

GEOTECHNICAL INVESTIGATIONS

**Highway Construction
km 1716.6 to 1723.6
Yukon, 2003-2004
Volume 1 of 3**



Geotechnical Services

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HIGHWAY CONSTRUCTION

GEOTECHNICAL INVESTIGATION

km 1716.6 to 1723.6
YUKON, 2004-2005

ALASKA HIGHWAY #1

Highway Construction
Km 1716.6 to 1723.6
Alaska Highway #1
Yukon, 2004-2005
Volume 1 of 3

This Data Package prepared for project viewing:

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Transportation Engineering Branch
Geotechnical Services
461 Range Road
Whitehorse, Yukon

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Volume 1 of 3

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Investigation notes, classification methods and legends.

CENTRELINE TESTING km 1716.6 to 1723.6, 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 1716+900 and increasing to km 1723+725.

Laboratory Testing Result Sheets are provided.

The reports for the centreline holes are arranged according to test hole number, starting at 619-495 and increasing to 649-259.

2001	TEST HOLES 495 to 505	shown with prefix 619-
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CONTENTS (continued)**Volume 2 of 3****GRANULAR SOURCE km 1719.5 RHS ALASKA HIGHWAY**

Location plans, photographs, and subsurface exploration and testing report sheets are provided.

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2003	TEST PITS 2774 to 2784 & 2795 to 2797	shown with prefix 658-
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	TEST PITS 2831 to 2845	shown with prefix 661-
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CONTENTS (continued)**Volume 3 of 3****GRANULAR SOURCE km 1721.0 RHS ALASKA HIGHWAY**

A production history and location plans are provided.

GRANULAR SOURCE km 1730.2 LHS ALASKA HIGHWAY

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

Auger Testing

2001	TEST HOLES 1926 to 1928	shown with prefix 623-
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Test Pit Testing

2002	TEST PITS 2460 to 2520	shown with prefix 638-
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HIGHWAY CONSTRUCTION

GEOTECHNICAL INVESTIGATION
km 1716.6 to 1723.6
YUKON, 2004-2005

ALASKA HIGHWAY #1

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.

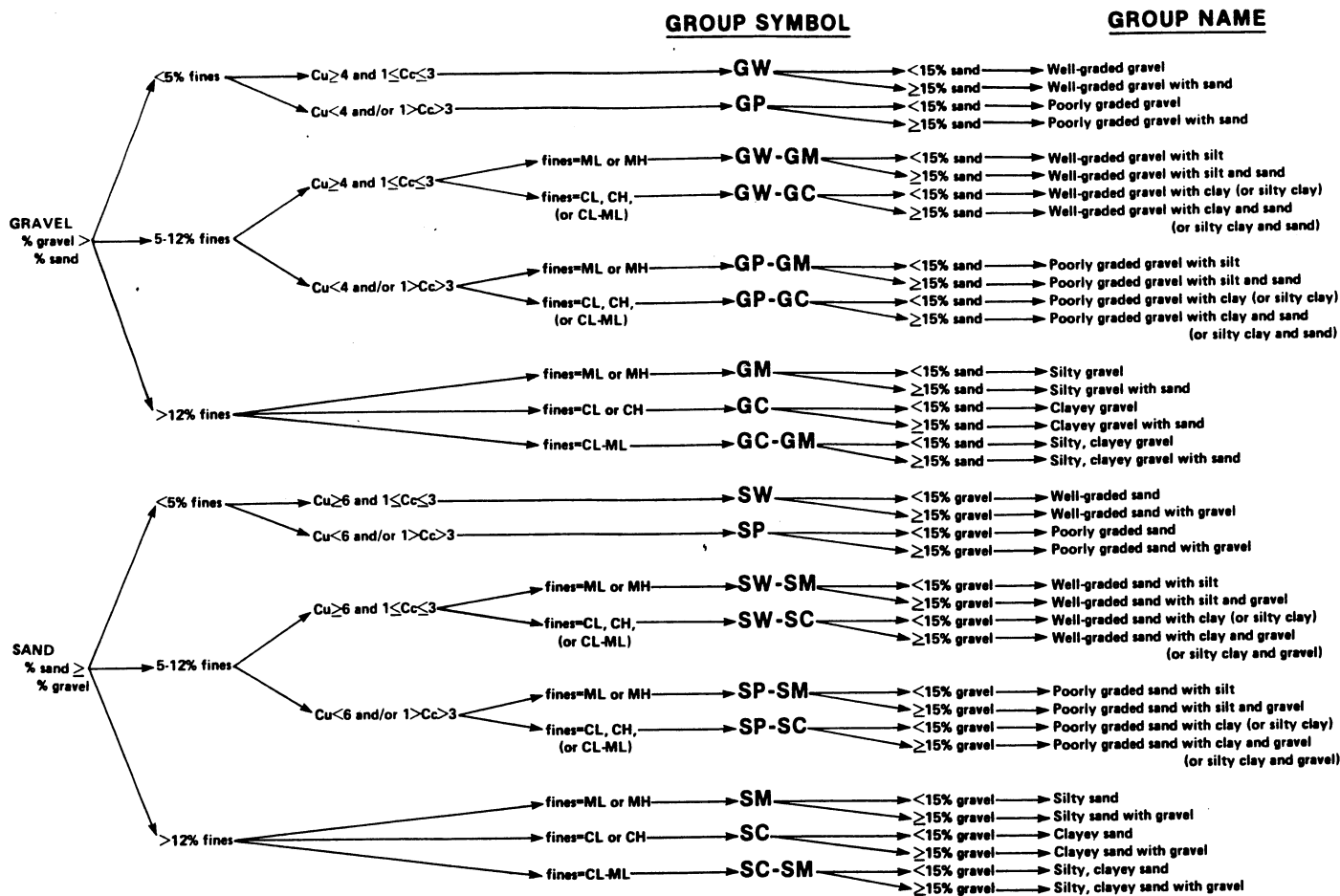
The sample laboratory testing data is provided to give detailed physical properties of selected retrieved samples within the subsurface profile. ***These tests may be conducted on disturbed samples and may exhibit properties different from the native materials. The sample classification may also vary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

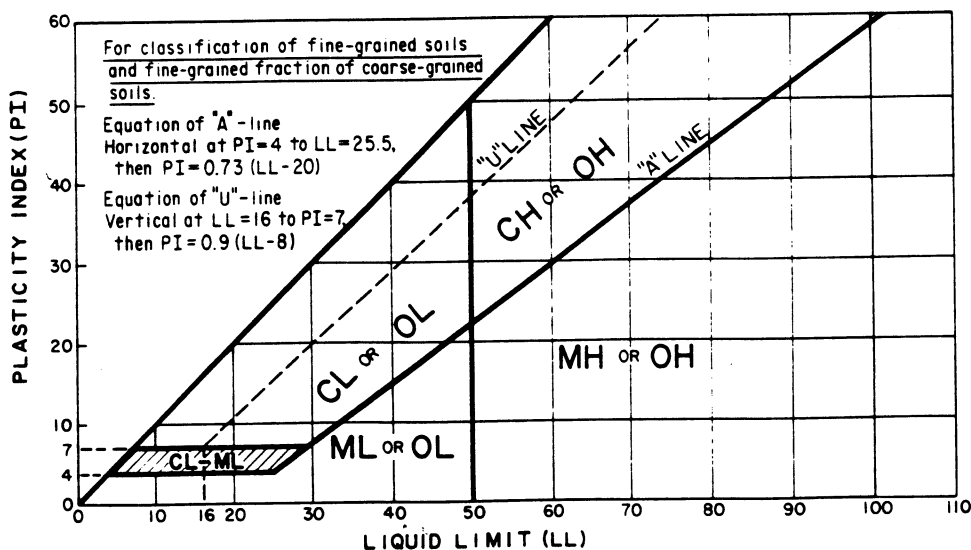
These descriptions and averages are not intended to be conclusive as to the nature of any material encountered, or to conditions between or around the test borings/pits.

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

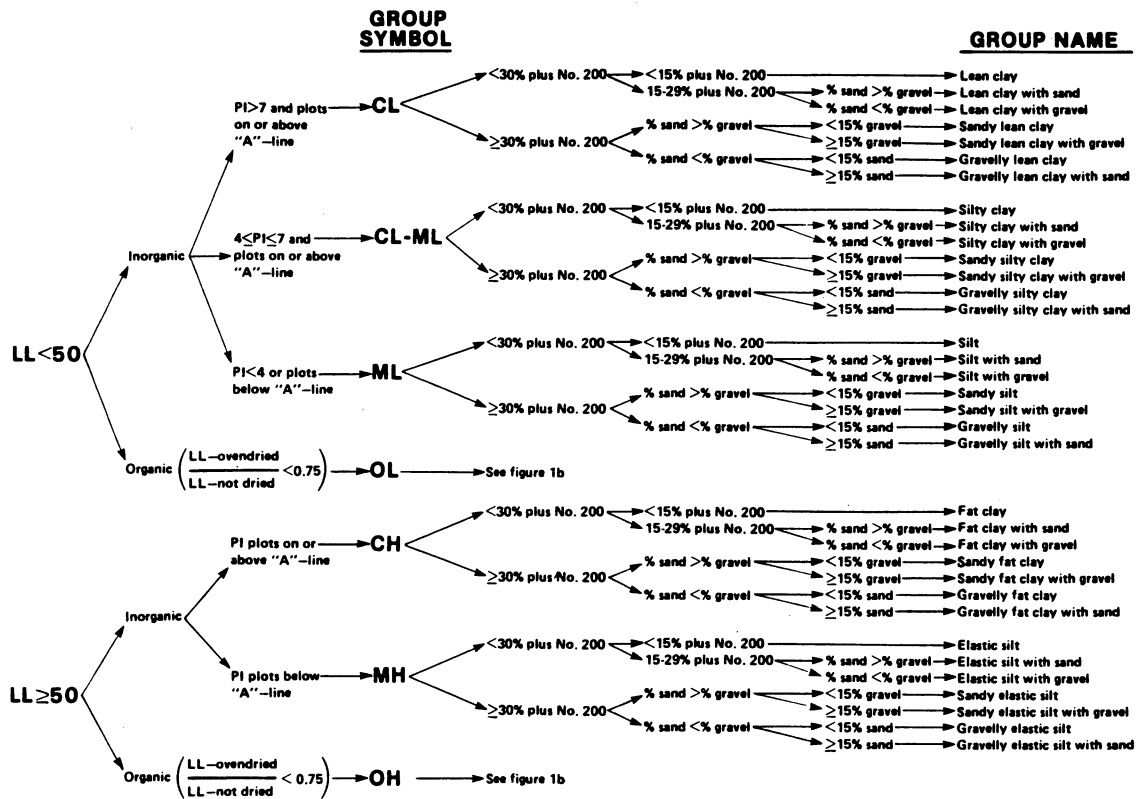
It is recommended that a site inspection, combined with consideration of the regional geology and climatic conditions be conducted. An evaluation of the investigation methods and development work done since the time of investigation should be done prior to interpreting the subsurface conditions at the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



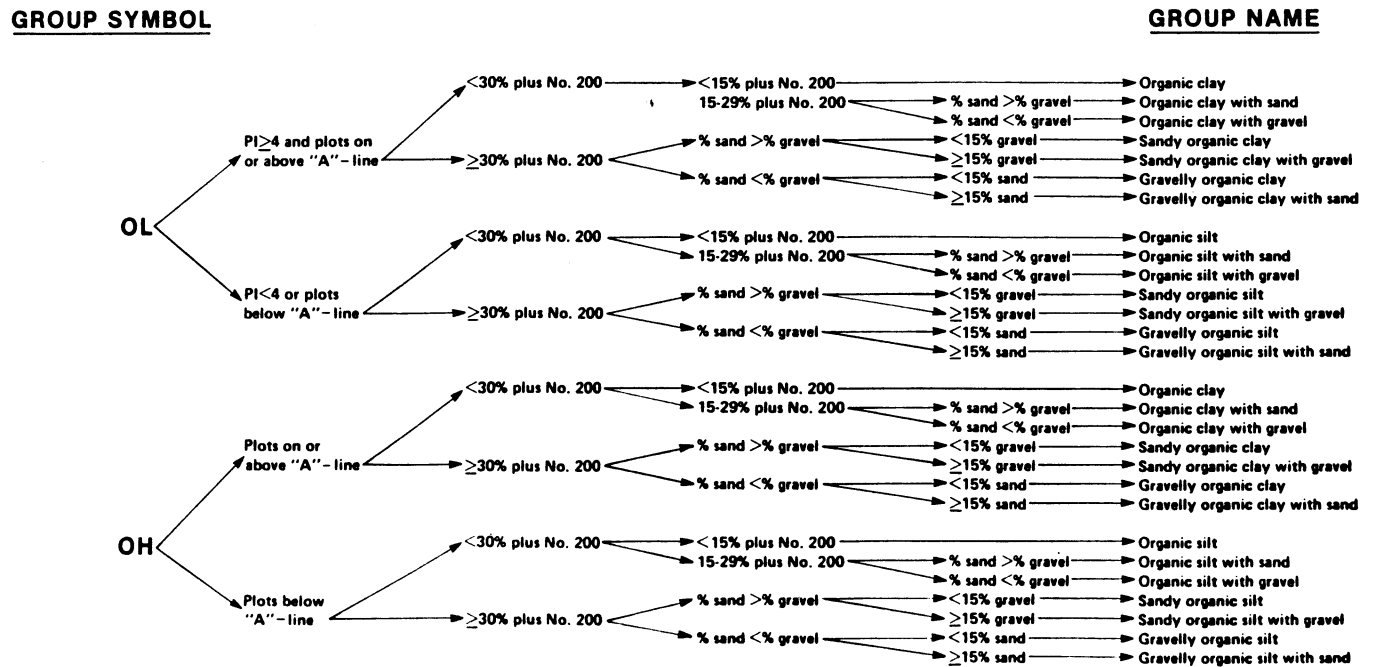
Flow chart for classifying coarse-grained soil.



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

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

Soil classification chart

UNIFIED SOIL CLASSIFICATION†

UNIFIED SOIL CLASSIFICATION†							
MAJOR DIVISIONS		GROUP SYMBOLS	TYPICAL NAMES	CLASSIFICATION CRITERIA			
COARSE-GRAINED SOILS More than 50% retained on No. 200 sieve*	GRAVELS 50% or more of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines	$C_u = D_{60}/D_{10}$ Greater than 4 $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3 Not meeting both criteria for GW		
		GRAVELS WITH FINES	GP	Poorly-graded gravels and gravel-sand mixtures, little or no fines			
		SANDS More than 50% of coarse fraction passes No. 4 sieve	GM	Silty gravels, gravel-sand-silt mixtures		Atterberg limits plot below 'A' line or plasticity index less than 4	Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
			GC	Clayey gravels, gravel-sand clay mixtures			
	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 Not meeting both criteria for SW		
		SANDS WITH FINES	SP	Poorly-graded sands and gravelly sands, little or no fines		Atterberg limits plot below 'A' line or plasticity index less than 4	Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
			SM	Silty sands, sand-silt mixtures			
		SANDS WITH FINES	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	PLASTICITY CHART For classification of fine-grained soils and fine fraction of coarse-grained soils Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols Equation of 'A' line: $PI = 0.73(LL - 20)$
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:

- Dual symbols are used to indicate borderline or mixed ice classifications
- Visual estimates of ice contents indicated on borehole logs $\pm 5\%$
- 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							3.0
4.0	▼ A triangle over two lines indicates water level detected at the time of drilling, unless otherwise noted						4.0
5.0							5.0
6.0							6.0
Government of Yukon Transportation Engineering				LOGGED BY: REVIEWED BY: Fig. No:		COMPLETION DEPTH: 6.0 m COMPLETE: / / Page 1 of 1	

HIGHWAY CONSTRUCTION

GEOTECHNICAL INVESTIGATION

km 1716.6 to 1723.6
YUKON, 2004-2005

ALASKA HIGHWAY #1

**CENTRELINE TESTING
1716+900 to 1723+725
ALASKA HIGHWAY**

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 649-259	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION:1716+900 2M RT		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN		☒ S.P.T.		☒ AUGER	
		☐ BULK		☐ TUBE	
				☐ CORE	

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL		
											20	
0.0	PREVIOUSLY STRIPPED POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP)-(GP-GM) -brown -damp -grinding @ 0.5m											0.0
1.0			140					GP				1.0
2.0			141					GP-GM				2.0
3.0	POORLY GRADED GRAVEL WITH SAND (GP) -brown -wet -very rough @ 2.5 END HOLE @ 3.0m		142					GP				3.0
4.0												4.0
5.0												5.0
6.0												6.0

Government of Yukon Transportation Engineering	LOGGED BY: G C	COMPLETION DEPTH: 3.0 m
	REVIEWED BY:	COMPLETE: 03/09/15
	Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 649-258	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION:1716+975 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			USC	SOIL SYMBOL	PERCENT SAND / GRAVEL			DEPTH (m)	
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL			
				20	40	60	80		20	40	60	80	
0.0	ORGANIC SILT (ML) -brown -saturated												0.0
1.0			137				ML						1.0
2.0	POORLY GRADED GRAVEL WITH SILT & SAND TO POORLY GRADED GRAVEL WITH SAND (GP-GM)-(GP) -saturated -grinding @ 1.5 to 1.6m -smooth easy drilling below 1.6m -sample # 139 has silt contamination from above		138				GP-GM						2.0
3.0			139				GP						3.0
4.0													4.0
5.0													5.0
6.0													6.0

Government of Yukon Transportation Engineering		LOGGED BY: G C	COMPLETION DEPTH: 3.0 m
		REVIEWED BY:	COMPLETE: 03/09/15
		Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 649-257								
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361								
D-4 CAT 6" AUGER		LOCATION: 1717+048 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL		
0.0	OPEN WILLOW AREA (WATER ON SURFACE)											0.0
	SILTY SAND (SM)											
	-brown											
	-wet to saturated											
1.0	-visible water @ 1.0m		134				SM					1.0
	-frozen 1.5 to 2.4m		135				SM					2.0
2.0												
	SILT (ML)											
	-brown											
	-saturated		136				ML					3.0
3.0	END HOLE @ 3.0m											
4.0												4.0
5.0												5.0
6.0												6.0
Government of Yukon Transportation Engineering				LOGGED BY: G C		COMPLETION DEPTH: 3.0 m						
				REVIEWED BY:		COMPLETE: 03/09/15						
				Fig. No:		Page 1 of 1						

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 649-256	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1717+158 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL		DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL	
0.0	ORGANIC / MOSS										0.0
	SILT WITH SAND TO SILTY SAND (ML)-(SM)										
	-brown										
	-frozen										
	-slow tight penetration										
1.0		X	131				ML				1.0
2.0		X	132				SM				2.0
	SANDY SILT (ML)										
	-brown										
	-frozen										
3.0		X	133				ML				3.0
	END HOLE @ 3.0m										
4.0											4.0
5.0											5.0
6.0											6.0

Government of Yukon		LOGGED BY: G C	COMPLETION DEPTH: 3.0 m
Transportation Engineering		REVIEWED BY:	COMPLETE: 03/09/15
		Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 649-255	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1717+253 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			USC	SOIL SYMBOL	PERCENT SAND / GRAVEL			DEPTH (m)			
				PLASTIC M.C. LIQUID					PERCENT SAND				PERCENT GRAVEL		
				20 40 60 80	20 40 60 80	20 40 60 80			20 40 60 80	20 40 60 80	20 40 60 80		20 40 60 80		
0.0	ORGANICS SILTY SAND WITH GRAVEL (SM) -brown -damp	☒	128	●	▲		SM		■		◆	0.0			
1.0	SILTY SAND WITH GRAVEL TO WELL-GRADED SAND WITH SILT & GRAVEL (SM)-(SW-SM) -brown -frozen -grinding @ 0.8m -tough drilling -sounds rougher than sample appearance	☒	129	●	▲		SM		■		◆	1.0			
2.0		☒	130	●			SW-SM		■			2.0			
3.0	END HOLE @ 3.0m											3.0			
4.0												4.0			
5.0												5.0			
6.0												6.0			

Government of Yukon Transportation Engineering		LOGGED BY: G C	COMPLETION DEPTH: 3.0 m
		REVIEWED BY:	COMPLETE: 03/09/15
		Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 649-254	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1717+315 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL		DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL	
				20 40 60 80	20 40 60 80	20 40 60 80			20 40 60 80	20 40 60 80	
0.0	SILT WITH SAND (ML) -brown -moist										0.0
1.0	SILTY GRAVEL WITH SAND (GM) -brown -damp -grinding starts @ 1.0m -hard grinding @ 1.5m		125				ML				1.0
2.0			126				GM				2.0
3.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -moist -easier drilling @ 2.4m END HOLE @ 3.0m		127				GP-GM				3.0
4.0											4.0
5.0											5.0
6.0											6.0

Government of Yukon Transportation Engineering		LOGGED BY: G C	COMPLETION DEPTH: 3.0 m
		REVIEWED BY:	COMPLETE: 03/09/15
		Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 649-253	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1717+390 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)	
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL			
				20	40	60	80		20	40	60	80	
0.0	ORGANIC POORLY GRADED GRAVEL WITH SAND (GP) -brown -damp -grinding hard												0.0
1.0			122					GP					1.0
2.0	SILTY GRAVEL WITH SAND (GM) -brown -damp -smooth @ 1.2m		123					GM					2.0
3.0	SANDY SILT (ML) -brown -damp -smooth		124					ML					3.0
4.0	END HOLE @ 3.0m												4.0
5.0													5.0
6.0													6.0

Government of Yukon Transportation Engineering	LOGGED BY: G C	COMPLETION DEPTH: 3.0 m
	REVIEWED BY:	COMPLETE: 03/09/15
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 649-252	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1717+490 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			USC	SOIL SYMBOL	PERCENT SAND / GRAVEL			DEPTH (m)
				PLASTIC M.C. LIQUID					PERCENT SAND PERCENT GRAVEL			
				20 40 60 80	20 40 60 80	20 40 60 80			20 40 60 80	20 40 60 80		
0.0	ORGANICS											0.0
	SANDY SILT (ML) -frozen, appears to have high moisture											
1.0		X	119				ML					1.0
	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -grey -moist -light grinding											
2.0		X	120				SW-SM					2.0
3.0		X	121				SW-SM					3.0
	END HOLE @ 3.0m											
4.0												4.0
5.0												5.0
6.0												6.0

Government of Yukon		LOGGED BY: G C		COMPLETION DEPTH: 3.0 m	
Transportation Engineering		REVIEWED BY:		COMPLETE: 03/09/15	
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 649-251								
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361								
D-4 CAT 6" AUGER		LOCATION: 1717+569 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			USC	SOIL SYMBOL	PERCENT SAND / GRAVEL			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL		
0.0	MOSS											0.0
	SANDY SILT (ML) -frozen											
1.0		☒	116				ML					1.0
	-grinding @ 1.5m frozen - slower											
2.0		☒	117				ML					2.0
	SILTY SAND WITH GRAVEL (SM) -frozen											
3.0		☒	118				SM					3.0
	END HOLE @ 3.0m											
4.0												4.0
5.0												5.0
6.0												6.0
Government of Yukon Transportation Engineering				LOGGED BY: G C REVIEWED BY: Fig. No:		COMPLETION DEPTH: 3.0 m COMPLETE: 03/09/11 Page 1 of 1						

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 649-250										
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361										
D-4 CAT 6" AUGER		LOCATION:1717+654 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 ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			DEPTH (m)		
				PLASTIC	M.C.	LIQUID			PERCENT GRAVEL ■					
0.0	MOSS / ORGANIC											0.0		
1.0	SANDY SILT (ML) -grey / brown -moist -easy drilling		113	20	40	60	80	ML		20	40	60	80	1.0
2.0	SILTY GRAVEL WITH SAND (GM) -brown -moist -little grind		114	20	40	60	80	GM		20	40	60	80	2.0
3.0	SANDY SILT (ML) -brown -moist -smooth drilling END HOLE @ 3.0m		115	20	40	60	80	ML		20	40	60	80	3.0
4.0													4.0	
5.0													5.0	
6.0													6.0	

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 649-249	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1717+753 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 ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		PERCENT GRAVEL ■		DEPTH (m)
				PLASTIC M.C. LIQUID									
				20 40 60 80	20 40 60 80	20 40 60 80			20 40 60 80	20 40 60 80	20 40 60 80		
0.0	ORGANIC SILT WITH SAND (ML) -brown -frozen (wet)											0.0	
1.0			110				ML					1.0	
2.0	SILTY GRAVEL WITH SAND (GM) -easy drilling - grinding seam @ 1.8m -moist below 2.0m		111				GM					2.0	
3.0	SILTY SAND WITH GRAVEL (SM) -grey -moist		112				SM					3.0	
3.0	END HOLE @ 3.0m												
4.0												4.0	
5.0												5.0	
6.0												6.0	

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 649-248	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1717+850 5M RT		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN		☒ S.P.T.		☒ AUGER	
		☐ BULK		☐ TUBE	
				☐ CORE	

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND / GRAVEL			DEPTH (m)			
				PLASTIC M.C. LIQUID					PERCENT SAND				PERCENT GRAVEL		
				20	40	60			20	40	60		20	40	60
0.0	MOSS / ORGANICS											0.0			
0.0 - 1.0	SILTY SAND (SM) -brown -damp -smooth easy drilling	☒	107	•	▲		SM		◆			1.0			
1.0 - 2.0	SILTY GRAVEL WITH SAND (GM) -(silt/gravel mixture) -brown -moist	☒	108	•	▲		GM		◆	■		2.0			
2.0 - 3.0	SILTY GRAVEL WITH SAND (GM) -grey -damp -sample # 109 contaminated from above -grinding starts @ 2.2m	☒	109	•	▲		GM		◆	■		3.0			
3.0	END HOLE @ 3.0m											3.0			
4.0												4.0			
5.0												5.0			
6.0												6.0			

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 649-247				
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361				
D-4 CAT 6" AUGER		LOCATION: 1717+945 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 ▲	USC	SOIL SYMBOL	◆ PERCENT SAND ◆	DEPTH (m)
				PLASTIC M.C. LIQUID 20 40 60 80			20 40 60 80 ■ PERCENT GRAVEL ■	
0.0	ORGANIC, MOSS SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -grey -damp -grinding 0.1 - 2.0m -easy drilling	X	104	● ▲		GM	◆ ■	0.0
1.0		X						1.0
2.0	SILTY SAND (SM) -brown -damp	X	105	● ▲		SM	■ ◆	2.0
3.0	END HOLE @ 3.0m	X	106	● ▲		SM	■ ◆	3.0
4.0								4.0
5.0								5.0
6.0								6.0
Government of Yukon Transportation Engineering				LOGGED BY: G C		COMPLETION DEPTH: 3.0 m		
				REVIEWED BY:		COMPLETE: 03/09/11		
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 649-246	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1718+045 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)
				PLASTIC M.C. LIQUID					PERCENT SAND PERCENT GRAVEL			
				20 40 60 80	20 40 60 80	20 40 60 80			20 40 60 80	20 40 60 80		
0.0	ORGANICS											0.0
	POORLY GRADED GRAVEL WITH SAND (GP)											
	-grey											
	-damp											
	-grinding 0.1 - 1.5m											
1.0			101				GP					1.0
	-easy drilling @ 1.5m to 3.0m											
2.0			102				GP					2.0
	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)											
	-grey											
	-damp											
3.0			103				SW-SM					3.0
	END HOLE @ 3.0m											
4.0												4.0
5.0												5.0
6.0												6.0

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Transportation Engineering		REVIEWED BY:	COMPLETE: 03/09/11
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-245	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1718+160 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL		DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL	
0.0	ORGANICS POORLY GRADED GRAVEL WITH SAND TO SILTY GRAVEL WITH SAND (GP)-(GM) -grey -damp -grinding @ 0.5m -easy drilling @ 1.0m -heavy grinding @ 1.7m WELL-GRADED SAND WITH GRAVEL (SW) -grey -damp -easy drilling END HOLE @ 3.0m										0.0
1.0		X	98					GP			1.0
2.0		X	99					GM			2.0
3.0		X	100					SW			3.0
4.0											4.0
5.0											5.0
6.0											6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-244	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1718+245 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)		
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL				
				20	40	60	80		20	40	60	80		
0.0	ORGANIC POORLY GRADED GRAVEL WITH SAND (GP) -grey -damp -grinding from surface -rough drilling		95					GP						0.0
2.0	WELL-GRADED GRAVEL WITH SAND (GW) -brown -damp -smooth drilling @ 1.5m		96					GW						2.0
3.0	SILTY SAND WITH GRAVEL (SM) -brown -damp		97					SM						3.0
3.0	END HOLE @ 3.0m													
4.0														4.0
5.0														5.0
6.0														6.0

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SUBSURFACE EXPLORATION & TESTING REPORT			SHAKWAK PROJECT GRANULAR INVESTIGATION			TEST HOLE NO: 648-243		
ENGINEERING CAPITAL			CONGDON-NO NAME CR			Project No: 552-202101-0361		
D-4 CAT 6" AUGER			LOCATION: 1718+345 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 / MOSS							0.0
	SILTY SAND WITH GRAVEL (SM) -olive -damp	X	92	● ▲	SM	[Symbol]	■ ◆	
1.0								1.0
	SILTY GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GM)-(GP-GM) -olive -damp -grinding hard @ 1.5m -easier drilling below 2.0m	X	93	● ▲	GM	[Symbol]	■ ◆	
2.0								2.0
		X	94	● ▲	GP-GM	[Symbol]	■ ◆	
3.0	END HOLE @ 3.0m							3.0
4.0								4.0
5.0								5.0
6.0								6.0

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COMPLETION DEPTH: 3.0 m
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-242	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1718+455 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL		DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL	
0.0	ORGANIC / MOSS										0.0
	WELL-GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SILT & SAND TO POORLY GRADED GRAVEL WITH SAND (GP)										
	-damp										
	-grey										
	-easy drilling										
1.0			89				SW				1.0
	-grinding harder below 1.5m										
2.0			90				GP-GM				2.0
3.0	END HOLE @ 3.0m		91				GP				3.0
4.0											4.0
5.0											5.0
6.0											6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-241	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1718+555 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)	
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL			
				20	40	60	80		20	40	60	80	
0.0	ORGANIC / MOSS												0.0
	SILT WITH SAND (ML) -brown -damp		86					ML					
1.0													
	SILTY SAND WITH GRAVEL (SM) -brown/olive -damp		87					SM					
2.0													
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -olive -damp -grinding drilling @ 1.5m -easy drilling below 2.0m		88					GP-GM					
3.0													
	END HOLE @ 3.0m												
4.0													
5.0													
6.0													

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-240	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1718+660 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			USC	SOIL SYMBOL	PERCENT SAND / GRAVEL			DEPTH (m)	
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL			
				20	40	60	80		20	40	60	80	
0.0	ORGANIC / MOSS												0.0
	SILTY SAND WITH GRAVEL (SM)												
	-brown												
	-damp												
	-smooth easy drilling												
1.0			83					SM					1.0
	SILT WITH SAND (ML)												
	-brown												
	-damp												
2.0			84					ML					2.0
	SILTY GRAVEL WITH SAND (GM)												
	-brown												
	-damp												
	-grinding												
3.0			85					GM					3.0
	END HOLE @ 3.0m												
4.0													4.0
5.0													5.0
6.0													6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-239	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1718+755 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL		DEPTH (m)
									PERCENT SAND	PERCENT GRAVEL	
				PLASTIC	M.C.	LIQUID			20 40 60 80	20 40 60 80	
0.0	MOSS / ORGANICS										0.0
	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)										
	-brown										
	-damp										
	-smooth easy drilling										
1.0			80				SW-SM				1.0
	SANDY GRAVEL										
	-damp to moist										
	-lost sample # 81										
2.0			81								2.0
	POORLY GRADED GRAVEL WITH SAND (GP)										
	-brown										
	-damp										
	-grinding @ 2.4m										
3.0			82				GP				3.0
	END HOLE @ 3.0m										
4.0											4.0
5.0											5.0
6.0											6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-238								
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361								
D-4 CAT 6" AUGER		LOCATION: 1718+835 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	MOSS / ORGANICS										0.0	
	POORLY GRADED GRAVEL WITH SAND (GP) -brown -damp	X	77					GP				
1.0	SILTY SAND WITH GRAVEL (SM) -brown -damp -easy smooth drilling	X	78	●	▲			SM	■	◆		
2.0												
3.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -brown -damp -grinding END HOLE @ 3.0m	X	79	●	▲			SW-SM	■	◆		
4.0												
5.0												
6.0												
Government of Yukon Transportation Engineering				LOGGED BY: G C REVIEWED BY: Fig. No:		COMPLETION DEPTH: 3.0 m COMPLETE: 03/09/10 Page 1 of 1						

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-237								
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361								
D-4 CAT 6" AUGER		LOCATION: 1718+960 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL		
0.0	ORGANICS											0.0
	SILTY GRAVEL WITH SAND (GM) -damp -brown	☒	73	●	▲		GM		◆	■		
1.0	POORLY GRADED GRAVEL WITH SILT & SAND TO POORLY GRADED GRAVEL WITH SAND (GP-GM)-(GP) -grey -damp -grinding @ 0.7m -harder grinding 1.5-2.5	☒	74	●▲			GP-GM		◆	■		1.0
2.0		☒	75	●			GP		◆	■		2.0
3.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -brown -damp -smoother END HOLE @ 3.0m	☒	76	●			SW-SM		◆	■		3.0
4.0												4.0
5.0												5.0
6.0												6.0
Government of Yukon Transportation Engineering				LOGGED BY: G C		COMPLETION DEPTH: 3.0 m						
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-236	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1719+052 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 ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		PERCENT GRAVEL ■	DEPTH (m)			
				20	40	60			80	20			40	60	80
0.0	ORGANICS											0.0			
	SILTY SAND WITH GRAVEL (SM)														
	-brown														
	-damp														
1.0	SILTY GRAVEL WITH SAND (GM)											1.0			
	-brown														
	-damp														
	-light grinding @ 1.0m														
2.0	-heavy grinding 1.9 to 2.8m											2.0			
3.0	SILTY SAND (SM)											3.0			
	-damp														
	-smooth drilling														
	END HOLE @ 3.0m														
4.0												4.0			
5.0												5.0			
6.0												6.0			

Government of Yukon Transportation Engineering		LOGGED BY: G C	COMPLETION DEPTH: 3.0 m
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-235								
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361								
D-4 CAT 6" AUGER		LOCATION: 1719+148 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL		
0.0	ORGANICS SANDY GRAVEL											0.0
1.0	ORGANICS SILTY SAND (SM) -brown -damp	X	67	●	▲		SM		◆			1.0
2.0	POORLY TO WELL-GRADED GRAVEL WITH SAND (GP)-(GW) -grey -damp to dry -grinding @ 1.5,	X	68	▲			GP		◆	■		2.0
3.0	-heavier grinding @ 2.8m END HOLE @ 3.0m	X	69	▲			GW		◆	■		3.0
4.0												4.0
5.0												5.0
6.0												6.0
Government of Yukon Transportation Engineering				LOGGED BY: G C REVIEWED BY: Fig. No:		COMPLETION DEPTH: 3.0 m COMPLETE: 03/09/10 Page 1 of 1						

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-234									
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361									
D-4 CAT 6" AUGER		LOCATION: 1719+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 ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			PERCENT GRAVEL ■	DEPTH (m)
				20	40	60			80	20	40		
				PLASTIC	M.C.	LIQUID							
				20	40	60	80			20	40	60	80
0.0	ORGANICS												0.0
	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	☒	64					SW-SM					
	-brown												
	-damp												
1.0	SILTY SAND WITH GRAVEL (SM)	☒	65					SM					1.0
	-brown												
	-damp												
	-grinding starts @ 0.9m												
2.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)												2.0
	-brown												
	-damp												
	-smooth easy drilling												
3.0	END HOLE @ 3.0m	☒	66					GP-GM					3.0
4.0													4.0
5.0													5.0
6.0													6.0
Government of Yukon Transportation Engineering				LOGGED BY: G C REVIEWED BY: Fig. No:				COMPLETION DEPTH: 3.0 m COMPLETE: 03/09/10 Page 1 of 1					

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-233								
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361								
D-4 CAT 6" AUGER		LOCATION: 1719+355 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 ▲			USC	SOIL SYMBOL	◆ PERCENT SAND ◆			DEPTH (m)
				20	40	60			80	20	40	
				PLASTIC M.C. LIQUID 20 40 60 80					■ PERCENT GRAVEL ■ 20 40 60 80			
0.0	SILTY GRAVEL WITH SAND (GM) - grey - moist	X	61	●	▲		GM		◆	■	0.0	
1.0	WELL-GRADED GRAVEL (GW) - grey - damp - angular to sub-angular - grinding 0.5m to 1.5m	X	62				GW		◆	■	1.0	
2.0	SANDY SILT (ML) - brown - wet - smooth easy drilling	X	63	●	▲		ML		◆		2.0	
3.0	END HOLE @ 3.0m										3.0	
4.0											4.0	
5.0											5.0	
6.0											6.0	
Government of Yukon Transportation Engineering				LOGGED BY: G C		COMPLETION DEPTH: 3.0 m						
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-232	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1719+455 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL		
											20	
0.0	ORGANICS											0.0
	POORLY GRADED GRAVEL WITH SAND (GP)											
	-grey											
	-damp											
	-grinding from surface											
1.0			58					GP				1.0
2.0			59					GP				2.0
	WELL-GRADED SAND WITH GRAVEL (SW)											
	-grey											
	-moist											
	-smooth easy drilling 2.2m to 3.0m											
3.0	ORGANICS		60					SW				3.0
	END HOLE @ 3.0m											
4.0												4.0
5.0												5.0
6.0												6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-231			
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361			
D-4 CAT 6" AUGER		LOCATION: 1719+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	POORLY GRADED GRAVEL WITH SAND (GP) -grey -damp to dry -no organics on surface, visible gravel	X	55		GP	▲▲▲▲▲ ◆ ■	0.0
1.0	-damp below 1.2m -harder grinding @ 1.2m	X	56		GP	▲▲▲▲▲ ◆ ■	1.0
2.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -grey -moist -easy smooth drilling 2.0m to 3.0m	X	57		GP-GM	▲▲▲▲▲ ◆ ■	2.0
3.0	END HOLE @ 3.0m						3.0
4.0							4.0
5.0							5.0
6.0							6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-230	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1719+648 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL		DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL	
0.0	ORGANIC SILTY GRAVEL WITH SAND (GM) -brown -damp		51				GM			0.0	
1.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -damp -grinding drilling -smooth @ 1.6m		52				GP-GM			1.0	
2.0	WELL-GRADED GRAVEL WITH SAND (GW) -brown -damp -heavy grinding @ 2.0m		53				GP-GM			2.0	
3.0	END HOLE @ 3.0m		54				GW			3.0	
4.0										4.0	
5.0										5.0	
6.0										6.0	

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-229	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1719+750 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	ORGANICS							0.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)							
	-grey							
	-damp							
	-grinding from 0.1m							
1.0			48			GP-GM		1.0
2.0	SAND							2.0
	-lost sample #49							
	-brown							
	-damp							
	SILT WITH SAND (ML)							
	-brown							
	-damp							
3.0	END HOLE @ 3.0m		50			ML		3.0
4.0								4.0
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering		LOGGED BY: G C	COMPLETION DEPTH: 3.0 m
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-228				
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361				
D-4 CAT 6" AUGER		LOCATION: 1719+852 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	ORGANICS							0.0
	SILTY SAND WITH GRAVEL (SM)							
	-olive							
	-damp							
1.0	-easy drilling							1.0
	ORGANICS							
	-brown							
2.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM)							2.0
	-brown							
	-damp							
	-sample # 46 contaminated from above							
	-grinding @ 2.5m							
3.0	-rougher @ 2.8m							3.0
	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0
Government of Yukon				LOGGED BY: G C		COMPLETION DEPTH: 3.0 m		
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-227								
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361								
D-4 CAT 6" AUGER		LOCATION: 1719+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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL		
0.0	SILTY SAND -damp											0.0
	ORGANIC ASH											
1.0	SILT WITH SAND (ML) -brown -damp	X	42	●		▲	ML		◆			1.0
2.0		X	43	●		▲	ML		◆			2.0
3.0	SANDY SILT (ML) -olive -damp -tighter drilling @ 2.5m -no grinding below 2.5m	X	44	●		▲	ML		◆			3.0
	END HOLE @ 3.0m											
4.0												4.0
5.0												5.0
6.0												6.0
Government of Yukon Transportation Engineering				LOGGED BY: G C REVIEWED BY: Fig. No:		COMPLETION DEPTH: 3.0 m COMPLETE: 03/09/09		Page 1 of 1				

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-226	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1720+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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL		DEPTH (m)		
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL			
				20	40	60	80		20	40	60	80	
0.0	SILT WITH SAND (ML) -brown -damp -smooth drilling - not frozen		39					ML					0.0
1.0													1.0
	SANDY SILT (ML) -with organics -brown -damp		40					ML					
2.0													2.0
	SILTY SAND (SM) -brown -damp												
3.0			41					SM					3.0
4.0	END HOLE @ 3.0m												4.0
5.0													5.0
6.0													6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 621-531	
ENGINEERING CAPITAL		CONDON CREEK CHANNEL		Project No: 092-202101-0362	
NODWELL B40L 6" AUGER		LOCATION: 1720+100 2M LHS		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN		☒ S.P.T.		☒ AUGER	
		☐ BULK		☐ TUBE	
				☐ CORE	

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND / GRAVEL		DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL	
0.0	SILT -damp -smooth										0.0
	ORGANIC										
1.0	SILT (ML) -brown -damp -smooth drilling, tight	X	1277				ML				1.0
2.0		X	1278				ML				2.0
3.0	SILTY SAND (SM) -brown -damp	X	1279				SM				3.0
4.0	SILTY SAND WITH GRAVEL (SM) -damp -minor grinding	X	1280				SM				4.0
5.0	END HOLE @ 4.0m Note: ditch drilling										5.0
6.0											6.0

Government of Yukon Transportation Engineering		LOGGED BY: G.C.	COMPLETION DEPTH: 4.0 m
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-225	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1720+155 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL		DEPTH (m)
				PLASTIC 20 40 60 80	M.C. 20 40 60 80	LIQUID 20 40 60 80			PERCENT SAND 20 40 60 80	PERCENT GRAVEL 20 40 60 80	
0.0	ORGANICS SILTY SAND TO SANDY SILT (ML) -brown -damp -no grinding										0.0
1.0			36				SM				1.0
2.0	-with organics below 2.0m		37				ML				2.0
3.0	END HOLE @ 3.0m		38				ML				3.0
4.0											4.0
5.0											5.0
6.0											6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 621-530	
ENGINEERING CAPITAL		CONDON CREEK CHANNEL		Project No: 092-202101-0382	
NODWELL B40L 6" AUGER		LOCATION: 1720+225 50M LHS		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN		☒ S.P.T.		☒ AUGER	
		☐ BULK		☐ TUBE	
				☐ CORE	

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			PERCENT GRAVEL ■	DEPTH (m)	
				PLASTIC	M.C.	LIQUID			20	40	60			80
0.0	SILT & DRY GRAVEL -fill												0.0	
1.0	ORGANIC -original												1.0	
2.0	SILT WITH SAND (ML) -brown -damp to moist -smooth penetration	☒	1274	●		▲	ML		◆		■		2.0	
3.0	SANDY SILT (ML) -damp -grinding (one rock) -smooth drilling below 3.2m	☒	1275	●		▲	ML		◆		■		3.0	
4.0		☒	1276	●		▲	ML		◆		■		4.0	
5.0	END HOLE @ 3.2m Note: ditch drilling, no access to new centreline												5.0	
6.0													6.0	

Government of Yukon Transportation Engineering		LOGGED BY: G.C.	COMPLETION DEPTH: 4.0 m
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-224	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1720+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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)	
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL			
				20	40	60	80		20	40	60	80	
0.0	MOSS WELL TO POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GW)-(GP)-(GP-GM) -brown -damp -easy drilling - not frozen												0.0
1.0			33					GW					1.0
2.0			34					GP					2.0
3.0	END HOLE @ 3.0m		35					GP-GM					3.0
4.0													4.0
5.0													5.0
6.0													6.0

Government of Yukon Transportation Engineering	LOGGED BY: G C	COMPLETION DEPTH: 3.0 m
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 621-529	
ENGINEERING CAPITAL		CONDON CREEK CHANNEL		Project No: 092-202101-0362	
NODWELL B40L 6" AUGER		LOCATION: 1720+325 50M LHS		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN ☒ S.P.T. ☒ AUGER ☐ BULK ☐ TUBE ☐ CORE					

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL		DEPTH (m)
				20 40 60 80					20 40 60 80	20 40 60 80	
				PLASTIC	M.C.	LIQUID					
0.0	POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT AND SAND (GP)-(GP-GM) -brown -damp -grinding from surface -rough drilling		1270				GP				0.0
										1.0	
										2.0	
2.0	SILTY SAND (SM) -brown -moist -some sand & gravel contamination from above -smooth drilling		1271				GP				2.0
										3.0	
										4.0	
3.0	END HOLE @ 4.5m Note: No access to new centreline Ditch drilling 10m Rt of existing highway Previously stripped.		1272				GP-GM				3.0
										4.0	
										5.0	
4.0			1273				SM				4.0
									5.0		
									6.0		

