GEOTECHNICAL INVESTIGATIONS

Highway Construction
km 1749.6 to 1759.2
Alaska Highway #1
Yukon, 2004-2005
Volume 1 of 2

Yukon
Highways and Public Works
Transportation Engineering Branch

Geotechnical Services

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Highway Construction
km 1749.6 to 1759.2
Alaska Highway #1
Yukon, 2004-2005
Volume 1 of 2

This Data Package prepared for project viewing:

February, 2004

Transportation Engineering Branch
Geotechnical Services
461 Range Road
Whitehorse, Yukon

CONTENTS

Volume 1 of 2

INTRODUCTION

Investigation notes, classification methods and legends.

CENTRELINE TESTING km 1749.6 to 1759.2 Alaska Highway

Subsurface Exploration and Test Report Sheets are provided.
The reports for the Centreline testing holes are arranged according to project location, starting at km 1749+550 and increasing to km 1759+300.

Laboratory Testing Result Sheets are provided.
The reports for the centreline holes are arranged according to test hole number, starting at 544-1390 and increasing to 552-1502.

2000	TEST HOLES 1390 to 1418	shown with prefix 544-
	TEST HOLES 1419 to 1427	shown with prefix 545-
	TEST HOLES 1428 to 1452	shown with prefix 549-
	TEST HOLES 1453 to 1465	shown with prefix 550-
	TEST HOLES 1466 to 1490	shown with prefix 551-
	TEST HOLES 1491 to 1502	shown with prefix 552-

CONTENTS (continued)

Volume 2 of 2

GRANULAR SOURCE km 1750.0 LHS ALASKA HIGHWAY Pit ID 115 G-04A

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

Auger Testing

1985	TEST HOLES 32	shown with prefix 777-
2001	TEST HOLES 1962 & 1963	shown with prefix 625-

Test Pit Testing

1985	TEST PITS 108	shown with prefix 808-
1988	TEST PITS 1 & 2	shown with prefix 29-
1988	TEST PITS 38 & 39	shown with prefix 30-
2002	TEST PITS 5, 6, 10, 11, 15, 16, 20, & 21	shown with prefix 631-

GRANULAR SOURCE km 1753.0 LHS ALASKA HIGHWAY Pit ID 115 G-20

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

Auger Testing

2003	TEST HOLES 2717 to 2727	shown with prefix 652-

Test Pit Testing

2002	TEST PITS 2400 to 2450	shown with prefix 636-
2003	TEST PITS 2729 to 2731 & 2745 to 2753	shown with prefix 653-

INTRODUCTION

GEOTECHNICAL INVESTIGATION DATA

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

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

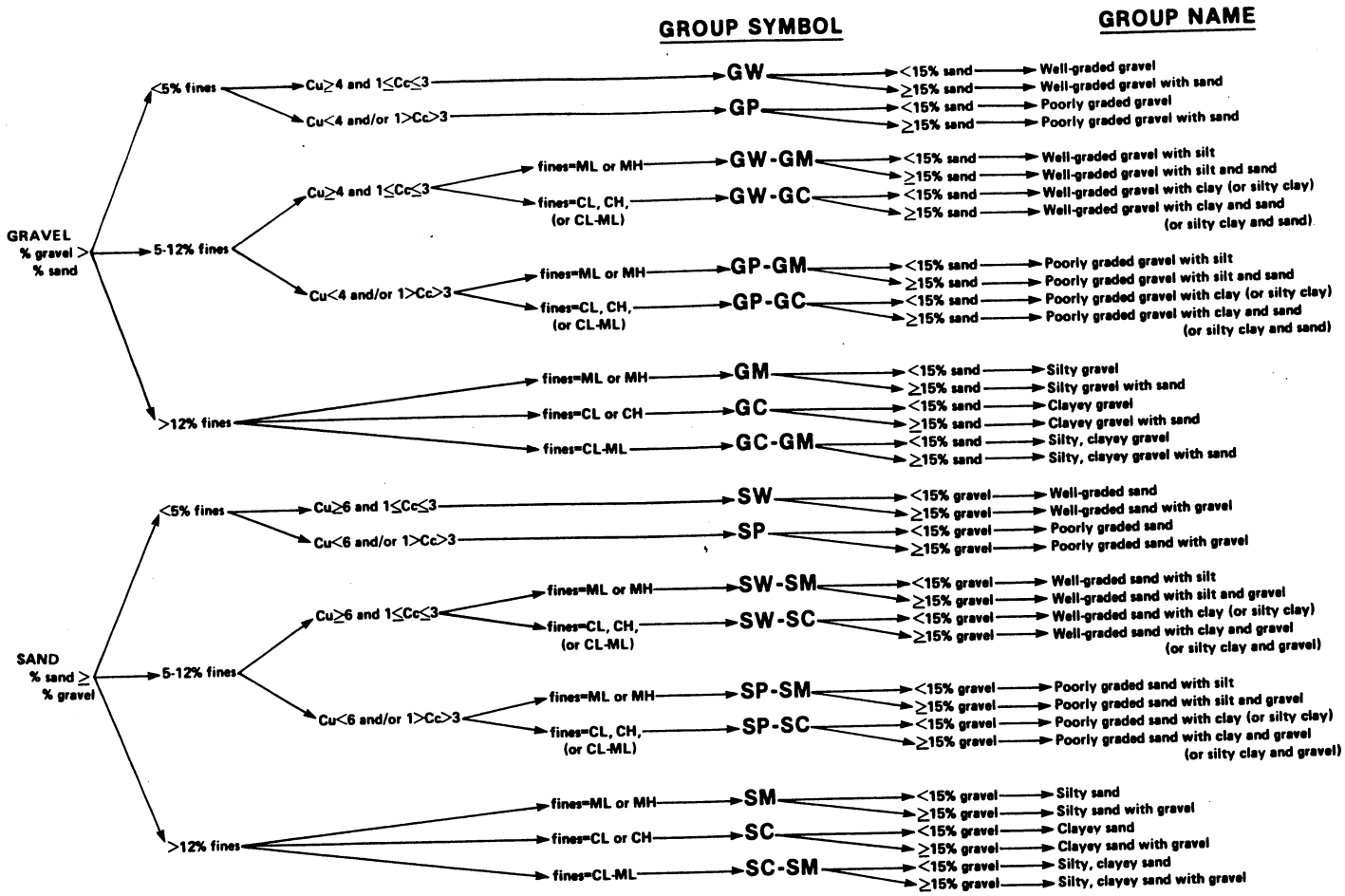
The sample laboratory testing data is provided to give detailed physical properties of selected retrieved samples within the subsurface profile. ***These tests may be conducted on disturbed samples and may exhibit properties different from the native materials. The sample classification may also vary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

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

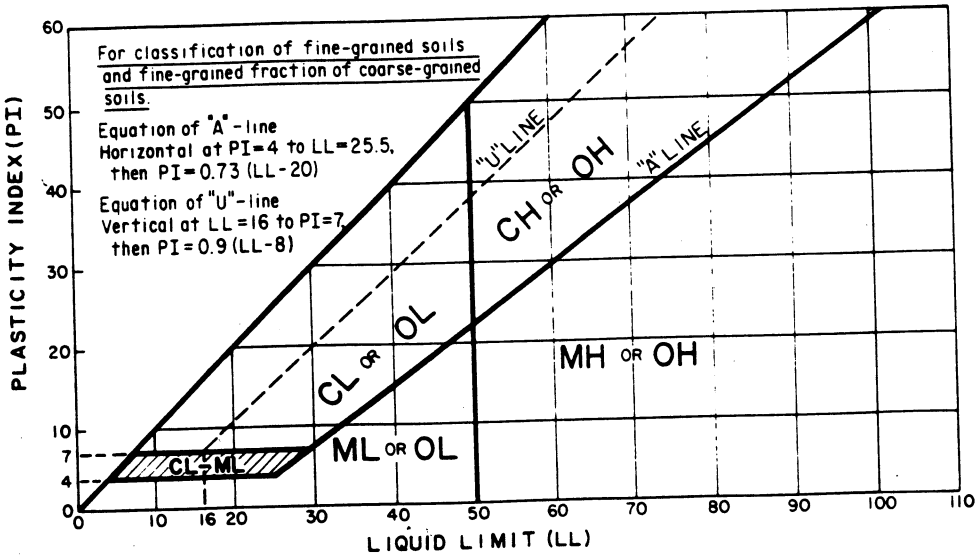
These descriptions and averages are not intended to be conclusive as to the nature of any material encountered, or to conditions between or around the test borings/pits.

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

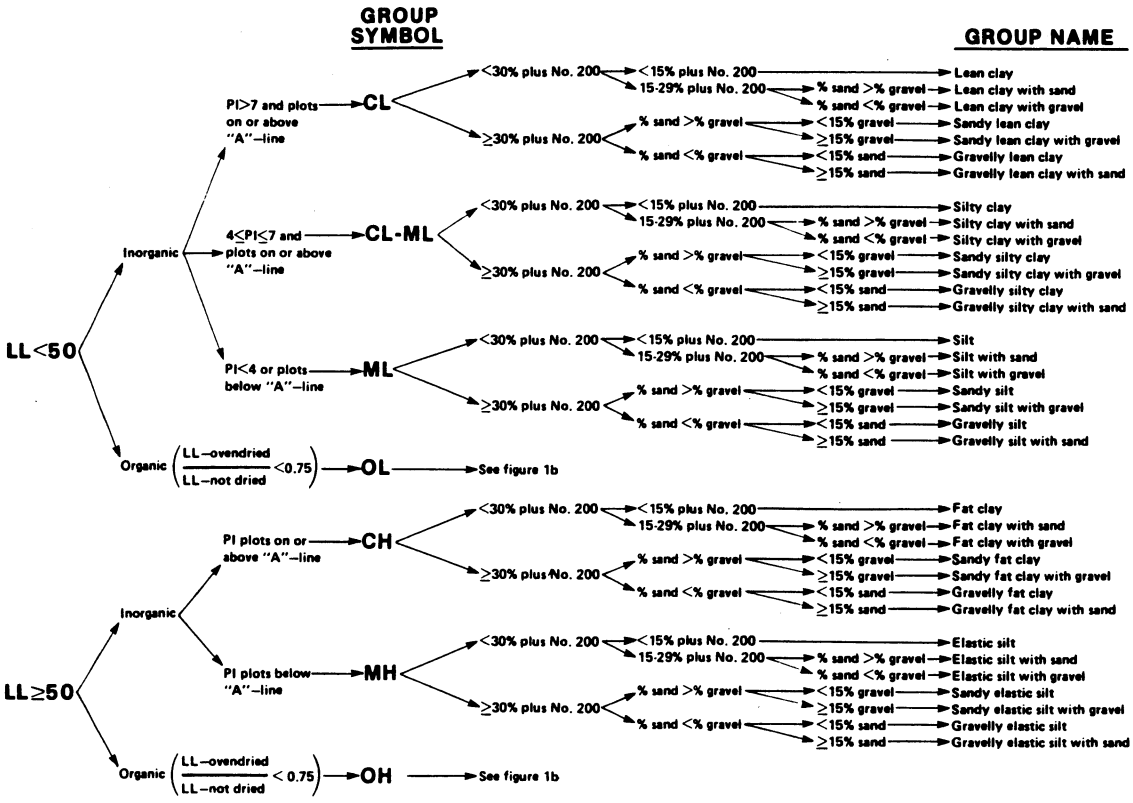
It is recommended that a site inspection, combined with consideration of the regional geology and climatic conditions be conducted. An evaluation of the investigation methods and development work done since the time of investigation should be done prior to interpreting the subsurface conditions at the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



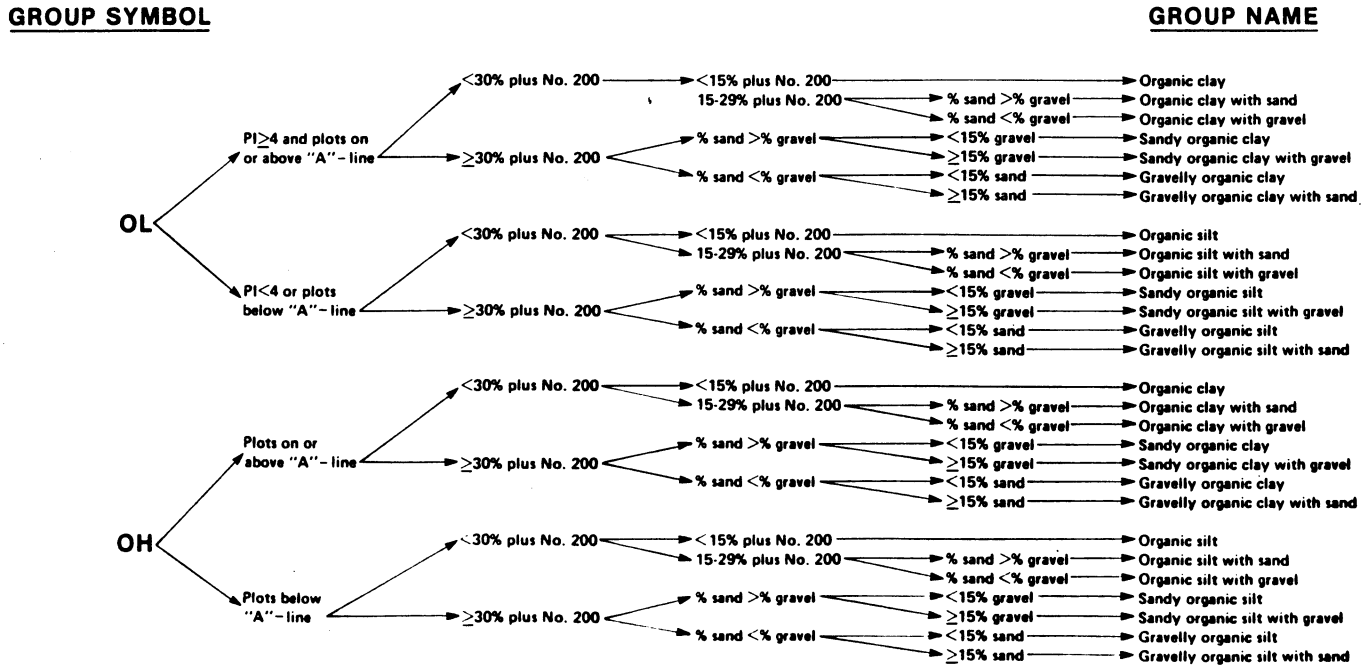
Flow chart for classifying coarse-grained soil.



Plasticity chart.



Flow chart for classifying fine-grained soil.



Flow chart for classifying organic soil.

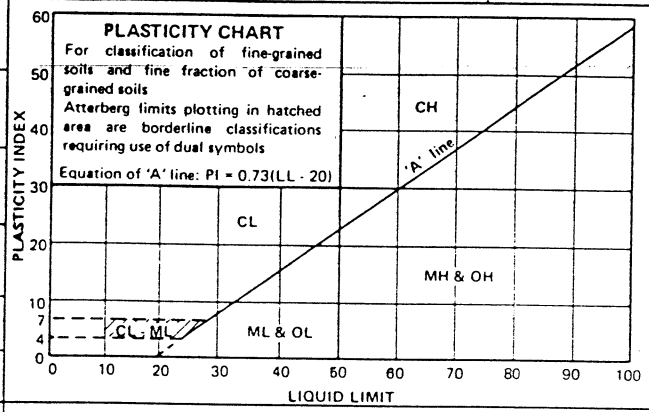
CRITERIA FOR ASSIGNING GROUP SYMBOLS AND GROUP NAMES USING LABORATORY TESTS [a]				SOIL CLASSIFICATION	
				GROUP SYMBOL	GROUP NAME [b]
COARSE-GRAINED SOILS more than 50% retained on No. 200 sieve	GRAVELS More than 50% of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS Less than 5% fines [c]	$C_u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

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

Soil classification chart

UNIFIED SOIL CLASSIFICATION†

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



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

GROUND ICE DESCRIPTION

ICE NOT VISIBLE

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

NOTE:

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

LEGEND

Soil Ice

VISIBLE ICE LESS THAN 50% BY VOLUME

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

VISIBLE ICE GREATER THAN 50% BY VOLUME

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

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

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

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

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

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CENTRELINE TESTING
1749.6 to 1759.2
ALASKA HIGHWAY

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1390
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1749+550 7.8M 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	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -dark grey -wet -easy grindy drilling	⊠	357	● ▲	SW-SM		■ ◆	0.0
1.0	SILTY SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SILT & SAND (SM)-(GP) -dark brownish grey -wet -coarser	⊠	358	● ▲	SM		■ ◆	1.0
2.0								2.0
3.0								3.0
4.0	-moist below 4.0m	⊠	359	● ▲	GP-GM		■	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/16
	Fig. No:	Page 1 of 1

03/12/09 02:34PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1391
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1749+647 1.3M 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	POORLY GRADED GRAVEL WITH SAND (GP) -dark grey -wet -grindy drilling							0.0
1.0								1.0
		⊠	360	●	GP		◆ ■	
2.0								2.0
	SILTY GRAVEL WITH SAND (GM) -dark brownish grey -moist							
3.0								3.0
4.0								4.0
		⊠	361	● ▲	GM		◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 00/05/16
	Fig. No:	Page 1 of 1

03/12/09 02:34PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1393
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1749+671 18M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SANDY GRAVEL -grindy drilling							0.0
	SILT WITH SAND (ML) -with organic -frozen (Nf) -smooth drilling	⊠	365	● ▲	ML	▯	◆	
1.0								1.0
	ORGANIC & ASH SILTY SAND WITH GRAVEL (SM) -brown -moist -grindier drilling							
2.0		⊠	366	● ▲	SM	▯	■ ◆	2.0
3.0	SILTY ORGANIC -wet -smooth drilling							3.0
	SILTY GRAVEL WITH SAND (GM) -brown -moist -hard grindy drilling							
4.0		⊠	367	● ▲	GM	▯	◆	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 00/05/17
	Fig. No:	Page 1 of 1

03/12/09 02:34PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1392
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1749+676 10M RT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -dark brownish grey -wet -grindy drilling	⊠	362	▲ ●	SW-SM		■ ◆	0.0
1.0								1.0
	ORGANIC, WOOD, SILT -frozen (Vx) -smooth drilling							
2.0								2.0
	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -dark brownish grey -moist -grindy drilling	⊠	363	● ▲	SW-SM		■ ◆	
3.0								3.0
	ORGANIC -smooth drilling							
	SILTY SAND WITH GRAVEL (SM) -brown -moist -grindy hard drilling	⊠	364	● ▲	SM		■ ◆	
4.0								4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 00/05/17
	Fig. No:	Page 1 of 1

03/12/09 02:34PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1394
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1749+789 4.8M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SANDY GRAVEL -dark brownish grey -moist -grindy drilling -lost sample # 368 -frozen (Nf) below 0.8m	⊠	368	●				
1.0								1.0
	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -dark brownish grey -damp -smoother drilling	⊠	369	●▲	SW-SM		■ ◆	
2.0	ASH							2.0
	SANDY SILT TO SILTY SAND WITH GRAVEL (ML)-(SM) -dark brown -moist -smooth easy drilling	⊠	370	● ▲	ML		■ ◆	
3.0								3.0
4.0		⊠	371	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 00/05/17
	Fig. No:	Page 1 of 1

03/12/09 02:36PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1395
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1749+892 32.6M 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 -smooth drilling							0.0
	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -brownish dark grey -moist -grindy drilling							
1.0		☒	372	●▲	SW-SM		■◆	1.0
2.0	POORLY GRADED GRAVEL WITH SAND (GP) -dark grey -damp	☒	373	▲	GP		◆■	2.0
3.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -dark brownish grey -moist -hard slow tough drilling below 3.2m	☒	374	●▲	GP-GM		◆■	3.0
4.0		☒	375	●▲	GP-GM		◆■	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/17
	Fig. No:	Page 1 of 1

03/12/09 02:36PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1396
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1750+002 56.6M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	DEPTH (m)
0.0	ORGANIC -smooth drilling					0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -grey -damp -grindy drilling					
1.0		☒	376	GP		1.0
	SILT WITH SAND (ML) -trace organic & ash -brown -frozen (Nf) -smooth drilling					
2.0		☒	377	ML		2.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -slightly brownish grey -moist -grindy drilling					
3.0		☒	378	GP-GM		3.0
4.0						4.0
	SILTY SAND WITH GRAVEL (SM) -brown -moist	☒	379	SM		
	END HOLE @ 4.7m					
5.0						5.0
6.0						6.0

PERCENT FINES: 20 40 60 80

PLASTIC M.C. LIQUID: 20 40 60 80

PERCENT SAND: 20 40 60 80

PERCENT GRAVEL: 20 40 60 80

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LOGGED BY: W.E.	COMPLETION DEPTH: 4.6 m
REVIEWED BY:	COMPLETE: 00/05/17
Fig. No:	Page 1 of 1

03/12/09 02:35PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1397
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1750+106 59.2M 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, WOOD -seasonal ice & snow							0.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -grey -damp -grindy drilling	⊠	380	● ▲	GP-GM		◆ ■	
1.0								1.0
	SILT WITH SAND (ML) -trace organic -brown -frozen (Nf) -smooth drilling	⊠	381	● ▲	ML		◆	
2.0								2.0
	SILTY SAND WITH GRAVEL (SM) -brown -moist	⊠	382	● ▲	SM		■ ◆	
3.0	-hard grindy drilling below 3.5m							3.0
4.0		⊠	383	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/17
	Fig. No:	Page 1 of 1

03/12/09 02:36PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1398
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1750+200 15M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) -grey -damp -grindy drilling below 0.3m							0.0
1.0		⊠	384	● ▲	GW-GM		◆ ■	1.0
2.0	SILT WITH SAND TO SILTY SAND WITH GRAVEL (ML)-(SM) -brown -frozen (Nf) -smooth drilling	⊠	385	● ▲	ML		■ ◆	2.0
3.0	-moist below 3.0m	⊠	386	● ▲	SM		■ ◆	3.0
4.0	SILTY GRAVEL WITH SAND (GM) -brown -moist -grindier drilling	⊠	387	● ▲	GM		◆ ■	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/17
	Fig. No:	Page 1 of 1

03/12/09 02:36PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1399
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1750+240 15M 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 (SM) -grey -damp -grindy drilling below 0.3m	⊠	388	● ▲	SM		◆	0.0
1.0	ASH & ORGANIC -moist -smooth drilling							1.0
2.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -brown -damp -contamination from above -grindy drilling	⊠	389	● ▲	SM		◆	2.0
3.0	-dark brown below 3.0m -rockier below 3.3m	⊠	390	● ▲	SM		■ ◆	3.0
4.0								4.0
		⊠	391	● ▲	GM		◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/05/17
Fig. No:	Page 1 of 1

03/12/09 02:35PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1400
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1750+300 CL	ELEVATION: 0.00 (m)

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

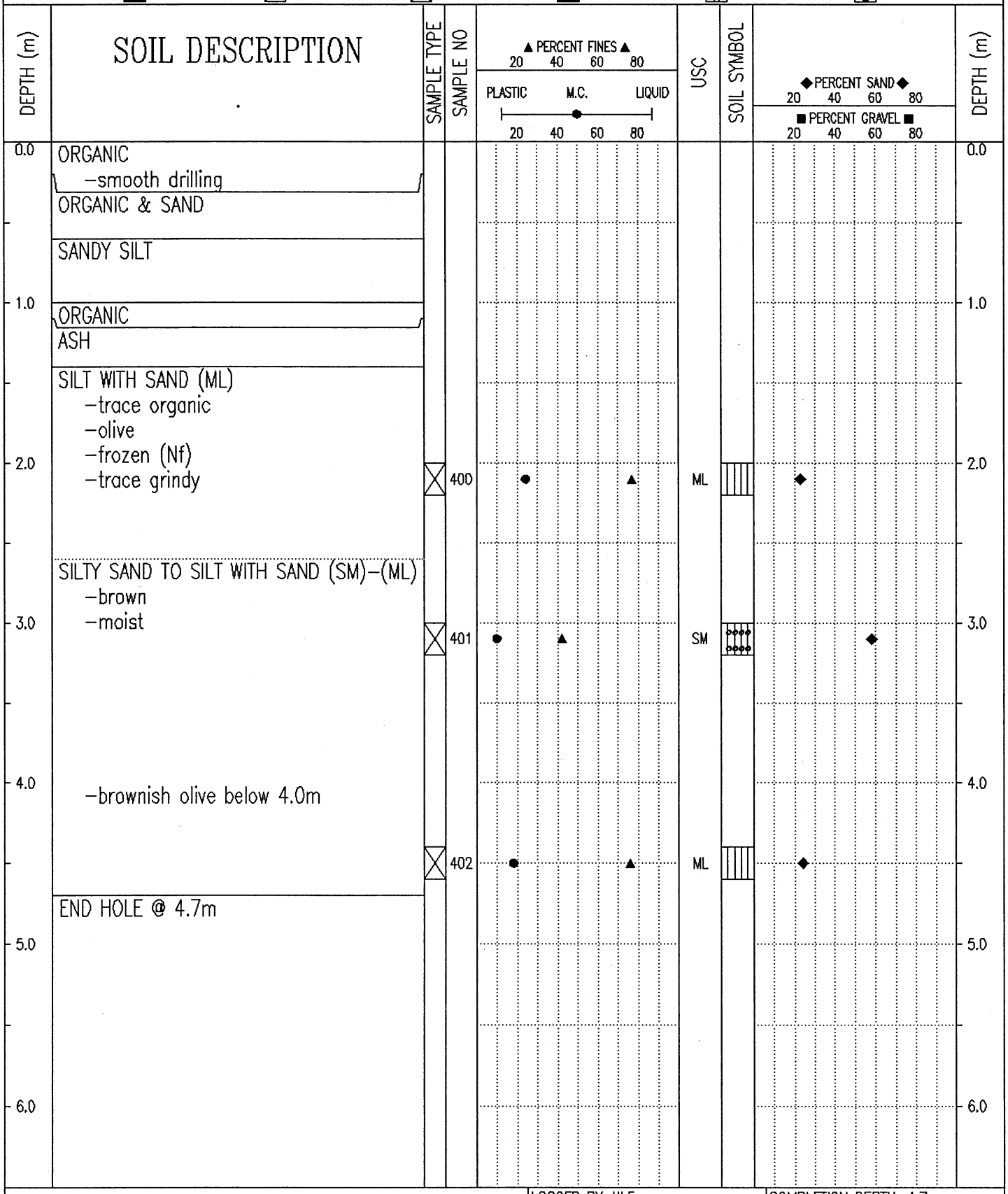
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -grey -damp -grindy drilling below 0.5m	⊠	392	● ▲	GP-GM		◆ ■	0.0
1.0								1.0
2.0	SILTY SAND (SM) -dark brownish grey -frozen (Nf) -smooth drilling	⊠	393	● ▲	SM		◆	2.0
3.0	WELL TO POORLY GRADED GRAVEL WITH SILT & SAND (GW-GM)-(GP-GM) -brownish grey -moist -grindy drilling -rockier below 3.2m	⊠	394	● ▲	GW-GM		◆ ■	3.0
4.0								4.0
		⊠	395	● ▲	GP-GM		◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 00/05/17
	Fig. No:	Page 1 of 1

03/12/09 02:35PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1402
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1750+365 20M RT	ELEVATION: 0.00 (m)

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



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	REVIEWED BY:	COMPLETE: 00/05/17
	Fig. No:	Page 1 of 1

01/01/26 09:04AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1401
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1750+375 20M LT	ELEVATION: 0.00 (m)

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

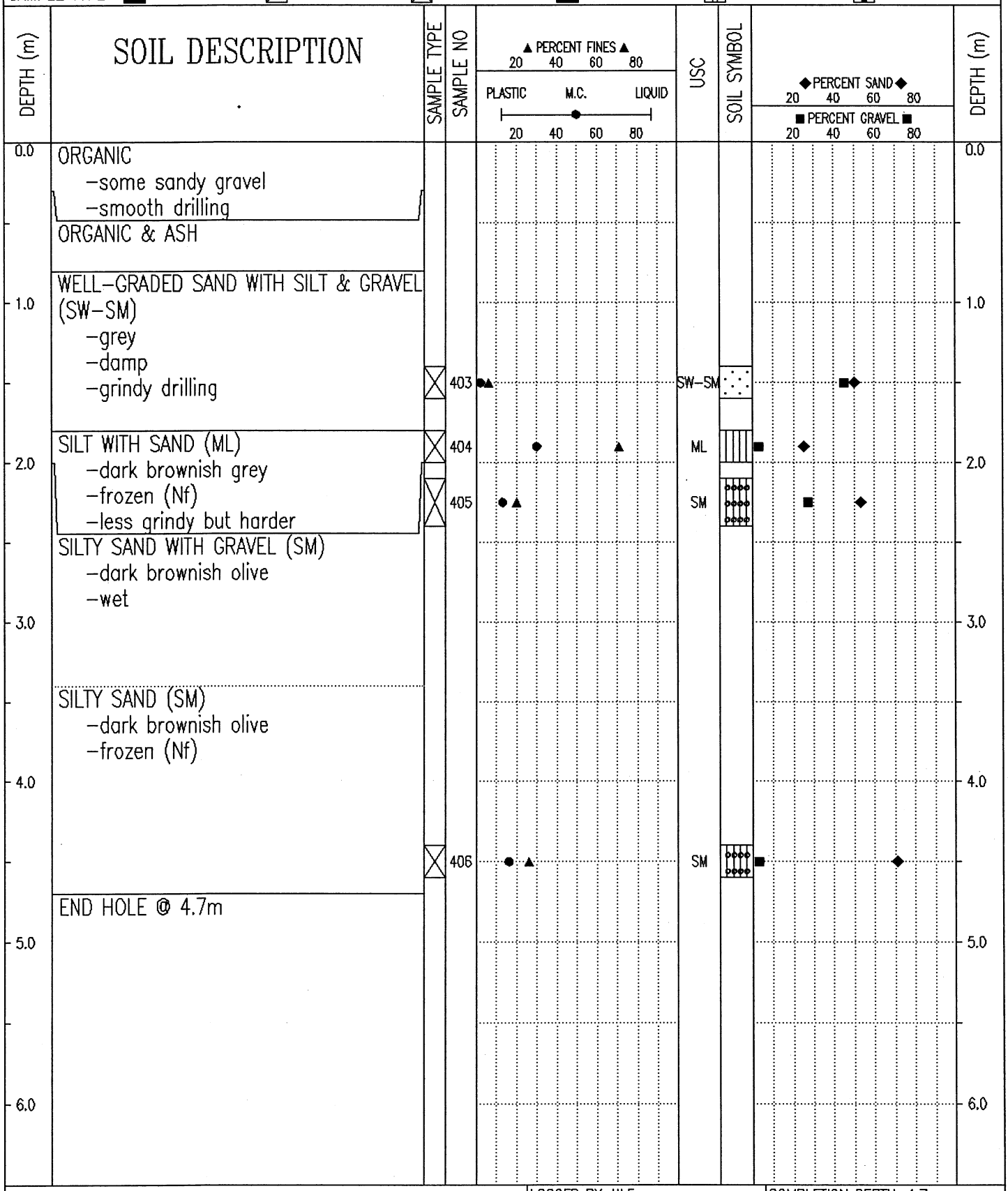
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC & ASH							0.0
	SILT WITH SAND (SM) -brown -damp -slightly grindy drilling							
1.0	-layer of ash 0.6m to 0.7m -ash contamination	☒	396	● ▲	SM	▨	■ ◆	1.0
	SANDY SILT TO SILTY SAND TO SANDY SILT (ML)-(SM)-(ML) -brown -damp							
2.0	-partially frozen (Nf) below 2.0m	☒	397	● ▲	ML	▤	■ ◆	2.0
3.0	-damp below 3.0m	☒	398	● ▲	SM	▨	■ ◆	3.0
4.0								4.0
		☒	399	● ▲	ML	▤	◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/17
	Fig. No:	Page 1 of 1

01/01/15 12:02PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1403
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1750+500 6M LT	ELEVATION: 0.00 (m)

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

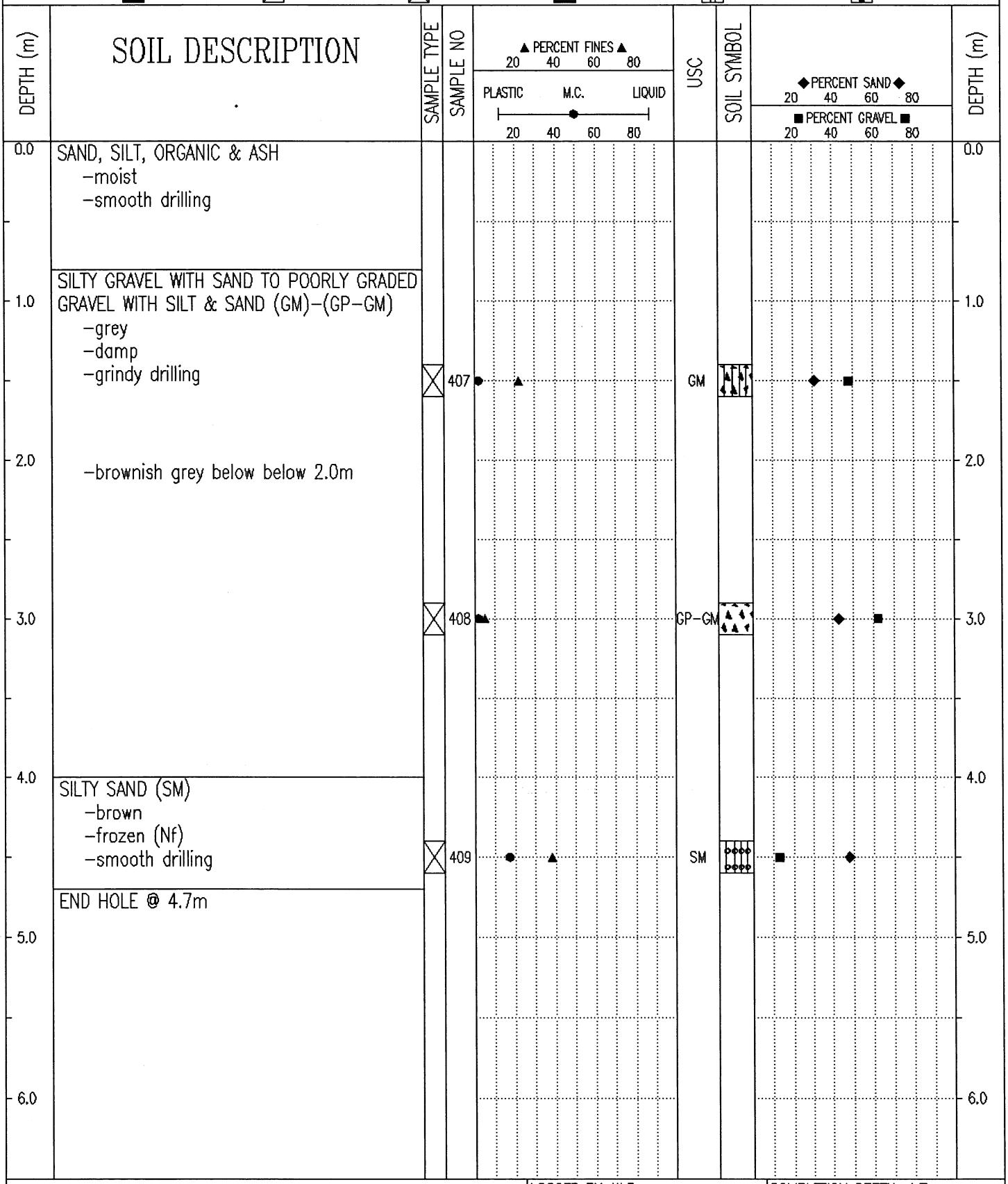


Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/17
	Fig. No:	Page 1 of 1

01/01/26 09:04AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1404
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1750+600 CL	ELEVATION: 0.00 (m)

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



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	REVIEWED BY:	COMPLETE: 00/05/17
	Fig. No:	Page 1 of 1

01/01/15 12:02PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1405
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1750+700 CL	ELEVATION: 0.00 (m)

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

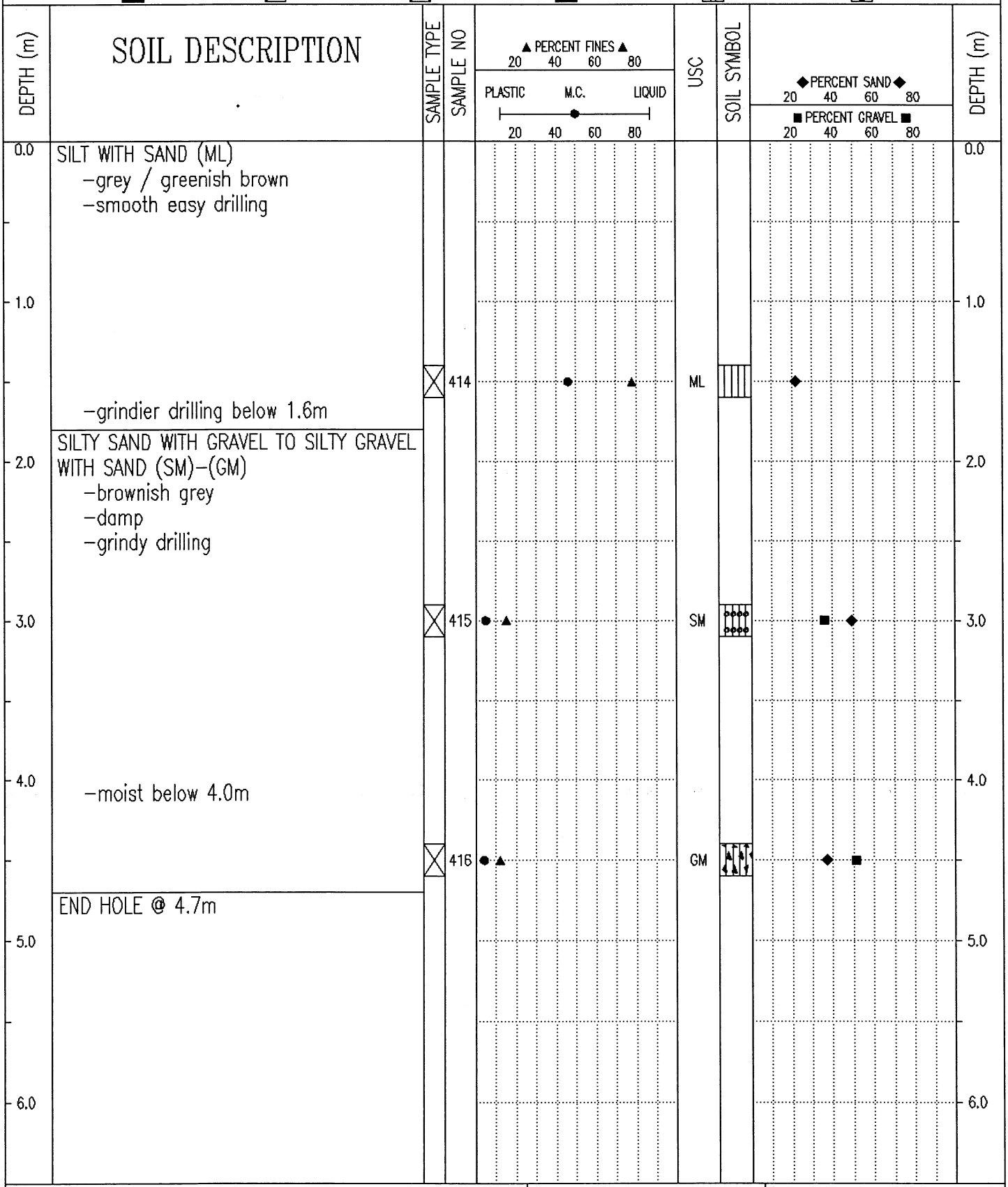
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC & ASH							0.0
	SANDY GRAVEL -grey -grindy drilling							
1.0	GRAVELLY SILT WITH SAND (ML) -orangey light brown -moist -smooth easy, trace grindy drilling	⊠	410	● ▲	ML		◆	1.0
2.0	SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -dark grey -frozen (Nf)	⊠	411	● ▲	SM		■ ◆	2.0
3.0	-dark brownish grey below 3.0m	⊠	412	● ▲	SM		■ ◆	3.0
4.0	-moist below 4.0m	⊠	413	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 00/05/17
	Fig. No:	Page 1 of 1

01/01/15 12:02PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1406
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1750+810 20M LT	ELEVATION: 0.00 (m)

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

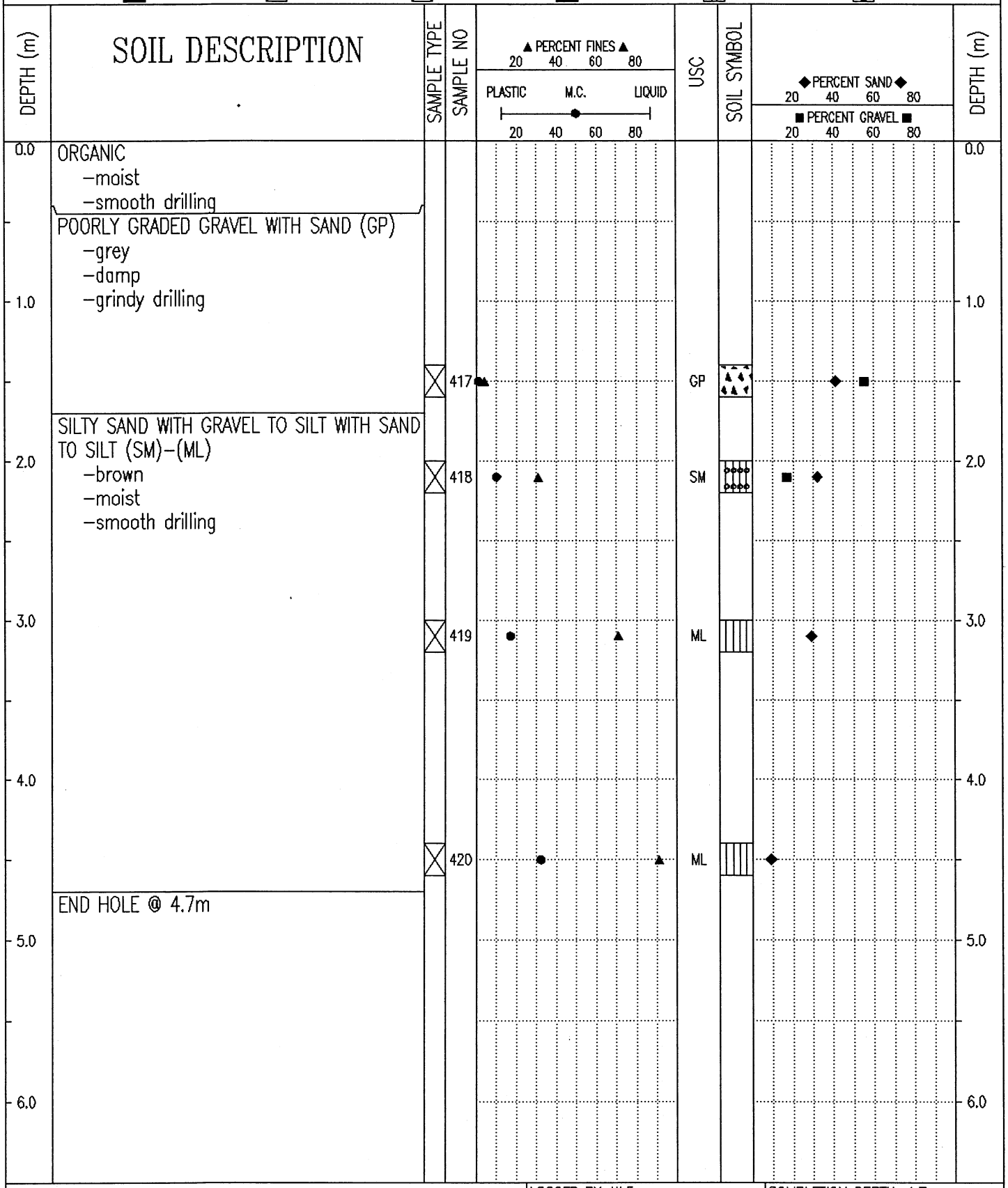


Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/17
	Fig. No:	Page 1 of 1

01/01/15 12:02PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1407
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1750+810 20M RT	ELEVATION: 0.00 (m)

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



Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/18
	Fig. No:	Page 1 of 1

01/01/26 09:04AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1408
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1750+900 CL	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 -smooth drilling							0.0
	SANDY SILT (ML) -olive -moist	⊠	421	● ▲	ML		◆	
1.0	ASH							1.0
	SILT (ML) -brown / grey -frozen (Nb) -grindy drilling below 1.4m -smooth drilling below 1.7m	⊠	422	● ▲	ML		◆	
2.0								2.0
3.0	-brownish olive grey below 3.0m	⊠	423	● ▲	ML		◆	3.0
	SILTY SAND WITH GRAVEL (SM) -dark brownish grey -moist -grindy drilling							
4.0		⊠	424	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/18
	Fig. No:	Page 1 of 1

01/01/15 12:02PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1409
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1751+000 CL	ELEVATION: 0.00 (m)

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

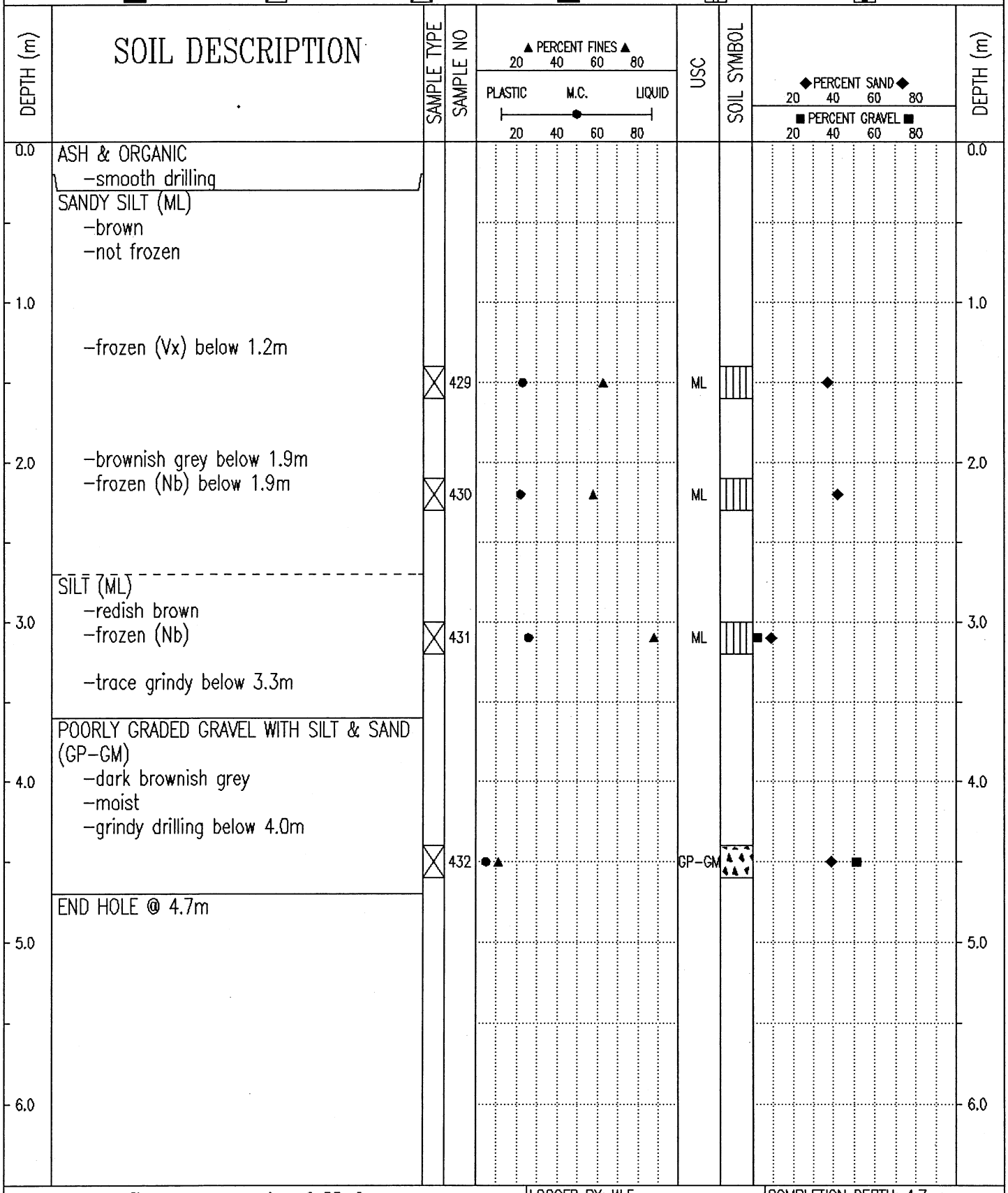
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ASH & ORGANIC -smooth drilling							0.0
	SILT WITH SAND (ML) -trace ash -brown -frozen (Nb)	⊠	425		ML			
1.0								1.0
2.0	SANDY SILT TO SILT (ML) -brown -frozen (Nb)	⊠	426		ML			2.0
3.0		⊠	427		ML			3.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brownish grey -moist -grindy drilling							
4.0		⊠	428		GP-GM			4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 00/05/18
	Fig. No:	Page 1 of 1

01/01/15 12:02PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1410
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1751+100 CL	ELEVATION: 0.00 (m)

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



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	REVIEWED BY:	COMPLETE: 00/05/18
	Fig. No:	Page 1 of 1

01/01/26 09:14AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1411
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1751+210 CL	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SILT & ORGANIC -smooth & easy drilling							0.0
	SILT & ASH							
	SILT (ML) -brown with grey & red -frozen (Nb)							
1.0		⊠	433	● ▲	ML		◆	1.0
	SILTY SAND (SM) -greyish brown -moist -trace grindy drilling							
2.0		⊠	434	● ▲	SM		■ ◆	2.0
3.0								3.0
	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -dark brownish grey -moist -grindier drilling							
4.0		⊠	435	● ▲	SW-SM		◆	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 00/05/18
	Fig. No:	Page 1 of 1

01/01/26 09:04AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1412
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1751+320 15M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SILT TO SILT WITH SAND (ML) -brown -smooth drilling -frozen (Nb) below 0.3m							0.0
1.0		⊠	436	● ▲	ML		◆	1.0
2.0	-brown / olive below 1.9m	⊠	437	● ▲	ML		■ ◆	2.0
	SILTY SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SILT & SAND (SM)-(GP-GM) -brownish grey -moist -grindy drilling							
3.0		⊠	438	● ▲	SM		■ ◆	3.0
4.0	-brownish grey below 4.0m							4.0
		⊠	439	● ▲	GP-GM		◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/18
	Fig. No:	Page 1 of 1

01/01/15 12:03PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1413
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1751+325 15M RT	ELEVATION: 0.00 (m)

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

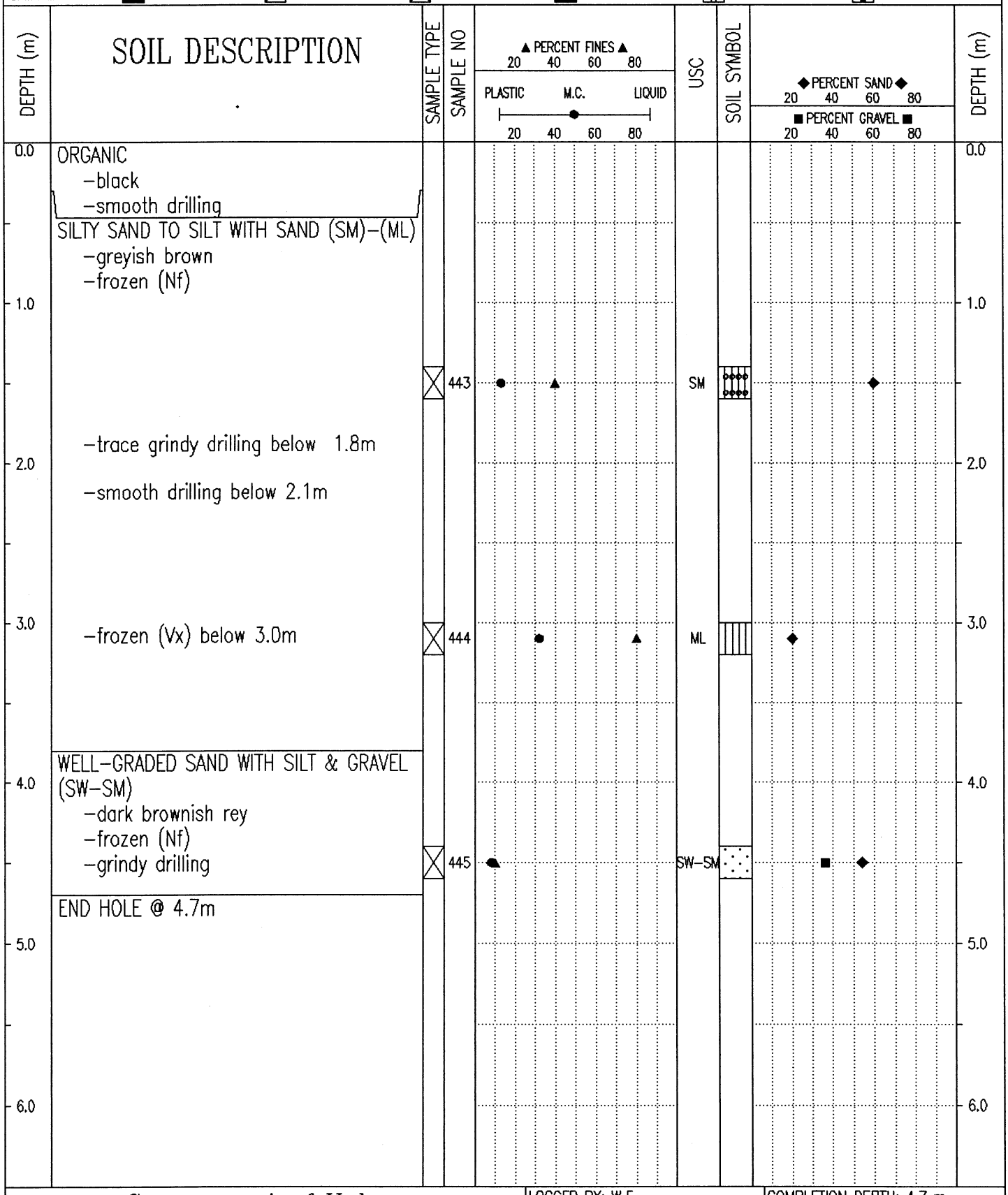
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC & ASH -black -smooth drilling							0.0
	SANDY SILT -no sample taken							
1.0								1.0
	SILTY SAND WITH GRAVEL (SM) -brown -damp -grindy drilling	⊠	440	● ▲	SM		■ ◆	
2.0								2.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -dark brownish grey -frozen (Nf)							
		⊠	441	●	GP-GM		◆ ■	
3.0								3.0
4.0								4.0
		⊠	442	●	GP-GM		◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/18
	Fig. No:	Page 1 of 1

01/01/15 12:03PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1414
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1751+425 5M RT	ELEVATION: 0.00 (m)

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE



Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/18
	Fig. No:	Page 1 of 1

03/12/09 03:15PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1415
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1751+525 CL	ELEVATION: 0.00 (m)

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

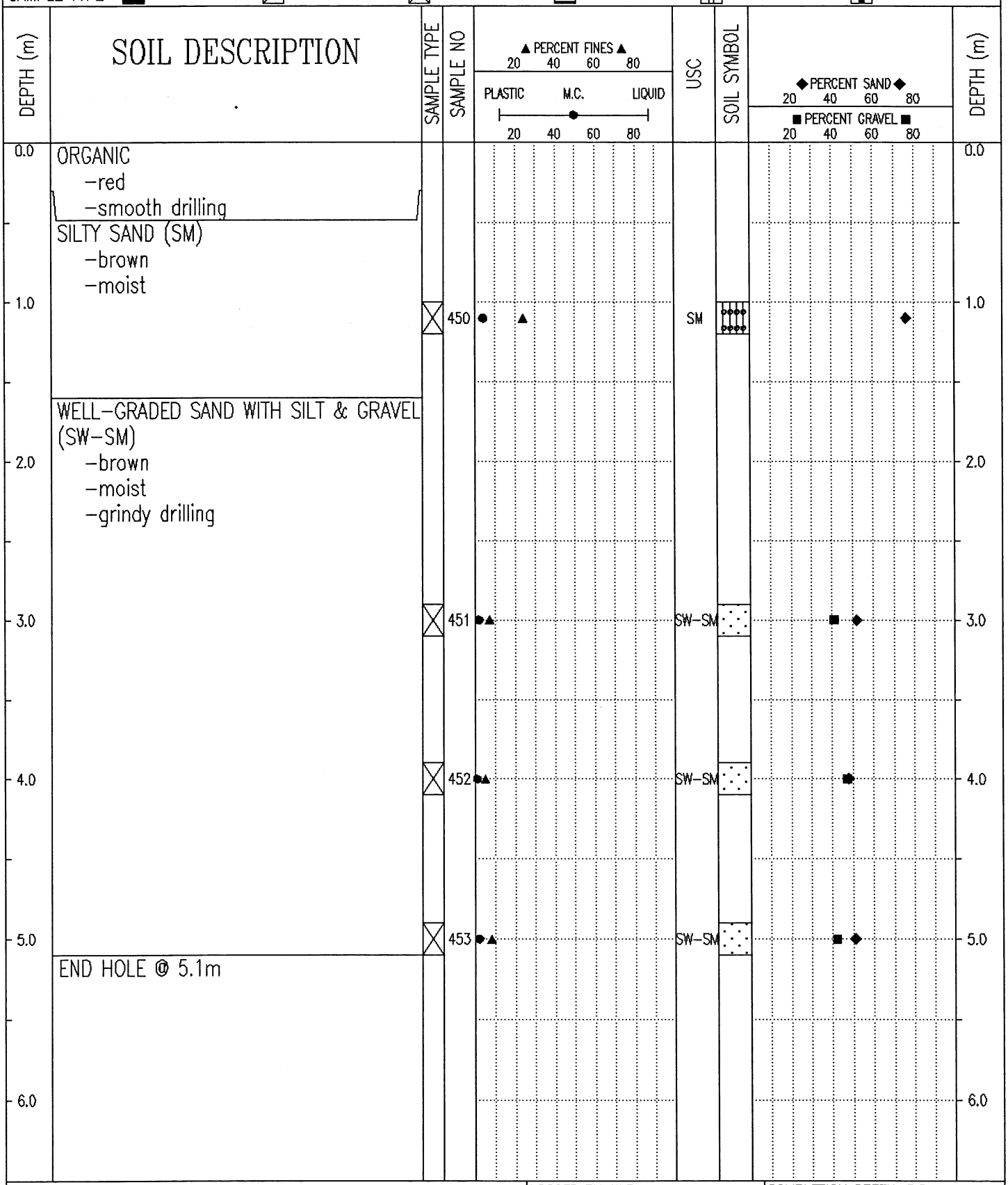
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC -black -smooth easy drilling							0.0
	ORGANIC & SILT							
	SILTY SAND (SM) -greyish brown -moist	⊠	446	● ▲	SM		■ ◆	
1.0								1.0
	SANDY SILT (ML) -brown with red -frozen (Nb)	⊠	447	● ▲	ML		◆	
2.0								2.0
	SILTY SAND WITH GRAVEL (SM) -brown -frozen (Nf)							
3.0		⊠	448	● ▲	SM		■ ◆	3.0
4.0								4.0
	-moist below 4.5m	⊠	449	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/18
	Fig. No:	Page 1 of 1

01/01/15 12:03PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1416
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1751+625 CL	ELEVATION: 0.00 (m)

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



Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 5.2 m
	REVIEWED BY:	COMPLETE: 00/05/18
	Fig. No:	Page 1 of 1

01/01/15 12:03PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1417
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1751+675 20M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFACE WATER ORGANIC -smooth drilling							0.0
	SILTY SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SILT & SAND TO WELL-GRADED SAND WITH SILT & GRAVEL (SM)-(GP-GM)-(SW-SM) -olive brown -free water -grindier below 1.3m	⊠	454	◆ ■ ◆	SM			
1.0								1.0
2.0	-saturated below 2.0m	⊠	455	◆ ■	GP-GM		◆ ■	2.0
3.0	-dark brownish grey below 3.0m -moist below 3.0m -contaminated with water below 3.0m	⊠	456	◆	SW-SM		■ ◆	3.0
	END HOLE @ 3.2m							
4.0								4.0
5.0								5.0
6.0								6.0

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LOGGED BY: W.E.	COMPLETION DEPTH: 3.2 m
REVIEWED BY:	COMPLETE: 00/05/18
Fig. No:	Page 1 of 1

01/01/26 09:04AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 544-1418
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1751+690 20M RT	ELEVATION: 0.00 (m)

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

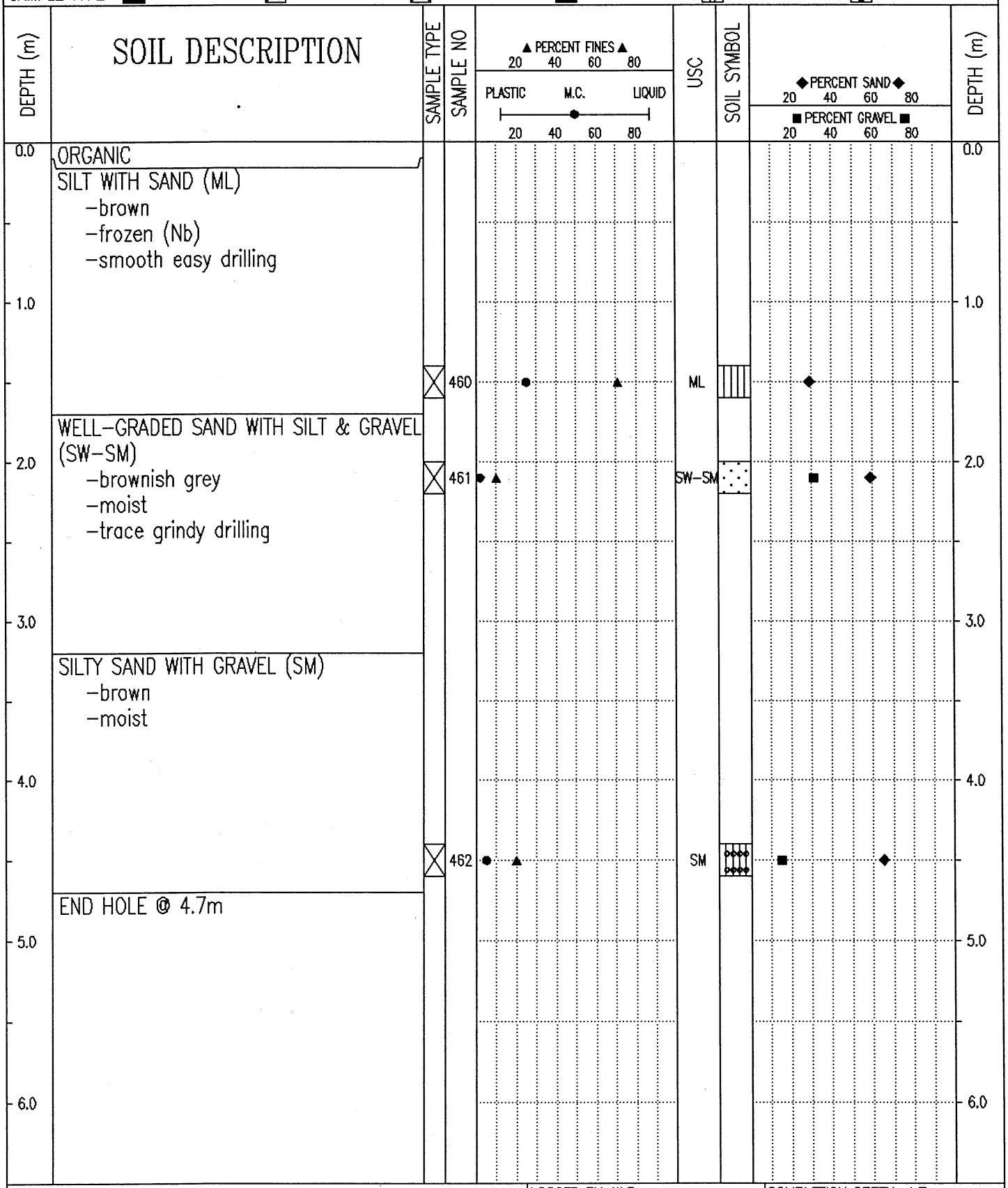
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFACE WATER ORGANIC -black -smooth drilling							0.0
	SILTY SAND WITH GRAVEL (SM) -olive brown -wet	⊠	457	● ▲	SM		●	
1.0	WELL-GRADED SAND WITH SILT & GRAVEL TO SILTY SAND (SW-SM)-(SM) -olive brown -wet -contaminated with water -grindy drilling							1.0
2.0		⊠	458	●	SW-SM		■ ◆	2.0
3.0	-dark brownish grey below 3.0m	⊠	459	● ▲	SM		■ ◆	3.0
	END HOLE @ 3.4m							
4.0								4.0
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 3.4 m
	REVIEWED BY:	COMPLETE: 00/05/18
	Fig. No:	Page 1 of 1

01/01/26 09:04AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 545-1419
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1751+795 15M LT	ELEVATION: 0.00 (m)

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

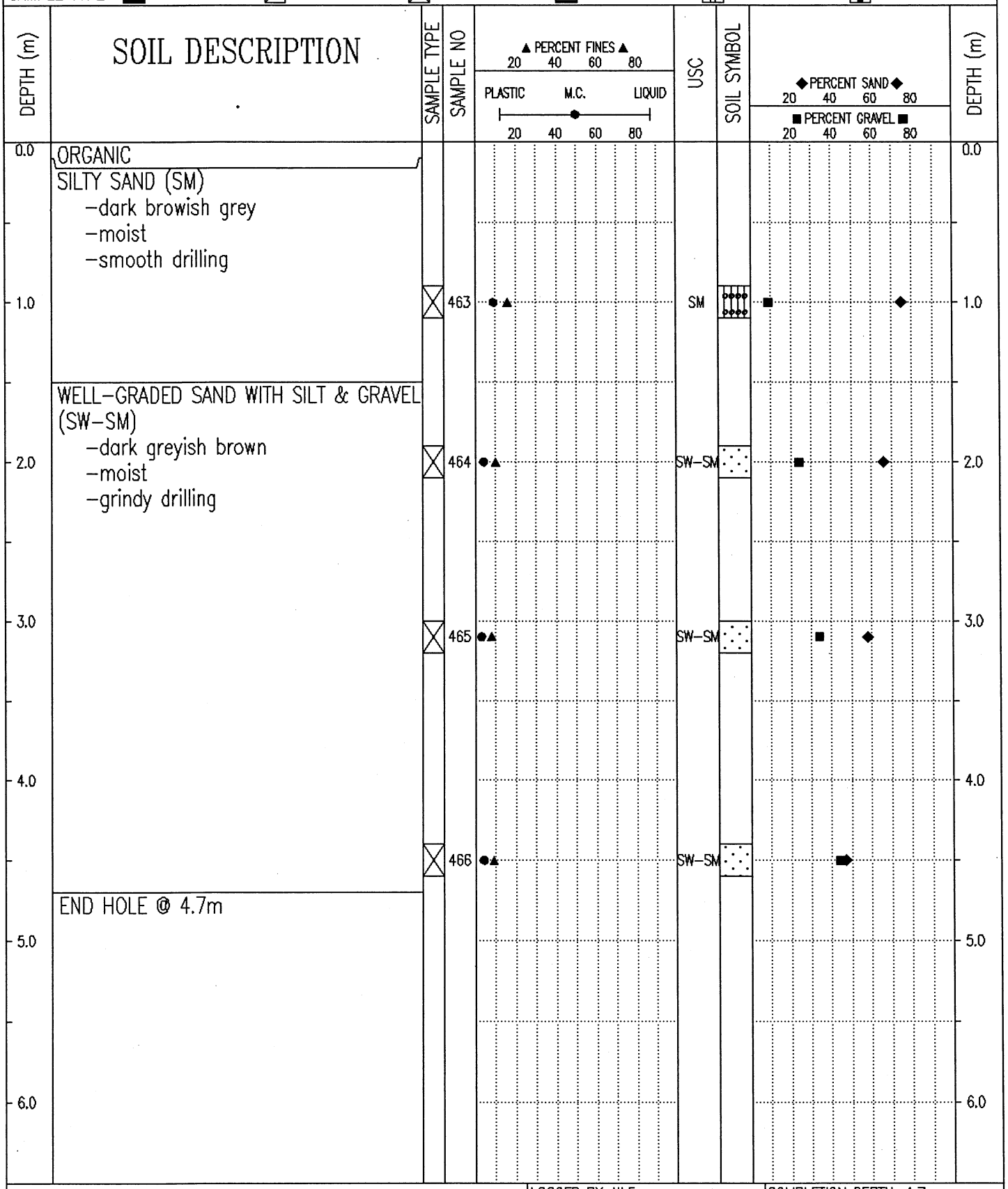


Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/19
	Fig. No:	Page 1 of 1

01/01/29 11:55AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 545-1420
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1751+810 20M RT	ELEVATION: 0.00 (m)

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



Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/19
	Fig. No:	Page 1 of 1

01/01/29 11:40AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 545-1421
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1751+900 CENTRELINE	ELEVATION: 0.00 (m)

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

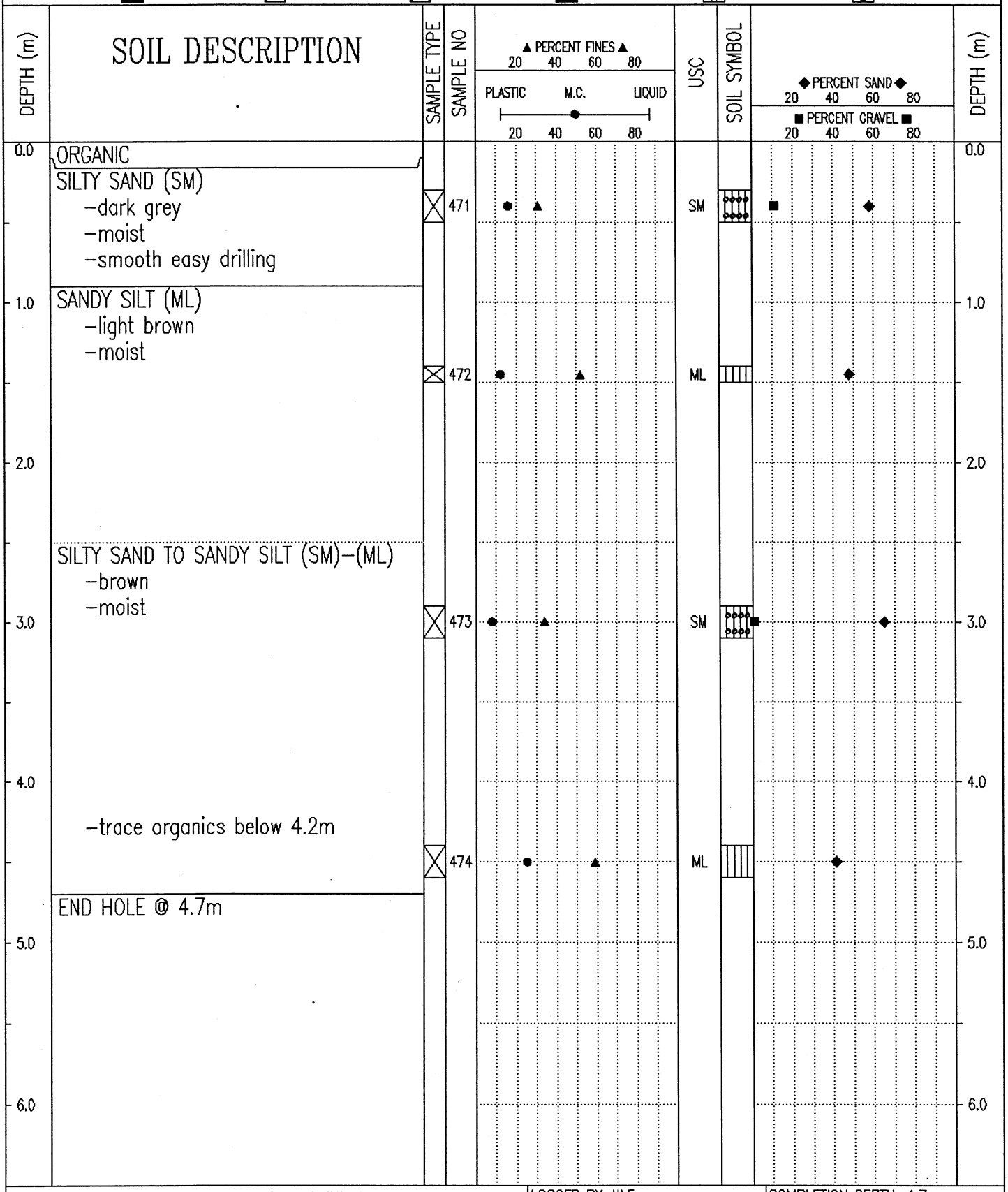
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SAND -trace gravel -dark grey -wet	⊠	467	● ▲	ML	▥	■ ◆	
1.0	SANDY SILT (ML) -tan -moist -smooth easy drilling							1.0
	SILTY SAND (SM) -brown -moist	⊠	468	● ▲	SM	▨	■ ◆	
2.0								2.0
	SANDY SILT (ML) -brown -moist -trace organic	⊠	469	● ▲	ML	▥	■ ◆	
3.0								3.0
4.0	-trace grindy drilling below 4.0m							4.0
		⊠	470	● ▲	ML	▥	■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/19
	Fig. No:	Page 1 of 1

01/01/29 11:43AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 545-1422
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1751+970 15M LT	ELEVATION: 0.00 (m)

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



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	REVIEWED BY:	COMPLETE: 00/05/19
	Fig. No:	Page 1 of 1

01/01/29 11:44AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 545-1423
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1752+020 20M RT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SILTY SAND WITH GRAVEL (SM) -dark grey -moist -trace grindy	⊠	475	● ▲	SM		■ ◆	
1.0	SANDY SILT (ML) -tan -damp -smooth drilling	⊠	476	● ▲	ML		■ ◆	1.0
	WELL-GRADED SAND WITH SILT & GRAVEL TO SILTY GRAVEL WITH SAND (SW-SM)-(GM) -brown -moist -grindy drilling							
2.0								2.0
3.0		⊠	477	● ▲	SW-SM		■ ◆	3.0
4.0								4.0
		⊠	478	● ▲	GM		◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/05/19
Fig. No:	Page 1 of 1

01/01/29 11:45AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 545-1424
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1752+125 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	ORGANIC & SAND							
	POORLY GRADED GRAVEL WITH SILT & SAND TO POORLY GRADED SAND WITH SILT AND GRAVEL (GP-GM)-(SW-SM) -light brownish grey -damp -grindy drilling							
1.0		⊠	479	● ▲	GP-GM		◆ ■	1.0
2.0								2.0
	-brown below 1.8m	⊠	480	● ▲	SW-SM		◆	
3.0								3.0
	SILTY SAND WITH GRAVEL (SM) -brown -moist							
4.0		⊠	481	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/19
	Fig. No:	Page 1 of 1

01/01/29 11:49AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 545-1425
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1752+200 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 SAND -wet							0.0
	WELL-GRADED SAND WITH SILT & GRAVEL TO POORLY GRADED GRAVEL WITH SILT & SAND TO WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)-(GP-GM)-(SW-SM) -dark brownish grey -moist -grindy							
1.0		⊠	482	● ▲	SW-SM		■ ◆	1.0
2.0								2.0
	-dark greyish brown below 2.8m	⊠	483	▲	GP-GM		◆ ■	
3.0								3.0
4.0		⊠	483A	● ▲	SW-SM		■ ◆	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

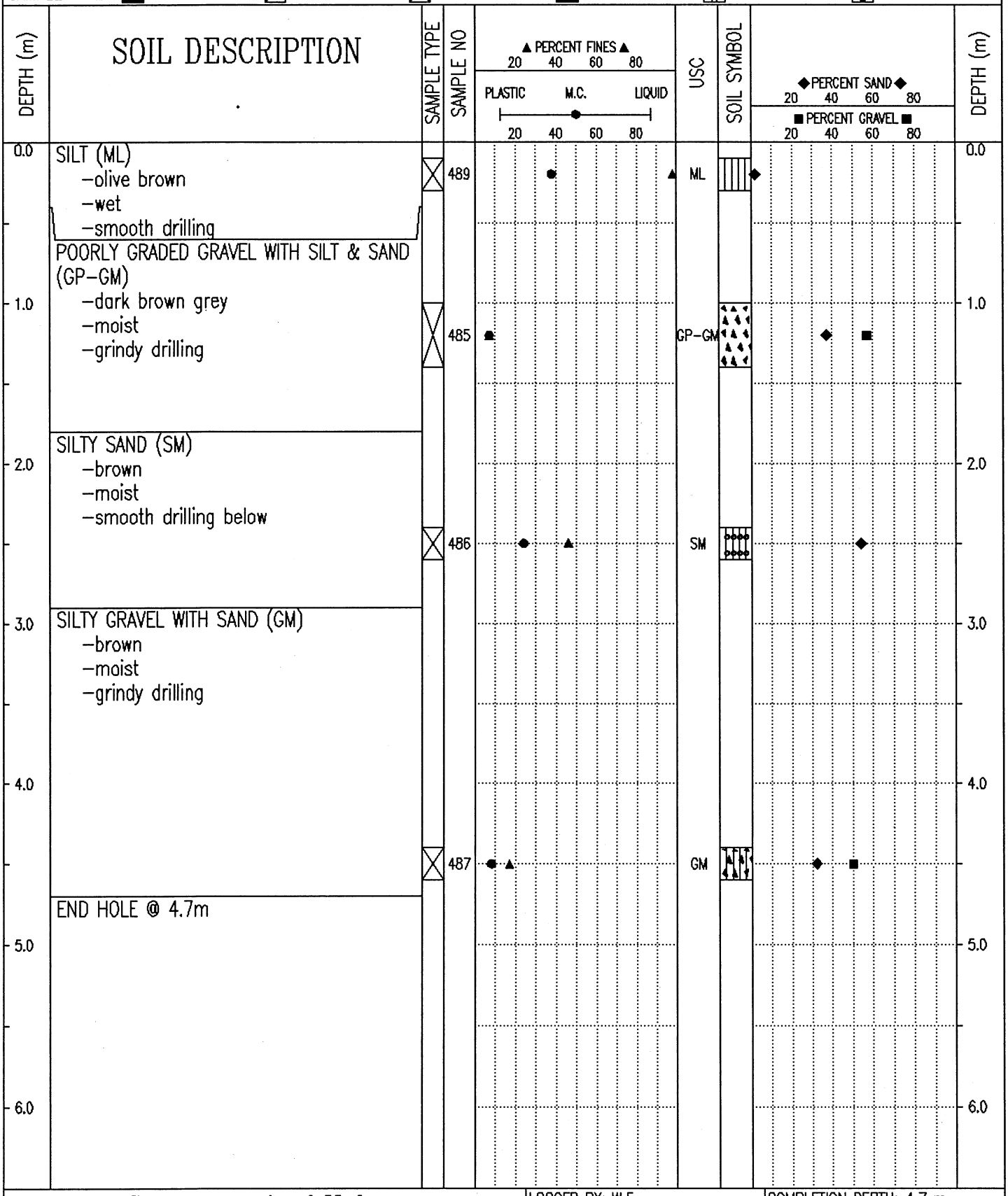
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LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/05/19
Fig. No:	Page 1 of 1

01/01/29 11:50AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 545-1426
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1752+310 15M RT	ELEVATION: 0.00 (m)

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

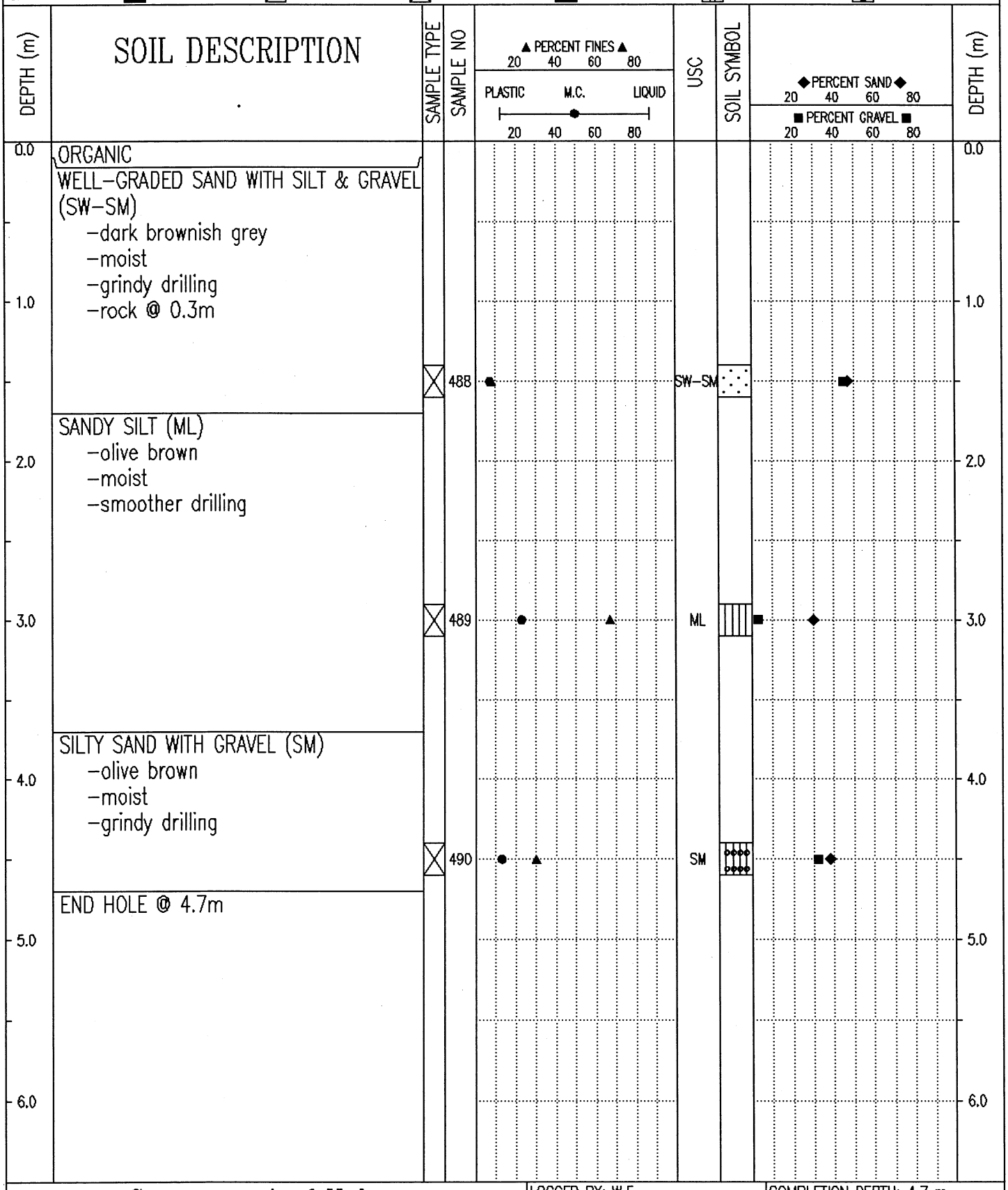


Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/19
	Fig. No:	Page 1 of 1

01/01/29 11:51AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 11	TEST HOLE NO: 545-1427
ENGINEERNG CAPITAL	KM 1729-1787 A/H	Project No: 092-202101-0361
B-40L	LOCATION: 1752+310 15M LT	ELEVATION: 0.00 (m)

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



Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/19
	Fig. No:	Page 1 of 1

01/01/29 11:52AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1428
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1752+425 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP)-(GP-GM)							
	-grey							
	-damp							
	-grindy drilling							
1.0	-maximum 50mm material	⊠	491	▲	GP		◆ ■	1.0
2.0								2.0
3.0		⊠	492	▲	GP-GM		◆ ■	3.0
	TRACE OF SAND ON AUGER ON RETRIEVAL							
	-easier drilling							
	-no sample							
4.0								4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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LOGGED BY: D.T	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/05/30
Fig. No:	Page 1 of 1

00/12/12 01:04PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1429
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1752+525 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SANDY GRAVEL -trace of silt -grey -moist -maximum 25mm material -grindy drilling	⊠	493	●				
1.0								1.0
	GRAVELLY SILTY SAND -light brown -damp -smooth drilling	⊠	494	●				
2.0								2.0
3.0		⊠	495	●				3.0
4.0								4.0
	SILTY SANDY GRAVEL -brown -moist -maximum 50mm material -grindy drilling	⊠	496	●				
5.0								5.0
	END HOLE @ 4.7m -all samples for this hole were lost.							
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/30
	Fig. No:	Page 1 of 1

00/12/12 11:51AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1430
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1752+625 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 -brown -moist -smooth drilling	⊠	497	●				
1.0	SANDY GRAVEL -some silt -brown -damp -maximum 50mm material -grindy drilling							1.0
		⊠	498	●				
2.0								2.0
	GRAVELLY SAND -brown -moist -easier drilling							
3.0								3.0
4.0								4.0
		⊠	499	●				
	END HOLE @ 4.7m -all samples for this hole were lost.							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/30
	Fig. No:	Page 1 of 1

00/12/12 11:51AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1431
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1752+775 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 -some organic -light brown -damp -lost sample # 500	⊠	500	●				
1.0								1.0
	SILTY SAND WITH GRAVEL TO WELL-GRADED SAND WITH SILT & GRAVEL (SM)-(SW-SM) -grey -damp -maximum 50mm material -grindy drilling	⊠	501	● ▲	SM		■ ◆	
2.0								2.0
		⊠	502	● ▲	SW-SM		■ ◆	
3.0								3.0
4.0								4.0
		⊠	503	● ▲	SW-SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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LOGGED BY: D.T	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/05/30
Fig. No:	Page 1 of 1

00/11/24 08:13AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1432
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1752+810 20M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SAND -trace silt -trace +5mm material -brown -moist -smooth drilling							0.0
1.0	WELL-GRADED SAND WITH SILT & GRAVEL TO SILTY SAND WITH GRAVEL (SW-SM)-(SM) -brown -moist	⊠	504	●	SW-SM		■ ◆	1.0
2.0	-maximum 50mm material -more gravels @ 1.8m							2.0
3.0	-trace organic @ 2.5m -lost sample # 505	⊠	505	●				3.0
4.0		⊠	506	● ▲	SM		■ ◆	4.0
5.0	END HOLE @ 4.7m Note: Test hole @ culvert site							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/30
	Fig. No:	Page 1 of 1

00/12/12 11:51AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1433
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1752+820 20M RT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SILTY SAND (SM) -brown -damp -some +5mm material	⊠	507	● ▲	SM		■ ◆	
1.0								1.0
2.0								2.0
	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -brown -moist -grindy drilling	⊠	508	● ▲	SM		■ ◆	
3.0								3.0
4.0								4.0
		⊠	509	● ▲	GM		◆ ■	
	END HOLE @ 4.7m Note: Test hole @ culvert site							
5.0								5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 00/05/30
	Fig. No:	Page 1 of 1

00/12/12 11:51AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1434
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1752+915 20M RT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	WELL-GRADED SAND WITH GRAVEL (SW) -brown -moist -maximum 100mm material -grindy drilling							0.0
1.0		⊠	510	●	SW		■ ◆	1.0
2.0								2.0
3.0								3.0
4.0	-more silt below 3.6m -saturated below 3.6m -easier drilling below 3.6m							4.0
	-lost sample # 511	⊠	511	●				
5.0	END HOLE @ 4.7m Note: Test hole @ culvert site. Copper Joe Creek overflow channel.							5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/05/30
Fig. No:	Page 1 of 1

00/12/12 11:51AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1435
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1752+915 20M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -moist -maximum 100mm material -grindy drilling							0.0
1.0	-lost sample # 512	⊠	512	●				1.0
2.0								2.0
3.0		⊠	513	▲	GP-GM		◆ ■	3.0
4.0	-more silt below 4.0m -wet below 4.0m -lost sample # 514	⊠	514	●				4.0
5.0	END HOLE @ 4.7m Note: Test Hole @ culvert site. Copper Joe Creek overflow channel							5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/05/30
Fig. No:	Page 1 of 1

00/12/12 11:51AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1436
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1752+950 Centreline	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 SAND -redish brown -moist							
1.0	SILTY SAND WITH GRAVEL (SM) -light brown -damp -grindy drilling	⊠	515	● ▲	SM		■ ◆	1.0
2.0	-hard slow grindy drilling below 2.0m							2.0
3.0		⊠	516	● ▲	SM		■ ◆	3.0
4.0	-very dense below 4.0m							4.0
5.0		⊠	517	● ▲	SM		■ ◆	5.0
	END HOLE @ 4.7m							
6.0								6.0

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	REVIEWED BY:	COMPLETE: 00/05/30
	Fig. No:	Page 1 of 1

00/12/12 11:51AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1437
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1753+050 20M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC -brown - black -frozen (Vx) -smooth hard drilling							0.0
1.0								1.0
2.0	SILT TO SILTY SAND WITH GRAVEL (ML)-(SM) -with ice -organic contamination -brown -trace +5mm material -grindy drilling -less +5mm material below 2.4m -smooth hard drilling below 2.4m	⊠	518	● ▲	ML	▥	■ ◆	2.0
3.0	-frozen (Vx) -lost sample # 519	⊠	519	●				3.0
4.0	-more +5mm material below 3.5m -grindy drilling below 3.5m	⊠	520	● ▲	SM	▥	■ ◆	4.0
5.0	END HOLE @ 4.7m							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/30
	Fig. No:	Page 1 of 1

00/11/23 02:52PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1438
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1753+100 20M RT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SILT WITH SAND TO SILTY SAND WITH GRAVEL TO SANDY SILT (ML)-(SM)-(ML) -brown -frozen (Nb) -smooth hard drilling							
1.0		⊠	521	● ▲	ML		■ ◆	1.0
	-some +5mm material below 1.8m -frozen (Nf) below 1.8m -grindy drilling below 1.8m							
2.0		⊠	522	● ▲	SM		■ ◆	2.0
3.0								3.0
4.0								4.0
		⊠	523	● ▲	ML		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/05/31
Fig. No:	Page 1 of 1

00/11/23 02:53PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1439
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1753+150 Centreline	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 TO SILTY SAND (ML)-(SM)-(SM) -brown -moist -some +5mm material -grindy drilling below 0.9m	⊠	524	● ▲	ML		■ ◆	
1.0								1.0
2.0								2.0
	-more +5mm material below 2.5m							
3.0		⊠	525	● ▲	SM		■ ◆	3.0
4.0								4.0
		⊠	526	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

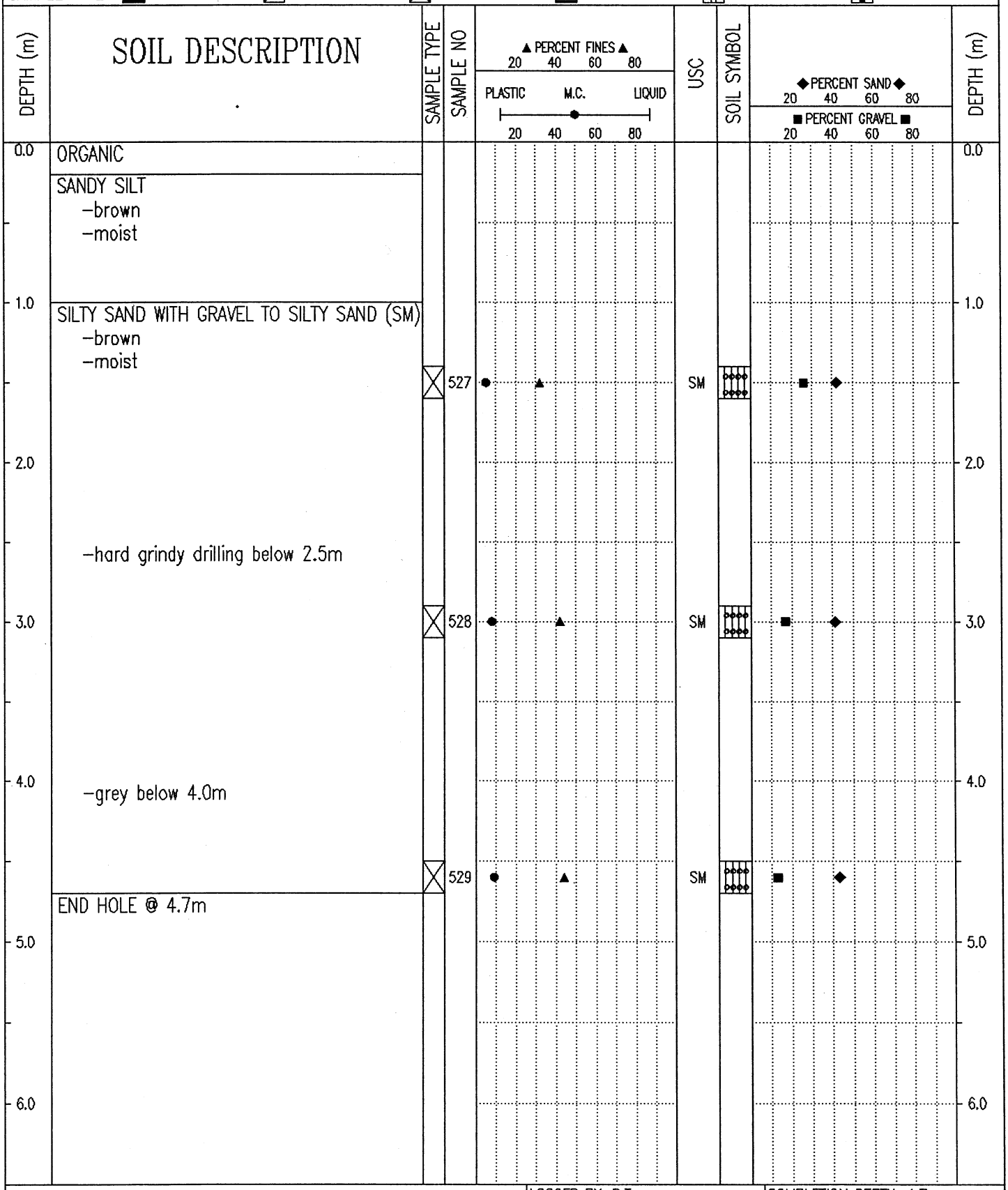
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REVIEWED BY:	COMPLETE: 00/05/31
Fig. No:	Page 1 of 1

00/12/12 11:51AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1440
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1753+250 Centreline	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: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/31
	Fig. No:	Page 1 of 1

00/12/12 11:51AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1441
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1753+350 Centreline	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 – frozen 0.1–0.2					0.0
	SANDY SILT –brown –moist					
1.0	SILTY SAND WITH GRAVEL (SM) –grey –moist –grindy drilling	⊠	530	SM		1.0
2.0	–hard grindy drilling below 2.4m					2.0
3.0	–dense below 3.0m	⊠	531	SM		3.0
4.0		⊠	532	SM		4.0
	END HOLE @ 4.7m					
5.0						5.0
6.0						6.0

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

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REVIEWED BY:	COMPLETE: 00/05/31
Fig. No:	Page 1 of 1

00/12/12 11:51AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1442
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1753+600 Centreline	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 -brown -moist -some +5mm material							
1.0	SILTY SAND TO SILTY SAND WITH GRAVEL (SM) -grey -moist -some +5mm material -grindy drilling	⊠	533	● ▲	SM		■ ◆	1.0
2.0								2.0
3.0	-dense below 2.8m -more +5mm material below 2.8m	⊠	534	● ▲	SM		■ ◆	3.0
4.0								4.0
		⊠	535	◆ ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/05/31
Fig. No:	Page 1 of 1

00/12/12 11:51AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1443
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1753+700 Centreline	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 -brown -moist -trace +5mm material							
1.0	SILTY SAND (SM) -olive -moist -grindy drilling -lost sample # 536	⊠	536	●				1.0
2.0								2.0
	-dense below 2.5m							
3.0		⊠	537	● ▲	SM		■ ◆	3.0
4.0								4.0
		⊠	538	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/31
	Fig. No:	Page 1 of 1

00/12/12 11:52AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1444
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1753+800 Centreline	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SILT -trace sand -olive -moist							
1.0	SILTY SAND (SM) -olive -moist -grindy drilling	⊠	539	●				1.0
2.0								2.0
	-more +5mm material below 2.5m -dense below 2.5m	⊠	540	● ▲	SM	▥	■ ◆	
3.0								3.0
4.0								4.0
		⊠	541	●				
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/05/31
	Fig. No:	Page 1 of 1

00/12/12 11:52AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1445
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1753+900 Centreline	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC SILT -some sand -olive -moist							0.0
1.0	GRAVELLY SANDY SILT -olive -moist -grindy drilling	⊠	542	●				1.0
2.0								2.0
	-dense below 2.6m							
3.0		⊠	543	●				3.0
4.0								4.0
		⊠	544	●				
5.0	END HOLE @ 4.7m -all samples for this hole were lost							5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 00/05/31
	Fig. No:	Page 1 of 1

00/12/12 11:52AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1446
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1754+000 20M RT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SANDY GRAVEL -trace silt -brown -hard slow rough grindy drilling -free water below .4m							0.0
1.0	-lost sample # 545	⊠	545	●				1.0
2.0								2.0
3.0	END HOLE @ 3.0m -refusal Note: Test hole in Copper Joe Creek main channel							3.0
4.0								4.0
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/05/31
Fig. No:	Page 1 of 1

00/12/12 11:52AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1447
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1754+000 20M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -brown -grindy drilling -free water @ 0.5m							0.0
1.0		⊠	546	▲	SW-SM		■ ◆	1.0
2.0	-harder drilling below 1.8m -frozen (Nf) below 1.8m -lost sample #547	⊠	547	◆				2.0
3.0	END HOLE @ 3.0M Note: Test hole in Copper Joe Creek main channel							3.0
4.0								4.0
5.0								5.0
6.0								6.0

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LOGGED BY: D.T	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 00/05/31
Fig. No:	Page 1 of 1

00/12/12 11:52AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1448
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1754+050 Centreline	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 ASH SANDY SILT -brown -moist -trace +5mm material							0.0
1.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -brown -moist -grindy drilling	⊠	548	●				1.0
2.0	-maximum 25mm material -lost sample # 548 -2nd refusal @ 2.0m - moved 2m upchain -hard slow grindy drilling @ 1.9m -1st refusal @ 2.0m - moved 2m upchain -rock dust on bit							2.0
3.0	-very dense / well consolidated @ 2.8m	⊠	549	● ▲	GM		■	3.0
4.0	-moist to wet below 4.0m	⊠	550	● ▲	SM		■ ◆	4.0
5.0	END HOLE @ 4.5m -refusal - rock dust on bit							5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 00/06/01
	Fig. No:	Page 1 of 1

00/12/13 01:56PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1449
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1754+150 Centreline	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				
	ASH				
	SANDY SILT				
	-brown				
	-frozen 0.2-0.4m				
	-trace +5mm material				
1.0	-moist below 0.4m				
	SILTY SAND WITH GRAVEL (SM)				
	-brown				
	-moist	⊠	551		
	-maximum 50mm material				
	-grindy drilling				
2.0	-lost sample # 551				
	-hard slow grindy drilling below 1.8m				
	-very dense material @ 2.8m	⊠	552	SM	▨
3.0					
4.0	END HOLE @ 4.1m				
	-refusal				
	-rock dust of bit				
5.0					
6.0					

PERCENT FINES ▲ (20 40 60 80); PLASTIC — M.C. — LIQUID (20 40 60 80); PERCENT SAND ◆ (20 40 60 80); PERCENT GRAVEL ■ (20 40 60 80)

DEPTH (m) 0.0 1.0 2.0 3.0 4.0 5.0 6.0

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	REVIEWED BY:	COMPLETE: 00/06/01
	Fig. No:	Page 1 of 1

00/12/12 11:52AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1450
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1754+250 Centreline	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 -some organic -dark brown -moist							
1.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -brown -damp -maximum 25mm material -grindy drilling	⊠	553	● ▲	SM		■ ◆	1.0
2.0	-hard slow grindy drilling below 1.8m							2.0
	-1st refusal @ 2.6m - moved 2m upchain							
3.0	-very dense @ 3.0m -2nd refusal @ 3.1m - moved 2m upchain	⊠	554	● ▲	GM		◆ ■	3.0
4.0								4.0
	END HOLE @ 4.5m -refusal - rock dust on bit							
5.0								5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 00/06/01
	Fig. No:	Page 1 of 1

00/12/12 11:52AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549–1452
ENGINEERING CAPITAL	KM 1729.6–1787 A/H	Project No: 092–202101–0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1754+315 20M RT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SILT & ORGANIC							
	POORLY GRADED GRAVEL WITH SILT & SAND (GP–GM) –brown –moist –maximum 75mm material –grindy drilling	⊠	558	● ▲	GP–GM		◆ ■	
1.0								1.0
2.0								2.0
		⊠	559	● ▲	GP–GM		◆ ■	
3.0								3.0
4.0	–wet to saturated below 3.9m							4.0
		⊠	560	●	GP–GM		◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/01
Fig. No:	Page 1 of 1

00/11/23 02:54PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 549-1451
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1754+325 20M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SANDY SILT WITH ORGANIC -with small gravels -brown -moist							
1.0	SILTY SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SILT & SAND (SM)-(GP-GM) -light brown -damp -maximum 50mm material -grindy drilling	⊠	555	● ▲	SM	▨	➡	1.0
2.0								2.0
3.0		⊠	556	● ▲	GP-GM	▨	◆ ■	3.0
4.0	-saturated below 4.0m							4.0
	-lost sample # 557	⊠	557	●				
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/01
Fig. No:	Page 1 of 1

00/11/23 02:54PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 550-1453
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1754+350 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC SILT (ML) -light brown -moist	⊠	561	● ▲	ML	▥	◆	0.0
1.0	SILTY SAND WITH GRAVEL (SM) -light brown -damp -maximum 50mm material -grindy drilling	⊠	562	● ▲	SM	▨	■ ◆	1.0
2.0	-very hard slow grindy drilling below 2.0m							2.0
3.0		⊠	563	● ▲	SM	▨	■ ◆	3.0
	END HOLE @ 3.5m -refusal - moved 2m upchain, replaced bit. -2nd refusal @ 3.2m							
4.0								4.0
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/01
Fig. No:	Page 1 of 1

00/12/22 11:46AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 550–1454
ENGINEERING CAPITAL	KM 1729.6–1787 A/H	Project No: 092–202101–0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1754+450 15M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SANDY SILT –brown –moist							
1.0	SILTY SAND WITH GRAVEL (SM) –brown –moist –maximum 25mm material –grindy drilling	⊠	564	● ▲	SM		■ ◆	1.0
2.0	–very hard slow grindy drilling below 1.9m							2.0
3.0		⊠	565	● ▲	SM		■ ◆	3.0
4.0	–very dense below 4.0m							4.0
		⊠	566	● ▲	SM		■ ◆	
5.0								5.0
		⊠	567	● ▲	SM		■ ◆	
6.0	END HOLE @ 6.0m							6.0

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REVIEWED BY:	COMPLETE: 00/06/01
Fig. No:	Page 1 of 1

00/12/22 11:46AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 550-1455
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1754+550 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SILT & ORGANIC							
	SILTY SAND WITH GRAVEL (SM) -olive -moist -grindy drilling							
1.0		⊠	568	● ▲	SM		■ ◆	1.0
2.0	-very hard slow grindy drilling							2.0
3.0	-dense below 3.0m	⊠	569	● ▲	SM		■ ◆	3.0
4.0								4.0
		⊠	570	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/01
Fig. No:	Page 1 of 1

01/01/09 01:41PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 550-1456
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1754+680 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 -brown -moist							
1.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -brown -moist -maximum 50mm material -grindy drilling	⊠	571	● ▲	GM		◆ ■	1.0
2.0	-dense below 2.5m							2.0
3.0		⊠	572	● ▲	SM		➡	3.0
4.0								4.0
		⊠	573	● ▲	SM		➡	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/01
Fig. No:	Page 1 of 1

01/01/09 01:43PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 550-1457
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1754+800 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 -brown -damp							
1.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (SM)-(GM)-(SM) -light brown -moist -grindy drilling	⊠	574	● ▲	SM		■ ◆	1.0
2.0								2.0
	-very dense below 2.5m							
3.0		⊠	575	● ▲	GM		■ ◆	3.0
4.0								4.0
		⊠	576	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 00/06/01
	Fig. No:	Page 1 of 1

01/01/09 01:45PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 550–1458
ENGINEERING CAPITAL	KM 1729.6–1787 A/H	Project No: 092–202101–0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1755+000 15M 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 ASH SANDY SILT –moist –brown							0.0
1.0	SILTY GRAVEL WITH SAND (GM) –light brown –damp –grindy drilling	☒	577	● ▲	GM		◆ ■	1.0
2.0	POORLY GRADED GRAVEL WITH SILT & SAND TO SILTY SAND WITH GRAVEL (GP–GM)–(SM) –light brown –damp –maximum 50mm material –very hard slow grindy drilling –refusal @ 2.0m – moved 2m upchain							2.0
3.0		☒	578	● ▲	GP–GM		◆ ■	3.0
4.0		☒	579	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.2m –refusal							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/02
Fig. No:	Page 1 of 1

01/01/09 02:03PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 550-1459
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1755+100 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SILT -some sand -frozen (Nf)							
1.0	SILTY SAND WITH GRAVEL TO WELL-GRADED SAND WITH SILT & GRAVEL (SM)-(SW-SM) -brown -frozen (Nf) -maximum 50mm material -grindy drilling	⊠	580	● ▲	SM	▨	■ ◆	1.0
2.0								2.0
3.0		⊠	581	● ▲	SW-SM	▨	■ ◆	3.0
4.0	END HOLE @ 4.0m -refusal							4.0
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/02
Fig. No:	Page 1 of 1

01/01/09 01:54PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 550-1460
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1755+200 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 -light brown -moist							
1.0	SILTY GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GM)-(GP-GM) -brown -moist -maximum 50mm material -grindy drilling	⊠	582	● ▲	GM		◆ ■	1.0
2.0	-very slow hard grindy drilling below 1.9m							2.0
3.0		⊠	583	● ▲	GP-GM		◆ ■	3.0
	END HOLE @ 3.7m -refusal - moved 2m upchain -2nd refusal @ 3.4m							
4.0								4.0
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/02
Fig. No:	Page 1 of 1

01/01/09 01:54PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 550-1461
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1755+300 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 ASH SANDY SILT -with organic -brown & black -moist							0.0
1.0	SILTY GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND TO SILTY GRAVEL WITH SAND (GM)-(GP-GM)-(GM) -brown -moist -maximum 50mm material -grindy drilling	⊠	584	● ▲	GM		◆ ■	1.0
2.0								2.0
3.0	-damp below 2.5m -very dense below 2.5m	⊠	585	● ▲	GP-GM		◆ ■	3.0
4.0								4.0
		⊠	586	● ▲	GM		◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/02
Fig. No:	Page 1 of 1

01/01/09 01:55PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 550-1462
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1755+400 10M RT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC ASH SANDY SILT -brown -moist -some +5mm material							0.0
1.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -brown -damp -maximum 50mm material -grindy drilling	⊠	587	● ▲	GM		✸	1.0
2.0								2.0
	-very dense below 2.5m							
3.0		⊠	588	● ▲	GM		◆ ■	3.0
4.0								4.0
		⊠	589	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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LOGGED BY: D.T	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/02
Fig. No:	Page 1 of 1

01/01/09 01:56PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 550–1463
ENGINEERING CAPITAL	KM 1729.6–1787 A/H	Project No: 092–202101–0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1755+500 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 ASH SANDY SILT –some organic –trace +5mm material							0.0
1.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (GM)–(SM)–(GM) –brown –damp –maximum 50mm material –grindy drilling	☒	590	● ▲	GM		◆ ■	1.0
2.0	–very hard slow grindy drilling below 2.2m –very dense below 2.6m							2.0
3.0		☒	591	● ▲	SM		■ ◆	3.0
4.0								4.0
		☒	592	● ▲	GM		◆ ■	
	END HOLE @ 4.7 M							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/02
	Fig. No:	Page 1 of 1

01/01/09 01:56PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 550-1464
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1755+600 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 -brown -damp							
1.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -brown -damp -maximum 50mm material -grindy drilling	⊠	593	● ▲	GM		◆ ■	1.0
2.0	-very hard slow grindy drilling below 2.0m							2.0
3.0	-dense below 3.0m	⊠	594	● ▲	GM		◆ ■	3.0
4.0								4.0
	-moist below 4.5m	⊠	596	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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LOGGED BY: D.T	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/02
Fig. No:	Page 1 of 1

01/01/09 01:58PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEG 11	TEST HOLE NO: 550-1465
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1755+700 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 ASH SANDY SILT -trace +5mm material -brown -moist							0.0
1.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -brown -damp -maximum 50mm material -very dense -grindy drilling -very hard slow grindy drilling below 1.4m	⊠	596	● ▲	GM		■	1.0
2.0								2.0
3.0		⊠	597	● ▲	GM		◆ ■	3.0
4.0								4.0
		⊠	598	● ▲	SM		■ ◆	
5.0	END HOLE @ 4.6m -refusal							5.0
6.0								6.0

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LOGGED BY: D.T	COMPLETION DEPTH: 4.6 m
REVIEWED BY:	COMPLETE: 00/06/02
Fig. No:	Page 1 of 1

01/01/09 02:00PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1466
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1755+800 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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
	ASH							
	SAND, SILT & ORGANIC							
	SILTY SAND WITH GRAVEL (SM) -light brown -damp -grindy drilling							
1.0		⊠	599	● ▲	SM		◆	1.0
2.0	-brown below 2.0m -moist below 2.0m -maximum 25mm material below 2.0m -dense below 2.0m							2.0
3.0		⊠	600	● ▲	SM		◆	3.0
4.0								4.0
		⊠	601	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/05
Fig. No:	Page 1 of 1

01/01/02 08:54AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1467
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1755+900 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 ASH SAND, SILT & ORGANIC							0.0
	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -brown -damp -grindy drilling	⊠	602	● ▲	SM	▨	■ ◆	
1.0								1.0
2.0	-moist below 2.1m -maximum 50mm material below 2.1m							2.0
3.0		⊠	603	● ▲	SM	▨	■ ◆	3.0
4.0								4.0
		⊠	604	● ▲	GM	▨	●	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/05
Fig. No:	Page 1 of 1

00/12/21 02:18PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1468
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1756+000 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SAND, SILT & ORGANIC -some +5mm material -moist							
	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -brown -moist -maximum 25mm material -grindy drilling -lost sample # 605	⊠	605	●				
1.0								1.0
2.0								2.0
	-dense below 2.5m							
3.0		⊠	606	● ▲	GM		◆ ■	3.0
4.0								4.0
		⊠	607	● ▲	SM		■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 00/06/05
	Fig. No:	Page 1 of 1

01/01/02 08:55AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1469
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1756+100 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 ORGANIC -some +5mm material -moist							
1.0	SILTY SAND WITH GRAVEL (SM) -brown -moist -maximum 25mm material -grindy drilling	⊠	608	● ▲	SM		■ ◆	1.0
2.0								2.0
3.0		⊠	609	● ▲	SM		■ ◆	3.0
4.0	END HOLE @ 3.7m -refusal							4.0
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 3.7 m
	REVIEWED BY:	COMPLETE: 00/06/05
	Fig. No:	Page 1 of 1

00/12/21 02:18PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1470
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1756+200 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 ORGANIC -moist							
1.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -brown -damp -grindy drilling	⊠	610	● ▲	GM		◆ ■	1.0
2.0								2.0
3.0		⊠	611	● ▲	SM		■	3.0
4.0		⊠	612	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/05
	Fig. No:	Page 1 of 1

01/01/02 08:55AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1471
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1756+300 CENTRELINE	ELEVATION: 0.00 (m)

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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, SAND & SILT -brown -satuarted							0.0
	SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -brown -frozen (Nf) -grindy drilling							
1.0								1.0
			613	● ▲	SM		■ ◆	
2.0								2.0
	-refusal @ 2.7m - moved 2m upchain -moist to wet below 2.7m							
3.0			614	● ▲	SM		■ ◆	3.0
4.0	END HOLE @ 4.0m -refusal # 2							4.0
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/05
Fig. No:	Page 1 of 1

01/01/02 08:55AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1472
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1756+400 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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
	SAND, SILT & ORGANIC -brown -moist							
1.0	SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -brown -moist -maximum 25mm material -grindy drilling							1.0
		⊠	615	● ▲	SM	▨	■ ◆	
2.0	-refusal @ 1.8m - moved 2m upchain							2.0
	-frozen (Nb) below 2.5m							
3.0		⊠	616	● ▲	SM	▨	■ ◆	3.0
4.0	END HOLE @ 4.0m -refusal							4.0
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/05
Fig. No:	Page 1 of 1

00/12/21 02:18PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1473
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1756+542 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 ASH SAND,SILT & ORGANIC							0.0
	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -brown -damp -grindy drilling							
1.0		⊠	616A	● ▲	GM		◆ ■	1.0
2.0								2.0
	-maximum 50mm material below 2.6m							
3.0		⊠	617	● ▲	GM		◆ ■	3.0
4.0								4.0
		⊠	618	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/05
Fig. No:	Page 1 of 1

01/01/02 08:55AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1474
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1756+650 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SAND, SILT & ORGANIC -grey - brown							
1.0	SILTY SAND WITH GRAVEL (SM) -brown -damp -maximum 25mm material	⊠	619	● ▲	SM		■ ◆	1.0
2.0	-slow hard grindy drilling below 1.8m							2.0
3.0	-dense below 2.5m	⊠	620	● ▲	SM		■ ◆	3.0
4.0		⊠	621	● ▲	SM		◆	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/05
	Fig. No:	Page 1 of 1

00/12/21 02:18PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1475
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1756+750 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 AND ORGANIC -trace sand							
	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -brown -moist -maximum 25mm material -grindy drilling							
1.0		⊠	622	● ▲	GM		◆ ■	1.0
	-dense below 1.8m							
2.0								2.0
3.0		⊠	623	● ▲	SM		■ ◆	3.0
4.0								4.0
		⊠	624	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/05
Fig. No:	Page 1 of 1

00/12/21 02:18PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1476
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 192-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1756+850 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 (Nf)							0.0
	SILT & ORGANIC -moist							
	SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -brown -moist -grindy drilling -maximum 25mm material -hard slow grindy drilling below 1.0m							
1.0		⊠	625	● ▲	SM		■ ◆	1.0
2.0								2.0
	-moist to wet below 2.5m	⊠	626	● ▲	SM		■ ◆	
3.0	-very hard slow grindy drilling below 3.0m							3.0
4.0		⊠	627	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.4m -refusal							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/05
Fig. No:	Page 1 of 1

00/12/21 02:19PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1477
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 192-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1756+950 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ROAD BED MATERIAL ORGANIC SANDY SILT & ORGANIC							0.0
	SILTY SAND WITH GRAVEL TO WELL-GRADED SAND WITH SILT & GRAVEL TO SILTY SAND WITH GRAVEL (SM)-(SW-SM)-(SM) -brown -moist -grindy drilling	⊠	628	● ▲	SM		■ ◆	
1.0								1.0
2.0								2.0
3.0		⊠	629	● ▲	SW-SM		■ ◆	3.0
	-very hard slow grindy drilling below 3.3m							
4.0	-dense below 4.0m							4.0
		⊠	630	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/05
Fig. No:	Page 1 of 1

00/12/21 02:19PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1478
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 192-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1757+050 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	PUSH PILE DEBRIS							0.0
	ORGANIC -frozen (Nf)							
1.0	ORGANIC & ASH							1.0
	SILTY SAND TO SILTY SAND WITH GRAVEL (SM) -light brown -damp -grindy drilling	⊠	631	● ▲	SM		■ ◆	
2.0	-moist below 2.5m							2.0
3.0	-very hard slow grindy drilling below 3.4	⊠	632	● ▲	SM		■ ◆	3.0
4.0		⊠	633	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/05
	Fig. No:	Page 1 of 1

00/12/21 02:19PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1479
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 192-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1757+150 15M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (GM)-(SM)-(GM) -brown -moist -maximum 50mm material							0.0
1.0								1.0
		⊠	634	● ▲	GM		◆ ■	
	-material saturated 1.8m to 2.4m							
2.0								2.0
	-frozen (Nf) below 2.4m							
		⊠	635	● ▲	SM		◆ ■	
3.0								3.0
4.0	-saturated below 4.0m							4.0
		⊠	636	● ▲	GM		◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/05
	Fig. No:	Page 1 of 1

01/01/02 08:55AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1480
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 192-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1757+250 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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
	SILTY SAND WITH GRAVEL (SM) -brown -damp							
1.0	-grindy drilling -hard slow grindy drilling below .8m	⊠	637	● ▲	SM	▥	■	1.0
	-dense below 1.5m	⊠	638	● ▲	SM	▥	■	
2.0								2.0
3.0								3.0
4.0								4.0
		⊠	639	● ▲	SM	▥	■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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Transportation Engineering

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REVIEWED BY:	COMPLETE: 00/06/05
Fig. No:	Page 1 of 1

00/12/21 02:19PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1481
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 192-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1757+350 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 SAND, SILT & ORGANIC							0.0
	SILTY SAND WITH GRAVEL TO WELL-GRADED SAND WITH SILT & GRAVEL (SM)-(SW-SM) -brown -damp -grindy drilling							
1.0		⊠	640	● ▲	SM		■ ◆	1.0
	-refusal @ 1.6m - move 1m upchain							
2.0								2.0
	-moist below 2.5m -maximum 50mm material below 2.5m							
3.0		⊠	641	● ▲	SM		■ ◆	3.0
4.0	-frozen (Nf) below 4.0m							4.0
		⊠	642	● ▲	SW-SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/05
Fig. No:	Page 1 of 1

01/01/02 08:55AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1482
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 192-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1757+450 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SILT & ORGANIC							
	SILTY SAND (SM) -brown -moist -grindy drilling							
1.0								1.0
		⊠	643	● ▲	SM		■ ◆	
2.0	SILTY SAND WITH GRAVEL (SM) -brown -moist -maximum 25mm material							2.0
3.0		⊠	644	● ▲	SM		■ ◆	3.0
4.0								4.0
		⊠	645	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/05
	Fig. No:	Page 1 of 1

00/12/21 02:19PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551–1483
ENGINEERING CAPITAL	KM 1729.6–1787 A/H	Project No: 192-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1757+550 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC, SILT & SAND –damp							0.0
	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)–(GM) –brown –damp –maximum 25mm material –grindy drilling							
1.0								1.0
		⊠	646	● ▲	SM		■	
2.0								2.0
	–moist below 2.5m							
3.0		⊠	647	● ▲	SM		■ ◆	3.0
4.0								4.0
		⊠	648	● ▲	GM		◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/05
	Fig. No:	Page 1 of 1

01/01/02 08:56AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1484
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 192-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1757+650 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	ORGANIC, SILT & SAND -brown -moist							
1.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -brown -damp -maximum 50mm material -grindy drilling -hard slow grindy drilling below 1.2m	⊠	649	● ▲	GM		◆ ■	1.0
2.0								2.0
3.0		⊠	650	● ▲	GM		◆ ■	3.0
4.0	-moist below 4.0m							4.0
		⊠	651	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

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REVIEWED BY:	COMPLETE: 00/06/05
Fig. No:	Page 1 of 1

01/01/02 08:55AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551–1485
ENGINEERING CAPITAL	KM 1729.6–1787 A/H	Project No: 192–202101–0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1757+750 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 SAND, SILT & ORGANIC							0.0
1.0	SILT GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)–(SM) –brown –damp –maximum 50mm material –grindy drilling	⊠	652		GM			1.0
2.0	–refusal @ 1.8m – moved 2m upchain							2.0
3.0		⊠	653		SM			3.0
4.0								4.0
		⊠	654		SM			
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/05
Fig. No:	Page 1 of 1

00/12/21 02:19PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1486
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 192-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1757+850 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SAND, ORGANIC & SILT							0.0
	SILTY GRAVEL WITH SAND TO SILTY SAND (GM)-(SM) -brown -damp -maximum 50mm material -grindy drilling							
1.0		⊠	655	● ▲	GM		◆ ■	1.0
2.0								2.0
3.0		⊠	656	● ▲	GM		◆ ■	3.0
4.0	-moist below 4.0m							4.0
		⊠	657	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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Transportation Engineering

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REVIEWED BY:	COMPLETE: 00/06/05
Fig. No:	Page 1 of 1

00/12/21 02:20PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1487
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 192-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1757+950 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 SAND, SILT & ORGANIC -wet							0.0
	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (GM)-(SM)-(GM) -brown -damp -maximum 25mm material -grindy drilling	⊠	658	● ▲	GM		◆ ■	
1.0								1.0
2.0								2.0
		⊠	659	● ▲	SM		■ ◆	
3.0	-refusal @ 2.9m - moved 2m upchain							3.0
4.0								4.0
		⊠	660	● ▲	GM		◆ ■	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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Transportation Engineering

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REVIEWED BY:	COMPLETE: 00/06/05
Fig. No:	Page 1 of 1

00/12/21 02:20PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1488
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 192-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1758+050 CENTRELINE	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
	SAND, SILT & ORGANIC					
	SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -brown -damp -maximum 25mm material -grindy drilling -refusal @ 1.0m - moved 2m upchain	AUGER	661	SM		
1.0						1.0
2.0						2.0
3.0		AUGER	662	SM		3.0
4.0	-moist below 4.0m					4.0
		AUGER	663	SM		
	END HOLE @ 4.7m					
5.0						5.0
6.0						6.0

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

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Transportation Engineering

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Fig. No:

COMPLETION DEPTH: 4.7 m
COMPLETE: 00/06/05
Page 1 of 1

00/12/21 02:20PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1489
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 192-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1758+150 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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
	ASH							
	SILT & ORGANIC							
	SILTY SAND WITH GRAVEL (SM) -light brown -damp -maximum 25mm material -grindy drilling							
1.0		⊠	664	● ▲	SM	▥	■ ◆	1.0
	-refusal @ 1.8m - moved 2m upchain -2nd refusal @ 1.8m - moved 3m upchain							
2.0	END HOLE @ 2.1m -refusal # 3							2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

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REVIEWED BY:	COMPLETE: 00/06/05
Fig. No:	Page 1 of 1

00/12/21 02:20PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 551-1490
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 192-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1758+175 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 ASH SILT & ORGANIC							0.0
	SILTY SAND WITH GRAVEL (SM) -light brown -damp -maximum 50mm material -grindy drilling							
1.0	-very hard slow grindy drilling @ .8m	⊠	665	● ▲	SM		■ ◆	1.0
2.0	WELL-GRADED SAND WITH GRAVEL (SW) -grey -moist -very hard smooth drilling							2.0
3.0		⊠	666	▲●	SW		■ ◆	3.0
	SANDY SILTY GRAVEL -grey -moist -angular gravels -very hard slow grindy drilling							
4.0	END HOLE @ 3.9m -refusal							4.0
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/05
Fig. No:	Page 1 of 1

00/12/21 02:20PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 552-1491
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1758+225 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SAND, SILT & ORGANIC							
	SILTY SAND WITH GRAVEL (SM) -brown -damp -maximum 25mm material -grindy drilling							
1.0								1.0
		⊠	667	● ▲	SM		■ ◆	
2.0								2.0
	-frozen (Nf) below 2.5m							
		⊠	668	● ▲	SM		■ ◆	
3.0								3.0
4.0	-moist to wet below 4.0m							4.0
		⊠	669	● ▲	SM		■ ◆	
	END HOLE @ 4.5m -refusal							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 00/06/07
	Fig. No:	Page 1 of 1

00/12/20 09:57AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 552-1492
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1758+325 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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) -brown -damp	⊠	670	● ▲	ML		◆	
1.0								1.0
	SILTY GRAVEL WITH SAND (GM) -brown -moist -grindy drilling -maximum 25mm material below 2.0m							
2.0								2.0
		⊠	671	● ▲	GM		■	
3.0								3.0
	END HOLE @ 3.4m -refusal							
4.0								4.0
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 00/06/07
Fig. No:	Page 1 of 1

00/12/20 09:58AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 552-1493
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1758+425 20M RT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SILT -some sand -frozen (Nb)							
	SILTY SAND WITH GRAVEL (SM) -brown -moist -maximum 25mm material	⊠	672A	● ▲	SM		◆	
1.0								1.0
2.0	-frozen (Nf) below 2.0m	⊠	672	● ▲	SM		■ ◆	2.0
	END HOLE @ 2.5m -refusal - moved to o/s 18 m rt -2nd refusal @ 1.8m -Note: Test hole @ culvert site.							
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 2.5 m
REVIEWED BY:	COMPLETE: 00/06/07
Fig. No:	Page 1 of 1

00/12/20 09:58AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 552-1494
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1758+450 20 M 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 SILT AND ORGANIC							0.0
	SILTY SAND WITH GRAVEL (SM) -light brown -damp -maximum 25mm material -grindy drilling							
1.0		⊠	673	● ▲	SM		■ ◆	1.0
2.0	-frozen (Nf) below 2.0m							2.0
3.0		⊠	674	● ▲	SM		■ ◆	3.0
	END HOLE @ 3.2m -refusal -Note: Test hole @ culvert site							
4.0								4.0
5.0								5.0
6.0								6.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 3.2 m
REVIEWED BY:	COMPLETE: 00/06/07
Fig. No:	Page 1 of 1

00/12/20 10:51AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 552-1495
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1758+550 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 -trace +5mm material							
1.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (SM)-(GM)-(SM) -light brown -damp -maximum 25mm material -grindy drilling	⊠	675	● ▲	SM		■ ◆	1.0
2.0	-frozen (Nf) below 2.1m							2.0
3.0		⊠	676	● ▲	GM		■ ◆	3.0
4.0	-moist below 4.0m							4.0
		⊠	677	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/07
Fig. No:	Page 1 of 1

00/12/19 10:00AM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 552-1496
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1758+650 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 -some +5mm material -brown -damp							
1.0	SILTY SAND WITH GRAVEL (SM) -light brown -damp -maximum 25mm material -grindy drilling	⊠	678	● ▲	SM		■ ◆	1.0
2.0								2.0
3.0	-moist below 2.8m	⊠	679	● ▲	SM		■	3.0
4.0	-damp below 4.0m							4.0
		⊠	680	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/07
Fig. No:	Page 1 of 1

03/05/20 07:57PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 552-1497
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1758+800 CENTRELINE	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 -some +5mm material -brown -moist							
1.0	SILTY SAND WITH GRAVEL (SM) -brown -damp -maximum 25mm material -grindy drilling -dense	⊠	681	● ▲	SM		■ ◆	1.0
2.0	-harder grindy drilling below 2.1m							2.0
	-frozen (Nf) below 2.5m	⊠	682	● ▲	SM		■ ◆	
3.0								3.0
4.0	-grey below 4.0m	⊠	683	● ▲	SM		■ ◆	4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/07
Fig. No:	Page 1 of 1

03/05/20 07:57PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 552-1498
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1758+900 14M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SILTY SAND -brown -moist							
1.0								1.0
	POORLY GRADED GRAVEL WITH SILT & SAND TO SILTY SAND WITH GRAVEL (GP-GM)-(SM) -brown -damp -maximum 25mm material -grindy drilling -harder drilling below 1.8m	⊠	684	● ▲	GP-GM		◆ ■	
2.0	-frozen (Nf) below 2.5m							2.0
3.0		⊠	685	● ▲	SM		■ ◆	3.0
4.0	-grey below 4.0m -easier drilling below 4.0m							4.0
		⊠	686	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/07
Fig. No:	Page 1 of 1

03/12/09 03:05PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 552-1499
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1759+010 + 15M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	DITCH DEBRIS							0.0
	SANDY SILTY ORGANIC -frozen (Nb)							
1.0	SILTY SAND WITH GRAVEL (SM) -brown -frozen (Nf) -grindy drilling	⊠	687	●▲	SM		■ ◆	1.0
2.0 ▼	-H20 level @ 2.0m -no sample recovered below 2.0m material washed off augers. -gravelly material observed							2.0 ▼
3.0								3.0
4.0								4.0
5.0	END HOLE @ 4.7m -Note: Test hole @ culvert site							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/07
	Fig. No:	Page 1 of 1

03/12/09 03:05PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 552-1500
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1759+100 + 13M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SILT -some organic -light brown -damp							
1.0	SILTY SAND WITH GRAVEL (SM) -light grey -damp -maximum 25mm material -grindy drilling	⊠	688	● ▲	SM		■ ◆	1.0
2.0	-saturated below 2.0m -lost sample # 689	⊠	689	●				2.0
	-grey below 2.6m -frozen (Nb) below 2.6m							
3.0	-harder grindy drilling	⊠	690	● ▲	SM		■ ◆	3.0
4.0								4.0
		⊠	691	● ▲	SM		■ ◆	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
	REVIEWED BY:	COMPLETE: 00/06/07
	Fig. No:	Page 1 of 1

03/12/09 03:05PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 552-1501
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1759+200 + 07M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SILT -trace sand -damp -brown							
1.0	SILTY SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND TO WELL-GRADED SAND WITH SILT & GRAVEL (SM)-(GP-GM)-(SW-SM) -brown -damp -maximum 50mm material -grindy drilling	⊠	692	● ▲	SM		■ ◆	1.0
2.0	-very hard grindy drilling below 2.0m							2.0
3.0		⊠	693	● ▲	GP-GM		◆ ■	3.0
4.0	-grey below 4.0m -wet below 4.0							4.0
		⊠	694	● ▲	SW-SM		●	
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

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LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/07
Fig. No:	Page 1 of 1

03/12/09 03:05PM

SUBSURFACE EXPLORATION AND TEST REPORT	SHAKWAK SEGMENT 11	TEST HOLE NO: 552-1502
ENGINEERING CAPITAL	KM 1729.6-1787 A/H	Project No: 092-202101-0361
B40 MOBILE DRILL 6" AUGER	LOCATION: 1759+300 + 11M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SILT & ORGANIC -brown -damp							0.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -damp -maximum 50mm material -grindy drilling	⊠	695	●▲	GP-GM		◆■	
1.0								1.0
2.0								2.0
	-grey below 2.5m -very hard grindy drilling below 2.5m	⊠	696	●▲	GP-GM		●	
3.0								3.0
	SILTY SAND WITH GRAVEL (SM) -grey -satuarated	⊠	697	● ▲	SM		■ ◆	
4.0								4.0
	END HOLE @ 4.7m							
5.0								5.0
6.0								6.0

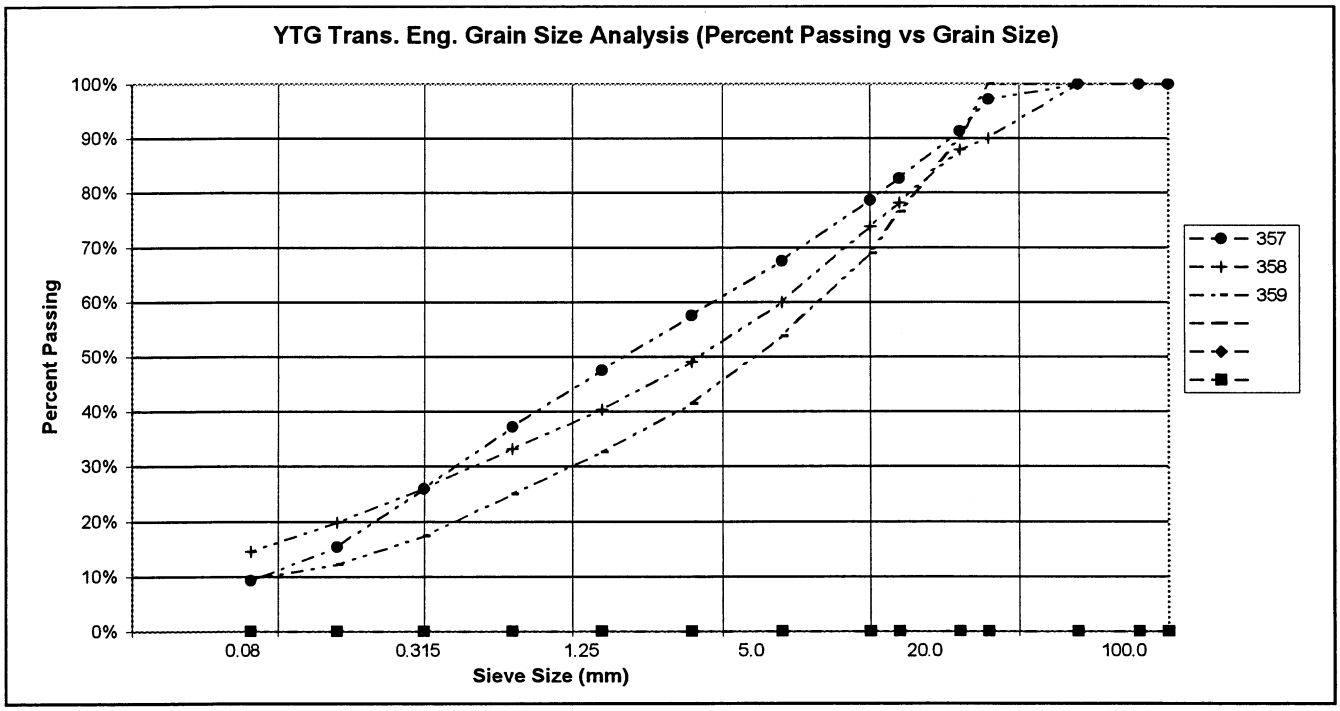
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LOGGED BY: D.T.	COMPLETION DEPTH: 4.7 m
REVIEWED BY:	COMPLETE: 00/06/07
Fig. No:	Page 1 of 1

03/12/09 03:05PM

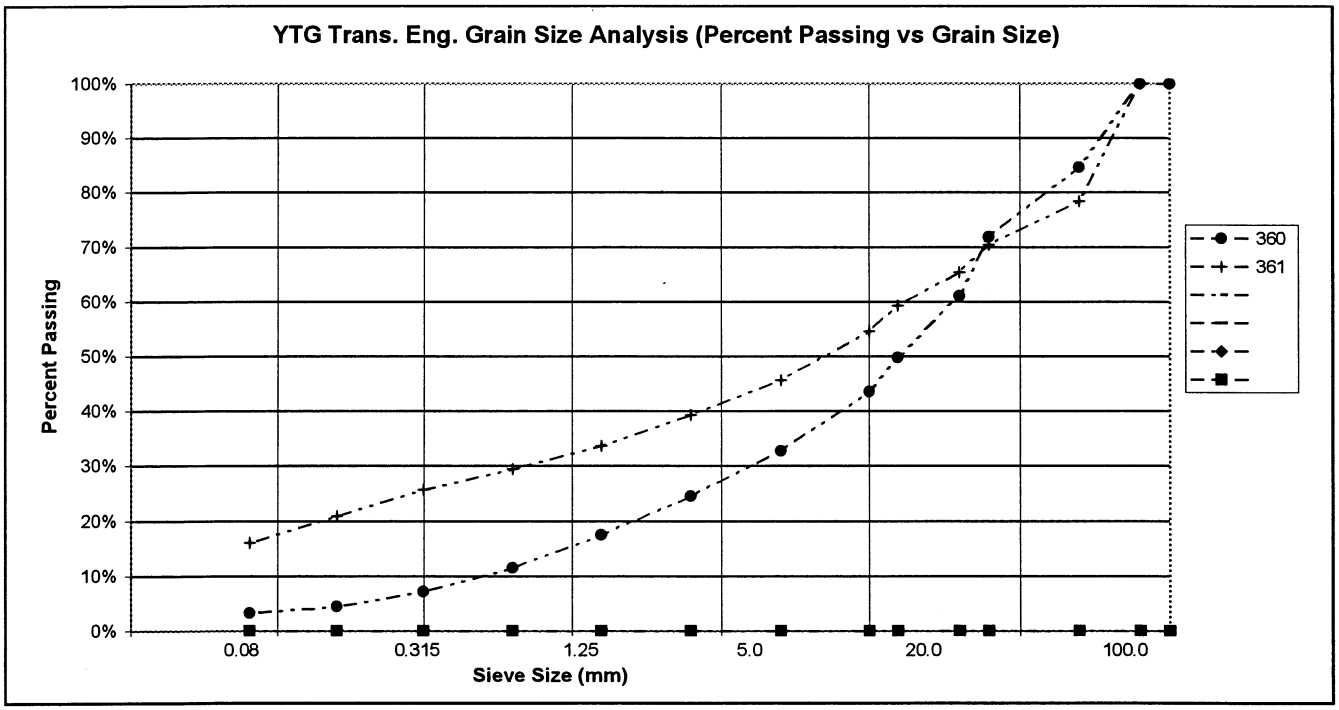
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CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1749+550 10M RT		
LOGGED BY:	W.E.		DATE COMP: 5/16/2000

FIELD NO:	357	358	359			
LAB NO:	660	661	662			
DEPTH:	0.8-1.0	2.0-2.2	4.4-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	97%	90%	100%			
20.0	91%	88%	90%			
12.5	83%	78%	77%			
10.0	79%	74%	69%			
5.0	67%	60%	54%			
2.5	57%	49%	41%			
1.25	48%	40%	33%			
0.630	37%	33%	25%			
0.315	26%	26%	17%			
0.160	15%	20%	12%			
0.080	9%	15%	10%			
M.C.(%):	3%	7%	3%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	33	40	46			
% SAND:	58	45	44			
% FINES:	9	15	10			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			



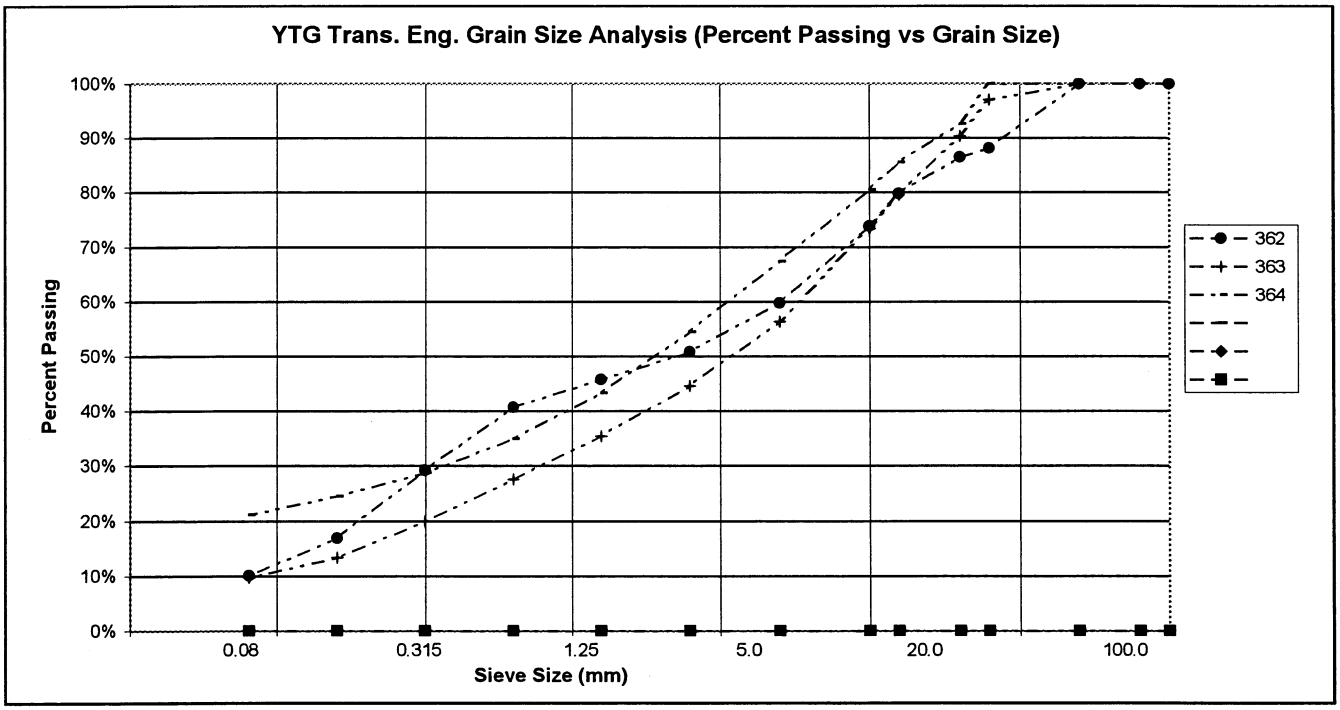
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CLIENT:	ENGINEERING CAPITAL					
PROJECT NAME:	SHAKWAK SEG 11					
PROJECT LOCATION:	KM 1729.6-1787 A/H					
DRILL UNIT:	MOBILE B40 L					
HOLE LOCATION:	1749+650 CL					
LOGGED BY:	W.E.				DATE COMP: 5/16/2000	

FIELD NO:	360	361				
LAB NO:	663	664				
DEPTH:	1.4-1.6	4.4-4.6				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	85%	78%				
25.0	72%	70%				
20.0	61%	65%				
12.5	50%	59%				
10.0	44%	55%				
5.0	33%	46%				
2.5	25%	39%				
1.25	17%	34%				
0.630	11%	29%				
0.315	7%	26%				
0.160	4%	21%				
0.080	3%	16%				
M.C.(%):	3%	6%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	67	54				
% SAND:	29	30				
% FINES:	3	16				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY GRAVEL WITH SAND (GM)				



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 544-1392
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1749+687 10M RT		
LOGGED BY:	W.E.		DATE COMP: 5/17/2000

FIELD NO:	362	363	364			
LAB NO:	665	666	667			
DEPTH:	1.1-1.3	2.5-2.7	4.4-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	88%	97%	100%			
20.0	87%	90%	93%			
12.5	80%	80%	86%			
10.0	74%	73%	81%			
5.0	60%	56%	67%			
2.5	51%	45%	55%			
1.25	46%	35%	43%			
0.630	41%	28%	35%			
0.315	29%	20%	29%			
0.160	17%	13%	25%			
0.080	10%	10%	21%			
M.C.(%):	13%	4%	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:	40	44	33			
% SAND:	50	47	46			
% FINES:	10	10	21			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)			

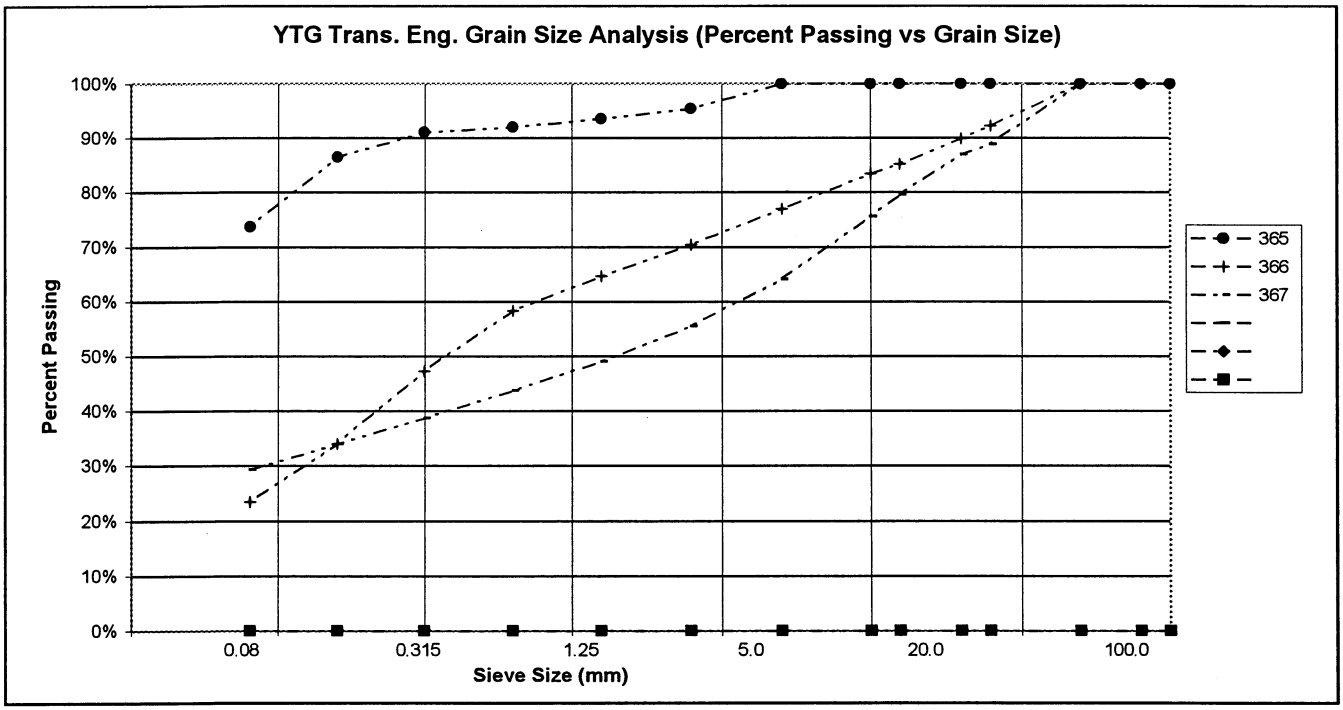


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1749+687 24M LT
LOGGED BY: W.E.

