL UNIT:	Cat 320 Excavator
HOLE LOCATION:	SEE PLAN
LOGGED BY:	D.T.

HOLE No.: 583-1529

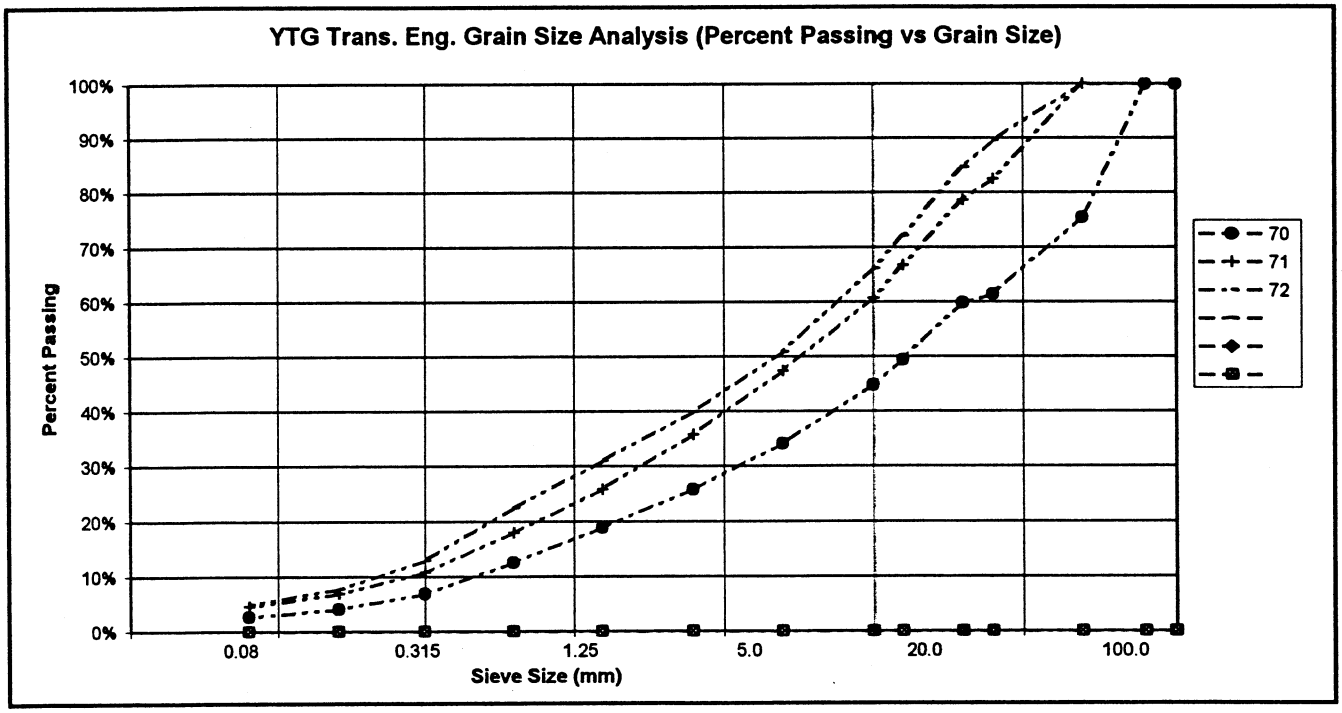
DATE COMP: 2001/03/13

FIELD NO:	69					
LAB NO:	69					
DEPTH:	4.0-4.4					
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	100%					
20.0	100%					
12.5	100%					
10.0	100%					
5.0	100%					
2.5	100%					
1.25	100%					
0.630	100%					
0.315	99%					
0.160	99%					
0.080	98%					
M.C.(%):						
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	0					
% SAND:	2					
% FINES:	98					
CLASSIFICATION	SILT (ML)					



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 583-1530
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:	70	71	72			
LAB NO:	70	71	72			
DEPTH:	0.9-1.1	2.7-3.0	4.8-5.0			
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	75%	100%	100%			
25.0	61%	82%	90%			
20.0	60%	79%	85%			
12.5	49%	67%	72%			
10.0	45%	61%	66%			
5.0	34%	47%	51%			
2.5	26%	36%	40%			
1.25	19%	26%	31%			
0.630	13%	18%	22%			
0.315	7%	11%	13%			
0.160	4%	7%	8%			
0.080	3%	5%	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:	66	53	49			
% SAND:	31	43	46			
% FINES:	3	5	5			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			

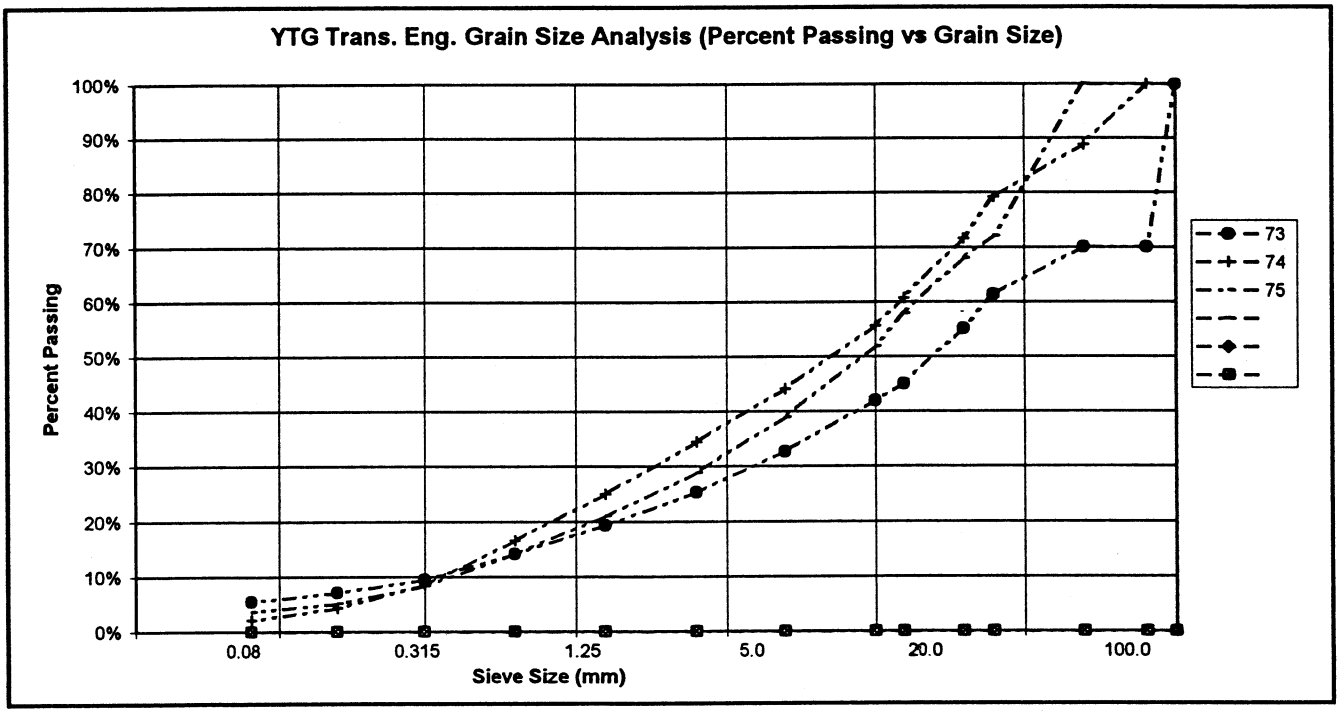


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H Silver Creek
DRILL UNIT: Cat 320 Excavator
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 583-1531

DATE COMP: 2001/03/13

FIELD NO:	73	74	75			
LAB NO:	73	74	75			
DEPTH:	0.3-0.6	2.3-2.7	4.8-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	70%	100%	100%			
50.0	70%	89%	100%			
25.0	61%	79%	72%			
20.0	55%	72%	68%			
12.5	45%	61%	58%			
10.0	42%	56%	52%			
5.0	33%	44%	39%			
2.5	25%	35%	29%			
1.25	19%	25%	21%			
0.630	14%	17%	14%			
0.315	9%	9%	8%			
0.160	7%	4%	5%			
0.080	6%	2%	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:	67	56	61			
% SAND:	27	42	35			
% FINES:	6	2	4			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			

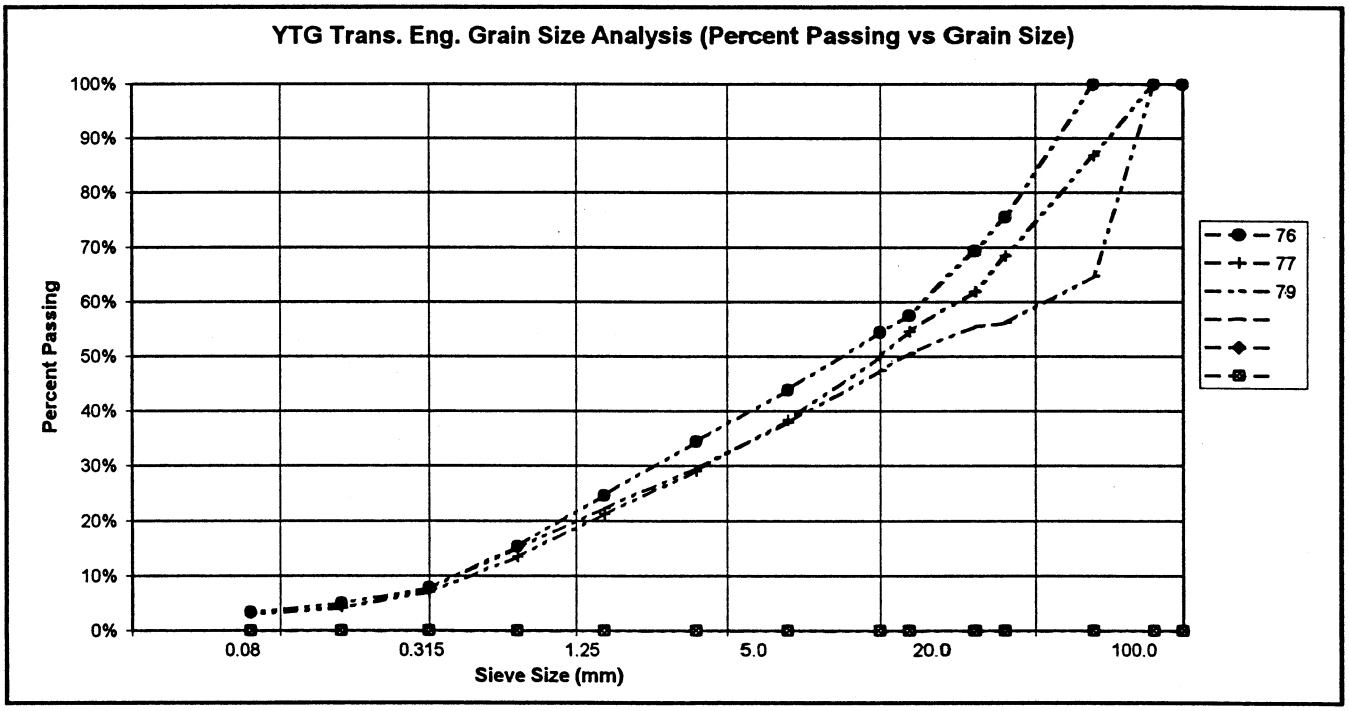


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H Silver Creek
DRILL UNIT: Cat 320 Excavator
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 583-1532