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-223								
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361								
D-4 CAT 6" AUGER		LOCATION: 1720+348 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL		
0.0	SANDY SILT WITH GRAVEL (ML) -organics (ground up tree) -grinding 0.1-1.2m											0.0
1.0			30				ML					1.0
2.0	POORLY GRADED GRAVEL WITH SILT (GP-GM) -brown -damp -smooth drilling		31				GP-GM					2.0
3.0	SILTY GRAVEL (GM) -damp -grinding 2.0 - 3.0m		32				GM					3.0
4.0	END HOLE @ 3.0m											4.0
5.0												5.0
6.0												6.0
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				REVIEWED BY:		COMPLETE: 03/09/09						
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 621-528	
ENGINEERING CAPITAL		CONDON CREEK CHANNEL		Project No: 092-202101-0362	
NODWELL B40L 6" AUGER		LOCATION: 1720+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			USC	SOIL SYMBOL	PERCENT SAND		PERCENT GRAVEL		DEPTH (m)				
				PLASTIC	M.C.	LIQUID			20	40	60	80		20	40	60	80
				20	40	60			80	20	40	60		80	20	40	60
0.0	ORGANIC POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -damp -rough grinding drilling 0.1m TO 4.5m												0.0				
1.0			1266					GP-GM					1.0				
2.0	POORLY GRADED GRAVEL WITH SAND (GP)		1267					GP					2.0				
3.0	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)		1268					GW-GM					3.0				
4.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		1269					GP-GM					4.0				
5.0	END HOLE @ 4.5m												5.0				
6.0													6.0				

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-222	
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361	
D-4 CAT 6" AUGER		LOCATION: 1720+450 4M RT		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN ☒ S.P.T. ☒ AUGER ☐ BULK ☐ TUBE ☐ CORE					

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)	
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL			
				20	40	60	80		20	40	60	80	
0.0	ORGANICS POORLY GRADED GRAVEL WITH SILT & SAND TO POORLY GRADED GRAVEL WITH SAND TO WELL-GRADED SAND WITH SILT & GRAVEL (GP-GM)-(GP)-(SW-SM) -brown -damp -easy drilling - not froxen -grinding @ 0.1m												0.0
1.0			27					GP-GM					1.0
2.0			28					GP					2.0
3.0	END HOLE @ 3.0m		29					SW-SM					3.0
4.0													4.0
5.0													5.0
6.0													6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 621-527	
ENGINEERING CAPITAL		CONDON CREEK CHANNEL		Project No: 092-202101-0362	
NODWELL B40L 6" AUGER		LOCATION: 1720+500 50M 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)	
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL			
				20	40	60	80		20	40	60	80	
0.0	ORGANIC SILTY SAND -damp												0.0
1.0	POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP)-(GP-GM) -brown -damp -grinding starts 0.5 to 1.8m	X	1262					GP					1.0
2.0	ORGANIC -possibly original ground SILT WITH SAND (ML) -olive -damp -smooth, tight	X	1263					GP-GM					2.0
3.0	SILTY SAND WITH GRAVEL (SM) -brown -damp -smooth	X	1264					ML					3.0
4.0													4.0
5.0	END HOLE @ 4.5m Note: Test hole @ edge of treeline 25m Rt of existing Hwy (8 inch spruce)												5.0
6.0													6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT GRANULAR INVESTIGATION		TEST HOLE NO: 648-221								
ENGINEERING CAPITAL		CONGDON-NO NAME CR		Project No: 552-202101-0361								
D-4 CAT 6" AUGER		LOCATION: 1720+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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL		
0.0	MOSS / ORGANIC											0.0
	SANDY SILT (ML) -brown -damp		24				ML					
1.0	SILTY GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GM)-(GP-GM) -brown -damp -grinding starts @ 1.0m -easy drilling - not frozen		25				GM					
2.0												
3.0	END HOLE @ 3.0m		26				GP-GM					
4.0												
5.0												
6.0												
Government of Yukon Transportation Engineering				LOGGED BY: G C REVIEWED BY: Fig. No:		COMPLETION DEPTH: 3.0 m COMPLETE: 03/09/09		Page 1 of 1				

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 621-526	
ENGINEERING CAPITAL		CONDON CREEK CHANNEL		Project No: 092-202101-0362	
NODWELL B4QL 6" AUGER		LOCATION: 1720+585 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			USC	SOIL SYMBOL	PERCENT SAND			PERCENT GRAVEL			DEPTH (m)
				PLASTIC M.C. LIQUID					20 40 60 80			20 40 60 80			
				20 40 60 80					20 40 60 80			20 40 60 80			
0.0	ORGANICS													0.0	
	SANDY GRAVEL														
	-damp														
	-grinding 0.2m to 0.5m														
	SILT WITH SAND (ML)														
	-wet														
1.0			1258				ML							1.0	
	POORLY GRADED GRAVEL WITH SAND TO WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)														
	-brown														
	-damp														
	-grinding @ 1.2m														
2.0			1259				GP							2.0	
			1260				SW-SM								
3.0														3.0	
	SILTY SAND WITH GRAVEL (SM)														
	-moist														
	-smoother drilling														
4.0			1261				SM							4.0	
5.0	END HOLE @ 4.5m													5.0	
	Note: No access through forest beyond this point, Willow & Spruce.														
6.0														6.0	

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 621-525	
ENGINEERING CAPITAL		CONDON CREEK CHANNEL		Project No: 092-202101-0362	
NODWELL B40L 6" AUGER		LOCATION: 1720+675 3M LT		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN		☒ S.P.T.		☒ AUGER	
		☐ BULK		☐ TUBE	
				☐ CORE	

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL		
											20	
0.0	POORLY GRADED GRAVEL WITH SAND (GP) -brown -damp -no organic on surface -grinding from surface											0.0
1.0			1254				GP					1.0
2.0			1255				GP					2.0
2.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -damp to moist											
3.0			1256				GP-GM					3.0
3.0	SILT (ML) -brown -moist -smoother drilling below 2.8m											
4.0			1257				ML					4.0
4.5	END HOLE @ 4.5m											
5.0												5.0
6.0												6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 621-524	
ENGINEERING CAPITAL		CONDON CREEK CHANNEL		Project No: 092-202101-0362	
NODWELL B40L 6" AUGER		LOCATION: 1720+775 5M RT		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN		☒ S.P.T.		☒ AUGER	
		☐ BULK		☐ TUBE	
				☐ CORE	

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL		DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL	
0.0	ORGANIC SILT TO SANDY SILT (ML) -brown -moist -smooth drilling										0.0
1.0		X	1251	•		▲	ML	▨	◆		1.0
2.0		X	1252	•		▲	ML	▨	◆		2.0
3.0	END HOLE @ 3.0m -refusal	X	1253	•		▲	ML	▨	◆	■	3.0
4.0											4.0
5.0											5.0
6.0											6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 621-523	
ENGINEERING CAPITAL		CONDON CREEK CHANNEL		Project No: 092-202101-0362	
NODWELL B40L 6" AUGER		LOCATION: 1720+875 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)	
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL			
				20	40	60	80		20	40	60	80	
0.0	CRUSH												0.0
	SILT TO SILT WITH SAND TO SANDY SILT (ML)												
	-brown												
	-moist												
	-smooth drilling												
1.0			1247				ML						1.0
2.0			1248				ML						2.0
3.0	SANDY SILT WITH GRAVEL (ML)		1249				ML						3.0
	-brown-grey												
	-damp												
	-grinding starts @ 2.8m												
4.0	END HOLE @ 4.0m		1250				ML						4.0
5.0													5.0
6.0													6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 11		TEST HOLE NO: 621-522	
ENGINEERING CAPITAL		CONDON CREEK CHANNEL		Project No: 092-202101-0362	
NODWELL B40L 6" AUGER		LOCATION: 1720+975 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			USC	SOIL SYMBOL	PERCENT SAND / GRAVEL			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL		
											20	
0.0	ORGANIC POORLY GRADED GRAVEL WITH SAND (GP) -grey -damp to moist -grinding starts @ surface											0.0
1.0			1243				GP					1.0
2.0			1244				GP					2.0
3.0			1245				GP					3.0
4.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -grey -damp -little smoother below 3.0m		1246				SW-SM					4.0
5.0	END HOLE @ 4.0m											5.0
6.0												6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 620-521	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1721+250 15M LT		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN ☒ S.P.T. ☒ AUGER ☐ BULK ☐ TUBE ☐ CORE					

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL		DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL	
0.0	ORGANIC										0.0
	SILT (ML)										
	-wet to saturated										
1.0	-brown below 0.8m										
	-frozen below 0.8m										
	-no visible ice below 0.8m										
	-slow tight penetration below 0.8m										
2.0											
	-olive (light colour) below 2.4m										
3.0											
	GRAVELLY SILT WITH SAND (ML)										
	-brown										
	-frozen										
	-some grinding										
4.0											
	END HOLE @ 4.5m										
5.0											
6.0											

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 620-520								
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362								
NODWELL B40 L 6" AUGER		LOCATION: 1721+325 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL		
0.0	ORGANIC											0.0
	SILT WITH SAND (ML)											
	-wet-saturated											
	-smooth											
1.0												1.0
	-brown below 1.0m											
	-frozen below 1.0m											
	-slow penetration below 1.0m											
2.0												2.0
3.0												3.0
	SILT (ML)											
	-brown											
	-frozen (Vx)											
	-very slow drilling											
4.0												4.0
	GRAVELLY SILT WITH SAND (ML)											
	-brown											
	-frozen (Vx)											
	-more ice than previous 2m											
	-some grinding @ 4.0m											
5.0												5.0
	END HOLE @ 4.5m											
6.0												6.0
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 620-519	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1721+375 12M LT		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN ☒ S.P.T. ☒ AUGER ☐ BULK ☐ TUBE ☐ CORE					

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		PERCENT GRAVEL ■		DEPTH (m)
				PLASTIC M.C. LIQUID									
				20 40 60 80					20 40 60 80		20 40 60 80		
0.0	ORGANIC											0.0	
1.0	SANDY SILT (ML) -brown -moist	X	1231	●	▲		ML		◆			1.0	
2.0	SILTY SAND (SM) -brown -frozen -smooth	X	1232	●	▲		SM			◆		2.0	
3.0	SILT WITH SAND TO SANDY SILT (ML) -frozen -tight slow drilling, minor grinding	X	1233	●	▲		ML		◆	■		3.0	
4.0		X	1234	●	▲		ML		◆	■		4.0	
5.0	END HOLE @ 4.5m											5.0	
6.0												6.0	

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 620-518	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1721+425 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL		DEPTH (m)	
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL		
0.0	ORGANIC										0.0	
1.0	SILT WITH SAND (ML) -with organics -brown -damp -smooth from surface	X	1227	20	40	60	ML		20	40	60	1.0
2.0	POORLY GRADED GRAVEL WITH SAND TO WELL-GRADED SAND WITH SILT & GRAVEL (GP)-(SW-SM) -brown -damp -grinding starts @ 1.5m	X	1228				GP					2.0
3.0		X	1229				GP					3.0
4.0	END HOLE @ 4.0m	X	1230				SW-SM					4.0
5.0											5.0	
6.0											6.0	

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 620-517	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1721+525 C.L.		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN ☒ S.P.T. ☒ AUGER ☐ BULK ☐ TUBE ☐ CORE					

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)	
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL			
				20	40	60	80		20	40	60	80	
0.0	POORLY GRADED GRAVEL WITH SILT & SAND TO POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)-(GP)-(GP-GM) -brown -damp -grinding from surface. -previously stripped												0.0
1.0			1223					GP-GM					1.0
2.0			1224					GP					2.0
3.0			1225					GP-GM					3.0
4.0	END HOLE @ 4.0m		1226					GP-GM					4.0
5.0													5.0
6.0													6.0

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.0 m
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 620-516	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1721+625 3M LT		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN		☒ S.P.T.		☒ AUGER	
		☐ BULK		☐ TUBE	
				☐ CORE	

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL		
											20	
0.0	ORGANIC SILTY GRAVEL WITH SAND TO WELL-GRADED SAND WITH GRAVEL (GM)-(SW) -brown -damp -grinding from surface											0.0
1.0			1219					GM				1.0
2.0			1220					SW				2.0
3.0	SILTY SAND (SM) -brown -moist -smoother less grinding		1221					SM				3.0
4.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -damp -little increase in grinding drilling END HOLE @ 4.0m		1222					GP-GM				4.0
5.0												5.0
6.0												6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 620-515	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1721+725 5M 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			USC	SOIL SYMBOL	PERCENT SAND		PERCENT GRAVEL		DEPTH (m)				
				PLASTIC	M.C.	LIQUID			20	40	60	80		20	40	60	80
				20	40	60			80	20	40	60		80	20	40	60
0.0	ORGANIC												0.0				
	SILTY SAND -brown -moist																
1.0	POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP)-(GP-GM) -brown -damp -grinding starts @ 0.5m	☒	1215				GP		40	60			1.0				
2.0		☒	1216				GP		40	60			2.0				
3.0		☒	1217				GP		40	60			3.0				
4.0		☒	1218				GP-GM		40	60			4.0				
5.0	END HOLE @ 4.5m												5.0				
6.0													6.0				

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 620-514	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1721+825 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 ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		PERCENT GRAVEL ■		DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	60	80	
0.0	ORGANIC											0.0	
	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)												
	-brown												
	-moist												
	-grinding starts @ 0.5m												
1.0			1211					SW-SM				1.0	
	SILTY GRAVEL WITH SAND TO POORLY TO WELL-GRADED GRAVEL WITH SILT & SAND (GM)-(GP-GM)-(GW-GM)												
	-brown												
	-damp												
	-smoother but still grinding												
2.0			1212					GM				2.0	
3.0			1213					GP-GM				3.0	
4.0			1214					GW-GM				4.0	
5.0	END HOLE @ 4.5m											5.0	
6.0												6.0	

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 620-513	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1721+925 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)	
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL			
				20	40	60	80		20	40	60	80	
0.0	ORGANIC												0.0
	ORGANIC & GRAVEL MIX -grinding @ 0.2m												
1.0	POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP)-(GP-GM) -brown -damp	☒	1207					GP					1.0
2.0		☒	1208					GP					2.0
3.0		☒	1209					GP-GM					3.0
4.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -brown -damp -smoother penetration	☒	1210					SW-SM					4.0
5.0	END HOLE @ 4.5m												5.0
6.0													6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 620-512	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1722+025 3M LT		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN ☒ S.P.T. ☒ AUGER ☐ BULK ☐ TUBE ☐ CORE					

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL		DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL	
0.0	ORGANIC SILTY SAND (SM) -brown -moist										0.0
1.0			1203	•	▲		SM	◈			1.0
2.0	POORLY GRADED GRAVEL WITH SILT & SAND TO POORLY GRADED GRAVEL WITH SAND (GP-GM)-(GP) -brown -damp -grinding @ 1.25m		1204	▲			GP-GM	◈	■		2.0
3.0			1205	▲			GP	◈	■		3.0
4.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -brown -damp -easier penetration		1206	▲			SW-SM	◈	■		4.0
4.5	END HOLE @ 4.5m										
5.0											5.0
6.0											6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 620-511	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1722+175 10M LT		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN ☒ S.P.T. ☒ AUGER ☐ BULK ☐ TUBE ☐ CORE					

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 PLASTIC M.C. LIQUID ----- 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 ----- 20 40 60 80 ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SILTY SAND (SM) -brown -moist -smooth easy penetration						0.0	
1.0			1199	● ▲	SM	◆	1.0	
2.0			1200	■	SM	◆	2.0	
3.0	-frozen below 2.6		1201	● ▲	SM	◆	3.0	
4.0	WELL-GRADED SAND WITH SILT (SW-SM) -frozen -slow & tight drilling		1202	■	SW-SM	◆	4.0	
5.0	END HOLE @ 4.5m						5.0	
6.0							6.0	

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 620-510	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1722+300 3M LT		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN ☒ S.P.T. ☒ AUGER ☐ BULK ☐ TUBE ☐ CORE					

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)	
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL			
				20	40	60	80		20	40	60	80	
0.0	MIXTURE OF ORGANICS, ASH & SILT -brown -damp												0.0
1.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -brown -damp -grinding starts @ 1.0m		1195					SM					1.0
2.0			1196					SW-SM					2.0
3.0			1197					SW-SM					3.0
4.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -organic contamination from above -quieter - smoother		1198					GP-GM					4.0
5.0	END HOLE @ 4.5m												5.0
6.0													6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 620-509	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1722+425 C.L.		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN ☒ S.P.T. ☒ AUGER ☐ BULK ☐ TUBE ☐ CORE					

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND / GRAVEL		DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL	
0.0	ORGANIC SILT WITH SAND (ML) -brown -wet										0.0
1.0			1191				ML				1.0
2.0	POORLY GRADED GRAVEL WITH SAND (GP) -brown -damp -grinding starts @ 1.2m		1192				GP				2.0
3.0	SILTY GRAVEL WITH SAND (GM) -brown -moist -smoother drilling		1193				GM				3.0
4.0	END HOLE @ 4.0m		1194				GM				4.0
5.0											5.0
6.0											6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 620-508	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1722+525 3M LT		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN ☒ S.P.T. ☒ AUGER ☐ BULK ☐ TUBE ☐ CORE					

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		PERCENT GRAVEL ■	DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40		
0.0	ORGANICS -grinding starts @ surface											0.0
	POORLY GRADED GRAVEL WITH SAND (GP) -with organics -brown -damp		1187				GP					
1.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -damp		1188				GP-GM					
2.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -damp to moist -not as grinding -difficult to recover sample due to auger collar		1189				GM					
3.0												
4.0	-Believe sample #1190 is more representative of material below 2.0m		1190				SM					
5.0	END HOLE @ 4.5m											
6.0												

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 620-507	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1722+625 C.L.		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN		☒ S.P.T.		☒ AUGER	
		☐ BULK		☐ TUBE	
				☐ CORE	

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL		DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL	
0.0	SILTY SAND WITH ORGANICS (SM) -brown -damp										0.0
1.0			1183				SM				1.0
2.0	POORLY GRADED GRAVEL WITH SAND TO WELL-GRADED SAND WITH SILT & GRAVEL (GP)-(SW-SM) -brown -dry -grinding starts @ 1.2m -damp below 2.0m		1184				GP				2.0
3.0			1185				SW-SM				3.0
4.0	SILTY SAND WITH GRAVEL (SM) -little smoother		1186				SM				4.0
5.0	END HOLE @ 4.5m										5.0
6.0											6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 620-506	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1722+700 C.L.		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN ☒ S.P.T. ☒ AUGER ☐ BULK ☐ TUBE ☐ CORE					

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		PERCENT GRAVEL ■	DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40		
0.0	SILTY SAND (SM) -brown -damp -smooth easy drilling	X	1177	●	▲		SM	●●●●●		◆		0.0
1.0				●				●●●●●				1.0
2.0				●	▲			●●●●●		◆		2.0
3.0				●	▲			●●●●●		◆		3.0
4.0				●	▲			●●●●●		◆		4.0
5.0	-either frozen or tightly packed below 7.3m (cold)	X	1180				SM	●●●●●				5.0
6.0								●●●●●				6.0
7.0				●	▲			●●●●●		◆		7.0
8.0								●●●●●				8.0
9.0				●	▲			●●●●●		◆		9.0
10.0	END HOLE @ 9.5m											10.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 619-505	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-D362	
NODWELL B40 L 6" AUGER		LOCATION: 1722+750 25M LT		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN ☒ S.P.T. ☒ AUGER ☐ BULK ☐ TUBE ☐ CORE					

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		PERCENT GRAVEL ■	DEPTH (m)			
				20	40	60			80	20			40	60	80
0.0	ORGANIC SILT											0.0			
1.0	-brown -damp SILTY SAND (SM)		1171	●	▲			SM	◆			1.0			
2.0	-brown -damp -easy smooth drilling 0 to 1.7m -frozen below 1.7m -slow tight drilling below 1.7m		1172	●				SM	◆			2.0			
3.0			1173	●	▲			SM	◆			3.0			
4.0												4.0			
5.0			1174	●	▲			SM	◆			5.0			
6.0												6.0			
7.0			1175	●	▲			SM	◆			7.0			
8.0												8.0			
9.0			1176	●	▲			SM	◆			9.0			
10.0	END HOLE @ 9.5											10.0			

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 619-504	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1722+825 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 ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			PERCENT GRAVEL ■			DEPTH (m)
				20	40	60			20	40	60	20	40	60	
0.0	ORGANIC													0.0	
	SILT -moist to wet														
1.0	SANDY SILT TO SILT WITH SAND (ML) -frozen -slow tight penetration	X	1167	●		▲	ML		◆					1.0	
2.0		X	1168	●		▲	ML		◆					2.0	
3.0		X	1169	●		▲	ML		◆					3.0	
4.0															
5.0	END HOLE @ 5.0m	X	1170	●		▲	ML		◆					5.0	
6.0															

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 619-503	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1722+875 25M LT		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN ☒ S.P.T. ☒ AUGER ☐ BULK ☐ TUBE ☐ CORE					

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)
				PLASTIC 20 40 60 80	M.C. 20 40 60 80	LIQUID 20 40 60 80			PERCENT SAND 20 40 60 80	PERCENT GRAVEL 20 40 60 80		
0.0	ORGANIC											0.0
	SILT -wet											
1.0	SILT WITH SAND (ML) -brown -frozen -slow penetration	☒	1163				ML					1.0
2.0	SILTY SAND TO SANDY SILT (SM)-(ML) -brown -frozen -tight drilling, no grinding	☒	1164				SM					2.0
3.0	-tough drilling below 2.6m	☒	1165				SM					3.0
4.0												4.0
5.0	END HOLE @ 5.0m	☒	1166				ML					5.0
6.0												6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 619-502	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1722+950 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 ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		PERCENT GRAVEL ■	DEPTH (m)		
				PLASTIC	M.C.	LIQUID			20	40			60	80
0.0	ORGANIC & ASH											0.0		
	SILT													
	-brown													
	-wet													
1.0	SILT (ML)	☒	1159				ML					1.0		
	-brown													
	-frozen													
	-slow penetration													
2.0	SANDY SILT (ML)	☒	1160				ML					2.0		
	-frozen													
3.0	SILTY SAND TO SANDY SILT (SM)-(ML)	☒	1161				SM					3.0		
	-brown													
	-frozen													
4.0		☒	1162				ML					4.0		
5.0	END HOLE @ 4.5m											5.0		
6.0												6.0		

Government of Yukon Transportation Engineering		LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
		REVIEWED BY:	COMPLETE: 01/09/10
		Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 619-501								
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362								
NODWELL B40 L 6" AUGER		LOCATION: 1723+050 4M 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL		
0.0	SILT -wet -previously stripped											0.0
1.0	SILTY SAND (SM) -brown -moist	X	1155	•	▲		SM	◈				1.0
2.0	SANDY SILT (ML) -frozen -tight drilling	X	1156	•	▲		ML		◈			2.0
3.0		X	1157	•	▲		ML		◈			3.0
4.0	SILT (ML) -brown -frozen	X										4.0
5.0	END HOLE @ 5.0m	X	1158	•	▲		ML	◈				5.0
6.0												6.0

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Fig. No:

COMPLETION DEPTH: 5.0 m

COMPLETE: 01/09/10

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 619-500	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1723+140 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 ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			PERCENT GRAVEL ■			DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	60	80	20	40	
0.0	ASH & ORGANIC													0.0	
0.0 - 1.0	SILTY SAND TO SILT WITH SAND (SM)-(ML)														
1.0	-brown		1148	●	▲		SM	⦿		◆				1.0	
1.0	-damp														
1.0	-smooth drilling														
1.0	-frozen below 1.4m														
1.0	-slow penetration below 1.6m		1149	●	▲		SM	⦿		◆				2.0	
2.0															
2.0			1150	●		▲	ML	⦿	■	◆				3.0	
3.0															
3.0	-frozen (Vx) below 3.5m														
4.0			1151		●	▲	ML	⦿	■	◆				4.0	
5.0															
5.0	SILTY SAND WITH GRAVEL TO SANDY SILT (SM)-(ML)														
5.0	-frozen		1152	●		▲	SM	⦿	■	◆				6.0	
6.0	-grinding between 5.0 - 7.5m														
6.0	-tight drilling														
7.0			1153	●		▲	ML	⦿	■	◆				7.0	
8.0															
9.0	END HOLE @ 9.0m		1154	●		▲	ML	⦿	■	◆				9.0	
10.0															

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Transportation Engineering		REVIEWED BY:		COMPLETE: 01/09/10	
		Fig. No:		Page 1 of 1	

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 619-499	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1723+275 C.L.		ELEVATION: 0.00 (m)	
SAMPLE TYPE ☒ RETURN ☒ S.P.T. ☒ AUGER ☐ BULK ☐ TUBE ☐ CORE					

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		PERCENT GRAVEL ■		DEPTH (m)
				20	40	60			80	20	40	60	
0.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -brown -damp -easy drilling	☒	1144					SW-SM					0.0
1.0													1.0
2.0	POORLY GRADED GRAVEL WITH SAND TO WELL-GRADED GRAVEL WITH SILT & SAND (GP)-(GW-GM) -brown -damp -little more grinding	☒	1145					GP					2.0
3.0													3.0
4.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -moist to wet -smoother drilling below 3.0m	☒	1146					GW-GM					4.0
5.0													5.0
6.0	END HOLE @ 4.5m	☒	1147					GP-GM					6.0

Government of Yukon Transportation Engineering		LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
		REVIEWED BY:	COMPLETE: 01/09/10
		Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 619-498	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1723+350 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			USC	SOIL SYMBOL	PERCENT SAND & GRAVEL			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT SAND	PERCENT GRAVEL		
0.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -brown -moist -rough drilling -grinding starts @ surface (previously stripped)											0.0
1.0			1140				GP-GM					1.0
2.0	POORLY GRADED GRAVEL WITH SAND (GP) -brown -damp		1141				GP					2.0
3.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -easier penetration @ 3.0m		1142				SW-SM					3.0
4.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		1143				GP-GM					4.0
4.0	END HOLE @ 4.0m											4.0
5.0												5.0
6.0												6.0

Government of Yukon Transportation Engineering		LOGGED BY: G.C.	COMPLETION DEPTH: 4.0 m
		REVIEWED BY:	COMPLETE: 01/09/10
		Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 619-497								
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362								
NODWELL B40 L 6" AUGER		LOCATION: 1723+540 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 ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT GRAVEL ■			
0.0	SILT WITH ORGANICS -orange-brown -0.5m diameter boulders on slope											0.0
1.0	SANDY SILT TO SILTY SAND (ML)-(SM) -creamy brown -dry -smooth easy drilling	X	1136	●	▲		ML		◆			1.0
2.0		X	1137	●	▲		SM		◆			2.0
3.0	SILTY SAND WITH GRAVEL TO POORLY GRADED SAND WITH SILT (SM)-(SP-SM) -dry -minor grinding @ 2.6m	X	1138	●	▲		SM		◆	■		3.0
4.0		X	1139	●	▲		SP-SM		◆			4.0
5.0	SILT WITH GRAVEL -damp -grinding between 5 & 6m -no sample recovered between 5 & 6m											5.0
6.0	END HOLE @ 6.0m -one refusal @ 6m -second refusal @ 5.5m											6.0
Government of Yukon Transportation Engineering				LOGGED BY: G.C.		COMPLETION DEPTH: 6.0 m						
				REVIEWED BY:		COMPLETE: 01/09/10						
				Fig. No:		Page 1 of 1						

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 619-496	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1723+625 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 ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		PERCENT GRAVEL ■		DEPTH (m)	
				20	40	60			80	20	40	60		80
0.0	ORGANIC											0.0		
0.0 - 1.0	SILTY SAND (SM) -brown -moist -smooth drilling		1130	●	▲		SM	⊞⊞⊞⊞⊞⊞		◆		1.0		
2.0	POORLY GRADED SAND WITH SILT TO SILTY SAND (SP-SM)-(SM) -brown -damp -minor grinding drilling		1131	●	▲		SP-SM	⊞⊞⊞⊞	■		◆	2.0		
3.0			1132	●	▲		SP-SM	⊞⊞⊞⊞	■		◆	3.0		
4.0			1133	●	▲		SM	⊞⊞⊞⊞⊞⊞	■		◆	4.0		
5.0	-tight drilling, some grinding drilling below 5.0m											5.0		
6.0	-smooth slow drilling below 6.0m		1134	●	▲		SM	⊞⊞⊞⊞⊞⊞		◆		6.0		
7.0												7.0		
8.0			1135	●	▲		SM	⊞⊞⊞⊞⊞⊞⊞⊞⊞	■	◆		8.0		
9.0	END HOLE @ 9.0m											9.0		
10.0												10.0		

Government of Yukon Transportation Engineering		LOGGED BY: G.C.	COMPLETION DEPTH: 9.0 m
		REVIEWED BY:	COMPLETE: 01/09/10
		Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 10		TEST HOLE NO: 619-495	
ENGINEERING CAPITAL		R.O.W. TESTING		Project No: 092-202101-0362	
NODWELL B40 L 6" AUGER		LOCATION: 1723+725 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 ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		DEPTH (m)		
				PLASTIC	M.C.	LIQUID			20	40		60	80
0.0	ORGANIC										0.0		
0.0 - 1.0	SANDY SILT (ML) -brown -damp -smooth	☒	1125	●		▲	ML		◆		0.5		
1.0 - 2.0	POORLY GRADED SAND WITH GRAVEL (SM) -brown -damp -smooth	☒	1126	▲			SP		■	◆	1.5		
2.0 - 3.0	SILTY SAND WITH GRAVEL (SM) -brown -damp	☒	1127	●		▲	SM		■	◆	2.5		
3.0 - 4.0	-minor grinding start @ 2.0m -tight drilling	☒	1128	●		▲	SM		■	◆	3.5		
5.0 - 7.0	SILT WITH SAND -brown -damp -sample # 1129 possible contaminated with material from above. Test results Silty Sand with Gravel (SM) Field description Silt with Sand	☒	1129	●		▲	SM		■	◆	6.5		
7.0 - 10.0	END HOLE @ 7.5m												

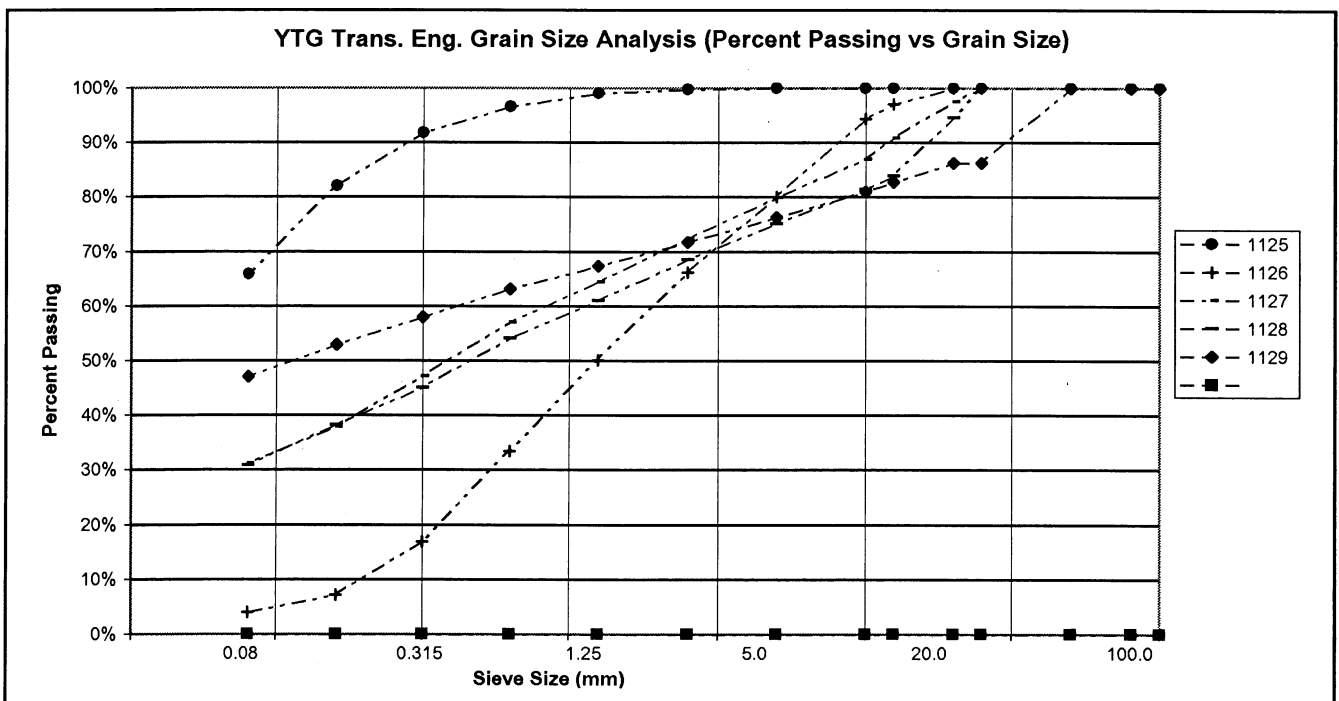
Government of Yukon Transportation Engineering		LOGGED BY: G.C.	COMPLETION DEPTH: 7.5 m
		REVIEWED BY:	COMPLETE: 01/09/10
		Fig. No:	Page 1 of 1

PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 619-495

DATE COMP: 2001/09/06

FIELD NO:	1125	1126	1127	1128	1129	
LAB NO:	1902	1903	1904	1905	1906	
DEPTH:	0.4-0.8	1.6-2.0	2.6-3.0	3.6-4.0	6.5-7.5	
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	
100.0	100%	100%	100%	100%	100%	
80.0	100%	100%	100%	100%	100%	
50.0	100%	100%	100%	100%	100%	
25.0	100%	100%	100%	100%	86%	
20.0	100%	100%	98%	95%	86%	
12.5	100%	97%	91%	84%	83%	
10.0	100%	94%	87%	82%	81%	
5.0	100%	80%	80%	75%	76%	
2.5	100%	66%	72%	69%	72%	
1.25	99%	50%	64%	61%	67%	
0.630	97%	34%	57%	54%	63%	
0.315	92%	17%	47%	45%	58%	
0.160	82%	7%	38%	38%	53%	
0.080	66%	4%	31%	31%	47%	
M.C.(%)	15%	1%	5%	5%	7%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	0	20	20	25	24	
% SAND:	34	76	49	44	29	
% FINES:	66	4	31	31	47	
CLASSIFICATION	SANDY SILT (ML)	POORLY GRADED SAND WITH GRAVEL (SP)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	



HOLF No.: 619-496

DATE COMP: 2001/09/06

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

This graph displays the grain size distribution for six different samples (1130 through 1135). The x-axis represents Sieve Size in millimeters on a logarithmic scale, and the y-axis represents Percent Passing on a linear scale from 0% to 100%.

Legend:

- 1130: Dashed line with solid circles
- 1131: Dashed line with plus signs
- 1132: Dotted line with solid circles
- 1133: Dashed line with solid circles
- 1134: Dashed line with solid diamonds
- 1135: Dashed line with solid squares

Approximate Data Points:

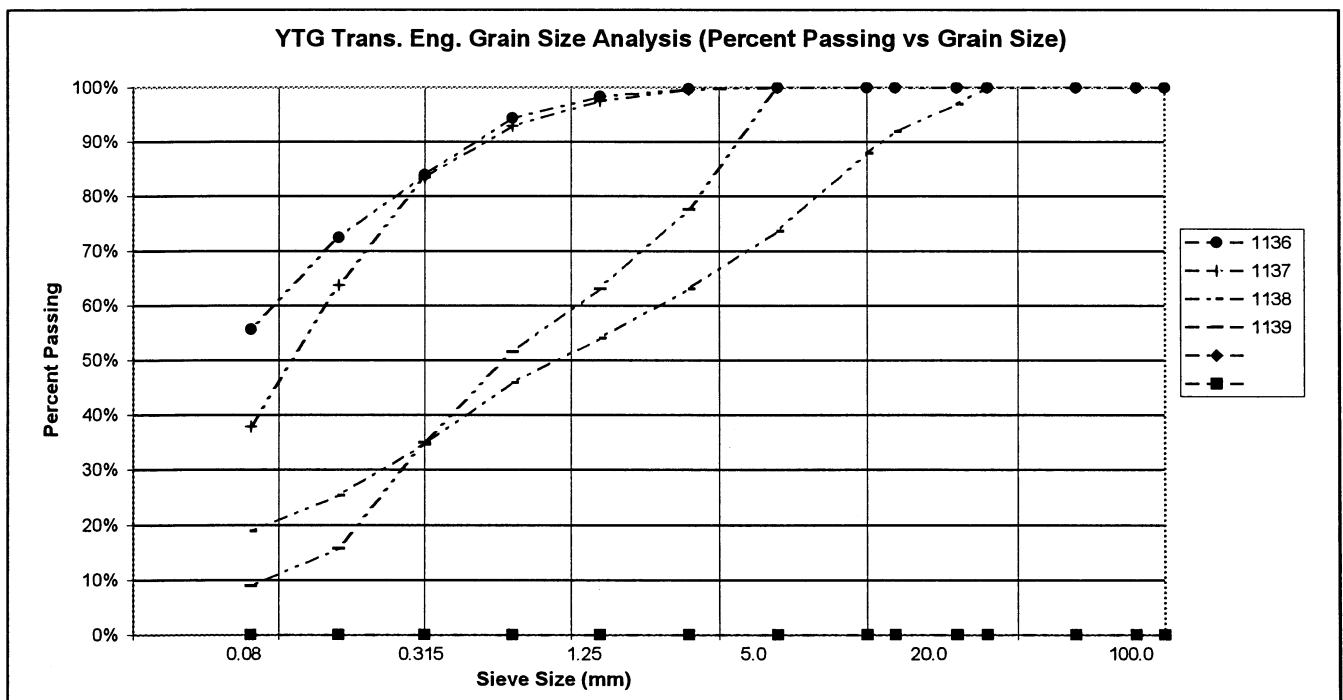
Sieve Size (mm)	1130 (%)	1131 (%)	1132 (%)	1133 (%)	1134 (%)	1135 (%)
0.075	39	10	15	14	46	49
0.15	57	21	25	24	60	61
0.3	77	42	38	37	68	69
0.6	88	61	50	49	76	76
1.2	93	73	64	63	82	82
2.5	97	85	84	83	91	91
5.0	100	92	91	90	92	92
10.0	100	96	96	95	96	96
20.0	100	100	100	100	100	100
100.0	100	100	100	100	100	100

PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 619-497

DATE COMP: 9/6/2001

FIELD NO:	1136	1137	1138	1139		
LAB NO:	1913	1914	1915	1916		
DEPTH:	0.5-1.0	1.6-2.0	2.6-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	97%	100%		
12.5	100%	100%	92%	100%		
10.0	100%	100%	88%	100%		
5.0	100%	100%	74%	100%		
2.5	100%	100%	63%	78%		
1.25	98%	98%	54%	63%		
0.630	94%	93%	46%	52%		
0.315	84%	83%	35%	35%		
0.160	72%	64%	25%	16%		
0.080	56%	38%	19%	9%		
M.C.(%)	5%	3%	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	0	0	26	0		
% SAND	44	62	55	91		
% FINES	56	38	19	9		
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED SAND WITH SILT (SP-SM)		

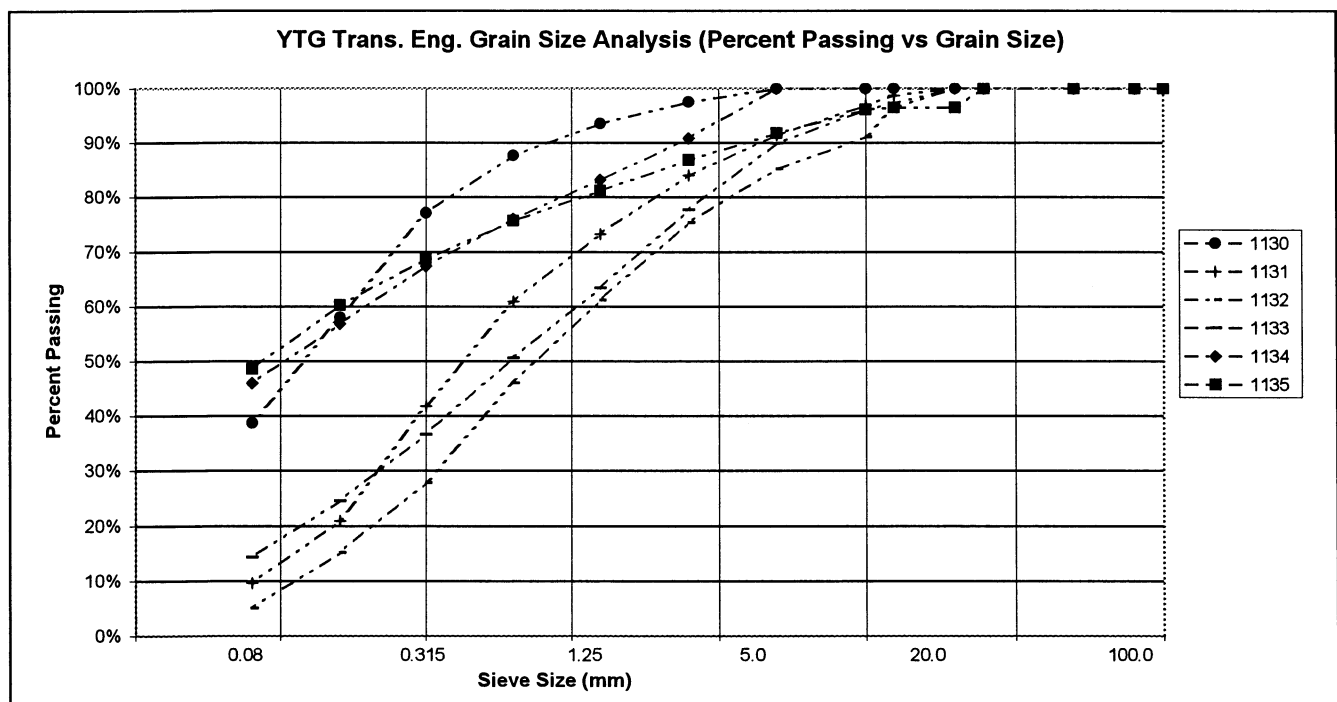


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 619-496

DATE COMP: 9/6/2001

FIELD NO:	1130	1131	1132	1133	1134	1135
LAB NO:	1907	1908	1909	1910	1911	1912
DEPTH:	0.5-1.0	1.8-2.0	2.6-3.0	4.0-4.5	6.0-6.5	8.0-9.0
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING
100.0	100%	100%	100%	100%	100%	100%
80.0	100%	100%	100%	100%	100%	100%
50.0	100%	100%	100%	100%	100%	100%
25.0	100%	100%	100%	100%	100%	100%
20.0	100%	100%	100%	100%	100%	96%
12.5	100%	99%	97%	97%	100%	96%
10.0	100%	97%	91%	96%	100%	96%
5.0	100%	91%	85%	90%	100%	92%
2.5	98%	84%	75%	78%	91%	87%
1.25	94%	73%	61%	63%	83%	81%
0.630	88%	61%	46%	51%	76%	76%
0.315	77%	42%	28%	37%	67%	69%
0.160	58%	21%	15%	25%	57%	60%
0.080	39%	10%	5%	14%	46%	49%
M.C.(%)	11%	2%	2%	3%	7%	6%
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC INDEX:	0.0	0.0	0.0	0.0	0.0	0.0
% GRAVEL:	0	9	15	10	0	8
% SAND:	61	82	80	76	54	43
% FINES:	39	10	5	14	46	49
CLASSIFICATION	SILTY SAND (SM)	POORLY GRADED SAND WITH SILT (SP-SM)	POORLY GRADED SAND WITH SILT (SP-SM)	SILTY SAND (SM)	SILTY SAND (SM)	SILTY SAND (SM)

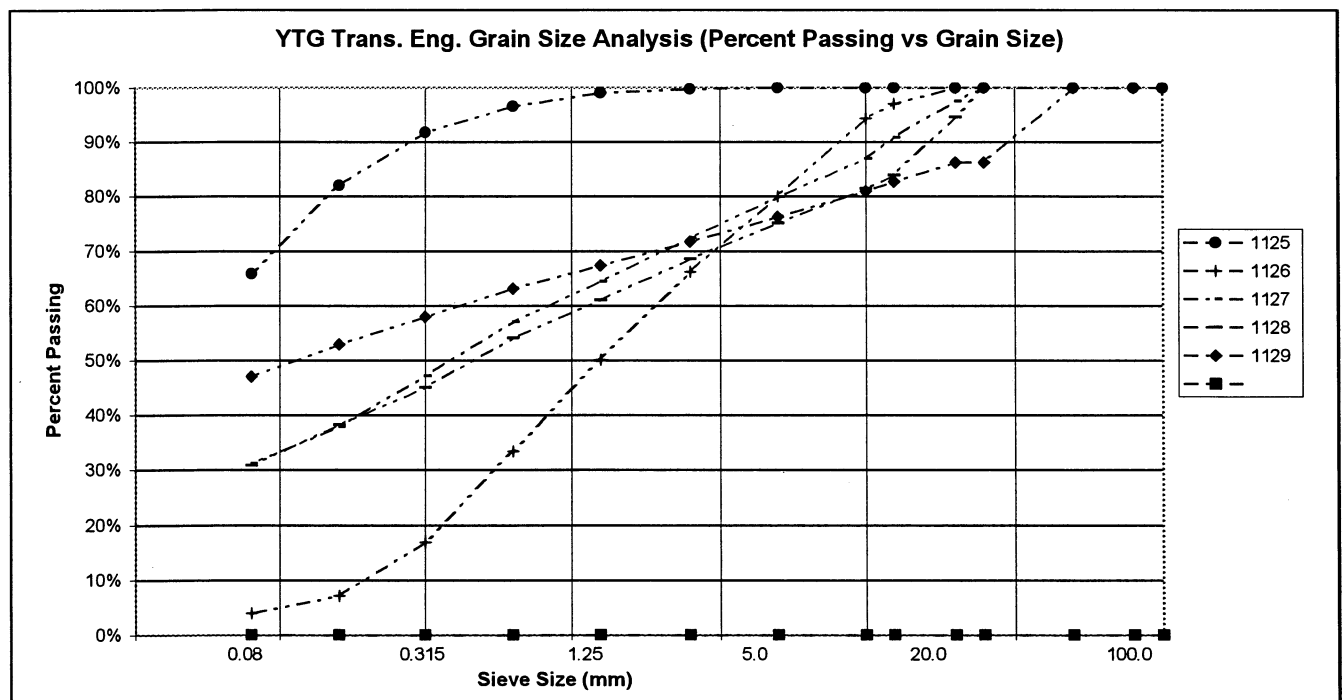


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 619-495

DATE COMP: 9/6/2001

FIELD NO:	1125	1126	1127	1128	1129	
LAB NO:	1902	1903	1904	1905	1906	
DEPTH:	0.4-0.8	1.6-2.0	2.6-3.0	3.6-4.0	6.5-7.5	
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	
100.0	100%	100%	100%	100%	100%	
80.0	100%	100%	100%	100%	100%	
50.0	100%	100%	100%	100%	100%	
25.0	100%	100%	100%	100%	86%	
20.0	100%	100%	98%	95%	86%	
12.5	100%	97%	91%	84%	83%	
10.0	100%	94%	87%	82%	81%	
5.0	100%	80%	80%	75%	76%	
2.5	100%	66%	72%	69%	72%	
1.25	99%	50%	64%	61%	67%	
0.630	97%	34%	57%	54%	63%	
0.315	92%	17%	47%	45%	58%	
0.160	82%	7%	38%	38%	53%	
0.080	66%	4%	31%	31%	47%	
M.C.(%)	15%	1%	5%	5%	7%	
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	
PLASTIC INDEX:	0.0	0.0	0.0	0.0	0.0	
% GRAVEL:	0	20	20	25	24	
% SAND:	34	76	49	44	29	
% FINES:	66	4	31	31	47	
CLASSIFICATION	SANDY SILT (ML)	POORLY GRADED SAND WITH GRAVEL (SP)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	