HOLE No.: 544-1393

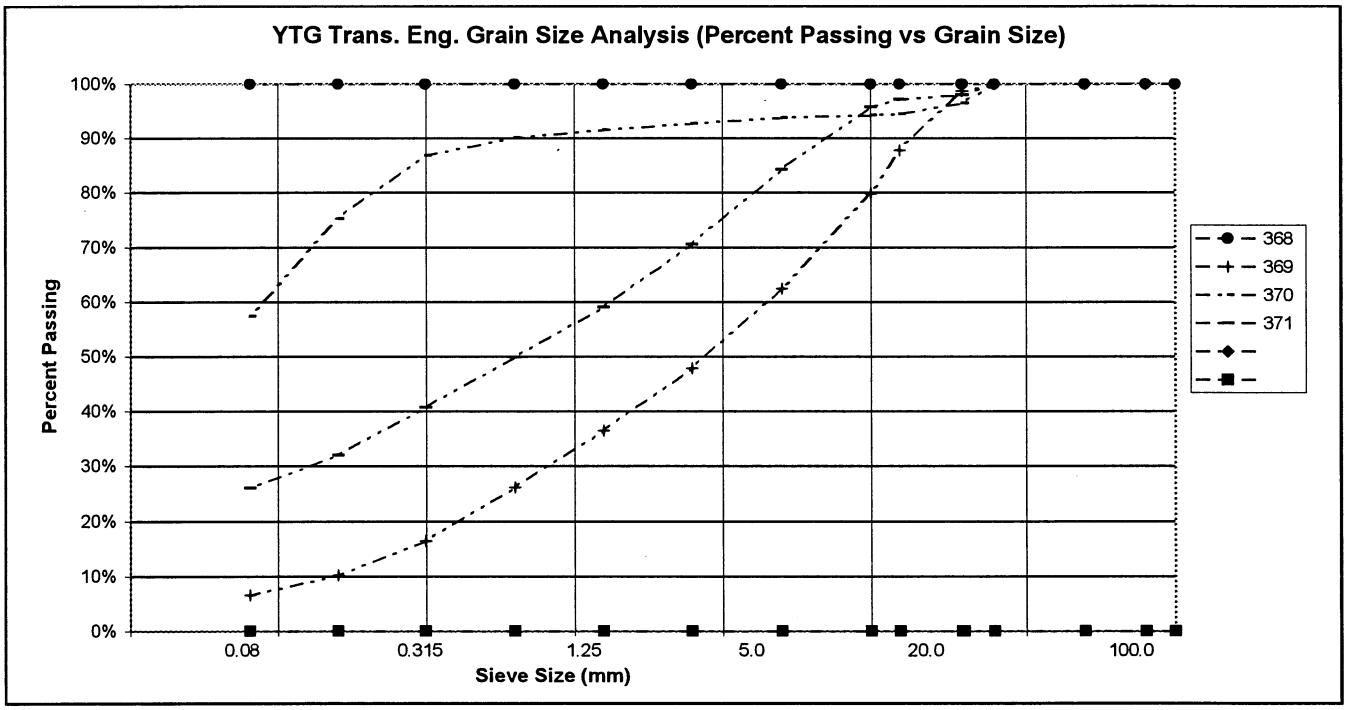
DATE COMP: 5/17/2000

FIELD NO:	365	366	367			
LAB NO:	668	669	670			
DEPTH:	0.9-1.0	2.5-2.8	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	100%	92%	89%			
20.0	100%	90%	87%			
12.5	100%	85%	80%			
10.0	100%	83%	76%			
5.0	100%	77%	64%			
2.5	95%	70%	56%			
1.25	94%	65%	49%			
0.630	92%	58%	44%			
0.315	91%	47%	39%			
0.160	87%	34%	34%			
0.080	74%	24%	29%			
M.C.(%):	39%	6%	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:	0	23	36			
% SAND:	26	54	35			
% FINES:	74	24	29			
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)			



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 544-1394
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1749+780 CL		
LOGGED BY:	W.E.		DATE COMP: 5/17/2000

FIELD NO:	368	369	370	371		
LAB NO:	LOST	672	673	674		
DEPTH:	0.6-1.0	1.9-2.1	3.0-3.2	4.7-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	99%	96%	98%		
12.5	100%	88%	95%	97%		
10.0	100%	80%	94%	96%		
5.0	100%	62%	94%	84%		
2.5	100%	48%	93%	71%		
1.25	100%	36%	92%	59%		
0.630	100%	26%	90%	50%		
0.315	100%	16%	87%	41%		
0.160	100%	10%	75%	32%		
0.080	100%	7%	57%	26%		
M.C.(%):	14%	2%	18%	6%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	38	6	16		
% SAND:	0	56	36	58		
% FINES:	100	7	57	26		
CLASSIFICATION	SILT (ML)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)		

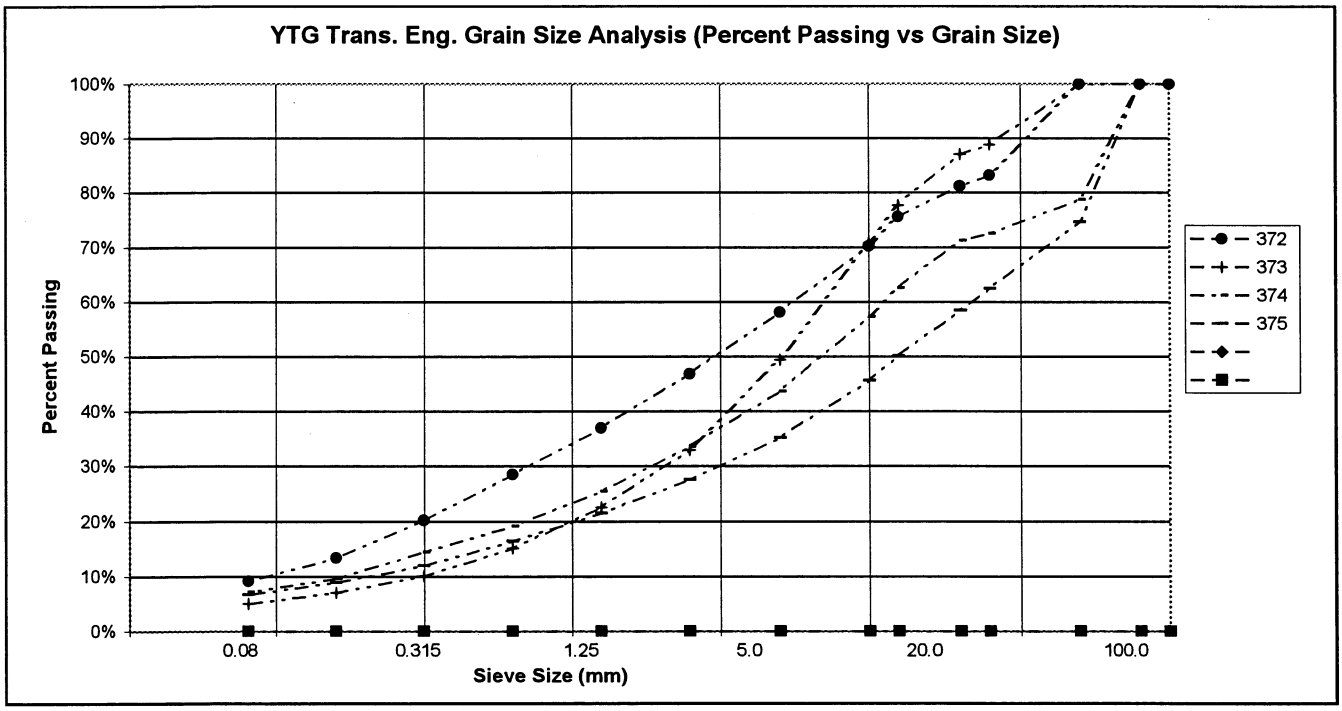


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1749+900 CL
LOGGED BY: W.E.

HOLE No.: 544-1395

DATE COMP: 5/17/2000

FIELD NO:	372	373	374	375		
LAB NO:	675	676	677	678		
DEPTH:	1.4-1.6	2.3-2.5	3.0-3.2	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	79%	75%		
25.0	83%	89%	73%	62%		
20.0	81%	87%	71%	58%		
12.5	76%	78%	63%	50%		
10.0	70%	71%	57%	46%		
5.0	58%	49%	44%	35%		
2.5	47%	33%	34%	28%		
1.25	37%	22%	25%	21%		
0.630	29%	15%	19%	16%		
0.315	20%	10%	14%	12%		
0.160	13%	7%	10%	9%		
0.080	9%	5%	7%	7%		
M.C.(%):	4%	2%	3%	2%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	42	51	56	65		
% SAND:	49	44	36	29		
% FINES:	9	5	7	7		
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

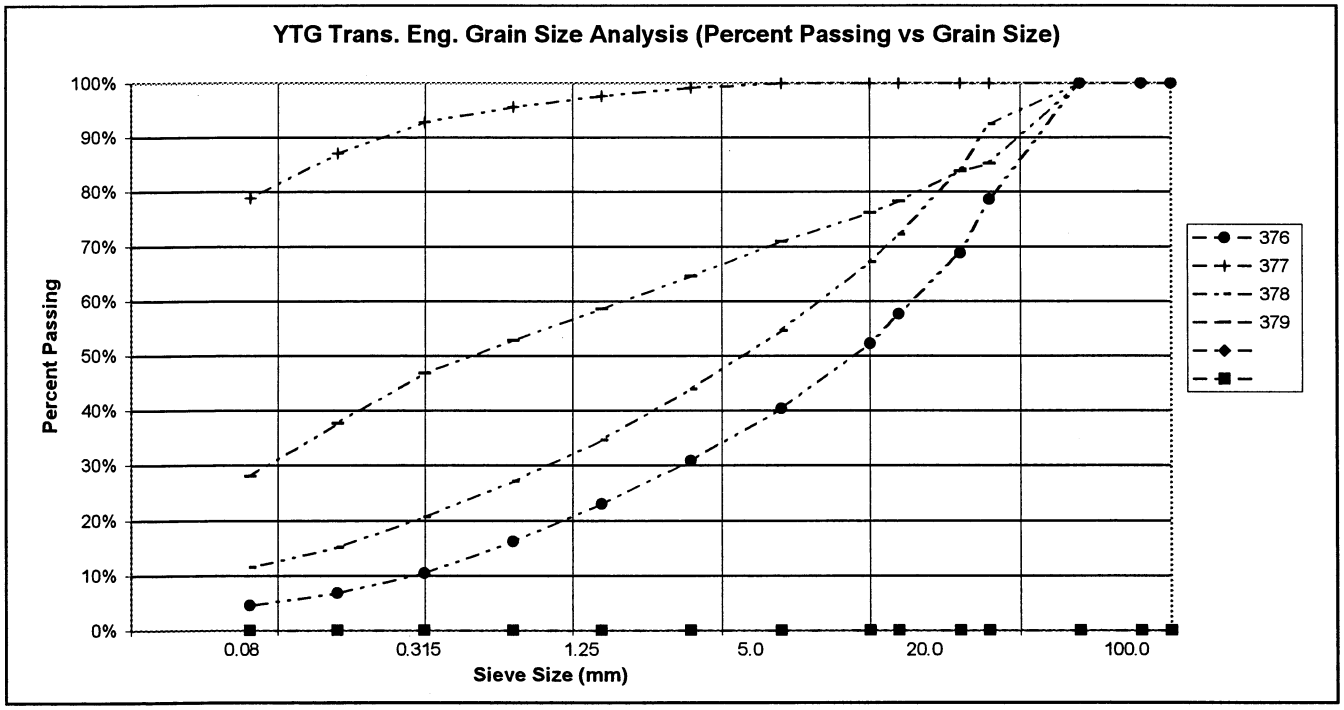


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1750+000 CL
LOGGED BY: W.E.

HOLE No.: 544-1396

DATE COMP: 5/17/2000

FIELD NO:	376	377	378	379		
LAB NO:	679	680	681	682		
DEPTH:	1.4-1.6	2.0-2.4	3.0-3.2	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	79%	100%	92%	85%		
20.0	69%	100%	84%	84%		
12.5	58%	100%	72%	78%		
10.0	52%	100%	67%	76%		
5.0	40%	100%	55%	71%		
2.5	31%	99%	44%	65%		
1.25	23%	98%	35%	59%		
0.630	16%	96%	27%	53%		
0.315	10%	93%	21%	47%		
0.160	7%	87%	15%	38%		
0.080	5%	79%	11%	28%		
M.C.(%):	2%	40%	4%	7%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	60	0	45	29		
% SAND:	36	21	43	43		
% FINES:	5	79	11	28		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILT WITH SAND (ML)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)		

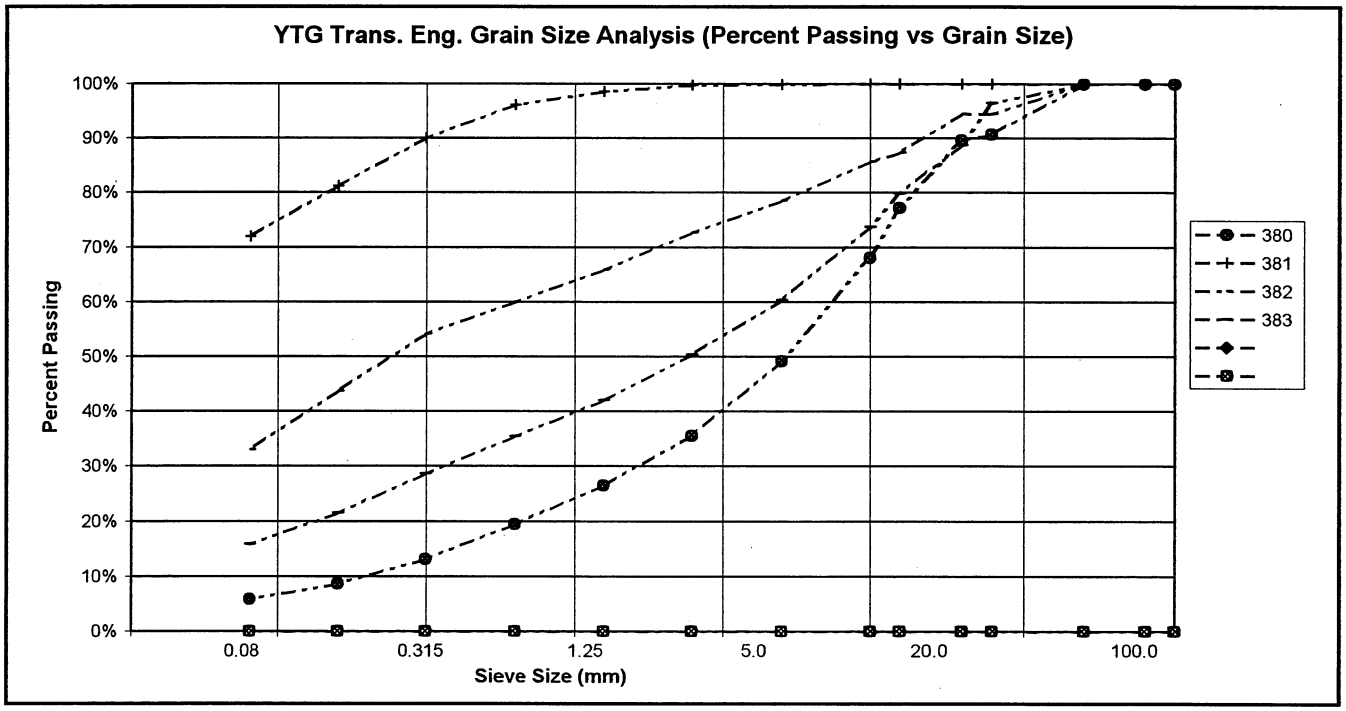


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1750+100 CL
LOGGED BY: W.E.

HOLE No.: 544-1397

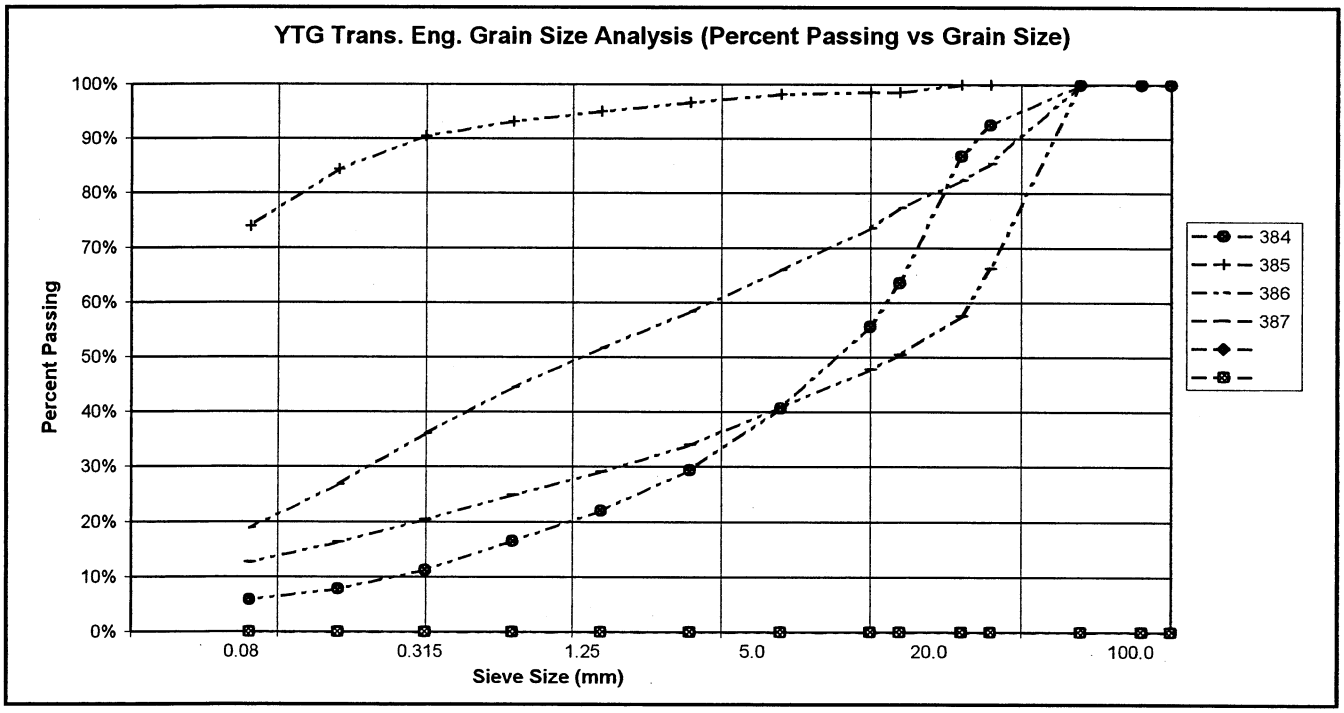
DATE COMP: 2000/05/17

FIELD NO:	380	381	382	383		
LAB NO:	683	684	685	686		
DEPTH:	1.1-1.3	2.0-2.2	3.0-3.2	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	91%	100%	94%	96%		
20.0	90%	100%	94%	89%		
12.5	77%	100%	87%	80%		
10.0	68%	100%	86%	74%		
5.0	49%	100%	79%	60%		
2.5	36%	100%	73%	50%		
1.25	27%	99%	66%	42%		
0.630	19%	96%	60%	35%		
0.315	13%	90%	54%	29%		
0.160	9%	81%	44%	21%		
0.080	6%	72%	33%	16%		
M.C.(%):	2%	37%	11%	4%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	51	0	21	40		
% SAND:	43	28	46	44		
% FINES:	6	72	33	16		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		



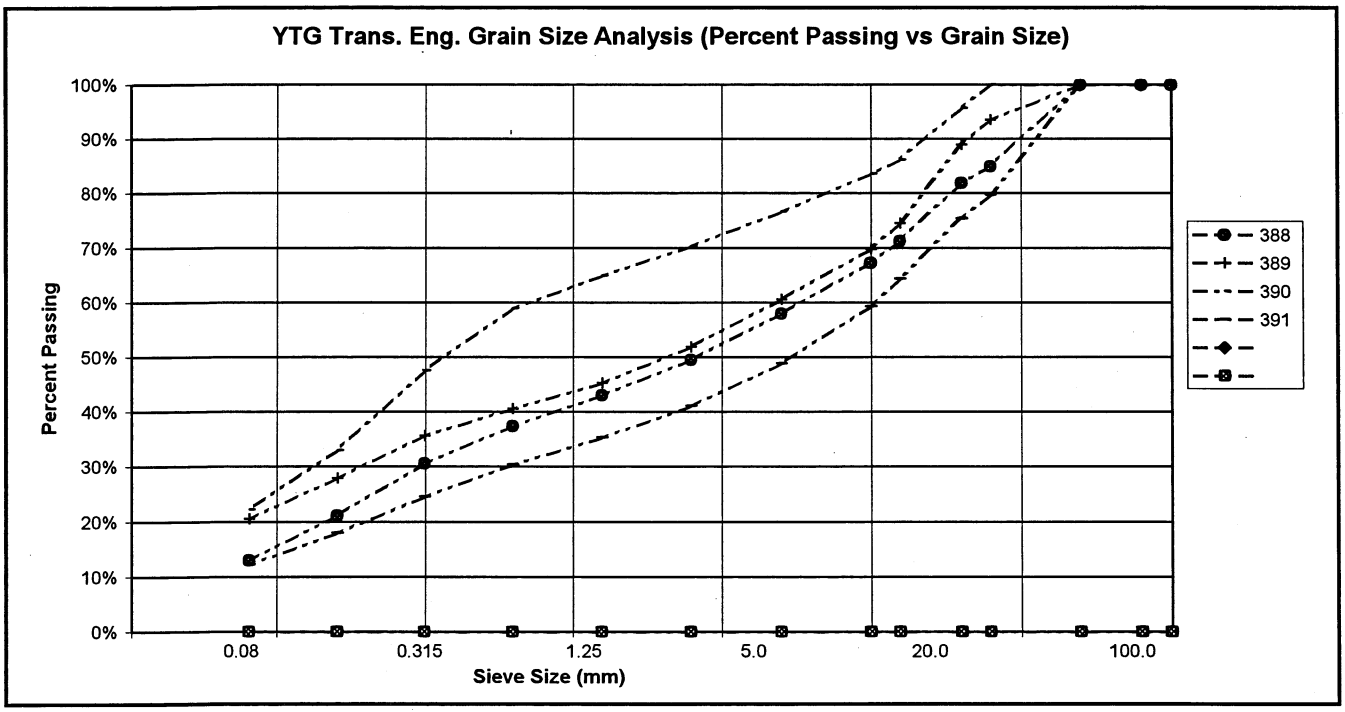
PROJECT NUMBER:	092-202101-0361-1	HOLE No.:	544-1398
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1750+200 15M LT		
LOGGED BY:	W.E.	DATE COMP:	2000/05/17

FIELD NO:	384	385	386	387		
LAB NO:	687	688	689	690		
DEPTH:	1.4-1.6	2.0-2.4	3.0-3.2	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	93%	100%	85%	66%		
20.0	87%	100%	82%	57%		
12.5	64%	99%	77%	50%		
10.0	56%	99%	74%	48%		
5.0	41%	98%	66%	41%		
2.5	29%	97%	58%	34%		
1.25	22%	95%	52%	29%		
0.630	17%	93%	44%	25%		
0.315	11%	91%	36%	20%		
0.160	8%	84%	27%	16%		
0.080	6%	74%	19%	13%		
M.C.(%):	2%	24%	7%	5%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	59	2	34	59		
% SAND:	35	24	47	28		
% FINES:	6	74	19	13		
CLASSIFICATION	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)		



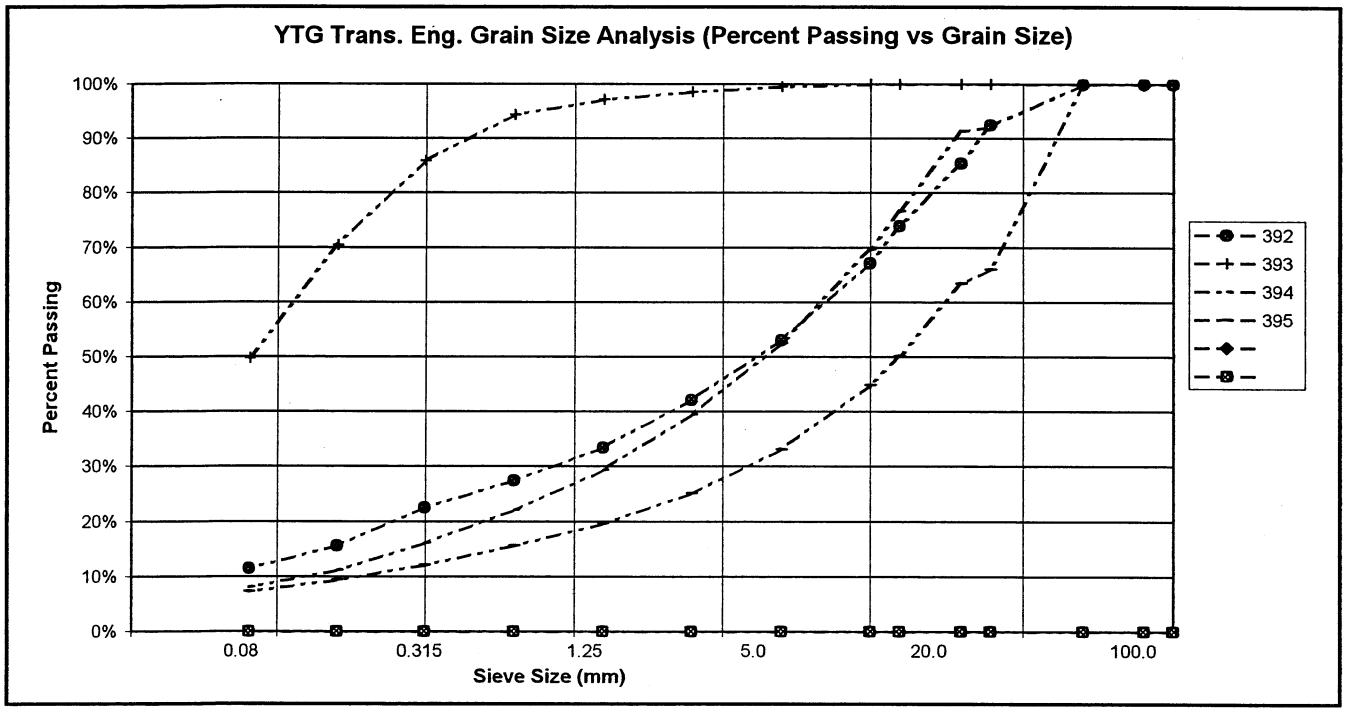
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 544-1399
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1750+240 15M RT		
LOGGED BY:	W.E.		DATE COMP: 2000/05/17

FIELD NO:	388	389	390	391		
LAB NO:	691	692	693	694		
DEPTH:	0.8-1.0	1.9-2.1	3.0-3.2	4.4-4.6		
TYPE:	AUGER	#N/A	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	85%	94%	100%	80%		
20.0	82%	89%	96%	75%		
12.5	71%	75%	86%	64%		
10.0	67%	70%	84%	59%		
5.0	58%	61%	77%	49%		
2.5	49%	52%	70%	41%		
1.25	43%	45%	65%	35%		
0.630	37%	41%	59%	30%		
0.315	31%	36%	48%	25%		
0.160	21%	28%	33%	18%		
0.080	13%	21%	22%	12%		
M.C.(%):	3%	5%	7%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	42	39	23	51		
% SAND:	45	40	54	37		
% FINES:	13	21	22	12		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)		



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 544-1400
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1750+300 CL		
LOGGED BY:	W.E.		DATE COMP: 2000/05/17

FIELD NO:	392	393	394	395		
LAB NO:	695	696	697	698		
DEPTH:	1.4-1.6	2.0-2.2	2.9-3.1	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	92%	100%	92%	66%		
20.0	85%	100%	91%	63%		
12.5	74%	100%	77%	50%		
10.0	67%	100%	70%	45%		
5.0	53%	100%	52%	33%		
2.5	42%	99%	39%	25%		
1.25	33%	97%	29%	20%		
0.630	28%	94%	22%	16%		
0.315	22%	86%	16%	12%		
0.160	16%	70%	11%	9%		
0.080	11%	50%	8%	7%		
M.C.(%):	2%	25%	3%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	47	0	48	67		
% SAND:	42	50	44	26		
% FINES:	11	50	8	7		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND (SM)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

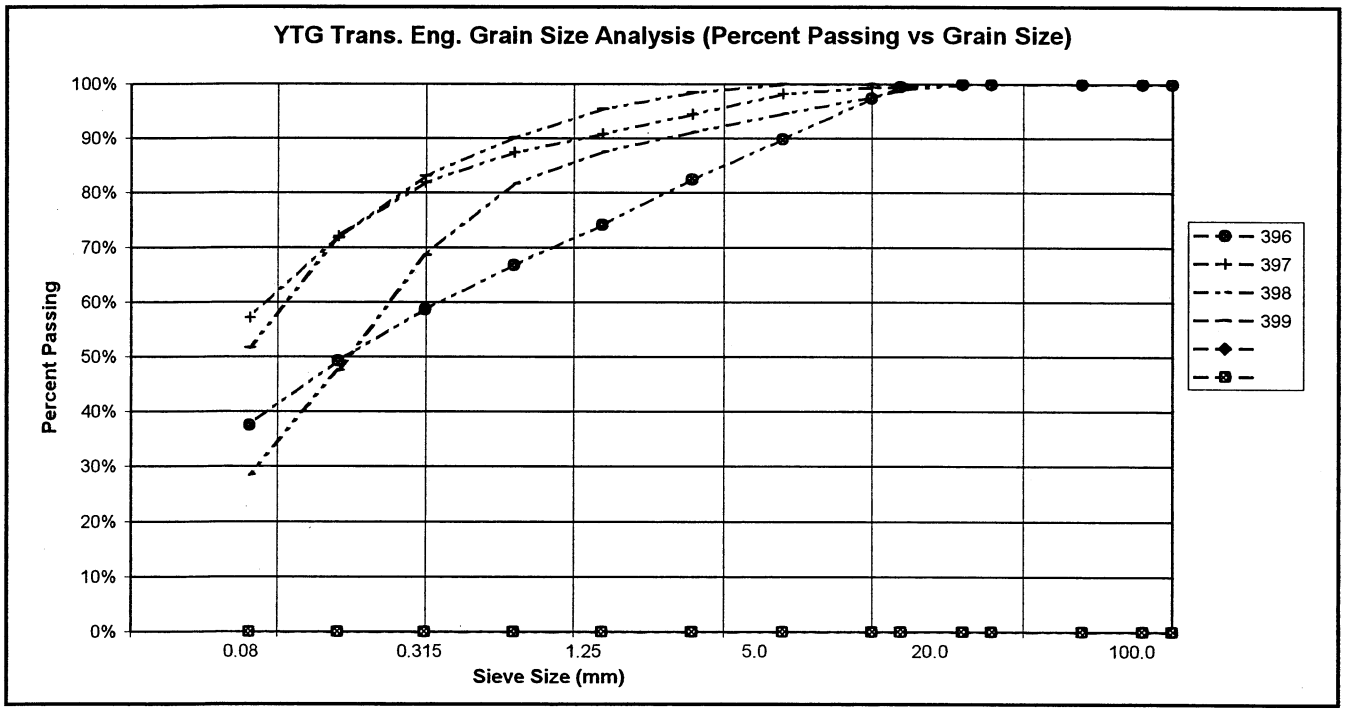


PROJECT NUMBER:	092-202101-0361-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 11
PROJECT LOCATION:	KM 1729.6-1787 A/H
DRILL UNIT:	MOBILE B40 L
HOLE LOCATION:	1750+375 20M LT
LOGGED BY:	W.E.

HOLE No.: 544-1401

DATE COMP: 2000/05/17

FIELD NO:	396	397	398	399		
LAB NO:	699	700	701	7.2		
DEPTH:	1.3-1.5	2.0-2.2	3.0-3.2	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	100%	100%		
12.5	99%	99%	99%	100%		
10.0	97%	99%	98%	100%		
5.0	90%	98%	95%	100%		
2.5	83%	95%	91%	98%		
1.25	74%	91%	88%	95%		
0.630	67%	87%	82%	90%		
0.315	59%	82%	69%	83%		
0.160	49%	72%	48%	72%		
0.080	38%	57%	28%	52%		
M.C.(%):	7%	14%	4%	9%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	10	2	5	0		
% SAND:	52	41	66	48		
% FINES:	38	57	28	52		
CLASSIFICATION	SILTY SAND (SM)	SANDY SILT (ML)	SILTY SAND (SM)	SANDY SILT (ML)		

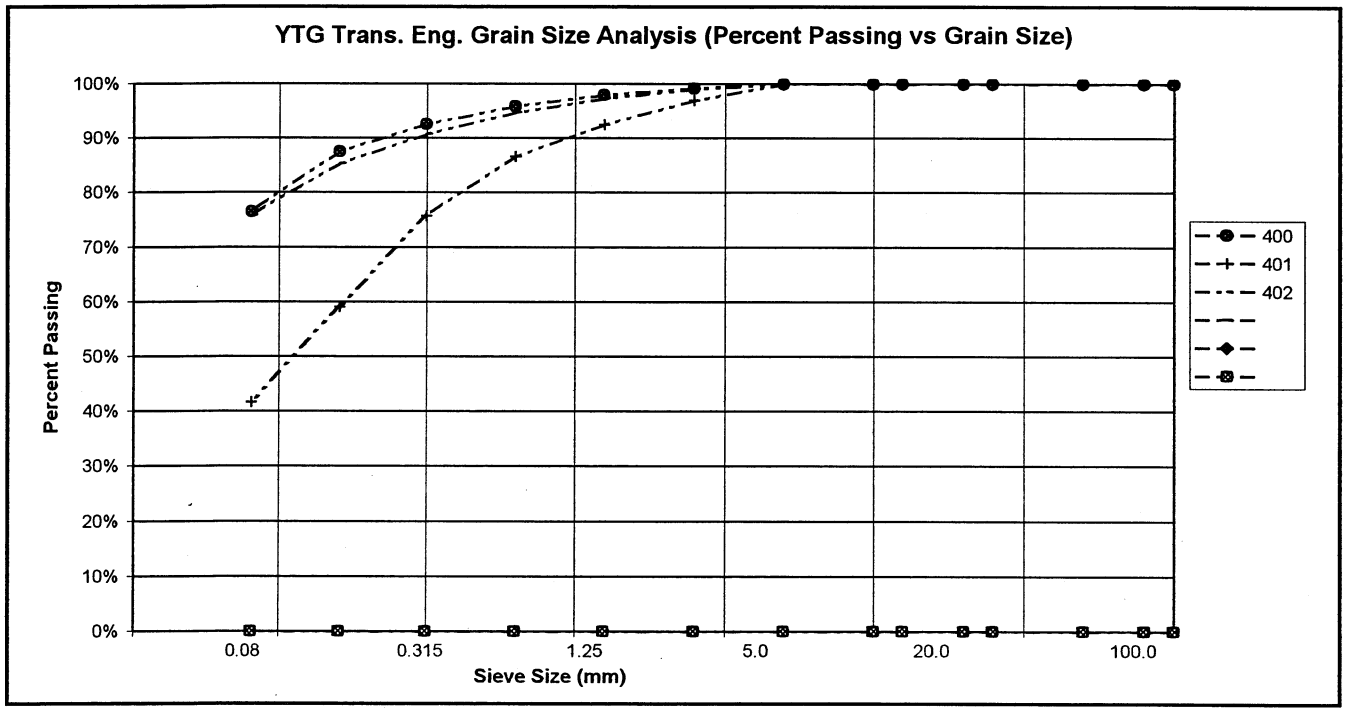


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1750+365 20M RT
LOGGED BY: W.E.

HOLE No.: 544-1402

DATE COMP: 2000/05/17

FIELD NO:	400	401	402			
LAB NO:	703	704	705			
DEPTH:	2.0-2.2	3.0-3.2	4.4-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	100%	100%			
12.5	100%	100%	100%			
10.0	100%	100%	100%			
5.0	100%	100%	100%			
2.5	99%	97%	99%			
1.25	98%	93%	97%			
0.630	96%	87%	95%			
0.315	93%	76%	91%			
0.160	88%	59%	85%			
0.080	77%	42%	76%			
M.C.(%):	24%	10%	18%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	0	0	0			
% SAND:	23	58	24			
% FINES:	77	42	76			
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND (SM)	SILT WITH SAND (ML)			

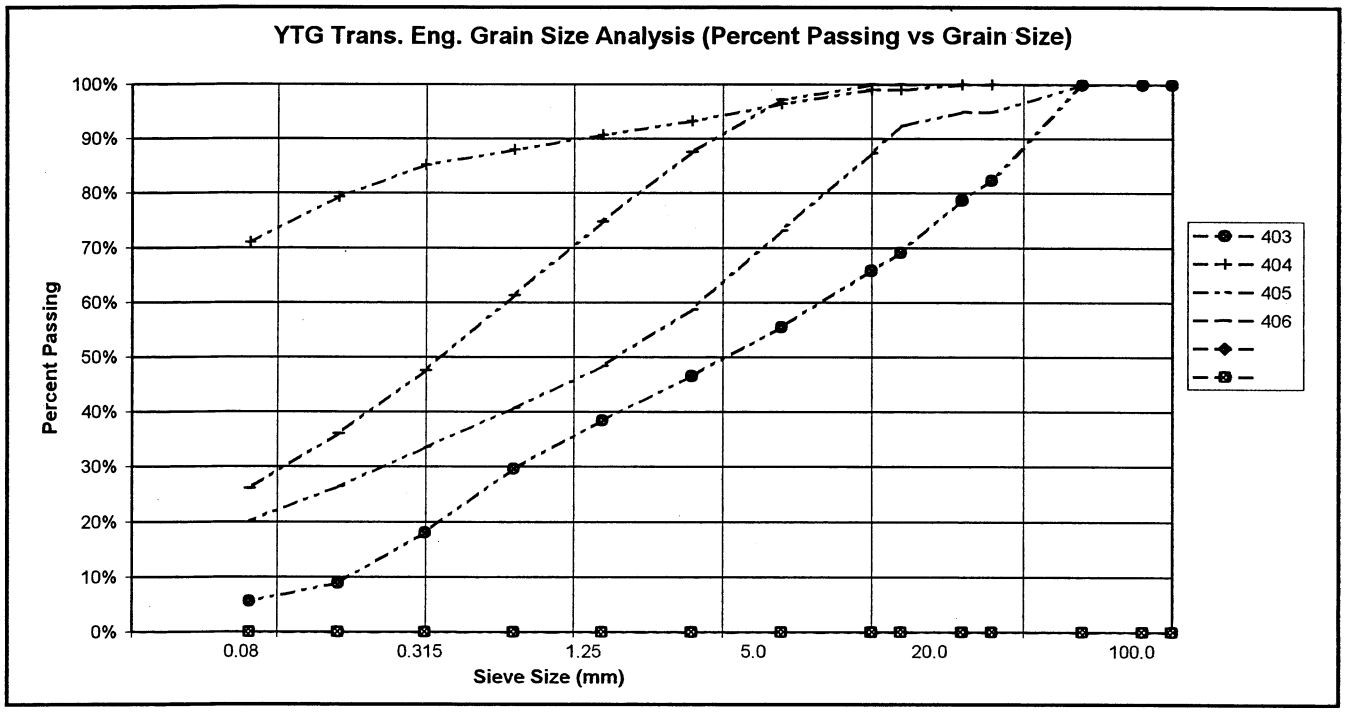


PROJECT NUMBER:	092-202101-0361-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 11
PROJECT LOCATION:	KM 1729.6-1787 A/H
DRILL UNIT:	MOBILE B40 L
HOLE LOCATION:	1750+500 6M LT
LOGGED BY:	W.E.

HOLE No.: 544-1403

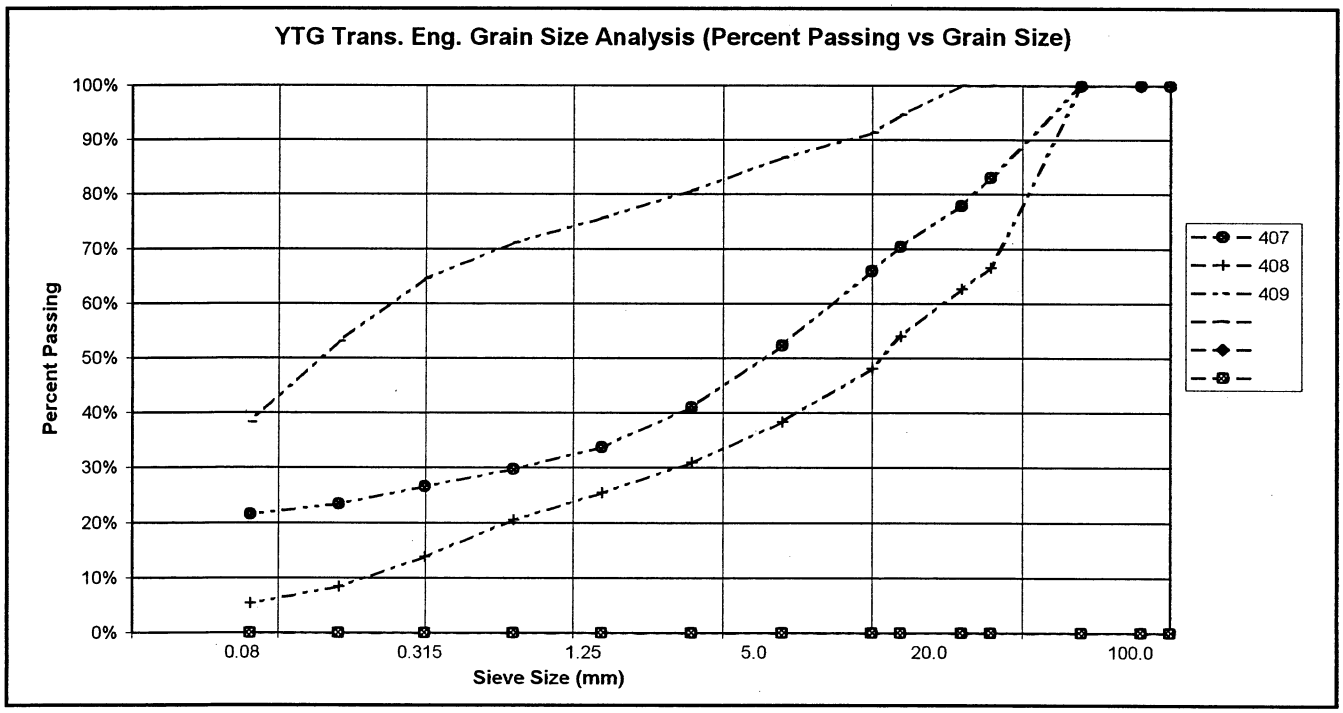
DATE COMP: 2000/05/17

FIELD NO:	403	404	405	406		
LAB NO:	706	707	708	709		
DEPTH:	1.4-1.6	1.8-2.0	2.1-2.4	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	82%	100%	95%	100%		
20.0	79%	100%	95%	100%		
12.5	69%	99%	92%	100%		
10.0	66%	99%	87%	100%		
5.0	55%	97%	73%	97%		
2.5	47%	93%	59%	88%		
1.25	39%	91%	48%	75%		
0.630	30%	88%	41%	61%		
0.315	18%	85%	34%	47%		
0.160	9%	79%	26%	36%		
0.080	6%	71%	20%	26%		
M.C.(%):	2%	30%	13%	16%		
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:	45	3	27	3		
% SAND:	50	25	53	71		
% FINES:	6	71	20	26		
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)		



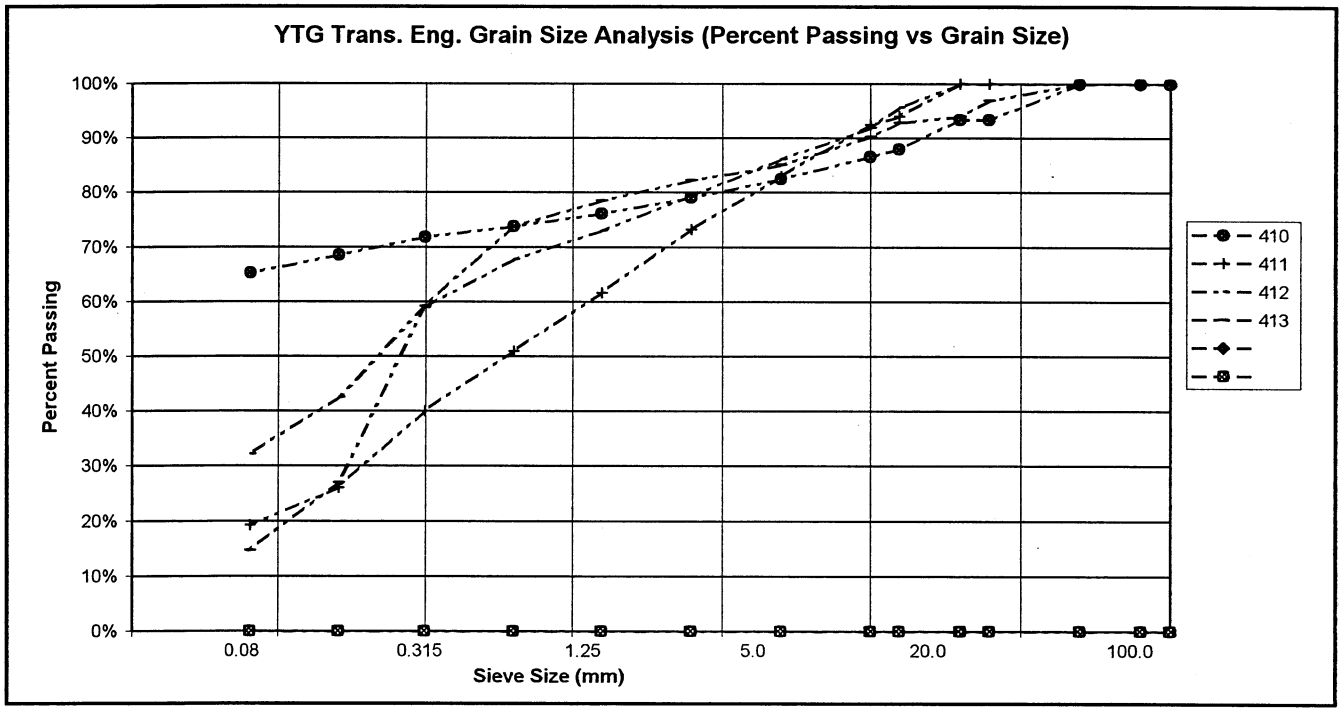
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 544-1404
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1750+600 CL		
LOGGED BY:	W.E.		DATE COMP: 2000/05/17

FIELD NO:	407	408	409			
LAB NO:	710	711	712			
DEPTH:	1.4-1.6	2.9-3.1	4.4-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	83%	67%	100%			
20.0	78%	63%	100%			
12.5	70%	54%	95%			
10.0	66%	48%	91%			
5.0	52%	38%	87%			
2.5	41%	31%	81%			
1.25	34%	25%	76%			
0.630	30%	21%	71%			
0.315	27%	14%	65%			
0.160	24%	8%	53%			
0.080	22%	5%	38%			
M.C.(%):	2%	2%	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:	48	62	13			
% SAND:	31	33	48			
% FINES:	22	5	38			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND (SM)			



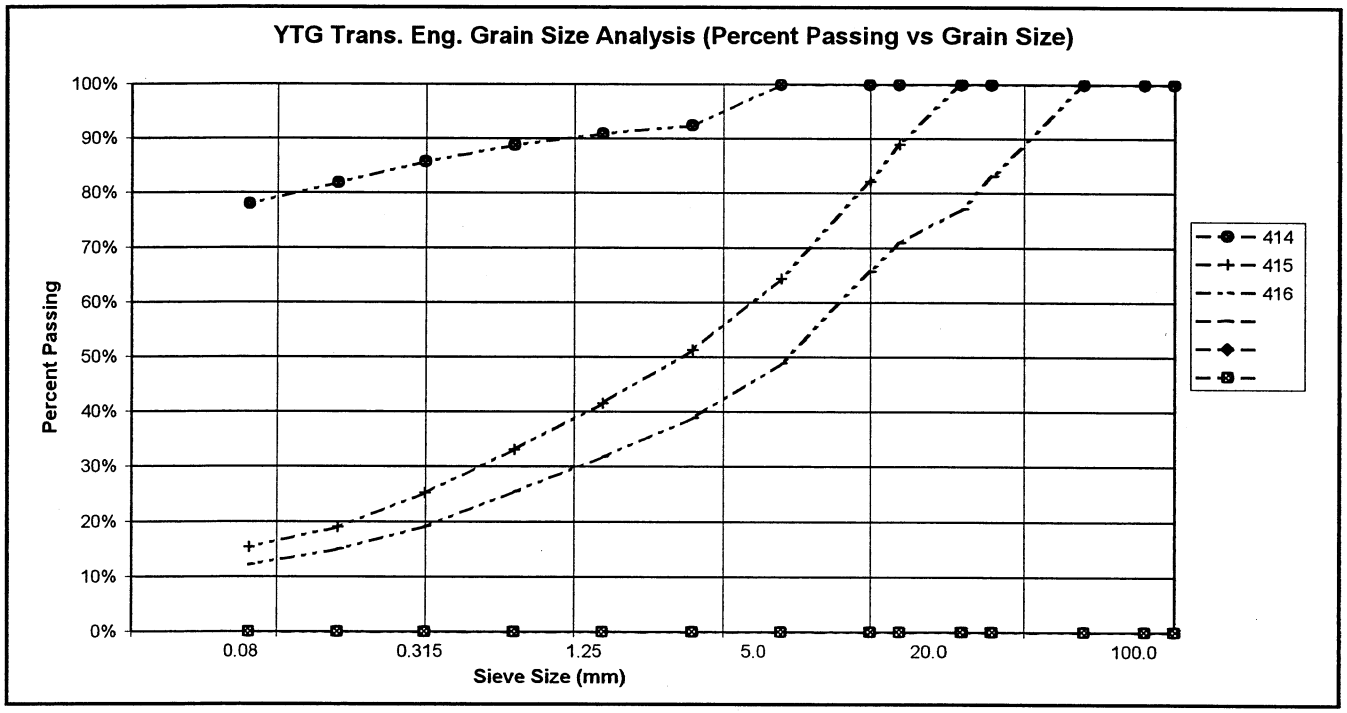
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 544-1405
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1750+700 CL		
LOGGED BY:	W.E.		DATE COMP: 2000/05/17

FIELD NO:	410	411	412	413		
LAB NO:	713	714	713	714		
DEPTH:	1.4-1.6	1.9-2.1	2.9-3.1	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	93%	100%	100%	97%		
20.0	93%	100%	100%	94%		
12.5	88%	94%	96%	93%		
10.0	87%	92%	92%	90%		
5.0	83%	83%	86%	85%		
2.5	79%	73%	79%	82%		
1.25	76%	62%	73%	79%		
0.630	74%	51%	68%	74%		
0.315	72%	40%	59%	59%		
0.160	69%	26%	43%	27%		
0.080	65%	19%	32%	15%		
M.C.(%):	11%	13%	14%	6%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	17	17	14	15		
% SAND:	17	64	54	70		
% FINES:	65	19	32	15		
CLASSIFICATION	GRAVELLY SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	SILTY SAND (SM)		



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 544-1406
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1750+810 20M LT		
LOGGED BY:	W.E.		DATE COMP: 2000/05/17

FIELD NO:	414	415	416			
LAB NO:	717	718	719			
DEPTH:	1.4-1.6	2.9-3.1	4.4-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	83%			
20.0	100%	100%	77%			
12.5	100%	89%	71%			
10.0	100%	82%	66%			
5.0	100%	64%	49%			
2.5	92%	51%	39%			
1.25	91%	42%	32%			
0.630	89%	33%	26%			
0.315	86%	25%	19%			
0.160	82%	19%	15%			
0.080	78%	15%	12%			
M.C.(%):	46%	5%	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:	0	36	51			
% SAND:	22	49	37			
% FINES:	78	15	12			
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)			

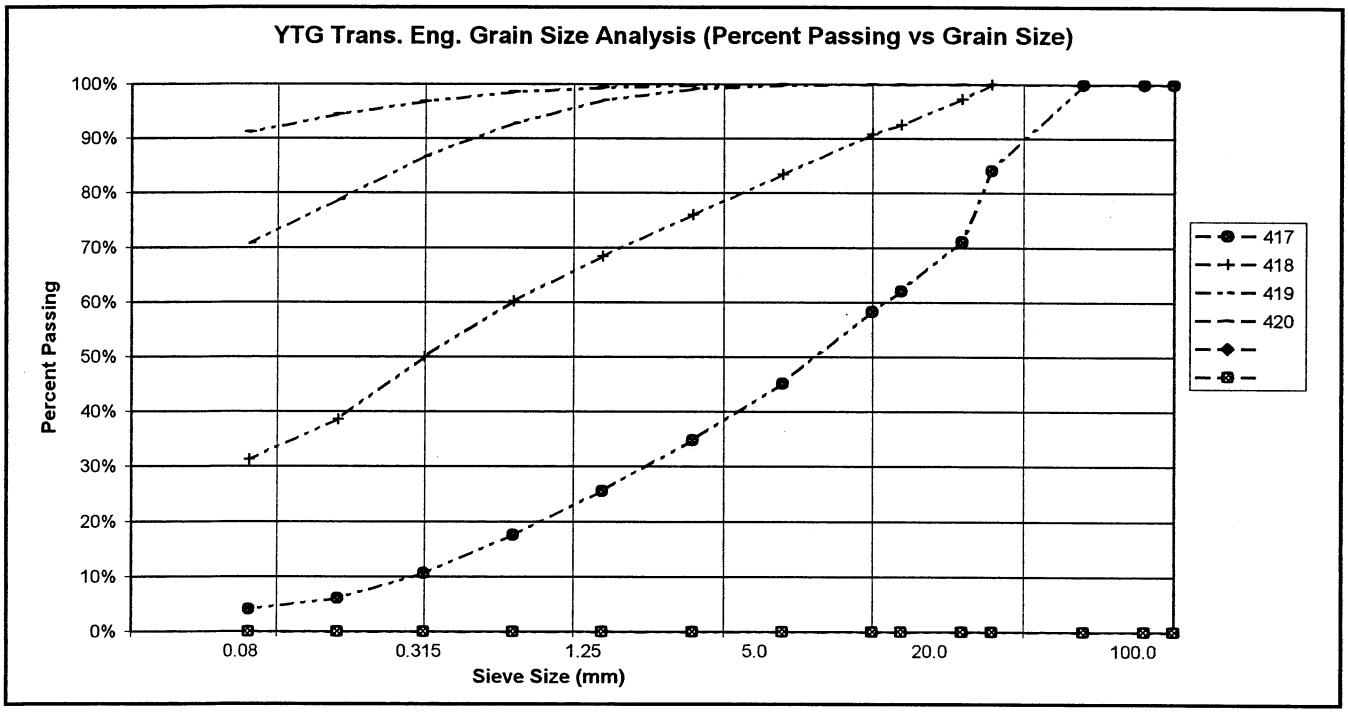


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1750+810 20M RT
LOGGED BY: W.E.

HOLE No.: 544-1407

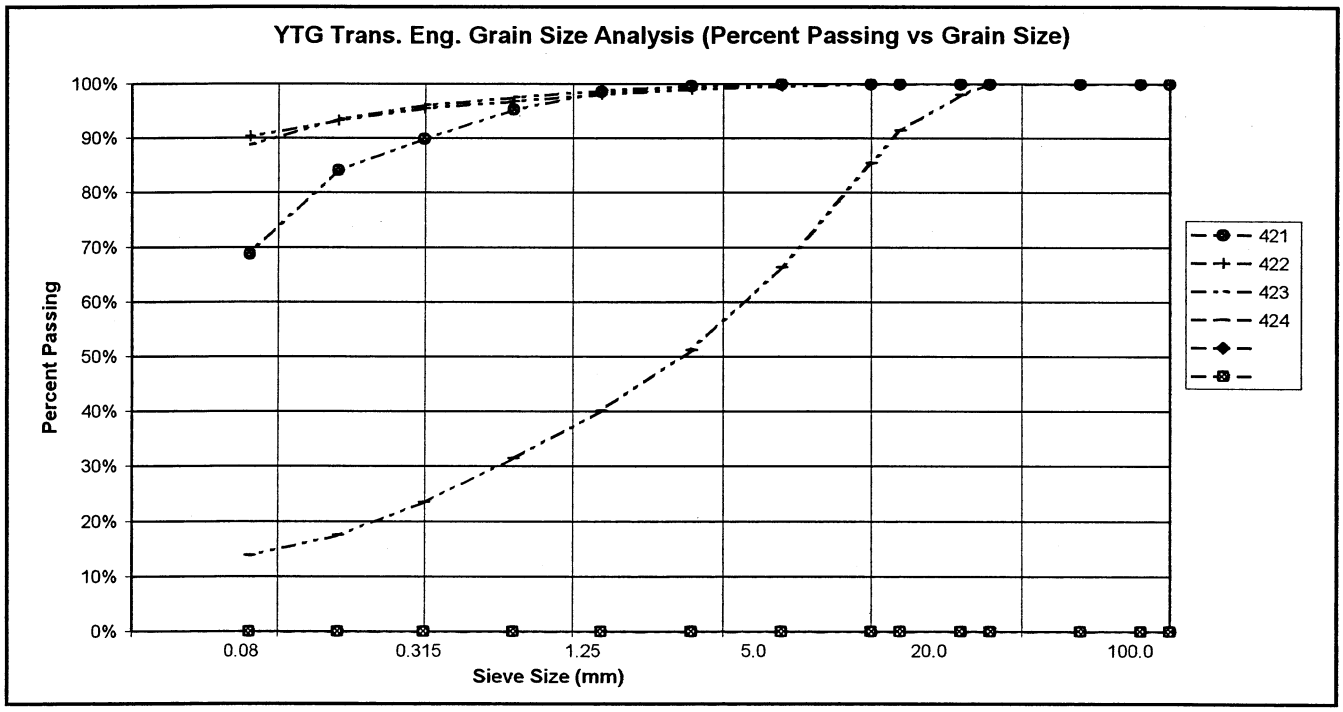
DATE COMP: 2000/05/17

FIELD NO:	417	418	419	420		
LAB NO:	720	721	722	723		
DEPTH:	1.4-1.6	2.0-2.2	3.0-3.2	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	84%	100%	100%	100%		
20.0	71%	97%	100%	100%		
12.5	62%	93%	100%	100%		
10.0	58%	91%	100%	100%		
5.0	45%	83%	100%	100%		
2.5	35%	76%	99%	100%		
1.25	26%	68%	97%	99%		
0.630	18%	60%	93%	99%		
0.315	11%	50%	87%	97%		
0.160	6%	39%	79%	94%		
0.080	4%	31%	71%	91%		
M.C.(%):	1%	10%	17%	32%		
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:	55	17	0	0		
% SAND:	41	52	29	9		
% FINES:	4	31	71	91		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND WITH GRAVEL (SM)	SILT WITH SAND (ML)	SILT (ML)		



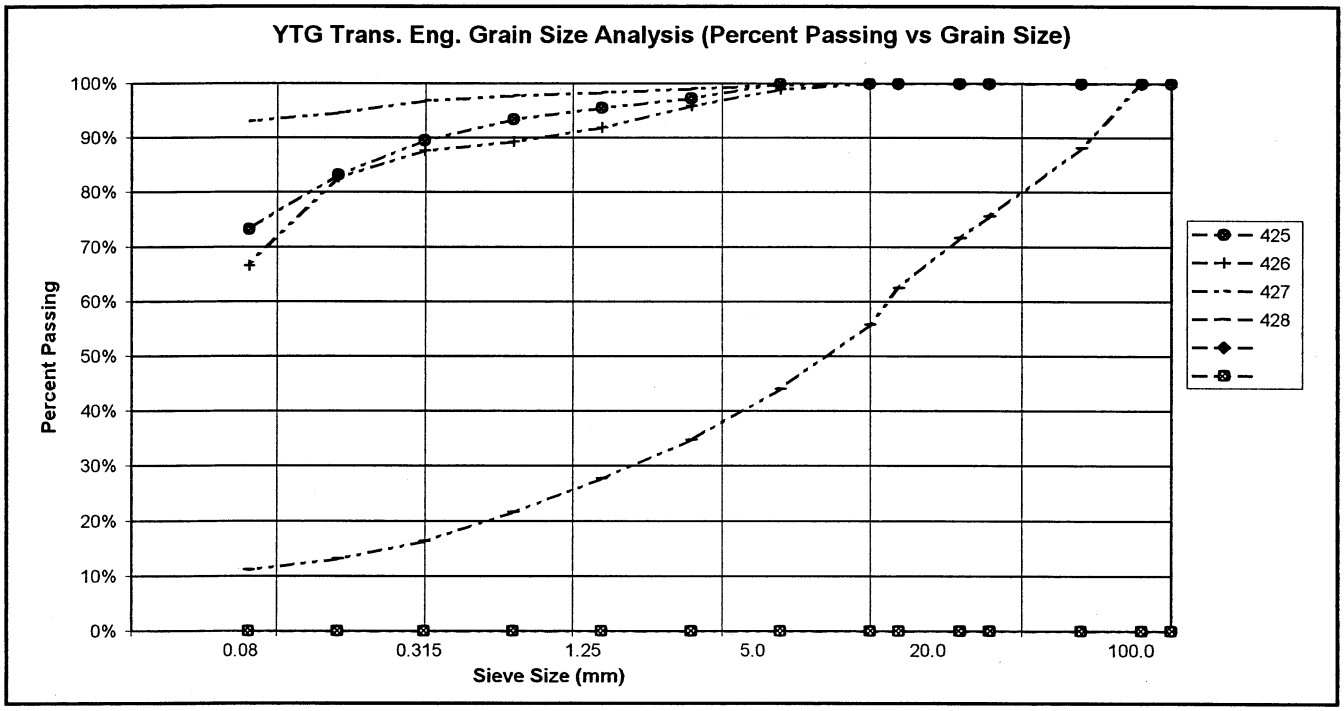
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 544-1408
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1750+900 CL		
LOGGED BY:	W.E.		DATE COMP: 2000/05/17

FIELD NO:	421	422	423	424		
LAB NO:	724	725	726	727		
DEPTH:	0.6-0.8	1.9-2.1	3.0-3.2	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	100%	98%		
12.5	100%	100%	100%	91%		
10.0	100%	100%	100%	85%		
5.0	100%	100%	100%	66%		
2.5	100%	99%	100%	51%		
1.25	99%	98%	99%	40%		
0.630	95%	97%	98%	32%		
0.315	90%	96%	96%	23%		
0.160	84%	93%	94%	17%		
0.080	69%	90%	89%	14%		
M.C.(%):	6%	47%	33%	6%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	0	0	34		
% SAND:	31	9	11	53		
% FINES:	69	90	89	14		
CLASSIFICATION	SANDY SILT (ML)	SILT (ML)	SILT (ML)	SILTY SAND WITH GRAVEL (SM)		



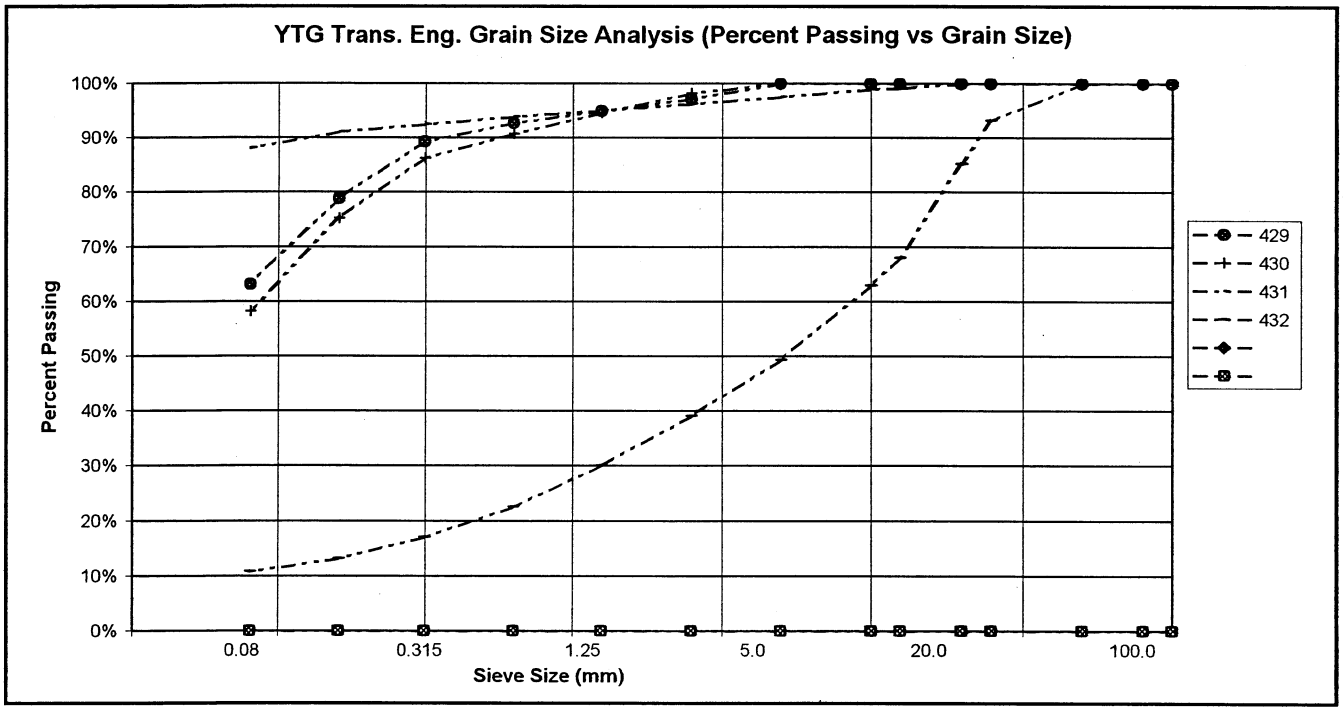
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 544-1409
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1751+000 CL		
LOGGED BY:	W.E.		DATE COMP: 2000/05/18

FIELD NO:	425	426	427	428		
LAB NO:	728	729	730	731		
DEPTH:	1.4-1.6	2.2-2.4	3.0-3.2	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	88%		
25.0	100%	100%	100%	76%		
20.0	100%	100%	100%	72%		
12.5	100%	100%	100%	62%		
10.0	100%	100%	100%	56%		
5.0	100%	99%	100%	44%		
2.5	97%	96%	99%	35%		
1.25	96%	92%	98%	28%		
0.630	93%	89%	98%	22%		
0.315	90%	88%	97%	16%		
0.160	83%	83%	95%	13%		
0.080	73%	67%	93%	11%		
M.C.(%):	19%	27%	35%	5%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	1	0	56		
% SAND:	27	32	7	33		
% FINES:	73	67	93	11		
CLASSIFICATION	SILT WITH SAND (ML)	SANDY SILT (ML)	SILT (ML)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 544-1410
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1751+100 CL		
LOGGED BY:	W.E.		DATE COMP: 2000/05/18

FIELD NO:	429	430	431	432		
LAB NO:	732	733	734	735		
DEPTH:	1.4-1.6	2.1-2.3	3.0-3.2	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	93%		
20.0	100%	100%	100%	85%		
12.5	100%	100%	99%	68%		
10.0	100%	100%	99%	63%		
5.0	100%	100%	98%	49%		
2.5	97%	98%	96%	39%		
1.25	95%	95%	95%	30%		
0.630	93%	91%	94%	23%		
0.315	89%	86%	93%	17%		
0.160	79%	75%	91%	13%		
0.080	63%	58%	88%	11%		
M.C.(%):	23%	22%	26%	5%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	0	2	51		
% SAND:	37	42	9	39		
% FINES:	63	58	88	11		
CLASSIFICATION	SANDY SILT (ML)	SANDY SILT (ML)	SILT (ML)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

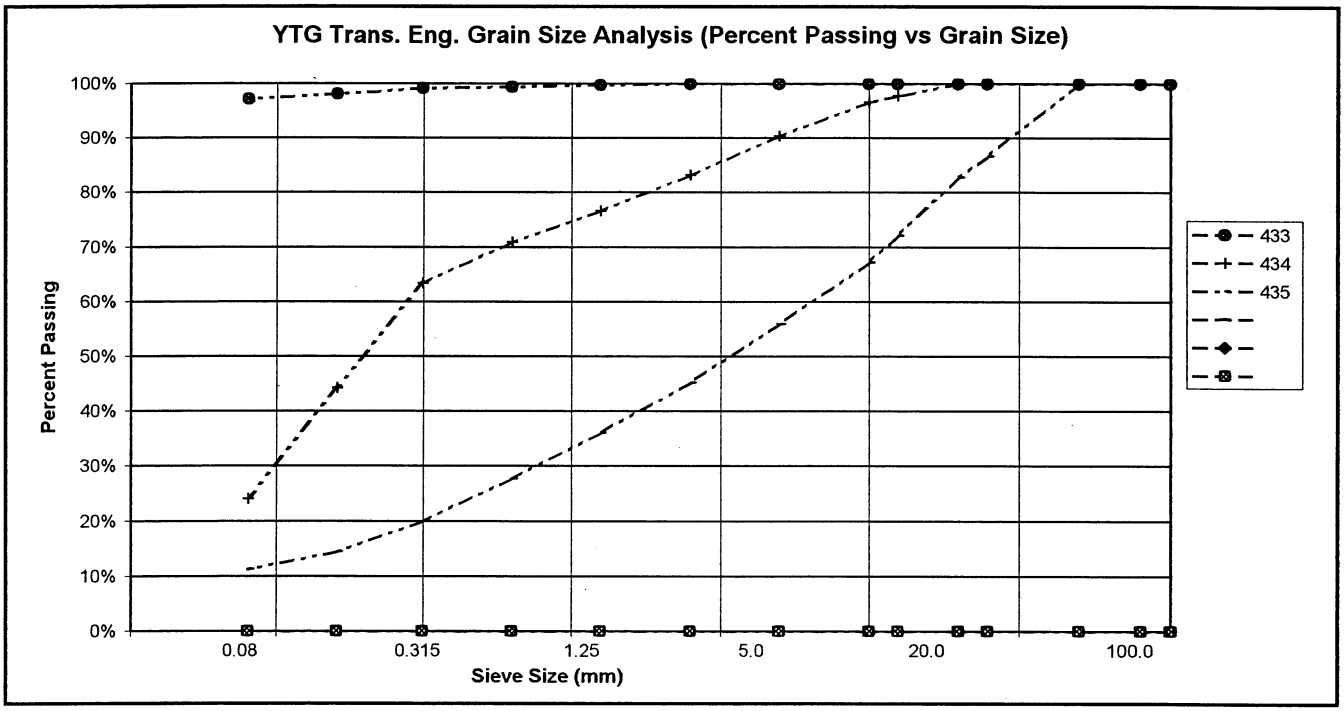


PROJECT NUMBER:	092-202101-0361-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 11
PROJECT LOCATION:	KM 1729.6-1787 A/H
DRILL UNIT:	MOBILE B40 L
HOLE LOCATION:	1751+210 CL
LOGGED BY:	W.E.

HOLE No.: 544-1411

DATE COMP: 2000/05/18

FIELD NO:	433	434	435			
LAB NO:	736	737	738			
DEPTH:	1.4-1.6	2.0-2.2	4.4-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	87%			
20.0	100%	100%	83%			
12.5	100%	98%	72%			
10.0	100%	97%	67%			
5.0	100%	90%	56%			
2.5	100%	83%	45%			
1.25	100%	77%	36%			
0.630	99%	71%	28%			
0.315	99%	63%	20%			
0.160	98%	44%	14%			
0.080	97%	24%	11%			
M.C.(%):	31%	6%	3%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	0	10	44			
% SAND:	3	66	45			
% FINES:	97	24	11			
CLASSIFICATION	SILT (ML)	SILTY SAND (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)			

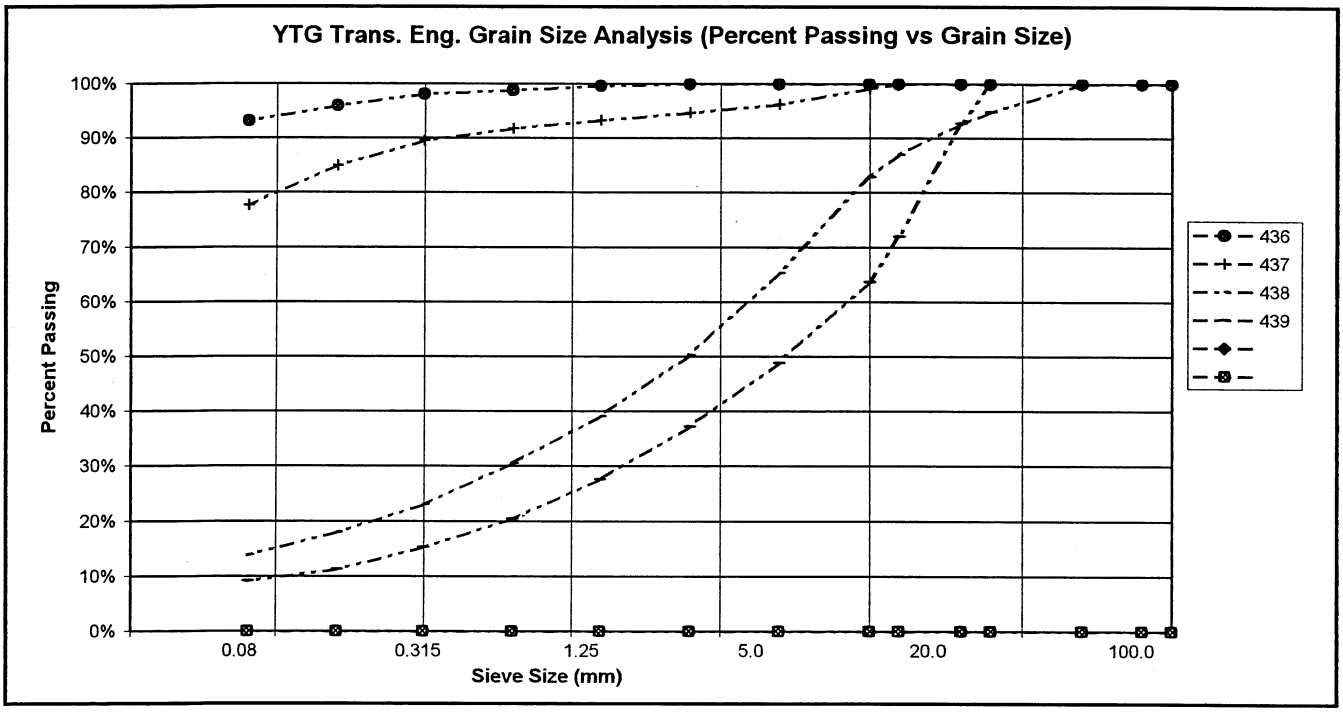


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1751+320 15M LT
LOGGED BY: W.E.

HOLE No.: 544-1412

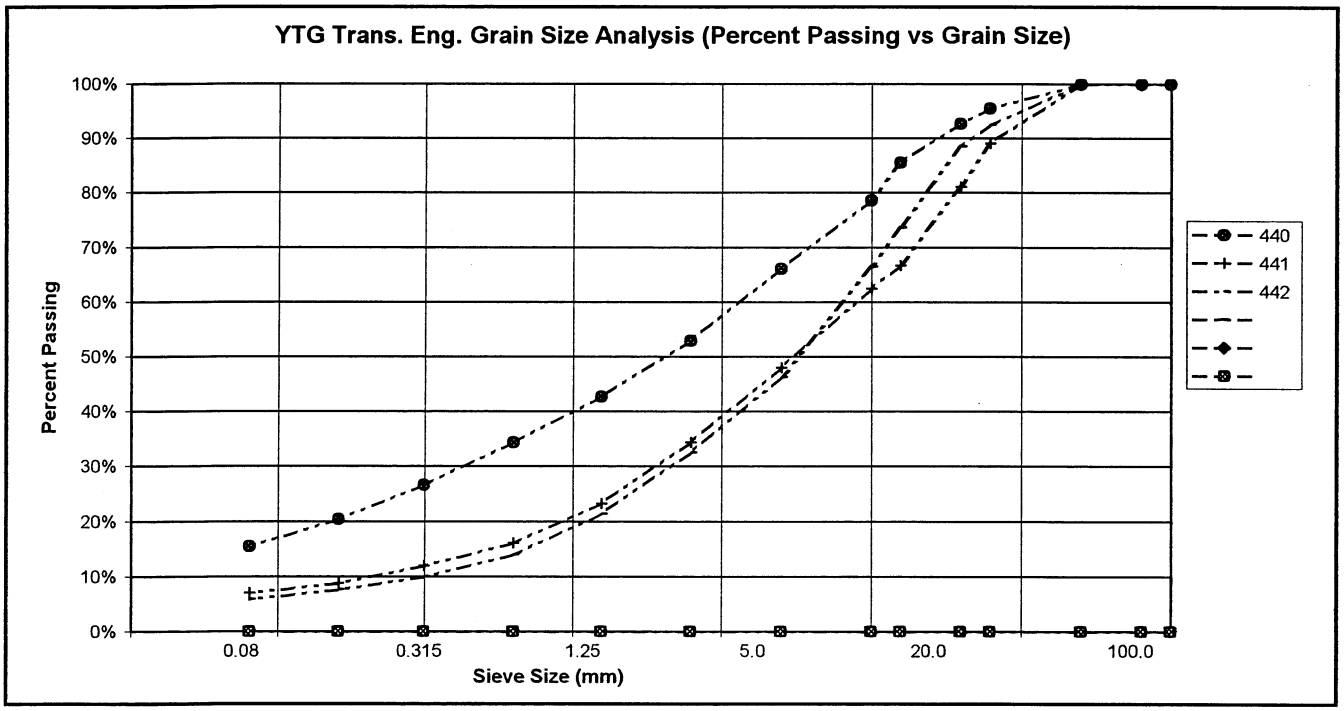
DATE COMP: 2000/05/18

FIELD NO:	436	437	438	439		
LAB NO:	739	740	741	742		
DEPTH:	1.4-1.6	1.9-2.1	2.9-3.1	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	95%		
20.0	100%	100%	93%	93%		
12.5	100%	100%	87%	72%		
10.0	100%	99%	83%	64%		
5.0	100%	96%	65%	49%		
2.5	100%	95%	50%	37%		
1.25	100%	93%	39%	28%		
0.630	99%	92%	31%	20%		
0.315	98%	90%	23%	15%		
0.160	96%	85%	18%	11%		
0.080	93%	78%	14%	9%		
M.C.(%):	30%	28%	6%	6%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	4	35	51		
% SAND:	7	19	51	40		
% FINES:	93	78	14	9		
CLASSIFICATION	SILT (ML)	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		



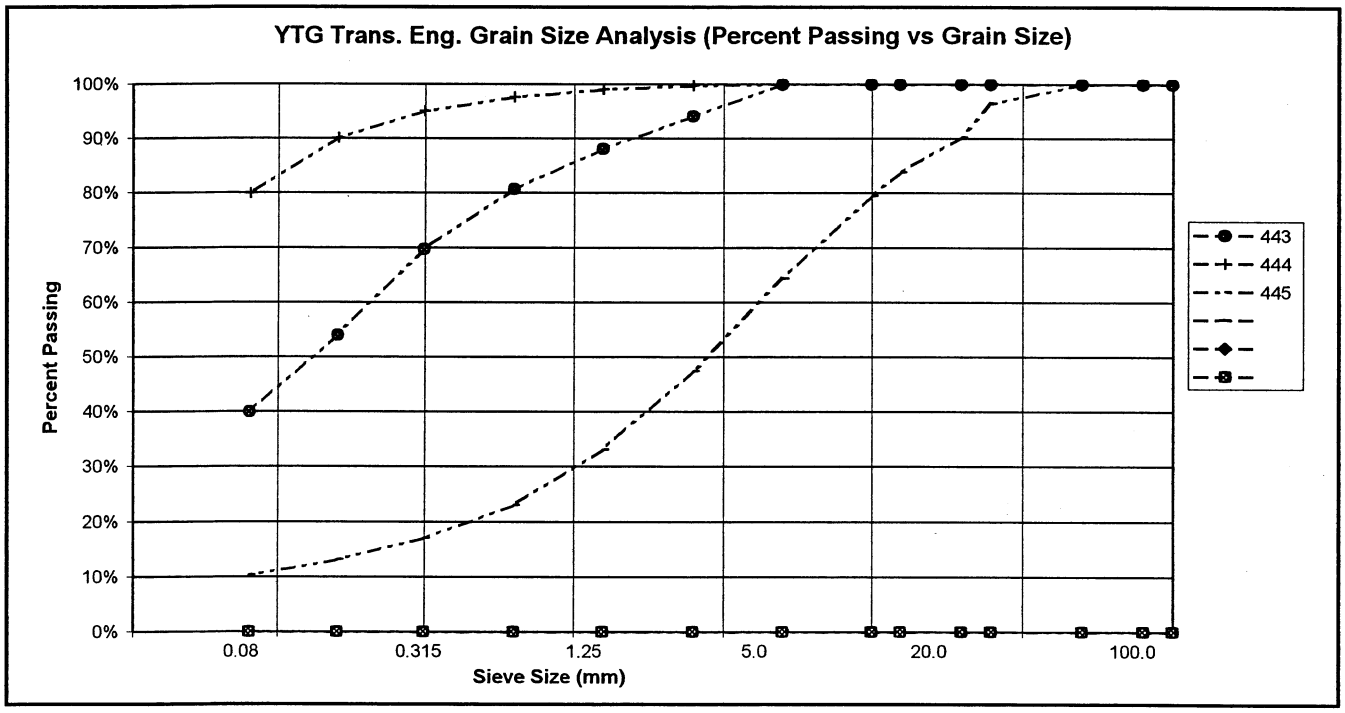
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 544-1413
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1751+325 15M RT		
LOGGED BY:	W.E.		DATE COMP: 2000/05/18

FIELD NO:	440	441	442			
LAB NO:	743	744	745			
DEPTH:	1.2-1.4	2.8-3.0	4.4-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	95%	89%	92%			
20.0	93%	81%	88%			
12.5	86%	67%	74%			
10.0	79%	62%	66%			
5.0	66%	48%	46%			
2.5	53%	34%	32%			
1.25	43%	23%	21%			
0.630	34%	16%	14%			
0.315	27%	12%	10%			
0.160	20%	9%	8%			
0.080	16%	7%	6%			
M.C.(%):	3%	6%	8%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	34	52	54			
% SAND:	51	41	40			
% FINES:	16	7	6			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 544-1414
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1751+425 5M RT		
LOGGED BY:	W.E.		DATE COMP: 2000/05/18

FIELD NO:	443	444	445			
LAB NO:	746	747	748			
DEPTH:	1.4-1.6	3.0-3.2	4.4-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	96%			
20.0	100%	100%	90%			
12.5	100%	100%	84%			
10.0	100%	100%	79%			
5.0	100%	100%	64%			
2.5	94%	100%	47%			
1.25	88%	99%	33%			
0.630	81%	98%	23%			
0.315	70%	95%	17%			
0.160	54%	90%	13%			
0.080	40%	80%	10%			
M.C.(%):	13%	32%	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:	0	0	36			
% SAND:	60	20	54			
% FINES:	40	80	10			
CLASSIFICATION	SILTY SAND (SM)	SILT WITH SAND (ML)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)			

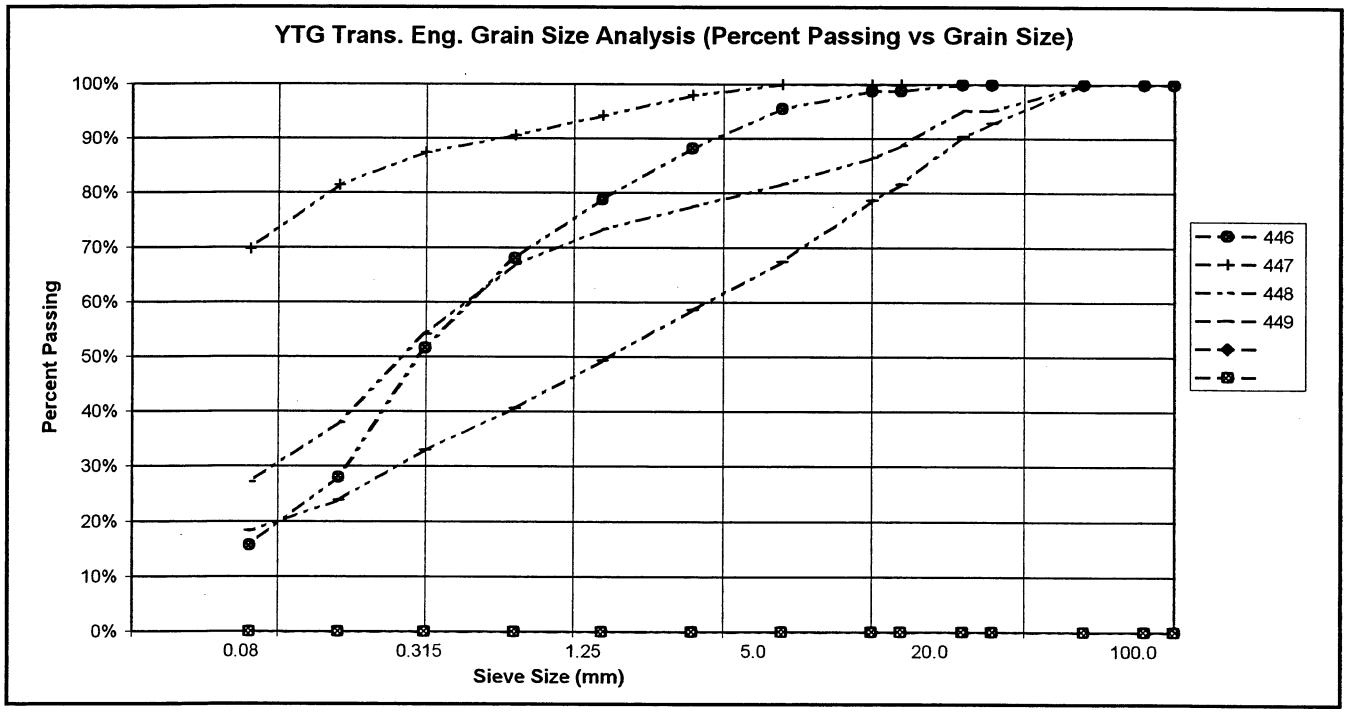


PROJECT NUMBER:	092-202101-0361-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 11
PROJECT LOCATION:	KM 1729.6-1787 A/H
DRILL UNIT:	MOBILE B40 L
HOLE LOCATION:	1751+525 CL
LOGGED BY:	W.E.

HOLE No.: 544-1415

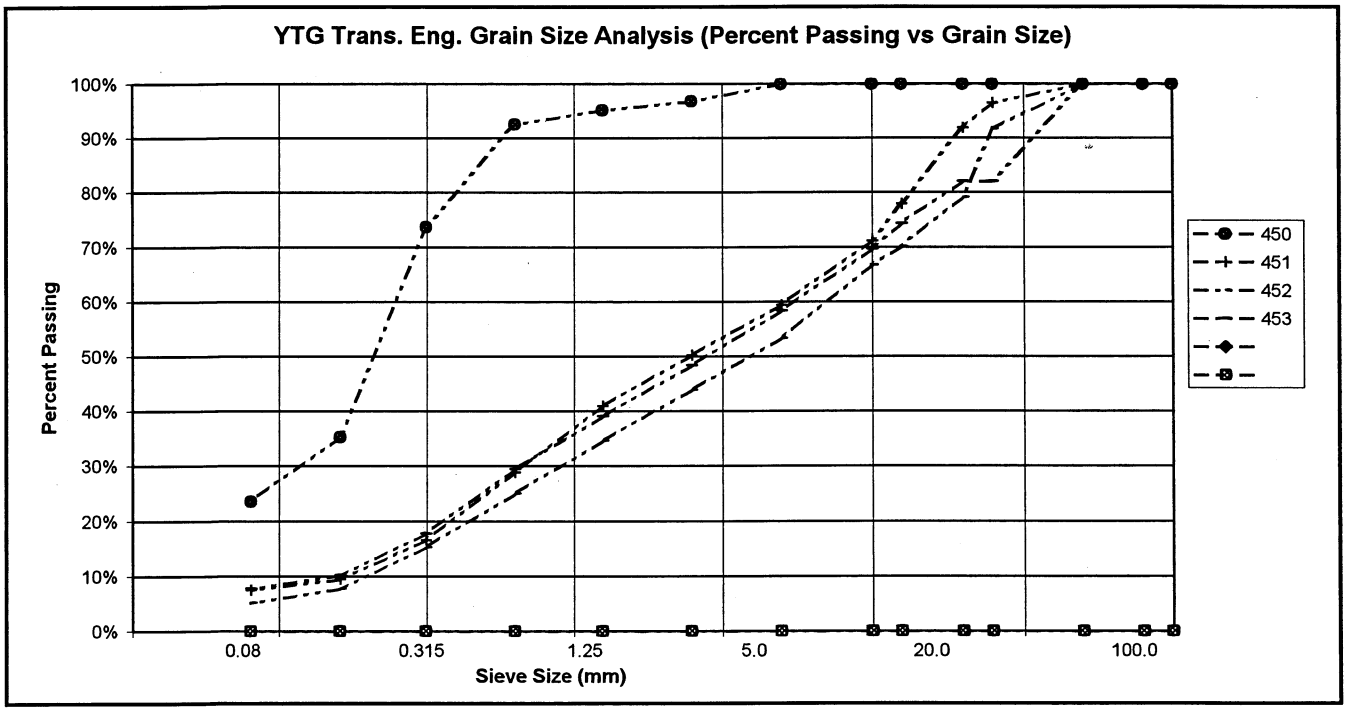
DATE COMP: 2000/05/18

FIELD NO:	446	447	448	449		
LAB NO:	749	750	751	752		
DEPTH:	0.9-1.0	1.4-1.6	2.9-3.1	4.5-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	95%	93%		
20.0	100%	100%	95%	90%		
12.5	99%	100%	89%	82%		
10.0	99%	100%	87%	79%		
5.0	96%	100%	82%	67%		
2.5	88%	98%	78%	59%		
1.25	79%	94%	73%	49%		
0.630	68%	91%	67%	41%		
0.315	52%	87%	54%	33%		
0.160	28%	81%	38%	24%		
0.080	16%	70%	27%	18%		
M.C.(%):	3%	21%	7%	5%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	4	0	18	33		
% SAND:	80	30	55	49		
% FINES:	16	70	27	18		
CLASSIFICATION	SILTY SAND (SM)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 544-1416
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1751+625 CL		
LOGGED BY:	W.E.		DATE COMP: 2000/05/18

FIELD NO:	450	451	452	453		
LAB NO:	753	754	755	756		
DEPTH:	1.0-1.2	2.9-3.1	3.9-4.1	4.9-5.1		
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%	96%	92%	82%		
20.0	100%	92%	79%	82%		
12.5	100%	78%	70%	74%		
10.0	100%	71%	67%	70%		
5.0	100%	59%	53%	58%		
2.5	97%	50%	44%	48%		
1.25	95%	41%	35%	39%		
0.630	93%	29%	25%	29%		
0.315	74%	17%	15%	18%		
0.160	35%	9%	8%	10%		
0.080	24%	7%	5%	8%		
M.C.(%):	4%	2%	1%	2%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	41	47	42		
% SAND:	76	52	48	51		
% FINES:	24	7	5	8		
CLASSIFICATION	SILTY SAND (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)		

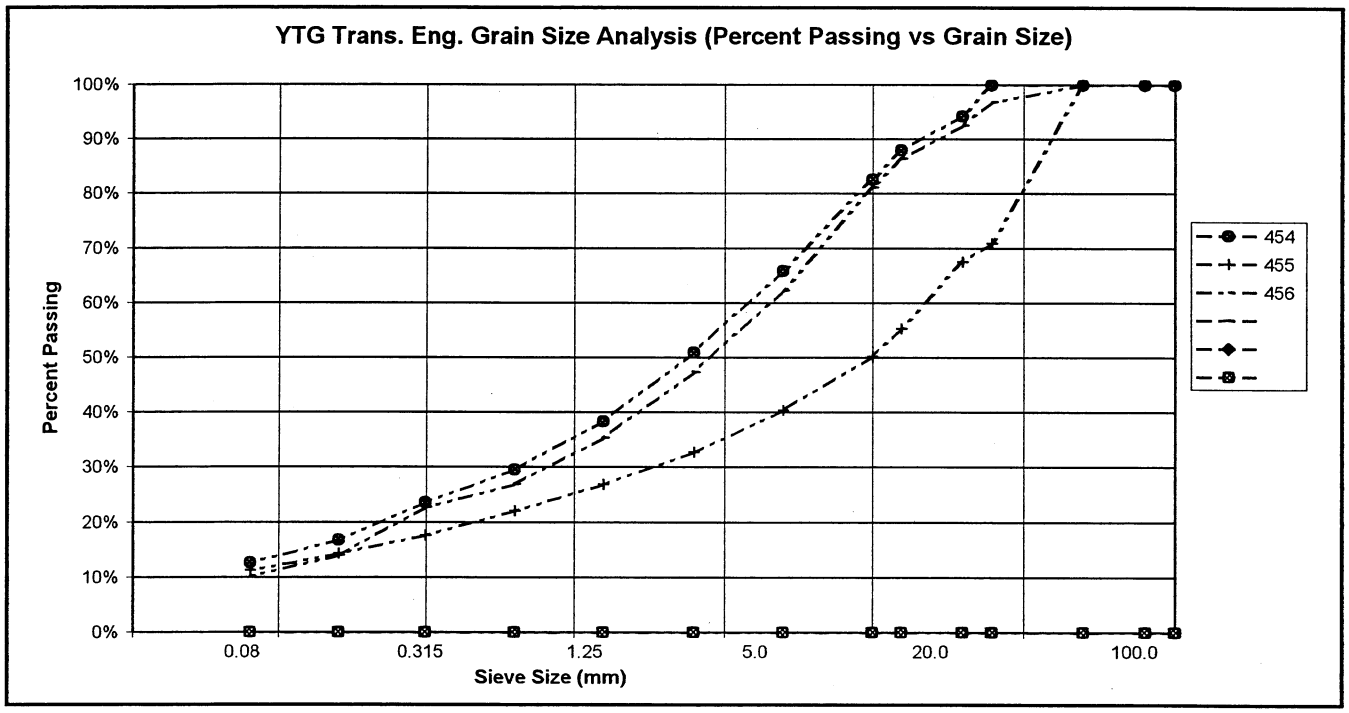


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1751+675 20M LT
LOGGED BY: W.E.

HOLE No.: 544-1417

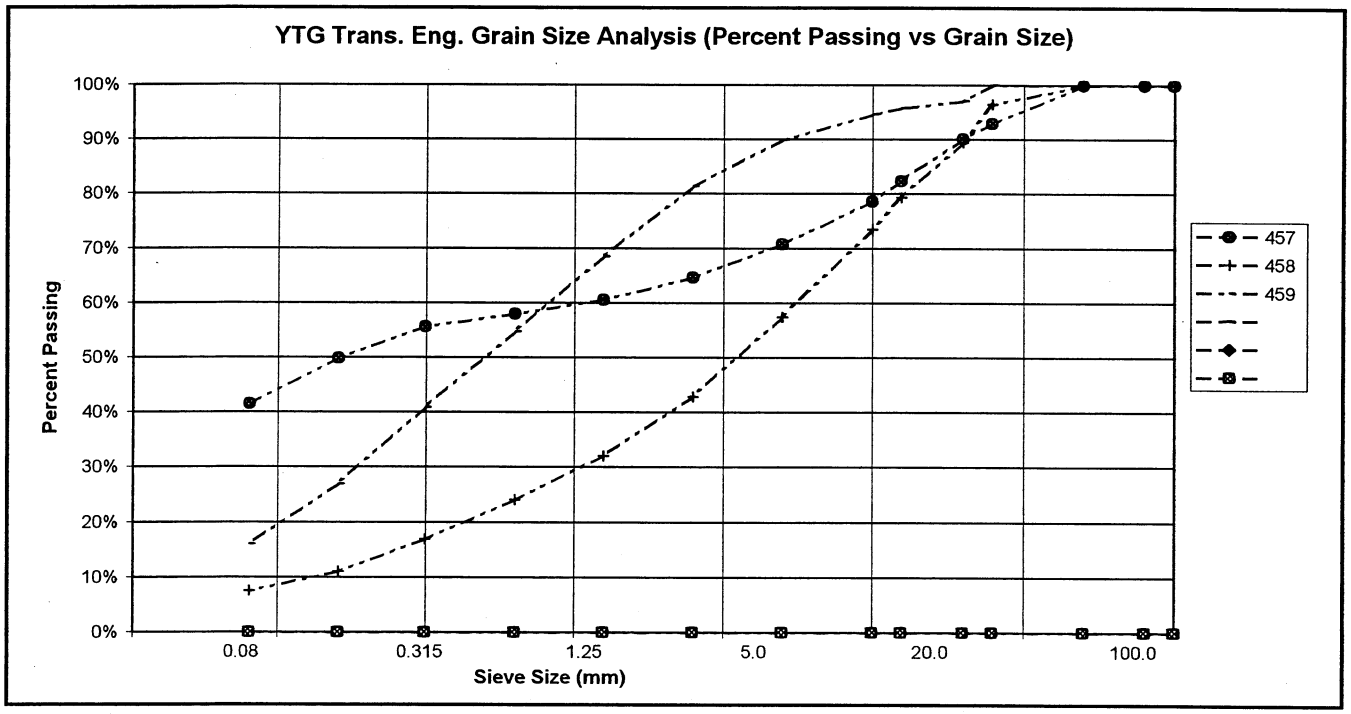
DATE COMP: 2000/05/18

FIELD NO:	454	455	456			
LAB NO:	757	758	759			
DEPTH:	0.9-1.1	1.9-2.1	3.0-3.2			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	71%	97%			
20.0	94%	67%	93%			
12.5	88%	55%	86%			
10.0	83%	50%	81%			
5.0	66%	40%	62%			
2.5	51%	33%	47%			
1.25	38%	27%	35%			
0.630	30%	22%	27%			
0.315	24%	18%	23%			
0.160	17%	14%	14%			
0.080	13%	11%	10%			
M.C.(%):	11%	9%	8%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	34	60	38			
% SAND:	53	29	52			
% FINES:	13	11	10			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)			



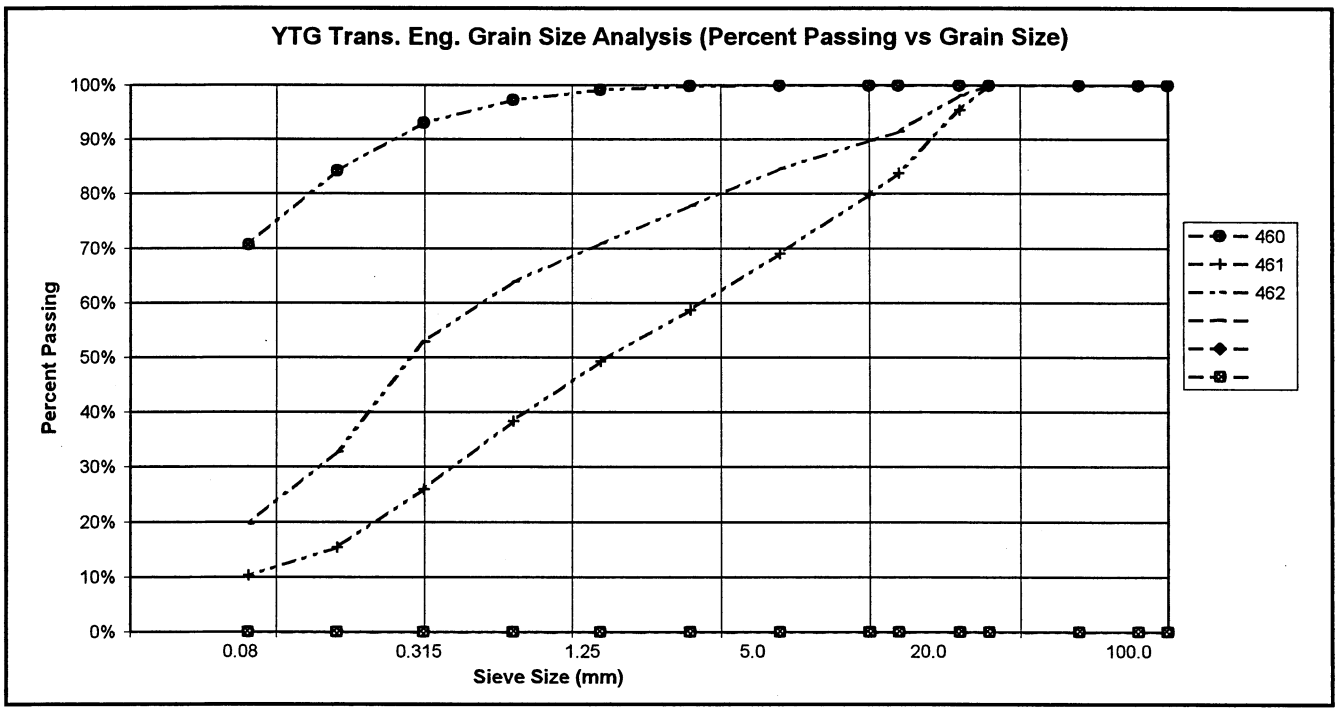
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 544-1418
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1751+690 20M RT		
LOGGED BY:	W.E.		DATE COMP: 2000/05/18

FIELD NO:	457	458	459			
LAB NO:	760	761	762			
DEPTH:	08.1.0	2.0-2.2	3.0-3.2			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	93%	96%	100%			
20.0	90%	89%	97%			
12.5	82%	79%	96%			
10.0	79%	73%	95%			
5.0	71%	57%	90%			
2.5	65%	43%	81%			
1.25	61%	32%	68%			
0.630	58%	24%	55%			
0.315	56%	17%	41%			
0.160	50%	11%	27%			
0.080	42%	7%	16%			
M.C.(%):	20%	8%	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:	29	43	10			
% SAND:	29	50	74			
% FINES:	42	7	16			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND (SM)			



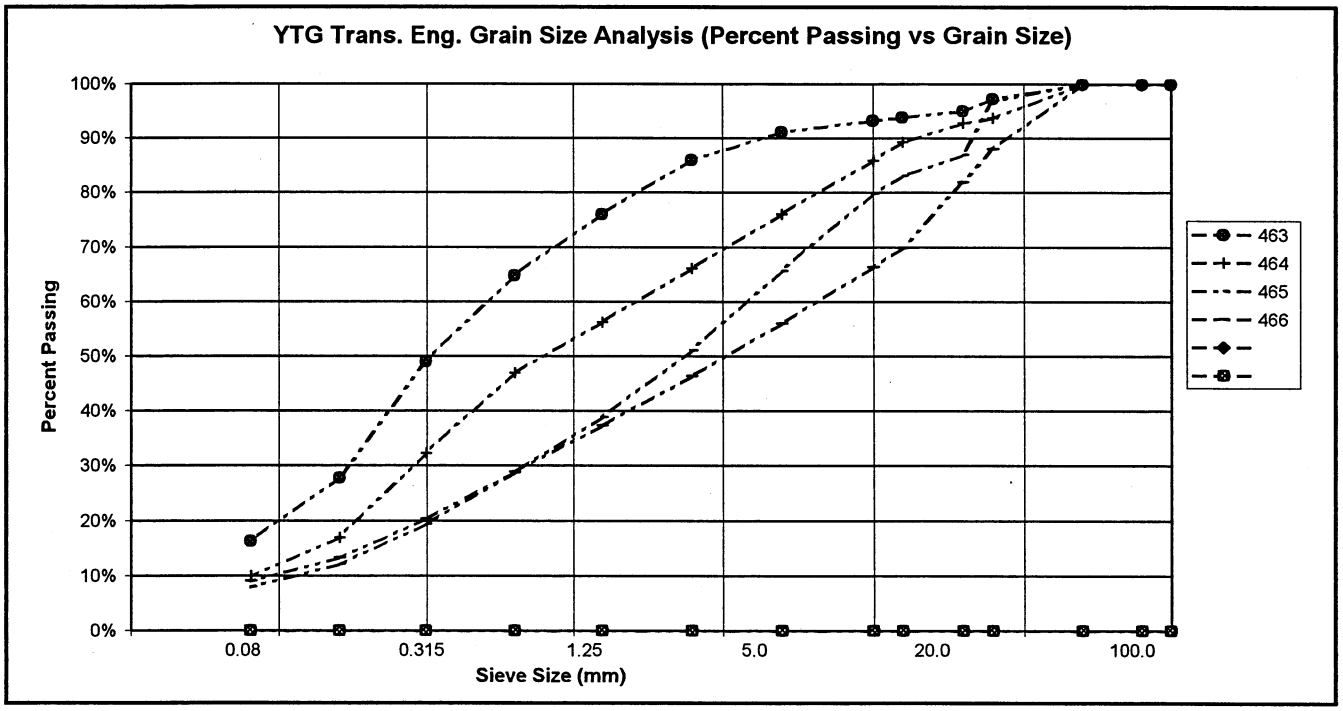
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 545-1419
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1751+795 15M LT		
LOGGED BY:	W.E.		DATE COMP: 2000/05/19

FIELD NO:	460	461	462			
LAB NO:	763	764	765			
DEPTH:	1.4-1.6	2.0-2.2	4.4-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	95%	98%			
12.5	100%	84%	91%			
10.0	100%	80%	90%			
5.0	100%	69%	85%			
2.5	100%	59%	78%			
1.25	99%	49%	71%			
0.630	97%	38%	64%			
0.315	93%	26%	53%			
0.160	84%	15%	33%			
0.080	71%	10%	20%			
M.C.(%):	25%	2%	5%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	0	31	15			
% SAND:	29	59	65			
% FINES:	71	10	20			
CLASSIFICATION	SILT WITH SAND (ML)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 545-1420
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1751+810 20M RT		
LOGGED BY:	W.E.		DATE COMP: 2000/05/19

FIELD NO:	463	464	465	466		
LAB NO:	766	767	768	769		
DEPTH:	0.9-1.1	1.9-2.1	3.0-3.2	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	97%	94%	97%	88%		
20.0	95%	93%	87%	82%		
12.5	94%	89%	83%	70%		
10.0	93%	86%	80%	66%		
5.0	91%	76%	66%	56%		
2.5	86%	66%	51%	46%		
1.25	76%	56%	39%	37%		
0.630	65%	47%	29%	29%		
0.315	49%	32%	19%	20%		
0.160	28%	17%	12%	13%		
0.080	16%	10%	8%	9%		
M.C.(%):	9%	4%	3%	4%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	9	24	34	44		
% SAND:	75	66	58	47		
% FINES:	16	10	8	9		
CLASSIFICATION	SILTY SAND (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)		

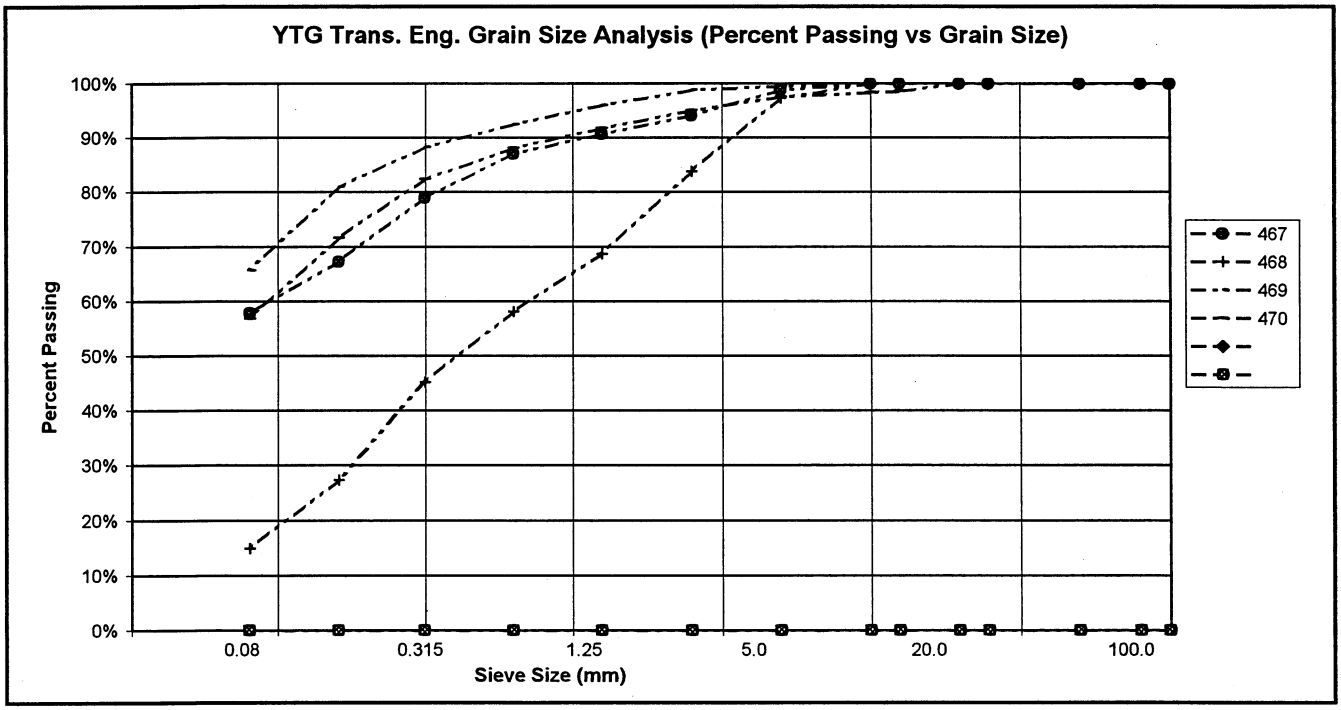


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1751+900 C/L
LOGGED BY: W.E.