DATE COMP: 2001/03/13

FIELD NO:	76	77	79			
LAB NO:	76	77	78			
DEPTH:	1.2-1.6	3.0-3.4	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%	65%			
25.0	76%	68%	56%			
20.0	69%	62%	55%			
12.5	58%	55%	51%			
10.0	55%	50%	47%			
5.0	44%	38%	38%			
2.5	34%	29%	30%			
1.25	25%	21%	22%			
0.630	15%	13%	15%			
0.315	8%	7%	8%			
0.160	5%	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:	56	62	62			
% SAND:	40	35	35			
% FINES:	3	3	3			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			

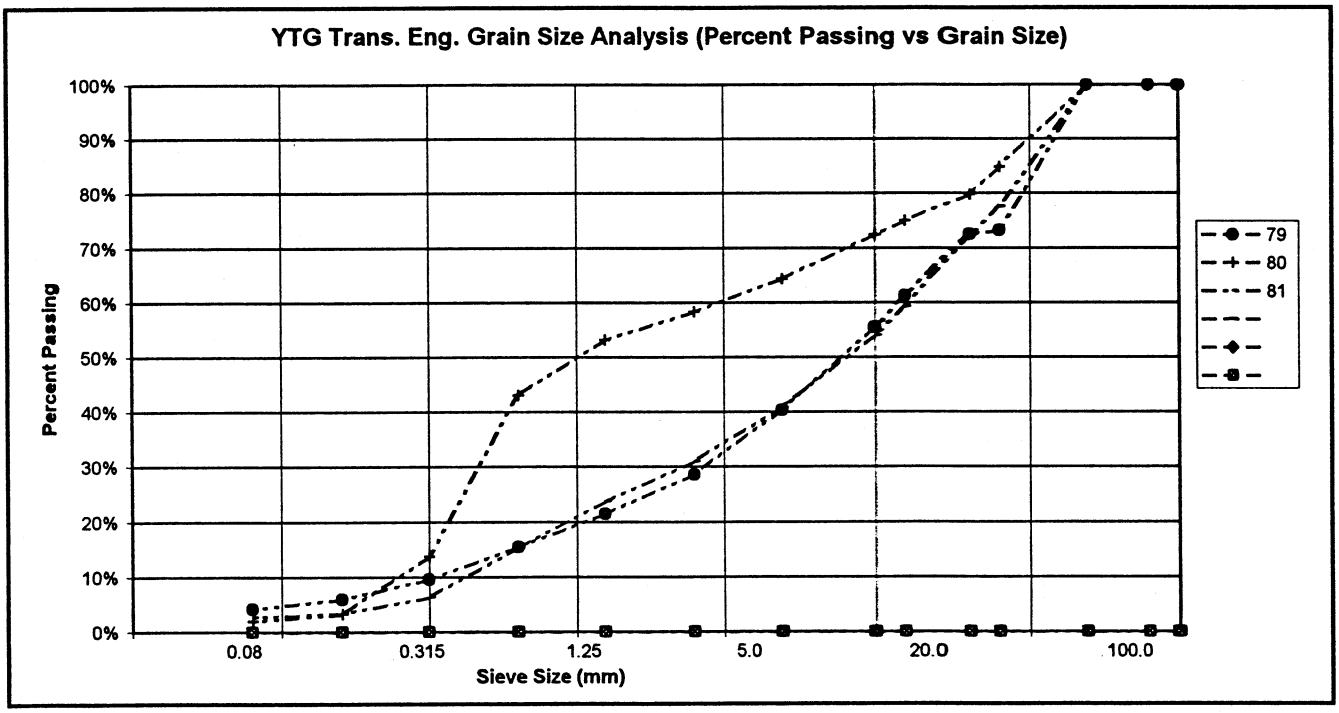


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H Silver Creek
DRILL UNIT: Cat 320 Excavator
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 583-1533

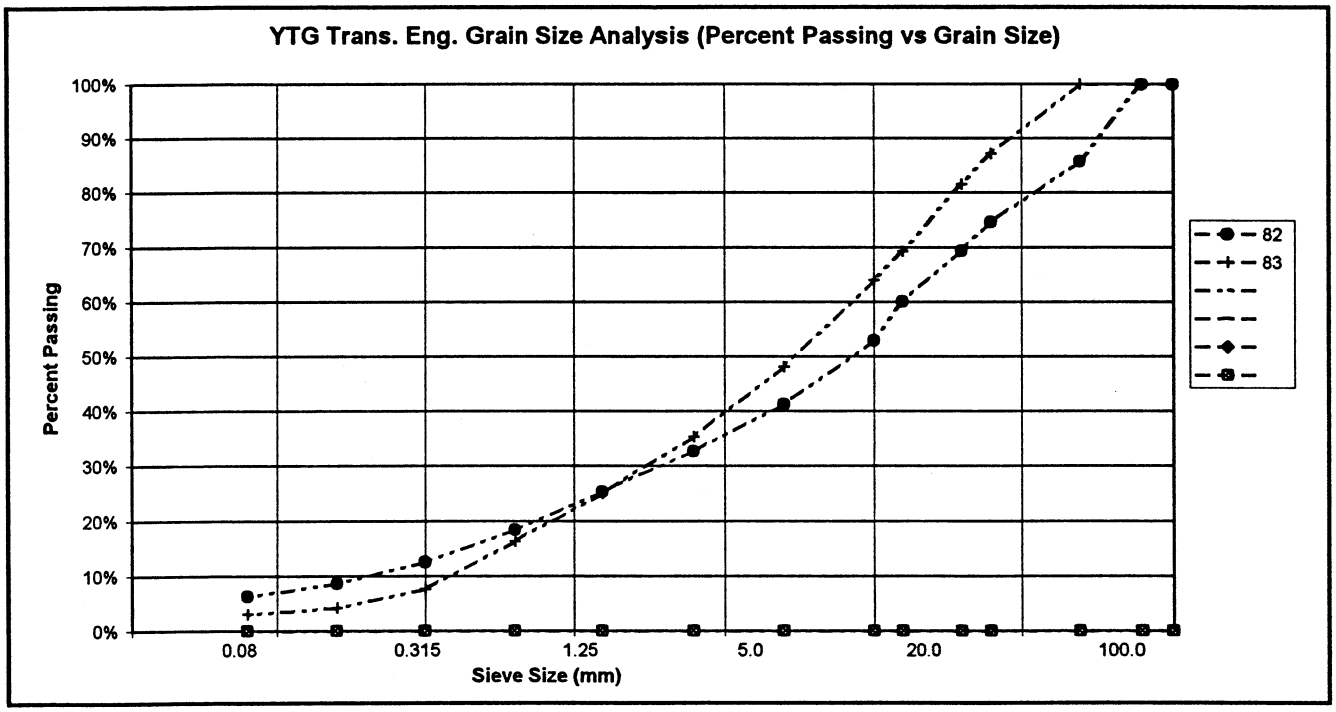
DATE COMP: 2001/03/13

FIELD NO:	79	80	81			
LAB NO:	79	80	81			
DEPTH:	0.4-0.7	2.3-2.7	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	73%	85%	78%			
20.0	73%	80%	72%			
12.5	61%	75%	59%			
10.0	56%	72%	54%			
5.0	40%	64%	41%			
2.5	29%	58%	31%			
1.25	21%	53%	24%			
0.630	15%	43%	15%			
0.315	10%	14%	6%			
0.160	6%	3%	3%			
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:	60	36	59			
% SAND:	36	62	38			
% FINES:	4	2	3			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SAND (GP)			



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 583-1534
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:	82	83				
LAB NO:	82	83				
DEPTH:	1.4-1.7	4.6-5.0				
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	86%	100%				
25.0	75%	87%				
20.0	69%	82%				
12.5	60%	69%				
10.0	53%	64%				
5.0	41%	48%				
2.5	33%	35%				
1.25	25%	25%				
0.630	18%	16%				
0.315	13%	8%				
0.160	9%	4%				
0.080	6%	3%				
M.C.(%):						
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	59	52				
% SAND:	35	45				
% FINES:	6	3				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)				