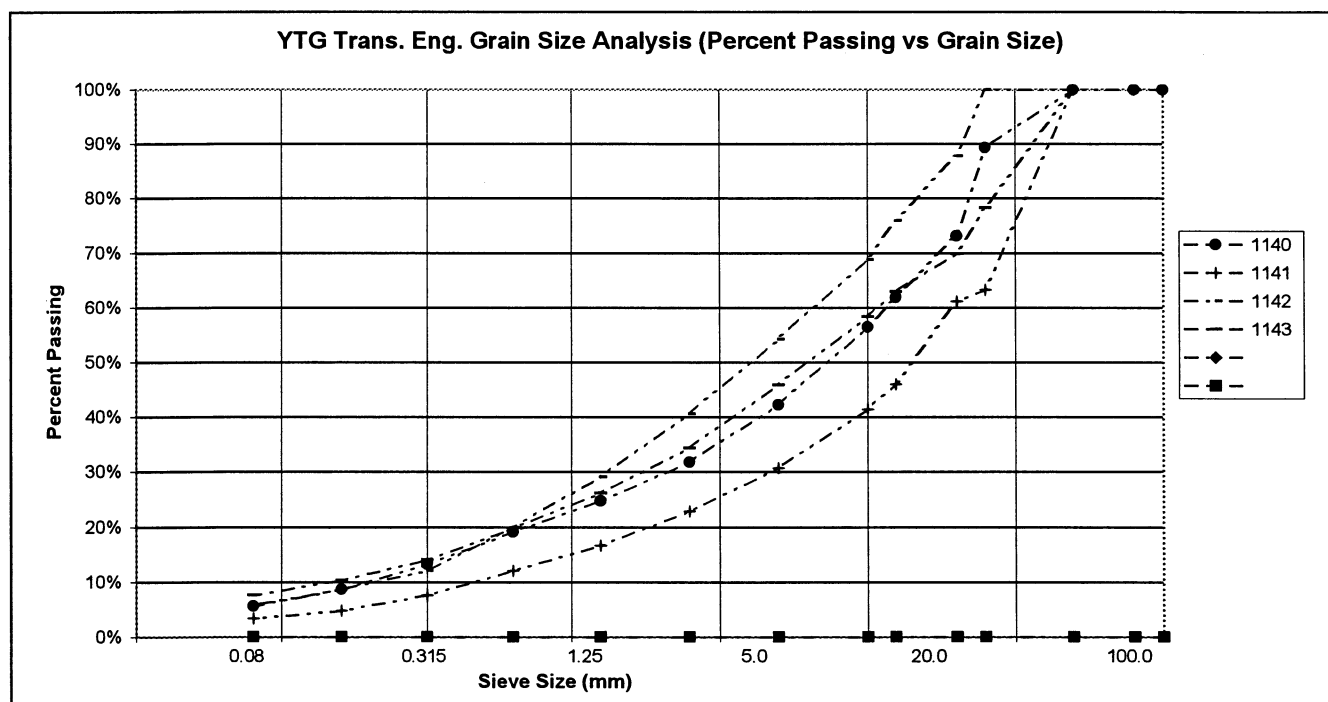


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 619-498

DATE COMP: 9/7/2001

FIELD NO:	1140	1141	1142	1143		
LAB NO:	1917	1918	1919	1920		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	3.5-4.0		
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	89%	63%	100%	78%		
20.0	73%	61%	88%	70%		
12.5	62%	46%	76%	63%		
10.0	56%	41%	69%	58%		
5.0	42%	31%	54%	46%		
2.5	32%	23%	41%	34%		
1.25	25%	17%	29%	26%		
0.630	19%	12%	20%	20%		
0.315	13%	8%	12%	14%		
0.160	9%	5%	9%	10%		
0.080	6%	3%	6%	8%		
M.C.(%)	3%	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	58	69	46	54		
% SAND	37	27	48	38		
% FINES	6	3	6	8		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

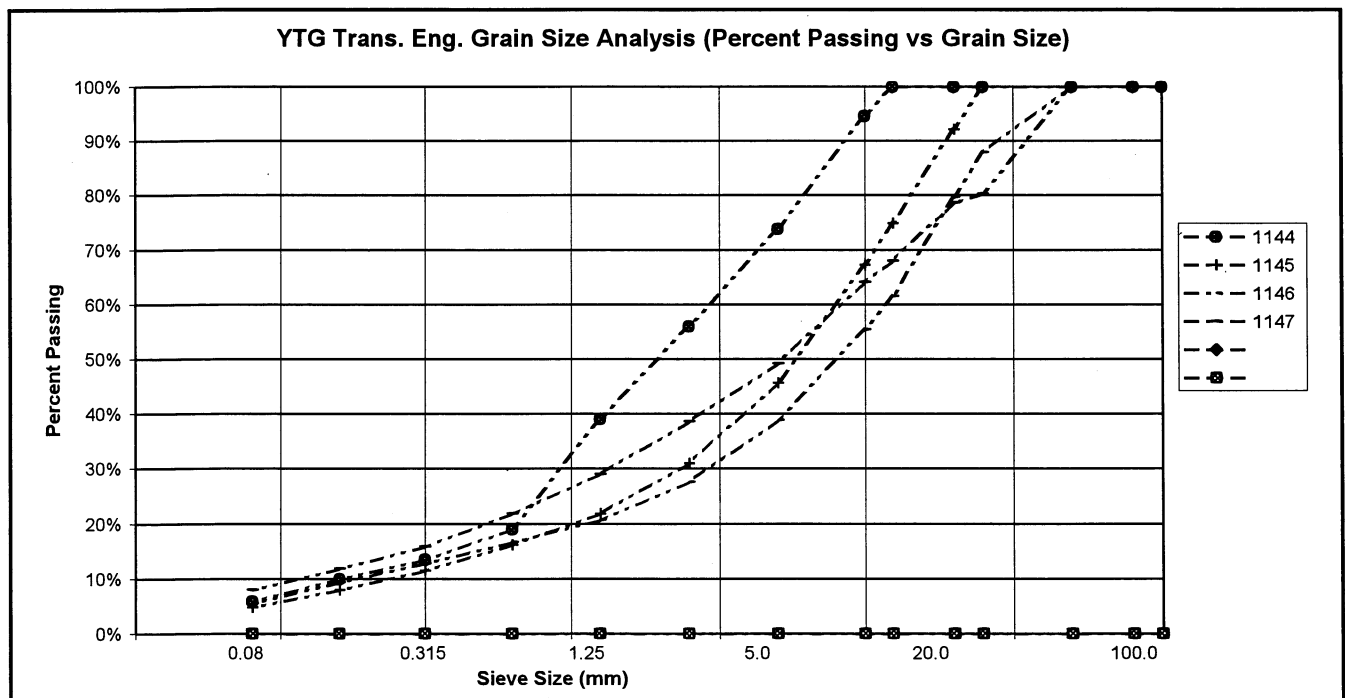


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 619-499

DATE COMP: 2001/09/07

FIELD NO:	1144	1145	1146	1147		
LAB NO:	1921	1922	1923	1924		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	88%	80%		
20.0	100%	92%	80%	79%		
12.5	100%	75%	61%	68%		
10.0	95%	67%	55%	64%		
5.0	74%	46%	39%	49%		
2.5	56%	31%	28%	39%		
1.25	39%	22%	21%	29%		
0.630	19%	16%	17%	22%		
0.315	13%	11%	13%	16%		
0.160	10%	8%	9%	12%		
0.080	6%	5%	6%	8%		
M.C.(%)	4%	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:	26	54	61	51		
% SAND:	68	41	33	41		
% FINES:	6	5	6	8		
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

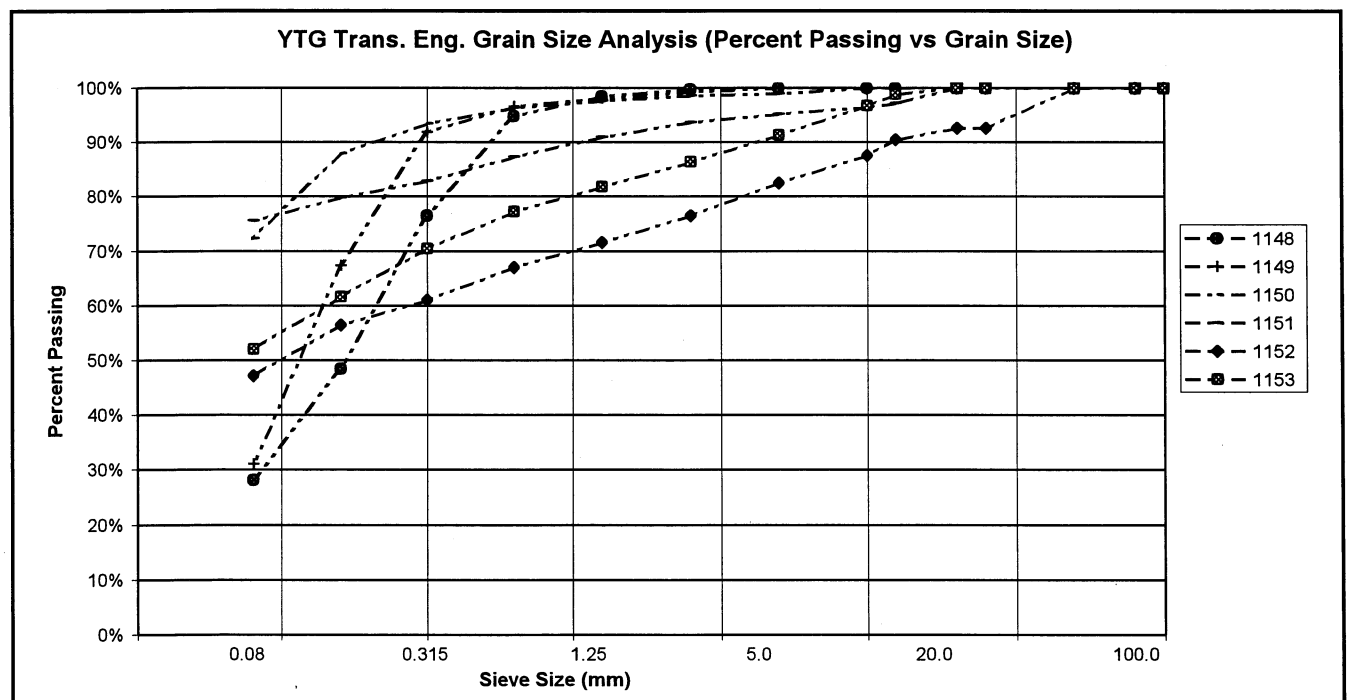


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 619-500

DATE COMP: 2001/09/07

FIELD NO:	1148	1149	1150	1151	1152	1153
LAB NO:	1925	1926	1927	1928	1929	1930
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	4.0-4.5	5.0-6.0	7.0-7.5
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING
100.0	100%	100%	100%	100%	100%	100%
80.0	100%	100%	100%	100%	100%	100%
50.0	100%	100%	100%	100%	100%	100%
25.0	100%	100%	100%	100%	93%	100%
20.0	100%	100%	100%	100%	93%	100%
12.5	100%	100%	100%	97%	90%	99%
10.0	100%	100%	100%	96%	88%	97%
5.0	100%	100%	99%	95%	83%	91%
2.5	100%	99%	99%	94%	76%	86%
1.25	99%	98%	98%	91%	72%	82%
0.630	95%	97%	96%	87%	67%	77%
0.315	76%	92%	93%	83%	61%	70%
0.160	49%	67%	88%	80%	56%	62%
0.080	28%	31%	72%	76%	47%	52%
M.C.(%)	7%	11%	19%	39%	10%	11%
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC INDEX:	0.0	0.0	0.0	0.0	0.0	0.0
% GRAVEL:	0	0	1	5	17	9
% SAND:	72	69	27	20	35	39
% FINES:	28	31	72	76	47	52
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND (SM)	SILT WITH SAND (ML)	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	SANDY SILT (ML)

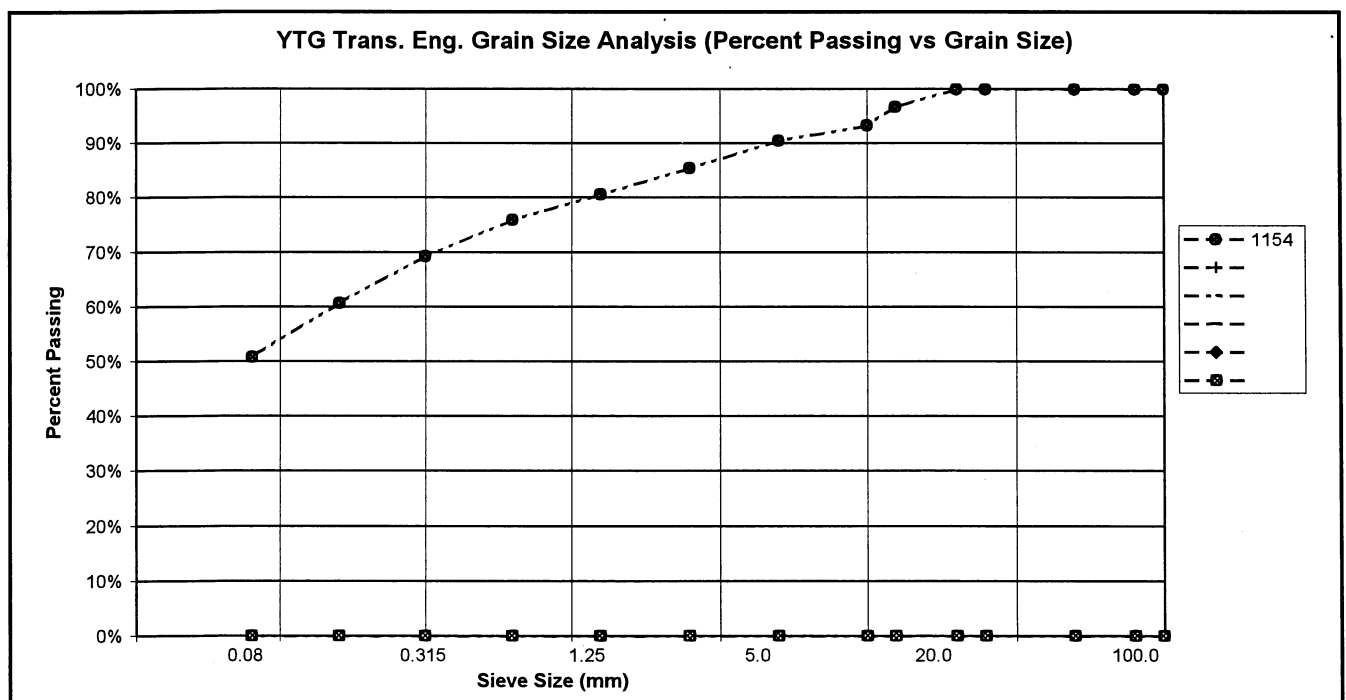


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 619-500A

DATE COMP: 2001/09/07

FIELD NO:	1154				
LAB NO:	1931				
DEPTH:	8.5-9.0				
TYPE:	AUGER	AUGER	AUGER	AUGER	
SIEVE SIZE	PERCENT PASSING				
100.0	100%				
80.0	100%				
50.0	100%				
25.0	100%				
20.0	100%				
12.5	97%				
10.0	93%				
5.0	91%				
2.5	85%				
1.25	81%				
0.630	76%				
0.315	69%				
0.160	61%				
0.080	51%				
M.C.(%)	10%				
LIQUID LIMIT:	0.0				
PLASTIC LIMIT:	0.0				
PLASTIC INDEX:	0.0				
% GRAVEL:	9				
% SAND:	40				
% FINES:	51				
CLASSIFICATION	SANDY SILT (ML)				

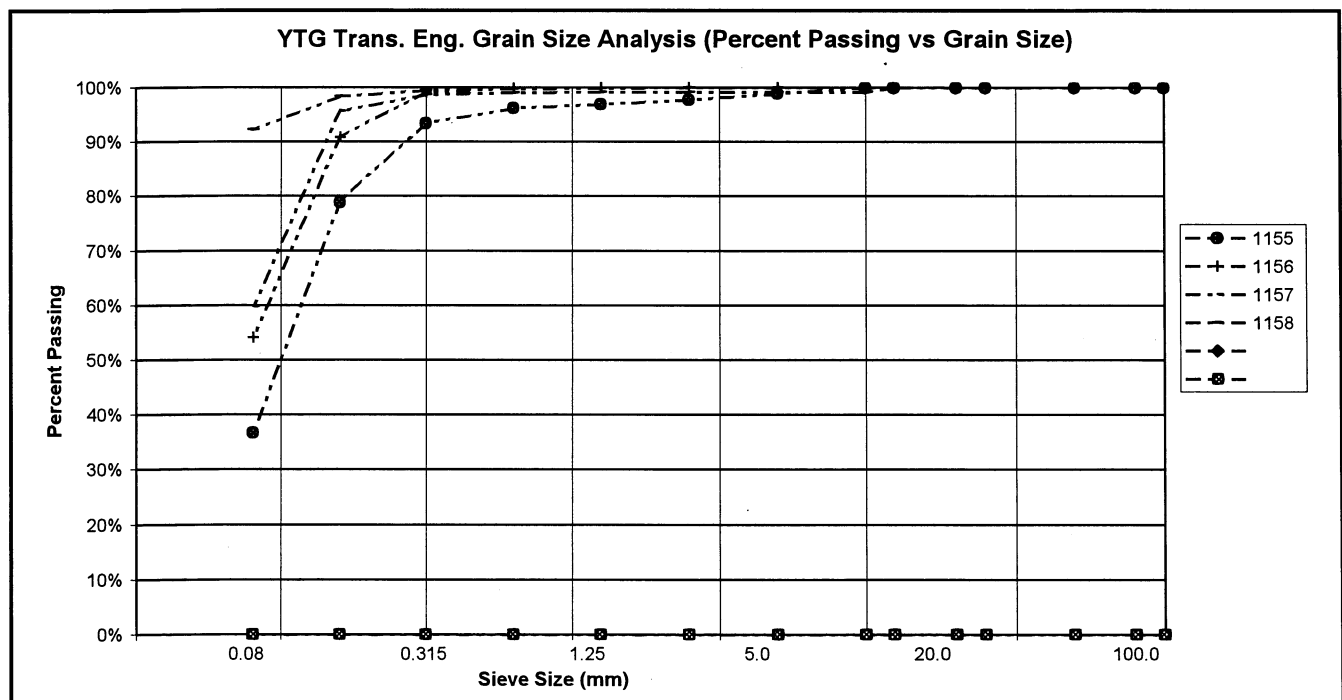


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 619-501

DATE COMP: 2001/09/07

FIELD NO:	1155	1156	1157	1158		
LAB NO:	1932	1933	1934	1935		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	4.0-5.0		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	100%	100%		
12.5	100%	100%	100%	100%		
10.0	100%	100%	99%	100%		
5.0	99%	100%	99%	100%		
2.5	98%	100%	99%	100%		
1.25	97%	100%	99%	100%		
0.630	96%	100%	99%	100%		
0.315	93%	99%	99%	99%		
0.160	79%	91%	96%	98%		
0.080	37%	54%	60%	92%		
M.C.(%)	17%	21%	20%	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:	1	0	1	0		
% SAND:	62	46	39	8		
% FINES:	37	54	60	92		
CLASSIFICATION	SILTY SAND (SM)	SANDY SILT (ML)	SANDY SILT (ML)	SILT (ML)		

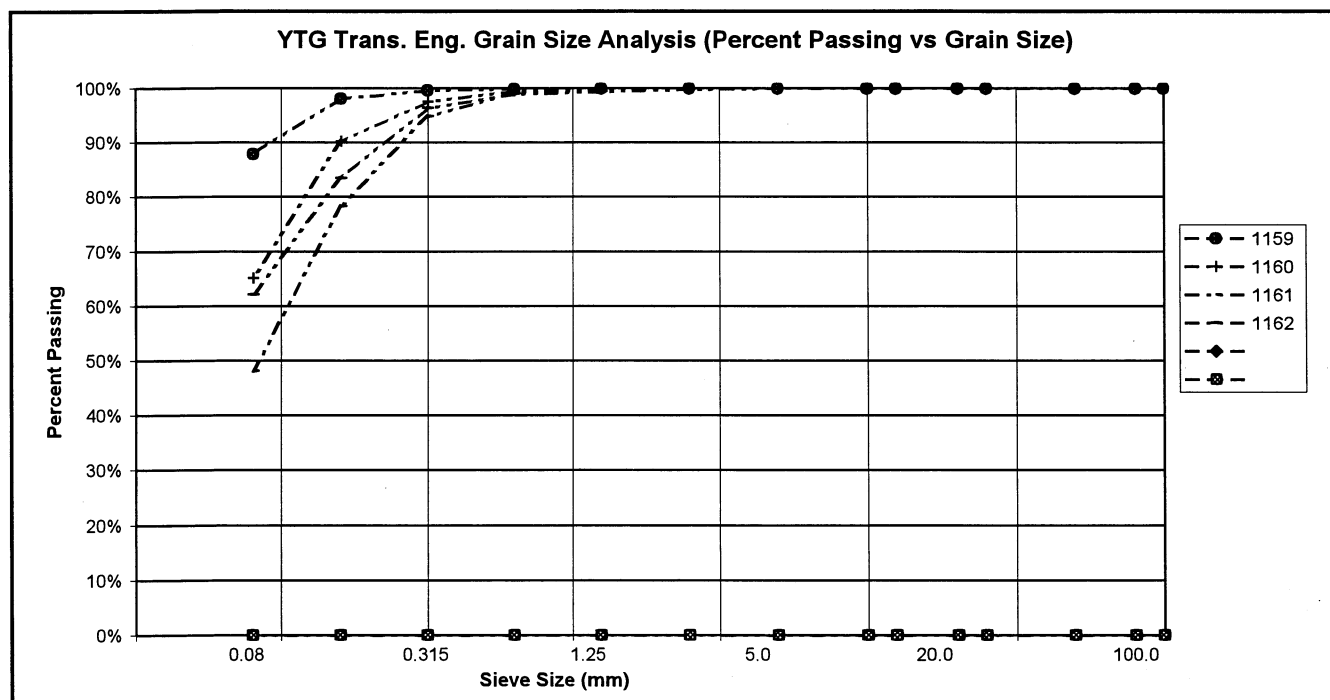


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 619-502

DATE COMP: 2001/09/07

FIELD NO:	1159	1160	1161	1162		
LAB NO:	1936	1937	1938	1939		
DEPTH:	0.8-1.0	1.6-2.0	2.6-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	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%	99%		
0.630	100%	100%	99%	99%		
0.315	100%	97%	95%	96%		
0.160	98%	90%	78%	83%		
0.080	88%	65%	48%	62%		
M.C.(%)	70%	24%	21%	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:	0	0	0	0		
% SAND:	12	35	52	38		
% FINES:	88	65	48	62		
CLASSIFICATION	SILT (ML)	SANDY SILT (ML)	SILTY SAND (SM)	SANDY SILT (ML)		

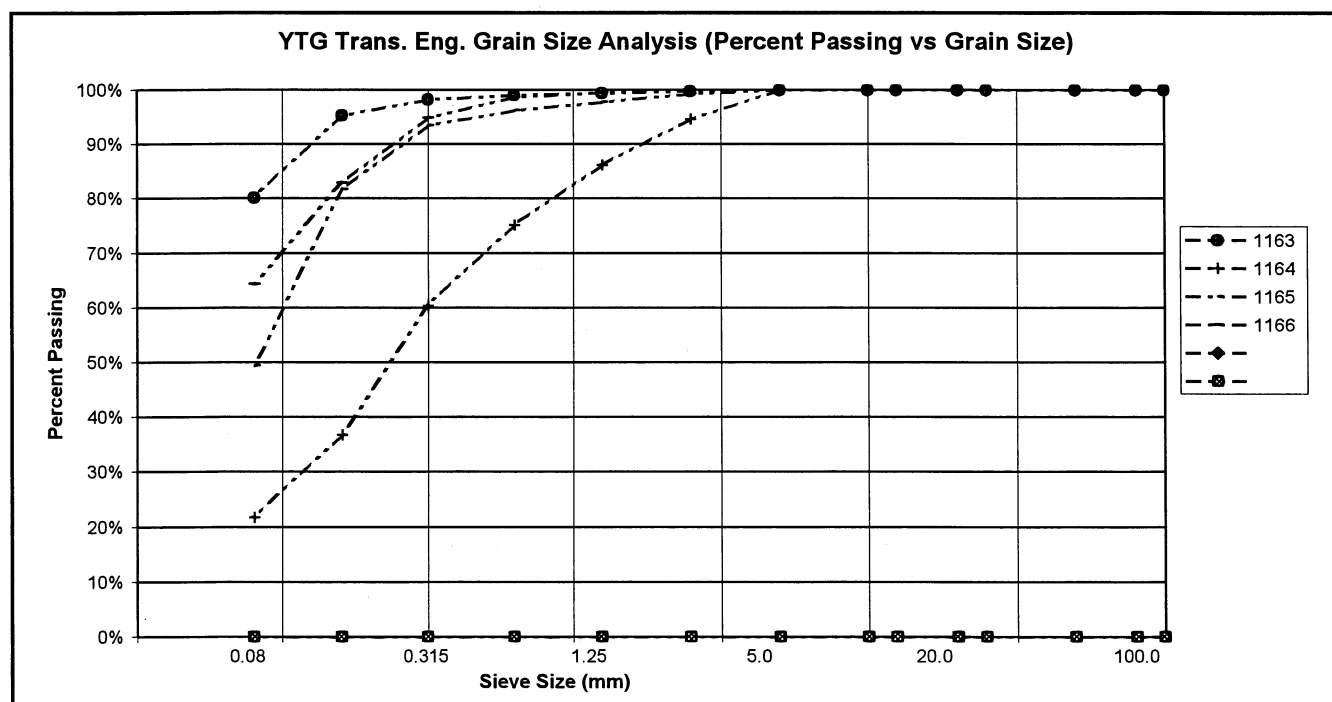


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 619-503

DATE COMP: 2001/09/07

FIELD NO:	1163	1164	1165	1166		
LAB NO:	1940	1941	1942	1943		
DEPTH:	0.75-1.0	1.6-2.0	2.6-3.0	4.5-5.0		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	100%	100%		
12.5	100%	100%	100%	100%		
10.0	100%	100%	100%	100%		
5.0	100%	100%	100%	100%		
2.5	100%	95%	99%	100%		
1.25	99%	86%	98%	100%		
0.630	99%	75%	96%	99%		
0.315	98%	60%	93%	95%		
0.160	95%	37%	82%	83%		
0.080	80%	22%	49%	64%		
M.C.(%)	35%	12%	21%	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	0	0	0		
% SAND:	20	78	51	36		
% FINES:	80	22	49	64		
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND (SM)	SILTY SAND (SM)	SANDY SILT (ML)		

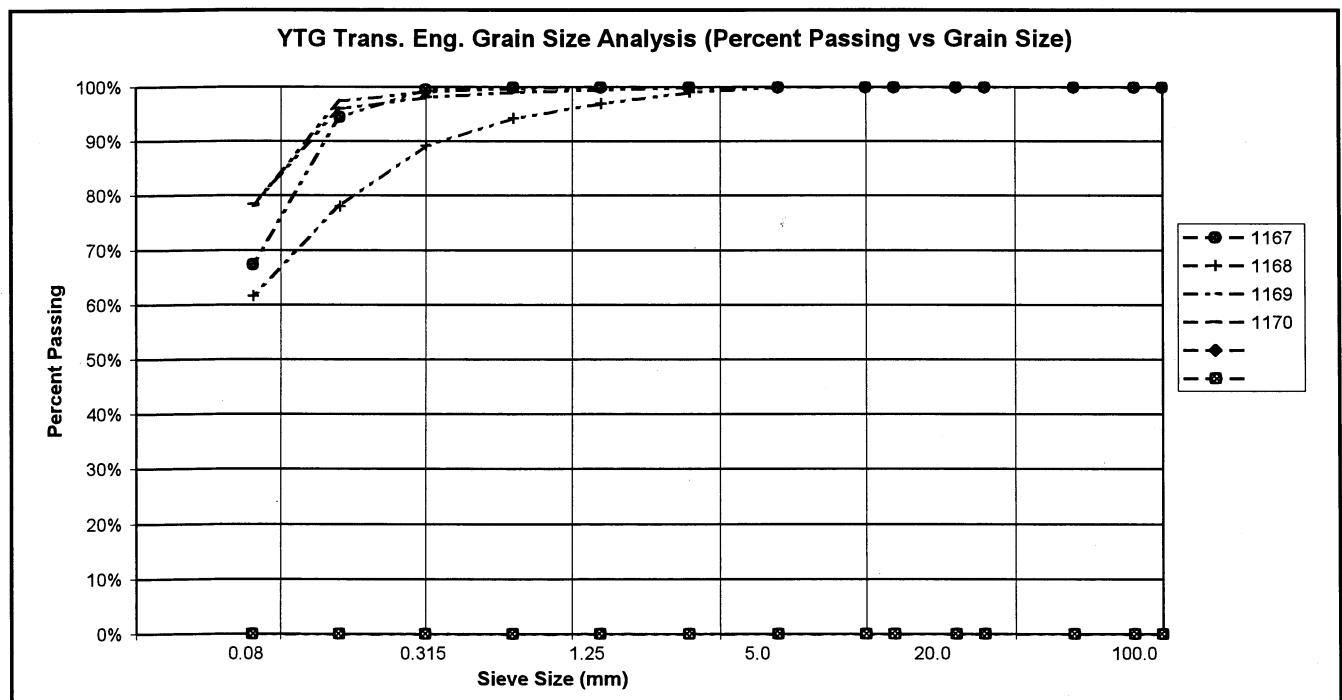


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 619-504

DATE COMP: 2001/09/07

FIELD NO:	1167	1168	1169	1170		
LAB NO:	1944	1945	1946	1947		
DEPTH:	0.75-1.0	1.6-2.0	2.6-3.0	4.5-5.0		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	100%	100%		
12.5	100%	100%	100%	100%		
10.0	100%	100%	100%	100%		
5.0	100%	100%	100%	100%		
2.5	100%	99%	100%	100%		
1.25	100%	97%	100%	100%		
0.630	100%	94%	100%	99%		
0.315	100%	89%	99%	98%		
0.160	95%	78%	97%	96%		
0.080	67%	62%	78%	78%		
M.C.(%)	4%	29%	26%	26%		
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:	33	38	22	22		
% FINES:	67	62	78	78		
CLASSIFICATION	SANDY SILT (ML)	SANDY SILT (ML)	SILT WITH SAND (ML)	SILT WITH SAND (ML)		



HOLE No.: 619-505

DATE COMP: 2001/09/07

Grain Size Analysis Data (Estimated from Graph)

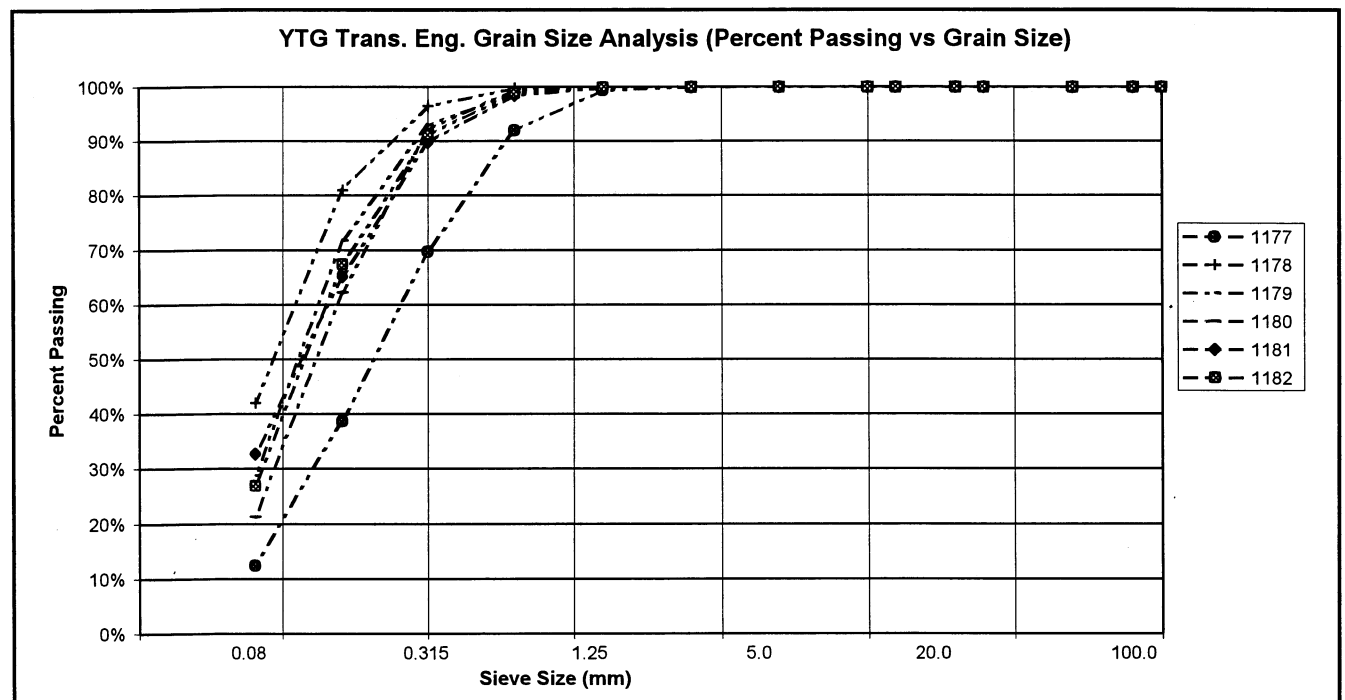
Sieve Size (mm)	1171 (%)	1172 (%)	1173 (%)	1174 (%)	1175 (%)	1176 (%)
0.075	16	25	30	35	37	37
0.15	62	68	70	72	75	78
0.3	88	90	92	93	95	96
0.6	98	99	99	99	100	100
1.25	100	100	100	100	100	100
2.5	100	100	100	100	100	100
5.0	100	100	100	100	100	100
10.0	100	100	100	100	100	100
20.0	100	100	100	100	100	100
40.0	100	100	100	100	100	100
60.0	100	100	100	100	100	100
100.0	100	100	100	100	100	100

PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 620-506

DATE COMP: 2001/09/11

FIELD NO:	1177	1178	1179	1180	1181	1182
LAB NO:	1954	1955	1956	1957	1958	1959
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	4.0-4.5	6.5-7.0	9.0-9.5
TYPE:	AUGER	AUGER	AUGER	AUGER	AUGER	AUGER
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING
100.0	100%	100%	100%	100%	100%	100%
80.0	100%	100%	100%	100%	100%	100%
50.0	100%	100%	100%	100%	100%	100%
25.0	100%	100%	100%	100%	100%	100%
20.0	100%	100%	100%	100%	100%	100%
12.5	100%	100%	100%	100%	100%	100%
10.0	100%	100%	100%	100%	100%	100%
5.0	100%	100%	100%	100%	100%	100%
2.5	100%	100%	100%	100%	100%	100%
1.25	99%	100%	100%	100%	100%	100%
0.630	92%	100%	99%	100%	98%	99%
0.315	70%	96%	93%	92%	90%	91%
0.160	39%	81%	72%	62%	65%	67%
0.080	12%	42%	29%	21%	33%	27%
M.C.(%)	4%	10%	4%	4%	3%	3%
LIQUID LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC LIMIT:	0.0	0.0	0.0	0.0	0.0	0.0
PLASTIC INDEX:	0.0	0.0	0.0	0.0	0.0	0.0
% GRAVEL:	0	0	0	0	0	0
% SAND:	88	58	71	79	67	73
% FINES:	12	42	29	21	33	27
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND (SM)	SILTY SAND (SM)	SILTY SAND (SM)	SILTY SAND (SM)	SILTY SAND (SM)

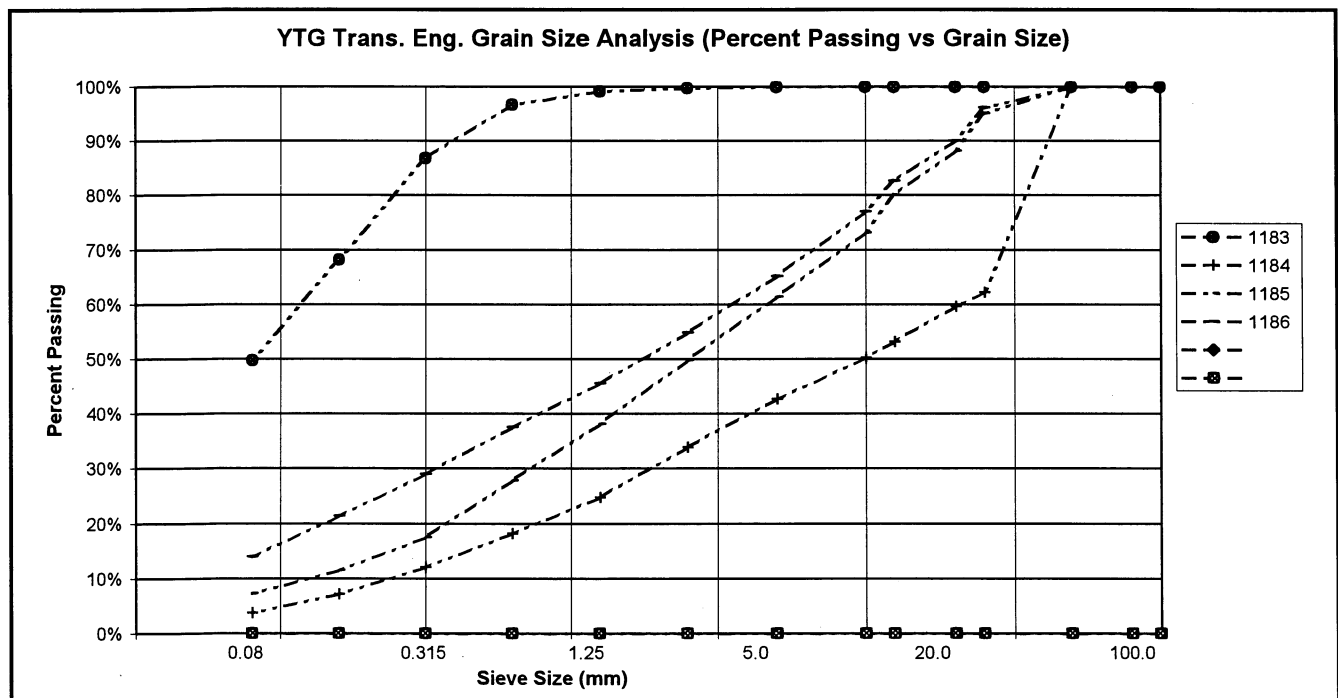


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 620-507

DATE COMP: 2001/09/11

FIELD NO:	1183	1184	1185	1186		
LAB NO:	1960	1961	1962	1963		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	62%	95%	96%		
20.0	100%	60%	88%	90%		
12.5	100%	53%	80%	83%		
10.0	100%	50%	73%	77%		
5.0	100%	43%	61%	65%		
2.5	100%	34%	50%	55%		
1.25	99%	25%	38%	45%		
0.630	97%	18%	28%	38%		
0.315	87%	12%	18%	29%		
0.160	68%	7%	12%	21%		
0.080	50%	4%	7%	14%		
M.C.(%)	19%	1%	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:	0	57	39	35		
% SAND:	50	39	54	51		
% FINES:	50	4	7	14		
CLASSIFICATION	SILTY SAND (SM)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)		

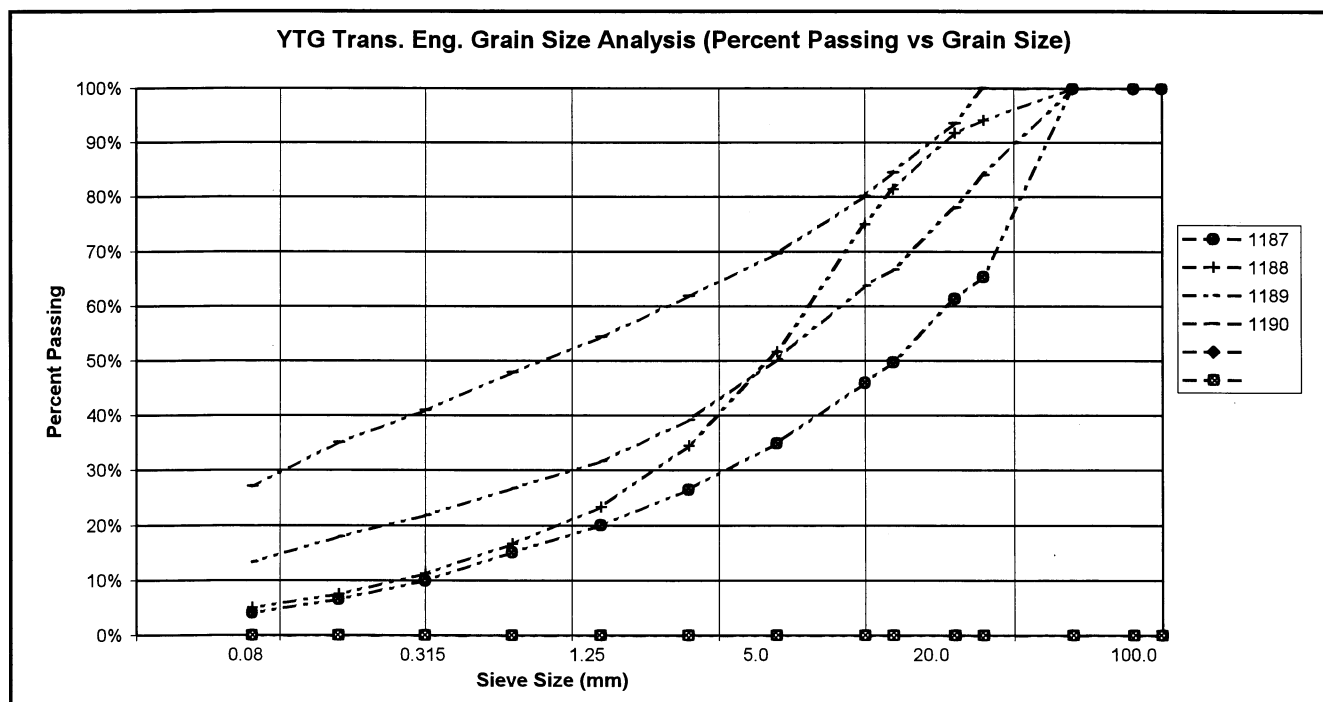


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 620-508

DATE COMP: 2001/09/11

FIELD NO:	1187	1188	1189	1190		
LAB NO:	1964	1965	1966	1967		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	3.8-4.3		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	65%	94%	84%	100%		
20.0	61%	92%	78%	94%		
12.5	50%	81%	67%	85%		
10.0	46%	75%	64%	80%		
5.0	35%	52%	50%	70%		
2.5	27%	35%	39%	62%		
1.25	20%	23%	32%	54%		
0.630	15%	17%	27%	48%		
0.315	10%	11%	22%	41%		
0.160	7%	8%	18%	35%		
0.080	4%	5%	13%	27%		
M.C.(%)	3%	2%	6%	10%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX:	0.0	0.0	0.0	0.0		
% GRAVEL:	65	48	50	30		
% SAND:	31	47	37	43		
% FINES:	4	5	13	27		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)		

