

GEOTECHNICAL INVESTIGATIONS

1 of 5



Community and Transportation Services
Transportation Engineering Branch

Geotechnical Services

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GR-01-087

HIGHWAY CONSTRUCTION

GEOTECHNICAL INVESTIGATION
KM 1803.95 TO KM 1820.4
YUKON, 2000-2001

ALASKA HIGHWAY #1

HIGHWAY CONSTRUCTION
km 1803.95 to km 1820.4
ALASKA HIGHWAY #1
Yukon, 2000-2001
Volume I of 5

This Data Package prepared for project viewing:

February, 2000

Transportation Engineering Branch
Geotechnical Services
461 Range Road
Whitehorse, Yukon

VOLUME CONTENTS

VOLUME 1 OF 5

Introduction

Centreline "Subsurface Exploration & Testing Report" sheets for holes located from km 1803+925 to km 1810+000

VOLUME 2 OF 5

Centreline "Subsurface Exploration & Testing Report" sheets for holes located from km 1810+000 to km 1820+400

VOLUME 3 OF 5

Centreline laboratory sample test result sheets for holes numbered 350 to 500

VOLUME 4 OF 5

Centreline laboratory sample test result sheets for holes numbered 501 to 849

VOLUME 5 OF 5

Granular testing - km 1819 LHS

CONTENTS

INTRODUCTION

Investigation notes, classification methods and legends.

CENTRELINE TESTING

“Subsurface Exploration & Testing Report” sheets and laboratory sample test result sheets are provided. The “Subsurface Exploration & Testing Report” sheets for the centreline holes are arranged according to project location, starting at km 1803+925 and increasing to km 1820+400. The laboratory sample test result sheets are arranged according to hole number.

Auger Testing

1999	TEST HOLES 350 to 400	shown on logs with prefix 509-
	TEST HOLES 401 to 425	shown on logs with prefix 511-
	TEST HOLES 426 to 436	shown on logs with prefix 512-
	TEST HOLES 440 to 448	shown on logs with prefix 512-
	TEST HOLES 429 to 500	shown on logs with prefix 513-
	TEST HOLES 501 to 512	shown on logs with prefix 514-
	TEST HOLES 563 to 566	shown on logs with prefix 519-
	TEST HOLES 572 to 575	shown on logs with prefix 519-
	TEST HOLES 620 to 644	shown on logs with prefix 520-
	TEST HOLES 645 to 658	shown on logs with prefix 521-
	TEST HOLES 659 to 709	shown on logs with prefix 526-
	TEST HOLES 710 to 731	shown on logs with prefix 527-
	TEST HOLES 834 to 844	shown on logs with prefix 531-
	TEST HOLES 485 to 849	shown on logs with prefix 532-

Notes on plotting of Centreline Holes:

1. Hole 495 shown at ~ 1807+225 on Sheet 5 of 19 should be removed
2. Hole 400 shown at ~ 1808+520 on Sheet 6 of 19 should be removed
3. Add Hole 440 at 1811+870 (centreline) on Sheet 9 of 19
4. Add Hole 408 at 1814+625 (centreline) on Sheet 12 of 19
5. Hole 391 shown at ~ 1816+500 on Sheet 14 of 19 should read Hole 392
6. Hole 392 shown at ~ 1816+600 on Sheet 14 of 19 should read Hole 391
7. Hole 843 shown at ~ 1817+700 on Sheet 15 of 19 should read Hole 378

CONTENTS (continued)

GRANULAR TESTING - KM 1819 LHS

“Subsurface Exploration & Testing Report” sheets, laboratory sample test result sheets, and location plans are provided.

The “Subsurface Exploration & Testing Report” sheets and the laboratory sample test result sheets are arranged according to hole number

Backhoe Testing

1994	TEST HOLES 4 to 10	shown with prefix 316-
1995	TEST HOLES 230 to 247, 249 to 250, & 252 to 253	shown with prefix 369-

Auger Testing

1995	TEST HOLES 1 to 9	shown with prefix 351-
	TEST HOLES 10 to 26	shown with prefix 352-

HIGHWAY CONSTRUCTION

GEOTECHNICAL INVESTIGATION
KM 1803.95 TO KM 1820.4
YUKON, 2000-2001

ALASKA HIGHWAY #1

INTRODUCTION

GEOTECHNICAL INVESTIGATION DATA

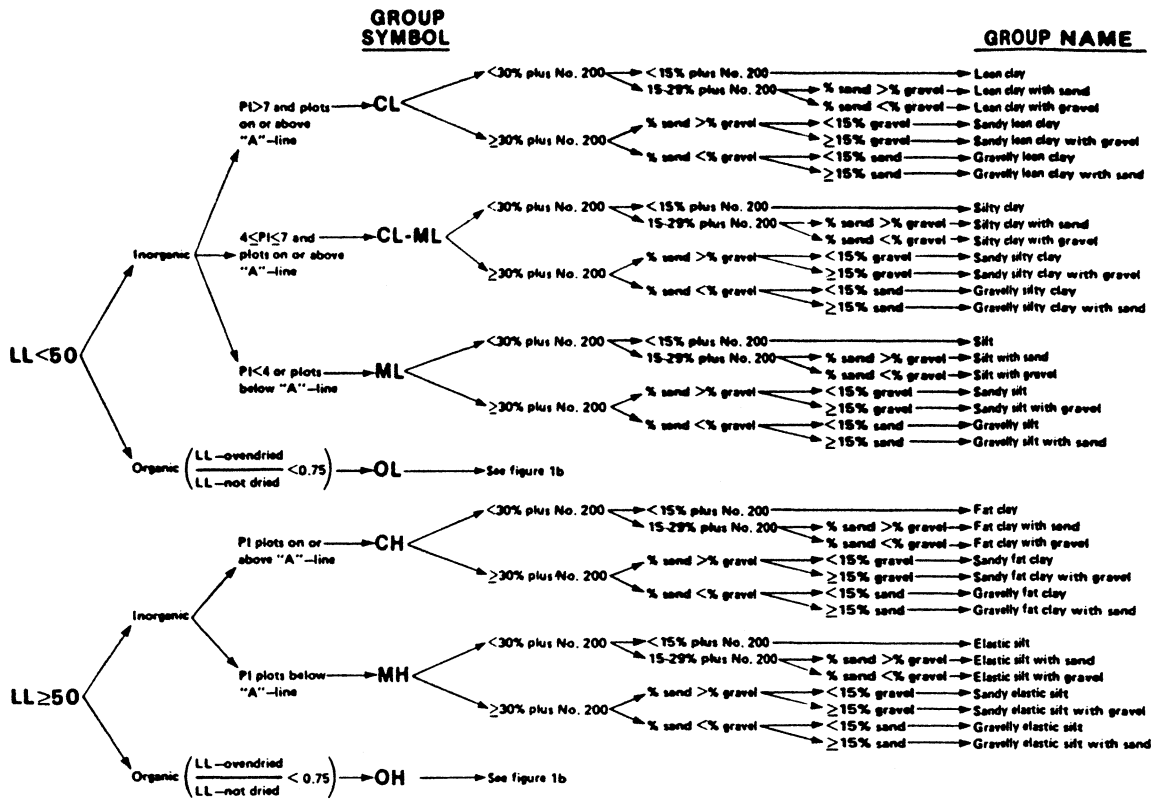
This geotechnical investigation data is provided to assist in the interpretation of soil conditions encountered within this project area. The data presented was prepared solely for Departmental designing and estimating purposes.

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

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

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

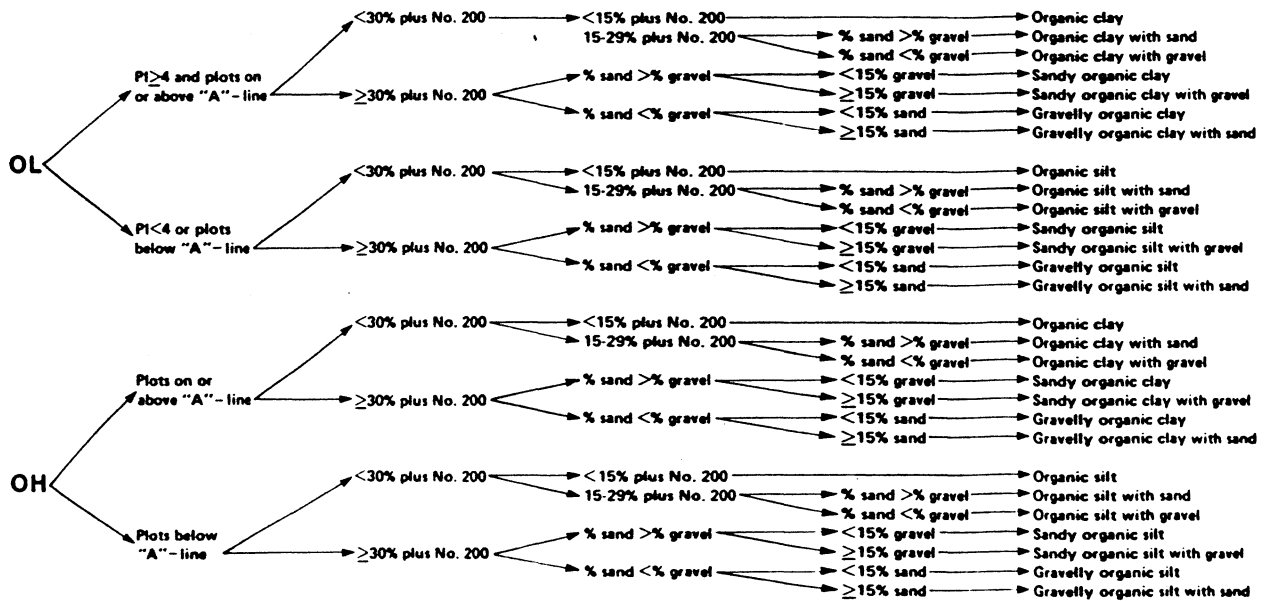
It is recommended that a site inspection, combined with consideration of the regional geology and climatic conditions be conducted. An evaluation of the investigation methods and development work done since the time of investigation should be done prior to interpreting the subsurface conditions for construction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



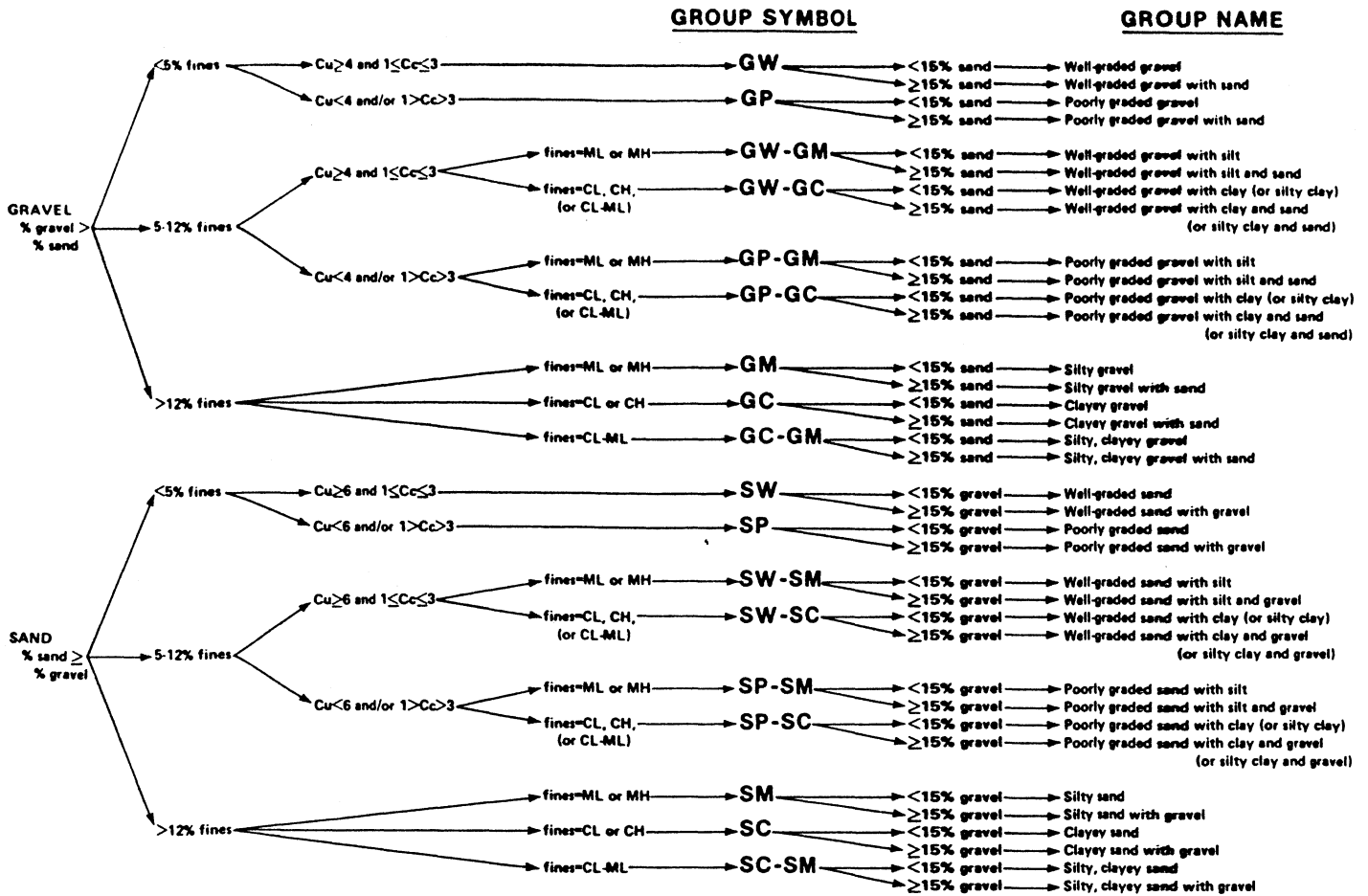
Flow chart for classifying fine-grained soil.

GROUP SYMBOL

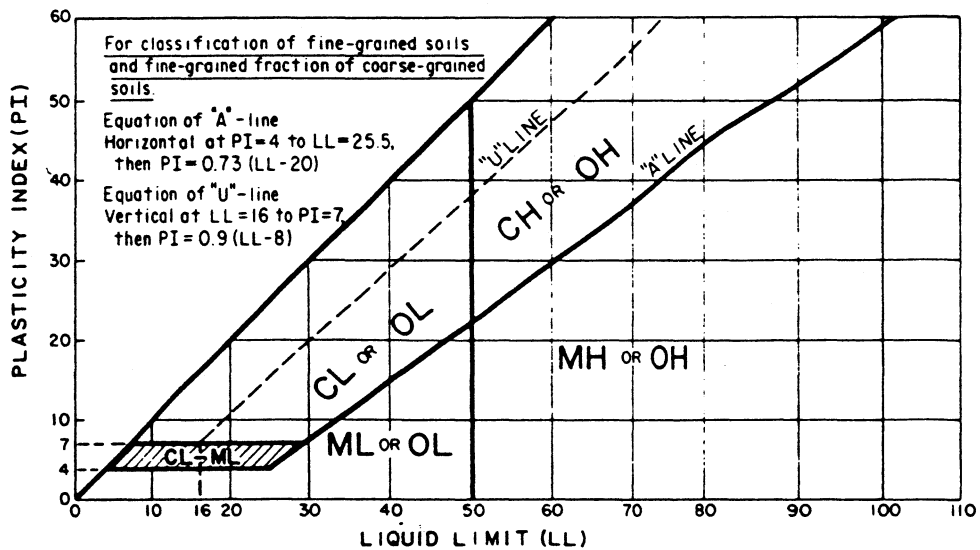
GROUP NAME



Flow chart for classifying organic soil.



Flow chart for classifying coarse-grained soil.



Plasticity chart.

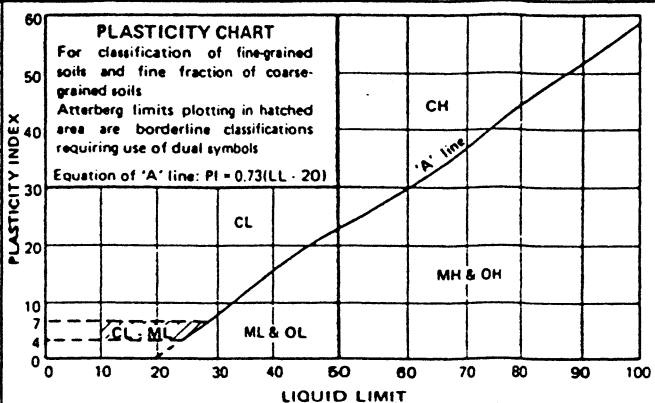
CRITERIA FOR ASSIGNING GROUP SYMBOLS AND GROUP NAMES USING LABORATORY TESTS ^a				SOIL CLASSIFICATION		
				GROUP SYMBOL	GROUP NAME ^b	
COARSE-GRAINED SOILS more than 50% retained on No. 200 sieve	GRAVELS More than 50% of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS Less than 5% fines ^c	$C_u \geq 4$ 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
	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
GW-GM well graded gravel with silt
GW-GC well graded gravel with clay
GP-GM poorly graded gravel with silt
GP-GC poorly graded gravel with clay
- 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 > 15% sand, add "with sand" to group name.
- If fines classify as CL-ML, use dual symbol GC-GM, SC-SM.
- If fines are organic, add "with organic fines" to group name.
- If soil contains > 15% gravel, add "with gravel" to group name.
- If Atterberg limits plot in hatched area, soil is a CL-ML, silty clay.
- If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel" whichever is predominant.
- If soil contains > 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†

MAJOR DIVISIONS		GROUP SYMBOLS	TYPICAL NAMES	CLASSIFICATION CRITERIA		
COARSE-GRAINED SOILS More than 50% retained on No. 200 sieve*	GRAVELS 50% or more of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines	Classification on basis of percentage of fines GW, GP, SW, SP GM, GC, SM, SC Borderline classification requiring use of dual symbols	
		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	CLEAN SANDS	SW		Well-graded sands and gravelly sands, little or no fines
			SANDS WITH FINES	SP		Poorly-graded sands and gravelly sands, little or no fines
	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	Ni	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

GROUP SYMBOLS	SYMBOLS	SUBGROUP DESCRIPTION	
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		<input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER	<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE	<input type="checkbox"/> CORE	
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 PLASTIC M.C. 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:		COMPLETION DEPTH: 6.0 m		
				REVIEWED BY:		COMPLETE: / /		
				Fig. No:		Page 1 of 1		

HIGHWAY CONSTRUCTION

GEOTECHNICAL INVESTIGATION
KM 1803.95 TO KM 1820.4
YUKON, 2000-2001

ALASKA HIGHWAY #1

CENTRELINE TESTING

km 1803+925 to km 1810+000
Subsurface Exploration & Testing Reports

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION		TEST HOLE NO: 519-572								
SHAKWAK SEG 13		KM 1796-1822 A/H		Project No: 092-202101-0329								
MOBILE B-40L		LOCATION: 1803+925 2M RHS		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	ORGANIC SANDY SILT (ML) -brown -frozen (Vx)											0.0
1.0												1.0
2.0	SILTY SAND WITH GRAVEL (SM) -grey -frozen (Nb) -grindy drilling @ 1.6m		451				ML					2.0
3.0	-more rocks below 3.0m		452				SM					3.0
4.0	END HOLE @ 3.2m -refusal - rock dust on bit											4.0
5.0												5.0
6.0												6.0

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LOGGED BY: S.H.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.2 m
COMPLETE: 99/07/05

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION	TEST HOLE NO: 519-566
SHAKWAK SEG 13		KM 1796-1822 A/H	Project No: 092-202101-0329
MOBILE B-40L		LOCATION: 1803+975 30M LHS	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> 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	
	ASH												
	SILTY GRAVEL WITH SAND (GM)												
	-grey brown												
	-frozen (Vx)												
1.0												1.0	
	-grindy drilling @ 1.3m	<input checked="" type="checkbox"/>	437	●	▲		GM	▲▲▲		■			
2.0												2.0	
3.0												3.0	
	-grey below 2.8m	<input checked="" type="checkbox"/>	438	●	▲		GM	▲▲▲		■			
4.0												4.0	
	END HOLE @ 3.2m												
	-refusal												
5.0												5.0	
6.0												6.0	

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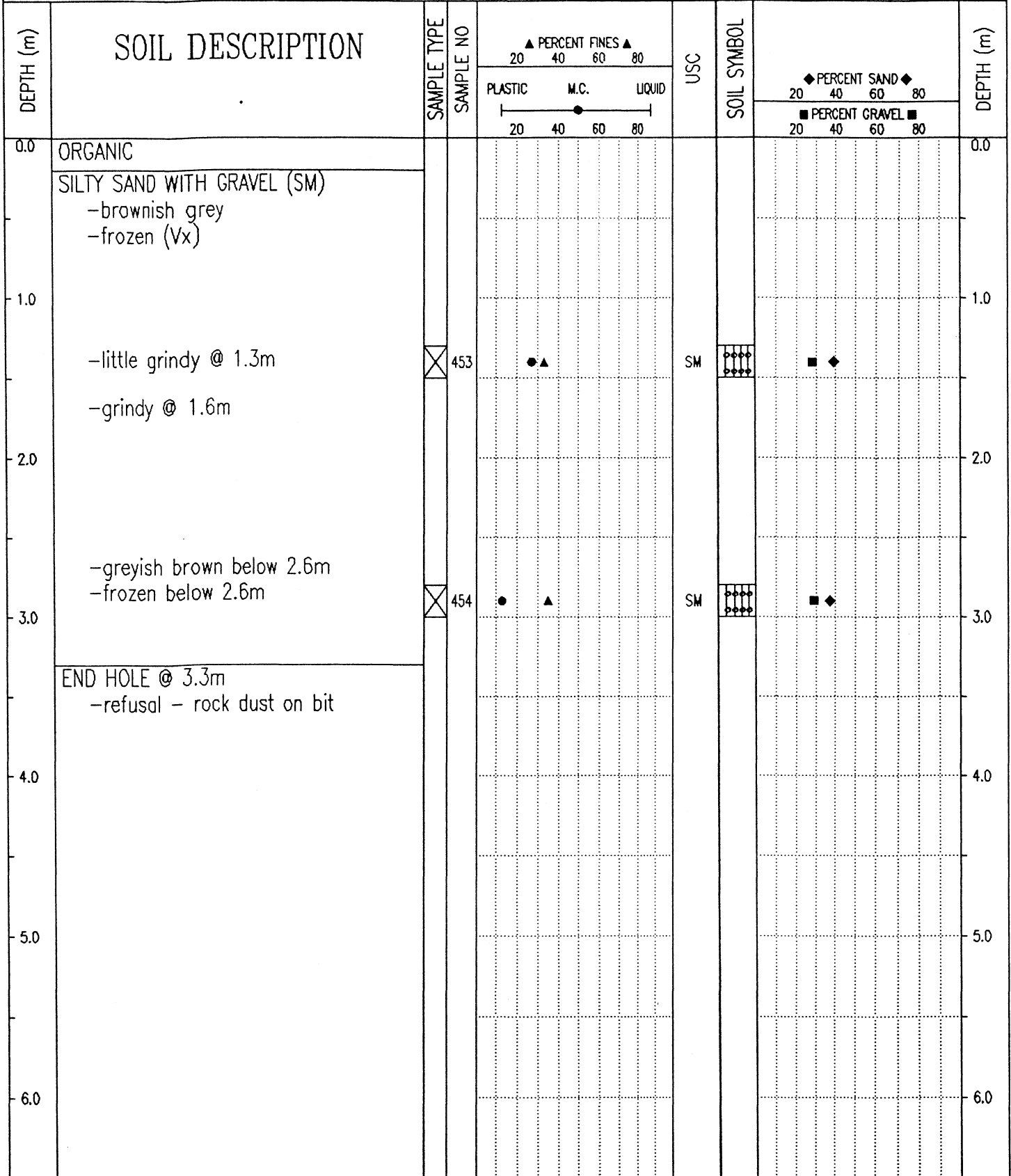
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COMPLETION DEPTH: 3.2 m

COMPLETE: 99/07/05

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION	TEST HOLE NO: 519-573
SHAKWAK SEG 13		KM 1796-1822 A/H	Project No: 092-202101-0329
MOBILE B-40L		LOCATION: 1804+025 2M RHS	ELEVATION: 0.00 (m)
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		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



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Fig. No:

COMPLETION DEPTH: 3.3 m

COMPLETE: 99/07/05

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION		TEST HOLE NO: 519-565							
SHAKWAK SEG 13		KM 1796-1822 A/H		Project No: 092-202101-0329							
MOBILE B-40L		LOCATION: 1804+050 30M LHS		ELEVATION: 0.00 (m)							
SAMPLE TYPE		S.P.T.		AUGER		BULK		TUBE		CORE	
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)			
0.0	ORGANIC							0.0			
	ASH										
	SILTY SAND WITH GRAVEL (SM)										
	-brown										
	-frozen (Nb)										
1.0	-(Vx) below .8m	☒	434	● ▲	SM	■ ◆		1.0			
		☒	435	● ▲	SM	■ ◆					
2.0	-grindy drilling @ 2.0m							2.0			
	-grey brown below 2.5m										
3.0	-rock dust on bit @ 3.0m	☒	436	● ▲	SM	■ ◆		3.0			
4.0	END HOLE @ 4.0m							4.0			
	-refusal										
5.0								5.0			
6.0								6.0			

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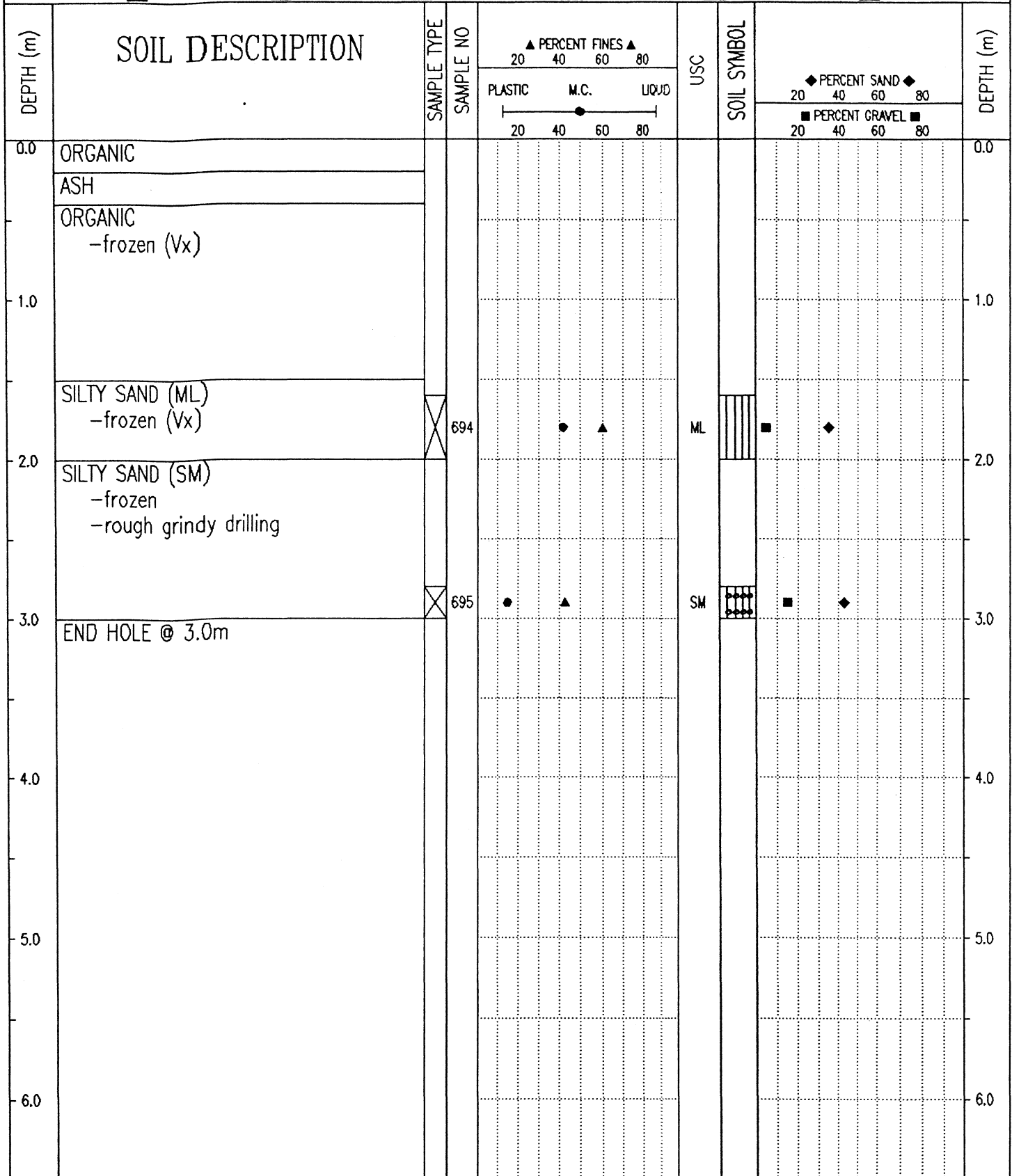
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COMPLETE: 99/07/05

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION		TEST HOLE NO: 519-574								
SHAKWAK SEG 13		KM 1796-1822 A/H		Project No: 092-202101-0329								
MOBILE B-40L		LOCATION: 1804+125 2M RHS		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	ORGANIC										0.0	
	SILT WITH SAND (ML) -brown -frozen (Vx)											
1.0		<input checked="" type="checkbox"/>	455				ML				1.0	
	-some organic @ 1.5m											
2.0											2.0	
	SILTY SAND WITH GRAVEL (SM) -frozen -slow hard grindy drilling											
3.0		<input checked="" type="checkbox"/>	456				SM				3.0	
	END HOLE @ 2.8m -refusal - rock dust on bit											
4.0											4.0	
5.0											5.0	
6.0											6.0	

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Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13	TEST HOLE NO: 527-731
ENGINEERING CAPITAL		KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L		LOCATION: 1804+125 20M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



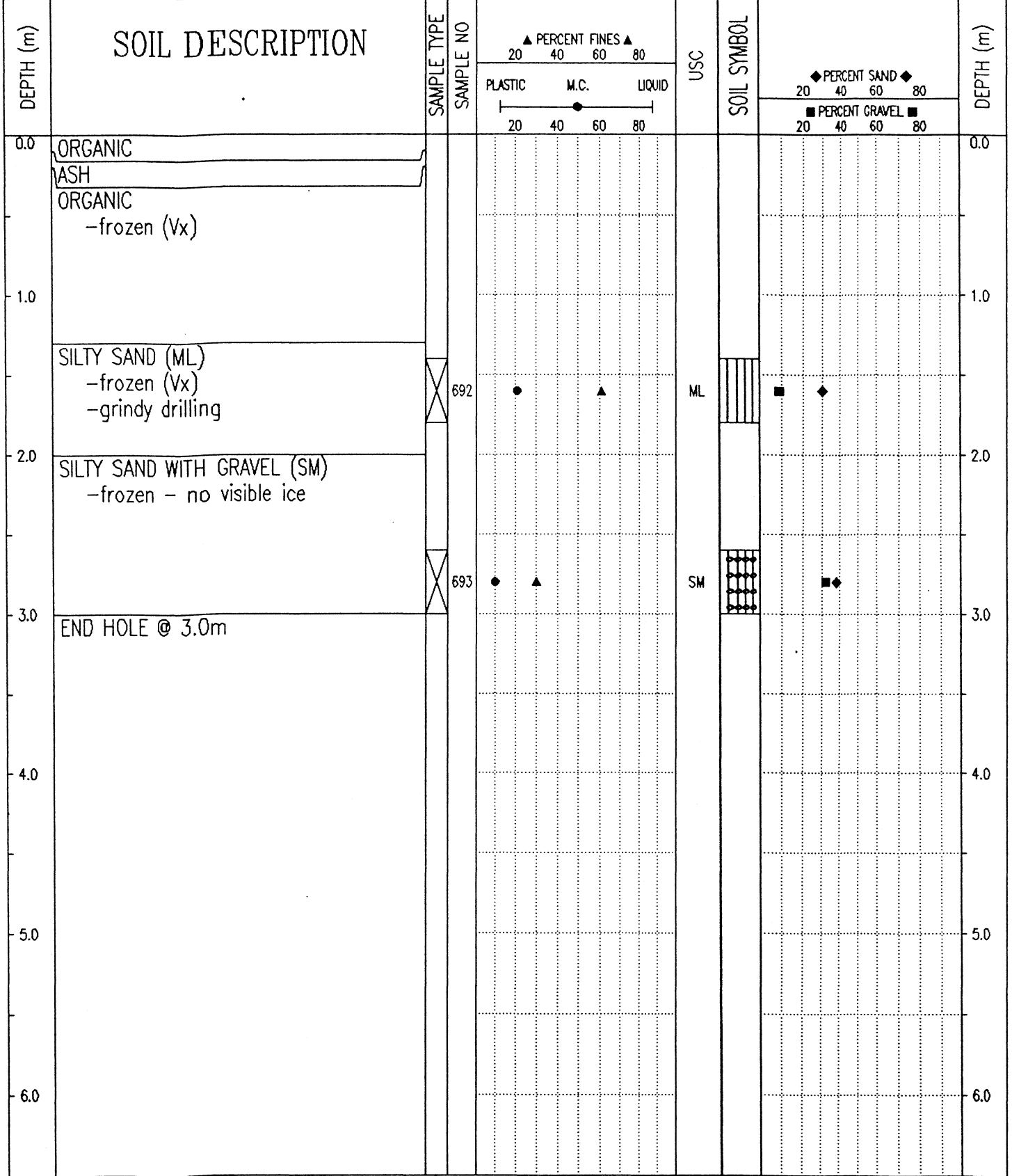
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COMPLETION DEPTH: 3.0 m
COMPLETE: 99/08/18

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 13	TEST HOLE NO: 527-730
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION: 1804+125 20M LT	ELEVATION: 0.00 (m)

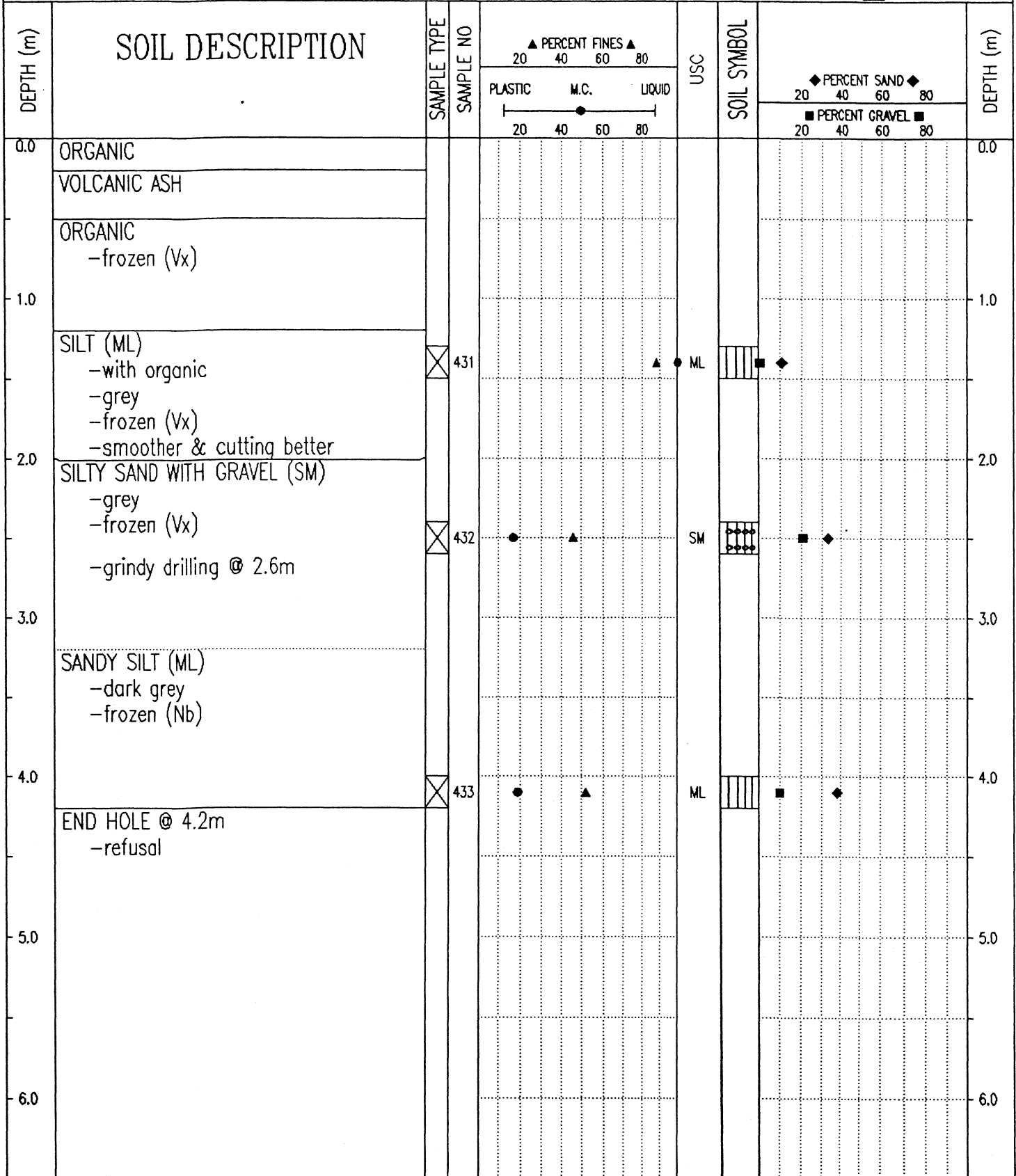
SAMPLE TYPE RETURN S.P.T. AUGER BULK TUBE CORE



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REVIEWED BY:	COMPLETE: 99/08/18
Fig. No:	Page 1 of 1

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION	TEST HOLE NO: 519-564
SHAKWAK SEG 13		KM 1796-1822 A/H	Project No: 092-202101-0329
MOBILE B-40L		LOCATION: 1804+150 30M LHS	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE

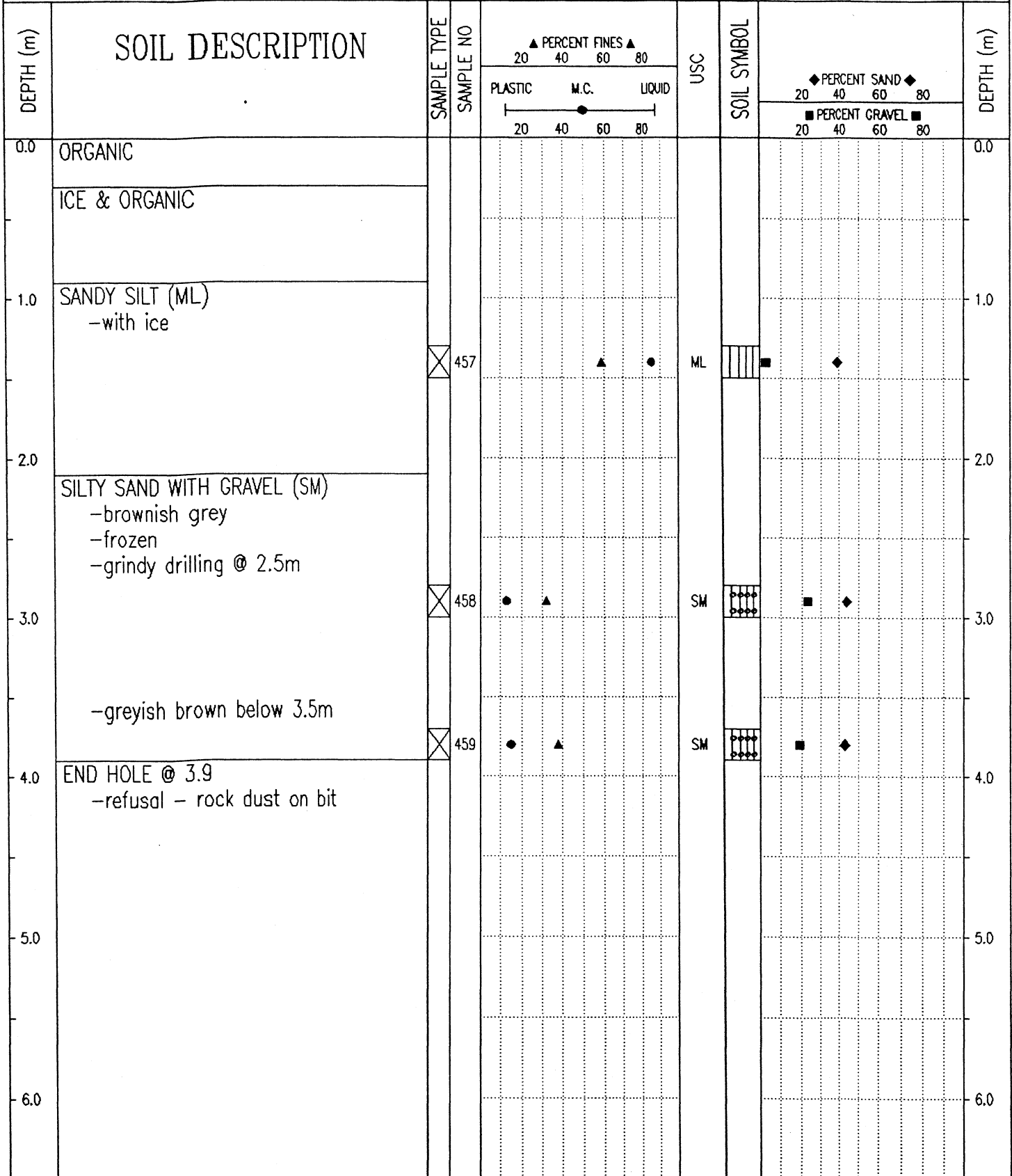


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Fig. No:

COMPLETION DEPTH: 4.2 m
COMPLETE: 99/07/05

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION	TEST HOLE NO: 519-575
SHAKWAK SEG 13		KM 1796-1822 A/H	Project No: 092-202101-0329
MOBILE B-40L		LOCATION: 1804+225 2M RHS	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE	



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LOGGED BY: S.H.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.9 m
COMPLETE: 99/07/05

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	
0.0 - 0.8	SILT WITH SAND (ML) -grey -frozen (Vx) below .4m		427		55	75	ML		■ ◆	0.8	
0.8 - 1.8	SANDY SILT WITH GRAVEL (ML) -grey -frozen (Vx) -grindy drilling		428		55	75	ML		■ ◆	1.8	
1.8 - 2.8	SILTY GRAVEL WITH SAND (GM) -grey -frozen (Vx)		429	15	55	75	GM		■ ◆	2.8	
2.8 - 3.8	SILTY SAND WITH GRAVEL (SM) -grey -frozen (Vx) -hard slow grindy drilling		430	15	55	75	SM		■ ◆	3.8	
3.8 - 4.0	END HOLE @ 4.0m -refusal - rock dust on bit									4.0	

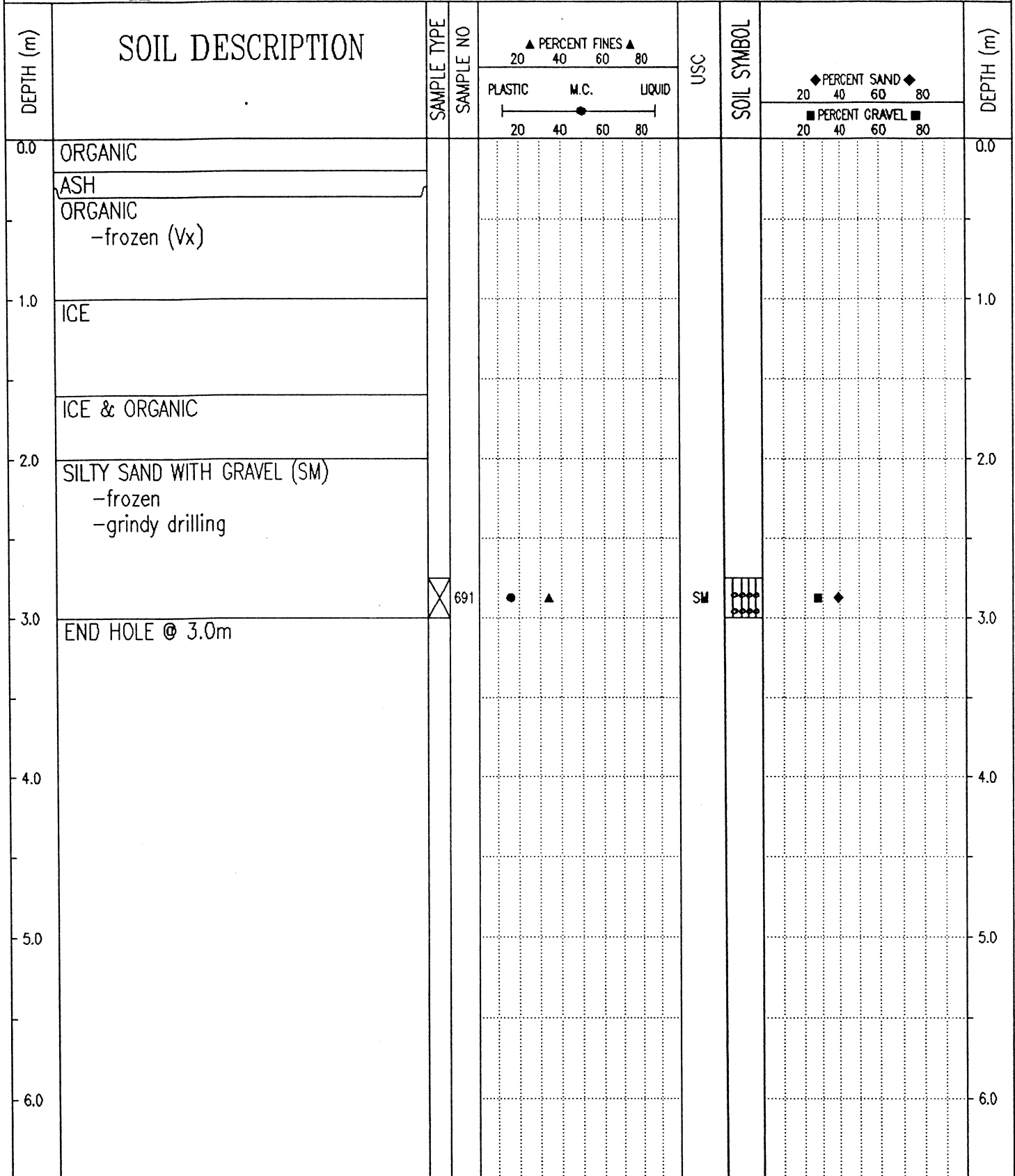
99/11/25 11:54AM

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 514-512									
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329									
NODWELL B-40L		LOCATION: 1804+275 CENTRELINE		ELEVATION: 0.00 (m)									
SAMPLE TYPE		<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER	<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE	<input type="checkbox"/> 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	
0.0 - 0.5	SILT WITH SAND (ML) -frozen	<input checked="" type="checkbox"/>	423	●		▲	ML		◆				
0.5 - 1.0	SILTY SAND WITH GRAVEL TO SANDY SILT WITH GRAVEL (SM)-(ML) -frozen (Vx)	<input checked="" type="checkbox"/>	424	●	▲		SM			◆	■		
1.0 - 2.0	SANDY SILT (ML) -not frozen	<input checked="" type="checkbox"/>	425	●	▲		ML			◆	■		
2.0 - 3.0	SANDY SILT (ML) -not frozen	<input checked="" type="checkbox"/>	426	●	▲		ML			◆	■		
3.0	END HOLE @ 3.0m											3.0	

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LOGGED BY: G.C.	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 99/05/07
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13	TEST HOLE NO: 527-729
ENGINEERING CAPITAL		KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L		LOCATION:1804+325 30M LT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE			



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LOGGED BY: G.C.	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 99/08/18
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 13	TEST HOLE NO: 527-728
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION: 1804+420 30M LT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> 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	
	ASH												
	ORGANIC & ICE -frozen (Vx)												
1.0												1.0	
	ORGANIC, ASH & ICE MIX												
2.0												2.0	
	SILTY GRAVEL (GM) -frozen -grindy drilling												
3.0	END HOLE @ 3.0m	<input checked="" type="checkbox"/>	690	●▲			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: 99/08/13
	Fig. No:	Page 1 of 1

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	ORGANIC										0.0	
	ASH											
	-frozen											
1.0	ORGANIC										1.0	
	-frozen (Vx)											
2.0	ICE WITH SILT										2.0	
		<input checked="" type="checkbox"/>	421				ML		■ ◆			
	SANDY SILT WITH GRAVEL (ML)											
	frozen											
3.0	END HOLE @ 3.0m										3.0	
		<input checked="" type="checkbox"/>	422				ML		■ ◆			

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	PERCENT SAND ◆ 20 40 60 80 PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SILT							
1.0	ICE -smooth drilling							1.0
2.0								2.0
3.0	SILTY SAND WITH GRAVEL (SM) -drill starts grinding @ 2.5m		420	▲ ●	SM	◆ ■		3.0
4.0	END HOLE @ 3.0m							4.0
5.0								5.0
6.0								6.0

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 13	TEST HOLE NO: 527-727
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION: 1804+575 20M RT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		PERCENT GRAVEL ■		DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	60	80	
0.0	ORGANIC SILTY ASH WITH ICE -frozen (Vx)											0.0	
1.0		<input checked="" type="checkbox"/>	688	●	▲		ML	▨	◆			1.0	
2.0	SILTY SAND (SM) -frozen -grindy drilling											2.0	
3.0		<input checked="" type="checkbox"/>	689	●	▲		SM	▨	◆	■		3.0	
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: 99/08/17
	Fig. No:	

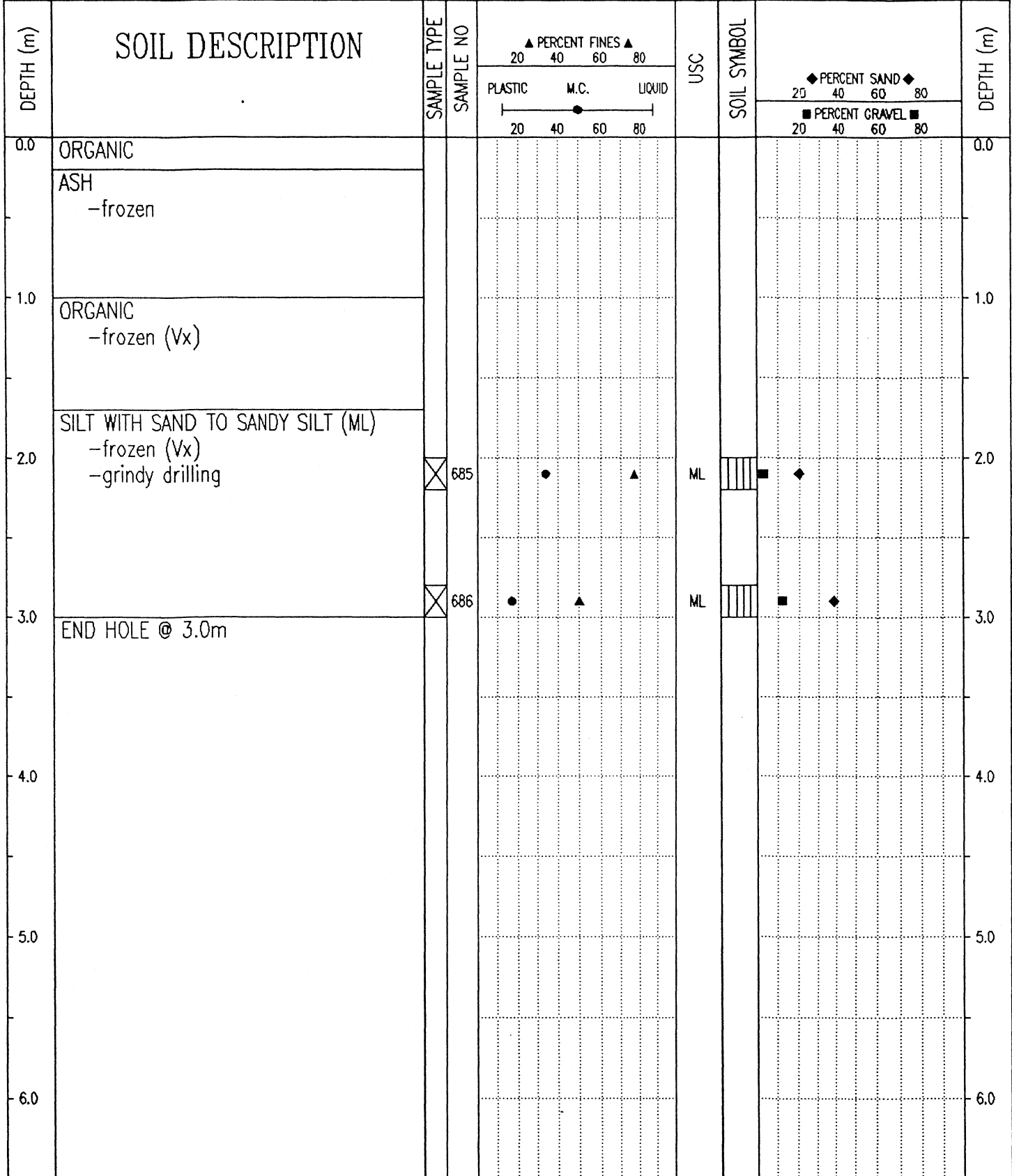
98/12/02 11:42AM

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13	TEST HOLE NO: 527-726
ENGINEERING CAPITAL		KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L		LOCATION: 1804+575 20M LT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> 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	ORGANIC										0.0	
	ASH -frozen											
1.0	ORGANIC & ASH MIX -frozen (Vx)										1.0	
2.0											2.0	
3.0	SILTY SAND WITH GRAVEL (SM) -frozen	<input checked="" type="checkbox"/>	687	●	▲		SM	■	◆		3.0	
	END HOLE @ 3.0m											
4.0											4.0	
5.0											5.0	
6.0											6.0	

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	Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 13	TEST HOLE NO: 527-725
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION: 1804+650 30M LT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



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Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/08/17

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 514-509								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1804+725 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.			20	40	60	80	
0.0	ORGANIC											0.0
	ASH											
	ICE											
1.0	ICE WITH SILT											1.0
	ICE - SILT - ODD ROCK -no sample		417			ML						
2.0	ICE - SILT - ODD ROCK -no sample											2.0
3.0	SILTY SAND WITH GRAVEL (SM) -frozen - no visible ice		418			SM						3.0
	-not frozen below 3.6m											
4.0	END HOLE @ 3.6m		419			SM						4.0
5.0												5.0
6.0												6.0

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Fig. No:
COMPLETION DEPTH: 4.0 m
COMPLETE: 99/05/07
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 13	TEST HOLE NO: 527-724
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION:1804+775 30M LT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK
		<input type="checkbox"/> TUBE
		<input type="checkbox"/> 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	ORGANIC										0.0	
	ASH											
	ORGANIC -frozen (Vx)											
1.0											1.0	
2.0	SANDY SILT WITH GRAVEL TO SILTY GRAVEL WITH SAND (ML)-(GM) -frozen -grindy drilling	<input checked="" type="checkbox"/>	683	●	▲		ML	▨	◆	■	2.0	
3.0											3.0	
4.0	END HOLE @ 4.0m	<input checked="" type="checkbox"/>	684	●	▲		GM	▨	◆	■	4.0	
5.0											5.0	
6.0											6.0	

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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 4.0 m
COMPLETE: 99/08/17

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 514-508								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1804+850 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE		RETURN		S.P.T.								
AUGER		BULK		TUBE								
CORE												
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	60	
0.0	ORGANICS -frozen (Vx)											0.0
1.0	ICE -no sample											1.0
2.0	ICE WITH SILT	⊗	414				ML	▨	◆	■		2.0
3.0	SILT (ML) -frozen (Vx) -drill grinding @ 2.2m	⊗	415				ML	▨	◆	■		3.0
4.0	SILTY SAND WITH GRAVEL (SM) -frozen (Vx)	⊗	416				SM	▨	◆	■		4.0
4.0	END HOLE @ 4.0M											4.0
5.0												5.0
6.0												6.0

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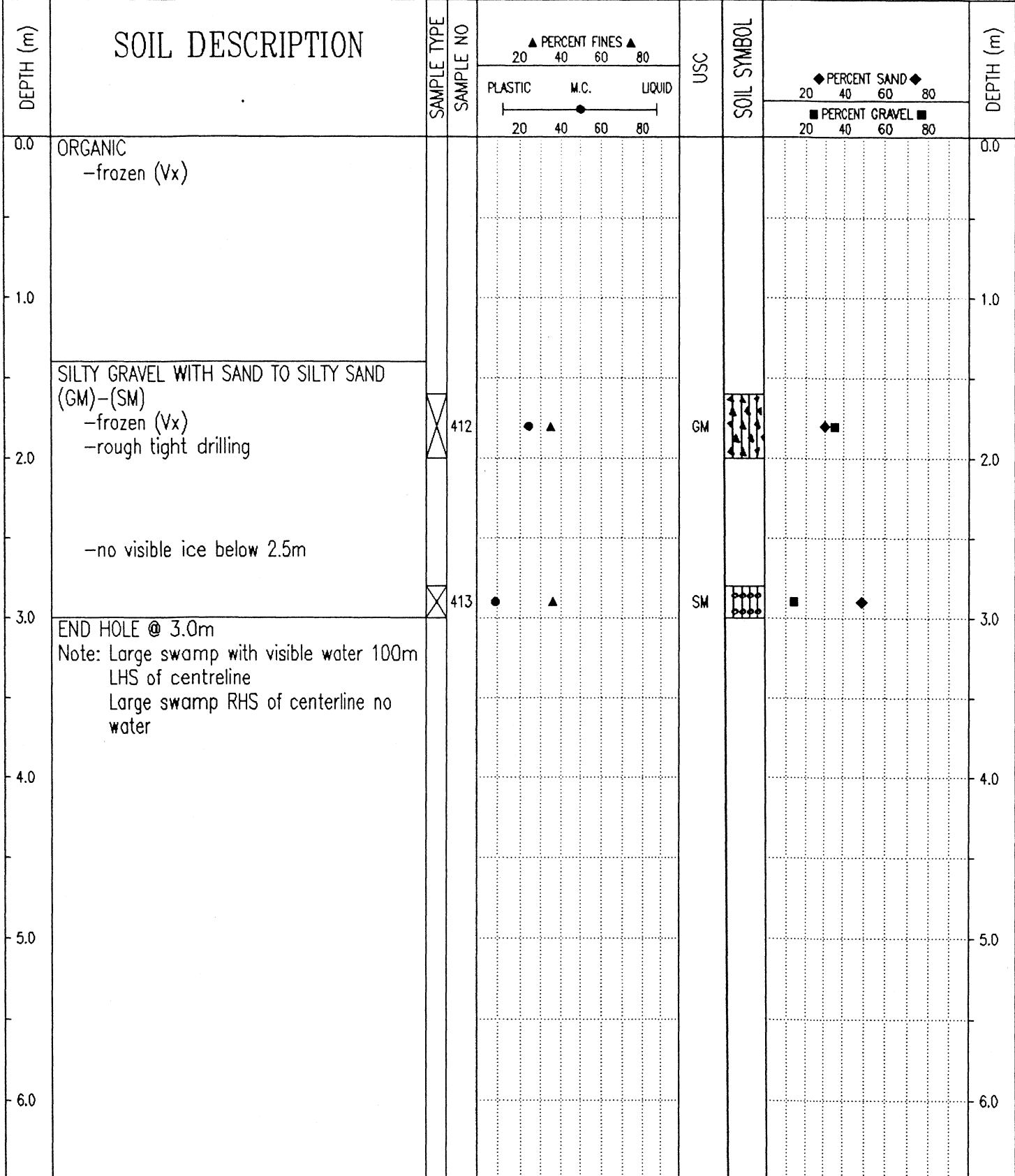
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Fig. No:

COMPLETION DEPTH: 4.0 m
COMPLETE: 99/05/07

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	ASH							
	-frozen							
	ORGANIC							
	-frozen (Vx)							
1.0								1.0
	SILTY SAND WITH GRAVEL (SM)							
	-frozen							
	-grindy drilling	<input checked="" type="checkbox"/>	681	● ▲	SM	◆ ■		2.0
2.0								
		<input checked="" type="checkbox"/>	682	● ▲	SM	◆ ■		3.0
3.0	END HOLE @ 3.0m							
4.0								4.0
5.0								5.0
6.0								6.0

SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 514-507
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1804+950 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



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Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/05/07

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 PLASTIC M.C. LIQUID 20 40 60 80			20 40 60 80 20 40 60 80		
0.0	ORGANIC ASH								0.0
0.0 - 1.0	ORGANIC -frozen (Vx)								1.0
2.0	SILTY GRAVEL WITH SAND (GM) -frozen	<input checked="" type="checkbox"/>	678	● ▲	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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LOGGED BY: G.C.	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 99/08/17
Fig. No:	Page 1 of 1

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 ■	PERCENT SAND ◆	PERCENT GRAVEL ■		
				20	40	60			20	40	60	80	
0.0	ORGANIC												0.0
	ASH												
	ORGANIC -frozen (Vx)												
1.0													1.0
	SILTY SAND WITH GRAVEL (SM) -frozen												
2.0	-grindy drilling below 2.0m		679	●	▲		SM	■	◆				2.0
3.0	END HOLE @ 3.0m		680	●	▲		SM	■	◆				3.0
4.0													4.0
5.0													5.0
6.0													6.0

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LOGGED BY: G.C.	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 99/08/17
Fig. No:	Page 1 of 1

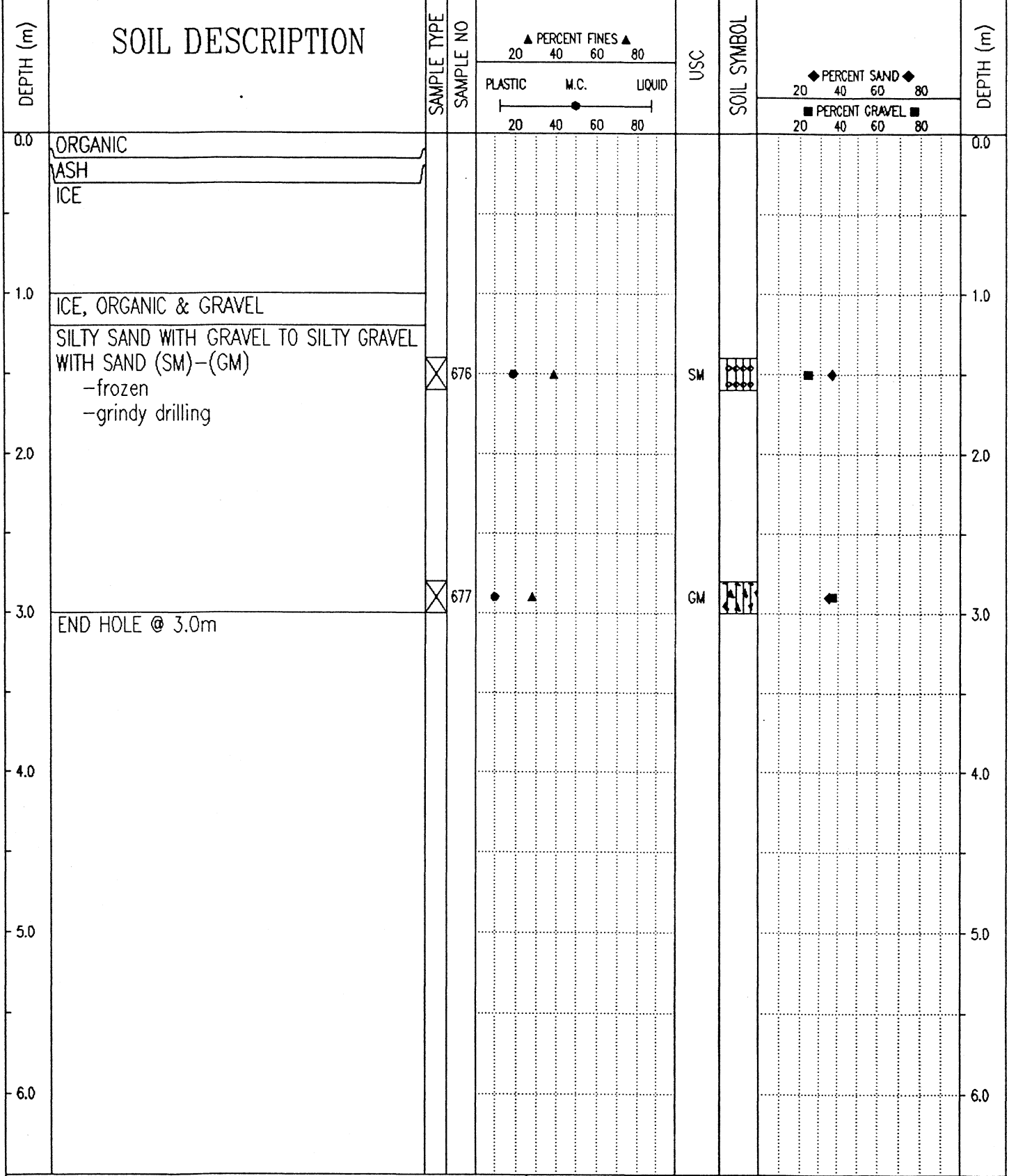
SAMPLE TYPE RETURN S.P.T. AUGER BULK TUBE CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	
0.0	ORGANIC									0.0	
	ASH										
	ORGANIC WITH SILT -frozen (Vx)										
1.0										1.0	
			409				ML				
2.0	SILTY GRAVEL WITH SAND (GM) -frozen -no visible ice										
			410				GM				
3.0										3.0	
			411				GM				
	END HOLE @ 3.2m										
4.0										4.0	
5.0										5.0	
6.0										6.0	

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LOGGED BY: G.C.	COMPLETION DEPTH: 3.2 m
REVIEWED BY:	COMPLETE: 99/05/07
Fig. No:	Page 1 of 1

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



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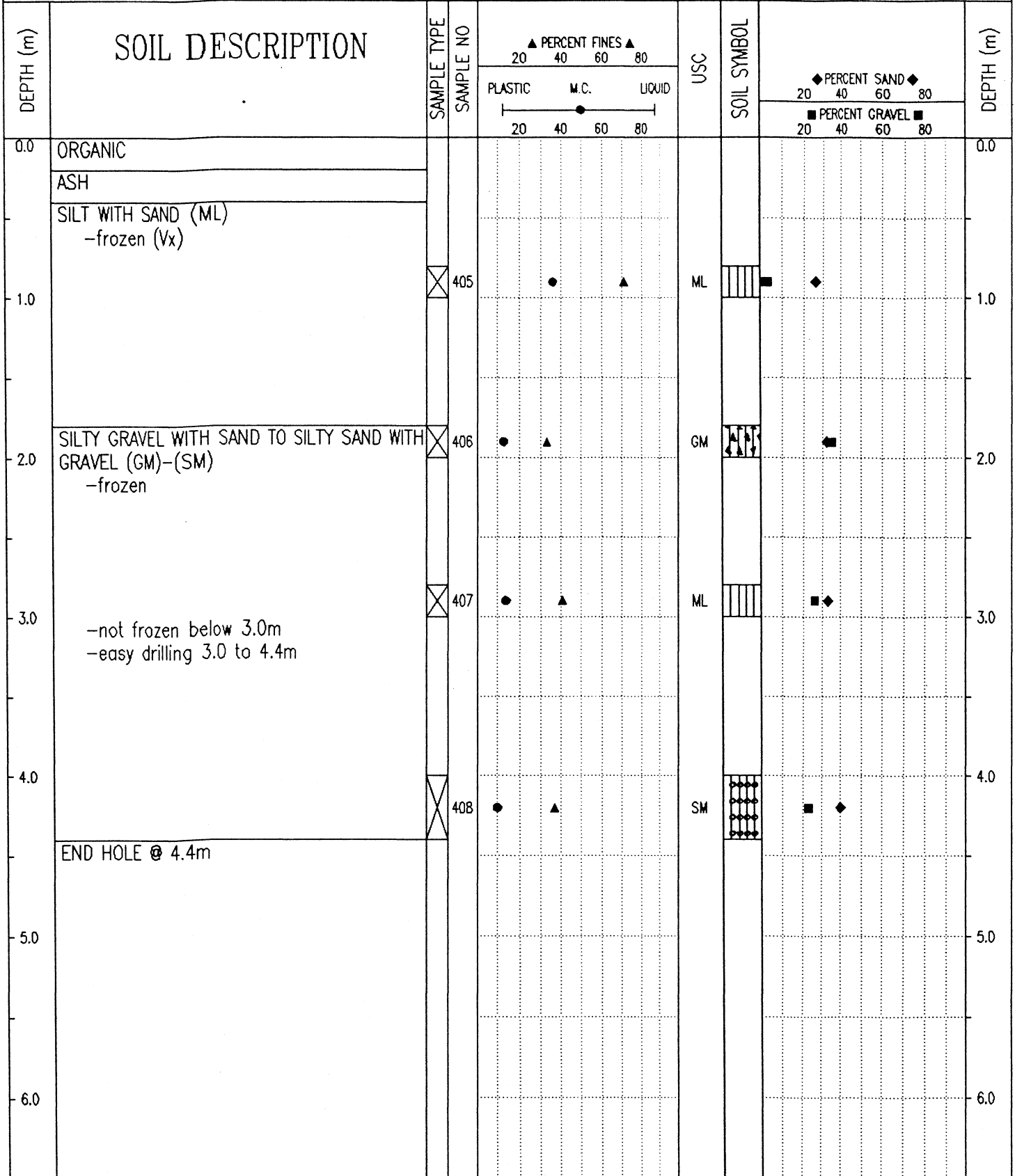
SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 527-719									
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329									
MOBILE B40-L		LOCATION:1805+172 30M RT		ELEVATION: 0.00 (m)									
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER									
				<input type="checkbox"/> BULK									
				<input type="checkbox"/> TUBE									
				<input type="checkbox"/> 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 ORGANIC -frozen											0.0	
1.0	GRAVELLY SILT WITH SAND (ML) -frozen (Vx) -grindy drilling											1.0	
2.0		<input checked="" type="checkbox"/>	674	●	▲		ML		◆			2.0	
3.0	SILTY GRAVEL WITH SAND (GM) -frozen											3.0	
3.0		<input checked="" type="checkbox"/>	675	●	▲		GM		◆	■		3.0	
4.0	END HOLE @ 3.0m											4.0	
5.0												5.0	
6.0												6.0	

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Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/08/17

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



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REVIEWED BY:

Fig. No:

COMPLETION DEPTH: 4.4 m

COMPLETE: 99/05/07

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 527-718							
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329							
MOBILE B40-L		LOCATION: 1805+275 30M RT		ELEVATION: 0.00 (m)							
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER							
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE							
				<input type="checkbox"/> CORE							
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲			USC	SOIL SYMBOL	◆ PERCENT SAND ◆		DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	
0.0	ORGANIC ASH ORGANIC -frozen										0.0
1.0	SILTY SAND WITH GRAVEL (SM) -frozen (Vx) -grindy drilling										1.0
2.0											2.0
3.0											3.0
4.0											4.0
5.0											5.0
6.0											6.0
	END HOLE @3.0m										

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 527-716				
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329				
MOBILE B40-L		LOCATION: 1805+325 20M RT		ELEVATION: 0.00 (m)				
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER				
				<input type="checkbox"/> BULK				
				<input type="checkbox"/> TUBE				
				<input type="checkbox"/> CORE				
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲		USC	SOIL SYMBOL	DEPTH (m)
				PLASTIC	M.C.			
0.0	ORGANIC -surface water							0.0
	ASH							
	ORGANIC -frozen (Vx)							
1.0								1.0
2.0	SILTY SAND WITH GRAVEL -frozen -grindy drilling	<input checked="" type="checkbox"/>	670	●	▲	SM	■ ◆	2.0
3.0	END HOLE @ 2.8m							3.0
4.0								4.0
5.0								5.0
6.0								6.0

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Fig. No:

COMPLETION DEPTH: 2.8 m
COMPLETE: 99/08/17

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 13	TEST HOLE NO: 527-717
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION:1805+325 20M LT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> 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 -visible surface water											0.0	
	ASH												
	ORGANIC -free water to .5m -frozen below .5m												
1.0												1.0	
2.0	SILTY SAND WITH GRAVEL (SM) -frozen -grinding drilling											2.0	
3.0		<input checked="" type="checkbox"/>	671	●	▲		SM	◆	■			3.0	
4.0												4.0	
5.0												5.0	
6.0												6.0	
	HOLE @ 3.0m -refusal												

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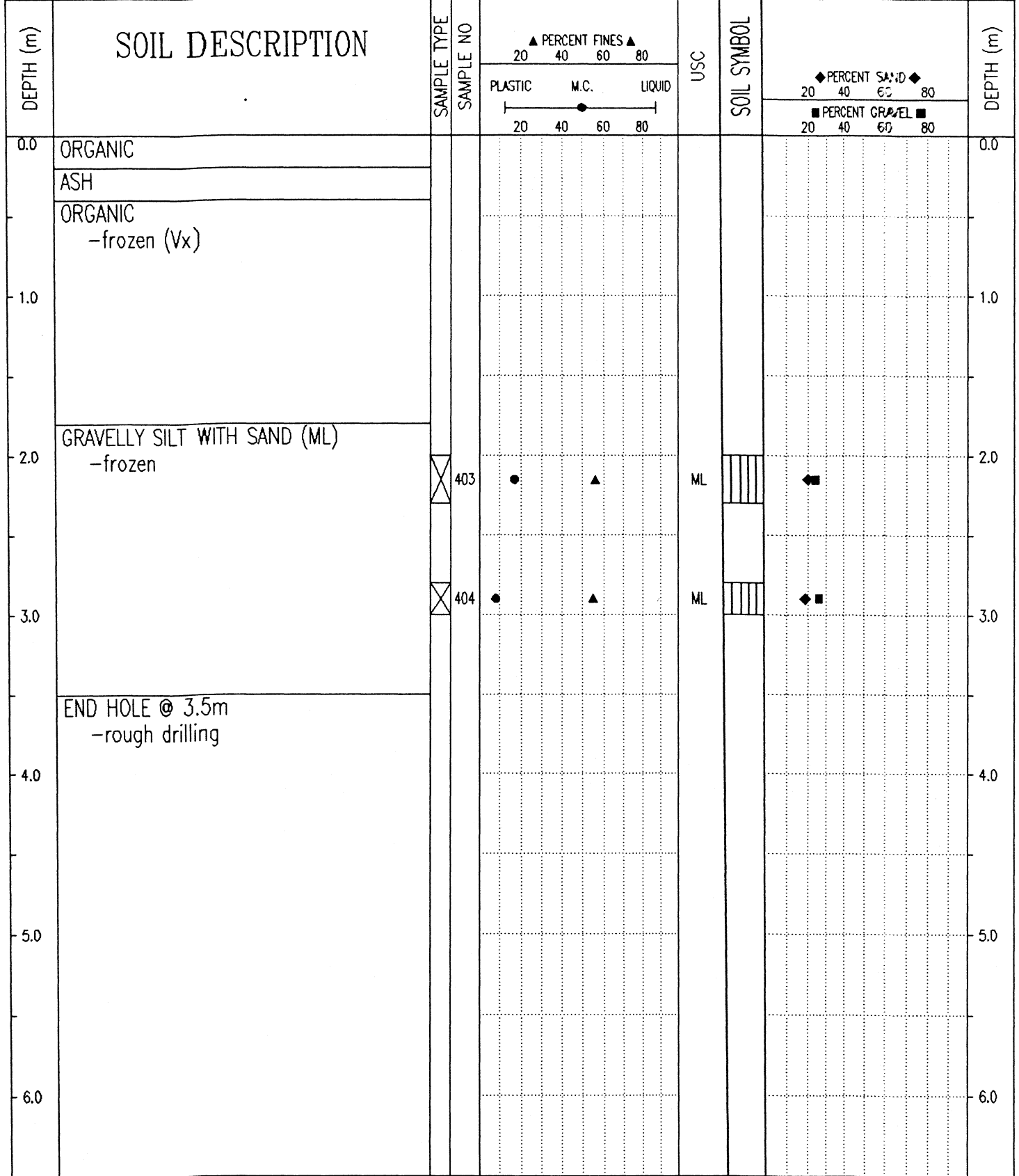
Fig. No:

COMPLETION DEPTH: 3.0 m

COMPLETE: 99/08/17

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SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 514-504
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1805+350 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
	<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
		<input type="checkbox"/> CORE



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LOGGED BY: G.C. COMPLETION DEPTH: 3.8 m
 REVIEWED BY: COMPLETE: 99/05/06
 Fig. No: Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 13	TEST HOLE NO: 527-714
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION:1805+425 20M RT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		PERCENT GRAVEL ■		DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	60	80	
0.0	ORGANIC -free water on surface											0.0	
	ASH												
	ORGANIC -frozen												
1.0												1.0	
	SILTY GRAVEL WITH SAND (GM) -frozen (Vx) -test hole is saturated @ 1.5m												
2.0												2.0	
3.0	-sample #668 contaminated with ash & organic END HOLE @ 3.0	<input checked="" type="checkbox"/>	668	●	▲		GM	◆	■			3.0	
4.0												4.0	
5.0												5.0	
6.0												6.0	

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Fig. No:

COMPLETION DEPTH: 3.0 m

COMPLETE: 99/08/17

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 527-715							
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329							
MOBILE B40-L		LOCATION: 1805+425 20M LT		ELEVATION: 0.00 (m)							
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER							
				<input type="checkbox"/> BULK							
				<input type="checkbox"/> TUBE							
				<input type="checkbox"/> CORE							
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲			USC	SOIL SYMBOL	◆ PERCENT SAND ◆		DEPTH (m)
				PLASTIC	M.C.	LIQID			20	40	
0.0	ORGANIC										0.0
	ASH										
	ORGANIC & SILT MIX -frozen (Vx)										
1.0											1.0
	SILT WITH SAND (ML) -frozen (Vx)										
2.0			669				ML				2.0
	SILTY GRAVEL WITH SAND -frozen -grindy drilling -no visible ice										
3.0	END HOLE @ 3m		669A				GM				3.0
4.0											4.0
5.0											5.0
6.0											6.0

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COMPLETION DEPTH: 3.0 m

COMPLETE: 99/08/17

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SUBSURFACE EXPLORATION & TESTING REPORT ALASKA HWY RECONSTRUCTION TEST HOLE NO: 514-503

SHAKWAK PROJECT SEG 13B KM 1799 - 1822 A/H Project No: 092-202101-0329

NODWELL B-40L LOCATION: 1805+450 CENTRELINE ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	60	
0.0	ORGANIC -frozen (Vx)											0.0
	ASH -frozen (Vx)											
	ORGANICS -frozen (Vx)											
1.0												1.0
	SILT WITH SAND (ML) -frozen (Vx)	<input checked="" type="checkbox"/>	400	●		▲	ML		◆			2.0
2.0												
	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-)SM) -frozen	<input checked="" type="checkbox"/>	401	●	▲		GM		◆	■		3.0
3.0												
		<input checked="" type="checkbox"/>	402	●	▲		SM		◆	■		4.0
4.0	END HOLE @ 4.0m											
5.0												5.0
6.0												6.0

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 527-713											
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329											
MOBILE B40-L		LOCATION:1805+450 20M RT		ELEVATION: 0.00 (m)											
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER											
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE											
				<input type="checkbox"/> 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	ORGANIC ASH ORGANIC -water entering hole @ 0.5m -organic & ash satirated @ 0.5m -frozen (Vx) below 0.5m													0.0	
2.0	SILTY GRAVEL WITH SAND (GM) -with ash contamination -frozen	<input checked="" type="checkbox"/>	666	●	▲		GM	▲▲▲	◆	■				2.0	
3.0	SILTY SAND WITH GRAVEL (SM) -frozen -drill grinding	<input checked="" type="checkbox"/>	667	●	▲		SM	●●●	■	◆				3.0	
	END HOLE @ 3.0m														

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COMPLETION DEPTH: 3.0 m
COMPLETE: 99/08/17

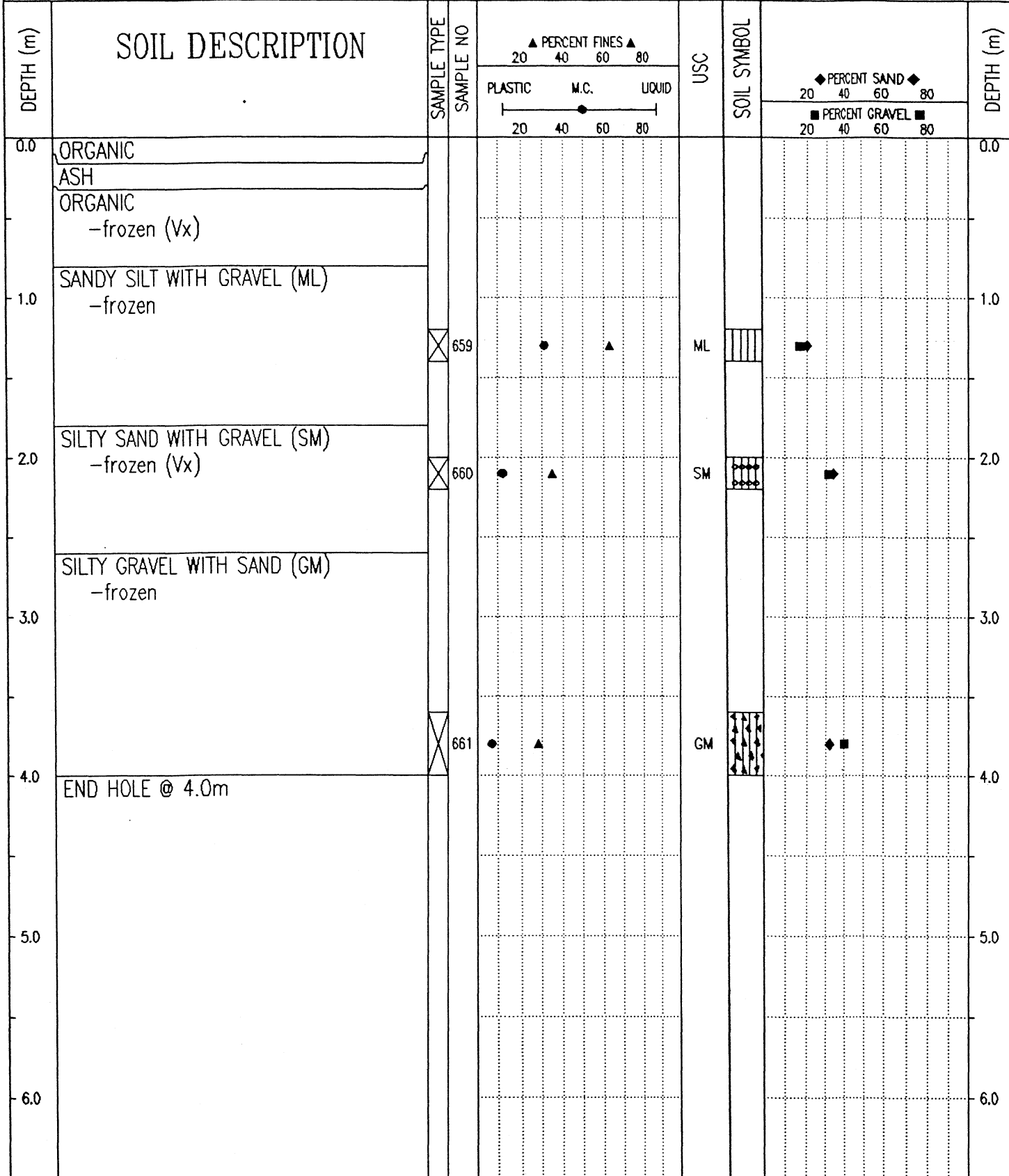
SAMPLE TYPE RETURN S.P.T. AUGER BULK TUBE CORE

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	ORGANIC											0.0
	ASH											
	ORGANIC -frozen (Vx)											
1.0												1.0
	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -frozen -grindy drilling											
2.0		<input checked="" type="checkbox"/>	664	●	▲		GM		◆	■		2.0
3.0		<input checked="" type="checkbox"/>	665	●	▲		SM		◆	■		3.0
	END HOLE @ 3.0m											
4.0												4.0
5.0												5.0
6.0												6.0

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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 13	TEST HOLE NO: 527-710
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION: 1805+550 20M RT	ELEVATION: 0.00 (m)

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

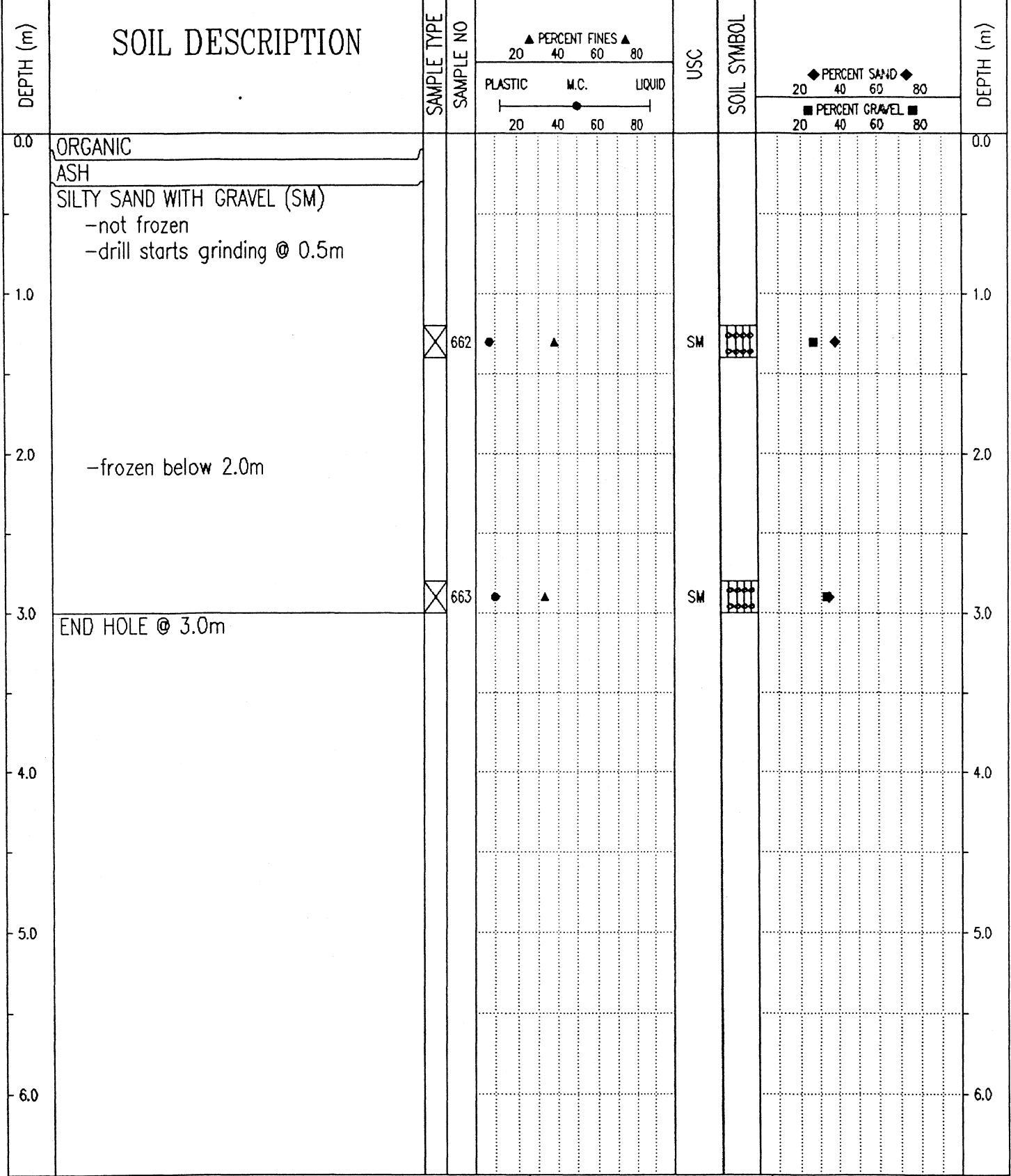


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Fig. No:

COMPLETION DEPTH: 4.0 m
COMPLETE: 99/08/05 17

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



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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	
0.0	ORGANIC											0.0
	ASH											
	ORGANIC -frozen											
1.0	SILTY GRAVEL WITH SAND (GM) -frozen (Vx) -rough drilling		398	●	▲		GM	◆	■			1.0
2.0												2.0
3.0	SILTY SAND WITH GRAVEL (SM) -not frozen		399	●	▲		SM	◆	■			3.0
	END HOLE @ 3.0m											
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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COMPLETE: 99/05/06

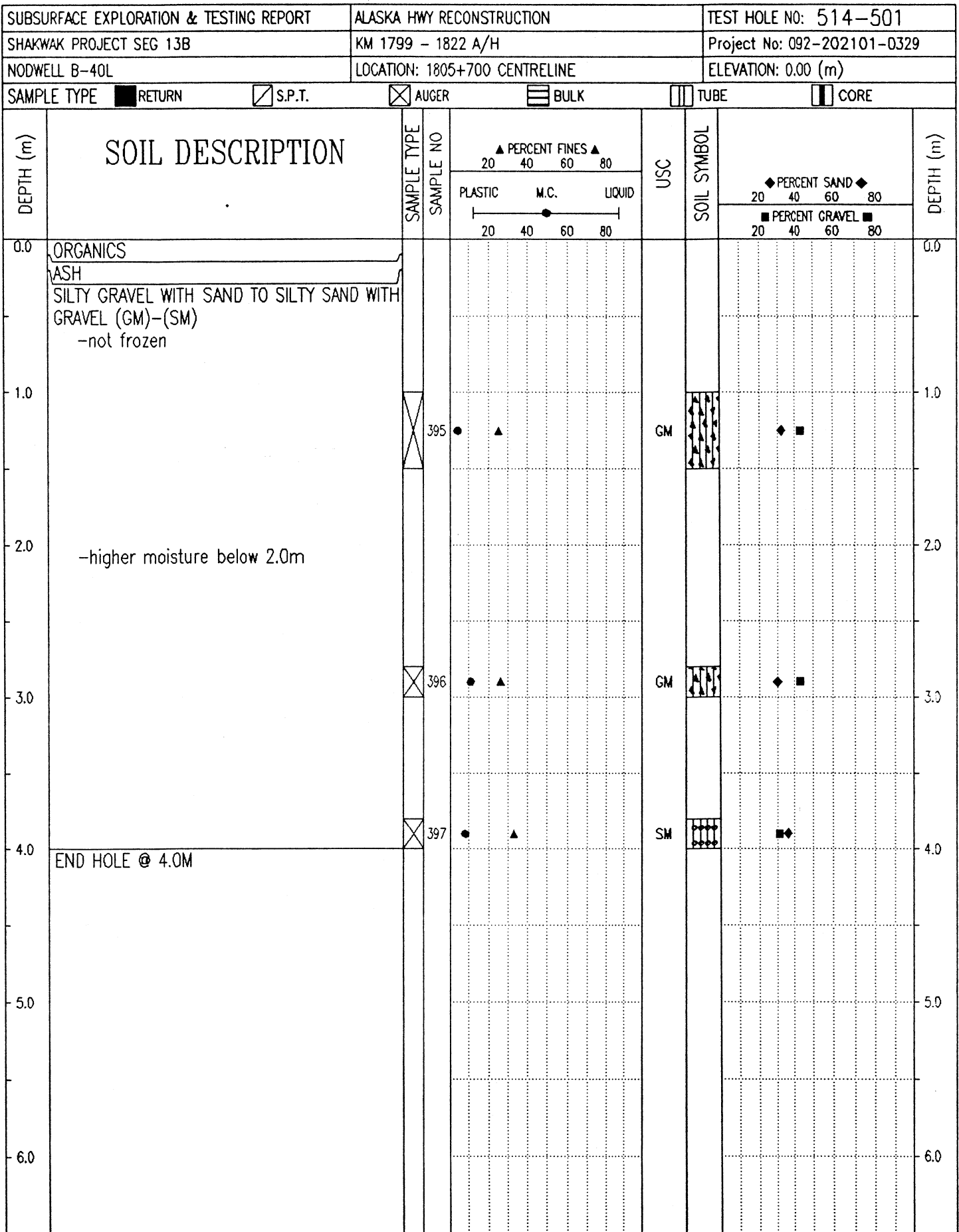
Fig. No:

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 526-709	
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329	
MOBILE B40-L		LOCATION: 1805+590 30M RT		ELEVATION: 0.00 (m)	
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER	
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE	
				<input type="checkbox"/> 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	
0.0	ORGANIC ASH											0.0
0.0 - 1.0	ORGANIC -frozen											1.0
1.0 - 2.0												2.0
2.0 - 3.0	SILTY SAND WITH GRAVEL (SM) -frozen (Vx) -grindy											3.0
3.0	END HOLE @ 3.0m	<input checked="" type="checkbox"/>	658	●	▲		SM	■	◆			3.0
3.0 - 4.0												4.0
4.0 - 5.0												5.0
5.0 - 6.0												6.0

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COMPLETION DEPTH: 4.0 m
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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 13	TEST HOLE NO: 526-708
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION: 1805+700 30M RT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT GRAVEL ■			
0.0	ORGANIC ASH										0.0	
0.0 - 1.0	ORGANIC -frozen										1.0	
1.0 - 2.0	SILTY SAND WITH GRAVEL (SM) -frozen -grindy drilling	<input checked="" type="checkbox"/>	656	●	▲		SM	◆◆◆◆	■	◆	2.0	
2.0 - 3.0		<input checked="" type="checkbox"/>	657	●	▲		SM	◆◆◆◆	■	◆	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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 REVIEWED BY: COMPLETE: 99/08/13
 Fig. No: Page 1 of 1

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	ASH							
1.0	ORGANIC -frozen (Vx)							1.0
2.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM) -(GM) -frozen -rough drilling	<input checked="" type="checkbox"/>	393	● ▲	SM		■ ◆	2.0
3.0	END HOLE @ 3.0m -refusal	<input checked="" type="checkbox"/>	394	● ▲	GM		■ ◆	3.0
4.0								4.0
5.0								5.0
6.0								6.0

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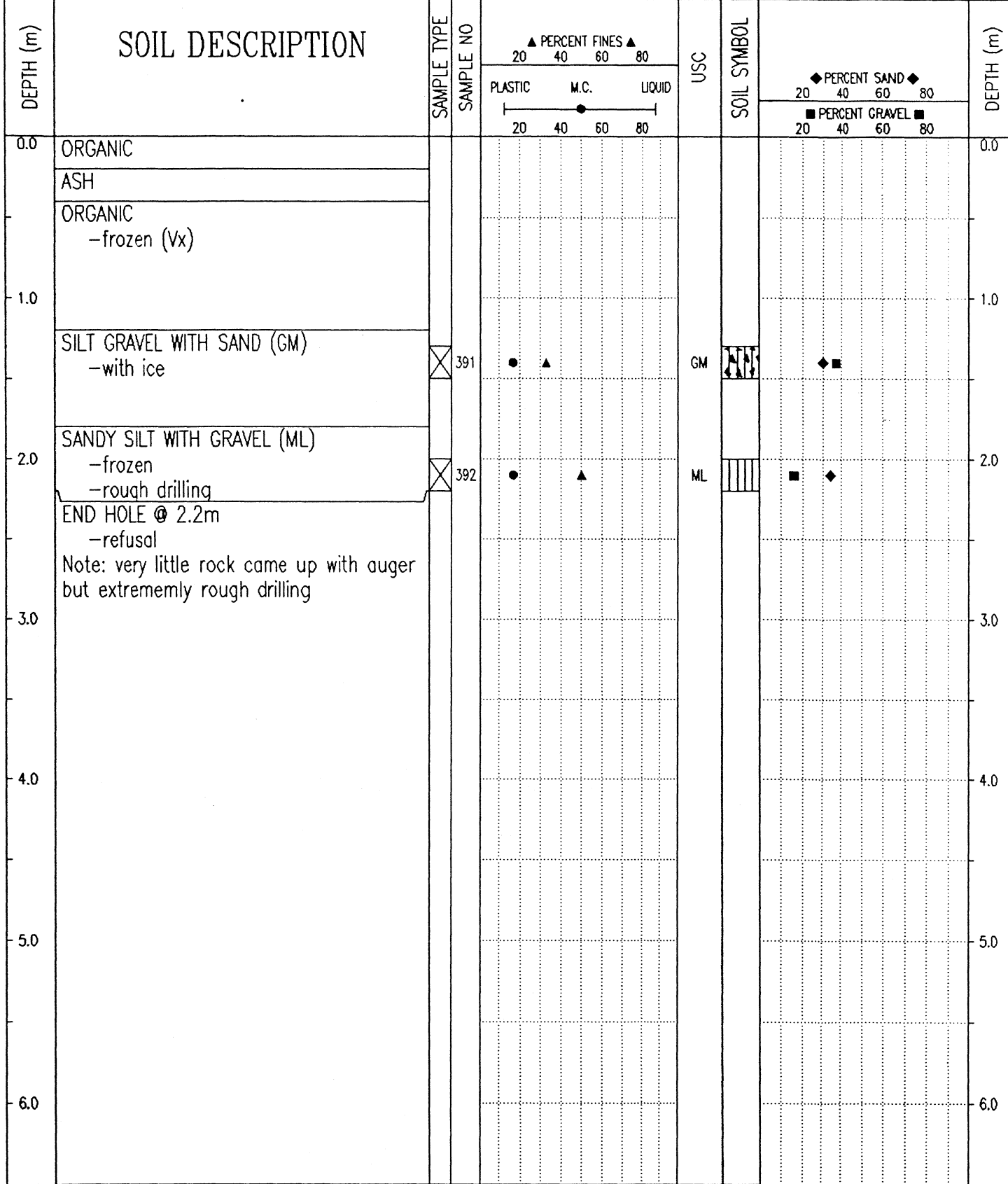
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COMPLETION DEPTH: 3.0 m
COMPLETE: 99/05/06

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 ■	PERCENT SAND ◆	
0.0	ORGANIC WASH SILTY SAND WITH GRAVEL (SM) -frozen -grindy @ 0.4m										0.0
1.0	-possible rock below 1.5m		655	●	▲		SM	◆	■		1.0
2.0	-wet - no sample @ 2.0m										2.0
2.2	END HOLE @ 2.2m -refusal										2.2
3.0											3.0
4.0											4.0
5.0											5.0
6.0											6.0

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



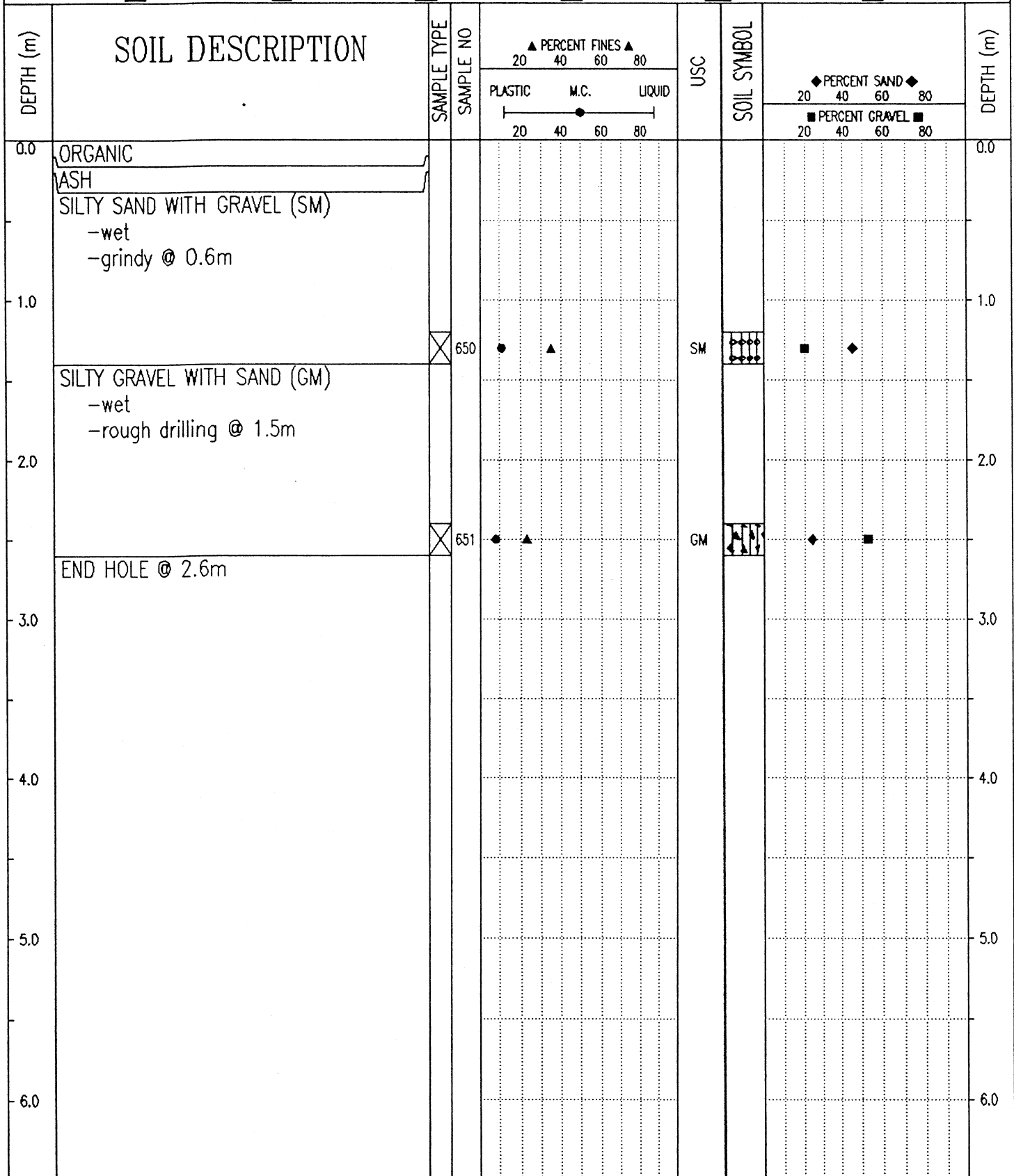
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Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 526-705						
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329						
MOBILE B40-L		LOCATION: 1805+915 20M RT		ELEVATION: 0.00 (m)						
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> 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	ORGANIC									0.0
	ASH									
	ORGANIC -frozen									
1.0										1.0
2.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -frozen -grindy drilling	<input checked="" type="checkbox"/>	652	●	▲		SM	■	◆	2.0
3.0	END HOLE @ 3.0m Note: old stripping from pipeline stockpile. Rt of centreline. Check testhole @ 1805+900 centreline	<input checked="" type="checkbox"/>	653	●	▲		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: 99/08/13				

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 526-706								
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329								
MOBILE B40-L		LOCATION: 1805+915 20M LT		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	
0.0	ORGANIC ASH											0.0
1.0	ORGANIC -frozen											1.0
2.0	SILTY SAND WITH GRAVEL (SM) -frozen -grindy drilling											2.0
3.0	END HOLE @ 3.0m	<input checked="" type="checkbox"/>	654	◆	▲		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: 99/08/13						
				Fig. No:				Page 1 of 1				

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 13	TEST HOLE NO: 526-704
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION: 1806+000 30M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.
	<input checked="" type="checkbox"/> AUGER	<input type="checkbox"/> BULK
	<input type="checkbox"/> TUBE	<input type="checkbox"/> CORE



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Fig. No:

COMPLETION DEPTH: 1.6 m

COMPLETE: 99/08/13

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SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 513-498					
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329					
NODWELL B-40L		LOCATION: 1806+075 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	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC								0.0
	ASH								
	SANDY SILT (ML) -frozen								
1.0		X	388	●	▲		ML	■ ◆	1.0
2.0	SILTY SAND WITH GRAVEL (SM) -rough drilling below 2.0m								2.0
3.0		X	389	◆	▲		SM	■ ◆	3.0
4.0	-tight drilling below 3.6m								
4.0	END HOLE @ 4.0m	X	390	●	▲		SM	■ ◆	4.0
5.0									5.0
6.0									6.0

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COMPLETION DEPTH: 4.0 m
COMPLETE: 99/05/06

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC ASH ORGANIC -frozen							0.0
1.0	SILTY SAND WITH GRAVEL (SM) -frozen -grindy drilling	<input checked="" type="checkbox"/>	648	● ▲	SM	◆ ■		1.0
2.0	-rough drilling @ 2.0m							2.0
3.0	END HOLE @ 2.9m -refusal	<input checked="" type="checkbox"/>	649	● ▲	SM	◆ ■		3.0
4.0								4.0
5.0								5.0
6.0								6.0

99/12/07 02:19PM

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 526-702							
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329							
MOBILE B40-L		LOCATION: 1806+200 30M RT		ELEVATION: 0.00 (m)							
SAMPLE TYPE		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	
0.0	ORGANIC ASH										0.0
	ORGANIC -frozen										
1.0											1.0
2.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -frozen -grindy drilling -rougher drilling below 2.0m		⊗	646	● ▲		GM	▲▲▲	◆ ■		2.0
3.0	END HOLE @ 2.8m -refusal		⊗	647	● ▲		SM	●●●●	■ ◆		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: 2.8 m COMPLETE: 99/08/13 Page 1 of 1			

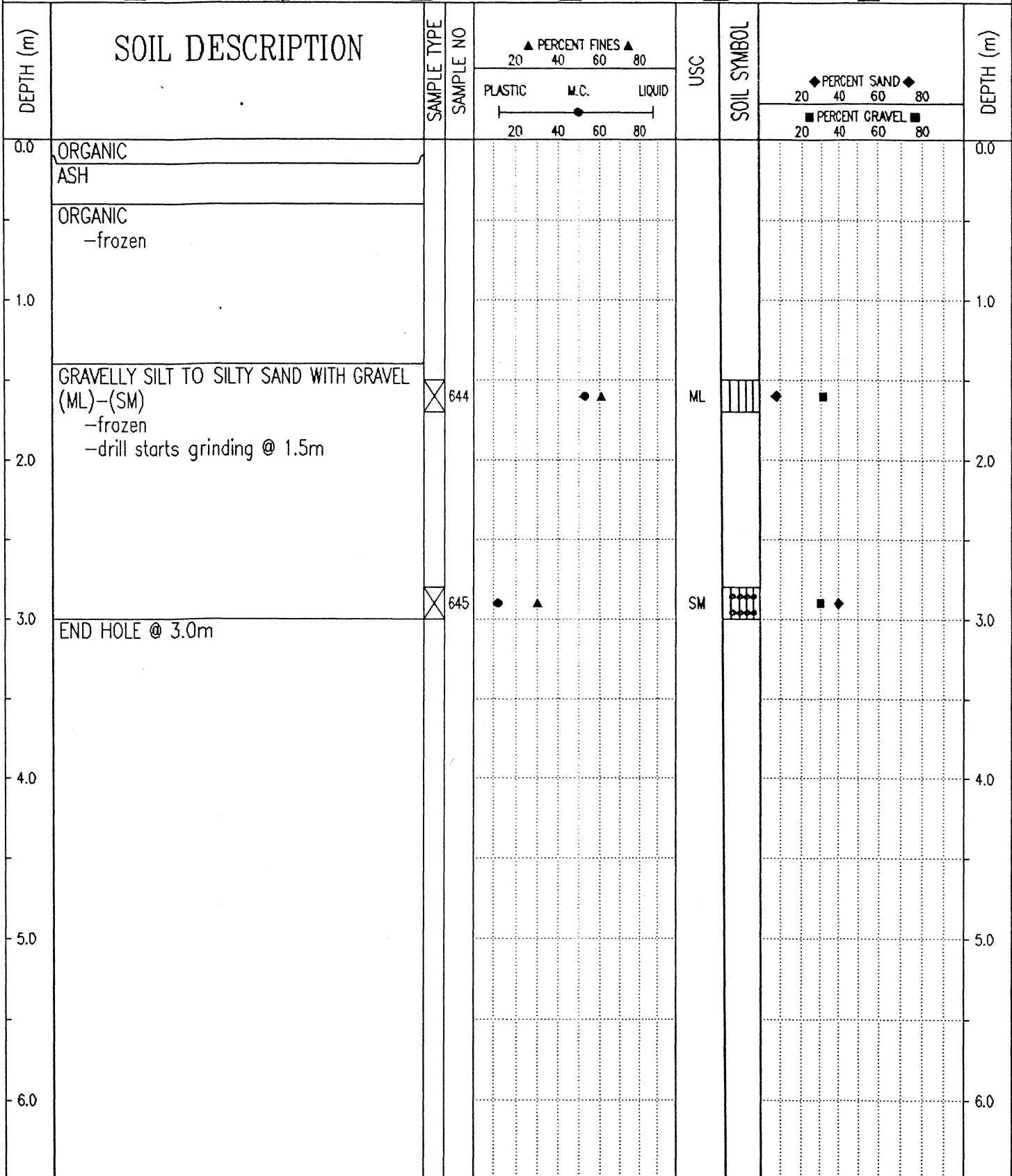
SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 513-497									
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329									
NODWELL B-40L		LOCATION: 1806+225 CENTRELINE		ELEVATION: 0.00 (m)									
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER									
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE									
				<input type="checkbox"/> 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	ORGANIC			20	40	60	80		20	40	60	80	0.0
	ASH												
	ORGANIC -frozen (Vx)												
1.0	SILTY SAND WITH GRAVEL (SM) -frozen (Vx) -rough drilling												1.0
2.0		<input checked="" type="checkbox"/>	387A	◆	▲			SM	◆	■			2.0
3.0	END HOLE @ 2.6m -refusal												3.0
4.0													4.0
5.0													5.0
6.0													6.0

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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 2.6 m
COMPLETE: 99/05/06

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13	TEST HOLE NO: 526-701
ENGINEERING CAPITAL		KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L		LOCATION:1806+300 30M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



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LOGGED BY: G.C.	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 99/08/13
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 513-496								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1806+325 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE		RETURN		S.P.T.								
		AUGER		BULK								
		TUBE		CORE								
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT GRAVEL			
0.0	ORGANIC										0.0	
	ASH											
	ORGANIC -frozen (Vx)											
1.0											1.0	
	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -frozen		386				SM					
2.0											2.0	
			387				GM					
3.0	END HOLE @ 3.0m -refusal										3.0	
4.0											4.0	
5.0											5.0	
6.0											6.0	

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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/05/06

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 526-700								
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329								
MOBILE B40-L		LOCATION: 1806+400 30M RT		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	ORGANIC ASH											0.0
0.0 - 1.0	SILTY SAND WITH GRAVEL TO SANDY SILT WITH GRAVEL (SM)-(ML) -frozen -drill starts grinding @ 0.8M											
0.8		<input checked="" type="checkbox"/>	642	●	▲		SM	◆	■			0.8
3.0	END HOLE @ 3.0m	<input checked="" type="checkbox"/>	643	●	▲		ML	◆	■			3.0

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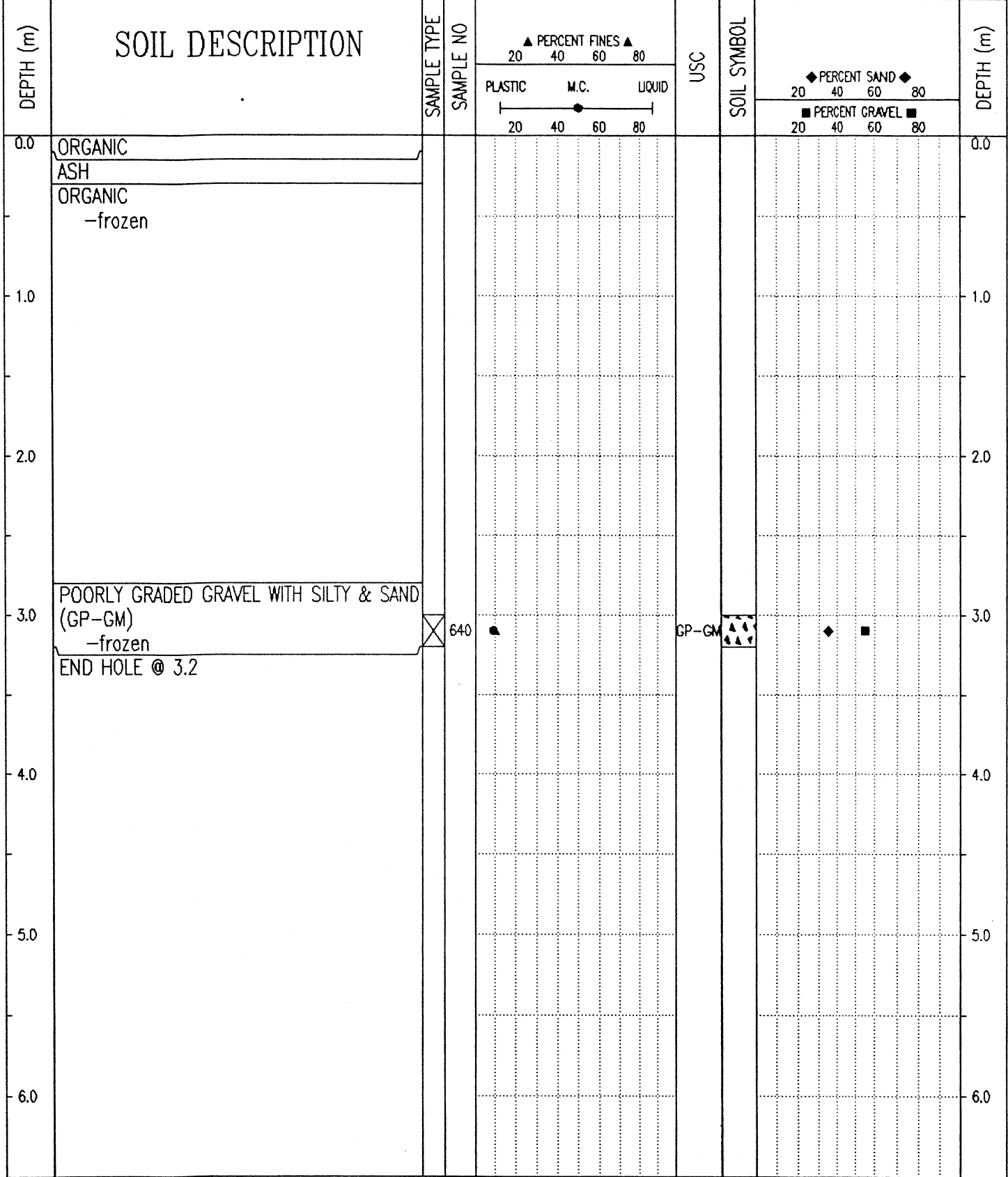
Fig. No:

COMPLETION DEPTH: 3.0 m

COMPLETE: 99/08/13

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



99/12/10 02:42PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 13	TEST HOLE NO: 526-699
ENGINEERING CAPITAL	KM 1799-1322 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION: 1806+470 20M LT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲			USC	SOIL SYMBOL	◆ PERCENT SAND ◆			DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	60	
0.0	ORGANIC											0.0
	ASH											
	ORGANIC -frozen											
1.0												1.0
2.0												2.0
3.0	SILTY GRAVEL WITH SAND (GM) -frozen -grindy drilling END HOLE @ 3.0m	<input checked="" type="checkbox"/>	641	●	▲		GM		◆	■		3.0
4.0												4.0
5.0												5.0
6.0												6.0

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LOGGED BY: G.C.	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 99/08/12
Fig. No:	Page 1 of 1

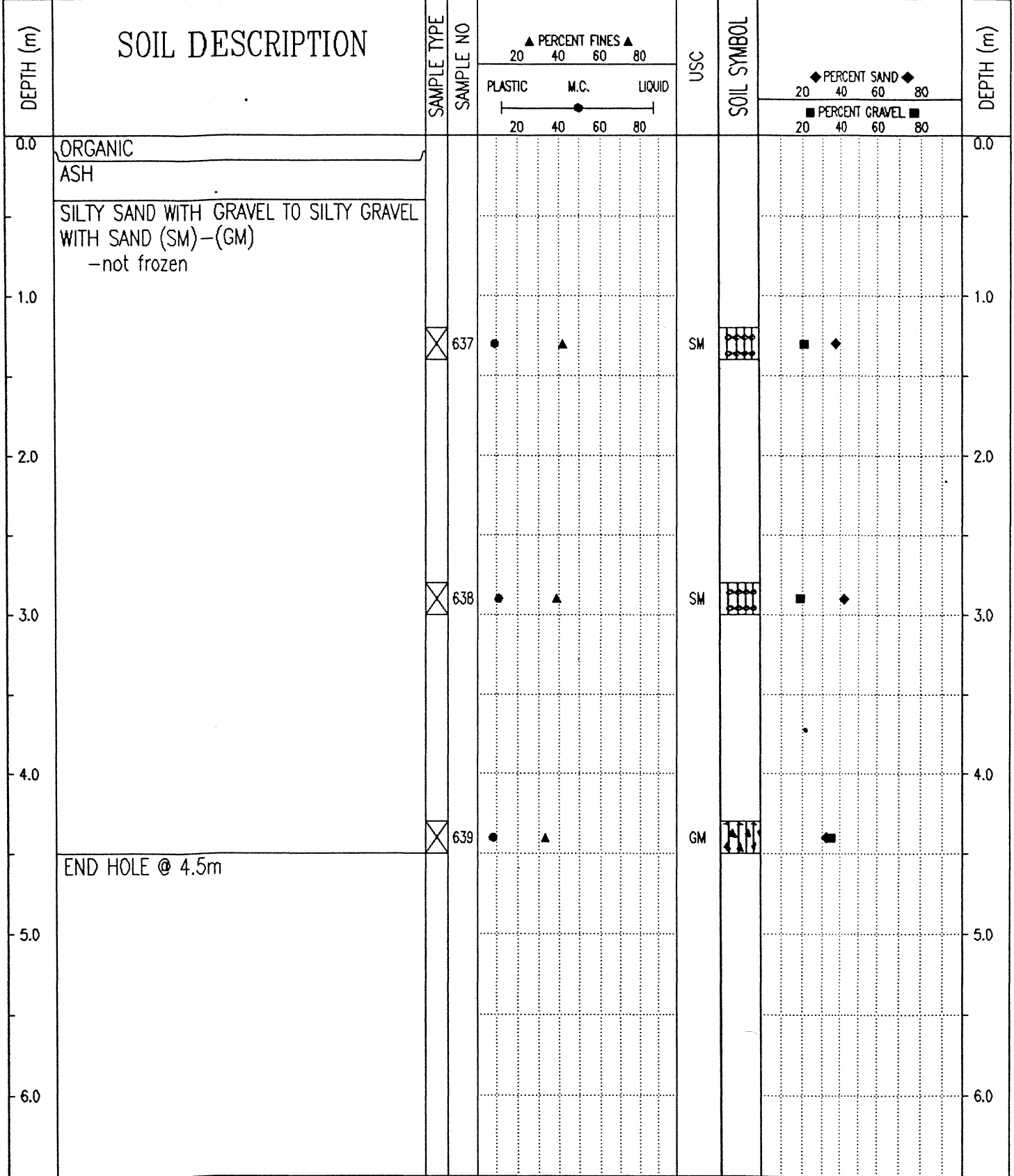
SAMPLE TYPE RETURN S.P.T. AUGER BULK TUBE CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	PERCENT SAND ◆ 20 40 60 80 PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	ASH							
	ORGANIC -frozen (Vx)							
1.0								1.0
2.0								2.0
	ICE							
3.0	SILTY SAND WITH GRAVEL (SM) -frozen -grindy drilling @ 2.9m END HOLE @ 3.0m	<input checked="" type="checkbox"/>	385	●▲	SM	◆■		3.0
4.0								4.0
5.0								5.0
6.0								6.0

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REVIEWED BY:	COMPLETE: 99/05/06
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13	TEST HOLE NO: 526-697
ENGINEERING CAPITAL		KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L		LOCATION:1806+575 30M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



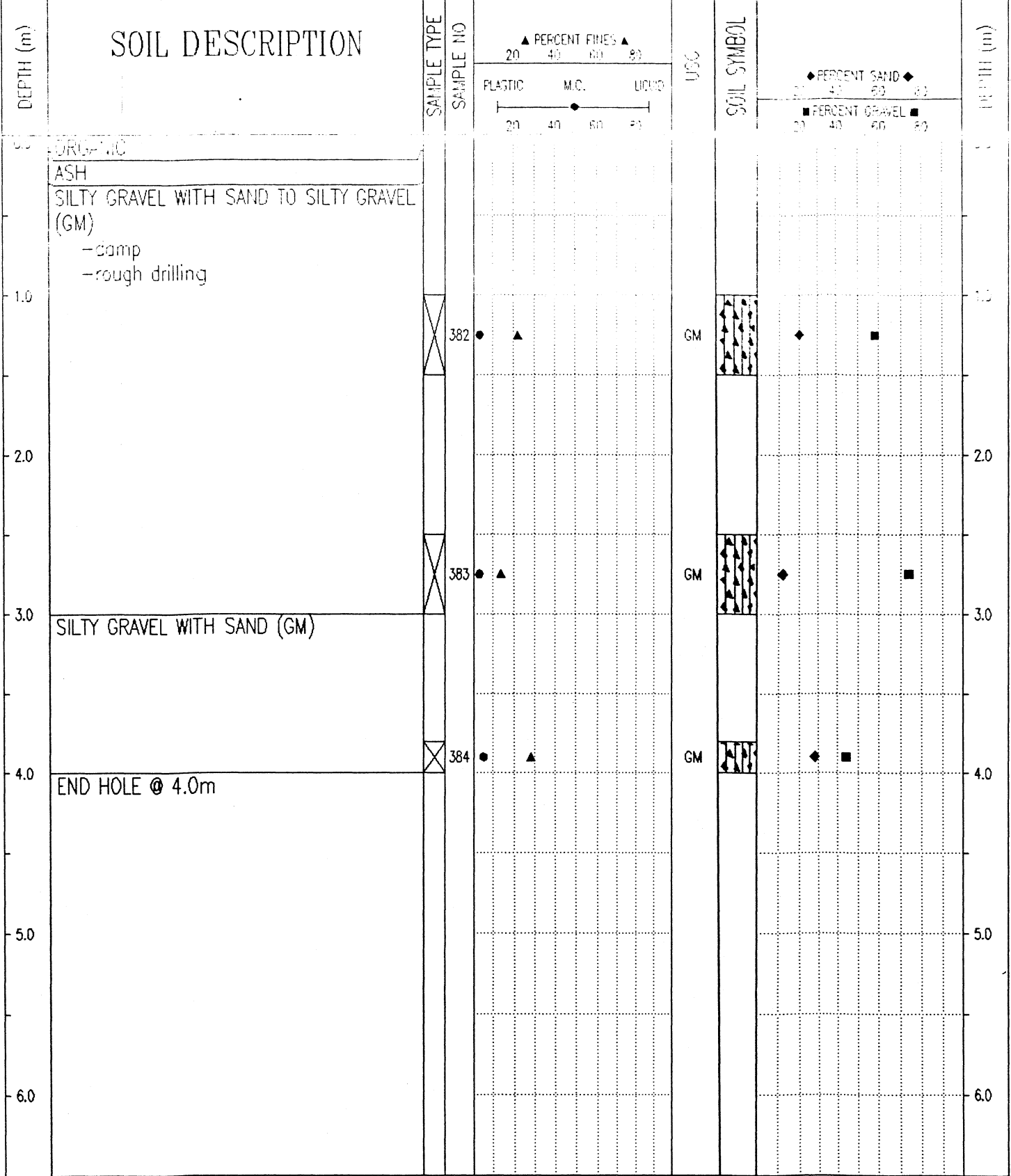
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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 4.5 m
COMPLETE: 99/08/12

99/12/13 09:50AM

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

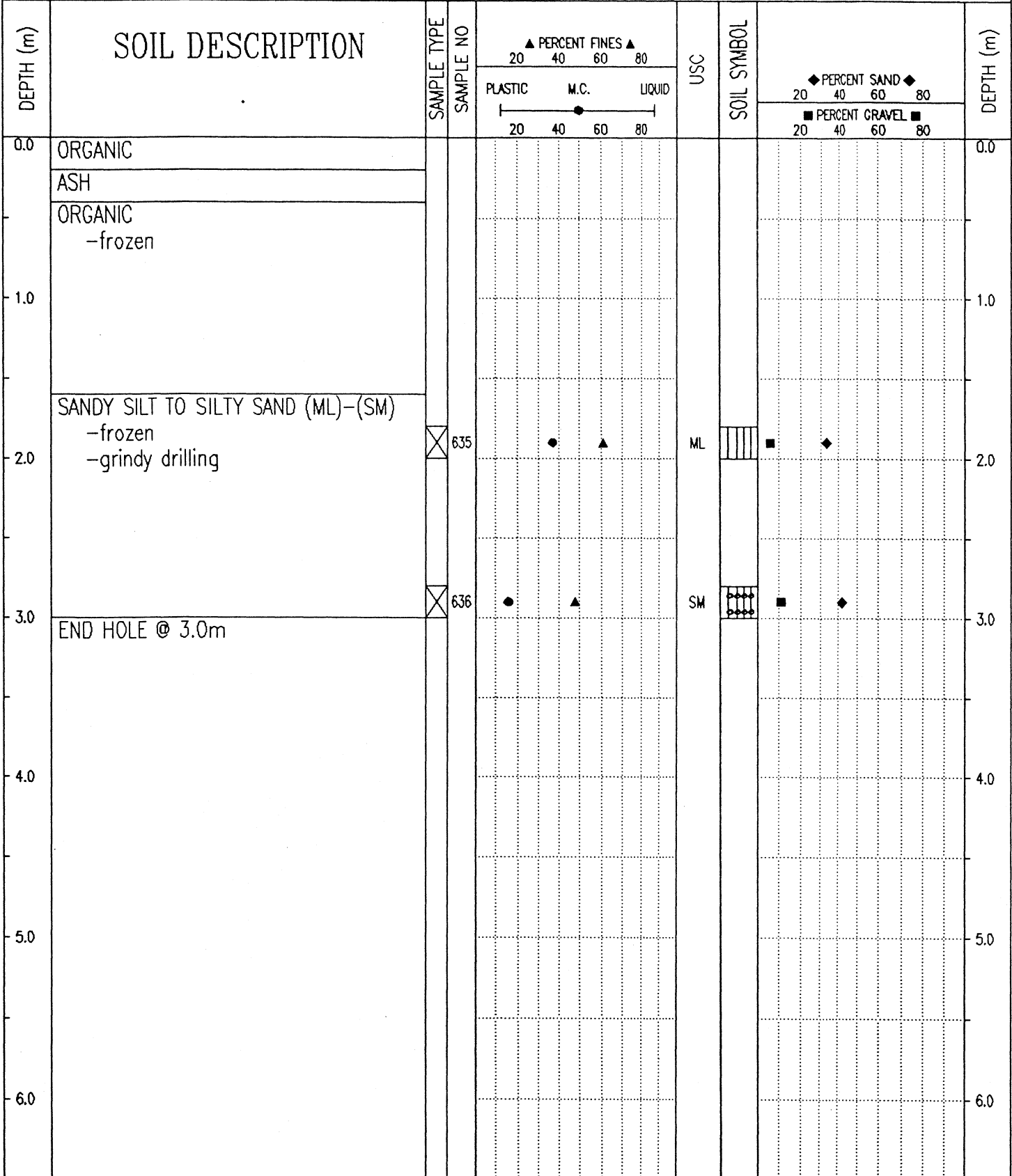


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LOGGED BY: G.C.	COMPLETION DEPTH: 4.0 m
REVIEWED BY:	COMPLETE: 99/05/06
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 526-695				
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329				
MOBILE B40-L		LOCATION:1806+695 20M RT		ELEVATION: 0.00 (m)				
SAMPLE TYPE		<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER	<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE	<input type="checkbox"/> CORE	
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲		USC	SOIL SYMBOL	DEPTH (m)
				PLASTIC	M.C.			
0.0	ORGANIC			20	40	60	80	0.0
	ASH							
	ORGANIC -frozen (Vx)							
1.0								1.0
2.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -frozen -grindy drilling	<input checked="" type="checkbox"/>	633	●	▲		GM	2.0
3.0	END HOLE @ 3.0m	<input checked="" type="checkbox"/>	634	●	▲		SM	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: 99/08/12 Page 1 of 1		

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 13	TEST HOLE NO: 526-696
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION: 1806+705 20M LT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK
		<input type="checkbox"/> TUBE
		<input type="checkbox"/> CORE



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REVIEWED BY:
Fig. No:

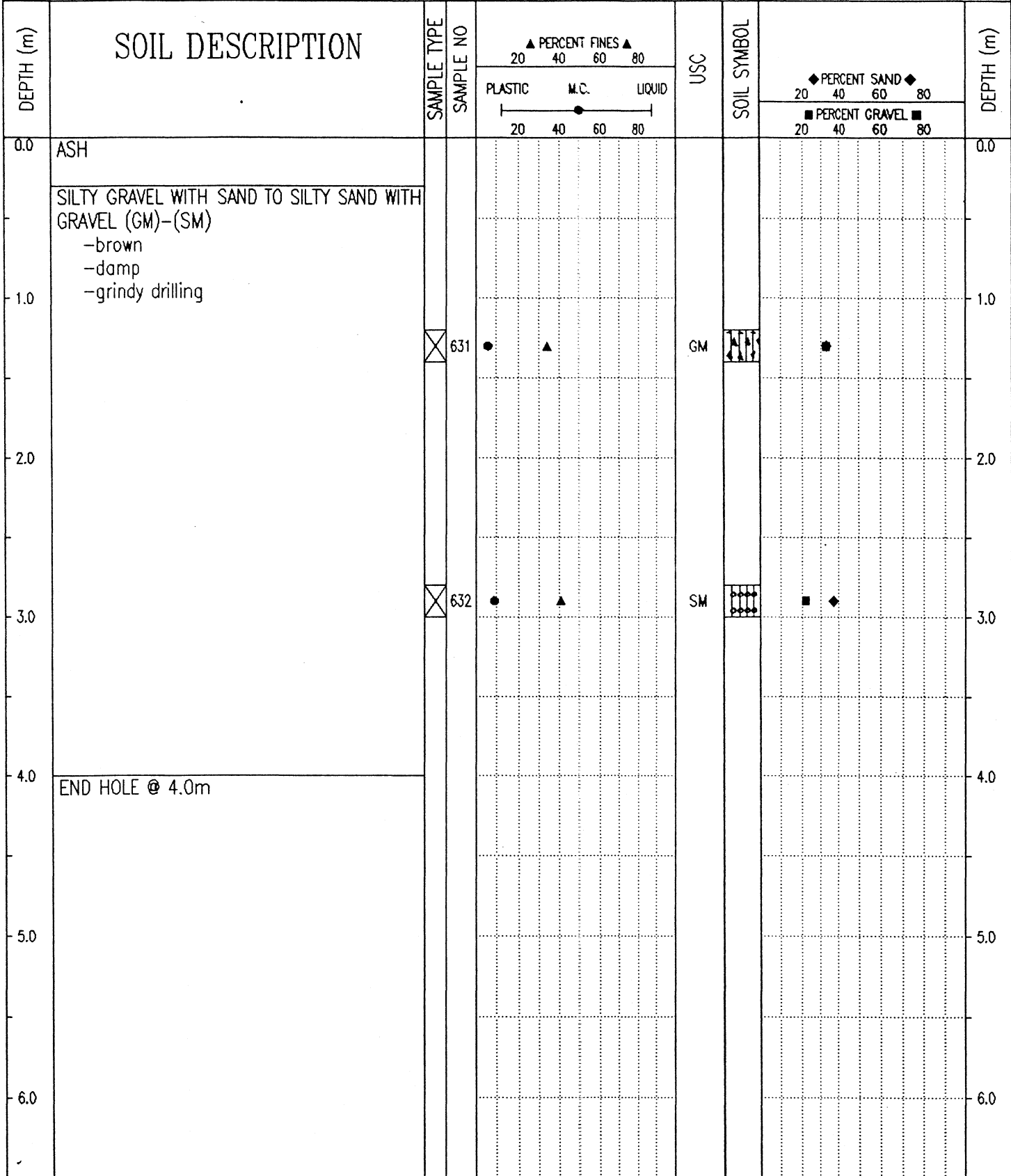
COMPLETION DEPTH: 3.0 m
COMPLETE: 99/08/12

SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 513-493
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1806+725 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT GRAVEL ■	PERCENT SAND ◆		
0.0	ORGANIC										0.0	
	ASH											
	ORGANIC -frozen (Vx)											
1.0											1.0	
	SILTY SAND WITH GRAVEL (SM) -frozen -grindy drilling	<input checked="" type="checkbox"/>	380	▲			SM	■	◆		2.0	
2.0												
		<input checked="" type="checkbox"/>	381	●	▲		SM	■	◆		3.0	
3.0	END HOLE @ 3.0m -refusal											
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: 99/05/06
	Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 13	TEST HOLE NO: 526-694
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION:1806+800 30M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



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Fig. No:

COMPLETION DEPTH: 4.0 m
COMPLETE: 99/08/12

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 513-492						
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329						
NODWELL B-40L		LOCATION: 1806+825 CENTRELINE		ELEVATION: 0.00 (m)						
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER						
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE						
				<input type="checkbox"/> CORE						
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲		U.C.	SOIL SYMBOL	◆ PERCENT SAND ◆		DEPTH (m)
				PLASTIC	M.C.			LIQUID	◆ PERCENT GRAVEL ◆	
0.0	ORGANIC									
	ASH									
	SILTY SANDY GRAVEL -frozen -last sample #378									
1.0			378							
	SILTY GRAVEL WITH SAND (GM) -frozen -rough drilling									
2.0										
	END HOLE @ 2.8m									
3.0			379			GM				
4.0										
5.0										
6.0										

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Fig. No:

COMPLETION DEPTH: 2.8 m

COMPLETE: 99/05/06

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SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 513-491						
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329						
NODWELL B-40L		LOCATION: 1806+875 CENTRELINE		ELEVATION: 0.00 (m)						
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER						
				<input type="checkbox"/> BULK						
				<input type="checkbox"/> TUBE						
				<input type="checkbox"/> 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	ORGANIC									0.0
	ASH									
1.0	ORGANIC -frozen (Vx)									1.0
2.0	SANDY SILT (ML) -frozen (Vx)	<input checked="" type="checkbox"/>	366	●	▲	ML	■	◆		2.0
3.0	SILTY SAND WITH GRAVEL (SM) -frozen (Vx) -drill grinding	<input checked="" type="checkbox"/>	377	▲		SM	■	◆	■	3.0
	END HOLE @ 3.0									
4.0										4.0
5.0										5.0
6.0										6.0

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Fig. No:

COMPLETION DEPTH: 3.0 m

COMPLETE: 99/05/06

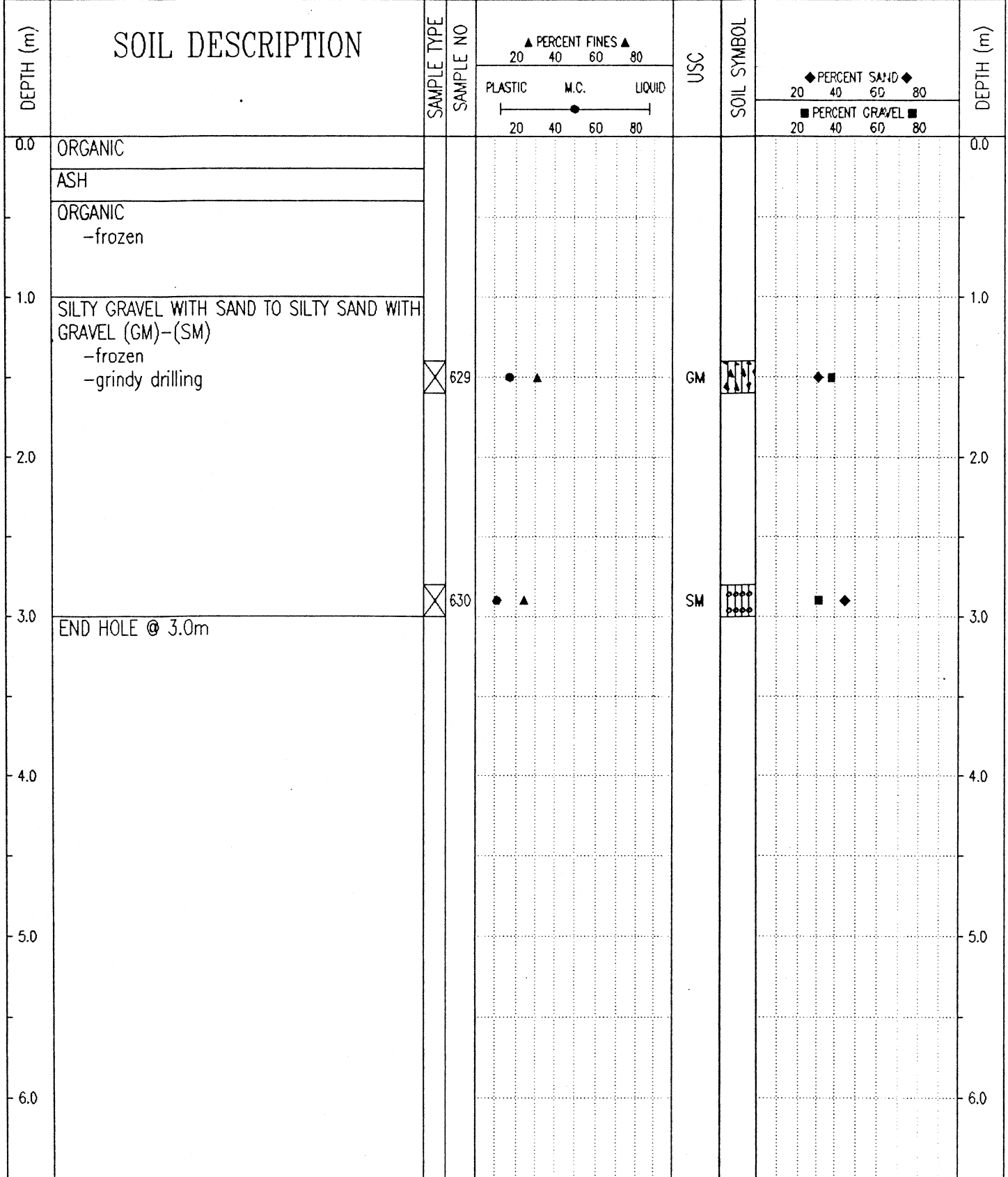
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SAMPLE TYPE RETURN S.P.T. AUGER BULK TUBE CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	60	
0.0	ORGANIC											0.0
	ASH											
	ORGANIC -frozen											
1.0												1.0
	SILTY SAND WITH GRAVEL (SM) -frozen -grindy drilling	<input checked="" type="checkbox"/>	627	●	▲		SM		■	◆		2.0
2.0												
	SILTY GRAVEL WITH SAND (GM) -frozen	<input checked="" type="checkbox"/>	628	●	▲		GM		◆	■		3.0
3.0	END HOLE @ 3.0m											
4.0												4.0
5.0												5.0
6.0												6.0

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 13	TEST HOLE NO: 526-693
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION: 1806+887 20M LT	ELEVATION: 0.00 (m)

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



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Fig. No:
COMPLETION DEPTH: 3.0 m
COMPLETE: 99/08/12
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 526-691								
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329								
MOBILE B40-L		LOCATION: 1806+950 30M RT		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	ORGANIC ASH										0.0	
0.0 - 1.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -brown -damp -grindy drilling											
1.0			625	●	▲		SM	◆	■		1.0	
2.0												
3.0	END HOLE @ 3.0m		626	●	▲		GM	◆	■		3.0	
4.0												
5.0												
6.0												

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Fig. No:

COMPLETION DEPTH: 3.0 m

COMPLETE: 99/08/12

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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 13	TEST HOLE NO: 526-690
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION: 1807+025 30M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK
		<input type="checkbox"/> TUBE
		<input type="checkbox"/> 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 -surface water entering Test hole											0.0	
	ASH												
	ORGANIC -frozen												
1.0												1.0	
2.0	-drill starts grinding @ 1.8m -no sample - washed off auger											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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Fig. No:

COMPLETION DEPTH: 3.0 m

COMPLETE: 99/08/12

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 526-688							
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329							
MOBILE B40-L		LOCATION: 1807+060 20M RT		ELEVATION: 0.00 (m)							
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER							
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE							
				<input type="checkbox"/> CORE							
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲			USC	SOIL SYMBOL	◆ PERCENT SAND ◆		DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	
0.0	ORGANIC -surface water entering test hole ASH PEAT MOSS										0.0
1.0											1.0
2.0	SILTY ORGANICS -odd gravel -frozen & grindy										2.0
3.0	SILTY SAND WITH GRAVEL (SM) -contaminated with silt, ash, & H2O from above -frozen -real grindy		622	●	▲		SM	■	◆		3.0
4.0											4.0
5.0											5.0
6.0											6.0
	END HOLE @ 3.0m										

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REVIEWED BY:

Fig. No:

COMPLETION DEPTH: 3.0 m

COMPLETE: 99/08/12

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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	
0.0	ORGANIC											0.0
	ASH -surface water contaminating test hole											
	ORGANIC -frozen											
1.0												1.0
	SILTY SAND WITH GRAVEL (SM) -frozen -grindy drilling	<input checked="" type="checkbox"/>	623	●	▲		SM	■	◆			
2.0												2.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -frozen	<input checked="" type="checkbox"/>	624	▲			GP-GM	◆	■			
3.0	END HOLE @ 3.0m											3.0
4.0												4.0
5.0												5.0
6.0												6.0

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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	
0.0 - 2.0	ORGANIC -frozen (Vx)												
2.0	SANDY SILT (ML) -frozen -little scrapping - not grinding	<input checked="" type="checkbox"/>	620				ML					2.0	
3.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -frozen -clean END HOLE @ 3.0m	<input checked="" type="checkbox"/>	621				GP-GM					3.0	
4.0												4.0	
5.0												5.0	
6.0												6.0	

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 513-490									
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329									
NODWELL B-40L		LOCATION: 1807+150 CENTRELINE		ELEVATION: 0.00 (m)									
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER									
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE									
				<input type="checkbox"/> 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		
0.0	ORGANIC												0.0
	ASH												
	ORGANIC -frozen (Vx)												
1.0	SILT WITH SAND (ML) -frozen (Vx)		364				ML						1.0
2.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -frozen -rough drilling		365				SW-SM						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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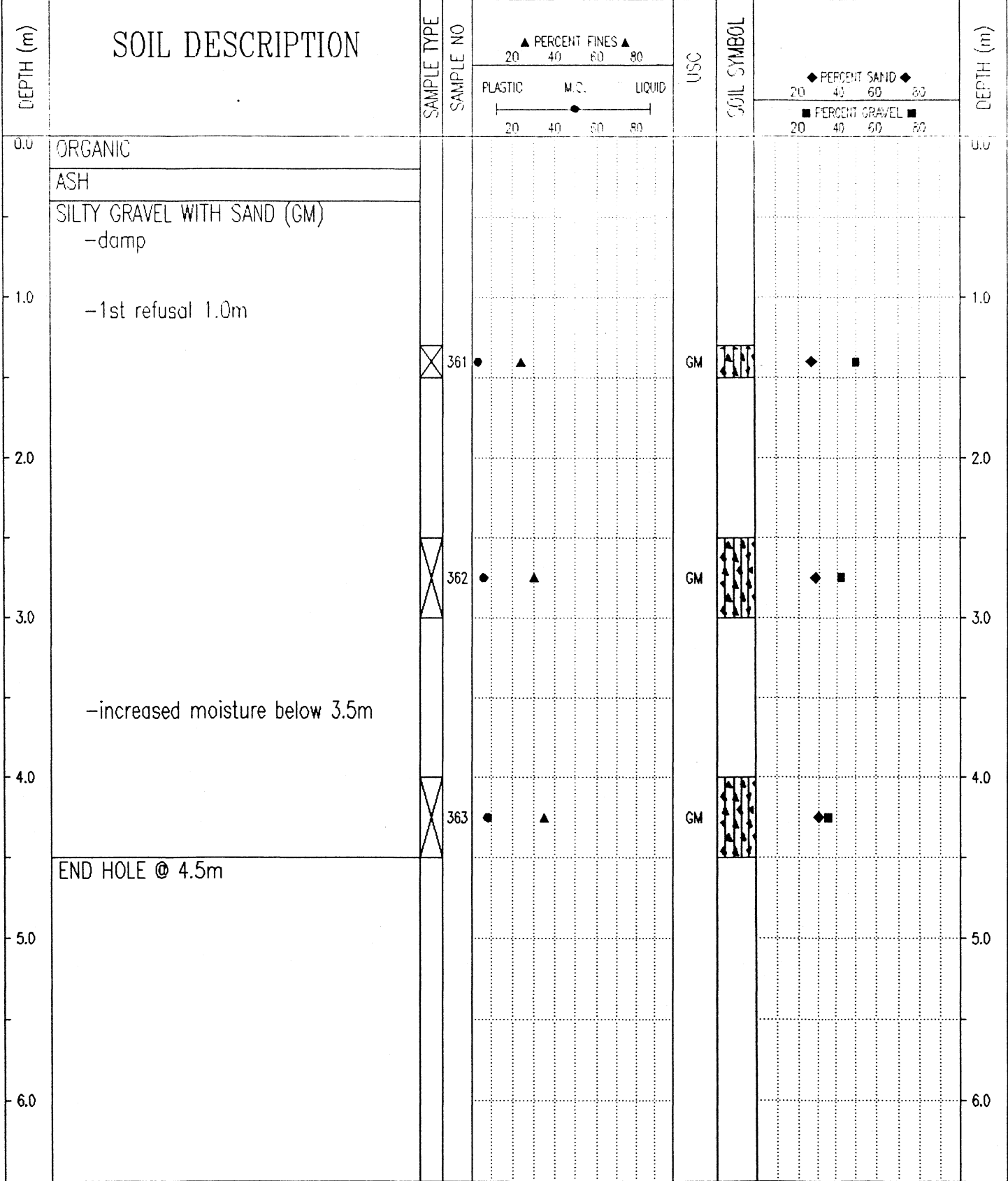
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REVIEWED BY:	COMPLETE: 99/05/05
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 526-686								
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329								
MOBILE B40-L		LOCATION: 1807+200 30M RT		ELEVATION: 0.00 (m)								
SAMPLE TYPE		RETURN		S.P.T.								
		AUGER		BULK								
				TUBE								
				CORE								
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT GRAVEL ■			
0.0	ORGANIC										0.0	
	ASH											
	ORGANIC											
1.0	GRAVELLY SILT (ML) -frozen (Vx) -grinding drilling	⊗	618	●	▲		ML	◆	■		1.0	
2.0	SILTY GRAVEL WITH SAND (GM) -frozen										2.0	
3.0	END HOLE @ 3.0m	⊗	619	●	▲		GM	◆	■		3.0	
4.0											4.0	
5.0											5.0	
6.0											6.0	

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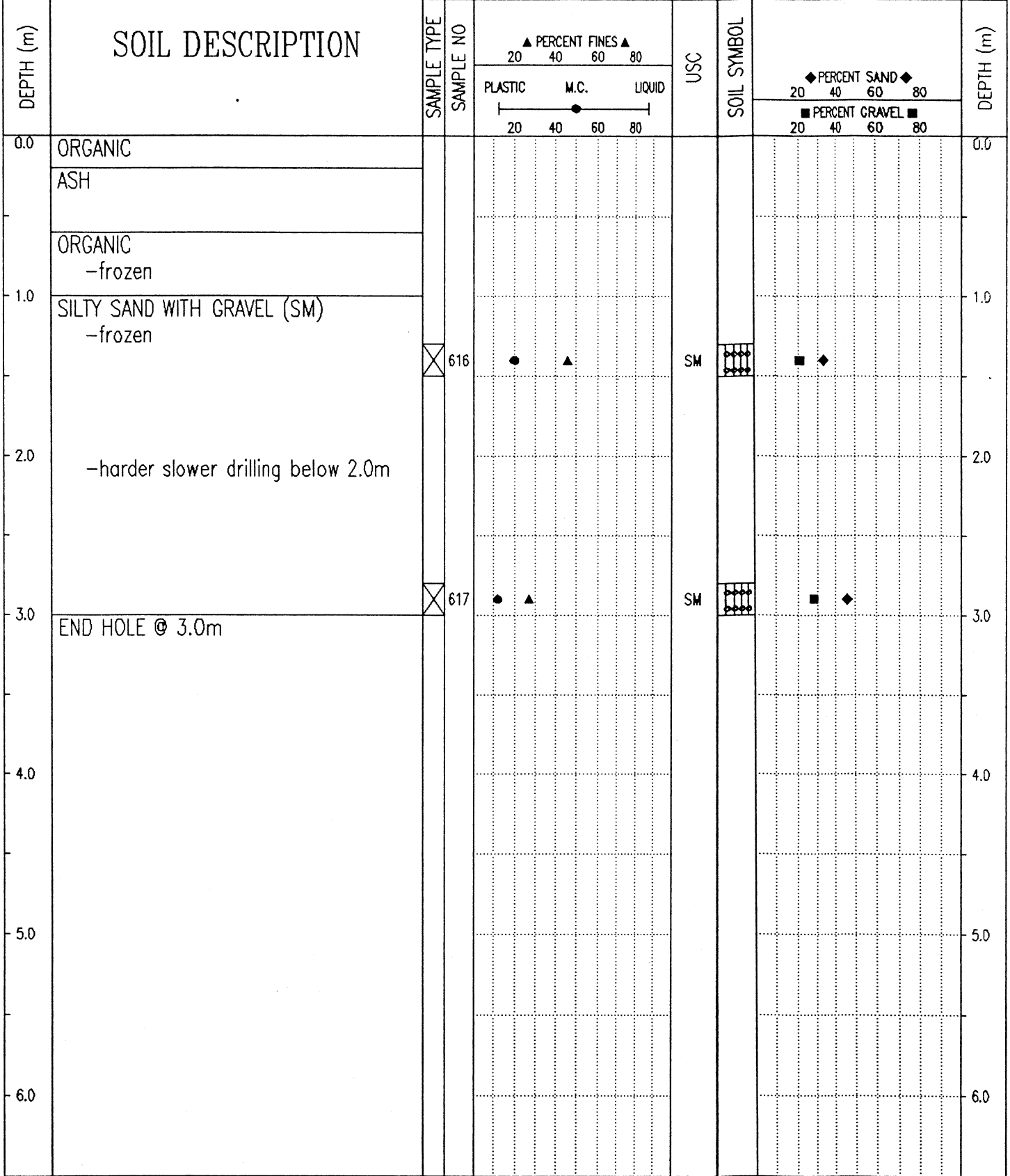
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REVIEWED BY:	COMPLETE: 99/08/12
Fig. No:	Page 1 of 1

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



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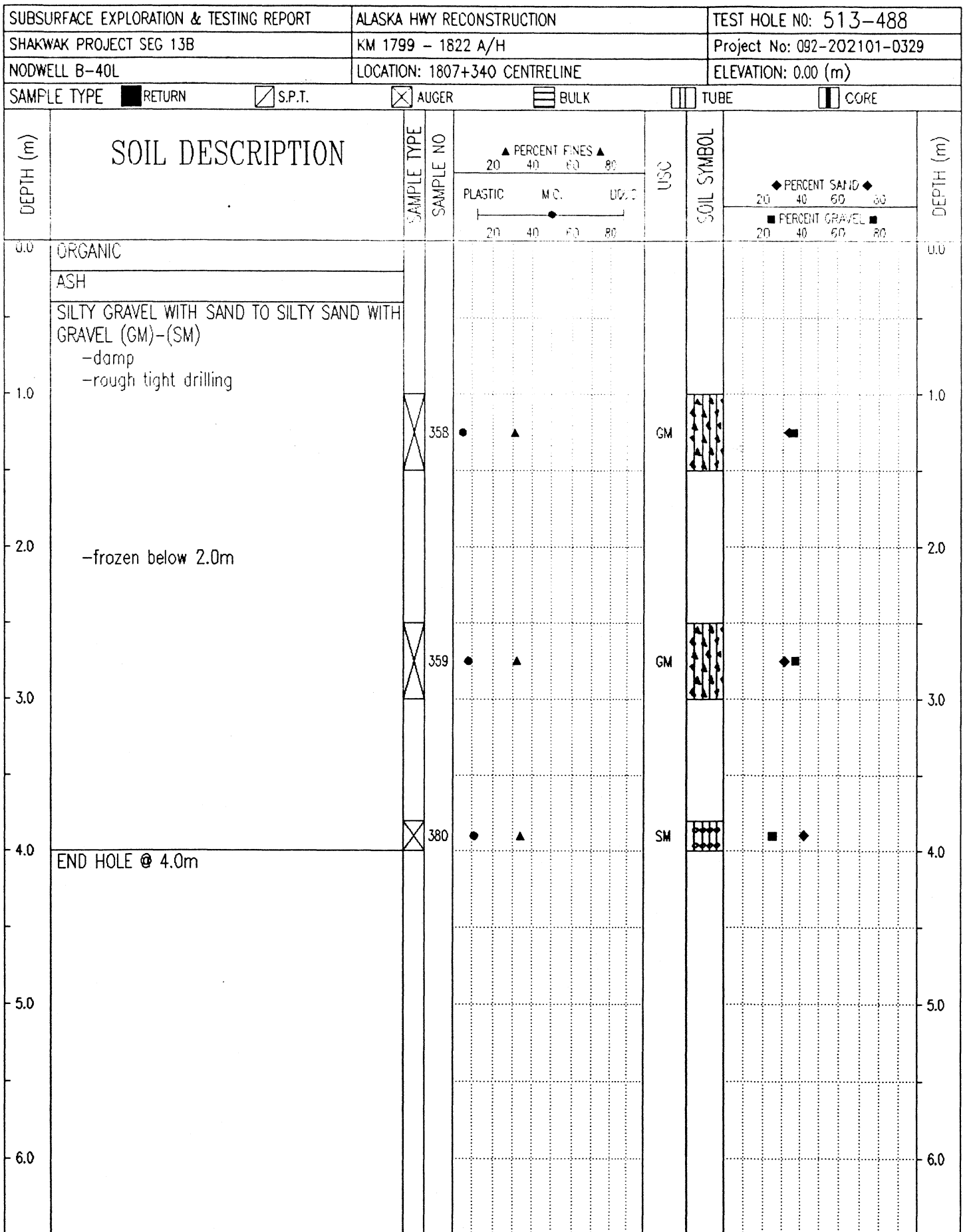
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ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION: 1807+300 30M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



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Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/08/13 12
Page 1 of 1



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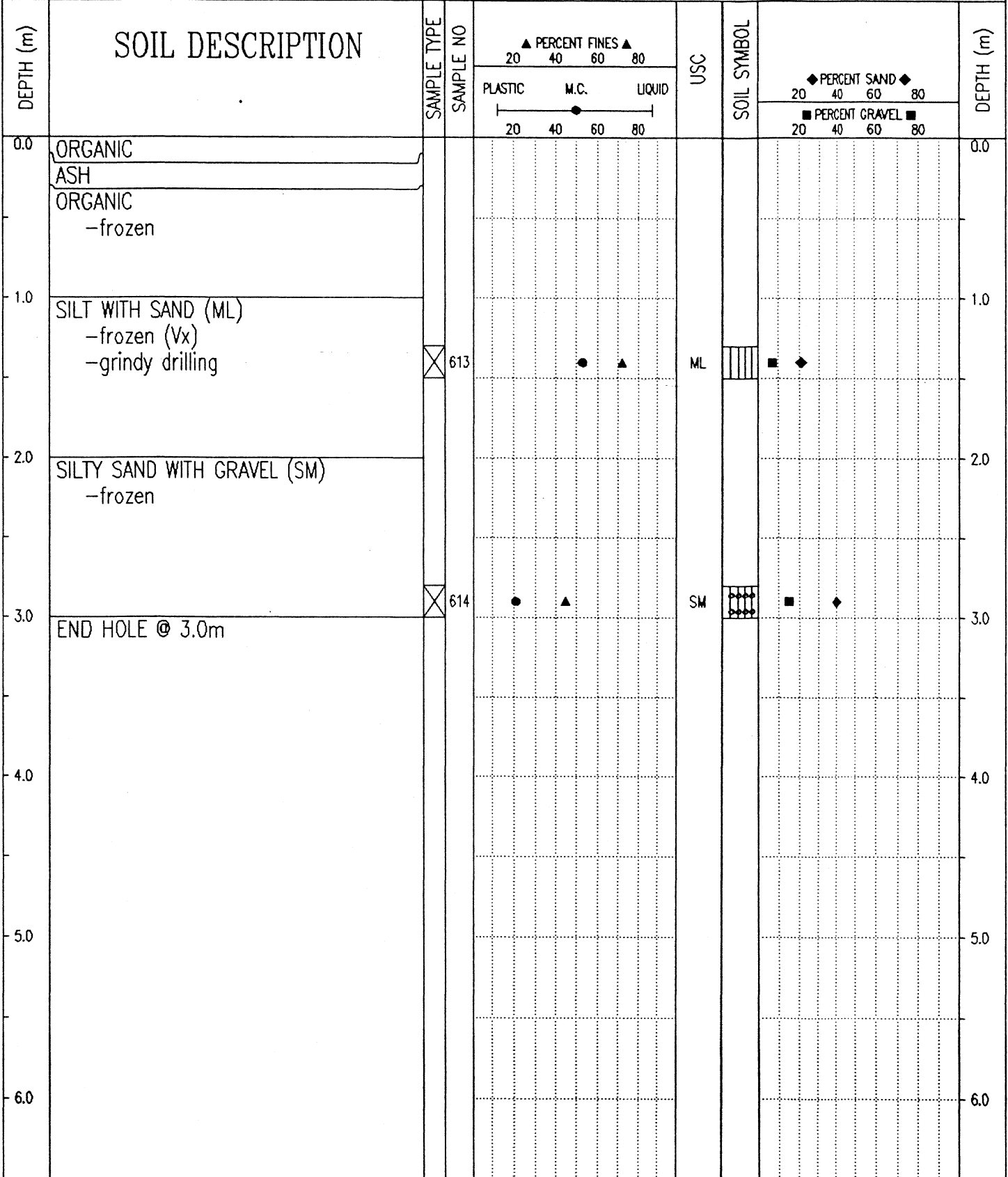
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REVIEWED BY:	COMPLETE: 99/05/05
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT SHAKWAK SEG 13 TEST HOLE NO: 526-683

ENGINEERING CAPITAL KM 1799-1822 A/H Project No: 092-202101-0329

MOBILE B40-L LOCATION:1807+345 20M RT ELEVATION: 0.00 (m)

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



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LOGGED BY: G.C. COMPLETION DEPTH: 3.0 m
 REVIEWED BY: COMPLETE: 99/08/11
 Fig. No: Page 1 of 1

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

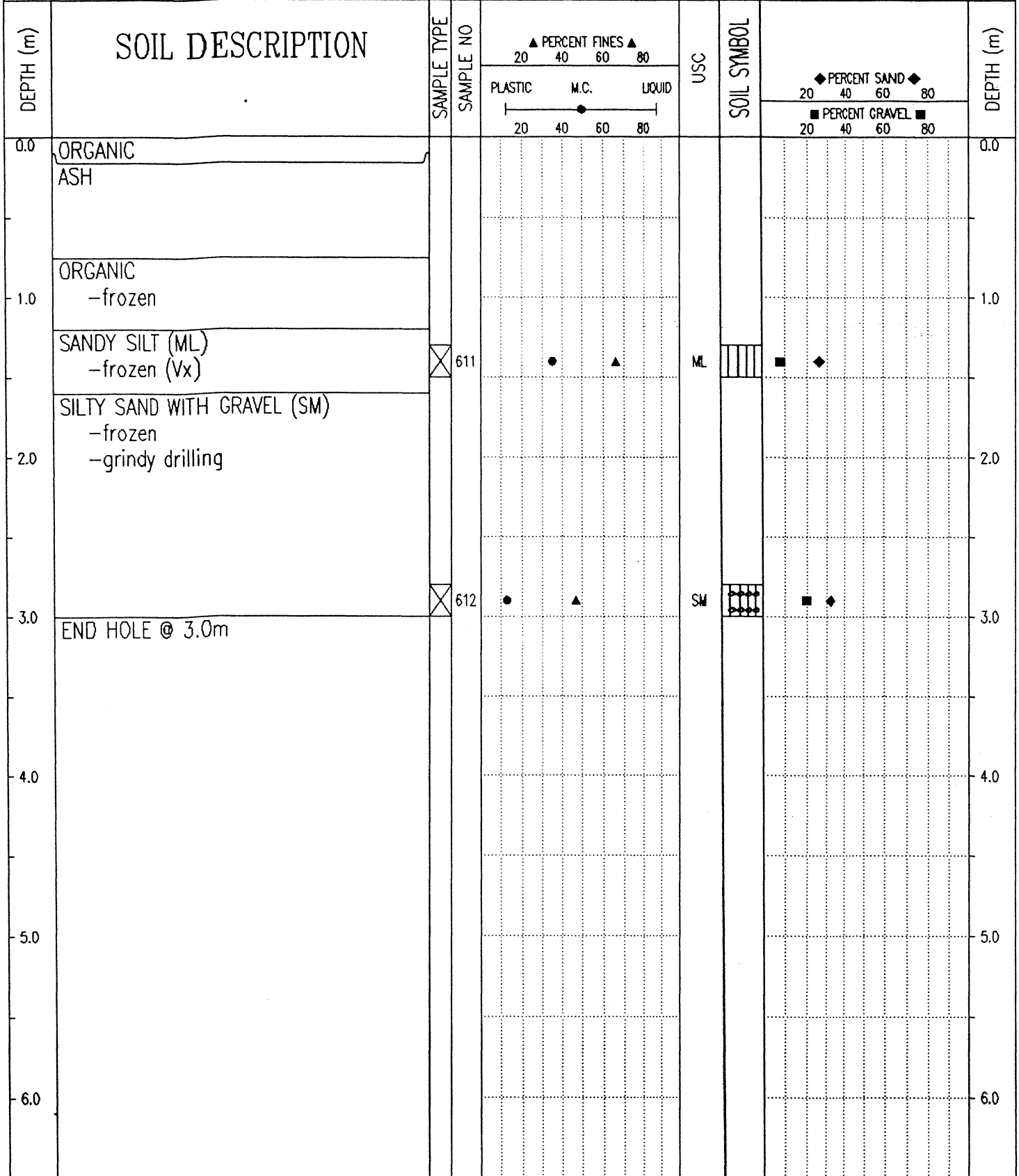
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	
0.0	ORGANIC ASH										0.0
0.0 - 1.0	ORGANIC -frozen (Vx)										1.0
1.0 - 2.5	SILTY GRAVEL WITH SAND (GM) -frozen (Vx) -grindy drill	<input checked="" type="checkbox"/>	615	20	40	60	GM	◆	■		2.0
2.5 - 2.5	END HOLE @ 2.5m -refusal										3.0
3.0 - 6.0											4.0
											5.0
											6.0

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LOGGED BY: G.C.	COMPLETION DEPTH: 2.5 m
REVIEWED BY:	COMPLETE: 99/08/13 12
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 13	TEST HOLE NO: 526-682
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION: 1807+400 30M RT	ELEVATION: 0.00 (m)

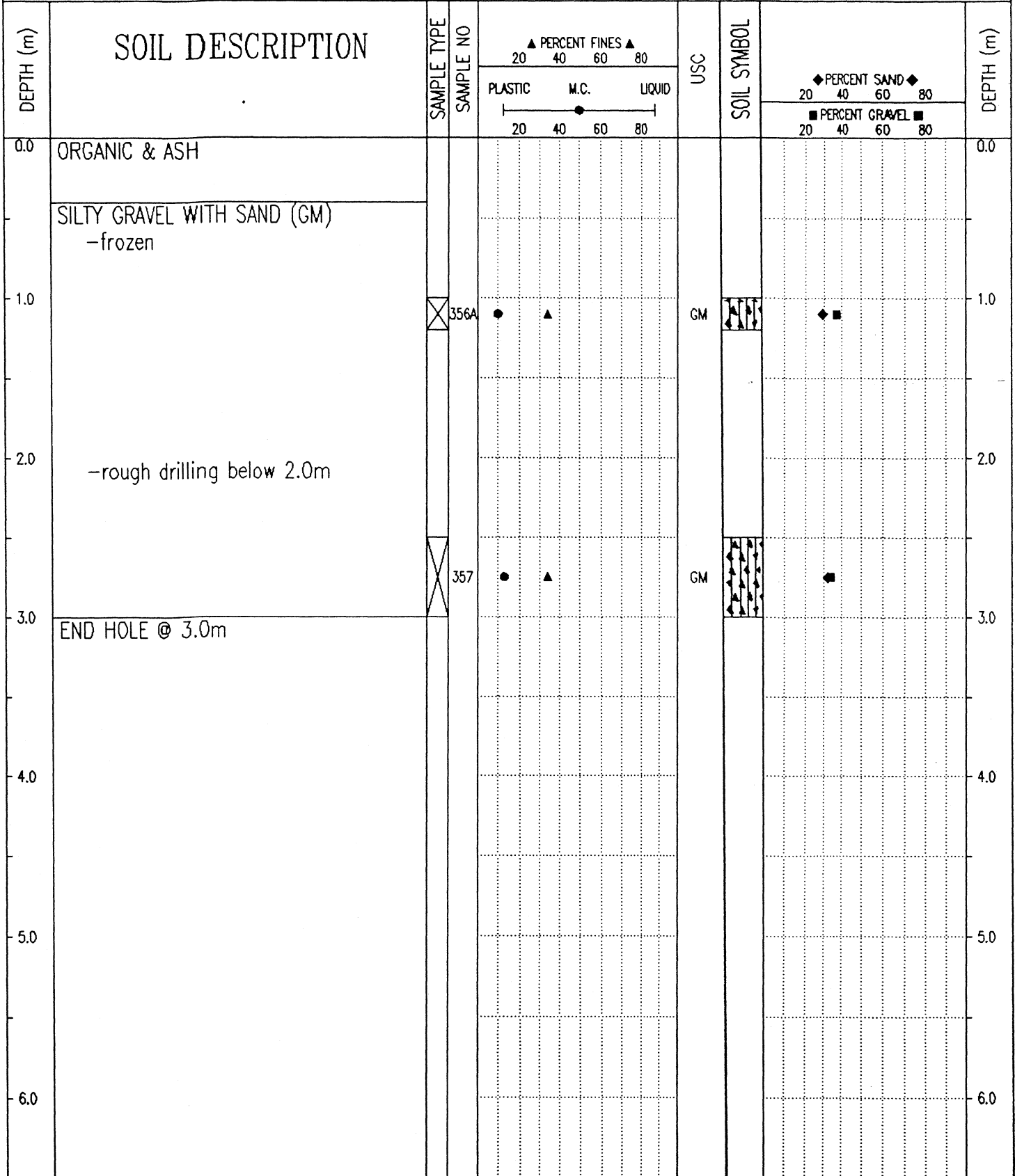
SAMPLE TYPE RETURN S.P.T. AUGER BULK TUBE CORE



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LOGGED BY: G.C.	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 99/08/11
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 513-481
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L		LOCATION: 1807+475 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



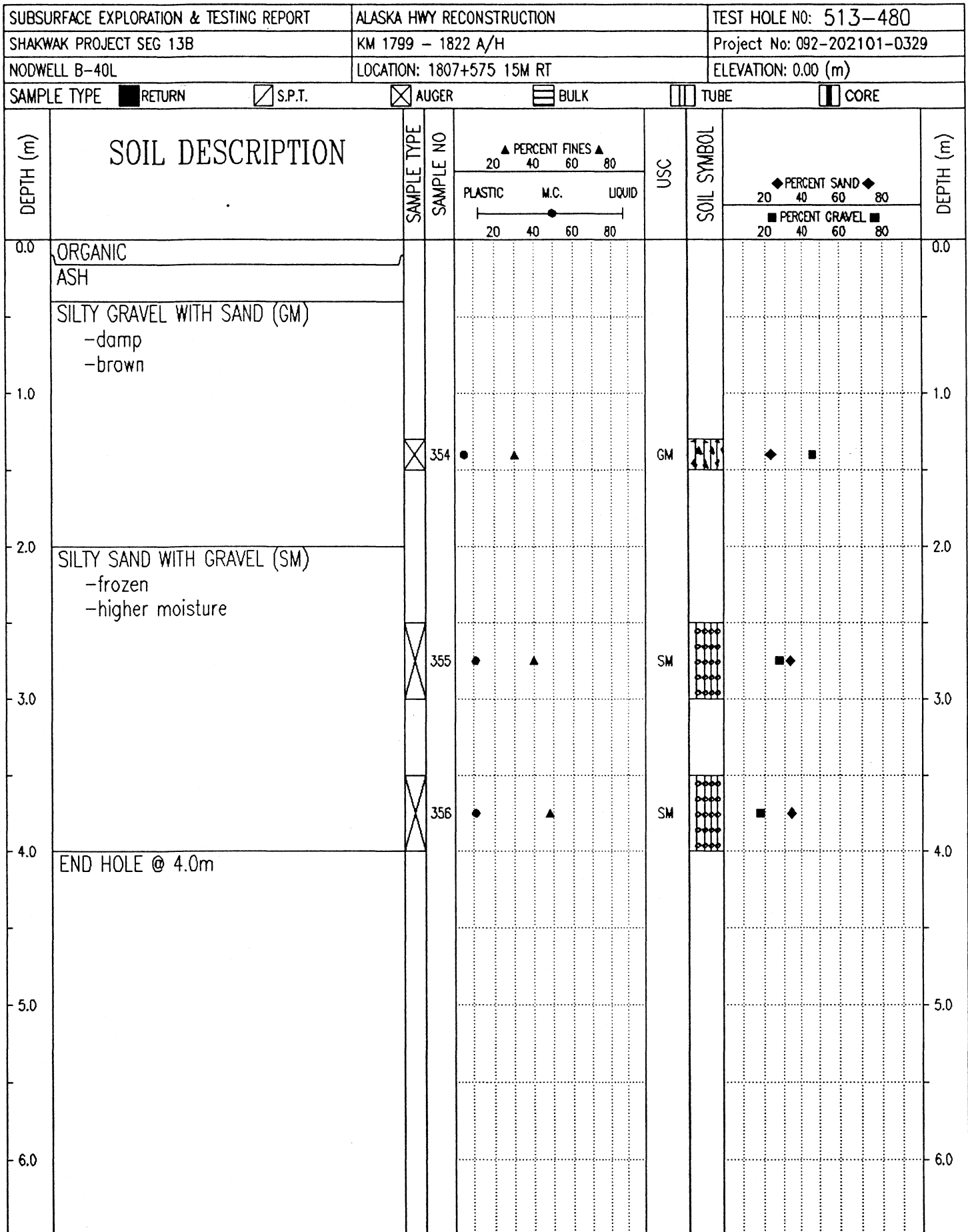
Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 3.0 m
	REVIEWED BY:	COMPLETE: 99/05/05
	Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 526-681							
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329							
MOBILE B40-L		LOCATION: 1807+500 30M RT		ELEVATION: 0.00 (m)							
SAMPLE TYPE		RETURN		S.P.T.							
		AUGER		BULK							
		TUBE		CORE							
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES		USC	SOIL SYMBOL	PERCENT SAND		PERCENT GRAVEL	DEPTH (m)
				PLASTIC	M.C.			LIQUID	20		
0.0	ORGANIC ASH										0.0
	ORGANIC -not frozen										
1.0											1.0
	SILTY SAND WITH GRAVEL (SM) -frozen (Vx) -grindy drilling		609			SM					
2.0											2.0
	SANDY SILT WITH GRAVEL (ML) -frozen		610			ML					
3.0	END HOLE @ 3.0m										3.0
4.0											4.0
5.0											5.0
6.0											6.0

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Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/08/11

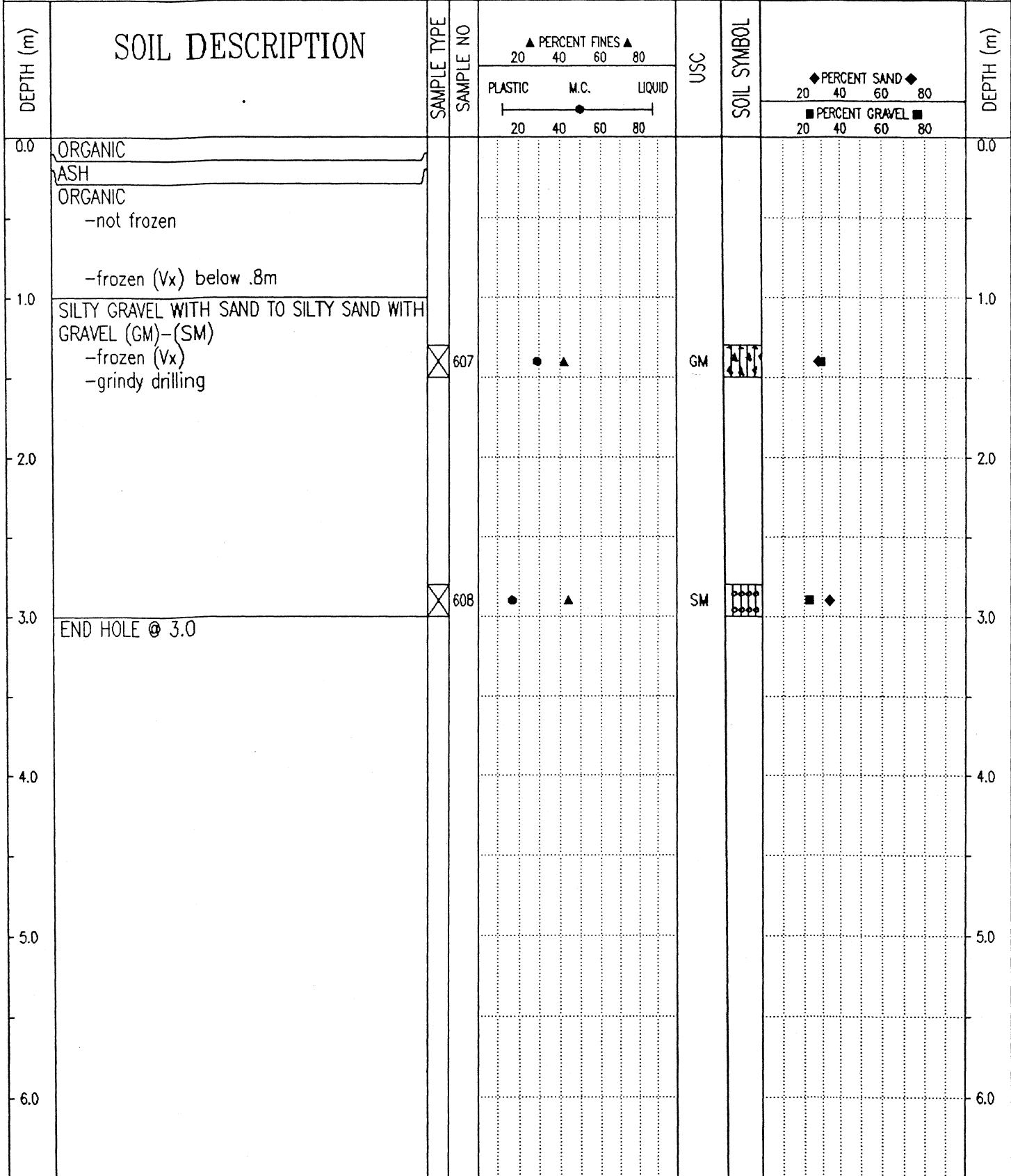


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REVIEWED BY:
Fig. No:

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COMPLETE: 99/05/05

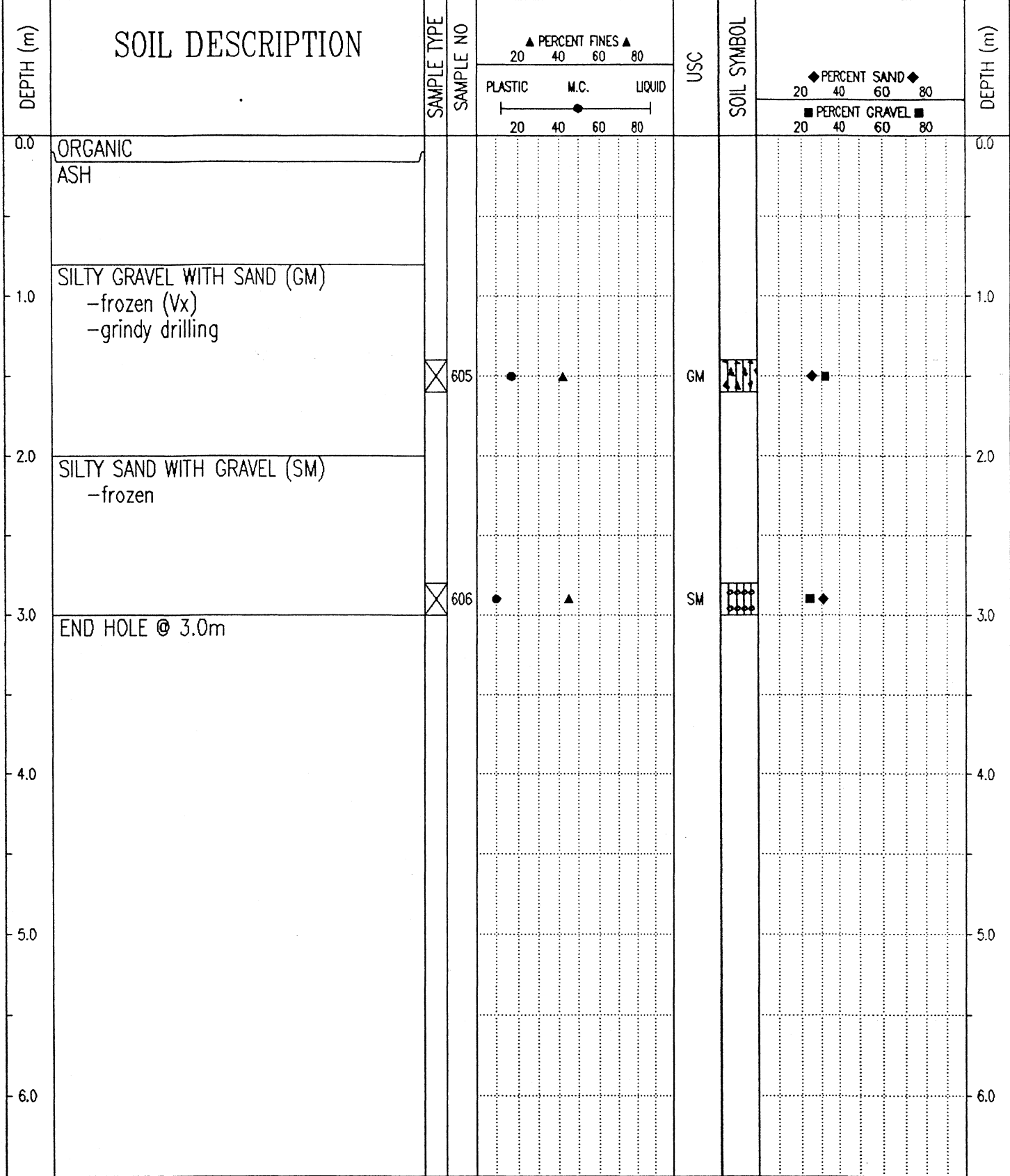
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ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION: 1807+600 30M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE	



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LOGGED BY: G.C.	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 99/08/11
Fig. No:	Page 1 of 1

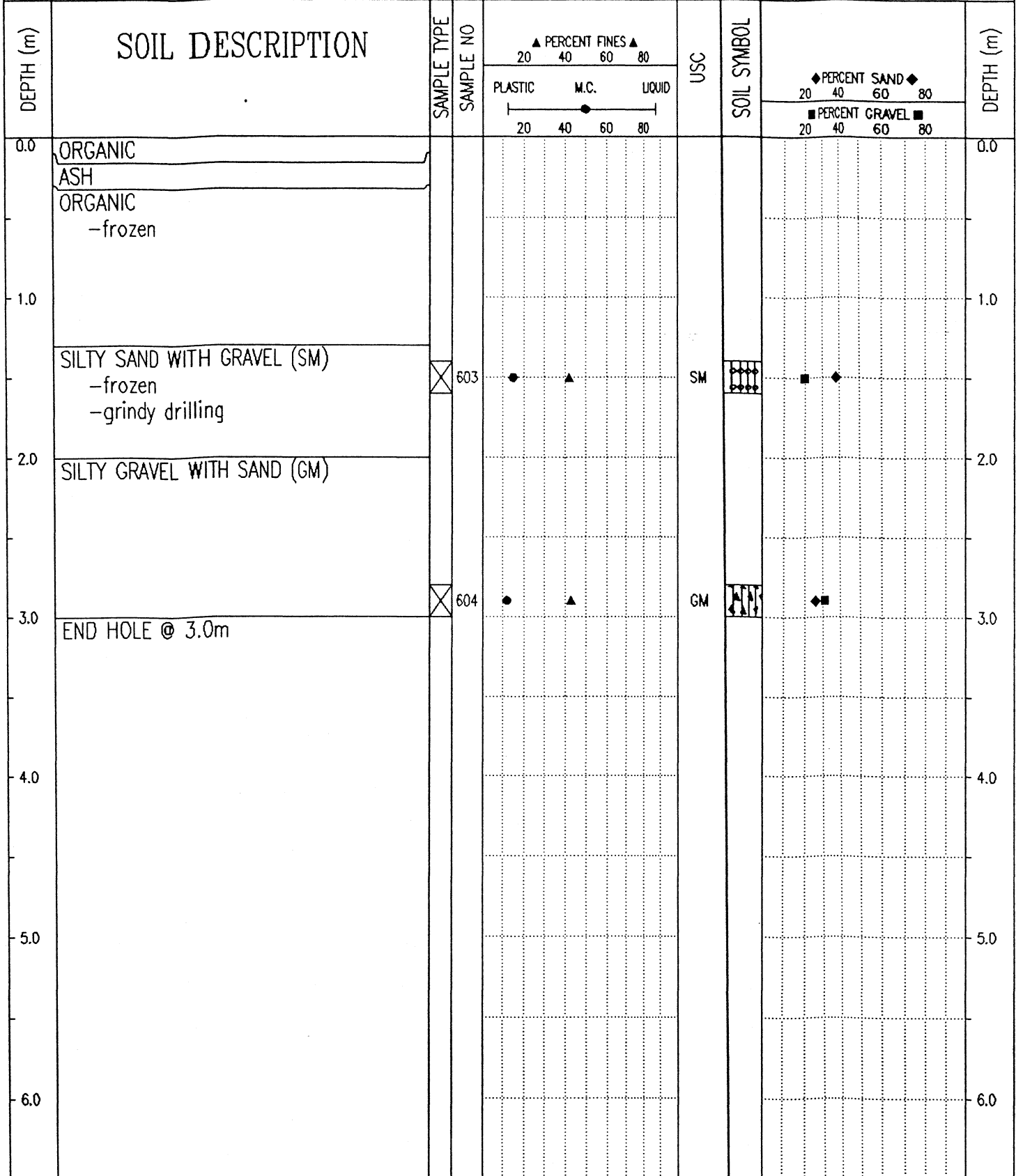
SAMPLE TYPE RETURN S.P.T. AUGER BULK TUBE CORE



