GEOTECHNICAL INVESTIGATIONS

Highway Construction
Km 1674.0 to 1684.3 Alaska Highway #1
Yukon, 2003-2004
Volume 1 of 2

Yukon
Highways and Public Works
Transportation Engineering Branch

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Highway Construction
Km 1674.0 to 1684.3
Alaska Highway #1
Yukon, 2003-2004
Volume 1 of 2

This Data Package prepared for project viewing:

April, 2003

Transportation Engineering Branch
Geotechnical Services
461 Range Road
Whitehorse, Yukon

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Volume 1 of 2

INTRODUCTION

Investigation notes, classification methods and legends.

2000 & 2001 CENTRELINE TESTING ALASKA HIGHWAY

Subsurface Exploration and Testing Report Sheets are provided.
The reports for the Right-of-Way holes are arranged according to project location, starting at Km 1673+875 and increasing to Km 1684+450.

Laboratory Testing Result Sheets are provided.
The reports for the centreline holes are arranged according to test hole number, starting at 563-1743 and increasing to 594-979.

2000 & 2001	TEST HOLES 1743 to 1747	shown with prefix 563-
	TEST HOLES 1748 to 1751	shown with prefix 564-
	TEST HOLES 888 to 912	shown with prefix 586-
	TEST HOLES 913 to 925	shown with prefix 587-
	TEST HOLES 926 to 948	shown with prefix 588-
	TEST HOLES 949 to 973	shown with prefix 593-
	TEST HOLES 974 to 979	shown with prefix 594-

NOTE: 2000 & 2001 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.

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1978 CENTRELINE TESTING ALASKA HIGHWAY

A Test Hole Location Reference Table and Subsurface Exploration & Testing Report Sheets are provided.
The reports for the centreline holes are arranged according to project location, starting at Km 1673+993 and increasing to Km 1684+415.

1978	TEST HOLES 169 to 301	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.

QUARRY SOURCE Km 1674 RHS ALASKA HIGHWAY

Location Plan and Subsurface Exploration and Testing Report Sheets are provided.

Air Rotary Drill Testing

2000	TEST HOLES 866 to 869, 873 to 883	shown with prefix 576-

GRANULAR SOURCE Km 1691.3 RHS ALASKA HIGHWAY (Silver City)

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

Auger Testing

2001	TEST HOLES 1505 & 1507	shown with prefix 581-
2001	TEST HOLES 1518	shown with prefix 582-

Backhoe Testing

1991	TEST PITS 03 to 06	shown with prefix 152-
1992	TEST PITS 17 to 20	shown with prefix EBA-
2001	TEST PITS 1520 to 1523, 1529 to 1533 1535 to 1543	shown with prefix 583-
2001	TEST PITS 1544 to 1546, 1551 & 1552	shown with prefix 584-

INTRODUCTION

GEOTECHNICAL INVESTIGATION DATA

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

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

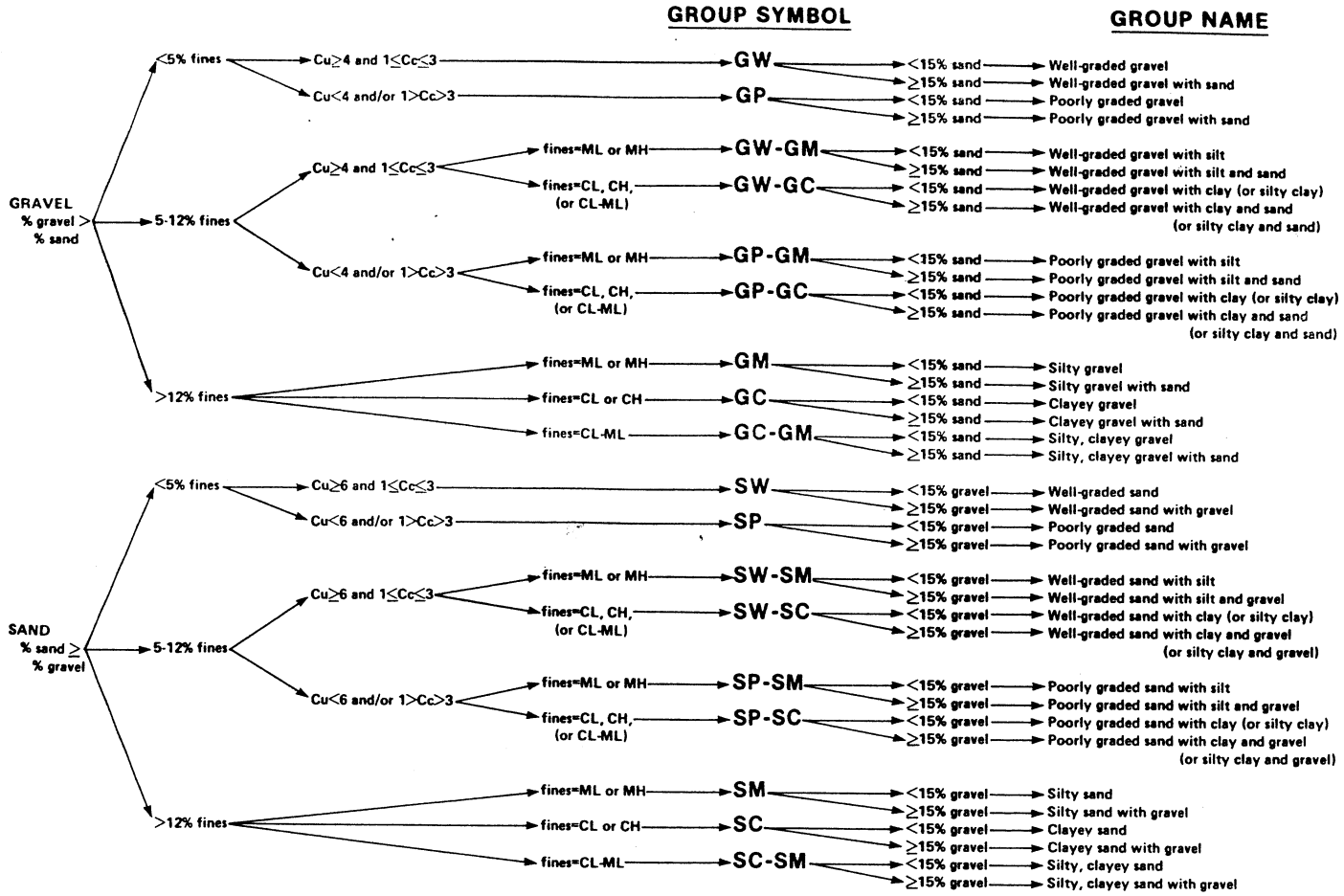
The sample laboratory testing data is provided to give detailed physical properties of selected retrieved samples within the subsurface profile. ***These tests may be conducted on disturbed samples and may exhibit properties different from the native materials. The sample classification may also vary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

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

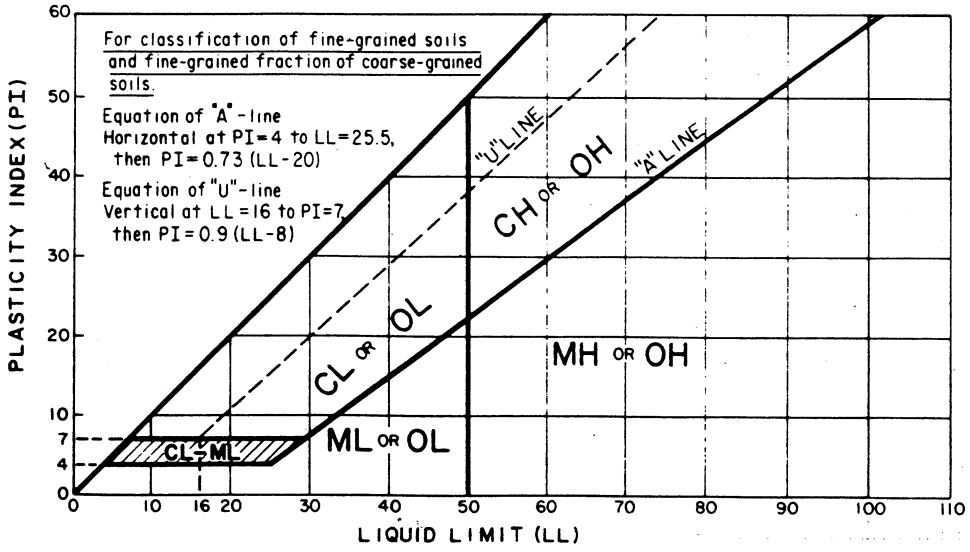
These descriptions and averages are not intended to be conclusive as to the nature of any material encountered, or to conditions between or around the test borings/pits.

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

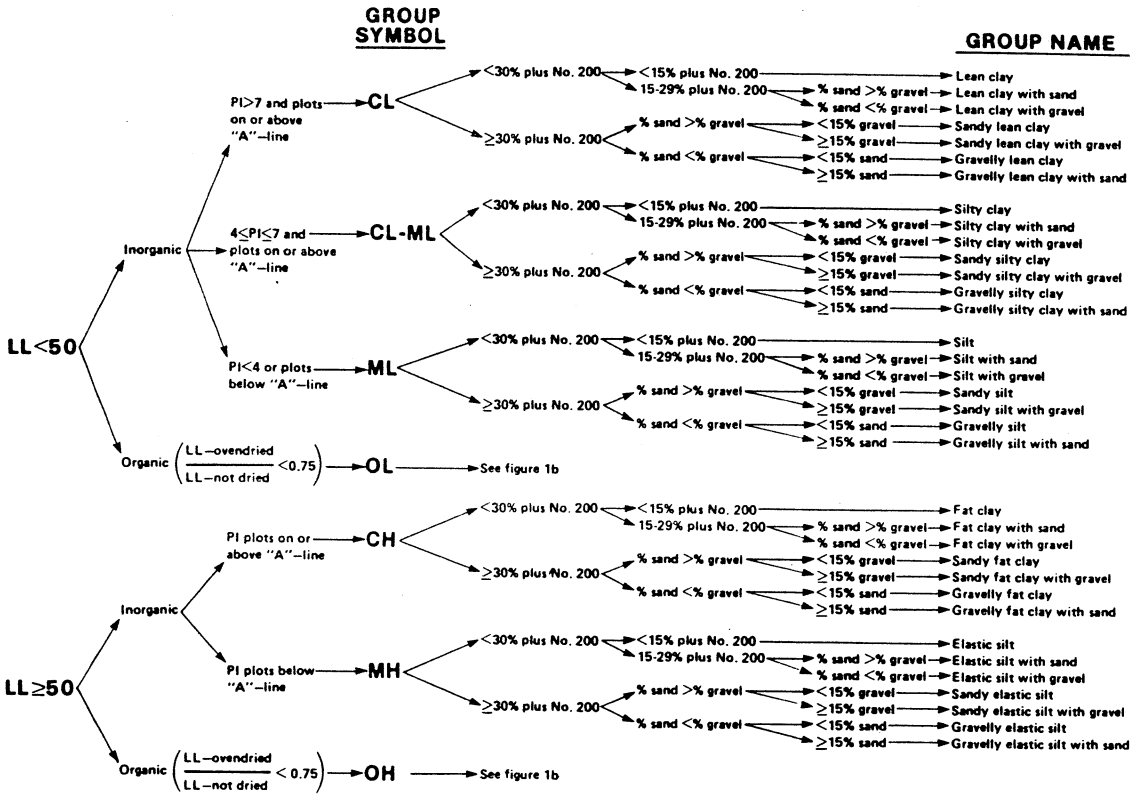
It is recommended that a site inspection, combined with consideration of the regional geology and climatic conditions be conducted. An evaluation of the investigation methods and development work done since the time of investigation should be done prior to interpreting the subsurface conditions at the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



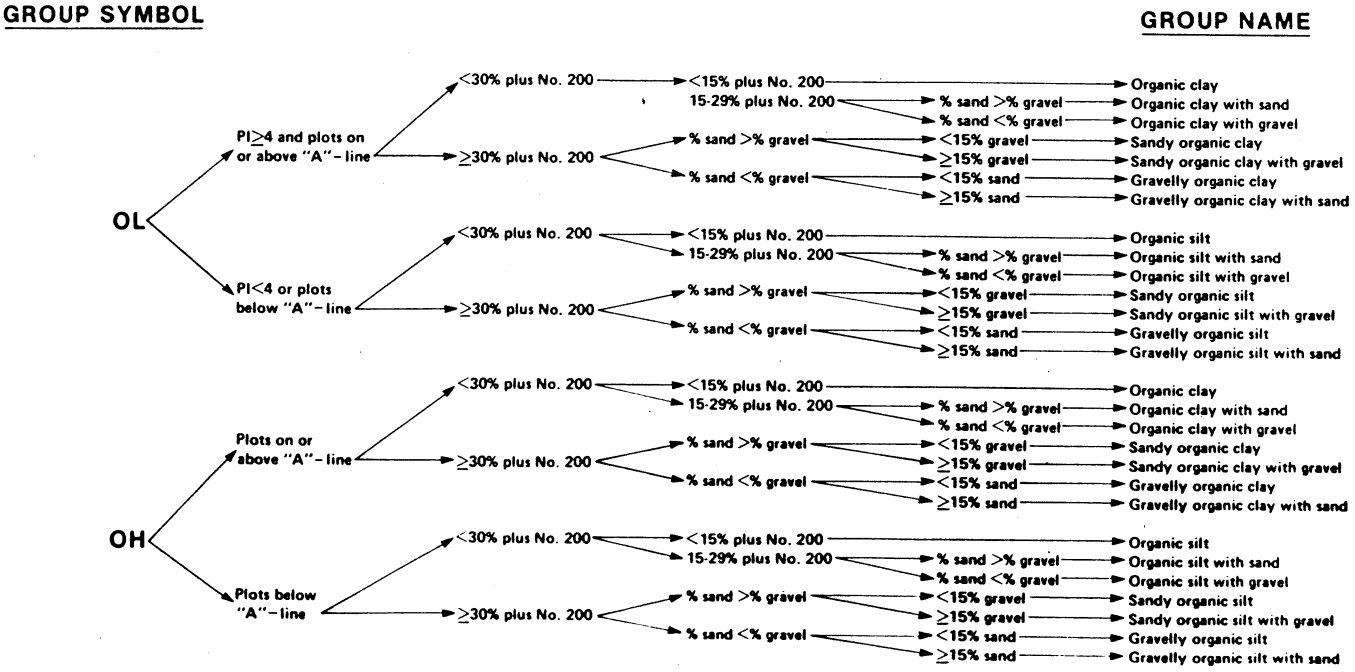
Flow chart for classifying coarse-grained soil.



Plasticity chart.



Flow chart for classifying fine-grained soil.



Flow chart for classifying organic soil.

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

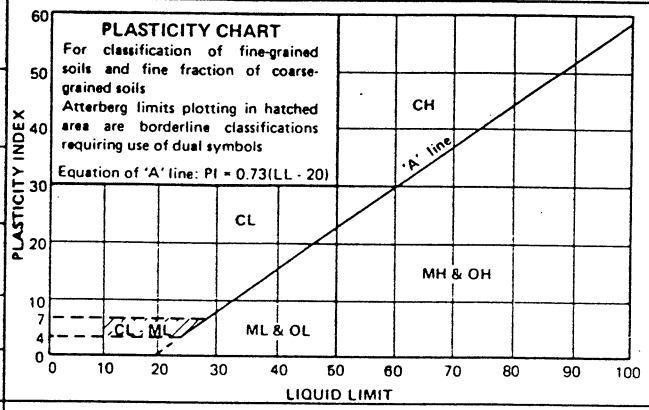
a. Based on the material passing the 3-in (75-mm) sieve.
b. If field sample contained cobbles and/or boulders, add "with cobbles and/or boulders" to group name.
c. Gravels with 5 to 12% fines require dual symbols
   GW-GM well graded gravel with silt
   GW-GC well graded gravel with clay
   GP-GM poorly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

Soil classification chart

UNIFIED SOIL CLASSIFICATION†

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES	CLASSIFICATION CRITERIA	
COARSE-GRAINED SOILS More than 50% retained on No. 200 sieve*	GRAVELS 50% or more of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines	$C_u = D_{60}/D_{10}$ Greater than 4 $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3	
			GP	Poorly-graded gravels and gravel-sand mixtures, little or no fines	Not meeting both criteria for GW	
		GRAVELS WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures	Atterberg limits plot below 'A' line or plasticity index less than 4	Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
			GC	Clayey gravels, gravel-sand clay mixtures	Atterberg limits plot above 'A' line and plasticity index greater than 7	
	SANDS More than 50% of coarse fraction passes No. 4 sieve	CLEAN SANDS	SW	Well-graded sands and gravelly sands, little or no fines	$C_u = D_{60}/D_{10}$ Greater than 6 $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3	
			SP	Poorly-graded sands and gravelly sands, little or no fines	Not meeting both criteria for SW	
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures	Atterberg limits plot below 'A' line or plasticity index less than 4	Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
			SC	Clayey sands, sand-clay mixtures	Atterberg limits plot above 'A' line and plasticity index greater than 7	
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		

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



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

GROUND ICE DESCRIPTION

ICE NOT VISIBLE

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

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

LEGEND
Soil  Ice

VISIBLE ICE LESS THAN 50% BY VOLUME

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

VISIBLE ICE GREATER THAN 50% BY VOLUME

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

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

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

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

Government of Yukon Transportation Engineering	LOGGED BY:	COMPLETION DEPTH: 6.0 m
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	Fig. No:	Page 1 of 1

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2000 & 2001 CENTRELINE TESTING
1673+875 to 1684+450
ALASKA HIGHWAY

Km 1673+875 to 1684+450 Alaska Highway #1

Auger Sample Results

SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-888
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1673+875	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) -olive -damp							
1.0	-sample 1 contaminated by organic from above	☒	1	● ▲	ML		◆	1.0
	SILT WITH SAND (ML) -olive brown -damp -noisy grindy drilling							
2.0	-smoother drilling below 2.4m							2.0
3.0		☒	2	● ▲	ML		◆	3.0
	-grindy drilling below 3.6m							
4.0	END HOLE @ 4.2m							4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-889
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1673+950	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) -olive brown -damp							
1.0		⊠	3	● ▲	ML		◆	1.0
	GRAVELLY SILT WITH SAND (ML) -olive -grindy drilling							
2.0								2.0
		⊠	4	● ▲	ML		■	
3.0								3.0
4.0								4.0
	END HOLE @ 4.5m -csp location rhs							
5.0								5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 01/03/27
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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-890
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1674+075	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 -damp -grindy drilling below 0.5m	⊠	5	● ▲	SM		■ ◆	
1.0								1.0
2.0	SANDY SILT (ML) -olive -damp							2.0
		⊠	6	● ▲	ML		■ ◆	
3.0								3.0
4.0		⊠	7	● ▲	ML		■ ◆	4.0
	END HOLE @ 4.5m Test hole adjacent to old borrow area RHS							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-891
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1674+150	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 (GM) -olive brown -damp -maximum 50mm material augered up -grindy drilling	⊠	8	● ▲	GM		◆ ■	
1.0								1.0
	SANDY SILT WITH GRAVEL TO SANDY SILT (ML) -olive -damp -smoother drilling	⊠	9	◆ ▲	ML		■ ◆	
2.0								2.0
3.0								3.0
4.0		⊠	10	● ▲	ML		■ ◆	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-892
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1674+300	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 (Vx) -smooth easy drilling							0.0
1.0	SILTY SAND (SM) -olive -wet	⊠	11	● ▲	SM		■ ◆	1.0
	-some gravel below 1.7m -grindy drilling below 1.7m	⊠	12	● ▲	SM		■ ◆	
2.0	-saturated below 1.7m							2.0
3.0								3.0
	-moist below 3.5m							
4.0								4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-893
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1674+400	ELEVATION: 0.00 (m)

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

SOIL DESCRIPTION

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC -frozen (Vx)							0.0
1.0	SANDY SILT WITH GRAVEL (ML) -olive -free water -some grindy drilling below 1.8m	⊠	13	● ▲	ML	▥	◆	1.0
2.0								2.0
3.0	SANDY SILT (ML) -olive -moist -less grindy drilling below 3.5m	⊠	14	● ▲	ML	▥	■ ◆	3.0
4.0								4.0
	END HOLE @ 4.5m -water level up to .3m @ EOH							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-894
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1674+500	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 (ML) -olive -wet to saturated							
1.0		⊠	15	● ▲	ML		● ■	1.0
	SILTY GRAVEL WITH SAND (GM) -olive -saturated -maximum 50mm material augered up -grindy drilling							
2.0								2.0
3.0		⊠	16	● ▲	GM		◆ ■	3.0
	SANDY SILT (ML) -olive -moist -smooth drilling							
4.0		⊠	17	● ▲	ML		■ ◆	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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LOGGED BY: K.J	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 01/03/27
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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-895
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1674+600	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 & GRAVEL -brown -humid -grindy drilling							
1.0	SILT WITH SAND TO SILT (ML) -olive -humid -smooth drilling	⊠	18	● ▲	ML	▯	■	1.0
2.0								2.0
3.0	-damp below 2.9m	⊠	19	● ▲	ML	▯	■	3.0
	SILTY GRAVEL WITH SAND (GM) -olive -damp							
4.0		⊠	20	● ▲	GM	▯	◆ ■	4.0
	END HOLE @ 4.4m							
5.0								5.0
6.0								6.0

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LOGGED BY: K.J	COMPLETION DEPTH: 4.4 m
REVIEWED BY:	COMPLETE: 01/03/28
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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-896
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1674+700	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 (ML) -olive -damp -slightly grindy drilling							
1.0		⊠	21	● ▲	ML		■ ◆	1.0
2.0								2.0
3.0								3.0
	SILTY GRAVEL WITH SAND GM) -olive -damp -maximum 80mm material augered up -grindy drilling							
4.0		⊠	22	● ▲	GM		◆ ■	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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LOGGED BY: K.J	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 01/03/28
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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-897
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1674+805	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 -old stripping pile material				
1.0	SILTY SAND WITH GRAVEL (SM) -brown -humid	⊠	23	SM	
2.0	SANDY SILT (ML) -olive -moist -grindy drilling				
3.0		⊠	24	ML	
4.0	SILTY GRAVEL WITH SAND (GM) -olive -moist	⊠	25	GM	
5.0	END HOLE @ 4.5m				
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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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-898
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1674+900	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) -olive brown -damp -some grindy drilling below 1.0m							
1.0		⊠	26	● ▲	ML		■ ◆	1.0
2.0	SILTY GRAVEL WITH SAND (GM) -olive -damp -maximum 80mm material augered up							2.0
3.0		⊠	27	● ▲	GM		◆ ■	3.0
	SILTY SAND WITH GRAVEL (SM) -olive -moist							
4.0		⊠	28	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: K.J	COMPLETION DEPTH: 4.5 m
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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-899
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1675+000	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
1.0	SILT WITH SAND TO SANDY SILT (ML) -olive brown -wet	⊠	29	● ▲	ML		■ ◆	1.0
2.0								2.0
3.0	-moist below 2.9m	⊠	30	● ▲	ML		■ ◆	3.0
4.0								4.0
5.0	END HOLE @ 4.5 Test hole adjacent to old stripping pile							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: K.J	COMPLETION DEPTH: 4.5 m
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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-900
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1675+100	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 AND SILT							0.0
	SILTY GRAVEL WITH SAND (GM) -olive -moist							
1.0		⊠	31	● ▲	GM		◆ ■	1.0
2.0								2.0
	SILTY SAND WITH GRAVEL TO SANDY SILT WITH GRAVEL (SM)-(ML) -olive -wet -smooth drilling							
3.0		⊠	32	● ▲	SM		■ ◆	3.0
4.0								4.0
		⊠	33	● ▲	ML		■ ◆	
	END HOLE @ 4.5m Test hole on small stripping pile adjacent to CPS location							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-901
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1675+200	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					0.0
1.0	SILT WITH SOME ORGANICS (ML) -dark brown -moist	⊠	34	ML		1.0
2.0	SILTY GRAVEL WITH SAND (GM) -olive -wet to saturated -maximum 50mm material augered up -grindy drilling	⊠	35	GM		2.0
3.0						3.0
4.0	SANDY SILT (ML) -greyish olive -moist -smooth drilling	⊠	36	ML		4.0
5.0	END HOLE @ 4.5m Note: unable to collar t.h. at .2m, install new bit and move 5m upchain					5.0
6.0						6.0

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-902
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1675+300	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 Vx -seasonal frost to 0.4m -smooth drilling below .4m -some grindy drilling below .8m							
1.0		⊠	37	● ▲	SM		■ ◆	1.0
2.0		⊠	38	● ▲	SM		■ ◆	2.0
3.0								3.0
	SILTY GRAVEL WITH SAND (GM) -olive -wet							
4.0		⊠	39	● ▲	GM		◆ ■	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-903
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1675+400	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 AND SILT -seasonal frost to 0.5m							0.0
	SANDY SILT WITH GRAVEL TO SANDY SILT (ML) -olive -moist (frozen)? -easier drilling							
1.0	-grindy drilling below 1.3m	⊠	40	● ▲	ML		■ ◆	1.0
2.0								2.0
3.0	-frozen (Vx)-(Vs) below 2.9m	⊠	41	● ▲	ML		■ ◆	3.0
4.0	-frozen (Vx) below 4.0m							4.0
		⊠	42	● ▲	ML		■ ◆	
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-904
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1675+500	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 SILT WITH SAND (ML) -olive brown -frozen (Nb)	⊠	43	● ▲	ML		■ ◆	
1.0								1.0
2.0								2.0
	-frozen (Vs) below 2.5m	⊠	44	● ▲	ML		■ ◆	
3.0								3.0
4.0	-frozen (Nb) below 4.0m	⊠	45	● ▲	ML		■ ◆	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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LOGGED BY: K.J	COMPLETION DEPTH: 4.5 m
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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-905
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1675+600	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 -smooth easy drilling SANDY SILT (ML) -olive -moist							0.0
1.0		⊠	46	● ▲	ML		■ ◆	1.0
2.0								2.0
3.0								3.0
4.0		⊠	47	● ▲	ML		■ ◆	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-906
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION: 1675+675	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 -free water							0.0
1.0	SANDY SILT (ML) -olive -moist	⊠	48	● ▲	ML	▥	■ ◆	1.0
2.0								2.0
3.0	-moist to wet below 2.8m -sample 49 contaminated by organic and water from above	⊠	49	● ▲	ML	▥	■ ◆	3.0
4.0		⊠	50	● ▲	ML	▥	■ ◆	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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LOGGED BY: K.J	COMPLETION DEPTH: 4.5 m
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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-907
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1675+790	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	ICE -seasonal glaciation							0.0
1.0 ▼								1.0 ▼
	ORGANIC WITH SAND AND GRAVEL -original ground @ 1.5m -free water -grindy drilling							
2.0	-no sample recovered material washed away							2.0
3.0	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM)							3.0
4.0	-blackish olive -free water -maximum 50mm material augered up -sample 51 contaminated from above	⊠	51	●	GP-GM	▨	◆ ■	4.0
	END HOLE @ 4.5m -culvert location Note: water level at 1.0m @ EOH							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-908
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1675+900	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 -saturated							0.0
	SANDY SILT (ML) -olive -wet							
1.0		⊠	52	● ▲	ML		■ ◆	1.0
2.0								2.0
3.0								3.0
	SILTY SAND WITH GRAVEL (SM) -olive -wet -more grindy drilling from 3.2-4.0m							
4.0		⊠	53	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-909
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1676+000	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 -smooth drilling							0.0
	SILTY GRAVEL WITH SAND (GM) -dark olive -saturated							
1.0	-some grindy drilling below 1.0m	⊠	54	● ▲	GM		◆ ■	1.0
2.0								2.0
3.0	SANDY SILT (ML) -dark brown -wet -smooth drilling below 3.0m							3.0
4.0		⊠	55	● ▲	ML		■ ◆	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-910
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1676+100	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	ICE –seasonal glaciation							0.0
1.0	ORGANIC WITH SILT AND ICE –frozen –sample 56 – 116% moisture –soft smooth easy drilling below 1.5m	⊠	56	▲●	ML		◆	1.0
2.0								2.0
3.0	ORGANIC WITH SILT, SAND, AND GRAVEL –dark grey –saturated –some grindy drilling below 2.3m –more grindy below 3.0M	⊠	57	● ▲	ML		■ ◆	3.0
4.0	SILTY GRAVEL WITH SAND (GM) –dark grey –free water –maximum 80mm material augered up	⊠	58	▲	GM		◆■	4.0
5.0	END HOLE @ 4.5m –culvert location							5.0
6.0								6.0

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LOGGED BY: K.J	COMPLETION DEPTH: 4.5 m
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01/11/29 03:16PM

SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-911
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1676+200	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 TO SILTY SAND (GM)-(SM) -brown -damp -some grindy drilling							
1.0		⊠	59	● ▲	GM		◆ ■	1.0
2.0	-olive below 2.8m -damp to moist below 2.8m							2.0
3.0		⊠	60	● ▲	SM		■ ◆	3.0
	-wetter material 3.3 to 3.9m							
4.0	-saturated below 3.9m							4.0
	-sample 61 contaminated with H20 from above	⊠	61	● ▲	SM		■ ◆	
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 586-912
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1676+300	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 TO SILTY SAND WITH GRAVEL (ML)-(SM) -brown -humid							
1.0		⊠	62	● ▲	ML		■ ◆	1.0
2.0								2.0
3.0		⊠	63	● ▲	ML		■ ◆	3.0
4.0	-damp below 4.0m							4.0
		⊠	64	● ▲	SM		■ ◆	
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 587-913
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1676+355	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 SILT (ML) -brown -damp							
1.0		⊠	65	● ▲	ML		◆	1.0
2.0	-olive brown -wet	⊠	66	● ▲	ML		◆	2.0
3.0								3.0
	SANDY SILT WITH GRAVEL (ML) -olive brown -moist-wet -grindy drilling							
4.0								4.0
	-sample 67 contaminated with water from above	⊠	67	● ▲	ML		■ ◆	
	END HOLE @ 4.5m -culvert location							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 587-914
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1676+425	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 (ML) -olive brown -damp -grindy drilling							
1.0		⊠	68	● ▲	ML		■ ◆	1.0
2.0								2.0
3.0								3.0
4.0		⊠	69	● ▲	ML		■ ◆	4.0
	END HOLE @4.5m							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 587-915
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1676+500	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 (ML)-(SM) -olive brown -damp -grindy drilling below .4m	⊠	70	● ▲	ML		■ ◆	
1.0								1.0
2.0								2.0
3.0								3.0
4.0		⊠	71	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

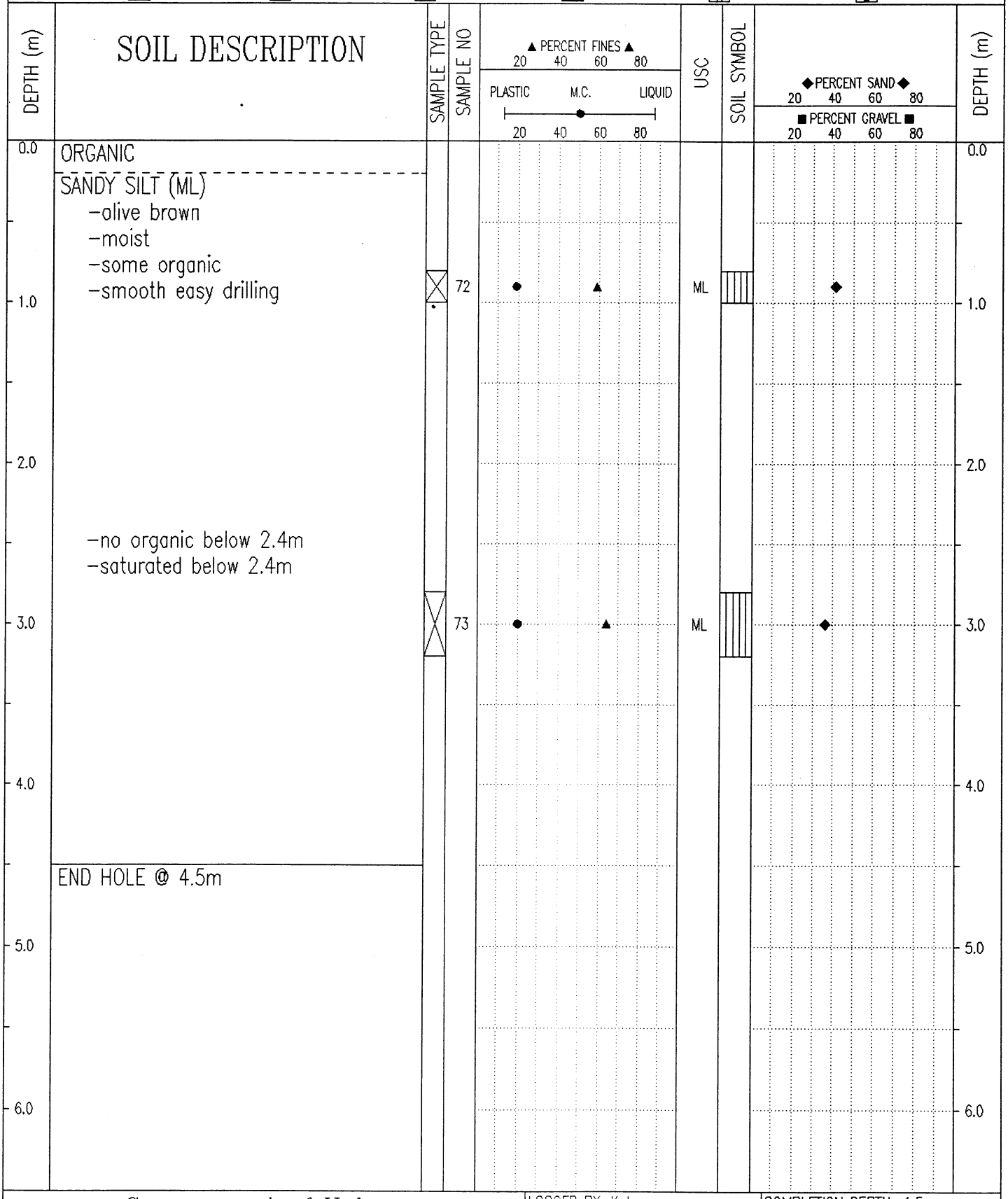
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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 587-916
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1676+550	ELEVATION: 0.00 (m)

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



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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 587-917
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1676+675 17M RIGHT	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 TO SANDY SILT (ML)							
	-olive							
1.0	-humid to damp	⊠	74	● ▲	ML	▥	■ ◆	1.0
2.0								2.0
3.0								3.0
4.0	-damp below 4.0m	⊠	75	● ▲	ML	▥	■◆	4.0
5.0								5.0
6.0								6.0
7.0		⊠	76	● ▲	ML	▥	■ ◆	7.0
	END HOLE @ 7.5m							
	Note: some 80mm gravel augered up							
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 587-918
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1676+750 35M RIGHT	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
	GRAVELLY SILT WITH SAND TO SANDY SILT (ML) -olive brown -humid -grindy drilling below 0.3m							
1.0		☒	77	● ▲	ML	▥	◆ ■	1.0
2.0								2.0
3.0								3.0
4.0		☒	78	● ▲	ML	▥	■ ◆	4.0
	-less grindy drilling below 4.5m -damper material 4.5-6.0m							
5.0								5.0
6.0	-grindy drilling below 6.0m							6.0
7.0		☒	79	● ▲	ML	▥	■ ◆	7.0
	END HOLE @ 7.5m							
8.0								8.0
9.0								9.0
10.0								10.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 587-919
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1676+825	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) -dark olive -humid -grindy drilling							
1.0		⊠	80	● ▲	SM		■ ◆	1.0
2.0	-brown below 2.2m -damp below 2.2m							2.0
3.0		⊠	81	● ▲	SM		■ ◆	3.0
4.0		⊠	82	● ▲	ML		■ ◆	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 587-920
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION: 1676+925	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	ICE							0.0
	ORGANIC							
1.0	SILT WITH SAND TO SANDY SILT (ML) -olive -saturated		83	● ▲	ML		◆	1.0
2.0 ▼	-trace grindy drilling below 2.0m							2.0 ▼
	-wet below 2.6m		84	● ▲	ML		■ ◆	
3.0	SILTY SAND WITH GRAVEL (SM) -olive brown -wet -grindy drilling							3.0
4.0	-saturated below 4.0m							4.0
	-sample 85 contaminated by water from above		85	● ▲	SM		■ ◆	
	END HOLE @ 4.5m -water level at 2.0m @ EOH -culvert location							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 587-921
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1677+000	ELEVATION: 0.00 (m)

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

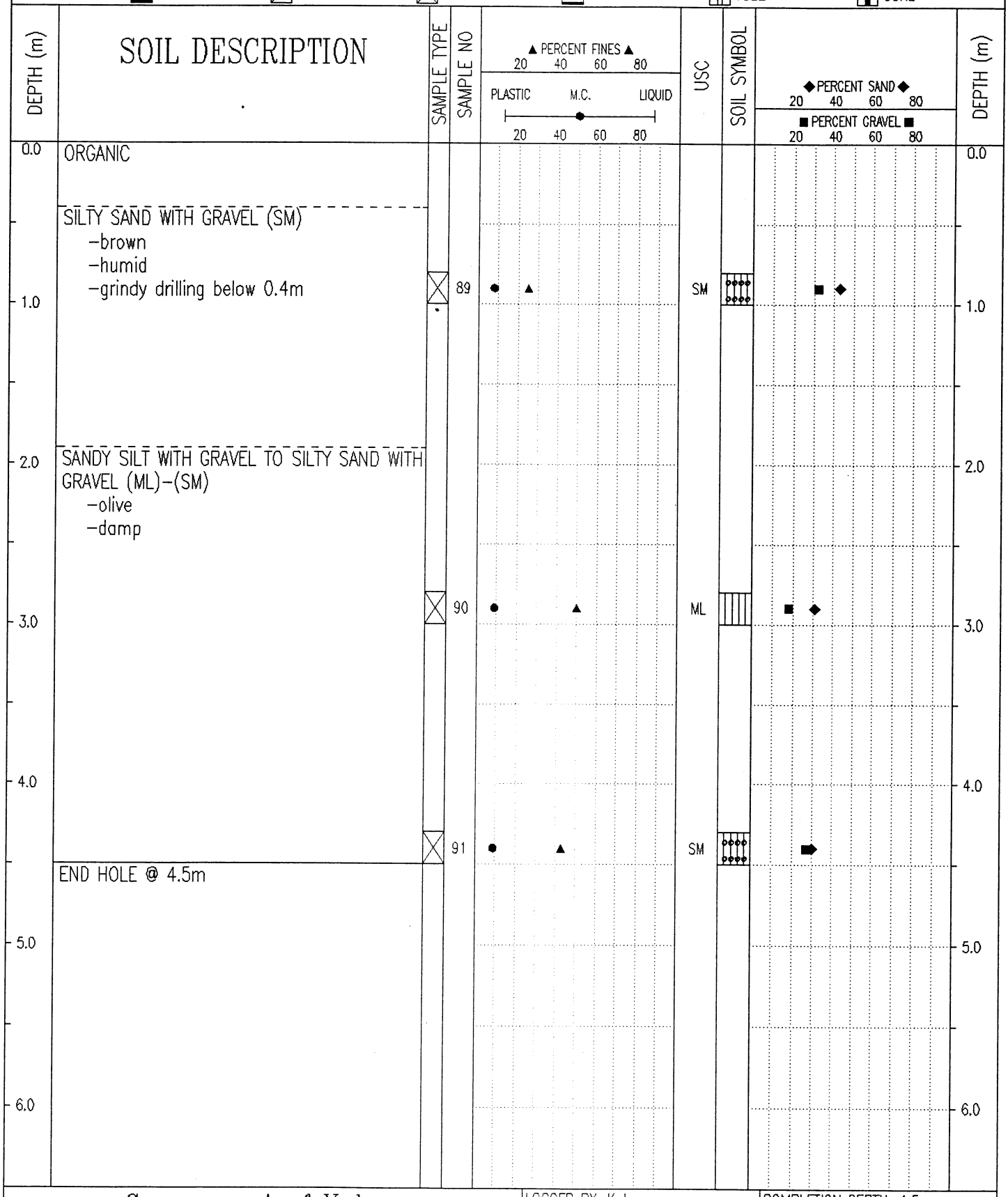
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SILT WITH SAND TO SANDY SILT (ML) -olive -saturated							
1.0		⊠	86	● ▲	ML		◆	1.0
2.0								2.0
3.0	-stratified -some grindy drilling below 3.0m	⊠	87	● ▲	ML		■ ◆	3.0
	SILTY GRAVEL WITH SAND (GM) -olive brown -free water -maximum 25mm material augered up							
4.0		⊠	88	● ▲	GM		◆ ■	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 587-922
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1677+150	ELEVATION: 0.00 (m)

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



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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 587-923
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1677+230	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 (GM) -brown -damp -grindy drilling below 0.6m	⊠	92	● ▲	GM		◆ ■	
1.0								1.0
	SANDY SILT TO SANDY SILT WITH GRAVEL (ML) -olive -damp -easy drilling below 1.5m	⊠	93	● ▲	ML		■ ◆	
2.0								2.0
3.0								3.0
4.0	-moist below 4.0m	⊠	94	● ▲	ML		■ ◆	4.0
	END HOLE @ 4.5m -culvert location							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: K.J	COMPLETION DEPTH: 4.5 m
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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 587-924
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1677+275 35M RIGHT	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
	GRAVELLY SILT WITH SAND (ML) -olive brown -humid -grindy drilling below 0.3m	⊠	95	● ▲	ML		◆ ■	
1.0								1.0
2.0	SILTY GRAVEL WITH SAND (GM) -olive brown -humid							2.0
3.0		⊠	96	● ▲	GM		◆ ■	3.0
4.0								4.0
	-some 80mm material augered up -very rough slow drilling below 4.5m	⊠	97	● ▲	GM		◆ ■	
5.0	END HOLE @ 5.0m -refusal							5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 587-925
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1677+305 15M RIGHT	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 -humid -grindy drilling below 0.4m							
1.0		⊠	98	● ▲	SM		■ ◆	1.0
	-rough drilling below 1.5m							
2.0								2.0
3.0								3.0
	-damp below 3.5m							
4.0		⊠	99	● ▲	SM		■ ◆	4.0
5.0								5.0
6.0		⊠	100	● ▲	GM		◆ ■	6.0
	END HOLE @ 6.0m							

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-926
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1677+400	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 SANDY SILT WITH GRAVEL TO SANDY SILT (GM)-(ML) -olive brown -damp -rough drilling below .5m							
1.0		⊠	101	● ▲	GM		◆ ■	1.0
2.0								2.0
3.0		⊠	102	● ▲	ML		◆	3.0
4.0		⊠	103	● ▲	ML		■ ◆	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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LOGGED BY: K.J	COMPLETION DEPTH: 4.5 m
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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-927
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1677+500	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 -humid -some rough drilling	⊠	104	● ▲	SM		■ ◆	
1.0								1.0
2.0								2.0
	SILTY GRAVEL WITH SAND TO SANDY SILT (GM)-(ML) -olive brown -damp	⊠	105	● ▲	GM		■	
3.0								3.0
4.0		⊠	106	● ▲	ML		■ ◆	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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LOGGED BY: K.J	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 01/04/02
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01/10/22 02:46PM

SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-928
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1677+600	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) -reddish brown -humid	⊠	107	● ▲	ML		◆	
1.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (SM)-(GM)-(SM) -brown -damp -grindy -sample #108 contaminated with silt from above	⊠	108	● ▲	SM		■ ◆	1.0
2.0								2.0
3.0		⊠	109	● ▲	GM		◆ ■	3.0
4.0								4.0
5.0								5.0
6.0	END HOLE @ 6.0m	⊠	110	● ▲	SM		■ ◆	6.0

Government of Yukon Transportation Engineering	LOGGED BY: K.J	COMPLETION DEPTH: 6.0 m
	REVIEWED BY:	COMPLETE: 01/04/02
	Fig. No:	Page 1 of 1

01/10/26 02:05PM

SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-929
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1677+675	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 -reddish brown -humid -some grindy drilling							
1.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (SM)-(GM)-(SM) -olive brown -humid -rough drilling	⊠	111	● ▲	SM		■ ◆	1.0
2.0								2.0
3.0								3.0
4.0		⊠	112	● ▲	SM		■ ◆	4.0
5.0								5.0
6.0								6.0
7.0	-sample 113 augered up -grindier drilling below 7.0m	⊠	113	● ▲	GM		◆ ■	7.0
8.0								8.0
9.0	END HOLE @ 9.0m	⊠	114	● ▲	SM		■ ◆	9.0
10.0								10.0

Government of Yukon Transportation Engineering	LOGGED BY: K.J	COMPLETION DEPTH: 9.0 m
	REVIEWED BY:	COMPLETE: 01/04/02
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01/11/30 03:08PM

SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 594-979
ENGINEERING CAPITAL	KM 1674 – 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1677+900 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
	SILT WITH SAND TO SANDY SILT WITH GRAVEL TO SANDY SILT (ML) –olive –damp							
1.0		⊠	211	● ▲	ML		■ ◆	1.0
2.0								2.0
3.0	–sample #212 & 213 were augered up	⊠	212	● ▲	ML		■ ◆	3.0
4.0								4.0
		⊠	213	● ▲	ML		■ ◆	
5.0								5.0
		⊠	214	● ▲	ML		■ ◆	
6.0	END HOLE @ 6.0m							6.0

Government of Yukon Transportation Engineering	LOGGED BY: K.J.	COMPLETION DEPTH: 6.0 m
	REVIEWED BY:	COMPLETE: 01/04/20
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01/12/04 12:02PM

SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 594-978
ENGINEERING CAPITAL	KM 1674 - 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1678+000	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
	GRAVELLY SAND WITH SILT -brown -damp -frost level @ 0.4m							
1.0	SANDY SILT (ML) -olive brown -damp	⊠	209	● ▲	ML		■ ◆	1.0
2.0								2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0	-no change in drilling 0.4 to EOH END HOLE @ 6.0m	⊠	210	● ▲	ML		■ ◆	6.0

Government of Yukon Transportation Engineering	LOGGED BY: K.J.	COMPLETION DEPTH: 6.0 m
	REVIEWED BY:	COMPLETE: 01/04/20
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01/12/04 12:02PM

SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 594-977
ENGINEERING CAPITAL	KM 1674 - 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1678+100	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				
	SILTY SAND WITH GRAVEL TO SANDY SILT (SM)-(ML) -olive brown -damp		207	SM	
3.0	END HOLE @ 3.0m		208	ML	

▲ 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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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 594-976
ENGINEERING CAPITAL	KM 1674 - 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1678+250	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 TO SILTY SAND WITH GRAVEL (ML)-(SM) -olive brown -damp	⊠	205	● ▲	SM		■ ◆	
1.0								1.0
2.0								2.0
3.0		⊠	206	● ▲	SM		■ ◆	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 594-975
ENGINEERING CAPITAL	KM 1674 - 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1678+400	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 (GM) -brown -damp							
1.0		⊠	203	● ▲	GM		◆	1.0
2.0	-olive brown below 2.5m							2.0
3.0		⊠	204	● ▲	GM		◆ ■	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 594-974
ENGINEERING CAPITAL	KM 1674 - 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1678+550 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	ORGANIC							0.0
	SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -olive brown -damp							
1.0		⊠	201	● ▲	SM		■ ◆	1.0
2.0								2.0
3.0		⊠	202	● ▲	SM		■ ◆	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-973
ENGINEERING CAPITAL	KM 1674 – 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION:1678+625 LHS	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 (ML) –olive –damp							
1.0		⊠	199	● ▲	ML		◆	1.0
2.0	SANDY SILT WITH GRAVEL(ML) –olive brown –damp							2.0
3.0		⊠	200	● ▲	ML		■ ◆	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-972
ENGINEERING CAPITAL	KM 1674 – 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION:1678+735	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 GRAVEL WITH SAND (ML)-(GM) -olive brown -damp							
1.0		⊠	197	● ▲	ML		■ ◆	1.0
2.0								2.0
3.0		⊠	198	● ▲	GM		■	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-971
ENGINEERING CAPITAL	KM 1674 – 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION:1678+850	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 GRAVEL WITH SAND (ML)-(GM)							
	-olive							
	-damp							
1.0		⊠	195	● ▲	ML	▥	■ ◆	1.0
2.0								2.0
3.0		⊠	196	● ▲	GM	▥	◆ ■	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-970
ENGINEERING CAPITAL	KM 1674 – 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION:1679+000	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 GRAVEL WITH SAND (ML)-(GM) -olive brown -damp							
1.0		⊠	193	● ▲	ML		■ ◆	1.0
2.0								2.0
3.0		⊠	194	● ▲	GM		◆ ■	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-969
ENGINEERING CAPITAL	KM 1674 - 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1679+150	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) -olive brown -damp							
1.0		⊠	191	● ▲	ML	▥	■ ◆	1.0
2.0								2.0
3.0		⊠	192	● ▲	ML	▥	■ ◆	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-968
ENGINEERING CAPITAL	KM 1674 - 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1679+300	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)							
	-olive brown							
	-damp							
1.0		⊠	189	● ▲	ML	▤	■ ◆	1.0
2.0								2.0
3.0		⊠	190	● ▲	SM	▨	■ ◆	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-967
ENGINEERING CAPITAL	KM 1674 - 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1679+450	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) -olive brown -damp							
1.0		⊠	187	● ▲	ML	▥	■ ◆	1.0
2.0								2.0
3.0		⊠	188	● ▲	ML	▥	■ ◆	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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LOGGED BY: K.J.	COMPLETION DEPTH: 3.0 m
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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-966
ENGINEERING CAPITAL	KM 1674 – 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1679+600 LHS	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 (SM)-(ML)							
	-olive brown							
	-damp							
1.0		⊠	185	● ▲	SM		■ ◆	1.0
2.0								2.0
3.0		⊠	186	● ▲	ML		■ ◆	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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LOGGED BY: K.J.	COMPLETION DEPTH: 3.0 m
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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-965
ENGINEERING CAPITAL	KM 1674 – 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1679+635 RHS	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 –free water							0.0
	SANDY SILT (ML) –olive –saturated							
1.0		⊠	183	● ▲	ML		■ ◆	1.0
2.0								2.0
3.0		⊠	184	● ▲	ML		■ ◆	3.0
	END HOLE @ 3.0m –culvert location Note: H20 @ 0.5m at completion of hole							
4.0								4.0
5.0								5.0
6.0								6.0