HOLE No.: 545-1421

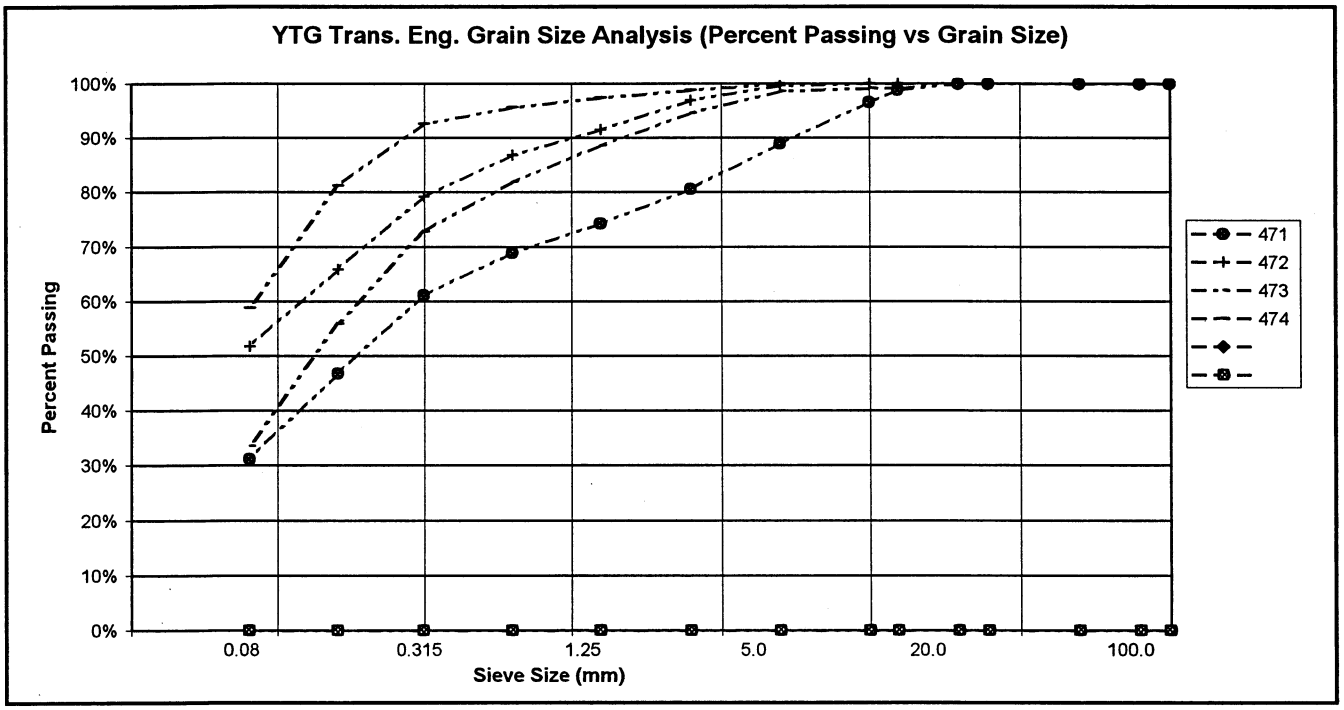
DATE COMP: 2000/05/19

FIELD NO:	467	468	469	470		
LAB NO:	770	771	772	773		
DEPTH:	0.6-0.8	1.5-1.7	2.9-3.1	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	100%	100%		
12.5	100%	100%	100%	99%		
10.0	100%	100%	100%	98%		
5.0	99%	97%	99%	98%		
2.5	94%	84%	99%	95%		
1.25	91%	69%	96%	92%		
0.630	87%	58%	93%	88%		
0.315	79%	45%	88%	82%		
0.160	67%	27%	81%	72%		
0.080	58%	15%	66%	57%		
M.C.(%):	10%	3%	21%	16%		
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:	1	3	1	2		
% SAND:	41	82	34	41		
% FINES:	58	15	66	57		
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND (SM)	SANDY SILT (ML)	SANDY SILT (ML)		



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 545-1422
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1751+900 15M LT		
LOGGED BY:	W.E.		DATE COMP: 2000/05/19

FIELD NO:	471	472	473	474		
LAB NO:	774	775	776	777		
DEPTH:	0.3-0.5	1.4-1.5	2.9-3.1	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	100%	100%		
12.5	99%	100%	99%	100%		
10.0	97%	100%	99%	100%		
5.0	89%	100%	99%	100%		
2.5	81%	97%	95%	99%		
1.25	74%	92%	89%	97%		
0.630	69%	87%	82%	96%		
0.315	61%	79%	73%	93%		
0.160	47%	66%	56%	81%		
0.080	31%	52%	34%	59%		
M.C.(%):	16%	12%	8%	25%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	11	0	1	0		
% SAND:	58	48	65	41		
% FINES:	31	52	34	59		
CLASSIFICATION	SILTY SAND (SM)	SANDY SILT (ML)	SILTY SAND (SM)	SANDY SILT (ML)		

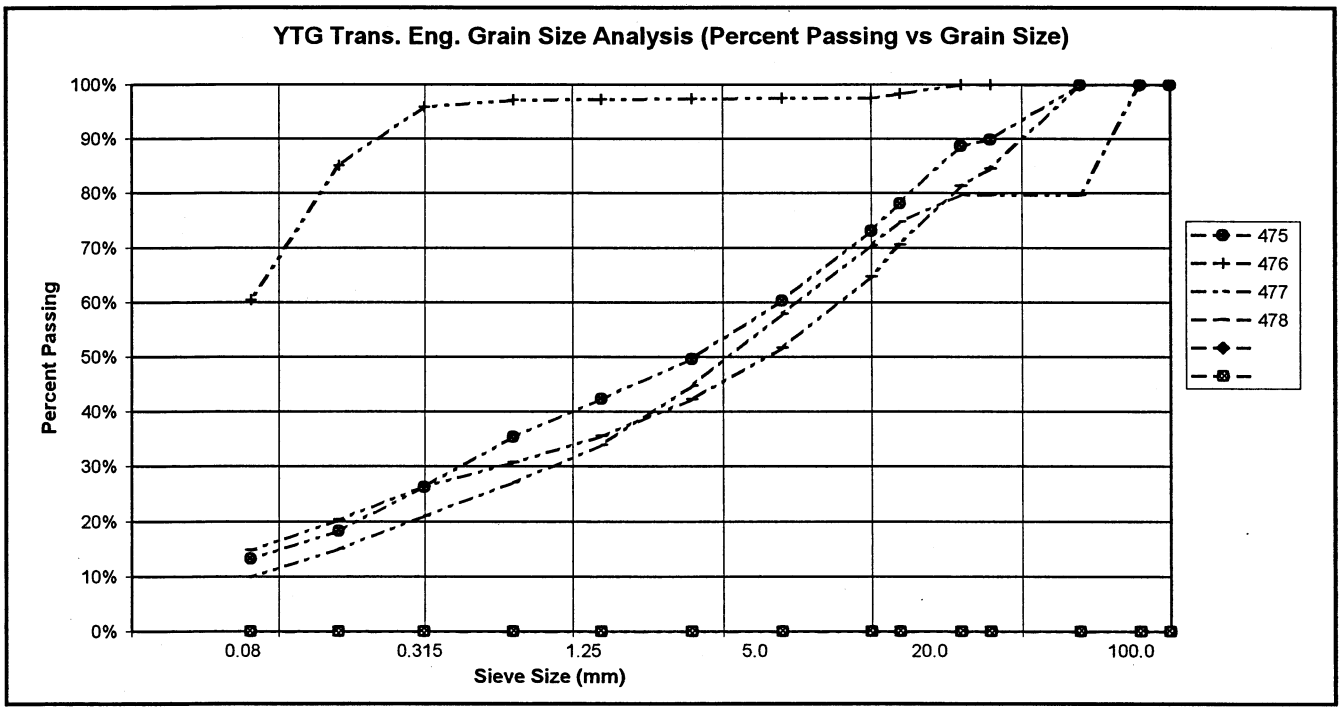


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1752+020 20M RT
LOGGED BY: W.E.

HOLE No.: 545-1423

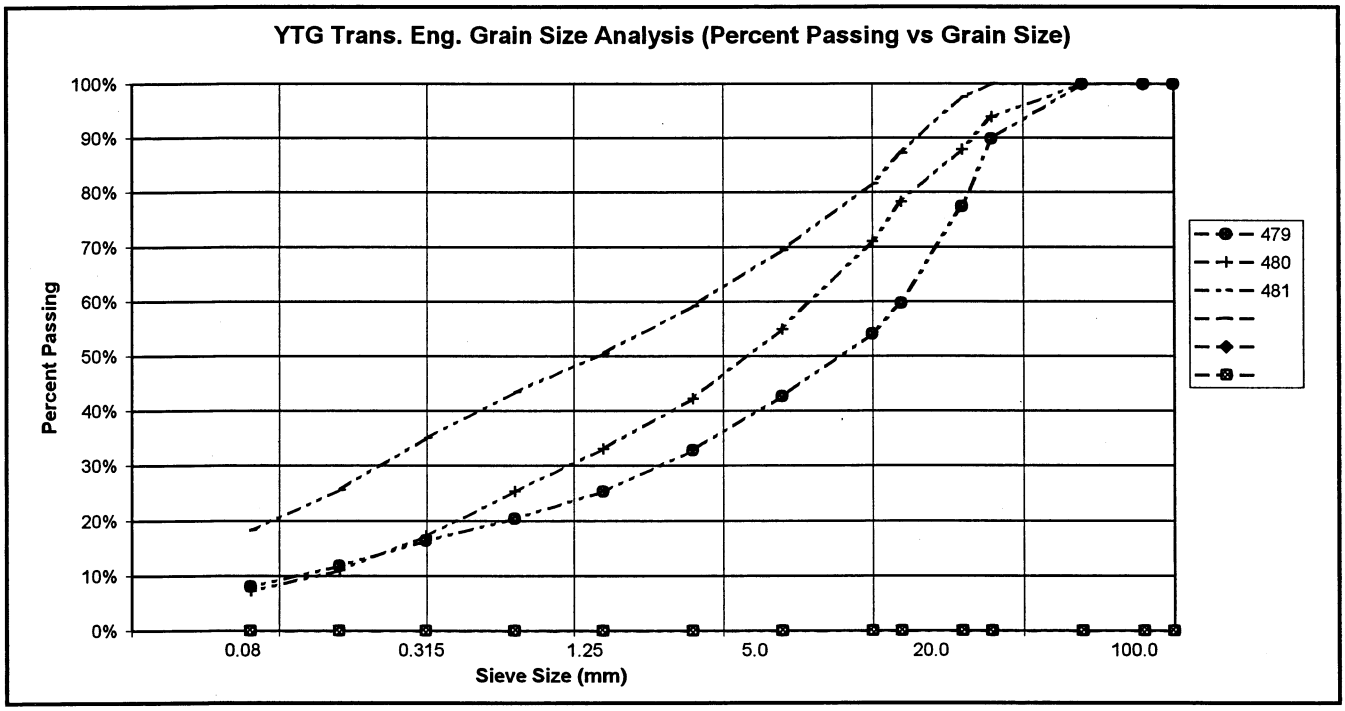
DATE COMP: 2000/05/19

FIELD NO:	475	476	477	478		
LAB NO:	778	779	780	781		
DEPTH:	0.4-0.6	1.4-1.6	2.8-3.0	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	80%	100%		
25.0	90%	100%	80%	84%		
20.0	89%	100%	80%	81%		
12.5	78%	98%	75%	71%		
10.0	73%	98%	70%	65%		
5.0	60%	98%	58%	52%		
2.5	50%	97%	45%	42%		
1.25	42%	97%	34%	36%		
0.630	35%	97%	27%	31%		
0.315	26%	96%	21%	26%		
0.160	18%	85%	15%	20%		
0.080	13%	60%	10%	15%		
M.C.(%):	7%	5%	3%	4%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	40	2	42	48		
% SAND:	47	37	48	37		
% FINES:	13	60	10	15		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY GRAVEL WITH SAND (GM)		



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 545-1424
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1752+125 C/L		
LOGGED BY:	W.E.		DATE COMP: 2000/05/19

FIELD NO:	479	480	481			
LAB NO:	782	783	784			
DEPTH:	1.4-1.6	2.8-3.0	4.4-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	90%	94%	100%			
20.0	77%	88%	98%			
12.5	60%	78%	87%			
10.0	54%	71%	82%			
5.0	43%	55%	69%			
2.5	33%	42%	59%			
1.25	25%	33%	51%			
0.630	20%	25%	43%			
0.315	16%	17%	35%			
0.160	12%	11%	26%			
0.080	8%	7%	18%			
M.C.(%):	2%	3%	6%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	57	45	31			
% SAND:	35	48	51			
% FINES:	8	7	18			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)			

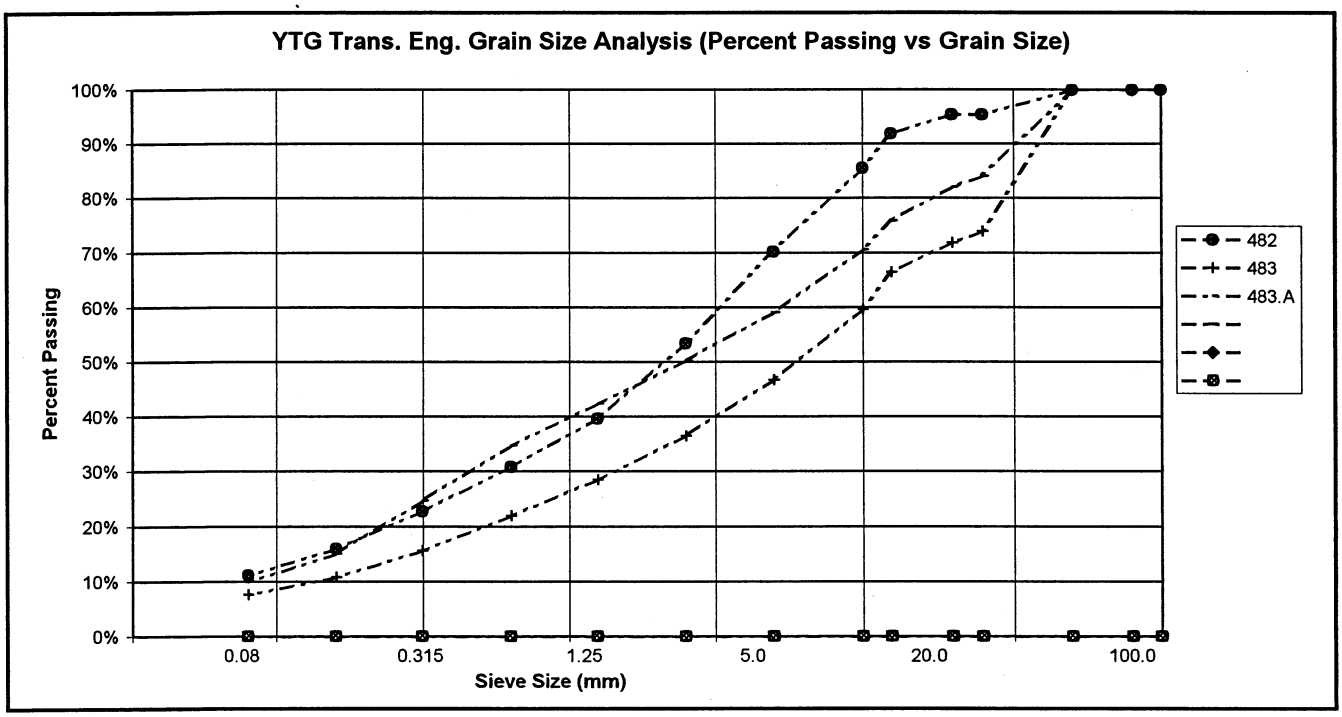


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1752+200 C/L
LOGGED BY: W.E.

HOLE No.: 545-1425

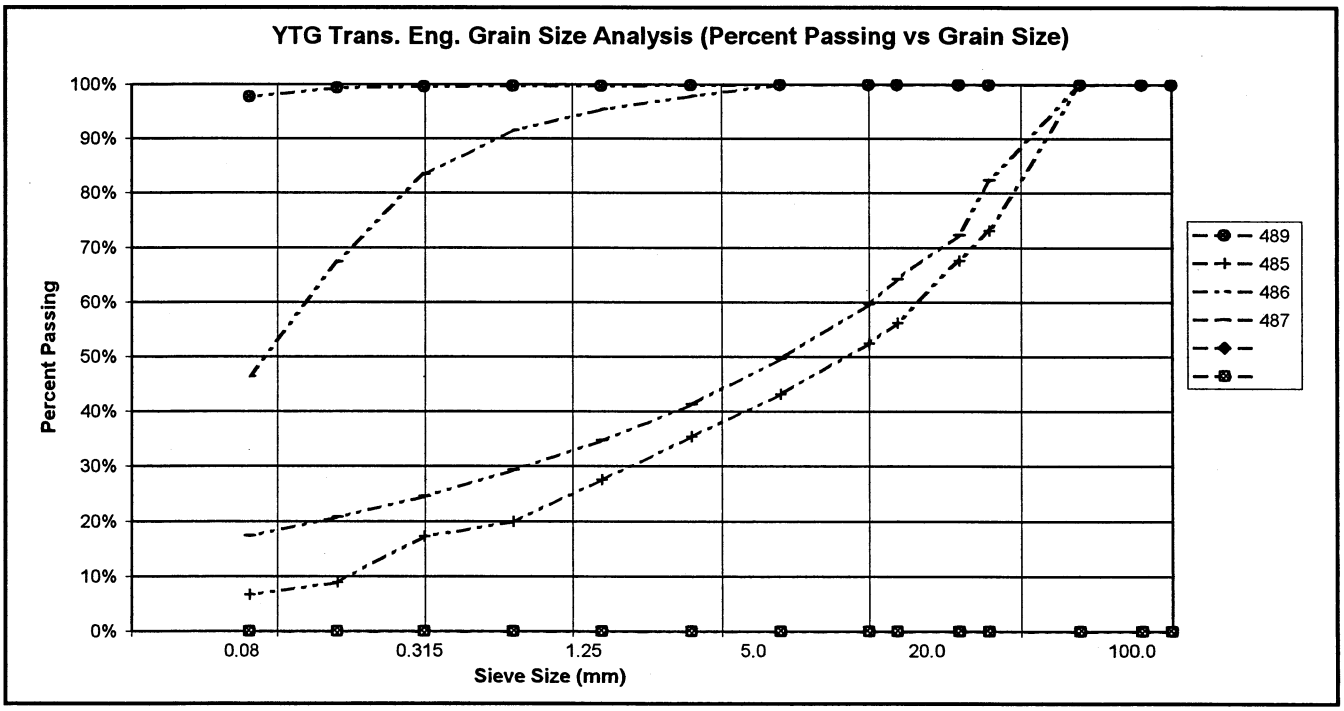
DATE COMP: 2000/05/19

FIELD NO:	482	483	483.A			
LAB NO:	785	786	787			
DEPTH:	1.4-1.6	2.8-3.0	4.4-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	95%	74%	84%			
20.0	95%	72%	82%			
12.5	92%	66%	76%			
10.0	86%	60%	71%			
5.0	70%	47%	59%			
2.5	53%	37%	50%			
1.25	40%	29%	42%			
0.630	31%	22%	35%			
0.315	23%	16%	25%			
0.160	16%	11%	15%			
0.080	11%	8%	10%			
M.C.(%):	6%	4%	4%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	30	53	41			
% SAND:	59	39	49			
% FINES:	11	8	10			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)			



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 545-1426
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1752+310 15M RT		
LOGGED BY:	W.E.		DATE COMP: 2000/05/19

FIELD NO:	489	485	486	487		
LAB NO:	788	789	790	791		
DEPTH:	0.1-0.3	1.0-1.4	2.4-2.6	4.4-4.6		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	73%	100%	82%		
20.0	100%	68%	100%	72%		
12.5	100%	56%	100%	64%		
10.0	100%	53%	100%	60%		
5.0	100%	43%	100%	50%		
2.5	100%	36%	98%	41%		
1.25	100%	28%	95%	35%		
0.630	100%	20%	92%	29%		
0.315	100%	17%	83%	25%		
0.160	99%	9%	67%	21%		
0.080	98%	7%	46%	17%		
M.C.(%):	38%	7%	24%	8%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	57	0	50		
% SAND:	2	37	54	32		
% FINES:	98	7	46	17		
CLASSIFICATION	SILT (ML)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND (SM)	SILTY GRAVEL WITH SAND (GM)		

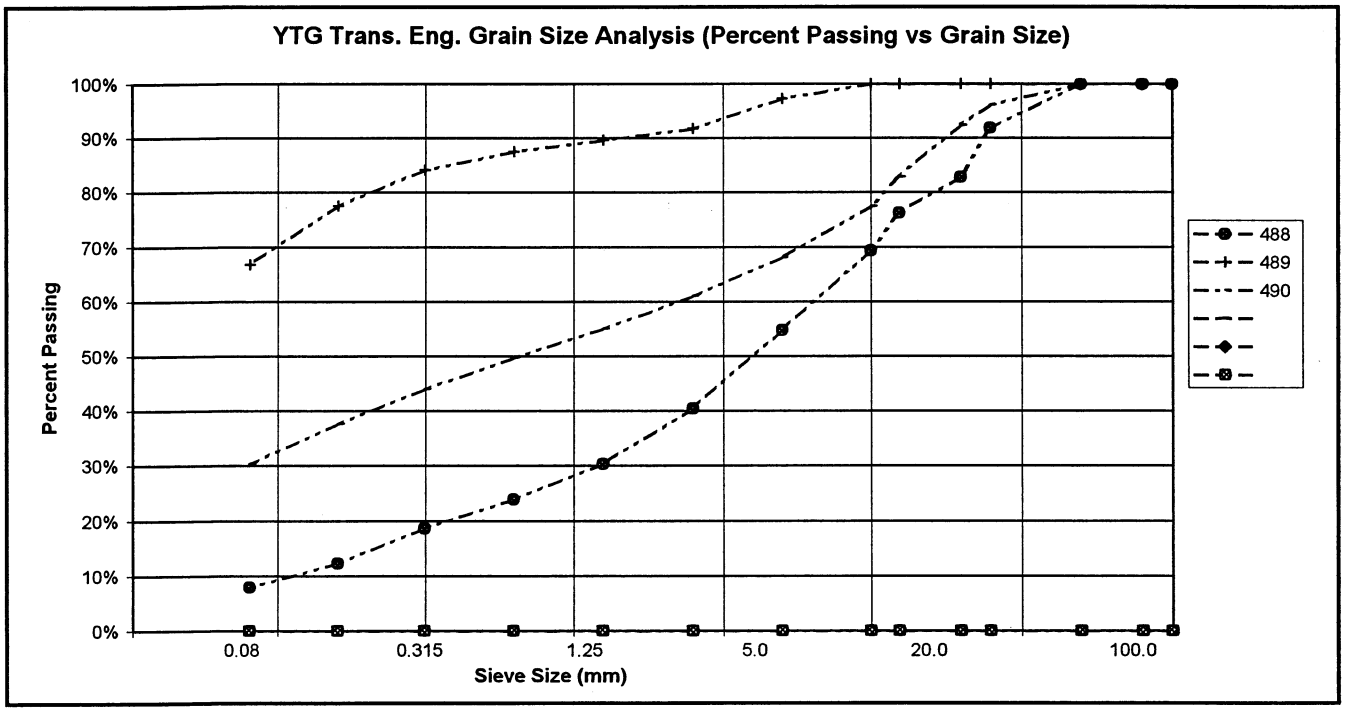


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1752+310 15M RT
LOGGED BY: W.E.

HOLE No.: 545-1427

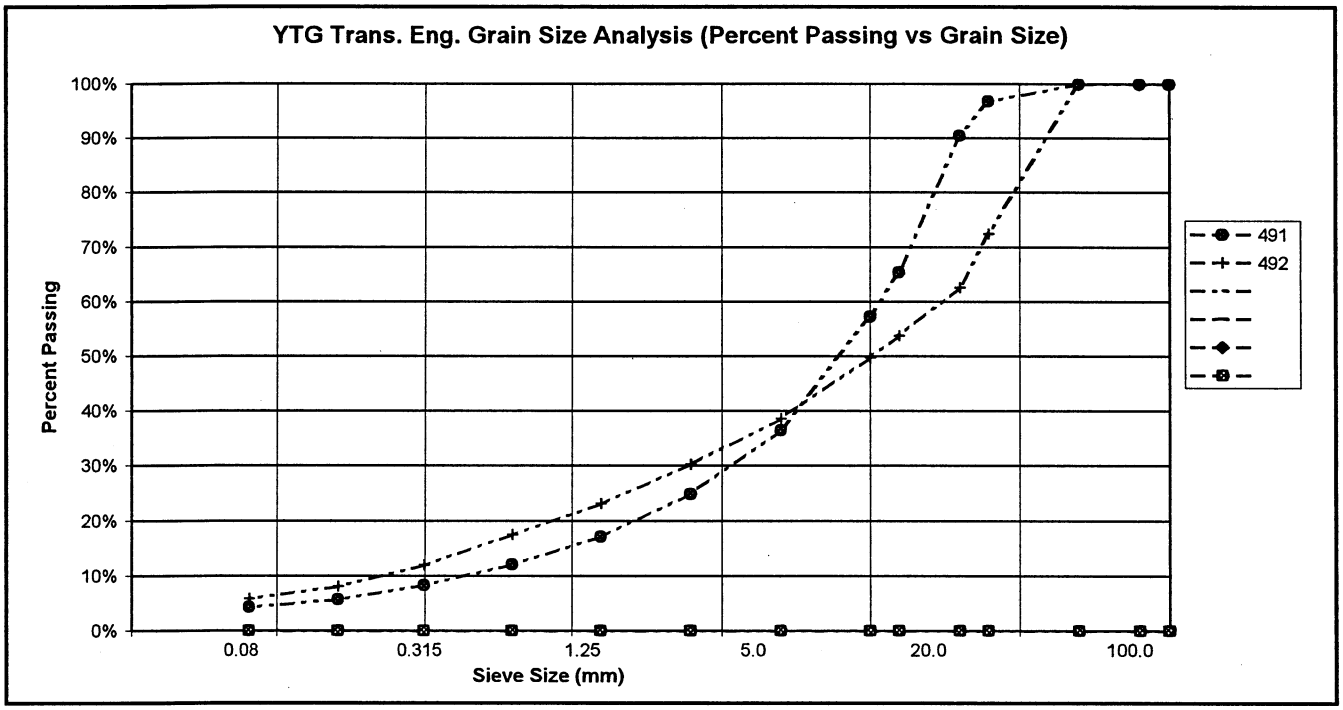
DATE COMP: 2000/05/19

FIELD NO:	488	489	490			
LAB NO:	792	793	794			
DEPTH:	1.4-1.6	2.9-3.1	4.4-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	92%	100%	96%			
20.0	83%	100%	92%			
12.5	76%	100%	83%			
10.0	69%	100%	78%			
5.0	55%	97%	68%			
2.5	41%	92%	61%			
1.25	30%	90%	55%			
0.630	24%	88%	50%			
0.315	19%	84%	44%			
0.160	12%	78%	38%			
0.080	8%	67%	30%			
M.C.(%):	7%	23%	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:	45	3	32			
% SAND:	47	30	38			
% FINES:	8	67	30			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)			



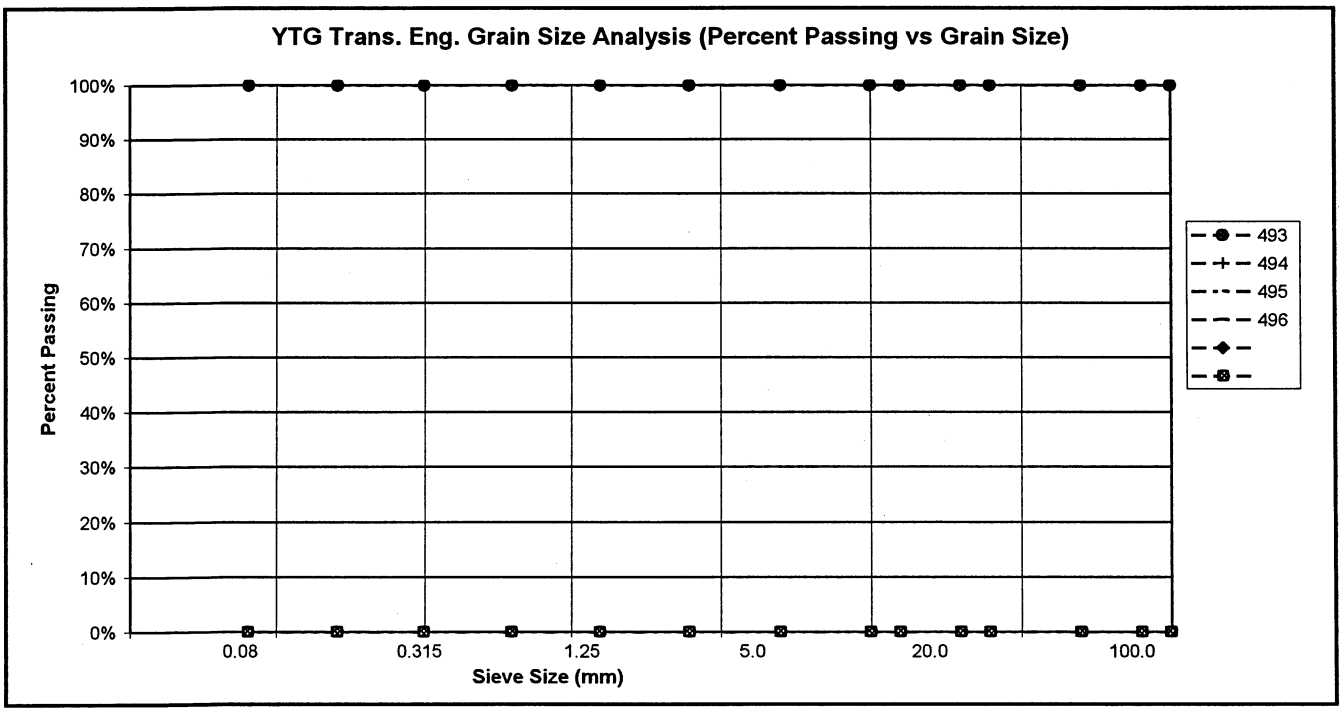
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1428
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1752+425 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/05/30

FIELD NO:	491	492				
LAB NO:	895	896				
DEPTH:	1.2-1.4	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%	72%				
20.0	91%	63%				
12.5	65%	54%				
10.0	57%	50%				
5.0	37%	39%				
2.5	25%	30%				
1.25	17%	23%				
0.630	12%	18%				
0.315	8%	12%				
0.160	6%	8%				
0.080	4%	6%				
M.C.(%):	2%	2%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	63	61				
% SAND:	32	33				
% FINES:	4	6				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				



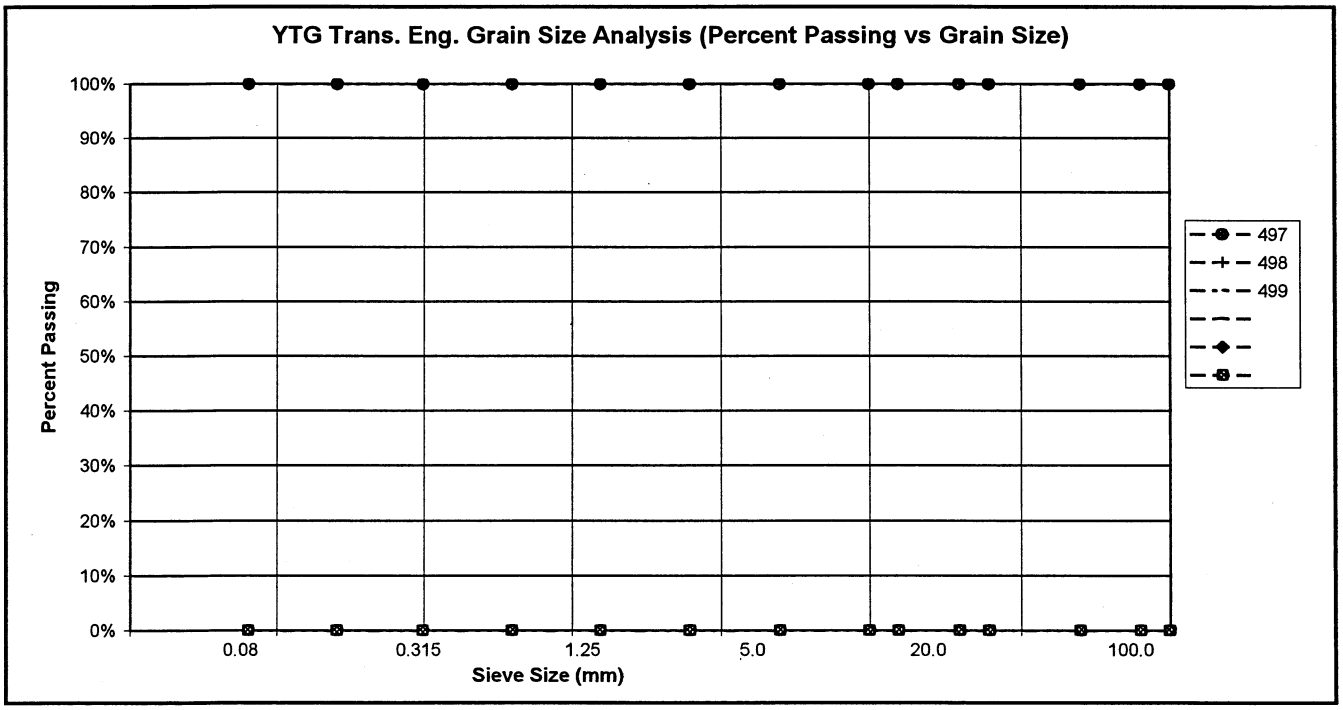
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1429
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1752+525 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/005/30

FIELD NO:	493	494	495	496		
LAB NO:	LOST	LOST	LOST	LOST		
DEPTH:	0.8-1.0	1.6-1.8	2.8-3.0	4.4-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	100%	100%		
12.5	100%	100%	100%	100%		
10.0	100%	100%	100%	100%		
5.0	100%	100%	100%	100%		
2.5	100%	100%	100%	100%		
1.25	100%	100%	100%	100%		
0.630	100%	100%	100%	100%		
0.315	100%	100%	100%	100%		
0.160	100%	100%	100%	100%		
0.080	100%	100%	100%	100%		
M.C.(%):	6%	3%	12%	9%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	0	0	0		
% SAND:	0	0	0	0		
% FINES:	100	100	100	100		
CLASSIFICATION	SILT (ML)	SILT (ML)	SILT (ML)	SILT (ML)		



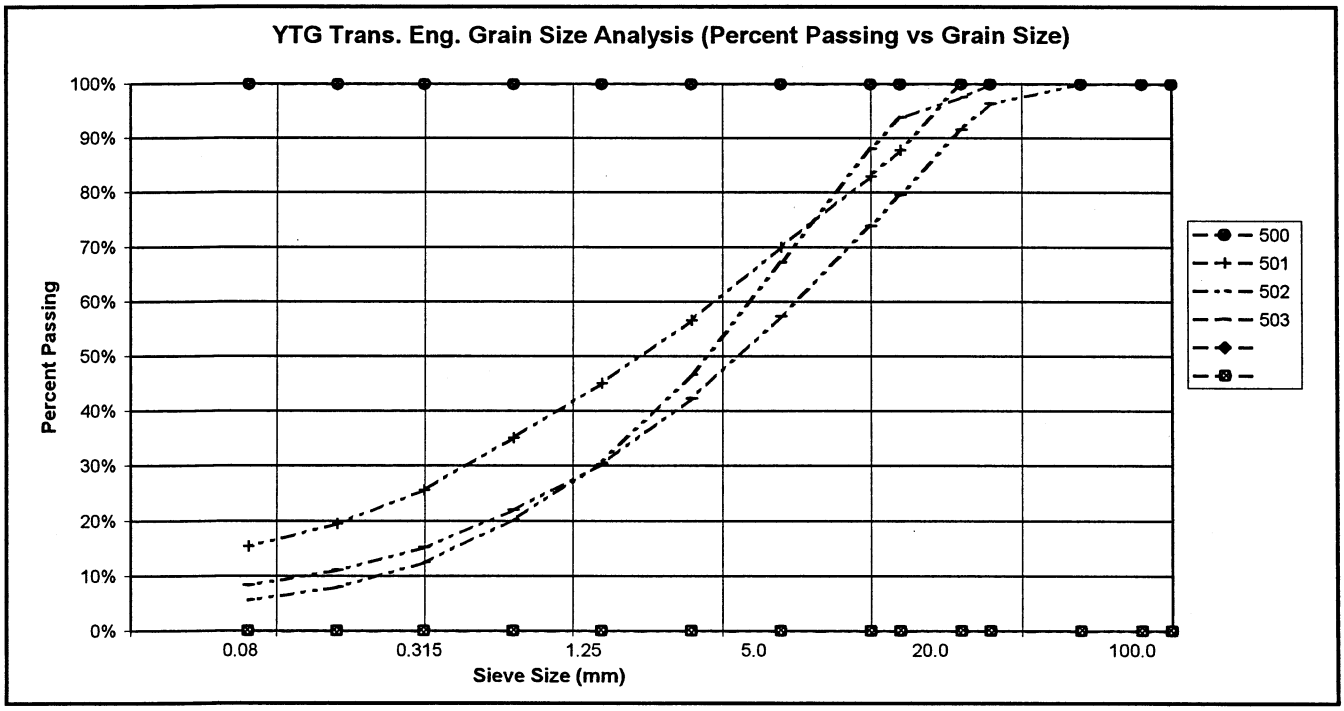
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1430
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1752+625 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/006/01

FIELD NO:	497	498	499			
LAB NO:	LOST	LOST	LOST			
DEPTH:	0.6-0.8	1.8-2.0	4.4-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	100%	100%			
12.5	100%	100%	100%			
10.0	100%	100%	100%			
5.0	100%	100%	100%			
2.5	100%	100%	100%			
1.25	100%	100%	100%			
0.630	100%	100%	100%			
0.315	100%	100%	100%			
0.160	100%	100%	100%			
0.080	100%	100%	100%			
M.C.(%):	4%	3%	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:	0	0	0			
% SAND:	0	0	0			
% FINES:	100	100	100			
CLASSIFICATION	~~SILT (ML)~~	~~SILT (ML)~~	~~SILT (ML)~~			



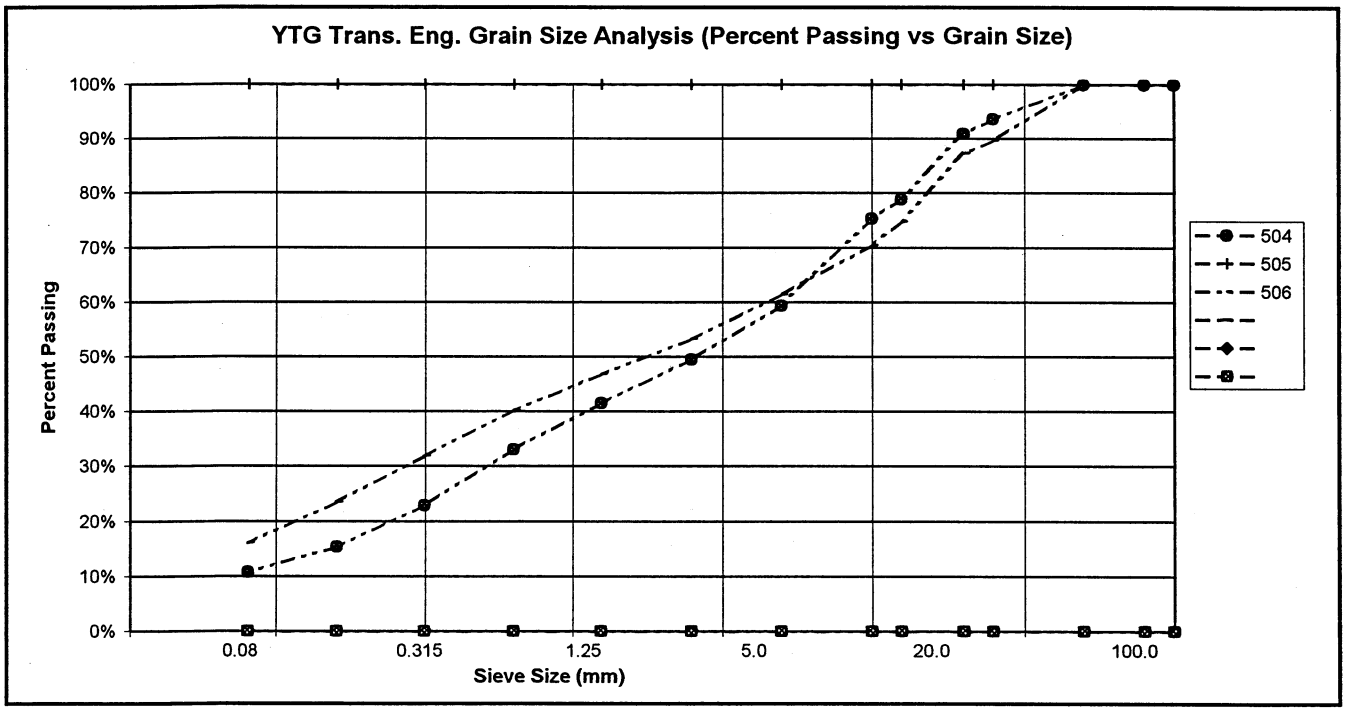
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1431
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1752+775 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/05/30

FIELD NO:	500	501	502	503		
LAB NO:	LOST	905	906	907		
DEPTH:	0.7-0.9	1.8-2.0	2.8-3.0	4.5-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	96%		
20.0	100%	100%	98%	91%		
12.5	100%	88%	94%	80%		
10.0	100%	83%	88%	74%		
5.0	100%	70%	67%	57%		
2.5	100%	57%	47%	42%		
1.25	100%	45%	31%	30%		
0.630	100%	35%	20%	22%		
0.315	100%	26%	12%	15%		
0.160	100%	19%	8%	11%		
0.080	100%	15%	6%	8%		
M.C.(%):	10%	5%	3%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	30	33	43		
% SAND:	0	55	62	49		
% FINES:	100	15	6	8		
CLASSIFICATION	SILT (ML)	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)		



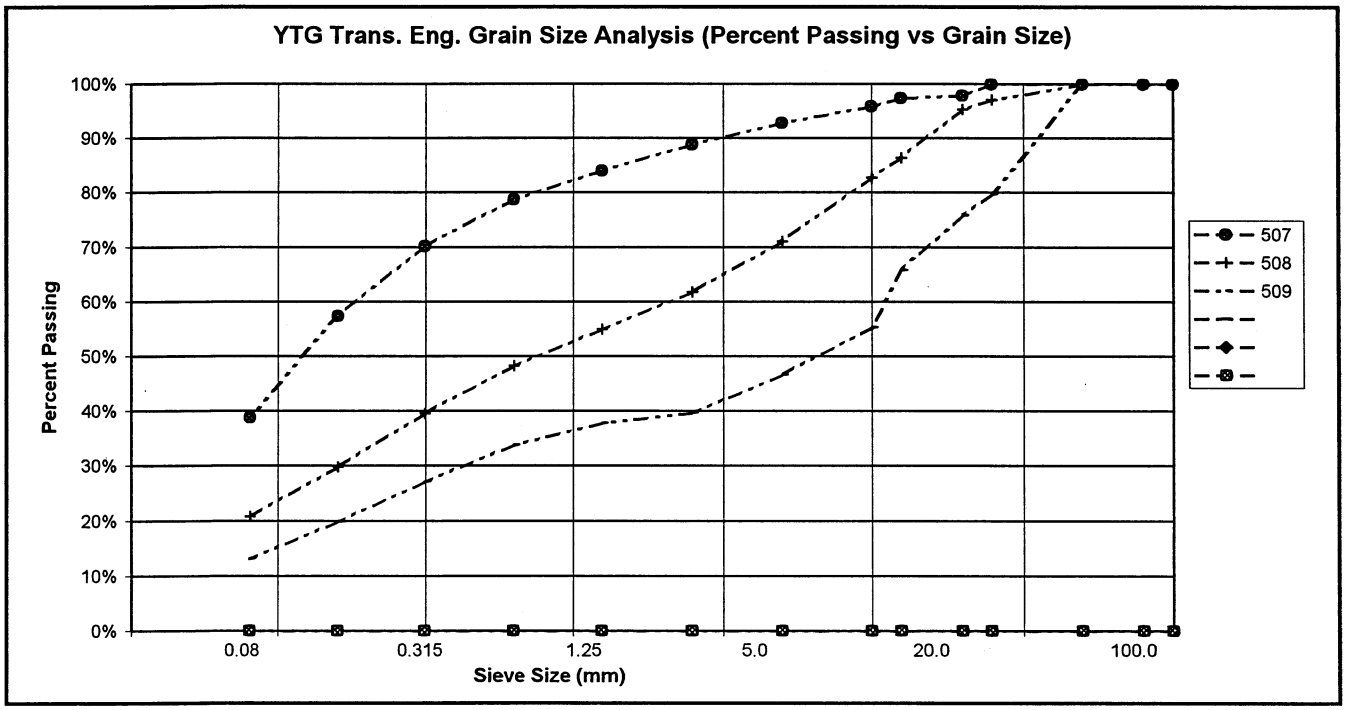
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1432
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1752+810 20M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/05/30

FIELD NO:	504	505	506			
LAB NO:	908	LOST	910			
DEPTH:	1.4-1.6	2.8-3.0	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	94%	100%	90%			
20.0	91%	100%	87%			
12.5	79%	100%	75%			
10.0	75%	100%	70%			
5.0	59%	100%	61%			
2.5	50%	100%	53%			
1.25	42%	100%	47%			
0.630	33%	100%	40%			
0.315	23%	100%	32%			
0.160	15%	100%	23%			
0.080	11%	100%	16%			
M.C.(%):	9%	13%	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:	41	0	39			
% SAND:	49	0	45			
% FINES:	11	100	16			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILT (ML)	SILTY SAND WITH GRAVEL (SM)			



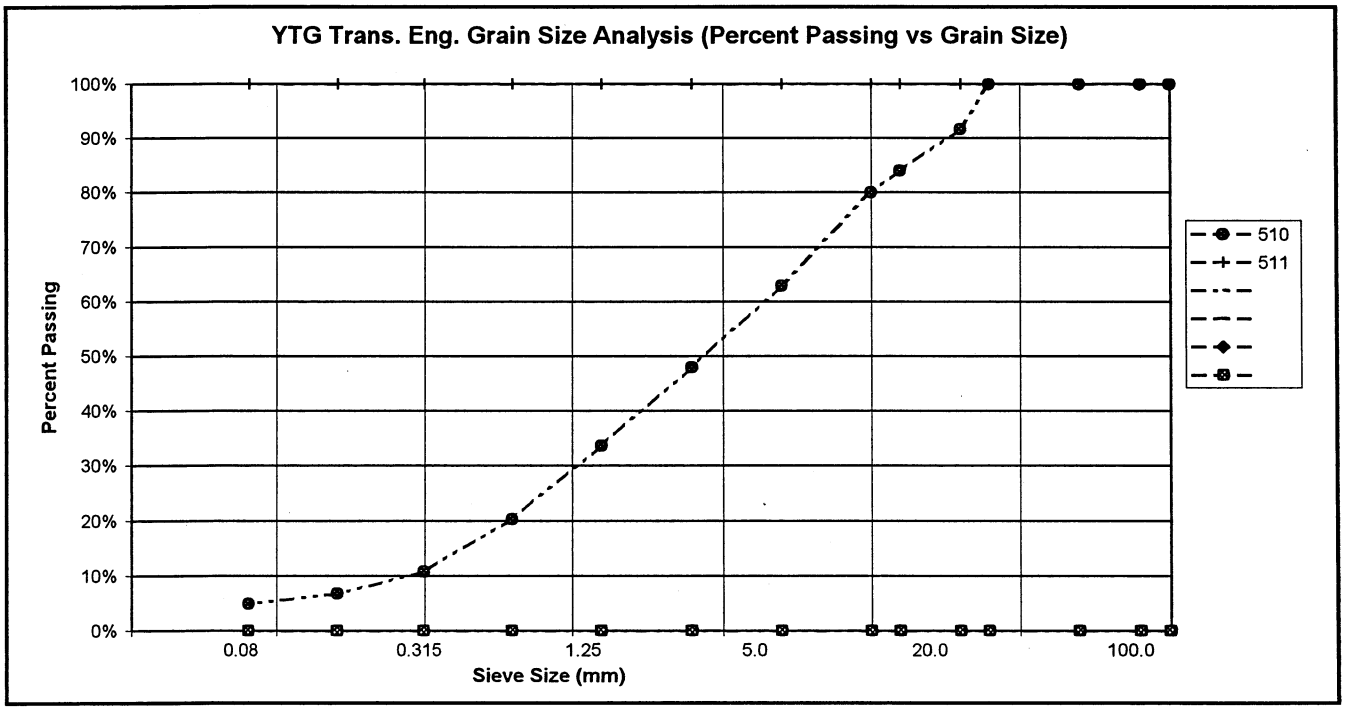
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1433
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1752+820 20M RT		
LOGGED BY:	D.T.		DATE COMP: 2000/05/30

FIELD NO:	507	508	509			
LAB NO:	911	912	913			
DEPTH:	1.2-1.4	3.0-3.2	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	97%	80%			
20.0	98%	95%	76%			
12.5	97%	86%	66%			
10.0	96%	83%	55%			
5.0	93%	71%	47%			
2.5	89%	62%	40%			
1.25	84%	55%	38%			
0.630	79%	48%	34%			
0.315	70%	40%	27%			
0.160	57%	30%	20%			
0.080	39%	21%	13%			
M.C.(%):	5%	5%	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:	7	29	53			
% SAND:	54	50	33			
% FINES:	39	21	13			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)			



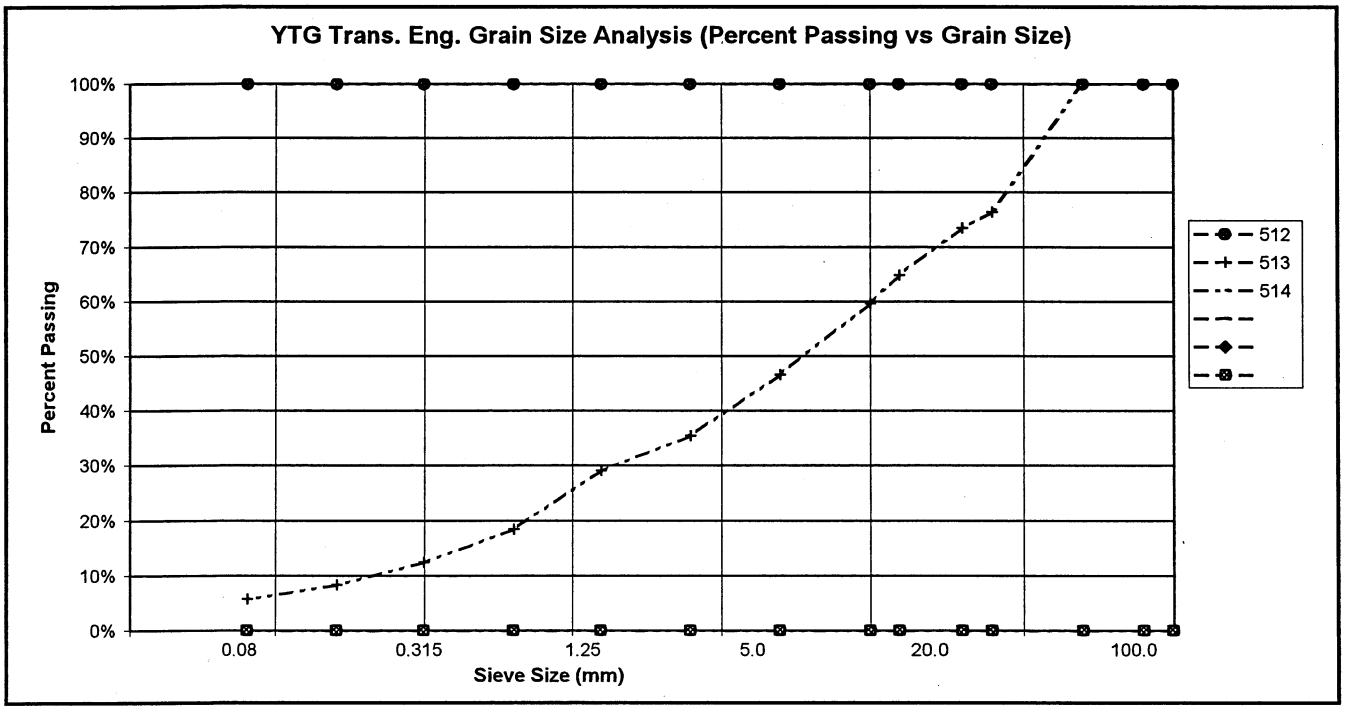
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1434
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1752+915 20M RT		
LOGGED BY:	D.T.		DATE COMP: 2000/05/30

FIELD NO:	510	511				
LAB NO:	914	LOST				
DEPTH:	1.3-1.5	4.5-4.7				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	100%				
20.0	92%	100%				
12.5	84%	100%				
10.0	80%	100%				
5.0	63%	100%				
2.5	48%	100%				
1.25	34%	100%				
0.630	20%	100%				
0.315	11%	100%				
0.160	7%	100%				
0.080	5%	100%				
M.C.(%):	4%	11%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	37	0				
% SAND:	58	0				
% FINES:	5	100				
CLASSIFICATION	WELL-GRADED SAND WITH GRAVEL (SW)	~~SILT (ML)~~				



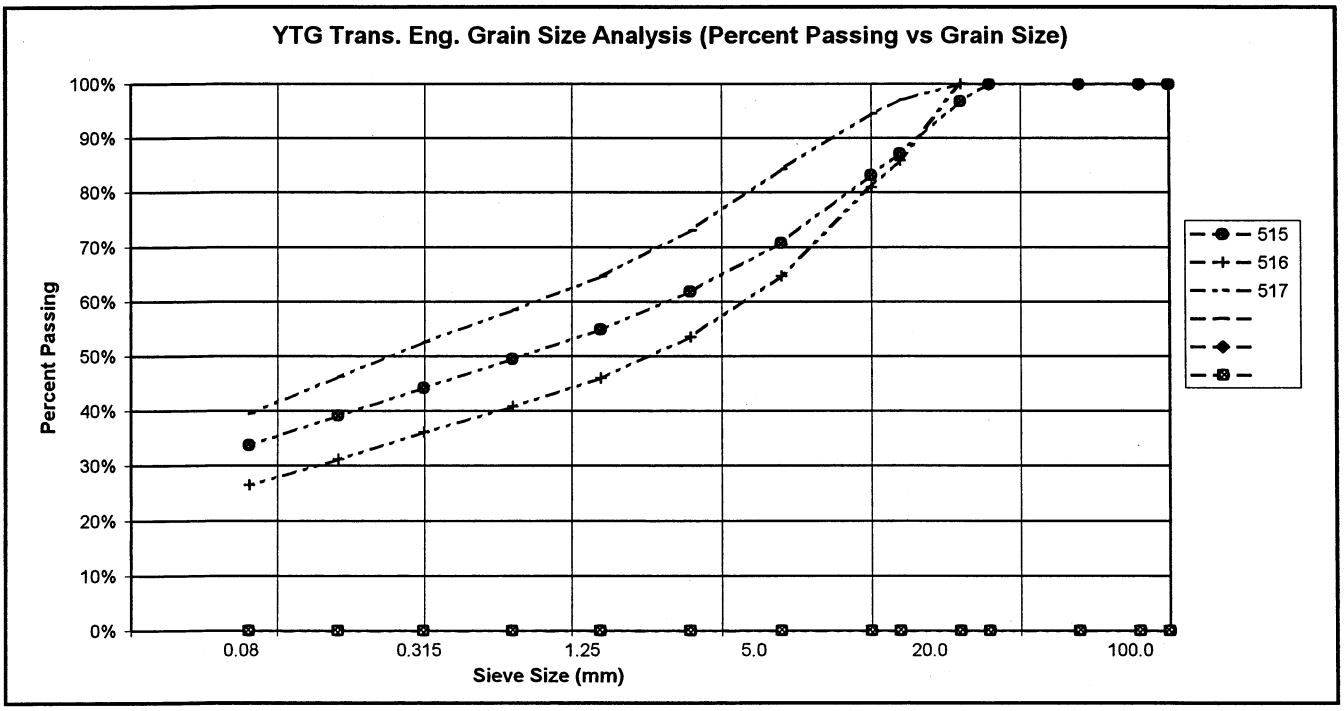
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1435
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1752+915 20M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/05/30

FIELD NO:	512	513	514			
LAB NO:	LOST	917	LOST			
DEPTH:	1.2-1.4	3.0-3.2	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	76%	100%			
20.0	100%	73%	100%			
12.5	100%	65%	100%			
10.0	100%	60%	100%			
5.0	100%	47%	100%			
2.5	100%	35%	100%			
1.25	100%	29%	100%			
0.630	100%	18%	100%			
0.315	100%	12%	100%			
0.160	100%	8%	100%			
0.080	100%	6%	100%			
M.C.(%):	4%	3%	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:	0	53	0			
% SAND:	0	41	0			
% FINES:	100	6	100			
CLASSIFICATION	~~SILT (ML)~~	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	~~SILT (ML)~~			



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1436
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1752+950 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/05/30

FIELD NO:	515	516	517			
LAB NO:	919	920	921			
DEPTH:	1.4-1.6	2.9-3.1	4.8-5.0			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	97%	100%	100%			
12.5	87%	86%	97%			
10.0	83%	81%	95%			
5.0	71%	65%	84%			
2.5	62%	53%	73%			
1.25	55%	46%	64%			
0.630	50%	41%	58%			
0.315	44%	36%	53%			
0.160	39%	31%	46%			
0.080	34%	27%	40%			
M.C.(%):	4%	4%	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:	29	35	16			
% SAND:	37	38	45			
% FINES:	34	27	40			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			

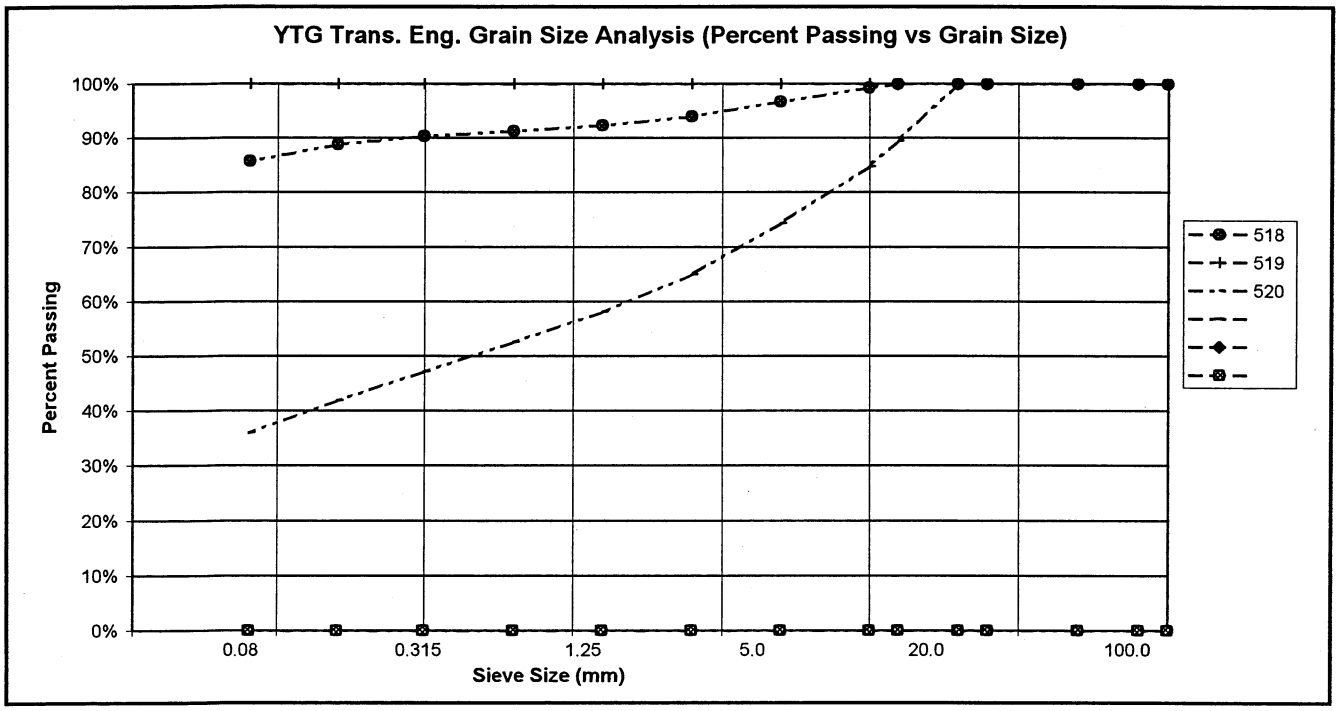


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1753+050 20M LT
LOGGED BY: D.T.

HOLE No.: 549-1437

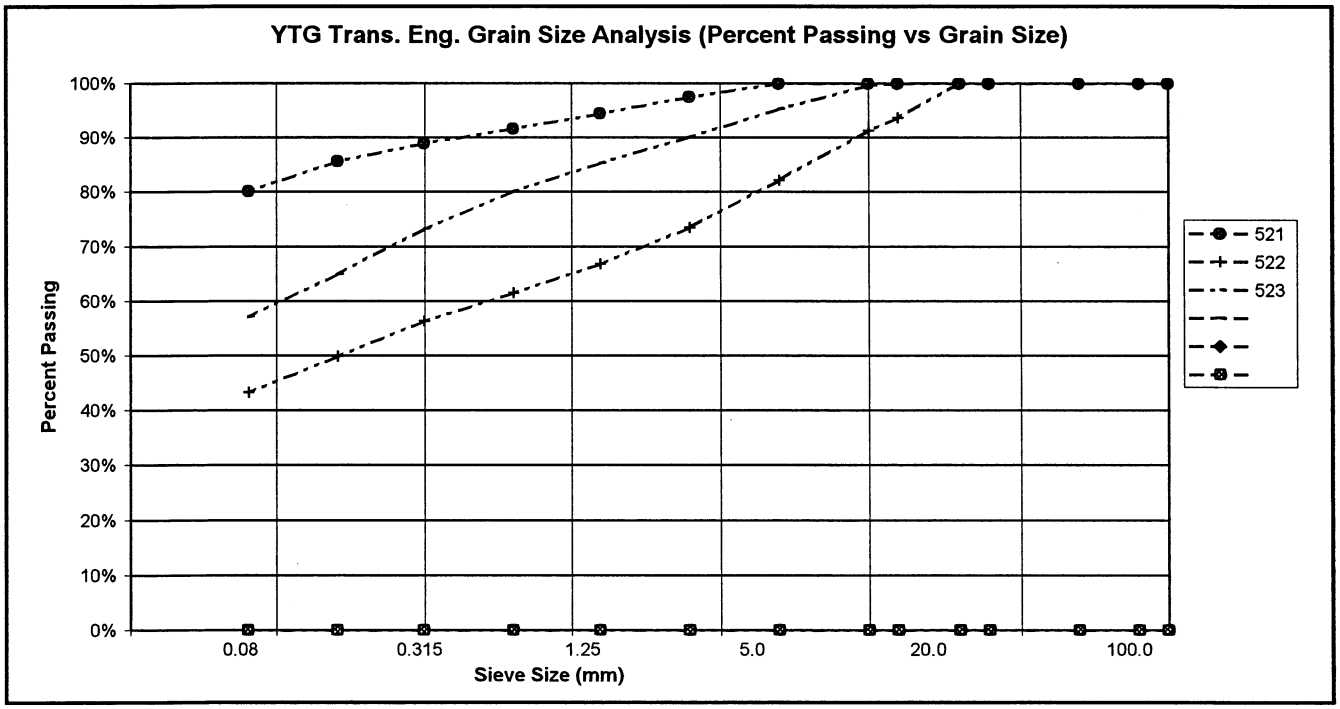
DATE COMP: 2000/05/30

FIELD NO:	518	519	520			
LAB NO:	922	LOST	520			
DEPTH:	1.9-2.1	3.0-3.2	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	100%	100%			
12.5	100%	100%	89%			
10.0	99%	100%	85%			
5.0	97%	100%	74%			
2.5	94%	100%	65%			
1.25	92%	100%	58%			
0.630	91%	100%	53%			
0.315	90%	100%	47%			
0.160	89%	100%	42%			
0.080	86%	100%	36%			
M.C.(%):	56%	28%	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:	3	0	26			
% SAND:	11	0	38			
% FINES:	86	100	36			
CLASSIFICATION	SILT (ML)	~~SILT (ML)~~	SILTY SAND WITH GRAVEL (SM)			



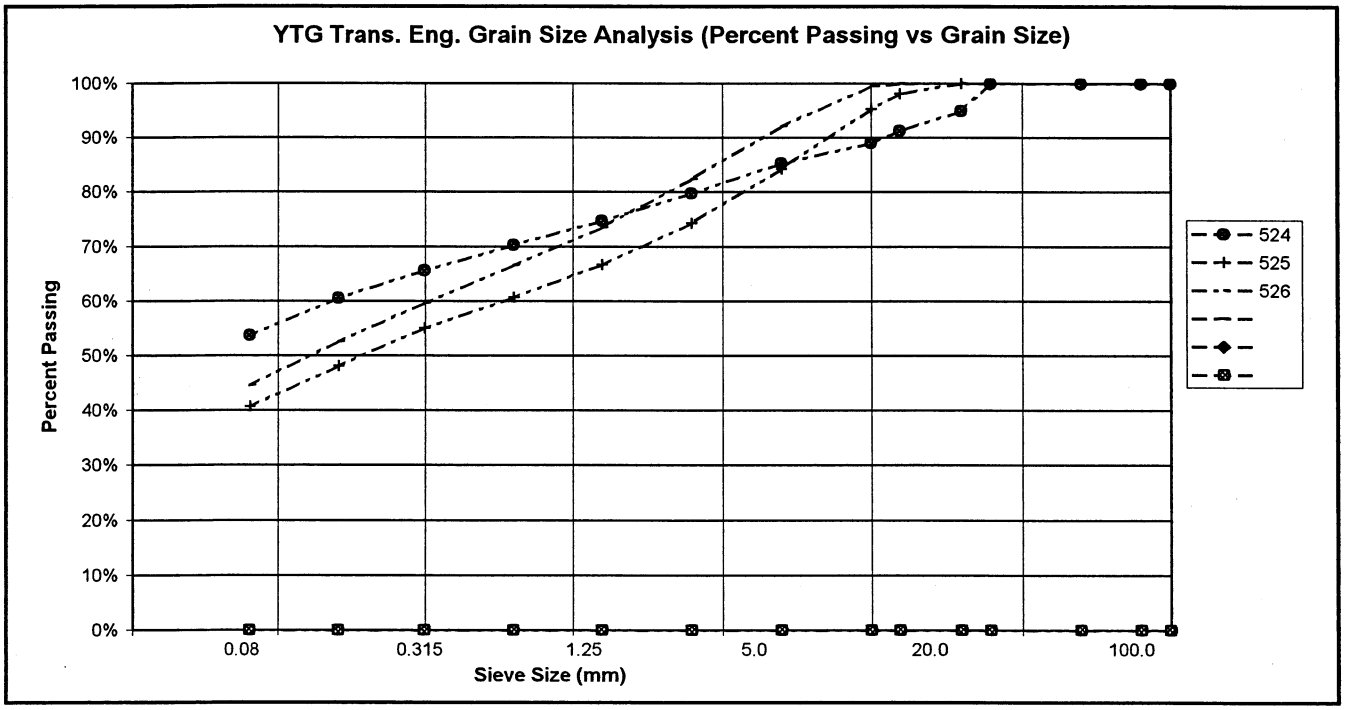
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1438
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1753+100 20M RT		
LOGGED BY:	D.T.		DATE COMP: 2000/05/31

FIELD NO:	521	522	523			
LAB NO:	925	926	927			
DEPTH:	1.3-1.5	2.2-2.4	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	100%	100%			
12.5	100%	94%	100%			
10.0	100%	91%	100%			
5.0	100%	82%	95%			
2.5	98%	73%	90%			
1.25	94%	67%	85%			
0.630	92%	61%	80%			
0.315	89%	56%	73%			
0.160	86%	50%	65%			
0.080	80%	43%	57%			
M.C.(%):	68%	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:	0	18	5			
% SAND:	20	39	38			
% FINES:	80	43	57			
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)			



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 449-1439
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1753+150 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/05/31

FIELD NO:	524	525	526			
LAB NO:	928	929	930			
DEPTH:	0.7-0.9	3.0-3.2	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	95%	100%	100%			
12.5	91%	98%	100%			
10.0	89%	95%	99%			
5.0	85%	84%	92%			
2.5	80%	74%	82%			
1.25	75%	67%	73%			
0.630	70%	61%	67%			
0.315	66%	55%	60%			
0.160	61%	48%	53%			
0.080	54%	41%	45%			
M.C.(%):	10%	7%	8%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	15	16	8			
% SAND:	32	44	47			
% FINES:	54	41	45			
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)			

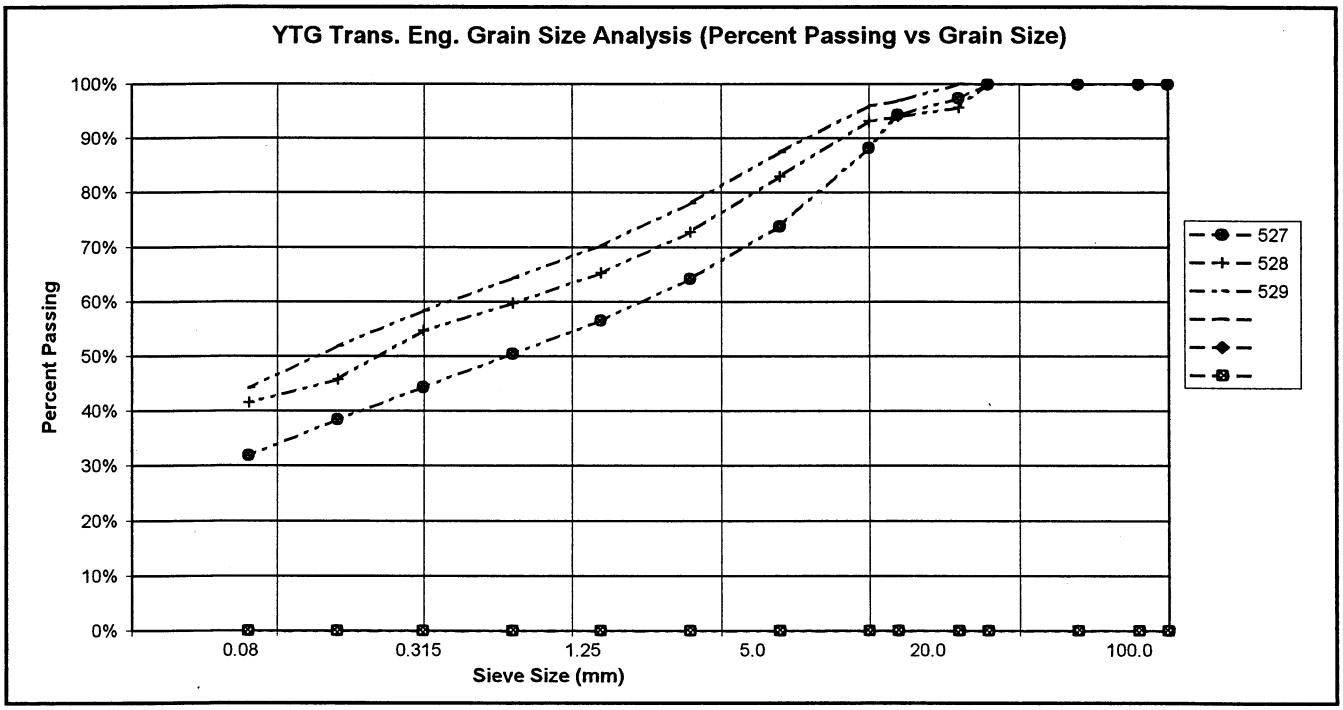


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1753+250 C/L
LOGGED BY: D.T.

HOLE No.: 549-1440

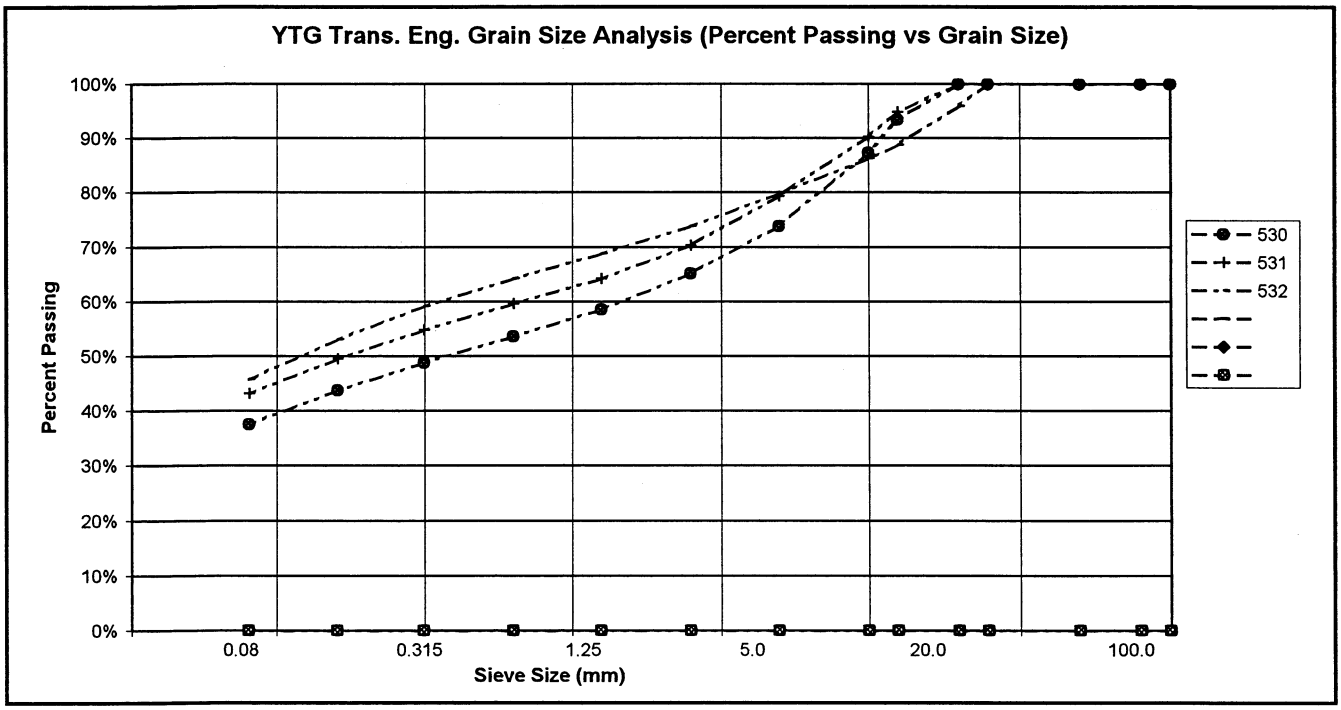
DATE COMP: 2000/05/31

FIELD NO:	527	528	529			
LAB NO:	931	932	933			
DEPTH:	1.4-1.6	2.9-3.1	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	97%	96%	100%			
12.5	94%	94%	97%			
10.0	88%	93%	96%			
5.0	74%	83%	87%			
2.5	64%	73%	78%			
1.25	57%	65%	70%			
0.630	50%	60%	64%			
0.315	44%	55%	58%			
0.160	39%	46%	52%			
0.080	32%	42%	44%			
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:	26	17	13			
% SAND:	42	41	43			
% FINES:	32	42	44			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)			



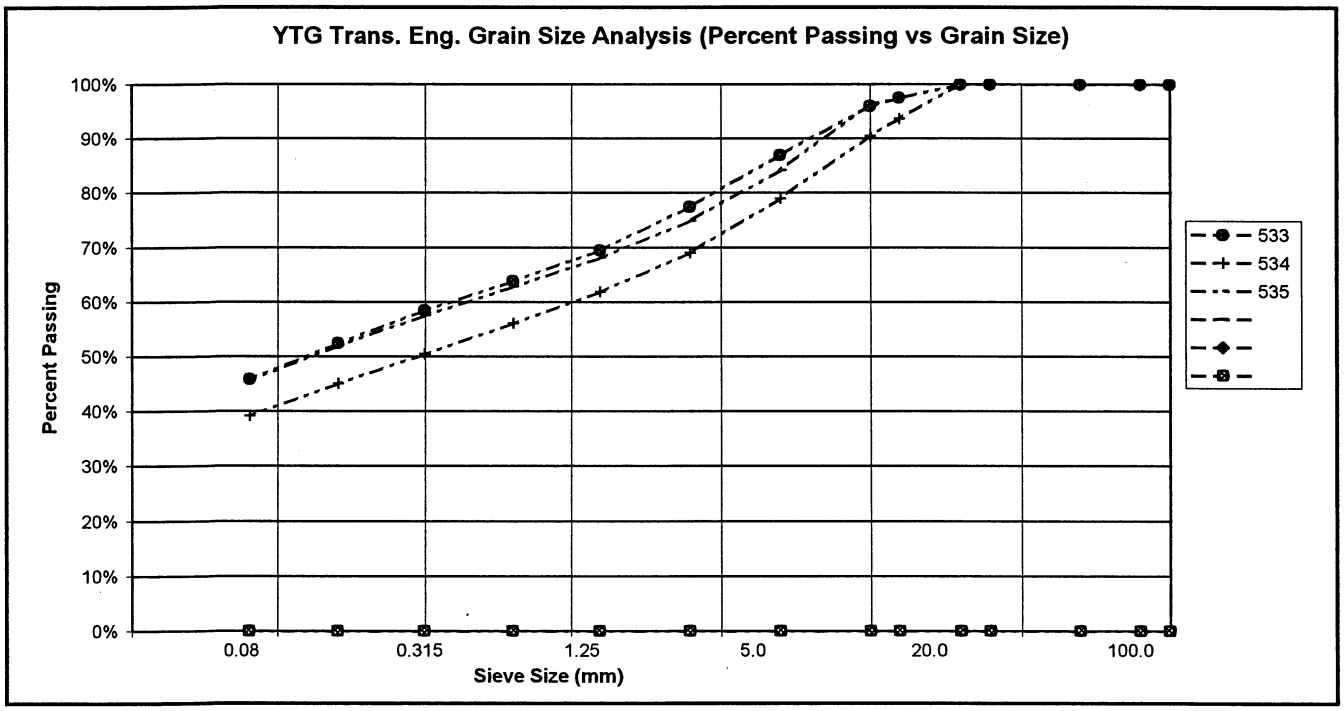
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1441
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1753 350 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/05/31

FIELD NO:	530	531	532			
LAB NO:	934	935	936			
DEPTH:	1.4-1.6	3.0-3.2	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	100%	96%			
12.5	93%	95%	89%			
10.0	87%	90%	86%			
5.0	74%	79%	80%			
2.5	65%	70%	74%			
1.25	59%	64%	69%			
0.630	54%	60%	64%			
0.315	49%	55%	59%			
0.160	44%	49%	53%			
0.080	38%	43%	46%			
M.C.(%):	6%	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:	26	21	20			
% SAND:	36	36	34			
% FINES:	38	43	46			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1442
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1753+600 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/05/31

FIELD NO:	533	534	535			
LAB NO:	937	928	939			
DEPTH:	1.4-1.6	2.9-3.1	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	100%	100%			
12.5	98%	94%	97%			
10.0	96%	90%	96%			
5.0	87%	79%	84%			
2.5	77%	69%	75%			
1.25	70%	62%	68%			
0.630	64%	56%	63%			
0.315	58%	51%	57%			
0.160	52%	45%	52%			
0.080	46%	39%	46%			
M.C.(%):	8%	9%	8%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	13	21	16			
% SAND:	41	40	38			
% FINES:	46	39	46			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			

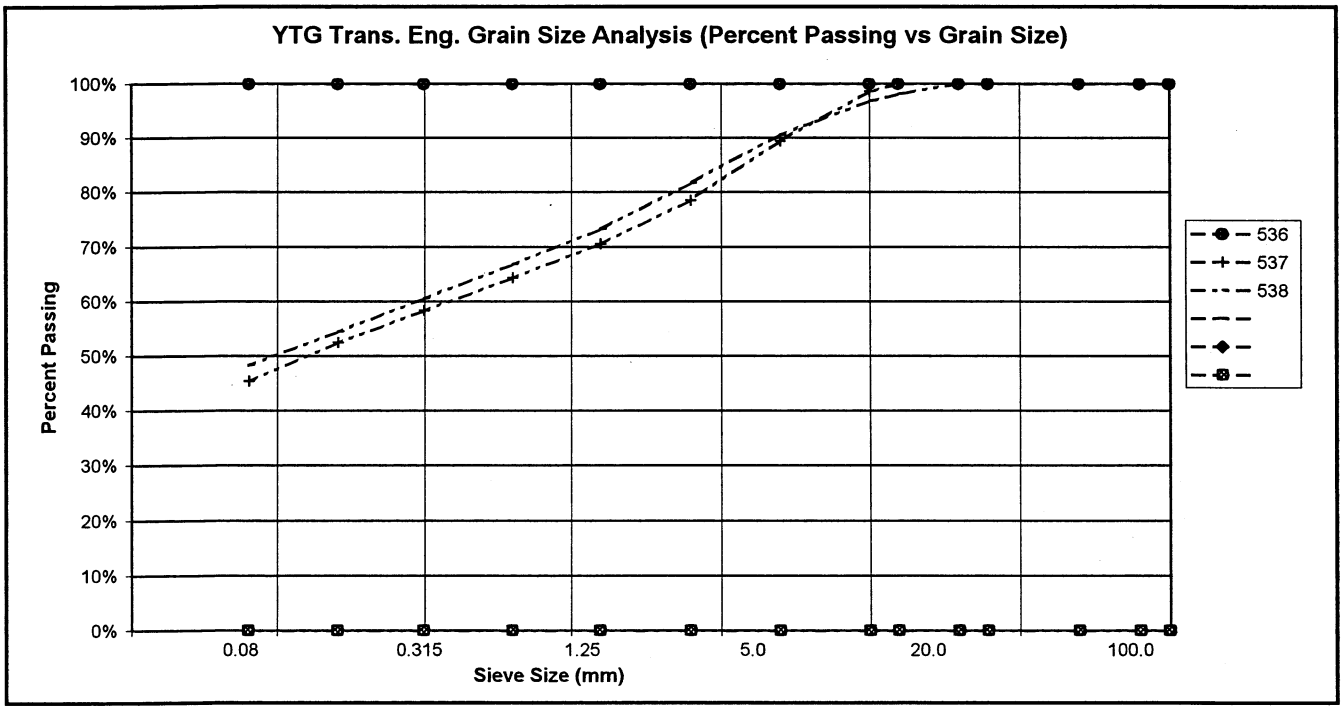


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1753+700 C/L
LOGGED BY: D.T.

HOLE No.: 549-1443

DATE COMP: 2000/05/31

FIELD NO:	536	537	538			
LAB NO:	LOST	941	942			
DEPTH:	1.3-1.5	2.8-3.0	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	100%	100%			
12.5	100%	100%	98%			
10.0	100%	99%	97%			
5.0	100%	89%	91%			
2.5	100%	79%	82%			
1.25	100%	71%	73%			
0.630	100%	64%	67%			
0.315	100%	58%	61%			
0.160	100%	52%	55%			
0.080	100%	45%	48%			
M.C.(%):	11%	8%	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:	0	11	9			
% SAND:	0	44	42			
% FINES:	100	45	48			
CLASSIFICATION	~~SILT (ML)~~	SILTY SAND (SM)	SILTY SAND (SM)			

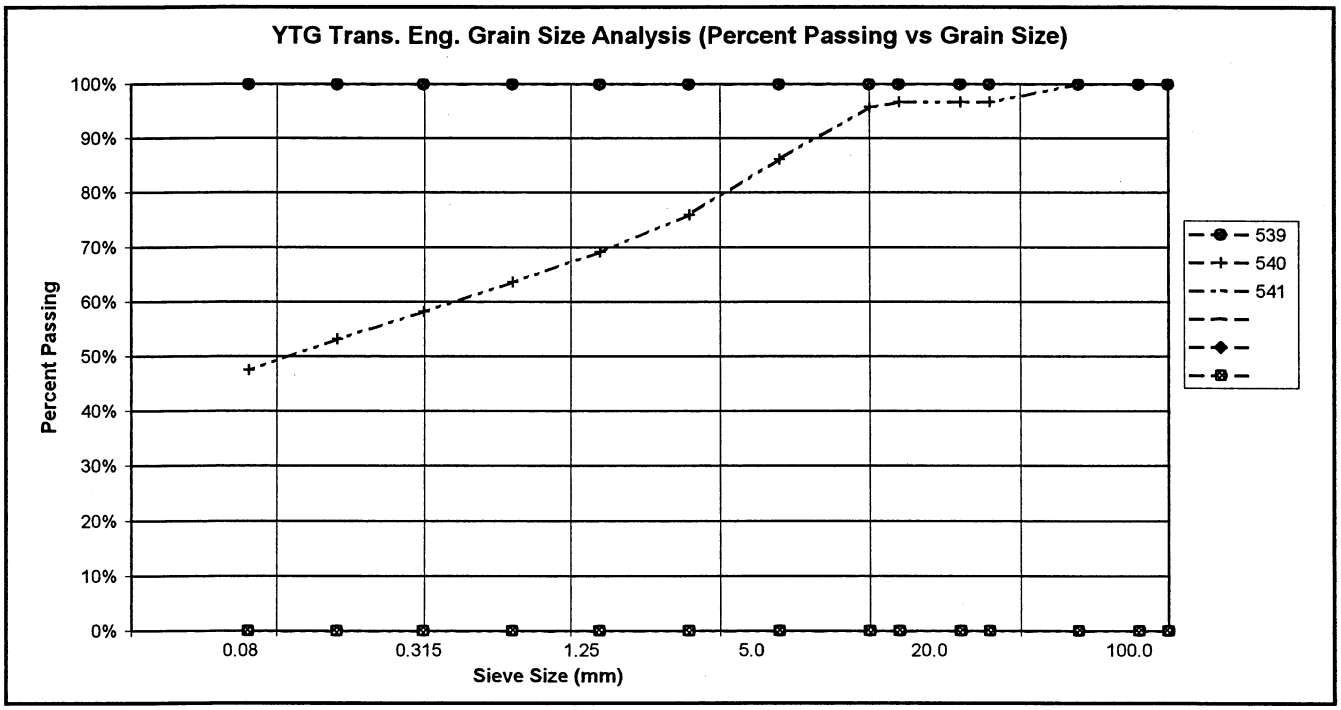


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1753+800 C/L
LOGGED BY: D.T.

HOLE No.: 549-1444

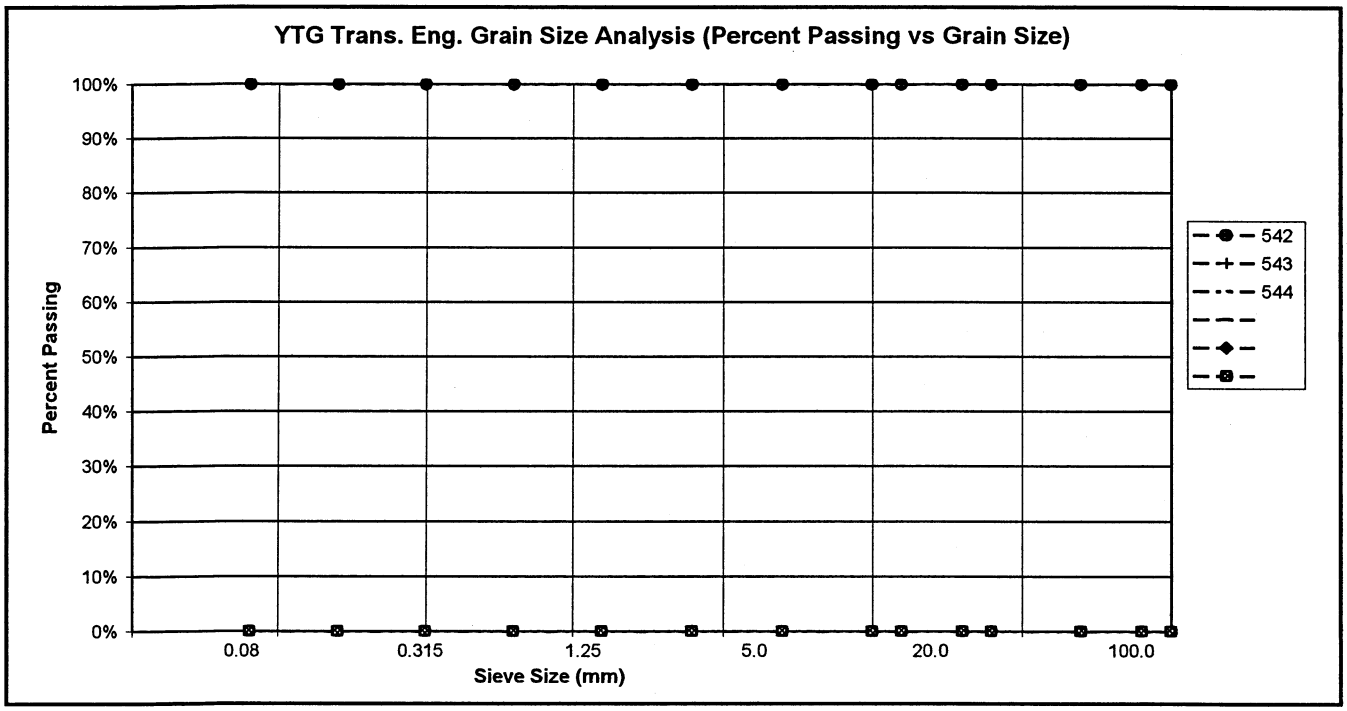
DATE COMP: 2000/05/31

FIELD NO:	539	540	541			
LAB NO:	LOST	944	LOST			
DEPTH:	1.3-1.5	2.7-2.9	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	97%	100%			
20.0	100%	97%	100%			
12.5	100%	97%	100%			
10.0	100%	96%	100%			
5.0	100%	86%	100%			
2.5	100%	76%	100%			
1.25	100%	69%	100%			
0.630	100%	64%	100%			
0.315	100%	58%	100%			
0.160	100%	53%	100%			
0.080	100%	48%	100%			
M.C.(%):	8%	8%	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:	0	14	0			
% SAND:	0	39	0			
% FINES:	100	48	100			
CLASSIFICATION	[illegible]	SILTY SAND (SM)	[illegible]			



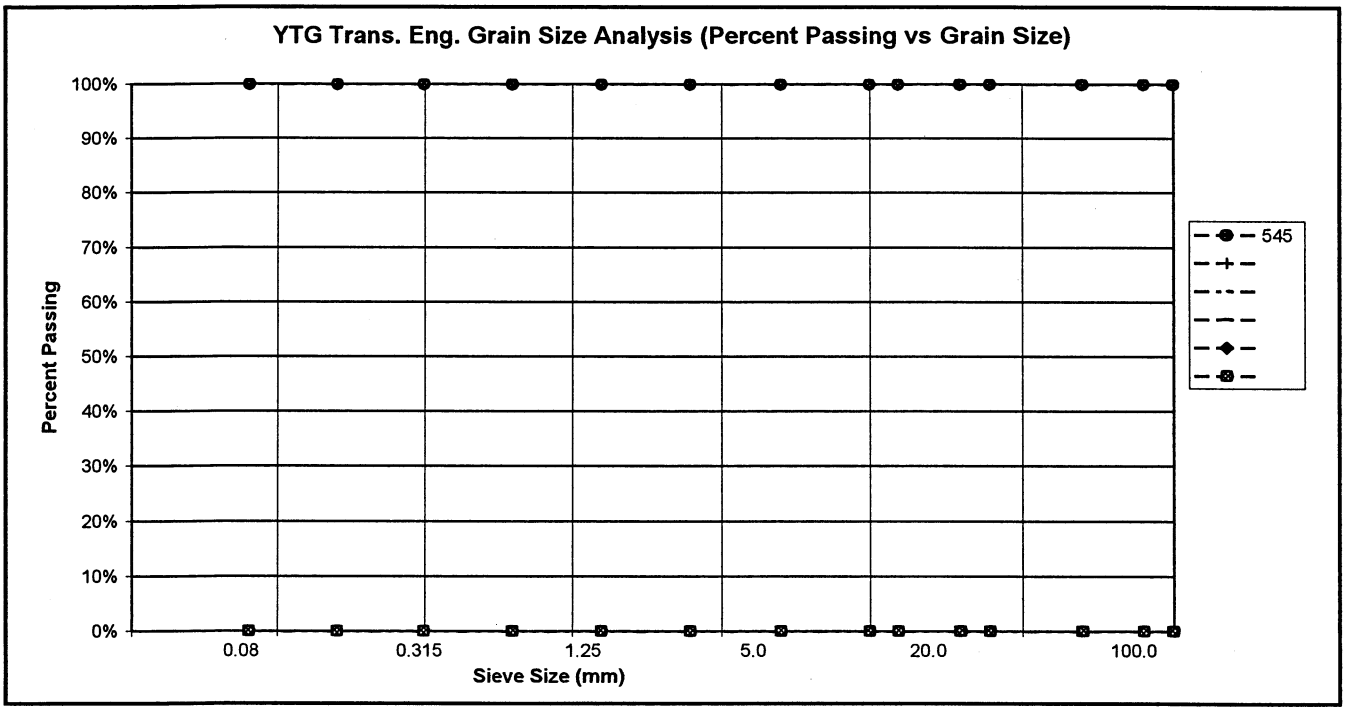
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1445
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1753+900 CENTRELINE		
LOGGED BY:	D.T.		DATE COMP: 2000/05/31

FIELD NO:	542	543	544			
LAB NO:	LOST	LOST	LOST			
DEPTH:	1.4-1.6	3.0-3.2	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	100%	100%			
12.5	100%	100%	100%			
10.0	100%	100%	100%			
5.0	100%	100%	100%			
2.5	100%	100%	100%			
1.25	100%	100%	100%			
0.630	100%	100%	100%			
0.315	100%	100%	100%			
0.160	100%	100%	100%			
0.080	100%	100%	100%			
M.C.(%):	8%	7%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	0	0	0			
% SAND:	0	0	0			
% FINES:	100	100	100			
CLASSIFICATION	SILT (ML)	SILT (ML)	SILT (ML)			



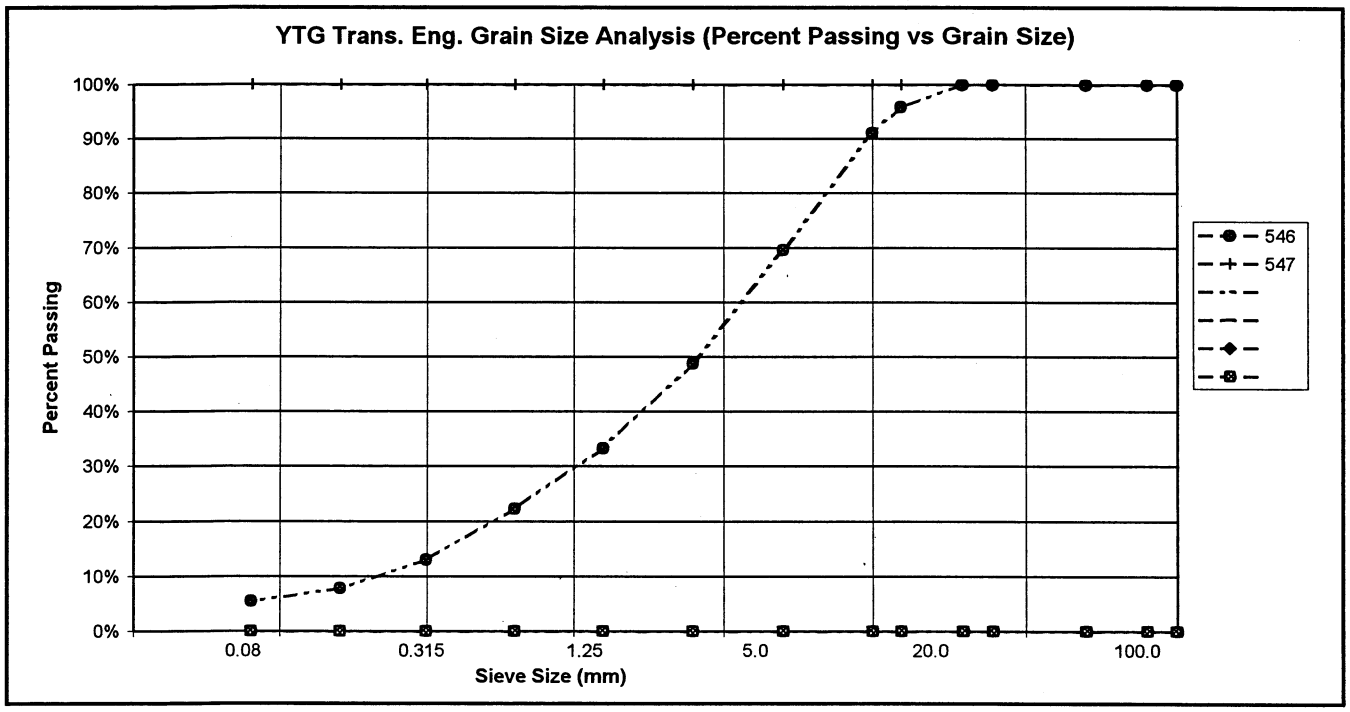
PROJECT NUMBER:	092-202101-0361-1				HOLE No.: 549-1446	
CLIENT:	ENGINEERING CAPITAL					
PROJECT NAME:	SHAKWAK SEG 11					
PROJECT LOCATION:	KM 1729.6-1787 A/H					
DRILL UNIT:	MOBILE B40 L					
HOLE LOCATION:	1754+000 20M RT					
LOGGED BY:	D.T.				DATE COMP: 2000/05/31	

FIELD NO:	545					
LAB NO:	LOST					
DEPTH:	1.2-1.4					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	100%					
20.0	100%					
12.5	100%					
10.0	100%					
5.0	100%					
2.5	100%					
1.25	100%					
0.630	100%					
0.315	100%					
0.160	100%					
0.080	100%					
M.C.(%):	10%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	0					
% SAND:	0					
% FINES:	100					
CLASSIFICATION	SILT (ML)					



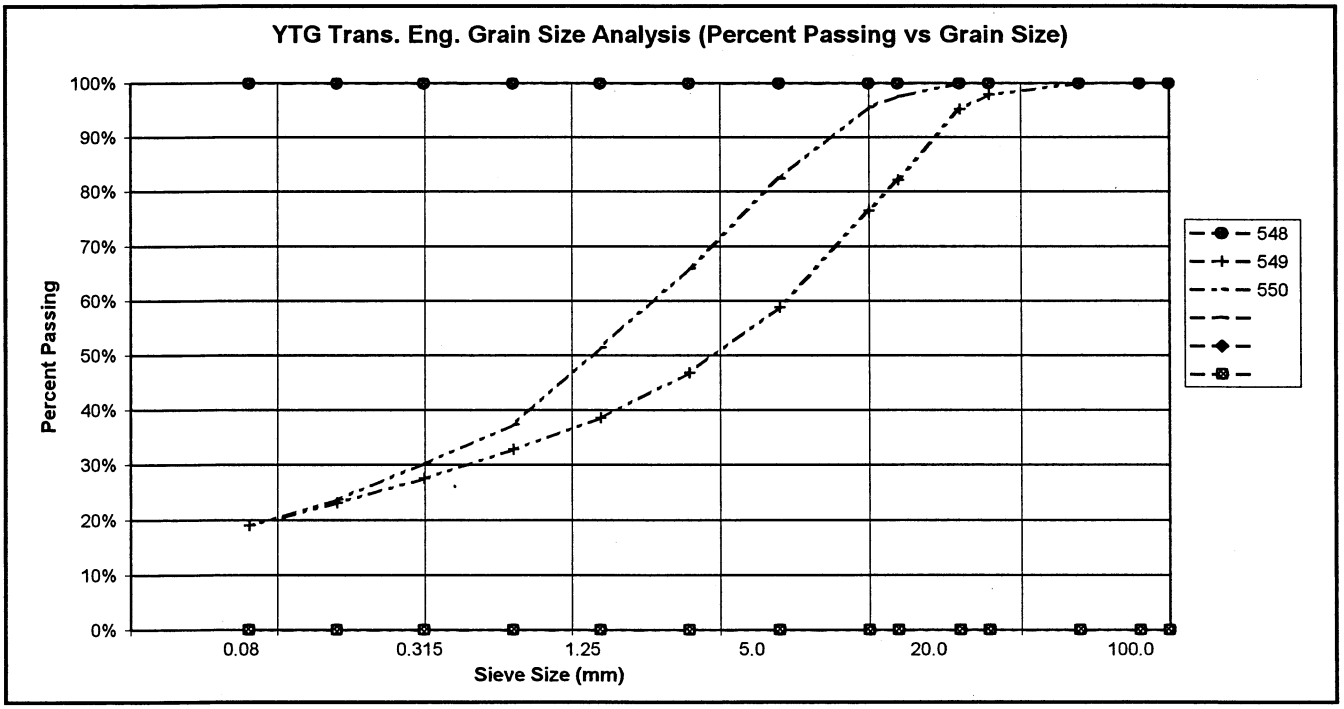
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1447
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1754+000 20M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/05/31

FIELD NO:	546	547				
LAB NO:	950	LOST				
DEPTH:	1.3-1.5	2.0-2.2				
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	96%	100%				
10.0	91%	100%				
5.0	70%	100%				
2.5	49%	100%				
1.25	33%	100%				
0.630	22%	100%				
0.315	13%	100%				
0.160	8%	100%				
0.080	6%	100%				
M.C.(%):	9%	10%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	30	0				
% SAND:	64	0				
% FINES:	6	100				
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	~~SILT (ML)~~				



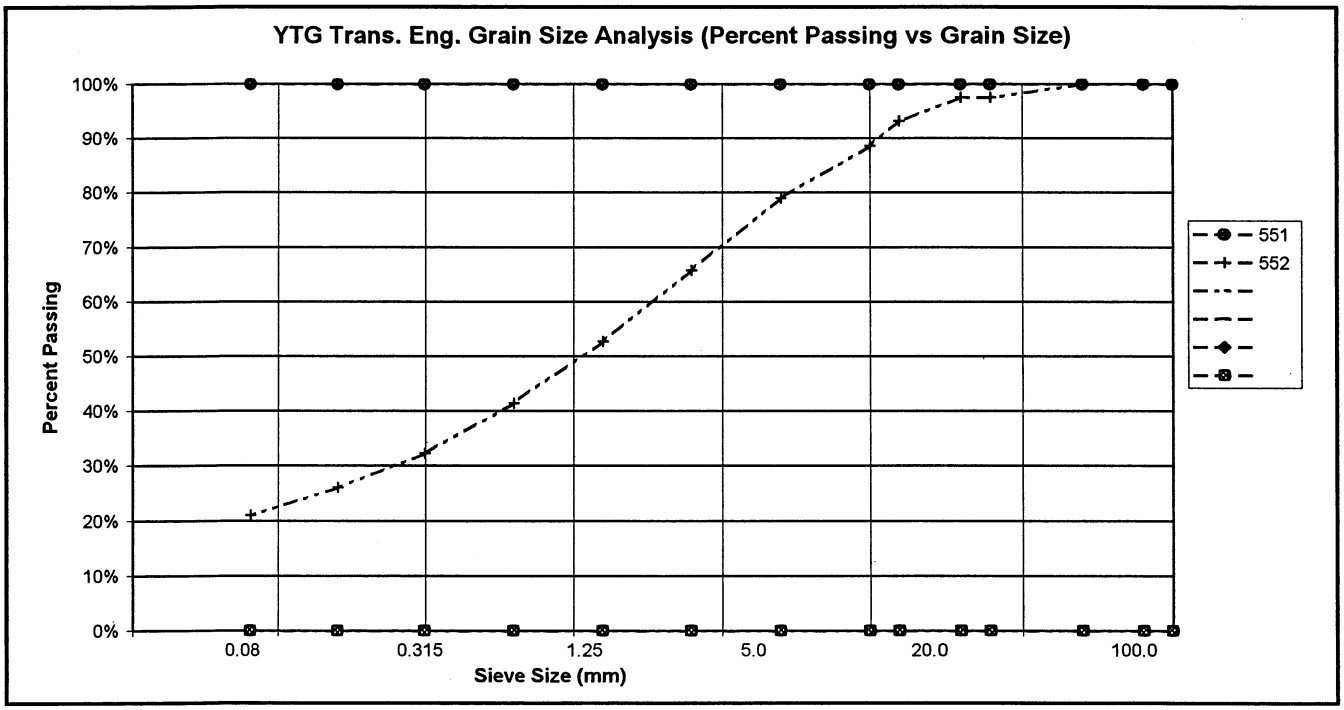
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1448
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1754+050 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/05/31

FIELD NO:	548	549	550			
LAB NO:	LOST	953	954			
DEPTH:	1.4-1.6	3.0-3.2	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	100%	98%	100%			
20.0	100%	95%	100%			
12.5	100%	82%	98%			
10.0	100%	77%	96%			
5.0	100%	59%	82%			
2.5	100%	47%	66%			
1.25	100%	39%	51%			
0.630	100%	33%	37%			
0.315	100%	28%	30%			
0.160	100%	23%	24%			
0.080	100%	19%	19%			
M.C.(%):	6%	3%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	0	41	18			
% SAND:	0	40	63			
% FINES:	100	19	19			
CLASSIFICATION	~~SILT (ML)~~	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)			



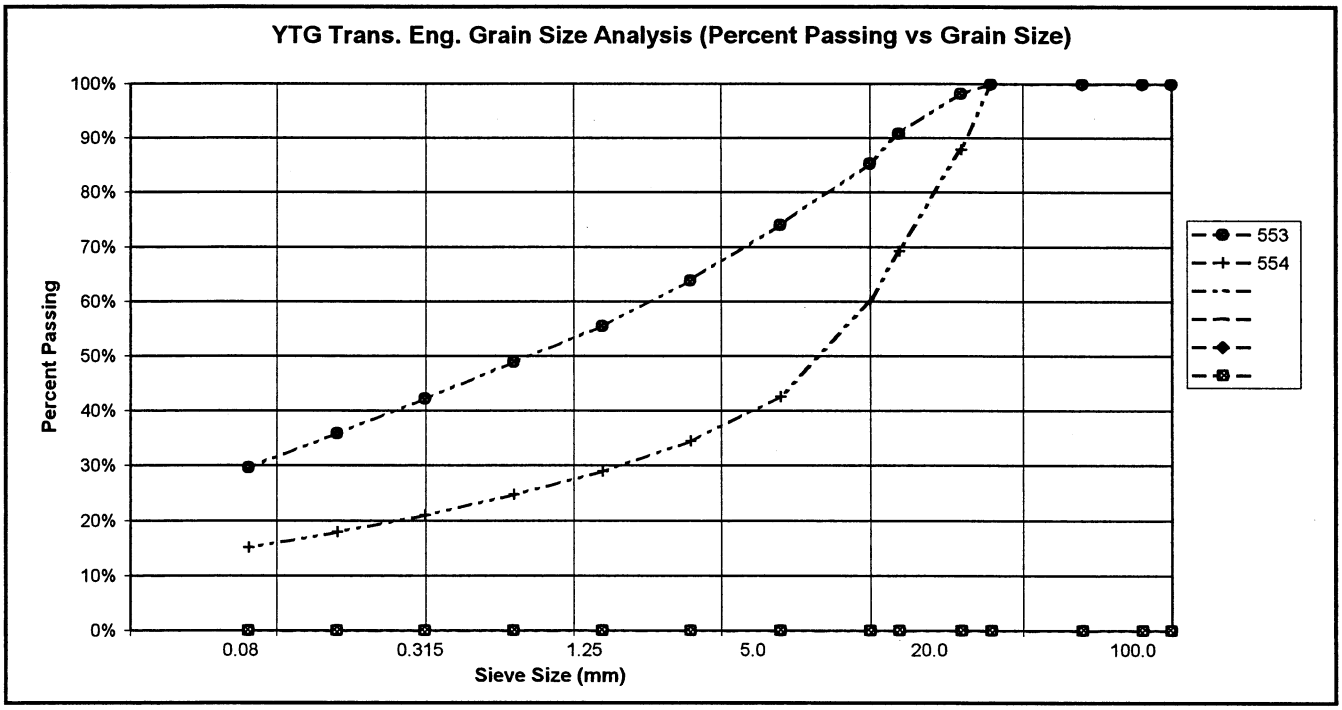
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1449
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1754+150 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/05/31

FIELD NO:	551	552				
LAB NO:	LOST	956				
DEPTH:	1.4-1.6	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%	98%				
20.0	100%	98%				
12.5	100%	93%				
10.0	100%	89%				
5.0	100%	79%				
2.5	100%	66%				
1.25	100%	53%				
0.630	100%	41%				
0.315	100%	32%				
0.160	100%	26%				
0.080	100%	21%				
M.C.(%):	4%	7%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	0	21				
% SAND:	0	58				
% FINES:	100	21				
CLASSIFICATION	~~SILT (ML)~~	SILTY SAND WITH GRAVEL (SM)				



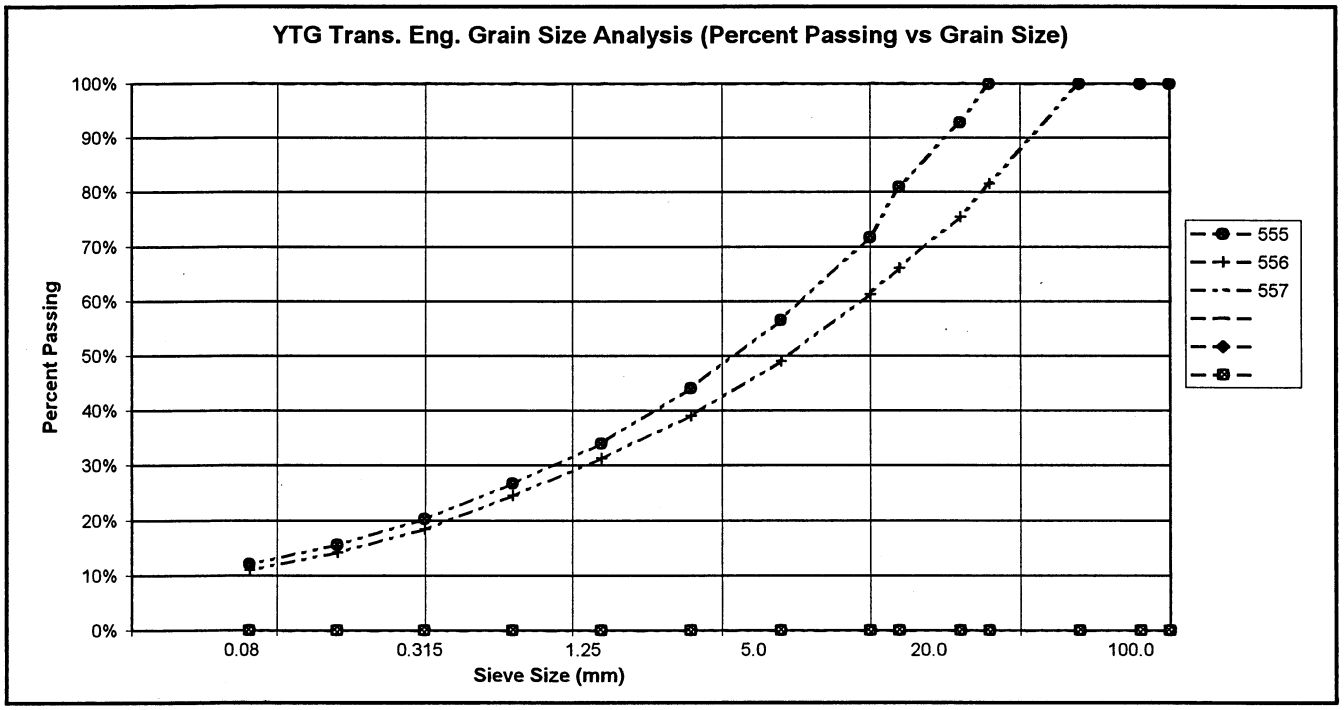
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1450
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1754+250 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/006/01

FIELD NO:	553	554				
LAB NO:	957	958				
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	98%	88%				
12.5	91%	69%				
10.0	85%	60%				
5.0	74%	43%				
2.5	64%	34%				
1.25	56%	29%				
0.630	49%	25%				
0.315	42%	21%				
0.160	36%	18%				
0.080	30%	15%				
M.C.(%):	5%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	26	57				
% SAND:	44	27				
% FINES:	30	15				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)				



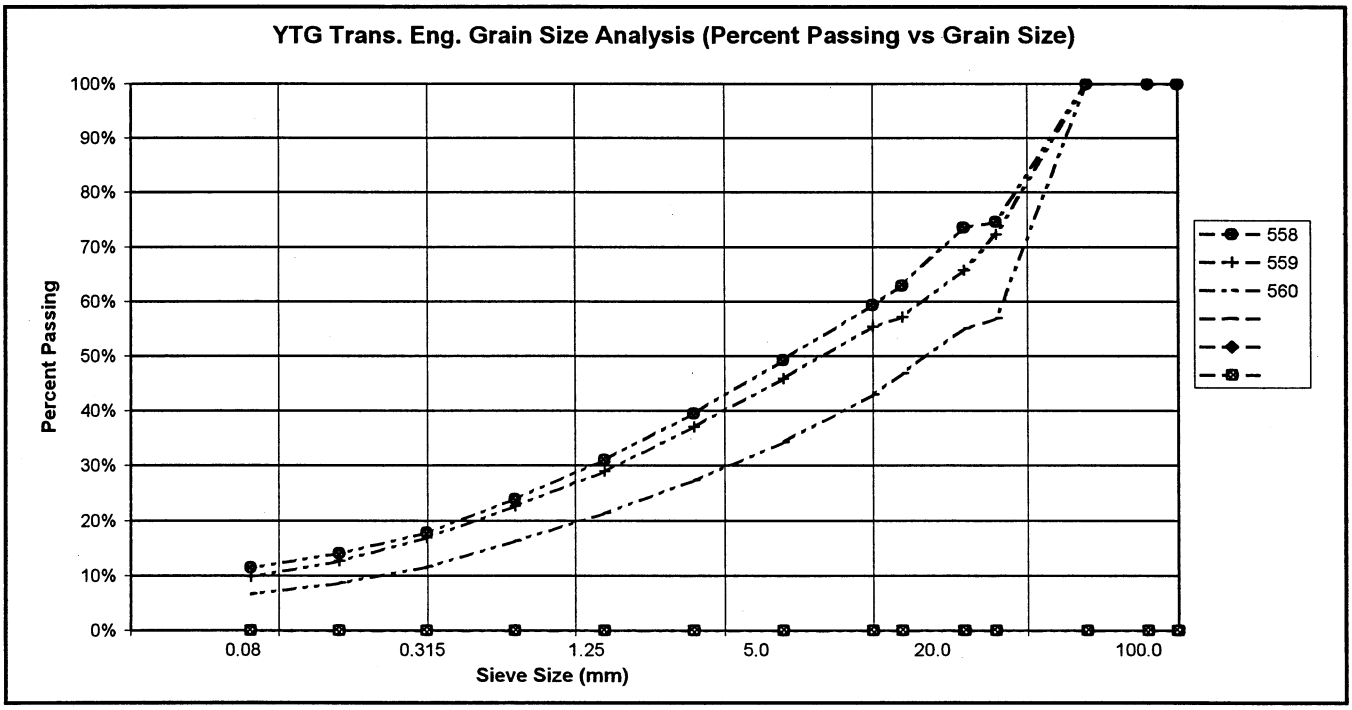
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1451
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1754+325 20M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/006/01

FIELD NO:	555	556	557			
LAB NO:	959	960	LOST			
DEPTH:	1.3-1.5	2.9-3.1	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	82%	100%			
20.0	93%	76%	100%			
12.5	81%	66%	100%			
10.0	72%	61%	100%			
5.0	57%	49%	100%			
2.5	44%	39%	100%			
1.25	34%	31%	100%			
0.630	27%	25%	100%			
0.315	20%	18%	100%			
0.160	16%	14%	100%			
0.080	12%	11%	100%			
M.C.(%):	4%	3%	6%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	43	51	0			
% SAND:	45	38	0			
% FINES:	12	11	100			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	~~SILT (ML)~~			



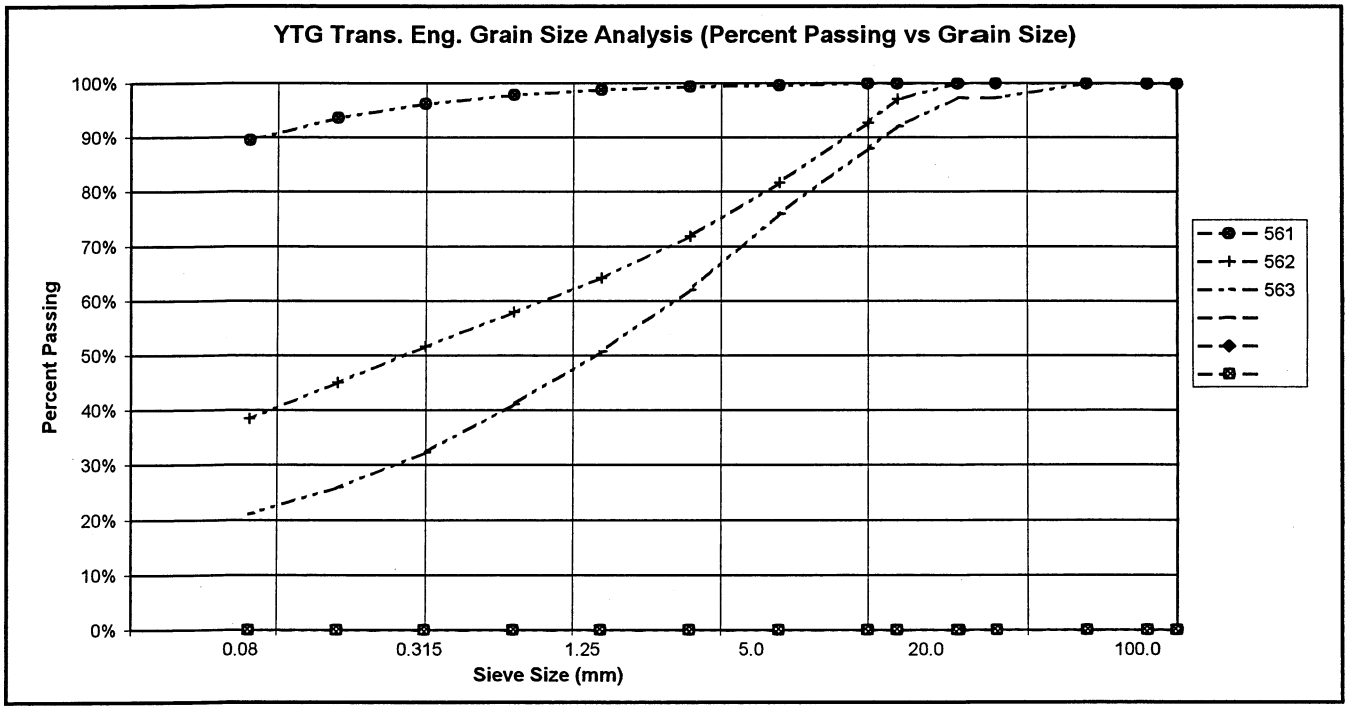
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 549-1452
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1754+315 20M RT		
LOGGED BY:	D.T.		DATE COMP: 2000/006/01

FIELD NO:	558	559	560			
LAB NO:	962	963	964			
DEPTH:	1.2-1.4	2.7-2.9	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	75%	72%	57%			
20.0	74%	66%	55%			
12.5	63%	57%	47%			
10.0	59%	55%	43%			
5.0	49%	46%	34%			
2.5	40%	37%	27%			
1.25	31%	29%	21%			
0.630	24%	23%	16%			
0.315	18%	17%	12%			
0.160	14%	13%	9%			
0.080	11%	10%	7%			
M.C.(%):	5%	6%	5%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	51	54	66			
% SAND:	38	36	28			
% FINES:	11	10	7			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			



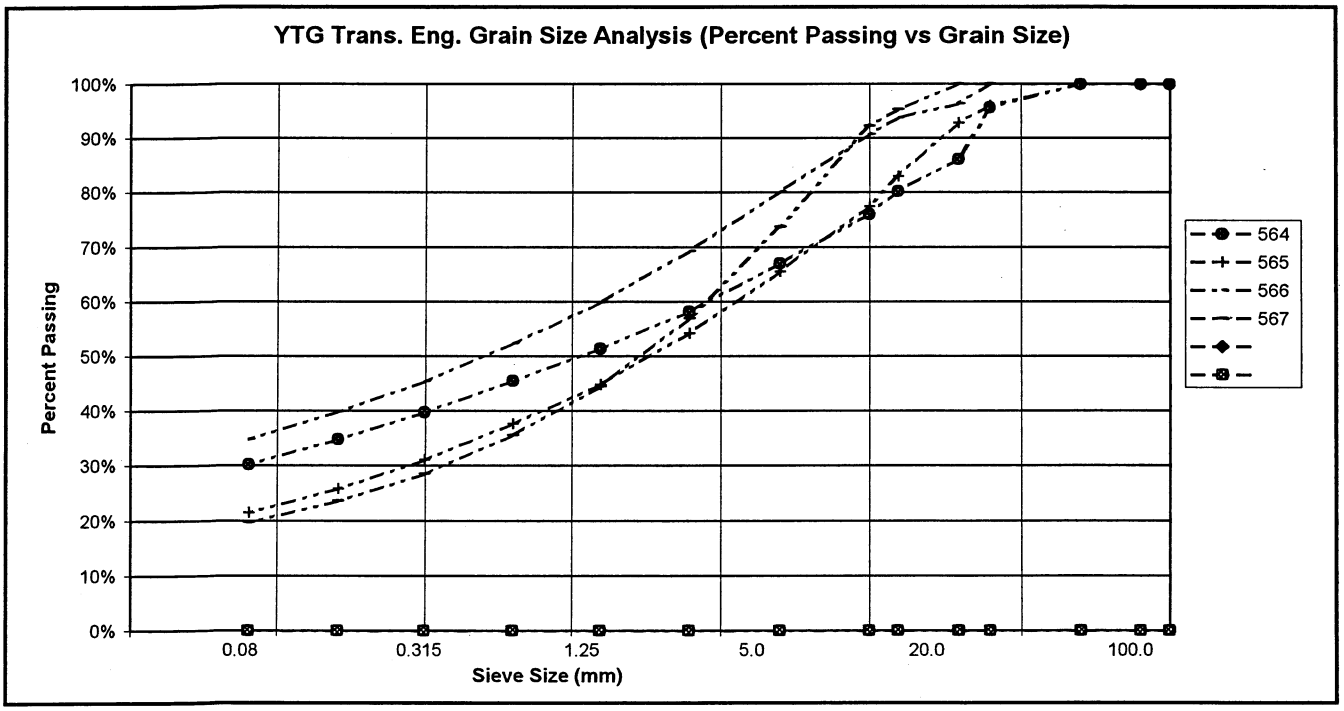
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 550-1453
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787. A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1754+350 CENTERLINE		
LOGGED BY:	D.T.		DATE COMP: 2000/06/01

FIELD NO:	561	562	563			
LAB NO:	965	966	967			
DEPTH:	0.4-0.6	1.4-1.6	2.8-3.0			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	97%			
20.0	100%	100%	97%			
12.5	100%	97%	92%			
10.0	100%	93%	88%			
5.0	100%	82%	76%			
2.5	99%	72%	62%			
1.25	99%	64%	51%			
0.630	98%	58%	41%			
0.315	96%	52%	32%			
0.160	94%	45%	26%			
0.080	90%	38%	21%			
M.C.(%):	8%	6%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	0	18	24			
% SAND:	10	43	55			
% FINES:	90	38	21			
CLASSIFICATION	SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



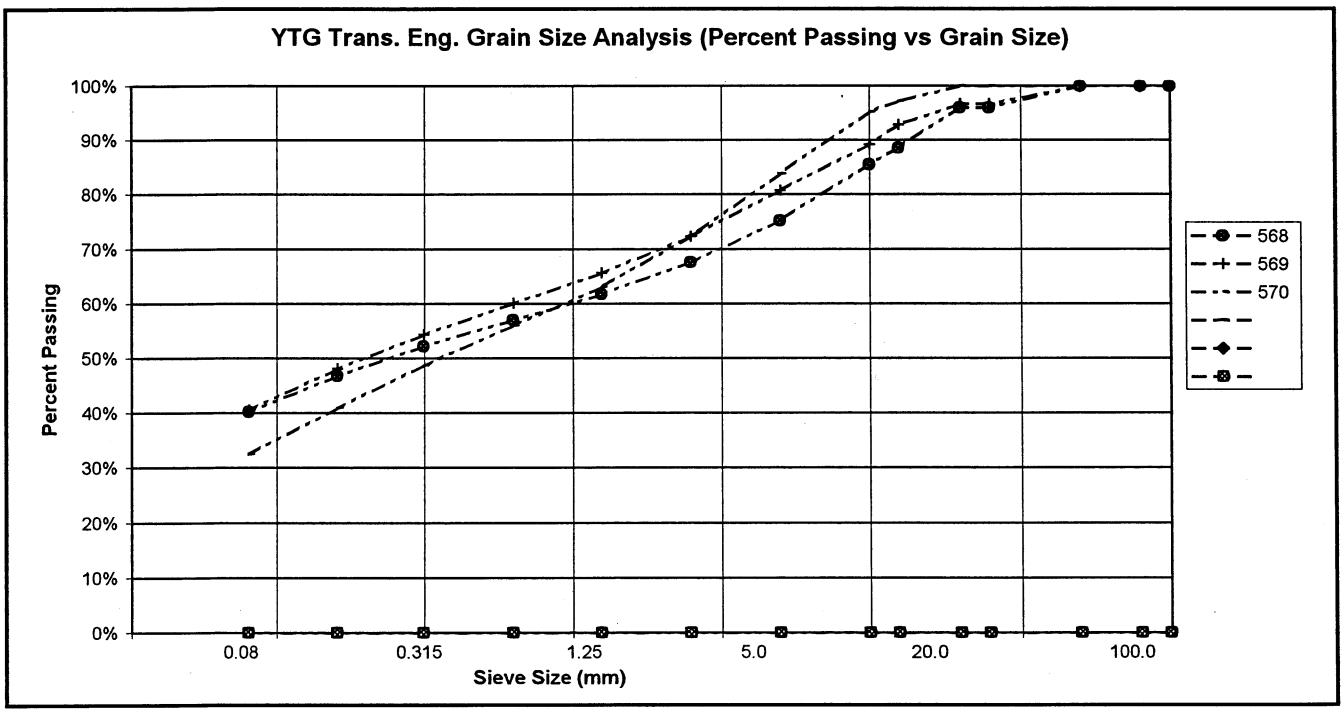
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 550-1454
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787. A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1754+450 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/01

FIELD NO:	564	565	566	567		
LAB NO:	968	969	970	971		
DEPTH:	1.4-1.6	3.0-3.2	4.2-4.4	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	96%	96%	100%	100%		
20.0	86%	93%	96%	100%		
12.5	80%	83%	94%	95%		
10.0	76%	77%	91%	92%		
5.0	67%	65%	80%	74%		
2.5	58%	54%	69%	57%		
1.25	51%	45%	60%	44%		
0.630	46%	38%	52%	36%		
0.315	40%	31%	45%	29%		
0.160	35%	26%	40%	24%		
0.080	30%	21%	35%	20%		
M.C.(%):	5%	6%	9%	7%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	33	35	20	26		
% SAND:	37	44	45	54		
% FINES:	30	21	35	20		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		



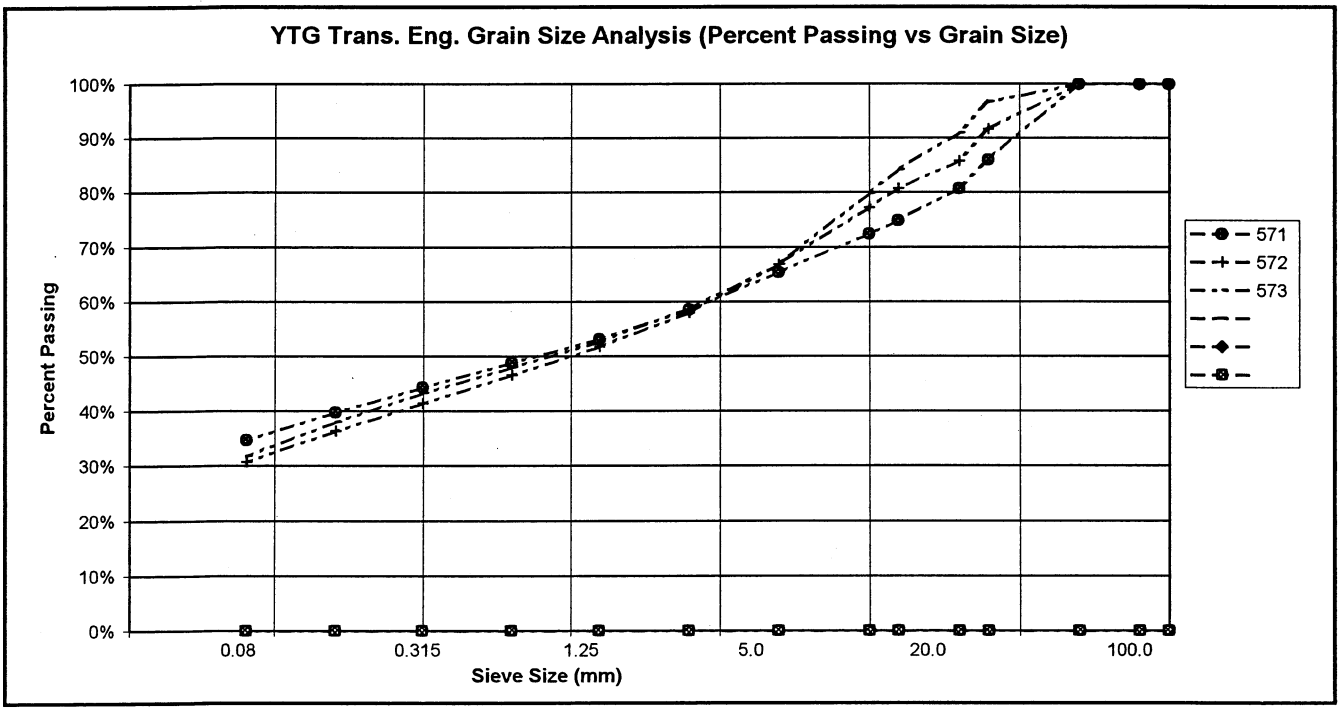
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 550-1455
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787. A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1454+550 CENTRELINE		
LOGGED BY:	D.T.		DATE COMP: 2000/06/01

FIELD NO:	568	569	570			
LAB NO:	972	973	974			
DEPTH:	1.4-1.6	2.9-3.1	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	96%	97%	100%			
20.0	96%	97%	100%			
12.5	89%	93%	97%			
10.0	86%	89%	95%			
5.0	75%	81%	84%			
2.5	68%	72%	72%			
1.25	62%	66%	63%			
0.630	57%	60%	56%			
0.315	52%	54%	49%			
0.160	47%	48%	41%			
0.080	40%	41%	33%			
M.C.(%):	6%	9%	8%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	25	19	16			
% SAND:	35	40	51			
% FINES:	40	41	33			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



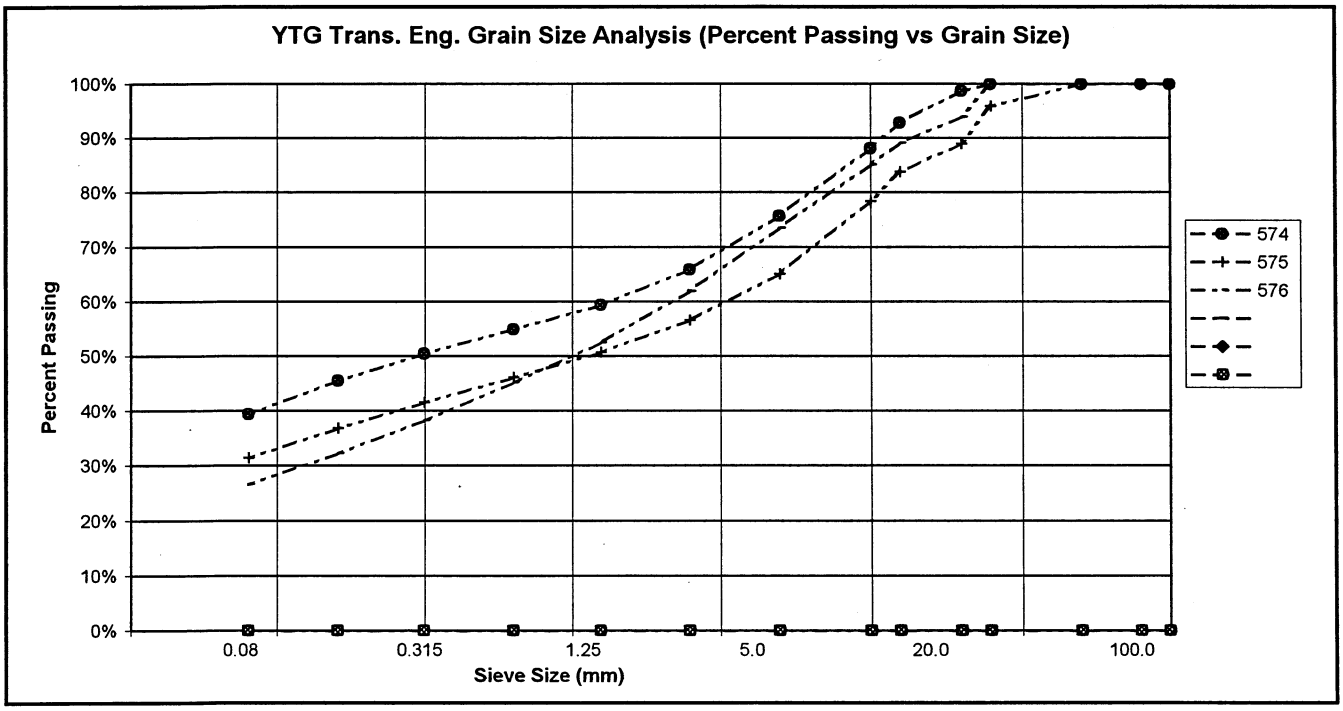
PROJECT NUMBER:	092-202101-0361-1	HOLE No.: 550-1456
CLIENT:	ENGINEERING CAPITAL	
PROJECT NAME:	SHAKWAK SEG 11	
PROJECT LOCATION:	KM 1729.6-1787. A/H	
DRILL UNIT:	MOBILE B40 L	
HOLE LOCATION:	1754+680 CENTRELINE	
LOGGED BY:	D.T.	DATE COMP: 2000/06/01

FIELD NO:	571	572	573			
LAB NO:	975	976	977			
DEPTH:	1.3-1.5	2.8-3.0	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	86%	92%	97%			
20.0	81%	86%	91%			
12.5	75%	81%	84%			
10.0	72%	77%	80%			
5.0	65%	67%	67%			
2.5	59%	58%	59%			
1.25	53%	52%	53%			
0.630	49%	47%	48%			
0.315	44%	41%	43%			
0.160	40%	36%	38%			
0.080	35%	31%	32%			
M.C.(%):	6%	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:	35	33	33			
% SAND:	31	36	35			
% FINES:	35	31	32			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 550-1457
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787. A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1754+800 CENTRELINE		
LOGGED BY:	D.T.		DATE COMP: 2000/06/01

FIELD NO:	574	575	576			
LAB NO:	978	979	980			
DEPTH:	1.4-1.6	2.1-3.1	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	96%	100%			
20.0	99%	89%	94%			
12.5	93%	84%	89%			
10.0	88%	78%	85%			
5.0	76%	65%	74%			
2.5	66%	57%	62%			
1.25	59%	51%	52%			
0.630	55%	46%	45%			
0.315	51%	42%	38%			
0.160	46%	37%	32%			
0.080	39%	31%	27%			
M.C.(%):	7%	5%	5%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	24	35	26			
% SAND:	36	34	47			
% FINES:	39	31	27			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)			

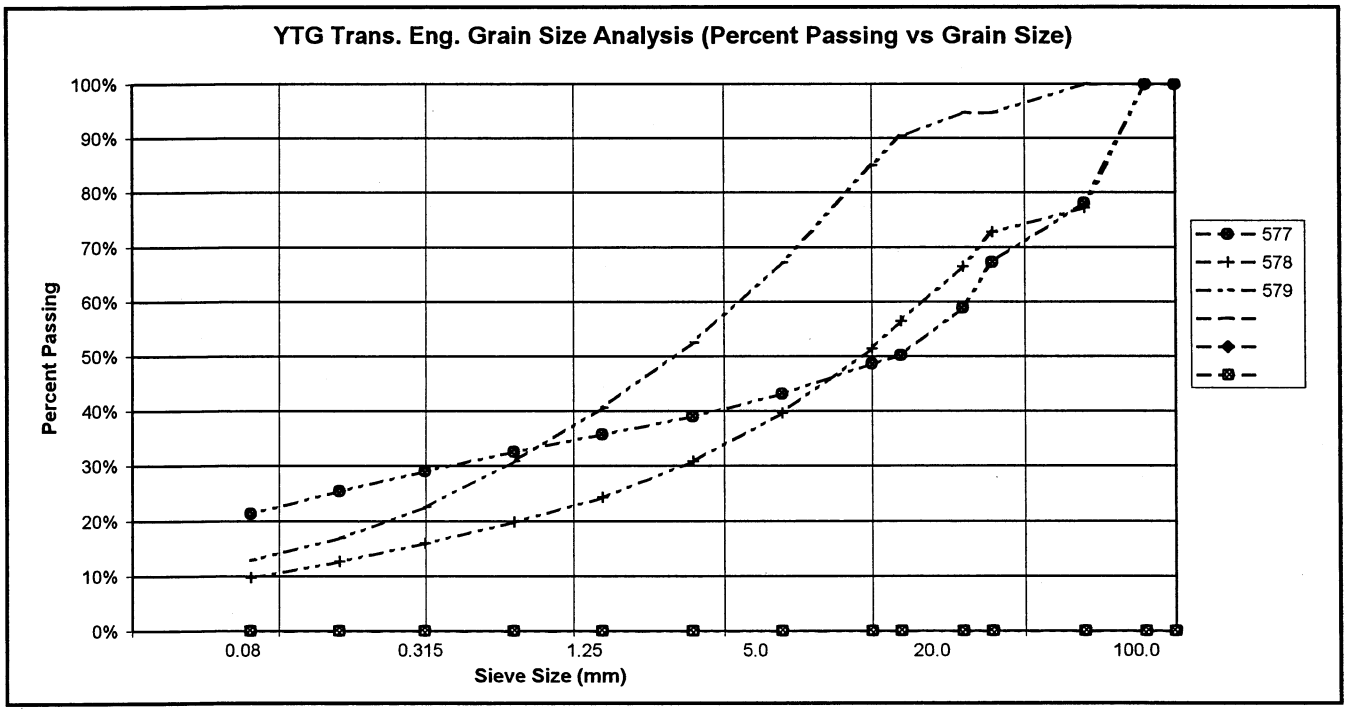


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787. A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1755+000 15M RT
LOGGED BY: D.T.