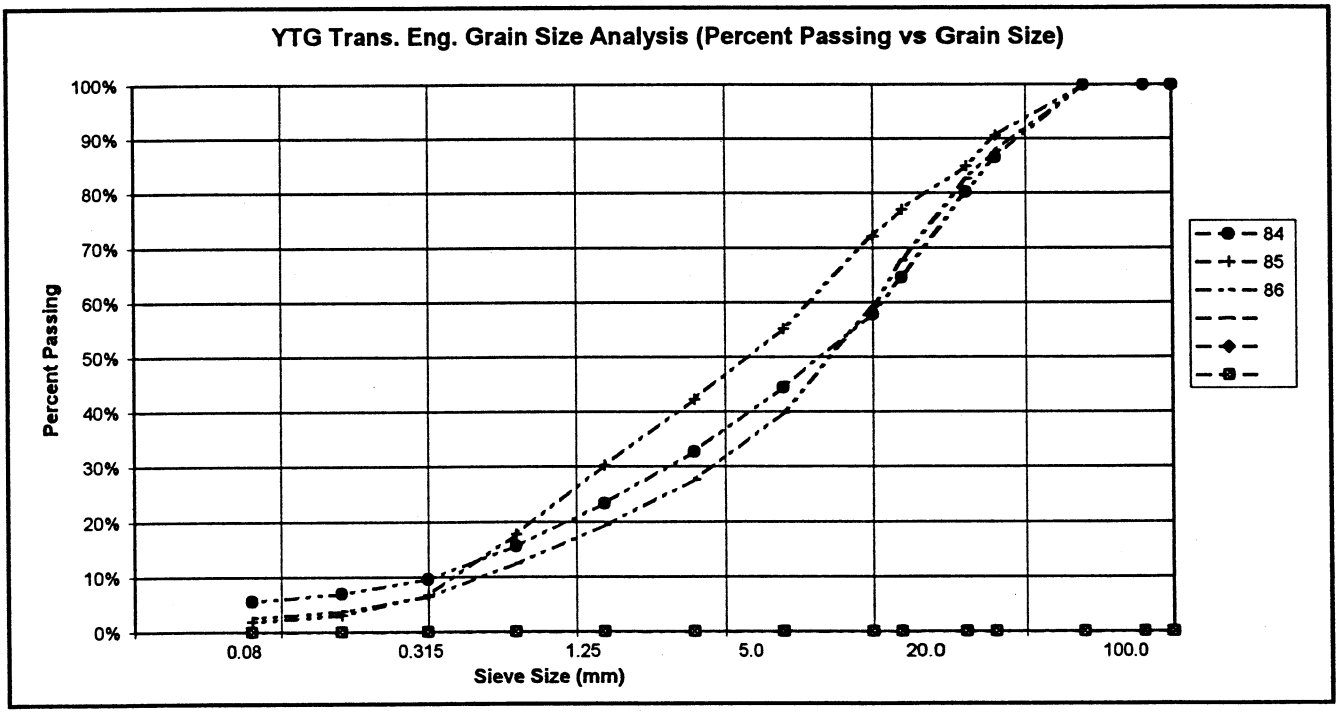


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H Silver Creek
DRILL UNIT: Cat 320 Excavator
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 583-1535

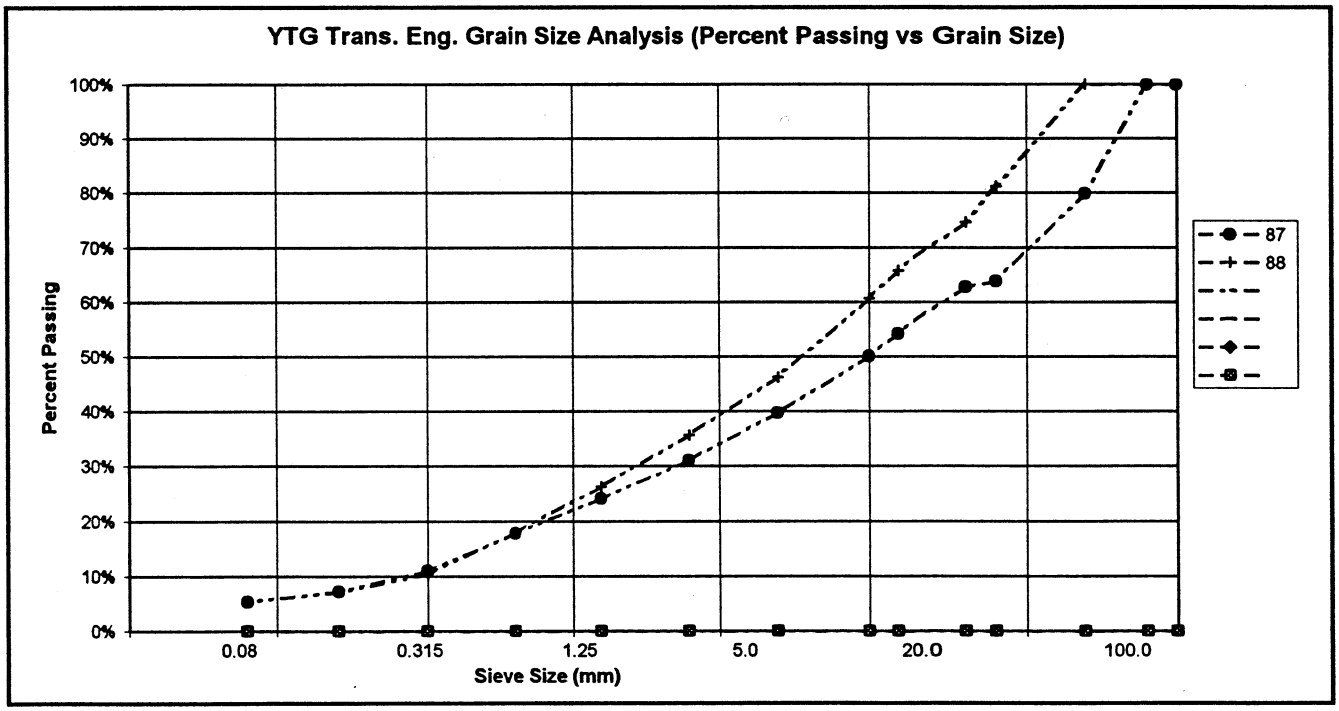
DATE COMP: 2001/03/13

FIELD NO:	84	85	86			
LAB NO:	84	85	86			
DEPTH:	0.5-0.8	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	87%	91%	88%			
20.0	80%	85%	83%			
12.5	65%	77%	68%			
10.0	58%	72%	59%			
5.0	44%	55%	40%			
2.5	33%	42%	28%			
1.25	23%	30%	19%			
0.630	16%	18%	12%			
0.315	10%	7%	6%			
0.160	7%	3%	4%			
0.080	6%	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:	56	45	60			
% SAND:	39	53	37			
% FINES:	6	2	3			
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.: 583-1536
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:	87	88				
LAB NO:	87	88				
DEPTH:	0.4-0.7	4.6-5.0				
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	80%	100%				
25.0	64%	81%				
20.0	63%	75%				
12.5	54%	66%				
10.0	50%	61%				
5.0	40%	46%				
2.5	31%	36%				
1.25	24%	26%				
0.630	18%	18%				
0.315	11%	10%				
0.160	7%	7%				
0.080	5%	6%				
M.C.(%):						
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	60	54				
% SAND:	34	41				
% FINES:	5	6				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

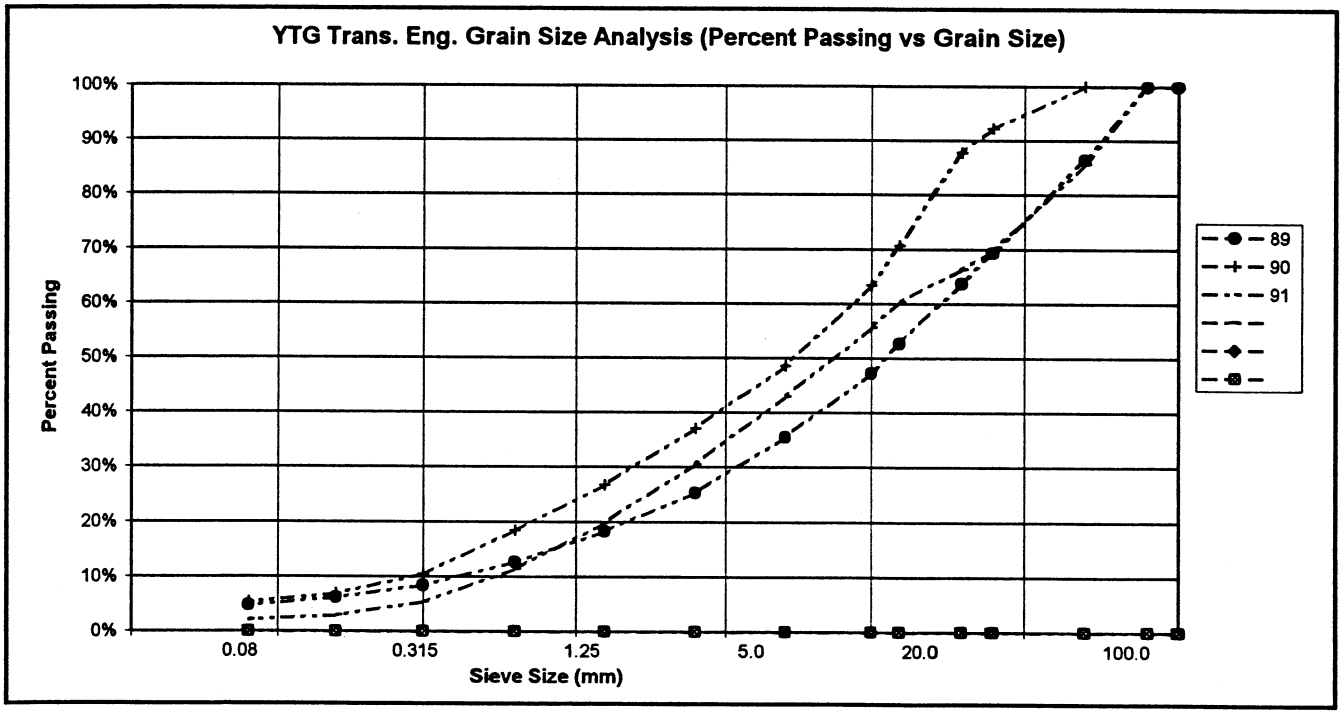


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1694 A/H Silver Creek
DRILL UNIT:	Cat 320 Excavator
HOLE LOCATION:	SEE PLAN
LOGGED BY:	D.T.