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LOGGED BY: K.J.	COMPLETION DEPTH: 3.0 m
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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-964
ENGINEERING CAPITAL	KM 1674 - 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1679+700 RHS	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 (SM)-(ML) -olive -saturated							
1.0		⊠	181	● ▲	SM		■ ◆	1.0
2.0								2.0
3.0		⊠	182	● ▲	ML		■ ◆	3.0
	END HOLE @ 3.0M Note: surface water (+/- 0.15m)							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-963
ENGINEERING CAPITAL	KM 1674 – 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1679+825	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) -olive brown -damp							
1.0		⊠	179	● ▲	SM		■ ◆	1.0
2.0								2.0
3.0		⊠	180	● ▲	SM		■ ◆	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: K.J.	COMPLETION DEPTH: 3.0 m
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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-962
ENGINEERING CAPITAL	KM 1674 - 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1679+975 36M RIGHT	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 GRAVEL WITH SAND (ML)-(GM) -olive brown -damp							
1.0		⊠	177	● ▲	ML		■ ◆	1.0
2.0								2.0
3.0		⊠	178	● ▲	GM		◆ ■	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-961
ENGINEERING CAPITAL	KM 1674 – 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1680+075 31M RIGHT	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) -olive brown -damp							
1.0		⊠	175	● ▲	ML	▥	■ ◆	1.0
2.0								2.0
3.0	END HOLE @ 3.0m	⊠	176	● ▲	ML	▥	■ ◆	3.0
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-960
ENGINEERING CAPITAL	KM 1674 – 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1680+225	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 POORLY GRADED GRAVEL WITH SAND (ML)-(GP) -olive brown -damp							
1.0		⊠	173	● ▲	ML		■ ◆	1.0
2.0								2.0
3.0		⊠	174	▲ ●	GP		◆ ■	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-959
ENGINEERING CAPITAL	KM 1674 - 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1680+375 RHS	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 GRAVEL WITH SAND (ML)-(GM) -olive -damp							
1.0		⊠	171	● ▲	ML		■ ◆	1.0
2.0								2.0
3.0		⊠	172	● ▲	GM		◆ ■	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: K.J.	COMPLETION DEPTH: 3.0 m
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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-958
ENGINEERING CAPITAL	KM 1674 – 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1680+460 RHS	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 (GM) -olive brown -damp -maximum 50mm material augered up -grindy drilling below .4m	☒	169	● ▲	GM		◆ ■	1.0
2.0								2.0
3.0		☒	170	● ▲	GM		◆ ■	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-957
ENGINEERING CAPITAL	KM 1674 - 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1680+575	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) -olive -damp							
1.0		⊠	168	● ▲	SM		■ ◆	1.0
2.0								2.0
3.0		⊠	169	● ▲	SM		■ ◆	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-956
ENGINEERING CAPITAL	KM 1674 – 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1680+675	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) -olive -damp							
1.0		⊠	165	● ▲	GM		■	1.0
2.0								2.0
3.0		⊠	166	● ▲	SM		■ ◆	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-955
ENGINEERING CAPITAL	KM 1674 – 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1680+800	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) –olive brown –damp –grindy drilling below 0.3m							
1.0		⊠	163	● ▲	SM		■ ◆	1.0
2.0	–olive below 2.5m							2.0
3.0		⊠	164	● ▲	GM		◆	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-954
ENGINEERING CAPITAL	KM 1674 - 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1680+900	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 SANDY SILT WITH GRAVEL (GM)-(ML)							
	-olive							
	-damp							
	-grindy drilling below .3m							
1.0		⊠	161	● ▲	GM		■	1.0
2.0								2.0
3.0		⊠	162	● ▲	ML		■ ◆	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-953
ENGINEERING CAPITAL	KM 1674 – 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1681+000 LHS	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) -olive -damp -some grindy drilling below 0.7m							
1.0		⊠	159	● ▲	SM		■ ◆	1.0
2.0	-damp to moist below 2.5m							2.0
3.0		⊠	160	● ▲	SM		■	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-952
ENGINEERING CAPITAL	KM 1674 - 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1681+100 LHS	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) -olive -moist	⊠	157	● ▲	SM		■ ◆	
1.0								1.0
2.0								2.0
3.0		⊠	158	● ▲	GM		◆ ■	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-951
ENGINEERING CAPITAL	KM 1674 – 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1681+250 LHS	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 (GM) –olive –damp							
1.0		⊠	155	● ▲	GM		◆ ■	1.0
2.0								2.0
3.0		⊠	156	● ▲	GM		◆	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-950
ENGINEERING CAPITAL	KM 1674 – 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1681+400 LHS	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) -olive -moist							
1.0		⊠	153	● ▲	ML		■ ◆	1.0
2.0								2.0
3.0		⊠	154	● ▲	SM		■ ◆	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 593-949
ENGINEERING CAPITAL	KM 1674 – 1684 A/H	Project No: 092-202101-0363
D-4 CAT B-30 MOBILE DRILL	LOCATION: 1681+550 LHS	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) –olive –moist							
1.0		⊠	151	● ▲	SM		●	1.0
2.0								2.0
3.0		⊠	152	● ▲	SM		■ ◆	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-948
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1681+700 LHS	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) -olive -moist							
1.0		⊠	149	● ▲	GM		■	1.0
2.0								2.0
3.0		⊠	150	● ▲	SM		■ ◆	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: K.J	COMPLETION DEPTH: 3.0 m
	REVIEWED BY:	COMPLETE: 01/04/18
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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-947
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1681+850	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 to 0.1m -red below 0.1m							0.0
1.0	SANDY SILT TO SILTY SAND WITH GRAVEL (ML)-(SM) -olive -damp	⊠	147	● ▲	ML	▥	■ ◆	1.0
2.0								2.0
3.0	END HOLE @ 3.0m	⊠	148	● ▲	SM	▨	■ ◆	3.0
4.0								4.0
5.0								5.0
6.0								6.0

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LOGGED BY: K.J	COMPLETION DEPTH: 3.0 m
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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-946
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1681+950 2M RIGHT	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 (GM) -olive -moist							
1.0	-sample #145 lost	⊠	145	●				1.0
2.0								2.0
3.0		⊠	146	● ▲	GM		◆■	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-945
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1682+050 2M RIGHT	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 (GM) -brown -damp -grindy drilling							
1.0		⊠	143	● ▲	GM		◆ ■	1.0
2.0								2.0
	SANDY SILT (ML) -olive -damp							
3.0								3.0
4.0		⊠	144	● ▲	ML		■ ◆	4.0
	END HOLE @ 4.3m							
5.0								5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 01/04/18
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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-944
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1682+160	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	ICE							0.0
	ORGANIC							
	SANDY SILT -olive brown -moist							
1.0		⊠	141	● ▲	ML	▥	■ ◆	1.0
2.0	SILT (ML) -olive -moist							2.0
3.0		⊠	142	● ▲	ML	▥	◆	3.0
	END HOLE @ 3.0m -csp location							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-943
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1682+225 1M RIGHT	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 (GM) -light brown -humid							
1.0		⊠	139	● ▲	GM		◆ ■	1.0
	SILT WITH SAND (ML) -tighter drilling -trace of gravel							
2.0								2.0
3.0								3.0
4.0		⊠	140	● ▲	ML		■ ◆	4.0
	END HOLE @ 4.3m							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-942
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1682+300 3M RIGHT	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 (ML) -olive brown -damp -trace of gravel							
1.0		⊠	137	● ▲	ML		■ ◆	1.0
2.0								2.0
	-olive below 2.5m -more gravel below 2.5m	⊠	138	● ▲	ML		■	
3.0	END HOLE @ 3.0m							3.0
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-941
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1682+400 C.L.	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	ICE							0.0
	ORGANIC							
1.0								1.0
2.0								2.0
3.0	SILTY SAND WITH GRAVEL (SM) -olive -wet to saturated -some easy grindy drilling							3.0
4.0		⊠	136	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.3m NOTE: Water up to 0.5m @ EOH							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-940
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1682+575	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	ICE							0.0
	ORGANIC -frozen to 0.6m -saturated below 0.6m							
1.0								1.0
2.0	SANDY SILT TO SILTY SAND WITH GRAVEL (ML)-(SM) -olive -saturated -tighter drilling							2.0
3.0	-sample 134 contaminated with organics from above	⊠	134	● ▲	ML	▥	■ ◆	3.0
	-free water below 3.8m							
4.0	-sample 135 contaminated by water from above	⊠	135	● ▲	SM	▥	■ ◆	4.0
	END HOLE @ 4.3m -water level up to 0.3m at EOH							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-939
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1682+685 RHS	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 to 0.2m -saturated below 0.2m							0.0
1.0								1.0
	SILTY GRAVEL WITH SAND (GM) -olive -wet to saturated -grindy drilling							
2.0								2.0
3.0								3.0
4.0		⊠	133	● ▲	GM		◆	4.0
	END HOLE @ 4.3m -csp location							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-938
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1682+725 LHS	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 to 0.4m -saturated below 0.4m							0.0
1.0								1.0
2.0	SILTY GRAVEL WITH SAND (GM) -olive -wet to saturated -trace grindy drilling -smooth drilling below 2.2m							2.0
3.0								3.0
4.0	-minimal material retained on auger remainder washed off	⊠	132	● ▲	GM		◆ ■	4.0
	END HOLE @ 4.3m -culvert location							
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-937
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION: 1682+800	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) -damp -grindy drilling below 0.5m							
1.0		⊠	130	● ▲	SM		■ ◆	1.0
2.0								2.0
3.0		⊠	131	● ▲	GM		◆ ■	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-936
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1682+950	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 ASH -damp to moist							
	SILTY GRAVEL WITH SAND (GM) -olive brown -damp							
1.0	-grindy drilling	⊠	128	● ▲	GM		◆ ■	1.0
2.0	-very hard slow grindy drilling							2.0
3.0		⊠	129	● ▲	GM		◆ ■	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-935
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1683+050	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 –saturated							0.0
	SILT WITH SAND (ML) –olive –wet to saturated	⊠	126	● ▲	ML		◆	
1.0	SILTY SAND WITH GRAVEL (SM) –olive brown –saturated –max 50mm material augered up –grindy drilling							1.0
2.0								2.0
	–sample 127 contaminated by water from above	⊠	127	● ▲	SM		■◆	
3.0	END HOLE @ 3.0m –culvert location –surface water							3.0
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-934
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1683+170	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							0.0
1.0		⊠	124	● ▲	GM		◆	1.0
2.0								2.0
3.0		⊠	125	●	GM		◆	3.0
	END HOLE @ 3.0m -test hole in bottom of previously excavated area							
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-933
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1683+300	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 -frozen							0.0
1.0		⊠	122	● ▲	SM		■ ◆	1.0
2.0	SILTY GRAVEL WITH SAND (GM) -brown -humid							2.0
		⊠	123	● ▲	GM		◆ ■	
3.0	END HOLE @ 2.7m -previously excavated area -visible ~150mm material							3.0
4.0								4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-932
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1683+470	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)							
	-olive brown							
	-frozen							
1.0		⊠	119	● ▲	SM		■ ◆	1.0
2.0	-damp below 2.0m							2.0
		⊠	120	● ▲	GM		◆ ■	
3.0								3.0
		⊠	121	● ▲	GM		◆■	
4.0	END HOLE @ 4.0m							4.0
5.0								5.0
6.0								6.0

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SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-931
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1683+575	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 -moist							0.0
	SILT -grey -damp							
1.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -brown -damp -grindy drilling @ 1.0m	⊠	117	● ▲	GM		◆ ■	1.0
	-sample 117 contaminated by silt from above							
2.0								2.0
	-damp to moist below 2.5m							
3.0		⊠	118	● ▲	SM		■ ◆	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

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Transportation Engineering

LOGGED BY: K.J	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 01/04/17
Fig. No:	Page 1 of 1

01/10/22 02:46PM

SUBSURFACE EXPLORATION & TEST REPORT	Shakwak Seg 9 Alaska Highway	TEST HOLE NO: 588-930
ENGINEERING CAPITAL	KM 1694-1692 A/H	Project No: 092-202101-0363
NODWELL B 40L 6" AUGER	LOCATION:1683+675	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 GRAVEL WITH SAND (GM) -brown -damp							
1.0		⊠	115	● ▲	GM		◆ ■	1.0
	SILTY GRAVEL (GM) -olive brown -moist -smoother drilling							
2.0								2.0
3.0		⊠	116	● ▲	GM		◆ ■	3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: K.J	COMPLETION DEPTH: 3.0 m
	REVIEWED BY:	COMPLETE: 01/04/17
	Fig. No:	Page 1 of 1

01/11/30 03:10PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 564-1751
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: KM 1683+650 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
	SILTY SAND WITH GRAVEL (SM) -brown -damp -grindy drilling	☒	1473	● ▲	SM		■ ◆	
1.0	ORGANIC -black -moist -smooth drilling							1.0
	SILTY SAND WITH GRAVEL (SM) -some +5mm material -brown -moist -grindy drilling							
2.0								2.0
		☒	1474	● ▲	SM		■ ◆	
3.0								3.0
4.0								4.0
		☒	1475	● ▲	SM		■ ◆	
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 00/07/31
Fig. No:	Page 1 of 1

00/10/11 10:57AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 564-1750
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: KM 1683+750 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	SANDY SILT (ML) -brown -moist -trace +5mm material	⊠	1471	● ▲	ML	▥	■ ◆	0.0
1.0	SILTY GRAVEL WITH SAND (GM) -brown -damp							1.0
2.0								2.0
3.0		⊠	1472	● ▲	GM		◆ ■	3.0
4.0	END HOLE @ 4.0m -refusal							4.0
5.0								5.0
6.0								6.0

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LOGGED BY: D.T	COMPLETION DEPTH: 4.0 m
REVIEWED BY:	COMPLETE: 00/07/31
Fig. No:	Page 1 of 1

00/10/11 10:57AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 9	TEST HOLE NO: 564-1749
ENGINEERING CAPITAL	KM 1664.5-1692.6	Project No: 092-202101-0363
MOBILE B40 L 6" AUGER	LOCATION: KM 1683+850 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	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -maximum 50mm material augered up -grindy drilling -1st refusal @ .7m - moved 2m upchain	⊠	1470	●▲	GP-GM	▨	◆ ■	0.0
1.0	END HOLE @ 1.3m -refusal							1.0
2.0								2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0

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Transportation Engineering

LOGGED BY: D.T	COMPLETION DEPTH: 1.3 m
REVIEWED BY:	COMPLETE: 00/07/31
Fig. No:	Page 1 of 1

00/10/11 10:58AM

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
Fig. No:	Page 1 of 1

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

00/10/26 01:40PM

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							4.0
		⊠	1463	● ▲	ML		■ ◆	
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

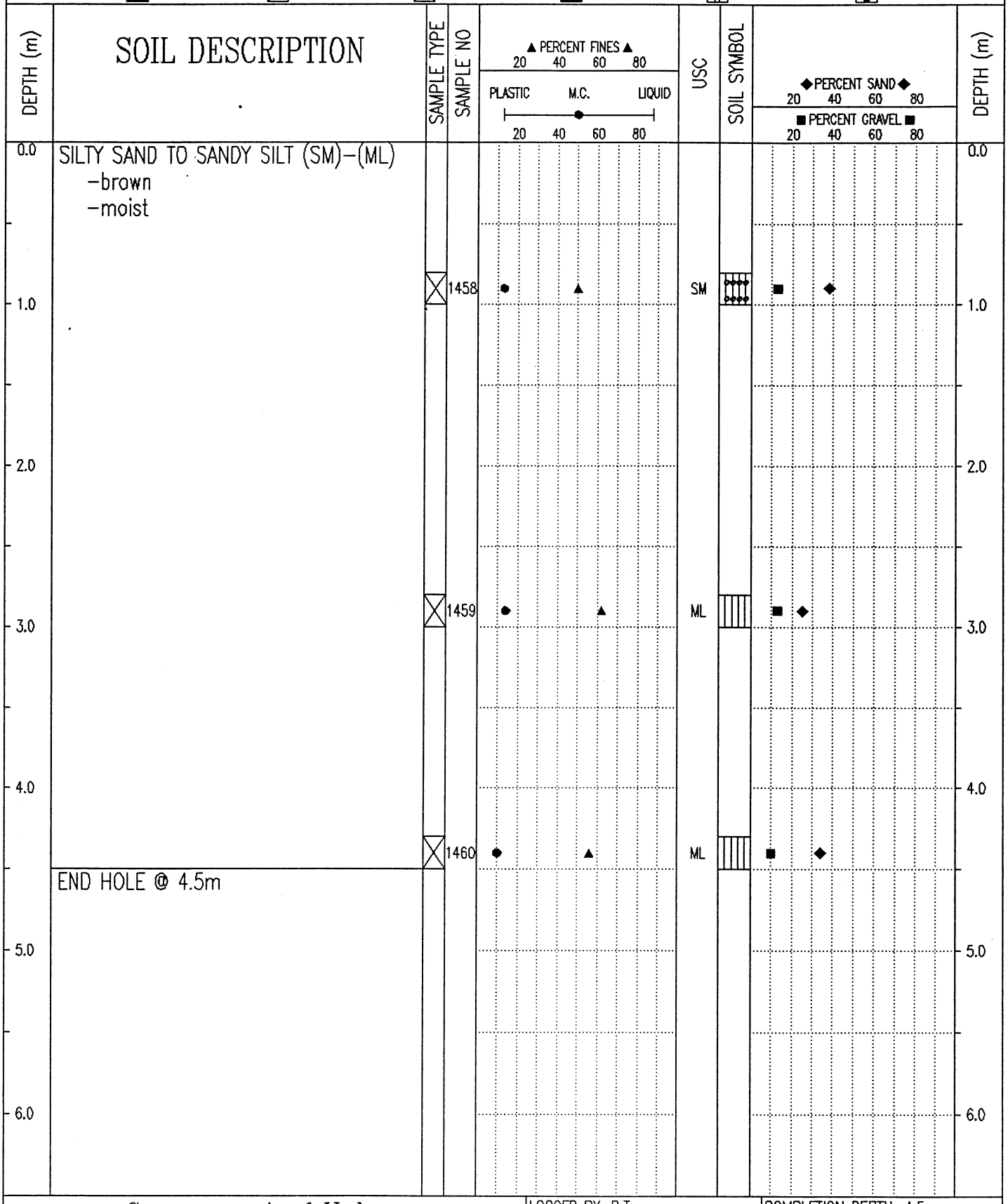
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Transportation Engineering

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

00/10/30 10:00AM

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



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

00/10/26 01:40PM

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 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 (ML) -brown -damp -grindy drilling							0.0
1.0		⊠	1455	● ▲	ML		■ ◆	1.0
2.0	SILTY SAND WITH GRAVEL (SM) -brown -damp							2.0
3.0		⊠	1456	● ▲	SM		■ ◆	3.0
4.0		⊠	1457	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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Transportation Engineering

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

00/10/26 01:40PM

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

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

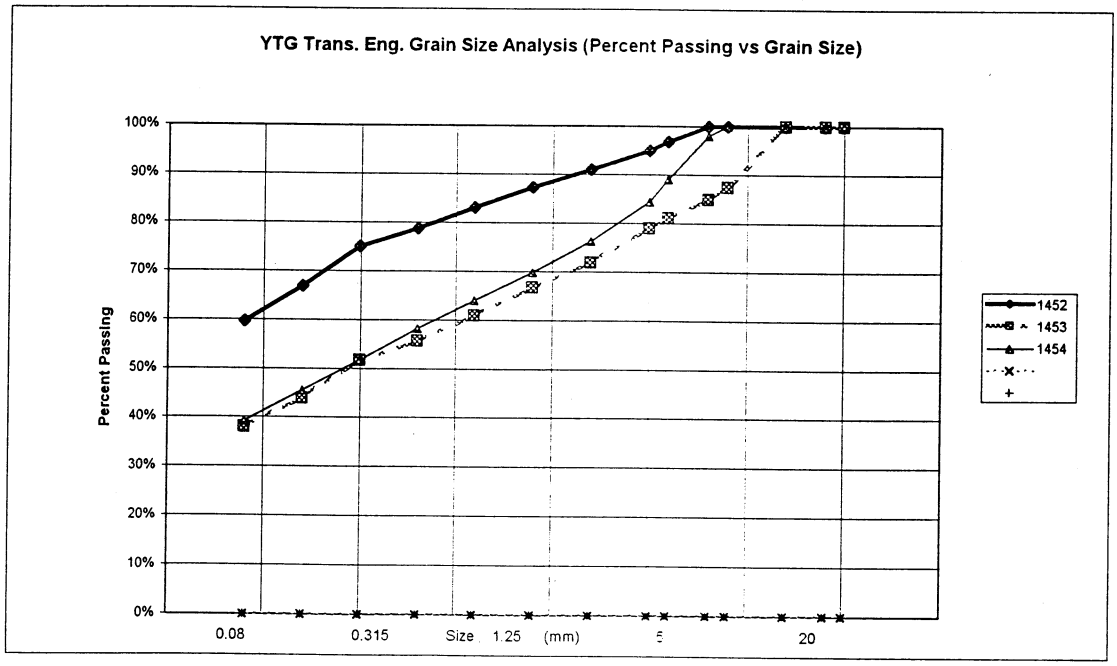
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Km 1673+875 to 1684+450 Alaska Highway #1

Auger Hole Logs

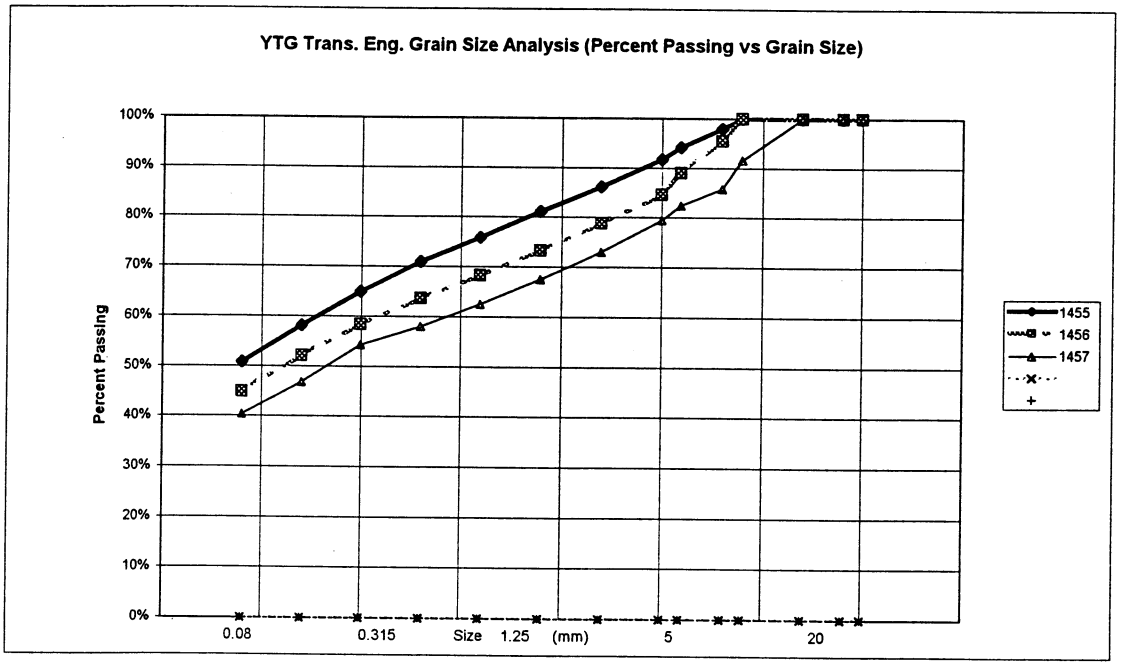
PROJECT NUMBER:	091-202101-0363-1		HOLE No.: 563-1743
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	Mobile B 40 L		
LOGGED BY:	Doug Trim		
HOLE LOCATION:	1684+450 7M RT		DATE COM 2000/07/28

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)		

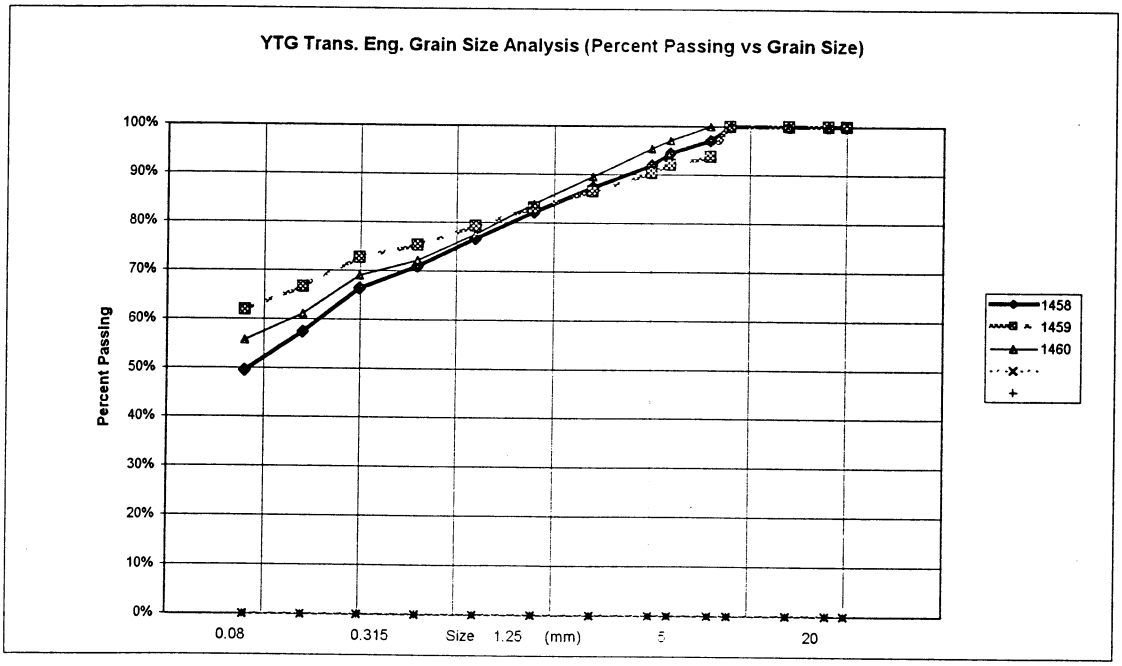


PROJECT NUMBER:	091-202101-0363-1		HOLE No.: 563-1744
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	Mobile B 40 L		
LOGGED BY:	Doug Trim		
HOLE LOCATION:	1684+350 5M RT		DATE COM 2000/07/28

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)		

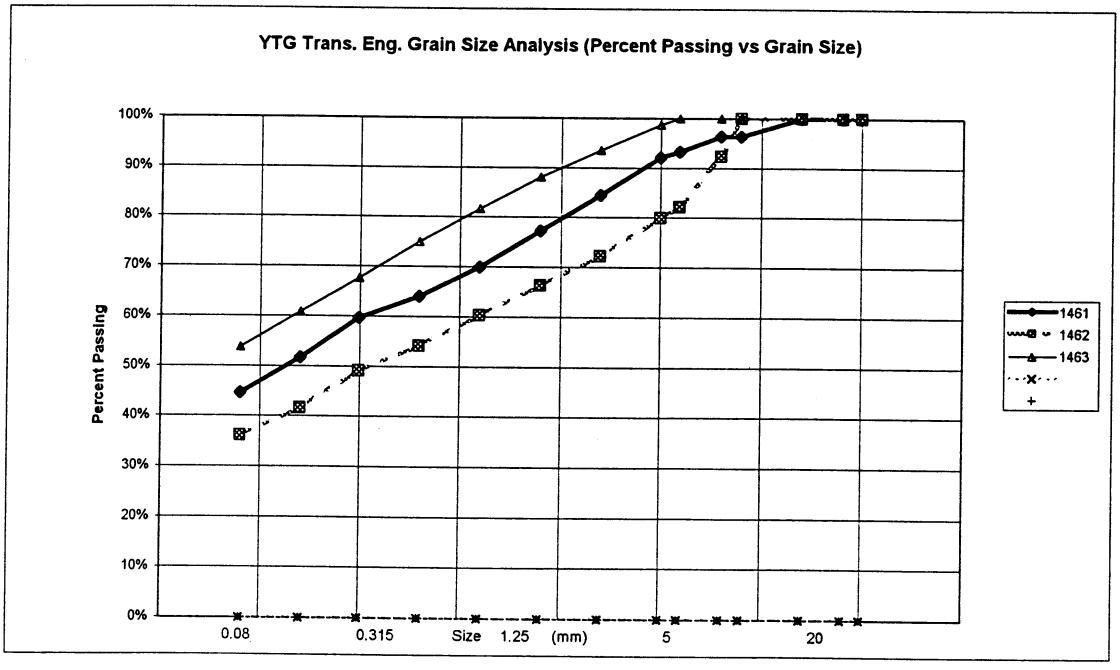


PROJECT NUMBER:	091-202101-0363-1					HOLE No.:	563-1745
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1664-1692 A/H						
DRILL UNIT:	Mobile B 40 L						
LOGGED BY:	Doug Trim						
HOLE LOCATION:	1684+250 5M RT					DATE COM	2000/07/28
FIELD NO:	1458	FIELD No.	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)		

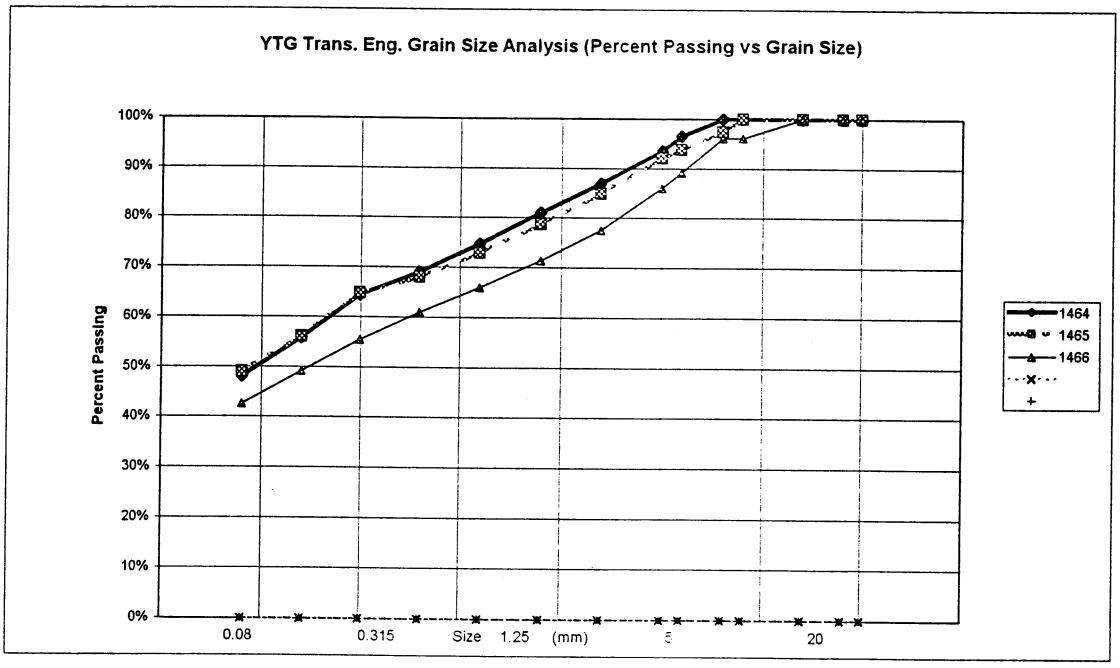


PROJECT NUMBER:	091-202101-0363-1		HOLE No.: 563-1746
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1664-1692 A/H		
DRILL UNIT:	Mobile B 40 L		
LOGGED BY:	Doug Trim		
HOLE LOCATION:	1684+150 5M RT		DATE COM 2000/07/28

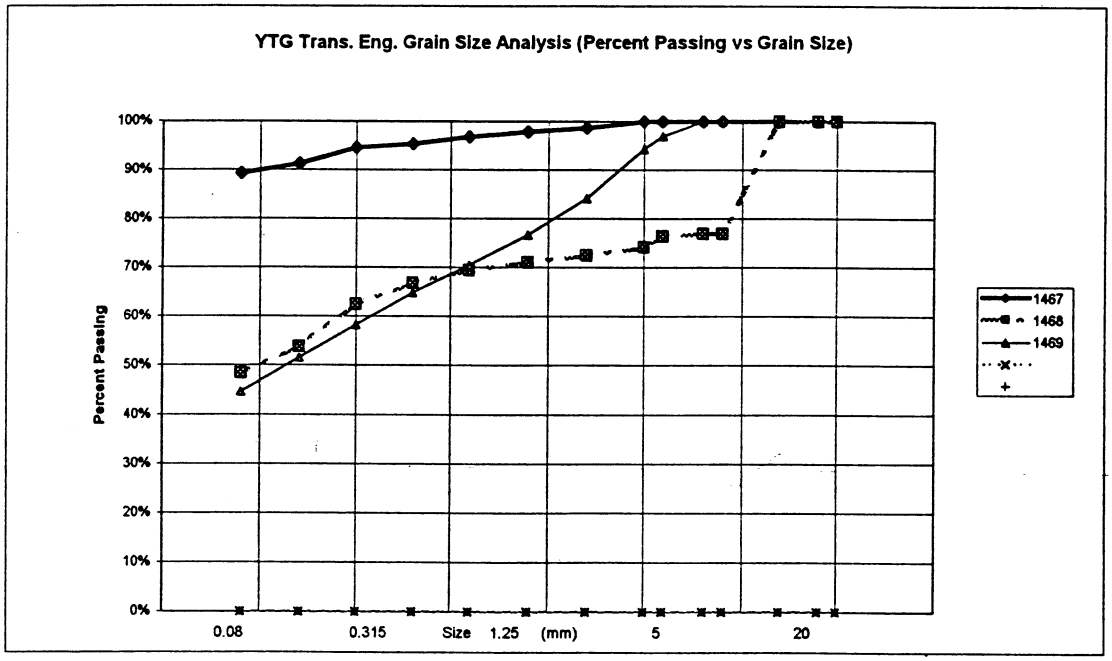
FIELD NO: 1461		FIELD No. 1462		FIELD No: 1463	
LAB NO:	1907	LAB No.	1908	LAB No:	1909
DEPTH:	0.8-1.0	DEPTH	2.8-3.0	DEPTH:	4.3-4.5
TYPE:	AUGER	A	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	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)		



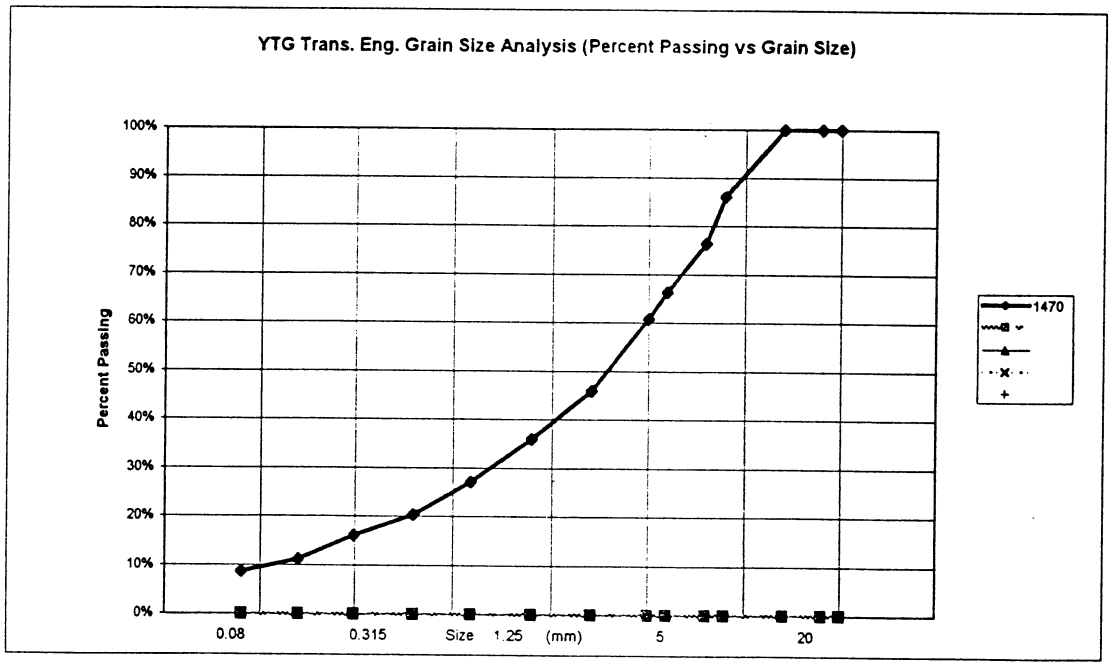
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 564-1749
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME.	SHAKWAK SEG 9		
PROJECT LOCATION:	KM 1683 ALASKA HWY		
DRILL UNIT:	MOBILE B 40-L		
LOGGED BY:	DOUG TRIM		
HOLE LOCATION:	1683+850 CENTRELINE		DATE COM 2000/07/31

FIELD NO:	1470
LAB NO:	1916
DEPTH:	0.8-1.0
TYPE:	AUGER

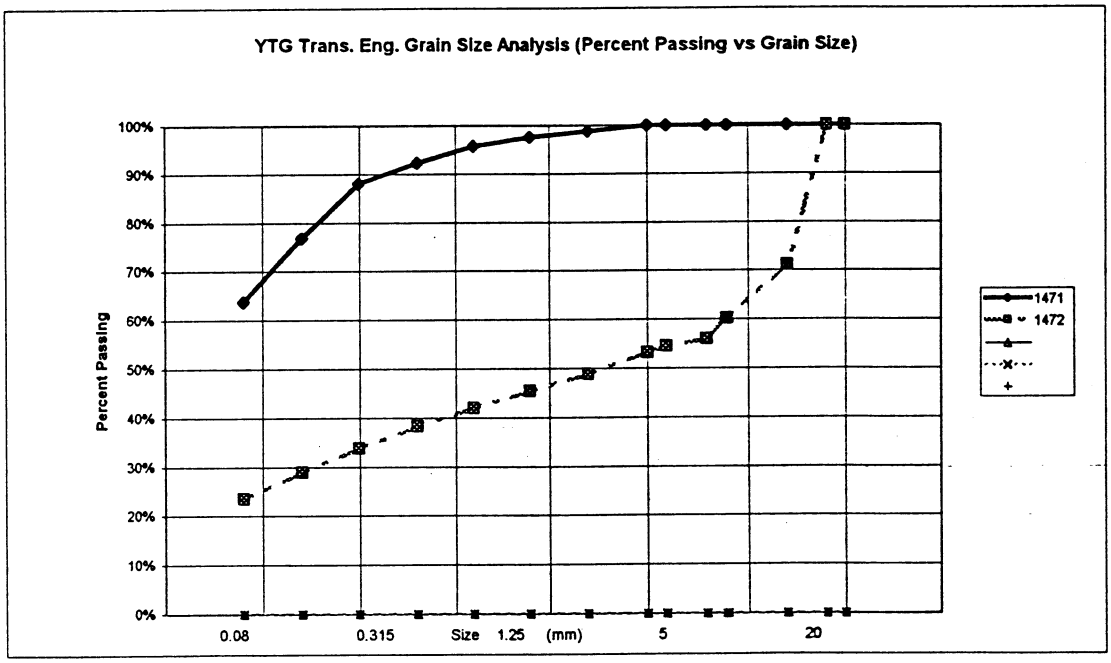
SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	86%
20.0	76%
12.5	66%
10.0	61%
5.0	46%
2.5	36%
1.25	27%
0.630	20%
0.315	16%
0.160	11%
0.080	9%

M.C.(%):	3%
LIMITS	
LIQUID:	0.0
PLASTIC:	0.0
P.I.:	0.0
% GRAVEL	54
% SAND:	37
% FINES:	9

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

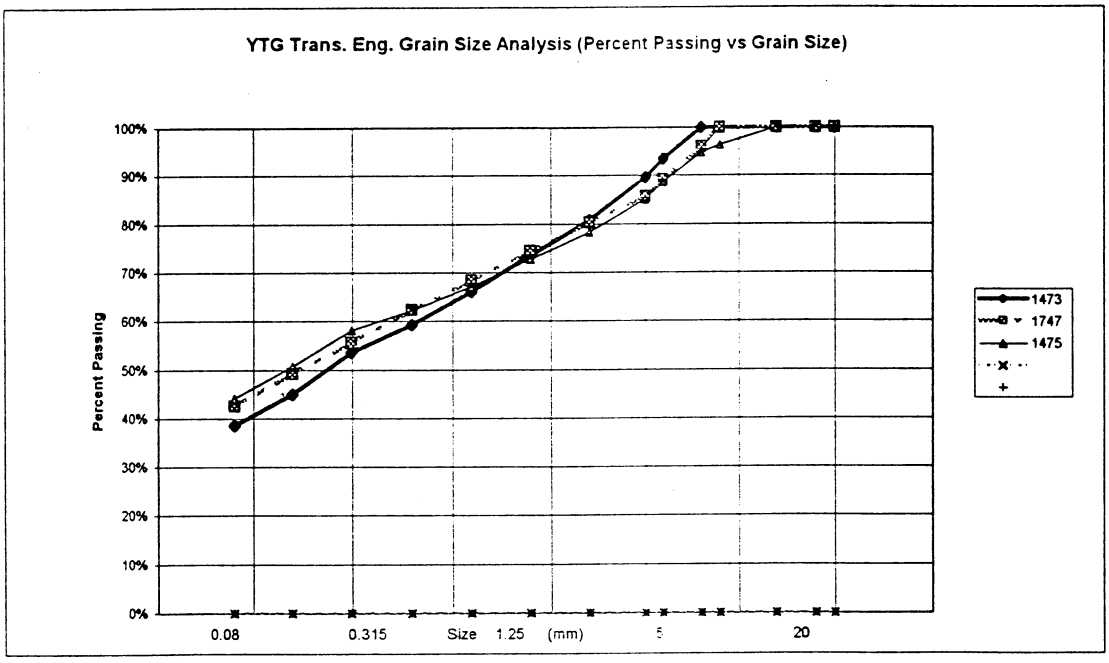


PROJECT NUMBER:	092-202101-0363-1					HOLE No.:	564-1750
CLIENT:	ENGINEERING-CAPITAL						
PROJECT NAME:	SHAKWAK SEG 9						
PROJECT LOCATION:	KM 1683 ALASKA HWY						
DRILL UNIT:	MOBILE B 40-L						
LOGGED BY:	DOUG TRIM						
HOLE LOCATION:	1683+750 3M LT					DATE COM	2000/07/31
FIELD NO:	1471	FIELD No.	1472				
LAB NO:	1917	LAB No.	1918				
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	71%				
25.0	100%	25.0	60%				
20.0	100%	20.0	56%				
12.5	100%	12.5	55%				
10.0	100%	10.0	53%				
5.0	99%	5.0	49%				
2.5	98%	2.5	46%				
1.25	96%	1.25	42%				
0.630	92%	0.630	38%				
0.315	88%	0.315	34%				
0.160	77%	0.160	29%				
0.080	64%	0.080	24%				
M.C.(%):	13%	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	1	% GRAVEL	51				
% SAND:	35	% SAND:	25				
% FINES:	64	% FINES:	24				
CLASSIFICATION:	SANDY SILT (ML)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)				



PROJECT NUMBER:	092-202101-0363-1		HOLE No : 564-1751
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+650 2M LT		DATE COM 2000/07/31

FIELD NO:	1473	FIELD No.	1747	FIELD No	1475		
LAB NO:	1919	LAB No.	1920	LAB No.	1921		
DEPTH:	0.5-0.7	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	96%	20.0	95%		
12.5	94%	12.5	89%	12.5	89%		
10.0	90%	10.0	86%	10.0	85%		
5.0	81%	5.0	80%	5.0	78%		
2.5	74%	2.5	74%	2.5	73%		
1.25	66%	1.25	68%	1.25	67%		
0.630	59%	0.630	62%	0.630	62%		
0.315	54%	0.315	56%	0.315	58%		
0.160	45%	0.160	49%	0.160	51%		
0.080	39%	0.080	43%	0.080	44%		
M.C.(%):	8%	M.C.(%):	12%	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	19	% GRAVEL	20	% GRAVEL	22		
% SAND:	42	% SAND:	38	% SAND	34		
% FINES:	39	% FINES:	43	% FINES	44		
CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL SM		

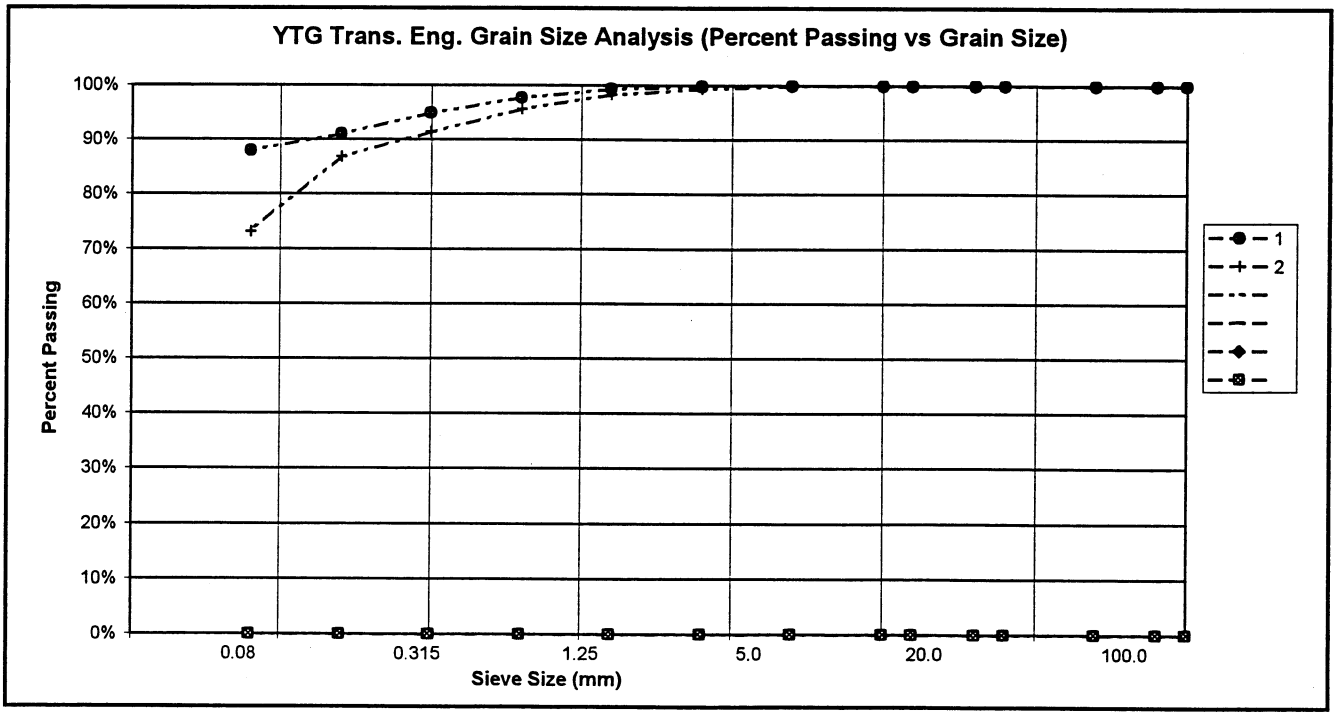


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1673+875
LOGGED BY:	K.J.

HOLE No.: 586-888

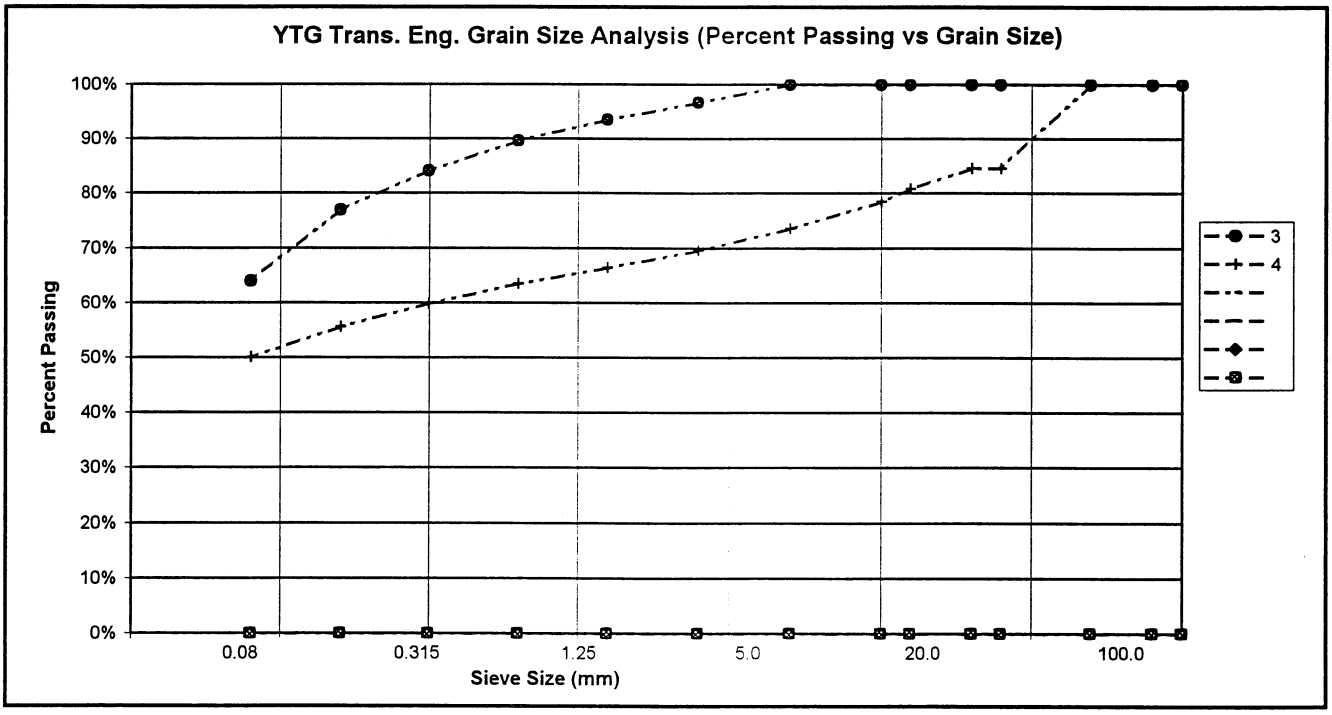
DATE COMP: 2001/03/27

FIELD NO:	1	2				
LAB NO:	173	174				
DEPTH:	0.8-1.2	2.6-3.0				
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	100%	100%				
20.0	100%	100%				
12.5	100%	100%				
10.0	100%	100%				
5.0	100%	100%				
2.5	100%	99%				
1.25	99%	98%				
0.630	98%	96%				
0.315	95%	91%				
0.160	91%	87%				
0.080	88%	73%				
M.C.(%):	26%	17%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	0	0				
% SAND:	12	27				
% FINES:	88	73				
CLASSIFICATION	SILT (ML)	SILT WITH SAND (ML)				



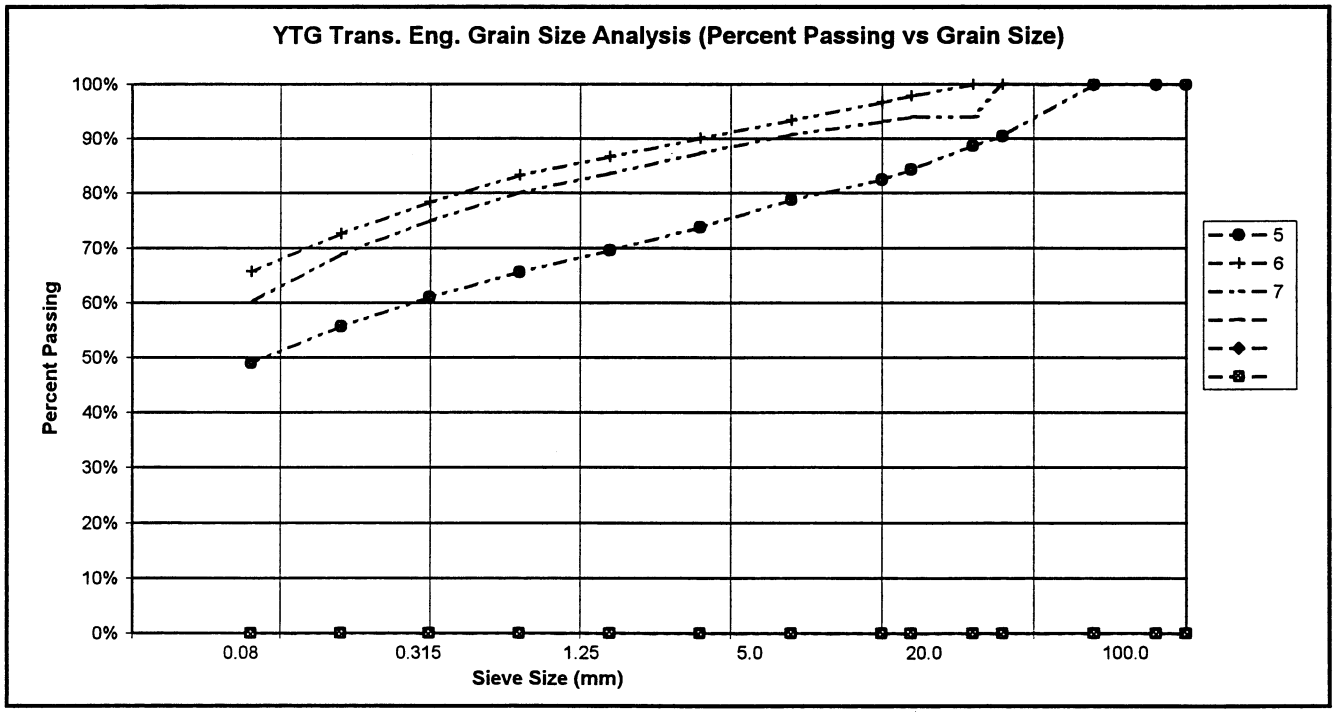
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 586-889
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1673+950		
LOGGED BY:	K.J.		DATE COMP: 2001/03/27

FIELD NO:	3	4				
LAB NO:	175	176				
DEPTH:	1.2-1.4	2.6-3.0				
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	100%	85%				
20.0	100%	85%				
12.5	100%	81%				
10.0	100%	78%				
5.0	100%	74%				
2.5	97%	70%				
1.25	94%	66%				
0.630	90%	63%				
0.315	84%	60%				
0.160	77%	56%				
0.080	64%	50%				
M.C.(%):	11%	9%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	0	26				
% SAND:	36	23				
% FINES:	64	50				
CLASSIFICATION	SANDY SILT (ML)	GRAVELLY SILT WITH SAND (ML)				



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 586-890
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1674+075		
LOGGED BY:	K.J.		DATE COMP: 2001/03/27

FIELD NO:	5	6	7			
LAB NO:	177	178	179			
DEPTH:	0.8-1.2	2.6-3.0	4.1-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	90%	100%	100%			
20.0	89%	100%	94%			
12.5	84%	98%	94%			
10.0	83%	97%	93%			
5.0	79%	93%	91%			
2.5	74%	90%	87%			
1.25	70%	87%	84%			
0.630	66%	83%	80%			
0.315	61%	78%	75%			
0.160	56%	73%	69%			
0.080	49%	66%	60%			
M.C.(%):	11%	10%	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:	21	7	9			
% SAND:	30	28	31			
% FINES:	49	66	60			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)	SANDY SILT (ML)			

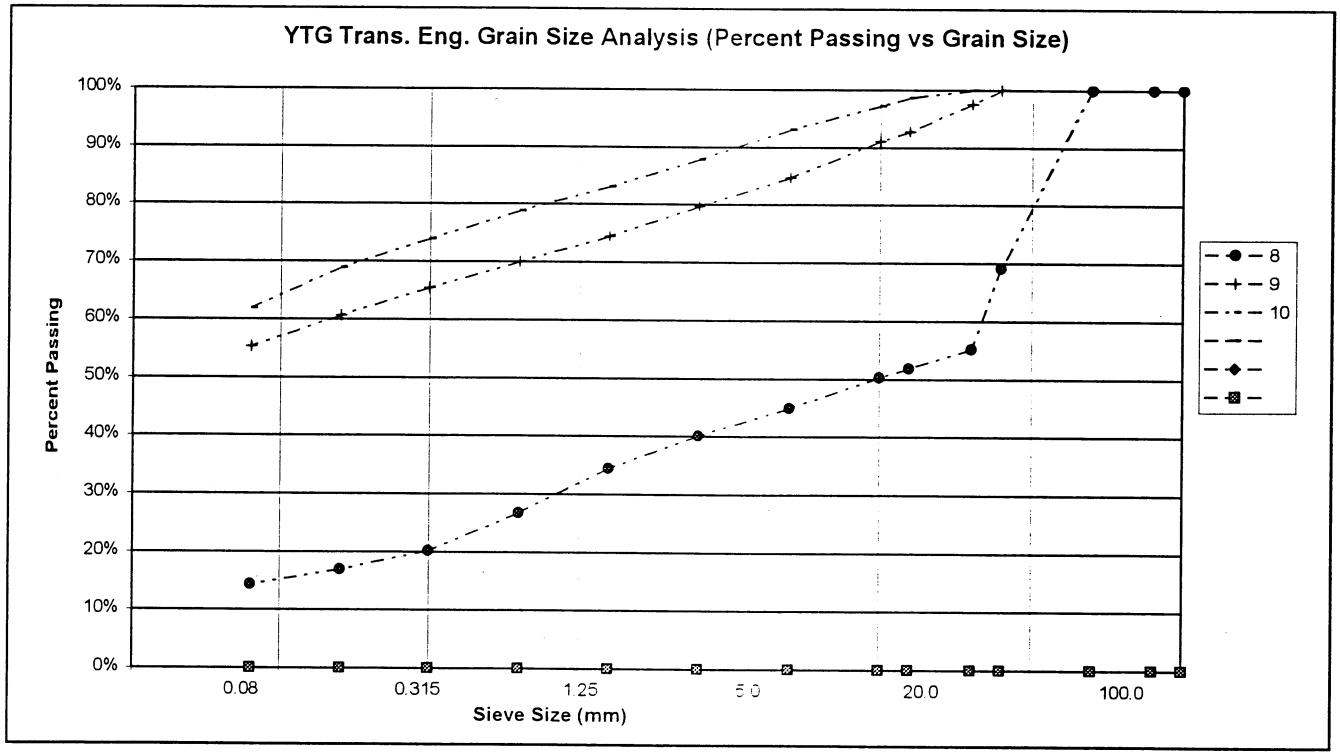


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1664.5 - 1692.6 A/H
DRILL UNIT: MOBILE B30 L
HOLE LOCATION: 1674+150
LOGGED BY: K.J.