HOLE No.: 550-1458

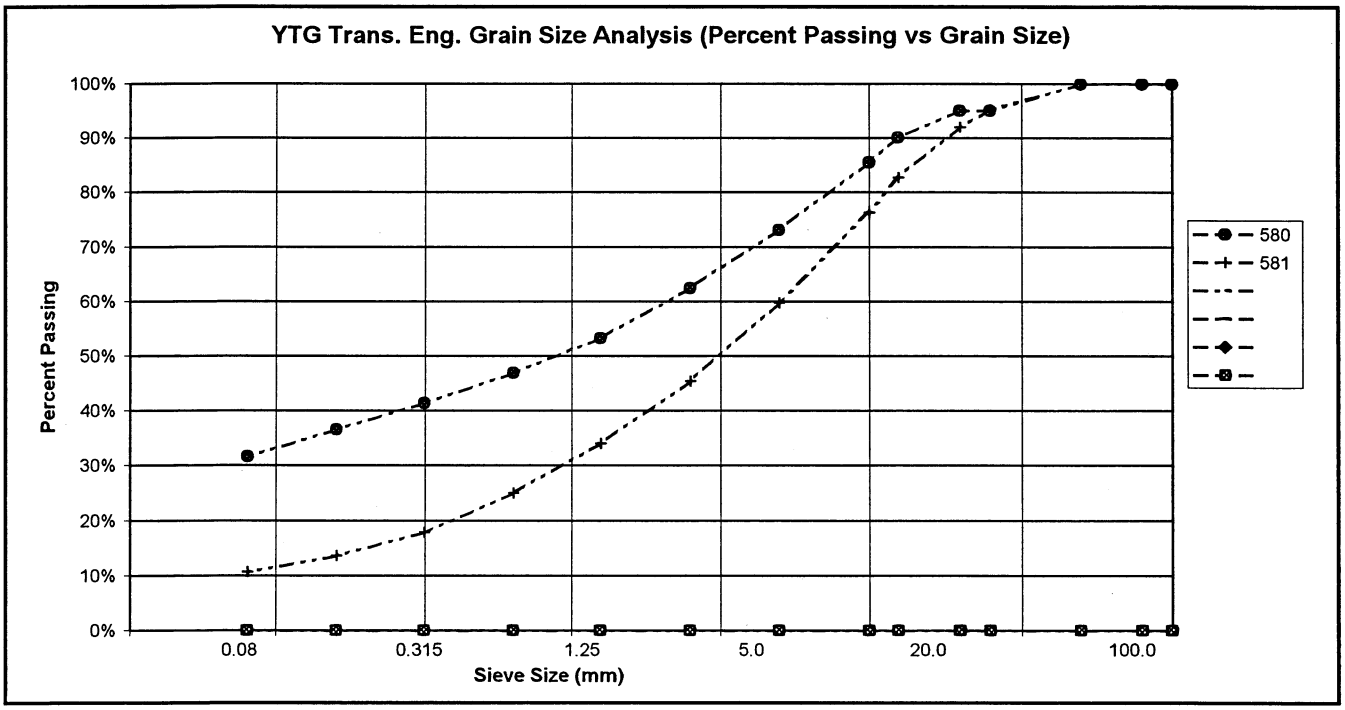
DATE COMP: 2000/06/02

FIELD NO:	577	578	579			
LAB NO:	981	982	983			
DEPTH:	1.2-1.4	2.9-3.1	4.0-4.2			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	78%	77%	100%			
25.0	67%	73%	95%			
20.0	59%	66%	95%			
12.5	50%	56%	90%			
10.0	49%	51%	85%			
5.0	43%	40%	67%			
2.5	39%	31%	52%			
1.25	36%	24%	41%			
0.630	33%	20%	31%			
0.315	29%	16%	23%			
0.160	25%	13%	17%			
0.080	21%	10%	13%			
M.C.(%):	5%	3%	6%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	57	60	33			
% SAND:	22	30	54			
% FINES:	21	10	13			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 550-1459
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787. A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1755+100 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/02

FIELD NO:	580	581				
LAB NO:	984	985				
DEPTH:	1.5-1.7	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	95%	95%				
20.0	95%	92%				
12.5	90%	83%				
10.0	86%	76%				
5.0	73%	60%				
2.5	62%	45%				
1.25	53%	34%				
0.630	47%	25%				
0.315	41%	18%				
0.160	37%	14%				
0.080	32%	11%				
M.C.(%):	14%	7%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	27	40				
% SAND:	41	49				
% FINES:	32	11				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)				

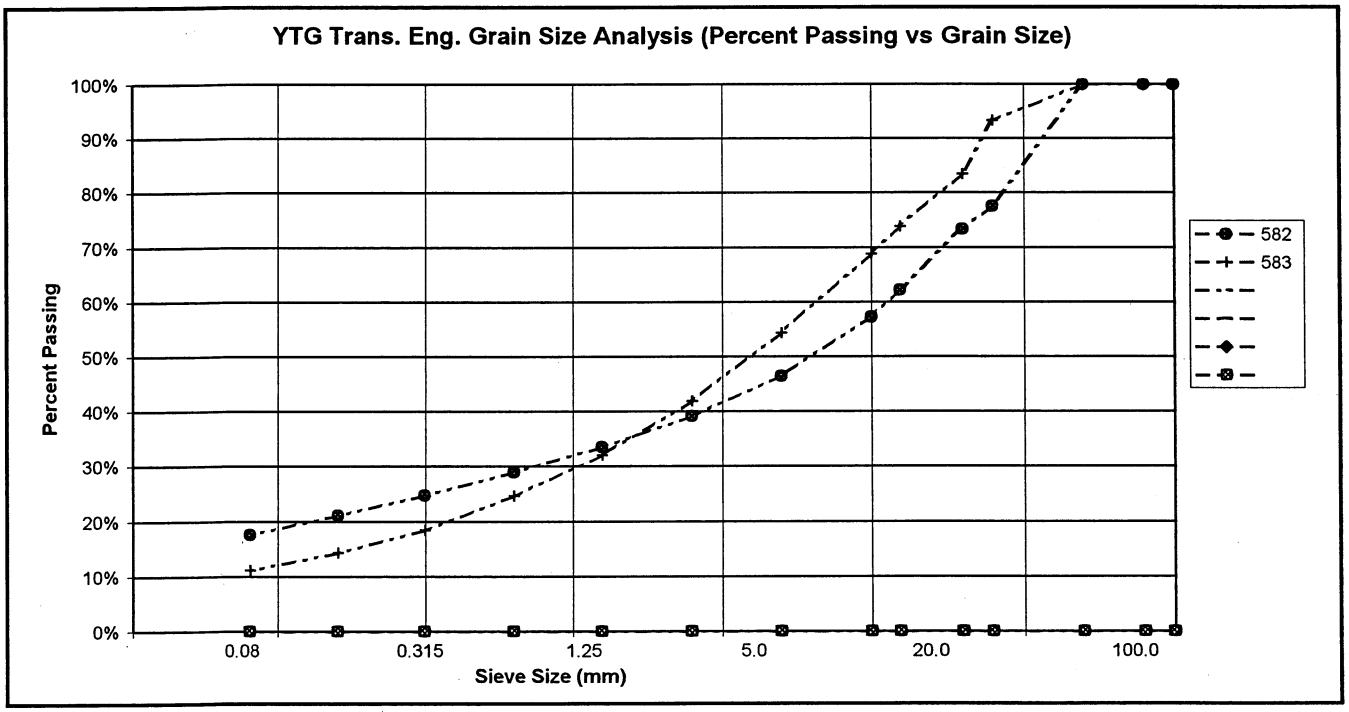


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787. A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1755+200 C/L
LOGGED BY: D.T.

HOLE No.: 550-1460

DATE COMP: 2000/06/02

FIELD NO:	582	583				
LAB NO:	986	987				
DEPTH:	1.6-1.8	2.8-3.0				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	78%	93%				
20.0	73%	83%				
12.5	62%	74%				
10.0	57%	69%				
5.0	46%	54%				
2.5	39%	42%				
1.25	34%	32%				
0.630	29%	25%				
0.315	25%	18%				
0.160	21%	14%				
0.080	18%	11%				
M.C.(%):	4%	5%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	54	46				
% SAND:	29	43				
% FINES:	18	11				
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

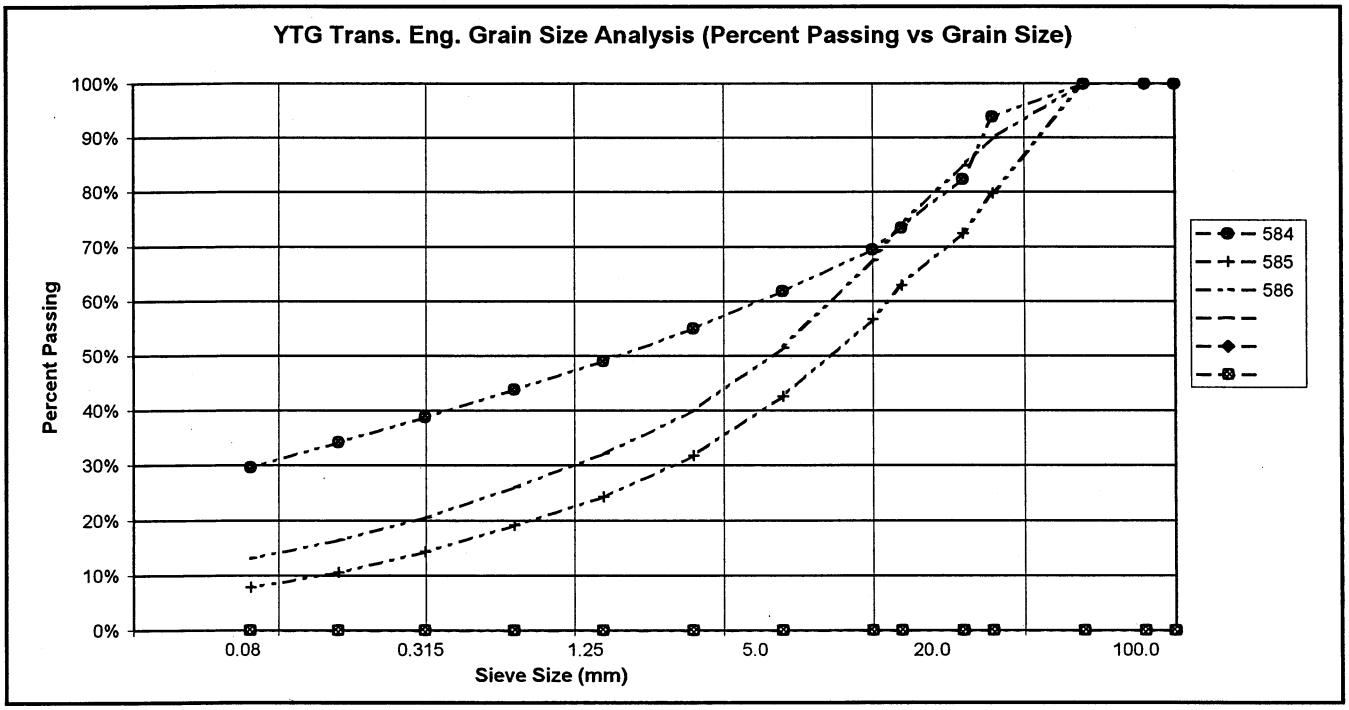


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787. A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1755+300 C/L
LOGGED BY: D.T.

HOLE No.: 550-1461

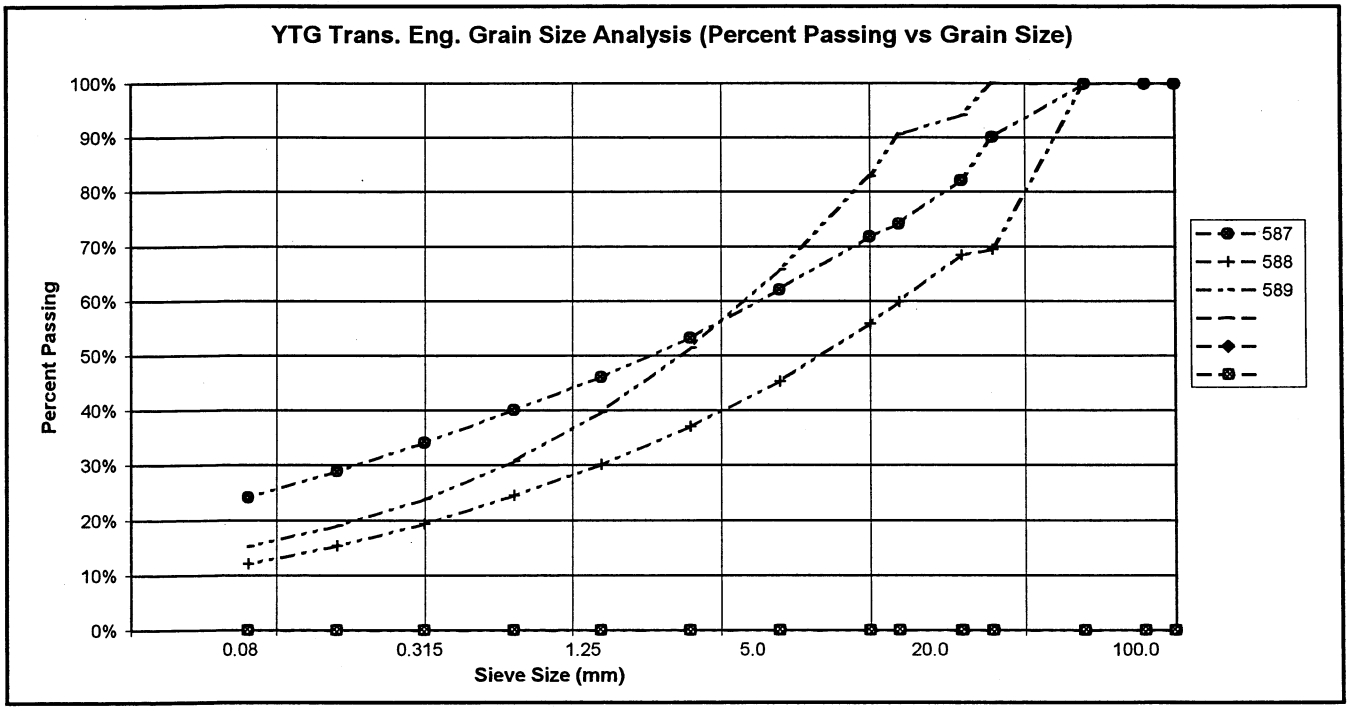
DATE COMP: 2000/06/02

FIELD NO:	584	585	586			
LAB NO:	988	989	990			
DEPTH:	1.4-1.6	2.9-3.1	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	94%	80%	90%			
20.0	82%	72%	85%			
12.5	74%	63%	74%			
10.0	69%	57%	68%			
5.0	62%	43%	51%			
2.5	55%	32%	40%			
1.25	49%	24%	32%			
0.630	44%	19%	26%			
0.315	39%	14%	21%			
0.160	34%	11%	16%			
0.080	30%	8%	13%			
M.C.(%):	5%	3%	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:	38	57	49			
% SAND:	32	35	38			
% FINES:	30	8	13			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY GRAVEL WITH SAND (GM)			



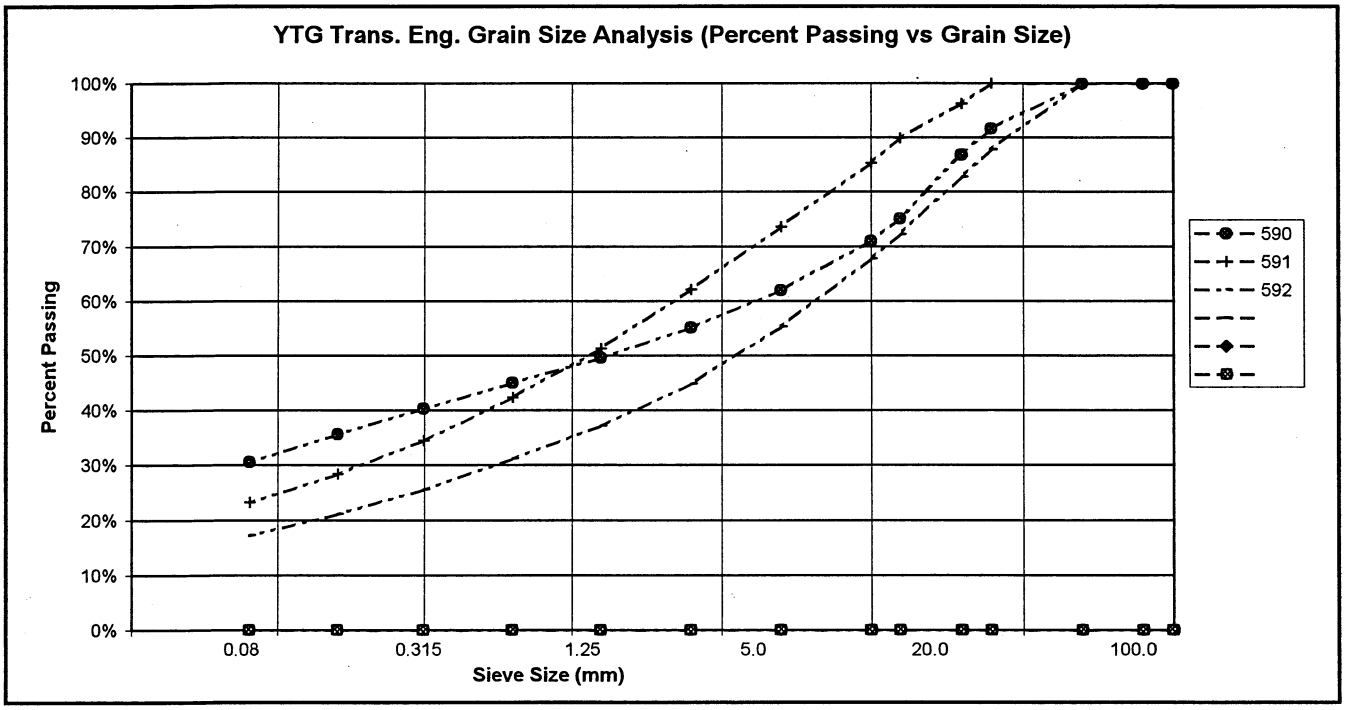
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 550-1462
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787. A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1755+400 10M RT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/02

FIELD NO:	587	588	589			
LAB NO:	991	992	993			
DEPTH:	1.6-1.8	2.8-3.0	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	90%	69%	100%			
20.0	82%	68%	94%			
12.5	74%	60%	91%			
10.0	72%	56%	83%			
5.0	62%	45%	66%			
2.5	53%	37%	51%			
1.25	46%	30%	40%			
0.630	40%	25%	31%			
0.315	34%	19%	24%			
0.160	29%	15%	19%			
0.080	24%	12%	15%			
M.C.(%):	5%	3%	3%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	38	55	34			
% SAND:	38	33	50			
% FINES:	24	12	15			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)			



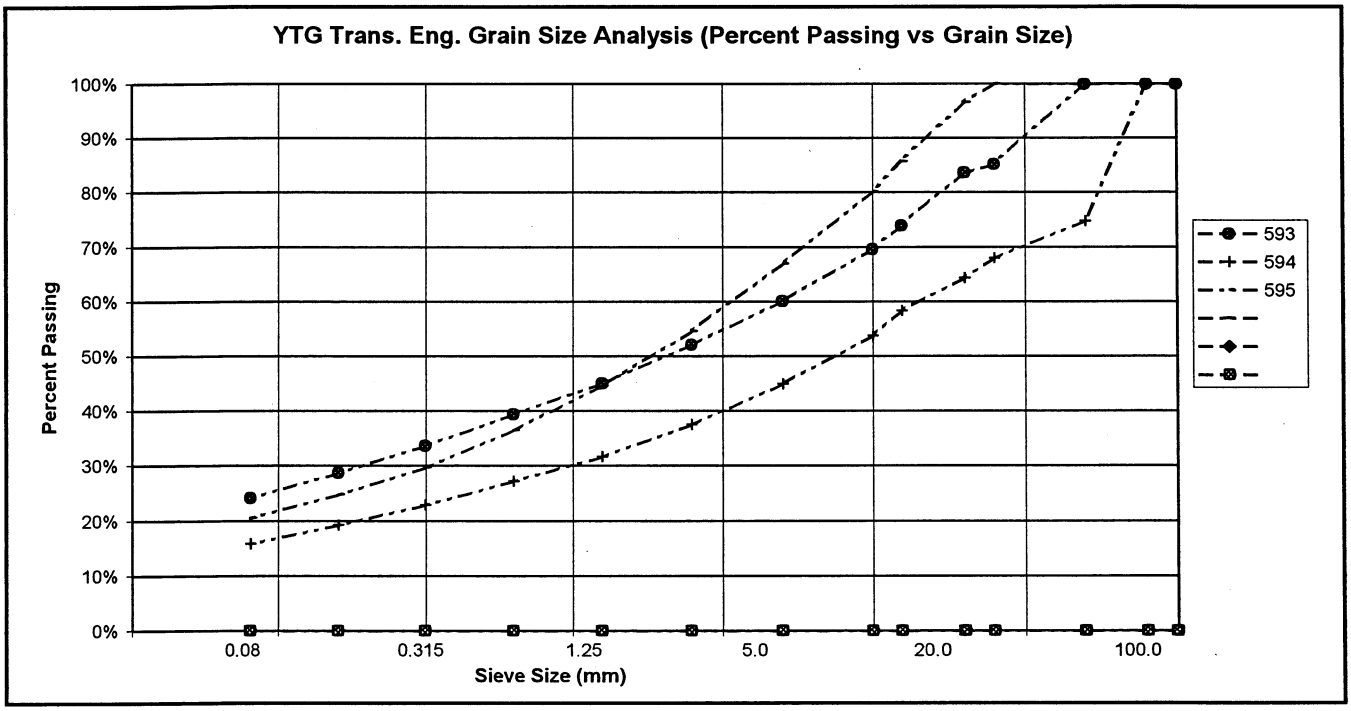
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 550-1463
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787. A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1755+500 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/02

FIELD NO:	590	591	592			
LAB NO:	994	995	996			
DEPTH:	1.3-1.5	2.9-3.1	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	92%	100%	88%			
20.0	87%	96%	83%			
12.5	75%	90%	72%			
10.0	71%	85%	68%			
5.0	62%	74%	55%			
2.5	55%	62%	45%			
1.25	50%	51%	37%			
0.630	45%	42%	31%			
0.315	40%	34%	26%			
0.160	36%	28%	21%			
0.080	31%	23%	17%			
M.C.(%):	4%	4%	3%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	38	26	45			
% SAND:	31	50	38			
% FINES:	31	23	17			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)			



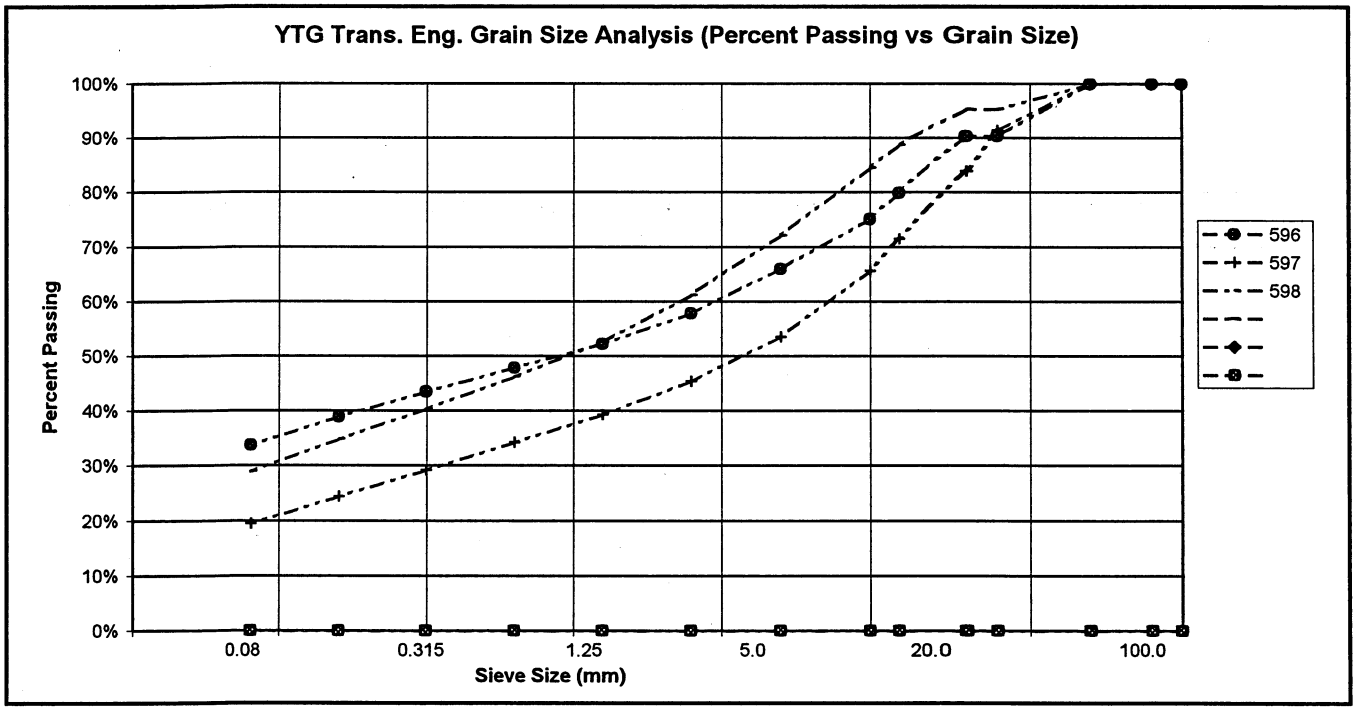
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 550-1464
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787. A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1755+600 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/02

FIELD NO:	593	594	595			
LAB NO:	997	998	999			
DEPTH:	1.4-1.6	3.0-3.2	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	75%	100%			
25.0	85%	68%	100%			
20.0	84%	64%	97%			
12.5	74%	58%	86%			
10.0	70%	54%	80%			
5.0	60%	45%	67%			
2.5	52%	38%	55%			
1.25	45%	32%	45%			
0.630	39%	27%	37%			
0.315	34%	23%	30%			
0.160	29%	19%	25%			
0.080	24%	16%	20%			
M.C.(%):	4%	3%	5%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	40	55	33			
% SAND:	36	29	46			
% FINES:	24	16	20			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 550-1465
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787. A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1755+700 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/02

FIELD NO:	596	597	598			
LAB NO:	1000	1001	1002			
DEPTH:	1.4-1.6	2.8-3.0	4.4-4.6			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	90%	91%	95%			
20.0	90%	84%	95%			
12.5	80%	71%	89%			
10.0	75%	66%	84%			
5.0	66%	54%	72%			
2.5	58%	45%	61%			
1.25	52%	39%	53%			
0.630	48%	34%	46%			
0.315	44%	29%	40%			
0.160	39%	24%	35%			
0.080	34%	20%	29%			
M.C.(%):	6%	3%	6%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	34	46	28			
% SAND:	32	34	43			
% FINES:	34	20	29			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)			

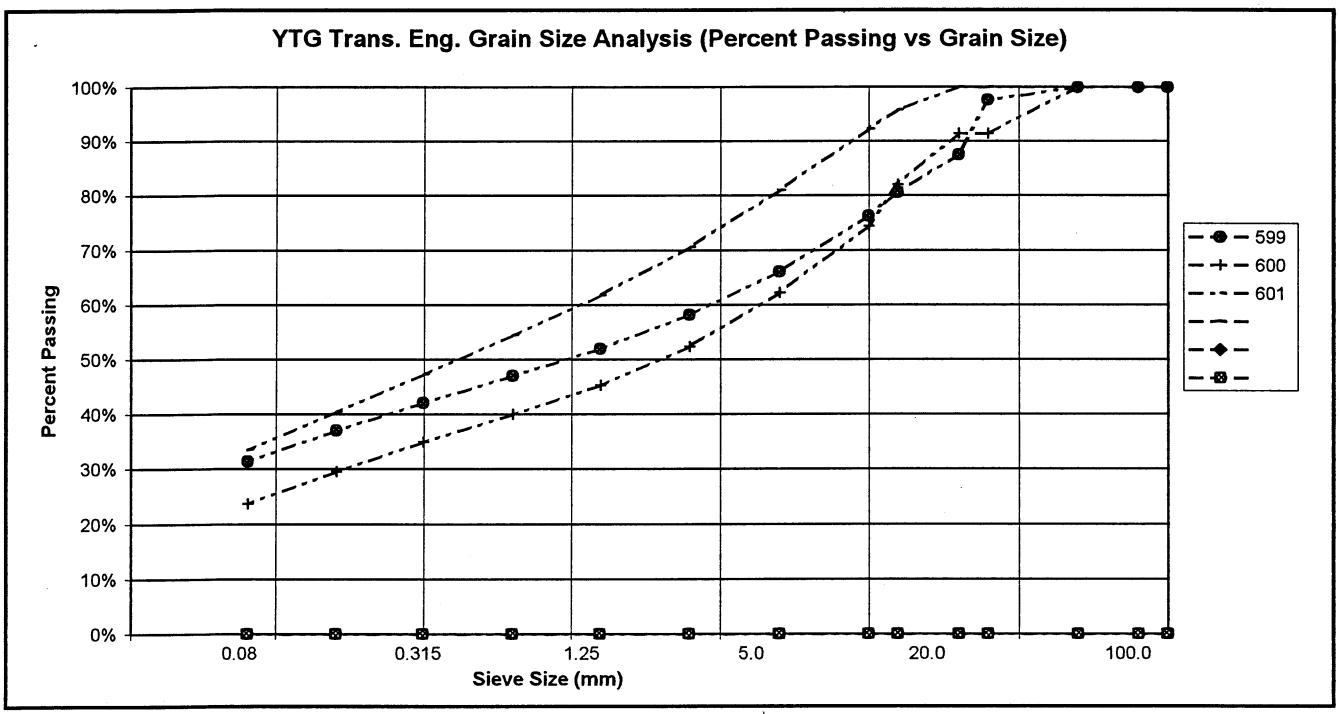


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEGMENT 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1755+800 C/L
LOGGED BY: D.T.

HOLE No.: 551-1466

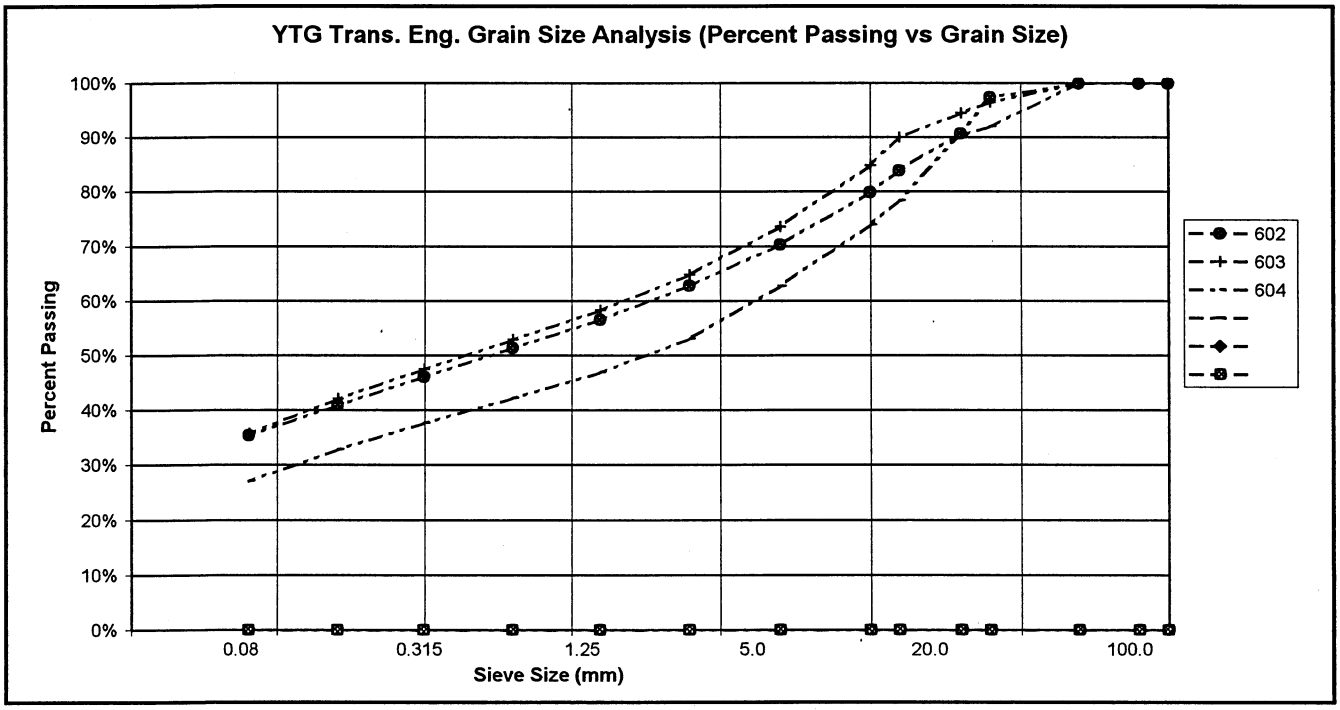
DATE COMP: 2000/06/05

FIELD NO:	599	600	601			
LAB NO:	1003	1004	1005			
DEPTH:	1.3-1.5	2.8-3.0	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	98%	91%	100%			
20.0	88%	91%	100%			
12.5	81%	82%	96%			
10.0	76%	74%	92%			
5.0	66%	62%	81%			
2.5	58%	52%	71%			
1.25	52%	45%	62%			
0.630	47%	40%	55%			
0.315	42%	35%	47%			
0.160	37%	30%	41%			
0.080	31%	24%	34%			
M.C.(%):	4%	7%	6%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	34	38	19			
% SAND:	35	39	47			
% FINES:	31	24	34			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



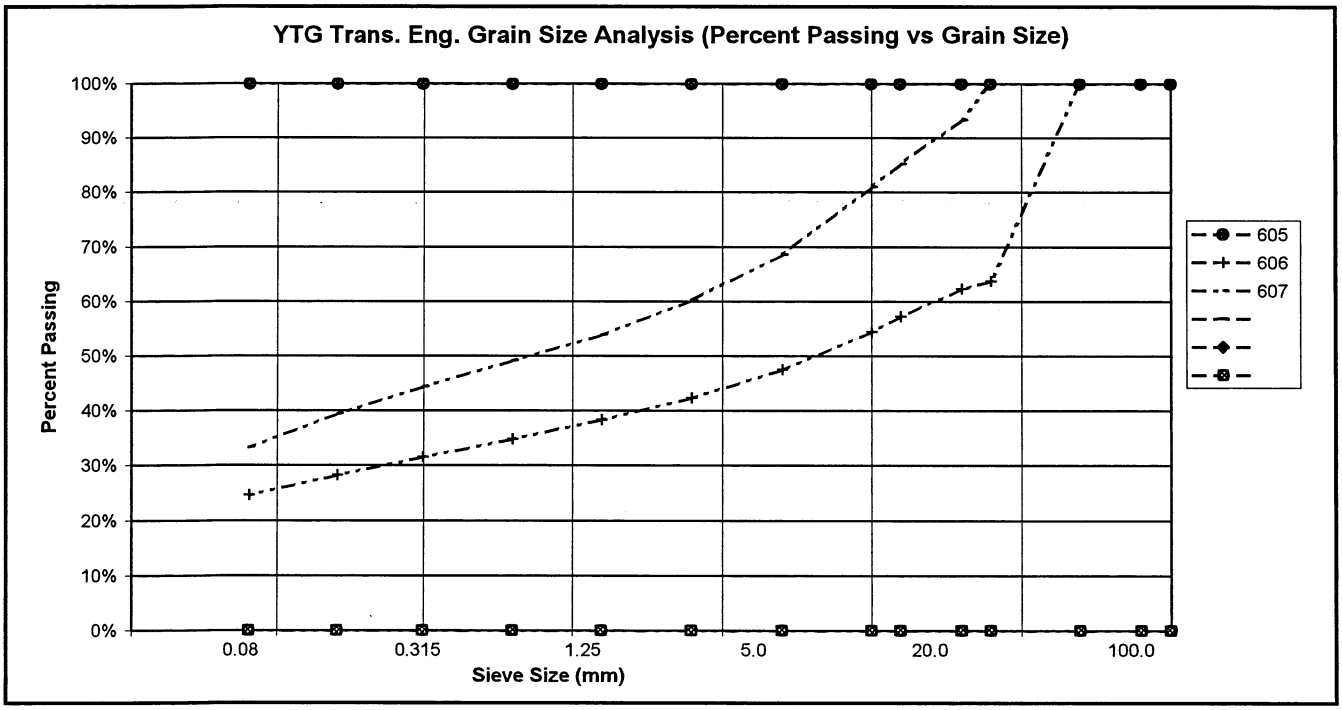
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1467
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1755+900 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/05

FIELD NO:	602	603	604			
LAB NO:	1006	1007	1008			
DEPTH:	1.2-1.4	2.9-3.1	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	97%	96%	92%			
20.0	91%	95%	90%			
12.5	84%	90%	78%			
10.0	80%	85%	74%			
5.0	70%	74%	63%			
2.5	63%	65%	53%			
1.25	57%	58%	47%			
0.630	51%	53%	42%			
0.315	46%	48%	38%			
0.160	41%	42%	33%			
0.080	35%	36%	27%			
M.C.(%):	6%	8%	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:	30	26	37			
% SAND:	35	38	36			
% FINES:	35	36	27			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)			



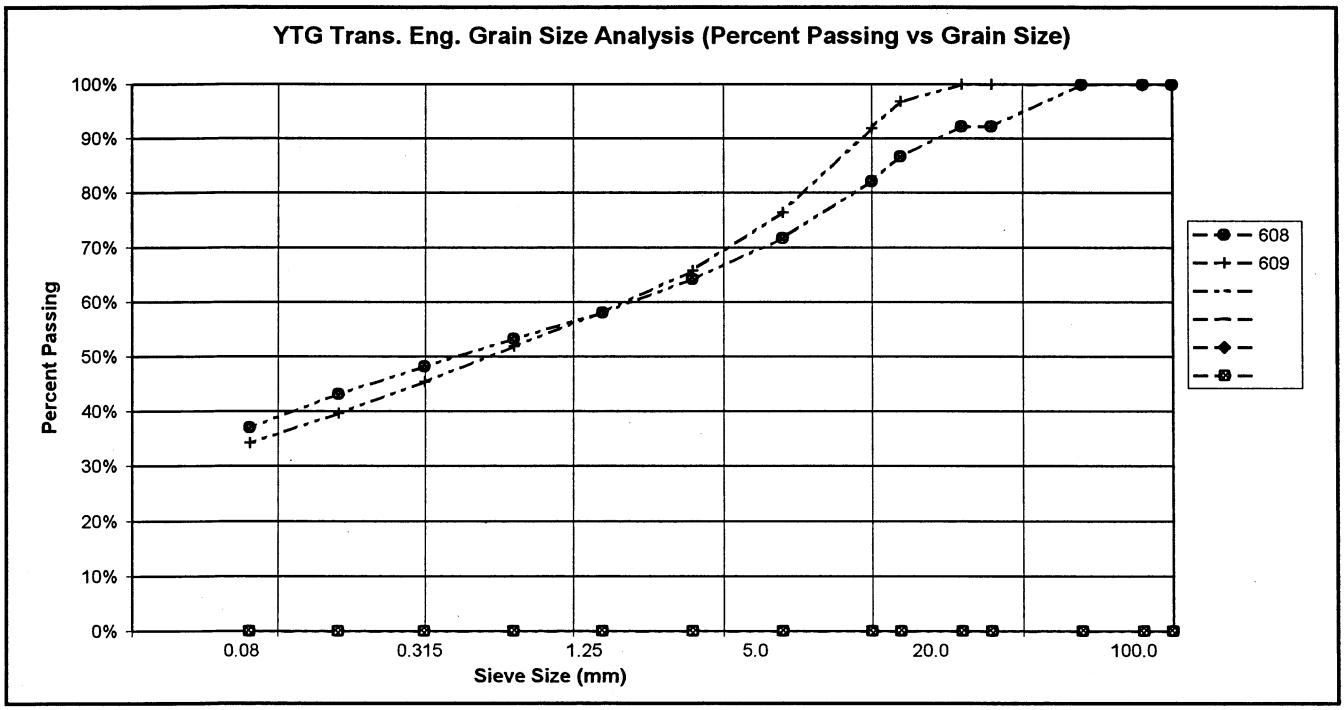
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1468
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1756+000C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/05

FIELD NO:	605	606	607			
LAB NO:	LOST	1010	1011			
DEPTH:	1.2-1.4	3.0-3.2	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	64%	100%			
20.0	100%	62%	93%			
12.5	100%	57%	85%			
10.0	100%	54%	81%			
5.0	100%	48%	69%			
2.5	100%	42%	60%			
1.25	100%	38%	54%			
0.630	100%	35%	49%			
0.315	100%	32%	44%			
0.160	100%	28%	39%			
0.080	100%	25%	33%			
M.C.(%):	5%	4%	5%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	0	52	31			
% SAND:	0	23	35			
% FINES:	100	25	33			
CLASSIFICATION	[illegible](ML)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)			



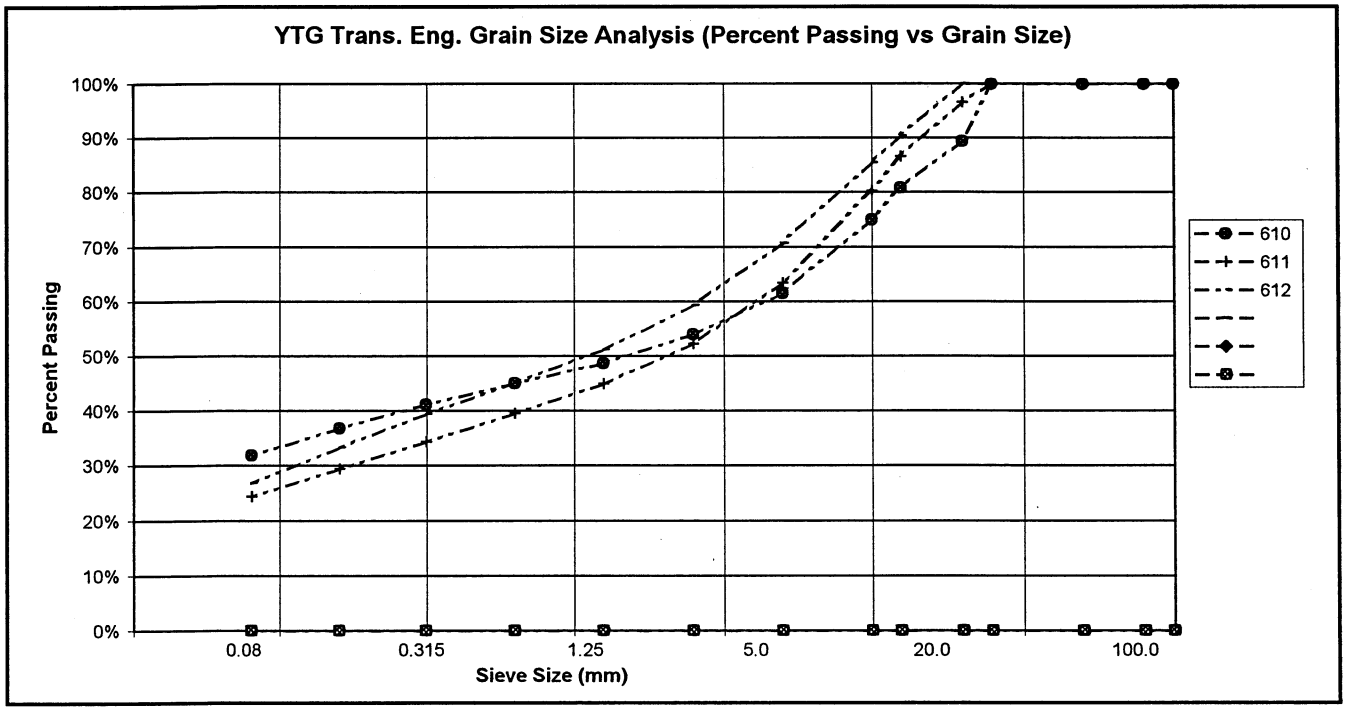
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1469
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1756+100 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/05

FIELD NO:	608	609				
LAB NO:	1012	1013				
DEPTH:	1.5-1.7	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	92%	100%				
20.0	92%	100%				
12.5	87%	97%				
10.0	82%	92%				
5.0	72%	76%				
2.5	64%	66%				
1.25	58%	58%				
0.630	53%	52%				
0.315	48%	45%				
0.160	43%	40%				
0.080	37%	34%				
M.C.(%):	6%	8%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	28	24				
% SAND:	35	42				
% FINES:	37	34				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				



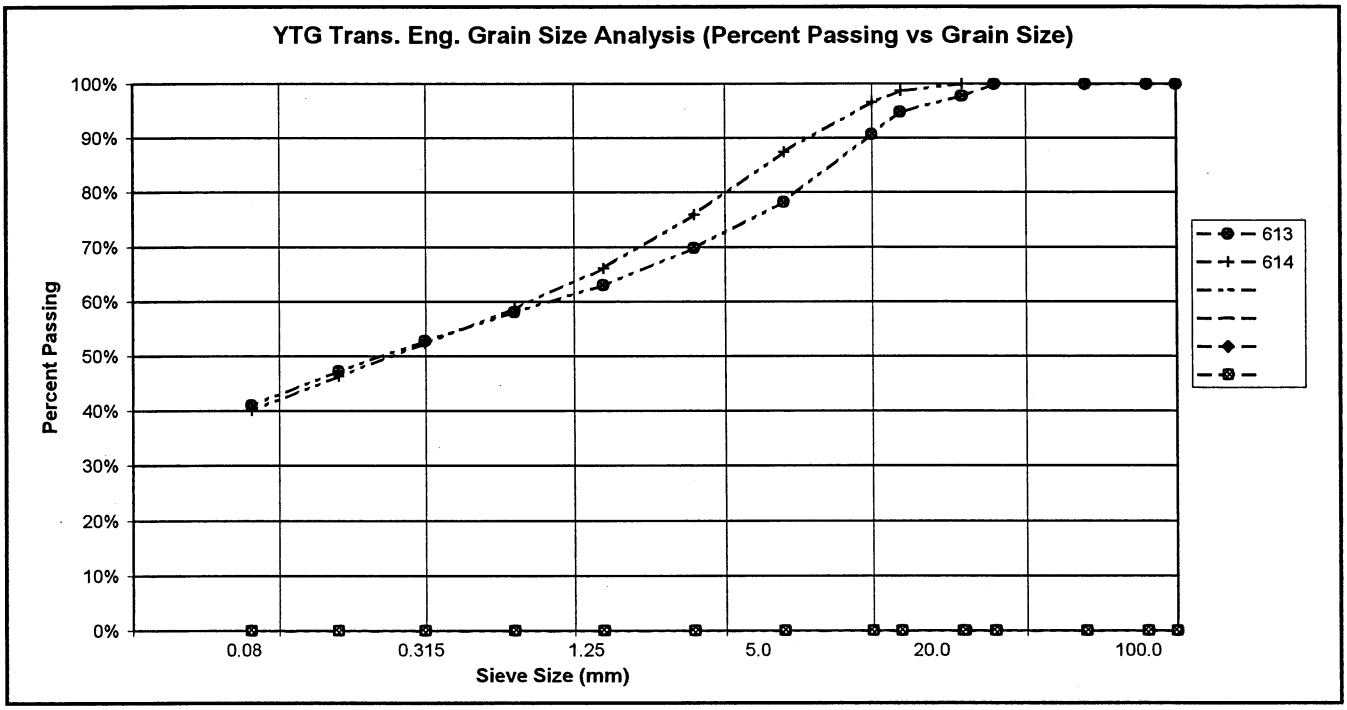
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1470
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1756+200 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/05

FIELD NO:	610	611	612			
LAB NO:	1014	1015	1016			
DEPTH:	1.4-1.6	2.6-2.8	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	89%	97%	100%			
12.5	81%	87%	90%			
10.0	75%	80%	85%			
5.0	61%	63%	71%			
2.5	54%	52%	59%			
1.25	49%	45%	51%			
0.630	45%	40%	45%			
0.315	41%	34%	39%			
0.160	37%	29%	33%			
0.080	32%	24%	27%			
M.C.(%):	6%	6%	6%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	39	37	29			
% SAND:	30	39	44			
% FINES:	32	24	27			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



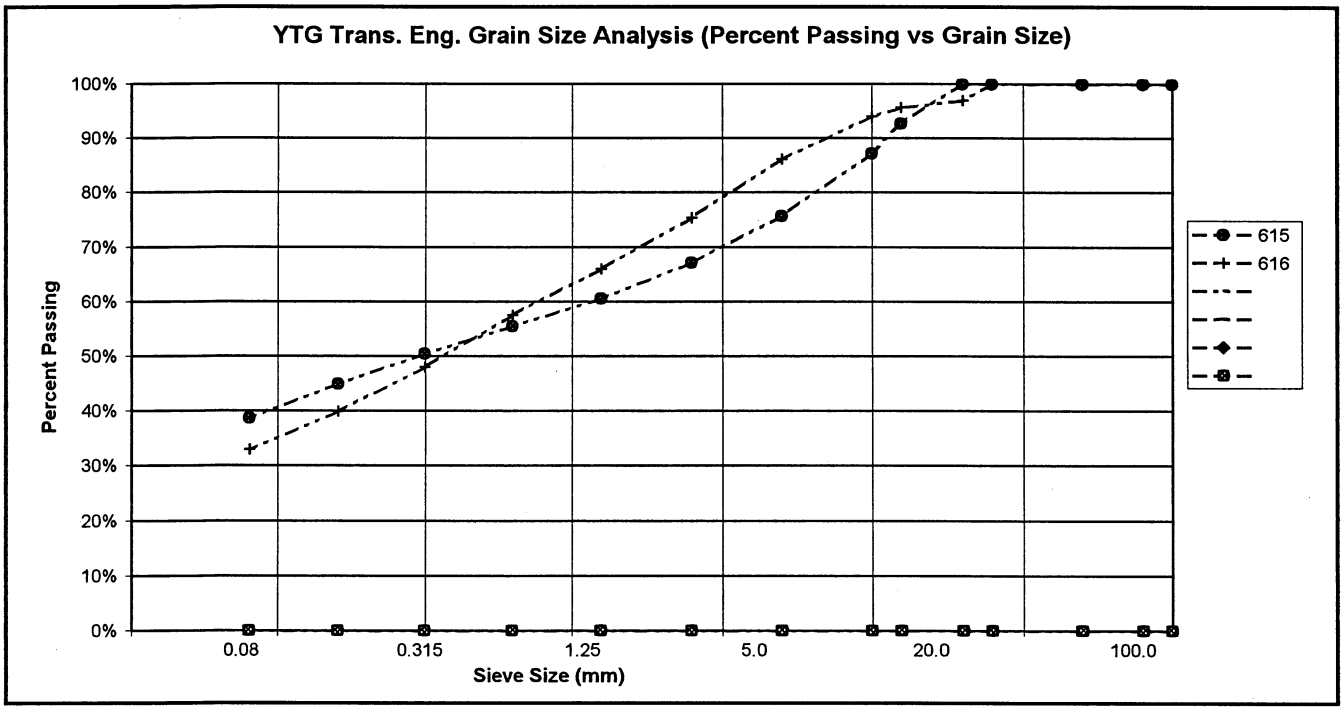
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1471
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1756+300 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/05

FIELD NO:	613	614				
LAB NO:	1017	1018				
DEPTH:	1.4-1.5	2.9-3.1				
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	100%				
25.0	100%	100%				
20.0	98%	100%				
12.5	95%	99%				
10.0	91%	97%				
5.0	78%	87%				
2.5	70%	76%				
1.25	63%	66%				
0.630	58%	59%				
0.315	53%	52%				
0.160	47%	46%				
0.080	41%	40%				
M.C.(%):	14%	11%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	22	13				
% SAND:	37	47				
% FINES:	41	40				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)				



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1472
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1756+400 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/05

FIELD NO:	615	616				
LAB NO:	1019	1020				
DEPTH:	1.5-1.7	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%	96%				
10.0	87%	94%				
5.0	76%	86%				
2.5	67%	75%				
1.25	61%	66%				
0.630	56%	58%				
0.315	50%	48%				
0.160	45%	40%				
0.080	39%	33%				
M.C.(%):	7%	9%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	24	14				
% SAND:	37	53				
% FINES:	39	33				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)				

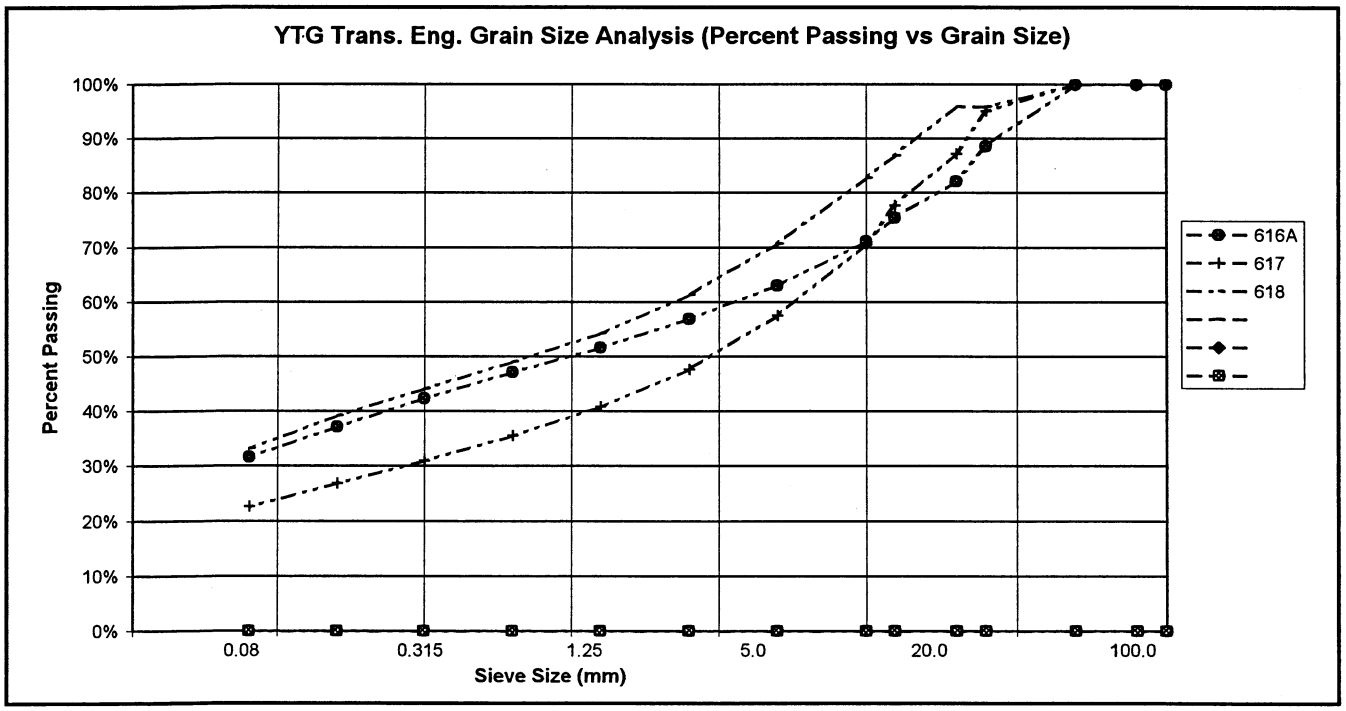


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEGMENT 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1756+542 C/L
LOGGED BY: D.T.

HOLE No.: 551-1473

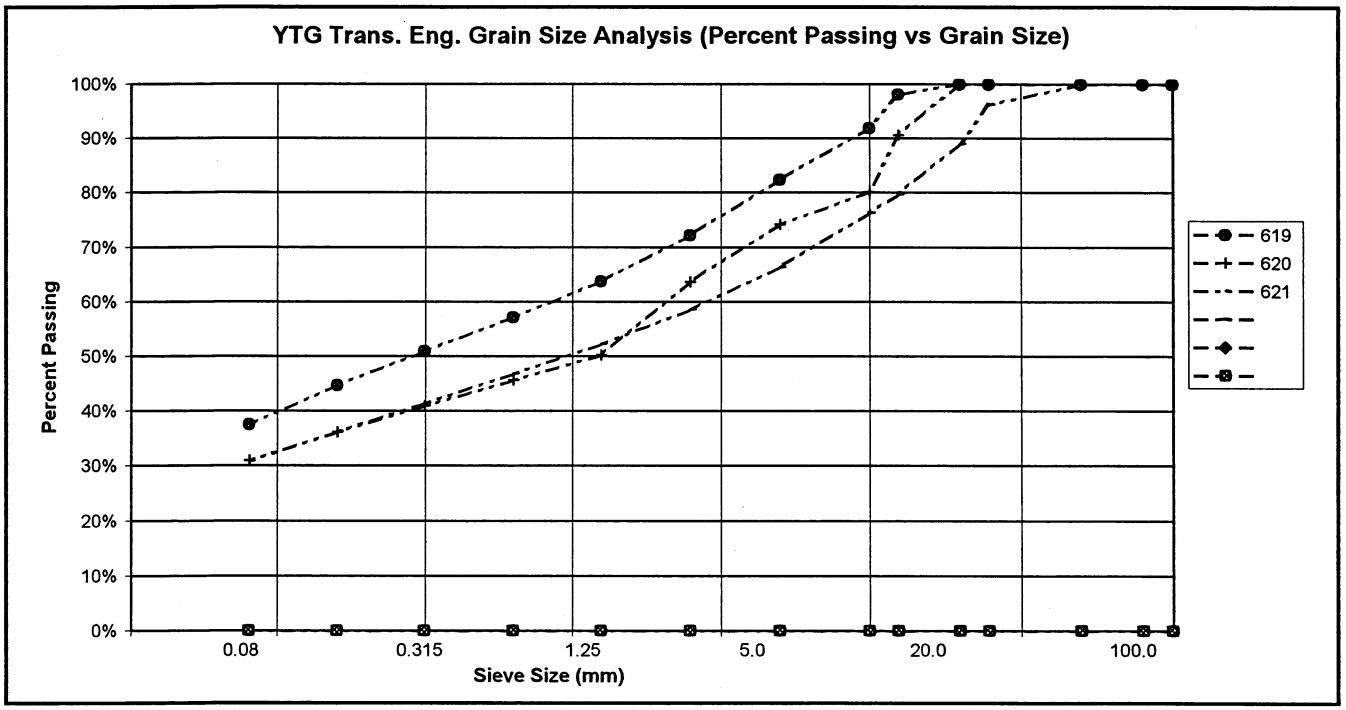
DATE COMP: 2000/06/05

FIELD NO:	616A	617	618			
LAB NO:	1021	1022	1023			
DEPTH:	1.3-1.5	2.9-3.1	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	89%	95%	96%			
20.0	82%	87%	96%			
12.5	76%	78%	87%			
10.0	71%	71%	83%			
5.0	63%	58%	71%			
2.5	57%	48%	61%			
1.25	52%	41%	54%			
0.630	47%	36%	49%			
0.315	42%	31%	44%			
0.160	37%	27%	39%			
0.080	32%	23%	33%			
M.C.(%):	5%	4%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	37	42	29			
% SAND:	31	35	37			
% FINES:	32	23	33			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)			



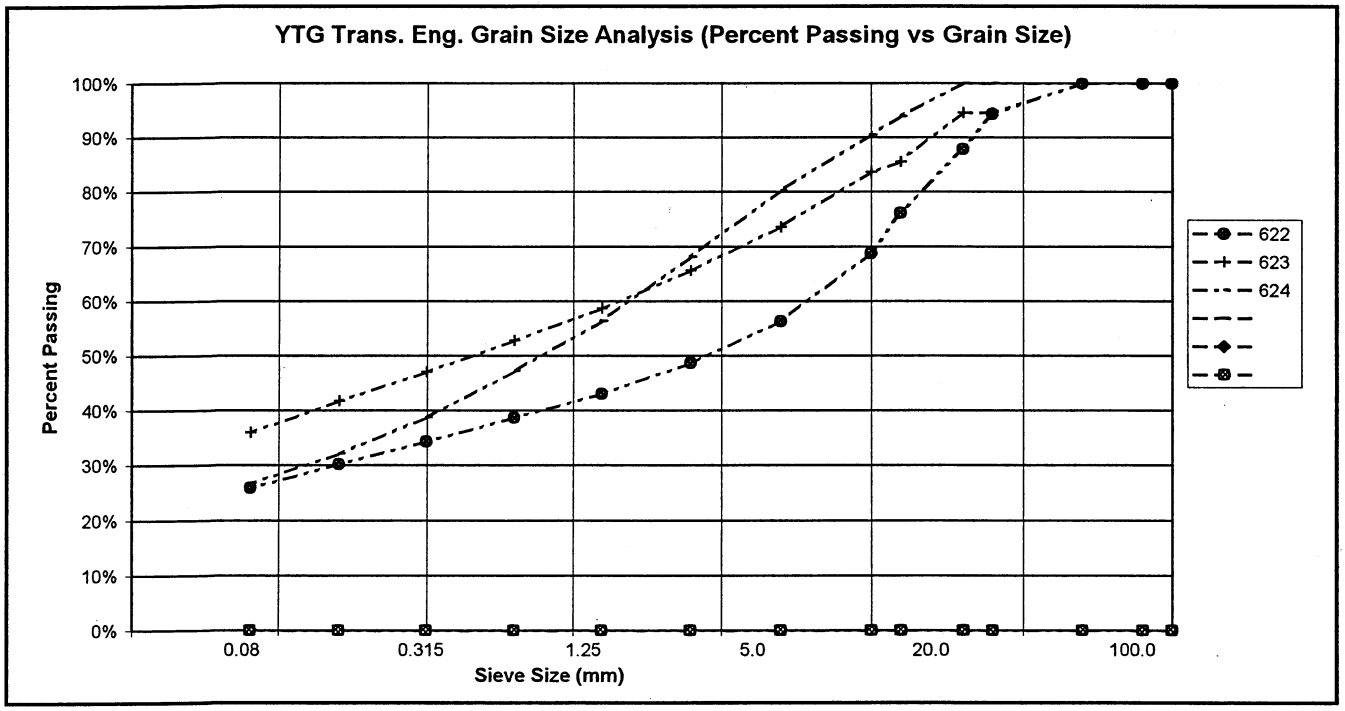
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1474
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1756+650 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/05

FIELD NO:	619	620	621			
LAB NO:	1024	1025	1026			
DEPTH:	1.4-1.6	2.8-3.0	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	96%			
20.0	100%	100%	89%			
12.5	98%	91%	80%			
10.0	92%	80%	76%			
5.0	82%	74%	66%			
2.5	72%	64%	59%			
1.25	64%	50%	52%			
0.630	57%	46%	47%			
0.315	51%	41%	41%			
0.160	45%	36%	36%			
0.080	38%	31%	31%			
M.C.(%):	6%	6%	5%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	18	26	34			
% SAND:	45	43	35			
% FINES:	38	31	31			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



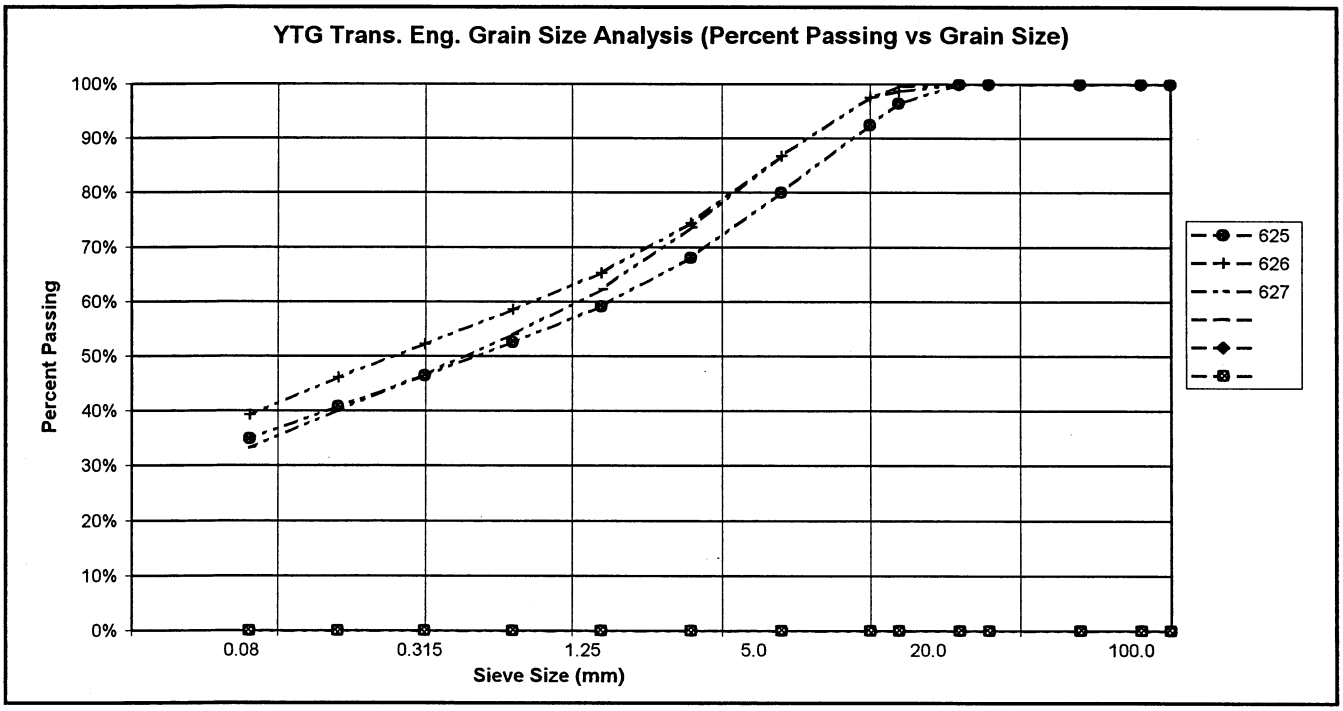
PROJECT NUMBER:	092-202101-0361-1	HOLE No.: 551-1475
CLIENT:	ENGINEERING CAPITAL	
PROJECT NAME:	SHAKWAK SEGMENT 11	
PROJECT LOCATION:	KM 1729.6-1787 A/H	
DRILL UNIT:	MOBILE B40 L	
HOLE LOCATION:	1756+750 CENTRELINE	
LOGGED BY:	D.T.	DATE COMP: 2000/06/05

FIELD NO:	622	623	624			
LAB NO:	1027	1028	1029			
DEPTH:	1.4-1.6	3.0-3.2	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	94%	95%	100%			
20.0	88%	95%	100%			
12.5	76%	86%	94%			
10.0	69%	84%	90%			
5.0	56%	74%	80%			
2.5	49%	66%	68%			
1.25	43%	59%	56%			
0.630	39%	53%	47%			
0.315	34%	47%	39%			
0.160	30%	42%	32%			
0.080	26%	36%	27%			
M.C.(%):	6%	8%	5%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	44	26	20			
% SAND:	30	38	54			
% FINES:	26	36	27			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



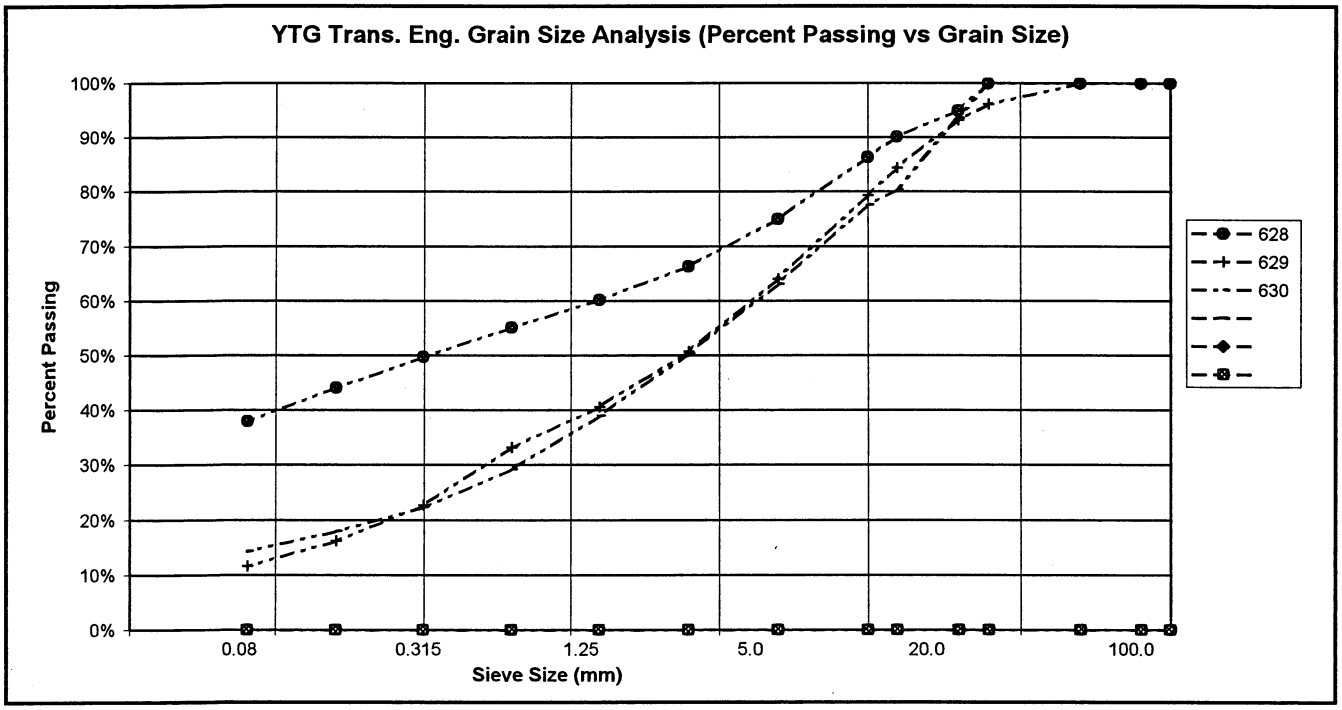
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1476
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1756+850 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/05

FIELD NO:	625	626	627			
LAB NO:	1030	1031	1032			
DEPTH:	1.5-1.7	2.6-2.8	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	100%	100%	100%			
20.0	100%	100%	100%			
12.5	96%	99%	100%			
10.0	92%	98%	98%			
5.0	80%	87%	87%			
2.5	68%	74%	74%			
1.25	59%	65%	62%			
0.630	53%	59%	54%			
0.315	47%	52%	47%			
0.160	41%	46%	40%			
0.080	35%	39%	33%			
M.C.(%):	6%	10%	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:	20	13	13			
% SAND:	45	48	53			
% FINES:	35	39	33			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)	SILTY SAND (SM)			



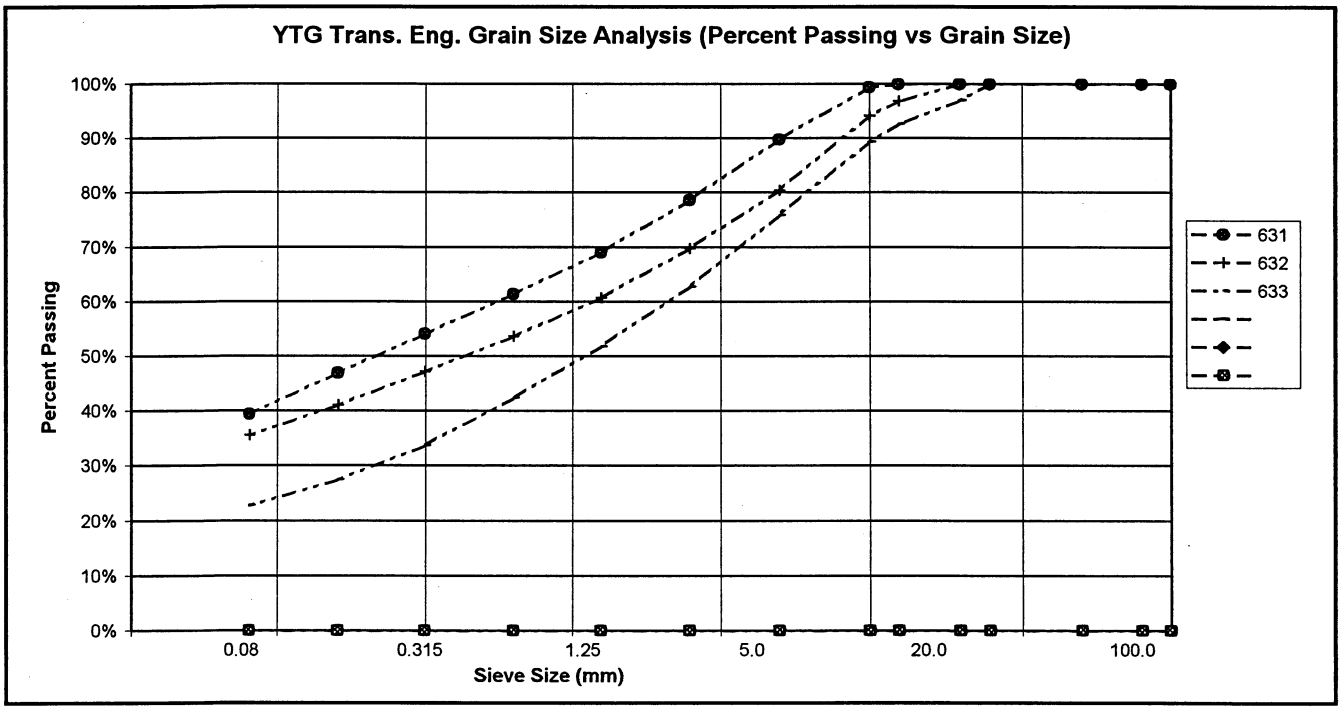
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1477
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1756+950 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/05

FIELD NO:	628	629	630			
LAB NO:	1033	1034	1035			
DEPTH:	1.3-1.5	2.8-3.0	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	96%	100%			
20.0	95%	93%	93%			
12.5	90%	84%	80%			
10.0	86%	79%	78%			
5.0	75%	64%	63%			
2.5	66%	51%	50%			
1.25	60%	41%	39%			
0.630	55%	33%	29%			
0.315	50%	23%	22%			
0.160	44%	16%	18%			
0.080	38%	12%	14%			
M.C.(%):	7%	2%	3%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	25	36	37			
% SAND:	37	52	49			
% FINES:	38	12	14			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)			



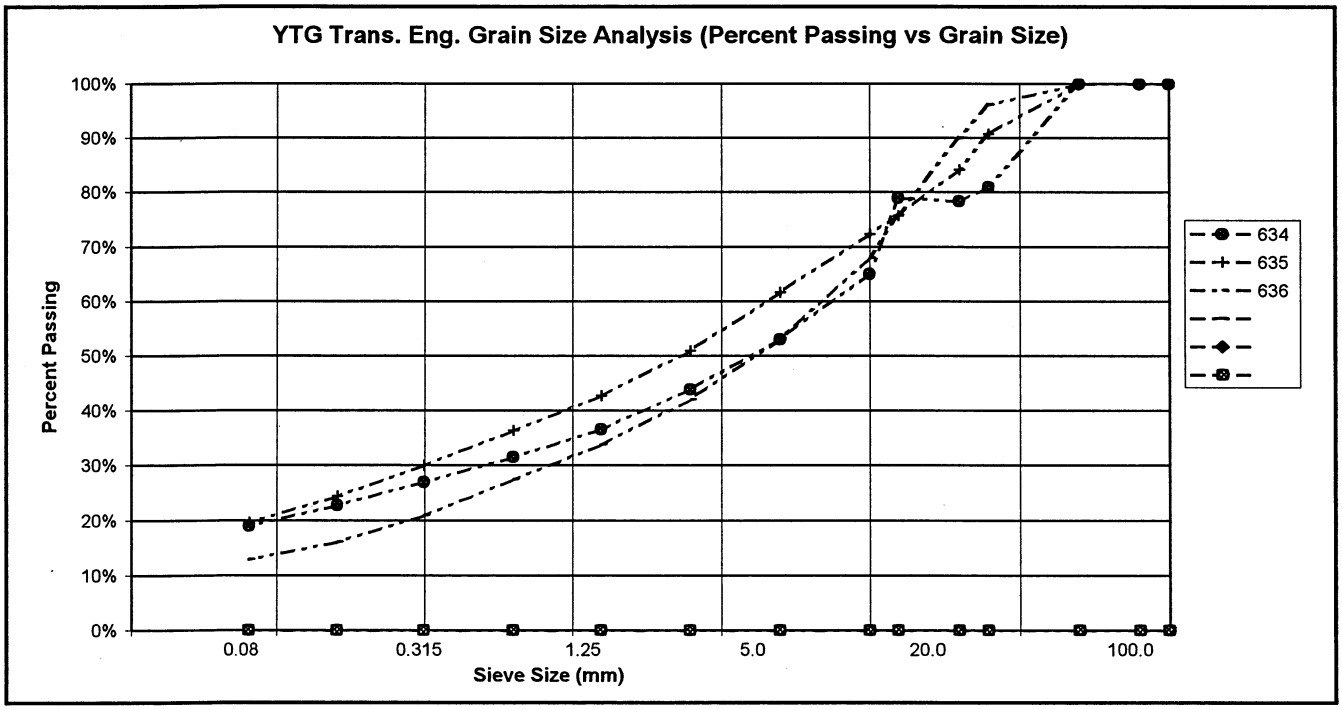
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1478
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1757+050 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/05

FIELD NO:	631	632	633			
LAB NO:	1036	1037	1038			
DEPTH:	1.4-1.6	2.8-3.0	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	100%	97%			
12.5	100%	97%	93%			
10.0	99%	94%	89%			
5.0	90%	80%	76%			
2.5	79%	70%	63%			
1.25	69%	61%	52%			
0.630	61%	54%	42%			
0.315	54%	47%	34%			
0.160	47%	41%	27%			
0.080	39%	36%	23%			
M.C.(%):	8%	7%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	10	20	24			
% SAND:	50	45	53			
% FINES:	39	36	23			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



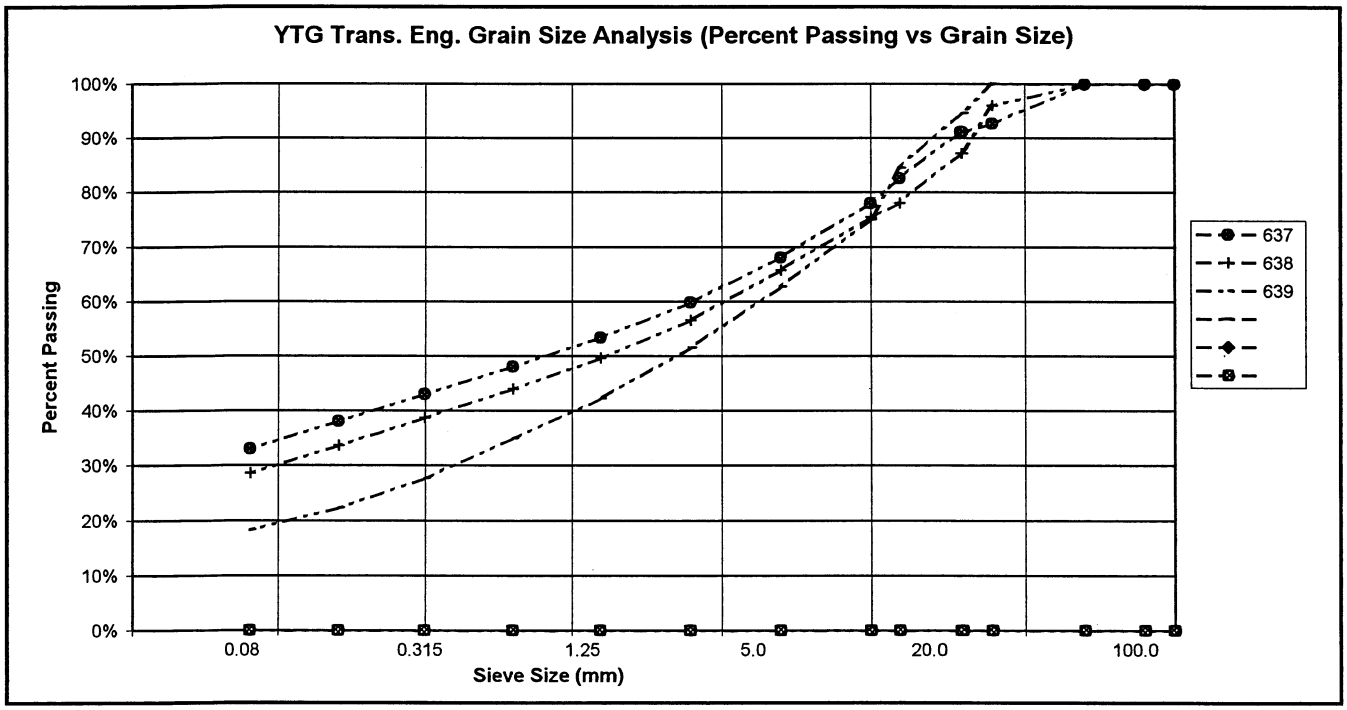
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1479
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1757+150 15M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/05

FIELD NO:	634	635	636			
LAB NO:	1039	1040	1041			
DEPTH:	1.4-1.6	2.8-3.0	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	81%	91%	96%			
20.0	78%	84%	90%			
12.5	79%	76%	76%			
10.0	65%	72%	68%			
5.0	53%	62%	53%			
2.5	44%	51%	42%			
1.25	37%	43%	34%			
0.630	32%	36%	27%			
0.315	27%	30%	21%			
0.160	23%	24%	16%			
0.080	19%	20%	13%			
M.C.(%):	5%	8%	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:	47	38	47			
% SAND:	34	42	40			
% FINES:	19	20	13			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)			



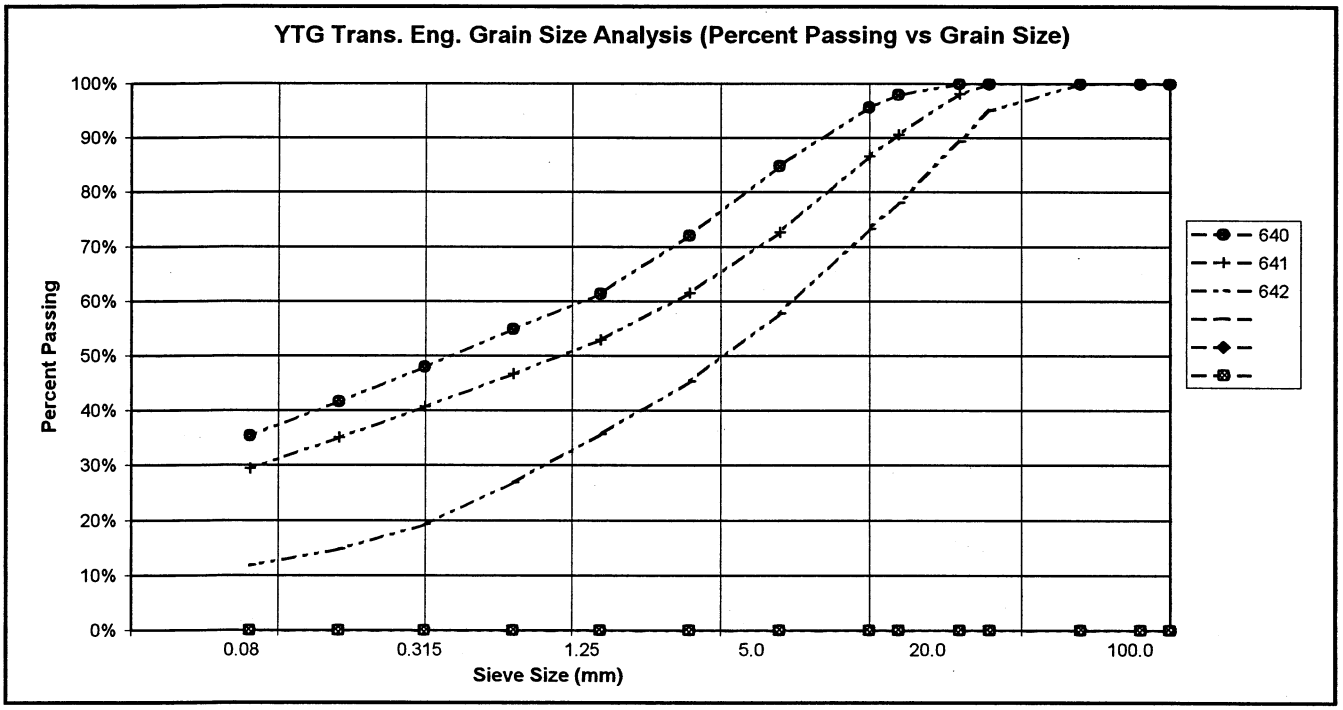
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1480
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1757+250 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/05

FIELD NO:	637	638	639			
LAB NO:	1042	1043	1044			
DEPTH:	0.9-1.1	1.6-1.8	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	93%	96%	100%			
20.0	91%	87%	95%			
12.5	83%	78%	84%			
10.0	78%	75%	75%			
5.0	68%	66%	63%			
2.5	60%	57%	52%			
1.25	53%	50%	42%			
0.630	48%	44%	35%			
0.315	43%	39%	28%			
0.160	38%	34%	22%			
0.080	33%	29%	18%			
M.C.(%):	6%	5%	5%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	32	34	37			
% SAND:	35	37	44			
% FINES:	33	29	18			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



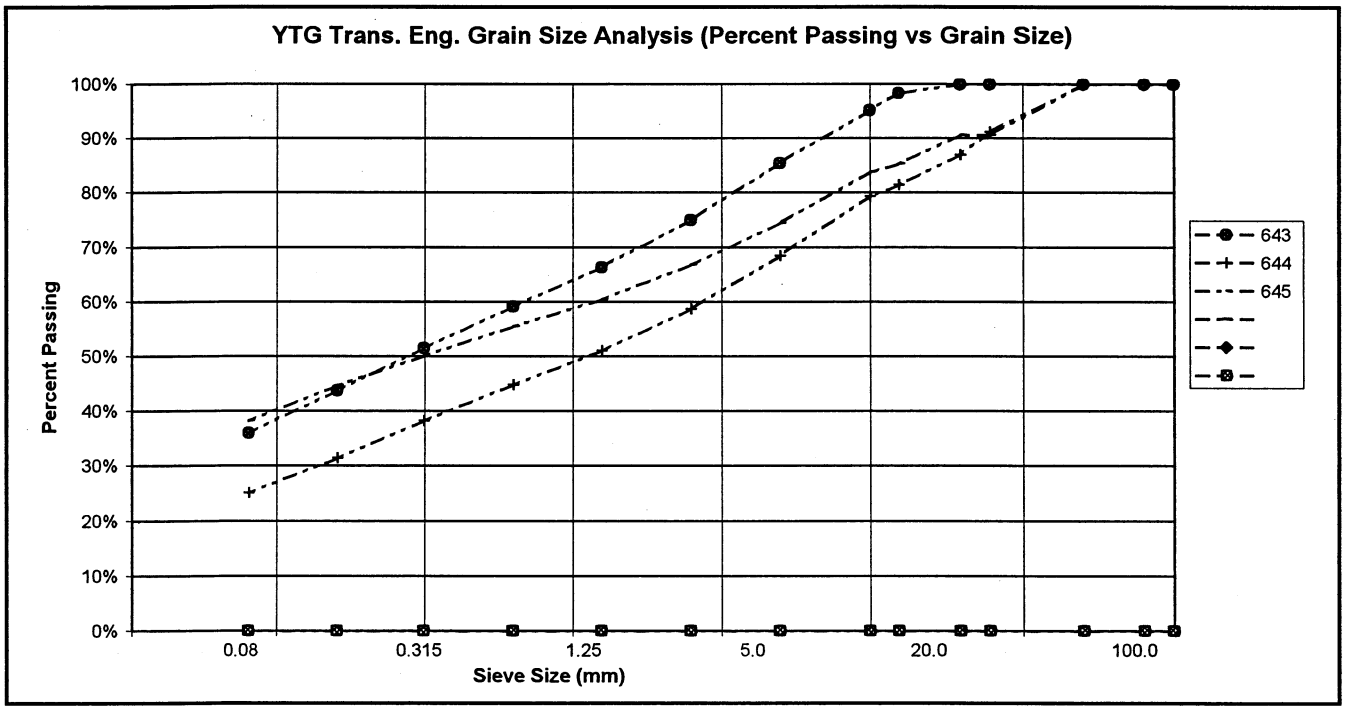
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1481
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1757+350 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/06

FIELD NO:	640	641	642			
LAB NO:	1045	1046	1047			
DEPTH:	1.3-1.5	2.8-3.0	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	95%			
20.0	100%	98%	89%			
12.5	98%	91%	78%			
10.0	96%	87%	73%			
5.0	85%	73%	58%			
2.5	72%	61%	45%			
1.25	61%	53%	36%			
0.630	55%	47%	27%			
0.315	48%	41%	19%			
0.160	42%	35%	15%			
0.080	35%	29%	12%			
M.C.(%):	6%	6%	6%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	15	27	42			
% SAND:	49	43	46			
% FINES:	35	29	12			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)			



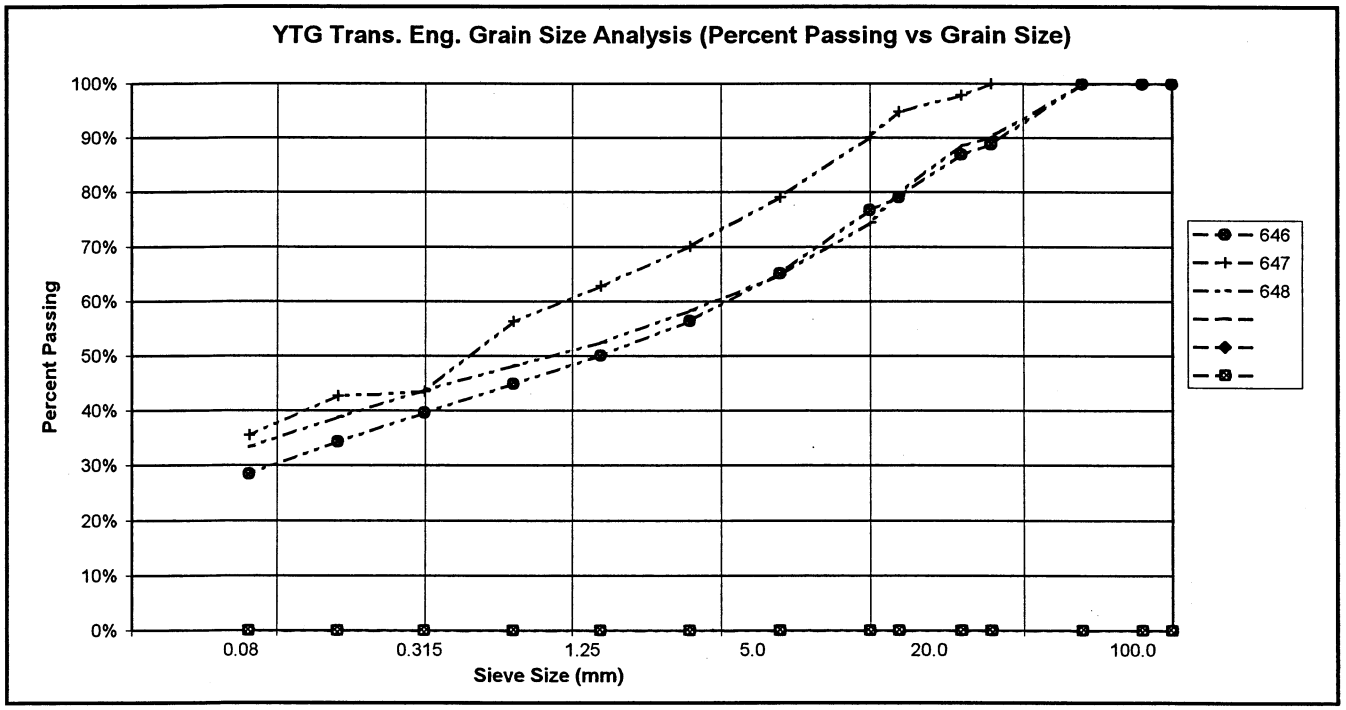
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1482
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1757+450 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/06

FIELD NO:	643	644	645			
LAB NO:	1048	1049	1050			
DEPTH:	1.4-1.6	3.0-3.2	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	91%	91%			
20.0	100%	87%	91%			
12.5	98%	81%	85%			
10.0	95%	79%	84%			
5.0	85%	68%	74%			
2.5	75%	59%	67%			
1.25	66%	51%	60%			
0.630	59%	45%	56%			
0.315	51%	38%	50%			
0.160	44%	31%	45%			
0.080	36%	25%	38%			
M.C.(%):	6%	8%	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:	15	32	26			
% SAND:	49	43	36			
% FINES:	36	25	38			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



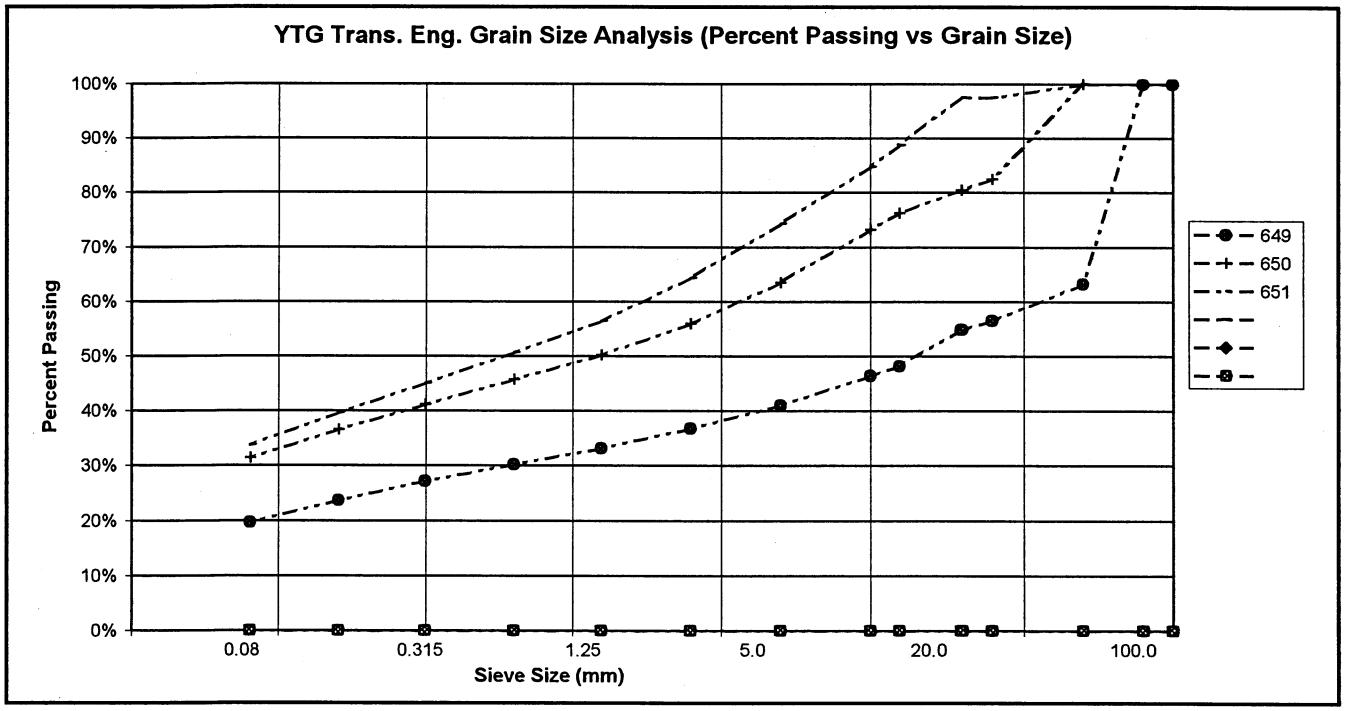
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1483
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1757+550 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/06

FIELD NO:	646	647	648			
LAB NO:	1051	1052	1053			
DEPTH:	1.5-1.7	2.9-3.1	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	89%	100%	90%			
20.0	87%	98%	89%			
12.5	79%	95%	80%			
10.0	77%	90%	74%			
5.0	65%	79%	65%			
2.5	56%	70%	58%			
1.25	50%	63%	52%			
0.630	45%	56%	48%			
0.315	40%	44%	44%			
0.160	34%	43%	39%			
0.080	29%	36%	33%			
M.C.(%):	4%	7%	9%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	35	21	35			
% SAND:	37	44	31			
% FINES:	29	36	33			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)			



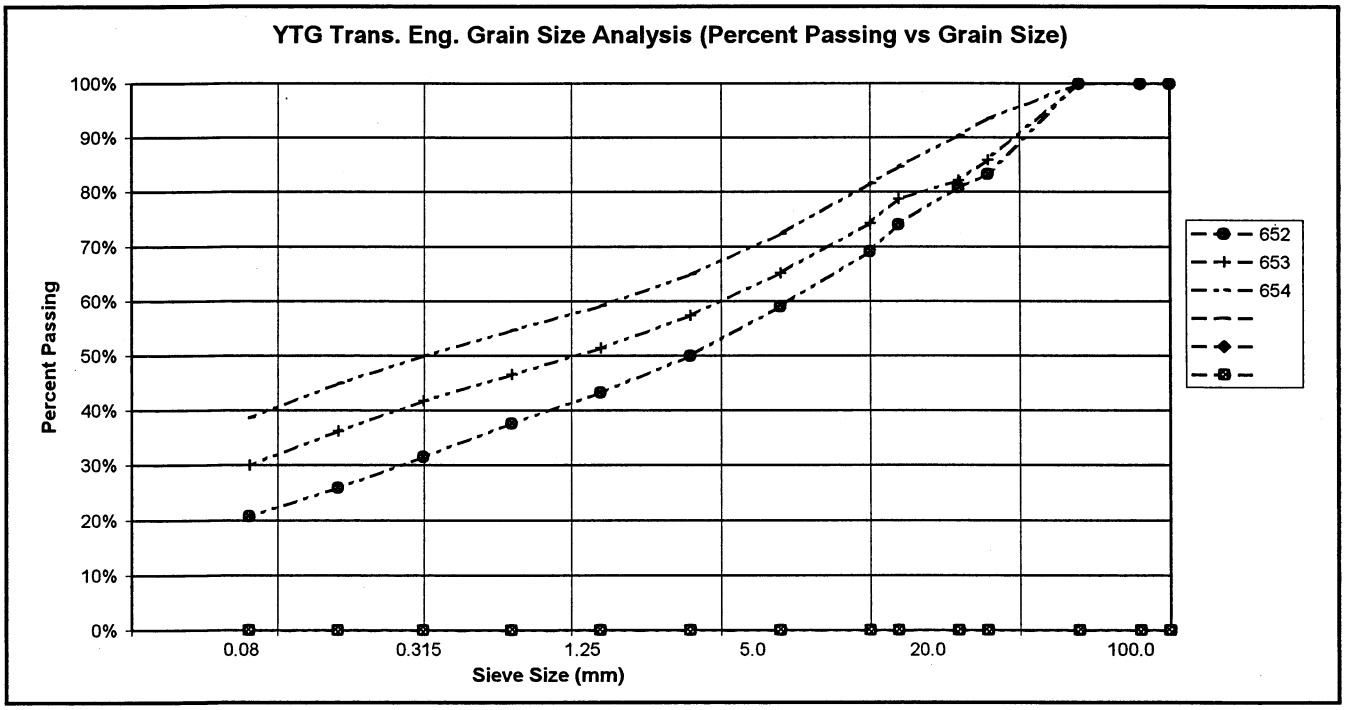
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1484
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1757+650 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/06

FIELD NO:	649	650	651			
LAB NO:	1054	1055	1056			
DEPTH:	1.5-1.7	2.9-3.1	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	63%	100%	100%			
25.0	57%	82%	98%			
20.0	55%	80%	98%			
12.5	48%	76%	89%			
10.0	47%	73%	85%			
5.0	41%	63%	74%			
2.5	37%	56%	64%			
1.25	33%	50%	56%			
0.630	30%	46%	51%			
0.315	27%	41%	45%			
0.160	24%	37%	40%			
0.080	20%	31%	34%			
M.C.(%):	4%	8%	8%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	59	37	26			
% SAND:	21	32	40			
% FINES:	20	31	34			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1485
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1757+750 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/06

FIELD NO:	652	653	654			
LAB NO:	1057	1058	1059			
DEPTH:	1.4-1.6	2.9-3.1	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	83%	86%	94%			
20.0	81%	82%	90%			
12.5	74%	79%	85%			
10.0	69%	74%	82%			
5.0	59%	65%	72%			
2.5	50%	57%	65%			
1.25	43%	51%	59%			
0.630	38%	47%	55%			
0.315	32%	42%	50%			
0.160	26%	36%	45%			
0.080	21%	30%	39%			
M.C.(%):	3%	7%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	41	35	28			
% SAND:	38	35	34			
% FINES:	21	30	39			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			

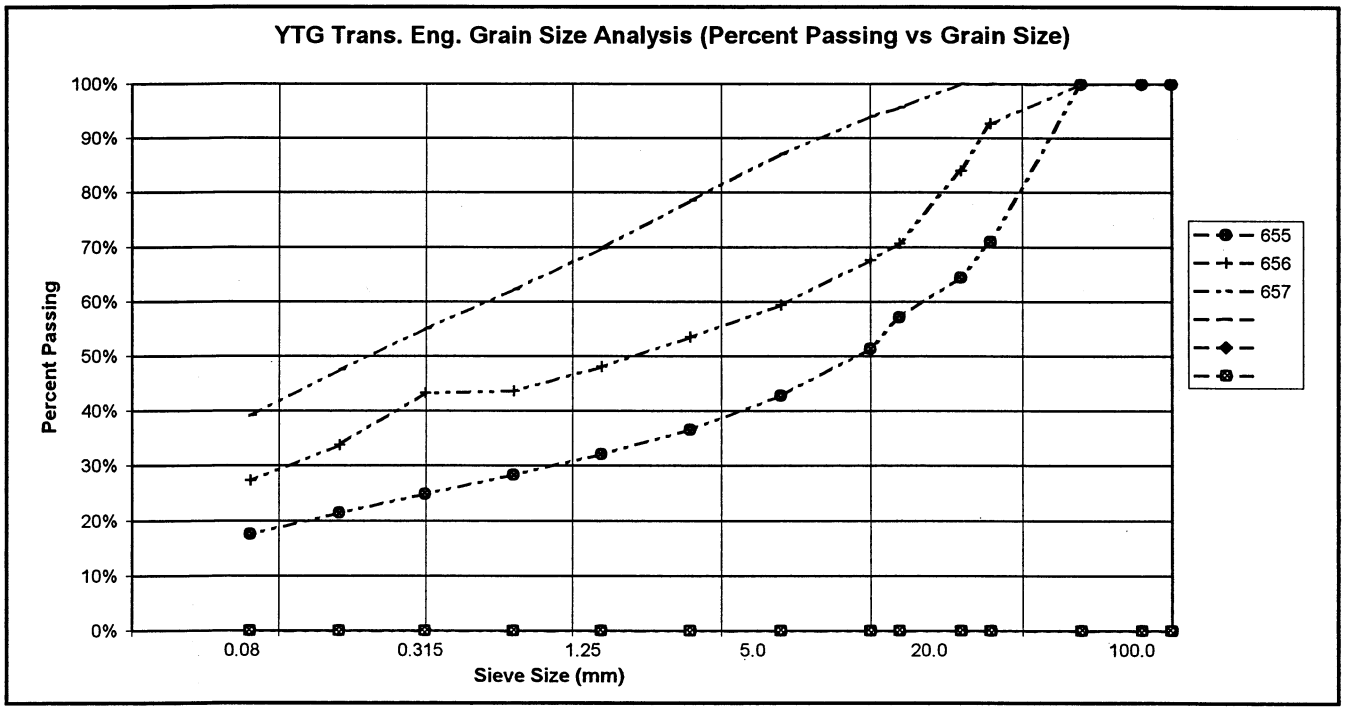


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEGMENT 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1757+850 C/L
LOGGED BY: D.T.

HOLE No.: 551-1486

DATE COMP: 2000/06/06

FIELD NO:	655	656	657			
LAB NO:	1060	1061	1062			
DEPTH:	1.4-1.6	2.8-3.0	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	71%	93%	100%			
20.0	64%	84%	100%			
12.5	57%	71%	96%			
10.0	51%	68%	94%			
5.0	43%	59%	87%			
2.5	37%	54%	78%			
1.25	32%	48%	70%			
0.630	28%	44%	62%			
0.315	25%	43%	55%			
0.160	21%	34%	48%			
0.080	18%	27%	39%			
M.C.(%):	3%	5%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	57	41	13			
% SAND:	25	32	48			
% FINES:	18	27	39			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND (SM)			

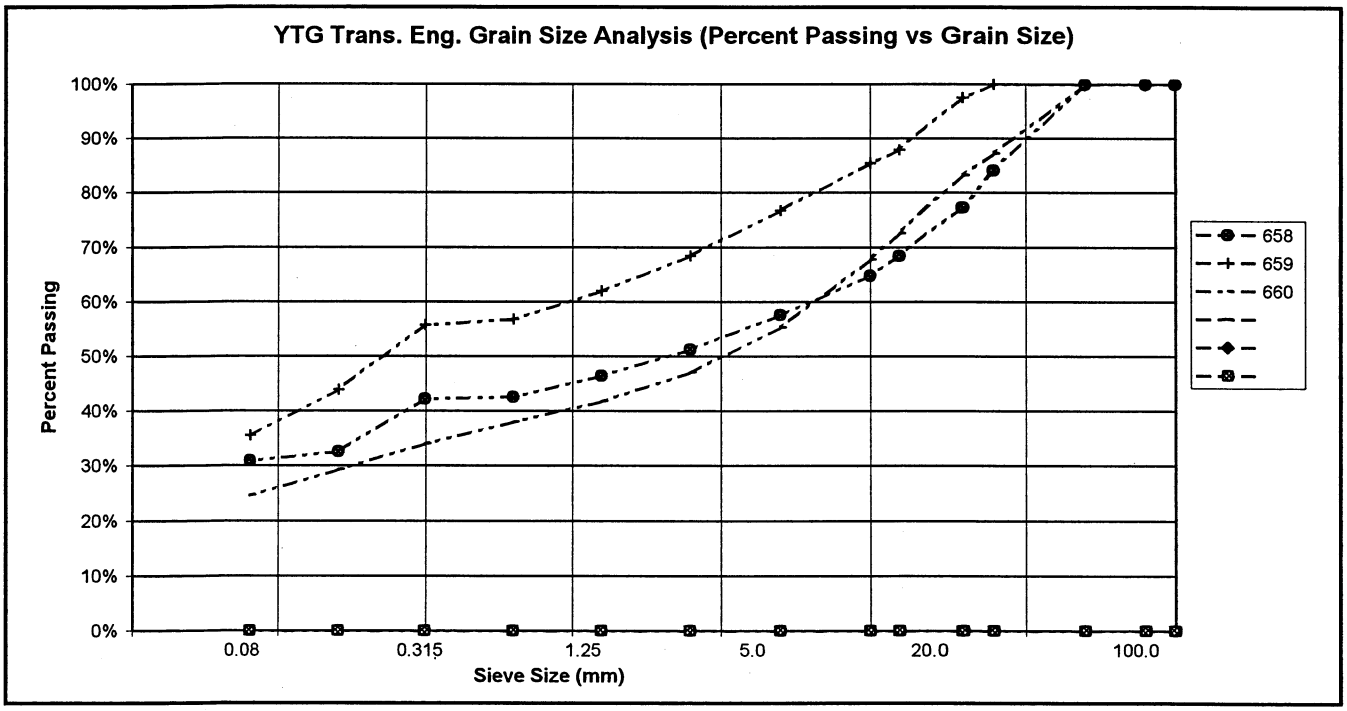


PROJECT NUMBER:	092-202101-0361-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEGMENT 11
PROJECT LOCATION:	KM 1729.6-1787 A/H
DRILL UNIT:	MOBILE B40 L
HOLE LOCATION:	1757+950 C//L
LOGGED BY:	D.T.