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REVIEWED BY:	COMPLETE: 99/08/11
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13	TEST HOLE NO: 526-678
ENGINEERING CAPITAL		KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L		LOCATION: 1807+640 20M LT	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE

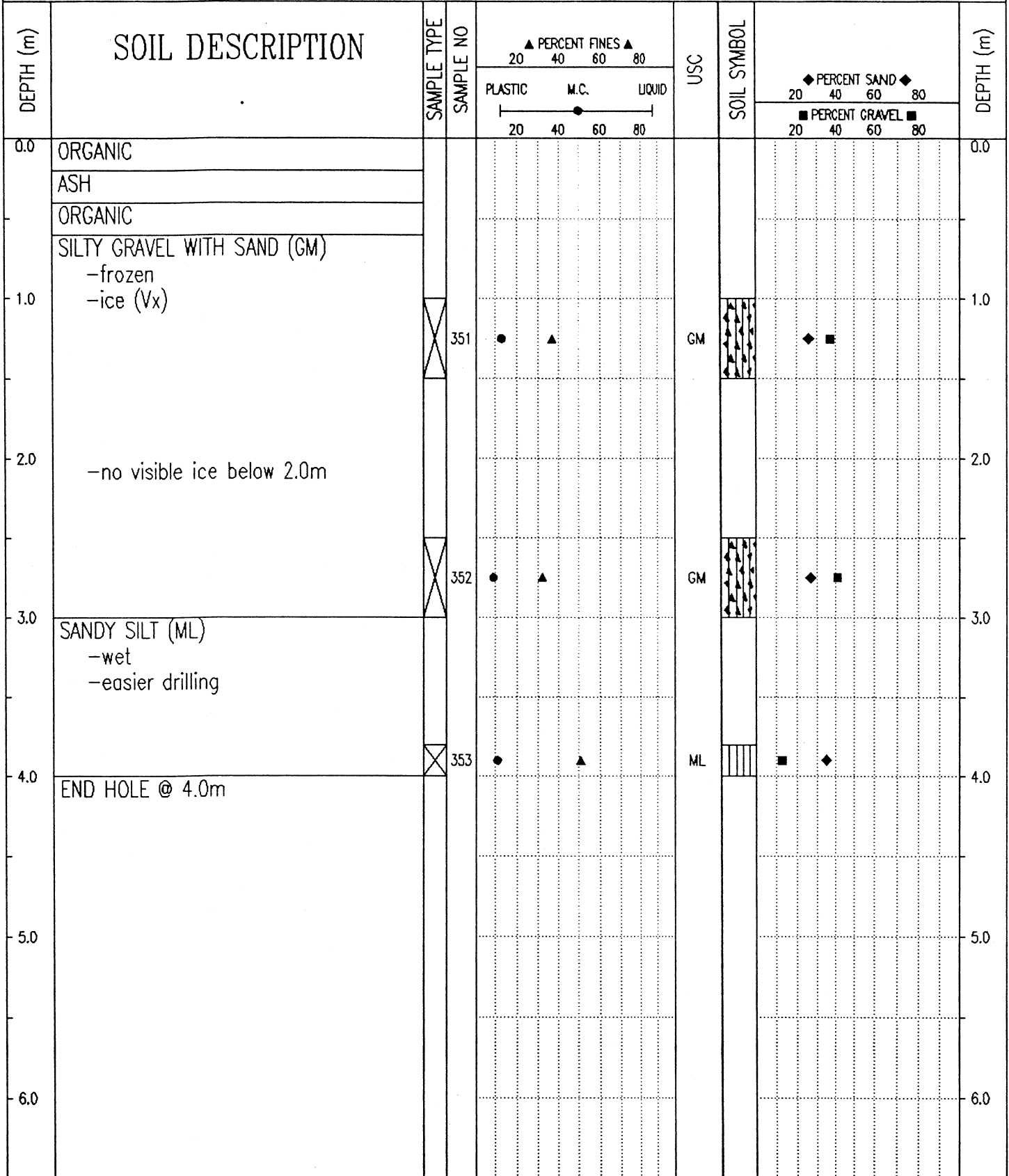


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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/08/11

SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 513-479
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1807+675 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
	<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
		<input type="checkbox"/> CORE



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Fig. No:

COMPLETION DEPTH: 4.0 m
COMPLETE: 99/05/05

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEC 13		TEST HOLE NO: 526-676						
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329						
MOBILE B40-L		LOCATION:1807+725 20M LT		ELEVATION: 0.00 (m)						
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER						
				<input type="checkbox"/> BULK						
				<input type="checkbox"/> TUBE						
				<input type="checkbox"/> 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	ORGANIC ASH									0.0
1.0	ORGANIC -frozen SANDY SILT WITH ICE									1.0
2.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -frozen -grindy drilling	<input checked="" type="checkbox"/>	599	●	▲		SM	◆	■	2.0
3.0	END HOLE @ 3.0m	<input checked="" type="checkbox"/>	600	●	▲		GM	◆	■	3.0
4.0										4.0
5.0										5.0
6.0										6.0

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Fig. No:

COMPLETION DEPTH: 3.0 m

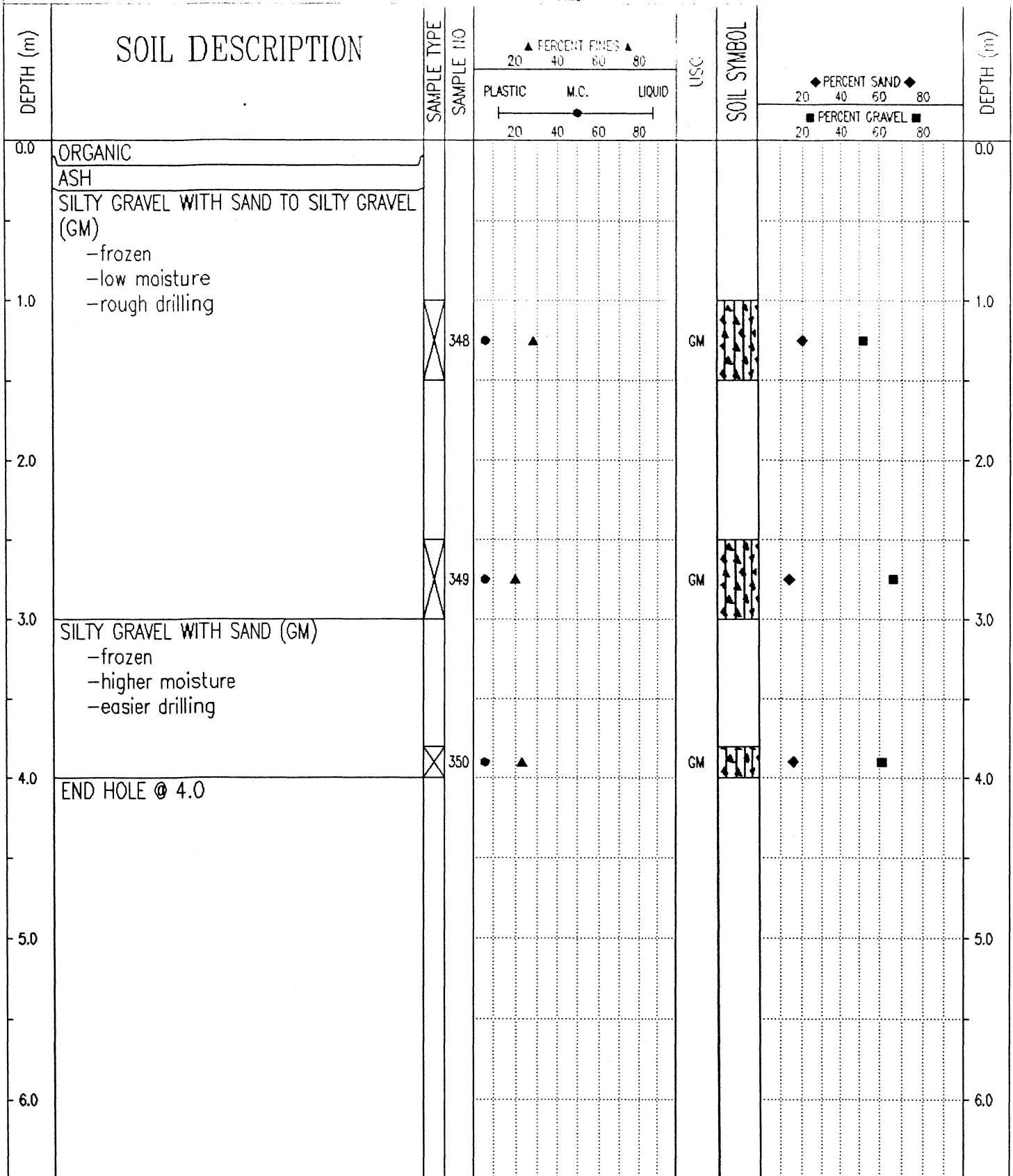
COMPLETE: 99/08/11

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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	ORGANIC														0.0
	ASH														
	ORGANIC -frozen														
1.0															1.0
	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -frozen -grindy drilling	<input checked="" type="checkbox"/>	601	●	▲		SM	▨	◆	■					
2.0															2.0
		<input checked="" type="checkbox"/>	602	●	▲		GM	▨	◆	■					
3.0	END HOLE @ 3.0m														3.0
4.0															4.0
5.0															5.0
6.0															6.0

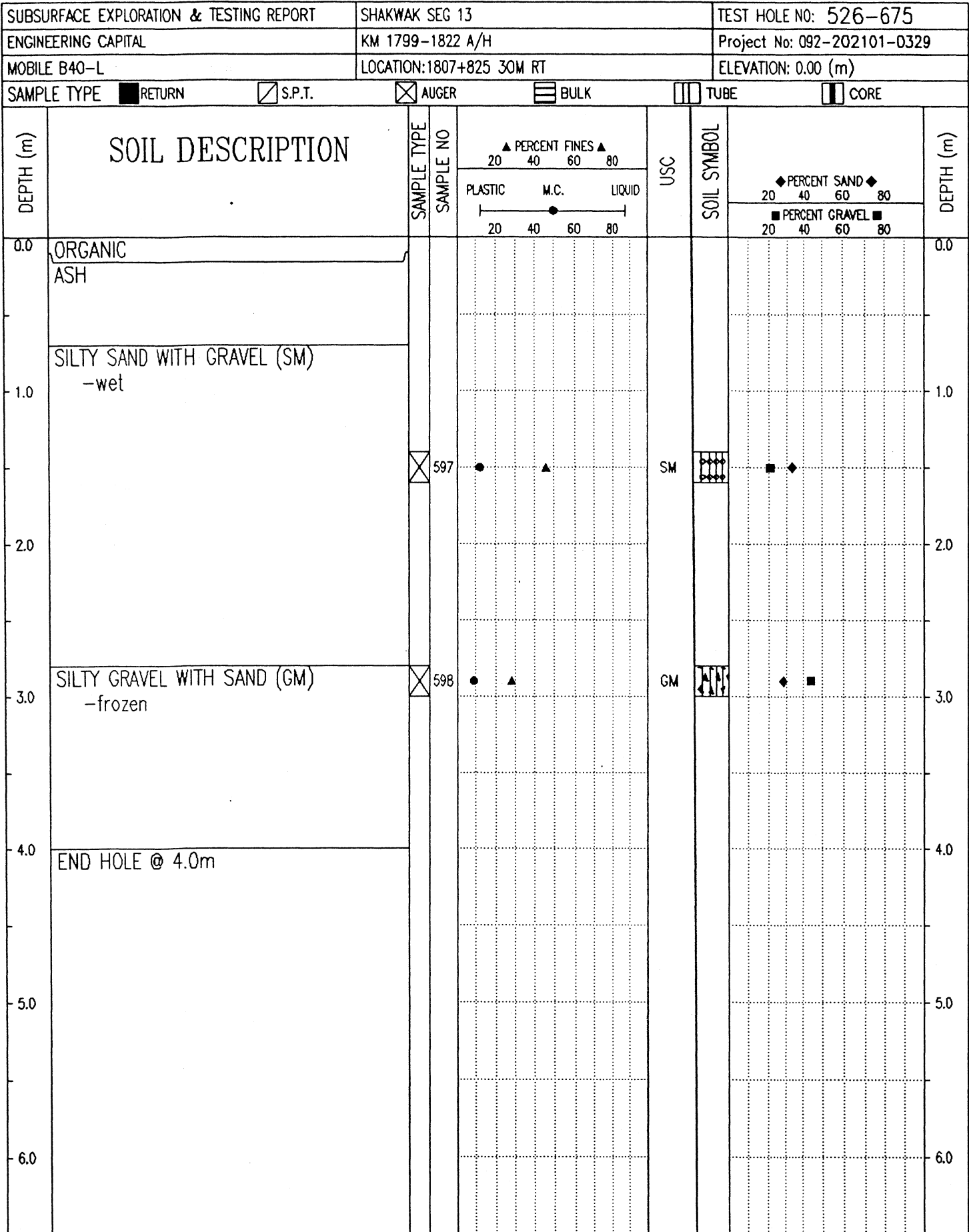
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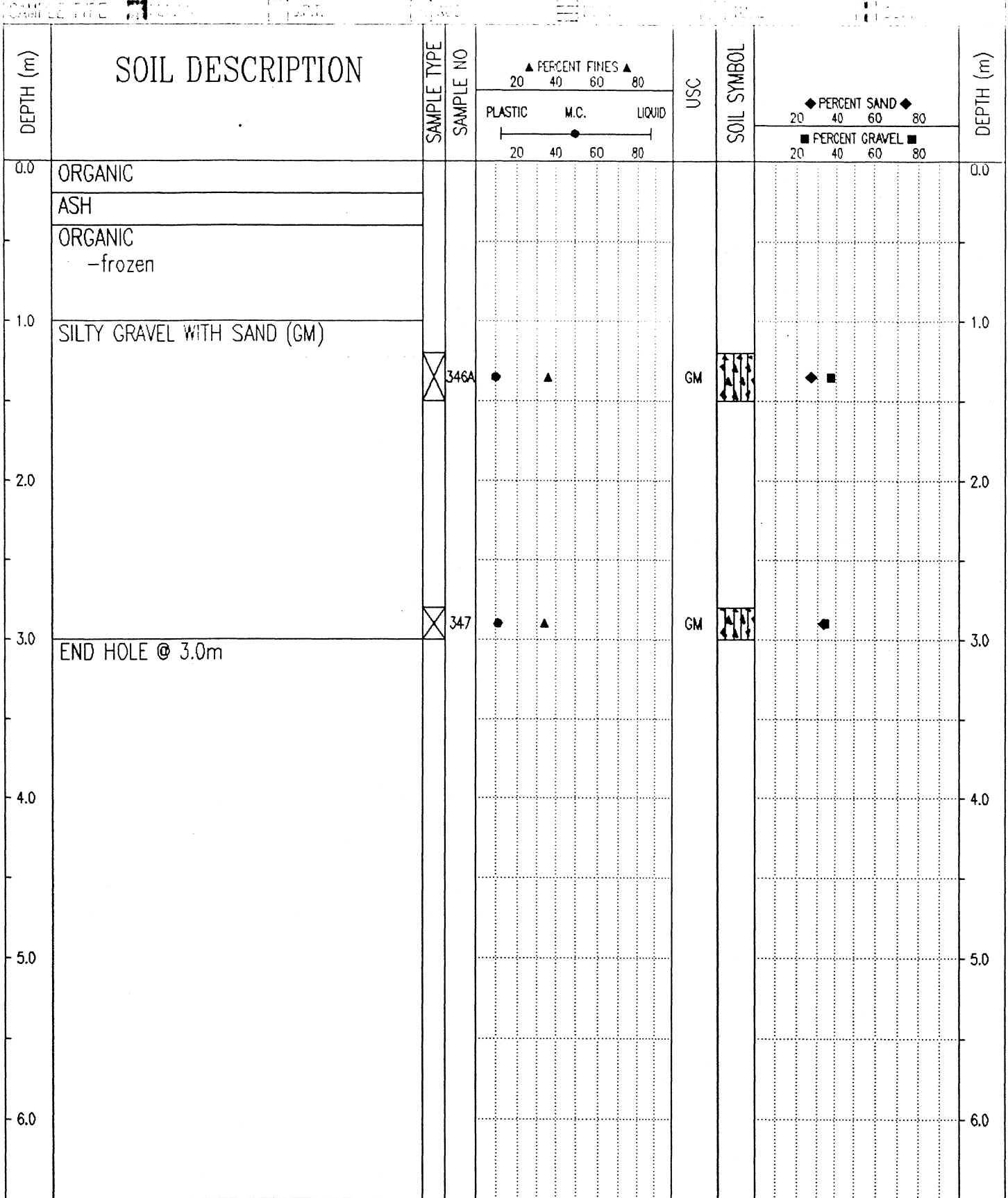
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REVIEWED BY:	COMPLETE: 99/08/11
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 513-477
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1807+875 CENTRELINE	ELEVATION: 0.00 (m)



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Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/05/05
Page 1 of 1

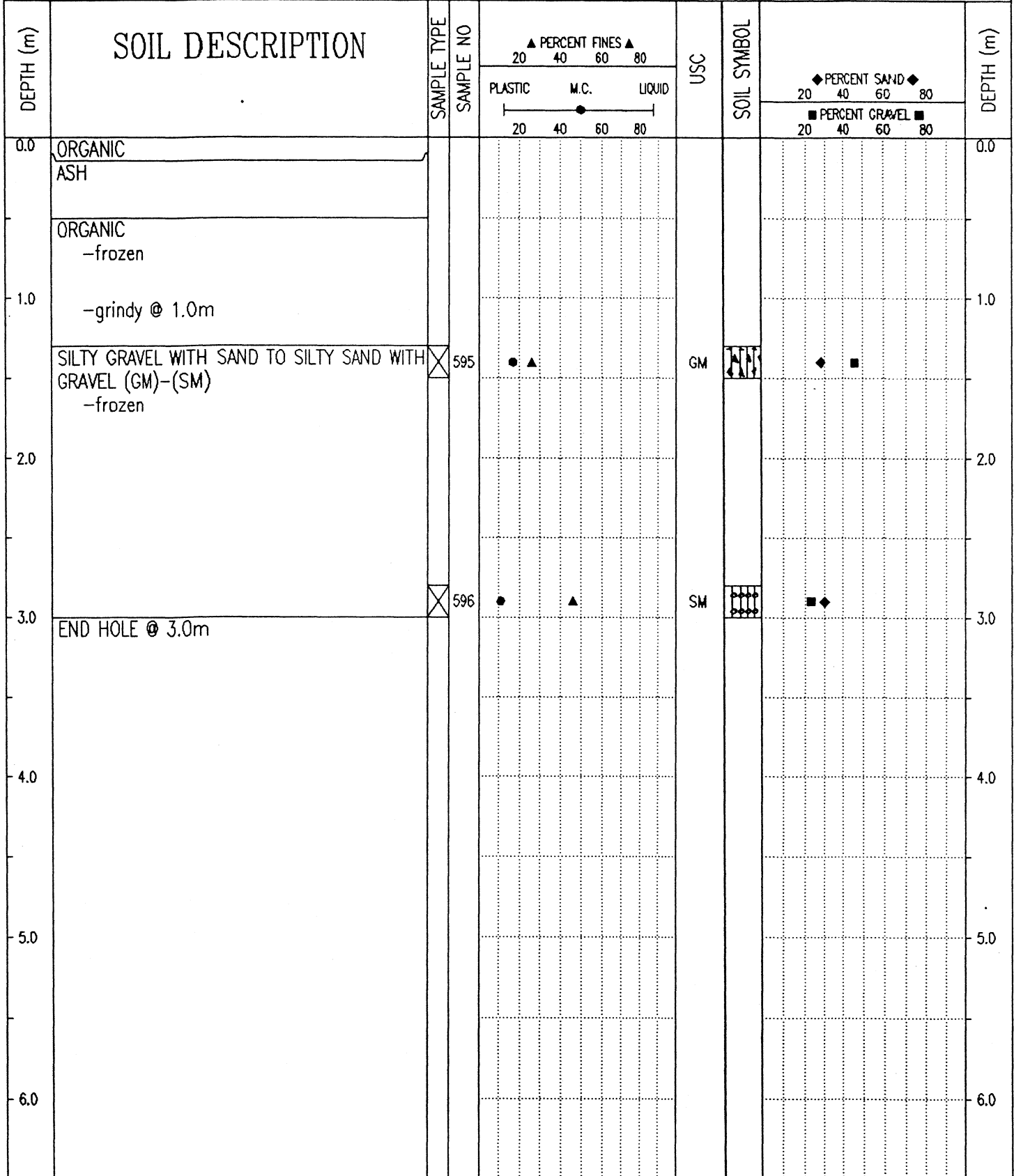
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ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION:1807+880 20M RT	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	60	
0.0	ORGANIC ASH											0.0
1.0	ORGANIC -frozen											1.0
2.0	SILTY SAND WITH GRAVEL (SM) -frozen -grindy drilling	<input checked="" type="checkbox"/>	593	●	▲		SM	◆◆◆◆	■	◆		2.0
3.0	END HOLE @ 3.0m	<input checked="" type="checkbox"/>	594	●	▲		SM	◆◆◆◆	■			3.0
4.0												4.0
5.0												5.0
6.0												6.0

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	REVIEWED BY:	COMPLETE: 99/08/11
	Fig. No:	Page 1 of 1

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



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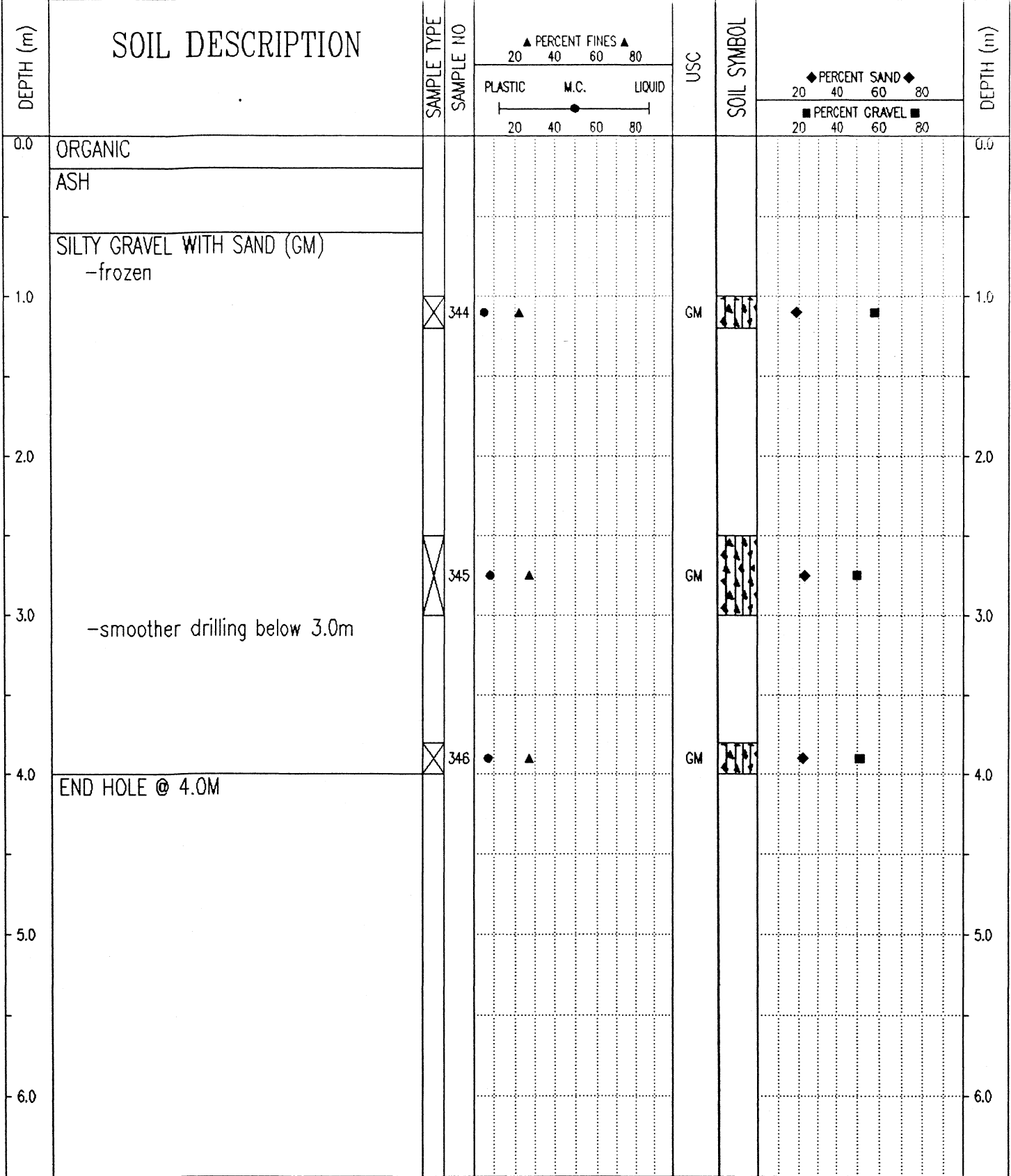
LOGGED BY: G.C.	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 99/08/11
Fig. No:	Page 1 of 1

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	
0.0	ORGANIC ASH											0.0
0.0 - 1.0	ORGANIC -frozen											
1.0 - 2.0	SILTY GRAVEL WITH SAND (GM) -frozen -grindy drilling	<input checked="" type="checkbox"/>	591	●	▲		GM		◆	■		
2.0 - 3.0	SILTY SAND WITH GRAVEL (SM) -frozen -smoother drilling	<input checked="" type="checkbox"/>	592	●	▲		SM		■	◆		
3.0 - 6.0	END HOLE @ 3.0m											

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SAMPLE TYPE RETURN S.P.T. AW C.P.T. TEST SOPT



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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	
0.0	ORGANIC ASH											0.0
0.0 - 1.0	ORGANIC -frozen											1.0
1.0 - 2.0	SILTY GRAVEL WITH SAND (GM) -frozen (Vx) -grindy drilling -more gravel @ 2.0m	<input checked="" type="checkbox"/>	587	●	▲		GM	◆	■			2.0
2.0 - 3.0	SILTY SAND (SM) -frozen -smoother drilling	<input checked="" type="checkbox"/>	588	●	▲		SM	■		◆		3.0
3.0	END HOLE @ 3.0m											3.0
4.0												4.0
5.0												5.0
6.0												6.0

99/12/06 10:57PM

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 526-671				
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329				
MOBILE B40-L		LOCATION:1808+035 20M LT		ELEVATION: 0.00 (m)				
SAMPLE TYPE		<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER	<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE	<input type="checkbox"/> CORE	
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲		USC	SOIL SYMBOL	DEPTH (m)
				PLASTIC	M.C.			
0.0	ORGANIC VOLCANIC ASH			20	40	60	80	0.0
1.0	ORGANIC -frozen (Vx)			20	40	60	80	1.0
2.0	SILTY SAND WITH GRAVEL (SM) -frozen (Vx) -grindy drilling	<input checked="" type="checkbox"/>	589	20	40	60	80	2.0
3.0	END HOLE @ 3.0m	<input checked="" type="checkbox"/>	590	20	40	60	80	3.0
4.0								4.0
5.0								5.0
6.0								6.0

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Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/08/11
Page 1 of 1

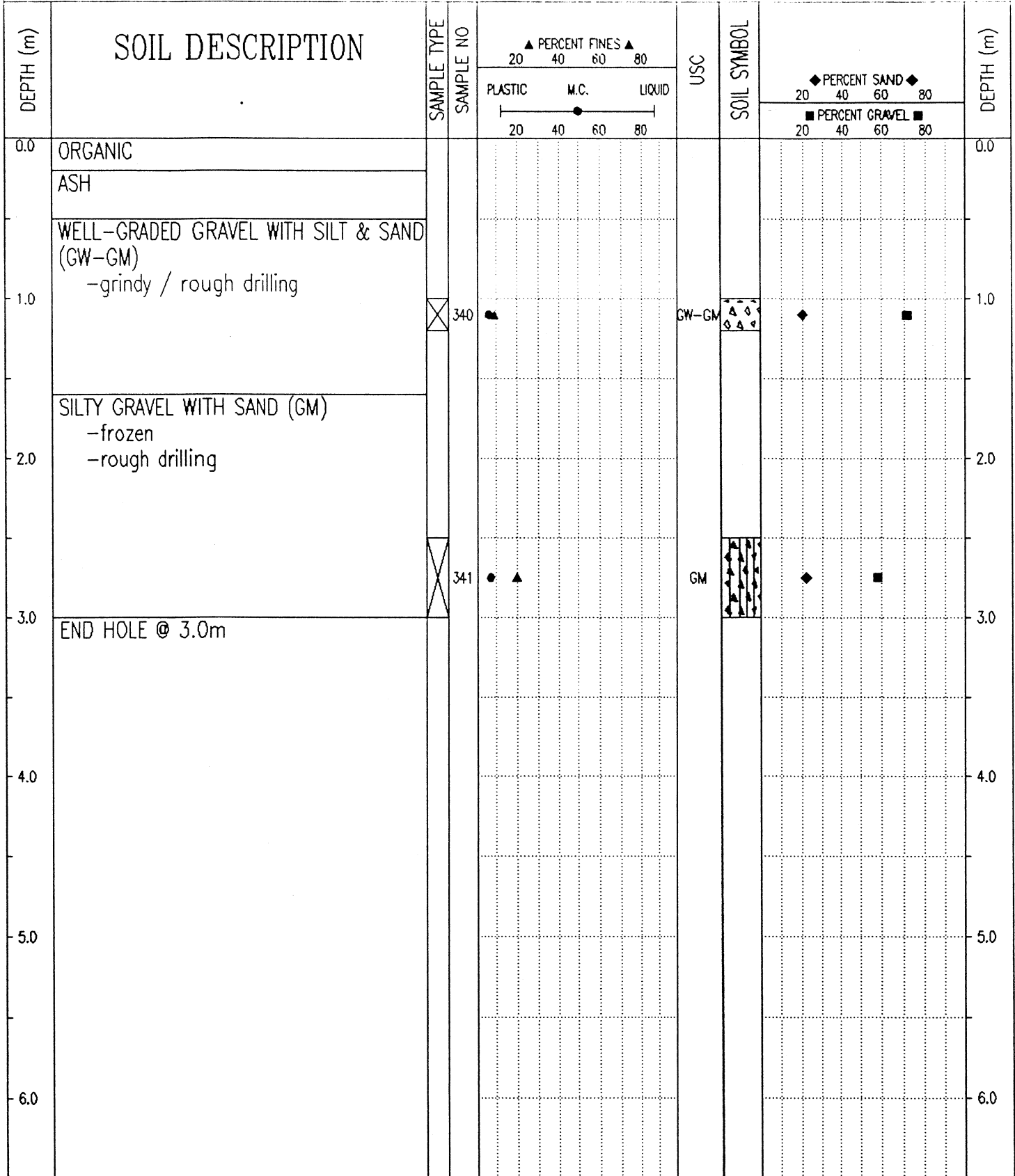
SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 513-475								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1808+040 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE		S.P.T.		CORE								
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲		USC	SOIL SYMBOL	◆ PERCENT SAND ◆		DEPTH (m)		
				PLASTIC	M.C.			LIQUID	PERCENT GRAVEL ■			
0.0	ORGANIC			20	40	60	80	20	40	60	80	0.0
	ASH											
	ORGANIC -frozen											
1.0												1.0
	SILTY SAND WITH GRAVEL (SM) -frozen -rough drilling		342	●	▲			■	◆			2.0
2.0												
			343	●	▲			■	◆			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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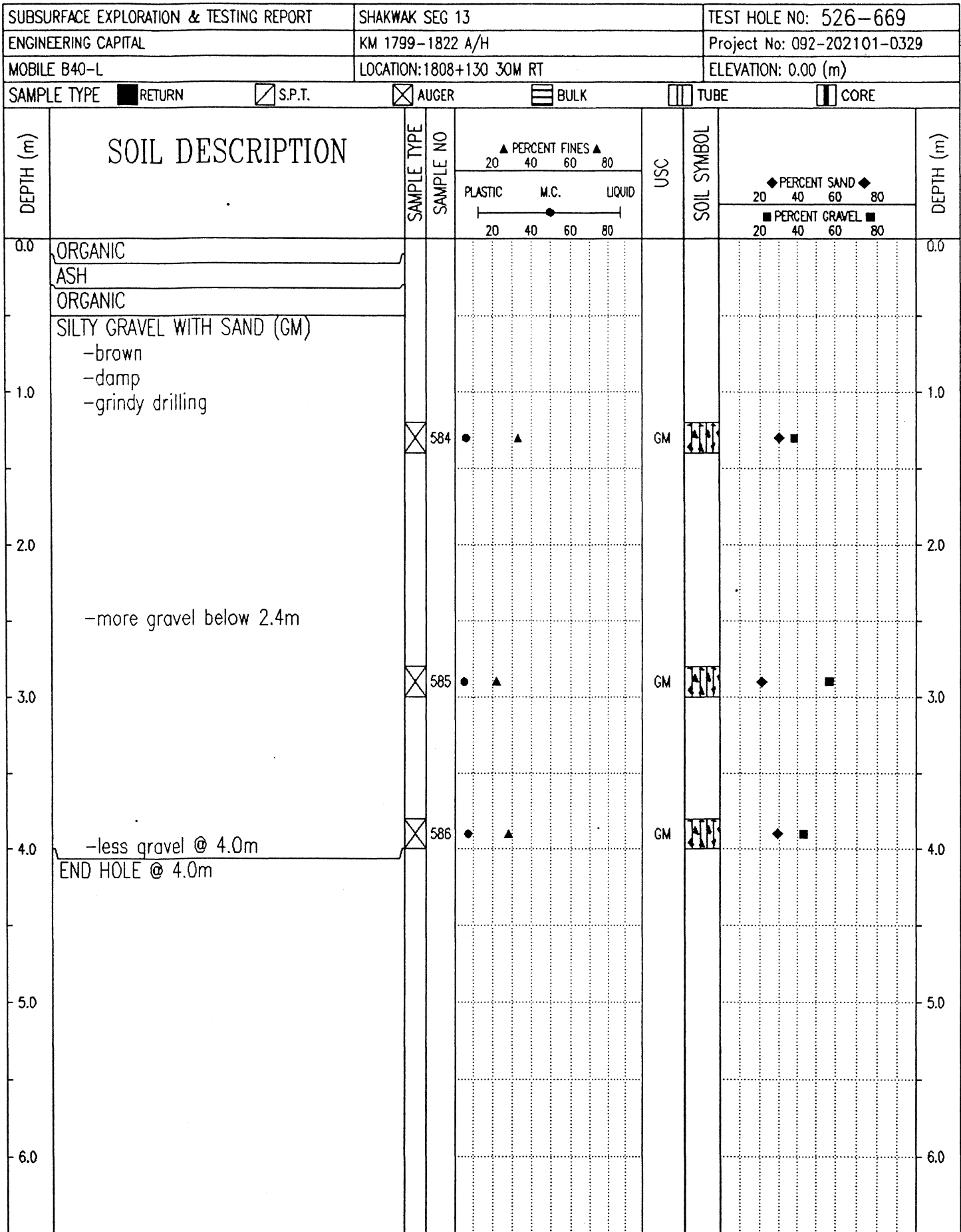
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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/05/05

SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 513-474
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1808+125 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



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	Fig. No:	Page 1 of 1



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Fig. No:

COMPLETION DEPTH: 4.0 m

COMPLETE: 99/08/11

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 526-667								
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329								
MOBILE B40-L		LOCATION: 1808+200 15M RT		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	ORGANIC VOLCANIC ASH			20	40	60	80	20	40	60	80	0.0
1.0	ORGANIC -frozen (Vx)											1.0
2.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -frozen -grindy drilling											2.0
		<input checked="" type="checkbox"/>	581	●▲			GP-GM	◆	■			
3.0	END HOLE @ 2.75m -refusal											3.0
4.0												4.0
5.0												5.0
6.0												6.0

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Fig. No:

COMPLETION DEPTH: 2.8 m
COMPLETE: 99/08/10

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 526-668					
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329					
MOBILE B40-L		LOCATION:1808+200 20M LT		ELEVATION: 0.00 (m)					
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER					
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE					
				<input type="checkbox"/> CORE					
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
				20	40	60	80		
				20	40	60	80		
0.0	ORGANIC ASH ORGANIC -frozen								0.0
1.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -frozen -grinding drilling -more gravel @ 1.3m	<input checked="" type="checkbox"/>	582	●	▲			GM	1.0
2.0	-rough drilling @ 2.0m								2.0
2.4	END HOLE @ 2.4m -refusal	<input checked="" type="checkbox"/>	583	●	▲			SM	2.4
3.0									3.0
4.0									4.0
5.0									5.0
6.0									6.0

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Fig. No:

COMPLETION DEPTH: 2.4 m
COMPLETE: 99/08/10

SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 513-473
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1808+220 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		
0.0	ORGANIC										0.0	
	ASH											
	ORGANIC -frozen (Vx)											
1.0											1.0	
	SILTY SAND WITH GRAVEL (SM) -frozen -grindy drilling											
2.0	END HOLE @ 2.0m -refusal 1st refusal @ 2.0m 2nd refusal @ 1.8m	<input checked="" type="checkbox"/>	339	●	▲		SM	◆◆◆◆	■	◆	2.0	
3.0											3.0	
4.0											4.0	
5.0											5.0	
6.0											6.0	

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REVIEWED BY:	COMPLETE: 99/05/05
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 13	TEST HOLE NO: 526-666
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION: 1808+250 30M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK
		<input type="checkbox"/> TUBE
		<input type="checkbox"/> 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 VOLCANIC ASH											0.0	
1.0	ORGANIC & SILT MIX -frozen (Vx)											1.0	
2.0	SILTY SAND WITH GRAVEL (SM) -frozen -grinding drilling	<input checked="" type="checkbox"/>	579	●	▲		SM	▢	◆	■		2.0	
3.0	END HOLE @ 3.0m	<input checked="" type="checkbox"/>	580	●	▲		SM	▢	◆	■		3.0	
4.0												4.0	
5.0												5.0	
6.0												6.0	

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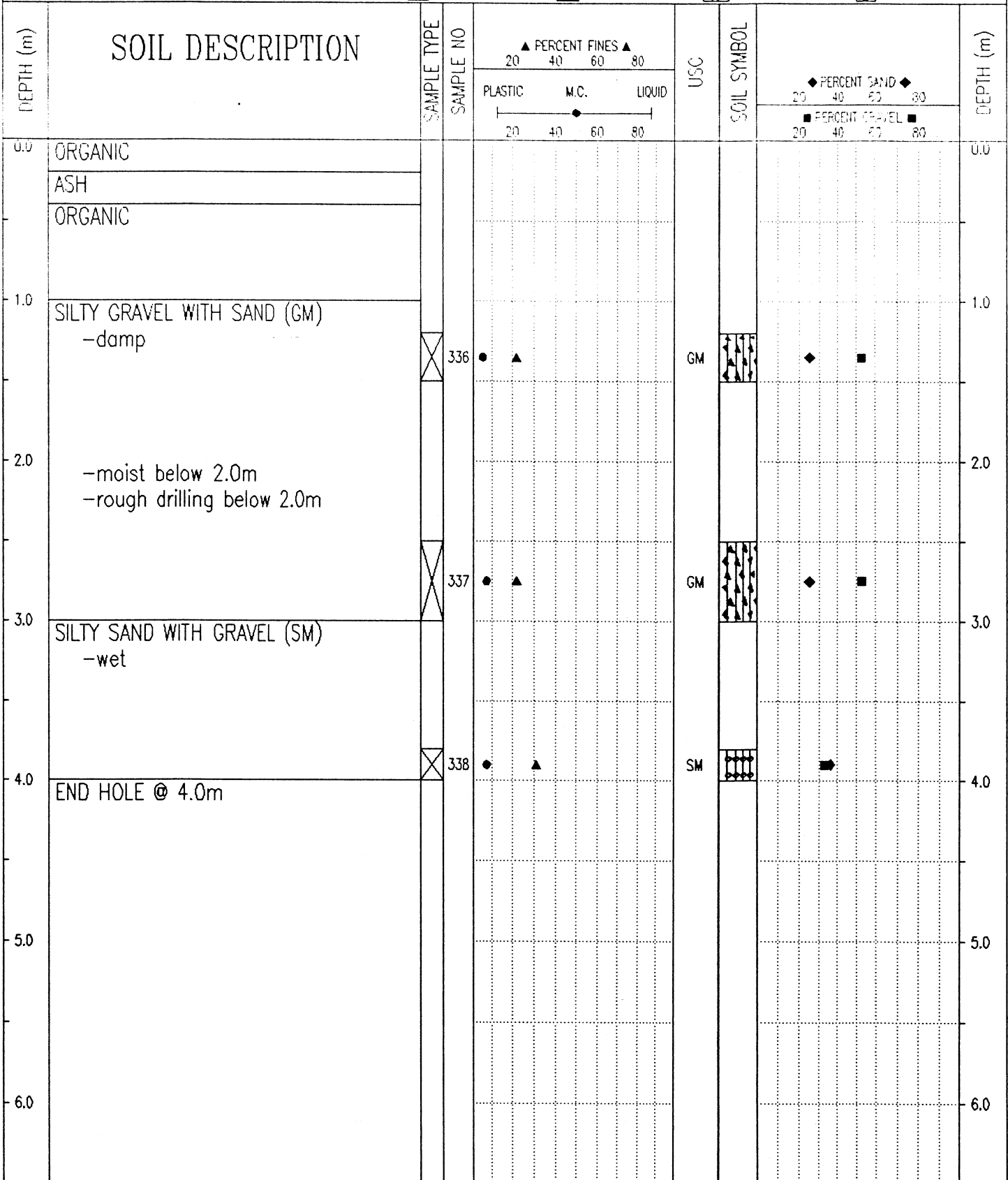
Fig. No:

COMPLETION DEPTH: 3.0 m

COMPLETE: 99/08/10

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SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 513-487
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L		LOCATION: 1808+300 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 4.0 m
COMPLETE: 99/05/04

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 526-665								
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329								
MOBILE B40-L		LOCATION: 1808+350 30M RT		ELEVATION: 0.00 (m)								
SAMPLE TYPE												
<input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE		<input type="checkbox"/> 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	
0.0	ORGANIC											0.0
	VOLCANIC ASH											
1.0	ICE RICH ORGANIC											1.0
	ICE LENSE -grindy drilling @ 1.3m											
2.0	SILTY SAND WITH GRAVEL (SM) -with 50% ice	<input checked="" type="checkbox"/>	577	●	▲		SM		◆	■		2.0
	SILTY GRAVEL WITH SAND (GM) -frozen											
3.0	END HOLE @ 3.0m	<input checked="" type="checkbox"/>	578	●	▲		GM		◆	■		3.0
4.0												4.0
5.0												5.0
6.0												6.0

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Fig. No:

COMPLETION DEPTH: 3.0 m

COMPLETE: 99/08/10

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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
	ASH											
	ORGANIC											
1.0	SILTY SAND WITH GRAVEL (SM) -frozen -1st refusal @ 1.5m	<input checked="" type="checkbox"/>	335	●	▲		SM	◆	■			1.0
2.0	END HOLE @ 2.0m -refusal											2.0
3.0												3.0
4.0												4.0
5.0												5.0
6.0												6.0

99/11/16 01:13PM

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	
0.0	ORGANIC VOLCANIC ASH										0.0
1.0	ORGANIC -frozen (Vx)										1.0
2.0	SILTY SAND WITH GRAVEL (SM) -frozen -grindy drilling	<input checked="" type="checkbox"/>	576	◆	▲		SM	◆	■	◆	2.0
3.0	END HOLE @ 2.8m -refusal - rock dust on bit										3.0
4.0											4.0
5.0											5.0
6.0											6.0

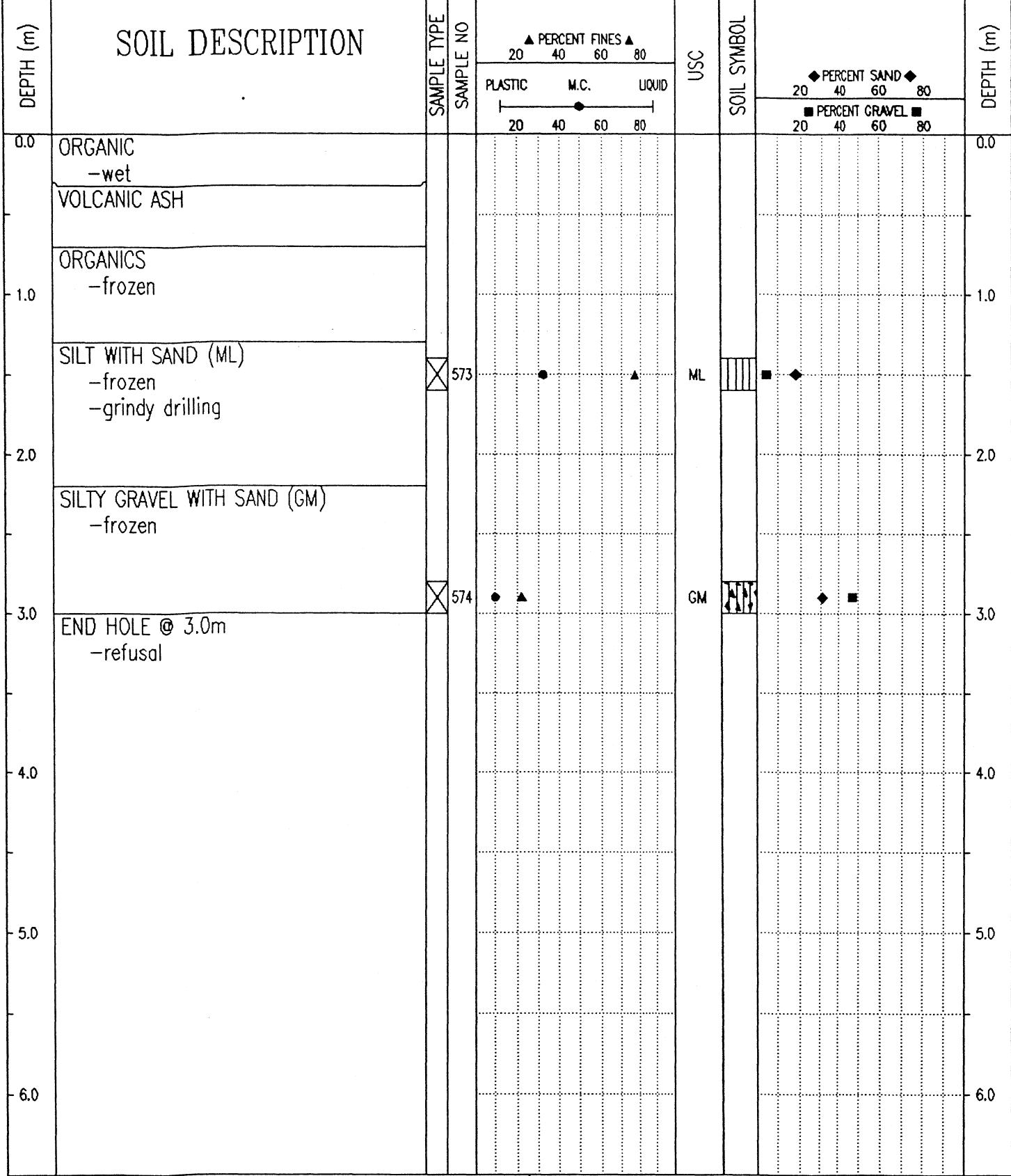
99/12/06 02:56PM

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	ORGANIC										0.0	
	ASH											
	ORGANIC -frozen											
1.0											1.0	
	SILTY GRAVEL WITH SAND (GM) -frozen with ice (Vx)		333	●	▲		GM	▲▲▲▲	■		2.0	
2.0												
	SILTY SAND WITH GRAVEL (SM) -not frozen		334	●	▲		SM	●●●●	■ ◆		3.0	
3.0	END HOLE @ 3.0m										3.0	
4.0											4.0	
5.0											5.0	
6.0											6.0	

99/05/24 10:43AM

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



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REVIEWED BY:	COMPLETE: 99/08/10
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 526-663						
ENGINEERING CAPITAL		KM 1739-1822 A/H		Project No: 092-202101-0329						
MOBILE B40-L		LOCATION: 1808+510 20M LT		ELEVATION: 0.00 (m)						
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER						
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE						
				<input type="checkbox"/> 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	ORGANIC -wet									0.0
	ASH -wet									
1.0	ORGANIC -frozen									1.0
	SILTY SAND WITH GRAVEL (SM) -frozen -grindy drilling -sample contaminated from above	<input checked="" type="checkbox"/>	575	●	▲	SM	◆	■	◆	
2.0	END HOLE @ 2.0m -refusal									2.0
3.0										3.0
4.0										4.0
5.0										5.0
6.0										6.0

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LOGGED BY: G.C.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 2.0 m
COMPLETE: 99/08/10

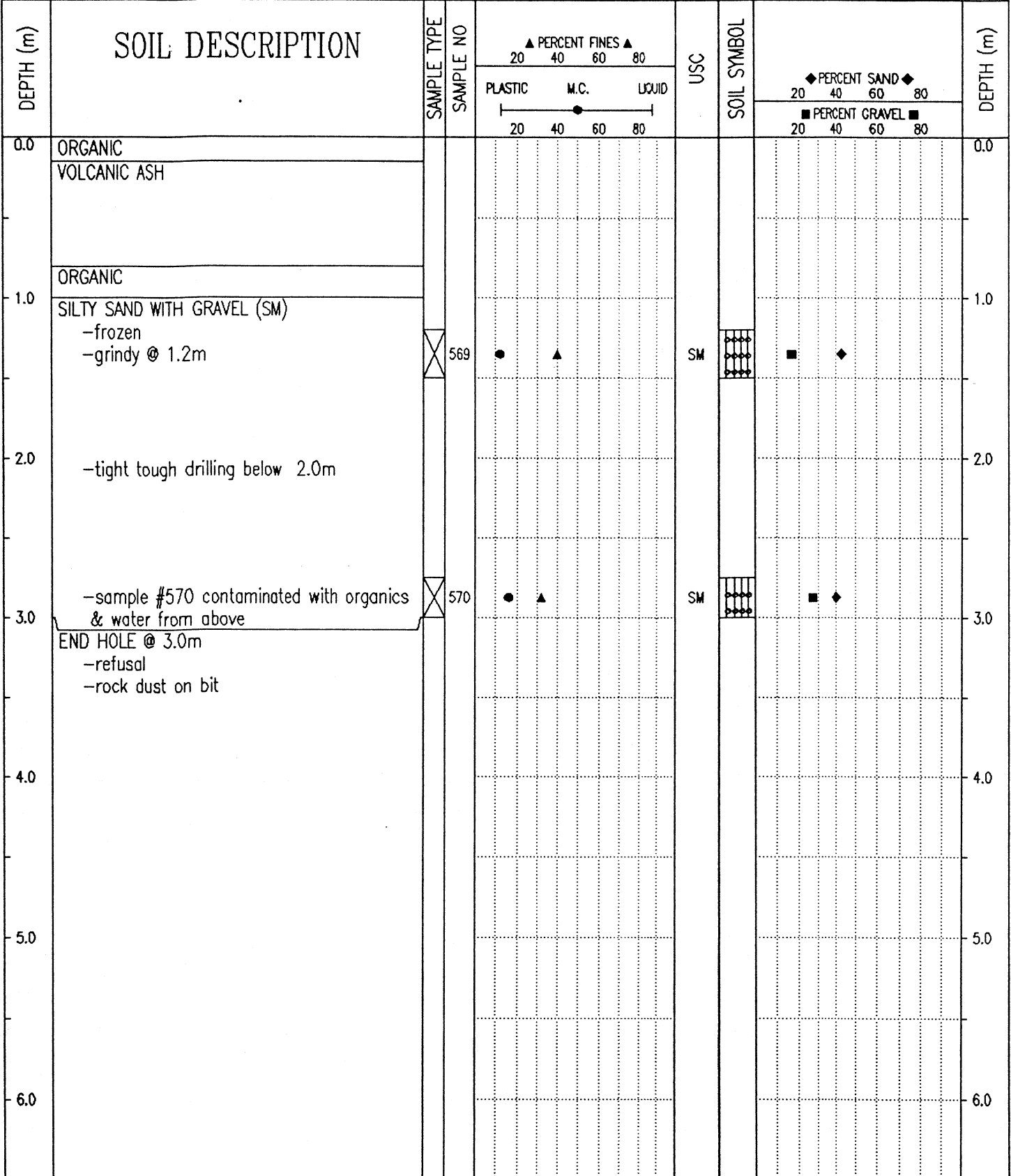
SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 513-484						
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329						
NODWELL B-40L		LOCATION: 1808+575 CENTRELINE		ELEVATION: 0.00 (m)						
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> 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	ORGANIC & ASH -mixed with H2O (surface)									0.0
1.0	ORGANIC -frozen									1.0
2.0	-1st refusal @ 1.5m SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -frozen	<input checked="" type="checkbox"/>	331	●	▲		SM	■	◆	2.0
3.0	END HOLE @ 3.0m	<input checked="" type="checkbox"/>	332	●	▲		GM	■	◆	3.0
4.0										4.0
5.0										5.0
6.0										6.0

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Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/05/04

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 13	TEST HOLE NO: 526-660
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B40-L	LOCATION:1808+575 20M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



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Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/08/10

SUBSURFACE EXPLORATION & TESTING REPORT SHAKWAK SEG 13 TEST HOLE NO: 526-661

ENGINEERING CAPITAL KM 1799-1822 A/H Project No: 092-202101-0329

MOBILE B40-L LOCATION: 1808+575 20M LT ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		PERCENT GRAVEL ■	DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40		
0.0	ORGANIC VOLCANIC ASH										0.0	
1.0	ORGANIC -frozen										1.0	
2.0	SILT WITH SAND (ML) -frozen SILT WITH SAND & GRAVEL (SM) -frozen -grindy drilling	<input checked="" type="checkbox"/>	571			80	ML		80		2.0	
3.0		<input checked="" type="checkbox"/>	572	20	40	80	SM		80		3.0	
4.0	END HOLE @ 3.8m -refusal - rock dust on bit -no sample churned up										4.0	
5.0											5.0	
6.0											6.0	

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COMPLETION DEPTH: 3.8 m
COMPLETE: 99/08/10

99/12/10 02:38PM

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK SEG 13		TEST HOLE NO: 526-659							
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329							
MOBILE B40-L		LOCATION: 1808+650 30M RT		ELEVATION: 0.00 (m)							
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER							
				<input type="checkbox"/> BULK							
				<input type="checkbox"/> TUBE							
				<input type="checkbox"/> CORE							
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	
0.0	SILTY GRAVEL WITH SAND (GM) -brown -damp										0.0
1.0											1.0
2.0	SILTY SAND WITH GRAVEL (SM) -brown -moist										2.0
3.0											3.0
4.0	SILTY GRAVEL WITH SAND (GM) -brown -damp -rougher drilling										4.0
5.0	END HOLE @ 4.6m										5.0
6.0											6.0
Government of Yukon Transportation Engineering				LOGGED BY: G.C.				COMPLETION DEPTH: 4.6 m			
				REVIEWED BY:				COMPLETE: 99/08/10			
				Fig. No:				Page 1 of 1			

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 513-483											
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329											
NODWELL B-40L		LOCATION: 1808+673 CENTRELINE		ELEVATION: 0.00 (m)											
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER											
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE											
				<input type="checkbox"/> 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	ORGANIC													0.0	
	ASH														
	ORGANIC -frozen														
1.0	SILTY GRAVEL WITH SAND (GM) -frozen													1.0	
		<input checked="" type="checkbox"/>	328	●	▲		GM	◆	■						
2.0														2.0	
	-not frozen below 2.2m														
3.0		<input checked="" type="checkbox"/>	329	●	▲		GM	◆	■					3.0	
4.0		<input checked="" type="checkbox"/>	330	●	▲		GM	◆	■					4.0	
	END HOLE @ 4.0m														
5.0														5.0	
6.0														6.0	

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COMPLETION DEPTH: 4.0 m

COMPLETE: 99/05/04

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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	
0.0	ORGANIC											0.0
	ASH											
	ORGANIC -frozen (Vx)											
1.0	SILTY SAND WITH GRAVEL (SM) -frozen with ice (Vx)	<input checked="" type="checkbox"/>	325	●	▲		SM	◐◑◒◓◔◕◖◗◘◙◚◛◜◝◞◟◠◡◢◣◤◥◦◧◨◩◪◫◬◭◮◯◰◱◲◳◴◵◶◷◸◹◺◻◼◽◾◿◠◡◢◣◤◥◦◧◨◩◪◫◬◭◮◯◰◱◲◳◴◵◶◷◸◹◺◻◼◽◾◿	◆	■		1.0
2.0												2.0
3.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -frozen	<input checked="" type="checkbox"/>	326	●	▲		GM	◐◑◒◓◔◕◖◗◘◙◚◛◜◝◞◟◠◡◢◣◤◥◦◧◨◩◪◫◬◭◮◯◰◱◲◳◴◵◶◷◸◹◺◻◼◽◾◿	◆	■		3.0
4.0												4.0
4.0	END HOLE @ 4.0M											4.0
5.0												5.0
6.0												6.0

99/11/16 01:12PM

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 521-658
ENGINEERING CAPITAL		KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B 40 L		LOCATION: 1808+750 37M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			DEPTH (m)	
				PLASTIC	M.C.	LIQUID			PERCENT GRAVEL ■				
				20	40	60	80		20	40	60	80	
0.0	ORGANIC -black -damp												0.0
	ASH -moist												
1.0	ORGANIC -trace rock -black -frozen (Vx) below .8m												1.0
2.0	SILTY SAND WITH GRAVEL (SM) -grindy drilling -frozen (Nf)												2.0
3.0	-hard drilling below 3.0m	<input checked="" type="checkbox"/>	564	●	▲		SM	■	◆				3.0
4.0	END HOLE @ 4.0m -refusal	<input checked="" type="checkbox"/>	565	●	▲		SM	■	◆				4.0
5.0													5.0
6.0													6.0

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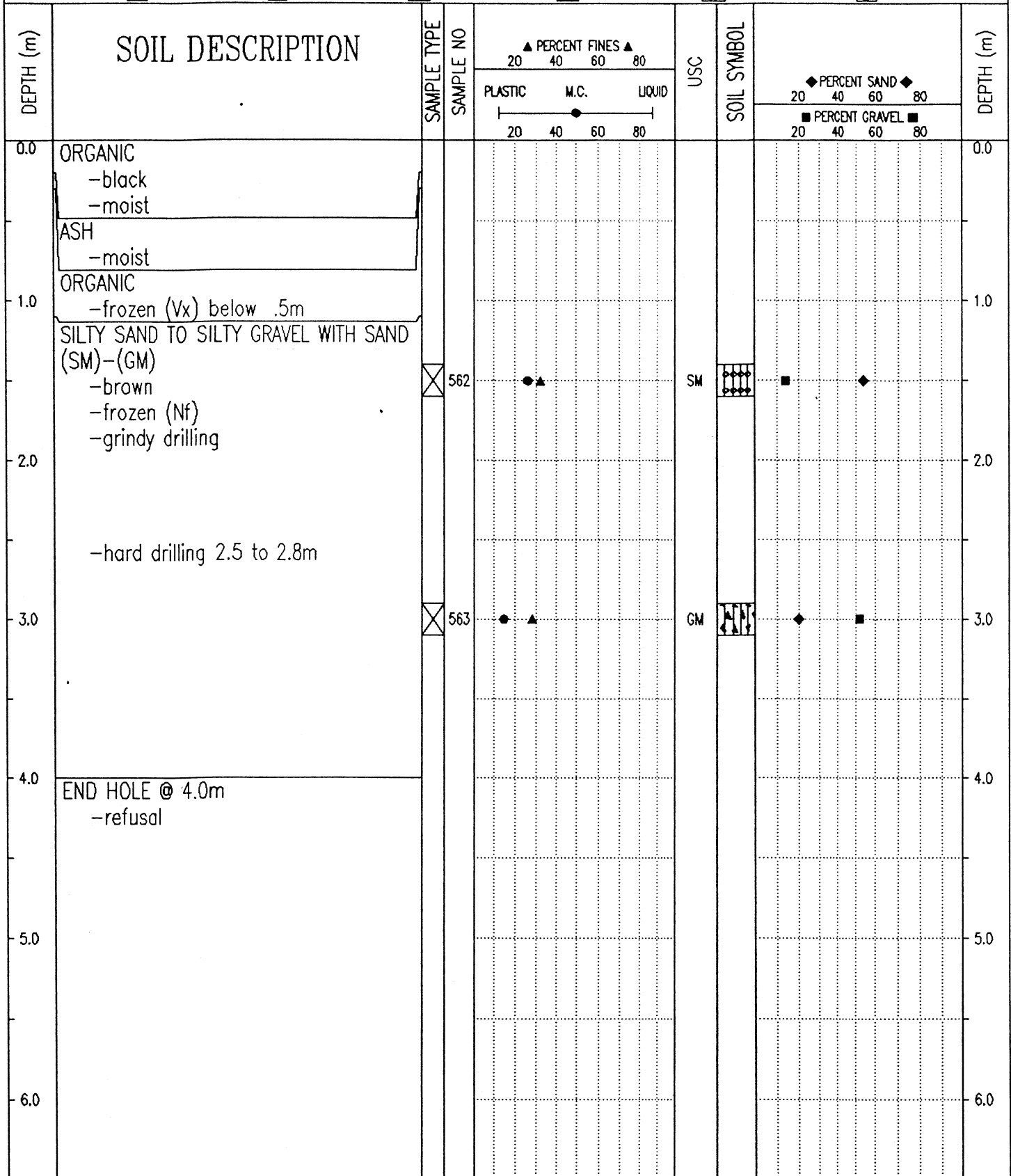
LOGGED BY: W.E.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 4.0 m
COMPLETE: 99/08/06

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

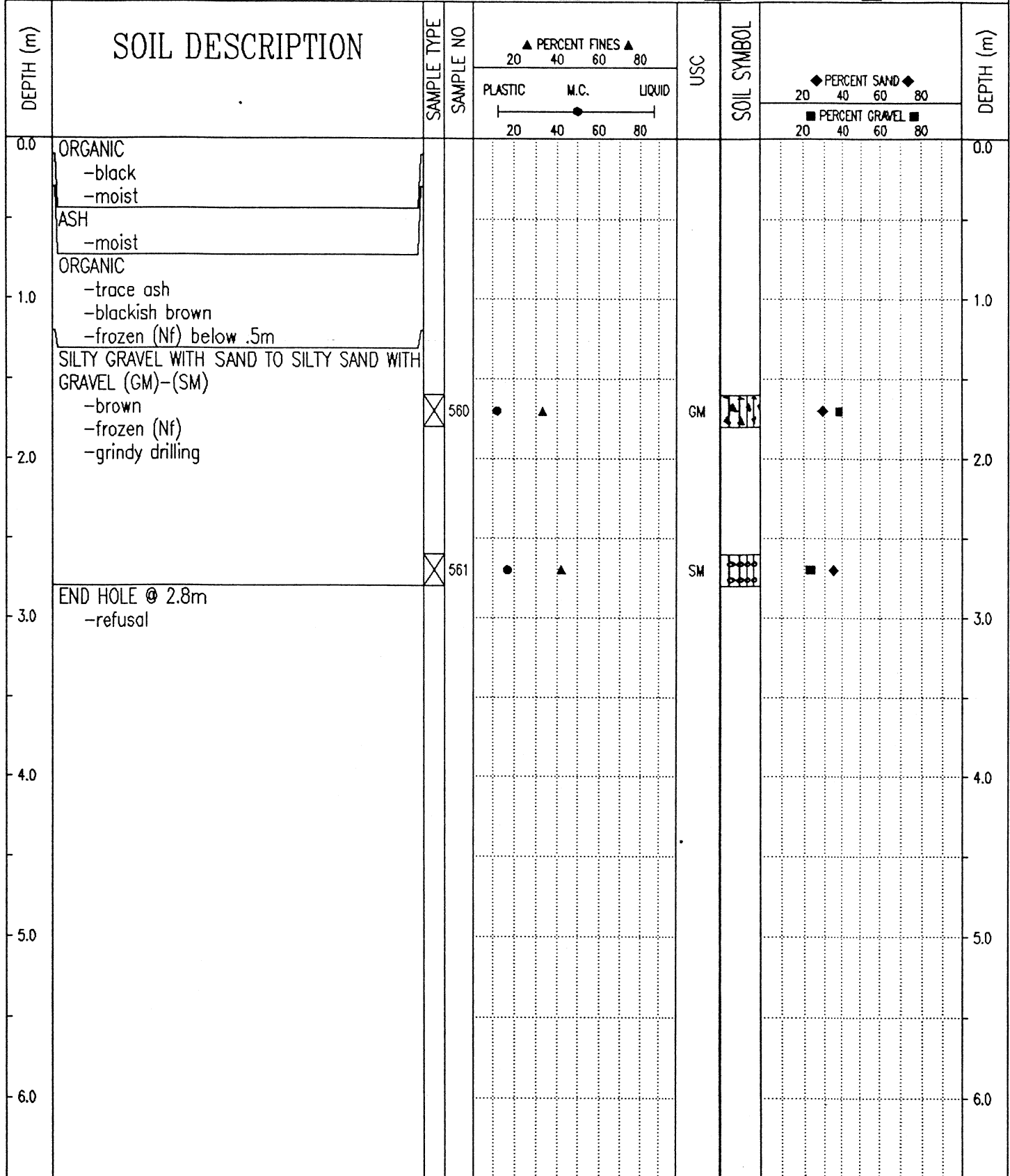
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO		USC	SOIL SYMBOL		DEPTH (m)
0.0	ORGANIC							0.0
	ASH							
	ORGANIC -frozen (Vx)							
1.0								1.0
	SILTY SAND WITH GRAVEL (SM) -frozen							
2.0	END HOLE @ 2.0m -refusal	<input checked="" type="checkbox"/>	324		SM			2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 521-657
ENGINEERING CAPITAL		KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B 40 L		LOCATION: 1808+860 20M LT	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.0 m
	REVIEWED BY:	COMPLETE: 99/08/06
	Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 521-656
ENGINEERING CAPITAL		KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B 40 L		LOCATION: 1808+865 22M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.8 m
COMPLETE: 99/08/06

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 513-471								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1808+950 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	ORGANIC										0.0	
	ASH											
	ORGANIC -frozen (Vx)											
1.0											1.0	
	SILTY GRAVEL WITH SAND (GM) -frozen (Vx)	X	322	●	▲		GM	◆	■			
2.0											2.0	
	SILTY SAND WITH GRAVEL (SM) -frozen											
3.0		X	323	●	▲		SM	◆	■			
	END HOLE @ 3.0M -refusal											
4.0											4.0	
5.0											5.0	
6.0											6.0	

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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/05/04

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 521-655							
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329							
MOBILE B 40 L		LOCATION: 1808+950 40M RT		ELEVATION: 0.00 (m)							
SAMPLE TYPE		S.P.T.		AUGER		BULK		TUBE		CORE	
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	PERCENT SAND ◆ 20 40 60 80 PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)			
0.0	ORGANIC -trace ash -blackish brown -damp							0.0			
1.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -brown -frozen (Nf) below .8m							1.0			
2.0		☒	558	● ▲	SM	◆ ■		2.0			
3.0	-hard drilling @ 2.6m	☒	559	● ▲	GM	◆ ■		3.0			
3.0	END HOLE @ 3.0m -refusal							3.0			
4.0								4.0			
5.0								5.0			
6.0								6.0			

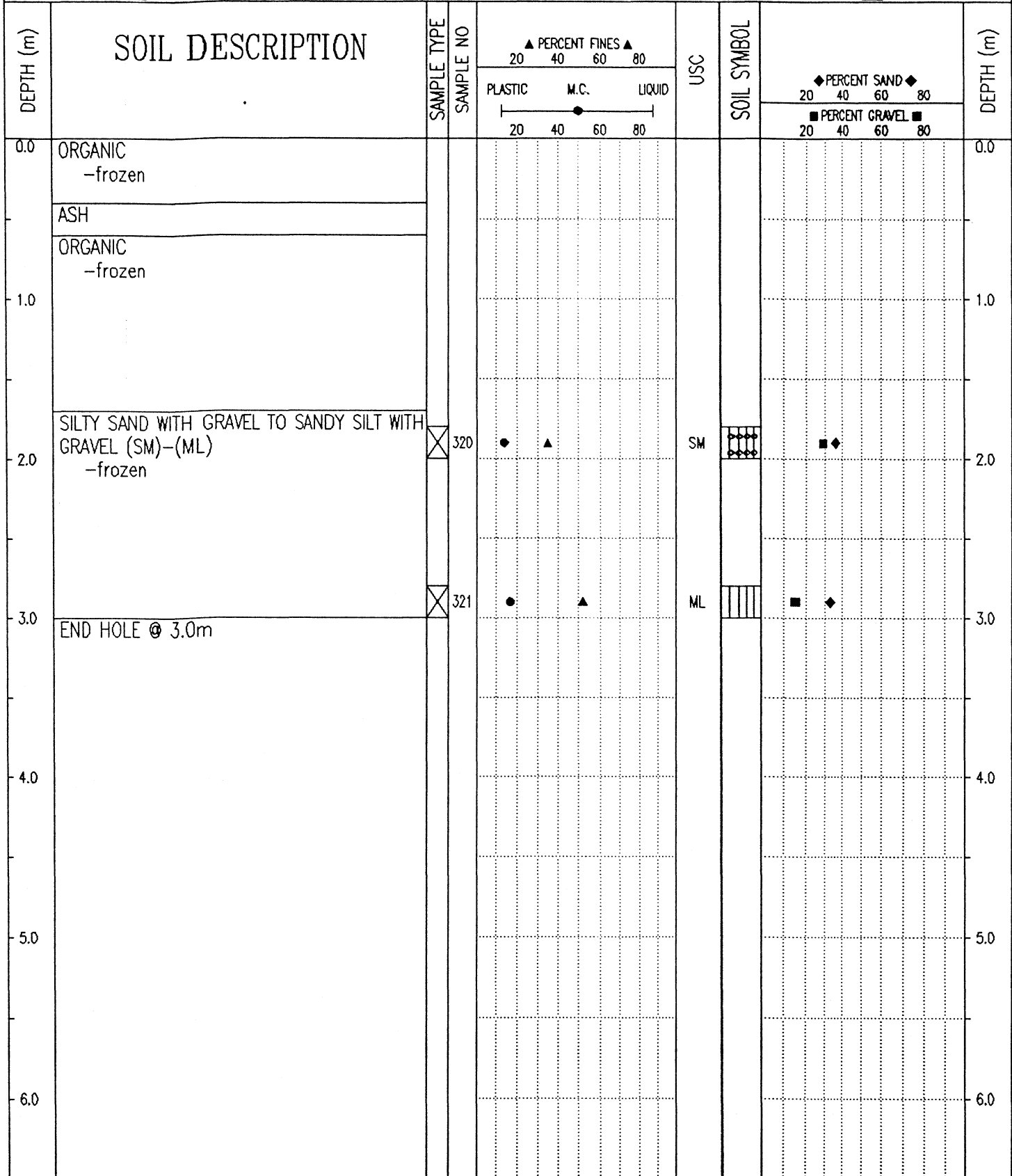
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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/08/06

SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 513-470
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1809+025 CENTRELINE	ELEVATION: 0.00 (m)

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

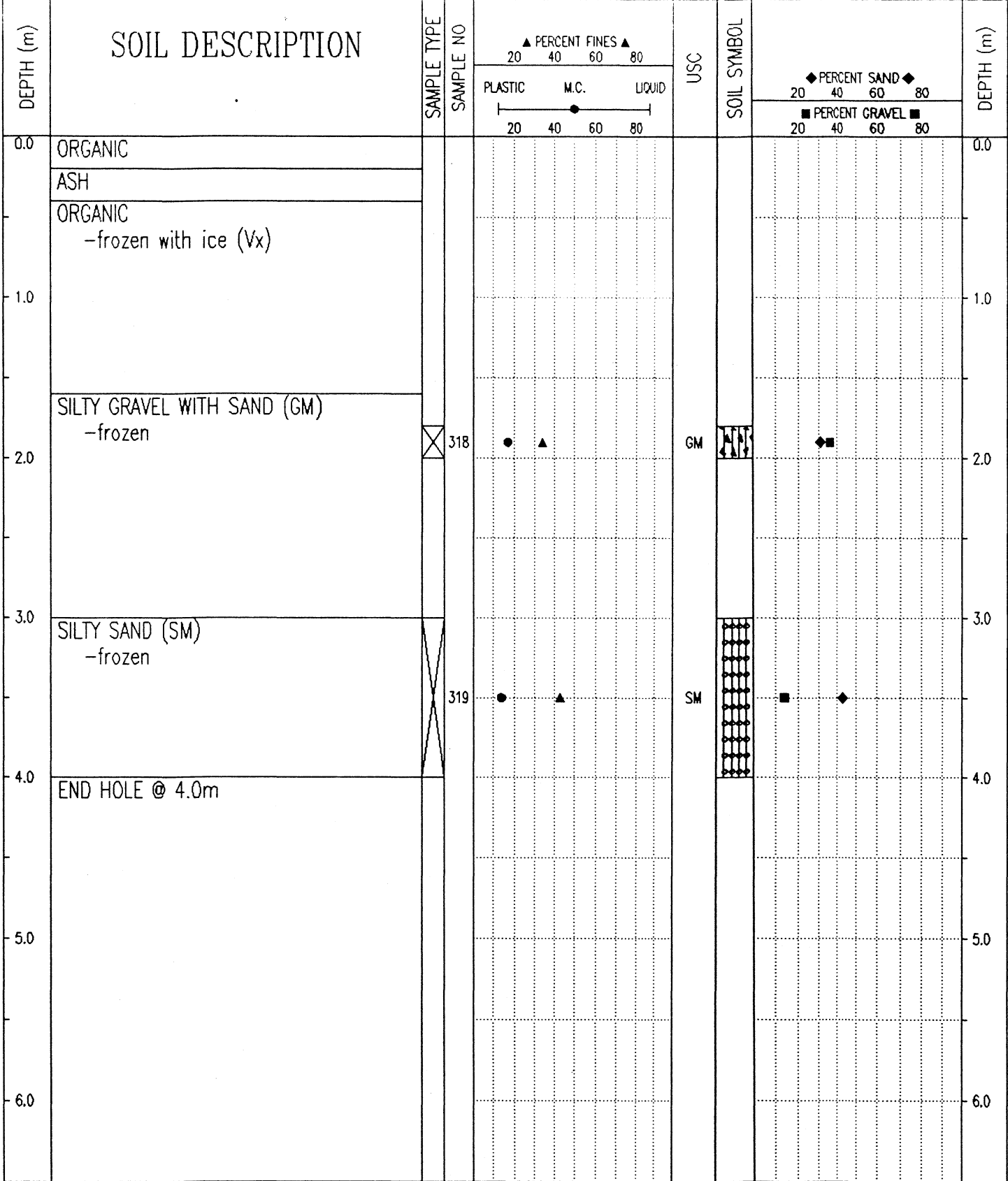


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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/05/04

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



SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 521-652							
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329							
MOBILE B 40 L		LOCATION: 1809+150 35M RT		ELEVATION: 0.00 (m)							
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER							
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE							
				<input type="checkbox"/> CORE							
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲			USC	SOIL SYMBOL	◆ PERCENT SAND ◆		DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	
0.0	ORGANIC -black -moist										0.0
	ASH -moist										
1.0	SILTY SAND WITH GRAVEL (SM) -greyish brown -frozen (Nf) below 1.0m										
		<input checked="" type="checkbox"/>	554	●	▲		SM	◈	■		
2.0											
3.0	END HOLE @ 3.0m -refusal										
		<input checked="" type="checkbox"/>	555	●	▲		SM	◈	■		
4.0											
5.0											
6.0											

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Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/08/06

SUBSURFACE EXPLORATION & TESTING REPORT ALASKA HWY RECONSTRUCTION TEST HOLE NO: 513-468

SHAKWAK PROJECT SEG 13B KM 1799 - 1822 A/H Project No: 092-202101-0329

NODWELL B-40L LOCATION: 1809+200 CENTRELINE ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			PERCENT GRAVEL ■			DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	60	80	20	40	
0.0	ORGANIC													0.0	
	ASH														
	ORGANIC -frozen														
1.0	SILTY SAND WITH GRAVEL (SM) -frozen -rough drilling -grindy drilling	<input checked="" type="checkbox"/>	316	●	▲		SM	◆	■					1.0	
2.0	END HOLE @ 2.0m -refusal	<input checked="" type="checkbox"/>	317	●	▲		SM	◆	■					2.0	
3.0														3.0	
4.0														4.0	
5.0														5.0	
6.0														6.0	

Government of Yukon Transportation Engineering

LOGGED BY: G.C. COMPLETION DEPTH: 2.0 m
 REVIEWED BY: COMPLETE: 99/05/04
 Fig. No:

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 521-651								
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329								
MOBILE B 40 L		LOCATION: 1809+250 20M LT		ELEVATION: 0.00 (m)								
SAMPLE TYPE		S.P.T.		AUGER								
RETURN		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	ORGANIC -black -damp ASH -moist ORGANIC -black -frozen ICE										0.0	
3.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -brownish grey -frozen (Vx) -grindy drilling	☒	552	●	▲		SM	■	◆		3.0	
4.0	-frozen (Nf) below 3.8m										4.0	
5.0	END HOLE @ 4.5m	☒	553	●	▲		GM	■	◆		5.0	
6.0											6.0	

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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 4.5 m
COMPLETE: 99/08/06

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 521-650
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B 40 L	LOCATION: 1809+255 21M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.
	<input checked="" type="checkbox"/> AUGER	<input type="checkbox"/> BULK
	<input type="checkbox"/> TUBE	<input type="checkbox"/> 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		
0.0	ORGANIC -black -moist											0.0	
	ASH -moist												
1.0	SILTY SAND (SM) -brown -frozen											1.0	
2.0	-grindy drilling @ 1.9m											2.0	
	-smooth drilling @ 2.4m												
	-sample #551 contaminated with org & water	<input checked="" type="checkbox"/>	551	▲	●		SM	◆	■				
3.0	SANDY GRAVELLY SILT -brown -grindy drilling @ 3.0											3.0	
4.0	END HOLE @ 4.0m											4.0	
5.0												5.0	
6.0												6.0	

Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 4.0 m
	REVIEWED BY:	COMPLETE: 99/08/06
	Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 513-467								
SHAKWAK PROJECT SEG 1.3B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1809+285 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	ORGANIC -frozen with ice (Vx)										0.0	
1.0											1.0	
2.0											2.0	
3.0	SANDY SILT WITH GRAVEL (ML) -frozen (Vx)		315	●	▲		ML	■			3.0	
4.0	END HOLE @ 3.0M -refusal										4.0	
5.0											5.0	
6.0											6.0	

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Fig. No:

COMPLETION DEPTH: 3.0 m

COMPLETE: 99/05/04

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SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 513-466									
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329									
NODWELL B-40L		LOCATION: 1809+325 CENTRELINE		ELEVATION: 0.00 (m)									
SAMPLE TYPE		<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER	<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE	<input type="checkbox"/> CORE						
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			DEPTH (m)	
				PLASTIC	M.C.	LIQUID			PERCENT GRAVEL ■				
				20	40	60	80		20	40	60	80	
0.0	ORGANIC												0.0
	ASH												
	ORGANIC -frozen (Vx)												
1.0													1.0
	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -frozen -drill starts grinding @ 1.5m	<input checked="" type="checkbox"/>	313	●	▲		GM	◆	■				2.0
2.0													
		<input checked="" type="checkbox"/>	314	●	▲		SM	◆	■				3.0
3.0	END HOLE @ 3.0m												
4.0													4.0
5.0													5.0
6.0													6.0

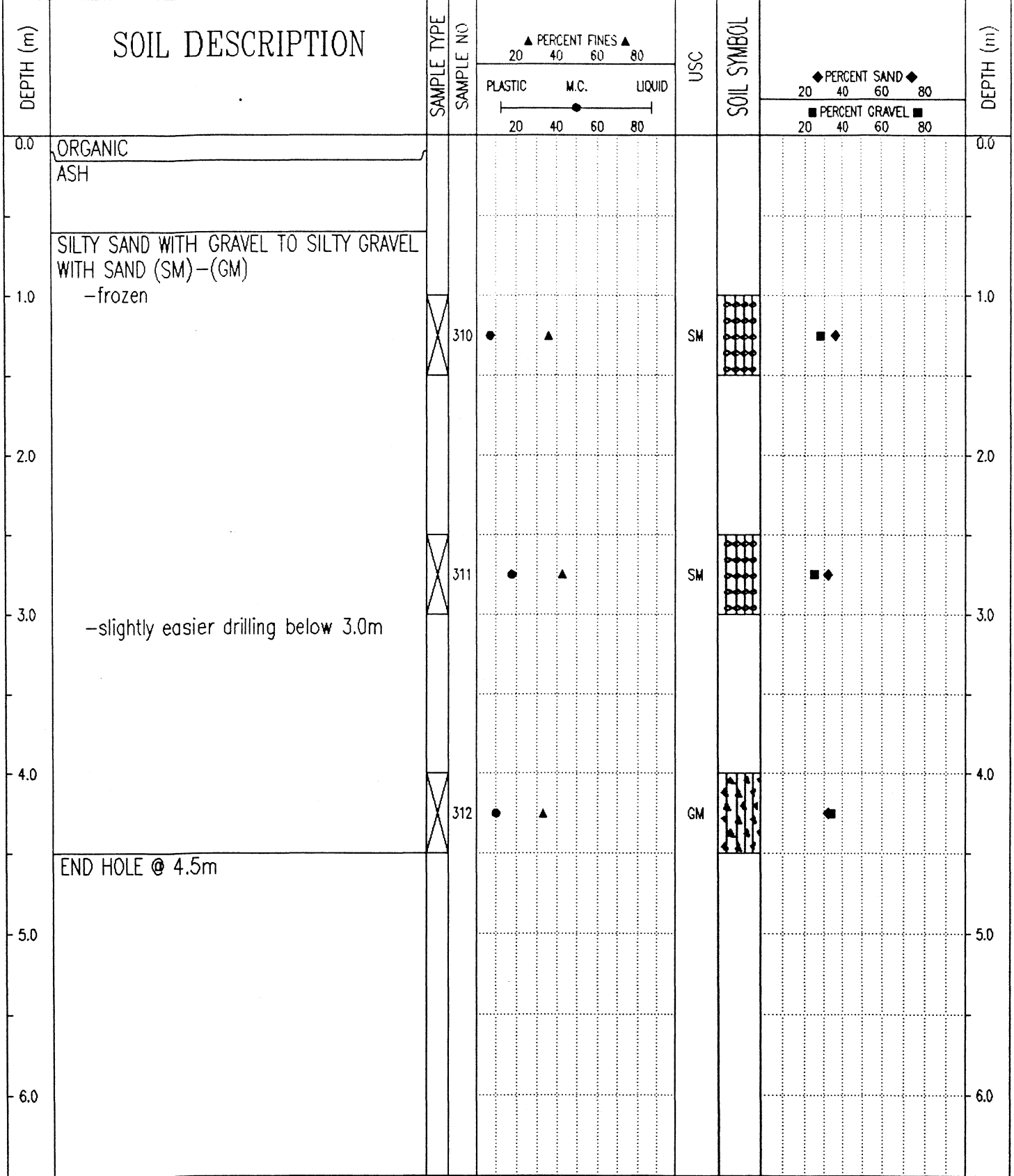
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LOGGED BY: G.C.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/05/04

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 521-649								
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329								
MOBILE B 40 L		LOCATION: 1809+410 40M RT		ELEVATION: 0.00 (m)								
SAMPLE TYPE		AUGER		TUBE								
<input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> 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 -black -damp											0.0
0.0 - 1.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -brown -moist -grindy drilling											1.0
1.0 - 2.0												2.0
2.0 - 3.0												3.0
3.0		X	548	●	▲		SM	◻◻◻◻◻◻	■	◆		3.0
3.0 - 4.0												4.0
4.0 - 5.0												5.0
5.0		X	549	●	▲		SM	◻◻◻◻◻◻	●			5.0
5.0 - 6.0												6.0
6.0												6.0
4.5	END HOLE @ 4.5m											4.5
Government of Yukon Transportation Engineering				LOGGED BY: W.E. REVIEWED BY: Fig. No:		COMPLETION DEPTH: 4.5 m COMPLETE: 99/08/06		Page 1 of 1				

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



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LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 99/05/04
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 513-464
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L		LOCATION: 1809+475 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> 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	ORGANIC										0.0	
	ASH											
	ORGANIC -frozen (Vx)											
2.0	SILTY GRAVEL WITH SAND (GM) -with ice (Vx)	<input checked="" type="checkbox"/>	308	●	▲		GM	◆	■		2.0	
3.0	SILTY SAND WITH GRAVEL (SM) -frozen	<input checked="" type="checkbox"/>	309	●	▲		SM	◆	■		3.0	
	END HOLE @ 3.0m											

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LOGGED BY: G.C.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/05/04

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 521-648								
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329								
MOBILE B 40 L		LOCATION: 1809+520 20M LT		ELEVATION: 0.00 (m)								
SAMPLE TYPE		RETURN		S.P.T.								
		AUGER		BULK								
		TUBE		CORE								
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND			DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	60	
0.0	ORGANIC -black -moist											0.0
	ASH -moist											
1.0	ORGANIC -black -frozen (Nf)											1.0
2.0	SILTY SAND WITH GRAVEL (SM) -brown -frozen (Nf) -grindy drilling	X	545	●	▲		SM	■	◆			2.0
3.0		X	546	●	▲		SM	■	◆			3.0
4.0		X	547	●	▲		SM	■	◆			4.0
	END HOLE @ 4.1m											
5.0												5.0
6.0												6.0
Government of Yukon Transportation Engineering				LOGGED BY: W.E.				COMPLETION DEPTH: 4.1 m				
				REVIEWED BY:				COMPLETE: 99/08/05				
				Fig. No:				Page 1 of 1				

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 521-647											
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329											
MOBILE B 40 L		LOCATION: 1809+530 18M RT		ELEVATION: 0.00 (m)											
SAMPLE TYPE		RETURN		S.P.T.											
		AUGER		BULK											
		TUBE		CORE											
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND			PERCENT GRAVEL			DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	60	80	20	40	
0.0	ORGANIC -black -moist													0.0	
	ASH -moist														
1.0	ORGANIC -black - some brown -frozen (Nf)													1.0	
2.0	SILTY GRAVEL TO SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -brown -frozen (Nf)	☒	542	●	▲		GM	▲▲▲	◆		■			2.0	
3.0	-more rock @ 3.0m	☒	543	●	▲		GM	▲▲▲	◆		■			3.0	
4.0	END HOLE @ 4.0m -refusal	☒	544	●	▲		SM	▲▲▲	◆		■			4.0	
5.0														5.0	
6.0														6.0	

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REVIEWED BY:
Fig. No:

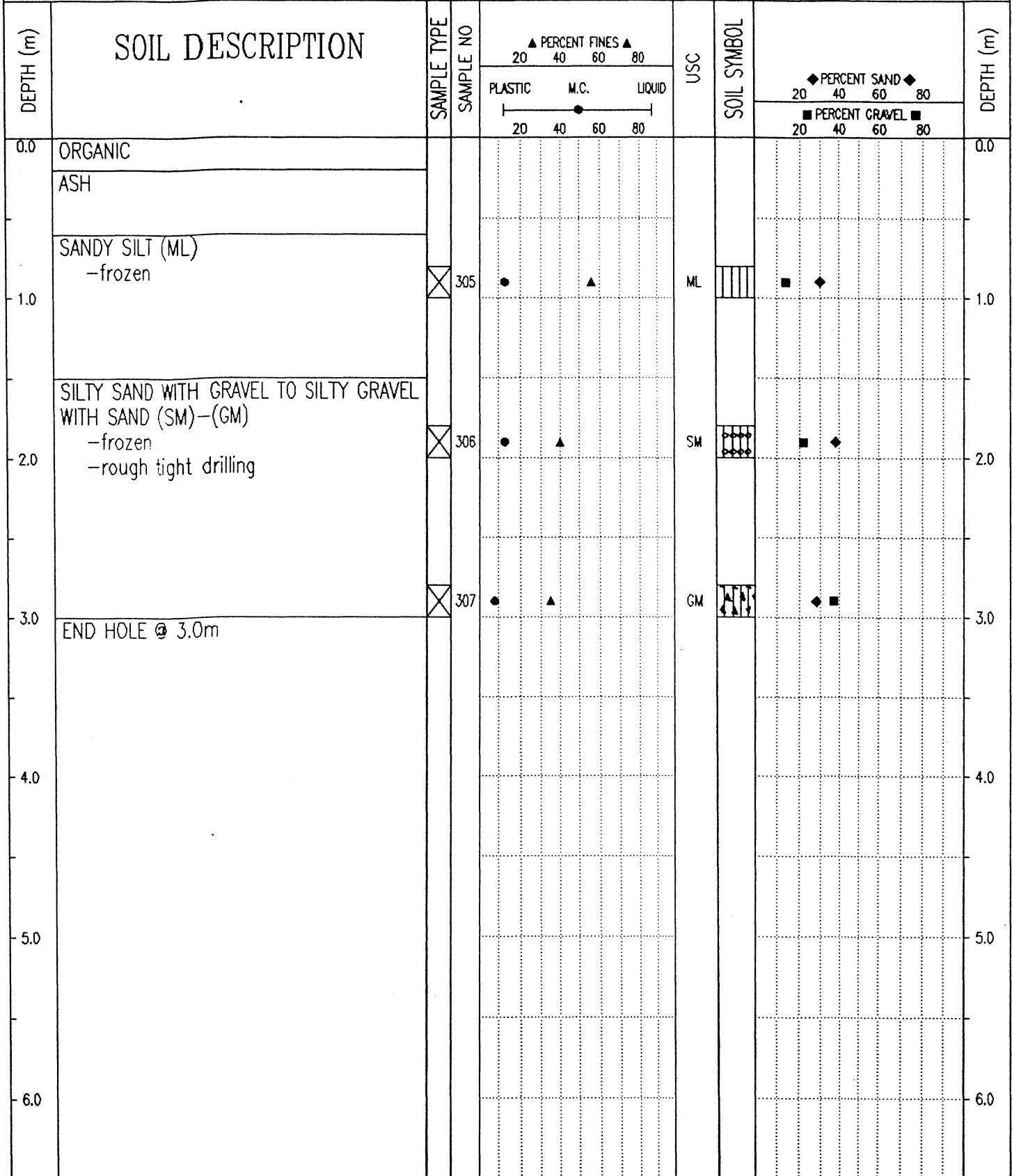
COMPLETION DEPTH: 4.0 m
COMPLETE: 99/08/05

SUBSURFACE EXPLOATION & TESTING REPORT ALASKA HWY RECONSTRUCTION TEST HOLE NO: 513-463

SHAKWAK PROJECT SEG 13B KM 1799 - 1822 A/H Project No: 092-202101-0329

NODWELL B-40L LOCATION: 1809+575 CENTRELINE ELEVATION: 0.00 (m)

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



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LOGGED BY: G.C. COMPLETION DEPTH: 3.0 m
 REVIEWED BY: COMPLETE: 99/05/04
 Fig. No: Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 513-462											
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329											
NODWELL B-40L		LOCATION: 1809+670 CENTRELINE		ELEVATION: 0.00 (m)											
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER											
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE											
				<input type="checkbox"/> 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	ORGANIC													0.0	
	ASH														
	ORGANIC -frozen (Vx)														
1.0														1.0	
2.0			304				ML							2.0	
3.0														3.0	
4.0	END HOLE @ 4.0M -drill starts grinding @ 4.0m -no sample recovered													4.0	
5.0														5.0	
6.0														6.0	

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LOGGED BY: G.C.
REVIEWED BY:
Fig. No:

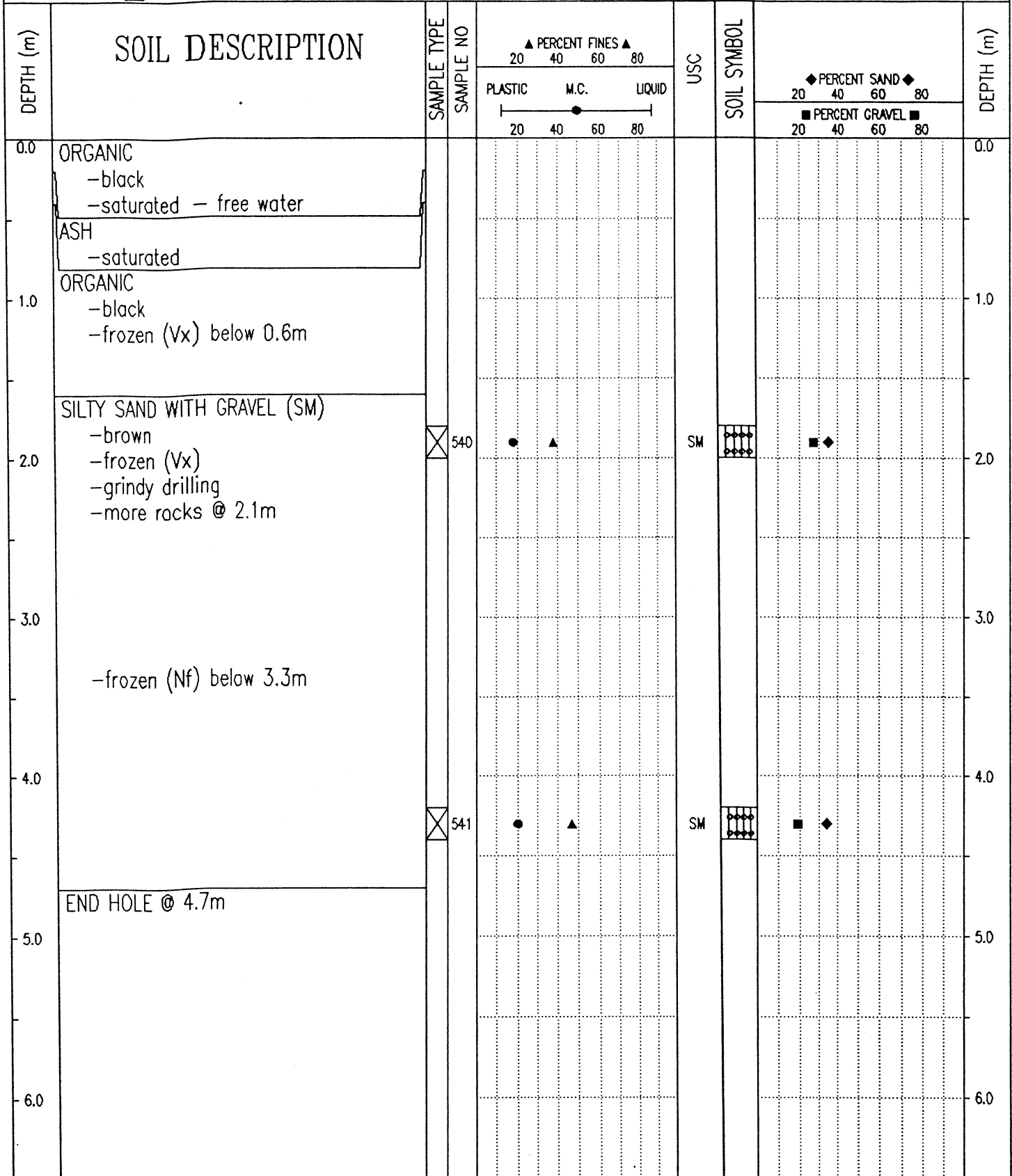
COMPLETION DEPTH: 4.0 m
COMPLETE: 99/05/04

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 521-645
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B 40 L	LOCATION: 1809+675 22M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.
	<input checked="" type="checkbox"/> AUGER	<input type="checkbox"/> BULK
	<input type="checkbox"/> TUBE	<input type="checkbox"/> 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	ORGANIC -black -free water -frozen (Vx) below .4m										0.0	
1.0											1.0	
2.0	-grindy drilling 2.0-2.1m -first refusal @ 2.0m -smooth drilling @ 2.1m										2.0	
3.0	-some rocks @ 3.1m										3.0	
4.0	END HOLE @ 3.5m -grindy drilling & refusal										4.0	
5.0											5.0	
6.0											6.0	

Government of Yukon Transportation Engineering	LOGGED BY: W.E.	COMPLETION DEPTH: 3.5 m
	REVIEWED BY:	COMPLETE: 99/08/05
	Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 521-646
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
MOBILE B 40 L	LOCATION: 1809+675 21M LHS	ELEVATION: 0.00 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



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LOGGED BY: W.E.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 4.7 m
COMPLETE: 99/08/05

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 513-461								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1809+740 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE		S.P.T.		AUGER								
RETURN		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	
0.0	ORGANIC										0.0	
	ASH											
	ORGANIC											
	SILTY GRAVEL WITH SAND (GM)											
	-frozen											
	-rough tight drilling											
1.0		⊗	302	●	▲		GM	◆	■		1.0	
2.0											2.0	
3.0		⊗	303	●	▲		GM	◆	■		3.0	
4.0											4.0	
5.0											5.0	
6.0											6.0	
	END HOLE @ 3.0M											

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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/05/04

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION		TEST HOLE NO: 520-644								
SHAKWAK SEG 13		KM 1796-1822 A/H		Project No: 092-202101-0329								
MOBILE B-40L		LOCATION: 1809+800 40 RHS		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	ORGANIC -black -damp										0.0	
	ASH -damp											
1.0	SILT -moist										1.0	
	SILTY SAND WITH GRAVEL (SM) -brown -moist -grindy drilling	<input checked="" type="checkbox"/>	538	●	▲		SM	■◆				
2.0	-more rocks below 2.0m -damp below 2.2m										2.0	
		<input checked="" type="checkbox"/>	539	●	▲		SM	■◆				
3.0											3.0	
4.0											4.0	
5.0	END HOLE @ 4.5m										5.0	
6.0											6.0	

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Transportation Engineering

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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 4.5 m
COMPLETE: 99/08/05

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 513-460	
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329	
NODWELL B-40L		LOCATION: 1809+825 CENTRELINE		ELEVATION: 0.00 (m)	
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER	
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE	
				<input type="checkbox"/> 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	
0.0	ORGANIC											0.0
	ASH											
	ORGANIC -frozen											
1.0												1.0
	ORGANICS WITH SILT -frozen (Vx)		301				ML					
2.0												2.0
3.0	END HOLE @ 3.0m											3.0
4.0												4.0
5.0												5.0
6.0												6.0

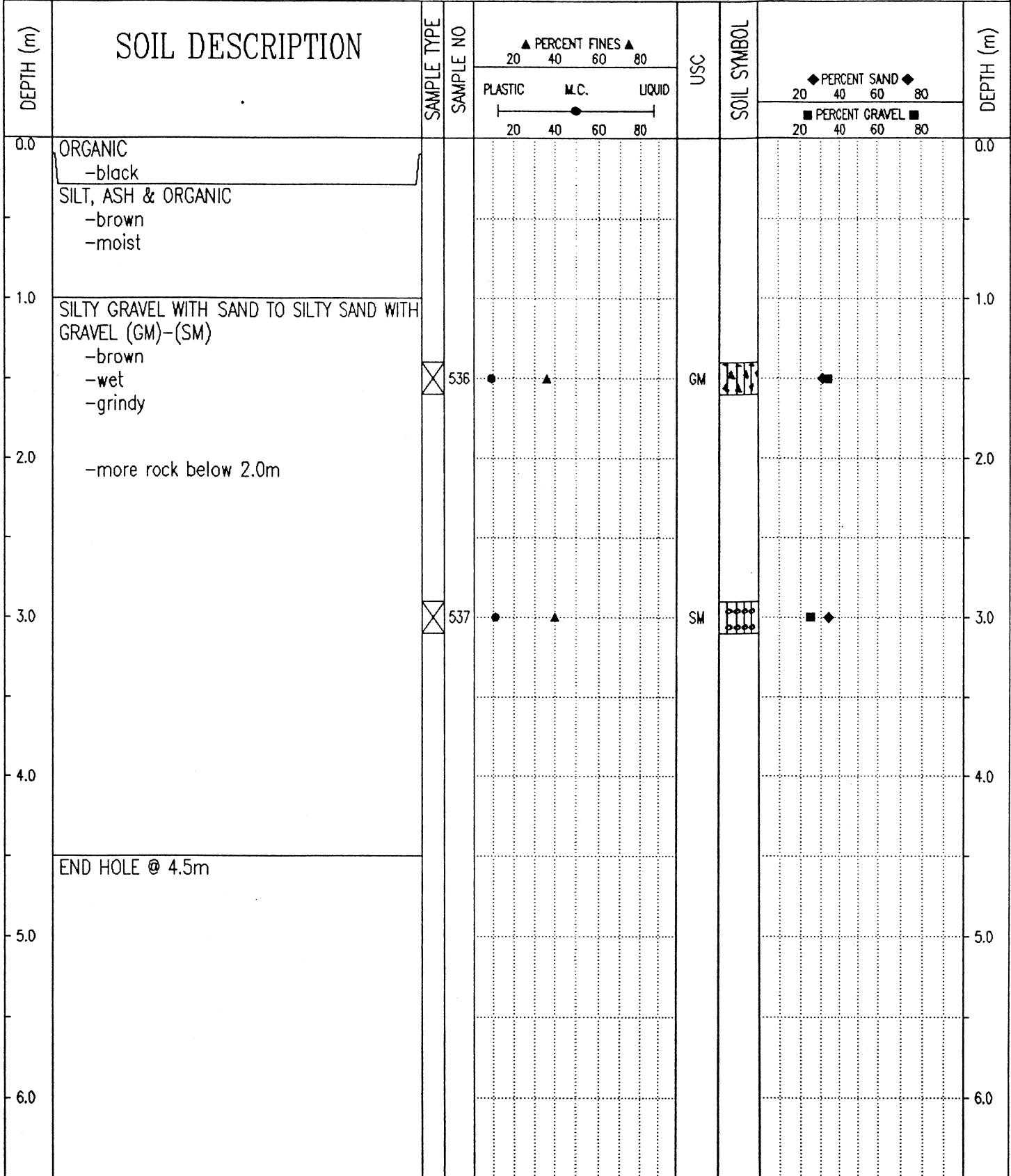
Government of Yukon Transportation Engineering		LOGGED BY: G.C.	COMPLETION DEPTH: 3.0 m
		REVIEWED BY:	COMPLETE: 99/05/03
		Fig. No:	Page 1 of 1

SUB-SURFACE EXPLORATION & TESTING REPORT ALASKA HWY RE-CONSTRUCTION TEST HOLE NO: 520-643

SHAKWAK SEG 13 KM 1796-1822 A/H Project No: 092-202101-0329

MOBILE B-40L LOCATION: 1809+895 28 RHS ELEVATION: 0.00 (m)

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



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Transportation Engineering

LOGGED BY: W.E.

REVIEWED BY:

Fig. No:

COMPLETION DEPTH: 4.5 m

COMPLETE: 99/08/05

Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 513-459							
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329							
NODWELL B-40L		LOCATION: 1809+950 CENTRELIN		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.			20	40		
0.0	ORGANIC										0.0
	ASH										
	ORGANIC -frozen										
1.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -frozen	⊗	299	●	▲	GM	▲▲▲▲	◆	■		1.0
2.0											2.0
3.0	END HOLE @ 3.0m -refusal	⊗	300	●	▲	SM	●●●●	◆	■		3.0
4.0											4.0
5.0											5.0
6.0											6.0

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Transportation Engineering

LOGGED BY: G.C.

REVIEWED BY:

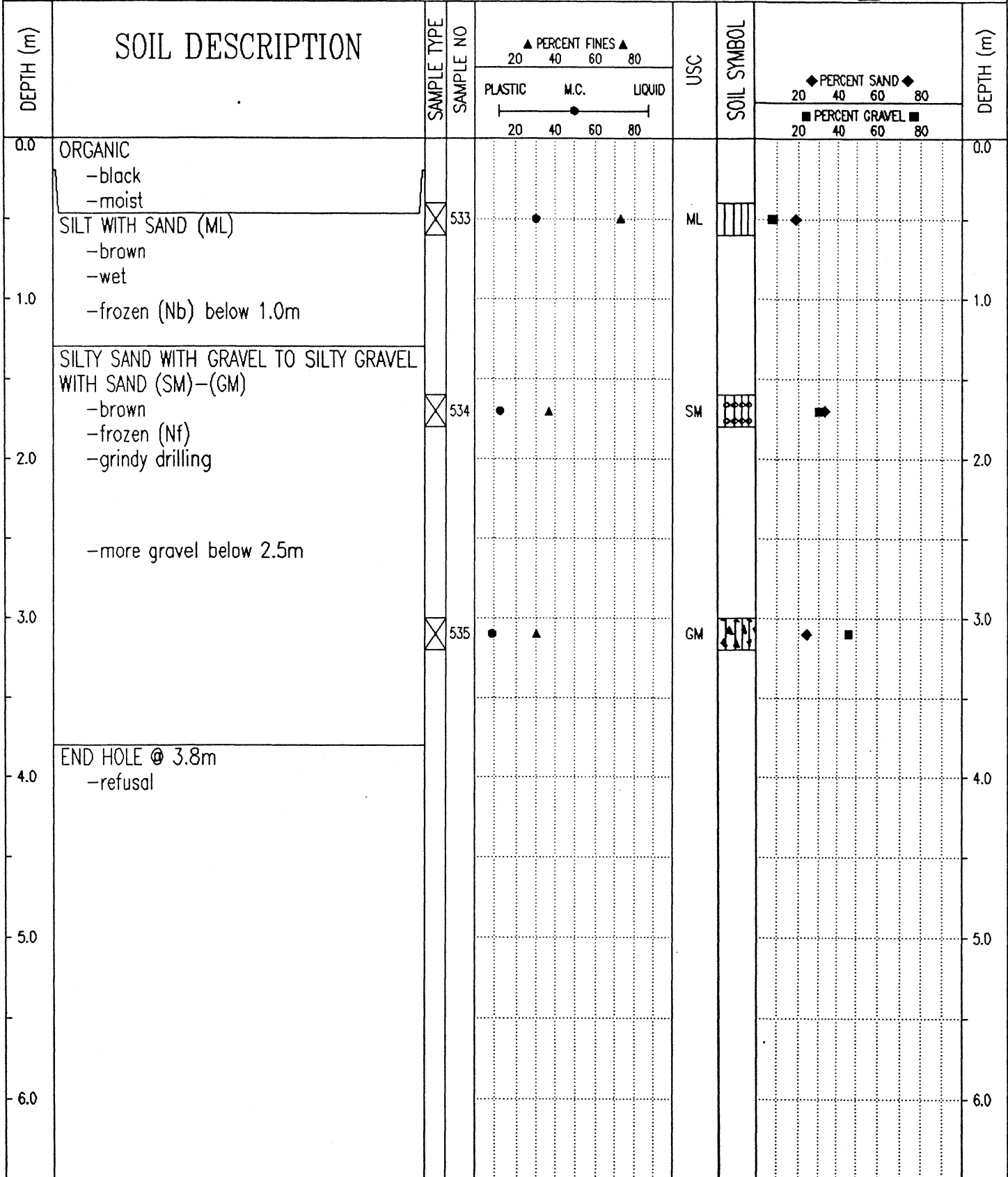
Fig. No:

COMPLETION DEPTH: 3.0 m

COMPLETE: 99/05/03

Page 1 of 1

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION	TEST HOLE NO: 520-642
SHAKWAK SEG 13		KM 1796-1822 A/H	Project No: 092-202101-0329
MOBILE B-40L		LOCATION: 1809+990 18 LHS	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



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Transportation Engineering

LOGGED BY: W.E.	COMPLETION DEPTH: 3.8 m
REVIEWED BY:	COMPLETE: 99/08/05
Fig. No:	Page 1 of 1

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION		TEST HOLE NO: 520-641						
SHAKWAK SEG 13		KM 1796-1822 A/H		Project No: 092-202101-0329						
MOBILE B-40L		LOCATION: 1809+990 18 RHS		ELEVATION: 0.00 (m)						
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE										
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80		USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80		DEPTH (m)
				PLASTIC M.C. LIQUID 20 40 60 80				■ PERCENT GRAVEL ■ 20 40 60 80		
0.0	ORGANIC -black -damp								0.0	
	ASH -moist									
1.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (SM)-(GM)-(SM) -brown -frozen (Nf) -grindy drilling -more rock below 1.5m	<input checked="" type="checkbox"/>	530	●	▲		SM	■ ◆	1.0	
2.0									2.0	
3.0		<input checked="" type="checkbox"/>	531	●	▲		GM	■ ◆	3.0	
4.0									4.0	
5.0	END HOLE @ 4.5m	<input checked="" type="checkbox"/>	532	●	▲		SM	■ ◆	5.0	
6.0									6.0	

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REVIEWED BY:

Fig. No:

COMPLETION DEPTH: 4.5 m

COMPLETE: 99/08/05

Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 521-653					
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329					
MOBILE B 40 L		LOCATION: 1809+025 21M RT		ELEVATION: 0.00 (m)					
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER					
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE					
				<input type="checkbox"/> CORE					
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲		USC	SOIL SYMBOL	DEPTH (m)	
				PLASTIC	M.C.				LIQUID
0.0	ORGANIC -black -wet							0.0	
	ASH -wet								
1.0	ORGANIC -trace ash -blackish brown -frozen (Nf) below .5m							1.0	
2.0	SILTY SAND WITH GRAVEL (SM) -brown -frozen (Nf) -grindy drilling -sample # 556 contaminated with org END HOLE @ 2.0m -refusal	<input checked="" type="checkbox"/>	556	●	▲	SM	■ ◆	2.0	
3.0								3.0	
4.0								4.0	
5.0								5.0	
6.0								6.0	
Government of Yukon Transportation Engineering				LOGGED BY: W.E. REVIEWED BY: Fig. No:		COMPLETION DEPTH: 2.0 m COMPLETE: 99/08/06 Page 1 of 1			

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	
0.0	ORGANIC -dark brown -wet											0.0
	ASH -wet											
1.0	ORGANIC -dark brown -frozen (Nf)											1.0
2.0	SILTY GRAVEL WITH SAND (GM) -brownish grey -frozen (Nf) -grindy drilling											2.0
3.0		<input checked="" type="checkbox"/>	557	●	▲		GM	<input checked="" type="checkbox"/>				3.0
	END HOLE @ 3.1m -refusal											
4.0												4.0
5.0												5.0
6.0												6.0

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LOGGED BY: W.E.	COMPLETION DEPTH: 3.1 m
REVIEWED BY:	COMPLETE: 99/08/06
Fig. No:	Page 1 of 1

GEOTECHNICAL INVESTIGATIONS

2 of 5



Community and Transportation Services
Transportation Engineering Branch

Geotechnical Services

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

ORIGINAL - Do Not Remove From File

GR-01-087

HIGHWAY CONSTRUCTION

GEOTECHNICAL INVESTIGATION
KM 1803.95 TO KM 1820.4
YUKON, 2000-2001

ALASKA HIGHWAY #1

HIGHWAY CONSTRUCTION
km 1803.95 to km 1820.4
ALASKA HIGHWAY #1
Yukon, 2000-2001
Volume 2 of 5

This Data Package prepared for project viewing:

February, 2000

Transportation Engineering Branch
Geotechnical Services
461 Range Road
Whitehorse, Yukon

VOLUME CONTENTS

VOLUME 1 OF 5

Introduction

Centreline "Subsurface Exploration & Testing Report" sheets for holes located from km 1803+925 to km 1810+000

VOLUME 2 OF 5

Centreline "Subsurface Exploration & Testing Report" sheets for holes located from km 1810+000 to km 1820+400

VOLUME 3 OF 5

Centreline laboratory sample test result sheets for holes numbered 350 to 500

VOLUME 4 OF 5

Centreline laboratory sample test result sheets for holes numbered 501 to 849

VOLUME 5 OF 5

Granular testing - km 1819 LHS

CONTENTS

INTRODUCTION

Investigation notes, classification methods and legends.

CENTRELINE TESTING

“Subsurface Exploration & Testing Report” sheets and laboratory sample test result sheets are provided. The “Subsurface Exploration & Testing Report” sheets for the centreline holes are arranged according to project location, starting at km 1803+925 and increasing to km 1820+400. The laboratory sample test result sheets are arranged according to hole number.

Auger Testing

1999	TEST HOLES 350 to 400	shown on logs with prefix 509-
	TEST HOLES 401 to 425	shown on logs with prefix 511-
	TEST HOLES 426 to 436	shown on logs with prefix 512-
	TEST HOLES 440 to 448	shown on logs with prefix 512-
	TEST HOLES 429 to 500	shown on logs with prefix 513-
	TEST HOLES 501 to 512	shown on logs with prefix 514-
	TEST HOLES 563 to 566	shown on logs with prefix 519-
	TEST HOLES 572 to 575	shown on logs with prefix 519-
	TEST HOLES 620 to 644	shown on logs with prefix 520-
	TEST HOLES 645 to 658	shown on logs with prefix 521-
	TEST HOLES 659 to 709	shown on logs with prefix 526-
	TEST HOLES 710 to 731	shown on logs with prefix 527-
	TEST HOLES 834 to 844	shown on logs with prefix 531-
	TEST HOLES 485 to 849	shown on logs with prefix 532-

Notes on plotting of Centreline Holes:

1. Hole 495 shown at ~ 1807+225 on Sheet 5 of 19 should be removed
2. Hole 400 shown at ~ 1808+520 on Sheet 6 of 19 should be removed
3. Add Hole 440 at 1811+870 (centreline) on Sheet 9 of 19
4. Add Hole 408 at 1814+625 (centreline) on Sheet 12 of 19
5. Hole 391 shown at ~ 1816+500 on Sheet 14 of 19 should read Hole 392
6. Hole 392 shown at ~ 1816+600 on Sheet 14 of 19 should read Hole 391
7. Hole 843 shown at ~ 1817+700 on Sheet 15 of 19 should read Hole 378

CONTENTS (continued)**GRANULAR TESTING - KM 1819 LHS**

“Subsurface Exploration & Testing Report” sheets, laboratory sample test result sheets, and location plans are provided.

The “Subsurface Exploration & Testing Report” sheets and the laboratory sample test result sheets are arranged according to hole number

Backhoe Testing

1994	TEST HOLES 4 to 10	shown with prefix 316-
1995	TEST HOLES 230 to 247, 249 to 250, & 252 to 253	shown with prefix 369-

Auger Testing

1995	TEST HOLES 1 to 9	shown with prefix 351-
	TEST HOLES 10 to 26	shown with prefix 352-

HIGHWAY CONSTRUCTION

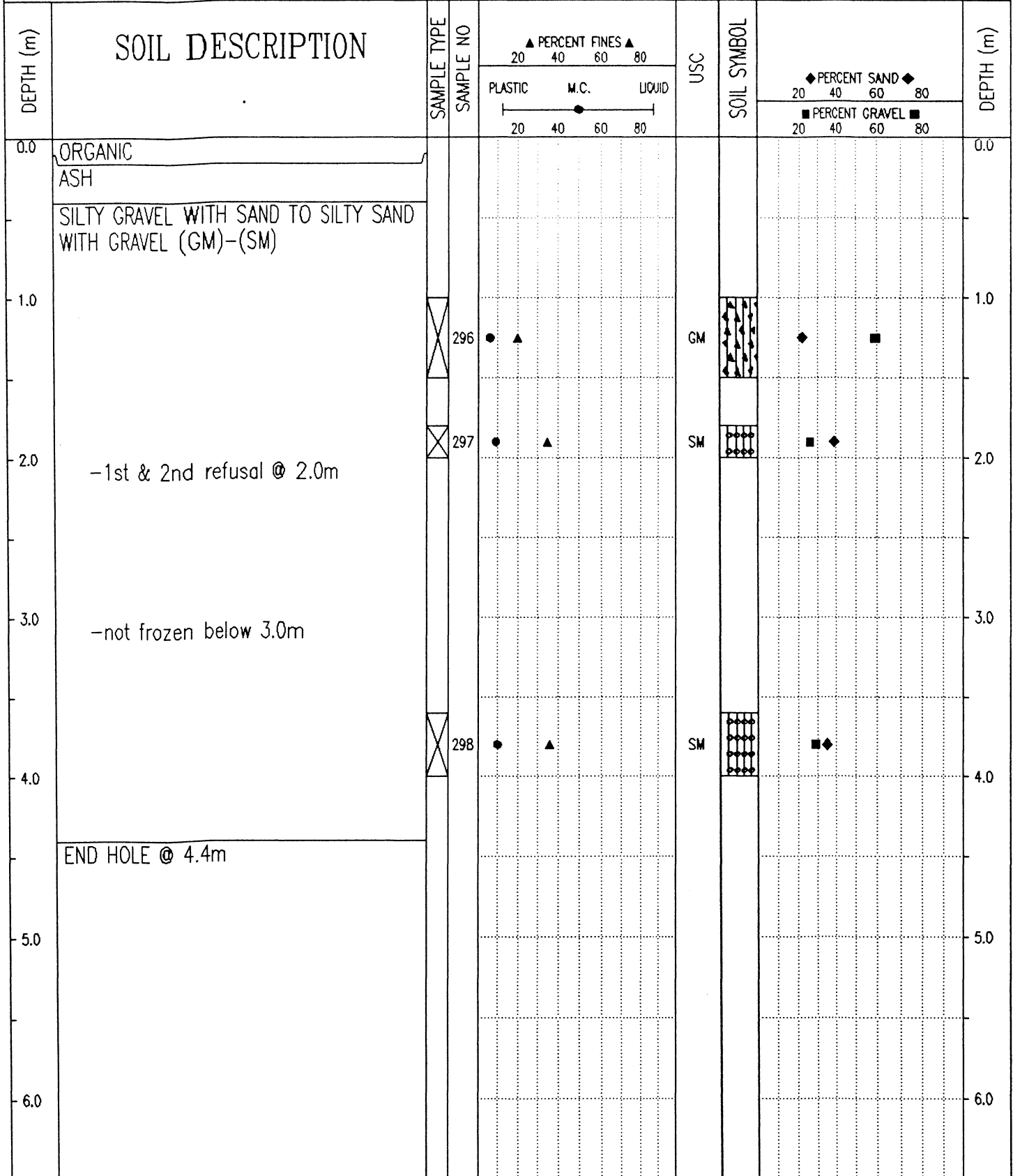
GEOTECHNICAL INVESTIGATION
KM 1803.95 TO KM 1820.4
YUKON, 2000-2001

ALASKA HIGHWAY #1

CENTRELINE TESTING

km 1810+000 to km 1820+400
Subsurface Exploration & Testing Reports

SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 513-458
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1810+050 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



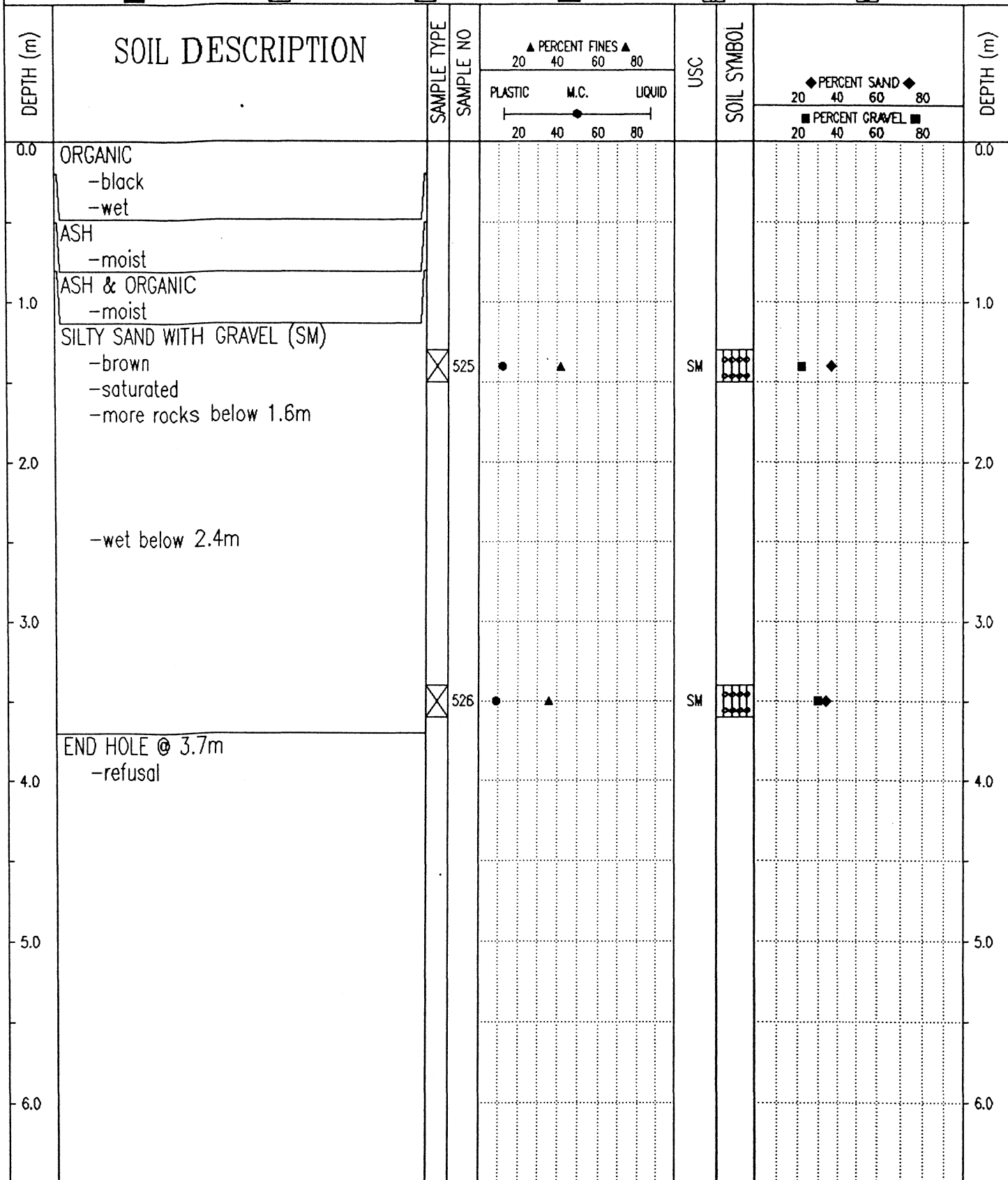
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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 4.4 m
COMPLETE: 99/05/03

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION		TEST HOLE NO: 520-640							
SHAKWAK SEG 13		KM 1796-1822 A/H		Project No: 092-202101-0329							
MOBILE B-40L		LOCATION: 1810+075 32 RHS		ELEVATION: 0.00 (m)							
SAMPLE TYPE		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
0.0	ORGANIC -brown -damp									0.0	
1.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (SM)-(GM)-(SM) -brown -wet									1.0	
2.0		⊗	527	●	▲	SM	▣	◆		2.0	
3.0		⊗	528	●	▲	GM	▣	◆	■	3.0	
4.0		⊗	529	●	▲	SM	▣	◆	■	4.0	
5.0	END HOLE @ 4.5m									5.0	
6.0										6.0	
Government of Yukon Transportation Engineering						LOGGED BY: W.E. REVIEWED BY: Fig. No:		COMPLETION DEPTH: 4.5 m COMPLETE: 99/08/05 Page 1 of 1			

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION	TEST HOLE NO: 520-639
SHAKWAK SEG 13		KM 1796-1822 A/H	Project No: 092-202101-0329
MOBILE B-40L		LOCATION: 1810+175 37 RHS	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE			



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LOGGED BY: W.E.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.7 m
COMPLETE: 99/08/05

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 513-457								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1810+200 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	ORGANIC										0.0	
	ASH											
	ORGANIC -frozen											
1.0	SILTY SAND TO SILTY SAND WITH GRAVEL (SM) -frozen -grindy drilling	<input checked="" type="checkbox"/>	294	●	▲		SM	⊗	■	◆	1.0	
2.0	-rough drilling END HOLE @ 2.0m -refusal @ 2.0m -2nd refusal @ 1.8m	<input checked="" type="checkbox"/>	295	●	▲		SM	⊗	■	◆	2.0	
3.0											3.0	
4.0											4.0	
5.0											5.0	
6.0											6.0	
Government of Yukon Transportation Engineering				LOGGED BY: G.C.		COMPLETION DEPTH: 2.0 m						
				REVIEWED BY:		COMPLETE: 99/05/03						
				Fig. No:				Page 1 of 1				

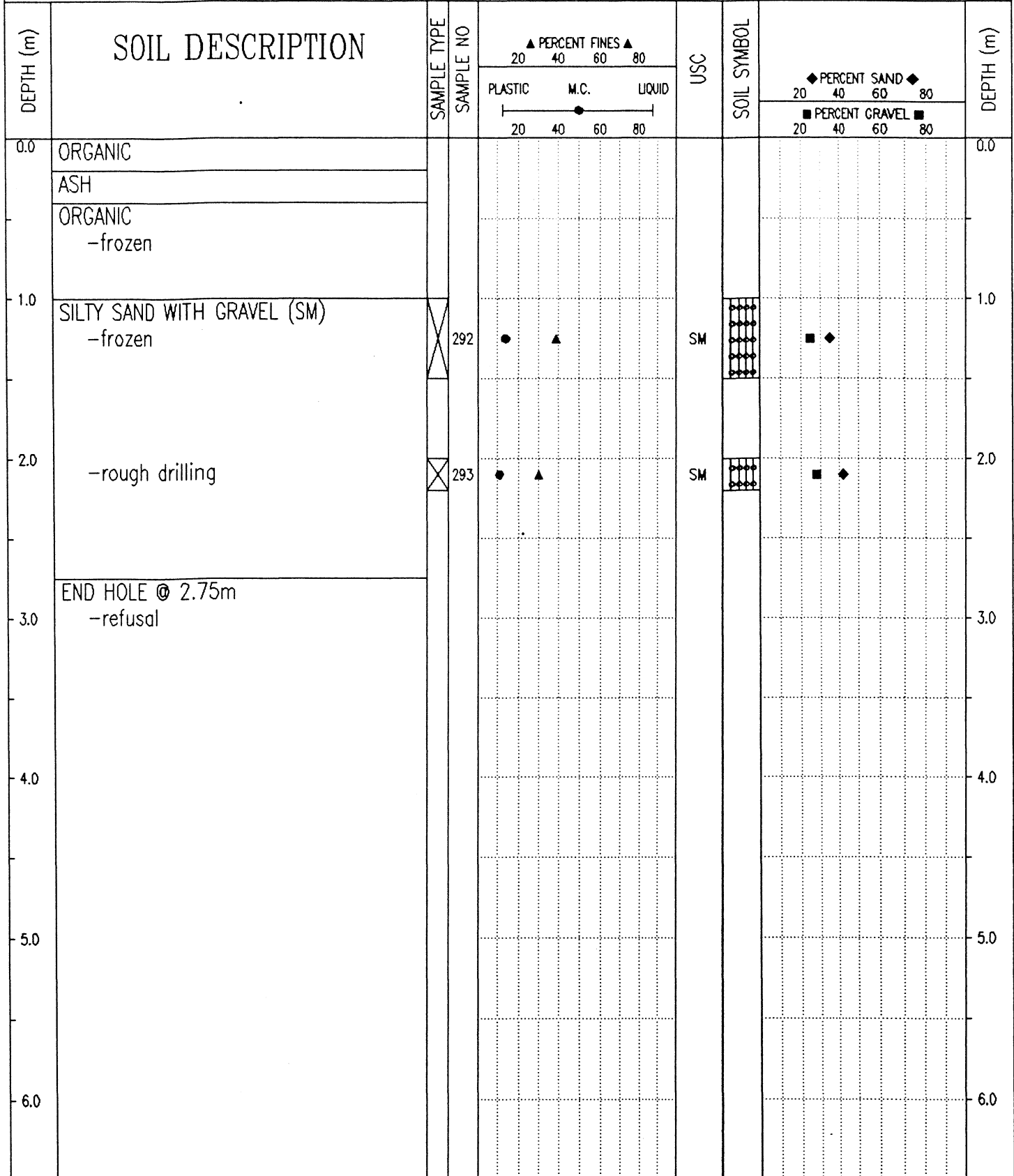
SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION	TEST HOLE NO: 520-638
SHAKWAK SEG 13		KM 1796-1822 A/H	Project No: 092-202101-0329
MOBILE B-40L		LOCATION: 1810+265 36 RHS	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> 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		
0.0	ORGANIC -black -moist											0.0	
	ASH -moist												
1.0	ASH & ORGANIC -wet											1.0	
	SILT (ML) -moist -frozen (Vx) below 1.2m -grindy below 1.6m	<input checked="" type="checkbox"/>	624	●		▲	ML	▨	◆	■			
2.0	END HOLE @ 2.0m -refusal - rock dust											2.0	
3.0												3.0	
4.0												4.0	
5.0												5.0	
6.0												6.0	

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LOGGED BY: W.E.	COMPLETION DEPTH: 2.0 m
REVIEWED BY:	COMPLETE: 99/08/05
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 513-456
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1810+275 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		

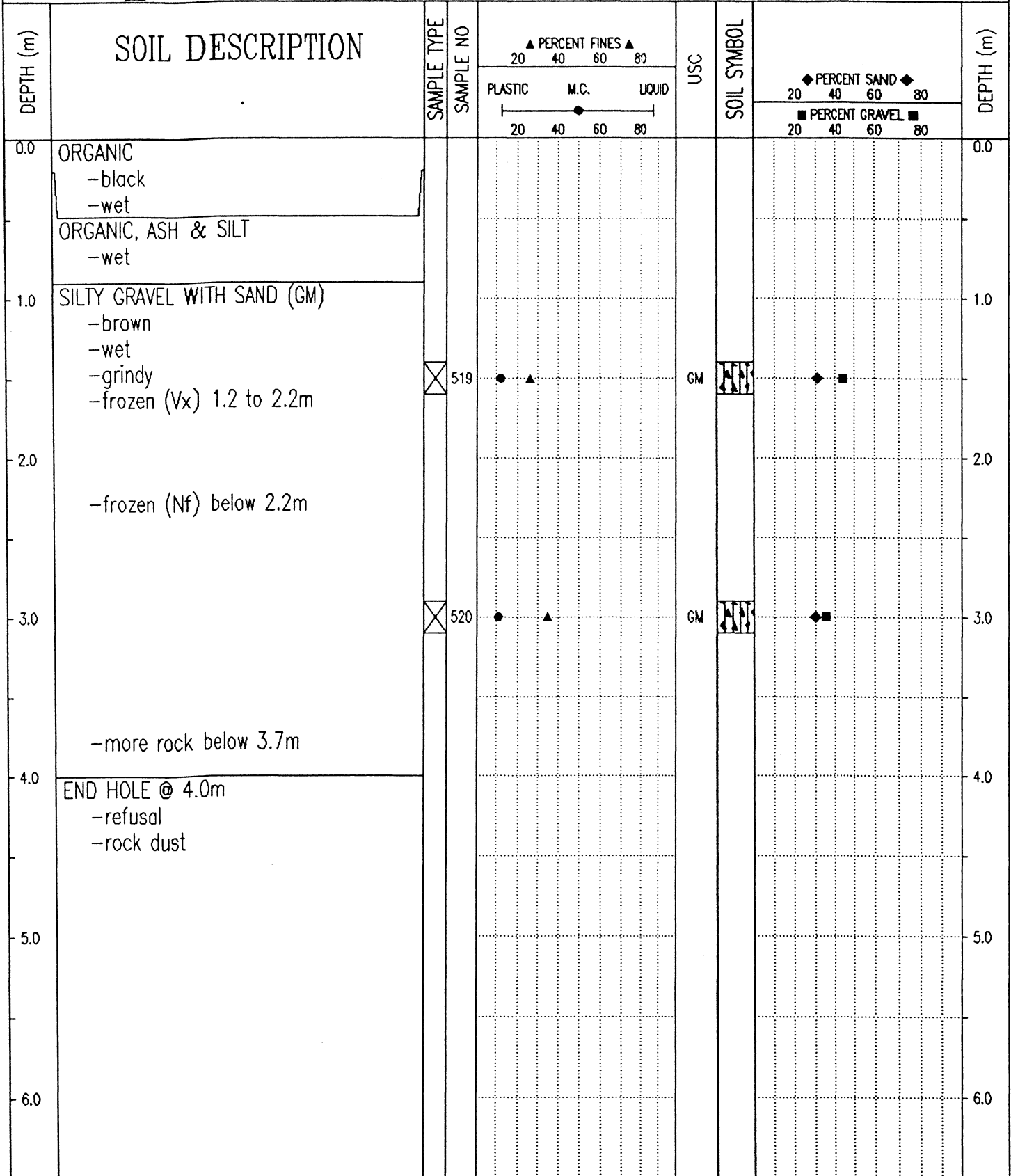


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Transportation Engineering

LOGGED BY: G.C.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 2.8 m
COMPLETE: 99/05/03

SUB-SURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RE-CONSTRUCTION	TEST HOLE NO: 520-636
SHAKWAK SEG 13	KM 1796-1822 A/H	Project No: 092-202101-0329
MOBILE B-40L	LOCATION: 1810+345 38 RHS (INLET)	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



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LOGGED BY: W.E.
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Fig. No:

COMPLETION DEPTH: 4.0 m
COMPLETE: 99/08/05

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION		TEST HOLE NO: 520-637									
SHAKWAK SEG 13		KM 1796-1822 A/H		Project No: 092-202101-0329									
MOBILE B-40L		LOCATION: 1810+350 18 LHS		ELEVATION: 0.00 (m)									
SAMPLE TYPE		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 -black -wet											0.0	
0.5	ORGANIC, ASH & SILT -frozen (Vx) below .5m											1.0	
2.0	SILTY SAND TO SILTY SAND WITH GRAVEL (ML)-(SM) -brown -frozen (Nf) -grindy drilling	☒	521	●	▲		ML	▨	◆	■		2.0	
3.0	-not frozen below 3.5m	☒	522	●	▲		SM	▨	◆	■		3.0	
4.5	EDN HOLE @ 4.5m	☒	523	●	▲		SM	▨	◆	■		4.5	

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Fig. No:

COMPLETION DEPTH: 4.5 m
COMPLETE: 99/08/05

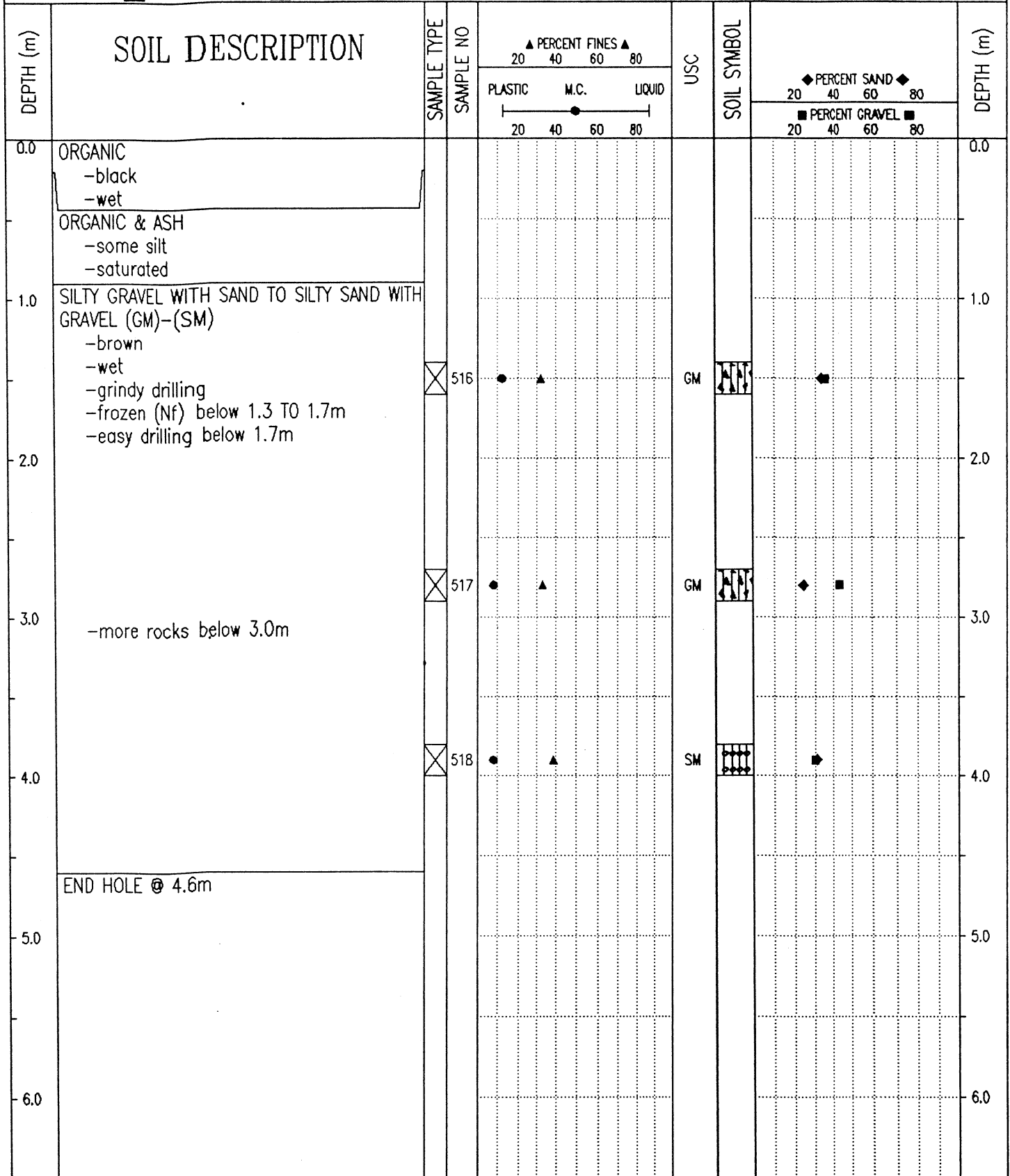
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SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329							
NODWELL B-40L		LOCATION: 1810+375 CENTRELINE		ELEVATION: 0.00 (m)							
SAMPLE TYPE		S.P.T.		AUGER		BULK		TUBE		CORE	
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80	■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)		
0.0	ORGANIC								0.0		
	ASH										
	ORGANIC -frozen										
1.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM)	X	288	● ▲	GM		◆ ■		1.0		
2.0	-1st refusal @ 1.7m -wet below 1.8m -easy drilling below 1.8m	X	289	● ▲	GM		◆ ■		2.0		
3.0		X	290	● ▲	GM		◆ ■		3.0		
4.0		X	291	● ▲	SM		◆ ■		4.0		
5.0	END HOLE @ 4.5m								5.0		
6.0									6.0		

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Fig. No:

COMPLETION DEPTH: 4.5 m
COMPLETE: 99/05/03

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION	TEST HOLE NO: 520-635
SHAKWAK SEG 13		KM 1796-1822 A/H	Project No: 092-202101-0329
MOBILE B-40L		LOCATION: 1810+415 20 RHS (INLET)	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



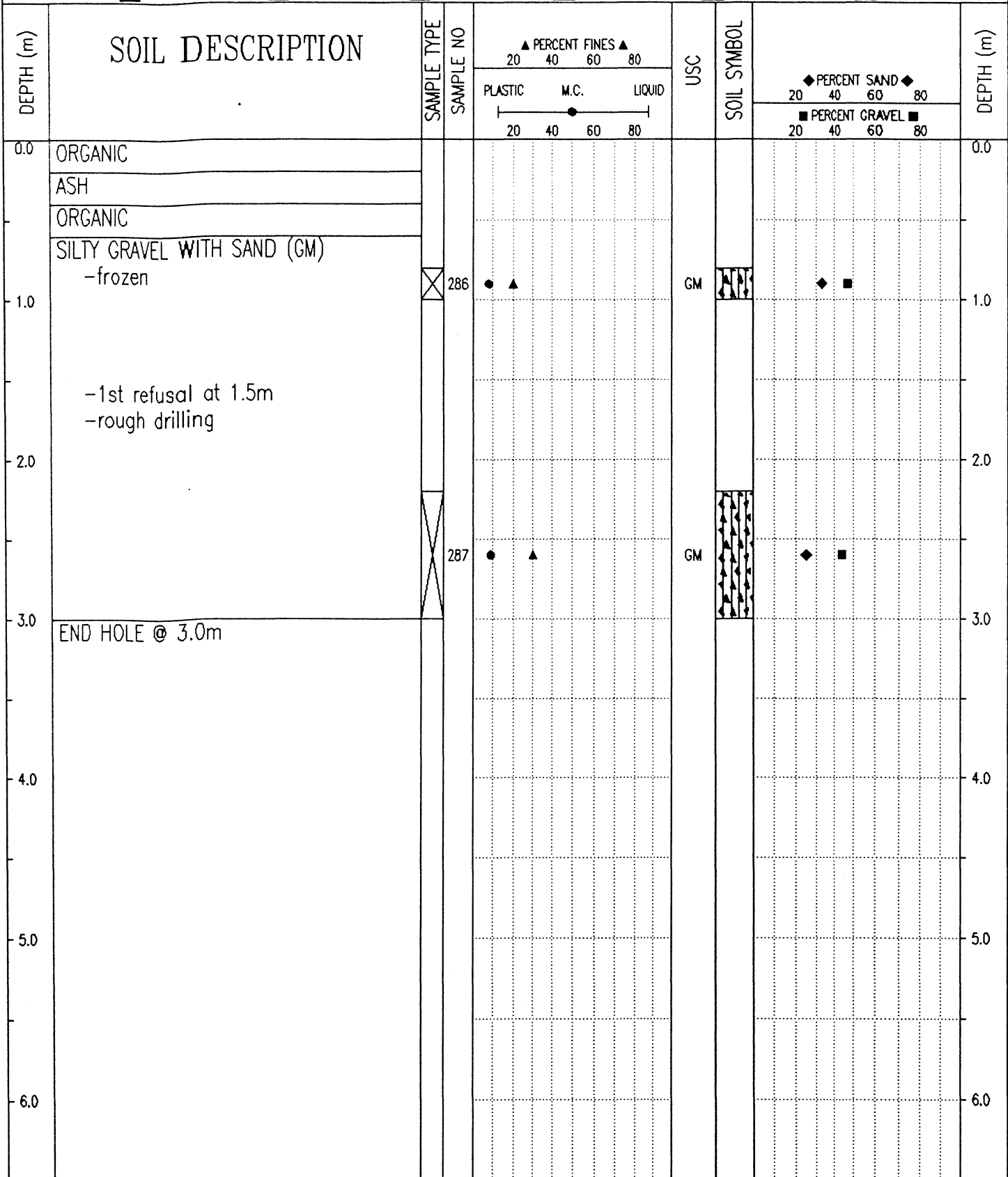
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Transportation Engineering

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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 4.6 m
COMPLETE: 99/08/05

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION		TEST HOLE NO: 520-634						
SHAKWAK SEG 13		KM 1796-1822 A/H		Project No: 092-202101-0329						
MOBILE B-40L		LOCATION: 1810+415 20 LHS (OUTLET)		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	ORGANIC -some ash -wet									0.0
1.0	SILTY GRAVEL WITH SAND (GM) -brown -frozen (Nf) -grindy below 1.3m									1.0
2.0										2.0
3.0	-more rock below 1.5m									3.0
4.0	END HOLE @ 2.8m -refusal									4.0
5.0										5.0
6.0										6.0
Government of Yukon Transportation Engineering				LOGGED BY: W.E.		COMPLETION DEPTH: 2.8 m				
				REVIEWED BY:		COMPLETE: 99/08/04				
				Fig. No:		Page 1 of 1				

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 513-454
SHAKWAK PROJECT SEG 1.3B		KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L		LOCATION: 1810+475 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/05/03

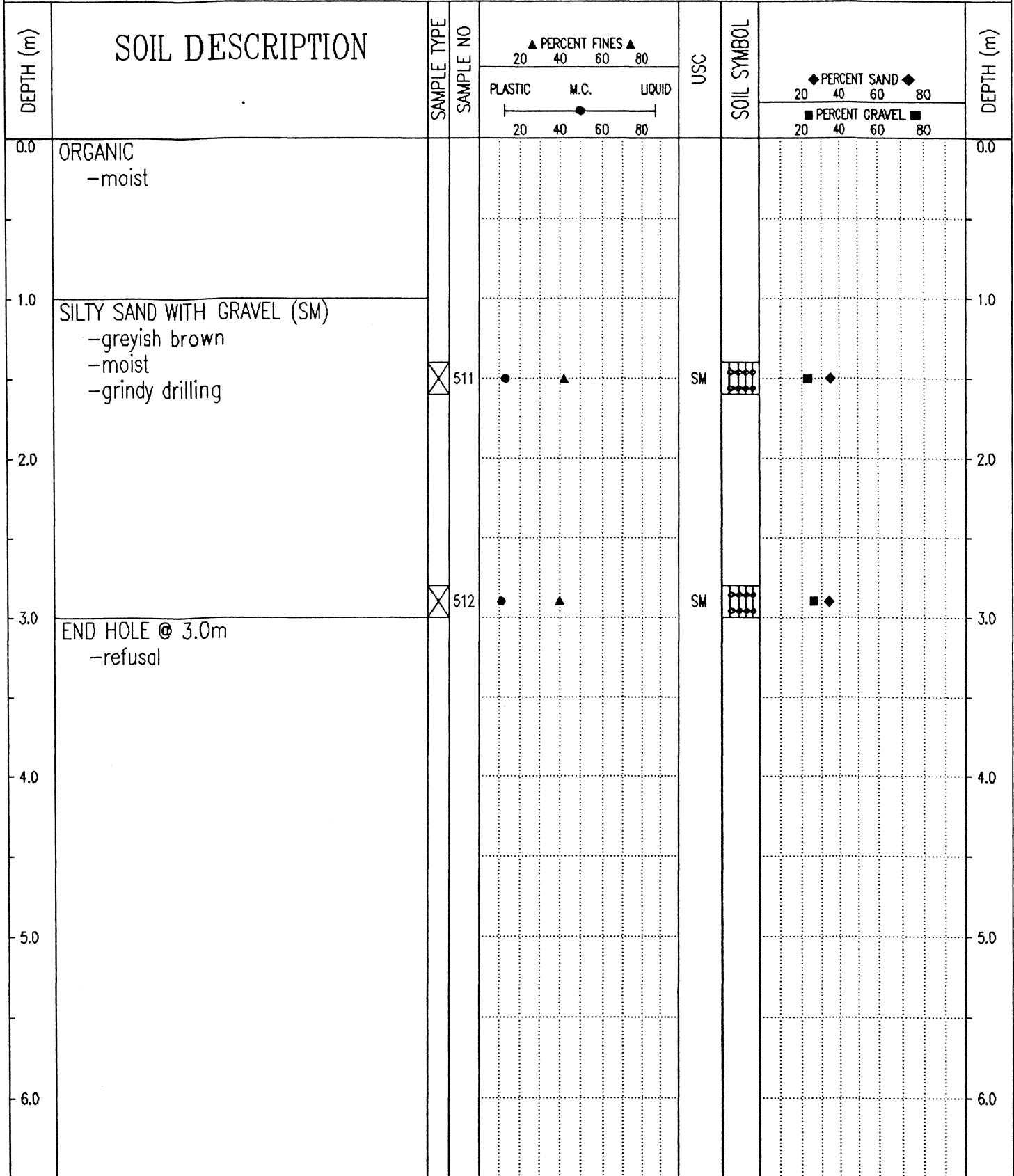
SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION		TEST HOLE NO: 520-633						
SHAKWAK SEG 13		KM 1796-1822 A/H		Project No: 092-202101-0329						
MOBILE B-40L		LOCATION: 1810+490 19 LHS (OUTLET)		ELEVATION: 0.00 (m)						
SAMPLE TYPE		RETURN		S.P.T.						
		AUGER		BULK						
		TUBE		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	ORGANIC -wet									0.0
1.0	SILTY GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SAND (GM)-(GP) -saturated -grindy below 1.3m -more rock below 1.3m									1.0
2.0										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: W.E. REVIEWED BY: Fig. No:		COMPLETION DEPTH: 3.0 m COMPLETE: 99/08/04		Page 1 of 1		

SUB-SURFACE EXPLORATION & TESTING REPORT ALASKA HWY RE-CONSTRUCTION TEST HOLE NO: 520-632

SHAKWAK SEG 13 KM 1796-1822 A/H Project No: 092-202101-0329

MOBILE B-40L LOCATION: 1810+490 17 RHS (INLET) ELEVATION: 0.00 (m)

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



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Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/08/04

98/11/25 08:23AM

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION		TEST HOLE NO: 520-631								
SHAKWAK SEG 13		KM 1796-1822 A/H		Project No: 092-202101-0329								
MOBILE B-40L		LOCATION: 1810+535 33M RHS		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	ORGANIC ASH ASH & ORGANIC -moist										0.0	
1.0	SILTY GRAVEL WITH SAND (GM) -greyish brown -frozen -moist										1.0	
2.0			509	●	▲		GM	▲▲▲	◆	■		
3.0	END HOLE @ 3.0m -refusal		510	●	▲		GM	▲▲▲	◆	■		
4.0											4.0	
5.0											5.0	
6.0											6.0	

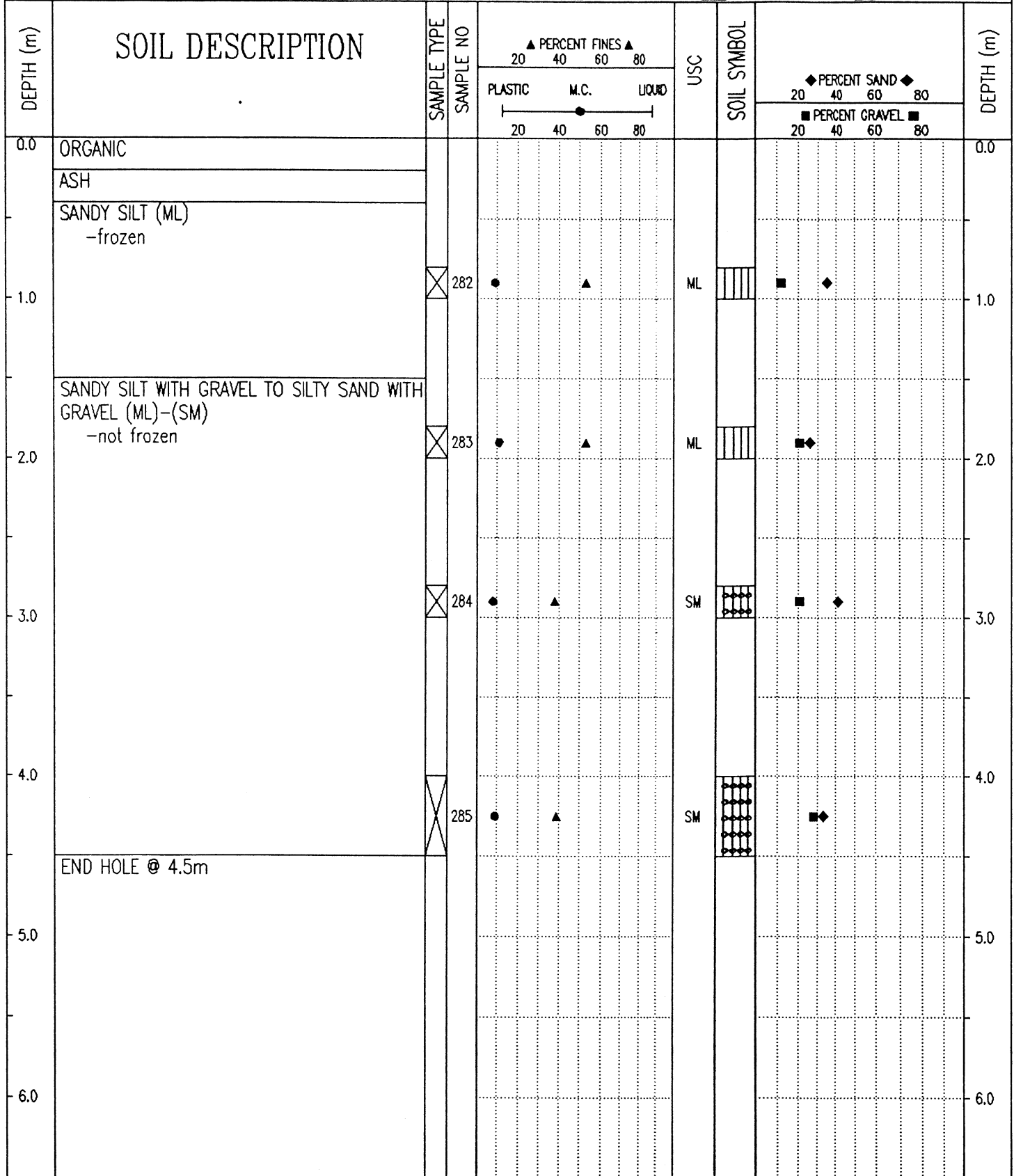
Government of Yukon
Transportation Engineering

LOGGED BY: W.E.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/08/04

99/11/25 08:23AM

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 513-453
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L		LOCATION: 1810+550 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



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LOGGED BY: G.C.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 4.5 m
COMPLETE: 99/05/03

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL ◆ PERCENT SAND ◆ 20 40 60 80 ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC						0.0
	ASH & ORGANIC -saturated						
	SILTY SAND WITH GRAVEL (SM) -moist -brown						
1.0							1.0
2.0							2.0
3.0		<input checked="" type="checkbox"/>	508	● ▲	SM	◆ ■	3.0
	SANDY SILT -some gravel -moist -grinding drilling						
4.0							4.0
5.0	END HOLE @ 4.5m						5.0
6.0							6.0

99/11/25 02:37PM


SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 513-452
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1810+625 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> 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	ORGANIC ASH											0.0
0.0 - 1.0	SILTY GRAVEL WITH SAND (GM) -frozen -surface water 0.4-0.6m		280	▲			GM	◆		■		1.0
2.0 - 3.0	SILTY SAND WITH GRAVEL (SM) -not frozen		281	●	▲		SM			■		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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LOGGED BY: G.C.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/05/03

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION		TEST HOLE NO: 520-629						
SHAKWAK SEG 13		KM 1796-1822 A/H		Project No: 092-202101-0329						
MOBILE B-40L		LOCATION: 1810+625 25M RHS (INLET)		ELEVATION: 0.00 (m)						
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE										
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80		USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80		DEPTH (m)
				PLASTIC M.C. LIQUID 20 40 60 80				■ PERCENT GRAVEL ■ 20 40 60 80		
0.0	ORGANIC									0.0
	ASH & ORGANIC -saturated									
1.0										1.0
	SILTY SAND WITH GRAVEL (SM) -brown -saturated -grinding drilling									
2.0										2.0
3.0		<input checked="" type="checkbox"/>	507	●	▲	SM		■◆		3.0
4.0										4.0
5.0	END HOLE @ 4.5m									5.0
6.0										6.0

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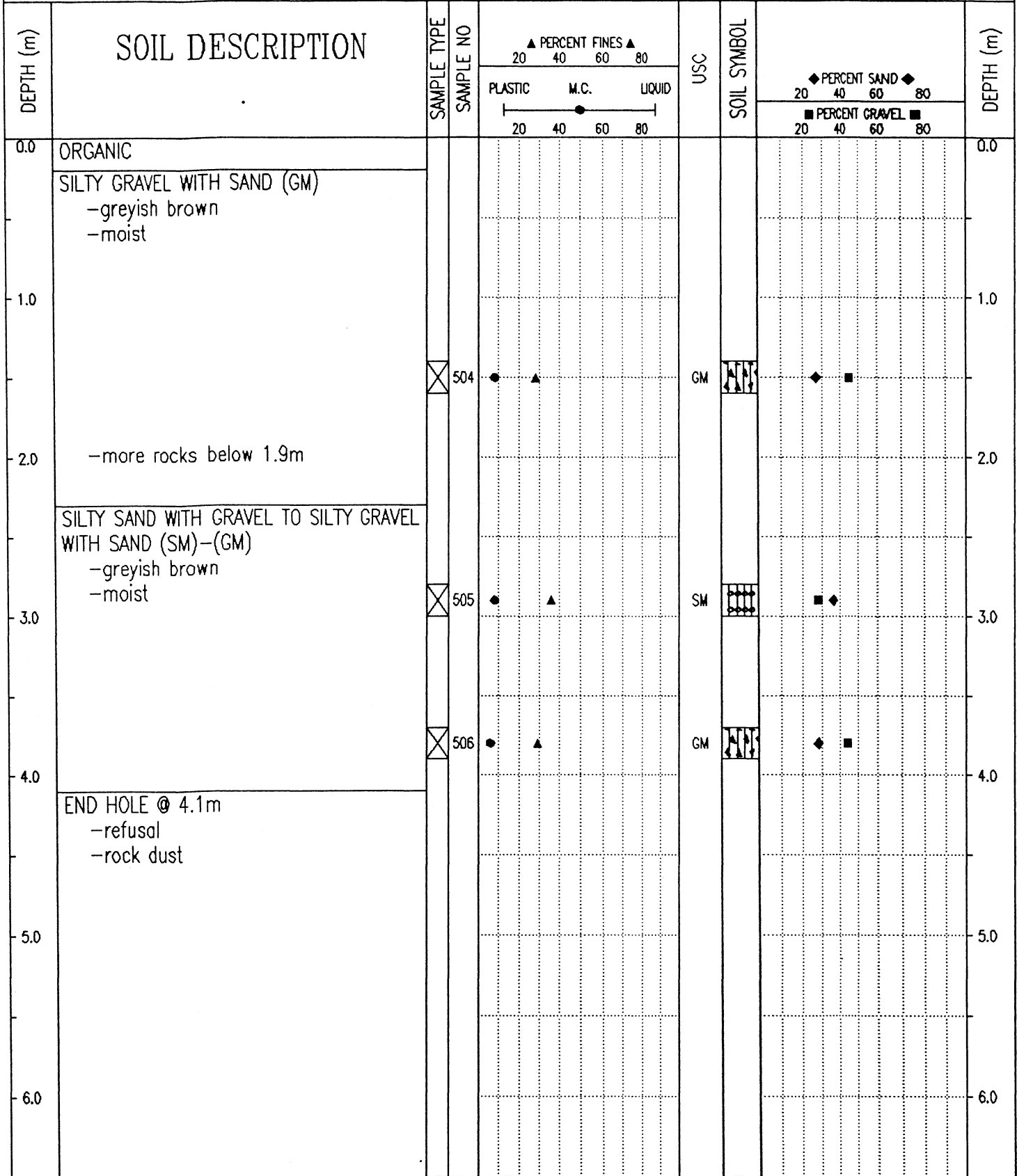
Fig. No:

COMPLETION DEPTH: 4.5 m

COMPLETE: 99/08/04

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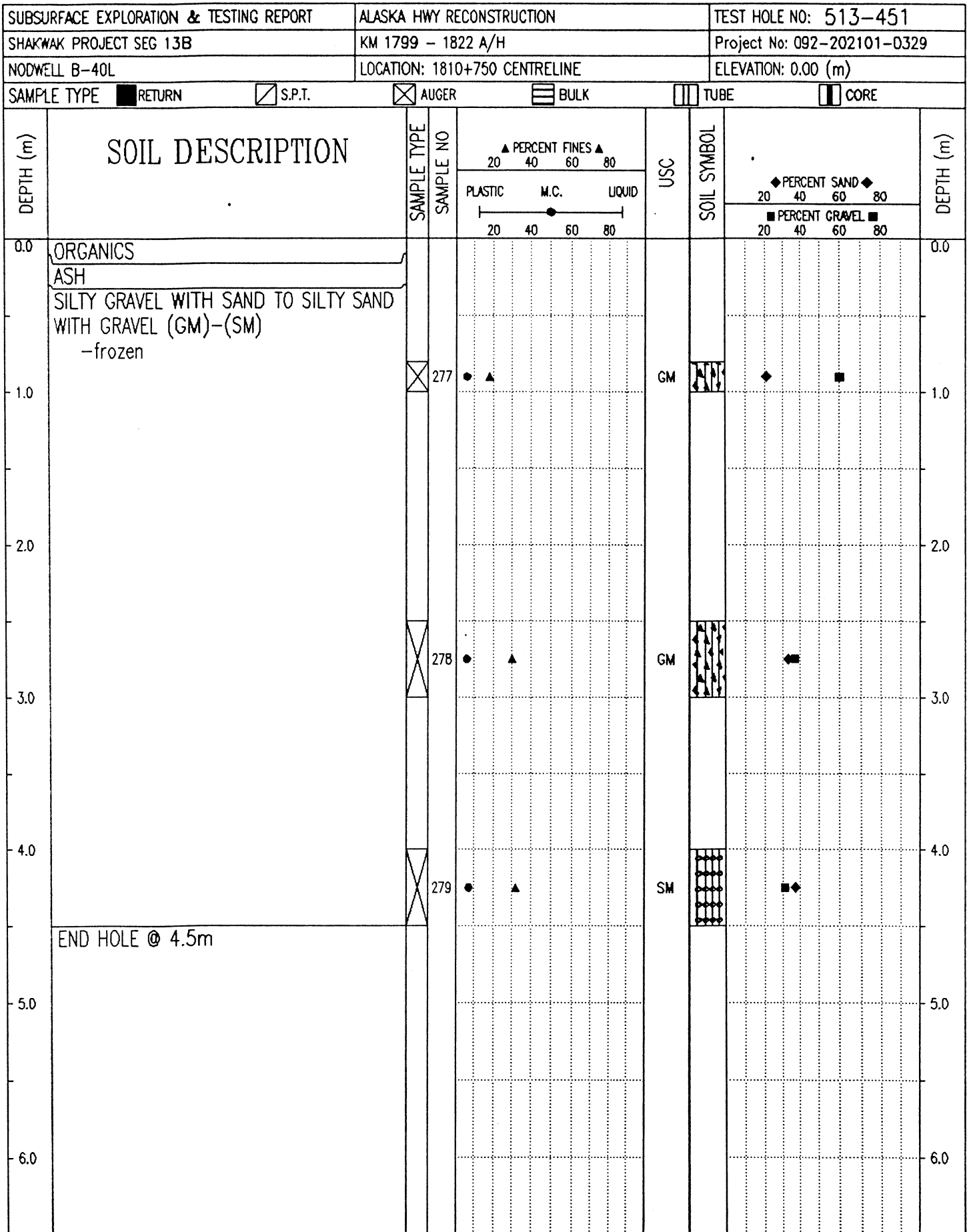
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SHAKWAK SEG 13		KM 1796-1822 A/H	Project No: 092-202101-0329
MOBILE B-40L		LOCATION: 1810+720 33M RHS	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



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LOGGED BY: W.E.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 4.1 m
COMPLETE: 99/08/04



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LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 99/05/03
Fig. No:	Page 1 of 1

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION		TEST HOLE NO: 520-627									
SHAKWAK SEG 13		KM 1796-1822 A/H		Project No: 092-202101-0329									
MOBILE B-40L		LOCATION: 1810+800 34M RHS		ELEVATION: 0.00 (m)									
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER									
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE									
				<input type="checkbox"/> CORE									
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			DEPTH (m)	
				PLASTIC	M.C.	LIQUID			PERCENT GRAVEL ■				
				20	40	60	80		20	40	60	80	
				20	40	60	80		20	40	60	80	
0.0	ORGANIC												0.0
	ORGANIC & ASH												
	ORGANIC -frozen (Vx)												
1.0													1.0
	SILTY SAND WITH GRAVEL (SM) -greyish brown -frozen (Nf) -grindy drilling												
2.0		<input checked="" type="checkbox"/>	502	●	▲		SM	■◆					2.0
	-brown below 2.5m												
3.0		<input checked="" type="checkbox"/>	503	●	▲		SM	■◆					3.0
4.0	END HOLE @ 3.8m -refusal -rock dust on bit												4.0
5.0													5.0
6.0													6.0

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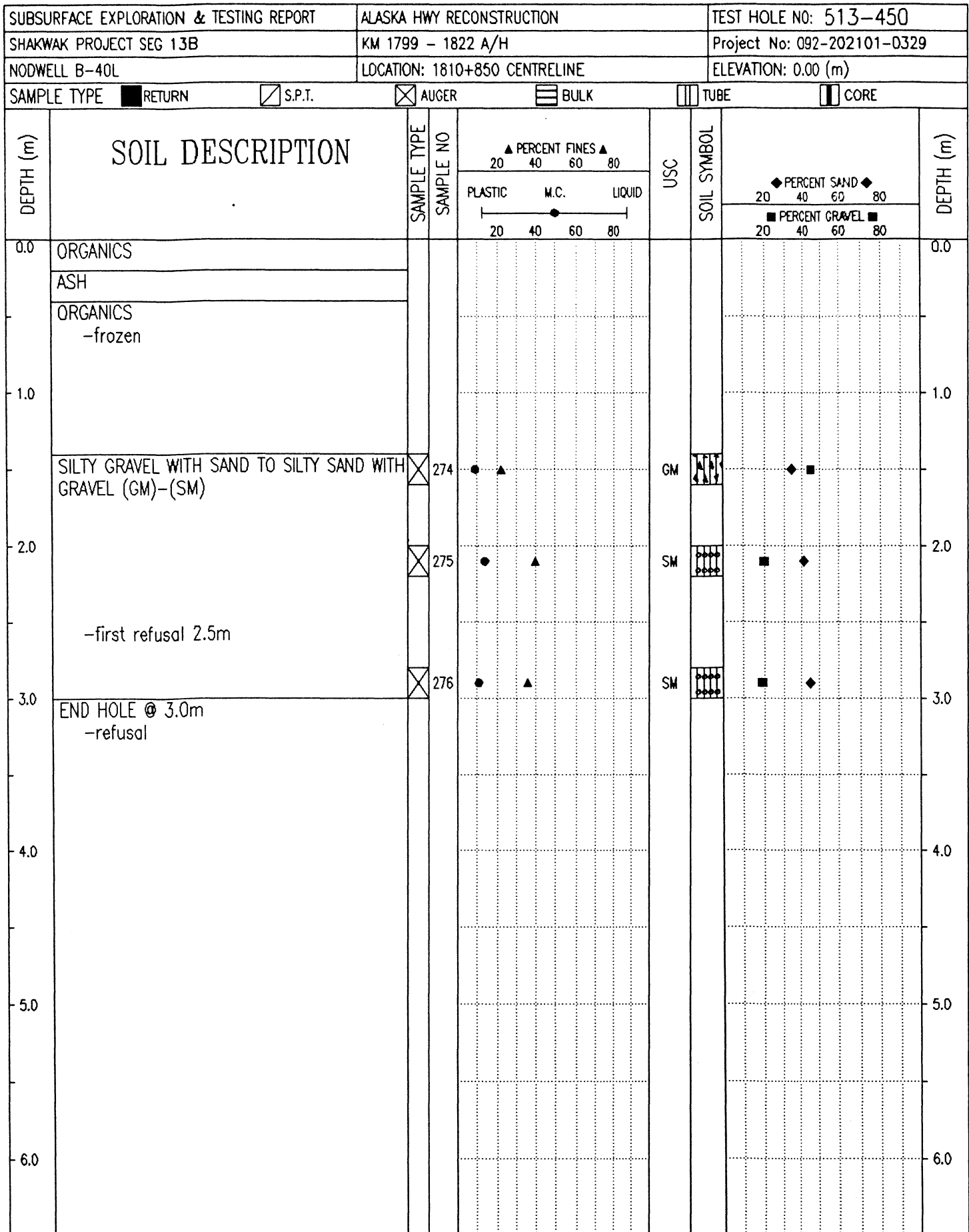
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Fig. No:

COMPLETION DEPTH: 3.8 m

COMPLETE: 99/08/04

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Fig. No:

COMPLETION DEPTH: 3.0 m

COMPLETE: 99/05/03

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SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION		TEST HOLE NO: 520-625					
SHAKWAK SEG 13		KM 1796-1822 A/H		Project No: 092-202101-0329					
MOBILE B-40L		LOCATION: 1810+875 21M RHS (INLET)		ELEVATION: 0.00 (m)					
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER					
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE					
				<input type="checkbox"/> CORE					
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC -saturated								0.0
	ASH & ORGANIC -saturated								
1.0	SILT WITH SAND (ML) -brown -frozen (Vx) -grindy								1.0
		<input checked="" type="checkbox"/>	500				ML		
2.0									2.0
3.0	END HOLE @ 2.8m -refusal -rock dust on bit								3.0
4.0									4.0
5.0									5.0
6.0									6.0

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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 2.8 m
COMPLETE: 99/08/04

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION		TEST HOLE NO: 520-626								
SHAKWAK SEG 13		KM 1796-1822 A/H		Project No: 092-202101-0329								
MOBILE B-40L		LOCATION: 1810+875 21M LHS (OUTLET)		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	ORGANIC			20	40	60	80	20	40	60	80	0.0
	ORGANIC & ASH -saturated -frozen below 0.6m											
1.0												1.0
	SILTY SAND WITH GRAVEL (SM) -brown -frozen (Nf) -grindy drilling -sample #501 contaminated with ash, organic & water	<input checked="" type="checkbox"/>	501	20	40	60	80	SM	◆			
2.0												2.0
	END HOLE @ 2.5m -refusal											
3.0												3.0
4.0												4.0
5.0												5.0
6.0												6.0

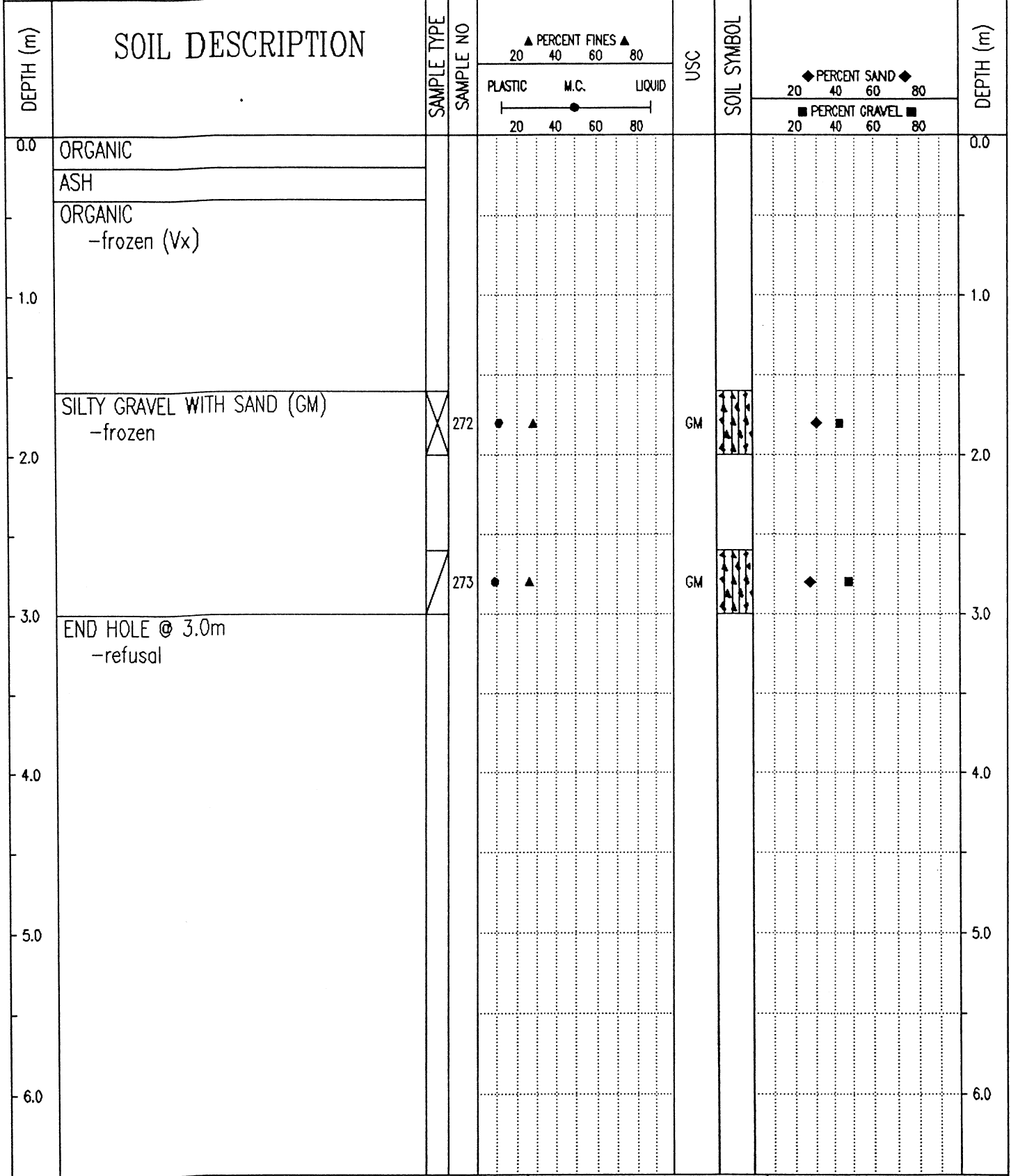
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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 2.5 m
COMPLETE: 99/08/04

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SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 513-449
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1810+950 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE	



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LOGGED BY: G.C.	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 99/05/03
Fig. No:	Page 1 of 1

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION		TEST HOLE NO: 520-624								
SHAKWAK SEG 13		KM 1796-1822 A/H		Project No: 092-202101-0329								
MOBILE B-40L		LOCATION: 1810+950 34M RHS		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	ORGANIC ORGANIC & MOSTLY ASH -wet										0.0	
1.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (GM)-(SM)-(GM) -brown -grindy -frozen below 1.5m	<input checked="" type="checkbox"/>	497	●	▲		GM	▲▲▲▲	◆		1.0	
2.0											2.0	
3.0	-sample #498 contaminated with ash & organic -more rocks below 3.5m	<input checked="" type="checkbox"/>	498	●	▲		SM	◆◆◆◆	■◆		3.0	
4.0		<input checked="" type="checkbox"/>	499	●	▲		GM	▲▲▲▲	◆■		4.0	
5.0	END HOLE @ 4.5m										5.0	
6.0											6.0	
Government of Yukon Transportation Engineering				LOGGED BY: W.E.				COMPLETION DEPTH: 4.5 m				
				REVIEWED BY:				COMPLETE: 99/08/04				
				Fig. No:				Page 1 of 1				

SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION		TEST HOLE NO: 520-623							
SHAKWAK SEG 13		KM 1796-1822 A/H		Project No: 092-202101-0329							
MOBILE B-40L		LOCATION: 1811+035 23M LHS (OUTLET)		ELEVATION: 0.00 (m)							
SAMPLE TYPE		S.P.T.		AUGER		BULK		TUBE		CORE	
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80		USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 ■ PERCENT GRAVEL ■ 20 40 60 80		DEPTH (m)	
0.0	ORGANIC -wet									0.0	
	ASH -wet										
	ORGANIC & ASH -wet										
1.0	-frozen below 1.0m									1.0	
	SILTY SAND WITH GRAVEL (SM) -brown -frozen (Nf) -grindy drilling										
2.0										2.0	
3.0	-sample # 496 contaminated with ash	<input checked="" type="checkbox"/>	496	●	▲	SM	◆	■	◆	3.0	
	END HOLE @ 3.0. -refusal										
4.0										4.0	
5.0										5.0	
6.0										6.0	

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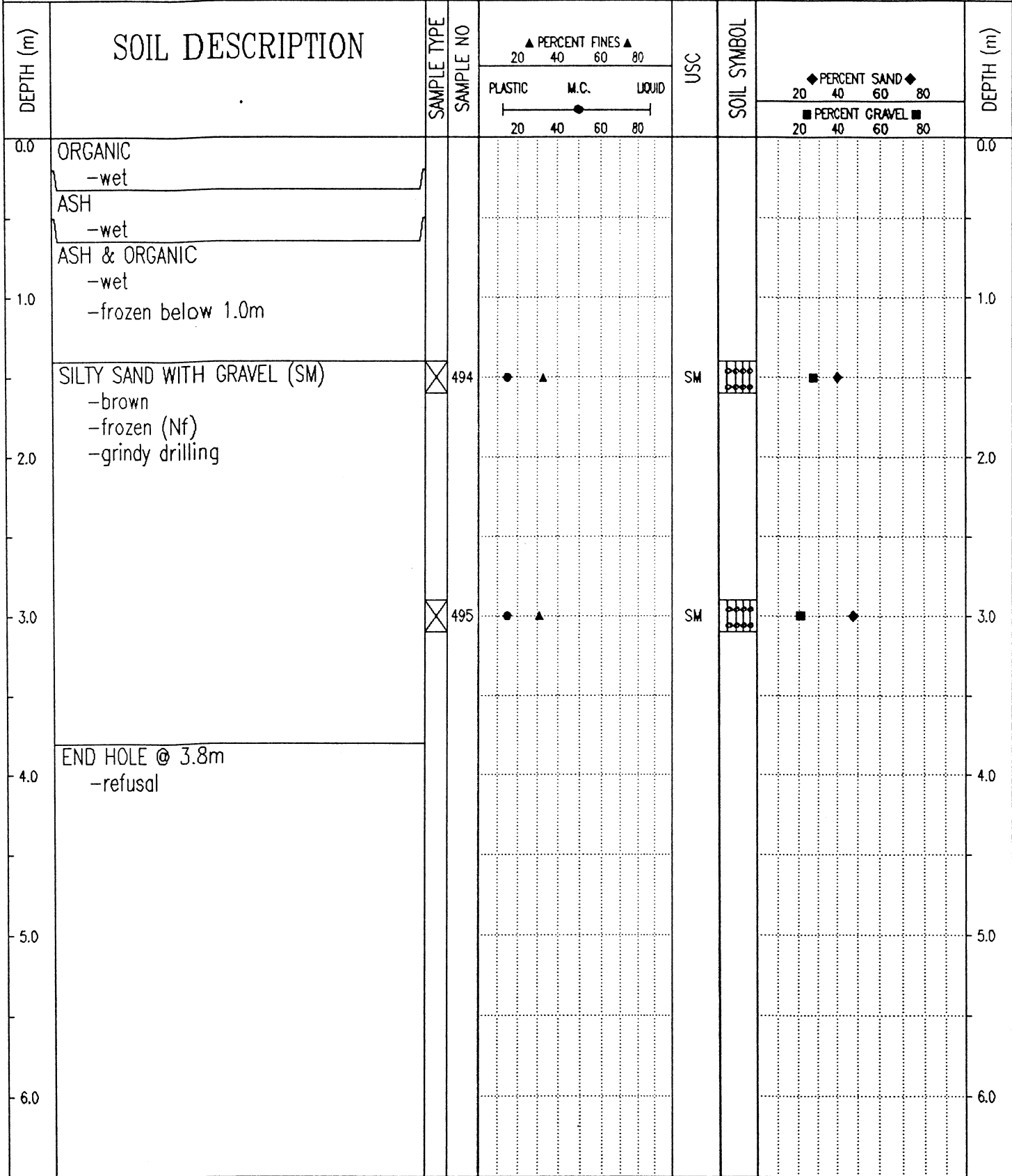
Fig. No:

COMPLETION DEPTH: 3.0 m

COMPLETE: 99/08/04

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SUB-SURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RE-CONSTRUCTION	TEST HOLE NO: 520-622
SHAKWAK SEG 13		KM 1796-1822 A/H	Project No: 092-202101-0329
MOBILE B-40L		LOCATION: 1811+040 21M RHS (INLET)	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE			



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	Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 512-448								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1811+050 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	ORGANICS										0.0	
	ASH											
	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM)											
	-frozen											
	-tough grindy drilling											
1.0		X	270	●	▲		GM	▲▲▲▲	◆	■	1.0	
2.0												
3.0		X	271	●	▲		GM	▲▲▲▲	◆◆	■	3.0	
3.0	END HOLE @ 3.0m											
4.0												
5.0												
6.0												
Government of Yukon Transportation Engineering				LOGGED BY: G.C.				COMPLETION DEPTH: 3.0 m				
				REVIEWED BY:				COMPLETE: 99/04/30				
				Fig. No:				Page 1 of 1				

SUB-SURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RE-CONSTRUCTION	TEST HOLE NO: 520-621
SHAKWAK SEG 13	KM 1796-1822 A/H	Project No: 092-202101-0329
MOBILE B-40L	LOCATION: 1811+125 30M RHS	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> 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	ORGANIC ASH											0.0	
	ORGANIC, ASH & SILT												
1.0												1.0	
2.0	SILTY GRAVEL WITH SAND (GM) -brown -frozen (Nf) -grindy drilling -more rocks below 1.8m	<input checked="" type="checkbox"/>	492	●	▲		GM	◄◄◄	◆	■		2.0	
3.0	-ash & organic contamination samp#493	<input checked="" type="checkbox"/>	493	●	▲		GM	◄◄◄	◆	■		3.0	
4.0	END HOLE @ 3.7m -refusal											4.0	
5.0												5.0	
6.0												6.0	

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Fig. No:

COMPLETION DEPTH: 3.7 m
COMPLETE: 99/08/04

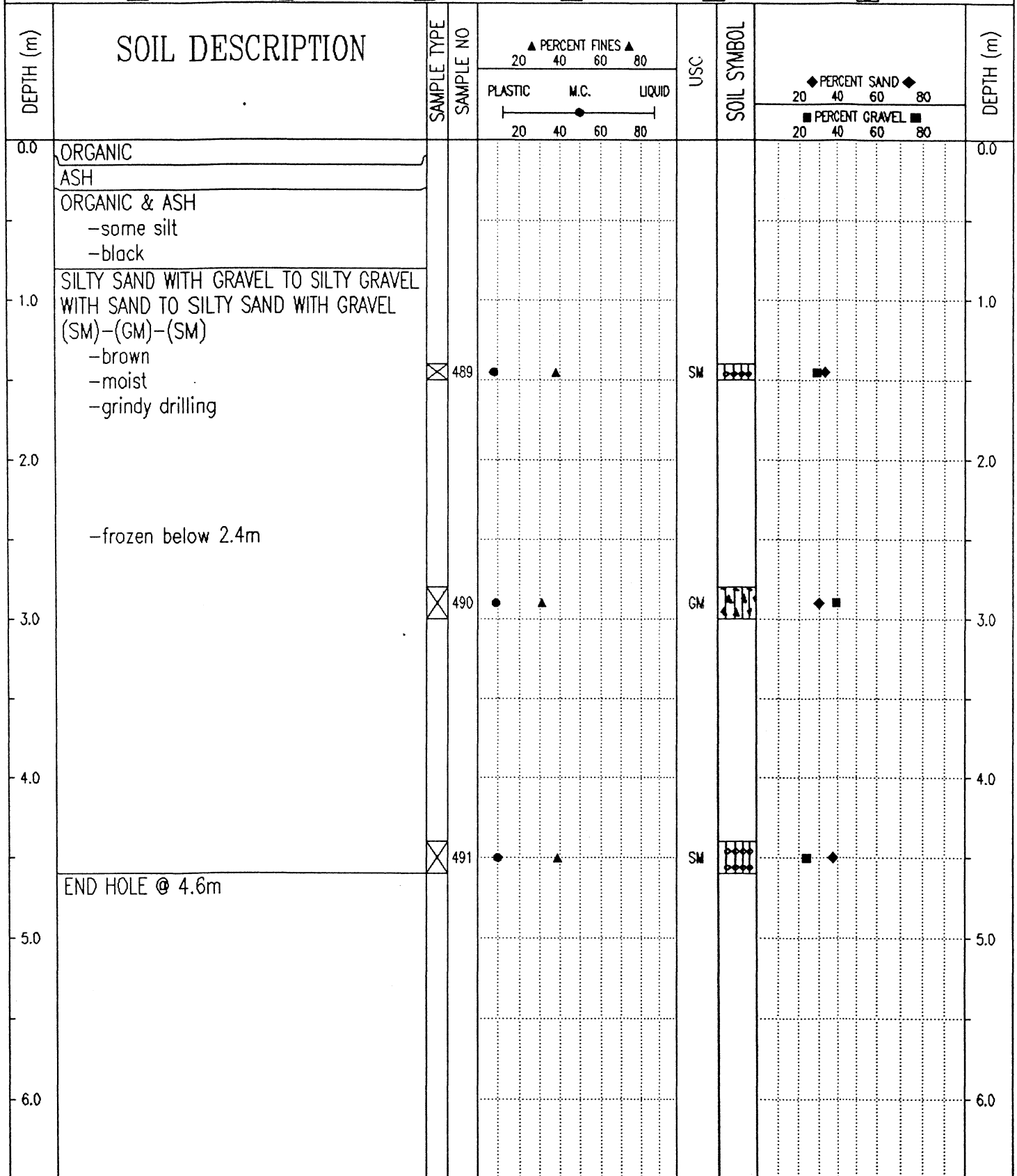
SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 512-447								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1811+160 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE		RETURN		S.P.T.								
AUGER		BULK		TUBE								
CORE												
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND			DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	60	
0.0	ORGANIC ASH ORGANICS -frozen (Vx)											0.0
2.0	SILTY GRAVEL WITH SAND (GM) -frozen -grindy drilling	X	268	•	▲		GM	■	◆			2.0
3.0	END HOLE @ 3.2m -refusal	X	269	•	▲		GM	■	◆			3.0