HOLE No.: 586-891

DATE COMP: 2001/03/27

FIELD NO:	8	9	10			
LAB NO:	180	181	182			
DEPTH:	1.2-1.6	2.0-2.2	4.1-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	69%	100%	100%			
20.0	55%	98%	100%			
12.5	52%	93%	99%			
10.0	50%	91%	97%			
5.0	45%	85%	93%			
2.5	40%	80%	88%			
1.25	34%	74%	83%			
0.630	27%	70%	79%			
0.315	20%	65%	74%			
0.160	17%	61%	69%			
0.080	14%	55%	62%			
M.C.(%):	3%	10%	12%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	55	15	7			
% SAND:	31	29	31			
% FINES:	14	55	62			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SANDY SILT WITH GRAVEL (ML)	SANDY SILT ML			

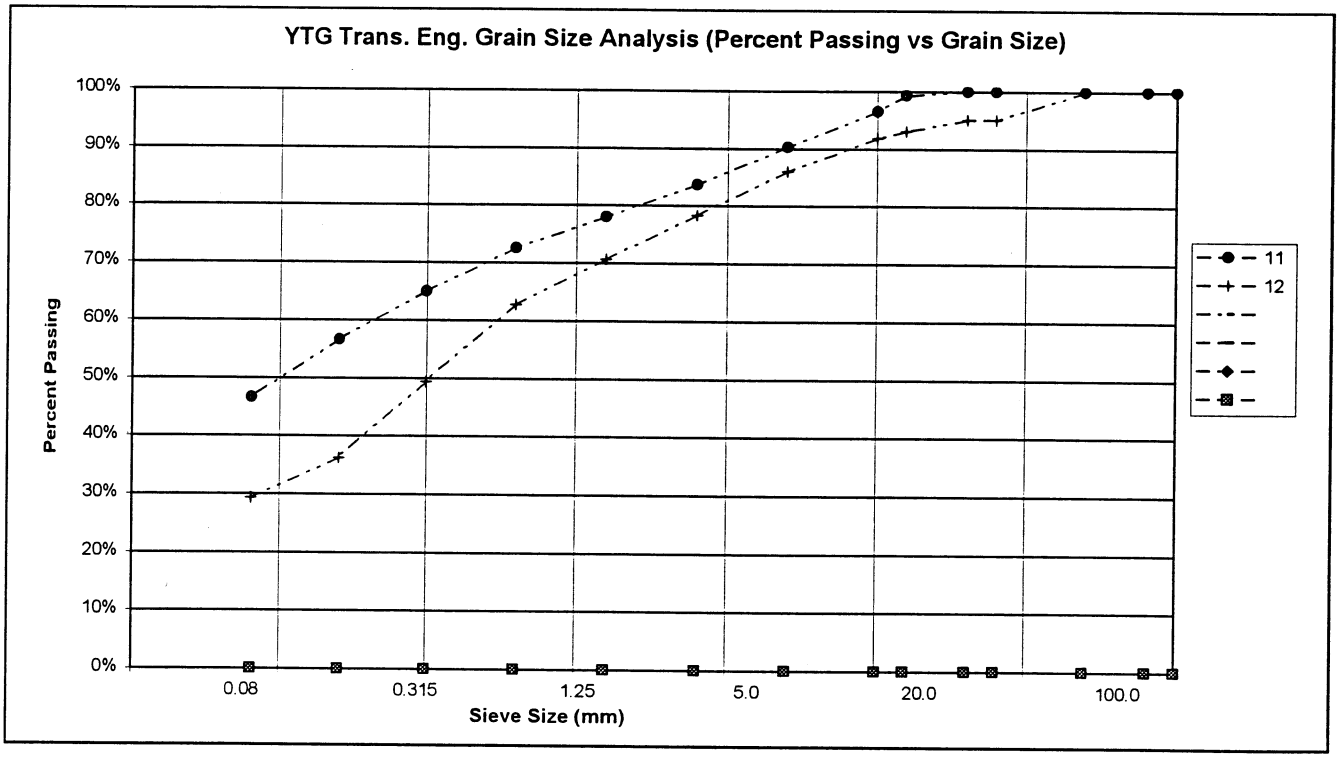


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1674+300
LOGGED BY:	K.J.

HOLE No.: 586-892

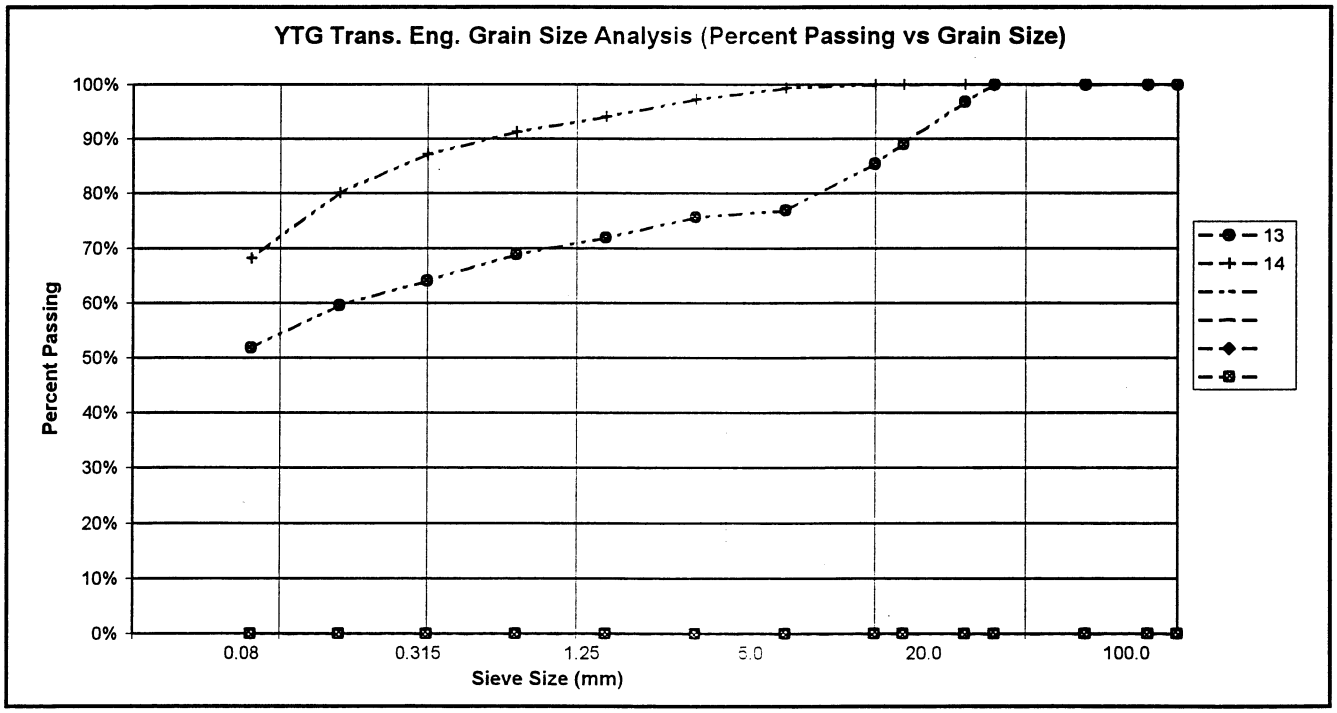
DATE COMP: 2001/03/27

FIELD NO:	11	12				
LAB NO:	183	184				
DEPTH:	1.3-1.5	1.8-2.0				
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	100%	95%				
20.0	100%	95%				
12.5	99%	93%				
10.0	96%	92%				
5.0	90%	86%				
2.5	84%	78%				
1.25	78%	71%				
0.630	73%	63%				
0.315	65%	49%				
0.160	57%	36%				
0.080	47%	29%				
M.C.(%):	15%	15%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	10	14				
% SAND:	44	57				
% FINES:	47	29				
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND (SM)				



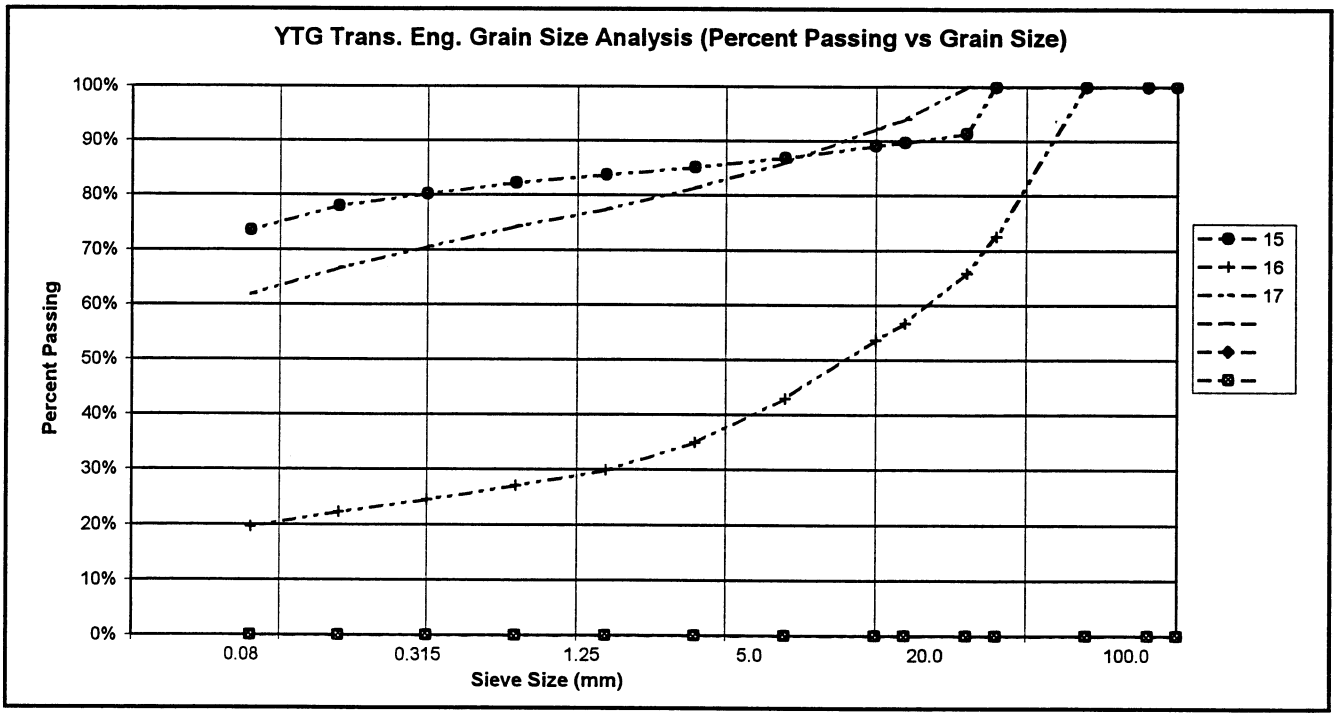
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 586-893
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1674+400		
LOGGED BY:	K.J.		DATE COMP: 2001/03/27

FIELD NO:	13	14				
LAB NO:	185	186				
DEPTH:	1.3-1.5	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	100%	100%				
20.0	97%	100%				
12.5	89%	100%				
10.0	85%	100%				
5.0	77%	99%				
2.5	76%	97%				
1.25	72%	94%				
0.630	69%	91%				
0.315	64%	87%				
0.160	60%	80%				
0.080	52%	68%				
M.C.(%):	14%	28%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	23	1				
% SAND:	25	31				
% FINES:	52	68				
CLASSIFICATION	SANDY SILT WITH GRAVEL (ML)	SANDY SILT (ML)				



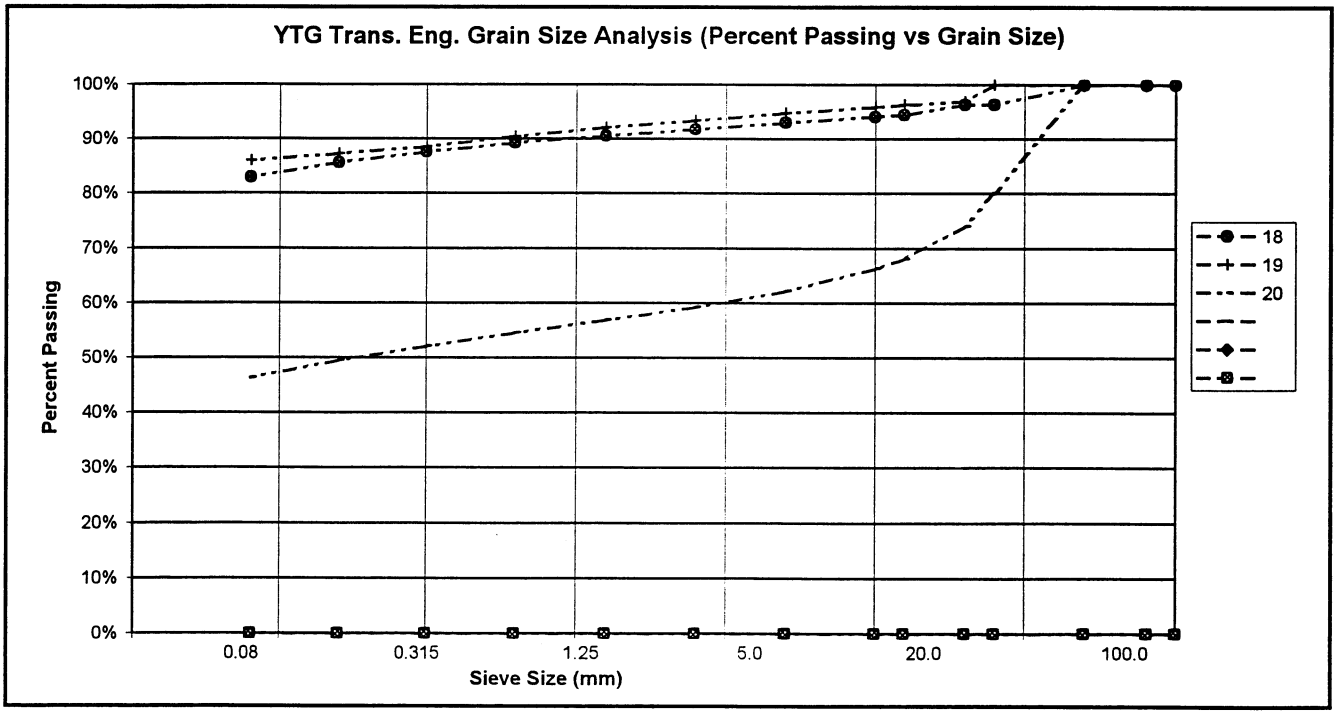
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 586-894
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1674+500		
LOGGED BY:	K.J.		DATE COMP: 2001/03/27

FIELD NO:	15	16	17			
LAB NO:	187	188	189			
DEPTH:	1.2-1.4	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	73%	100%			
20.0	91%	66%	100%			
12.5	90%	57%	94%			
10.0	89%	54%	92%			
5.0	87%	43%	86%			
2.5	85%	35%	82%			
1.25	84%	30%	77%			
0.630	82%	27%	74%			
0.315	80%	24%	71%			
0.160	78%	22%	67%			
0.080	74%	20%	62%			
M.C.(%):	32%	13%	16%			
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	57	14			
% SAND:	13	23	24			
% FINES:	74	20	62			
CLASSIFICATION	SILT WITH SAND (ML)	SILTY GRAVEL WITH SAND (GM)	SANDY SILT (ML)			



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 586-895
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1674+600		
LOGGED BY:	K.J.		DATE COMP: 2001/03/28

FIELD NO:	18	19	20			
LAB NO:	190	191	192			
DEPTH:	1.3-1.5	2.8-3.0	4.2-4.4			
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%	100%	80%			
20.0	96%	97%	74%			
12.5	94%	96%	68%			
10.0	94%	96%	66%			
5.0	93%	95%	62%			
2.5	92%	93%	59%			
1.25	91%	92%	57%			
0.630	89%	90%	55%			
0.315	88%	89%	52%			
0.160	86%	87%	50%			
0.080	83%	86%	46%			
M.C.(%):	15%	17%	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:	7	5	38			
% SAND:	10	9	16			
% FINES:	83	86	46			
CLASSIFICATION	SILT WITH SAND (ML)	SILT (ML)	SILTY GRAVEL WITH SAND (GM)			

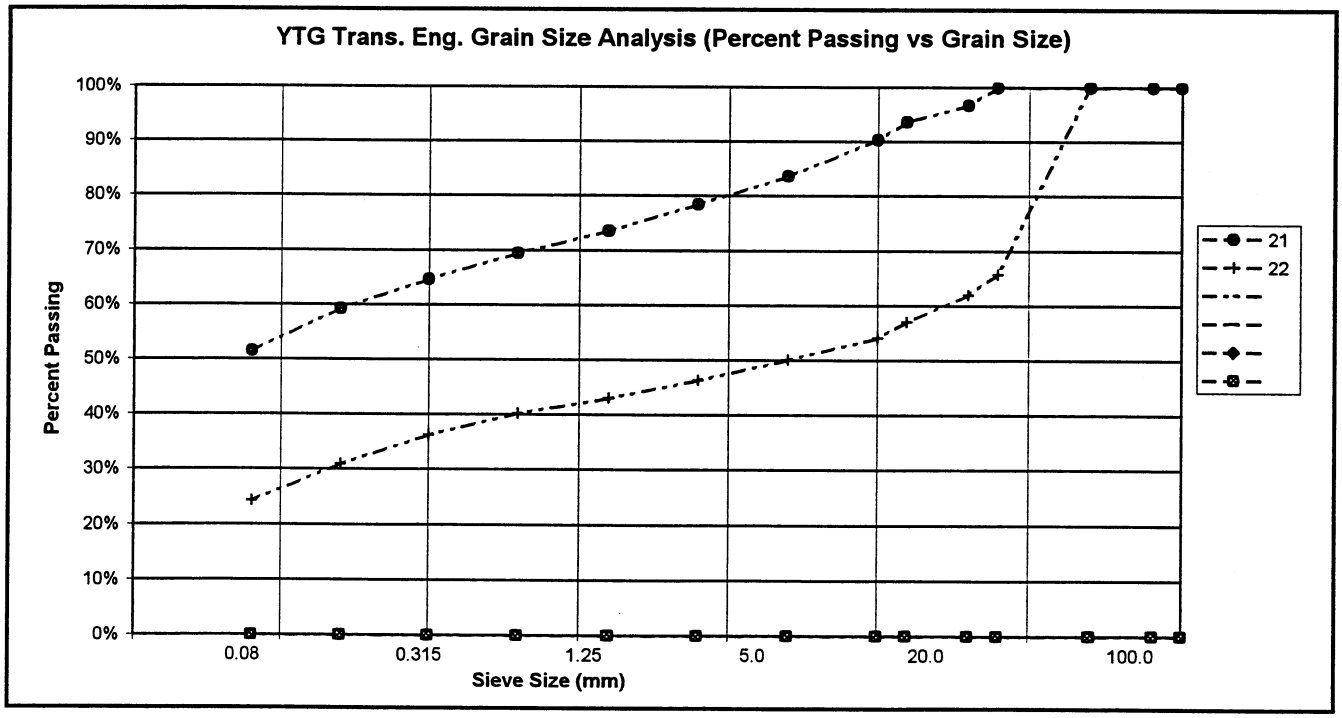


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1674+700
LOGGED BY:	K.J.

HOLE No.: 586-896

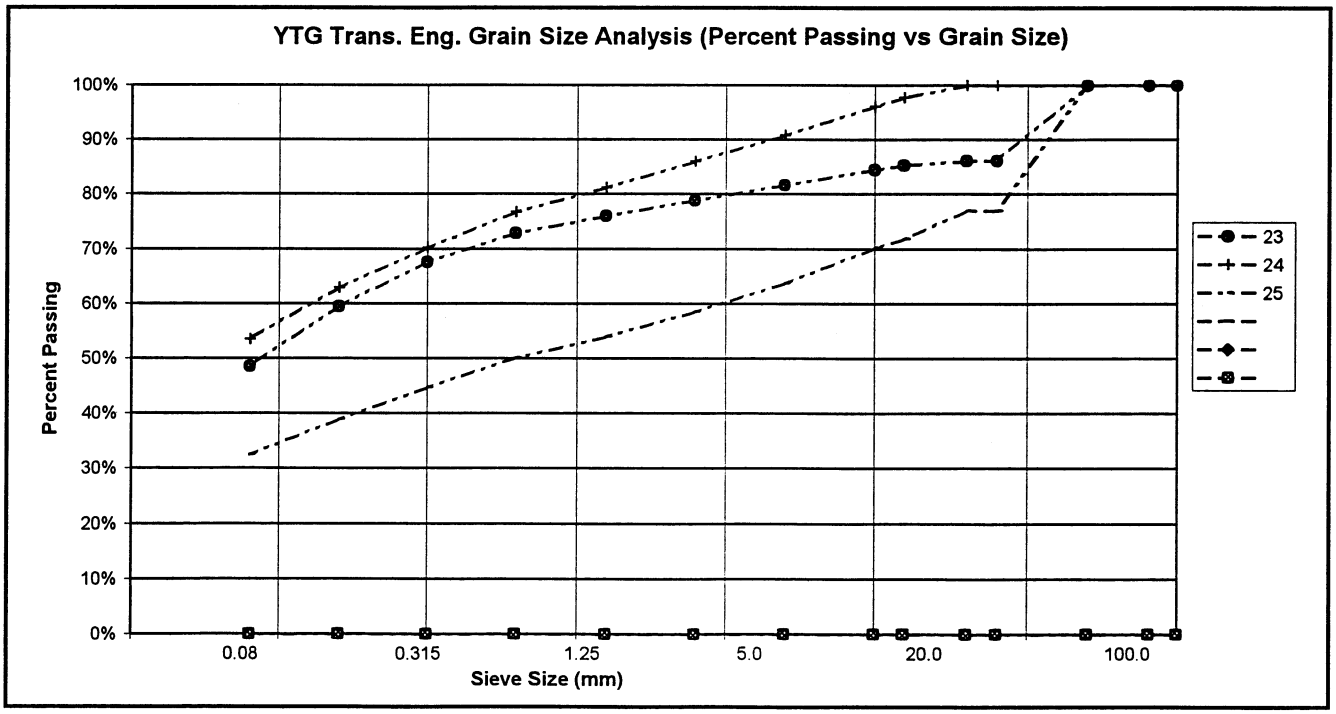
DATE COMP: 2001/03/28

FIELD NO:	21	22				
LAB NO:	193	194				
DEPTH:	1.3-1.5	4.3-4.5				
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%	66%				
20.0	97%	62%				
12.5	94%	57%				
10.0	90%	54%				
5.0	84%	50%				
2.5	78%	46%				
1.25	74%	43%				
0.630	70%	40%				
0.315	65%	36%				
0.160	59%	31%				
0.080	52%	24%				
M.C.(%):	10%	6%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	16	50				
% SAND:	32	26				
% FINES:	52	24				
CLASSIFICATION	SANDY SILT WITH GRAVEL (ML)	SILTY GRAVEL WITH SAND (GM)				



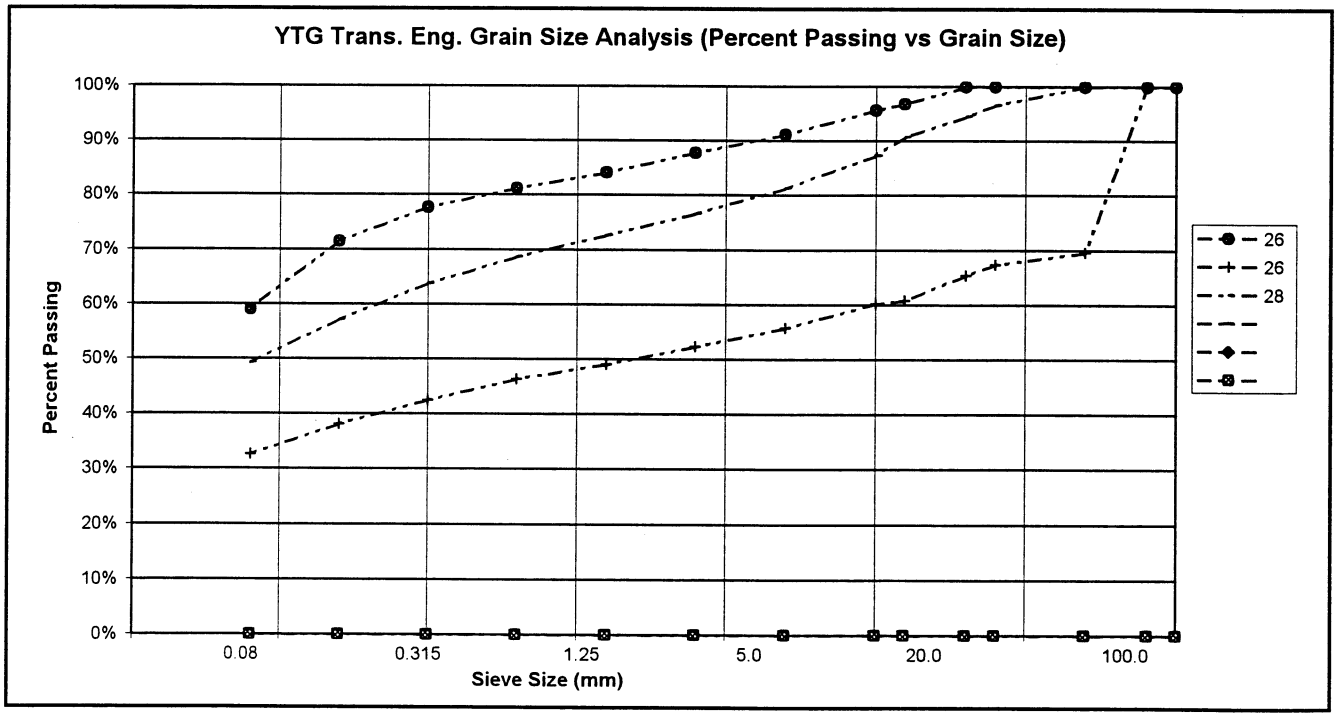
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 586-897
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1674-805		
LOGGED BY:	K.J.		DATE COMP: 2001/03/28

FIELD NO:	23	24	25			
LAB NO:	195	196	197			
DEPTH:	1.3-1.5	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	86%	100%	77%			
20.0	86%	100%	77%			
12.5	85%	98%	72%			
10.0	85%	96%	70%			
5.0	82%	91%	64%			
2.5	79%	86%	59%			
1.25	76%	81%	54%			
0.630	73%	77%	50%			
0.315	68%	70%	45%			
0.160	60%	63%	39%			
0.080	49%	54%	32%			
M.C.(%):	11%	12%	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:	18	9	36			
% SAND:	33	37	31			
% FINES:	49	54	32			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)	SILTY GRAVEL WITH SAND (GM)			



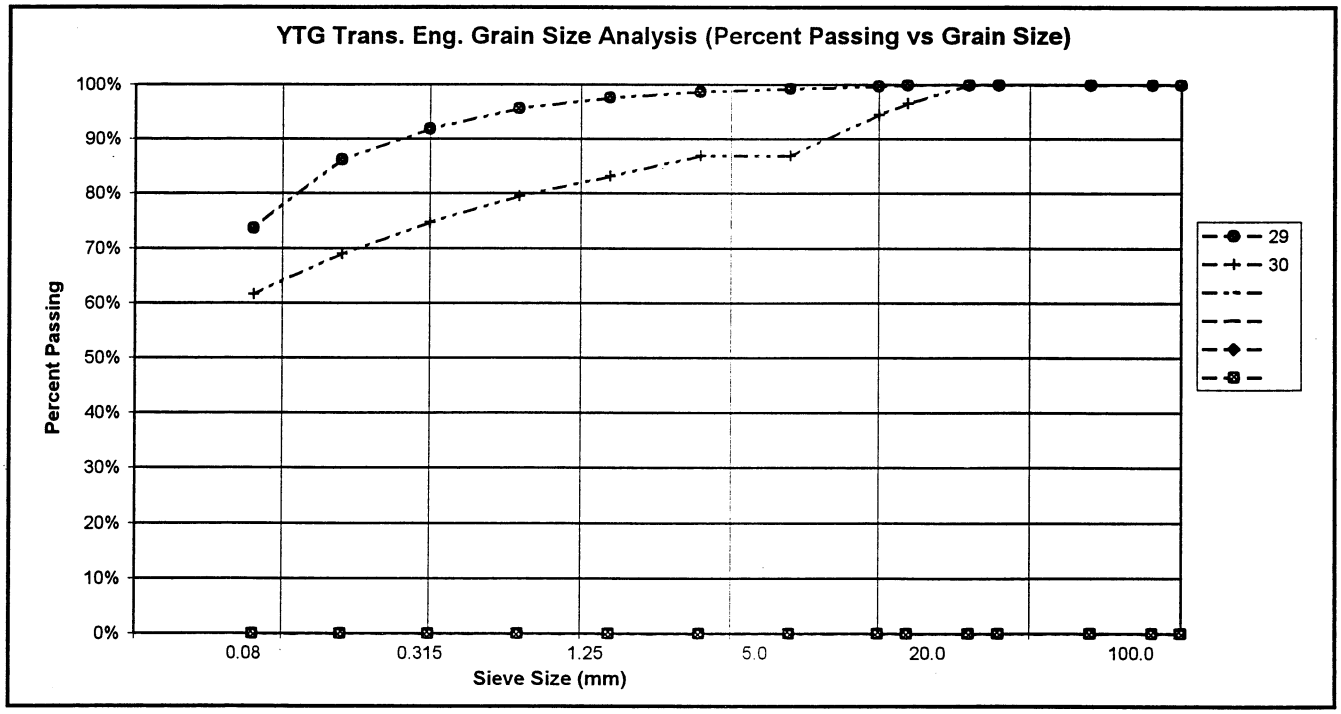
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 586-898
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1674+900		
LOGGED BY:	K.J.		DATE COMP: 2001/03/28

FIELD NO:	26	26	28			
LAB NO:	198	27	200			
DEPTH:	1.3-1.5	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	70%	100%			
25.0	100%	67%	97%			
20.0	100%	65%	95%			
12.5	97%	61%	91%			
10.0	96%	60%	87%			
5.0	91%	56%	81%			
2.5	88%	52%	77%			
1.25	84%	49%	73%			
0.630	81%	46%	69%			
0.315	78%	43%	64%			
0.160	71%	38%	57%			
0.080	59%	33%	49%			
M.C.(%):	12%	7%	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:	9	44	19			
% SAND:	32	23	32			
% FINES:	59	33	49			
CLASSIFICATION	SANDY SILT (ML)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 586-899
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1675+000		
LOGGED BY:	K.J.		DATE COMP: 2001/03/28

FIELD NO:	29	30				
LAB NO:	201	202				
DEPTH:	1.3-1.5	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	100%	100%				
20.0	100%	100%				
12.5	100%	97%				
10.0	100%	95%				
5.0	99%	87%				
2.5	99%	87%				
1.25	98%	83%				
0.630	96%	80%				
0.315	92%	75%				
0.160	86%	69%				
0.080	74%	62%				
M.C.(%):	23%	14%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	1	13				
% SAND:	26	25				
% FINES:	74	62				
CLASSIFICATION	SILT WITH SAND (ML)	SANDY SILT (ML)				

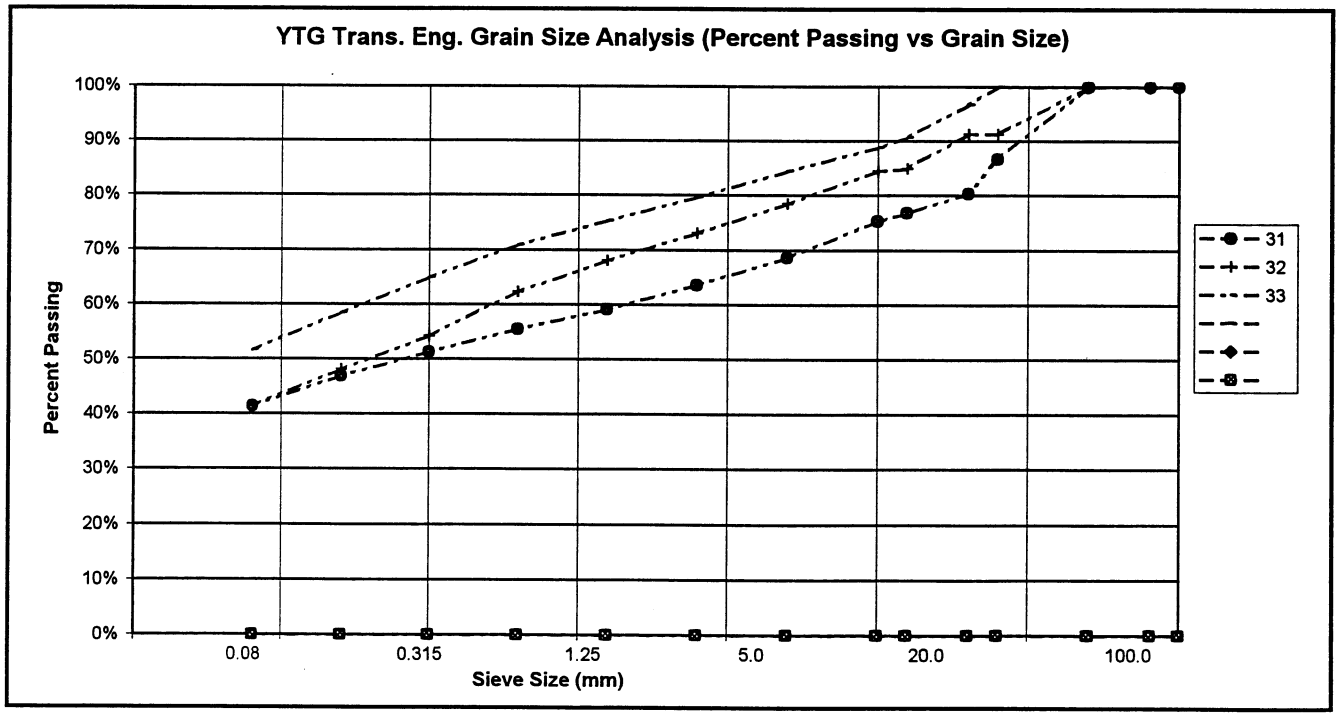


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1675+100
LOGGED BY:	K.J.

HOLE No.: 586-900

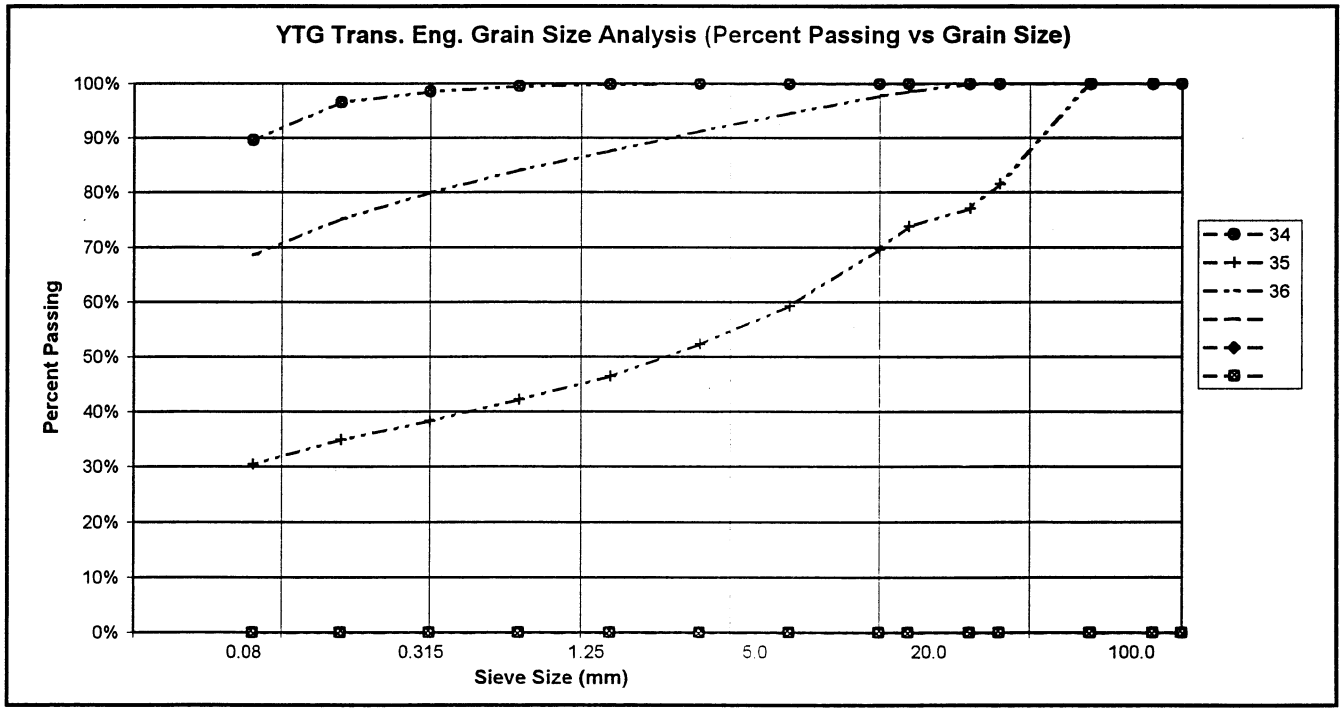
DATE COMP: 2001/03/28

FIELD NO:	31	32	33			
LAB NO:	203	204	205			
DEPTH:	1.3-1.5	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	87%	91%	100%			
20.0	80%	91%	97%			
12.5	77%	85%	91%			
10.0	75%	85%	89%			
5.0	69%	78%	85%			
2.5	64%	73%	80%			
1.25	59%	68%	75%			
0.630	55%	62%	71%			
0.315	51%	54%	65%			
0.160	47%	48%	58%			
0.080	41%	42%	52%			
M.C.(%):	11%	12%	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:	31	22	15			
% SAND:	27	37	33			
% FINES:	41	42	52			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SANDY SILT WITH GRAVEL (ML)			



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 586-901
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1675+200		
LOGGED BY:	K.J.		DATE COMP: 2001/03/28

FIELD NO:	34	35	36			
LAB NO:	206	207	208			
DEPTH:	1.3-1.5	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	82%	100%			
20.0	100%	77%	100%			
12.5	100%	74%	99%			
10.0	100%	70%	98%			
5.0	100%	59%	95%			
2.5	100%	52%	91%			
1.25	100%	46%	88%			
0.630	100%	42%	84%			
0.315	99%	38%	80%			
0.160	97%	35%	75%			
0.080	90%	31%	69%			
M.C.(%):	63%	11%	15%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	0	41	5			
% SAND:	10	29	26			
% FINES:	90	31	69			
CLASSIFICATION	SILT (ML)	SILTY GRAVEL WITH SAND (GM)	SANDY SILT (ML)			

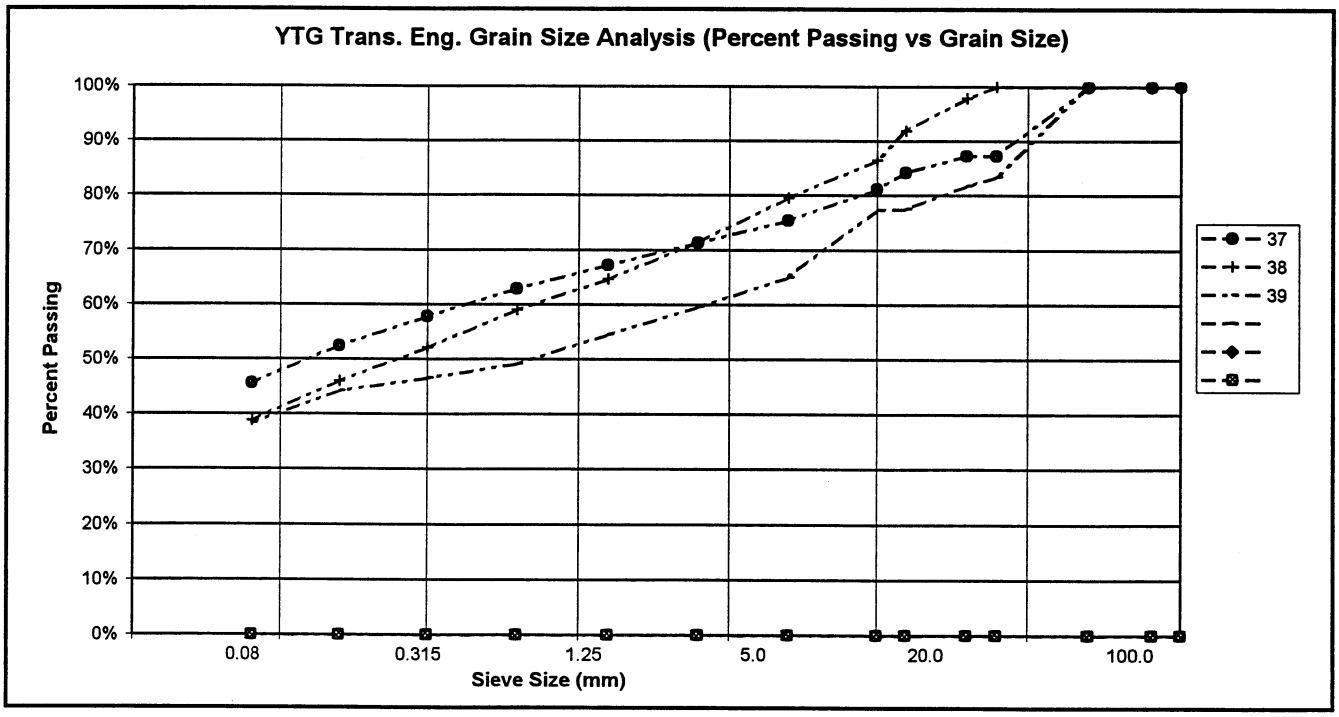


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1675+300
LOGGED BY:	K.J.