HOLE No.: 551-1487

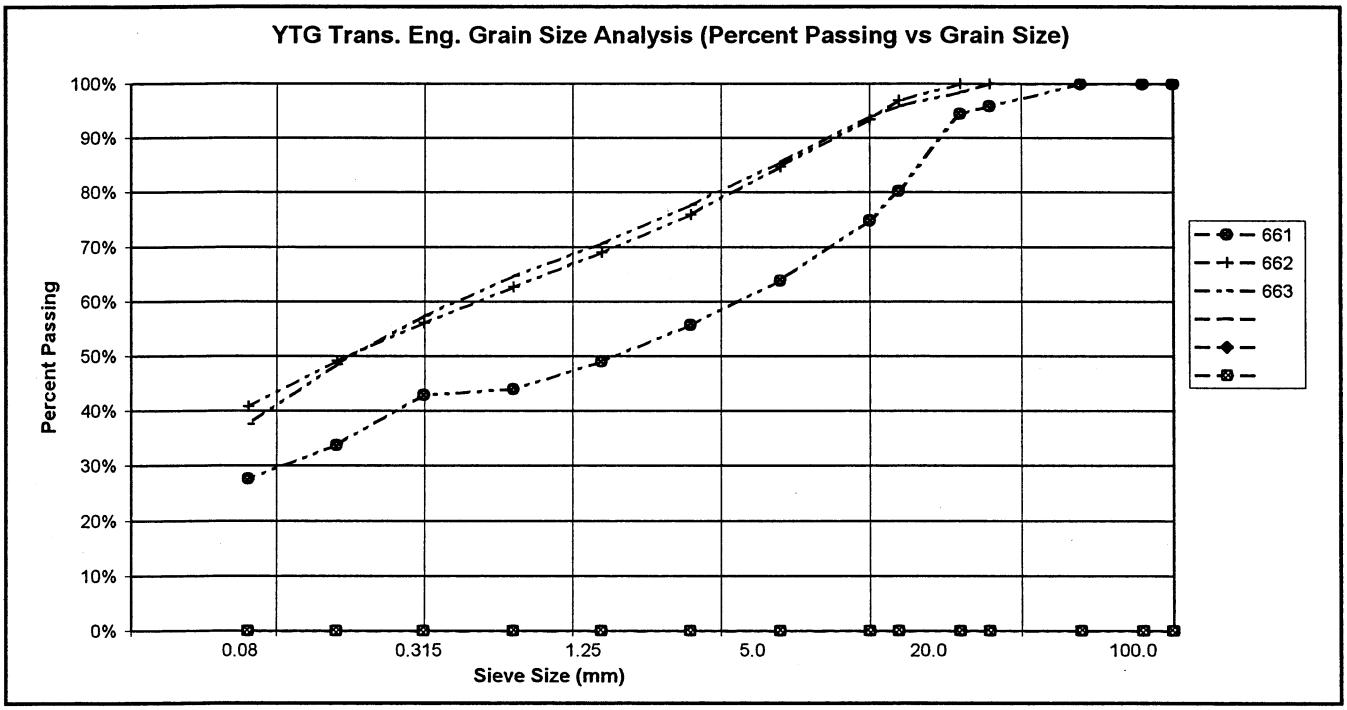
DATE COMP: 2000/06/06

FIELD NO:	658	659	660			
LAB NO:	1063	1064	1065			
DEPTH:	1.4-1.6	2.6-2.8	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	84%	100%	87%			
20.0	77%	98%	83%			
12.5	68%	88%	73%			
10.0	65%	85%	68%			
5.0	58%	77%	55%			
2.5	51%	68%	47%			
1.25	46%	62%	42%			
0.630	43%	57%	38%			
0.315	42%	56%	34%			
0.160	33%	44%	29%			
0.080	31%	36%	25%			
M.C.(%):	7%	8%	5%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	42	23	45			
% SAND:	27	41	31			
% FINES:	31	36	25			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)			



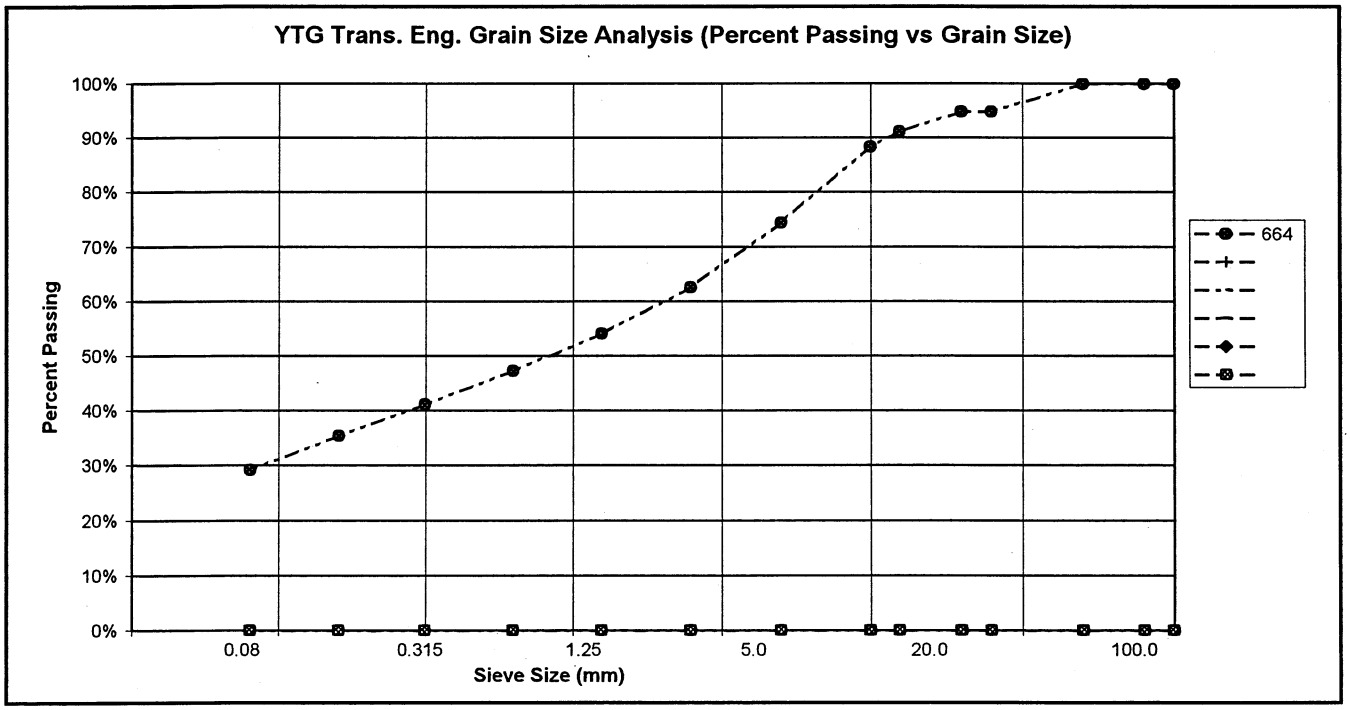
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 511-1488
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1758+050 CENTRELINE		
LOGGED BY:	D.T.		DATE COMP: 2000/06/07

FIELD NO:	661	662	663			
LAB NO:	1066	1067	1068			
DEPTH:	1.3-1.5	3.0-3.2	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	96%	100%	100%			
20.0	95%	100%	98%			
12.5	80%	97%	96%			
10.0	75%	93%	94%			
5.0	64%	85%	86%			
2.5	56%	76%	78%			
1.25	49%	69%	71%			
0.630	44%	63%	65%			
0.315	43%	56%	57%			
0.160	34%	49%	48%			
0.080	28%	41%	38%			
M.C.(%):	4%	8%	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:	36	15	14			
% SAND:	36	44	48			
% FINES:	28	41	38			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)			



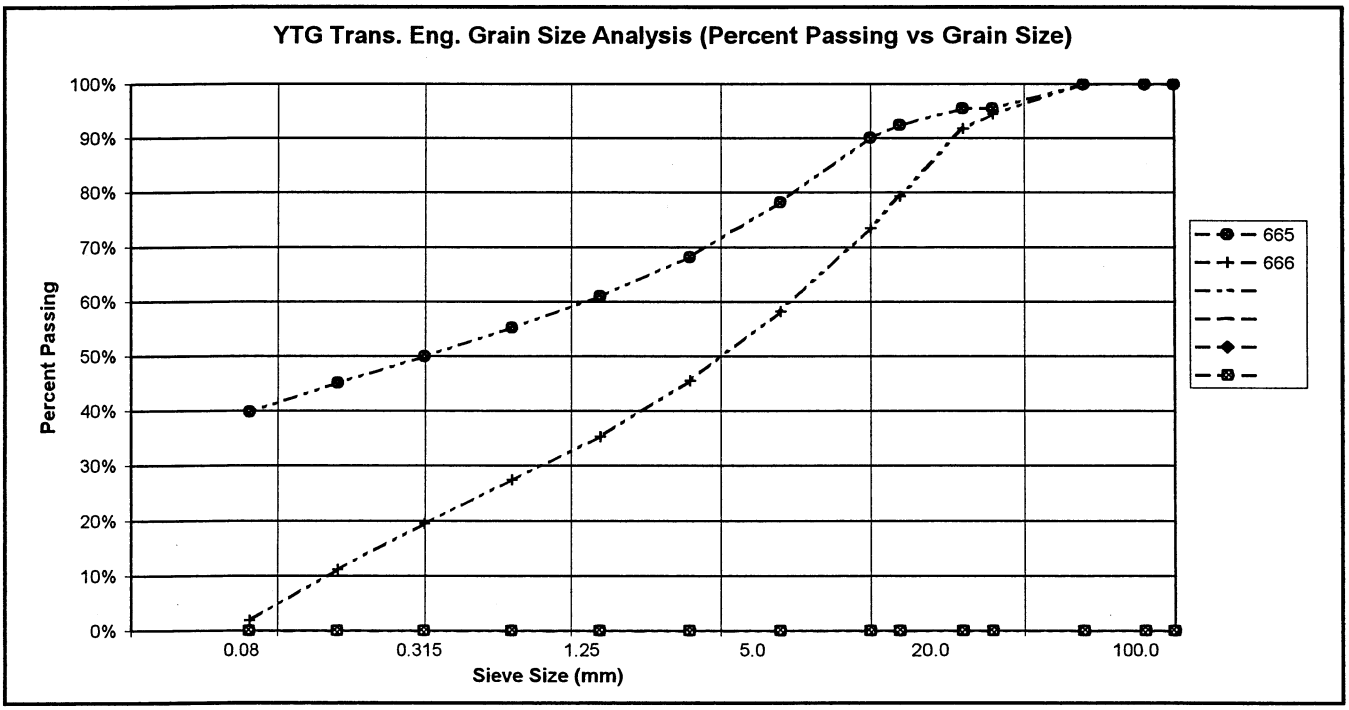
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1489
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1758+150 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/0 7

FIELD NO:	664					
LAB NO:	1069					
DEPTH:	1.4-1.6					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	95%					
20.0	95%					
12.5	91%					
10.0	88%					
5.0	74%					
2.5	63%					
1.25	54%					
0.630	47%					
0.315	41%					
0.160	35%					
0.080	29%					
M.C.(%):	5%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	26					
% SAND:	45					
% FINES:	29					
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)					



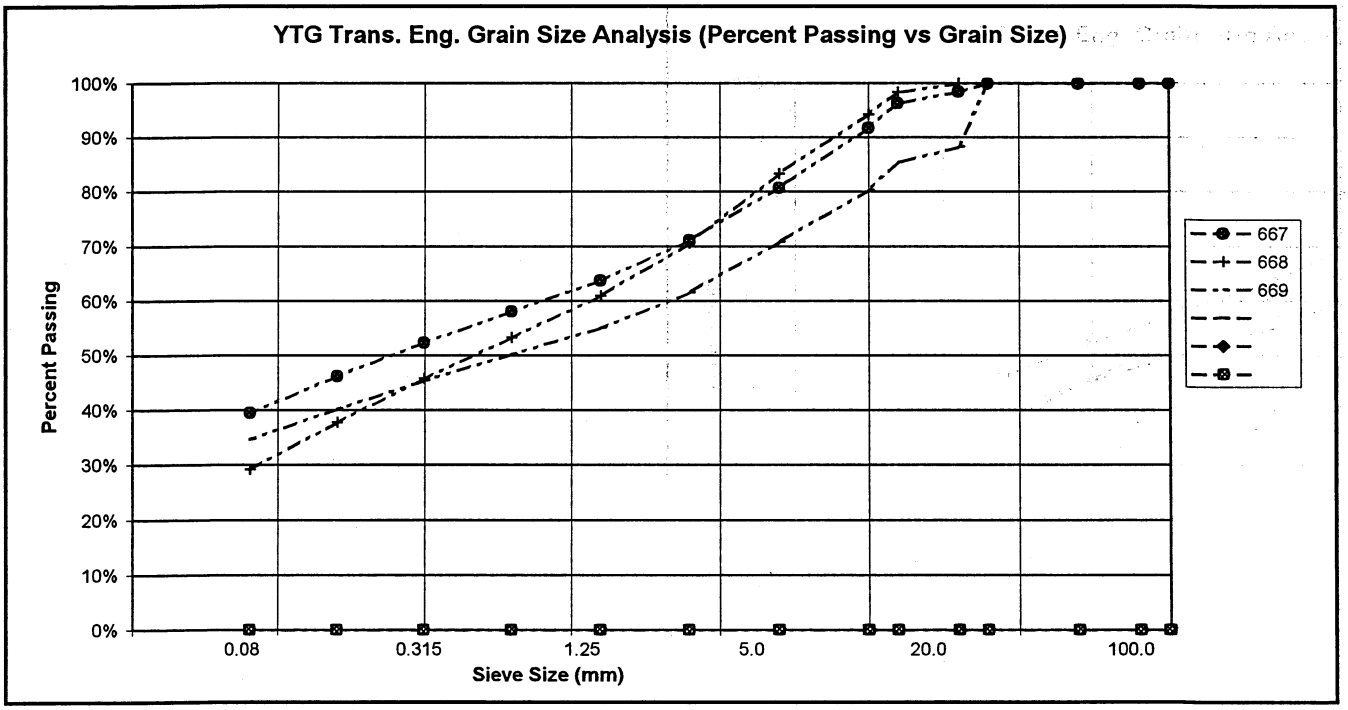
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 551-1490
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEGMENT 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1758+175 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/0 7

FIELD NO:	665	666				
LAB NO:	1070	1071				
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	96%	94%				
20.0	96%	92%				
12.5	93%	79%				
10.0	90%	73%				
5.0	78%	58%				
2.5	68%	46%				
1.25	61%	35%				
0.630	55%	27%				
0.315	50%	20%				
0.160	45%	11%				
0.080	40%	2%				
M.C.(%):	5%	5%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	22	42				
% SAND:	38	56				
% FINES:	40	2				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED SAND WITH GRAVEL (SW)				



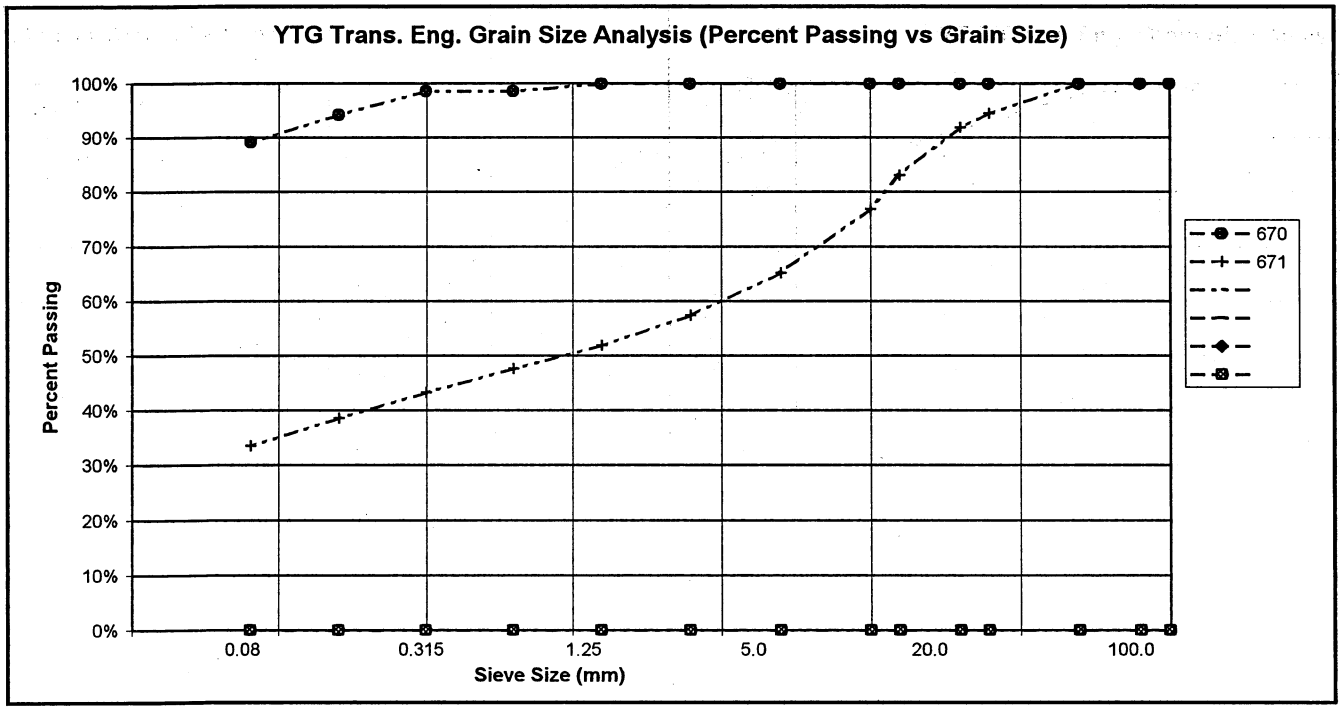
PROJECT NUMBER:	092-202-101-0361-1		HOLE No.: 552-1491
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1758+225 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/07

FIELD NO:	667	668	669			
LAB NO:	1072	1073	1074			
DEPTH:	1.4-1.6	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	98%	100%	88%			
12.5	96%	98%	86%			
10.0	92%	94%	80%			
5.0	81%	83%	71%			
2.5	71%	71%	62%			
1.25	64%	61%	55%			
0.630	58%	53%	50%			
0.315	52%	46%	45%			
0.160	46%	38%	40%			
0.080	40%	29%	35%			
M.C.(%):	7%	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:	19	17	29			
% SAND:	41	54	36			
% FINES:	40	29	35			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



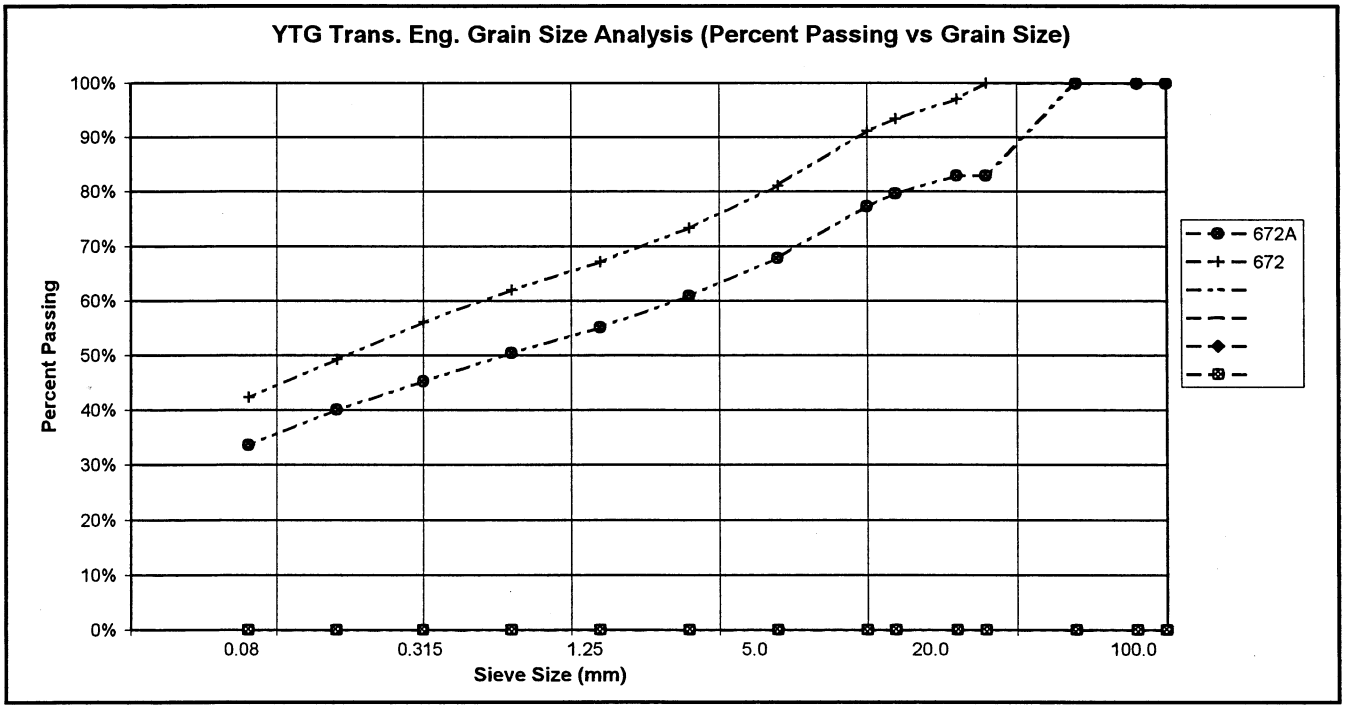
PROJECT NUMBER:	092-202-101-0361-1		HOLE No.: 552-1492
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1758+325 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/07

FIELD NO:	670	671				
LAB NO:	1075	1076				
DEPTH:	0.7-0.9	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%	95%				
20.0	100%	92%				
12.5	100%	83%				
10.0	100%	77%				
5.0	100%	65%				
2.5	100%	57%				
1.25	100%	52%				
0.630	99%	48%				
0.315	99%	43%				
0.160	94%	39%				
0.080	89%	34%				
M.C.(%):	15%	8%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	0	35				
% SAND:	11	32				
% FINES:	89	34				
CLASSIFICATION	SILT (ML)	SILTY GRAVEL WITH SAND (GM)				



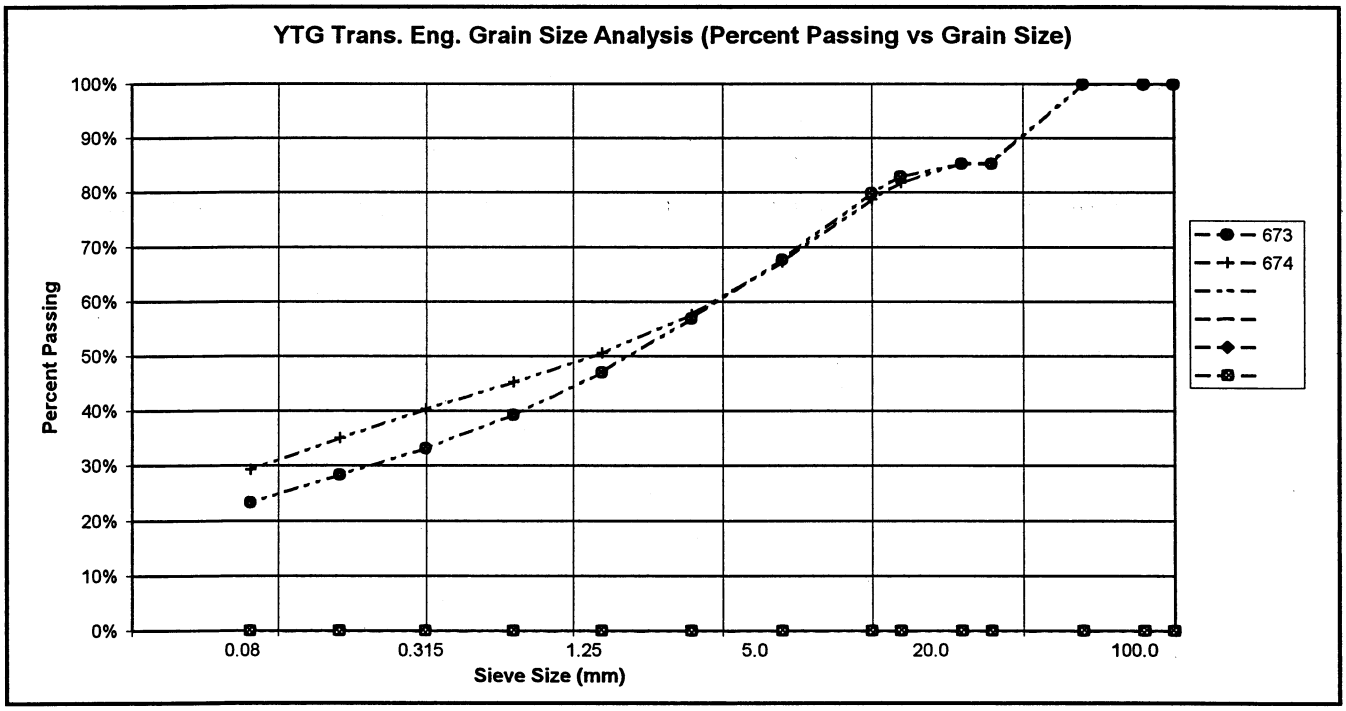
PROJECT NUMBER:	092-202-101-0361-1		HOLE No.: 552-1493
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1758+425 20M RT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/07

FIELD NO:	672A	672				
LAB NO:	1077	1078				
DEPTH:	0.8-1.0	2.0-2.2				
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	83%	100%				
20.0	83%	97%				
12.5	80%	93%				
10.0	77%	91%				
5.0	68%	81%				
2.5	61%	73%				
1.25	55%	67%				
0.630	50%	62%				
0.315	45%	56%				
0.160	40%	49%				
0.080	34%	42%				
M.C.(%):	6%	12%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	32	19				
% SAND:	34	39				
% FINES:	34	42				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				



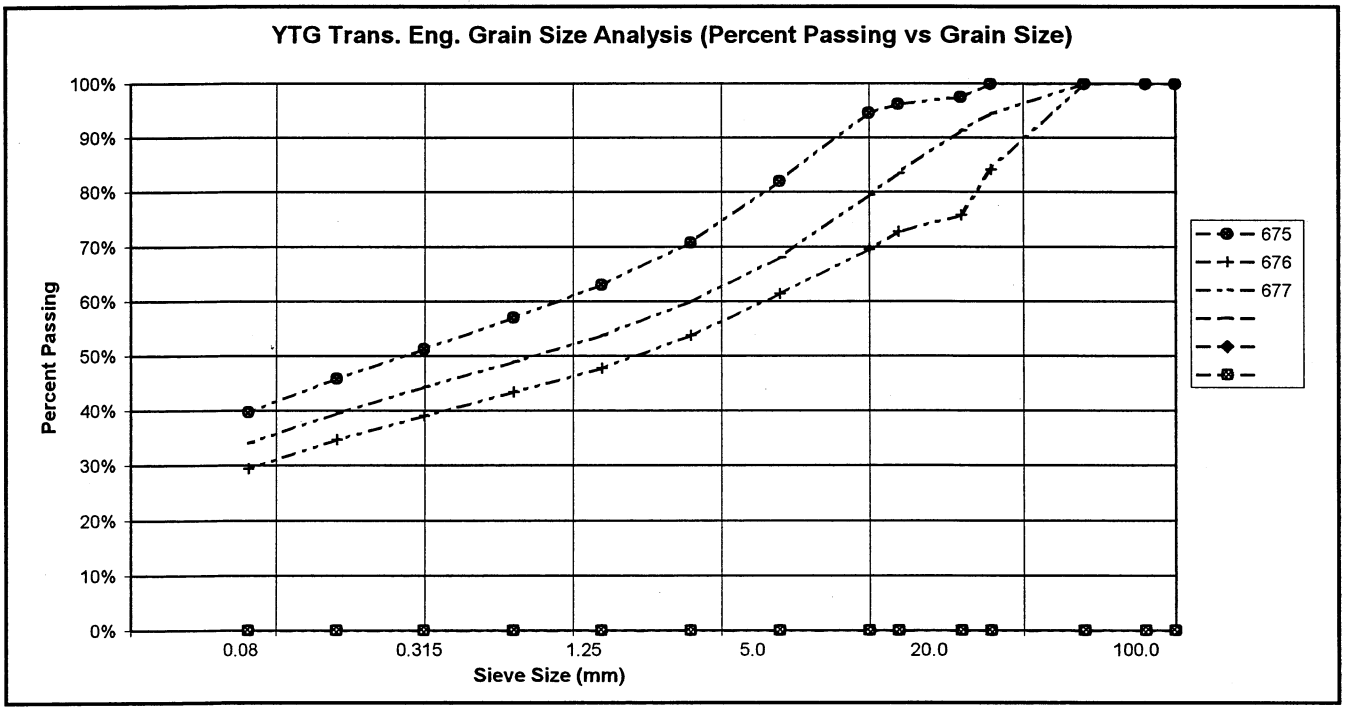
PROJECT NUMBER:	092-202-101-0361-1		HOLE No.: 552-1494
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1758+450 20M LT		
LOGGED BY:	D.T.		DATE COMP: 2000/06/07

FIELD NO:	673	674				
LAB NO:	1079	1080				
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	85%	85%				
20.0	85%	85%				
12.5	83%	82%				
10.0	80%	79%				
5.0	68%	67%				
2.5	57%	58%				
1.25	47%	51%				
0.630	39%	45%				
0.315	33%	40%				
0.160	28%	35%				
0.080	23%	29%				
M.C.(%):	4%	9%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	32	33				
% SAND:	44	38				
% FINES:	23	29				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)				



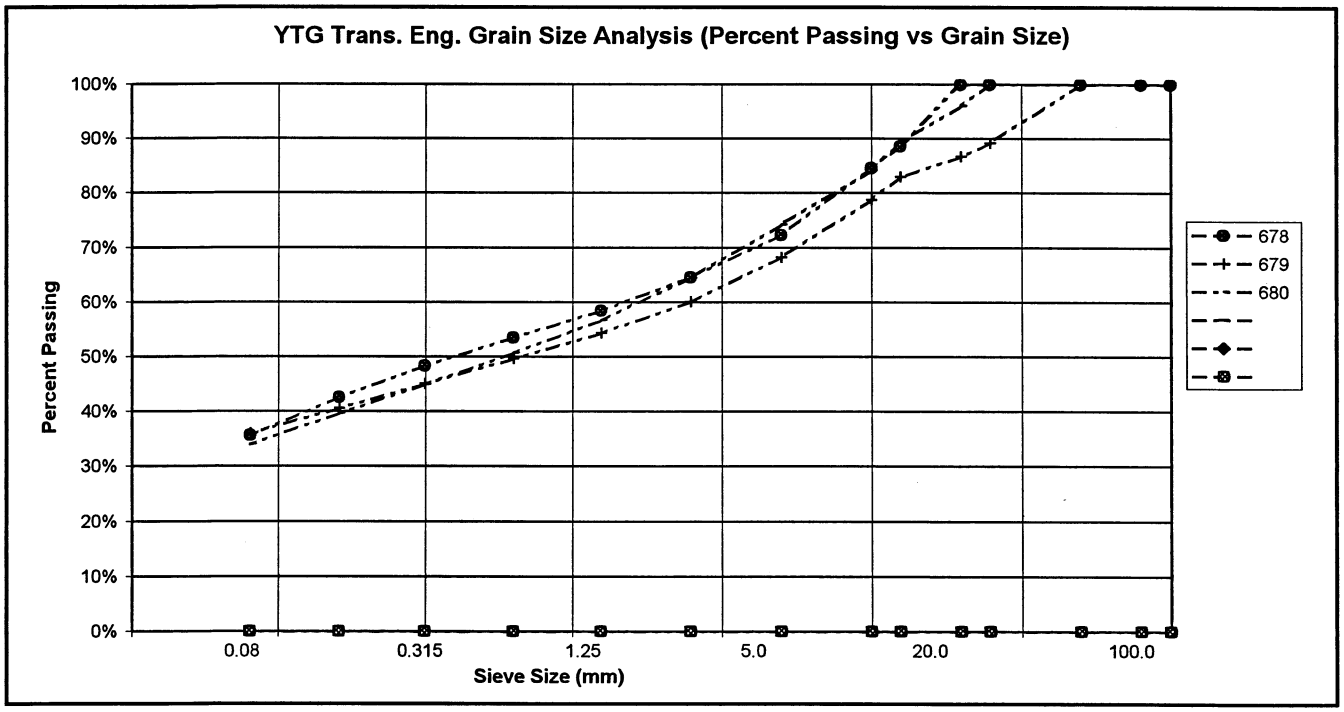
PROJECT NUMBER:	092-202-101-0361-1		HOLE No.: 552-1495
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1758+550 C/L		
LOGGED BY:	D.T.		DATE COMP: 2000/06/07

FIELD NO:	675	676	677			
LAB NO:	1081	1082	1083			
DEPTH:	1.4-1.6	2.9-3.1	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	84%	94%			
20.0	98%	76%	91%			
12.5	96%	73%	83%			
10.0	95%	69%	79%			
5.0	82%	61%	68%			
2.5	71%	54%	60%			
1.25	63%	48%	54%			
0.630	57%	43%	49%			
0.315	51%	39%	44%			
0.160	46%	35%	40%			
0.080	40%	29%	34%			
M.C.(%):	5%	7%	7%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	18	39	32			
% SAND:	42	32	34			
% FINES:	40	29	34			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)			



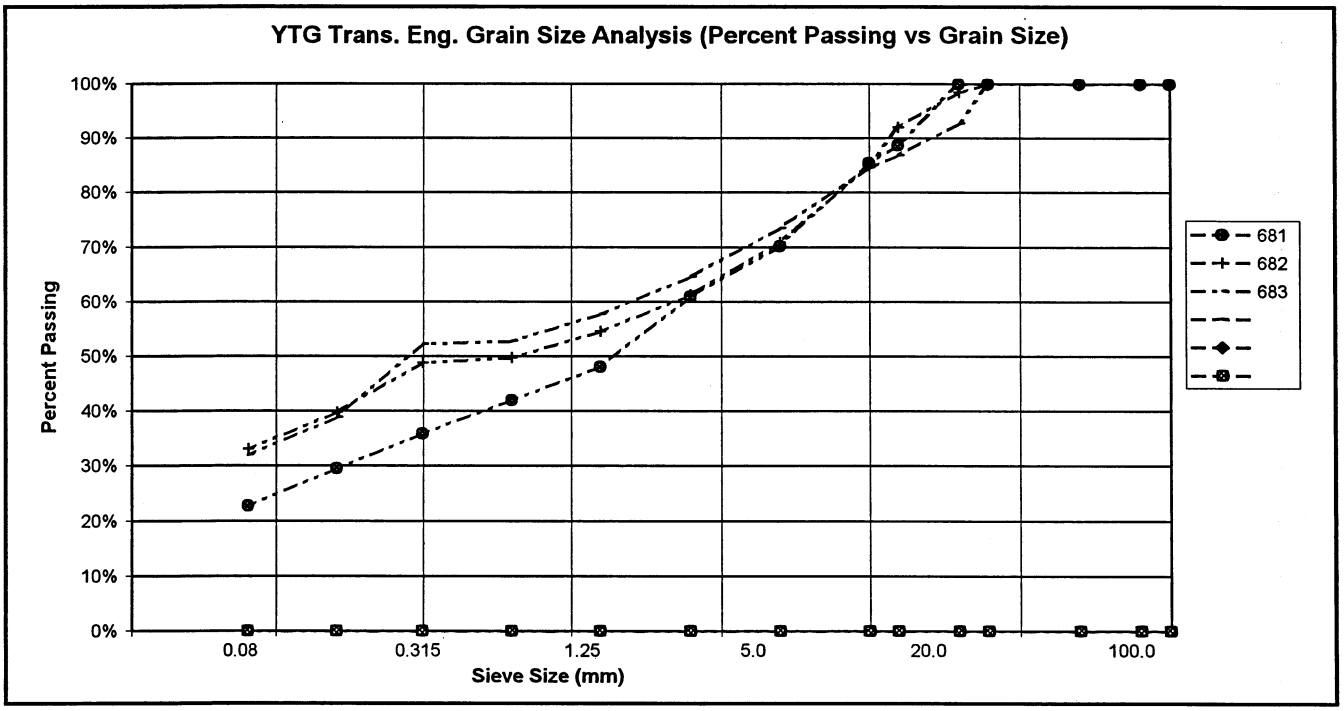
PROJECT NUMBER:	092-202-101-0361-1		HOLE No.: 552-1496
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1758+650 C/L		
LOGGED BY:	D.T.		DATE COMP: 06/07/2000

FIELD NO:	678	679	680			
LAB NO:	1084	1085	1086			
DEPTH:	1.4-1.6	2.9-3.1	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	89%	100%			
20.0	100%	87%	96%			
12.5	89%	83%	89%			
10.0	85%	79%	84%			
5.0	72%	68%	74%			
2.5	65%	60%	64%			
1.25	58%	54%	57%			
0.630	54%	50%	51%			
0.315	48%	45%	45%			
0.160	43%	41%	40%			
0.080	36%	36%	34%			
M.C.(%):	5%	9%	6%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	28	32	26			
% SAND:	37	32	40			
% FINES:	36	36	34			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER:	092-202-101-0361-1		HOLE No.: 552-1497
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1758+800 C/L		
LOGGED BY:	D.T.		DATE COMP: 06/07/2000

FIELD NO:	681	682	683			
LAB NO:	1087	1088	1089			
DEPTH:	1.2-1.4	2.8-3.0	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	99%	93%			
12.5	89%	92%	87%			
10.0	85%	85%	85%			
5.0	70%	71%	73%			
2.5	61%	61%	65%			
1.25	48%	55%	58%			
0.630	42%	50%	53%			
0.315	36%	49%	52%			
0.160	30%	40%	39%			
0.080	23%	33%	32%			
M.C.(%):	4%	9%	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:	30	29	27			
% SAND:	47	38	41			
% FINES:	23	33	32			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			

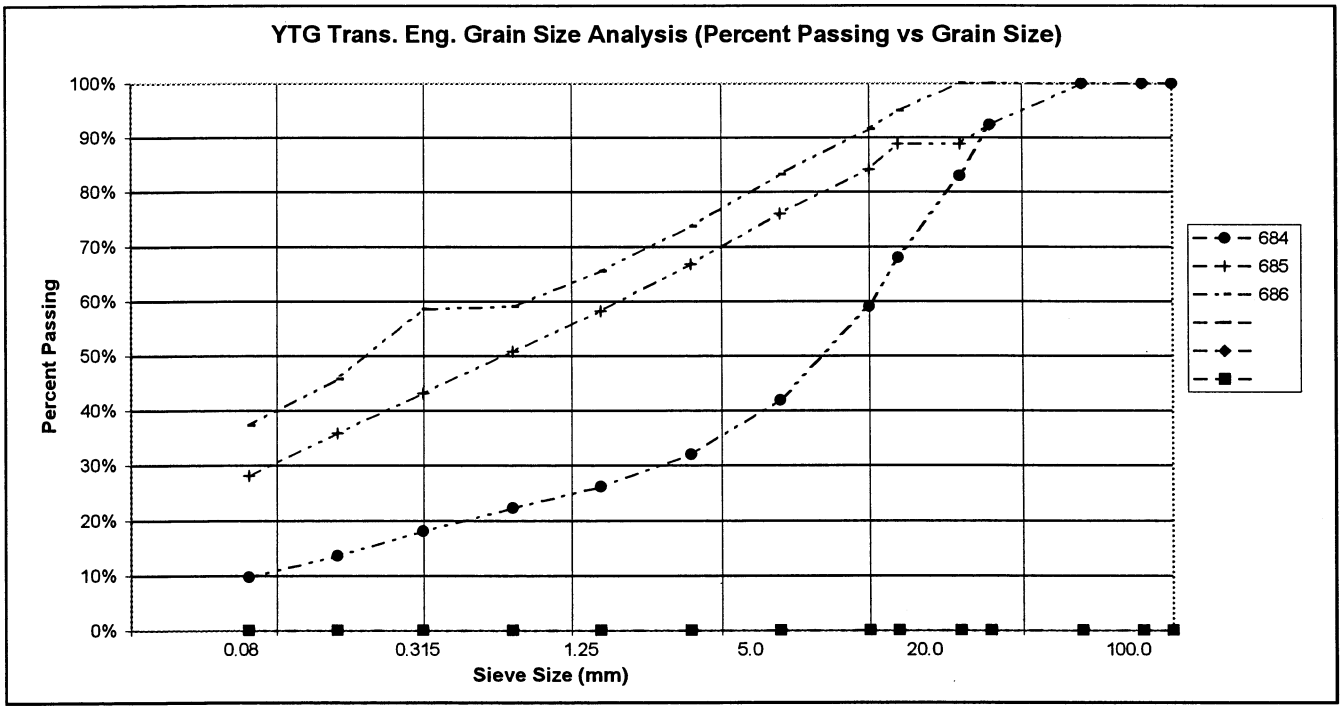


PROJECT NUMBER: 092-202-101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1758+900 14M LT
LOGGED BY: D.T.

HOLE No.: 552-1498

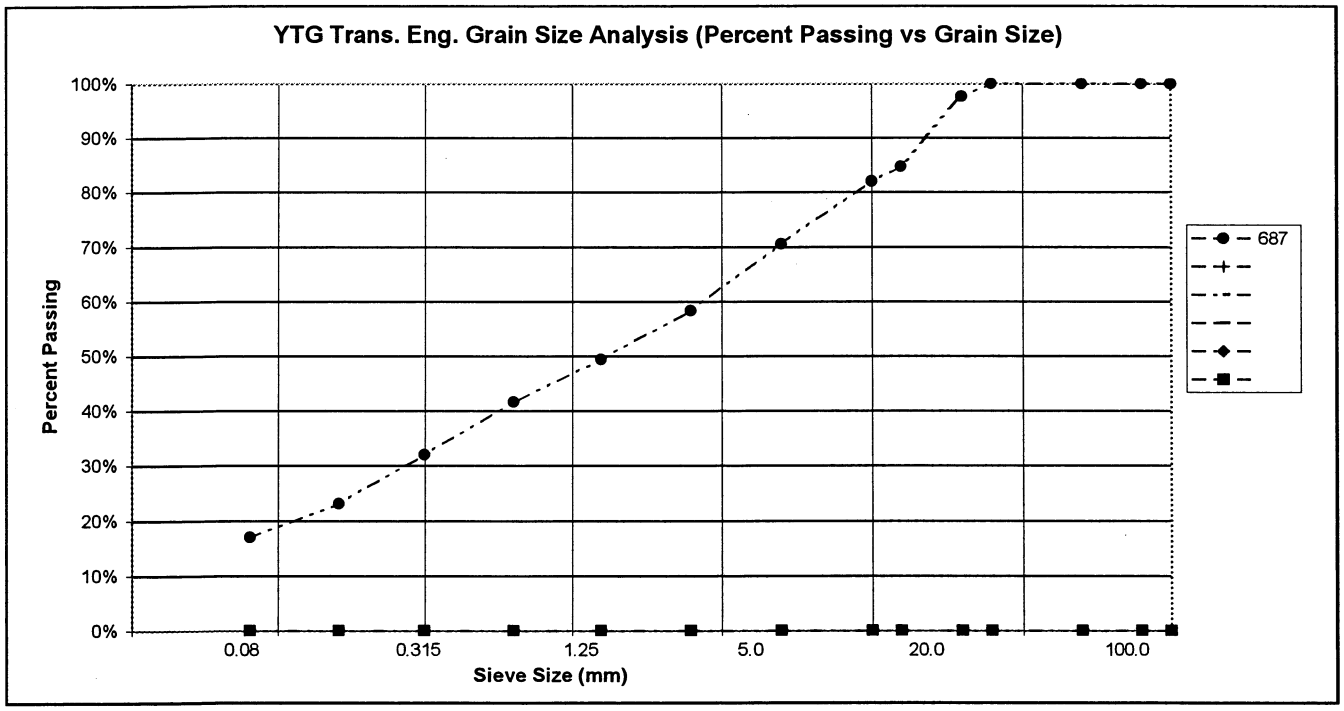
DATE COMP: 6/8/2000

FIELD NO:	684	685	686			
LAB NO:	1090	1091	1092			
DEPTH:	1.5-1.7	2.9-3.1	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	92%	92%	100%			
20.0	83%	89%	100%			
12.5	68%	89%	95%			
10.0	59%	84%	92%			
5.0	42%	76%	83%			
2.5	32%	67%	74%			
1.25	26%	58%	65%			
0.630	22%	51%	59%			
0.315	18%	43%	59%			
0.160	14%	36%	46%			
0.080	10%	28%	37%			
M.C.(%):	3%	10%	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:	58	24	17			
% SAND:	32	48	46			
% FINES:	10	28	37			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER:	092-202-101-0361-1				HOLE No.: 552-1499	
CLIENT:	ENGINEERING CAPITAL					
PROJECT NAME:	SHAKWAK SEG 11					
PROJECT LOCATION:	KM 1729.6-1787 A/H					
DRILL UNIT:	MOBILE B40 L					
HOLE LOCATION:	1759+010 15M LT					
LOGGED BY:	D.T.				DATE COMP: 6/8/2000	

FIELD NO:	687					
LAB NO:	1093					
DEPTH:	1.3-1.5					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	100%					
20.0	98%					
12.5	85%					
10.0	82%					
5.0	71%					
2.5	58%					
1.25	49%					
0.630	42%					
0.315	32%					
0.160	23%					
0.080	17%					
M.C.(%):	11%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	29					
% SAND:	53					
% FINES:	17					
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)					

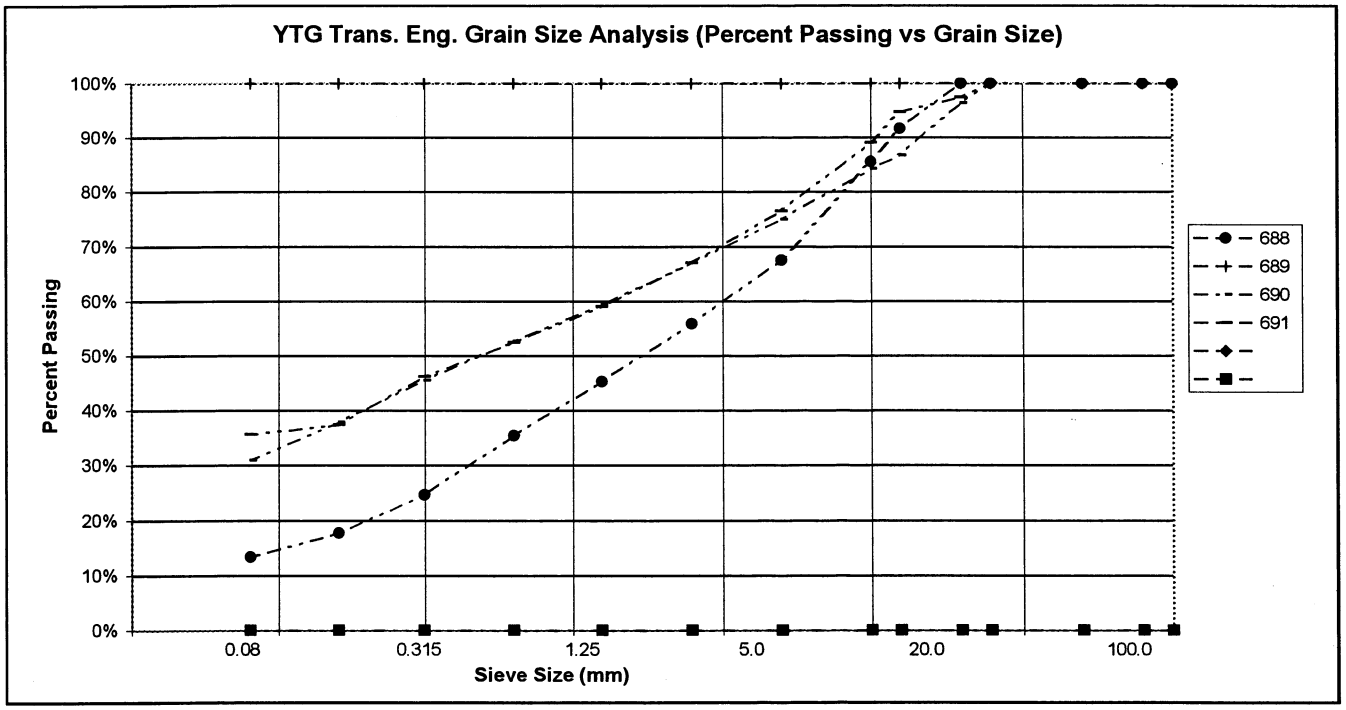


PROJECT NUMBER: 092-202-101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1759+100 13M LT
LOGGED BY: D.T.

HOLE No.: 552-1500

DATE COMP: 6/8/2000

FIELD NO:	688	689	690	691		
LAB NO:	1094	LOST	1096	1097		
DEPTH:	1.4-1.6	2.0-2.2	2.9-3.1	4.5-4.7		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	96%	97%		
12.5	92%	100%	87%	95%		
10.0	86%	100%	84%	89%		
5.0	68%	100%	75%	77%		
2.5	56%	100%	67%	67%		
1.25	45%	100%	59%	59%		
0.630	35%	100%	53%	52%		
0.315	25%	100%	46%	46%		
0.160	18%	100%	38%	37%		
0.080	13%	100%	31%	36%		
M.C.(%):	2%	8%	13%	11%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	32	0	25	23		
% SAND:	54	0	44	41		
% FINES:	13	100	31	36		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		

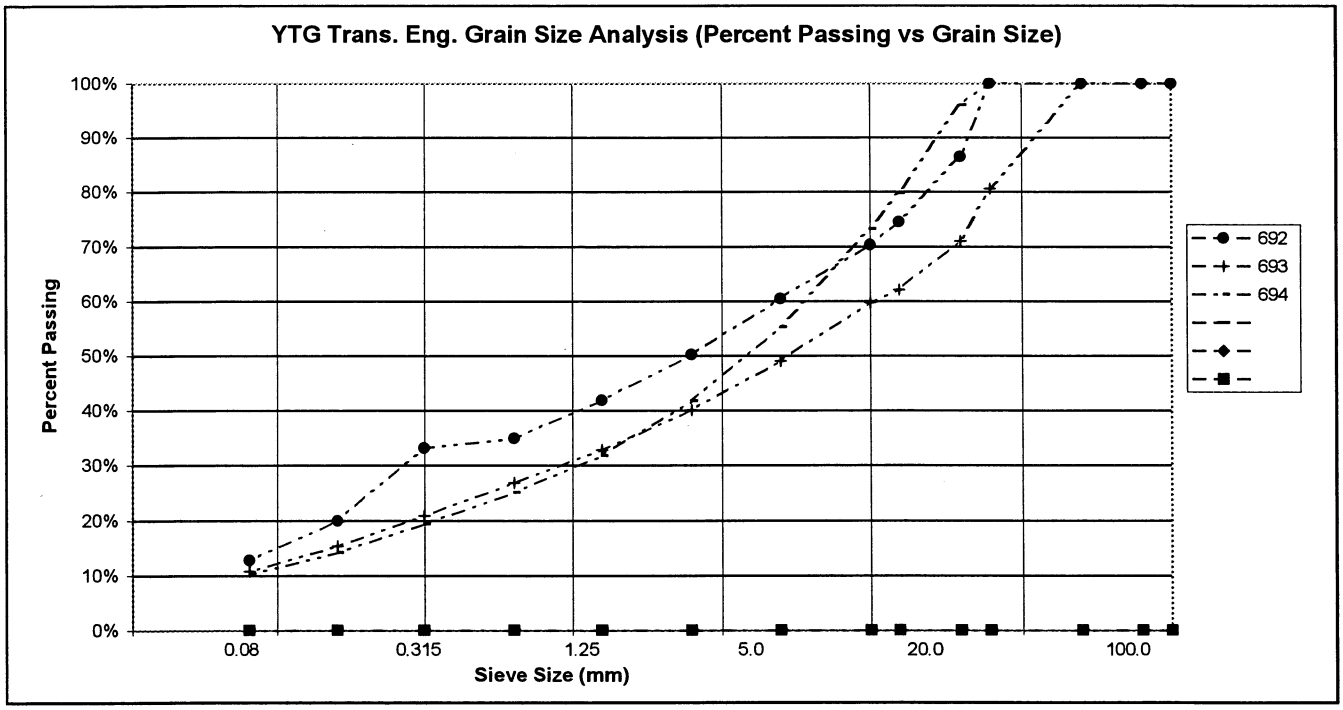


PROJECT NUMBER: 092-202-101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 11
PROJECT LOCATION: KM 1729.6-1787 A/H
DRILL UNIT: MOBILE B40 L
HOLE LOCATION: 1759+200 7M LT
LOGGED BY: D.T.

HOLE No.: 552-1501

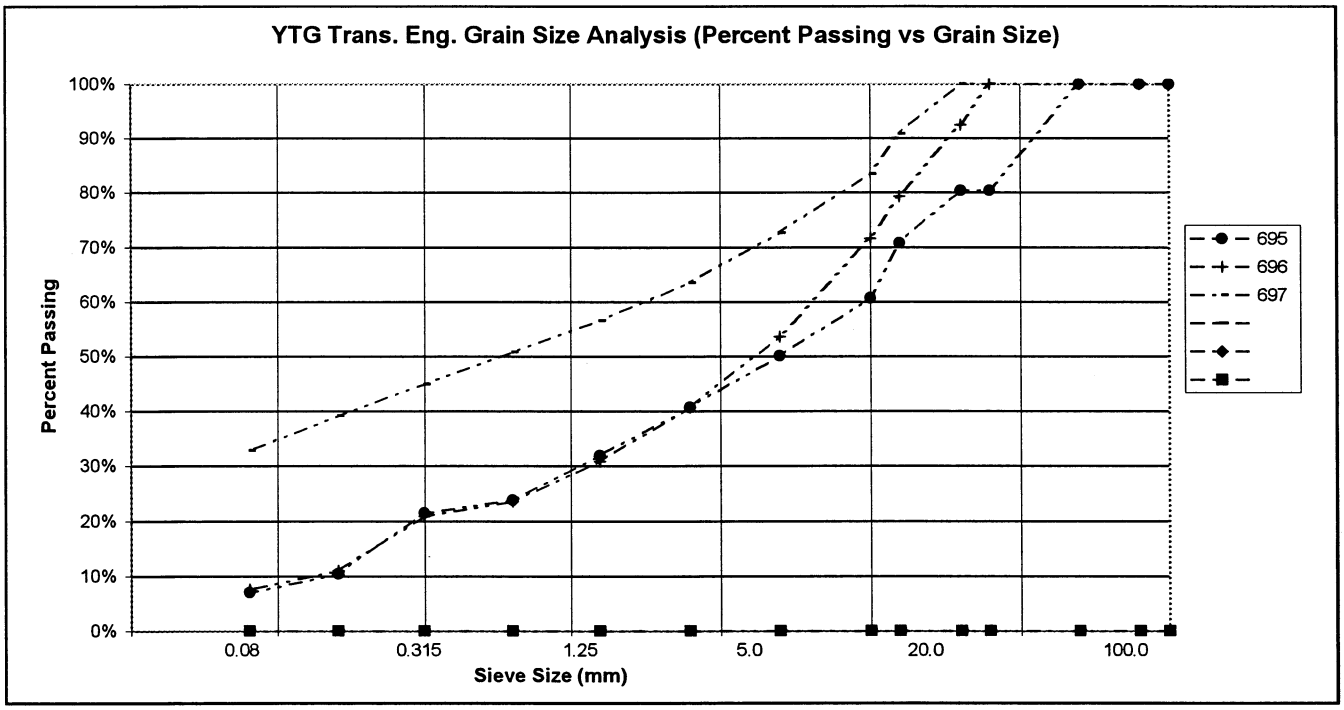
DATE COMP: 6/8/2000

FIELD NO:	692	693	694			
LAB NO:	1098	1099	1100			
DEPTH:	1.5-1.7	2.9-3.0	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	81%	100%			
20.0	86%	71%	96%			
12.5	75%	62%	80%			
10.0	70%	60%	73%			
5.0	60%	49%	55%			
2.5	50%	40%	42%			
1.25	42%	33%	32%			
0.630	35%	27%	25%			
0.315	33%	21%	19%			
0.160	20%	15%	14%			
0.080	13%	11%	10%			
M.C.(%):	3%	2%	5%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	40	51	45			
% SAND:	48	38	45			
% FINES:	13	11	10			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)			



PROJECT NUMBER:	092-202-101-0361-1		HOLE No.: 552-1502
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	KM 1729.6-1787 A/H		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	1759+300 11M LT		
LOGGED BY:	D.T.		DATE COMP: 6/8/2000

FIELD NO:	695	696	697			
LAB NO:	1101	1102	1103			
DEPTH:	1.4-1.6	2.8-3.0	4.5-4.7			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	80%	100%	100%			
20.0	80%	93%	100%			
12.5	71%	79%	91%			
10.0	61%	72%	83%			
5.0	50%	54%	73%			
2.5	41%	41%	63%			
1.25	32%	31%	57%			
0.630	24%	24%	51%			
0.315	21%	21%	45%			
0.160	10%	11%	39%			
0.080	7%	8%	33%			
M.C.(%):	2%	2%	8%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	50	46	27			
% SAND:	43	46	40			
% FINES:	7	8	33			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND WITH GRAVEL (SM)			



GEOTECHNICAL INVESTIGATIONS

Highway Construction
km 1749.6 to 1759.2
Alaska Highway #1
Yukon, 2004-2005
Volume 2 of 2



Highways and Public Works
Transportation Engineering Branch

Geotechnical Services

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

ORIGINAL - Do Not Remove From File

Highway Construction
km 1749.6 to 1759.2
Alaska Highway #1
Yukon, 2004-2005
Volume 2 of 2

This Data Package prepared for project viewing:

February, 2004

Transportation Engineering Branch
Geotechnical Services
461 Range Road
Whitehorse, Yukon

CONTENTS

Volume 1 of 2

INTRODUCTION

Investigation notes, classification methods and legends.

CENTRELINE TESTING km 1749.6 to 1759.2 Alaska Highway

Subsurface Exploration and Test Report Sheets are provided.
The reports for the Centreline testing holes are arranged according to project location, starting at km 1749+550 and increasing to km 1759+300.

Laboratory Testing Result Sheets are provided.
The reports for the centreline holes are arranged according to test hole number, starting at 544-1390 and increasing to 552-1502.

2000	TEST HOLES 1390 to 1418	shown with prefix 544-
	TEST HOLES 1419 to 1427	shown with prefix 545-
	TEST HOLES 1428 to 1452	shown with prefix 549-
	TEST HOLES 1453 to 1465	shown with prefix 550-
	TEST HOLES 1466 to 1490	shown with prefix 551-
	TEST HOLES 1491 to 1502	shown with prefix 552-

CONTENTS (continued)

Volume 2 of 2

GRANULAR SOURCE km 1750.0 LHS ALASKA HIGHWAY Pit ID 115 G-04A

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

Auger Testing

1985	TEST HOLES 32	shown with prefix 777-
2001	TEST HOLES 1962 & 1963	shown with prefix 625-

Test Pit Testing

1985	TEST PITS 108	shown with prefix 808-
1988	TEST PITS 1 & 2	shown with prefix 29-
1988	TEST PITS 38 & 39	shown with prefix 30-
2002	TEST PITS 5, 6, 10, 11, 15, 16, 20, & 21	shown with prefix 631-

GRANULAR SOURCE km 1753.0 LHS ALASKA HIGHWAY Pit ID 115 G-20

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

Auger Testing

2003	TEST HOLES 2717 to 2727	shown with prefix 652-

Test Pit Testing

2002	TEST PITS 2400 to 2450	shown with prefix 636-
2003	TEST PITS 2729 to 2731 & 2745 to 2753	shown with prefix 653-

GRANULAR SOURCE TESTING
km 1750.0 LHS
(Lewis Creek)
ALASKA HIGHWAY

HISTORY OF AGGREGATE PRODUCTION

Alaska Highway Km 1749.5 L.H.S.
115 G-04A (Lewis Creek)

Average Crusher Run Characteristics of Material Produced

File Number --- 4100-60-55 Contractor --- Summit Aggregates Inc.
Stockpile ID --- 2003-17 Commenced --- 03-11-16 Completed --- 03-11-18
Type of aggregate --- 20 mm B.S.T. Aggregate
Amount Produced ---5,664 m^3 No. of tests --- 14

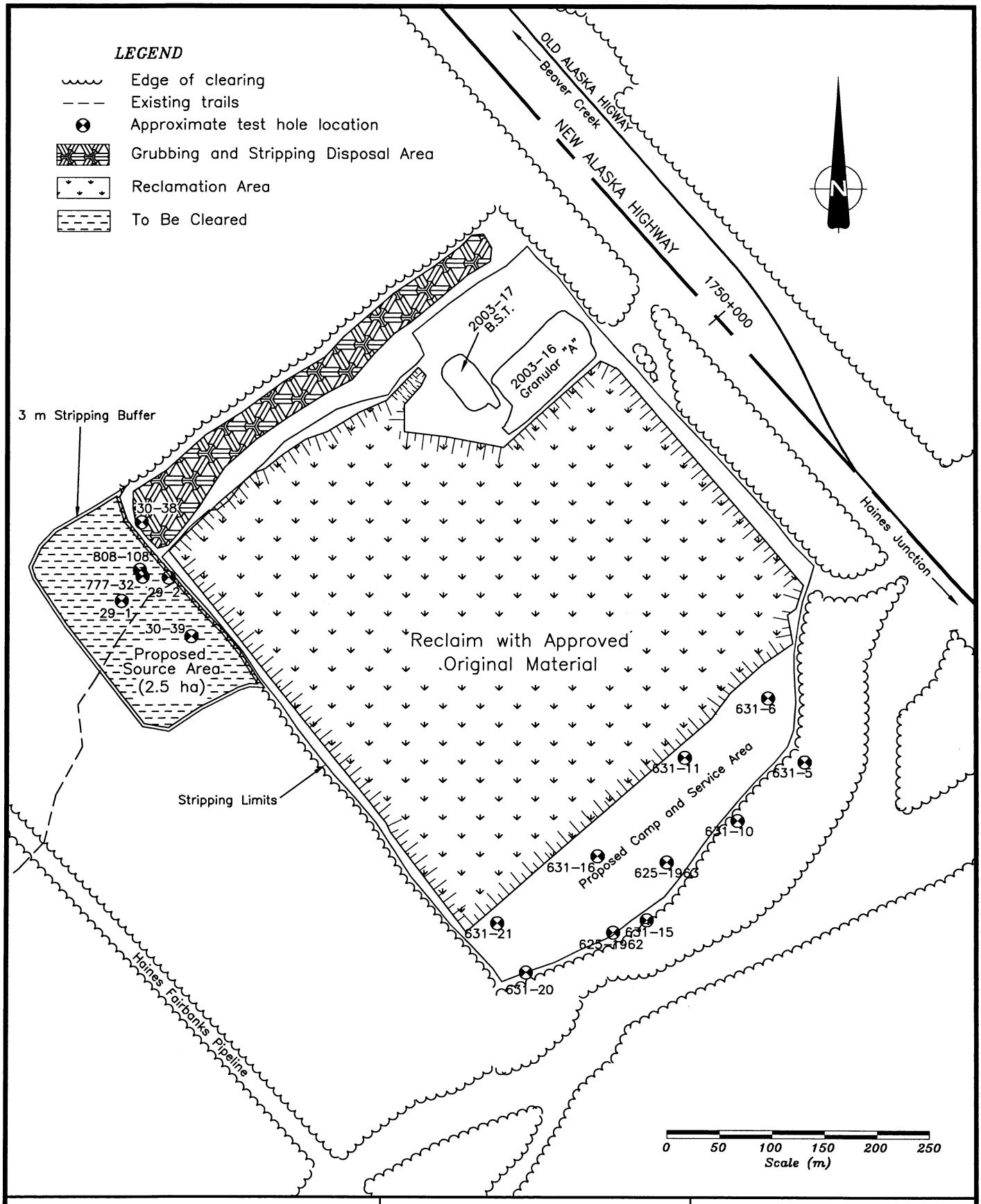
Sieve Size mm	20.0	12.5	10.0	5.00	2.50	1.25	0.315	0.080
Percent Passing	99.9	86.3	--	50.7	35.8	24.1	10.0	5.0

Moisture Content - 3.0 % Standard Proctor
Fracture - 68.6 % Kg/m^3 @ % moisture

File Number --- 4100-60-55 Contractor --- Summit Aggregates Inc.
Stockpile ID --- 2003-16 Commenced --- 03-11-14 Completed --- 03-11-24
Type of aggregate --- Granular "A" Base Course
Amount Produced ---37,921 m^3 No. of tests --- 88

Sieve Size mm	20.0	12.5	10.0	5.00	2.50	1.25	0.315	0.080
Percent Passing	99.9	85.4	--	52.0	37.8	26.8	12.1	5.5

Moisture Content - 3.0 % Standard Proctor
Fracture - 65.4 % 2290 Kg/m^3 @ 7.5 % moisture

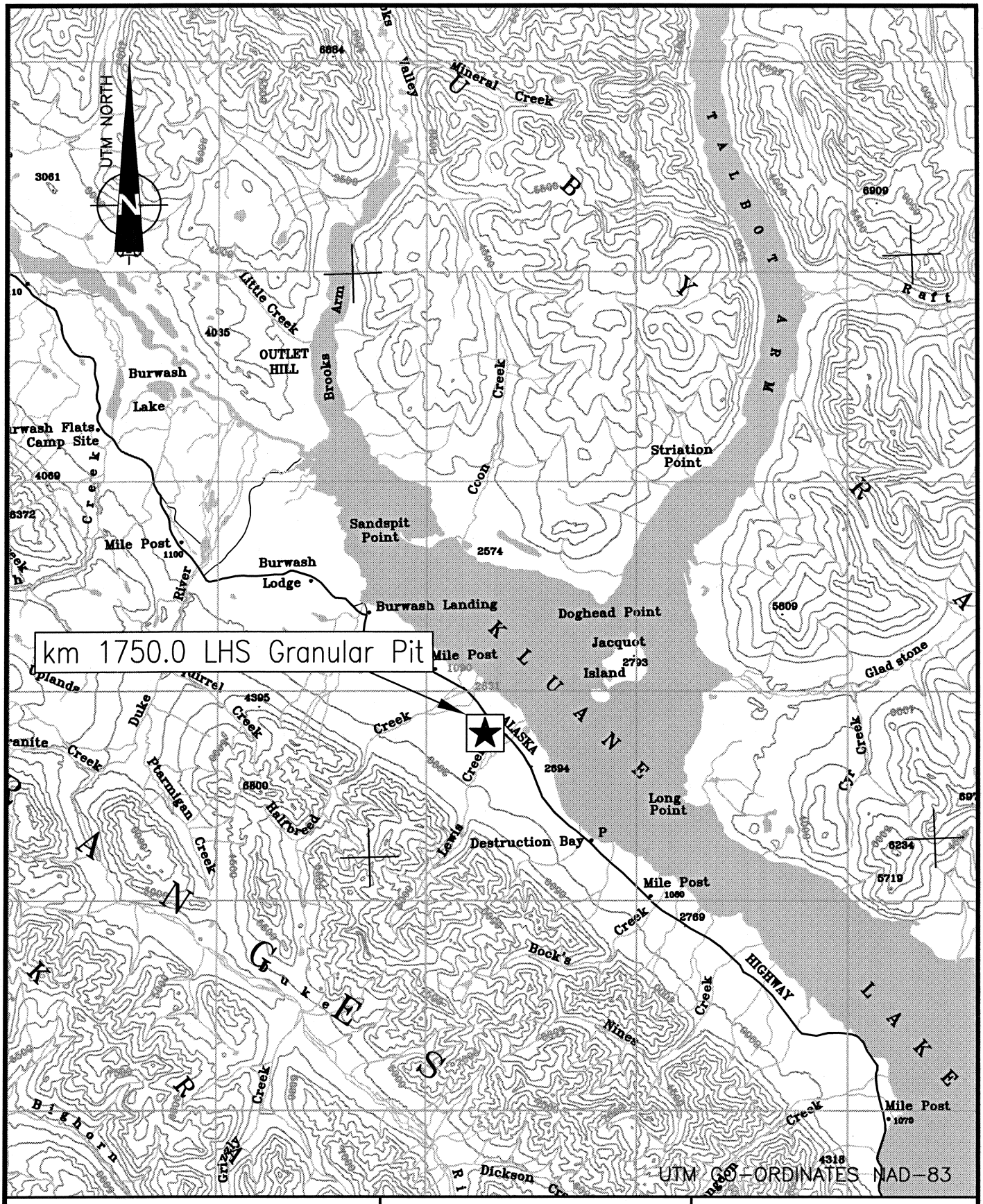


Yukon
Highways and Public Works

Transportation Engineering Branch

SITE PLAN
GRANULAR PIT
Km 1750.0 L.H.S.
(Lewis Creek)
ALASKA HWY. YUKON

pit file:	115 G-04A
revision:	2004-Proposed
drawn:	JJM
date:	2004-02-23
scale:	1: 5000
drwg:	115g-04aS



Yukon
Highways and Public Works

Transportation Engineering Branch

KEY PLAN
GRANULAR PIT
km 1750.0 LHS
(Lewis Creek)
ALASKA HWY. YUKON

pit file:	115 G-04A
quad:	115 G/07
drawn:	JJM
date:	2004-02-23
scale:	1: 250,000
drwg:	115g-04aK

Km 1750.0 LHS Alaska Highway #1
Pit Ident. 115 G-04A
(Copper Joe Creek)

May 1985
Book # 777

Auger Hole Logs

Public Works Canada

WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT 77-32

PROJECT/SECTION			HOLE No. 85-32
HOLE LOCATION		ELEV.	DEPTH TO G.W.L.
DATE DRILLED 85-05-31	DRILL UNIT B30 6" AUGER		TECHNICIAN D.S.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASS. or G.W.L.	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1	WELL-GRADED GRAVEL WITH SAND - GREY		AP	97	224	GW	60.3	35.8	—	
2	ROCKY - SLOW DRILLING WELL-GRADED GRAVEL - GREY		AP	98	225	GW	83.4	14.2	—	
3	WELL-GRADED GRAVEL WITH SILTY SAND - GREY		AP	99	226	GW-GM	57.6	36.4	—	
	REFUSAL									

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

0 10 20 30 40 50 60 70 80 90 100

Dwg No 80-253

Km 1750.0 LHS Alaska Highway #1
Pit Ident. 115 G-04A
(Copper Joe Creek)

September 2001
Book # 625

Auger Hole Logs

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAS SEG 11	TEST HOLE NO: 625-1963
ENGINEERING CAPITAL	LEWIS CREEK CHANNEL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 SAND (GP) -brown -damp -rough drilling from surface to 4.5m							0.0
1.0								1.0
			1458		GP			
2.0								2.0
3.0								3.0
4.0			1459		GP			4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 01/09/25
Fig. No:	Page 1 of 1

02/01/21 11:32AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAS SEG 11	TEST HOLE NO: 625-1962
ENGINEERING CAPITAL	LEWIS CREEK CHANNEL	Project No: 092-202101-0361
MOBILE B40L 6" AUGER	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -damp -rough drilling from surface to 3.5m							
1.0								1.0
			1456 ▲		GP-GM		◆ ■	
2.0								2.0
3.0								3.0
	-smooth drilling below 3.5m							
4.0			1457 ▲		GP-GM		◆ ■	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: C.C.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 01/09/25
Fig. No:	Page 1 of 1

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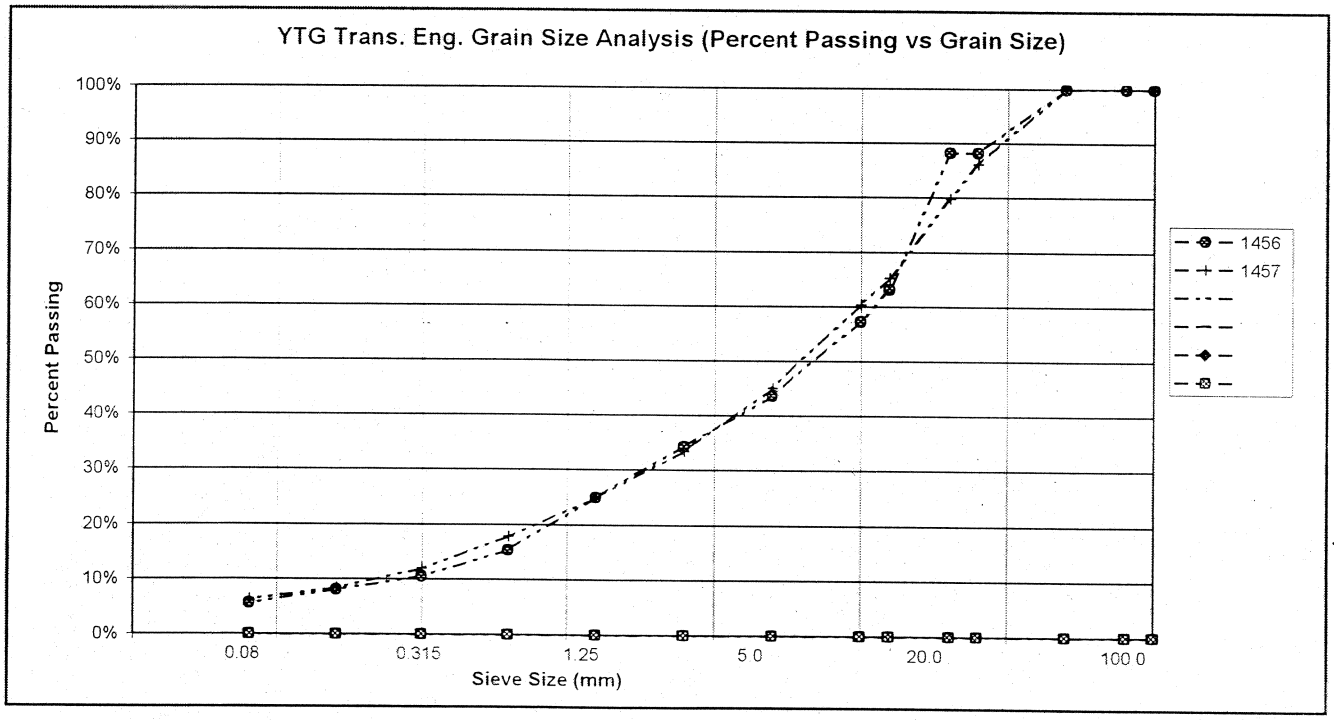
Km 1750.0 LHS Alaska Highway #1
Pit Ident. 115 G-04A
(Copper Joe Creek)

September 2001
Book # 625

Auger Sample Results

PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 625-1962
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 11		
PROJECT LOCATION:	Lewis Creek Channel		
DRILL UNIT:	MOBILE B40 L		
HOLE LOCATION:	See Testhole Log Sheet		
LOGGED BY:	G.C.		DATE COMP: 2001/09/25

FIELD NO:	1456	1457				
LAB NO:	2237	2238				
DEPTH:	1.0-2.0	3.5-4.5				
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	88%	86%				
20.0	88%	80%				
12.5	63%	65%				
10.0	57%	60%				
5.0	44%	45%				
2.5	34%	33%				
1.25	25%	25%				
0.630	15%	18%				
0.315	11%	12%				
0.160	8%	8%				
0.080	6%	6%				
M.C.(%):	3%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	56	55				
% SAND:	38	39				
% FINES:	6	6				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

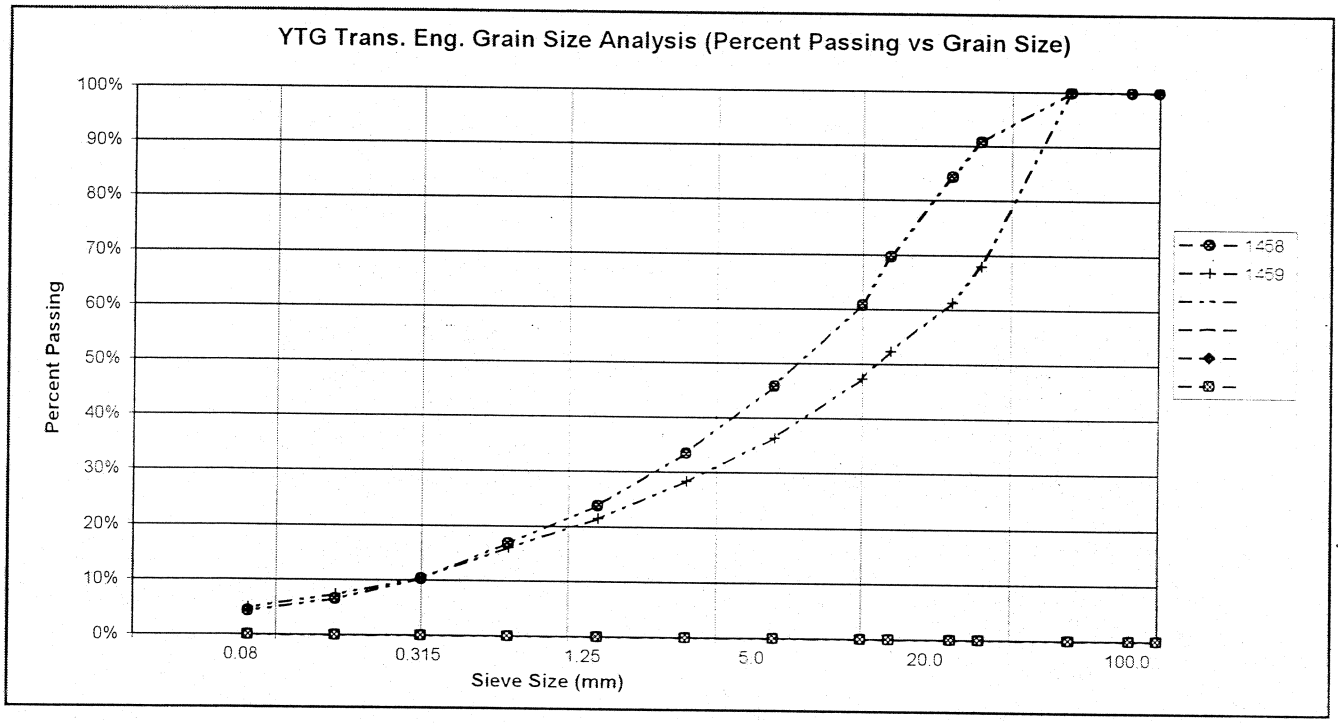


PROJECT NUMBER:	092-202101-0361-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 11
PROJECT LOCATION:	Lewis Creek Channel
DRILL UNIT:	MOBILE B40 L
HOLE LOCATION:	See Testhole Log Sheet
LOGGED BY:	G.C.

HOLE No.: 625-1963

DATE COMP: 2001/09/25

FIELD NO:	1458	1459				
LAB NO:	2236	2239				
DEPTH:	1.0-2.0	3.5-4.5				
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	91%	68%				
20.0	84%	61%				
12.5	70%	52%				
10.0	61%	47%				
5.0	46%	36%				
2.5	34%	28%				
1.25	24%	21%				
0.630	17%	16%				
0.315	10%	10%				
0.160	7%	7%				
0.080	4%	5%				
M.C.(%):	2%	2%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	54	64				
% SAND:	42	31				
% FINES:	4	5				
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)				



Km 1750.0 LHS Alaska Highway #1
Pit Ident. 115 G-04A
(Copper Joe Creek)

June 1985
Book # 808

Test Pit Logs

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT 808-108

PROJECT/SECTION			HOLE No. 85-108
HOLE LOCATION		ELEV.	DEPTH TO G.W.L.
DATE DRILLED 85-06-27	DRILL UNIT BACKHOE		TECHNICIAN D.S.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASS. or G.W.L.	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
1	POORLY GRADED GRAVEL WITH SAND - GREY									
2	EST. 20% COBBLES 10 TO 20 cm. ø									
3	HARD DIGGING - DK. GREY	UNFROZEN TO FROZEN	PIT RUN	255	2962	GP	57.4	39.4	—	
			CRUSH	255	2962	GW	55.2	44.1	—	
	END HOLE									
4										
5										
6										
7										
8										
9										
10										

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

0 10 20 30 40 50 60 70 80 90

x NP
x NP

C.C. = 83.9%

Km 1750.0 LHS Alaska Highway #1
Pit Ident. 115 G-04A
(Copper Joe Creek)

October 1988
Book # 029 and 030

Test Pit Logs

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-01
PWC CAPITAL – Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 MATERIAL							0.0
	WELL-GRADED GRAVEL WITH SAND (GW) -maximum 100mm material							
1.0			1	▲	GW		◆ ■	1.0
2.0								2.0
3.0	SANDY SILT -light brown -saturated							3.0
	END HOLE at 3.5m							
4.0								4.0
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: DT	COMPLETION DEPTH: 3.5 m
REVIEWED BY:	COMPLETE: 88/10/19
Fig. No:	Page 1 of 1

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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 029-02
PWC CAPITAL – Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 MATERIAL							0.0
	WELL-GRADED GRAVEL WITH SAND (GW) –maximum 150mm material –subrounded to rounded							
1.0								1.0
			2 ▲		GW		◆ ◆	
2.0								2.0
3.0	–damp below 3.0m		3 ▲		GW		◆ ◆	3.0
4.0								4.0
5.0	–caving in below 5.0m		4 ▲		GW		◆ ◆	5.0
	END HOLE at 5.3m							
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: DT	COMPLETION DEPTH: 5.3 m
REVIEWED BY:	COMPLETE: 88/10/19
Fig. No:	Page 1 of 1

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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST PIT NO: 030-38
PWC CAPITAL – Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 MATERIAL SANDY SILT							0.0
	POORLY TO WELL-GRADED GRAVEL WITH SAND (GP TO GW) –gray brown –moist –maximum 200mm material –estimate 5% +100mm							
1.0								1.0
			81 ▲		GP		◆ ■	
2.0								2.0
			82 ▲		GW		◆	
3.0								3.0
	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM) –gray brown –moist –maximum 200mm material –estimate 5% +100mm							
4.0								4.0
			83 ▲		GP-GM		◆ ■	
5.0	END HOLE at 5.0m –flat terrian –beside water course –formerly logged area							5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: CB	COMPLETION DEPTH: 5.0 m
REVIEWED BY:	COMPLETE: 88/10/23
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE--ENGINEERING	TEST PIT NO: 030-39
PWC CAPITAL - Y.T.	A/H KM 1749.5 LHS	Project No: 115-G-04
BACKHOE: CAT 225	LOCATION: See Plan	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 MATERIAL				
	POORLY GRADED GRAVEL WITH SAND (GP) -gray brown -moist -maximum 250mm material -estimate 10% +100mm -easy digging		84	GP	
3.0	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM) -gray brown -moist -maximum 250mm material -estimate 10% +100mm -hole caving in -easy digging		85	GP-GM	
4.0	-maximum 200mm material below 4.5m -estimate 5% +100mm below 4.5m				
5.0			86	GP-GM	
	END HOLE at 5.2m -photo #1-7				
6.0					

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

DEPTH (m) 0.0 1.0 2.0 3.0 4.0 5.0 6.0

Government of Yukon Transportation Engineering	LOGGED BY: CB	COMPLETION DEPTH: 5.2 m
	REVIEWED BY:	COMPLETE: 88/10/23
	Fig. No:	Page 1 of 1

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Km 1750.0 LHS Alaska Highway #1
Pit Ident. 115 G-04A
(Copper Joe Creek)

October 1988
Book # 029 and 030

Pit Run Sample Results

PROJECT NUMBER:	115-G-04	HOLE NUMBER:	029-01
CLIENT:	PWC CAPITAL - Y.T.		
PROJECT NAME:	ALASKA HIGHWAY PRE-ENGINEERING		
PROJECT LOCATION:	A/H KM 1749.5 LHS		
DRILL UNIT:	CAT 225 HOE		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	DT	DATE COMPLETED:	88.10.19

FIELD NO: 1
LAB NO: 2853
DEPTH: 1.1-1.5
TYPE: BULK

SIEVE SIZE	PERCENT PASSING
101.6	100
76.2	75
50.8	69
38.1	65
25.4	57
19.0	53
12.7	45
9.5	41
4.76	34
2.38	--
2.00	27
1.19	--
0.841	20
0.595	--
0.42	14
0.297	--
0.177	--
0.149	7
0.074	4

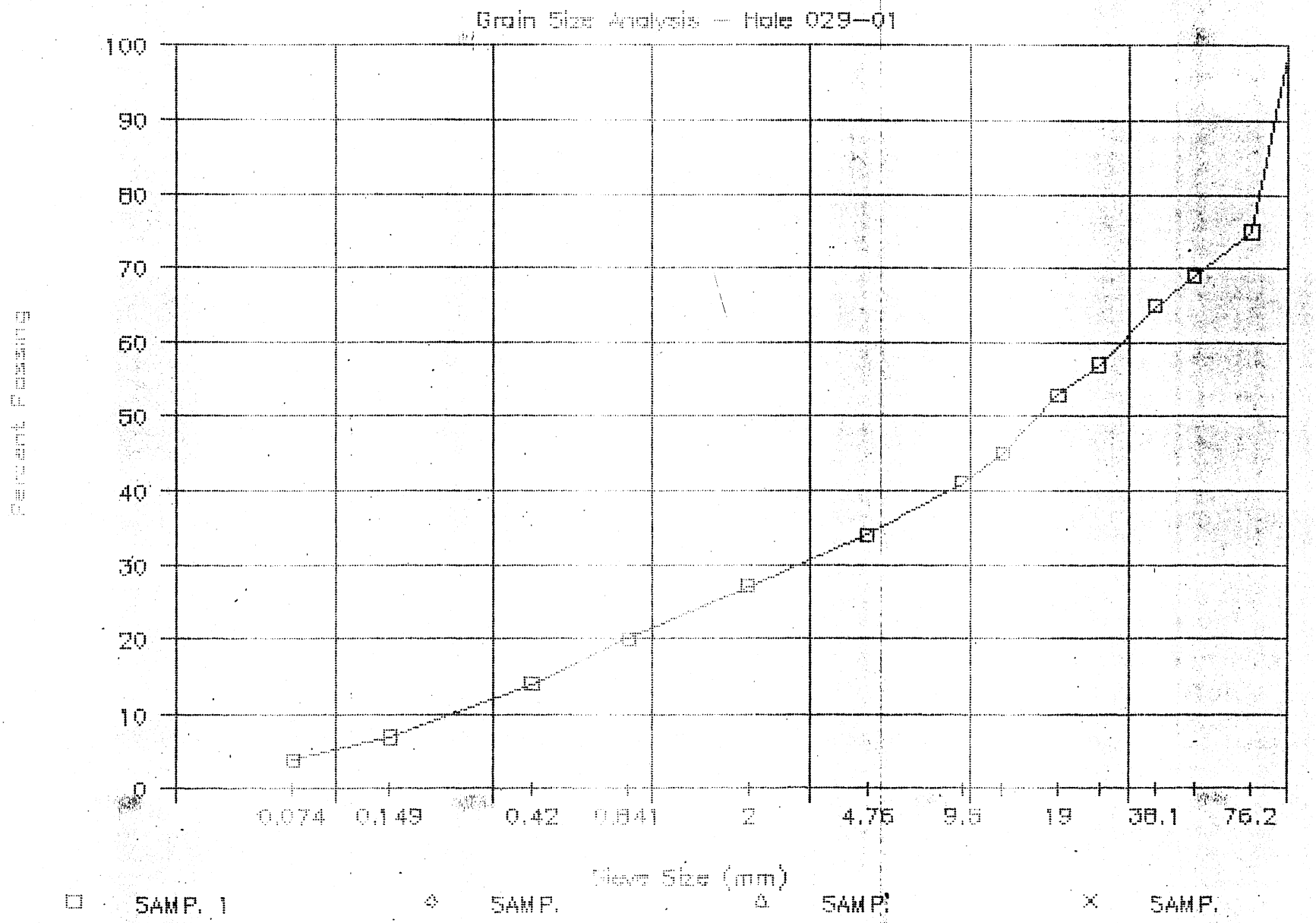
M.C.(%): --

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

% GRAVEL: 66
% SAND: 31
% FINES: 4

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

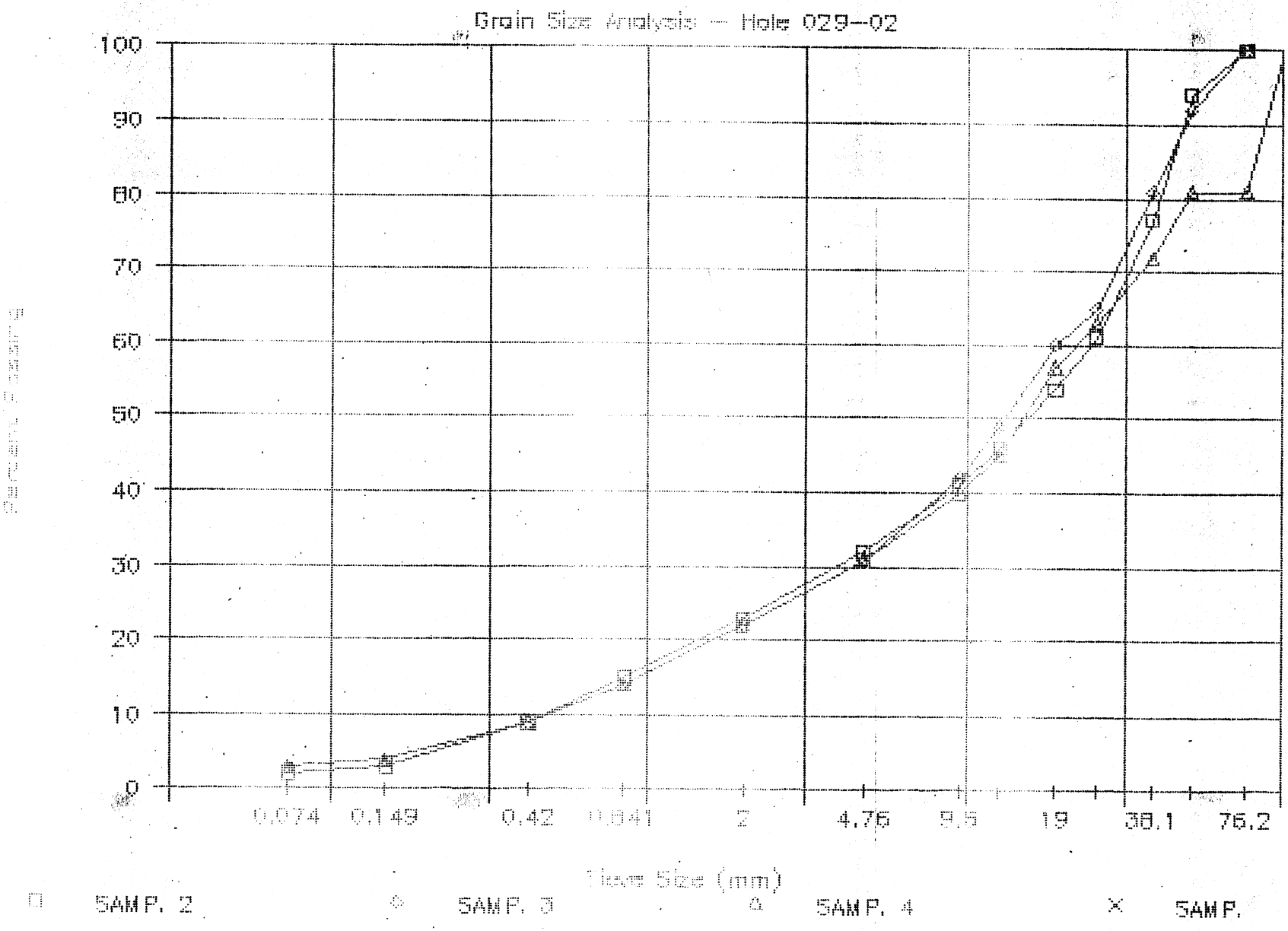
PUBLIC WORKS CANADA — WHITEHORSE, Y.T.



PROJECT NUMBER:	115-G-04	HOLE NUMBER:	029-02
CLIENT:	PWC CAPITAL - Y.T.		
PROJECT NAME:	ALASKA HIGHWAY PRE-ENGINEERING		
PROJECT LOCATION:	A/H KM 1749.5 LHS		
DRILL UNIT:	CAT 225 HOE		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	DT	DATE COMPLETED:	88.10.19

FIELD NO: 2		FIELD NO: 3		FIELD NO: 4	
LAB NO:	2854	LAB NO:	2855	LAB NO:	2856
DEPTH:	1.2-1.9	DEPTH:	3.0-3.4	DEPTH:	5.0-5.3
TYPE:	BULK	TYPE:	BULK	TYPE:	BULK
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--	101.6	100
76.2	100	76.2	100	76.2	81
50.8	94	50.8	92	50.8	81
38.1	77	38.1	81	38.1	72
25.4	61	25.4	65	25.4	63
19.0	54	19.0	60	19.0	57
12.7	46	12.7	49	12.7	45
9.5	41	9.5	42	9.5	40
4.76	32	4.76	31	4.76	31
2.38	--	2.38	--	2.38	--
2.00	22	2.00	22	2.00	22
1.19	--	1.19	--	1.19	--
0.841	15	0.841	14	0.841	14
0.595	--	0.595	--	0.595	--
0.42	9	0.42	9	0.42	9
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	3	0.149	4	0.149	4
0.074	2	0.074	3	0.074	3
M.C.(%):	--	M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	68	% GRAVEL:	69	% GRAVEL:	69
% SAND:	30	% SAND:	29	% SAND:	28
% FINES:	2	% FINES:	3	% FINES:	3
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
WELL-GRADED GRAVEL WITH SAND (GW)		WELL-GRADED GRAVEL WITH SAND (GW)		WELL-GRADED GRAVEL WITH SAND (GW)	

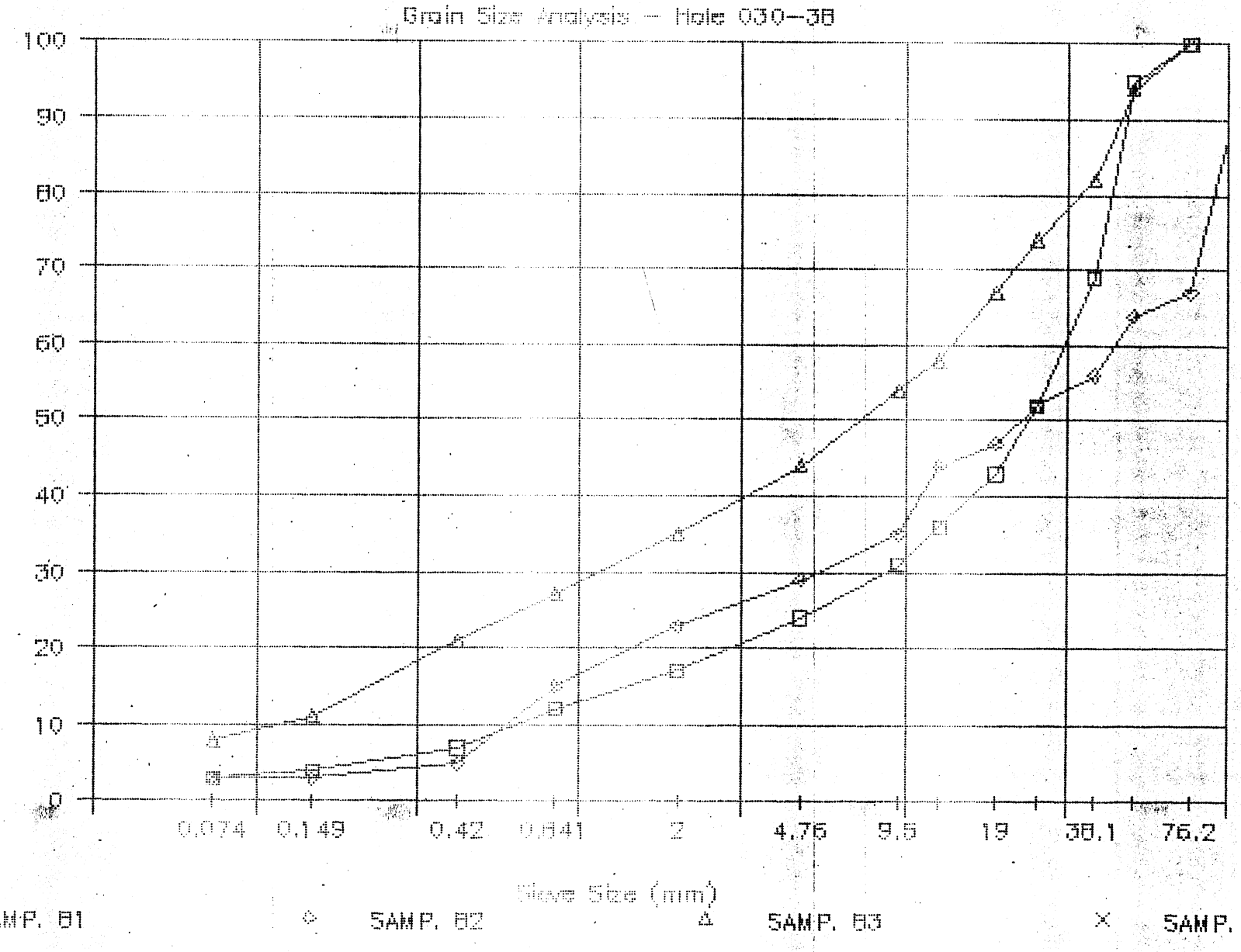
PUBLIC WORKS CANADA — WHITEHORSE, Y.T.



PROJECT NUMBER: 115-G-04 HOLE NUMBER: 030-38
CLIENT: PWC CAPITAL - Y.T.
PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
PROJECT LOCATION: A/H KM 1749.5 LHS
DRILL UNIT: CAT 225 HOE
HOLE LOCATION: SEE PLAN
LOGGED BY: CB DATE COMPLETED: 88.10.23

FIELD NO: 81		FIELD NO: 82		FIELD NO: 83	
LAB NO: 2931		LAB NO: 2932		LAB NO: 2933	
DEPTH: 1.4-1.8		DEPTH: 2.4-2.8		DEPTH: 4.4-4.8	
TYPE: BULK		TYPE: BULK		TYPE: BULK	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	89	101.6	--
76.2	100	76.2	67	76.2	100
50.8	95	50.8	64	50.8	94
38.1	69	38.1	56	38.1	82
25.4	52	25.4	52	25.4	74
19.0	43	19.0	47	19.0	67
12.7	36	12.7	44	12.7	58
9.5	31	9.5	35	9.5	54
4.76	24	4.76	29	4.76	44
2.38	--	2.38	--	2.38	--
2.00	17	2.00	23	2.00	35
1.19	--	1.19	--	1.19	--
0.841	12	0.841	15	0.841	27
0.595	--	0.595	--	0.595	--
0.42	7	0.42	5	0.42	21
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	4	0.149	3	0.149	11
0.074	3	0.074	3	0.074	8
M.C.(%):	--	M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	76	% GRAVEL:	71	% GRAVEL:	56
% SAND:	21	% SAND:	26	% SAND:	37
% FINES:	3	% FINES:	3	% FINES:	8
CLASSIFICATION: POORLY GRADED GRAVEL WITH SAND (GP)		CLASSIFICATION: WELL-GRADED GRAVEL WITH SAND (GW)		CLASSIFICATION: POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	

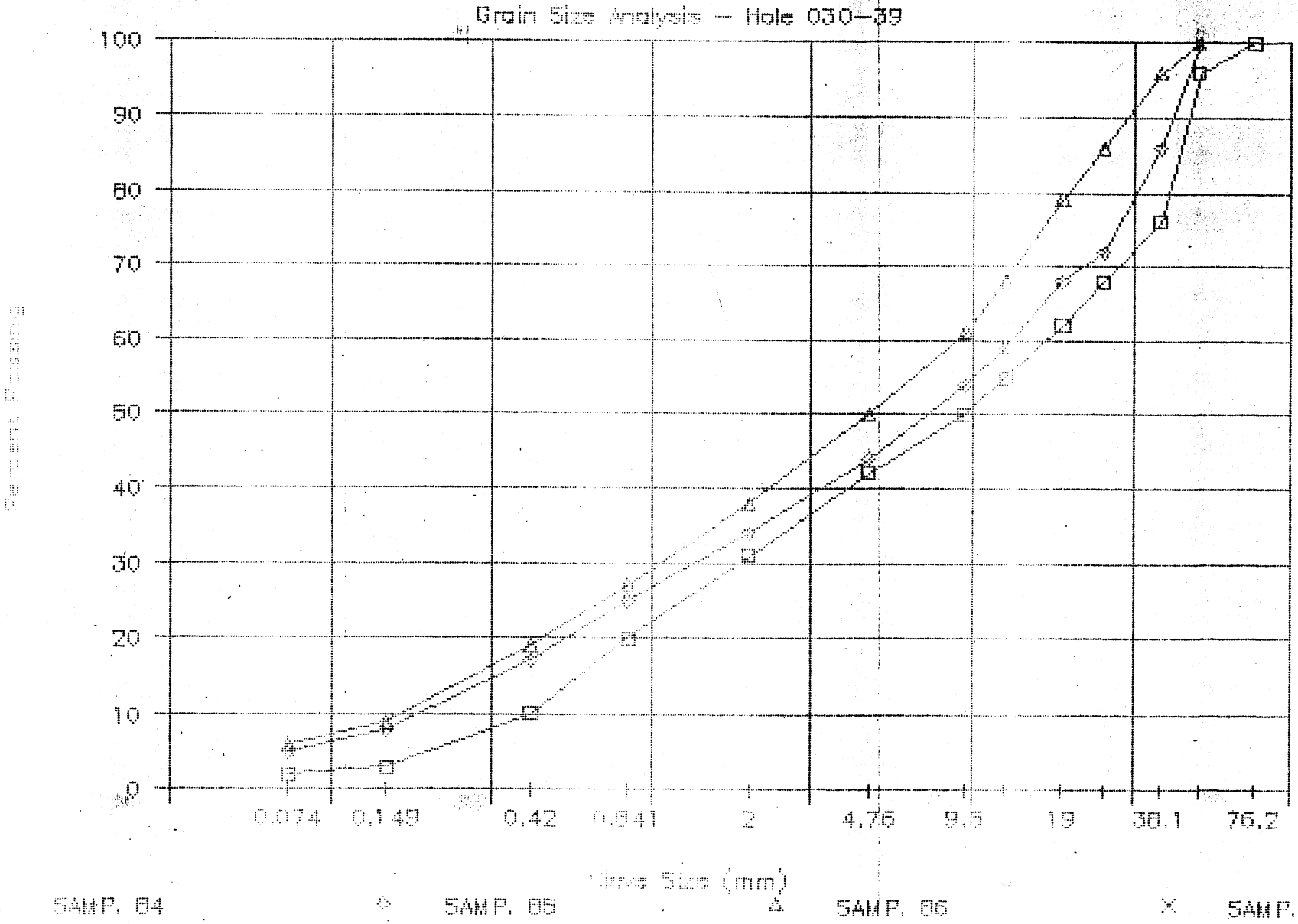
PUBLIC WORKS CANADA — WHITEHORSE, Y.T.



PROJECT NUMBER:	115-G-04	HOLE NUMBER:	030-39
CLIENT:	PWC CAPITAL - Y.T.		
PROJECT NAME:	ALASKA HIGHWAY PRE-ENGINEERING		
PROJECT LOCATION:	A/H KM 1749.5 LHS		
DRILL UNIT:	CAT 225 HOE		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	CB	DATE COMPLETED:	88.10.23

FIELD NO: 84		FIELD NO: 85		FIELD NO: 86	
LAB NO: 2934		LAB NO: 2935		LAB NO: 2936	
DEPTH: 1.6-2.0		DEPTH: 3.4-3.8		DEPTH: 4.8-5.2	
TYPE: BULK		TYPE: BULK		TYPE: BULK	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--	101.6	--
76.2	100	76.2	--	76.2	--
50.8	96	50.8	100	50.8	100
38.1	76	38.1	86	38.1	96
25.4	68	25.4	72	25.4	86
19.0	62	19.0	68	19.0	79
12.7	55	12.7	59	12.7	68
9.5	50	9.5	54	9.5	61
4.76	42	4.76	44	4.76	50
2.38	--	2.38	--	2.38	--
2.00	31	2.00	33	2.00	38
1.19	--	1.19	--	1.19	--
0.841	20	0.841	25	0.841	27
0.595	--	0.595	--	0.595	--
0.42	10	0.42	17	0.42	19
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	3	0.149	8	0.149	9
0.074	2	0.074	5	0.074	6
M.C.(%):	--	M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	58	% GRAVEL:	56	% GRAVEL:	50
% SAND:	40	% SAND:	39	% SAND:	44
% FINES:	2	% FINES:	5	% FINES:	6
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
POORLY GRADED GRAVEL WITH SAND		POORLY GRADED GRAVEL WITH SILT & SAND		POORLY GRADED GRAVEL WITH SILT & SAND	

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.



Km 1750.0 LHS Alaska Highway #1
Pit Ident. 115 G-04A
(Copper Joe Creek)

October 1988
Book # 029 and 030

Crush Sample Results

PROJECT NUMBER:	115-G-04	HOLE NUMBER:	029-01C
CLIENT:	PWC CAPITAL - Y.T.		
PROJECT NAME:	ALASKA HIGHWAY PRE-ENGINEERING		
PROJECT LOCATION:	A/H KM 1749.5 LHS		
DRILL UNIT:	CAT 225 HOE		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	DT	DATE COMPLETED:	88.10.19

FIELD NO: 1
LAB NO: 2853
DEPTH: 1.1-1.5
TYPE: BULK
CC = 82%

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	88
9.5	72
4.76	48
2.38	--
2.00	31
1.19	--
0.841	21
0.595	--
0.42	15
0.297	--
0.177	--
0.149	7
0.074	4

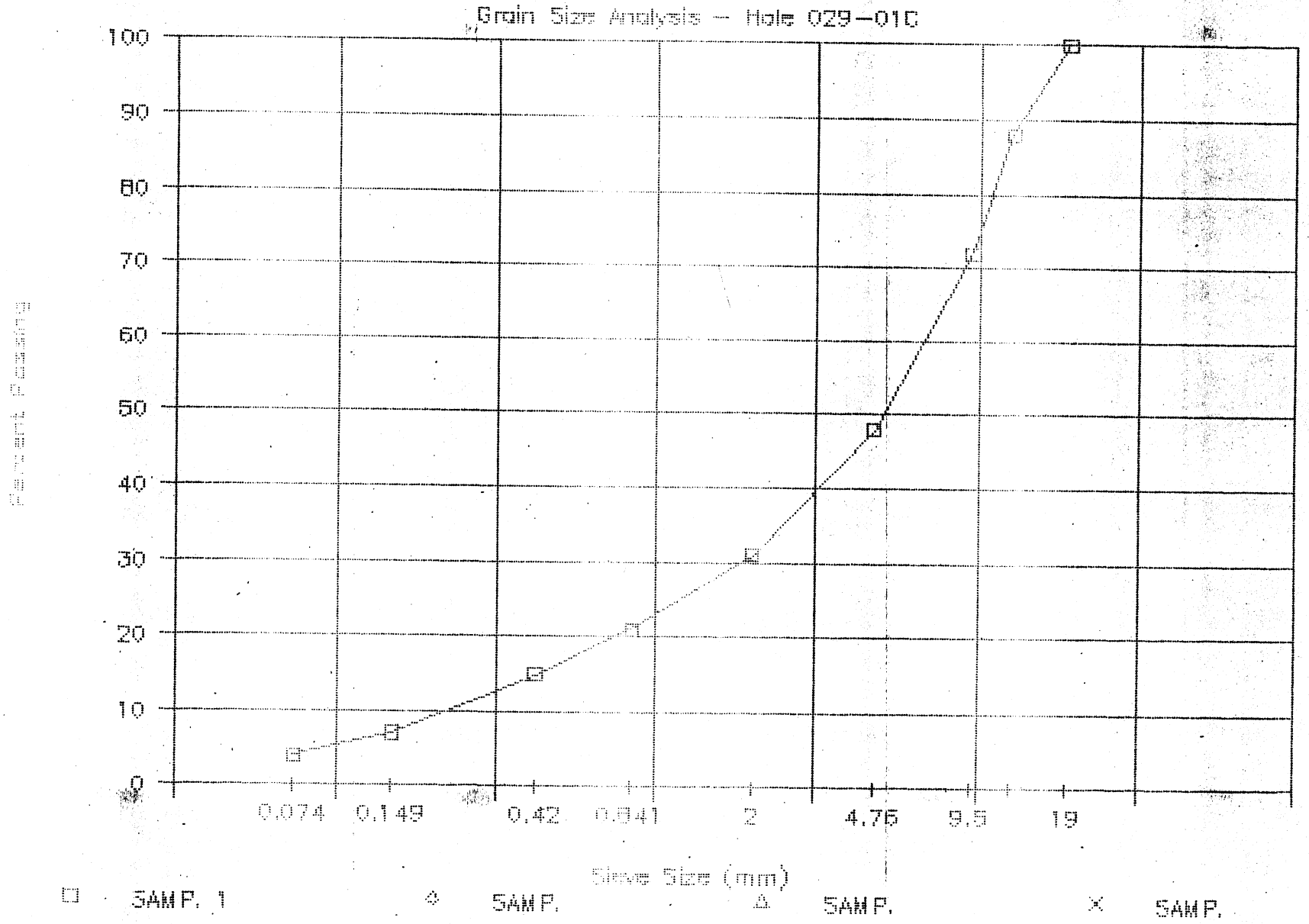
M.C.(%): --

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

% GRAVEL: 52
% SAND: 43
% FINES: 4

CLASSIFICATION:
WELL-GRADED
GRAVEL WITH SAND
(GW)

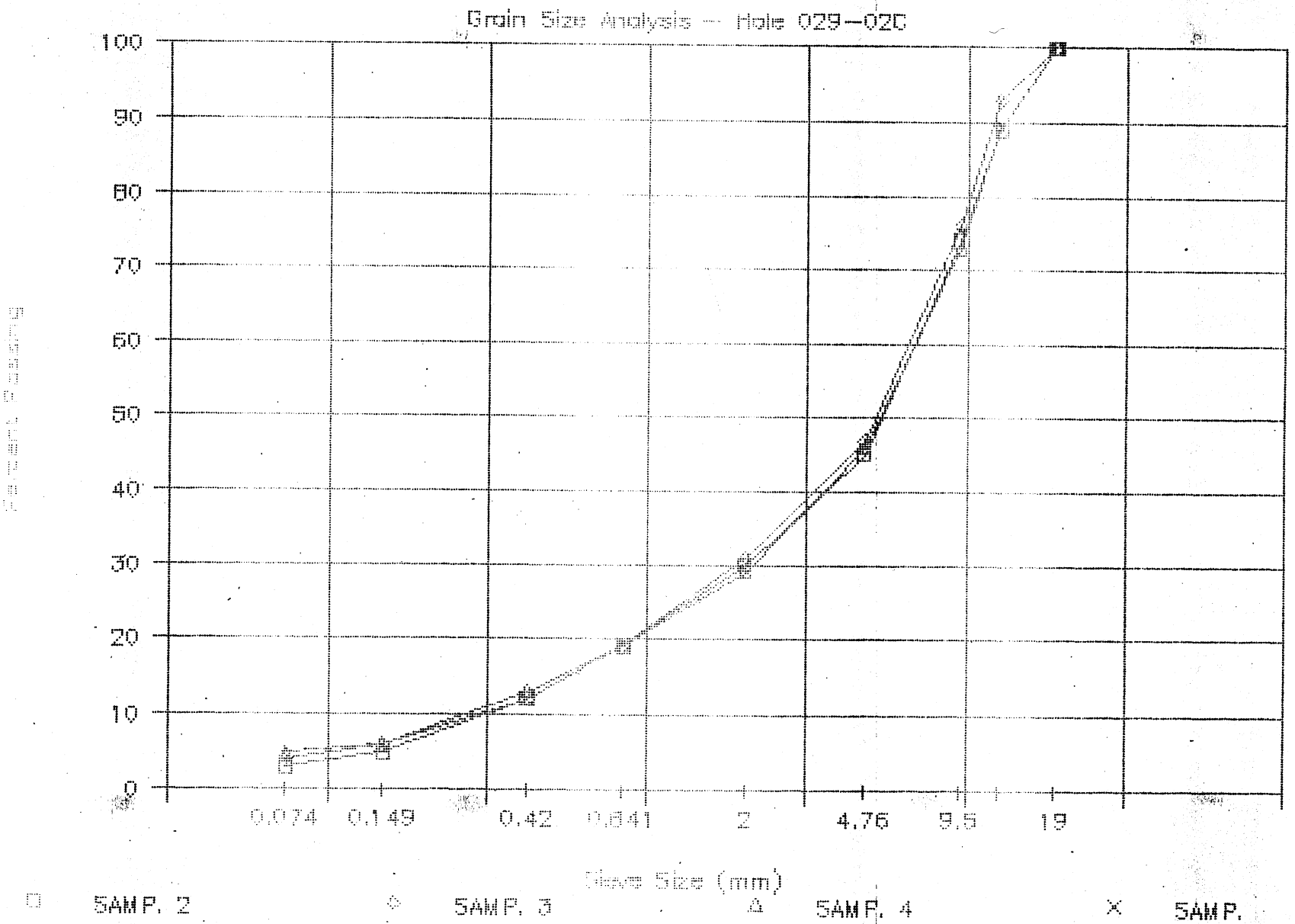
PUBLIC WORKS CANADA — WHITEHORSE, Y.T.



PROJECT NUMBER:	115-G-04	HOLE NUMBER:	029-02C
CLIENT:	PWC CAPITAL - Y.T.		
PROJECT NAME:	ALASKA HIGHWAY PRE-ENGINEERING		
PROJECT LOCATION:	A/H KM 1749.5 LHS		
DRILL UNIT:	CAT 225 HOE		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	DT	DATE COMPLETED:	88.10.19

FIELD NO: 2		FIELD NO: 3		FIELD NO: 4	
LAB NO:	2854	LAB NO:	2855	LAB NO:	2856
DEPTH:	1.2-1.9	DEPTH:	3.0-3.4	DEPTH:	5.0-5.3
TYPE:	BULK	TYPE:	BULK	TYPE:	BULK
CC = 79%		CC = 87%		CC = 97%	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--	101.6	--
76.2	--	76.2	--	76.2	--
50.8	--	50.8	--	50.8	--
38.1	--	38.1	--	38.1	--
25.4	--	25.4	--	25.4	--
19.0	100	19.0	100	19.0	100
12.7	89	12.7	93	12.7	89
9.5	74	9.5	76	9.5	73
4.76	45	4.76	47	4.76	46
2.38	--	2.38	--	2.38	--
2.00	36	2.00	31	2.00	29
1.19	--	1.19	--	1.19	--
0.841	19	0.841	19	0.841	19
0.595	--	0.595	--	0.595	--
0.42	12	0.42	12	0.42	13
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	5	0.149	6	0.149	6
0.074	3	0.074	4	0.074	5
M.C.(%):	--	M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	55	% GRAVEL:	53	% GRAVEL:	54
% SAND:	42	% SAND:	43	% SAND:	41
% FINES:	3	% FINES:	4	% FINES:	5
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
WELL-GRADED GRAVEL WITH SAND (GW)		WELL-GRADED GRAVEL WITH SAND (GW)		WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	

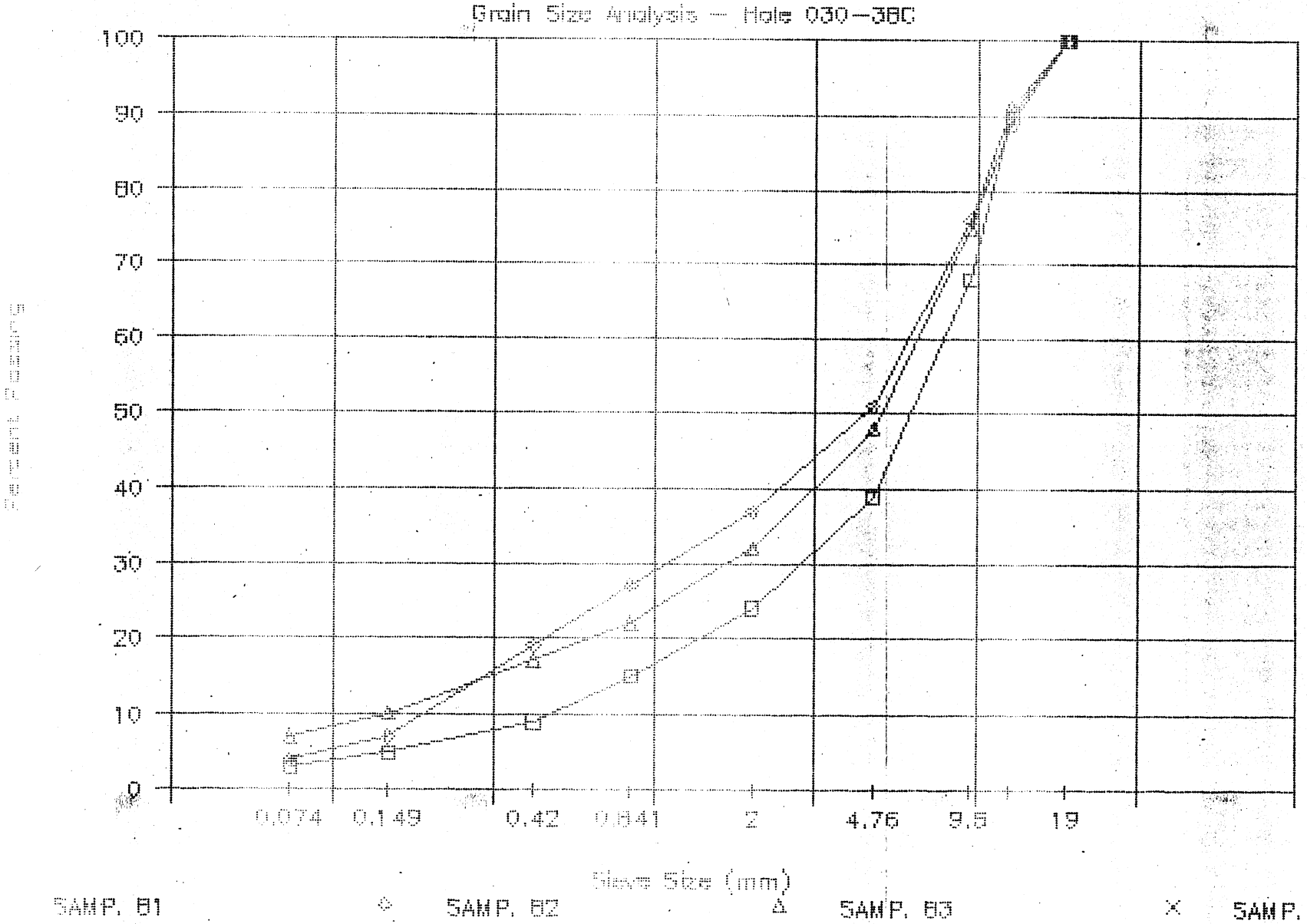
PUBLIC WORKS CANADA — WHITEHORSE, Y.T.



PROJECT NUMBER:	115-G-04	HOLE NUMBER:	030-38C
CLIENT:	PWC CAPITAL - Y.T.		
PROJECT NAME:	ALASKA HIGHWAY PRE-ENGINEERING		
PROJECT LOCATION:	A/H KM 1749.5 LHS		
DRILL UNIT:	CAT 225 HOE		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	CB	DATE COMPLETED:	88.10.23

FIELD NO: 81		FIELD NO: 82		FIELD NO: 83	
LAB NO: 2931		LAB NO: 2932		LAB NO: 2933	
DEPTH: 1.4-1.8		DEPTH: 2.4-2.8		DEPTH: 4.4-4.8	
TYPE: BULK		TYPE: BULK		TYPE: BULK	
CC = 83%		CC = 85%		CC = 80%	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--	101.6	--
76.2	--	76.2	--	76.2	--
50.8	--	50.8	--	50.8	--
38.1	--	38.1	--	38.1	--
25.4	--	25.4	--	25.4	--
19.0	100	19.0	100	19.0	100
12.7	90	12.7	91	12.7	89
9.5	69	9.5	76	9.5	75
4.76	39	4.76	51	4.76	48
2.38	--	2.38	--	2.38	--
2.00	24	2.00	37	2.00	32
1.19	--	1.19	--	1.19	--
0.841	15	0.841	27	0.841	22
0.595	--	0.595	--	0.595	--
0.42	9	0.42	19	0.42	17
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	5	0.149	7	0.149	10
0.074	3	0.074	4	0.074	7
M.C.(%):	--	M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	61	% GRAVEL:	49	% GRAVEL:	52
% SAND:	36	% SAND:	47	% SAND:	41
% FINES:	3	% FINES:	4	% FINES:	7
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
WELL-GRADED		WELL-GRADED		WELL-GRADED	
GRAVEL WITH SAND		GRAVEL WITH SAND		GRAVEL WITH SILT	
(GW)		(GW)		(GW-GM)	

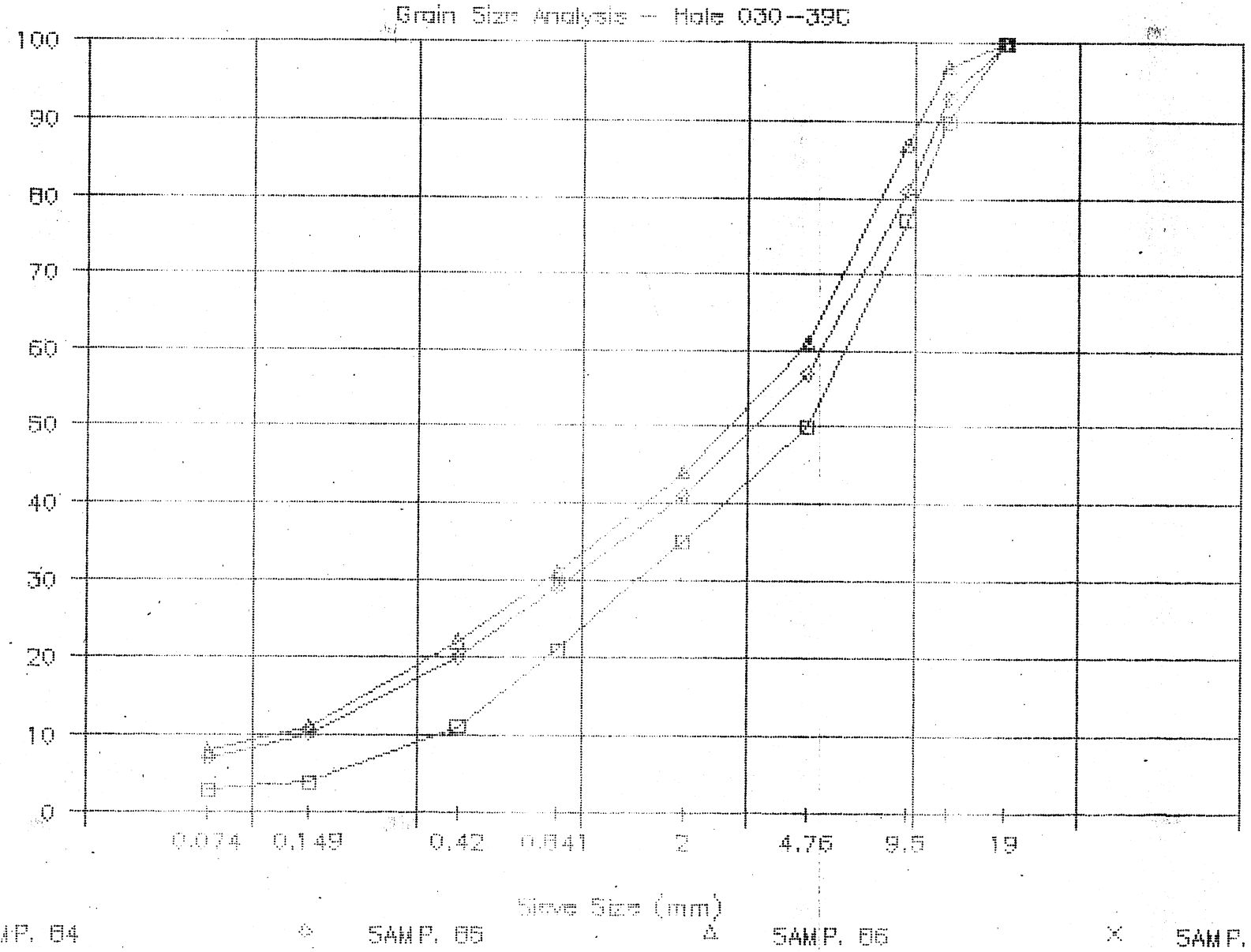
PUBLIC WORKS CANADA — WHITEHORSE, Y.T.



PROJECT NUMBER:	115-G-04	HOLE NUMBER:	030-39C
CLIENT:	PWC CAPITAL - Y.T.		
PROJECT NAME:	ALASKA HIGHWAY PRE-ENGINEERING		
PROJECT LOCATION:	A/H KM 1749.5 LHS		
DRILL UNIT:	CAT 225 HOE		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	CB	DATE COMPLETED:	88.10.23

FIELD NO: 84		FIELD NO: 85		FIELD NO: 86	
LAB NO: 2934		LAB NO: 2935		LAB NO: 2936	
DEPTH: 1.6-2.0		DEPTH: 3.4-3.8		DEPTH: 4.8-5.2	
TYPE: BULK		TYPE: BULK		TYPE: BULK	
CC = 79%		CC = 70%		CC = 60%	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	--	101.6	--	101.6	--
76.2	--	76.2	--	76.2	--
50.8	--	50.8	--	50.8	--
38.1	--	38.1	--	38.1	--
25.4	--	25.4	--	25.4	--
19.0	100	19.0	100	19.0	100
12.7	90	12.7	93	12.7	97
9.5	77	9.5	81	9.5	87
4.76	50	4.76	57	4.76	61
2.38	--	2.38	--	2.38	--
2.00	33	2.00	41	2.00	44
1.19	--	1.19	--	1.19	--
0.841	21	0.841	29	0.841	31
0.595	--	0.595	--	0.595	--
0.42	11	0.42	20	0.42	22
0.297	--	0.297	--	0.297	--
0.177	--	0.177	--	0.177	--
0.149	4	0.149	10	0.149	11
0.074	3	0.074	7	0.074	8
M.C.(%):	--	M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	50	% GRAVEL:	43	% GRAVEL:	39
% SAND:	48	% SAND:	50	% SAND:	54
% FINES:	3	% FINES:	7	% FINES:	8
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
POORLY GRADED GRAVEL WITH SAND (GP)		WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)		WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.



Km 1750.0 LHS Alaska Highway #1
Pit Ident. 115 G-04A
(Copper Joe Creek)

February 2002
Book # 631

Test Pit Logs

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-05
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 /SANDY SILT							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -grey/brown -dry -medium dense -cobbles to 150mm (50-75% gravels)		16		GP			
1.0								1.0
2.0	SILTY SAND WITH GRAVEL (SM) -with organic -dark brown -damp -firm		17		SM			2.0
3.0	POORLY GRADED GRAVEL WITH SAND TO WELL-GRADED SAND WITH SILT & GRAVEL (GP)-(SW-SM) -dark brown -damp -loose -cobbles to 150mm (40-60% gravels)		18		GP			3.0
4.0			19		SW-SM			4.0
	END HOLE @ 4.4m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.4 m
	REVIEWED BY:	COMPLETE: 02/02/11
	Fig. No: 115-G-04A	Page 1 of 1

02/03/08 09:09AM

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-06
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 /SANDY SILT							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -grey/brown -dry -medium dense -cobbles to 150mm (50-75% gravels)		20		GP			
1.0								1.0
2.0	ORGANIC & SILT (ML) -dark brown -damp -firm		21		ML			2.0
3.0	SILTY SAND (SM) -dark brown -damp -loose -trace organics		22		SM			3.0
4.0	POORLY GRADED GRAVEL WITH SAND (GP) -dark brown -damp to moist -gravel to 50mm (40-70% gravels)		23		GP			4.0
	END HOLE @ 4.4m							
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: JRP	COMPLETION DEPTH: 4.4 m
REVIEWED BY:	COMPLETE: 02/02/12
Fig. No: 115-G-04A	Page 1 of 1

02/03/11 01:30PM

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-10
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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/SANDY SILT							0.0
	WELL TO POORLY GRADED GRAVEL WITH SAND (GW)-(GP) -grey/brown -dry -medium dense -cobbles to 200mm (50-75% gravels)							
1.0			36		GW			1.0
2.0			37		GP			2.0
	-dark brown below 2.8m -damp to moist -loose -cobbles to 150mm (40-70% gravels)							
3.0			38		GW			3.0
4.0	ORGANIC & SILT WITH SAND (ML) -dark brown, damp, firm -roots & wood encountered		39		ML			4.0
	SANDY GRAVEL -dark brown, damp,loose							
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 02/02/12
	Fig. No: 115-G-04A	Page ' of '

02/03/11 01:30PM

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-11
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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/SANDY SILT							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -grey/brown -dry -medium dense -cobbles to 150mm (50-75% gravels) -wood encountered @ 1.0m		40	▲	GP		◆ ■	
1.0								1.0
2.0	-dark brown below 2.2m -damp to moist below 2.2m -gravel to 60mm below 2.2m (40-75% gravel)		41	▲	GP		◆ ■	2.0
3.0	ORGANIC & SILT WITH SAND (ML) -dark brown, damp, firm		42	● ▲	ML		◆ ■	3.0
	SILTY SAND (SM) -dark brown -damp -loose		43	● ▲	SM		◆ ■	
4.0								4.0
	END HOLE @ 4.4m							
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: JRP	COMPLETION DEPTH: 4.4 m
REVIEWED BY:	COMPLETE: 02/02/12
File No: 115-G-04A	Page 1 of 1

10/02/11 01:30PM

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-15
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	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	SILTY SAND/SANDY SILT				
	POORLY GRADED GRAVEL WITH SAND (GP) -grey brown -dry -medium dense -cobbles to 150mm (50-70 gravels) -wood encountered @ 1.0m				
1.0	-lost sample # 56		56		
2.0	-dark brown below 1.9m -moist -loose -cobbles to 150mm (40-70% gravels)		57	GP	
3.0			58	GP	
4.0			59	GP	
	END HOLE @ 4.4m				
5.0					
6.0					

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

DEPTH (m)

Government of Yukon
Transportation Engineering

LOGGED BY: JRP	COMPLETION DEPTH: 4.4 m
REVIEWED BY:	COMPLETE: 02/02/15
Fig. No: 115-G-04A	Page 1 of 1

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-16
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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/SANDY SILT							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -grey/brown -dry -medium dense -cobbles to 150mm (50-75% gravels) -wood encountered to 1.0m		60		GP			
1.0								1.0
2.0	ORGANIC SILT & SAND (ML) -dark brown,damp,firm		61		ML			2.0
	POORLY GRADED GRAVEL WITH SAND (GP) -dark brown -damp -loose -60mm max size (40-60% gravels)		62		GP			
3.0	SILT (ML) -dark brown -damp -firm		63		ML			3.0
4.0	WELL-GRADED SAND WITH GRAVEL (SW) -dark brown -damp -loose -60mm max size (40-60% gravels)		64		SW			4.0
	END HOLE @ 4.6m							
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: JRP	COMPLETION DEPTH: 4.6 m
REVIEWED BY:	COMPLETE: 02/02/13
Fig. No: 115-G-04A	Page 1 of 1

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-20
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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/SANDY SILT							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -trace of silt in seams 150mm thick -grey/brown -dry -medium dense -cobbles to 150mm (50-75% gravels) -some wood in top 1.0m		77	▲	GP		◆ ■	
1.0								1.0
2.0			78	▲	GP		◆ ■	2.0
	ORGANIC SILTS & SAND -dark brown -damp -firm							
3.0								3.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -dark brown -damp to moist -cobbles to 100mm (30-70% gravels)		79	● ▲	GP-GM		◆ ■	
4.0								4.0
			80	● ▲	GP-GM		◆ ■	
	END HOLE @ 4.6m							
5.0								5.0
6.0								6.0

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LOGGED BY: JRP	COMPLETION DEPTH: 4.6 m
REVIEWED BY:	COMPLETE: 02/02/13
File No: 115-G-04A	Page 1 of 1

02/03/11 01:31PM

SUBSURFACE EXPORATION & TESTING REPORT	LEWIS CREEK GRANULAR INVESTIGATION	TEST PIT NO: 631-21
ENGINEERING CAPITAL	PIT 115-G-04A	Project No: 092-202101-361
KOEHRING 6625 HOE	LOCATION:KM 1749.5 A/H LHS SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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/SANY SILT							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -grey/brown -dry -medium dense -cobbles to 200mm (50-75% gravel)							
1.0			81		GP			1.0
2.0			82		GP			2.0
	ORGANIC SILTS & SAND -dark brown,damp,firm -wood encountered							
3.0	POORLY GRADED GRAVEL WITH SAND (GP) -dark brown -damp -loose -cobbles to 200mm (50-75% gravels)		83		GP			3.0
4.0			84		GP			4.0
	END HOLE @ 4.2m							
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: JRP	COMPLETION DEPTH: 4.2 m
REVIEWED BY:	COMPLETE: 02/02/13
Fig. No: 115-G-04A	Page 1 of 1

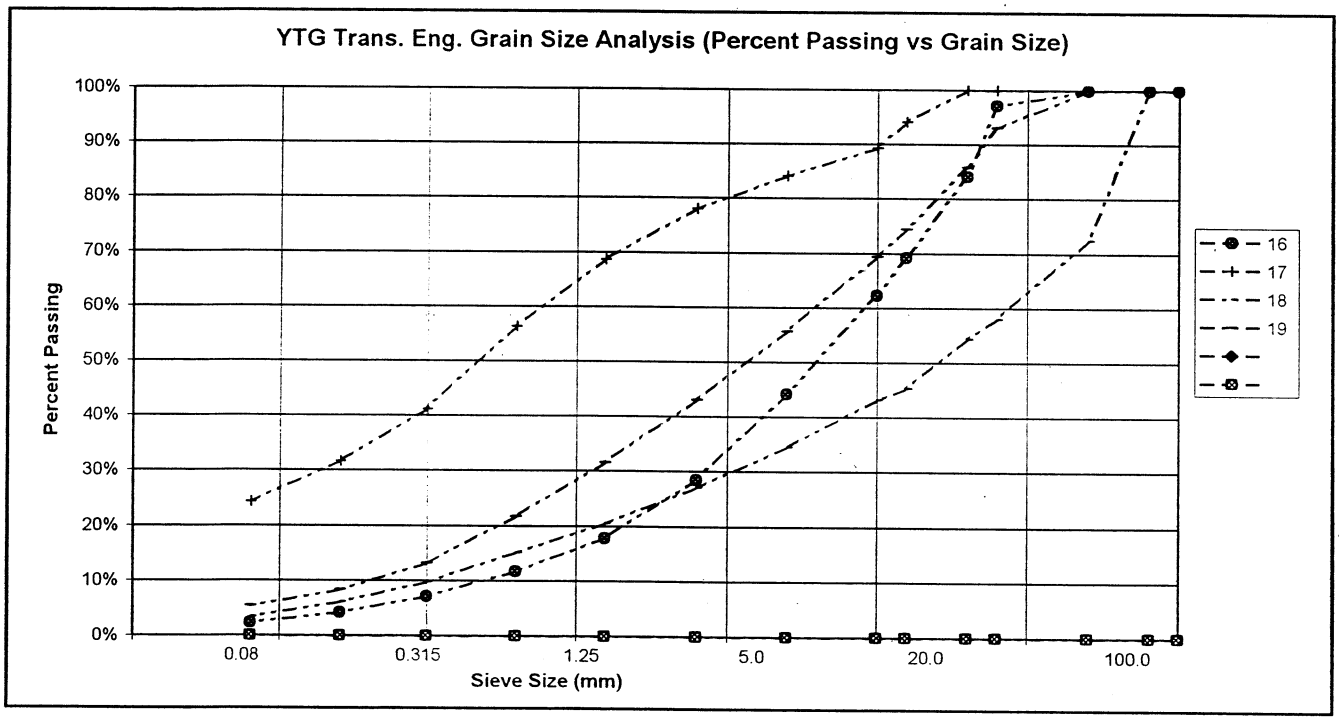
Km 1750.0 LHS Alaska Highway #1
Pit Ident. 115 G-04A
(Copper Joe Creek)

February 2002
Book # 631

Pit Run Sample Results

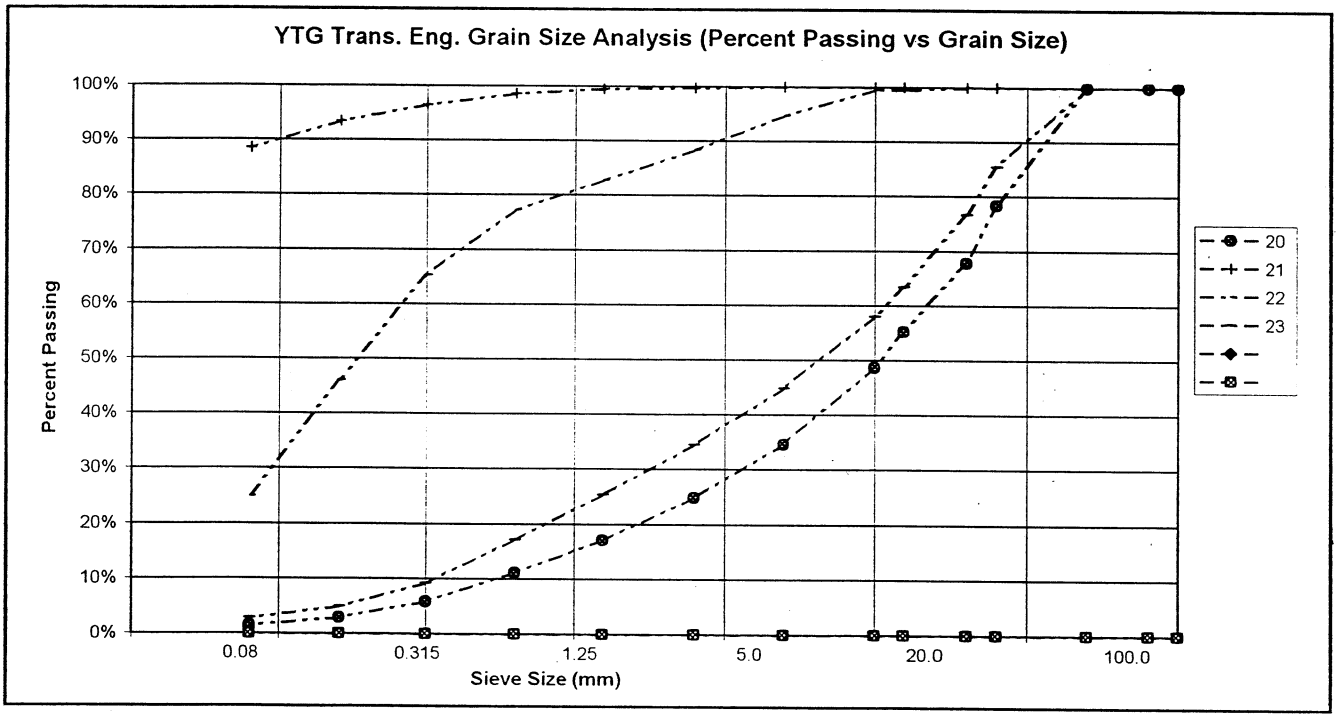
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 631-05
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	Granular Investigation Lewis Creek		
PROJECT LOCATION:	Km 1747.5 RHS A/H		
DRILL UNIT:	Koehring 6625 BackHoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JR Paine (R.W.)		DATE COMP: 2002/02/02

FIELD NO:	16	17	18	19		
LAB NO:	16	17	18	19		
DEPTH:	1.2-1.5	2.1-2.4	3.0-3.4	4.0-4.4		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	72%	100%		
25.0	97%	100%	58%	93%		
20.0	84%	100%	54%	86%		
12.5	69%	94%	45%	74%		
10.0	62%	89%	43%	69%		
5.0	44%	84%	34%	56%		
2.5	28%	78%	27%	43%		
1.25	18%	69%	21%	32%		
0.630	12%	56%	15%	22%		
0.315	7%	41%	10%	13%		
0.160	4%	32%	6%	8%		
0.080	2%	24%	3%	5%		
M.C.(%):	2%	63%	3%	4%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	56	16	66	44		
% SAND:	42	60	31	50		
% FINES:	2	24	3	5		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)		



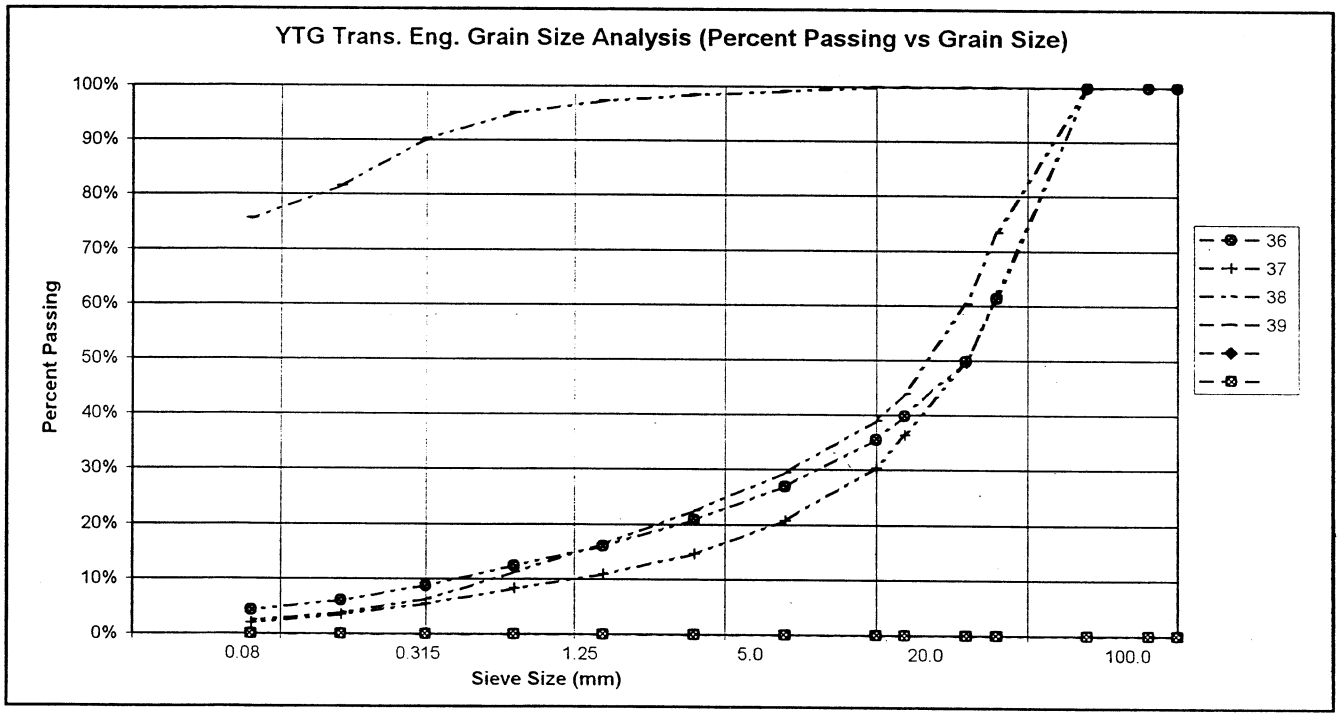
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 631-06
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	Granular Investigation Lewis Creek		
PROJECT LOCATION:	Km 1747.5 RHS A/H		
DRILL UNIT:	Koehring 6625 BackHoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JR Paine (R.W.)		DATE COMP: 2002/02/02

FIELD NO:	20	21	22	23		
LAB NO:	20	21	22	23		
DEPTH:	1.2-1.5	2.1-2.5	2.5-3.5	4.0-4.4		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	78%	100%	100%	85%		
20.0	68%	100%	100%	77%		
12.5	55%	100%	100%	63%		
10.0	49%	100%	100%	58%		
5.0	35%	100%	95%	45%		
2.5	25%	100%	88%	34%		
1.25	17%	99%	83%	25%		
0.630	11%	99%	77%	17%		
0.315	6%	97%	65%	9%		
0.160	3%	93%	46%	5%		
0.080	1%	88%	25%	3%		
M.C.(%):	2%	42%	15%	2%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	65	0	5	55		
% SAND:	33	12	70	42		
% FINES:	1	88	25	3		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILT (ML)	SILTY SAND (SM)	POORLY GRADED GRAVEL WITH SAND (GP)		



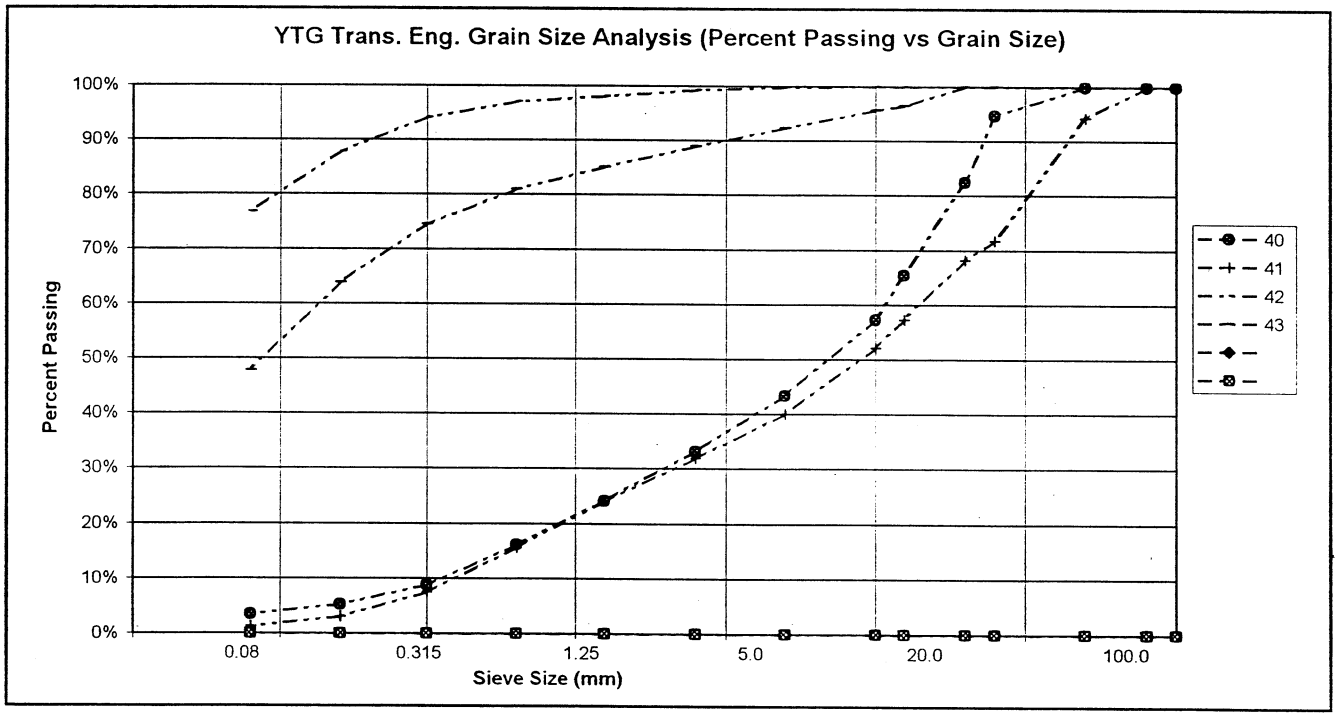
PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 631-10
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	Granular Investigation Lewis Creek		
PROJECT LOCATION:	Km 1747.5 RHS A/H		
DRILL UNIT:	Koehring 6625 BackHoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JR Paine (R.W.)		DATE COMP: 2002/02/02

FIELD NO:	36	37	38	39		
LAB NO:	36	37	38	39		
DEPTH:	1.2-1.5	2.0-2.4	3.0-3.4	4.0-4.2		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	61%	62%	73%	100%		
20.0	50%	50%	60%	100%		
12.5	40%	36%	44%	100%		
10.0	36%	30%	39%	100%		
5.0	27%	21%	29%	99%		
2.5	21%	15%	22%	99%		
1.25	16%	11%	16%	97%		
0.630	12%	8%	11%	95%		
0.315	9%	6%	6%	90%		
0.160	6%	4%	4%	82%		
0.080	4%	2%	2%	76%		
M.C.(%):	3%	2%	2%	58%		
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:	73	79	71	1		
% SAND:	23	19	27	24		
% FINES:	4	2	2	76		
CLASSIFICATION	WELL-GRADED GRAVEL WITH SAND (GW)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED GRAVEL WITH SAND (GW)	SILT WITH SAND (ML)		



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 631-11
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	Granular Investigation Lewis Creek		
PROJECT LOCATION:	Km 1747.5 RHS A/H		
DRILL UNIT:	Koehring 6625 BackHoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JR Paine (R.W.)		DATE COMP: 2002/02/02

FIELD NO:	40	41	42	43		
LAB NO:	40	41	42	43		
DEPTH:	1.2-1.5	2.3-2.6	3.0-3.3	4.0-4.4		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	94%	100%	100%		
25.0	95%	72%	100%	100%		
20.0	83%	68%	100%	100%		
12.5	65%	57%	100%	96%		
10.0	57%	52%	100%	96%		
5.0	43%	40%	100%	92%		
2.5	33%	32%	99%	89%		
1.25	24%	24%	98%	85%		
0.630	16%	16%	97%	81%		
0.315	9%	8%	94%	75%		
0.160	5%	3%	88%	64%		
0.080	3%	1%	77%	48%		
M.C.(%):	2%	2%	33%	21%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	57	60	0	8		
% SAND:	40	39	23	45		
% FINES:	3	1	77	48		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	SILT WITH SAND (ML)	SILTY SAND (SM)		

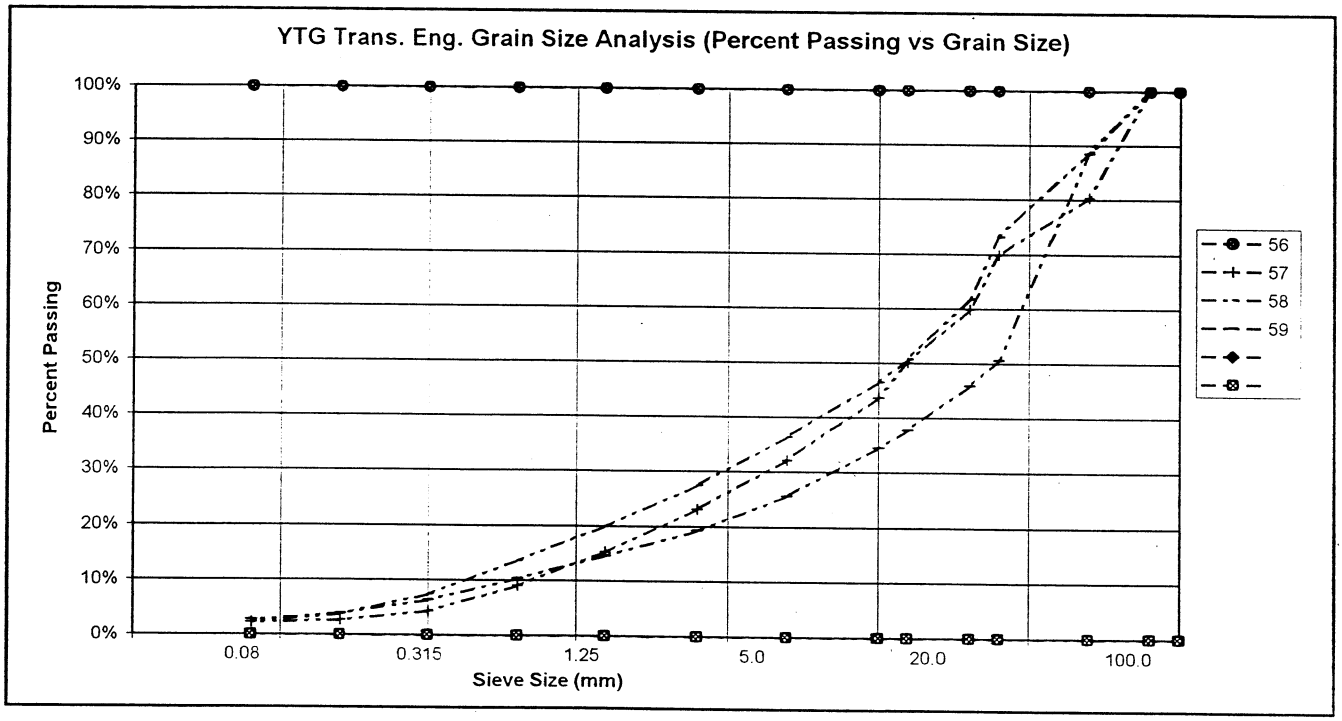


PROJECT NUMBER: 092-202101-0361-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: Granular Investigation Lewis Creek
PROJECT LOCATION: Km 1747.5 RHS A/H
DRILL UNIT: Koehring 6625 BackHoe
HOLE LOCATION: See Plan
LOGGED BY: JR Paine (R.W.)