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Fig. No:

COMPLETION DEPTH: 3.2 m
COMPLETE: 99/04/30

SUB-SURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RE-CONSTRUCTION	TEST HOLE NO: 520-620
SHAKWAK SEG 13	KM 1796-1822 A/H	Project No: 092-202101-0329
MOBILE B-40L	LOCATION: 1811+225 31M RHS	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.
	<input checked="" type="checkbox"/> AUGER	<input type="checkbox"/> BULK
	<input type="checkbox"/> TUBE	<input type="checkbox"/> CORE



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REVIEWED BY:	COMPLETE: 99/08/04
Fig. No:	Page 1 of 1

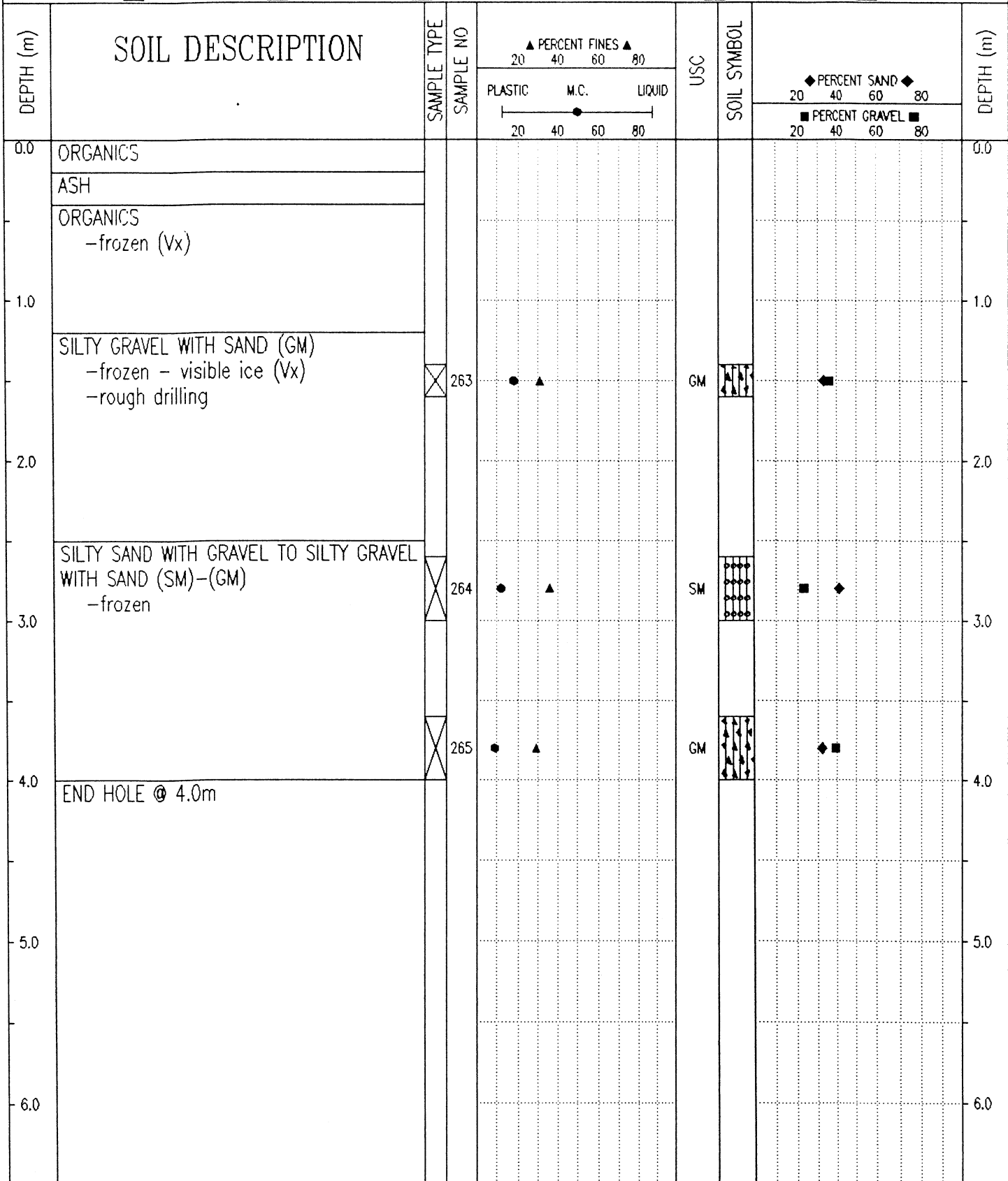
SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 512-446									
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329									
NODWELL B-40L		LOCATION: 1811+275 CENTRELINE		ELEVATION: 0.00 (m)									
SAMPLE TYPE		S.P.T.		AUGER									
RETURN		BULK		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		
0.0	ORGANICS												0.0
	ASH												
	ORGANICS WITH SILT -frozen (Nf)												
1.0		X	266				ML						1.0
	SILTY GRAVEL WITH SAND (GM) -frozen -rough grindy drilling												
2.0		X	267				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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Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/04/30

SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 512-445
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1811+400 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		




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Fig. No:

COMPLETION DEPTH: 4.0 m
COMPLETE: 99/04/30
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SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 512-444											
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329											
NODWELL B-40L		LOCATION: 1811+492 CENTRELIN		ELEVATION: 0.00 (m)											
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER											
				<input type="checkbox"/> BULK											
				<input type="checkbox"/> TUBE											
				<input type="checkbox"/> 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	ORGANIC ASH													0.0	
1.0	SILTY SAND WITH GRAVEL (SM) -with ash contamination -frozen -grindy drilling	<input checked="" type="checkbox"/>	260	●	▲		SM	▨▨▨▨	●					1.0	
2.0	SILTY GRAVEL WITH SAND (GM) -frozen -rough drilling	<input checked="" type="checkbox"/>	261	●	▲		GM	▨▨▨▨	◆	■				2.0	
3.0	END HOLE @ 3.0m	<input checked="" type="checkbox"/>	262	●	▲		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: 99/04/30							
				Fig. No:				Page 1 of 1							

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 512-443				
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329				
NODWELL B-40L		LOCATION: 1811+575 CENTRELINE		ELEVATION: 0.00 (m)				
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> 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	ORGANICS							0.0
	SILTY GRAVEL WITH SAND(GM) -frozen							
1.0	END HOLE 1.0M -4 refusals @ 1.0m -Note: test hole 1.5m above water in creek - could possibly be boulder patch.	<input checked="" type="checkbox"/>	259	● ▲	GM		◆ ■	1.0
2.0								2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0
Government of Yukon Transportation Engineering				LOGGED BY: G.C.		COMPLETION DEPTH: 1.0 m		
				REVIEWED BY:		COMPLETE: 99/04/30		
				Fig. No:		Page 1 of 1		

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 512-442								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1811+700 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
		<input type="checkbox"/> 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	ORGANIC											0.0
	ASH											
	SILTY SAND WITH GRAVEL (SM) -fill											
1.0		<input checked="" type="checkbox"/>	256	●	▲		SM	⊞	■	◆		1.0
2.0	SILTY SAND TO SILTY SAND WITH GRAVEL (SM)	<input checked="" type="checkbox"/>	257	●	▲		SM	⊞	■	◆		2.0
3.0	END HOLE @ 3.0m	<input checked="" type="checkbox"/>	258	●	▲		SM	⊞	■	◆		3.0
4.0												4.0
5.0												5.0
6.0												6.0

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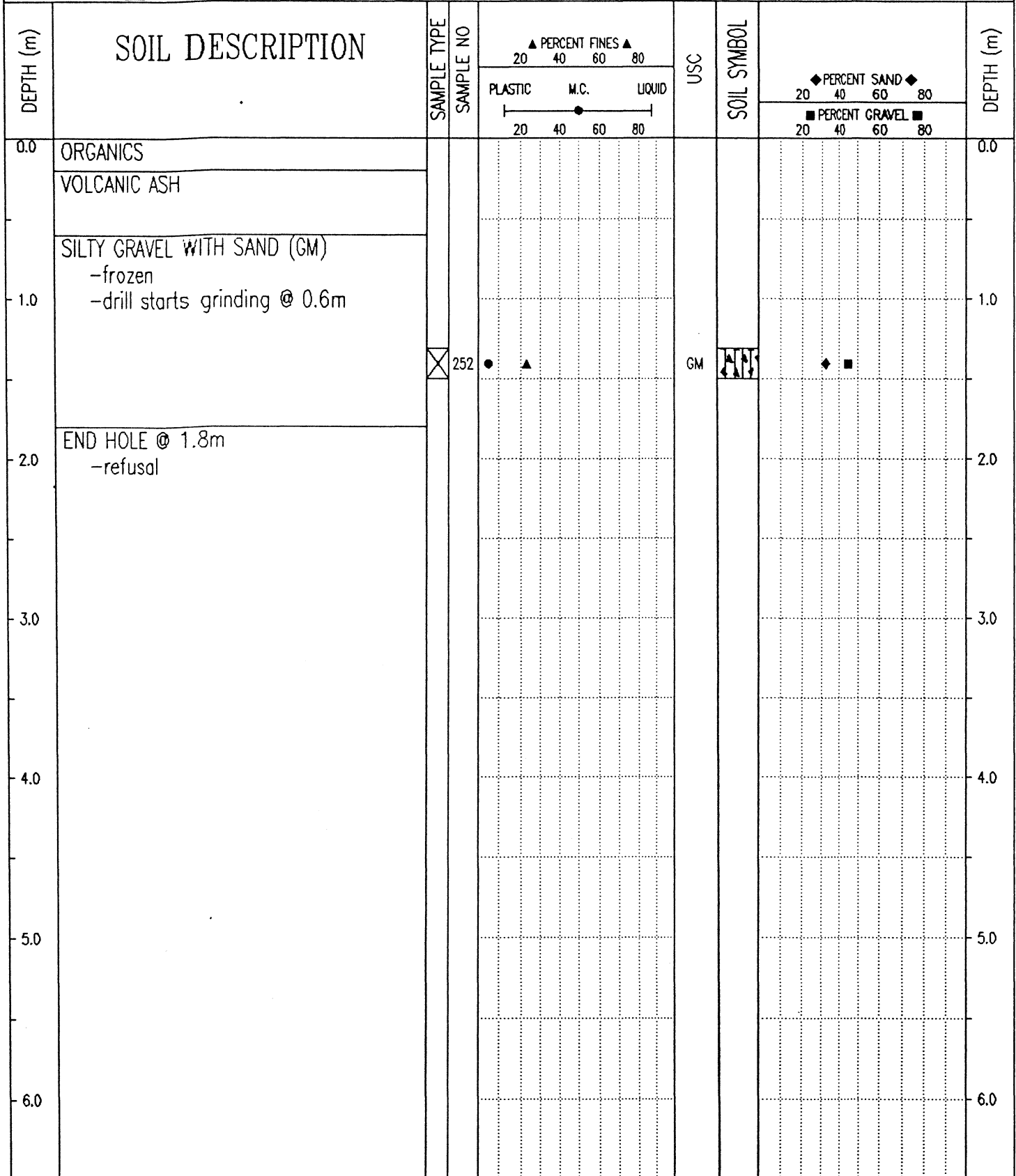
LOGGED BY: G.C.
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Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/04/30

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 512-441								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1811+800 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	
0.0	MIXTURE OF ORGANICS, ASH & SAND GRAVEL -not layered -frozen											0.0
1.0	ORGANIC & SILT -frozen -smooth drilling from 1.0m											1.0
2.0	SANDY SILT WITH GRAVEL (SM) -frozen	<input checked="" type="checkbox"/>	254	●	▲		SM		■◆			2.0
3.0	SILTY GRAVEL WITH SAND (GM) -frozen -grinding drilling											3.0
4.0	END HOLE @ 4.0m -refusal	<input checked="" type="checkbox"/>	255	●	▲		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				
				REVIEWED BY:				COMPLETE: 99/04/30				
				Fig. No:				Page 1 of 1				

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 512-440								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1811+900 CENTRELIN		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	
0.0	ORGANICS WITH ICE -(Vx)											0.0
1.0												1.0
2.0	ORGANIC -with silt -frozen	<input checked="" type="checkbox"/>	253		55	65	ML	◆				2.0
3.0	END HOLE @ 3.0m Note: ice rich at 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: 99/04/30				
				Fig. No:				Page 1 of 1				

SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 512-436
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1811+955 5M LT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		

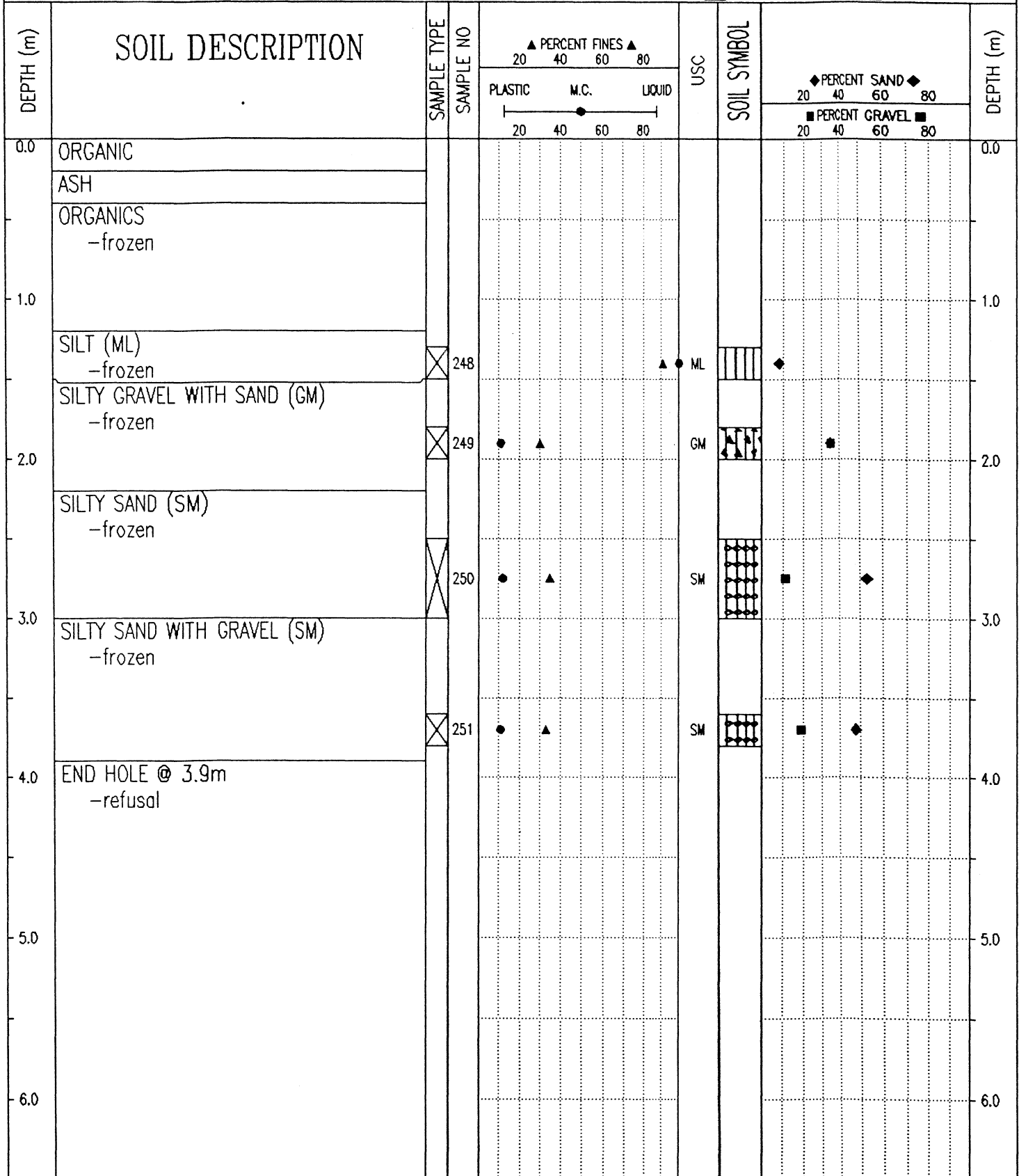


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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 1.8 m
COMPLETE: 99/04/28

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 512-435
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L		LOCATION: 1812+025 CENTRELIN	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



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Fig. No:

COMPLETION DEPTH: 3.9 m
COMPLETE: 99/04/28

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 512-434								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1812+125 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE		RETURN		S.P.T.								
AUGER		BULK		TUBE								
CORE												
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT GRAVEL ■			
0.0	ORGANICS										0.0	
	ASH											
1.0	ORGANICS WITH ICE -frozen (Vx)										1.0	
2.0	SILTY SAND WITH GRAVEL TO SILTY SAND (SM) -frozen -drill starts grinding @ 1.5m	X	246	●	▲		SM	■	◆		2.0	
3.0	END HOLE @ 2.8m -refusal	X	247	●	▲		SM	■	◆		3.0	
4.0											4.0	
5.0											5.0	
6.0											6.0	

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Fig. No:

COMPLETION DEPTH: 2.8 m

COMPLETE: 99/04/28

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SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 512-433									
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329									
NODWELL B-40L		LOCATION: 1812+225 CENTRELINE		ELEVATION: 0.00 (m)									
SAMPLE TYPE		RETURN		S.P.T.									
AUGER		BULK		TUBE									
CORE													
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND			PERCENT GRAVEL	DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	60		
0.0	ORGANICS												0.0
	ASH												
	ORGANICS -frozen												
1.0													1.0
	SILT (ML) -with organics	X	244				ML						
2.0													2.0
	SILTY SAND (SM) -frozen -grindy drilling @ 2.0m	X	245				ML						
3.0													3.0
	END HOLE @ 3.0m -rock dust on bit Note: Sample #245 may be ground up gravel or rock (rough drilling)												
4.0													4.0
5.0													5.0
6.0													6.0

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COMPLETION DEPTH: 3.0 m
COMPLETE: 99/04/28

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 512-432								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1812+325 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> 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	ORGANICS										0.0	
	ICE & ASH											
	SILTY SAND WITH GRAVEL (SM) -frozen -rough drilling											
1.0		<input checked="" type="checkbox"/>	243	●	▲		SM	■	◆		1.0	
2.0	END HOLE @ 1.8m -refusal										2.0	
3.0											3.0	
4.0											4.0	
5.0											5.0	
6.0											6.0	
Government of Yukon Transportation Engineering				LOGGED BY: G.C. REVIEWED BY: Fig. No:		COMPLETION DEPTH: 1.8 m COMPLETE: 99/04/28		Page 1 of 1				

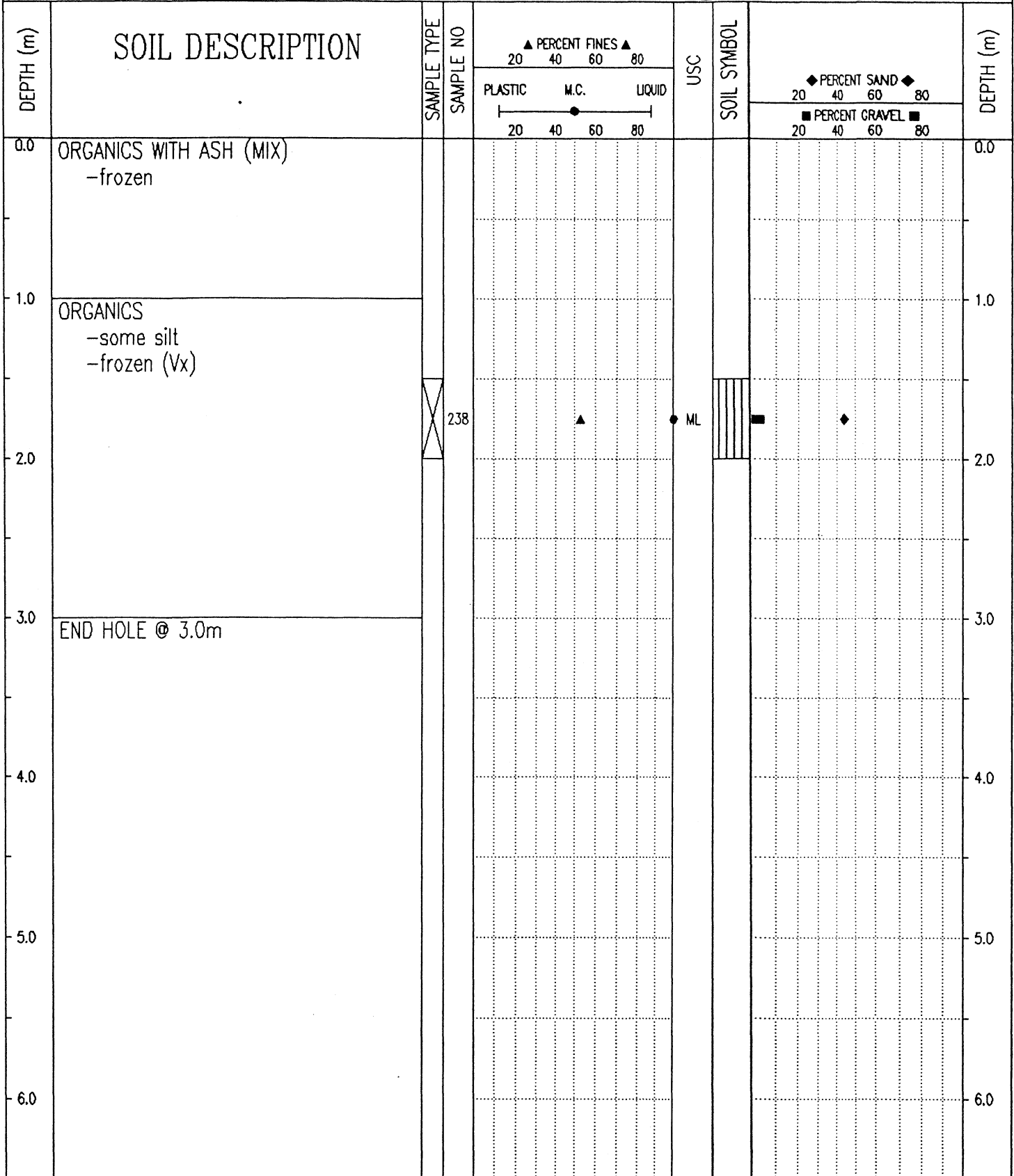
SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 512-431						
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329						
NODWELL B-40L		LOCATION: 1812+425 CENTRELIN		ELEVATION: 0.00 (m)						
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE										
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80		USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80		DEPTH (m)
				PLASTIC	M.C.			LIQUID	■ PERCENT GRAVEL ■ 20 40 60 80	
0.0	ORGANICS									0.0
	ASH & ICE									
	SILTY SAND WITH GRAVEL (SM) - frozen (Vx)									
1.0		<input checked="" type="checkbox"/>	241	●	▲		SM	◆		1.0
2.0										2.0
3.0		<input checked="" type="checkbox"/>	242	●	▲		SM	■ ◆		3.0
4.0	END HOLE @ 3.3m									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: 3.3 m COMPLETE: 99/04/28 Page 1 of 1				

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 512-430
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L		LOCATION: 1812+500 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> 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	ORGANIC										0.0	
	ASH											
	SILTY SAND WITH GRAVEL (SM)											
	-frozen											
	-drill starts grinding @ 0.6m											
	-rough drilling below 1.0m											
1.0			239	●	▲		SM	■	◆		1.0	
2.0											2.0	
			240	●	▲		SM	■	◆		3.0	
3.0											3.0	
	END HOLE @ 3.4M											
	-refusal											
4.0											4.0	
5.0											5.0	
6.0											6.0	

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SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 512-429
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1812+525 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.
	<input checked="" type="checkbox"/> AUGER	<input type="checkbox"/> BULK
	<input type="checkbox"/> TUBE	<input type="checkbox"/> CORE



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REVIEWED BY:	COMPLETE: 99/04/28
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SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 512-428								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1812+725 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	ORGANIC										0.0	
	ASH											
	ORGANICS -frozen (Vx)											
1.0											1.0	
	SILTY SAND WITH GRAVEL (SM) -frozen (Vx)		235				SM					
2.0			236				SM				2.0	
3.0			237				SM				3.0	
4.0	END HOLE @ 3.6m -refusal										4.0	
5.0											5.0	
6.0											6.0	

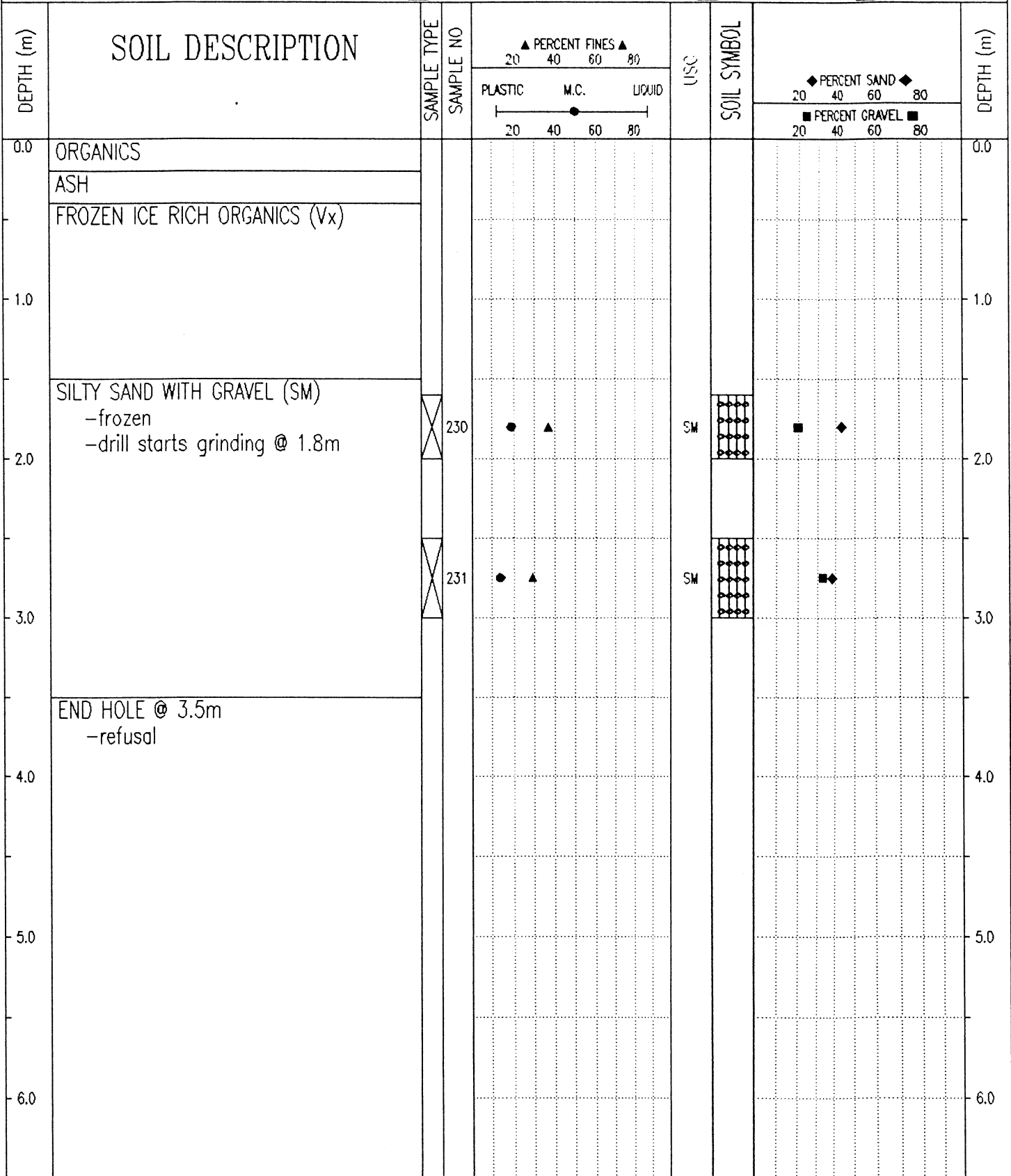
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Fig. No:

COMPLETION DEPTH: 3.6 m
COMPLETE: 99/04/28

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 512-427								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1812+825 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	ORGANICS										0.0	
	ASH											
	ORGANICS WITH ICE -frozen (Vx)											
1.0											1.0	
	SILTY SAND WITH GRAVEL (SM) -frozen -drill starts grinding @ 1.5m -first refusal @ 2.0m	X	232	●	▲		SM	■	◆			
2.0											2.0	
	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -frozen	X	233	●	▲		GM	■	◆			
3.0											3.0	
		X	234	●	▲		SM	■	◆			
4.0	END HOLE @ 4.0m -refusal										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: 99/04/28						
				Fig. No:		Page 1 of 1						

SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 512-426
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1812+925 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		

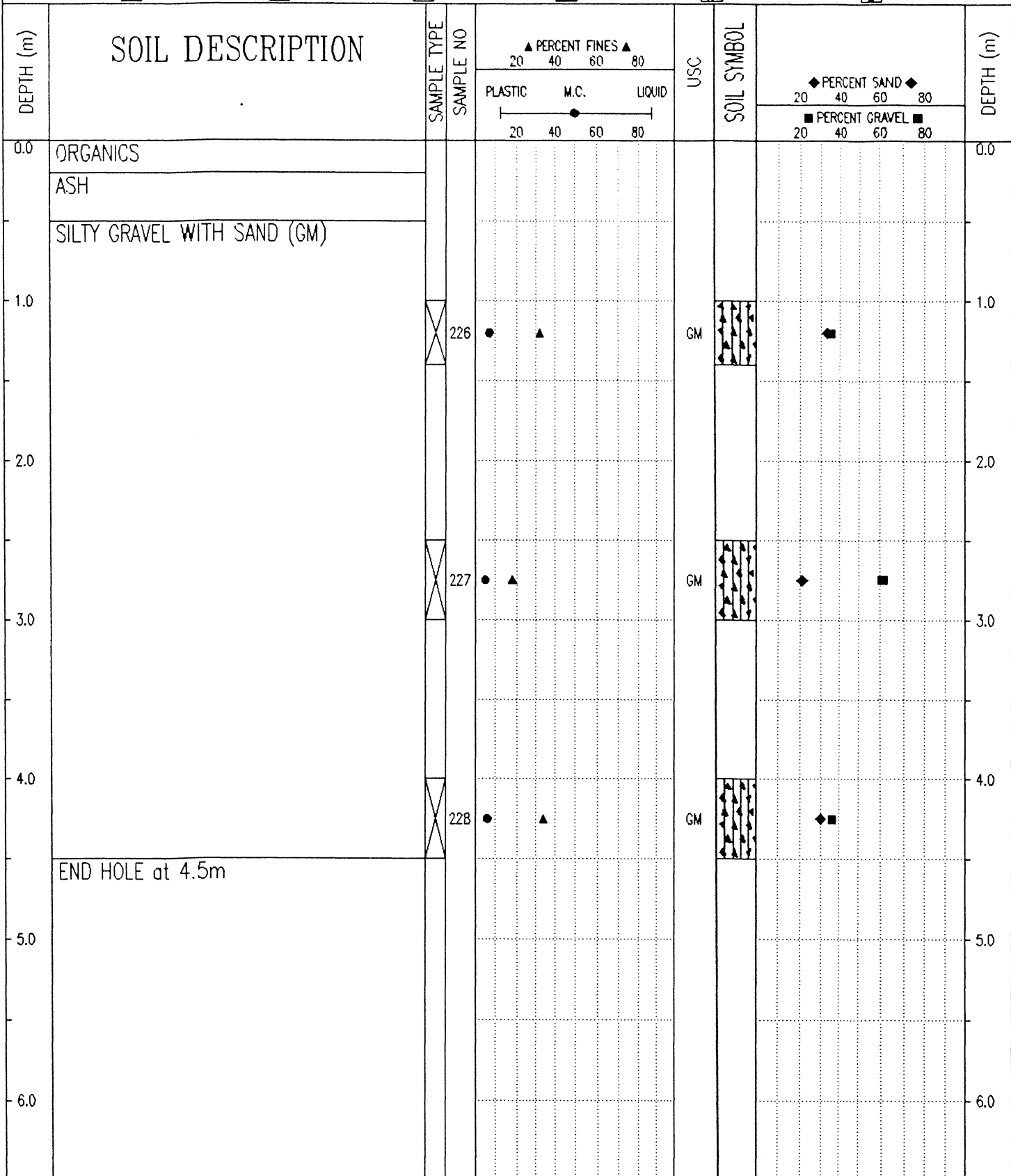


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Fig. No:

COMPLETION DEPTH: 3.5 m
COMPLETE: 99/04/28

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 511-425								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1813+050 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	ORGANICS -frozen			20	40	60	80	20	40	60	80	0.0
	ICE RICH VOLCANIC ASH											
1.0												1.0
	ORGANICS -frozen (Vx)											
2.0												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: 99/04/28						
				Fig. No:		Page 1 of 1						



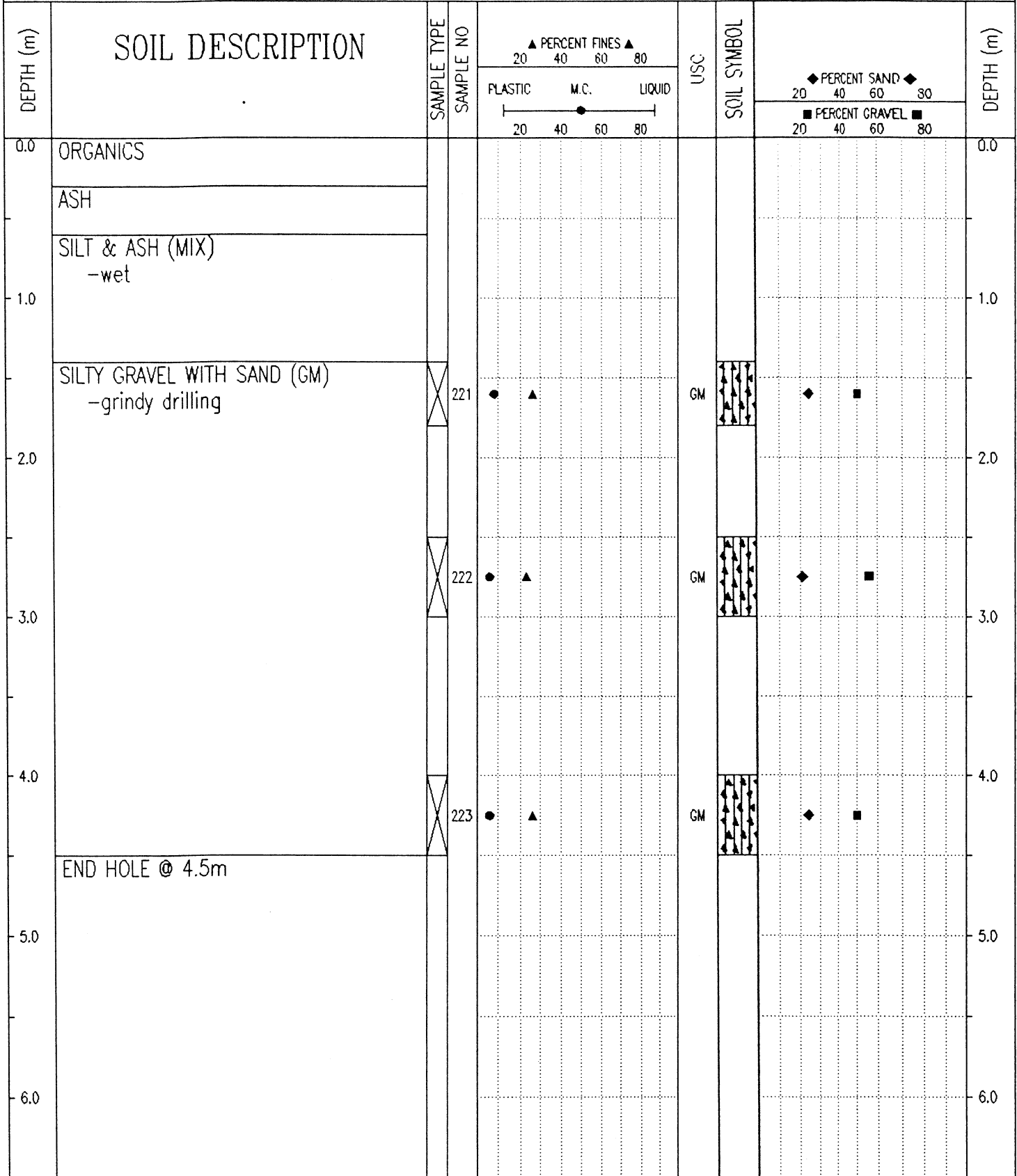
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SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329					
NODWELL B-40L		LOCATION: 1813+275 CENTRELINE		ELEVATION: 0.00 (m)					
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> 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	ORGANICS								0.0
	ASH								
1.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND(SM)-(GM) -grindy drilling								1.0
		X	224	●	▲	SM	■	◆	
		X	225	●	▲	GM	■	◆	
2.0	END HOLE @ 2.0m -2 refusals								2.0
3.0									3.0
4.0									4.0
5.0									5.0
6.0									6.0

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REVIEWED BY:	COMPLETE: 99/04/28
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 511-422
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1813+375 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



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	REVIEWED BY:	COMPLETE: 99/04/27
	Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 511-421							
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329							
NODWELL B-40L		LOCATION: 1813+450 CENTRELINE		ELEVATION: 0.00 (m)							
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER							
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE							
				<input type="checkbox"/> 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		
0.0	ORGANICS										0.0
	ASH										
	ORGANICS & ASH (MIX)										
1.0											1.0
	SILTY GRAVEL WITH SAND (GM)										
	-wet										
	-grindy drilling										
2.0											2.0
			219				GM				
3.0											3.0
4.0			220				GM				4.0
	END HOLE @ 4.5m										
5.0											5.0
6.0											6.0

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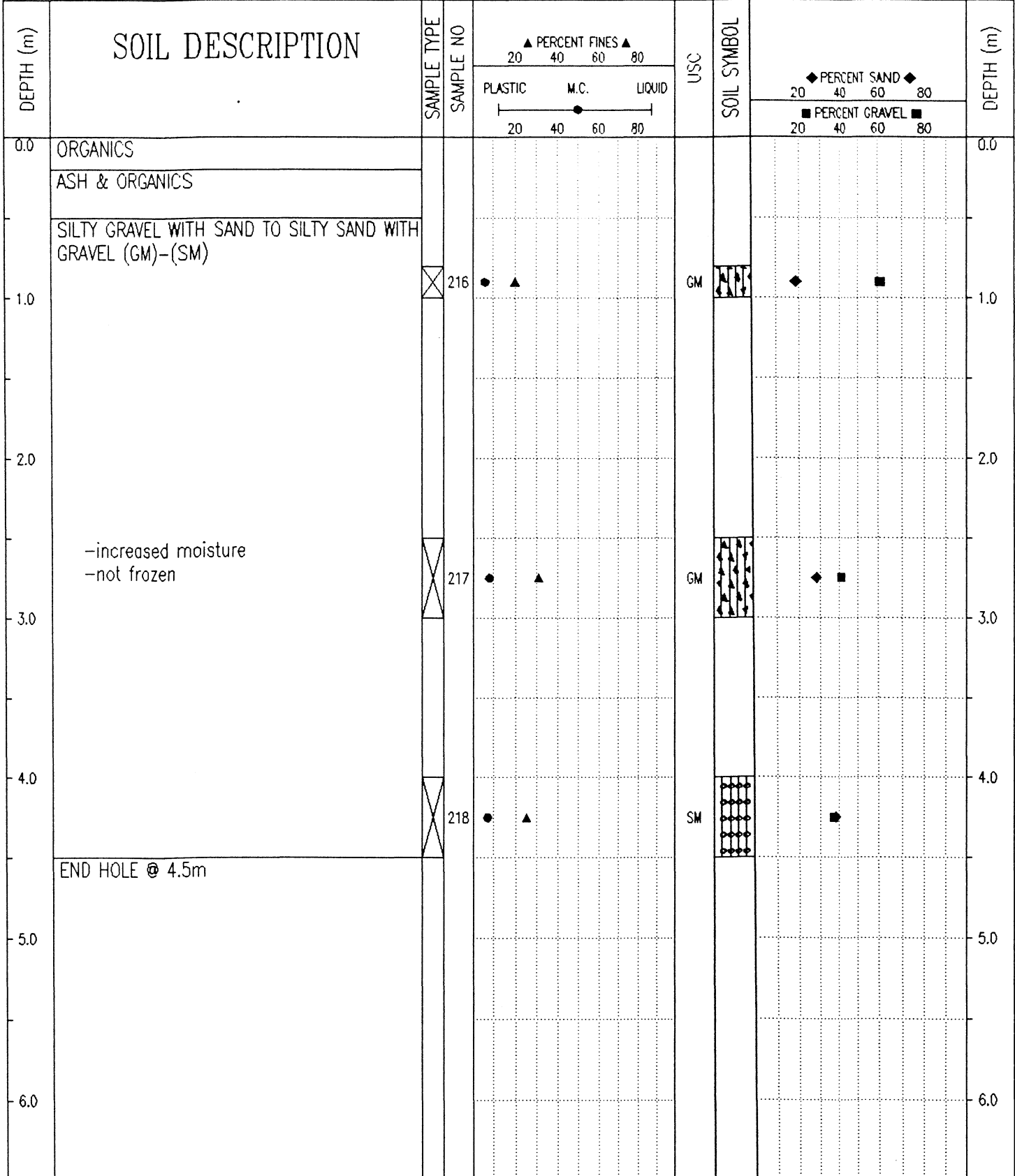
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COMPLETION DEPTH: 4.5 m

COMPLETE: 99/04/27

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SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 511-420
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1813+525 CENTRELIN	ELEVATION: 0.00 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



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Fig. No:

COMPLETION DEPTH: 4.5 m
COMPLETE: 99/04/27

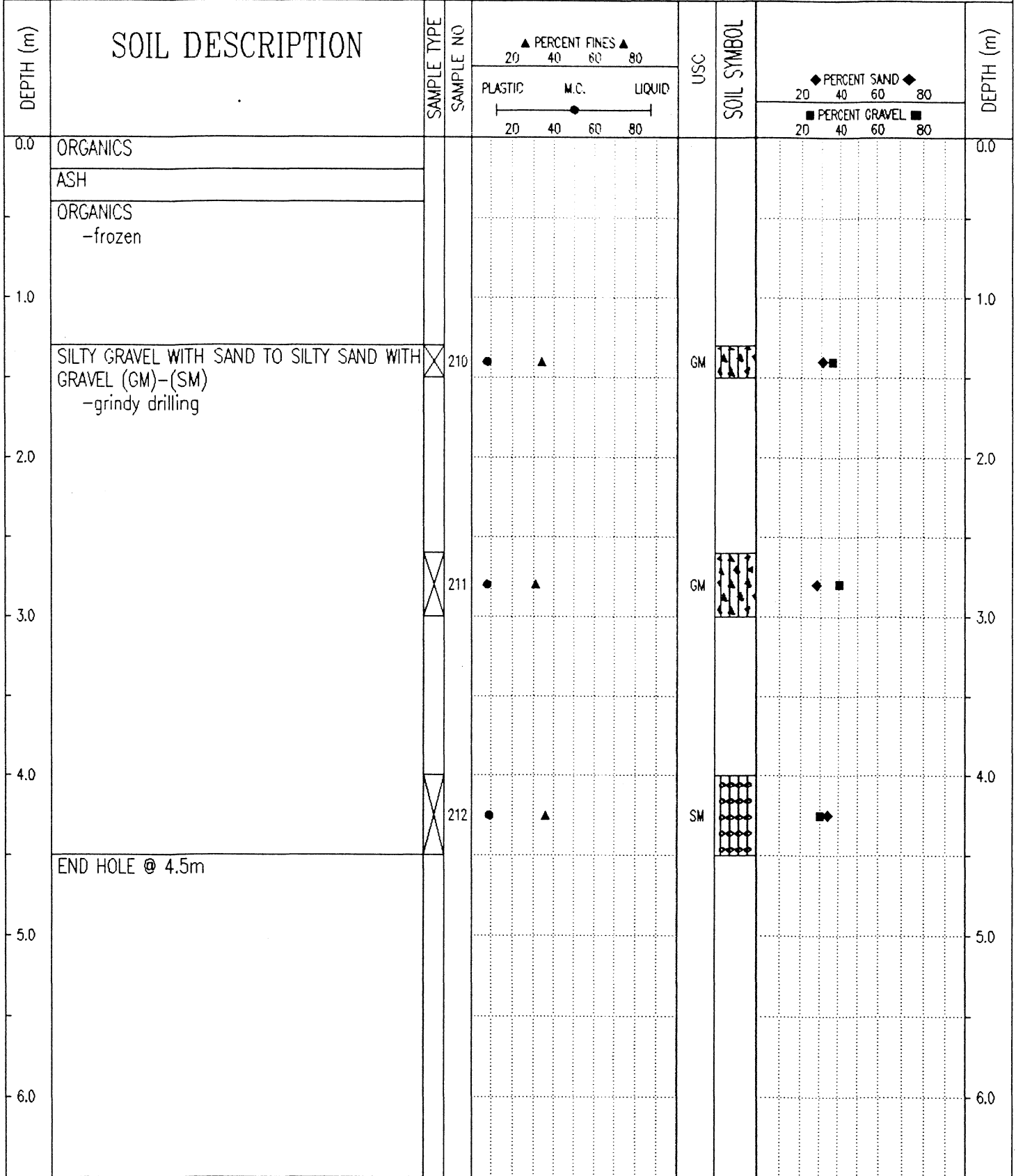
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SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1813+625 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE		AUGER		CORE								
<input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> 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	
0.0	ORGANICS											0.0
	ASH											
	SILT WITH ORGANICS -frozen											
1.0	SILTY GRAVEL WITH SAND (GM)		213	●	▲		GM	◆	■			1.0
	-first refusal @ 1.6m											
	-rougher drilling below 2.0m											
2.0												
3.0			214	●	▲		GM	◆	■			3.0
4.0			215	●	▲		GM	◆	■			4.0
5.0	END HOLE @ 4.5M											5.0
6.0												6.0

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Fig. No:

COMPLETION DEPTH: 4.5 m
COMPLETE: 99/04/27

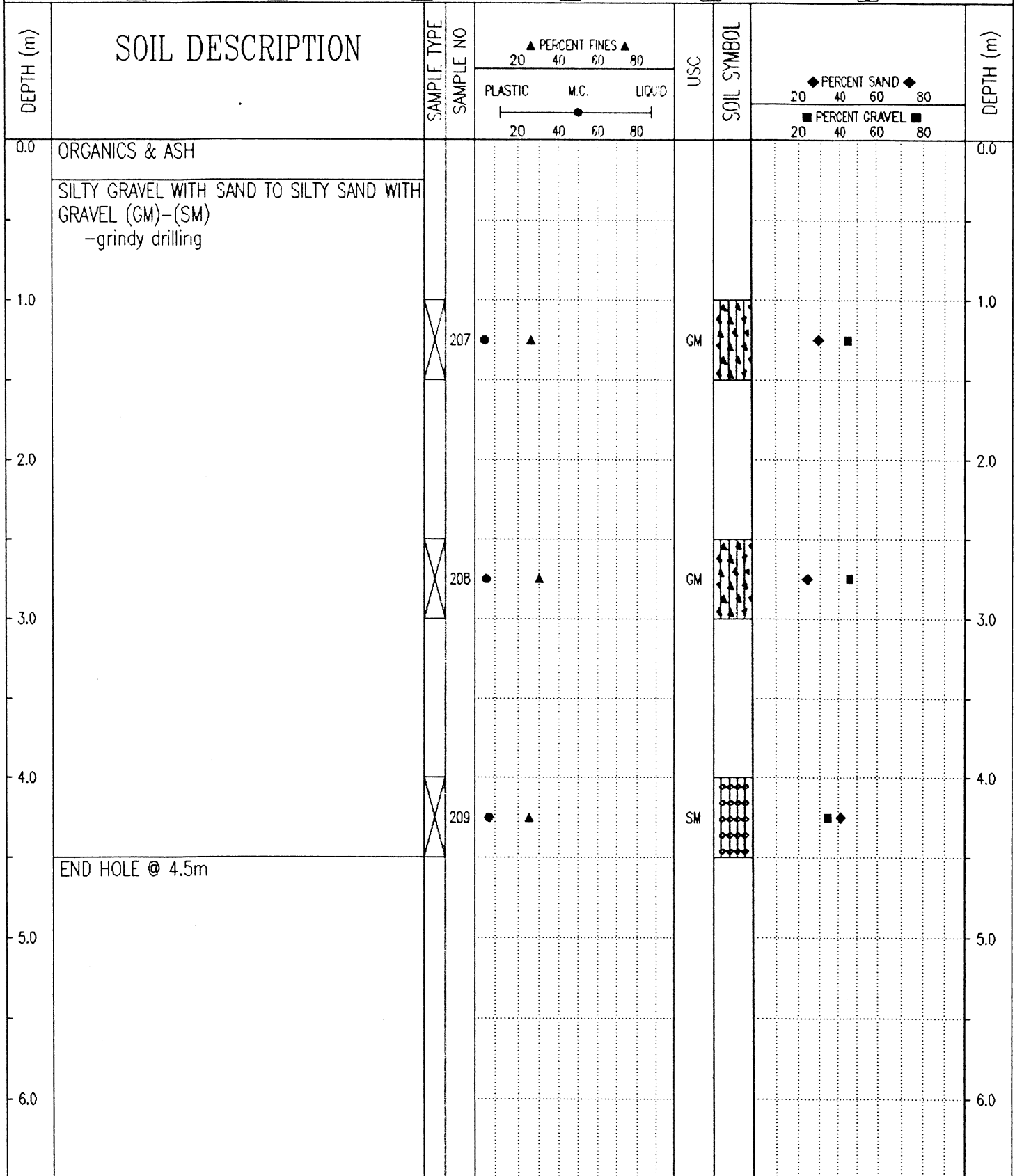
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SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L		LOCATION: 1813+725 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



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SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 511-417
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1813+825 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



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	REVIEWED BY:	COMPLETE: 99/04/27
	Fig. No:	Page 1 of 1

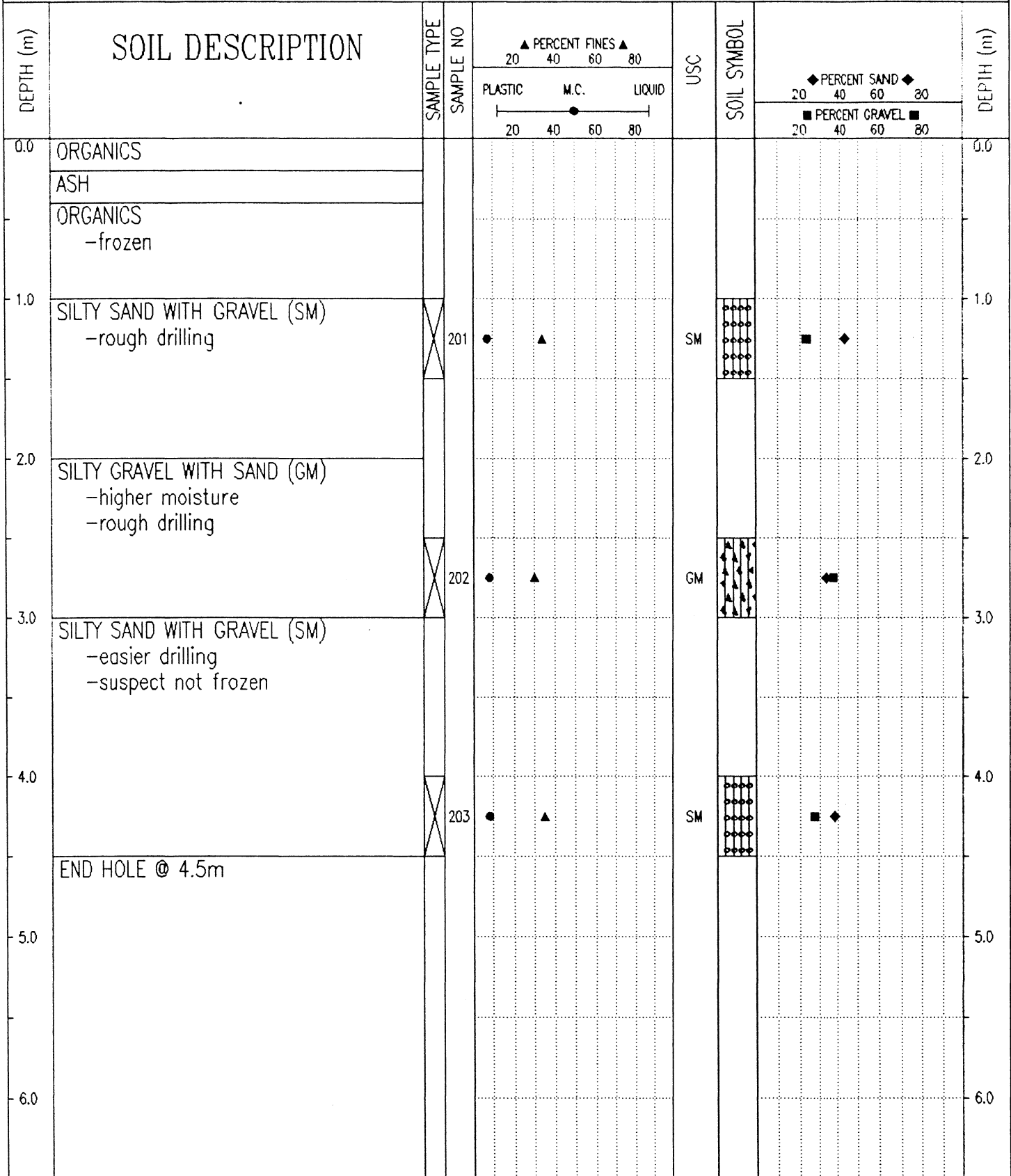
SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 511-416						
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329						
NODWELL B-40L		LOCATION: 1813+875 CENTRELINE		ELEVATION: 0.00 (m)						
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER						
				<input type="checkbox"/> BULK						
				<input type="checkbox"/> TIJBE						
				<input type="checkbox"/> CORE						
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80		USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80		DEPTH (m)
				PLASTIC M.C. LIQUID 20 40 60 80				■ PERCENT GRAVEL ■ 20 40 60 80		
0.0	ORGANIC & ASH									0.0
	SILTY SAND WITH GRAVEL TO SILTY GRAVEL TO SAND (GM) -grindy drilling									
1.0			204	●	▲	SM		■	◆	1.0
2.0										
3.0	-sample #205 has ash contamination from above.		205	●	▲	GM		◆	■	3.0
4.0			206	●	▲	GM		◆	■	4.0
5.0	END HOLE @ 4.5m									
6.0										

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COMPLETION DEPTH: 4.5 m
COMPLETE: 99/04/27

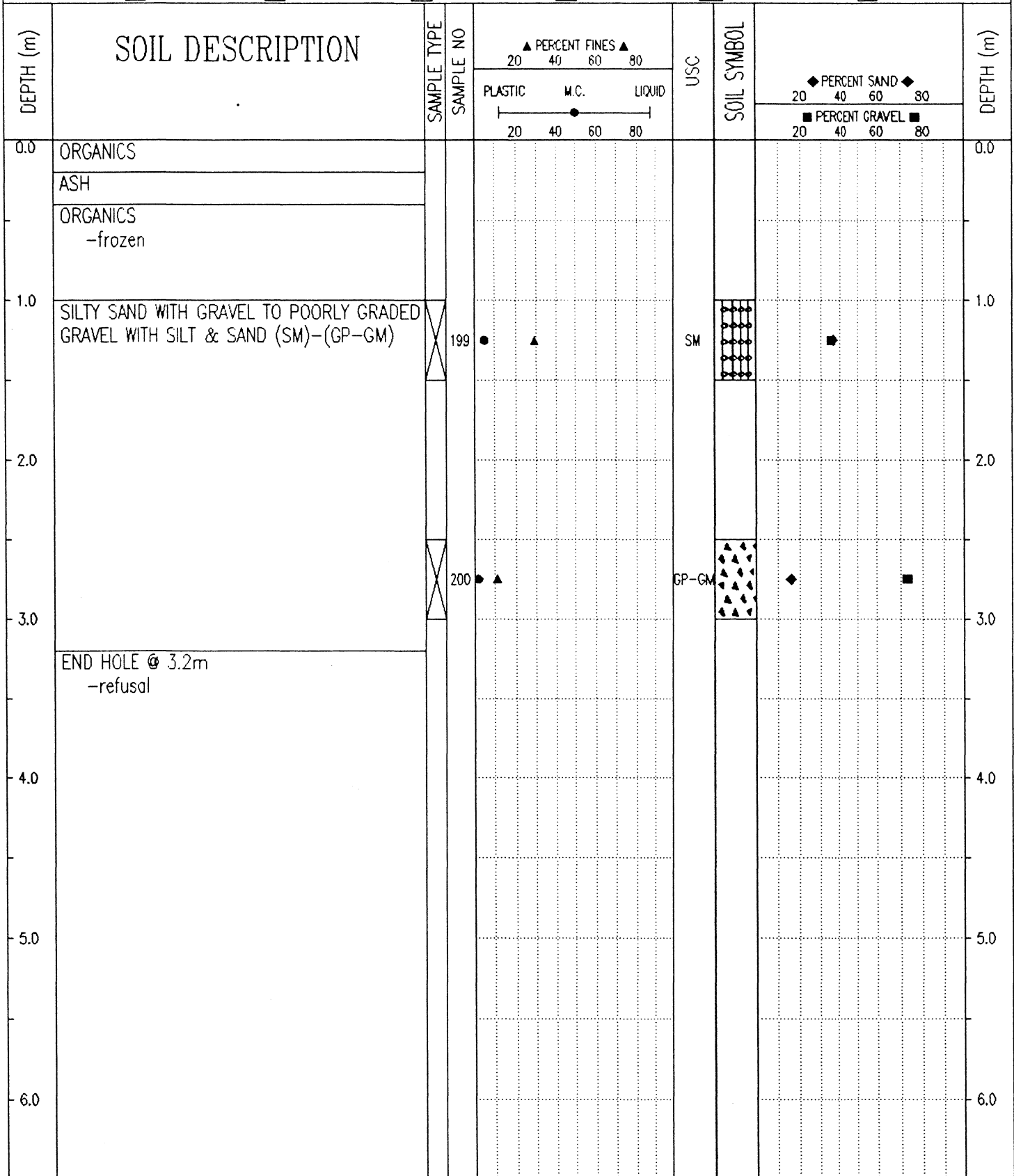
SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 511-415
SHANAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0323
NODWELL B-40L	LOCATION: 1813+975 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



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LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 99/04/27
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 511-414
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1814+075 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



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Fig. No:

COMPLETION DEPTH: 3.2 m
COMPLETE: 99/04/27

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 511-413							
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329							
NODWELL B-40L		LOCATION: 1814+175 CENTRELINE		ELEVATION: 0.00 (m)							
SAMPLE TYPE		RETURN		S.P.T.							
		AUGER		BULK							
		TUBE		CORE							
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND		DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	
0.0	ORGANICS									0.0	
	ASH										
	ORGANIC -frozen										
1.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -drilling starts grinding 1.0m -rough drilling	X	196	●	▲		SM	■	◆	1.0	
2.0										2.0	
3.0		X	197	●	▲		GM	■	◆	3.0	
4.0		X	198	●	▲		GM	■	◆	4.0	
5.0	END HOLE @ 4.5m									5.0	
6.0										6.0	

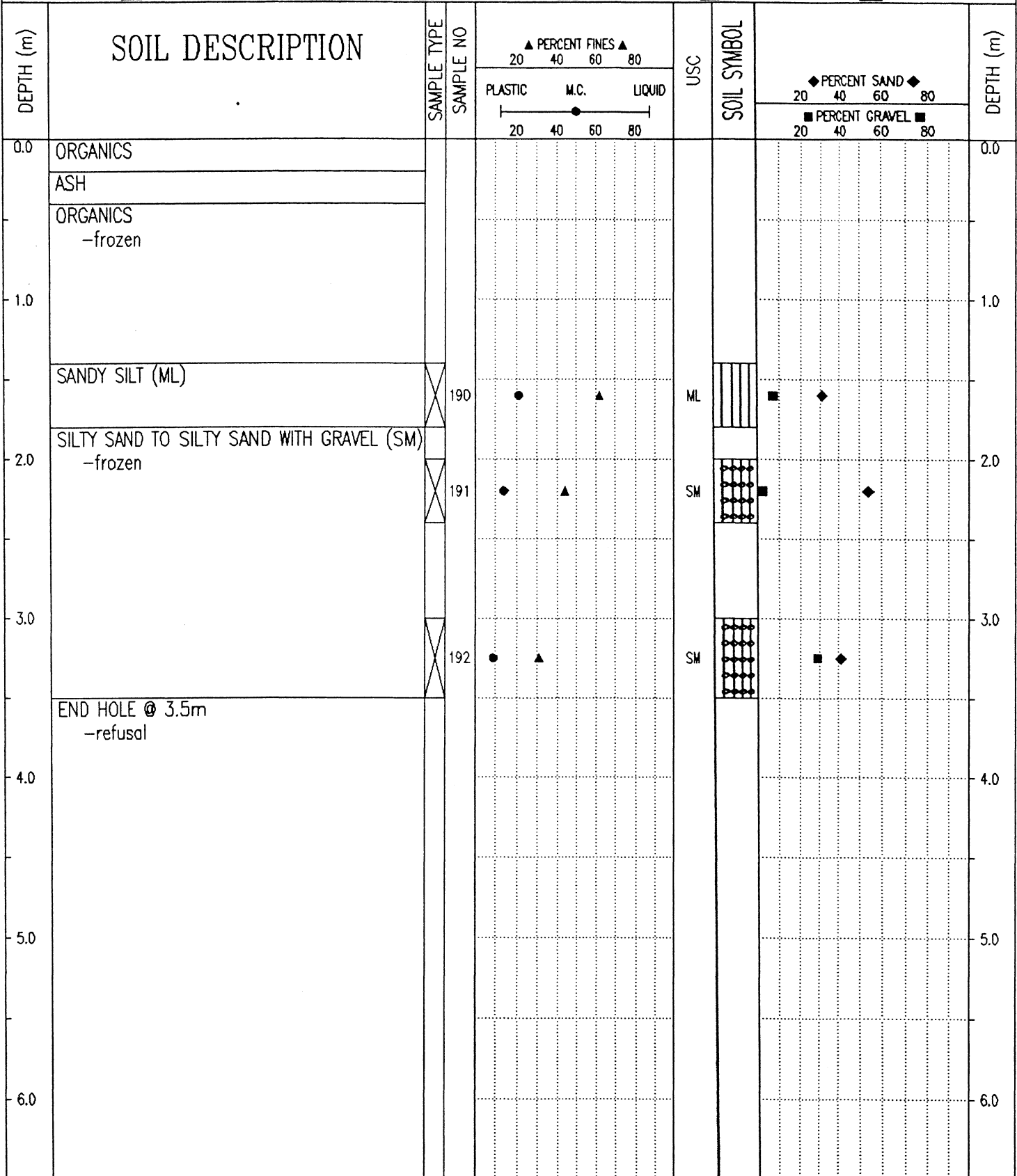
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Fig. No:

COMPLETION DEPTH: 4.5 m
COMPLETE: 99/04/27

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 511-412								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1814+275 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE		SAMPLE TYPE		SAMPLE TYPE								
<input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE												
DEPTH (m)	SOIL DESCRIPTION	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		PERCENT GRAVEL ■		DEPTH (m)
			PLASTIC	M.C.	LIQUID			20	40	60	80	
0.0	ORGANICS										0.0	
	ASH											
	ORGANICS -frozen											
1.0											1.0	
	WELL-GRADED GRAVEL WITH SILT & SAND TO SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GW-GM)-(GM)-(SM) -rough drilling											
2.0		193	▲			GW-GM	▲▲▲▲	◆		■	2.0	
3.0		194	▲			GM	▲▲▲▲	◆		■	3.0	
4.0		195	▲			SM	▲▲▲▲			■	4.0	
	END HOLE @ 4.4m											
5.0											5.0	
6.0											6.0	

SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 511-411
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1814+375 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		

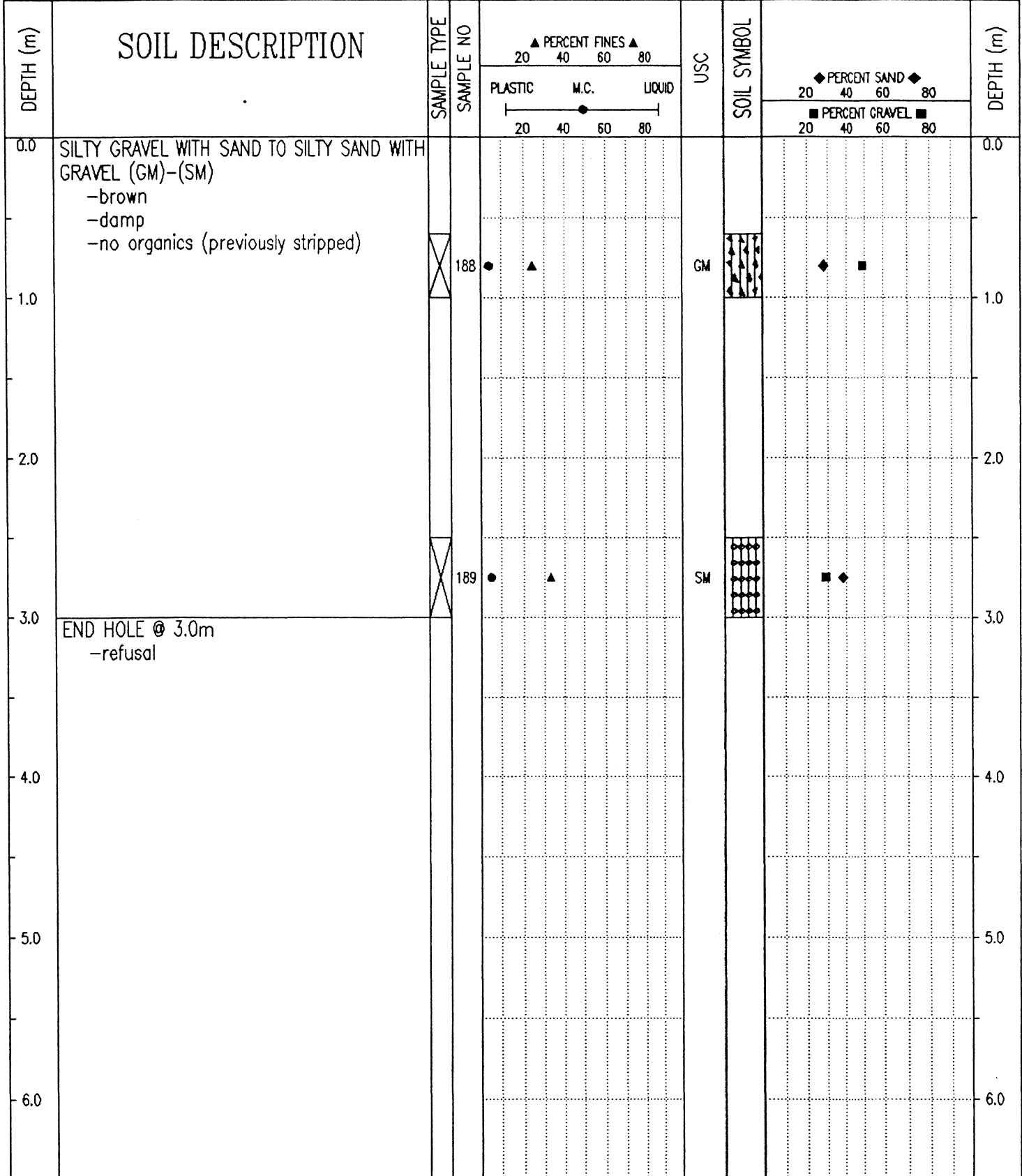


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Fig. No:

COMPLETION DEPTH: 3.5 m
COMPLETE: 99/04/27

SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 511-410
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1814+400 15M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		

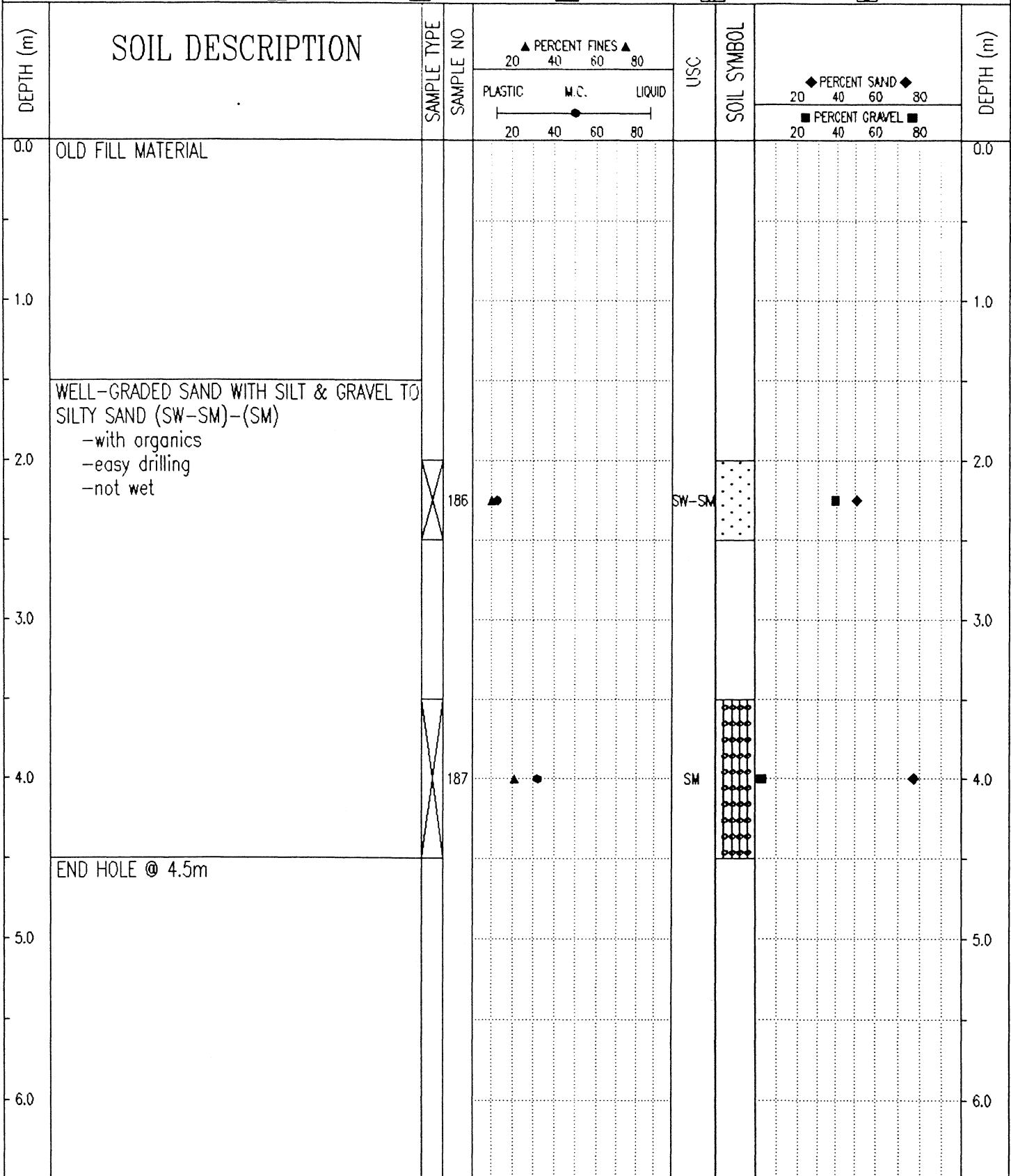


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Fig. No:

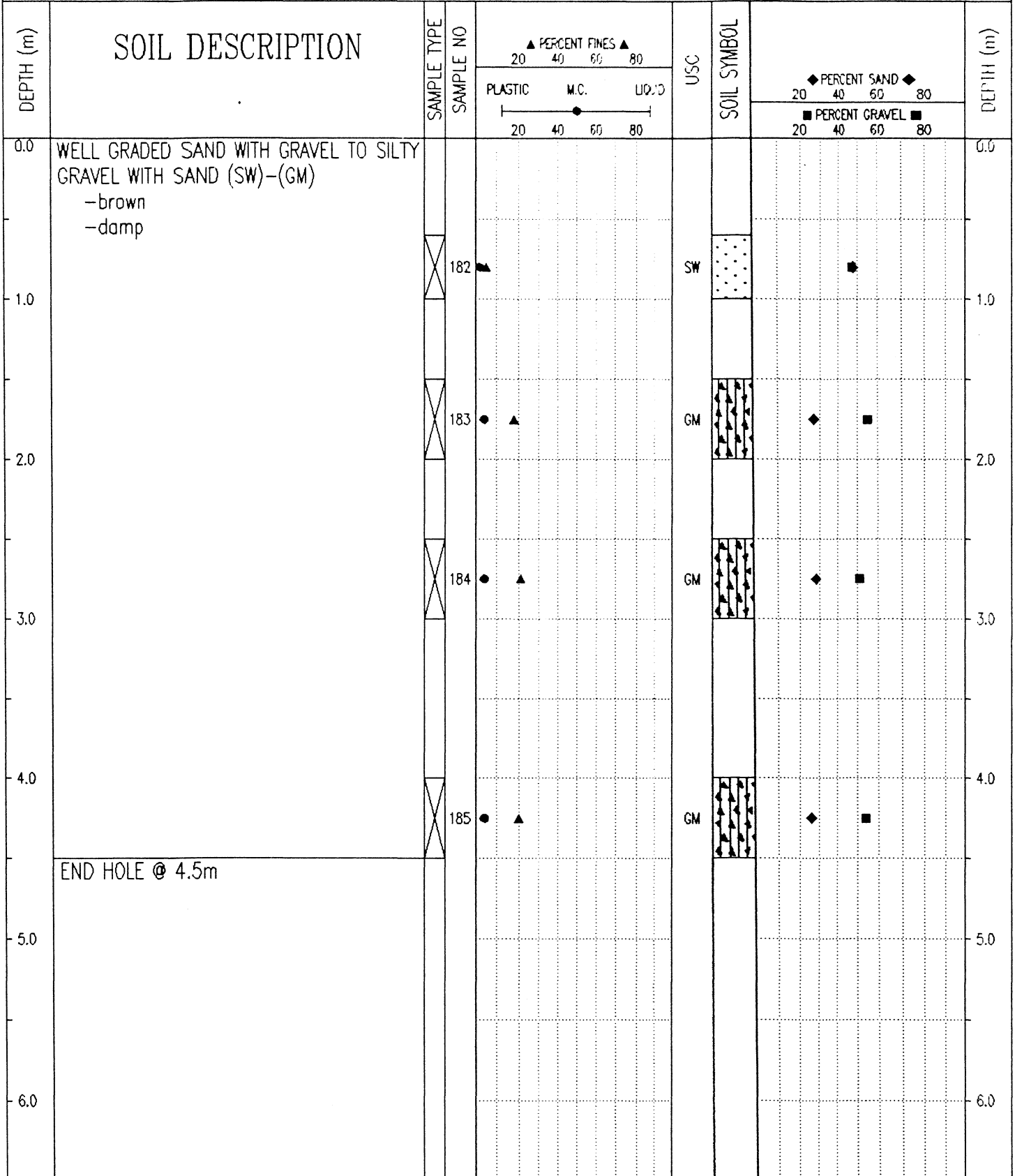
COMPLETION DEPTH: 3.0 m
COMPLETE: 99/04/27

SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 511-409
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1814+550 20M LT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



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SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 511-408
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1814+625 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



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SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 511-407								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1814+750 10M RT		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> 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	
	VOLCANIC ASH											
1.0	ORGANIC -frozen										1.0	
	SILTY SAND WITH GRAVEL (SM) -frozen											
2.0		<input checked="" type="checkbox"/>	179	●	▲		SM	■	◆		2.0	
	SILTY GRAVEL WITH SAND (GM)											
3.0		<input checked="" type="checkbox"/>	180	●	▲		GM	■	◆		3.0	
4.0		<input checked="" type="checkbox"/>	181	●	▲		GM	■	◆		4.0	
5.0	END HOLE @ 4.5m											
6.0											6.0	
Government of Yukon Transportation Engineering				LOGGED BY: G.C.		COMPLETION DEPTH: 4.5 m						
				REVIEWED BY:		COMPLETE: 99/04/26						
				Fig. No:		Page 1 of 1						

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 511-406						
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329						
NODWELL B-40L		LOCATION: 1814+850 5M RT		ELEVATION: 0.00 (m)						
SAMPLE TYPE		<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER	<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE	<input type="checkbox"/> 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	ORGANICS									0.0
	VOLCANIC ASH									
1.0	ORGANICS -frozen									1.0
2.0	SILTY GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	<input checked="" type="checkbox"/>	176	● ▲		GM	▲▲▲▲	◆ ■		2.0
3.0		<input checked="" type="checkbox"/>	177	● ▲		GP-GM	▲▲▲▲	◆ ■		3.0
4.0	SILTY GRAVEL WITH SAND (GM)	<input checked="" type="checkbox"/>	178	● ▲		GM	▲▲▲▲	◆ ■		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: 99/04/26				
				Fig. No:		Page 1 of 1				

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 511-405								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1814+950 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN		<input type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
				<input type="checkbox"/> BULK								
				<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	
0.0	ORGANICS & ASH MIX											0.0
1.0	ORGANICS -frozen											1.0
2.0	-thawed layer of organics 1.4 to 1.8											2.0
3.0	ORGANIC & ICE											3.0
4.0	SILT (ML) -with ice											4.0
4.0	END HOLE @ 4.0m		175				▲◆ ML					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: 99/04/23				
				Fig. No:				Page 1 of 1				

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 511-404						
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329						
NODWELL B-40L		LOCATION: 1815+120 10M RT		ELEVATION: 0.00 (m)						
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE										
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲		USC	SOIL SYMBOL	◆ PERCENT SAND ◆		DEPTH (m)
				PLASTIC	M.C.			LIQUID	20	
0.0	ORGANICS									0.0
	ASH									
1.0	ORGANICS -frozen -trace of visible ice -slow penetration									1.0
2.0										2.0
3.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -frozen (Vx) -grindy drilling	<input checked="" type="checkbox"/>	174	▲	●		GP-GM	◆	■	3.0
	END HOLE @ 3.2m Note: T.H. at culvert installation site.									
4.0										4.0
5.0										5.0
6.0										6.0
Government of Yukon Transportation Engineering				LOGGED BY: G.C. REVIEWED BY:		COMPLETION DEPTH: 3.2 m COMPLETE: 99/04/23		Page 1 of 1		

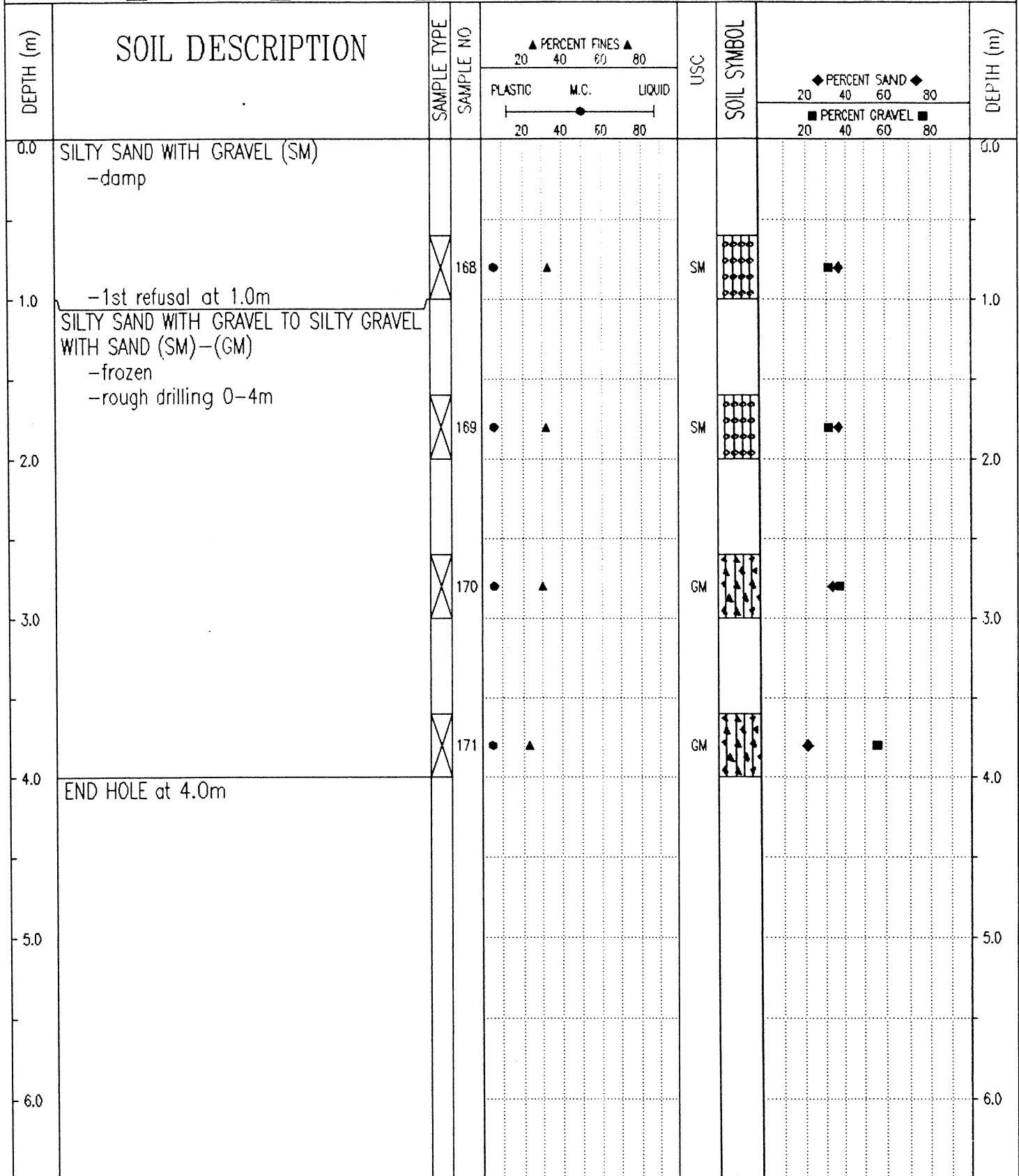
SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 511-403							
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329							
NODWELL B-40L		LOCATION: 1815+200 CENTRELINE		ELEVATION: 0.00 (m)							
SAMPLE TYPE		RETURN		S.P.T.							
		AUGER		BULK							
		TUBE		CORE							
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES		USC	SOIL SYMBOL	PERCENT SAND		PERCENT GRAVEL	DEPTH (m)
				PLASTIC	M.C.			20	40		
0.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM) -brown -damp -rough drilling (fill area)	AUGER	172	20	40	SM	20	40	60	80	0.0
1.0			173	20	40	GM	20	40	60	80	1.0
2.0	END HOLE @ 2.5m -refusal	AUGER									2.0
3.0											3.0
4.0											4.0
5.0											5.0
6.0											6.0

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COMPLETION DEPTH: 2.5 m
COMPLETE: 99/04/23

SUBSURFACE EXPLORATION & TESTING REPORT	ALASKA HWY RECONSTRUCTION	TEST HOLE NO: 511-402
SHAKWAK PROJECT SEG 13B	KM 1799 - 1822 A/H	Project No: 092-202101-0329
NODWELL B-40L	LOCATION: 1815+400 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



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Fig. No:

COMPLETION DEPTH: 4.0 m
COMPLETE: 99/04/23

SUBSURFACE EXPLORATION & TESTING REPORT		ALASKA HWY RECONSTRUCTION		TEST HOLE NO: 511-401								
SHAKWAK PROJECT SEG 13B		KM 1799 - 1822 A/H		Project No: 092-202101-0329								
NODWELL B-40L		LOCATION: 1815+500 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	STRIPPING FROM EXISTING HIGHWAY										0.0	
1.0	FROZEN ORGANICS										1.0	
	ASH											
2.0	SILTY SAND WITH GRAVEL (SM) -frozen -drill starts grinding @ 1.8m	<input checked="" type="checkbox"/>	165	●	▲		SM	■	◆		2.0	
3.0		<input checked="" type="checkbox"/>	166	●	▲		SM	■	◆		3.0	
4.0	END HOLE @ 4.3m										4.0	
5.0											5.0	
6.0											6.0	

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COMPLETION DEPTH: 4.3 m
COMPLETE: 99/04/23

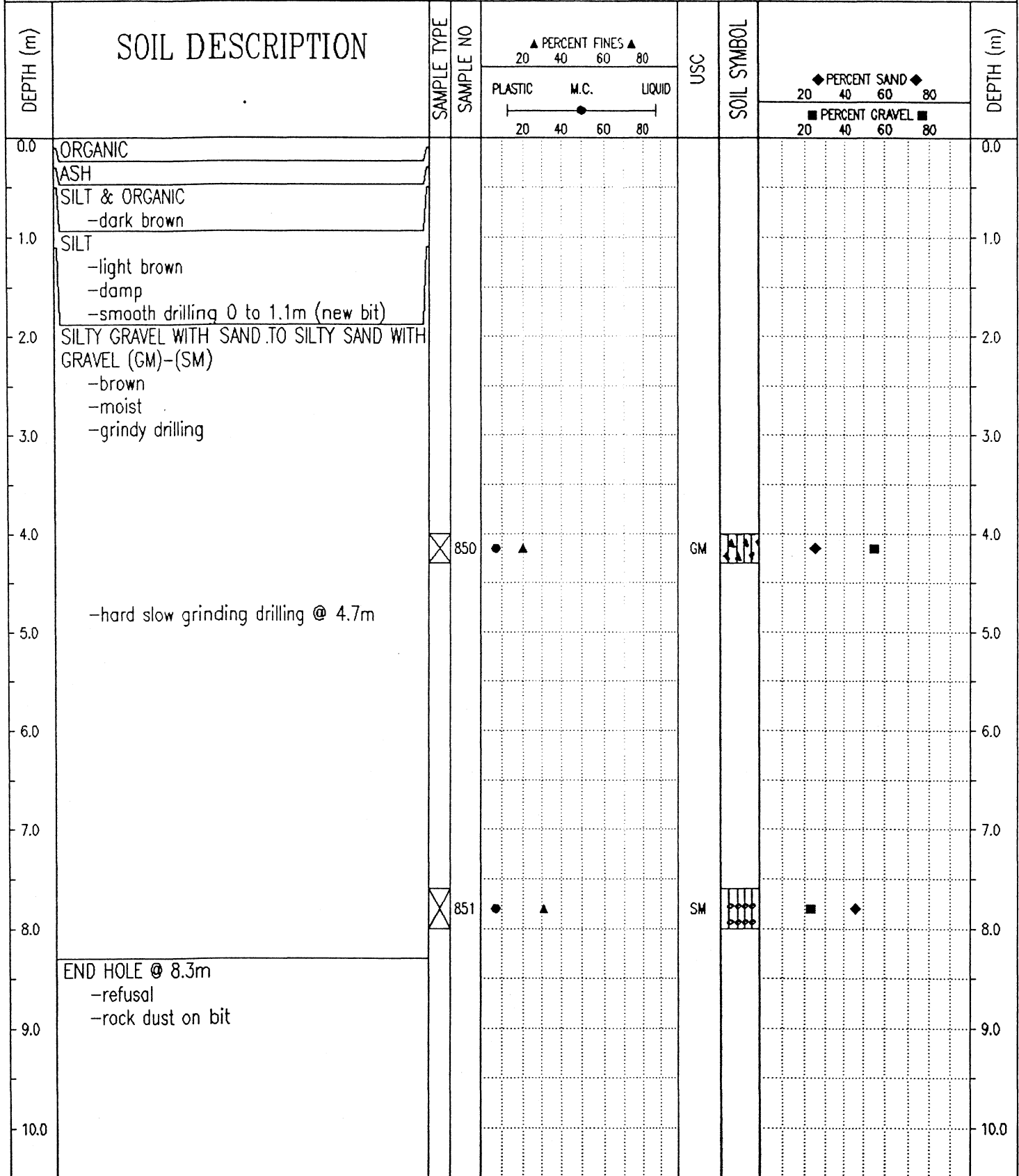
SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-400								
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329								
NODWELL B40-L		LOCATION: 1815+600 CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE		RETURN		S.P.T.								
		AUGER		BULK								
				TUBE								
				CORE								
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT GRAVEL ■			
0.0	ORGANIC ASH										0.0	
1.0	SILTY GRAVEL WITH SAND (GM)										1.0	
	-frozen below 1.6m											
2.0			162				GM				2.0	
3.0			163				GM				3.0	
4.0	END HOLE @ 4.0m -refusal		164				GM				4.0	
5.0											5.0	
6.0											6.0	

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Fig. No:

COMPLETION DEPTH: 4.0 m
COMPLETE: 99/04/23

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 531-834
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
B-40L MOBILE DRILL 6" AUGER	LOCATION: 1815+600 10M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		

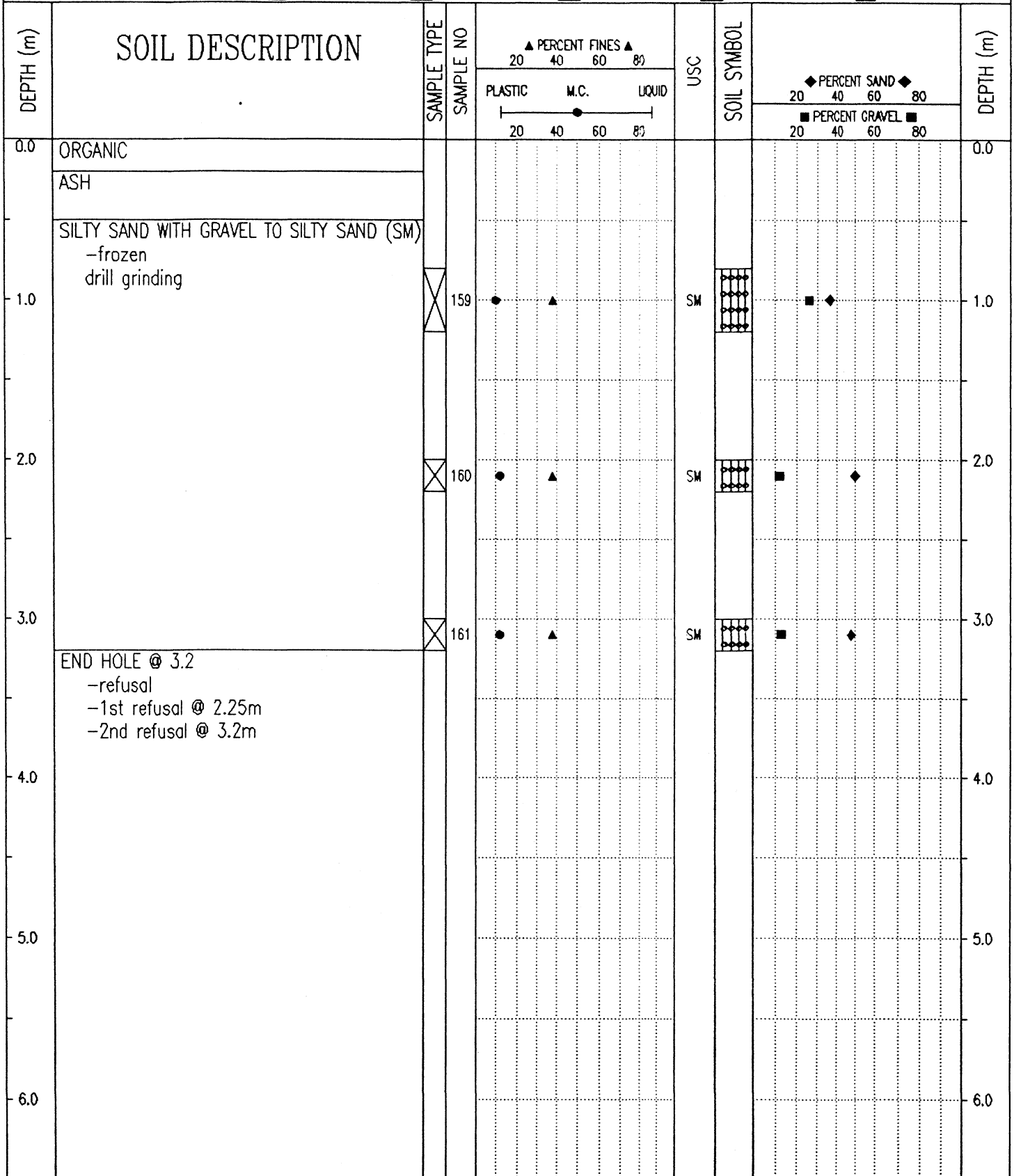


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COMPLETION DEPTH: 8.3 m
COMPLETE: 99/10/20

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-399
ENGINEERING CAPITAL	KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L	LOCATION: 1815+700 CENTRELIN	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE	



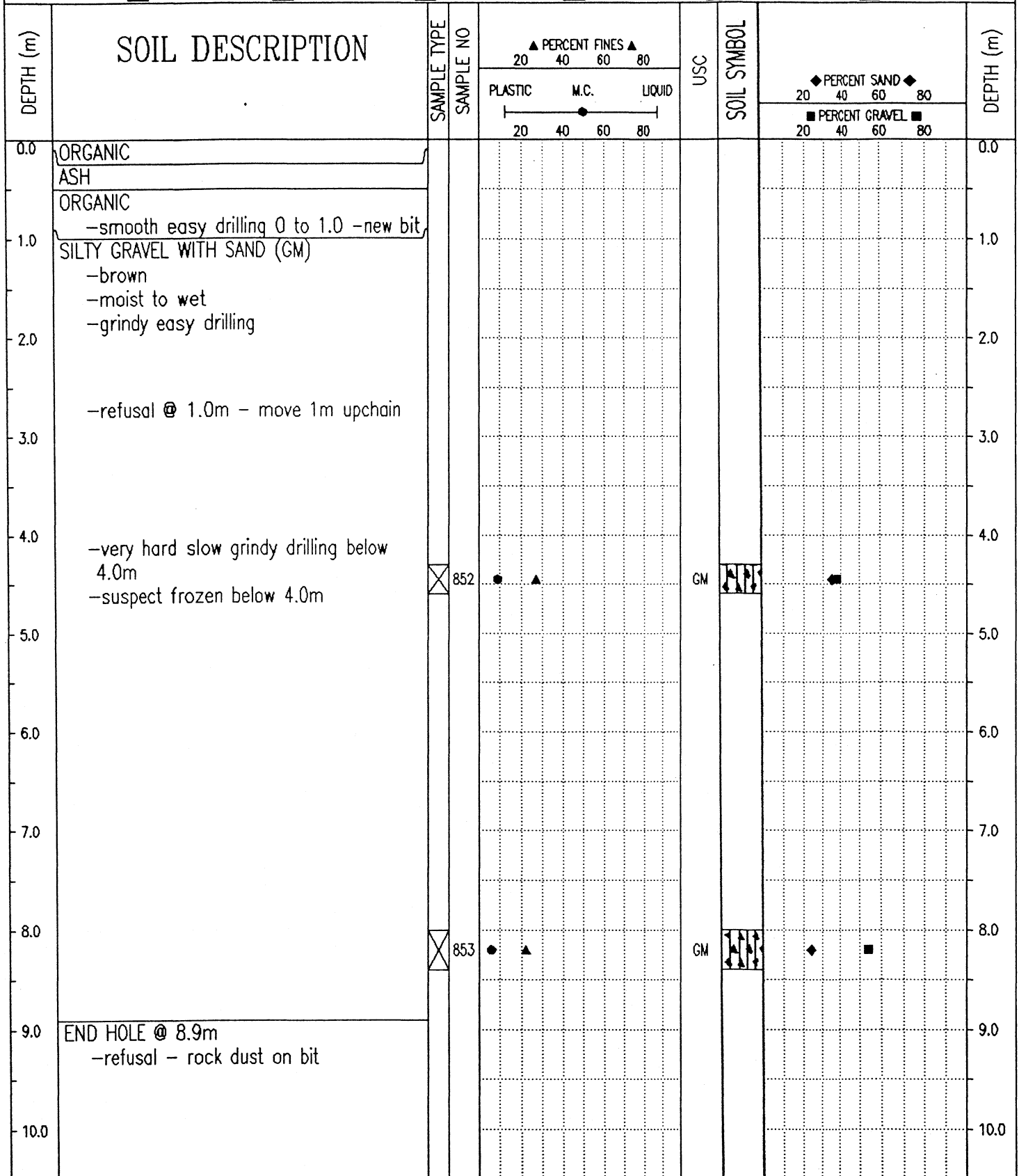
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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.2 m
COMPLETE: 99/04/23

99/11/02 10:25AM

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 531-835
ENGINEERING CAPITAL		KM 1799-1822 A/H	Project No: 092-202101-0329
B-40L MOBILE DRILL 6" AUGER		LOCATION: 1815+700 10M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



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LOGGED BY: D.T	COMPLETION DEPTH: 8.9 m
REVIEWED BY:	COMPLETE: 99/10/20
Fig. No:	Page 1 of 1

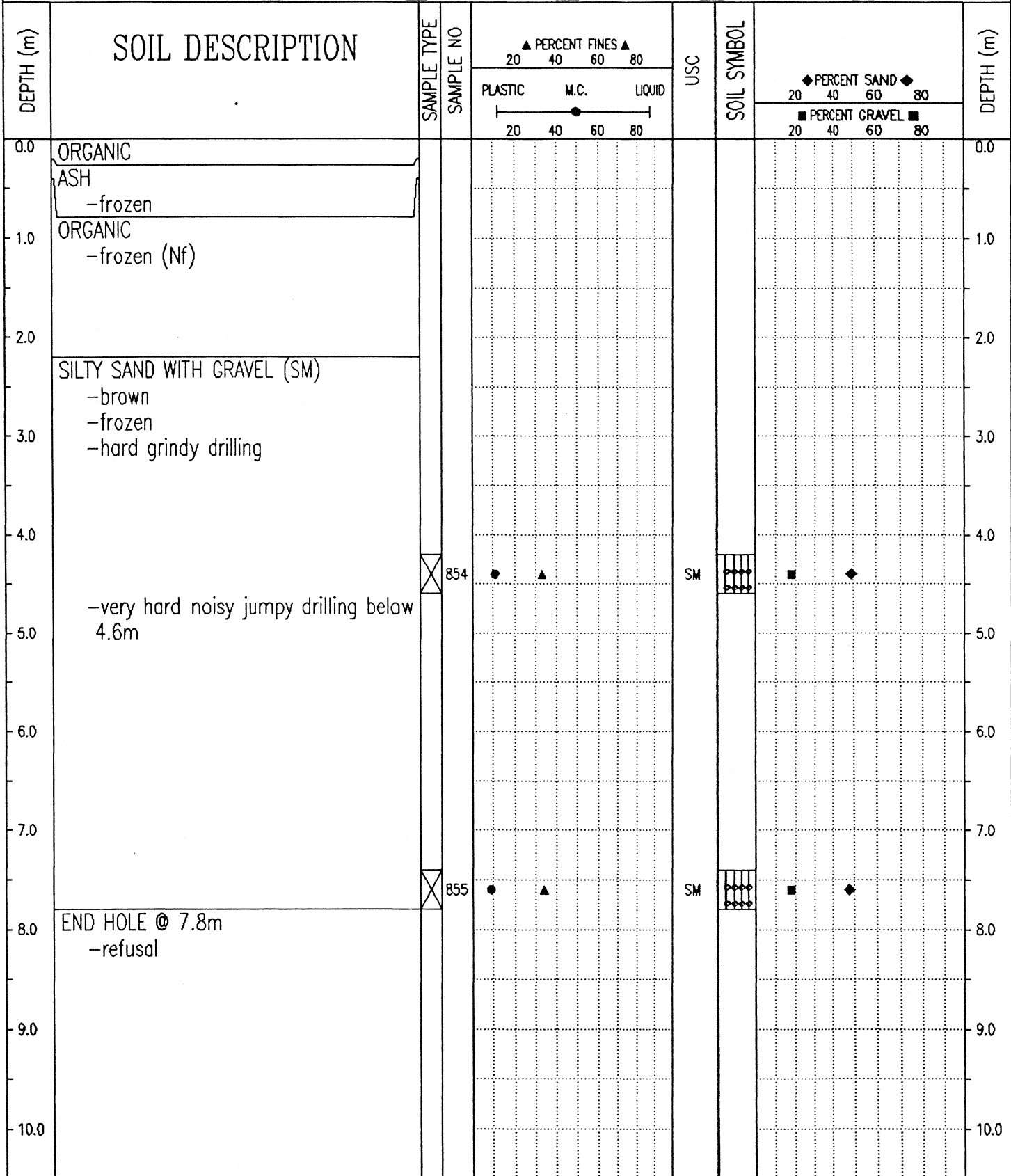
SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-398								
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329								
NODWELL B40-L		LOCATION: 1815+800 CENTRELIN		ELEVATION: 0.00 (m)								
SAMPLE TYPE		RETURN		S.P.T.								
		AUGER		BULK								
		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	ORGANIC										0.0	
	VOLCANIC ASH											
1.0											1.0	
	ORGANICS -frozen (Vx)											
2.0	SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM)-(SM) -frozen -drill starts grinding @ 2.0m	X	156	●	▲		GM	▲▲▲	◆	■	2.0	
3.0		X	157	●	▲		SM	■	◆	■	3.0	
4.0		X	158	●	▲		SM	■	◆	■	4.0	
5.0	END HOLE @ 4.2m -refusal										5.0	
6.0											6.0	

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Fig. No:

COMPLETION DEPTH: 4.2 m
COMPLETE: 99/04/23

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 531-836
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
B-40L MOBILE DRILL 6" AUGER	LOCATION: 1815+800 10M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



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	Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-397								
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-22101-0329								
NODWELL B40-L		LOCATION: 1815+900 CENTRELINE		ELEVATION: 0.00 (~)								
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
				<input type="checkbox"/> BULK								
				<input type="checkbox"/> TUBE								
				<input type="checkbox"/> CORE								
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	50	
0.0	ORGANIC VOLCANIC ASH											0.0
1.0	ORGANIC -frozen no visible ice											1.0
2.0	SILTY GRAVEL WITH SAND (GM) -frozen	<input checked="" type="checkbox"/>	154				GM		◆	■		2.0
2.5		<input checked="" type="checkbox"/>	155				GM		◆	■		2.5
3.0	END HOLE @ 2.5m -refusal -1st refusal @ 2.5m -2nd refusal @ 1.8m -3RD REFUSAL @ 2.5M											3.0
4.0												4.0
5.0												5.0
6.0												6.0

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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 2.5 m
COMPLETE: 99/04/23

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 531-837						
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329						
B-40L MOBILE DRILL 6" AUGER		LOCATION: 1815+900		ELEVATION: 0.00 (m)						
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE										
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80		USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80		DEPTH (m)
				PLASTIC M.C. LIQUID 20 40 60 80				■ PERCENT GRAVEL ■ 20 40 60 80		
0.0	ORGANIC ASH -frozen @ .3m									0.0
1.0	ORGANIC -frozen -first refusal @ 1.0m -new bit & shank - old one sheared off -hard grindy drilling (GRAVEL?)									1.0
2.0										2.0
3.0	END HOLE @ 2.9m -refusals @ 2.3m & 2.6m -moved 2m upchain - lost bit									3.0
4.0										4.0
5.0										5.0
6.0										6.0
Government of Yukon Transportation Engineering				LOGGED BY: D.T. REVIEWED BY: Fig. No:		COMPLETION DEPTH: 2.9 m COMPLETE: 99/10/20		Page 1 of 1		

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-396								
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329								
NODWELL B40-L		LOCATION: 1816+000 15M RT CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	ORGANIC VOLCANIC ASH										0.0	
1.0	SILTY SAND WITH GRAVEL (SM) -frozen -some ice -grinding rough drilling	<input checked="" type="checkbox"/>	152	● ▲			SM	■ ◆			1.0	
2.0											2.0	
3.0		<input checked="" type="checkbox"/>	153	● ▲			SM	■ ◆			3.0	
4.0	END HOLE @ 3.8M -refusal -refusals @ 1816+000 2.0m @ 1816+003 1.8M @ 1816+006 3.8m										4.0	
5.0											5.0	
6.0											6.0	
Government of Yukon Transportation Engineering				LOGGED BY: G.C.		COMPLETION DEPTH: 3.8 m						
				REVIEWED BY:		COMPLETE: 99/04/22						
				Fig. No:		Page 1 of 1						

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 531-838						
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329						
B-40L MOBILE DRILL 6" AUGER		LOCATION: 1816+000 25M RT		ELEVATION: 0.00 (m)						
SAMPLE TYPE		<input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE								
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80		USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 ■ PERCENT GRAVEL ■ 20 40 60 80		DEPTH (m)
0.0	ORGANIC ASH -frozen @ .3m									0.0
1.0	ORGANIC -frozen (Nf)									1.0
2.0	SILTY GRAVEL WITH SAND (GM) -brown -frozen (Nf) -maximum 75mm material augered up -hard slow grindy drilling									2.0
3.0										3.0
4.0		<input checked="" type="checkbox"/>	856	◆ ▲		GM	▲ ▲ ▲ ▲	◆ ■		4.0
5.0										5.0
6.0										6.0
7.0	SILT (ML) -brown -frozen -ice rich - ranging from (Vx) to ice & silt -smooth easy drilling									7.0
8.0										8.0
9.0		<input checked="" type="checkbox"/>	857	● ▲		ML	▨ ▨ ▨ ▨	◆ ◆		9.0
10.0	END HOLE @ 9.9M									10.0
Government of Yukon Transportation Engineering				LOGGED BY: D.T		COMPLETION DEPTH: 9.9 m				
				REVIEWED BY:		COMPLETE: 99/10/20				
				Fig. No:		Page 1 of 1				

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-395								
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329								
NODWELL B40-L		LOCATION: 1816+150 CENTRELIN		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	
0.0	ORGANIC											0.0
	VOLCANIC ASH - SILT -dry											
1.0	MIX OF ASH SILT & ROCKS -suspect ditching material											1.0
2.0	SILT (ML) WITH ICE -frozen -estimate 50/50 ice with silt @ 2.0m											2.0
3.0	-less ice (Vx) below 3.0m		150				▲	ML				3.0
4.0			151				▲	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: 99/04/22				
				Fig. No:				Page 1 of 1				

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 531-840
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
B-40L MOBILE DRILL 6" AUGER	LOCATION: 1816+225 43M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> 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		
0.0	ICE H2O											0.0	
0.0 - 1.0	SANDY SILTY GRAVEL -brown -free water											1.0	
1.0 - 2.0												2.0	
2.0 - 3.0	SANDY GRAVELLY SILT -dark brown -wet to saturated											3.0	
3.0 - 4.0												4.0	
4.0 - 5.0												5.0	
5.0 - 6.0	SANDY SILTY GRAVEL -suspect frozen -very hard grindy drilling -no material recovered											5.0	
6.0 - 10.0	END HOLE @ 5.9m											6.0	
												7.0	
												8.0	
												9.0	
												10.0	

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 531-839
ENGINEERING CAPITAL		KM 1799-1822 A/H	Project No: 092-202101-0329
B-40L MOBILE DRILL 6" AUGER		LOCATION: 1816+230 10M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> 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	
0.0	ICE H2O											0.0
0.0 - 3.0	SILTY SANDY GRAVEL -dark brown -free water -no sample											1.0
3.0 - 5.0	SANDY SILT -some gravel -dark brown -free water											3.0
5.0 - 5.9	SANDY SILT -light grey -saturated											5.0
5.9 - 10.0	END HOLE @ 5.9m Note: Test hole in creek bed											6.0
												7.0
												8.0
												9.0
												10.0

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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 531-841
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
B-40L MOBILE DRILL 6" AUGER	LOCATION: 1816+230 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 ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT GRAVEL ■			
0.0	ORGANIC SANDY SILTY GRAVEL WITH ORGANIC										0.0	
1.0	-dark brown										1.0	
	-wet .2 to 1.7m											
2.0	-saturated 1.7 to 3.1m										2.0	
3.0											3.0	
4.0	-free water 3.1 to 4.5m										4.0	
5.0	END HOLE @ 4.5m										5.0	
6.0											6.0	
7.0											7.0	
8.0											8.0	
9.0											9.0	
10.0											10.0	
11.0											11.0	
12.0											12.0	
13.0											13.0	
14.0											14.0	
15.0											15.0	
16.0											16.0	

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-394
ENGINEERING CAPITAL		KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L		LOCATION: 1816+250 5M RT CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> 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	OLD FILL MATERIAL -grinding										0.0	
	ORGANICS & WOOD -thawed											
1.0											1.0	
	SATUATED ORGANICS -with a few rounded cobbles -not frozen (slurry)											
2.0											2.0	
3.0			149A	▲	●		GM	◆	■		3.0	
4.0											4.0	
5.0	END HOLE @ 4.5 Note: test hole is 10m upchain of existing culvert										5.0	
6.0											6.0	

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Fig. No:

COMPLETION DEPTH: 4.5 m
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-393					
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329					
NODWELL B40-L		LOCATION: 1816+300 15M RT CENTRELINE		ELEVATION: 0.00 (m)					
SAMPLE TYPE		S.P.T.		AUGER					
RETURN		BULK		TUBE					
CORE									
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC ASH							0.0	
1.0	SANDY SILT WITH GRAVEL (ML) -with ice		146	●	▲		ML	1.0	
2.0	SANDY SILT (ML) -less ice (Vx)		147	●	▲		ML	2.0	
3.0	ORGANIC & ICE (Vx) -with wood (trees)		148		▲	●	ML	3.0	
4.0	SILT WITH SAND (ML) -frozen		149	●	▲		ML	4.0	
5.0	END HOLE @ 4.5m							5.0	
6.0								6.0	

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Fig. No:

COMPLETION DEPTH: 4.5 m
COMPLETE: 99/04/22

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-392									
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329									
NODWELL B40-L		LOCATION: 1816+500 10M RT CENTRELINE		ELEVATION: 0.00 (m)									
SAMPLE TYPE		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	ORGANIC MIX OF SILT, ORGANIC & ASH											0.0	
1.0												1.0	
2.0	-with ice (Vx) below 1.5m											2.0	
3.0			143				ML					3.0	
4.0	SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND (SM)-(GM)		144				SM					4.0	
5.0			145				GM					5.0	
6.0	END HOLE @ 5.0m											6.0	

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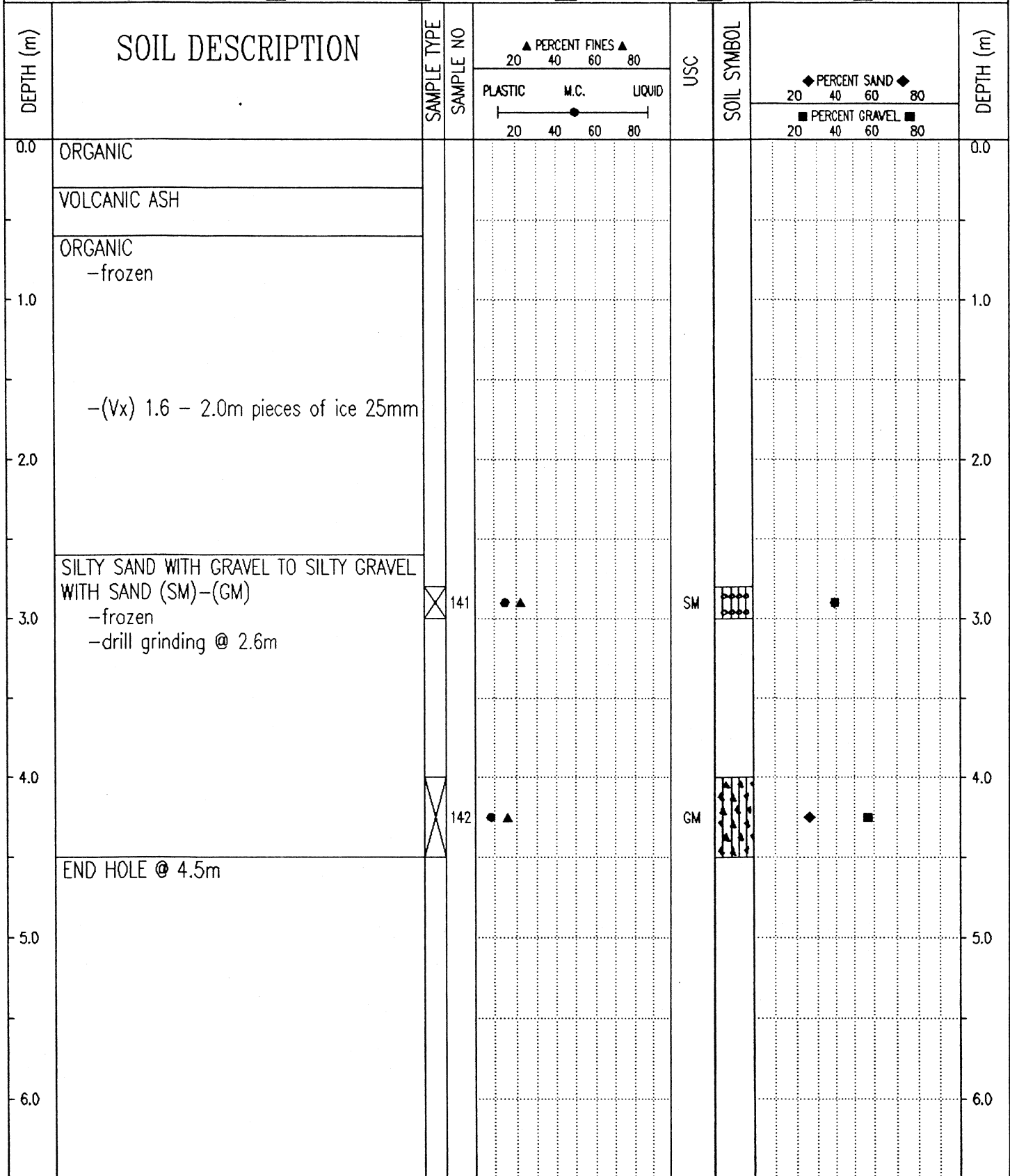
Fig. No:

COMPLETION DEPTH: 5.0 m

COMPLETE: 99/04/22

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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-391
ENGINEERING CAPITAL	KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L	LOCATION: 1816+600 10M RT CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
	<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
		<input type="checkbox"/> CORE

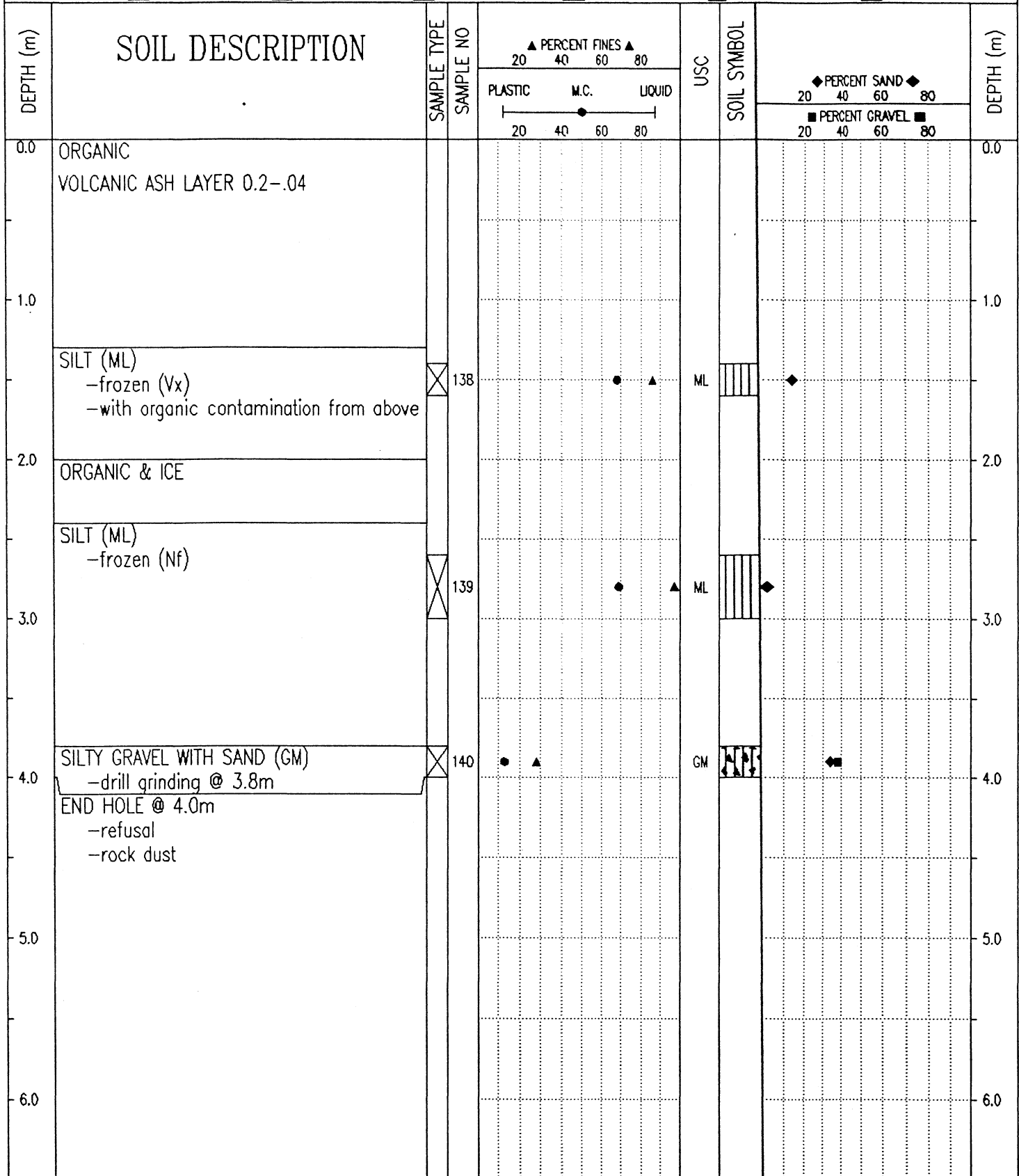


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Fig. No:

COMPLETION DEPTH: 4.5 m
COMPLETE: 99/04/22

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-390
ENGINEERING CAPITAL	KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L	LOCATION: 1816+725 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE	

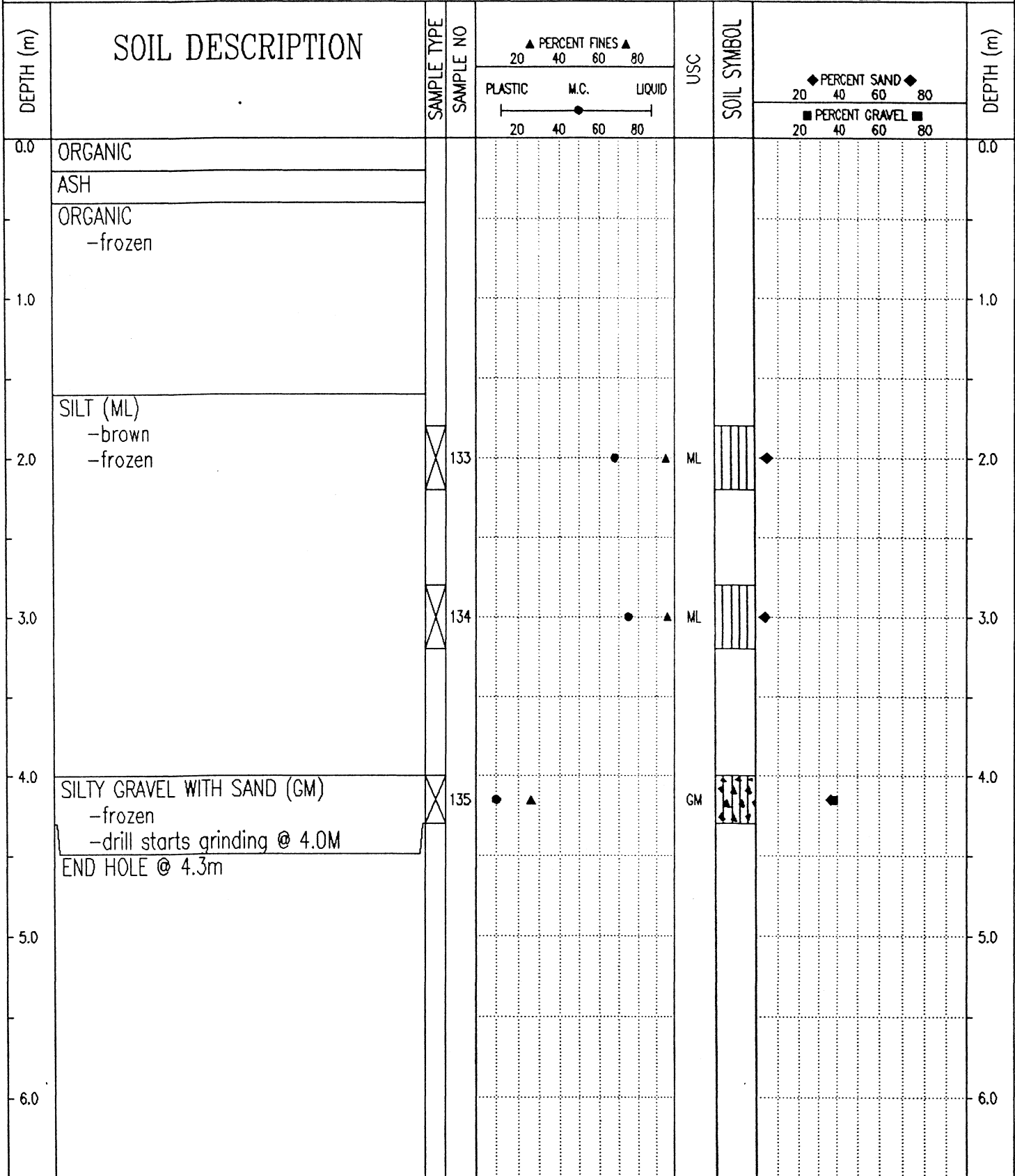


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REVIEWED BY:	COMPLETE: 99/04/22
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-389									
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329									
NODWELL B40-L		LOCATION: 1816+800 15M RT CENTRELINE		ELEVATION: 0.00 (m)									
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER									
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE									
				<input type="checkbox"/> 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	
	ASH												
1.0	ORGANIC -frozen below .6m											1.0	
2.0	-visible ice below 2.0m											2.0	
3.0	SILTY SAND WITH GRAVEL (SM) -frozen (Vx) -drill starts grinding @ 2.8m	<input checked="" type="checkbox"/>	136	●	▲		SM	■◆				3.0	
4.0	END HOLE @ 4.0m	<input checked="" type="checkbox"/>	137	●	▲		SM	■◆				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: 99/04/22					
				Fig. No:				Page 1 of 1					

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-388
ENGINEERING CAPITAL		KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L		LOCATION: 1816+900 25M RT CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.3 m
	REVIEWED BY:	COMPLETE: 99/04/22
	Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT SHAKWAK PROJECT SEG 13 TEST HOLE NO: 509-387

ENGINEERING CAPITAL KM 1820-1815 A/H Project No: 092-202101-0329

NODWELL B40-L LOCATION: 1816+950 15M RT CENTRELINE ELEVATION: 0.00 (m)

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

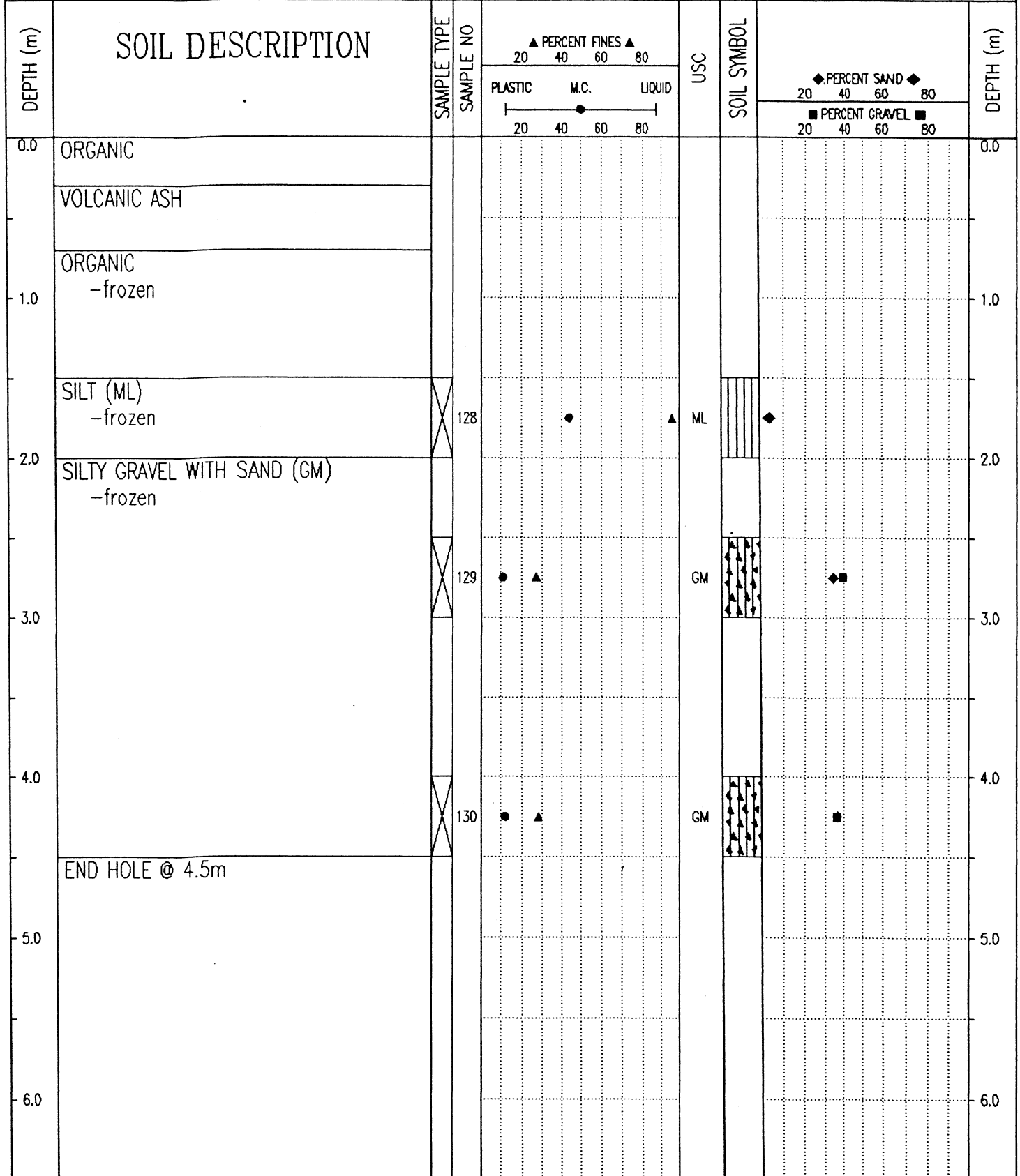
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40	60	
0.0	ORGANIC											0.0
	VOLCANIC ASH											
1.0	ORGANIC -frozen (Nf)											1.0
2.0												2.0
3.0	SILT (ML) -with organic -frozen	<input checked="" type="checkbox"/>	131				▲ ML	◆				3.0
4.0		<input checked="" type="checkbox"/>	132				● ▲ ML	◆				4.0
5.0	END HOLE @ 4.6m											5.0
6.0												6.0

Government of Yukon
Transportation Engineering

LOGGED BY: G.C.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 4.0 m
COMPLETE: 99/04/22

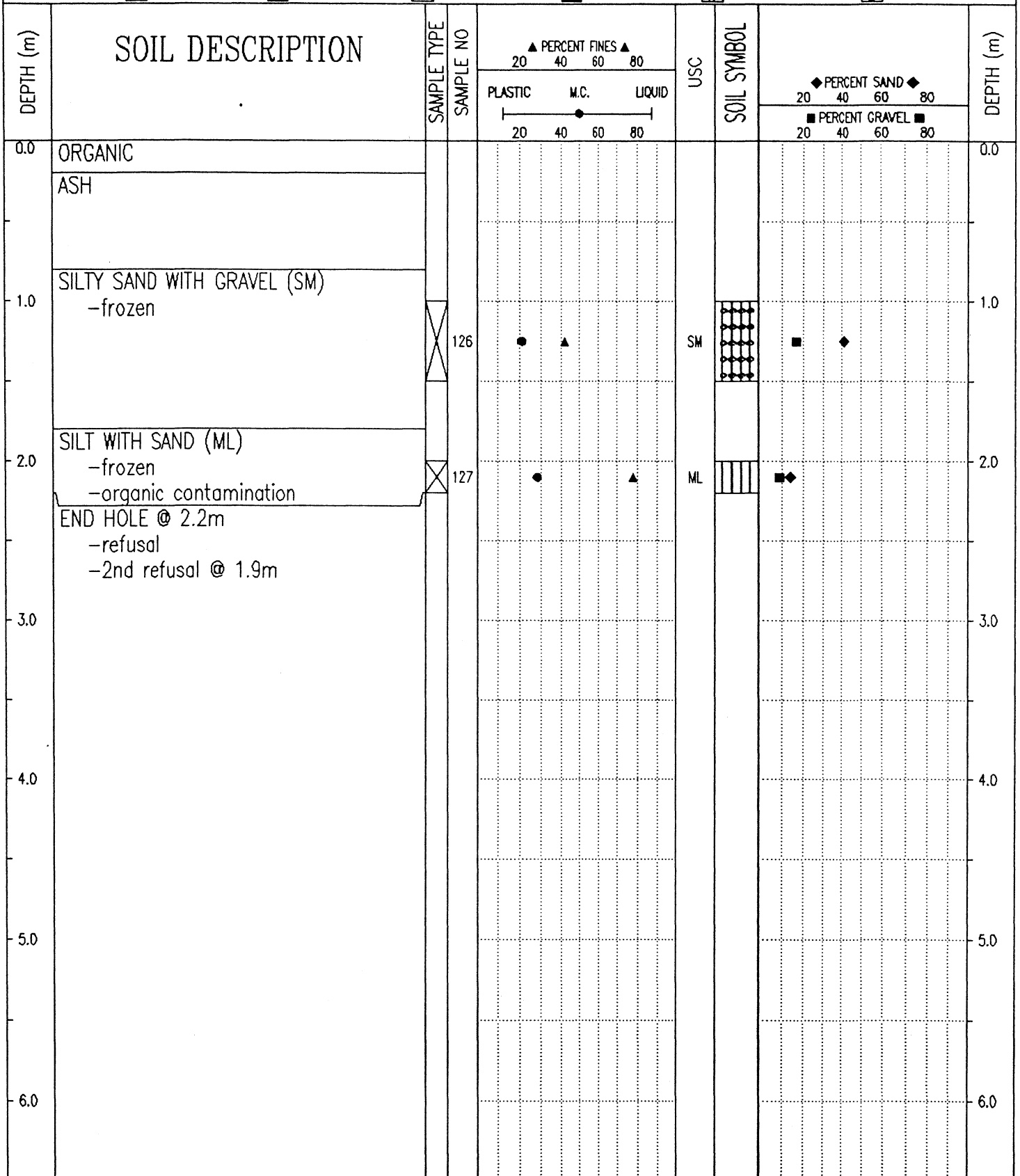
SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-386
ENGINEERING CAPITAL		KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L		LOCATION: 1817+050 25M RT CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



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LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 99/04/22
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-385
ENGINEERING CAPITAL		KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L		LOCATION: 1817+150 30M RT CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



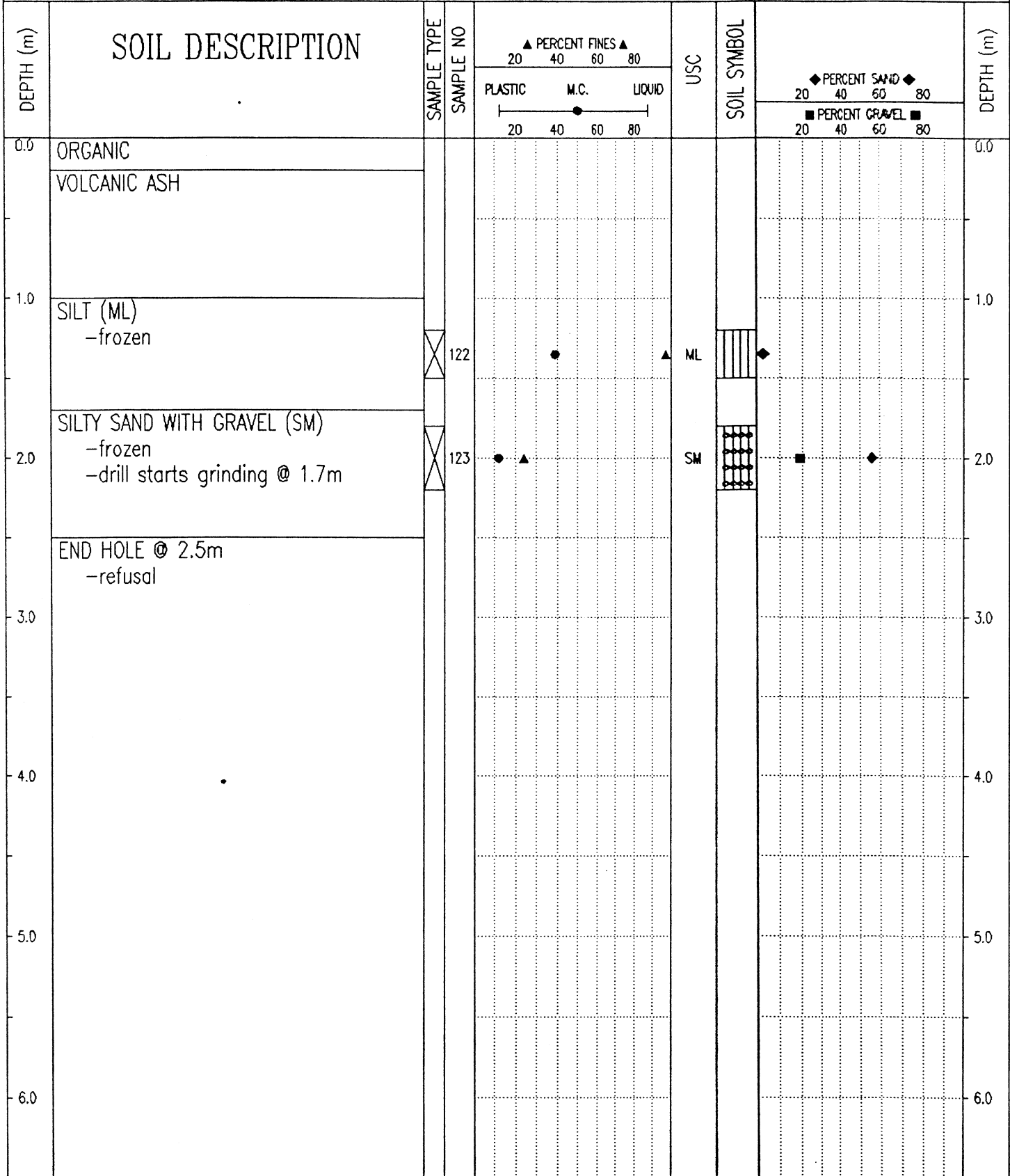
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LOGGED BY: G.C.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 2.2 m
COMPLETE: 99/04/21

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-384						
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329						
NODWELL B40-L		LOCATION: 1817+175 25M RT CENTRELINE		ELEVATION: 0.00 (m)						
SAMPLE TYPE		<input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE								
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲		USC	SOIL SYMBOL	◆ PERCENT SAND ◆		DEPTH (m)
				PLASTIC	M.C.			LIQUID	20	
0.0	ORGANIC VOLCANIC ASH									0.0
1.0	ORGANIC -frozen with small ice lenses									1.0
2.0	SILTY GRAVEL WITH SAND TO SILTY SAND (GM)-(SM) -frozen -drill starts grinding @ 1.5m -rough drilling	<input checked="" type="checkbox"/>	124	● ▲		GM	▲ ◆ ■			2.0
3.0	END HOLE @ 3.0m -refusal	<input checked="" type="checkbox"/>	125	● ▲		SM	■ ◆			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: 99/04/21		Page 1 of 1		

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-383
ENGINEERING CAPITAL	KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L	LOCATION: 1817+275 30M RT CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE	



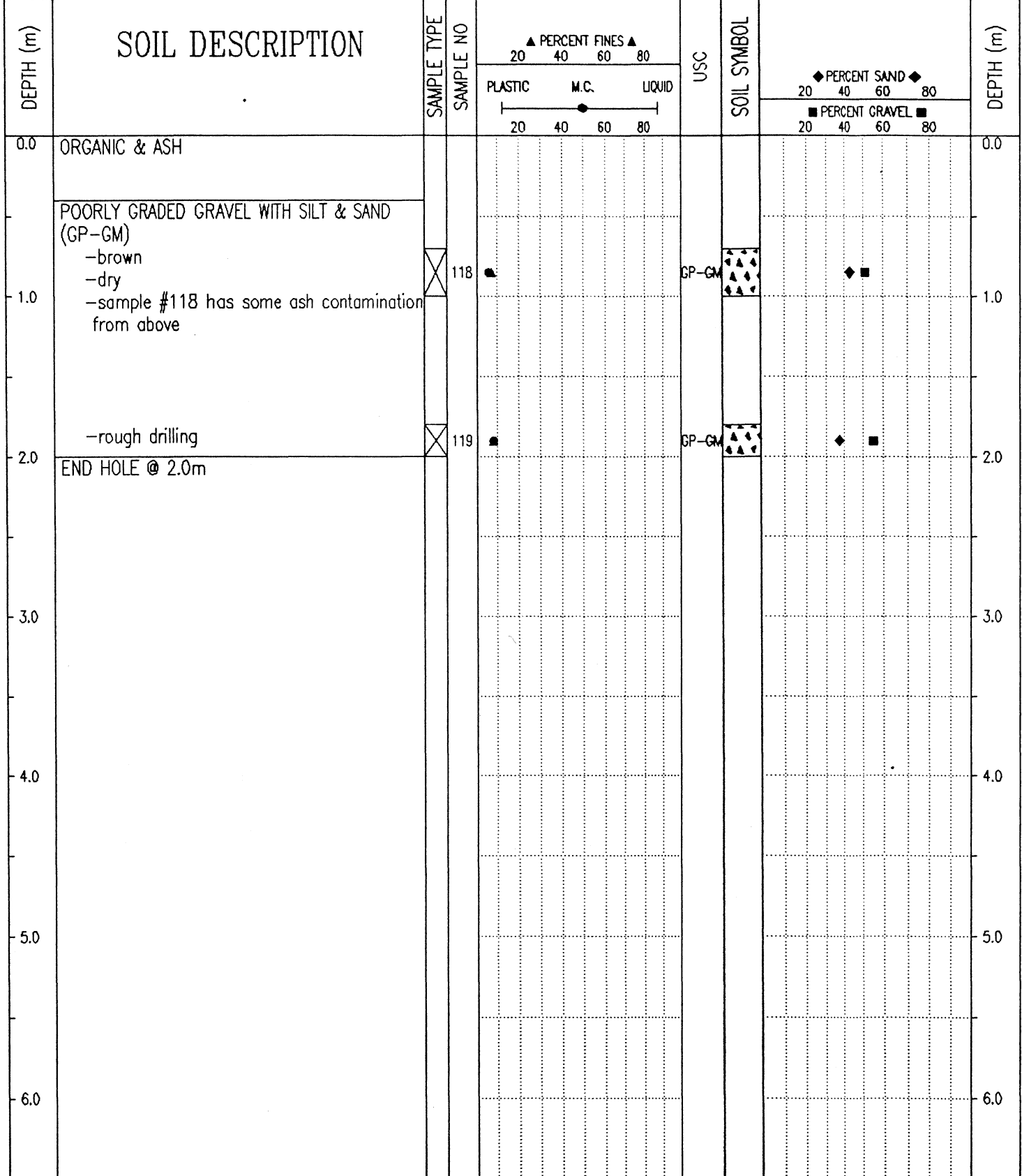
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LOGGED BY: G.C.	COMPLETION DEPTH: 2.5 m
REVIEWED BY:	COMPLETE: 99/04/21
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-382								
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329								
NODWELL B40-L		LOCATION: 1817+365 40M RT CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> 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	ORGANIC & ASH & GRAVEL (MIX)										0.0	
1.0	SILTY GRAVEL WITH SAND (GM) -frozen										1.0	
2.0		<input checked="" type="checkbox"/>	120	●	▲		GM	◆	■		2.0	
3.0	-wet below 3.0m										3.0	
4.0	END HOLE @ 4.0m Note: Test hole is in old channel	<input checked="" type="checkbox"/>	121	●	▲		GM	◆	■		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: 4.0 m COMPLETE: 99/04/21		Page 1 of 1				

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-381
ENGINEERING CAPITAL	KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L	LOCATION: 1817+370 CENTRELINE	ELEVATION: 0.00 (m)

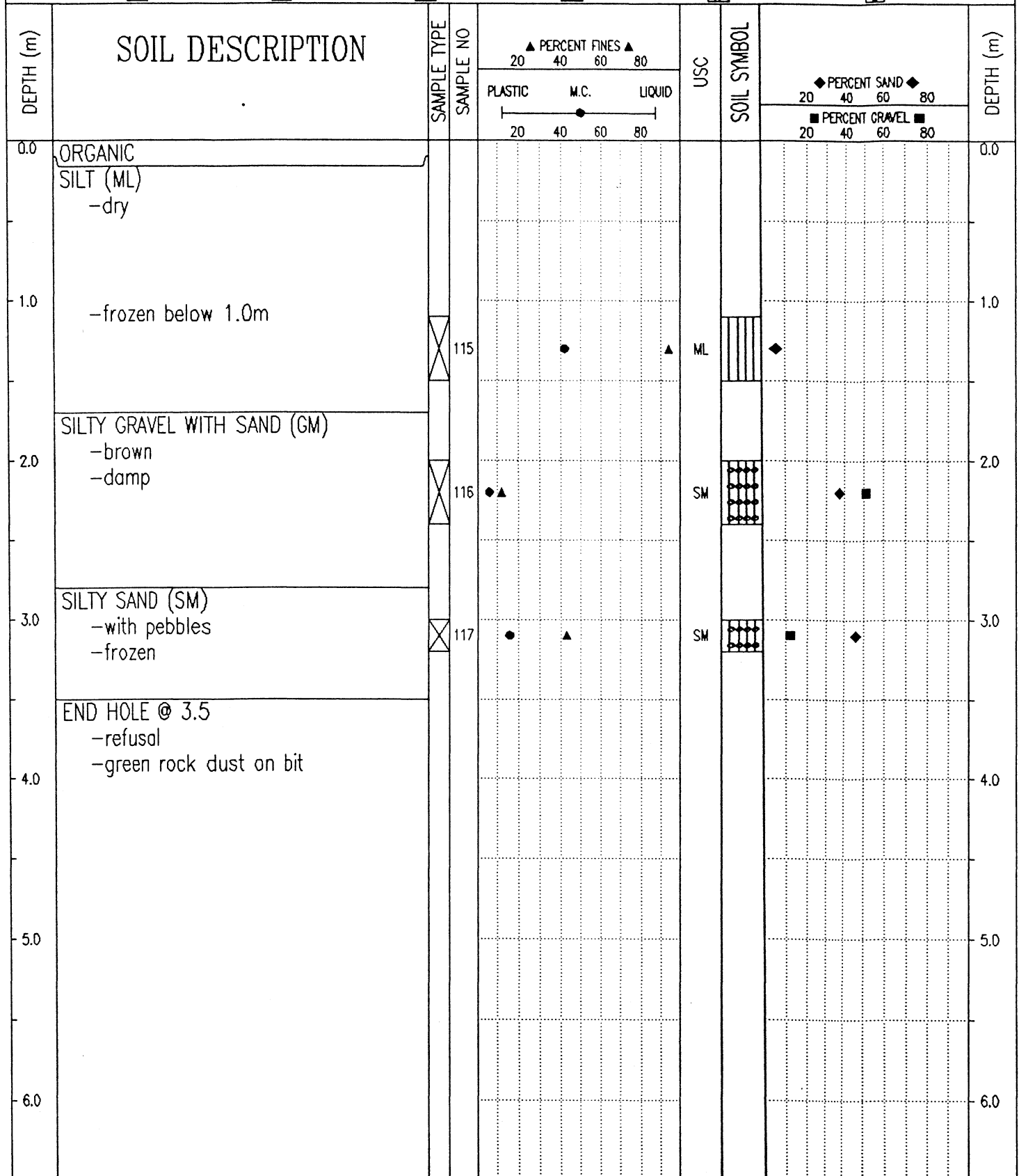
SAMPLE TYPE RETURN S.P.T. AUGER BULK TUBE CORE



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LOGGED BY: G.C.	COMPLETION DEPTH: 2.0 m
REVIEWED BY:	COMPLETE: 99/04/21
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-380
ENGINEERING CAPITAL		KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L		LOCATION: 1817+500 25M RT CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE

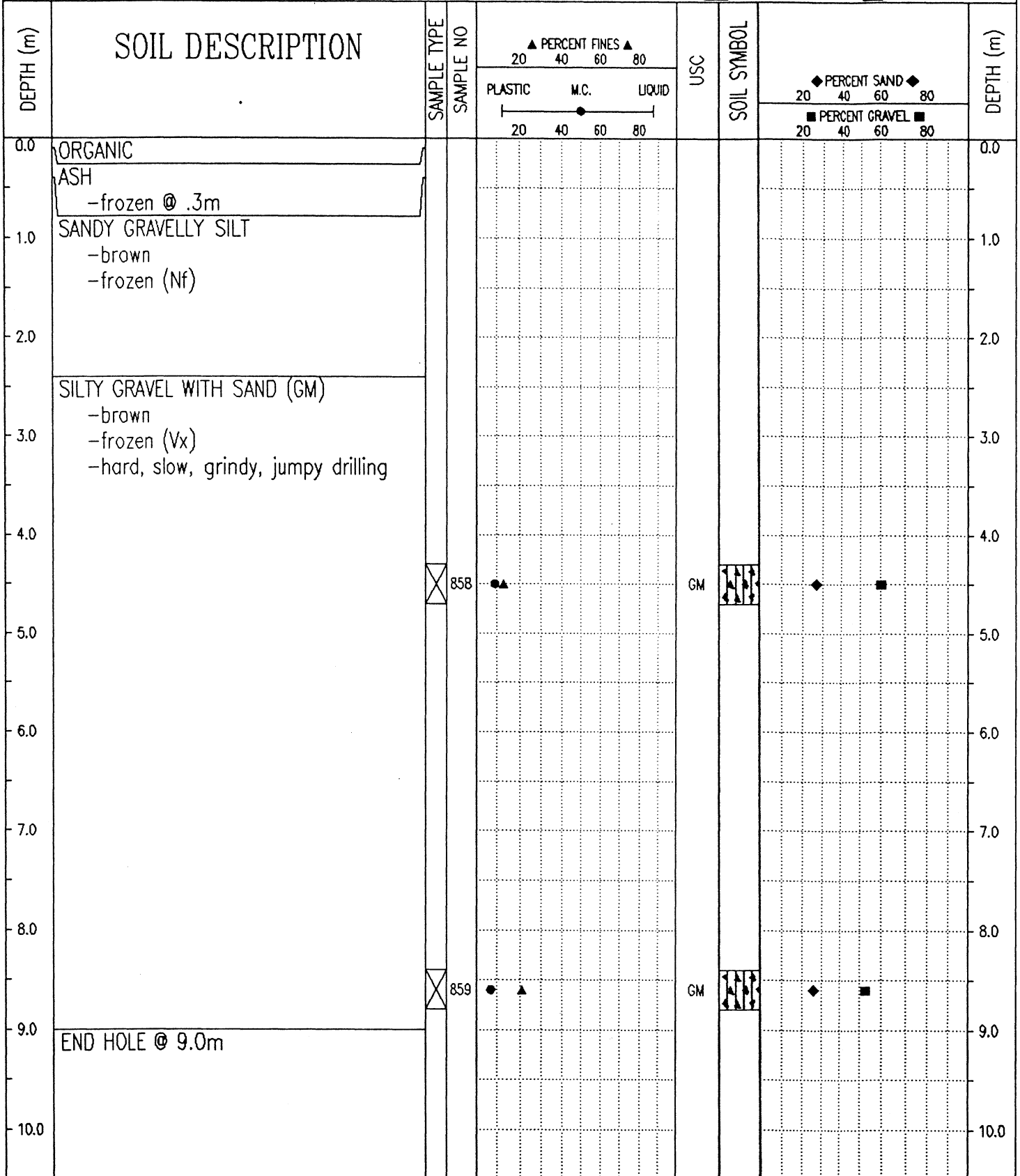


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LOGGED BY: G.C.
REVIEWED BY:
Fig. No:

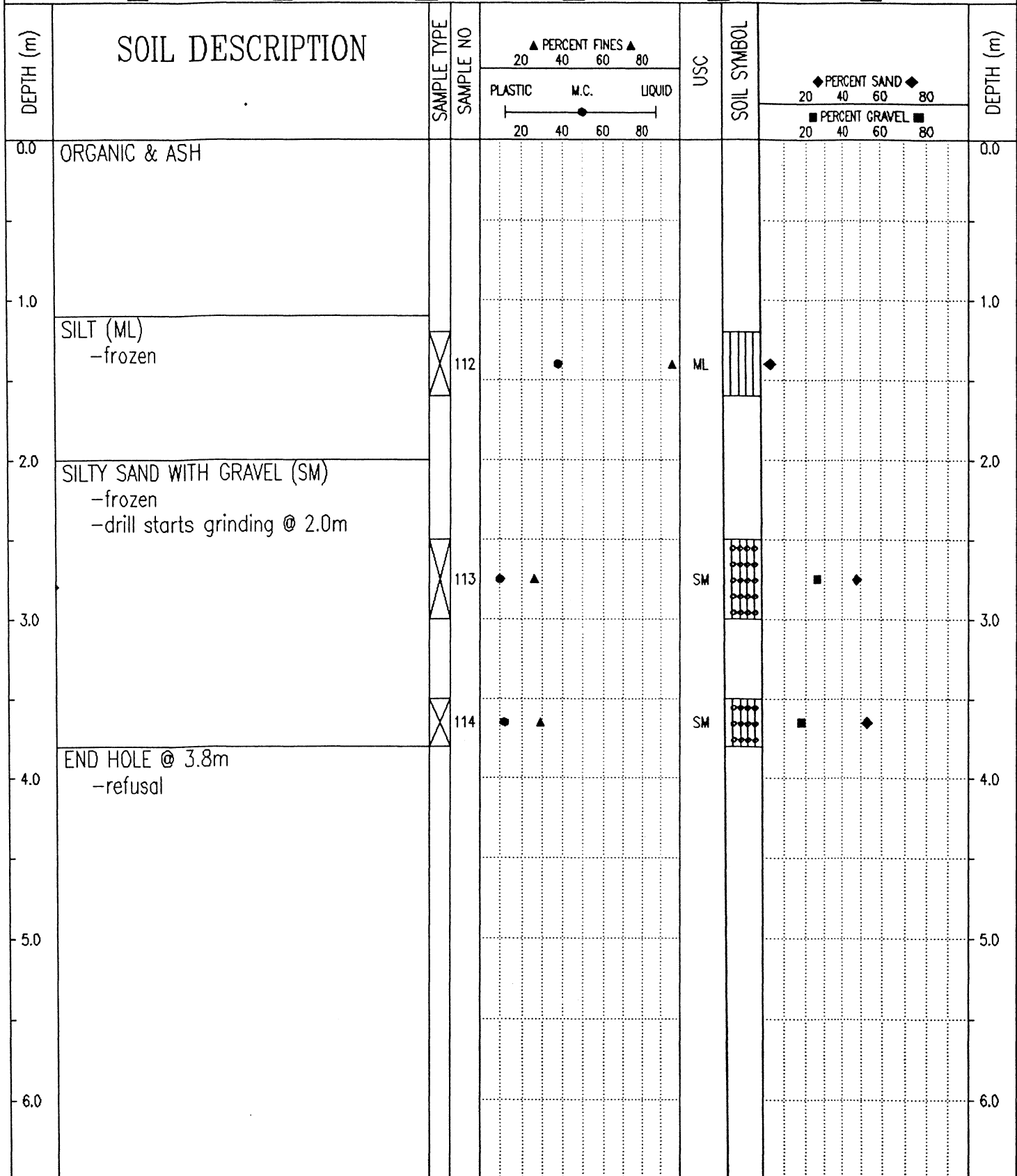
COMPLETION DEPTH: 3.5 m
COMPLETE: 99/04/21

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 531-842
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
B-40L MOBILE DRILL 6" AUGER	LOCATION: 1817+500 25M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



Government of Yukon Transportation Engineering	LOGGED BY: D.T	COMPLETION DEPTH: 9.0 m
	REVIEWED BY:	COMPLETE: 99/10/21
	Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-379
ENGINEERING CAPITAL		KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L		LOCATION: 1817+600 20M RT CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



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LOGGED BY: G.C.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.8 m
COMPLETE: 99/04/21

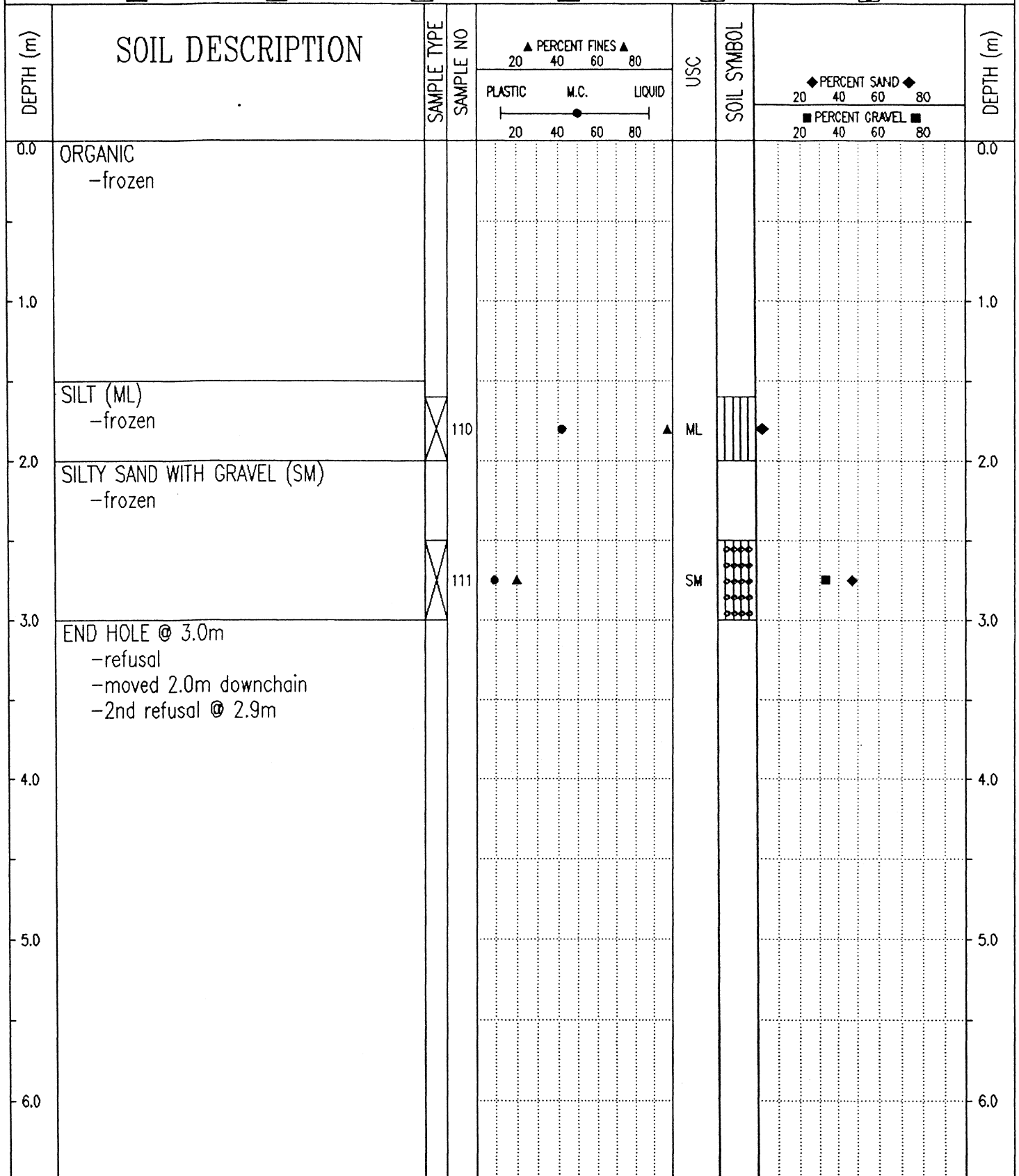
SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 531-843				
ENGINEERING CAPITAL		KM 1799-1822 A/H		Project No: 092-202101-0329				
B-40L MOBILE DRILL 6" AUGER		LOCATION: 1817+601 12M RT		ELEVATION: 0.00 (m)				
SAMPLE TYPE		<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER	<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE	<input type="checkbox"/> CORE	
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲		USC	SOIL SYMBOL	DEPTH (m)
				PLASTIC	M.C.			
0.0	ORGANIC			20	40	60	80	0.0
	ASH							
	ORGANIC							
1.0	-frozen (Vx)							1.0
	SANDY SILT							
	-light brown							
	-frozen (Vx)							
2.0	SANDY SILTY GRAVELS							2.0
	-brown							
	-frozen (Vx)							
	-slow grindy drilling							
3.0								3.0
4.0	SILTY SAND WITH GRAVEL (SM)							4.0
	-brown							
	-easier grindy drilling							
5.0		<input checked="" type="checkbox"/>	860				SM	5.0
	-hard slow drilling below 5.2m							
6.0								6.0
	-grey below 6.0m							
7.0								7.0
8.0								8.0
	-sample # 861 was frozen in-situ but thawed upon retrieval							
	-wet to sat							
9.0	END HOLE @ 9.0m	<input checked="" type="checkbox"/>	861				SM	9.0
	-refusal							
10.0								10.0

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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 8.8 m
COMPLETE: 99/10/22

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-378
ENGINEERING CAPITAL		KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L		LOCATION: 1817+700 20M RT CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE			



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LOGGED BY: G.C.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/04/21

SUBSURFACE EXPLORATION & TESTING REPORT SHAKWAK PROJECT SEG 13 TEST HOLE NO: 531-844

ENGINEERING CAPITAL KM 1799-1822 A/H Project No: 092-202101-0329

B-40L MOBILE DRILL 6" AUGER LOCATION: 1817+706 14M 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 ■				
				20	40	60	80		20	40	60	80	
0.0	ORGANIC ASH												0.0
0.0 - 0.5	ORGANIC SANDY SILT -light brown -frozen (Nf)												0.5
0.5 - 2.0	SILTY SANDY GRAVEL -brown -frozen (Vx) -grindy drilling												2.0
2.0 - 3.0	ICE WITH GRAVELLY SAND & SILT -brown -smooth easy drilling												3.0
3.0 - 4.0	SILTY SAND WITH GRAVEL (SM) -brown -frozen (Vx) -hard slow grindy drilling	<input checked="" type="checkbox"/>	862	●	▲			SM	◆	■			4.0
4.0 - 7.0	-no sample recovered												7.0
7.0 - 9.0	END HOLE @ 9.0m -lead auger broke off												9.0
9.0 - 10.0													10.0

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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 9.0 m
COMPLETE: 99/10/22

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 532-845
ENGINEERING CAPITAL		KM 1799-1822 A/H	Project No: 092-202101-0329
B-40L MOBILE DRILL 6" AUGER		LOCATION: 1817+815 20M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> 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	ORGANIC ASH -frozen below 0.2m											0.0
0.2	ORGANIC -frozen											1.0
1.0	SILT -light brown -some sand -frozen (Nf)											2.0
2.0	SILTY SAND WITH GRAVEL (SM) -brown -frozen (Vx) -hard grindy drilling											3.0
3.0												4.0
4.0												5.0
5.0												6.0
6.0	END HOLE @ 6.0m		863				SM					6.0

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Fig. No:

COMPLETION DEPTH: 6.1 m
COMPLETE: 99/10/25

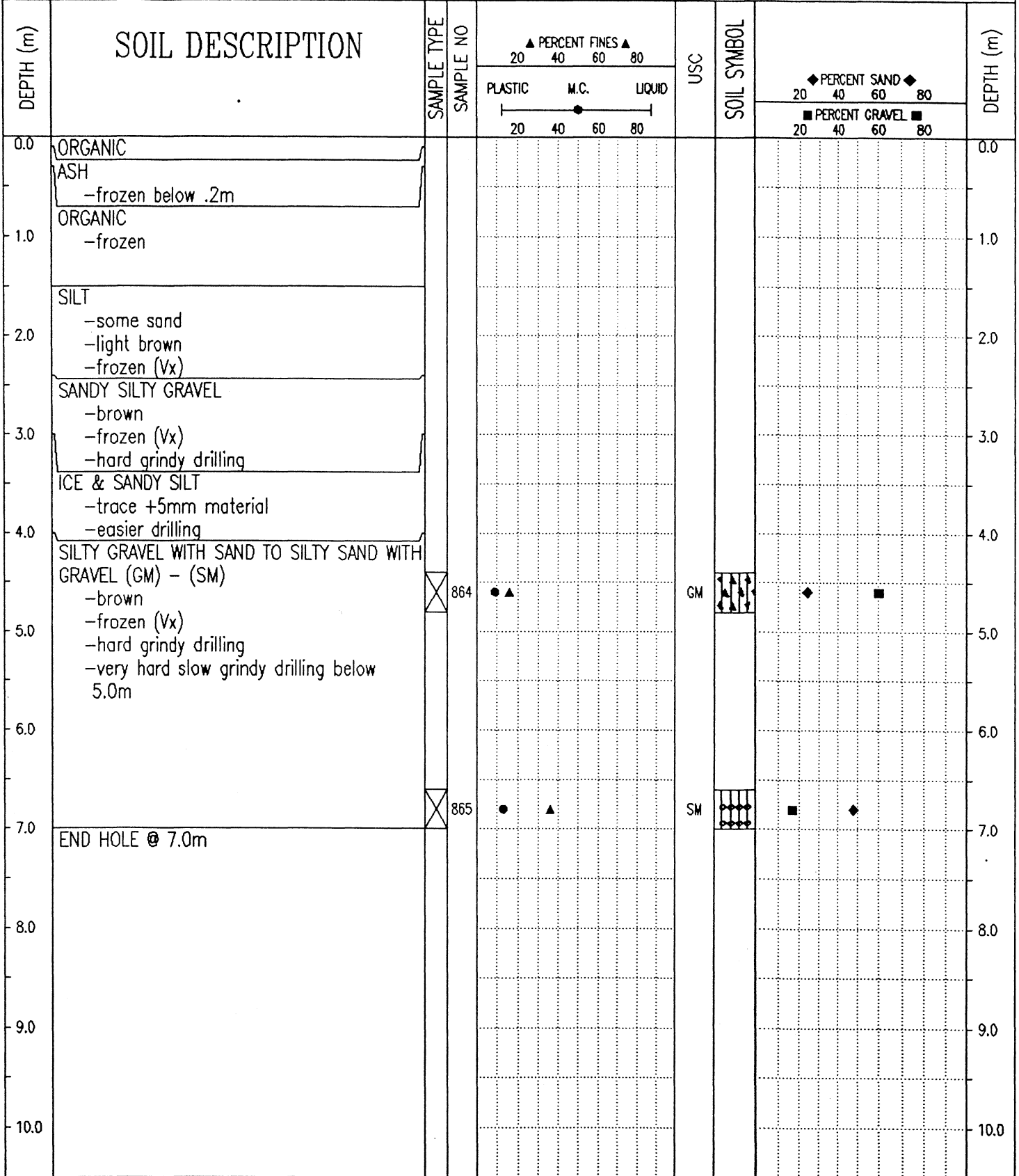
SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-377								
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329								
NODWELL B40-L		LOCATION: 1817+875 20M RT CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> 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 -frozen (Vx) with ice											0.0
1.0												1.0
2.0												2.0
3.0	SILT (ML)	<input checked="" type="checkbox"/>	107				ML					3.0
4.0	SILTY SAND WITH GRAVEL (SM) -drill starts grinding @ 3.5m	<input checked="" type="checkbox"/>	108				SM					4.0
4.0	SILT (ML) -frozen	<input checked="" type="checkbox"/>	109				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: 99/04/21						
				Fig. No:		Page 1 of 1						

SUBSURFACE EXPLORATION & TESTING REPORT SHAKWAK PROJECT SEG 13 TEST HOLE NO: 532-846

ENGINEERING CAPITAL KM 1799-1822 A/H Project No: 092-202101-0329

B-40L MOBILE DRILL 6" AUGER LOCATION: 1817+890 15M RT ELEVATION: 0.00 (m)

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



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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 7.0 m
COMPLETE: 99/10/25

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-374
ENGINEERING CAPITAL		KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L		LOCATION: 1817+895 40M RT CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> 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	ORGANIC -frozen													0.0	
2.0	SILT (ML) -frozen -grinding drilling @ 2.0m	<input checked="" type="checkbox"/>	102		●	▲	ML							2.0	
3.0	END HOLE @ 2.7m -refusal -light green rock dust													3.0	
4.0														4.0	
5.0														5.0	
6.0														6.0	

LOGGED BY: G.C.	COMPLETION DEPTH: 2.7 m
REVIEWED BY:	COMPLETE: 99/04/20
Fig. No:	Page 1 of 1

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-373
ENGINEERING CAPITAL		KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L		LOCATION: 1817+900 10M RT CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> 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	NO DATA RECORDED										0.0	
	ORGANIC & PEAT -frozen											
1.0											1.0	
2.0											2.0	
	SILT WITH SAND (ML) -frozen											
3.0											3.0	
	END HOLE @ 3.0m -refusal		101	●		▲	ML	▨	◆	■		
4.0											4.0	
5.0											5.0	
6.0											6.0	

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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 3.0 m
COMPLETE: 99/04/20

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-376								
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329								
NODWELL B40-L		LOCATION: 1817+930 40M RT 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	ORGANIC -frozen										0.0	
1.0											1.0	
2.0	SILT (ML) -frozen		105				ML				2.0	
2.0	SILTY SAND WITH GRAVEL (SM) -light brown -angular -drill starts grinding @ 2.0m		106				SM				2.0	
3.0	END HOLE @ 2.8m -refusal										3.0	
4.0											4.0	
5.0											5.0	
6.0											6.0	

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REVIEWED BY:

Fig. No:

COMPLETION DEPTH: 2.8 m

COMPLETE: 99/04/21

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SUBSURFACE EXPLORATION & TESTING REPORT SHAKWAK PROJECT SEG 13 TEST HOLE NO: 509-375

ENGINEERING CAPITAL KM 1820-1815 A/H Project No: 092-202101-0329

NODWELL B40-L LOCATION: 1817+940 10M RT CENTRELINE ELEVATION: 0.00 (m)

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

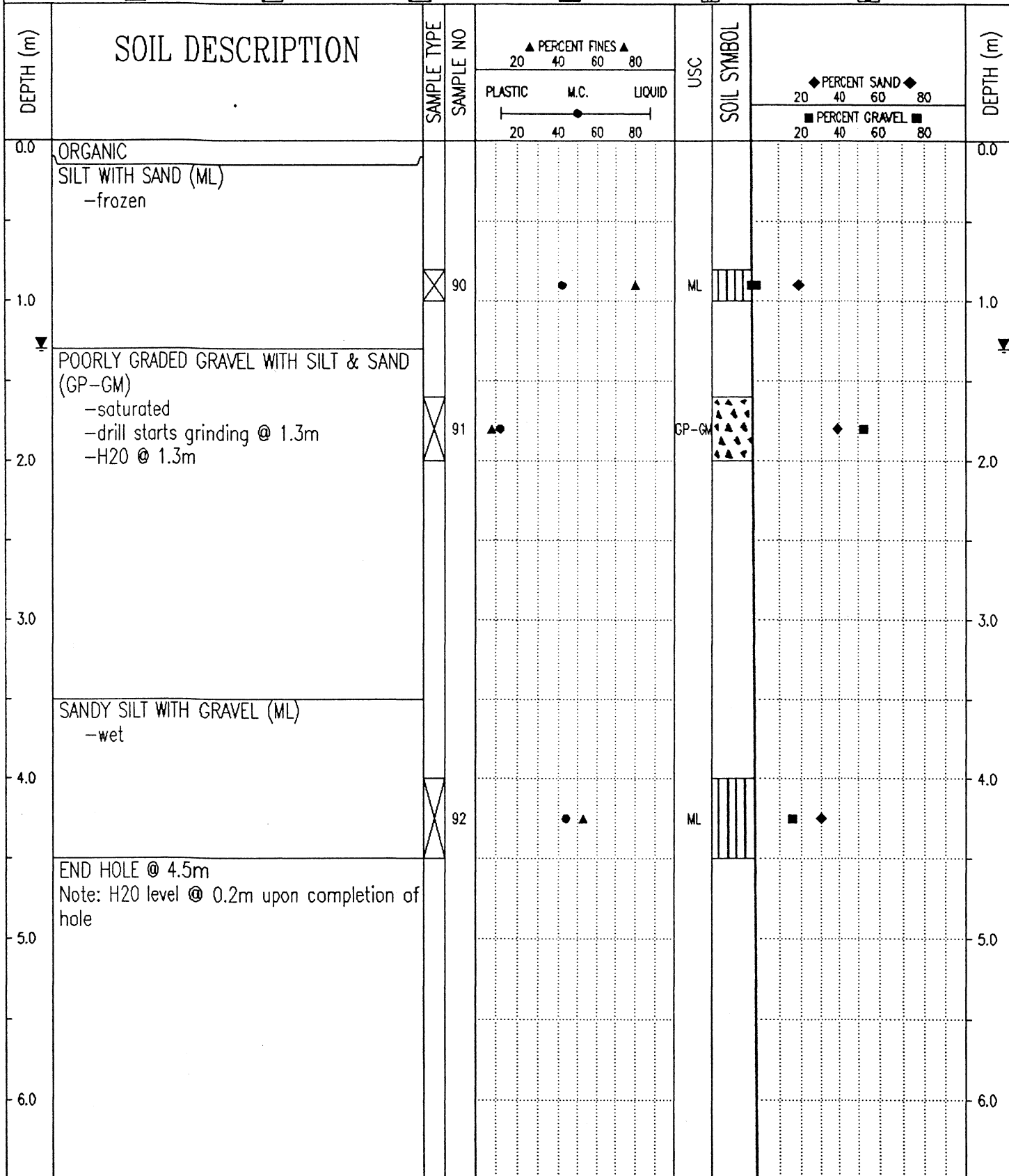
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆			DEPTH (m)
				PLASTIC	M.C.	LIQUID			PERCENT GRAVEL ■			
0.0	ORGANIC										0.0	
	ORGANIC -frozen with ice lenses											
1.0											1.0	
	SILT (ML) -frozen											
2.0		<input checked="" type="checkbox"/>	103				ML				2.0	
	-drill starts grinding @ 2.4m											
3.0	SILT WITH GRAVEL -frozen -lost sample # 104										3.0	
4.0	END HOLE @ 3.5m -refusal -rock dust										4.0	
5.0											5.0	
6.0											6.0	

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LOGGED BY: G.C. COMPLETION DEPTH: 3.5 m
 REVIEWED BY: COMPLETE: 99/04/21
 Fig. No: Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-372						
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329						
NODWELL B40-L		LOCATION: 1818+000 10M LT CENTRELIN		ELEVATION: 0.00 (m)						
SAMPLE TYPE		<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER	<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE	<input type="checkbox"/> CORE			
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80		USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80		DEPTH (m)
				PLASTIC	M.C.			LIQUID	■ PERCENT GRAVEL ■ 20 40 60 80	
0.0	ORGANIC POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -damp									0.0
1.0		<input checked="" type="checkbox"/>	97				GP-GM			1.0
2.0	POORLY GRADED GRAVEL WITH SAND (GP) -frozen with ice lenses (Vx) -tougher drilling @ 2.0m	<input checked="" type="checkbox"/>	98				GP			2.0
3.0	SILTY GRAVEL WITH SAND TO WELL GRADED GRAVEL WITH SILT & SAND (GW-GM) -wet -easy drilling below 3.0M	<input checked="" type="checkbox"/>	99				GM			3.0
4.0	-saturated below 4.0m	<input checked="" type="checkbox"/>	100				GW-GM			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: 99/04/20				
				Fig. No:		Page 1 of 1				

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-370
ENGINEERING CAPITAL		KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L		LOCATION: 1818+100 10M RT CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 99/04/20
	Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-371								
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329								
NODWELL B40-L		LOCATION: 1818+110 15M LT CENTRELIN		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 (ML) -frozen										0.0	
1.0	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM) -frozen		93				ML				1.0	
2.0			94				SW-SM				2.0	
3.0	WELL-GRADED GRAVEL WITH SAND (GW) -saturated		95				GW				3.0	
4.0			96				GW				4.0	
5.0	END HOLE @ 4.5m										5.0	
6.0											6.0	

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Fig. No:

COMPLETION DEPTH: 4.5 m

COMPLETE: 99/04/20

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-369								
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329								
NODWELL B40-L		LOCATION: 1818+200 CENTRELIN		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	ORGANIC										0.0	
	ASH											
	-frozen											
1.0	FROZEN ORGANICS WITH ICE										1.0	
2.0											2.0	
3.0	SILTY SAND WITH GRAVEL (SM)		89				SM				3.0	
	-frozen											
	-ice rich											
	-drill starts grinding @ 2.5m											
	-easier drilling below 3.0m											
4.0	END HOLE @ 4.0m										4.0	
	-refusal											
	Note: Could not access knob RHS between 368 & 369 (Steep)											
5.0											5.0	
6.0											6.0	

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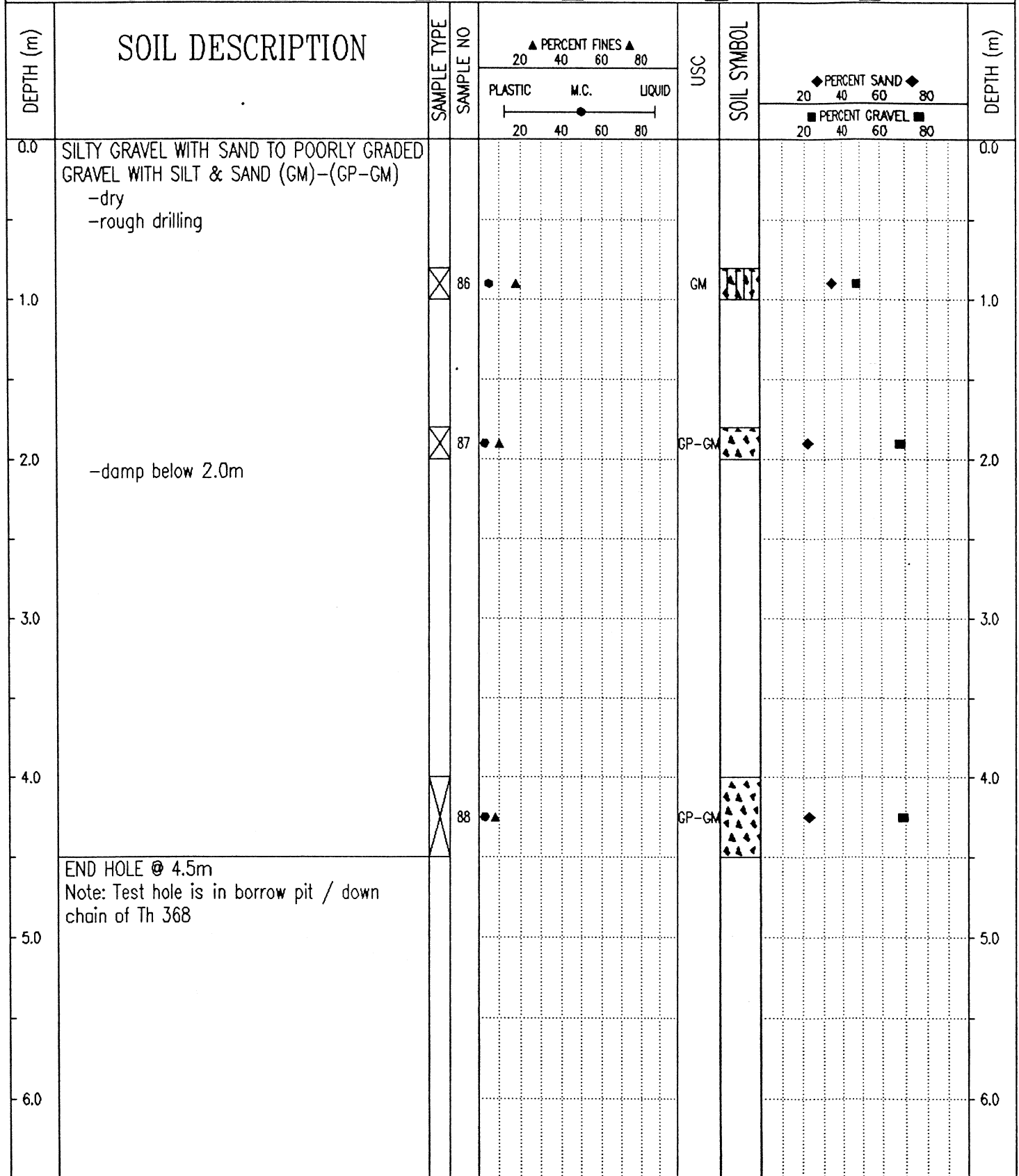
Fig. No:

COMPLETION DEPTH: 4.0 m

COMPLETE: 99/04/20

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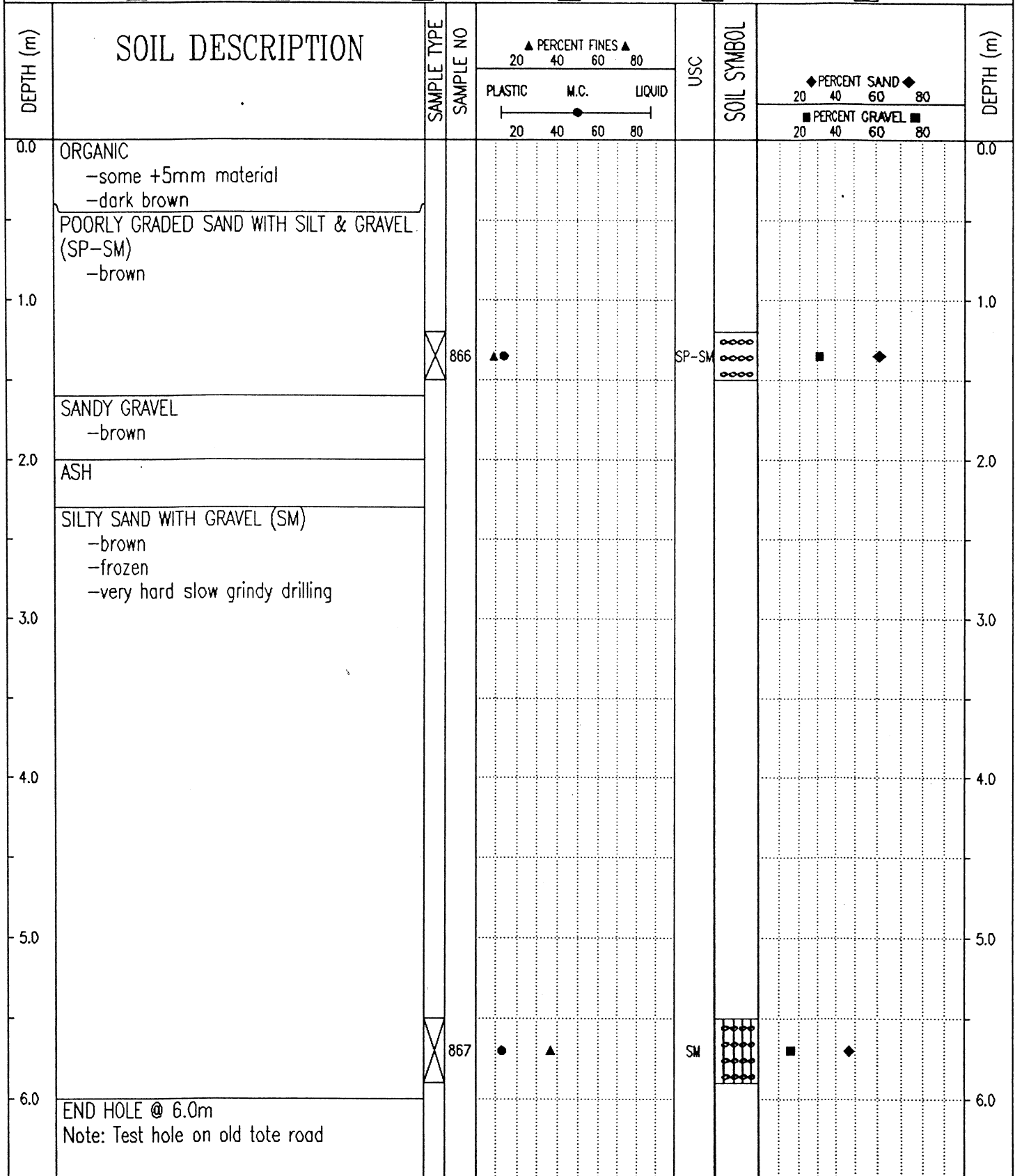
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ENGINEERING CAPITAL		KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L		LOCATION: 1818+275 5M RT CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