HOLE No.: 586-902

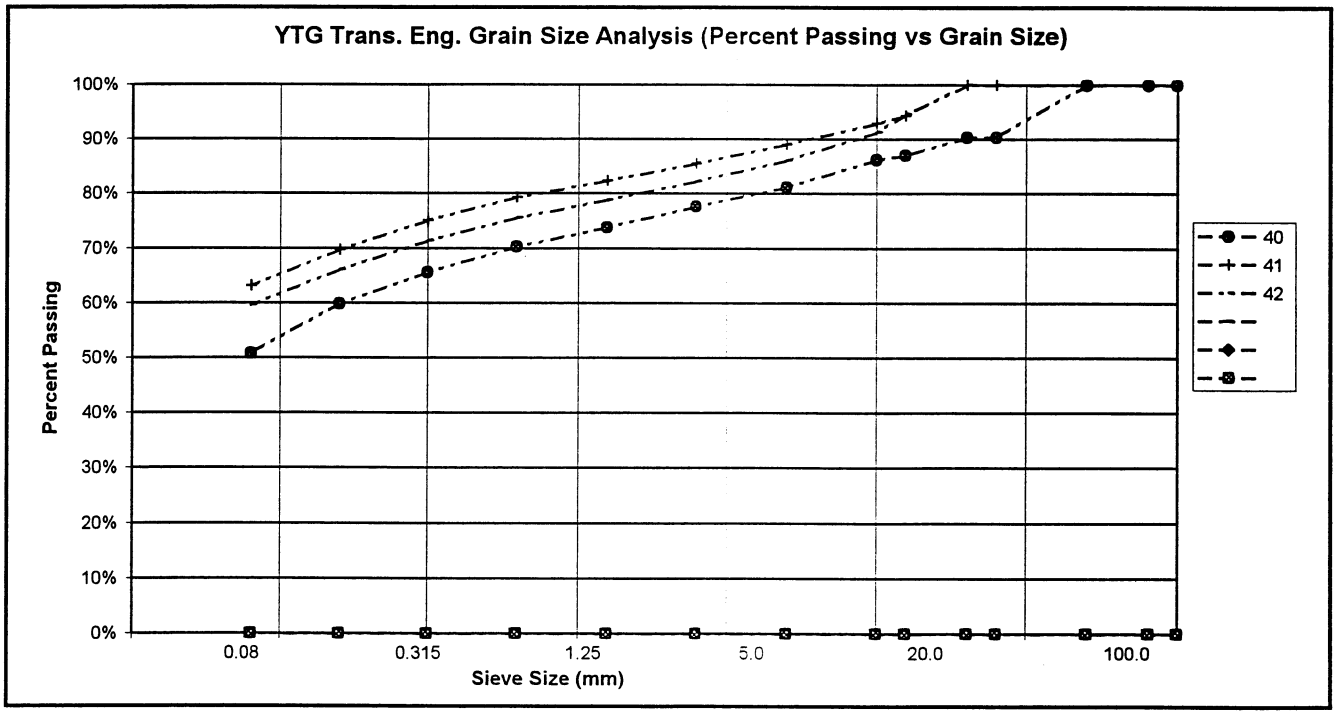
DATE COMP: 2001/03/28

FIELD NO:	37	38	39			
LAB NO:	209	210	211			
DEPTH:	1.3-1.5	2.0-2.2	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	87%	100%	83%			
20.0	87%	98%	82%			
12.5	84%	92%	78%			
10.0	81%	87%	77%			
5.0	75%	80%	65%			
2.5	71%	71%	60%			
1.25	67%	65%	55%			
0.630	63%	59%	49%			
0.315	58%	52%	47%			
0.160	52%	46%	44%			
0.080	46%	39%	38%			
M.C.(%):	28%	25%	18%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	25	20	35			
% SAND:	30	41	27			
% FINES:	46	39	38			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)			



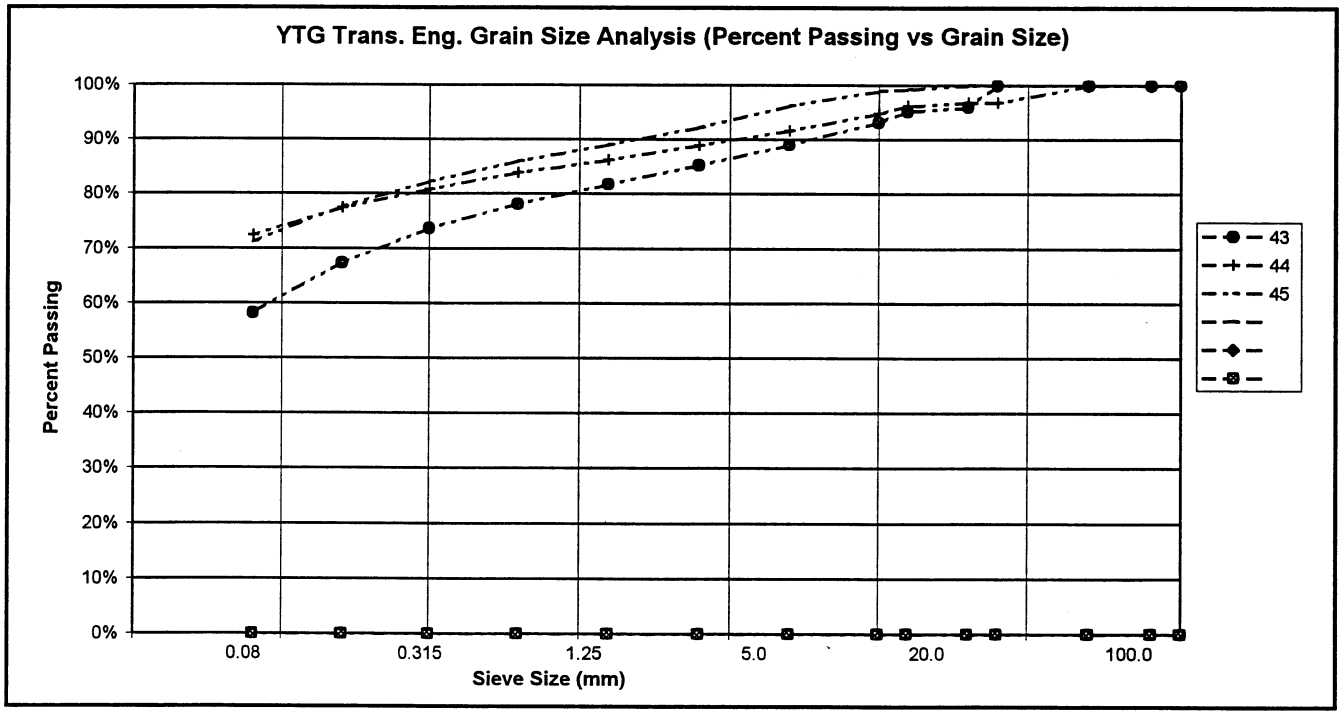
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 586-903
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1675+400		
LOGGED BY:	K.J.		DATE COMP: 2001/03/28

FIELD NO:	40	41	42			
LAB NO:	212	213	214			
DEPTH:	1.3-1.5	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	90%	100%	100%			
20.0	90%	100%	100%			
12.5	87%	94%	95%			
10.0	86%	93%	91%			
5.0	81%	89%	86%			
2.5	78%	86%	82%			
1.25	74%	82%	79%			
0.630	70%	79%	76%			
0.315	66%	75%	71%			
0.160	60%	70%	66%			
0.080	51%	63%	60%			
M.C.(%):	15%	17%	18%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	19	11	14			
% SAND:	30	26	26			
% FINES:	51	63	60			
CLASSIFICATION	SANDY SILT WITH GRAVEL (ML)	SANDY SILT (ML)	SANDY SILT (ML)			



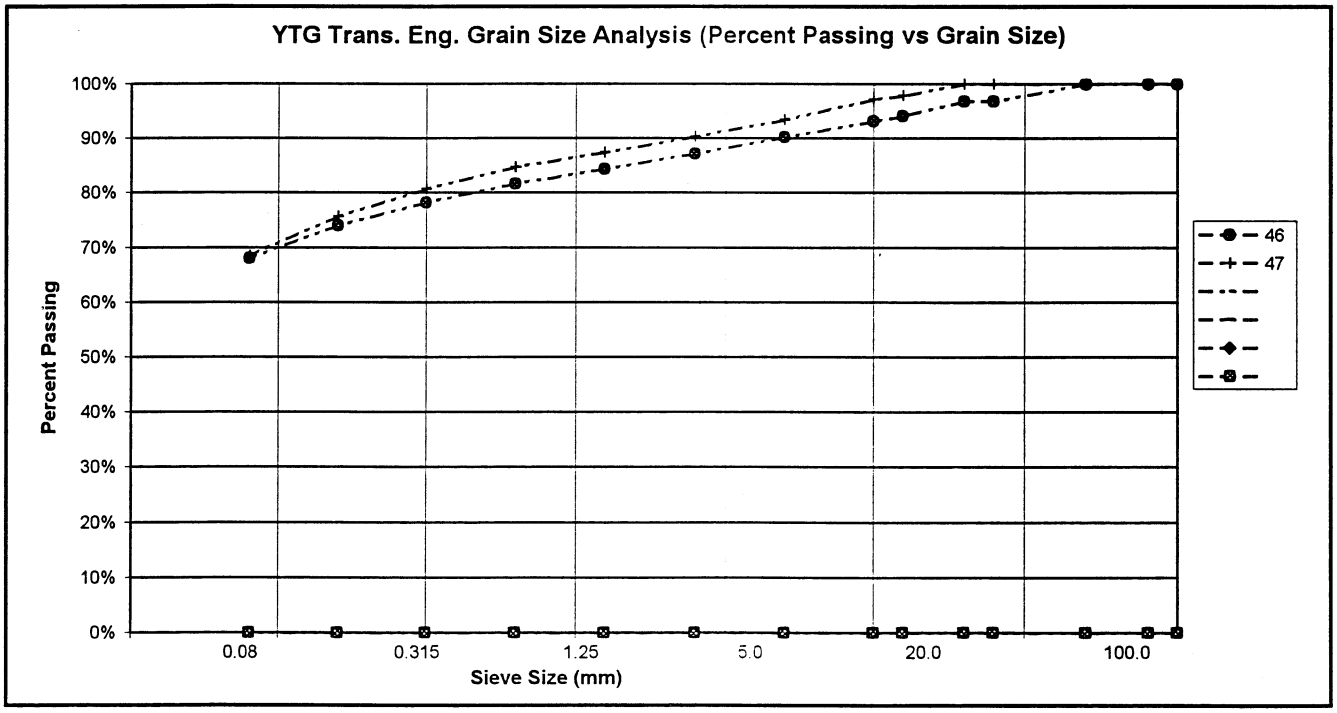
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 586-904
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1675+500		
LOGGED BY:	K.J.		DATE COMP: 2001/03/28

FIELD NO:	43	44	45			
LAB NO:	215	216	217			
DEPTH:	08-1.0	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	97%	100%			
20.0	96%	97%	100%			
12.5	95%	96%	99%			
10.0	93%	95%	99%			
5.0	89%	92%	96%			
2.5	85%	89%	92%			
1.25	82%	86%	89%			
0.630	78%	84%	86%			
0.315	74%	81%	82%			
0.160	67%	77%	78%			
0.080	58%	72%	71%			
M.C.(%):	12%	21%	20%			
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:	11	8	4			
% SAND:	31	19	25			
% FINES:	58	72	71			
CLASSIFICATION	SANDY SILT (ML)	SILT WITH SAND (ML)	SILT WITH SAND (ML)			



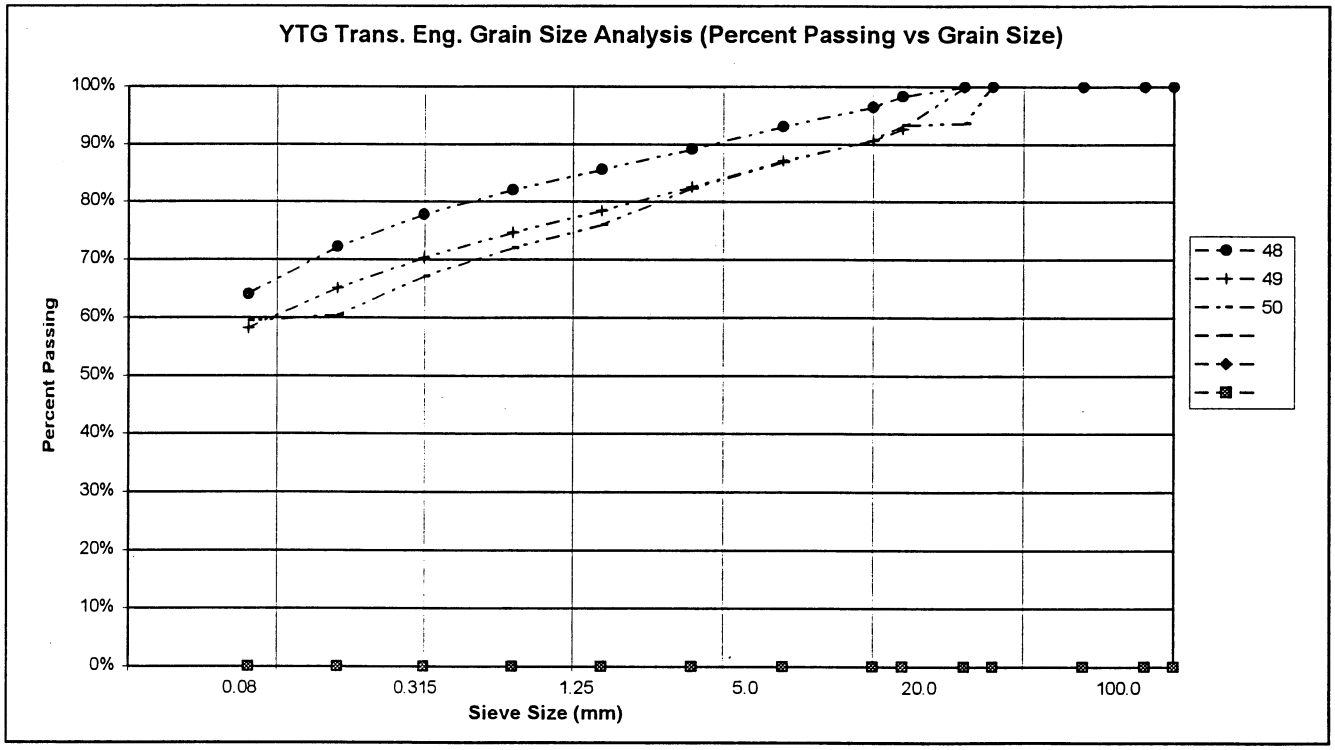
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 586-905
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1675+600		
LOGGED BY:	K.J.		DATE COMP: 2001/03/28

FIELD NO:	46	47				
LAB NO:	218	219				
DEPTH:	1.3-1.5	4.3-4.5				
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	97%	100%				
20.0	97%	100%				
12.5	94%	98%				
10.0	93%	97%				
5.0	90%	93%				
2.5	87%	90%				
1.25	84%	87%				
0.630	82%	85%				
0.315	78%	81%				
0.160	74%	76%				
0.080	68%	69%				
M.C.(%):	17%	15%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	10	7				
% SAND:	22	25				
% FINES:	68	69				
CLASSIFICATION	SANDY SILT (ML)	SANDY SILT (ML)				



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 586-906
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1675+675		
LOGGED BY:	K.J.		DATE COMP: 2001/03/28

FIELD NO:	48	49	50			
LAB NO:	220	221	222			
DEPTH:	1.3-1.5	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	100%	94%			
12.5	98%	93%	93%			
10.0	96%	91%	91%			
5.0	93%	87%	87%			
2.5	89%	83%	82%			
1.25	86%	78%	76%			
0.630	82%	75%	72%			
0.315	78%	70%	67%			
0.160	72%	65%	60%			
0.080	64%	58%	59%			
M.C.(%):	17%	16%	15%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	7	13	13			
% SAND:	29	29	28			
% FINES:	64	58	59			
CLASSIFICATION	SANDY SILT (ML)	SANDY SILT (ML)	SANDY SILT (ML)			

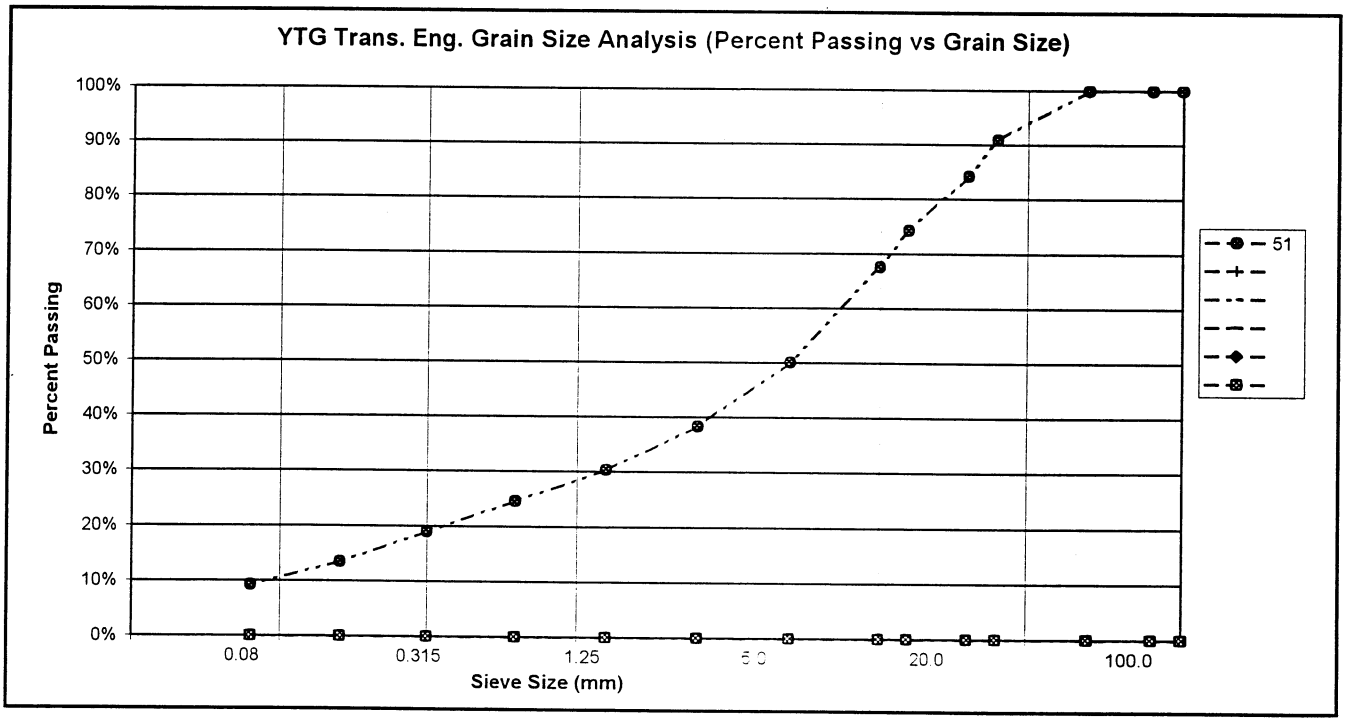


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1675+790
LOGGED BY:	K.J.

HOLE No.: 586-907

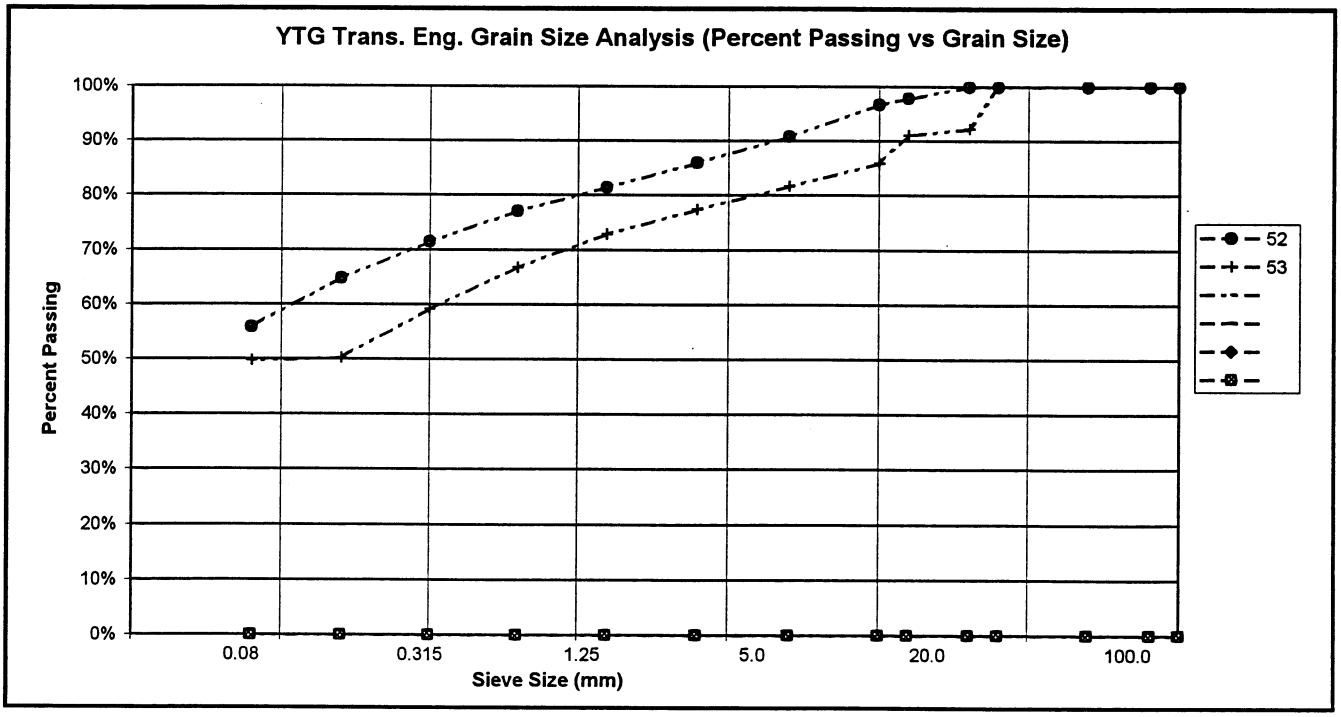
DATE COMP: 2001/03/28

FIELD NO:	51					
LAB NO:	223					
DEPTH:	4.3-4.5					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	91%					
20.0	84%					
12.5	74%					
10.0	68%					
5.0	50%					
2.5	38%					
1.25	30%					
0.630	25%					
0.315	19%					
0.160	14%					
0.080	9%					
M.C.(%):	7%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	50					
% SAND:	41					
% FINES:	9					
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)					



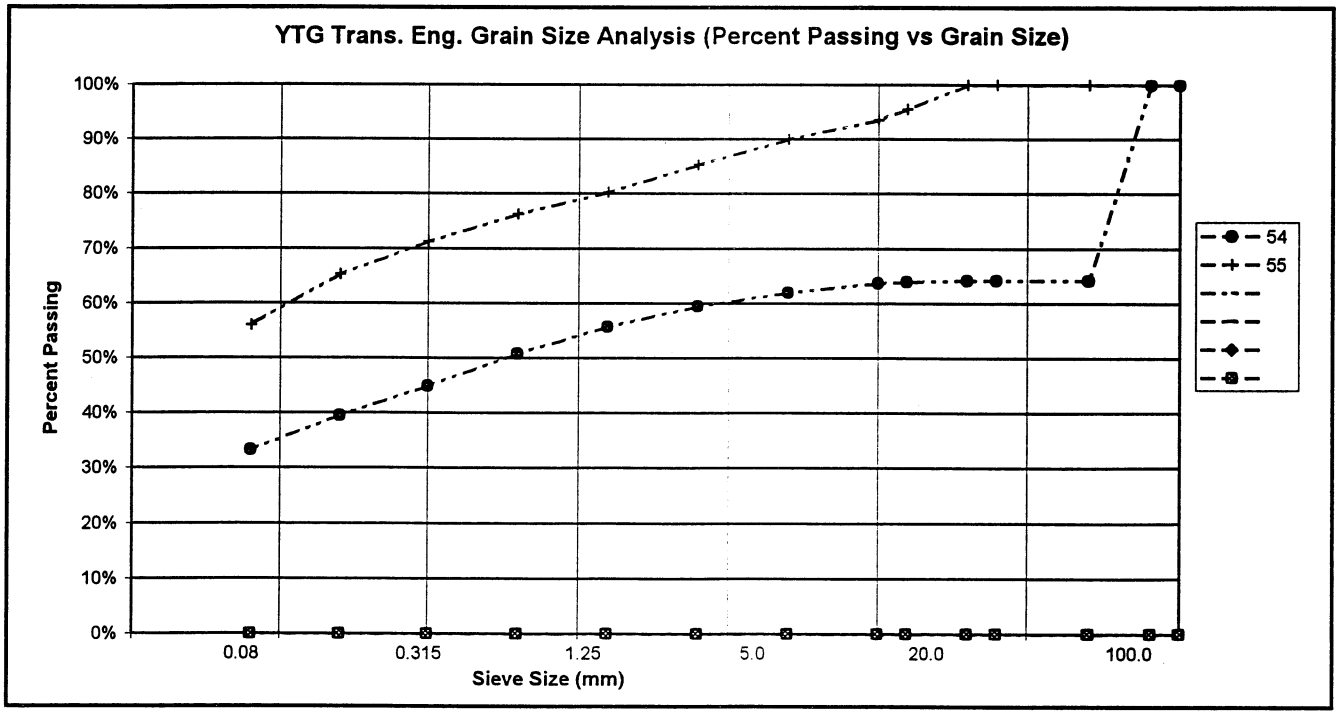
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 586-908
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1675+900		
LOGGED BY:	K.J.		DATE COMP: 2001/03/28

FIELD NO:	52	53				
LAB NO:	224	225				
DEPTH:	1.3-1.5	4.3-4.5				
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	100%	92%				
12.5	98%	91%				
10.0	97%	86%				
5.0	91%	82%				
2.5	86%	77%				
1.25	81%	73%				
0.630	77%	67%				
0.315	72%	59%				
0.160	65%	50%				
0.080	56%	50%				
M.C.(%):	14%	13%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	9	18				
% SAND:	35	32				
% FINES:	56	50				
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)				



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 586-909
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1676+000		
LOGGED BY:	K.J.		DATE COMP: 03/29/2001

FIELD NO:	54	55				
LAB NO:	226	227				
DEPTH:	1.3-1.5	4.3-4.5				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	64%	100%				
25.0	64%	100%				
20.0	64%	100%				
12.5	64%	96%				
10.0	64%	94%				
5.0	62%	90%				
2.5	60%	85%				
1.25	56%	80%				
0.630	51%	76%				
0.315	45%	71%				
0.160	40%	65%				
0.080	33%	56%				
M.C.(%):	20%	30%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	38	10				
% SAND:	29	34				
% FINES:	33	56				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SANDY SILT (ML)				

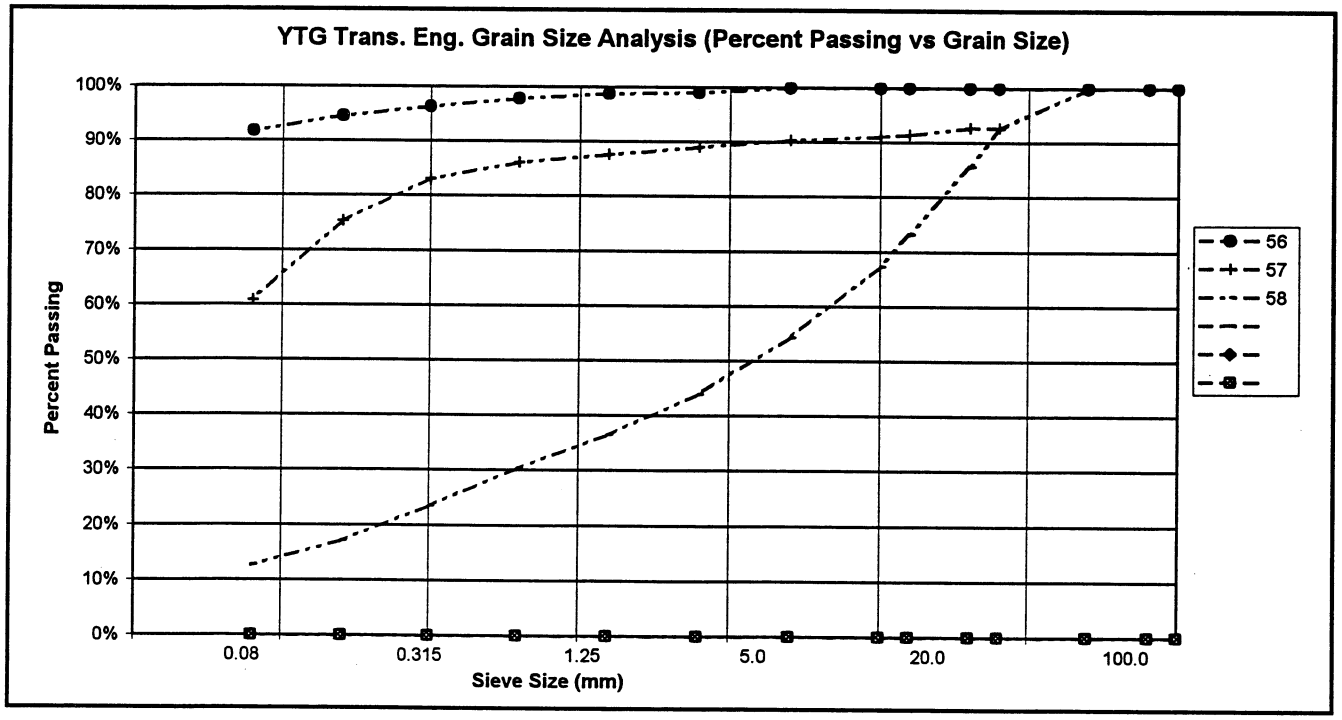


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1676+100
LOGGED BY:	K.J.

HOLE No.: 586-910

DATE COMP: 03/29/2001

FIELD NO:	56	57	58			
LAB NO:	228	229	230			
DEPTH:	1.3-1.5	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	93%	92%			
20.0	100%	93%	86%			
12.5	100%	91%	73%			
10.0	100%	91%	67%			
5.0	100%	90%	54%			
2.5	99%	89%	44%			
1.25	99%	88%	37%			
0.630	98%	86%	30%			
0.315	96%	83%	24%			
0.160	95%	75%	17%			
0.080	92%	61%	13%			
M.C.(%):	116%	48%	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:	0	10	46			
% SAND:	8	30	42			
% FINES:	92	61	13			
CLASSIFICATION	SILT (ML)	SANDY SILT (ML)	SILTY GRAVEL WITH SAND (GM)			

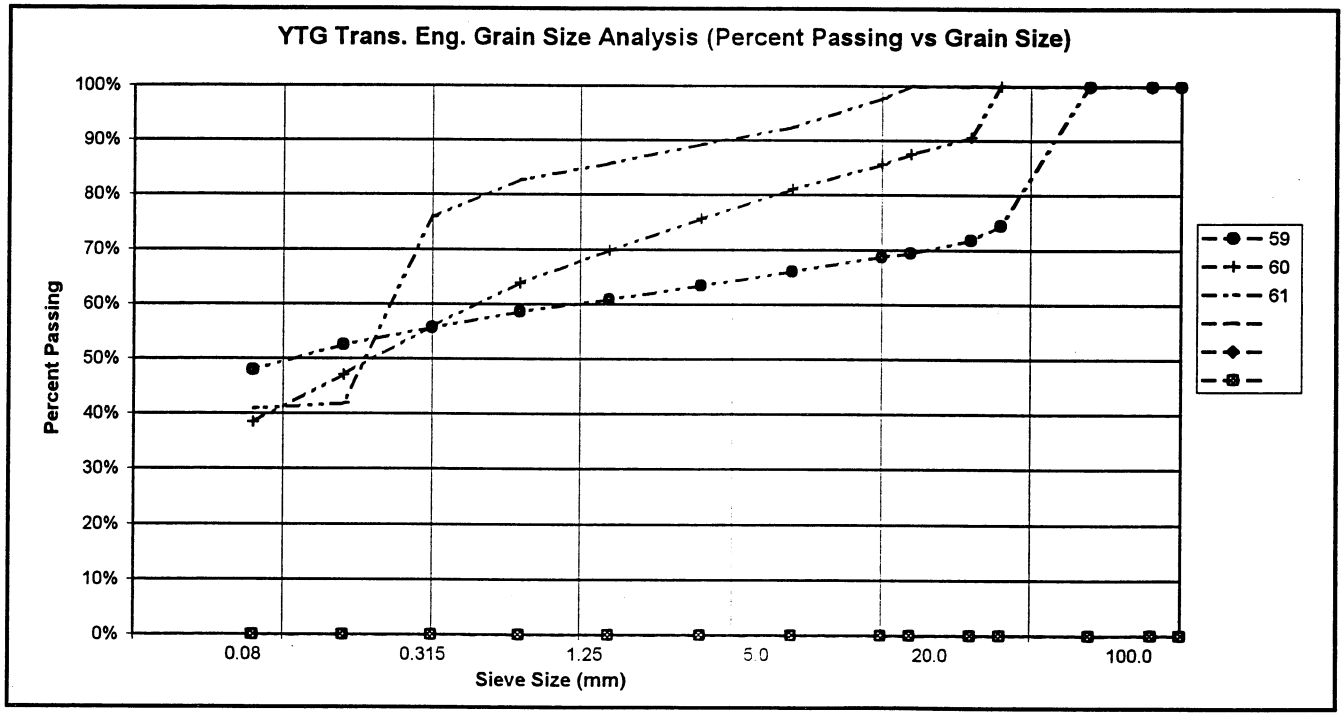


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1676+200
LOGGED BY:	K.J.

HOLE No.: 586-911

DATE COMP: 03/29/2001

FIELD NO:	59	60	61			
LAB NO:	231	232	233			
DEPTH:	1.3-1.5	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	74%	100%	100%			
20.0	72%	91%	100%			
12.5	69%	88%	100%			
10.0	69%	86%	98%			
5.0	66%	81%	92%			
2.5	64%	76%	89%			
1.25	61%	70%	86%			
0.630	59%	64%	83%			
0.315	56%	56%	76%			
0.160	53%	47%	42%			
0.080	48%	38%	41%			
M.C.(%):	10%	9%	15%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	34	19	8			
% SAND:	18	43	51			
% FINES:	48	38	41			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)			

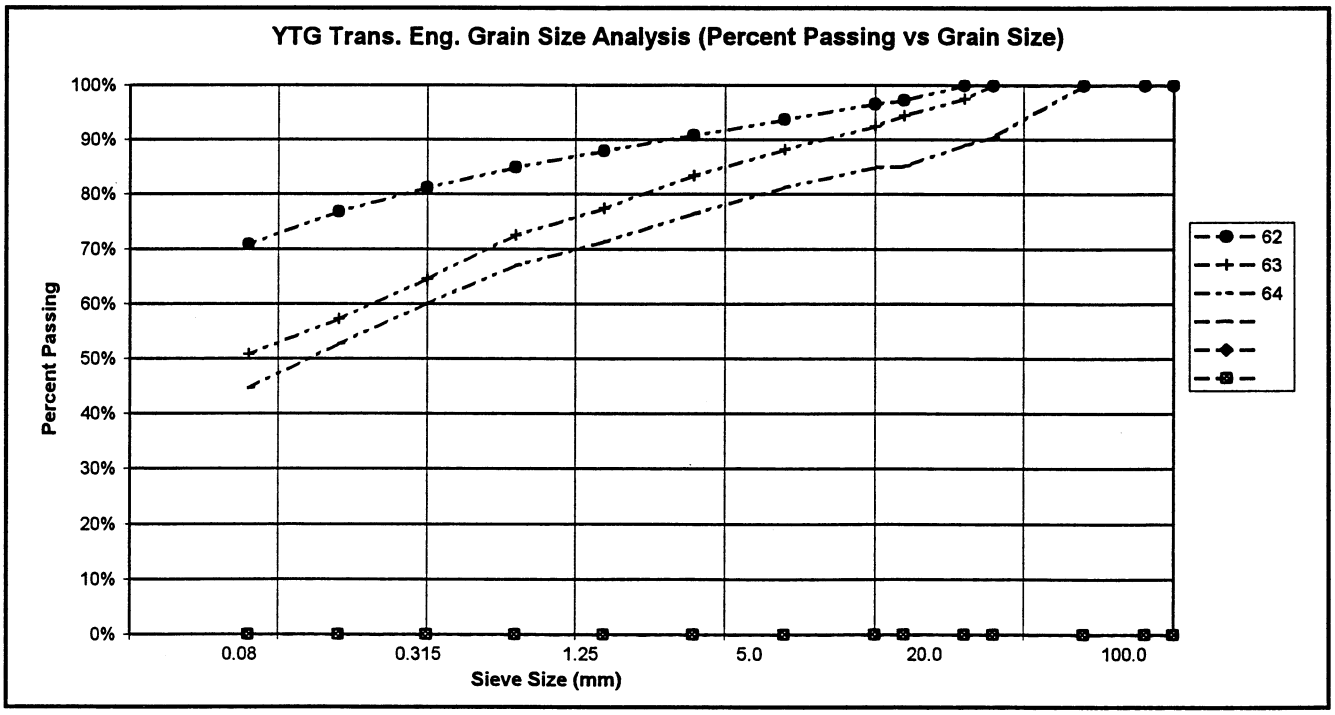


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1676+300
LOGGED BY:	K.J.

HOLE No.: 586-912

DATE COMP: 03/29/2001

FIELD NO:	62	63	64			
LAB NO:	234	235	236			
DEPTH:	1.3-1.5	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	90%			
20.0	100%	97%	89%			
12.5	97%	94%	85%			
10.0	97%	92%	85%			
5.0	94%	88%	81%			
2.5	91%	83%	76%			
1.25	88%	78%	71%			
0.630	85%	72%	67%			
0.315	81%	65%	60%			
0.160	77%	57%	53%			
0.080	71%	51%	45%			
M.C.(%):	10%	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:	6	12	19			
% SAND:	23	37	37			
% FINES:	71	51	45			
CLASSIFICATION	SILT WITH SAND (ML)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)			

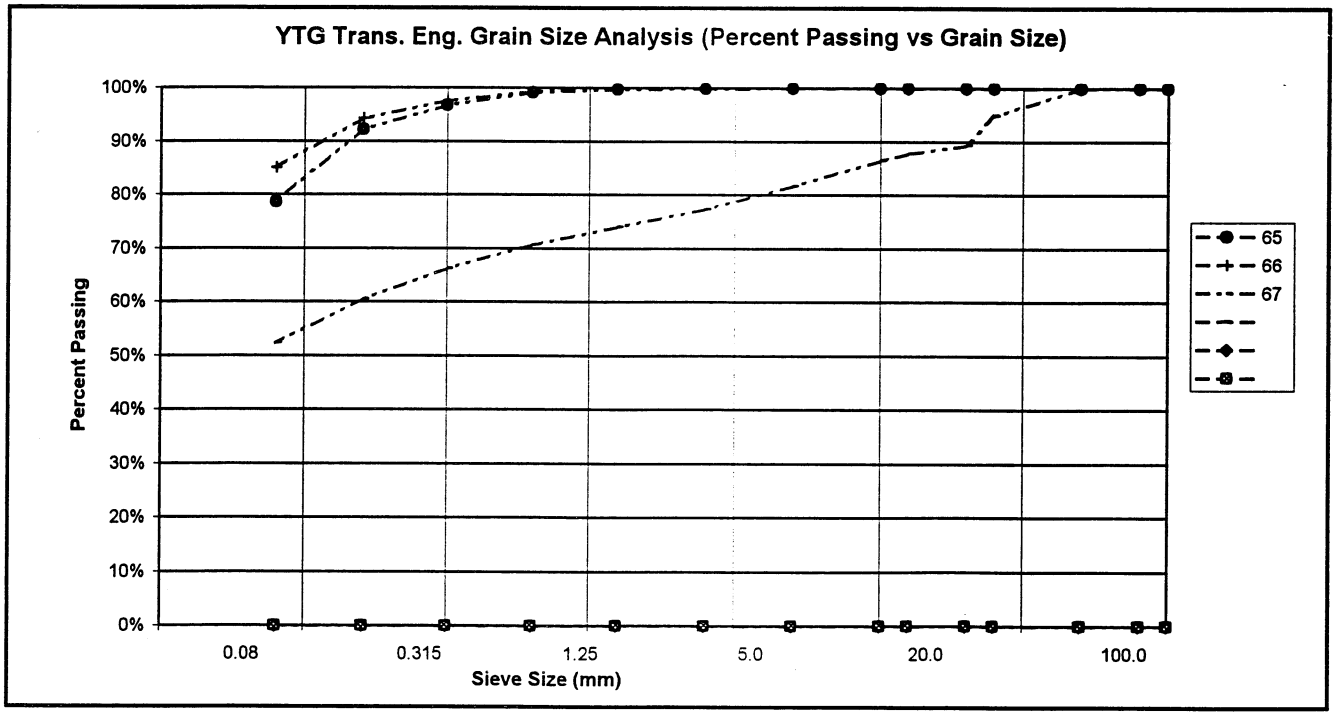


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1676+355
LOGGED BY:	K.J.

HOLE No.: 587-913

DATE COMP: 03/29/2001

FIELD NO:	65	66	67			
LAB NO:	237	238	239			
DEPTH:	0.8-1.0	1.8-2.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	95%			
20.0	100%	100%	89%			
12.5	100%	100%	88%			
10.0	100%	100%	86%			
5.0	100%	100%	82%			
2.5	100%	100%	77%			
1.25	100%	100%	74%			
0.630	99%	99%	71%			
0.315	97%	98%	66%			
0.160	92%	94%	60%			
0.080	79%	85%	52%			
M.C.(%):	15%	19%	12%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	0	0	18			
% SAND:	21	15	29			
% FINES:	79	85	52			
CLASSIFICATION	SILT WITH SAND (ML)	SILT (ML)	SANDY SILT WITH GRAVEL (ML)			

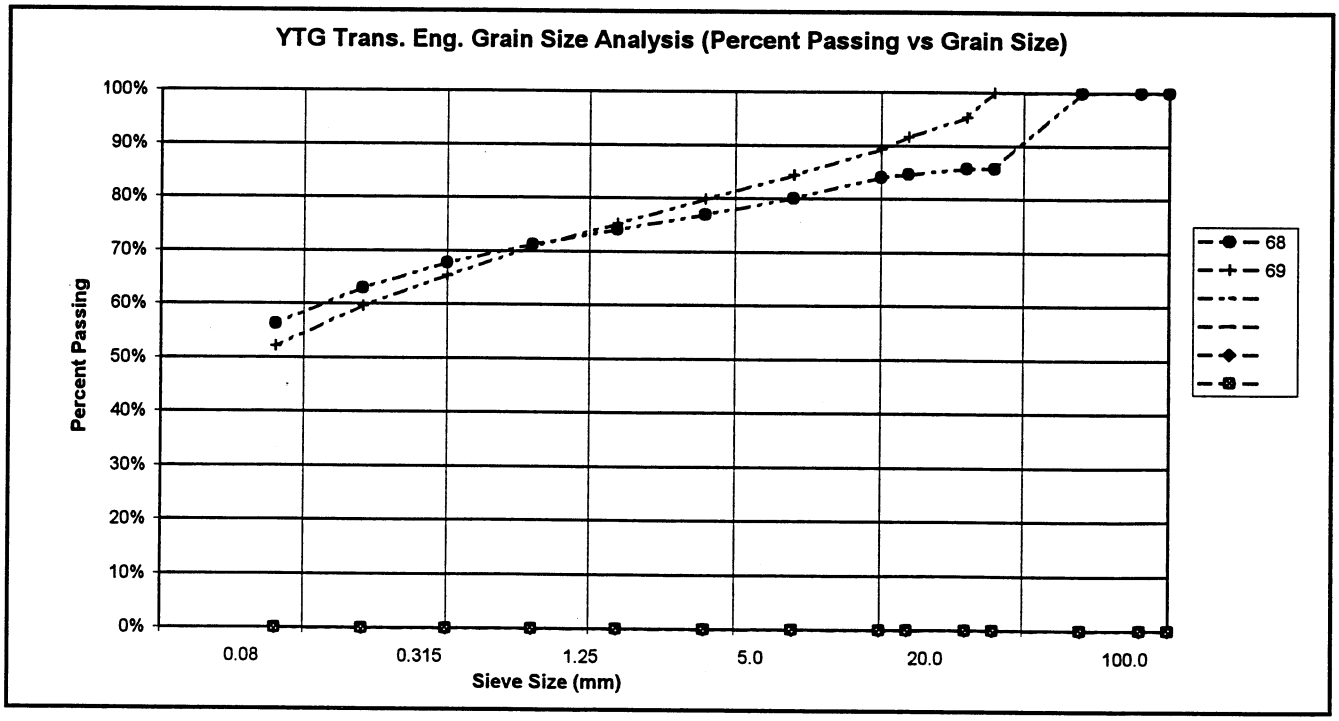


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1676+425
LOGGED BY:	K.J.

HOLE No.: 587-914

DATE COMP: 03/29/2001

FIELD NO:	68	69				
LAB NO:	240	241				
DEPTH:	1.3-1.5	4.3-4.5				
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%	100%				
20.0	86%	95%				
12.5	85%	92%				
10.0	84%	89%				
5.0	80%	84%				
2.5	77%	80%				
1.25	74%	75%				
0.630	71%	71%				
0.315	68%	65%				
0.160	63%	60%				
0.080	56%	52%				
M.C.(%):	9%	9%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	20	16				
% SAND:	24	32				
% FINES:	56	52				
CLASSIFICATION	SANDY SILT WITH GRAVEL (ML)	SANDY SILT WITH GRAVEL (ML)				

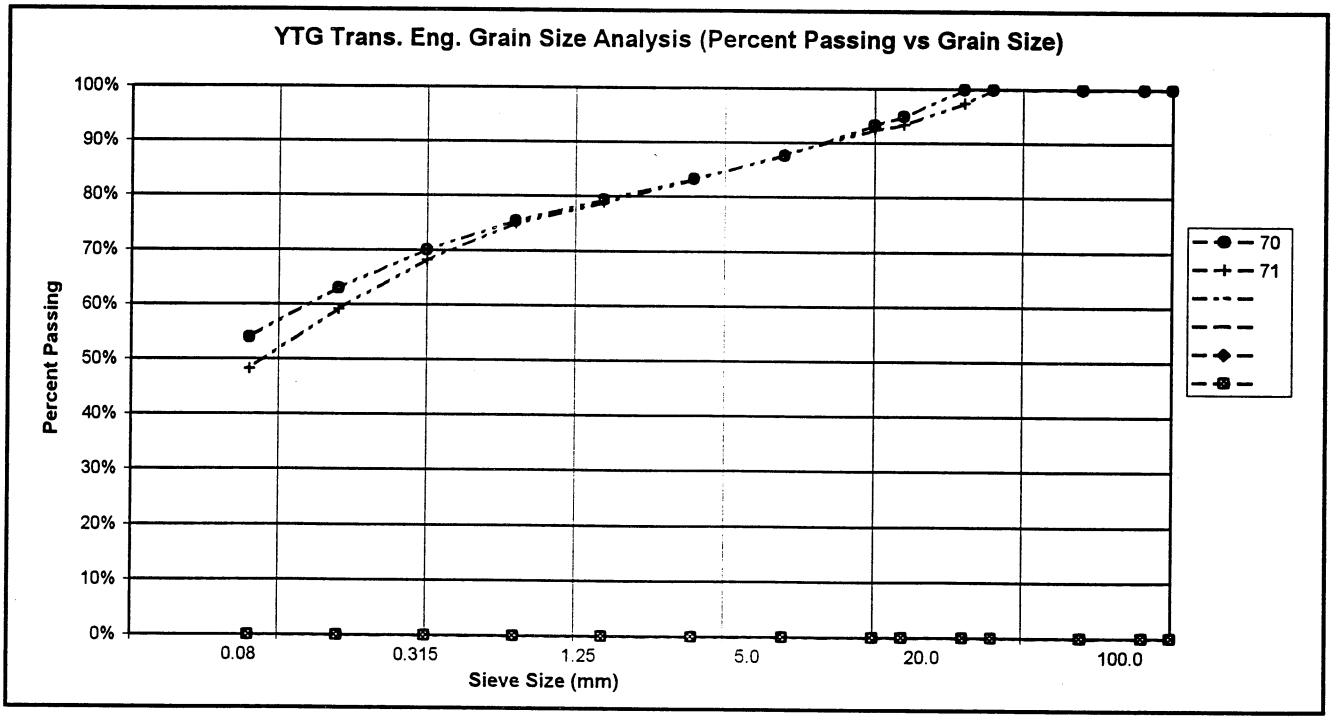


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1676+500
LOGGED BY:	K.J.

HOLE No.: 587-915

DATE COMP: 03/29/2001

FIELD NO:	70	71				
LAB NO:	242	243				
DEPTH:	1.3-1.5	4.3-4.5				
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	100%	97%				
12.5	95%	93%				
10.0	93%	92%				
5.0	88%	88%				
2.5	83%	83%				
1.25	79%	79%				
0.630	76%	75%				
0.315	70%	68%				
0.160	63%	59%				
0.080	54%	48%				
M.C.(%):	9%	10%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	12	12				
% SAND:	34	40				
% FINES:	54	48				
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND (SM)				

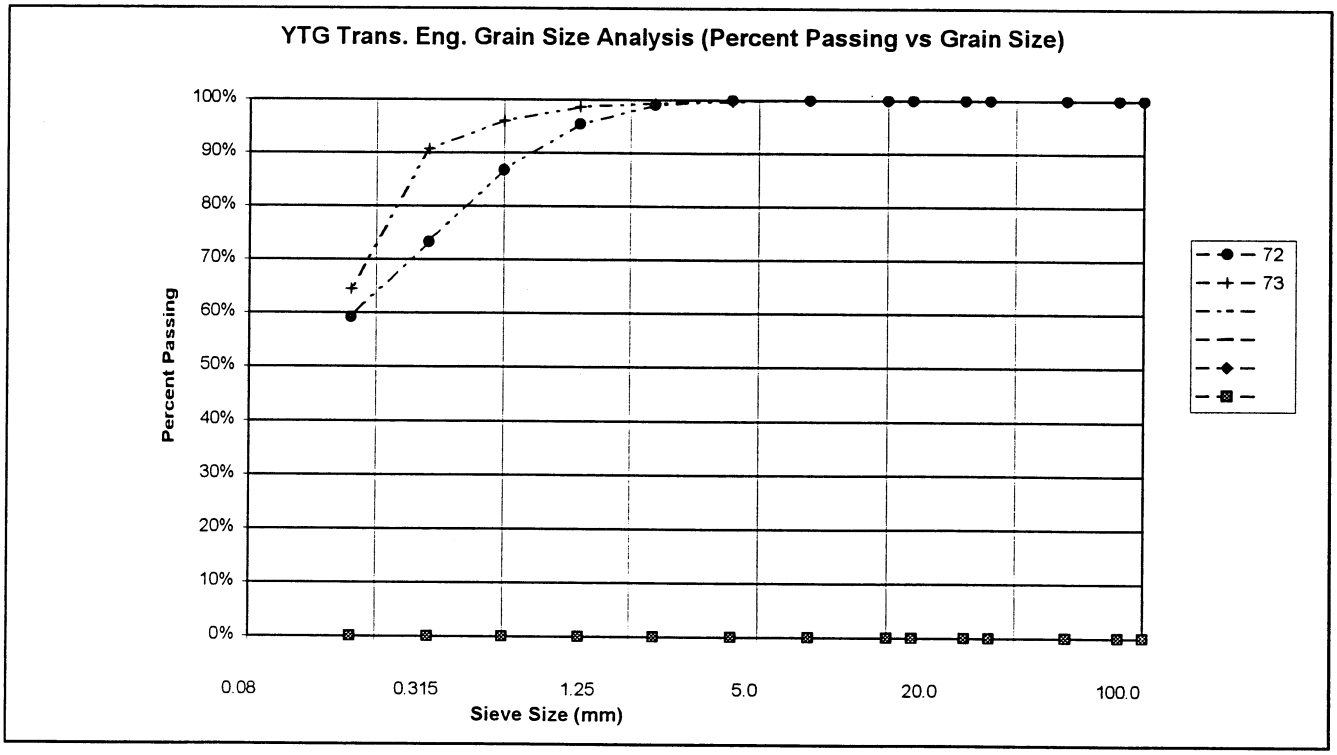


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1676-550
LOGGED BY:	K.J.

HOLE No.: 587-916

DATE COMP: 2001/03/29

FIELD NO:	72	73				
LAB NO:	244	245				
DEPTH:	.8-1.0	2.8-3.2				
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	100%	100%				
12.5	100%	100%				
10.0	100%	100%				
5.0	100%	100%				
2.5	100%	100%				
1.25	99%	99%				
0.630	95%	99%				
0.315	87%	96%				
0.160	73%	91%				
0.080	59%	64%				
M.C.(%):	19%	20%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	0	0				
% SAND:	41	36				
% FINES:	59	64				
CLASSIFICATION	SANDY SILT (ML)	SANDY SILT (ML)				

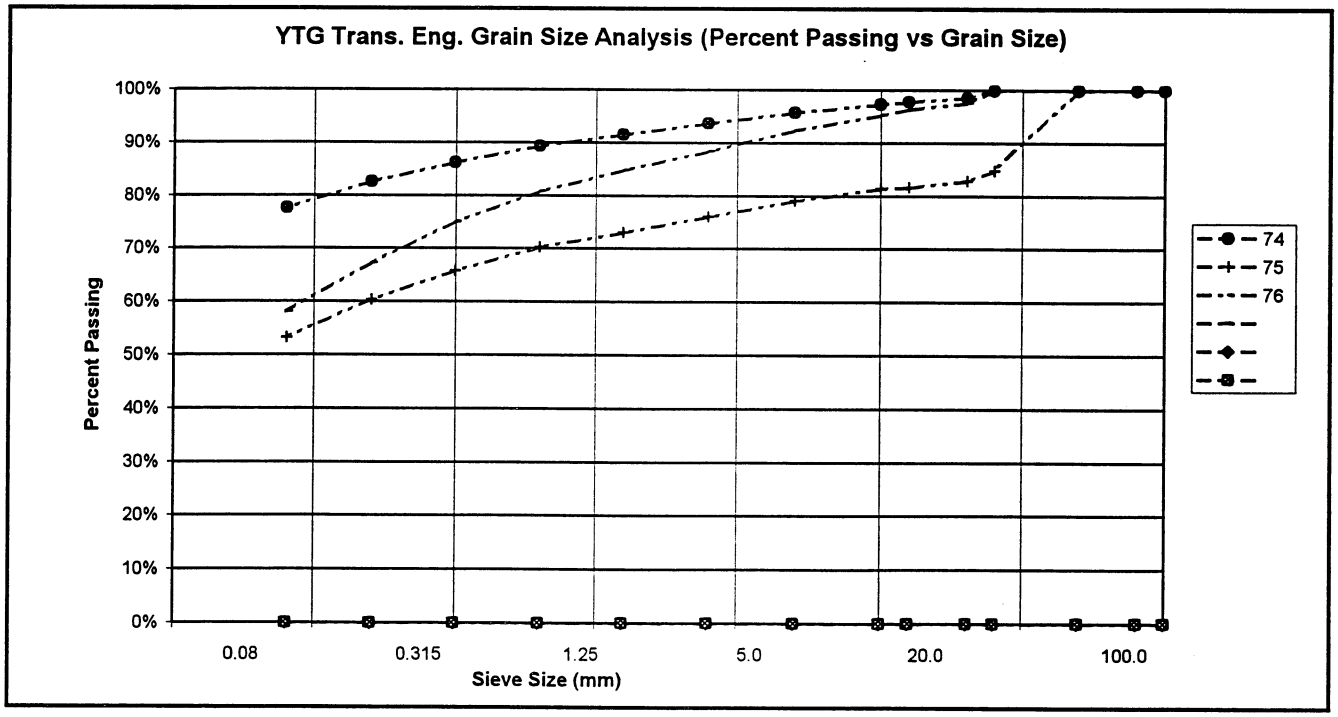


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1676+675
LOGGED BY:	K.J.