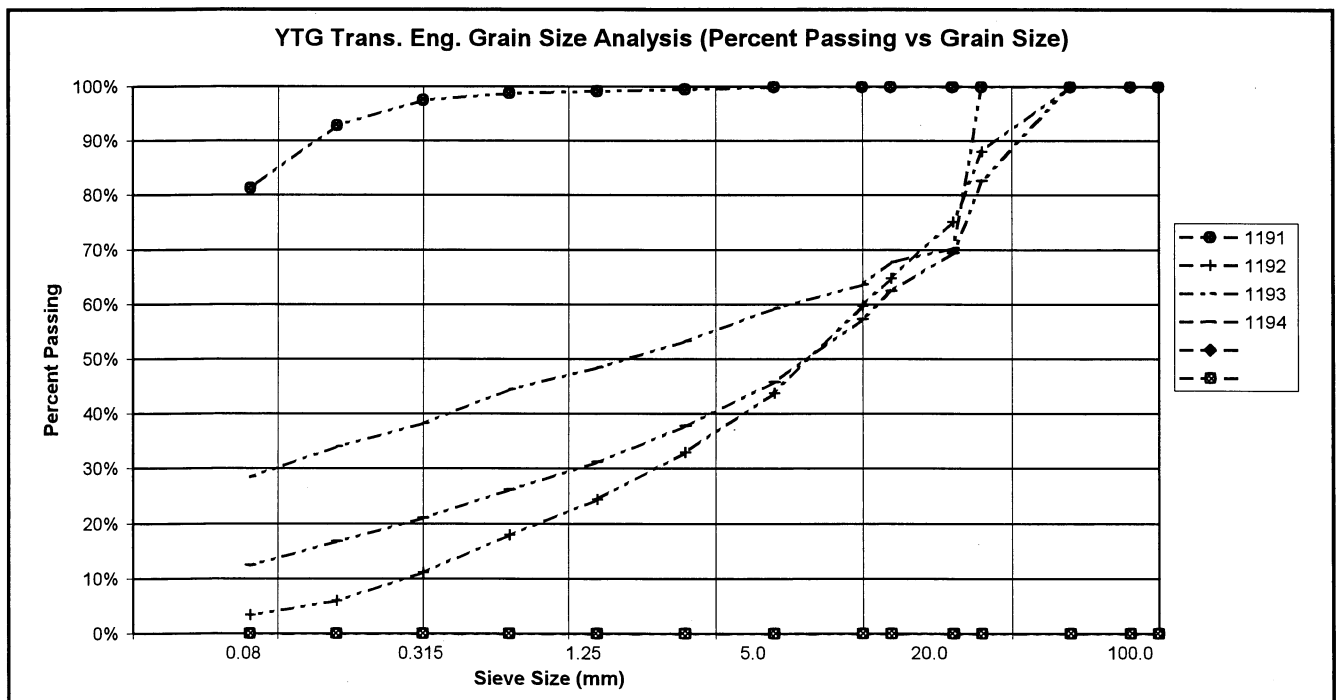


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 620-509

DATE COMP: 2001/09/11

FIELD NO:	1191	1192	1193	1194		
LAB NO:	1968	1969	1970	1971		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	3.6-4.0		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	88%	100%	83%		
20.0	100%	75%	70%	69%		
12.5	100%	65%	68%	62%		
10.0	100%	60%	64%	57%		
5.0	100%	44%	59%	46%		
2.5	100%	33%	53%	38%		
1.25	99%	24%	48%	31%		
0.630	99%	18%	45%	26%		
0.315	98%	11%	38%	21%		
0.160	93%	6%	34%	17%		
0.080	81%	3%	29%	12%		
M.C.(%)	30%	2%	15%	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	56	41	54		
% SAND:	19	40	31	33		
% FINES:	81	3	29	12		
CLASSIFICATION	SILT WITH SAND (ML)	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)		

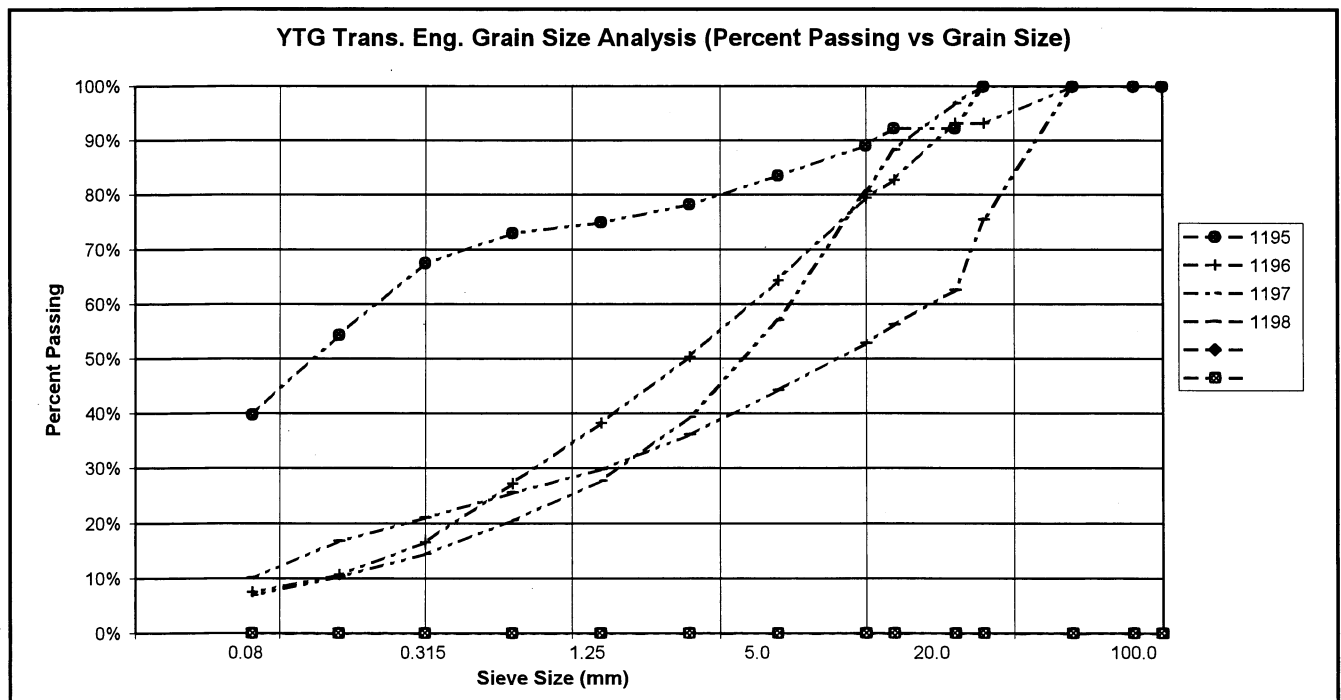


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 620-510

DATE COMP: 2001/09/11

FIELD NO:	1195	1196	1197	1198		
LAB NO:	1972	1973	1974	1975		
DEPTH:	0.6-1.0	1.6-2.0	2.3-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	93%	100%	75%		
20.0	92%	93%	97%	63%		
12.5	92%	83%	88%	56%		
10.0	89%	79%	81%	53%		
5.0	84%	64%	57%	44%		
2.5	78%	50%	39%	36%		
1.25	75%	38%	28%	30%		
0.630	73%	27%	21%	26%		
0.315	68%	17%	14%	21%		
0.160	54%	11%	10%	17%		
0.080	40%	7%	7%	10%		
M.C.(%)	24%	3%	3%	5%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX:	0.0	0.0	0.0	0.0		
% GRAVEL:	16	36	43	56		
% SAND:	44	57	50	34		
% FINES:	40	7	7	10		
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

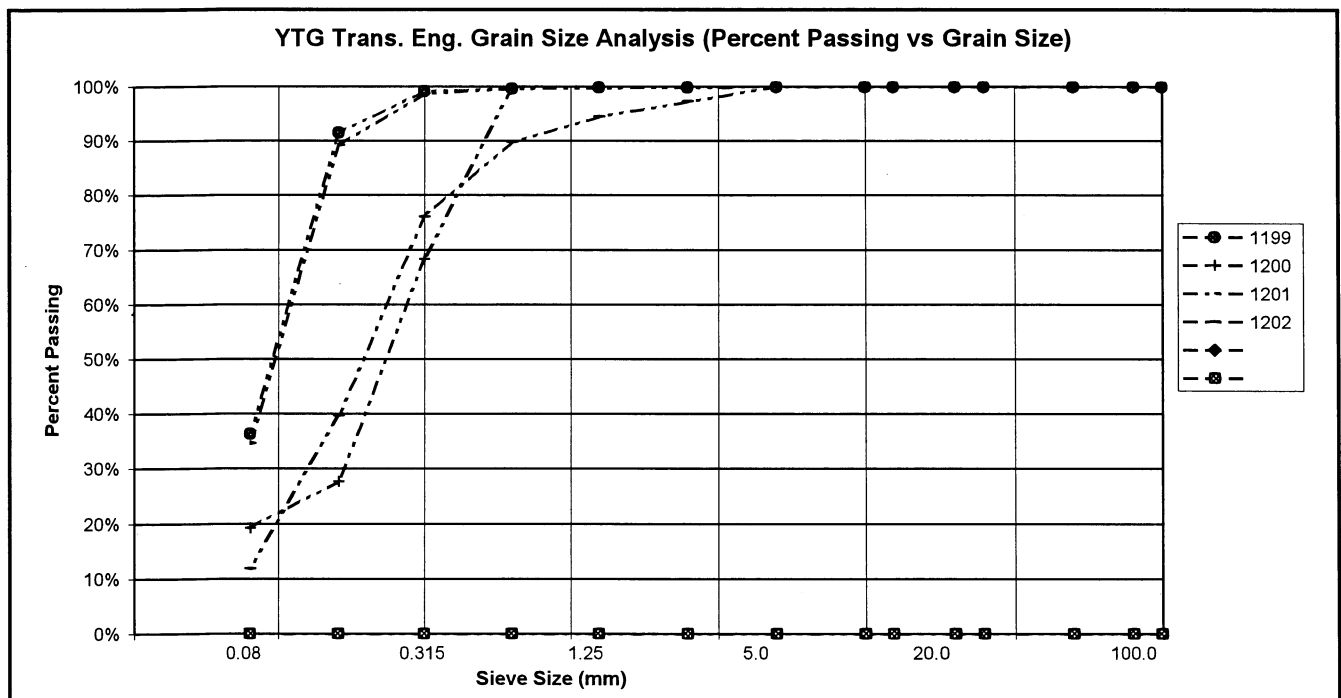


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 620-511

DATE COMP: 2001/09/11

FIELD NO:	1199	1200	1201	1202		
LAB NO:	1976	1977	1978	1979		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	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%	97%		
1.25	100%	100%	100%	94%		
0.630	100%	100%	100%	90%		
0.315	99%	68%	99%	76%		
0.160	92%	28%	89%	40%		
0.080	36%	19%	35%	12%		
M.C.(%)	10%	19%	24%	10%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	0	0	0		
% SAND:	64	81	65	88		
% FINES:	36	19	35	12		
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND (SM)	SILTY SAND (SM)	WELL-GRADED SAND WITH SILT (SW-SM)		

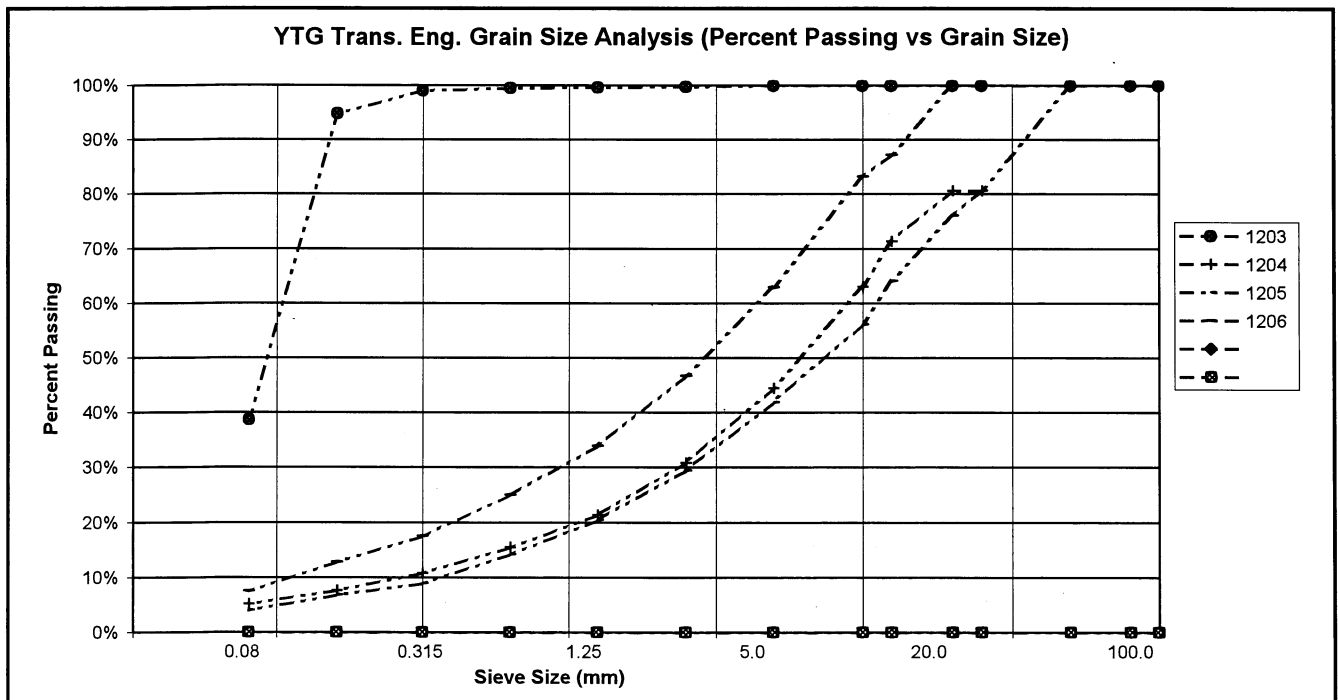


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 620-512

DATE COMP: 2001/09/11

FIELD NO:	1203	1204	1205	1206		
LAB NO:	1980	1981	1982	1983		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	81%	81%	100%		
20.0	100%	81%	76%	100%		
12.5	100%	71%	64%	87%		
10.0	100%	63%	56%	83%		
5.0	100%	44%	42%	63%		
2.5	100%	31%	30%	47%		
1.25	100%	21%	20%	34%		
0.630	100%	15%	14%	25%		
0.315	99%	11%	9%	17%		
0.160	95%	8%	7%	13%		
0.080	39%	5%	4%	7%		
M.C.(%):	15%	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:	0	56	58	37		
% SAND:	61	39	38	55		
% FINES:	39	5	4	7		
CLASSIFICATION	SILTY SAND (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)		



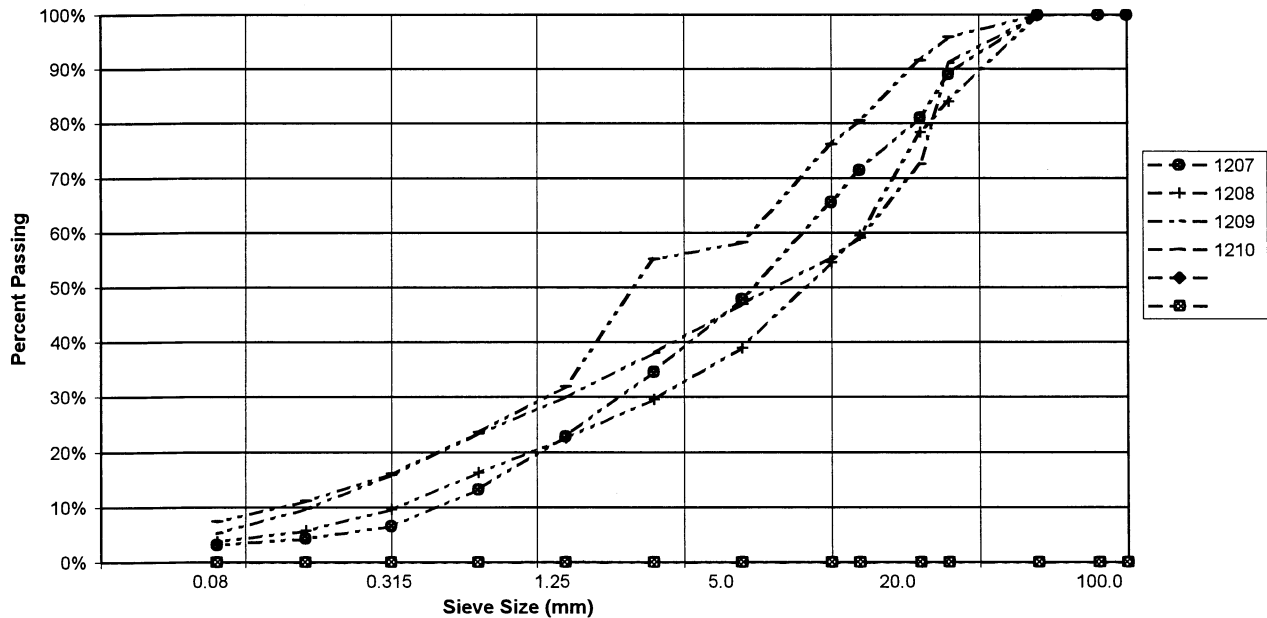
PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 620-513

DATE COMP: 2001/09/11

FIELD NO:	1207	1208	1209	1210		
LAB NO:	1984	1985	1986	1987		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	89%	84%	91%	96%		
20.0	81%	78%	73%	92%		
12.5	71%	59%	59%	80%		
10.0	66%	55%	56%	76%		
5.0	48%	39%	47%	58%		
2.5	35%	30%	38%	55%		
1.25	23%	23%	30%	32%		
0.630	13%	16%	23%	24%		
0.315	7%	10%	16%	16%		
0.160	4%	6%	10%	11%		
0.080	3%	4%	5%	7%		
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:	52	61	53	42		
% SAND:	45	35	42	51		
% FINES:	3	4	5	7		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

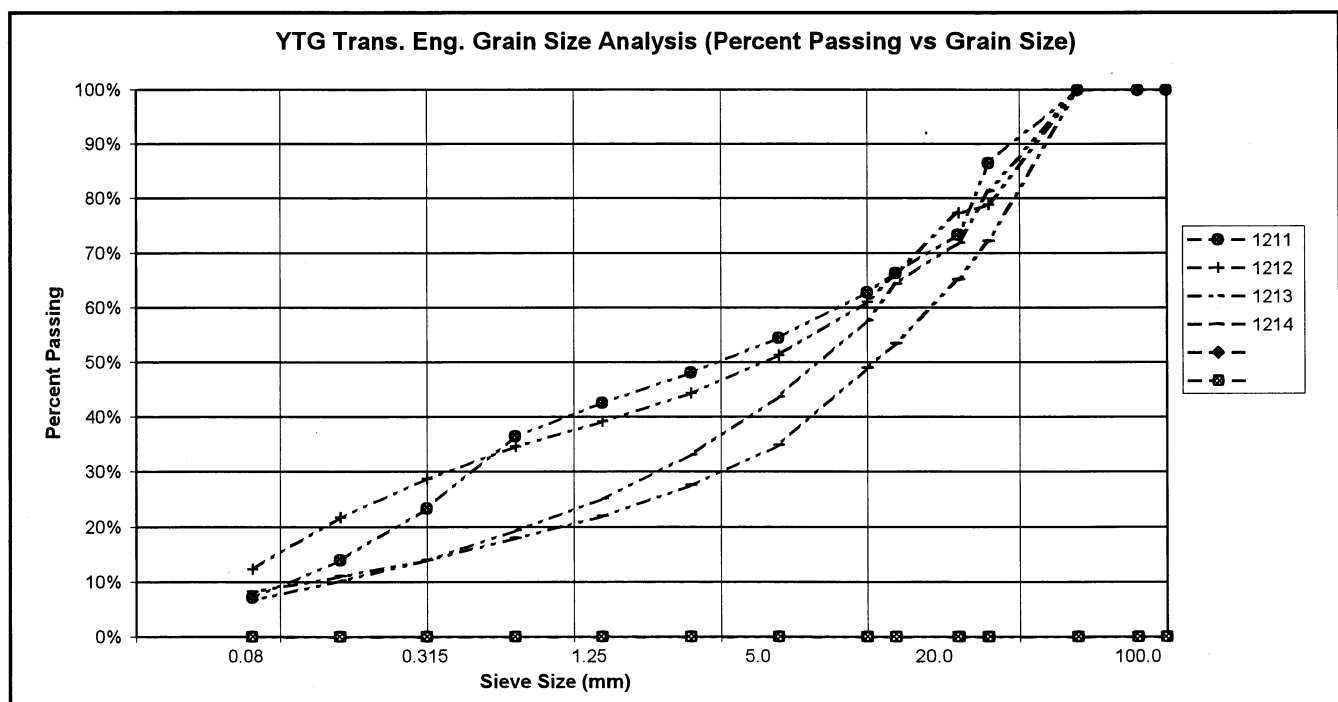


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 620-514

DATE COMP: 2001/09/11

FIELD NO:	1211	1212	1213	1214		
LAB NO:	1988	1989	1990	1991		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	87%	79%	81%	72%		
20.0	73%	77%	72%	65%		
12.5	66%	66%	64%	53%		
10.0	63%	61%	58%	49%		
5.0	54%	51%	44%	35%		
2.5	48%	44%	33%	28%		
1.25	43%	39%	25%	22%		
0.630	36%	35%	19%	18%		
0.315	23%	29%	14%	14%		
0.160	14%	22%	10%	11%		
0.080	7%	12%	7%	8%		
M.C.(%)	4%	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:	46	49	56	65		
% SAND:	47	39	37	27		
% FINES:	7	12	7	8		
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY GRAVEL WITH SAND (GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)		

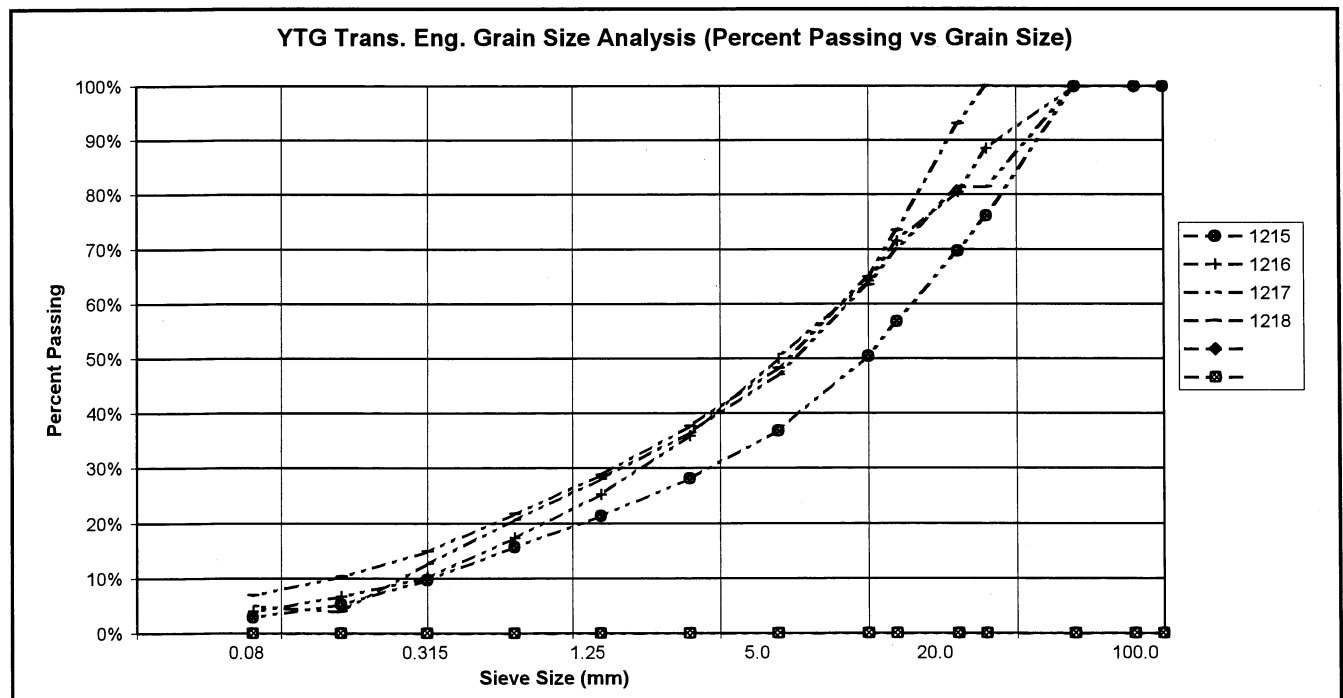


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 620-515

DATE COMP: 2001/09/11

FIELD NO:	1215	1216	1217	1218		
LAB NO:	1992	1993	1994	1995		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	76%	88%	81%	100%		
20.0	70%	81%	81%	93%		
12.5	57%	71%	70%	74%		
10.0	50%	64%	64%	65%		
5.0	37%	50%	47%	48%		
2.5	28%	36%	36%	38%		
1.25	21%	25%	28%	29%		
0.630	16%	17%	21%	22%		
0.315	10%	10%	13%	15%		
0.160	5%	7%	4%	10%		
0.080	3%	4%	5%	7%		
M.C.(%)	1%	1%	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:	63	50	53	52		
% SAND:	34	46	42	41		
% FINES:	3	4	5	7		
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)		

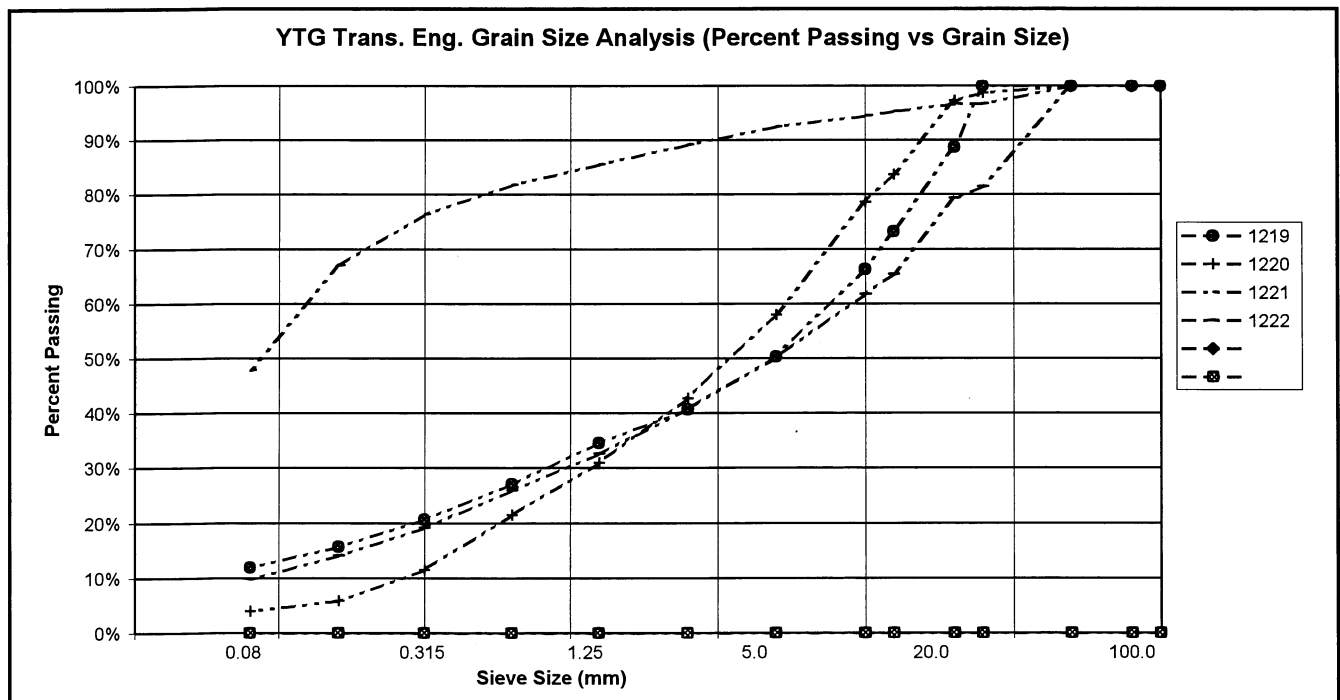


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 620-516

DATE COMP: 2001/09/11

FIELD NO:	1219	1220	1221	1222		
LAB NO:	1996	1997	1998	1999		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	3.5-4.0		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	99%	97%	81%		
20.0	89%	97%	97%	79%		
12.5	73%	84%	95%	65%		
10.0	66%	79%	94%	62%		
5.0	50%	58%	92%	50%		
2.5	41%	43%	89%	41%		
1.25	35%	31%	86%	33%		
0.630	27%	21%	82%	26%		
0.315	21%	11%	76%	19%		
0.160	16%	6%	67%	14%		
0.080	12%	4%	48%	10%		
M.C.(%)	5%	3%	18%	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:	50	42	8	50		
% SAND:	38	54	45	40		
% FINES:	12	4	48	10		
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	WELL-GRADED SAND WITH GRAVEL (SW)	SILTY SAND (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

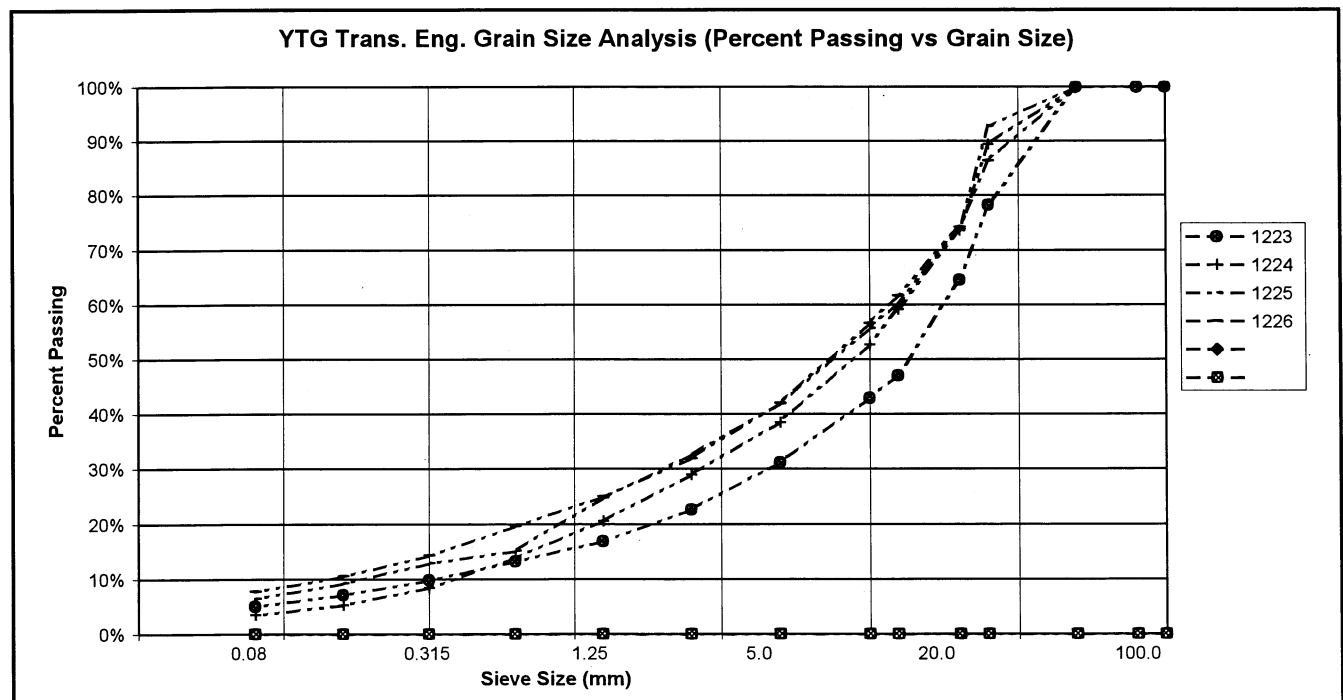


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 620-517

DATE COMP: 2001/09/11

FIELD NO:	1223	1224	1225	1226		
LAB NO:	2000	2001	2002	2003		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	3.6-4.0		
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	78%	89%	93%	86%		
20.0	65%	74%	74%	74%		
12.5	47%	59%	60%	62%		
10.0	43%	53%	56%	57%		
5.0	31%	39%	42%	42%		
2.5	23%	29%	33%	32%		
1.25	17%	21%	25%	25%		
0.630	13%	14%	15%	20%		
0.315	10%	8%	13%	14%		
0.160	7%	5%	9%	11%		
0.080	5%	3%	6%	8%		
M.C.(%)	3%	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:	69	61	58	58		
% SAND:	26	35	35	34		
% FINES:	5	3	6	8		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

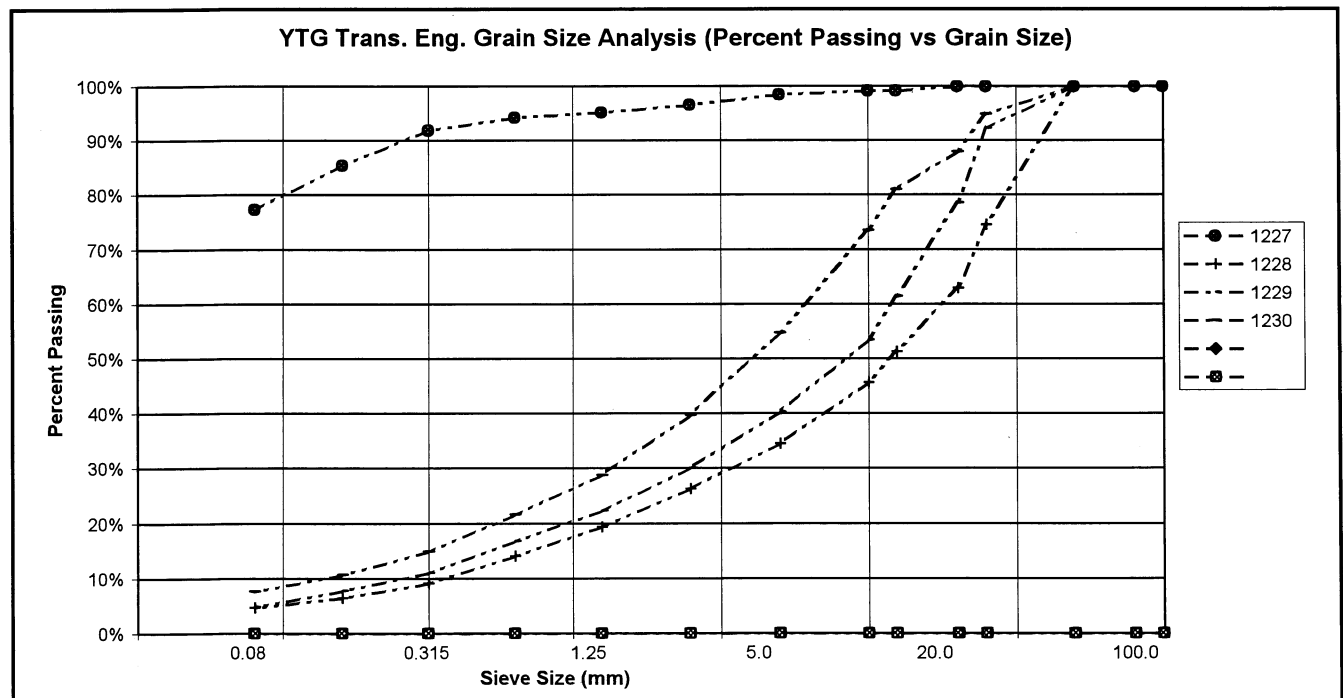


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 620-518

DATE COMP: 2001/09/11

FIELD NO:	1227	1228	1229	1230		
LAB NO:	2004	2005	2006	2007		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	3.5-4.0		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	75%	92%	95%		
20.0	100%	63%	78%	88%		
12.5	99%	51%	61%	81%		
10.0	99%	46%	53%	74%		
5.0	98%	35%	40%	55%		
2.5	97%	26%	30%	40%		
1.25	95%	19%	22%	29%		
0.630	94%	14%	17%	22%		
0.315	92%	9%	11%	15%		
0.160	85%	6%	8%	11%		
0.080	77%	5%	5%	8%		
M.C.(%)	25%	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:	2	65	60	45		
% SAND:	21	30	35	47		
% FINES:	77	5	5	8		
CLASSIFICATION	SILT WITH SAND (ML)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)		

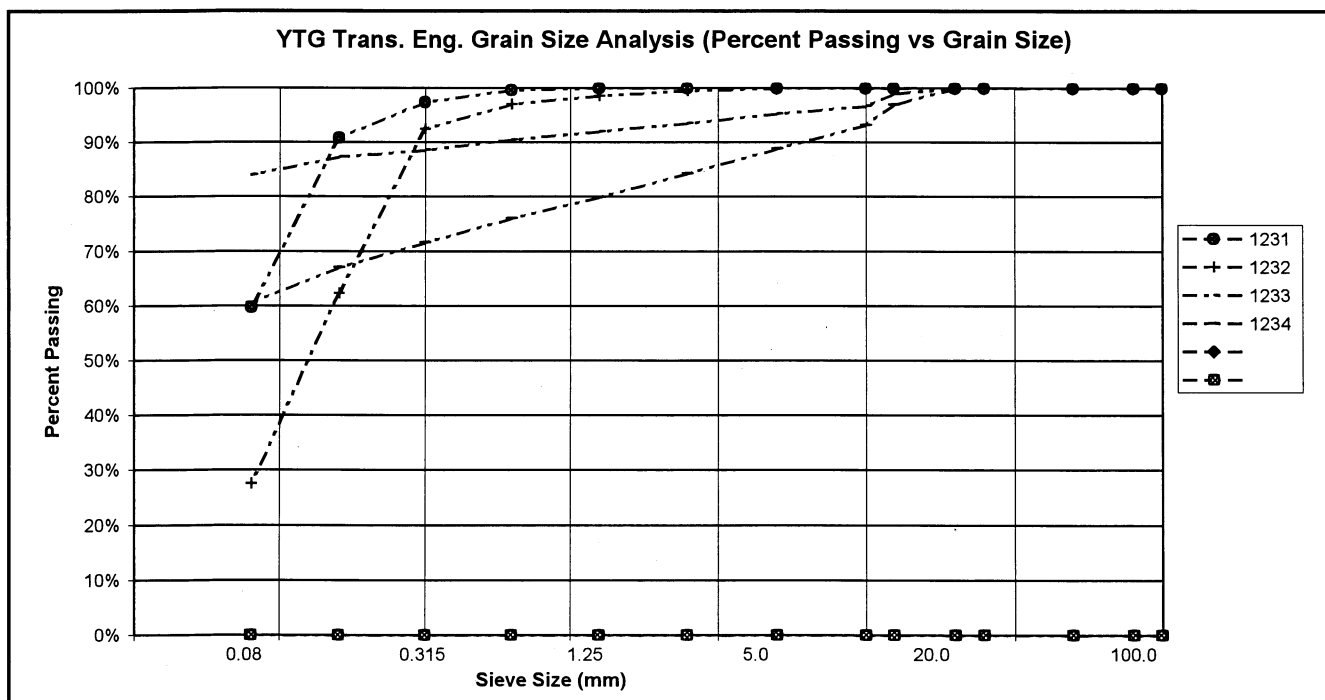


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 620-519

DATE COMP: 2001/09/12

FIELD NO:	1231	1232	1233	1234		
LAB NO:	2008	2009	2010	2011		
DEPTH:	0.6-1.0	1.7-2.0	2.6-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	100%	100%		
12.5	100%	100%	99%	97%		
10.0	100%	100%	97%	93%		
5.0	100%	100%	95%	89%		
2.5	100%	99%	94%	84%		
1.25	100%	99%	92%	80%		
0.630	100%	97%	90%	76%		
0.315	97%	92%	89%	72%		
0.160	91%	62%	87%	67%		
0.080	60%	28%	84%	61%		
M.C.(%)	20%	20%	23%	12%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	0	5	11		
% SAND:	40	72	11	28		
% FINES:	60	28	84	61		
CLASSIFICATION	SANDY SILT (ML)	SILTY SAND (SM)	SILT WITH SAND (ML)	SANDY SILT (ML)		

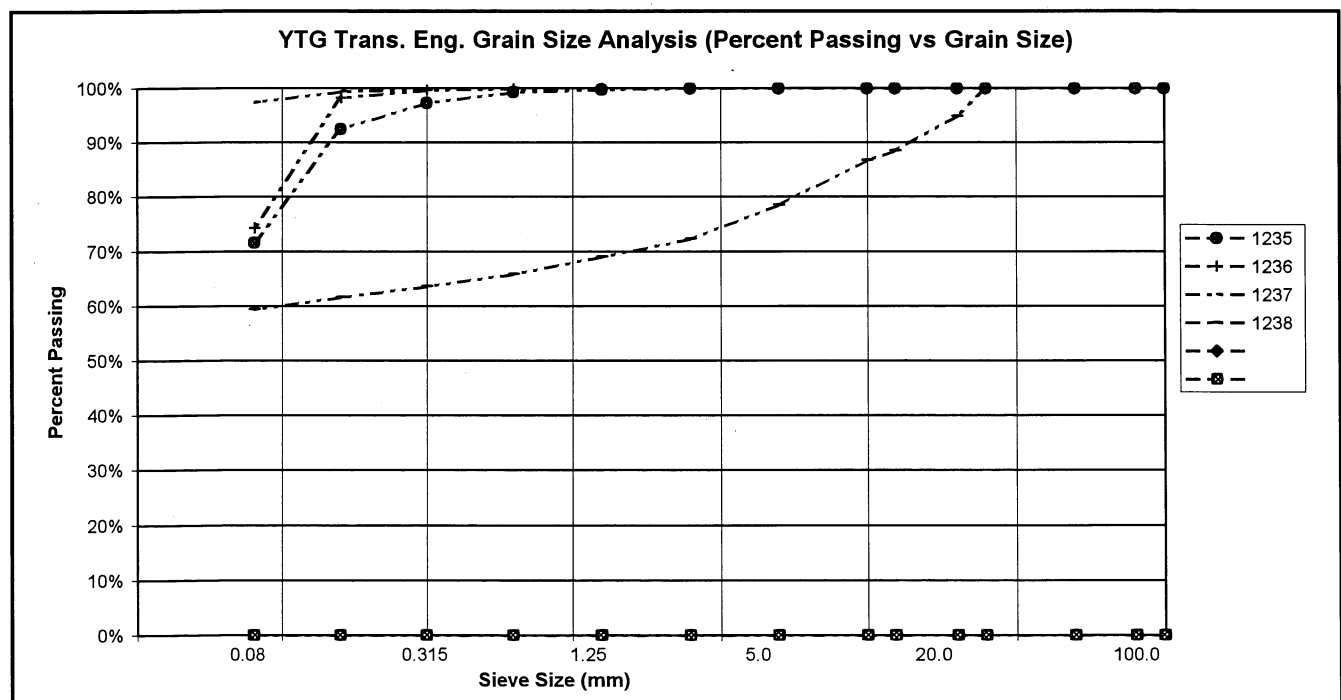


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 620-520

DATE COMP: 2001/09/12

FIELD NO:	1235	1236	1237	1238		
LAB NO:	2012	2013	2014	2015		
DEPTH:	0.4-0.8	1.6-2.0	2.6-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	100%		
20.0	100%	100%	100%	95%		
12.5	100%	100%	100%	88%		
10.0	100%	100%	100%	87%		
5.0	100%	100%	100%	79%		
2.5	100%	100%	100%	72%		
1.25	100%	100%	100%	69%		
0.630	99%	100%	100%	66%		
0.315	97%	100%	100%	64%		
0.160	92%	98%	99%	62%		
0.080	72%	74%	97%	59%		
M.C.(%)	44%	18%	24%	20%		
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	21		
% SAND:	28	26	3	19		
% FINES:	72	74	97	59		
CLASSIFICATION	SILT WITH SAND (ML)	SILT WITH SAND (ML)	SILT (ML)	GRAVELLY SILT WITH SAND (ML)		

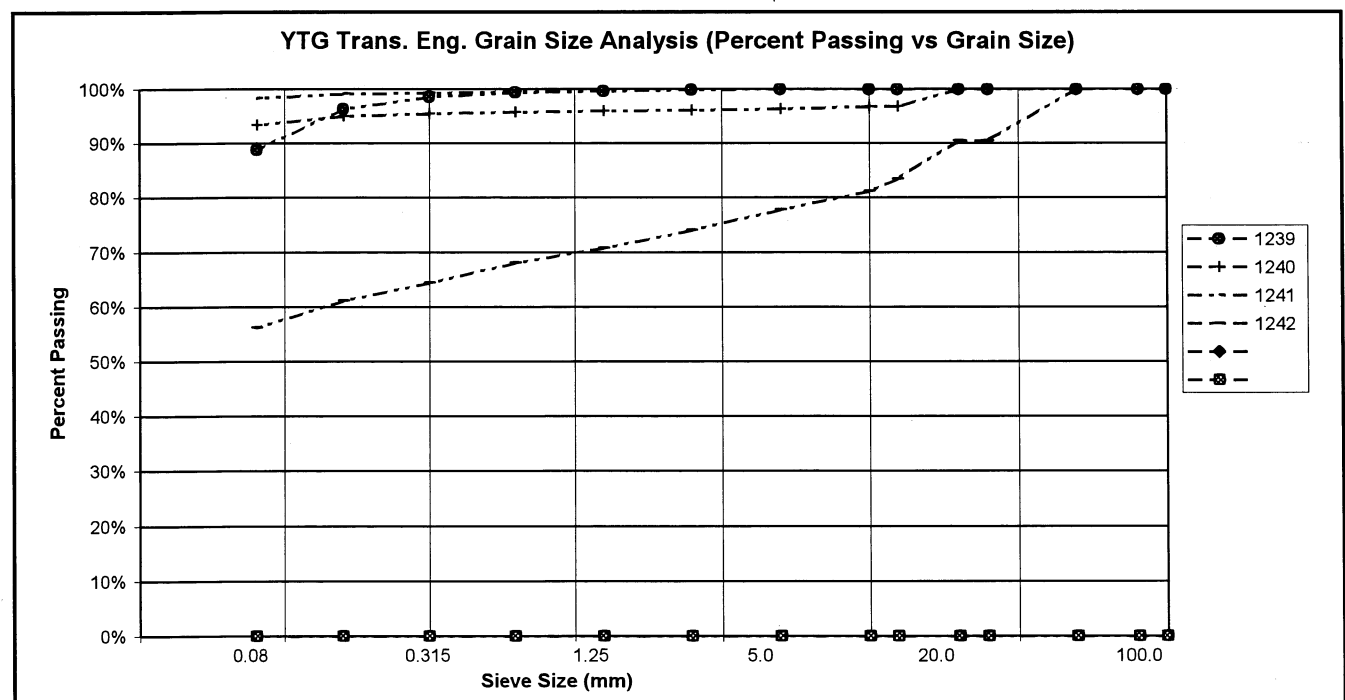


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 620-521

DATE COMP: 2001/09/12

FIELD NO:	1239	1240	1241	1242		
LAB NO:	2016	2017	2018	2019		
DEPTH:	0.4-0.8	1.6-2.0	2.6-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	91%		
20.0	100%	100%	100%	91%		
12.5	100%	97%	100%	83%		
10.0	100%	97%	100%	81%		
5.0	100%	96%	100%	78%		
2.5	100%	96%	100%	74%		
1.25	100%	96%	100%	71%		
0.630	99%	96%	100%	68%		
0.315	99%	96%	99%	64%		
0.160	96%	95%	99%	61%		
0.080	89%	93%	98%	56%		
M.C.(%)	46%	24%	14%	10%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	4	0	22		
% SAND:	11	3	2	22		
% FINES:	89	93	98	56		
CLASSIFICATION	SILT (ML)	SILT (ML)	SILT (ML)	GRAVELLY SILT WITH SAND (ML)		