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REVIEWED BY:	COMPLETE: 99/04/20
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 532-847
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
B-40L MOBILE DRILL 6" AUGER	LOCATION: 1818+325 15M RT	ELEVATION: 0.00 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



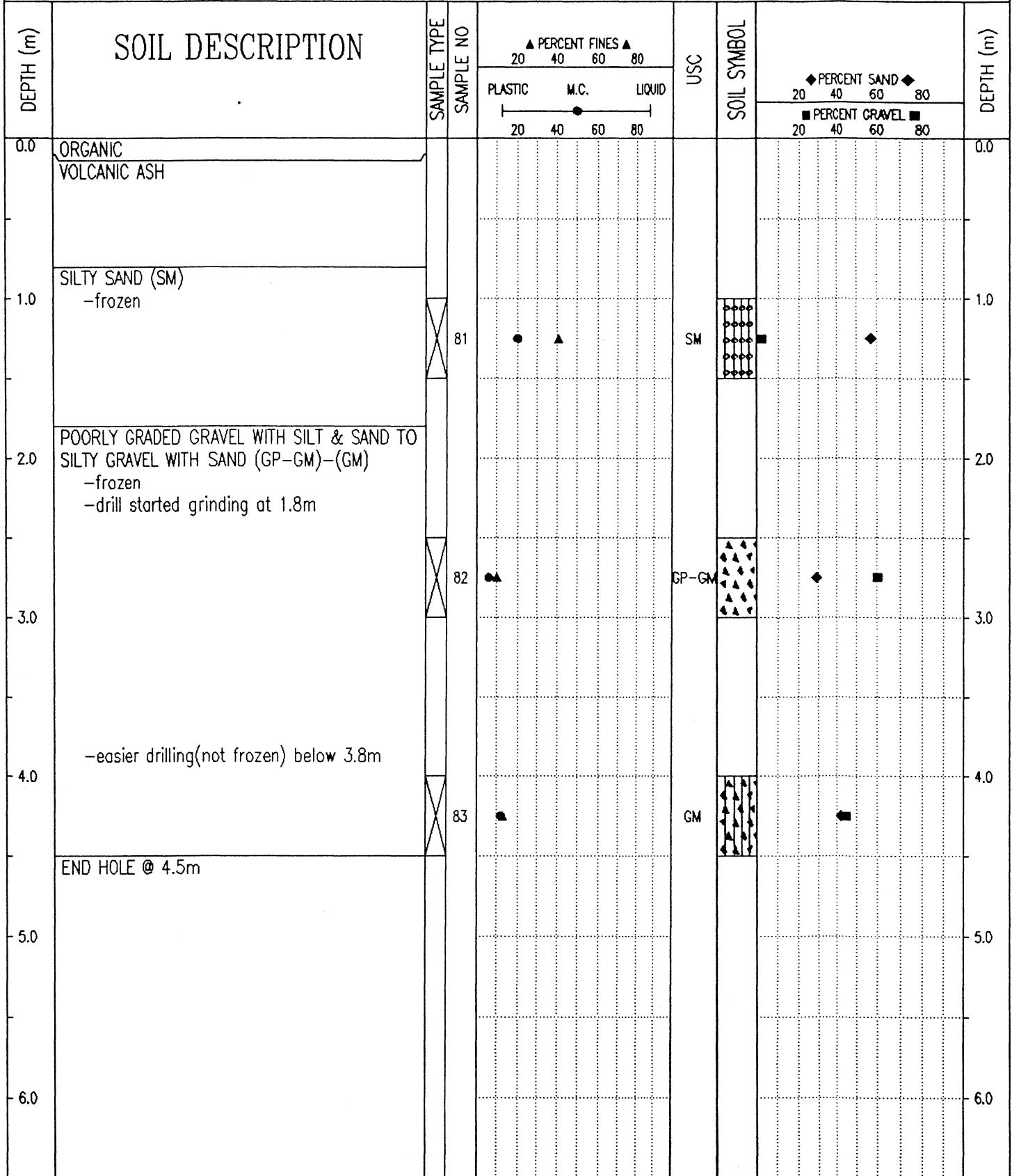
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LOGGED BY: D.T
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 6.0 m
COMPLETE: 99/10/25

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-367								
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329								
NODWELL B40-L		LOCATION: 1818+350 20M RT CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE		<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER	<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE	<input type="checkbox"/> 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	ORGANIC			20	40	60	80	20	40	60	80	0.0
	VOLCANIC ASH											
1.0	PEAT & ORGANIC -frozen											1.0
	ICE											
2.0	SANDY SILT (ML) -frozen with ice											2.0
		X	84									
3.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -frozen -drill starts grinding @ 2.8m											3.0
		X	85									
4.0	END HOLE @ 3.6m -refusal											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: 3.6 m COMPLETE: 99/04/20		Page 1 of 1				

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-366
ENGINEERING CAPITAL		KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L		LOCATION: 1818+355 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



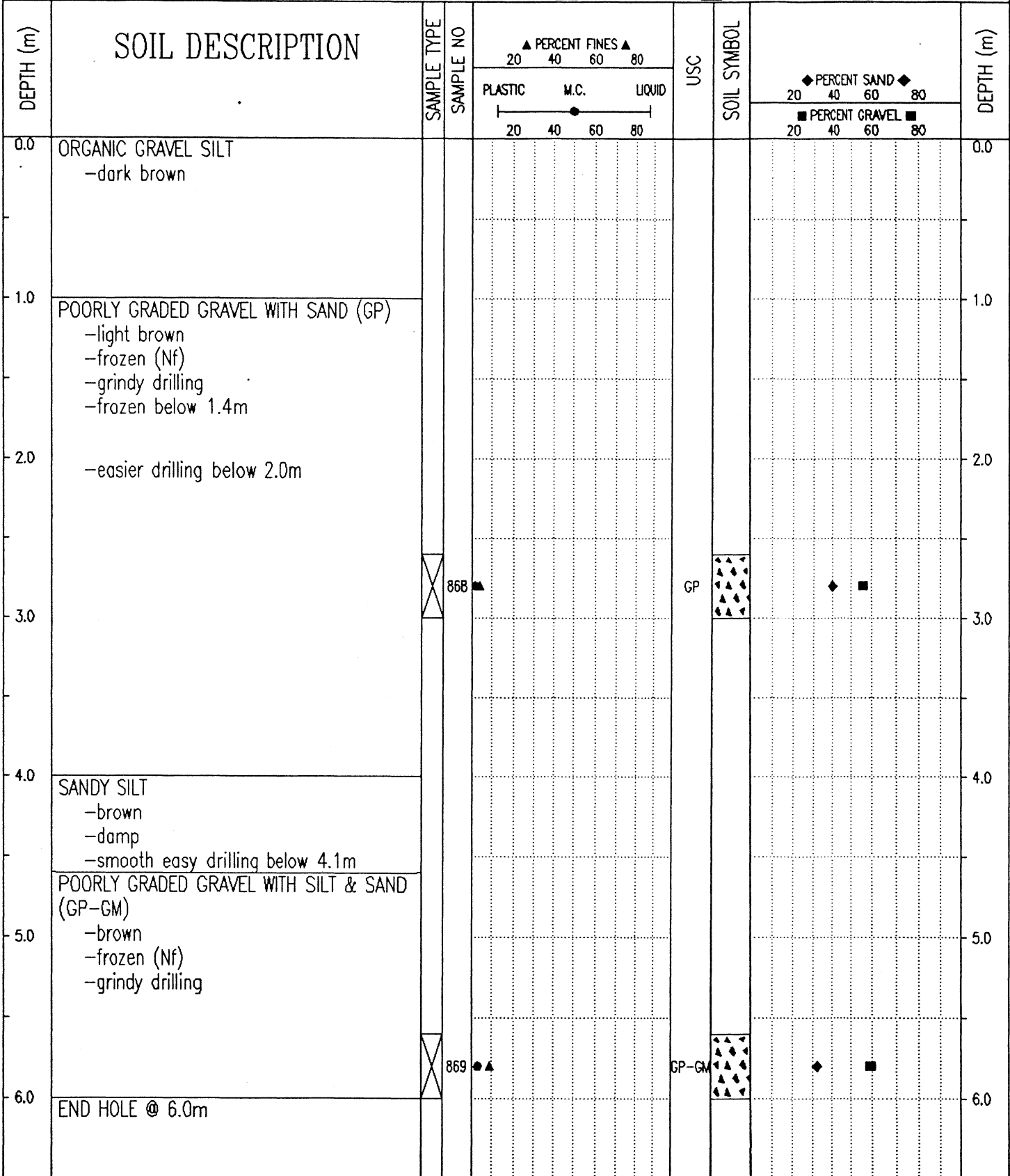
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Fig. No:

COMPLETION DEPTH: 4.5 m
COMPLETE: 99/04/20

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 532-848
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
B-40L MOBILE DRILL 6" AUGER	LOCATION: 1818+477 15M RT	ELEVATION: 0.00 (m)

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

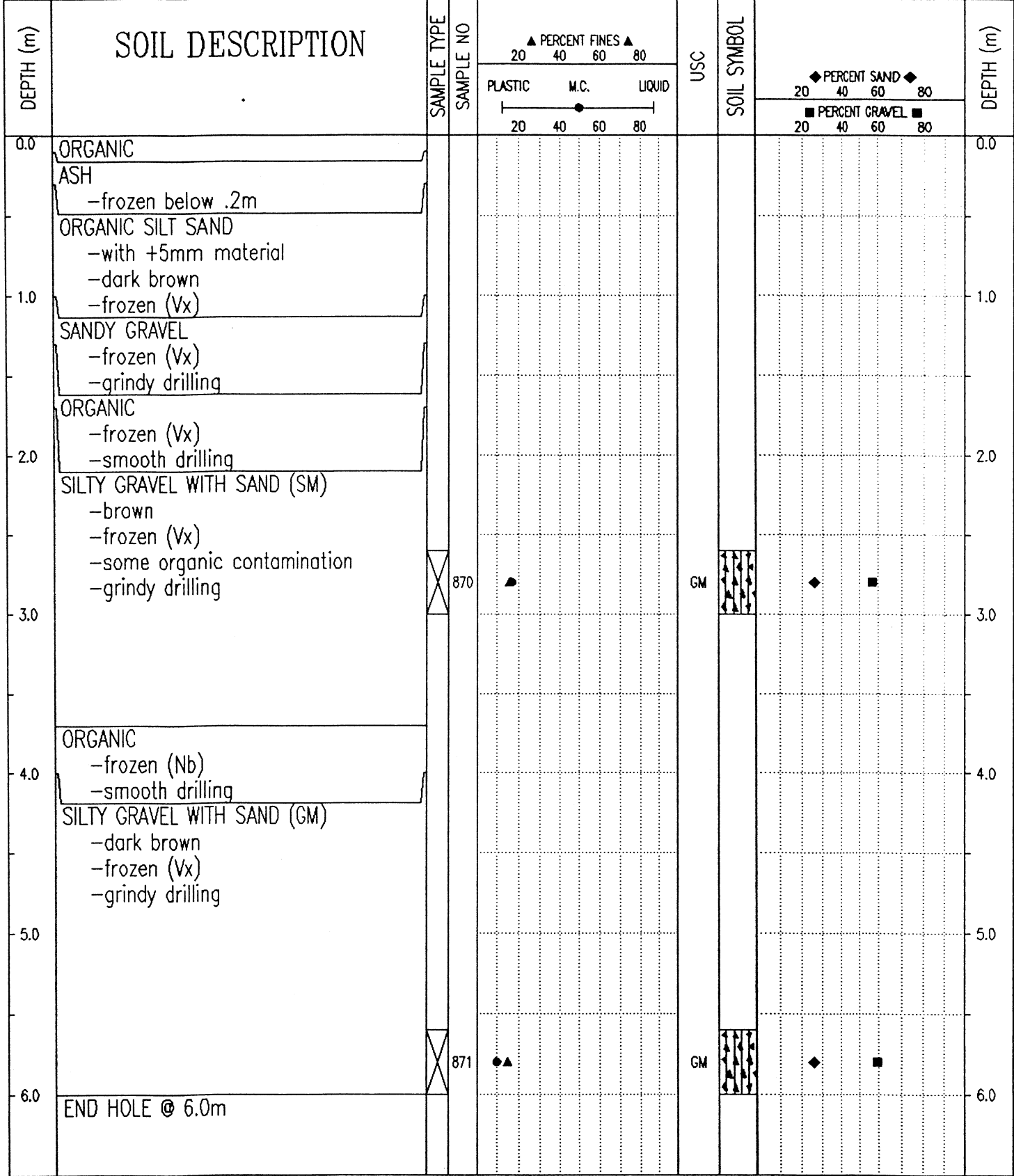


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REVIEWED BY:	COMPLETE: 99/10/26
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 532-849
ENGINEERING CAPITAL	KM 1799-1822 A/H	Project No: 092-202101-0329
B-40L MOBILE DRILL 6" AUGER	LOCATION: 1818+600 10M RT	ELEVATION: 0.00 (m)

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



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Fig. No:

COMPLETION DEPTH: 6.0 m
COMPLETE: 99/10/26
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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-365								
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329								
NODWELL B40-L		LOCATION: 1818+725 10M RT CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	
0.0	ORGANIC ASH											0.0
1.0	SILTY GRAVEL WITH SAND (GM) -mixed with ash & organics		79				GM					1.0
2.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)											2.0
3.0	END HOLE @ 3.0m -refusal		80				GP-GM					3.0
4.0												4.0
5.0												5.0
6.0												6.0

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LOGGED BY: G.C.	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 99/04/20
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-363								
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329								
NODWELL B40-L		LOCATION: 1818+775 20M RT CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
				<input type="checkbox"/> BULK								
				<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	ORGANIC										0.0	
	VOLCANIC ASH											
	ORGANIC, PEAT ETC.											
1.0		<input checked="" type="checkbox"/>	75	●	▲		SM	■	◆		1.0	
	SILT -with ash contamination -frozen											
2.0		<input checked="" type="checkbox"/>	76	●	▲		SM	■			2.0	
	SILTY SAND WITH GRAVEL (SM) -with ash contamination -frozen											
	END HOLE @ 2.4m -refusal -rock dust											
3.0											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: 2.4 m COMPLETE: 99/04/20		Page 1 of 1				

SUBSURFACE EXPLORATION & TESTING REPORT SHAKWAK PROJECT SEG 13 TEST HOLE NO: 509-364

ENGINEERING CAPITAL KM 1820-1815 A/H Project No: 092-202101-0329

NODWELL B40-L LOCATION: 1818+775 10M LT 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	
0.0	GRAVEL -from csp excavation											0.0	
1.0	VOLCANIC ASH											1.0	
	ORGANIC -frozen												
2.0	SILTY GRAVEL WITH SAND (GM) -with organic contamination		77	●▲			GM	◆■				2.0	
3.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -with organic											3.0	
4.0			78	●▲			GP-GM	◆■				4.0	
4.5	END HOLE @ 4.5m											4.5	

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Fig. No:

COMPLETION DEPTH: 4.5 m

COMPLETE: 99/04/20

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SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-362
ENGINEERING CAPITAL		KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L		LOCATION: 1819+000 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE

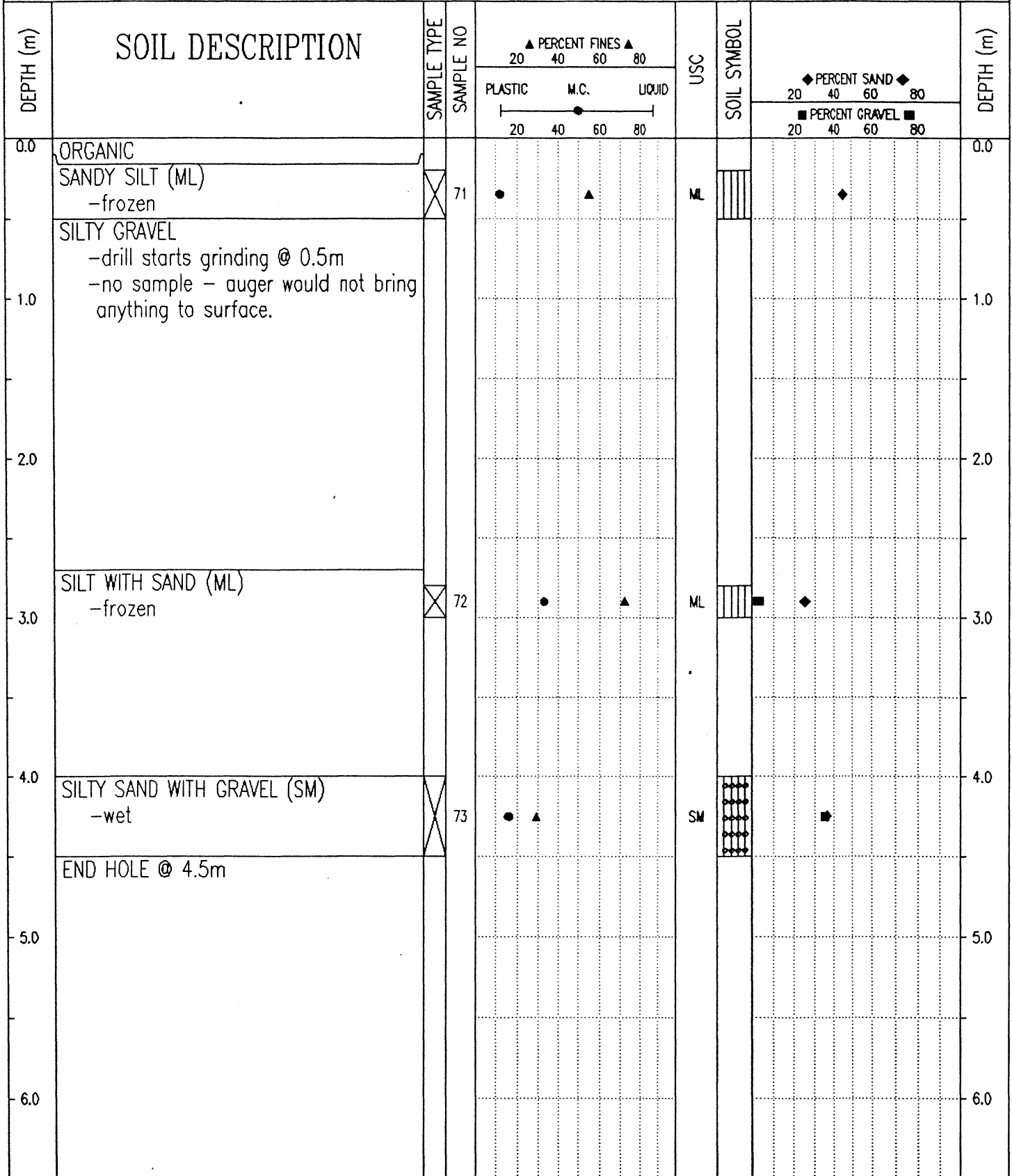
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	SOIL SYMBOL	PERCENT SAND ◆		PERCENT GRAVEL ■	DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40		
0.0	ORGANIC										0.0	
	VOLCANIC ASH											
1.0	ORGANIC -with silt -frozen										1.0	
	SILTY SAND WITH GRAVEL (SM) -frozen with ice & ash -drill starts grinding @ 1.3m	<input checked="" type="checkbox"/>	74	▲	●		SM	◆	◆	■		
2.0	END HOLE @ 2.0M -refusal Note: 2nd refusal @ 1.3m 3rd refusal @ 2.4m										2.0	
3.0											3.0	
4.0											4.0	
5.0											5.0	
6.0											6.0	

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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 2.0 m
COMPLETE: 99/04/20

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-361
ENGINEERING CAPITAL	KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L	LOCATION: 1819+100 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE	

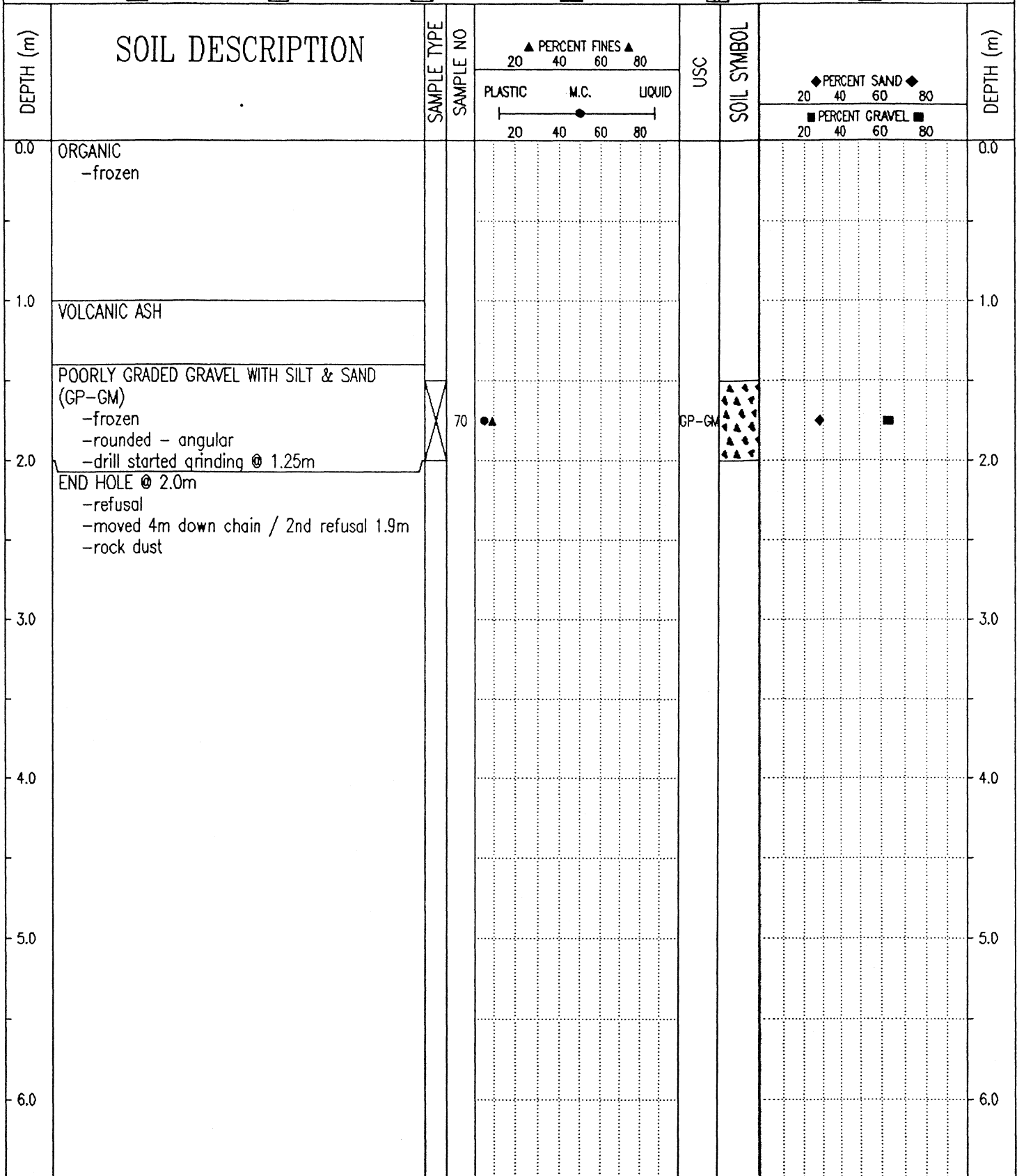


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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 4.5 m
COMPLETE: 99/04/19

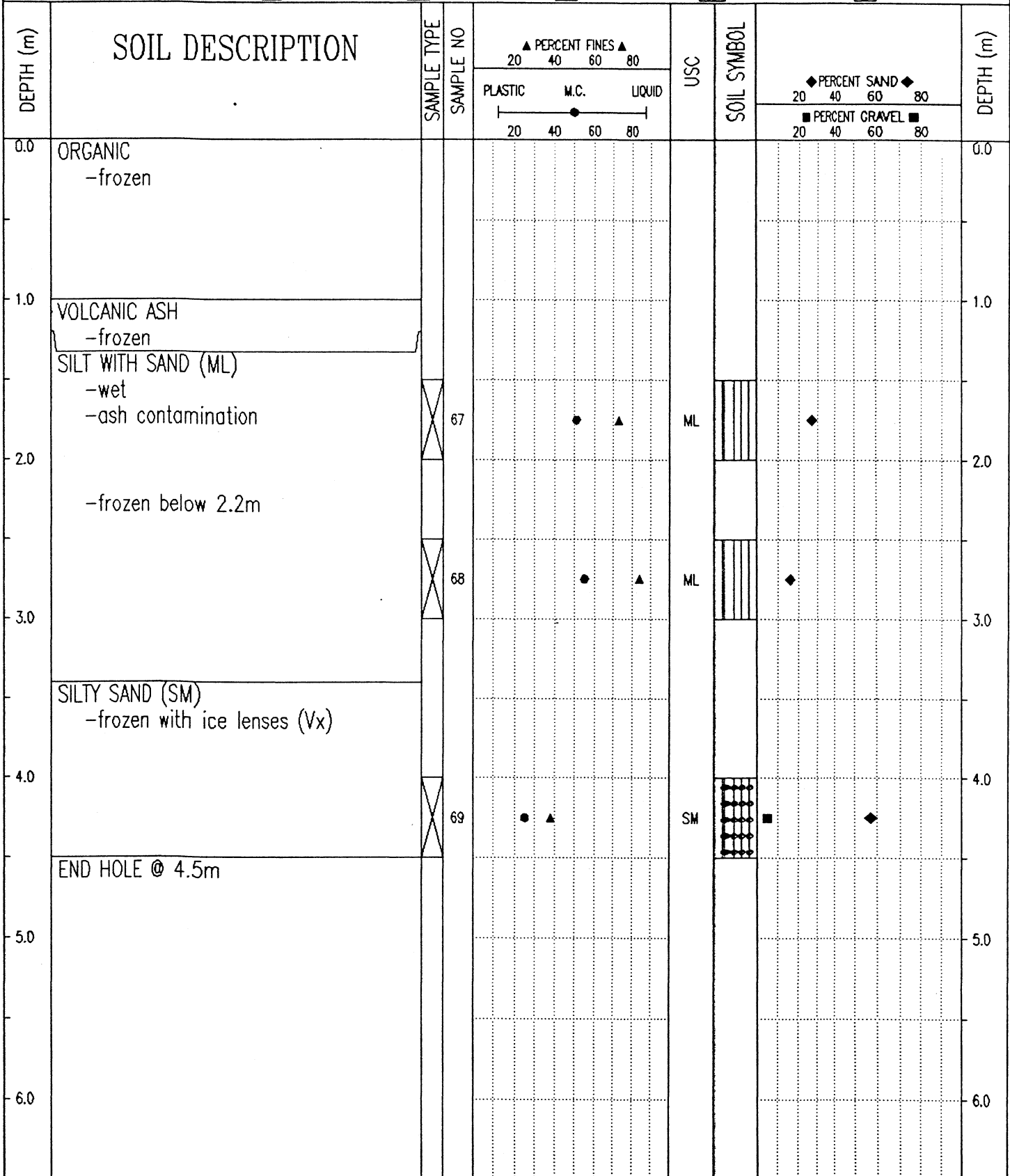
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ENGINEERING CAPITAL		KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L		LOCATION: 1819+200 CENTRELINE(NO STAKES)	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



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LOGGED BY: G.C.	COMPLETION DEPTH: 2.0 m
REVIEWED BY:	COMPLETE: 99/04/19
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-359
ENGINEERING CAPITAL		KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L		LOCATION: 1819+275 1M RT CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



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REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 4.5 m
COMPLETE: 99/04/19

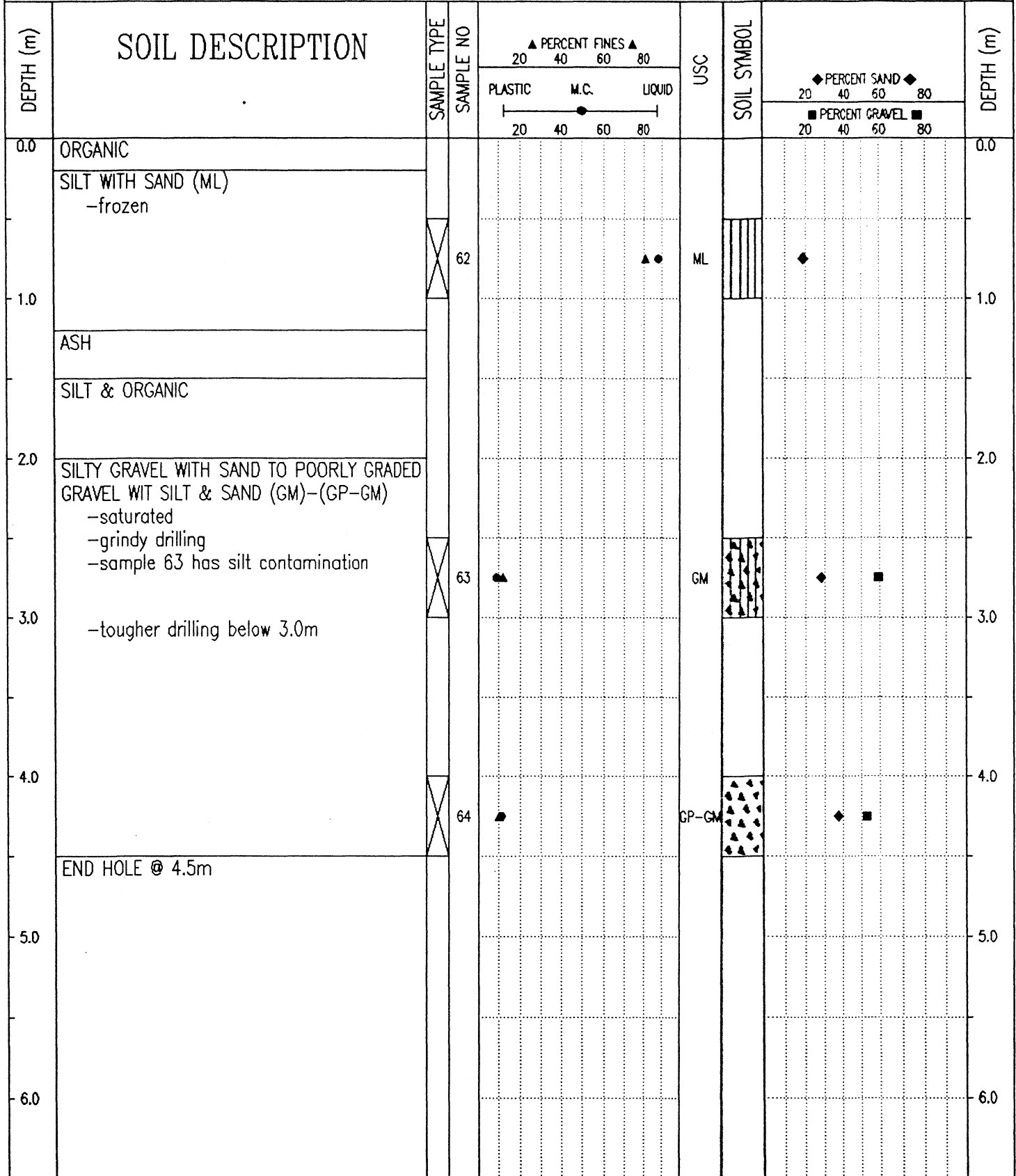
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ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329				
NODWELL B40-L		LOCATION: 1819+375 CENTRELINE		ELEVATION: 0.00 (m)				
SAMPLE TYPE		<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER	<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE	<input type="checkbox"/> CORE	
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲		USC	SOIL SYMBOL	DEPTH (m)
				PLASTIC	M.C.			
0.0	ORGANIC -frozen			20	40	60	80	0.0
1.0								1.0
	ASH - VOLCANIC -frozen							
2.0								2.0
	SILT (ML) -frozen							
		<input checked="" type="checkbox"/>	65					
3.0								3.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) -damp - moist -drill starts grinding @ 2.7m							
4.0		<input checked="" type="checkbox"/>	70					4.0
5.0								5.0
	END HOLE @ 4.5m							
6.0								6.0
Government of Yukon Transportation Engineering				LOGGED BY: G.C.		COMPLETION DEPTH: 4.5 m		
				REVIEWED BY:		COMPLETE: 99/04/19		
				Fig. No:		Page 1 of 1		

SUBSURFACE EXPLORATION & TESTING REPORT SHAKWAK PROJECT SEG 13 TEST HOLE NO: 509-357

ENGINEERING CAPITAL KM 1820-1815 A/H Project No: 092-202101-0329

NODWELL B40-L LOCATION: 1819+475 CENTRELINE ELEVATION: 0.00 (m)

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



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REVIEWED BY:

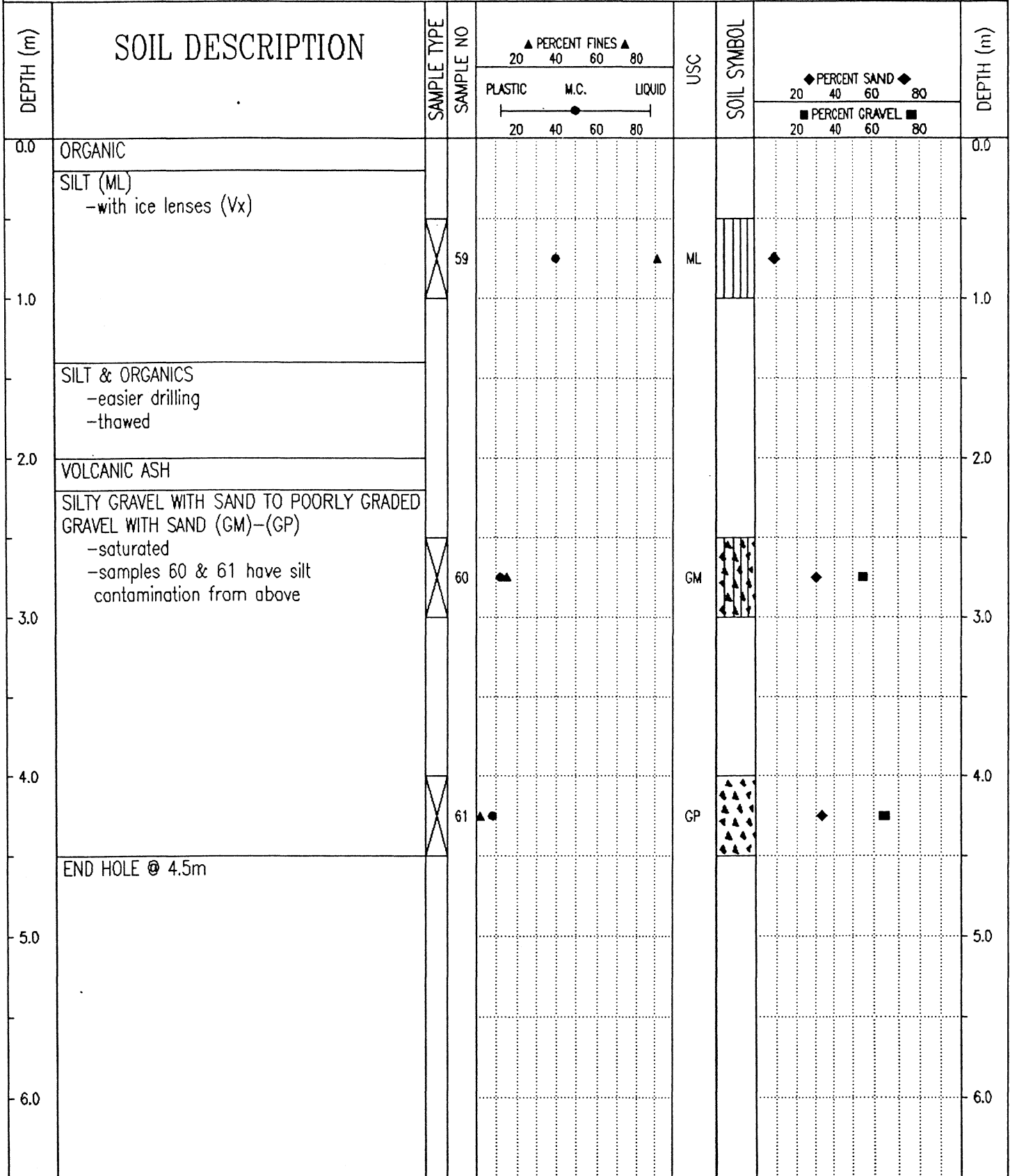
Fig. No:

COMPLETION DEPTH: 4.5 m

COMPLETE: 99/04/19

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SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-356
ENGINEERING CAPITAL	KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L	LOCATION: 1819+575 2M RT CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.
	<input checked="" type="checkbox"/> AUGER	<input type="checkbox"/> BULK
	<input type="checkbox"/> TUBE	<input type="checkbox"/> CORE

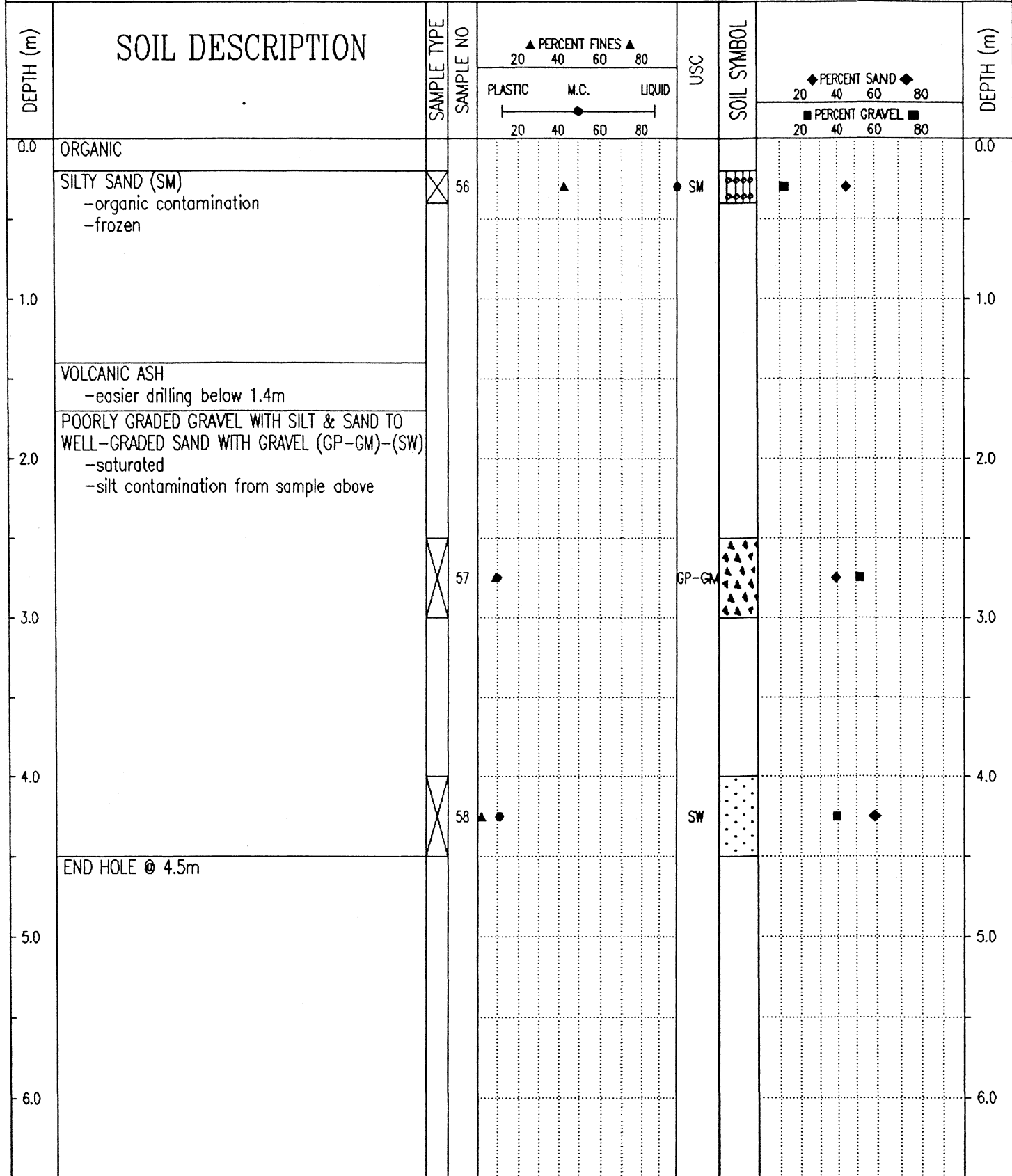


Government of Yukon
Transportation Engineering

LOGGED BY: G.C.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 4.5 m
COMPLETE: 99/04/19

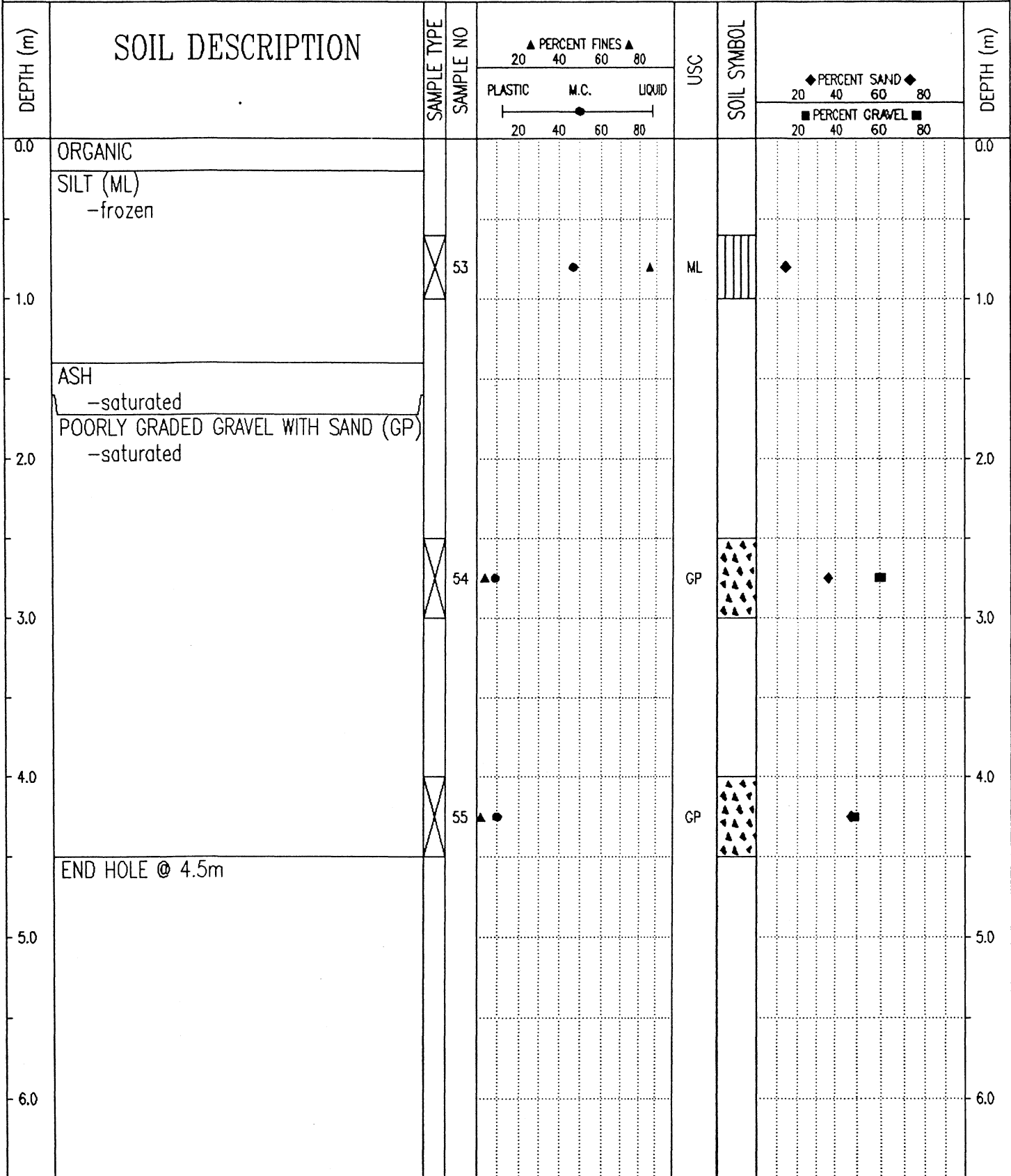
SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-355
ENGINEERING CAPITAL		KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L		LOCATION: 1819+675 20M LT CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 99/04/19
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-354
ENGINEERING CAPITAL		KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L		LOCATION: 1819+675 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 99/04/19
Fig. No:	Page 1 of 1

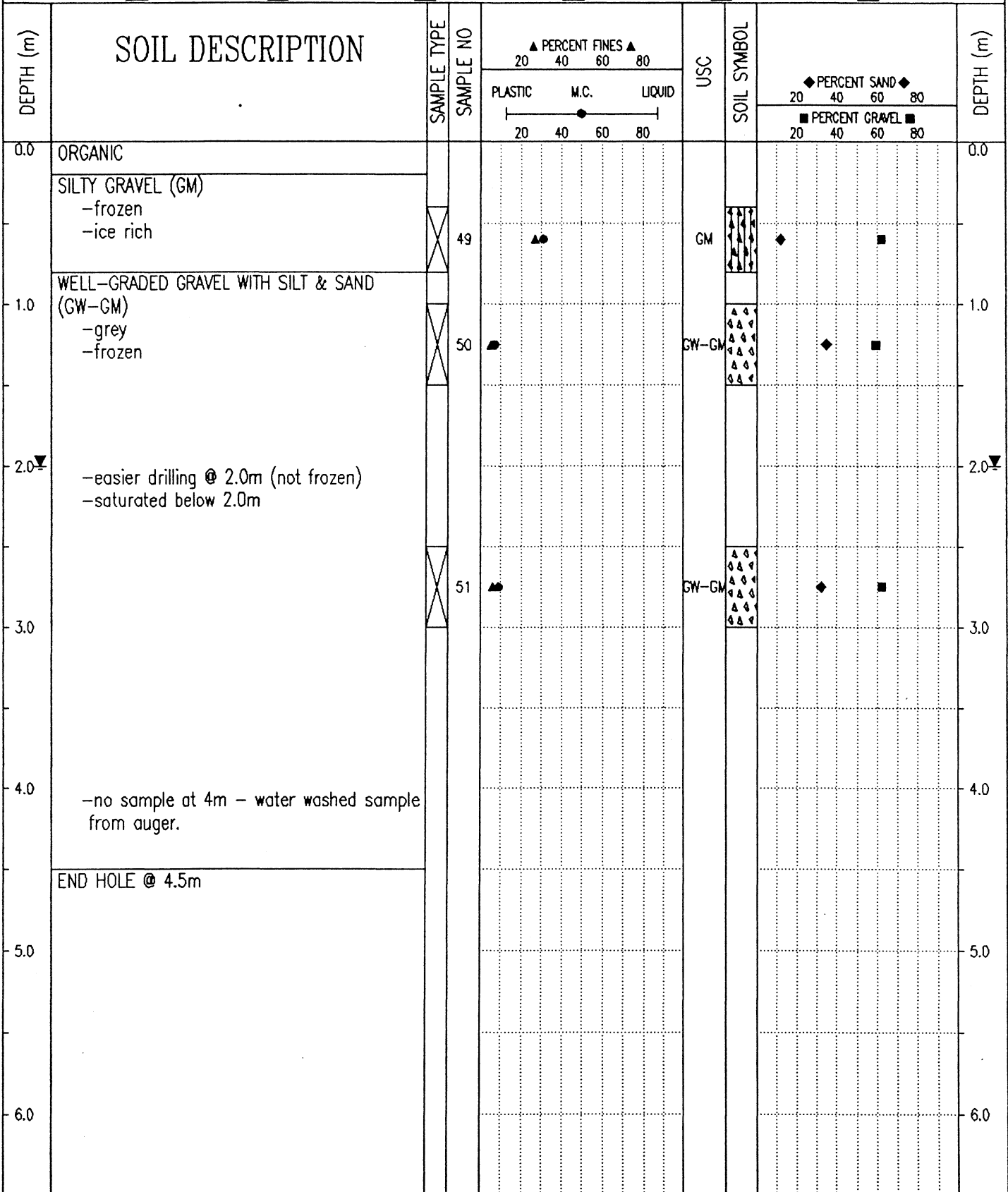
SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-353			
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329			
NODWELL B40-L		LOCATION: 1819+725 CENTRELINE		ELEVATION: 0.00 (m)			
SAMPLE TYPE		SAMPLE NO		USC			
<input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		52		SM			
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	PERCENT FINES ▲			SOIL SYMBOL	DEPTH (m)
			PLASTIC	M.C.	LIQUID		
0.0	ORGANIC						0.0
0.0 - 1.0	SILTY SAND (SM) -frozen		●	▲		■ ◆	0.0 - 1.0
1.0 - 2.0	SANDY GRAVEL -saturated -smoother / easier drilling below 1.5 -grindy drilling / water -no sample recovered from auger						2.0
2.0 - 3.0							3.0
3.0 - 4.0	-easy drilling below 3.0m						4.0
4.0 - 5.0							5.0
5.0 - 6.0	END HOLE @ 4.5m						6.0

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Transportation Engineering

LOGGED BY: G.C.
REVIEWED BY:
Fig. No:

COMPLETION DEPTH: 4.5 m
COMPLETE: 99/04/19

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-352
ENGINEERING CAPITAL	KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L	LOCATION: 1819+825 2M RT OF CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.
	<input checked="" type="checkbox"/> AUGER	<input type="checkbox"/> BULK
	<input type="checkbox"/> TUBE	<input type="checkbox"/> CORE



Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 99/04/19
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT		SHAKWAK PROJECT SEG 13		TEST HOLE NO: 509-351 A								
ENGINEERING CAPITAL		KM 1820-1815 A/H		Project No: 092-202101-0329								
NODWELL B40-L		LOCATION: 1819+875 2M RT OF CENTRELINE		ELEVATION: 0.00 (m)								
SAMPLE TYPE <input type="checkbox"/> RETURN		<input checked="" type="checkbox"/> S.P.T.		<input checked="" type="checkbox"/> AUGER								
		<input type="checkbox"/> BULK		<input type="checkbox"/> TUBE								
				<input type="checkbox"/> 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	ORGANIC SILT (ML) -grey -frozen										0.0	
1.0	POOR GRADED SAND WITH SILT (SP-SM) -frozen		46				ML				1.0	
2.0	WELL-GRADED GRAVEL WITH SAND (GW) -grey -wet -grindy drilling @ 1.5m -easier drilling below 2.0m -H2O @ 2.0m		47				SP-SM				2.0	
3.0	SANDY GRAVEL -saturated -no sample - washed off auger		48				GW				3.0	
4.5	END HOLE @ 4.5m										4.5	

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Transportation Engineering

LOGGED BY: G.C.
REVIEWED BY:
Fig. No:

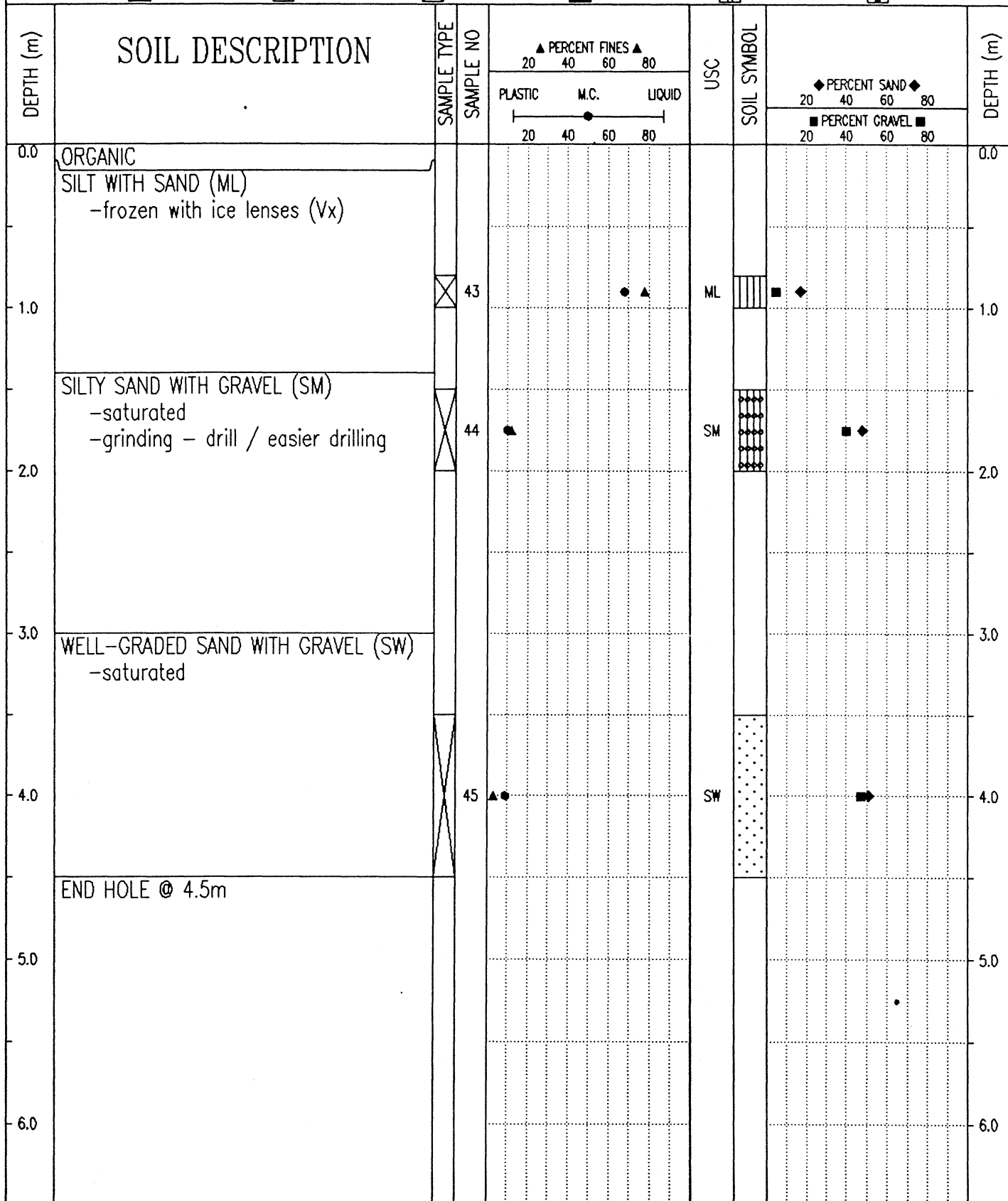
COMPLETION DEPTH: 4.5 m
COMPLETE: 99/04/19

SUBSURFACE EXPLORATION & TESTING REPORT SHAKWAK PROJECT SEG 13 TEST HOLE NO: 509-351

ENGINEERING CAPITAL KM 1820-1815 A/H Project No: 092-202101-0329

NODWELL B40-L LOCATION: 1820+000 CENTRELINE ELEVATION: 0.00 (m)

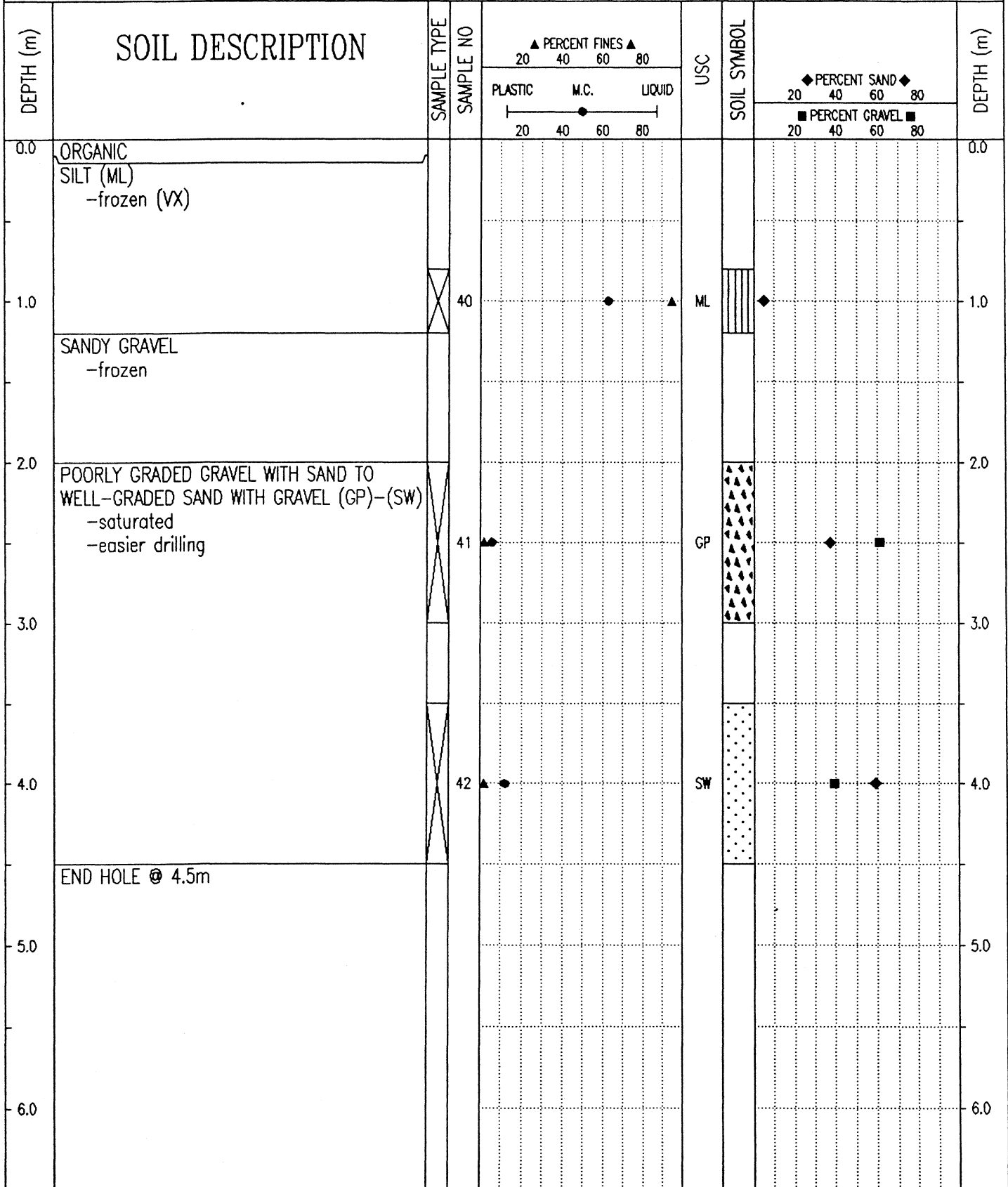
SAMPLE TYPE RETURN S.P.T. AUGER BULK TUBE CORE



Government of Yukon
Transportation Engineering

LOGGED BY: G.C. COMPLETION DEPTH: 4.5 m
 REVIEWED BY: COMPLETE: 99/04/19
 Fig. No: Page 1 of 1

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK PROJECT SEG 13	TEST HOLE NO: 509-350
ENGINEERING CAPITAL	KM 1820-1815 A/H	Project No: 092-202101-0329
NODWELL B40-L	LOCATION: 1820+050 CENTRELINE	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE	



Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 99/04/19
	Fig. No:	Page 1 of 1

GEOTECHNICAL INVESTIGATIONS

3 of 5



Community and Transportation Services
Transportation Engineering Branch

Geotechnical Services

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

ORIGINAL - Do Not Remove From File

GR-01-087

HIGHWAY CONSTRUCTION

GEOTECHNICAL INVESTIGATION
KM 1803.95 TO KM 1820.4
YUKON, 2000-2001

ALASKA HIGHWAY #1

HIGHWAY CONSTRUCTION
km 1803.95 to km 1820.4
ALASKA HIGHWAY #1
Yukon, 2000-2001
Volume 3 of 5

This Data Package prepared for project viewing:

February, 2000

Transportation Engineering Branch
Geotechnical Services
461 Range Road
Whitehorse, Yukon

VOLUME CONTENTS

VOLUME 1 OF 5

Introduction

Centreline "Subsurface Exploration & Testing Report" sheets for holes located from km 1803+925 to km 1810+000

VOLUME 2 OF 5

Centreline "Subsurface Exploration & Testing Report" sheets for holes located from km 1810+000 to km 1820+400

VOLUME 3 OF 5

Centreline laboratory sample test result sheets for holes numbered 350 to 500

VOLUME 4 OF 5

Centreline laboratory sample test result sheets for holes numbered 501 to 849

VOLUME 5 OF 5

Granular testing - km 1819 LHS

CONTENTS

INTRODUCTION

Investigation notes, classification methods and legends.

CENTRELINE TESTING

“Subsurface Exploration & Testing Report” sheets and laboratory sample test result sheets are provided. The “Subsurface Exploration & Testing Report” sheets for the centreline holes are arranged according to project location, starting at km 1803+925 and increasing to km 1820+400. The laboratory sample test result sheets are arranged according to hole number.

Auger Testing

1999	TEST HOLES 350 to 400	shown on logs with prefix 509-
	TEST HOLES 401 to 425	shown on logs with prefix 511-
	TEST HOLES 426 to 436	shown on logs with prefix 512-
	TEST HOLES 440 to 448	shown on logs with prefix 512-
	TEST HOLES 429 to 500	shown on logs with prefix 513-
	TEST HOLES 501 to 512	shown on logs with prefix 514-
	TEST HOLES 563 to 566	shown on logs with prefix 519-
	TEST HOLES 572 to 575	shown on logs with prefix 519-
	TEST HOLES 620 to 644	shown on logs with prefix 520-
	TEST HOLES 645 to 658	shown on logs with prefix 521-
	TEST HOLES 659 to 709	shown on logs with prefix 526-
	TEST HOLES 710 to 731	shown on logs with prefix 527-
	TEST HOLES 834 to 844	shown on logs with prefix 531-
	TEST HOLES 485 to 849	shown on logs with prefix 532-

Notes on plotting of Centreline Holes:

1. Hole 495 shown at ~ 1807+225 on Sheet 5 of 19 should be removed
2. Hole 400 shown at ~ 1808+520 on Sheet 6 of 19 should be removed
3. Add Hole 440 at 1811+870 (centreline) on Sheet 9 of 19
4. Add Hole 408 at 1814+625 (centreline) on Sheet 12 of 19
5. Hole 391 shown at ~ 1816+500 on Sheet 14 of 19 should read Hole 392
6. Hole 392 shown at ~ 1816+600 on Sheet 14 of 19 should read Hole 391
7. Hole 843 shown at ~ 1817+700 on Sheet 15 of 19 should read Hole 378

CONTENTS (continued)**GRANULAR TESTING - KM 1819 LHS**

"Subsurface Exploration & Testing Report" sheets, laboratory sample test result sheets, and location plans are provided.

The "Subsurface Exploration & Testing Report" sheets and the laboratory sample test result sheets are arranged according to hole number

Backhoe Testing

1994	TEST HOLES 4 to 10	shown with prefix 316-
1995	TEST HOLES 230 to 247, 249 to 250, & 252 to 253	shown with prefix 369-

Auger Testing

1995	TEST HOLES 1 to 9	shown with prefix 351-
	TEST HOLES 10 to 26	shown with prefix 352-

HIGHWAY CONSTRUCTION

GEOTECHNICAL INVESTIGATION
KM 1803.95 TO KM 1820.4
YUKON, 2000-2001

ALASKA HIGHWAY #1

CENTRELINE TESTING

hole 350 to hole 500
Laboratory Sample Test Results

PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-350
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1820+050 center line
 LOGGED BY: G.C. DATE COMP 99-04-19

FIELD NO: 40	FIELD No. 41	FIELD No: 42
LAB NO: 44	LAB No. 45	LAB No: 46
DEPTH: 0.8-1.2	DEPTH 2.0-3.0	DEPTH: 3.5-4.5
TYPE: AUGER	TYPE AUGER	TYPE: AUGER

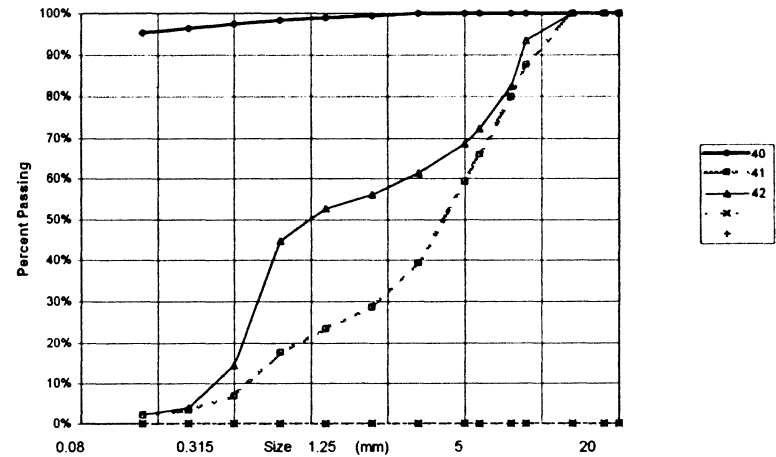
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	88%	25.0	93%
20.0	100%	20.0	80%	20.0	82%
12.5	100%	12.5	66%	12.5	72%
10.0	100%	10.0	59%	10.0	68%
5.0	100%	5.0	39%	5.0	61%
2.5	99%	2.5	28%	2.5	56%
1.25	99%	1.25	23%	1.25	53%
0.630	98%	0.630	18%	0.630	45%
0.315	97%	0.315	7%	0.315	14%
0.160	96%	0.160	3%	0.160	4%
0.080	95%	0.080	2%	0.080	2%

M.C.(%): 63%	M.C.(%): 6%	M.C.(%): 12%
LIMITS	LIMITS	LIMITS
LIQUID: 0.0	LIQUID: 0.0	LIQUID: 0.0
PLASTIC: 0.0	PLASTIC: 0.0	PLASTIC: 0.0
P.I.: 0.0	P.I.: 0.0	P.I.: 0.0

% GRAVEL: 0	% GRAVEL: 61	% GRAVEL: 39
% SAND: 5	% SAND: 37	% SAND: 59
% FINES: 95	% FINES: 2	% FINES: 2

CLASSIFICATION: SILT (ML)	CLASSIFICATION: POORLY GRADED GRAVEL WITH SAND (GP)	CLASSIFICATION: WELL-GRADED SAND WITH GRAVEL (SW)
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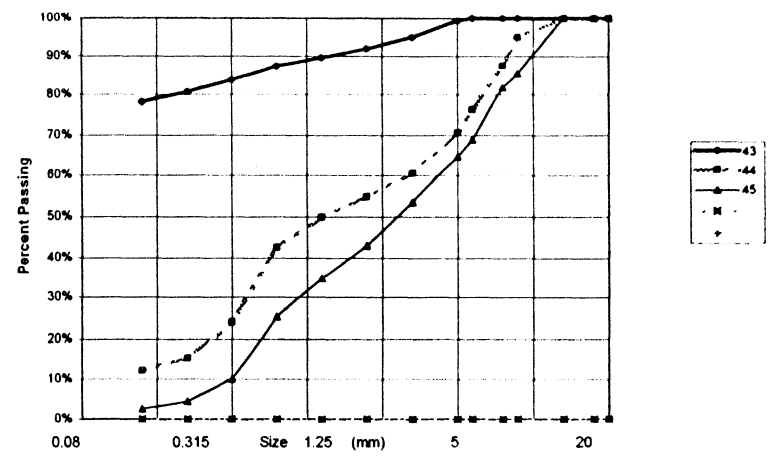
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-351
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1820+000 center line
 LOGGED BY: G.C. DATE COMP 99-04-19

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
43	47	0.8-1.0	AUGER	44	48	1.5-2.0	AUGER	45	49	3.5-4.5	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	95%	25.0	86%	25.0	86%	25.0	86%	25.0	86%
20.0	100%	20.0	88%	20.0	82%	20.0	82%	20.0	82%	20.0	82%
12.5	100%	12.5	76%	12.5	69%	12.5	69%	12.5	69%	12.5	69%
10.0	99%	10.0	71%	10.0	65%	10.0	65%	10.0	65%	10.0	65%
5.0	95%	5.0	60%	5.0	53%	5.0	53%	5.0	53%	5.0	53%
2.5	92%	2.5	55%	2.5	43%	2.5	43%	2.5	43%	2.5	43%
1.25	90%	1.25	50%	1.25	35%	1.25	35%	1.25	35%	1.25	35%
0.630	87%	0.630	43%	0.630	25%	0.630	25%	0.630	25%	0.630	25%
0.315	84%	0.315	24%	0.315	10%	0.315	10%	0.315	10%	0.315	10%
0.160	81%	0.160	15%	0.160	4%	0.160	4%	0.160	4%	0.160	4%
0.080	78%	0.080	12%	0.080	3%	0.080	3%	0.080	3%	0.080	3%
M.C. (%)	68%	M.C. (%)	10%	M.C. (%)	9%	M.C. (%)	9%	M.C. (%)	9%	M.C. (%)	9%
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	5	% GRAVEL:	40	% GRAVEL:	47	% GRAVEL:	47	% GRAVEL:	47	% GRAVEL:	47
% SAND:	17	% SAND:	48	% SAND:	51	% SAND:	51	% SAND:	51	% SAND:	51
% FINES:	78	% FINES:	12	% FINES:	3	% FINES:	3	% FINES:	3	% FINES:	3
CLASSIFICATION:	SILT WITH SAND (ML)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	WELL-GRADED SAND WITH GRAVEL (SW)	CLASSIFICATION:	WELL-GRADED SAND WITH GRAVEL (SW)	CLASSIFICATION:	WELL-GRADED SAND WITH GRAVEL (SW)	CLASSIFICATION:	WELL-GRADED SAND WITH GRAVEL (SW)

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: XXXXXXXXXX
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1819+875 2m RT
 LOGGED BY: G.C. DATE COMP 99-04-19

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
46	50	0.5-1.0	AUGER	47	51	1.0-1.5	AUGER	48	52	2.2-3.0	AUGER

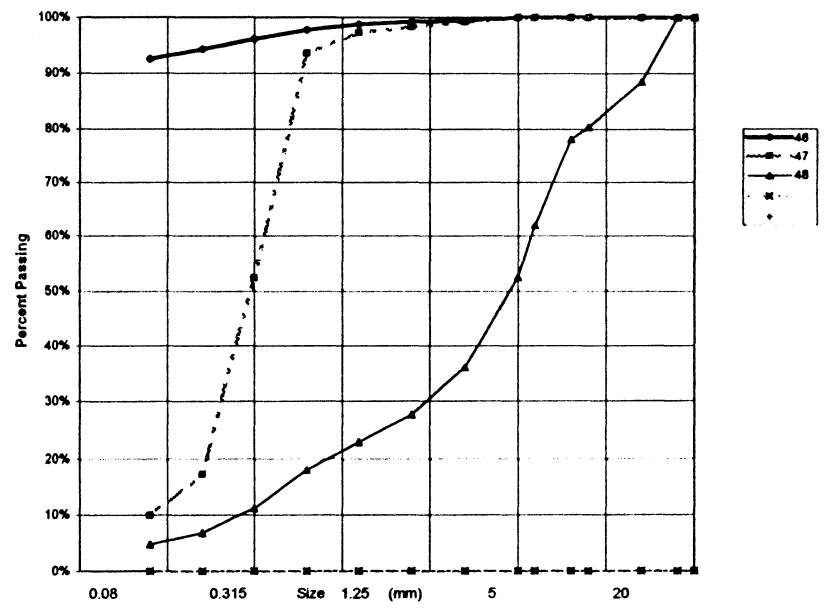
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	88%
25.0	100%	25.0	100%	25.0	80%
20.0	100%	20.0	100%	20.0	78%
12.5	100%	12.5	100%	12.5	62%
10.0	100%	10.0	100%	10.0	52%
5.0	99%	5.0	99%	5.0	36%
2.5	99%	2.5	98%	2.5	28%
1.25	99%	1.25	97%	1.25	23%
0.830	98%	0.830	94%	0.830	18%
0.315	96%	0.315	52%	0.315	11%
0.160	94%	0.160	17%	0.160	7%
0.080	93%	0.080	10%	0.080	5%

M.C. (%)	LIMITS	LIMITS	LIMITS
83%	LIQUID: 0.0	LIQUID: 0.0	LIQUID: 0.0
	PLASTIC: 0.0	PLASTIC: 0.0	PLASTIC: 0.0
	P.I.: 0.0	P.I.: 0.0	P.I.: 0.0

% GRAVEL:	% SAND:	% FINES:	% GRAVEL:	% SAND:	% FINES:	% GRAVEL:	% SAND:	% FINES:
1	7	93	1	89	10	64	31	5

CLASSIFICATION:	CLASSIFICATION:	CLASSIFICATION:
SILT (ML)	POORLY GRADED SAND WITH SILT (SP-SM)	WELL-GRADED GRAVEL WITH SAND (GW)

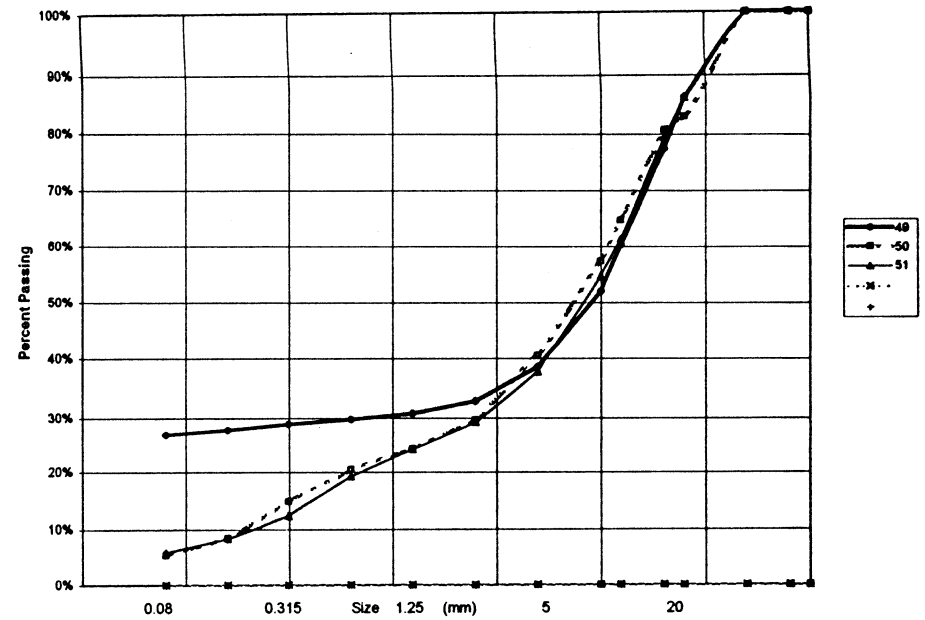
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-352
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1819+825 2m RT
 LOGGED BY: G.C. DATE COMP 99-04-19

FIELD NO: 49		FIELD No. 50		FIELD No: 51	
LAB NO: 53		LAB No. 54		LAB No: 55	
DEPTH: 0.4-0.8		DEPTH 1.0-1.5		DEPTH: 2.5-3.0	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	87%	25.0	83%	25.0	87%
20.0	77%	20.0	81%	20.0	79%
12.5	60%	12.5	65%	12.5	61%
10.0	52%	10.0	57%	10.0	55%
5.0	38%	5.0	41%	5.0	38%
2.5	33%	2.5	30%	2.5	29%
1.25	31%	1.25	24%	1.25	24%
0.630	30%	0.630	20%	0.630	19%
0.315	29%	0.315	15%	0.315	12%
0.160	28%	0.160	8%	0.160	8%
0.080	27%	0.080	5%	0.080	6%
M.C.(%): 31%		M.C.(%): 7%		M.C.(%): 9%	
LIMITS		LIMITS		LIMITS	
LIQUID: 0.0		LIQUID: 0.0		LIQUID: 0.0	
PLASTIC: 0.0		PLASTIC: 0.0		PLASTIC: 0.0	
P.I.: 0.0		P.I.: 0.0		P.I.: 0.0	
% GRAVEL: 62		% GRAVEL: 59		% GRAVEL: 62	
% SAND: 12		% SAND: 35		% SAND: 32	
% FINES: 27		% FINES: 5		% FINES: 6	
CLASSIFICATION: SILTY GRAVEL (GM)		CLASSIFICATION: WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)		CLASSIFICATION: WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	

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



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	509-353
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1819+725 center line		
LOGGED BY:	G.C.	DATE COMP	99-04-19

FIELD NO:	52
LAB NO:	56
DEPTH:	0.5-1.0
TYPE:	AUGER

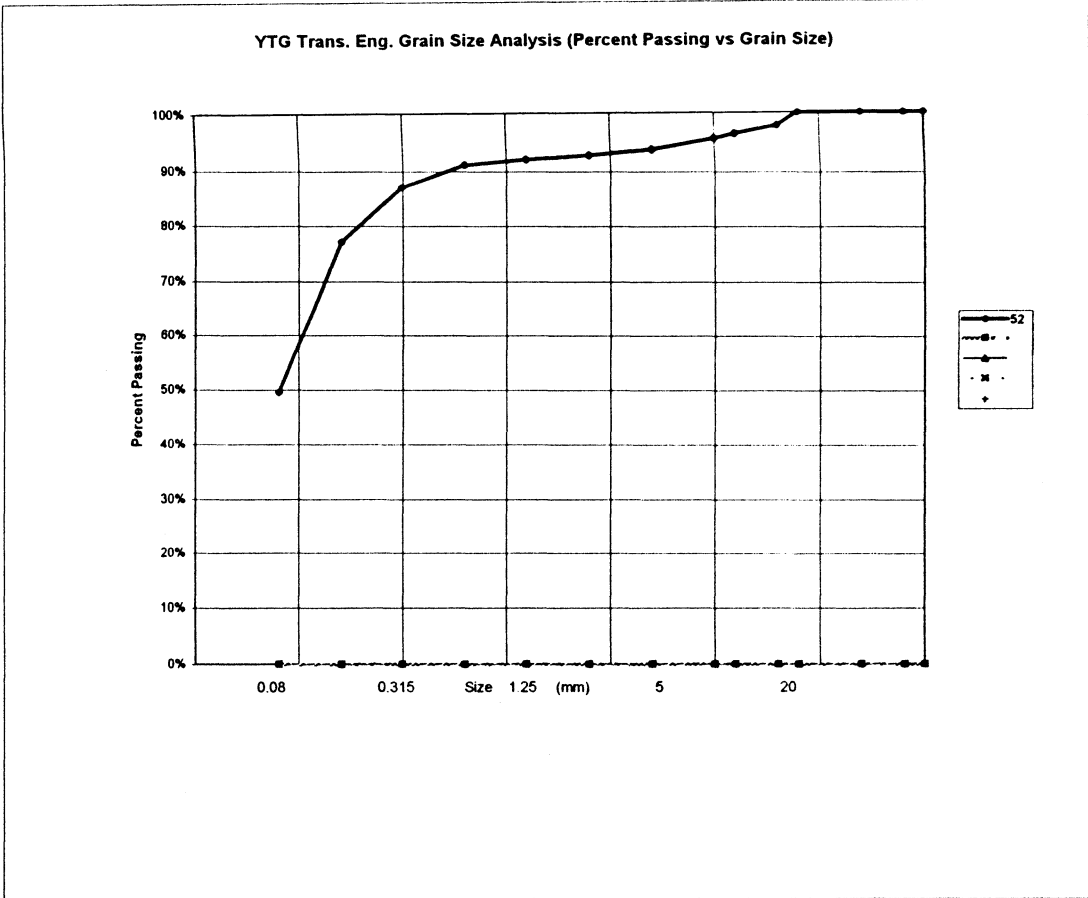
SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	98%
12.5	96%
10.0	95%
5.0	94%
2.5	93%
1.25	92%
0.630	91%
0.315	87%
0.160	77%
0.080	50%

M.C.(%):	24%
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LIMITS	
LIQUID:	0.0
PLASTIC:	0.0
P.I.:	0.0

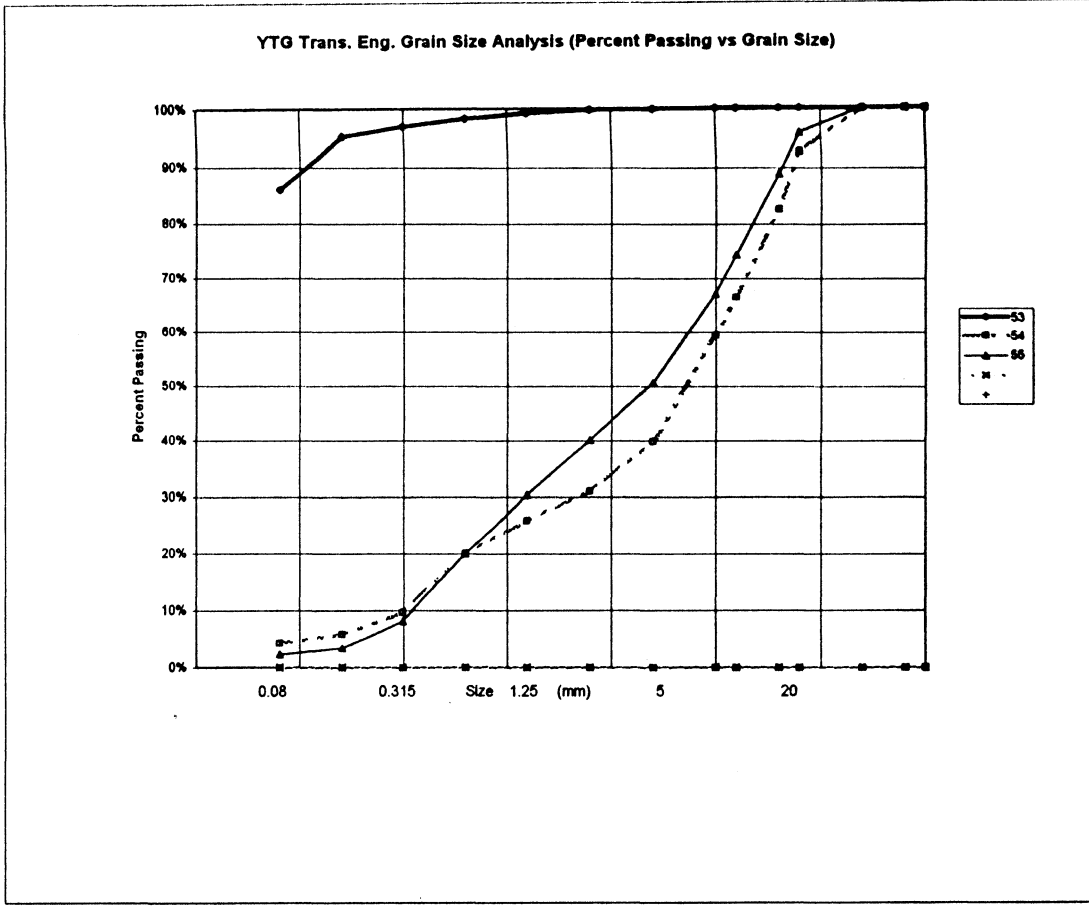
% GRAVEL:	6
% SAND:	44
% FINES:	50

CLASSIFICATION:	
SILTY SAND (SM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-354
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1790-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1819+875 center line
 LOGGED BY: G.C. DATE COMP 99-04-19

FIELD NO:	53	FIELD No:	54	FIELD No:	55
LAB NO:	57	LAB No:	58	LAB No:	59
DEPTH:	0.6-1.0	DEPTH:	2.5-3.0	DEPTH:	4.0-4.5
TYPE:	AUGER	TYPE:	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	93%	25.0	96%
20.0	100%	20.0	83%	20.0	89%
12.5	100%	12.5	67%	12.5	74%
10.0	100%	10.0	59%	10.0	67%
5.0	100%	5.0	40%	5.0	51%
2.5	100%	2.5	31%	2.5	40%
1.25	99%	1.25	26%	1.25	30%
0.630	98%	0.630	20%	0.630	20%
0.315	97%	0.315	10%	0.315	8%
0.160	95%	0.160	6%	0.160	3%
0.080	86%	0.080	4%	0.080	2%
M.C.(%):	47%	M.C.(%):	9%	M.C.(%):	10%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	0	% GRAVEL:	60	% GRAVEL:	49
% SAND:	14	% SAND:	36	% SAND:	48
% FINES:	86	% FINES:	4	% FINES:	2
CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	POORLY GRADED GRAVEL WITH SAND (GP)	CLASSIFICATION:	POORLY GRADED GRAVEL WITH SAND (GP)



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	509-355
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1819+675 20m LT	DATE COMP	99-04-19
LOGGED BY:	G.C.		

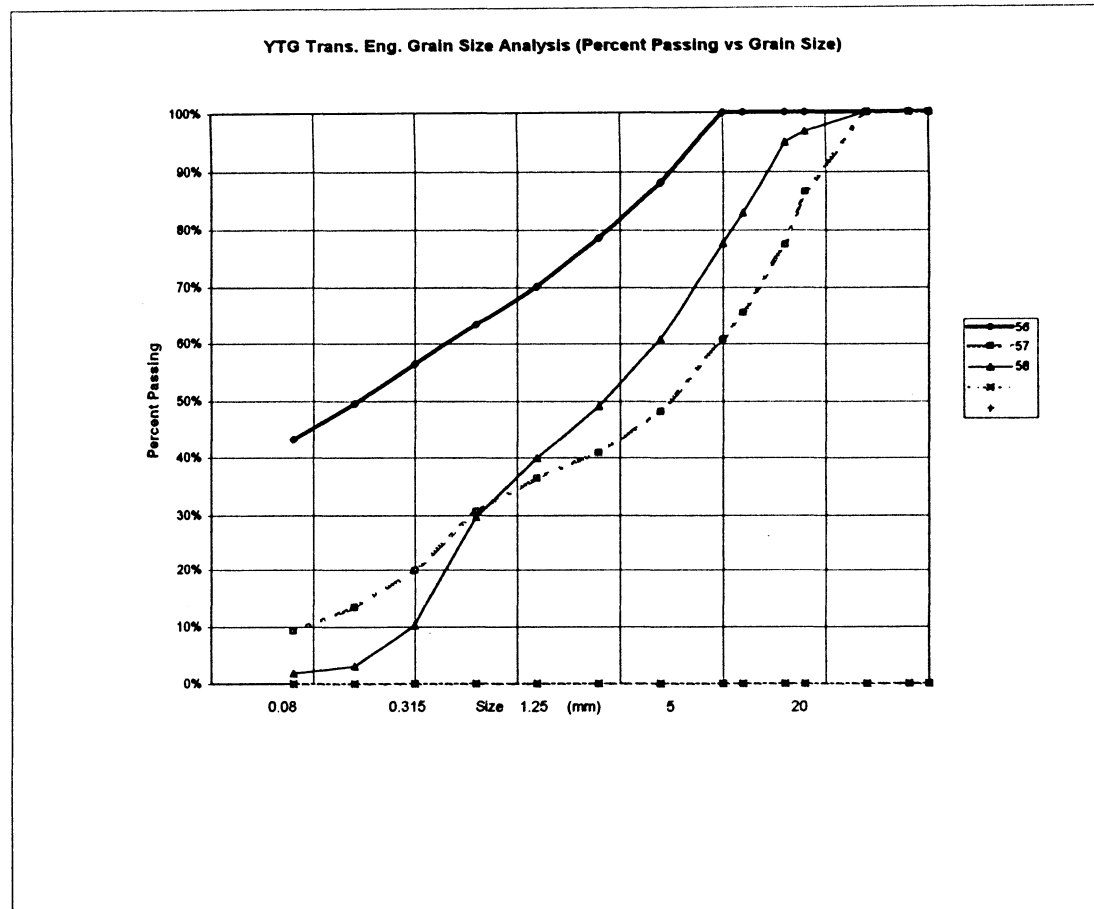
FIELD NO:	56	FIELD No:	57	FIELD No:	58
LAB NO:	60	LAB No:	61	LAB No:	62
DEPTH:	0.2-0.4	DEPTH:	2.5-3.0	DEPTH:	4.0-4.5
TYPE:	AUGER	TYPE:	AUGER	TYPE:	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	87%	25.0	97%
20.0	100%	20.0	77%	20.0	95%
12.5	100%	12.5	66%	12.5	83%
10.0	100%	10.0	61%	10.0	78%
5.0	88%	5.0	48%	5.0	61%
2.5	78%	2.5	41%	2.5	49%
1.25	70%	1.25	36%	1.25	40%
0.630	63%	0.630	31%	0.630	30%
0.315	56%	0.315	20%	0.315	10%
0.160	50%	0.160	13%	0.160	3%
0.080	43%	0.080	9%	0.080	2%

M.C.(%):	172%	M.C.(%):	10%	M.C.(%):	11%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0

% GRAVEL:	12	% GRAVEL:	52	% GRAVEL:	39
% SAND:	45	% SAND:	39	% SAND:	59
% FINES:	43	% FINES:	9	% FINES:	2

CLASSIFICATION:	CLASSIFICATION:	CLASSIFICATION:
SILTY SAND (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED SAND WITH GRAVEL (SW)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-356
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1819+575 2m RT
 LOGGED BY: G.C. DATE COMP 99-04-19

FIELD NO: 59	FIELD No. 60	FIELD No: 61
LAB NO: 63	LAB No. 64	LAB No: 65
DEPTH: 0.5-1.0	DEPTH 2.5-3.0	DEPTH: 4.0-4.5
TYPE: AUGER	TYPE AUGER	TYPE: AUGER

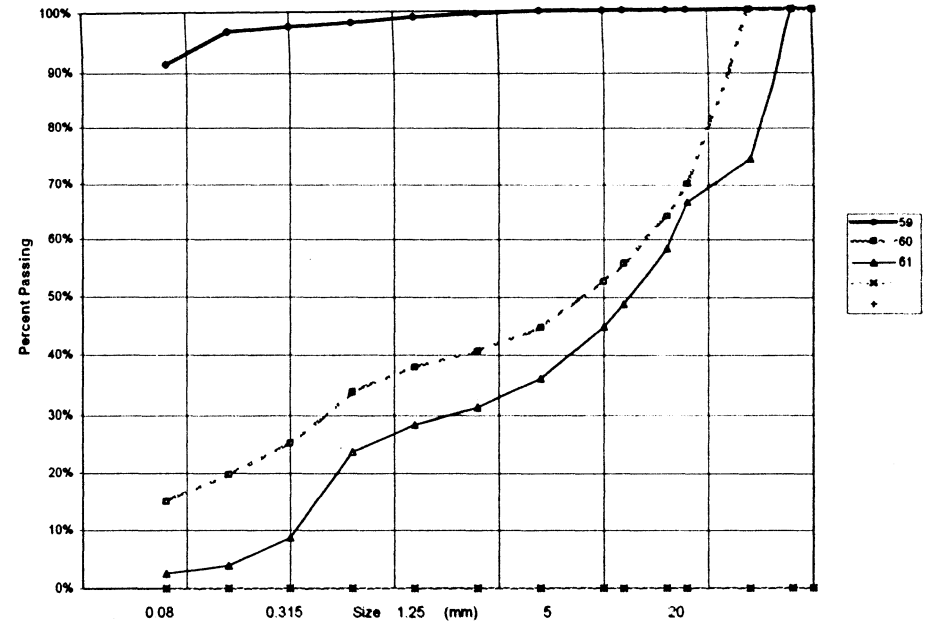
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	75%
25.0	100%	25.0	70%	25.0	67%
20.0	100%	20.0	64%	20.0	58%
12.5	100%	12.5	56%	12.5	49%
10.0	100%	10.0	53%	10.0	45%
5.0	100%	5.0	45%	5.0	36%
2.5	100%	2.5	41%	2.5	31%
1.25	99%	1.25	38%	1.25	28%
0.630	98%	0.630	34%	0.630	24%
0.315	97%	0.315	25%	0.315	9%
0.160	97%	0.160	20%	0.160	4%
0.080	91%	0.080	15%	0.080	2%

M.C. (%): 40%	M.C. (%): 12%	M.C. (%): 8%
LIMITS	LIMITS	LIMITS
LIQUID: 0.0	LIQUID: 0.0	LIQUID: 0.0
PLASTIC: 0.0	PLASTIC: 0.0	PLASTIC: 0.0
P.I.: 0.0	P.I.: 0.0	P.I.: 0.0

% GRAVEL: 0	% GRAVEL: 55	% GRAVEL: 64
% SAND: 9	% SAND: 30	% SAND: 33
% FINES: 91	% FINES: 15	% FINES: 2

CLASSIFICATION: SILT (ML)	CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION: POORLY GRADED GRAVEL WITH SAND (GP)
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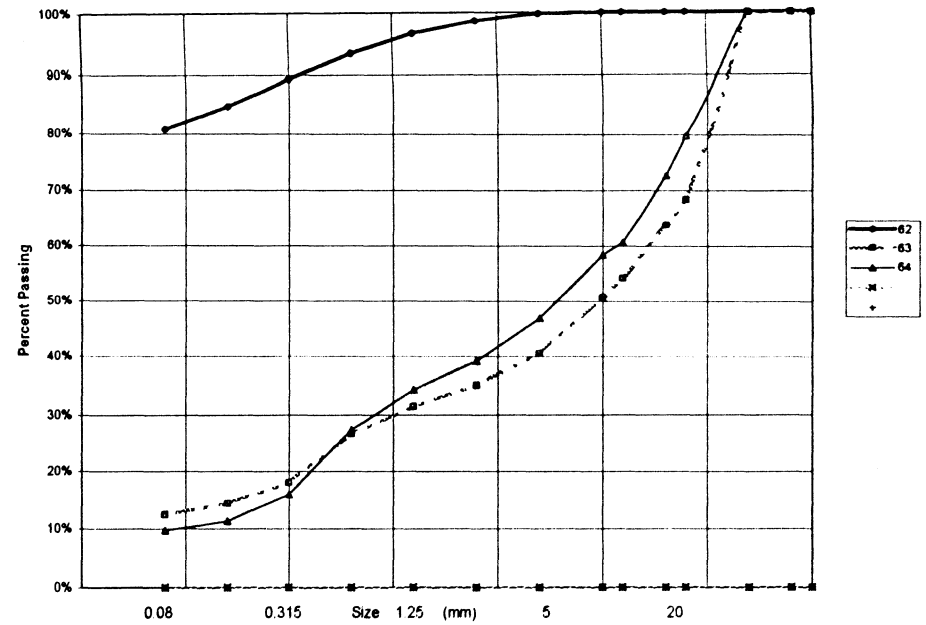
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-357
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1819+475 center line
 LOGGED BY: G.C. DATE COMP 99-04-19

FIELD NO: 62		FIELD No. 63		FIELD No. 64	
LAB NO: 66		LAB No. 67		LAB No. 68	
DEPTH: 0.5-1.0		DEPTH 2.5-3.0		DEPTH: 4.0-4.5	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	69%	25.0	80%
20.0	100%	20.0	64%	20.0	73%
12.5	100%	12.5	54%	12.5	61%
10.0	100%	10.0	51%	10.0	58%
5.0	100%	5.0	41%	5.0	47%
2.5	99%	2.5	35%	2.5	39%
1.25	98%	1.25	31%	1.25	34%
0.630	93%	0.630	27%	0.630	27%
0.315	89%	0.315	18%	0.315	16%
0.160	85%	0.160	14%	0.160	11%
0.080	81%	0.080	12%	0.080	10%
M.C. (%)	88%	M.C. (%)	9%	M.C. (%)	11%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	0	% GRAVEL:	59	% GRAVEL:	53
% SAND:	19	% SAND:	28	% SAND:	37
% FINES:	81	% FINES:	12	% FINES:	10
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILT WITH SAND (ML)		SILTY GRAVEL WITH SAND (GM)		POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	

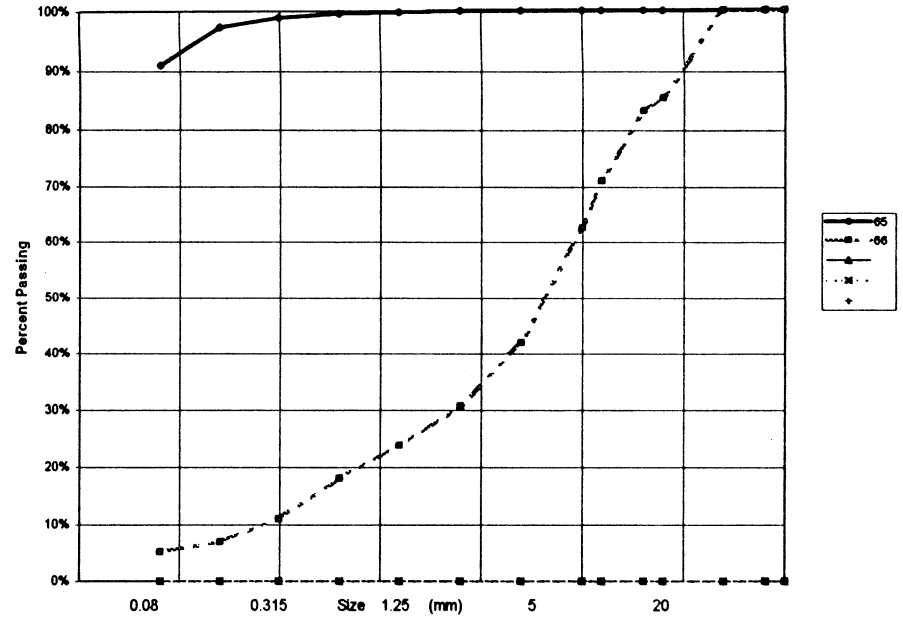
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-358
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1819+375 center line
 LOGGED BY: G.C. DATE COMP 99-04-19

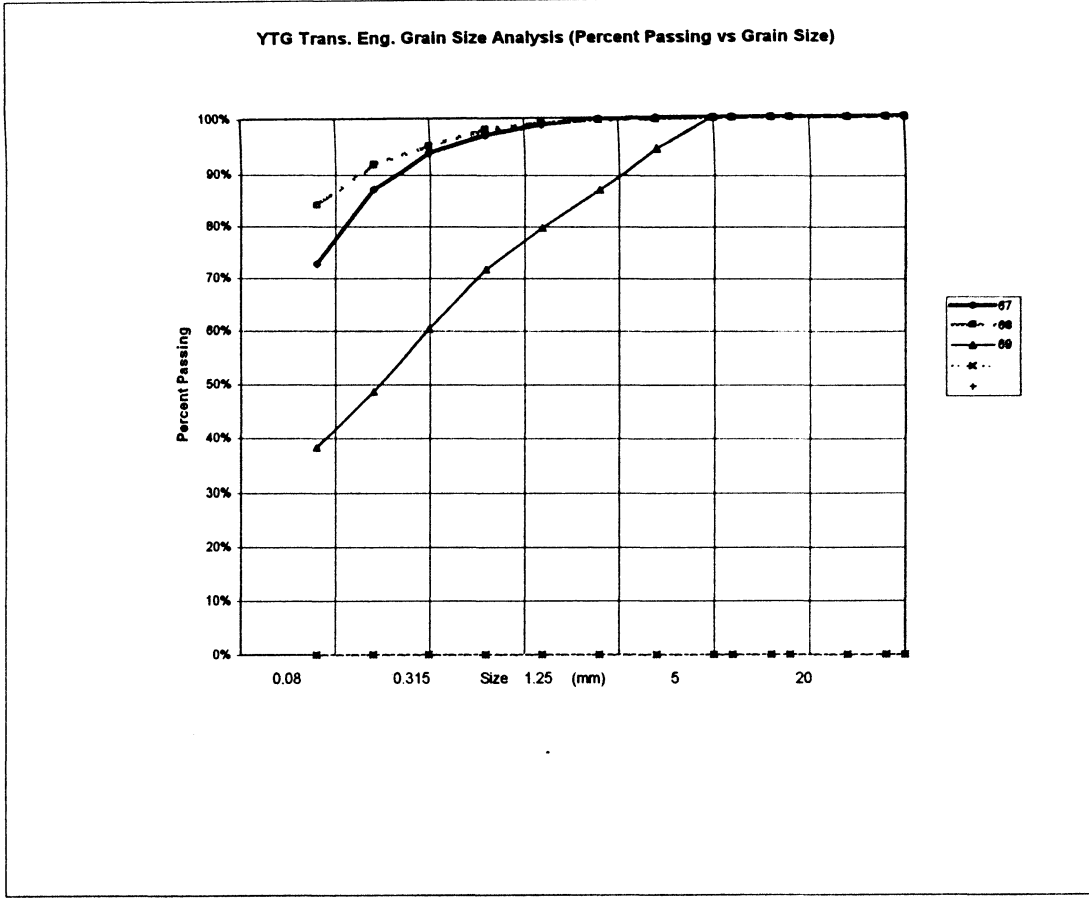
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	86%
20.0	100%	20.0	83%
12.5	100%	12.5	71%
10.0	100%	10.0	63%
5.0	100%	5.0	42%
2.5	100%	2.5	31%
1.25	100%	1.25	24%
0.630	100%	0.630	18%
0.315	99%	0.315	11%
0.160	97%	0.160	7%
0.080	91%	0.080	5%
M.C.(%): 42% M.C.(%): 8%			
LIMITS			
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	0	% GRAVEL:	58
% SAND:	9	% SAND:	37
% FINES:	91	% FINES:	5
CLASSIFICATION:			
SILT (ML)		POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-359
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1819+275 1m RT
 LOGGED BY: G.C. DATE COMP 99-04-19

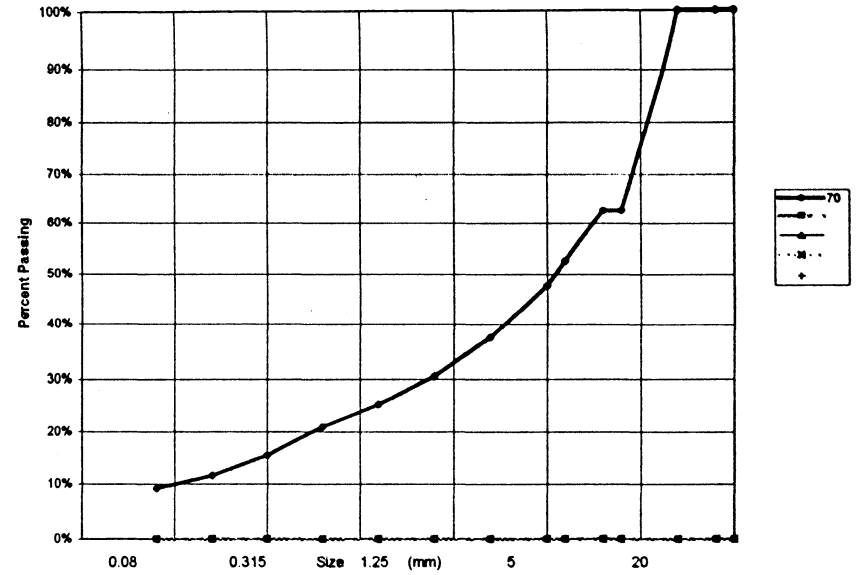
FIELD NO: 67		FIELD No. 68		FIELD No: 69	
LAB NO: 71		LAB No. 72		LAB No: 73	
DEPTH: 1.5-2.0		DEPTH 2.5-3.0		DEPTH: 4.0-4.5	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	100%
20.0	100%	20.0	100%	20.0	100%
12.5	100%	12.5	100%	12.5	100%
10.0	100%	10.0	100%	10.0	100%
5.0	100%	5.0	100%	5.0	95%
2.5	100%	2.5	100%	2.5	87%
1.25	99%	1.25	99%	1.25	80%
0.630	97%	0.630	98%	0.630	72%
0.315	94%	0.315	95%	0.315	60%
0.160	87%	0.160	92%	0.160	49%
0.080	73%	0.080	84%	0.080	38%
M.C.(%):	51%	M.C.(%):	55%	M.C.(%):	25%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	0	% GRAVEL:	0	% GRAVEL:	5
% SAND:	27	% SAND:	16	% SAND:	57
% FINES:	73	% FINES:	84	% FINES:	38
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILT WITH SAND (ML)		SILT WITH SAND (ML)		SILTY SAND (SM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-360
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1819+200 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-04-19

FIELD NO: 70			
LAB NO: 74			
DEPTH: 1.5-2.0			
TYPE: AUGER			
SIEVE SIZE	PERCENT PASSING		
100.0	100%		
80.0	100%		
50.0	100%		
25.0	63%		
20.0	63%		
12.5	53%		
10.0	48%		
5.0	37%		
2.5	30%		
1.25	25%		
0.630	21%		
0.315	15%		
0.160	12%		
0.080	9%		
M.C.(%):	5%		
LIMITS			
LIQUID:	0.0		
PLASTIC:	0.0		
P.I.:	0.0		
% GRAVEL:	63		
% SAND:	28		
% FINES:	9		
CLASSIFICATION:			
POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

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

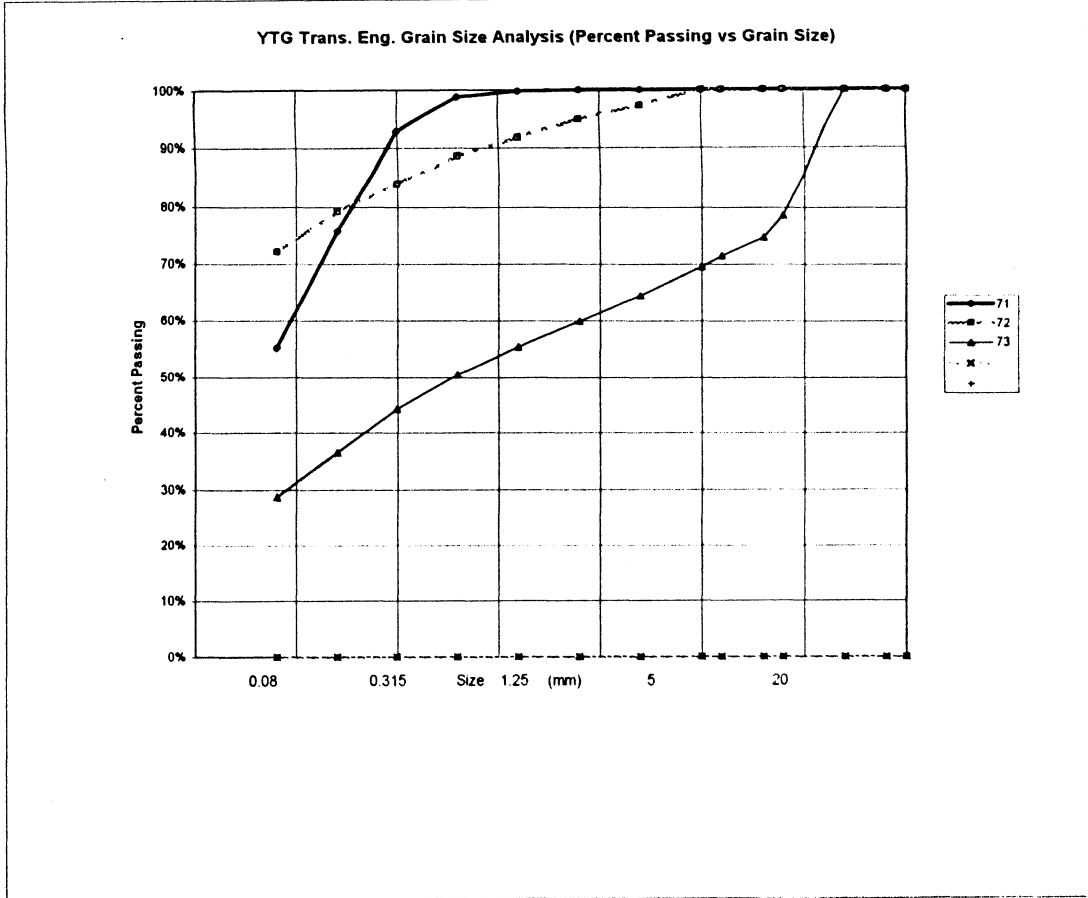


PROJECT NUMBER: 091-202101-0329-199		HOLE No.: 509-361	
CLIENT: ENGINEERING CAPITAL			
PROJECT NAME: SHAKWAK SEG 13			
PROJECT LOCATION: KM 1799-1822 A/H			
DRILL UNIT: B-40-L Nodwell			
HOLE LOCATION: 1819+100 center line		DATE COMP 99-04-19	
LOGGED BY: G.C.			

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
71	75	0.2-0.5	AUGER	72	76	2.8-3.2	AUGER	73	77	4.0-4.5	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	79%
20.0	100%	20.0	100%	20.0	75%
12.5	100%	12.5	100%	12.5	71%
10.0	100%	10.0	100%	10.0	70%
5.0	100%	5.0	97%	5.0	65%
2.5	100%	2.5	95%	2.5	60%
1.25	100%	1.25	92%	1.25	55%
0.630	99%	0.630	89%	0.630	50%
0.315	93%	0.315	84%	0.315	44%
0.160	76%	0.160	79%	0.160	36%
0.080	55%	0.080	72%	0.080	29%

M.C.(%):	12%	M.C.(%):	33%	M.C.(%):	16%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	0	% GRAVEL:	3	% GRAVEL:	35
% SAND:	45	% SAND:	25	% SAND:	38
% FINES:	55	% FINES:	72	% FINES:	29
CLASSIFICATION:	SANDY SILT (ML)	CLASSIFICATION:	SILT WITH SAND (ML)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-362
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B.40-L Nodwell
 HOLE LOCATION: 1819+000 center line
 LOGGED BY: G.C. DATE COMP 99-04-20

FIELD NO: 74
 LAB NO: 78
 DEPTH: 1.3-1.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	97%
12.5	82%
10.0	74%
5.0	59%
2.5	51%
1.25	44%
0.630	36%
0.315	26%
0.160	19%
0.080	14%

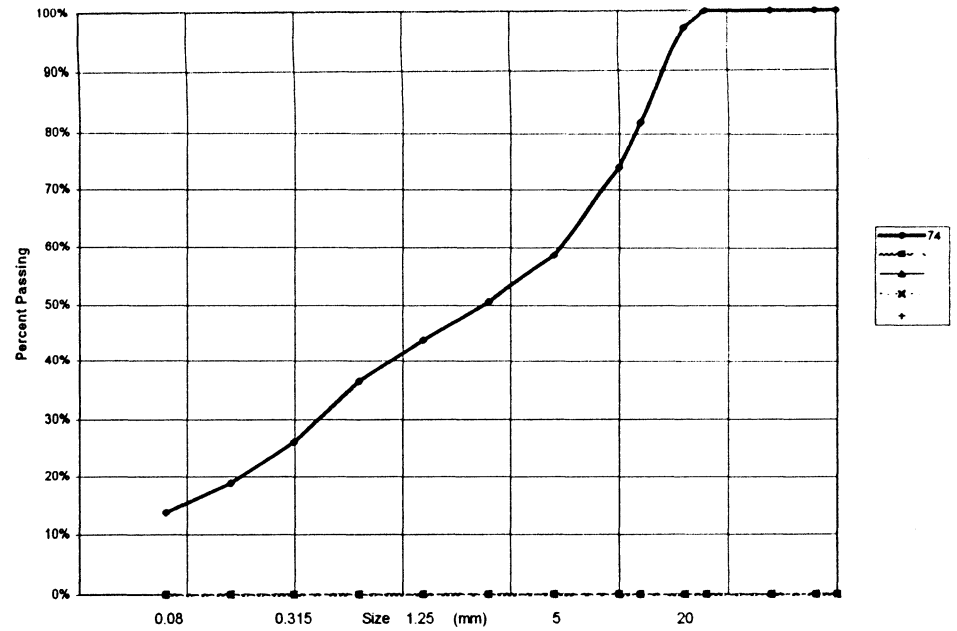
M.C.(%): 11%

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

% GRAVEL: 41
 % SAND: 45
 % FINES: 14

CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM)

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

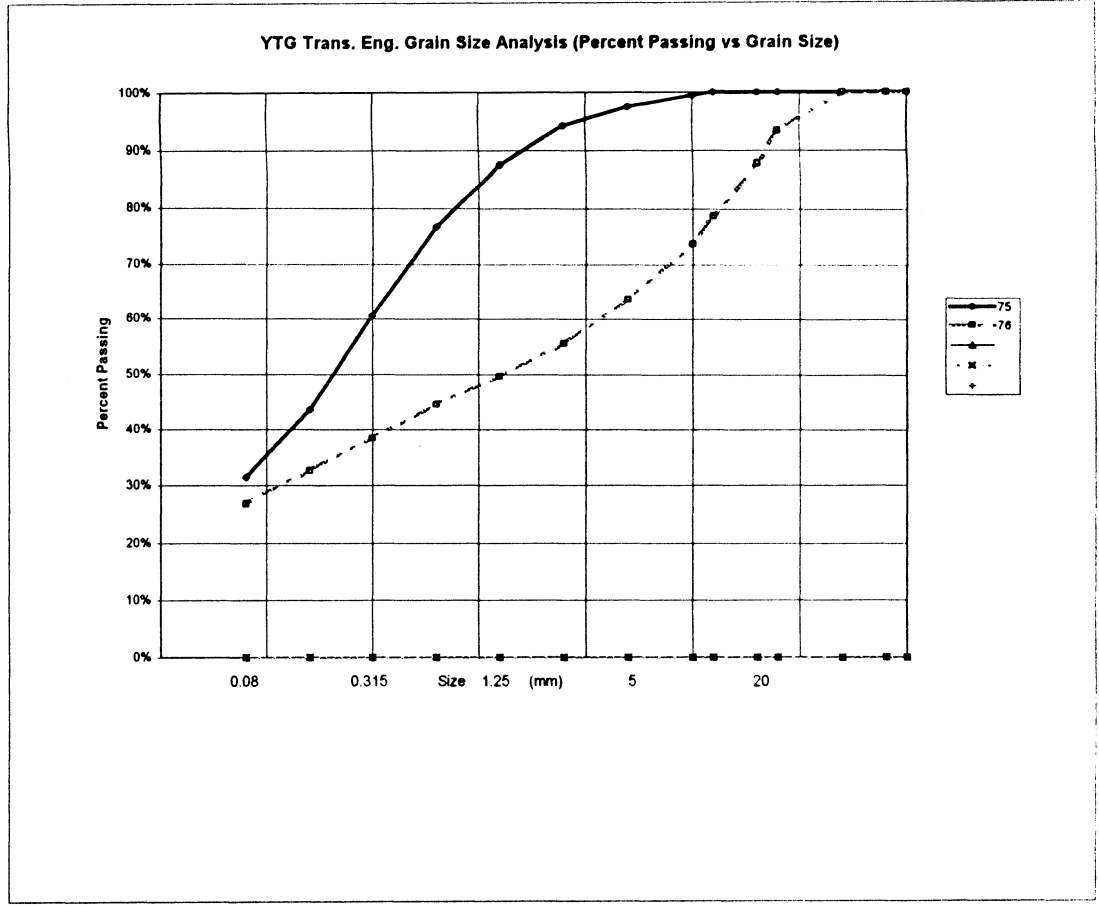


PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	509-363
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1818+775 20m RT		
LOGGED BY:	G.C.	DATE COMP	99-04-20

FIELD NO:	75	FIELD No:	76
LAB NO:	79	LAB No:	80
DEPTH:	0.8-1.2	DEPTH	2.2-2.4
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	93%
20.0	100%	20.0	88%
12.5	100%	12.5	79%
10.0	99%	10.0	74%
5.0	97%	5.0	64%
2.5	94%	2.5	56%
1.25	88%	1.25	50%
0.630	77%	0.630	45%
0.315	61%	0.315	38%
0.160	44%	0.160	33%
0.080	31%	0.080	27%

M.C.(%):	17%	M.C.(%):	19%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	3	% GRAVEL:	36
% SAND:	66	% SAND:	37
% FINES:	31	% FINES:	27
CLASSIFICATION:		CLASSIFICATION:	
	SILTY SAND (SM)		SILTY SAND WITH GRAVEL (SM)



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	509-364
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 AH		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1818+775 10m LT		
LOGGED BY:	G.C.	DATE COMP	99-04-20

FIELD NO:	77	FIELD No.	78
LAB NO:	81	LAB No.	82
DEPTH:	1.8-2.4	DEPTH	4.0-4.5
TYPE:	AUGER	TYPE	AUGER

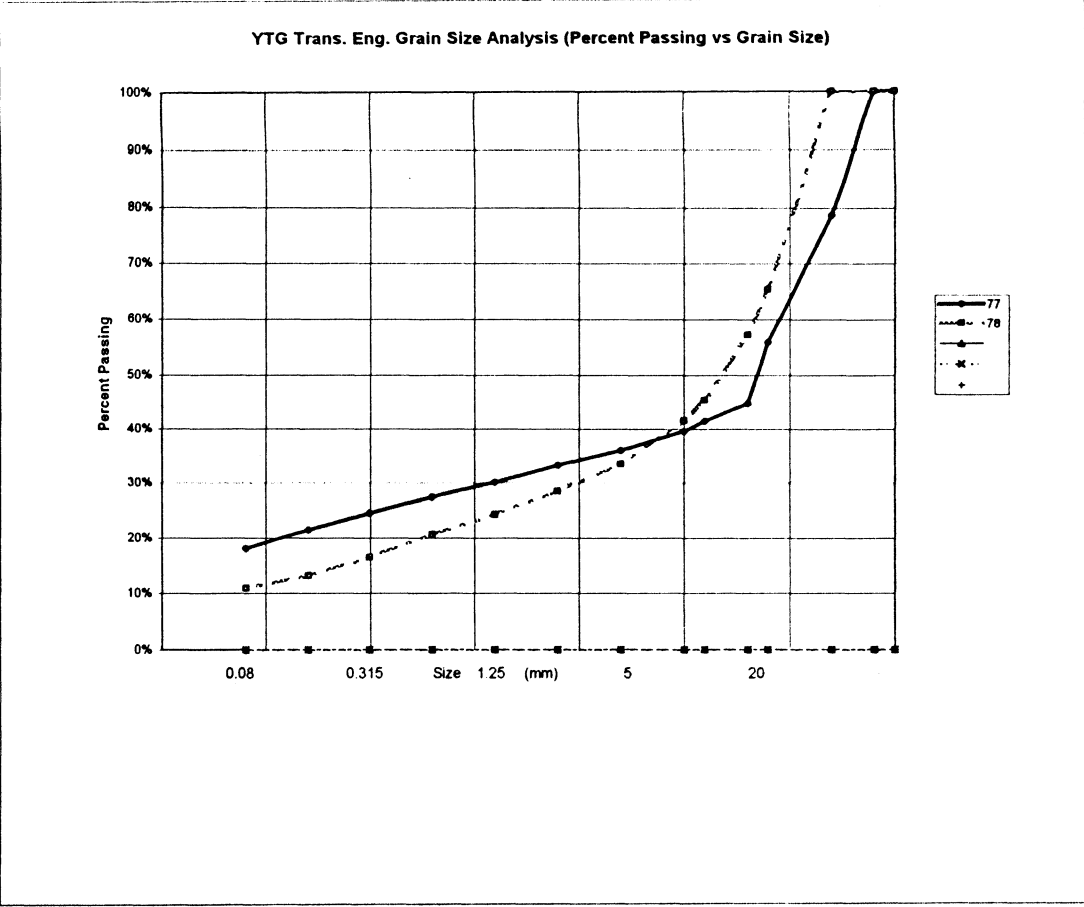
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	79%	50.0	100%
25.0	56%	25.0	65%
20.0	45%	20.0	57%
12.5	41%	12.5	45%
10.0	40%	10.0	42%
5.0	36%	5.0	34%
2.5	33%	2.5	28%
1.25	30%	1.25	24%
0.830	27%	0.830	21%
0.315	25%	0.315	16%
0.160	21%	0.160	13%
0.080	18%	0.080	11%

M.C.(%):	11%	M.C.(%):	7%
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LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0

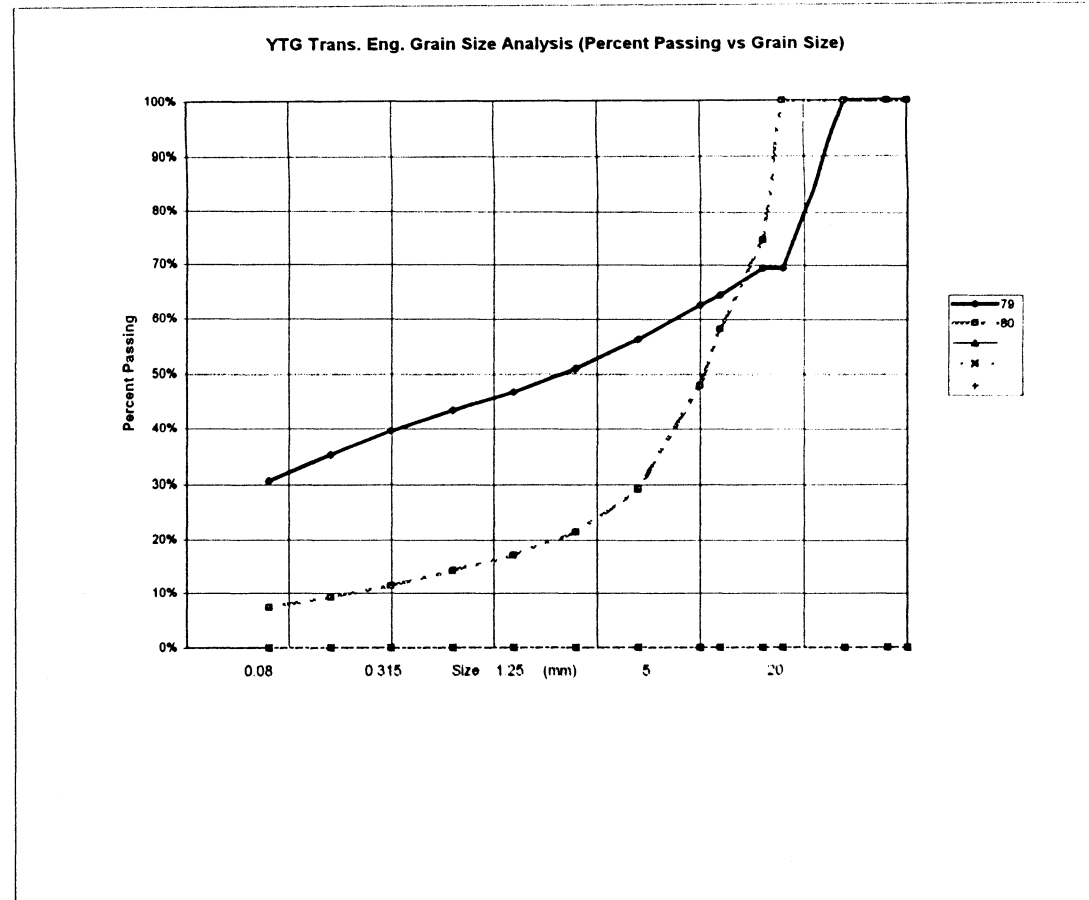
% GRAVEL:	64	% GRAVEL:	66
% SAND:	18	% SAND:	23
% FINES:	18	% FINES:	11

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-365
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1818+725 10m RT
 LOGGED BY: G.C. DATE COMP 99-04-20

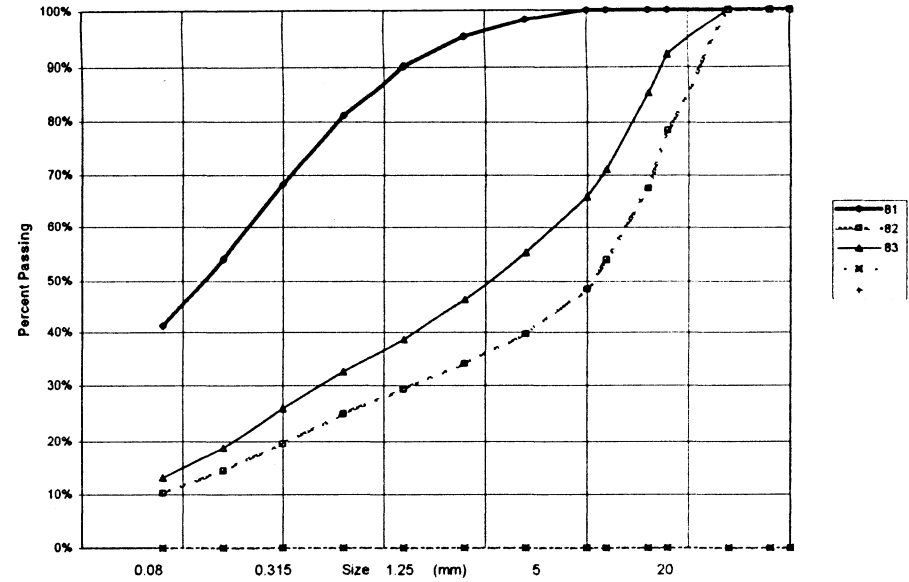
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	69%	25.0	100%
20.0	69%	20.0	75%
12.5	65%	12.5	58%
10.0	63%	10.0	48%
5.0	56%	5.0	29%
2.5	51%	2.5	21%
1.25	47%	1.25	17%
0.630	43%	0.630	14%
0.315	40%	0.315	11%
0.160	35%	0.160	9%
0.080	31%	0.080	7%
M.C.(%): 32%		M.C.(%): 5%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	44	% GRAVEL:	71
% SAND:	26	% SAND:	22
% FINES:	31	% FINES:	7
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-366
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1818+355 center line
 LOGGED BY: G.C. DATE COMP 99-04-20

FIELD NO:	81	FIELD No:	82	FIELD No:	83
LAB NO:	85	LAB No:	86	LAB No:	87
DEPTH:	1.0-1.5	DEPTH:	2.5-3.0	DEPTH:	4.0-4.5
TYPE:	AUGER	TYPE:	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	78%	25.0	92%
20.0	100%	20.0	67%	20.0	86%
12.5	100%	12.5	54%	12.5	71%
10.0	100%	10.0	49%	10.0	66%
5.0	98%	5.0	40%	5.0	55%
2.5	95%	2.5	34%	2.5	46%
1.25	90%	1.25	29%	1.25	39%
0.630	81%	0.630	25%	0.630	32%
0.315	68%	0.315	19%	0.315	26%
0.160	54%	0.160	14%	0.160	19%
0.080	41%	0.080	10%	0.080	13%
M.C.(%):	20%	M.C.(%):	6%	M.C.(%):	12%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	2	% GRAVEL:	60	% GRAVEL:	45
% SAND:	57	% SAND:	29	% SAND:	42
% FINES:	41	% FINES:	10	% FINES:	13
CLASSIFICATION:	SILTY SAND (SM)	CLASSIFICATION:	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-367
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1818+350 20m RT
 LOGGED BY: G.C. DATE COMP 99-04-20

FIELD NO: 84 FIELD No. 85
 LAB NO: 88 LAB No. 89
 DEPTH: 2.0-2.5 DEPTH 3.2-3.6
 TYPE: AUGER TYPE AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	84%
20.0	100%	20.0	82%
12.5	100%	12.5	63%
10.0	100%	10.0	52%
5.0	100%	5.0	32%
2.5	99%	2.5	22%
1.25	97%	1.25	16%
0.630	92%	0.630	12%
0.315	82%	0.315	9%
0.160	71%	0.160	6%
0.080	58%	0.080	5%

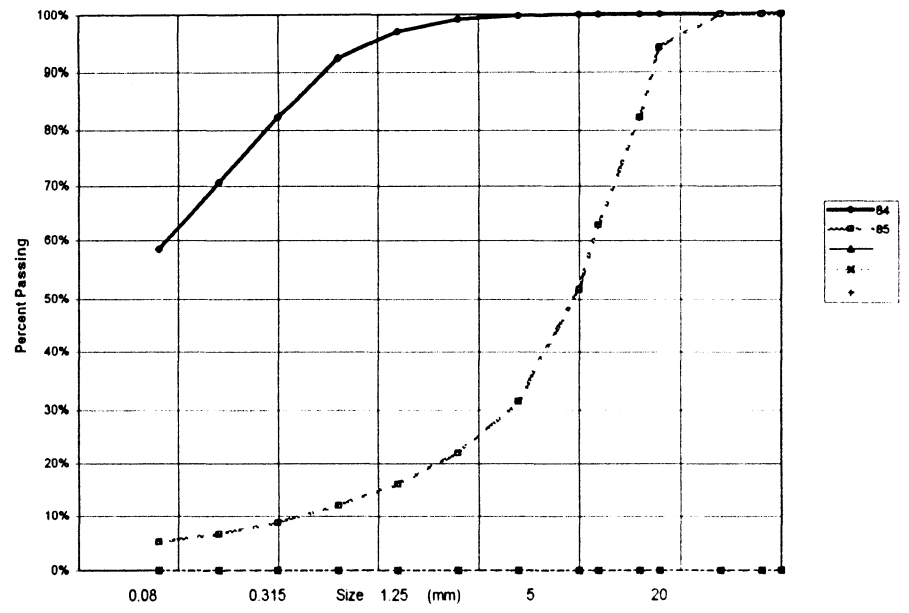
M.C.(%): 49% M.C.(%): 6%

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

% GRAVEL: 0 % GRAVEL: 68
 % SAND: 41 % SAND: 26
 % FINES: 58 % FINES: 5

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

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



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	509-368
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1818+275 5m LT		
LOGGED BY:	G.C.	DATE COMP	99-04-20

FIELD NO:	86	FIELD No:	87	FIELD No:	88
LAB NO:	90	LAB No:	91	LAB No:	92
DEPTH:	0.8-1.0	DEPTH:	1.8-2.0	DEPTH:	4.0-4.5
TYPE:	AUGER	TYPE:	AUGER	TYPE:	AUGER

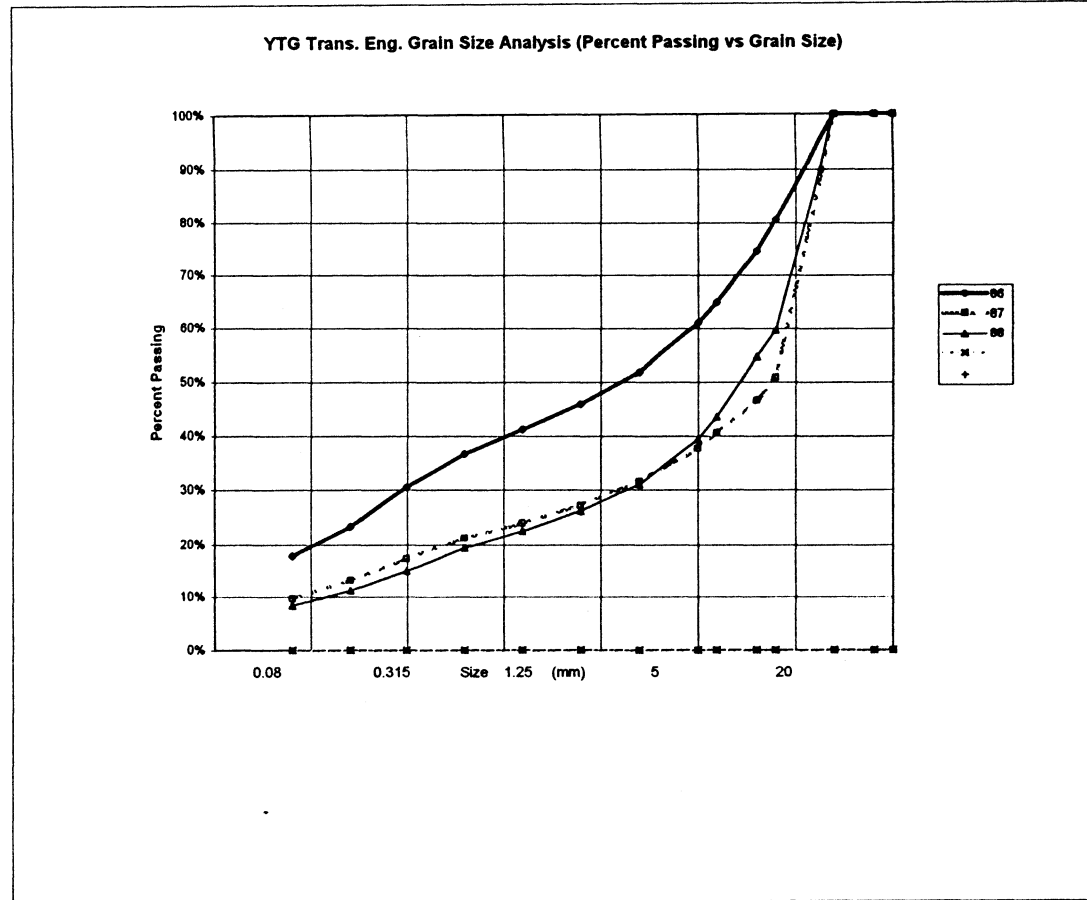
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	81%	25.0	51%	25.0	60%
20.0	75%	20.0	47%	20.0	55%
12.5	65%	12.5	41%	12.5	44%
10.0	61%	10.0	38%	10.0	39%
5.0	52%	5.0	32%	5.0	31%
2.5	46%	2.5	27%	2.5	26%
1.25	41%	1.25	24%	1.25	23%
0.630	37%	0.630	21%	0.630	19%
0.315	30%	0.315	17%	0.315	15%
0.160	23%	0.160	13%	0.160	11%
0.080	18%	0.080	10%	0.080	8%

M.C.(%):	5%	M.C.(%):	3%	M.C.(%):	3%
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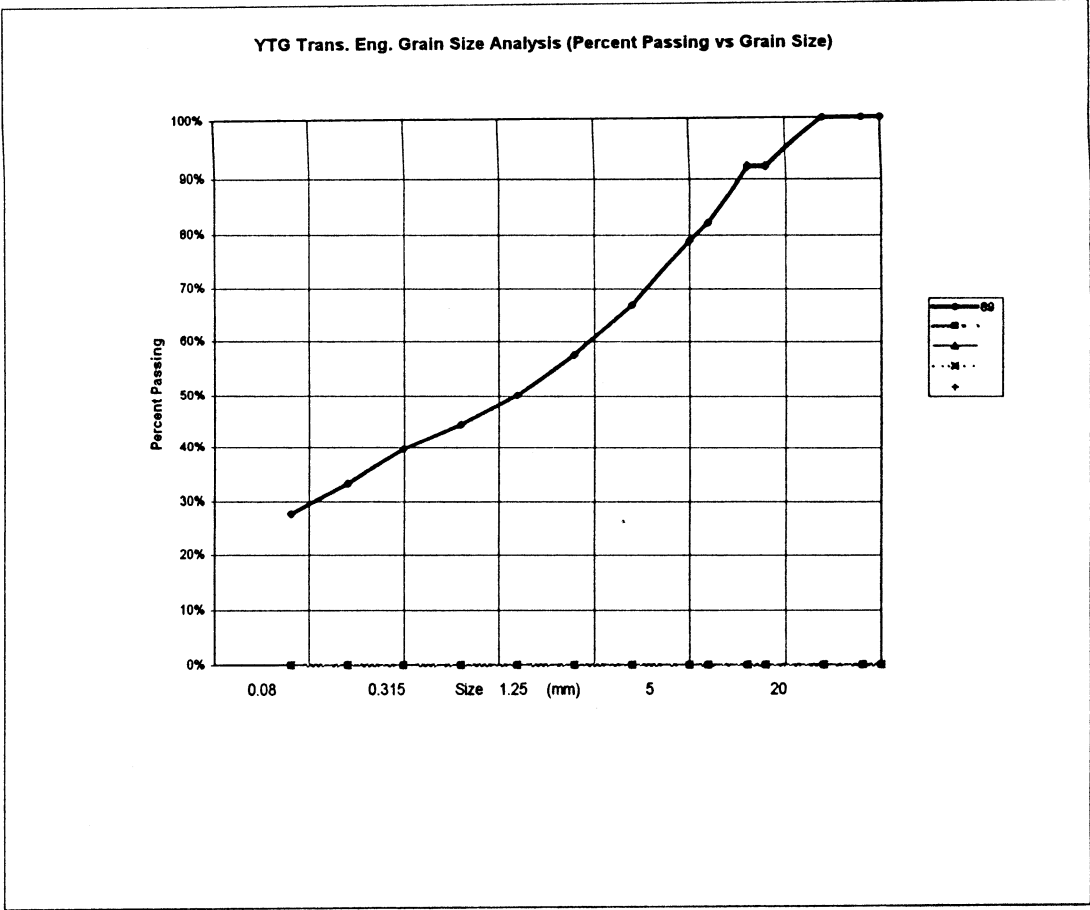
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0

% GRAVEL:	48	% GRAVEL:	68	% GRAVEL:	69
% SAND:	34	% SAND:	22	% SAND:	23
% FINES:	18	% FINES:	10	% FINES:	8

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



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	509-369
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1818+200 CENTRELINE	DATE COMP	99-04-20
LOGGED BY:	G.C.		
=====			
FIELD NO:	89		
LAB NO:	93		
DEPTH:	2.6-3.0		
TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING		
100.0	100%		
80.0	100%		
50.0	100%		
25.0	92%		
20.0	92%		
12.5	82%		
10.0	79%		
5.0	67%		
2.5	58%		
1.25	50%		
0.830	44%		
0.315	40%		
0.160	33%		
0.080	28%		
M.C.(%):	12%		
LIMITS			
LIQUID:	0.0		
PLASTIC:	0.0		
P.I.:	0.0		
% GRAVEL:	33		
% SAND:	39		
% FINES:	28		
CLASSIFICATION:			
SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	509-370
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1818+100 10M RT		
LOGGED BY:	G.C.	DATE COMP	99-04-20

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.:	LAB No.:	DEPTH:	TYPE:	FIELD No.:	LAB No.:	DEPTH:	TYPE:
90	94	0.8-1.0	AUGER	91	95	1.6-2.0	AUGER	92	98	4.0-4.5	AUGER

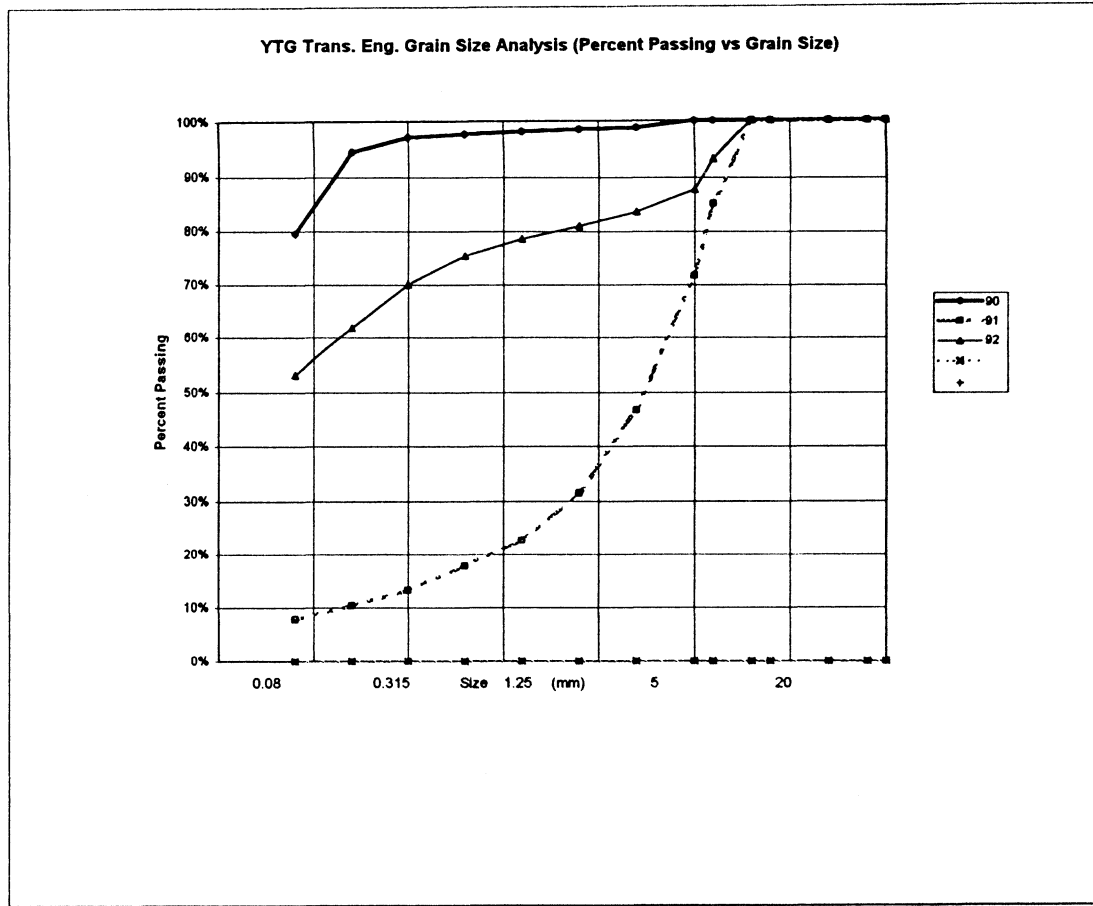
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	100%
20.0	100%	20.0	100%	20.0	100%
12.5	100%	12.5	85%	12.5	93%
10.0	100%	10.0	72%	10.0	88%
5.0	99%	5.0	47%	5.0	84%
2.5	98%	2.5	31%	2.5	81%
1.25	98%	1.25	23%	1.25	79%
0.630	98%	0.630	18%	0.630	75%
0.315	97%	0.315	13%	0.315	70%
0.160	94%	0.160	10%	0.160	62%
0.080	80%	0.080	8%	0.080	53%

M.C.(%):	42%	M.C.(%):	12%	M.C.(%):	44%
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LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0

% GRAVEL:	1	% GRAVEL:	53	% GRAVEL:	16
% SAND:	19	% SAND:	39	% SAND:	30
% FINES:	80	% FINES:	8	% FINES:	53

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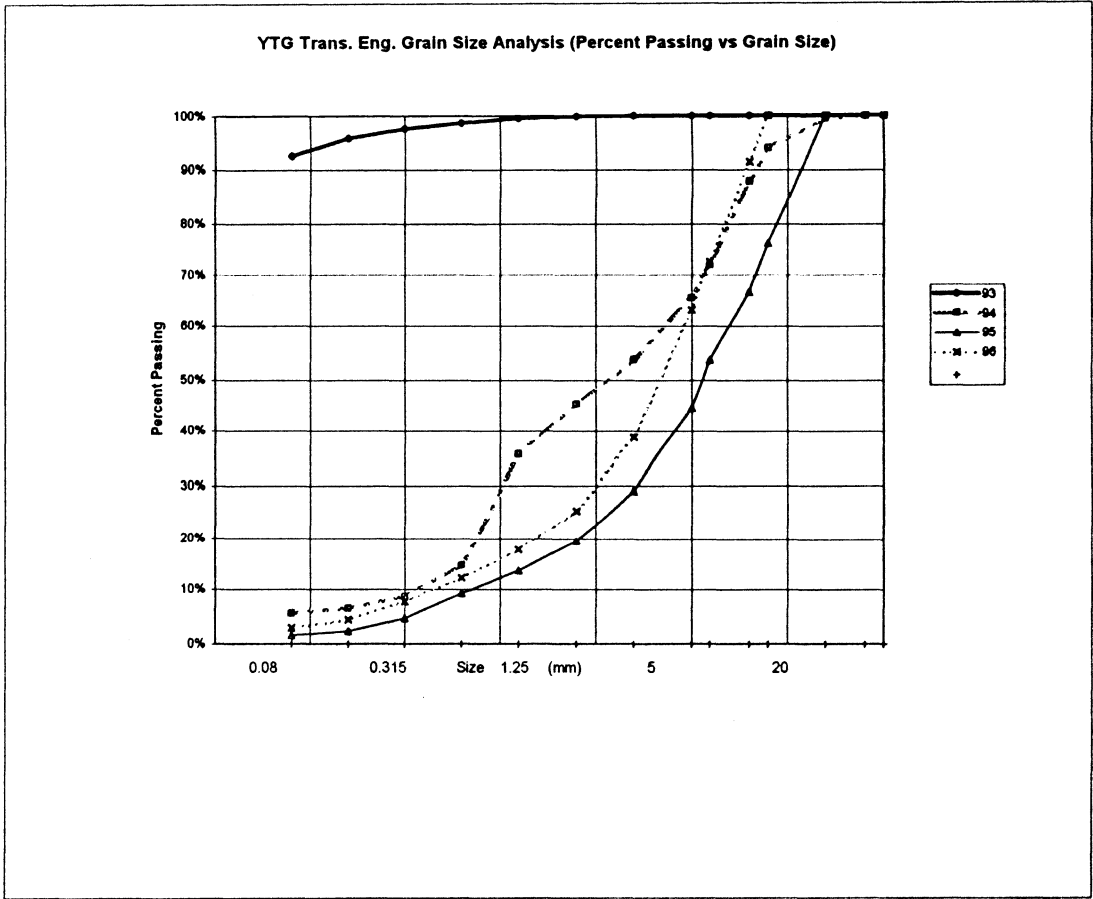


PROJECT NUMBER: 091-202101-0329-199		HOLE No.: 509-371	
CLIENT: ENGINEERING CAPITAL			
PROJECT NAME: SHAKWAK SEG 13			
PROJECT LOCATION: KM 1799-1822 A/H			
DRILL UNIT: B-40-L Nodwell			
HOLE LOCATION: 1818+110 15M LT		DATE COMP 99-04-20	
LOGGED BY: G.C.			

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
93	97	0.7-1.0	AUGER	94	98	1.4-1.8	AUGER	95	99	2.5-3.0	AUGER	96	100	4.0-4.5	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	99%	50.0	100%	50.0	100%
25.0	100%	25.0	94%	25.0	78%	25.0	100%
20.0	100%	20.0	88%	20.0	67%	20.0	91%
12.5	100%	12.5	72%	12.5	54%	12.5	73%
10.0	100%	10.0	66%	10.0	44%	10.0	63%
5.0	100%	5.0	54%	5.0	29%	5.0	39%
2.5	100%	2.5	45%	2.5	19%	2.5	25%
1.25	99%	1.25	36%	1.25	14%	1.25	18%
0.630	99%	0.630	15%	0.630	9%	0.630	12%
0.315	98%	0.315	9%	0.315	5%	0.315	8%
0.160	96%	0.160	6%	0.160	2%	0.160	4%
0.080	92%	0.080	6%	0.080	2%	0.080	3%

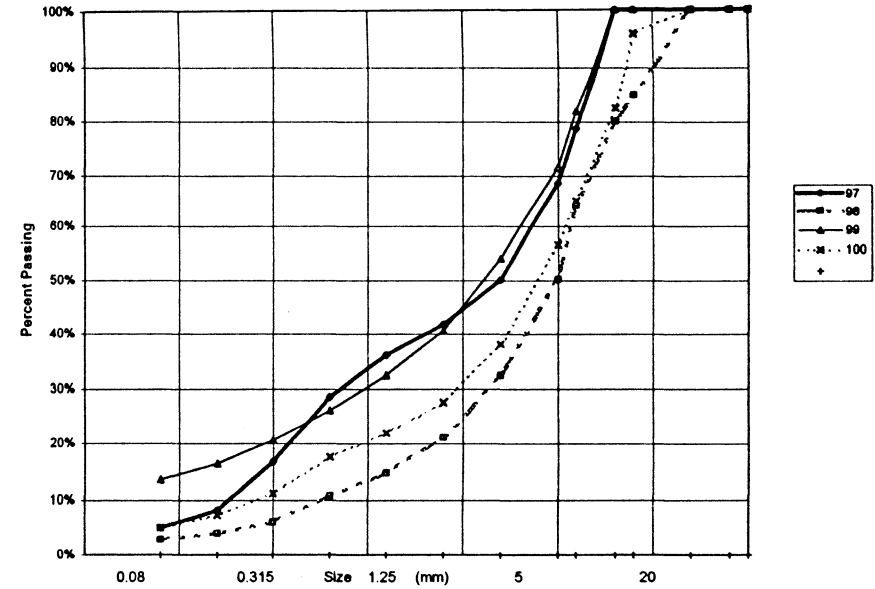
M.C.(%):	37%	M.C.(%):	8%	M.C.(%):	7%	M.C.(%):	6%
LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	0	% GRAVEL:	46	% GRAVEL:	71	% GRAVEL:	61
% SAND:	7	% SAND:	48	% SAND:	27	% SAND:	36
% FINES:	92	% FINES:	6	% FINES:	2	% FINES:	3
CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	CLASSIFICATION:	WELL-GRADED GRAVEL WITH SAND (GW)	CLASSIFICATION:	WELL-GRADED GRAVEL WITH SAND (GW)



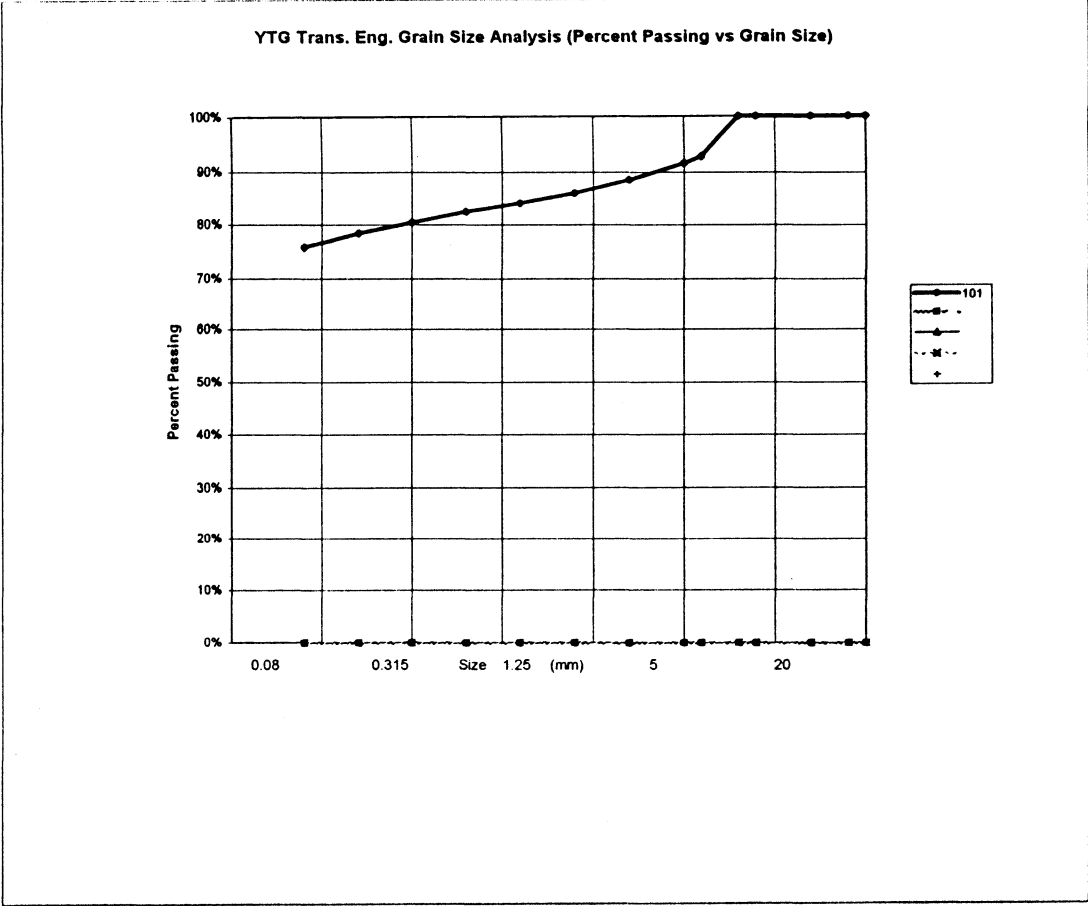
PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-372
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1818+000 10M LT
 LOGGED BY: G.C. DATE COMP 99-04-20

FIELD NO: 97		FIELD No. 98		FIELD No: 99		FIELD No: 100	
LAB NO: 101		LAB No. 102		LAB No: 103		LAB No: 104	
DEPTH: 0.8-1.0		DEPTH 1.8-2.0		DEPTH: 2.8-3.0		DEPTH: 4.0-4.5	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	85%	25.0	100%	25.0	96%
20.0	100%	20.0	80%	20.0	100%	20.0	83%
12.5	79%	12.5	64%	12.5	82%	12.5	65%
10.0	69%	10.0	50%	10.0	72%	10.0	56%
5.0	50%	5.0	32%	5.0	54%	5.0	38%
2.5	42%	2.5	21%	2.5	41%	2.5	28%
1.25	36%	1.25	15%	1.25	32%	1.25	22%
0.630	29%	0.630	11%	0.630	26%	0.630	18%
0.315	17%	0.315	6%	0.315	21%	0.315	11%
0.160	8%	0.160	4%	0.160	16%	0.160	7%
0.080	5%	0.080	3%	0.080	14%	0.080	5%
M.C.(%):	3%	M.C.(%):	5%	M.C.(%):	6%	M.C.(%):	5%
LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	50	% GRAVEL:	68	% GRAVEL:	48	% GRAVEL:	62
% SAND:	45	% SAND:	30	% SAND:	40	% SAND:	33
% FINES:	5	% FINES:	3	% FINES:	14	% FINES:	5
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		POORLY GRADED GRAVEL WITH SAND (GP)		SILTY GRAVEL WITH SAND (GM)		WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	

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



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	509-373
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1709-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1817+900 10M RT		
LOGGED BY:	G.C.	DATE COMP	99-04-20
=====			
FIELD NO:	101		
LAB NO:	105		
DEPTH:	2.5-3.0		
TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING		
100.0	100%		
80.0	100%		
50.0	100%		
25.0	100%		
20.0	100%		
12.5	93%		
10.0	92%		
5.0	89%		
2.5	86%		
1.25	84%		
0.830	82%		
0.315	80%		
0.160	78%		
0.080	76%		
M.C.(%):	32%		
LIMITS			
LIQUID:	0.0		
PLASTIC:	0.0		
P.I.:	0.0		
% GRAVEL:	11		
% SAND:	13		
% FINES:	76		
CLASSIFICATION:			
	SILT WITH SAND (ML)		



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-374
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1817+895 40M RT
 LOGGED BY: G.C. DATE COMP 99-04-20

FIELD NO: 102
 LAB NO: 108
 DEPTH: 1.7-2.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	100%
12.5	100%
10.0	100%
5.0	100%
2.5	100%
1.25	100%
0.630	100%
0.315	99%
0.160	97%
0.080	94%

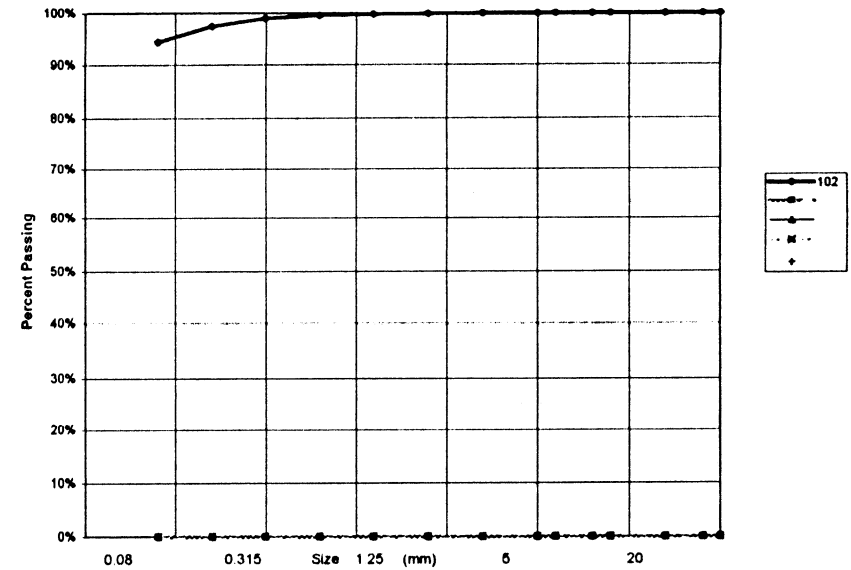
M.C. (%): 61%

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

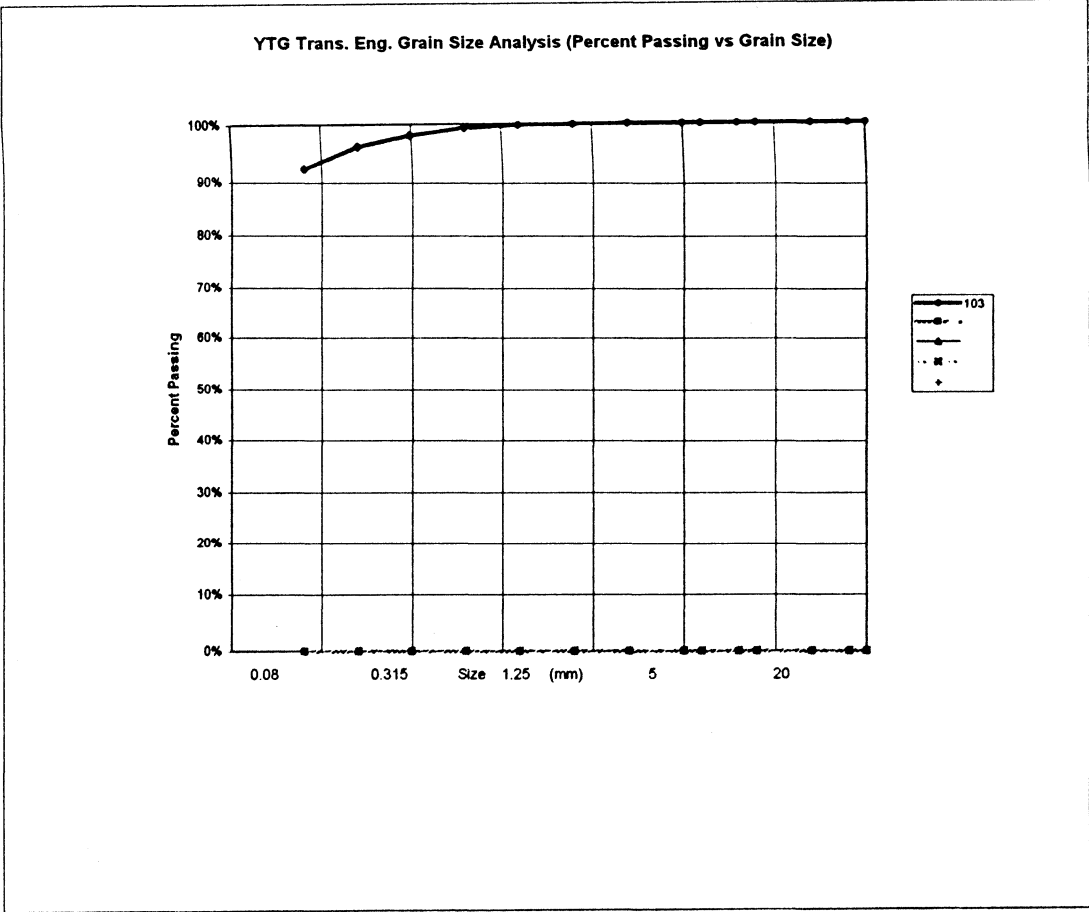
% GRAVEL: 0
 % SAND: 6
 % FINES: 94

CLASSIFICATION:
 SILT (ML)

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



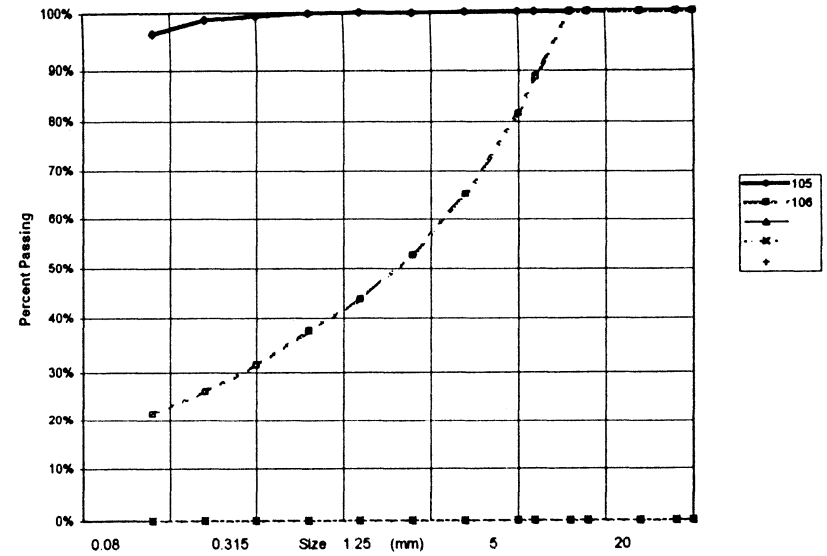
PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	509-375
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1817+940 10M RT	DATE COMP	99-04-20
LOGGED BY:	G.C.		
=====			
FIELD NO:	103		
LAB NO:	107		
DEPTH:	1.8-2.0		
TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING		
100.0	100%		
80.0	100%		
50.0	100%		
25.0	100%		
20.0	100%		
12.5	100%		
10.0	100%		
5.0	100%		
2.5	100%		
1.25	100%		
0.630	99%		
0.315	98%		
0.160	96%		
0.080	92%		
M.C.(%):	49%		
LIMITS			
LIQUID:	0.0		
PLASTIC:	0.0		
P.I.:	0.0		
% GRAVEL:	0		
% SAND:	7		
% FINES:	92		
CLASSIFICATION:			
	SILT (ML)		



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-376
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1817+930 40M RT
 LOGGED BY: G.C. DATE COMP 99-04-20

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	100%
12.5	100%	12.5	89%
10.0	100%	10.0	82%
5.0	100%	5.0	65%
2.5	100%	2.5	53%
1.25	100%	1.25	44%
0.630	100%	0.630	37%
0.315	99%	0.315	31%
0.160	99%	0.160	26%
0.080	96%	0.080	21%
M.C. (%): 37%		M.C. (%): 8%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	0	% GRAVEL:	35
% SAND:	4	% SAND:	44
% FINES:	96	% FINES:	21
CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)

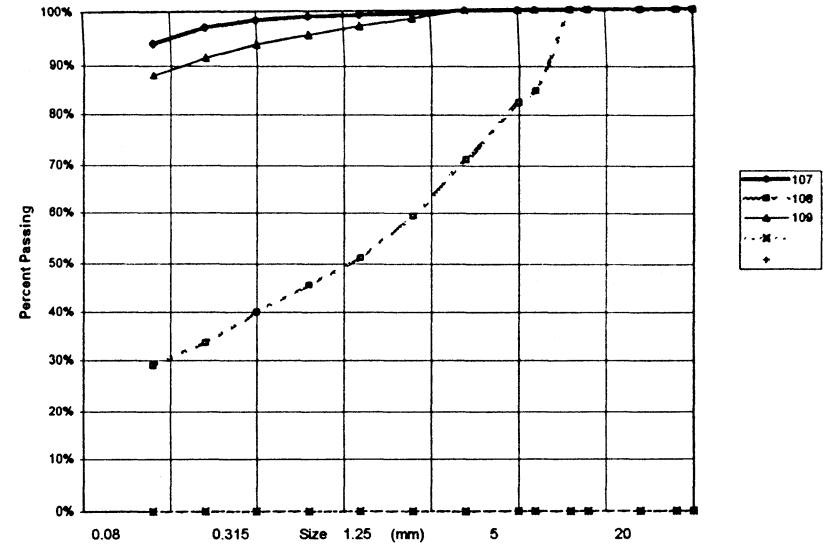
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-377
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1817+875 20M RT
 LOGGED BY: G.C. DATE COMP 99-04-20

FIELD No. 107		FIELD No. 108		FIELD No. 109	
LAB NO:	111	LAB No.	112	LAB No:	113
DEPTH:	2.5-3.0	DEPTH	3.6-4.0	DEPTH:	4.0-4.5
TYPE:	AUGER	TYPE	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	100%
20.0	100%	20.0	100%	20.0	100%
12.5	100%	12.5	85%	12.5	100%
10.0	100%	10.0	82%	10.0	100%
5.0	100%	5.0	71%	5.0	100%
2.5	99%	2.5	59%	2.5	98%
1.25	99%	1.25	51%	1.25	97%
0.630	99%	0.630	46%	0.630	96%
0.315	98%	0.315	40%	0.315	94%
0.160	97%	0.160	34%	0.160	91%
0.080	94%	0.080	29%	0.080	88%
M.C.(%):	53%	M.C.(%):	16%	M.C.(%):	48%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	0	% GRAVEL:	29	% GRAVEL:	0
% SAND:	6	% SAND:	42	% SAND:	12
% FINES:	94	% FINES:	29	% FINES:	88
CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILT (ML)

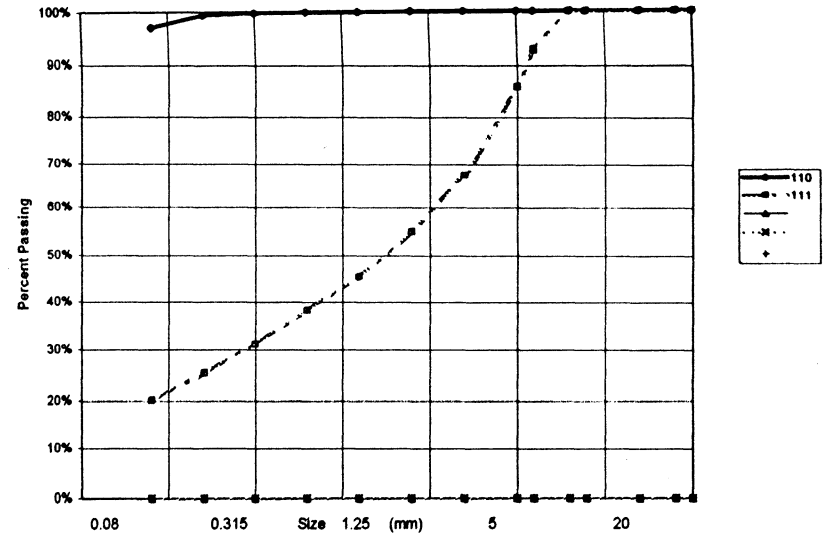
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-378
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1817+700 20M RT
 LOGGED BY: G.C. DATE COMP 99-04-20

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	100%
12.5	100%	12.5	93%
10.0	100%	10.0	86%
5.0	100%	5.0	67%
2.5	100%	2.5	55%
1.25	100%	1.25	45%
0.630	100%	0.630	38%
0.315	100%	0.315	31%
0.160	99%	0.160	25%
0.080	97%	0.080	20%
M.C. (%):	42%	M.C. (%):	9%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	0	% GRAVEL:	33
% SAND:	3	% SAND:	47
% FINES:	97	% FINES:	20
CLASSIFICATION:		CLASSIFICATION:	
SILT (ML)		SILTY SAND WITH GRAVEL (SM)	

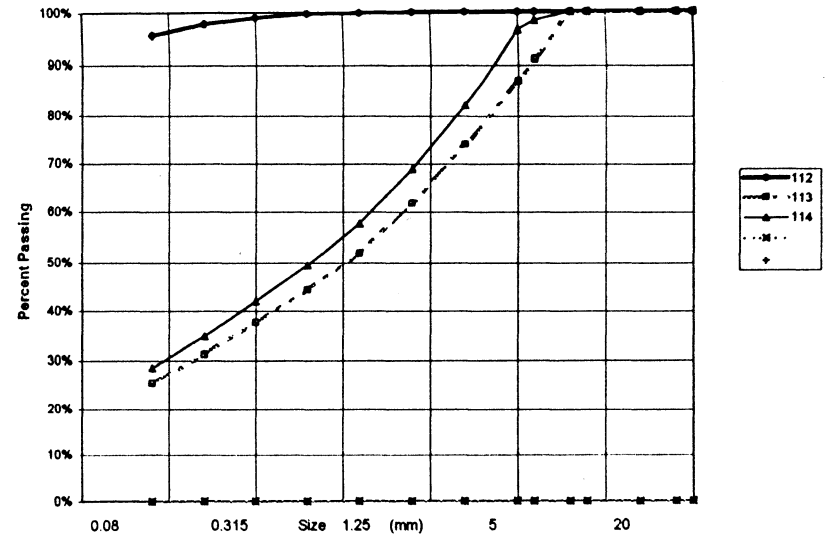
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0328-199 HOLE No.: 509-378
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1817+800 20M RT
 LOGGED BY: G.C. DATE COMP 99-04-20

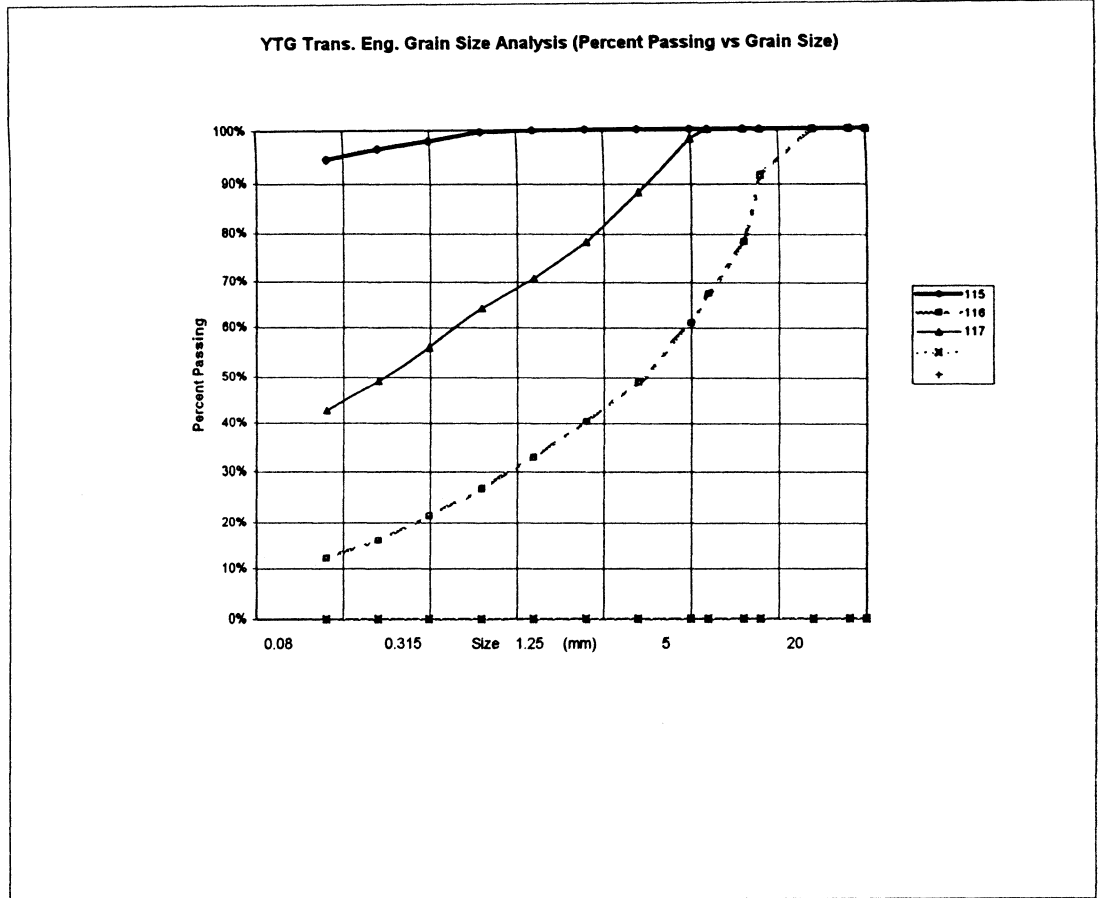
FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
112	118	1.2-1.6	AUGER	113	117	2.5-3.0	AUGER	114	118	3.5-3.8	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	100%	25.0	100%	25.0	100%	25.0	100%
20.0	100%	20.0	100%	20.0	100%	20.0	100%	20.0	100%	20.0	100%
12.5	100%	12.5	91%	12.5	91%	12.5	98%	12.5	98%	12.5	98%
10.0	100%	10.0	87%	10.0	87%	10.0	97%	10.0	97%	10.0	97%
5.0	100%	5.0	74%	5.0	74%	5.0	82%	5.0	82%	5.0	82%
2.5	100%	2.5	62%	2.5	62%	2.5	69%	2.5	69%	2.5	69%
1.25	100%	1.25	52%	1.25	52%	1.25	58%	1.25	58%	1.25	58%
0.630	100%	0.630	44%	0.630	44%	0.630	49%	0.630	49%	0.630	49%
0.315	98%	0.315	38%	0.315	38%	0.315	42%	0.315	42%	0.315	42%
0.180	98%	0.180	31%	0.180	31%	0.180	35%	0.180	35%	0.180	35%
0.080	96%	0.080	26%	0.080	26%	0.080	29%	0.080	29%	0.080	29%
M.C.(%):	38%	M.C.(%):	10%	M.C.(%):	12%	M.C.(%):		M.C.(%):		M.C.(%):	
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	0	% GRAVEL:	26	% GRAVEL:	18	% GRAVEL:		% GRAVEL:		% GRAVEL:	
% SAND:	4	% SAND:	48	% SAND:	53	% SAND:		% SAND:		% SAND:	
% FINES:	96	% FINES:	26	% FINES:	29	% FINES:		% FINES:		% FINES:	
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILT (ML)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-380
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1817+500 25M RT
 LOGGED BY: G.C. DATE COMP 99-04-20

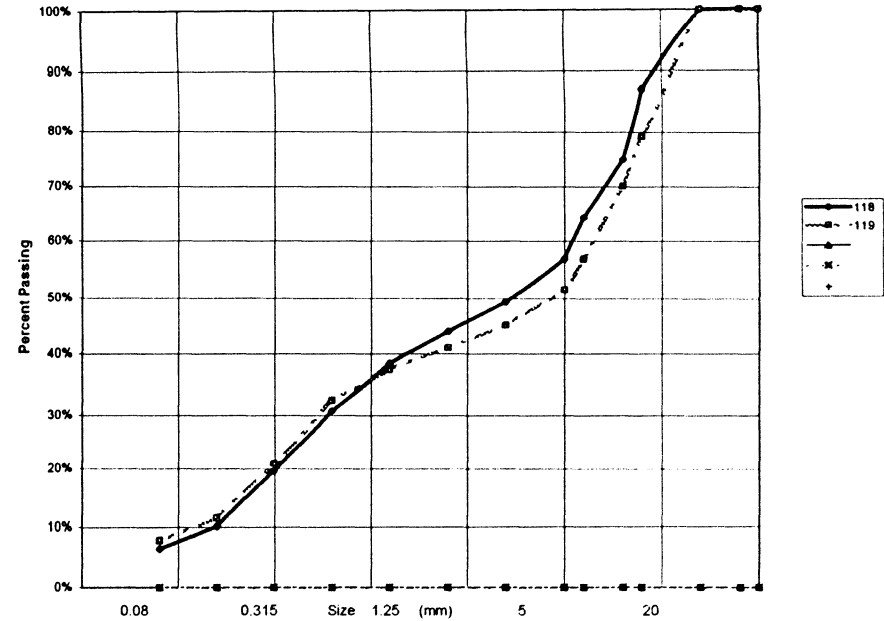
FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
115	119	1.1-1.5	AUGER	116	120	2.0-2.4	AUGER	117	121	3.0-3.2	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	92%	25.0	92%	25.0	100%	25.0	100%	25.0	100%
20.0	100%	20.0	78%	20.0	78%	20.0	100%	20.0	100%	20.0	100%
12.5	100%	12.5	68%	12.5	68%	12.5	100%	12.5	100%	12.5	100%
10.0	100%	10.0	61%	10.0	61%	10.0	98%	10.0	98%	10.0	98%
5.0	100%	5.0	49%	5.0	49%	5.0	88%	5.0	88%	5.0	88%
2.5	100%	2.5	40%	2.5	40%	2.5	78%	2.5	78%	2.5	78%
1.25	100%	1.25	33%	1.25	33%	1.25	71%	1.25	71%	1.25	71%
0.630	100%	0.630	27%	0.630	27%	0.630	64%	0.630	64%	0.630	64%
0.315	98%	0.315	21%	0.315	21%	0.315	58%	0.315	58%	0.315	58%
0.160	97%	0.160	16%	0.160	16%	0.160	49%	0.160	49%	0.160	49%
0.080	94%	0.080	12%	0.080	12%	0.080	43%	0.080	43%	0.080	43%
M.C.(%):	42%	M.C.(%):	6%	M.C.(%):	16%	M.C.(%):		M.C.(%):		M.C.(%):	
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	0	% GRAVEL:	51	% GRAVEL:	12	% GRAVEL:		% GRAVEL:		% GRAVEL:	
% SAND:	6	% SAND:	37	% SAND:	46	% SAND:		% SAND:		% SAND:	
% FINES:	94	% FINES:	12	% FINES:	43	% FINES:		% FINES:		% FINES:	
CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION:	SILTY SAND (SM)	CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	



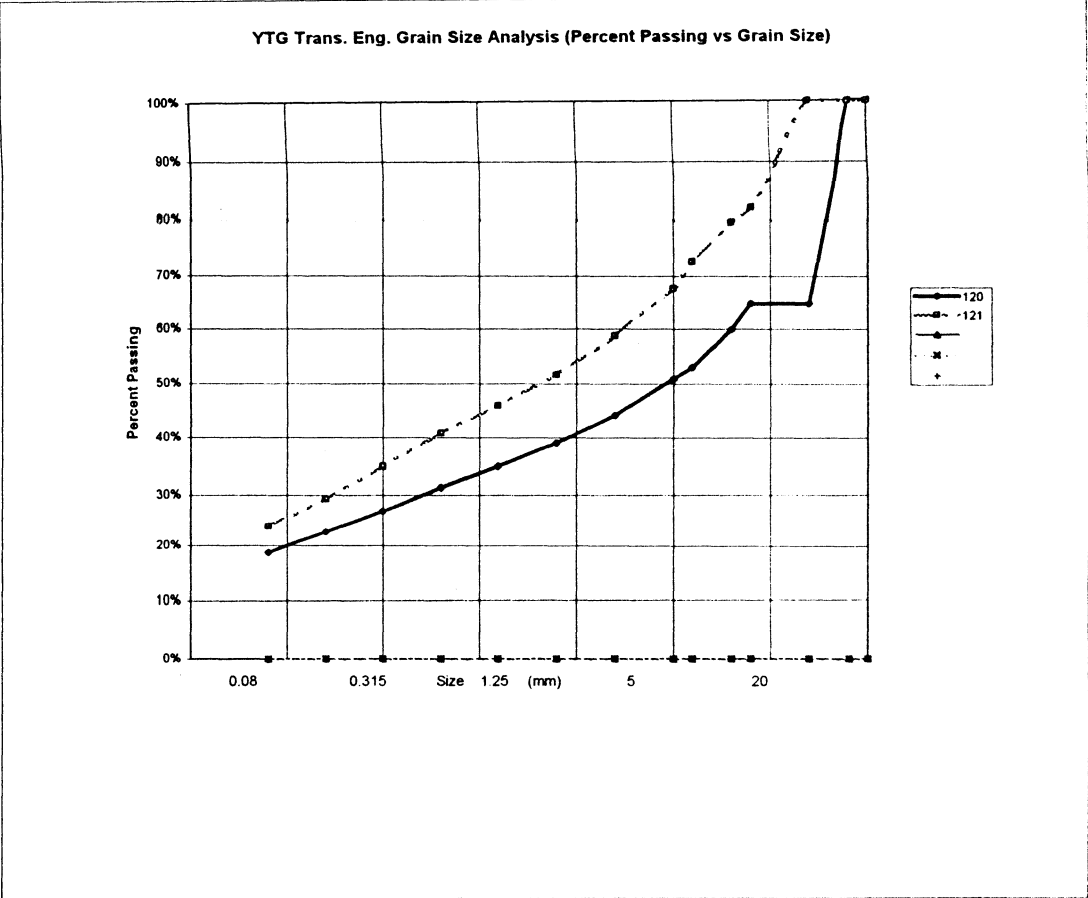
PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-381
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1817+370 center line
 LOGGED BY: G.C. DATE COMP 99-04-21

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	87%	25.0	79%
20.0	75%	20.0	70%
12.5	64%	12.5	57%
10.0	57%	10.0	51%
5.0	49%	5.0	45%
2.5	44%	2.5	41%
1.25	38%	1.25	38%
0.630	31%	0.630	33%
0.315	20%	0.315	21%
0.160	10%	0.160	12%
0.080	7%	0.080	8%
M.C. (%)	6%	M.C. (%)	8%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	51	% GRAVEL:	55
% SAND:	43	% SAND:	37
% FINES:	7	% FINES:	8
CLASSIFICATION:		CLASSIFICATION:	
POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)		POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	

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



PROJECT NUMBER: 091-202101-0329-199		HOLE No.: 509-382	
CLIENT: ENGINEERING CAPITAL			
PROJECT NAME: SHAKWAK SEG 13			
PROJECT LOCATION: KM 1799-1822 A/H			
DRILL UNIT: B-40-L Nodwell			
HOLE LOCATION: 1817+365 40m RT			
LOGGED BY: G.C.		DATE COMP 99-04-21	
=====		=====	
FIELD NO: 120	FIELD No. 121		
LAB NO: 124	LAB No. 125		
DEPTH: 1.8-2.2	DEPTH: 3.4-4.0		
TYPE: AUGER	TYPE: AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	65%	50.0	100%
25.0	65%	25.0	82%
20.0	60%	20.0	80%
12.5	53%	12.5	73%
10.0	51%	10.0	68%
5.0	44%	5.0	59%
2.5	39%	2.5	52%
1.25	35%	1.25	46%
0.630	31%	0.630	41%
0.315	27%	0.315	35%
0.160	23%	0.160	29%
0.080	19%	0.080	24%
M.C.(%): 8%	M.C.(%): 7%		
LIMITS	LIMITS		
LIQUID: 0.0	LIQUID: 0.0		
PLASTIC: 0.0	PLASTIC: 0.0		
P.I.: 0.0	P.I.: 0.0		
% GRAVEL: 56	% GRAVEL: 41		
% SAND: 25	% SAND: 35		
% FINES: 19	% FINES: 24		
CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)		



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	509-383
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1817+275 30m RT		
LOGGED BY:	G.C.	DATE COMP	99-04-21