HOLE No.: 583-1537

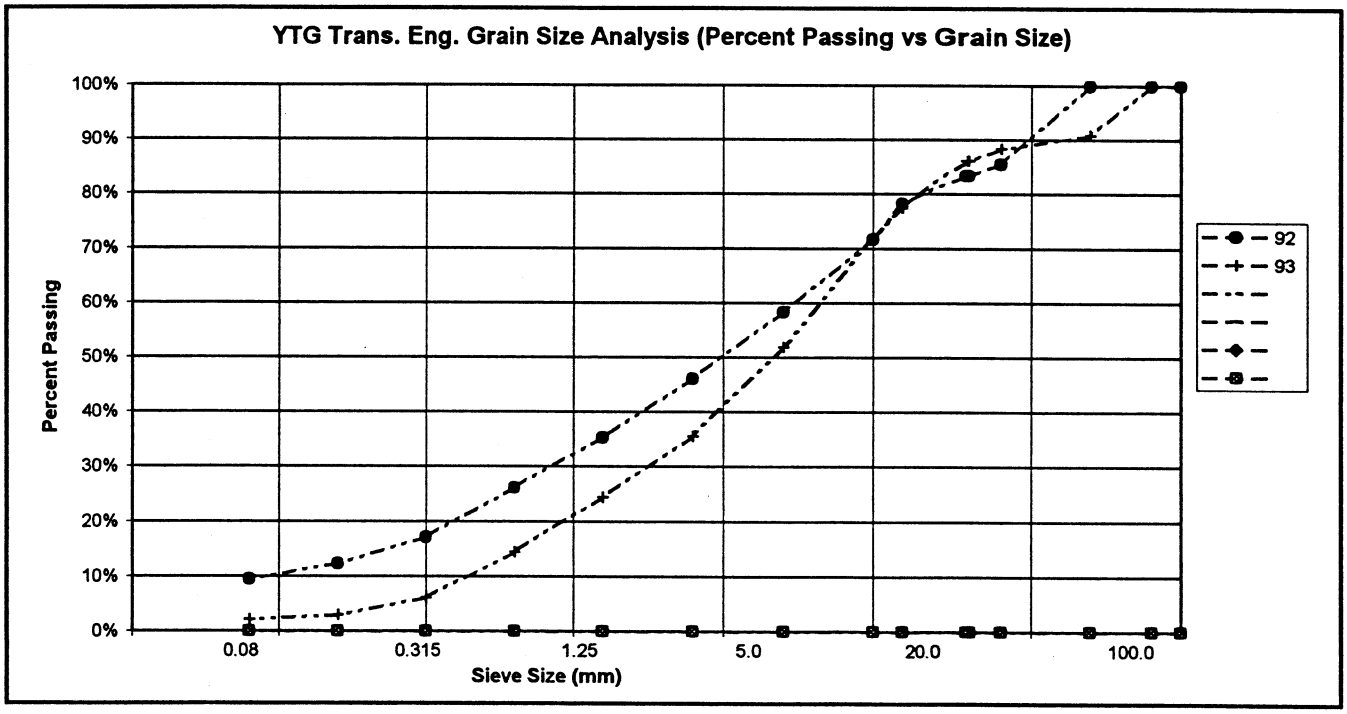
DATE COMP: 2001/03/14

FIELD NO:	89	90	91			
LAB NO:	89	90	91			
DEPTH:	0.3-0.7	2.4-2.8	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	87%	100%	86%			
25.0	69%	92%	70%			
20.0	64%	88%	66%			
12.5	53%	71%	60%			
10.0	47%	63%	56%			
5.0	36%	49%	43%			
2.5	25%	37%	30%			
1.25	18%	27%	20%			
0.630	13%	18%	11%			
0.315	8%	10%	5%			
0.160	6%	7%	3%			
0.080	5%	5%	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:	64	51	57			
% SAND:	31	43	41			
% FINES:	5	5	2			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)			



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 583-1538
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:	92	93				
LAB NO:	92	93				
DEPTH:	0.4-0.7	2.3-2.7				
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	91%				
25.0	86%	88%				
20.0	83%	86%				
12.5	78%	78%				
10.0	72%	72%				
5.0	58%	52%				
2.5	46%	36%				
1.25	35%	24%				
0.630	26%	14%				
0.315	17%	6%				
0.160	12%	3%				
0.080	10%	2%				
M.C.(%):						
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	42	48				
% SAND:	49	50				
% FINES:	10	2				
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	WELL-GRADED SAND WITH GRAVEL (SW)				

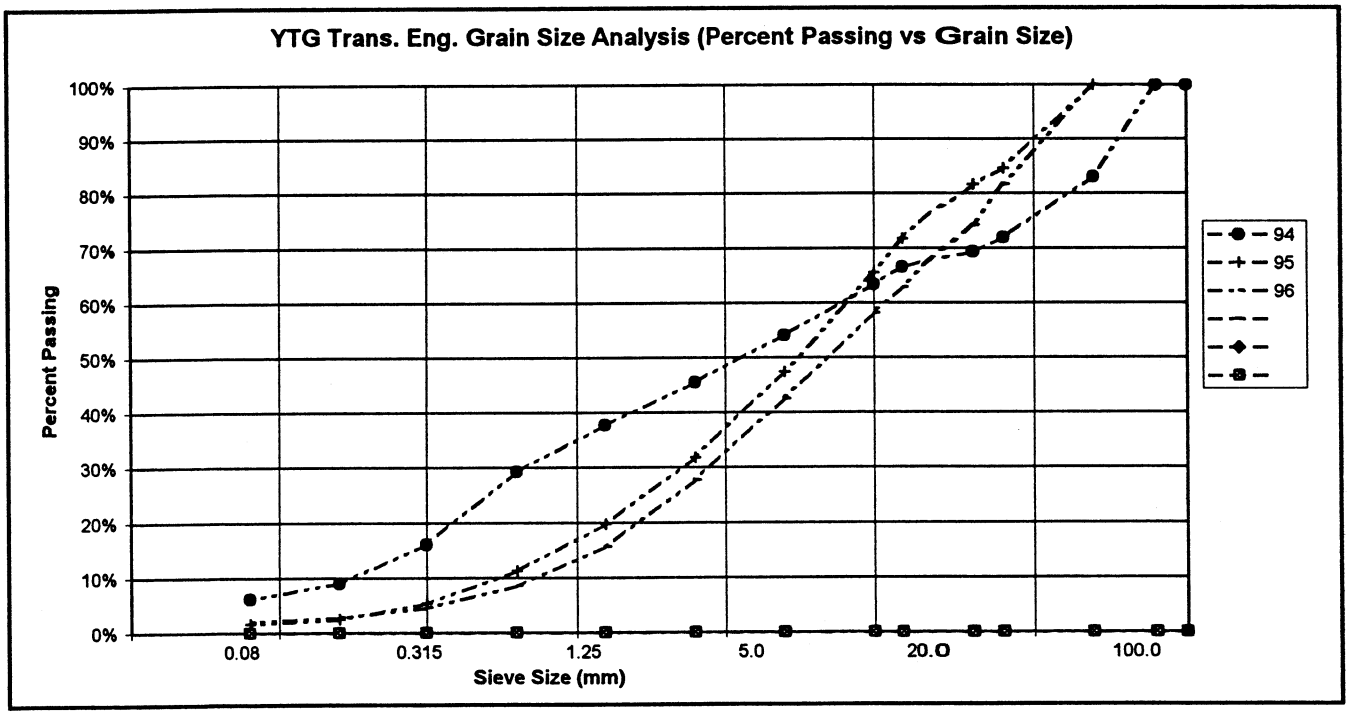


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H Silver Creek
DRILL UNIT: Cat 320 Excavator
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 583-1539

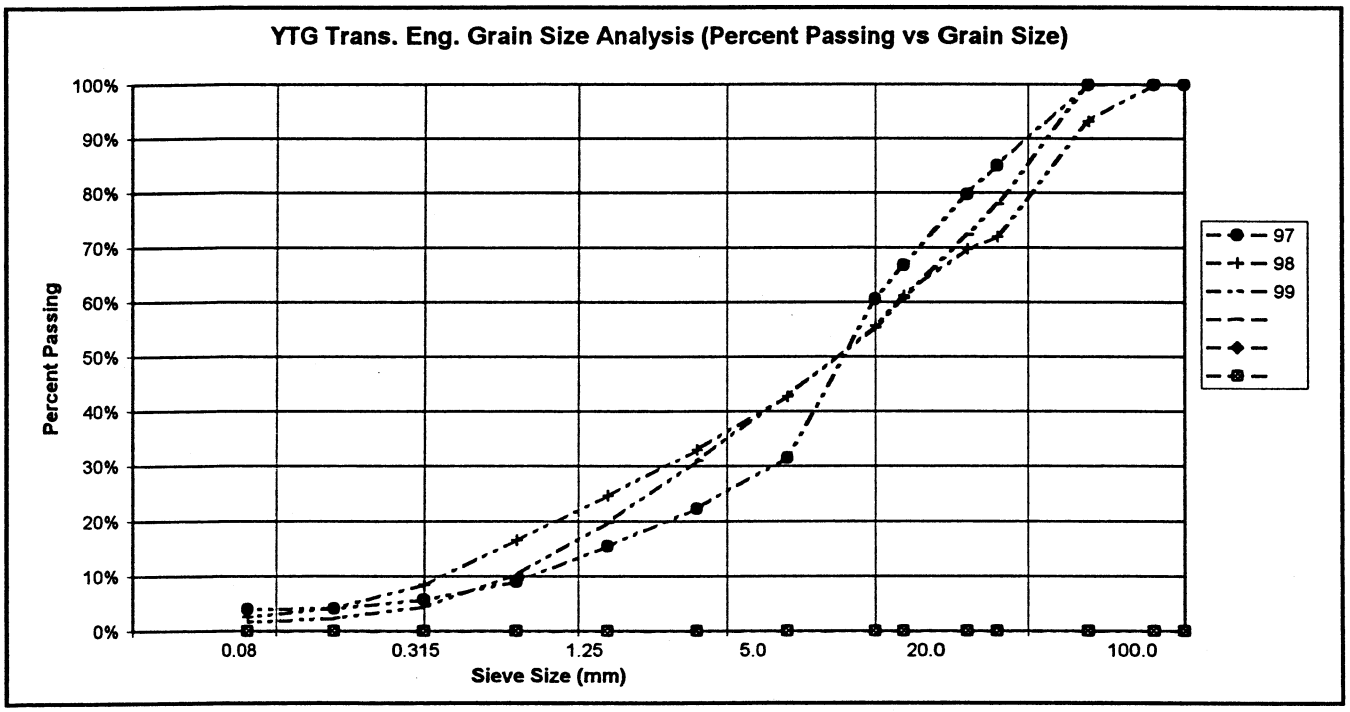
DATE COMP: 2001/03/14

FIELD NO:	94	95	96			
LAB NO:	94	95	96			
DEPTH:	0.7-1.0	2.4-2.8	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	83%	100%	100%			
25.0	72%	85%	82%			
20.0	69%	82%	74%			
12.5	67%	72%	63%			
10.0	63%	65%	58%			
5.0	54%	47%	43%			
2.5	46%	32%	28%			
1.25	38%	20%	16%			
0.630	29%	11%	9%			
0.315	16%	5%	5%			
0.160	9%	3%	3%			
0.080	6%	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:	46	53	57			
% SAND:	48	46	41			
% FINES:	6	2	2			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			