HOLE No.: 631-15

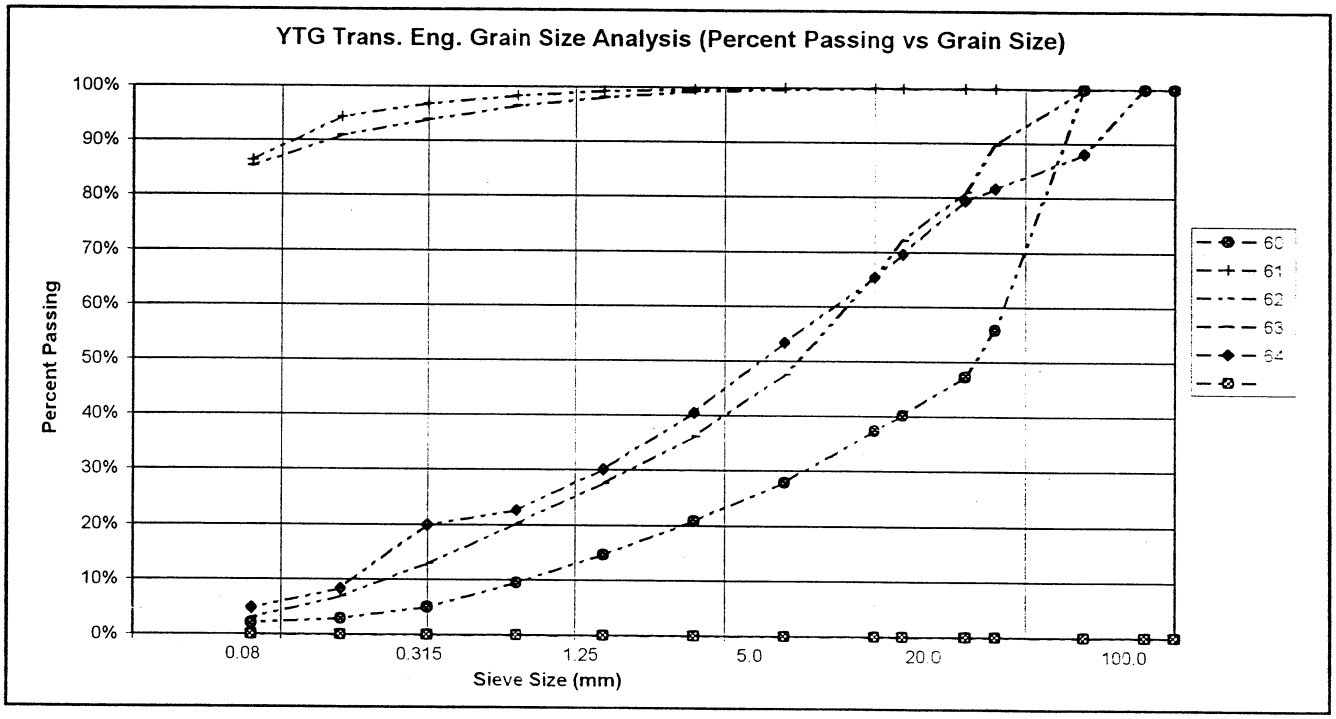
DATE COMP: 2002/02/02

FIELD NO:	56	57	58	59		
LAB NO:	Lost	57	58	59		
DEPTH:	1.2-1.5	2.2-2.5	3.2-3.5	4.1-4.4		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	80%	89%	89%		
25.0	100%	70%	73%	51%		
20.0	100%	60%	62%	46%		
12.5	100%	50%	51%	38%		
10.0	100%	44%	46%	35%		
5.0	100%	32%	36%	26%		
2.5	100%	23%	27%	19%		
1.25	100%	15%	20%	15%		
0.630	100%	9%	14%	10%		
0.315	100%	4%	7%	6%		
0.160	100%	3%	4%	4%		
0.080	100%	2%	2%	3%		
M.C.(%):	2%	2%	4%	1%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	68	64	74		
% SAND:	0	30	34	23		
% FINES:	[illegible]	2	2	3		
CLASSIFICATION	[illegible]	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		



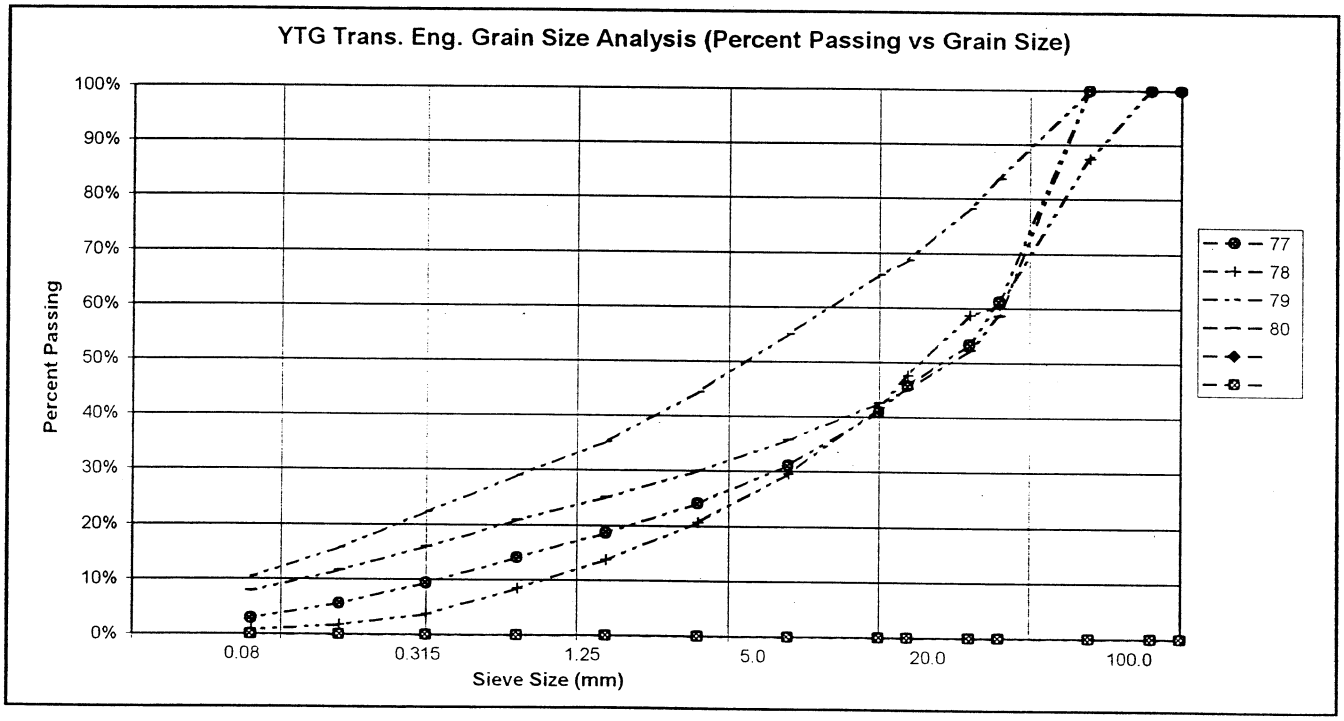
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CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	Granular Investigation Lewis Creek		
PROJECT LOCATION:	Km 1747.5 RHS A/H		
DRILL UNIT:	Koehring 6625 BackHoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JR Paine (R.W.)		DATE COMP: 2002/02/02

FIELD NO:	60	61	62	63	64	
LAB NO:	60	61	62	63	64	
DEPTH:	1.0-1.3	1.9-2.2	2.2-2.5	3.2-3.5	4.2-4.6	
TYPE:	BULK	BULK	BULK	BULK	BULK	#N/A
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	
100.0	100%	100%	100%	100%	100%	
80.0	100%	100%	100%	100%	100%	
50.0	100%	100%	100%	100%	88%	
25.0	56%	100%	90%	100%	82%	
20.0	47%	100%	81%	100%	79%	
12.5	40%	100%	72%	100%	70%	
10.0	37%	100%	65%	100%	65%	
5.0	28%	100%	48%	100%	53%	
2.5	21%	100%	36%	99%	40%	
1.25	15%	99%	28%	98%	30%	
0.630	10%	98%	20%	96%	23%	
0.315	5%	97%	13%	94%	20%	
0.160	3%	94%	7%	91%	8%	
0.080	2%	86%	3%	85%	5%	
M.C.(%):	2%	40%	2%	36%	3%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX.:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	72	0	52	0	47	
% SAND:	26	14	45	14	49	
% FINES:	2	86	3	85	5	
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILT (ML)	POORLY GRADED GRAVEL WITH SAND (GP)	SILT (ML)	WELL-GRADED SAND WITH GRAVEL (SW)	



PROJECT NUMBER:	092-202101-0361-1		HOLE No.: 631-20
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	Granular Investigation Lewis Creek		
PROJECT LOCATION:	Km 1747.5 RHS A/H		
DRILL UNIT:	Koehring 6625 BackHoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JR Paine (R.W.)		DATE COMP: 2002/02/02

FIELD NO:	77	78	79	80		
LAB NO:	77	78	79	80		
DEPTH:	1.1-1.4	2.1-2.4	3.2-3.6	4.2-4.6		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	87%	100%	100%		
25.0	61%	61%	84%	59%		
20.0	53%	59%	78%	52%		
12.5	46%	48%	69%	45%		
10.0	41%	42%	66%	43%		
5.0	31%	30%	55%	36%		
2.5	24%	21%	44%	30%		
1.25	19%	14%	35%	25%		
0.630	14%	8%	29%	21%		
0.315	9%	4%	22%	16%		
0.160	6%	2%	16%	12%		
0.080	3%	1%	10%	8%		
M.C.(%):	2%	2%	6%	5%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	69	70	45	64		
% SAND:	28	29	45	28		
% FINES:	3	1	10	8		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

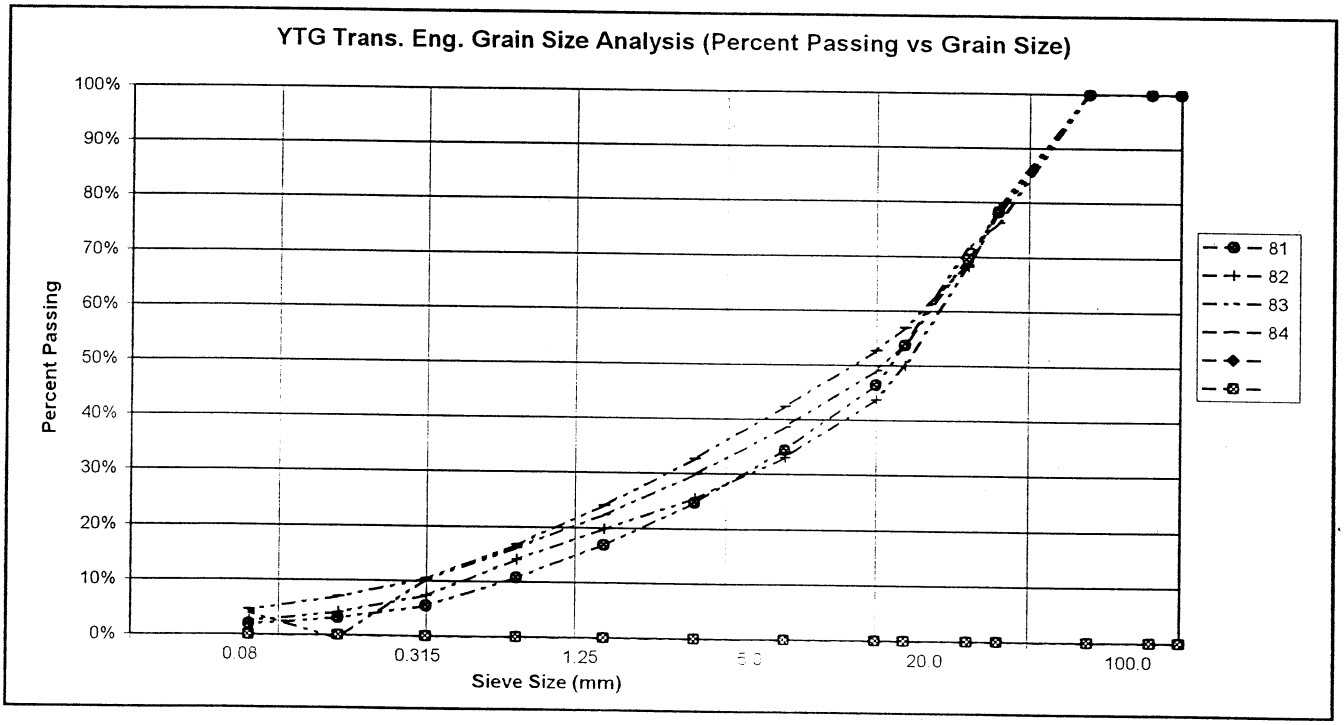


PROJECT NUMBER:	092-202101-0361-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	Granular Investigation Lewis Creek
PROJECT LOCATION:	Km 1747.5 RHS A/H
DRILL UNIT:	Koehring 6625 BackHoe
HOLE LOCATION:	See Plan
LOGGED BY:	JR Paine (R.W.)

HOLE No.: 631-21

DATE COMP: 2002/02/02

FIELD NO:	81	82	83	84		
LAB NO:	81	82	83	84		
DEPTH:	1.0-1.3	1.8-2.1	3.3-3.6	4.0-4.2		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	78%	79%	76%	78%		
20.0	70%	68%	72%	68%		
12.5	54%	50%	54%	57%		
10.0	47%	44%	49%	53%		
5.0	34%	33%	39%	42%		
2.5	25%	26%	30%	33%		
1.25	17%	20%	22%	24%		
0.630	11%	14%	16%	17%		
0.315	5%	7%	10%	10%		
0.160	3%	4%	-1%	7%		
0.080	2%	3%	4%	5%		
M.C.(%):	2%	2%	3%	4%		
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:	66	67	61	58		
% SAND:	32	30	34	38		
% FINES:	2	3	4	5		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP	POORLY GRADED GRAVEL WITH SAND (GP)		



GRANULAR SOURCE TESTING
km 1753.0 LHS
(Copper Joe Creek)
ALASKA HIGHWAY

HISTORY OF AGGREGATE PRODUCTION

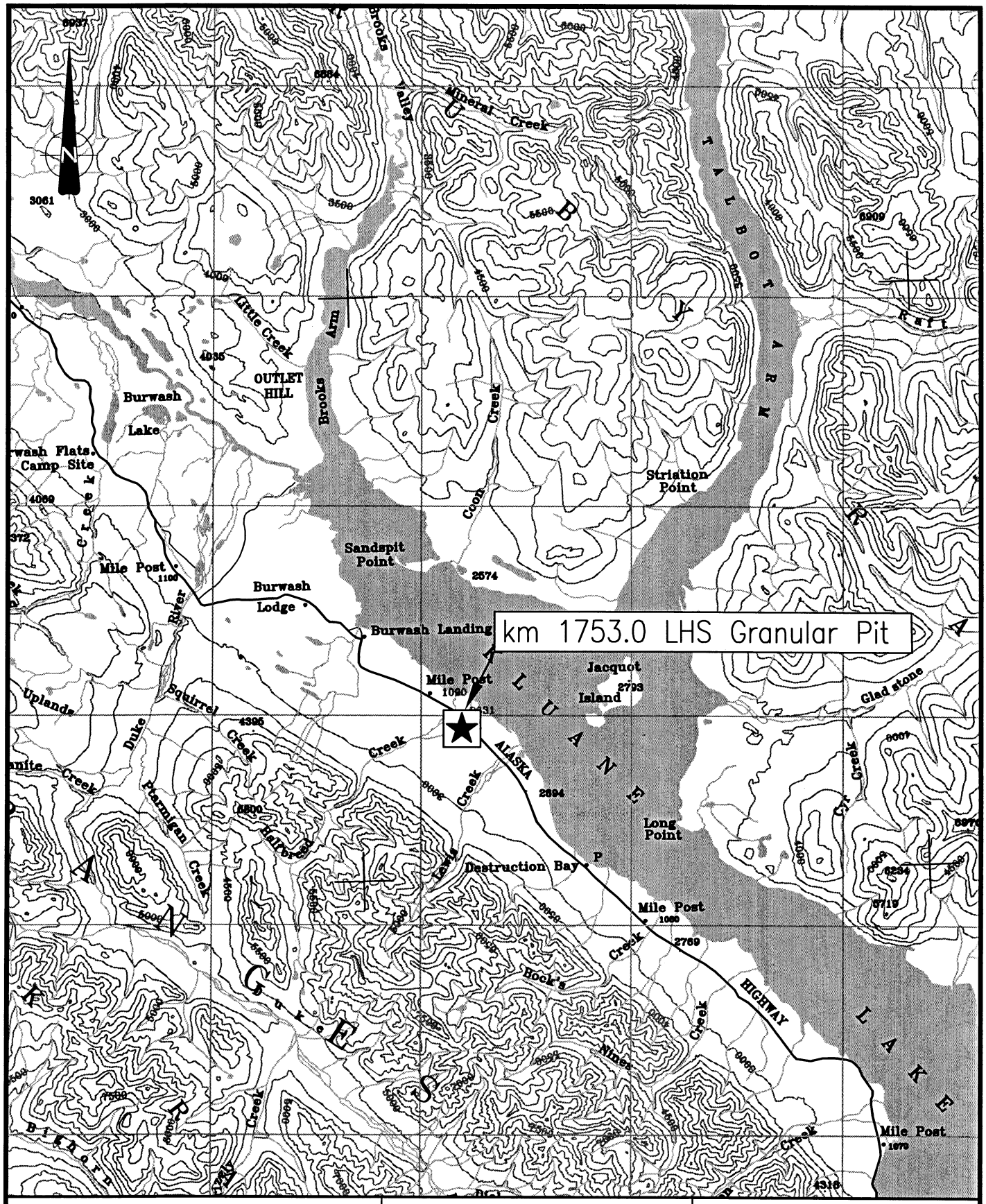
Alaska Highway Km 1753.0 LHS
Pit ID 115 G-20 (Copper Joe Creek)

Average Crusher Run Characteristics of Material Produced

File Number --- 4100-60-55 Contractor --- Summit Aggregates Inc.
Stockpile ID --- 2003-21 Commenced --- 03-11-07 Completed --- 03-11-10
Type of aggregate --- Granular "A" Base Course
Amount Produced --- 8,916 m^3 No. of tests --- 20

Sieve Size mm	20.0	12.5	10.0	5.00	2.50	1.25	0.315	0.080
Percent Passing	100	89.6	--	59.6	--	32.9	15.0	5.6

Moisture Content - 3.8 % Standard Proctor
Fracture - 61.6 % 2220 Kg/m^3 @ 8.2 % moisture

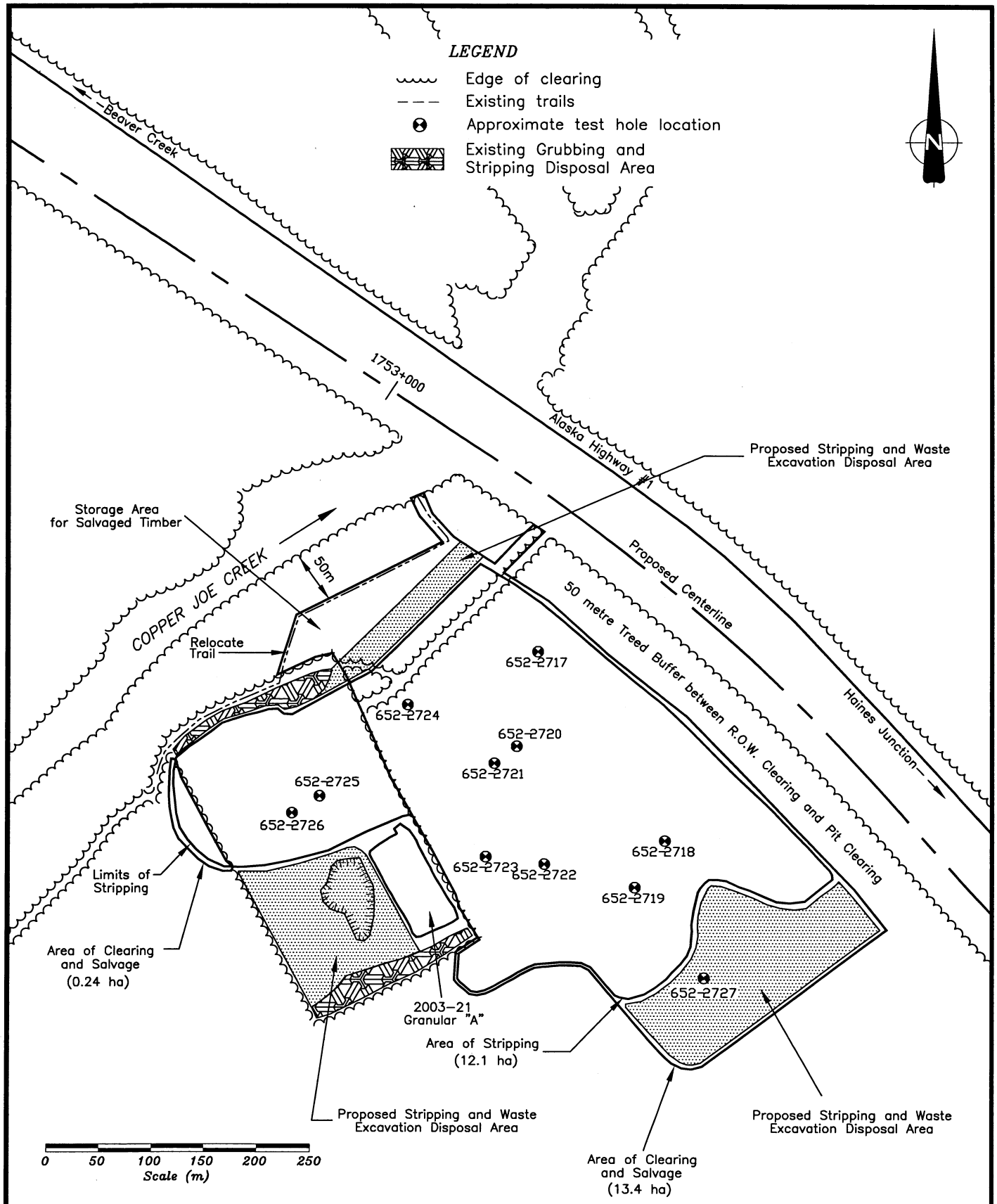


Yukon
Highways and Public Works

Transportation Engineering Branch

KEY PLAN
GRANULAR PIT
RESERVE
km 1753.0 L.H.S.
(Copper Joe Creek)
ALASKA HWY. YUKON

pit file:	115-G-20
quad:	115G/07
drawn:	S. Fraser
date:	2003-09-19
scale:	1: 250,000
drwg:	115g-20K

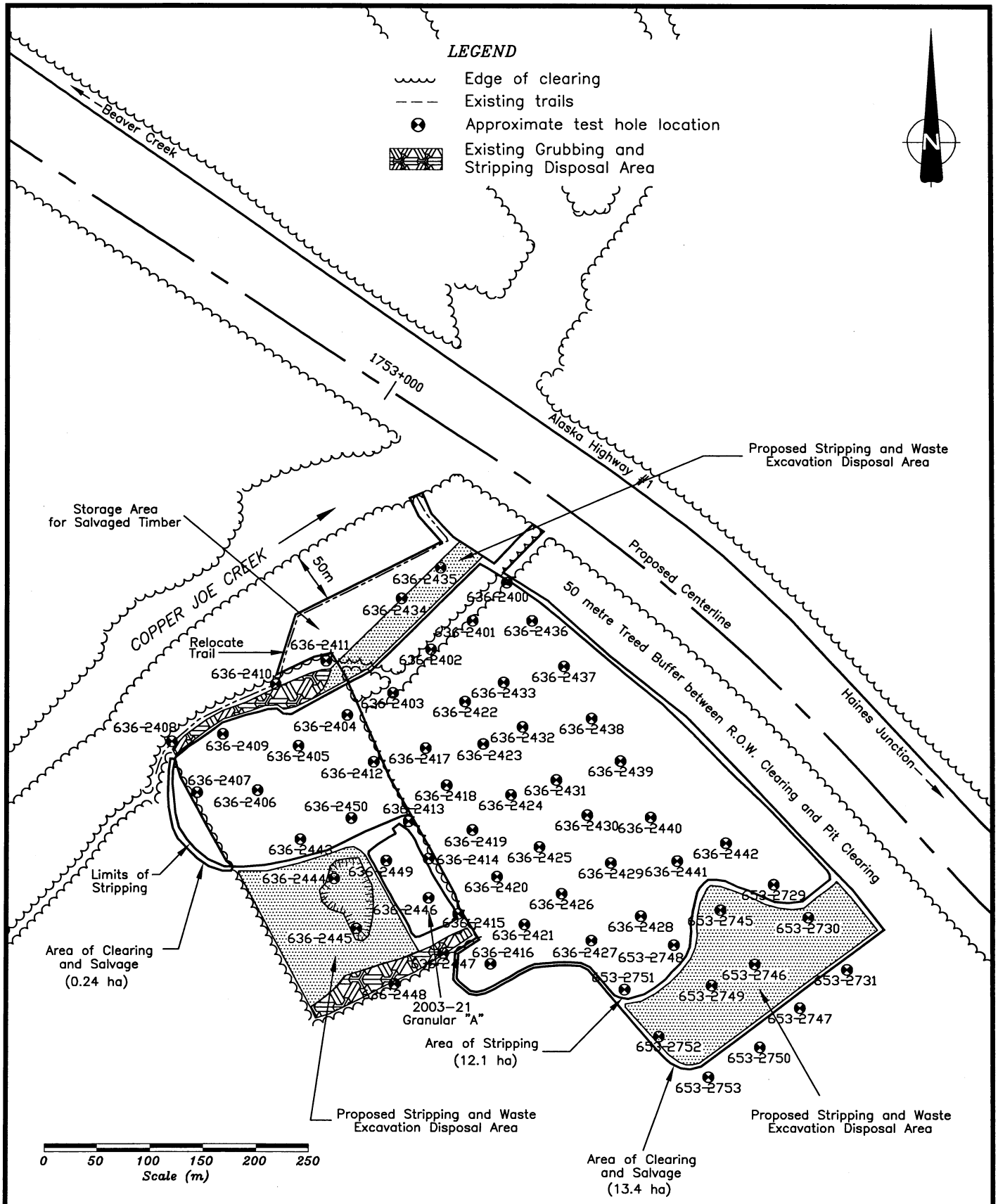


Yukon
Highways and Public Works

Transportation Engineering Branch

SITE PLAN
GRANULAR PIT
km 1753.0 L.H.S.
(Copper Joe Creek)
ALASKA HWY. YUKON

pit file:	115 G-20
revision:	2004-Proposed
drawn:	JJM
date:	2004-02-23
scale:	1: 5000
drwg:	115g-20S



Yukon
Highways and Public Works

Transportation Engineering Branch

SITE PLAN
GRANULAR PIT
km 1753.0 L.H.S.
(Copper Joe Creek)
ALASKA HWY. YUKON

pit file:	115 G-20
revision:	2004-Proposed
drawn:	JJM
date:	2004-02-23
scale:	1: 5000
drwg:	115g-20S

Km 1753.0 LHS Alaska Highway #1
Pit Ident. 115 G-20
(Copper Joe Creek)

September 2003
Book # 652

Auger Hole Logs

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST HOLE NO: 652-2717
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0362
D-4 CAT - 6" AUGER	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL
0.0	ORGANIC				
	SANDY SILT (ML) -with organics -brown -damp -smooth easy drilling	AUGER	185	ML	
1.0					
	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -grey -damp -smooth & little grinding -Note: Believed we hooked a rock with 3rd auger, Had to reverse auger coming up until 3m mark. Grinding below 3.0m Lot of silt augered up -heavier grinding @ 3.5m -easy drilling below 4.0m	AUGER	186	SW-SM	
2.0					
3.0					
4.0					
5.0	-easy - some grinding below 4.8m				
6.0	-easy drilling - light grinding below 5.6m				
7.0	-rougher - tighter drilling 7.0-7.5m				
	END HOLE @ 7.5m				
8.0					
9.0					
10.0					

▲ PERCENT FINES ▲ (20 40 60 80)

PLASTIC M.C. LIQUID (20 40 60 80)

◆ PERCENT SAND ◆ (20 40 60 80)

■ PERCENT GRAVEL ■ (20 40 60 80)

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

Government of Yukon Transportation Engineering	LOGGED BY: GC	COMPLETION DEPTH: 7.5 m
	REVIEWED BY:	COMPLETE: 03/10/01
	Fig. No:	Page 1 of 1

04/02/24 11:50AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST HOLE NO: 652-2718
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
D-4 CAT - 6" AUGER	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0								0.0
	SANDY GRAVEL -grinding starts @ 0.4m - 7.5m -consistent grinding - average drilling							
1.0								1.0
2.0								2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0
7.0								7.0
	END HOLE @ 7.5m							
8.0								8.0
9.0								9.0
10.0								10.0

Government of Yukon Transportation Engineering	LOGGED BY: GC	COMPLETION DEPTH: 7.5 m
	REVIEWED BY:	COMPLETE: 03/10/01
	Fig. No:	Page 1 of 1

04/02/24 12:03PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST HOLE NO: 652-2719
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
D-4 CAT – 6" AUGER	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC & SILT							0.0
	SANDY GRAVEL							
	-brown							
	-damp							
1.0	-grinding starts @ 0.1m							1.0
	-easy drilling							
2.0								2.0
	-small gravel augered up							
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0
7.0								7.0
	END HOLE @ 7.5m							
8.0								8.0
9.0								9.0
10.0								10.0

Government of Yukon
Transportation Engineering

LOGGED BY: GC	COMPLETION DEPTH: 7.5 m
REVIEWED BY:	COMPLETE: 03/10/01
Fig. No:	Page 1 of 1

04/02/24 11:51AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST HOLE NO: 652-2720
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
D-4 CAT - 6" AUGER	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SANDY GRAVEL -grey -damp -visible gravel on surface -very little organics -grinding from surface -easy drilling							0.0
1.0								1.0
2.0	-small gravel augered up							2.0
3.0	-heavier grinding @ 3.0 to 4.0m							3.0
4.0								4.0
5.0	-still grinding @ 4.8m -easy drilling below 5.0m							5.0
6.0								6.0
7.0								7.0
7.5	END HOLE @ 7.5m -no silt coming up with augers -maximum 50mm material augered up							
8.0								8.0
9.0								9.0
10.0								10.0

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Transportation Engineering

LOGGED BY: GC	COMPLETION DEPTH: 7.5 m
REVIEWED BY:	COMPLETE: 03/10/02
Fig. No:	Page 1 of 1

04/02/24 11:53AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST HOLE NO: 652-2721
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
D-4 CAT - 6" AUGER	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	-grinding 0-0.6m							0.0
1.0	SILT -brown -damp to moist -smooth drilling							1.0
2.0	SANDY GRAVEL -grinding -rougher @ 1.5m -grinding but easier drilling below 2.0							2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0
7.0								7.0
	END HOLE @ 7.5m							
8.0								8.0
9.0								9.0
10.0								10.0

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LOGGED BY: GC	COMPLETION DEPTH: 7.5 m
REVIEWED BY:	COMPLETE: 03/10/02
Fig. No:	Page 1 of 1

04/02/24 11:54AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST HOLE NO: 652-2722
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
D-4 CAT - 6" AUGER	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANICS							0.0
	SAND -smooth 0-1.3m							
1.0								1.0
	SANDY GRAVEL -grinding but easy drilling							
2.0								2.0
3.0	-smooth - quiet grinding below 3.0m -small gravel augerer up below 3.0m							3.0
4.0	-possible coarser gravel below 4.0m -rough drilling 4.0-6.0m							4.0
5.0								5.0
	-dry to damp below 5.6m							
6.0	-rough - tight drilling 6.0-7.5m							6.0
7.0								7.0
	END HOLE @ 7.5m							
8.0								8.0
9.0								9.0
10.0								10.0

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LOGGED BY: GC	COMPLETION DEPTH: 7.5 m
REVIEWED BY:	COMPLETE: 03/10/02
Fig. No:	Page 1 of 1

04/02/24 11:57AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST HOLE NO: 652-2723
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
D-4 CAT - 6" AUGER	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC & SILT SAND							0.0
1.0	SILT LAYER GRAVELLY SAND -grinding light -easy drilling							1.0
2.0								2.0
3.0	SANDY GRAVEL -coarser grinding 3.0m-4.5m							3.0
4.0	-rough 4.0-4.5m							4.0
5.0	-rough slow drilling 4.5-6.0m							5.0
6.0	-coarse below 6.0m -rough & tight below 6.0m							6.0
7.0	END HOLE @ 7.5m							7.0
8.0								8.0
9.0								9.0
10.0								10.0

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Transportation Engineering

LOGGED BY: GC	COMPLETION DEPTH: 7.5 m
REVIEWED BY:	COMPLETE: 03/10/02
Fig. No:	Page 1 of 1

04/02/24 12:07PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST HOLE NO: 652-2724
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
D-4 CAT - 6" AUGER	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	-smooth drilling 0-0.5m							0.0
	SANDY GRAVEL -grinding 0.5 - 6.0m							
1.0								1.0
2.0								2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0	-rough drilling 6.0-7.5m							6.0
7.0								7.0
	END HOLE @ 7.5m							
8.0								8.0
9.0								9.0
10.0								10.0

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LOGGED BY: GC	COMPLETION DEPTH: 7.5 m
REVIEWED BY:	COMPLETE: 03/10/02
Fig. No:	Page 1 of 1

04/02/24 11:59AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST HOLE NO: 652-2725
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
D-4 CAT - 6" AUGER	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANICS							0.0
	GRAVELLY SAND							
	SAND							
1.0	SANDY GRAVEL -moist -silty -light grinding							1.0
2.0	-easy drilling							2.0
3.0								3.0
4.0	-silty below 4.0m							4.0
5.0								5.0
	-heavy rough grinding drilling							
6.0	END HOLE @ 6.0m -refusal - tight							6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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LOGGED BY: GC	COMPLETION DEPTH: 6.0 m
REVIEWED BY:	COMPLETE: 03/10/02
Fig. No:	Page 1 of 1

04/02/24 12:00PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST HOLE NO: 652-2726
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
D-4 CAT - 6" AUGER	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SANDY GRAVEL -light grinding							
1.0								1.0
2.0								2.0
	-moist silty sand brought up with auger							
3.0								3.0
4.0	-silty below 4.0 -smooth below 4.0m							4.0
5.0								5.0
	GRAVEL -rough drilling							
6.0								6.0
7.0	END HOLE @ 6.8m -refusal							7.0
8.0								8.0
9.0								9.0
10.0								10.0

Government of Yukon Transportation Engineering	LOGGED BY: GC	COMPLETION DEPTH: 6.8 m
	REVIEWED BY:	COMPLETE: 03/10/02
	Fig. No:	Page 1 of 1

04/02/24 12:03PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST HOLE NO: 652-2727
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
D-4 CAT - 6" AUGER	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANICS							0.0
	SAND							
1.0								1.0
	SAND WITH GRAVEL -minor grinding -tight 2.0-3.0m							
2.0								2.0
3.0								3.0
	SAND -saturated							
4.0	SILT -wet							4.0
5.0	END HOLE @ 5.0m							5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0

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LOGGED BY: GC	COMPLETION DEPTH: 5.0 m
REVIEWED BY:	COMPLETE: 03/10/02
Fig. No:	Page 1 of 1

04/02/24 12:01PM

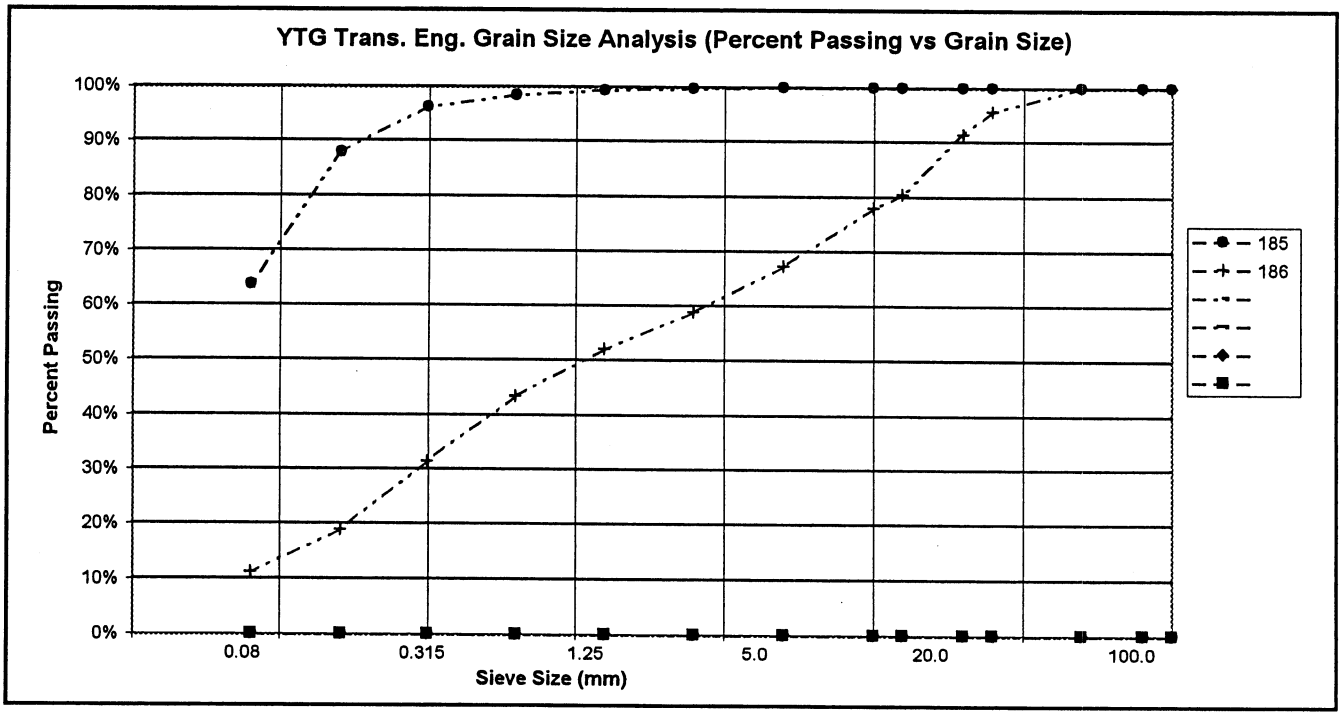
Km 1753.0 LHS Alaska Highway #1
Pit Ident. 115 G-20
(Copper Joe Creek)

September 2003
Book # 652

Auger Sample Results

PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 652-2717
CLIENT:	Shakwak		
PROJECT NAME:	Copper Joe Granular Investigation		
PROJECT LOCATION:	Km 1753 Alaska Highway		
DRILL UNIT:	D-4 Cat		
HOLE LOCATION:	See Plan / GPS		
LOGGED BY:	G.C		DATE COMP: 03/12/17

FIELD NO:	185	186				
LAB NO:	345	346				
DEPTH:	0.4-0.8	2.0-3.0				
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%	91%				
12.5	100%	80%				
10.0	100%	78%				
5.0	100%	67%				
2.5	100%	59%				
1.25	99%	52%				
0.630	99%	43%				
0.315	96%	31%				
0.160	88%	19%				
0.080	64%	11%				
M.C.(%):	20%	3%				
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	0	33				
% SAND:	36	56				
% FINES:	64	11				
CLASSIFICATION	SANDY SILT (ML)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)				



Km 1753.0 LHS Alaska Highway #1
Pit Ident. 115 G-20
(Copper Joe Creek)

September 2002
Book # 636

Test Pit Logs

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2400
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICALS SILT & ORGANICS -brown -dense							0.0
1.0	POORLY GRADED GRAVEL WITH SAND (GP) -grey - brown -damp -medium dense -estimate 0-5% +75mm material -maximum 150 mm diameter		1		GP			1.0
2.0			2		GP			2.0
3.0			3		GP			3.0
4.0			4		GP			4.0
5.0	END HOLE @ 4.5m							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 02/09/
	Fig. No:	Page 1 of 1

02/11/05 08:49AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2401
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILTS & ORGANICS -brown -dry, dense							0.0
1.0	POORLY GRADED GRAVEL WITH SAND (GP) -grey / brown -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter		5	▲	GP		◆ ■	1.0
2.0	POORLY GRADED SAND WITH GRAVEL (SP) -grey / brown -damp, loose		6	▲	SP		◆ ◆	2.0
3.0	POORLY GRADED GRAVEL WITH SAND (GP) -grey / brown -damp, medium dense		7	▲	GP		◆ ■	3.0
4.0	SILT WITH SAND (ML) -brown -damp, fine grained		8	● ▲	ML		◆	4.0
5.0	END HOLE @ 4.5m							5.0
6.0								6.0

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LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/05 08:49AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2402
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILT & ORGANICS -brown -dry, dense							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -grey / brown -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter		9		GP			
1.0								1.0
	-organics noted between 1.8-2.2m trees & roots							
2.0	-increase cobbles 2.2 to 3.0m -estimate 5-15% +75mm material -maximum 150mm diameter		10		GP			2.0
3.0								3.0
	-moist to wet below 3.5m		11		GP			
4.0								4.0
	SILT (ML) -brown -damp, soft to firm -oxidized layers		12		ML			
5.0								5.0
	END HOLE @ 4.8m							
6.0								6.0

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REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/05 08:49AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2403
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILTS & ORGANICS -brown -dry, dense							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -grey / brown -damp to moist -estimate 0-5% +75mm material -maximum 100mm diameter -loose		13		GP			
1.0								1.0
			14		GP			
2.0								2.0
			15		GP			
3.0								3.0
			16		GP			
4.0								4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 02/09/
	Fig. No:	Page 1 of 1

02/11/05 08:49AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2404
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILT & ORGANICS							0.0
	POORLY TO WELL TO POORLY GRADED GRAVEL WITH SAND (GP)-(GW)-(GP)							
	-grey / brown							
	-damp to moist							
	-medium dense							
1.0	-estimate 0-5% +75mm material							1.0
	-maximum 150mm diameter							
	POORLY GRADED GRAVEL WITH SAND		17		GP			
2.0			18		GP			2.0
3.0			19		GW			3.0
4.0			20		GP			4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

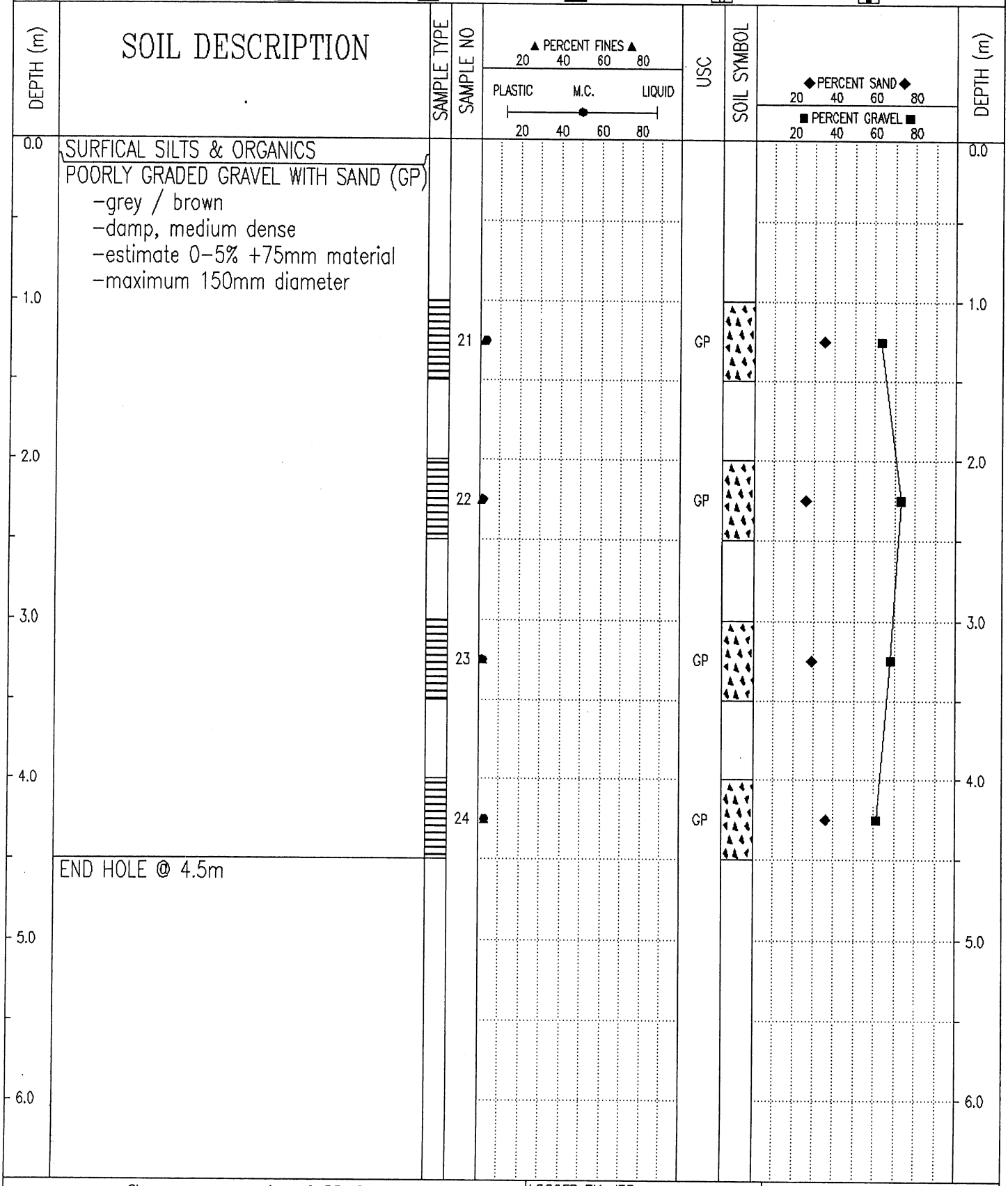
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REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/05 08:49AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2405
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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



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	REVIEWED BY:	COMPLETE: 02/09/
	Fig. No:	Page 1 of 1

02/11/06 08:49AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2406
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILTS & ORGANICS							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -grey / brown -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter		25		GP			
1.0								1.0
2.0			26		GP			2.0
3.0	WELL-GRADED SAND WITH GRAVEL (SW) -grey / brown -moist, loose		27		SW			3.0
4.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -grey / brown -moist -medium dense		28		GP-GM			4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/05 08:49AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2407
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILTS & ORGANICS							0.0
	WELL TO POORLY GRADED GRAVEL WITH SAND (GW)-(GP) -brown / grey -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter							
1.0			29		GW			1.0
2.0	-moist below 2.0m		30		GP			2.0
3.0			31		GP			3.0
	-tree encountered @ 3.8m -estimate 0-10% +75mm material -maximum 200mm diameter							
4.0			32		GP			4.0
	END HOLE @ 4.8m							
5.0								5.0
6.0								6.0

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LOGGED BY: JRP	COMPLETION DEPTH: 4.8 m
REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/05 08:49AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2408
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. 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 GRAVELLY SAND TO GRAVELLY SILTY SAND -trace organics -brown -damp, loose							0.0
1.0								1.0
	POORLY GRADED GRAVEL WITH SAND (GP) -grey / brown -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter		33		GP			
2.0								2.0
			34		GP			
3.0	SILTY SAND WITH GRAVEL (SM) -brown -damp, loose							3.0
4.0			35		SM			4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/05 08:49AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2409
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILT & ORGANICS							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -grey / brown -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter		36		GP			
1.0								1.0
	SILT, SOME SAND -organics -damp, firm							
	POORLY GRADED GRAVEL WITH SAND (GP) -grey / brown -damp to moist -medium dense		37		GP			
2.0								2.0
3.0	-estimate 0-5% +75mm material -maximum 150mm diameter		38		GP			3.0
4.0	SILT WITH SAND (ML) -brown -damp to moist, firm -organic silts		39		ML			4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

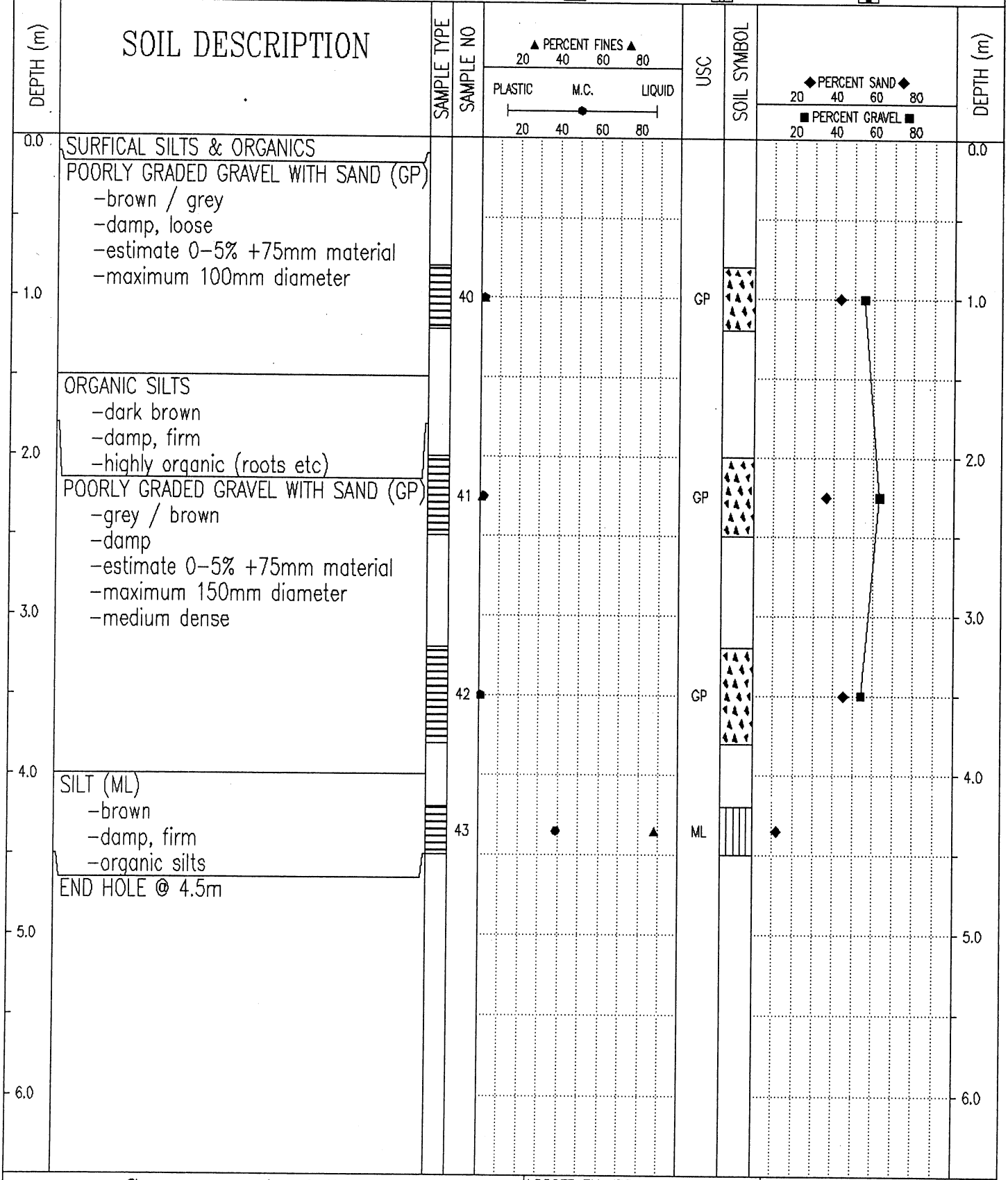
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REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/05 08:49AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2410
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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



Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 02/09/
	Fig. No:	Page 1 of 1

02/11/05 10:59AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2411
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	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	SURFICAL SILTS & ORGANICS				
	POORLY GRADED GRAVEL WITH SAND (GP) -brown / grey -dry to damp -estimate 0-5% +75mm material -maximum 100mm diameter -loose		44	GP	
1.0	ORGANIC SILTS -brown -damp, firm				
2.0	POORLY GRADED GRAVEL WITH SAND (GP) -brown -damp, medium dense -estimate 0-5% +75mm material -maximum 100mm diameter		45	GP	
3.0					
4.0	SILT (ML) -brown -damp, firm -dark organic seams		46	ML	
	END HOLE @ 4.2m				
5.0					
6.0					

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

DEPTH (m) 0.0 1.0 2.0 3.0 4.0 5.0 6.0

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LOGGED BY: JRP	COMPLETION DEPTH: 4.2 m
REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/05 10:59AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2412
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILTS & ORGANICS							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) –brown / grey –damp, loose		47		GP			
1.0	SILTY SAND (SM) –brown –damp, loose –fine grained		48		SM			1.0
2.0	POORLY GRADED SAND WITH GRAVEL (SP) –brown –damp, loose		49		SP			2.0
3.0	POORLY GRADED GRAVEL WITH SAND (GP) –brown –damp, medium dense		50		GP			3.0
4.0								4.0
5.0	END HOLE @ 4.8m							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.8 m
	REVIEWED BY:	COMPLETE: 02/09/
	Fig. No:	Page 1 of 1

02/11/05 10:59AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2413
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	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	SURFICAL ORGANICS & SILTS				
	SANDY GRAVEL –brown –damp, loose				
1.0	SANDY SILT –brown –damp, firm –highly organic (roots etc)				
	SILTY SAND (SM) –brown –damp, loose		51	SM	
2.0	SANDY SILT –brown –damp, loose –trace gravel				
	SILTY SAND (SM) –brown –damp, loose –organic silts noted		52	SM	
3.0					
4.0	POORLY GRADED GRAVEL WITH SAND (GP) –brown –moist, loose		53	GP	
	END HOLE @ 4.5m				
5.0					
6.0					

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID

20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

DEPTH (m) 0.0 1.0 2.0 3.0 4.0 5.0 6.0

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REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/05 10:59AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2414
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILT & ORGANICS							0.0
	GRAVELLY SAND –brown –damp, loose							
1.0	SILT –brown –damp, firm –highly organic		54		GP			1.0
	POORLY GRADED GRAVEL WITH SAND (GP) –brown –damp, medium dense							
2.0	SILTY SAND (SM) –brown –damp, loose		55		SM			2.0
3.0	POORLY GRADED GRAVEL WITH SAND (GP) –brown / grey –damp, medium dense –estimate 0–5% +75mm material –maximum 150mm diameter –estimate 0–10% +75mm material –maximum 300mm diameter		56		GP			3.0
4.0			57		GP			4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/05 10:59AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2415
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL ORGANICS & SILT							0.0
	GRAVELLY SAND -brown -damp, loose							
1.0	SANDY SILT (ML) -brown -damp, loose -organic noted		58		ML			1.0
2.0	POORLY GRADED GRAVEL WITH SAND (GP) -brown -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter		59		GP			2.0
3.0			60		GP			3.0
4.0			61		GP			4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

03/09/30 12:52PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2416
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	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	SURFICAL ORGANIC & SILTS				
	SILTY SAND -brown -damp, loose				
1.0	POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP)-(GP-GM) -brown -damp, medium dense -estimate 0-5% +75mm material -maximum 200mm diameter -moist below 1.8m		62	GP	
2.0			63	GP	
3.0	-grey / brown below 3.0m		64	GP	
4.0			65	GP-GM	
	END HOLE @ 4.5m				
5.0					
6.0					

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

DEPTH (m) 0.0 1.0 2.0 3.0 4.0 5.0 6.0

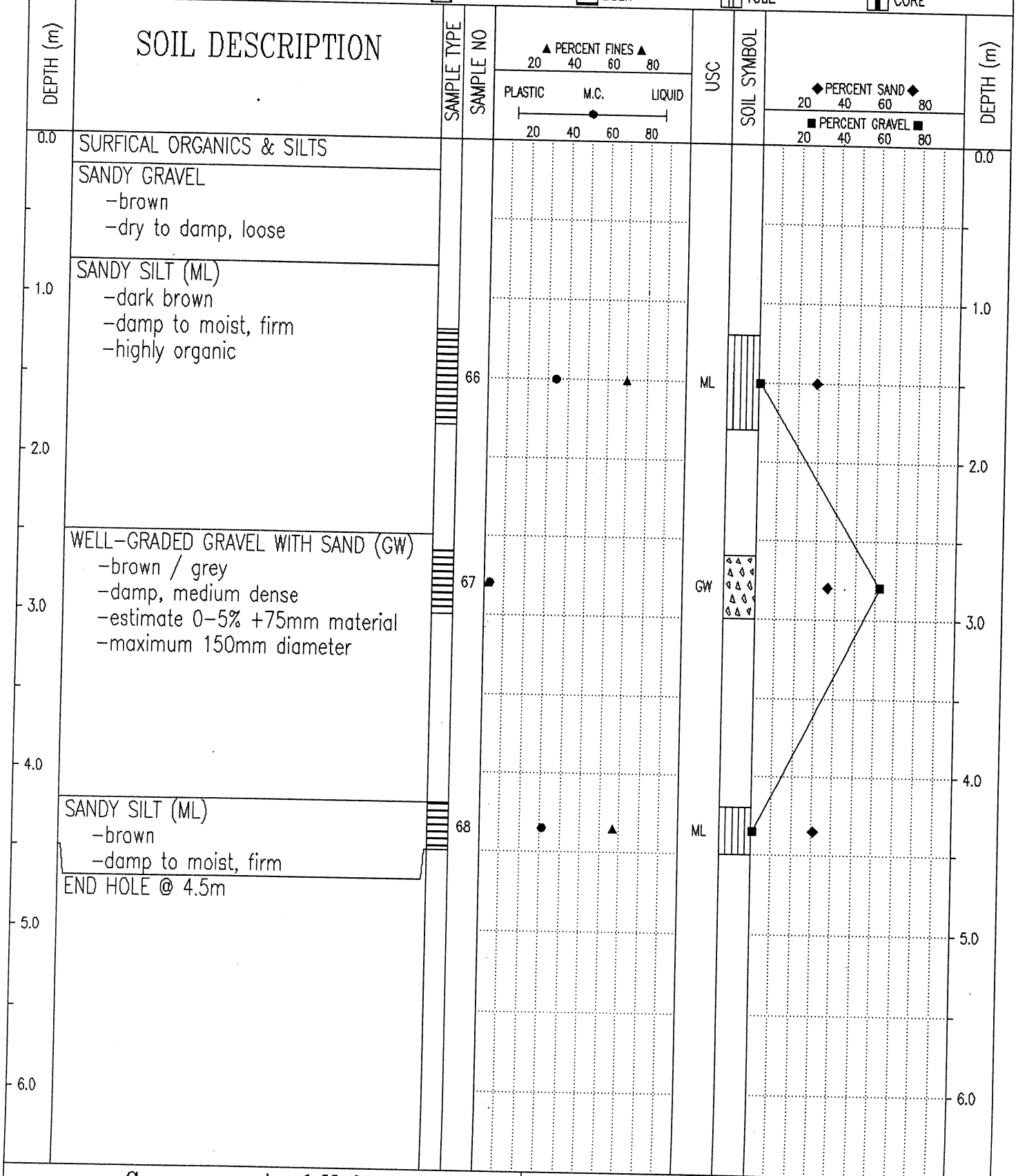
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REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/05 10:59AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2417
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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



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	REVIEWED BY:	COMPLETE: 02/09/
	Fig. No:	Page 1 of 1

02/11/05 10:59AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2418
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILT & ORGANICS							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -brown / grey -damp, loose -estimate 0-5% +75mm material -maximum 150mm diameter		69		GP			
1.0								1.0
	-moist below 1.8m		70		GP			
2.0								2.0
3.0	SANDY SILT / SILTY SAND -brown -damp, loose -some organic noted							3.0
	POORLY GRADED GRAVEL WITH SILT & SAND TO POORLY GRADED GRAVEL WITH SAND (GP-GM)-(GP) -brown / grey -moist, medium dense		71		GP-GM			
4.0			72		GP			4.0
	END HOLE @ 4.8m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/05 10:59AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2419
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	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	SURFICAL SILT & ORGANICS				
	POORLY GRADED GRAVEL WITH SAND (GP) -brown / grey -damp, medium dense -estimate 0-10% +75mm material -maximum 150mm diameter		73	GP	
1.0					
2.0	-organic (tree) noted @ 2.0-2.2m -moist below 2.2m		74	GP	
3.0	WELL-GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SW)-(GP) -brown / grey -moist, medium dense -estimate 0-10% +75mm material -maximum 200mm diameter		75	SW	
4.0	-estimate 0-10% +75mm material below 3.8m -maximum 300mm diameter		76	GP	
	END HOLE @ 4.5m				
5.0					
6.0					

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

DEPTH (m) 0.0 1.0 2.0 3.0 4.0 5.0 6.0

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REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/05 11:12AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2420
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	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	SURFICAL ORGANIC & SILT				
	SANDY SILT -brown -damp to moist, firm				
1.0	POORLY GRADED GRAVEL WITH SAND (GP) -brown / grey -damp, loose -estimate 0-5% +75mm material -maximum 150mm diameter		77	GP	
2.0	SANDY SILT / SILTY SAND -brown -damp, firm -highly organic (trees, roots)				
3.0	POORLY GRADED GRAVEL WITH SILT & SAND TO POORLY GRADED GRAVEL WITH SAND (GP-GM)-(GP) -brown / grey -moist , medium dense -estimate 0-5% +75mm material -maximum 150mm diameter		78	GP-GM	
4.0	-estimate 0-10% +75mm material below 4.0m -maximum 300mm diameter		79	GP	
5.0	END HOLE @ 4.8m				
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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REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/06 02:15PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2421
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILT & ORGANICS							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -brown / grey -damp, loose -estimate 0-5% +75mm material -maximum 150mm diameter		80		GP			
1.0								1.0
			81		GP			
2.0								2.0
			82		GP			
3.0								3.0
4.0	WELL-GRADED SAND WITH GRAVEL (SW) -brown / grey -damp, loose -some organics (decomposed wood)		83		SW			4.0
	END HOLE @ 4.8m							
5.0								5.0
6.0								6.0

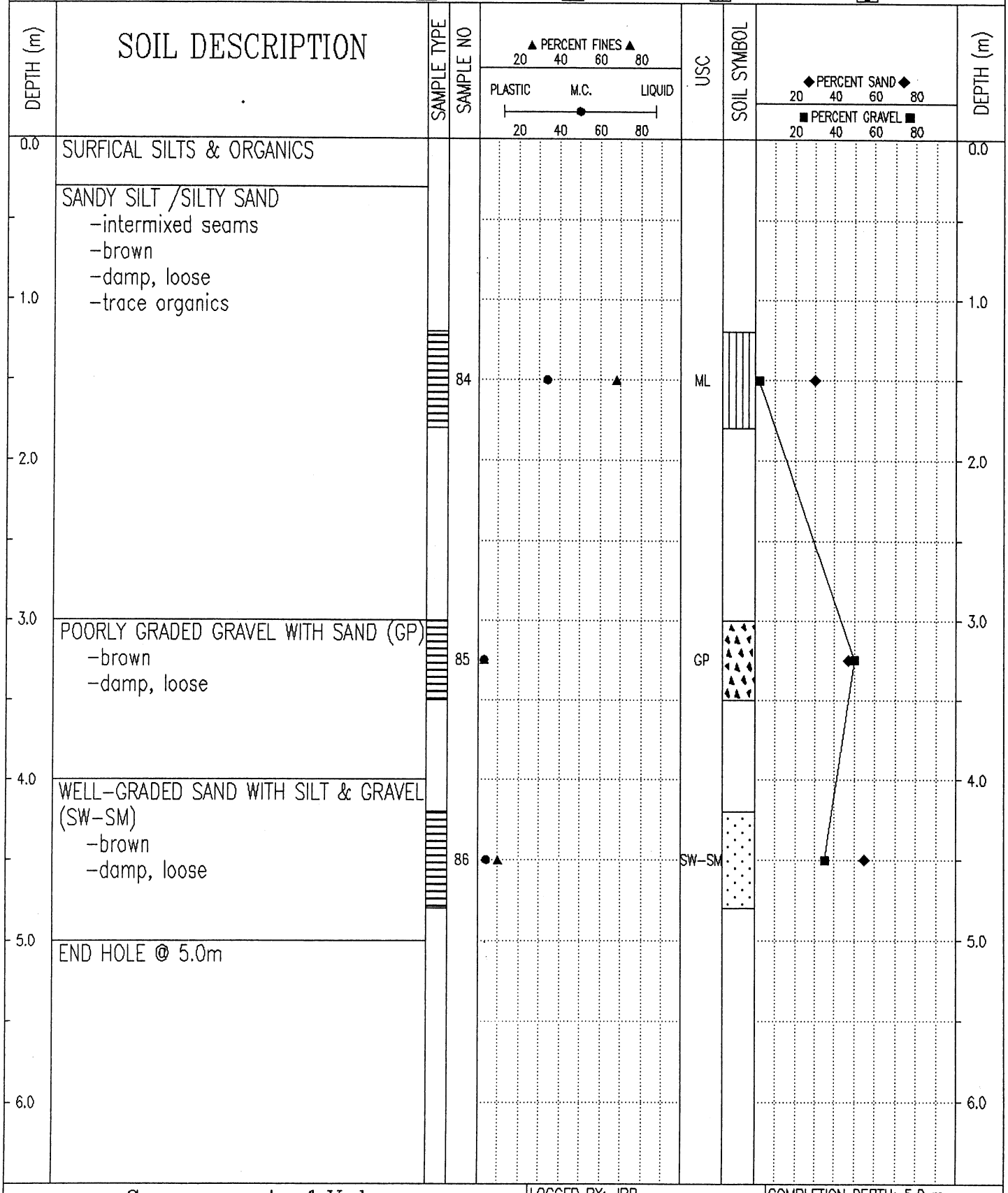
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REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/05 02:11PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2422
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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



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	REVIEWED BY:	COMPLETE: 02/09/
	Fig. No:	Page 1 of 1

02/11/05 02:11PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2423
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILTS & ORGANICS							0.0
	POORLY GRADED GRAVEL WITH SAND (GP)							
	-brown / grey							
	-damp, medium dense							
	-estimate 0-5% +75mm material							
	-maximum 150mm diameter							
1.0	-moist below 1.0m		87		GP			1.0
2.0			88		GP			2.0
3.0			89		GP			3.0
4.0			90		GP			4.0
5.0	END HOLE @ 5.0							5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/06 02:11PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2424
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILTS & ORGANICS							0.0
	SANDY SILT (ML) -brown -damp, loose		91	● ▲	ML		◆	
1.0								1.0
2.0								2.0
	POORLY GRADED GRAVEL WITH SAND (GP) -brown / grey -damp, medium dense -estimate 0-5% +75mm material -maximum 300mm diameter		92	●	GP		◆ ■	
3.0								3.0
4.0			93	●	GP		◆ ■	4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/05 02:11PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2425
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILT & ORGANICS							0.0
	SANDY SILT -brown -damp, loose -organics noted							
1.0	POORLY GRADED GRAVEL WITH SAND (GP) -brown / grey -damp, loose -estimate 0-5% +75mm material -maximum 100mm diameter		94		GP			1.0
2.0	SANDY SILT -brown -damp, loose -organic noted							2.0
	POORLY GRADED GRAVEL WITH SAND (GP) -brown / grey -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter -increase gravels with depth		95		GP			
3.0								3.0
			96		GP			
4.0								4.0
			97		GP			
5.0	END HOLE @ 4.8m							5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/06 09:34AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2426
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	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	SURFICAL SILT & ORGANICS				
	SANDY SILT –brown –damp, loose –organics noted				
1.0	POORLY GRADED GRAVEL WITH SAND (GP) –brown / grey –damp, medium dense –estimate 0–10% +75mm material –maximum 200mm diameter		98	GP	
2.0	POORLY GRADED SAND WITH GRAVEL (SP) –brown / grey –moist, medium dense –estimate 0–5% +75mm material –maximum 150mm diameter		99	SP	
3.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP–GM) –brown / grey –moist, medium dense –estimate 0–10% +75mm material –maximum 200mm diameter		100	GP–GM	
4.0	SANDY SILT /SILTY SAND –brown –damp, loose –fine grained, organics noted		101	GP–GM	
5.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP–GM) –brown / grey –damp, medium grained –estimate 0–5% +75mm material –maximum 150mm diameter				
	END HOLE @ 4.8m				
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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	REVIEWED BY:	COMPLETE: 02/09/
	Fig. No:	Page 1 of 1

02/11/06 09:34AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2427
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	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	SURFICAL SILT & ORGANICS				
	SANDY SILT / SILTY SAND -brown -damp, loose -fine grained, organics noted				
1.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -brown / grey -damp, medium dense		102	SW-SM	
2.0	SANDY SILT -brown -damp, firm				
	SANDY GRAVEL -brown / grey -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter -sample 103 lost		103		
3.0					
4.0	SILT WITH SAND TO SANDY SILT (ML) -brown -damp, loose -organics noted 3.6 to 4.0m		104	ML	
			105A	ML	
5.0	END HOLE @ 4.8m				
6.0					

PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

DEPTH (m) 0.0 1.0 2.0 3.0 4.0 5.0 6.0

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LOGGED BY: JRP	COMPLETION DEPTH: 4.8 m
REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/06 09:38AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2428
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES / PLASTIC M.C. LIQUID	USC	SOIL SYMBOL	PERCENT SAND / PERCENT GRAVEL	DEPTH (m)
0.0	SURFICAL SILT & ORGANICS							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -brown / grey -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter		105B		GP			
1.0								1.0
	WELL-GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SW)-(GP) -brown / grey -moist -increase gravels with depth -noted sandy seams between 1.6-2.5		106		SW			
2.0								2.0
3.0			107		GP			3.0
4.0	SILT WITH SAND (ML) -damp, firm -organics noted		108		ML			4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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

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LOGGED BY: JRP	COMPLETION DEPTH: 4.2 m
REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/06 09:40AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2429
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILT & ORGANICS							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -brown -damp, loose -variable sand/silt seams 0.8-1.0m -trace organics, (rootlets)		109	▲	GP			
1.0								1.0
	SILTY SAND WITH GRAVEL (SM) -brown / grey -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter -wood encountered @ 2.0m		110	●▲	SM			
2.0								2.0
3.0								3.0
	SILTY SAND / SANDY SILT -brown -damp, loose -organic noted		111	●	GP-GM			
4.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown/grey -damp to moist, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter							4.0
5.0	END HOLE @ 4.2m							5.0
6.0								6.0

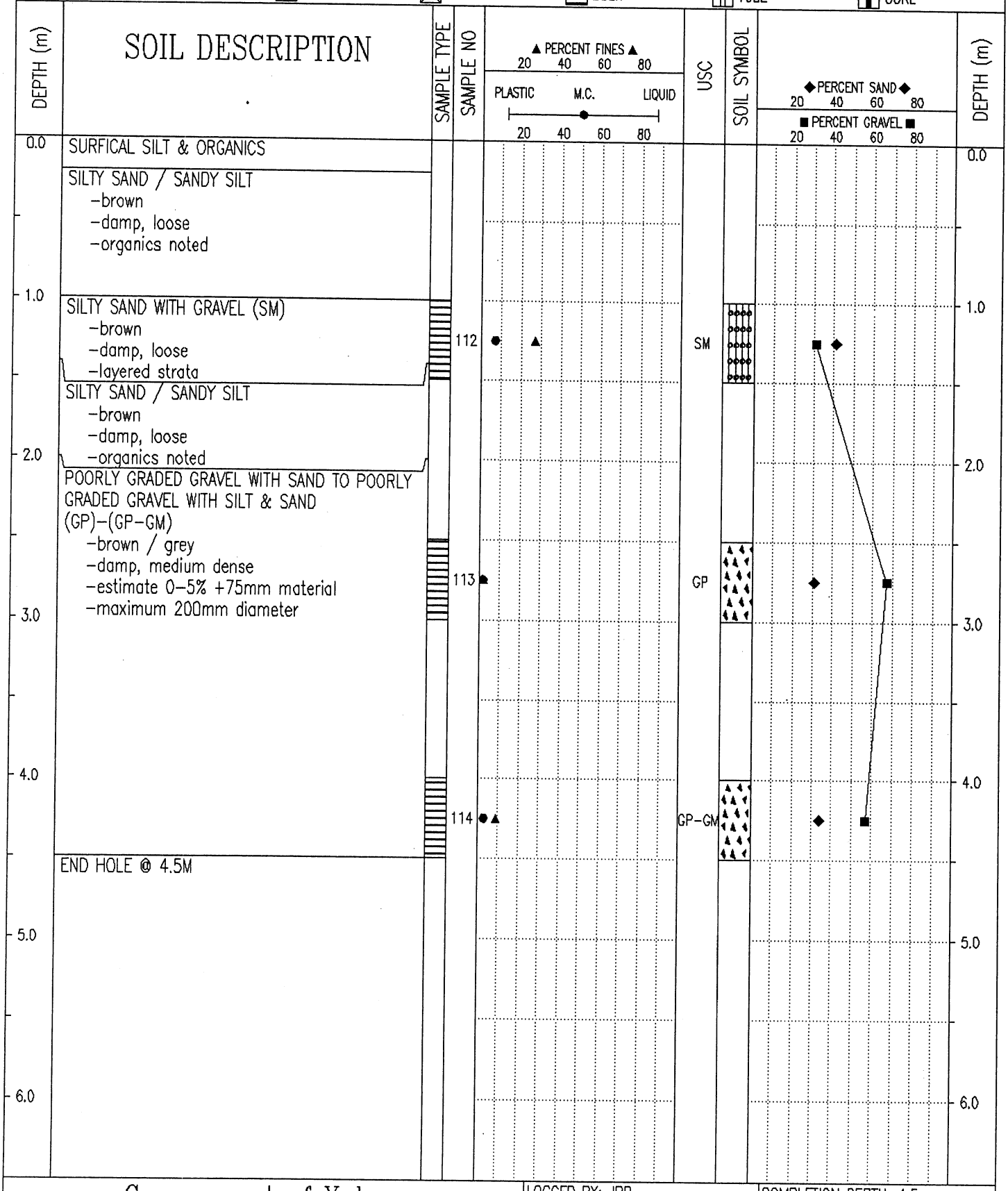
Government of Yukon
Transportation Engineering

LOGGED BY: JRP	COMPLETION DEPTH: 4.2 m
REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/06 09:34AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2430
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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



Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 02/09/
	Fig. No:	Page 1 of 1

02/11/06 01:30PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2431
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

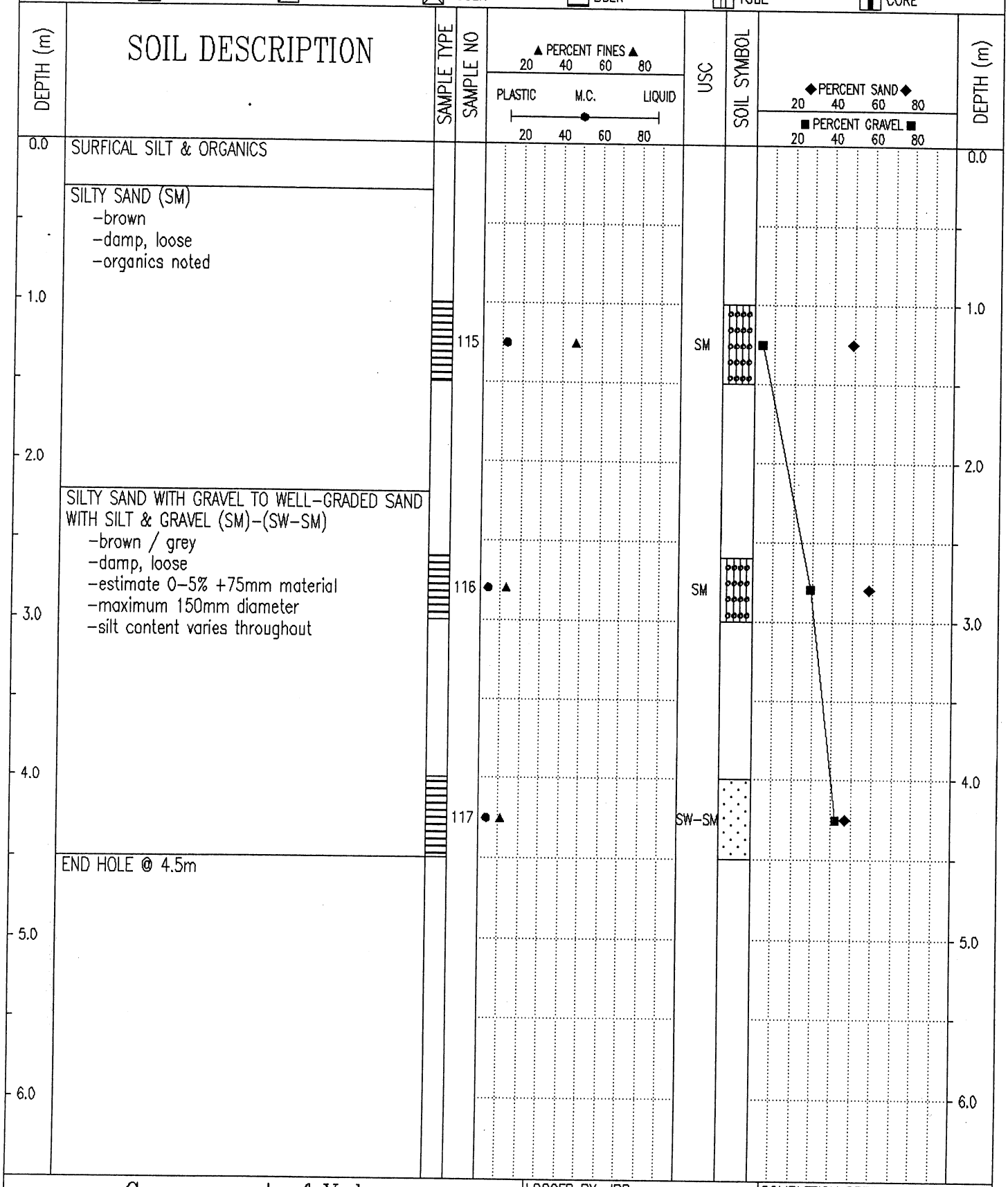
SOIL DESCRIPTION

SURFICAL SILT & ORGANICS

SILTY SAND (SM)
- -brown
- -damp, loose
- -organics noted

SILTY SAND WITH GRAVEL TO WELL-GRADED SAND WITH SILT & GRAVEL (SM)-(SW-SM)
- -brown / grey
- -damp, loose
- -estimate 0-5% +75mm material
- -maximum 150mm diameter
- -silt content varies throughout

END HOLE @ 4.5m



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	REVIEWED BY:	COMPLETE: 02/09/
	Fig. No:	Page 1 of 1

02/11/06 01:30PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2432
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILTS & ORGANICS							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -brown / grey -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter -moist below 1.2m		118		GP			
1.0								1.0
			119		GP			
2.0								2.0
3.0	-sand seam 3.1 to 3.4m							3.0
			120		GP			
4.0								4.0
			121		GP			
5.0	END HOLE @ 4.8m							5.0
6.0								6.0

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LOGGED BY: JRP	COMPLETION DEPTH: 4.8 m
REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/06 01:30PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2433
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	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	SURFICAL SILTY & ORGANICS				
	SILTY SAND WITH GRAVEL (SM) -brown -damp, loose -highly organics		122	SM	
2.0	WELL-GRADED SAND WITH GRAVEL (SW) -brown / grey -moist, medium dense		123	SW	
4.0	SILT (ML) -brown -damp, firm		124	ML	
	END HOLE @ 4.5m				
5.0					
6.0					

▲ PERCENT FINES ▲ 20 40 60 80
PLASTIC M.C. LIQUID 20 40 60 80
◆ PERCENT SAND ◆ 20 40 60 80
■ PERCENT GRAVEL ■ 20 40 60 80

DEPTH (m) 0.0 1.0 2.0 3.0 4.0 5.0 6.0

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REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/10/25 08:47AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2434
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

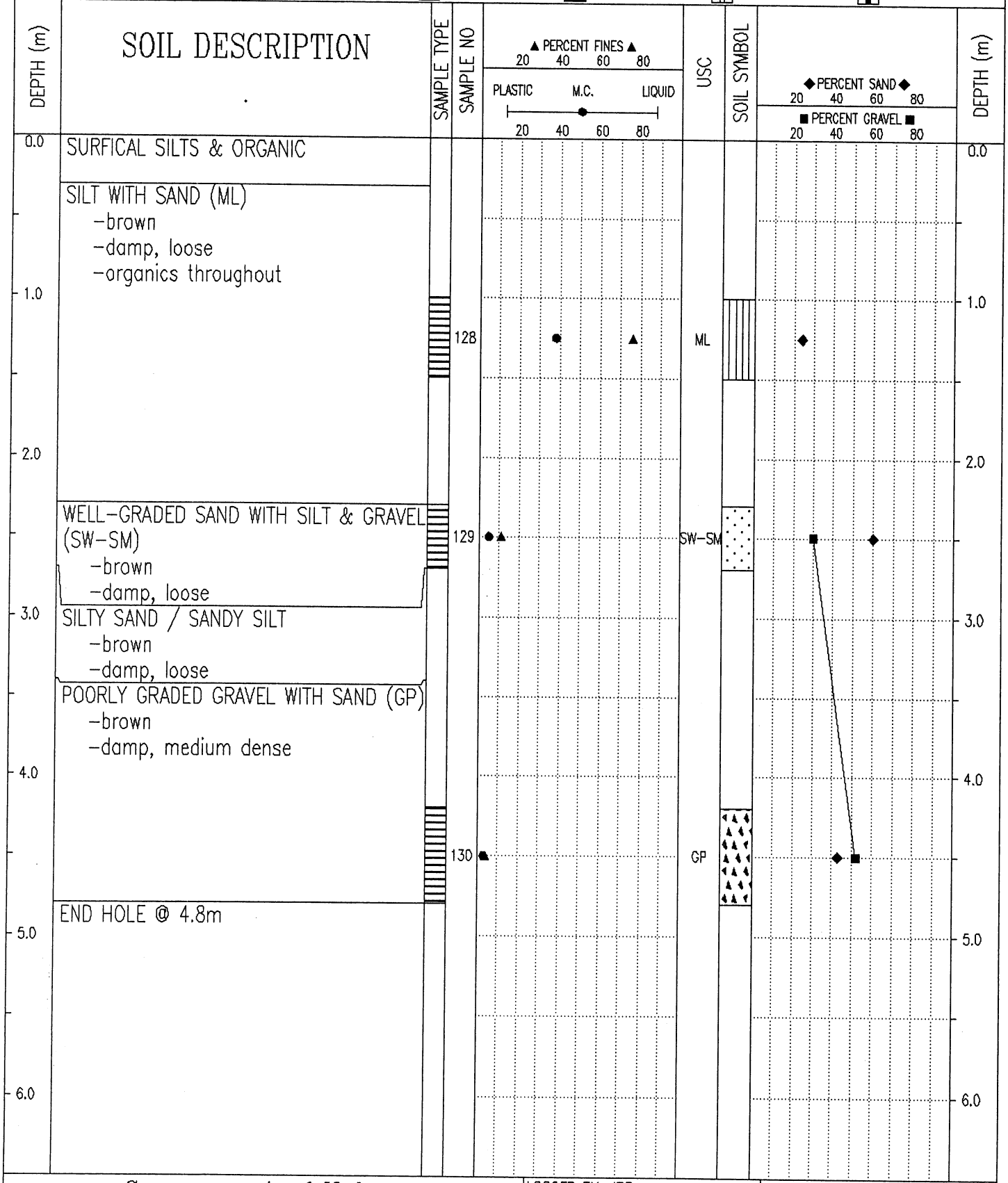
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILT ORGANICS							0.0
	GRAVELLY SAND							
	SANDY SILT (ML) -brown -damp, loose		125		ML			
1.0								1.0
2.0								2.0
	WELL-GRADED SAND WITH GRAVEL (SW) -brown -damp, loose		126		SW			
3.0	SILTY SAND / SANDY SILT -damp, loose							3.0
	WELL-GRADED GRAVEL WITH SAND (GW) -brown -damp, medium dense		127		GW			
4.0								4.0
	END HOLE @ 4.8m							
5.0								5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 02/09/
	Fig. No:	Page 1 of 1

02/10/25 08:47AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2435
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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



Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.8 m
	REVIEWED BY:	COMPLETE: 02/09/
	Fig. No:	Page 1 of 1

02/10/25 08:47AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2436
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILTS & ORGANICS							0.0
	SILT SOME SAND TO SANDY SILT -brown -damp, loose							
1.0	WELL-GRADED SAND WITH GRAVEL (SW) -brown / grey -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter		131		SW			1.0
2.0	POORLY GRADED GRAVEL WITH SAND (GP) -brown/grey -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter		132		GP			2.0
3.0			133		GP			3.0
4.0			134		GP			4.0
5.0	END HOLE @ 5.0							5.0
6.0								6.0

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	REVIEWED BY:	COMPLETE: 02/09/
	Fig. No:	Page 1 of 1

02/11/06 01:36PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2437
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILT & ORGANICS							0.0
	GRAVELLY SAND -some silt -brown -dry to damp, loose							
1.0	SANDY SILT -brown -damp, loose -organics noted (roots etc.)							1.0
	POORLY GRADED GRAVEL WITH SAND (GP) -brown / grey -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter		135		GP			
2.0			136		GP			2.0
	SANDY SILT / SILTY SAND -brown -damp, loose -organics noted							
3.0	POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP)-(GP-GM) -brown / grey -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter		137		GP			3.0
4.0			138		GP-GM			4.0
	END HOLE @ 4.8m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/06 01:30PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2438
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	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	SURFICAL SILTS & ORGANICS				
	POORLY GRADED GRAVEL WITH SAND (GP) -brown / grey -damp, loose -rootlets noted to 0.5m depth -sample #139 taken from excavation side wall – not spill pile		139	GP	
1.0					
	SILT WITH SAND (ML) -brown -damp, loose -organics throughout		140	ML	
2.0					
	POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP)-(GP-GM) -brown / grey -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter -moist below 3.5m		141	GP	
3.0					
4.0			142	GP-GM	
	END HOLE @ 4.8m				
5.0					
6.0					

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

DEPTH (m) 0.0 1.0 2.0 3.0 4.0 5.0 6.0

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	REVIEWED BY:	COMPLETE: 02/09/
	Fig. No:	Page 1 of 1

02/11/06 01:30PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2439
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL ORGANICS							0.0
	SILTY SAND WITH GRAVEL (SM) -brown -damp, loose -some gravelly seams		143		SM			
1.0								1.0
2.0	POORLY GRADED GRAVEL WITH SAND (GP) -brown -damp, medium dense -odd cobble to 150mm diameter							2.0
			144		GP			
3.0	-estimate 0-5% +75mm material below 3.0m -maximum 150mm diameter							3.0
4.0			145		GP			4.0
	END HOLE @ 4.5m							
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/06 01:38PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2440
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILTS ORGANICS							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -brown / grey -dry to damp, loose -estimate 0-5% +75mm material -maximum 150mm diameter -organics noted throughout (rootlets)		146		GP			
1.0								1.0
2.0			147		GP			2.0
3.0	SILTY SAND / SANDY SILT -brown -damp, loose							3.0
	POORLY GRADED GRAVEL WITH SAND (GP) -brown / grey -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter		178		GP			
4.0			179		GP			4.0
5.0	END HOLE @ 4.8m							5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/06 02:36PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2441
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	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	SURFICAL SILT & ORGANICS				
	POORLY GRADED GRAVEL WITH SAND (GP) -brown -dry to damp, loose -organics noted throughout		150	GP	
1.0	-brown / grey below 1.4m -moist, medium dense below 1.4m -estimate 0-5% +75mm material -maximum 150mm diameter		151	GP	
2.0					
3.0	-increase cobbles below 3.0m -estimate 0-10% +75mm material -maximum 150mm diameter		152	GP	
4.0			153	GP	
5.0	END HOLE @ 4.8m				
6.0					

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

DEPTH (m) 0.0 1.0 2.0 3.0 4.0 5.0 6.0

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LOGGED BY: JRP	COMPLETION DEPTH: 4.8 m
REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/06 02:36PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2442
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	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	SURFICAL SILTS & ORGANIC				
	GRAVELLY SILTY SAND –brown –damp, loose –organics throughout				
1.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP–GM) –brown / grey –damp, medium dense –estimate 0–5% +75mm material –maximum 100mm diameter		154	GP–GM	
2.0					
	POORLY GRADED GRAVEL WITH SAND (GP) –brown / grey –damp, medium dense –estimate 0–5% +75mm material –maximum 150mm diameter		155	GP	
3.0					
	SANDY SILT (ML) –brown –damp –damp, loose		156	ML	
4.0	END HOLE @ 4.0M –sloughage				
5.0					
6.0					

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

DEPTH (m) 0.0 1.0 2.0 3.0 4.0 5.0 6.0

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LOGGED BY: JRP	COMPLETION DEPTH: 4.0 m
REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/06 02:36PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2443
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILT & ORGANICS							0.0
	POORLY GRADED GRAVEL WITH SAND TO WELL-GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (GP)-(SW)-(GP) -brown -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter		157		GP			
1.0								1.0
2.0			158		SW			2.0
3.0			159		GP			3.0
4.0	SILTY SAND WITH GRAVEL (SM) -brown / grey -damp, medium dense -silt present in odd seams -estimate 0-5% +75mm material -maximum 150mm diameter		160		SM			4.0
5.0								5.0
	END HOLE @ 5.2m							
6.0								6.0

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REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/06 02:36PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2444
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	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	SURFICAL SILT & ORGANICS				
	WELL-GRADED SAND WITH GRAVEL (SW) -brown -damp, medium dense -noted organics		161	SW	
1.0					
2.0	SILTY SAND WITH GRAVEL (SM) -brown -damp, loose -alternating sandy silt & gravelly sand strata -organics noted		162	SM	
3.0	SANDY GRAVEL -brown / grey -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter -some sandy silt seams noted				
4.0	SANDY SILT (ML) -brown -damp, loose		163	ML	
	END HOLE @ 4.5m				
5.0					
6.0					

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

DEPTH (m) 0.0 1.0 2.0 3.0 4.0 5.0 6.0

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REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/06 02:36PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2445
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILT & ORGANIC							0.0
	GRAVELLY SAND –trace silt –brown –damp, mediium dense							
1.0	POORLY GRADED GRAVEL WITH SAND (GP) –brown –damp, medium dense –estimate 0–5% +75mm material –maximum 150mm diameter		164		GP			1.0
2.0	–sandy seam noted 2.4 – 2.7m		165		GP			2.0
3.0	SANDY SILT – TRACE TO SOME GRAVEL (SEAMS) –organic silts –brown –damp, loose –odd gravelly seam							3.0
4.0	POORLY GRADED GRAVEL WITH SAND (GP) –brown / grey –damp, medium dense –estimate 0–5% +75mm material –maximum 150mm diameter		166		GP			4.0
	END HOLE @ 4.8m							
5.0								5.0
6.0								6.0

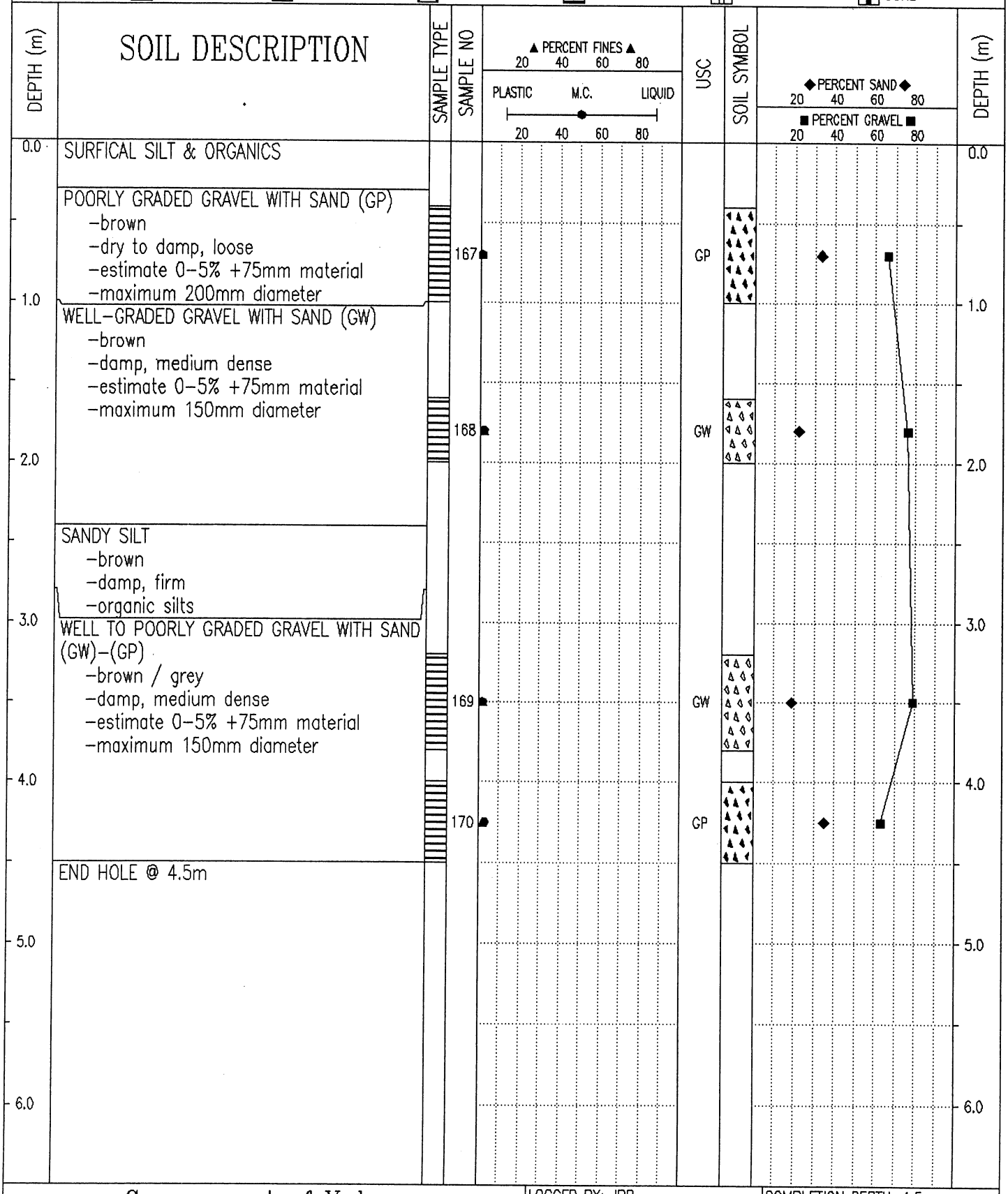
Government of Yukon
Transportation Engineering

LOGGED BY: JRP	COMPLETION DEPTH: 4.8 m
REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/06 02:36PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2446
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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



Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 02/09/
	Fig. No:	Page 1 of 1

02/11/06 02:36PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2447
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION
0.0	SURFICAL SILT & ORGANIC
	SILTY SAND (SM) –brown –damp, loose –some organic silt seams noted
1.0	
	SANDY GRAVEL –brown / grey –damp, medium dense
	SANDY SILT / SILTY SAND –brown –damp, medium dense –organic noted throughout
2.0	
	WELL-GRADED SAND WITH SILT & GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SW-SM)-(GP) –brown / grey –damp, medium dense –estimate 0-5% +75mm material –maximum 150mm diameter
3.0	
4.0	
	END HOLE @ 4.5m
5.0	
6.0	

SAMPLE TYPE / SAMPLE NO: 171, 172, 173, 174

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

USC / SOIL SYMBOL: SM, SW-SM, GP, GP

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

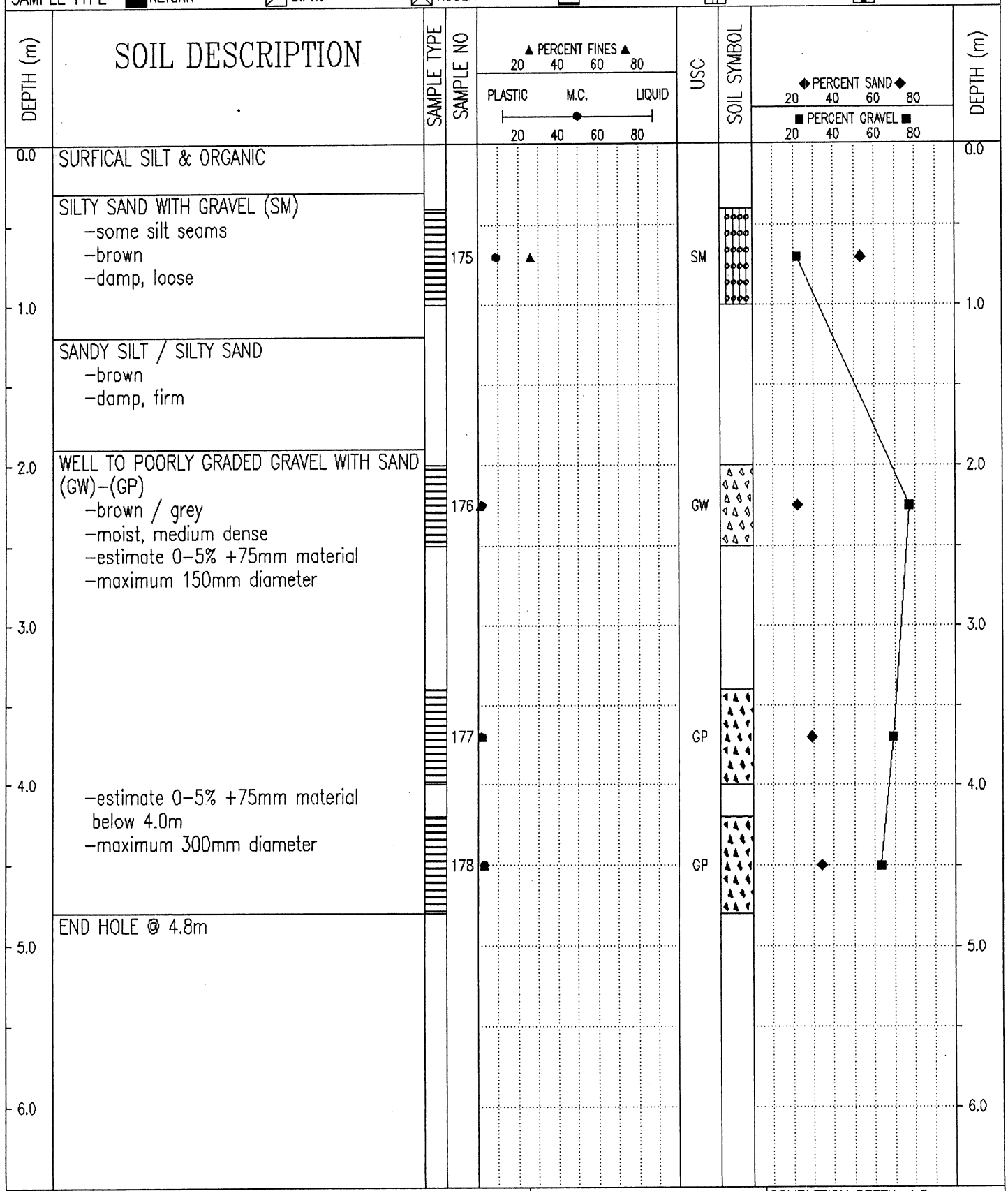
DEPTH (m): 0.0, 1.0, 2.0, 3.0, 4.0, 5.0, 6.0

Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 02/09/
	Fig. No:	Page 1 of 1

02/11/06 02:36PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2448
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

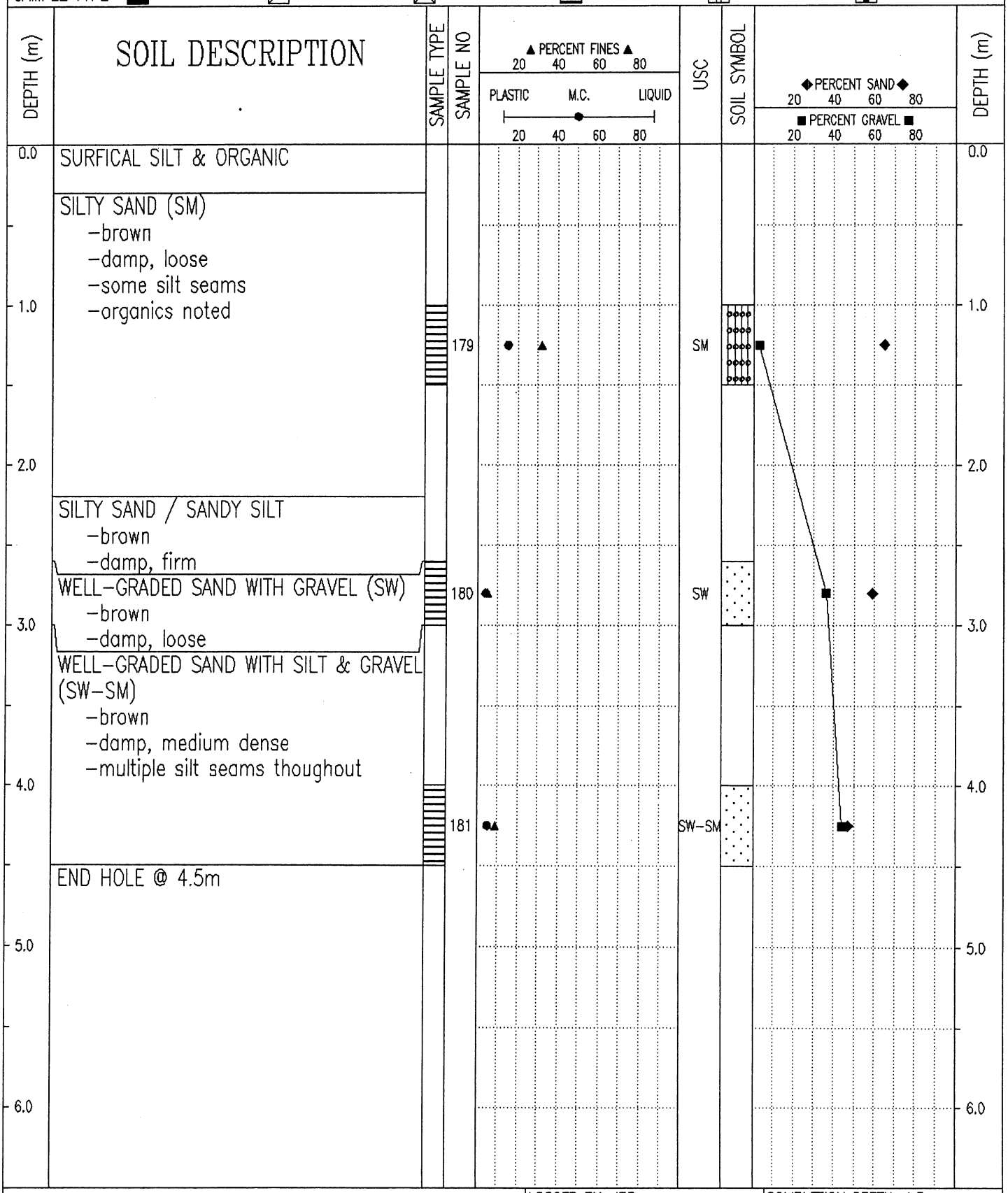


Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.8 m
	REVIEWED BY:	COMPLETE: 02/09/
	Fig. No:	Page 1 of 1

02/11/06 02:36PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2449
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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



Government of Yukon Transportation Engineering	LOGGED BY: JRP	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 02/09/
	Fig. No:	Page 1 of 1

02/11/06 02:36PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEGMENT 11	TEST PIT NO: 636-2450
ENGINEERING CAPITAL	COPPER JOE CREEK	Project No: 552-202101-0361
KOEHRING 6625 BACKHOE	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SURFICAL SILTS & ORGANICS							0.0
	WELL TO POORLY-GRADED GRAVEL WITH SAND (GW)-(GP) -brown -damp, medium dense -estimate 0-5% +75mm material -maximum 150mm diameter -organics noted to 1.2m depth		182		GW			
1.0								1.0
2.0			183		GP			2.0
3.0								3.0
4.0			184		GP			4.0
	SILT WITH SAND (ML) -brown -damp, loose		185		ML			
5.0	END HOLE @ 4.8m							5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: JRP	COMPLETION DEPTH: 4.8 m
REVIEWED BY:	COMPLETE: 02/09/
Fig. No:	Page 1 of 1

02/11/06 02:43PM

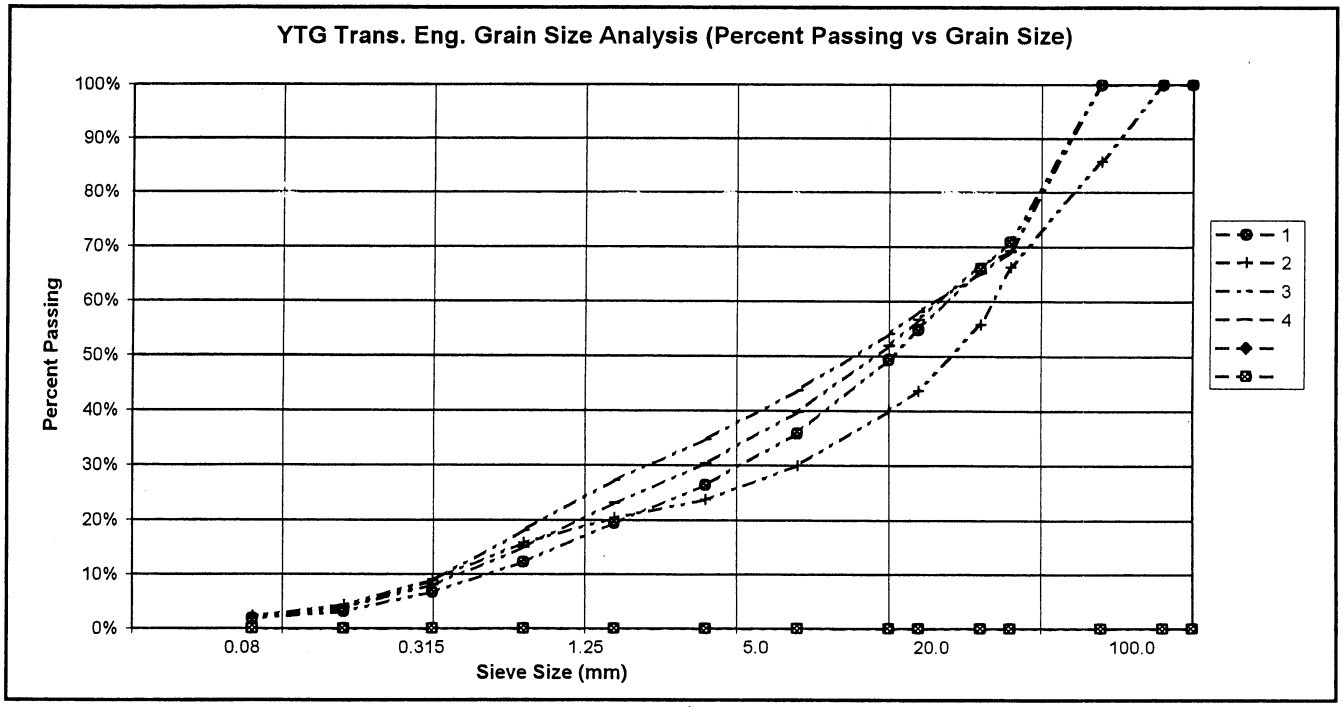
Km 1753.0 LHS Alaska Highway #1
Pit Ident. 115 G-20
(Copper Joe Creek)

September 2002
Book # 636

Pit Run Sample Results

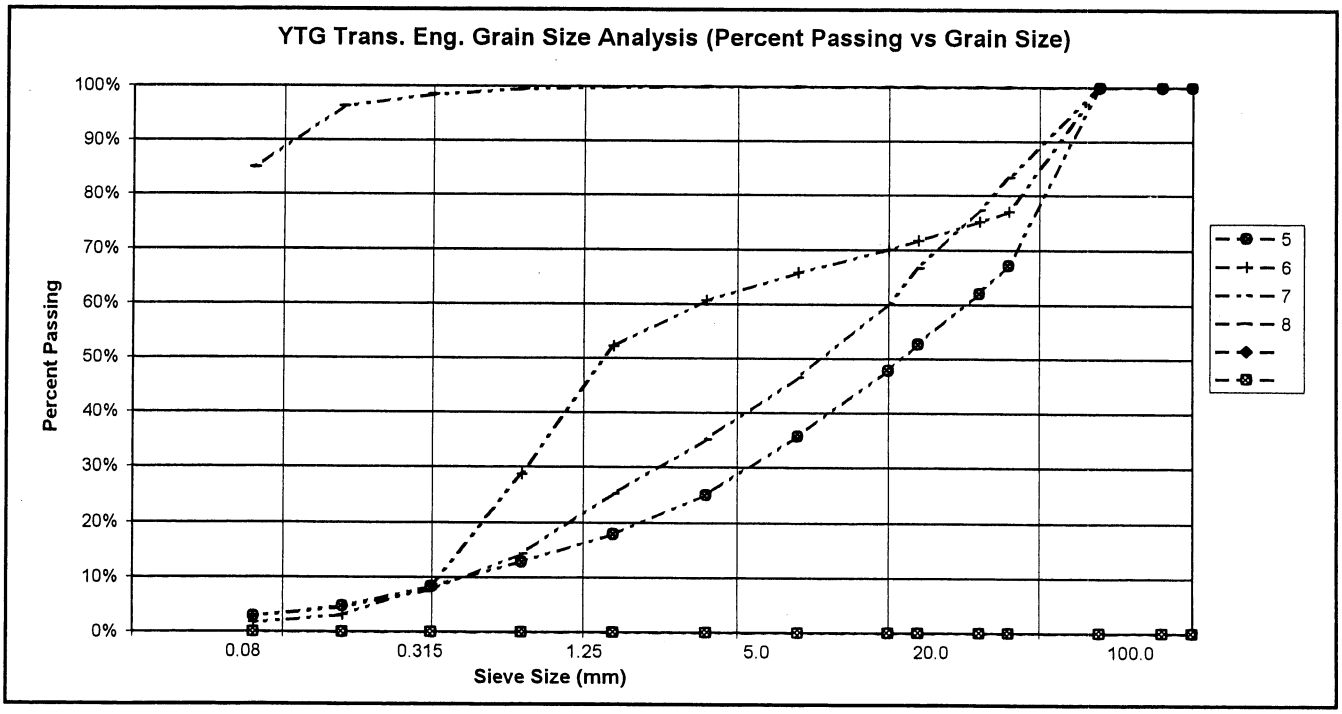
PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2400
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	1	2	3	4		
LAB NO:	261	262	263	264		
DEPTH:	1-1.5	2-2.5	3-3.5	4-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	86%	100%	100%		
25.0	71%	66%	69%	69%		
20.0	66%	56%	65%	67%		
12.5	55%	44%	58%	57%		
10.0	49%	40%	54%	52%		
5.0	36%	30%	44%	40%		
2.5	27%	24%	35%	30%		
1.25	19%	20%	27%	23%		
0.630	12%	16%	18%	15%		
0.315	7%	9%	9%	8%		
0.160	3%	4%	4%	4%		
0.080	2%	2%	2%	2%		
M.C.(%):	2%	2%	2%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	64	70	56	60		
% SAND:	34	28	42	38		
% FINES:	2	2	2	2		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		



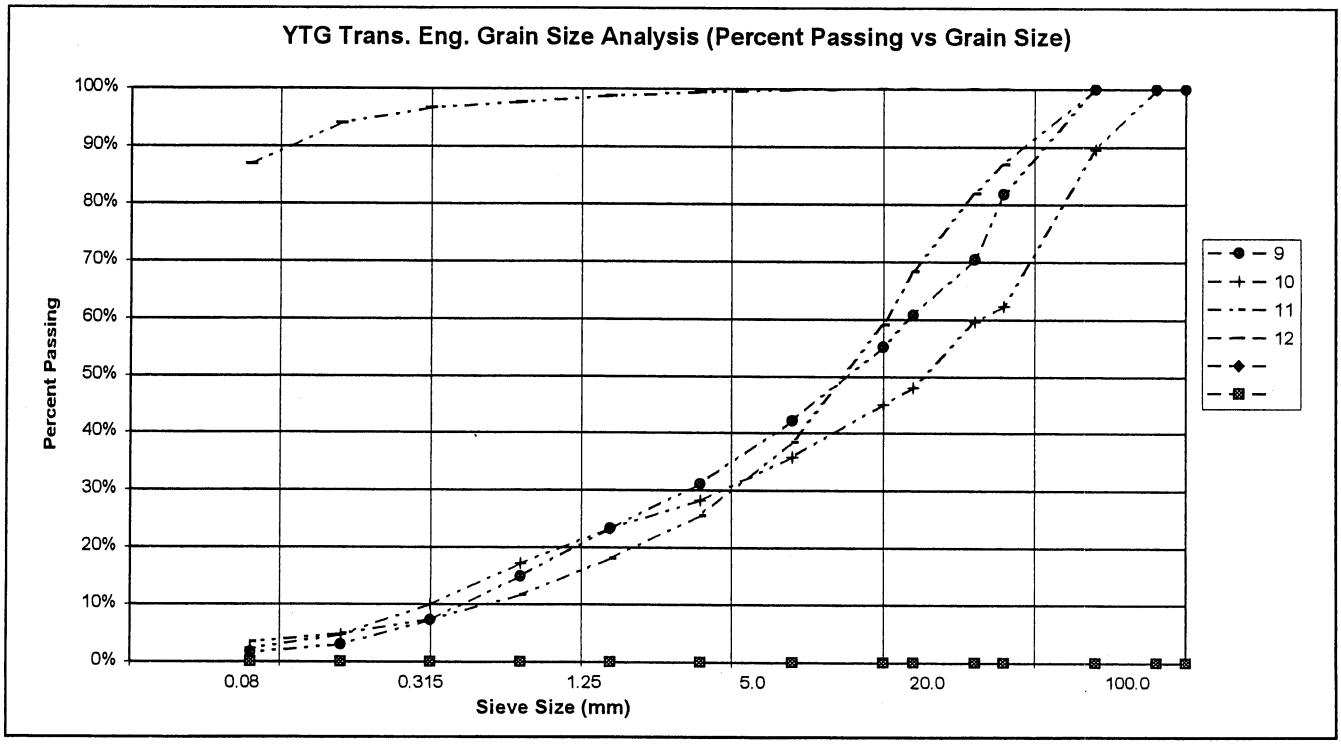
PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2401
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	5	6	7	8		
LAB NO:	265	266	267	268		
DEPTH:	1-1.5	2-2.5	3-3.5	4.2-4.5		
TYPE:	BULK	AUGER	BULK	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	67%	77%	83%	100%		
20.0	62%	75%	77%	100%		
12.5	53%	72%	67%	100%		
10.0	48%	70%	60%	100%		
5.0	36%	66%	47%	100%		
2.5	25%	61%	35%	100%		
1.25	18%	52%	25%	100%		
0.630	13%	29%	14%	100%		
0.315	8%	8%	8%	99%		
0.160	5%	3%	5%	96%		
0.080	3%	2%	3%	85%		
M.C.(%):	2%	3%	3%	35%		
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:	64	34	53	0		
% SAND:	33	64	44	15		
% FINES:	3	2	3	85		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED SAND WITH GRAVEL (SP)	POORLY GRADED GRAVEL WITH SAND (GP)	SILT WITH SAND (ML)		



PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2402
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	9	10	11	12		
LAB NO:	269	270	271	272		
DEPTH:	1-1.5	2-2.5	3.5-4.0	4.5-4.8		
TYPE:	BULK	AUGER	BULK	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%	90%	100%	100%		
25.0	82%	62%	87%	100%		
20.0	70%	60%	82%	100%		
12.5	61%	48%	68%	100%		
10.0	55%	45%	59%	100%		
5.0	42%	36%	38%	100%		
2.5	31%	28%	26%	99%		
1.25	23%	23%	18%	99%		
0.630	15%	17%	12%	98%		
0.315	7%	10%	7%	97%		
0.160	3%	5%	5%	94%		
0.080	2%	2%	3%	87%		
M.C.(%):	2%	2%	4%	34%		
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:	58	64	62	0		
% SAND:	40	33	35	13		
% FINES:	2	2	3	87		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	SILT (ML)		

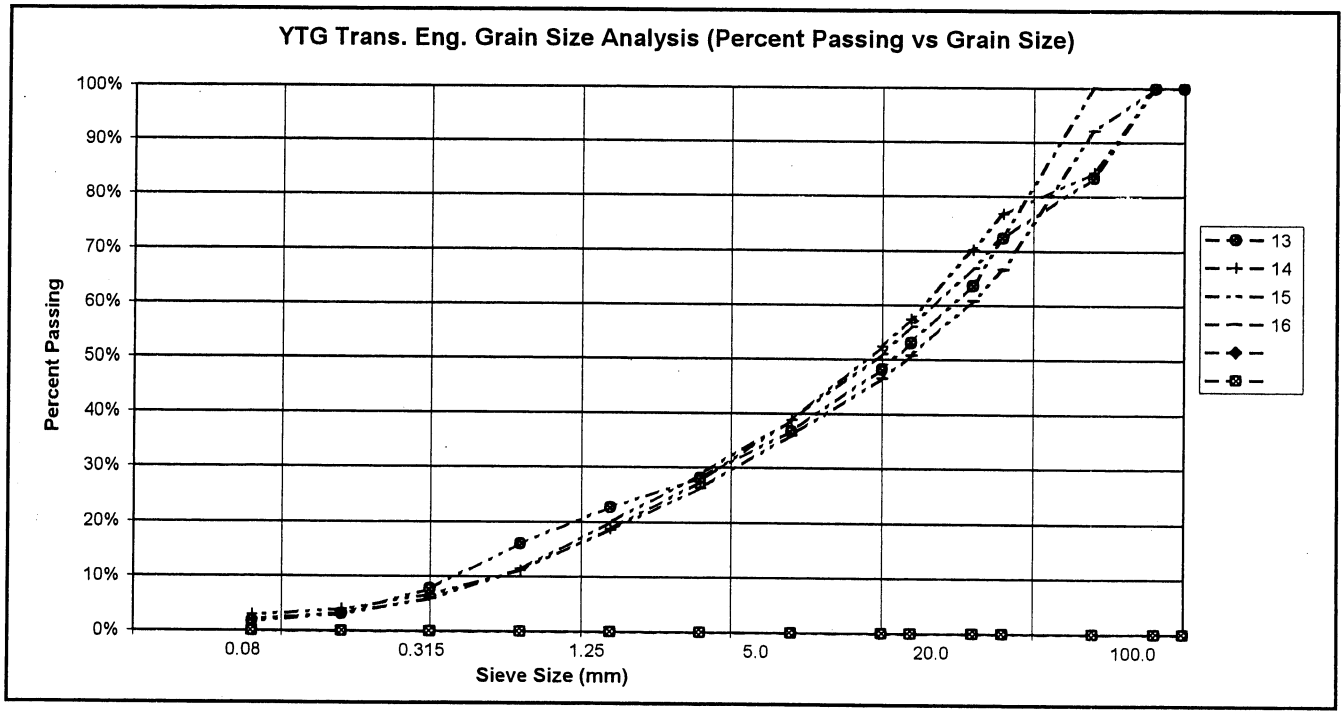


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Engineering Capital
PROJECT NAME: Shakwak Granular Investigation
PROJECT LOCATION: Km 1753 LHS Copper Joe Creek
DRILL UNIT: Koehring 6625 Backhoe
HOLE LOCATION: See Plan
LOGGED BY: JRP R.W.