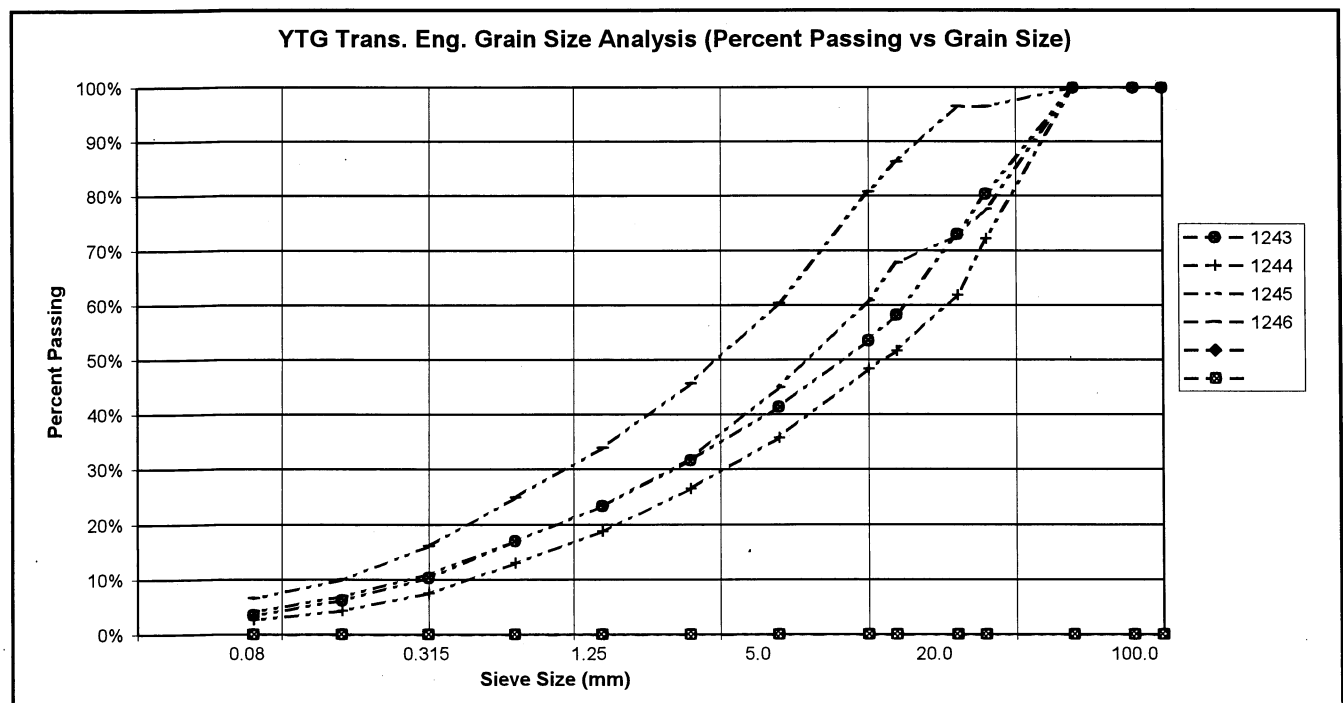


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 621-522

DATE COMP: 2002/09/12

FIELD NO:	1243	1244	1245	1246		
LAB NO:	2020	2021	2022	2023		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	3.6-4.0		
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	80%	72%	78%	97%		
20.0	73%	62%	73%	97%		
12.5	58%	52%	68%	86%		
10.0	53%	48%	61%	81%		
5.0	41%	36%	45%	60%		
2.5	32%	27%	32%	46%		
1.25	23%	19%	23%	34%		
0.630	17%	13%	17%	25%		
0.315	10%	7%	11%	16%		
0.160	6%	4%	7%	10%		
0.080	3%	3%	4%	7%		
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:	59	64	55	40		
% SAND:	38	33	41	54		
% FINES:	3	3	4	7		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)		

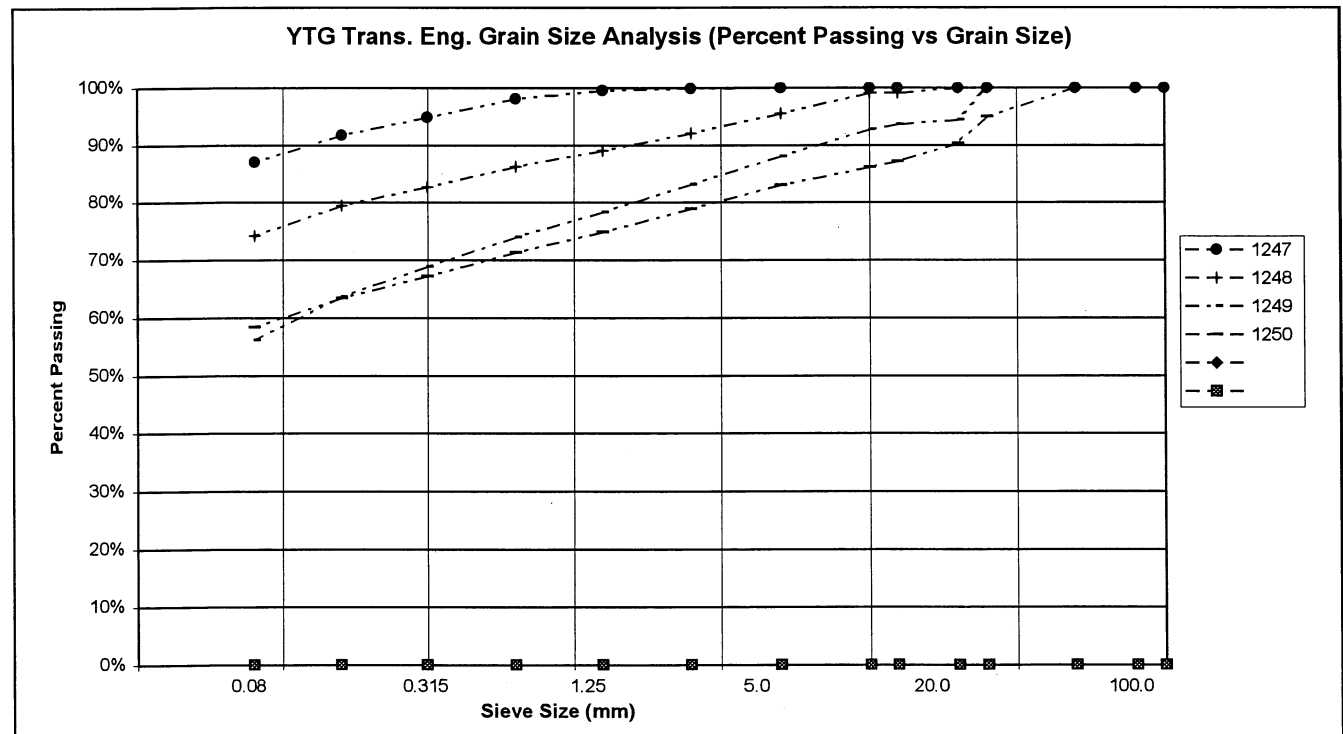


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 621-523

DATE COMP: 2002/09/12

FIELD NO:	1247	1248	1249	1250		
LAB NO:	2024	2025	2026	2027		
DEPTH:	0.6-1.0	1.6-1.8	2.6-2.8	3.6-4.0		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	100%	100%	95%		
20.0	100%	100%	94%	90%		
12.5	100%	99%	94%	87%		
10.0	100%	99%	93%	86%		
5.0	100%	95%	88%	83%		
2.5	100%	92%	83%	79%		
1.25	100%	89%	78%	75%		
0.630	98%	86%	74%	71%		
0.315	95%	83%	69%	67%		
0.160	92%	79%	64%	63%		
0.080	87%	74%	56%	58%		
M.C.(%)	28%	13%	10%	13%		
LIQUID LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC LIMIT:	0.0	0.0	0.0	0.0		
PLASTIC INDEX:	0.0	0.0	0.0	0.0		
% GRAVEL:	0	5	12	17		
% SAND:	13	21	32	25		
% FINES:	87	74	56	58		
CLASSIFICATION	SILT (ML)	SILT WITH SAND (ML)	SANDY SILT (ML)	SANDY SILT WITH GRAVEL (ML)		

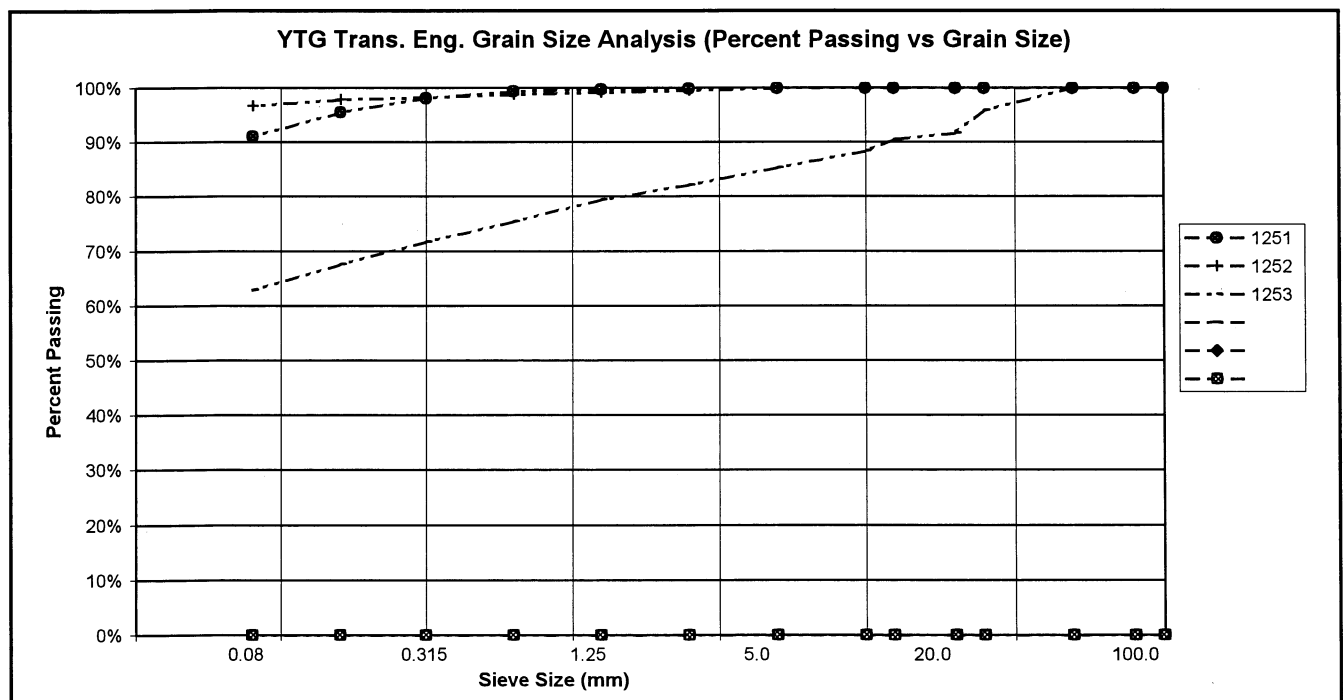


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 621-524

DATE COMP: 2002/09/12

FIELD NO:	1251	1252	1253			
LAB NO:	2028	2029	2030			
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0			
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%	96%			
20.0	100%	100%	92%			
12.5	100%	100%	91%			
10.0	100%	100%	88%			
5.0	100%	100%	85%			
2.5	100%	100%	82%			
1.25	100%	99%	80%			
0.630	99%	99%	76%			
0.315	98%	98%	72%			
0.160	96%	98%	68%			
0.080	91%	97%	63%			
M.C.(%)	23%	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:	0	0	15			
% SAND:	9	3	22			
% FINES:	91	97	63			
CLASSIFICATION	SILT (ML)	SILT (ML)	SANDY SILT (ML)			

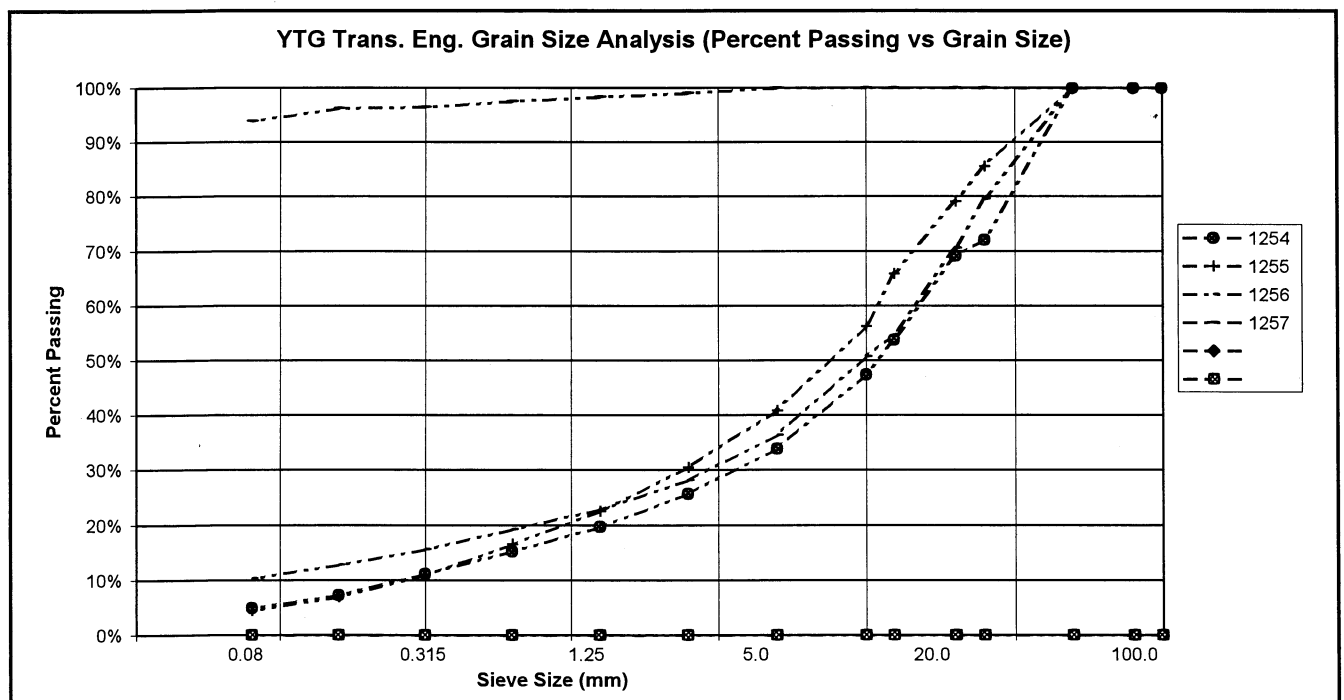


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 621-525

DATE COMP: 2002/09/12

FIELD NO:	1254	1255	1256	1257		
LAB NO:	2031	2032	2033	2034		
DEPTH:	0.6-1.0	1.6-2.0	2.4-2.8	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	72%	86%	80%	100%		
20.0	69%	79%	71%	100%		
12.5	54%	66%	55%	100%		
10.0	47%	56%	51%	100%		
5.0	34%	41%	36%	100%		
2.5	26%	31%	28%	99%		
1.25	20%	23%	23%	98%		
0.630	15%	17%	19%	98%		
0.315	11%	11%	16%	96%		
0.160	7%	7%	13%	96%		
0.080	5%	5%	10%	94%		
M.C.(%)	2%	2%	4%	24%		
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	59	64	0		
% SAND:	29	36	26	6		
% FINES:	5	5	10	94		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILT (ML)		

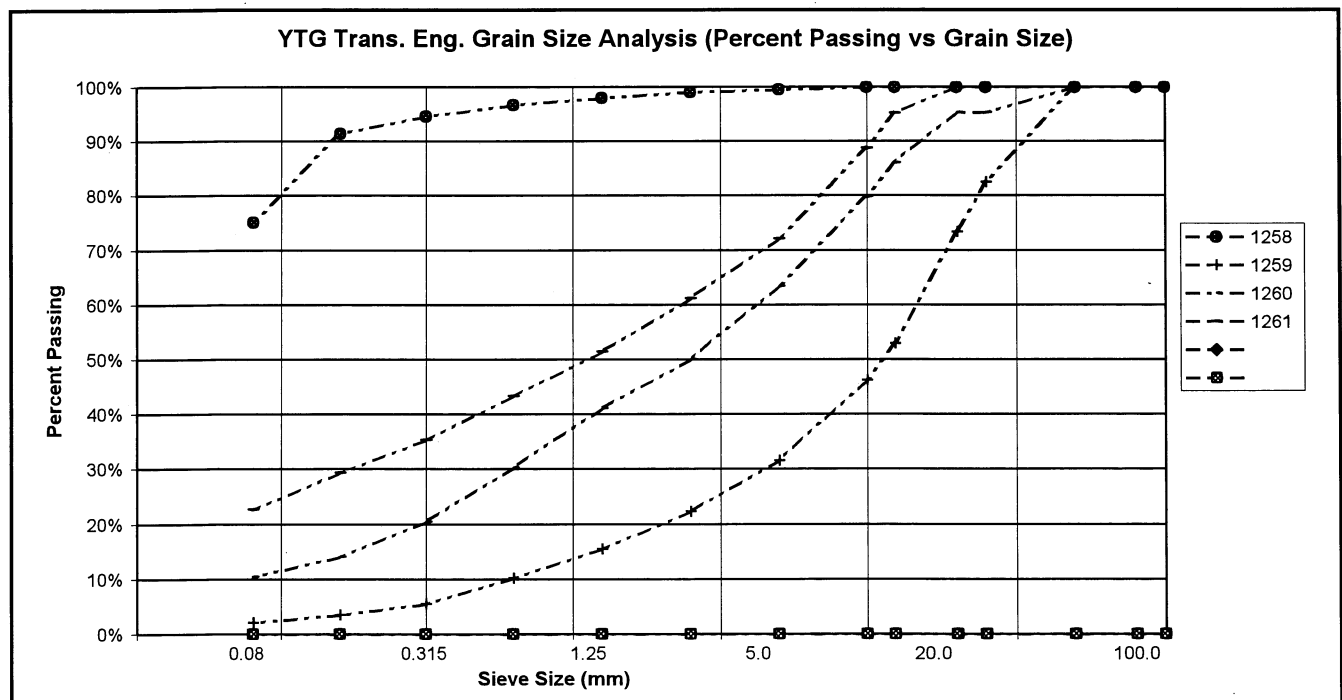


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 621-526

DATE COMP: 2002/09/13

FIELD NO:	1258	1259	1260	1261		
LAB NO:	2035	2036	2037	2038		
DEPTH:	0.6-1.0	1.6-2.0	2.2-2.6	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	83%	95%	100%		
20.0	100%	73%	95%	100%		
12.5	100%	53%	86%	95%		
10.0	100%	46%	80%	89%		
5.0	100%	32%	63%	72%		
2.5	99%	22%	50%	61%		
1.25	98%	16%	41%	51%		
0.630	97%	10%	30%	43%		
0.315	95%	6%	20%	35%		
0.160	91%	4%	14%	29%		
0.080	75%	2%	10%	23%		
M.C.(%)	27%	1%	4%	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	68	37	28		
% SAND:	24	29	53	49		
% FINES:	75	2	10	23		
CLASSIFICATION	SILT WITH SAND (ML)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)		

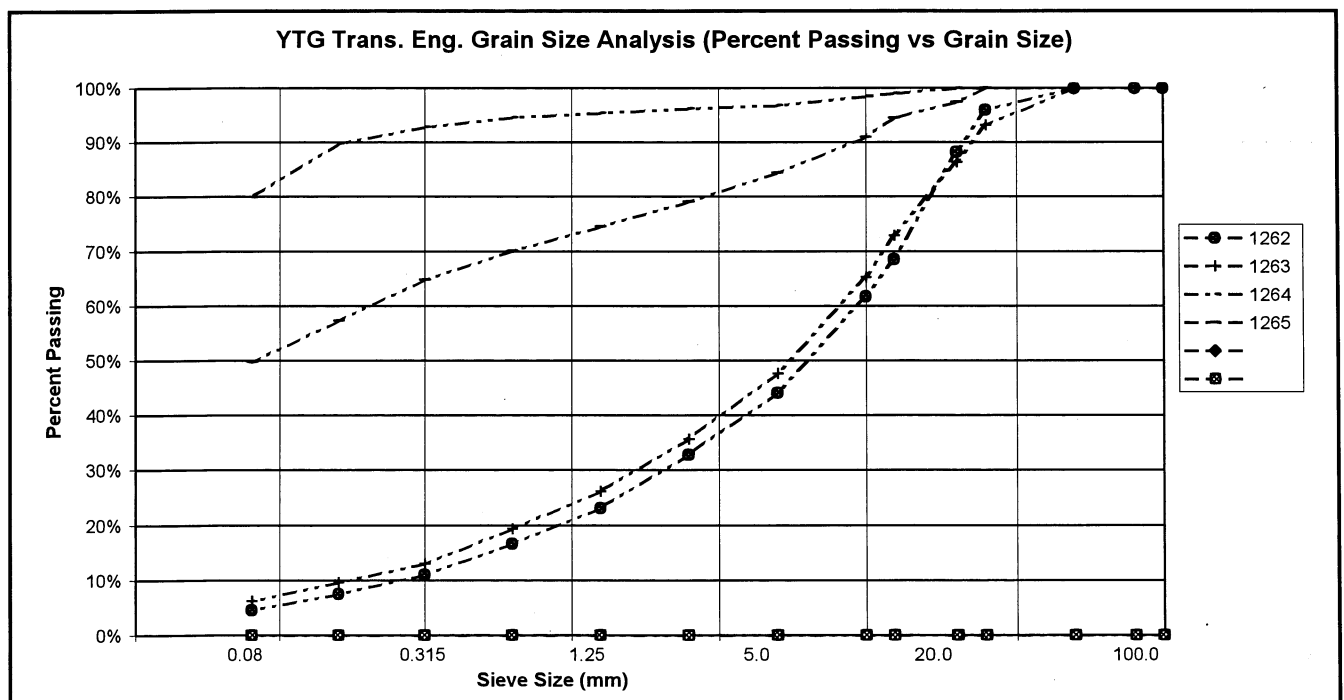


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 621-527

DATE COMP: 2002/09/13

FIELD NO:	1262	1263	1264	1265		
LAB NO:	2039	2040	2041	2042		
DEPTH:	0.6-1.0	1.4-1.8	2.2-2.4	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	96%	93%	100%	100%		
20.0	88%	86%	100%	97%		
12.5	69%	73%	99%	95%		
10.0	62%	65%	98%	91%		
5.0	44%	48%	97%	84%		
2.5	33%	36%	96%	79%		
1.25	23%	26%	95%	75%		
0.630	17%	19%	95%	70%		
0.315	11%	13%	93%	65%		
0.160	7%	10%	90%	57%		
0.080	5%	6%	80%	50%		
M.C.(%)	2%	3%	13%	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:	56	52	3	16		
% SAND:	40	41	17	35		
% FINES:	5	6	80	50		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)		

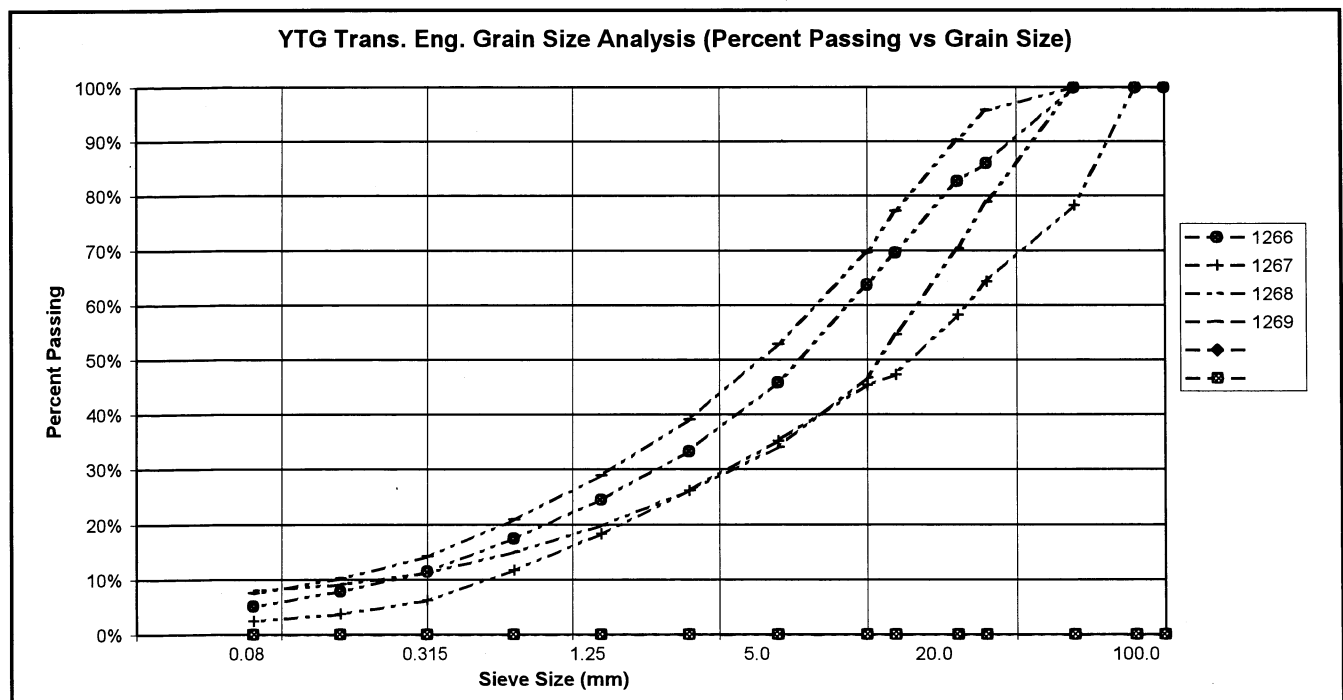


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 621-528

DATE COMP: 2002/09/13

FIELD NO:	1266	1267	1268	1269		
LAB NO:	2043	2044	2045	2046		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	78%	100%	100%		
25.0	86%	64%	79%	96%		
20.0	83%	58%	70%	90%		
12.5	70%	47%	55%	77%		
10.0	64%	45%	47%	70%		
5.0	46%	35%	34%	53%		
2.5	33%	26%	26%	39%		
1.25	24%	18%	20%	29%		
0.630	18%	12%	15%	21%		
0.315	11%	6%	11%	14%		
0.160	8%	4%	9%	10%		
0.080	5%	2%	8%	7%		
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:	54	65	66	47		
% SAND:	41	33	26	45		
% FINES:	5	2	8	7		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		

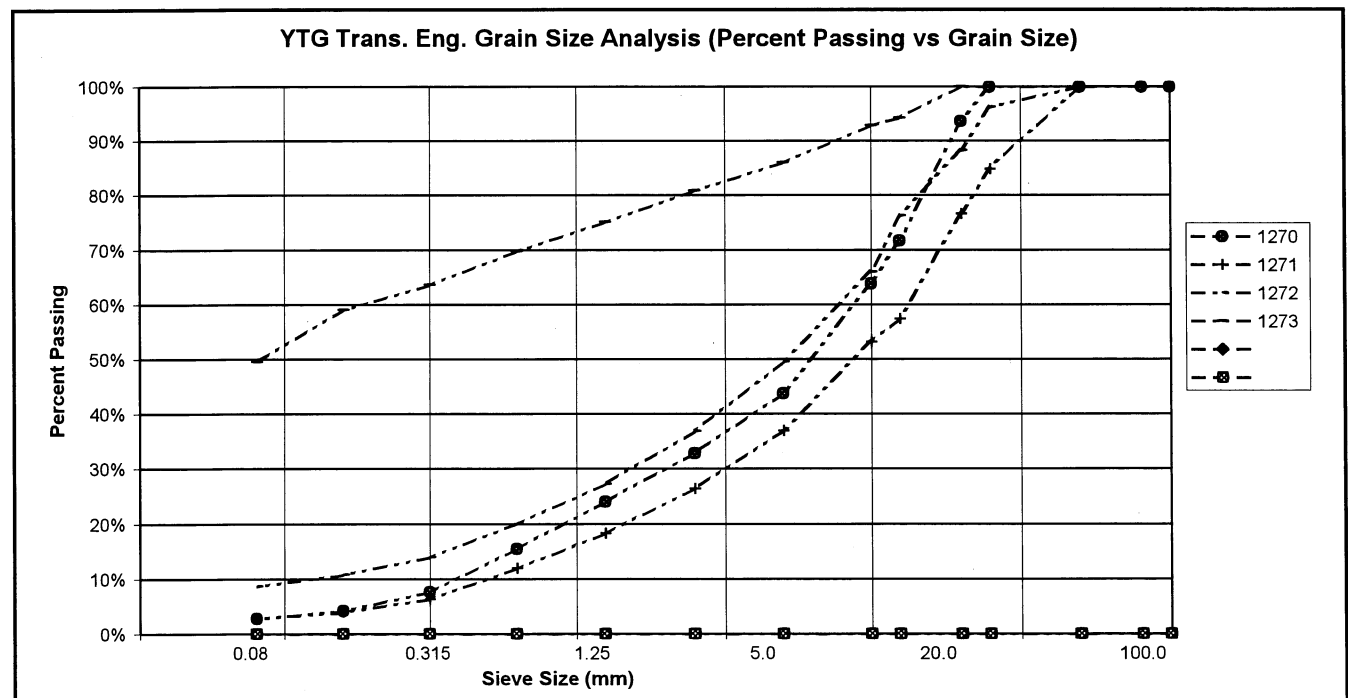


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 621-529

DATE COMP: 2002/09/13

FIELD NO:	1270	1271	1272	1273		
LAB NO:	2047	2048	2049	2050		
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0	4.0-4.5		
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING		
100.0	100%	100%	100%	100%		
80.0	100%	100%	100%	100%		
50.0	100%	100%	100%	100%		
25.0	100%	85%	96%	100%		
20.0	94%	77%	88%	100%		
12.5	72%	57%	76%	94%		
10.0	64%	53%	66%	93%		
5.0	44%	37%	50%	86%		
2.5	33%	26%	37%	81%		
1.25	24%	18%	27%	75%		
0.630	16%	12%	20%	70%		
0.315	8%	6%	14%	64%		
0.160	4%	4%	11%	59%		
0.080	3%	3%	9%	50%		
M.C.(%)	2%	2%	3%	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:	56	63	50	14		
% SAND:	41	34	41	37		
% FINES:	3	3	9	50		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	SILTY SAND (SM)		

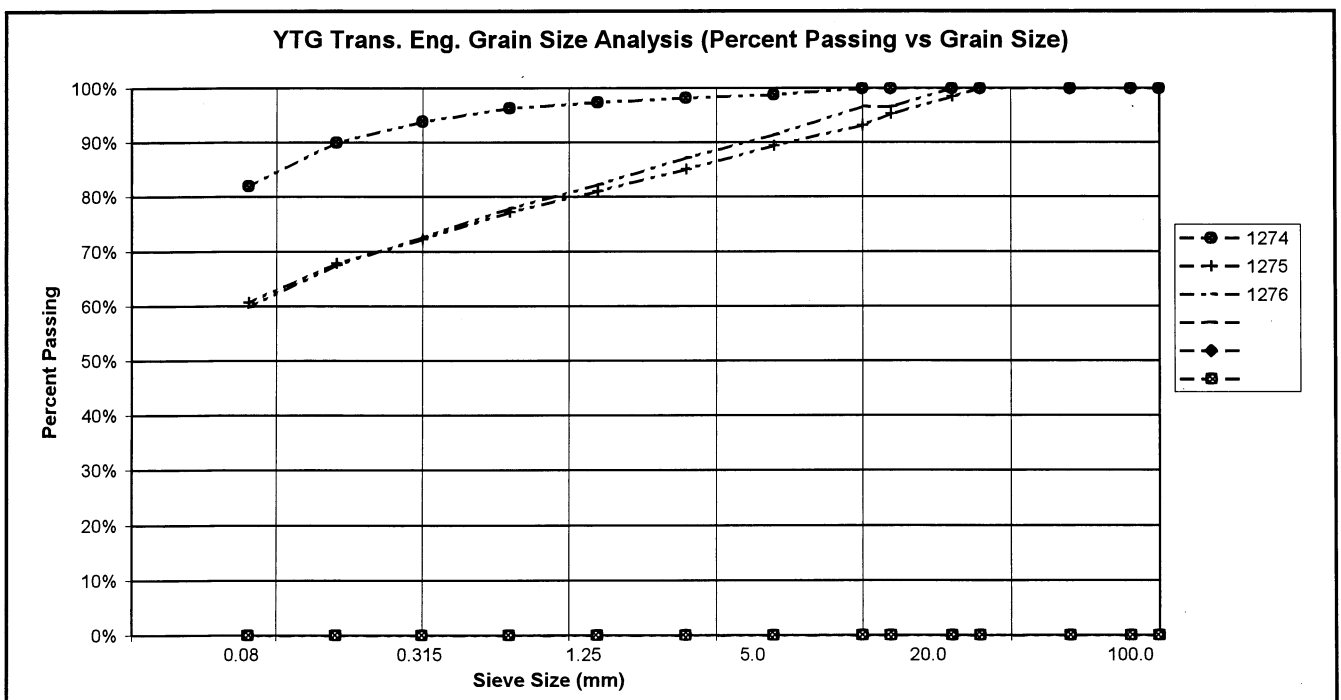


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 621-530

DATE COMP: 2002/09/13

FIELD NO:	1274	1275	1276			
LAB NO:	2051	2052	2053			
DEPTH:	1.6-2.0	2.75-3.0	3.6-4.0			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	100%			
20.0	100%	98%	100%			
12.5	100%	95%	97%			
10.0	100%	93%	97%			
5.0	99%	89%	91%			
2.5	98%	85%	87%			
1.25	97%	81%	82%			
0.630	96%	77%	78%			
0.315	94%	72%	73%			
0.160	90%	68%	67%			
0.080	82%	61%	60%			
M.C.(%)	15%	11%	11%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX:	0.0	0.0	0.0			
% GRAVEL:	1	11	9			
% SAND:	17	29	32			
% FINES:	82	61	60			
CLASSIFICATION	SILT WITH SAND (ML)	SANDY SILT (ML)	SANDY SILT (ML)			

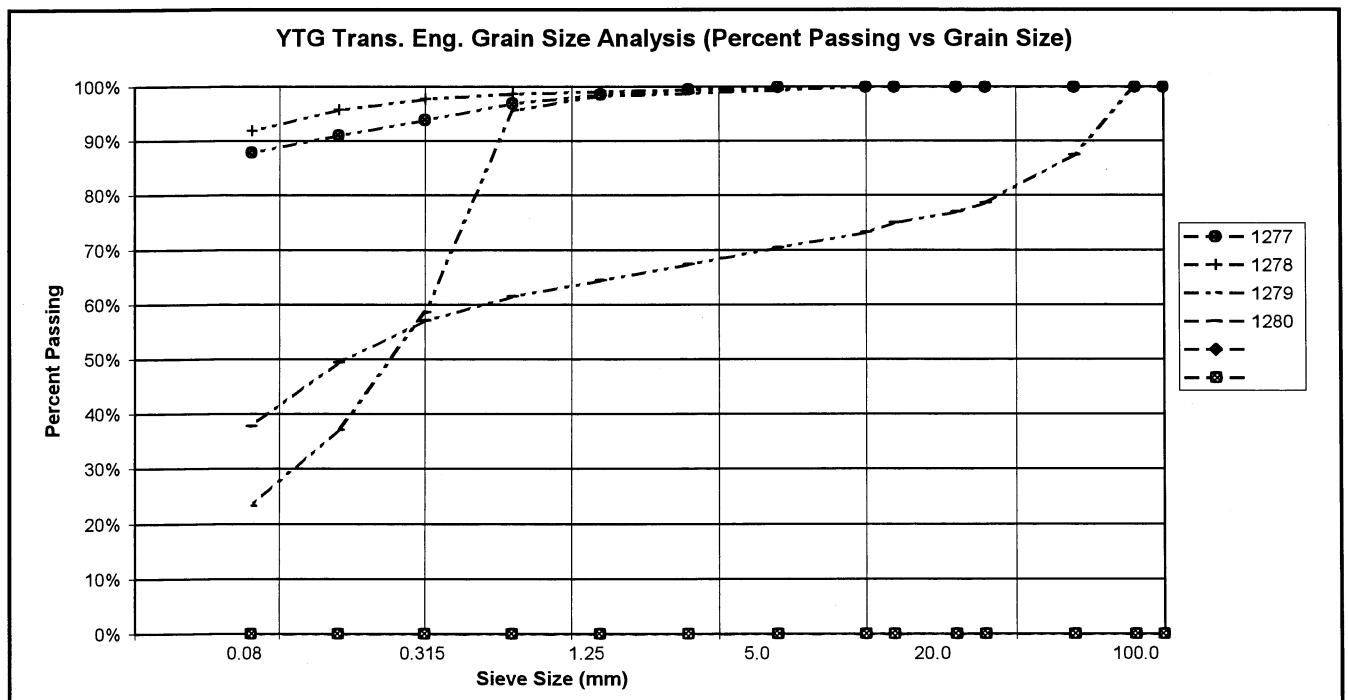


PROJECT NUMBER: 092-202101-0362-1
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 10
 PROJECT LOCATION: Km 1692.6-1729.6 A/H
 DRILL UNIT: MOBILE B40 L
 HOLE LOCATION: See Testhole Log Sheet
 LOGGED BY: G.C.

HOLE No.: 621-531

DATE COMP: 2002/09/13

FIELD NO:	1277	1278	1279	1280		
LAB NO:	2054	2055	2056	2057		
DEPTH:	0.75-1.0	1.6-2.0	2.6-3.0	3.6-4.0		
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%	87%		
25.0	100%	100%	100%	79%		
20.0	100%	100%	100%	77%		
12.5	100%	100%	100%	75%		
10.0	100%	100%	100%	73%		
5.0	100%	100%	99%	70%		
2.5	100%	99%	99%	67%		
1.25	99%	99%	98%	64%		
0.630	97%	99%	96%	62%		
0.315	94%	98%	59%	57%		
0.160	91%	96%	37%	49%		
0.080	88%	92%	23%	38%		
M.C.(%)	30%	19%	5%	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:	0	0	1	30		
% SAND:	12	8	76	33		
% FINES:	88	92	23	38		
CLASSIFICATION	SILT (ML)	SILT (ML)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)		

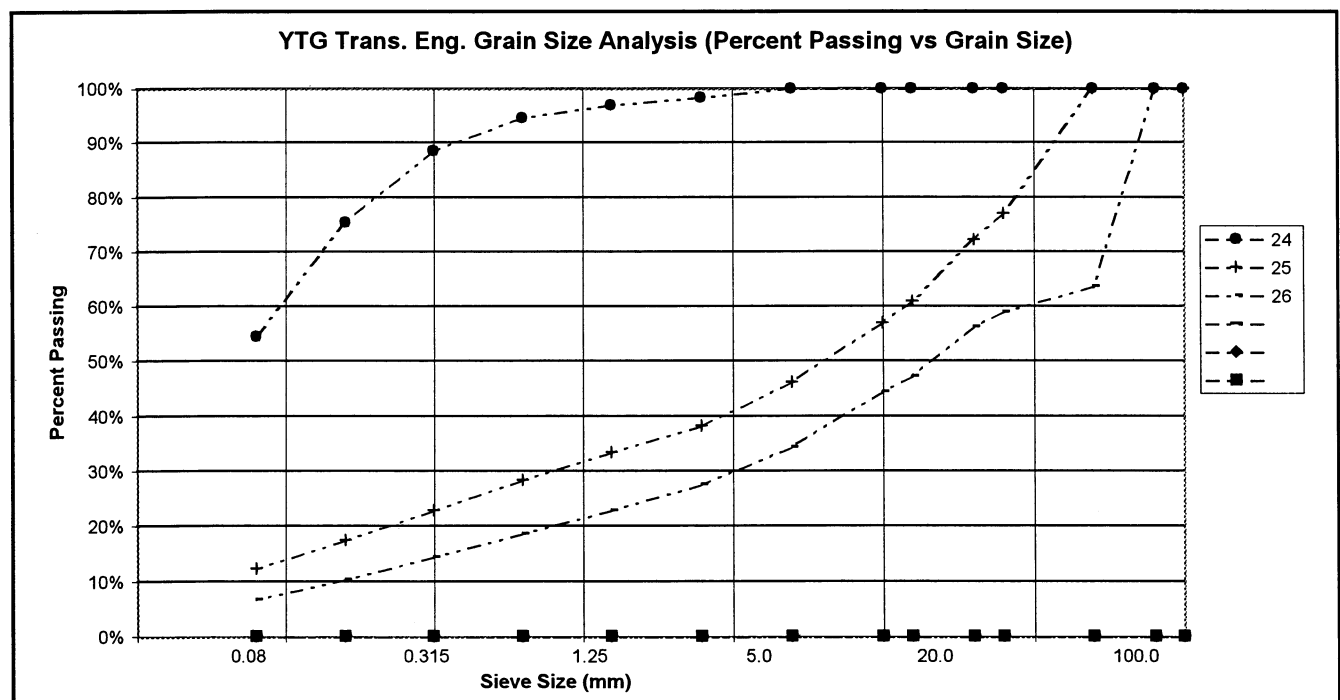


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1720+550 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-221

DATE COMP: 03/09/09

FIELD NO:	24	25	26			
LAB NO:	186	187	188			
DEPTH:	0.4-1.0	1.5-2.0	2.5-3.0			
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%	64%			
25.0	100%	77%	59%			
20.0	100%	72%	56%			
12.5	100%	61%	47%			
10.0	100%	57%	44%			
5.0	100%	46%	34%			
2.5	98%	38%	28%			
1.25	97%	33%	23%			
0.630	95%	28%	19%			
0.315	89%	23%	14%			
0.160	75%	17%	10%			
0.080	55%	12%	7%			
M.C.(%)	20%	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	54	66			
% SAND:	45	34	28			
% FINES:	55	12	7			
CLASSIFICATION	SANDY SILT (ML)	SILTY GRAVEL WITH SAND (GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

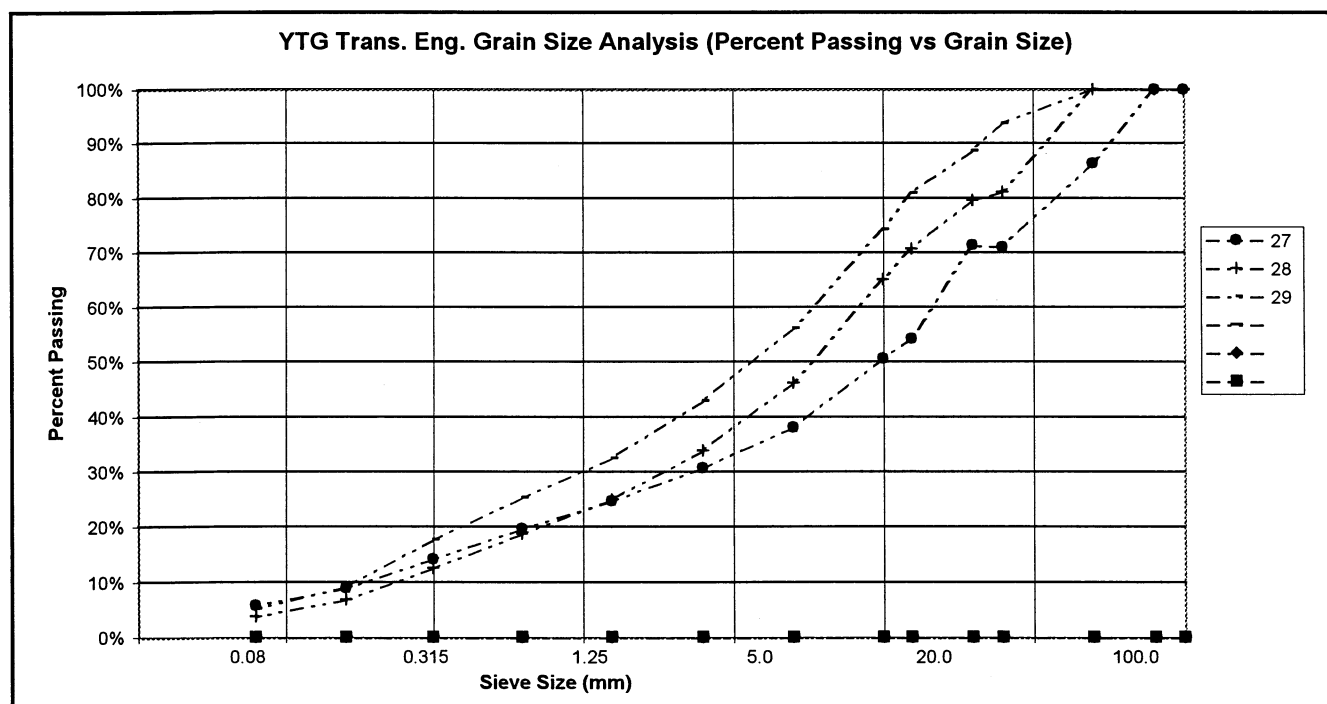


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1720+450 4m RT
 LOGGED BY: G.C.