HOLE No.: 587-917

DATE COMP: 03/29/2001

FIELD NO:	74	75	76			
LAB NO:	246	247	248			
DEPTH:	1.3-1.5	4.3-4.5	7.1-7.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	85%	100%			
20.0	99%	83%	98%			
12.5	98%	82%	96%			
10.0	97%	81%	95%			
5.0	96%	79%	92%			
2.5	94%	76%	88%			
1.25	91%	73%	85%			
0.630	89%	70%	81%			
0.315	86%	66%	75%			
0.160	83%	60%	67%			
0.080	78%	53%	58%			
M.C.(%):	14%	11%	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:	4	21	8			
% SAND:	18	26	34			
% FINES:	78	53	58			
CLASSIFICATION	SILT WITH SAND (ML)	SANDY SILT WITH GRAVEL (ML)	SANDY SILT (ML)			

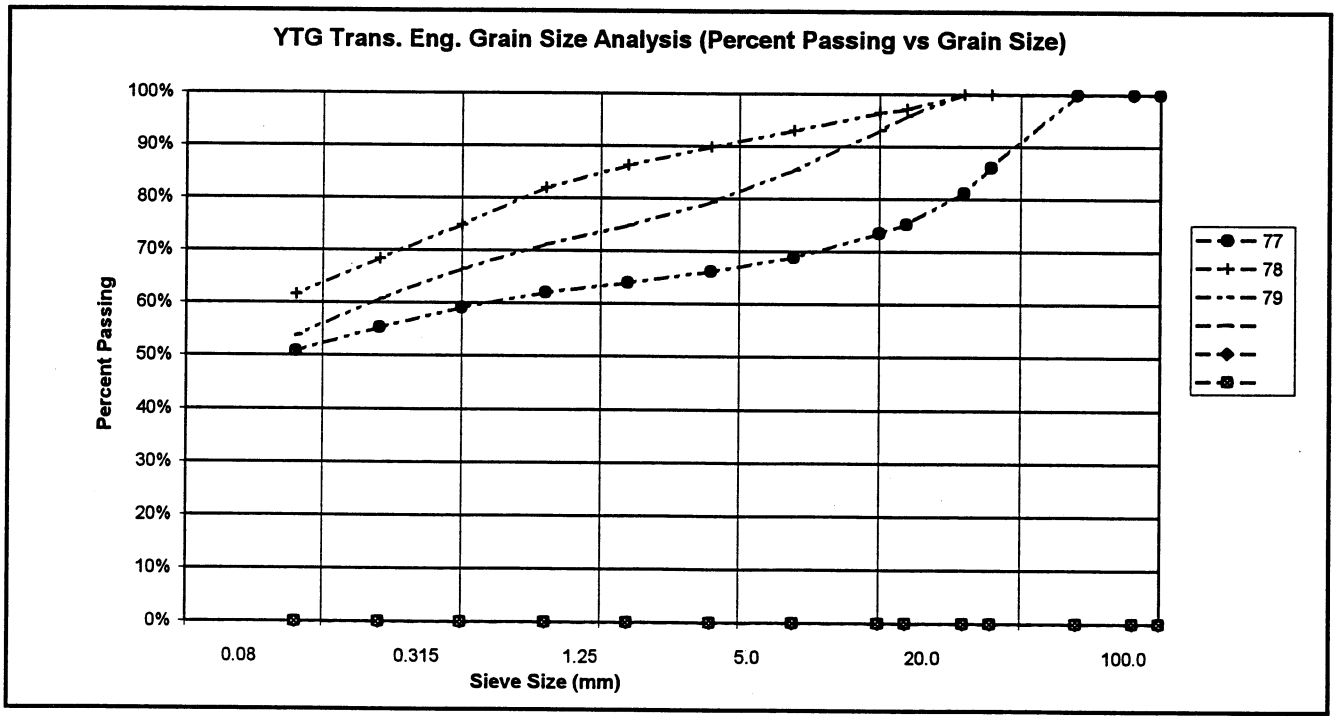


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: 1664.5 - 1692.6 A/H
DRILL UNIT: MOBILE B30 L
HOLE LOCATION: 1676+750
LOGGED BY: K.J.

HOLE No.: 587-918

DATE COMP: 03/29/2001

FIELD NO:	77	78	79			
LAB NO:	249	250	251			
DEPTH:	1.3-1.5	4.3-4.5	7.3-7.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	86%	100%	100%			
20.0	81%	100%	100%			
12.5	75%	97%	96%			
10.0	74%	97%	93%			
5.0	69%	93%	85%			
2.5	66%	90%	79%			
1.25	64%	86%	75%			
0.630	62%	82%	71%			
0.315	59%	75%	67%			
0.160	55%	68%	61%			
0.080	51%	62%	54%			
M.C.(%):	9%	12%	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:	31	7	15			
% SAND:	18	31	32			
% FINES:	51	62	54			
CLASSIFICATION	GRAVELLY SILT WITH SAND (ML)	SANDY SILT (ML)	SANDY SILT (ML)			

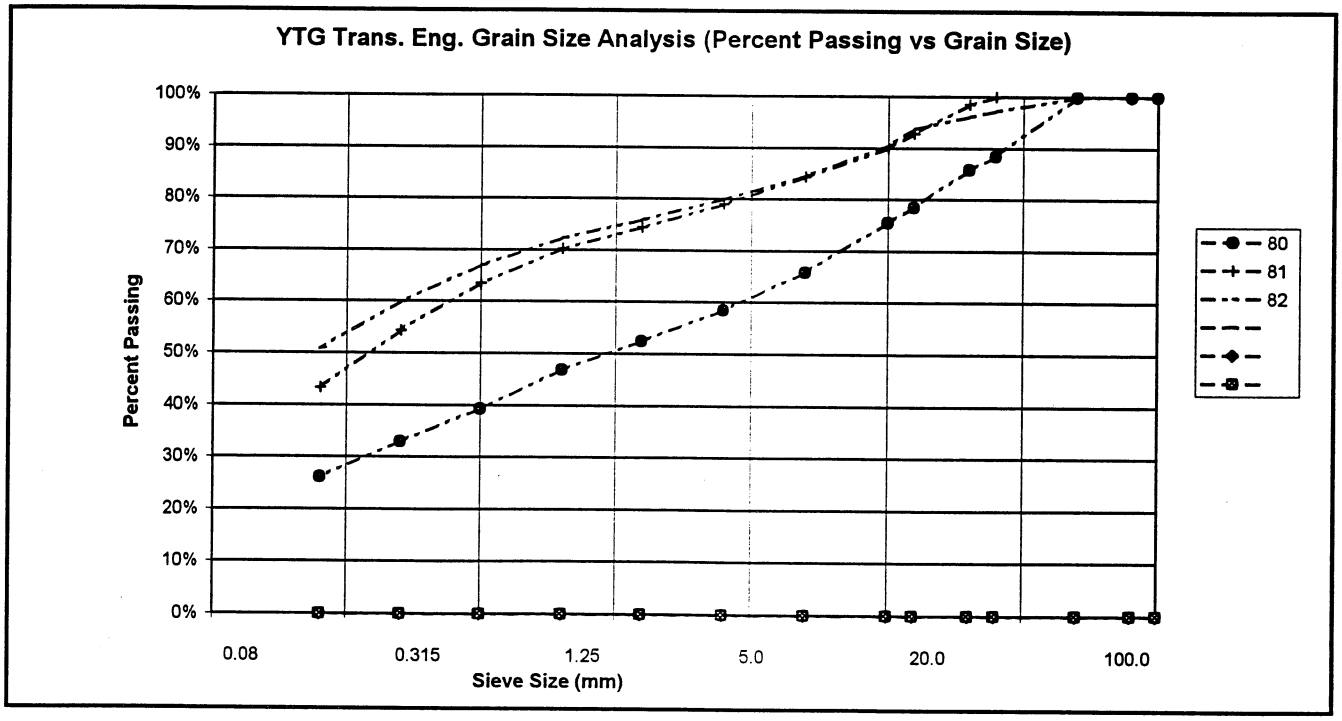


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1676+825
LOGGED BY:	K.J.

HOLE No.: 587-919

DATE COMP: 03/29/2001

FIELD NO:	80	81	82			
LAB NO:	252	253	254			
DEPTH:	1.3-1.5	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	88%	100%	97%			
20.0	86%	99%	96%			
12.5	79%	93%	94%			
10.0	76%	90%	91%			
5.0	66%	84%	85%			
2.5	59%	79%	80%			
1.25	53%	74%	76%			
0.630	47%	70%	72%			
0.315	39%	64%	67%			
0.160	33%	54%	60%			
0.080	26%	43%	51%			
M.C.(%):	5%	8%	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:	34	16	15			
% SAND:	40	41	34			
% FINES:	26	43	51			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SANDY SILT WITH GRAVEL (ML)			

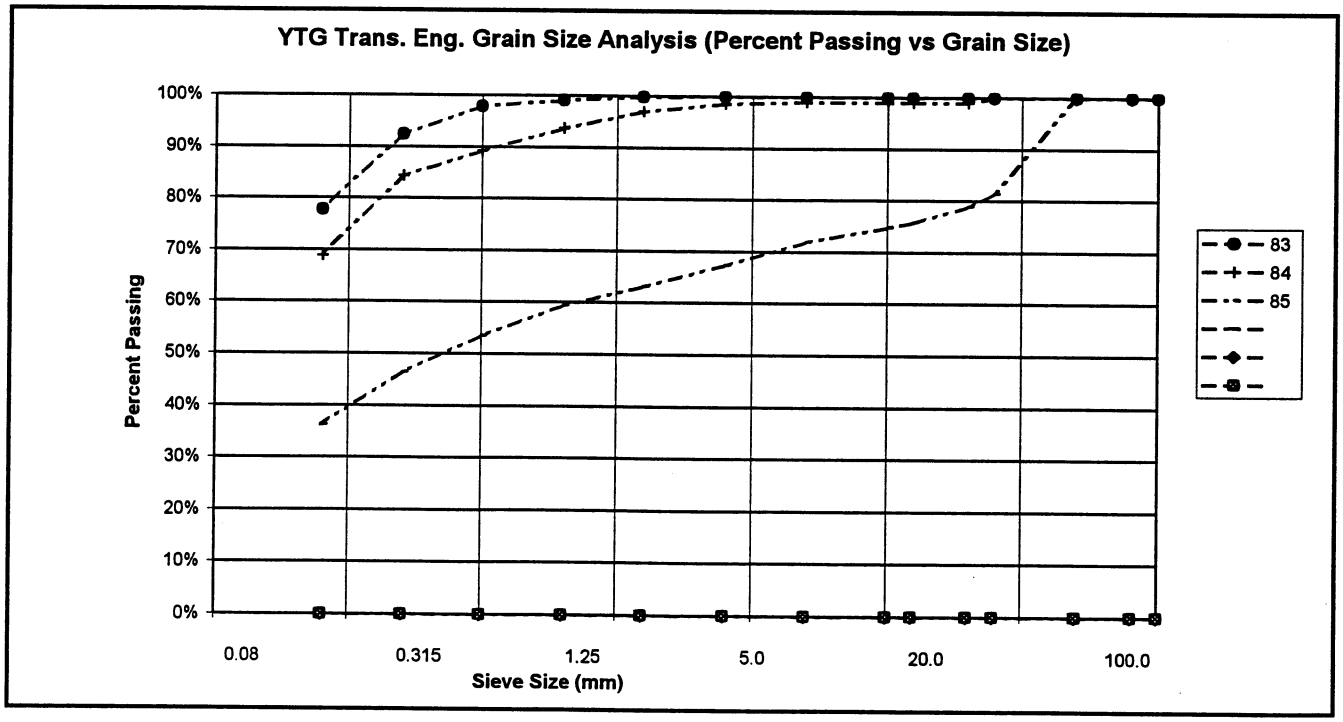


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1676+925
LOGGED BY:	K.J.

HOLE No.: 587-920

DATE COMP: 03/30/2001

FIELD NO:	83	84	85			
LAB NO:	255	256	257			
DEPTH:	1.3-1.5	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	81%			
20.0	100%	99%	79%			
12.5	100%	99%	76%			
10.0	100%	99%	75%			
5.0	100%	99%	72%			
2.5	100%	99%	67%			
1.25	100%	97%	63%			
0.630	99%	94%	59%			
0.315	98%	89%	53%			
0.160	92%	84%	46%			
0.080	78%	69%	36%			
M.C.(%):	29%	23%	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:	0	1	28			
% SAND:	22	30	36			
% FINES:	78	69	36			
CLASSIFICATION	SILT WITH SAND (ML)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)			

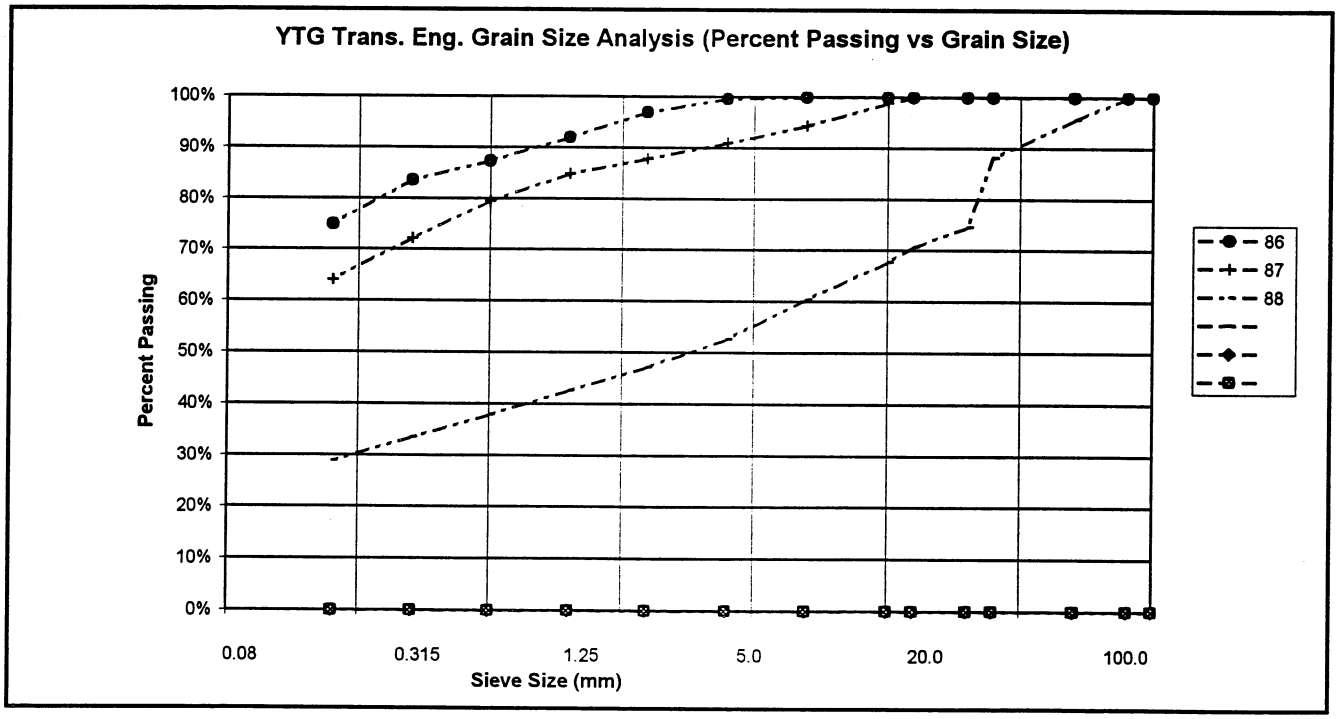


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1677-000
LOGGED BY:	K.J.

HOLE No.: 587-921

DATE COMP: 03/30/2001

FIELD NO:	86	87	88			
LAB NO:	258	259	260			
DEPTH:	1.3-1.5	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	96%			
25.0	100%	100%	88%			
20.0	100%	100%	75%			
12.5	100%	100%	71%			
10.0	100%	99%	68%			
5.0	100%	94%	60%			
2.5	100%	91%	53%			
1.25	97%	88%	47%			
0.630	92%	85%	43%			
0.315	87%	79%	38%			
0.160	84%	72%	33%			
0.080	75%	64%	29%			
M.C.(%):	35%	22%	17%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	0	6	40			
% SAND:	25	30	32			
% FINES:	75	64	29			
CLASSIFICATION	SILT WITH SAND (ML)	SANDY SILT (ML)	SILTY GRAVEL WITH SAND (GM)			

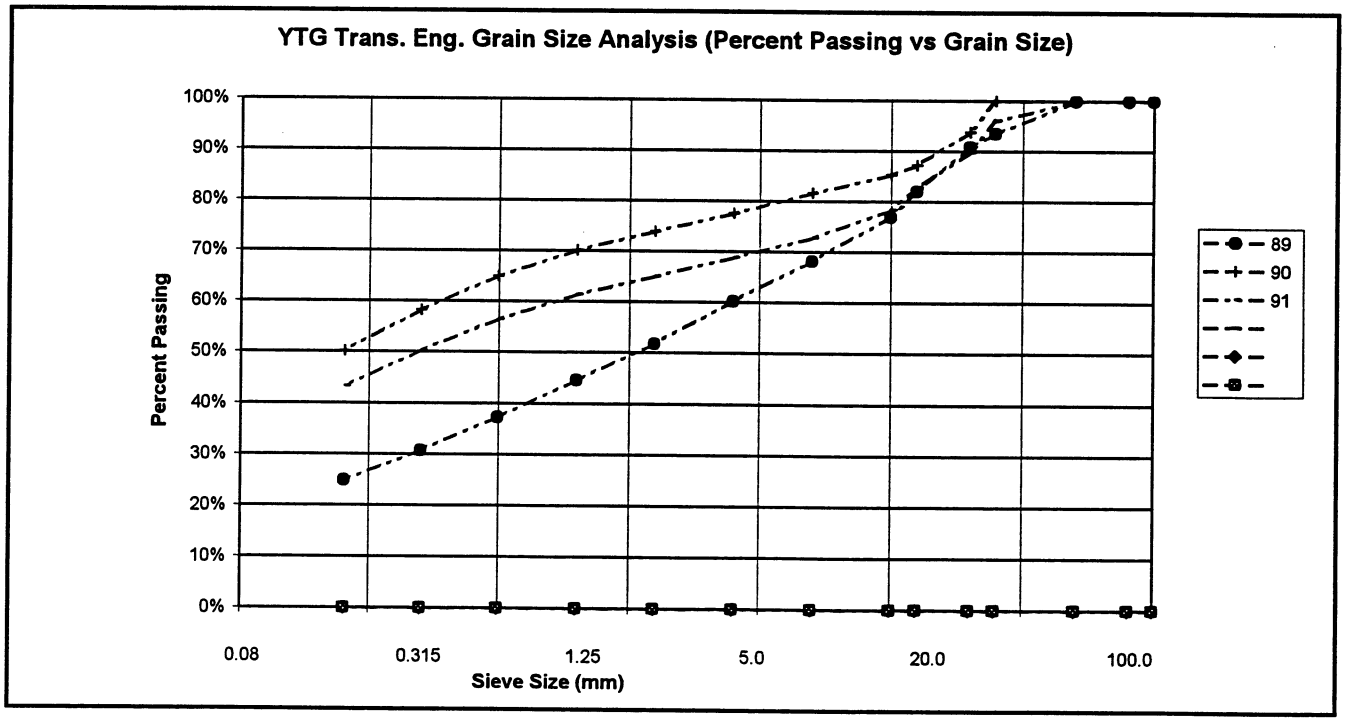


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: 1664.5 - 1692.6 A/H
DRILL UNIT: MOBILE B30 L
HOLE LOCATION: 1677+150
LOGGED BY: K.J.

HOLE No.: 587-922

DATE COMP: 03/30/2001

FIELD NO:	89	90	91			
LAB NO:	261	262	263			
DEPTH:	.8-1.0	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	93%	100%	96%			
20.0	91%	94%	90%			
12.5	82%	87%	83%			
10.0	77%	85%	78%			
5.0	68%	82%	73%			
2.5	60%	78%	69%			
1.25	52%	74%	65%			
0.630	45%	70%	61%			
0.315	37%	65%	56%			
0.160	31%	58%	50%			
0.080	25%	50%	43%			
M.C.(%):	8%	9%	9%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	32	18	27			
% SAND:	43	31	30			
% FINES:	25	50	43			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SANDY SILT WITH GRAVEL (ML)	SILTY SAND WITH GRAVEL (SM)			

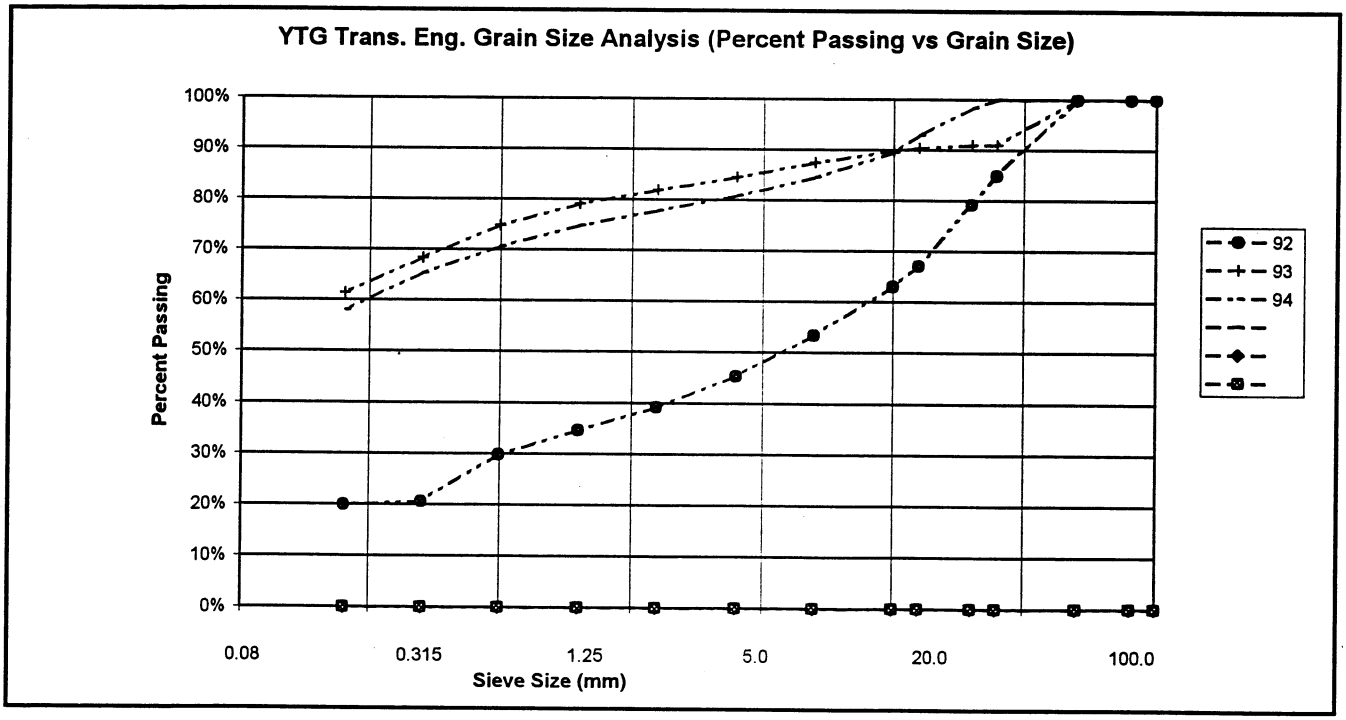


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1677+230
LOGGED BY:	K.J.

HOLE No.: 587-923

DATE COMP: 03/30/2001

FIELD NO:	92	93	94			
LAB NO:	264	265	266			
DEPTH:	0.8-1.0	1.8-2.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	85%	91%	100%			
20.0	79%	91%	98%			
12.5	67%	90%	93%			
10.0	63%	90%	90%			
5.0	53%	87%	85%			
2.5	45%	85%	81%			
1.25	39%	82%	78%			
0.630	35%	79%	75%			
0.315	30%	75%	71%			
0.160	21%	68%	65%			
0.080	20%	61%	58%			
M.C.(%):	6%	13%	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:	47	13	15			
% SAND:	33	26	27			
% FINES:	20	61	58			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SANDY SILT (ML)	SANDY SILT WITH GRAVEL (ML)			

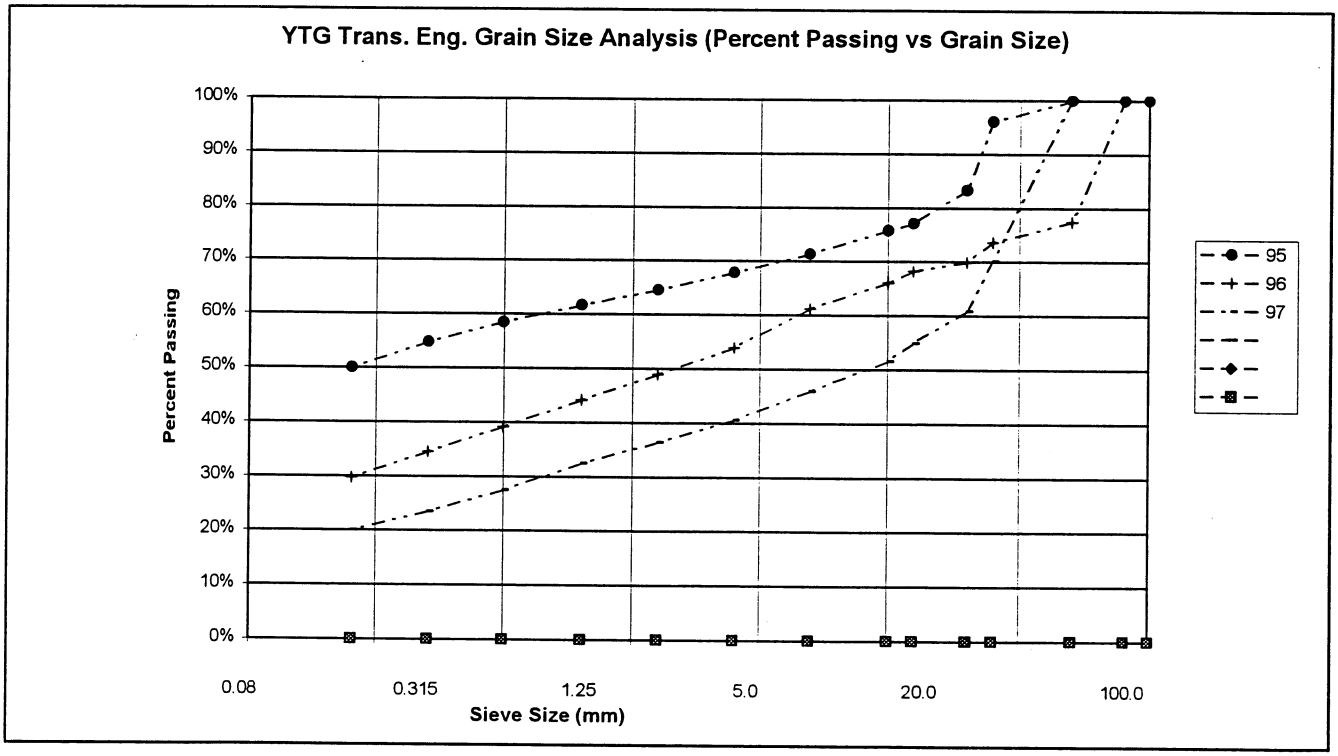


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5 - 1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1677+275 35m RT
LOGGED BY:	K.J.

HOLE No.: 587-924

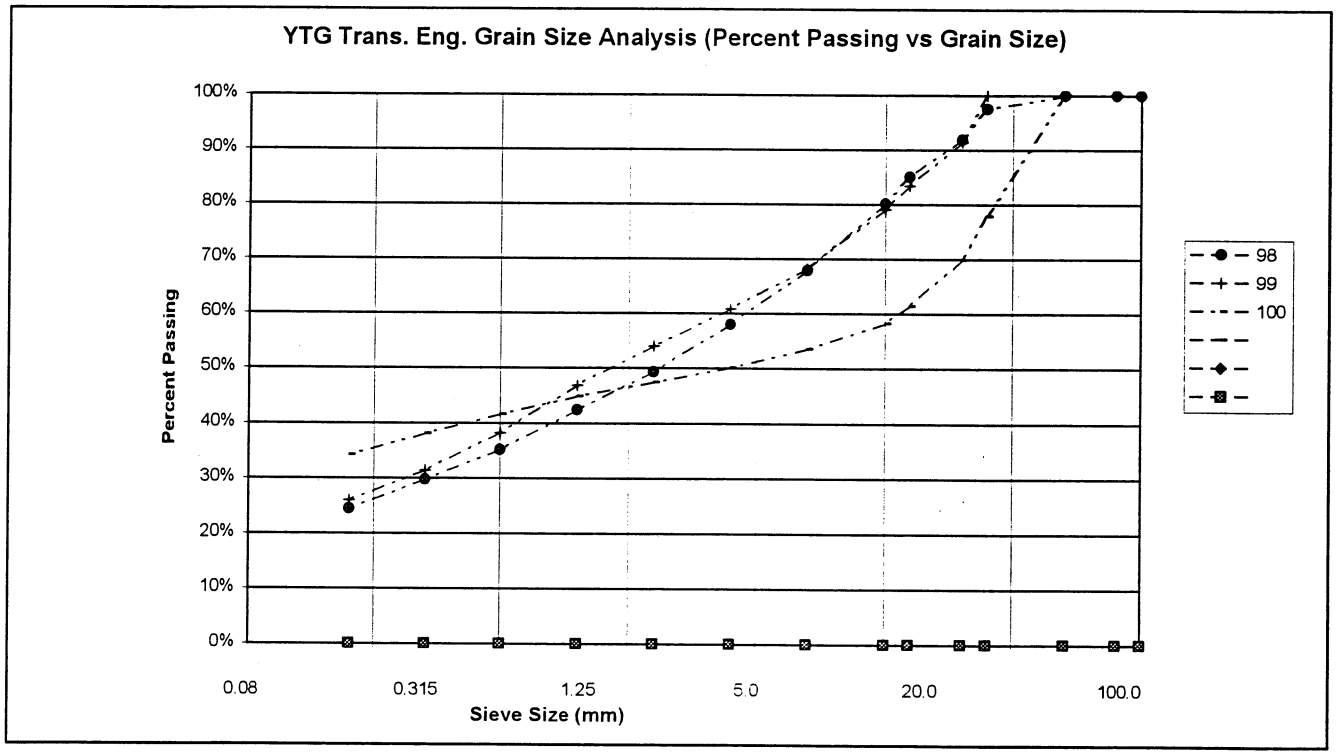
DATE COMP: 2001/03/30

FIELD NO:	95	96	97			
LAB NO:	267	268	269			
DEPTH:	1.3-1.5	2.8-3.0	4.3-4.5			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	77%	100%			
25.0	96%	74%	70%			
20.0	83%	70%	61%			
12.5	77%	68%	55%			
10.0	76%	66%	52%			
5.0	71%	61%	46%			
2.5	68%	54%	41%			
1.25	65%	49%	36%			
0.630	62%	44%	32%			
0.315	58%	39%	27%			
0.160	55%	34%	24%			
0.080	50%	30%	20%			
M.C.(%):	8%	6%	4%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	29	39	54			
% SAND:	21	32	26			
% FINES:	50	30	20			
CLASSIFICATION	GRAVELLY SILT WITH SAND (ML)	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)			



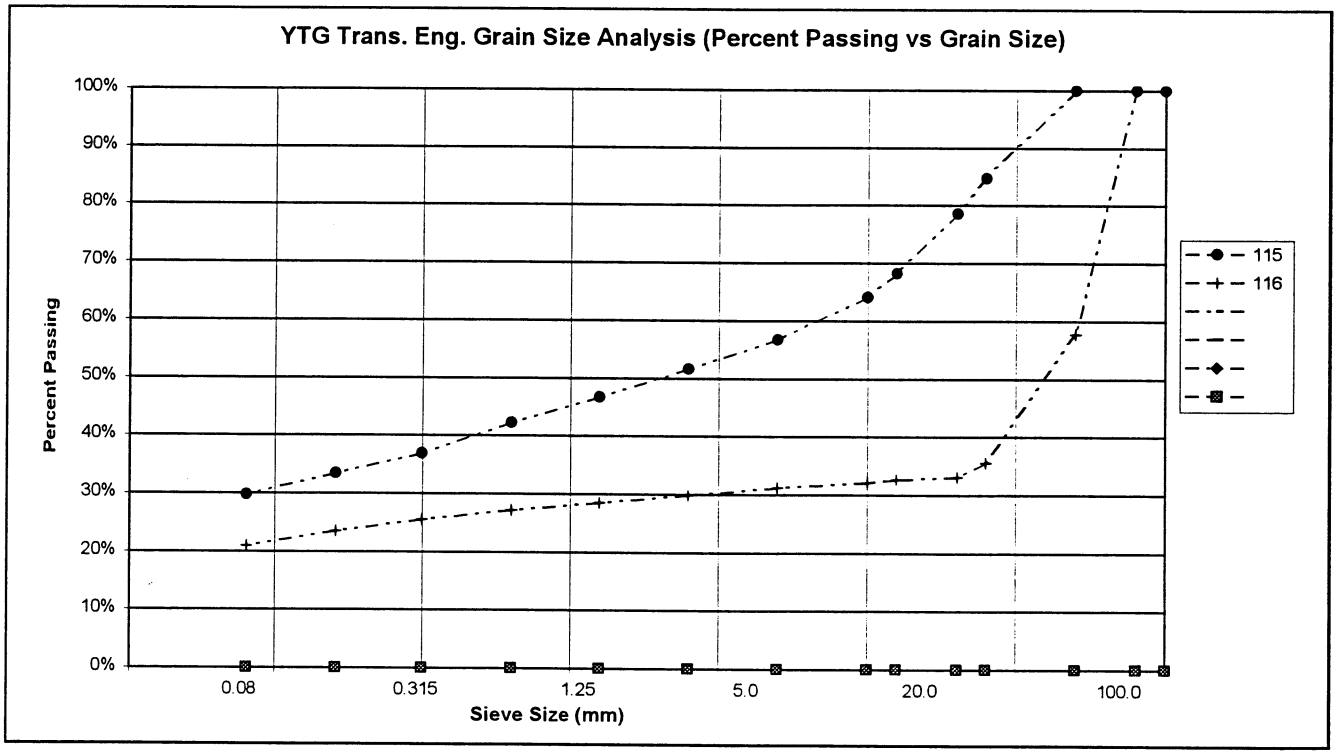
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 587-925
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	1664.5 - 1692.6 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1677+305		
LOGGED BY:	K.J.		DATE COMP: 2001/03/30

FIELD NO:	98	99	100			
LAB NO:	270	271	272			
DEPTH:	1.3-1.5	3.8-4.0	5.8-6.0			
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%	78%			
20.0	92%	91%	70%			
12.5	85%	83%	61%			
10.0	80%	79%	58%			
5.0	68%	68%	54%			
2.5	58%	61%	50%			
1.25	49%	54%	47%			
0.630	42%	47%	45%			
0.315	35%	38%	42%			
0.160	30%	31%	38%			
0.080	24%	26%	34%			
M.C.(%):	4%	5%	6%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	32	32	46			
% SAND:	44	42	19			
% FINES:	24	26	34			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)			



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 588-930
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	1664.5-1692.6 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1683+675		
LOGGED BY:	K.J.		DATE COMP: 2001/04/02

FIELD NO:	115	116				
LAB NO:	359	360				
DEPTH:	1.3-1.5	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%	58%				
25.0	85%	36%				
20.0	79%	33%				
12.5	68%	33%				
10.0	64%	32%				
5.0	57%	31%				
2.5	52%	30%				
1.25	47%	29%				
0.630	42%	27%				
0.315	37%	26%				
0.160	33%	23%				
0.080	30%	21%				
M.C.(%):	9%	9%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	43	69				
% SAND:	27	10				
% FINES:	30	21				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL (GM)				

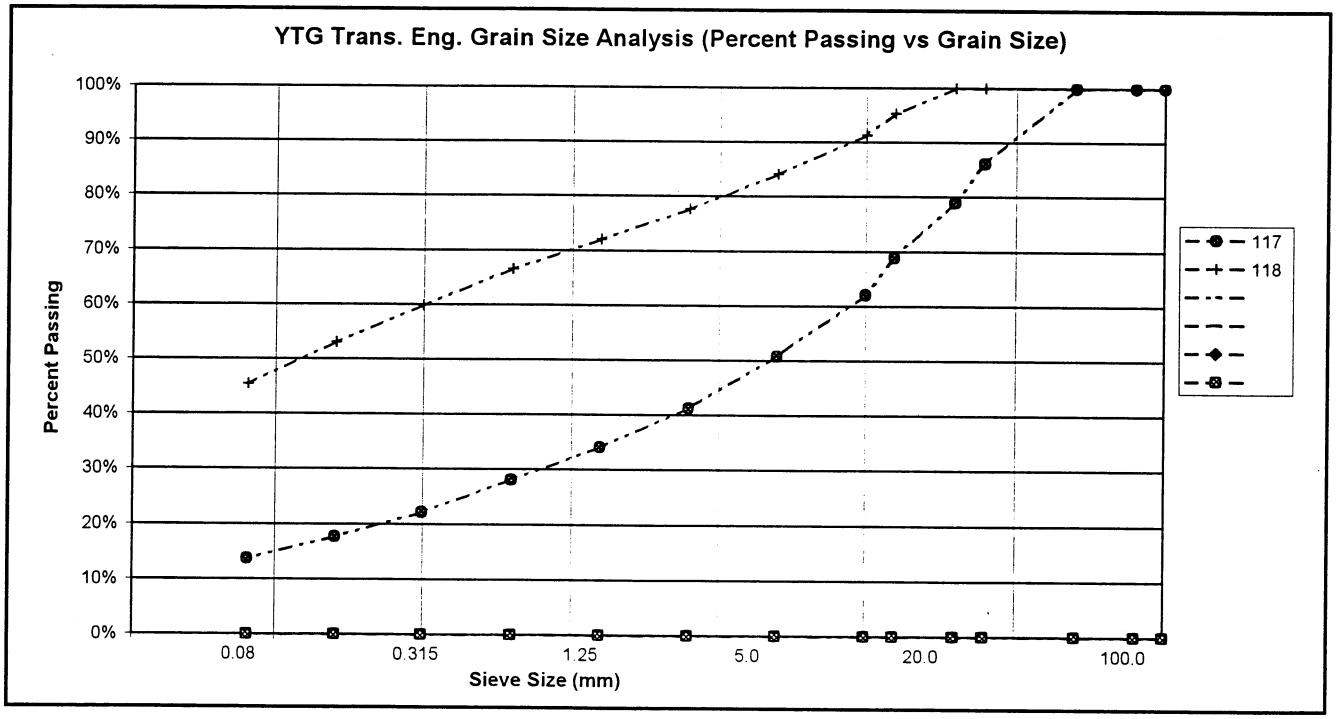


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5-1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1683+575
LOGGED BY:	K.J.

HOLE No.: 588-931

DATE COMP: 2001/04/17

FIELD NO:	117	118				
LAB NO:	361	362				
DEPTH:	1.3-1.5	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	86%	100%				
20.0	79%	100%				
12.5	69%	95%				
10.0	62%	91%				
5.0	51%	84%				
2.5	41%	78%				
1.25	34%	72%				
0.630	28%	67%				
0.315	22%	60%				
0.160	18%	53%				
0.080	14%	45%				
M.C.(%):	3%	8%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	49	16				
% SAND:	37	39				
% FINES:	14	45				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)				

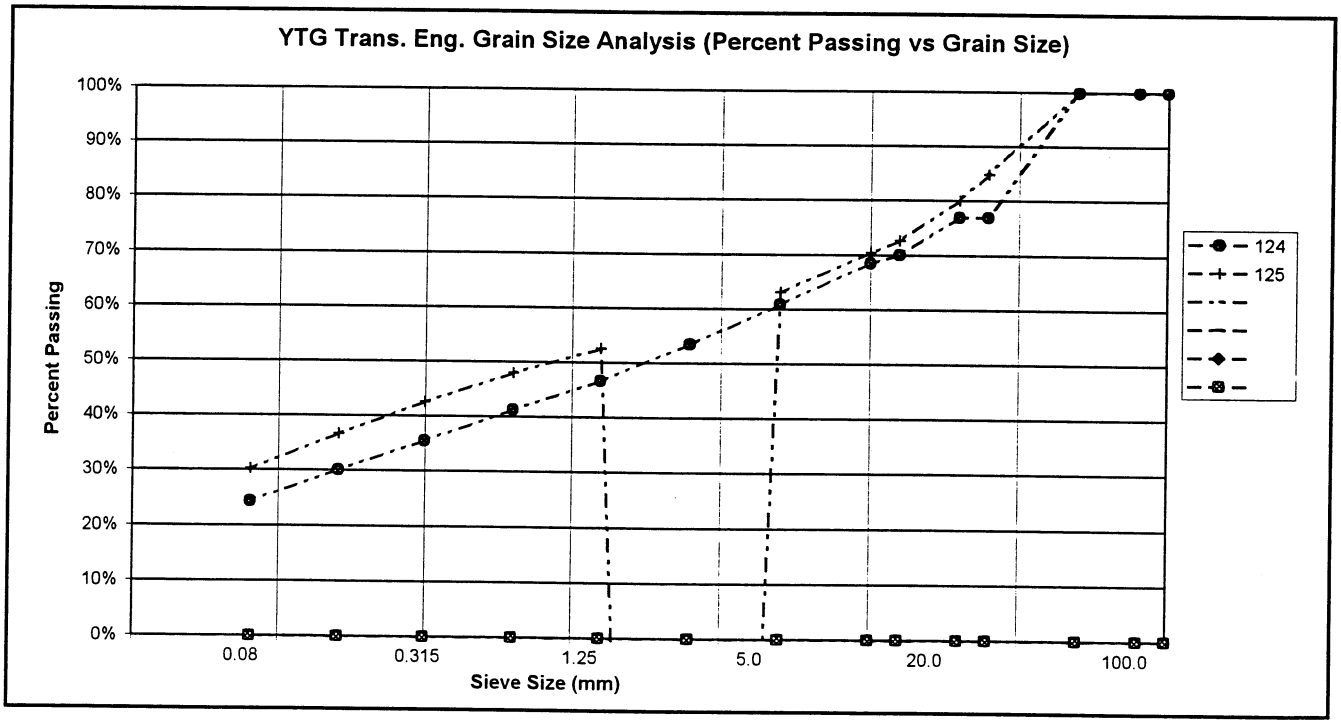


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: 1664.5-1692.6 A/H
DRILL UNIT: MOBILE B30 L
HOLE LOCATION: 1683+170
LOGGED BY: K.J.

HOLE No.: 588-934

DATE COMP: 2001/04/02

FIELD NO:	124	125				
LAB NO:	368	369				
DEPTH:	1.1-1.3	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	77%	85%				
20.0	77%	80%				
12.5	70%	73%				
10.0	69%	70%				
5.0	61%	63%				
2.5	53%	-316%				
1.25	47%	53%				
0.630	41%	48%				
0.315	36%	43%				
0.160	30%	37%				
0.080	24%	30%				
M.C.(%):	5%	5%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	39	37				
% SAND:	37	33				
% FINES:	24	30				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)				

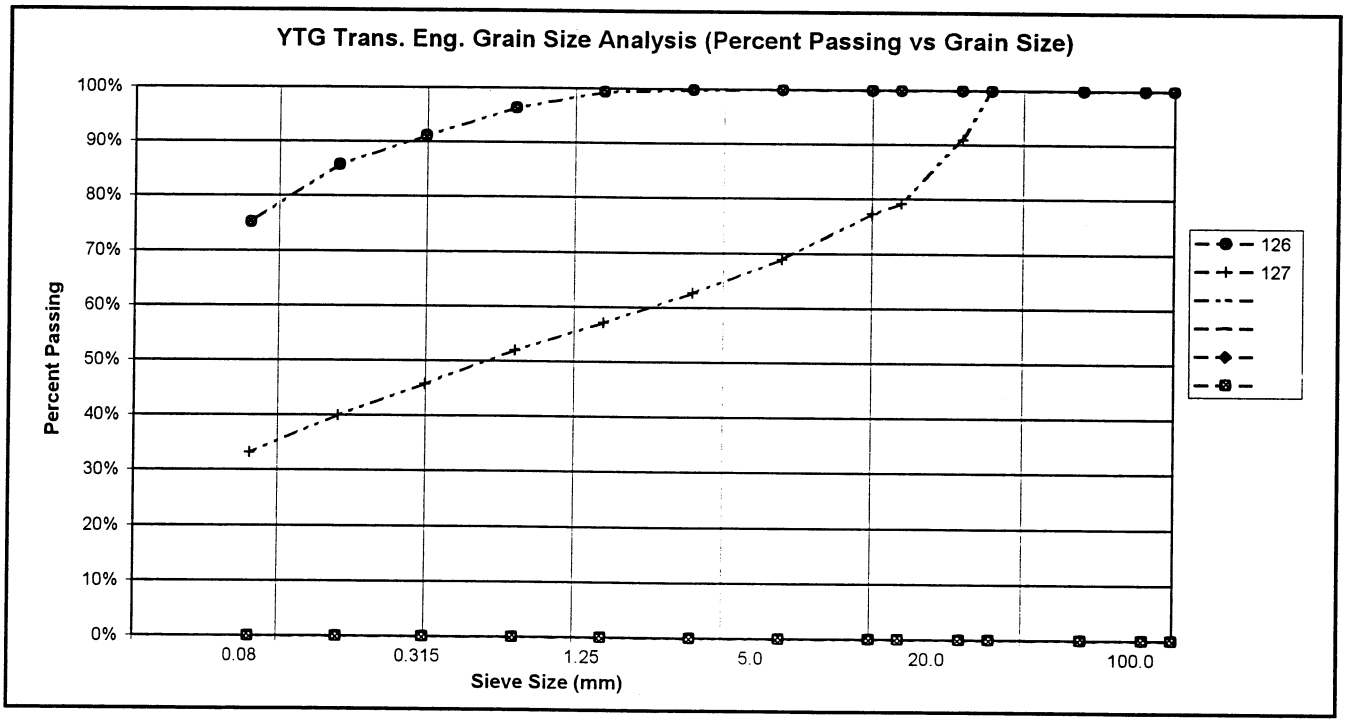


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: 1664.5-1692.6 A/H
DRILL UNIT: MOBILE B30 L
HOLE LOCATION: 1683+050
LOGGED BY: K.J.

HOLE No.: 588-935

DATE COMP: 2001/04/17

FIELD NO:	126	127				
LAB NO:	370	371				
DEPTH:	0.8-1.0	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	100%	100%				
20.0	100%	91%				
12.5	100%	79%				
10.0	100%	77%				
5.0	100%	69%				
2.5	100%	63%				
1.25	99%	57%				
0.630	96%	52%				
0.315	91%	46%				
0.160	86%	40%				
0.080	75%	33%				
M.C.(%):	21%	11%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	0	31				
% SAND:	25	36				
% FINES:	75	33				
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)				

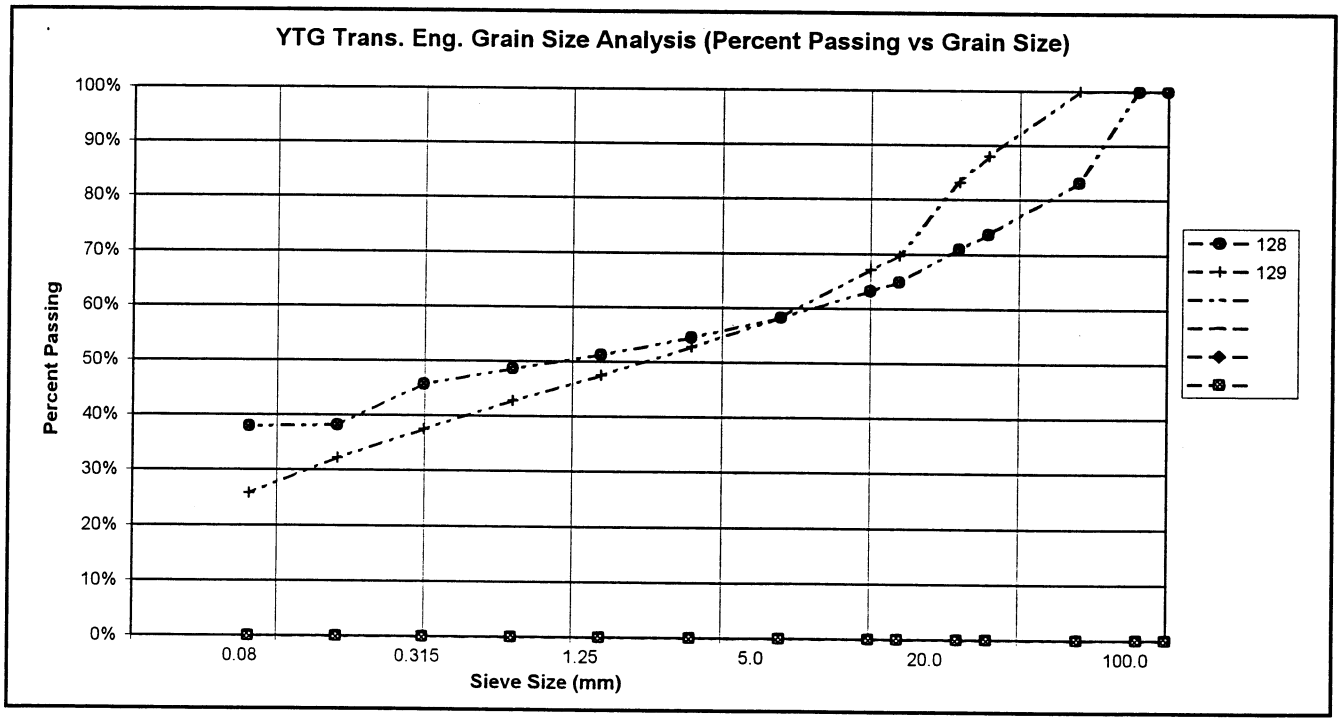


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5-1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1682+950
LOGGED BY:	K.J.