HOLE No.: 636-2403

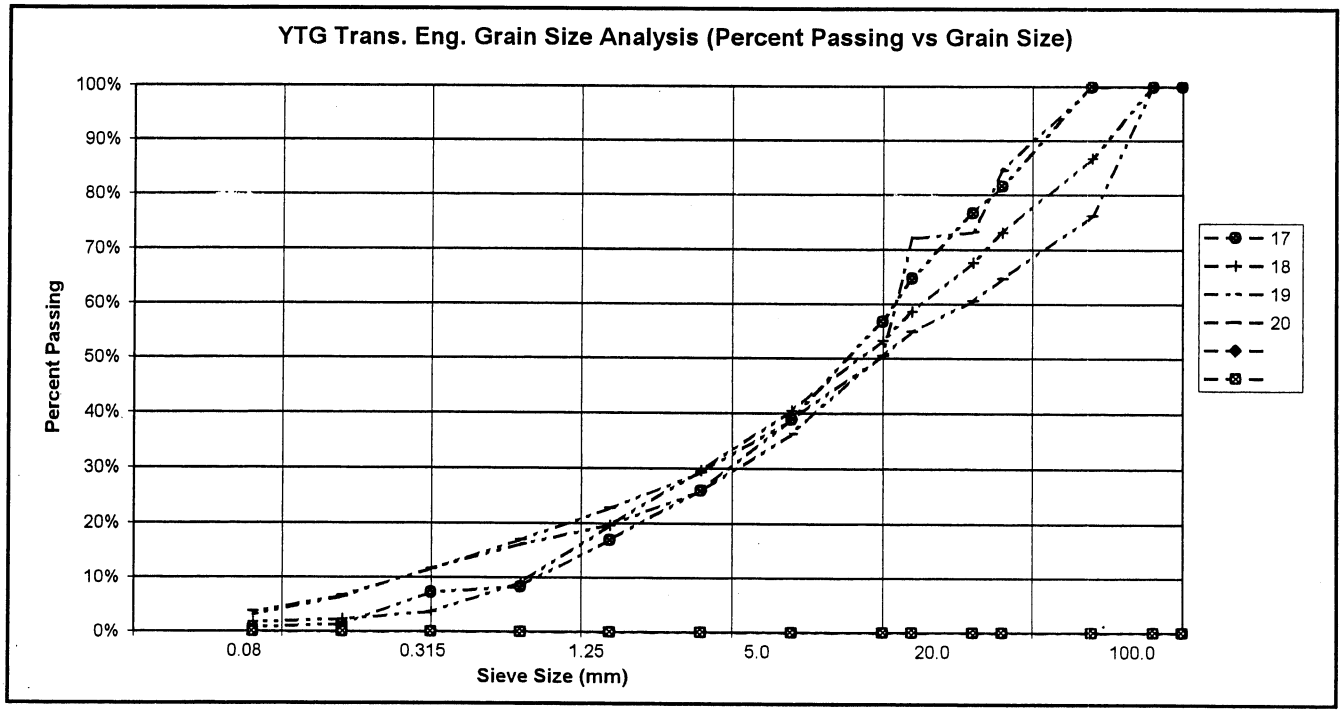
DATE COMP: Sept 2002

FIELD NO:	13	14	15	16		
LAB NO:	273	274	275	276		
DEPTH:	1-1.5	2-2.5	3.2-3.8	4-4.5		
TYPE:	BULK	AUGER	BULK	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	84%	84%	100%	92%		
25.0	72%	77%	73%	67%		
20.0	64%	70%	67%	61%		
12.5	53%	57%	56%	51%		
10.0	48%	52%	51%	47%		
5.0	37%	39%	39%	36%		
2.5	28%	27%	29%	26%		
1.25	23%	19%	20%	19%		
0.630	16%	11%	11%	11%		
0.315	8%	7%	6%	6%		
0.160	3%	4%	3%	3%		
0.080	2%	3%	2%	2%		
M.C.(%):	2%	3%	3%	4%		
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:	63	61	61	64		
% SAND:	35	36	37	34		
% FINES:	2	3	2	2		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		



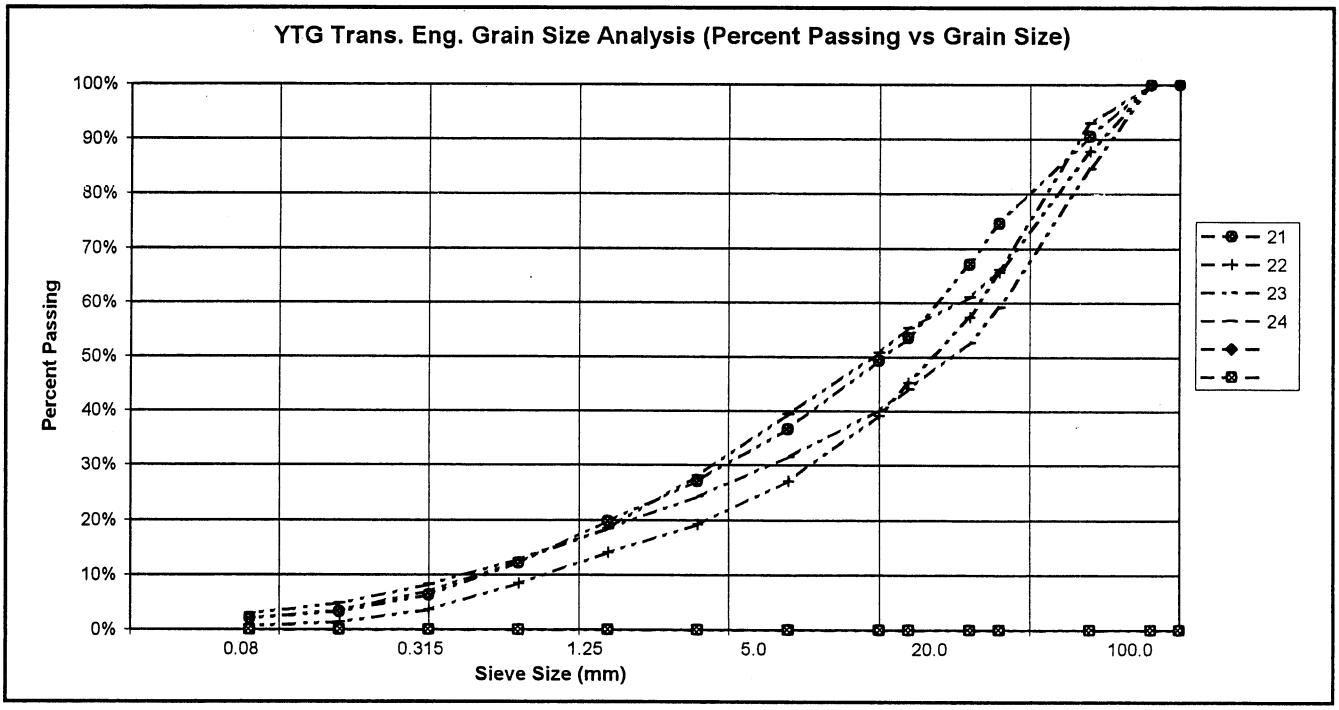
PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2404
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	17	18	19	20		
LAB NO:	277	278	279	280		
DEPTH:	1-1.5	2-2.5	3-3.5	4-4.5		
TYPE:	BULK	AUGER	BULK	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%	87%	100%	76%		
25.0	82%	73%	85%	65%		
20.0	77%	68%	73%	61%		
12.5	65%	59%	72%	55%		
10.0	57%	53%	51%	50%		
5.0	39%	41%	36%	39%		
2.5	26%	30%	26%	29%		
1.25	17%	20%	20%	23%		
0.630	8%	9%	16%	17%		
0.315	7%	4%	12%	12%		
0.160	1%	2%	6%	7%		
0.080	1%	2%	3%	4%		
M.C.(%):	2%	2%	3%	4%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	61	59	64	61		
% SAND:	38	39	33	35		
% FINES:	1	2	3	4		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED GRAVEL WITH SAND (GW)	POORLY GRADED GRAVEL WITH SAND (GP)		



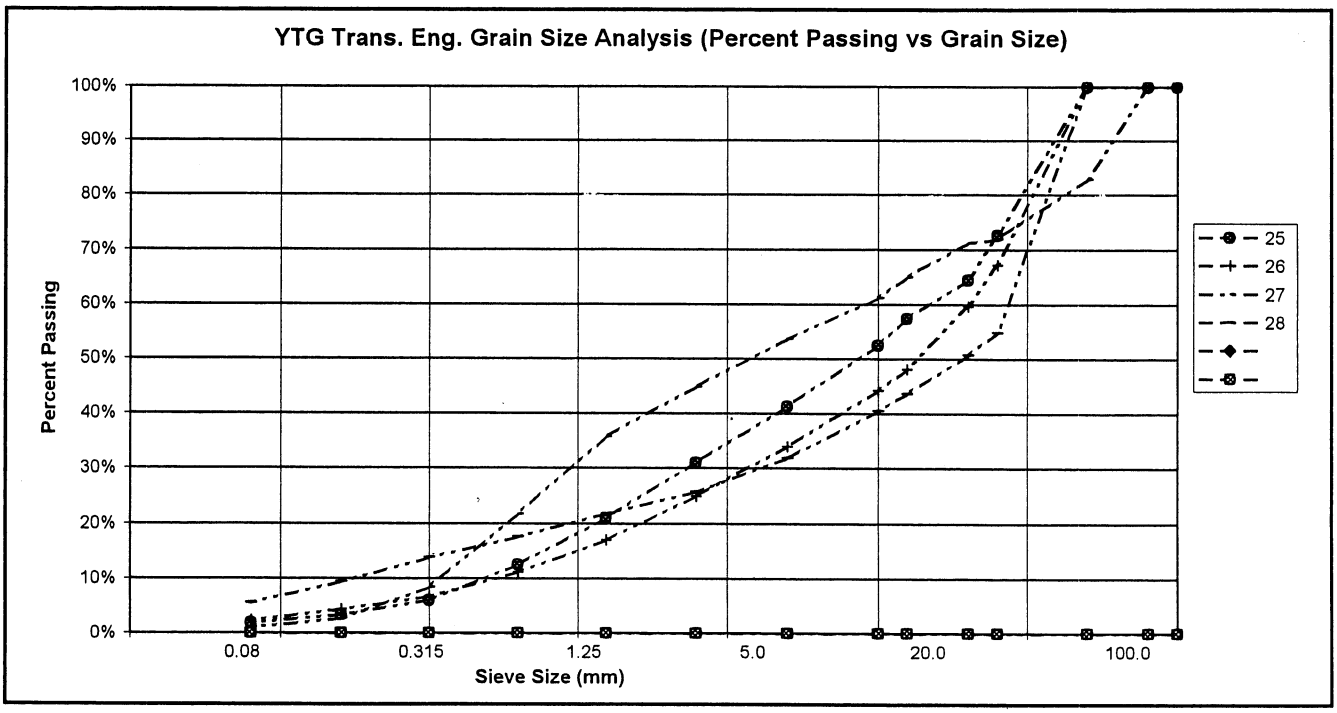
PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2405
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	21	22	23	24		
LAB NO:	281	282	283	284		
DEPTH:	1-1.5	2-2.5	3-3.5	4-4.5		
TYPE:	BULK	AUGER	BULK	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	91%	88%	85%	93%		
25.0	75%	66%	59%	66%		
20.0	67%	57%	53%	61%		
12.5	54%	45%	44%	55%		
10.0	49%	39%	40%	51%		
5.0	37%	27%	32%	39%		
2.5	27%	19%	24%	28%		
1.25	20%	14%	19%	18%		
0.630	12%	8%	12%	13%		
0.315	6%	4%	7%	8%		
0.160	3%	1%	3%	5%		
0.080	2%	1%	2%	3%		
M.C.(%):	3%	2%	2%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	63	73	68	61		
% SAND:	35	26	29	36		
% FINES:	2	1	2	3		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		



PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2406
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	25	26	27	28		
LAB NO:	285	286	287	288		
DEPTH:	1-1.5	2-2.5	3-3.5	4-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	83%	100%		
25.0	73%	67%	72%	55%		
20.0	64%	60%	71%	51%		
12.5	57%	48%	65%	44%		
10.0	52%	44%	61%	40%		
5.0	41%	34%	54%	32%		
2.5	31%	25%	45%	26%		
1.25	21%	17%	36%	22%		
0.630	13%	11%	22%	18%		
0.315	6%	7%	8%	14%		
0.160	3%	4%	3%	9%		
0.080	2%	2%	1%	5%		
M.C.(%):	2%	2%	3%	4%		
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:	59	66	46	68		
% SAND:	40	32	53	26		
% FINES:	2	2	1	5		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

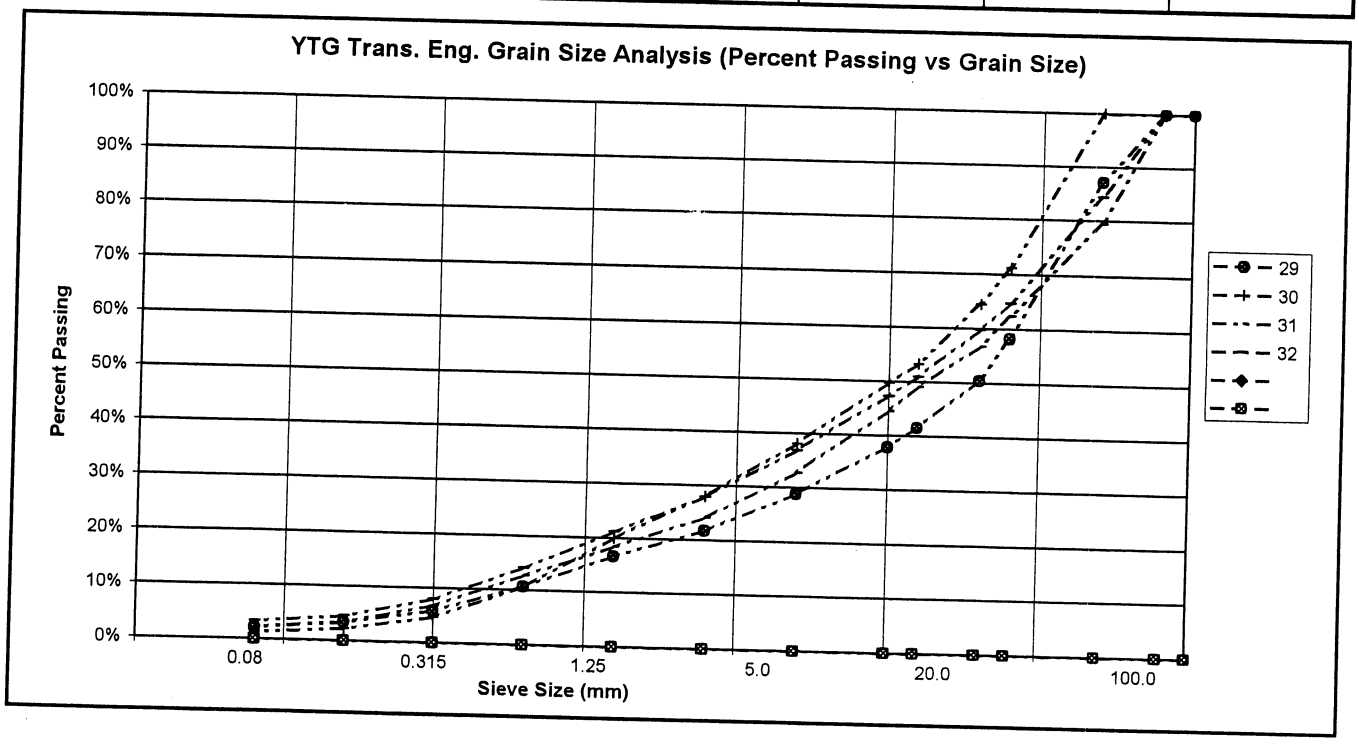


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Engineering Capital
PROJECT NAME: Shakwak Granular Investigation
PROJECT LOCATION: Km 1753 LHS Copper Joe Creek
DRILL UNIT: Koehring 6625 Backhoe
HOLE LOCATION: See Plan
LOGGED BY: JRP R.W.

HOLE No.: 636-2407

DATE COMP: Sept 2002

FIELD NO:	29	30	31	32		
LAB NO:	289	290	291	292		
DEPTH:	1-1.5	2-2.5	3-3.5	4.2-4.8		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	87%	100%	79%	84%		
25.0	58%	71%	62%	65%		
20.0	51%	64%	57%	60%		
12.5	42%	53%	49%	51%		
10.0	38%	50%	44%	47%		
5.0	29%	38%	33%	37%		
2.5	22%	28%	24%	28%		
1.25	17%	20%	18%	21%		
0.630	11%	11%	13%	14%		
0.315	6%	5%	7%	8%		
0.160	3%	2%	4%	5%		
0.080	2%	1%	2%	3%		
M.C.(%):	2%	2%	3%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	71	62	67	63		
% SAND:	27	37	30	34		
% FINES:	2	1	2	3		
CLASSIFICATION	WELL-GRADED GRAVEL WITH SAND (GW)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		

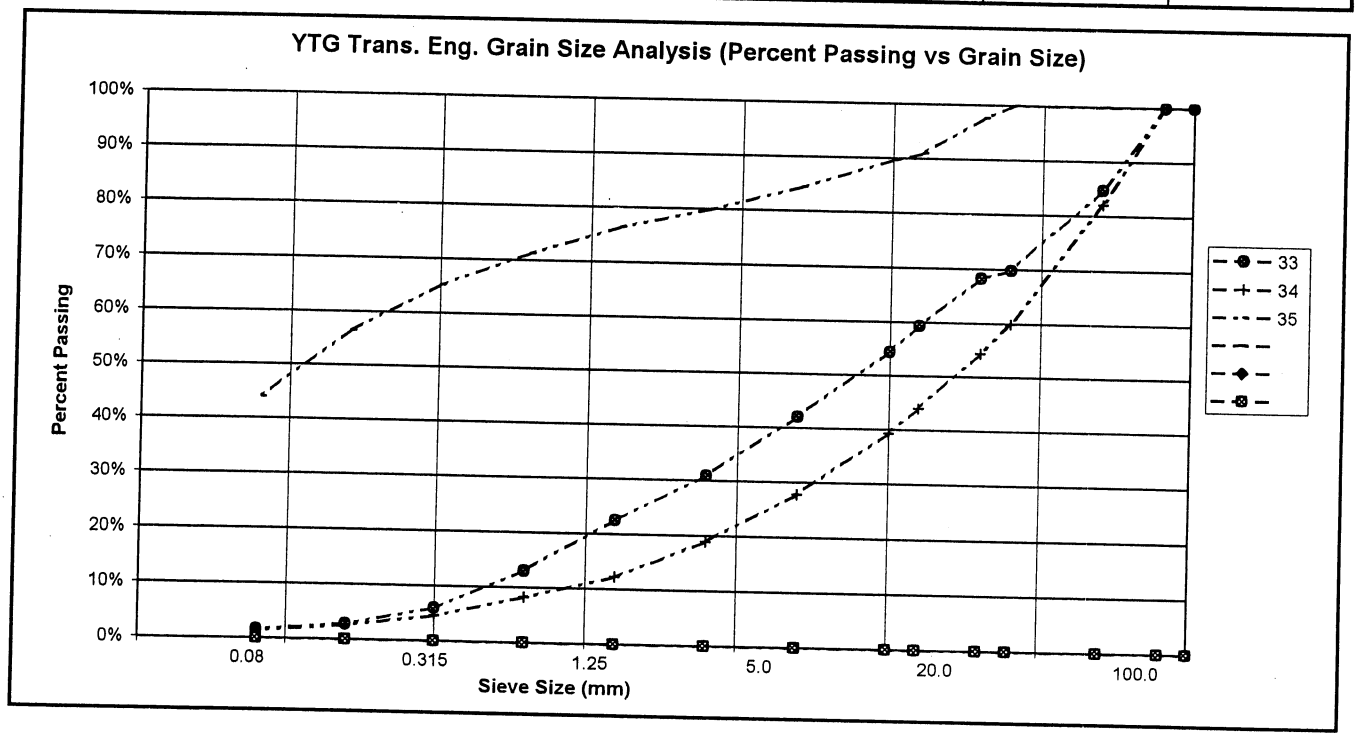


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Engineering Capital
PROJECT NAME: Shakwak Granular Investigation
PROJECT LOCATION: Km 1753 LHS Copper Joe Creek
DRILL UNIT: Koehring 6625 Backhoe
HOLE LOCATION: See Plan
LOGGED BY: JRP R.W.

HOLE No.: 636-2408

DATE COMP: Sept 2002

FIELD NO:	33	34	35			
LAB NO:	293	294	295			
DEPTH:	1.5-2.1	2.5-3.0	4.0-4.5			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	85%	82%	100%			
25.0	70%	60%	100%			
20.0	68%	54%	98%			
12.5	59%	44%	91%			
10.0	54%	39%	90%			
5.0	42%	28%	84%			
2.5	31%	19%	80%			
1.25	22%	12%	76%			
0.630	13%	8%	71%			
0.315	6%	5%	65%			
0.160	3%	3%	56%			
0.080	2%	1%	44%			
M.C.(%):	2%	2%	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:	58	72	16			
% SAND:	41	26	40			
% FINES:	2	1	44			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND WITH GRAVEL (SM)			

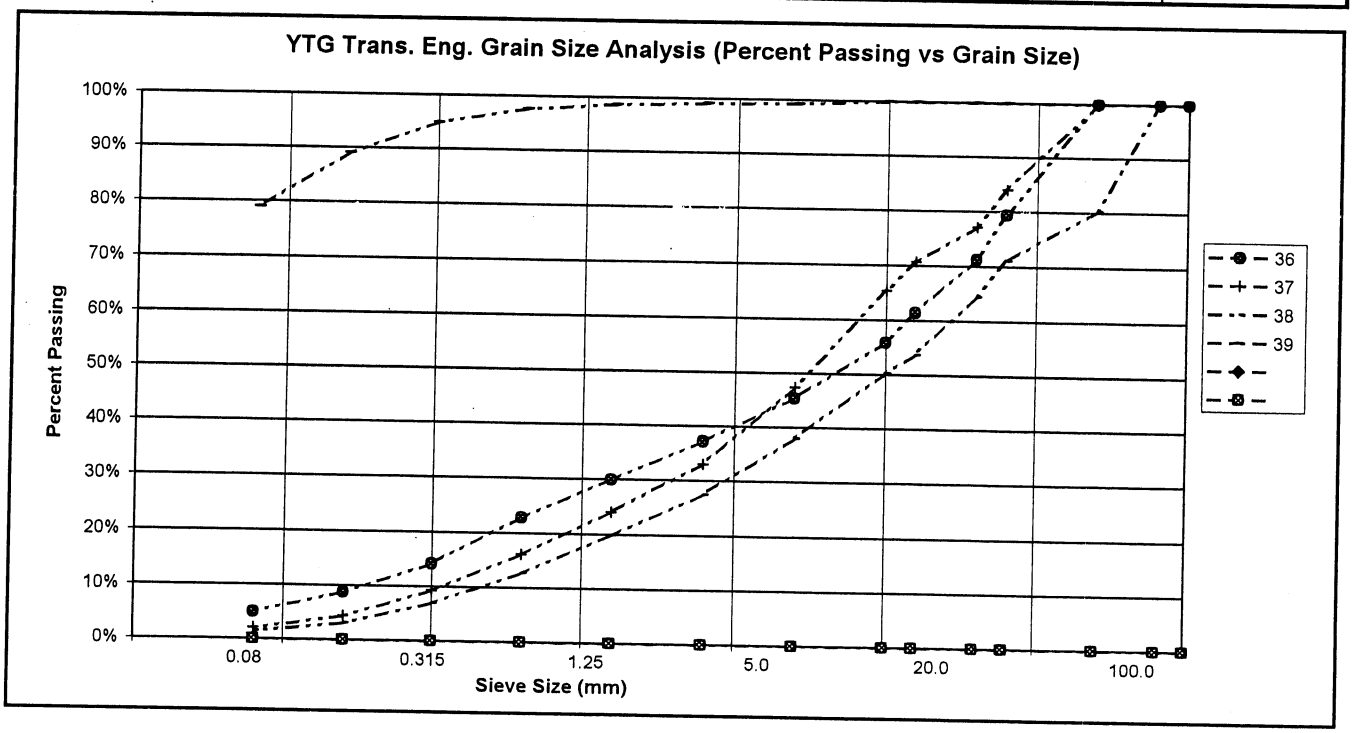


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Engineering Capital
PROJECT NAME: Shakwak Granular Investigation
PROJECT LOCATION: Km 1753 LHS Copper Joe Creek
DRILL UNIT: Koehring 6625 Backhoe
HOLE LOCATION: See Plan
LOGGED BY: JRP R.W.

HOLE No.: 636-2409

DATE COMP: Sept 2002

FIELD NO:	36	37	38	39		
LAB NO:	296	297	298	299		
DEPTH:	0.5-1.0	2-2.5	3.2-3.8	4.0-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	80%	100%		
25.0	79%	84%	71%	100%		
20.0	71%	77%	64%	100%		
12.5	61%	71%	54%	100%		
10.0	56%	65%	50%	100%		
5.0	45%	47%	38%	99%		
2.5	37%	33%	27%	99%		
1.25	30%	24%	20%	99%		
0.630	23%	16%	13%	98%		
0.315	14%	9%	7%	95%		
0.160	9%	4%	3%	89%		
0.080	5%	2%	1%	79%		
M.C.(%):	3%	2%	2%	34%		
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:	55	53	62	1		
% SAND:	41	45	37	20		
% FINES:	5	2	1	79		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	SILT WITH SAND (ML)		

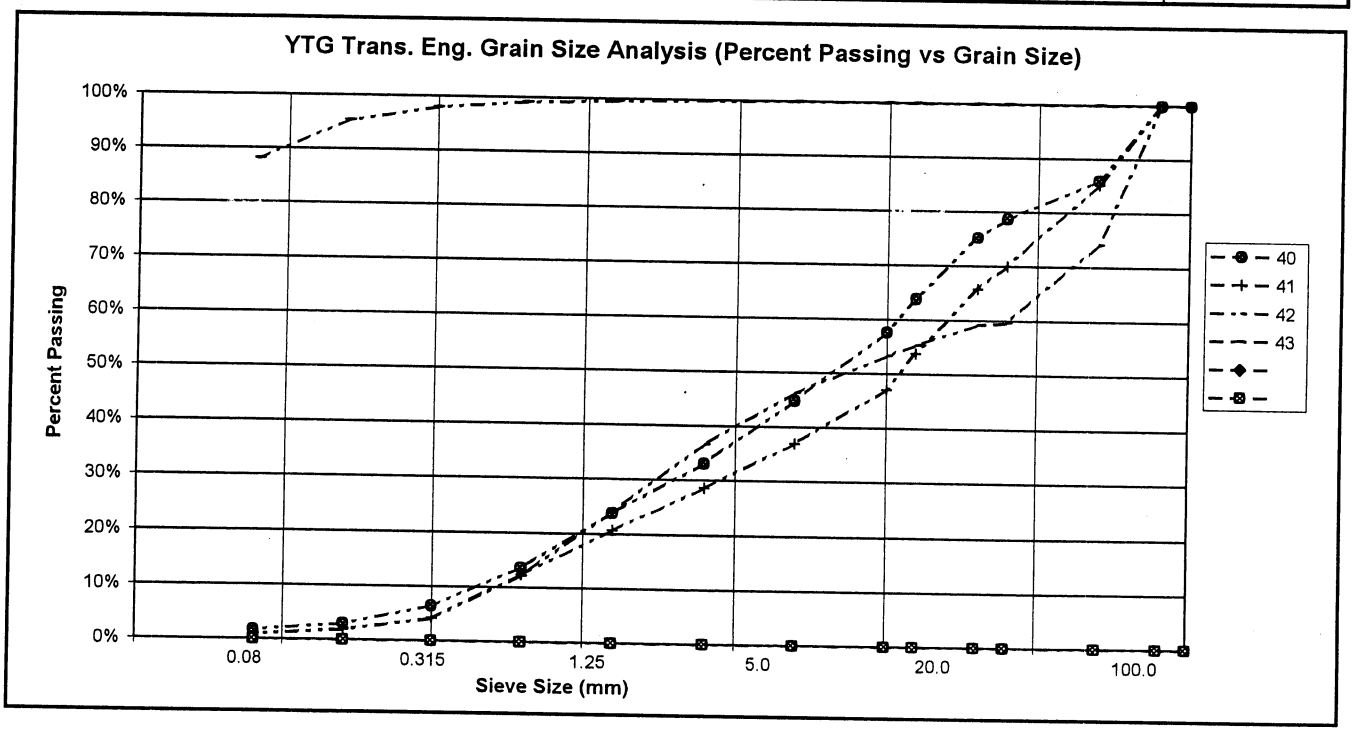


PROJECT NUMBER:	552-202101-0361-1
CLIENT:	Engineering Capital
PROJECT NAME:	Shakwak Granular Investigation
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek
DRILL UNIT:	Koehring 6625 Backhoe
HOLE LOCATION:	See Plan
LOGGED BY:	JRP R.W.

HOLE No.: 636-2410

DATE COMP: Sept 2002

FIELD NO:	40	41	42	43		
LAB NO:	300	301	302	303		
DEPTH:	0.8-1.2	2.0-2.5	3.2-3.8	4.2-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	86%	85%	74%	100%		
25.0	79%	70%	60%	100%		
20.0	75%	66%	59%	100%		
12.5	64%	54%	55%	100%		
10.0	58%	47%	53%	100%		
5.0	45%	37%	46%	100%		
2.5	33%	29%	37%	100%		
1.25	24%	21%	24%	100%		
0.630	14%	12%	12%	99%		
0.315	6%	4%	4%	98%		
0.160	3%	2%	2%	95%		
0.080	2%	1%	1%	88%		
M.C.(%):	2%	2%	1%	39%		
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:	55	63	54	0		
% SAND:	43	36	45	12		
% FINES:	2	1	1	88		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	SILT (ML)		

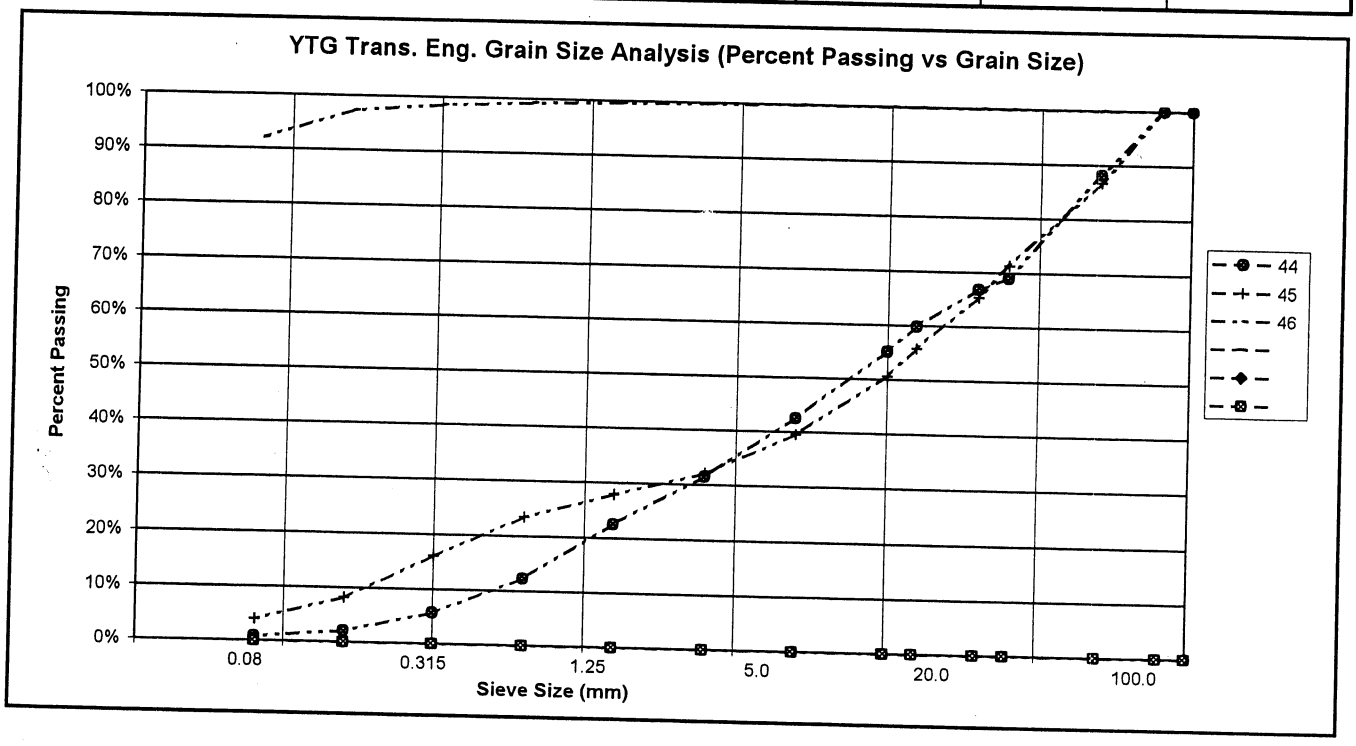


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Engineering Capital
PROJECT NAME: Shakwak Granular Investigation
PROJECT LOCATION: Km 1753 LHS Copper Joe Creek
DRILL UNIT: Koehring 6625 Backhoe
HOLE LOCATION: See Plan
LOGGED BY: JRP R.W.

HOLE No.: 636-2411

DATE COMP: Sept 2002

FIELD NO:	44	45	46			
LAB NO:	304	305	306			
DEPTH:	0.8-1.2	2.2-2.8	3.8-4.2			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	88%	87%	100%			
25.0	69%	71%	100%			
20.0	67%	65%	100%			
12.5	60%	56%	100%			
10.0	55%	51%	100%			
5.0	43%	40%	100%			
2.5	32%	32%	100%			
1.25	23%	28%	100%			
0.630	12%	23%	99%			
0.315	6%	16%	99%			
0.160	2%	8%	97%			
0.080	1%	4%	92%			
M.C.(%):	2%	2%	43%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	57	60	0			
% SAND:	42	36	8			
% FINES:	1	4	92			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	SILT (ML)			

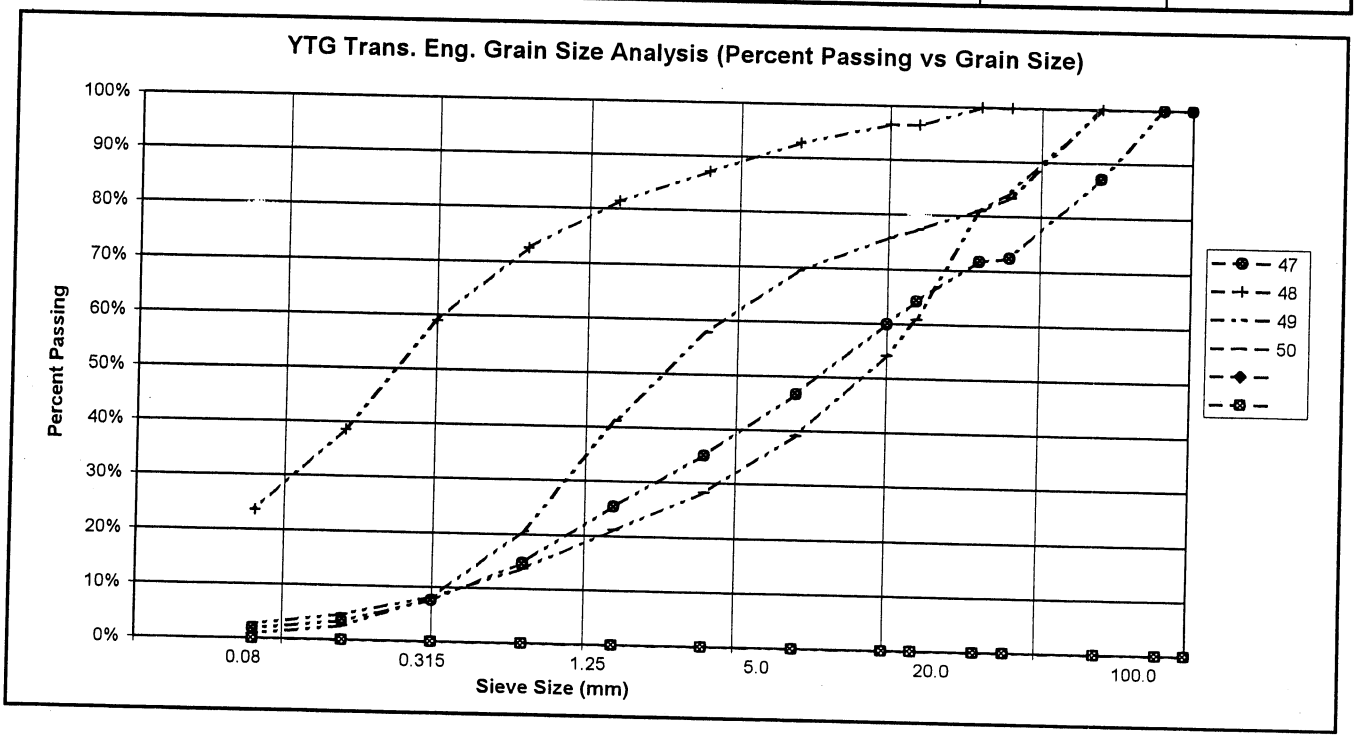


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Engineering Capital
PROJECT NAME: Shakwak Granular Investigation
PROJECT LOCATION: Km 1753 LHS Copper Joe Creek
DRILL UNIT: Koehring 6625 Backhoe
HOLE LOCATION: See Plan
LOGGED BY: JRP R.W.

HOLE No.: 636-2412

DATE COMP: Sept 2002

FIELD NO:	47	48	49	50		
LAB NO:	307	308	309	310		
DEPTH:	0.2-0.8	1.0-1.5	2.3-2.9	4.0-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	87%	100%	100%	100%		
25.0	72%	100%	84%	83%		
20.0	72%	100%	81%	81%		
12.5	64%	97%	77%	61%		
10.0	60%	97%	76%	54%		
5.0	47%	93%	69%	39%		
2.5	35%	87%	58%	28%		
1.25	25%	81%	41%	21%		
0.630	15%	73%	21%	14%		
0.315	8%	59%	8%	8%		
0.160	3%	39%	3%	5%		
0.080	2%	24%	1%	3%		
M.C.(%):	2%	12%	2%	4%		
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:	53	7	31	61		
% SAND:	45	69	68	36		
% FINES:	2	24	1	3		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND (SM)	POORLY GRADED SAND WITH GRAVEL (SP)	POORLY GRADED GRAVEL WITH SAND (GP)		

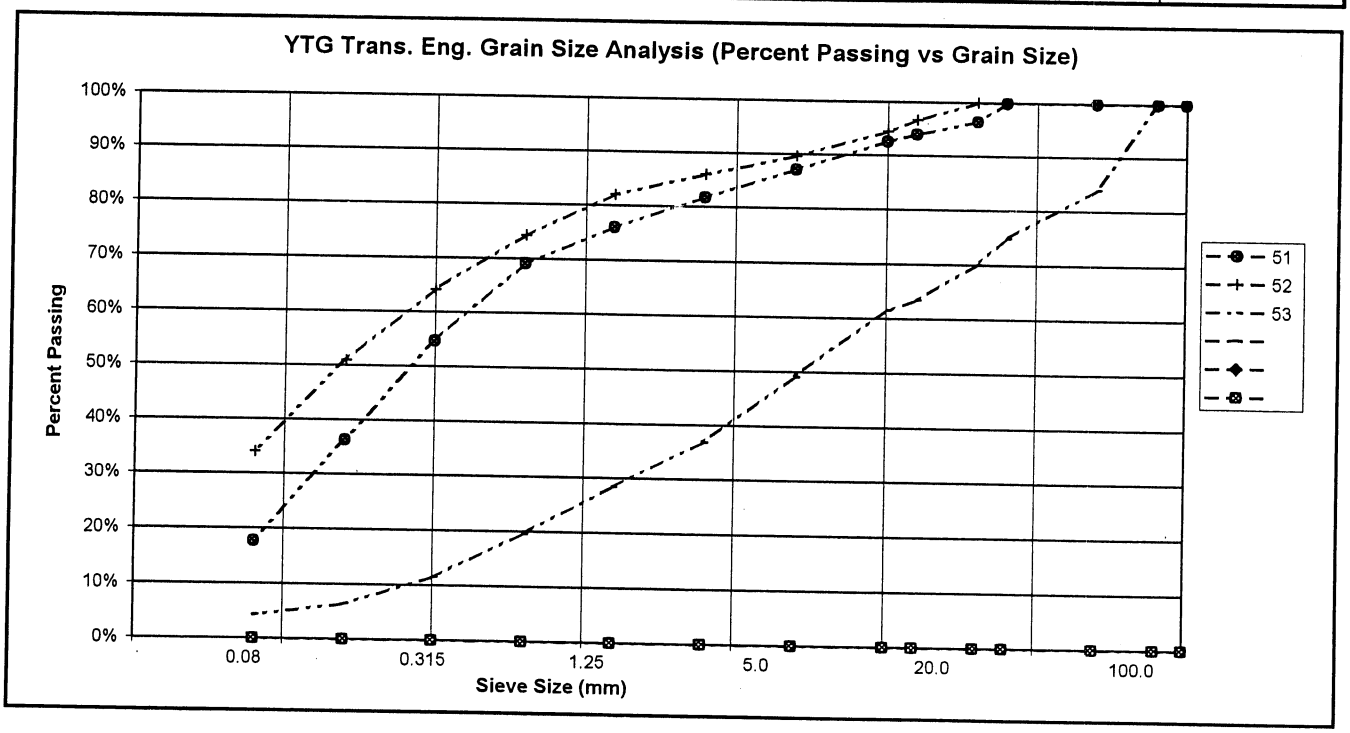


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Engineering Capital
PROJECT NAME: Shakwak Granular Investigation
PROJECT LOCATION: Km 1753 LHS Copper Joe Creek
DRILL UNIT: Koehring 6625 Backhoe
HOLE LOCATION: See Plan
LOGGED BY: JRP R.W.

HOLE No.: 636-2413

DATE COMP: Sept 2002

FIELD NO:	51	52	53			
LAB NO:	311	312	313			
DEPTH:	1.4-2.0	2.6-3.0	4-4.5			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	84%			
25.0	100%	100%	75%			
20.0	97%	100%	70%			
12.5	94%	97%	63%			
10.0	93%	94%	61%			
5.0	87%	90%	49%			
2.5	82%	86%	37%			
1.25	76%	82%	28%			
0.630	69%	74%	19%			
0.315	55%	64%	11%			
0.160	36%	51%	6%			
0.080	18%	34%	4%			
M.C.(%):	9%	14%	3%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	13	10	51			
% SAND:	69	56	45			
% FINES:	18	34	4			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND (SM)	POORLY GRADED GRAVEL WITH SAND (GP)			

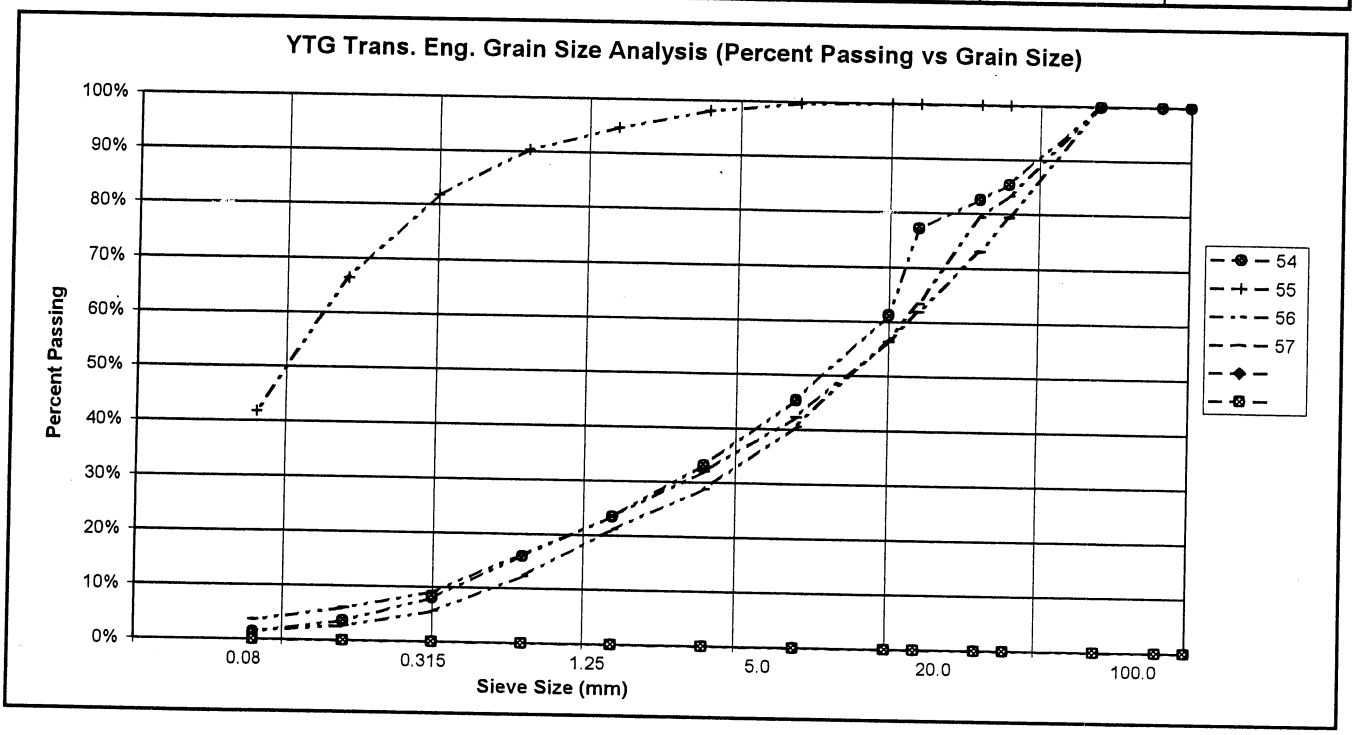


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Engineering Capital
PROJECT NAME: Shakwak Granular Investigation
PROJECT LOCATION: Km 1753 LHS Copper Joe Creek
DRILL UNIT: Koehring 6625 Backhoe
HOLE LOCATION: See Plan
LOGGED BY: JRP R.W.

HOLE No.: 636-2414

DATE COMP: Sept 2002

FIELD NO:	54	55	56	57		
LAB NO:	314	315	316	317		
DEPTH:	0.8-1.2	2.1-2.5	3.0-3.5	4-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	85%	100%	83%	79%		
20.0	83%	100%	79%	73%		
12.5	77%	100%	63%	62%		
10.0	61%	100%	57%	56%		
5.0	45%	100%	40%	42%		
2.5	33%	98%	29%	32%		
1.25	23%	95%	21%	23%		
0.630	16%	90%	12%	16%		
0.315	8%	82%	6%	9%		
0.160	4%	66%	3%	6%		
0.080	1%	42%	2%	4%		
M.C.(%):	2%	13%	2%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	55	0	60	58		
% SAND:	44	58	39	39		
% FINES:	1	42	2	4		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND (SM)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		

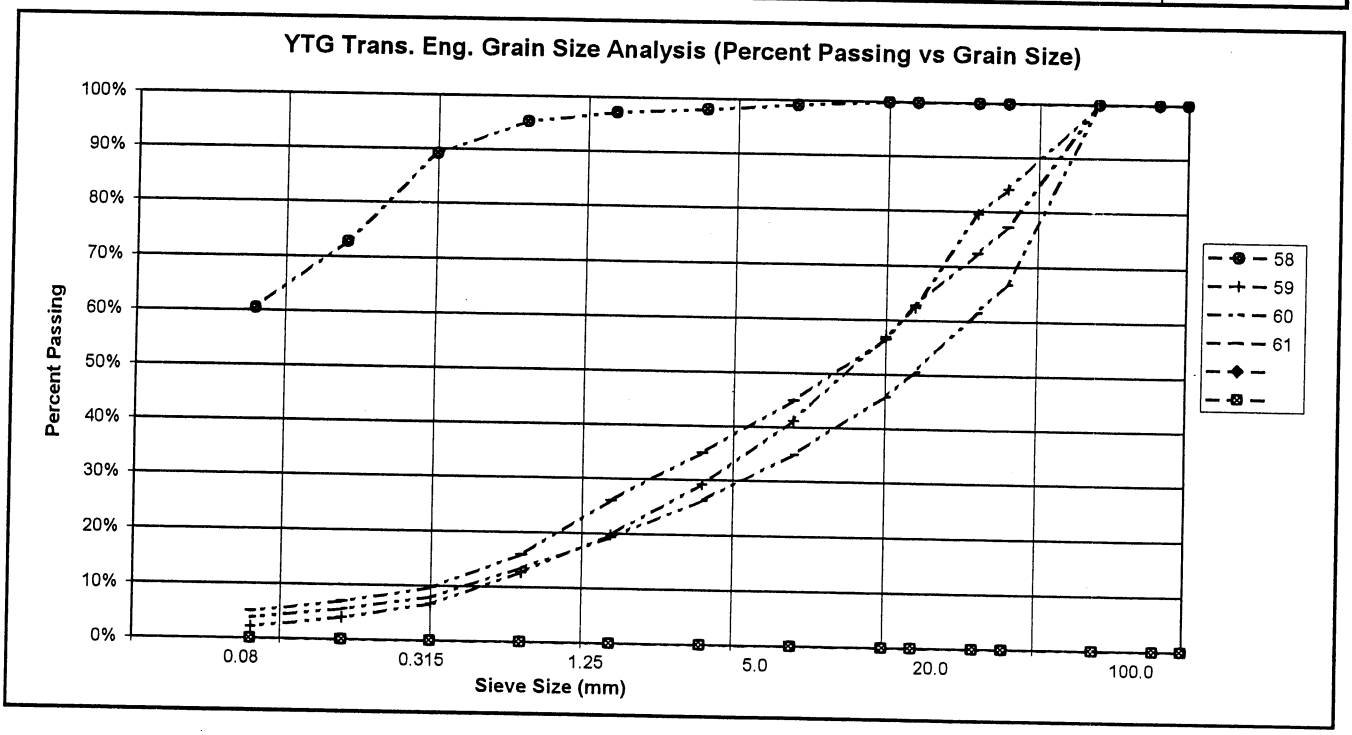


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Engineering Capital
PROJECT NAME: Shakwak Granular Investigation
PROJECT LOCATION: Km 1753 LHS Copper Joe Creek
DRILL UNIT: Koehring 6625 Backhoe
HOLE LOCATION: See Plan
LOGGED BY: JRP R.W.

HOLE No.: 636-2415

DATE COMP: Sept 2002

FIELD NO:	58	59	60	61		
LAB NO:	318	319	320	321		
DEPTH:	1.0-1.5	2.0-2.5	3.0-3.5	4.0-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	84%	67%	77%		
20.0	100%	80%	62%	72%		
12.5	100%	62%	51%	63%		
10.0	100%	57%	46%	56%		
5.0	99%	41%	35%	45%		
2.5	98%	29%	26%	35%		
1.25	97%	20%	19%	26%		
0.630	95%	13%	13%	16%		
0.315	89%	7%	8%	10%		
0.160	73%	4%	5%	7%		
0.080	60%	2%	4%	5%		
M.C.(%):	28%	2%	3%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	1	59	65	55		
% SAND:	39	39	31	40		
% FINES:	60	2	4	5		
CLASSIFICATION	SANDY SILT (ML)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		

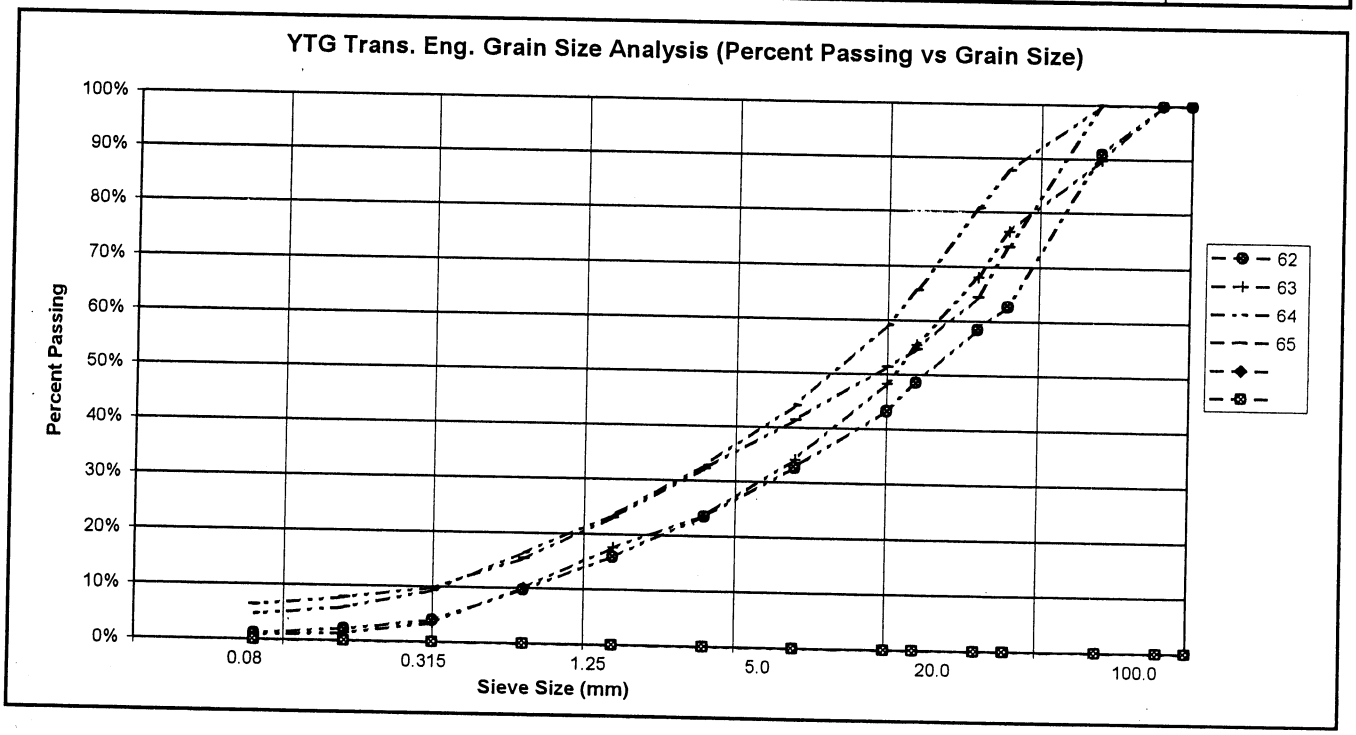


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Engineering Capital
PROJECT NAME: Shakwak Granular Investigation
PROJECT LOCATION: Km 1753 LHS Copper Joe Creek
DRILL UNIT: Koehring 6625 Backhoe
HOLE LOCATION: See Plan
LOGGED BY: JRP R.W.

HOLE No.: 636-2416

DATE COMP: Sept 2002

FIELD NO:	62	63	64	65		
LAB NO:	322	323	324	325		
DEPTH:	1.0-1.5	2.0-2.5	3.0-3.5	4.0-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	91%	90%	100%	100%		
25.0	63%	76%	88%	74%		
20.0	58%	68%	81%	64%		
12.5	49%	56%	66%	55%		
10.0	43%	48%	59%	51%		
5.0	33%	34%	44%	41%		
2.5	24%	24%	33%	32%		
1.25	16%	18%	23%	23%		
0.630	10%	10%	16%	15%		
0.315	4%	4%	9%	10%		
0.160	2%	1%	6%	8%		
0.080	1%	1%	5%	6%		
M.C.(%):	4%	2%	4%	4%		
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:	67	66	56	59		
% SAND:	32	33	39	35		
% FINES:	1	1	5	6		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

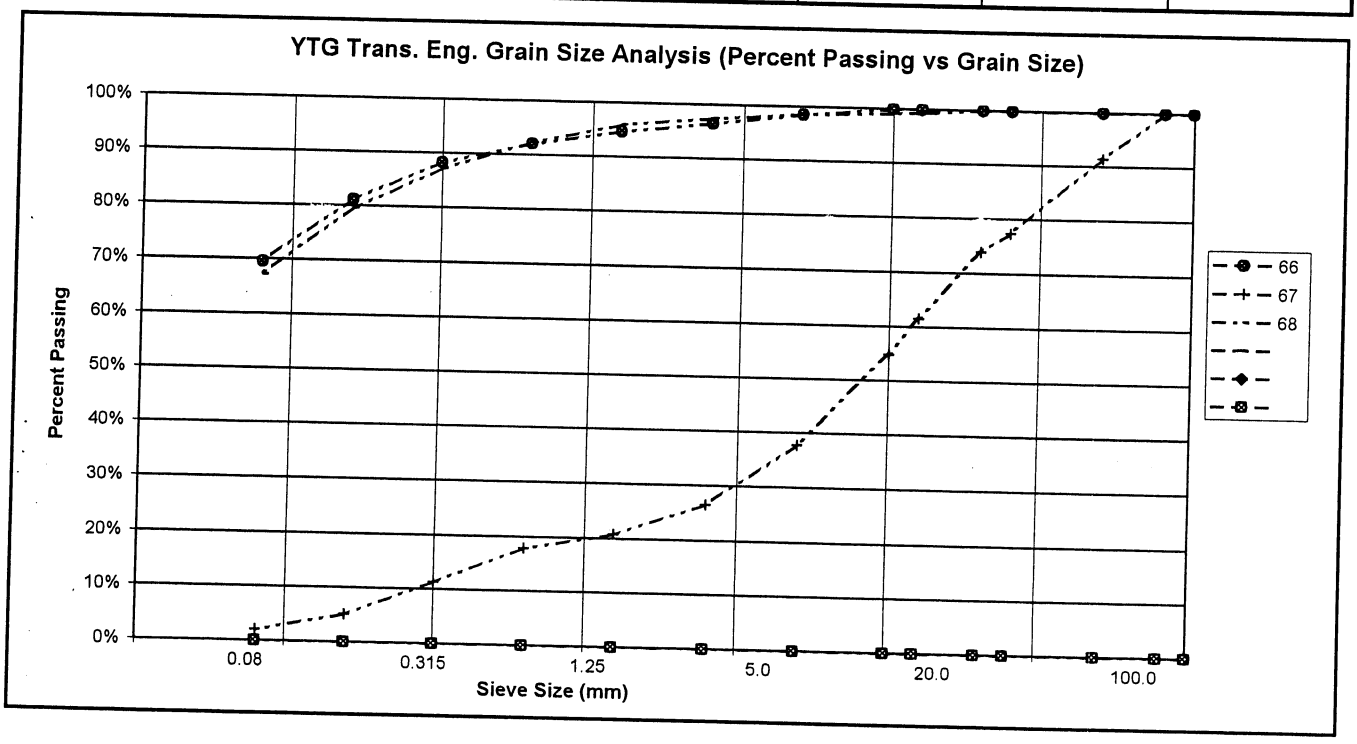


PROJECT NUMBER:	552-202101-0361-1
CLIENT:	Engineering Capital
PROJECT NAME:	Shakwak Granular Investigation
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek
DRILL UNIT:	Koehring 6625 Backhoe
HOLE LOCATION:	See Plan
LOGGED BY:	JRP R.W.

HOLE No.: 636-2417

DATE COMP: Sept 2002

FIELD NO:	66	67	68			
LAB NO:	626	627	628			
DEPTH:	1.2-1.8	2.6-3.0	4.2-4.5			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	91%	100%			
25.0	100%	77%	100%			
20.0	100%	74%	100%			
12.5	100%	61%	99%			
10.0	100%	55%	99%			
5.0	99%	38%	99%			
2.5	97%	26%	98%			
1.25	95%	21%	96%			
0.630	92%	18%	92%			
0.315	88%	11%	87%			
0.160	81%	5%	80%			
0.080	70%	2%	67%			
M.C.(%):	34%	3%	31%			
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:	1	62	1			
% SAND:	29	36	31			
% FINES:	70	2	67			
CLASSIFICATION	SANDY SILT (ML)	WELL-GRADED GRAVEL WITH SAND (GW)	SANDY SILT (ML)			

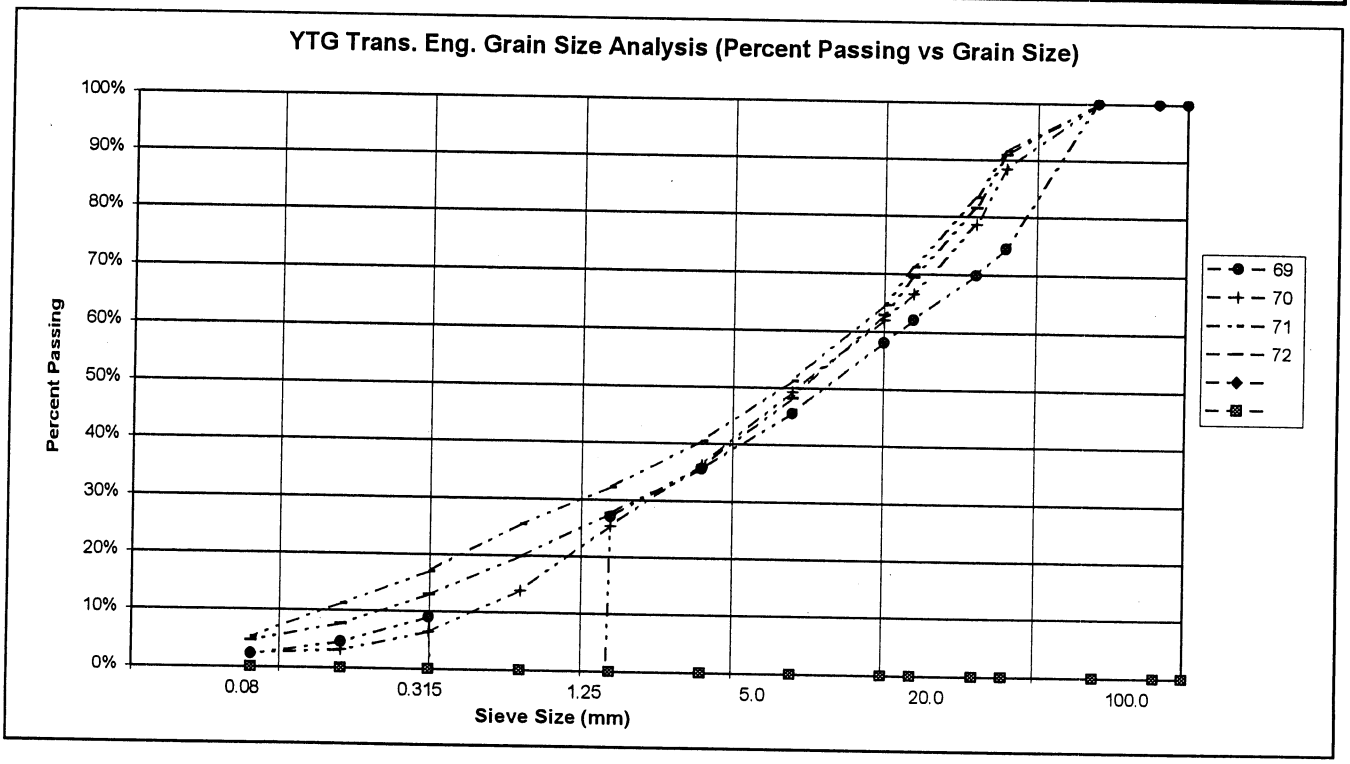


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Engineering Capital
PROJECT NAME: Shakwak Granular Investigation
PROJECT LOCATION: Km 1753 LHS Copper Joe Creek
DRILL UNIT: Koehring 6625 Backhoe
HOLE LOCATION: See Plan
LOGGED BY: JRP R.W.

HOLE No.: 636-2418

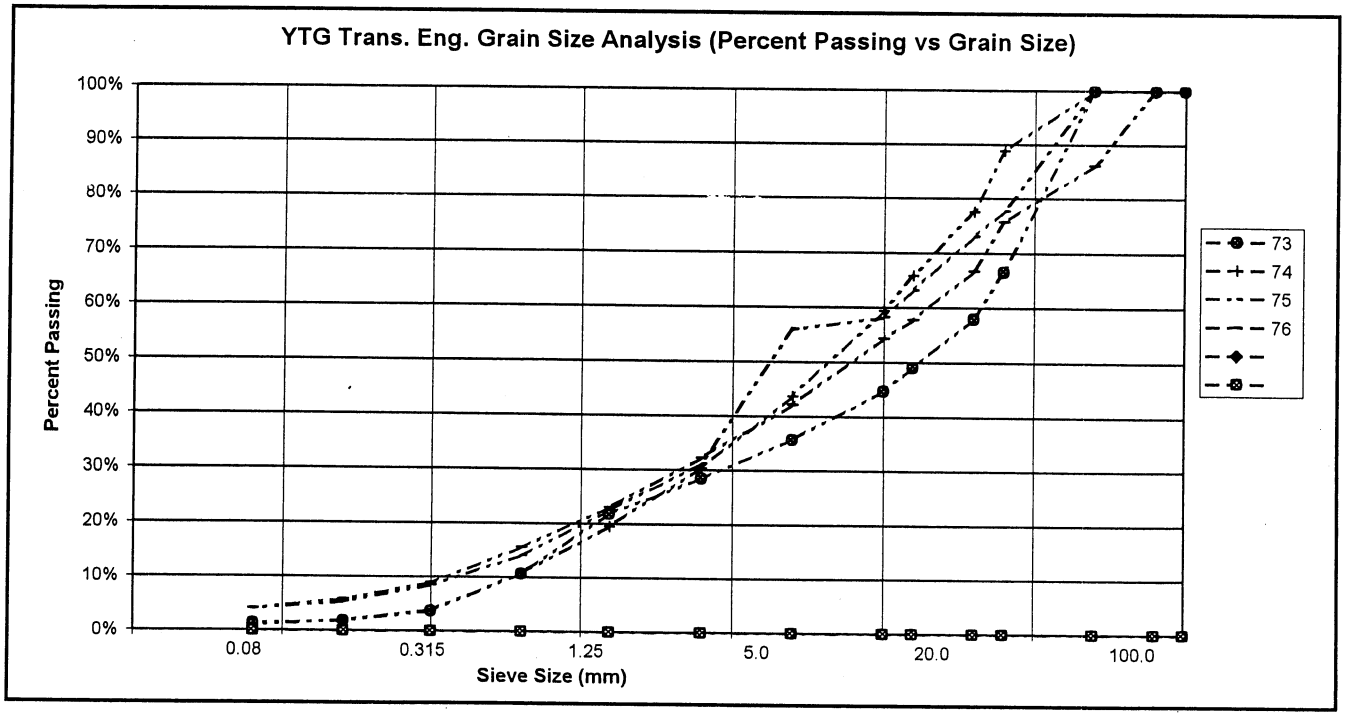
DATE COMP: Sept 2002

FIELD NO:	69	70	71	72		
LAB NO:	329	330	331	332		
DEPTH:	0.5-1.0	2.0-2.5	3.5-4.0	4.2-4.8		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	75%	88%	92%	91%		
20.0	70%	79%	83%	82%		
12.5	62%	67%	71%	69%		
10.0	58%	62%	65%	63%		
5.0	46%	49%	51%	48%		
2.5	36%	36%	40%	36%		
1.25	27%	25%	32%	28%		
0.630	-655%	14%	26%	20%		
0.315	9%	6%	17%	13%		
0.160	5%	3%	11%	8%		
0.080	2%	2%	5%	5%		
M.C.(%):	3%	4%	6%	6%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	54	51	49	52		
% SAND:	43	47	46	44		
% FINES:	2	2	5	5		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)		



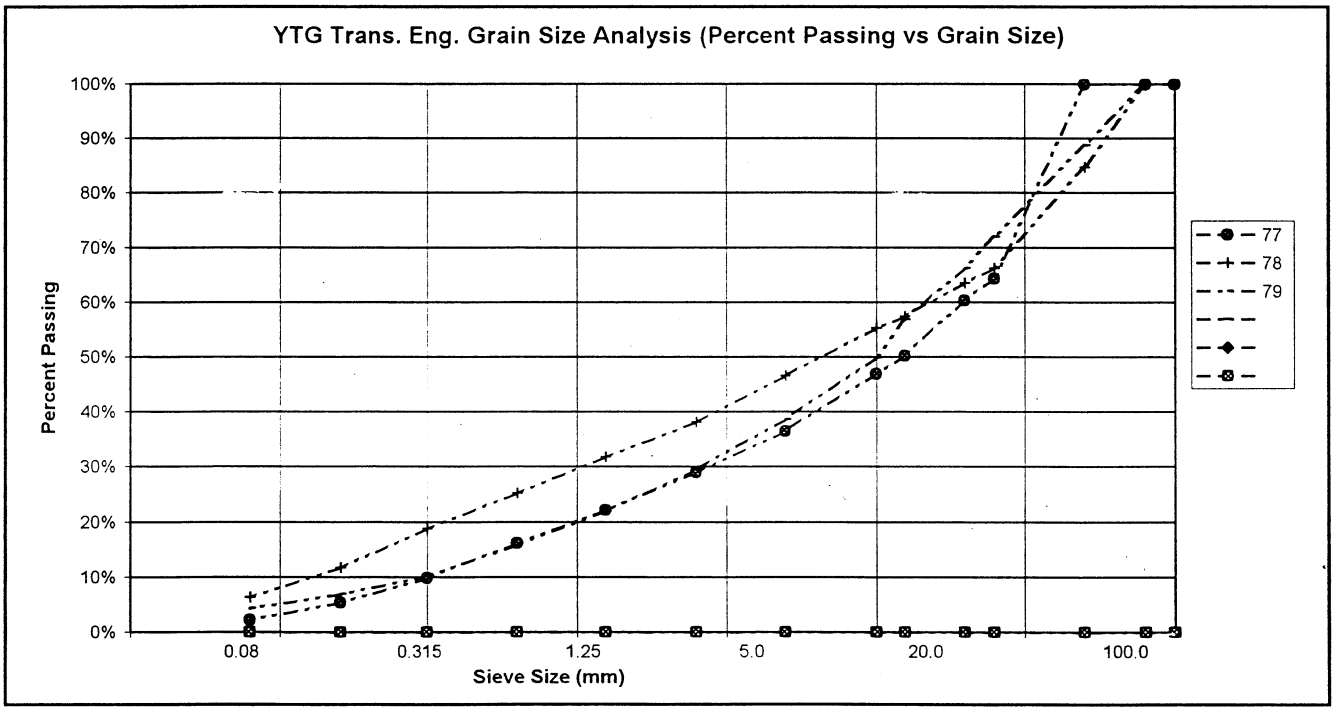
PROJECT NUMBER:	552-202101-0361-1	HOLE No.: 636-2419
CLIENT:	Engineering Capital	
PROJECT NAME:	Shakwak Granular Investigation	
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek	
DRILL UNIT:	Koehring 6625 Backhoe	
HOLE LOCATION:	See Plan	
LOGGED BY:	JRP R.W.	DATE COMP: Sept 2002

FIELD NO:	73	74	75	76		
LAB NO:	333	334	335	336		
DEPTH:	0.6-1.2	2.2-2.8	3.2-3.8	4.0-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	86%		
25.0	67%	89%	78%	76%		
20.0	58%	78%	73%	67%		
12.5	49%	66%	63%	58%		
10.0	45%	59%	58%	54%		
5.0	36%	44%	56%	42%		
2.5	28%	30%	31%	32%		
1.25	22%	19%	22%	23%		
0.630	11%	11%	14%	16%		
0.315	4%	4%	8%	9%		
0.160	2%	2%	5%	6%		
0.080	1%	1%	4%	4%		
M.C.(%):	2%	2%	4%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	64	56	44	58		
% SAND:	34	43	52	38		
% FINES:	1	1	4	4		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SAND (GP)		



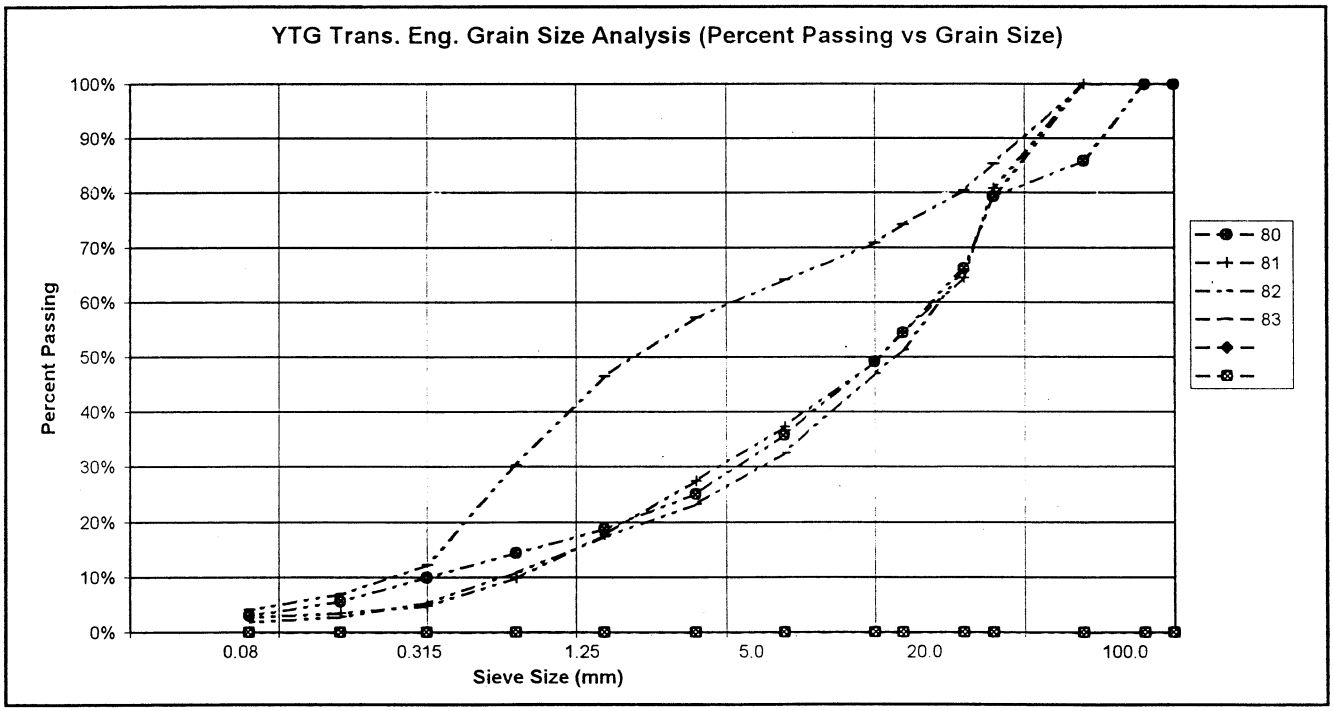
PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2420
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	77	78	79			
LAB NO:	337	338	339			
DEPTH:	1.0-1.5	3.0-3.5	4.4-4.8			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	85%	89%			
25.0	64%	66%	72%			
20.0	60%	64%	66%			
12.5	50%	57%	57%			
10.0	47%	55%	50%			
5.0	36%	47%	39%			
2.5	29%	38%	30%			
1.25	22%	32%	22%			
0.630	16%	25%	16%			
0.315	10%	19%	10%			
0.160	5%	12%	7%			
0.080	2%	6%	4%			
M.C.(%):	2%	3%	3%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	64	53	61			
% SAND:	34	40	34			
% FINES:	2	6	4			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)			



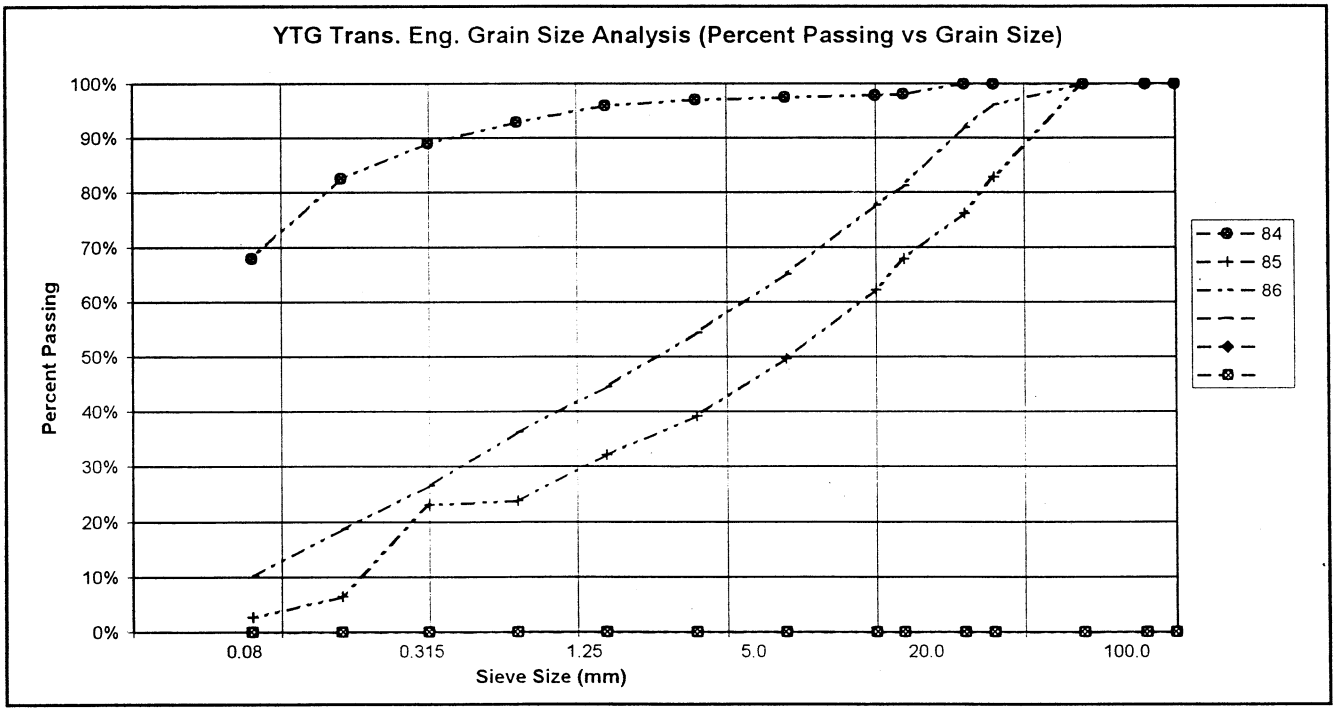
PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2421
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	80	81	82	83		
LAB NO:	340	341	342	343		
DEPTH:	1.0-1.6	2.0-2.6	3.0-3.6	4.0-4.6		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	86%	100%	100%	100%		
25.0	79%	81%	79%	85%		
20.0	66%	64%	66%	80%		
12.5	55%	54%	51%	74%		
10.0	49%	49%	47%	71%		
5.0	36%	37%	33%	64%		
2.5	25%	27%	23%	57%		
1.25	19%	18%	17%	46%		
0.630	14%	10%	11%	30%		
0.315	10%	5%	5%	12%		
0.160	6%	4%	3%	7%		
0.080	3%	3%	2%	4%		
M.C.(%):	2%	3%	3%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	64	63	67	36		
% SAND:	33	35	31	60		
% FINES:	3	3	2	4		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH GRAVEL (SW)		



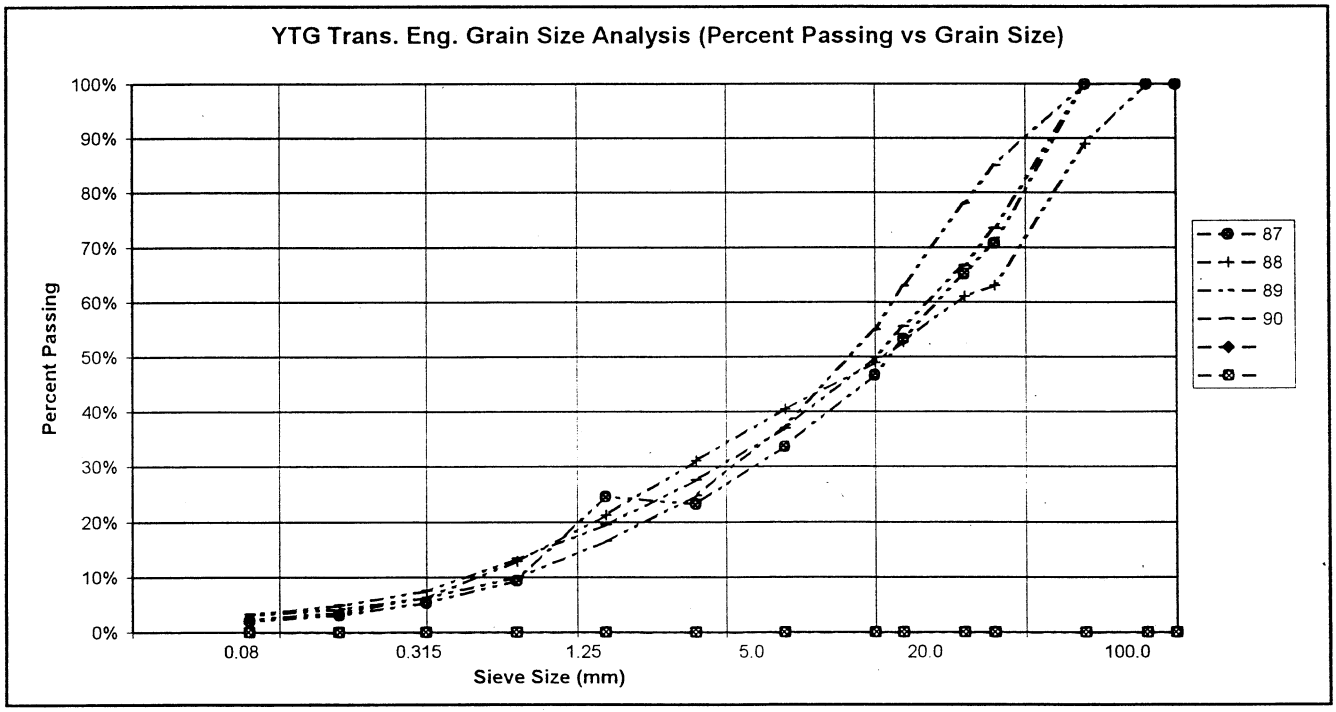
PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2422
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	84	85	86			
LAB NO:	344	345	346			
DEPTH:	1.2-1.8	3.0-3.5	4.2-4.8			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	83%	96%			
20.0	100%	76%	92%			
12.5	98%	68%	81%			
10.0	98%	62%	78%			
5.0	98%	50%	65%			
2.5	97%	39%	54%			
1.25	96%	32%	45%			
0.630	93%	24%	36%			
0.315	89%	23%	27%			
0.160	83%	6%	19%			
0.080	68%	3%	10%			
M.C.(%):	34%	3%	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:	2	50	35			
% SAND:	30	47	55			
% FINES:	68	3	10			
CLASSIFICATION	SANDY SILT (ML)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)			



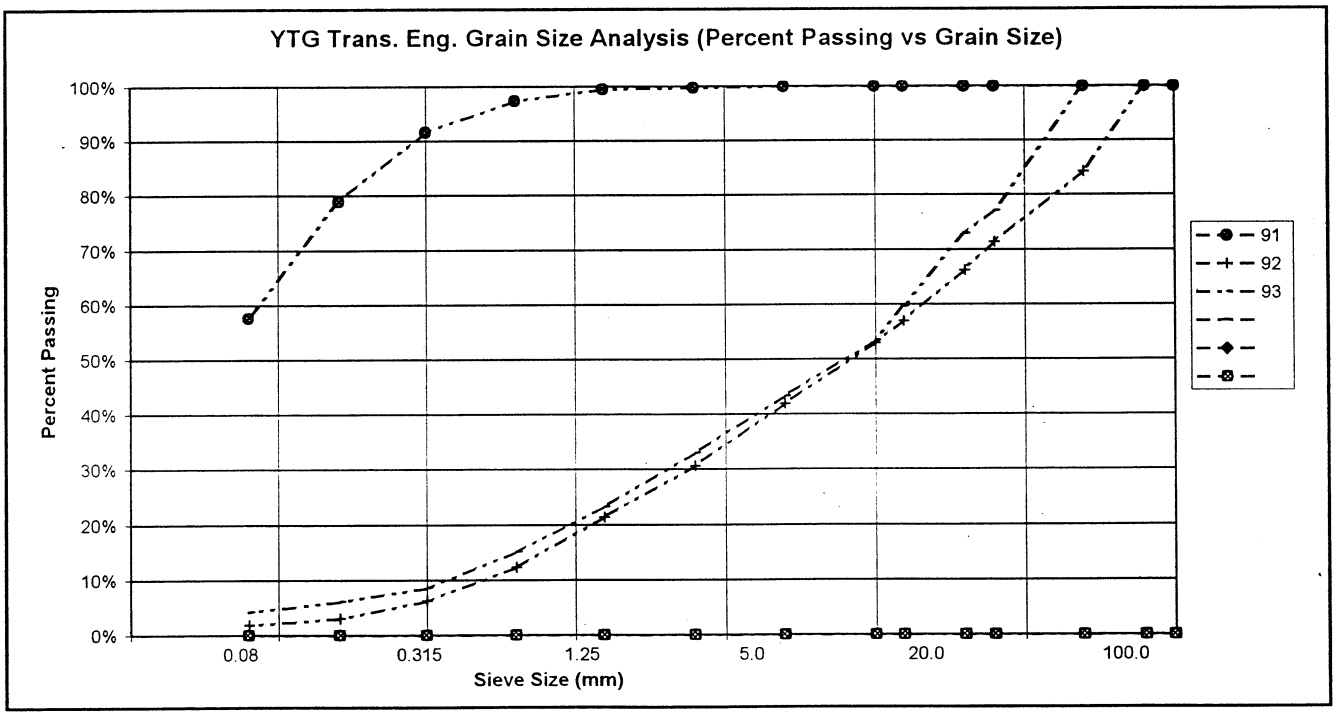
PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2423
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	87	88	89	90		
LAB NO:	347	348	349	350		
DEPTH:	1.0-1.5	2.0-2.5	3.2-3.8	4.3-4.9		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	89%	100%	100%		
25.0	71%	63%	85%	73%		
20.0	65%	61%	78%	67%		
12.5	53%	53%	63%	55%		
10.0	47%	49%	55%	50%		
5.0	34%	40%	38%	37%		
2.5	23%	31%	25%	28%		
1.25	25%	21%	17%	19%		
0.630	9%	13%	10%	13%		
0.315	5%	6%	6%	8%		
0.160	3%	4%	4%	5%		
0.080	2%	2%	3%	3%		
M.C.(%):	5%	4%	4%	4%		
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:	66	60	62	63		
% SAND:	31	38	34	34		
% FINES:	2	2	3	3		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		



PROJECT NUMBER:	552-202101-0361-1	HOLE No.: 636-2424
CLIENT:	Engineering Capital	
PROJECT NAME:	Shakwak Granular Investigation	
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek	
DRILL UNIT:	Koehring 6625 Backhoe	
HOLE LOCATION:	See Plan	
LOGGED BY:	JRP R.W.	DATE COMP: Sept 2002

FIELD NO:	91	92	93			
LAB NO:	351	352	353			
DEPTH:	1.0-1.4	2.5-3.0	4.0-4.5			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	84%	100%			
25.0	100%	71%	77%			
20.0	100%	66%	73%			
12.5	100%	57%	60%			
10.0	100%	53%	53%			
5.0	100%	42%	43%			
2.5	100%	31%	33%			
1.25	99%	21%	23%			
0.630	97%	12%	15%			
0.315	92%	6%	9%			
0.160	79%	3%	6%			
0.080	58%	2%	4%			
M.C.(%):	19%	2%	3%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	0	58	57			
% SAND:	42	40	39			
% FINES:	58	2	4			
CLASSIFICATION	SANDY SILT (ML)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			

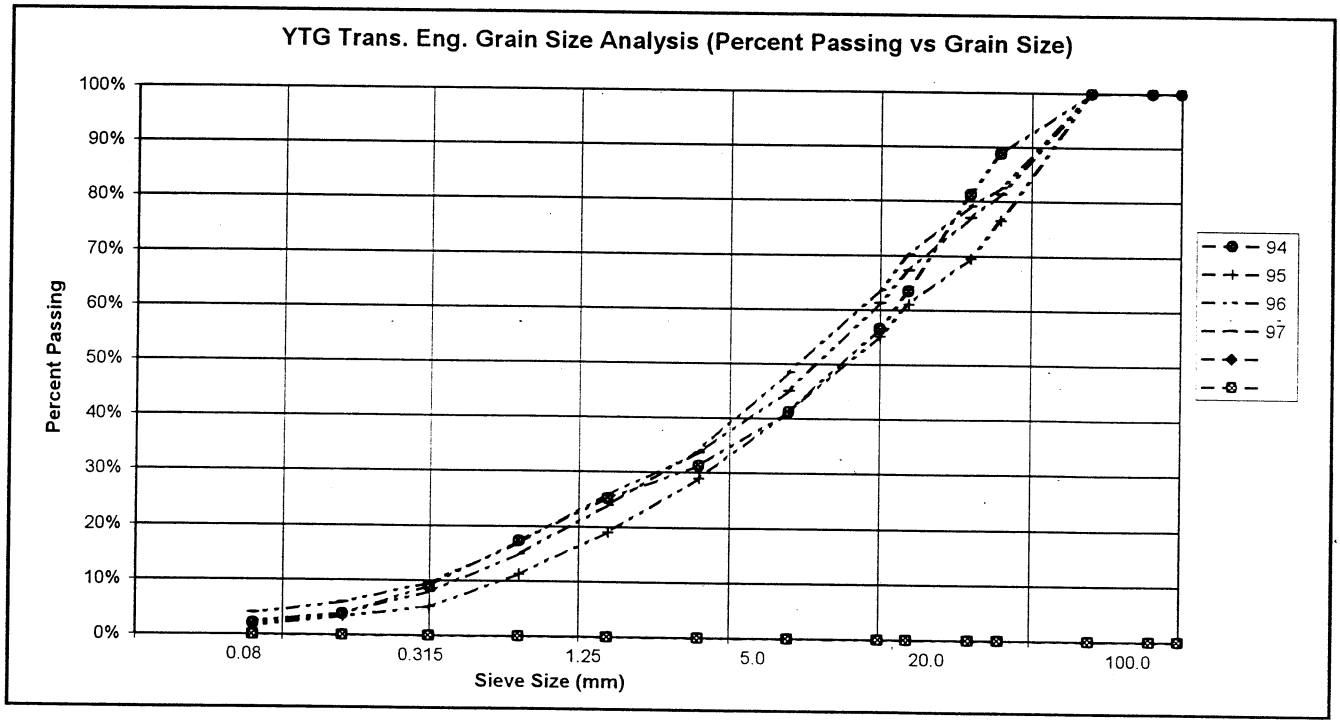


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Engineering Capital
PROJECT NAME: Shakwak Granular Investigation
PROJECT LOCATION: Km 1753 LHS Copper Joe Creek
DRILL UNIT: Koehring 6625 Backhoe
HOLE LOCATION: See Plan
LOGGED BY: JRP R.W.

HOLE No.: 636-2425

DATE COMP: Sept 2002

FIELD NO:	94	95	96	97		
LAB NO:	354	355	356	357		
DEPTH:	1.0-1.4	2.2-2.8	3.3-3.8	4.3-4.8		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	89%	76%	83%	81%		
20.0	81%	69%	79%	77%		
12.5	64%	61%	70%	67%		
10.0	57%	55%	64%	61%		
5.0	41%	41%	49%	45%		
2.5	31%	29%	34%	34%		
1.25	25%	19%	24%	26%		
0.630	17%	11%	15%	17%		
0.315	9%	5%	8%	10%		
0.160	4%	3%	4%	6%		
0.080	2%	2%	3%	4%		
M.C.(%):	2%	2%	2%	2%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	59	59	51	55		
% SAND:	39	40	46	41		
% FINES:	2	2	3	4		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		

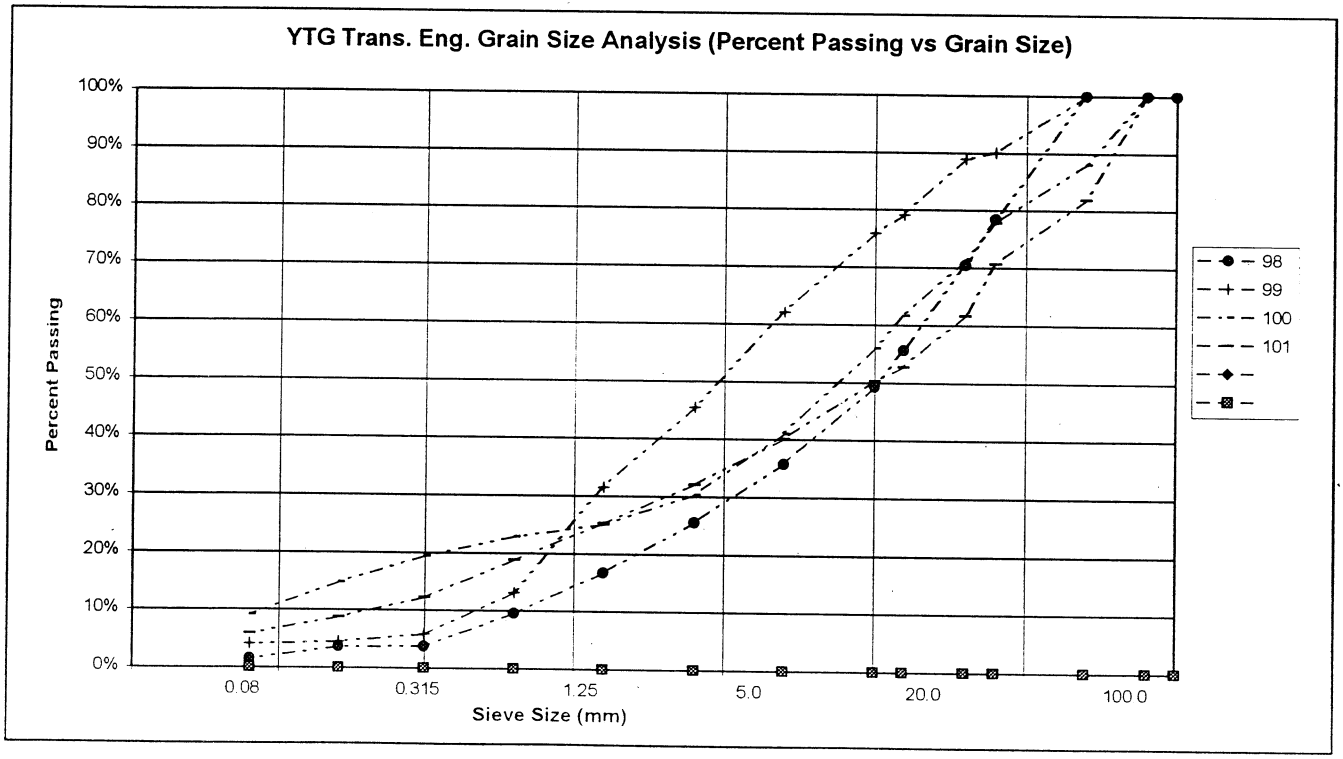


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Engineering Capital
PROJECT NAME: Shakwak Granular Investigation
PROJECT LOCATION: Km 1753 LHS Copper Joe Creek
DRILL UNIT: Koehring 6625 Backhoe
HOLE LOCATION: See Plan
LOGGED BY: JRP R.W.

HOLE No.: 636-2426

DATE COMP: Sept 2002

FIELD NO:	98	99	100	101		
LAB NO:	358	359	360	361		
DEPTH:	0.8-1.4	2.0-2.5	3.0-3.5	4.3-4.8		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	88%	82%		
25.0	79%	90%	78%	71%		
20.0	70%	89%	71%	62%		
12.5	56%	79%	62%	53%		
10.0	49%	76%	56%	50%		
5.0	36%	62%	41%	40%		
2.5	26%	45%	30%	32%		
1.25	17%	32%	25%	25%		
0.630	10%	13%	23%	19%		
0.315	4%	6%	19%	12%		
0.160	4%	5%	15%	9%		
0.080	2%	4%	9%	6%		
M.C.(%):	2%	4%	5%	4%		
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:	64	38	59	60		
% SAND:	34	58	32	34		
% FINES:	2	4	9	6		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED SAND WITH GRAVEL (SP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

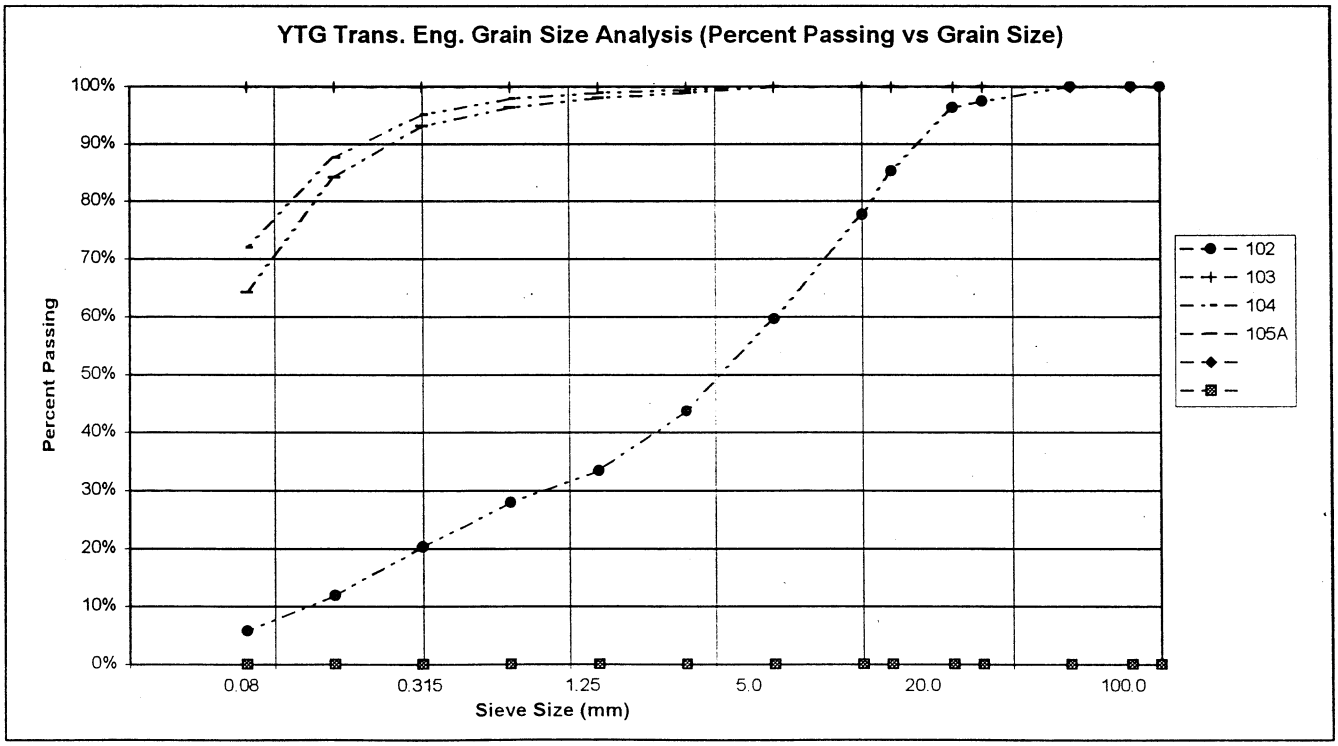


PROJECT NUMBER:	552-202101-0361-1
CLIENT:	Engineering Capital
PROJECT NAME:	Shakwak Granular Investigation
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek
DRILL UNIT:	Koehring 6625 Backhoe
HOLE LOCATION:	See Plan
LOGGED BY:	JRP R.W.

HOLE No.: 636-2427

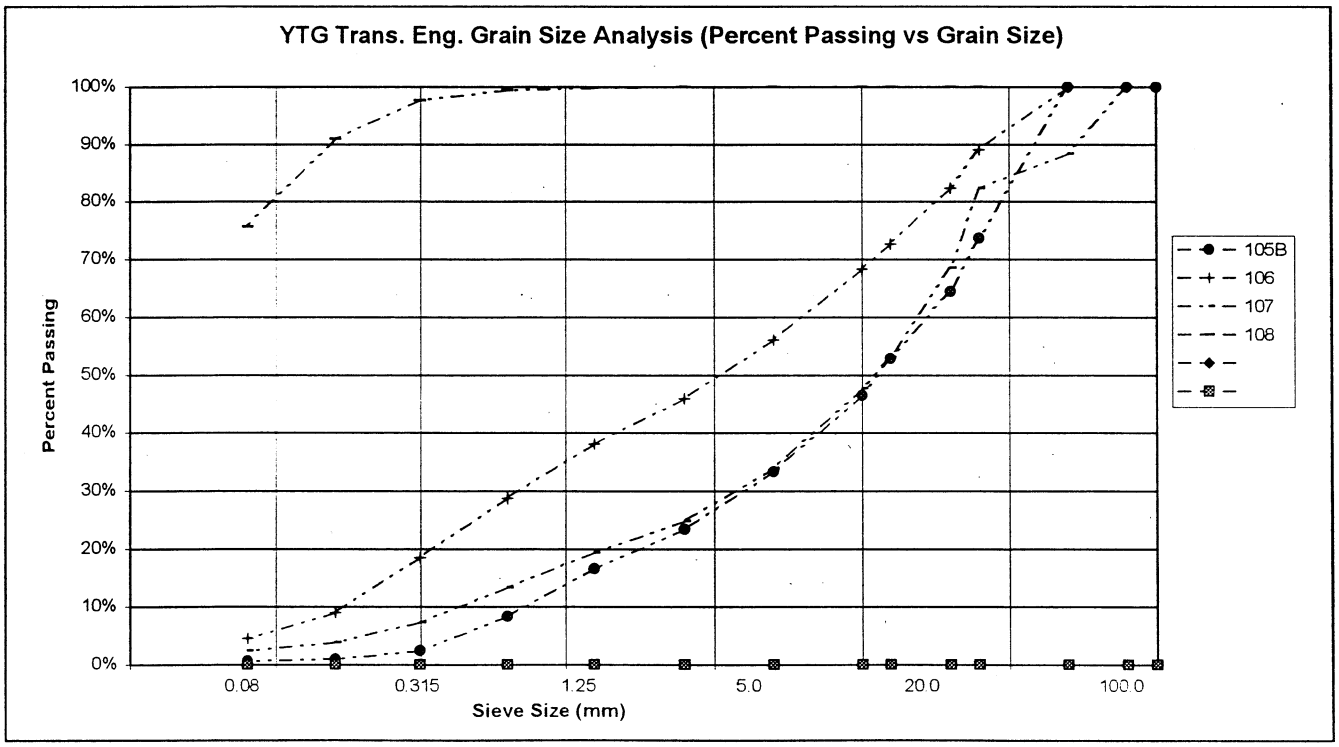
DATE COMP: Sept 2002

FIELD NO:	102	103	104	105A		
LAB NO:	362	LOST	363	364		
DEPTH:	1.0-1.5	2.2-2.8	3.6-4.0	4.2-4.8		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	97%	100%	100%	100%		
20.0	96%	100%	100%	100%		
12.5	85%	100%	100%	100%		
10.0	78%	100%	100%	100%		
5.0	60%	100%	100%	100%		
2.5	44%	100%	99%	99%		
1.25	33%	100%	99%	98%		
0.630	28%	100%	98%	96%		
0.315	20%	100%	95%	93%		
0.160	12%	100%	88%	84%		
0.080	6%	100%	72%	64%		
M.C.(%):	4%		27%	25%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	40	0	0	0		
% SAND:	54	0	28	36		
% FINES:	6	100	72	64		
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	~~SILT (ML)~~ LOST	SILT WITH SAND (ML)	SANDY SILT (ML)		



PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2428
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	105B	106	107	108		
LAB NO:	365	366	367	368		
DEPTH:	0.4-1.0	1.6-2.2	3.0-3.5	4.2-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	88%	100%		
25.0	74%	89%	82%	100%		
20.0	64%	82%	69%	100%		
12.5	53%	73%	53%	100%		
10.0	46%	68%	48%	100%		
5.0	33%	56%	34%	100%		
2.5	23%	46%	25%	100%		
1.25	17%	38%	19%	100%		
0.630	8%	29%	13%	99%		
0.315	2%	19%	7%	98%		
0.160	1%	9%	4%	91%		
0.080	1%	5%	2%	76%		
M.C.(%):	2%	5%	3%	32%		
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:	67	44	66	0		
% SAND:	33	52	31	24		
% FINES:	1	5	2	76		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SAND (GP)	SILT WITH SAND (ML)		

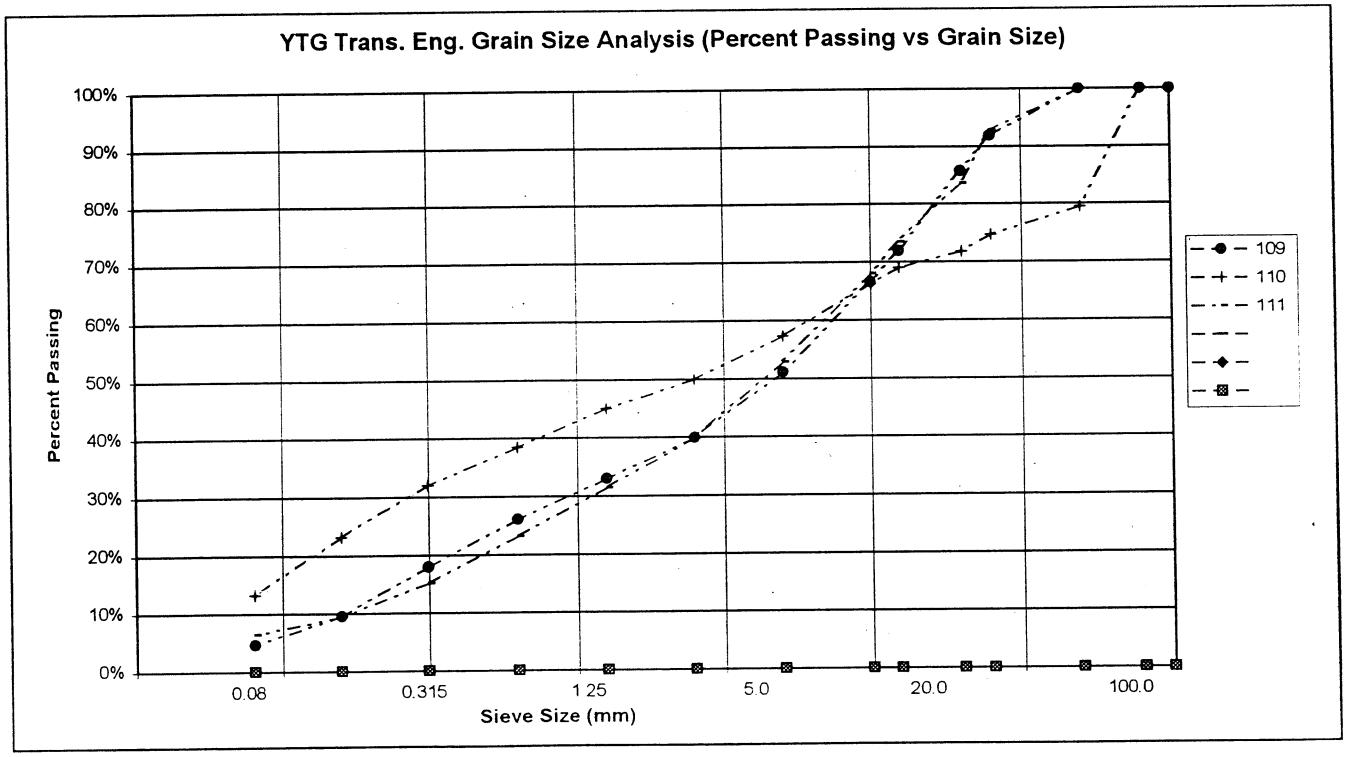


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Engineering Capital
PROJECT NAME: Shakwak Granular Investigation
PROJECT LOCATION: Km 1753 LHS Copper Joe Creek
DRILL UNIT: Koehring 6625 Backhoe
HOLE LOCATION: See Plan
LOGGED BY: JRP R.W.

HOLE No.: 636-2429

DATE COMP: Sept 2002

FIELD NO:	109	110	111			
LAB NO:	369	370	371			
DEPTH:	0.6-1.0	1.8-2.4	3.8-4.2			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	79%	100%			
25.0	92%	75%	93%			
20.0	86%	72%	84%			
12.5	72%	69%	74%			
10.0	67%	66%	68%			
5.0	51%	57%	53%			
2.5	40%	50%	40%			
1.25	33%	45%	31%			
0.630	26%	38%	23%			
0.315	18%	32%	15%			
0.160	10%	23%	9%			
0.080	5%	13%	6%			
M.C.(%):	2%	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:	49	43	47			
% SAND:	46	44	46			
% FINES:	5	13	6			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

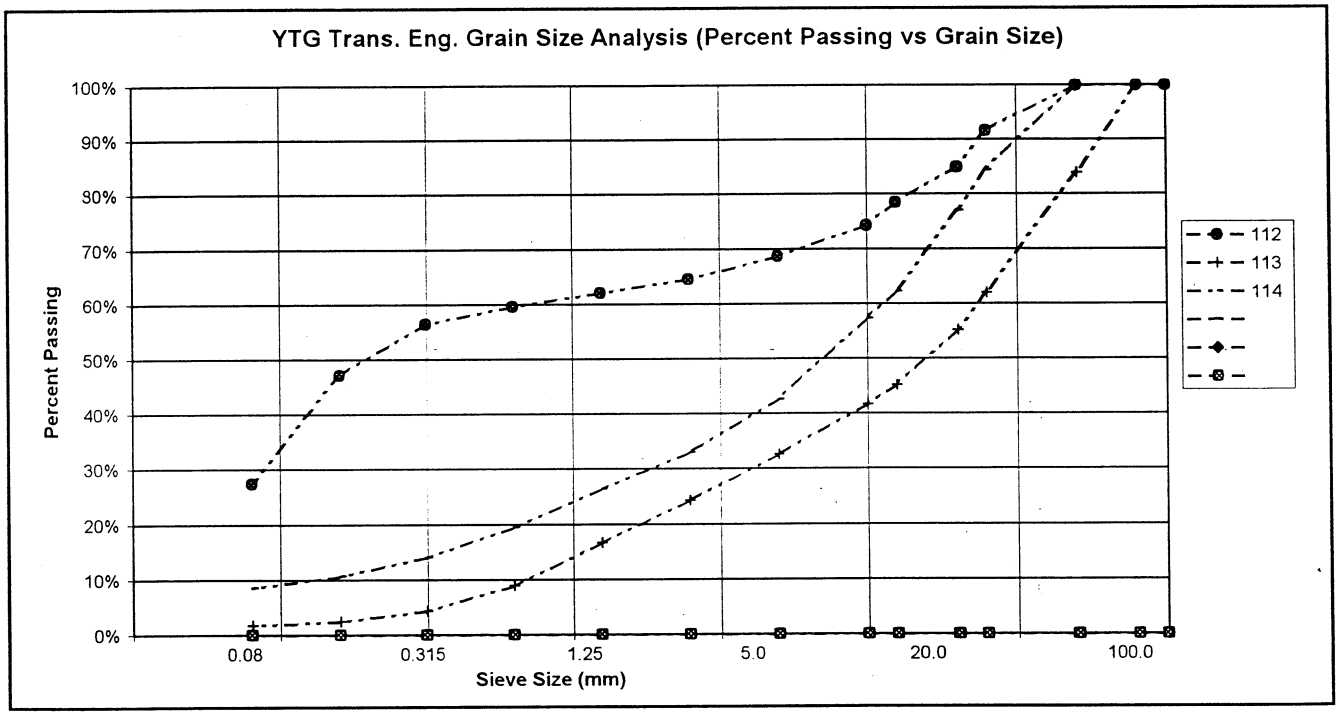


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Engineering Capital
PROJECT NAME: Shakwak Granular Investigation
PROJECT LOCATION: Km 1753 LHS Copper Joe Creek
DRILL UNIT: Koehring 6625 Backhoe
HOLE LOCATION: See Plan
LOGGED BY: JRP R.W.

HOLE No.: 636-2430

DATE COMP: Sept 2002

FIELD NO:	112	113	114			
LAB NO:	372	373	374			
DEPTH:	1.0-1.5	2.5-3.0	4.0-4.5			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	84%	100%			
25.0	92%	62%	84%			
20.0	85%	55%	77%			
12.5	79%	45%	62%			
10.0	74%	42%	57%			
5.0	69%	33%	43%			
2.5	65%	24%	33%			
1.25	62%	17%	26%			
0.630	60%	9%	20%			
0.315	56%	4%	14%			
0.160	47%	2%	11%			
0.080	27%	2%	9%			
M.C.(%):	7%	2%	3%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	31	67	57			
% SAND:	41	31	34			
% FINES:	27	2	9			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

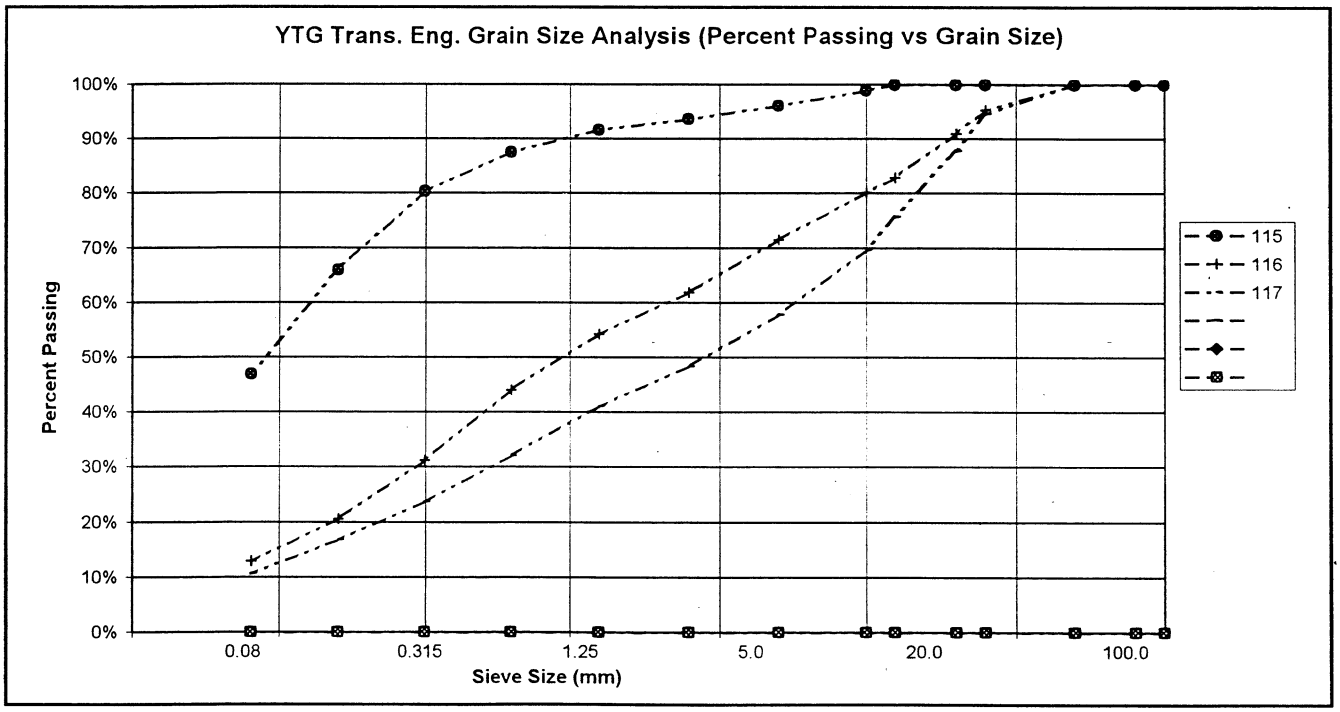


PROJECT NUMBER:	552-202101-0361-1
CLIENT:	Engineering Capital
PROJECT NAME:	Shakwak Granular Investigation
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek
DRILL UNIT:	Koehring 6625 Backhoe
HOLE LOCATION:	See Plan
LOGGED BY:	JRP R.W.