HOLE No.: 648-222

DATE COMP: 03/09/09

FIELD NO:	27	28	29		
LAB NO:	189	190	191		
DEPTH:	0.5-1.0	1.5-2.0	2.5-3.0		
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	86%	100%	100%		
25.0	71%	81%	94%		
20.0	71%	80%	89%		
12.5	54%	71%	81%		
10.0	51%	65%	74%		
5.0	38%	46%	56%		
2.5	31%	34%	43%		
1.25	25%	25%	32%		
0.630	20%	19%	25%		
0.315	14%	13%	18%		
0.160	9%	7%	9%		
0.080	6%	4%	5%		
M.C.(%)	1%	1%	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:	62	54	44		
% SAND:	32	42	51		
% FINES:	6	4	5		
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)		

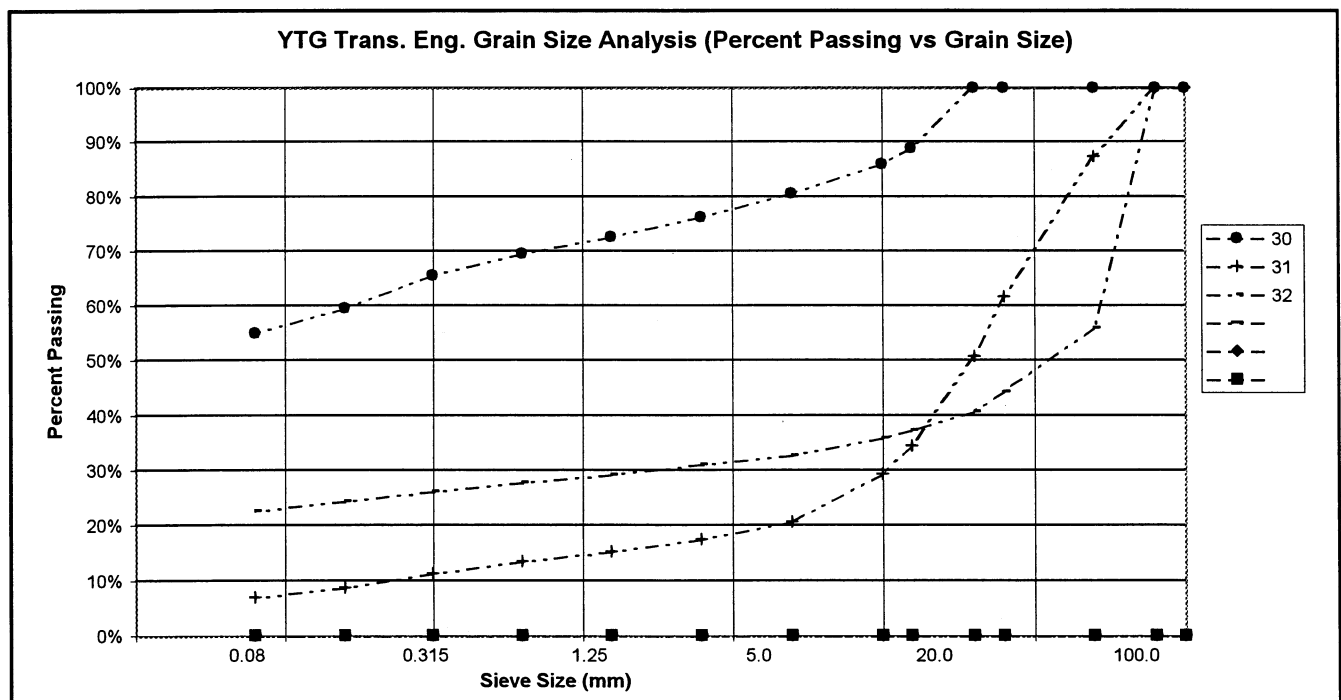


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1720+348 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-223

DATE COMP: 03/09/09

FIELD NO:	30	31	32			
LAB NO:	192	193	194			
DEPTH:	0.6-1.0	1.5-2.0	2.4-3.0			
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%	87%	56%			
25.0	100%	62%	44%			
20.0	100%	51%	41%			
12.5	89%	35%	37%			
10.0	86%	29%	36%			
5.0	80%	21%	33%			
2.5	76%	17%	31%			
1.25	73%	15%	29%			
0.630	69%	13%	28%			
0.315	65%	11%	26%			
0.160	60%	9%	24%			
0.080	55%	7%	23%			
M.C.(%)	17%	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:	20	79	67			
% SAND:	25	14	10			
% FINES:	55	7	23			
CLASSIFICATION	SANDY SILT WITH GRAVEL (ML)	POORLY GRADED GRAVEL WITH SILT (GP-GM)	SILTY GRAVEL (GM)			



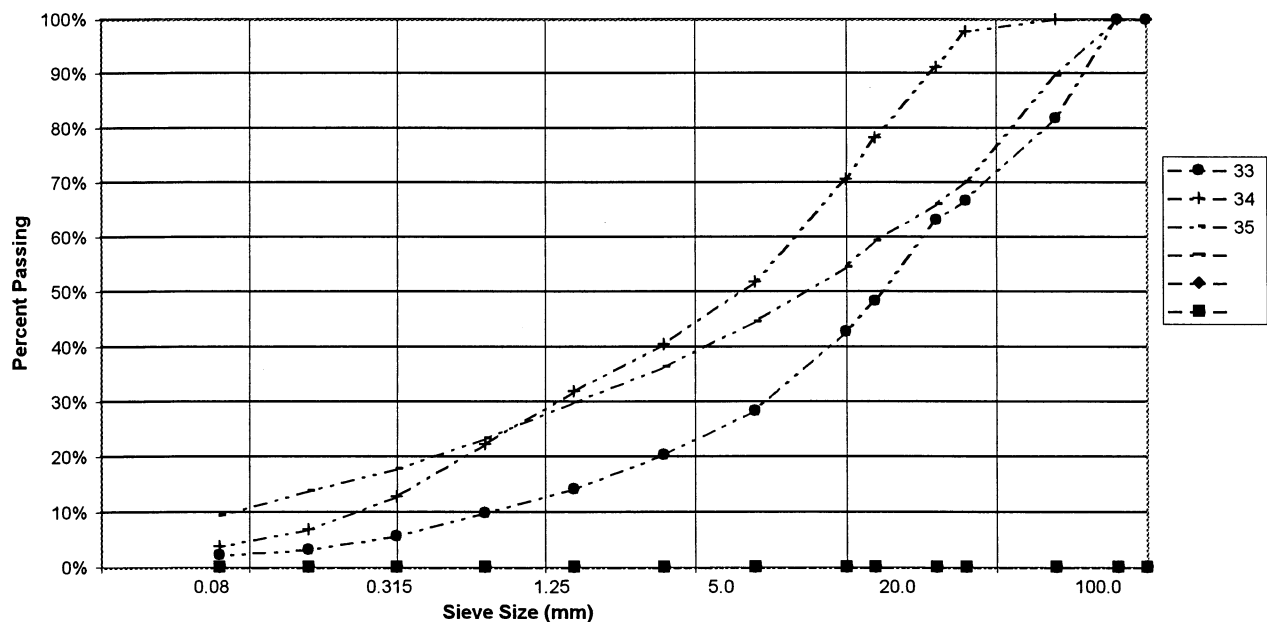
PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1720+250 CENTRELINE
 LOGGED BY: G.C.

HOLE No.: 648-224

DATE COMP: 03/09/09

FIELD NO:	33	34	35			
LAB NO:	195	196	197			
DEPTH:	0.5-1.0	1.5-2.0	2.5-3.0			
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	82%	100%	90%			
25.0	67%	98%	70%			
20.0	63%	91%	66%			
12.5	48%	78%	59%			
10.0	43%	71%	55%			
5.0	28%	52%	44%			
2.5	20%	40%	36%			
1.25	14%	32%	30%			
0.630	10%	22%	23%			
0.315	6%	13%	18%			
0.160	3%	7%	14%			
0.080	2%	4%	9%			
M.C.(%)	1%	2%	3%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX:	0.0	0.0	0.0			
% GRAVEL:	72	48	56			
% SAND:	26	48	35			
% FINES:	2	4	9			
CLASSIFICATION	WELL-GRADED GRAVEL WITH SAND (GW)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

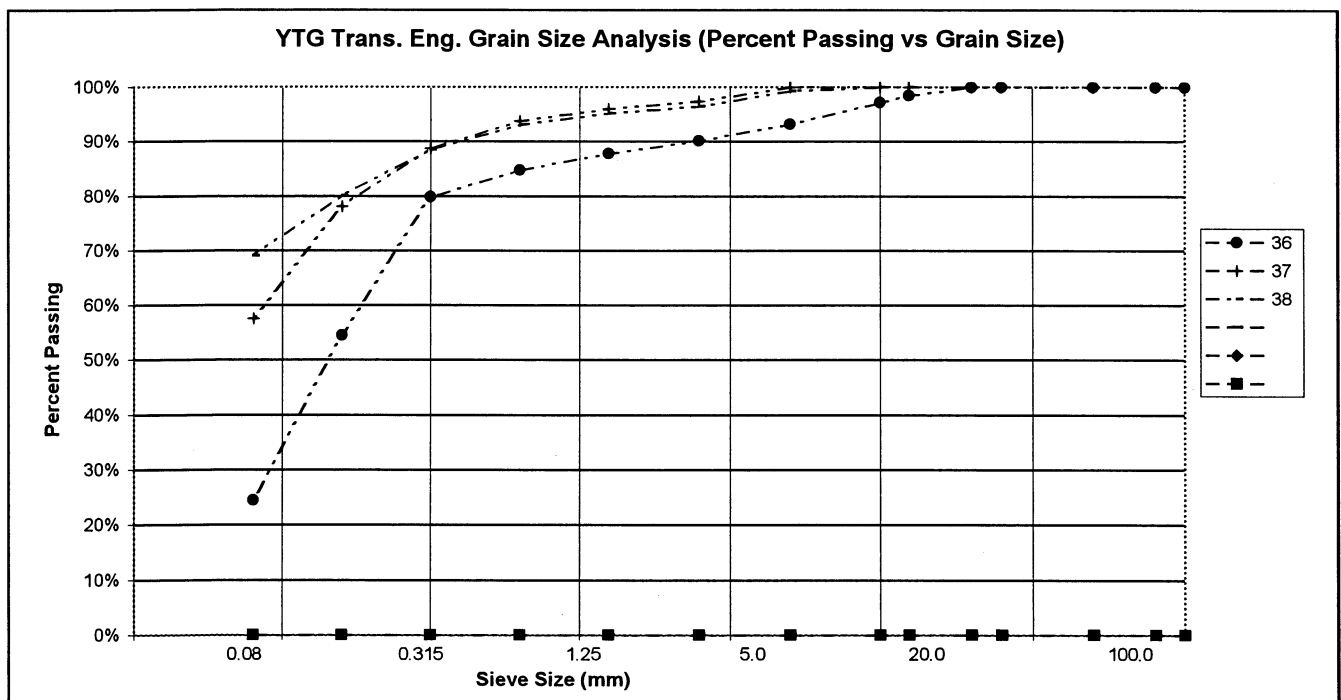


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1720+155 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-225

DATE COMP: 03/09/09

FIELD NO:	36	37	38			
LAB NO:	198	199	200			
DEPTH:	0.5-1.0	1.5-2.0	2.5-3.0			
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%	100%			
20.0	100%	100%	100%			
12.5	98%	100%	100%			
10.0	97%	100%	100%			
5.0	93%	100%	99%			
2.5	90%	97%	96%			
1.25	88%	96%	95%			
0.630	85%	94%	93%			
0.315	80%	89%	89%			
0.160	54%	78%	80%			
0.080	25%	58%	69%			
M.C.(%)	3%	7%	20%			
LIQUID LIMIT	0.0	0.0	0.0			
PLASTIC LIMIT	0.0	0.0	0.0			
PLASTIC INDEX	0.0	0.0	0.0			
% GRAVEL	7	0	1			
% SAND	69	42	30			
% FINES	25	58	69			
CLASSIFICATION	SILTY SAND (SM)	SANDY SILT (ML)	SANDY SILT (ML)			

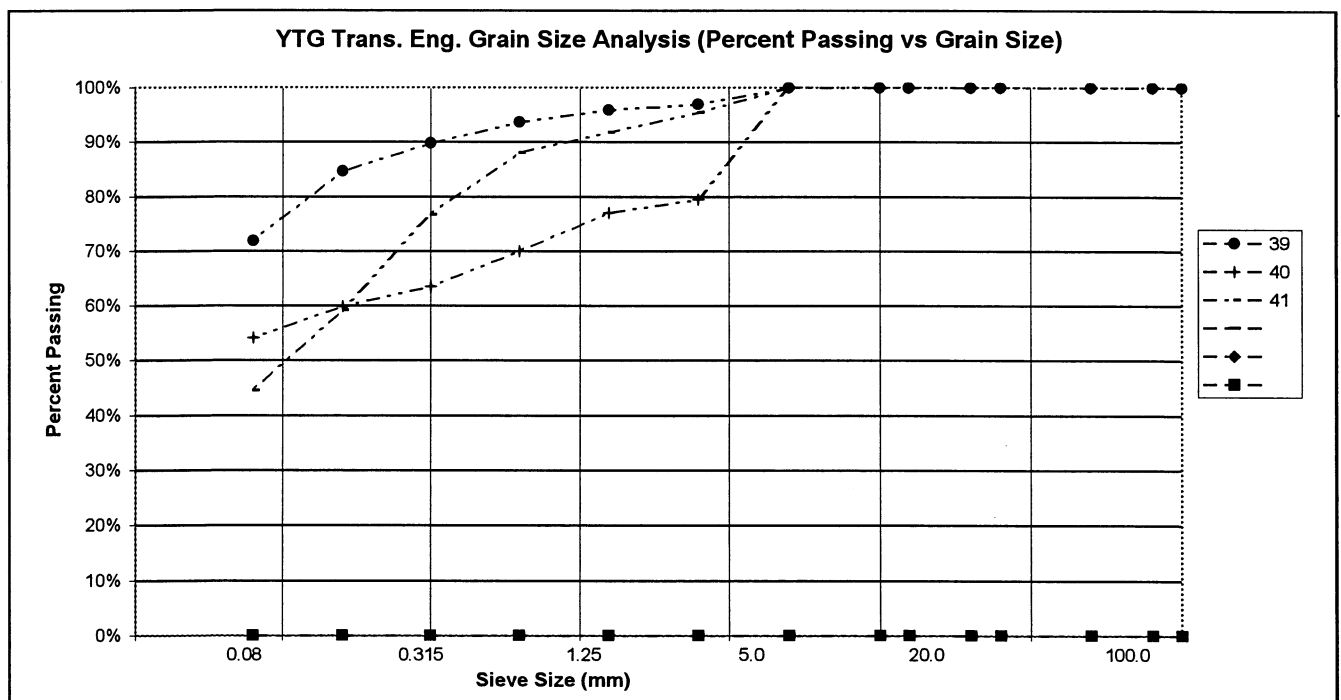


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1720+050 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-226

DATE COMP: 03/09/09

FIELD NO:	39	40	41			
LAB NO:	201	202	203			
DEPTH:	0.4-1.0	1.2-1.5	2.5-3.0			
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%	100%			
20.0	100%	100%	100%			
12.5	100%	100%	100%			
10.0	100%	100%	100%			
5.0	100%	100%	100%			
2.5	97%	80%	95%			
1.25	96%	77%	92%			
0.630	94%	70%	88%			
0.315	90%	64%	77%			
0.160	85%	60%	59%			
0.080	72%	54%	45%			
M.C.(%)	22%	24%	11%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX:	0.0	0.0	0.0			
% GRAVEL:	0	0	0			
% SAND:	28	46	55			
% FINES:	72	54	45			
CLASSIFICATION	SILT WITH SAND (ML)	SANDY SILT (ML)	SILTY SAND (SM)			

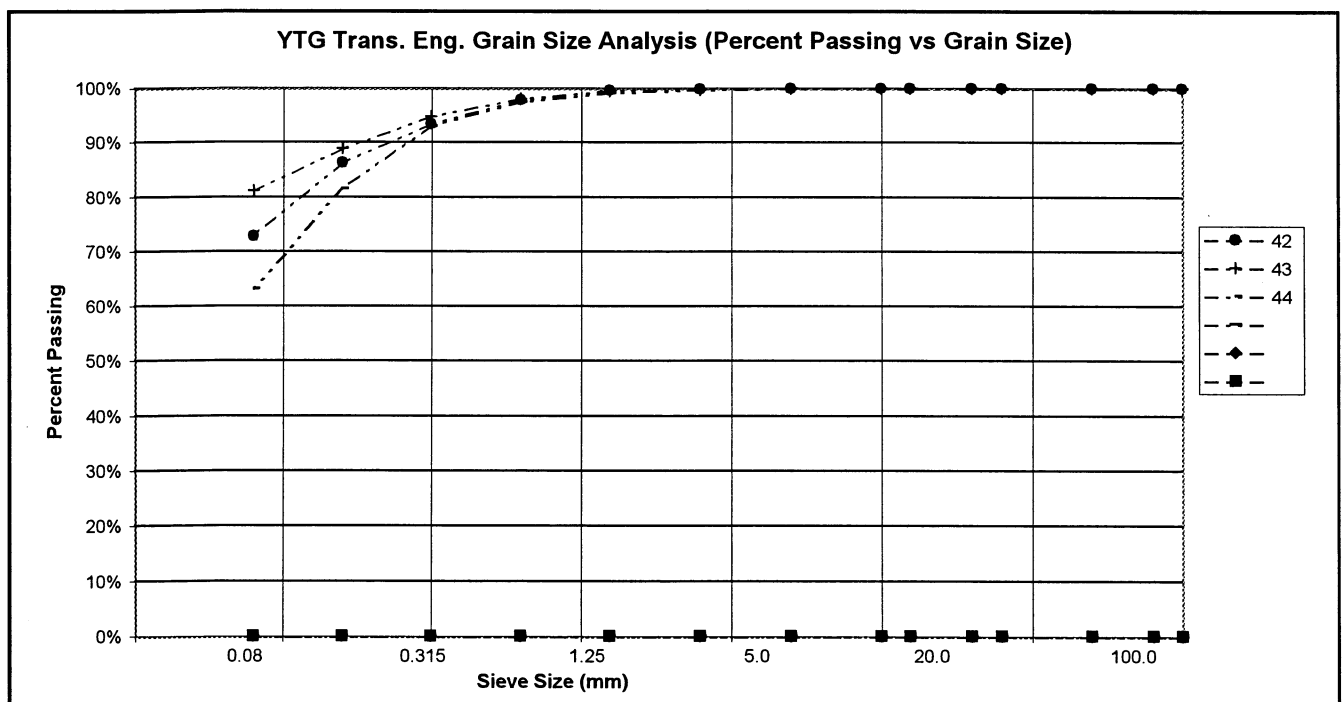


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1719+950 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-227

DATE COMP: 03/09/09

FIELD NO:	42	43	44			
LAB NO:	204	205	206			
DEPTH:	0.6-1.0	1.5-2.0	2.6-3.0			
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%	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%	99%			
0.630	98%	98%	98%			
0.315	93%	95%	93%			
0.160	86%	89%	81%			
0.080	73%	81%	63%			
M.C.(%)	6%	13%	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:	27	19	37			
% FINES:	73	81	63			
CLASSIFICATION	SILT WITH SAND (ML)	SILT WITH SAND (ML)	SANDY SILT (ML)			

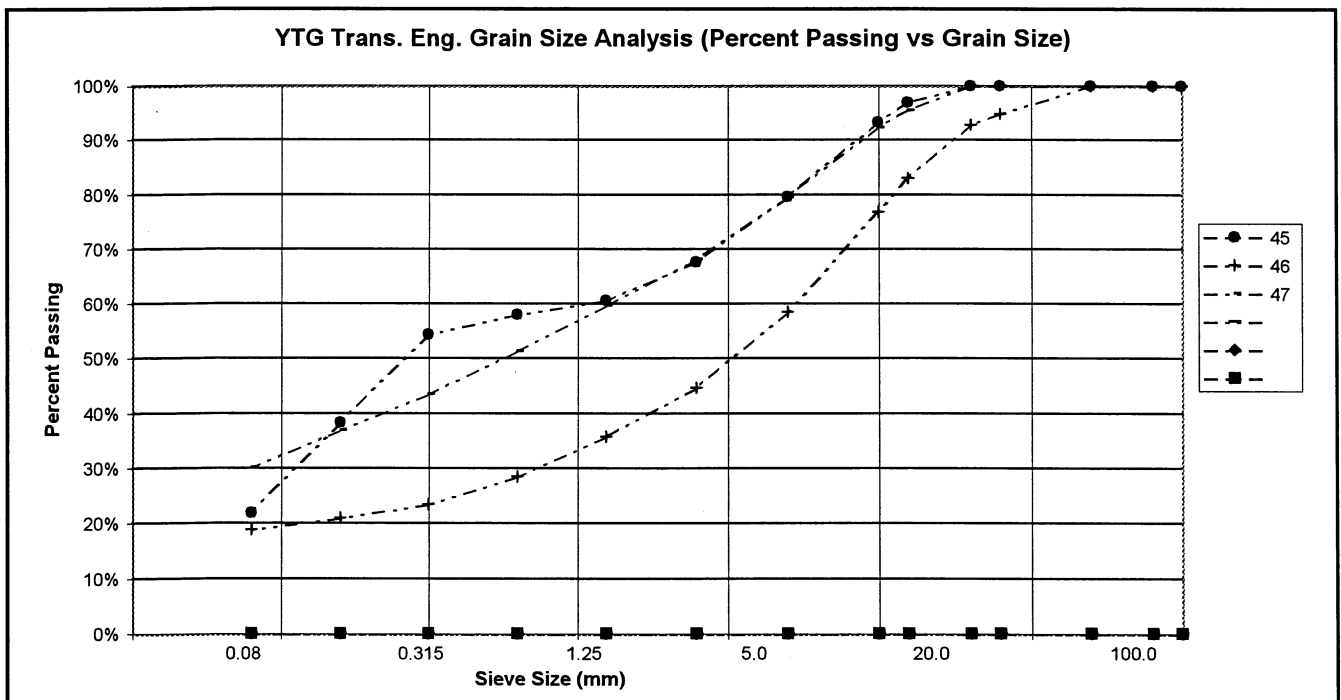


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1719+852 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-228

DATE COMP: 03/09/09

FIELD NO:	45	46	47			
LAB NO:	207	208	209			
DEPTH:	0.4-0.8	1.6-2.0	2.5-3.0			
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%	95%	100%			
20.0	100%	93%	100%			
12.5	97%	83%	96%			
10.0	93%	77%	92%			
5.0	80%	59%	80%			
2.5	68%	45%	68%			
1.25	61%	36%	60%			
0.630	58%	28%	51%			
0.315	54%	23%	43%			
0.160	38%	21%	37%			
0.080	22%	19%	30%			
M.C.(%)	3%	5%	6%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX:	0.0	0.0	0.0			
% GRAVEL:	20	41	20			
% SAND:	58	40	49			
% FINES:	22	19	30			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)			

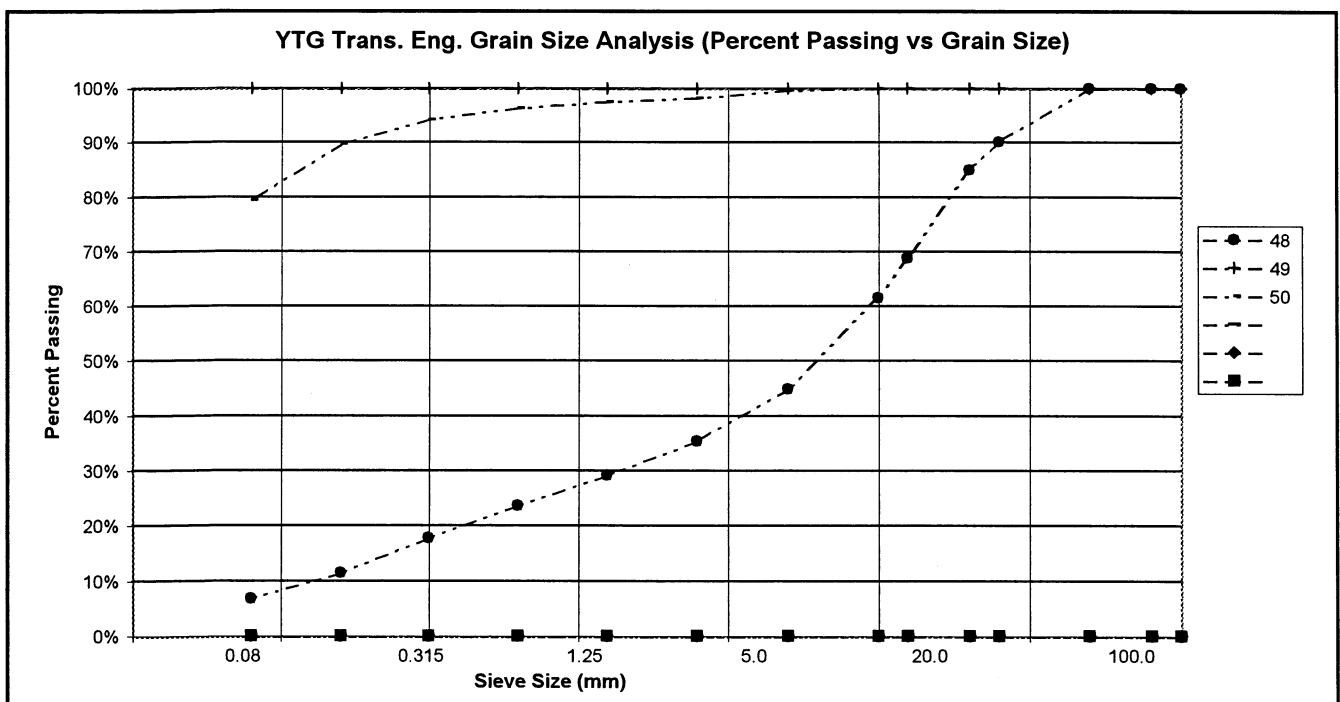


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1719+750 3m RT
 LOGGED BY: G.C.

HOLE No.: 648-229

DATE COMP: 03/09/09

FIELD NO:	48	49	50			
LAB NO:	210	LOST	212			
DEPTH:	0.5-1.0	1.8-2.2	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	90%	100%	100%			
20.0	85%	100%	100%			
12.5	69%	100%	100%			
10.0	62%	100%	100%			
5.0	45%	100%	100%			
2.5	35%	100%	98%			
1.25	29%	100%	97%			
0.630	24%	100%	96%			
0.315	18%	100%	94%			
0.160	12%	100%	90%			
0.080	7%	100%	79%			
M.C.(%)	3%	9%	24%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX:	0.0	0.0	0.0			
% GRAVEL:	55	0	0			
% SAND:	38	0	20			
% FINES:	7	100	79			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	~~GP-GM~~	SILT WITH SAND (ML)			



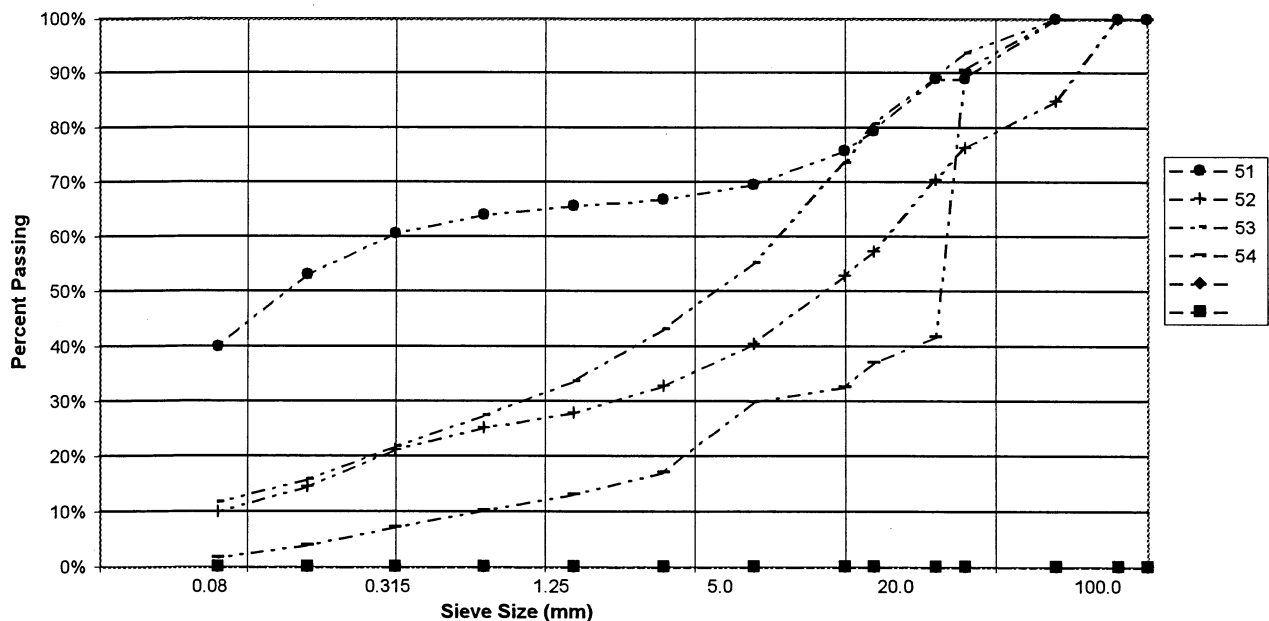
PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1719+648 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-230

DATE COMP: 03/09/10

FIELD NO:	51	52	53	54		
LAB NO:	213	214	215	216		
DEPTH:	0.4-0.9	1.2-1.6	1.6-2.0	2.4-3.0		
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%	85%	100%	100%		
25.0	89%	76%	94%	91%		
20.0	89%	70%	89%	42%		
12.5	79%	57%	81%	37%		
10.0	76%	53%	74%	33%		
5.0	70%	41%	55%	30%		
2.5	67%	33%	43%	17%		
1.25	66%	28%	34%	13%		
0.630	64%	25%	27%	10%		
0.315	61%	21%	22%	7%		
0.160	53%	15%	16%	4%		
0.080	40%	10%	12%	2%		
M.C.(%)	12%	3%	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:	30	59	45	70		
% SAND:	30	31	44	28		
% FINES:	40	10	12	2		
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED GRAVEL WITH SAND (GW)		

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

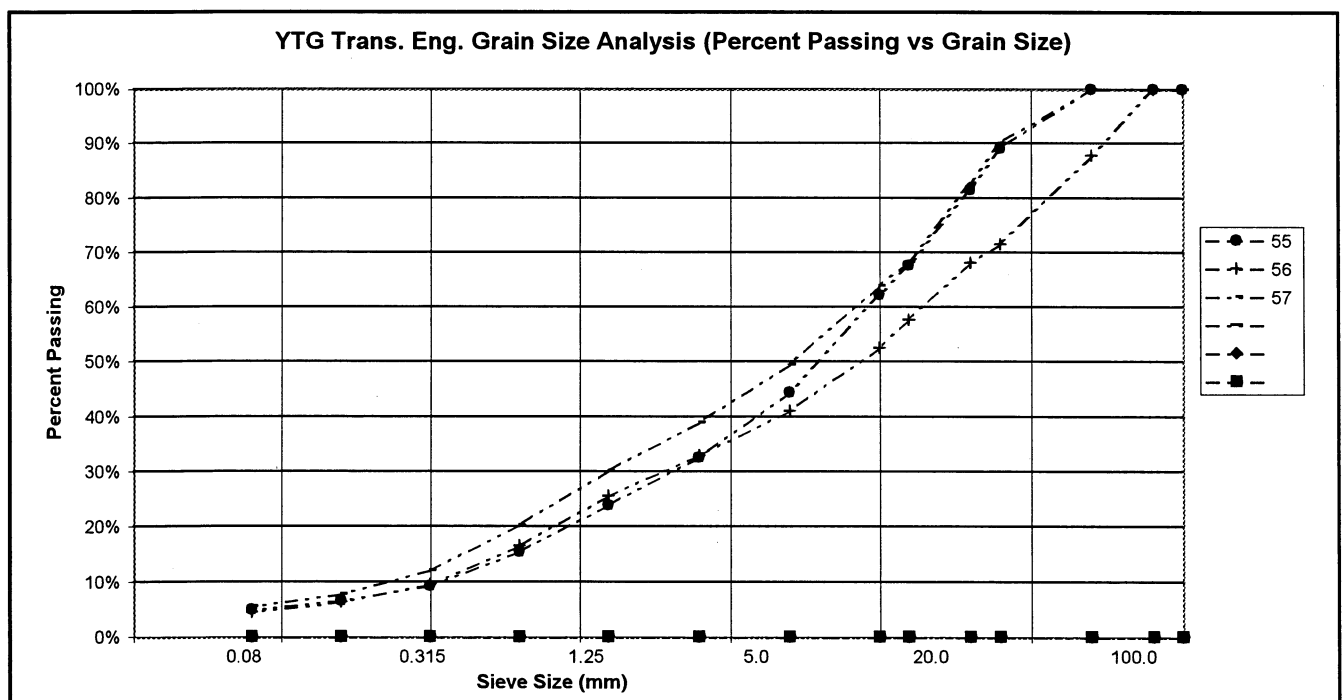


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1719+550 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-231

DATE COMP: 03/09/10

FIELD NO:	55	56	57			
LAB NO:	217	218	219			
DEPTH:	0.5-1.0	1.5-2.0	2.5-3.0			
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%	88%	100%			
25.0	89%	72%	90%			
20.0	81%	68%	83%			
12.5	68%	58%	68%			
10.0	62%	52%	64%			
5.0	44%	41%	49%			
2.5	33%	33%	39%			
1.25	24%	26%	30%			
0.630	15%	17%	20%			
0.315	9%	10%	12%			
0.160	7%	6%	8%			
0.080	5%	4%	5%			
M.C.(%)	2%	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:	56	59	51			
% SAND:	40	37	44			
% FINES:	5	4	5			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

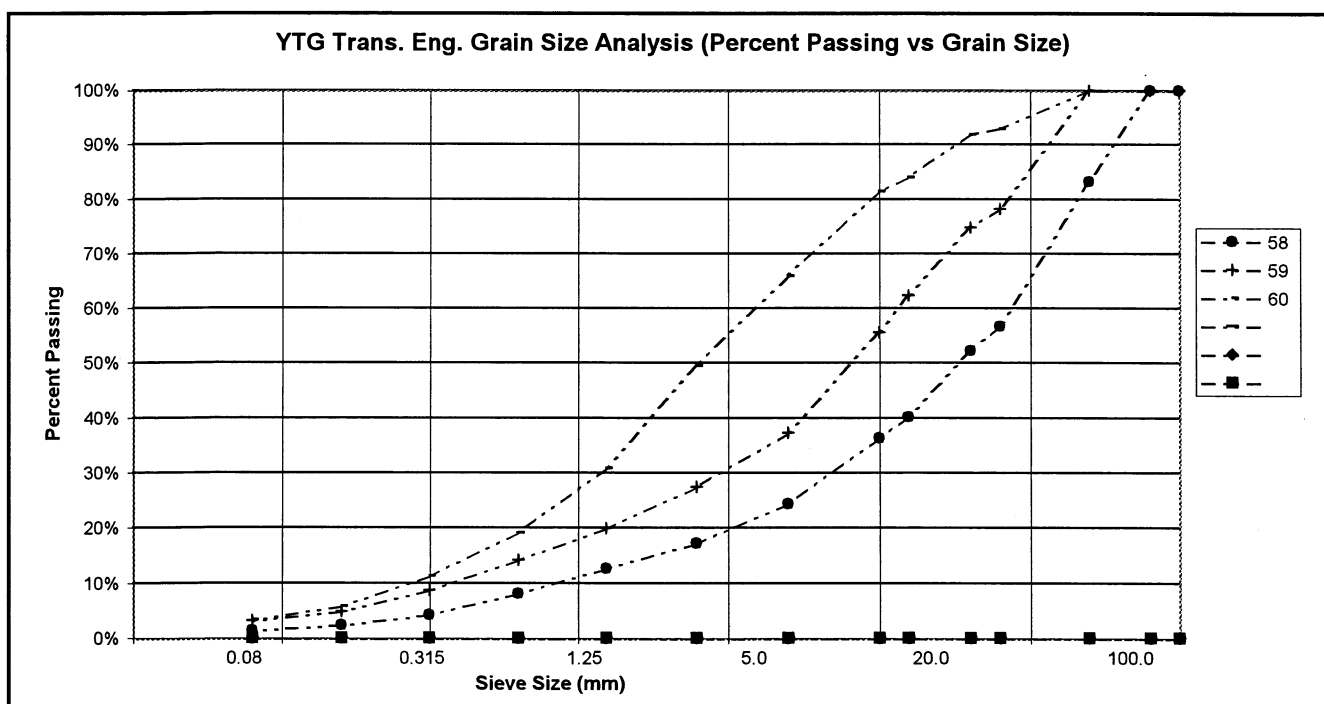


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1719+455 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-232

DATE COMP: 03/09/10

FIELD NO:	58	59	60			
LAB NO:	220	221	222			
DEPTH:	0.5-1.0	1.5-2.0	2.4-2.8			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	83%	100%	100%			
25.0	57%	78%	93%			
20.0	52%	75%	92%			
12.5	40%	62%	84%			
10.0	36%	56%	81%			
5.0	24%	37%	66%			
2.5	17%	27%	49%			
1.25	13%	20%	31%			
0.630	8%	14%	19%			
0.315	4%	9%	11%			
0.160	2%	5%	6%			
0.080	1%	3%	3%			
M.C.(%)	1%	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:	76	63	34			
% SAND:	23	34	63			
% FINES:	1	3	3			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH GRAVEL (SW)			

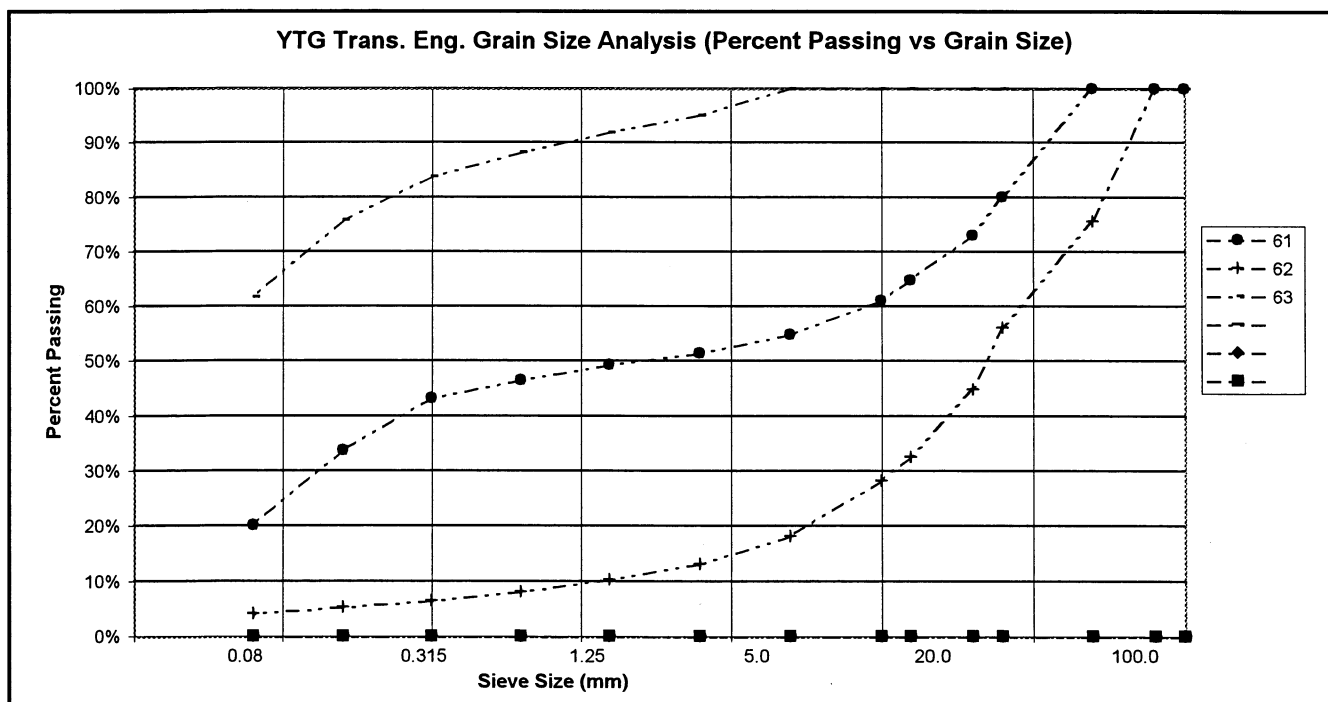


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1719+355 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-233

DATE COMP: 03/09/10

FIELD NO:	61	62	63			
LAB NO:	223	234	235			
DEPTH:	0.2-0.4	0.8-1.2	2.2-2.6			
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%	76%	100%			
25.0	80%	56%	100%			
20.0	73%	45%	100%			
12.5	65%	33%	100%			
10.0	61%	28%	100%			
5.0	55%	18%	100%			
2.5	51%	13%	95%			
1.25	49%	10%	92%			
0.630	47%	8%	88%			
0.315	43%	6%	84%			
0.160	34%	5%	76%			
0.080	20%	4%	62%			
M.C.(%)	11%	2%	22%			
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	82	0			
% SAND:	35	14	38			
% FINES:	20	4	62			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	WELL-GRADED GRAVEL (GW)	SANDY SILT (ML)			

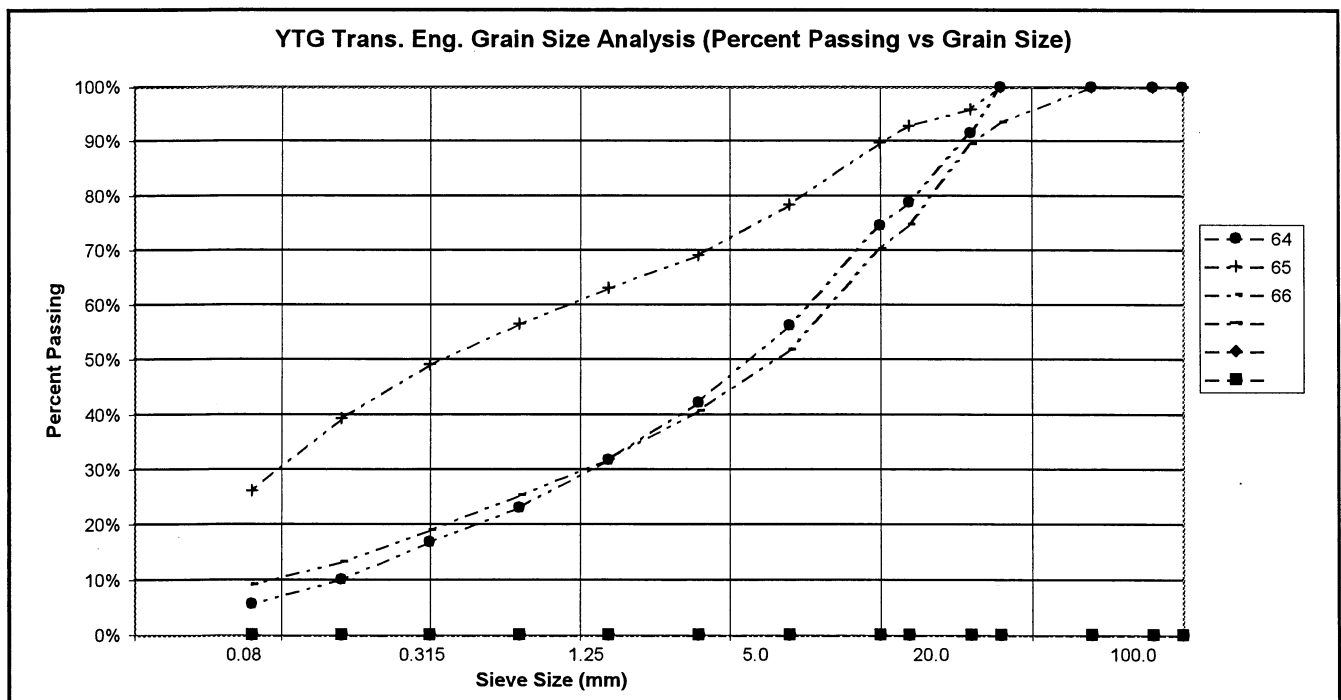


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1719+250 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-234

DATE COMP: 03/09/10

FIELD NO:	64	65	66			
LAB NO:	226	227	228			
DEPTH:	0.2-0.6	1.0-1.4	2.4-3.0			
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%	94%			
20.0	92%	96%	89%			
12.5	79%	93%	75%			
10.0	75%	90%	70%			
5.0	56%	78%	52%			
2.5	42%	69%	41%			
1.25	32%	63%	32%			
0.630	23%	57%	25%			
0.315	17%	49%	19%			
0.160	10%	39%	13%			
0.080	6%	26%	9%			
M.C.(%)	2%	6%	11%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX:	0.0	0.0	0.0			
% GRAVEL:	44	22	48			
% SAND:	51	52	43			
% FINES:	6	26	9			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