FIELD NO:	122	FIELD No:	123
LAB NO:	126	LAB No:	127
DEPTH:	1.2-1.5	DEPTH	1.8-2.2
TYPE:	AUGER	TYPE	AUGER

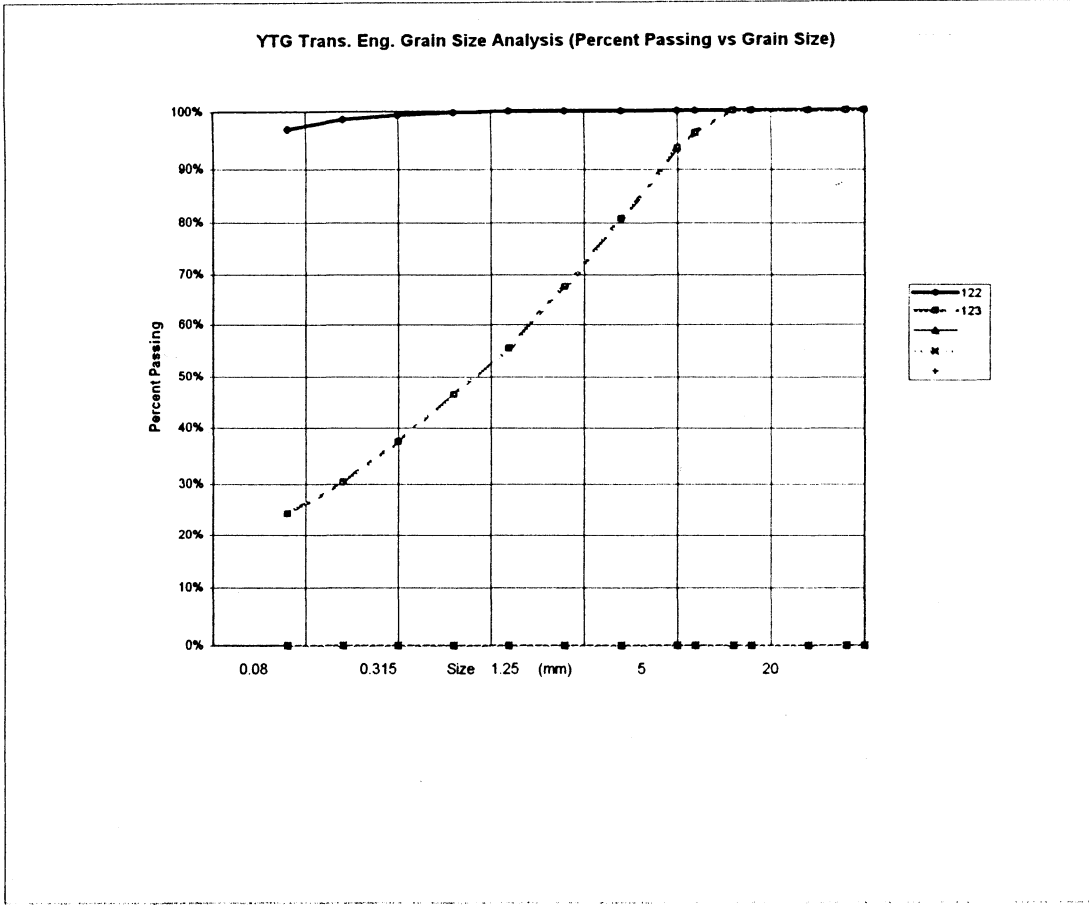
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	100%
12.5	100%	12.5	96%
10.0	100%	10.0	93%
5.0	100%	5.0	81%
2.5	100%	2.5	68%
1.25	100%	1.25	56%
0.630	100%	0.630	46%
0.315	99%	0.315	37%
0.160	99%	0.160	30%
0.080	97%	0.080	24%

M.C. (%):	39%	M.C. (%):	12%
-----------	-----	-----------	-----

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

% GRAVEL:	0	% GRAVEL:	19
% SAND:	3	% SAND:	56
% FINES:	97	% FINES:	24

CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)
-----------------	-----------	-----------------	-----------------------------

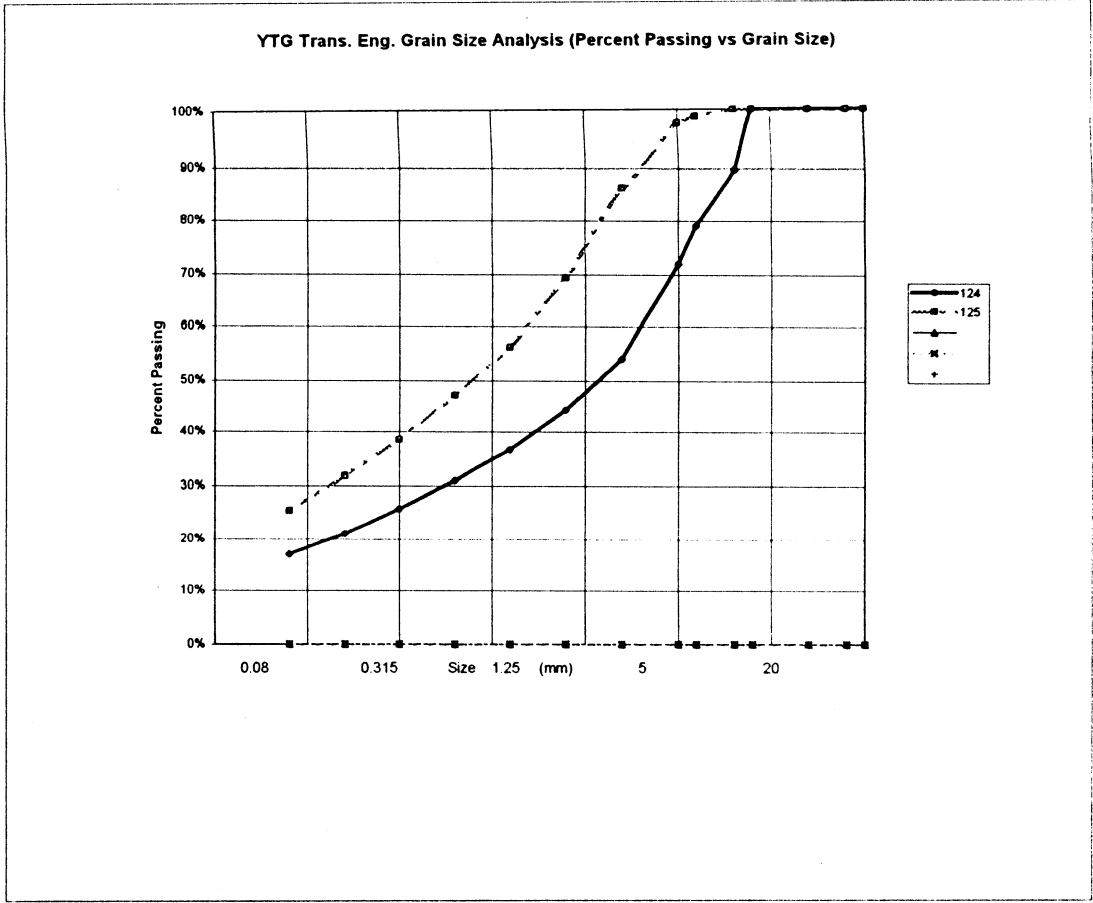


PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	509-384
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1817+175 25m RT		
LOGGED BY:	G.C.	DATE COMP	99-04-21

FIELD NO:	124	FIELD No:	125
LAB NO:	128	LAB No:	129
DEPTH:	1.6-2.0	DEPTH	2.5-3.0
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	90%	20.0	100%
12.5	79%	12.5	99%
10.0	72%	10.0	97%
5.0	54%	5.0	86%
2.5	44%	2.5	69%
1.25	36%	1.25	56%
0.630	31%	0.630	47%
0.315	26%	0.315	38%
0.160	21%	0.160	32%
0.080	17%	0.080	25%

M.C. (%):	8%	M.C. (%):	9%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	46	% GRAVEL:	14
% SAND:	37	% SAND:	61
% FINES:	17	% FINES:	25
CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION:	SILTY SAND (SM)



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	509-385
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1817+150 30m RT		
LOGGED BY:	G.C.	DATE COMP	99-04-21

FIELD NO:	126	FIELD No:	127
LAB NO:	130	LAB No:	131
DEPTH:	1.0-1.5	DEPTH	2.0-2.2
TYPE:	AUGER	TYPE	AUGER

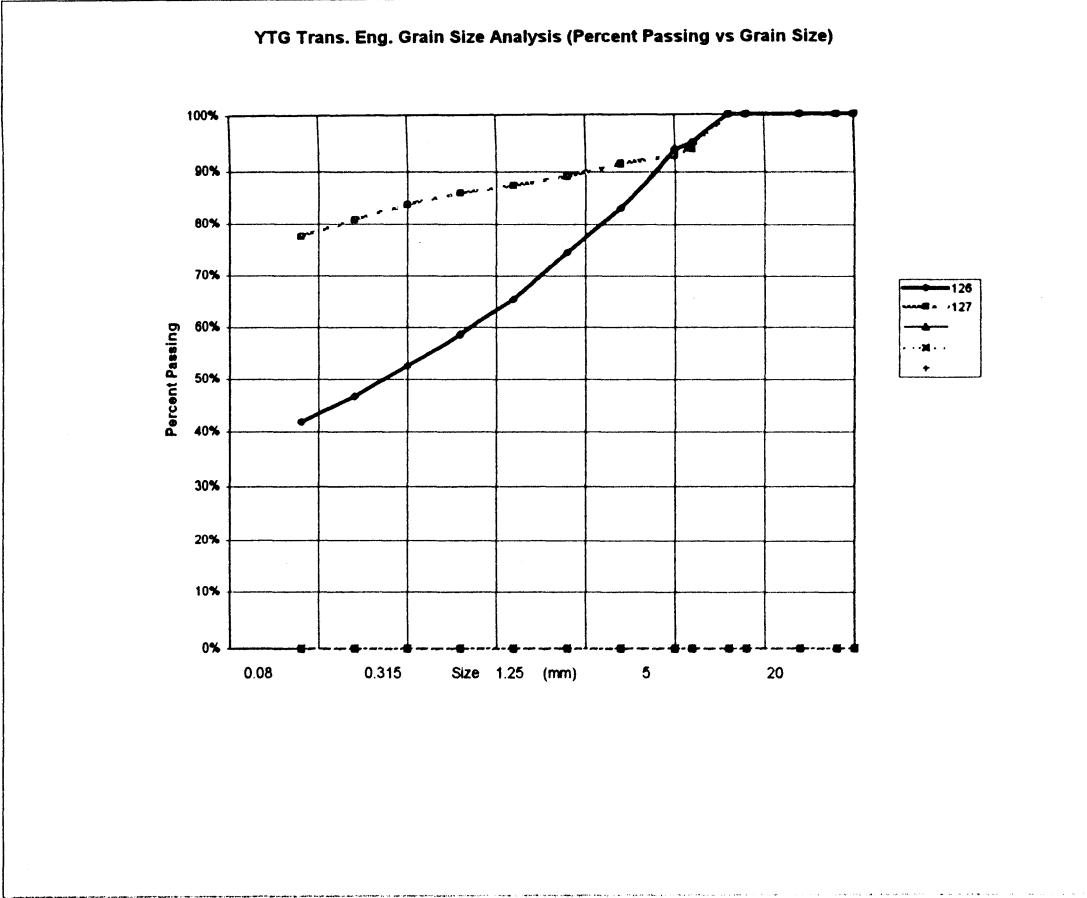
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	100%
12.5	95%	12.5	94%
10.0	94%	10.0	93%
5.0	83%	5.0	91%
2.5	75%	2.5	89%
1.25	65%	1.25	88%
0.630	59%	0.630	86%
0.315	53%	0.315	84%
0.160	47%	0.160	81%
0.080	42%	0.080	78%

M.C.(%):	21%	M.C.(%):	28%
----------	-----	----------	-----

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

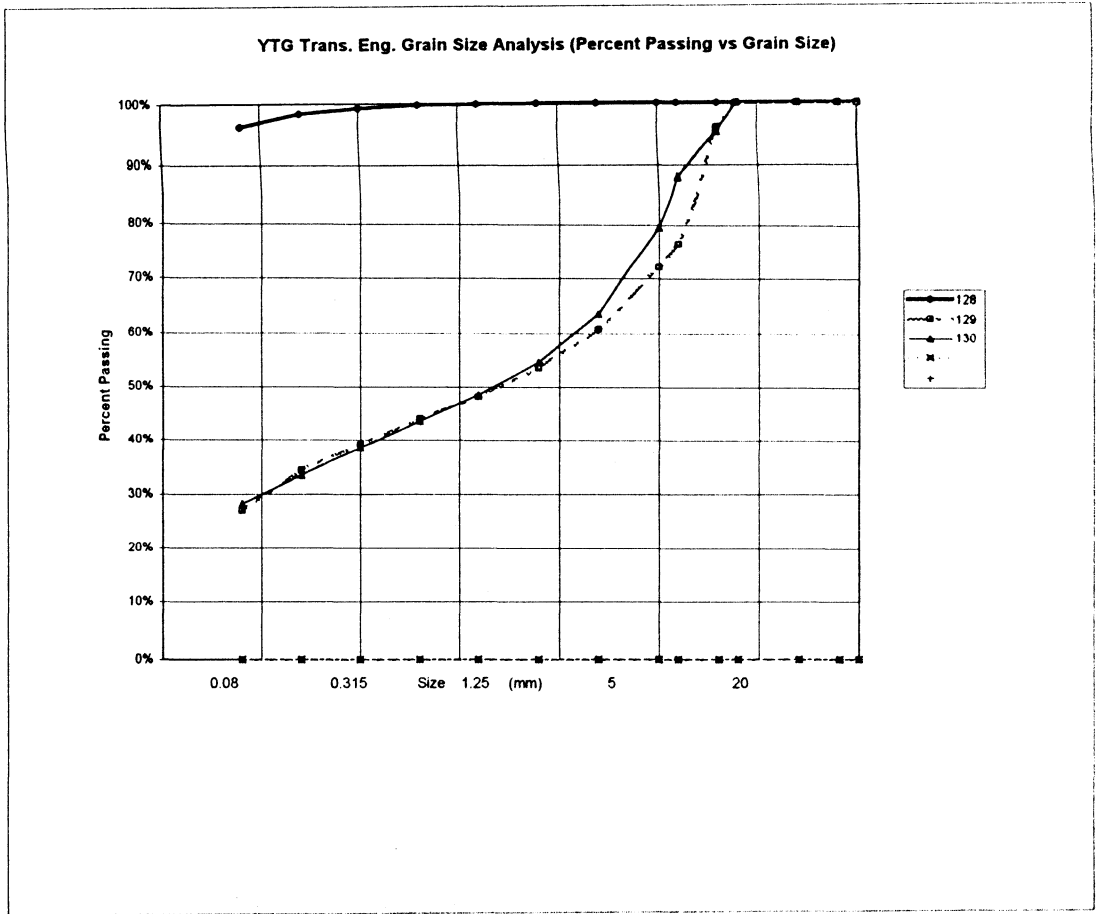
% GRAVEL:	17	% GRAVEL:	9
% SAND:	41	% SAND:	14
% FINES:	42	% FINES:	78

CLASSIFICATION:	CLASSIFICATION:
SILTY SAND WITH GRAVEL (SM)	SILT WITH SAND (ML)



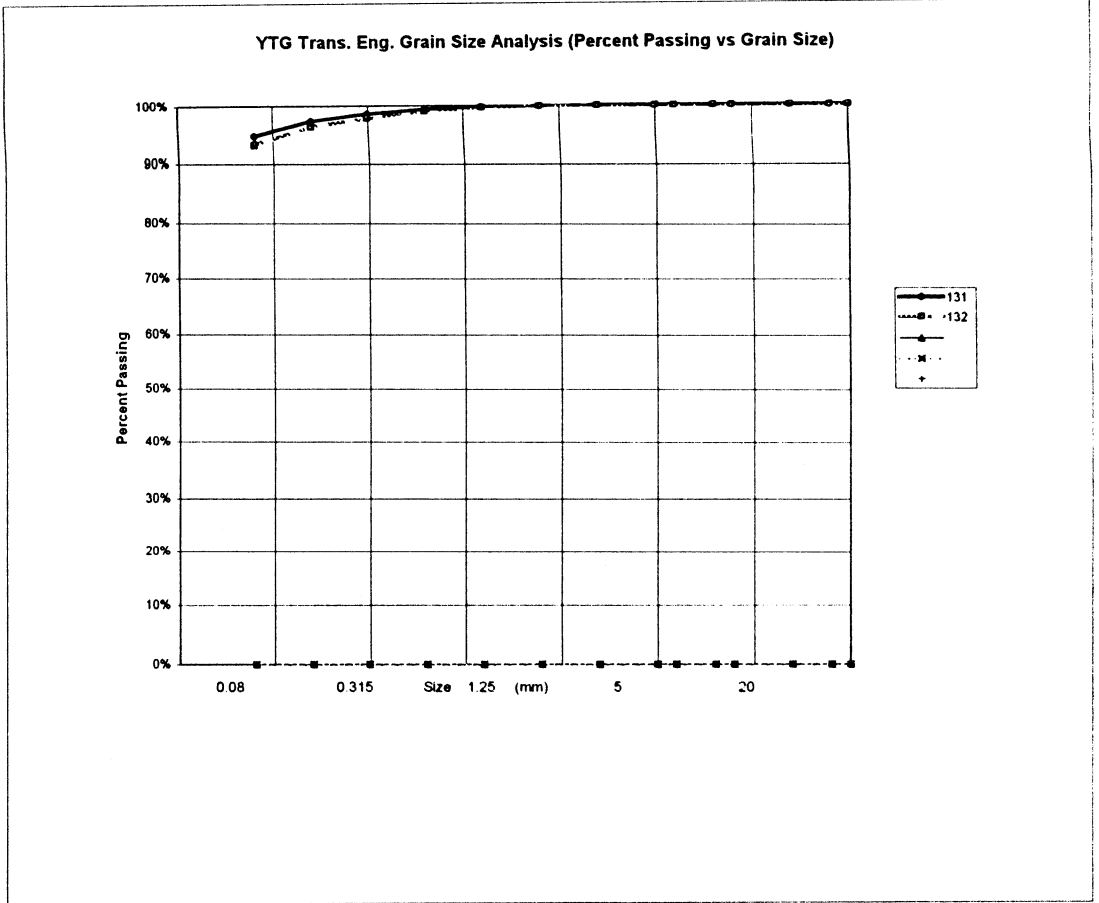
PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-386
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1817+050 25m RT
 LOGGED BY: G.C. DATE COMP 99-04-22

FIELD NO: 128		FIELD No. 129		FIELD No: 130	
LAB NO: 132		LAB No. 133		LAB No: 134	
DEPTH: 1.5-2.0		DEPTH 2.5-3.0		DEPTH: 4.0-4.5	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	100%
20.0	100%	20.0	96%	20.0	95%
12.5	100%	12.5	77%	12.5	88%
10.0	100%	10.0	72%	10.0	80%
5.0	100%	5.0	61%	5.0	64%
2.5	100%	2.5	53%	2.5	54%
1.25	100%	1.25	48%	1.25	48%
0.630	100%	0.630	44%	0.630	44%
0.315	99%	0.315	39%	0.315	38%
0.160	98%	0.160	34%	0.160	33%
0.080	96%	0.080	27%	0.080	28%
M.C. (%)	44%	M.C. (%)	11%	M.C. (%)	12%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	0	% GRAVEL:	39	% GRAVEL:	36
% SAND:	4	% SAND:	34	% SAND:	36
% FINES:	96	% FINES:	27	% FINES:	28
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILT (ML)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-387
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1816+950 15m RT
 LOGGED BY: G.C. DATE COMP 99-04-22

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	100%
12.5	100%	12.5	100%
10.0	100%	10.0	100%
5.0	100%	5.0	100%
2.5	100%	2.5	100%
1.25	100%	1.25	100%
0.630	99%	0.630	99%
0.315	98%	0.315	98%
0.160	97%	0.160	96%
0.080	95%	0.080	93%
M.C. (%): 122%		M.C. (%): 76%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	0	% GRAVEL:	0
% SAND:	5	% SAND:	7
% FINES:	95	% FINES:	93
CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILT (ML)

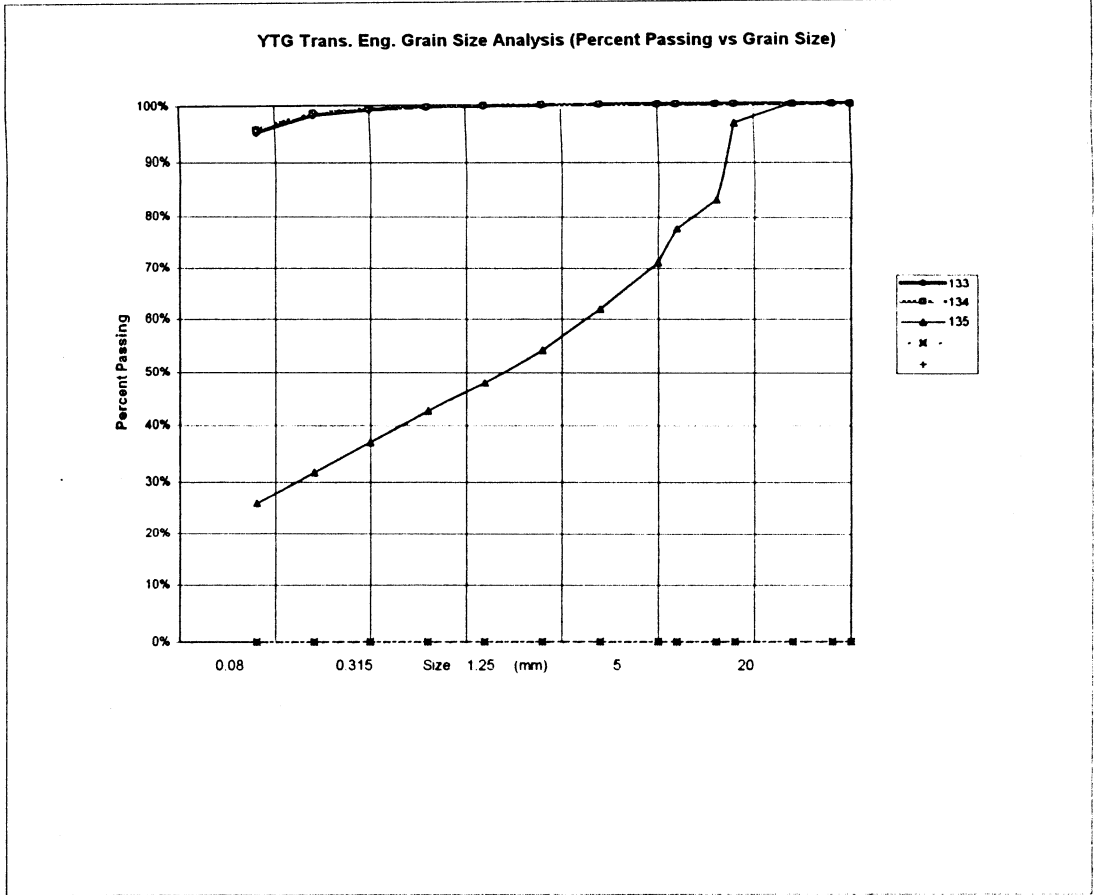


PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-388
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1816+900 25m RT
 LOGGED BY: G.C. DATE COMP 99-04-22

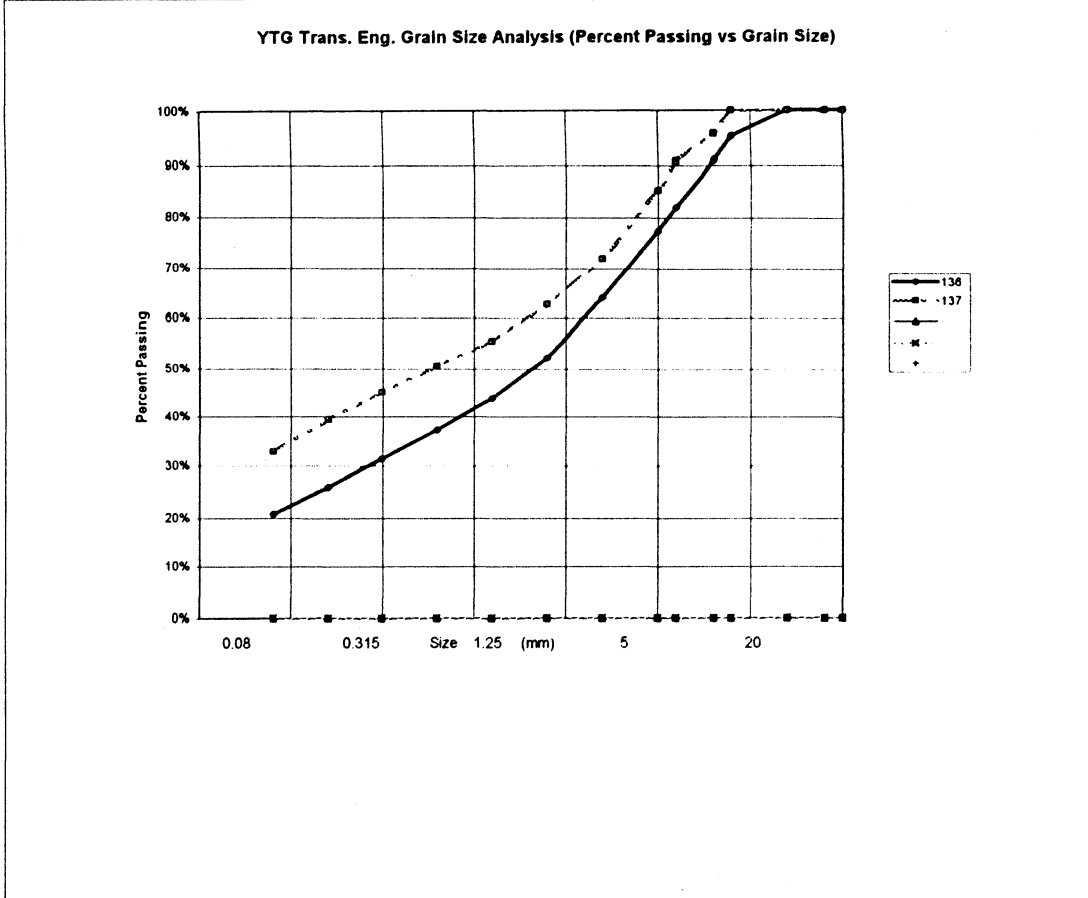
FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
133	137	1.8-2.2	AUGER	134	138	2.8-3.2	AUGER	135	139	4.0-4.3	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	96%
20.0	100%	20.0	100%	20.0	83%
12.5	100%	12.5	100%	12.5	78%
10.0	100%	10.0	100%	10.0	71%
5.0	100%	5.0	100%	5.0	62%
2.5	100%	2.5	100%	2.5	54%
1.25	100%	1.25	100%	1.25	48%
0.630	100%	0.630	100%	0.630	43%
0.315	99%	0.315	99%	0.315	37%
0.160	98%	0.160	99%	0.160	32%
0.080	95%	0.080	96%	0.080	26%

M.C. (%):	68%	M.C. (%):	75%	M.C. (%):	10%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	0	% GRAVEL:	0	% GRAVEL:	38
% SAND:	5	% SAND:	4	% SAND:	36
% FINES:	95	% FINES:	96	% FINES:	28
CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	509-389
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1816+800 15m RT		
LOGGED BY:	G.C.	DATE COMP	99-04-22
=====			
FIELD NO:	136	FIELD No.	137
LAB NO:	140	LAB No.	141
DEPTH:	2.8-3.0	DEPTH	3.6-4.0
TYPE:	AUGER	TYPE	AUGER
=====			
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	95%	25.0	100%
20.0	91%	20.0	96%
12.5	82%	12.5	91%
10.0	77%	10.0	85%
5.0	64%	5.0	72%
2.5	52%	2.5	63%
1.25	44%	1.25	56%
0.630	37%	0.630	51%
0.315	31%	0.315	45%
0.160	26%	0.160	39%
0.080	21%	0.080	33%
=====			
M.C. (%):	11%	M.C. (%):	18%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	36	% GRAVEL:	28
% SAND:	43	% SAND:	39
% FINES:	21	% FINES:	33
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

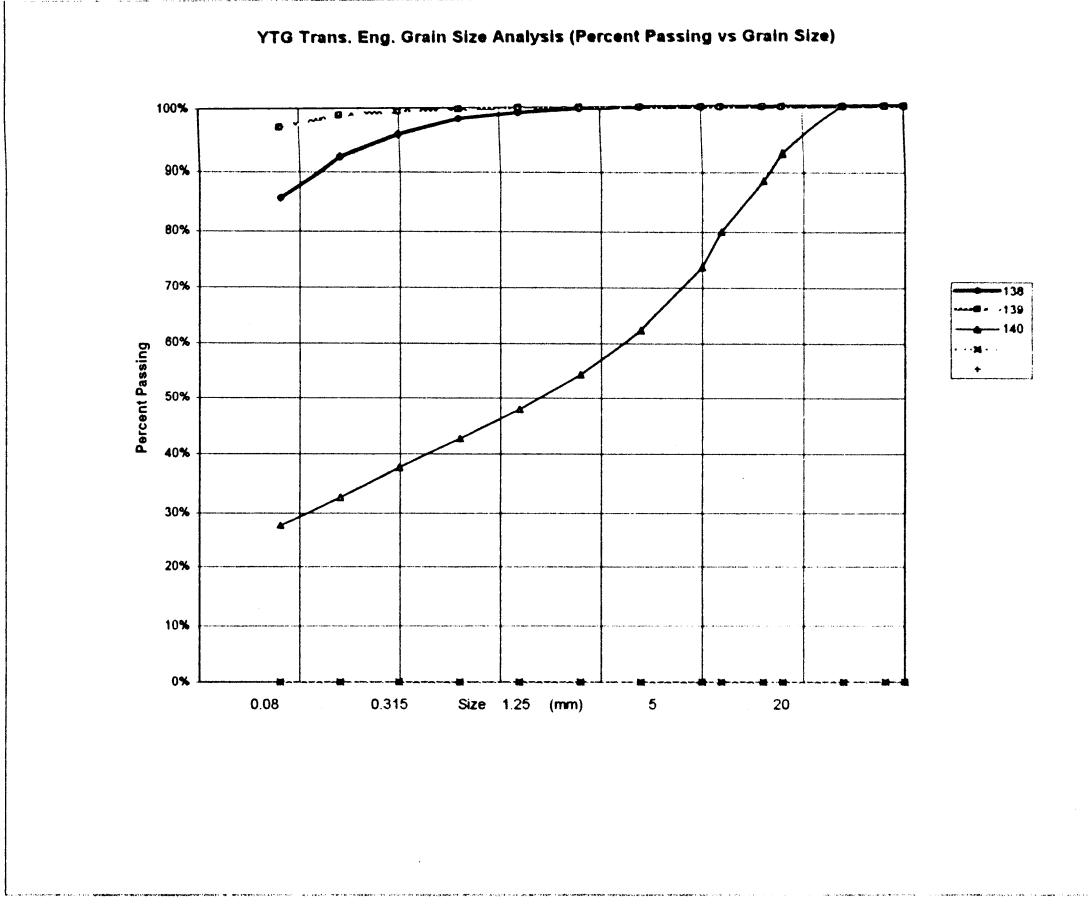


PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	509-390
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1818+725 center line		
LOGGED BY:	G.C.	DATE COMP	99-04-22

FIELD NO:	LAB NO:	DEPTH:	TYPE:
138	142	1.4-1.6	AUGER
139	143	2.6-3.0	AUGER
140	144	3.8-4.0	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	93%
20.0	100%	20.0	100%	20.0	89%
12.5	100%	12.5	100%	12.5	80%
10.0	100%	10.0	100%	10.0	74%
5.0	100%	5.0	100%	5.0	62%
2.5	100%	2.5	100%	2.5	54%
1.25	99%	1.25	100%	1.25	48%
0.630	98%	0.630	100%	0.630	43%
0.315	96%	0.315	99%	0.315	38%
0.160	92%	0.160	99%	0.160	33%
0.080	86%	0.080	97%	0.080	28%

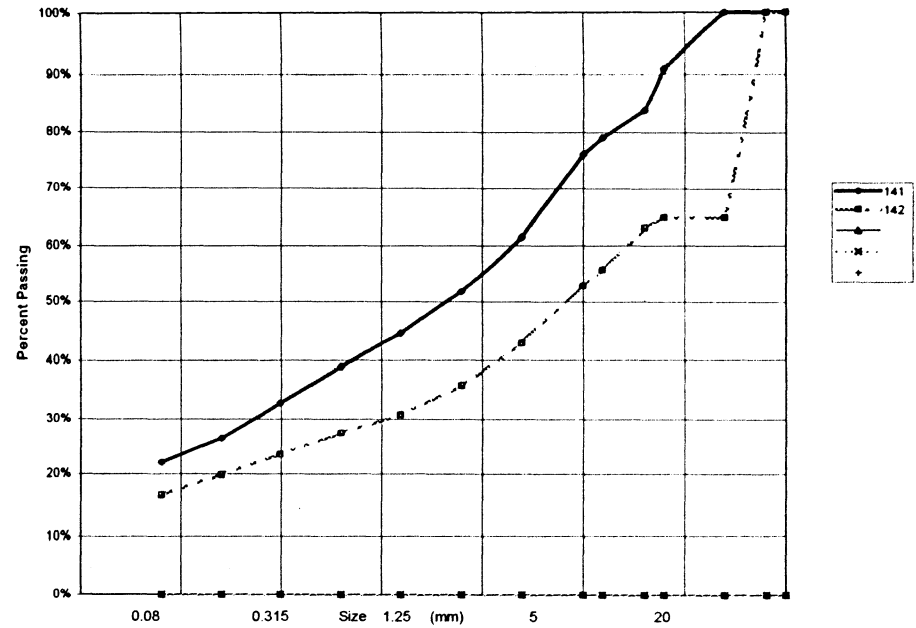
M.C. (%):	68%	M.C. (%):	69%	M.C. (%):	13%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	0	% GRAVEL:	0	% GRAVEL:	38
% SAND:	14	% SAND:	3	% SAND:	34
% FINES:	86	% FINES:	97	% FINES:	28
CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-391
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1816+600 10m RT
 LOGGED BY: G.C. DATE COMP 99-04-22

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	65%
25.0	91%	25.0	65%
20.0	84%	20.0	63%
12.5	79%	12.5	56%
10.0	76%	10.0	53%
5.0	61%	5.0	43%
2.5	52%	2.5	36%
1.25	44%	1.25	31%
0.630	39%	0.630	27%
0.315	33%	0.315	23%
0.160	26%	0.160	20%
0.080	22%	0.080	16%
M.C.(%):	15%	M.C.(%):	8%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	39	% GRAVEL:	57
% SAND:	39	% SAND:	26
% FINES:	22	% FINES:	16
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)	

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



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	509-392
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1816+500 10m RT		
LOGGED BY:	G.C.	DATE COMP	99-04-22

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
143	147	2.5-3.0	AUGER	144	148	4.0-4.4	AUGER	145	149	4.6-5.0	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	78%
20.0	100%	20.0	100%	20.0	75%
12.5	100%	12.5	94%	12.5	61%
10.0	100%	10.0	87%	10.0	56%
5.0	100%	5.0	68%	5.0	42%
2.5	100%	2.5	57%	2.5	35%
1.25	100%	1.25	49%	1.25	29%
0.630	99%	0.630	44%	0.630	25%
0.315	96%	0.315	38%	0.315	21%
0.160	94%	0.160	33%	0.160	17%
0.080	90%	0.080	29%	0.080	14%

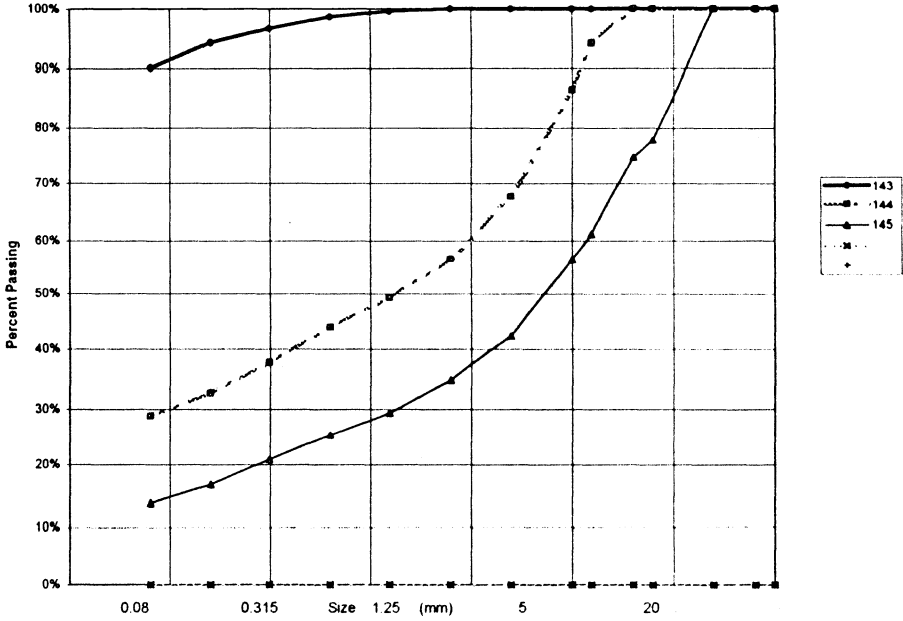
M.C. (%):	127%	M.C. (%):	20%	M.C. (%):	8%
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LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0

% GRAVEL:	0	% GRAVEL:	32	% GRAVEL:	58
% SAND:	10	% SAND:	39	% SAND:	29
% FINES:	90	% FINES:	29	% FINES:	14

CLASSIFICATION:	CLASSIFICATION:	CLASSIFICATION:
SILT (ML)	SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)

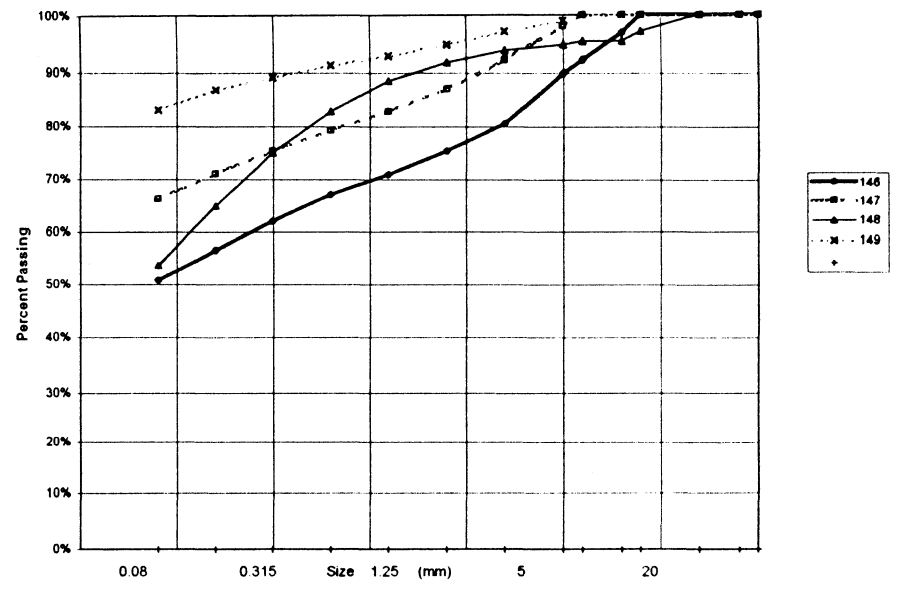
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	509-393
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1816+300 15m RT	DATE COMP	99-04-22
LOGGED BY:	G.C.		

FIELD NO: 146		FIELD No. 147		FIELD No: 148		FIELD No: 149	
LAB NO: 150		LAB No. 151		LAB No: 152		LAB No: 153	
DEPTH: 1.0-1.5		DEPTH 1.8-2.2		DEPTH: 3.0-3.5		DEPTH: 4.0-4.5	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	97%	25.0	100%
20.0	97%	20.0	100%	20.0	95%	20.0	100%
12.5	92%	12.5	100%	12.5	95%	12.5	100%
10.0	90%	10.0	98%	10.0	95%	10.0	99%
5.0	81%	5.0	92%	5.0	94%	5.0	97%
2.5	75%	2.5	87%	2.5	92%	2.5	95%
1.25	71%	1.25	83%	1.25	89%	1.25	93%
0.630	67%	0.630	79%	0.630	83%	0.630	91%
0.315	62%	0.315	75%	0.315	75%	0.315	89%
0.160	57%	0.160	71%	0.160	65%	0.160	87%
0.080	51%	0.080	66%	0.080	54%	0.080	83%
M.C.(%): 23%		M.C.(%): 33%		M.C.(%): 176%		M.C.(%): 43%	
LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	19	% GRAVEL:	8	% GRAVEL:	6	% GRAVEL:	3
% SAND:	30	% SAND:	26	% SAND:	40	% SAND:	14
% FINES:	51	% FINES:	66	% FINES:	54	% FINES:	83
CLASSIFICATION: SANDY SILT WITH GRAVEL (ML)		CLASSIFICATION: SANDY SILT (ML)		CLASSIFICATION: SANDY SILT (ML)		CLASSIFICATION: SILT WITH SAND (ML)	

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-394
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1816+250 5m RT
 LOGGED BY: G.C. DATE COMP 99-04-22

FIELD NO: 149a
 LAB NO: 154
 DEPTH: 2.5-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	83%
20.0	67%
12.5	57%
10.0	52%
5.0	42%
2.5	37%
1.25	34%
0.630	31%
0.315	25%
0.160	20%
0.080	16%

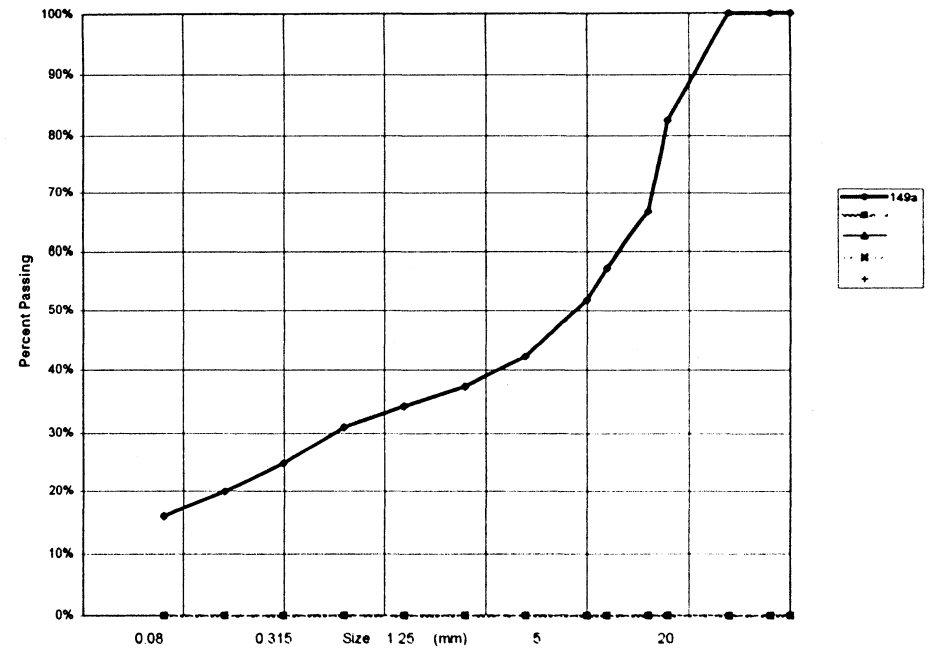
M.C.(%): 21%

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

% GRAVEL: 58
 % SAND: 26
 % FINES: 16

CLASSIFICATION:
 SILTY GRAVEL WITH SAND (GM)

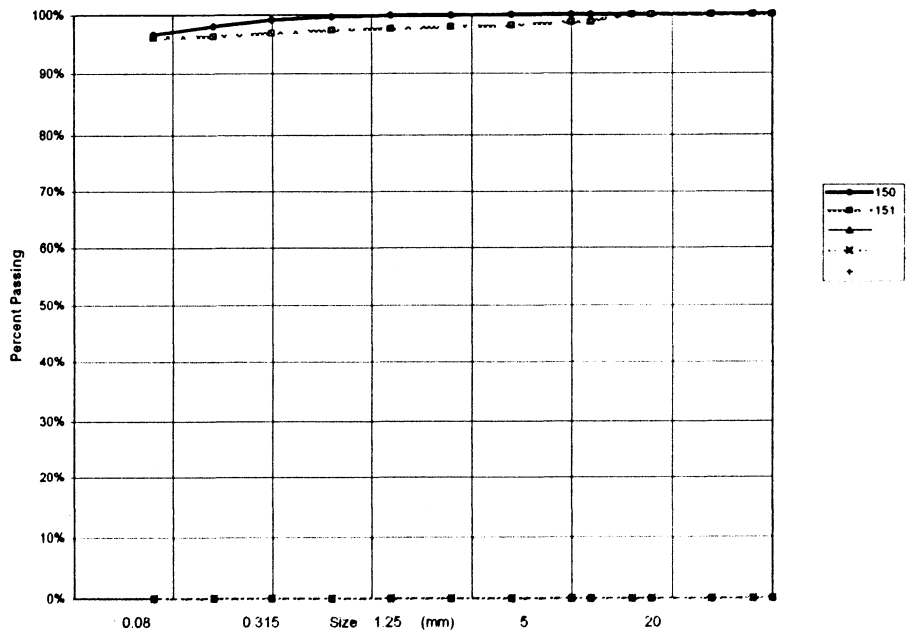
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 508-395
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1816+150 center line
 LOGGED BY: G.C. DATE COMP 99-04-22

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	100%
12.5	100%	12.5	99%
10.0	100%	10.0	99%
5.0	100%	5.0	98%
2.5	100%	2.5	98%
1.25	100%	1.25	98%
0.630	100%	0.630	97%
0.315	99%	0.315	97%
0.160	98%	0.160	96%
0.080	97%	0.080	96%
M.C. (%)	44%	M.C. (%)	28%
LIMITS			
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	0	% GRAVEL:	2
% SAND:	3	% SAND:	2
% FINES:	97	% FINES:	96
CLASSIFICATION:		CLASSIFICATION:	
SILT (ML)		SILT (ML)	

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



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	509-398
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1816+000 15M RT		
LOGGED BY:	G.C.	DATE COMP	89-04-22

FIELD NO:	152	FIELD No.	153
LAB NO:	157	LAB No.	158
DEPTH:	1.2-1.6	DEPTH	2.5-3.0
TYPE:	AUGER	TYPE	AUGER

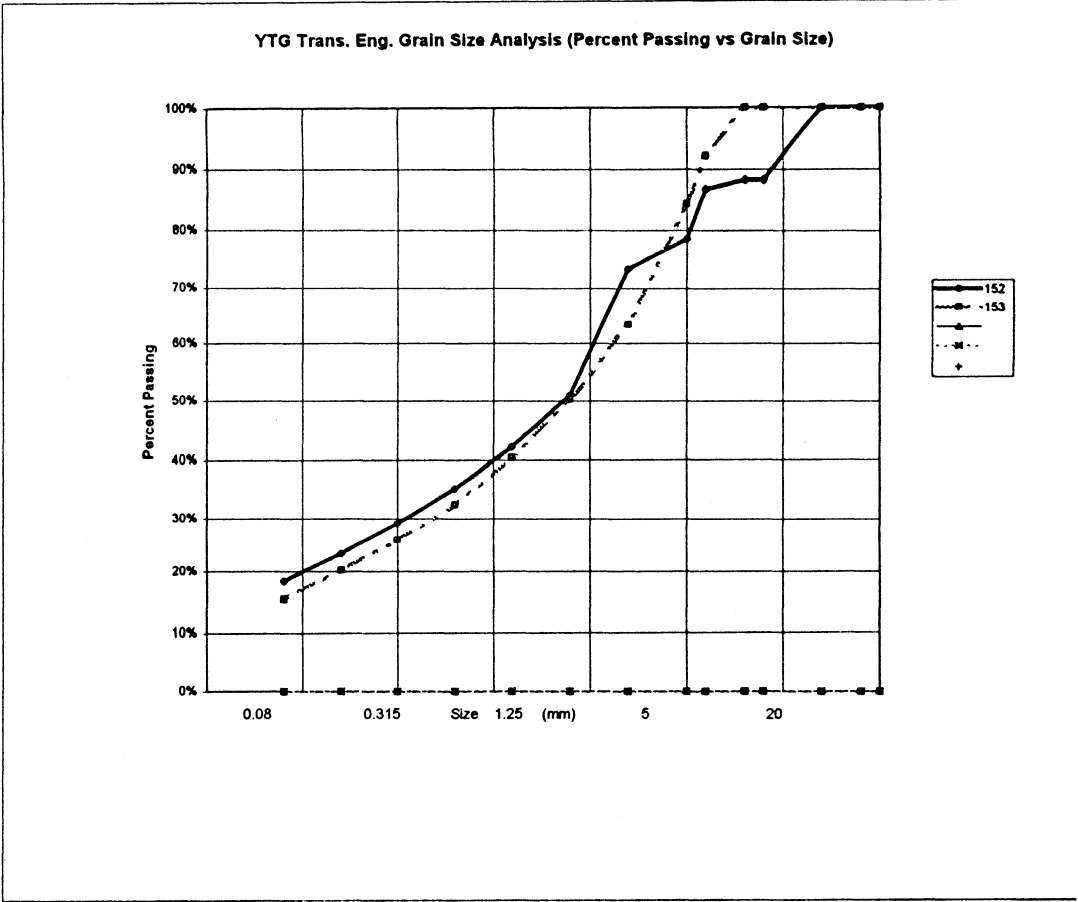
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	88%	25.0	100%
20.0	88%	20.0	100%
12.5	87%	12.5	92%
10.0	79%	10.0	85%
5.0	73%	5.0	63%
2.5	51%	2.5	50%
1.25	42%	1.25	40%
0.630	35%	0.630	33%
0.315	29%	0.315	26%
0.160	23%	0.160	20%
0.080	18%	0.080	15%

M.C.(%):	11%	M.C.(%):	7%
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LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0

% GRAVEL:	27	% GRAVEL:	37
% SAND:	55	% SAND:	48
% FINES:	18	% FINES:	15

CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-397
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1815+900 center line
 LOGGED BY: G.C. DATE COMP 99-04-23

FIELD NO: 154	FIELD No. 155
LAB NO: 159	LAB No. 160
DEPTH: 1.6-2.0	DEPTH 2.2-2.5
TYPE: AUGER	TYPE AUGER

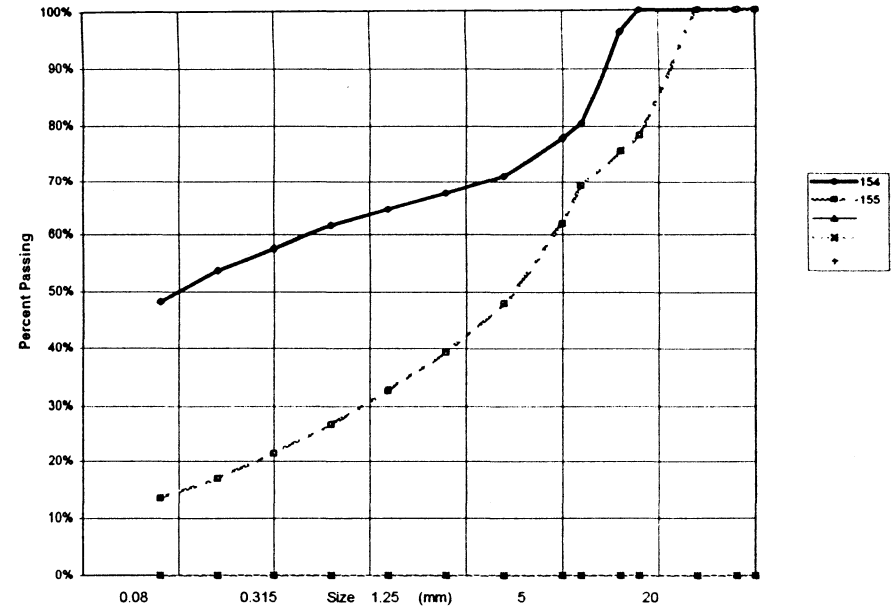
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	78%
20.0	96%	20.0	76%
12.5	80%	12.5	69%
10.0	78%	10.0	62%
5.0	71%	5.0	48%
2.5	68%	2.5	39%
1.25	65%	1.25	33%
0.630	62%	0.630	27%
0.315	58%	0.315	21%
0.160	54%	0.160	17%
0.080	48%	0.080	13%

M.C.(%): 30%	M.C.(%): 7%
LIMITS	
LIQUID: 0.0	LIQUID: 0.0
PLASTIC: 0.0	PLASTIC: 0.0
P.I.: 0.0	P.I.: 0.0

% GRAVEL: 29	% GRAVEL: 52
% SAND: 23	% SAND: 35
% FINES: 48	% FINES: 13

CLASSIFICATION: SILTY GRAVEL WITH SAND (GM) CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)

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



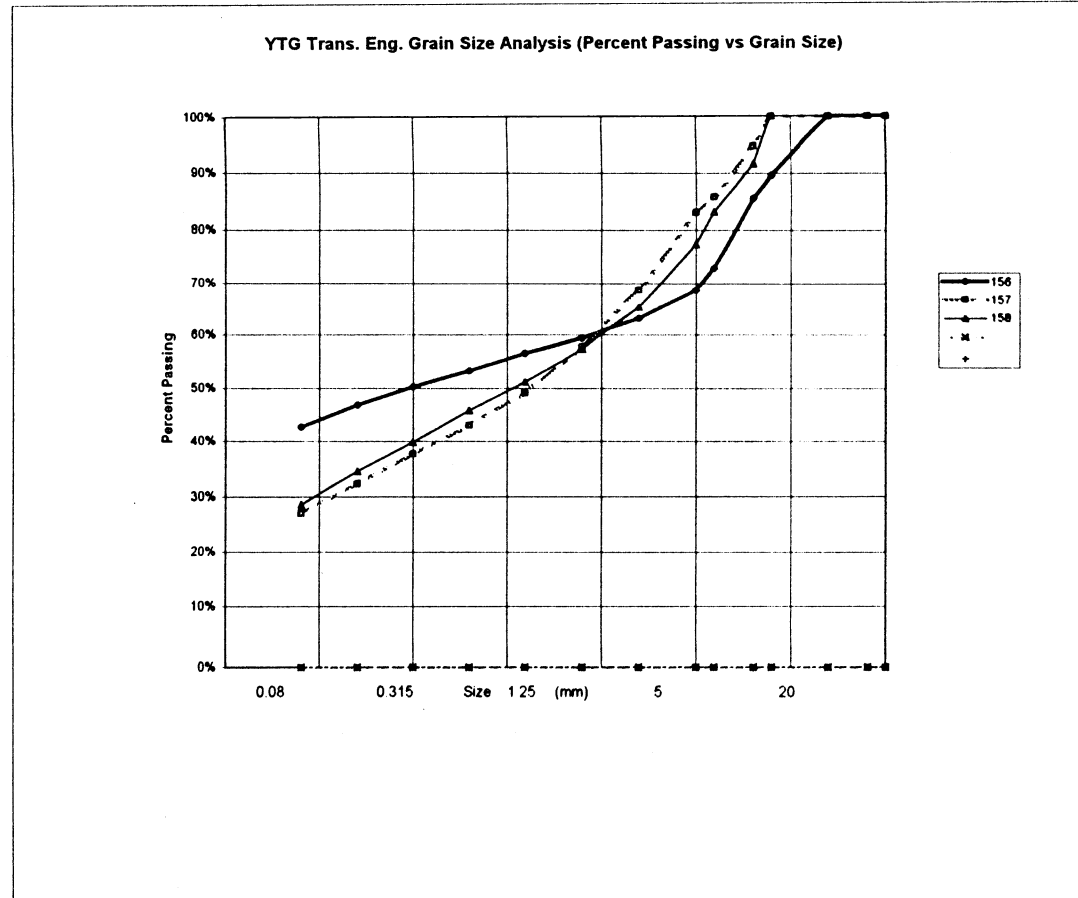
PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	509-398
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1815+800 center line		
LOGGED BY:	G.C.	DATE COMP	99-04-23

FIELD NO:	LAB NO:	DEPTH:	TYPE:
156	161	1.8-2.0	AUGER
157	162	2.6-3.0	AUGER
158	163	3.8-4.2	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	90%	25.0	100%	25.0	100%
20.0	86%	20.0	95%	20.0	92%
12.5	73%	12.5	86%	12.5	83%
10.0	69%	10.0	83%	10.0	77%
5.0	63%	5.0	69%	5.0	65%
2.5	59%	2.5	58%	2.5	58%
1.25	57%	1.25	49%	1.25	51%
0.630	53%	0.630	43%	0.630	46%
0.315	50%	0.315	38%	0.315	40%
0.160	47%	0.160	32%	0.160	34%
0.080	43%	0.080	27%	0.080	29%

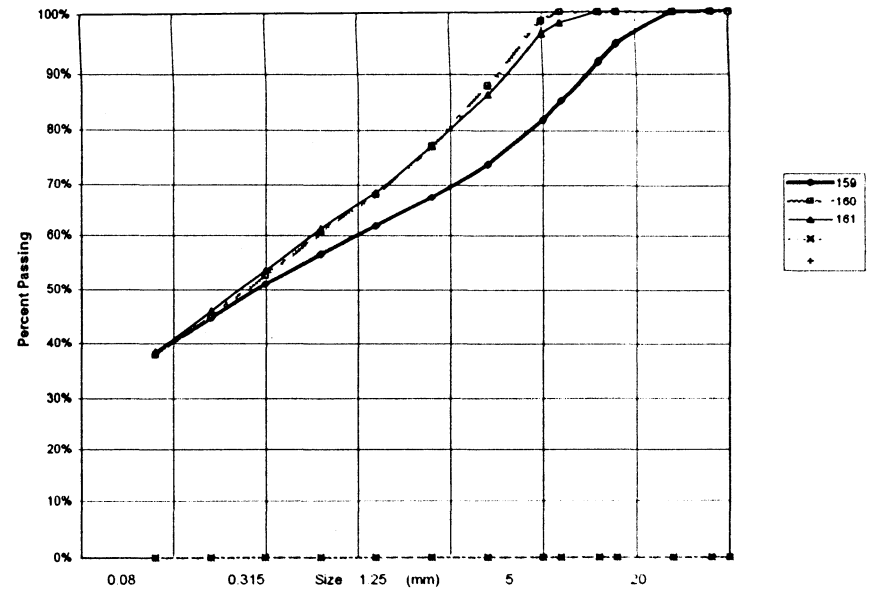
M.C. (%)	25%	M.C. (%)	11%	M.C. (%)	9%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	37	% GRAVEL:	31	% GRAVEL:	35
% SAND:	21	% SAND:	42	% SAND:	37
% FINES:	43	% FINES:	27	% FINES:	29

CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)
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PROJECT NUMBER: 091-202101-0329-199		HOLE No: 509-399	
CLIENT: ENGINEERING CAPITAL			
PROJECT NAME: SHAKWAK SEG 13			
PROJECT LOCATION: KM 1799-1822 A/H			
DRILL UNIT: B-40-L Nodwell			
HOLE LOCATION: 1815+700 center line		DATE COMP 99-04-23	
LOGGED BY: G.C.			
FIELD NO: 159	FIELD No: 160	FIELD No: 161	
LAB NO: 164	LAB No: 165	LAB No: 166	
DEPTH: 0.8-1.2	DEPTH: 2.0-2.2	DEPTH: 3.0-3.2	
TYPE: AUGER	TYPE: AUGER	TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	95%	25.0	100%
20.0	92%	20.0	100%
12.5	86%	12.5	100%
10.0	82%	10.0	98%
5.0	74%	5.0	88%
2.5	68%	2.5	77%
1.25	62%	1.25	68%
0.630	57%	0.630	61%
0.315	51%	0.315	53%
0.160	45%	0.160	45%
0.080	38%	0.080	38%
M.C.(%): 10%	M.C.(%): 12%	M.C.(%): 12%	
LIMITS	LIMITS	LIMITS	
LIQUID: 0.0	LIQUID: 0.0	LIQUID: 0.0	
PLASTIC: 0.0	PLASTIC: 0.0	PLASTIC: 0.0	
P.I.: 0.0	P.I.: 0.0	P.I.: 0.0	
% GRAVEL: 26	% GRAVEL: 12	% GRAVEL: 13	
% SAND: 38	% SAND: 50	% SAND: 48	
% FINES: 38	% FINES: 38	% FINES: 38	
CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION: SILTY SAND (SM)	CLASSIFICATION: SILTY SAND (SM)	

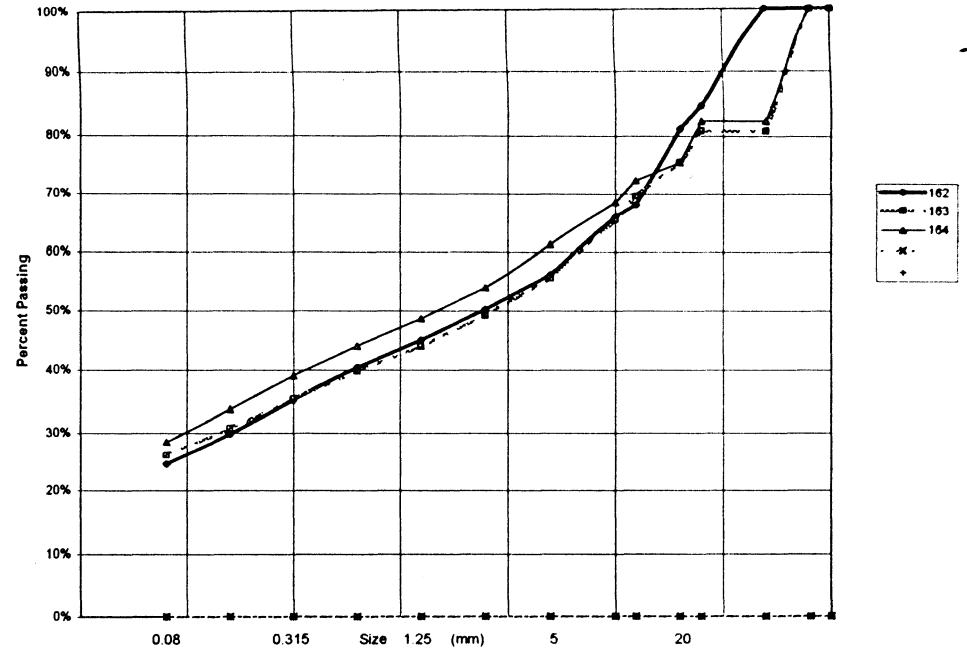
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 509-400
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1815+600 center line
 LOGGED BY: G.C. DATE COMP 99-04-23

FIELD NO: 162		FIELD No. 163		FIELD No: 164	
LAB NO: 167		LAB No. 168		LAB No: 169	
DEPTH: 1.0-1.4		DEPTH 2.0-2.4		DEPTH: 2.8-3.2	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	81%	50.0	82%
25.0	85%	25.0	81%	25.0	82%
20.0	81%	20.0	76%	20.0	75%
12.5	68%	12.5	70%	12.5	72%
10.0	66%	10.0	65%	10.0	68%
5.0	56%	5.0	56%	5.0	61%
2.5	50%	2.5	49%	2.5	54%
1.25	45%	1.25	44%	1.25	49%
0.630	40%	0.630	40%	0.630	44%
0.315	35%	0.315	35%	0.315	39%
0.160	30%	0.160	31%	0.160	34%
0.080	25%	0.080	26%	0.080	28%
M.C.(%):	3%	M.C.(%):	10%	M.C.(%):	10%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	44	% GRAVEL:	44	% GRAVEL:	39
% SAND:	32	% SAND:	30	% SAND:	33
% FINES:	25	% FINES:	26	% FINES:	28
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	

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



PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-401
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1815+500 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-04-23

FIELD NO: 165 FIELD No. 166
 LAB NO: 170 LAB No. 171
 DEPTH: 1.8-2.2 DEPTH 3.0-3.2
 TYPE: AUGER TYPE AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	97%
20.0	100%	20.0	94%
12.5	92%	12.5	91%
10.0	88%	10.0	89%
5.0	79%	5.0	81%
2.5	72%	2.5	74%
1.25	65%	1.25	68%
0.630	60%	0.630	63%
0.315	53%	0.315	57%
0.160	46%	0.160	49%
0.080	40%	0.080	42%

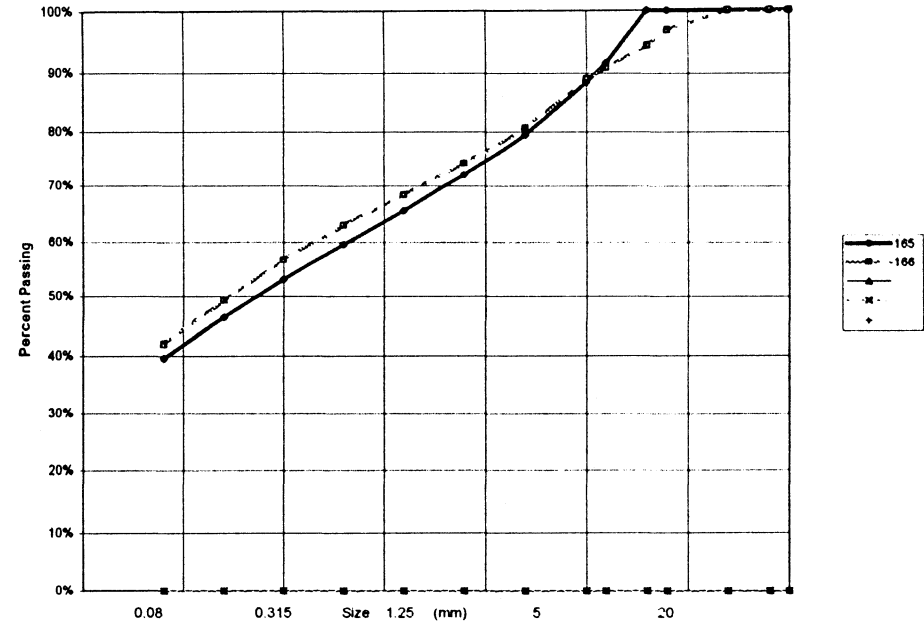
M.C. (%): 13% M.C. (%): 13%

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

% GRAVEL: 21 % GRAVEL: 19
 % SAND: 40 % SAND: 39
 % FINES: 40 % FINES: 42

CLASSIFICATION: CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM) SILTY SAND WITH GRAVEL (SM)

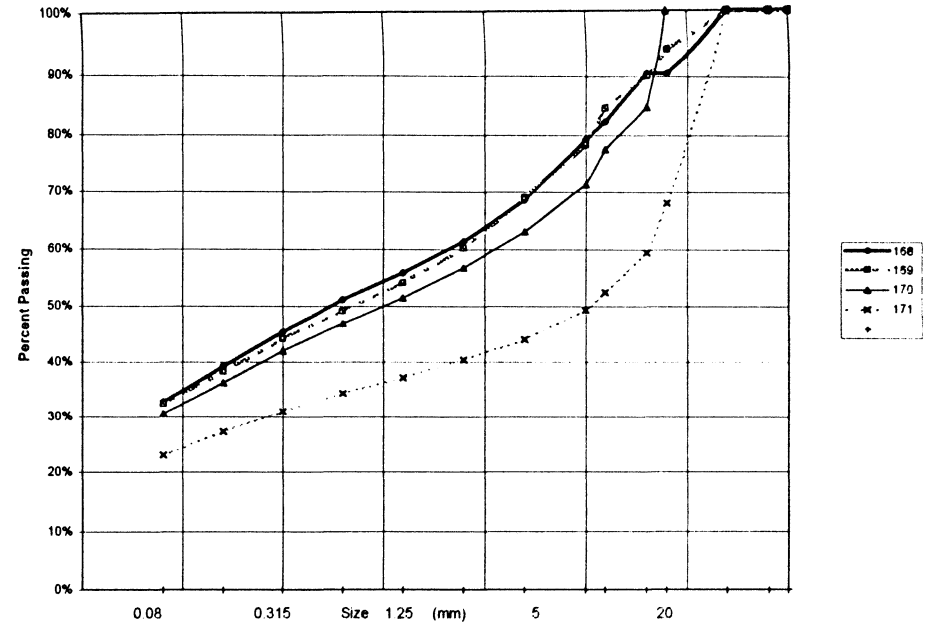
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-402
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1815+400 CENTRELINE
 LOGGED BY: G.C. DATE COMP 1999-04-23

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
168	172	0.6-1.0	AUGER	169	173	1.6-2.0	AUGER	170	174	2.6-3.0	AUGER	171	175	3.6-4.0	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	91%	25.0	95%	25.0	95%	25.0	100%	25.0	85%	25.0	100%	25.0	68%	25.0	68%
20.0	91%	20.0	90%	20.0	90%	20.0	85%	20.0	85%	20.0	85%	20.0	59%	20.0	59%
12.5	82%	12.5	85%	12.5	85%	12.5	78%	12.5	78%	12.5	78%	12.5	52%	12.5	52%
10.0	79%	10.0	78%	10.0	78%	10.0	71%	10.0	71%	10.0	71%	10.0	49%	10.0	49%
5.0	69%	5.0	69%	5.0	63%	5.0	63%	5.0	63%	5.0	63%	5.0	44%	5.0	44%
2.5	61%	2.5	60%	2.5	57%	2.5	57%	2.5	57%	2.5	57%	2.5	40%	2.5	40%
1.25	56%	1.25	54%	1.25	51%	1.25	51%	1.25	51%	1.25	51%	1.25	37%	1.25	37%
0.630	51%	0.630	49%	0.630	47%	0.630	47%	0.630	47%	0.630	47%	0.630	34%	0.630	34%
0.315	45%	0.315	44%	0.315	42%	0.315	42%	0.315	42%	0.315	42%	0.315	31%	0.315	31%
0.160	39%	0.160	38%	0.160	36%	0.160	36%	0.160	36%	0.160	36%	0.160	27%	0.160	27%
0.080	33%	0.080	32%	0.080	30%	0.080	30%	0.080	30%	0.080	30%	0.080	23%	0.080	23%
M.C. (%)	6%	M.C. (%)	6%	M.C. (%)	6%	M.C. (%)	6%	M.C. (%)	5%	M.C. (%)	5%	M.C. (%)	5%	M.C. (%)	5%
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	31	% GRAVEL:	31	% GRAVEL:	37	% GRAVEL:	37	% GRAVEL:	56	% GRAVEL:	56	% GRAVEL:	56	% GRAVEL:	56
% SAND:	36	% SAND:	36	% SAND:	33	% SAND:	33	% SAND:	21	% SAND:	21	% SAND:	21	% SAND:	21
% FINES:	33	% FINES:	32	% FINES:	30	% FINES:	30	% FINES:	23	% FINES:	23	% FINES:	23	% FINES:	23
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	

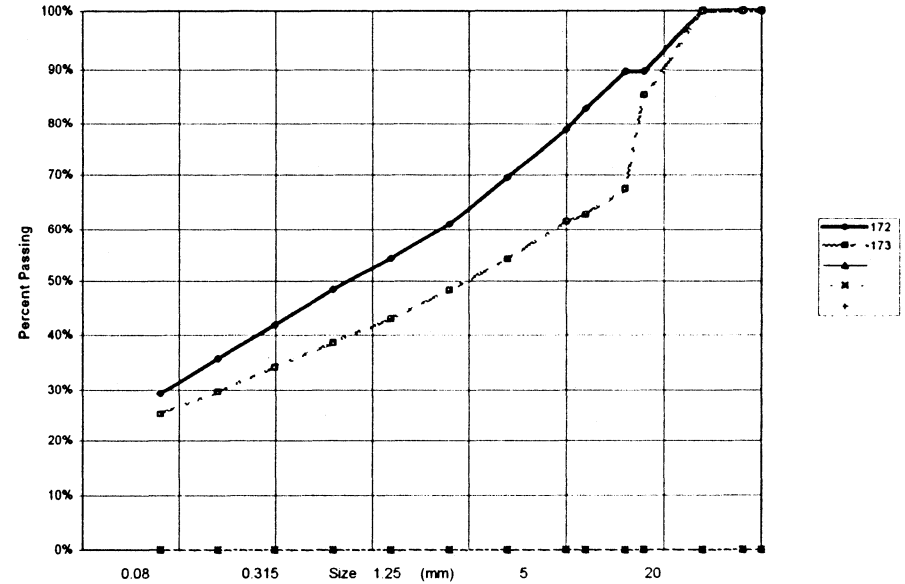
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-403
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1815+200 CENTRELINE
 LOGGED BY: G. C. DATE COMP 1999-04-23

=====		=====	
FIELD NO: 172	FIELD No. 173		
LAB NO: 176	LAB No. 177		
DEPTH: 0.6-1.0	DEPTH 2.0-2.5		
TYPE: AUGER	TYPE AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	90%	25.0	85%
20.0	90%	20.0	67%
12.5	83%	12.5	63%
10.0	79%	10.0	62%
5.0	70%	5.0	54%
2.5	61%	2.5	48%
1.25	54%	1.25	43%
0.630	48%	0.630	39%
0.315	42%	0.315	34%
0.160	36%	0.160	30%
0.080	29%	0.080	25%
M.C.(%): 4%	M.C.(%): 4%		
LIMITS	LIMITS		
LIQUID: 0.0	LIQUID: 0.0		
PLASTIC: 0.0	PLASTIC: 0.0		
P.I.: 0.0	P.I.: 0.0		
% GRAVEL: 30	% GRAVEL: 46		
% SAND: 40	% SAND: 29		
% FINES: 29	% FINES: 25		
CLASSIFICATION:	CLASSIFICATION:		
SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)		

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



PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-404
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1815+120 10M RT
 LOGGED BY: G.C. DATE COMP 1999-04-23

FIELD NO: 174
 LAB NO: 178
 DEPTH: 2.8-3.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	96%
20.0	87%
12.5	68%
10.0	62%
5.0	45%
2.5	35%
1.25	27%
0.630	22%
0.315	17%
0.160	13%
0.080	10%

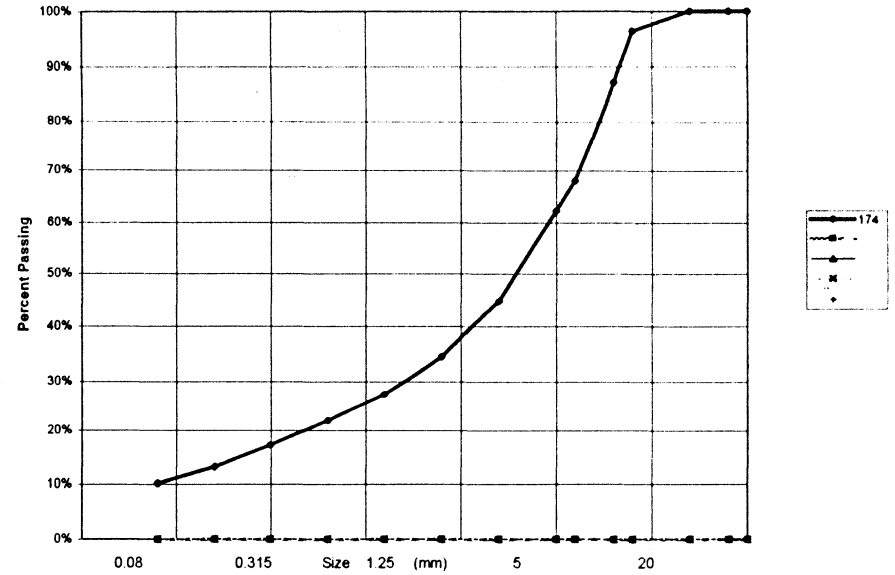
M.C. (%): 16%

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

% GRAVEL: 55
 % SAND: 35
 % FINES: 10

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

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



PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-405
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1814+950 CENTRELINE
 G.C.
 LOGGED BY: DATE COMP 1999-04-23

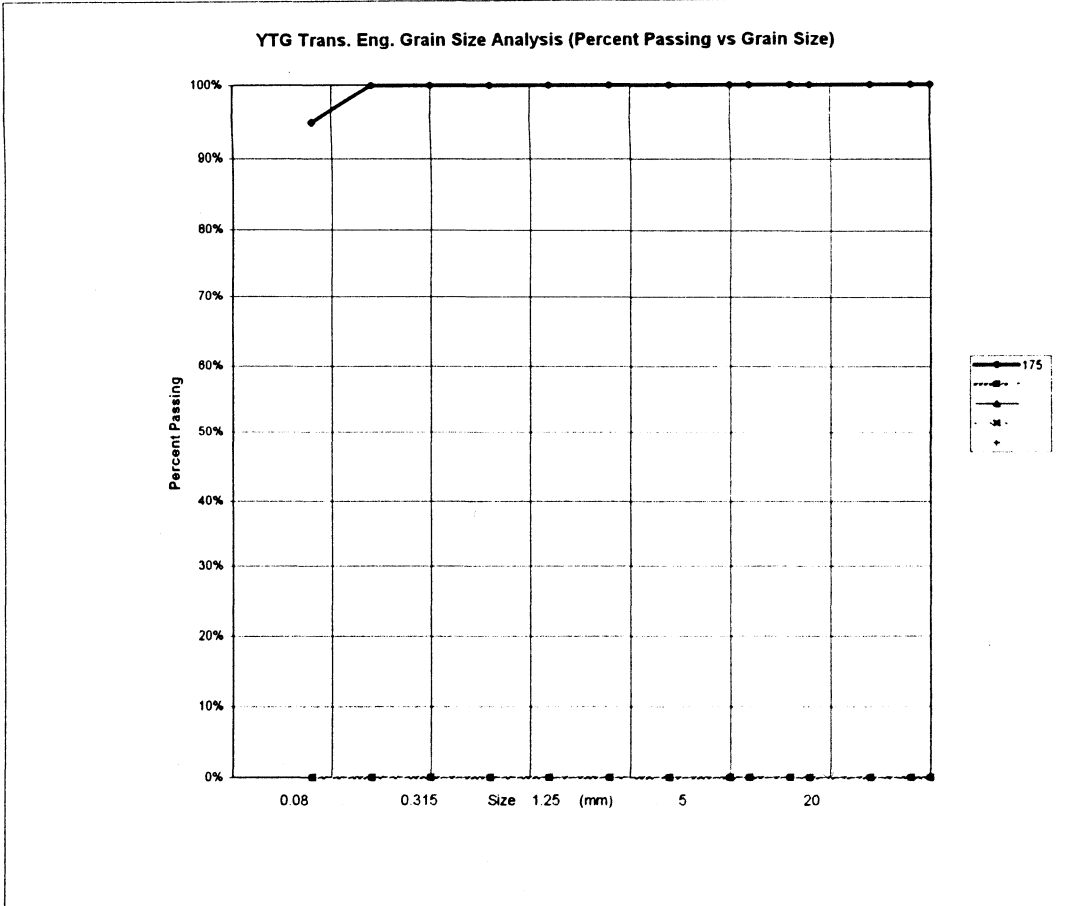
SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	100%
12.5	100%
10.0	100%
5.0	100%
2.5	100%
1.25	100%
0.630	100%
0.315	100%
0.160	100%
0.080	95%

M.C. (%)	184%
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LIMITS	
LIQUID:	0.0
PLASTIC:	0.0
P.I.:	0.0

% GRAVEL:	0
% SAND:	5
% FINES:	95

CLASSIFICATION:
SILT (ML)



PROJECT NUMBER:	092-202101-0329-199	HOLE No.:	511-406
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799 - 1822 A/H		
DRILL UNIT:	B-40-L NODWELL		
HOLE LOCATION:	1814+850 5M RT	DATE COMP	1999-04-26
LOGGED BY:	G.C.		

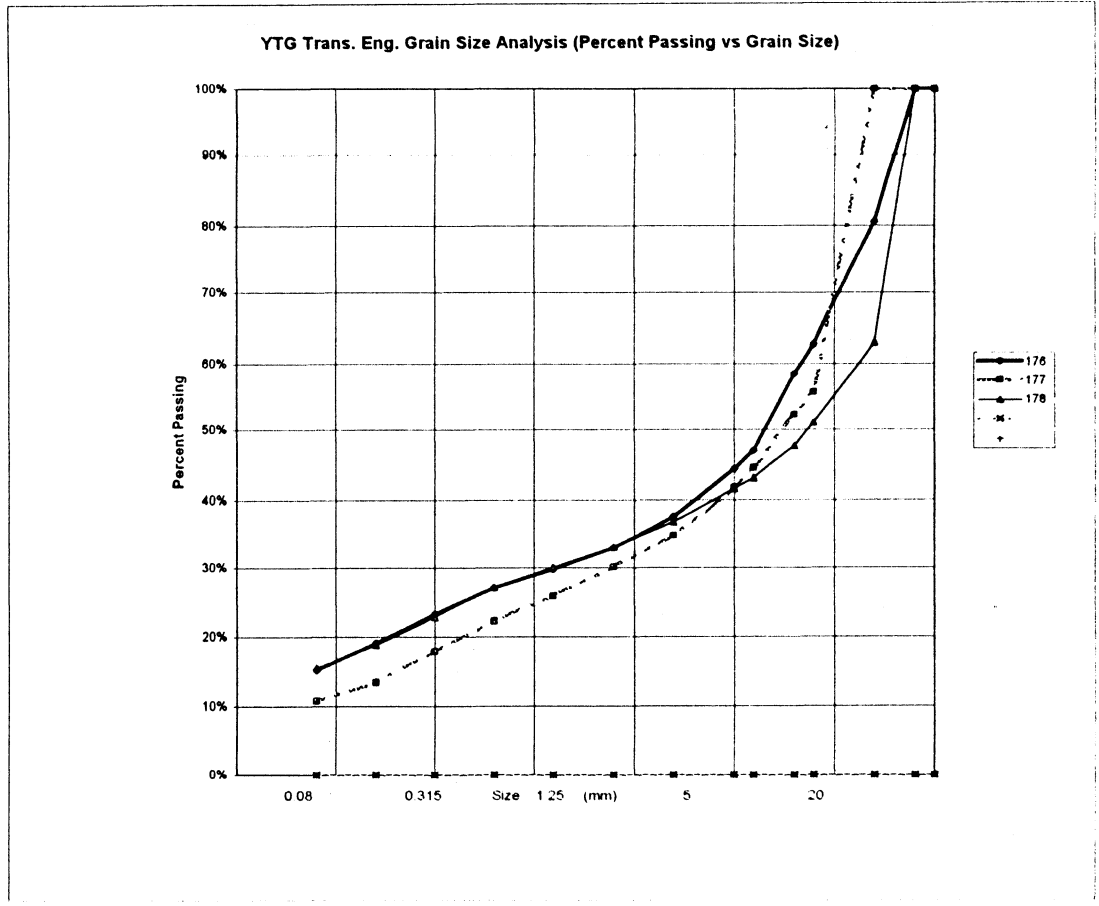
FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
176	192	1.2-1.5	AUGER	177	193	2.5-3.0	AUGER	178	194	3.6-4.0	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	81%	50.0	100%	50.0	63%
25.0	63%	25.0	56%	25.0	51%
20.0	58%	20.0	52%	20.0	48%
12.5	47%	12.5	44%	12.5	43%
10.0	44%	10.0	42%	10.0	41%
5.0	38%	5.0	35%	5.0	37%
2.5	33%	2.5	30%	2.5	33%
1.25	30%	1.25	26%	1.25	30%
0.630	27%	0.630	22%	0.630	27%
0.315	23%	0.315	18%	0.315	23%
0.160	19%	0.160	13%	0.160	19%
0.080	15%	0.080	11%	0.080	15%

M.C. (%):	4%	M.C. (%):	4%	M.C. (%):	4%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0

% GRAVEL:	62	% GRAVEL:	65	% GRAVEL:	63
% SAND:	23	% SAND:	24	% SAND:	21
% FINES:	15	% FINES:	11	% FINES:	15

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

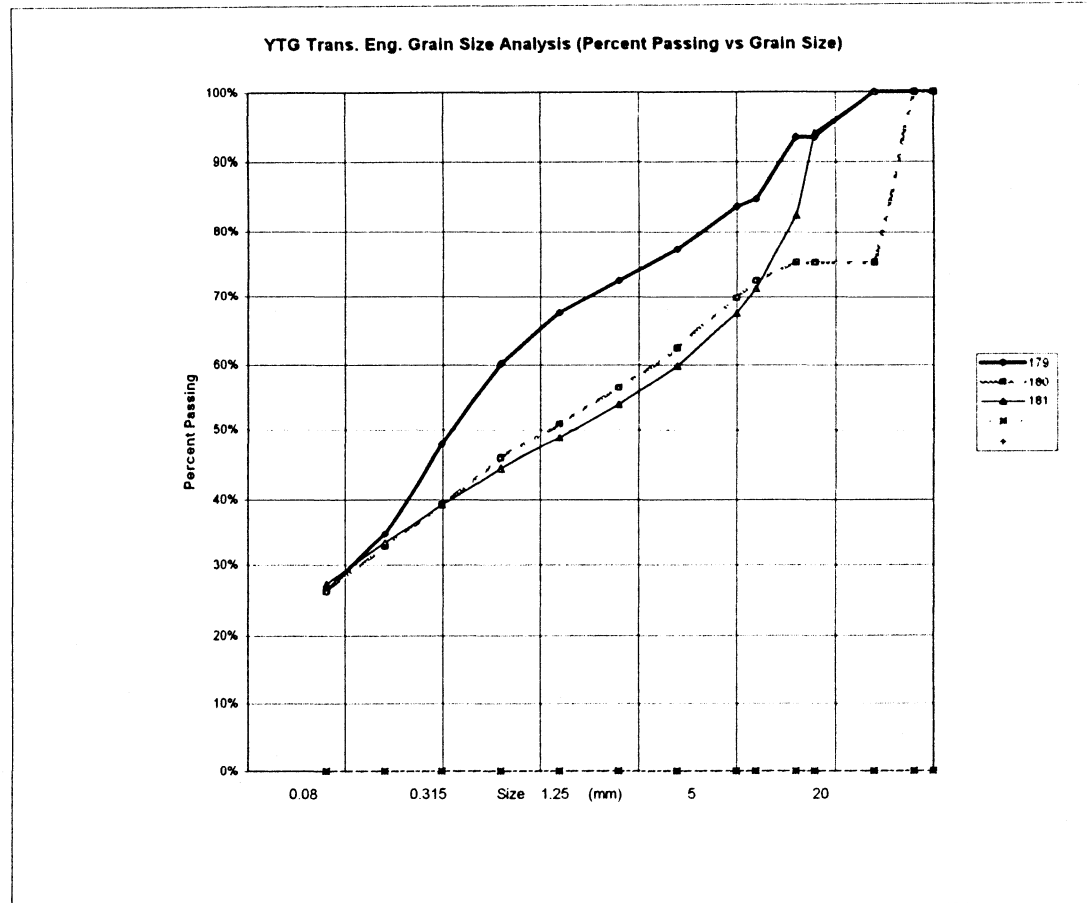


PROJECT NUMBER:	092-202101-0329-199	HOLE No.:	511-407
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799 - 1822 A/H		
DRILL UNIT:	B-40-L NODWELL		
HOLE LOCATION:	1814*750 10M RT	DATE COMP	1999-04-26
LOGGED BY:	G.C.		

FIELD NO:	179	FIELD No:	180	FIELD No:	181
LAB NO:	195	LAB No:	196	LAB No:	197
DEPTH:	1.5-2.0	DEPTH:	2.6-3.0	DEPTH:	4.0-4.5
TYPE:	AUGER	TYPE:	AUGER	TYPE:	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	75%	50.0	100%
25.0	93%	25.0	75%	25.0	94%
20.0	83%	20.0	75%	20.0	82%
12.5	85%	12.5	72%	12.5	71%
10.0	84%	10.0	70%	10.0	67%
5.0	77%	5.0	62%	5.0	80%
2.5	73%	2.5	56%	2.5	54%
1.25	67%	1.25	51%	1.25	49%
0.630	60%	0.630	46%	0.630	44%
0.315	48%	0.315	39%	0.315	39%
0.160	35%	0.160	33%	0.160	33%
0.080	26%	0.080	26%	0.080	27%

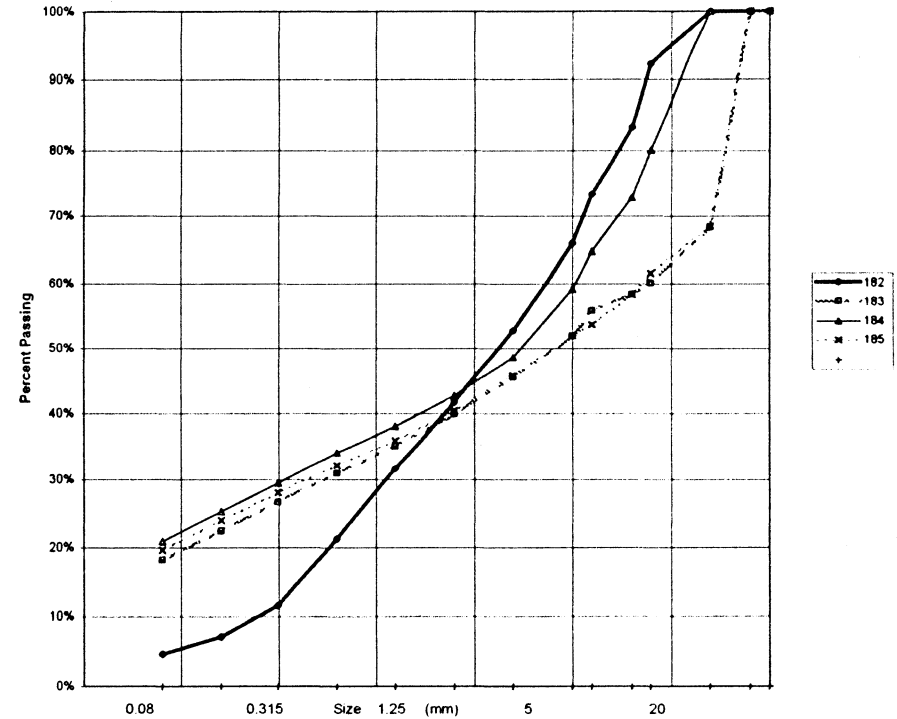
M.C. (%):	8%	M.C. (%):	7%	M.C. (%):	5%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	23	% GRAVEL:	38	% GRAVEL:	40
% SAND:	51	% SAND:	36	% SAND:	33
% FINES:	26	% FINES:	26	% FINES:	27
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	



PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-408
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1814+625 CENTRELINE
 LOGGED BY: G.C. DATE COMP 1999-04-27

FIELD NO: 182		FIELD No. 183		FIELD No: 184		FIELD No: 185	
LAB NO: 198		LAB No. 199		LAB No: 200		LAB No: 201	
DEPTH: 0.6-1.0		DEPTH 1.5-2.0		DEPTH: 2.5-3.0		DEPTH: 4.0-4.5	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	68%	50.0	100%	50.0	68%
25.0	92%	25.0	60%	25.0	80%	25.0	61%
20.0	83%	20.0	58%	20.0	73%	20.0	58%
12.5	73%	12.5	56%	12.5	65%	12.5	54%
10.0	66%	10.0	52%	10.0	59%	10.0	52%
5.0	53%	5.0	45%	5.0	49%	5.0	46%
2.5	42%	2.5	40%	2.5	43%	2.5	40%
1.25	32%	1.25	35%	1.25	38%	1.25	36%
0.630	21%	0.630	31%	0.630	34%	0.630	32%
0.315	11%	0.315	27%	0.315	29%	0.315	28%
0.160	7%	0.160	22%	0.160	25%	0.160	24%
0.080	5%	0.080	18%	0.080	21%	0.080	20%
M.C.(%)	2%	M.C.(%)	4%	M.C.(%)	4%	M.C.(%)	4%
LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	47	% GRAVEL:	55	% GRAVEL:	51	% GRAVEL:	54
% SAND:	48	% SAND:	27	% SAND:	28	% SAND:	26
% FINES:	5	% FINES:	18	% FINES:	21	% FINES:	20
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
WELL-GRADED SAND WITH GRAVEL (SW)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	

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



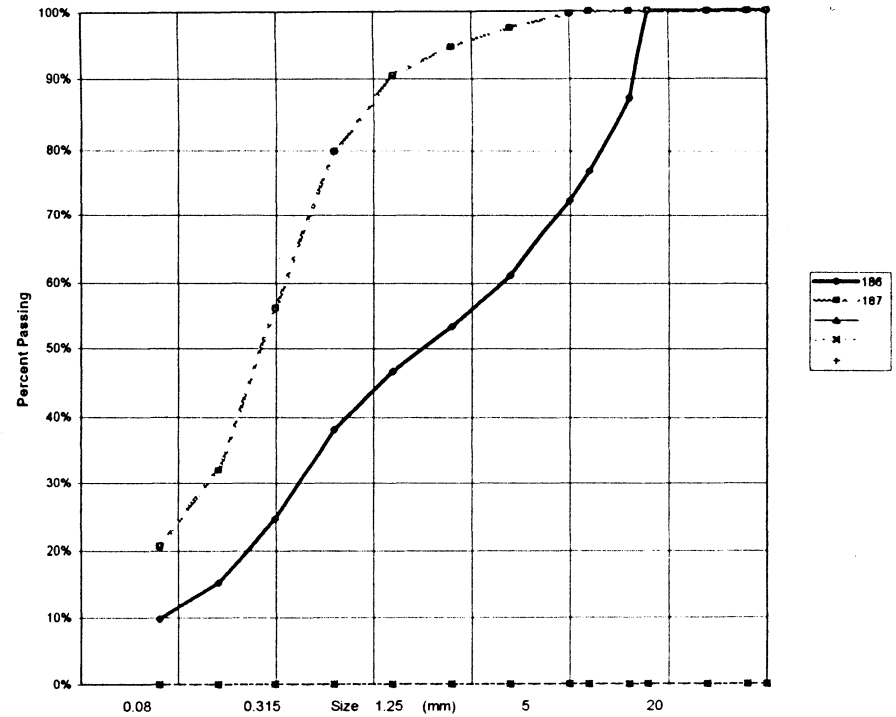
PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-409
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1789 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1814+550 20M LT
 LOGGED BY: G.C. DATE COMP 1999-04-27

FIELD NO.	LAB NO.	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH	TYPE
188	202	2.0-2.5	AUGER	187	203	3.5-4.5	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	87%	20.0	100%
12.5	77%	12.5	100%
10.0	72%	10.0	100%
5.0	61%	5.0	97%
2.5	53%	2.5	95%
1.25	47%	1.25	90%
0.630	38%	0.630	80%
0.315	25%	0.315	56%
0.160	15%	0.160	32%
0.080	10%	0.080	21%

M.C. (%):	13%	M.C. (%):	32%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	39	% GRAVEL:	3
% SAND:	51	% SAND:	77
% FINES:	10	% FINES:	21
CLASSIFICATION:		CLASSIFICATION:	
WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)		SILTY SAND (SM)	

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



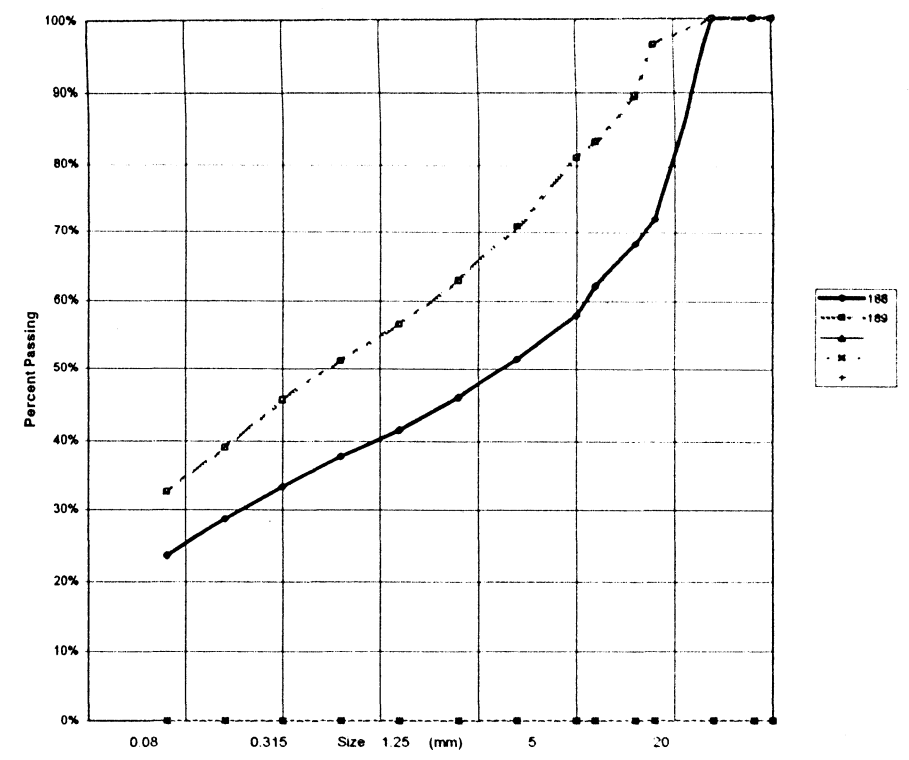
PROJECT NUMBER:	092-202101-0329-199	HOLE No.:	511-410
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799 - 1822 A/H		
DRILL UNIT:	B-40-L NODWELL		
HOLE LOCATION:	1814+400 15M RT		
LOGGED BY:	G.C.	DATE COMP	1999-04-27

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH	TYPE
188	204	0.6-1.0	AUGER	189	205	2.5-3.0	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	72%	25.0	96%
20.0	68%	20.0	90%
12.5	62%	12.5	84%
10.0	58%	10.0	81%
5.0	51%	5.0	71%
2.5	46%	2.5	63%
1.25	42%	1.25	56%
0.630	38%	0.630	51%
0.315	33%	0.315	45%
0.160	29%	0.160	39%
0.080	24%	0.080	33%

M.C. (%):	4%	M.C. (%):	5%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	49	% GRAVEL:	29
% SAND:	28	% SAND:	38
% FINES:	24	% FINES:	33
CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)

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



PROJECT NUMBER:	092-202101-0329-199	HOLE No.:	511-411
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799 - 1822 A/H		
DRILL UNIT:	B-40-L NODWELL		
HOLE LOCATION:	1814+375 CENTRELINE		
LOGGED BY:	G.C.	DATE COMP	1999-04-27

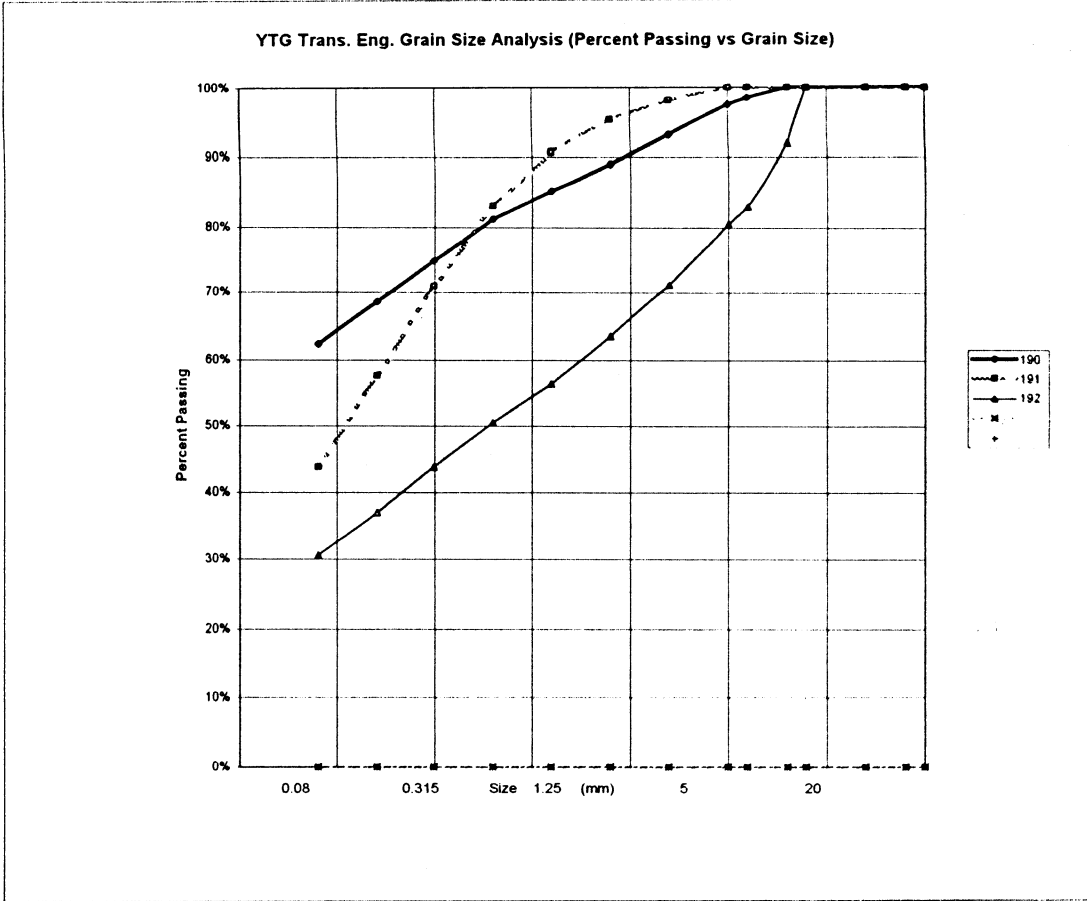
FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
190	206	1.4-1.8	AUGER	191	207	2.0-2.4	AUGER	192	208	3.0-3.5	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	100%
20.0	100%	20.0	100%	20.0	92%
12.5	98%	12.5	100%	12.5	83%
10.0	97%	10.0	100%	10.0	80%
5.0	93%	5.0	98%	5.0	71%
2.5	89%	2.5	95%	2.5	64%
1.25	85%	1.25	91%	1.25	56%
0.630	81%	0.630	83%	0.630	50%
0.315	75%	0.315	71%	0.315	44%
0.160	68%	0.160	58%	0.160	37%
0.080	62%	0.080	44%	0.080	31%

M.C. (%)	LIMITS	LIMITS	LIMITS
21%	LIQUID: 0.0	LIQUID: 0.0	LIQUID: 0.0
	PLASTIC: 0.0	PLASTIC: 0.0	PLASTIC: 0.0
	P.I.: 0.0	P.I.: 0.0	P.I.: 0.0

% GRAVEL:	% SAND:	% FINES:	% GRAVEL:	% SAND:	% FINES:	% GRAVEL:	% SAND:	% FINES:
7	31	62	2	54	44	29	41	31

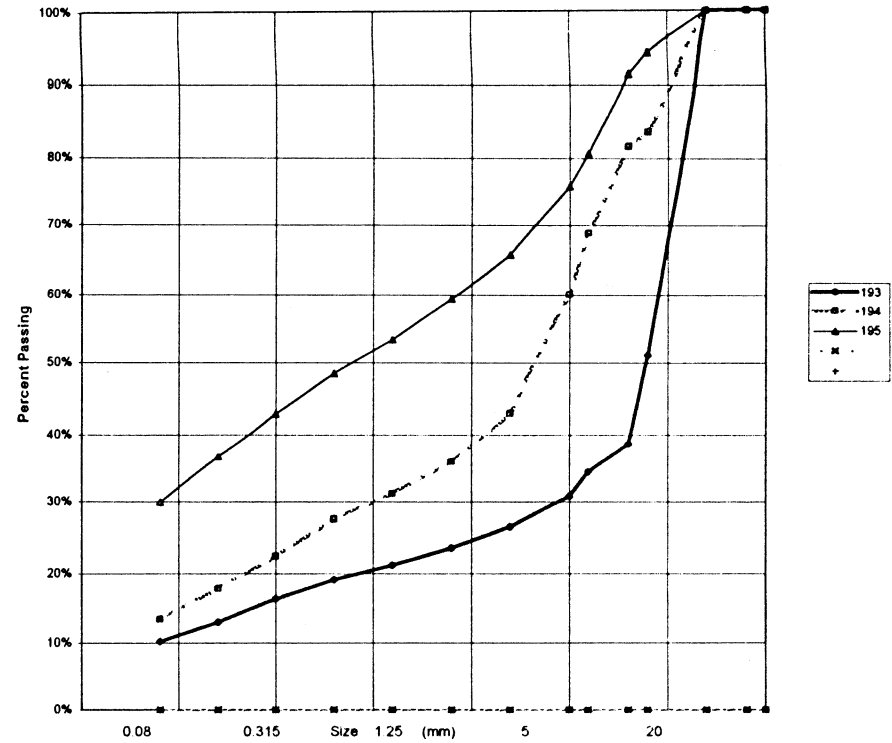
CLASSIFICATION:	CLASSIFICATION:	CLASSIFICATION:
SANDY SILT (ML)	SILTY SAND (SM)	SILTY SAND WITH GRAVEL (SM)



PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-412
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1814+275 CENTRELINE
 LOGGED BY: G.C. DATE COMP 1999-04-27

FIELD NO: 193		FIELD No. 194		FIELD No: 195	
LAB NO: 209		LAB No. 210		LAB No: 211	
DEPTH: 1.5-2.0		DEPTH 2.5-3.0		DEPTH: 4.0-4.4	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	51%	25.0	84%	25.0	94%
20.0	39%	20.0	82%	20.0	91%
12.5	34%	12.5	69%	12.5	81%
10.0	31%	10.0	60%	10.0	76%
5.0	26%	5.0	43%	5.0	66%
2.5	24%	2.5	36%	2.5	59%
1.25	21%	1.25	31%	1.25	53%
0.630	19%	0.630	27%	0.630	48%
0.315	16%	0.315	22%	0.315	43%
0.160	13%	0.160	18%	0.160	37%
0.080	10%	0.080	13%	0.080	30%
M.C.(%)	3%	M.C.(%)	3%	M.C.(%)	5%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	74	% GRAVEL:	57	% GRAVEL:	34
% SAND:	16	% SAND:	30	% SAND:	36
% FINES:	10	% FINES:	13	% FINES:	30
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

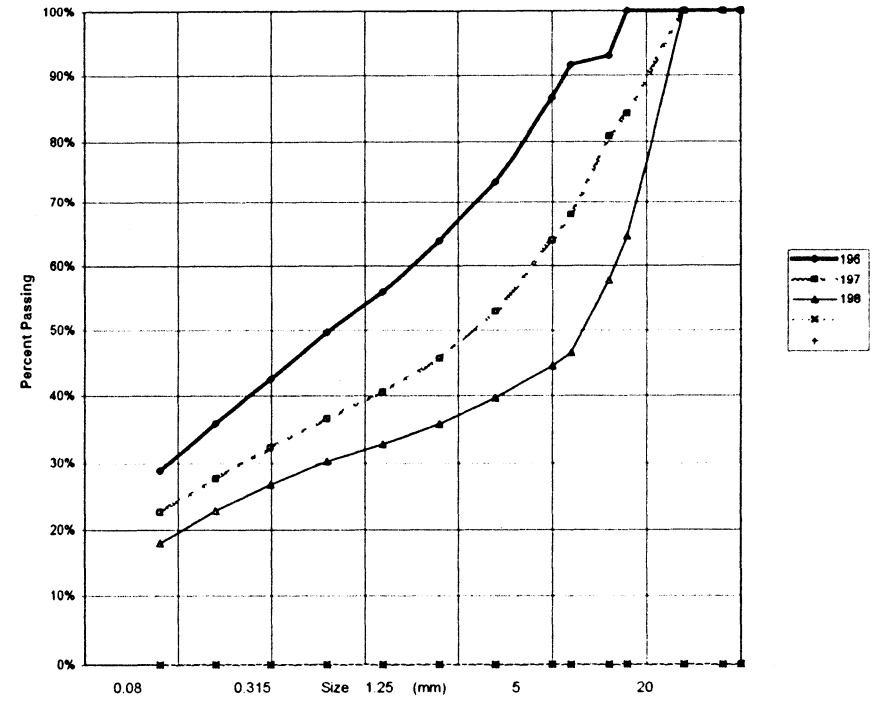
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-413
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1814+175 CENTRELINE
 LOGGED BY: G.C. DATE COMP 1999-04-27

FIELD NO: 196		FIELD No. 197		FIELD No: 198	
LAB NO: 212		LAB No. 213		LAB No: 214	
DEPTH: 1.0-1.5		DEPTH 2.5-3.0		DEPTH: 4.0-4.5	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	84%	25.0	64%
20.0	93%	20.0	81%	20.0	58%
12.5	92%	12.5	68%	12.5	47%
10.0	87%	10.0	64%	10.0	44%
5.0	73%	5.0	53%	5.0	40%
2.5	64%	2.5	46%	2.5	36%
1.25	56%	1.25	40%	1.25	33%
0.630	50%	0.630	36%	0.630	30%
0.315	42%	0.315	32%	0.315	27%
0.160	36%	0.160	28%	0.160	23%
0.080	29%	0.080	23%	0.080	18%
M.C.(%)	6%	M.C.(%)	5%	M.C.(%)	4%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	27	% GRAVEL:	47	% GRAVEL:	00
% SAND:	45	% SAND:	30	% SAND:	22
% FINES:	29	% FINES:	23	% FINES:	18
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	

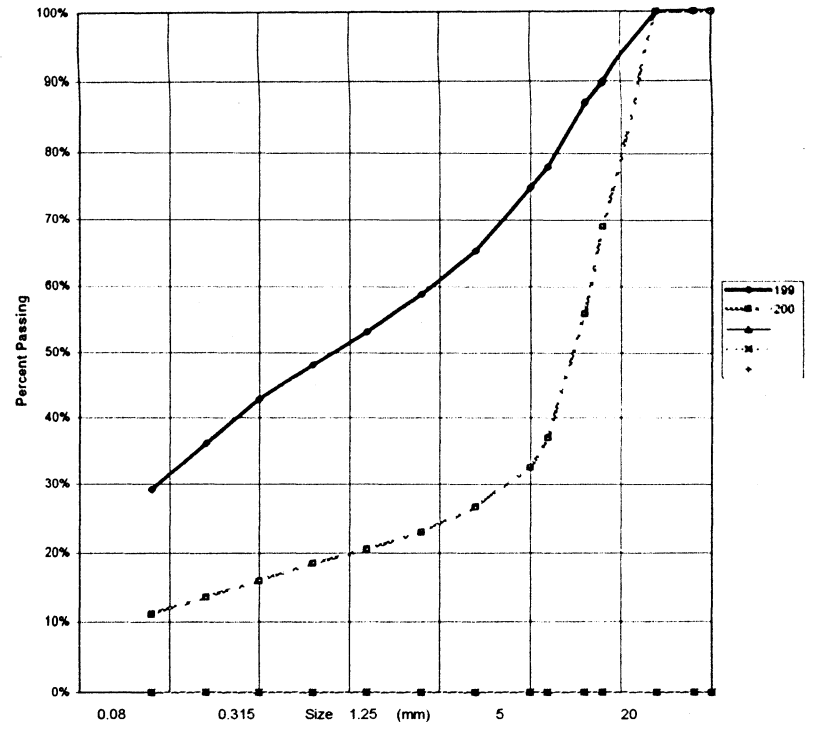
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-414
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1814+075 CENTRELINE
 LOGGED BY: G.C. DATE COMP 1999-04-27

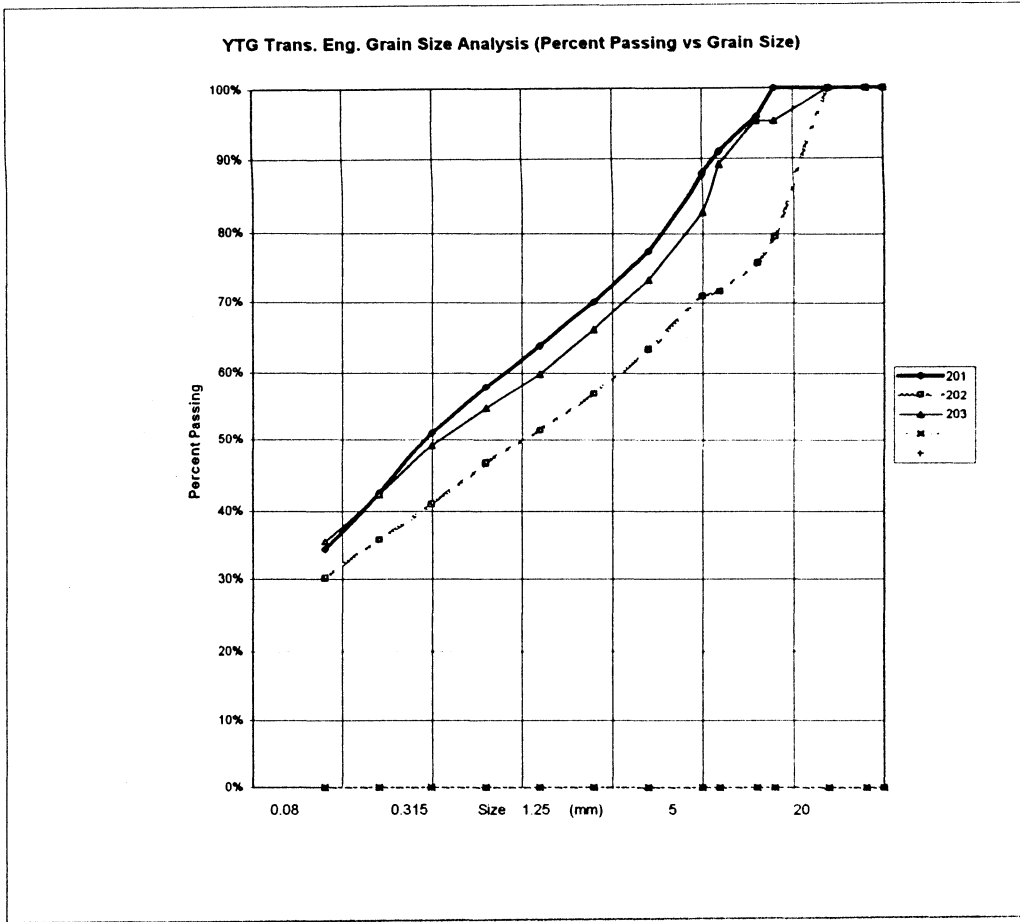
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	90%	25.0	69%
20.0	87%	20.0	56%
12.5	78%	12.5	37%
10.0	75%	10.0	33%
5.0	65%	5.0	27%
2.5	54%	2.5	23%
1.25	53%	1.25	20%
0.630	48%	0.630	19%
0.315	43%	0.315	16%
0.160	36%	0.160	13%
0.080	29%	0.080	11%
M.C. (%)	5%	M.C. (%)	2%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	35	% GRAVEL:	73
% SAND:	36	% SAND:	16
% FINES:	29	% FINES:	11
CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)

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



PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-415
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1813+975 CENTRELINE
 LOGGED BY: G.C. DATE COMP 1999-04-27

FIELD NO: 201		FIELD No. 202		FIELD No: 203	
LAB NO: 217		LAB No. 218		LAB No: 219	
DEPTH: 1.0-1.5		DEPTH 2.5-3.0		DEPTH: 4.0-4.5	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	80%	25.0	95%
20.0	96%	20.0	76%	20.0	95%
12.5	91%	12.5	72%	12.5	89%
10.0	88%	10.0	71%	10.0	83%
5.0	77%	5.0	63%	5.0	73%
2.5	70%	2.5	57%	2.5	66%
1.25	64%	1.25	51%	1.25	60%
0.630	58%	0.630	47%	0.630	55%
0.315	51%	0.315	41%	0.315	49%
0.160	43%	0.160	36%	0.160	42%
0.080	34%	0.080	30%	0.080	35%
M.C.(%):	7%	M.C.(%):	8%	M.C.(%):	8%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	23	% GRAVEL:	37	% GRAVEL:	27
% SAND:	43	% SAND:	33	% SAND:	38
% FINES:	34	% FINES:	30	% FINES:	35
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-416
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1813+875 CENTRELINE
 LOGGED BY: G.C. DATE COMP 1999-04-27

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
204	220	1.0-1.5	AUGER	205	221	2.5-3.0	AUGER	206	222	4.0-4.5	AUGER

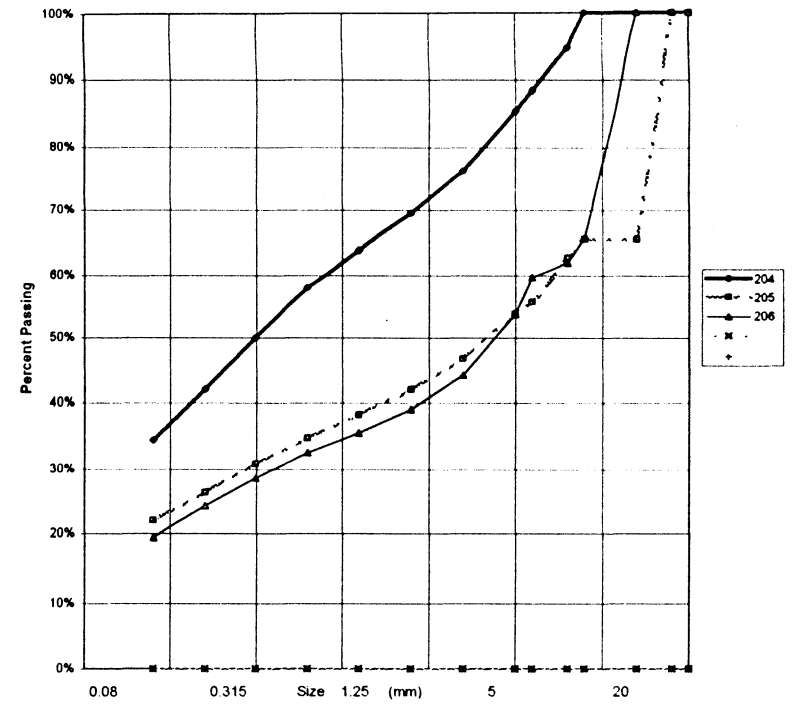
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	65%	50.0	100%
25.0	100%	25.0	65%	25.0	65%
20.0	94%	20.0	63%	20.0	62%
12.5	88%	12.5	56%	12.5	60%
10.0	86%	10.0	54%	10.0	54%
5.0	76%	5.0	47%	5.0	44%
2.5	69%	2.5	42%	2.5	39%
1.25	64%	1.25	38%	1.25	36%
0.630	58%	0.630	35%	0.630	33%
0.315	50%	0.315	31%	0.315	29%
0.160	42%	0.160	26%	0.160	24%
0.080	35%	0.080	22%	0.080	19%

M.C.(%)	LIMITS	LIMITS	LIMITS
6%	LIQUID: 0.0	LIQUID: 0.0	LIQUID: 0.0
	PLASTIC: 0.0	PLASTIC: 0.0	PLASTIC: 0.0
	P.I.: 0.0	P.I.: 0.0	P.I.: 0.0

% GRAVEL:	% SAND:	% FINES:	% GRAVEL:	% SAND:	% FINES:	% GRAVEL:	% SAND:	% FINES:
24	42	35	53	25	22	56	25	19

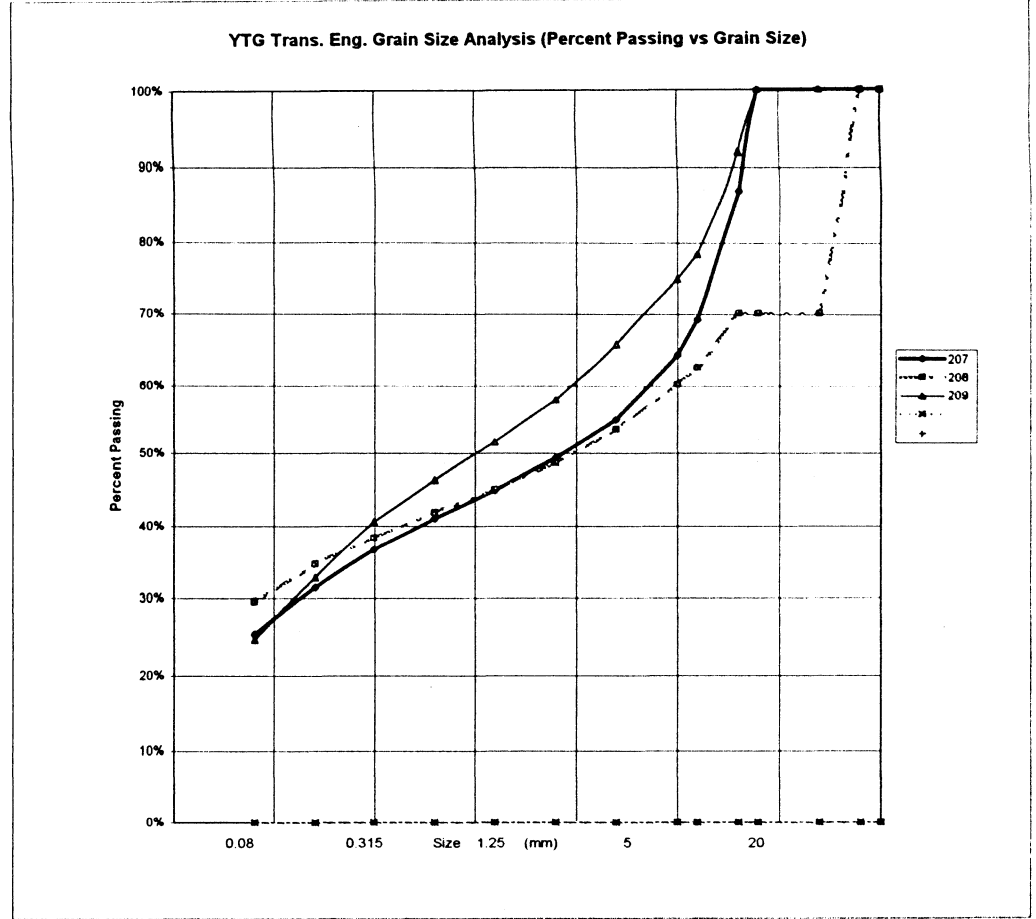
CLASSIFICATION:	CLASSIFICATION:	CLASSIFICATION:
SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)

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

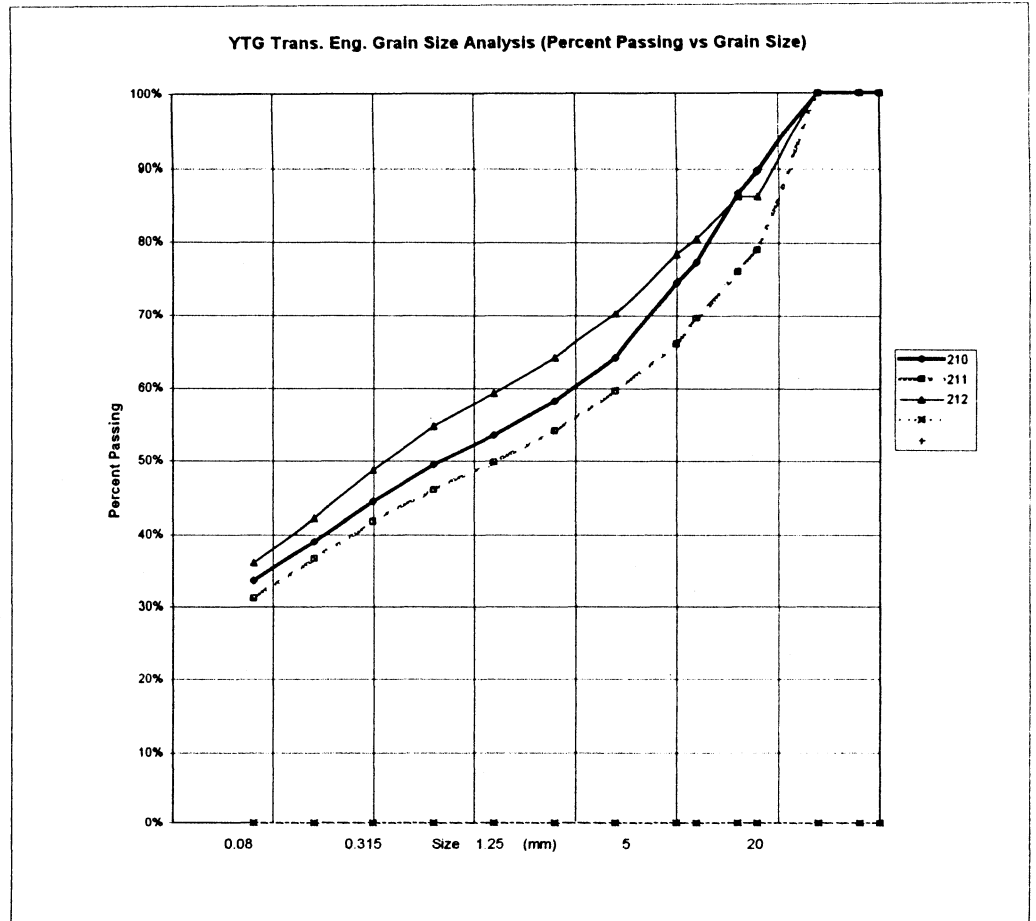


PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-417
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1813+825 CENTRELINE
 LOGGED BY: G.C. DATE COMP 1999-04-27

FIELD NO:	207	FIELD No.	208	FIELD No:	209
LAB NO:	223	LAB No.	224	LAB No:	225
DEPTH:	1.0-1.5	DEPTH	2.5-3.0	DEPTH:	4.0-4.5
TYPE:	AUGER	TYPE	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	70%	50.0	100%
25.0	100%	25.0	70%	25.0	100%
20.0	87%	20.0	70%	20.0	92%
12.5	89%	12.5	63%	12.5	79%
10.0	85%	10.0	60%	10.0	75%
5.0	55%	5.0	54%	5.0	66%
2.5	49%	2.5	49%	2.5	58%
1.25	45%	1.25	45%	1.25	52%
0.630	41%	0.630	42%	0.630	46%
0.315	37%	0.315	38%	0.315	41%
0.160	31%	0.160	35%	0.160	33%
0.080	26%	0.080	30%	0.080	25%
M.C. (%):	5%	M.C. (%):	6%	M.C. (%):	7%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	45	% GRAVEL:	46	% GRAVEL:	34
% SAND:	29	% SAND:	24	% SAND:	41
% FINES:	26	% FINES:	30	% FINES:	25
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

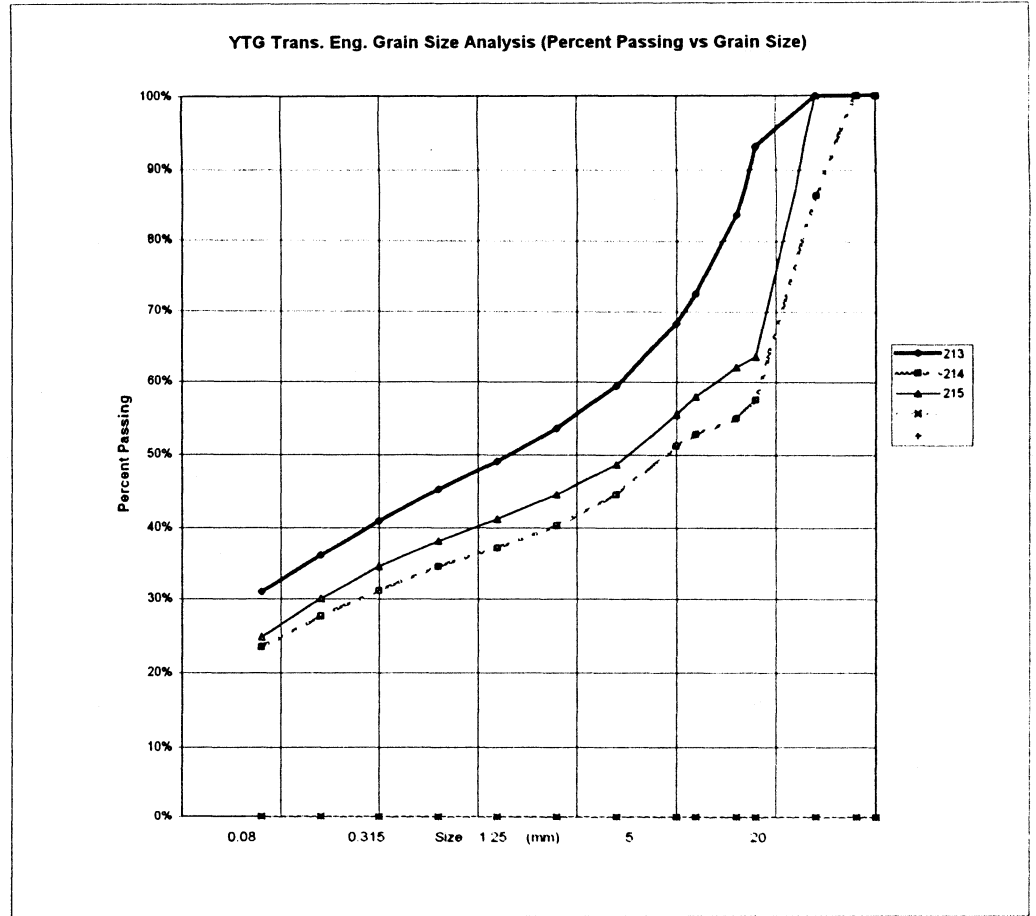


PROJECT NUMBER: 092-202101-0329-199		HOLE No.: 511-418	
CLIENT: ENGINEERING CAPITAL			
PROJECT NAME: SHAKWAK SEG 13			
PROJECT LOCATION: KM 1799 - 1822 A/H			
DRILL UNIT: B-40-L NODWELL			
HOLE LOCATION: 1813+725 CENTRELINE		DATE COMP 1999-04-27	
LOGGED BY: G.C.			
=====		=====	
FIELD NO: 210	FIELD No. 211	FIELD No: 212	
LAB NO: 226	LAB No. 227	LAB No: 228	
DEPTH: 1.3-1.5	DEPTH 2.6-3.0	DEPTH: 4.0-4.5	
TYPE: AUGER	TYPE AUGER	TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	90%	25.0	79%
20.0	87%	20.0	76%
12.5	77%	12.5	70%
10.0	75%	10.0	68%
5.0	64%	5.0	60%
2.5	58%	2.5	54%
1.25	54%	1.25	50%
0.630	50%	0.630	46%
0.315	44%	0.315	42%
0.160	39%	0.160	37%
0.080	34%	0.080	31%
M.C.(%): 8%	M.C.(%): 8%	M.C.(%): 9%	
LIMITS	LIMITS	LIMITS	
LIQUID: 0.0	LIQUID: 0.0	LIQUID: 0.0	
PLASTIC: 0.0	PLASTIC: 0.0	PLASTIC: 0.0	
P.I.: 0.0	P.I.: 0.0	P.I.: 0.0	
% GRAVEL: 36	% GRAVEL: 40	% GRAVEL: 30	
% SAND: 31	% SAND: 28	% SAND: 34	
% FINES: 34	% FINES: 31	% FINES: 36	
CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	



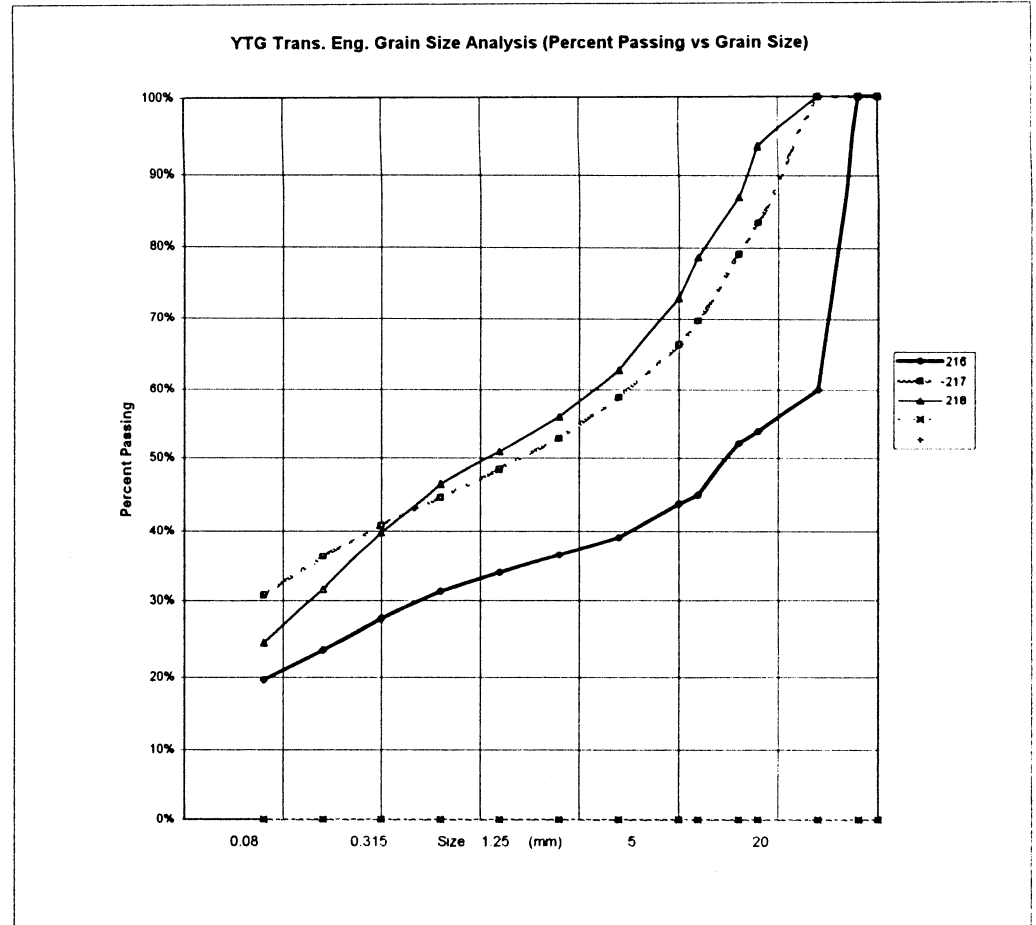
PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-419
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1813+625 CENTRELINE
 LOGGED BY: G.C. DATE COMP 1999-04-27

FIELD NO: 213		FIELD No. 214		FIELD No: 215	
LAB NO: 229		LAB No. 230		LAB No: 231	
DEPTH: 1.0-1.5		DEPTH: 2.5-3.0		DEPTH: 4.0-4.5	
TYPE: AUGER		TYPE: AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	87%	50.0	100%
25.0	93%	25.0	57%	25.0	63%
20.0	84%	20.0	55%	20.0	62%
12.5	73%	12.5	53%	12.5	58%
10.0	68%	10.0	51%	10.0	55%
5.0	59%	5.0	44%	5.0	49%
2.5	54%	2.5	40%	2.5	44%
1.25	49%	1.25	37%	1.25	41%
0.630	45%	0.630	35%	0.630	38%
0.315	41%	0.315	31%	0.315	34%
0.160	36%	0.160	28%	0.160	30%
0.080	31%	0.080	24%	0.080	25%
M.C. (%)	7%	M.C. (%)	5%	M.C. (%)	5%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	41	% GRAVEL:	56	% GRAVEL:	51
% SAND:	28	% SAND:	21	% SAND:	24
% FINES:	31	% FINES:	24	% FINES:	25
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	



PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-420
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1813+525 CENTRELINE
 LOGGED BY: G.C. DATE COMP 1999-04-27

FIELD NO.	LAB NO.	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH:	TYPE:
216	232	0.8-1.0	AUGER	217	233	2.5-3.0	AUGER	218	234	4.0-4.5	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	60%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	54%	25.0	84%	25.0	93%	25.0	93%	25.0	93%	25.0	93%
20.0	52%	20.0	79%	20.0	87%	20.0	87%	20.0	87%	20.0	87%
12.5	45%	12.5	70%	12.5	79%	12.5	79%	12.5	79%	12.5	79%
10.0	44%	10.0	66%	10.0	73%	10.0	73%	10.0	73%	10.0	73%
5.0	39%	5.0	59%	5.0	63%	5.0	63%	5.0	63%	5.0	63%
2.5	36%	2.5	53%	2.5	56%	2.5	56%	2.5	56%	2.5	56%
1.25	34%	1.25	48%	1.25	51%	1.25	51%	1.25	51%	1.25	51%
0.630	31%	0.630	45%	0.630	47%	0.630	47%	0.630	47%	0.630	47%
0.315	28%	0.315	41%	0.315	40%	0.315	40%	0.315	40%	0.315	40%
0.160	24%	0.160	36%	0.160	32%	0.160	32%	0.160	32%	0.160	32%
0.080	20%	0.080	31%	0.080	25%	0.080	25%	0.080	25%	0.080	25%
M.C. (%)	6%	M.C. (%)	8%	M.C. (%)	7%	M.C. (%)	7%	M.C. (%)	7%	M.C. (%)	7%
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	61	% GRAVEL:	41	% GRAVEL:	37	% GRAVEL:	37	% GRAVEL:	37	% GRAVEL:	37
% SAND:	19	% SAND:	28	% SAND:	38	% SAND:	38	% SAND:	38	% SAND:	38
% FINES:	20	% FINES:	31	% FINES:	25	% FINES:	25	% FINES:	25	% FINES:	25
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	



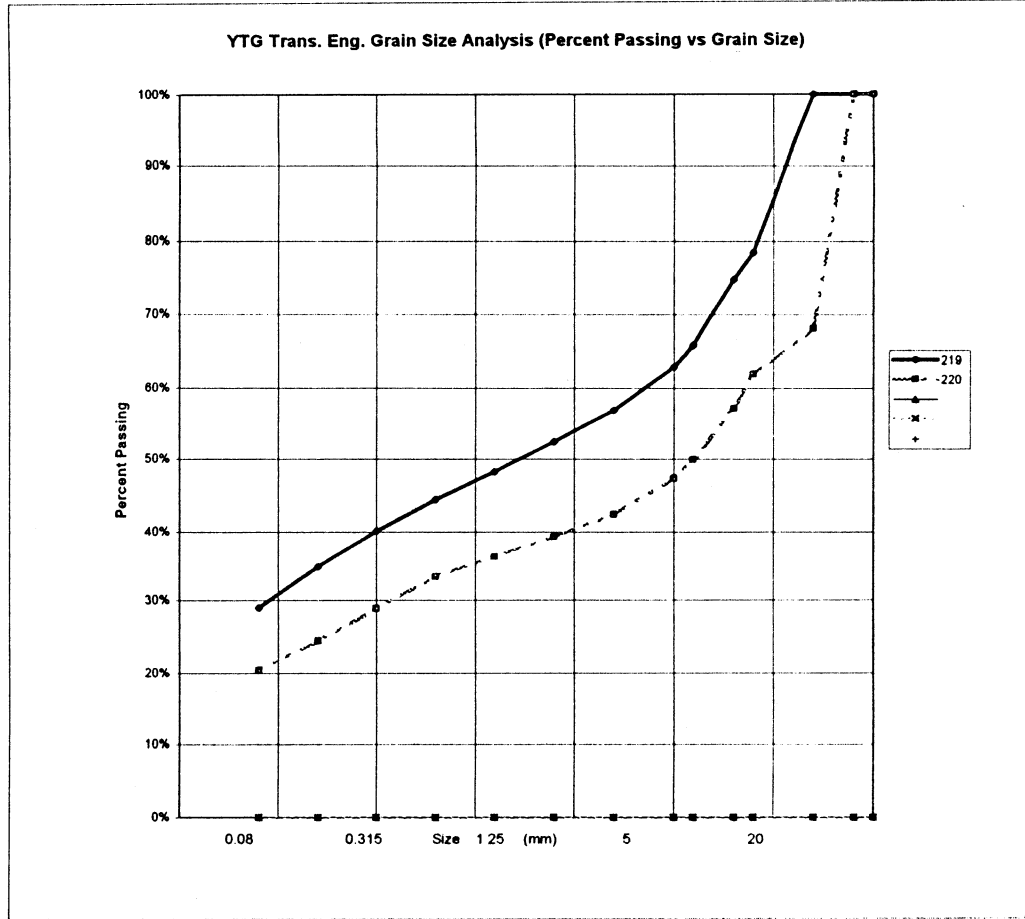
PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-421
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1813+450 CENTRELINE G.C.
 LOGGED BY: DATE COMP 1999-04-27

FIELD NO:	219	FIELD No.	220
LAB NO:	235	LAB No.	236
DEPTH:	2.0-3.0	DEPTH	4.0-4.5
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	68%
25.0	78%	25.0	62%
20.0	75%	20.0	57%
12.5	66%	12.5	50%
10.0	63%	10.0	47%
5.0	57%	5.0	43%
2.5	52%	2.5	39%
1.25	48%	1.25	36%
0.630	45%	0.630	33%
0.315	40%	0.315	29%
0.160	35%	0.160	25%
0.080	29%	0.080	20%

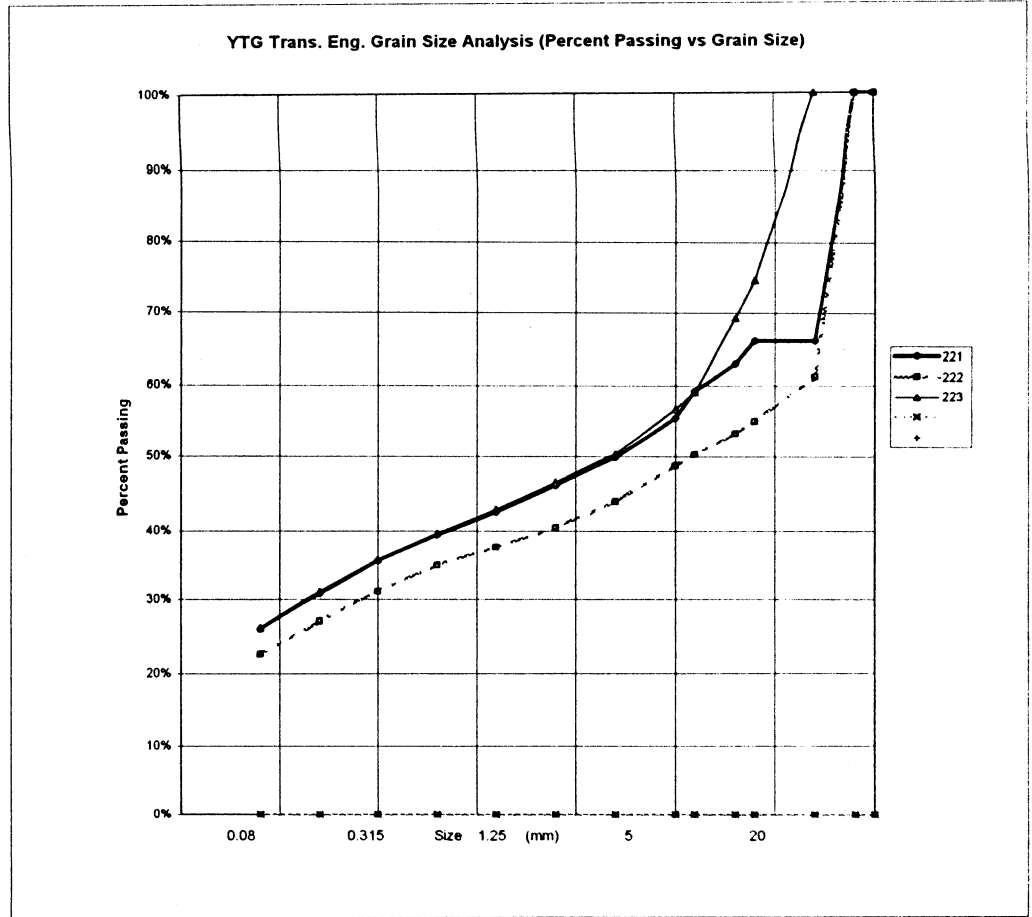
M.C. (%):	6%	M.C. (%):	9%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	43	% GRAVEL:	57
% SAND:	28	% SAND:	22
% FINES:	29	% FINES:	20

CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	



PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-422
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1813+375 CENTRELINE
 G.C.
 LOGGED BY: DATE COMP 1999-04-27

FIELD NO:	221	FIELD No:	222	FIELD No:	223
LAB NO:	237	LAB No:	238	LAB No:	239
DEPTH:	1.4-1.8	DEPTH:	2.5-3.0	DEPTH:	4.0-4.5
TYPE:	AUGER	TYPE:	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	66%	50.0	61%	50.0	100%
25.0	66%	25.0	55%	25.0	75%
20.0	63%	20.0	53%	20.0	69%
12.5	59%	12.5	50%	12.5	59%
10.0	55%	10.0	49%	10.0	57%
5.0	50%	5.0	44%	5.0	50%
2.5	46%	2.5	40%	2.5	46%
1.25	43%	1.25	38%	1.25	43%
0.630	39%	0.630	35%	0.630	40%
0.315	36%	0.315	31%	0.315	36%
0.160	31%	0.160	27%	0.160	31%
0.080	26%	0.080	23%	0.080	26%
M.C. (%):	8%	M.C. (%):	6%	M.C. (%):	6%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	50	% GRAVEL:	56	% GRAVEL:	50
% SAND:	24	% SAND:	21	% SAND:	24
% FINES:	26	% FINES:	23	% FINES:	26
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	

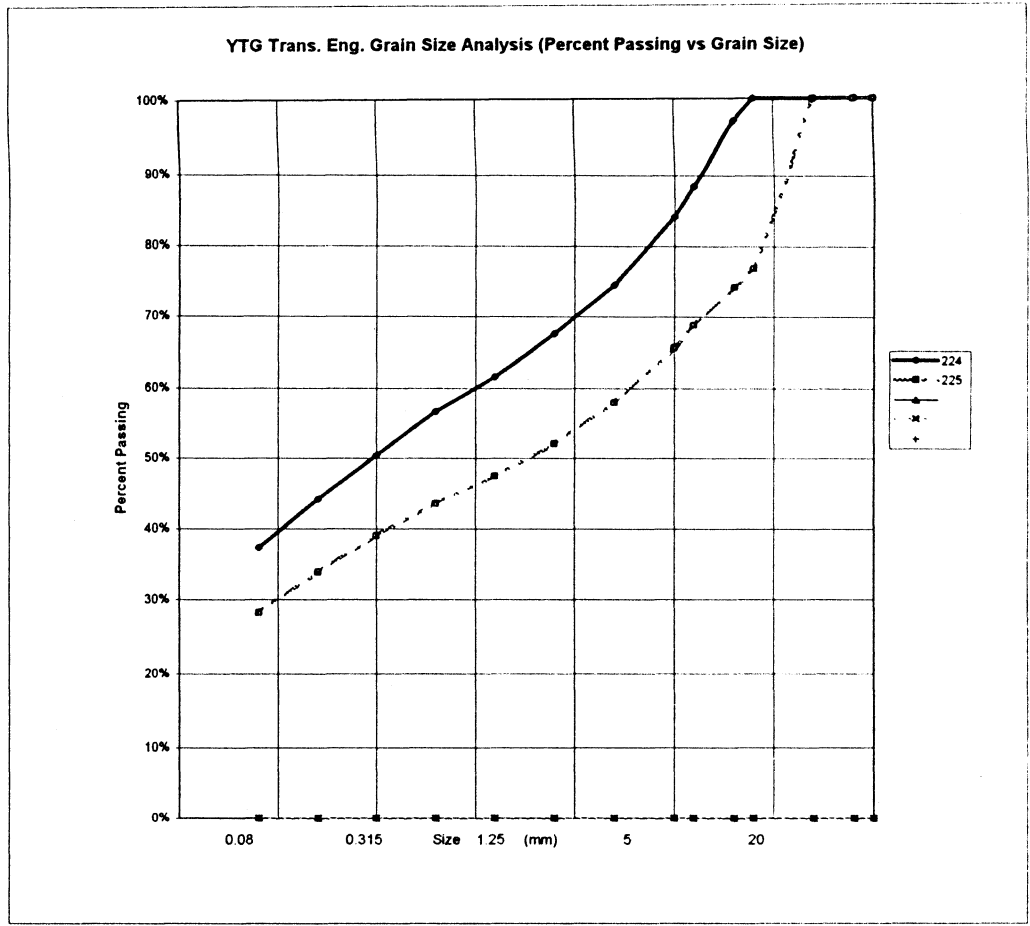


PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-423
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1813+275 CENTRELINE
 LOGGED BY: G.C. DATE COMP 1999-04-28

FIELD NO:	224	FIELD No:	225
LAB NO:	240	LAB No:	241
DEPTH:	1.0-1.5	DEPTH:	1.6-2.0
TYPE:	AUGER	TYPE:	AUGER

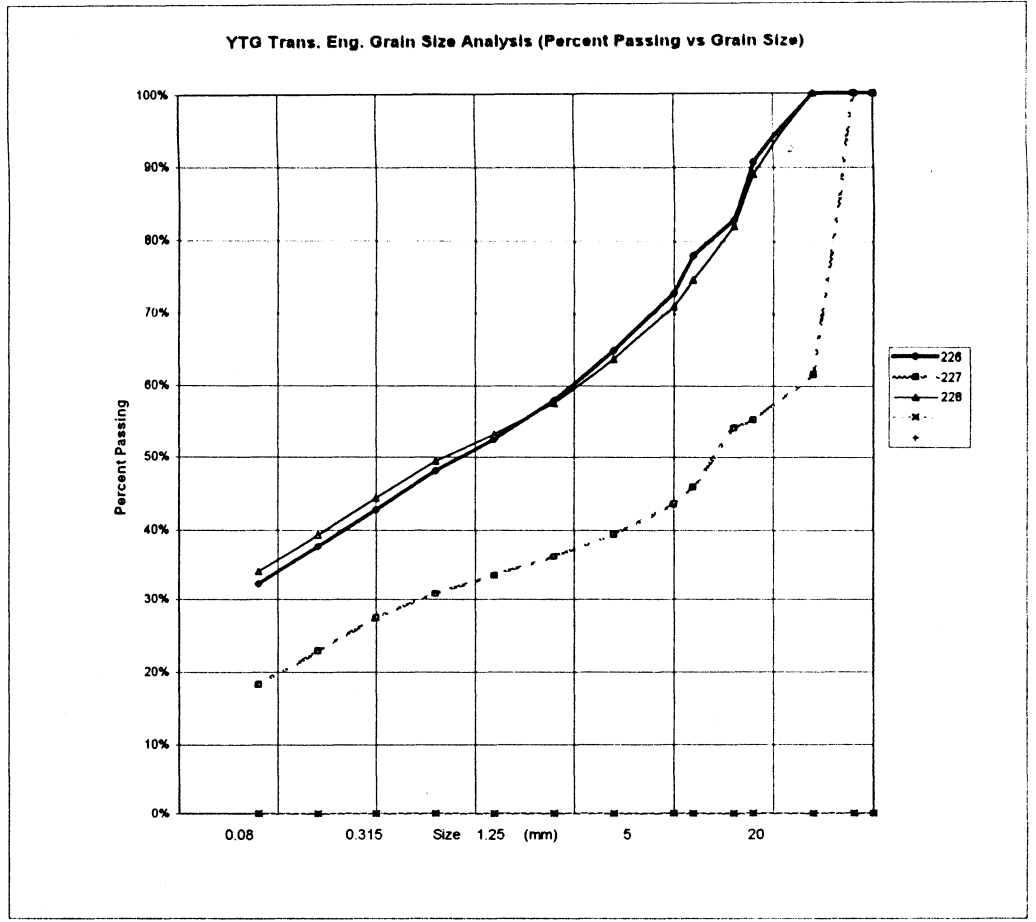
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	77%
20.0	97%	20.0	74%
12.5	88%	12.5	69%
10.0	84%	10.0	66%
5.0	74%	5.0	58%
2.5	68%	2.5	52%
1.25	62%	1.25	47%
0.630	57%	0.630	43%
0.315	50%	0.315	39%
0.160	44%	0.160	34%
0.080	37%	0.080	28%

M.C. (%)	10%	M.C. (%)	8%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	26	% GRAVEL:	42
% SAND:	37	% SAND:	30
% FINES:	37	% FINES:	28
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)	



PROJECT NUMBER: 092-202101-0329-199 HOLE No.: 511-424
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799 - 1822 A/H
 DRILL UNIT: B-40-L NODWELL
 HOLE LOCATION: 1813+150 CENTRELINE
 LOGGED BY: G.C. DATE COMP 1999-04-28

FIELD NO: 226		FIELD No. 227		FIELD No: 228	
LAB NO: 242		LAB No. 243		LAB No: 244	
DEPTH: 1.0-1.4		DEPTH: 2.5-3.0		DEPTH: 4.0-4.5	
TYPE: AUGER		TYPE: AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	62%	50.0	100%
25.0	91%	25.0	55%	25.0	89%
20.0	83%	20.0	54%	20.0	82%
12.5	78%	12.5	46%	12.5	75%
10.0	73%	10.0	44%	10.0	71%
5.0	65%	5.0	39%	5.0	64%
2.5	58%	2.5	36%	2.5	58%
1.25	53%	1.25	33%	1.25	53%
0.630	48%	0.630	31%	0.630	49%
0.315	43%	0.315	27%	0.315	44%
0.160	38%	0.160	23%	0.160	39%
0.080	32%	0.080	18%	0.080	34%
M.C.(%): 7%		M.C.(%): 5%		M.C.(%): 6%	
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	35	% GRAVEL:	61	% GRAVEL:	36
% SAND:	33	% SAND:	21	% SAND:	30
% FINES:	32	% FINES:	18	% FINES:	34
CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)		CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)		CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)	



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	512-426
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1812+925 center line		
LOGGED BY:	G.C.	DATE COMP	99-04-28

FIELD NO:	230	FIELD No:	231
LAB NO:	246	LAB No:	247
DEPTH:	1.6-2.0	DEPTH:	2.5-3.0
TYPE:	AUGER	TYPE:	AUGER

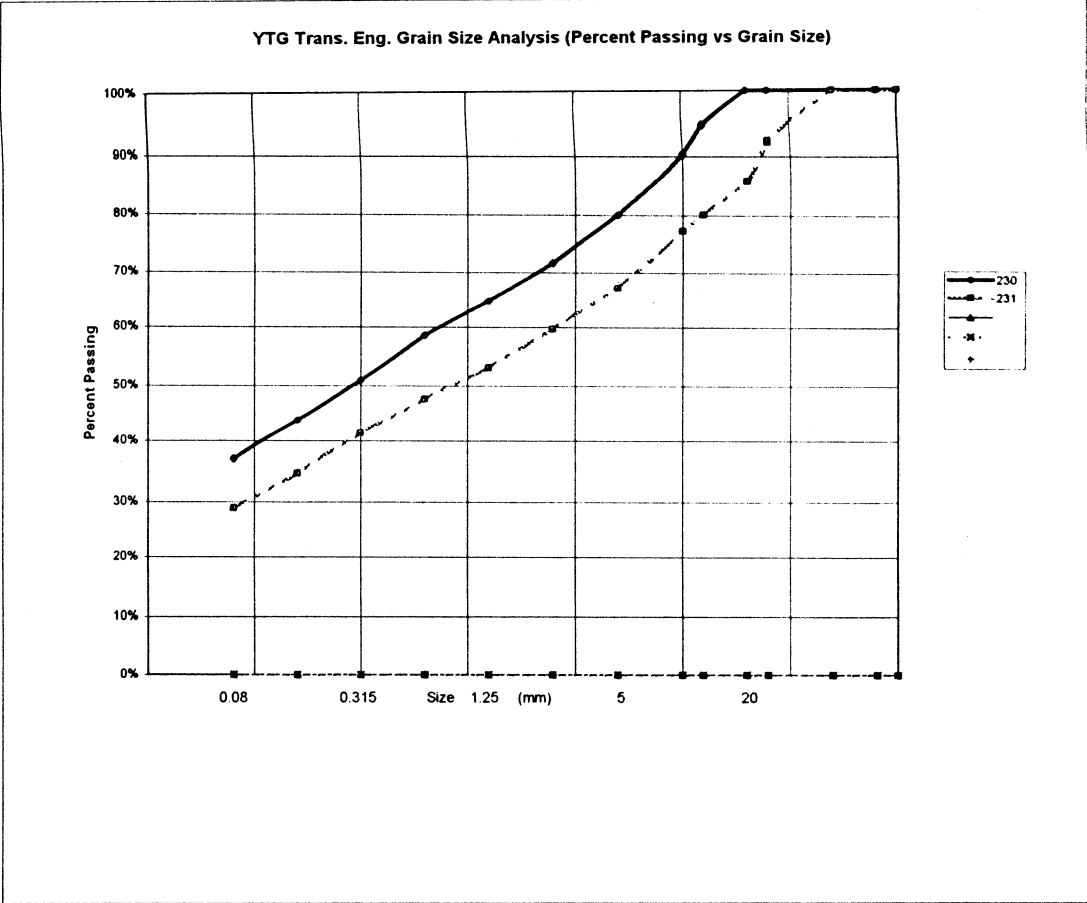
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	92%
20.0	100%	20.0	86%
12.5	94%	12.5	80%
10.0	90%	10.0	77%
5.0	80%	5.0	67%
2.5	72%	2.5	60%
1.25	65%	1.25	53%
0.630	58%	0.630	48%
0.315	51%	0.315	42%
0.160	44%	0.160	35%
0.080	37%	0.080	29%

M.C.(%):	19%	M.C.(%):	14%
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LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0

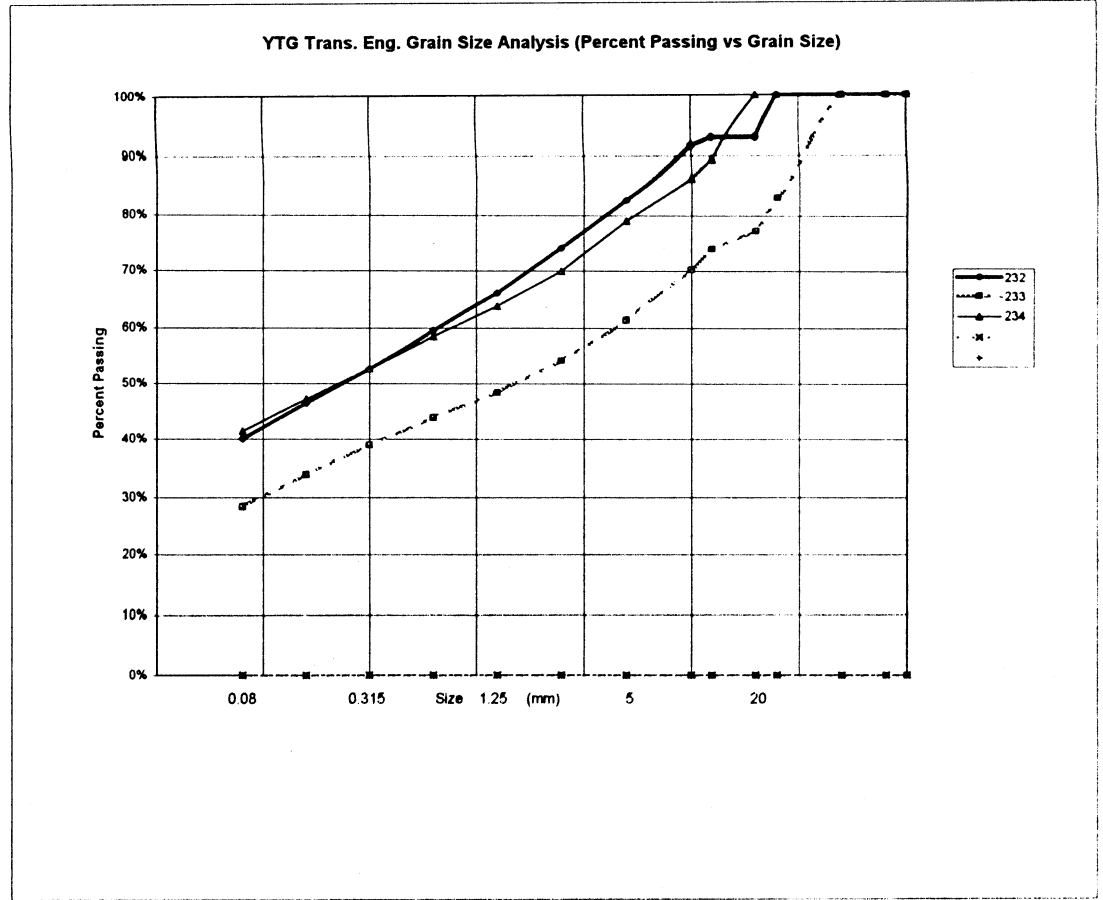
% GRAVEL:	20	% GRAVEL:	33
% SAND:	43	% SAND:	38
% FINES:	37	% FINES:	29

CLASSIFICATION:	CLASSIFICATION:
SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 512-427
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1812+825 center line
 LOGGED BY: G.C. DATE COMP 99-04-28

FIELD NO: 232		FIELD No. 233		FIELD No: 234	
LAB NO: 248		LAB No. 249		LAB No: 250	
DEPTH: 1.8-2.0		DEPTH: 2.5-3.0		DEPTH: 3.5-4.0	
TYPE: AUGER		TYPE: AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	83%	25.0	100%
20.0	93%	20.0	77%	20.0	100%
12.5	93%	12.5	74%	12.5	89%
10.0	91%	10.0	70%	10.0	87%
5.0	83%	5.0	61%	5.0	79%
2.5	74%	2.5	54%	2.5	70%
1.25	68%	1.25	48%	1.25	64%
0.630	60%	0.630	44%	0.630	58%
0.315	53%	0.315	39%	0.315	53%
0.160	46%	0.160	34%	0.160	47%
0.080	40%	0.080	28%	0.080	41%
M.C. (%)	15%	M.C. (%)	12%	M.C. (%)	15%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	17	% GRAVEL:	30	% GRAVEL:	21
% SAND:	43	% SAND:	33	% SAND:	38
% FINES:	40	% FINES:	28	% FINES:	41
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

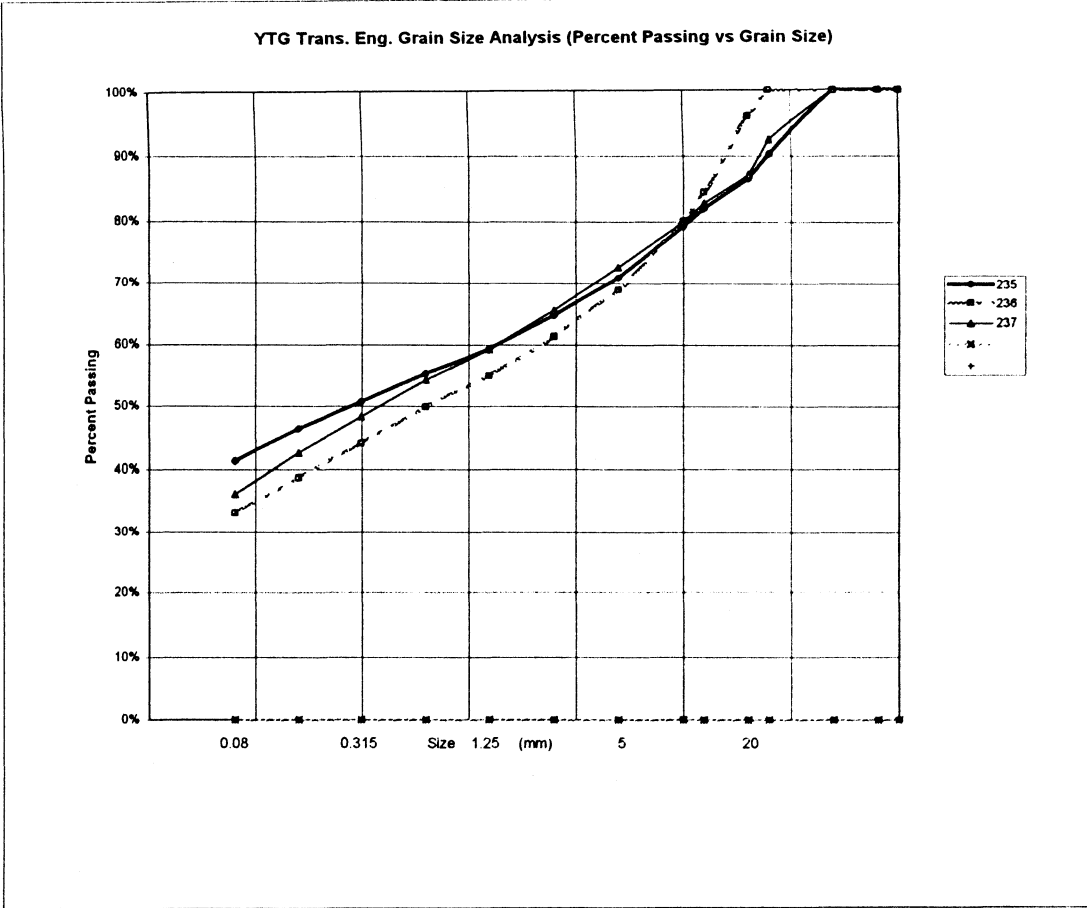


PROJECT NUMBER:	091-202101-0329-199	HOLE No.	512-428
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1812+725 center line		
LOGGED BY:	G.C.	DATE COMP	99-04-28

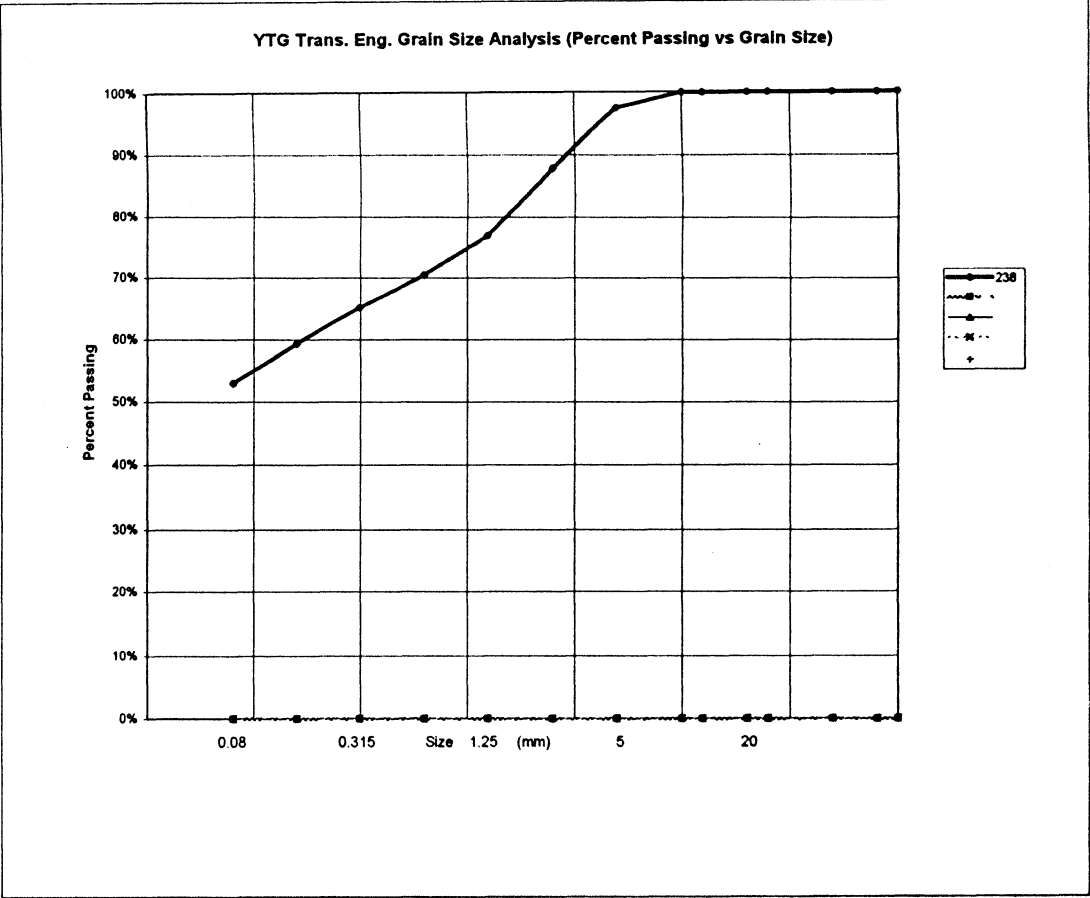
FIELD NO:	235	FIELD No.	236	FIELD No:	237
LAB NO:	251	LAB No.	252	LAB No:	253
DEPTH:	1.2-1.5	DEPTH	1.5-2.0	DEPTH:	2.6-3.0
TYPE:	AUGER	TYPE	AUGER	TYPE:	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	90%	25.0	100%	25.0	92%
20.0	87%	20.0	96%	20.0	87%
12.5	82%	12.5	85%	12.5	83%
10.0	79%	10.0	80%	10.0	80%
5.0	71%	5.0	69%	5.0	73%
2.5	65%	2.5	61%	2.5	65%
1.25	59%	1.25	55%	1.25	59%
0.630	55%	0.630	50%	0.630	54%
0.315	51%	0.315	44%	0.315	48%
0.160	46%	0.160	39%	0.160	42%
0.080	41%	0.080	33%	0.080	36%

M.C.(%):	27%	M.C.(%):	18%	M.C.(%):	13%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	29	% GRAVEL:	31	% GRAVEL:	27
% SAND:	30	% SAND:	36	% SAND:	36
% FINES:	41	% FINES:	33	% FINES:	36
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	512-429
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1812+575 center line		
LOGGED BY:	G.C.	DATE COMP	99-04-28
=====			
FIELD NO:	238		
LAB NO:	254		
DEPTH:	1.5-2.0		
TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING		
100.0	100%		
80.0	100%		
50.0	100%		
25.0	100%		
20.0	100%		
12.5	100%		
10.0	100%		
5.0	97%		
2.5	88%		
1.25	77%		
0.630	70%		
0.315	65%		
0.160	59%		
0.080	53%		
M.C.(%):	186%		
LIMITS			
LIQUID:	0.0		
PLASTIC:	0.0		
P.I.:	0.0		
% GRAVEL:	3		
% SAND:	44		
% FINES:	53		
CLASSIFICATION:			
SANDY SILT (ML)			



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	512-430
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1812+500 center line		
LOGGED BY:	G.C.	DATE COMP	99-04-28

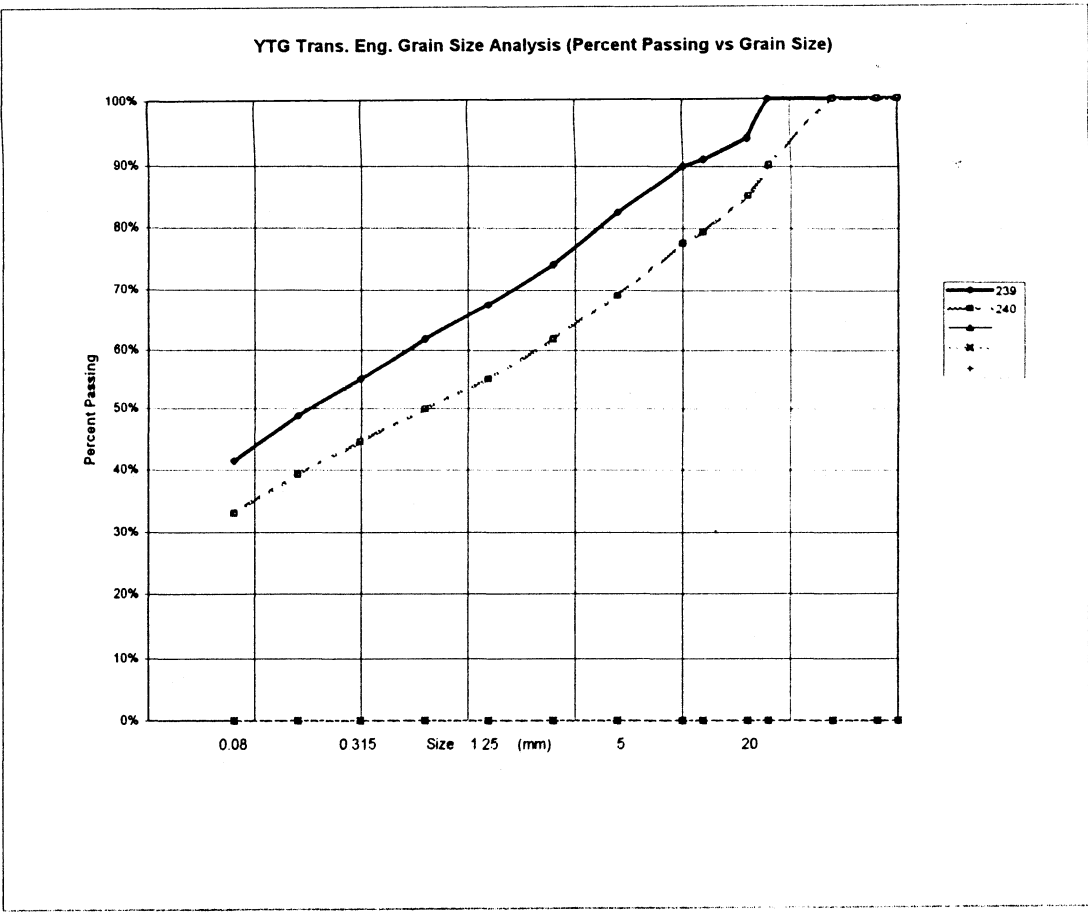
FIELD NO:	239	FIELD No.	240
LAB NO:	255	LAB No.	256
DEPTH:	1.0-1.5	DEPTH	2.5-3.0
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	90%
20.0	94%	20.0	85%
12.5	91%	12.5	79%
10.0	90%	10.0	78%
5.0	83%	5.0	69%
2.5	74%	2.5	62%
1.25	67%	1.25	55%
0.630	62%	0.630	50%
0.315	55%	0.315	45%
0.160	49%	0.160	39%
0.080	41%	0.080	33%

M.C. (%):	12%	M.C. (%):	11%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0

% GRAVEL:	17	% GRAVEL:	31
% SAND:	41	% SAND:	36
% FINES:	41	% FINES:	33

CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	512-431
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1812+425 center line		
LOGGED BY:	G.C.	DATE COMP	99-04-28

FIELD NO:	241	FIELD No.	242
LAB NO:	257	LAB No.	258
DEPTH:	1.0-1.5	DEPTH	2.5-3.0
TYPE:	AUGER	TYPE	AUGER

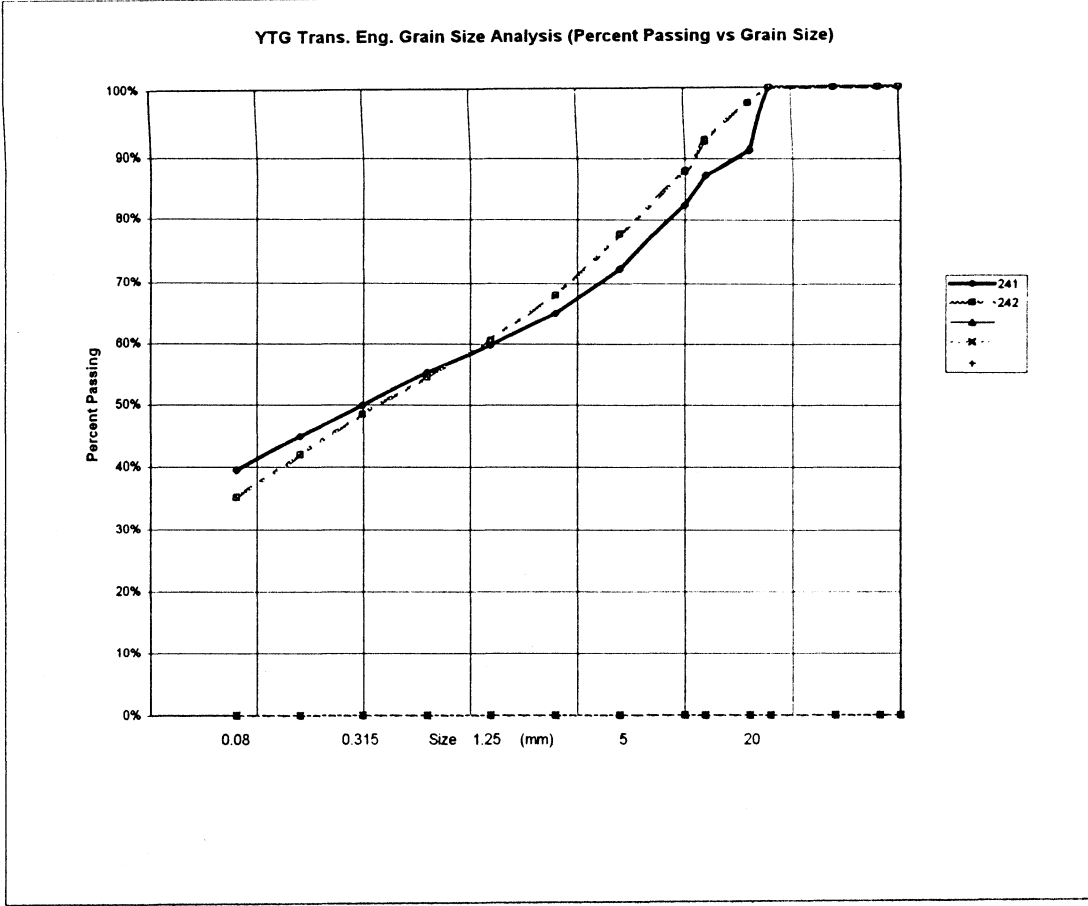
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	91%	20.0	97%
12.5	88%	12.5	92%
10.0	82%	10.0	88%
5.0	72%	5.0	78%
2.5	65%	2.5	68%
1.25	60%	1.25	61%
0.630	55%	0.630	55%
0.315	50%	0.315	48%
0.160	45%	0.160	42%
0.080	39%	0.080	35%

M.C. (%):	16%	M.C. (%):	11%
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LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
PI	0.0	PI	0.0

% GRAVEL:	28	% GRAVEL:	22
% SAND:	33	% SAND:	42
% FINES:	39	% FINES:	35

CLASSIFICATION:	CLASSIFICATION:
SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 512-432
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1812+325 center line
 LOGGED BY: G.C. DATE COMP 99-04-28

FIELD NO: 243
 LAB NO: 259
 DEPTH: 1.0-1.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	100%
12.5	95%
10.0	91%
5.0	81%
2.5	70%
1.25	63%
0.630	58%
0.315	52%
0.160	46%
0.080	39%

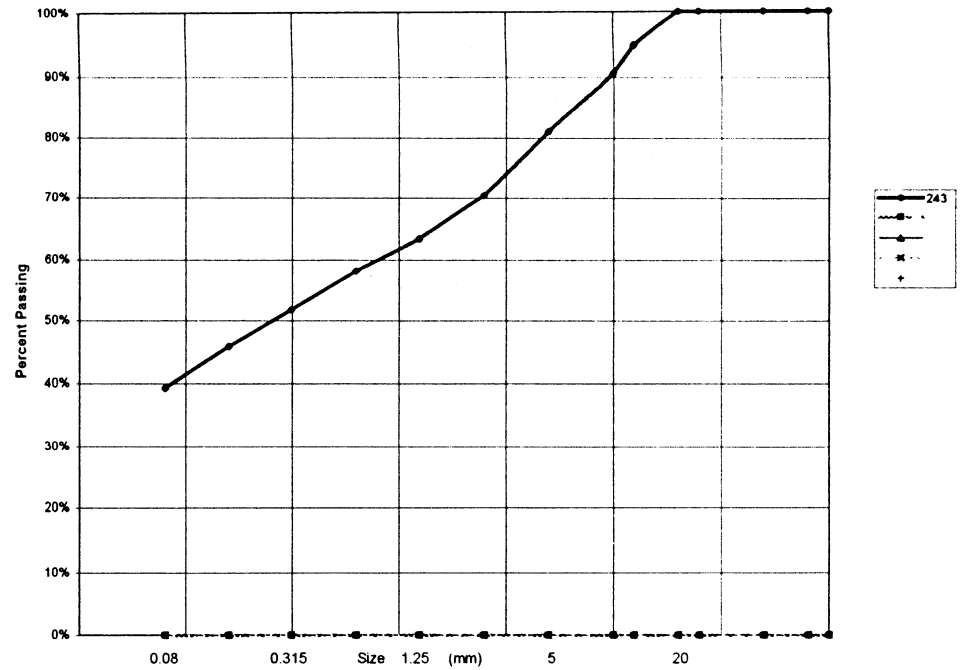
M.C. (%): 14%

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

% GRAVEL: 19
 % SAND: 42
 % FINES: 39

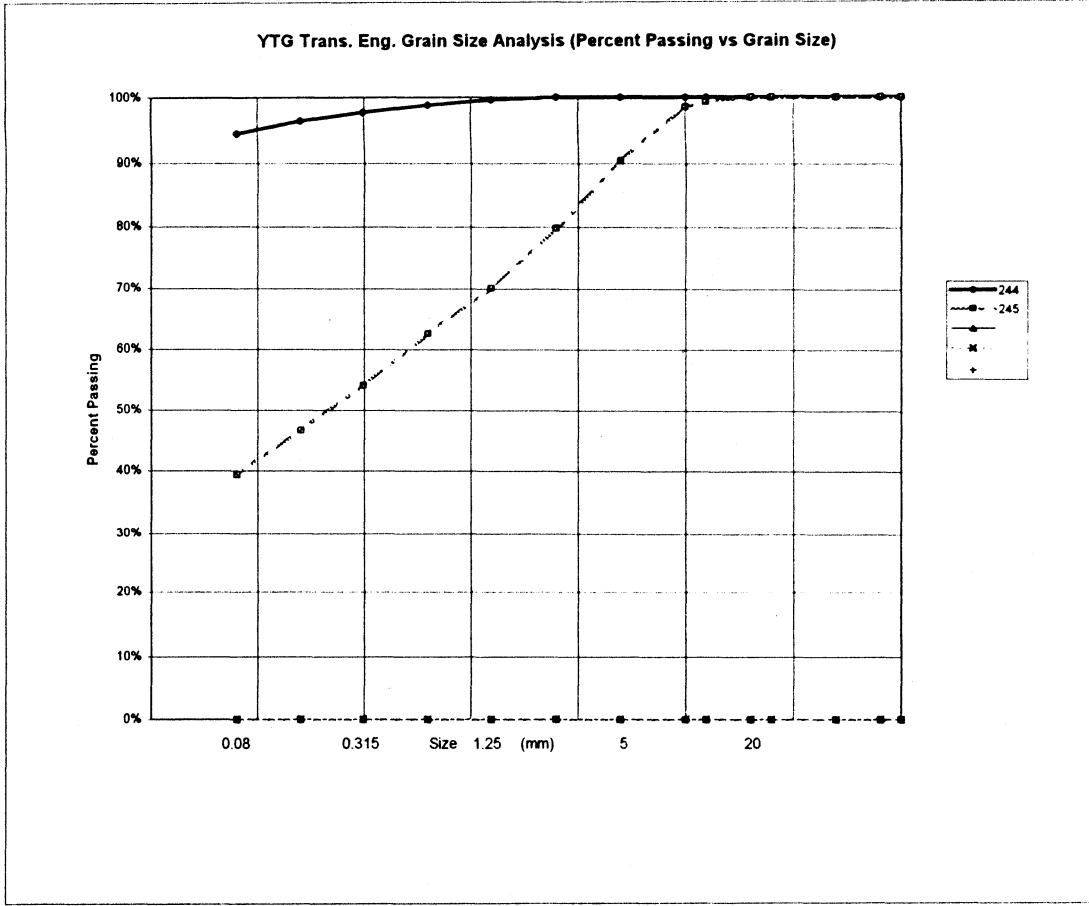
CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM)