HOLE No.: 636-2431

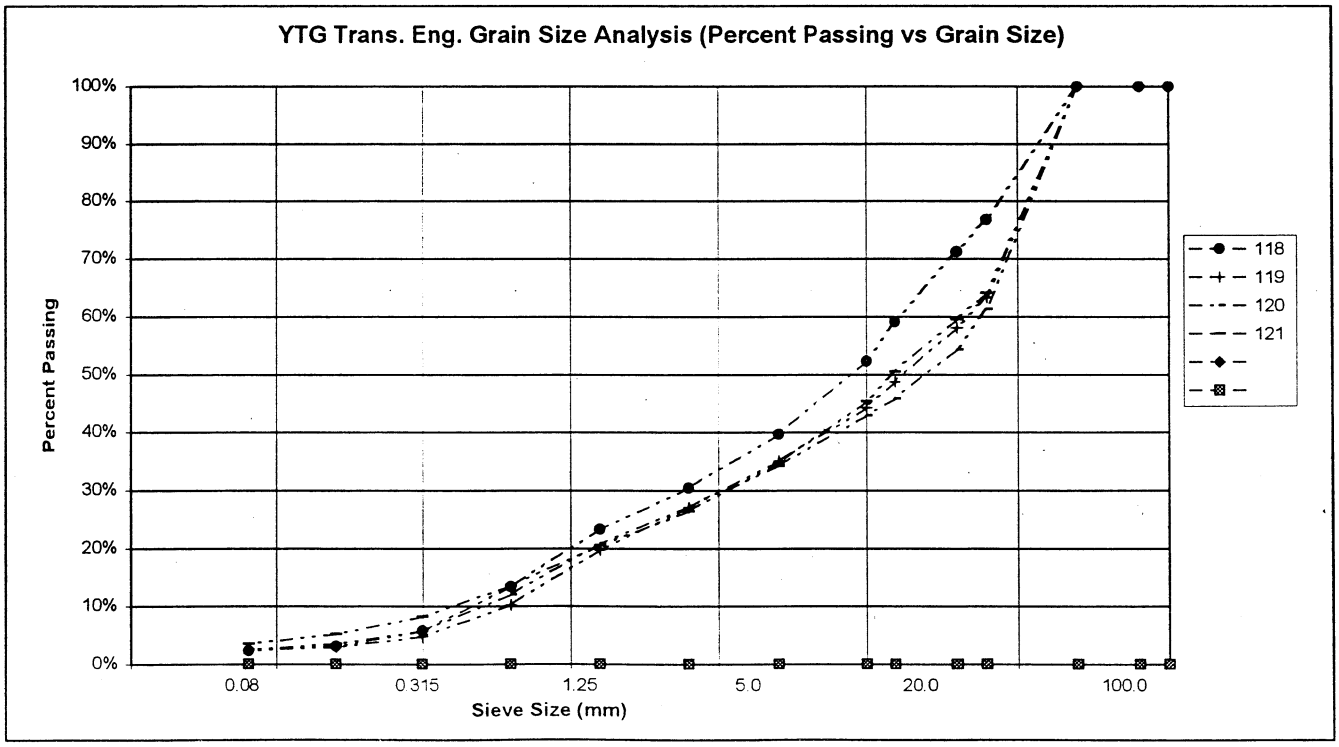
DATE COMP: Sept 2002

FIELD NO:	115	116	117			
LAB NO:	375	376	377			
DEPTH:	1-1.5	2.6-3.0	4-4.5			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	95%	95%			
20.0	100%	91%	88%			
12.5	100%	83%	76%			
10.0	99%	80%	70%			
5.0	96%	71%	58%			
2.5	94%	62%	48%			
1.25	92%	54%	41%			
0.630	88%	44%	32%			
0.315	80%	31%	24%			
0.160	66%	21%	17%			
0.080	47%	13%	11%			
M.C.(%):	12%	4%	4%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	4	29	42			
% SAND:	49	58	47			
% FINES:	47	13	11			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)			



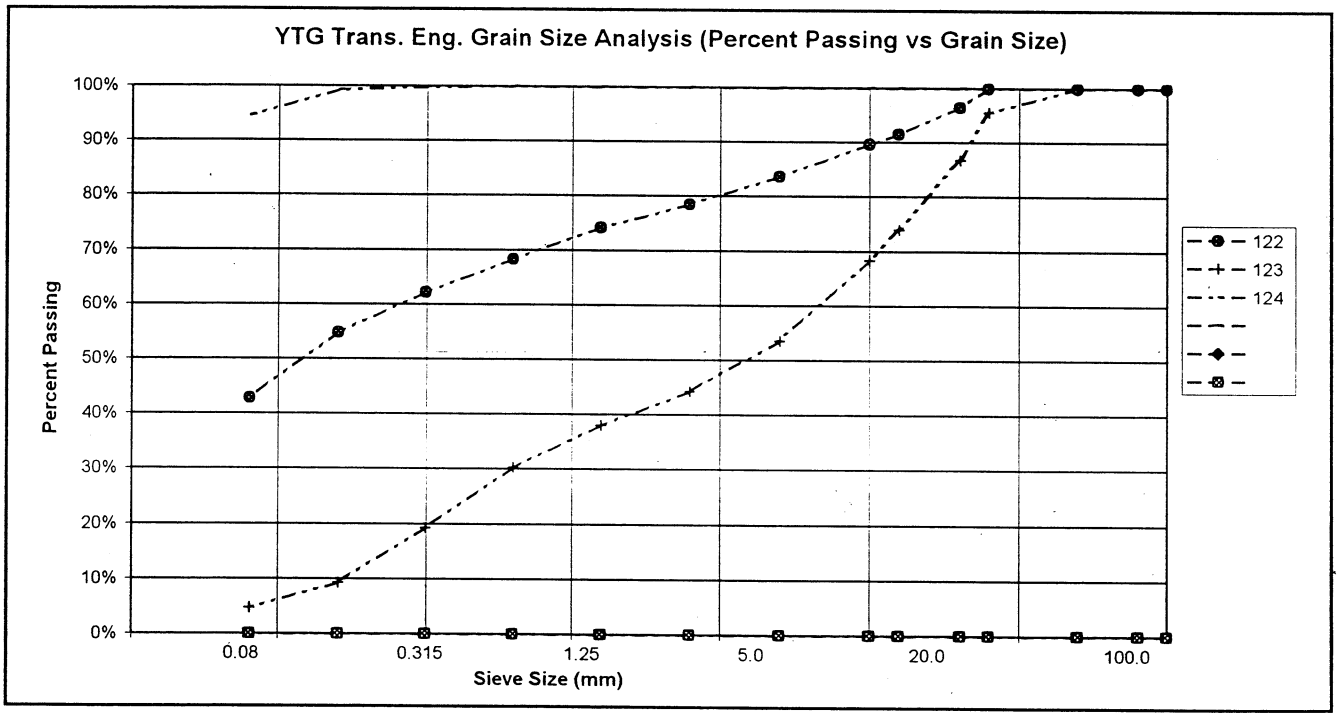
PROJECT NUMBER:	552-202101-0361-1	HOLE No.: 636-2432
CLIENT:	Engineering Capital	
PROJECT NAME:	Shakwak Granular Investigation	
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek	
DRILL UNIT:	Koehring 6625 Backhoe	
HOLE LOCATION:	See Plan	
LOGGED BY:	JRP R.W.	DATE COMP: Sept 2002

FIELD NO:	118	119	120	121		
LAB NO:	378	379	380	381		
DEPTH:	0.8-1.2	1.5-2.0	3.2-3.8	4.2-4.8		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	77%	63%	61%	64%		
20.0	71%	58%	54%	60%		
12.5	59%	49%	46%	51%		
10.0	52%	44%	43%	45%		
5.0	40%	35%	34%	35%		
2.5	30%	27%	27%	26%		
1.25	23%	20%	21%	20%		
0.630	13%	10%	12%	14%		
0.315	6%	5%	6%	8%		
0.160	3%	3%	4%	5%		
0.080	2%	2%	3%	4%		
M.C.(%):	2%	3%	3%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	60	65	66	65		
% SAND:	37	33	32	31		
% FINES:	2	2	3	4		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		



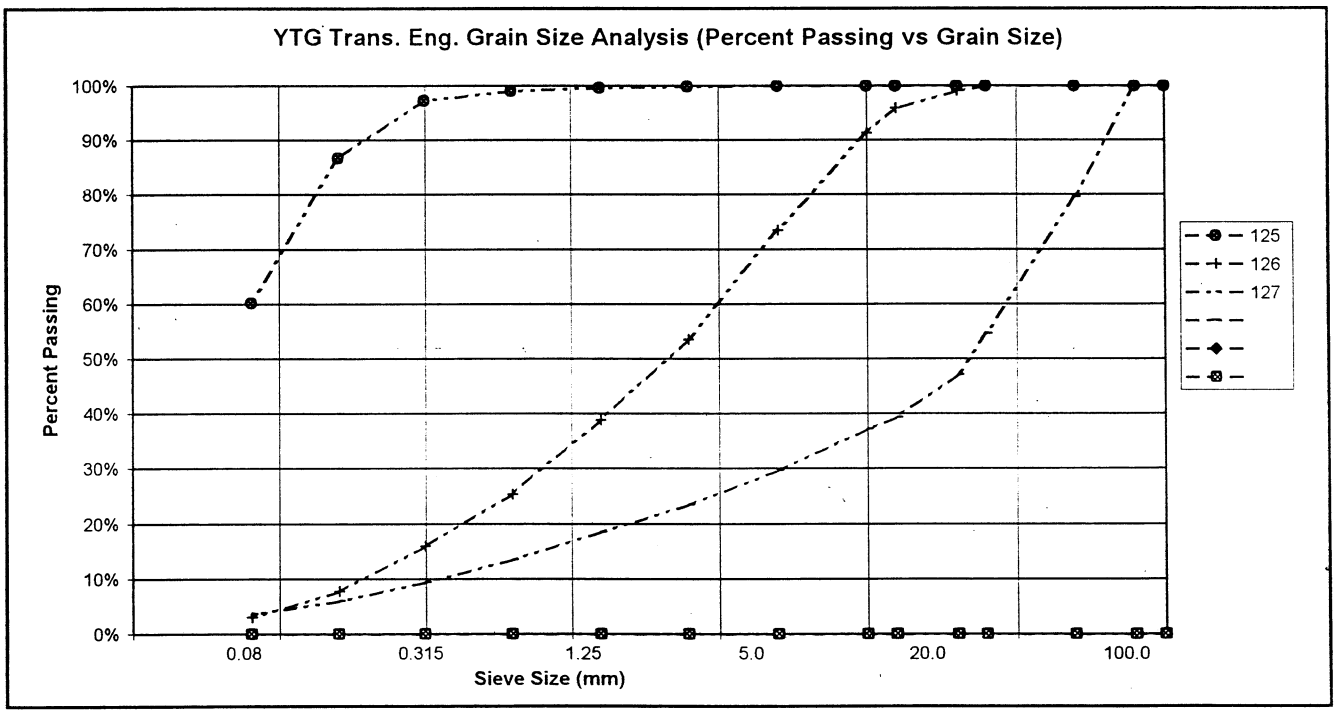
PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2433
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	122	123	124			
LAB NO:	382	383	384			
DEPTH:	1.0-1.6	2.2-2.8	4.0-4.5			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	96%	100%			
20.0	97%	87%	100%			
12.5	92%	74%	100%			
10.0	90%	68%	100%			
5.0	84%	54%	100%			
2.5	79%	44%	100%			
1.25	74%	38%	100%			
0.630	68%	30%	100%			
0.315	62%	19%	100%			
0.160	55%	9%	99%			
0.080	43%	5%	95%			
M.C.(%):	15%	3%	28%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	16	46	0			
% SAND:	41	49	5			
% FINES:	43	5	95			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED SAND WITH GRAVEL (SW)	SILT (ML)			



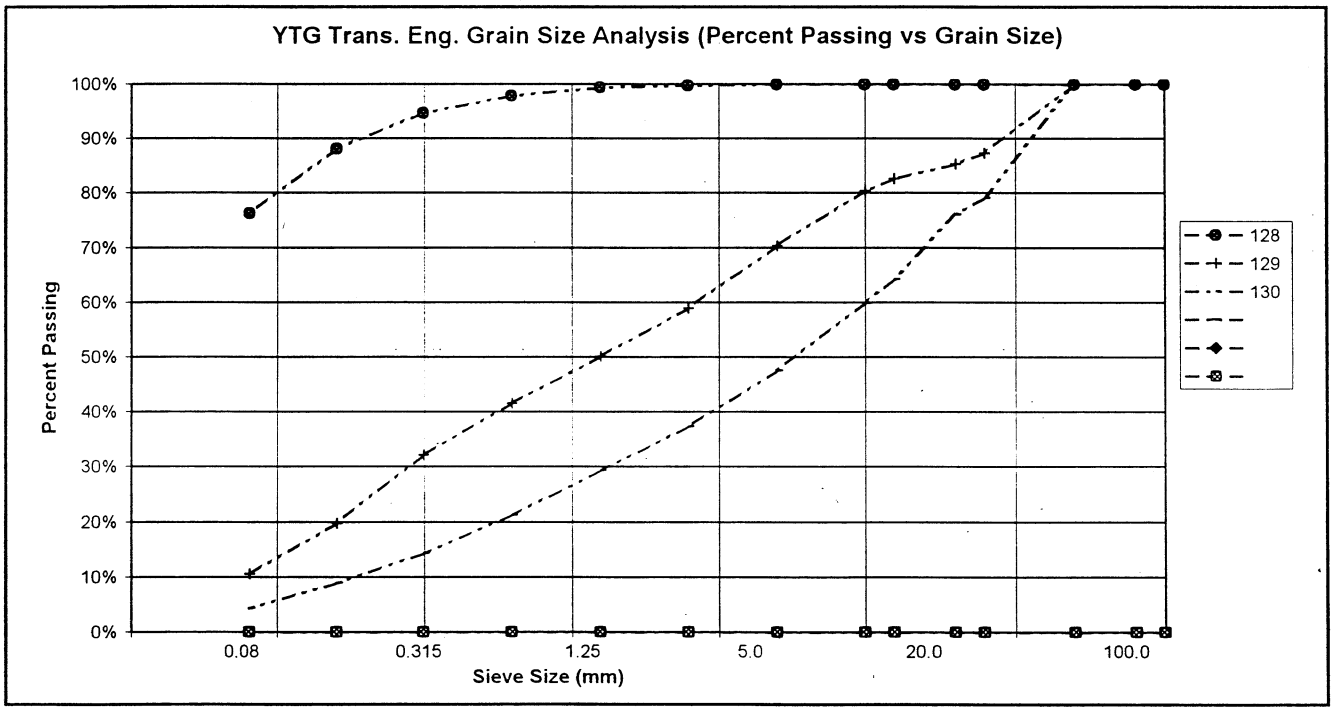
PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2434
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	125	126	127			
LAB NO:	385	386	387			
DEPTH:	1.0-1.5	2.5-2.9	4.2-4.8			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	80%			
25.0	100%	100%	55%			
20.0	100%	99%	47%			
12.5	100%	96%	39%			
10.0	100%	91%	37%			
5.0	100%	73%	30%			
2.5	100%	54%	23%			
1.25	100%	39%	19%			
0.630	99%	25%	14%			
0.315	97%	16%	9%			
0.160	87%	8%	6%			
0.080	60%	3%	4%			
M.C.(%):	22%	3%	2%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	0	27	70			
% SAND:	40	70	26			
% FINES:	60	3	4			
CLASSIFICATION	SANDY SILT (ML)	WELL-GRADED SAND WITH GRAVEL (SW)	WELL-GRADED GRAVEL WITH SAND (GW)			



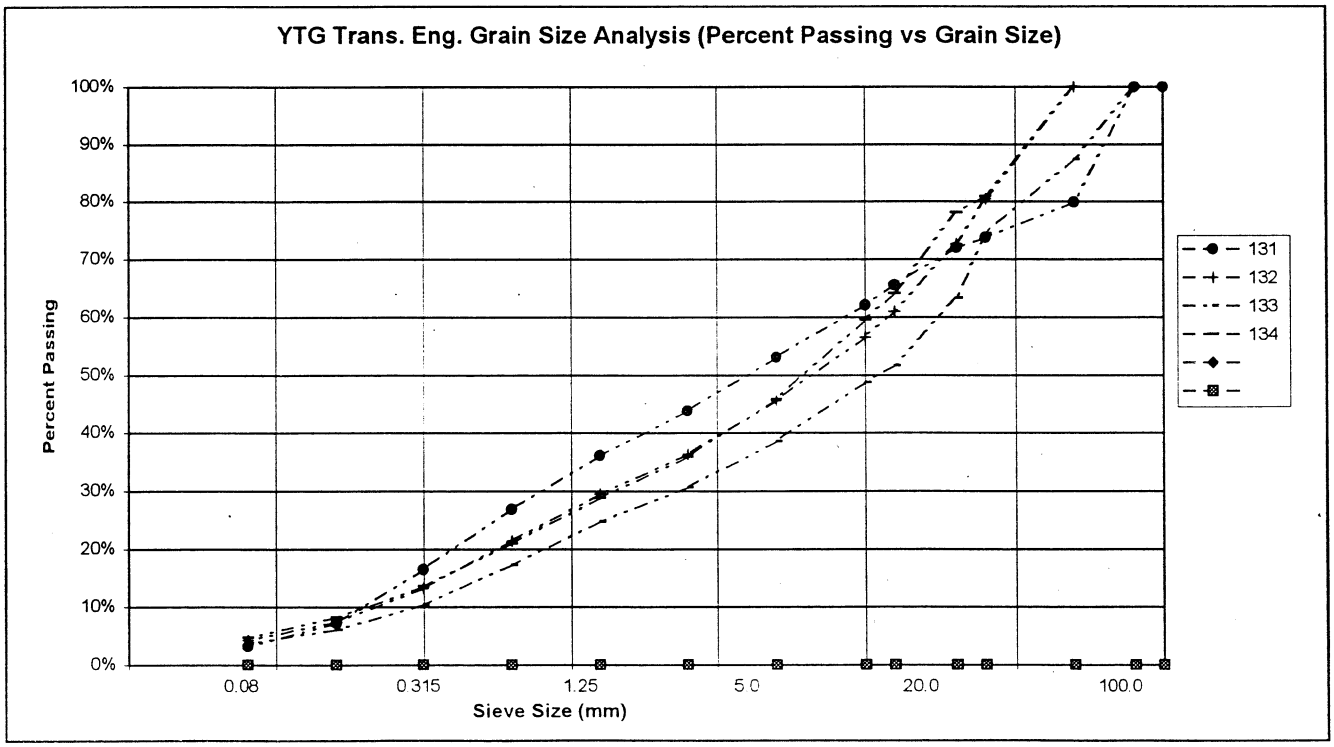
PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2435
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	128	129	130			
LAB NO:	388	389	390			
DEPTH:	1.0-1.5	2.3-2.7	4.2-4.8			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	87%	79%			
20.0	100%	85%	76%			
12.5	100%	83%	64%			
10.0	100%	80%	60%			
5.0	100%	70%	48%			
2.5	100%	59%	37%			
1.25	99%	50%	29%			
0.630	98%	42%	21%			
0.315	95%	32%	14%			
0.160	88%	20%	9%			
0.080	76%	11%	4%			
M.C.(%):	38%	5%	3%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	0	30	52			
% SAND:	24	60	43			
% FINES:	76	11	4			
CLASSIFICATION	SILT WITH SAND (ML)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SAND (GP)			



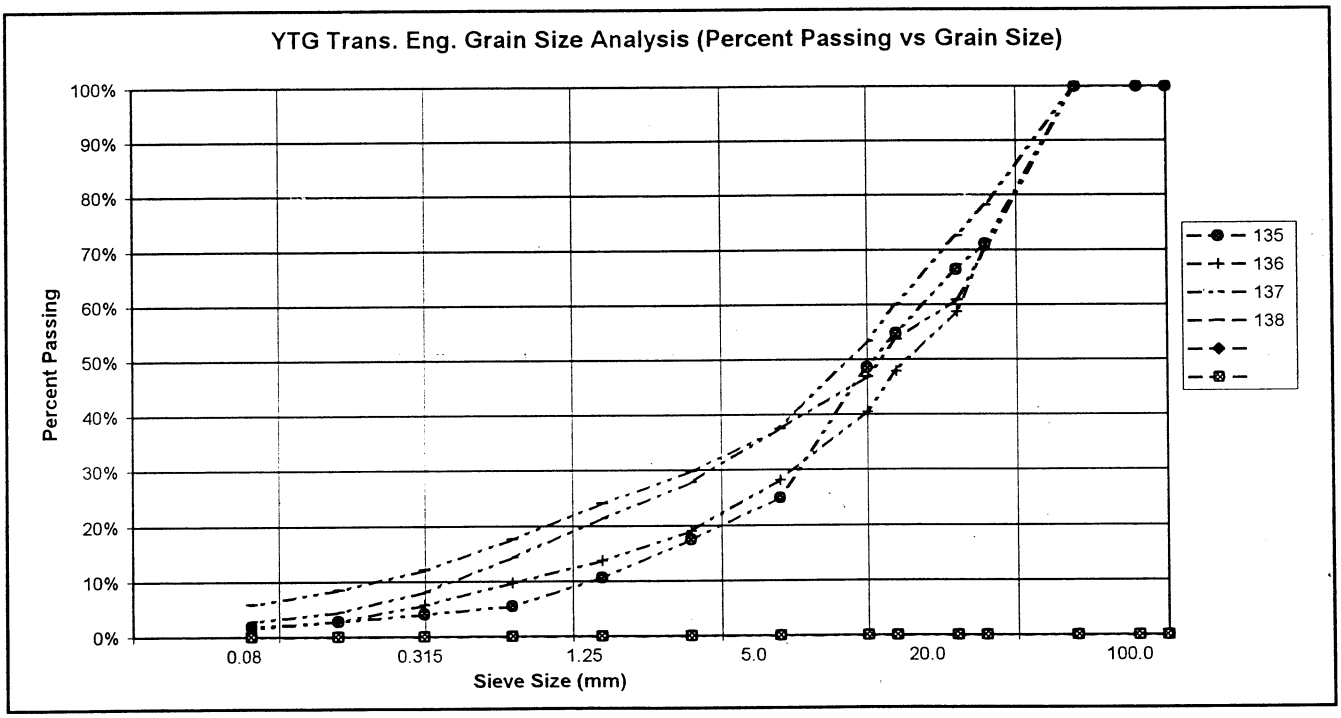
PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2436
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	131	132	133	134		
LAB NO:	391	392	393	394		
DEPTH:	1.1-1.6	2.2-2.8	3.2-3.8	4.4-5.0		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	80%	100%	87%	100%		
25.0	74%	81%	75%	81%		
20.0	72%	73%	63%	78%		
12.5	65%	61%	52%	64%		
10.0	62%	56%	49%	60%		
5.0	53%	46%	39%	46%		
2.5	44%	36%	31%	36%		
1.25	36%	30%	25%	29%		
0.630	27%	21%	17%	21%		
0.315	16%	13%	11%	14%		
0.160	7%	7%	6%	8%		
0.080	3%	4%	4%	5%		
M.C.(%):	3%	3%	3%	4%		
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:	47	54	61	54		
% SAND:	50	41	35	41		
% FINES:	3	4	4	5		
CLASSIFICATION	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		



PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2437
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	135	136	137	138		
LAB NO:	395	396	397	398		
DEPTH:	1.0-1.5	2.0-2.5	3.2-3.8	4.2-4.8		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	71%	71%	78%	70%		
20.0	66%	59%	72%	61%		
12.5	55%	48%	60%	54%		
10.0	49%	41%	53%	47%		
5.0	25%	28%	38%	37%		
2.5	18%	19%	28%	30%		
1.25	11%	14%	21%	24%		
0.630	6%	10%	14%	18%		
0.315	4%	6%	8%	12%		
0.160	3%	3%	5%	8%		
0.080	2%	2%	3%	6%		
M.C.(%):	2%	2%	4%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	75	72	62	63		
% SAND:	23	26	35	32		
% FINES:	2	2	3	6		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

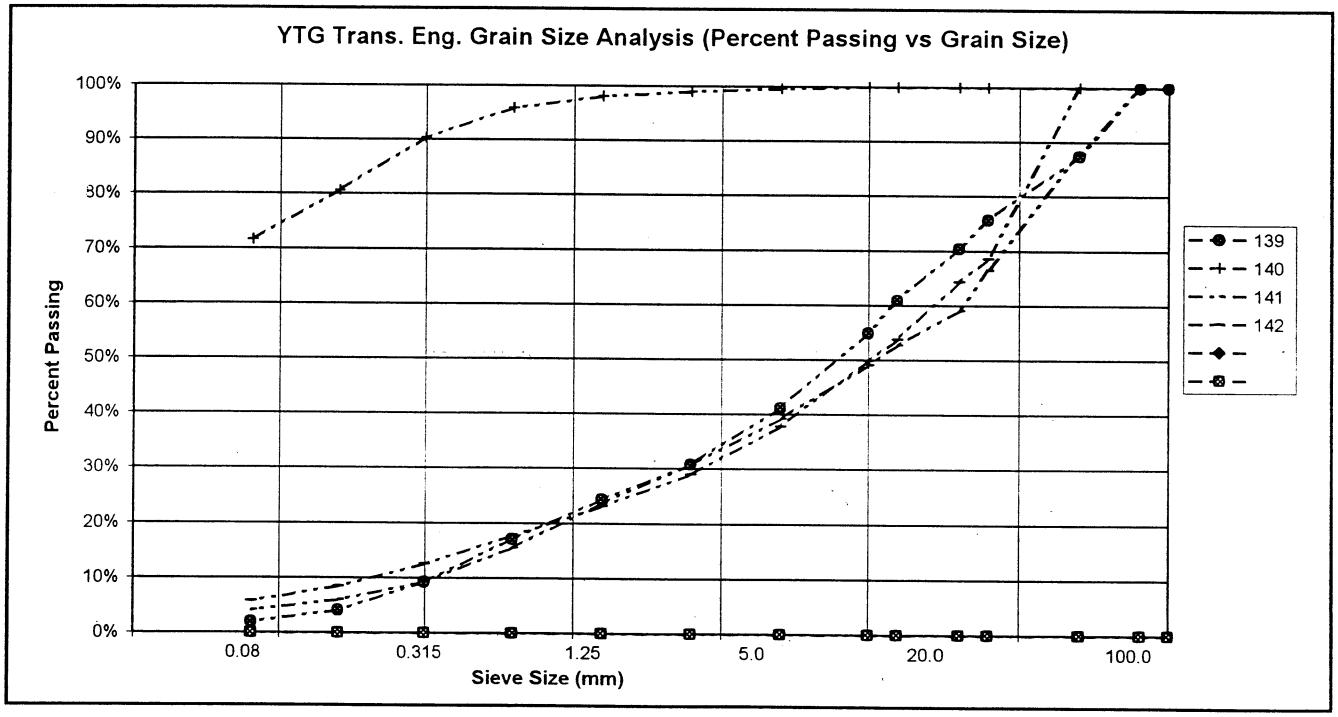


PROJECT NUMBER:	552-202101-0361-1
CLIENT:	Engineering Capital
PROJECT NAME:	Shakwak Granular Investigation
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek
DRILL UNIT:	Koehring 6625 Backhoe
HOLE LOCATION:	See Plan
LOGGED BY:	JRP R.W.

HOLE No.: 636-2438

DATE COMP: Sept 2002

FIELD NO:	139	140	141	142		
LAB NO:	399	400	401	402		
DEPTH:	0.4-1.0	2.2-2.6	2.8-3.3	4.4-4.8		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	87%	100%	88%	100%		
25.0	76%	100%	66%	69%		
20.0	70%	100%	59%	64%		
12.5	61%	100%	53%	54%		
10.0	55%	100%	49%	50%		
5.0	41%	100%	39%	38%		
2.5	31%	99%	31%	29%		
1.25	24%	98%	24%	23%		
0.630	17%	96%	15%	18%		
0.315	9%	90%	9%	13%		
0.160	4%	81%	6%	8%		
0.080	2%	72%	4%	6%		
M.C.(%):	2%	42%	4%	4%		
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:	59	0	61	62		
% SAND:	39	28	35	32		
% FINES:	2	72	4	6		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILT WITH SAND (ML)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

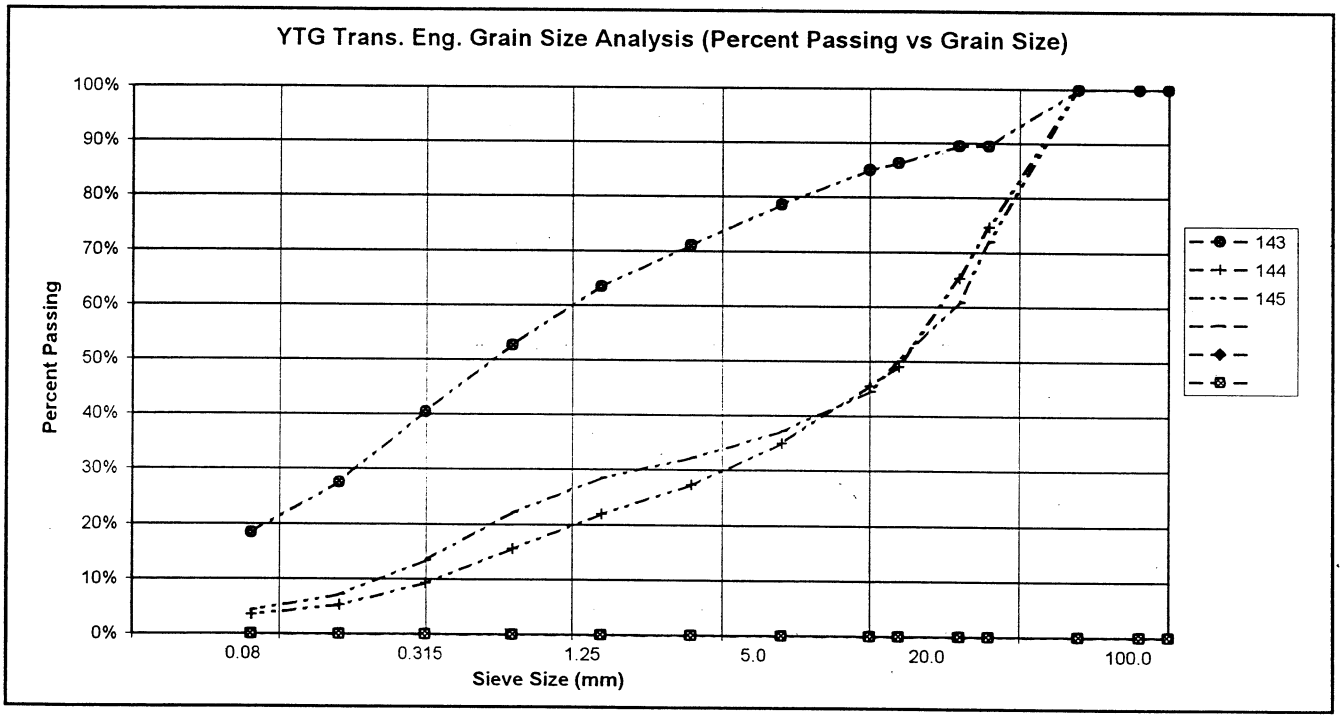


PROJECT NUMBER:	552-202101-0361-1
CLIENT:	Engineering Capital
PROJECT NAME:	Shakwak Granular Investigation
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek
DRILL UNIT:	Koehring 6625 Backhoe
HOLE LOCATION:	See Plan
LOGGED BY:	JRP R.W.

HOLE No.: 636-2439

DATE COMP: Sept 2002

FIELD NO:	143	144	145			
LAB NO:	403	404	405			
DEPTH:	1.0-1.6	2.6-3.2	4.0-4.5			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	90%	75%	72%			
20.0	90%	65%	61%			
12.5	86%	49%	50%			
10.0	85%	46%	44%			
5.0	79%	35%	37%			
2.5	71%	27%	32%			
1.25	63%	22%	29%			
0.630	53%	16%	22%			
0.315	41%	9%	13%			
0.160	28%	5%	7%			
0.080	18%	4%	4%			
M.C.(%):	5%	2%	2%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	21	65	63			
% SAND:	60	31	33			
% FINES:	18	4	4			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			

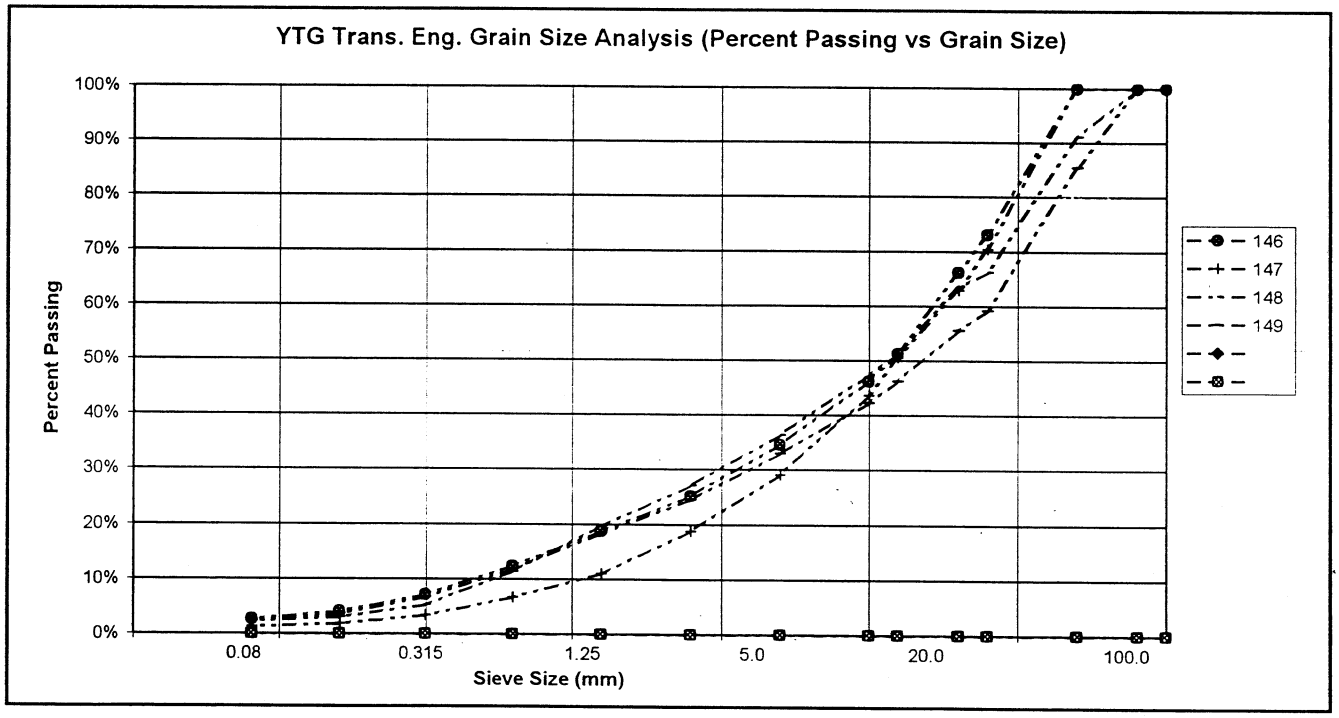


PROJECT NUMBER:	552-202101-0361-1
CLIENT:	Engineering Capital
PROJECT NAME:	Shakwak Granular Investigation
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek
DRILL UNIT:	Koehring 6625 Backhoe
HOLE LOCATION:	See Plan
LOGGED BY:	JRP R.W.

HOLE No.: 636-2440

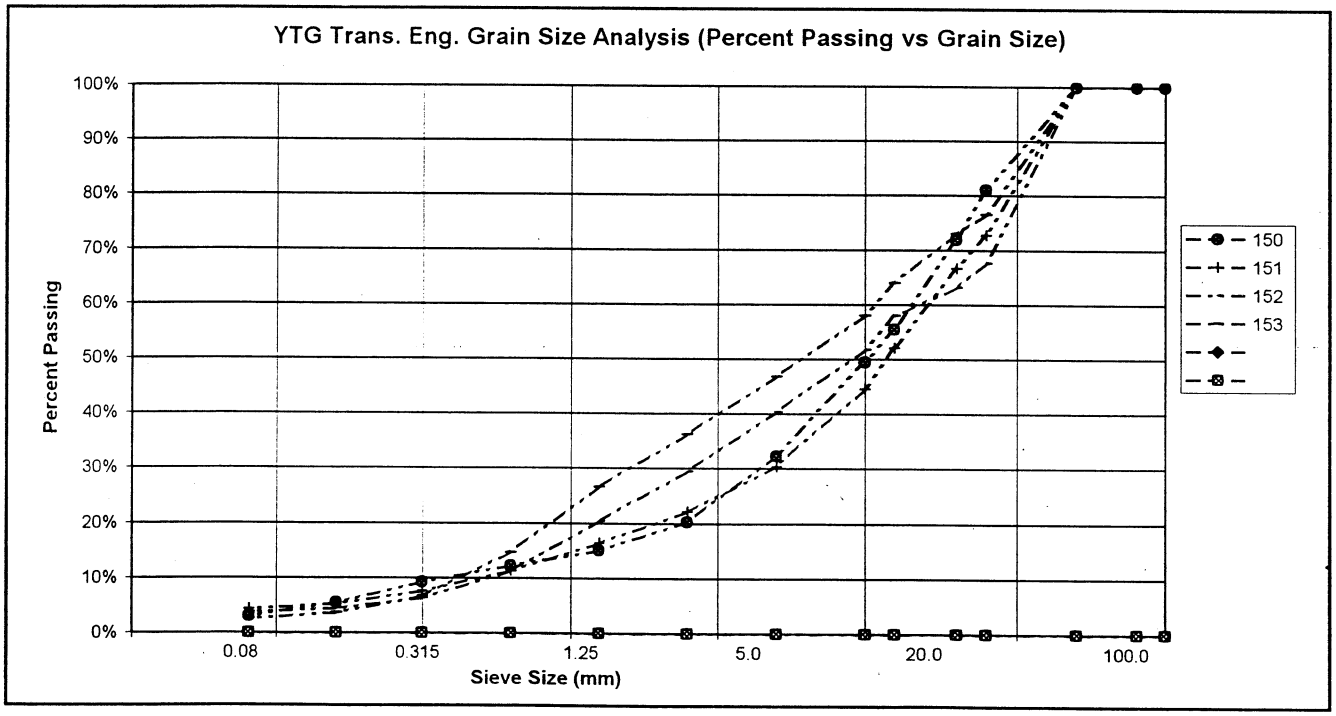
DATE COMP: Sept 2002

FIELD NO:	146	147	148	149		
LAB NO:	406	407	408	409		
DEPTH:	0.6-1.2	1.8-2.4	3.2-3.8	4.2-4.8		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	91%	85%		
25.0	73%	70%	66%	59%		
20.0	66%	63%	63%	56%		
12.5	51%	51%	51%	46%		
10.0	46%	44%	47%	42%		
5.0	35%	29%	36%	33%		
2.5	25%	19%	27%	25%		
1.25	19%	11%	20%	18%		
0.630	12%	7%	11%	12%		
0.315	7%	3%	5%	7%		
0.160	4%	2%	3%	4%		
0.080	3%	1%	2%	2%		
M.C.(%):	2%	2%	2%	2%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	65	71	64	67		
% SAND:	32	28	34	31		
% FINES:	3	1	2	2		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		



PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2441
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	150	151	152	153		
LAB NO:	410	411	412	413		
DEPTH:	0.8-1.5	2.0-2.6	3.2-3.9	4.2-4.8		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	81%	73%	68%	77%		
20.0	72%	67%	63%	73%		
12.5	56%	52%	58%	64%		
10.0	50%	45%	52%	58%		
5.0	32%	30%	40%	47%		
2.5	20%	22%	29%	36%		
1.25	15%	16%	20%	27%		
0.630	12%	11%	11%	15%		
0.315	9%	8%	6%	7%		
0.160	5%	5%	4%	4%		
0.080	3%	4%	4%	3%		
M.C.(%):	2%	3%	3%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	68	70	60	53		
% SAND:	29	26	37	44		
% FINES:	3	4	4	3		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		

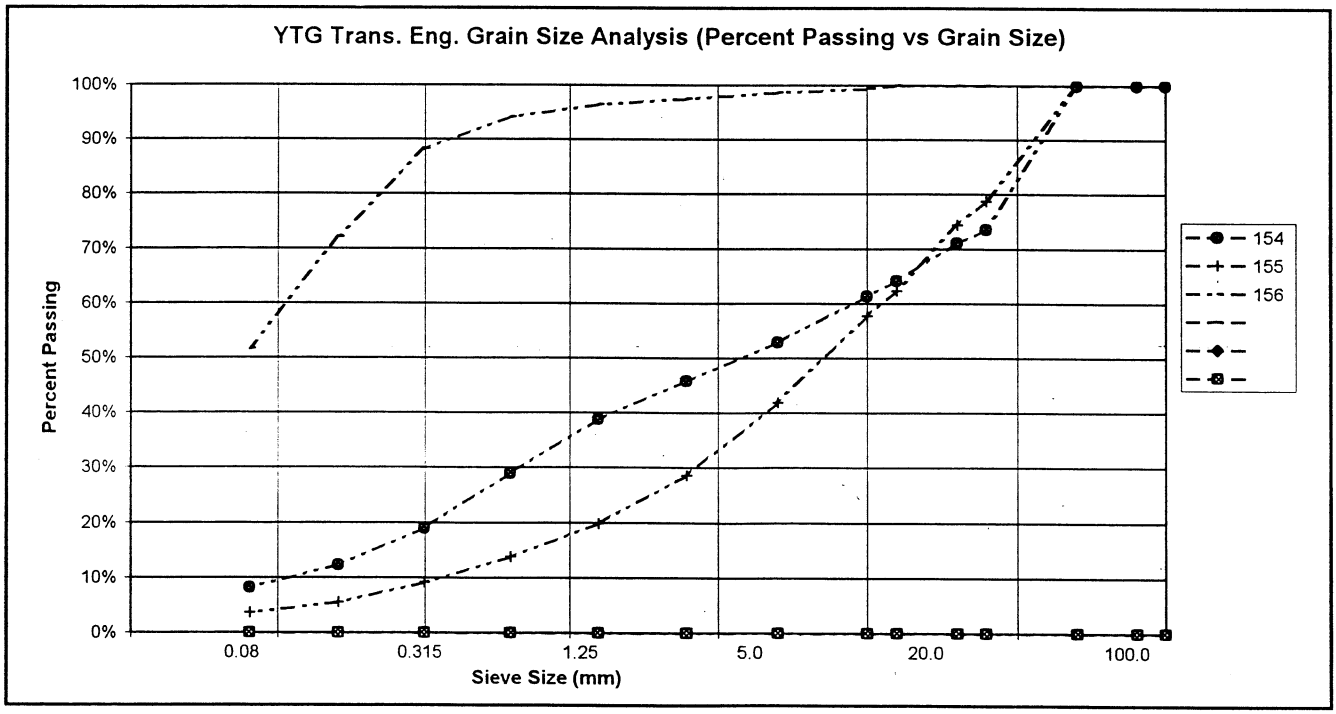


PROJECT NUMBER:	552-202101-0361-1
CLIENT:	Engineering Capital
PROJECT NAME:	Shakwak Granular Investigation
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek
DRILL UNIT:	Koehring 6625 Backhoe
HOLE LOCATION:	See Plan
LOGGED BY:	JRP R.W.

HOLE No.: 636-2442

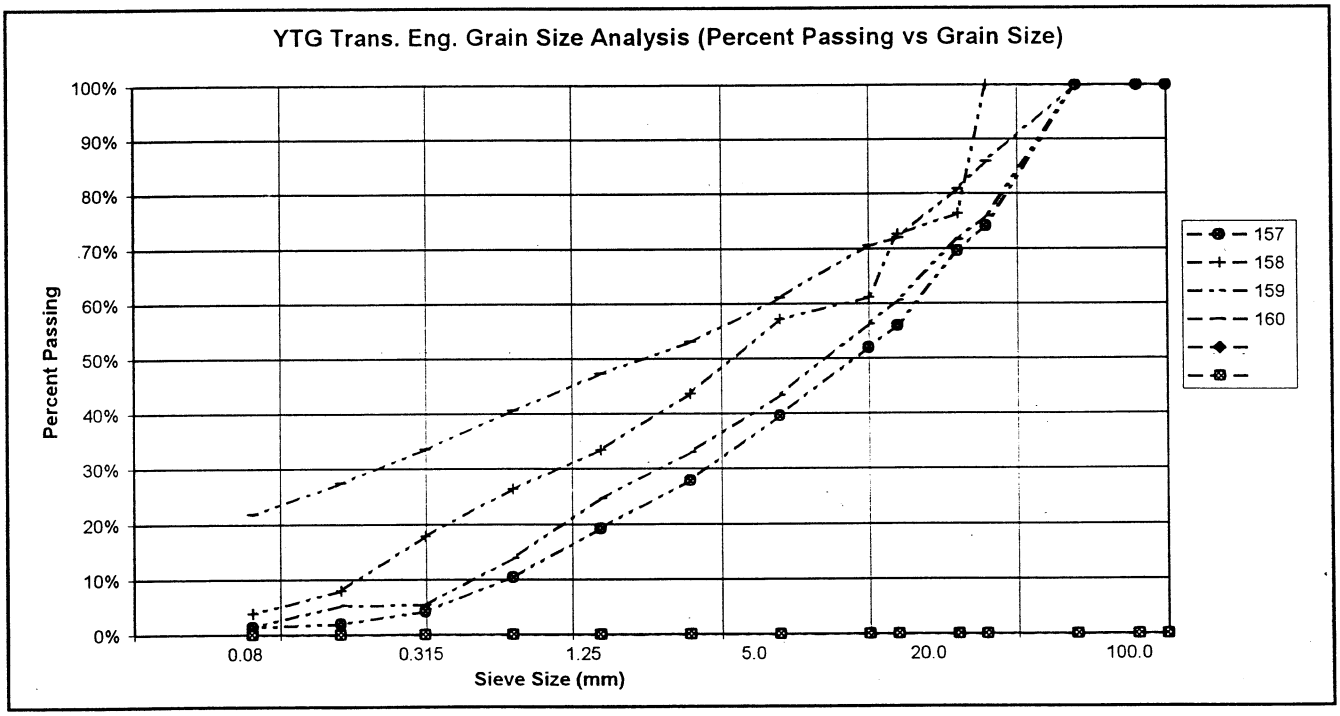
DATE COMP: Sept 2002

FIELD NO:	154	155	156			
LAB NO:	414	415	416			
DEPTH:	0.8-1.2	2.2-2.8	3.4-3.8			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	74%	79%	100%			
20.0	71%	74%	100%			
12.5	64%	62%	100%			
10.0	61%	58%	99%			
5.0	53%	42%	99%			
2.5	46%	29%	98%			
1.25	39%	20%	96%			
0.630	29%	14%	94%			
0.315	19%	9%	88%			
0.160	12%	6%	72%			
0.080	8%	4%	52%			
M.C.(%):	4%	3%	23%			
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	58	1			
% SAND:	45	38	47			
% FINES:	8	4	52			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)	SANDY SILT (ML)			



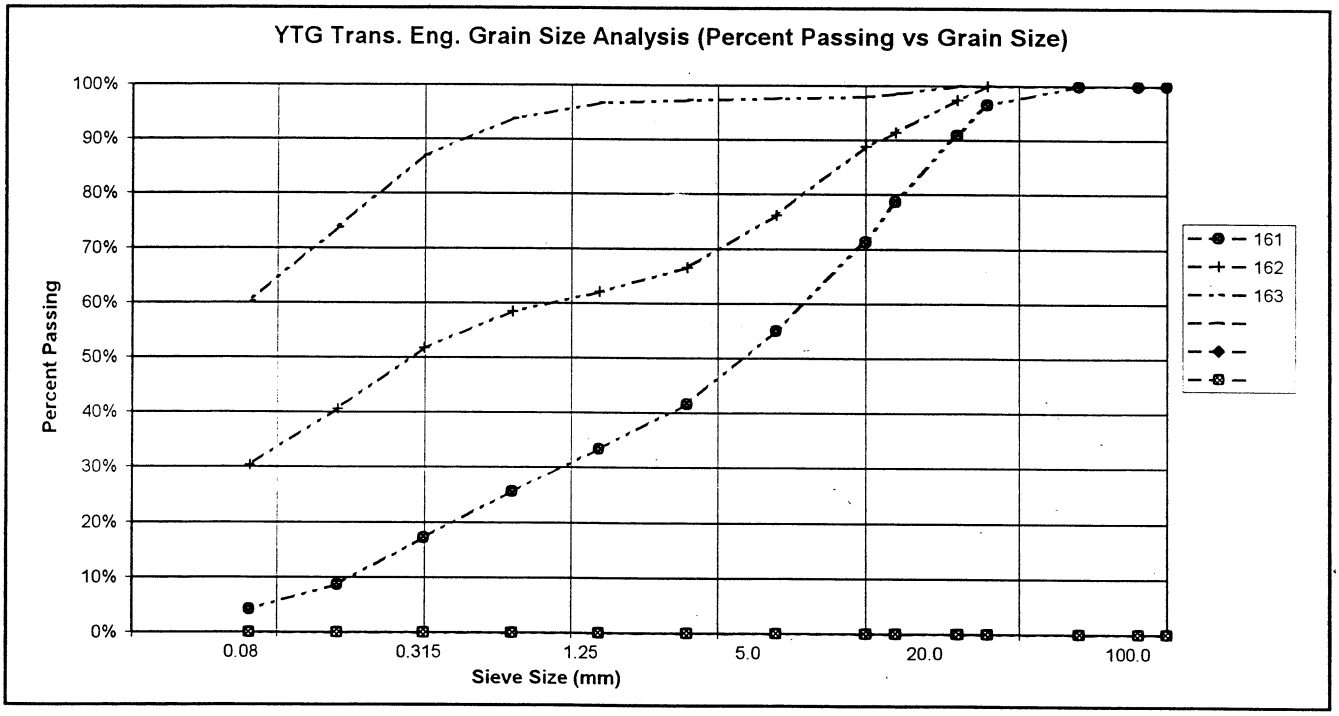
PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2443
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	157	158	159	160		
LAB NO:	417	418	419	420		
DEPTH:	0.8-1.5	2.2-2.9	3.2-3.9	4.6-5.2		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	74%	100%	76%	86%		
20.0	70%	76%	72%	81%		
12.5	56%	73%	61%	72%		
10.0	52%	61%	56%	71%		
5.0	40%	57%	43%	61%		
2.5	28%	44%	33%	53%		
1.25	19%	33%	25%	47%		
0.630	10%	26%	14%	41%		
0.315	4%	18%	5%	34%		
0.160	2%	8%	5%	27%		
0.080	1%	4%	2%	22%		
M.C.(%):	2%	3%	2%	11%		
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:	60	43	57	39		
% SAND:	38	53	42	39		
% FINES:	1	4	2	22		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND WITH GRAVEL (SM)		



PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 636-2444
CLIENT:	Engineering Capital		
PROJECT NAME:	Shakwak Granular Investigation		
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek		
DRILL UNIT:	Koehring 6625 Backhoe		
HOLE LOCATION:	See Plan		
LOGGED BY:	JRP R.W.		DATE COMP: Sept 2002

FIELD NO:	161	162	163			
LAB NO:	421	422	423			
DEPTH:	0.6-1.2	2.0-2.6	4.0-4.5			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	97%	100%	100%			
20.0	91%	97%	100%			
12.5	79%	91%	99%			
10.0	71%	89%	98%			
5.0	55%	76%	98%			
2.5	42%	67%	97%			
1.25	33%	62%	97%			
0.630	26%	58%	94%			
0.315	17%	52%	87%			
0.160	9%	41%	74%			
0.080	4%	30%	60%			
M.C.(%):	4%	19%	26%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	45	24	2			
% SAND:	51	46	37			
% FINES:	4	30	60			
CLASSIFICATION	WELL-GRADED SAND WITH GRAVEL (SW)	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)			

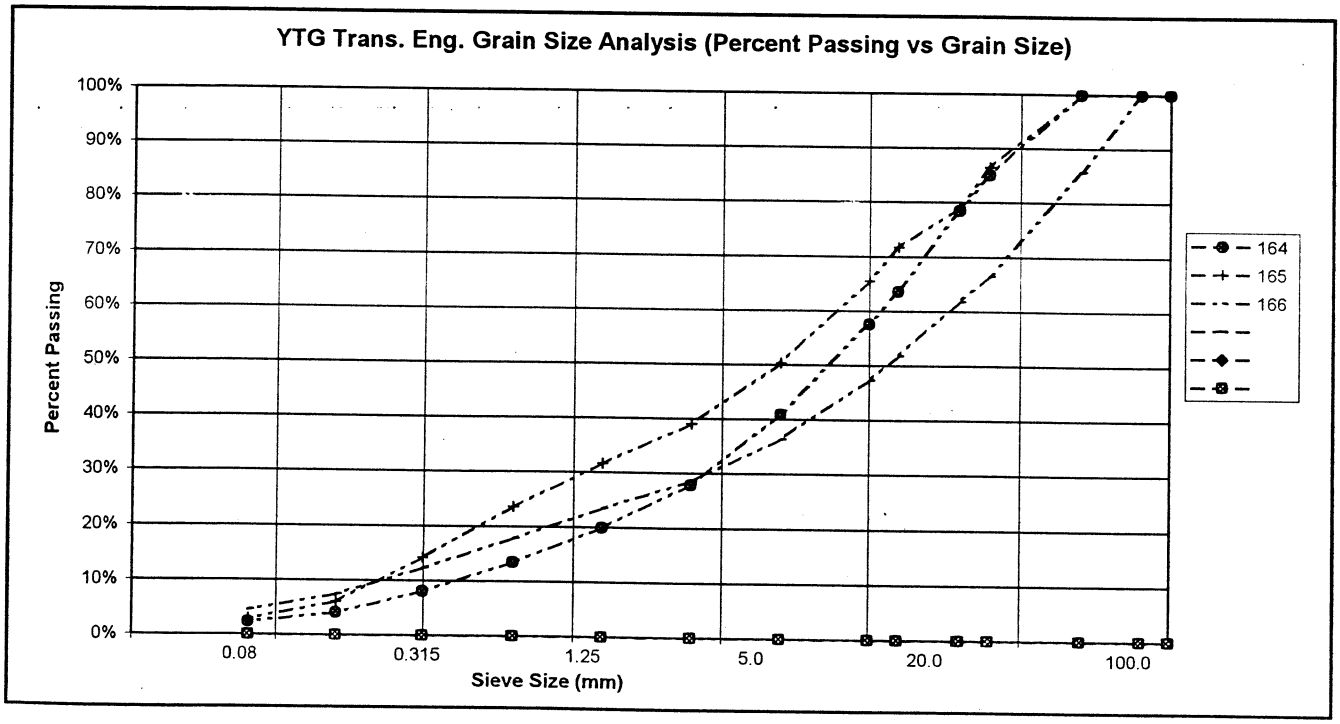


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Engineering Capital
PROJECT NAME: Shakwak Granular Investigation
PROJECT LOCATION: Km 1753 LHS Copper Joe Creek
DRILL UNIT: Koehring 6625 Backhoe
HOLE LOCATION: See Plan
LOGGED BY: JRP R.W.

HOLE No.: 636-2445

DATE COMP: Sept 2002

FIELD NO:	164	165	166			
LAB NO:	424	425	426			
DEPTH:	1.0-1.5	2.2-2.8	4.2-4.8			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	86%			
25.0	85%	87%	66%			
20.0	78%	79%	62%			
12.5	64%	72%	52%			
10.0	58%	65%	47%			
5.0	41%	50%	36%			
2.5	28%	39%	29%			
1.25	20%	32%	23%			
0.630	13%	24%	18%			
0.315	8%	14%	12%			
0.160	4%	6%	8%			
0.080	2%	3%	5%			
M.C.(%):	2%	3%	3%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	59	50	64			
% SAND:	39	47	32			
% FINES:	2	3	5			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			

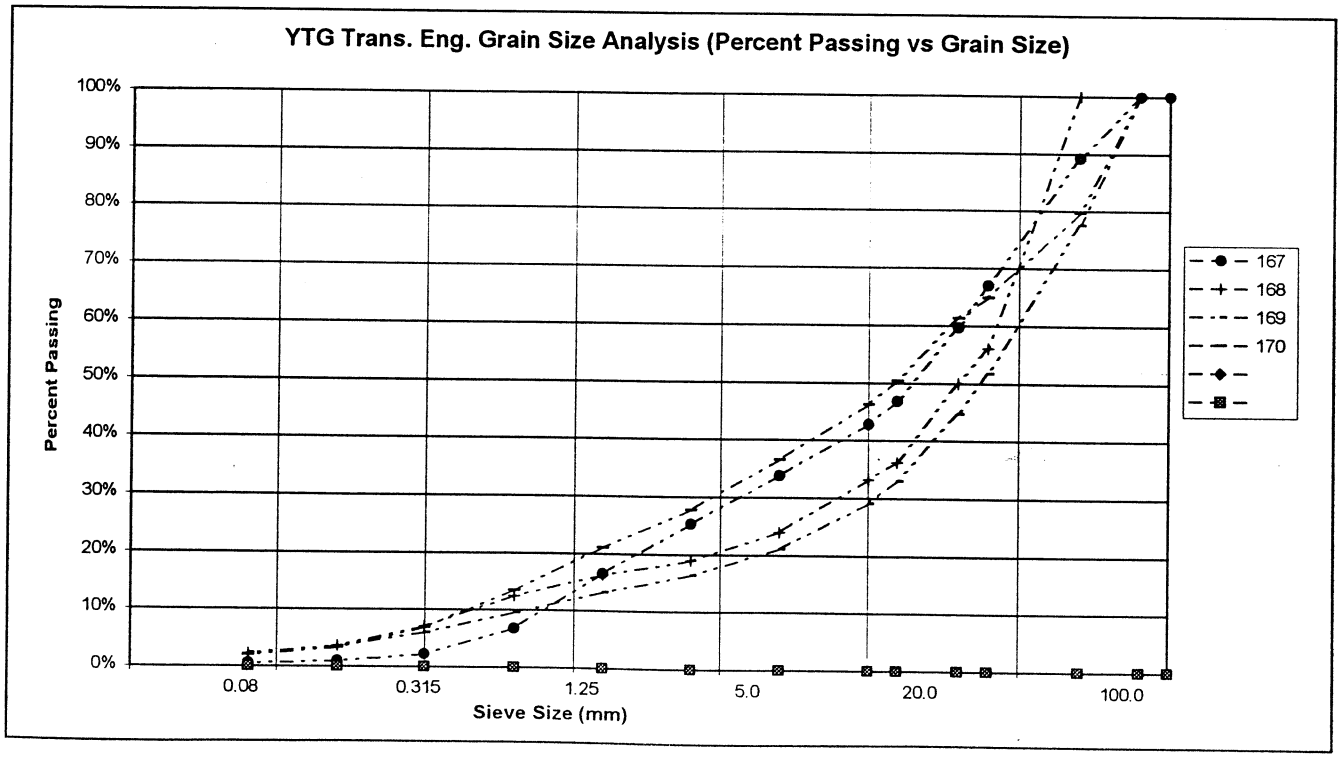


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Engineering Capital
PROJECT NAME: Shakwak Granular Investigation
PROJECT LOCATION: Km 1753 LHS Copper Joe Creek
DRILL UNIT: Koehring 6625 Backhoe
HOLE LOCATION: See Plan
LOGGED BY: JRP R.W.

HOLE No.: 636-2446

DATE COMP: Sept 2002

FIELD NO:	167	168	169	170		
LAB NO:	427	428	429	430		
DEPTH:	0.4-1.0	1.6-2.0	3.2-3.8	4.0-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	89%	100%	78%	80%		
25.0	67%	56%	52%	65%		
20.0	60%	50%	45%	61%		
12.5	47%	36%	33%	50%		
10.0	43%	33%	29%	46%		
5.0	34%	24%	21%	37%		
2.5	25%	19%	16%	28%		
1.25	17%	16%	13%	21%		
0.630	7%	12%	10%	13%		
0.315	2%	7%	6%	7%		
0.160	1%	4%	4%	3%		
0.080	1%	2%	2%	2%		
M.C.(%):	1%	2%	2%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	66	76	79	63		
% SAND:	33	22	19	35		
% FINES:	1	2	2	2		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED GRAVEL WITH SAND (GW)	WELL-GRADED GRAVEL WITH SAND (GW)	POORLY GRADED GRAVEL WITH SAND (GP)		

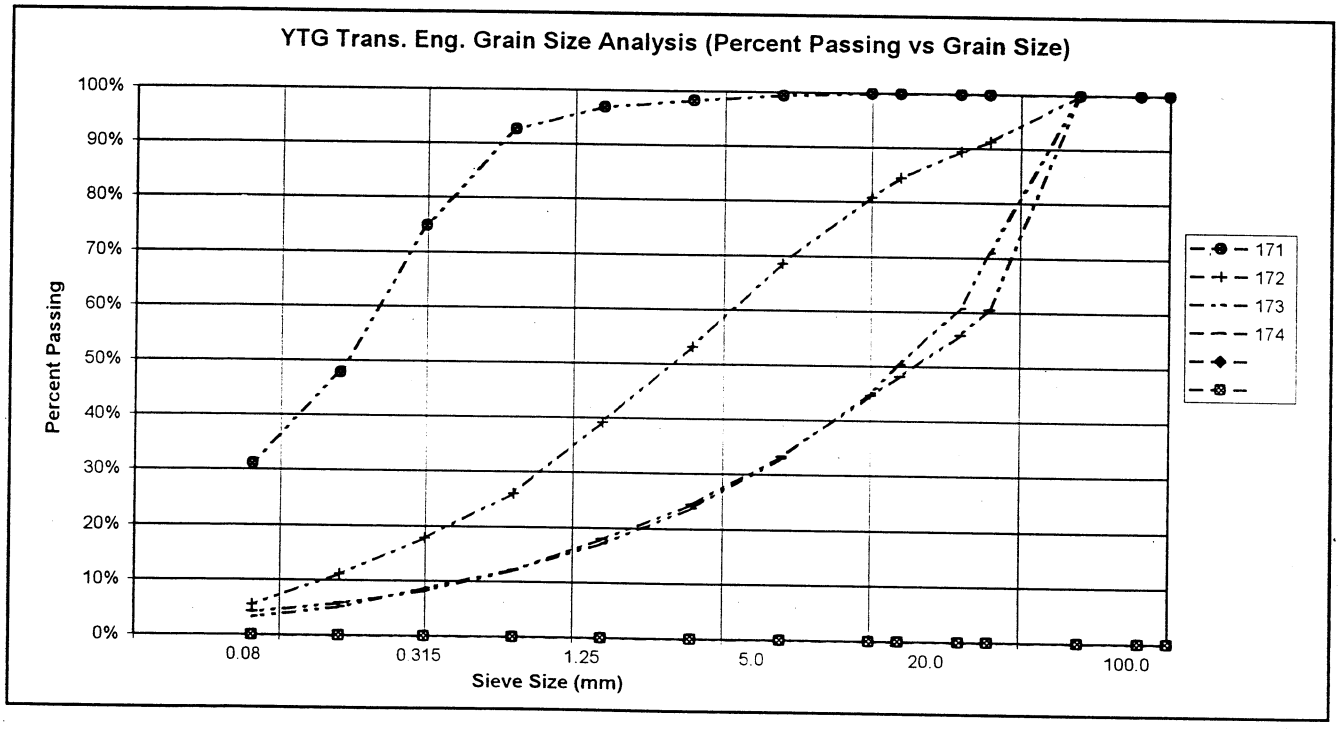


PROJECT NUMBER:	552-202101-0361-1
CLIENT:	Engineering Capital
PROJECT NAME:	Shakwak Granular Investigation
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek
DRILL UNIT:	Koehring 6625 Backhoe
HOLE LOCATION:	See Plan
LOGGED BY:	JRP R.W.

HOLE No.: 636-2447

DATE COMP: Sept 2002

FIELD NO:	171	172	173	174		
LAB NO:	431	432	433	434		
DEPTH:	0.4-1.0	2.3-2.8	3.2-3.8	4.0-4.5		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	91%	71%	60%		
20.0	100%	89%	61%	56%		
12.5	100%	84%	50%	48%		
10.0	100%	81%	45%	45%		
5.0	99%	69%	33%	33%		
2.5	98%	53%	24%	24%		
1.25	97%	39%	17%	18%		
0.630	93%	26%	12%	12%		
0.315	75%	18%	9%	8%		
0.160	48%	11%	5%	6%		
0.080	31%	6%	3%	4%		
M.C.(%):	13%	3%	2%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	1	31	67	67		
% SAND:	68	63	30	29		
% FINES:	31	6	3	4		
CLASSIFICATION	SILTY SAND (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		

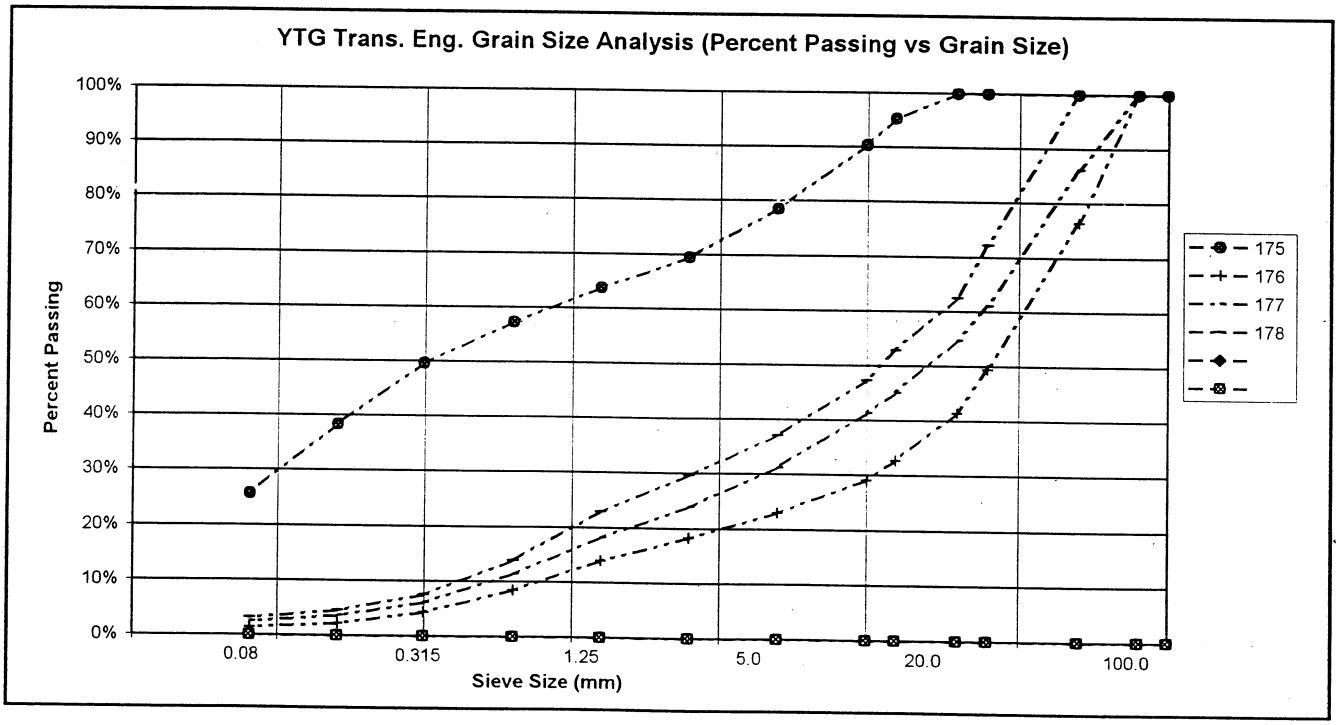


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Engineering Capital
PROJECT NAME: Shakwak Granular Investigation
PROJECT LOCATION: Km 1753 LHS Copper Joe Creek
DRILL UNIT: Koehring 6625 Backhoe
HOLE LOCATION: See Plan
LOGGED BY: JRP R.W.

HOLE No.: 636-2448

DATE COMP: Sept 2002

FIELD NO:	175	176	177	178		
LAB NO:	435	436	437	438		
DEPTH:	0.4-1.0	2.0-2.5	3.4-4.0	4.2-4.8		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	76%	86%	100%		
25.0	100%	49%	61%	72%		
20.0	100%	41%	55%	62%		
12.5	95%	33%	45%	53%		
10.0	90%	29%	41%	47%		
5.0	78%	23%	31%	37%		
2.5	70%	18%	24%	30%		
1.25	64%	14%	18%	23%		
0.630	57%	8%	11%	14%		
0.315	50%	4%	6%	8%		
0.160	38%	2%	4%	5%		
0.080	26%	1%	2%	3%		
M.C.(%):	9%	2%	2%	3%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	22	77	69	63		
% SAND:	53	22	29	34		
% FINES:	26	1	2	3		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED GRAVEL WITH SAND (GW)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		

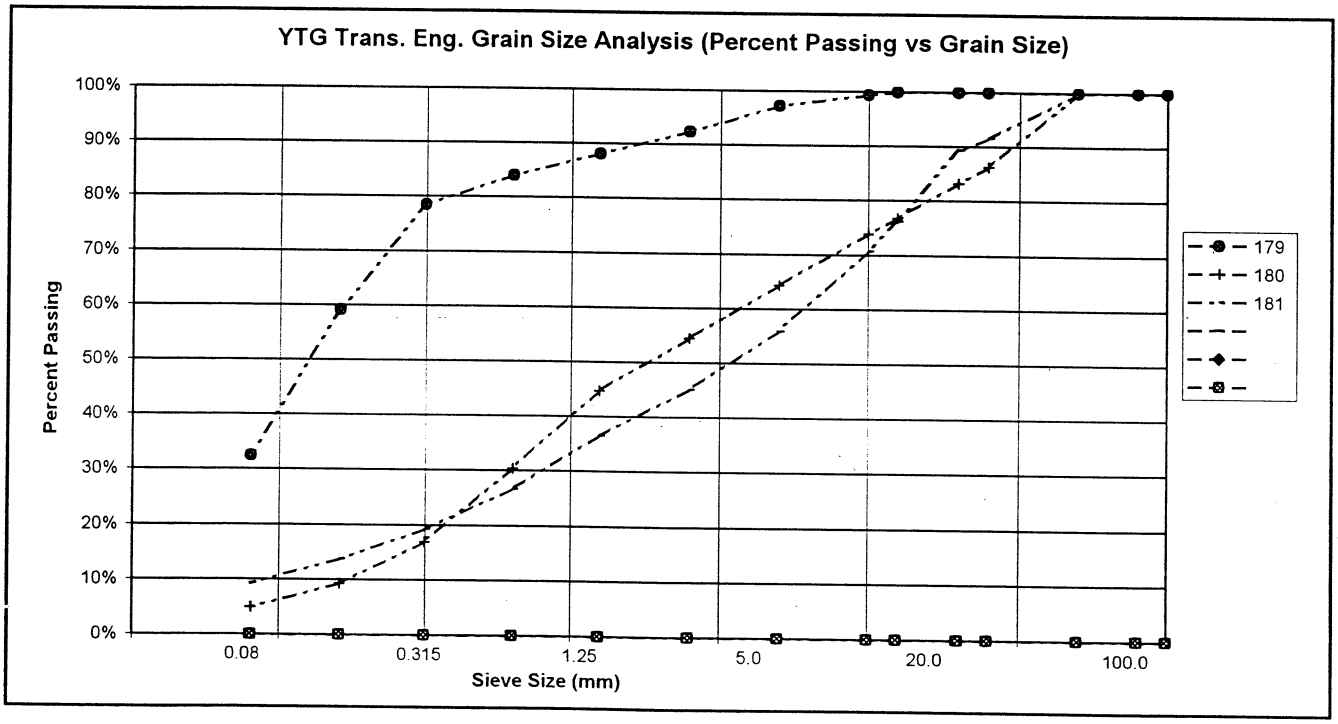


PROJECT NUMBER:	552-202101-0361-1
CLIENT:	Engineering Capital
PROJECT NAME:	Shakwak Granular Investigation
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek
DRILL UNIT:	Koehring 6625 Backhoe
HOLE LOCATION:	See Plan
LOGGED BY:	JRP R.W.

HOLE No.: 636-2449

DATE COMP: Sept 2002

FIELD NO:	179	180	181			
LAB NO:	439	440	442			
DEPTH:	1.0-1.5	2.6-3.0	4.0-4.5			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	86%	92%			
20.0	100%	83%	89%			
12.5	100%	77%	76%			
10.0	99%	74%	71%			
5.0	97%	64%	56%			
2.5	92%	54%	45%			
1.25	88%	45%	36%			
0.630	84%	30%	27%			
0.315	79%	17%	19%			
0.160	59%	9%	14%			
0.080	32%	5%	9%			
M.C.(%):	15%	4%	5%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	3	36	44			
% SAND:	65	59	47			
% FINES:	32	5	9			
CLASSIFICATION	SILTY SAND (SM)	WELL-GRADED SAND WITH GRAVEL (SW)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)			

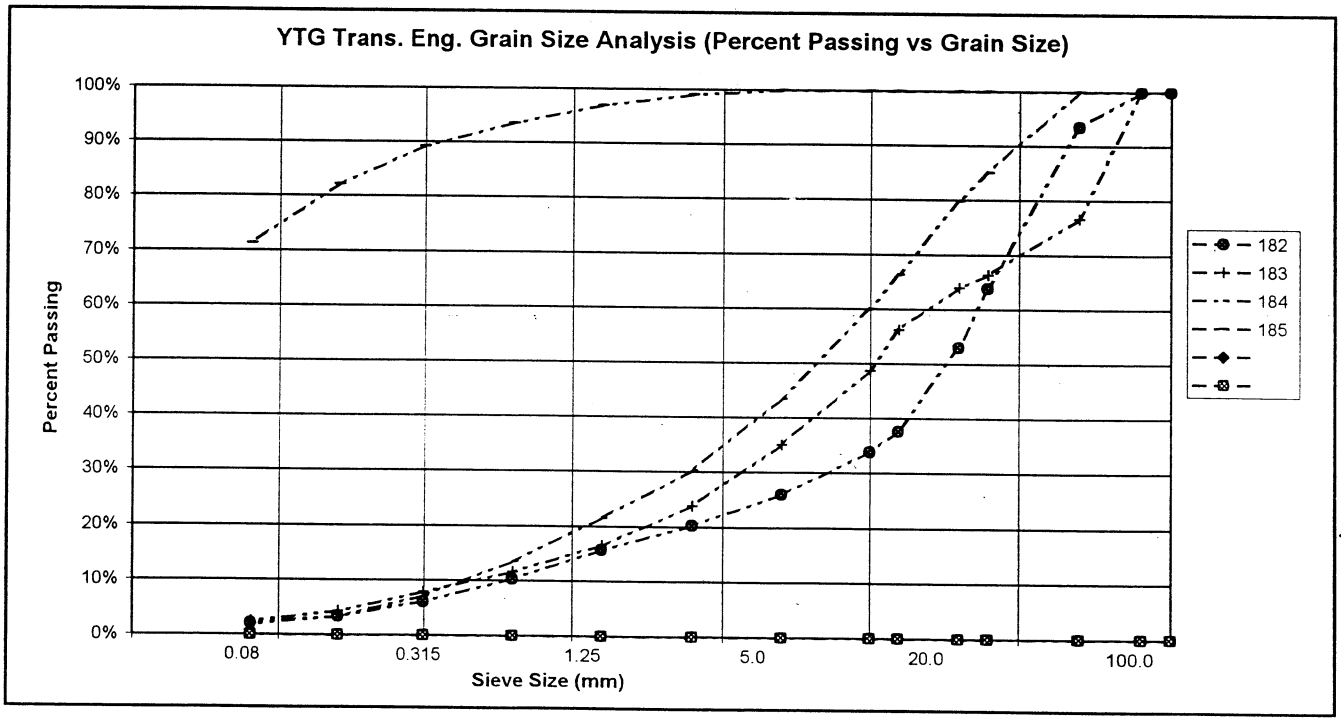


PROJECT NUMBER:	552-202101-0361-1
CLIENT:	Engineering Capital
PROJECT NAME:	Shakwak Granular Investigation
PROJECT LOCATION:	Km 1753 LHS Copper Joe Creek
DRILL UNIT:	Koehring 6625 Backhoe
HOLE LOCATION:	See Plan
LOGGED BY:	JRP R.W.

HOLE No.: 636-2450

DATE COMP: Sept 2002

FIELD NO:	182	183	184	185		
LAB NO:	442	443	444	445		
DEPTH:	0.6-1.2	2.0-2.5	3.6-4.0	4.4-4.8		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	94%	77%	100%	100%		
25.0	64%	66%	85%	100%		
20.0	53%	64%	80%	100%		
12.5	38%	56%	66%	100%		
10.0	34%	49%	60%	100%		
5.0	26%	35%	43%	100%		
2.5	20%	24%	30%	99%		
1.25	16%	17%	21%	97%		
0.630	10%	12%	13%	94%		
0.315	6%	8%	7%	89%		
0.160	3%	4%	3%	82%		
0.080	2%	3%	2%	71%		
M.C.(%):	2%	2%	3%	28%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	74	65	57	0		
% SAND:	24	33	42	29		
% FINES:	2	3	2	71		
CLASSIFICATION	WELL-GRADED GRAVEL WITH SAND (GW)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	SILT WITH SAND (ML)		



Km 1753.0 LHS Alaska Highway #1
Pit Ident. 115 G-20
(Copper Joe Creek)

September 2003
Book # 653

Test Pit Logs

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST PIT NO: 653-2729
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
KAMATSU PC 220 LC EXCAVATOR	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE NO	USC	SOIL SYMBOL
0.0	ORGANICS			
	POORLY GRADED GRAVEL WITH SAND (GP) -brown -damp -maximum 150mm material	186	GP	
1.0	-maximum 100mm material below 1.2m -easy digging below 1.2m	187	GP	
2.0				
		188	GP	
3.0				
		189	GP	
4.0	END HOLE @ 4.0m			
5.0				
6.0				

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

DEPTH (m)

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Transportation Engineering

LOGGED BY: GC	COMPLETION DEPTH: 4.0 m
REVIEWED BY:	COMPLETE: 03/10/07
Fig. No:	Page 1 of 1

03/12/08 11:50AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST PIT NO: 653-2730
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
KAMATSU PC 220 LC EXCAVATOR	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	POORLY GRADED SAND WITH SILT (SP-SM) -small layers of silt & coarse sand		190	▲	SP-SM		■ ◆	
1.0	WELL-GRADED SAND WITH SILT & GRAVEL TO SILTY SAND WITH GRAVEL (SW-SM)-(SM) -layer of gravelly sand / sand and small seams of silt -brown -damp -easy digging		191	▲	SW-SM		■ ◆	1.0
2.0								2.0
			192	▲	SW-SM		■ ◆	
3.0								3.0
			193	▲	SM		■ ◆	
4.0	END HOLE @ 4.0 Note: Primarily 3.5m of sand -Walls of excavation stable.							4.0
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: GC	COMPLETION DEPTH: 4.0 m
	REVIEWED BY:	COMPLETE: 03/10/07
	Fig. No:	Page 1 of 1

03/12/08 11:50AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST PIT NO: 653-2731
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
KAMATSU PC 220 LC EXCAVATOR	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -brown -damp -maximum 150mm material -easy digging		194 ▲		GP			
1.0								1.0
	WELL-GRADED SAND WITH GRAVEL (SW) -brown -damp		195 ▲		SW			
2.0								2.0
	POORLY GRADED GRAVEL WITH SAND (GP) -layered -brown -damp		196 ▲		GP			
3.0								3.0
			197 ▲		GP			
4.0	END HOLE @ 4.0m							4.0
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: GC	COMPLETION DEPTH: 4.0 m
REVIEWED BY:	COMPLETE: 03/10/07
Fig. No:	Page 1 of 1

03/12/08 11:50AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST PIT NO: 653-2745
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
KAMATSU PC 220 LC EXCAVATOR	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -silt and sand layers -brown -damp		198	▲	SW-SM		◆ ■	
1.0								1.0
	SILTY SAND WITH GRAVEL (SM) -brown -damp		199	▲	SM		◆ ■	
2.0								2.0
			200	▲	SM		◆ ■	
3.0								3.0
	POORLY GRADED GRAVEL WITH SAND (GP) -brown -damp		201	▲	GP		◆ ■	
4.0	END HOLE @ 4.0m							4.0
5.0								5.0
6.0								6.0

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Transportation Engineering

LOGGED BY: GC	COMPLETION DEPTH: 4.0 m
REVIEWED BY:	COMPLETE: 03/10/07
Fig. No:	Page 1 of 1

03/12/08 11:50AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST PIT NO: 653-2746
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
KAMATSU PC 220 LC EXCAVATOR	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SILT & ORGANICS							0.0
	SILTY SAND (SM) -maximum 50mm material		202	▲	SM		■ ◆	
1.0								1.0
	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -layers of sand & small gravels		203	▲	SW-SM		■ ◆	
2.0								2.0
	SANDY SILT SEAM							
	SILTY SAND WITH GRAVEL (SM) -damp		204	▲	SM		■ ◆	
3.0								3.0
	-silt seam 3.4 to 3.6m		205	▲	SM		■ ◆	
4.0	END HOLE @ 4.0m -easy digging throughout -wall holding up							4.0
5.0								5.0
6.0								6.0

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LOGGED BY: GC	COMPLETION DEPTH: 4.0 m
REVIEWED BY:	COMPLETE: 03/10/07
Fig. No:	Page 1 of 1

03/12/08 11:50AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST PIT NO: 653-2747
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
KAMATSU PC 220 LC EXCAVATOR	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) –brown –damp –maximum 100mm material		206 ▲		GP		◆ ■	
1.0								1.0
			207 ▲		GP		◆ ■	
2.0								2.0
	SILTY SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SM)–(GP) –brown –damp –maximum 100mm material		208 ▲		SM		◆ ■	
3.0								3.0
			209 ▲		GP		■	
4.0	END HOLE @ 4.0m							4.0
5.0								5.0
6.0								6.0

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LOGGED BY: GC	COMPLETION DEPTH: 4.0 m
REVIEWED BY:	COMPLETE: 03/10/07
Fig. No:	Page 1 of 1

03/12/08 11:50AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST PIT NO: 653-2748
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
KAMATSU PC 220 LC EXCAVATOR	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SILTY SAND WITH GRAVEL (SM) –damp to moist		210 ▲		SM			
1.0	POORLY GRADED GRAVEL WITH SAND (GP) –maximum 75mm material –easy digging – walls not sloughing		211 ▲		GP			1.0
2.0								2.0
3.0	–brown below 2.8m –damp below 2.8m –maximum 150mm material below 2.8m		212 ▲		GP			3.0
	–maximum 100mm material below 3.2m		213 ▲		GP			
4.0	END HOLE @ 4.0m							4.0
5.0								5.0
6.0								6.0

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Transportation Engineering

LOGGED BY: GC	COMPLETION DEPTH: 4.0 m
REVIEWED BY:	COMPLETE: 03/10/07
Fig. No:	Page 1 of 1

03/12/08 11:51AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST PIT NO: 653-2749
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
KAMATSU PC 220 LC EXCAVATOR	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	COARSE SAND							
	SILTY SAND WITH GRAVEL (SM) -brown -moist		214	▲	SM		◆ ■	
1.0	WELL-GRADED SAND WITH GRAVEL (SW) -grey -damp -old rotten tree @ 1.0 - 2.0		215	▲	SW		◆ ■	1.0
2.0	SILT -brown							2.0
	POORLY GRADED GRAVEL WITH SAND (GP) -moist		216	▲	GP		◆ ■	
3.0	SILTY SAND WITH GRAVEL (SM) -frozen (Vx)							3.0
			217	▲	SM		◆ ■	
4.0	END HOLE @ 4.0m							4.0
5.0								5.0
6.0								6.0

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Transportation Engineering

LOGGED BY: GC	COMPLETION DEPTH: 4.0 m
REVIEWED BY:	COMPLETE: 03/10/08
Fig. No:	Page 1 of 1

03/12/08 11:51AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST PIT NO: 653-2750
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
KAMATSU PC 220 LC EXCAVATOR	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -brown -damp -maximum 150mm material		218 ▲		GP			1.0
1.0								
			219 ▲		GP			
2.0	WELL-GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SW)-(GP) -brown -damp -maximum 100mm material -no silt seams							2.0
			220 ▲		SW			
3.0								3.0
			221 ▲		GP			
4.0	END HOLE @ 4.0							4.0
5.0								5.0
6.0								6.0

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LOGGED BY: GC	COMPLETION DEPTH: 4.0 m
REVIEWED BY:	COMPLETE: 03/10/08
Fig. No:	Page 1 of 1

03/12/08 11:51AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST PIT NO: 653-2751
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
KAMATSU PC 220 LC EXCAVATOR	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■PERCENT GRAVEL■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SILTY SAND WITH GRAVEL (SM) –grey –damp –maximum 50mm material		222 ▲		SM			
1.0	LAYER OF BROWN SILT							1.0
	POOR GRADED SAND WITH GRAVEL TO WELL-GRADED SAND WITH SILT & GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SP)-(SW-SM)-(GP) –grey –damp –maximum 100mm material		223 ▲		SP			
2.0								2.0
3.0			224 ▲		SW-SM			3.0
4.0	END HOLE @ 4.0m		225 ▲		GP			4.0
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: GC	COMPLETION DEPTH: 4.0 m
REVIEWED BY:	COMPLETE: 03/10/08
Fig. No:	Page 1 of 1

03/12/08 11:51AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST PIT NO: 653-2752
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
KAMATSU PC 220 LC EXCAVATOR	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SAND –brown –damp							
	POORLY GRADED GRAVEL WITH SAND (GP) –brown –damp –maximum 50mm material		226	▲	GP		◆ ■	
1.0								1.0
	–maximum 75mm material below 1.5m		227	▲	GP		◆ ■	
2.0								2.0
	SMALL SILT SEAM –moist							
	SILTY SAND WITH GRAVEL (SM) –moist to wet		228	▲	SM		◆ ■	
3.0	–frozen below 3.0m		229	▲	SM		◆ ■	3.0
	END HOLE @ 3.5m							
4.0								4.0
5.0								5.0
6.0								6.0

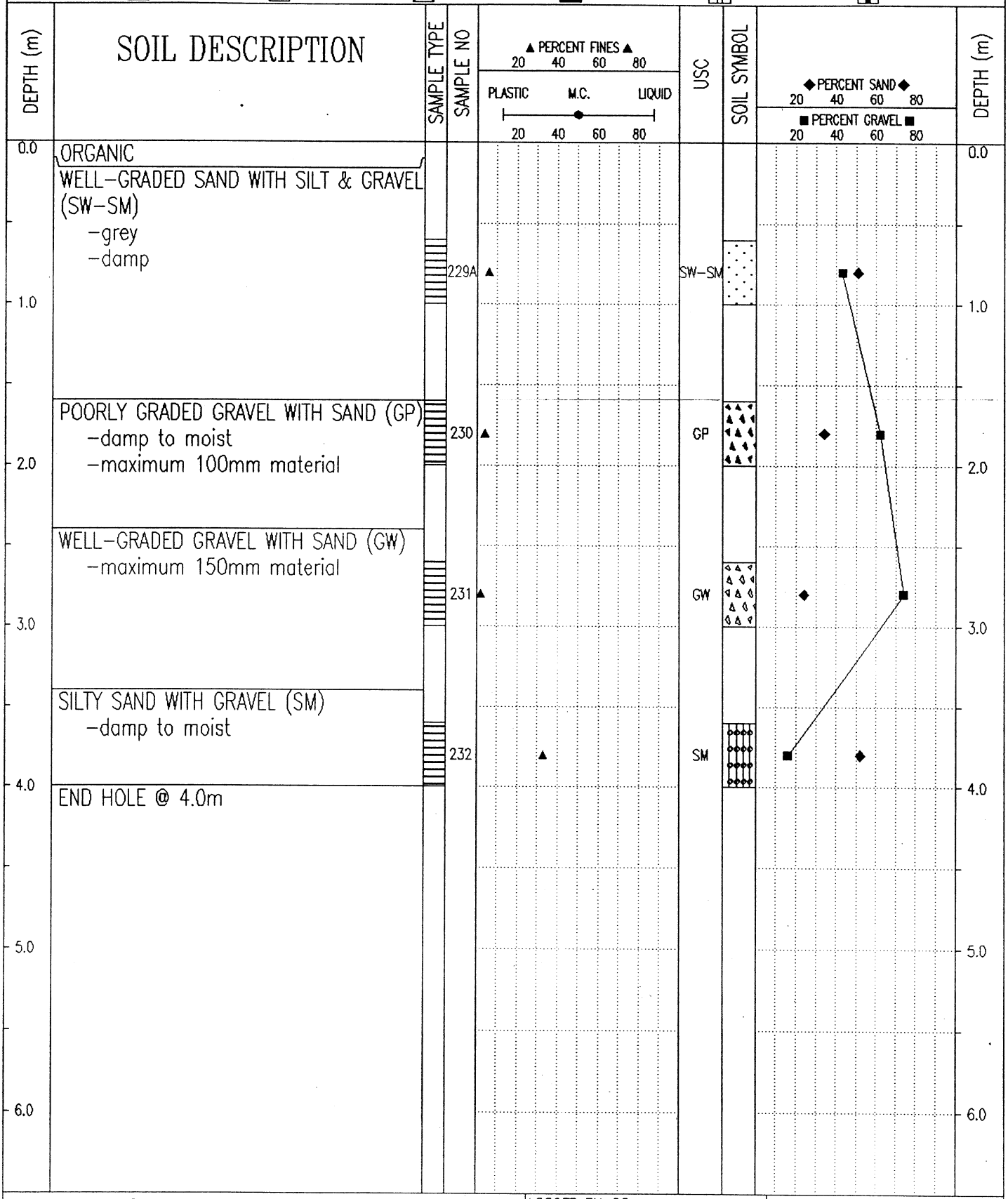
Government of Yukon
Transportation Engineering

LOGGED BY: GC	COMPLETION DEPTH: 3.5 m
REVIEWED BY:	COMPLETE: 03/10/08
Fig. No:	Page 1 of 1

03/12/08 11:51AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT GRANULAR INVESTIGATION	TEST PIT NO: 653-2753
ENGINEERING CAPITAL	COPPER JOE 115-G-20	Project No: 552-202101-0361
KAMATSU PC 220 LC EXCAVATOR	LOCATION: SEE PLAN & GPS	ELEVATION: 0.00 (m)

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



Government of Yukon Transportation Engineering	LOGGED BY: GC	COMPLETION DEPTH: 4.0 m
	REVIEWED BY:	COMPLETE: 03/10/08
	Fig. No:	Page 1 of 1

03/12/08 11:51AM

Km 1753.0 LHS Alaska Highway #1
Pit Ident. 115 G-20
(Copper Joe Creek)

September 2003
Book # 653

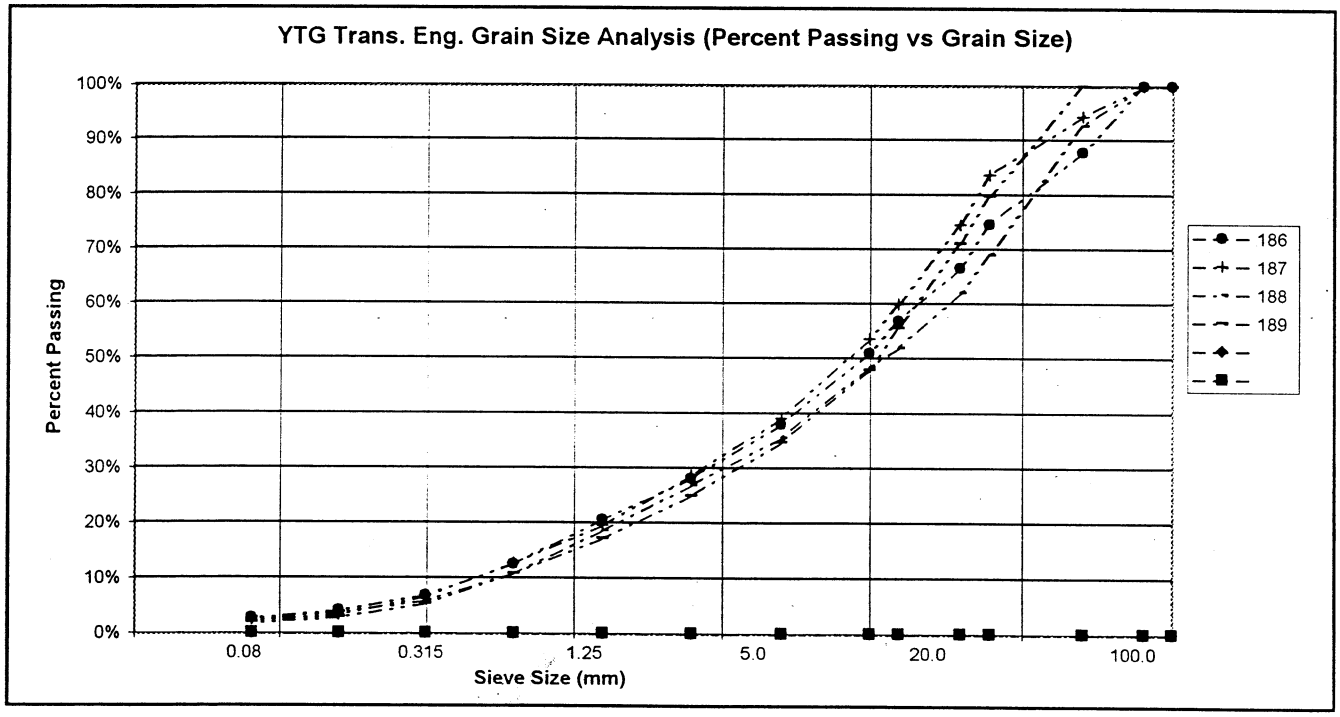
Pit Run Sample Results

PROJECT NUMBER:	552-202101-0361-1
CLIENT:	Shakwak
PROJECT NAME:	Copper Joe Granular Investigation
PROJECT LOCATION:	Km 1753 Alaska Highway
DRILL UNIT:	Kamatsu PC 220 LC
HOLE LOCATION:	See Plan
LOGGED BY:	G.C

HOLE No.: 653-2729

DATE COMP: 03/10/07

FIELD NO:	186	187	188	189		
LAB NO:	347	348	349	350		
DEPTH:	0.5-1.0	1.5-2.0	2.5-3.0	3.5-4.0		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	88%	94%	93%	100%		
25.0	75%	84%	69%	80%		
20.0	67%	74%	62%	71%		
12.5	57%	60%	52%	56%		
10.0	51%	54%	48%	48%		
5.0	38%	39%	36%	35%		
2.5	28%	29%	27%	25%		
1.25	21%	20%	19%	17%		
0.630	13%	13%	11%	11%		
0.315	7%	7%	6%	5%		
0.160	4%	3%	4%	3%		
0.080	3%	2%	3%	2%		
M.C.(%):						
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:	62	61	64	65		
% SAND:	35	37	33	33		
% FINES:	3	2	3	2		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		

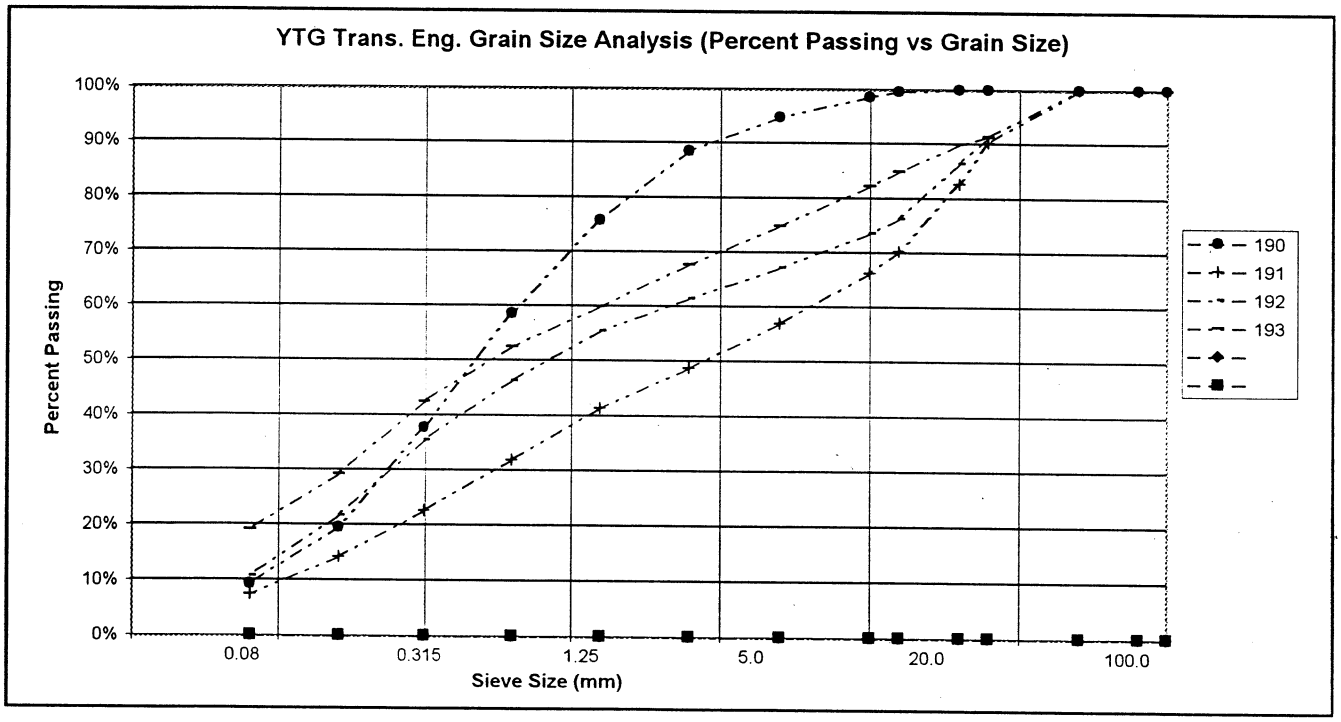


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Shakwak
PROJECT NAME: Copper Joe Granular Investigation
PROJECT LOCATION: Km 1753 Alaska Highway
DRILL UNIT: Kamatsu PC 220 LC
HOLE LOCATION: See Plan
LOGGED BY: G.C

HOLE No.: 653-2730

DATE COMP: 03/10/07

FIELD NO:	190	191	192	193		
LAB NO:	351	352	353	354		
DEPTH:	0.5-1.0	1.5-2.0	2.5-3.0	3.5-4.0		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	90%	91%	91%		
20.0	100%	83%	86%	90%		
12.5	100%	70%	76%	85%		
10.0	99%	66%	73%	82%		
5.0	95%	57%	67%	75%		
2.5	89%	49%	61%	68%		
1.25	76%	41%	55%	60%		
0.630	59%	32%	46%	52%		
0.315	38%	23%	35%	42%		
0.160	20%	14%	22%	29%		
0.080	9%	7%	11%	19%		
M.C.(%):						
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:	5	43	33	25		
% SAND:	86	50	57	56		
% FINES:	9	7	11	19		
CLASSIFICATION	POORLY GRADED SAND WITH SILT (SP-SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)		

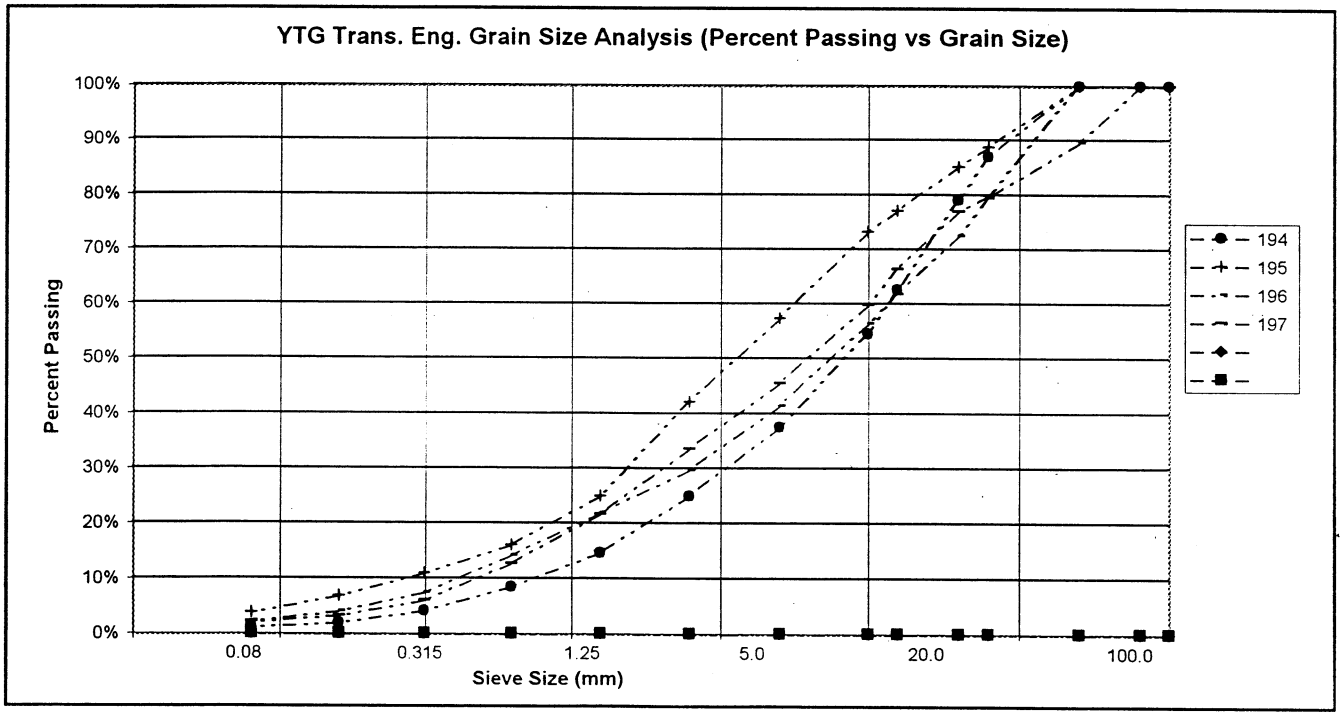


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Shakwak
PROJECT NAME: Copper Joe Granular Investigation
PROJECT LOCATION: Km 1753 Alaska Highway
DRILL UNIT: Kamatsu PC 220 LC
HOLE LOCATION: See Plan
LOGGED BY: G.C

HOLE No.: 653-2731

DATE COMP: 03/10/07

FIELD NO:	194	195	196	197		
LAB NO:	355	356	357	358		
DEPTH:	0.5-1.0	1.5-2.0	2.5-3.0	3.5-4.0		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	90%	100%		
25.0	87%	89%	79%	80%		
20.0	79%	85%	72%	77%		
12.5	63%	77%	62%	66%		
10.0	55%	73%	56%	60%		
5.0	38%	57%	41%	45%		
2.5	25%	42%	30%	33%		
1.25	15%	25%	22%	22%		
0.630	8%	16%	14%	13%		
0.315	4%	11%	7%	6%		
0.160	2%	7%	4%	3%		
0.080	1%	4%	2%	2%		
M.C.(%):						
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:	62	43	59	55		
% SAND:	36	54	39	43		
% FINES:	1	4	2	2		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		

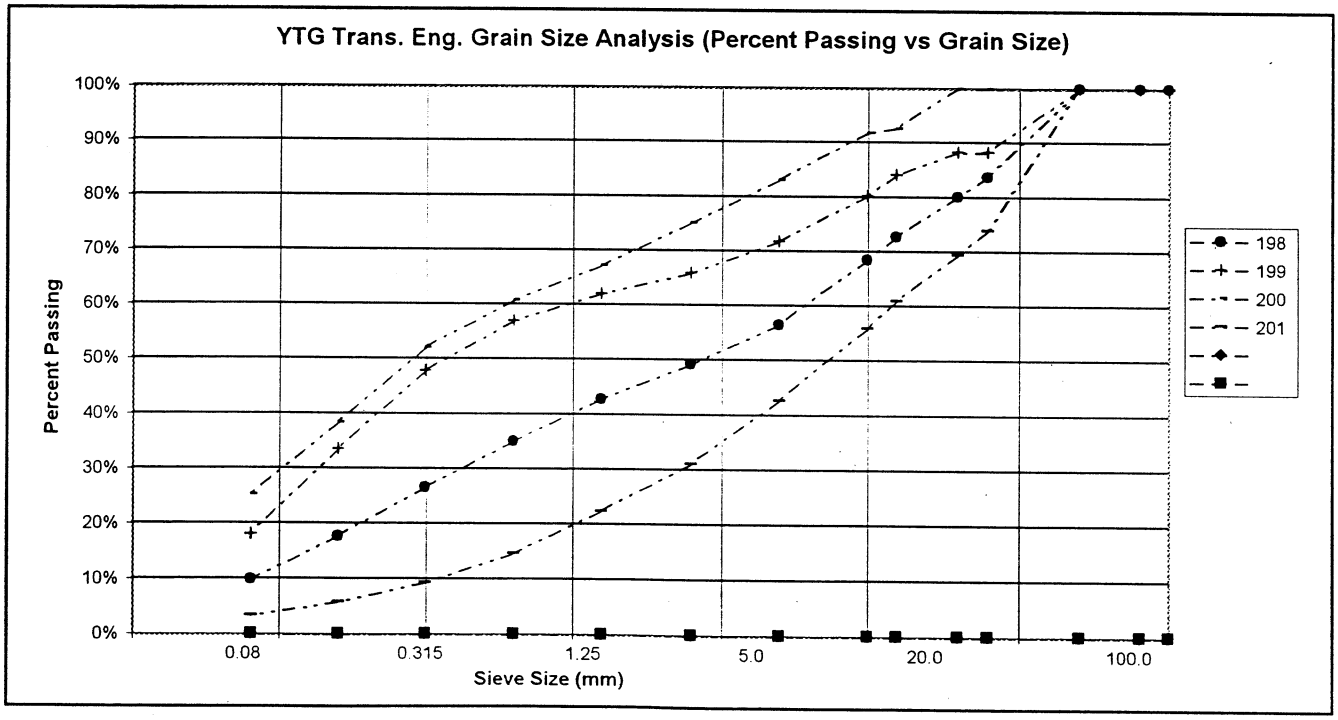


PROJECT NUMBER:	552-202101-0361-1
CLIENT:	Shakwak
PROJECT NAME:	Copper Joe Granular Investigation
PROJECT LOCATION:	Km 1753 Alaska Highway
DRILL UNIT:	Kamatsu PC 220 LC
HOLE LOCATION:	See Plan
LOGGED BY:	G.C

HOLE No.: 653-2745

DATE COMP: 03/10/07

FIELD NO:	198	199	200	201		
LAB NO:	359	360	361	362		
DEPTH:	0.5-1.0	1.6-2.0	2.5-3.0	3.5-4.0		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	84%	88%	100%	74%		
20.0	80%	88%	100%	69%		
12.5	73%	84%	93%	61%		
10.0	69%	80%	92%	56%		
5.0	56%	72%	83%	43%		
2.5	49%	66%	75%	31%		
1.25	43%	62%	67%	22%		
0.630	35%	57%	61%	15%		
0.315	27%	48%	52%	9%		
0.160	18%	34%	38%	6%		
0.080	10%	18%	25%	3%		
M.C.(%):						
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:	44	28	17	57		
% SAND:	47	54	58	39		
% FINES:	10	18	25	3		
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SAND (GP)		

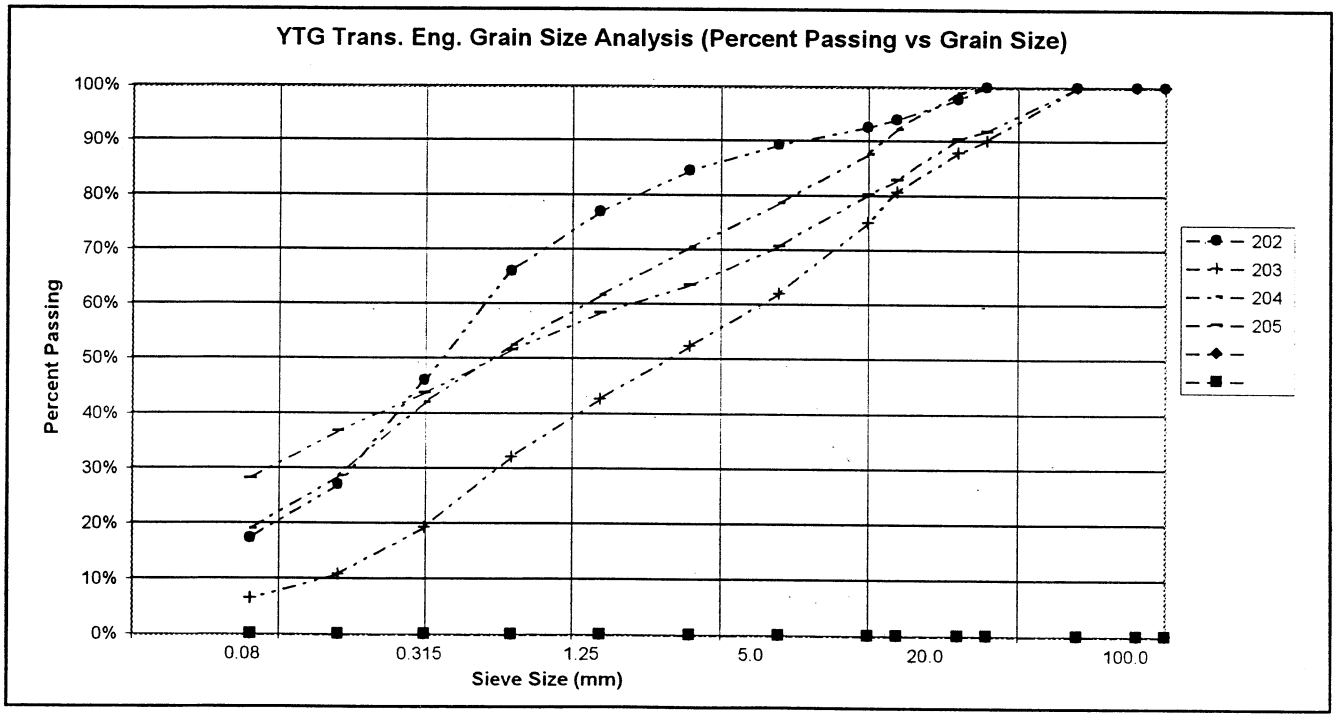


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Shakwak
PROJECT NAME: Copper Joe Granular Investigation
PROJECT LOCATION: Km 1753 Alaska Highway
DRILL UNIT: Kamatsu PC 220 LC
HOLE LOCATION: See Plan
LOGGED BY: G.C

HOLE No.: 653-2746

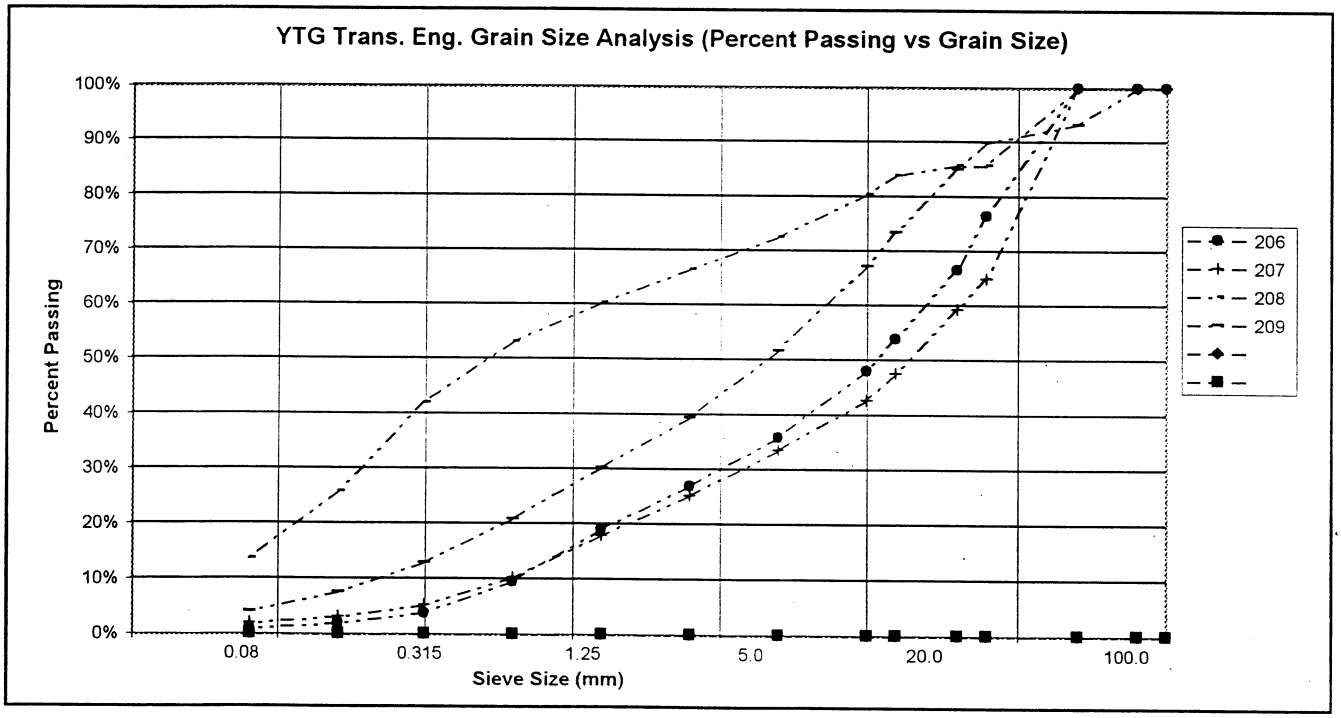
DATE COMP: 03/10/07

FIELD NO:	202	203	204	205		
LAB NO:	363	364	365	366		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	3.6-4.0		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	90%	100%	92%		
20.0	98%	88%	99%	90%		
12.5	94%	81%	92%	83%		
10.0	93%	75%	88%	80%		
5.0	89%	62%	78%	71%		
2.5	85%	52%	70%	64%		
1.25	77%	43%	62%	58%		
0.630	66%	32%	52%	52%		
0.315	46%	19%	42%	44%		
0.160	27%	11%	29%	37%		
0.080	17%	6%	19%	28%		
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	11	38	22	29		
% SAND:	72	56	59	43		
% FINES:	17	6	19	28		
CLASSIFICATION	SILTY SAND (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		



PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 653-2747
CLIENT:	Shakwak		
PROJECT NAME:	Copper Joe Granular Investigation		
PROJECT LOCATION:	Km 1753 Alaska Highway		
DRILL UNIT:	Kamatsu PC 220 LC		
HOLE LOCATION:	See Plan		
LOGGED BY:	G.C		DATE COMP: 03/10/07

FIELD NO:	206	207	208	209		
LAB NO:	367	368	369	370		
DEPTH:	0.5-1.0	1.5-2.0	2.6-3.0	3.6-3.8		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	93%		
25.0	76%	65%	86%	90%		
20.0	67%	59%	86%	85%		
12.5	54%	48%	84%	73%		
10.0	48%	43%	80%	67%		
5.0	36%	34%	72%	52%		
2.5	27%	25%	66%	39%		
1.25	19%	18%	60%	30%		
0.630	10%	10%	53%	21%		
0.315	4%	5%	42%	13%		
0.160	2%	3%	26%	8%		
0.080	1%	2%	14%	4%		
M.C.(%):						
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:	64	66	28	48		
% SAND:	35	32	59	48		
% FINES:	1	2	14	4		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SAND (GP)		

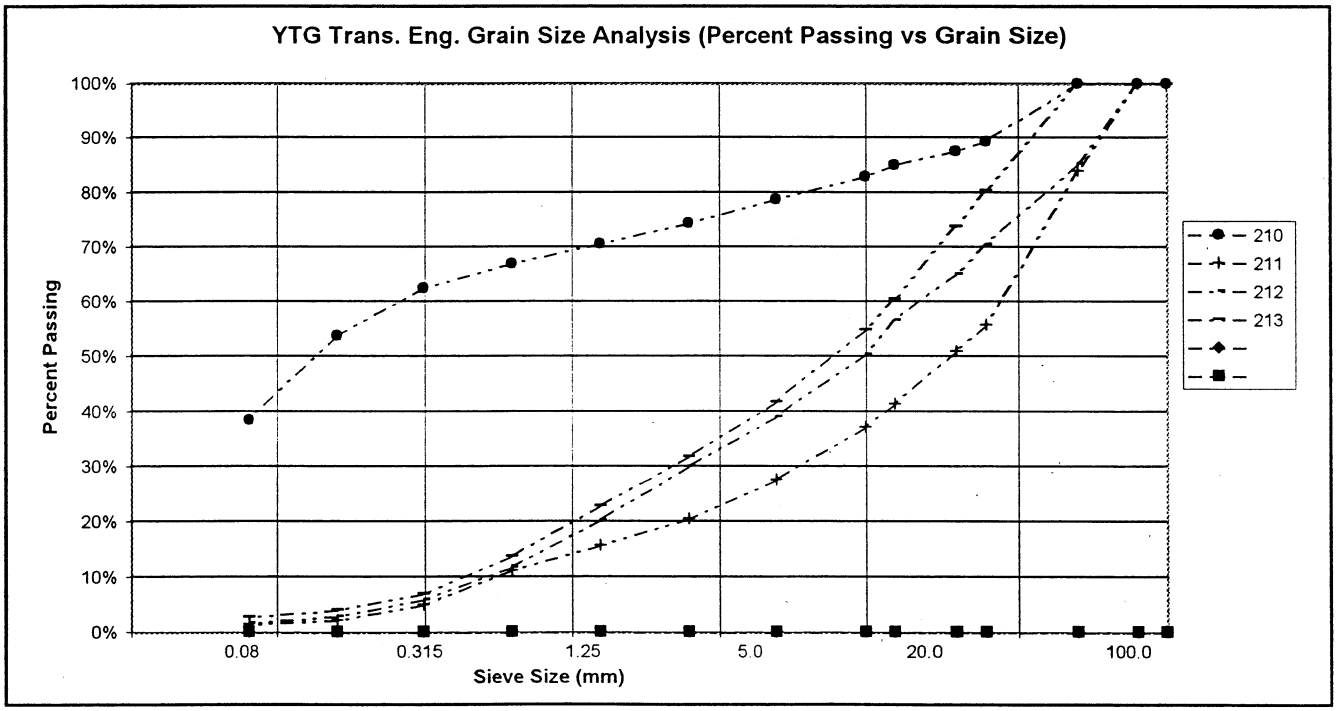


PROJECT NUMBER: 552-202101-0361-1
CLIENT: Shakwak
PROJECT NAME: Copper Joe Granular Investigation
PROJECT LOCATION: Km 1753 Alaska Highway
DRILL UNIT: Kamatsu PC 220 LC
HOLE LOCATION: See Plan
LOGGED BY: G.C

HOLE No.: 653-2748

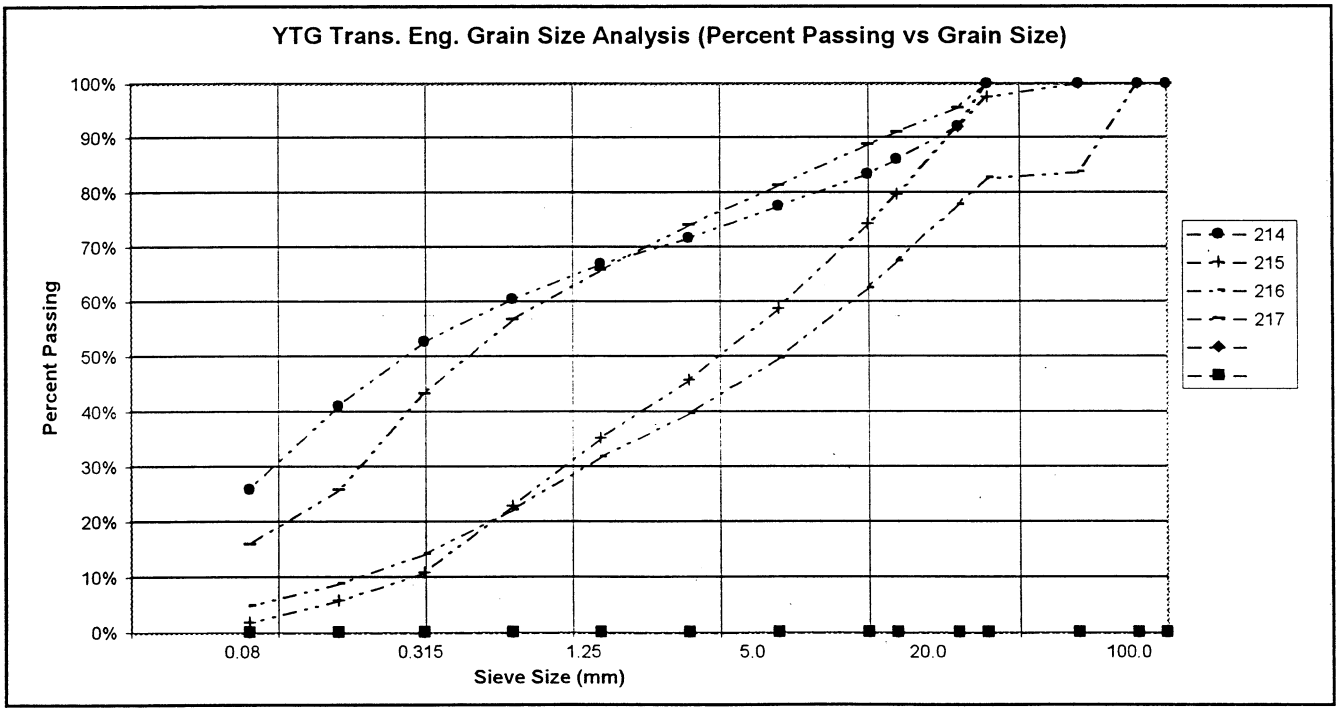
DATE COMP: 03/10/07

FIELD NO:	210	211	212	213		
LAB NO:	371	372	373	374		
DEPTH:	0.4-0.6	1.5-2.0	2.8-3.2	3.6-4.0		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	84%	85%	100%		
25.0	89%	56%	70%	80%		
20.0	88%	51%	65%	74%		
12.5	85%	41%	57%	60%		
10.0	83%	37%	50%	55%		
5.0	79%	27%	39%	42%		
2.5	74%	21%	30%	32%		
1.25	71%	16%	20%	23%		
0.630	67%	11%	12%	14%		
0.315	63%	5%	6%	7%		
0.160	54%	2%	3%	4%		
0.080	38%	1%	2%	3%		
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	21	73	61	58		
% SAND:	40	26	37	39		
% FINES:	38	1	2	3		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)		



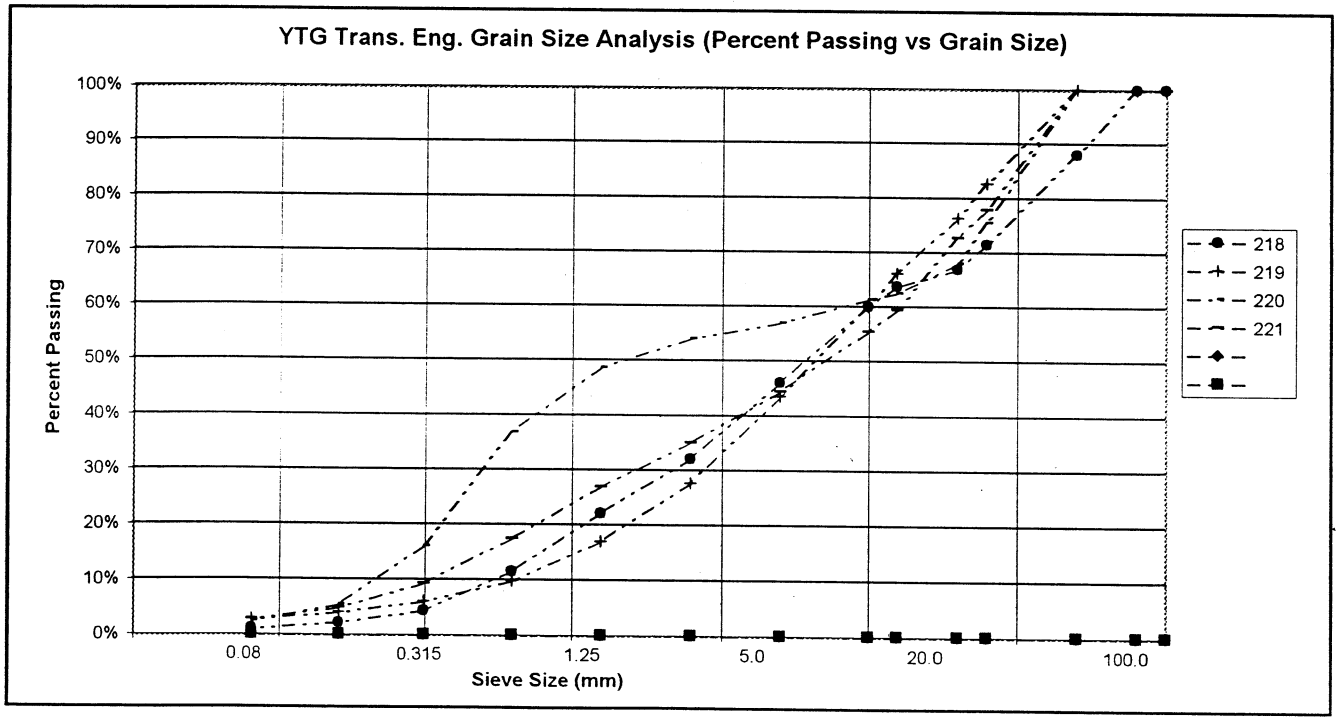
PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 653-2749
CLIENT:	Shakwak		
PROJECT NAME:	Copper Joe Granular Investigation		
PROJECT LOCATION:	Km 1753 Alaska Highway		
DRILL UNIT:	Kamatsu PC 220 LC		
HOLE LOCATION:	See Plan		
LOGGED BY:	G.C		DATE COMP: 03/10/07

FIELD NO:	214	215	216	217		
LAB NO:	375	376	377	378		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	3.6-4.0		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	84%	100%		
25.0	100%	98%	83%	100%		
20.0	92%	92%	78%	96%		
12.5	86%	80%	67%	91%		
10.0	83%	74%	62%	89%		
5.0	77%	59%	50%	81%		
2.5	72%	46%	40%	74%		
1.25	67%	35%	32%	66%		
0.630	61%	23%	22%	57%		
0.315	53%	11%	14%	43%		
0.160	41%	6%	9%	26%		
0.080	26%	2%	5%	16%		
M.C.(%):						
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:	23	41	50	19		
% SAND:	52	57	45	65		
% FINES:	26	2	5	16		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND WITH GRAVEL (SM)		



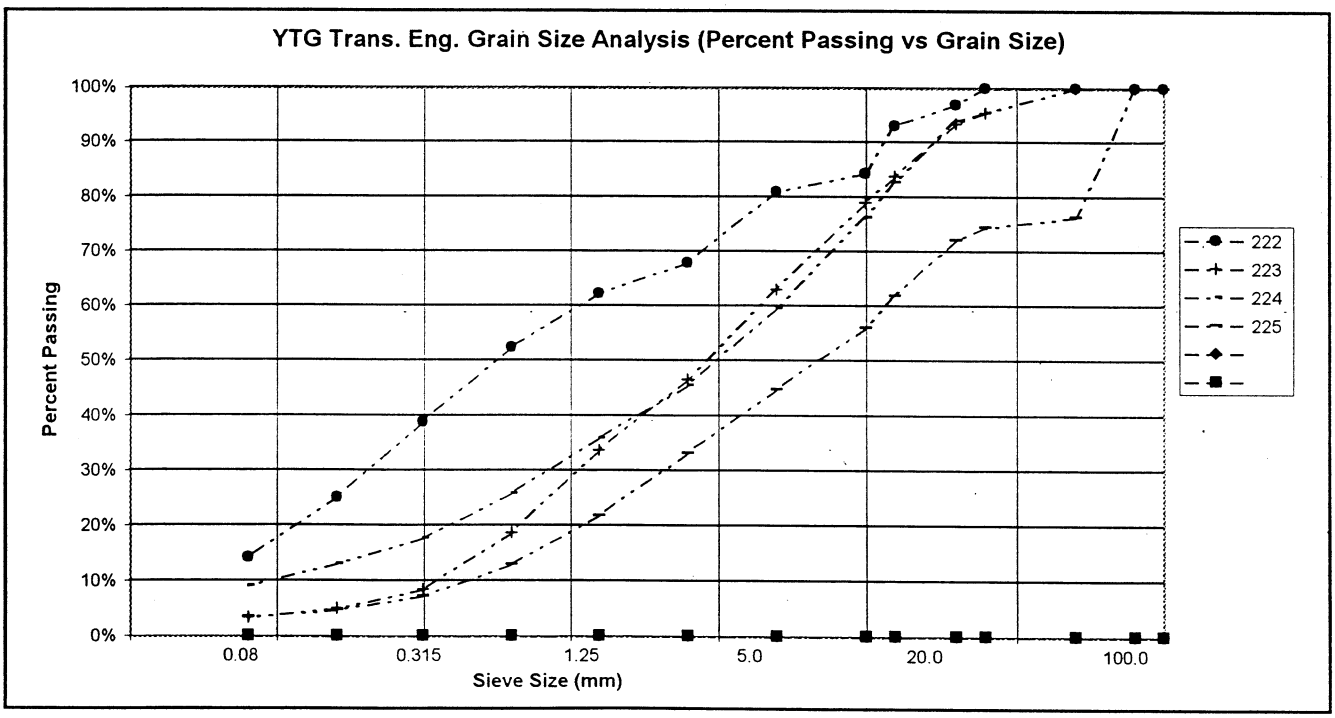
PROJECT NUMBER:	552-202101-0361-1	HOLE No.:	653-2750
CLIENT:	Shakwak		
PROJECT NAME:	Copper Joe Granular Investigation		
PROJECT LOCATION:	Km 1753 Alaska Highway		
DRILL UNIT:	Kamatsu PC 220 LC		
HOLE LOCATION:	See Plan		
LOGGED BY:	G.C	DATE COMP:	03/10/08

FIELD NO:	218	219	220	221		
LAB NO:	379	380	381	382		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	3.6-4.0		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	88%	100%	100%	100%		
25.0	71%	83%	76%	78%		
20.0	67%	76%	68%	73%		
12.5	64%	66%	62%	59%		
10.0	60%	60%	61%	55%		
5.0	46%	43%	57%	44%		
2.5	32%	28%	54%	35%		
1.25	22%	17%	49%	27%		
0.630	11%	10%	37%	17%		
0.315	4%	6%	16%	9%		
0.160	2%	4%	5%	5%		
0.080	1%	3%	2%	3%		
M.C.(%):						
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:	54	57	43	56		
% SAND:	45	41	55	42		
% FINES:	1	3	2	3		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SAND (GP)		



PROJECT NUMBER:	552-202101-0361-1		HOLE No.: 653-2751
CLIENT:	Shakwak		
PROJECT NAME:	Copper Joe Granular Investigation		
PROJECT LOCATION:	Km 1753 Alaska Highway		
DRILL UNIT:	Kamatsu PC 220 LC		
HOLE LOCATION:	See Plan		
LOGGED BY:	G.C		DATE COMP: 03/10/08

FIELD NO:	222	223	224	225		
LAB NO:	383	384	385	386		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	3.6-4.0		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	76%		
25.0	100%	95%	96%	74%		
20.0	97%	93%	94%	72%		
12.5	93%	84%	83%	62%		
10.0	84%	79%	76%	56%		
5.0	81%	63%	60%	45%		
2.5	68%	47%	45%	33%		
1.25	62%	34%	36%	22%		
0.630	52%	19%	26%	13%		
0.315	39%	8%	18%	7%		
0.160	25%	5%	13%	5%		
0.080	14%	3%	9%	3%		
M.C.(%):						
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:	19	37	40	55		
% SAND:	67	60	50	41		
% FINES:	14	3	9	3		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED SAND WITH GRAVEL (SP)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SAND (GP)		

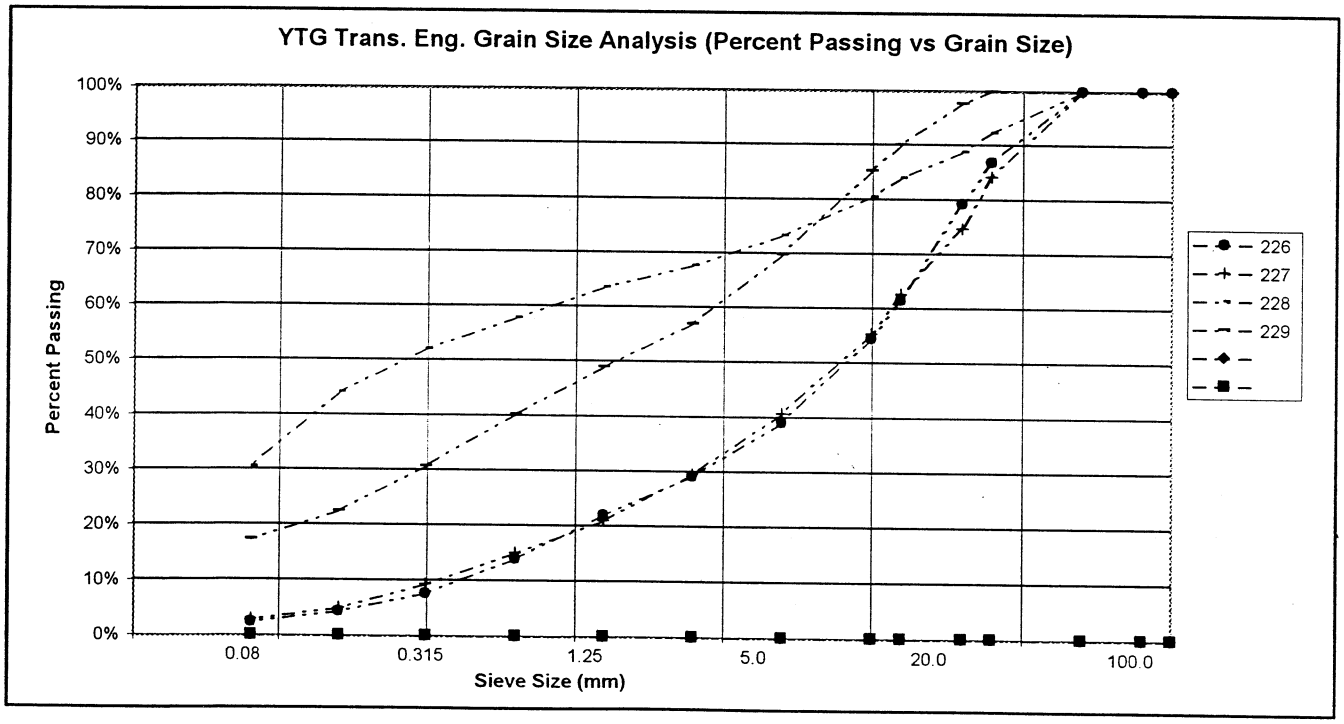


PROJECT NUMBER:	552-202101-0361-1
CLIENT:	Shakwak
PROJECT NAME:	Copper Joe Granular Investigation
PROJECT LOCATION:	Km 1753 Alaska Highway
DRILL UNIT:	Kamatsu PC 220 LC
HOLE LOCATION:	See Plan
LOGGED BY:	G.C

HOLE No.: 653-2752

DATE COMP: 03/10/08

FIELD NO:	226	227	228	229		
LAB NO:	387	388	389	390		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	3.0-3.4		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	87%	84%	92%	100%		
20.0	79%	75%	89%	98%		
12.5	62%	63%	84%	90%		
10.0	54%	55%	80%	85%		
5.0	39%	41%	73%	70%		
2.5	29%	30%	68%	57%		
1.25	22%	21%	64%	49%		
0.630	14%	15%	58%	40%		
0.315	8%	9%	52%	31%		
0.160	4%	5%	44%	23%		
0.080	2%	3%	31%	17%		
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX.:	0.0	0.0	0.0	0.0		
% GRAVEL:	61	59	27	30		
% SAND:	37	38	43	52		
% FINES:	2	3	31	17		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		



PROJECT NUMBER:	552-202101-0361-1
CLIENT:	Shakwak
PROJECT NAME:	Copper Joe Granular Investigation
PROJECT LOCATION:	Km 1753 Alaska Highway
DRILL UNIT:	Kamatsu PC 220 LC
HOLE LOCATION:	See Plan
LOGGED BY:	G.C

HOLE No.: 653-2753

DATE COMP: 03/10/08

FIELD NO:	229A	230	231	232		
LAB NO:	391	392	393	394		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	3.6-4.0		
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**	**PERCENT PASSING**		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	85%	91%	100%		
25.0	97%	75%	59%	100%		
20.0	93%	70%	51%	100%		
12.5	83%	57%	40%	93%		
10.0	76%	53%	36%	90%		
5.0	57%	38%	26%	84%		
2.5	44%	28%	21%	81%		
1.25	36%	19%	17%	78%		
0.630	29%	12%	13%	75%		
0.315	19%	7%	7%	68%		
0.160	10%	5%	3%	51%		
0.080	6%	4%	2%	33%		
M.C.(%):						
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:	43	62	74	16		
% SAND:	51	34	24	52		
% FINES:	6	4	2	33		
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED GRAVEL WITH SAND (GW)	SILTY SAND WITH GRAVEL (SM)		