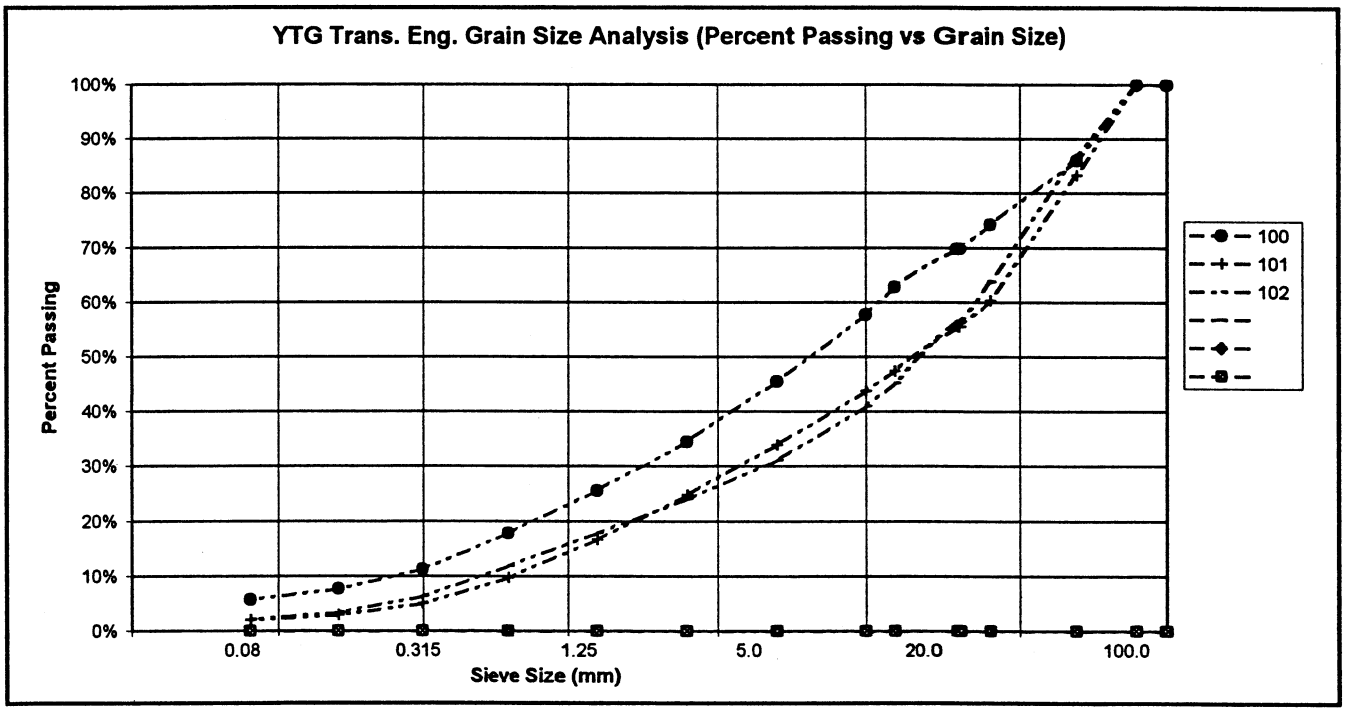
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 583-1540
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H Silver Creek		
DRILL UNIT:	Cat 320 Excavator		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/14

FIELD NO:	97	98	99			
LAB NO:	97	98	99			
DEPTH:	0.6-0.9	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%	93%	100%			
25.0	85%	72%	78%			
20.0	80%	70%	72%			
12.5	67%	61%	61%			
10.0	61%	56%	55%			
5.0	32%	43%	43%			
2.5	22%	33%	31%			
1.25	16%	25%	20%			
0.630	9%	17%	10%			
0.315	6%	8%	4%			
0.160	4%	4%	2%			
0.080	4%	3%	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:	68	57	57			
% SAND:	28	40	41			
% FINES:	4	3	2			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			



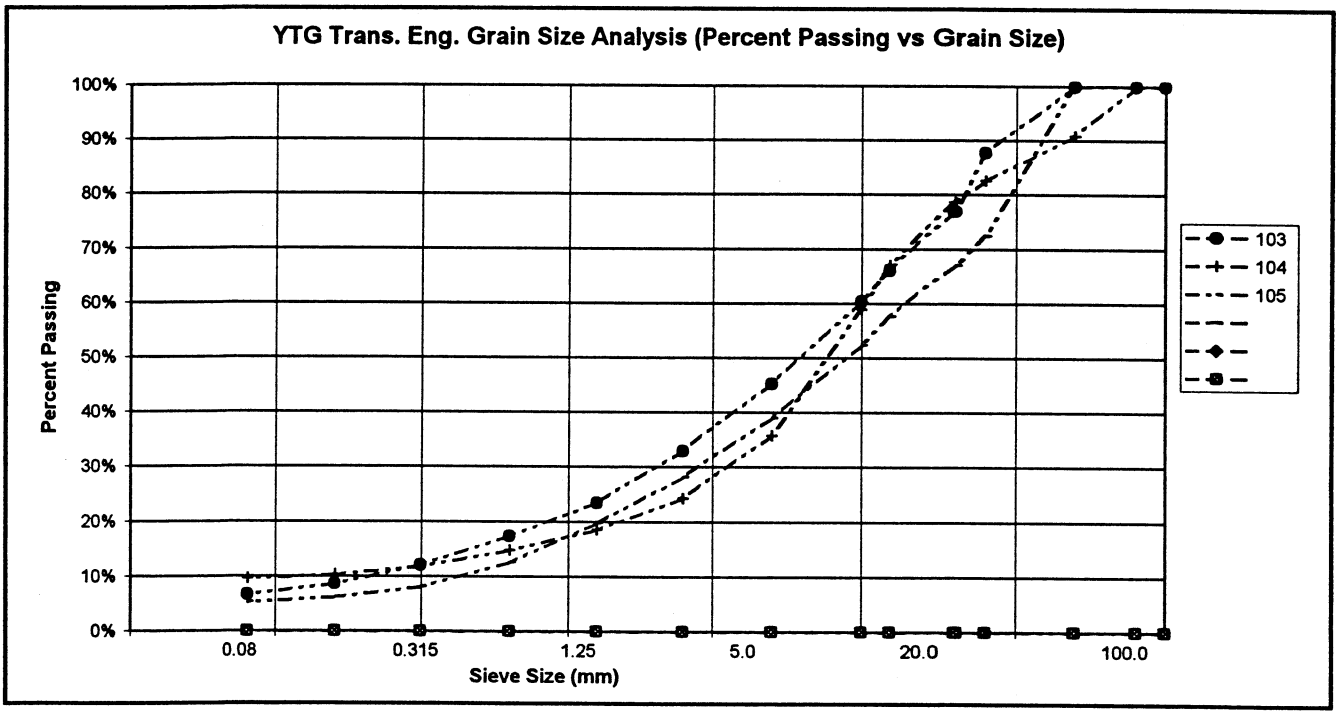
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 583-1541
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H Silver Creek		
DRILL UNIT:	Cat 320 Excavator		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/14

FIELD NO:	100	101	102			
LAB NO:	100	101	102			
DEPTH:	0.3-0.6	2.2-2.8	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)			



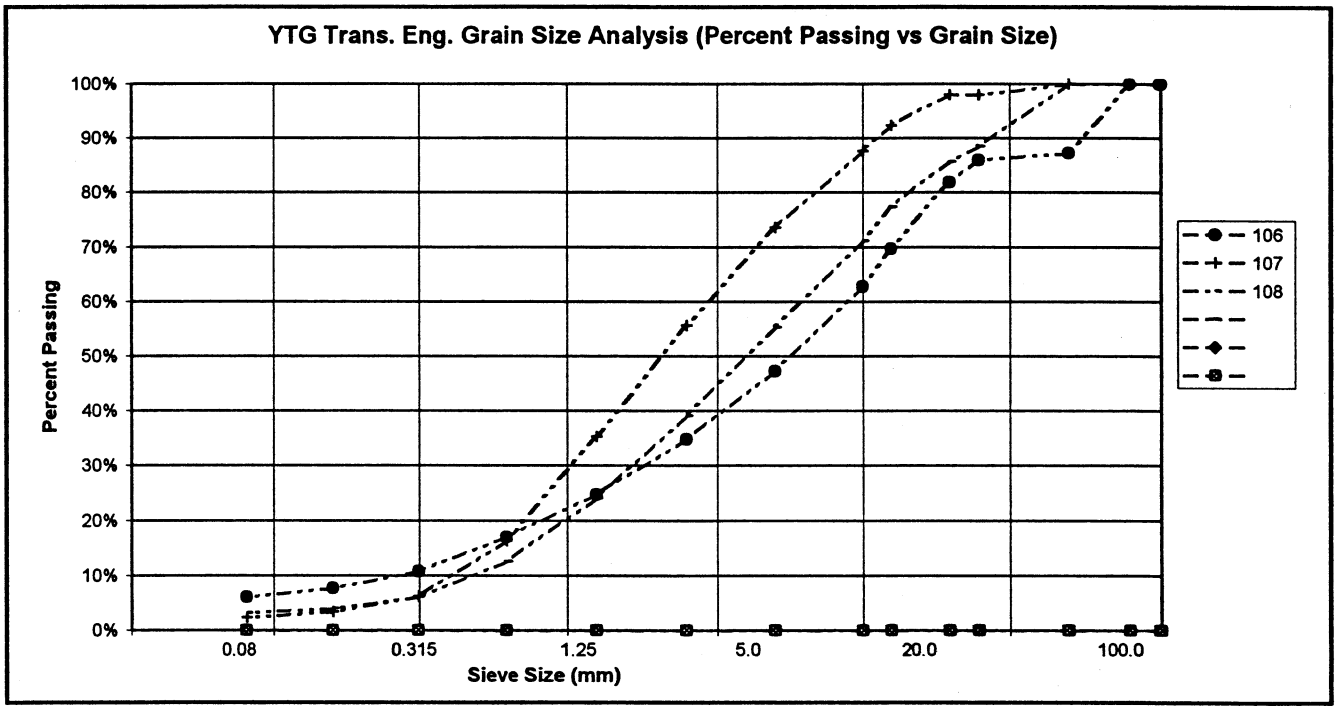
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 583-1542
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H Silver Creek		
DRILL UNIT:	Cat 320 Excavator		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/14

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)			