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

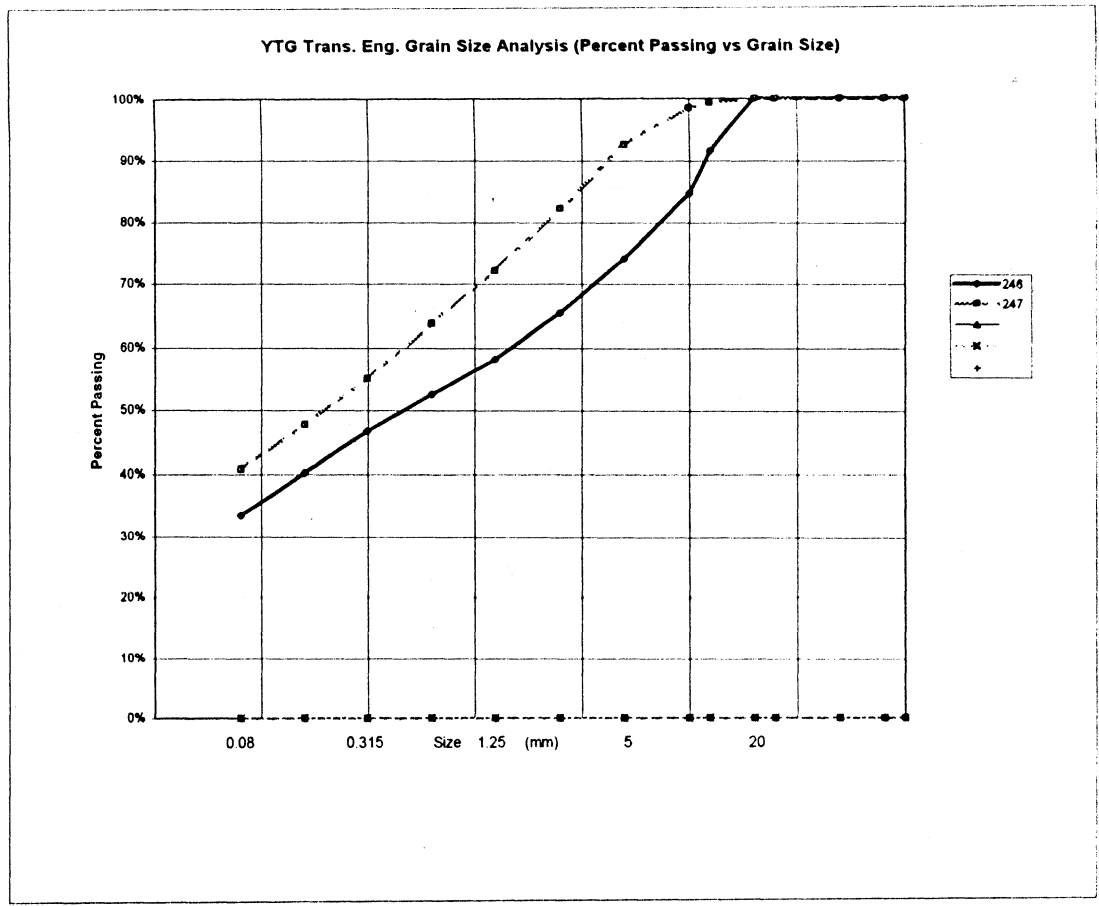


PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 512-433
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1812+225 center line
 LOGGED BY: G.C. DATE COMP 99-04-28

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	100%
12.5	100%	12.5	99%
10.0	100%	10.0	98%
5.0	100%	5.0	90%
2.5	100%	2.5	80%
1.25	100%	1.25	70%
0.630	99%	0.630	62%
0.315	98%	0.315	54%
0.160	96%	0.160	47%
0.080	94%	0.080	39%
M.C. (%):	65%	M.C. (%):	13%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	0	% GRAVEL:	10
% SAND:	6	% SAND:	51
% FINES:	94	% FINES:	39
CLASSIFICATION:	SILT (ML)	CLASSIFICATION:	SILTY SAND (SM)

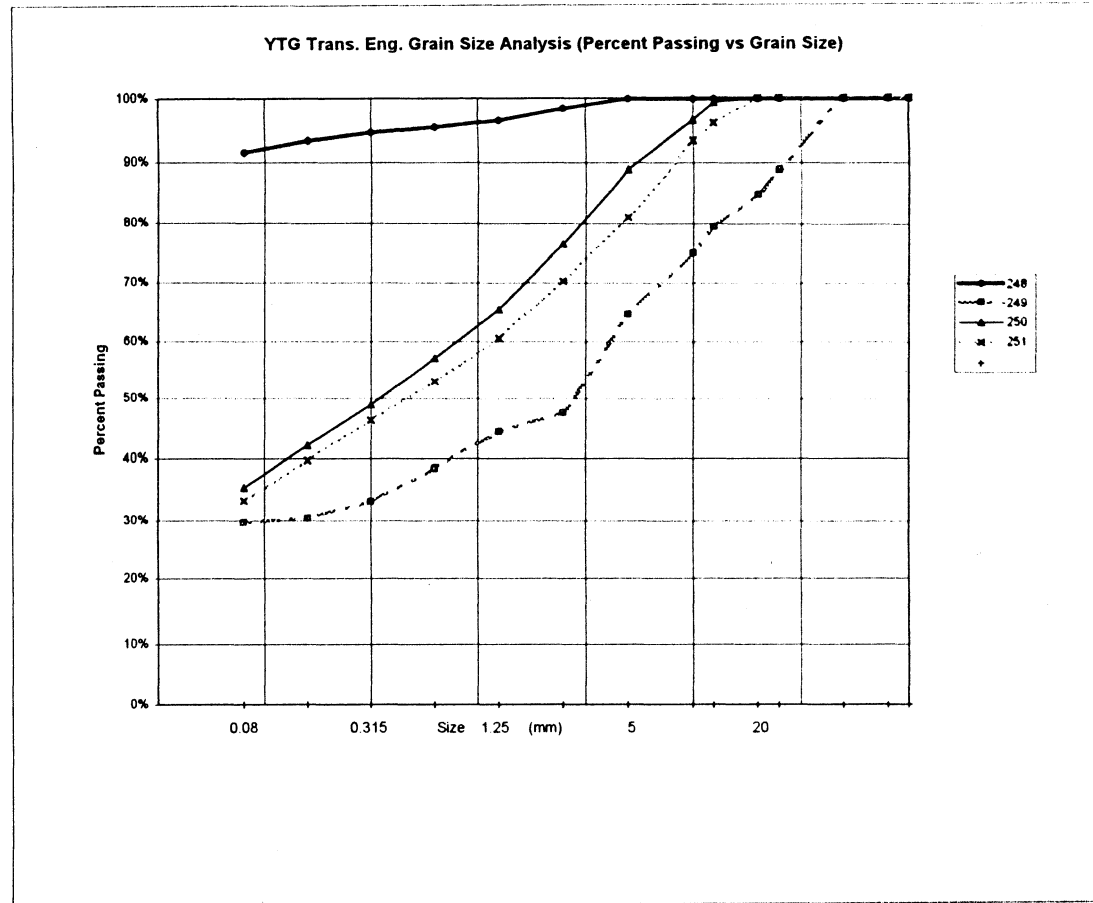


PROJECT NUMBER: 091-202101-0329-199		HOLE No.: 512-434	
CLIENT: ENGINEERING CAPITAL			
PROJECT NAME: SHAKWAK SEG 13			
PROJECT LOCATION: KM 1799-1822 A/H			
DRILL UNIT: B-40-L Nodwell			
HOLE LOCATION: 1812+125 center line			
LOGGED BY: G.C.		DATE COMP 99-04-28	
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FIELD NO: 246	FIELD No. 247		
LAB NO: 262	LAB No. 263		
DEPTH: 1.5-2.0	DEPTH 2.6-2.8		
TYPE: AUGER	TYPE AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	100%
12.5	92%	12.5	99%
10.0	85%	10.0	98%
5.0	74%	5.0	93%
2.5	65%	2.5	82%
1.25	58%	1.25	72%
0.630	53%	0.630	64%
0.315	47%	0.315	55%
0.160	40%	0.160	48%
0.080	34%	0.080	41%
M.C.(%): 11%	M.C.(%): 12%		
LIMITS	LIMITS		
LIQUID: 0.0	LIQUID: 0.0		
PLASTIC: 0.0	PLASTIC: 0.0		
P.I.: 0.0	P.I.: 0.0		
% GRAVEL: 26	% GRAVEL: 7		
% SAND: 40	% SAND: 52		
% FINES: 34	% FINES: 41		
CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION: SILTY SAND (SM)		



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 512-435
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1812+025 center line
 LOGGED BY: G.C. DATE COMP 99-04-28

FIELD NO: 248		FIELD No. 249		FIELD No: 250		FIELD No: 251	
LAB NO: 264		LAB No. 265		LAB No: 266		LAB No: 267	
DEPTH: 1.3-1.5		DEPTH 1.8-2.0		DEPTH: 2.5-3.0		DEPTH: 3.6-3.8	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	89%	25.0	100%	25.0	100%
20.0	100%	20.0	85%	20.0	100%	20.0	100%
12.5	100%	12.5	79%	12.5	99%	12.5	96%
10.0	100%	10.0	75%	10.0	96%	10.0	93%
5.0	100%	5.0	65%	5.0	89%	5.0	81%
2.5	98%	2.5	47%	2.5	76%	2.5	70%
1.25	96%	1.25	44%	1.25	65%	1.25	61%
0.630	95%	0.630	38%	0.630	57%	0.630	53%
0.315	94%	0.315	33%	0.315	49%	0.315	46%
0.160	93%	0.160	30%	0.160	42%	0.160	40%
0.080	91%	0.080	30%	0.080	35%	0.080	33%
M.C. (%): 189%		M.C. (%): 11%		M.C. (%): 12%		M.C. (%): 11%	
LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	0	% GRAVEL:	35	% GRAVEL:	11	% GRAVEL:	19
% SAND:	8	% SAND:	35	% SAND:	53	% SAND:	48
% FINES:	91	% FINES:	30	% FINES:	35	% FINES:	33
CLASSIFICATION: SILT (ML)		CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)		CLASSIFICATION: SILTY SAND (SM)		CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 512-436
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B.40-L Nodwell
 HOLE LOCATION: 1811+955 5m LT
 LOGGED BY: G.C. DATE COMP 99-04-28

FIELD NO: 252
 LAB NO: 268
 DEPTH: 1.3-1.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	89%
20.0	65%
12.5	63%
10.0	62%
5.0	55%
2.5	47%
1.25	41%
0.630	37%
0.315	32%
0.160	28%
0.080	23%

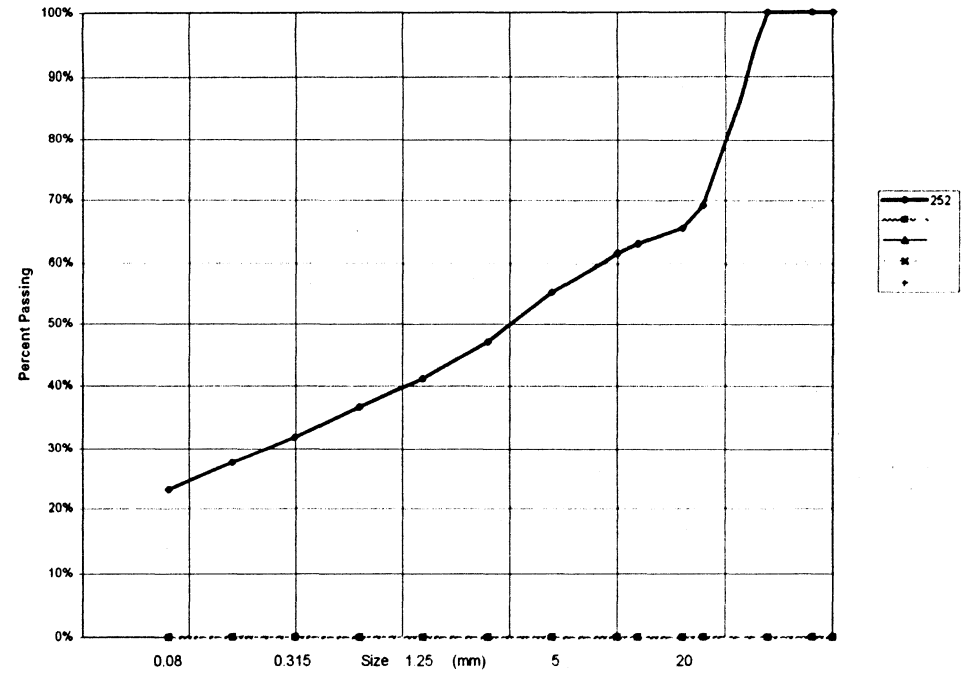
M.C.(%): 5%

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

% GRAVEL: 45
 % SAND: 32
 % FINES: 23

CLASSIFICATION:
 SILTY GRAVEL WITH SAND (GM)

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



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	512-440
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1811+900 center line		
LOGGED BY:	G.C.	DATE COMP	99-04-30

FIELD NO:	253
LAB NO:	269
DEPTH:	1.6-2.0
TYPE:	AUGER

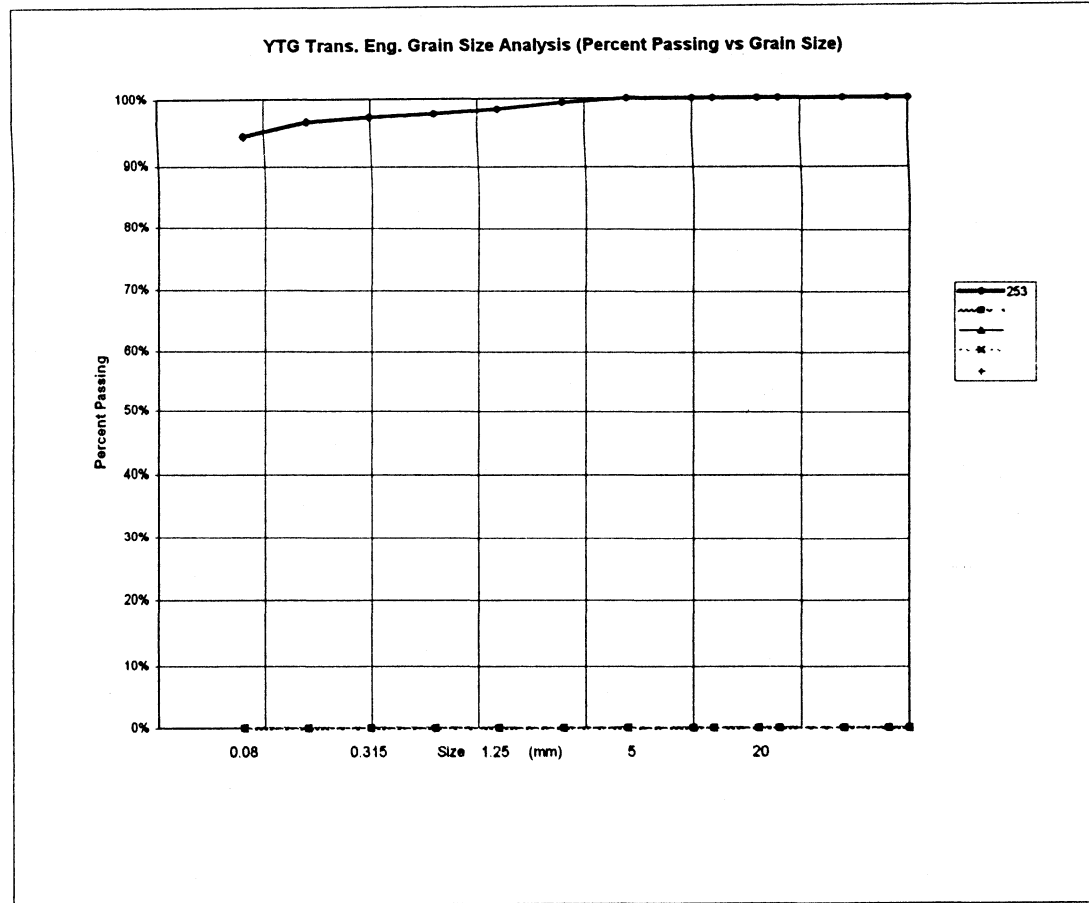
SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	100%
12.5	100%
10.0	100%
5.0	100%
2.5	99%
1.25	98%
0.630	98%
0.315	97%
0.160	96%
0.080	94%

M.C.(%)	67%
---------	-----

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

% GRAVEL:	0
% SAND:	6
% FINES:	94

CLASSIFICATION:	SILT (ML)
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PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 512-441
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1811+800 center line
 LOGGED BY: G.C. DATE COMP 99-04-30

FIELD NO:	254	FIELD No.	255
LAB NO:	270	LAB No.	271
DEPTH:	2.0-2.4	DEPTH	3.6-4.0
TYPE:	AUGER	TYPE	AUGER

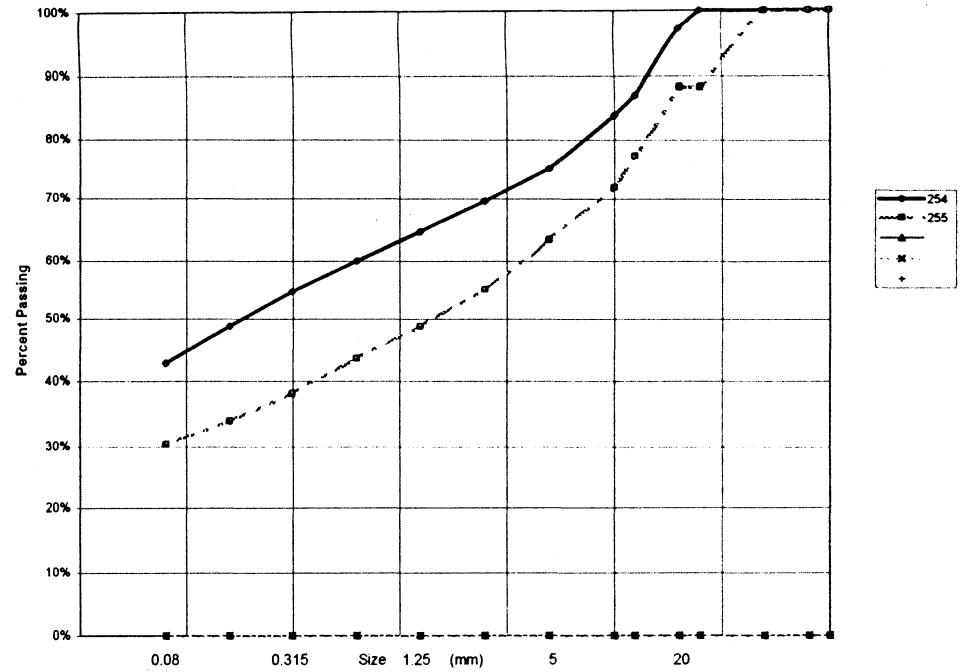
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	88%
20.0	97%	20.0	88%
12.5	87%	12.5	77%
10.0	84%	10.0	72%
5.0	75%	5.0	63%
2.5	70%	2.5	55%
1.25	65%	1.25	49%
0.630	60%	0.630	44%
0.315	55%	0.315	38%
0.160	49%	0.160	34%
0.080	43%	0.080	30%

M.C.(%):	15%	M.C.(%):	10%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0

% GRAVEL:	25	% GRAVEL:	37
% SAND:	32	% SAND:	33
% FINES:	43	% FINES:	30

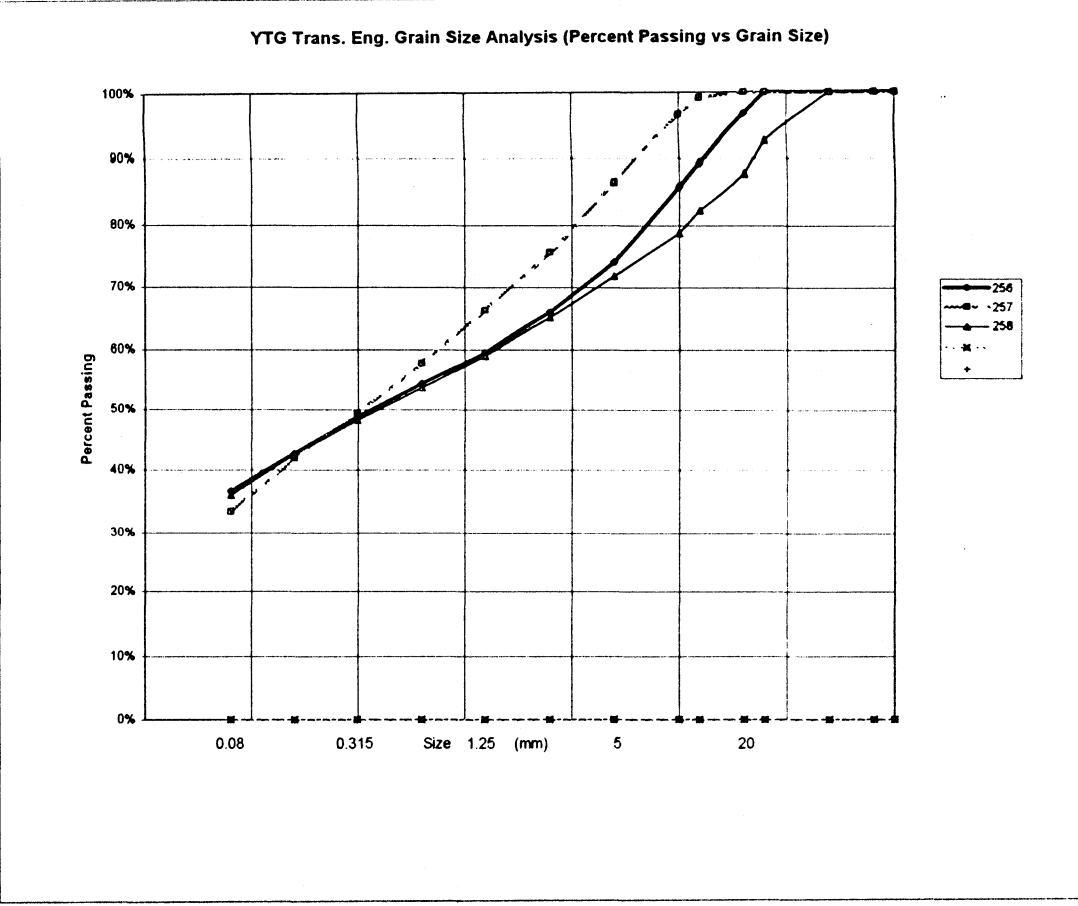
CLASSIFICATION:	CLASSIFICATION:
SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)

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

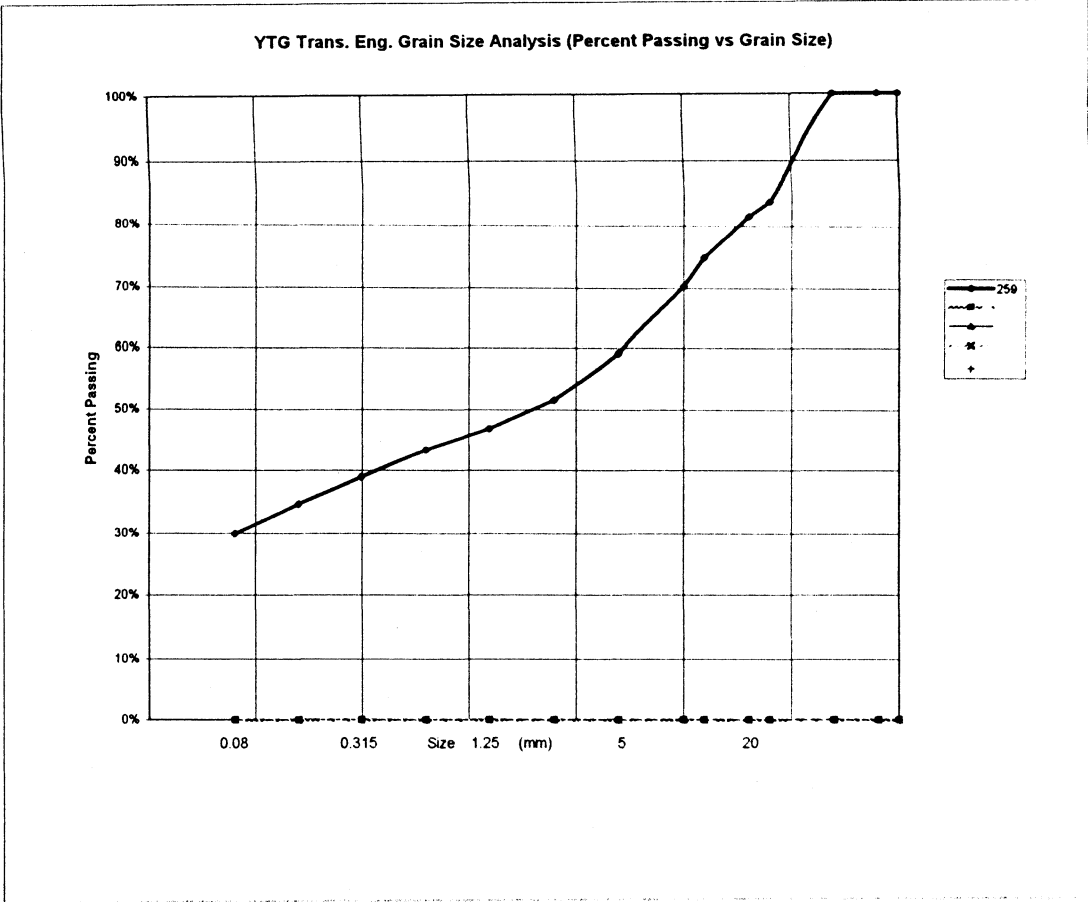


PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 512-442
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1811+700 center line
 LOGGED BY: G.C. DATE COMP 99-04-30

FIELD NO: 256		FIELD No. 257		FIELD No: 258	
LAB NO: 272		LAB No. 273		LAB No: 274	
DEPTH: 1.0-1.5		DEPTH 2.0-2.2		DEPTH: 2.8-3.0	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	92%
20.0	97%	20.0	100%	20.0	88%
12.5	89%	12.5	99%	12.5	82%
10.0	86%	10.0	96%	10.0	79%
5.0	74%	5.0	87%	5.0	72%
2.5	66%	2.5	76%	2.5	65%
1.25	60%	1.25	66%	1.25	59%
0.630	54%	0.630	58%	0.630	54%
0.315	49%	0.315	49%	0.315	48%
0.160	43%	0.160	42%	0.160	42%
0.080	37%	0.080	34%	0.080	36%
M.C.(%): 7%		M.C.(%): 9%		M.C.(%): 8%	
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	26	% GRAVEL:	13	% GRAVEL:	28
% SAND:	37	% SAND:	53	% SAND:	36
% FINES:	37	% FINES:	34	% FINES:	36
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND (SM)		SILTY SAND WITH GRAVEL (SM)	



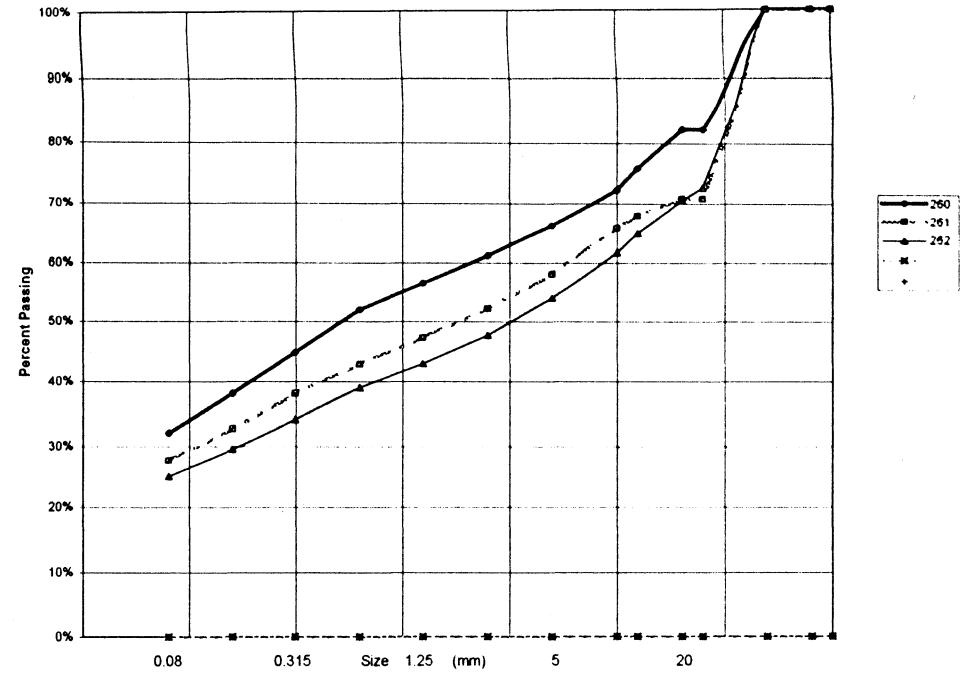
PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	512-443
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1811+575 center line		
LOGGED BY:	G.C.	DATE COMP	99-04-30
=====			
FIELD NO:	259		
LAB NO:	275		
DEPTH:	0.8-1.0		
TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING		
100.0	100%		
80.0	100%		
50.0	100%		
25.0	84%		
20.0	82%		
12.5	75%		
10.0	70%		
5.0	59%		
2.5	52%		
1.25	47%		
0.630	43%		
0.315	39%		
0.160	35%		
0.080	30%		
M.C. (%)	11%		
LIMITS			
LIQUID:	0.0		
PLASTIC:	0.0		
P.I.:	0.0		
% GRAVEL:	41		
% SAND:	29		
% FINES:	30		
CLASSIFICATION:			
SILTY GRAVEL WITH SAND (GM)			



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 512-444
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1811+492 center line
 LOGGED BY: G.C. DATE COMP 99-04-30

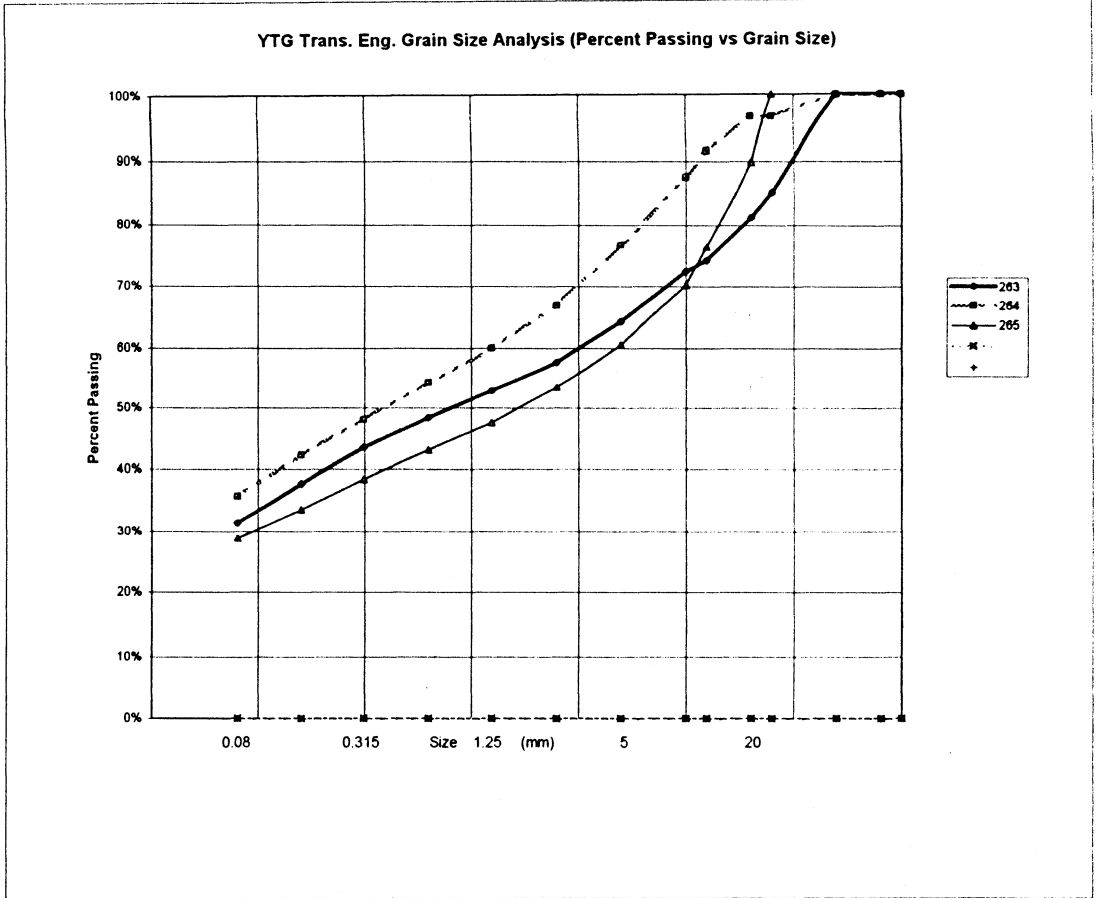
FIELD NO:	260	FIELD No:	261	FIELD No:	262
LAB NO:	276	LAB No:	277	LAB No:	278
DEPTH:	0.8-1.0	DEPTH:	1.8-2.0	DEPTH:	2.8-3.0
TYPE:	AUGER	TYPE:	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	82%	25.0	71%	25.0	73%
20.0	82%	20.0	71%	20.0	71%
12.5	78%	12.5	68%	12.5	65%
10.0	72%	10.0	66%	10.0	62%
5.0	66%	5.0	58%	5.0	54%
2.5	61%	2.5	52%	2.5	48%
1.25	57%	1.25	47%	1.25	43%
0.630	52%	0.630	43%	0.630	39%
0.315	45%	0.315	38%	0.315	34%
0.160	38%	0.160	33%	0.160	29%
0.080	32%	0.080	28%	0.080	25%
M.C. (%):	8%	M.C. (%):	8%	M.C. (%):	8%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	34	% GRAVEL:	42	% GRAVEL:	46
% SAND:	34	% SAND:	30	% SAND:	29
% FINES:	32	% FINES:	28	% FINES:	25
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 512-445
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1811+400 center line
 LOGGED BY: G.C. DATE COMP 99-04-30

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
263	279	1.4-1.6	AUGER	264	280	2.6-3.0	AUGER	265	281	3.6-4.0	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	85%	25.0	96%	25.0	96%	25.0	100%	25.0	100%	25.0	100%
20.0	81%	20.0	96%	20.0	96%	20.0	90%	20.0	90%	20.0	90%
12.5	74%	12.5	91%	12.5	91%	12.5	77%	12.5	77%	12.5	77%
10.0	72%	10.0	88%	10.0	88%	10.0	70%	10.0	70%	10.0	70%
5.0	64%	5.0	77%	5.0	77%	5.0	61%	5.0	61%	5.0	61%
2.5	58%	2.5	67%	2.5	67%	2.5	54%	2.5	54%	2.5	54%
1.25	53%	1.25	60%	1.25	60%	1.25	48%	1.25	48%	1.25	48%
0.630	48%	0.630	54%	0.630	54%	0.630	43%	0.630	43%	0.630	43%
0.315	43%	0.315	48%	0.315	48%	0.315	38%	0.315	38%	0.315	38%
0.160	38%	0.160	42%	0.160	42%	0.160	34%	0.160	34%	0.160	34%
0.080	31%	0.080	36%	0.080	36%	0.080	29%	0.080	29%	0.080	29%
M.C.(%):	18%	M.C.(%):	12%	M.C.(%):	9%	M.C.(%):		M.C.(%):		M.C.(%):	
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	36	% GRAVEL:	23	% GRAVEL:	39	% GRAVEL:	39	% GRAVEL:	39	% GRAVEL:	39
% SAND:	33	% SAND:	41	% SAND:	32	% SAND:	32	% SAND:	32	% SAND:	32
% FINES:	31	% FINES:	36	% FINES:	29	% FINES:	29	% FINES:	29	% FINES:	29
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	

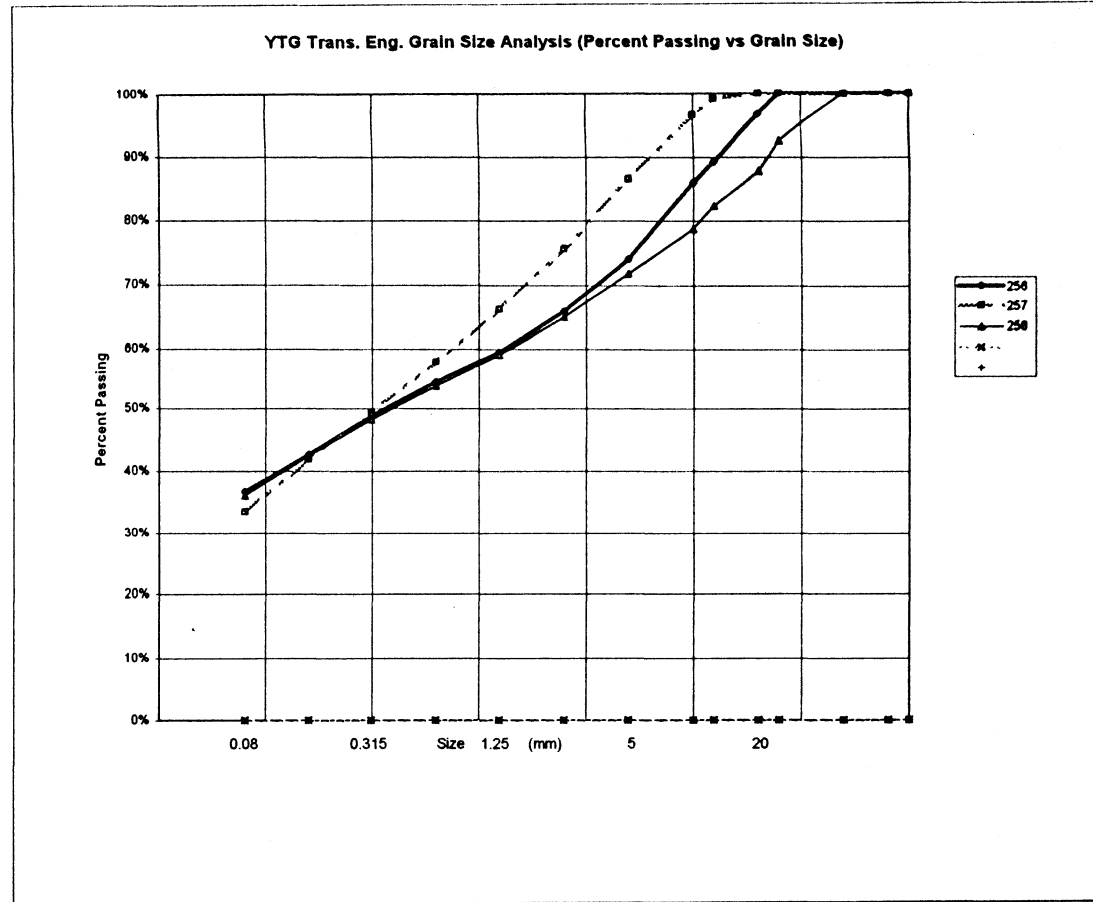


PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 512-442
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1811+700 center line
 LOGGED BY: G.C. DATE COMP 99-04-30

FIELD NO:	256	FIELD No:	257	FIELD No:	258
LAB NO:	272	LAB No:	273	LAB No:	274
DEPTH:	1.0-1.5	DEPTH:	2.0-2.2	DEPTH:	2.8-3.0
TYPE:	AUGER	TYPE:	AUGER	TYPE:	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	92%
20.0	97%	20.0	100%	20.0	88%
12.5	89%	12.5	99%	12.5	82%
10.0	86%	10.0	96%	10.0	79%
5.0	74%	5.0	87%	5.0	72%
2.5	66%	2.5	76%	2.5	65%
1.25	60%	1.25	66%	1.25	59%
0.630	54%	0.630	58%	0.630	54%
0.315	49%	0.315	49%	0.315	48%
0.160	43%	0.160	42%	0.160	42%
0.080	37%	0.080	34%	0.080	36%

M.C.(%)	7%	M.C.(%)	9%	M.C.(%)	8%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	26	% GRAVEL:	13	% GRAVEL:	28
% SAND:	37	% SAND:	53	% SAND:	36
% FINES:	37	% FINES:	34	% FINES:	36
CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY SAND (SM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)



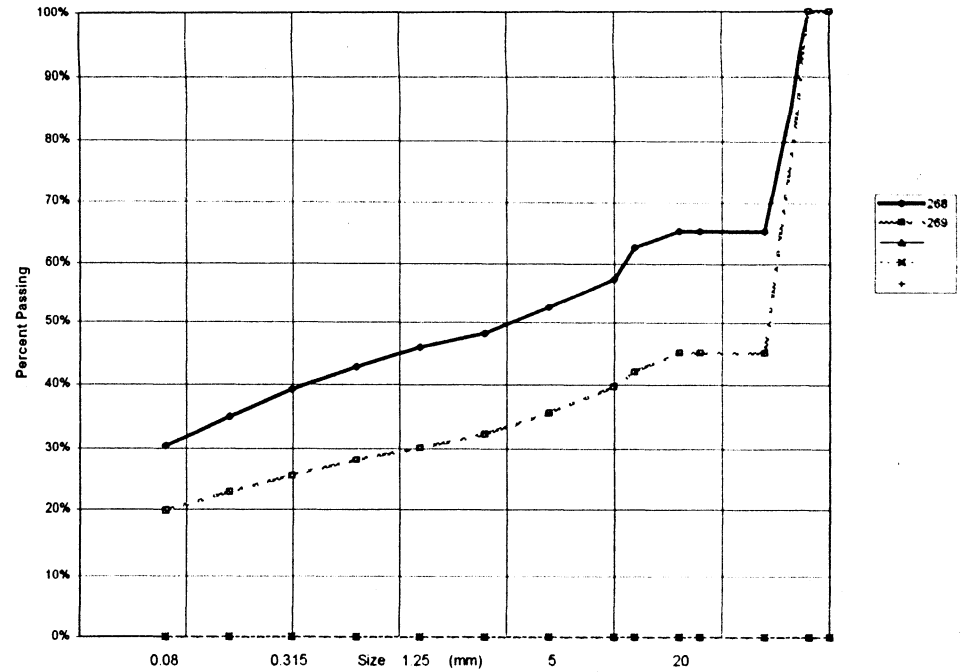
PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 512-447
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1811+160 center line
 LOGGED BY: G.C. DATE COMP 99-04-30

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH	TYPE
268	284	2.0-2.2	AUGER	269	285	2.8-3.0	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	65%	50.0	45%
25.0	65%	25.0	45%
20.0	65%	20.0	45%
12.5	63%	12.5	42%
10.0	58%	10.0	40%
5.0	53%	5.0	36%
2.5	48%	2.5	32%
1.25	46%	1.25	30%
0.630	43%	0.630	28%
0.315	39%	0.315	25%
0.160	35%	0.160	23%
0.080	30%	0.080	20%

M.C. (%):	13%	M.C. (%):	11%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	47	% GRAVEL:	64
% SAND:	22	% SAND:	16
% FINES:	30	% FINES:	20
CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 512-448
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1811+050 center line
 LOGGED BY: G.C. DATE COMP 99-04-30

FIELD NO:	270	FIELD No.	271
LAB NO:	286	LAB No.	287
DEPTH:	1.0-1.5	DEPTH	2.5-3.0
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	80%	50.0	100%
25.0	55%	25.0	78%
20.0	53%	20.0	68%
12.5	52%	12.5	63%
10.0	49%	10.0	59%
5.0	44%	5.0	63%
2.5	40%	2.5	42%
1.25	37%	1.25	37%
0.630	35%	0.630	34%
0.315	31%	0.315	30%
0.160	28%	0.160	26%
0.080	24%	0.080	21%

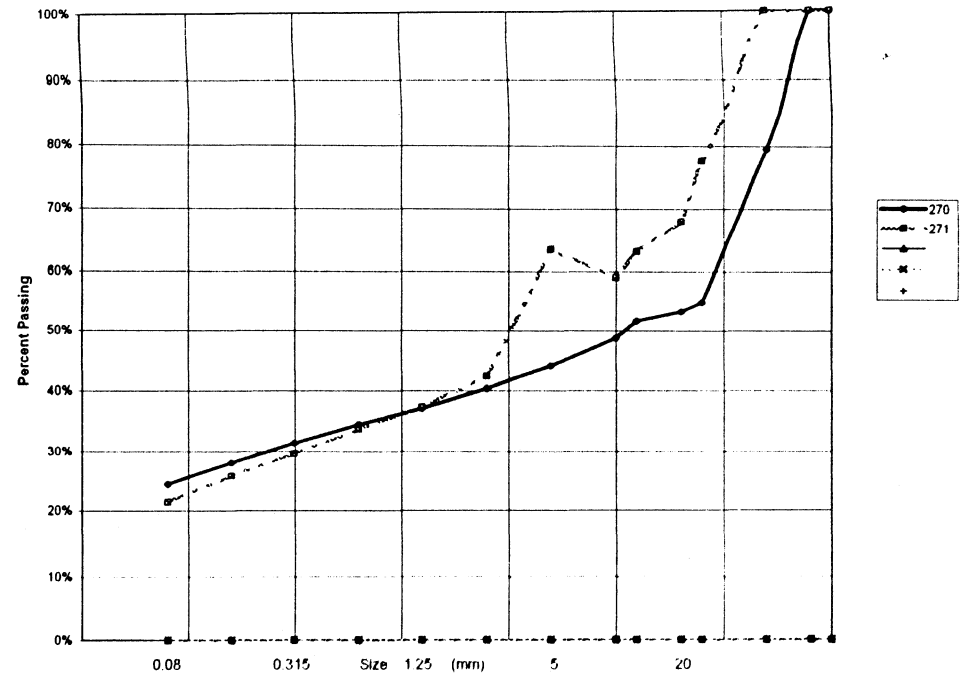
M.C. (%): 9% M.C. (%): 7%

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

% GRAVEL:	56	% GRAVEL:	37
% SAND:	20	% SAND:	42
% FINES:	24	% FINES:	21

CLASSIFICATION: SILTY GRAVEL WITH SAND (GM) CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513+449
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1810+950 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-03

FIELD NO:	272	FIELD No:	273
LAB NO:	288	LAB No:	289
DEPTH:	1.6-2.0	DEPTH:	2.6-3.0
TYPE:	AUGER	TYPE:	AUGER

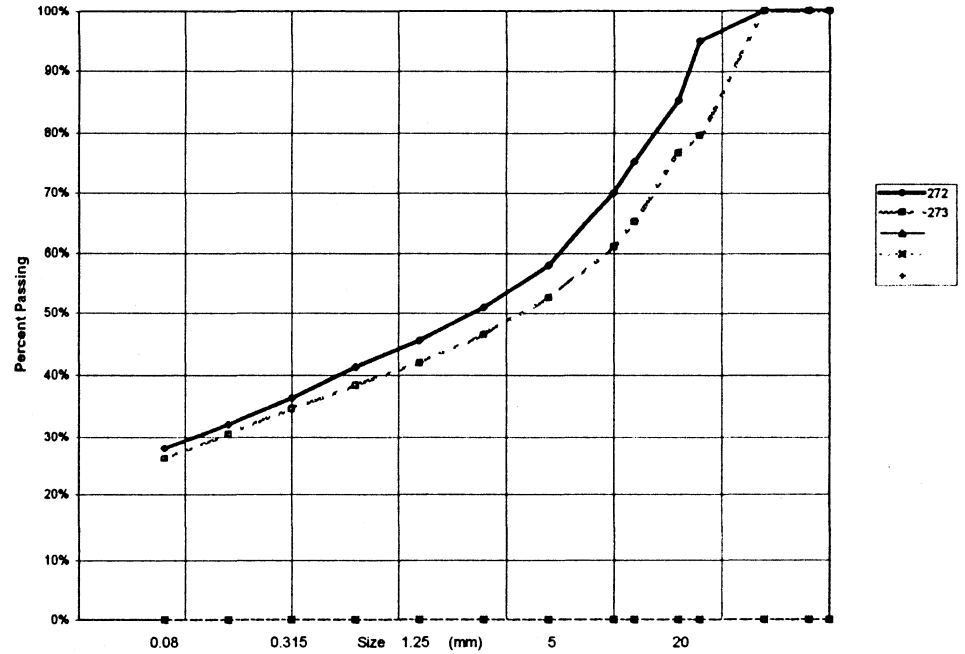
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	95%	25.0	80%
20.0	85%	20.0	77%
12.5	75%	12.5	65%
10.0	70%	10.0	61%
5.0	58%	5.0	53%
2.5	51%	2.5	46%
1.25	46%	1.25	42%
0.630	41%	0.630	38%
0.315	36%	0.315	35%
0.160	32%	0.160	31%
0.080	26%	0.080	26%

M.C. (%):	11%	M.C. (%):	9%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0

% GRAVEL:	42	% GRAVEL:	47
% SAND:	30	% SAND:	27
% FINES:	28	% FINES:	26

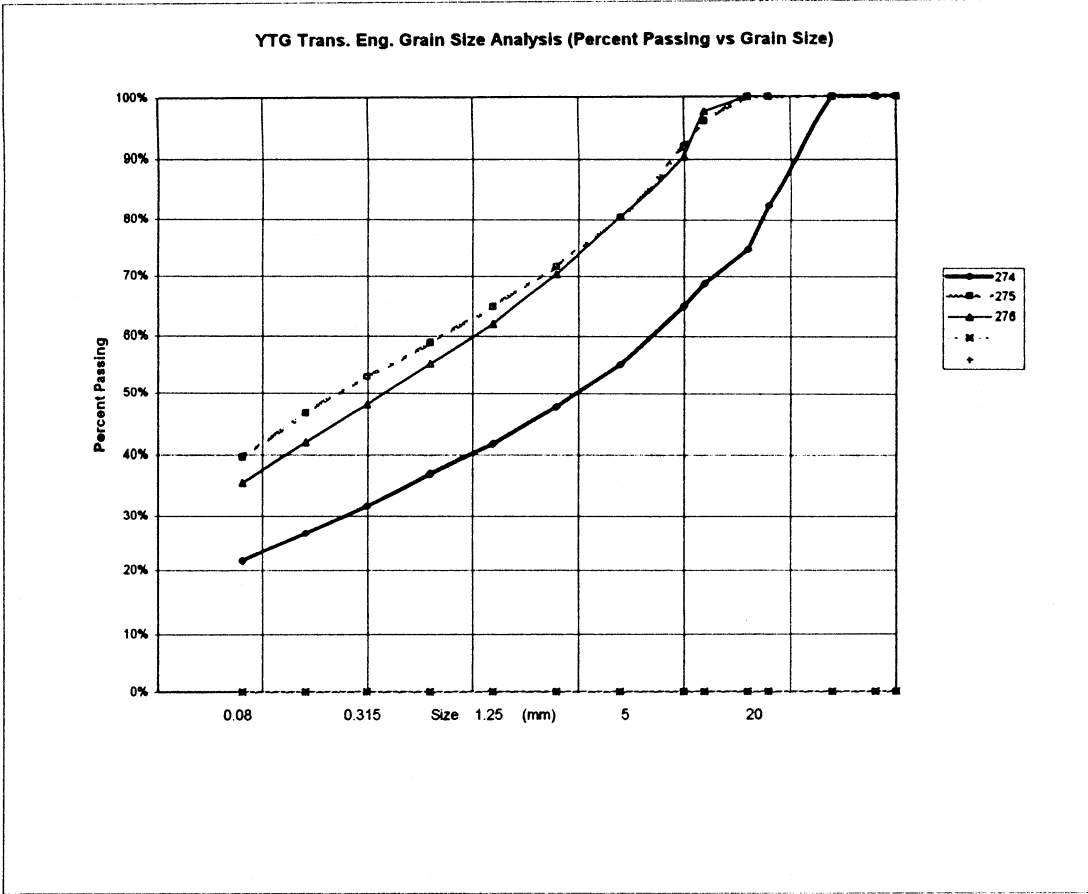
CLASSIFICATION:	CLASSIFICATION:
SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-450
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1810+850 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-03

FIELD NO: 274		FIELD No. 275		FIELD No: 276	
LAB NO: 290		LAB No. 291		LAB No: 292	
DEPTH: 1.4-1.6		DEPTH 2.0-2.2		DEPTH: 2.8-3.0	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	83%	25.0	100%	25.0	100%
20.0	75%	20.0	100%	20.0	100%
12.5	69%	12.5	96%	12.5	97%
10.0	65%	10.0	92%	10.0	90%
5.0	55%	5.0	80%	5.0	81%
2.5	48%	2.5	72%	2.5	70%
1.25	42%	1.25	65%	1.25	62%
0.630	37%	0.630	59%	0.630	55%
0.315	32%	0.315	53%	0.315	48%
0.160	27%	0.160	47%	0.160	42%
0.080	22%	0.080	40%	0.080	36%
M.C.(%): 9%		M.C.(%): 14%		M.C.(%): 11%	
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	45	% GRAVEL:	20	% GRAVEL:	19
% SAND:	34	% SAND:	41	% SAND:	45
% FINES:	22	% FINES:	40	% FINES:	38
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

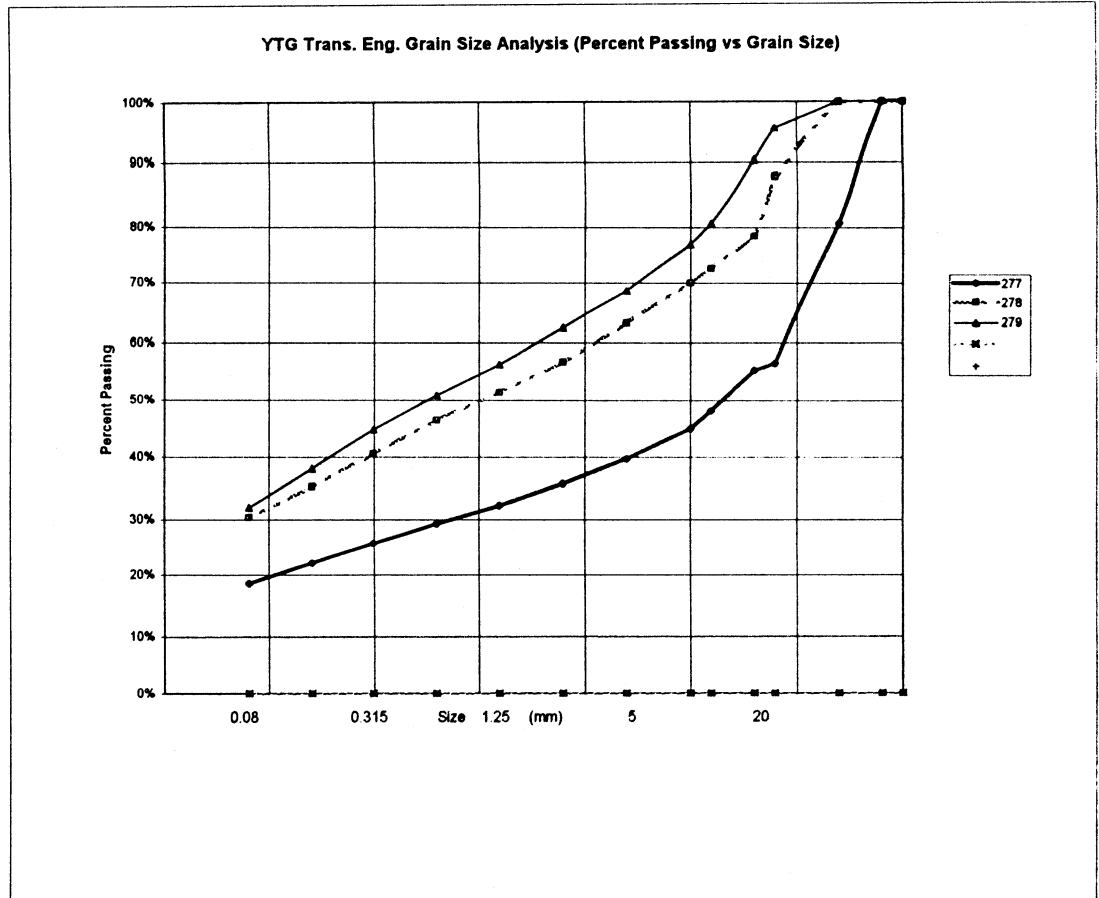


PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	513-451
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1810+750 CENTRELINE		
LOGGED BY:	G.C.	DATE COMP	99-05-03

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH:	TYPE:
277	293	0.8-1.0	AUGER	278	294	2.5-3.0	AUGER	279	295	4.0-4.5	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	81%	50.0	100%	50.0	100%
25.0	57%	25.0	88%	25.0	96%
20.0	56%	20.0	79%	20.0	90%
12.5	48%	12.5	73%	12.5	81%
10.0	45%	10.0	70%	10.0	77%
5.0	40%	5.0	63%	5.0	69%
2.5	36%	2.5	57%	2.5	62%
1.25	32%	1.25	51%	1.25	56%
0.630	29%	0.630	46%	0.630	51%
0.315	26%	0.315	40%	0.315	45%
0.160	22%	0.160	35%	0.160	38%
0.080	18%	0.080	30%	0.080	32%

M.C. (%):	6%	M.C. (%):	6%	M.C. (%):	7%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	60	% GRAVEL:	37	% GRAVEL:	31
% SAND:	21	% SAND:	33	% SAND:	37
% FINES:	18	% FINES:	30	% FINES:	32
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

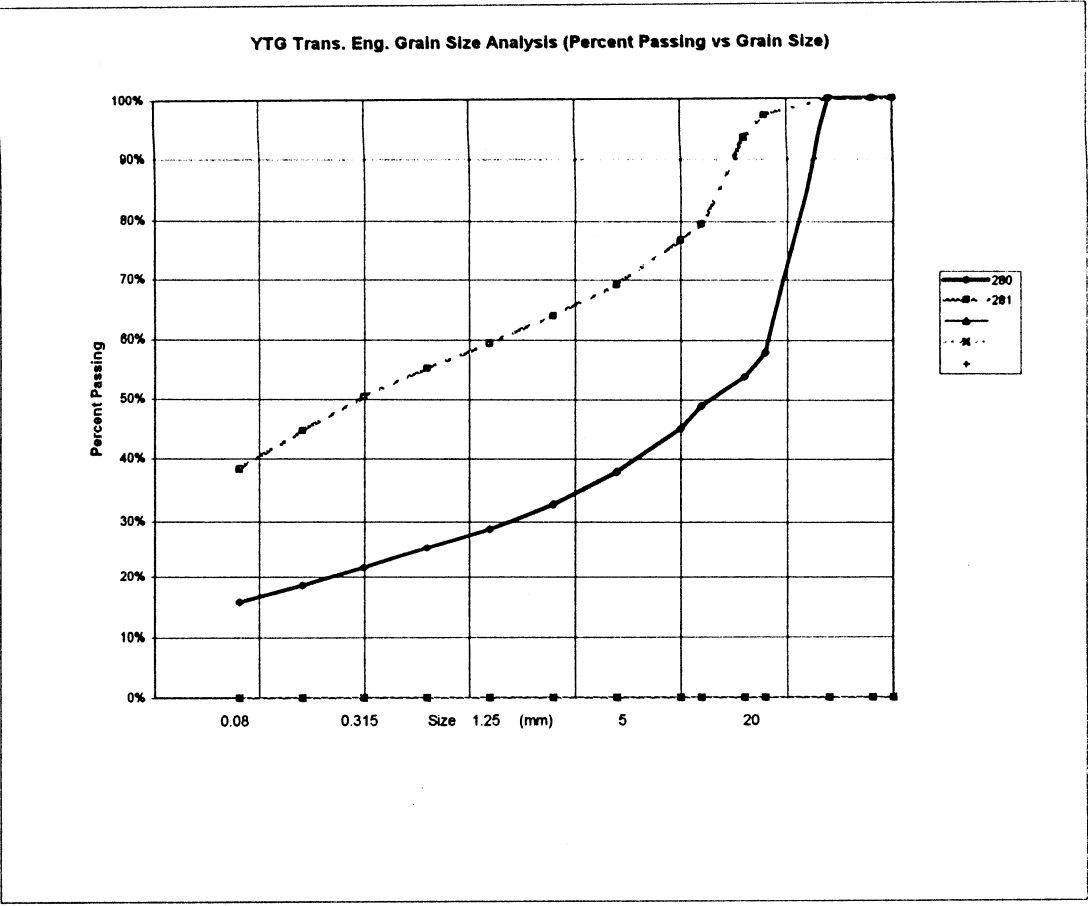


PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	513-452
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1810+625 CENTRELINE		
LOGGED BY:	G.C.	DATE COMP	99-05-03

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH	TYPE
280	296	1.0-1.5	AUGER	281	297	2.5-3.0	AUGER

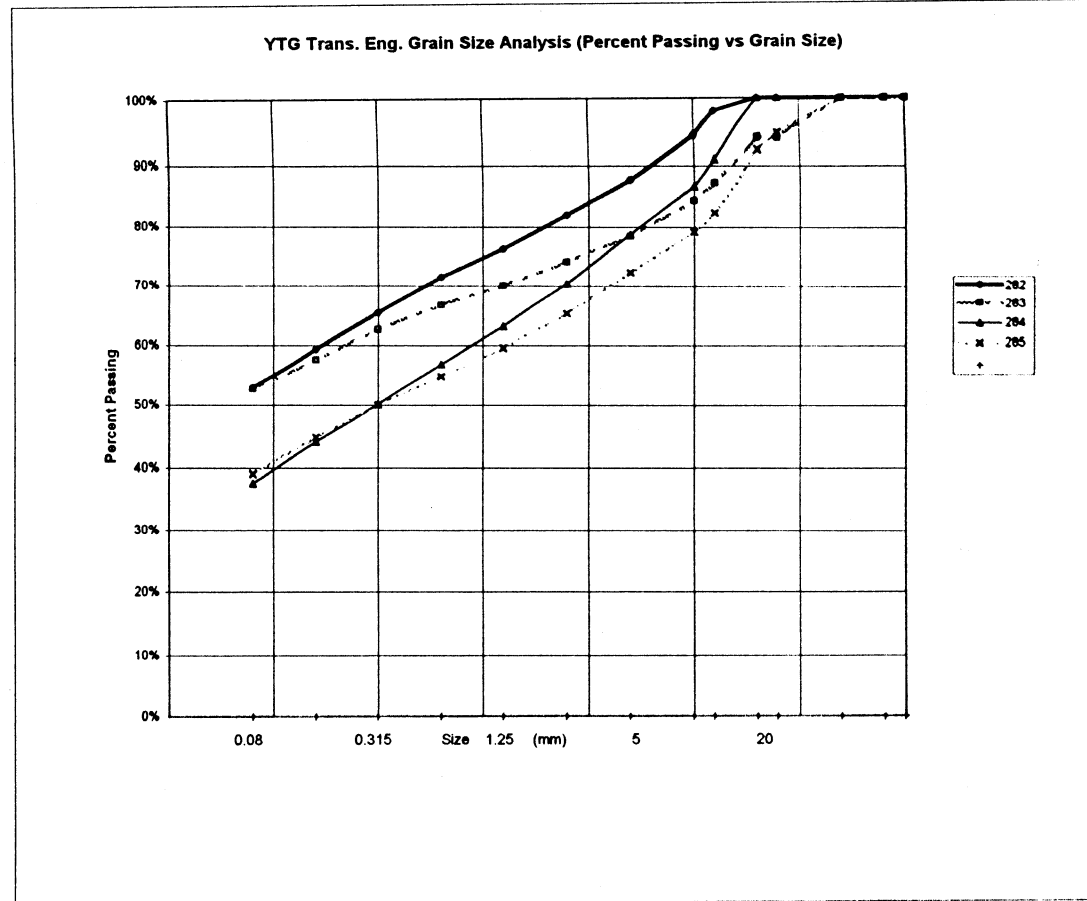
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	58%	25.0	97%
20.0	54%	20.0	93%
12.5	49%	12.5	80%
10.0	45%	10.0	77%
5.0	38%	5.0	69%
2.5	33%	2.5	64%
1.25	29%	1.25	59%
0.630	25%	0.630	55%
0.315	22%	0.315	50%
0.160	19%	0.160	45%
0.080	16%	0.080	38%

M.C. (%):	11%	M.C. (%):	9%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	62	% GRAVEL:	31
% SAND:	22	% SAND:	31
% FINES:	16	% FINES:	38
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

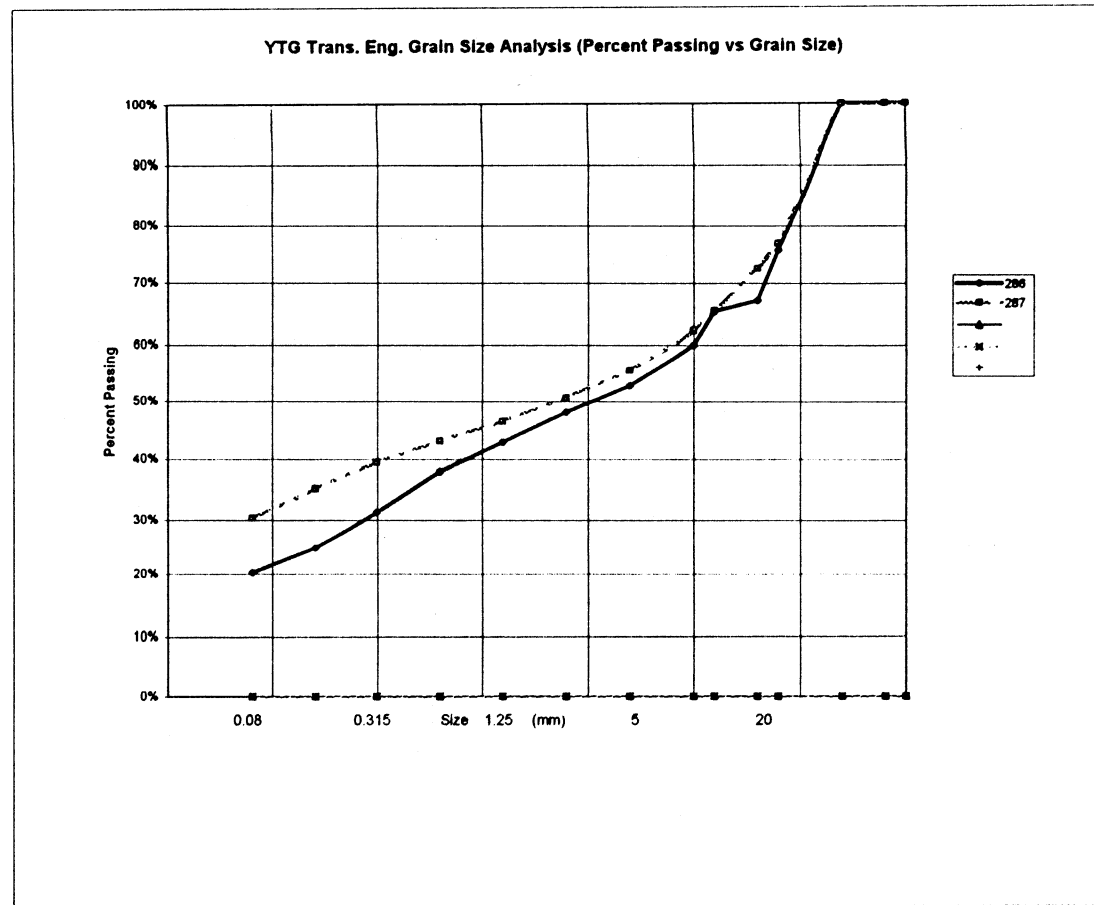


PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-453
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1810+550 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-03

FIELD NO: 282		FIELD No: 283		FIELD No: 284		FIELD No: 285	
LAB NO: 298		LAB No: 299		LAB No: 300		LAB No: 301	
DEPTH: 0.8-1.0		DEPTH: 1.8-2.0		DEPTH: 2.8-3.0		DEPTH: 4.0-4.5	
TYPE: AUGER		TYPE: AUGER		TYPE: AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	94%	25.0	100%	25.0	95%
20.0	100%	20.0	94%	20.0	100%	20.0	92%
12.5	98%	12.5	87%	12.5	91%	12.5	82%
10.0	94%	10.0	84%	10.0	87%	10.0	79%
5.0	88%	5.0	79%	5.0	79%	5.0	72%
2.5	82%	2.5	74%	2.5	70%	2.5	65%
1.25	76%	1.25	70%	1.25	63%	1.25	60%
0.630	71%	0.630	67%	0.630	57%	0.630	55%
0.315	65%	0.315	63%	0.315	50%	0.315	50%
0.160	59%	0.160	58%	0.160	44%	0.160	45%
0.080	53%	0.080	53%	0.080	38%	0.080	38%
M.C.(%): 9%		M.C.(%): 11%		M.C.(%): 8%		M.C.(%): 9%	
LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	12	% GRAVEL:	21	% GRAVEL:	21	% GRAVEL:	28
% SAND:	35	% SAND:	26	% SAND:	41	% SAND:	33
% FINES:	53	% FINES:	53	% FINES:	38	% FINES:	39
CLASSIFICATION: SANDY SILT (ML)		CLASSIFICATION: SANDY SILT WITH GRAVEL (ML)		CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)		CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	

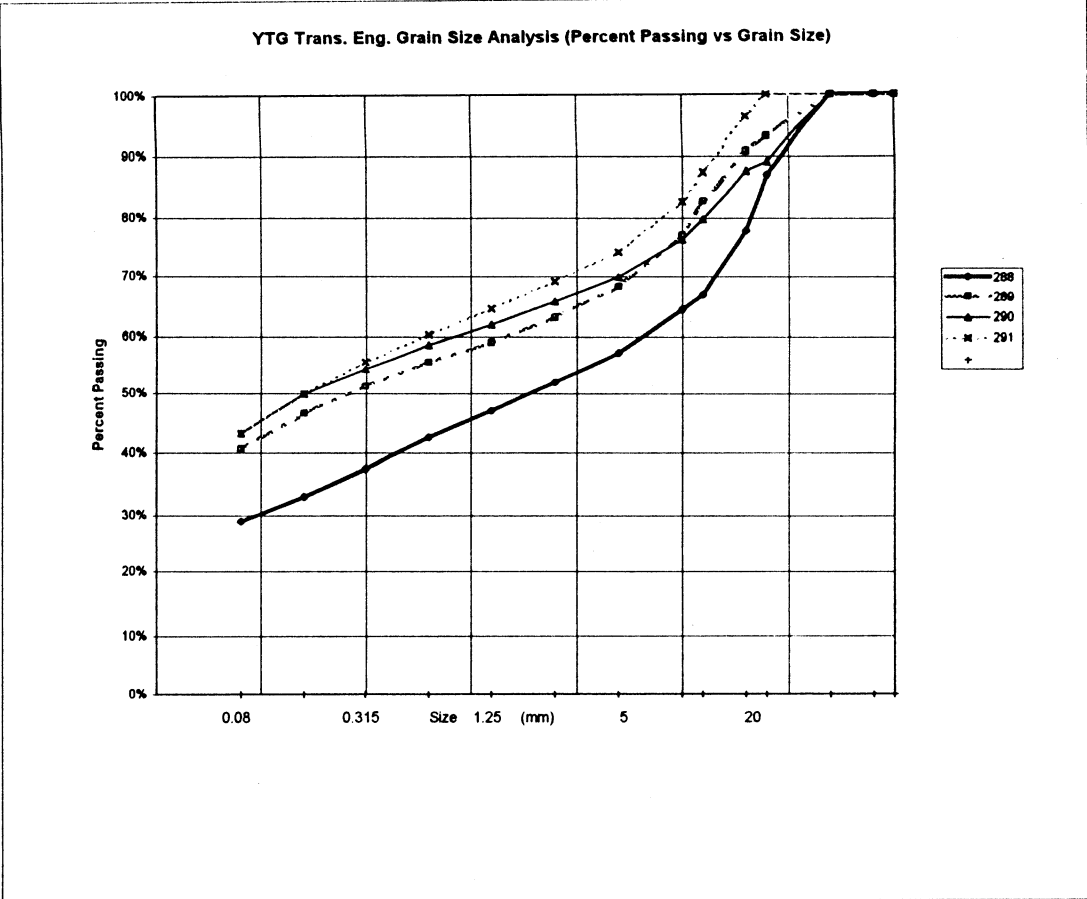


PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	513-454
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1810+475 CENTRELINE	DATE COMP	99-05-03
LOGGED BY:	G.C.		
=====			
FIELD NO:	288	FIELD No.	287
LAB NO:	302	LAB No.	303
DEPTH:	0.8-1.0	DEPTH	2.2-3.0
TYPE:	AUGER	TYPE	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	76%	25.0	77%
20.0	67%	20.0	73%
12.5	65%	12.5	65%
10.0	60%	10.0	62%
5.0	53%	5.0	56%
2.5	48%	2.5	51%
1.25	43%	1.25	47%
0.630	38%	0.630	43%
0.315	31%	0.315	39%
0.160	25%	0.160	35%
0.080	20%	0.080	30%
M.C.(%):	8%	M.C.(%):	9%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	47	% GRAVEL:	44
% SAND:	33	% SAND:	25
% FINES:	20	% FINES:	30
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-455
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1810+375 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-03

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
288	304	1.0-1.5	AUGER	289	305	2.0-2.2	AUGER	290	306	2.8-3.0	AUGER	291	307	4.0-4.5	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	87%	25.0	93%	25.0	89%	25.0	88%	25.0	80%	25.0	88%	25.0	88%	25.0	88%
20.0	78%	20.0	91%	20.0	88%	20.0	80%	20.0	76%	20.0	83%	20.0	83%	20.0	83%
12.5	67%	12.5	83%	12.5	80%	12.5	70%	12.5	50%	12.5	74%	12.5	74%	12.5	74%
10.0	64%	10.0	77%	10.0	76%	10.0	66%	10.0	62%	10.0	65%	10.0	65%	10.0	65%
5.0	57%	5.0	68%	5.0	68%	5.0	59%	5.0	59%	5.0	60%	5.0	60%	5.0	60%
2.5	52%	2.5	63%	2.5	63%	2.5	54%	2.5	54%	2.5	56%	2.5	56%	2.5	56%
1.25	47%	1.25	59%	1.25	62%	1.25	59%	1.25	59%	1.25	60%	1.25	60%	1.25	60%
0.630	42%	0.630	56%	0.630	56%	0.630	54%	0.630	54%	0.630	56%	0.630	56%	0.630	56%
0.315	37%	0.315	51%	0.315	54%	0.315	50%	0.315	50%	0.315	50%	0.315	50%	0.315	50%
0.160	33%	0.160	47%	0.160	47%	0.160	43%	0.160	43%	0.160	43%	0.160	43%	0.160	43%
0.080	29%	0.080	41%	0.080	43%	0.080	43%	0.080	43%	0.080	43%	0.080	43%	0.080	43%
M.C.(%)	11%	M.C.(%)	12%	M.C.(%)	12%	M.C.(%)	11%	M.C.(%)	11%	M.C.(%)	11%	M.C.(%)	11%	M.C.(%)	11%
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	43	% GRAVEL:	32	% GRAVEL:	30	% GRAVEL:	26	% GRAVEL:	26	% GRAVEL:	26	% GRAVEL:	26	% GRAVEL:	26
% SAND:	29	% SAND:	28	% SAND:	27	% SAND:	31	% SAND:	31	% SAND:	31	% SAND:	31	% SAND:	31
% FINES:	29	% FINES:	41	% FINES:	43	% FINES:	43	% FINES:	43	% FINES:	43	% FINES:	43	% FINES:	43
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

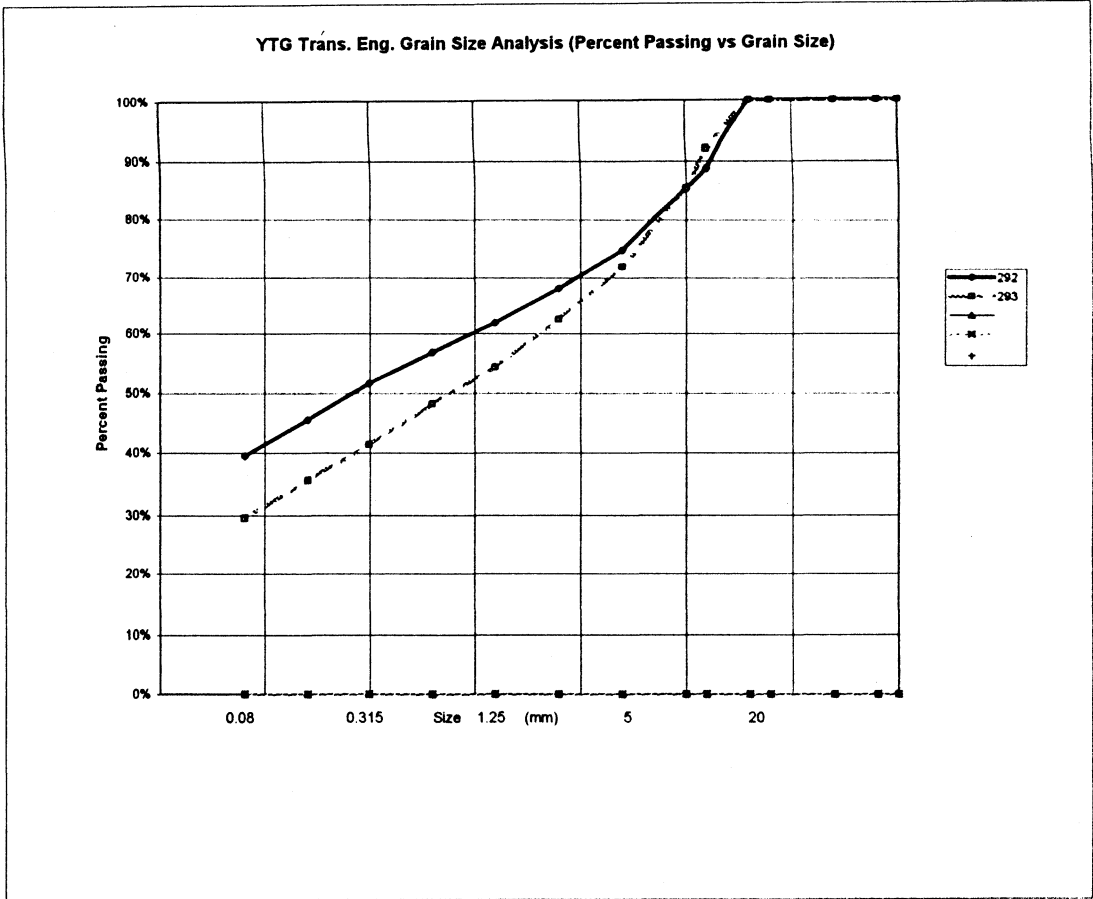


PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-458
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1810+275 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-03

FIELD NO:	292	FIELD No.	293
LAB NO:	308	LAB No.	309
DEPTH:	1.0-1.5	DEPTH	2.0-2.2
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	100%
12.5	89%	12.5	92%
10.0	86%	10.0	86%
5.0	75%	5.0	72%
2.5	68%	2.5	63%
1.25	62%	1.25	54%
0.630	57%	0.630	48%
0.315	52%	0.315	41%
0.160	46%	0.160	35%
0.080	39%	0.080	30%

M.C. (%):	14%	M.C. (%):	11%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	25	% GRAVEL:	28
% SAND:	35	% SAND:	42
% FINES:	39	% FINES:	30
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

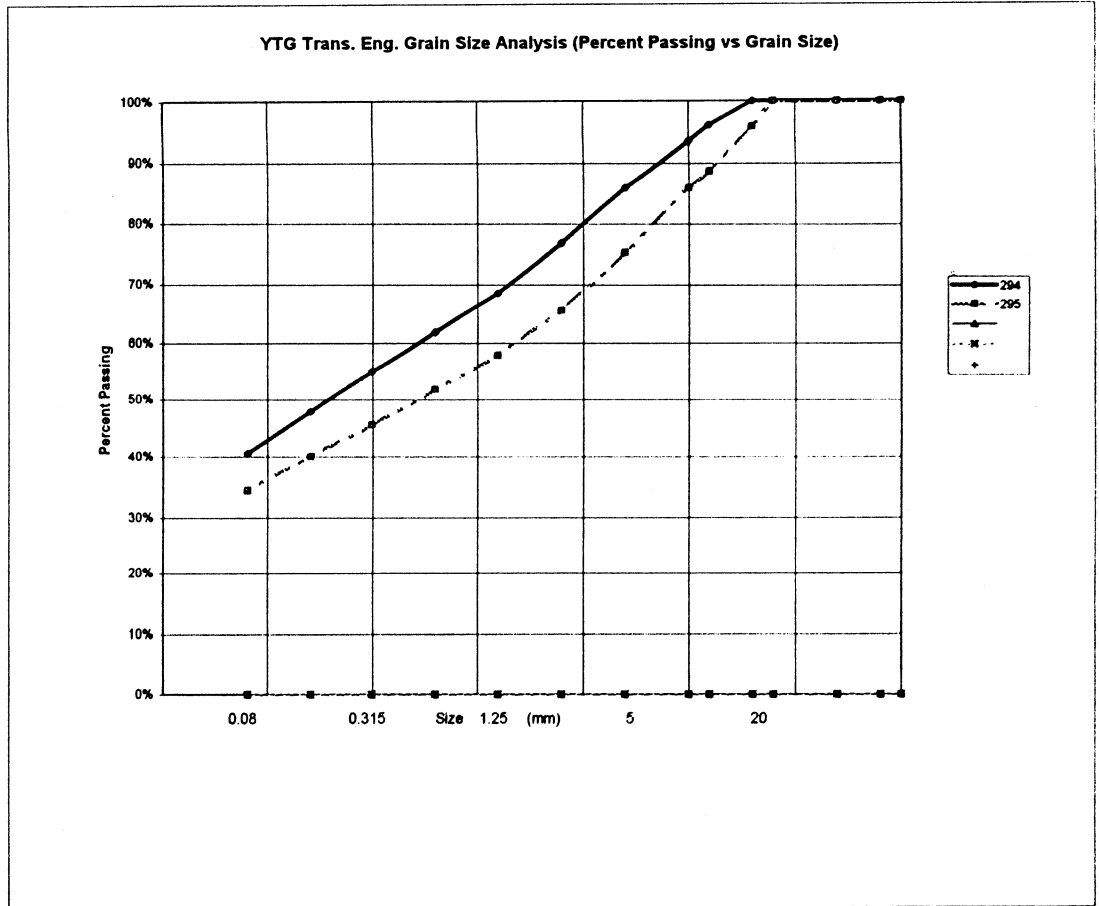


PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	513-457
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1810+200 CENTRELINE	DATE COMP	99-05-03
LOGGED BY:	G.C.		

FIELD NO:	294	FIELD No.	295
LAB NO:	310	LAB No.	311
DEPTH:	1.0-1.5	DEPTH	1.8-2.0
TYPE:	AUGER	TYPE	AUGER

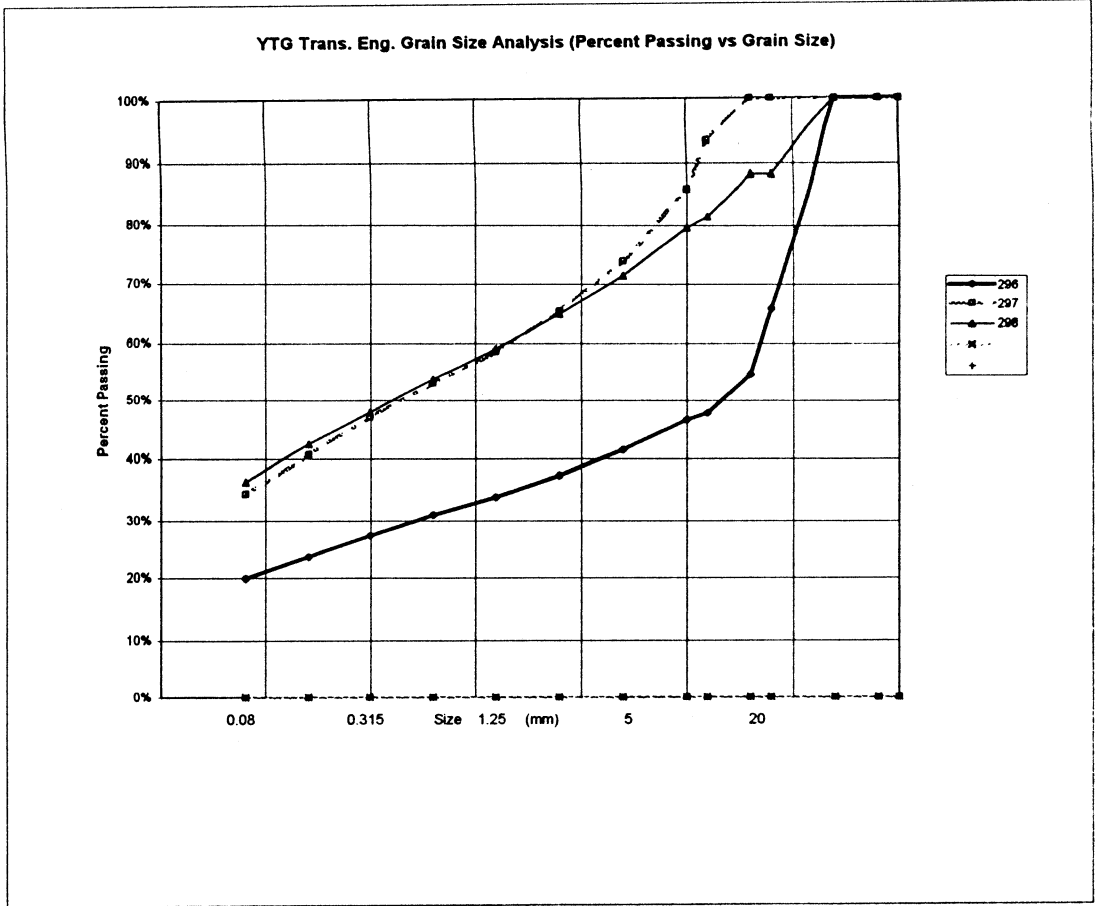
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	98%
12.5	98%	12.5	89%
10.0	93%	10.0	86%
5.0	86%	5.0	75%
2.5	77%	2.5	65%
1.25	69%	1.25	58%
0.630	62%	0.630	52%
0.315	55%	0.315	46%
0.160	48%	0.160	40%
0.080	41%	0.080	34%

M.C.(%):	9%	M.C.(%):	9%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	14	% GRAVEL:	25
% SAND:	46	% SAND:	41
% FINES:	41	% FINES:	34
CLASSIFICATION:	SILTY SAND (SM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-458
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1810+050 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-03

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
296	312	1.0-1.5	AUGER	297	313	1.8-2.0	AUGER	298	314	3.6-4.0	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	66%	25.0	100%	25.0	88%	25.0	88%	25.0	88%	25.0	88%
20.0	55%	20.0	100%	20.0	88%	20.0	88%	20.0	88%	20.0	88%
12.5	48%	12.5	93%	12.5	82%	12.5	82%	12.5	82%	12.5	82%
10.0	47%	10.0	86%	10.0	80%	10.0	80%	10.0	80%	10.0	80%
5.0	41%	5.0	74%	5.0	71%	5.0	71%	5.0	71%	5.0	71%
2.5	37%	2.5	65%	2.5	65%	2.5	65%	2.5	65%	2.5	65%
1.25	34%	1.25	59%	1.25	59%	1.25	59%	1.25	59%	1.25	59%
0.630	31%	0.630	53%	0.630	54%	0.630	54%	0.630	54%	0.630	54%
0.315	27%	0.315	47%	0.315	48%	0.315	48%	0.315	48%	0.315	48%
0.160	23%	0.160	41%	0.160	42%	0.160	42%	0.160	42%	0.160	42%
0.080	20%	0.080	35%	0.080	36%	0.080	36%	0.080	36%	0.080	36%
M.C.(%):	6%	M.C.(%):	9%	M.C.(%):	10%	M.C.(%):	10%	M.C.(%):	10%	M.C.(%):	10%
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	59	% GRAVEL:	26	% GRAVEL:	29	% GRAVEL:	29	% GRAVEL:	29	% GRAVEL:	29
% SAND:	22	% SAND:	39	% SAND:	35	% SAND:	35	% SAND:	35	% SAND:	35
% FINES:	20	% FINES:	35	% FINES:	36	% FINES:	36	% FINES:	36	% FINES:	36
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	513-459
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1809+950 CENTRELINE		
LOGGED BY:	G.C.	DATE COMP	99-05-03

FIELD NO:	299	FIELD No.	300
LAB NO:	315	LAB No.	316
DEPTH:	1.0-1.5	DEPTH	2.5-3.0
TYPE:	AUGER	TYPE	AUGER

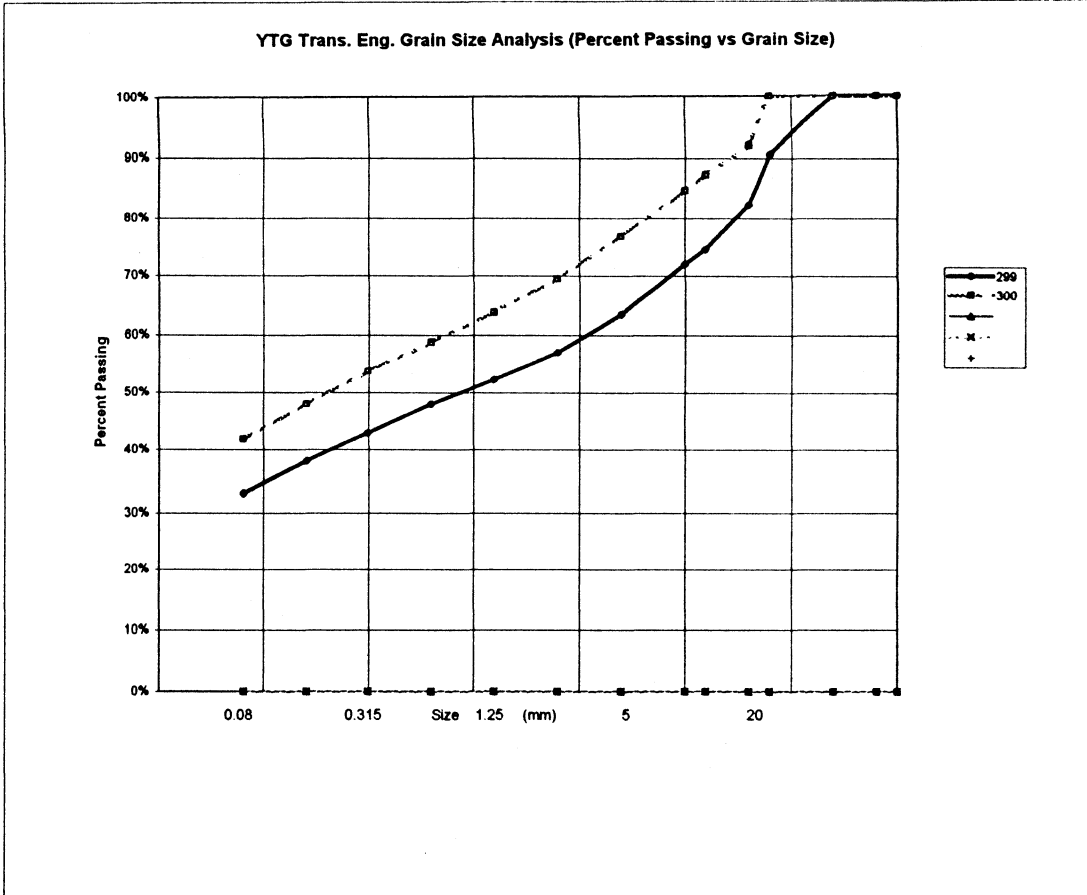
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	91%	25.0	100%
20.0	82%	20.0	92%
12.5	75%	12.5	87%
10.0	72%	10.0	85%
5.0	63%	5.0	77%
2.5	57%	2.5	70%
1.25	52%	1.25	64%
0.630	48%	0.630	59%
0.315	43%	0.315	54%
0.160	38%	0.160	48%
0.080	33%	0.080	42%

M.C. (%):	11%	M.C. (%):	13%
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LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0

% GRAVEL:	37	% GRAVEL:	23
% SAND:	30	% SAND:	35
% FINES:	33	% FINES:	42

CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)
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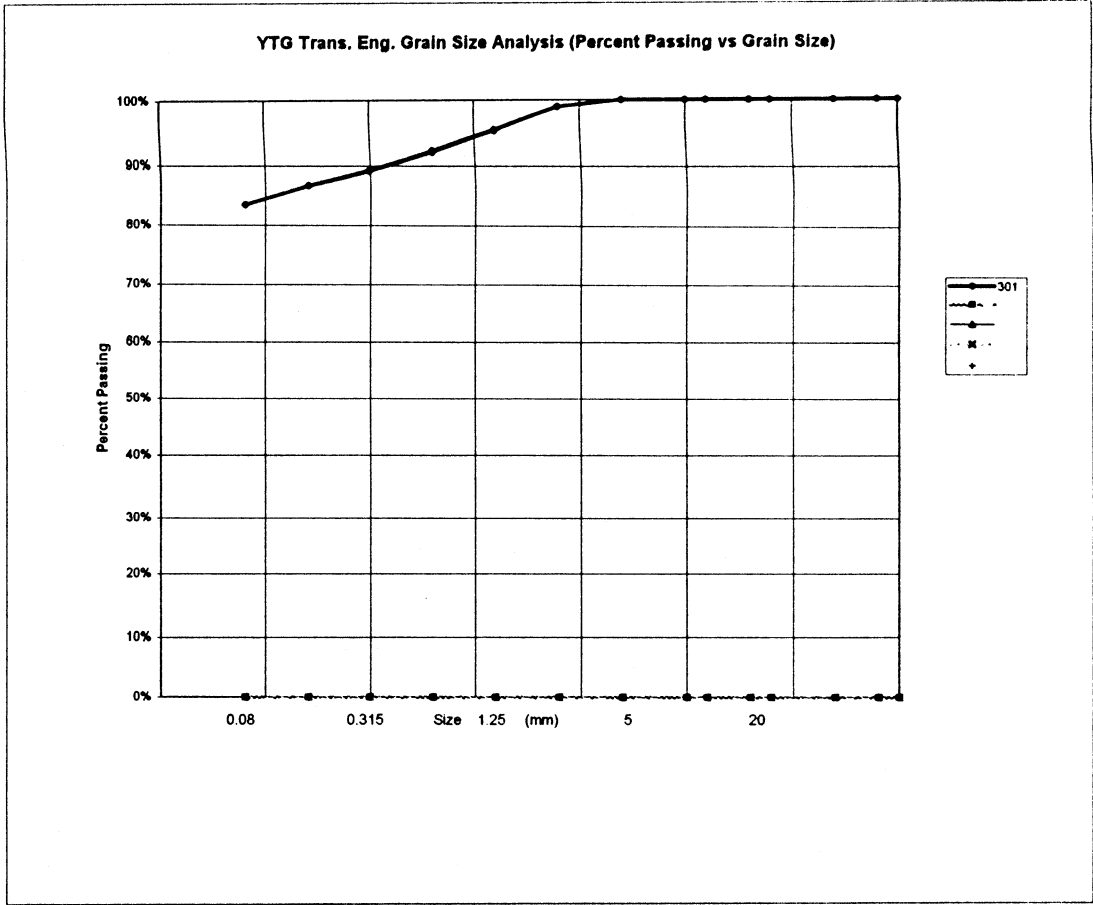


PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-460
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1809+825 CENTRELINE
 LOGGED BY: G.C. DATE COMP 09-05-03

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	100%
12.5	100%
10.0	100%
5.0	100%
2.5	99%
1.25	95%
0.630	92%
0.315	89%
0.160	87%
0.080	84%

M.C.(%)	74%
LIMITS	
LIQUID:	0.0
PLASTIC:	0.0
P.I.:	0.0
% GRAVEL:	0
% SAND:	16
% FINES:	84

CLASSIFICATION:
SILT WITH SAND (ML)

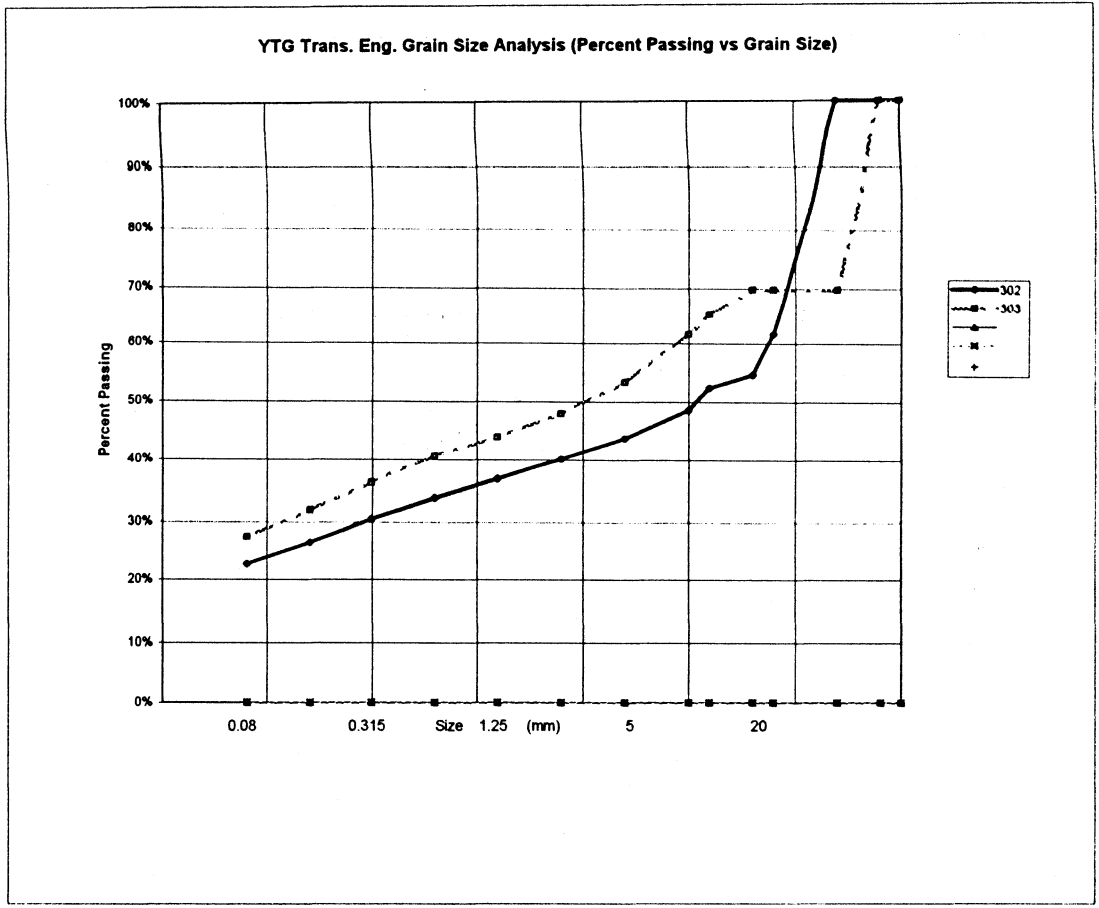


PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-461
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1809+740 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-04

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH	TYPE
302	318	1.0-1.4	AUGER	303	319	2.5-3.0	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	70%
25.0	62%	25.0	70%
20.0	55%	20.0	70%
12.5	52%	12.5	65%
10.0	49%	10.0	62%
5.0	44%	5.0	53%
2.5	40%	2.5	48%
1.25	37%	1.25	44%
0.630	34%	0.630	41%
0.315	30%	0.315	38%
0.160	26%	0.160	32%
0.080	23%	0.080	27%

M.C.(%):	4%	M.C.(%):	6%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	56	% GRAVEL:	47
% SAND:	21	% SAND:	26
% FINES:	23	% FINES:	27
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-462
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1809+670 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-04

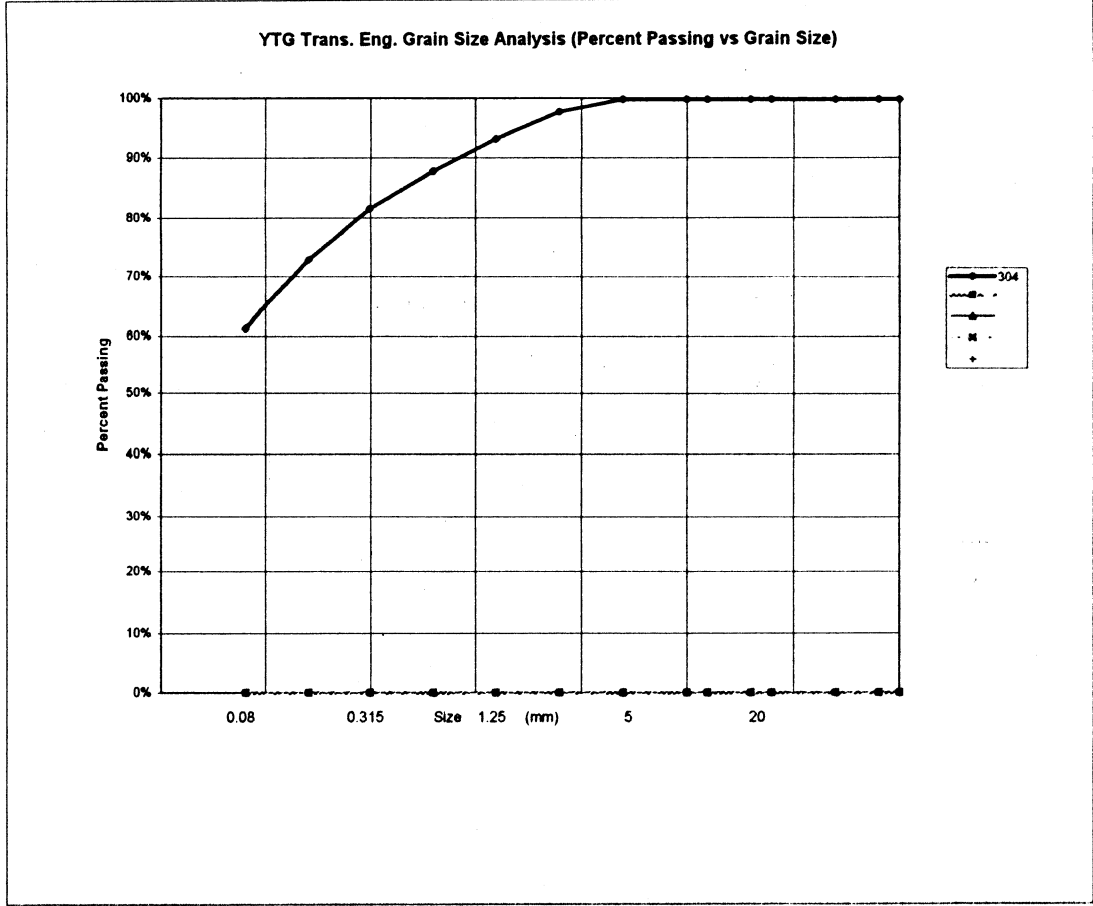
SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	100%
12.5	100%
10.0	100%
5.0	100%
2.5	98%
1.25	93%
0.630	88%
0.315	81%
0.160	73%
0.080	61%

M.C.(%):	282%
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LIMITS	
LIQUID:	0.0
PLASTIC:	0.0
P.I.:	0.0

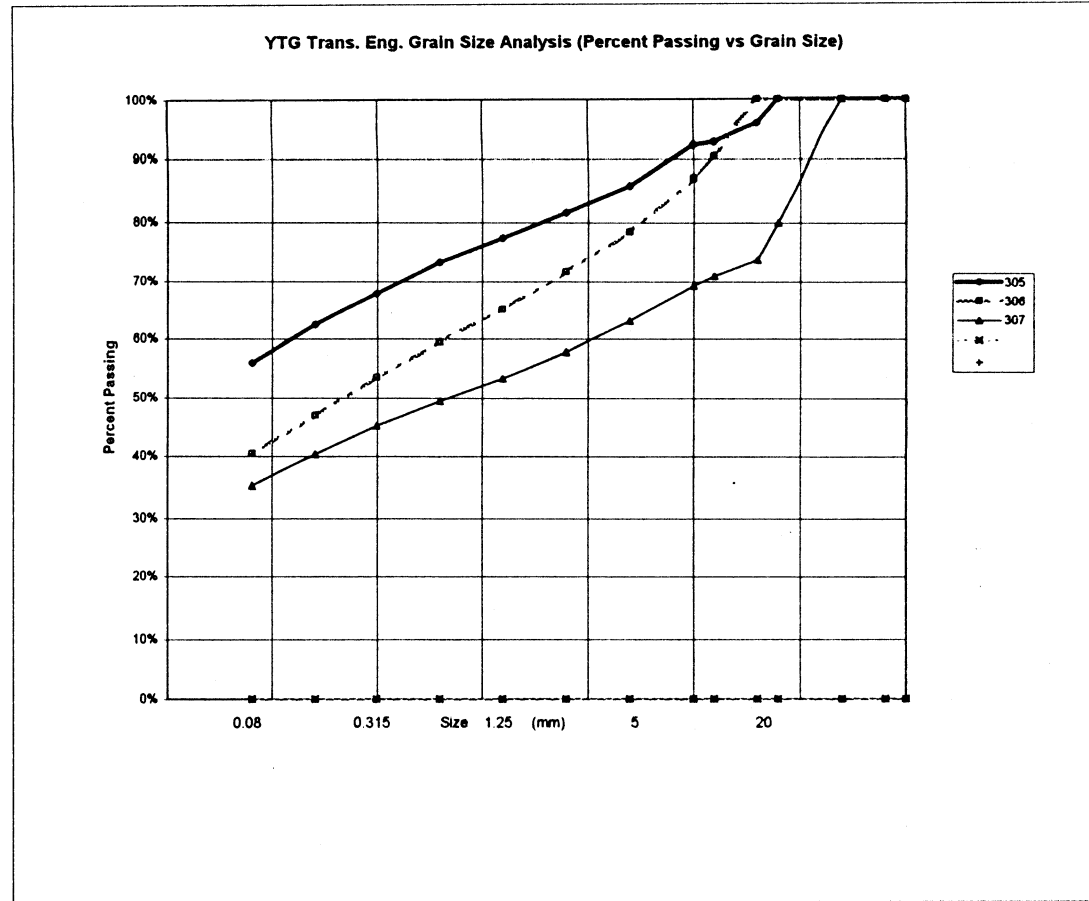
% GRAVEL:	0
% SAND:	39
% FINES:	61

CLASSIFICATION:
 SANDY SILT (ML)



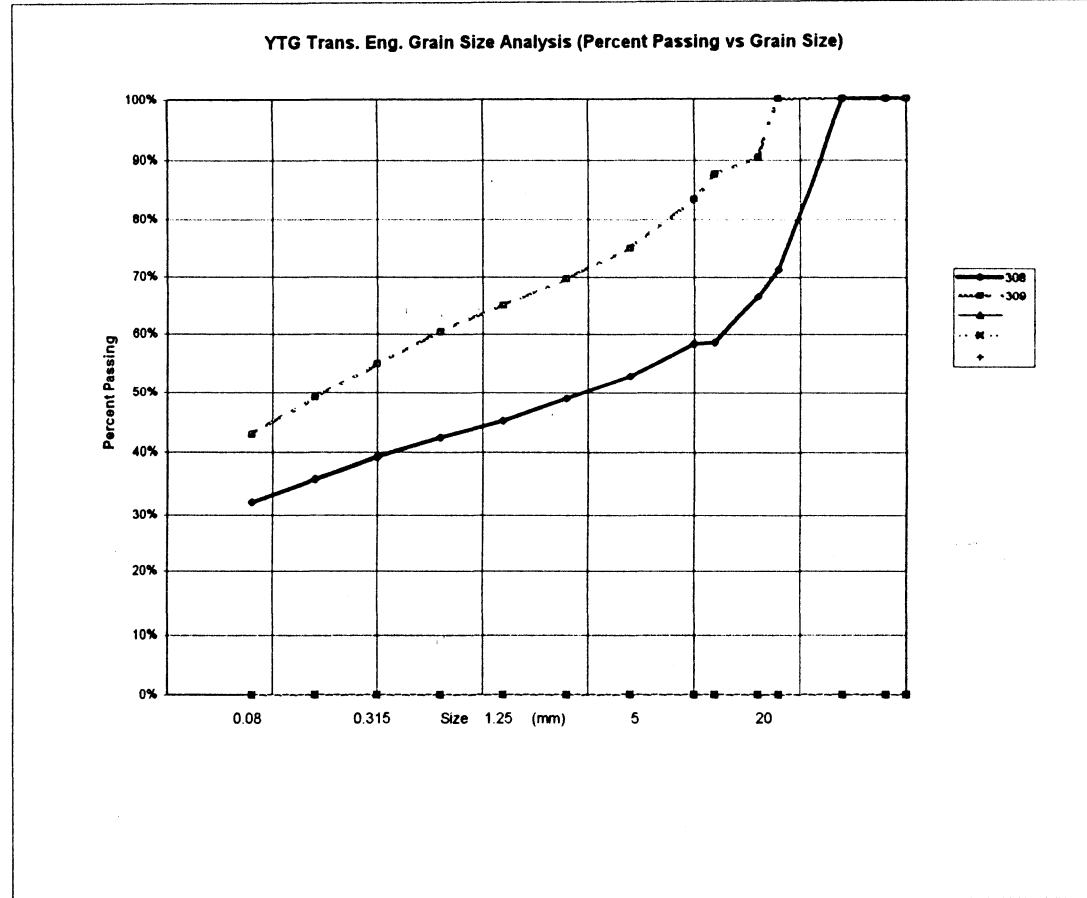
PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-483
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1809+575 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-04

FIELD NO: 305		FIELD No. 306		FIELD No: 307	
LAB NO: 321		LAB No. 322		LAB No: 323	
DEPTH: 0.8-1.0		DEPTH 1.8-2.0		DEPTH: 2.8-3.0	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	80%
20.0	96%	20.0	100%	20.0	74%
12.5	93%	12.5	90%	12.5	71%
10.0	92%	10.0	87%	10.0	69%
5.0	86%	5.0	78%	5.0	63%
2.5	82%	2.5	72%	2.5	58%
1.25	77%	1.25	65%	1.25	53%
0.630	73%	0.630	60%	0.630	50%
0.315	68%	0.315	54%	0.315	45%
0.160	62%	0.160	47%	0.160	40%
0.080	56%	0.080	40%	0.080	35%
M.C. (%):	13%	M.C. (%):	13%	M.C. (%):	8%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	14	% GRAVEL:	22	% GRAVEL:	37
% SAND:	30	% SAND:	38	% SAND:	28
% FINES:	56	% FINES:	40	% FINES:	35
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SANDY SILT (ML)		SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)	



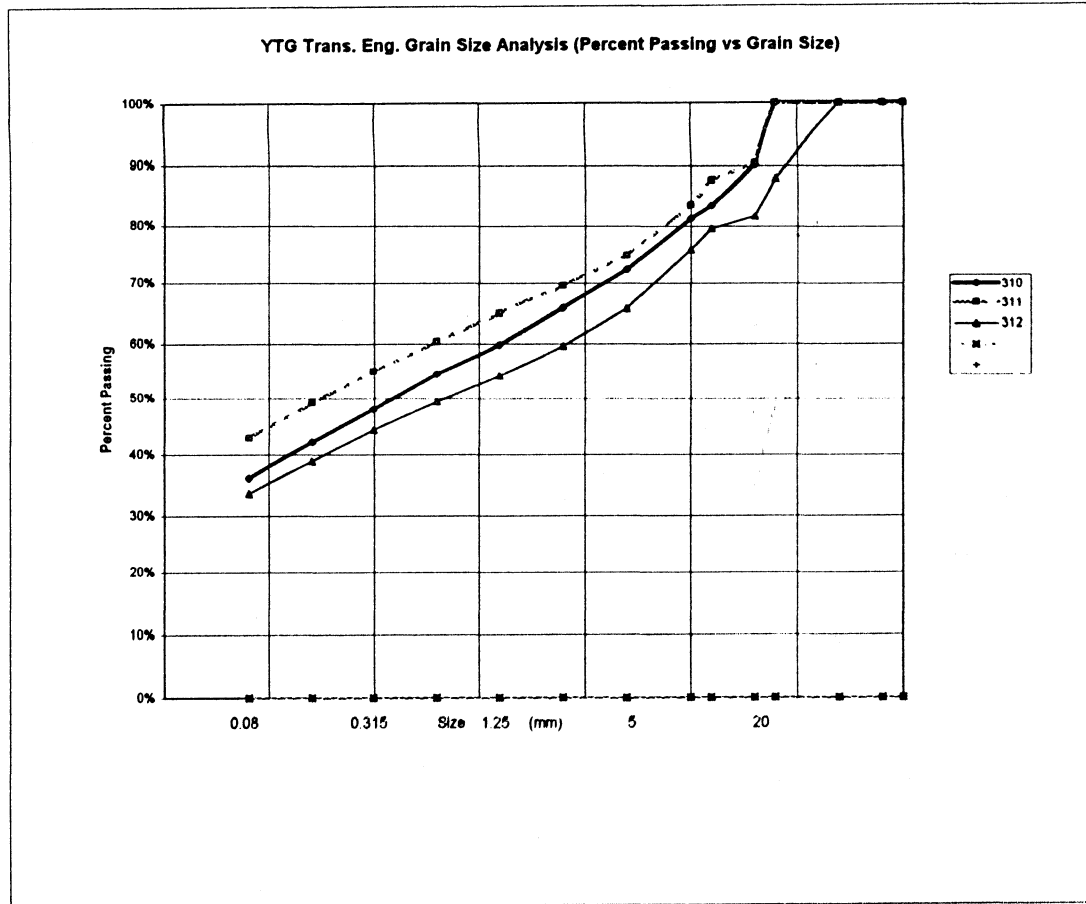
PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-464
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1809+475 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-04

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	71%	25.0	100%
20.0	66%	20.0	90%
12.5	59%	12.5	88%
10.0	58%	10.0	84%
5.0	53%	5.0	75%
2.5	49%	2.5	70%
1.25	45%	1.25	65%
0.630	42%	0.630	60%
0.315	39%	0.315	55%
0.160	36%	0.160	49%
0.080	32%	0.080	43%
M.C.(%): 20%		M.C.(%): 18%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	47	% GRAVEL:	25
% SAND:	21	% SAND:	32
% FINES:	32	% FINES:	43
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

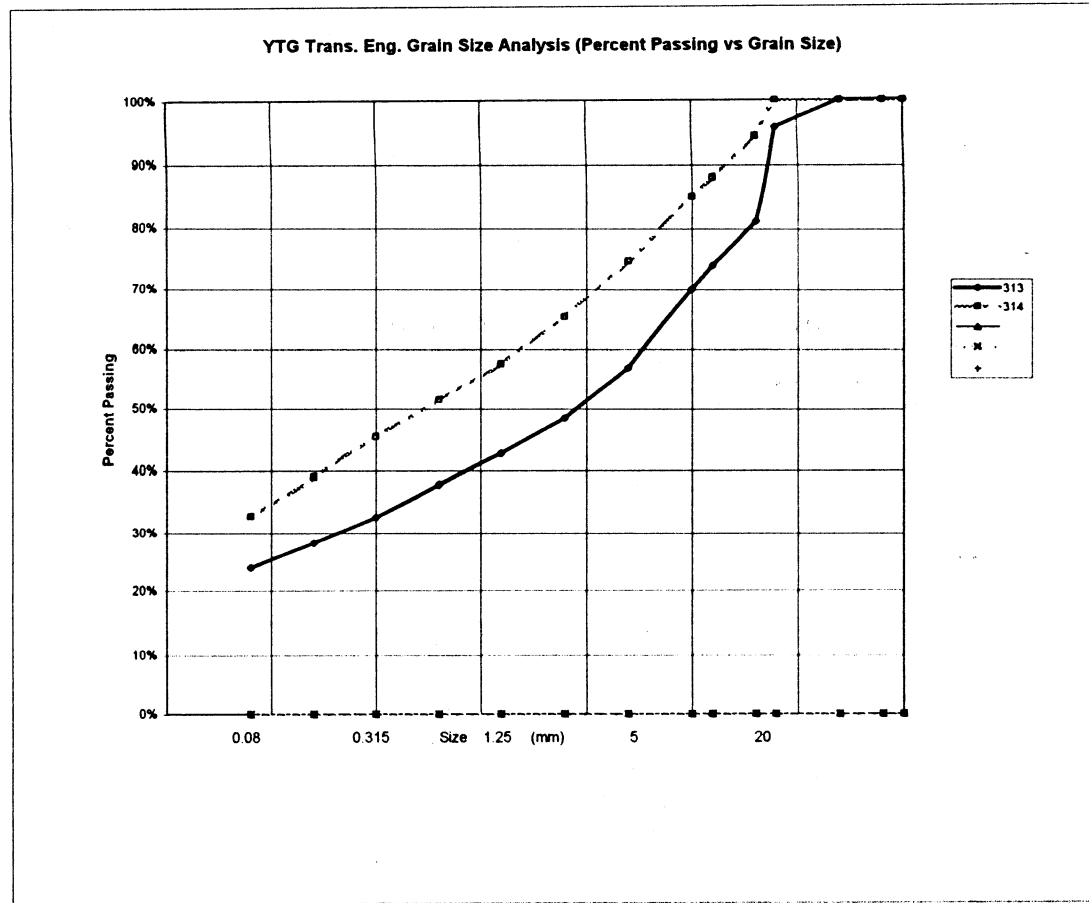


PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-465
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1809+425 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-08

FIELD NO: 310		FIELD No. 311		FIELD No: 312	
LAB NO:	326	LAB No.	327	LAB No:	328
DEPTH:	1.0-1.5	DEPTH:	2.5-3.0	DEPTH:	4.0-4.5
TYPE:	AUGER	TYPE:	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	88%
20.0	80%	20.0	90%	20.0	82%
12.5	84%	12.5	88%	12.5	80%
10.0	81%	10.0	84%	10.0	76%
5.0	72%	5.0	75%	5.0	66%
2.5	66%	2.5	70%	2.5	60%
1.25	60%	1.25	65%	1.25	54%
0.830	55%	0.830	60%	0.830	49%
0.315	48%	0.315	55%	0.315	44%
0.160	42%	0.160	49%	0.160	39%
0.080	36%	0.080	43%	0.080	33%
M.C.(%):	7%	M.C.(%):	18%	M.C.(%):	10%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	28	% GRAVEL:	25	% GRAVEL:	34
% SAND:	36	% SAND:	32	% SAND:	32
% FINES:	36	% FINES:	43	% FINES:	33
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)	



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	513-486
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1809+325 CENTRELINE		
LOGGED BY:	G.C.	DATE COMP	99-05-25 ⁰⁴
=====			
FIELD NO:	313	FIELD No.	314
LAB NO:	329	LAB No.	330
DEPTH:	1.8-2.0	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	95%	25.0	100%
20.0	81%	20.0	94%
12.5	74%	12.5	88%
10.0	70%	10.0	85%
5.0	57%	5.0	75%
2.5	49%	2.5	65%
1.25	43%	1.25	58%
0.630	38%	0.630	52%
0.315	33%	0.315	45%
0.160	28%	0.160	39%
0.080	24%	0.080	33%
M.C.(%):	11%	M.C.(%):	12%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	43	% GRAVEL:	25
% SAND:	33	% SAND:	42
% FINES:	24	% FINES:	33
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	513-467
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1809+285 CENTRELINE		
LOGGED BY:	G.C.	DATE COMP	99-05-03

FIELD NO:	315
LAB NO:	331
DEPTH:	2.6-3.0
TYPE:	AUGER

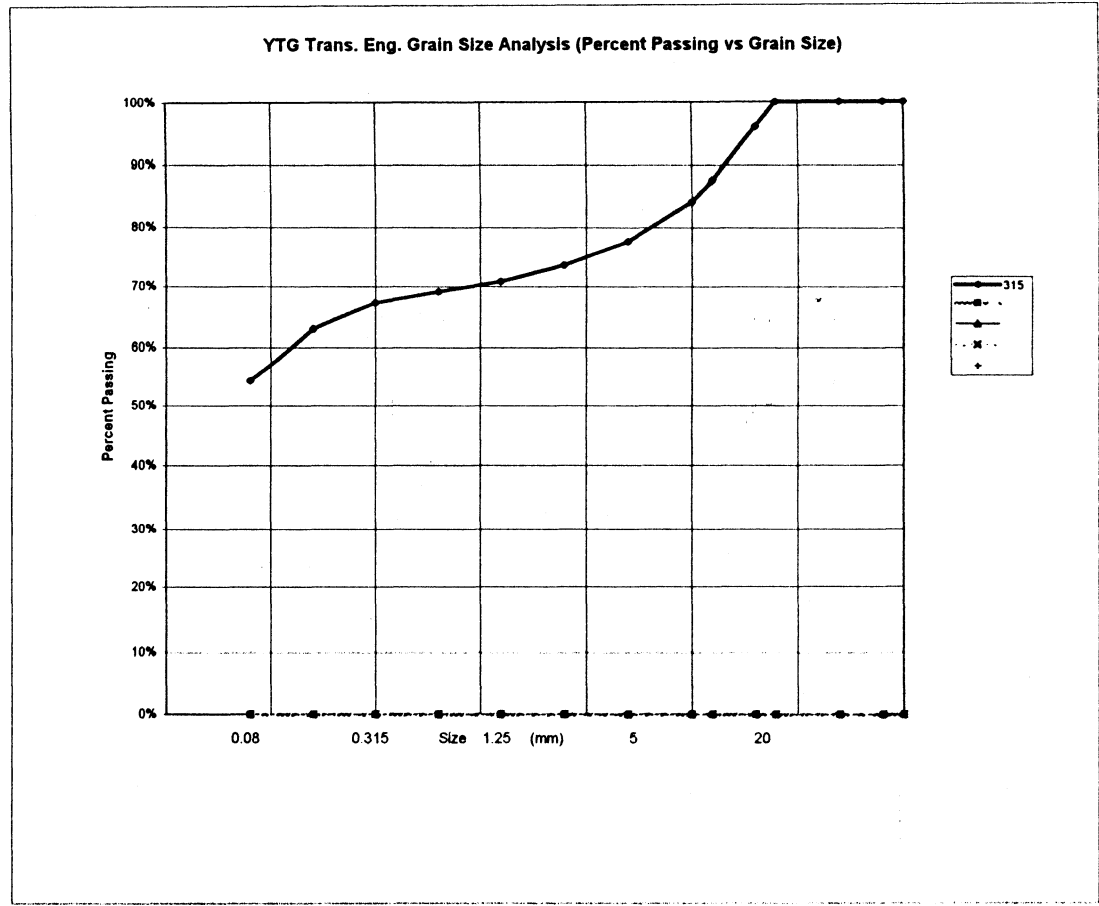
SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	96%
12.5	86%
10.0	84%
5.0	78%
2.5	74%
1.25	71%
0.630	69%
0.315	67%
0.160	63%
0.080	54%

M.C. (%)	27%
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LIMITS	
LIQUID:	0.0
PLASTIC:	0.0
P.I.:	0.0

% GRAVEL:	22
% SAND:	23
% FINES:	54

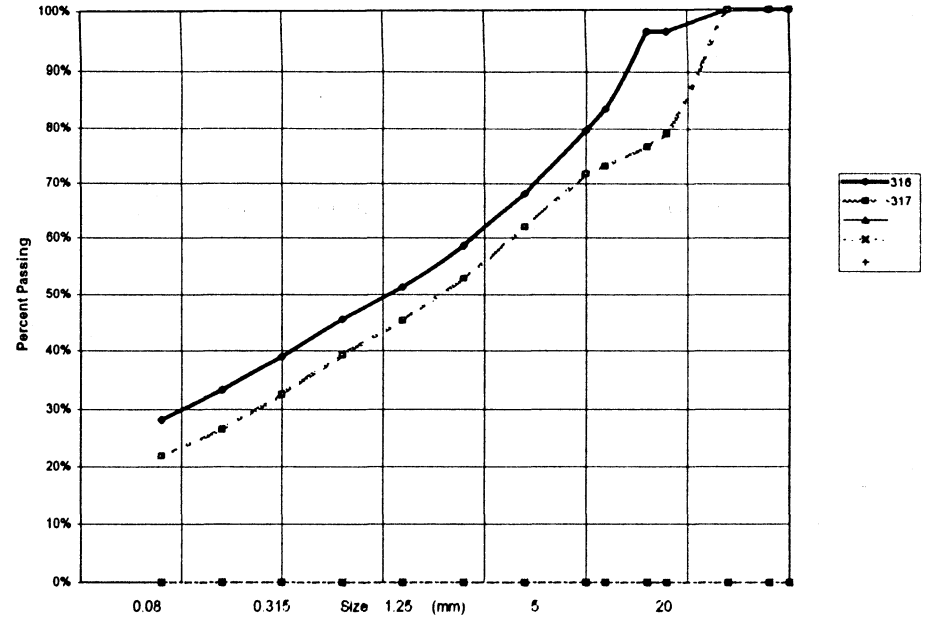
CLASSIFICATION:	
SANDY SILT WITH GRAVEL (ML)	



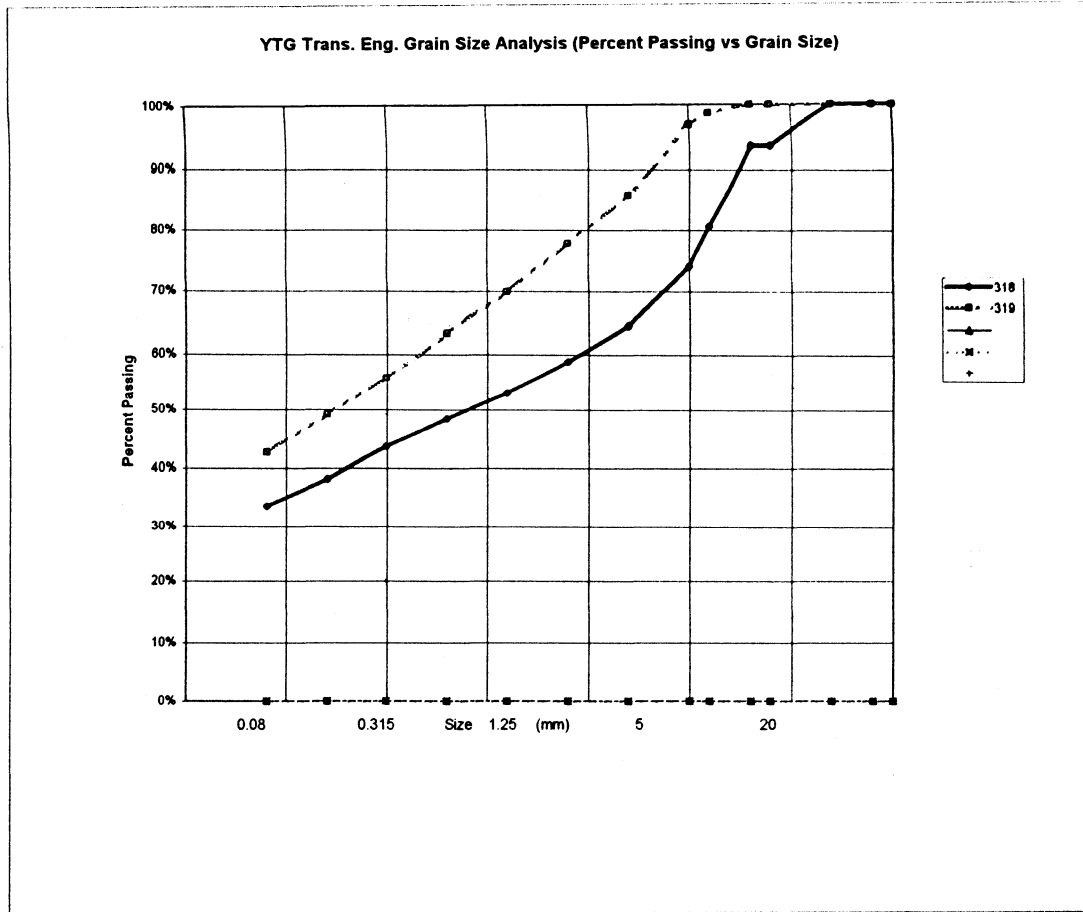
PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-468
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1809+200 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-08

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	96%	25.0	79%
20.0	96%	20.0	77%
12.5	84%	12.5	73%
10.0	80%	10.0	72%
5.0	68%	5.0	62%
2.5	59%	2.5	53%
1.25	51%	1.25	45%
0.630	45%	0.630	39%
0.315	39%	0.315	32%
0.160	33%	0.160	27%
0.080	28%	0.080	22%
M.C. (%)	10%	M.C. (%)	8%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	32	% GRAVEL:	38
% SAND:	40	% SAND:	40
% FINES:	28	% FINES:	22
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

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

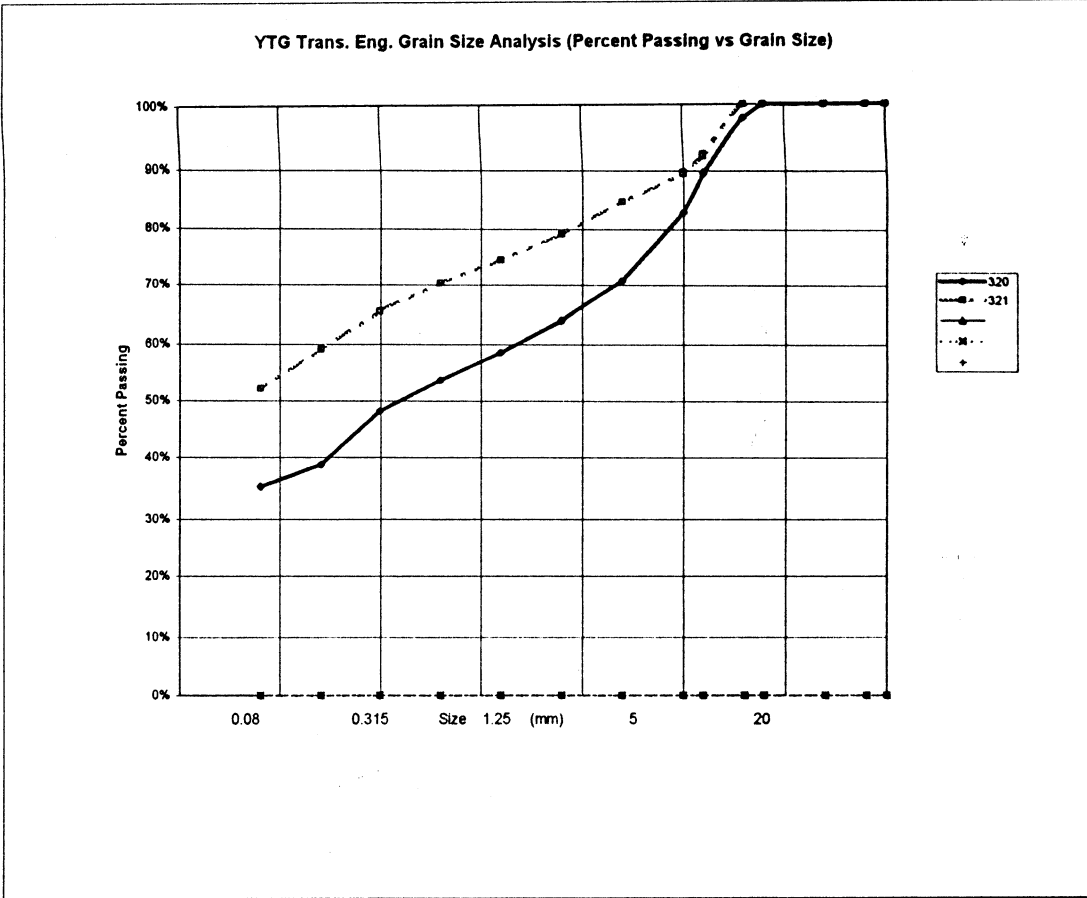


PROJECT NUMBER: 091-202101-0329-199		HOLE No.: 513-489	
CLIENT: ENGINEERING CAPITAL			
PROJECT NAME: SHAKWAK SEG 13			
PROJECT LOCATION: KM 1789-1822 A/H			
DRILL UNIT: B-40-L Nodwell			
HOLE LOCATION: 1809+100 CENTRELINE		DATE COMP 99-05-05	
LOGGED BY: G.C.			
=====		=====	
FIELD NO: 318	FIELD No. 319		
LAB NO: 334	LAB No. 335		
DEPTH: 1.8-2.0	DEPTH 3.0-4.0		
TYPE: AUGER	TYPE AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	94%	25.0	100%
20.0	94%	20.0	100%
12.5	81%	12.5	99%
10.0	74%	10.0	97%
5.0	64%	5.0	86%
2.5	59%	2.5	78%
1.25	53%	1.25	70%
0.630	48%	0.630	63%
0.315	44%	0.315	56%
0.160	38%	0.160	49%
0.080	34%	0.080	43%
M.C.(%): 17%	M.C.(%): 14%		
LIMITS	LIMITS		
LIQUID: 0.0	LIQUID: 0.0		
PLASTIC: 0.0	PLASTIC: 0.0		
P.I.: 0.0	P.I.: 0.0		
% GRAVEL: 36	% GRAVEL: 14		
% SAND: 31	% SAND: 43		
% FINES: 34	% FINES: 43		
CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION: SILTY SAND (SM)		



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-470
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1809+025 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-04

FIELD NO: 320		FIELD No. 321	
LAB NO: 336		LAB No. 337	
DEPTH: 1.8-2.0		DEPTH 2.8-3.0	
TYPE: AUGER		TYPE AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	98%	20.0	100%
12.5	90%	12.5	92%
10.0	83%	10.0	90%
5.0	71%	5.0	85%
2.5	64%	2.5	79%
1.25	59%	1.25	74%
0.630	54%	0.630	70%
0.315	48%	0.315	65%
0.160	39%	0.160	59%
0.080	35%	0.080	52%
M.C.(%): 14%		M.C.(%): 17%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	29	% GRAVEL:	15
% SAND:	36	% SAND:	33
% FINES:	35	% FINES:	52
CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)		CLASSIFICATION: SANDY SILT WITH GRAVEL (ML)	



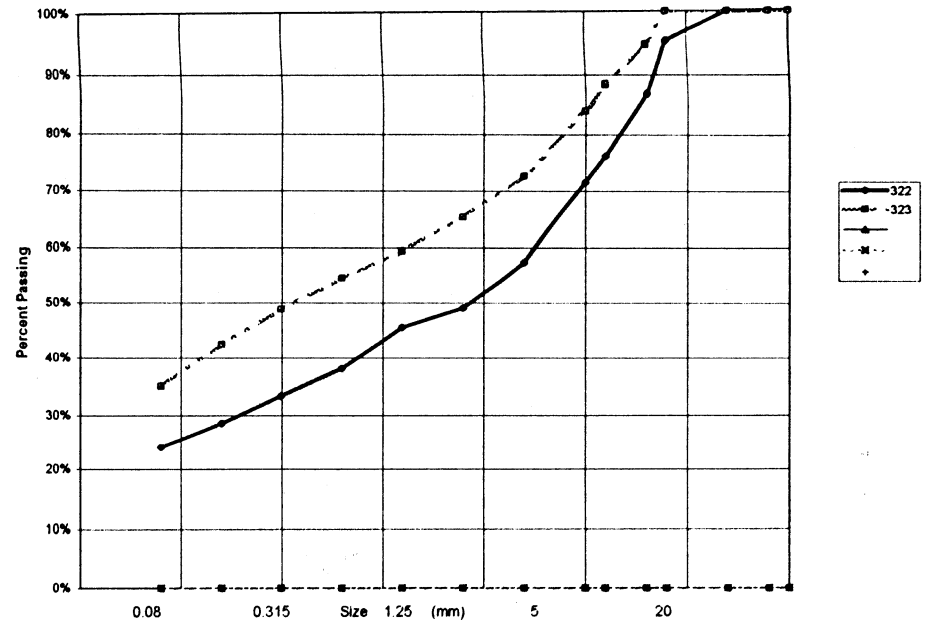
PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-471
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1808+950 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-04

FIELD NO:	322	FIELD No.	323
LAB NO:	338	LAB No.	339
DEPTH:	1.3-1.5	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	95%	25.0	100%
20.0	87%	20.0	94%
12.5	76%	12.5	89%
10.0	72%	10.0	84%
5.0	58%	5.0	73%
2.5	49%	2.5	65%
1.25	45%	1.25	58%
0.630	38%	0.630	55%
0.315	33%	0.315	49%
0.160	29%	0.160	43%
0.080	24%	0.080	35%

M.C. (%):	10%	M.C. (%):	13%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	42	% GRAVEL:	27
% SAND:	33	% SAND:	38
% FINES:	24	% FINES:	35
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-472
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1808+850 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-04

FIELD NO: 324
 LAB NO: 340
 DEPTH: 1.8-2.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	90%
20.0	88%
12.5	86%
10.0	82%
5.0	71%
2.5	63%
1.25	57%
0.630	52%
0.315	46%
0.160	41%
0.080	36%

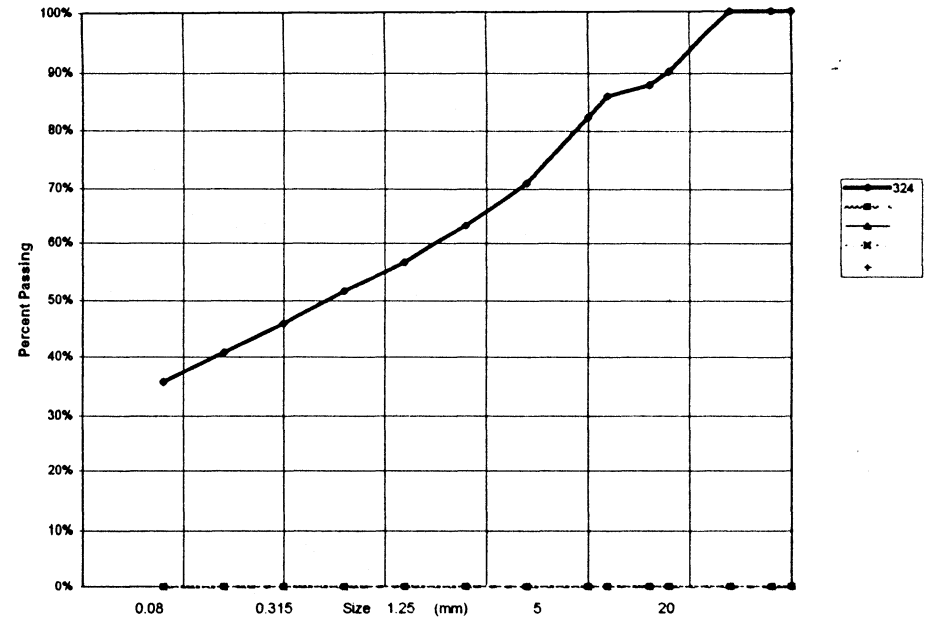
M.C.(%): 14%

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

% GRAVEL: 29
 % SAND: 35
 % FINES: 36

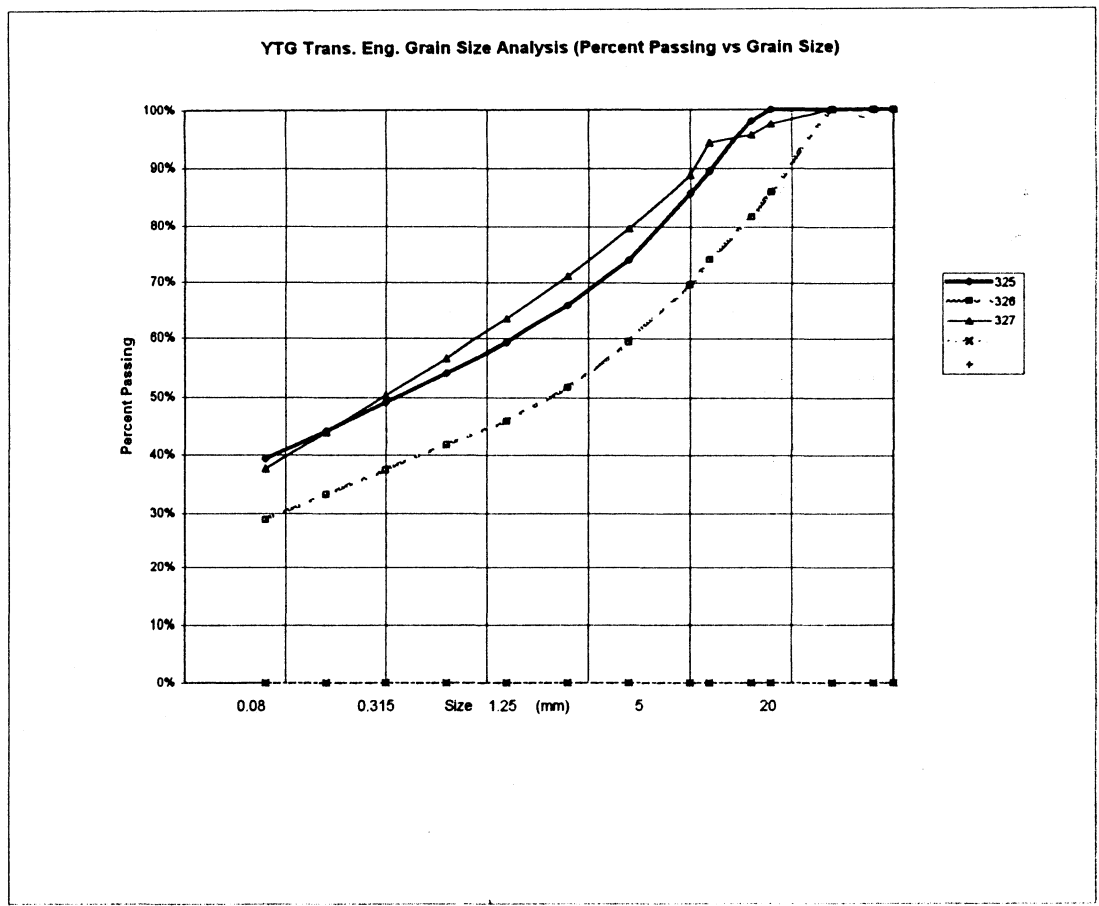
CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM)

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-482
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nadwell
 HOLE LOCATION: 1808+750 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-05

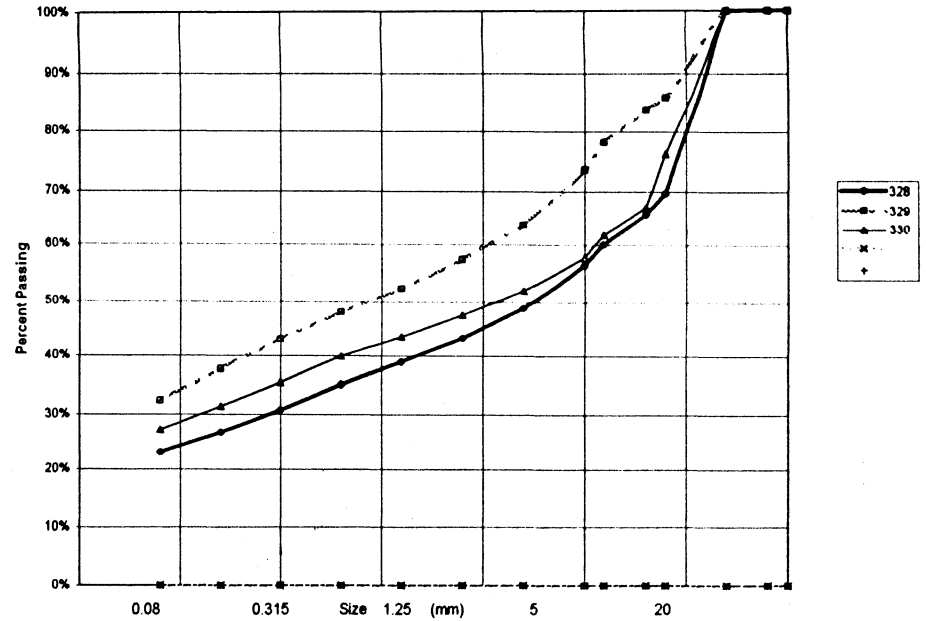
FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
325	341	1.2-1.5	AUGER	326	342	2.8-3.0	AUGER	327	343	3.6-4.0	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	86%	25.0	97%	25.0	95%	25.0	97%	25.0	95%
20.0	98%	20.0	82%	20.0	95%	20.0	94%	20.0	95%	20.0	94%
12.5	90%	12.5	74%	12.5	94%	12.5	94%	12.5	94%	12.5	94%
10.0	86%	10.0	70%	10.0	89%	10.0	89%	10.0	89%	10.0	89%
5.0	74%	5.0	59%	5.0	80%	5.0	80%	5.0	80%	5.0	80%
2.5	66%	2.5	52%	2.5	71%	2.5	71%	2.5	71%	2.5	71%
1.25	59%	1.25	46%	1.25	63%	1.25	63%	1.25	63%	1.25	63%
0.630	54%	0.630	42%	0.630	57%	0.630	57%	0.630	57%	0.630	57%
0.315	49%	0.315	37%	0.315	50%	0.315	50%	0.315	50%	0.315	50%
0.160	44%	0.160	33%	0.160	44%	0.160	44%	0.160	44%	0.160	44%
0.080	39%	0.080	29%	0.080	38%	0.080	38%	0.080	38%	0.080	38%
M.C.(%):	15%	M.C.(%):	13%	M.C.(%):	14%	M.C.(%):	14%	M.C.(%):	14%	M.C.(%):	14%
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	26	% GRAVEL:	41	% GRAVEL:	20	% GRAVEL:	20	% GRAVEL:	20	% GRAVEL:	20
% SAND:	35	% SAND:	31	% SAND:	42	% SAND:	42	% SAND:	42	% SAND:	42
% FINES:	39	% FINES:	29	% FINES:	38	% FINES:	38	% FINES:	38	% FINES:	38
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-483
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1808+673 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-06

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
328	344	1.3-1.5	AUGER	329	345	2.8-3.0	AUGER	330	346	3.8-4.0	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	70%	25.0	86%	25.0	86%	25.0	76%	25.0	76%	25.0	76%
20.0	66%	20.0	84%	20.0	84%	20.0	67%	20.0	67%	20.0	67%
12.5	60%	12.5	78%	12.5	78%	12.5	62%	12.5	62%	12.5	62%
10.0	57%	10.0	73%	10.0	73%	10.0	58%	10.0	58%	10.0	58%
5.0	49%	5.0	64%	5.0	64%	5.0	52%	5.0	52%	5.0	52%
2.5	43%	2.5	58%	2.5	58%	2.5	47%	2.5	47%	2.5	47%
1.25	39%	1.25	52%	1.25	52%	1.25	43%	1.25	43%	1.25	43%
0.630	35%	0.630	48%	0.630	48%	0.630	40%	0.630	40%	0.630	40%
0.315	31%	0.315	43%	0.315	43%	0.315	35%	0.315	35%	0.315	35%
0.160	27%	0.160	38%	0.160	38%	0.160	31%	0.160	31%	0.160	31%
0.080	23%	0.080	32%	0.080	32%	0.080	27%	0.080	27%	0.080	27%
M.C. (%)	5%	M.C. (%)	8%	M.C. (%)	7%	M.C. (%)	7%	M.C. (%)	7%	M.C. (%)	7%
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	51	% GRAVEL:	36	% GRAVEL:	48	% GRAVEL:	48	% GRAVEL:	48	% GRAVEL:	48
% SAND:	26	% SAND:	32	% SAND:	25	% SAND:	25	% SAND:	25	% SAND:	25
% FINES:	23	% FINES:	32	% FINES:	27	% FINES:	27	% FINES:	27	% FINES:	27
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	

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

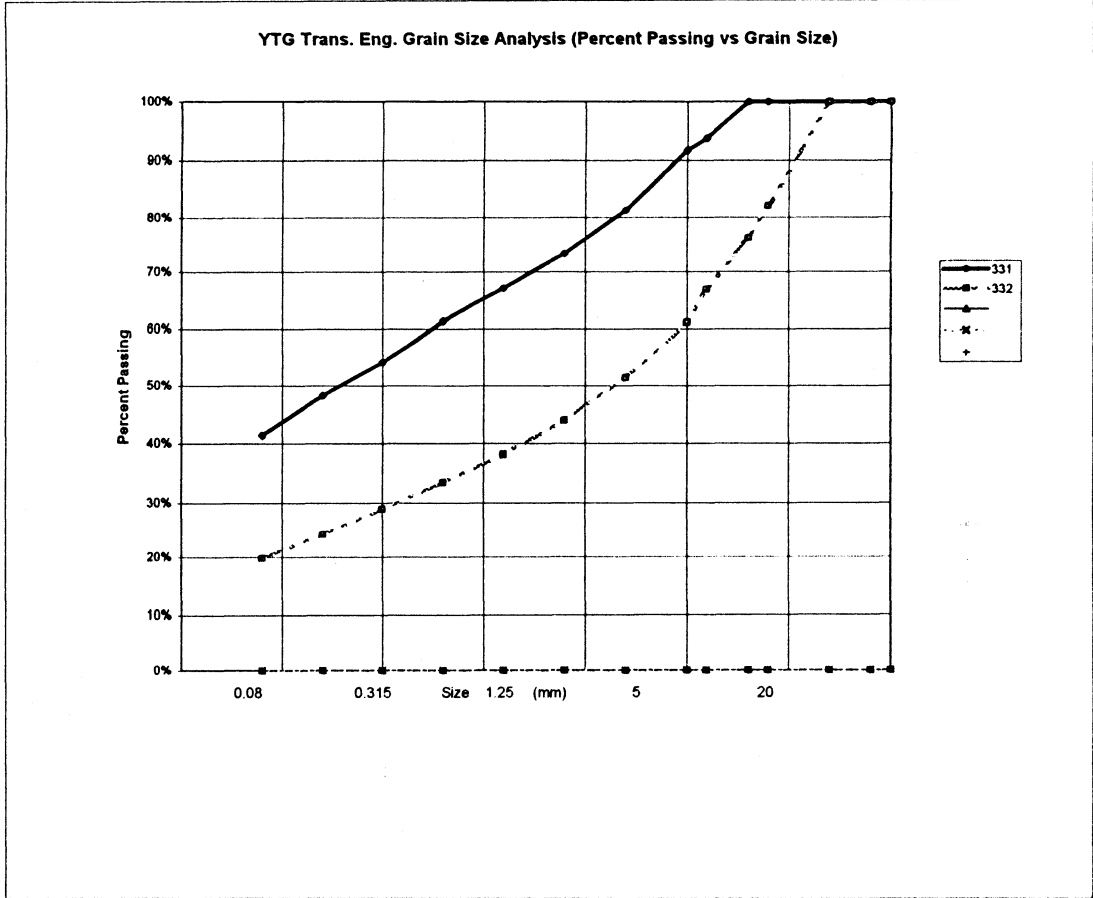


PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	513-484
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1808+575 CENTRELIN	DATE COMP	99-05-25
LOGGED BY:	G.C.		

FIELD NO:	331	FIELD No.	332
LAB NO:	347	LAB No.	348
DEPTH:	1.8-2.0	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER

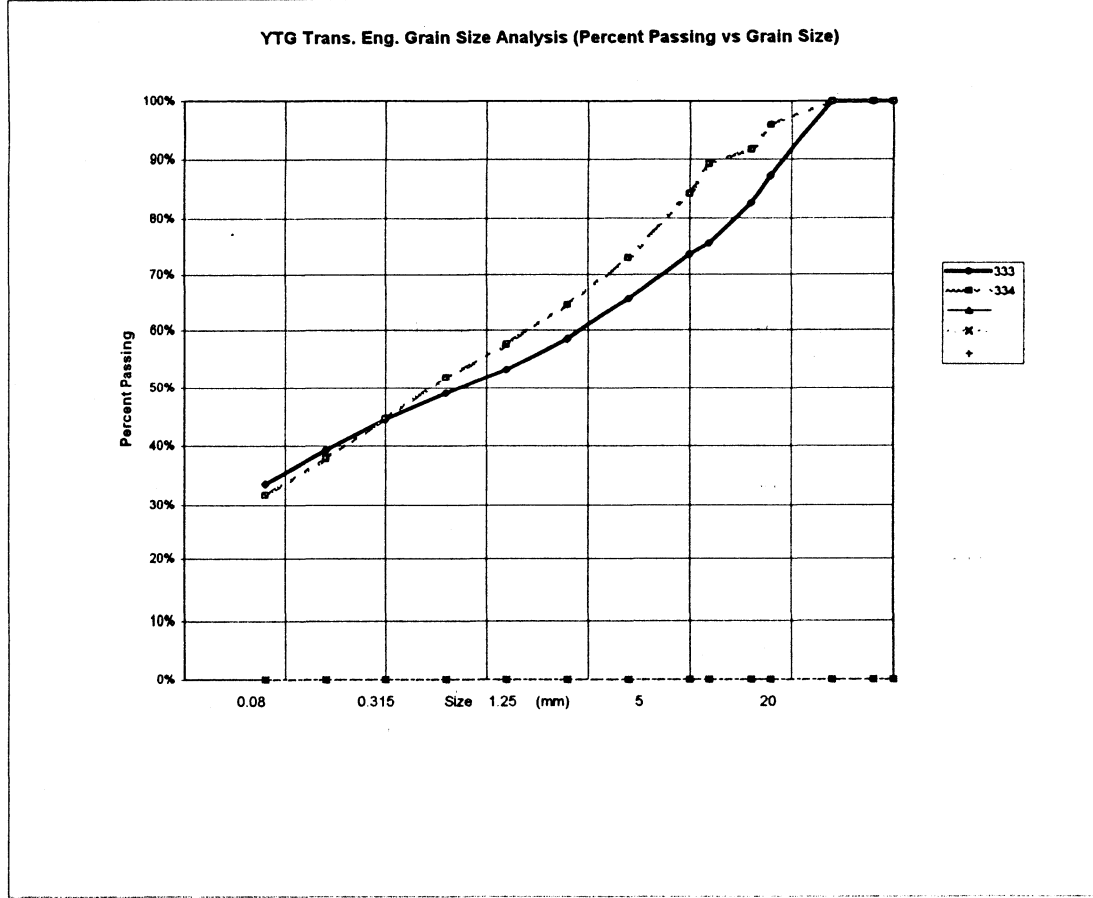
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	82%
20.0	100%	20.0	76%
12.5	94%	12.5	67%
10.0	92%	10.0	61%
5.0	81%	5.0	51%
2.5	73%	2.5	44%
1.25	67%	1.25	38%
0.630	61%	0.630	33%
0.315	54%	0.315	29%
0.160	48%	0.160	24%
0.080	41%	0.080	20%

M.C. (%):	14%	M.C. (%):	10%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	19	% GRAVEL:	49
% SAND:	40	% SAND:	32
% FINES:	41	% FINES:	20
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-485
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1808+510 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-05

=====		=====	
FIELD NO: 333	FIELD No. 334		
LAB NO: 349	LAB No. 350		
DEPTH: 1.6-2.0	DEPTH 2.6-3.0		
TYPE: AUGER	TYPE AUGER		
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	87%	25.0	96%
20.0	83%	20.0	92%
12.5	75%	12.5	89%
10.0	73%	10.0	84%
5.0	65%	5.0	73%
2.5	59%	2.5	64%
1.25	53%	1.25	58%
0.630	49%	0.630	52%
0.315	44%	0.315	45%
0.160	39%	0.160	38%
0.080	34%	0.080	32%
M.C. (%): 13%	M.C. (%): 11%		
LIMITS	LIMITS		
LIQUID: 0.0	LIQUID: 0.0		
PLASTIC: 0.0	PLASTIC: 0.0		
P.I.: 0.0	P.I.: 0.0		
% GRAVEL: 35	% GRAVEL: 27		
% SAND: 32	% SAND: 41		
% FINES: 34	% FINES: 32		
CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)		



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	513-486
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1808+420 CENTRELINE	DATE COMP	99-05-05
LOGGED BY:	G.C.		

FIELD NO:	335
LAB NO:	351
DEPTH:	1.2-1.5
TYPE:	AUGER

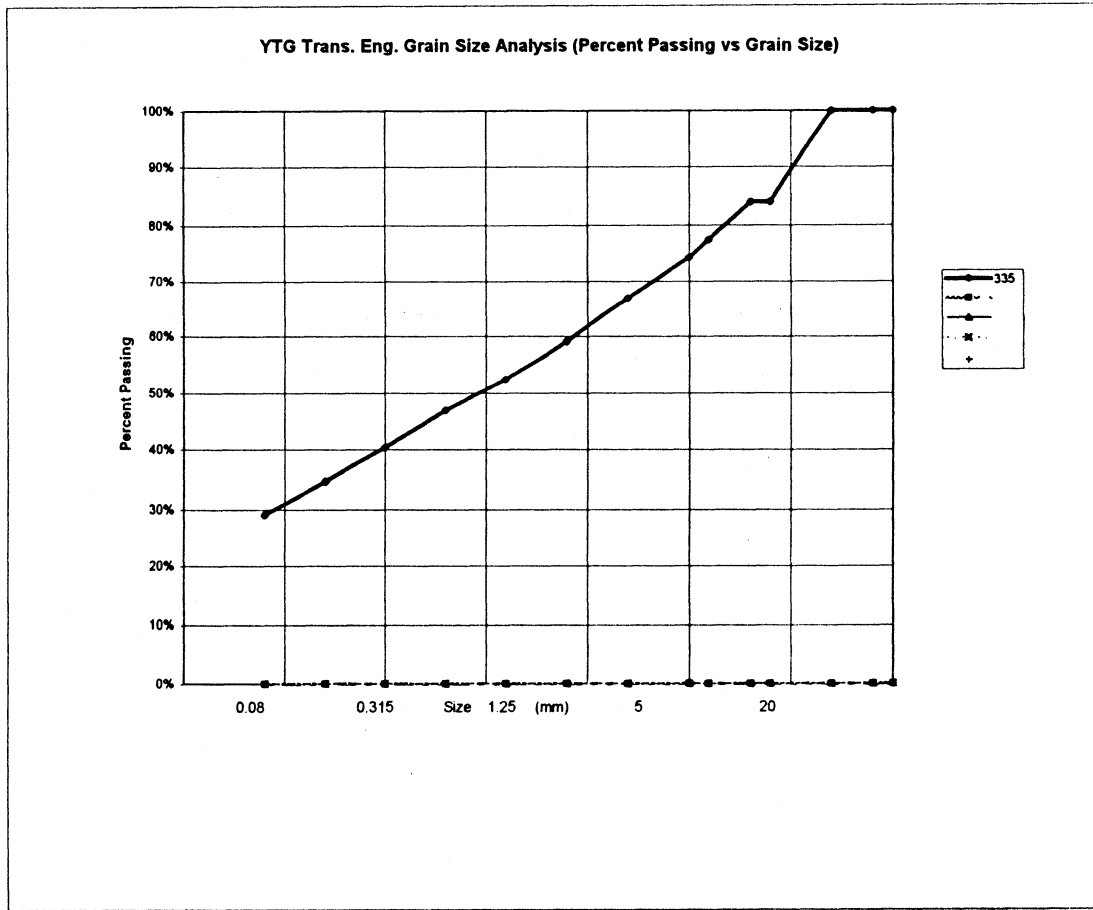
SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	84%
20.0	84%
12.5	77%
10.0	74%
5.0	67%
2.5	59%
1.25	53%
0.630	47%
0.315	40%
0.160	35%
0.080	29%

M.C. (%)	9%
----------	----

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

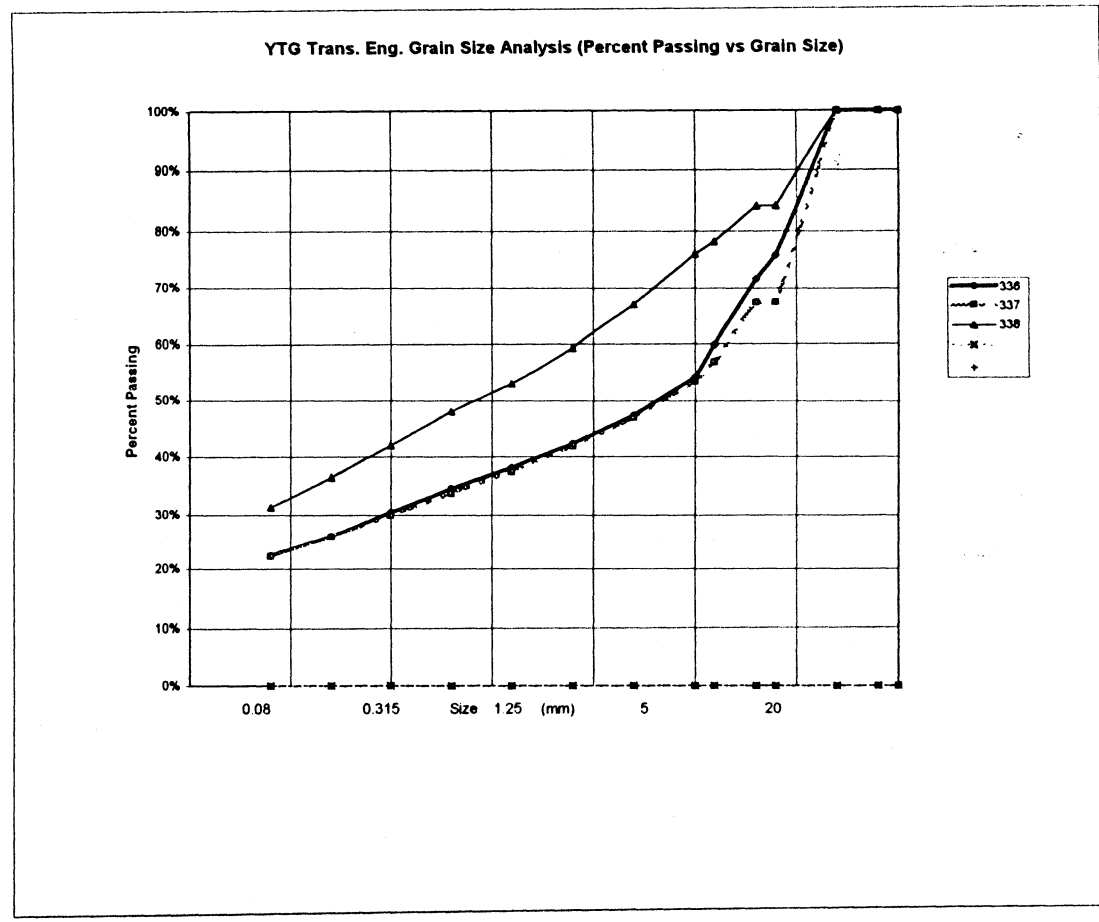
% GRAVEL:	33
% SAND:	38
% FINES:	29

CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)	



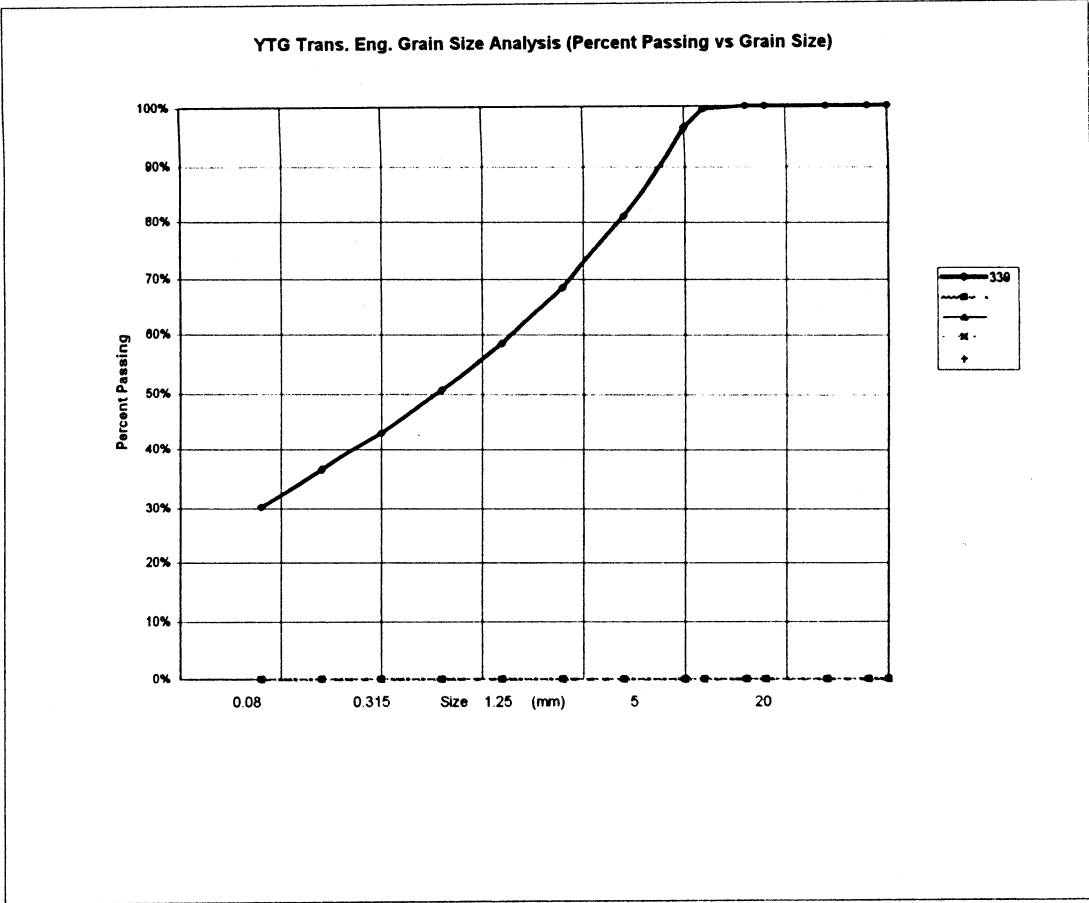
PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-487
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1808+300 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-05

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
336	352	1.2-1.5	AUGER	337	353	2.5-3.0	AUGER	338	354	3.8-4.0	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	76%	25.0	67%	25.0	67%	25.0	84%	25.0	84%	25.0	84%
20.0	72%	20.0	67%	20.0	67%	20.0	84%	20.0	84%	20.0	84%
12.5	60%	12.5	57%	12.5	57%	12.5	78%	12.5	78%	12.5	78%
10.0	54%	10.0	54%	10.0	54%	10.0	76%	10.0	76%	10.0	76%
5.0	47%	5.0	47%	5.0	47%	5.0	67%	5.0	67%	5.0	67%
2.5	42%	2.5	42%	2.5	42%	2.5	59%	2.5	59%	2.5	59%
1.25	38%	1.25	37%	1.25	37%	1.25	53%	1.25	53%	1.25	53%
0.630	35%	0.630	34%	0.630	34%	0.630	48%	0.630	48%	0.630	48%
0.315	31%	0.315	30%	0.315	30%	0.315	42%	0.315	42%	0.315	42%
0.160	26%	0.160	26%	0.160	26%	0.160	36%	0.160	36%	0.160	36%
0.080	22%	0.080	22%	0.080	22%	0.080	31%	0.080	31%	0.080	31%
M.C.(%)	5%	M.C.(%)	7%	M.C.(%)	7%	M.C.(%)	7%	M.C.(%)	7%	M.C.(%)	7%
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	53	% GRAVEL:	53	% GRAVEL:	53	% GRAVEL:	33	% GRAVEL:	33	% GRAVEL:	33
% SAND:	25	% SAND:	25	% SAND:	25	% SAND:	38	% SAND:	38	% SAND:	38
% FINES:	22	% FINES:	22	% FINES:	22	% FINES:	31	% FINES:	31	% FINES:	31
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-473
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1808+220 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-05

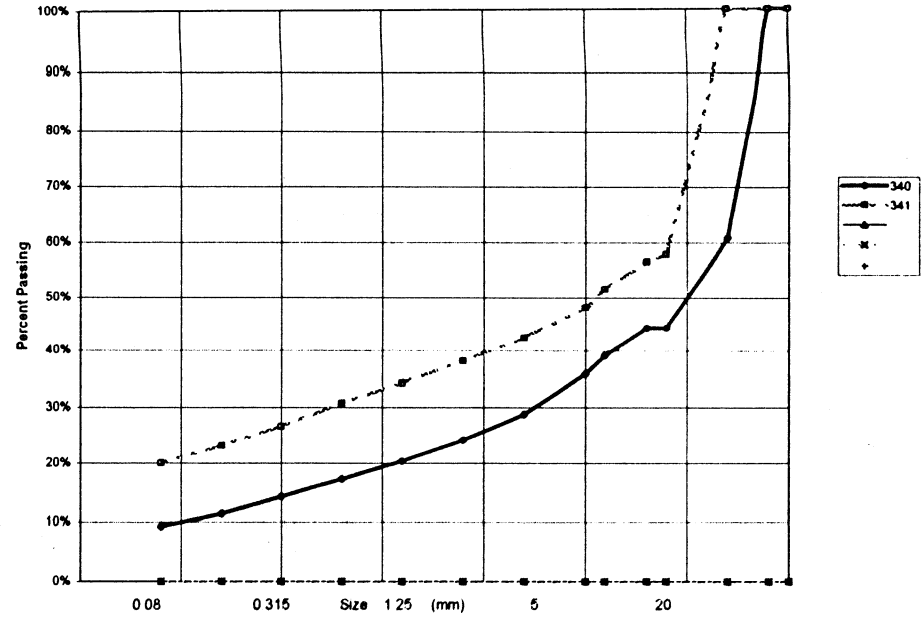
SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	100%
12.5	99%
10.0	96%
5.0	81%
2.5	69%
1.25	58%
0.630	51%
0.315	43%
0.160	37%
0.080	30%
M.C. (%): 12%	
LIMITS	
LIQUID:	0.0
PLASTIC:	0.0
P.I.:	0.0
% GRAVEL:	19
% SAND:	51
% FINES:	30
CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	



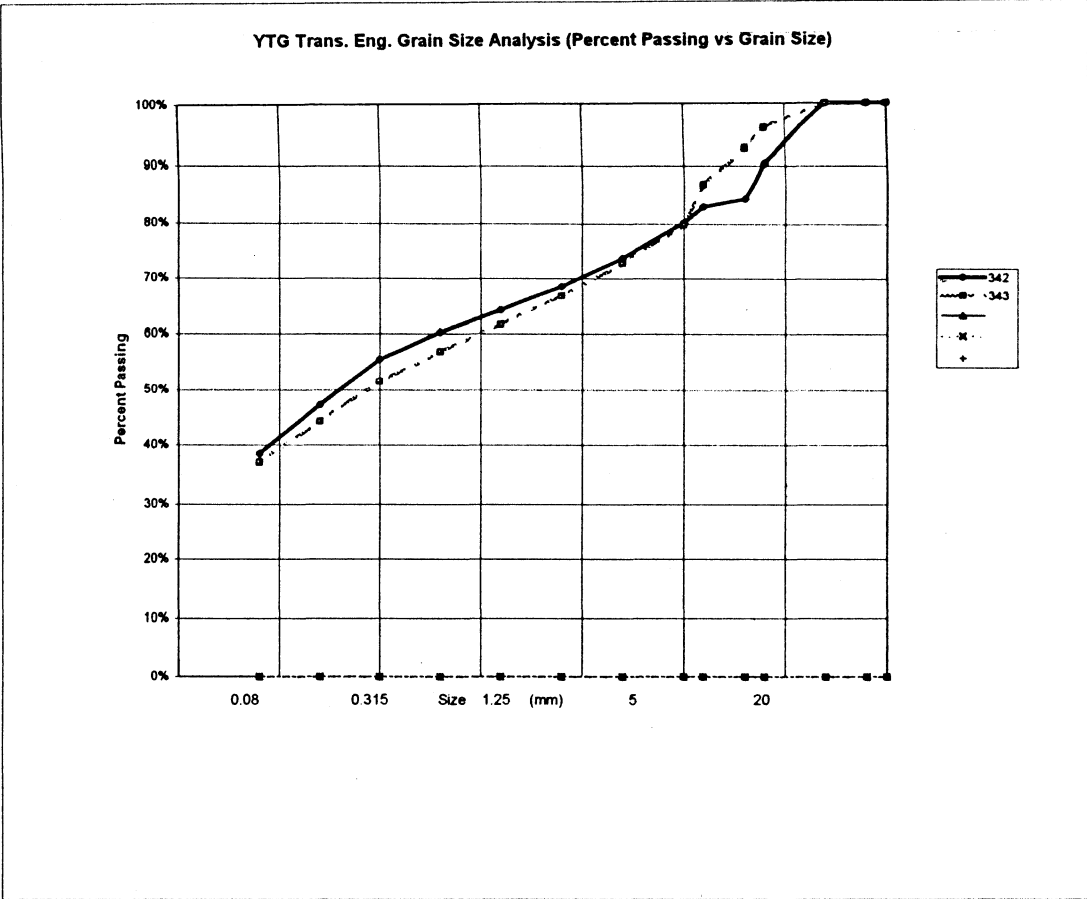
PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-474
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1808+125 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-05

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	61%	50.0	100%
25.0	44%	25.0	58%
20.0	44%	20.0	57%
12.5	39%	12.5	52%
10.0	36%	10.0	48%
5.0	29%	5.0	42%
2.5	24%	2.5	38%
1.25	20%	1.25	34%
0.630	17%	0.630	31%
0.315	14%	0.315	27%
0.160	11%	0.160	23%
0.080	9%	0.080	20%
M.C. (%):	6%	M.C. (%):	7%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	71	% GRAVEL:	58
% SAND:	20	% SAND:	22
% FINES:	9	% FINES:	20
CLASSIFICATION:		CLASSIFICATION:	
WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)		SILTY GRAVEL WITH SAND (GM)	

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



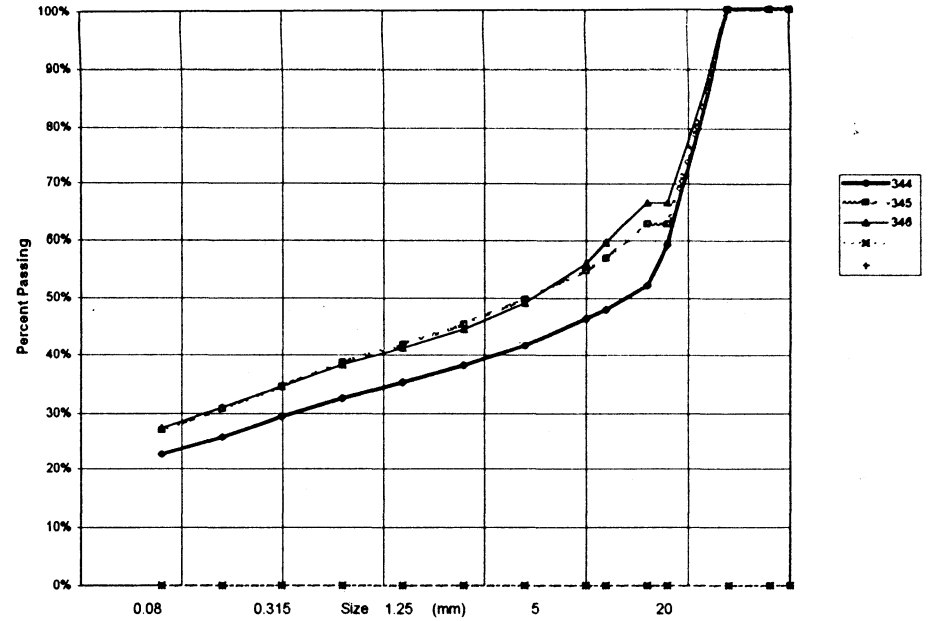
PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	513-475
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1808+040 CENTRELINE		
LOGGED BY:	G.C.	DATE COMP	99-05-05
=====			
FIELD NO:	342	FIELD No.	343
LAB NO:	358	LAB No.	359
DEPTH:	1.5-2.0	DEPTH	2.6-3.0
TYPE:	AUGER	TYPE	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	90%	25.0	96%
20.0	85%	20.0	93%
12.5	83%	12.5	87%
10.0	80%	10.0	80%
5.0	74%	5.0	73%
2.5	68%	2.5	67%
1.25	64%	1.25	62%
0.630	60%	0.630	57%
0.315	56%	0.315	52%
0.160	47%	0.160	44%
0.080	38%	0.080	37%
M.C. (%):	17%	M.C. (%):	17%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	26	% GRAVEL:	27
% SAND:	35	% SAND:	36
% FINES:	38	% FINES:	37
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-476
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1807+975 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-05

FIELD NO: 344		FIELD No. 345		FIELD No: 346	
LAB NO: 380		LAB No. 361		LAB No: 362	
DEPTH: 1.0-1.2		DEPTH 2.5-3.0		DEPTH: 3.8-4.0	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	59%	25.0	63%	25.0	67%
20.0	52%	20.0	63%	20.0	67%
12.5	48%	12.5	57%	12.5	60%
10.0	47%	10.0	55%	10.0	56%
5.0	42%	5.0	50%	5.0	49%
2.5	38%	2.5	45%	2.5	45%
1.25	35%	1.25	42%	1.25	41%
0.630	33%	0.630	39%	0.630	38%
0.315	29%	0.315	35%	0.315	35%
0.160	26%	0.160	31%	0.160	31%
0.080	22%	0.080	27%	0.080	27%
M.C.(%):	5%	M.C.(%):	8%	M.C.(%):	7%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	58	% GRAVEL:	50	% GRAVEL:	51
% SAND:	19	% SAND:	23	% SAND:	22
% FINES:	22	% FINES:	27	% FINES:	27
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	

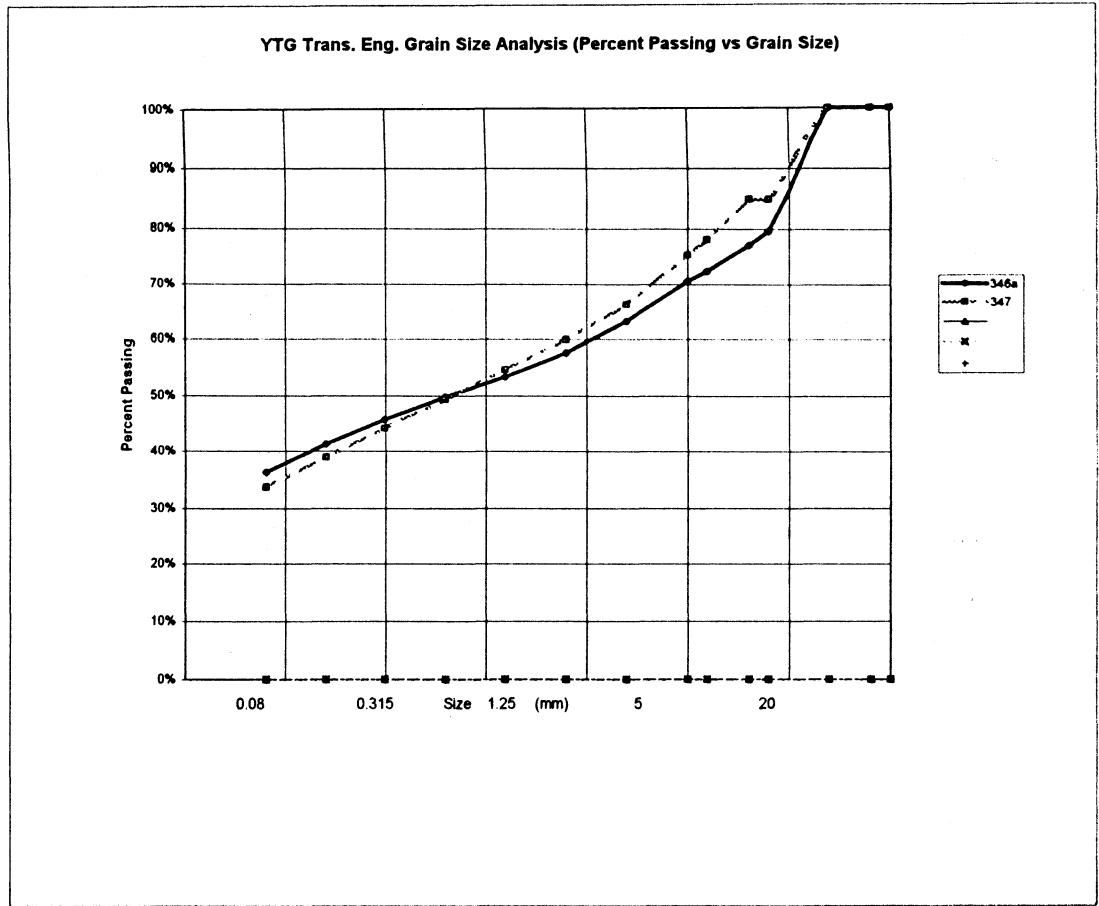
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	513-477
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1807+875 CENTRELINE		
LOGGED BY:	G.C.	DATE COMP	99-05-05
=====			
FIELD NO:	346a	FIELD No.	347
LAB NO:	363	LAB No.	364
DEPTH:	1.2-1.5	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER

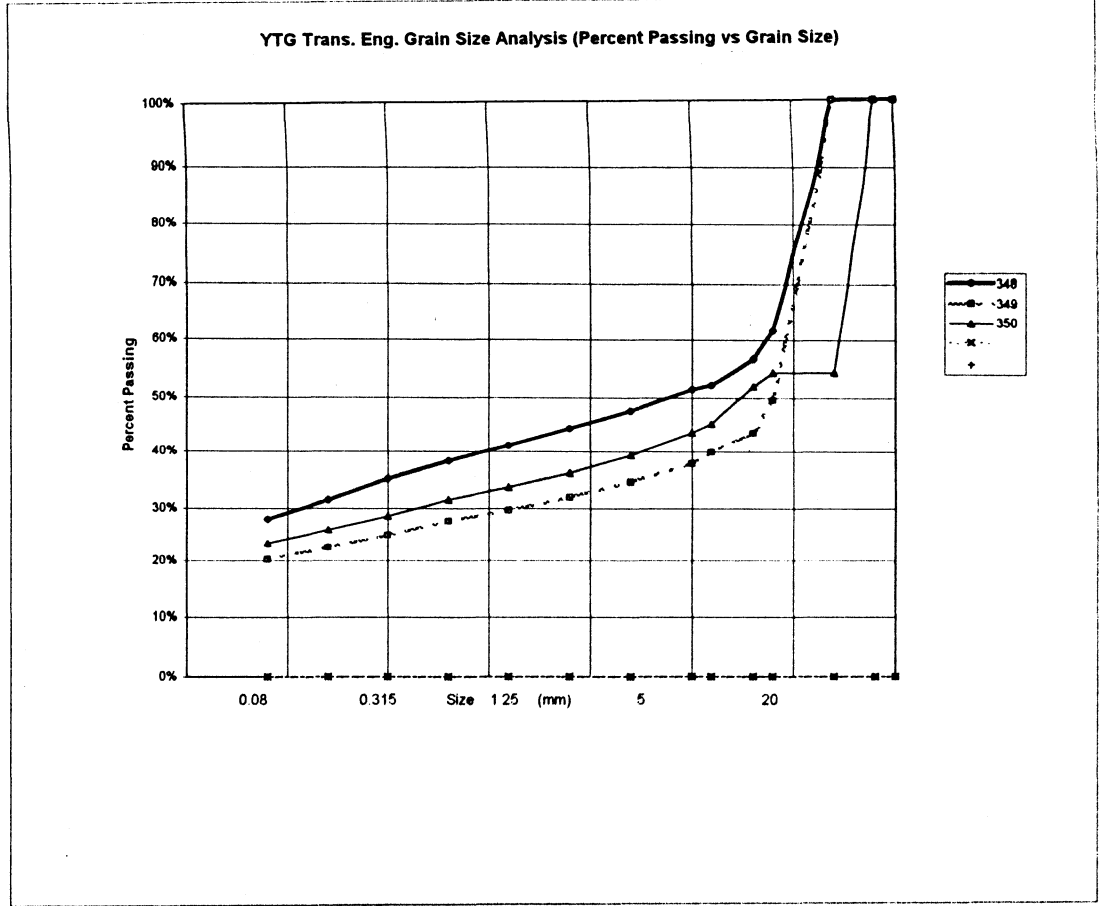
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	80%	25.0	85%
20.0	77%	20.0	85%
12.5	72%	12.5	78%
10.0	71%	10.0	75%
5.0	63%	5.0	66%
2.5	58%	2.5	60%
1.25	53%	1.25	55%
0.630	50%	0.630	49%
0.315	46%	0.315	44%
0.160	41%	0.160	39%
0.080	36%	0.080	34%