HOLE No.: 588-936

DATE COMP: 2001/04/17

FIELD NO:	128	129				
LAB NO:	372	373				
DEPTH:	1.1-1.3	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	83%	100%				
25.0	74%	88%				
20.0	71%	83%				
12.5	65%	70%				
10.0	63%	67%				
5.0	58%	58%				
2.5	55%	53%				
1.25	51%	48%				
0.630	49%	43%				
0.315	46%	38%				
0.160	38%	32%				
0.080	38%	26%				
M.C.(%):	7%	4%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	42	42				
% SAND:	20	33				
% FINES:	38	26				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)				

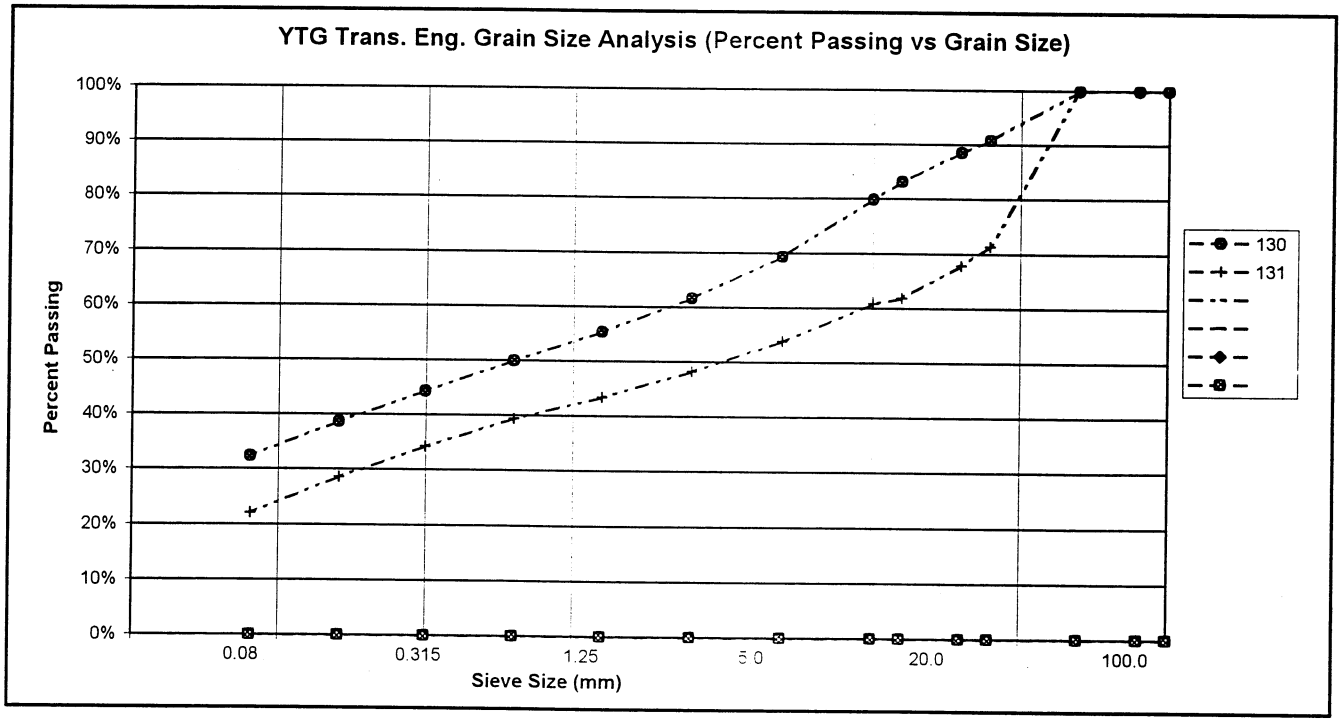


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5-1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1682+800
LOGGED BY:	K.J.

HOLE No.: 588-937

DATE COMP: 2001/04/17

FIELD NO:	130	131				
LAB NO:	374	375				
DEPTH:	1.1-1.3	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	91%	71%				
20.0	89%	68%				
12.5	83%	62%				
10.0	80%	61%				
5.0	69%	54%				
2.5	62%	48%				
1.25	55%	43%				
0.630	50%	39%				
0.315	44%	34%				
0.160	39%	29%				
0.080	32%	22%				
M.C.(%):	7%	4%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	31	46				
% SAND:	37	32				
% FINES:	32	22				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)				

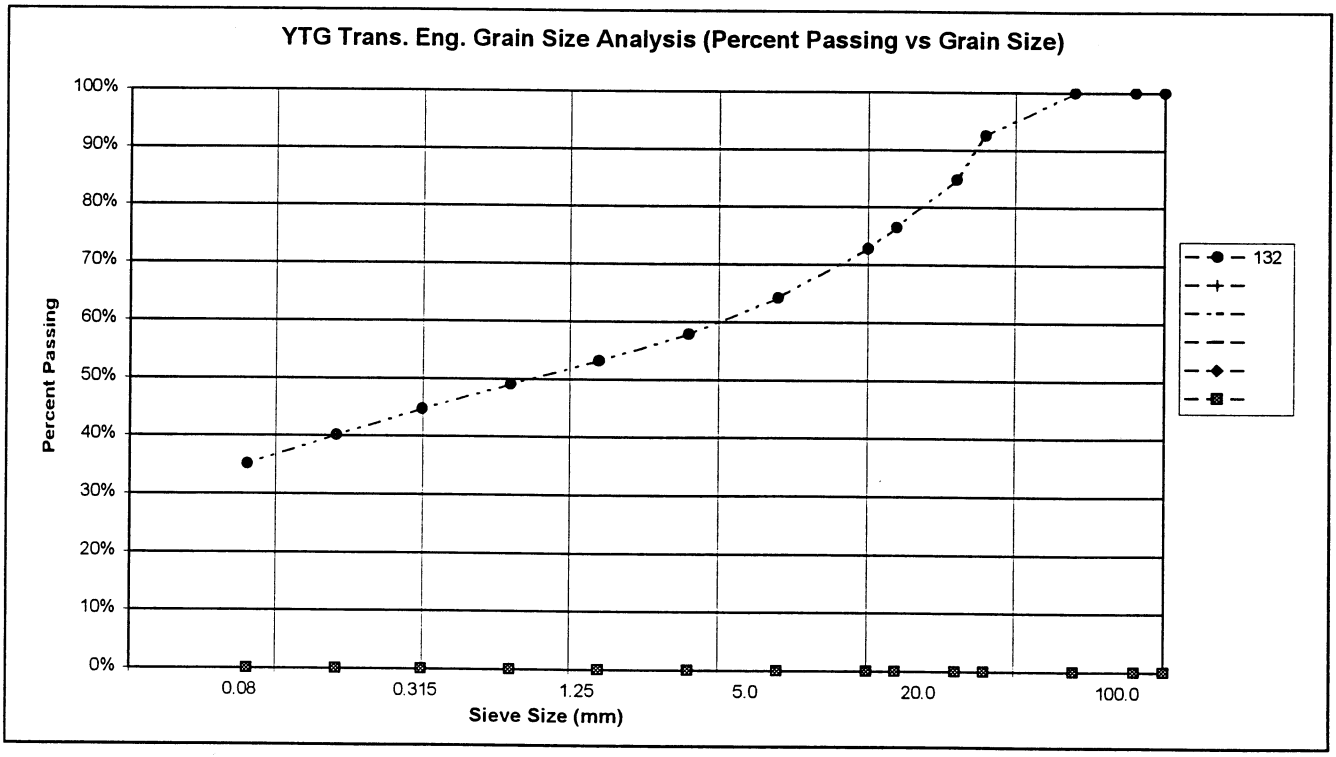


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5-1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1682+725
LOGGED BY:	K.J.

HOLE No.: 588-938

DATE COMP: 2001/04/17

FIELD NO:	132					
LAB NO:	376					
DEPTH:	4.1-4.3					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	93%					
20.0	85%					
12.5	76%					
10.0	73%					
5.0	64%					
2.5	58%					
1.25	53%					
0.630	49%					
0.315	45%					
0.160	40%					
0.080	35%					
M.C.(%):	11%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	36					
% SAND:	29					
% FINES:	35					
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)					

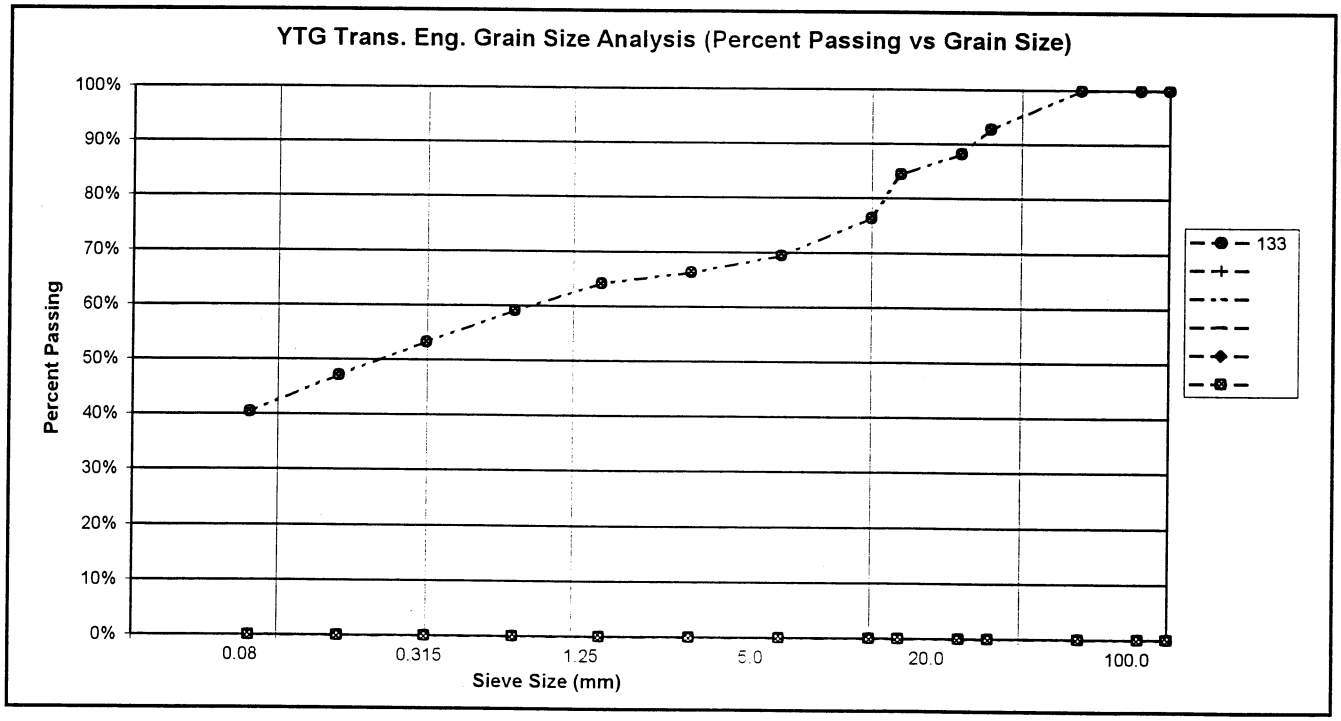


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5-1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1682+685
LOGGED BY:	K.J.

HOLE No.: 588-939

DATE COMP: 2001/04/17

FIELD NO:	133					
LAB NO:	377					
DEPTH:	4.1-4.3					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	93%					
20.0	88%					
12.5	85%					
10.0	76%					
5.0	70%					
2.5	66%					
1.25	64%					
0.630	59%					
0.315	53%					
0.160	47%					
0.080	40%					
M.C.(%):	11%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	30					
% SAND:	29					
% FINES:	40					
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)					

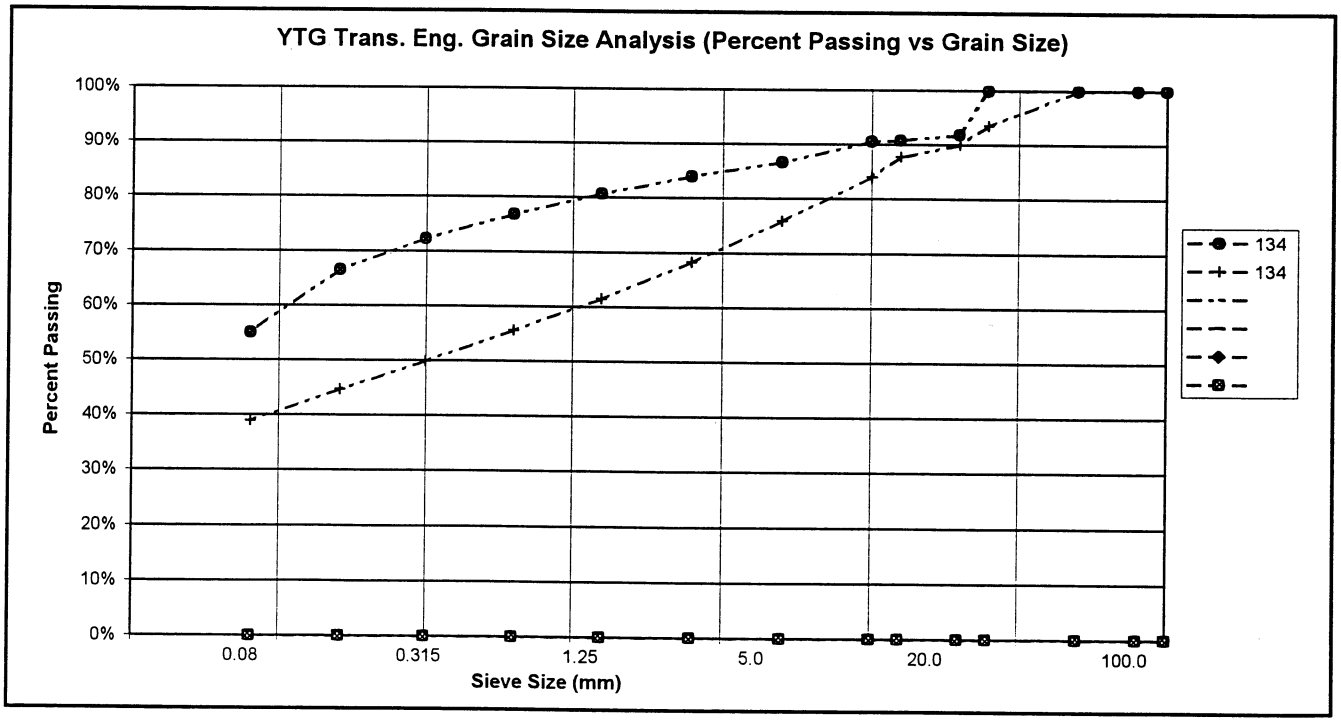


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5-1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1682+575
LOGGED BY:	K.J.

HOLE No.: 588-940

DATE COMP: 2001/04/17

FIELD NO:	134	134				
LAB NO:	378	379				
DEPTH:	2.8-3.0	4.1-4.3				
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	100%	93%				
20.0	92%	90%				
12.5	91%	88%				
10.0	91%	84%				
5.0	87%	76%				
2.5	84%	68%				
1.25	81%	62%				
0.630	77%	56%				
0.315	72%	50%				
0.160	67%	45%				
0.080	55%	39%				
M.C.(%):	20%	12%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	13	24				
% SAND:	32	37				
% FINES:	55	39				
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)				

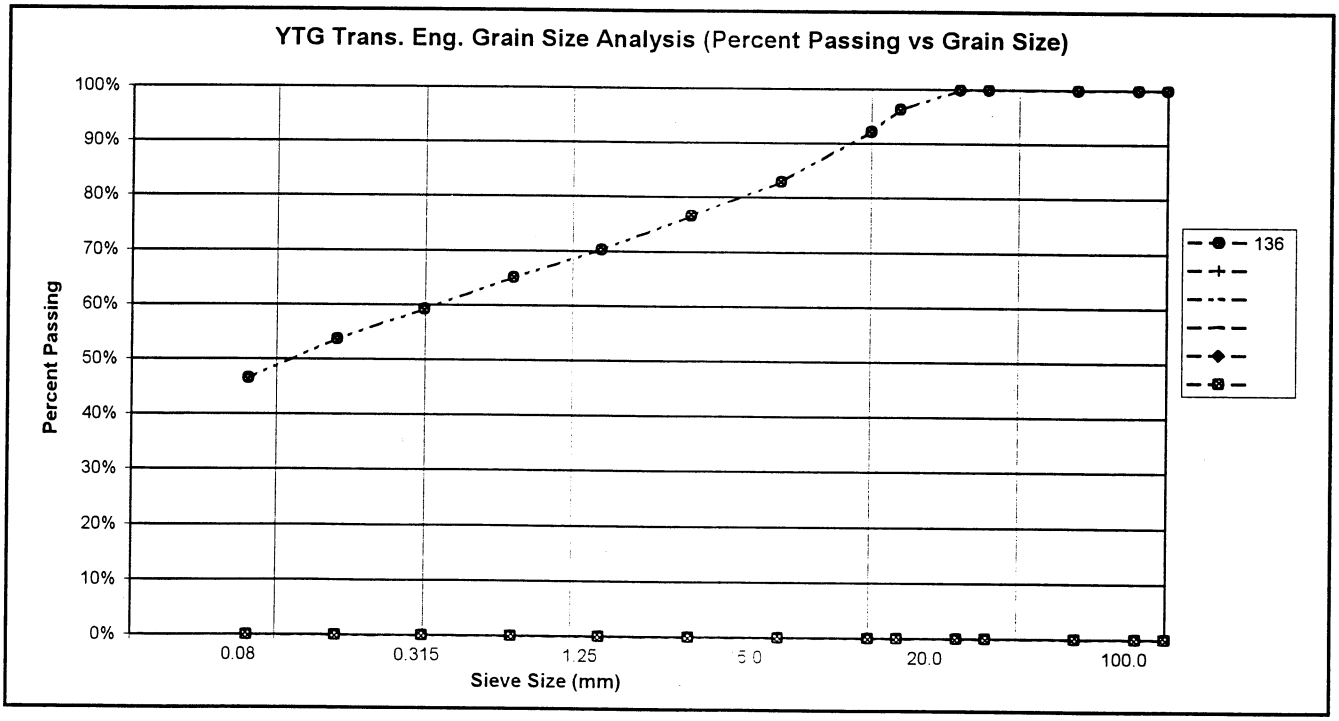


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5-1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1682+400 centreline
LOGGED BY:	K.J.

HOLE No.: 588-941

DATE COMP: 2001/04/17

FIELD NO:	136					
LAB NO:	380					
DEPTH:	4.1-4.3					
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	96%					
10.0	92%					
5.0	83%					
2.5	77%					
1.25	70%					
0.630	65%					
0.315	59%					
0.160	54%					
0.080	47%					
M.C.(%):	12%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	17					
% SAND:	36					
% FINES:	47					
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)					

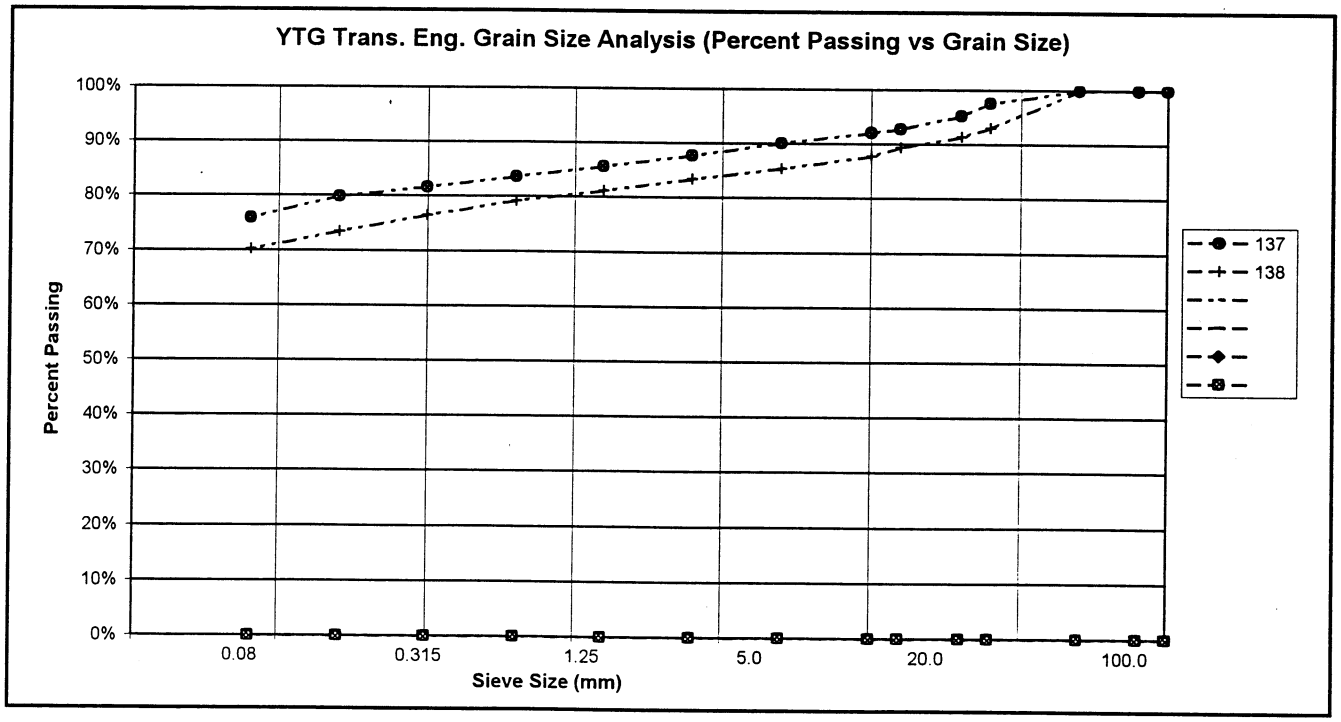


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5-1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1682+300
LOGGED BY:	K.J.

HOLE No.: 588-942

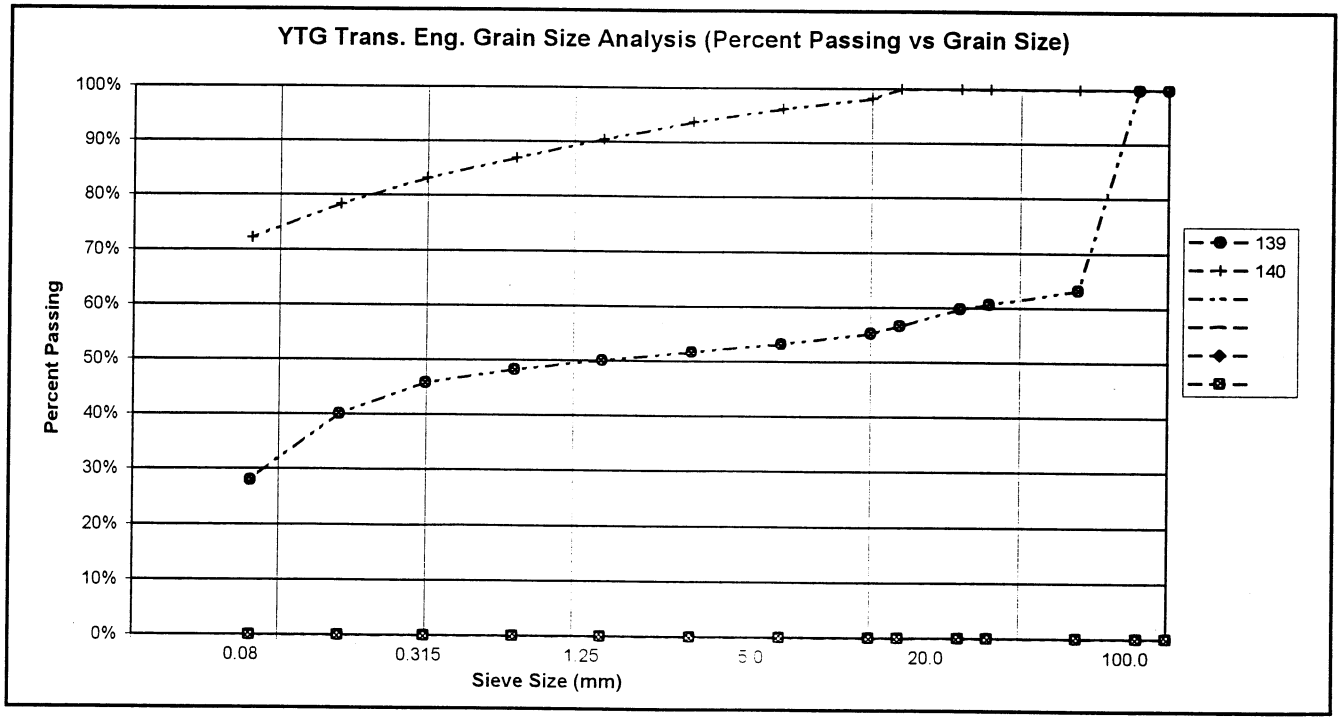
DATE COMP: 2001/04/17

FIELD NO:	137	138				
LAB NO:	381	382				
DEPTH:	1.1-1.3	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	98%	93%				
20.0	95%	91%				
12.5	93%	89%				
10.0	92%	88%				
5.0	90%	85%				
2.5	88%	83%				
1.25	86%	81%				
0.630	84%	79%				
0.315	82%	76%				
0.160	80%	73%				
0.080	76%	70%				
M.C.(%):	14%	15%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	10	15				
% SAND:	14	15				
% FINES:	76	70				
CLASSIFICATION	SILT WITH SAND (ML)	SILT WITH SAND (ML)				



PROJECT NUMBER:	092-202101-0363-1	HOLE No.:	588-943
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	1664.5-1692.6 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1682+225 1m RT		
LOGGED BY:	K.J.	DATE COMP:	2001/04/17

FIELD NO:	139	140				
LAB NO:	383	384				
DEPTH:	1.1-1.3	4.1-4.3				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	63%	100%				
25.0	61%	100%				
20.0	60%	100%				
12.5	57%	100%				
10.0	55%	98%				
5.0	53%	96%				
2.5	52%	94%				
1.25	50%	90%				
0.630	48%	87%				
0.315	46%	83%				
0.160	40%	78%				
0.080	28%	72%				
M.C.(%):	5%	12%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	47	4				
% SAND:	25	24				
% FINES:	28	72				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILT WITH SAND (ML)				

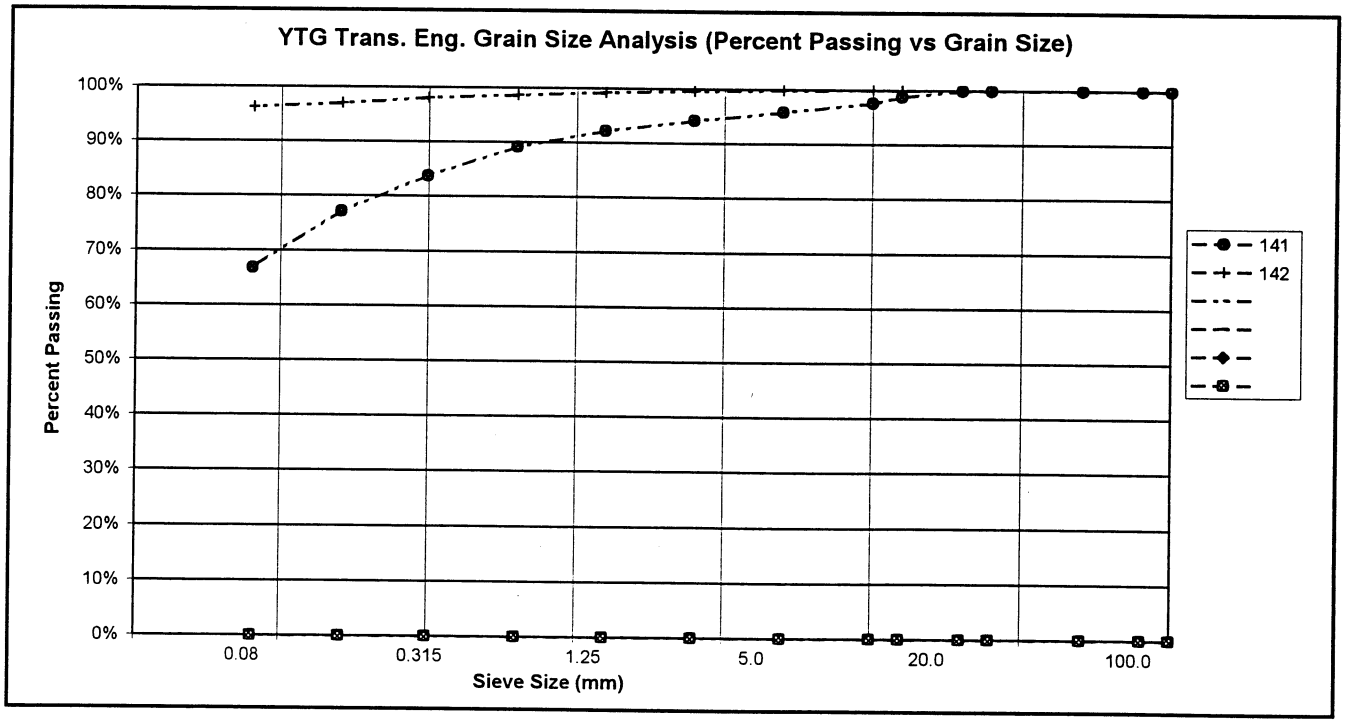


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: 1664.5-1692.6 A/H
DRILL UNIT: MOBILE B30 L
HOLE LOCATION: 1682+160
LOGGED BY: K.J.

HOLE No.: 588-944

DATE COMP: 2001/04/17

FIELD NO:	141	142				
LAB NO:	385	386				
DEPTH:	1.1-1.3	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	100%	100%				
20.0	100%	100%				
12.5	99%	100%				
10.0	98%	100%				
5.0	96%	100%				
2.5	94%	100%				
1.25	92%	99%				
0.630	89%	99%				
0.315	84%	98%				
0.160	77%	97%				
0.080	67%	96%				
M.C.(%):	15%	24%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	4	0				
% SAND:	29	4				
% FINES:	67	96				
CLASSIFICATION	SANDY SILT (ML)	SILT (ML)				

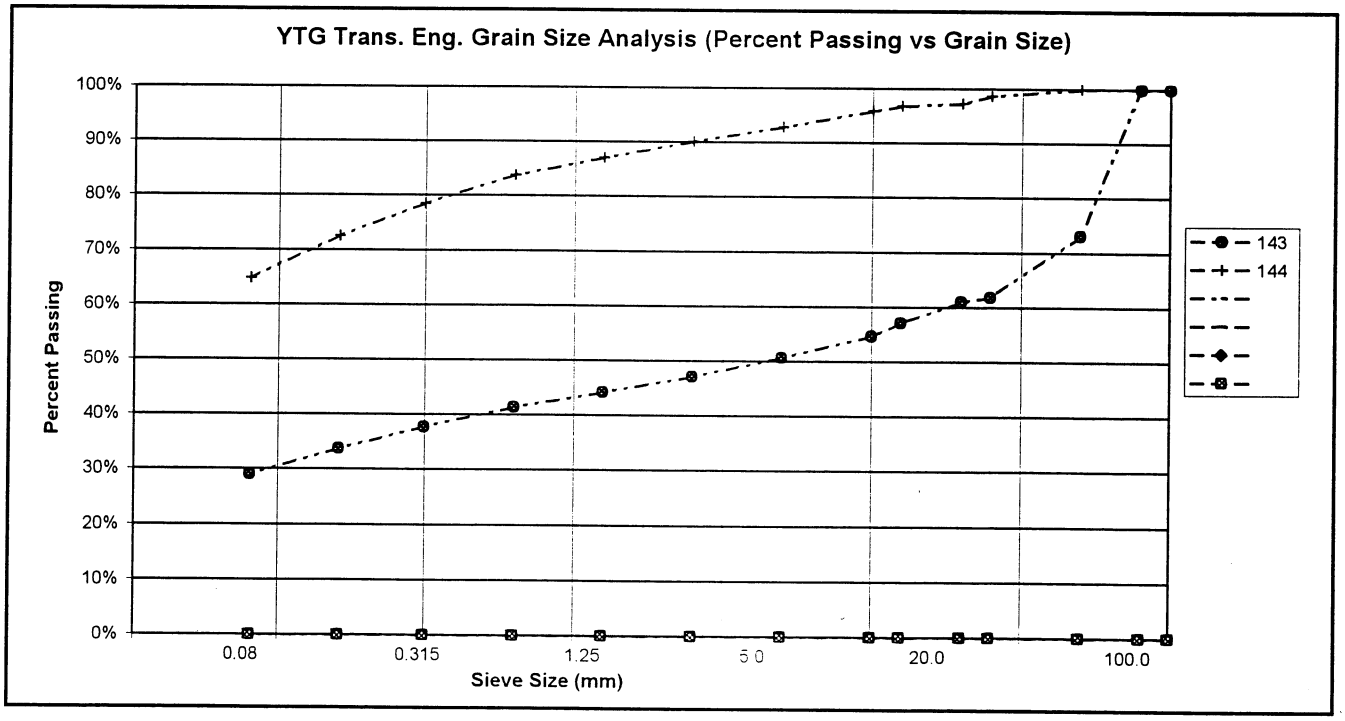


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: 1664.5-1692.6 A/H
DRILL UNIT: MOBILE B30 L
HOLE LOCATION: 1682+050 2m RT
LOGGED BY: K.J.

HOLE No.: 588-945

DATE COMP: 2001/04/17

FIELD NO:	143	144				
LAB NO:	387	388				
DEPTH:	1.1-1.3	4.1-4.3				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	73%	100%				
25.0	62%	99%				
20.0	61%	97%				
12.5	57%	97%				
10.0	55%	96%				
5.0	51%	93%				
2.5	47%	90%				
1.25	44%	87%				
0.630	41%	84%				
0.315	38%	79%				
0.160	34%	73%				
0.080	29%	65%				
M.C.(%):	5%	11%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	49	7				
% SAND:	22	28				
% FINES:	29	65				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SANDY SILT (ML)				

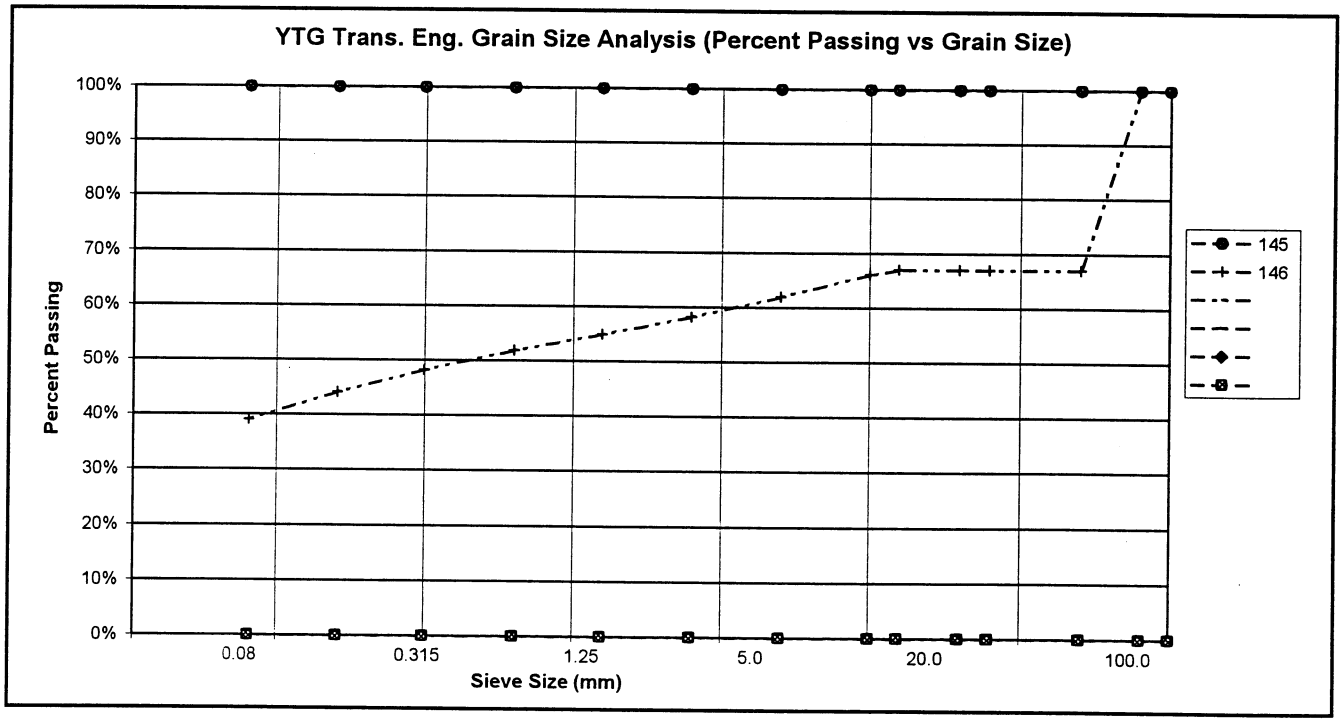


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5-1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1681-950 2m RT
LOGGED BY:	K.J.

HOLE No.: 588-946

DATE COMP: 2001/04/17

FIELD NO:	145	146				
LAB NO:	389	390				
DEPTH:	1.1-1.3	2.8-3.0				
TYPE:	#N/A	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	67%				
25.0	100%	67%				
20.0	100%	67%				
12.5	100%	67%				
10.0	100%	66%				
5.0	100%	62%				
2.5	100%	58%				
1.25	100%	55%				
0.630	100%	52%				
0.315	100%	48%				
0.160	100%	44%				
0.080	100%	39%				
M.C.(%):	9%	9%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	0	38				
% SAND:	0	23				
% FINES:	100	39				
CLASSIFICATION	SILT (ML)	SILTY GRAVEL WITH SAND (GM)				

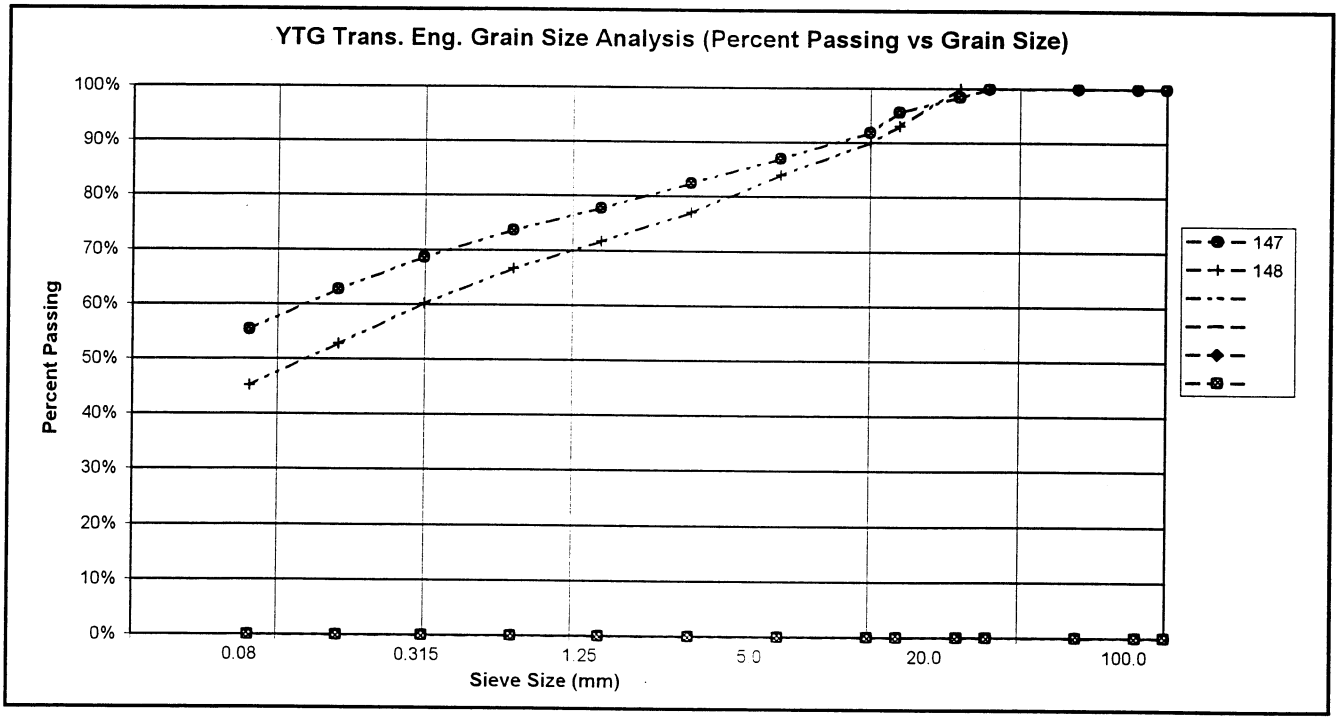


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5-1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1681+850 centreline
LOGGED BY:	K.J.

HOLE No.: 588-947

DATE COMP: 2001/04/17

FIELD NO:	147	148				
LAB NO:	391	392				
DEPTH:	1.1-1.3	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	100%	100%				
20.0	98%	100%				
12.5	96%	93%				
10.0	92%	90%				
5.0	87%	84%				
2.5	82%	77%				
1.25	78%	72%				
0.630	74%	67%				
0.315	69%	60%				
0.160	63%	53%				
0.080	55%	45%				
M.C.(%):	11%	9%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	13	16				
% SAND:	32	39				
% FINES:	55	45				
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)				

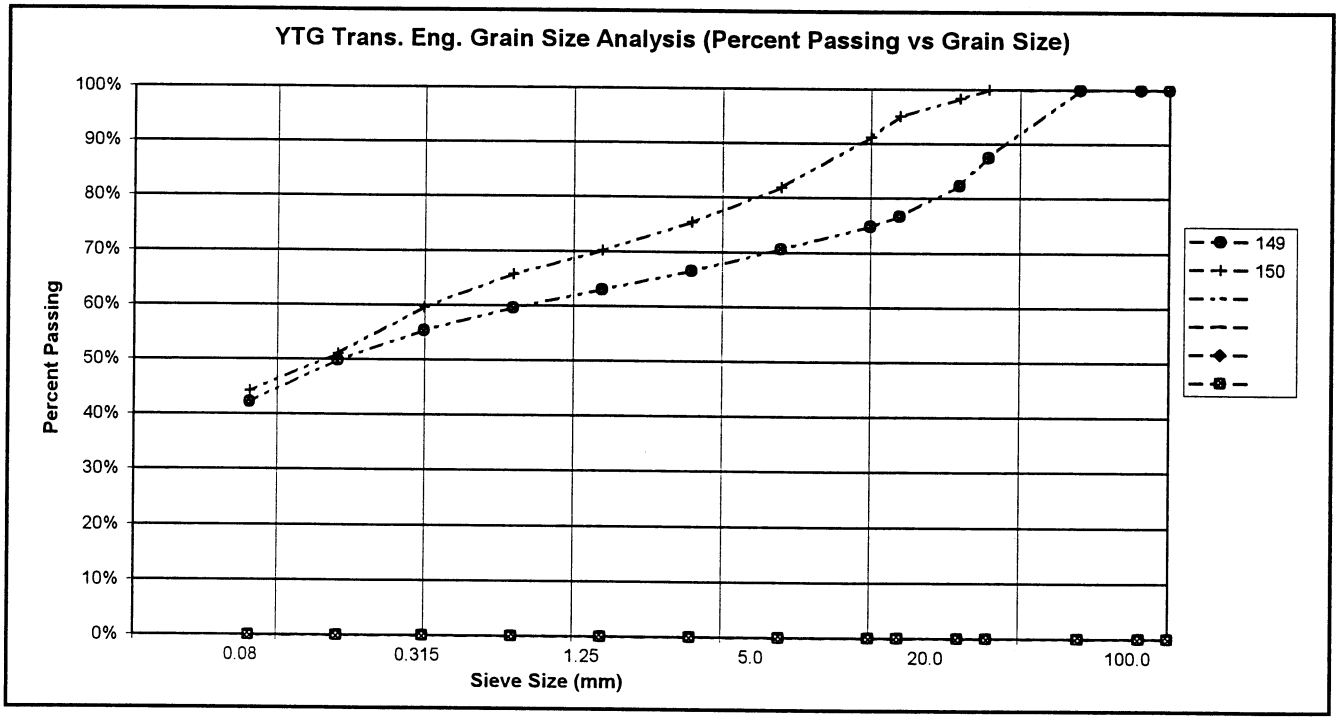


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	1664.5-1692.6 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1681+700
LOGGED BY:	K.J.

HOLE No.: 588-948

DATE COMP: 2001/04/17

FIELD NO:	149	150				
LAB NO:	393	394				
DEPTH:	1.1-1.3	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	88%	100%				
20.0	82%	98%				
12.5	77%	95%				
10.0	75%	91%				
5.0	71%	82%				
2.5	66%	75%				
1.25	63%	70%				
0.630	60%	66%				
0.315	55%	60%				
0.160	50%	51%				
0.080	42%	44%				
M.C.(%):	9%	10%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	29	18				
% SAND:	28	38				
% FINES:	42	44				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)				

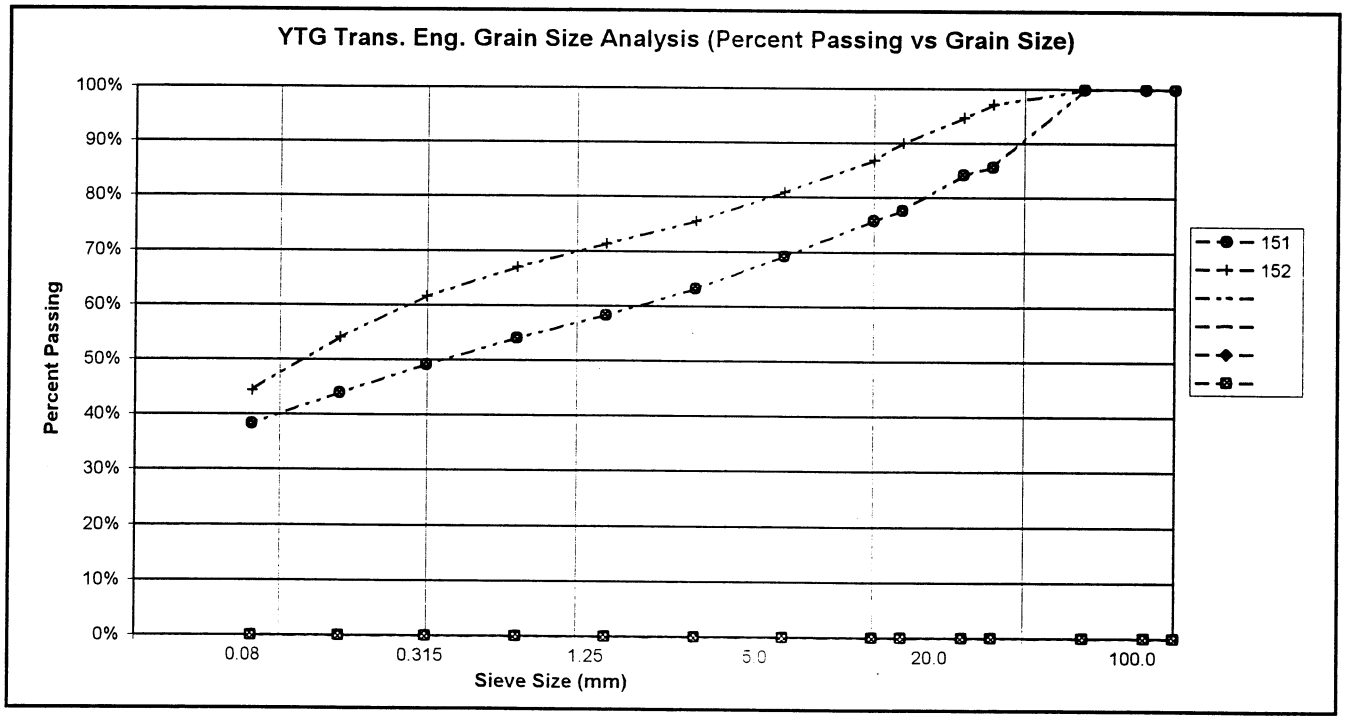


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1664-1692 A/H
DRILL UNIT: MOBILE B30 L
HOLE LOCATION: 1681+550 LHS
LOGGED BY: KJ

HOLE No.: 593-949

DATE COMP: 2001/04/18

FIELD NO:	151	152				
LAB NO:	395	396				
DEPTH:	1.1-1.3	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	86%	97%				
20.0	84%	95%				
12.5	78%	90%				
10.0	76%	87%				
5.0	69%	81%				
2.5	63%	76%				
1.25	58%	71%				
0.630	54%	67%				
0.315	49%	62%				
0.160	44%	54%				
0.080	38%	44%				
M.C.(%):	8%	9%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	31	19				
% SAND:	31	37				
% FINES:	38	44				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				

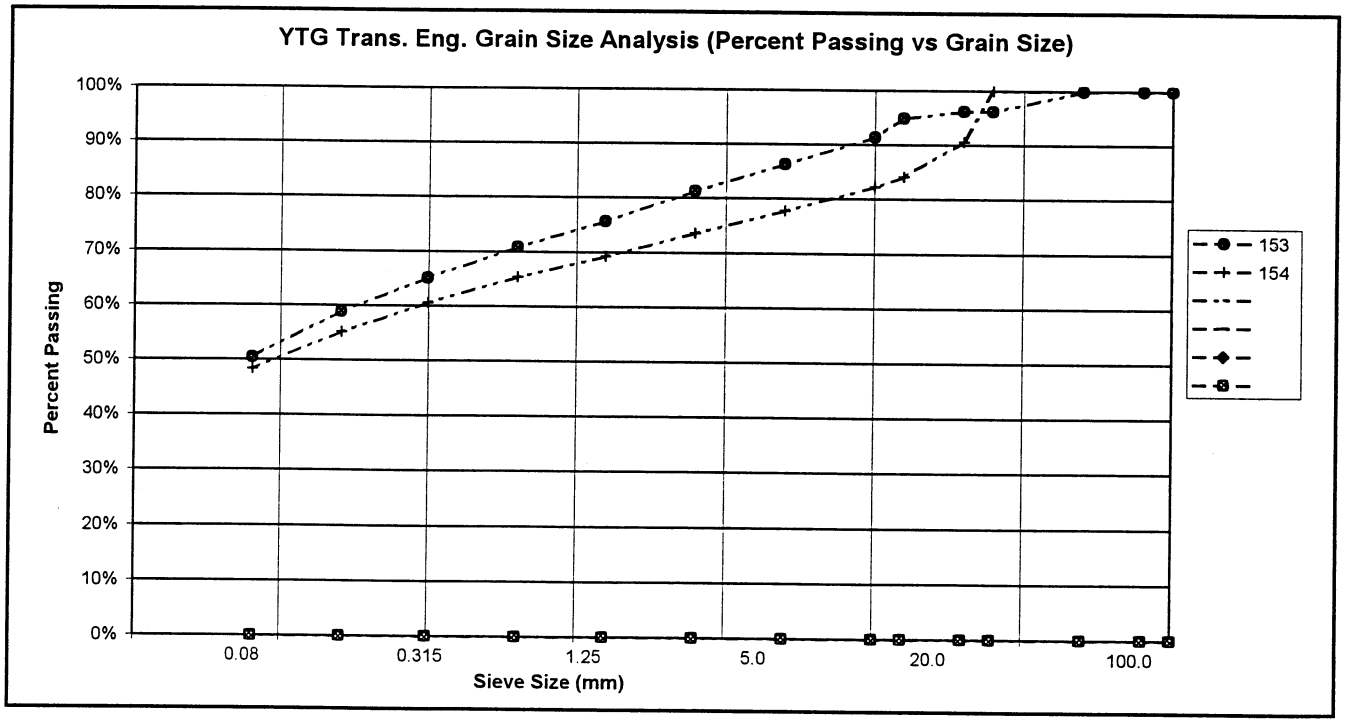


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1664-1692 A/H
DRILL UNIT: MOBILE B30 L
HOLE LOCATION: 1681+400 LHS
LOGGED BY: KJ

HOLE No.: 593-950

DATE COMP: 2001/04/18

FIELD NO:	153	154				
LAB NO:	397	398				
DEPTH:	1.1-1.3	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	96%	100%				
20.0	96%	91%				
12.5	95%	84%				
10.0	91%	82%				
5.0	86%	78%				
2.5	81%	74%				
1.25	76%	69%				
0.630	71%	65%				
0.315	65%	61%				
0.160	59%	55%				
0.080	50%	48%				
M.C.(%):	10%	10%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	14	22				
% SAND:	36	29				
% FINES:	50	48				
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)				