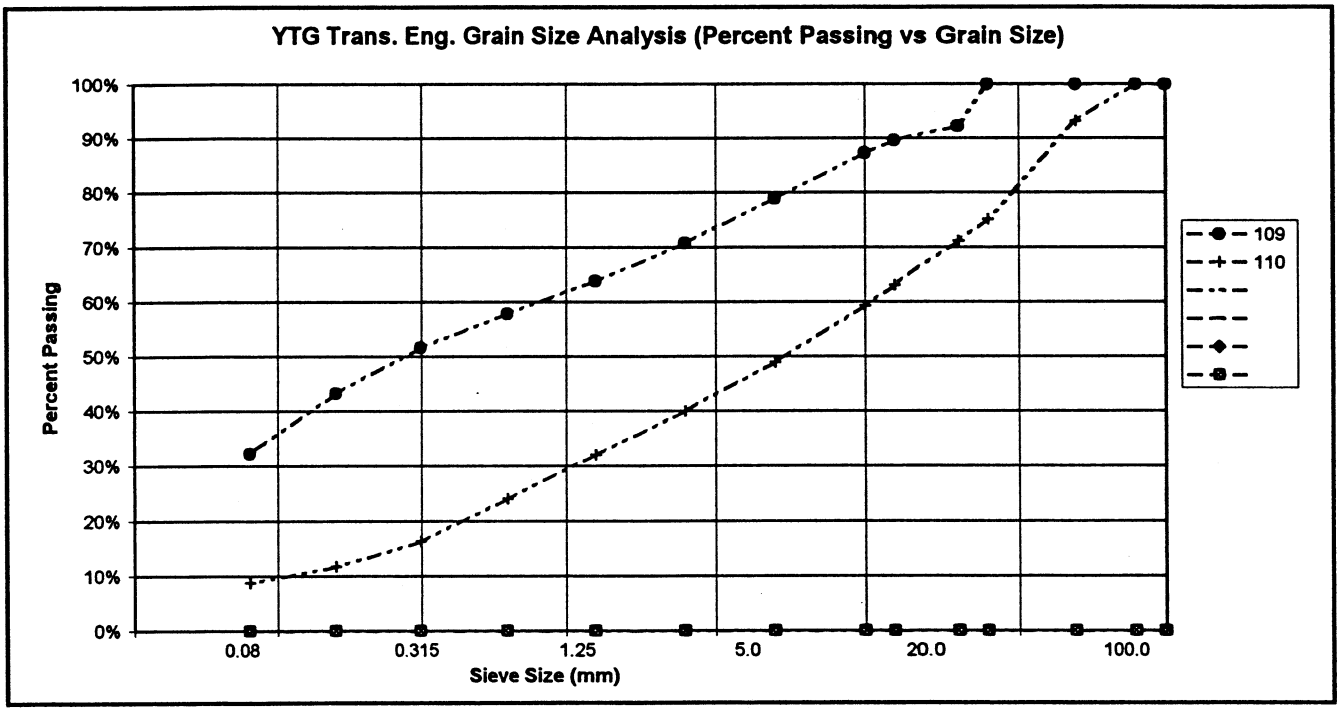
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 583-1543
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H Silver Creek		
DRILL UNIT:	Cat 320 Excavator		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/14

FIELD NO:	106	107	108			
LAB NO:	106	107	108			
DEPTH:	0.5-0.8	2.6-3.0	4.4-4.6			
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	87%	100%	100%			
25.0	86%	98%	88%			
20.0	82%	98%	86%			
12.5	70%	92%	77%			
10.0	63%	88%	71%			
5.0	47%	74%	55%			
2.5	35%	56%	39%			
1.25	25%	35%	24%			
0.630	17%	16%	13%			
0.315	11%	6%	6%			
0.160	8%	3%	4%			
0.080	6%	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:	53	26	45			
% SAND:	41	71	52			
% FINES:	6	2	3			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED SAND WITH GRAVEL (SP)	WELL-GRADED SAND WITH GRAVEL (SW)			



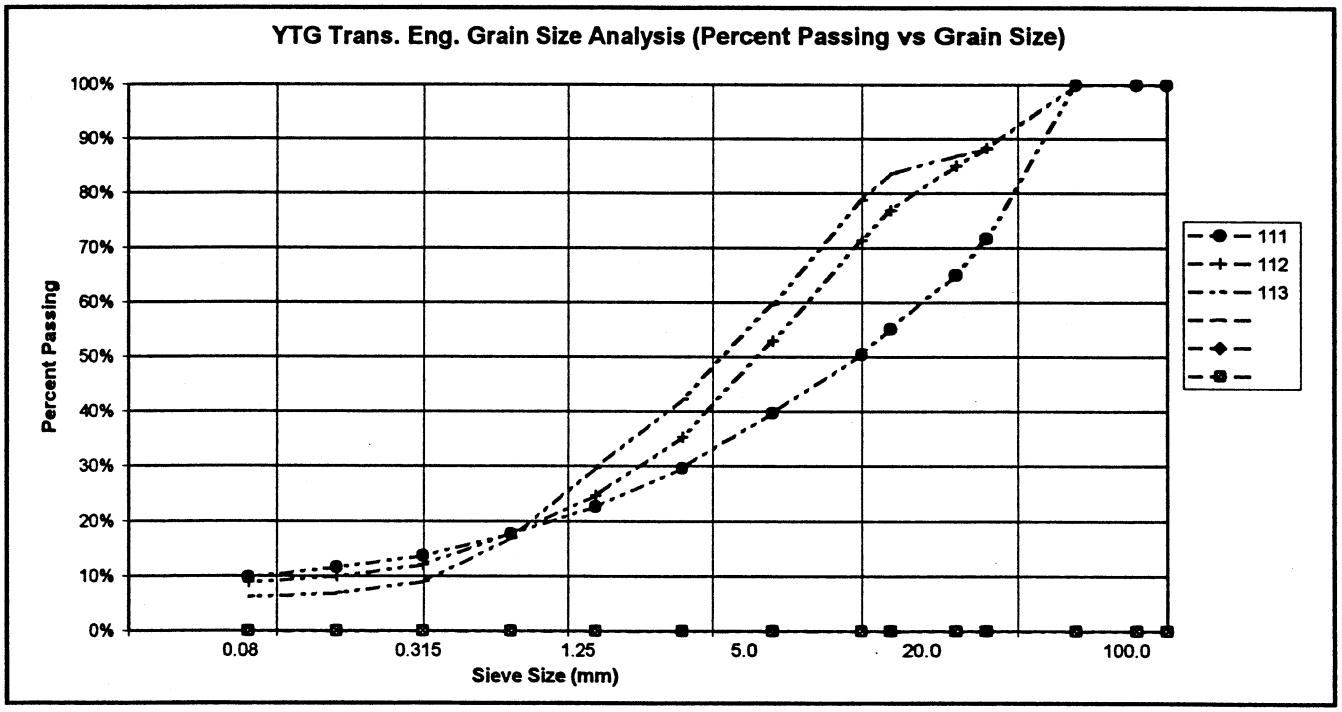
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 584-1544
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H		
DRILL UNIT:	CAT 320 L EXCAVATOR		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/15

FIELD NO:	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)				



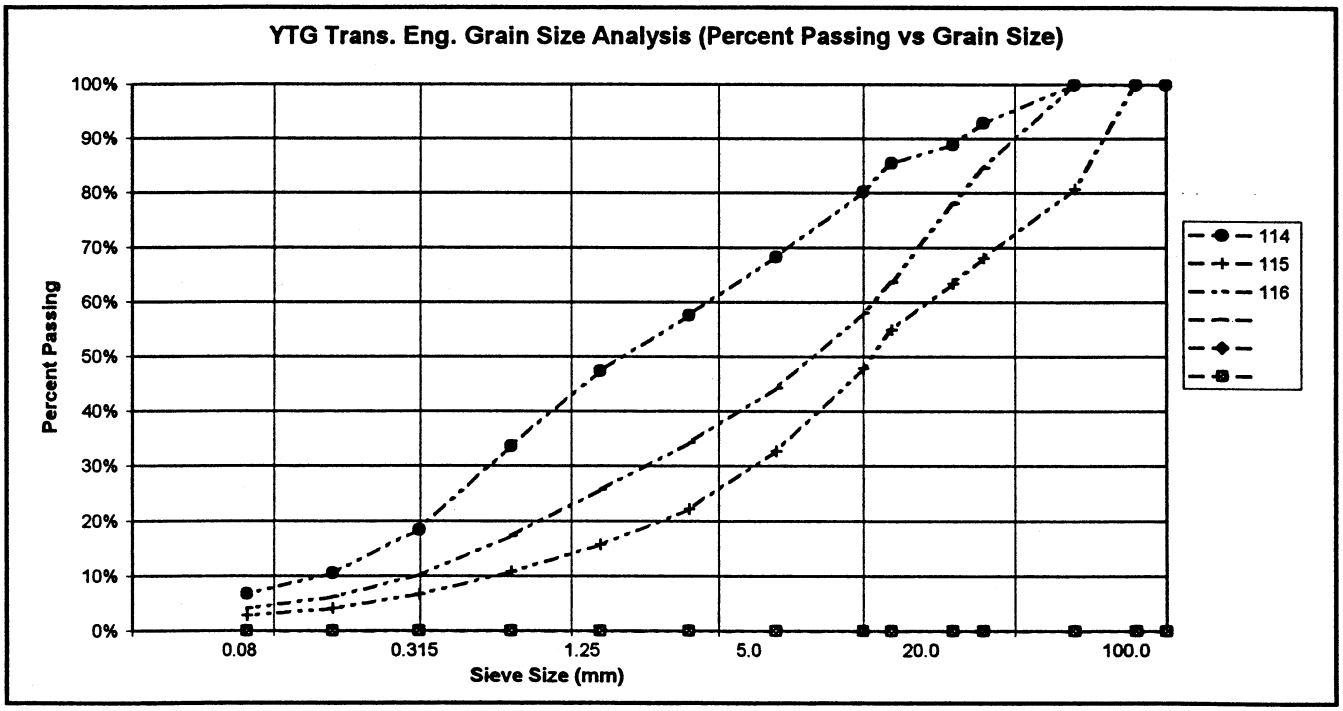
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 584-1545
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H		
DRILL UNIT:	CAT 320 L EXCAVATOR		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/15

FIELD NO:	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		HOLE No.: 584-1546
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:	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)			