M.C.(%):	10%	M.C.(%):	11%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	37	% GRAVEL:	34
% SAND:	27	% SAND:	33
% FINES:	36	% FINES:	34
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-478
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1807+775 10 M RHS
 LOGGED BY: G.C. DATE COMP 99-05-05

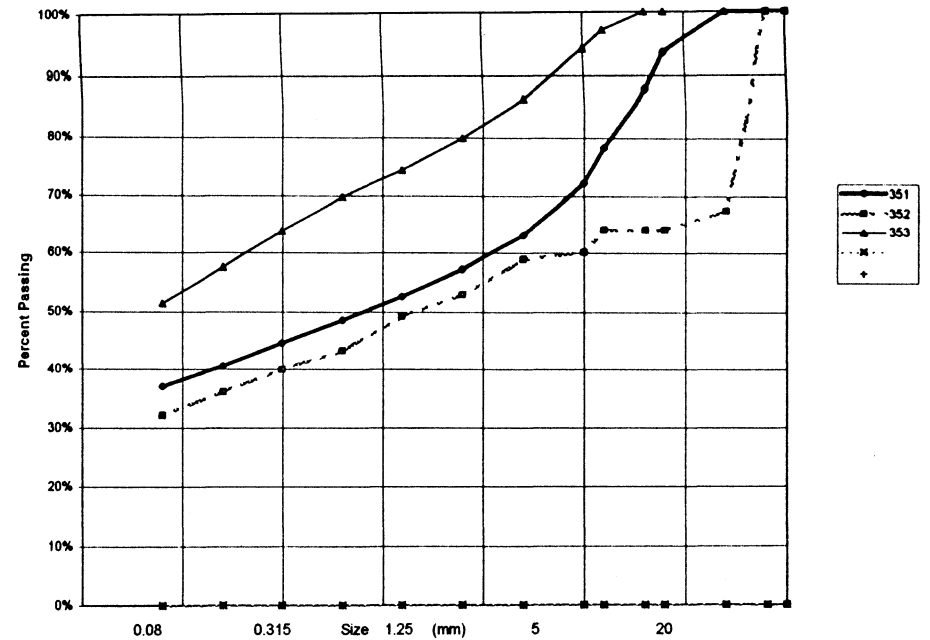
FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
348	365	1.0-1.5	AUGER	349	366	2.5-3.0	AUGER	350	367	3.8-4.0	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	55%	50.0	55%	50.0	55%
25.0	62%	25.0	50%	25.0	50%	25.0	55%	25.0	55%	25.0	55%
20.0	57%	20.0	44%	20.0	44%	20.0	52%	20.0	52%	20.0	52%
12.5	52%	12.5	40%	12.5	40%	12.5	45%	12.5	45%	12.5	45%
10.0	52%	10.0	38%	10.0	38%	10.0	43%	10.0	43%	10.0	43%
5.0	48%	5.0	34%	5.0	34%	5.0	39%	5.0	39%	5.0	39%
2.5	44%	2.5	32%	2.5	32%	2.5	36%	2.5	36%	2.5	36%
1.25	41%	1.25	30%	1.25	30%	1.25	34%	1.25	34%	1.25	34%
0.630	38%	0.630	28%	0.630	28%	0.630	31%	0.630	31%	0.630	31%
0.315	35%	0.315	25%	0.315	25%	0.315	29%	0.315	29%	0.315	29%
0.160	32%	0.160	23%	0.160	23%	0.160	26%	0.160	26%	0.160	26%
0.080	28%	0.080	20%	0.080	20%	0.080	23%	0.080	23%	0.080	23%
M.C. (%)	6%	M.C. (%)	6%	M.C. (%)	6%	M.C. (%)	6%	M.C. (%)	6%	M.C. (%)	6%
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	52	% GRAVEL:	66	% GRAVEL:	61	% GRAVEL:	61	% GRAVEL:	61	% GRAVEL:	61
% SAND:	20	% SAND:	14	% SAND:	18	% SAND:	18	% SAND:	18	% SAND:	18
% FINES:	28	% FINES:	20	% FINES:	23	% FINES:	23	% FINES:	23	% FINES:	23
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-479
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1807+675 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-05

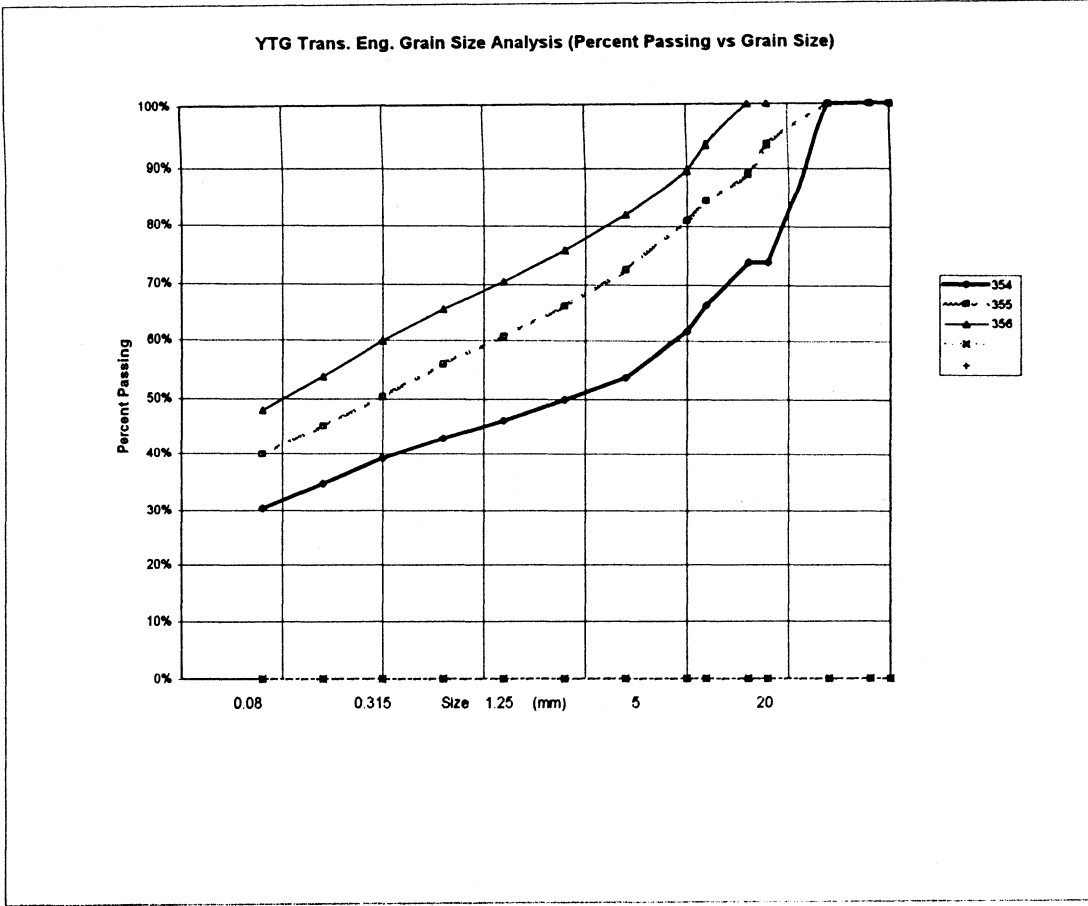
FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
351	368	1.0-1.5	AUGER	352	369	2.5-3.0	AUGER	353	370	3.8-4.0	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	67%	50.0	100%	50.0	100%	50.0	100%
25.0	93%	25.0	64%	25.0	100%	25.0	100%	25.0	100%	25.0	100%
20.0	88%	20.0	64%	20.0	100%	20.0	100%	20.0	100%	20.0	100%
12.5	78%	12.5	64%	12.5	97%	12.5	97%	12.5	97%	12.5	97%
10.0	72%	10.0	60%	10.0	94%	10.0	94%	10.0	94%	10.0	94%
5.0	63%	5.0	59%	5.0	87%	5.0	87%	5.0	87%	5.0	87%
2.5	57%	2.5	53%	2.5	80%	2.5	80%	2.5	80%	2.5	80%
1.25	53%	1.25	49%	1.25	74%	1.25	74%	1.25	74%	1.25	74%
0.630	49%	0.630	43%	0.630	70%	0.630	70%	0.630	70%	0.630	70%
0.315	45%	0.315	40%	0.315	64%	0.315	64%	0.315	64%	0.315	64%
0.160	41%	0.160	38%	0.160	58%	0.160	58%	0.160	58%	0.160	58%
0.080	37%	0.080	32%	0.080	51%	0.080	51%	0.080	51%	0.080	51%
M.C.(%):	13%	M.C.(%):	9%	M.C.(%):	11%	M.C.(%):	11%	M.C.(%):	11%	M.C.(%):	11%
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	37	% GRAVEL:	41	% GRAVEL:	13	% GRAVEL:	13	% GRAVEL:	13	% GRAVEL:	13
% SAND:	26	% SAND:	27	% SAND:	35	% SAND:	35	% SAND:	35	% SAND:	35
% FINES:	37	% FINES:	32	% FINES:	51	% FINES:	51	% FINES:	51	% FINES:	51
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SANDY SILT (ML)		SANDY SILT (ML)		SANDY SILT (ML)		SANDY SILT (ML)	

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



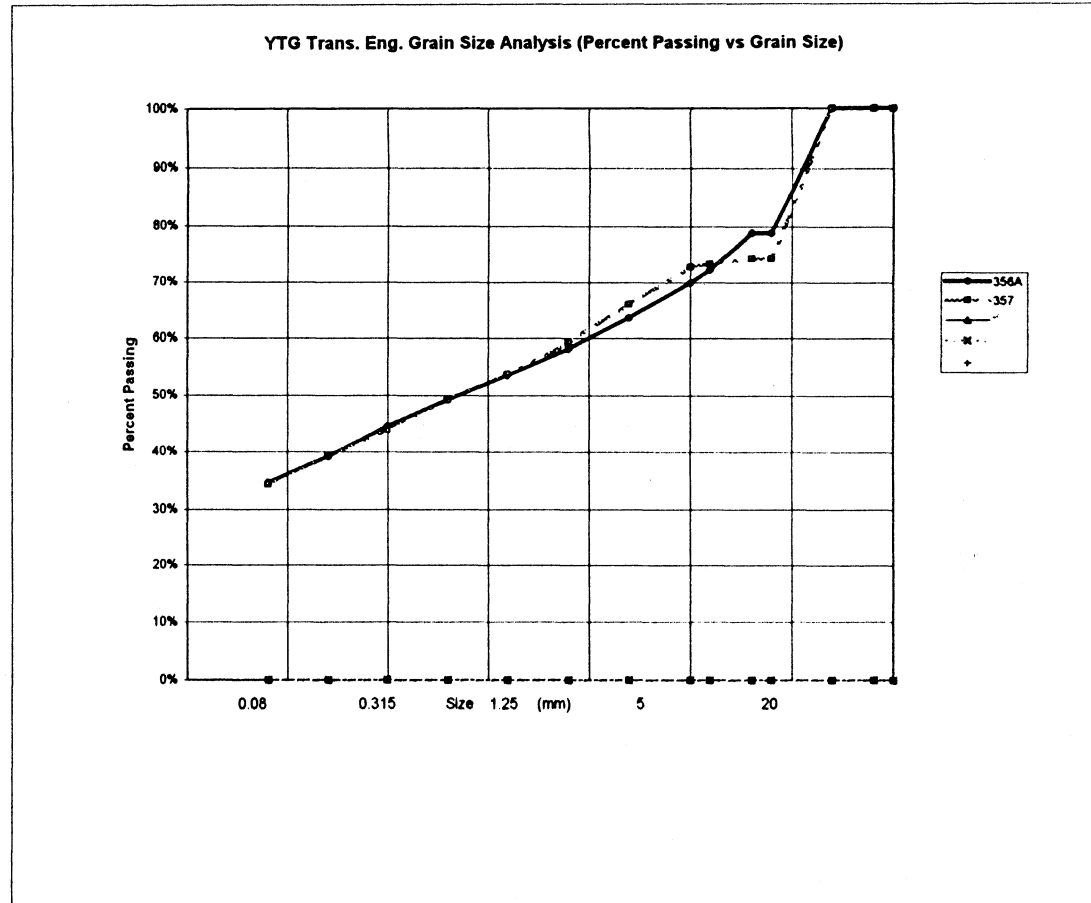
PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-480
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1807+575 15M RHS
 LOGGED BY: G.C. DATE COMP 99-05-05

FIELD NO: 354		FIELD No. 355		FIELD No: 356	
LAB NO: 371		LAB No. 372		LAB No: 373	
DEPTH: 1.3-1.5		DEPTH 2.5-3.0		DEPTH: 3.5-4.0	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	74%	25.0	93%	25.0	100%
20.0	74%	20.0	89%	20.0	100%
12.5	66%	12.5	85%	12.5	93%
10.0	62%	10.0	81%	10.0	90%
5.0	54%	5.0	73%	5.0	82%
2.5	50%	2.5	66%	2.5	76%
1.25	46%	1.25	61%	1.25	70%
0.630	43%	0.630	56%	0.630	65%
0.315	39%	0.315	50%	0.315	60%
0.160	35%	0.160	45%	0.160	54%
0.080	30%	0.080	40%	0.080	48%
M.C.(%): 5%		M.C.(%): 11%		M.C.(%): 11%	
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	46	% GRAVEL:	27	% GRAVEL:	18
% SAND:	23	% SAND:	33	% SAND:	34
% FINES:	30	% FINES:	40	% FINES:	48
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	



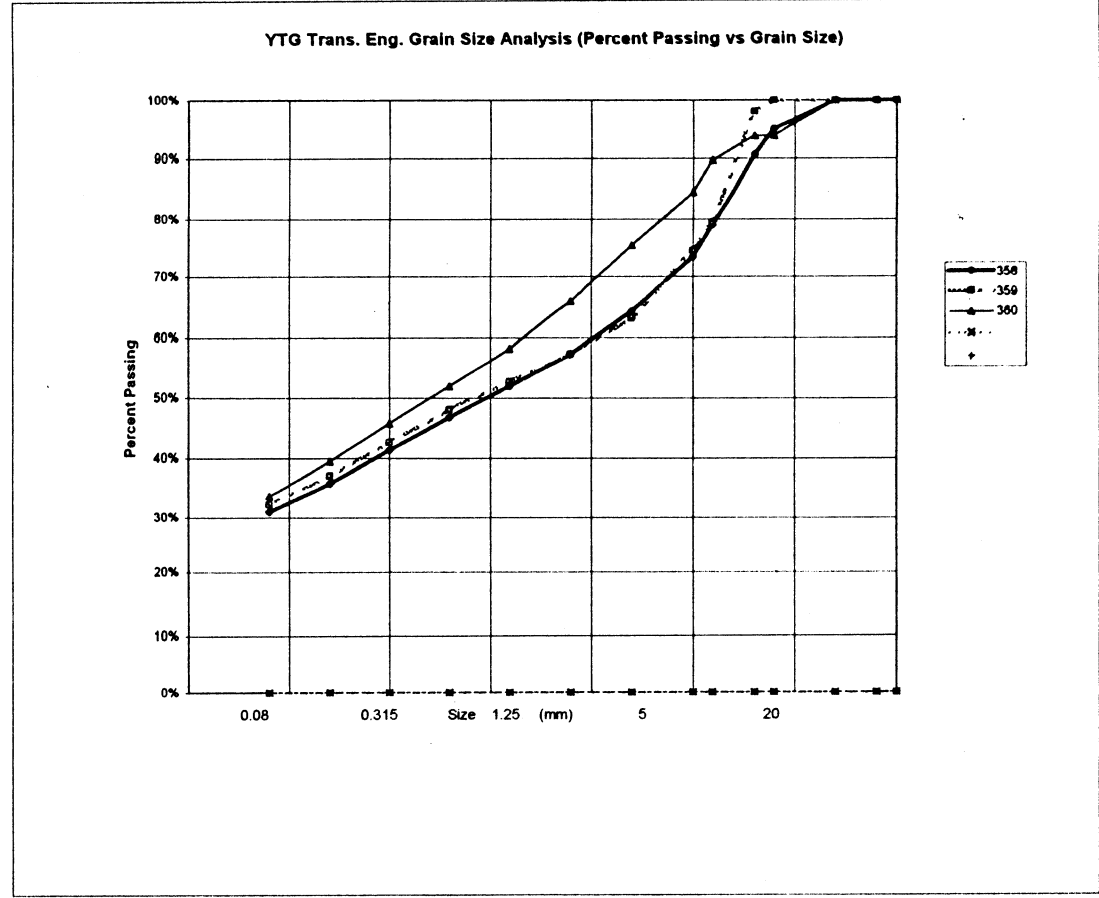
PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-481
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1807+475 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-05

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	79%	25.0	74%
20.0	79%	20.0	74%
12.5	72%	12.5	73%
10.0	70%	10.0	73%
5.0	63%	5.0	66%
2.5	58%	2.5	58%
1.25	54%	1.25	54%
0.630	49%	0.630	49%
0.315	44%	0.315	44%
0.160	39%	0.160	39%
0.080	34%	0.080	34%
M.C.(%):	10%	M.C.(%):	13%
LIMITS			
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	37	% GRAVEL:	34
% SAND:	29	% SAND:	32
% FINES:	34	% FINES:	34
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	



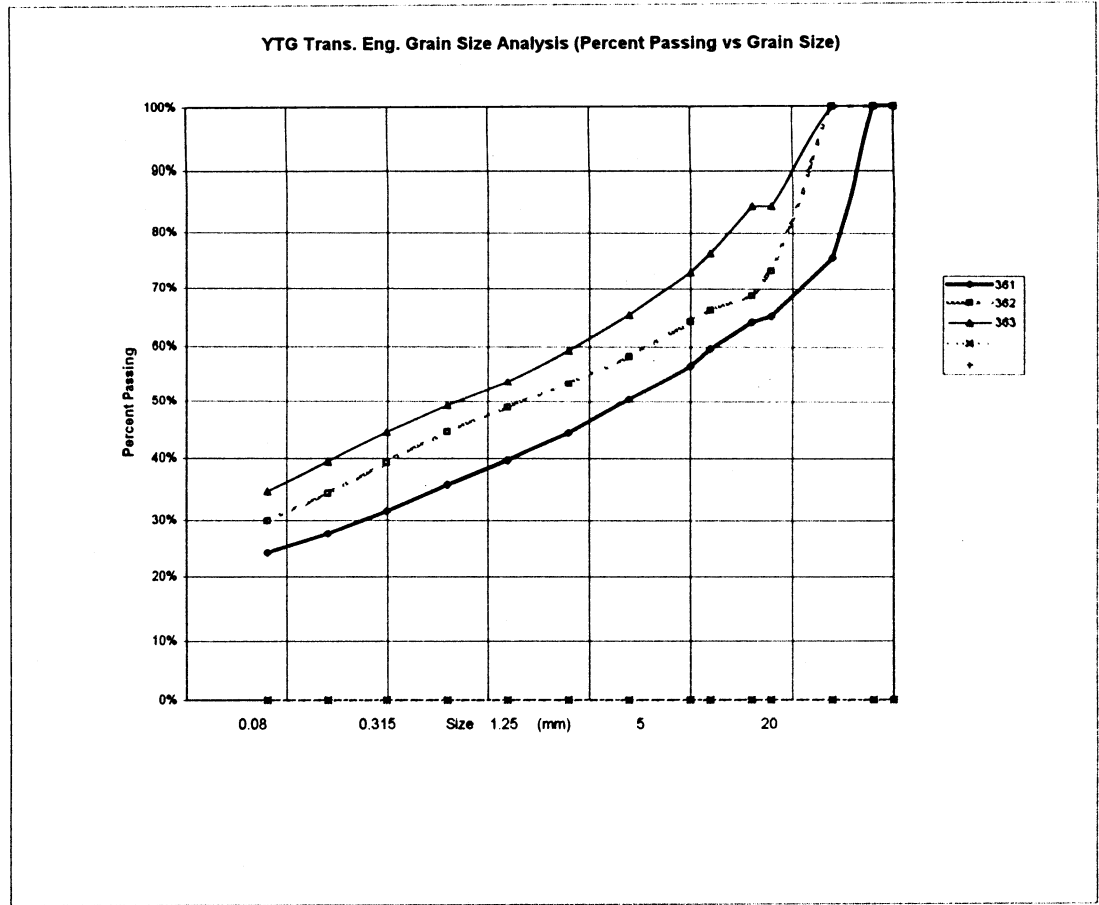
PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-488
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1807+340 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-05

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH:	TYPE:
358	378	1.0-1.5	AUGER	359	377	2.5-3.0	AUGER	360	378	3.8-4.0	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	95%	25.0	100%	25.0	100%	25.0	94%	25.0	94%	25.0	94%
20.0	91%	20.0	98%	20.0	98%	20.0	94%	20.0	94%	20.0	94%
12.5	79%	12.5	79%	12.5	79%	12.5	90%	12.5	90%	12.5	90%
10.0	73%	10.0	74%	10.0	74%	10.0	85%	10.0	85%	10.0	85%
5.0	64%	5.0	63%	5.0	63%	5.0	75%	5.0	75%	5.0	75%
2.5	57%	2.5	57%	2.5	57%	2.5	66%	2.5	66%	2.5	66%
1.25	52%	1.25	53%	1.25	53%	1.25	58%	1.25	58%	1.25	58%
0.630	47%	0.630	48%	0.630	48%	0.630	52%	0.630	52%	0.630	52%
0.315	41%	0.315	43%	0.315	43%	0.315	48%	0.315	48%	0.315	48%
0.160	36%	0.160	37%	0.160	37%	0.160	40%	0.160	40%	0.160	40%
0.080	31%	0.080	32%	0.080	32%	0.080	34%	0.080	34%	0.080	34%
M.C. (%)	5%	M.C. (%)	8%	M.C. (%)	11%	M.C. (%)		M.C. (%)		M.C. (%)	
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	36	% GRAVEL:	37	% GRAVEL:	25	% GRAVEL:		% GRAVEL:		% GRAVEL:	
% SAND:	33	% SAND:	31	% SAND:	42	% SAND:		% SAND:		% SAND:	
% FINES:	31	% FINES:	32	% FINES:	34	% FINES:		% FINES:		% FINES:	
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	



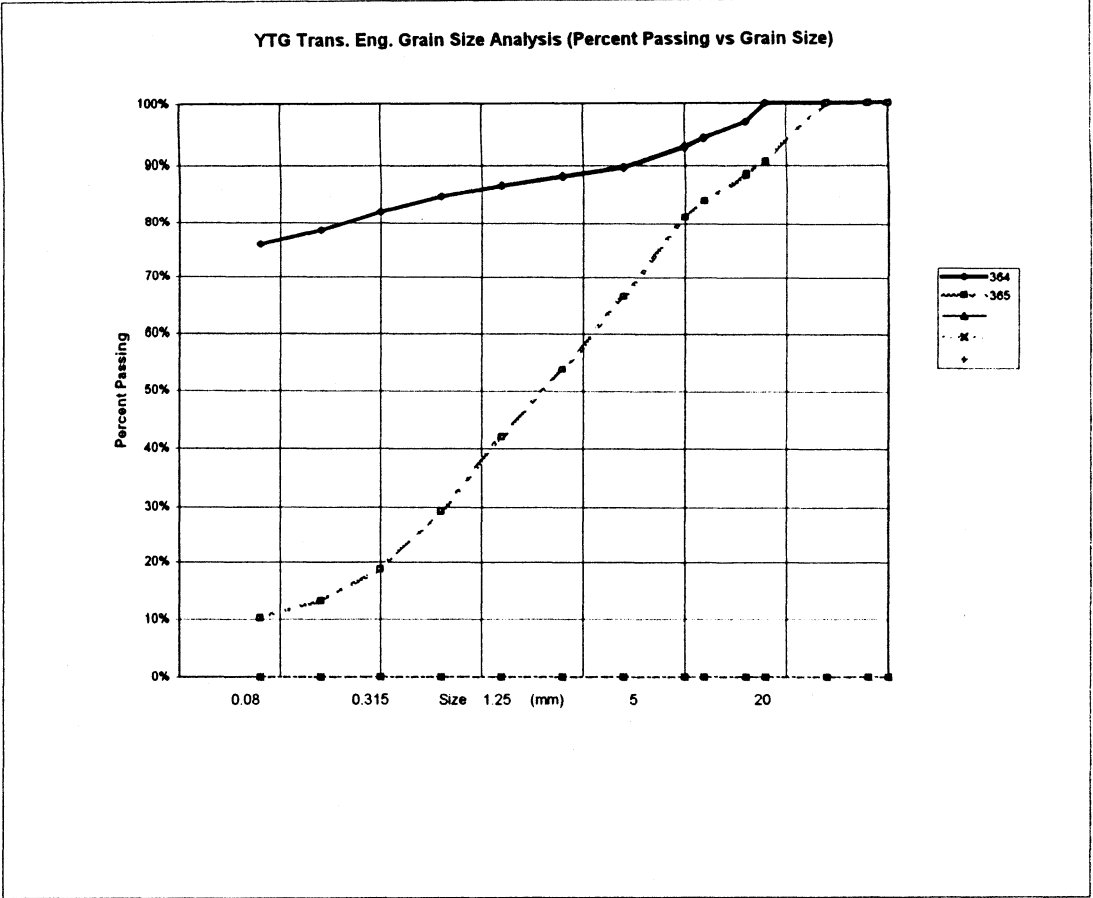
PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-489
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1807+275 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-05

FIELD NO: 361		FIELD No. 362		FIELD No: 363	
LAB NO: 379		LAB No. 380		LAB No: 381	
DEPTH: 1.3-1.5		DEPTH 2.5-3.0		DEPTH: 4.0-4.5	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	76%	50.0	100%	50.0	100%
25.0	65%	25.0	73%	25.0	85%
20.0	64%	20.0	69%	20.0	85%
12.5	60%	12.5	66%	12.5	78%
10.0	57%	10.0	64%	10.0	73%
5.0	50%	5.0	58%	5.0	65%
2.5	44%	2.5	53%	2.5	59%
1.25	40%	1.25	49%	1.25	54%
0.630	36%	0.630	45%	0.630	49%
0.315	31%	0.315	39%	0.315	44%
0.160	28%	0.160	35%	0.160	40%
0.080	24%	0.080	30%	0.080	35%
M.C.(%):	3%	M.C.(%):	6%	M.C.(%):	8%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	50	% GRAVEL:	42	% GRAVEL:	35
% SAND:	26	% SAND:	28	% SAND:	30
% FINES:	24	% FINES:	30	% FINES:	35
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-490
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1807+150 CENTRELIN
 LOGGED BY: G.C. DATE COMP 99-05-05

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	90%
20.0	97%	20.0	89%
12.5	94%	12.5	84%
10.0	93%	10.0	81%
5.0	90%	5.0	66%
2.5	88%	2.5	54%
1.25	87%	1.25	42%
0.630	85%	0.630	29%
0.315	82%	0.315	19%
0.160	79%	0.160	13%
0.080	76%	0.080	10%
M.C. (%): 23%		M.C. (%): 7%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	10	% GRAVEL:	34
% SAND:	14	% SAND:	56
% FINES:	76	% FINES:	10
CLASSIFICATION: SILT WITH SAND (ML)		CLASSIFICATION: WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	513-491
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1806+875 CENTRELINE		
LOGGED BY:	G.C.	DATE COMP	99-05-05

FIELD NO:	366	FIELD No.	377
LAB NO:	384	LAB No.	385
DEPTH:	2.2-2.4	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER

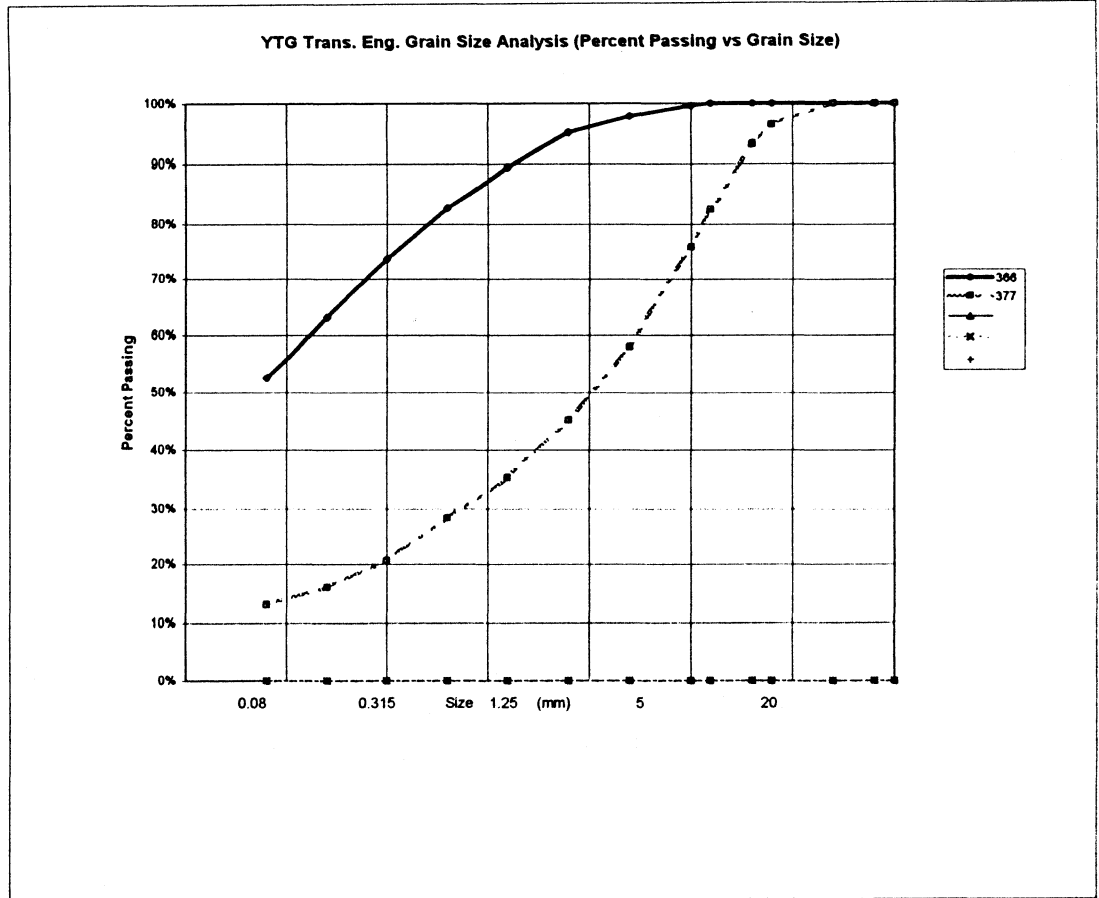
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	96%
20.0	100%	20.0	93%
12.5	100%	12.5	83%
10.0	100%	10.0	76%
5.0	98%	5.0	58%
2.5	95%	2.5	45%
1.25	89%	1.25	35%
0.630	83%	0.630	28%
0.315	74%	0.315	21%
0.160	63%	0.160	18%
0.080	53%	0.080	13%

M.C.(%):	22%	M.C.(%):	9%
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LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0

% GRAVEL:	2	% GRAVEL:	42
% SAND:	45	% SAND:	45
% FINES:	53	% FINES:	13

CLASSIFICATION:		CLASSIFICATION:	
SANDY SILT (ML)		SILTY SAND WITH GRAVEL (SM)	

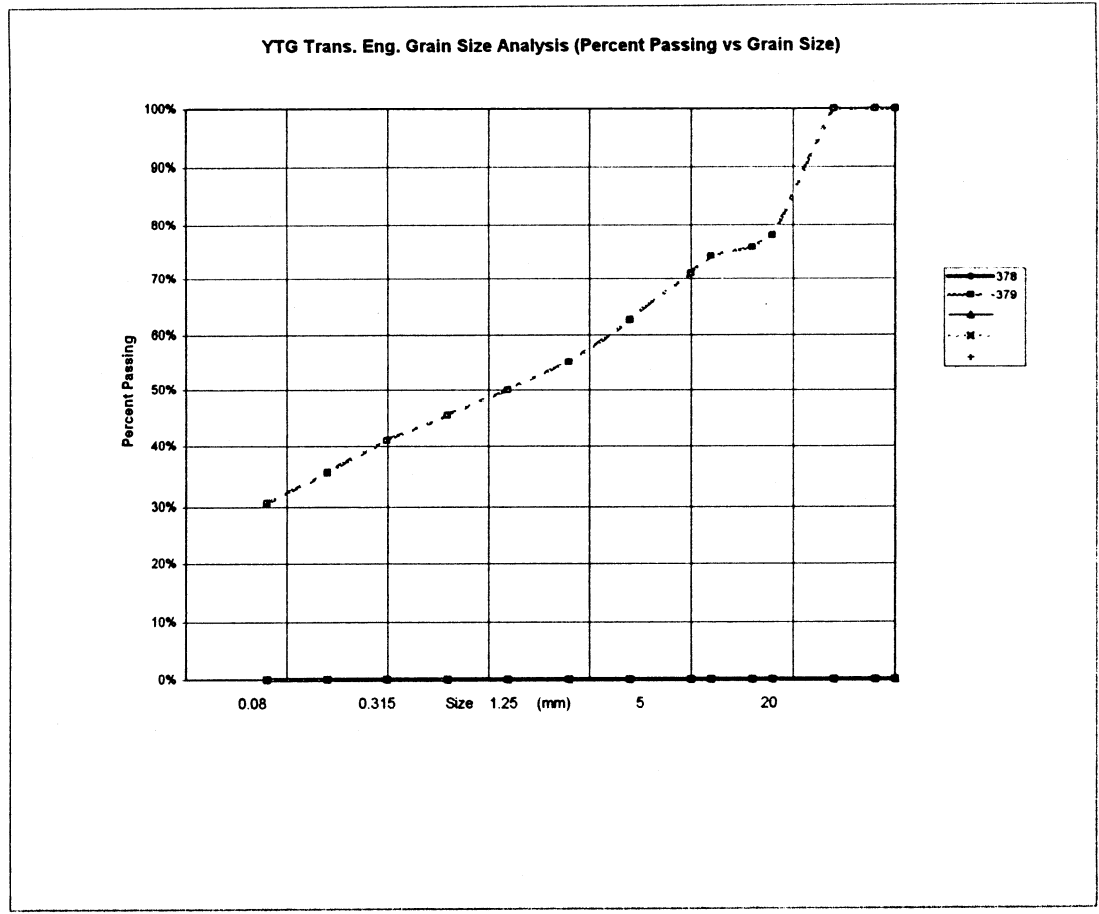


PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	513-492
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1806+825 CENTRELINE		
LOGGED BY:	G.C.	DATE COMP	99-05-06

FIELD NO:	378	FIELD No.	379
LAB NO:	386	LAB No.	387
DEPTH:	1.0-1.5	DEPTH	2.6-2.8
TYPE:	AUGER	TYPE	AUGER

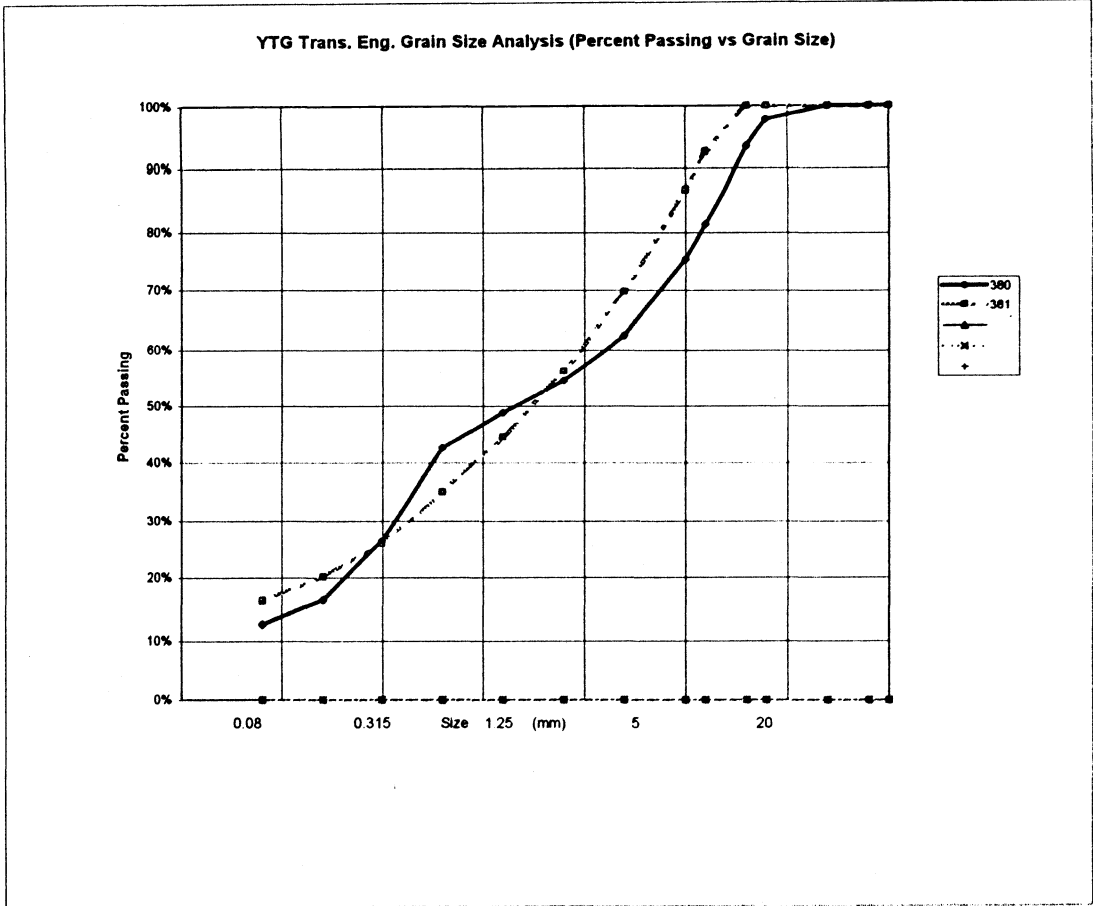
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	#DIV/0!	100.0	100%
80.0	#DIV/0!	80.0	100%
50.0	#DIV/0!	50.0	100%
25.0	#DIV/0!	25.0	78%
20.0	#DIV/0!	20.0	76%
12.5	#DIV/0!	12.5	74%
10.0	#DIV/0!	10.0	71%
5.0	#DIV/0!	5.0	62%
2.5	#DIV/0!	2.5	55%
1.25	#DIV/0!	1.25	50%
0.630	#DIV/0!	0.630	45%
0.315	#DIV/0!	0.315	41%
0.160	#DIV/0!	0.160	36%
0.080	#DIV/0!	0.080	31%

M.C.(%):	5%	M.C.(%):	8%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	#DIV/0!	% GRAVEL:	38
% SAND:	#DIV/0!	% SAND:	32
% FINES:	#DIV/0!	% FINES:	31
CLASSIFICATION:	LOST SAMPLE	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-483
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1806+725 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-06

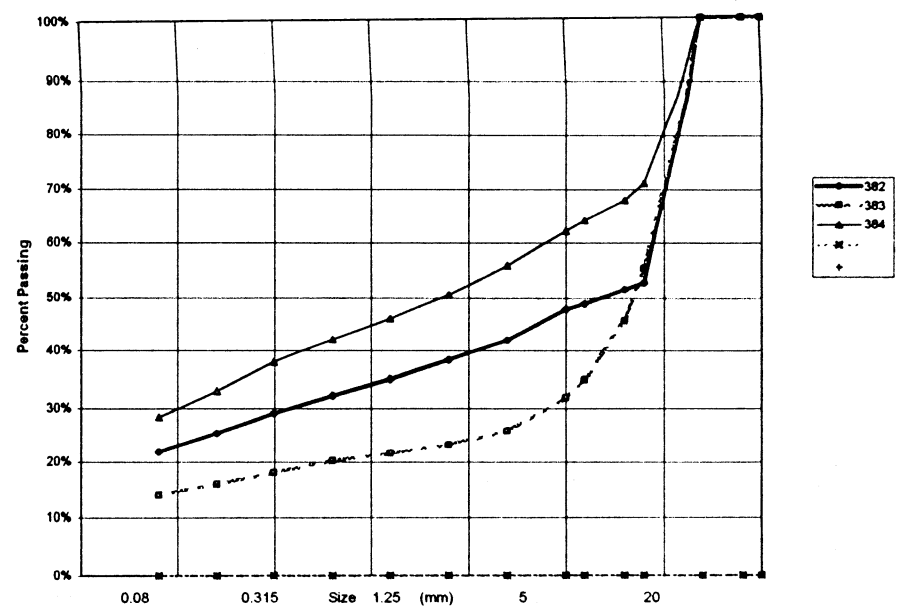
FIELD NO: 380		FIELD No. 381	
LAB NO: 388		LAB No. 389	
DEPTH: 2.0-2.2		DEPTH 2.8-3.0	
TYPE: AUGER		TYPE AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	98%	25.0	100%
20.0	93%	20.0	100%
12.5	81%	12.5	92%
10.0	75%	10.0	87%
5.0	62%	5.0	70%
2.5	54%	2.5	58%
1.25	49%	1.25	45%
0.630	43%	0.630	35%
0.315	28%	0.315	28%
0.160	16%	0.160	20%
0.080	13%	0.080	16%
M.C.(%): 11%		M.C.(%): 9%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	38	% GRAVEL:	30
% SAND:	50	% SAND:	54
% FINES:	13	% FINES:	16
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-494
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1806+600 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-06

FIELD NO:	LAB NO:	DEPTH:	TYPE:	PERCENT PASSING	SIEVE SIZE
382	390	1.0-1.5	AUGER	100%	100.0
383	391	2.5-3.0	AUGER	100%	100.0
384	392	3.8-4.0	AUGER	100%	100.0
				71%	25.0
				68%	20.0
				84%	12.5
				62%	10.0
				56%	5.0
				51%	2.5
				46%	1.25
				42%	0.630
				38%	0.315
				33%	0.160
				28%	0.080
M.C. (%)	3%	M.C. (%)	3%	M.C. (%)	5%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	58	% GRAVEL:	74	% GRAVEL:	44
% SAND:	20	% SAND:	12	% SAND:	28
% FINES:	22	% FINES:	14	% FINES:	28
CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION:	SILTY GRAVEL (GM)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-495
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1806+475 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-06

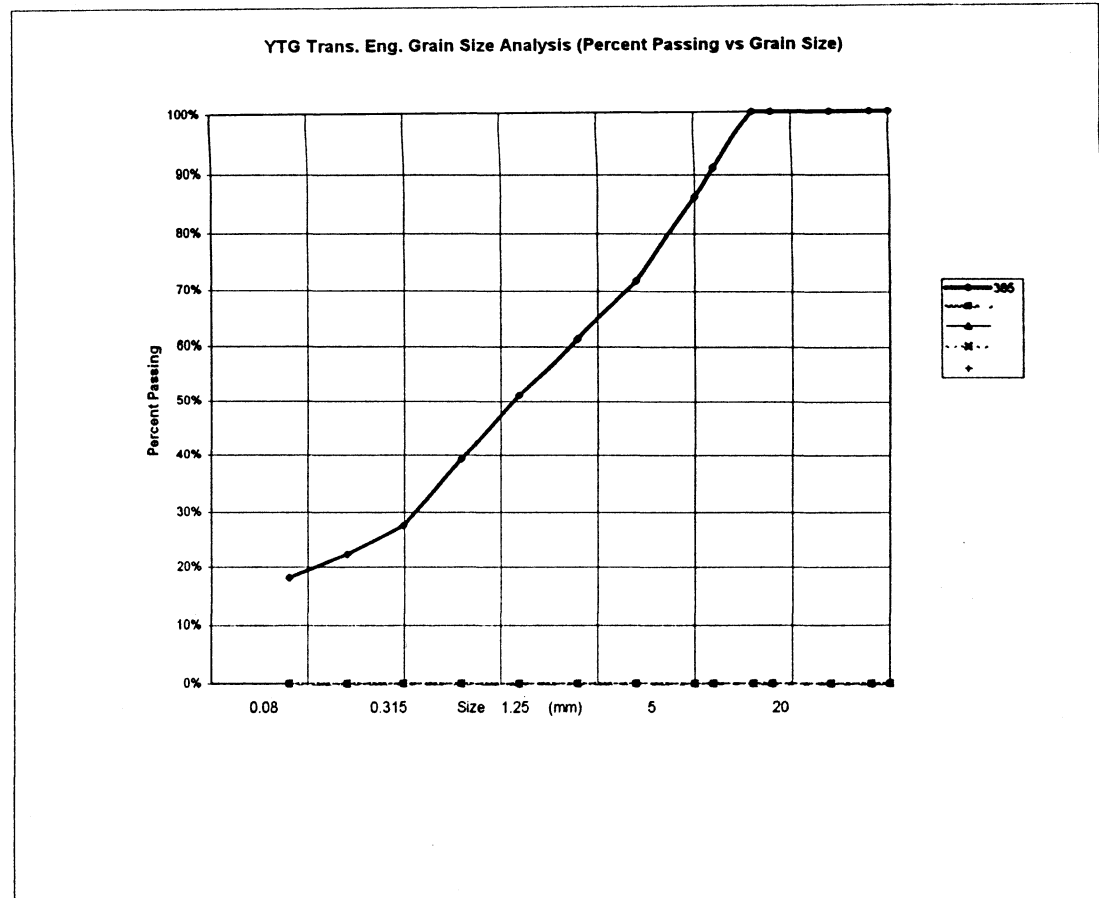
SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	100%
12.5	91%
10.0	86%
5.0	72%
2.5	61%
1.25	51%
0.630	39%
0.315	28%
0.160	22%
0.080	18%

M.C.(%)	12%
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LIMITS	
LIQUID:	0.0
PLASTIC:	0.0
P.I.:	0.0

% GRAVEL:	28
% SAND:	54
% FINES:	18

CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM)

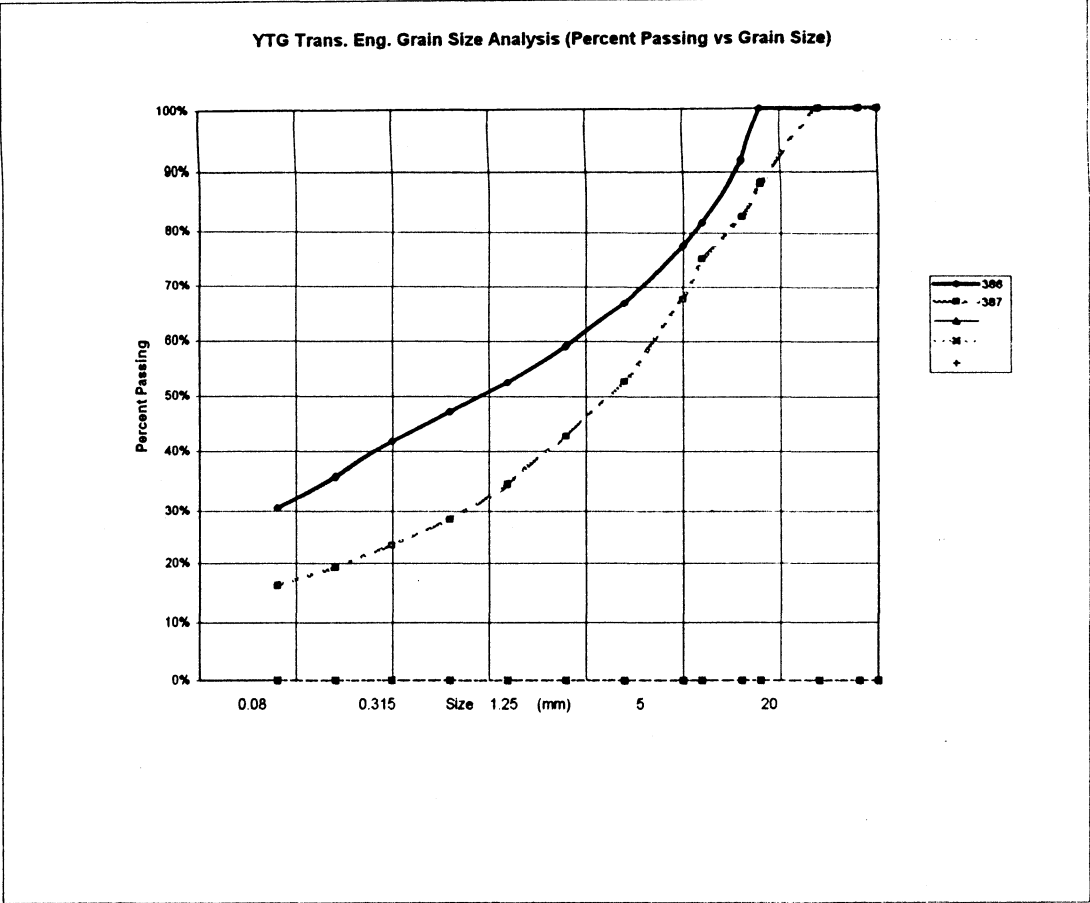


PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-496
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1806+325 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-06

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH	TYPE
386	494	1.6-2.0	AUGER	387	395	1.8-2.0	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	88%
20.0	92%	20.0	83%
12.5	82%	12.5	75%
10.0	78%	10.0	68%
5.0	67%	5.0	53%
2.5	59%	2.5	43%
1.25	53%	1.25	35%
0.630	47%	0.630	28%
0.315	42%	0.315	23%
0.160	36%	0.160	19%
0.080	31%	0.080	16%

M.C.(%):	10%	M.C.(%):	7%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	33	% GRAVEL:	47
% SAND:	36	% SAND:	37
% FINES:	31	% FINES:	18
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-497
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1806+225 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-05

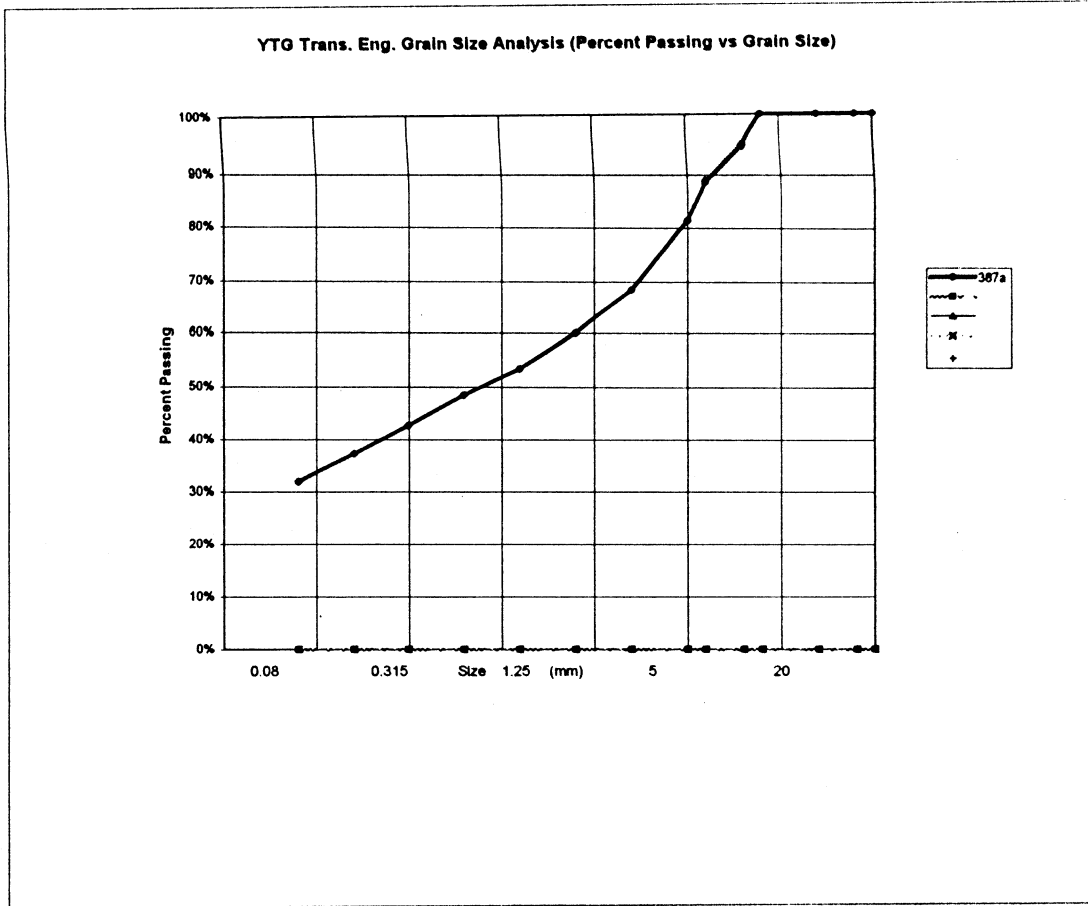
SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	95%
12.5	89%
10.0	81%
5.0	68%
2.5	60%
1.25	54%
0.630	48%
0.315	43%
0.160	37%
0.080	32%

M.C.(%)	10%
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LIMITS	
LIQUID	0.0
PLASTIC	0.0
P.I.	0.0

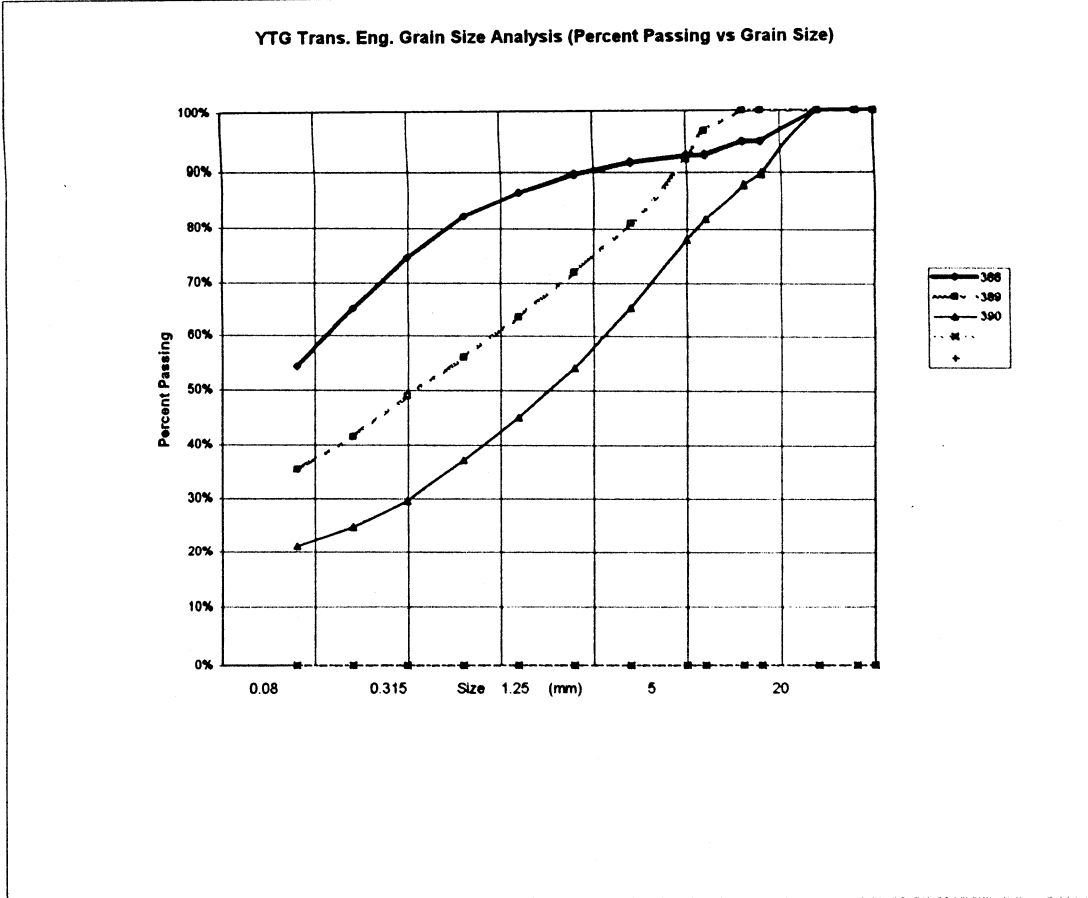
% GRAVEL	32
% SAND	37
% FINES	32

CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-498
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 AH
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1806+075 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-06

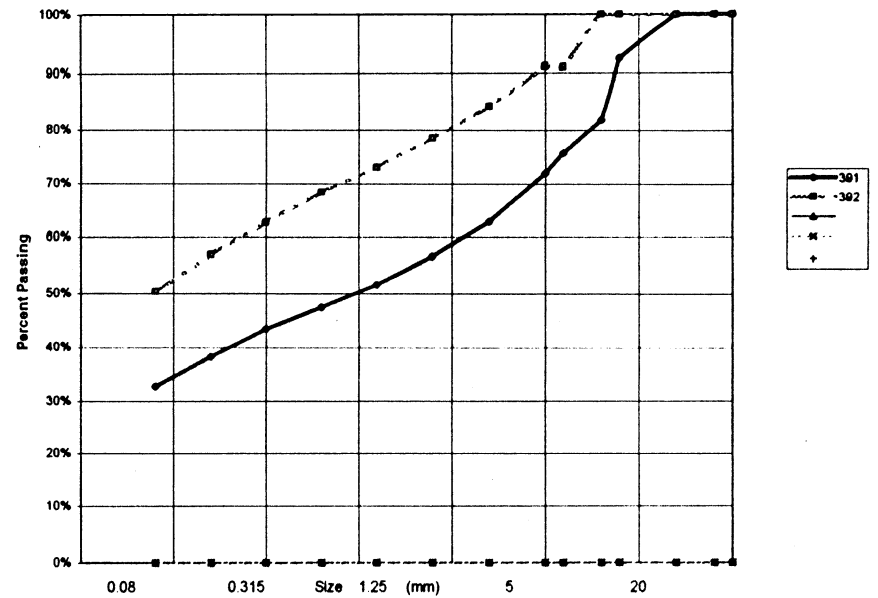
FIELD NO: 388		FIELD No. 389		FIELD No: 390	
LAB NO: 397		LAB No. 398		LAB No: 399	
DEPTH: 1.0-1.4		DEPTH 2.5-3.0		DEPTH: 3.6-4.0	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	94%	25.0	100%	25.0	90%
20.0	94%	20.0	100%	20.0	88%
12.5	92%	12.5	96%	12.5	82%
10.0	92%	10.0	92%	10.0	78%
5.0	91%	5.0	81%	5.0	65%
2.5	90%	2.5	72%	2.5	54%
1.25	87%	1.25	64%	1.25	45%
0.630	82%	0.630	56%	0.630	37%
0.315	75%	0.315	49%	0.315	30%
0.180	65%	0.180	41%	0.180	25%
0.080	54%	0.080	35%	0.080	21%
M.C.(%):	17%	M.C.(%):	10%	M.C.(%):	8%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	9	% GRAVEL:	19	% GRAVEL:	35
% SAND:	37	% SAND:	46	% SAND:	44
% FINES:	54	% FINES:	35	% FINES:	21
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SANDY SILT (ML)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-499
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1805+900 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-06

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	92%	25.0	100%
20.0	82%	20.0	100%
12.5	76%	12.5	91%
10.0	72%	10.0	91%
5.0	63%	5.0	84%
2.5	57%	2.5	78%
1.25	52%	1.25	73%
0.630	47%	0.630	68%
0.315	43%	0.315	63%
0.160	38%	0.160	57%
0.080	33%	0.080	50%
M.C. (%)	17%	M.C. (%)	17%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	37	% GRAVEL:	18
% SAND:	30	% SAND:	34
% FINES:	33	% FINES:	50
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SANDY SILT WITH GRAVEL (ML)	

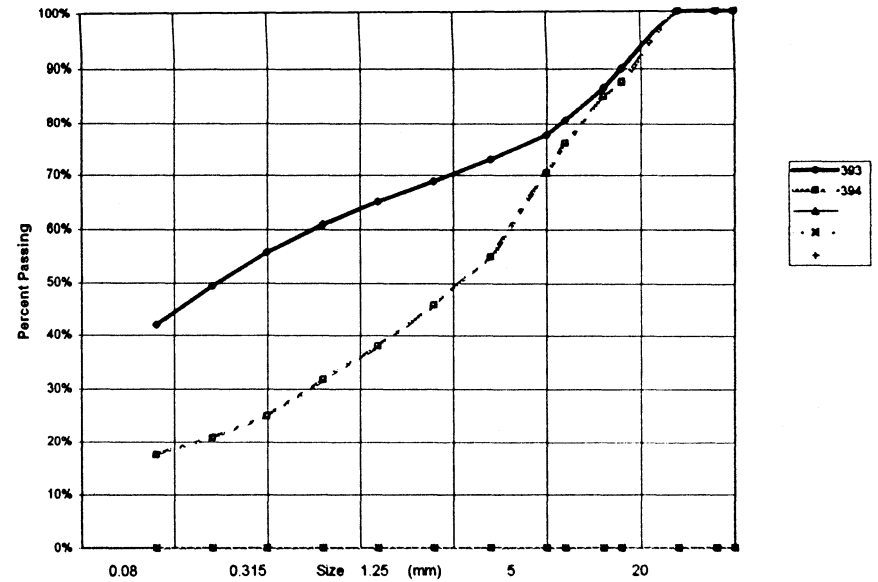
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 513-500
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1805+800 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-06

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	90%	25.0	88%
20.0	87%	20.0	85%
12.5	81%	12.5	76%
10.0	78%	10.0	70%
5.0	73%	5.0	55%
2.5	69%	2.5	46%
1.25	65%	1.25	38%
0.630	61%	0.630	32%
0.315	56%	0.315	25%
0.160	49%	0.160	21%
0.080	42%	0.080	18%
M.C. (%):	14%	M.C. (%):	8%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	27	% GRAVEL:	45
% SAND:	31	% SAND:	38
% FINES:	42	% FINES:	18
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)	

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



GEOTECHNICAL INVESTIGATIONS

4 of 5



Community and Transportation Services
Transportation Engineering Branch

Geotechnical Services

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

ORIGINAL - Do Not Remove From File

GR-01-087

HIGHWAY CONSTRUCTION

GEOTECHNICAL INVESTIGATION

KM 1803.95 TO KM 1820.4
YUKON, 2000-2001

ALASKA HIGHWAY #1

HIGHWAY CONSTRUCTION

km 1803.95 to km 1820.4

ALASKA HIGHWAY #1

Yukon, 2000-2001

Volume 4 of 5

This Data Package prepared for project viewing:

February, 2000

Transportation Engineering Branch
Geotechnical Services
461 Range Road
Whitehorse, Yukon

VOLUME CONTENTS

VOLUME 1 OF 5

Introduction

Centreline "Subsurface Exploration & Testing Report" sheets for holes located from km 1803+925 to km 1810+000

VOLUME 2 OF 5

Centreline "Subsurface Exploration & Testing Report" sheets for holes located from km 1810+000 to km 1820+400

VOLUME 3 OF 5

Centreline laboratory sample test result sheets for holes numbered 350 to 500

VOLUME 4 OF 5

Centreline laboratory sample test result sheets for holes numbered 501 to 849

VOLUME 5 OF 5

Granular testing - km 1819 LHS

CONTENTS

INTRODUCTION

Investigation notes, classification methods and legends.

CENTRELINE TESTING

“Subsurface Exploration & Testing Report” sheets and laboratory sample test result sheets are provided. The “Subsurface Exploration & Testing Report” sheets for the centreline holes are arranged according to project location, starting at km 1803+925 and increasing to km 1820+400. The laboratory sample test result sheets are arranged according to hole number.

Auger Testing

1999	TEST HOLES 350 to 400	shown on logs with prefix 509-
	TEST HOLES 401 to 425	shown on logs with prefix 511-
	TEST HOLES 426 to 436	shown on logs with prefix 512-
	TEST HOLES 440 to 448	shown on logs with prefix 512-
	TEST HOLES 429 to 500	shown on logs with prefix 513-
	TEST HOLES 501 to 512	shown on logs with prefix 514-
	TEST HOLES 563 to 566	shown on logs with prefix 519-
	TEST HOLES 572 to 575	shown on logs with prefix 519-
	TEST HOLES 620 to 644	shown on logs with prefix 520-
	TEST HOLES 645 to 658	shown on logs with prefix 521-
	TEST HOLES 659 to 709	shown on logs with prefix 526-
	TEST HOLES 710 to 731	shown on logs with prefix 527-
	TEST HOLES 834 to 844	shown on logs with prefix 531-
	TEST HOLES 485 to 849	shown on logs with prefix 532-

Notes on plotting of Centreline Holes:

1. Hole 495 shown at ~ 1807+225 on Sheet 5 of 19 should be removed
2. Hole 400 shown at ~ 1808+520 on Sheet 6 of 19 should be removed
3. Add Hole 440 at 1811+870 (centreline) on Sheet 9 of 19
4. Add Hole 408 at 1814+625 (centreline) on Sheet 12 of 19
5. Hole 391 shown at ~ 1816+500 on Sheet 14 of 19 should read Hole 392
6. Hole 392 shown at ~ 1816+600 on Sheet 14 of 19 should read Hole 391
7. Hole 843 shown at ~ 1817+700 on Sheet 15 of 19 should read Hole 378

CONTENTS (continued)**GRANULAR TESTING - KM 1819 LHS**

“Subsurface Exploration & Testing Report” sheets, laboratory sample test result sheets, and location plans are provided.

The “Subsurface Exploration & Testing Report” sheets and the laboratory sample test result sheets are arranged according to hole number.

Backhoe Testing

1994	TEST HOLES 4 to 10	shown with prefix 316-
1995	TEST HOLES 230 to 247, 249 to 250, & 252 to 253	shown with prefix 369-

Auger Testing

1995	TEST HOLES 1 to 9	shown with prefix 351-
	TEST HOLES 10 to 26	shown with prefix 352-

HIGHWAY CONSTRUCTION

GEOTECHNICAL INVESTIGATION

KM 1803.95 TO KM 1820.4
YUKON, 2000-2001

ALASKA HIGHWAY #1

CENTRELINE TESTING

**hole 501 to hole 849
Laboratory Sample Test Results**

PROJECT NUMBER:	092-202101-0329	HOLE No.:	514-501
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK PROJECT		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	NODWELL B-40L		
HOLE LOCATION:	1805+700 CENTRELINE		
LOGGED BY:	G.C.	DATE COMP	99-05-06

FIELD NO:	395	FIELD No:	396	FIELD No:	397
LAB NO:	404	LAB No:	405	LAB No:	406
DEPTH:	1.0-1.5	DEPTH:	2.8-3.0	DEPTH:	3.8-4.0
TYPE:	AUGER	TYPE:	AUGER	TYPE:	AUGER

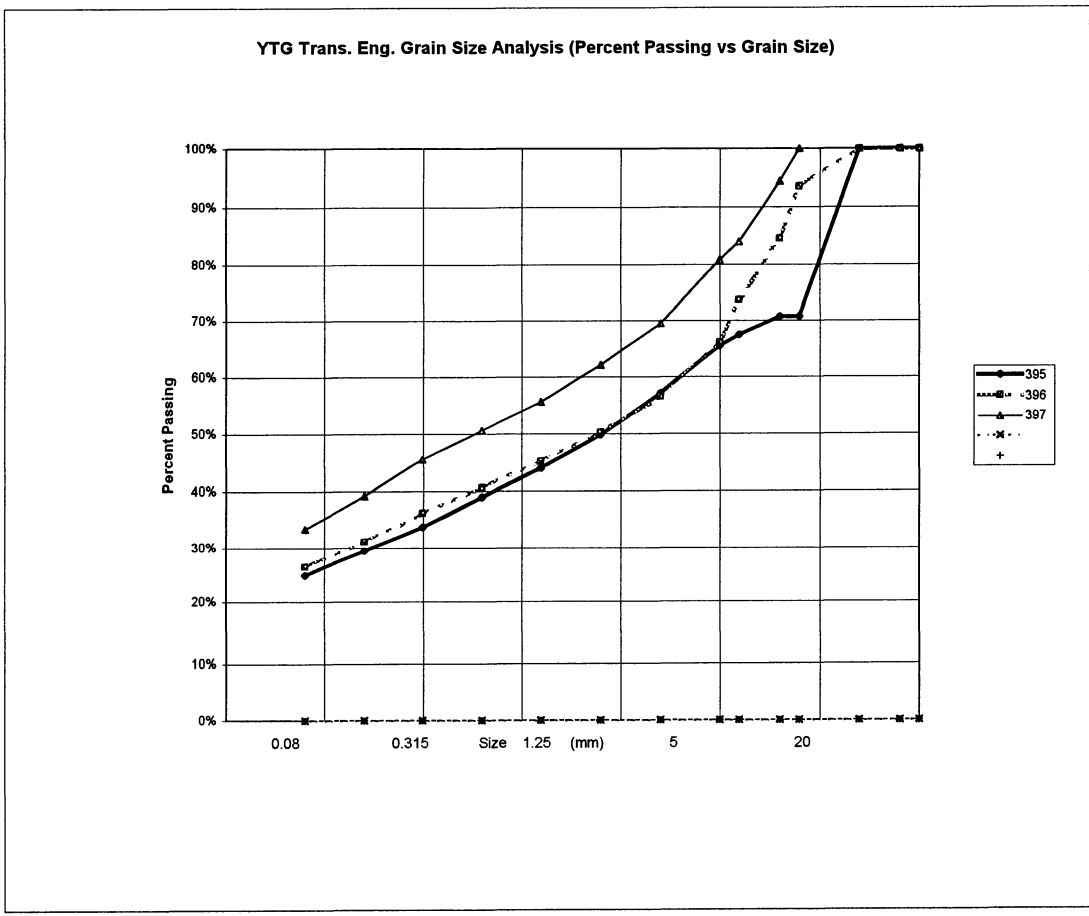
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	71%	25.0	93%	25.0	100%
20.0	71%	20.0	84%	20.0	94%
12.5	67%	12.5	74%	12.5	84%
10.0	65%	10.0	66%	10.0	81%
5.0	57%	5.0	57%	5.0	69%
2.5	50%	2.5	50%	2.5	62%
1.25	44%	1.25	45%	1.25	56%
0.630	39%	0.630	41%	0.630	51%
0.315	34%	0.315	36%	0.315	45%
0.160	29%	0.160	31%	0.160	39%
0.080	25%	0.080	26%	0.080	33%

M.C.(%):	4%	M.C.(%):	11%	M.C.(%):	8%
----------	----	----------	-----	----------	----

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

% GRAVEL:	43	% GRAVEL:	43	% GRAVEL:	31
% SAND:	32	% SAND:	30	% SAND:	36
% FINES:	25	% FINES:	26	% FINES:	33

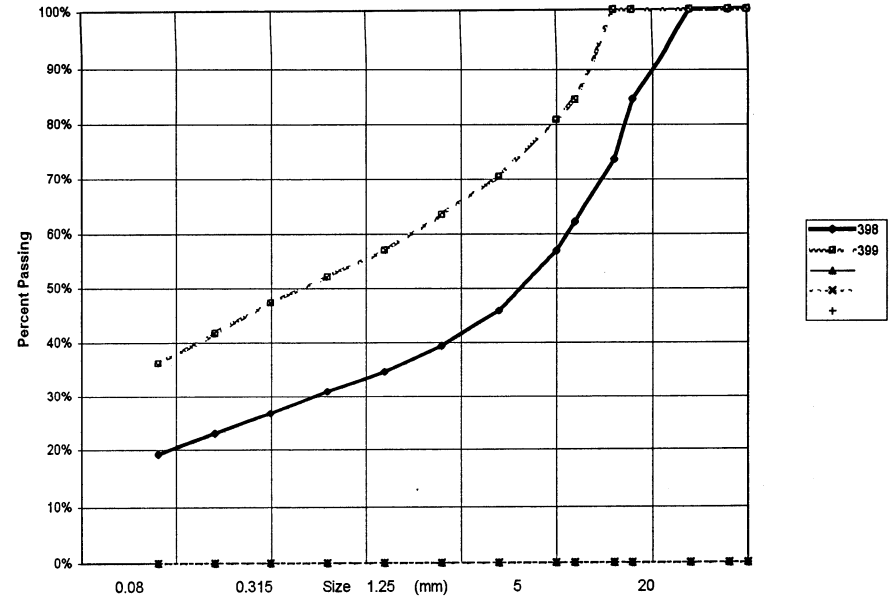
CLASSIFICATION:	CLASSIFICATION:	CLASSIFICATION:
SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 514-502
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: NODWELL B-40L
 HOLE LOCATION: 1805+575 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-06

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	85%	25.0	100%
20.0	74%	20.0	100%
12.5	62%	12.5	84%
10.0	57%	10.0	81%
5.0	46%	5.0	71%
2.5	39%	2.5	63%
1.25	35%	1.25	57%
0.630	31%	0.630	52%
0.315	27%	0.315	47%
0.160	23%	0.160	42%
0.080	19%	0.080	36%
M.C.(%):	8%	M.C.(%):	12%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	54	% GRAVEL:	29
% SAND:	27	% SAND:	34
% FINES:	19	% FINES:	36
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

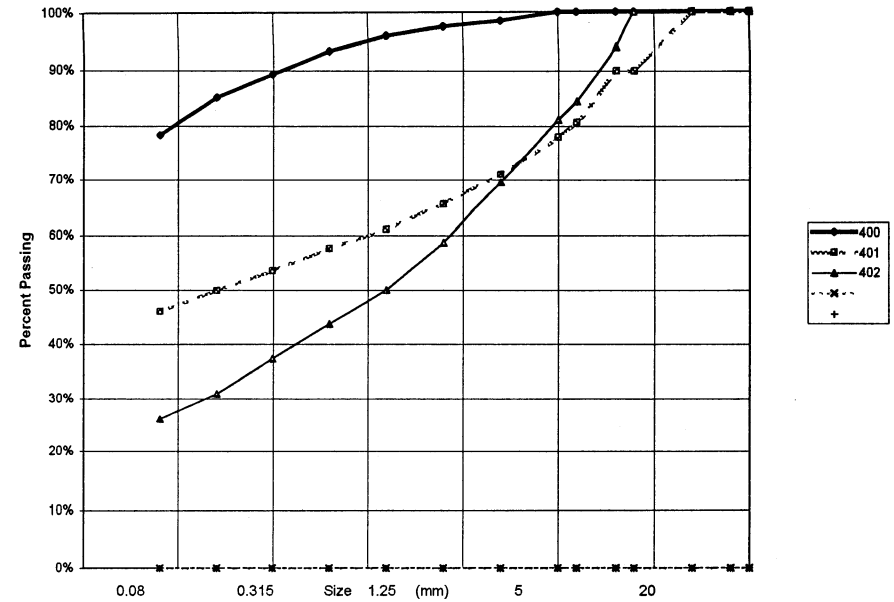
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 514-503
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: NODWELL B-40L
 HOLE LOCATION: 1805+450 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-07

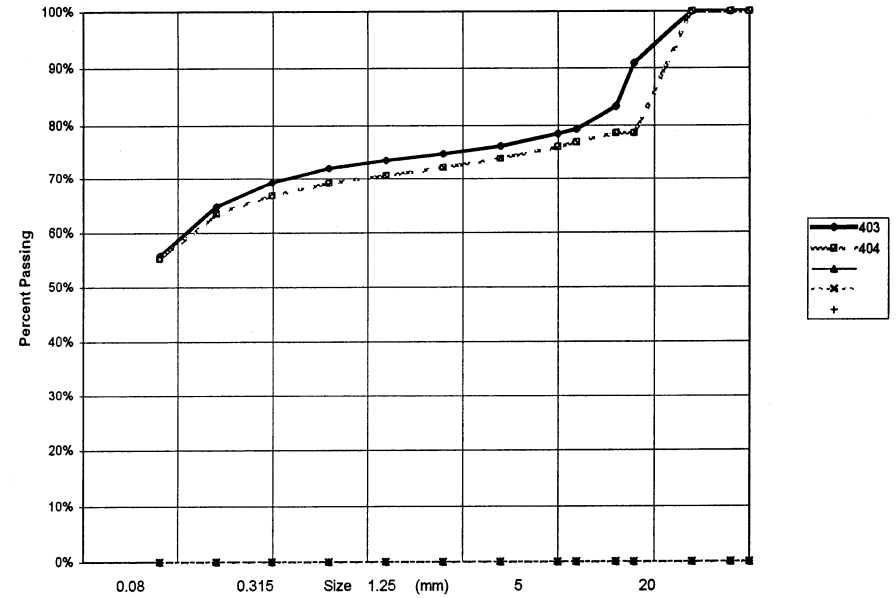
FIELD NO: 400		FIELD No. 401		FIELD No: 402	
LAB NO: 409		LAB No. 410		LAB No: 411	
DEPTH: 1.8-2.0		DEPTH 2.8-3.0		DEPTH: 3.8-4.0	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	90%	25.0	100%
20.0	100%	20.0	90%	20.0	94%
12.5	100%	12.5	81%	12.5	85%
10.0	100%	10.0	78%	10.0	81%
5.0	98%	5.0	71%	5.0	70%
2.5	98%	2.5	65%	2.5	59%
1.25	96%	1.25	61%	1.25	50%
0.630	93%	0.630	58%	0.630	44%
0.315	89%	0.315	54%	0.315	37%
0.160	85%	0.160	50%	0.160	31%
0.080	78%	0.080	46%	0.080	26%
M.C.(%):	25%	M.C.(%):	11%	M.C.(%):	10%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	2	% GRAVEL:	29	% GRAVEL:	30
% SAND:	20	% SAND:	25	% SAND:	44
% FINES:	78	% FINES:	46	% FINES:	26
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILT WITH SAND (ML)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

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



PROJECT NUMBER:	092-202101-0329	HOLE No.:	514-504
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK PROJECT		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	NODWELL B-40L		
HOLE LOCATION:	1805+350 CENTRELINE		
LOGGED BY:	G.C.	DATE COMP	99-05-07
=====			
FIELD NO:	403	FIELD No.	404
LAB NO:	412	LAB No.	413
DEPTH:	2.0-2.3	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	91%	25.0	79%
20.0	83%	20.0	79%
12.5	79%	12.5	77%
10.0	78%	10.0	76%
5.0	76%	5.0	74%
2.5	75%	2.5	72%
1.25	74%	1.25	71%
0.630	72%	0.630	69%
0.315	69%	0.315	67%
0.160	64%	0.160	63%
0.080	56%	0.080	55%
M.C.(%):	17%	M.C.(%):	8%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	24	% GRAVEL:	26
% SAND:	20	% SAND:	19
% FINES:	56	% FINES:	55
CLASSIFICATION:		CLASSIFICATION:	
GRAVELLY SILT WITH SAND (ML)		GRAVELLY SILT WITH SAND (ML)	

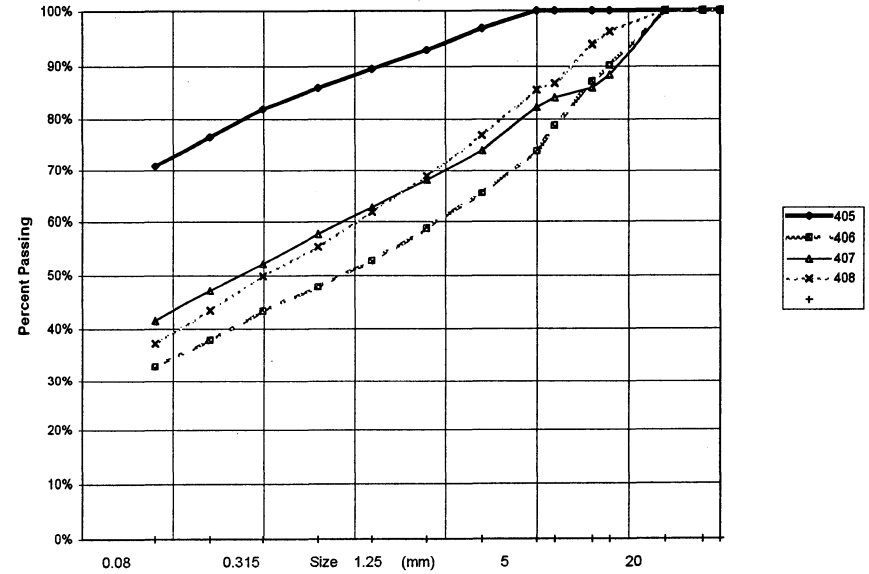
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 514-505
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: NODWELL B-40L
 HOLE LOCATION: 1805+175 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-07

FIELD NO: 405		FIELD No. 406		FIELD No: 407		FIELD No: 408	
LAB NO: 414		LAB No. 415		LAB No: 416		LAB No: 417	
DEPTH: 0.8-1.0		DEPTH 1.8-2.0		DEPTH: 2.8-3.0		DEPTH: 4.0-4.4	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	90%	25.0	88%	25.0	96%
20.0	100%	20.0	87%	20.0	86%	20.0	94%
12.5	100%	12.5	79%	12.5	84%	12.5	87%
10.0	100%	10.0	74%	10.0	82%	10.0	86%
5.0	97%	5.0	65%	5.0	74%	5.0	77%
2.5	93%	2.5	59%	2.5	68%	2.5	69%
1.25	90%	1.25	53%	1.25	63%	1.25	62%
0.630	86%	0.630	48%	0.630	58%	0.630	56%
0.315	82%	0.315	43%	0.315	52%	0.315	50%
0.160	77%	0.160	38%	0.160	47%	0.160	43%
0.080	71%	0.080	33%	0.080	41%	0.080	37%
M.C.(%):	36%	M.C.(%):	13%	M.C.(%):	14%	M.C.(%):	10%
LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	3	% GRAVEL:	35	% GRAVEL:	26	% GRAVEL:	23
% SAND:	26	% SAND:	32	% SAND:	33	% SAND:	40
% FINES:	71	% FINES:	33	% FINES:	41	% FINES:	37
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILT WITH SAND (ML)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

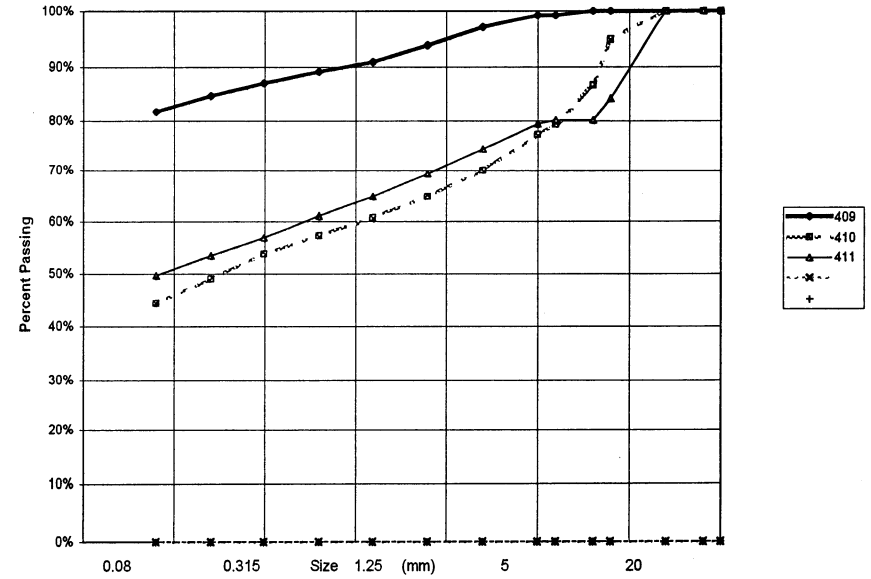
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 514-506
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: NODWELL B-40L
 HOLE LOCATION: 1805+050 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-07

FIELD NO: 409		FIELD No. 410		FIELD No: 411	
LAB NO: 418		LAB No. 419		LAB No: 420	
DEPTH: 1.2-1.4		DEPTH 2.0-2.2		DEPTH: 3.0-3.2	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	95%	25.0	84%
20.0	100%	20.0	87%	20.0	80%
12.5	99%	12.5	79%	12.5	80%
10.0	99%	10.0	77%	10.0	79%
5.0	97%	5.0	70%	5.0	74%
2.5	94%	2.5	65%	2.5	69%
1.25	91%	1.25	61%	1.25	65%
0.630	89%	0.630	57%	0.630	61%
0.315	87%	0.315	54%	0.315	57%
0.160	85%	0.160	49%	0.160	53%
0.080	82%	0.080	44%	0.080	50%
M.C.(%):	98%	M.C.(%):	17%	M.C.(%):	22%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	3	% GRAVEL:	30	% GRAVEL:	26
% SAND:	15	% SAND:	26	% SAND:	25
% FINES:	82	% FINES:	44	% FINES:	50
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILT WITH SAND (ML)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 514-507
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: NODWELL B-40L
 HOLE LOCATION: 1804-950 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-07

FIELD NO:	412	FIELD No.	413
LAB NO:	421	LAB No.	422
DEPTH:	1.6-2.0	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	94%	25.0	100%
20.0	91%	20.0	100%
12.5	80%	12.5	98%
10.0	75%	10.0	94%
5.0	65%	5.0	86%
2.5	59%	2.5	75%
1.25	54%	1.25	65%
0.630	50%	0.630	58%
0.315	45%	0.315	50%
0.160	40%	0.160	43%
0.080	35%	0.080	36%

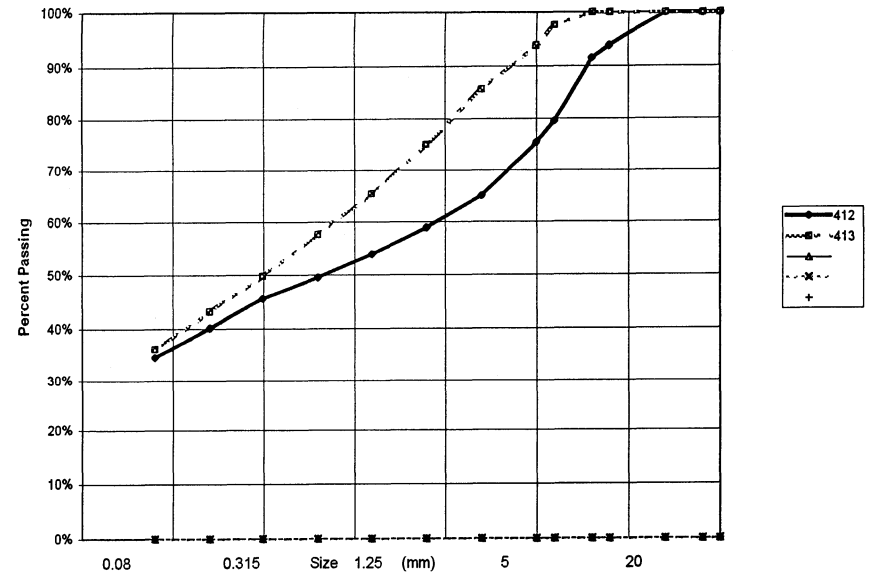
M.C.(%): 24% M.C.(%): 9%

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

% GRAVEL:	35	% GRAVEL:	14
% SAND:	30	% SAND:	49
% FINES:	35	% FINES:	36

CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)
 CLASSIFICATION: SILTY SAND (SM)

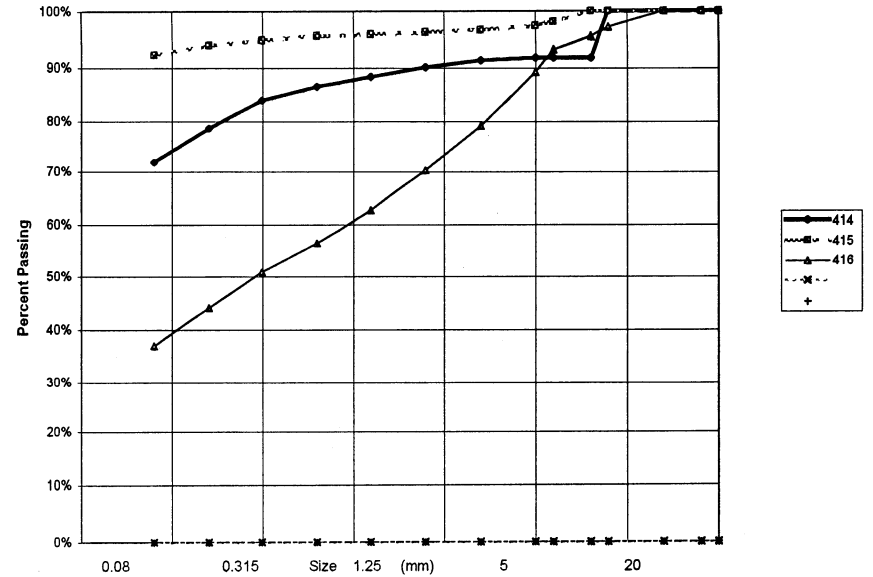
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 514+508
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: NODWELL B-40L
 HOLE LOCATION: 1804+850 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-07

FIELD NO: 414		FIELD No. 415		FIELD No: 416	
LAB NO: 423		LAB No. 424		LAB No: 425	
DEPTH: 1.8-2.0		DEPTH 2.7-3.0		DEPTH: 3.8-4.0	
TYPE: BULK		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	97%
20.0	92%	20.0	100%	20.0	95%
12.5	92%	12.5	98%	12.5	93%
10.0	92%	10.0	97%	10.0	89%
5.0	91%	5.0	97%	5.0	79%
2.5	90%	2.5	96%	2.5	70%
1.25	88%	1.25	96%	1.25	63%
0.630	87%	0.630	96%	0.630	56%
0.315	84%	0.315	95%	0.315	51%
0.160	79%	0.160	94%	0.160	44%
0.080	72%	0.080	92%	0.080	37%
M.C.(%):	154%	M.C.(%):	39%	M.C.(%):	13%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	9	% GRAVEL:	3	% GRAVEL:	21
% SAND:	19	% SAND:	4	% SAND:	42
% FINES:	72	% FINES:	92	% FINES:	37
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILT WITH SAND (ML)		SILT (ML)		SILTY SAND WITH GRAVEL (SM)	

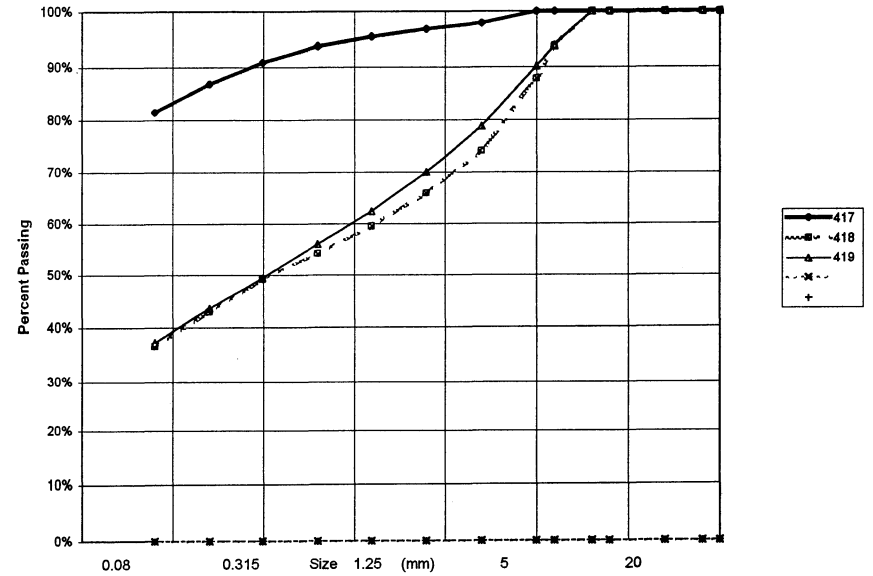
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 514-509
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: NODWELL B-40L
 HOLE LOCATION: 1804+725 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-07

FIELD NO:	417	FIELD No:	418	FIELD No:	419
LAB NO:	426	LAB No:	427	LAB No:	428
DEPTH:	1.4-1.6	DEPTH:	2.8-3.0	DEPTH:	3.8-4.0
TYPE:	BULK	TYPE:	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	100%
20.0	100%	20.0	100%	20.0	100%
12.5	100%	12.5	94%	12.5	94%
10.0	100%	10.0	88%	10.0	90%
5.0	98%	5.0	74%	5.0	79%
2.5	97%	2.5	66%	2.5	70%
1.25	95%	1.25	59%	1.25	62%
0.630	94%	0.630	54%	0.630	56%
0.315	91%	0.315	49%	0.315	49%
0.160	87%	0.160	43%	0.160	43%
0.080	82%	0.080	37%	0.080	37%
M.C.(%):	66%	M.C.(%):	13%	M.C.(%):	14%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	2	% GRAVEL:	26	% GRAVEL:	21
% SAND:	16	% SAND:	38	% SAND:	41
% FINES:	82	% FINES:	37	% FINES:	37
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILT WITH SAND (ML)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 514-510
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: NODWELL B-40L
 HOLE LOCATION: 1804+550 CENTRELINE
 LOGGED BY: G.C. DATE COMP 99-05-07

FIELD NO: 420
 LAB NO: 429
 DEPTH: 2.6-3.0
 TYPE: BULK

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	100%
12.5	94%
10.0	91%
5.0	81%
2.5	69%
1.25	58%
0.630	49%
0.315	40%
0.160	28%
0.080	21%

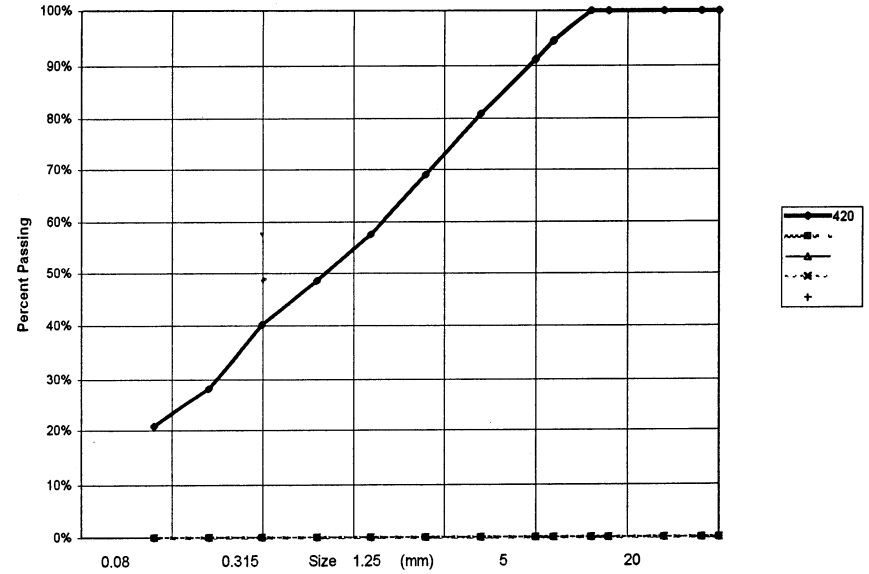
M.C.(%): 11%

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

% GRAVEL: 19
 % SAND: 60
 % FINES: 21

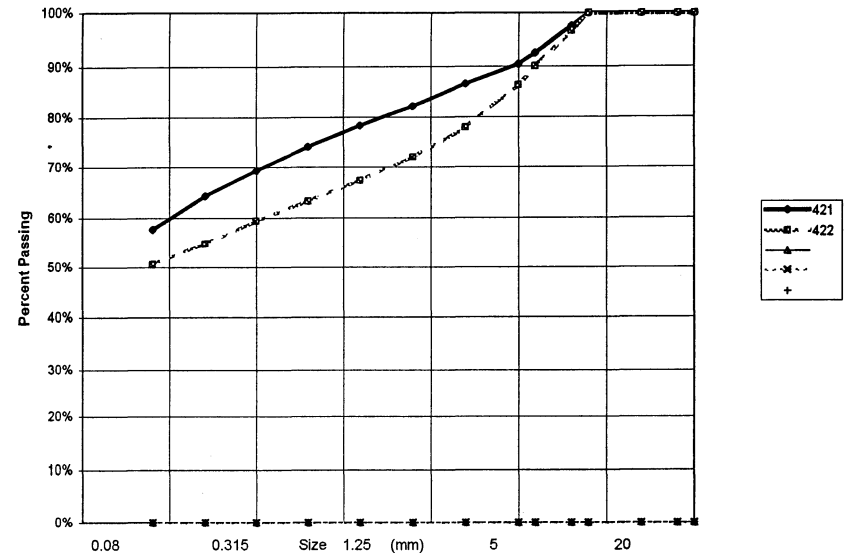
CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM)

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



PROJECT NUMBER:	092-202101-0329	HOLE No.:	514-511
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK PROJECT		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	NODWELL B-40L		
HOLE LOCATION:	1804+450 CENTRELINE	DATE COMP	99-05-07
LOGGED BY:	G.C.		
=====			
FIELD NO:	421	FIELD No.	422
LAB NO:	430	LAB No.	431
DEPTH:	2.0-2.2	DEPTH	2.8-3.0
TYPE:	BULK	TYPE	AUGER
=====			
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	97%	20.0	97%
12.5	93%	12.5	90%
10.0	90%	10.0	86%
5.0	87%	5.0	78%
2.5	82%	2.5	72%
1.25	78%	1.25	67%
0.630	74%	0.630	63%
0.315	69%	0.315	59%
0.160	64%	0.160	55%
0.080	58%	0.080	51%
=====			
M.C.(%):	36%	M.C.(%):	24%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	13	% GRAVEL:	22
% SAND:	29	% SAND:	27
% FINES:	58	% FINES:	51
CLASSIFICATION:		CLASSIFICATION:	
SANDY SILT (ML)		SANDY SILT WITH GRAVEL (ML)	

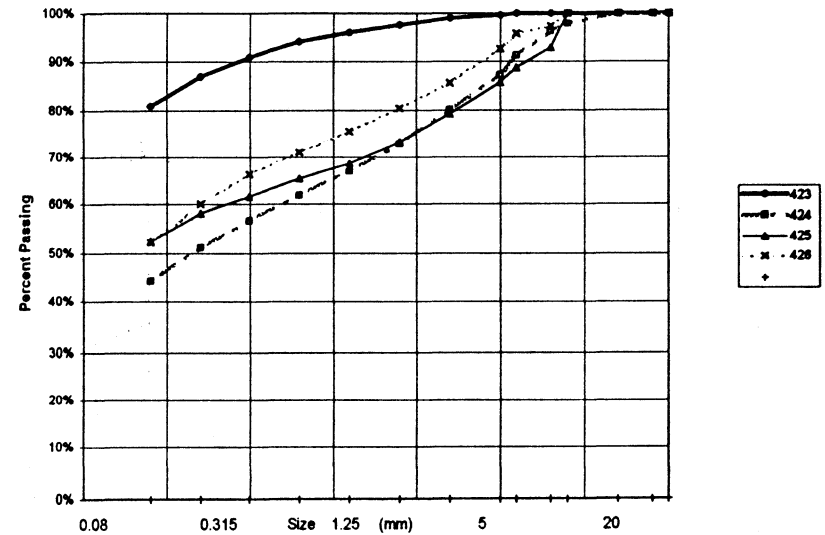
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER:	092-202101-0329	HOLE No.:	514-512
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK PROJECT		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	NODWELL B-40L		
HOLE LOCATION:	1804+275 CENTRELINE		
LOGGED BY:	G.C.	DATE COMP	99-05-07

FIELD NO: 423		FIELD No. 424		FIELD No: 425		FIELD No: 426	
LAB NO: 432		LAB No. 433		LAB No: 434		LAB No: 435	
DEPTH: 0.4-0.8		DEPTH 1.0-1.2		DEPTH: 1.8-2.0		DEPTH: 2.8-3.0	
TYPE: BULK		TYPE AUGER		TYPE: AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	98%	25.0	100%	25.0	100%
20.0	100%	20.0	96%	20.0	93%	20.0	97%
12.5	100%	12.5	91%	12.5	89%	12.5	96%
10.0	100%	10.0	87%	10.0	86%	10.0	92%
5.0	99%	5.0	80%	5.0	79%	5.0	86%
2.5	97%	2.5	73%	2.5	73%	2.5	80%
1.25	96%	1.25	67%	1.25	69%	1.25	76%
0.630	94%	0.630	62%	0.630	65%	0.630	71%
0.315	91%	0.315	57%	0.315	61%	0.315	66%
0.160	87%	0.160	51%	0.160	58%	0.160	60%
0.080	81%	0.080	44%	0.080	52%	0.080	52%
M.C.(%): 18%		M.C.(%): 15%		M.C.(%): 20%		M.C.(%): 18%	
LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID: 0.0		LIQUID: 0.0		LIQUID: 0.0		LIQUID: 0.0	
PLASTIC: 0.0		PLASTIC: 0.0		PLASTIC: 0.0		PLASTIC: 0.0	
P.I.: 0.0		P.I.: 0.0		P.I.: 0.0		P.I.: 0.0	
% GRAVEL: 1		% GRAVEL: 20		% GRAVEL: 21		% GRAVEL: 14	
% SAND: 18		% SAND: 36		% SAND: 27		% SAND: 33	
% FINES: 81		% FINES: 44		% FINES: 52		% FINES: 52	
CLASSIFICATION: SILT WITH SAND (ML)		CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)		CLASSIFICATION: SANDY SILT WITH GRAVEL (ML)		CLASSIFICATION: SANDY SILT (ML)	

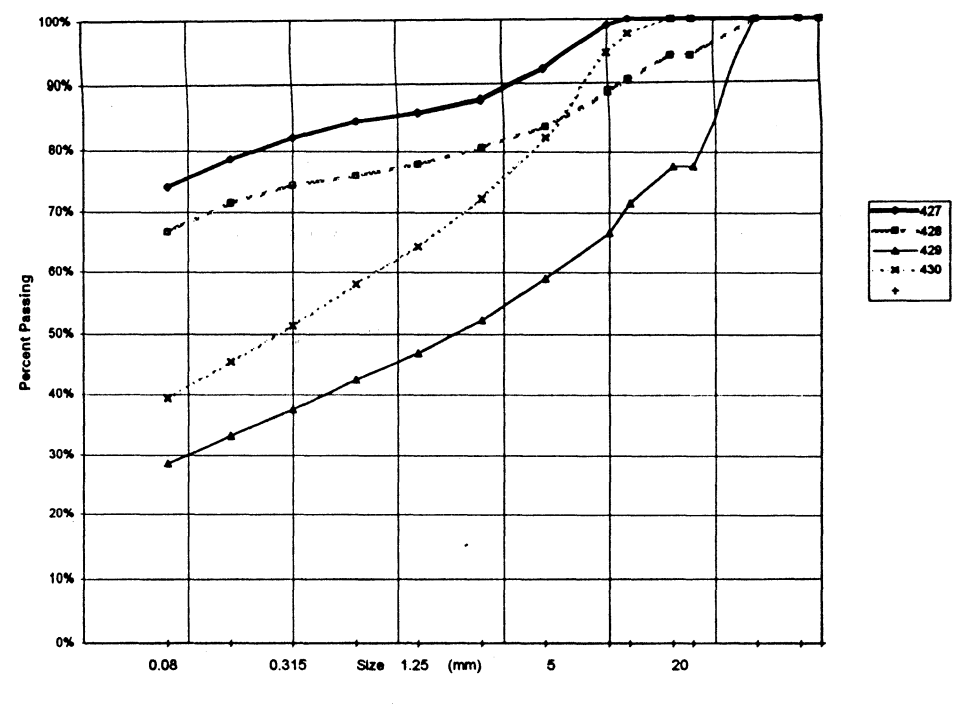
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 519-563
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1804+225 35M LT
 LOGGED BY: S.H. DATE COMP 99-07-05

FIELD NO: 427		FIELD No. 428		FIELD No: 429		FIELD No: 430	
LAB NO: 528		LAB No. 527		LAB No: 528		LAB No: 529	
DEPTH: 0.5-0.9		DEPTH 1.3-1.5		DEPTH: 2.6-3.0		DEPTH: 3.6-4.0	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	94%	25.0	78%	25.0	100%
20.0	100%	20.0	94%	20.0	78%	20.0	100%
12.5	100%	12.5	90%	12.5	71%	12.5	97%
10.0	99%	10.0	89%	10.0	67%	10.0	94%
5.0	92%	5.0	84%	5.0	59%	5.0	82%
2.5	88%	2.5	81%	2.5	52%	2.5	72%
1.25	88%	1.25	78%	1.25	47%	1.25	64%
0.830	85%	0.830	76%	0.830	42%	0.830	58%
0.315	82%	0.315	74%	0.315	37%	0.315	51%
0.160	79%	0.160	71%	0.160	33%	0.160	45%
0.080	74%	0.080	67%	0.080	29%	0.080	39%
M.C.(%):	52%	M.C.(%):	76%	M.C.(%):	11%	M.C.(%):	15%
LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	8	% GRAVEL:	18	% GRAVEL:	41	% GRAVEL:	18
% SAND:	18	% SAND:	17	% SAND:	30	% SAND:	43
% FINES:	74	% FINES:	67	% FINES:	29	% FINES:	39
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILT WITH SAND (ML)		SANDY SILT WITH GRAVEL (ML)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

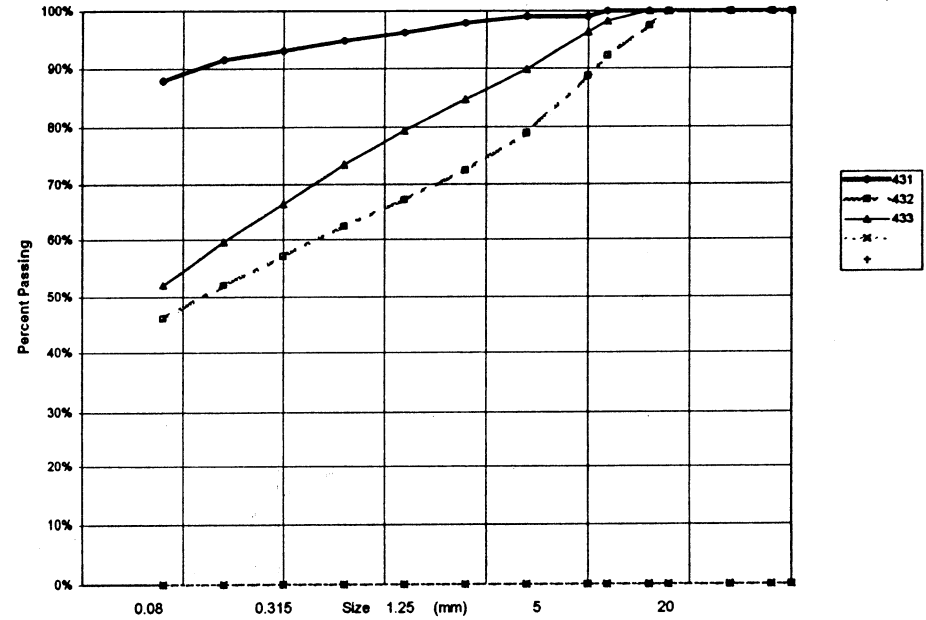
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 519-564
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1804+150 30M LT
 LOGGED BY: S.H. DATE COMP 99-07-05

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	100%
20.0	100%	20.0	97%	20.0	100%
12.5	100%	12.5	92%	12.5	98%
10.0	99%	10.0	89%	10.0	96%
5.0	99%	5.0	79%	5.0	90%
2.5	98%	2.5	72%	2.5	85%
1.25	96%	1.25	67%	1.25	79%
0.630	95%	0.630	62%	0.630	74%
0.315	93%	0.315	57%	0.315	66%
0.160	91%	0.160	52%	0.160	60%
0.080	88%	0.080	46%	0.080	52%
M.C.(%):	105%	M.C.(%):	17%	M.C.(%):	19%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	1	% GRAVEL:	21	% GRAVEL:	10
% SAND:	11	% SAND:	33	% SAND:	38
% FINES:	88	% FINES:	46	% FINES:	52
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILT (ML)		SILTY SAND WITH GRAVEL (SM)		SANDY SILT (ML)	

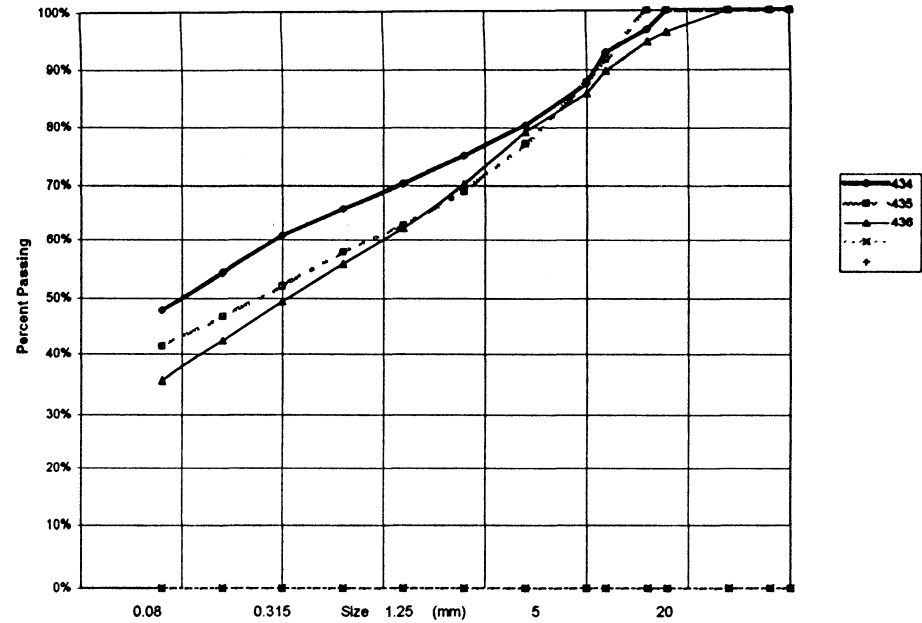
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 519-585
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1804+050 30M LT
 LOGGED BY: S.H. DATE COMP 99-07-05

FIELD NO: 434		FIELD No. 435		FIELD No: 436	
LAB NO: 533		LAB No. 534		LAB No: 535	
DEPTH: 0.6-0.8		DEPTH 1.3-1.5		DEPTH: 2.6-3.0	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	98%
20.0	97%	20.0	100%	20.0	95%
12.5	93%	12.5	92%	12.5	90%
10.0	88%	10.0	88%	10.0	86%
5.0	80%	5.0	77%	5.0	79%
2.5	75%	2.5	69%	2.5	70%
1.25	70%	1.25	63%	1.25	62%
0.630	66%	0.630	58%	0.630	56%
0.315	61%	0.315	52%	0.315	49%
0.160	54%	0.160	47%	0.160	42%
0.080	48%	0.080	41%	0.080	36%
M.C.(%):	15%	M.C.(%):	17%	M.C.(%):	11%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	20	% GRAVEL:	23	% GRAVEL:	21
% SAND:	33	% SAND:	36	% SAND:	44
% FINES:	48	% FINES:	41	% FINES:	36
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

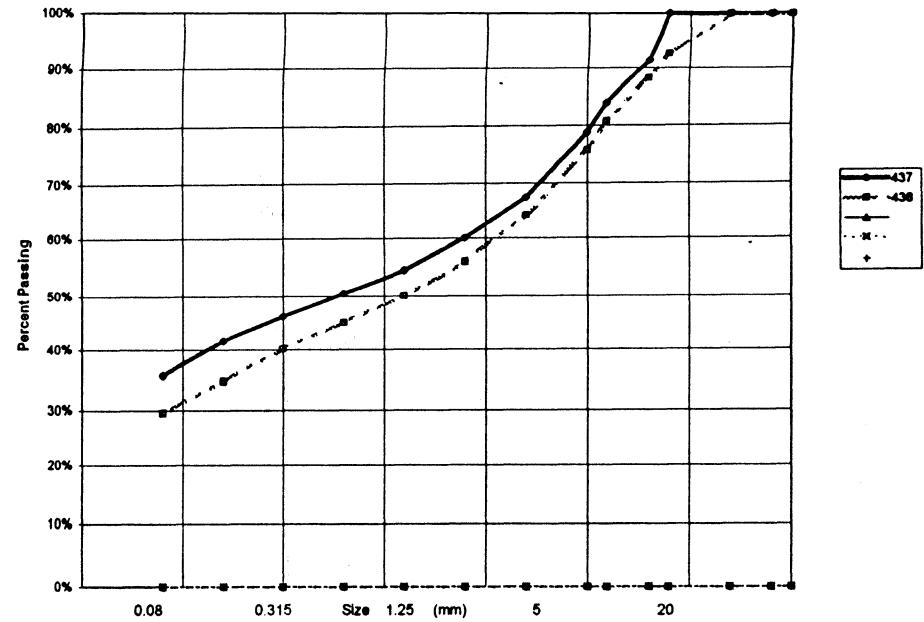
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 519-568
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1803+975 30M LT
 LOGGED BY: S.H. DATE COMP 99-07-05

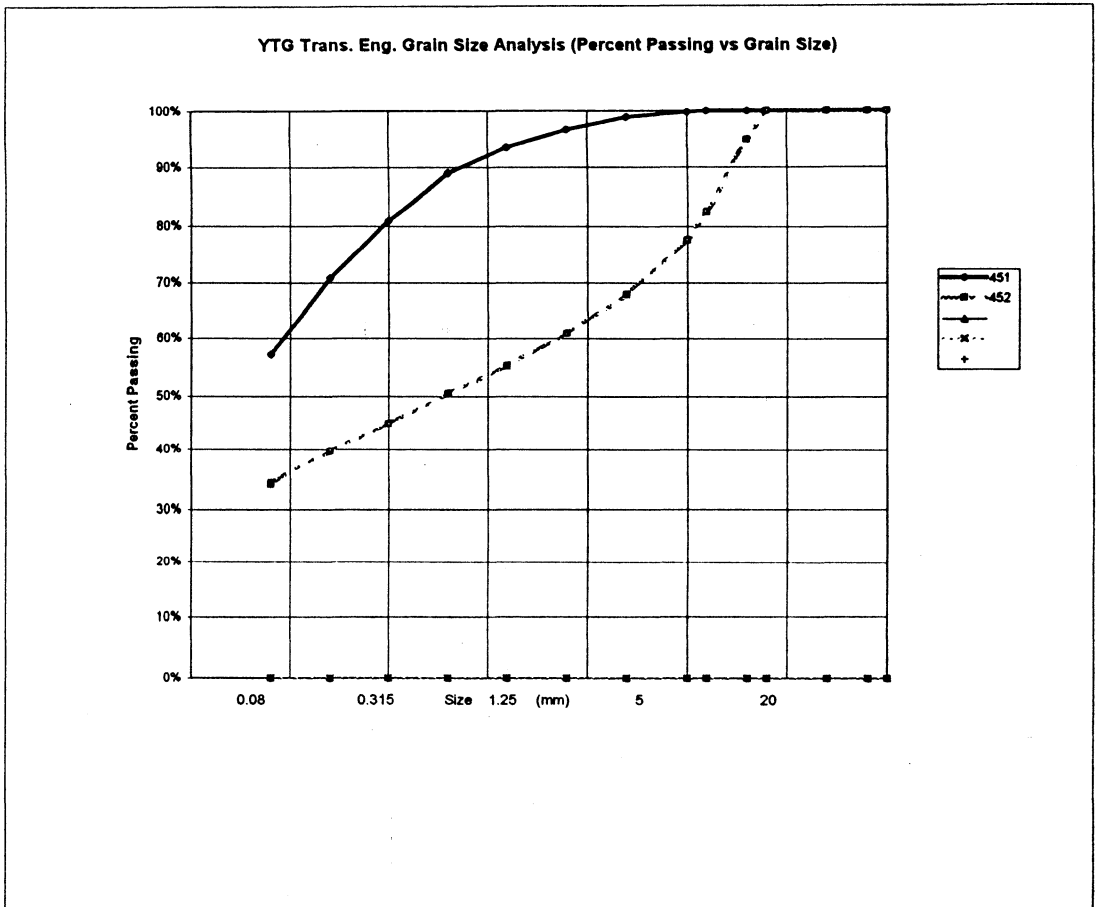
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	93%
20.0	91%	20.0	88%
12.5	84%	12.5	81%
10.0	79%	10.0	76%
5.0	67%	5.0	64%
2.5	60%	2.5	56%
1.25	55%	1.25	50%
0.630	50%	0.630	45%
0.315	46%	0.315	40%
0.160	42%	0.160	35%
0.080	36%	0.080	30%
M.C.(%):	17%	M.C.(%):	12%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	33	% GRAVEL:	36
% SAND:	32	% SAND:	35
% FINES:	36	% FINES:	30
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 519-572
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1803+925 2m RT
 LOGGED BY: S.H. DATE COMP 99-07-05

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	95%
12.5	100%	12.5	83%
10.0	100%	10.0	78%
5.0	89%	5.0	68%
2.5	97%	2.5	61%
1.25	93%	1.25	55%
0.630	89%	0.630	50%
0.315	81%	0.315	45%
0.160	71%	0.160	40%
0.080	57%	0.080	34%
M.C.(%): 35%		M.C.(%): 13%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	1	% GRAVEL:	32
% SAND:	42	% SAND:	34
% FINES:	57	% FINES:	34
CLASSIFICATION:		CLASSIFICATION:	
SANDY SILT (ML)		SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 519-573
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1798-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1804+025 2M RT
 LOGGED BY: S.H. DATE COMP 99-07-05

FIELD NO: 453 FIELD No. 454
 LAB NO: 552 LAB No. 553
 DEPTH: 1.3-1.5 DEPTH 2.8-3.0
 TYPE: AUGER TYPE AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	98%
20.0	93%	20.0	96%
12.5	89%	12.5	87%
10.0	85%	10.0	82%
5.0	72%	5.0	71%
2.5	63%	2.5	64%
1.25	58%	1.25	58%
0.630	51%	0.630	52%
0.315	45%	0.315	47%
0.180	39%	0.180	41%
0.080	33%	0.080	35%

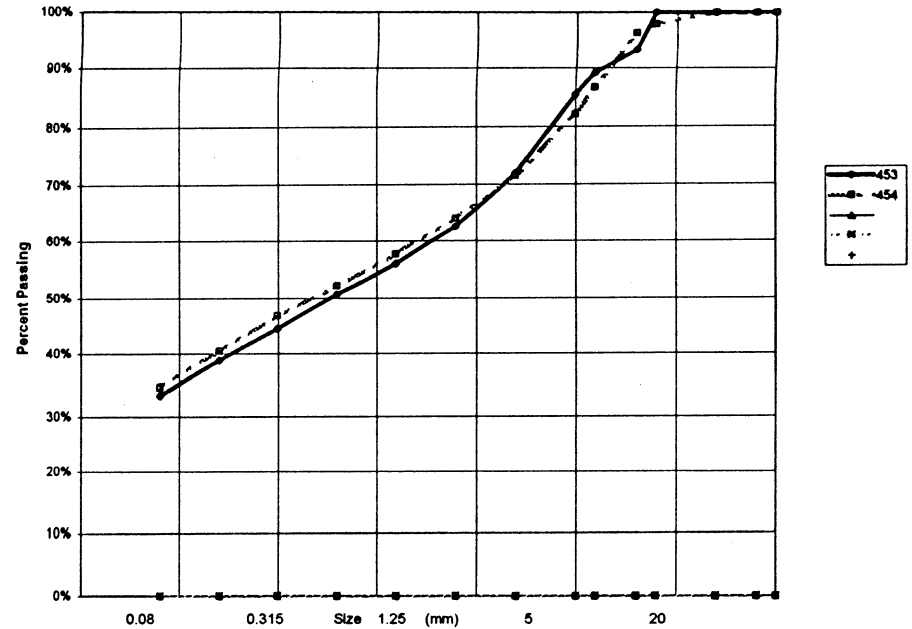
M.C.(%): 27% M.C.(%): 13%

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

% GRAVEL: 28 % GRAVEL: 29
 % SAND: 39 % SAND: 37
 % FINES: 33 % FINES: 35

CLASSIFICATION: CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM) SILTY SAND WITH GRAVEL (SM)

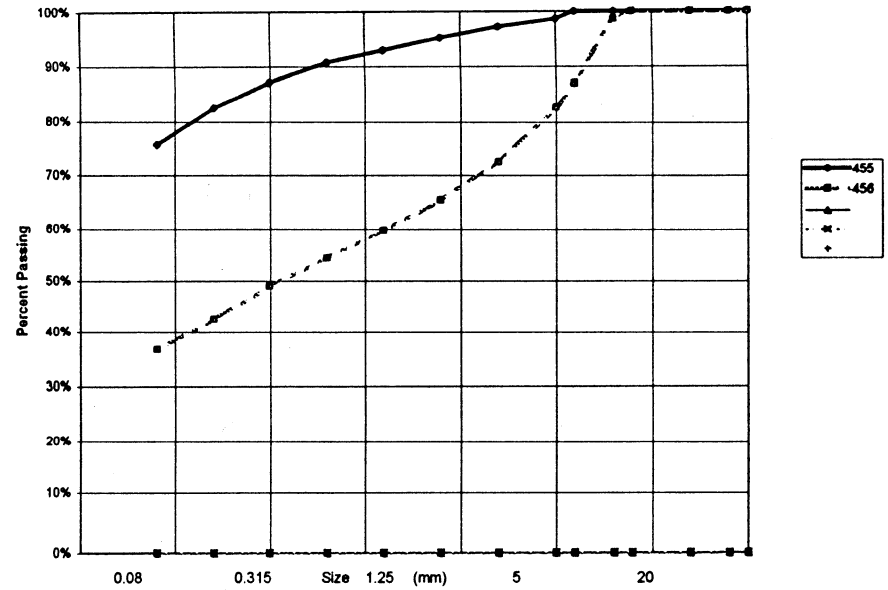
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 519-574
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1804+125 2M RT
 LOGGED BY: S.H. DATE COMP 99-07-05

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	99%
12.5	100%	12.5	87%
10.0	99%	10.0	83%
5.0	97%	5.0	72%
2.5	95%	2.5	66%
1.25	93%	1.25	60%
0.830	91%	0.830	54%
0.315	87%	0.315	49%
0.160	83%	0.160	43%
0.080	76%	0.080	37%
M.C.(%):	73%	M.C.(%):	17%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	3	% GRAVEL:	28
% SAND:	22	% SAND:	36
% FINES:	76	% FINES:	37
CLASSIFICATION:		CLASSIFICATION:	
SILT WITH SAND (ML)		SILTY SAND WITH GRAVEL (SM)	

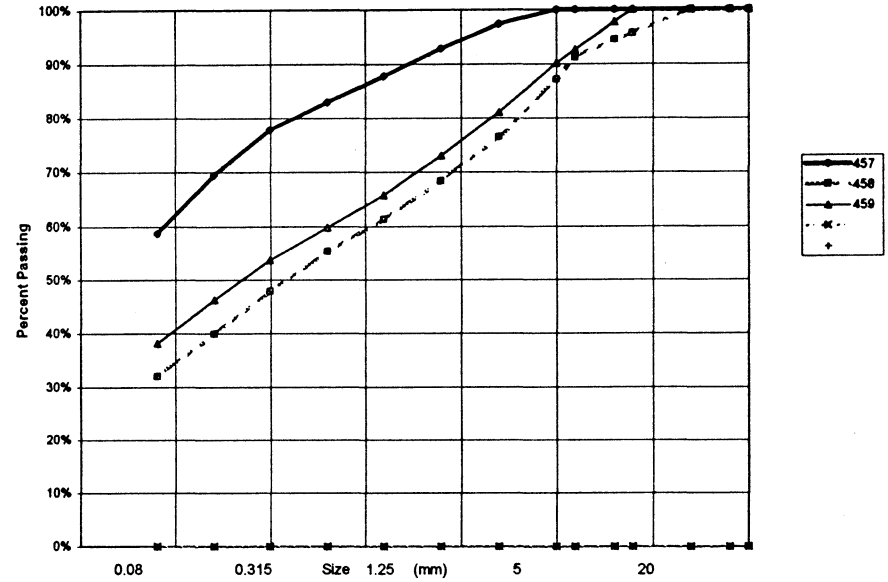
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 519-575
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1804+225 2M RT
 LOGGED BY: S.H. DATE COMP 99-07-05

FIELD NO: 457		FIELD No. 458		FIELD No: 459	
LAB NO: 556		LAB No. 557		LAB No: 558	
DEPTH: 1.3-1.5		DEPTH 2.8-3.0		DEPTH: 3.7-3.9	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	96%	25.0	100%
20.0	100%	20.0	95%	20.0	98%
12.5	100%	12.5	91%	12.5	93%
10.0	100%	10.0	87%	10.0	90%
5.0	97%	5.0	77%	5.0	81%
2.5	93%	2.5	68%	2.5	73%
1.25	88%	1.25	61%	1.25	66%
0.630	83%	0.630	55%	0.630	60%
0.315	78%	0.315	48%	0.315	54%
0.180	69%	0.180	40%	0.180	46%
0.080	59%	0.080	32%	0.080	38%
M.C.(%):	85%	M.C.(%):	13%	M.C.(%):	15%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	3	% GRAVEL:	23	% GRAVEL:	19
% SAND:	39	% SAND:	44	% SAND:	43
% FINES:	59	% FINES:	32	% FINES:	38
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SANDY SILT (ML)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

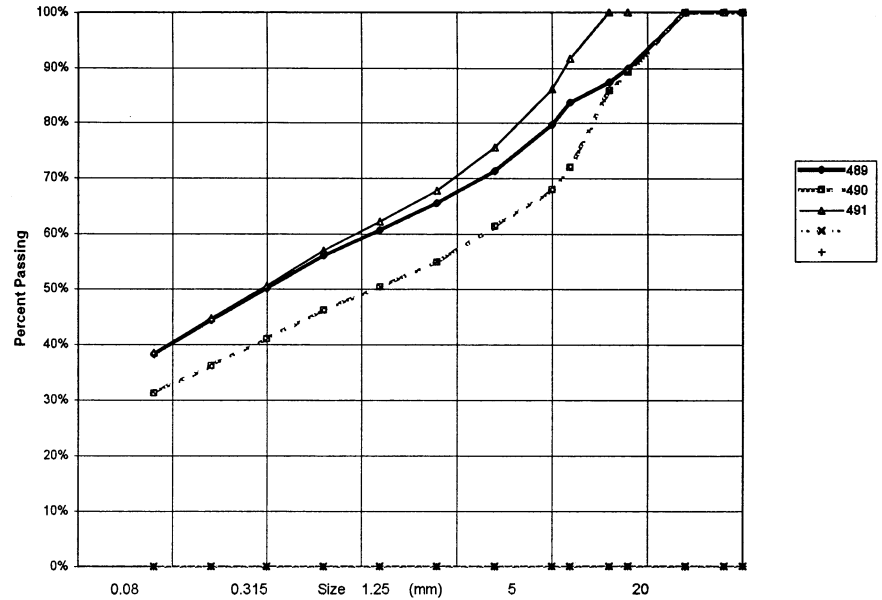
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 520-620
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1811+225 31M RT
 LOGGED BY: W.E. DATE COMP 99-08-04

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH	TYPE	FIELD No:	LAB No:	DEPTH:	TYPE:
489	585	1.4-1.5	AUGER	490	586	2.8-3.0	AUGER	491	587	4.4-4.6	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	90%	25.0	89%	25.0	100%	25.0	100%	25.0	100%	25.0	100%
20.0	87%	20.0	86%	20.0	100%	20.0	100%	20.0	100%	20.0	100%
12.5	84%	12.5	72%	12.5	92%	12.5	92%	12.5	92%	12.5	92%
10.0	80%	10.0	68%	10.0	86%	10.0	86%	10.0	86%	10.0	86%
5.0	71%	5.0	61%	5.0	76%	5.0	76%	5.0	76%	5.0	76%
2.5	65%	2.5	55%	2.5	68%	2.5	68%	2.5	68%	2.5	68%
1.25	61%	1.25	50%	1.25	62%	1.25	62%	1.25	62%	1.25	62%
0.630	56%	0.630	46%	0.630	57%	0.630	57%	0.630	57%	0.630	57%
0.315	50%	0.315	41%	0.315	51%	0.315	51%	0.315	51%	0.315	51%
0.160	44%	0.160	36%	0.160	45%	0.160	45%	0.160	45%	0.160	45%
0.080	38%	0.080	31%	0.080	39%	0.080	39%	0.080	39%	0.080	39%
M.C.(%):	8%	M.C.(%):	9%	M.C.(%):	10%	M.C.(%):	10%	M.C.(%):	10%	M.C.(%):	10%
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	29	% GRAVEL:	39	% GRAVEL:	24	% GRAVEL:	24	% GRAVEL:	24	% GRAVEL:	24
% SAND:	33	% SAND:	30	% SAND:	37	% SAND:	37	% SAND:	37	% SAND:	37
% FINES:	38	% FINES:	31	% FINES:	39	% FINES:	39	% FINES:	39	% FINES:	39
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

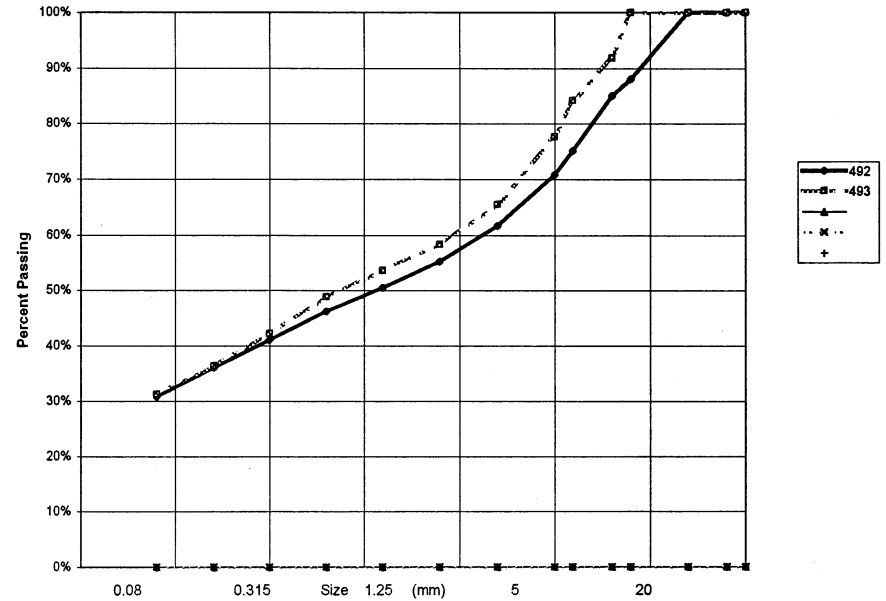
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 520-621
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1811+125 30M RT
 LOGGED BY: W.E. DATE COMP 99-08-04

FIELD NO: 492		FIELD No. 493	
LAB NO: 588		LAB No. 589	
DEPTH: 1.4-1.5		DEPTH 2.8-3.0	
TYPE: AUGER		TYPE AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	88%	25.0	100%
20.0	85%	20.0	92%
12.5	75%	12.5	84%
10.0	71%	10.0	78%
5.0	62%	5.0	65%
2.5	55%	2.5	58%
1.25	51%	1.25	54%
0.630	46%	0.630	49%
0.315	41%	0.315	42%
0.160	36%	0.160	36%
0.080	31%	0.080	31%
M.C.(%): 12%		M.C.(%): 13%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	38	% GRAVEL:	35
% SAND:	31	% SAND:	34
% FINES:	31	% FINES:	31
CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)		CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)	

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 520-622
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1811+040 INLET 21M RT
 LOGGED BY: W.E. DATE COMP 99-08-04

FIELD NO: 494	FIELD No. 495
LAB NO: 590	LAB No. 591
DEPTH: 1.4-1.6	DEPTH 2.9-3.1
TYPE: AUGER	TYPE AUGER

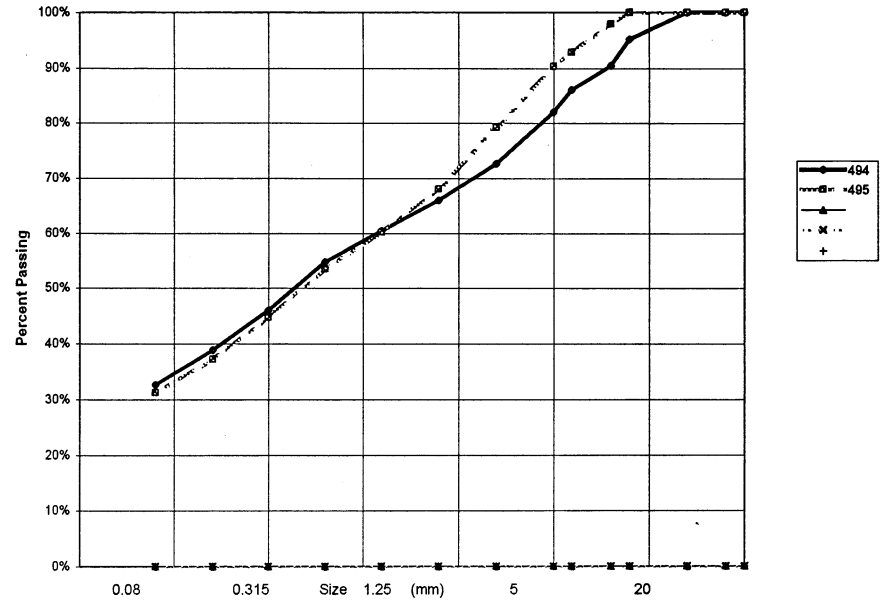
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	95%	25.0	100%
20.0	90%	20.0	98%
12.5	86%	12.5	93%
10.0	82%	10.0	90%
5.0	73%	5.0	79%
2.5	66%	2.5	68%
1.25	60%	1.25	60%
0.630	55%	0.630	53%
0.315	46%	0.315	45%
0.160	39%	0.160	37%
0.080	33%	0.080	31%

M.C.(%): 15%	M.C.(%): 15%
LIMITS	LIMITS
LIQUID: 0.0	LIQUID: 0.0
PLASTIC: 0.0	PLASTIC: 0.0
P.I.: 0.0	P.I.: 0.0

% GRAVEL: 27	% GRAVEL: 21
% SAND: 40	% SAND: 48
% FINES: 33	% FINES: 31

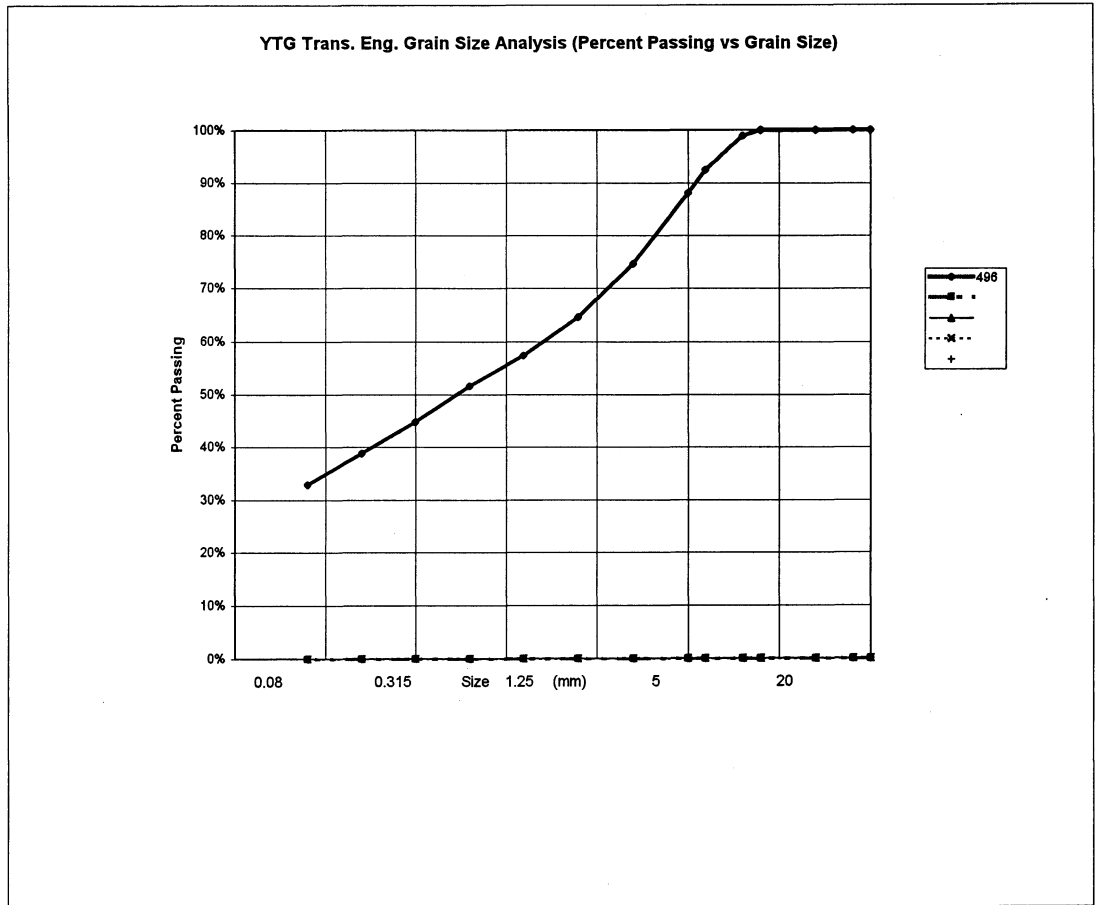
CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)
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YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	520-623
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1811+035 OUTLET 23M LT		
LOGGED BY:	W.E.	DATE COMP	8/4/99

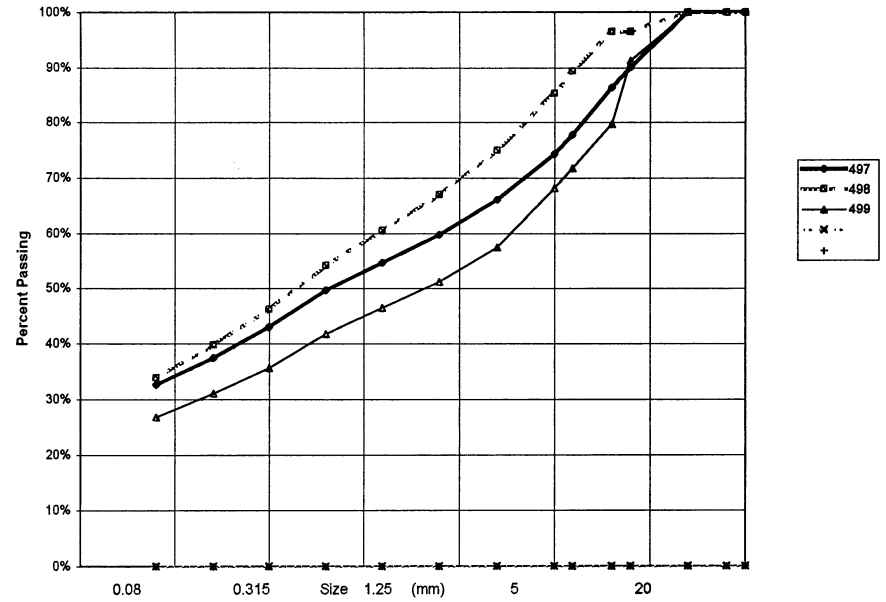
FIELD NO:	496		
LAB NO:	592		
DEPTH:	2.8-3.0		
TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING		
100.0	100%		
80.0	100%		
50.0	100%		
25.0	100%		
20.0	99%		
12.5	92%		
10.0	88%		
5.0	75%		
2.5	65%		
1.25	57%		
0.630	51%		
0.315	45%		
0.160	39%		
0.080	33%		
M.C.(%):	12%		
LIMITS			
LIQUID:	0.0		
PLASTIC:	0.0		
P.I.:	0.0		
% GRAVEL:	25		
% SAND:	42		
% FINES:	33		
CLASSIFICATION:			
SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	520-624
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1810+950 34M RT		
LOGGED BY:	W.E.	DATE COMP	99-08-04

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
497	593	1.5-1.7	AUGER	498	594	3.0-3.2	AUGER	499	595	3.9-4.1	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	90%	25.0	97%	25.0	91%	25.0	97%	25.0	91%	25.0	97%
20.0	86%	20.0	97%	20.0	80%	20.0	97%	20.0	80%	20.0	97%
12.5	78%	12.5	89%	12.5	72%	12.5	89%	12.5	72%	12.5	89%
10.0	74%	10.0	85%	10.0	68%	10.0	85%	10.0	68%	10.0	85%
5.0	66%	5.0	75%	5.0	57%	5.0	75%	5.0	57%	5.0	75%
2.5	60%	2.5	67%	2.5	51%	2.5	67%	2.5	51%	2.5	67%
1.25	55%	1.25	61%	1.25	46%	1.25	61%	1.25	46%	1.25	61%
0.630	50%	0.630	54%	0.630	42%	0.630	54%	0.630	42%	0.630	54%
0.315	43%	0.315	46%	0.315	36%	0.315	46%	0.315	36%	0.315	46%
0.160	37%	0.160	40%	0.160	31%	0.160	40%	0.160	31%	0.160	40%
0.080	33%	0.080	34%	0.080	27%	0.080	34%	0.080	27%	0.080	34%
M.C. (%)	9%	M.C. (%)	13%	M.C. (%)	12%	M.C. (%)	12%	M.C. (%)	12%	M.C. (%)	12%
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	34	% GRAVEL:	25	% GRAVEL:	43	% GRAVEL:	25	% GRAVEL:	43	% GRAVEL:	25
% SAND:	33	% SAND:	41	% SAND:	31	% SAND:	41	% SAND:	31	% SAND:	41
% FINES:	33	% FINES:	34	% FINES:	27	% FINES:	34	% FINES:	27	% FINES:	34
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 520-625
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1810-875 21M RT INLET
 LOGGED BY: S.H. DATE COMP 99-08-04

FIELD NO: 500
 LAB NO: 596
 DEPTH: 1.4-1.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	100%
12.5	100%
10.0	100%
5.0	100%
2.5	99%
1.25	97%
0.630	94%
0.315	89%
0.160	85%
0.080	82%

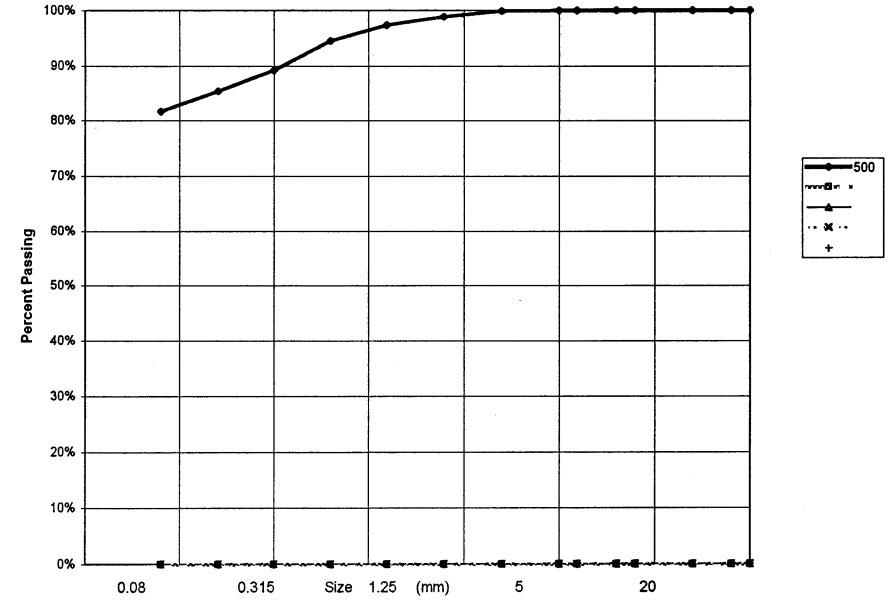
M.C.(%): 46%

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

% GRAVEL: 0
 % SAND: 18
 % FINES: 82

CLASSIFICATION:
 SILT WITH SAND (ML)

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 520-626
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1810+875 21m It outlet
 LOGGED BY: W.E. DATE COMP 99-08-04

FIELD NO: 501
 LAB NO: 597
 DEPTH: 1.4-1.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	100%
12.5	94%
10.0	88%
5.0	78%
2.5	70%
1.25	63%
0.630	57%
0.315	47%
0.160	38%
0.080	32%

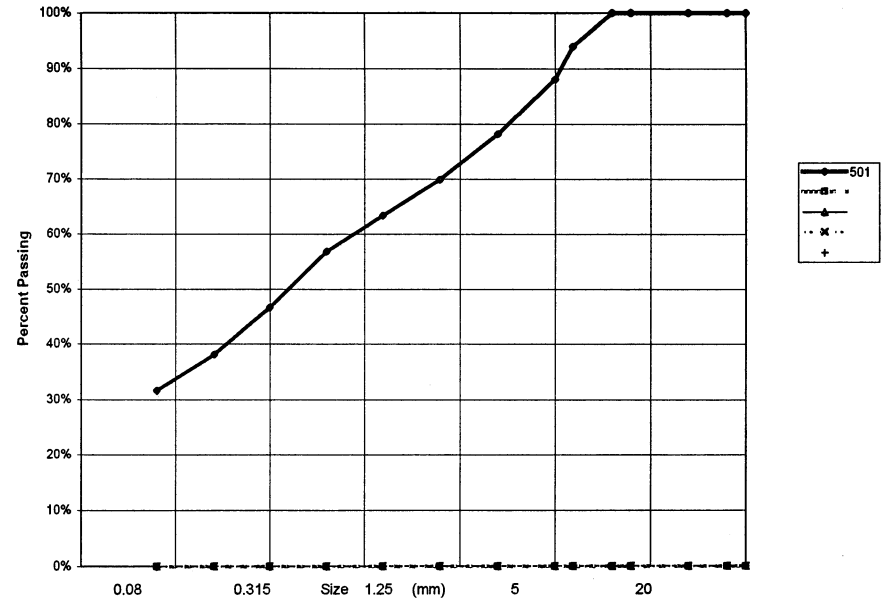
M.C.(%): 26%

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

% GRAVEL: 22
 % SAND: 46
 % FINES: 32

CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM)

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



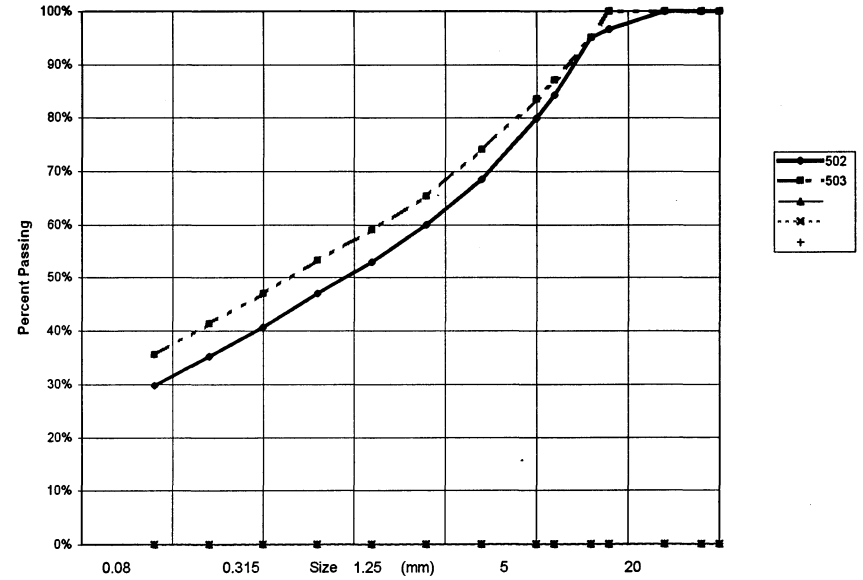
PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 520-627
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1810+800 34M RT
 LOGGED BY: S.H. DATE COMP 8/4/99

FIELD NO:	502	FIELD No.	503
LAB NO:	598	LAB No.	599
DEPTH:	2.0-2.2	DEPTH	3.1-3.3
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	97%	25.0	100%
20.0	95%	20.0	95%
12.5	84%	12.5	87%
10.0	80%	10.0	84%
5.0	68%	5.0	74%
2.5	60%	2.5	65%
1.25	53%	1.25	59%
0.630	47%	0.630	53%
0.315	41%	0.315	47%
0.160	35%	0.160	41%
0.080	30%	0.080	36%

M.C.(%):	9%	M.C.(%):	12%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	32	% GRAVEL:	26
% SAND:	39	% SAND:	38
% FINES:	30	% FINES:	36
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

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



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	520-628
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1810+720 33M RT		
LOGGED BY:	S.H.	DATE COMP	8/4/99

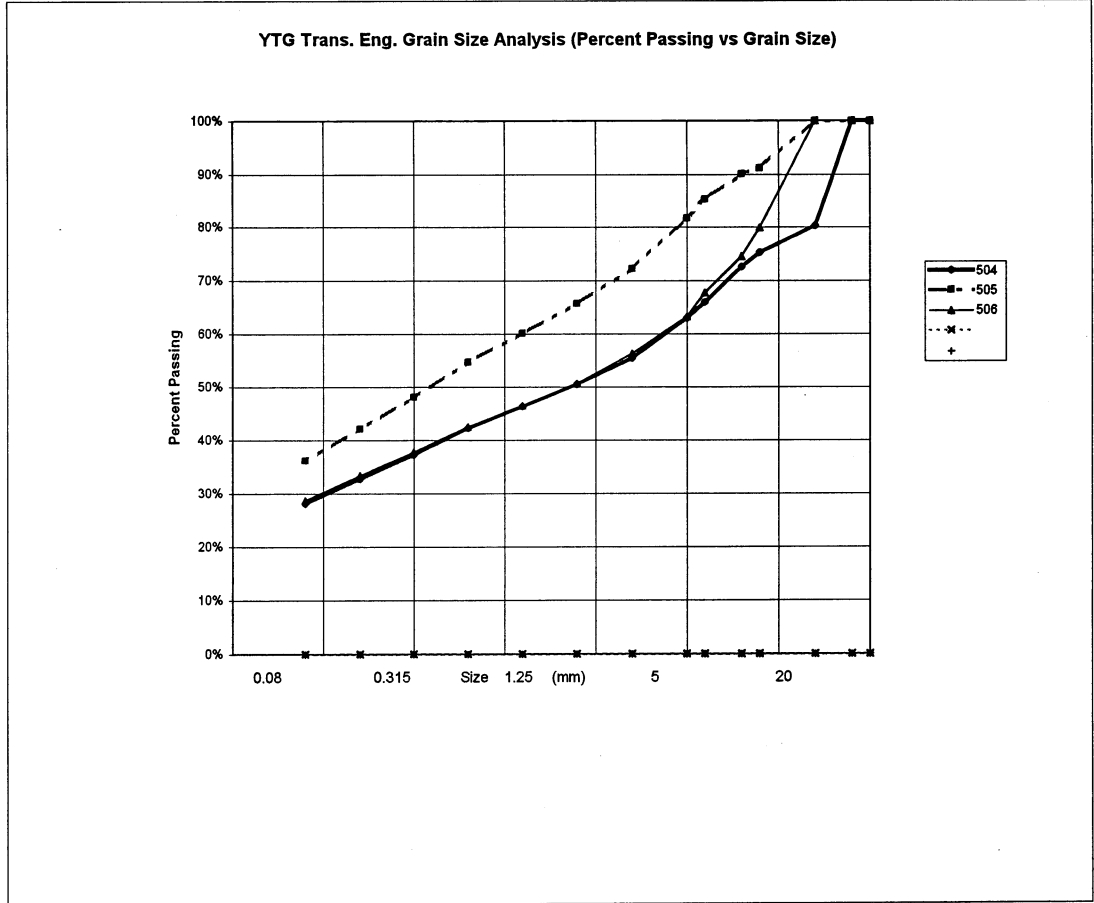
FIELD NO:	504	FIELD No.	505	FIELD No.:	506
LAB NO:	600	LAB No.	601	LAB No:	602
DEPTH:	1.4-1.6	DEPTH	2.8-3.0	DEPTH:	3.7-3.9
TYPE:	AUGER	TYPE	AUGER	TYPE:	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	80%	50.0	100%	50.0	100%
25.0	75%	25.0	91%	25.0	80%
20.0	73%	20.0	90%	20.0	75%
12.5	66%	12.5	85%	12.5	68%
10.0	63%	10.0	82%	10.0	63%
5.0	55%	5.0	72%	5.0	56%
2.5	50%	2.5	66%	2.5	51%
1.25	46%	1.25	60%	1.25	46%
0.630	42%	0.630	55%	0.630	43%
0.315	37%	0.315	48%	0.315	38%
0.160	33%	0.160	42%	0.160	33%
0.080	28%	0.080	36%	0.080	29%

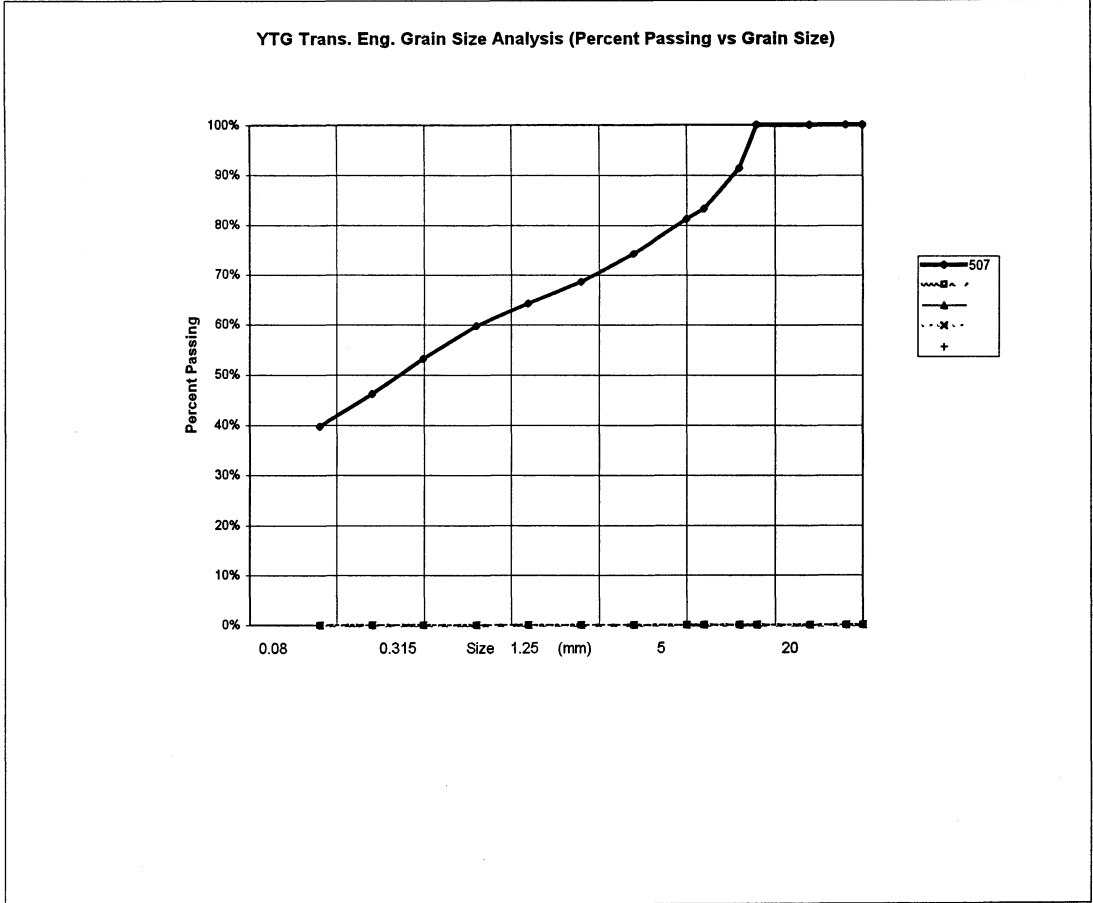
M.C.(%):	8%	M.C.(%):	8%	M.C.(%):	6%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0

% GRAVEL:	45	% GRAVEL:	28	% GRAVEL:	44
% SAND:	27	% SAND:	36	% SAND:	28
% FINES:	28	% FINES:	36	% FINES:	29

CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)
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PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	520-629
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1810+625 25M RT		
LOGGED BY:	S.H.	DATE COMP	99-08-04
=====			
FIELD NO:	507		
LAB NO:	603		
DEPTH:	2.9-3.1		
TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING		
100.0	100%		
80.0	100%		
50.0	100%		
25.0	100%		
20.0	91%		
12.5	83%		
10.0	81%		
5.0	74%		
2.5	69%		
1.25	64%		
0.630	60%		
0.315	53%		
0.160	46%		
0.080	40%		
M.C.(%):	14%		
LIMITS			
LIQUID:	0.0		
PLASTIC:	0.0		
P.I.:	0.0		
% GRAVEL:	26		
% SAND:	34		
% FINES:	40		
CLASSIFICATION:			
SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 520-630
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1810+620 18M LT OUTLET
 LOGGED BY: S.H. DATE COMP 99-08-04

FIELD NO: 508
 LAB NO: 604
 DEPTH: 2.7-2.9
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	92%
20.0	92%
12.5	86%
10.0	82%
5.0	75%
2.5	69%
1.25	63%
0.630	58%
0.315	51%
0.160	45%
0.080	38%

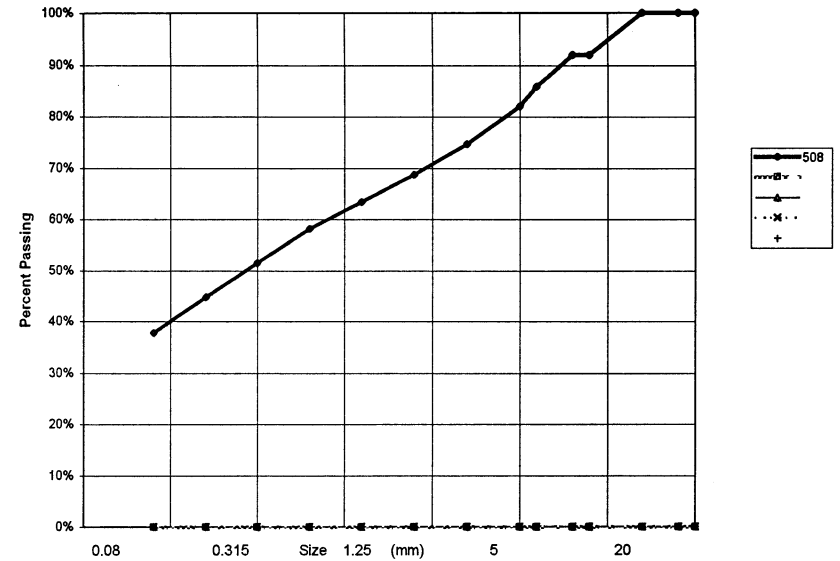
M.C.(%): 12%

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

% GRAVEL: 25
 % SAND: 37
 % FINES: 38

CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM)

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



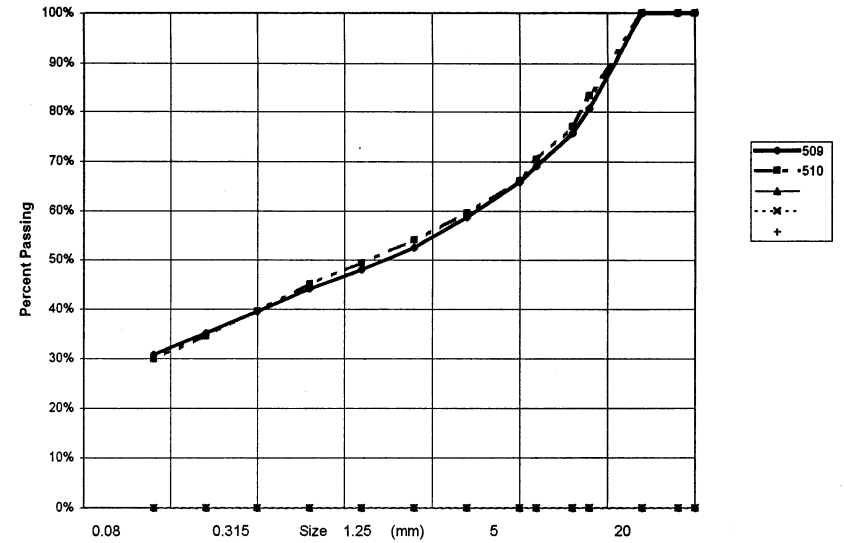
PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 520-631
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1810+535 33M RT
 LOGGED BY: S.H. DATE COMP 8/4/99

FIELD NO:	509	FIELD No.	510
LAB NO:	605	LAB No.	606
DEPTH:	1.4-1.6	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	81%	25.0	83%
20.0	76%	20.0	77%
12.5	69%	12.5	71%
10.0	66%	10.0	66%
5.0	59%	5.0	60%
2.5	52%	2.5	54%
1.25	48%	1.25	49%
0.630	44%	0.630	45%
0.315	40%	0.315	40%
0.160	35%	0.160	35%
0.080	31%	0.080	30%

M.C.(%):	13%	M.C.(%):	10%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	41	% GRAVEL:	40
% SAND:	28	% SAND:	30
% FINES:	31	% FINES:	30
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	

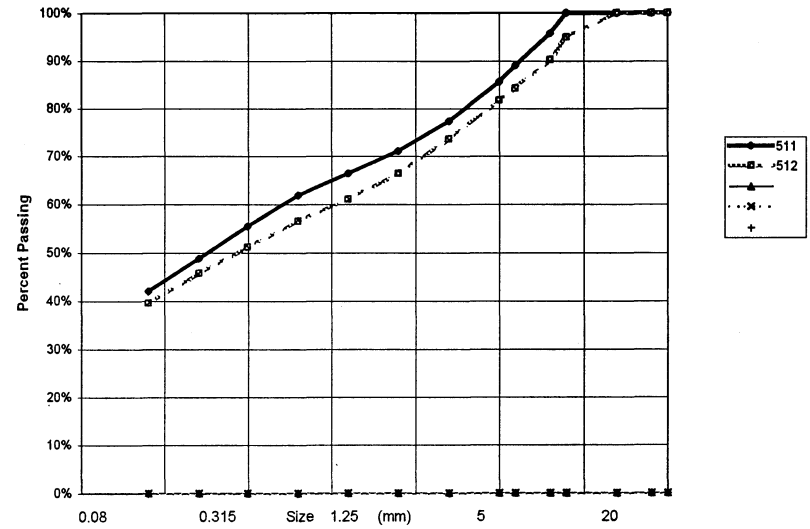
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 520-632
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1810+490 17M RT
 LOGGED BY: S.H. DATE COMP 99-08-04

FIELD NO: 511		FIELD No. 512	
LAB NO: 607		LAB No. 608	
DEPTH: 1.4-1.6		DEPTH 2.8-3.0	
TYPE: AUGER		TYPE AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	95%
20.0	96%	20.0	90%
12.5	89%	12.5	84%
10.0	86%	10.0	82%
5.0	77%	5.0	74%
2.5	71%	2.5	66%
1.25	66%	1.25	61%
0.630	62%	0.630	57%
0.315	56%	0.315	51%
0.160	49%	0.160	46%
0.080	42%	0.080	40%
M.C.(%): 13%		M.C.(%): 11%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	23	% GRAVEL:	26
% SAND:	35	% SAND:	34
% FINES:	42	% FINES:	40
CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)		CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	

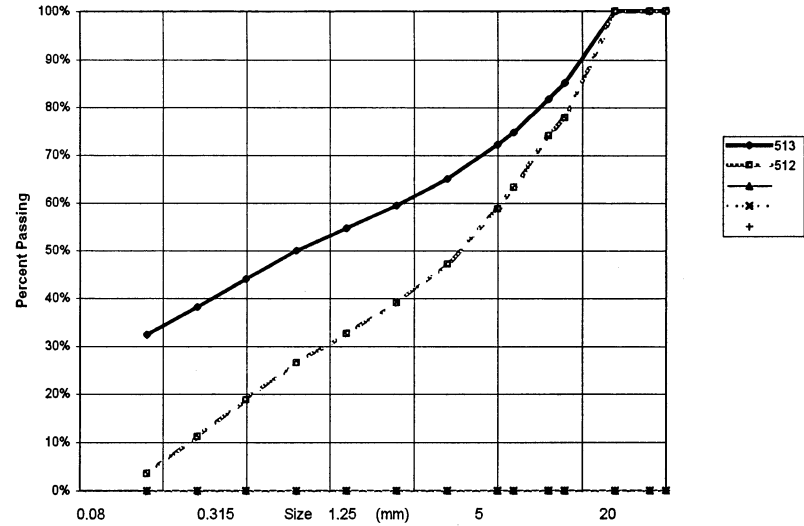
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 520-633
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1810+490 19M LT OUTLET
 LOGGED BY: S.H. DATE COMP 99-08-04

FIELD NO: 513		FIELD No. 512	
LAB NO: 609		LAB No. 608	
DEPTH: 1.4-1.6		DEPTH 2.8-3.0	
TYPE: AUGER		TYPE AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	85%	25.0	78%
20.0	82%	20.0	74%
12.5	75%	12.5	63%
10.0	72%	10.0	59%
5.0	65%	5.0	47%
2.5	59%	2.5	39%
1.25	55%	1.25	33%
0.630	50%	0.630	27%
0.315	44%	0.315	19%
0.160	38%	0.160	11%
0.080	32%	0.080	4%
M.C.(%):	9%	M.C.(%):	8%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	35	% GRAVEL:	53
% SAND:	33	% SAND:	44
% FINES:	32	% FINES:	4
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		POORLY GRADED GRAVEL WITH SAND (GP)	

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 520-634
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1810+415 20M LT OUTLET
 LOGGED BY: W.E DATE COMP 99-08-04

FIELD NO: 515
 LAB NO: 611
 DEPTH: 1.4-1.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	74%
20.0	69%
12.5	67%
10.0	64%
5.0	58%
2.5	54%
1.25	50%
0.630	47%
0.315	42%
0.160	37%
0.080	32%

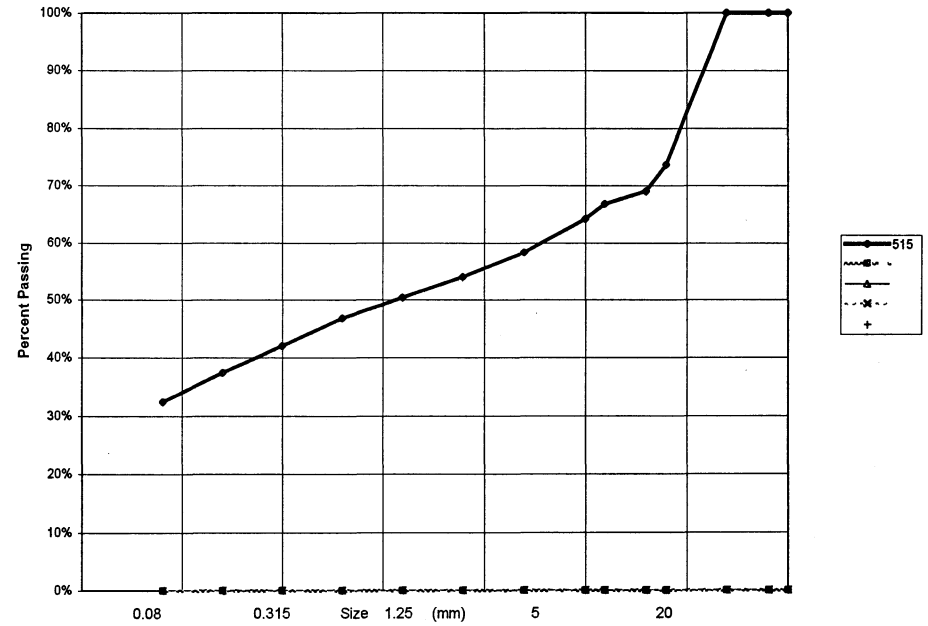
M.C. (%): 17%

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

% GRAVEL: 42
 % SAND: 26
 % FINES: 32

CLASSIFICATION:
 SILTY GRAVEL WITH SAND (GM)

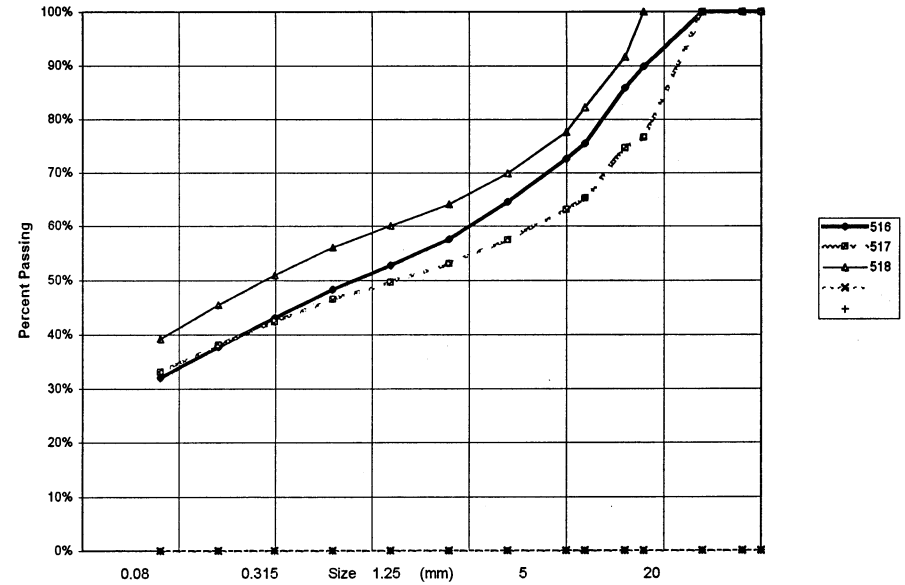
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 520-635
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 AH
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1810 415 20M RT INLET
 LOGGED BY: W.E DATE COMP 99-08-05

FIELD NO: 516		FIELD No. 517		FIELD No: 518	
LAB NO:	612	LAB No.	613	LAB No:	614
DEPTH:	1.4-1.6	DEPTH	2.7-2.9	DEPTH:	3.8-4.0
TYPE:	AUGER	TYPE	AUGER	TYPE:	BULK
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	90%	25.0	77%	25.0	100%
20.0	86%	20.0	75%	20.0	92%
12.5	75%	12.5	65%	12.5	82%
10.0	73%	10.0	63%	10.0	78%
5.0	65%	5.0	57%	5.0	70%
2.5	57%	2.5	53%	2.5	64%
1.25	53%	1.25	50%	1.25	60%
0.630	48%	0.630	46%	0.630	56%
0.315	43%	0.315	42%	0.315	51%
0.160	38%	0.160	38%	0.160	45%
0.080	32%	0.080	33%	0.080	39%
M.C.(%):	12%	M.C.(%):	8%	M.C.(%):	8%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	35	% GRAVEL:	43	% GRAVEL:	30
% SAND:	33	% SAND:	24	% SAND:	31
% FINES:	32	% FINES:	33	% FINES:	39
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

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



PROJECT NUMBER:	092-202101-0329	HOLE No.:	520-636
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK PROJECT		
PROJECT LOCATION:	SEG 13 KM 1799-1722 A/H		
DRILL UNIT:	NODWELL B40-L		
HOLE LOCATION:	1810+345 38M RT		
LOGGED BY:	W.E	DATE COMP	99-08-05

FIELD NO:	519	FIELD No.	520
LAB NO:	615	LAB No.	616
DEPTH:	1.4-1.6	DEPTH	2.9-3.1
TYPE:	AUGER	TYPE	AUGER

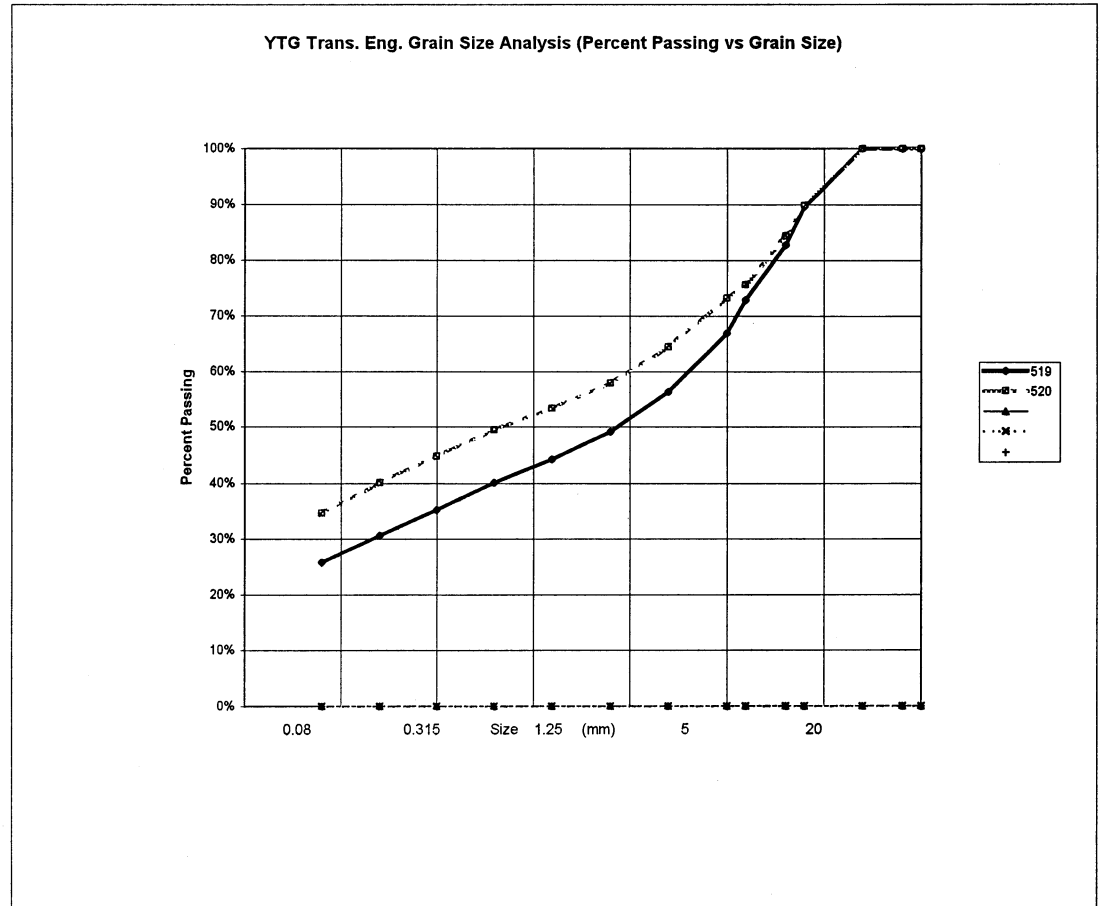
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	90%	25.0	90%
20.0	83%	20.0	84%
12.5	73%	12.5	76%
10.0	67%	10.0	73%
5.0	56%	5.0	65%
2.5	49%	2.5	58%
1.25	44%	1.25	53%
0.630	40%	0.630	49%
0.315	35%	0.315	45%
0.160	30%	0.160	40%
0.080	26%	0.080	35%

M.C.(%):	12%	M.C.(%):	11%
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LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0

% GRAVEL:	44	% GRAVEL:	35
% SAND:	31	% SAND:	30
% FINES:	26	% FINES:	35

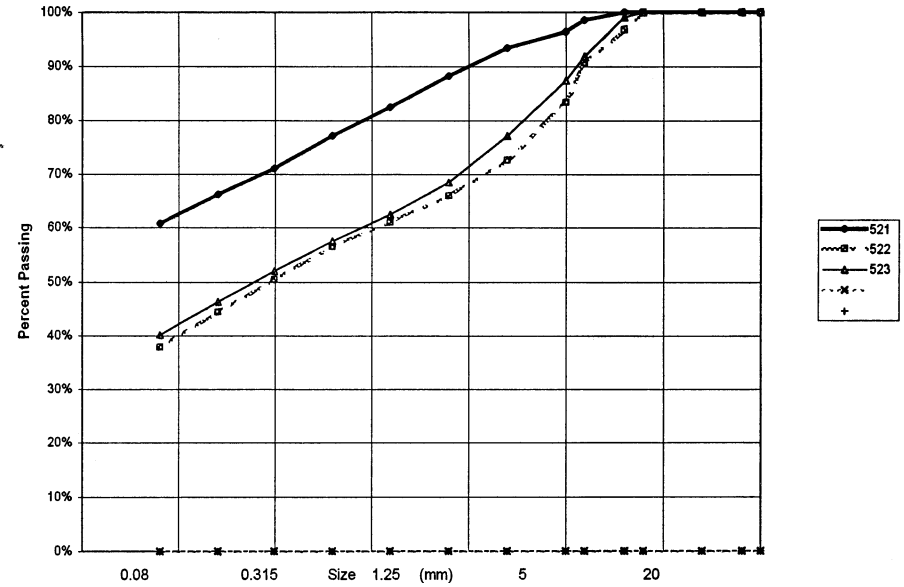
CLASSIFICATION:	CLASSIFICATION:
SILTY GRAVEL WITH SAND (GM)	SILTY GRAVEL WITH SAND (GM)



PROJECT NUMBER:	092-202101-0329	HOLE No.:	520-637
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK PROJECT		
PROJECT LOCATION:	SEG 13 KM 1789-1722 A/H		
DRILL UNIT:	NODWELL B40-L		
HOLE LOCATION:	1810+350 18M LT		
LOGGED BY:	W.E	DATE COMP	99-08-05

FIELD NO:	521	FIELD No:	522	FIELD No:	523
LAB NO:	617	LAB No:	618	LAB No:	619
DEPTH:	1.7-1.9	DEPTH:	2.9-3.1	DEPTH:	4.2-4.4
TYPE:	AUGER	TYPE:	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	100%
20.0	100%	20.0	97%	20.0	99%
12.5	99%	12.5	91%	12.5	92%
10.0	96%	10.0	83%	10.0	87%
5.0	93%	5.0	73%	5.0	77%
2.5	88%	2.5	66%	2.5	68%
1.25	82%	1.25	61%	1.25	62%
0.630	77%	0.630	56%	0.630	57%
0.315	71%	0.315	50%	0.315	52%
0.160	66%	0.160	44%	0.160	46%
0.080	61%	0.080	38%	0.080	40%
M.C.(%):	38%	M.C.(%):	15%	M.C.(%):	9%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	7	% GRAVEL:	27	% GRAVEL:	23
% SAND:	33	% SAND:	35	% SAND:	37
% FINES:	61	% FINES:	38	% FINES:	40
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SANDY SILT (ML)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 520-638
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1810+265 36M RT
 LOGGED BY: W.E DATE COMP 8/5/99

FIELD NO: 524
 LAB NO: 620
 DEPTH: 1.3-1.5
 TYPE: AUGER

SIEVE SIZE PERCENT PASSING

100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	100%
12.5	100%
10.0	100%
5.0	99%
2.5	99%
1.25	99%
0.630	98%
0.315	96%
0.160	94%
0.080	90%

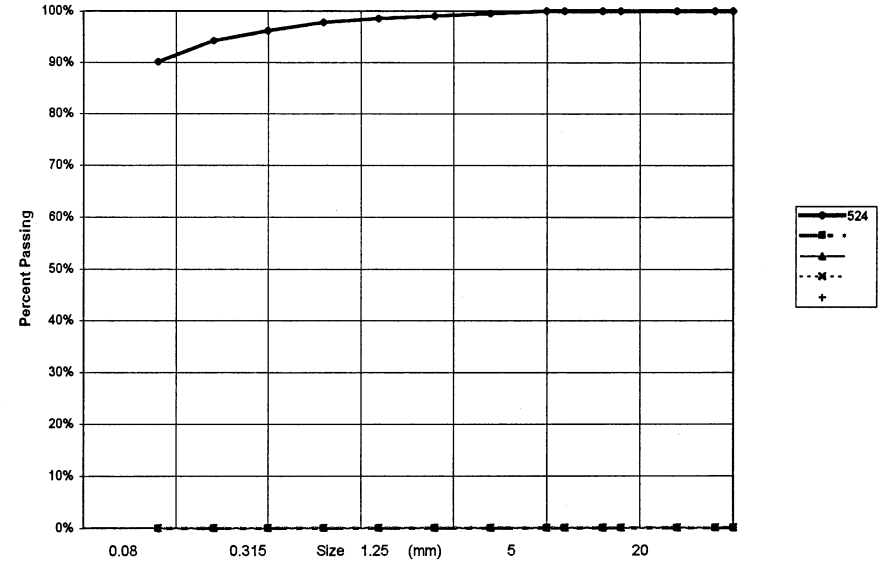
M.C.(%): 32%

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

% GRAVEL: 1
 % SAND: 9
 % FINES: 90

CLASSIFICATION:
 SILT (ML)

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



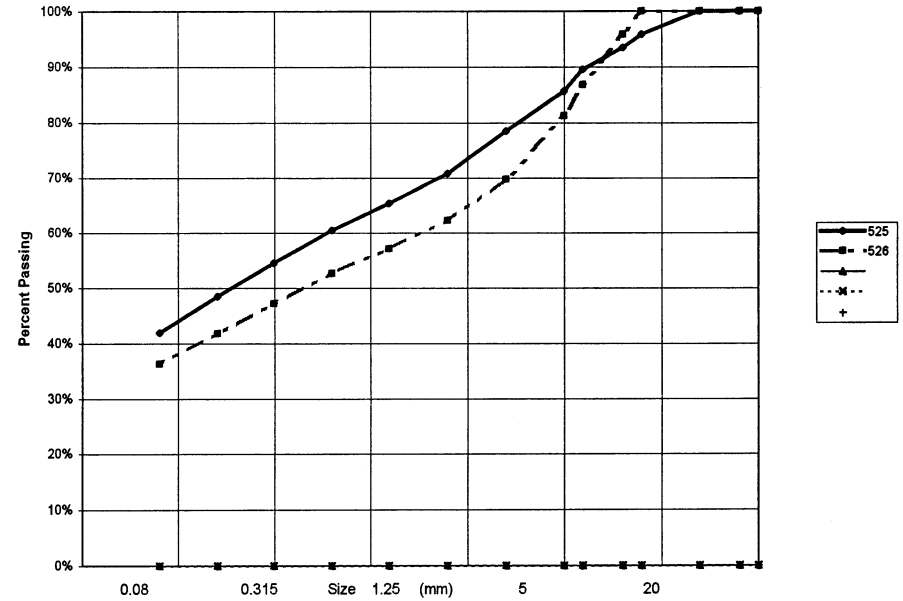
PROJECT NUMBER: 092-202101-0329 HOLE No.: 520-639
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1810+175 37M RT
 LOGGED BY: W.E DATE COMP 8/5/99

FIELD NO:	525	FIELD No:	526
LAB NO:	621	LAB No:	622
DEPTH:	1.3-1.5	DEPTH	3.4-3.6
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	96%	25.0	100%
20.0	93%	20.0	96%
12.5	89%	12.5	87%
10.0	86%	10.0	81%
5.0	78%	5.0	70%
2.5	71%	2.5	62%
1.25	65%	1.25	57%
0.630	61%	0.630	53%
0.315	54%	0.315	47%
0.160	48%	0.160	42%
0.080	42%	0.080	36%