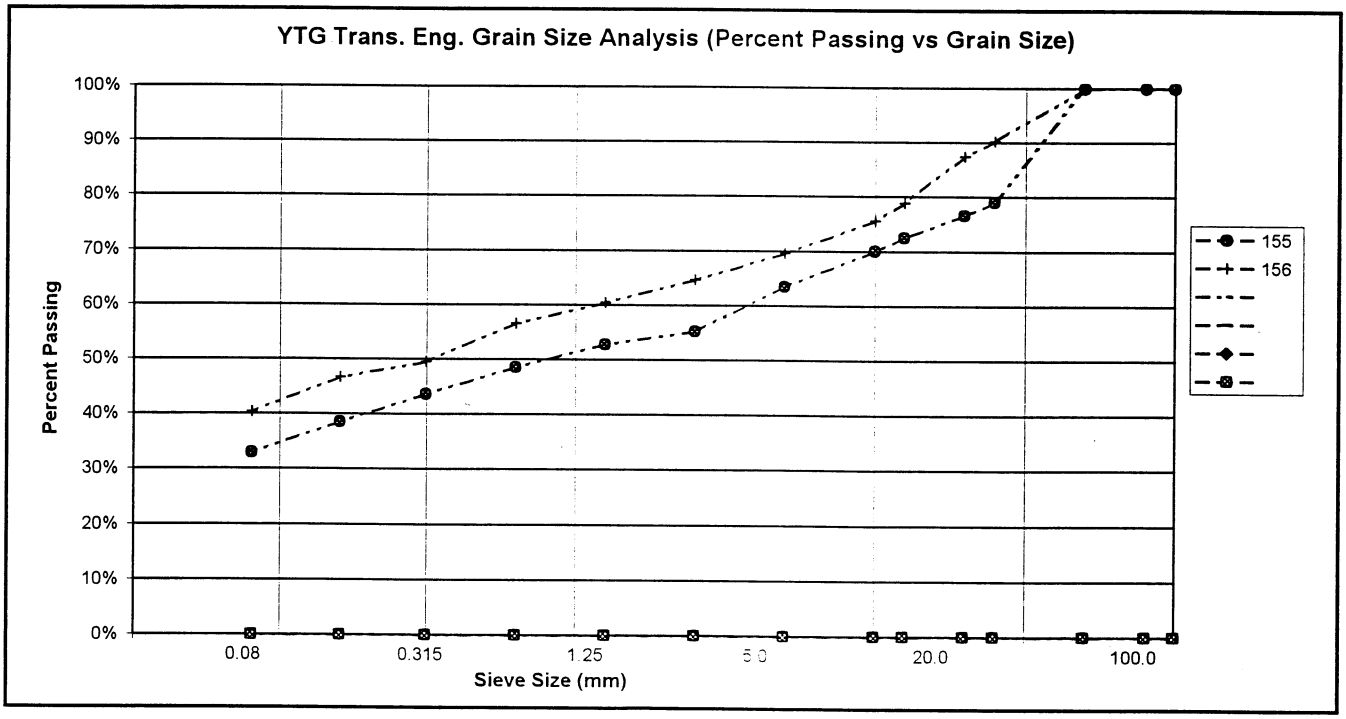


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1681+250 LHS
LOGGED BY:	KJ

HOLE No.: 593-951

DATE COMP: 2001/04/18

FIELD NO:	155	156				
LAB NO:	399	400				
DEPTH:	1.1-1.3	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	79%	90%				
20.0	77%	87%				
12.5	73%	79%				
10.0	70%	76%				
5.0	64%	70%				
2.5	55%	65%				
1.25	53%	60%				
0.630	49%	57%				
0.315	44%	50%				
0.160	39%	47%				
0.080	33%	40%				
M.C.(%):	6%	7%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	36	30				
% SAND:	31	29				
% FINES:	33	40				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)				

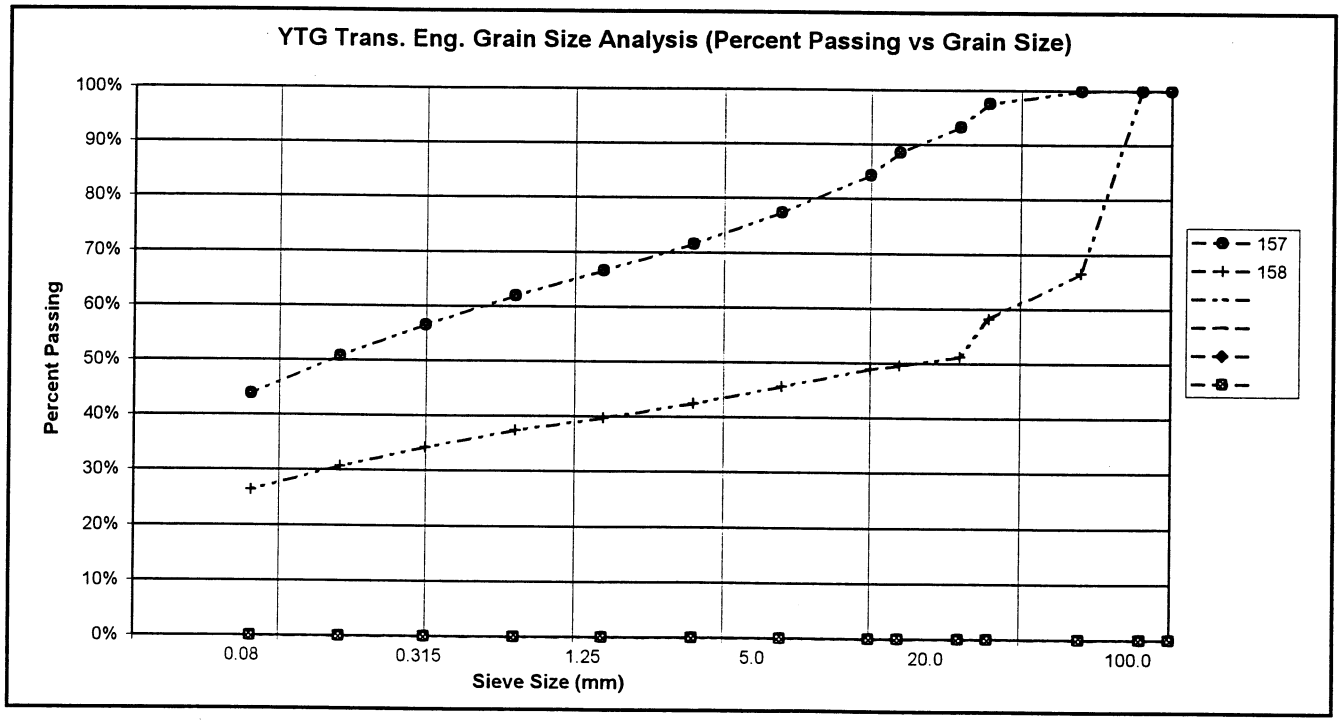


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1664-1692 A/H
DRILL UNIT: MOBILE B30 L
HOLE LOCATION: 1681+100
LOGGED BY: KJ

HOLE No.: 593-952

DATE COMP: 2001/04/18

FIELD NO:	157	158				
LAB NO:	401	402				
DEPTH:	1.1-1.3	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%	67%				
25.0	98%	58%				
20.0	93%	51%				
12.5	89%	50%				
10.0	84%	49%				
5.0	77%	46%				
2.5	72%	43%				
1.25	67%	40%				
0.630	62%	37%				
0.315	57%	34%				
0.160	51%	31%				
0.080	44%	26%				
M.C.(%):	10%	7%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	23	54				
% SAND:	34	19				
% FINES:	44	26				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)				

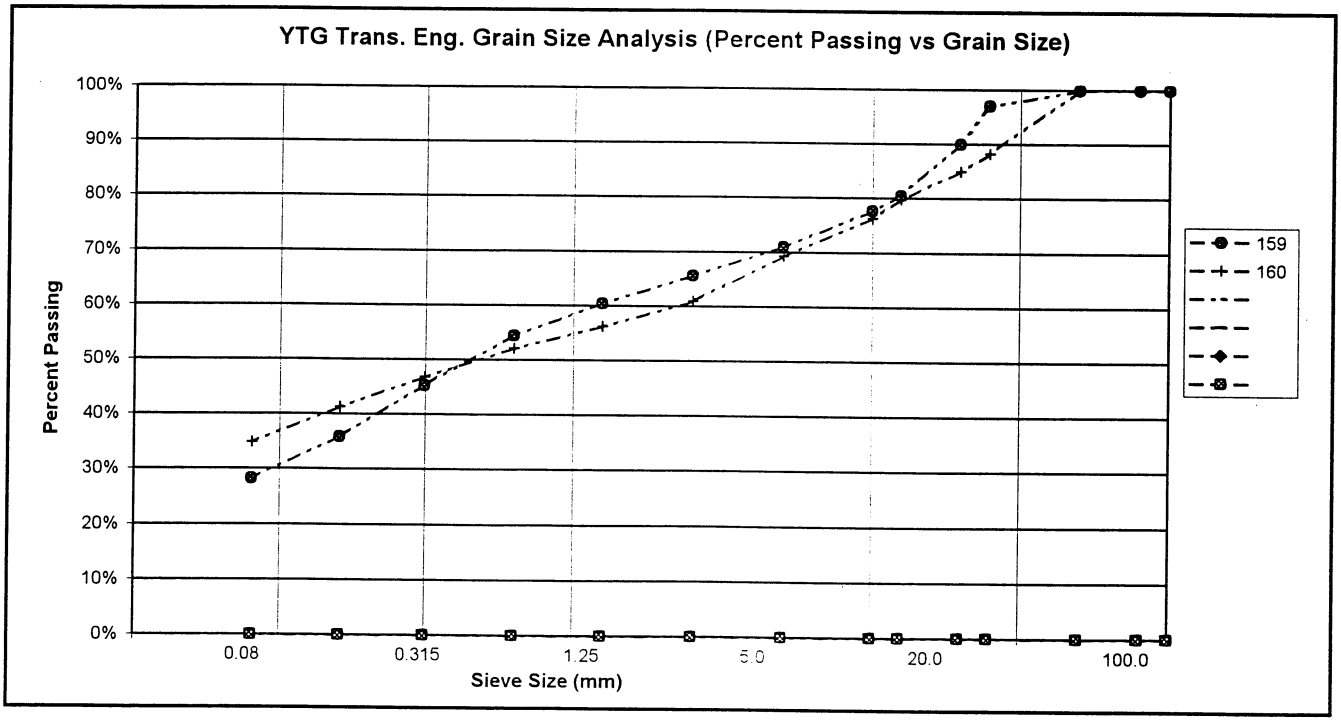


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1681+000
LOGGED BY:	KJ

HOLE No.: 593-953

DATE COMP: 2001/04/18

FIELD NO:	159	160				
LAB NO:	403	404				
DEPTH:	1.1-1.3	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	97%	88%				
20.0	90%	85%				
12.5	81%	80%				
10.0	78%	76%				
5.0	71%	69%				
2.5	66%	61%				
1.25	60%	56%				
0.630	54%	52%				
0.315	45%	47%				
0.160	36%	41%				
0.080	28%	35%				
M.C.(%):	7%	8%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	29	31				
% SAND:	43	34				
% FINES:	28	35				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				

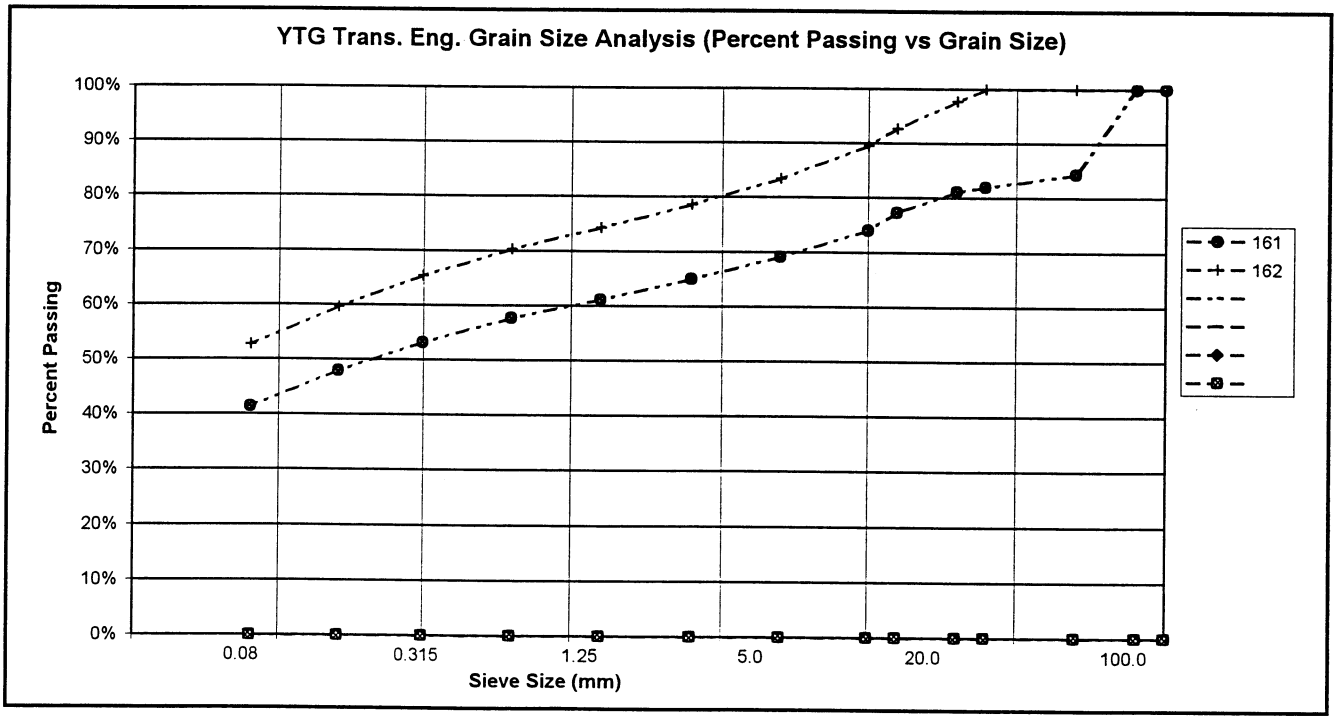


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1680+900
LOGGED BY:	KJ

HOLE No.: 593-954

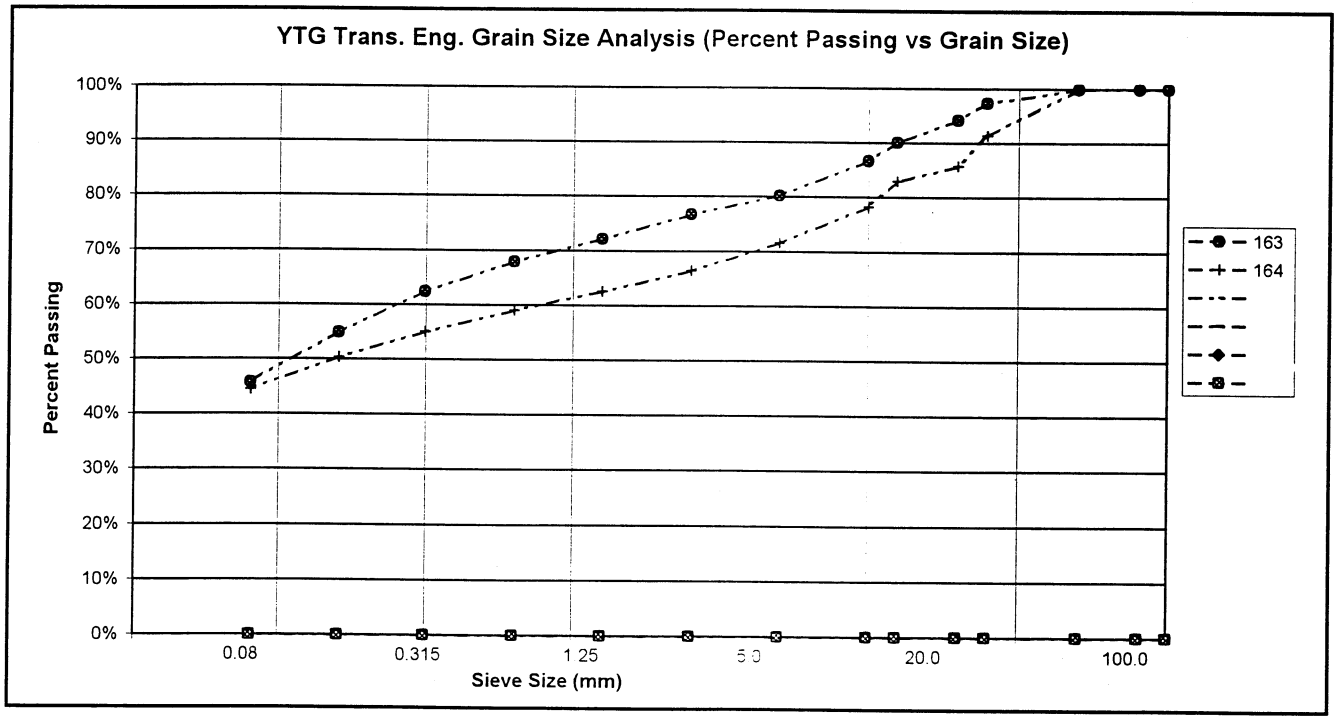
DATE COMP: 2001/04/18

FIELD NO:	161	162				
LAB NO:	405	406				
DEPTH:	1.1-1.3	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	84%	100%				
25.0	82%	100%				
20.0	81%	98%				
12.5	77%	93%				
10.0	74%	90%				
5.0	69%	83%				
2.5	65%	79%				
1.25	61%	74%				
0.630	58%	70%				
0.315	53%	65%				
0.160	48%	60%				
0.080	41%	53%				
M.C.(%):	8%	9%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	31	17				
% SAND:	28	31				
% FINES:	41	53				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SANDY SILT WITH GRAVEL (ML)				



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 593-955
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664-1692 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1680+800		
LOGGED BY:	KJ		DATE COMP: 2001/04/18

FIELD NO:	163	164				
LAB NO:	407	408				
DEPTH:	1.1-1.3	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	97%	91%				
20.0	94%	86%				
12.5	90%	83%				
10.0	87%	78%				
5.0	80%	72%				
2.5	77%	66%				
1.25	72%	63%				
0.630	68%	59%				
0.315	62%	55%				
0.160	55%	50%				
0.080	46%	44%				
M.C.(%):	8%	7%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	20	28				
% SAND:	35	27				
% FINES:	46	44				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)				

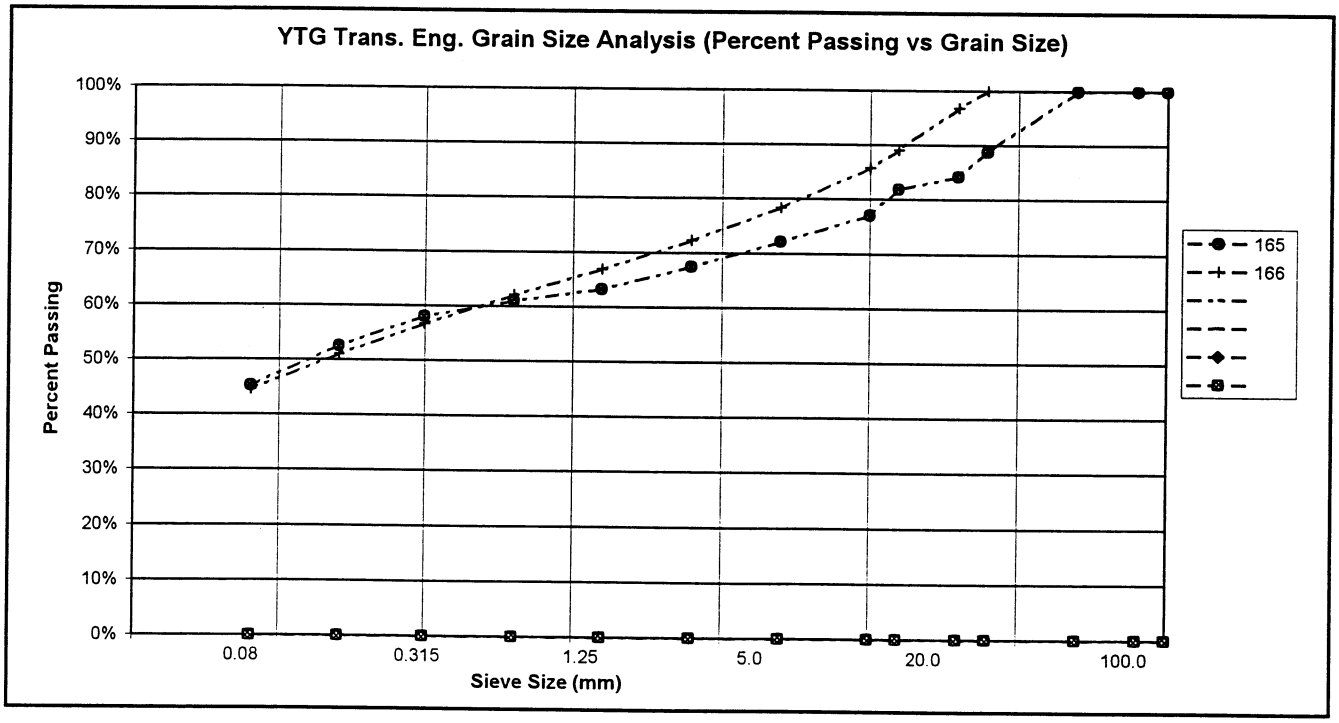


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1680+675
LOGGED BY:	KJ

HOLE No.: 593-956

DATE COMP: 2001/04/18

FIELD NO:	165	166				
LAB NO:	409	410				
DEPTH:	1.1-1.3	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	89%	100%				
20.0	84%	97%				
12.5	82%	89%				
10.0	77%	86%				
5.0	72%	78%				
2.5	67%	72%				
1.25	63%	67%				
0.630	61%	62%				
0.315	58%	57%				
0.160	53%	51%				
0.080	45%	45%				
M.C.(%):	9%	8%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	28	22				
% SAND:	27	34				
% FINES:	45	45				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)				

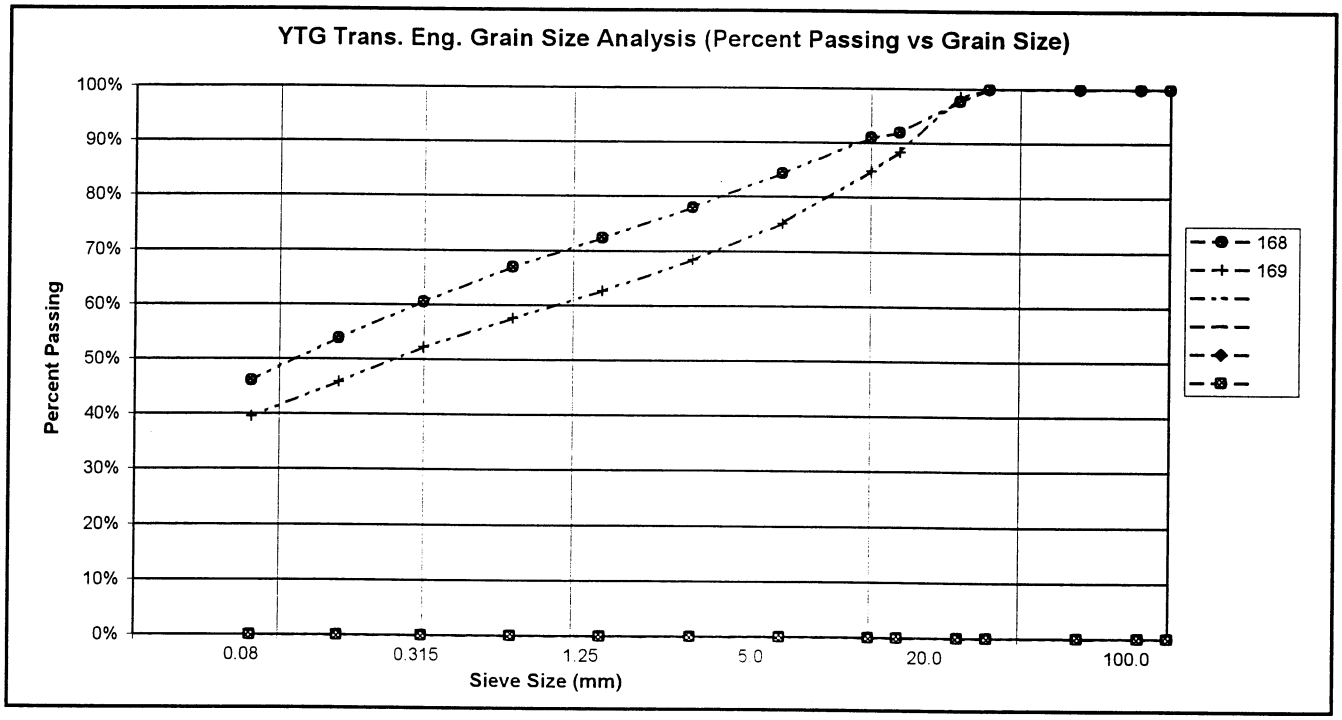


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1680+575
LOGGED BY:	KJ

HOLE No.: 593-957

DATE COMP: 2001/04/18

FIELD NO:	168	169				
LAB NO:	411	412				
DEPTH:	1.1-1.3	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	100%	100%				
20.0	98%	99%				
12.5	92%	88%				
10.0	91%	85%				
5.0	84%	75%				
2.5	78%	68%				
1.25	72%	63%				
0.630	67%	58%				
0.315	61%	52%				
0.160	54%	46%				
0.080	46%	40%				
M.C.(%):	9%	6%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	16	25				
% SAND:	38	36				
% FINES:	46	40				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				

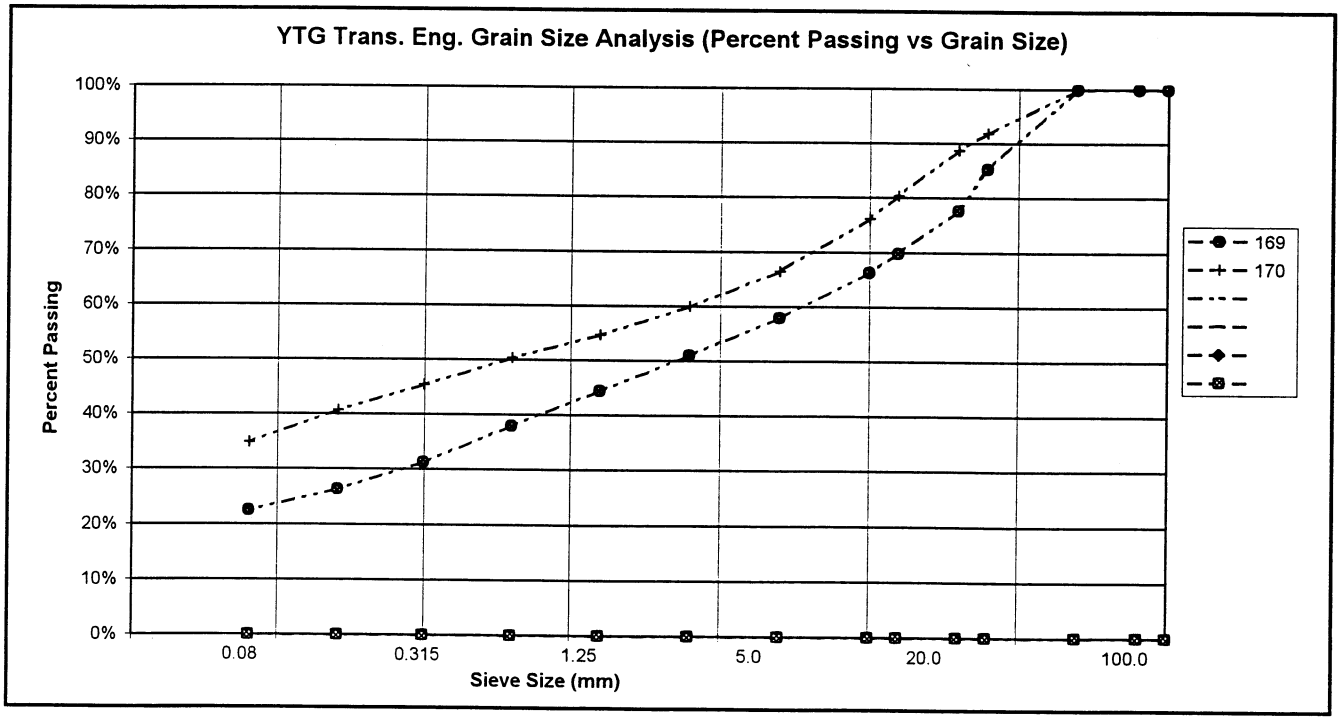


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1680+460
LOGGED BY:	KJ

HOLE No.: 593-958

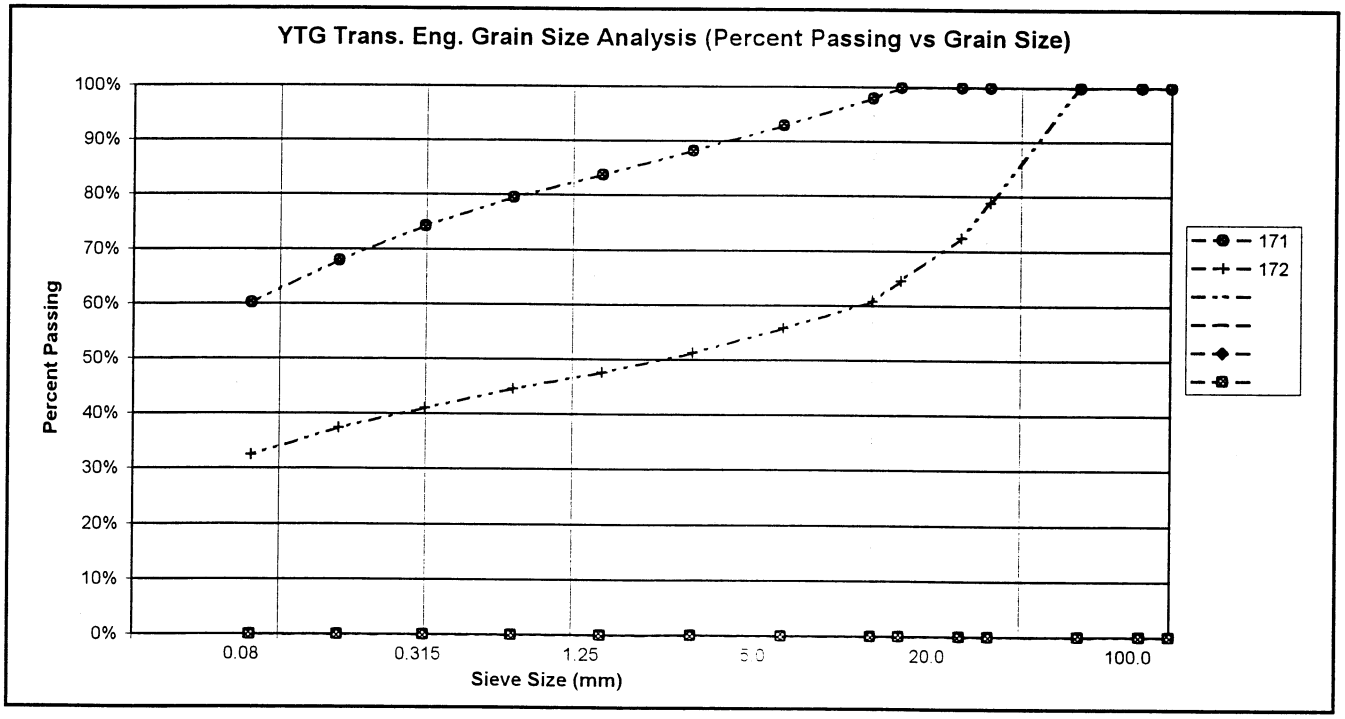
DATE COMP: 2001/04/18

FIELD NO:	169	170				
LAB NO:	413	414				
DEPTH:	1.1-1.3	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	85%	92%				
20.0	78%	89%				
12.5	70%	80%				
10.0	66%	76%				
5.0	58%	66%				
2.5	51%	60%				
1.25	44%	55%				
0.630	38%	50%				
0.315	31%	45%				
0.160	26%	41%				
0.080	23%	35%				
M.C.(%):	5%	7%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	42	34				
% SAND:	35	32				
% FINES:	23	35				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)				



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 593-959
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664-1692 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1680+375		
LOGGED BY:	KJ		DATE COMP: 2001/04/19

FIELD NO:	171	172				
LAB NO:	415	416				
DEPTH:	1.1-1.3	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	100%	79%				
20.0	100%	72%				
12.5	100%	65%				
10.0	98%	61%				
5.0	93%	56%				
2.5	88%	51%				
1.25	84%	48%				
0.630	80%	45%				
0.315	74%	41%				
0.160	68%	37%				
0.080	60%	33%				
M.C.(%):	10%	6%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	7	44				
% SAND:	33	23				
% FINES:	60	33				
CLASSIFICATION	SANDY SILT (ML)	SILTY GRAVEL WITH SAND (GM)				

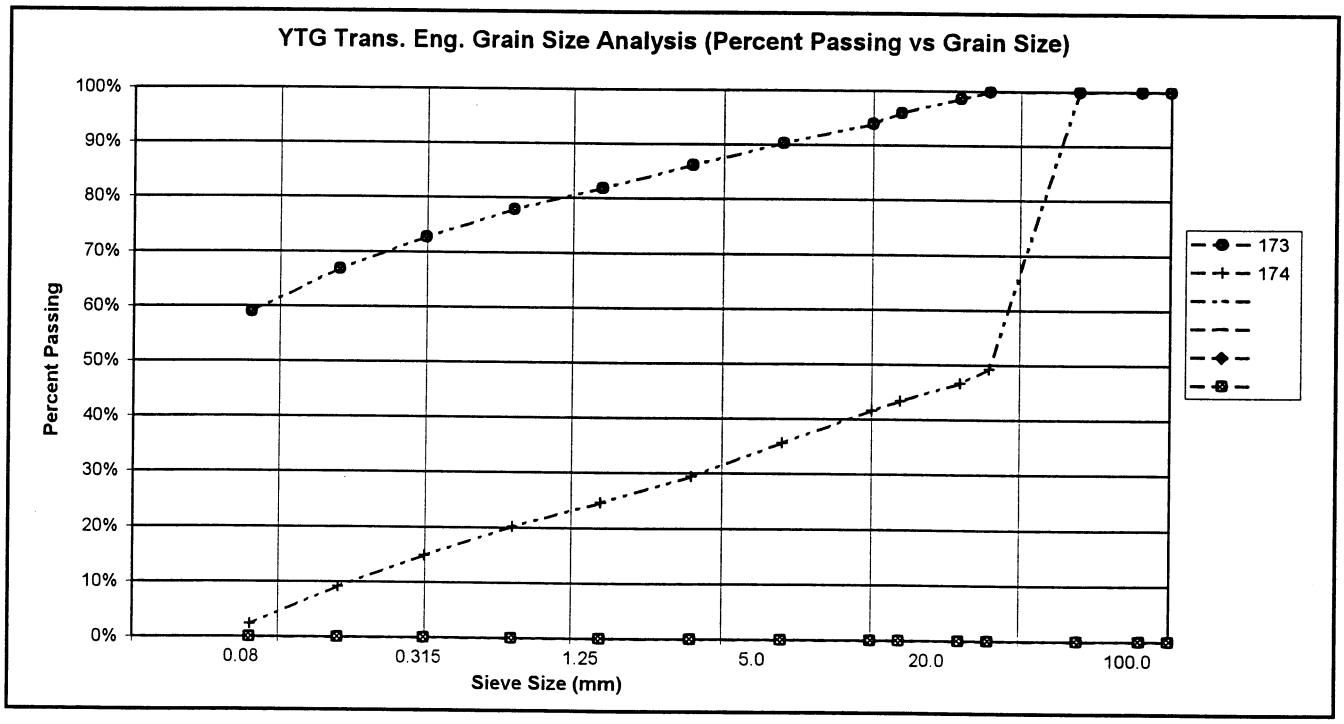


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1680+225
LOGGED BY:	KJ

HOLE No.: 593-960

DATE COMP: 2001/04/19

FIELD NO:	173	174				
LAB NO:	417	418				
DEPTH:	1.1-1.3	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	100%	49%				
20.0	99%	47%				
12.5	96%	43%				
10.0	94%	42%				
5.0	90%	36%				
2.5	86%	29%				
1.25	82%	25%				
0.630	78%	20%				
0.315	73%	15%				
0.160	67%	9%				
0.080	59%	2%				
M.C.(%):	11%	8%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	10	64				
% SAND:	31	33				
% FINES:	59	2				
CLASSIFICATION	SANDY SILT (ML)	POORLY GRADED GRAVEL WITH SAND (GP)				

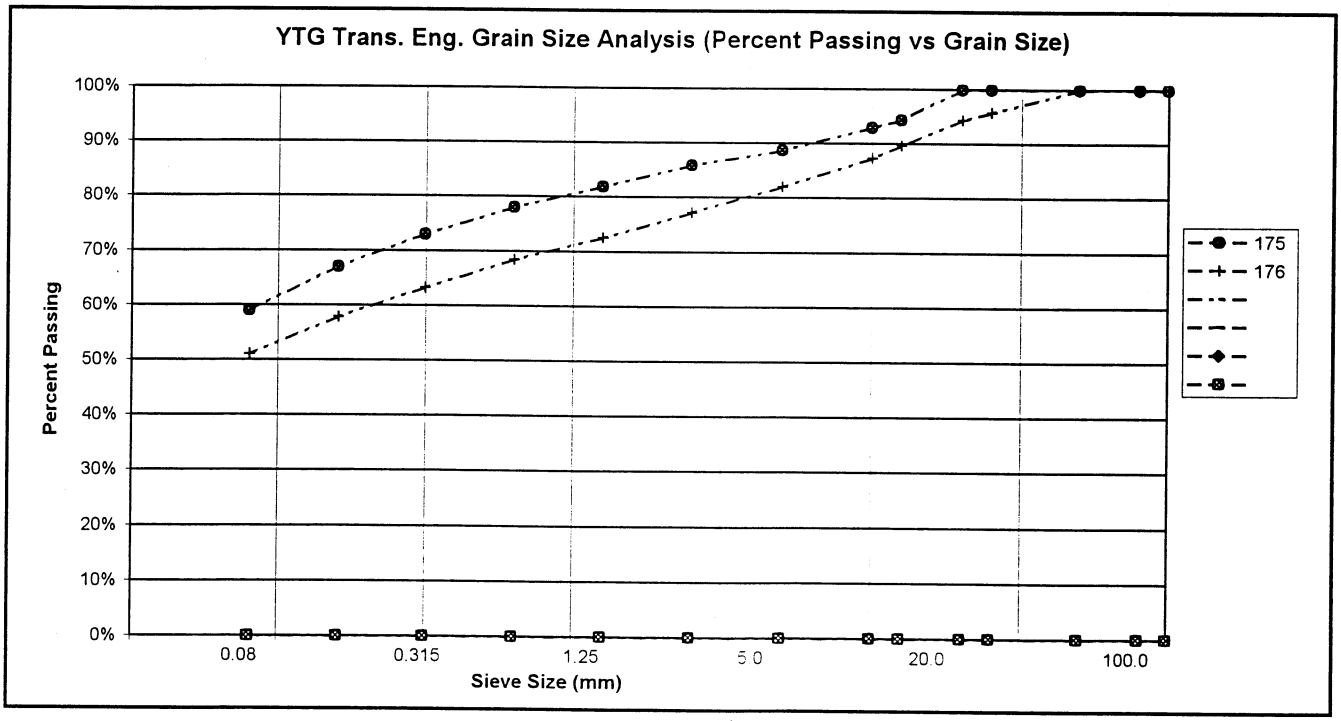


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1680+075
LOGGED BY:	KJ

HOLE No.: 593-961

DATE COMP: 2001/04/19

FIELD NO:	175	176				
LAB NO:	419	420				
DEPTH:	1.1-1.3	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	100%	96%				
20.0	100%	94%				
12.5	94%	90%				
10.0	93%	87%				
5.0	89%	82%				
2.5	86%	77%				
1.25	82%	73%				
0.630	78%	68%				
0.315	73%	63%				
0.160	67%	58%				
0.080	59%	51%				
M.C.(%):	10%	9%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	11	18				
% SAND:	30	31				
% FINES:	59	51				
CLASSIFICATION	SANDY SILT (ML)	SANDY SILT WITH GRAVEL (ML)				

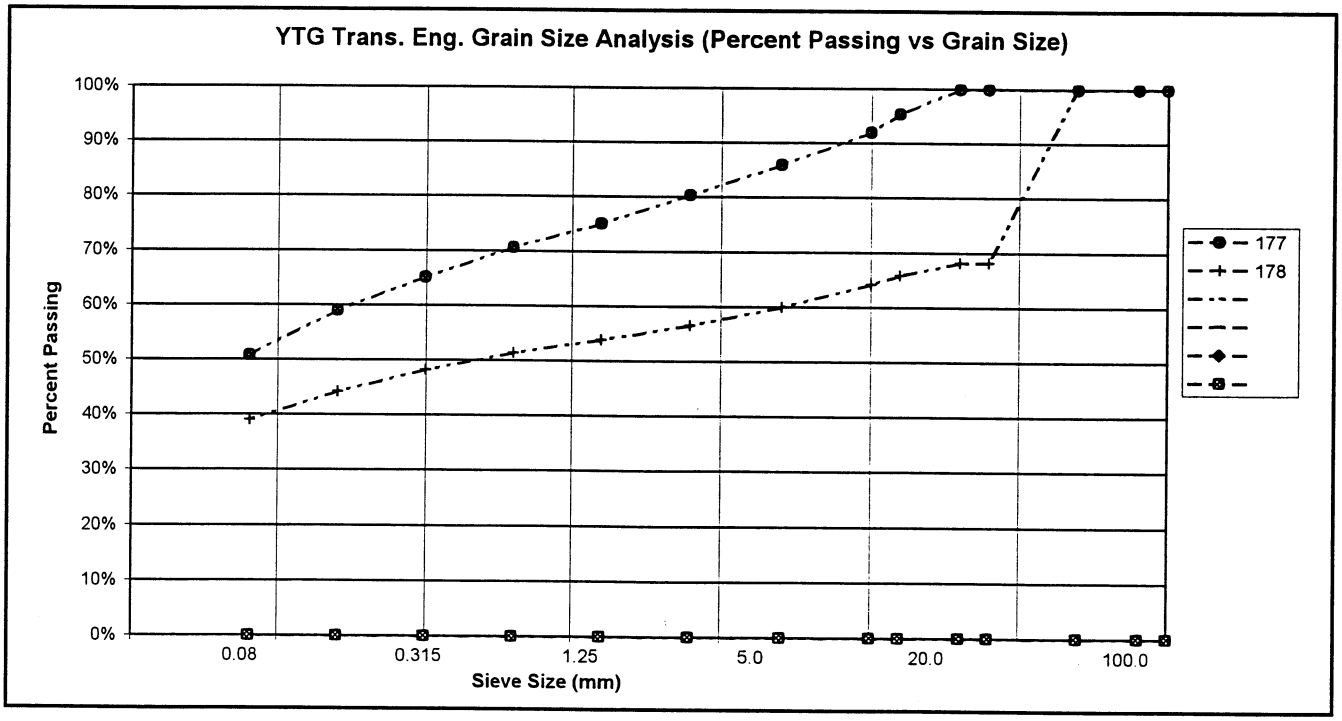


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1679+975
LOGGED BY:	KJ

HOLE No.: 593-962

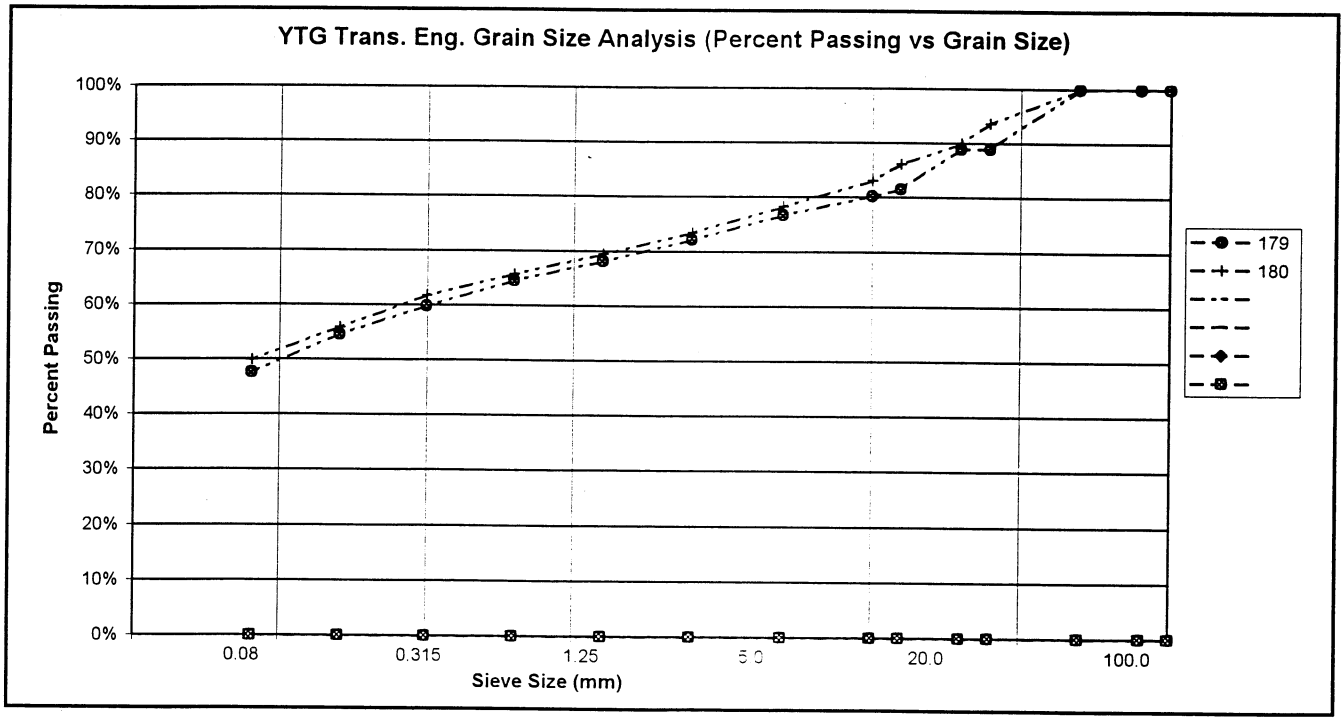
DATE COMP: 2001/04/19

FIELD NO:	177	178				
LAB NO:	421	422				
DEPTH:	1.1-1.3	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	100%	68%				
20.0	100%	68%				
12.5	95%	66%				
10.0	92%	64%				
5.0	86%	60%				
2.5	80%	57%				
1.25	75%	54%				
0.630	71%	51%				
0.315	65%	48%				
0.160	59%	44%				
0.080	51%	39%				
M.C.(%):	9%	6%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	14	40				
% SAND:	35	21				
% FINES:	51	39				
CLASSIFICATION	SANDY SILT (ML)	SILTY GRAVEL WITH SAND (GM)				



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 593-963
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664-1692 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1679+825		
LOGGED BY:	KJ		DATE COMP: 2001/04/19

FIELD NO:	179	180				
LAB NO:	423	424				
DEPTH:	1.1-1.3	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	89%	94%				
20.0	89%	90%				
12.5	82%	86%				
10.0	80%	83%				
5.0	77%	78%				
2.5	72%	73%				
1.25	68%	69%				
0.630	65%	66%				
0.315	60%	62%				
0.160	55%	56%				
0.080	48%	50%				
M.C.(%):	10%	8%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	23	22				
% SAND:	29	28				
% FINES:	48	50				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				

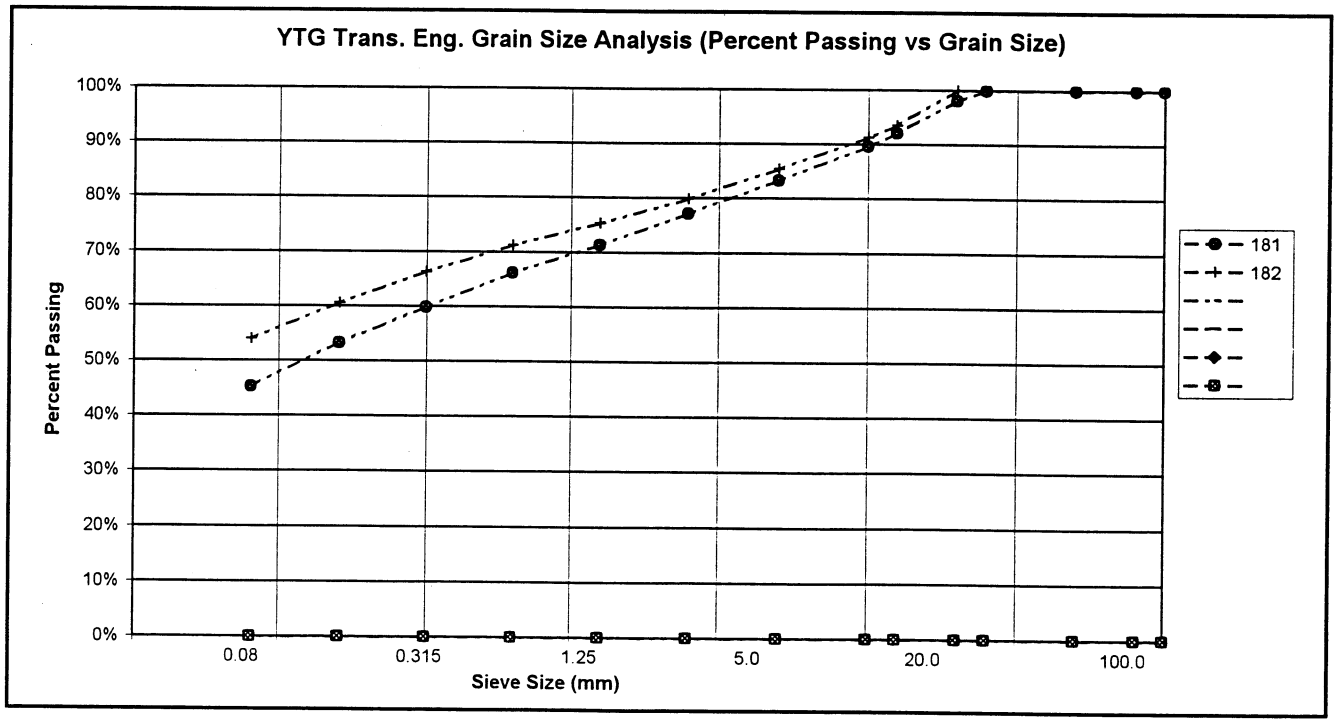


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1679+700
LOGGED BY:	KJ

HOLE No.: 593-964

DATE COMP: 2001/04/19

FIELD NO:	181	182				
LAB NO:	425	426				
DEPTH:	1.1-1.3	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	100%	100%				
20.0	98%	100%				
12.5	92%	94%				
10.0	90%	91%				
5.0	83%	85%				
2.5	77%	80%				
1.25	71%	75%				
0.630	66%	71%				
0.315	60%	66%				
0.160	53%	61%				
0.080	45%	54%				
M.C.(%):	14%	14%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	17	15				
% SAND:	38	31				
% FINES:	45	54				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)				