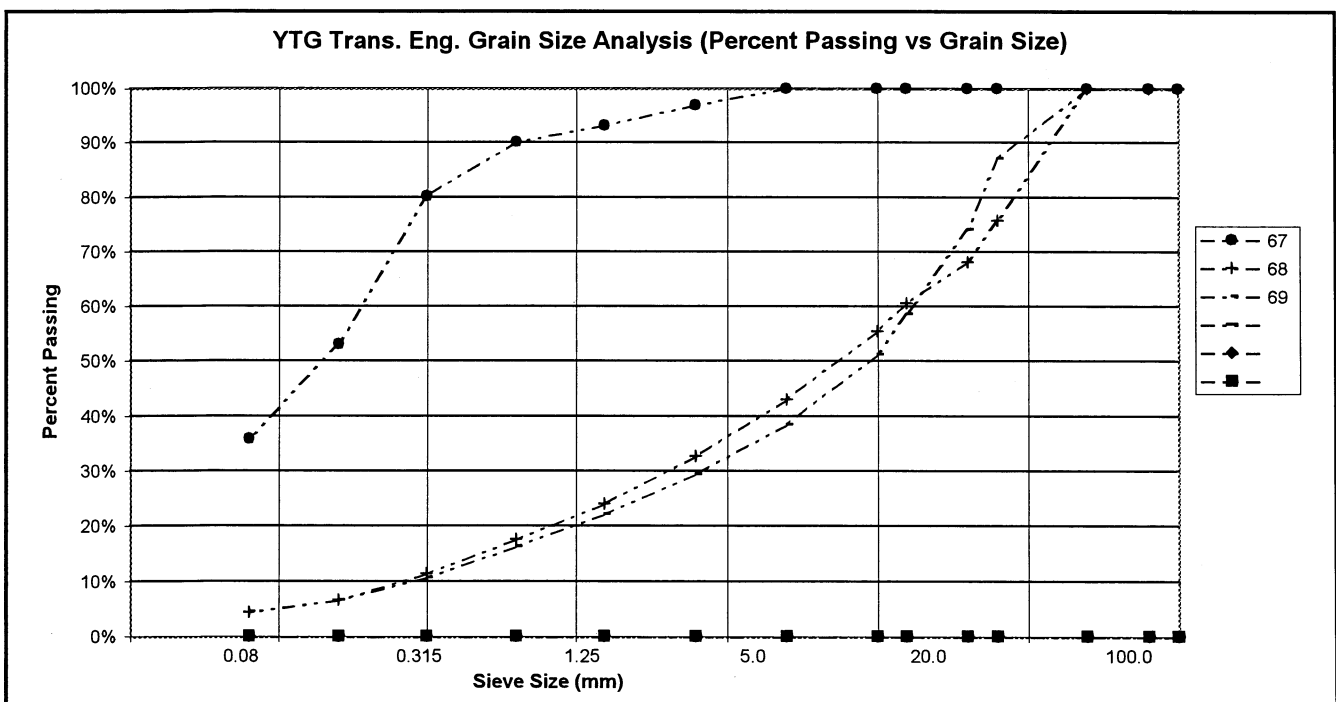


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1719+145 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-235

DATE COMP: 03/09/10

FIELD NO:	67	68	69			
LAB NO:	229	230	231			
DEPTH:	0.6-1.0	1.6-2.0	2.5-3.0			
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%	76%	87%			
20.0	100%	68%	74%			
12.5	100%	61%	59%			
10.0	100%	55%	51%			
5.0	100%	43%	38%			
2.5	97%	33%	29%			
1.25	93%	24%	22%			
0.630	90%	18%	16%			
0.315	80%	11%	11%			
0.160	53%	7%	7%			
0.080	36%	4%	4%			
M.C.(%)	11%	1%	1%			
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	57	62			
% SAND:	64	39	34			
% FINES:	36	4	4			
CLASSIFICATION	SILTY SAND (SM)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED GRAVEL WITH SAND (GW)			

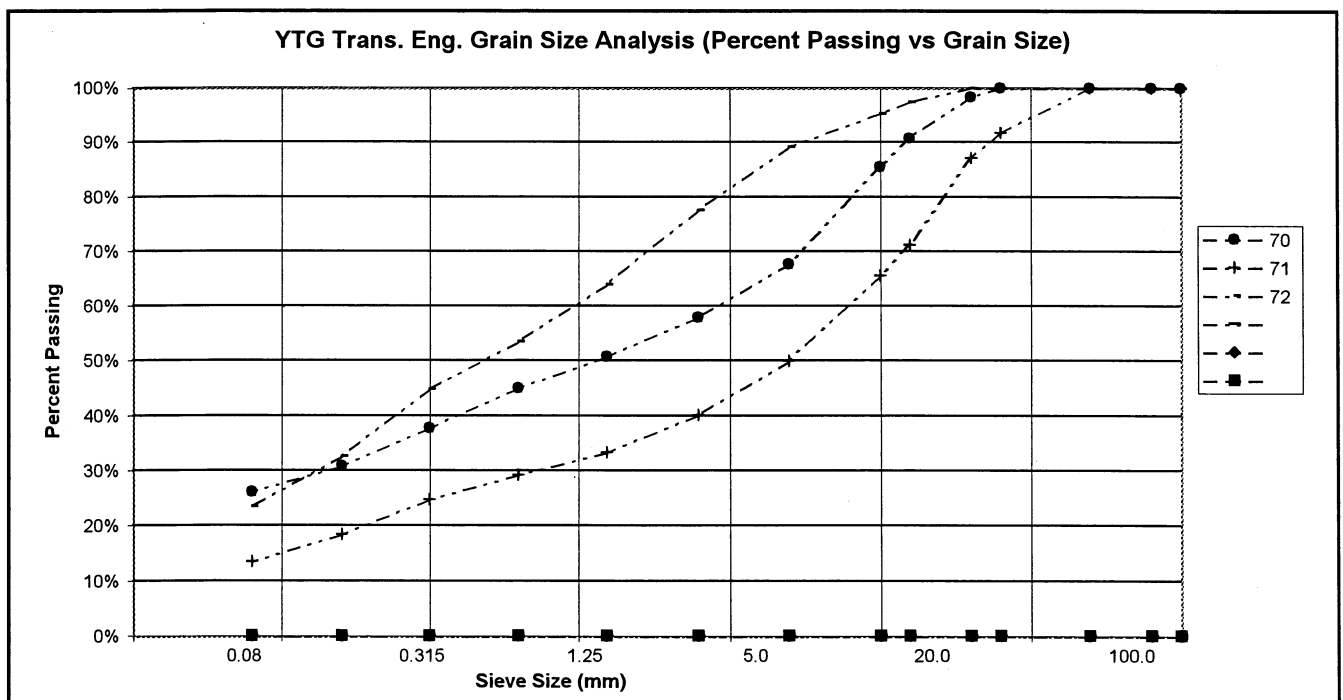


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1719+052 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-236

DATE COMP: 03/09/10

FIELD NO:	70	71	72			
LAB NO:	232	233	234			
DEPTH:	0.6-1.0	1.6-2.0	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%	92%	100%			
20.0	98%	87%	100%			
12.5	91%	71%	97%			
10.0	85%	66%	95%			
5.0	68%	50%	89%			
2.5	58%	40%	78%			
1.25	51%	33%	64%			
0.630	45%	29%	53%			
0.315	38%	25%	45%			
0.160	31%	18%	33%			
0.080	26%	14%	23%			
M.C.(%):	8%	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:	32	50	11			
% SAND:	41	36	66			
% FINES:	26	14	23			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND (SM)			

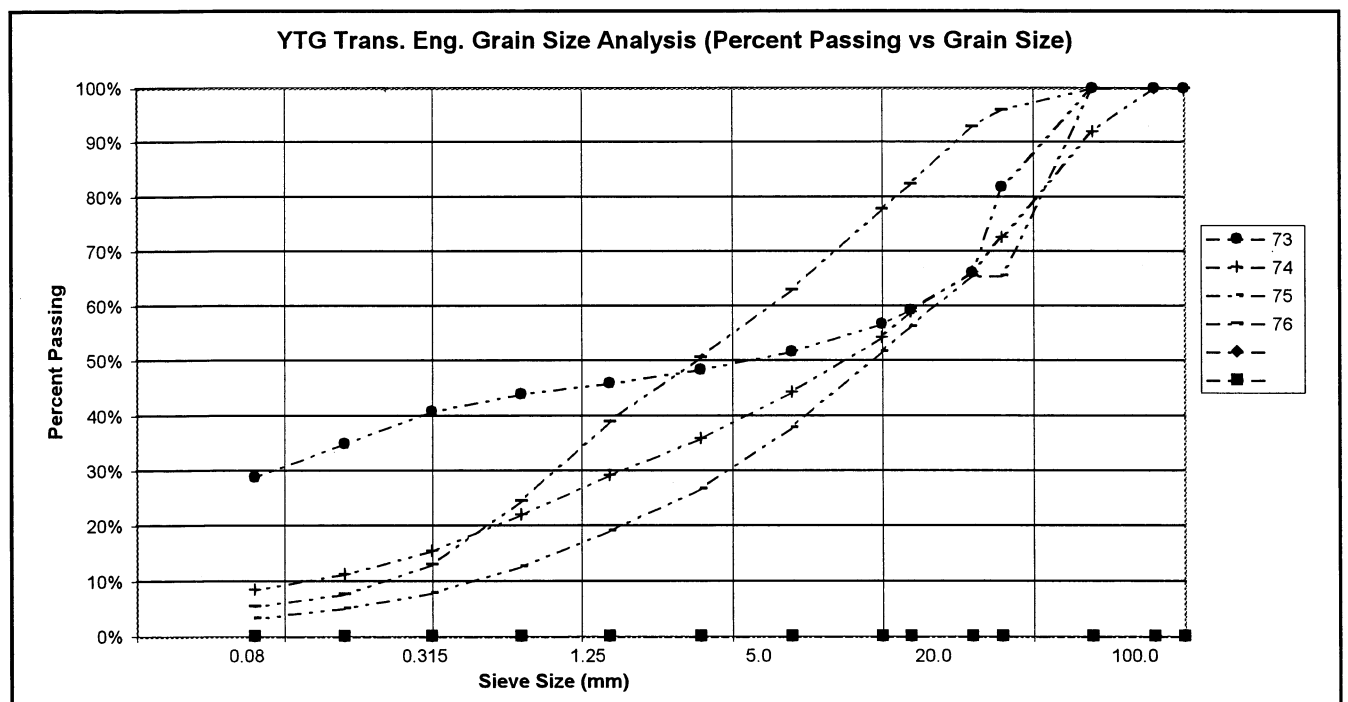


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1718+960 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-237

DATE COMP: 03/09/10

FIELD NO:	73	74	75	76		
LAB NO:	235	236	237	238		
DEPTH:	0.2-0.4	1.0-1.4	2.0-2.5	2.5-3.0		
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%	92%	100%	100%		
25.0	82%	73%	65%	96%		
20.0	66%	66%	65%	93%		
12.5	59%	59%	56%	82%		
10.0	57%	54%	52%	78%		
5.0	52%	44%	38%	63%		
2.5	48%	36%	27%	51%		
1.25	46%	29%	19%	39%		
0.630	44%	22%	13%	25%		
0.315	41%	15%	8%	13%		
0.160	35%	11%	5%	8%		
0.080	29%	8%	3%	5%		
M.C.(%)	8%	3%	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:	48	56	62	37		
% SAND:	23	36	35	58		
% FINES:	29	8	3	5		
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)		

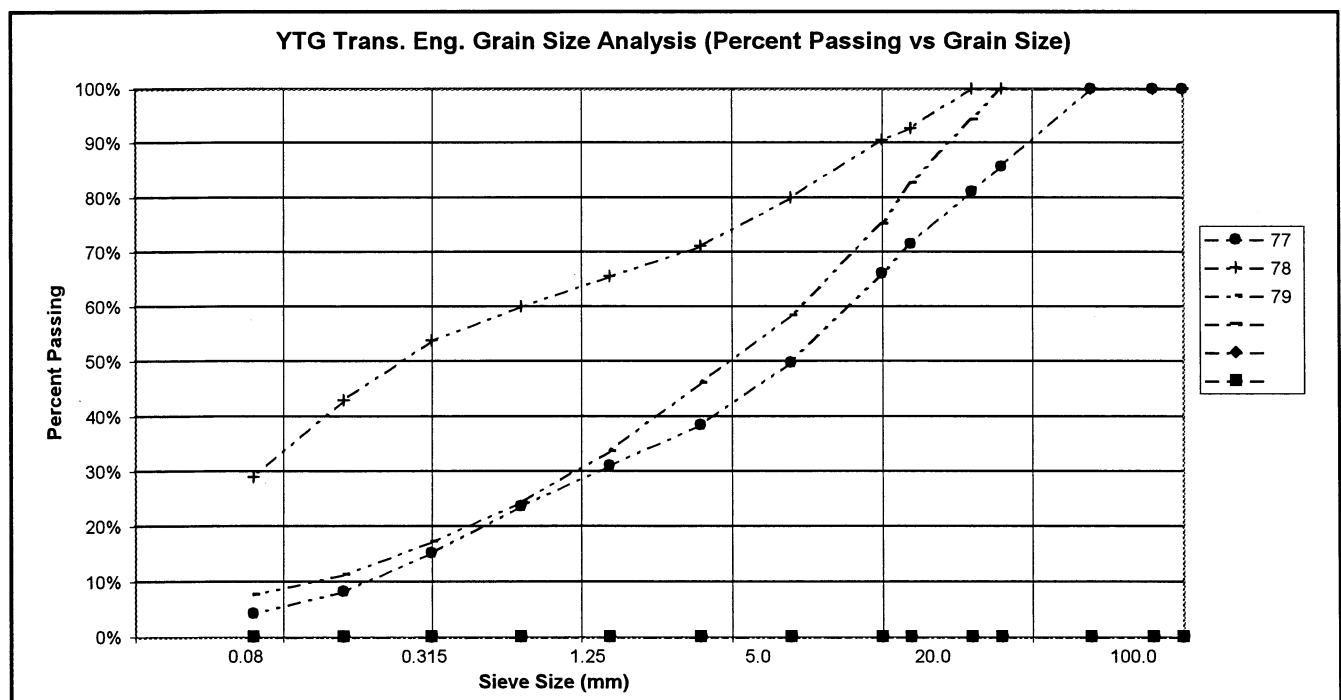


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1718+835 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-238

DATE COMP: 03/09/10

FIELD NO:	77	78	79			
LAB NO:	239	240	241			
DEPTH:	0.5-1.0	1.6-2.0	2.6-3.0			
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	86%	100%	100%			
20.0	81%	100%	94%			
12.5	71%	93%	83%			
10.0	66%	91%	75%			
5.0	50%	80%	58%			
2.5	39%	71%	46%			
1.25	31%	66%	34%			
0.630	24%	60%	24%			
0.315	15%	54%	17%			
0.160	8%	43%	11%			
0.080	4%	29%	8%			
M.C.(%)	1%	6%	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:	50	20	42			
% SAND:	46	51	51			
% FINES:	4	29	8			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)			

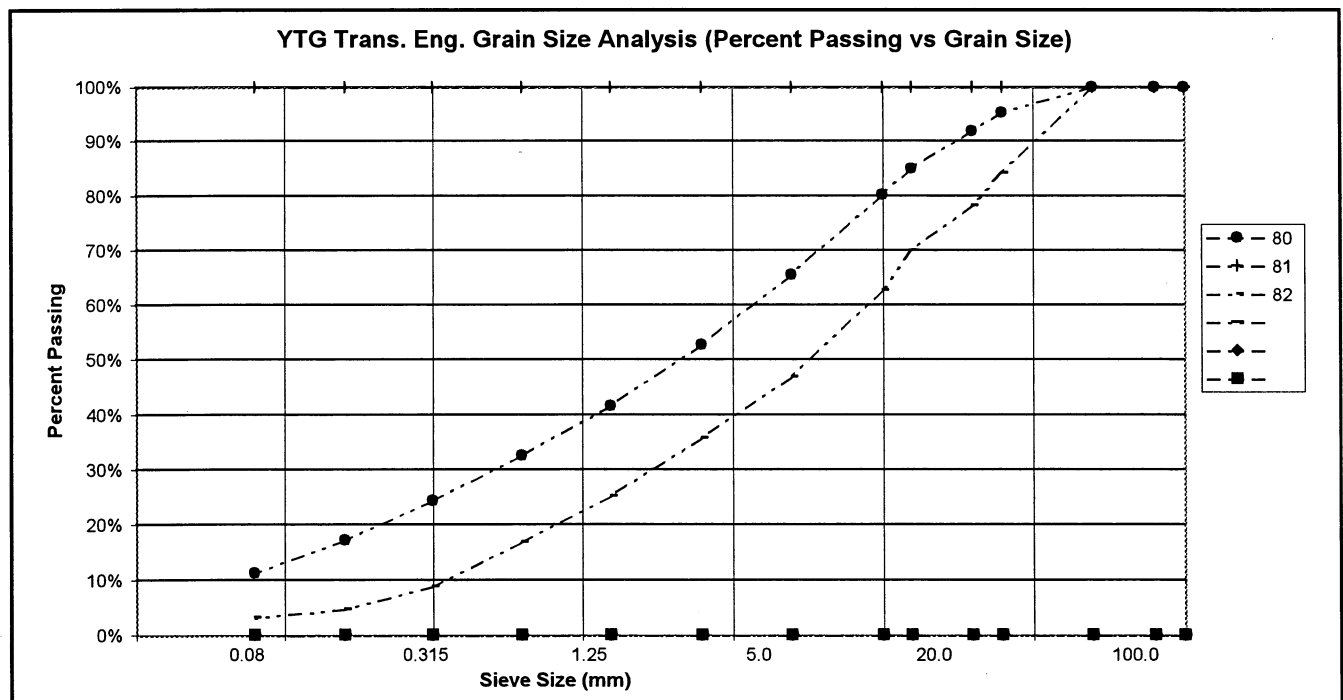


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1718+755 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-239

DATE COMP: 03/09/10

FIELD NO:	80	81	82			
LAB NO:	242	Lost	244			
DEPTH:	0.5-1.0	1.6-2.0	2.6-3.0			
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	95%	100%	84%			
20.0	92%	100%	78%			
12.5	85%	100%	70%			
10.0	80%	100%	63%			
5.0	66%	100%	47%			
2.5	53%	100%	36%			
1.25	42%	100%	25%			
0.630	33%	100%	17%			
0.315	24%	100%	9%			
0.160	17%	100%	5%			
0.080	11%	100%	3%			
M.C.(%)	4%	7%	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:	34	0	53			
% SAND:	54	0	44			
% FINES:	11	100	3			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	~~SILT (MH)~~	POORLY GRADED GRAVEL WITH SAND (GP)			

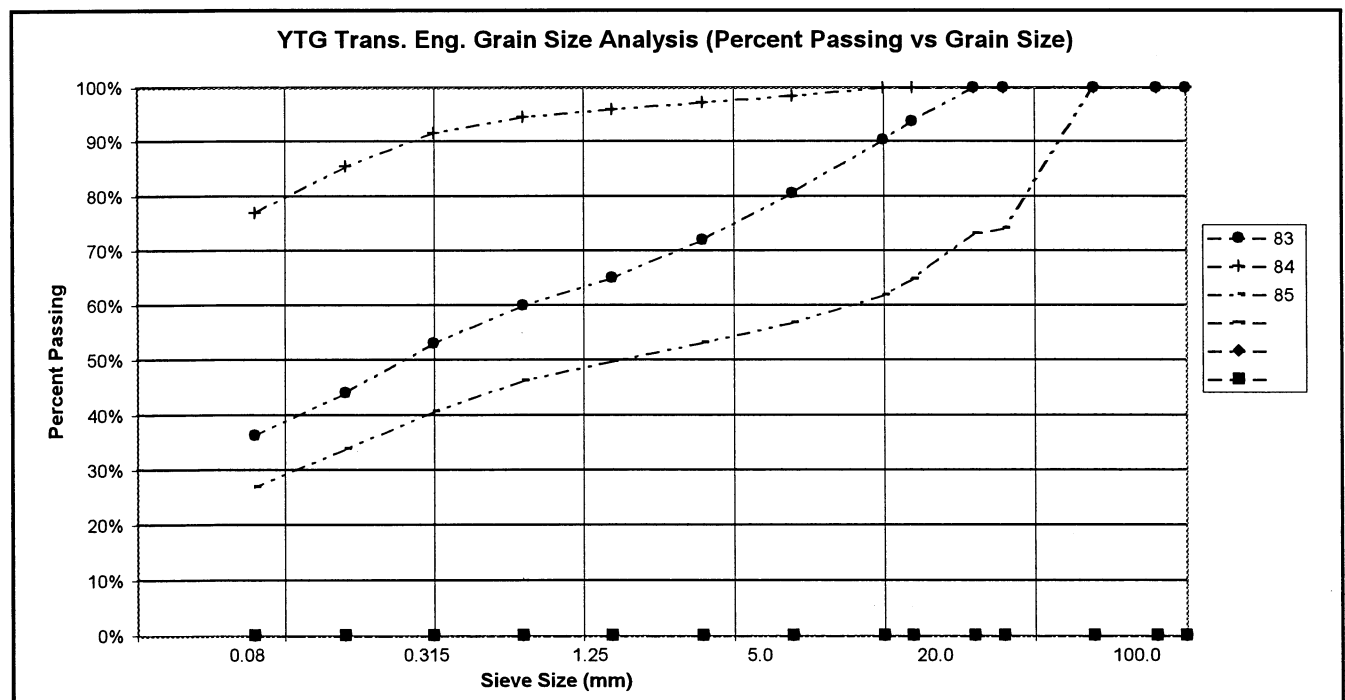


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1718+660 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-240

DATE COMP: 03/09/10

FIELD NO:	83	84	85			
LAB NO:	245	246	247			
DEPTH:	0.5-1.0	1.5-2.0	2.6-3.0			
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%	74%			
20.0	100%	100%	73%			
12.5	94%	100%	65%			
10.0	90%	100%	62%			
5.0	81%	98%	57%			
2.5	72%	97%	53%			
1.25	65%	96%	50%			
0.630	60%	95%	46%			
0.315	53%	92%	41%			
0.160	44%	85%	34%			
0.080	36%	77%	27%			
M.C.(%)	9%	22%	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:	19	2	43			
% SAND:	44	22	30			
% FINES:	36	77	27			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILT WITH SAND (ML)	SILTY GRAVEL WITH SAND (GM)			

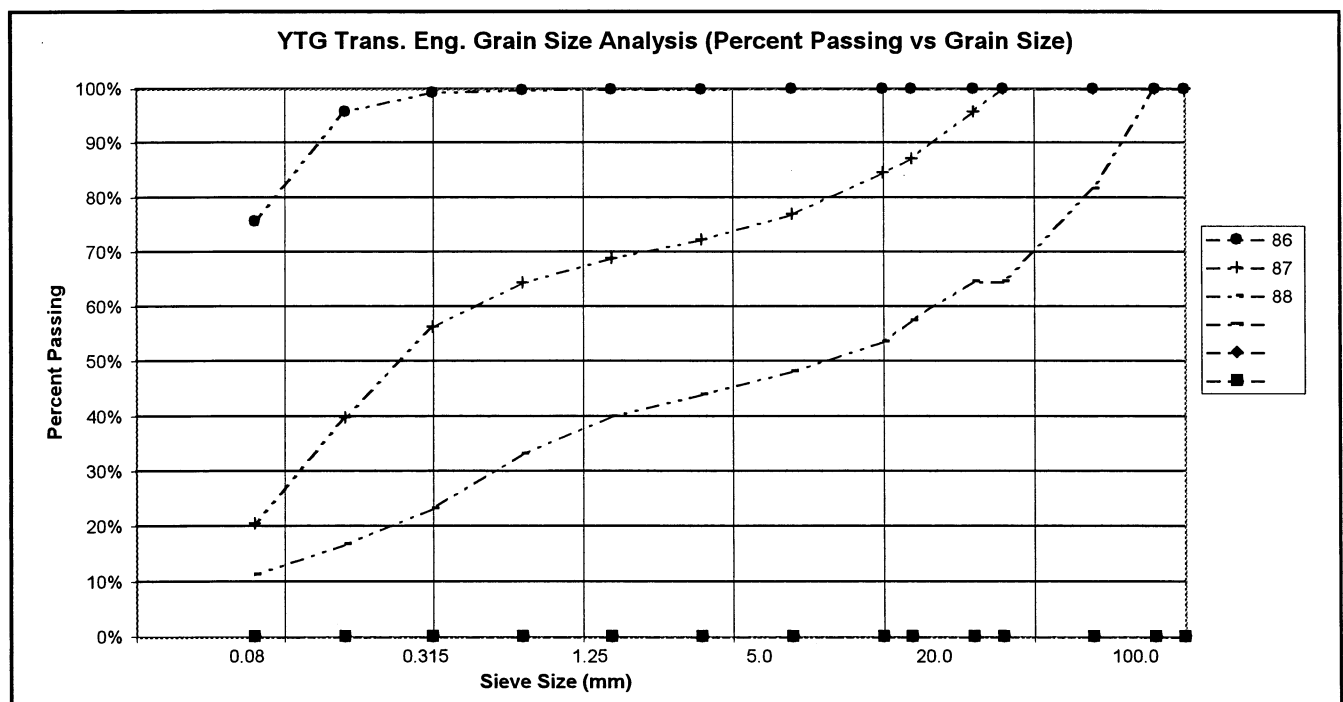


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1718+555 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-241

DATE COMP: 03/09/10

FIELD NO:	86	87	88			
LAB NO:	248	249	250			
DEPTH:	0.5-1.0	1.2-1.5	2.5-3.0			
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%	82%			
25.0	100%	100%	65%			
20.0	100%	96%	65%			
12.5	100%	87%	57%			
10.0	100%	85%	54%			
5.0	100%	77%	48%			
2.5	100%	72%	44%			
1.25	100%	69%	40%			
0.630	100%	64%	33%			
0.315	99%	56%	23%			
0.160	96%	40%	17%			
0.080	76%	20%	11%			
M.C.(%)	13%	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	23	52			
% SAND:	24	56	37			
% FINES:	76	20	11			
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

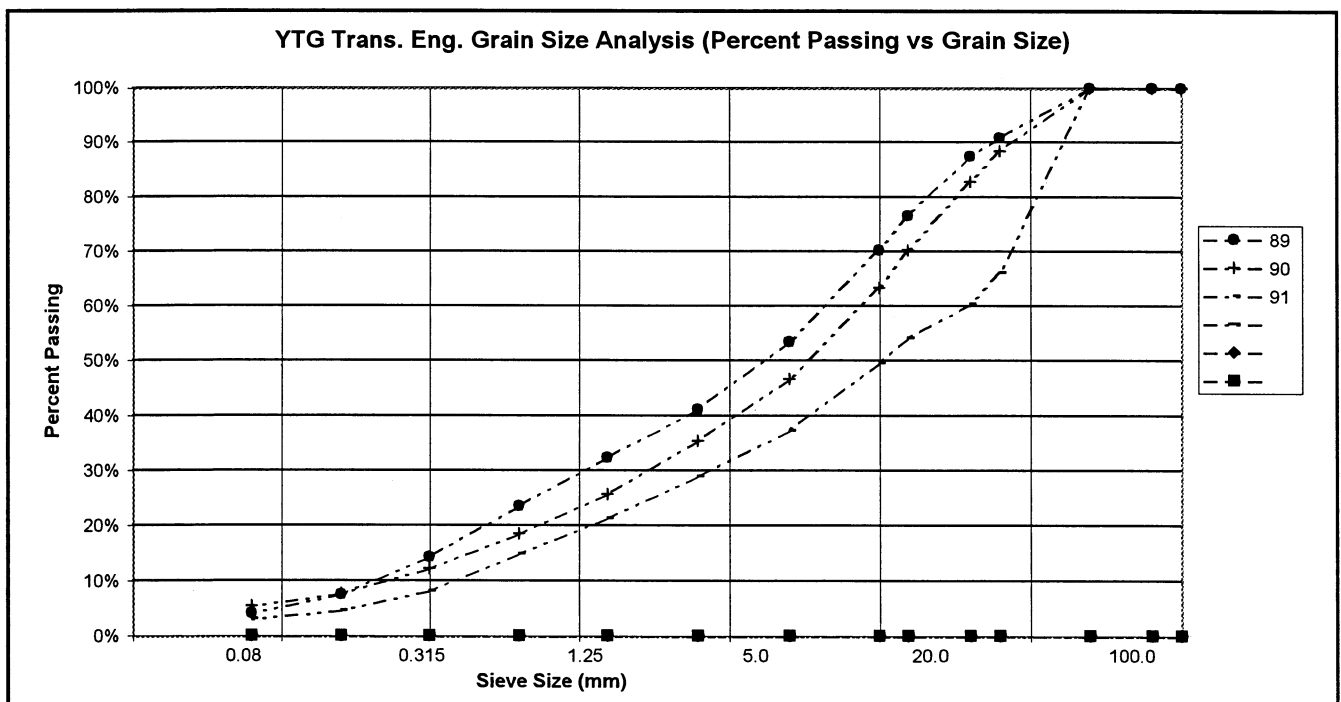


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1718+455 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-242

DATE COMP: 03/09/10

FIELD NO:	89	90	91			
LAB NO:	251	252	253			
DEPTH:	0.5-1.0	1.5-2.0	2.5-3.0			
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	91%	88%	66%			
20.0	87%	83%	60%			
12.5	77%	70%	54%			
10.0	70%	63%	50%			
5.0	53%	47%	37%			
2.5	41%	35%	29%			
1.25	32%	26%	21%			
0.630	24%	19%	15%			
0.315	14%	12%	8%			
0.160	7%	8%	5%			
0.080	4%	5%	3%			
M.C.(%)	2%	3%	2%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX:	0.0	0.0	0.0			
% GRAVEL:	47	53	63			
% SAND:	49	41	34			
% FINES:	4	5	3			
CLASSIFICATION	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)			

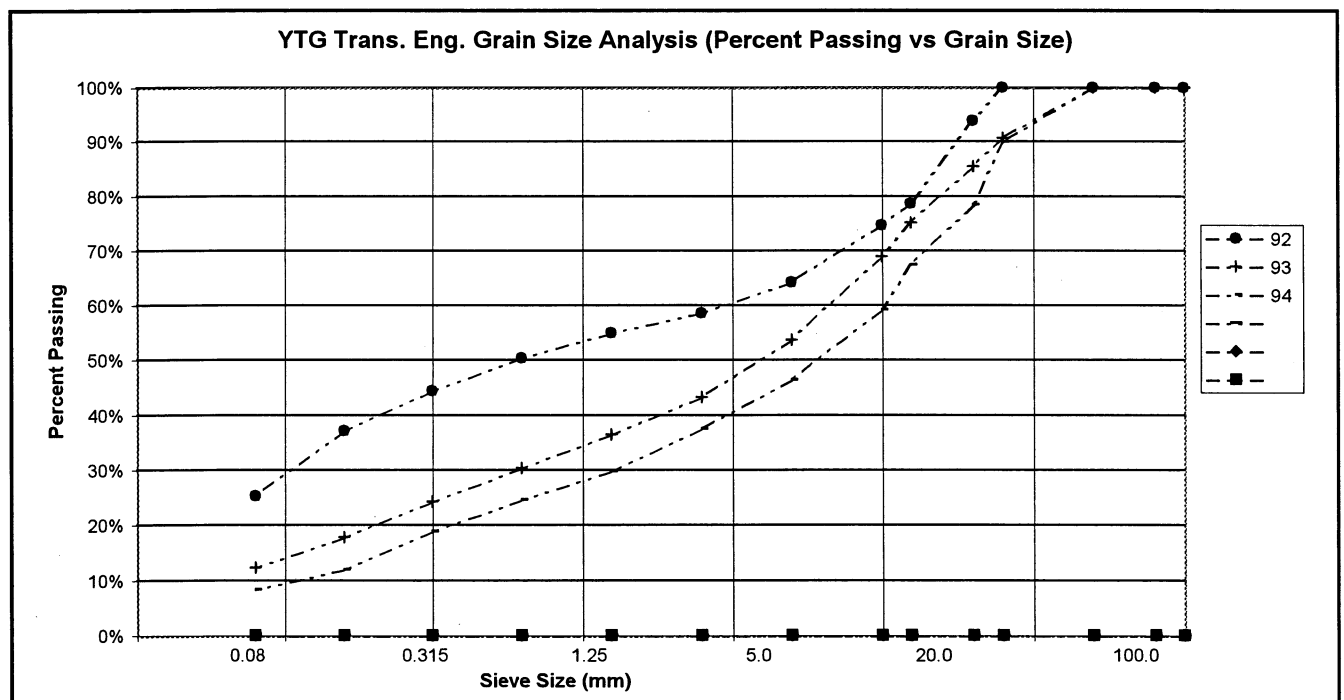


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1718+345 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-243

DATE COMP: 03/09/10

FIELD NO:	92	93	94			
LAB NO:	254	255	256			
DEPTH:	0.5-1.0	1.5-2.0	2.5-3.5			
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%	91%	90%			
20.0	94%	85%	78%			
12.5	79%	75%	67%			
10.0	75%	69%	59%			
5.0	64%	54%	46%			
2.5	59%	43%	37%			
1.25	55%	36%	30%			
0.630	50%	30%	25%			
0.315	44%	24%	19%			
0.160	37%	18%	12%			
0.080	25%	12%	8%			
M.C.(%)	6%	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:	36	46	54			
% SAND:	39	41	38			
% FINES:	25	12	8			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

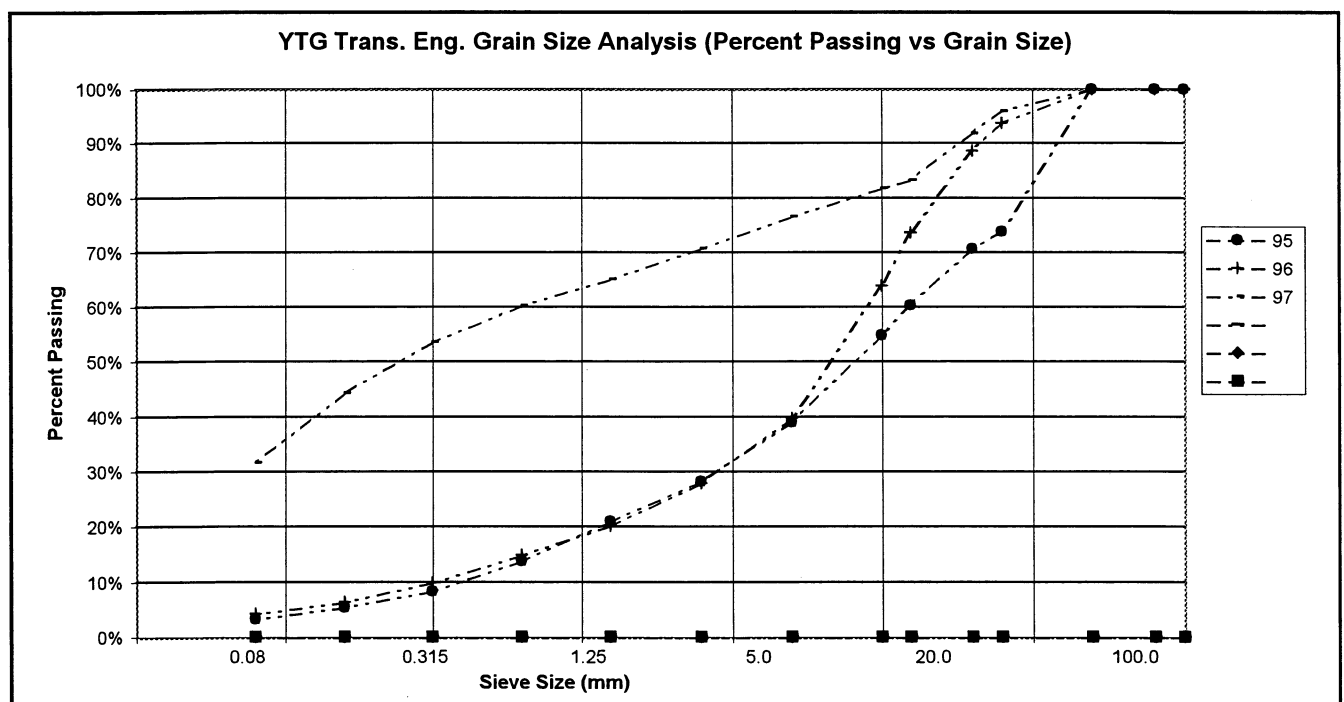


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1718+250 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-244

DATE COMP: 03/09/10

FIELD NO:	95	96	97			
LAB NO:	257	258	259			
DEPTH:	0.4-0.8	1.6-2.0	2.5-3.0			
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	74%	94%	96%			
20.0	71%	89%	92%			
12.5	60%	74%	83%			
10.0	55%	64%	82%			
5.0	39%	40%	77%			
2.5	28%	28%	71%			
1.25	21%	20%	65%			
0.630	14%	15%	60%			
0.315	8%	10%	54%			
0.160	5%	6%	44%			
0.080	3%	4%	32%			
M.C.(%)	2%	2%	9%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX:	0.0	0.0	0.0			
% GRAVEL:	61	60	23			
% SAND:	36	36	45			
% FINES:	3	4	32			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED GRAVEL WITH SAND (GW)	SILTY SAND WITH GRAVEL (SM)			

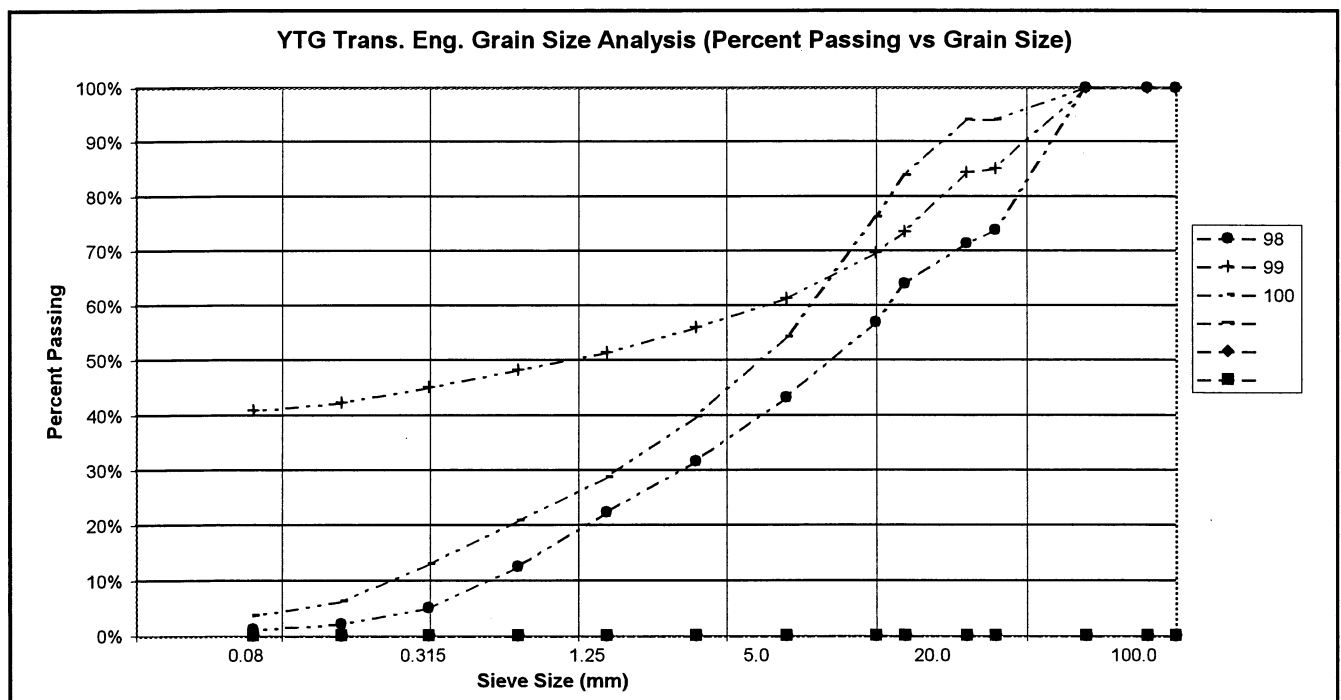


PROJECT NUMBER: 552-202101-0361-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek - No Name Creek
 PROJECT LOCATION: Km 1692.6 - 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1718+160 Centreline
 LOGGED BY: G.C.

HOLE No.: 648-245

DATE COMP: 03/09/11

FIELD NO:	98	99	100			
LAB NO:	260	261	262			
DEPTH:	0.6-1.0	1.8-2.2	2.7-3.0			
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	74%	85%	94%			
20.0	71%	84%	94%			
12.5	64%	74%	84%			
10.0	57%	70%	76%			
5.0	43%	61%	54%			
2.5	32%	56%	40%			
1.25	22%	52%	29%			
0.630	12%	48%	21%			
0.315	5%	45%	13%			
0.160	2%	42%	6%			
0.080	1%	41%	4%			
M.C.(%)	1%	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:	57	39	46			
% SAND:	42	20	51			
% FINES:	1	41	4			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY GRAVEL WITH SAND (GM)	WELL-GRADED SAND WITH GRAVEL (SW)			

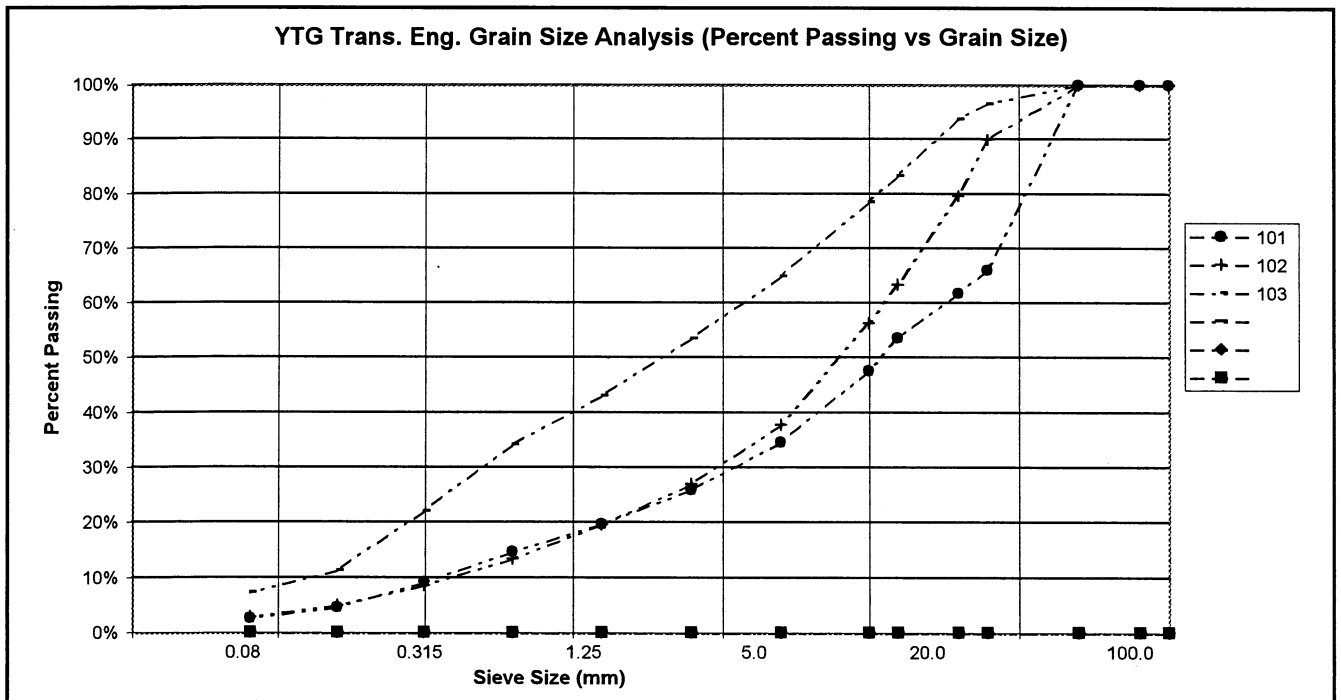


PROJECT NUMBER: 552-202101-0362-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek & No-Name Creek
 PROJECT LOCATION: Km 1692.6- 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1718+045 Centreline
 LOGGED BY: G.C.

HOLE No.: 649-246

DATE COMP: 03/09/11

FIELD NO:	101	102	103			
LAB NO:	263	264	265			
DEPTH:	0.5-1.0	1.5-2.0	2.5-3.0			
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	66%	90%	97%			
20.0	62%	80%	94%			
12.5	54%	63%	83%			
10.0	48%	56%	78%			
5.0	35%	38%	65%			
2.5	26%	27%	54%			
1.25	20%	20%	43%			
0.630	15%	13%	34%			
0.315	9%	9%	22%			
0.160	5%	5%	11%			
0.080	3%	3%	7%			
M.C.(%)	1%	1%	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:	65	62	35			
% SAND:	32	35	58			
% FINES:	3	3	7			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)			

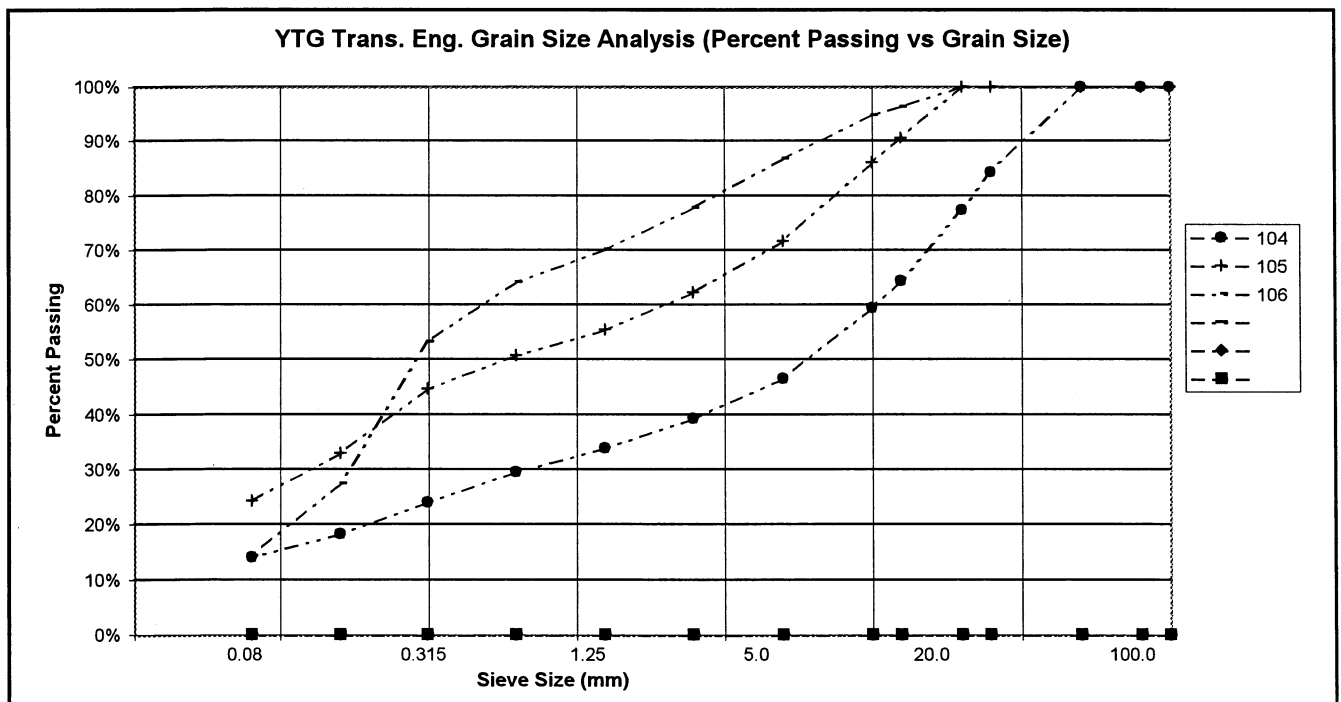


PROJECT NUMBER: 552-202101-0362-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek & No-Name Creek
 PROJECT LOCATION: Km 1692.6- 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1717+945 Centreline
 LOGGED BY: G.C.