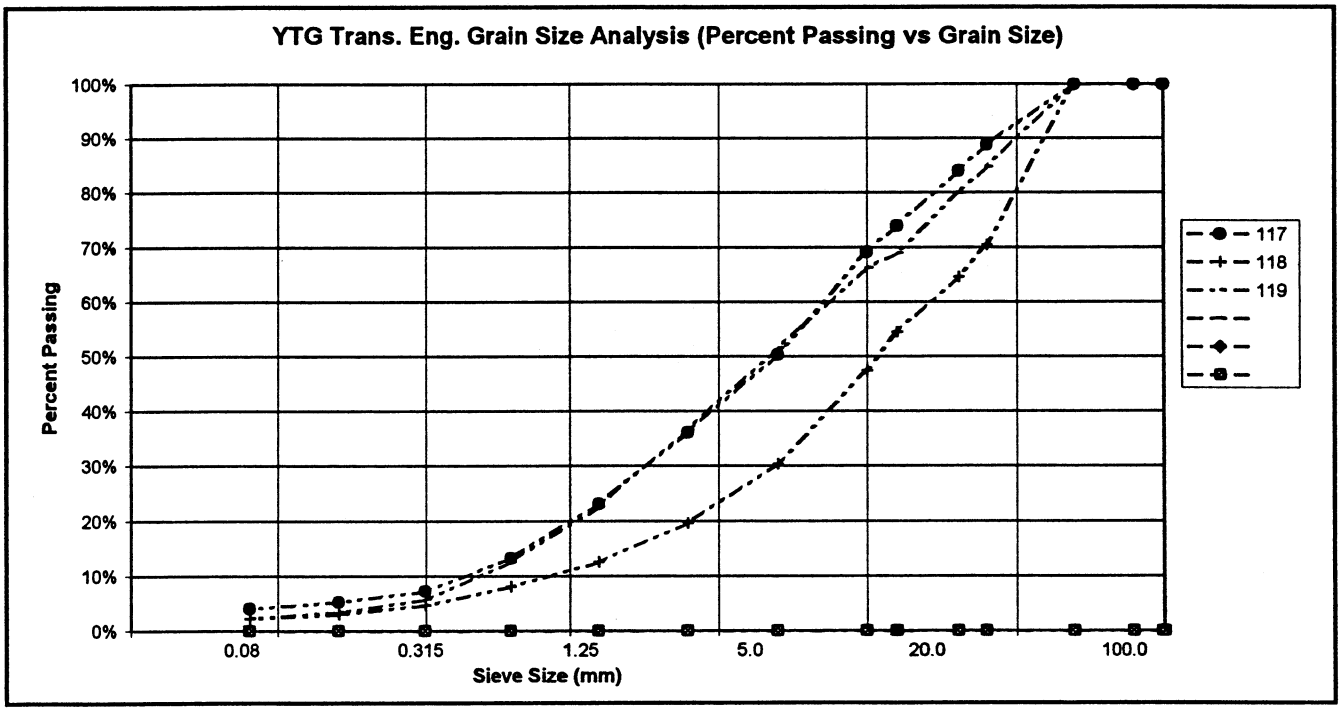


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H
DRILL UNIT: CAT 320 L EXCAVATOR
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 584-1547

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)			

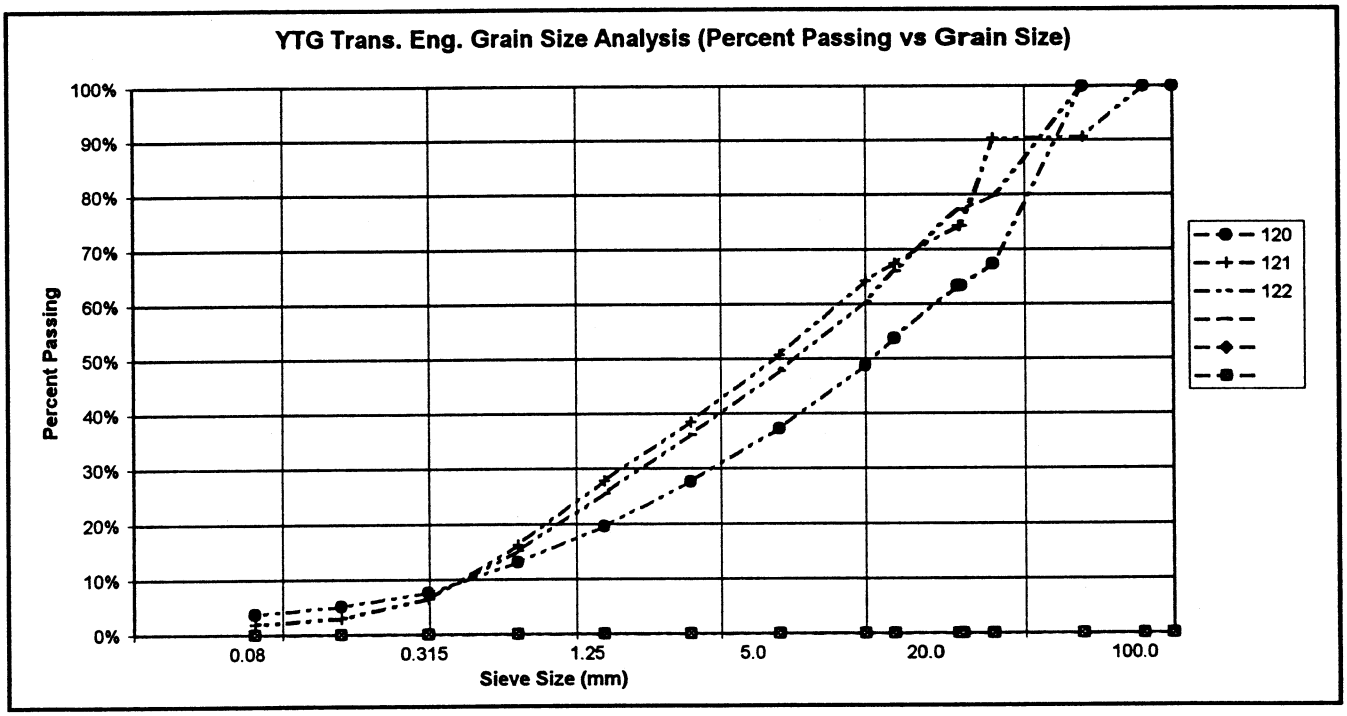


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H
DRILL UNIT: CAT 320 L EXCAVATOR
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 584-1548

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)			

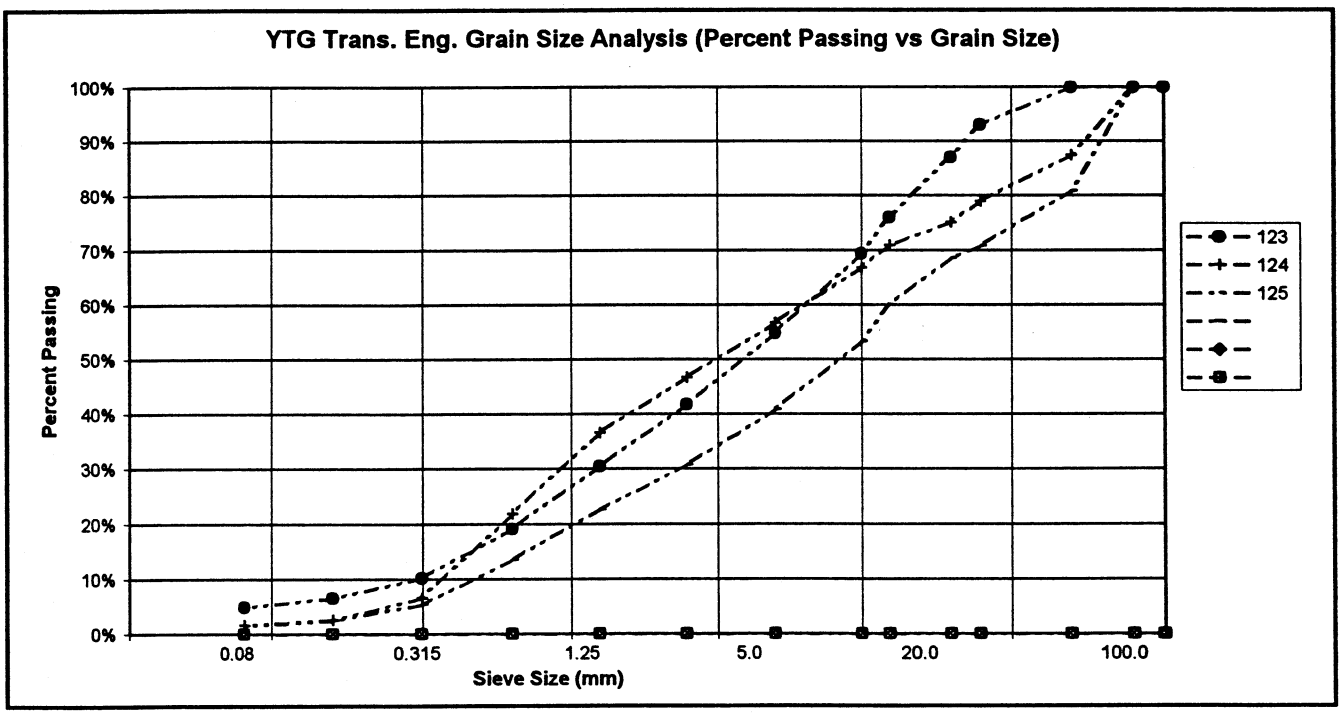


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H
DRILL UNIT: CAT 320 L EXCAVATOR
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

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)			