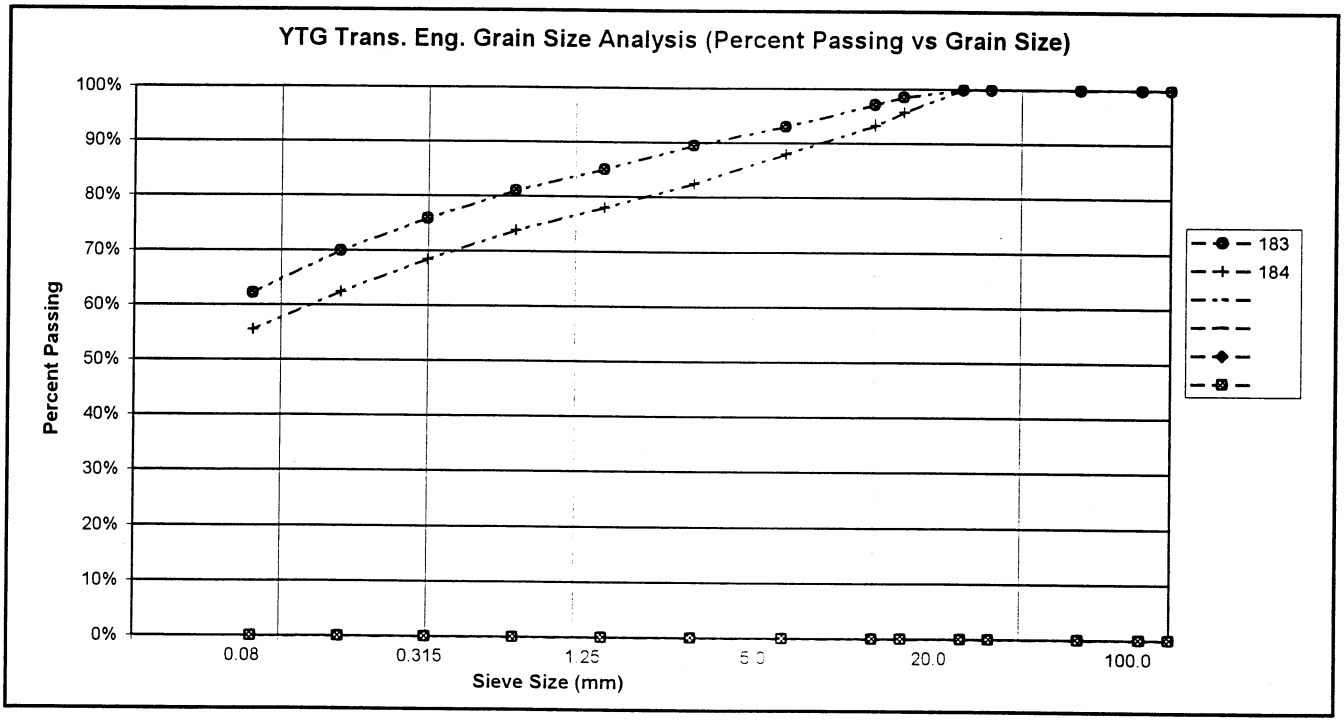


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1679+635
LOGGED BY:	KJ

HOLE No.: 593-965

DATE COMP: 2001/04/19

FIELD NO:	183	184				
LAB NO:	427	428				
DEPTH:	1.1-1.3	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	100%	100%				
20.0	100%	100%				
12.5	99%	96%				
10.0	97%	93%				
5.0	93%	88%				
2.5	90%	83%				
1.25	85%	78%				
0.630	81%	74%				
0.315	76%	68%				
0.160	70%	62%				
0.080	62%	56%				
M.C.(%):	22%	15%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	7	12				
% SAND:	31	33				
% FINES:	62	56				
CLASSIFICATION	SANDY SILT (ML)	SANDY SILT (ML)				

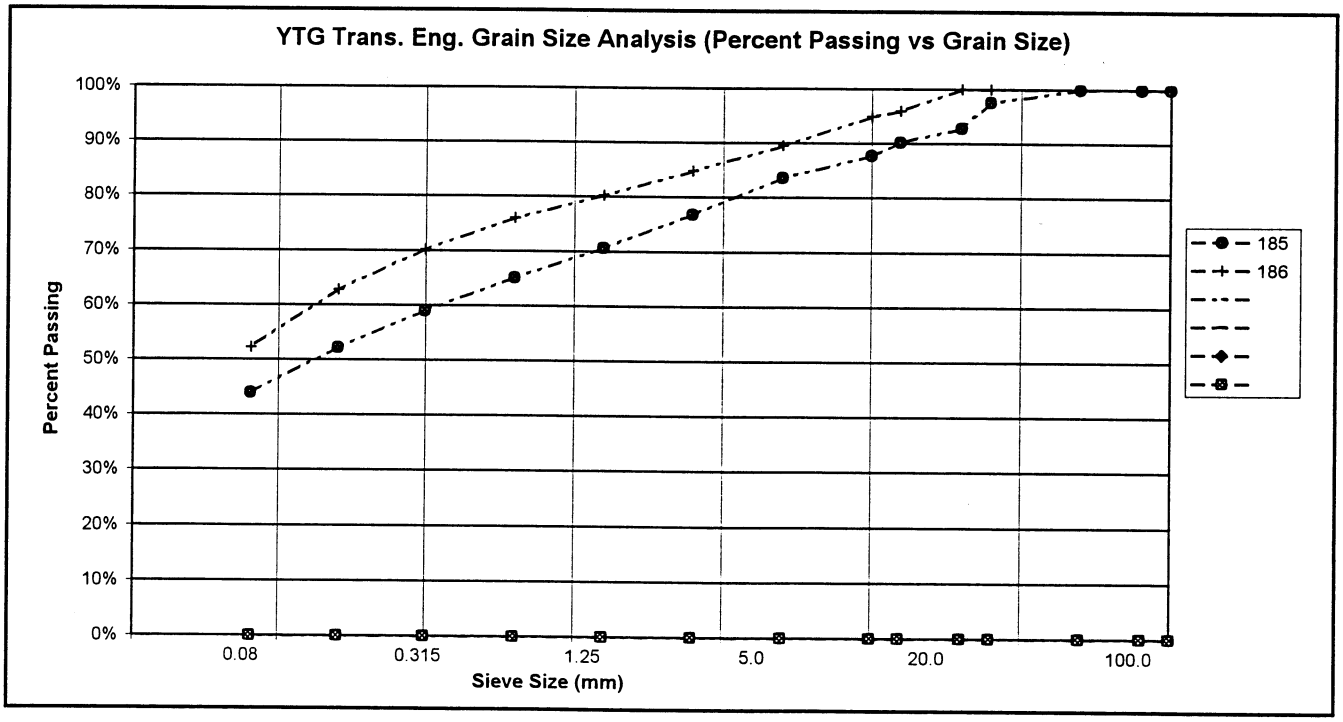


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1679+600
LOGGED BY:	KJ

HOLE No.: 593-966

DATE COMP: 2001/04/19

FIELD NO:	185	186				
LAB NO:	429	430				
DEPTH:	1.1-1.2	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	98%	100%				
20.0	93%	100%				
12.5	90%	96%				
10.0	88%	95%				
5.0	84%	90%				
2.5	77%	85%				
1.25	71%	80%				
0.630	65%	76%				
0.315	59%	70%				
0.160	52%	63%				
0.080	44%	52%				
M.C.(%):	10%	10%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	16	10				
% SAND:	40	37				
% FINES:	44	52				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)				

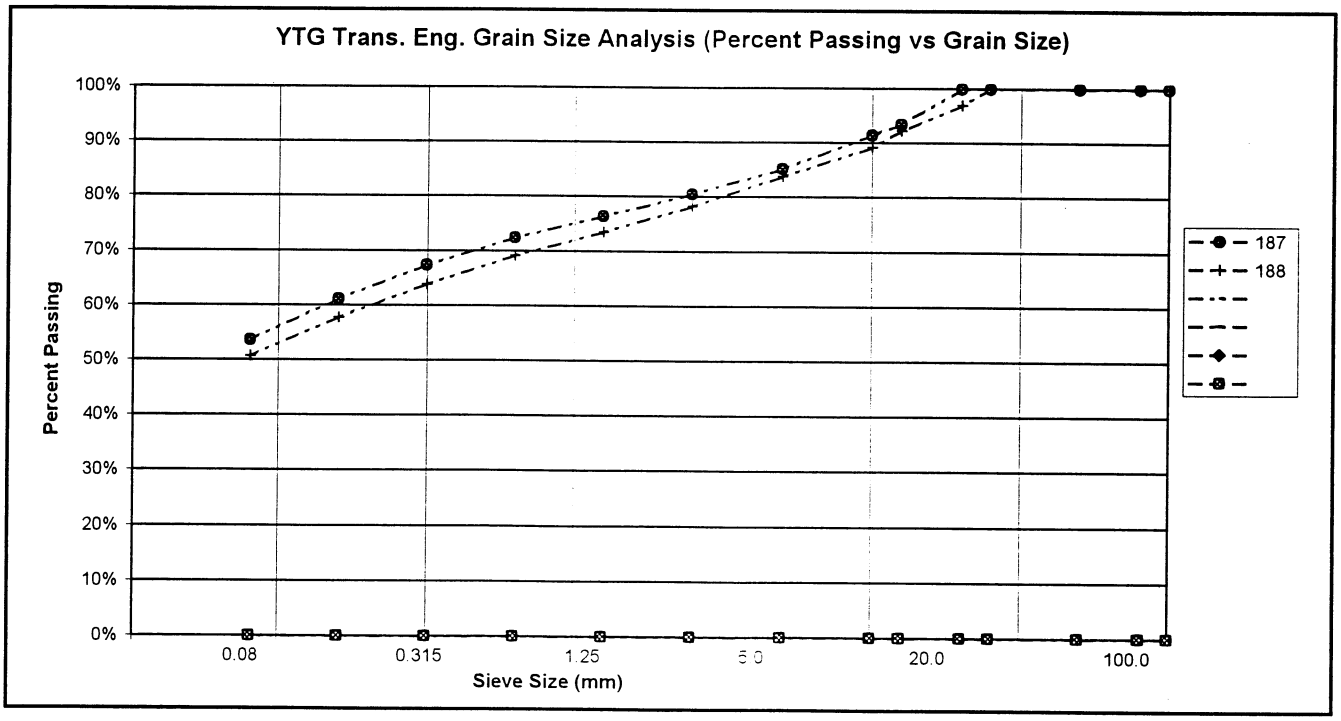


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1679+450
LOGGED BY:	KJ

HOLE No.: 593-967

DATE COMP: 2001/04/19

FIELD NO:	187	188				
LAB NO:	431	432				
DEPTH:	1.1-1.3	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	100%	100%				
20.0	100%	97%				
12.5	93%	92%				
10.0	91%	89%				
5.0	85%	84%				
2.5	80%	78%				
1.25	76%	74%				
0.630	72%	69%				
0.315	67%	64%				
0.160	61%	58%				
0.080	54%	51%				
M.C.(%):	9%	9%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	15	16				
% SAND:	32	33				
% FINES:	54	51				
CLASSIFICATION	SANDY SILT (ML)	SANDY SILT WITH GRAVEL (ML)				

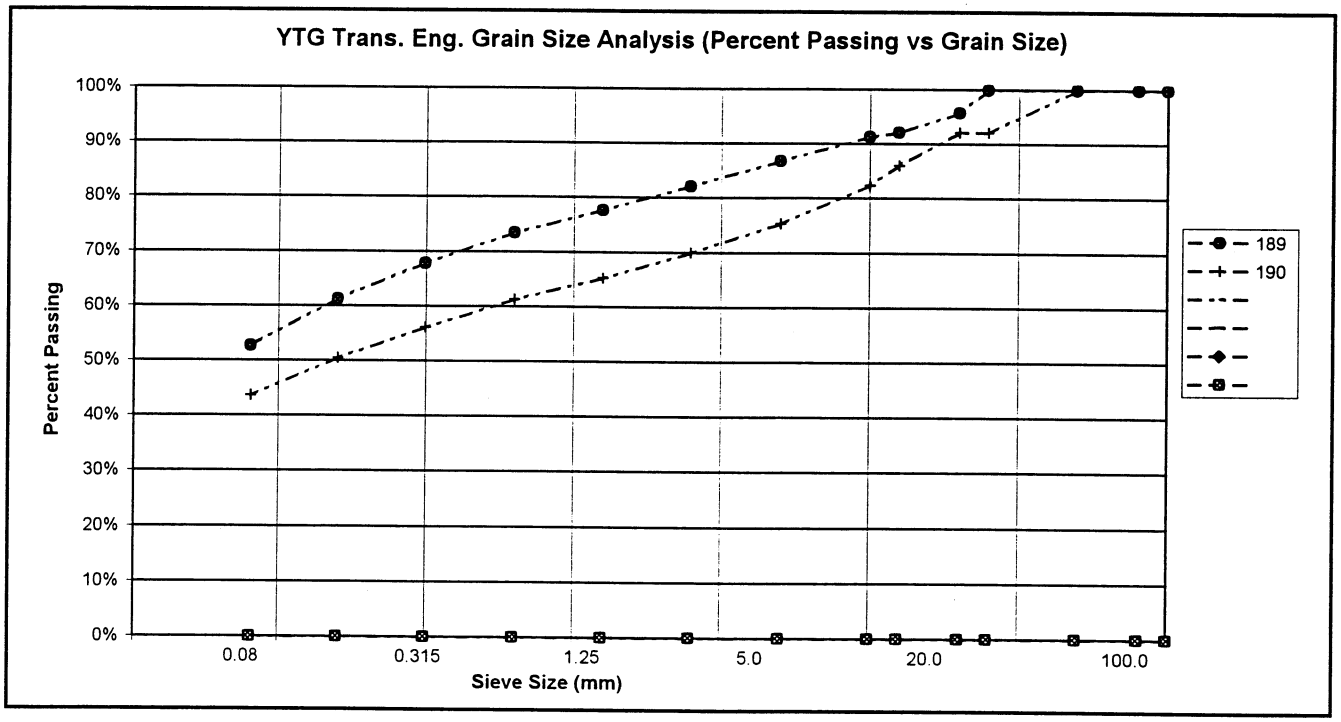


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1679+300
LOGGED BY:	KJ

HOLE No.: 593-968

DATE COMP: 2001/04/19

FIELD NO:	189	190				
LAB NO:	433	434				
DEPTH:	1.1-1.3	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	100%	92%				
20.0	96%	92%				
12.5	92%	86%				
10.0	91%	82%				
5.0	87%	75%				
2.5	82%	70%				
1.25	78%	65%				
0.630	74%	61%				
0.315	68%	56%				
0.160	61%	51%				
0.080	53%	44%				
M.C.(%):	9%	11%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	13	25				
% SAND:	34	32				
% FINES:	53	44				
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)				

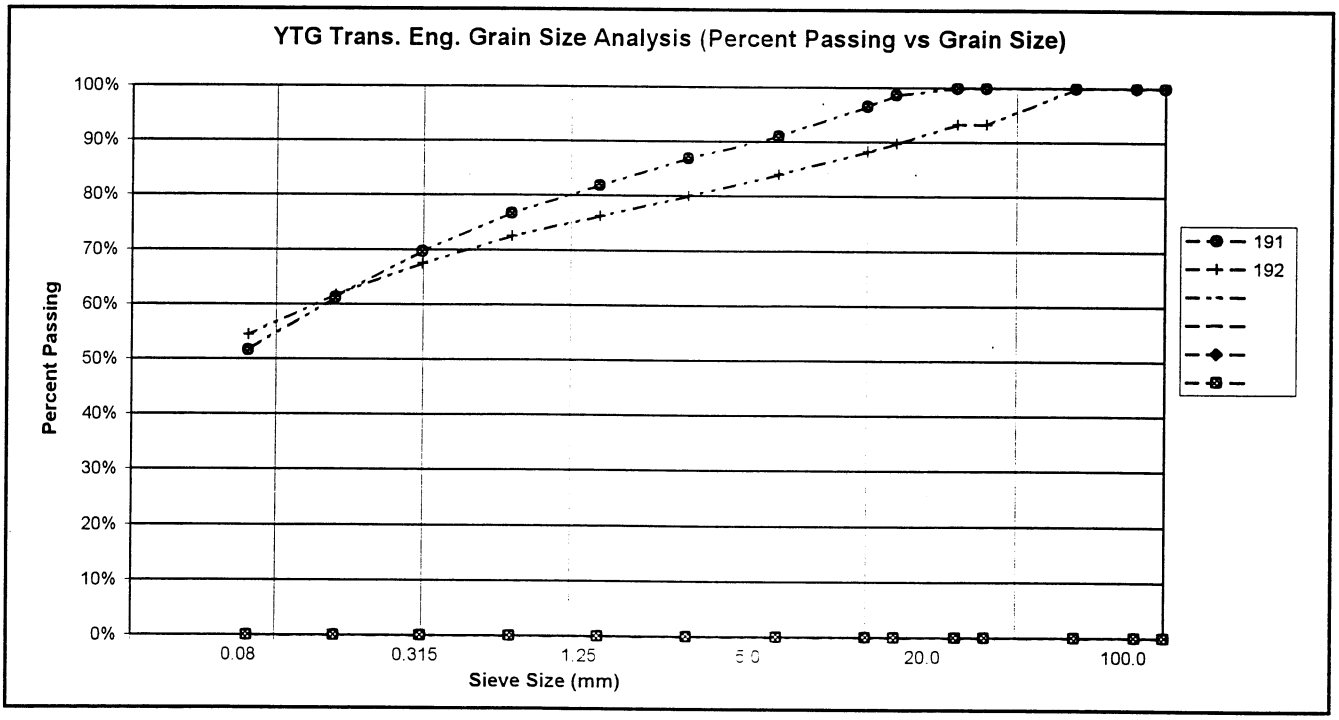


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1679+150
LOGGED BY:	KJ

HOLE No.: 593-969

DATE COMP: 2001/04/19

FIELD NO:	191	192				
LAB NO:	435	436				
DEPTH:	1.1-1.3	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	100%	93%				
20.0	100%	93%				
12.5	99%	90%				
10.0	97%	88%				
5.0	91%	84%				
2.5	87%	80%				
1.25	82%	76%				
0.630	77%	73%				
0.315	70%	67%				
0.160	61%	62%				
0.080	52%	54%				
M.C.(%):	9%	9%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	9	16				
% SAND:	39	30				
% FINES:	52	54				
CLASSIFICATION	SANDY SILT (ML)	SANDY SILT WITH GRAVEL (ML)				

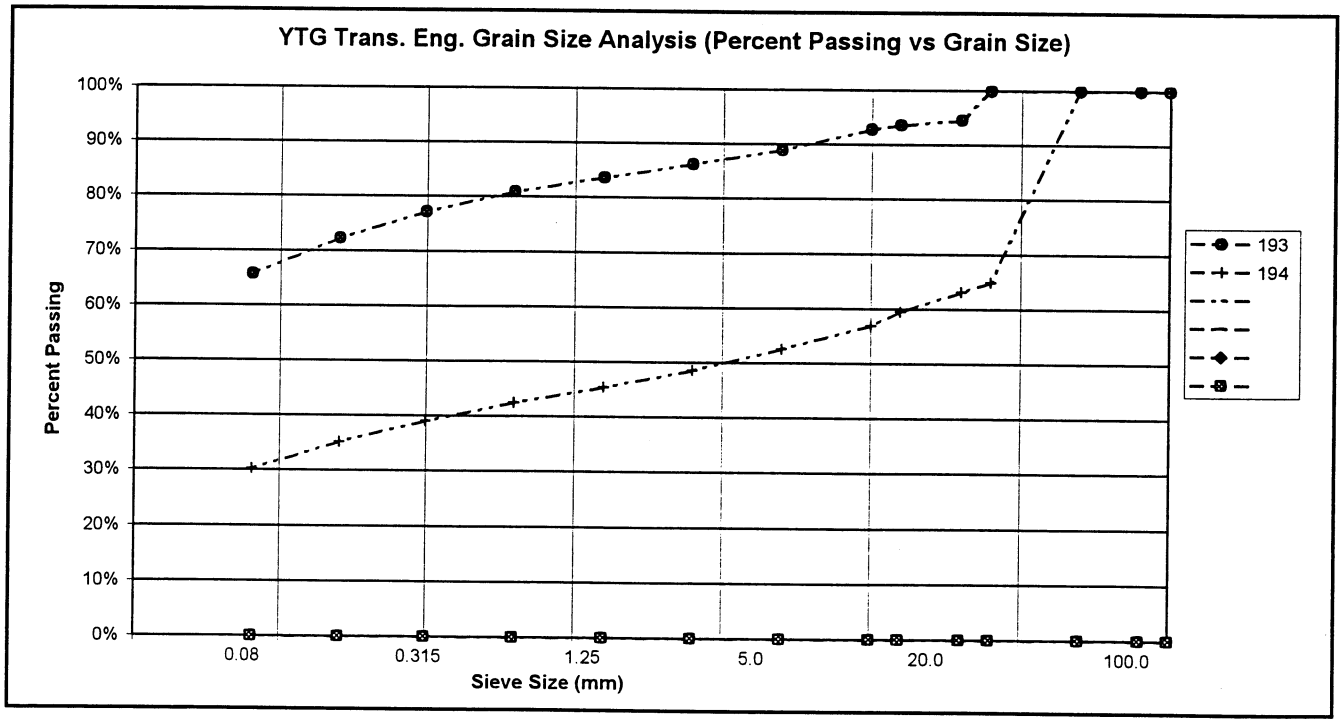


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1664-1692 A/H
DRILL UNIT: MOBILE B30 L
HOLE LOCATION: 1679+000
LOGGED BY: KJ

HOLE No.: 593-970

DATE COMP: 2001/04/19

FIELD NO:	193	194				
LAB NO:	437	438				
DEPTH:	1.1-1.3	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	100%	65%				
20.0	95%	63%				
12.5	94%	59%				
10.0	93%	57%				
5.0	89%	53%				
2.5	86%	49%				
1.25	84%	45%				
0.630	81%	42%				
0.315	77%	39%				
0.160	72%	35%				
0.080	66%	30%				
M.C.(%):	11%	5%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	11	47				
% SAND:	23	22				
% FINES:	66	30				
CLASSIFICATION	SANDY SILT (ML)	SILTY GRAVEL WITH SAND (GM)				

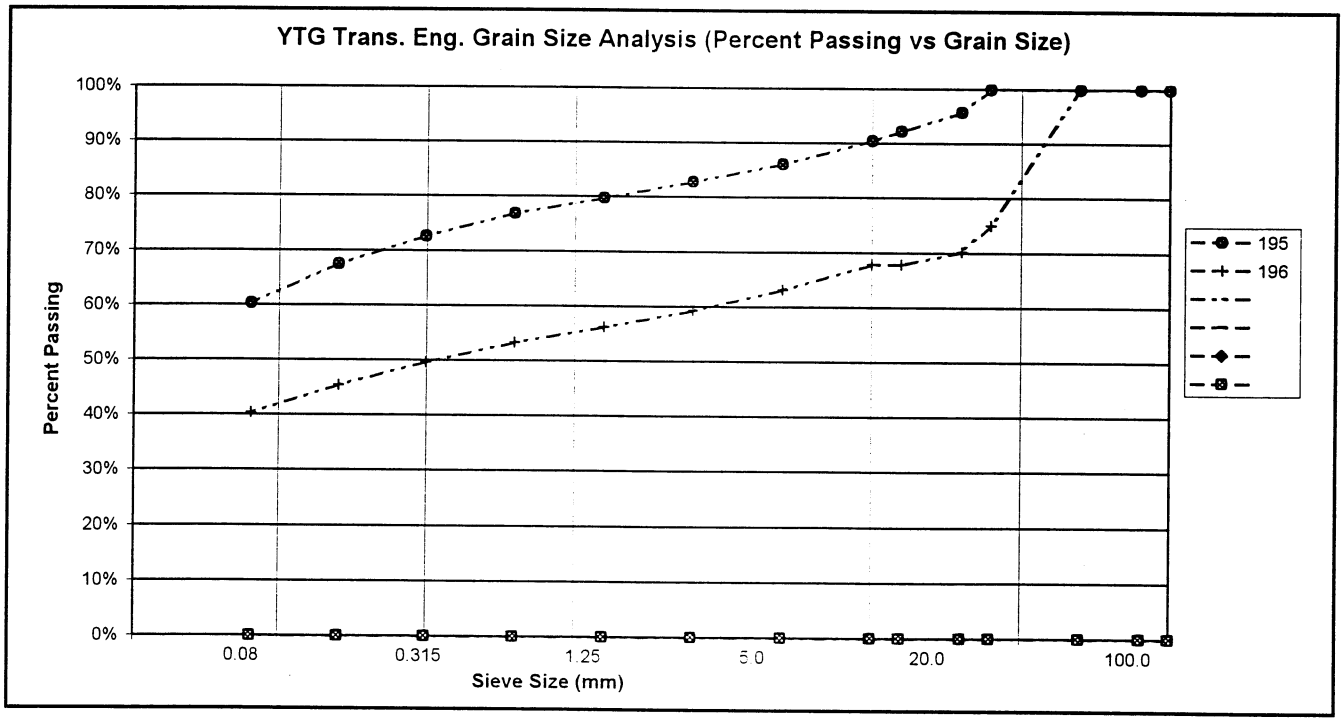


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1678+850
LOGGED BY:	KJ

HOLE No.: 593-971

DATE COMP: 2001/04/19

FIELD NO:	195	196				
LAB NO:	439	440				
DEPTH:	1.1-1.3	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	100%	75%				
20.0	96%	70%				
12.5	92%	68%				
10.0	91%	68%				
5.0	86%	63%				
2.5	83%	59%				
1.25	80%	56%				
0.630	77%	53%				
0.315	73%	50%				
0.160	68%	45%				
0.080	60%	40%				
M.C.(%):	10%	7%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	14	37				
% SAND:	26	23				
% FINES:	60	40				
CLASSIFICATION	SANDY SILT (ML)	SILTY GRAVEL WITH SAND (GM)				

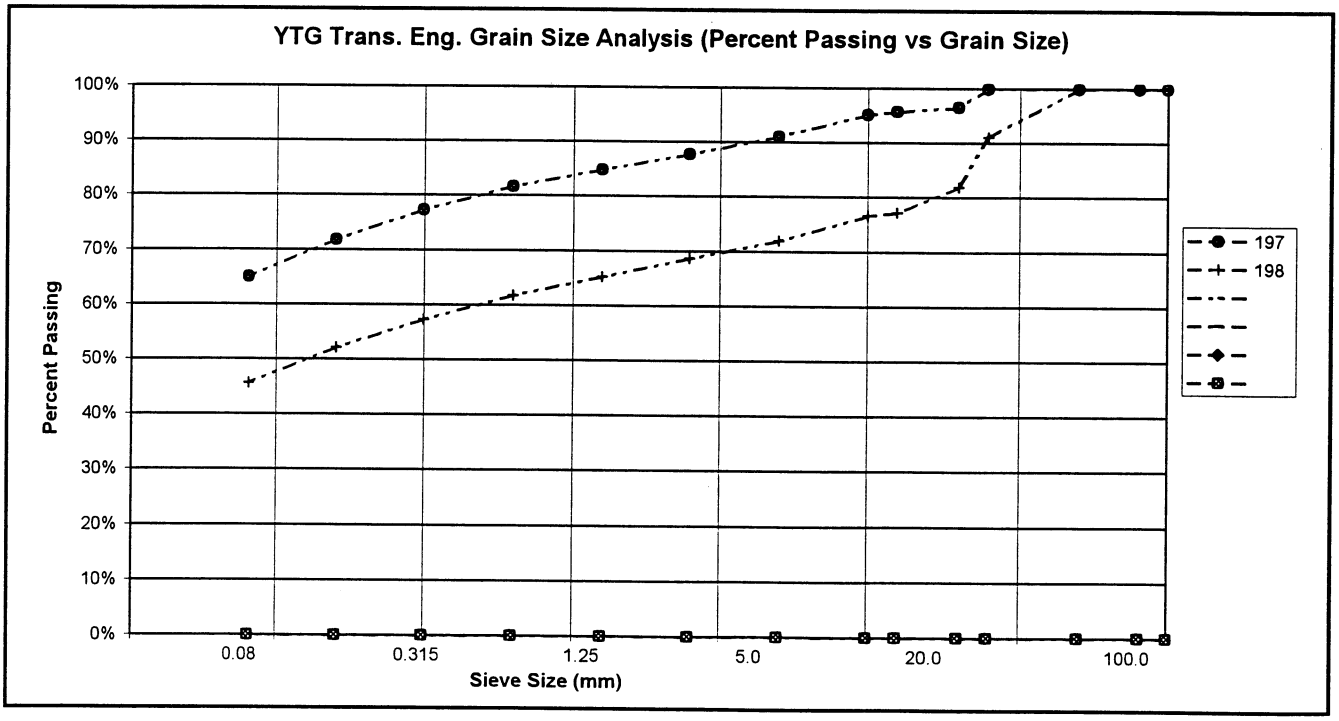


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1678+735
LOGGED BY:	KJ

HOLE No.: 593-972

DATE COMP: 2001/04/19

FIELD NO:	197	198				
LAB NO:	441	442				
DEPTH:	1.1-1.3	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	100%	91%				
20.0	97%	82%				
12.5	96%	77%				
10.0	95%	77%				
5.0	91%	72%				
2.5	88%	69%				
1.25	85%	65%				
0.630	82%	62%				
0.315	77%	57%				
0.160	72%	52%				
0.080	65%	46%				
M.C.(%):	11%	8%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	9	28				
% SAND:	26	26				
% FINES:	65	46				
CLASSIFICATION	SANDY SILT (ML)	SILTY GRAVEL WITH SAND (GM)				

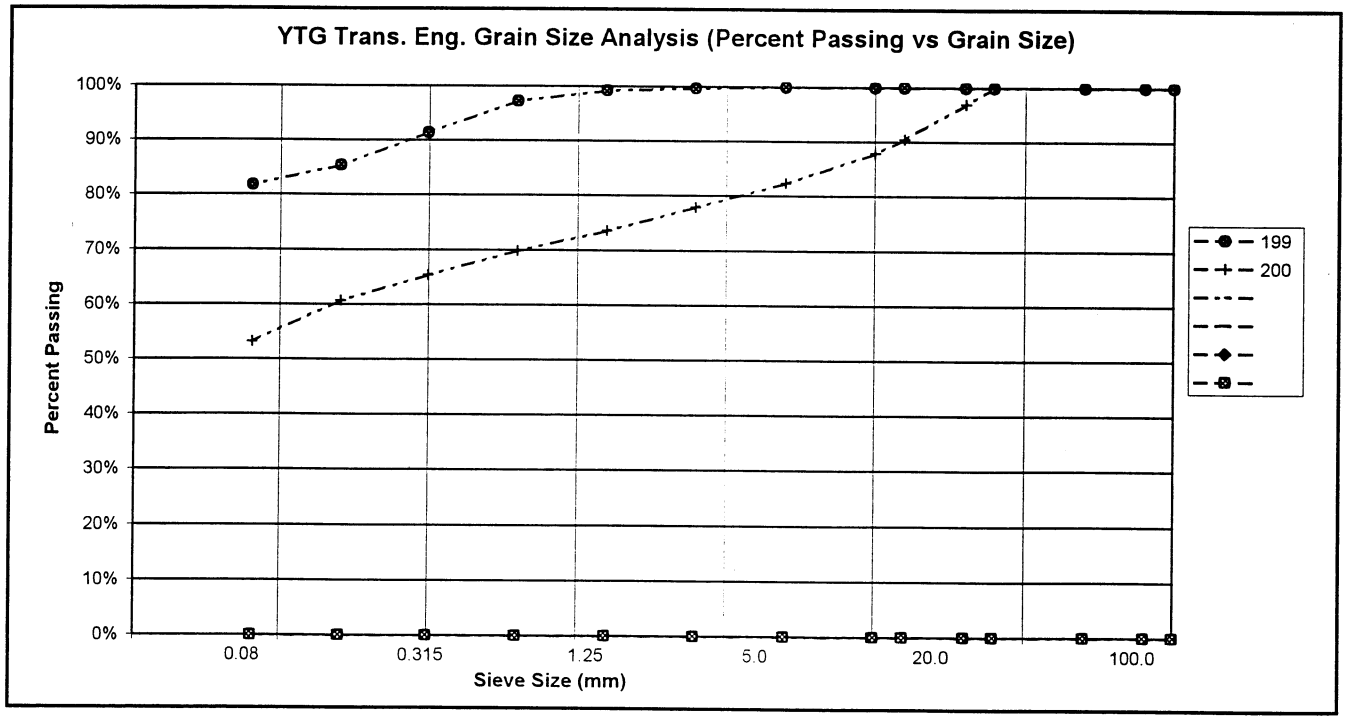


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1678+625
LOGGED BY:	KJ

HOLE No.: 593-973

DATE COMP: 2001/04/19

FIELD NO:	199	200				
LAB NO:	443	444				
DEPTH:	1.1-1.3	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	100%	100%				
20.0	100%	97%				
12.5	100%	90%				
10.0	100%	88%				
5.0	100%	82%				
2.5	100%	78%				
1.25	99%	74%				
0.630	97%	70%				
0.315	91%	65%				
0.160	85%	61%				
0.080	82%	53%				
M.C.(%):	21%	10%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	0	18				
% SAND:	18	29				
% FINES:	82	53				
CLASSIFICATION	SILT WITH SAND (ML)	SANDY SILT WITH GRAVEL (ML)				

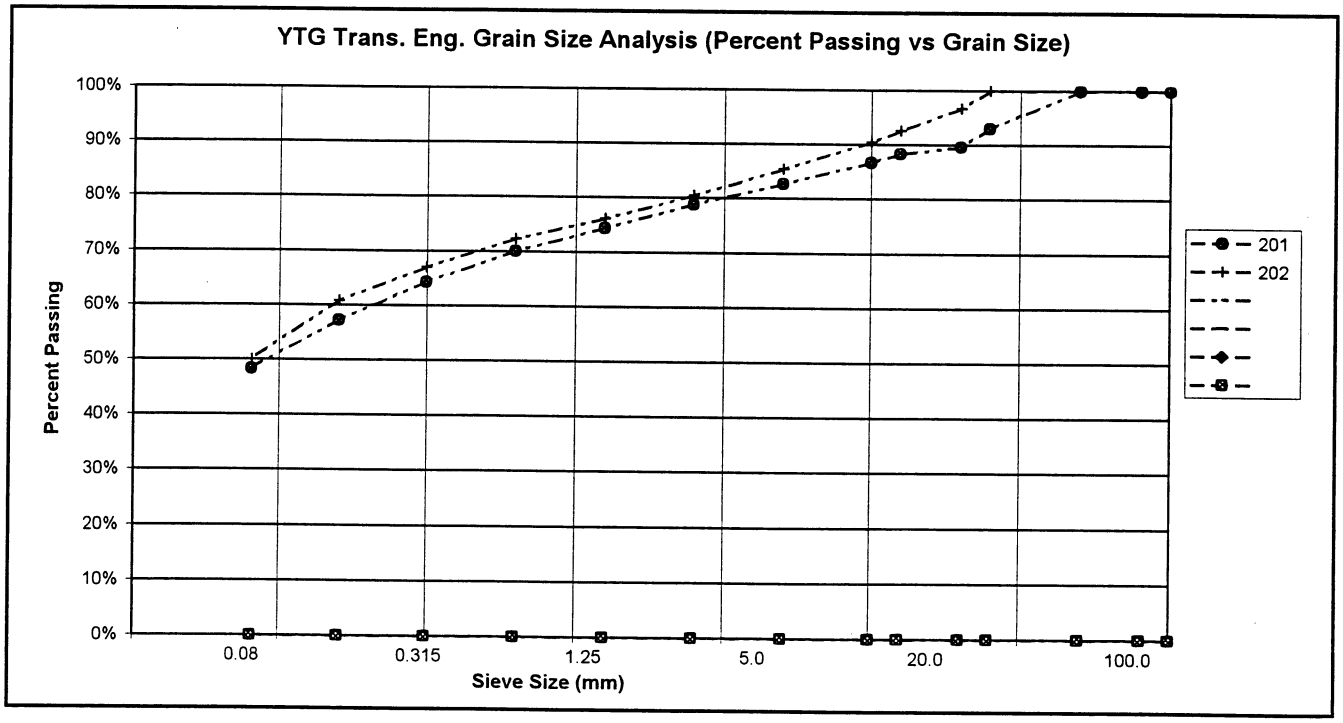


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1678+550 30m RT
LOGGED BY:	KJ

HOLE No.: 594-974

DATE COMP: 2001/04/20

FIELD NO:	201	202				
LAB NO:	445	446				
DEPTH:	1.1-1.3	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	93%	100%				
20.0	90%	97%				
12.5	88%	93%				
10.0	87%	90%				
5.0	83%	85%				
2.5	79%	81%				
1.25	74%	76%				
0.630	70%	72%				
0.315	64%	67%				
0.160	57%	61%				
0.080	48%	50%				
M.C.(%):	9%	10%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	17	15				
% SAND:	34	35				
% FINES:	48	50				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)				

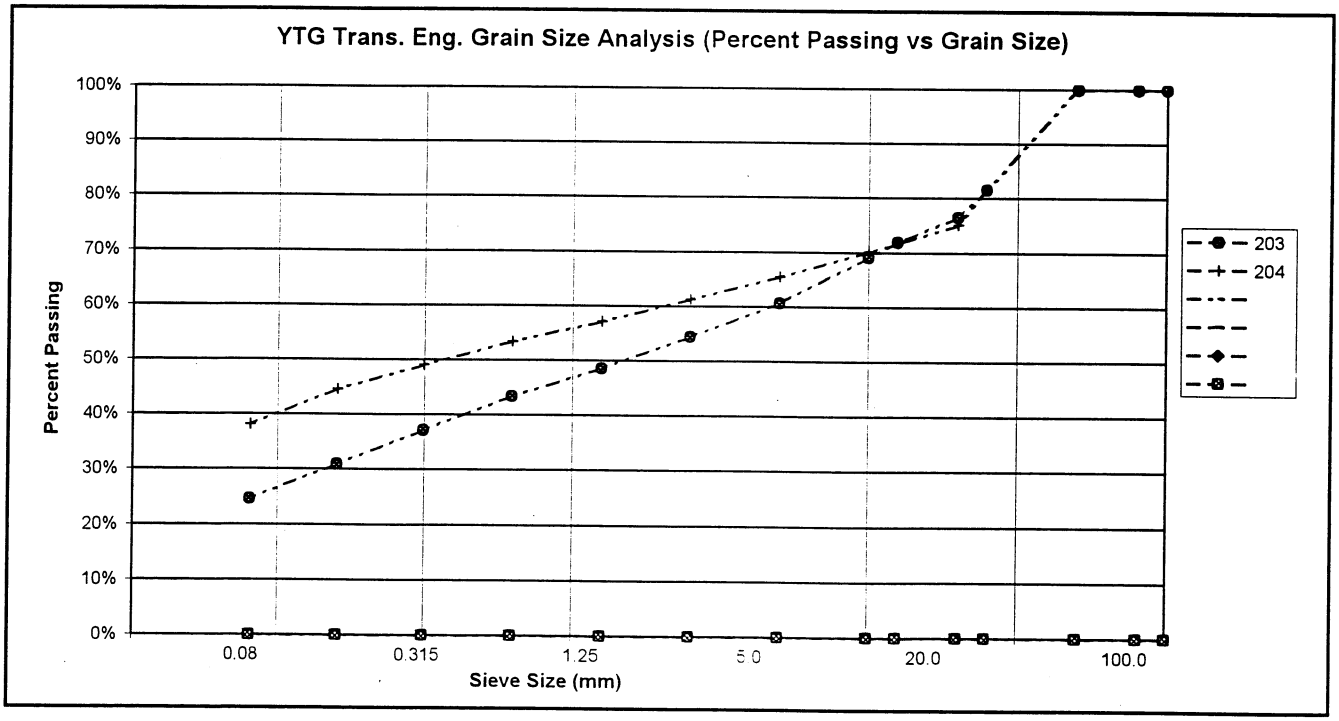


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1664-1692 A/H
DRILL UNIT: MOBILE B30 L
HOLE LOCATION: 1678+400
LOGGED BY: KJ

HOLE No.: 594-975

DATE COMP: 2001/04/20

FIELD NO:	203	204				
LAB NO:	447	448				
DEPTH:	1.1-1.3	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	82%	82%				
20.0	77%	75%				
12.5	72%	72%				
10.0	69%	70%				
5.0	61%	66%				
2.5	55%	61%				
1.25	49%	57%				
0.630	43%	53%				
0.315	37%	49%				
0.160	31%	45%				
0.080	25%	38%				
M.C.(%):	5%	7%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	39	34				
% SAND:	36	27				
% FINES:	25	38				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)				

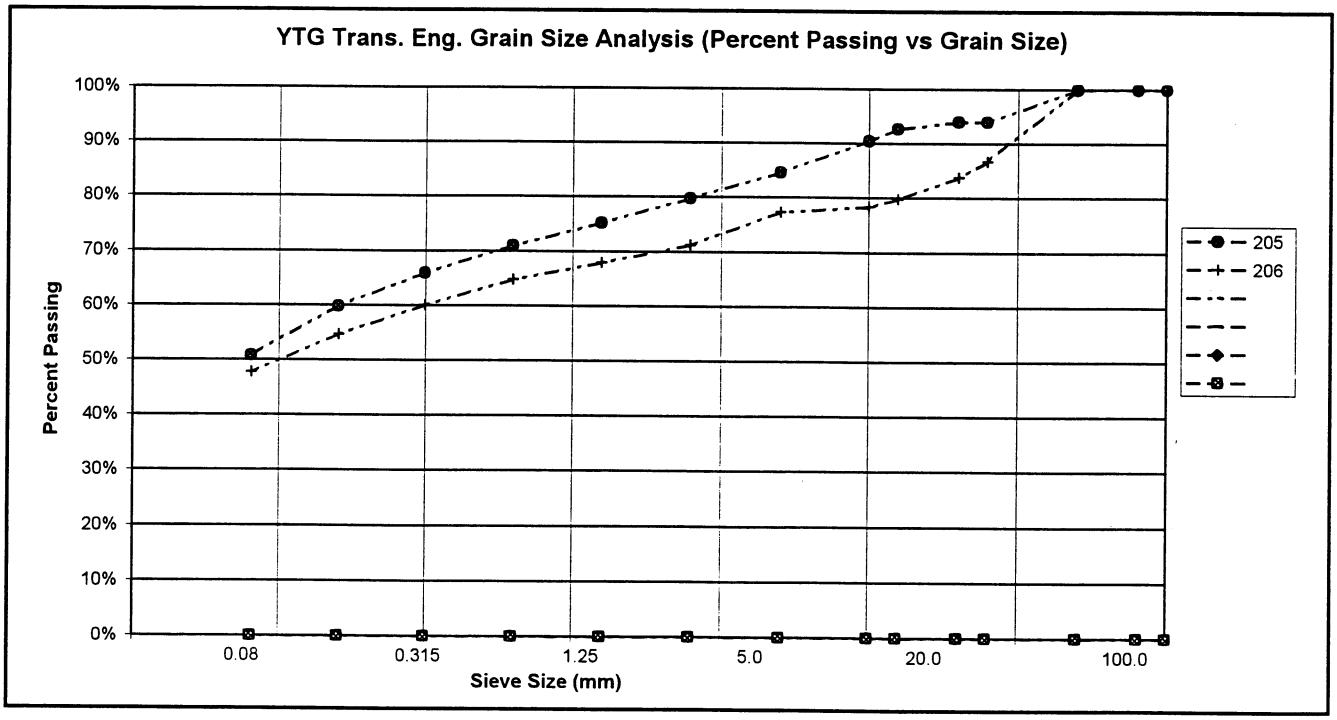


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1678+250
LOGGED BY:	KJ

HOLE No.: 594-976

DATE COMP: 2001/04/20

FIELD NO:	205	206				
LAB NO:	449	450				
DEPTH:	1.1-1.3	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	94%	87%				
20.0	94%	84%				
12.5	93%	80%				
10.0	91%	78%				
5.0	85%	77%				
2.5	80%	71%				
1.25	75%	68%				
0.630	71%	65%				
0.315	66%	60%				
0.160	60%	55%				
0.080	51%	48%				
M.C.(%):	11%	8%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	15	23				
% SAND:	34	30				
% FINES:	51	48				
CLASSIFICATION	SANDY SILT WITH GRAVEL (ML)	SILTY SAND WITH GRAVEL (SM)				

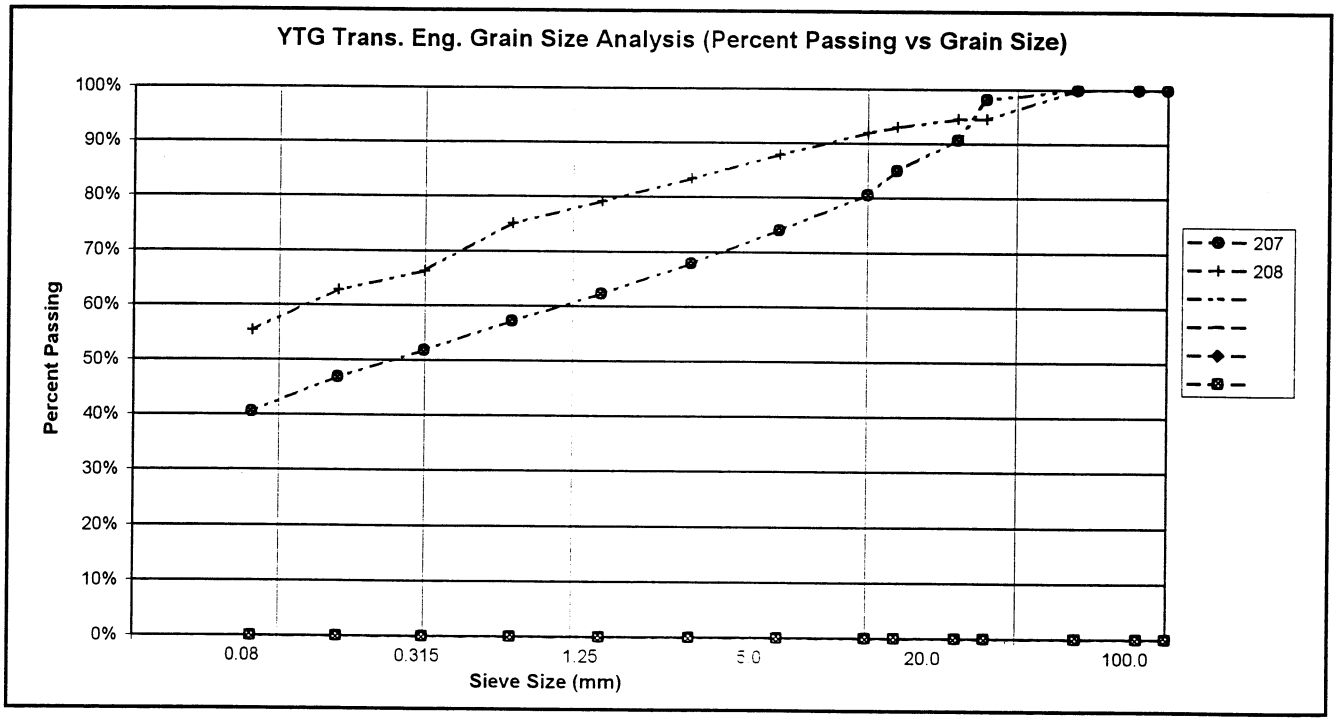


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1678+100
LOGGED BY:	KJ

HOLE No.: 594-977

DATE COMP: 2001/04/20

FIELD NO:	207	208				
LAB NO:	451	452				
DEPTH:	1.1-1.3	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	98%	95%				
20.0	91%	95%				
12.5	85%	93%				
10.0	81%	92%				
5.0	74%	88%				
2.5	68%	83%				
1.25	62%	79%				
0.630	57%	75%				
0.315	52%	66%				
0.160	47%	63%				
0.080	41%	55%				
M.C.(%):	8%	9%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	26	12				
% SAND:	33	33				
% FINES:	41	55				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)				

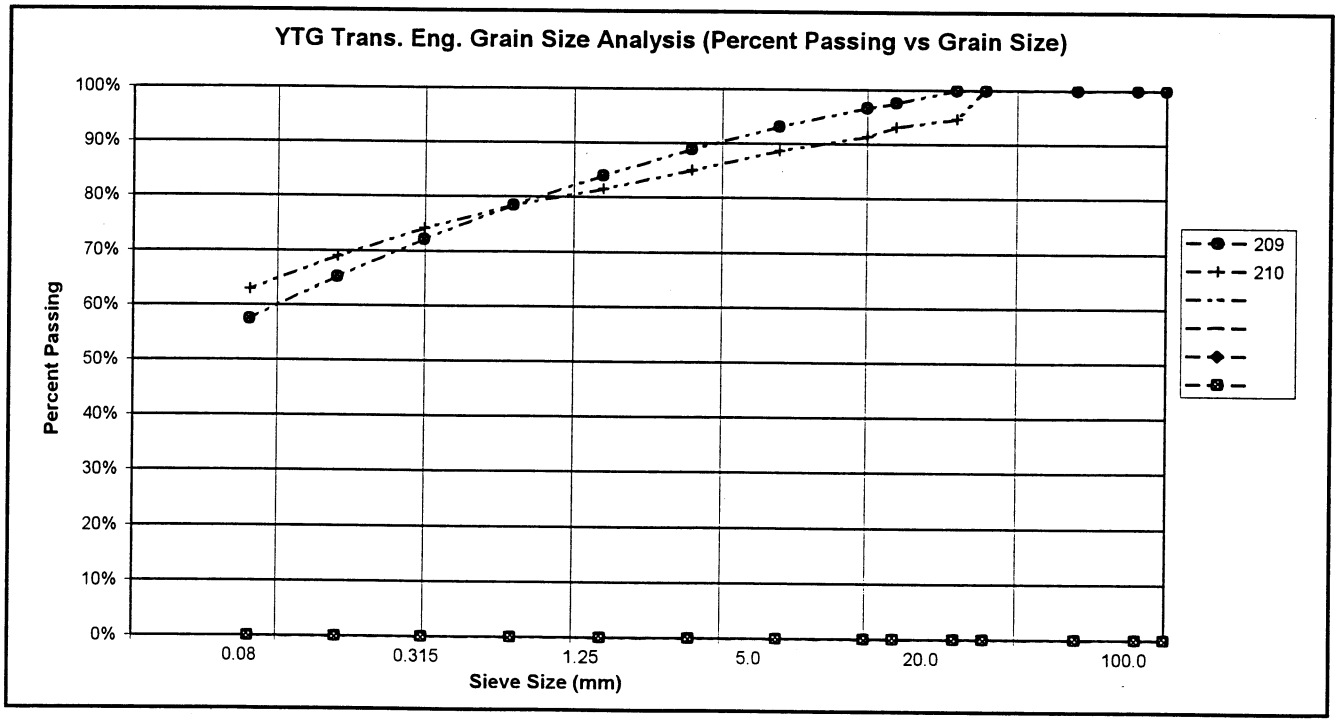


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1664-1692 A/H
DRILL UNIT:	MOBILE B30 L
HOLE LOCATION:	1678+000
LOGGED BY:	KJ

HOLE No.: 594-978

DATE COMP: 2001/04/20

FIELD NO:	209	210				
LAB NO:	453	454				
DEPTH:	1.1-1.3	5.8-6.0				
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	100%	100%				
20.0	100%	95%				
12.5	98%	93%				
10.0	97%	91%				
5.0	93%	89%				
2.5	89%	85%				
1.25	84%	82%				
0.630	79%	79%				
0.315	72%	74%				
0.160	65%	69%				
0.080	57%	63%				
M.C.(%):	11%	13%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	7	11				
% SAND:	36	26				
% FINES:	57	63				
CLASSIFICATION	SANDY SILT (ML)	SANDY SILT (ML)				



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 594-979
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1664-1692 A/H		
DRILL UNIT:	MOBILE B30 L		
HOLE LOCATION:	1677+900 35M RT		
LOGGED BY:	KJ		DATE COMP: 2001/04/20

FIELD NO:	211	212	213	214		
LAB NO:	455	456	457	458		
DEPTH:	1.1-1.3	2.8-3.0	4.3-4.5	5.8-6.0		
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%	94%	100%	100%		
20.0	100%	94%	100%	100%		
12.5	98%	91%	98%	100%		
10.0	97%	89%	95%	99%		
5.0	93%	84%	90%	95%		
2.5	90%	80%	86%	91%		
1.25	88%	77%	82%	86%		
0.630	85%	73%	79%	83%		
0.315	81%	68%	73%	78%		
0.160	77%	62%	67%	71%		
0.080	72%	56%	60%	64%		
M.C.(%):	11%	10%	11%	12%		
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:	7	16	10	5		
% SAND:	22	29	29	31		
% FINES:	72	56	60	64		
CLASSIFICATION	SILT WITH SAND (ML)	SANDY SILT WITH GRAVEL (ML)	SANDY SILT (ML)	SANDY SILT (ML)		