HOLE No.: 649-247

DATE COMP: 03/09/11

FIELD NO:	104	105	106			
LAB NO:	266	267	268			
DEPTH:	0.5-1.0	1.5-2.0	2.5-3.0			
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	84%	100%	100%			
20.0	77%	100%	100%			
12.5	64%	91%	96%			
10.0	59%	86%	95%			
5.0	47%	72%	87%			
2.5	39%	62%	78%			
1.25	34%	55%	70%			
0.630	30%	51%	64%			
0.315	24%	45%	53%			
0.160	18%	33%	27%			
0.080	14%	24%	14%			
M.C.(%)	5%	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:	53	28	13			
% SAND:	32	47	72			
% FINES:	14	24	14			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)	SILTY SAND (SM)			

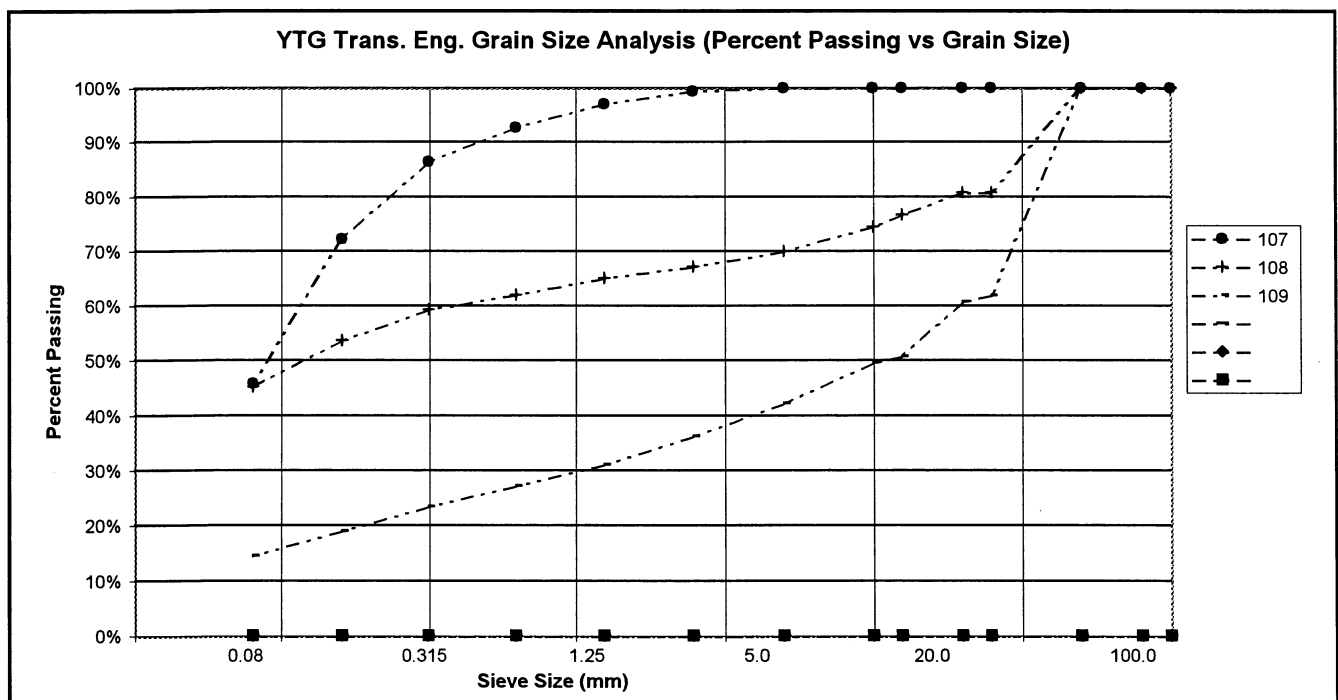


PROJECT NUMBER: 552-202101-0362-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek & No-Name Creek
 PROJECT LOCATION: Km 1692.6- 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1717+850 5m Rt
 LOGGED BY: G.C.

HOLE No.: 649-248

DATE COMP: 03/09/11

FIELD NO:	107	108	109			
LAB NO:	269	270	271			
DEPTH:	0.5-1.0	1.6-2.0	2.6-3.0			
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%	81%	62%			
20.0	100%	81%	61%			
12.5	100%	77%	51%			
10.0	100%	74%	50%			
5.0	100%	70%	42%			
2.5	99%	67%	36%			
1.25	97%	65%	31%			
0.630	93%	62%	27%			
0.315	86%	59%	23%			
0.160	72%	54%	19%			
0.080	46%	45%	14%			
M.C.(%)	14%	16%	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	30	58			
% SAND:	54	25	28			
% FINES:	46	45	14			
CLASSIFICATION	SILTY SAND (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)			

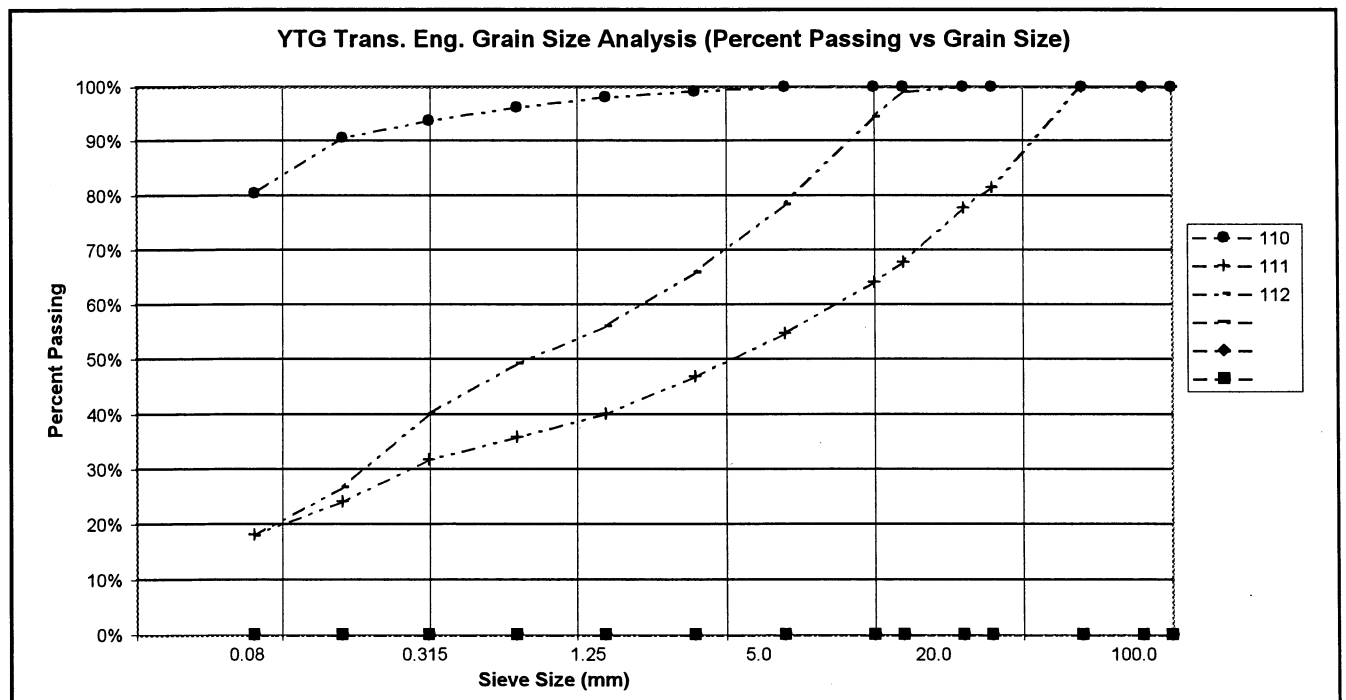


PROJECT NUMBER: 552-202101-0362-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek & No-Name Creek
 PROJECT LOCATION: Km 1692.6- 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1717+753 Centreline
 LOGGED BY: G.C.

HOLE No.: 649-249

DATE COMP: 03/09/11

FIELD NO:	110	111	112			
LAB NO:	272	273	274			
DEPTH:	0.8-1.2	1.8-2.2	2.6-3.0			
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%	82%	100%			
20.0	100%	78%	100%			
12.5	100%	68%	99%			
10.0	100%	64%	94%			
5.0	100%	55%	78%			
2.5	99%	47%	66%			
1.25	98%	40%	56%			
0.630	96%	36%	49%			
0.315	94%	32%	40%			
0.160	91%	24%	27%			
0.080	80%	18%	18%			
M.C.(%)	32%	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	45	22			
% SAND:	20	37	60			
% FINES:	80	18	18			
CLASSIFICATION	SILT WITH SAND (ML)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)			

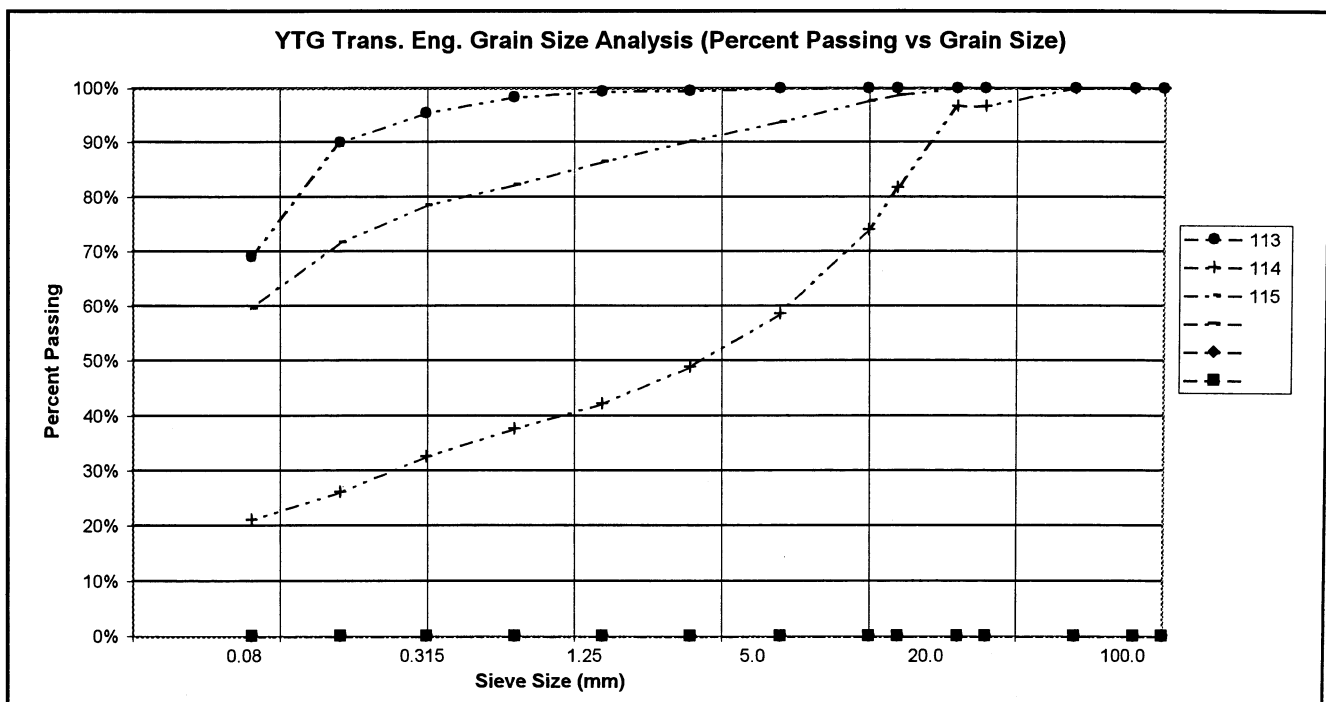


PROJECT NUMBER: 552-202101-0362-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek & No-Name Creek
 PROJECT LOCATION: Km 1692.6- 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1717+654 Centreline
 LOGGED BY: G.C.

HOLE No.: 649-250

DATE COMP: 03/09/11

FIELD NO:	113	114	115			
LAB NO:	275	276	277			
DEPTH:	0.5-1.0	1.8-2.2	2.6-3.0			
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%	97%	100%			
20.0	100%	97%	100%			
12.5	100%	82%	99%			
10.0	100%	74%	98%			
5.0	100%	59%	94%			
2.5	100%	49%	90%			
1.25	99%	42%	86%			
0.630	98%	38%	82%			
0.315	95%	33%	78%			
0.160	90%	26%	72%			
0.080	69%	21%	60%			
M.C.(%)	25%	9%	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:	0	41	6			
% SAND:	31	38	34			
% FINES:	69	21	60			
CLASSIFICATION	SANDY SILT (ML)	SILTY GRAVEL WITH SAND (GM)	SANDY SILT (ML)			

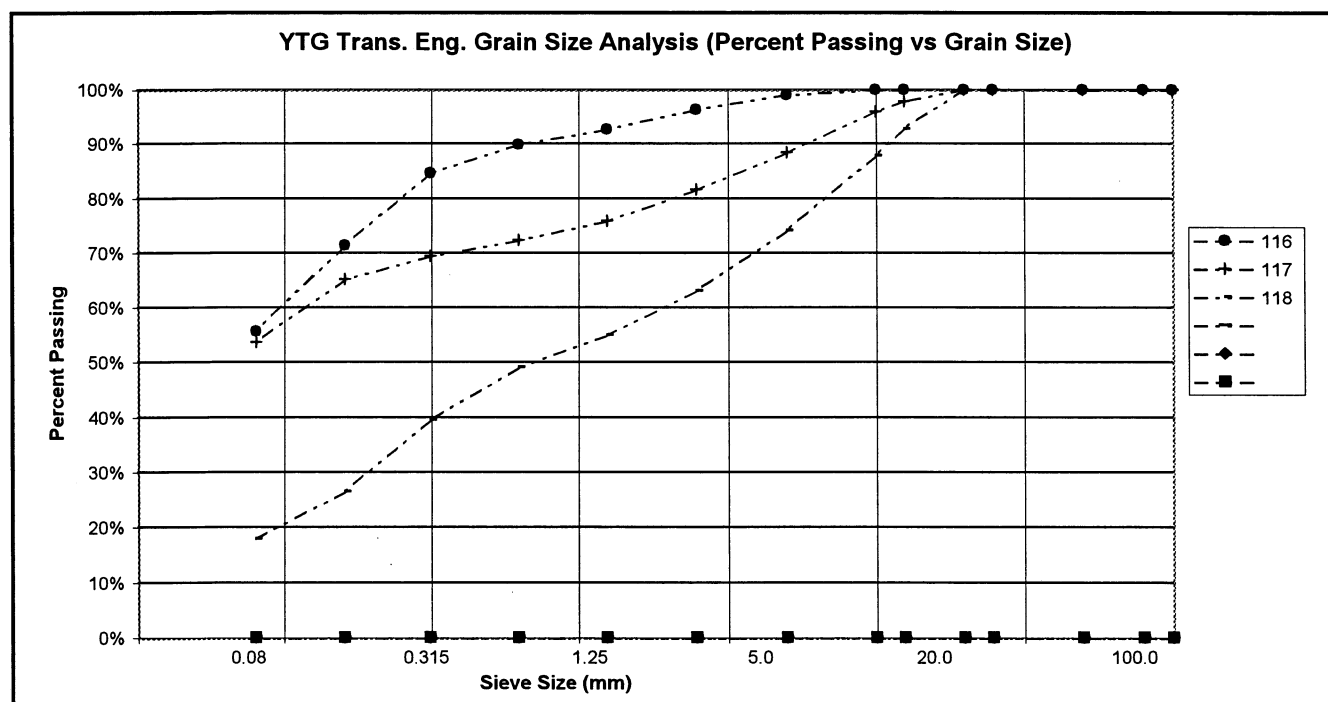


PROJECT NUMBER: 552-202101-0362-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek & No-Name Creek
 PROJECT LOCATION: Km 1692.6- 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1717+569 Centreline
 LOGGED BY: G.C.

HOLE No.: 649-251

DATE COMP: 03/09/11

FIELD NO:	116	117	118			
LAB NO:	278	279	280			
DEPTH:	0.6-1.0	1.6-2.0	2.4-3.0			
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%	100%			
20.0	100%	100%	100%			
12.5	100%	98%	93%			
10.0	100%	96%	88%			
5.0	99%	88%	74%			
2.5	96%	82%	63%			
1.25	93%	76%	55%			
0.630	90%	72%	49%			
0.315	85%	69%	40%			
0.160	71%	65%	26%			
0.080	56%	54%	18%			
M.C.(%)	24%	20%	14%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX:	0.0	0.0	0.0			
% GRAVEL:	1	12	26			
% SAND:	43	35	56			
% FINES:	56	54	18			
CLASSIFICATION	SANDY SILT (ML)	SANDY SILT (ML)	SILTY SAND WITH GRAVEL (SM)			

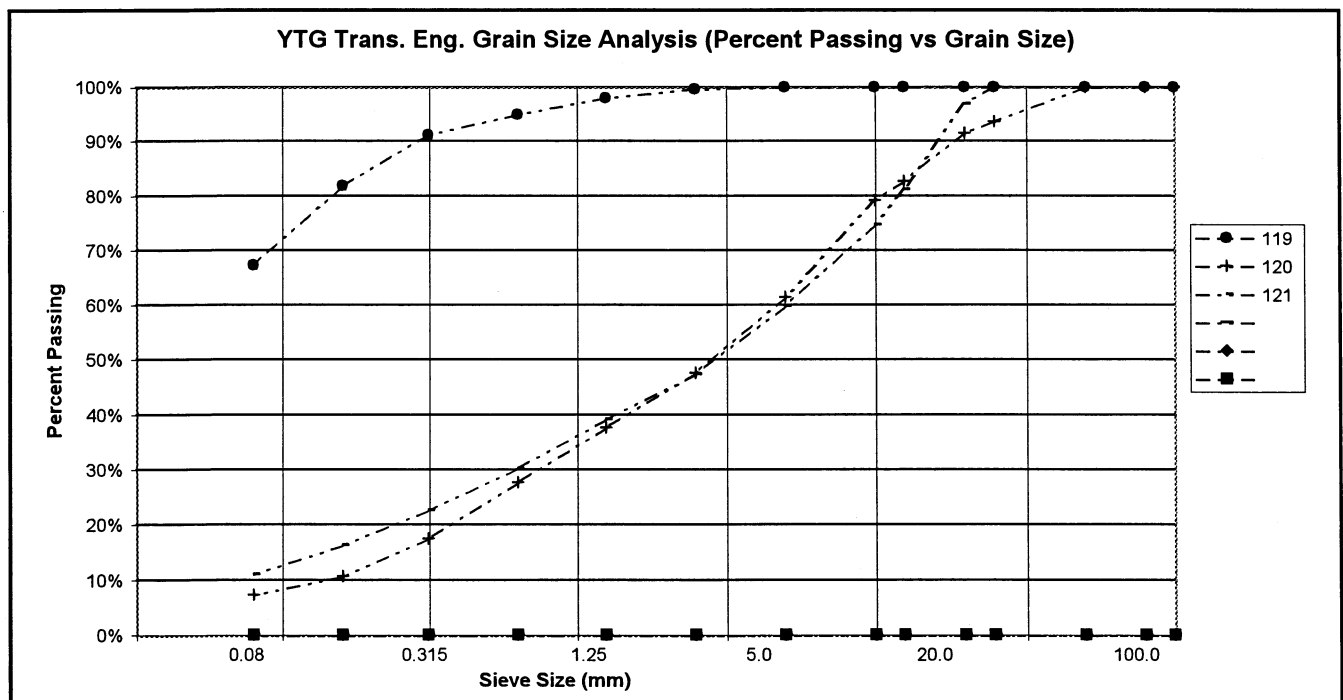


PROJECT NUMBER: 552-202101-0362-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek & No-Name Creek
 PROJECT LOCATION: Km 1692.6- 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1717+490 Centreline
 LOGGED BY: G.C.

HOLE No.: 649-252

DATE COMP: 03/09/11

FIELD NO:	119	120	121			
LAB NO:	281	282	283			
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0			
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%	94%	100%			
20.0	100%	92%	97%			
12.5	100%	83%	81%			
10.0	100%	79%	75%			
5.0	100%	61%	60%			
2.5	100%	48%	47%			
1.25	98%	38%	39%			
0.630	95%	28%	30%			
0.315	91%	17%	23%			
0.160	82%	11%	16%			
0.080	67%	7%	11%			
M.C.(%)	37%	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:	0	39	40			
% SAND:	33	54	49			
% FINES:	67	7	11			
CLASSIFICATION	SANDY SILT (ML)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)			



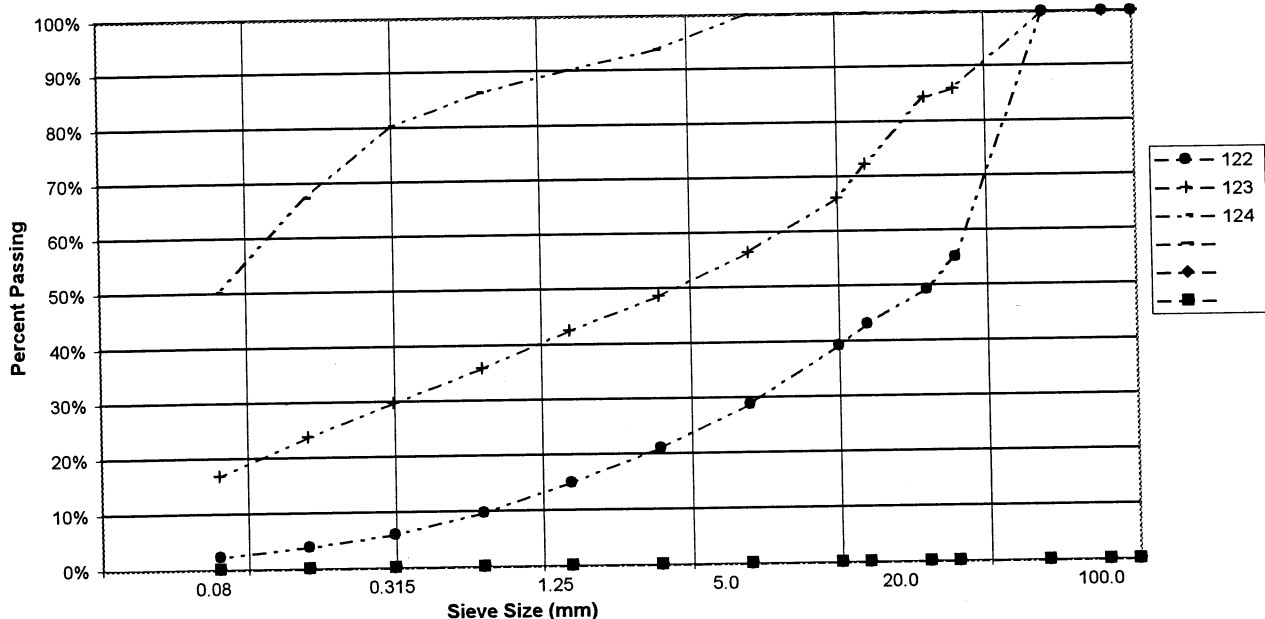
PROJECT NUMBER: 552-202101-0362-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek & No-Name Creek
 PROJECT LOCATION: Km 1692.6- 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1717+390 Centreline
 LOGGED BY: G.C.

HOLE No.: 649-253

DATE COMP: 03/09/15

FIELD NO:	122	123	124			
LAB NO:	284	285	286			
DEPTH:	0.5-1.0	1.4-1.7	2.5-3.0			
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	55%	86%	100%			
20.0	49%	84%	100%			
12.5	43%	72%	100%			
10.0	39%	66%	100%			
5.0	29%	56%	100%			
2.5	21%	49%	94%			
1.25	15%	43%	90%			
0.630	10%	36%	86%			
0.315	6%	30%	80%			
0.160	4%	24%	67%			
0.080	2%	17%	50%			
M.C.(%)	1%	6%	15%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX:	0.0	0.0	0.0			
% GRAVEL:	71	44	0			
% SAND:	27	40	50			
% FINES:	2	17	50			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	SILTY GRAVEL WITH SAND (GM)	SANDY SILT (ML)			

YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)

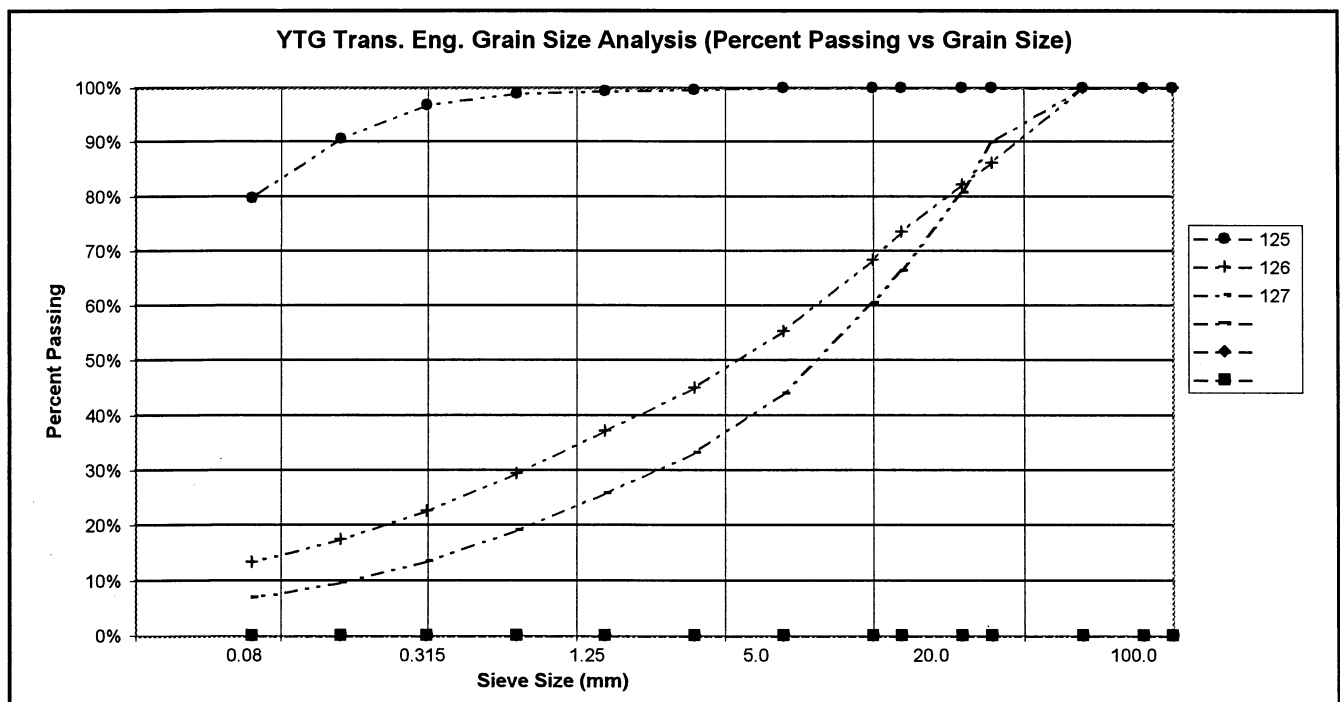


PROJECT NUMBER: 552-202101-0362-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek & No-Name Creek
 PROJECT LOCATION: Km 1692.6- 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1717+315 Centreline
 LOGGED BY: G.C.

HOLE No.: 649-254

DATE COMP: 03/09/15

FIELD NO:	125	126	127			
LAB NO:	287	288	289			
DEPTH:	0.4-0.8	1.5-2.0	2.5-3.0			
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%	86%	90%			
20.0	100%	82%	81%			
12.5	100%	73%	65%			
10.0	100%	68%	60%			
5.0	100%	55%	44%			
2.5	100%	45%	33%			
1.25	99%	37%	26%			
0.630	99%	29%	19%			
0.315	97%	23%	13%			
0.160	91%	18%	10%			
0.080	80%	13%	7%			
M.C.(%)	29%	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:	0	45	56			
% SAND:	20	42	37			
% FINES:	80	13	7			
CLASSIFICATION	SILT WITH SAND (ML)	SILTY GRAVEL WITH SAND (GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

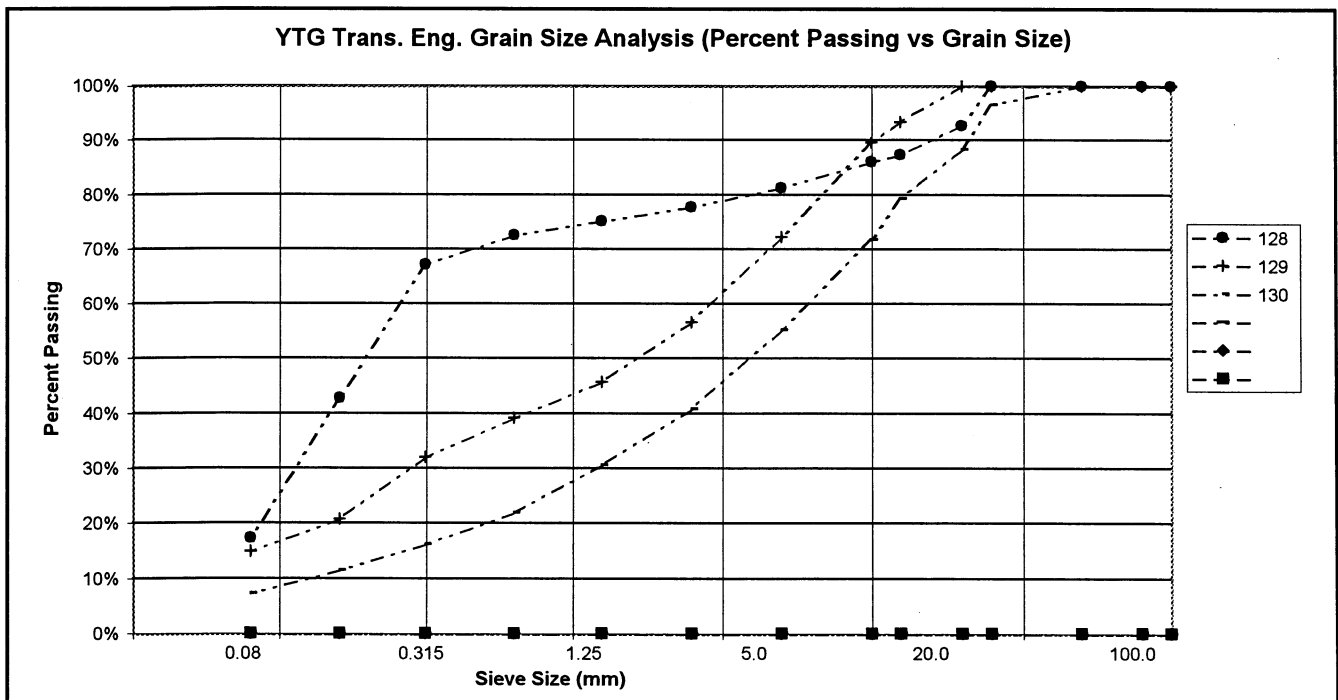


PROJECT NUMBER: 552-202101-0362-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek & No-Name Creek
 PROJECT LOCATION: Km 1692.6- 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1717+253 Centreline
 LOGGED BY: G.C.

HOLE No.: 649-255

DATE COMP: 03/09/15

FIELD NO:	128	129	130			
LAB NO:	290	291	292			
DEPTH:	0.4-0.6	1.4-1.8	2.4-2.8			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	100%	100%	97%			
20.0	93%	100%	88%			
12.5	87%	93%	79%			
10.0	86%	90%	72%			
5.0	81%	72%	55%			
2.5	78%	57%	41%			
1.25	75%	46%	31%			
0.630	73%	39%	22%			
0.315	67%	32%	16%			
0.160	43%	21%	11%			
0.080	17%	15%	7%			
M.C.(%)	6%	11%	8%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX:	0.0	0.0	0.0			
% GRAVEL:	19	28	45			
% SAND:	64	57	48			
% FINES:	17	15	7			
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)			

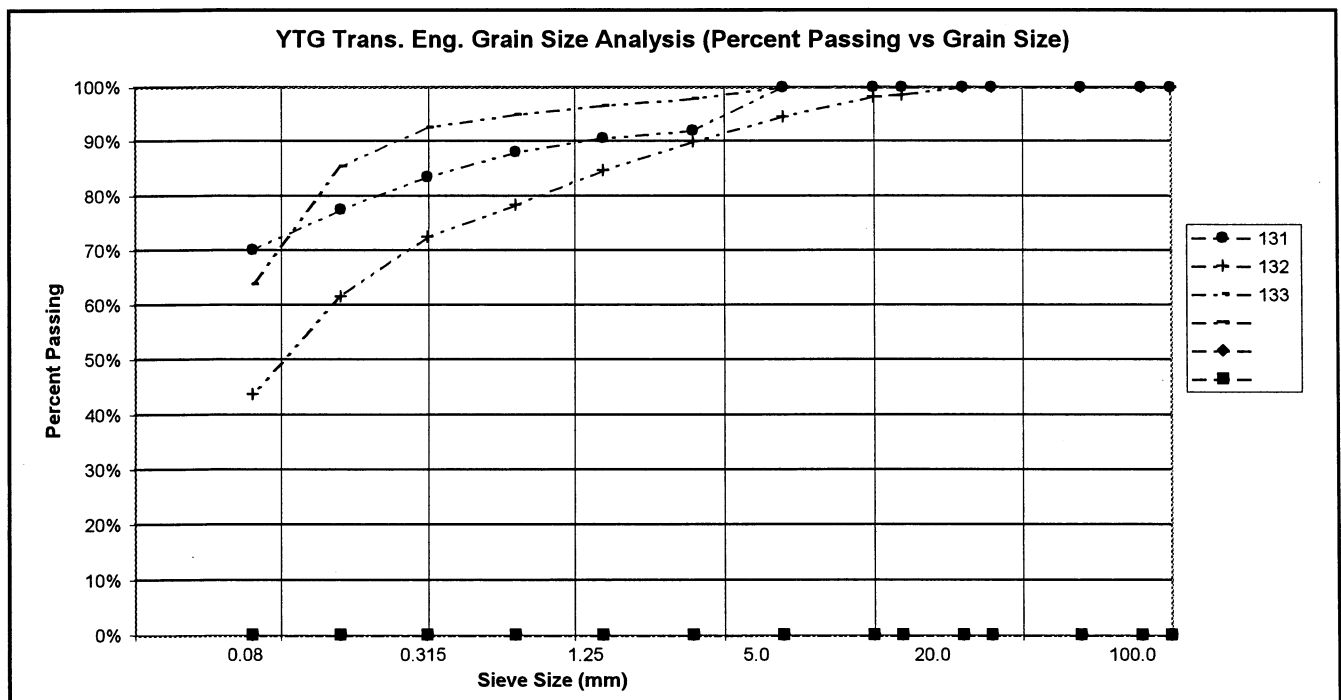


PROJECT NUMBER: 552-202101-0362-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek & No-Name Creek
 PROJECT LOCATION: Km 1692.6- 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1717+158 Centreline
 LOGGED BY: G.C.

HOLE No.: 649-256

DATE COMP: 03/09/15

FIELD NO:	131	132	133			
LAB NO:	293	294	295			
DEPTH:	0.8-1.2	1.6-2.0	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%	100%			
20.0	100%	100%	100%			
12.5	100%	99%	100%			
10.0	100%	98%	100%			
5.0	100%	95%	100%			
2.5	92%	90%	98%			
1.25	91%	85%	97%			
0.630	88%	78%	95%			
0.315	83%	72%	93%			
0.160	77%	62%	85%			
0.080	70%	44%	64%			
M.C.(%)	78%	34%	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:	0	5	0			
% SAND:	30	51	36			
% FINES:	70	44	64			
CLASSIFICATION	SILT WITH SAND (ML)	SILTY SAND (SM)	SANDY SILT (ML)			

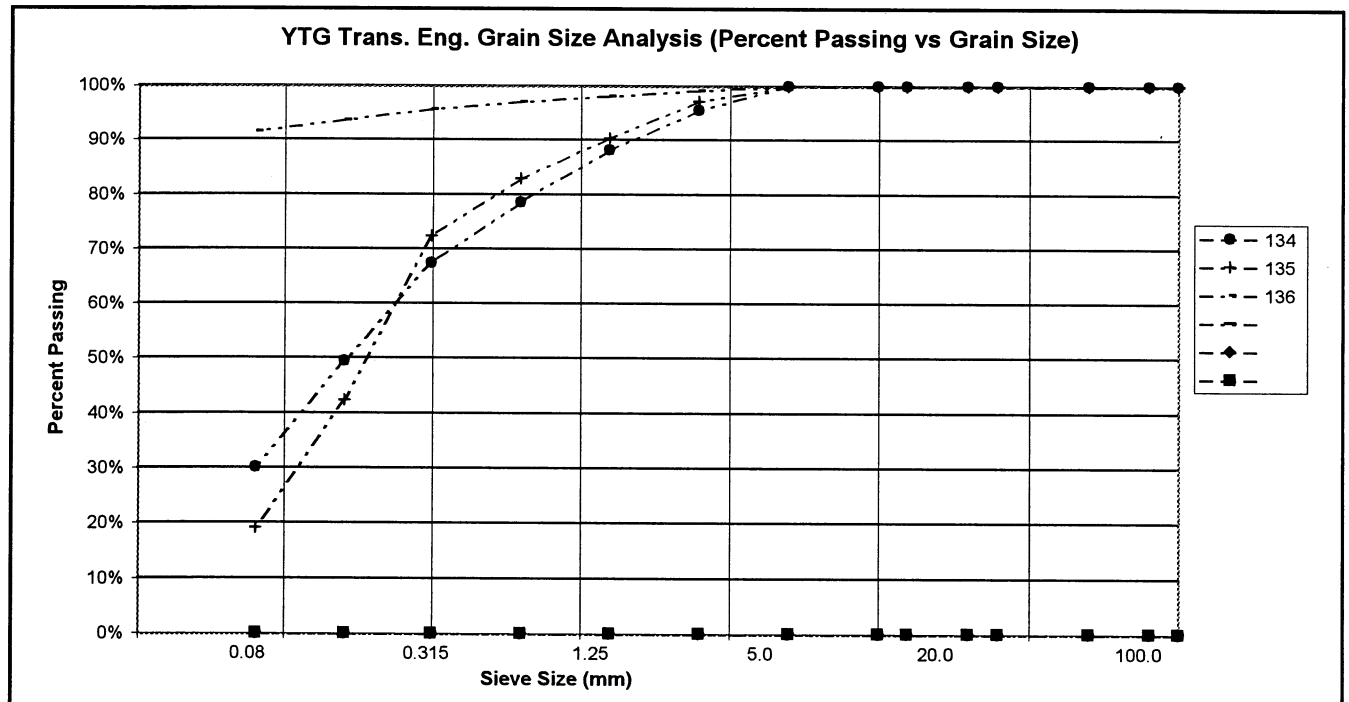


PROJECT NUMBER: 552-202101-0362-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek & No-Name Creek
 PROJECT LOCATION: Km 1692.6- 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1717+048 Centreline
 LOGGED BY: G.C.

HOLE No.: 649-257

DATE COMP: 03/09/15

FIELD NO:	134	135	136			
LAB NO:	296	297	298			
DEPTH:	0.6-1.0	1.4-2.0	2.6-3.0			
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%	100%			
20.0	100%	100%	100%			
12.5	100%	100%	100%			
10.0	100%	100%	100%			
5.0	100%	100%	100%			
2.5	96%	97%	99%			
1.25	88%	90%	98%			
0.630	79%	83%	97%			
0.315	67%	72%	96%			
0.160	49%	42%	94%			
0.080	30%	19%	92%			
M.C.(%)	18%	18%	39%			
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:	70	81	8			
% FINES:	30	19	92			
CLASSIFICATION	SILTY SAND (SM)	SILTY SAND (SM)	SILT (ML)			

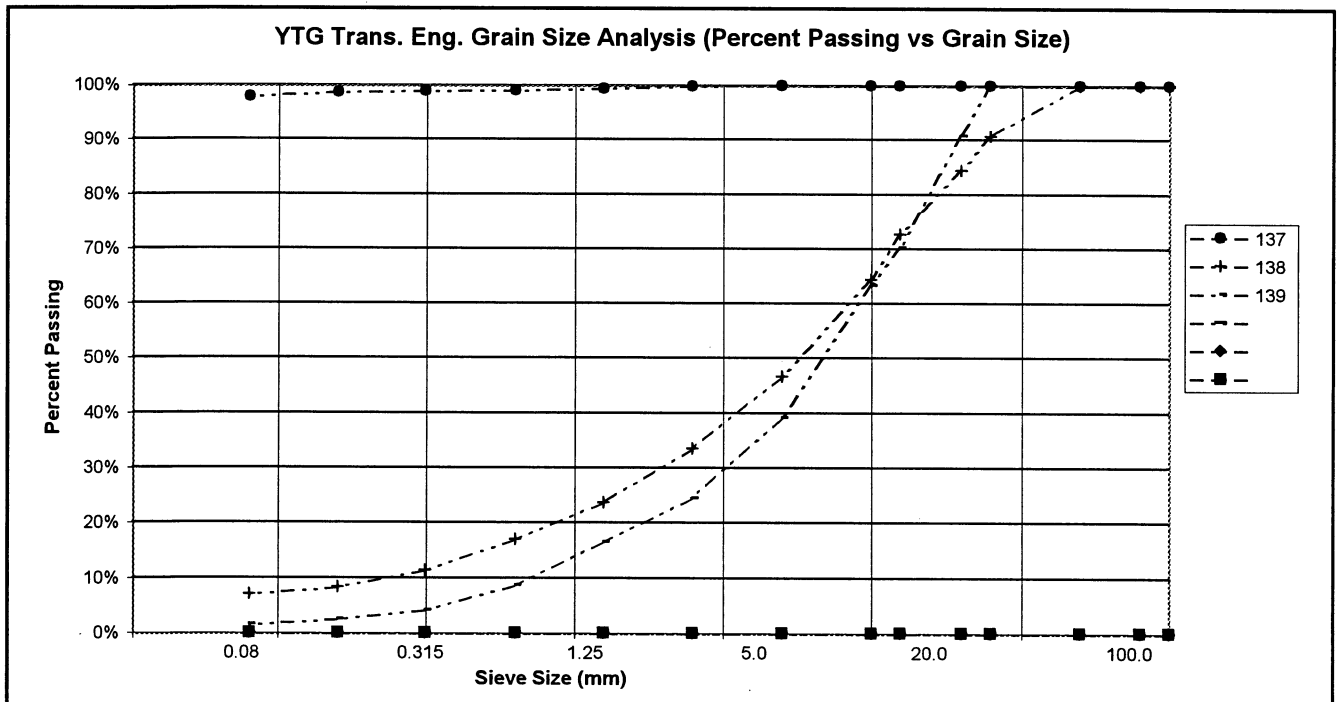


PROJECT NUMBER: 552-202101-0362-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek & No-Name Creek
 PROJECT LOCATION: Km 1692.6- 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1716+975 Centreline
 LOGGED BY: G.C.

HOLE No.: 649-258

DATE COMP: 03/09/15

FIELD NO:	137	138	139			
LAB NO:	299	300	301			
DEPTH:	0.6-1.0	1.6-2.0	2.5-3.0			
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%	91%	100%			
20.0	100%	84%	91%			
12.5	100%	73%	70%			
10.0	100%	64%	63%			
5.0	100%	47%	39%			
2.5	100%	33%	24%			
1.25	99%	24%	17%			
0.630	99%	17%	9%			
0.315	99%	11%	4%			
0.160	99%	8%	2%			
0.080	98%	7%	2%			
M.C.(%)	36%	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	53	61			
% SAND:	2	40	38			
% FINES:	98	7	2			
CLASSIFICATION	SILT (ML)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)			



PROJECT NUMBER: 552-202101-0362-1
 CLIENT: Shakwak
 PROJECT NAME: Congdon Creek & No-Name Creek
 PROJECT LOCATION: Km 1692.6- 1729.6 A/H
 DRILL UNIT: D-4 Cat 6" Auger
 HOLE LOCATION: 1716+900 2m Rt
 LOGGED BY: G.C.

HOLE No.: 649-259

DATE COMP: 03/09/15

FIELD NO:	140	141	142			
LAB NO:	302	303	304			
DEPTH:	0.6-1.0	1.6-2.0	2.6-3.0			
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	92%	96%	80%			
20.0	86%	84%	74%			
12.5	69%	73%	61%			
10.0	57%	66%	55%			
5.0	30%	53%	41%			
2.5	23%	41%	30%			
1.25	20%	30%	23%			
0.630	13%	22%	16%			
0.315	6%	15%	10%			
0.160	5%	11%	6%			
0.080	4%	8%	3%			
M.C.(%)	1%	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:	70	47	59			
% SAND:	26	44	37			
% FINES:	4	8	3			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)			