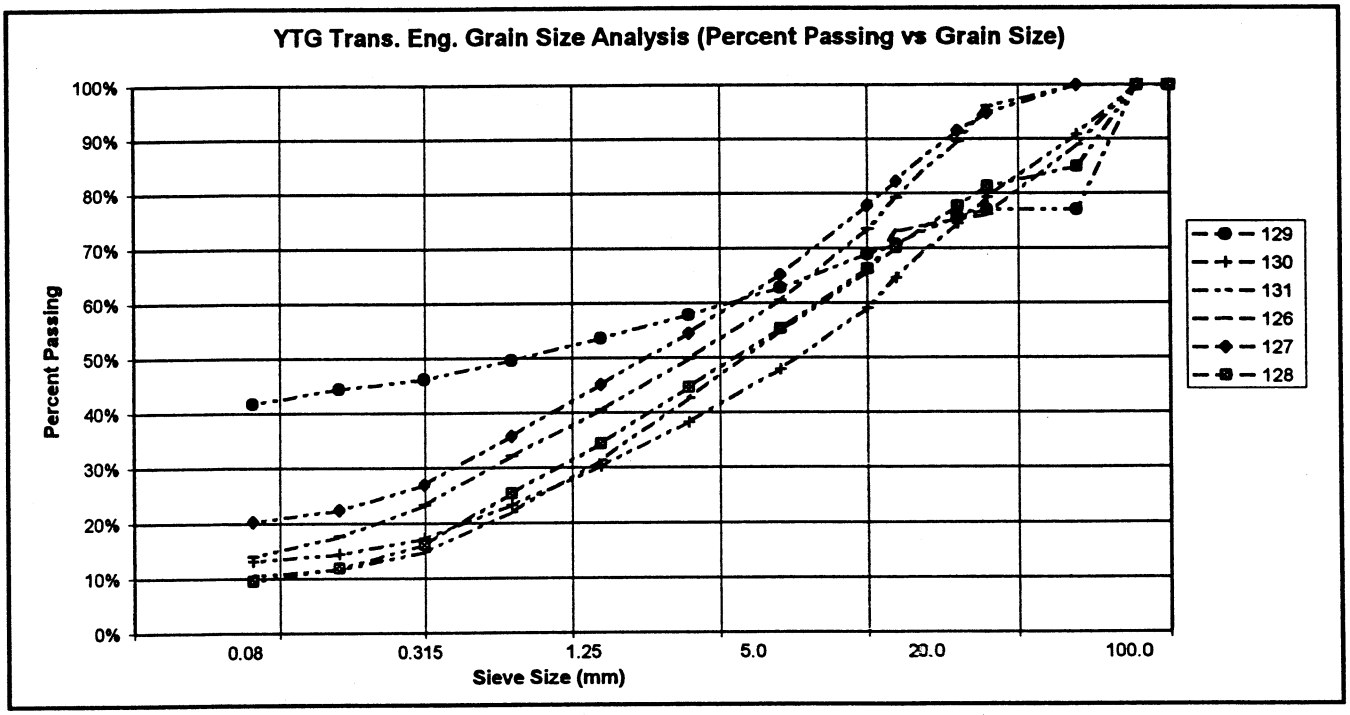


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H
DRILL UNIT: CAT 320 L EXCAVATOR
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 584-1550

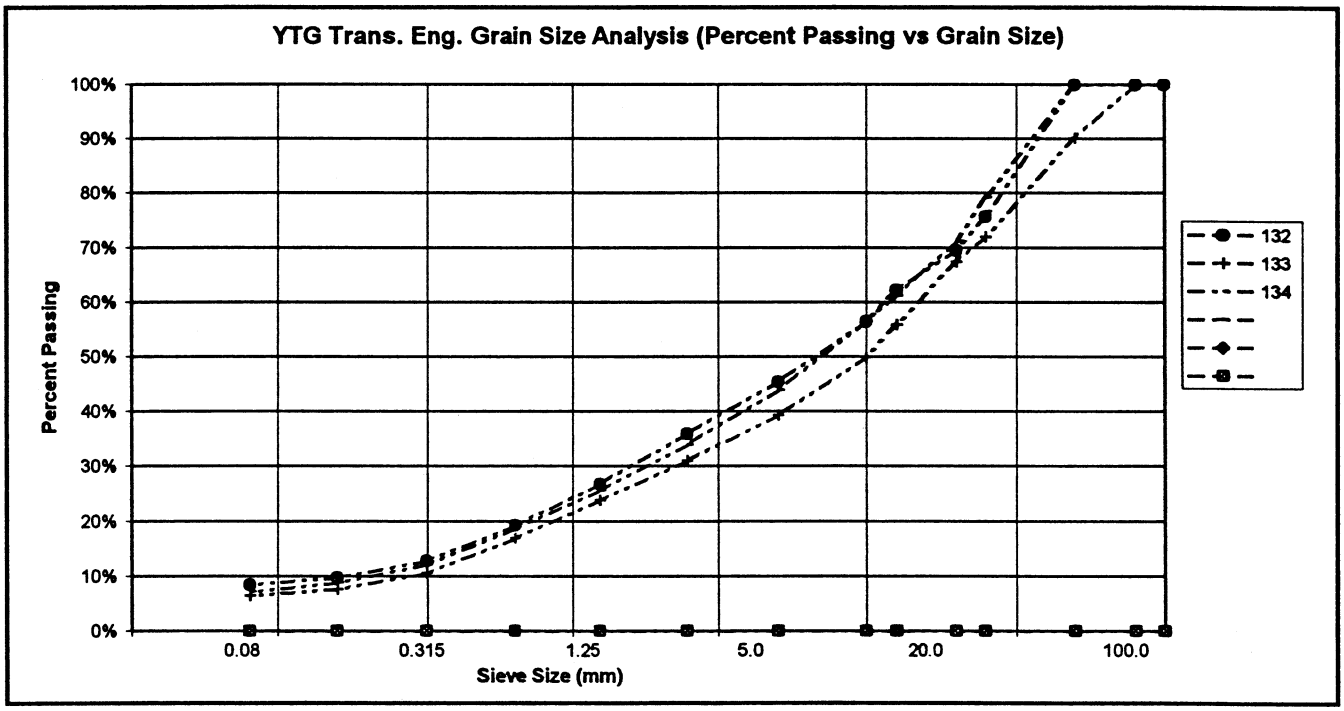
DATE COMP: 2001/03/15

FIELD NO:	129	130	131	126	127	128
LAB NO:	129	130	131	126	127	128
DEPTH:	1.8-2.2	3.4-3.7	4.6-5.0	6.6-7.0	7.7-8.0	8.9-9.3
TYPE:	BULK	BULK	BULK	BULK	BULK	BULK
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING
100.0	100%	100%	100%	100%	100%	100%
80.0	100%	100%	100%	100%	100%	100%
50.0	77%	91%	89%	100%	100%	85%
25.0	77%	79%	76%	96%	95%	81%
20.0	76%	74%	75%	90%	92%	78%
12.5	71%	65%	73%	79%	82%	70%
10.0	69%	59%	66%	73%	78%	66%
5.0	63%	48%	55%	60%	65%	55%
2.5	58%	38%	43%	50%	54%	45%
1.25	54%	30%	31%	41%	45%	34%
0.630	50%	23%	22%	32%	36%	25%
0.315	46%	17%	15%	23%	27%	16%
0.160	45%	14%	12%	18%	22%	12%
0.080	42%	13%	11%	14%	20%	9%
M.C.(%):						
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:	37	52	45	40	35	45
% SAND:	21	35	44	46	45	46
% FINES:	42	13	11	14	20	9
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 584-1551
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:	132	133	134			
LAB NO:	132	133	134			
DEPTH:	2.2-2.4	3.9-4.3	5.7-6.0			
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%	90%	100%			
25.0	76%	72%	79%			
20.0	69%	67%	71%			
12.5	62%	56%	61%			
10.0	57%	50%	56%			
5.0	45%	39%	44%			
2.5	36%	31%	34%			
1.25	27%	24%	26%			
0.630	19%	17%	19%			
0.315	13%	11%	12%			
0.160	10%	8%	9%			
0.080	8%	6%	7%			
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	61	56			
% SAND:	37	33	37			
% FINES:	8	6	7			
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)			

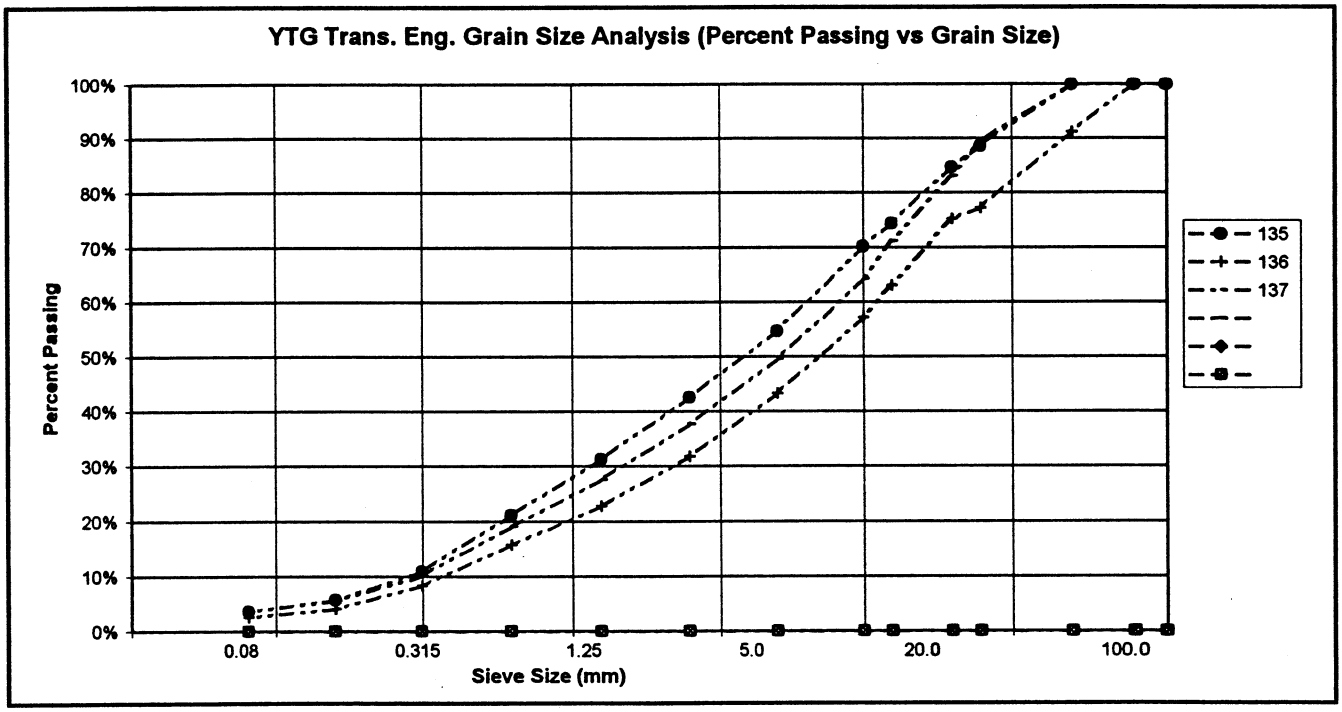


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1694 A/H
DRILL UNIT:	CAT 320 L EXCAVATOR
HOLE LOCATION:	SEE PLAN
LOGGED BY:	D.T.

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)			



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