M.C.(%):	12%	M.C.(%):	9%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	22	% GRAVEL:	30
% SAND:	37	% SAND:	34
% FINES:	42	% FINES:	36
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

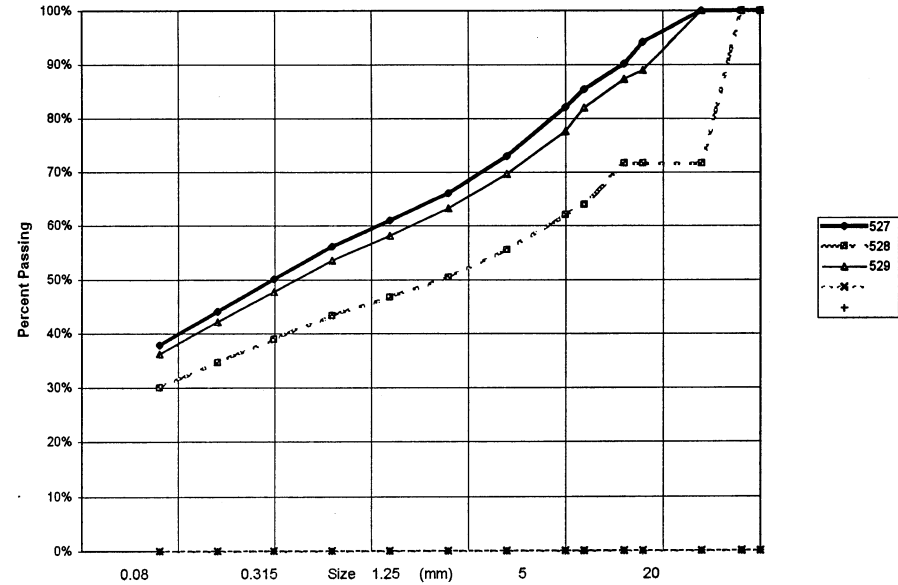
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 520-640
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1810+075 32M RT
 LOGGED BY: W.E DATE COMP 99-08-05

FIELD NO: 527		FIELD No. 528		FIELD No: 529	
LAB NO: 623		LAB No. 624		LAB No: 625	
DEPTH: 1.4-1.6		DEPTH 2.8-3.0		DEPTH: 4.2-4.4	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	72%	50.0	100%
25.0	94%	25.0	72%	25.0	89%
20.0	90%	20.0	72%	20.0	87%
12.5	85%	12.5	64%	12.5	82%
10.0	82%	10.0	62%	10.0	78%
5.0	73%	5.0	55%	5.0	70%
2.5	66%	2.5	50%	2.5	63%
1.25	61%	1.25	47%	1.25	58%
0.630	56%	0.630	43%	0.630	53%
0.315	50%	0.315	39%	0.315	48%
0.160	44%	0.160	35%	0.160	42%
0.080	38%	0.080	30%	0.080	36%
M.C. (%): 9%		M.C. (%): 10%		M.C. (%): 9%	
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	27	% GRAVEL:	45	% GRAVEL:	30
% SAND:	35	% SAND:	25	% SAND:	34
% FINES:	38	% FINES:	30	% FINES:	36
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

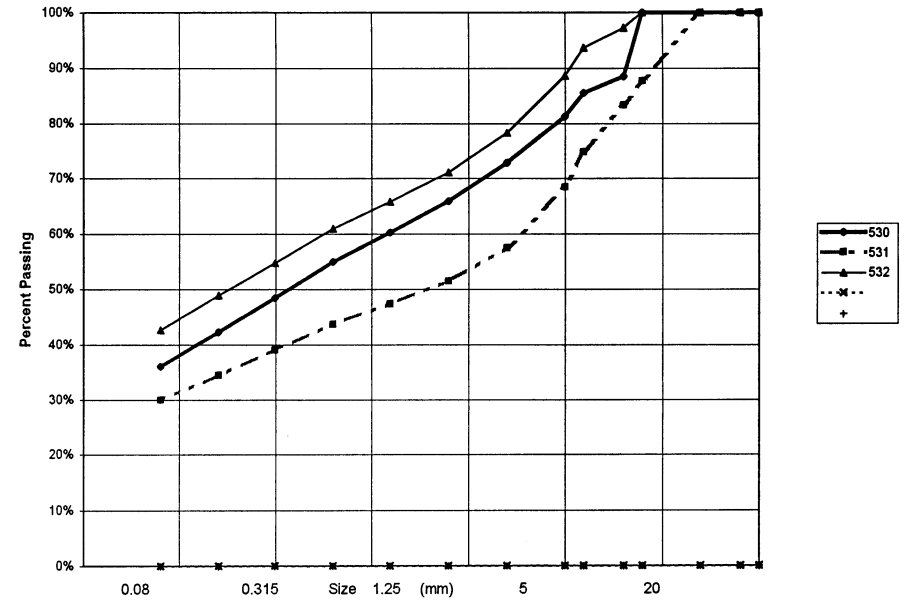
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 520-641
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1809+990 18M RT
 LOGGED BY: W.E DATE COMP 8/5/99

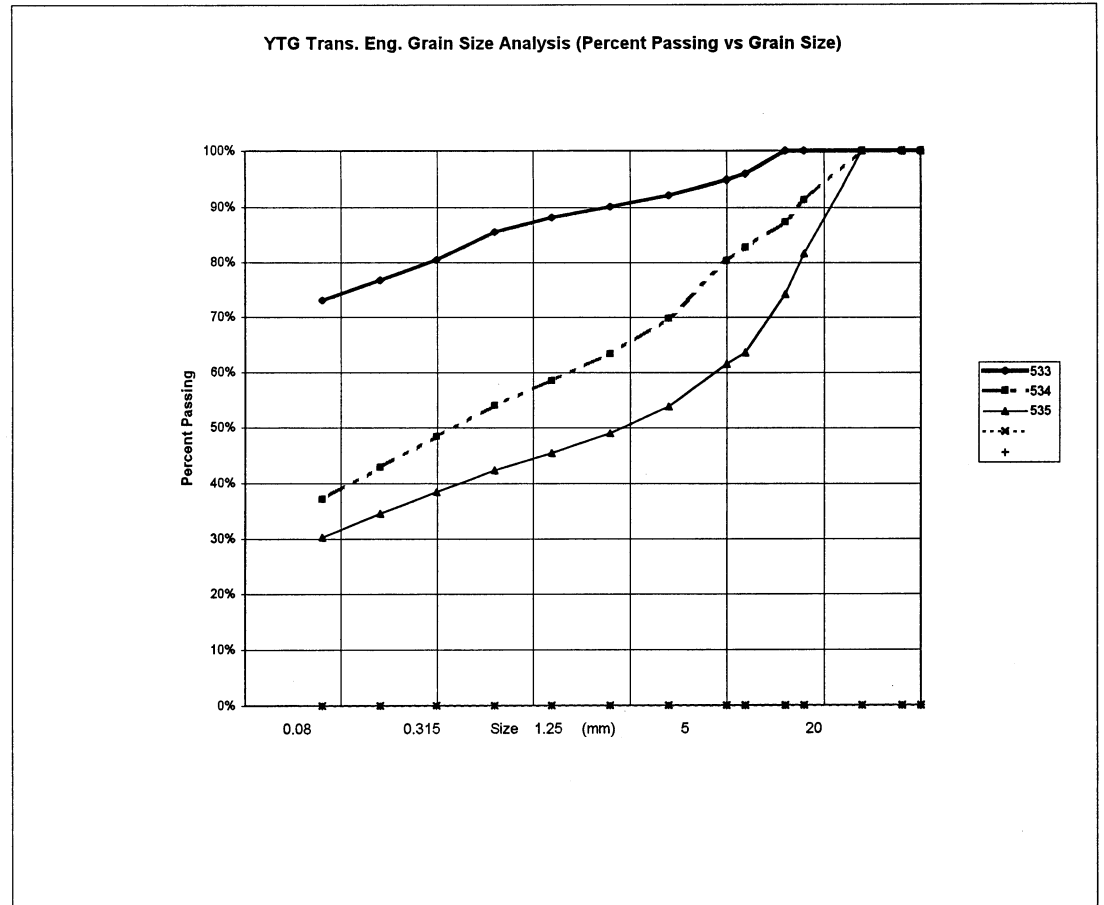
FIELD NO:	530	FIELD No:	531	FIELD No:	532
LAB NO:	626	LAB No:	327	LAB No:	628
DEPTH:	1.4-1.6	DEPTH:	2.9-3.1	DEPTH:	4.2-4.4
TYPE:	AUGER	TYPE:	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	88%	25.0	100%
20.0	89%	20.0	83%	20.0	97%
12.5	86%	12.5	75%	12.5	94%
10.0	81%	10.0	68%	10.0	89%
5.0	73%	5.0	57%	5.0	78%
2.5	66%	2.5	52%	2.5	71%
1.25	60%	1.25	47%	1.25	66%
0.630	55%	0.630	44%	0.630	61%
0.315	48%	0.315	39%	0.315	55%
0.160	42%	0.160	34%	0.160	49%
0.080	36%	0.080	30%	0.080	43%
M.C.(%):	11%	M.C.(%):	9%	M.C.(%):	9%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	27	% GRAVEL:	43	% GRAVEL:	22
% SAND:	37	% SAND:	28	% SAND:	36
% FINES:	36	% FINES:	30	% FINES:	43
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 520-642
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1809+990 18M LT
 LOGGED BY: W.E DATE COMP 8/5/99

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
533	629	0.4-0.6	AUGER	534	630	1.6-1.8	AUGER	535	631	3.0-3.2	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	91%	25.0	82%	25.0	82%	25.0	82%	25.0	82%
20.0	100%	20.0	87%	20.0	74%	20.0	74%	20.0	74%	20.0	74%
12.5	96%	12.5	83%	12.5	64%	12.5	64%	12.5	64%	12.5	64%
10.0	95%	10.0	80%	10.0	62%	10.0	62%	10.0	62%	10.0	62%
5.0	92%	5.0	70%	5.0	54%	5.0	54%	5.0	54%	5.0	54%
2.5	90%	2.5	63%	2.5	49%	2.5	49%	2.5	49%	2.5	49%
1.25	88%	1.25	59%	1.25	45%	1.25	45%	1.25	45%	1.25	45%
0.630	85%	0.630	54%	0.630	42%	0.630	42%	0.630	42%	0.630	42%
0.315	80%	0.315	48%	0.315	38%	0.315	38%	0.315	38%	0.315	38%
0.160	77%	0.160	43%	0.160	34%	0.160	34%	0.160	34%	0.160	34%
0.080	73%	0.080	37%	0.080	30%	0.080	30%	0.080	30%	0.080	30%
M.C.(%):	30%	M.C.(%):	13%	M.C.(%):	9%	M.C.(%):	9%	M.C.(%):	9%	M.C.(%):	9%
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	8	% GRAVEL:	30	% GRAVEL:	46	% GRAVEL:	46	% GRAVEL:	46	% GRAVEL:	46
% SAND:	19	% SAND:	33	% SAND:	24	% SAND:	24	% SAND:	24	% SAND:	24
% FINES:	73	% FINES:	37	% FINES:	30	% FINES:	30	% FINES:	30	% FINES:	30
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILT WITH SAND (ML)		SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	



PROJECT NUMBER:	092-202101-0329	HOLE No.:	520-643
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK PROJECT		
PROJECT LOCATION:	SEG 13 KM 1799-1722 A/H		
DRILL UNIT:	NODWELL B40-L		
HOLE LOCATION:	1809+895 28M RT		
LOGGED BY:	W.E	DATE COMP	99-08-05

FIELD NO:	536	FIELD No.	537
LAB NO:	632	LAB No.	633
DEPTH:	1.4-1.6	DEPTH	2.9-3.1
TYPE:	AUGER	TYPE	AUGER

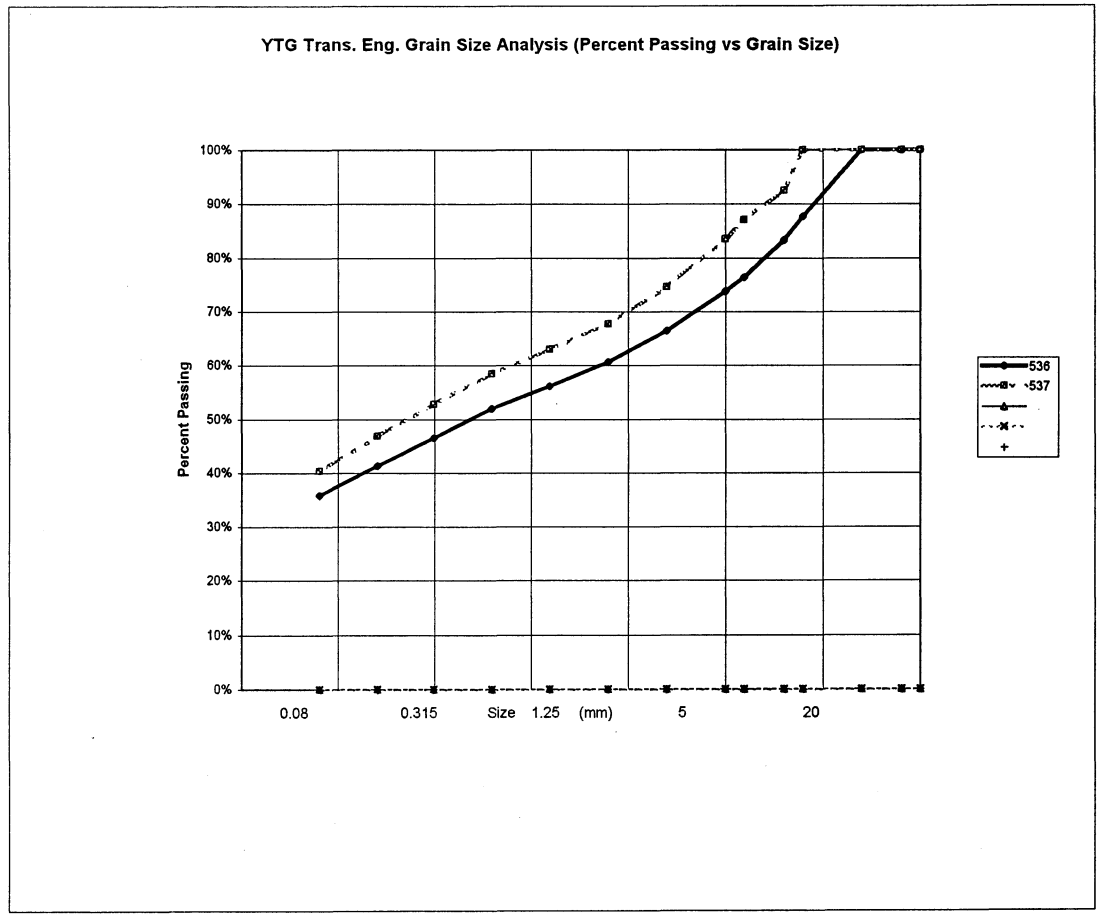
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	88%	25.0	100%
20.0	83%	20.0	93%
12.5	76%	12.5	87%
10.0	74%	10.0	84%
5.0	66%	5.0	75%
2.5	61%	2.5	68%
1.25	56%	1.25	63%
0.630	52%	0.630	59%
0.315	47%	0.315	53%
0.160	41%	0.160	47%
0.080	36%	0.080	40%

M.C.(%):	9%	M.C.(%):	11%
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LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0

% GRAVEL:	34	% GRAVEL:	25
% SAND:	31	% SAND:	34
% FINES:	36	% FINES:	40

CLASSIFICATION:	CLASSIFICATION:
SILTY GRAVEL WITH SAND (GM)	SILTY SAND WITH GRAVEL (SM)



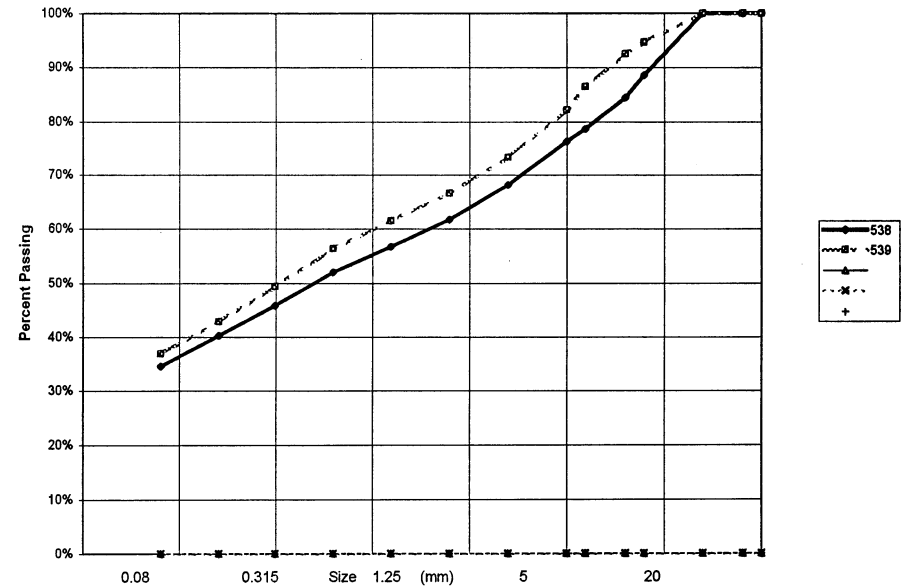
PROJECT NUMBER: 092-202101-0329 HOLE No.: 520-644
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1809+800 40M RT
 LOGGED BY: W.E DATE COMP 99-08-05

FIELD NO:	538	FIELD No.	539
LAB NO:	634	LAB No.	635
DEPTH:	1.4-1.6	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	89%	25.0	95%
20.0	84%	20.0	93%
12.5	79%	12.5	87%
10.0	76%	10.0	82%
5.0	68%	5.0	73%
2.5	62%	2.5	67%
1.25	57%	1.25	61%
0.630	52%	0.630	56%
0.315	46%	0.315	49%
0.160	40%	0.160	43%
0.080	35%	0.080	37%

M.C.(%):	8%	M.C.(%):	10%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	32	% GRAVEL:	27
% SAND:	34	% SAND:	36
% FINES:	35	% FINES:	37
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

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



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	521-646
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1809+675 21M LT		
LOGGED BY:	WE	DATE COMP	99-08-05

FIELD NO:	540	FIELD No.	541
LAB NO:	636	LAB No.	637
DEPTH:	1.8-2.0	DEPTH	4.2-4.4
TYPE:	AUGER	TYPE	AUGER

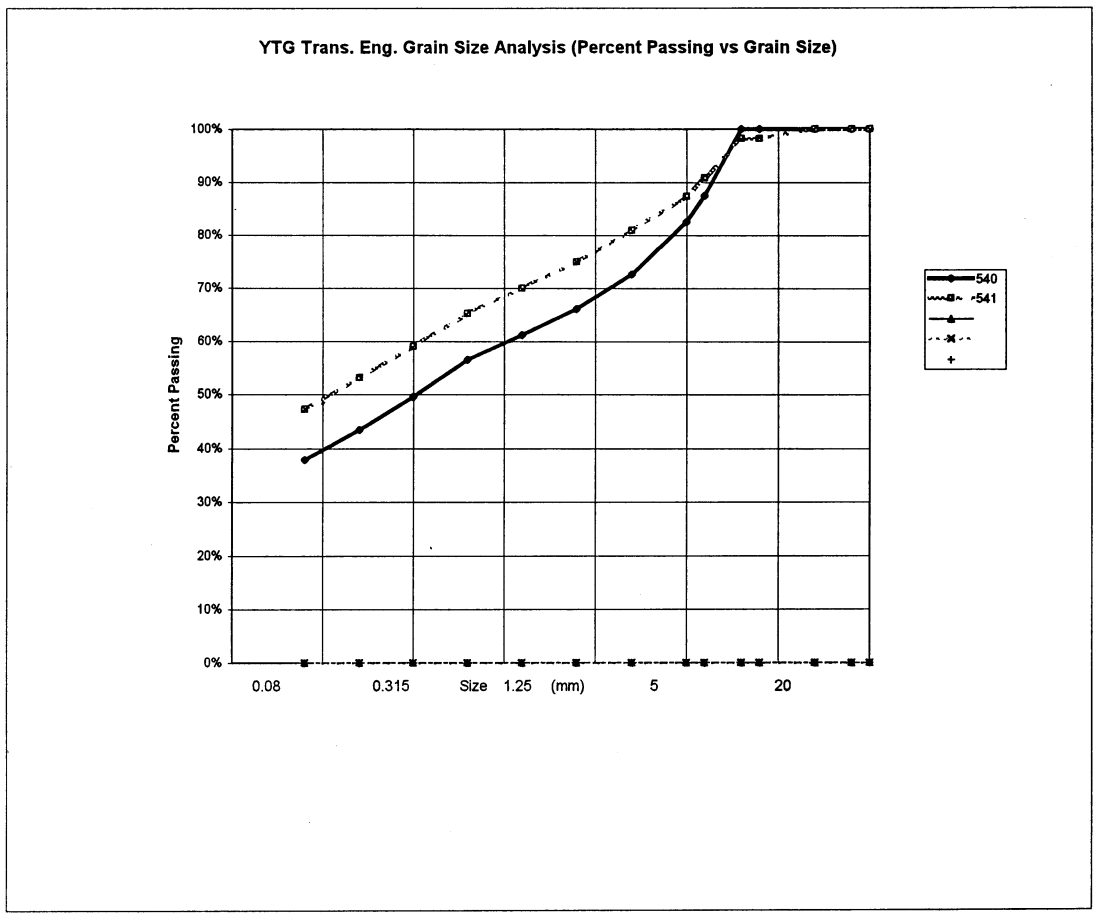
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	98%
20.0	100%	20.0	98%
12.5	87%	12.5	91%
10.0	83%	10.0	87%
5.0	73%	5.0	81%
2.5	66%	2.5	75%
1.25	61%	1.25	70%
0.630	56%	0.630	65%
0.315	50%	0.315	59%
0.160	43%	0.160	53%
0.080	38%	0.080	47%

M.C.(%):	18%	M.C.(%):	20%
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LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0

% GRAVEL:	27	% GRAVEL:	19
% SAND:	35	% SAND:	34
% FINES:	38	% FINES:	47

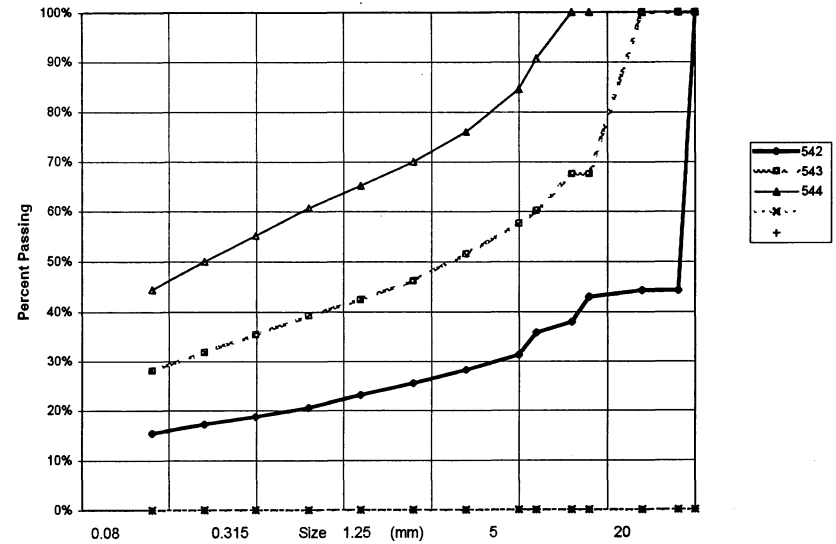
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 521-647
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1809+530 18M RT
 LOGGED BY: WE DATE COMP 99-08-05

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:	FIELD No:	LAB No:	DEPTH:	TYPE:
542	638	1.8-2.0	AUGER	543	639	2.8-3.0	AUGER	544	640	3.8-4.0	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	44%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	44%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	43%	25.0	68%	25.0	100%	25.0	100%	25.0	100%	25.0	100%
20.0	38%	20.0	68%	20.0	100%	20.0	100%	20.0	100%	20.0	100%
12.5	36%	12.5	60%	12.5	91%	12.5	91%	12.5	91%	12.5	91%
10.0	31%	10.0	58%	10.0	84%	10.0	84%	10.0	84%	10.0	84%
5.0	28%	5.0	52%	5.0	76%	5.0	76%	5.0	76%	5.0	76%
2.5	26%	2.5	46%	2.5	70%	2.5	70%	2.5	70%	2.5	70%
1.25	23%	1.25	42%	1.25	65%	1.25	65%	1.25	65%	1.25	65%
0.630	20%	0.630	39%	0.630	61%	0.630	61%	0.630	61%	0.630	61%
0.315	19%	0.315	35%	0.315	55%	0.315	55%	0.315	55%	0.315	55%
0.160	17%	0.160	32%	0.160	50%	0.160	50%	0.160	50%	0.160	50%
0.080	15%	0.080	28%	0.080	44%	0.080	44%	0.080	44%	0.080	44%
M.C.(%):	7%	M.C.(%):	11%	M.C.(%):	17%	M.C.(%):	17%	M.C.(%):	17%	M.C.(%):	17%
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	72	% GRAVEL:	48	% GRAVEL:	24	% GRAVEL:	24	% GRAVEL:	24	% GRAVEL:	24
% SAND:	13	% SAND:	23	% SAND:	32	% SAND:	32	% SAND:	32	% SAND:	32
% FINES:	15	% FINES:	28	% FINES:	44	% FINES:	44	% FINES:	44	% FINES:	44
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 521-648
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1809+520 20M LT
 LOGGED BY: WE DATE COMP 99-08-05

FIELD NO: 545	FIELD No. 546	FIELD No: 547
LAB NO: 641	LAB No. 642	LAB No: 643
DEPTH: 1.4-1.6	DEPTH 2.9-3.1	DEPTH: 3.9-4.1
TYPE: AUGER	TYPE AUGER	TYPE: AUGER

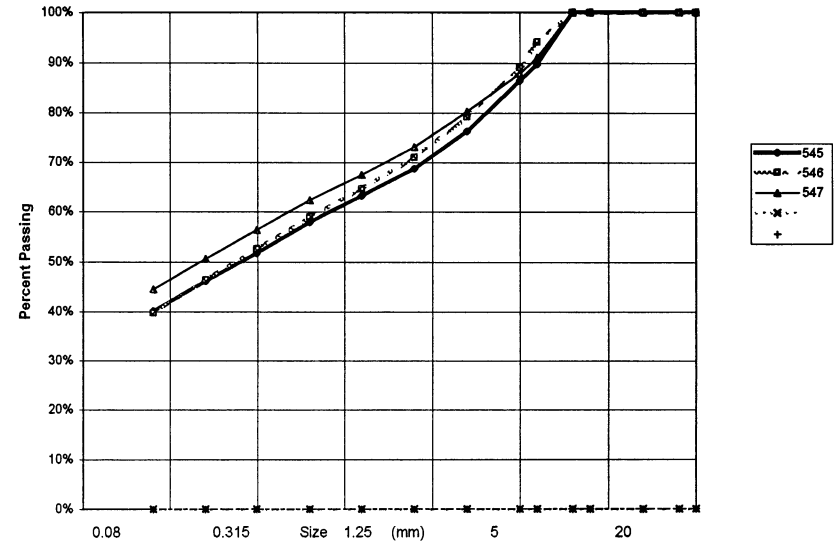
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	100%
20.0	100%	20.0	100%	20.0	100%
12.5	90%	12.5	94%	12.5	91%
10.0	86%	10.0	89%	10.0	88%
5.0	76%	5.0	79%	5.0	80%
2.5	69%	2.5	71%	2.5	73%
1.25	63%	1.25	65%	1.25	67%
0.630	58%	0.630	59%	0.630	62%
0.315	52%	0.315	53%	0.315	56%
0.160	46%	0.160	46%	0.160	51%
0.080	40%	0.080	40%	0.080	44%

M.C.(%): 16%	M.C.(%): 11%	M.C.(%): 14%
LIMITS	LIMITS	LIMITS
LIQUID: 0.0	LIQUID: 0.0	LIQUID: 0.0
PLASTIC: 0.0	PLASTIC: 0.0	PLASTIC: 0.0
P.I.: 0.0	P.I.: 0.0	P.I.: 0.0

% GRAVEL: 24	% GRAVEL: 21	% GRAVEL: 20
% SAND: 36	% SAND: 39	% SAND: 36
% FINES: 40	% FINES: 40	% FINES: 44

CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)
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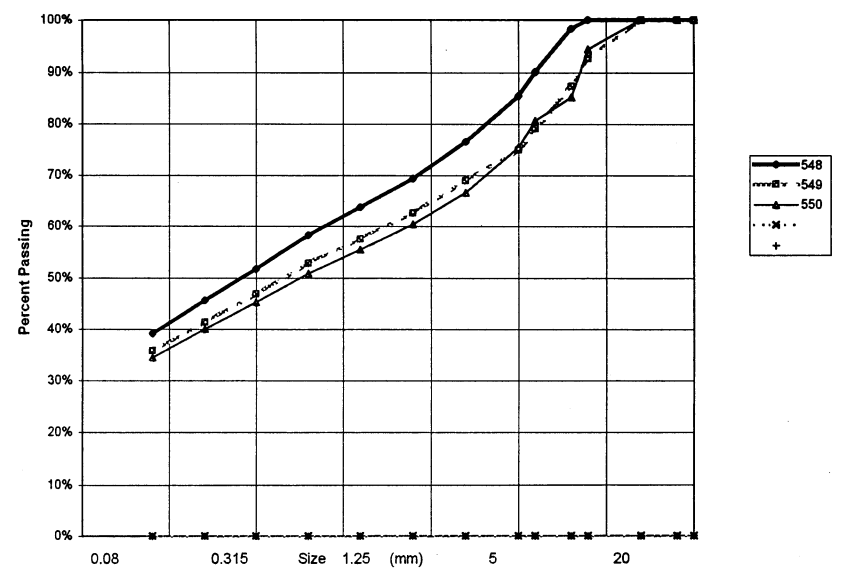
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 521-649
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1809+410 40 M RT
 LOGGED BY: WE DATE COMP 99-08-06

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH	TYPE	FIELD No:	LAB No:	DEPTH:	TYPE:
548	644	1.3-1.5	AUGER	549	645	2.9-3.1	AUGER	550	646	4.2-4.4	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	93%	25.0	94%	25.0	94%	25.0	94%	25.0	94%
20.0	98%	20.0	87%	20.0	85%	20.0	85%	20.0	85%	20.0	85%
12.5	90%	12.5	79%	12.5	81%	12.5	81%	12.5	81%	12.5	81%
10.0	86%	10.0	75%	10.0	75%	10.0	75%	10.0	75%	10.0	75%
5.0	77%	5.0	69%	5.0	67%	5.0	67%	5.0	67%	5.0	67%
2.5	69%	2.5	63%	2.5	60%	2.5	60%	2.5	60%	2.5	60%
1.25	64%	1.25	58%	1.25	55%	1.25	55%	1.25	55%	1.25	55%
0.630	58%	0.630	53%	0.630	51%	0.630	51%	0.630	51%	0.630	51%
0.315	52%	0.315	47%	0.315	45%	0.315	45%	0.315	45%	0.315	45%
0.160	46%	0.160	41%	0.160	40%	0.160	40%	0.160	40%	0.160	40%
0.080	39%	0.080	36%	0.080	34%	0.080	34%	0.080	34%	0.080	34%
M.C.(%):	8%	M.C.(%):	9%	M.C.(%):	8%	M.C.(%):	8%	M.C.(%):	8%	M.C.(%):	8%
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	23	% GRAVEL:	31	% GRAVEL:	33	% GRAVEL:	33	% GRAVEL:	33	% GRAVEL:	33
% SAND:	37	% SAND:	33	% SAND:	33	% SAND:	32	% SAND:	32	% SAND:	32
% FINES:	39	% FINES:	36	% FINES:	36	% FINES:	34	% FINES:	34	% FINES:	34
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 521-650
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK-SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1809+255 21M RT
 LOGGED BY: WE DATE COMP 99-08-06

FIELD NO: 551
 LAB NO: 647
 DEPTH: 2.6-2.8
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	100%
12.5	100%
10.0	99%
5.0	95%
2.5	91%
1.25	86%
0.630	75%
0.315	47%
0.160	26%
0.080	18%

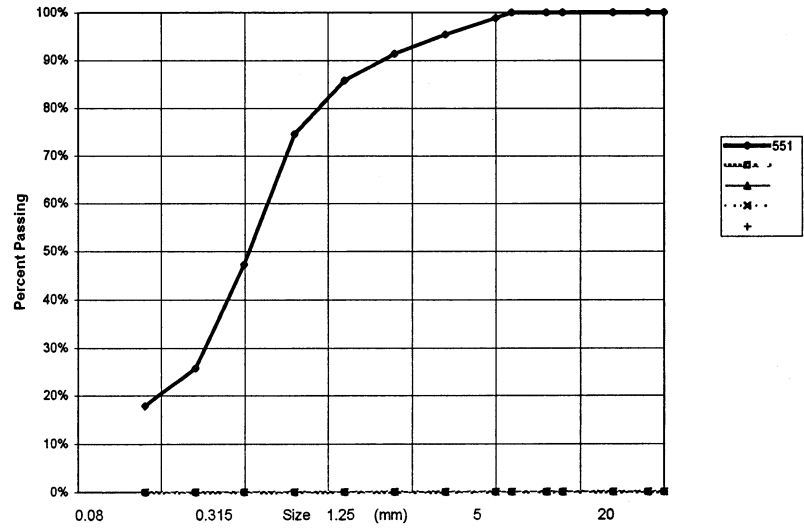
M.C.(%): 26%

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

% GRAVEL: 5
 % SAND: 77
 % FINES: 18

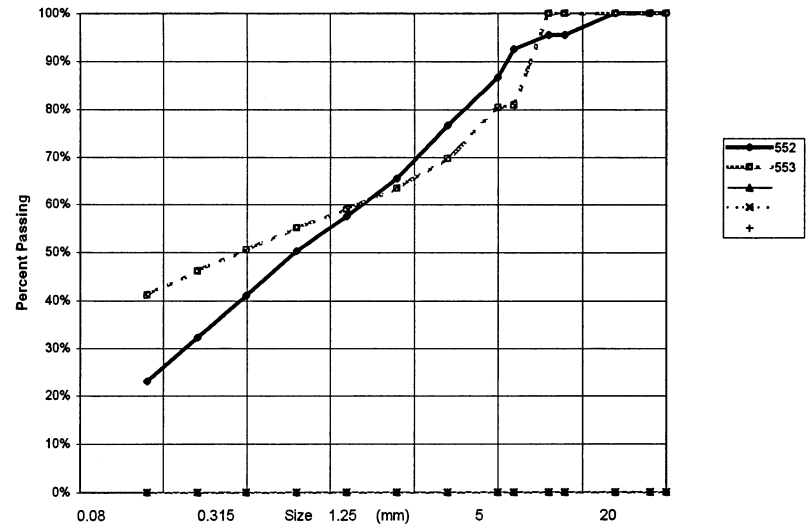
CLASSIFICATION:
 SILTY SAND (SM)

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



PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	521-651
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1809+250 20M RT		
LOGGED BY:	WE	DATE COMP	99-08-06
=====			
FIELD NO:	552	FIELD No.	553
LAB NO:	648	LAB No.	649
DEPTH:	3.0-3.2	DEPTH	4.3-4.5
TYPE:	AUGER	TYPE	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	96%	25.0	100%
20.0	96%	20.0	100%
12.5	92%	12.5	81%
10.0	87%	10.0	80%
5.0	77%	5.0	70%
2.5	65%	2.5	63%
1.25	58%	1.25	59%
0.630	50%	0.630	55%
0.315	41%	0.315	50%
0.160	32%	0.160	46%
0.080	23%	0.080	41%
M.C.(%):	12%	M.C.(%):	18%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	23	% GRAVEL:	30
% SAND:	54	% SAND:	29
% FINES:	23	% FINES:	41
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)	

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



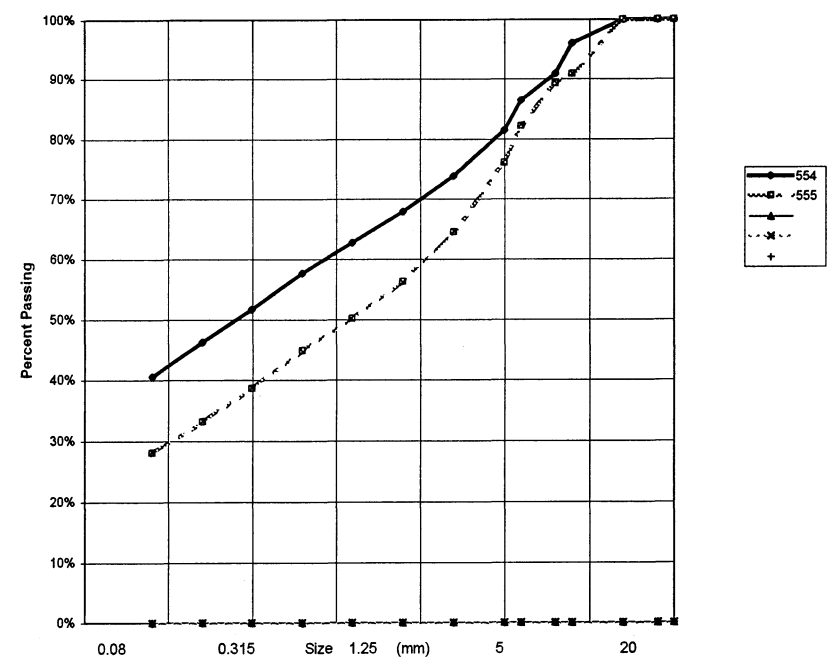
PROJECT NUMBER:	091-202101-0329-199	HOLE No.:	521-652
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1809+150 35M RT		
LOGGED BY:	WE	DATE COMP	99-08-06

FIELD NO:	554	FIELD No.	555
LAB NO:	650	LAB No.	651
DEPTH:	1.2-1.6	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	96%	25.0	91%
20.0	91%	20.0	89%
12.5	86%	12.5	82%
10.0	81%	10.0	76%
5.0	74%	5.0	65%
2.5	68%	2.5	56%
1.25	63%	1.25	50%
0.630	58%	0.630	45%
0.315	52%	0.315	39%
0.160	46%	0.160	33%
0.080	41%	0.080	28%

M.C.(%):	13%	M.C.(%):	9%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	26	% GRAVEL:	35
% SAND:	33	% SAND:	36
% FINES:	41	% FINES:	28
CLASSIFICATION:	CLASSIFICATION:		
SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)		

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 521-653
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1809+025 21M RT
 LOGGED BY: WE DATE COMP 99-08-06

FIELD NO: 556
 LAB NO: 652
 DEPTH: 1.6-1.8
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	95%
20.0	89%
12.5	86%
10.0	82%
5.0	74%
2.5	65%
1.25	60%
0.630	55%
0.315	49%
0.160	43%
0.080	36%

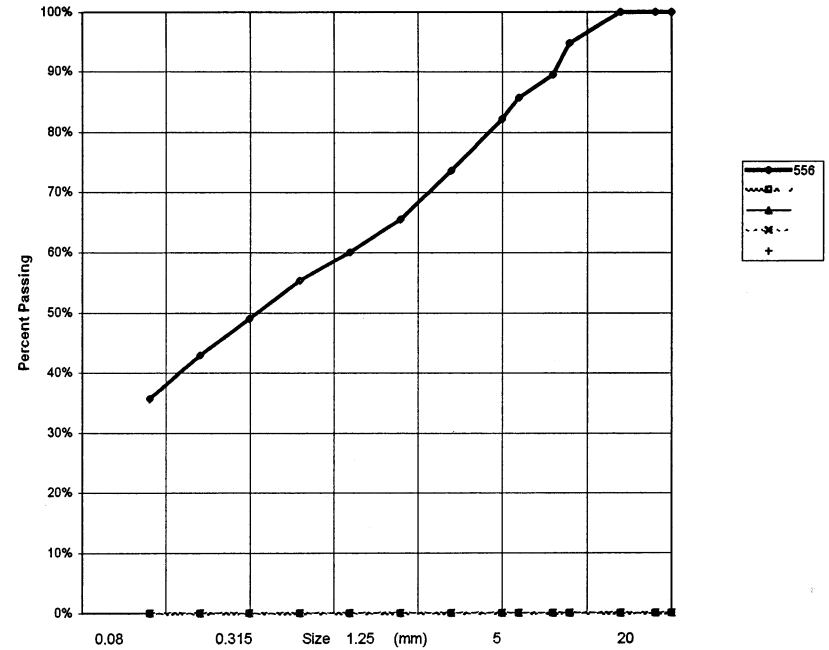
M.C.(%): 17%

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

% GRAVEL: 26
 % SAND: 38
 % FINES: 36

CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM)

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 521-654
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1809+025 25M RT
 LOGGED BY: WE DATE COMP 99-08-06

FIELD NO: 557
 LAB NO: 653
 DEPTH: 2.8-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	92%
20.0	89%
12.5	77%
10.0	73%
5.0	65%
2.5	58%
1.25	53%
0.630	48%
0.315	43%
0.160	38%
0.080	33%

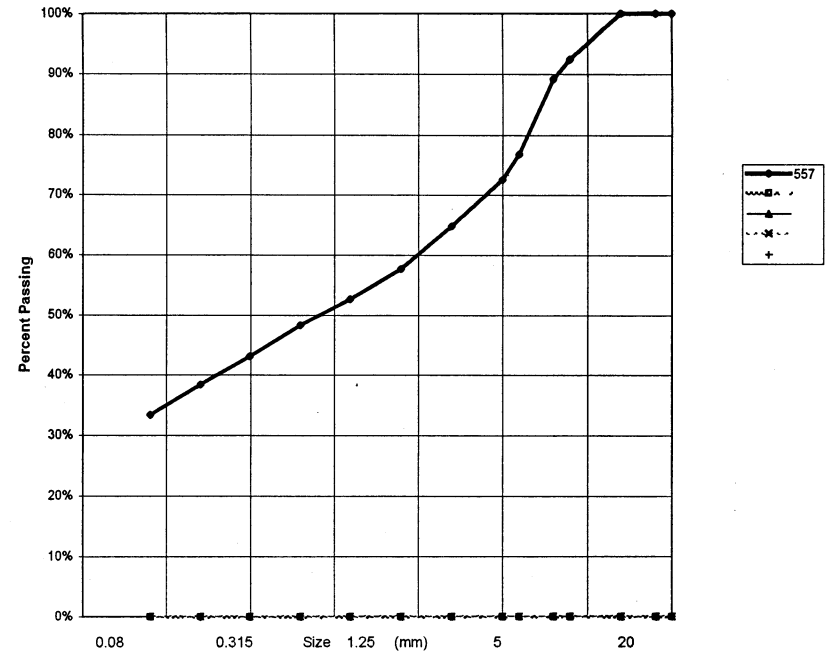
M.C.(%): 11%

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

% GRAVEL: 35
 % SAND: 31
 % FINES: 33

CLASSIFICATION:
 SILTY GRAVEL WITH SAND (GM)

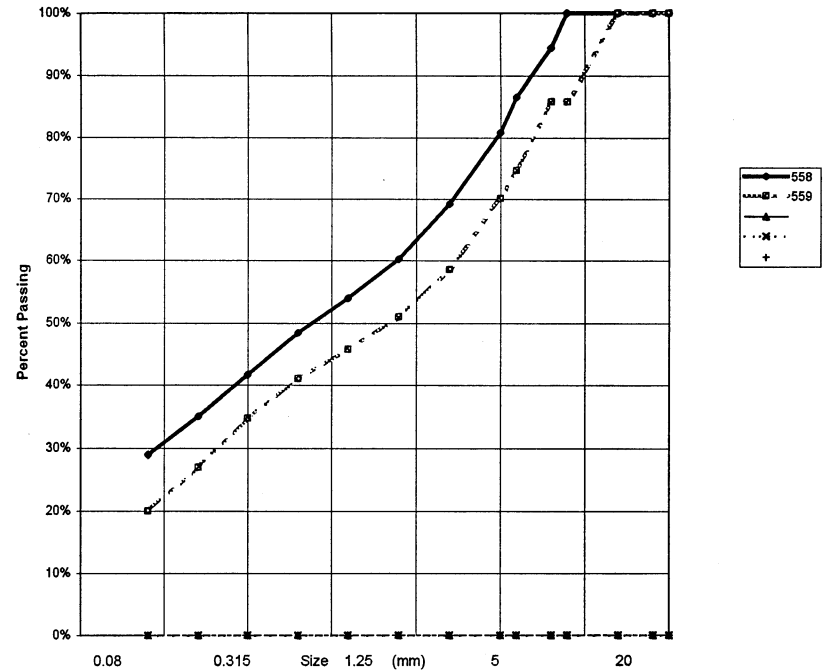
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 521-655
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1808+950 40M RT
 LOGGED BY: WE DATE COMP 99-08-06

FIELD NO: 558		FIELD No. 559	
LAB NO: 654		LAB No. 655	
DEPTH: 1.6-1.8		DEPTH 2.8-3.0	
TYPE: AUGER		TYPE AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	86%
20.0	94%	20.0	86%
12.5	87%	12.5	75%
10.0	81%	10.0	70%
5.0	69%	5.0	59%
2.5	60%	2.5	51%
1.25	54%	1.25	46%
0.630	48%	0.630	41%
0.315	42%	0.315	35%
0.160	35%	0.160	27%
0.080	29%	0.080	20%
M.C.(%): 11%		M.C.(%): 10%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	31	% GRAVEL:	41
% SAND:	40	% SAND:	39
% FINES:	29	% FINES:	20
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)	

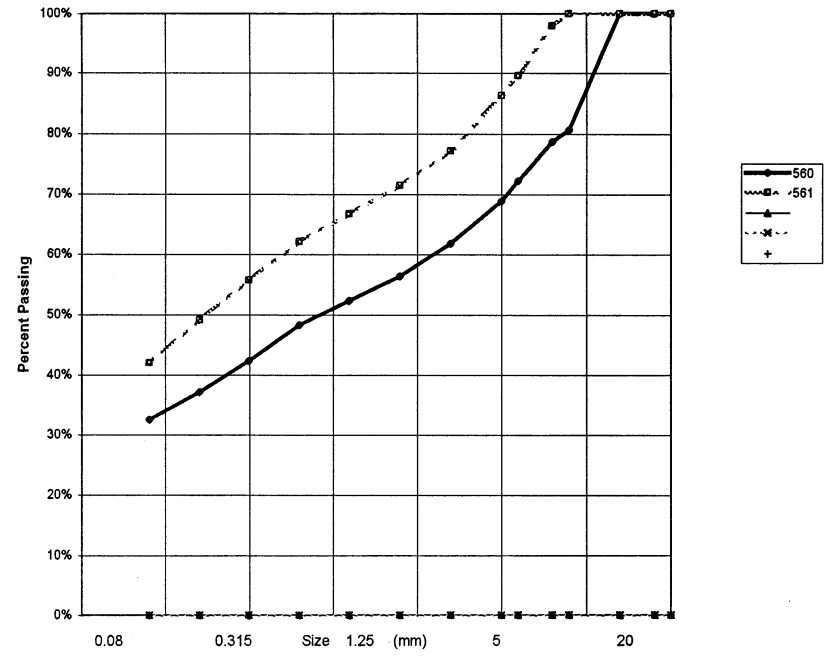
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 521-656
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1808+865 22M RT
 LOGGED BY: WE DATE COMP 99-08-06

FIELD NO: 560		FIELD No. 561	
LAB NO: 656		LAB No. 657	
DEPTH: 1.6-1.8		DEPTH 2.6-2.8	
TYPE: AUGER		TYPE AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	81%	25.0	100%
20.0	79%	20.0	98%
12.5	72%	12.5	90%
10.0	69%	10.0	86%
5.0	62%	5.0	77%
2.5	56%	2.5	71%
1.25	52%	1.25	67%
0.630	48%	0.630	62%
0.315	42%	0.315	56%
0.160	37%	0.160	49%
0.080	33%	0.080	42%
M.C.(%): 12%		M.C.(%): 17%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	38	% GRAVEL:	23
% SAND:	29	% SAND:	35
% FINES:	33	% FINES:	42
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

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



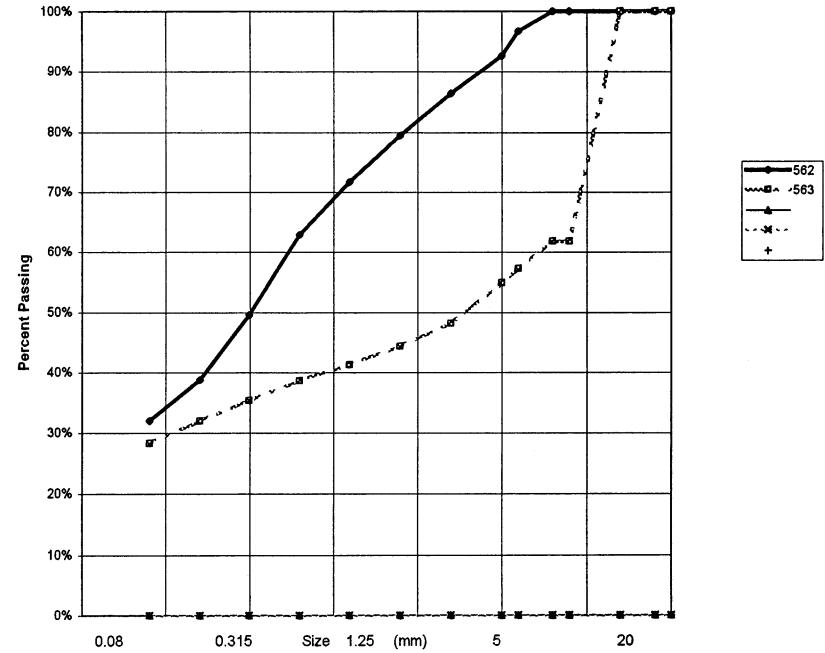
PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 521-657
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1808+860 20M LT
 LOGGED BY: WE DATE COMP 99-08-06

FIELD NO:	562	FIELD No.	563
LAB NO:	658	LAB No.	659
DEPTH:	1.4-1.6	DEPTH	2.9-3.1
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	62%
20.0	100%	20.0	62%
12.5	97%	12.5	57%
10.0	93%	10.0	55%
5.0	86%	5.0	48%
2.5	79%	2.5	44%
1.25	72%	1.25	41%
0.630	63%	0.630	39%
0.315	50%	0.315	35%
0.160	39%	0.160	32%
0.080	32%	0.080	28%

M.C. (%):	26%	M.C. (%):	15%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	14	% GRAVEL:	52
% SAND:	54	% SAND:	20
% FINES:	32	% FINES:	28
CLASSIFICATION:	SILTY SAND (SM)	CLASSIFICATION:	SILTY GRAVEL WITH SAND (GM)

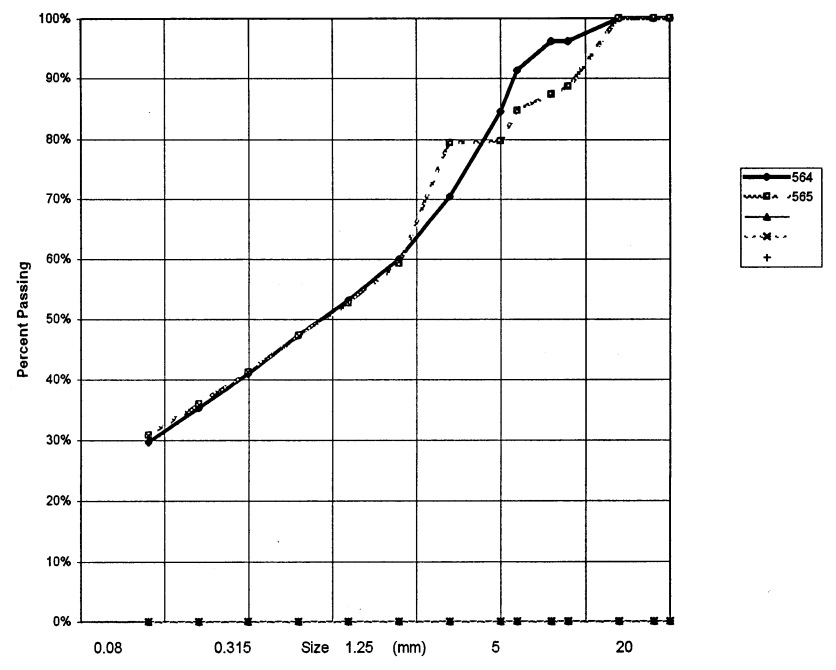
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 521-658
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1808+750 37M RT
 LOGGED BY: WE DATE COMP 99-08-06

FIELD NO: 564		FIELD No. 565	
LAB NO: 660		LAB No. 661	
DEPTH: 2.8-3.0		DEPTH 3.8-4.0	
TYPE: AUGER		TYPE AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	96%	25.0	89%
20.0	96%	20.0	87%
12.5	91%	12.5	85%
10.0	85%	10.0	80%
5.0	70%	5.0	79%
2.5	60%	2.5	59%
1.25	53%	1.25	53%
0.630	47%	0.630	47%
0.315	41%	0.315	41%
0.160	35%	0.160	36%
0.080	30%	0.080	31%
M.C.(%): 11%		M.C.(%): 14%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	30	% GRAVEL:	21
% SAND:	41	% SAND:	49
% FINES:	30	% FINES:	31
CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)		CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	

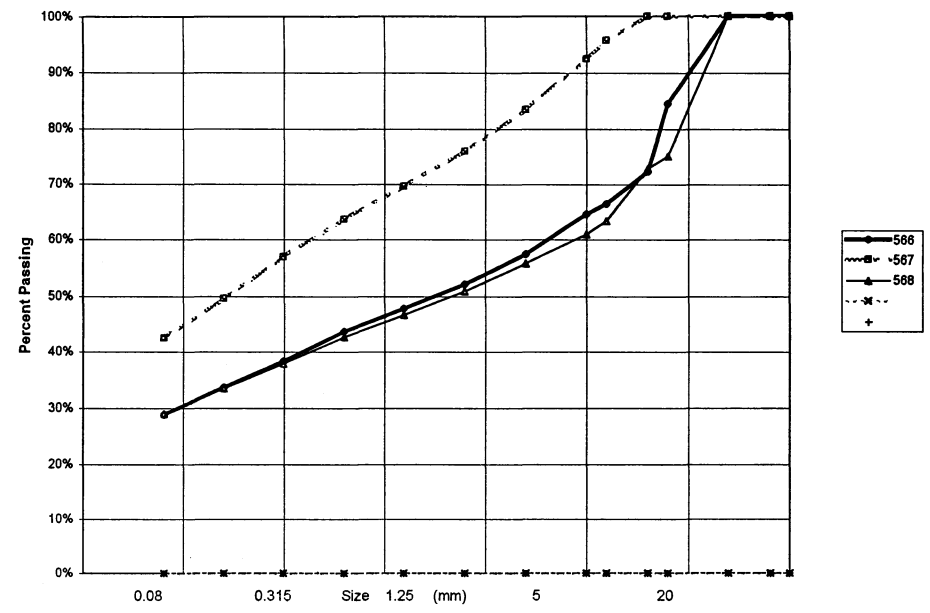
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER:	092-202101-0329	HOLE No.:	526-659
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK PROJECT		
PROJECT LOCATION:	SEG 13 KM 1799-1322 A/H		
DRILL UNIT:	NODWELL B40-L		
HOLE LOCATION:	1808+650 30M RT		
LOGGED BY:	G.C.	DATE COMP	99-08-10

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH	TYPE	FIELD No:	LAB No:	DEPTH:	TYPE:
566	662	1.1-1.5	AUGER	567	662	2.6-3.0	AUGER	568	664	4.2-4.6	BULK
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%	50.0	100%
25.0	84%	25.0	100%	25.0	75%	25.0	75%	25.0	75%	25.0	75%
20.0	72%	20.0	100%	20.0	73%	20.0	73%	20.0	73%	20.0	73%
12.5	66%	12.5	96%	12.5	63%	12.5	63%	12.5	63%	12.5	63%
10.0	65%	10.0	92%	10.0	61%	10.0	61%	10.0	61%	10.0	61%
5.0	57%	5.0	83%	5.0	56%	5.0	56%	5.0	56%	5.0	56%
2.5	52%	2.5	76%	2.5	51%	2.5	51%	2.5	51%	2.5	51%
1.25	48%	1.25	70%	1.25	47%	1.25	47%	1.25	47%	1.25	47%
0.630	44%	0.630	64%	0.630	43%	0.630	43%	0.630	43%	0.630	43%
0.315	38%	0.315	57%	0.315	38%	0.315	38%	0.315	38%	0.315	38%
0.160	34%	0.160	50%	0.160	33%	0.160	33%	0.160	33%	0.160	33%
0.080	29%	0.080	43%	0.080	29%	0.080	29%	0.080	29%	0.080	29%
M.C.(%):	7%	M.C.(%):	10%	M.C.(%):	6%	M.C.(%):	6%	M.C.(%):	6%	M.C.(%):	6%
LIMITS		LIMITS		LIMITS		LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	43	% GRAVEL:	17	% GRAVEL:	44	% GRAVEL:	44	% GRAVEL:	44	% GRAVEL:	44
% SAND:	29	% SAND:	41	% SAND:	27	% SAND:	27	% SAND:	27	% SAND:	27
% FINES:	29	% FINES:	43	% FINES:	29	% FINES:	29	% FINES:	29	% FINES:	29
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	

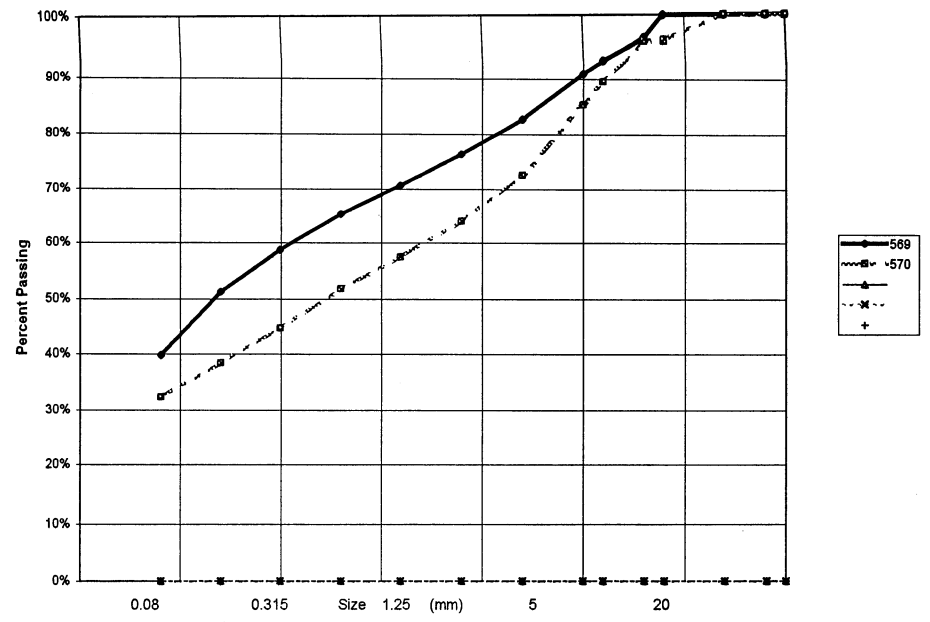
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-660
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1808+575 20M RT
 LOGGED BY: G.C. DATE COMP 1999-08-10

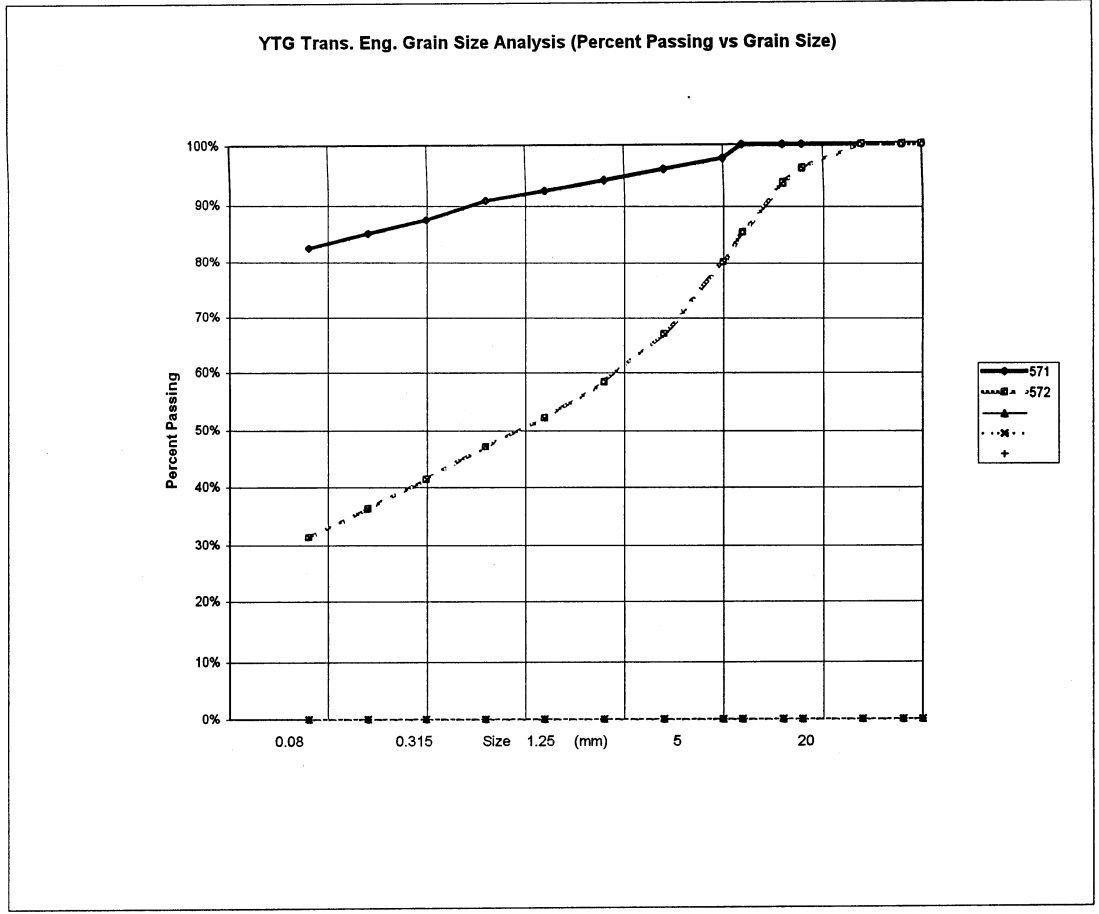
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	96%
20.0	97%	20.0	96%
12.5	93%	12.5	89%
10.0	91%	10.0	85%
5.0	83%	5.0	73%
2.5	76%	2.5	64%
1.25	71%	1.25	57%
0.630	65%	0.630	52%
0.315	59%	0.315	45%
0.160	51%	0.160	38%
0.080	40%	0.080	32%
M.C.(%): 12%		M.C.(%): 16%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	17	% GRAVEL:	27
% SAND:	43	% SAND:	40
% FINES:	40	% FINES:	32
CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)		CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-661
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1522 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1808+575 20M LT
 LOGGED BY: G.C. DATE COMP 1999-08-11

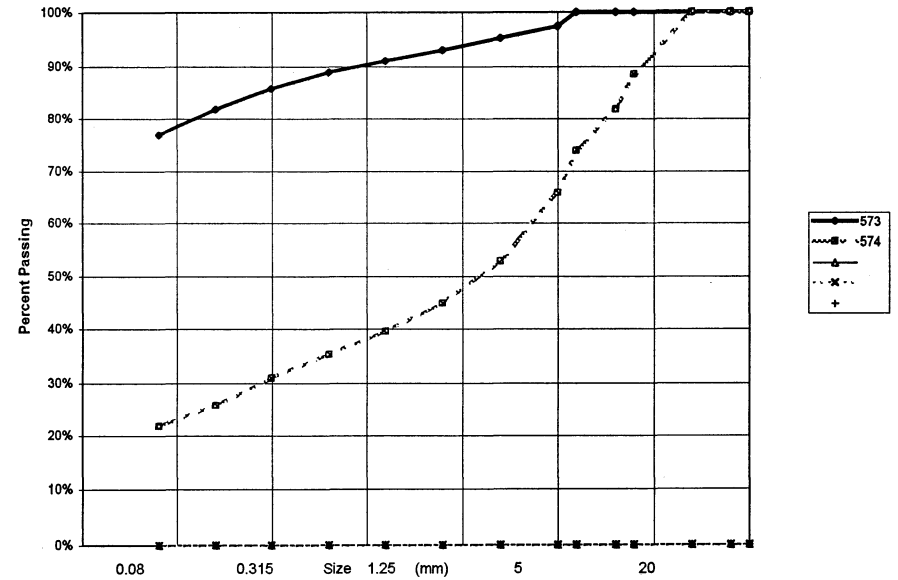
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	96%
20.0	100%	20.0	94%
12.5	100%	12.5	85%
10.0	98%	10.0	80%
5.0	96%	5.0	67%
2.5	94%	2.5	58%
1.25	93%	1.25	52%
0.630	91%	0.630	47%
0.315	88%	0.315	41%
0.160	85%	0.160	36%
0.080	82%	0.080	31%
M.C.(%): 77%		M.C.(%): 14%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	4	% GRAVEL:	33
% SAND:	13	% SAND:	36
% FINES:	82	% FINES:	31
CLASSIFICATION: SILT WITH SAND (ML)		CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-662
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1822 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1808+510 15M RT
 LOGGED BY: G.C. DATE COMP 1999-08-11

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	89%
20.0	100%	20.0	82%
12.5	100%	12.5	74%
10.0	97%	10.0	66%
5.0	95%	5.0	53%
2.5	93%	2.5	45%
1.25	91%	1.25	40%
0.630	89%	0.630	35%
0.315	86%	0.315	31%
0.160	82%	0.160	26%
0.080	77%	0.080	22%
M.C.(%): 32%		M.C.(%): 10%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	5	% GRAVEL:	47
% SAND:	18	% SAND:	31
% FINES:	77	% FINES:	22
CLASSIFICATION: SILT WITH SAND (ML)		CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)	

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-663
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1822 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1808+510 20M LT
 LOGGED BY: G.C. DATE COMP 1999-08-10

FIELD NO: 575
 LAB NO: 671
 DEPTH: 1.4-1.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	93%
12.5	89%
10.0	86%
5.0	80%
2.5	75%
1.25	70%
0.630	65%
0.315	58%
0.160	52%
0.080	48%

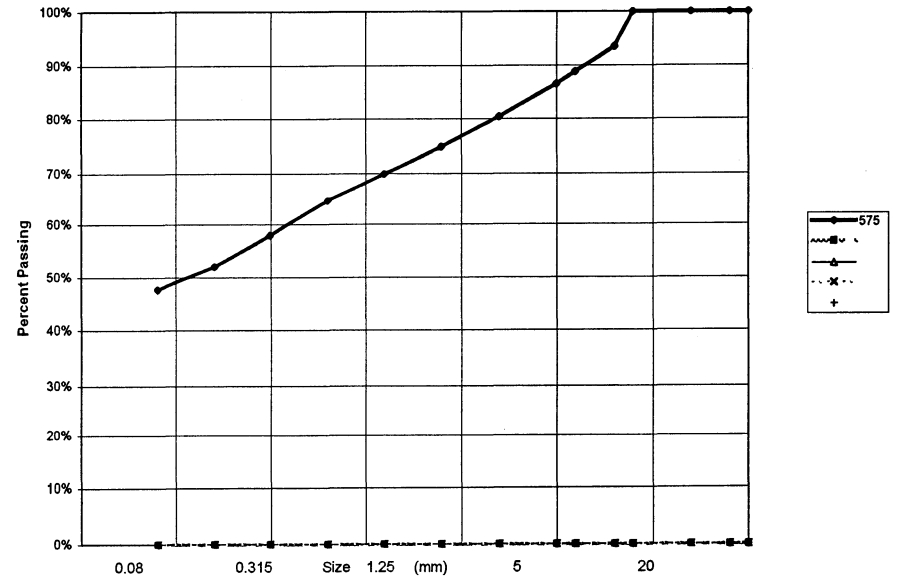
M.C.(%): 21%

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

% GRAVEL: 20
 % SAND: 33
 % FINES: 48

CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM)

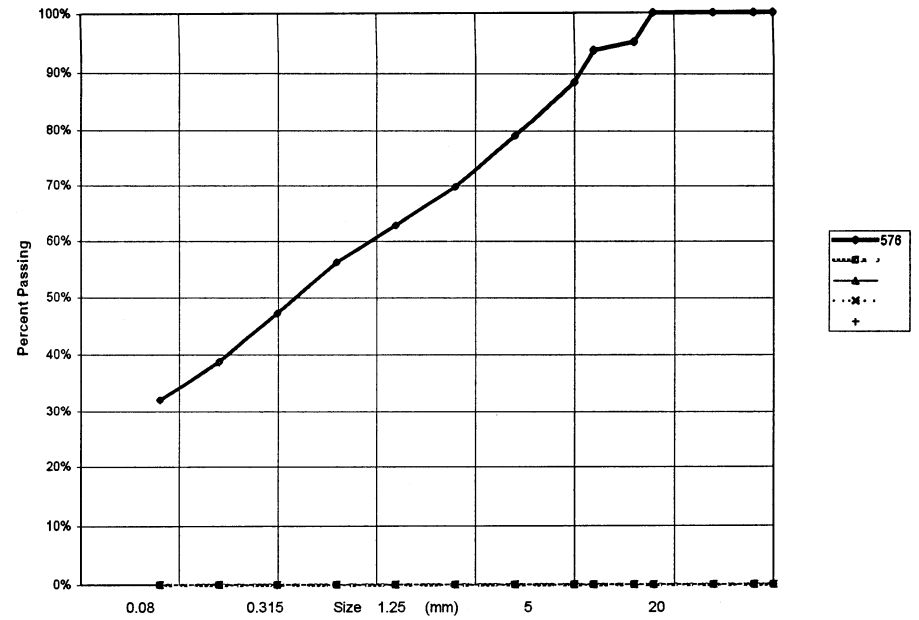
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-664
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1808+450 30M RT
 LOGGED BY: G.C. DATE COMP 1999-08-10

FIELD NO: 576			
LAB NO: 672			
DEPTH: 2.2-2.5			
TYPE: AUGER			
SIEVE SIZE	PERCENT PASSING		
100.0	100%		
80.0	100%		
50.0	100%		
25.0	100%		
20.0	95%		
12.5	94%		
10.0	89%		
5.0	79%		
2.5	70%		
1.25	63%		
0.630	56%		
0.315	47%		
0.160	39%		
0.080	32%		
M.C.(%):	10%		
LIMITS			
LIQUID:	0.0		
PLASTIC:	0.0		
P.I.:	0.0		
% GRAVEL:	21		
% SAND:	47		
% FINES:	32		
CLASSIFICATION:			
SILTY SAND WITH GRAVEL (SM)			

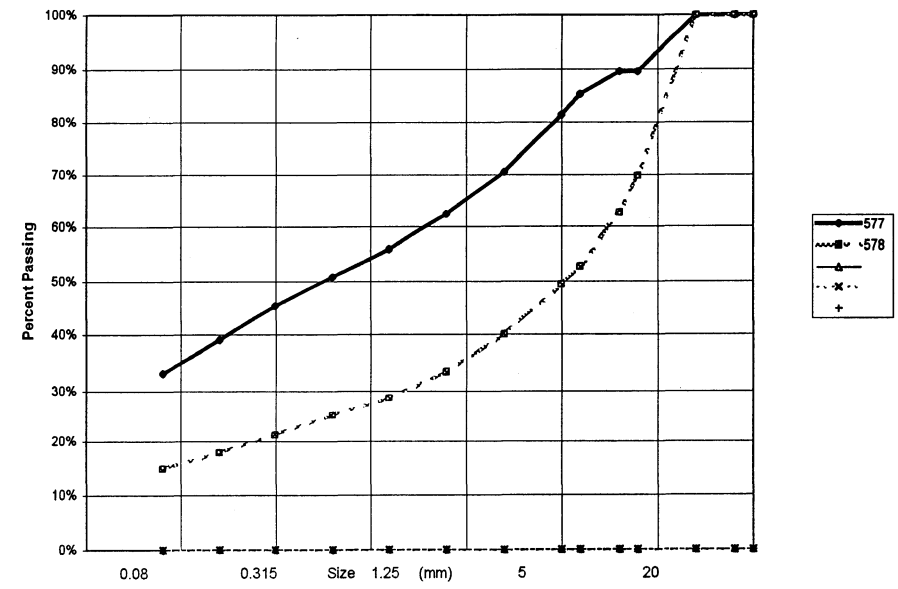
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-665
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1808+350 30M RT
 LOGGED BY: G.C. DATE COMP 1999-08-10

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	89%	25.0	70%
20.0	89%	20.0	63%
12.5	85%	12.5	53%
10.0	81%	10.0	49%
5.0	71%	5.0	40%
2.5	62%	2.5	33%
1.25	56%	1.25	29%
0.630	51%	0.630	25%
0.315	45%	0.315	21%
0.160	39%	0.160	18%
0.080	33%	0.080	15%
M.C.(%):	14%	M.C.(%):	7%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	29	% GRAVEL:	60
% SAND:	37	% SAND:	25
% FINES:	33	% FINES:	15
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)	

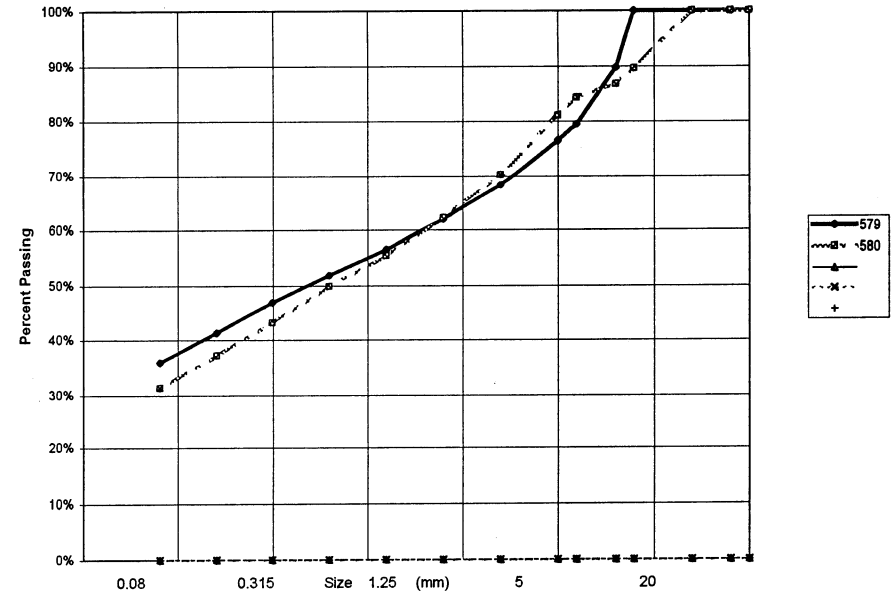
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-666
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-122 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1808+250 30M RT
 LOGGED BY: G.C. DATE COMP 1999-08-10

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	90%
20.0	90%	20.0	87%
12.5	79%	12.5	84%
10.0	76%	10.0	81%
5.0	68%	5.0	70%
2.5	62%	2.5	62%
1.25	57%	1.25	55%
0.630	52%	0.630	50%
0.315	47%	0.315	43%
0.160	41%	0.160	37%
0.080	36%	0.080	31%
M.C.(%): 11%		M.C.(%): 10%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	32	% GRAVEL:	30
% SAND:	32	% SAND:	39
% FINES:	36	% FINES:	31
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-667
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1808+200 15M RT
 LOGGED BY: G.C. DATE COMP 1999-08-11

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	82%
20.0	71%
12.5	61%
10.0	54%
5.0	43%
2.5	34%
1.25	26%
0.630	21%
0.315	16%
0.160	13%
0.080	10%

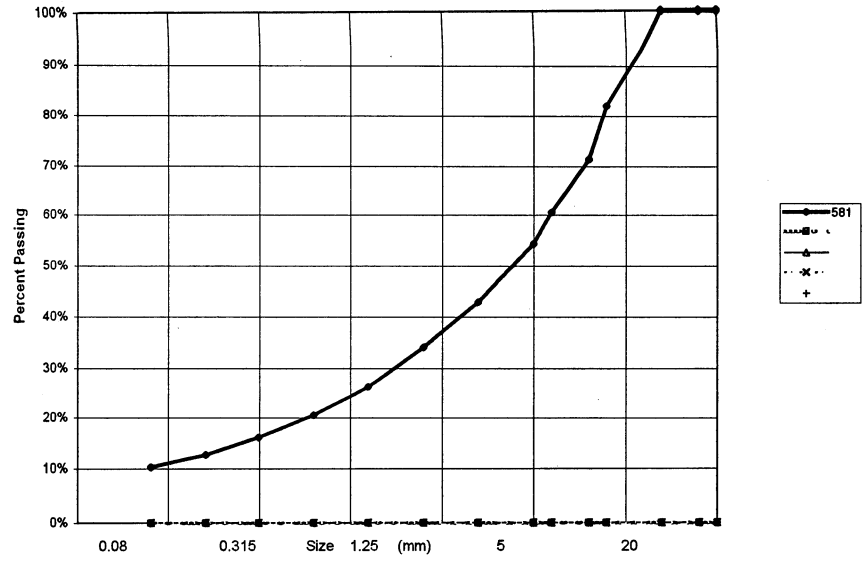
M.C.(%)	6%
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LIMITS	
LIQUID:	0.0
PLASTIC:	0.0
P.I.:	0.0

% GRAVEL:	57
% SAND:	33
% FINES:	10

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

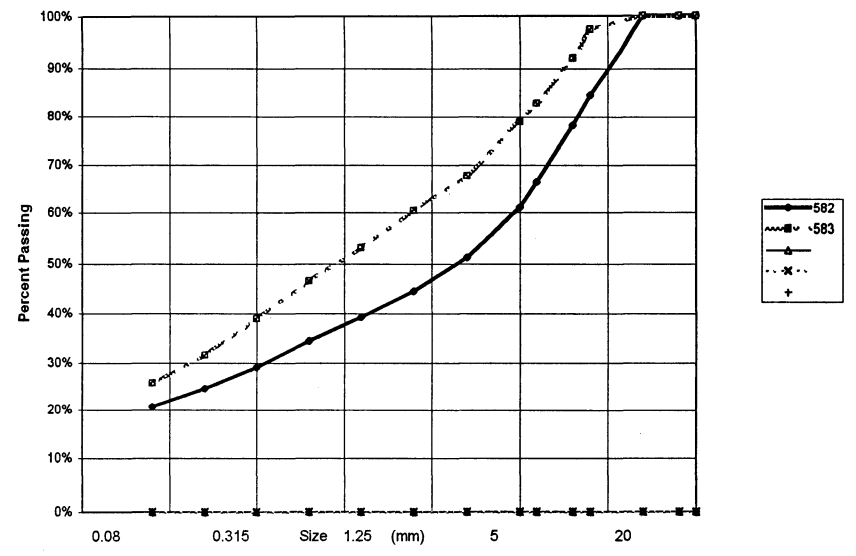
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-668
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1322 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1808+200 20M LT
 LOGGED BY: G.C. DATE COMP 1999-08-11

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	85%	25.0	97%
20.0	78%	20.0	92%
12.5	66%	12.5	83%
10.0	61%	10.0	79%
5.0	51%	5.0	68%
2.5	44%	2.5	60%
1.25	39%	1.25	53%
0.630	34%	0.630	47%
0.315	29%	0.315	39%
0.160	25%	0.160	32%
0.080	21%	0.080	26%
M.C.(%): 10%		M.C.(%): 9%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	49	% GRAVEL:	32
% SAND:	31	% SAND:	42
% FINES:	21	% FINES:	26
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

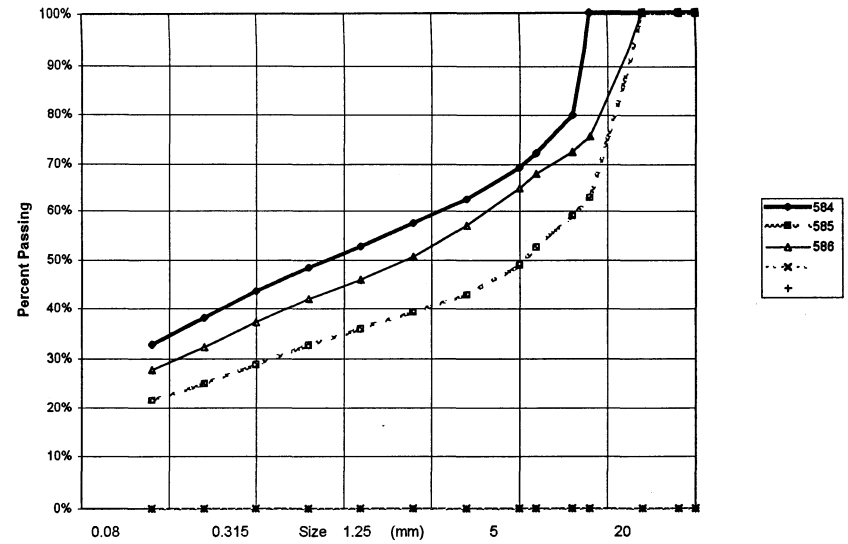
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-669
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1808+130 30M RT
 LOGGED BY: G.C. DATE COMP 1999-08-11

FIELD NO:	584	FIELD No:	585	FIELD No:	586
LAB NO:	680	LAB No:	681	LAB No:	682
DEPTH:	1.2-1.4	DEPTH:	2.8-3.0	DEPTH:	3.8-4.0
TYPE:	AUGER	TYPE:	AUGER	TYPE:	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	63%	25.0	76%
20.0	80%	20.0	59%	20.0	72%
12.5	72%	12.5	53%	12.5	68%
10.0	69%	10.0	49%	10.0	65%
5.0	62%	5.0	43%	5.0	57%
2.5	57%	2.5	39%	2.5	51%
1.25	53%	1.25	36%	1.25	46%
0.630	48%	0.630	33%	0.630	42%
0.315	44%	0.315	29%	0.315	37%
0.160	38%	0.160	25%	0.160	32%
0.080	33%	0.080	22%	0.080	28%
M.C.(%):	6%	M.C.(%):	5%	M.C.(%):	7%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	38	% GRAVEL:	57	% GRAVEL:	43
% SAND:	30	% SAND:	21	% SAND:	29
% FINES:	33	% FINES:	22	% FINES:	28
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-670
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1808+035 20M RT
 LOGGED BY: G.C. DATE COMP 1999-08-11

FIELD NO: 587 FIELD No. 588
 LAB NO: 683 LAB No. 684
 DEPTH: 1.3-1.5 DEPTH 2.8-3.0
 TYPE: AUGER TYPE AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	68%	25.0	100%
20.0	61%	20.0	100%
12.5	55%	12.5	98%
10.0	52%	10.0	97%
5.0	45%	5.0	93%
2.5	41%	2.5	89%
1.25	38%	1.25	84%
0.630	35%	0.630	77%
0.315	33%	0.315	62%
0.160	29%	0.160	40%
0.080	26%	0.080	28%

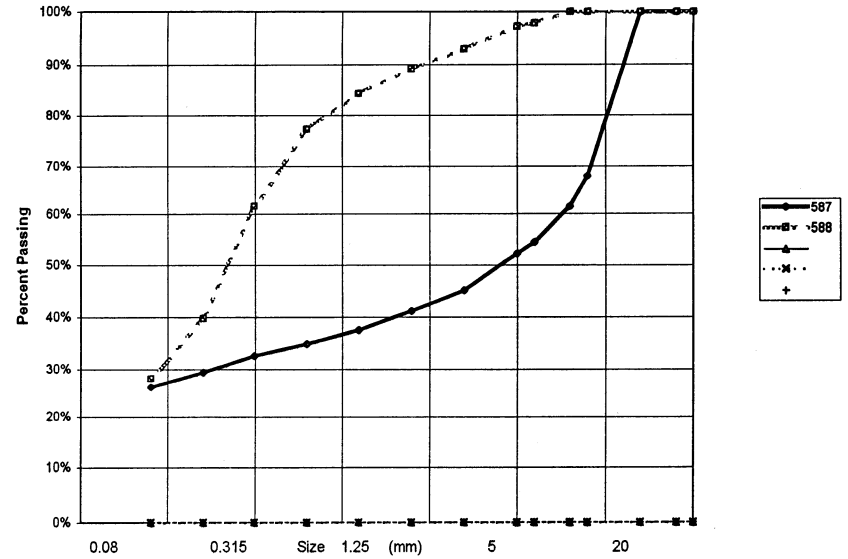
M.C.(%): 16% M.C.(%): 15%

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

% GRAVEL: 55 % GRAVEL: 7
 % SAND: 19 % SAND: 65
 % FINES: 26 % FINES: 28

CLASSIFICATION: CLASSIFICATION:
 SILTY GRAVEL WITH SAND (GM) SILTY SAND (SM)

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-671
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1322 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1808+035 20M LT
 LOGGED BY: G.C. DATE COMP 1999-08-11

FIELD NO: 589 FIELD No. 590
 LAB NO: 685 LAB No. 686
 DEPTH: 1.4-1.6 DEPTH 2.8-3.0
 TYPE: AUGER TYPE AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	93%	20.0	100%
12.5	88%	12.5	96%
10.0	85%	10.0	87%
5.0	78%	5.0	84%
2.5	69%	2.5	66%
1.25	63%	1.25	60%
0.630	57%	0.630	54%
0.315	52%	0.315	47%
0.160	45%	0.160	38%
0.080	39%	0.080	34%

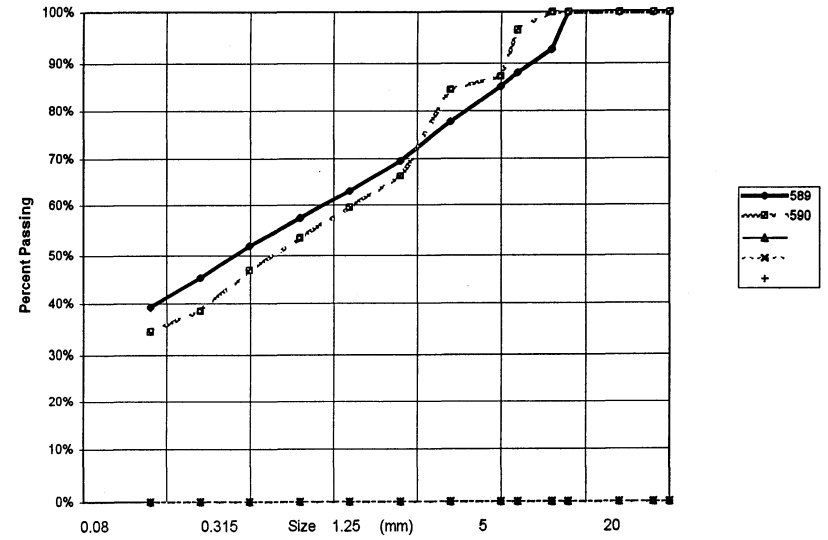
M.C.(%): 18% M.C.(%): 7%

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

% GRAVEL: 22 % GRAVEL: 16
 % SAND: 38 % SAND: 50
 % FINES: 39 % FINES: 34

CLASSIFICATION: CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM) SILTY SAND WITH GRAVEL (SM)

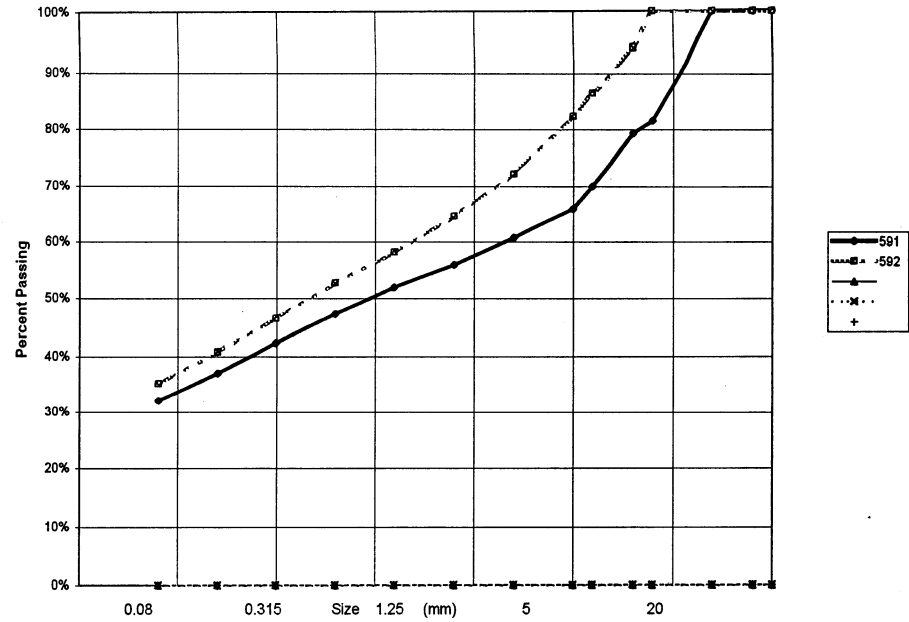
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-672
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1522 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1807+950 30M RT
 LOGGED BY: G.C. DATE COMP 1999-08-11

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	82%	25.0	100%
20.0	79%	20.0	94%
12.5	70%	12.5	86%
10.0	66%	10.0	82%
5.0	61%	5.0	72%
2.5	56%	2.5	65%
1.25	52%	1.25	58%
0.630	47%	0.630	53%
0.315	42%	0.315	46%
0.160	37%	0.160	41%
0.080	32%	0.080	35%
M.C.(%):	12%	M.C.(%):	12%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	39	% GRAVEL:	28
% SAND:	29	% SAND:	37
% FINES:	32	% FINES:	35
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

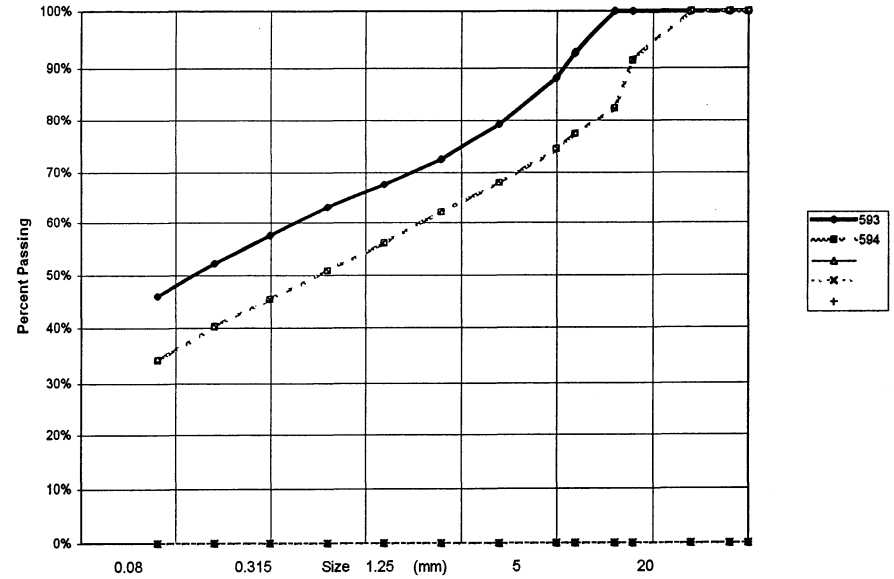
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-673
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1X22 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1807+880 20M RT
 LOGGED BY: G.C. DATE COMP 1999-08-11

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	91%
20.0	100%	20.0	82%
12.5	93%	12.5	77%
10.0	88%	10.0	74%
5.0	79%	5.0	68%
2.5	73%	2.5	62%
1.25	68%	1.25	56%
0.630	63%	0.630	51%
0.315	58%	0.315	46%
0.160	52%	0.160	40%
0.080	46%	0.080	34%
M.C.(%):	18%	M.C.(%):	9%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	21	% GRAVEL:	32
% SAND:	33	% SAND:	34
% FINES:	46	% FINES:	34
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-674
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1822 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1807+880 20MLT
 LOGGED BY: G.C. DATE COMP 1999-08-11

FIELD NO:	595	FIELD No.	596
LAB NO:	691	LAB No.	692
DEPTH:	1.3-1.5	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	74%	25.0	100%
20.0	68%	20.0	100%
12.5	65%	12.5	89%
10.0	61%	10.0	85%
5.0	54%	5.0	77%
2.5	49%	2.5	72%
1.25	44%	1.25	67%
0.630	40%	0.630	63%
0.315	36%	0.315	58%
0.160	31%	0.160	52%
0.080	26%	0.080	46%

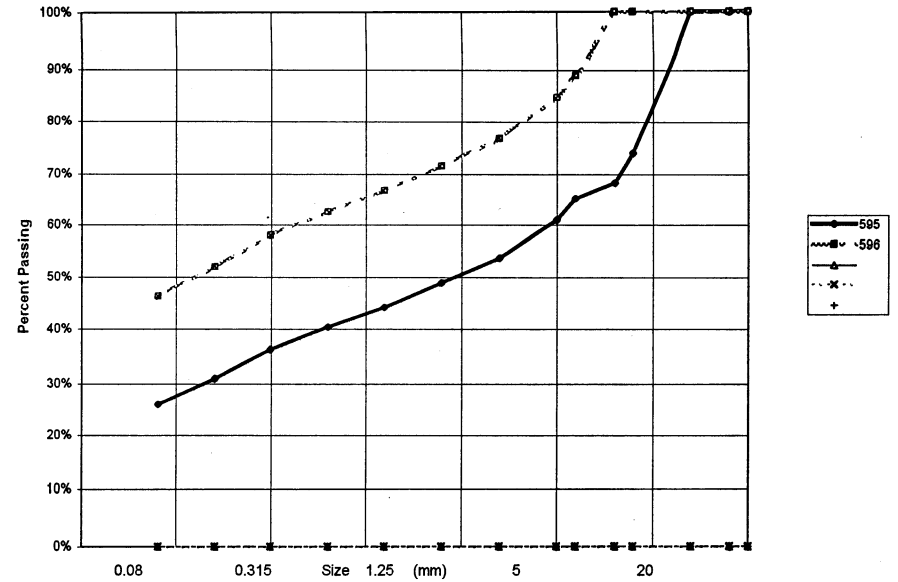
M.C. (%): 17% M.C. (%): 11%

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

% GRAVEL:	46	% GRAVEL:	23
% SAND:	28	% SAND:	30
% FINES:	26	% FINES:	46

CLASSIFICATION: SILTY GRAVEL WITH SAND (GM) CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)

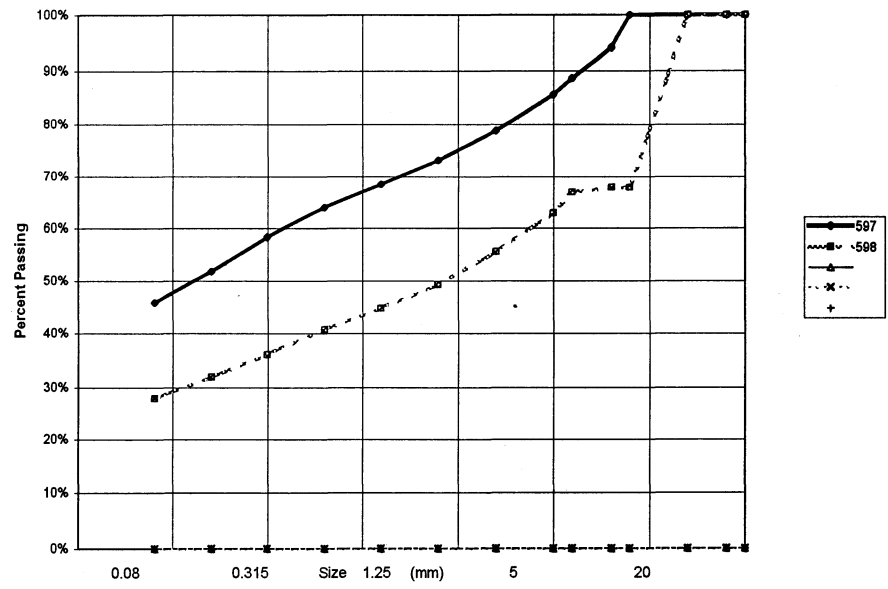
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-675
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-122 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1807+825 30M RT
 LOGGED BY: G.C. DATE COMP 1999-08-11

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	68%
20.0	94%	20.0	68%
12.5	89%	12.5	67%
10.0	86%	10.0	63%
5.0	79%	5.0	56%
2.5	73%	2.5	49%
1.25	68%	1.25	45%
0.630	64%	0.630	41%
0.315	58%	0.315	36%
0.160	52%	0.160	32%
0.080	46%	0.080	28%
M.C.(%):	12%	M.C.(%):	9%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	21	% GRAVEL:	44
% SAND:	33	% SAND:	28
% FINES:	46	% FINES:	28
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)	

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



PROJECT NUMBER:	092-202101-0329	HOLE No.:	526-676
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK PROJECT		
PROJECT LOCATION:	SEG 13 KM 1799-1322 A/H		
DRILL UNIT:	NODWELL B40-L		
HOLE LOCATION:	1807+725 20M LT		
LOGGED BY:	G.C.	DATE COMP	1999-08-11

FIELD NO:	599	FIELD No.	600
LAB NO:	695	LAB No.	696
DEPTH:	1.4-1.6	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	63%
20.0	89%	20.0	63%
12.5	88%	12.5	61%
10.0	82%	10.0	60%
5.0	76%	5.0	55%
2.5	72%	2.5	52%
1.25	68%	1.25	49%
0.630	63%	0.630	45%
0.315	59%	0.315	42%
0.160	52%	0.160	37%
0.080	46%	0.080	33%

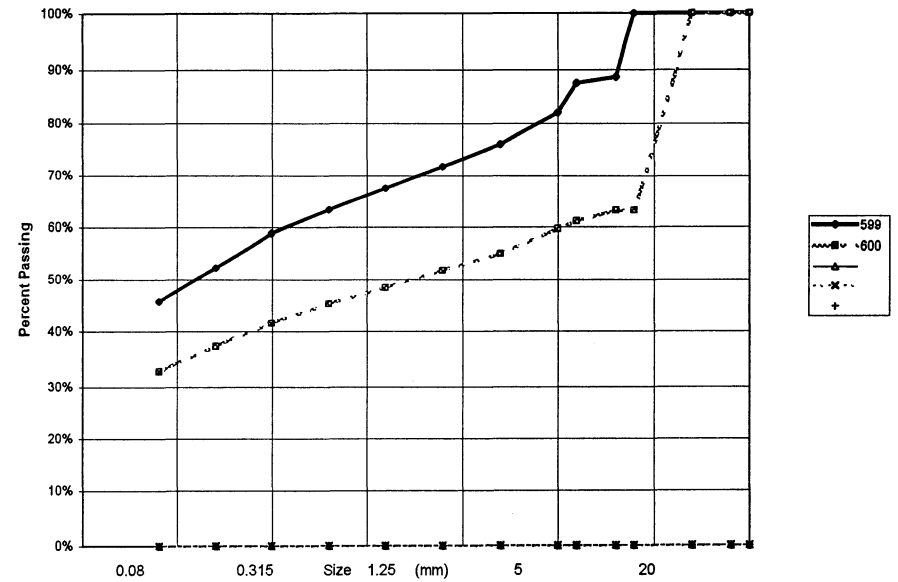
M.C.(%):	17%	M.C.(%):	10%
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LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0

% GRAVEL:	24	% GRAVEL:	45
% SAND:	30	% SAND:	22
% FINES:	46	% FINES:	33

CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)	

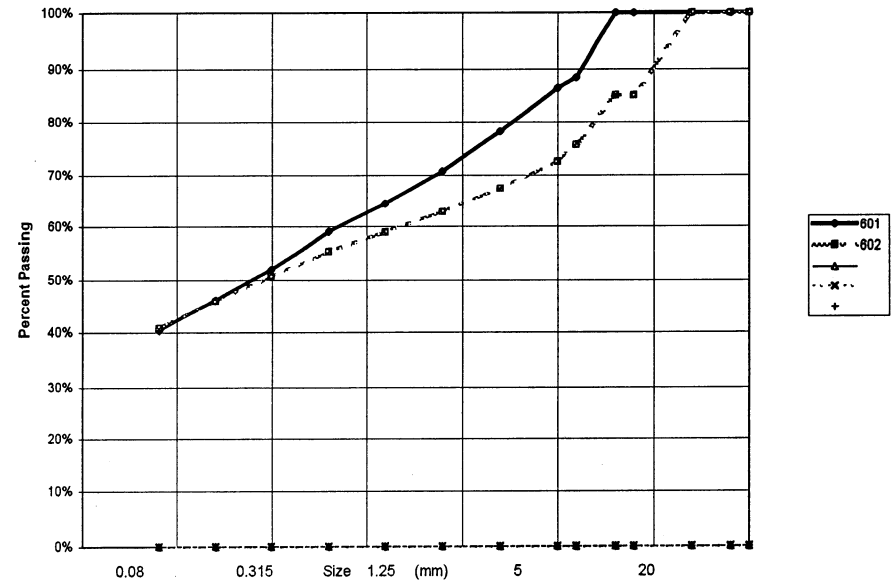
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-677
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1322 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1807+725 20M LT
 LOGGED BY: G.C. DATE COMP 1999-08-11

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	85%
20.0	100%	20.0	85%
12.5	88%	12.5	76%
10.0	86%	10.0	73%
5.0	78%	5.0	67%
2.5	71%	2.5	63%
1.25	64%	1.25	59%
0.630	59%	0.630	55%
0.315	52%	0.315	51%
0.160	46%	0.160	46%
0.080	40%	0.080	41%
M.C.(%):	16%	M.C.(%):	13%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	22	% GRAVEL:	33
% SAND:	38	% SAND:	27
% FINES:	40	% FINES:	41
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)	

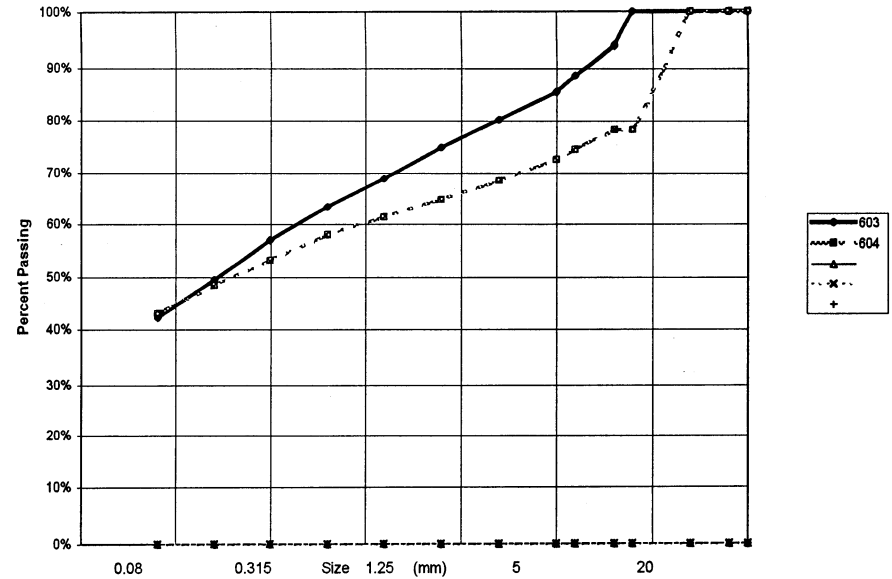
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-678
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1322 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1807+640 20M LT
 LOGGED BY: G.C. DATE COMP 1999-08-11

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	78%
20.0	94%	20.0	78%
12.5	89%	12.5	75%
10.0	86%	10.0	73%
5.0	80%	5.0	69%
2.5	75%	2.5	65%
1.25	69%	1.25	61%
0.630	63%	0.630	58%
0.315	57%	0.315	53%
0.160	50%	0.160	48%
0.080	42%	0.080	43%
M.C.(%): 15%		M.C.(%): 12%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	20	% GRAVEL:	31
% SAND:	38	% SAND:	26
% FINES:	42	% FINES:	43
CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)		CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)	

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



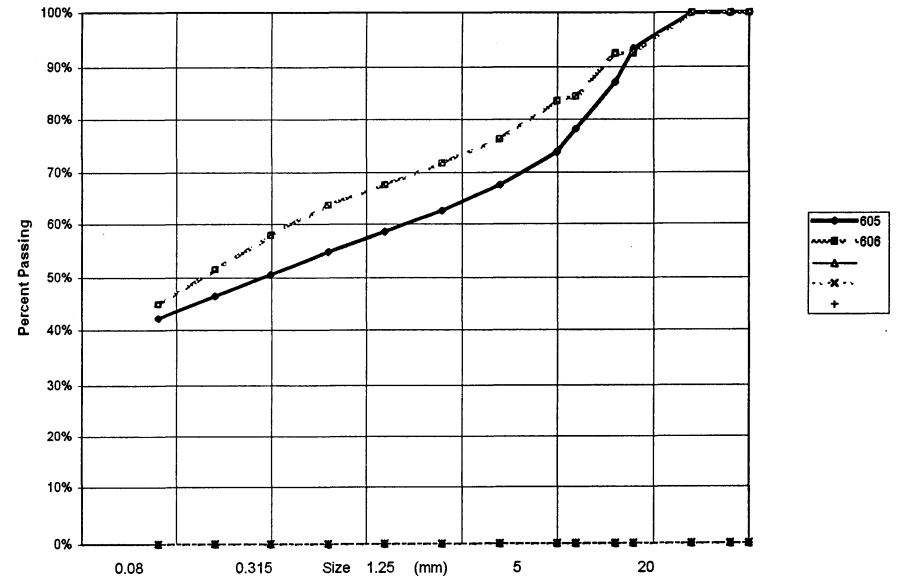
PROJECT NUMBER:	092-202101-0329	HOLE No.:	526-679
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK PROJECT		
PROJECT LOCATION:	SEG 13 KM 1799-1322 A/H		
DRILL UNIT:	NODWELL B40-L		
HOLE LOCATION:	1807+640 20m rt		
LOGGED BY:	G.C.	DATE COMP	1999-08-11

FIELD NO:	605	FIELD No.	606
LAB NO:	701	LAB No.	702
DEPTH:	1.4-1.6	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	93%	25.0	92%
20.0	87%	20.0	92%
12.5	78%	12.5	84%
10.0	74%	10.0	84%
5.0	68%	5.0	76%
2.5	63%	2.5	72%
1.25	58%	1.25	68%
0.630	55%	0.630	64%
0.315	51%	0.315	58%
0.160	47%	0.160	52%
0.080	42%	0.080	45%

M.C.(%):	17%	M.C.(%):	10%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	32	% GRAVEL:	24
% SAND:	25	% SAND:	31
% FINES:	42	% FINES:	45
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

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



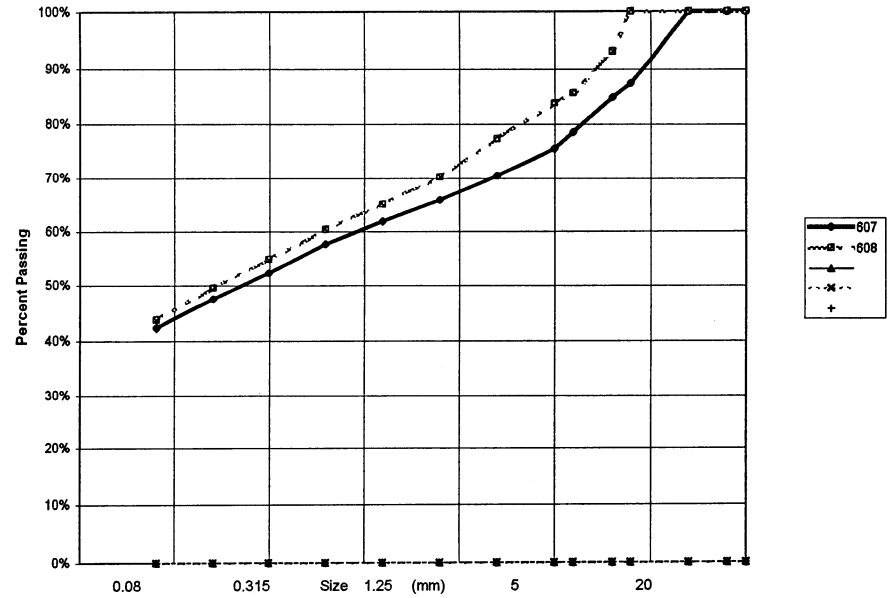
PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-680
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1822 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1807+600 30m rt
 LOGGED BY: G.C. DATE COMP 1999-08-11

FIELD NO:	607	FIELD No.	608
LAB NO:	703	LAB No.	704
DEPTH:	1.3-1.5	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	88%	25.0	100%
20.0	85%	20.0	93%
12.5	79%	12.5	86%
10.0	76%	10.0	84%
5.0	70%	5.0	77%
2.5	66%	2.5	70%
1.25	62%	1.25	65%
0.630	58%	0.630	60%
0.315	52%	0.315	55%
0.160	47%	0.160	50%
0.080	42%	0.080	44%

M.C.(%):	29%	M.C.(%):	17%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	30	% GRAVEL:	23
% SAND:	28	% SAND:	34
% FINES:	42	% FINES:	44
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

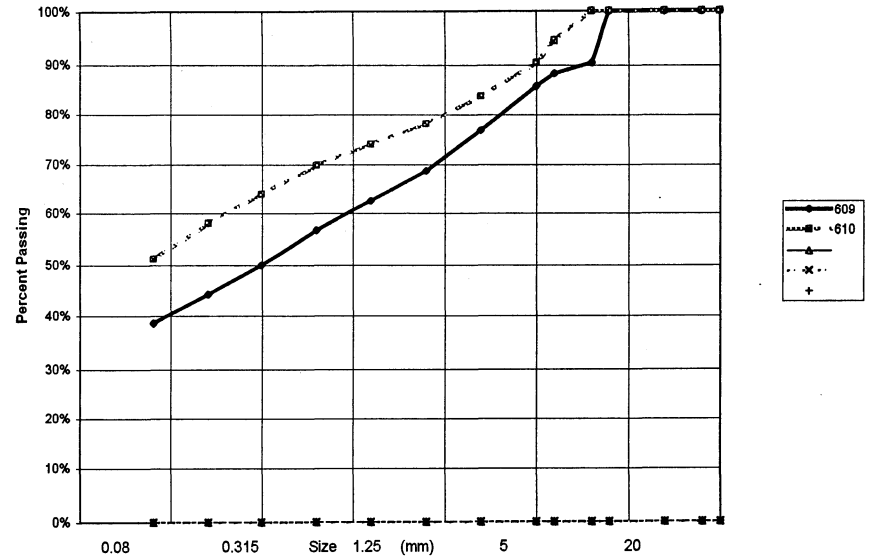
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-681
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1822 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1807+500 30m rt
 LOGGED BY: G.C. DATE COMP 1999-08-11

FIELD NO:	609	FIELD No.	610
LAB NO:	705	LAB No.	706
DEPTH:	1.4-1.6	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	90%	20.0	100%
12.5	88%	12.5	95%
10.0	86%	10.0	90%
5.0	77%	5.0	84%
2.5	69%	2.5	78%
1.25	63%	1.25	74%
0.630	57%	0.630	70%
0.315	50%	0.315	64%
0.160	44%	0.160	58%
0.080	39%	0.080	51%
M.C.(%):	3%	M.C.(%):	13%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	23	% GRAVEL:	16
% SAND:	38	% SAND:	33
% FINES:	39	% FINES:	51
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SANDY SILT WITH GRAVEL (ML)	

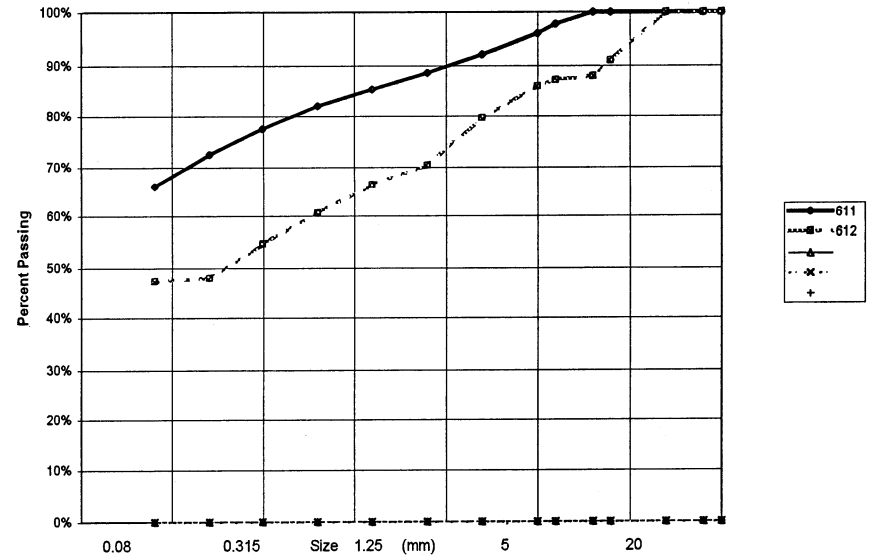
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER:	092-202101-0329	HOLE No.:	526-682
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK PROJECT		
PROJECT LOCATION:	SEG 13 KM 1799-1322 A/H		
DRILL UNIT:	NODWELL B40-L		
HOLE LOCATION:	1807+400 30m rt		
LOGGED BY:	G.C.	DATE COMP	1999-08-11

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	91%
20.0	100%	20.0	88%
12.5	98%	12.5	87%
10.0	96%	10.0	86%
5.0	92%	5.0	80%
2.5	89%	2.5	70%
1.25	85%	1.25	66%
0.630	82%	0.630	61%
0.315	77%	0.315	55%
0.160	73%	0.160	48%
0.080	66%	0.080	47%
M.C.(%):	35%	M.C.(%):	13%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	8	% GRAVEL:	20
% SAND:	26	% SAND:	32
% FINES:	66	% FINES:	47
CLASSIFICATION:		CLASSIFICATION:	
SANDY SILT (ML)		SILTY SAND WITH GRAVEL (SM)	

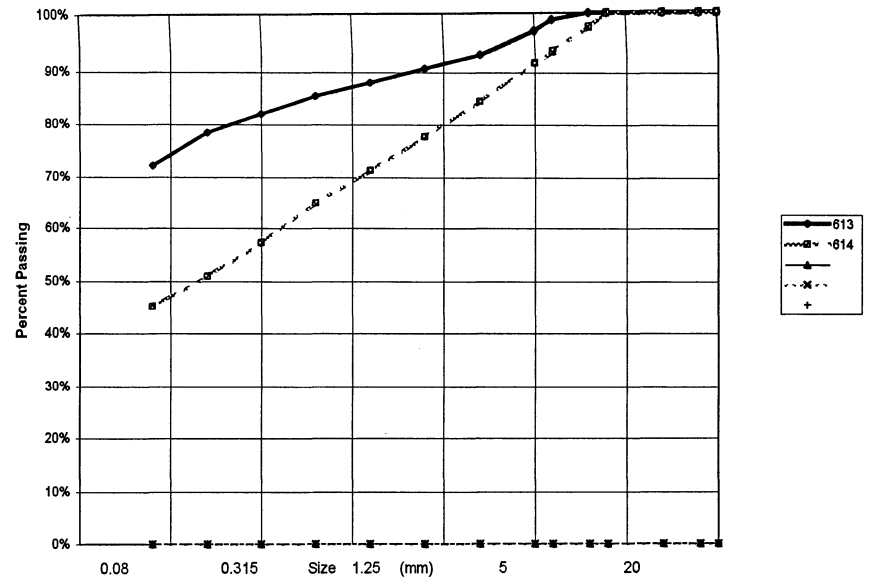
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-683
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1822 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1807+345 20m Rt
 LOGGED BY: G.C. DATE COMP 99-08-11

FIELD NO: 613		FIELD No. 614	
LAB NO: 709		LAB No. 710	
DEPTH: 1.3-1.5		DEPTH 2.8-3.0	
TYPE: AUGER		TYPE AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	98%
12.5	99%	12.5	94%
10.0	97%	10.0	92%
5.0	93%	5.0	85%
2.5	91%	2.5	78%
1.25	88%	1.25	71%
0.630	86%	0.630	65%
0.315	82%	0.315	57%
0.160	78%	0.160	51%
0.080	72%	0.080	45%
M.C.(%): 53%		M.C.(%): 21%	
LIMITS		LIMITS	
LIQUID: 0.0		LIQUID: 0.0	
PLASTIC: 0.0		PLASTIC: 0.0	
P.I.: 0.0		P.I.: 0.0	
% GRAVEL: 7		% GRAVEL: 15	
% SAND: 21		% SAND: 40	
% FINES: 72		% FINES: 45	
CLASSIFICATION: SILT WITH SAND (ML)		CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	

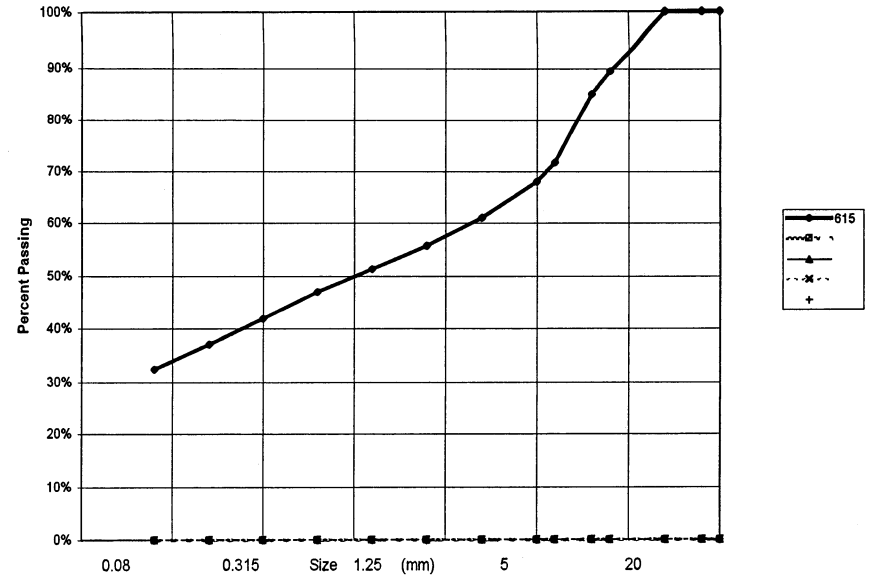
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-683A
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1822 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1807+350 20M LT
 LOGGED BY: G.C. DATE COMP 99-08-12

FIELD NO: 615			
LAB NO: 711			
DEPTH: 1.4-1.6			
TYPE: AUGER			
SIEVE SIZE	PERCENT PASSING		
100.0	100%		
80.0	100%		
50.0	100%		
25.0	90%		
20.0	85%		
12.5	72%		
10.0	68%		
5.0	61%		
2.5	56%		
1.25	51%		
0.630	47%		
0.315	42%		
0.160	37%		
0.080	32%		
M.C.(%):	18%		
LIMITS			
LIQUID:	0.0		
PLASTIC:	0.0		
P.I.:	0.0		
% GRAVEL:	39		
% SAND:	29		
% FINES:	32		
CLASSIFICATION:			
SILTY GRAVEL WITH SAND (GM)			

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-684
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-122 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1807+300 30M RT
 LOGGED BY: G.C. DATE COMP 1999-08-12

FIELD NO: 616	FIELD No. 617
LAB NO: 712	LAB No. 713
DEPTH: 1.3-1.5	DEPTH 2.8-3.0
TYPE: AUGER	TYPE AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	94%
20.0	97%	20.0	94%
12.5	91%	12.5	90%
10.0	87%	10.0	84%
5.0	79%	5.0	72%
2.5	71%	2.5	61%
1.25	66%	1.25	53%
0.630	61%	0.630	46%
0.315	56%	0.315	38%
0.160	51%	0.160	32%
0.080	46%	0.080	27%

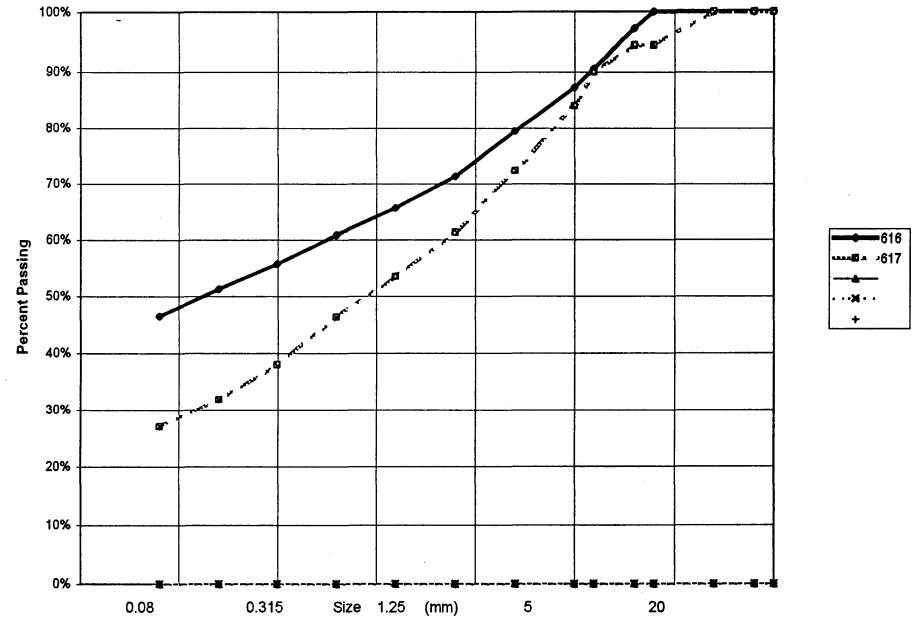
M.C.(%): 20% M.C.(%): 12%

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

% GRAVEL:	21	% GRAVEL:	28
% SAND:	33	% SAND:	46
% FINES:	46	% FINES:	27

CLASSIFICATION: SILTY SAND WITH GRAVEL (SM) CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)

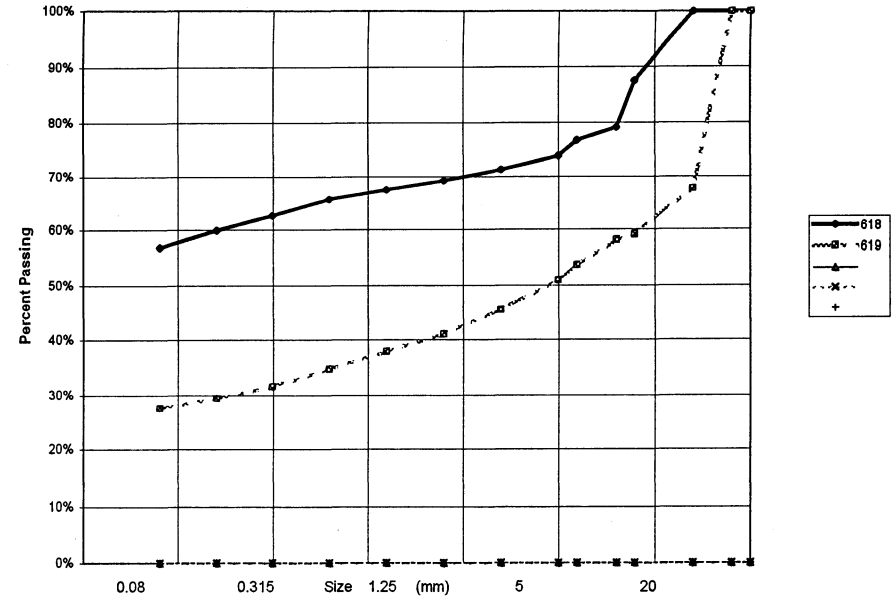
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-686
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1822 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1807+200 30M RT
 LOGGED BY: G.C. DATE COMP 99-08-12

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	68%
25.0	87%	25.0	59%
20.0	79%	20.0	58%
12.5	77%	12.5	54%
10.0	74%	10.0	51%
5.0	71%	5.0	45%
2.5	69%	2.5	41%
1.25	67%	1.25	38%
0.630	66%	0.630	35%
0.315	63%	0.315	32%
0.160	60%	0.160	29%
0.080	57%	0.080	28%
M.C.(%):	33%	M.C.(%):	11%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	29	% GRAVEL:	55
% SAND:	14	% SAND:	18
% FINES:	57	% FINES:	28
CLASSIFICATION:		CLASSIFICATION:	
GRAVELLY SILT (ML)		SILTY GRAVEL WITH SAND (GM)	

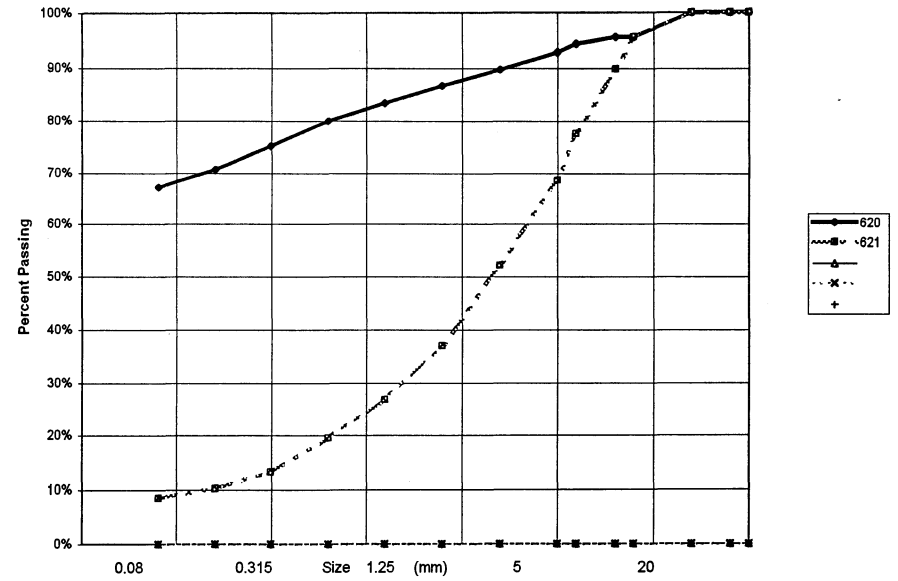
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-687
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1322 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1807+125 30M RT
 LOGGED BY: G.C. DATE COMP 1999-08-12

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	96%	25.0	96%
20.0	96%	20.0	90%
12.5	94%	12.5	78%
10.0	93%	10.0	69%
5.0	90%	5.0	52%
2.5	87%	2.5	37%
1.25	83%	1.25	27%
0.630	80%	0.630	19%
0.315	75%	0.315	13%
0.160	71%	0.160	10%
0.080	67%	0.080	9%
M.C.(%):	2%	M.C.(%):	7%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	10	% GRAVEL:	48
% SAND:	22	% SAND:	44
% FINES:	67	% FINES:	9
CLASSIFICATION:		CLASSIFICATION:	
SANDY SILT (ML)		POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-688
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1822 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1807+060 20M RT
 LOGGED BY: G.C. DATE COMP 99-08-12

FIELD NO: 622
 LAB NO: 718
 DEPTH: 2.5-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	93%
20.0	93%
12.5	86%
10.0	85%
5.0	80%
2.5	75%
1.25	70%
0.630	65%
0.315	57%
0.160	50%
0.080	45%

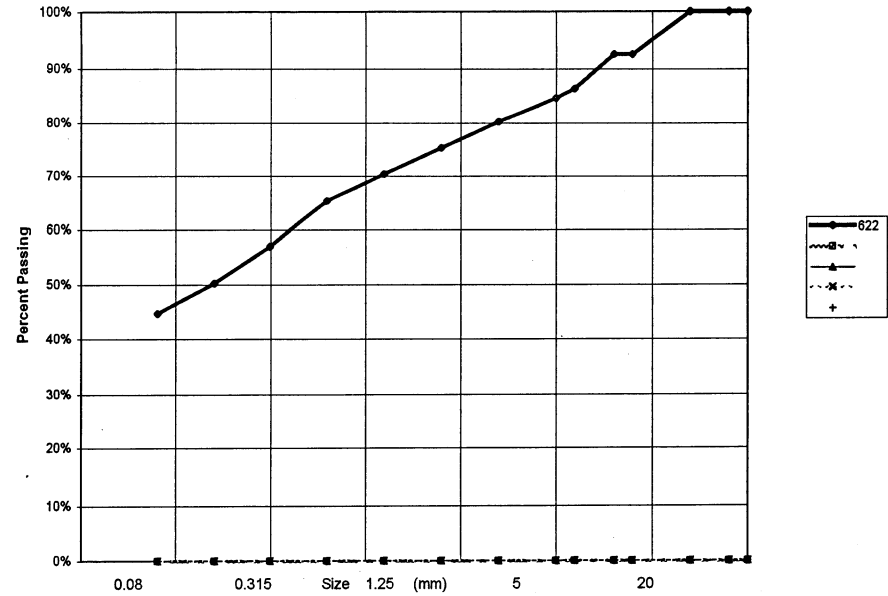
M.C.(%): 29%

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

% GRAVEL: 20
 % SAND: 35
 % FINES: 45

CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM)

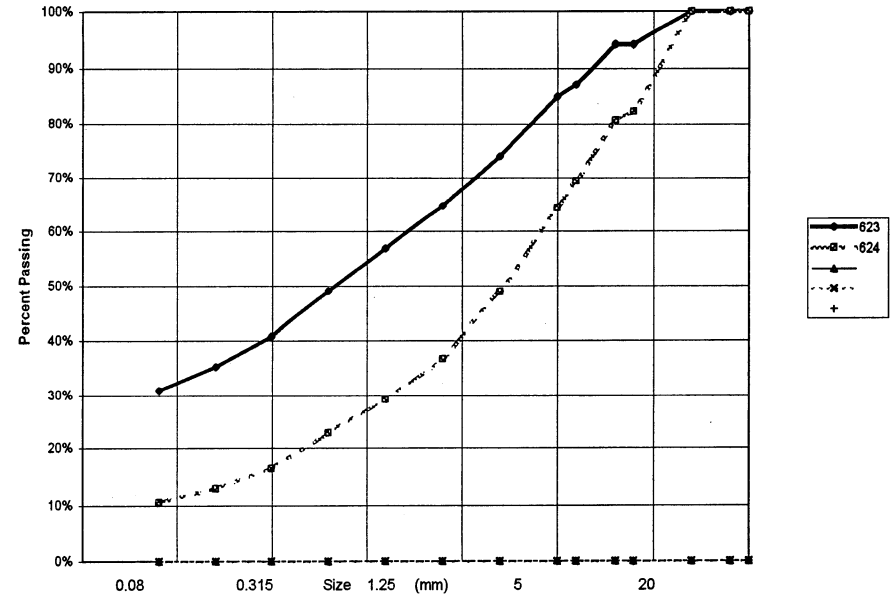
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-689
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1807+060 20M LT
 LOGGED BY: G.C. DATE COMP 1999-08-12

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	94%	25.0	82%
20.0	94%	20.0	81%
12.5	87%	12.5	69%
10.0	85%	10.0	64%
5.0	74%	5.0	49%
2.5	65%	2.5	37%
1.25	57%	1.25	29%
0.630	49%	0.630	23%
0.315	41%	0.315	16%
0.160	35%	0.160	13%
0.080	31%	0.080	11%
M.C.(%):	15%	M.C.(%):	8%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	26	% GRAVEL:	51
% SAND:	43	% SAND:	38
% FINES:	31	% FINES:	11
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	

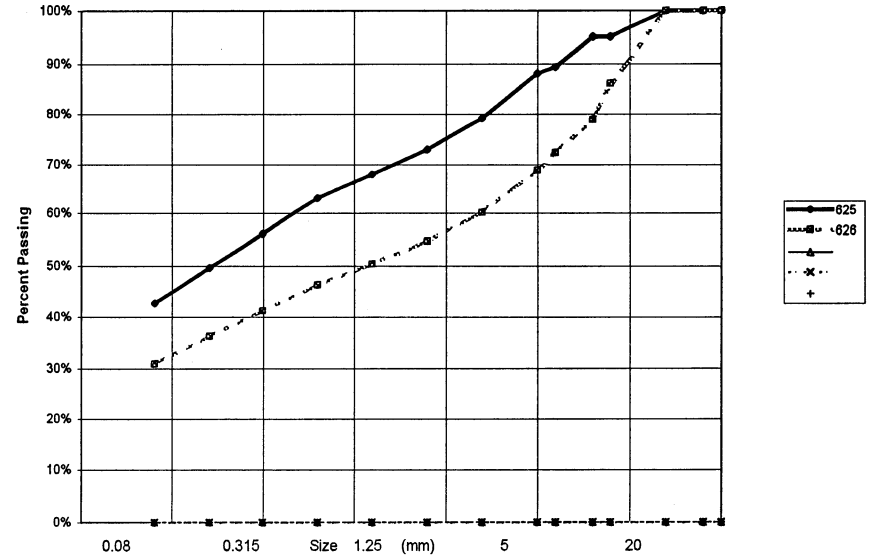
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-691
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1322 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1806+950 30M RT
 LOGGED BY: G.C. DATE COMP 1999-08-12

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	95%	25.0	86%
20.0	95%	20.0	79%
12.5	89%	12.5	72%
10.0	88%	10.0	69%
5.0	79%	5.0	60%
2.5	73%	2.5	55%
1.25	68%	1.25	50%
0.630	63%	0.630	46%
0.315	56%	0.315	41%
0.160	50%	0.160	36%
0.080	43%	0.080	31%
M.C.(%):	8%	M.C.(%):	6%
LIMITS			
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	21	% GRAVEL:	40
% SAND:	36	% SAND:	29
% FINES:	43	% FINES:	31
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)	

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



PROJECT NUMBER:	092-202101-0329	HOLE No.:	526-692
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK PROJECT		
PROJECT LOCATION:	SEG 13 KM 1799-1322 A/H		
DRILL UNIT:	NODWELL B40-L		
HOLE LOCATION:	1806+887 20M RT		
LOGGED BY:	G.C.	DATE COMP	99-08-12

FIELD NO:	627	FIELD No.	628
LAB NO:	723	LAB No.	724
DEPTH:	1.8-2.0	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER

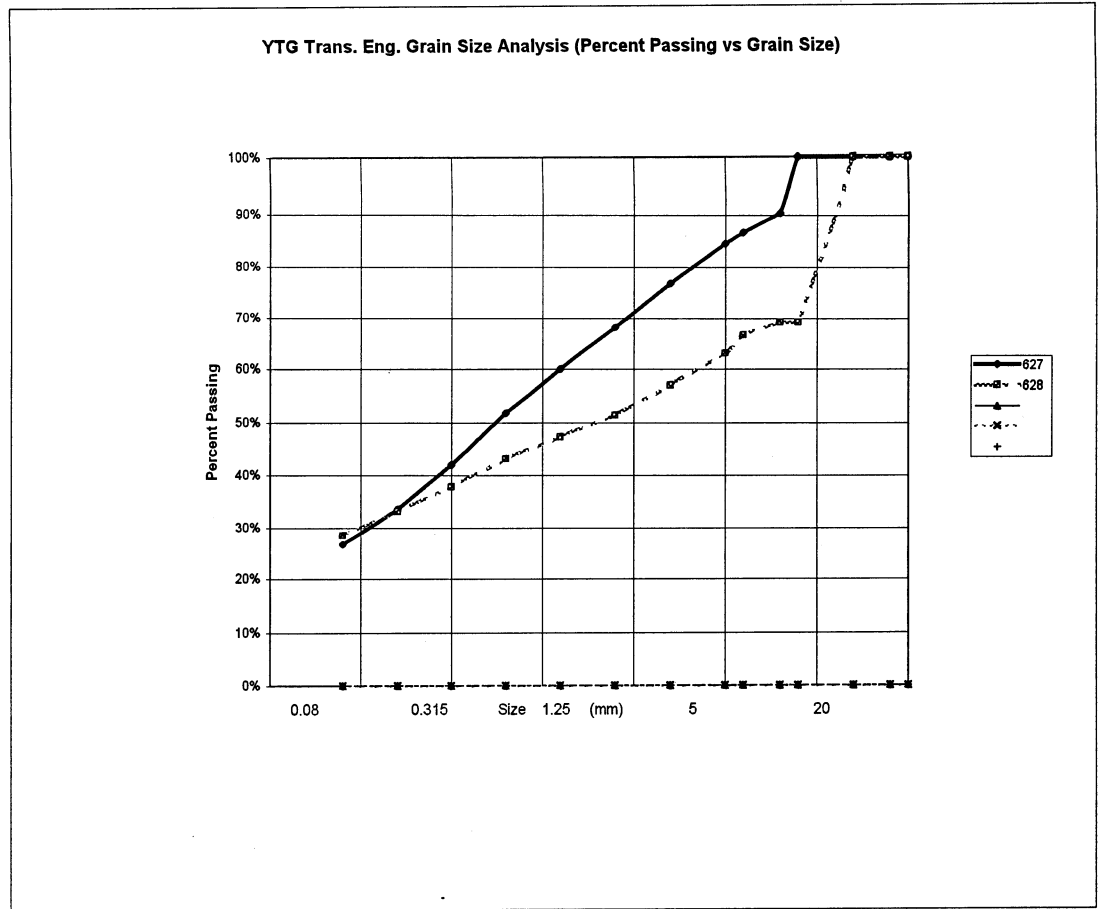
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	69%
20.0	90%	20.0	69%
12.5	87%	12.5	67%
10.0	85%	10.0	63%
5.0	77%	5.0	57%
2.5	68%	2.5	51%
1.25	60%	1.25	47%
0.630	52%	0.630	43%
0.315	42%	0.315	38%
0.160	34%	0.160	33%
0.080	27%	0.080	29%

M.C.(%):	13%	M.C.(%):	13%
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LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0

% GRAVEL:	23	% GRAVEL:	43
% SAND:	50	% SAND:	28
% FINES:	27	% FINES:	29

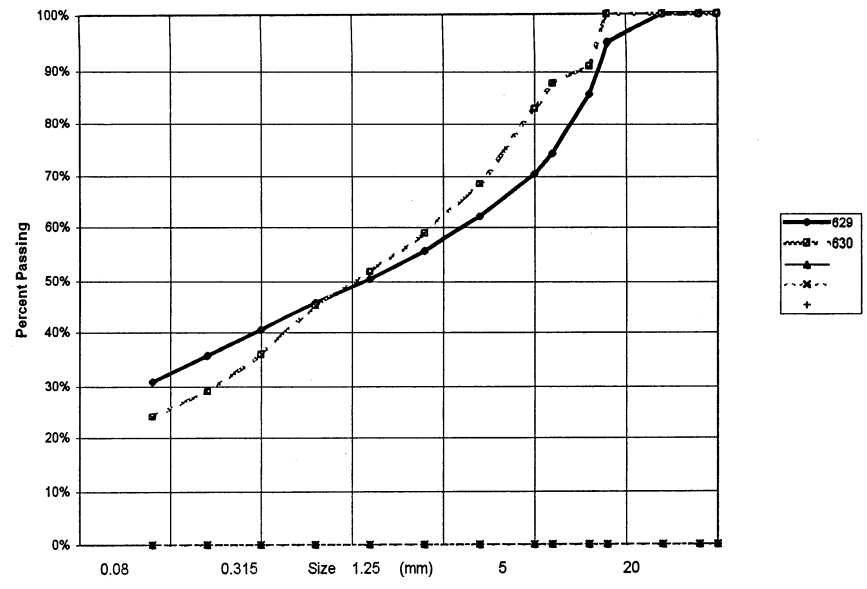
CLASSIFICATION:	CLASSIFICATION:
SILTY SAND WITH GRAVEL (SM)	SILTY GRAVEL WITH SAND (GM)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-893
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1322 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1806+887 20M LT
 LOGGED BY: G.C. DATE COMP 1999-08-12

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	95%	25.0	100%
20.0	86%	20.0	91%
12.5	74%	12.5	88%
10.0	70%	10.0	83%
5.0	62%	5.0	69%
2.5	56%	2.5	59%
1.25	50%	1.25	52%
0.630	46%	0.630	45%
0.315	40%	0.315	36%
0.160	36%	0.160	29%
0.080	31%	0.080	24%
M.C.(%): 17%		M.C.(%): 11%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	38	% GRAVEL:	31
% SAND:	31	% SAND:	45
% FINES:	31	% FINES:	24
CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)		CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	

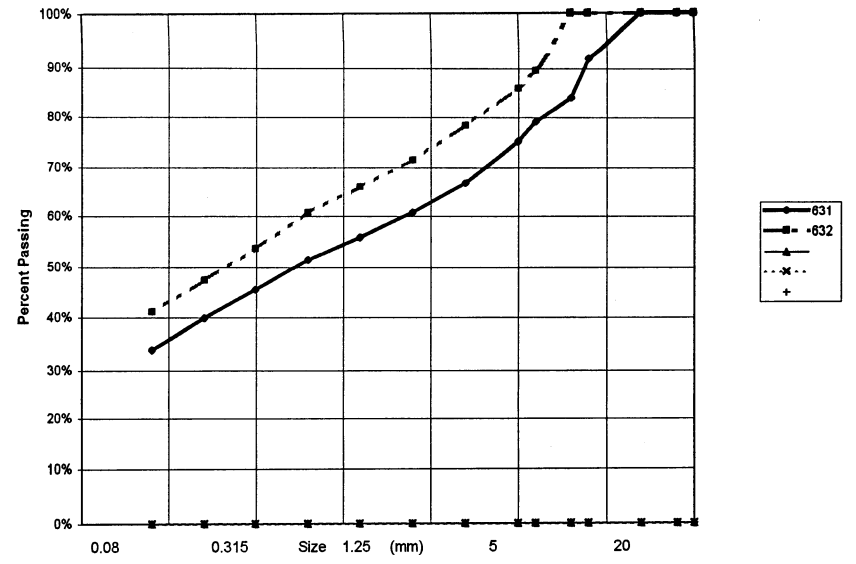
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-694
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1522 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1806+800 30M RT
 LOGGED BY: G.C. DATE COMP 8/12/99

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	92%	25.0	100%
20.0	84%	20.0	100%
12.5	79%	12.5	90%
10.0	75%	10.0	86%
5.0	67%	5.0	78%
2.5	61%	2.5	72%
1.25	56%	1.25	66%
0.630	52%	0.630	61%
0.315	46%	0.315	54%
0.160	40%	0.160	47%
0.080	34%	0.080	41%
M.C.(%): 6%		M.C.(%): 9%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	33	% GRAVEL:	22
% SAND:	33	% SAND:	37
% FINES:	34	% FINES:	41
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

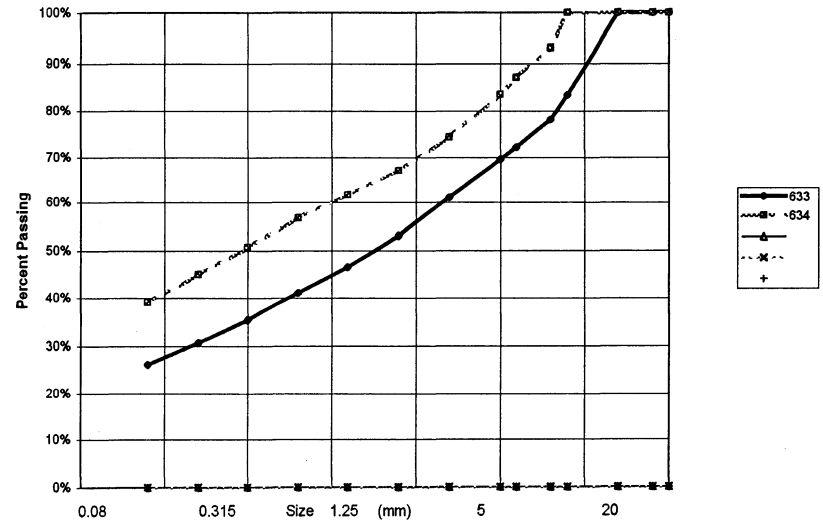
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 529-695
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1822 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1806+695 20M RT
 LOGGED BY: G.C. DATE COMP 99-08-12

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	83%	25.0	100%
20.0	78%	20.0	93%
12.5	72%	12.5	87%
10.0	70%	10.0	84%
5.0	61%	5.0	74%
2.5	53%	2.5	67%
1.25	47%	1.25	62%
0.630	41%	0.630	57%
0.315	35%	0.315	51%
0.160	31%	0.160	45%
0.080	26%	0.080	39%
M.C.(%):	11%	M.C.(%):	17%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	39	% GRAVEL:	26
% SAND:	35	% SAND:	35
% FINES:	26	% FINES:	39
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-696
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1899-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1806+705 20M LT
 LOGGED BY: G.C. DATE COMP 1999-08-12

FIELD NO: 635 FIELD No. 636
 LAB NO: 731 LAB No. 732
 DEPTH: 1.8-2.0 DEPTH 2.8-3.0
 TYPE: AUGER TYPE AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	100%
12.5	99%	12.5	98%
10.0	98%	10.0	96%
5.0	94%	5.0	89%
2.5	89%	2.5	83%
1.25	84%	1.25	77%
0.630	79%	0.630	71%
0.315	73%	0.315	63%
0.160	67%	0.160	55%
0.080	61%	0.080	48%

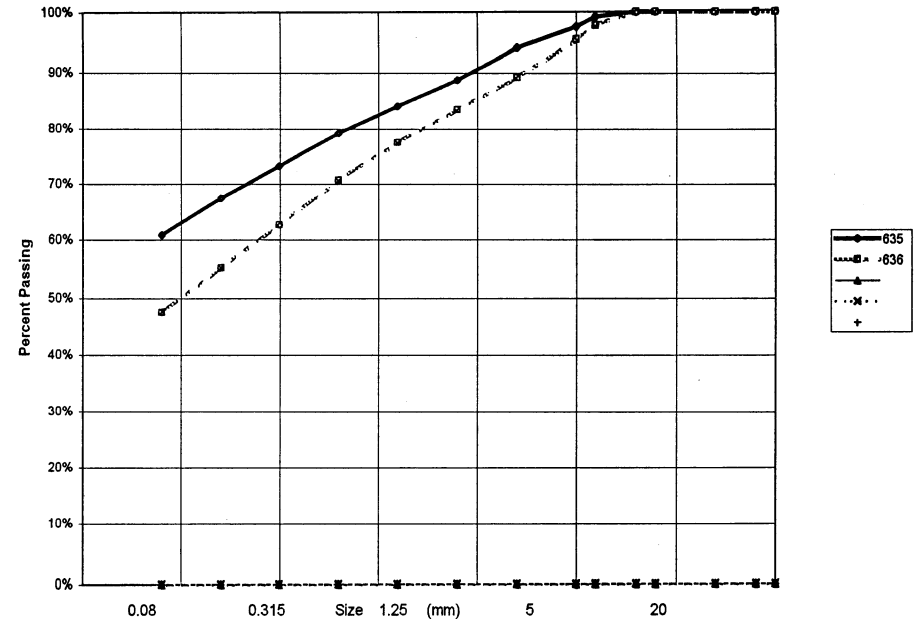
M.C.(%): 37% M.C.(%): 16%

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

% GRAVEL: 6 % GRAVEL: 11
 % SAND: 33 % SAND: 42
 % FINES: 61 % FINES: 48

CLASSIFICATION: SANDY SILT (ML) CLASSIFICATION: SILTY SAND (SM)

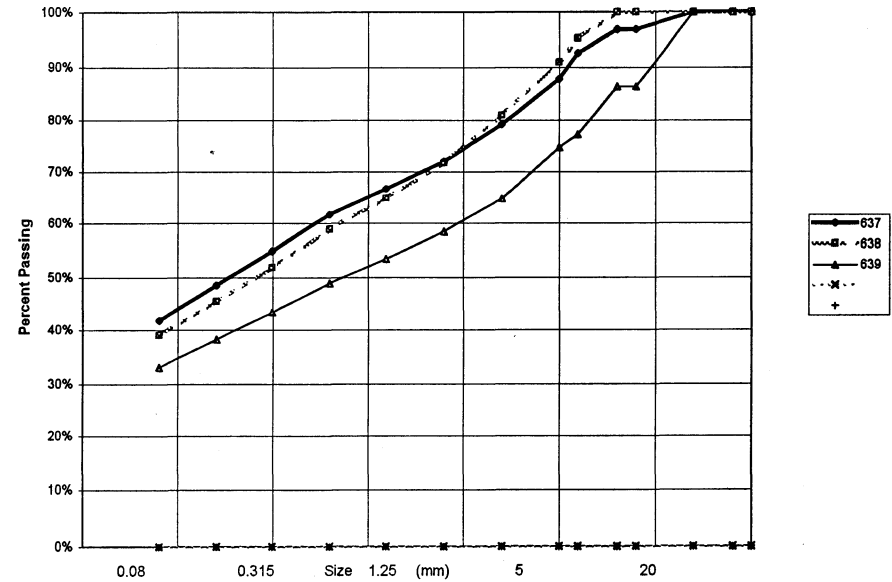
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-697
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1322 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1806+575 30M RT
 LOGGED BY: G.C. DATE COMP 1999-08-12

FIELD NO: 637		FIELD No. 638		FIELD No: 639	
LAB NO: 733		LAB No. 734		LAB No: 735	
DEPTH: 1.2-1.4		DEPTH: 2.8-3.0		DEPTH: 4.3-4.5	
TYPE: AUGER		TYPE: AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	97%	25.0	100%	25.0	86%
20.0	97%	20.0	100%	20.0	86%
12.5	93%	12.5	95%	12.5	77%
10.0	88%	10.0	91%	10.0	75%
5.0	79%	5.0	81%	5.0	65%
2.5	72%	2.5	72%	2.5	58%
1.25	67%	1.25	65%	1.25	54%
0.630	62%	0.630	59%	0.630	49%
0.315	55%	0.315	52%	0.315	43%
0.160	49%	0.160	46%	0.160	38%
0.080	42%	0.080	39%	0.080	33%
M.C.(%):	9%	M.C.(%):	11%	M.C.(%):	8%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	21	% GRAVEL:	19	% GRAVEL:	35
% SAND:	37	% SAND:	42	% SAND:	32
% FINES:	42	% FINES:	39	% FINES:	33
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)	

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-698
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1322 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1806+470 20M RT
 LOGGED BY: G.C. DATE COMP 1999-08-12

FIELD NO: 640
 LAB NO: 736
 DEPTH: 3.0-3.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	80%
20.0	80%
12.5	69%
10.0	64%
5.0	45%
2.5	34%
1.25	28%
0.630	21%
0.315	14%
0.160	12%
0.080	10%

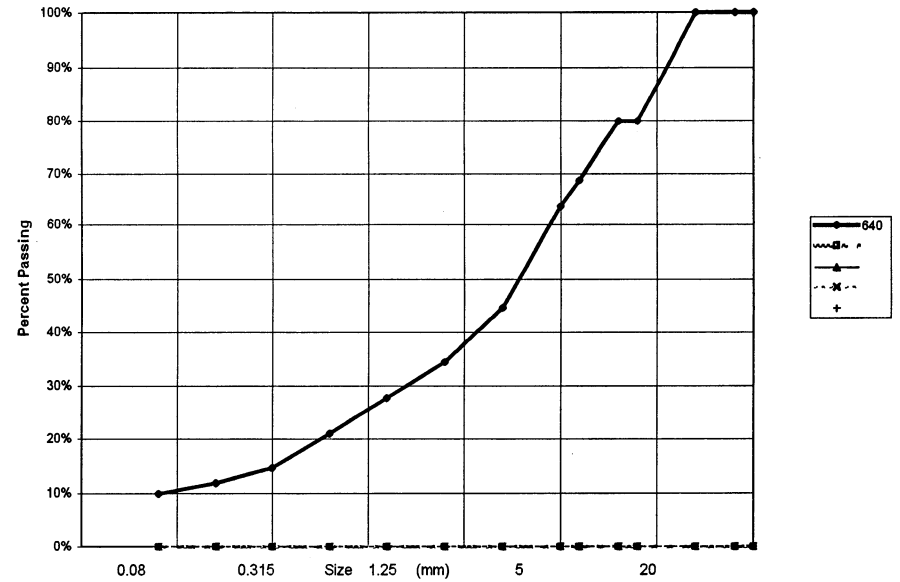
M.C.(%): 9%

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

% GRAVEL: 55
 % SAND: 35
 % FINES: 10

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

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-699
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1522 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1806+470 20M LT
 LOGGED BY: G.C. DATE COMP 1999-08-12

FIELD NO: 641
 LAB NO: 737
 DEPTH: 2.8-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	93%
20.0	85%
12.5	67%
10.0	61%
5.0	43%
2.5	35%
1.25	30%
0.630	26%
0.315	23%
0.160	20%
0.080	18%

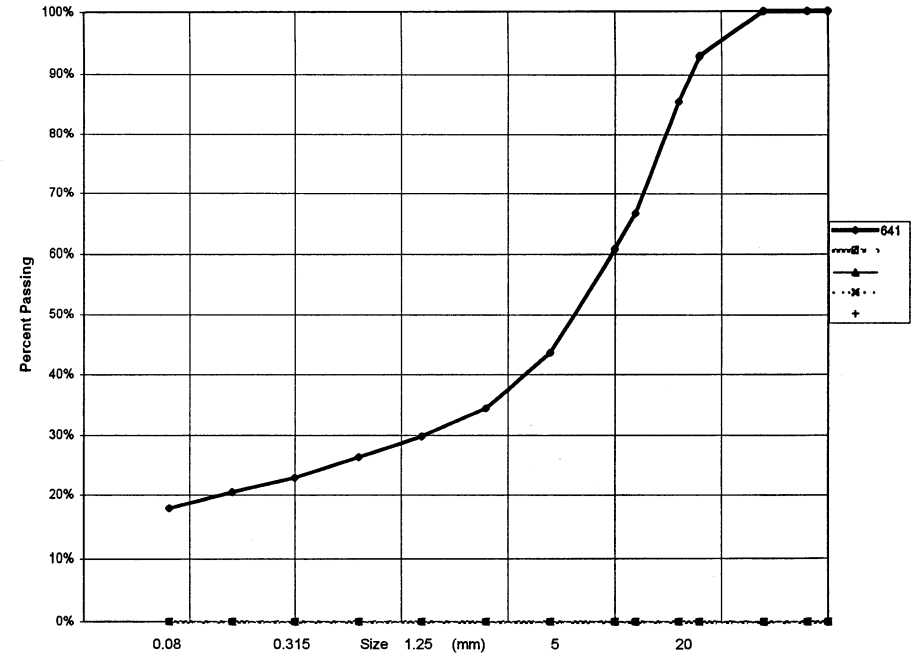
M.C. (%): 12%

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

% GRAVEL: 57
 % SAND: 26
 % FINES: 18

CLASSIFICATION:
 SILTY GRAVEL WITH SAND (GM)

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 528-700
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1822 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1806+400 30M RT
 LOGGED BY: G.C. DATE COMP 1999-08-12

FIELD NO: 642 FIELD No. 643
 LAB NO: 738 LAB No. 739
 DEPTH: 1.2-1.4 DEPTH 2.8-3.0
 TYPE: AUGER TYPE AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	92%	25.0	100%
20.0	92%	20.0	96%
12.5	84%	12.5	91%
10.0	81%	10.0	88%
5.0	74%	5.0	84%
2.5	67%	2.5	81%
1.25	62%	1.25	77%
0.630	57%	0.630	75%
0.315	51%	0.315	72%
0.160	46%	0.160	69%
0.080	40%	0.080	67%

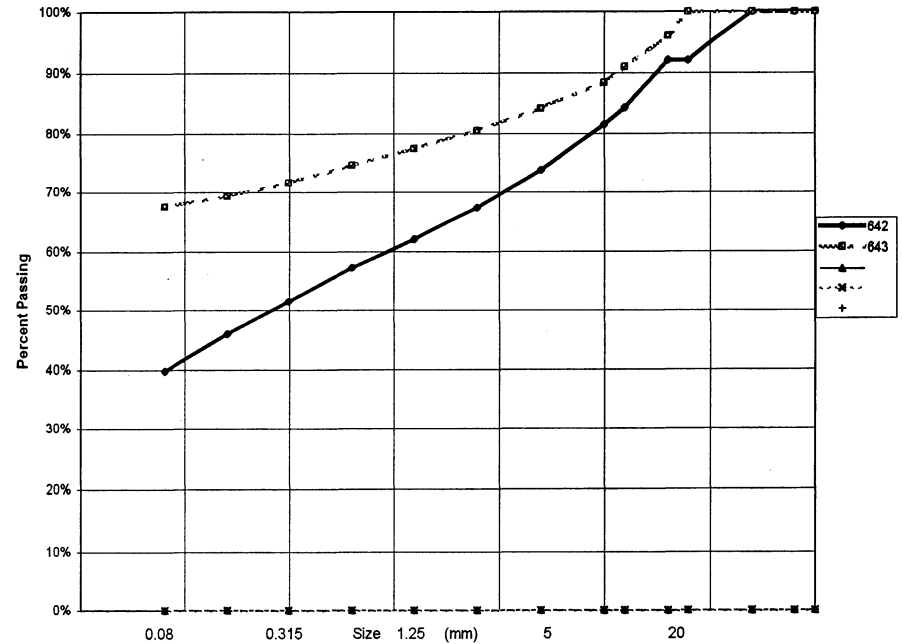
M.C.(%): 22% M.C.(%): 20%

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

% GRAVEL: 26 % GRAVEL: 16
 % SAND: 34 % SAND: 17
 % FINES: 40 % FINES: 67

CLASSIFICATION: CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM) SANDY SILT WITH GRAVEL (ML)

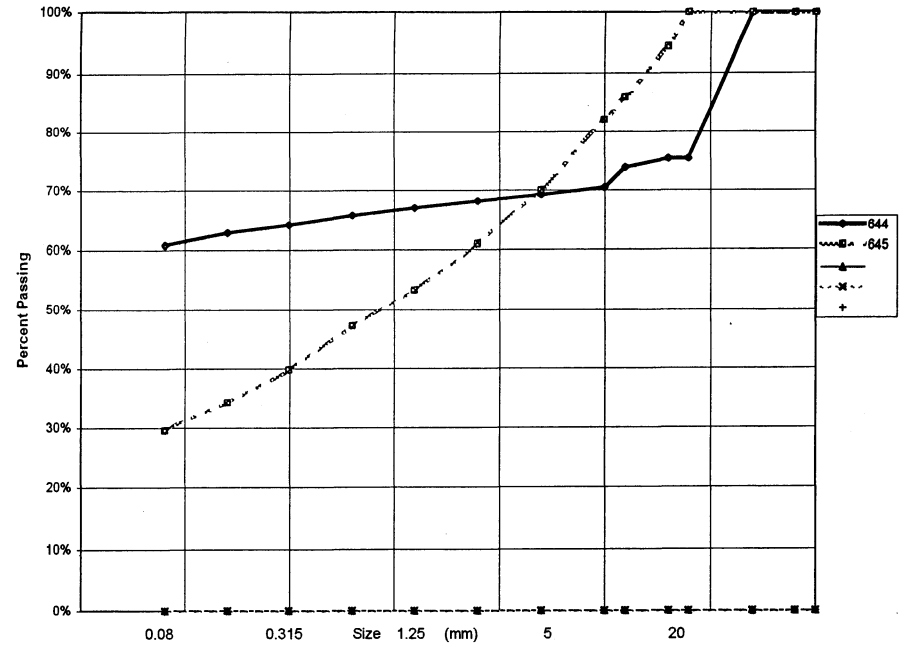
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-701
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1522 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1806+300 30M RT
 LOGGED BY: G.C. DATE COMP 1999-08-12

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	75%	25.0	100%
20.0	75%	20.0	94%
12.5	74%	12.5	86%
10.0	70%	10.0	82%
5.0	69%	5.0	70%
2.5	68%	2.5	61%
1.25	67%	1.25	53%
0.630	66%	0.630	47%
0.315	64%	0.315	40%
0.160	63%	0.160	34%
0.080	61%	0.080	30%
M.C.(%): 53%		M.C.(%): 12%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	31	% GRAVEL:	30
% SAND:	8	% SAND:	40
% FINES:	61	% FINES:	30
CLASSIFICATION:		CLASSIFICATION:	
GRAVELLY SILT (ML)		SILTY SAND WITH GRAVEL (SM)	

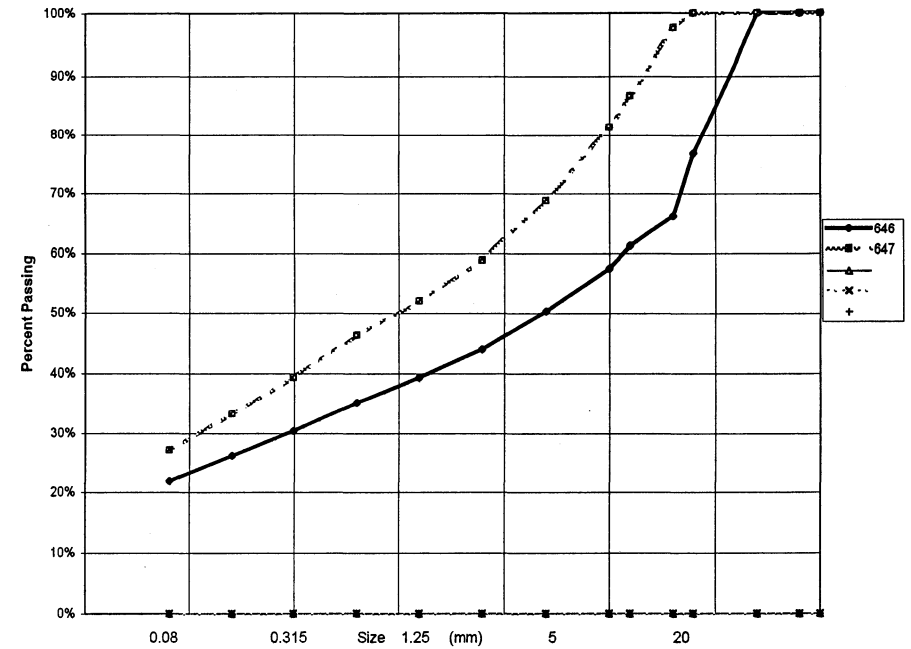
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-702
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1522 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1806+200 30M RT
 LOGGED BY: G.C. DATE COMP 1999-08-13

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	77%	25.0	100%
20.0	66%	20.0	98%
12.5	61%	12.5	87%
10.0	57%	10.0	81%
5.0	50%	5.0	69%
2.5	44%	2.5	59%
1.25	39%	1.25	52%
0.630	35%	0.630	46%
0.315	30%	0.315	39%
0.160	26%	0.160	33%
0.080	22%	0.080	27%
M.C.(%):	13%	M.C.(%):	11%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	50	% GRAVEL:	31
% SAND:	28	% SAND:	42
% FINES:	22	% FINES:	27
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

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



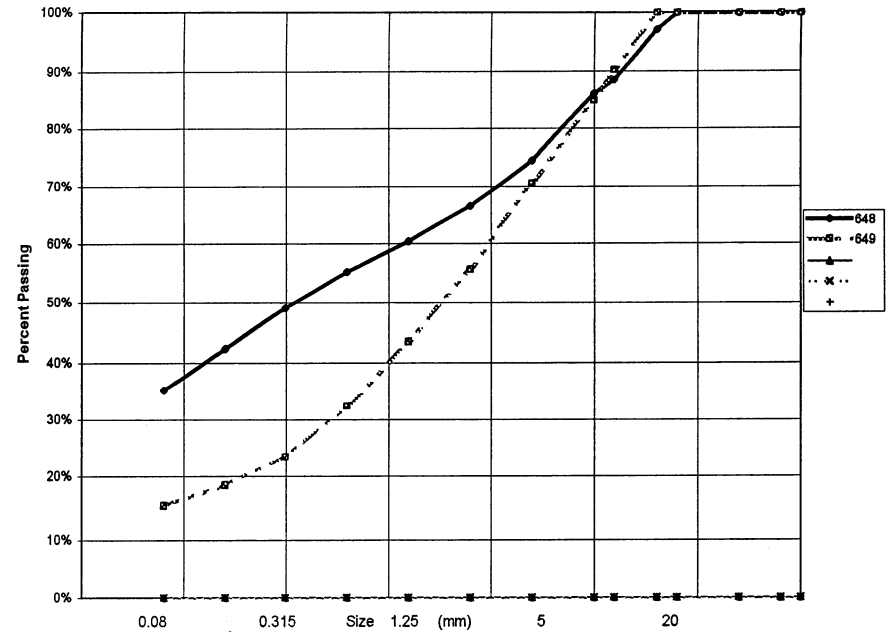
PROJECT NUMBER:	092-202101-0329	HOLE No.:	526-703
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK PROJECT		
PROJECT LOCATION:	SEG 13 KM 1799-1722 A/H		
DRILL UNIT:	NODWELL B40-L		
HOLE LOCATION:	1806+100 30M RT		
LOGGED BY:	G.C.	DATE COMP	1999-08-13

FIELD NO:	648	FIELD No.	649
LAB NO:	744	LAB No.	745
DEPTH:	1.2-1.4	DEPTH	2.6-2.9
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	97%	20.0	100%
12.5	89%	12.5	90%
10.0	86%	10.0	85%
5.0	74%	5.0	71%
2.5	66%	2.5	56%
1.25	60%	1.25	43%
0.630	55%	0.630	32%
0.315	49%	0.315	23%
0.160	42%	0.160	19%
0.080	35%	0.080	15%

M.C.(%):	13%	M.C.(%):	10%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	26	% GRAVEL:	29
% SAND:	39	% SAND:	55
% FINES:	35	% FINES:	15
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

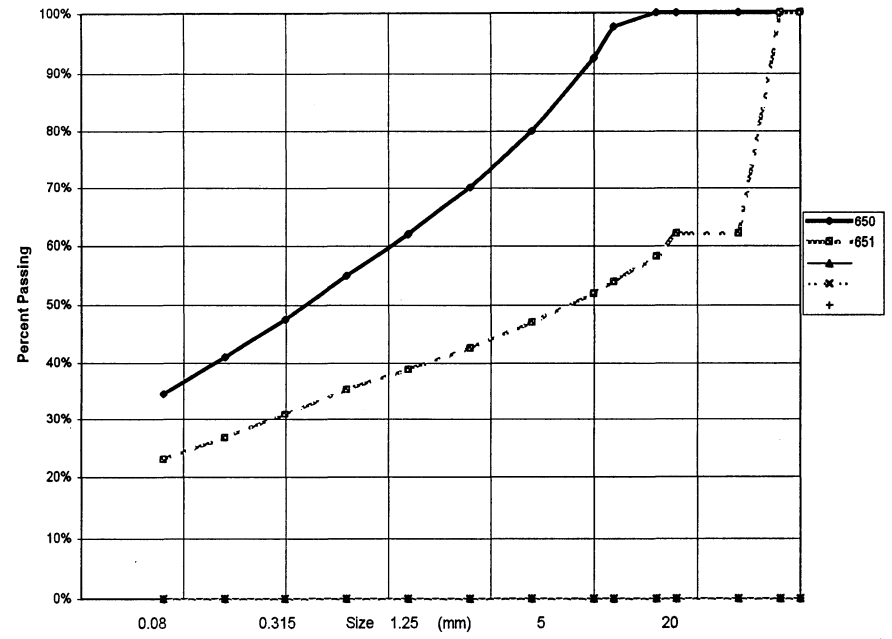
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-704
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1#22 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1806+000 30M RT
 LOGGED BY: G.C. DATE COMP 1999-08-13

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	62%
25.0	100%	25.0	62%
20.0	100%	20.0	58%
12.5	98%	12.5	54%
10.0	93%	10.0	52%
5.0	80%	5.0	47%
2.5	70%	2.5	42%
1.25	62%	1.25	39%
0.630	55%	0.630	35%
0.315	47%	0.315	31%
0.160	41%	0.160	27%
0.080	35%	0.080	23%
M.C.(%): 11%		M.C.(%): 8%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	20	% GRAVEL:	53
% SAND:	45	% SAND:	24
% FINES:	35	% FINES:	23
CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)		CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)	

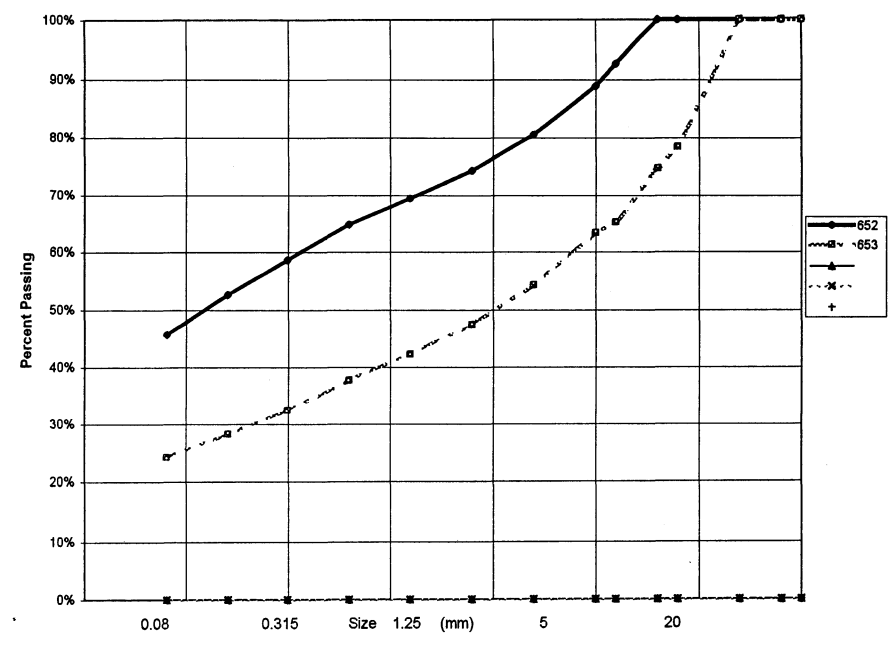
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-705
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1822 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1805+915 20M RT
 LOGGED BY: G.C. DATE COMP 99-08-14

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	79%
20.0	100%	20.0	75%
12.5	93%	12.5	65%
10.0	89%	10.0	63%
5.0	81%	5.0	54%
2.5	74%	2.5	47%
1.25	69%	1.25	42%
0.630	65%	0.630	38%
0.315	59%	0.315	33%
0.160	53%	0.160	28%
0.080	46%	0.080	24%
M.C. (%)	13%	M.C. (%)	10%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	19	% GRAVEL:	46
% SAND:	35	% SAND:	30
% FINES:	46	% FINES:	24
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)	

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-706
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1 22 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1805+915 20M LT
 LOGGED BY: G.C. DATE COMP 1999-08-14

FIELD NO: 654
 LAB NO: 750
 DEPTH: 2.6-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	93%
20.0	84%
12.5	79%
10.0	73%
5.0	61%
2.5	49%
1.25	40%
0.630	34%
0.315	28%
0.160	23%
0.080	19%

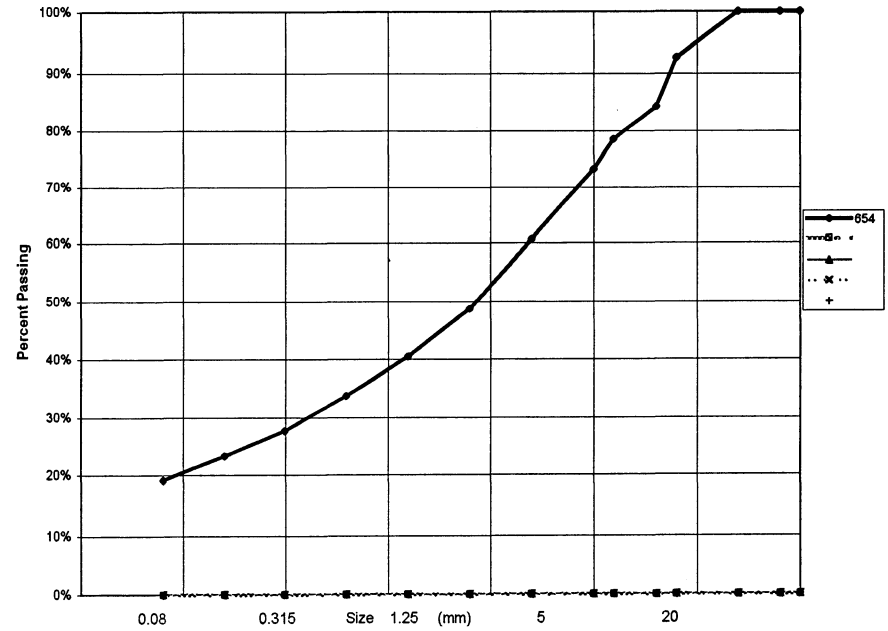
M.C.(%): 11%

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

% GRAVEL: 39
 % SAND: 41
 % FINES: 19

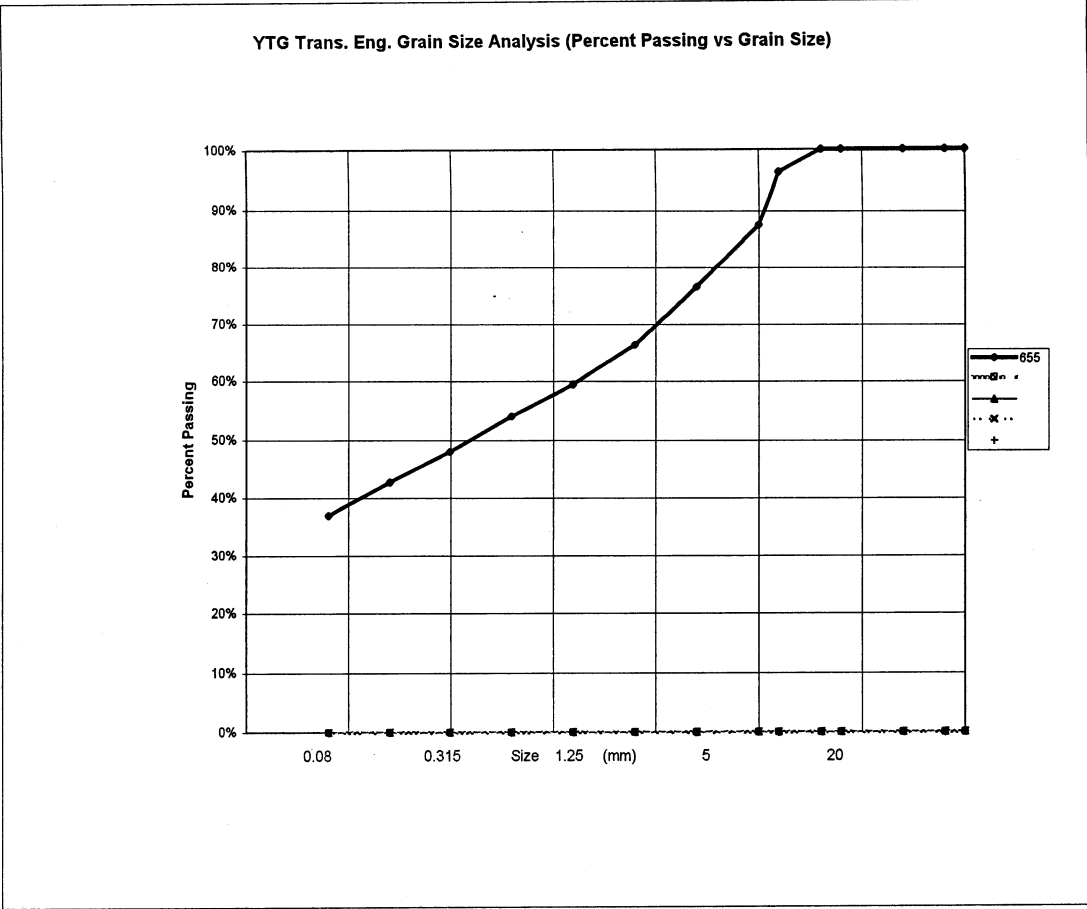
CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM)

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-707
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1322 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1805+800 30M RT
 LOGGED BY: G.C. DATE COMP 1999-08-14

FIELD NO:	655		
LAB NO:	751		
DEPTH:	1.0-1.2		
TYPE:	AUGER		
SIEVE SIZE	PERCENT PASSING		
100.0	100%		
80.0	100%		
50.0	100%		
25.0	100%		
20.0	100%		
12.5	96%		
10.0	88%		
5.0	77%		
2.5	66%		
1.25	59%		
0.630	54%		
0.315	48%		
0.160	43%		
0.080	37%		
M.C.(%):	16%		
LIMITS			
LIQUID:	0.0		
PLASTIC:	0.0		
P.I.:	0.0		
% GRAVEL:	23		
% SAND:	40		
% FINES:	37		
CLASSIFICATION:			
SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER:	092-202101-0329	HOLE No.:	526-708
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK PROJECT		
PROJECT LOCATION:	SEG 13 KM 1799-1722 A/H		
DRILL UNIT:	NODWELL B40-L		
HOLE LOCATION:	1805+700 30M RT		
LOGGED BY:	G.C.	DATE COMP	1999-08-14

FIELD NO:	656	FIELD No.	657
LAB NO:	752	LAB No.	753
DEPTH:	1.6-1.8	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER

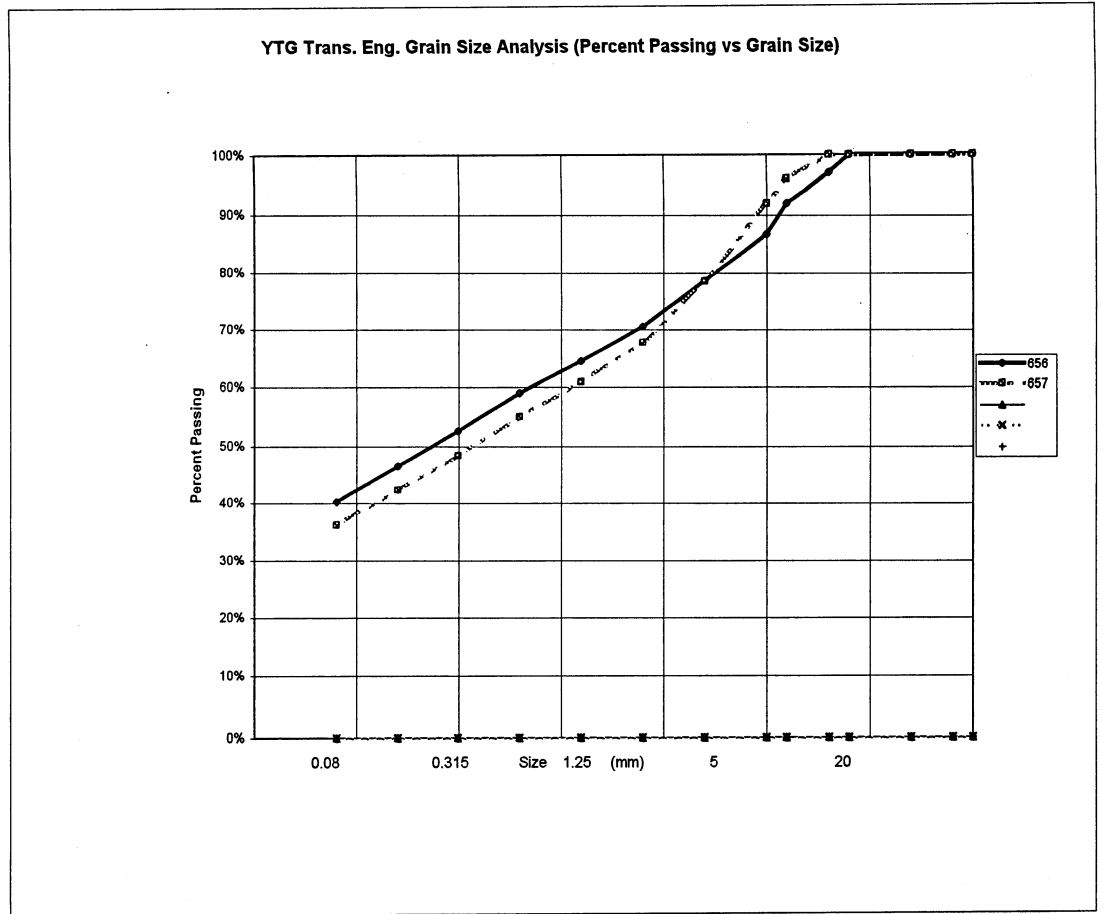
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	97%	20.0	100%
12.5	92%	12.5	96%
10.0	87%	10.0	92%
5.0	79%	5.0	78%
2.5	70%	2.5	68%
1.25	64%	1.25	61%
0.630	59%	0.630	55%
0.315	53%	0.315	48%
0.160	46%	0.160	42%
0.080	40%	0.080	36%

M.C.(%):	13%	M.C.(%):	10%
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LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0

% GRAVEL:	21	% GRAVEL:	22
% SAND:	38	% SAND:	42
% FINES:	40	% FINES:	36

CLASSIFICATION:	CLASSIFICATION:
SILTY SAND WITH GRAVEL (SM)	SILTY SAND WITH GRAVEL (SM)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 526-709
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-122 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1805+590 30M RT
 LOGGED BY: G.C. DATE COMP 1999-08-14

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	92%
20.0	88%
12.5	83%
10.0	78%
5.0	67%
2.5	58%
1.25	52%
0.630	47%
0.315	41%
0.160	37%
0.080	31%

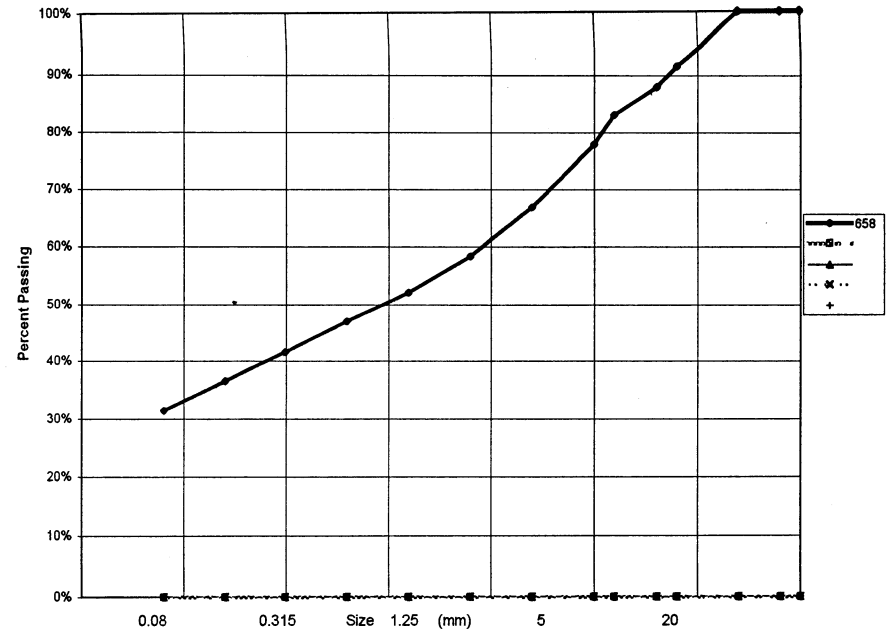
M.C.(%)	10%
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LIMITS	
LIQUID:	0.0
PLASTIC:	0.0
P.I.:	0.0

% GRAVEL:	33
% SAND:	35
% FINES:	31

CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)	

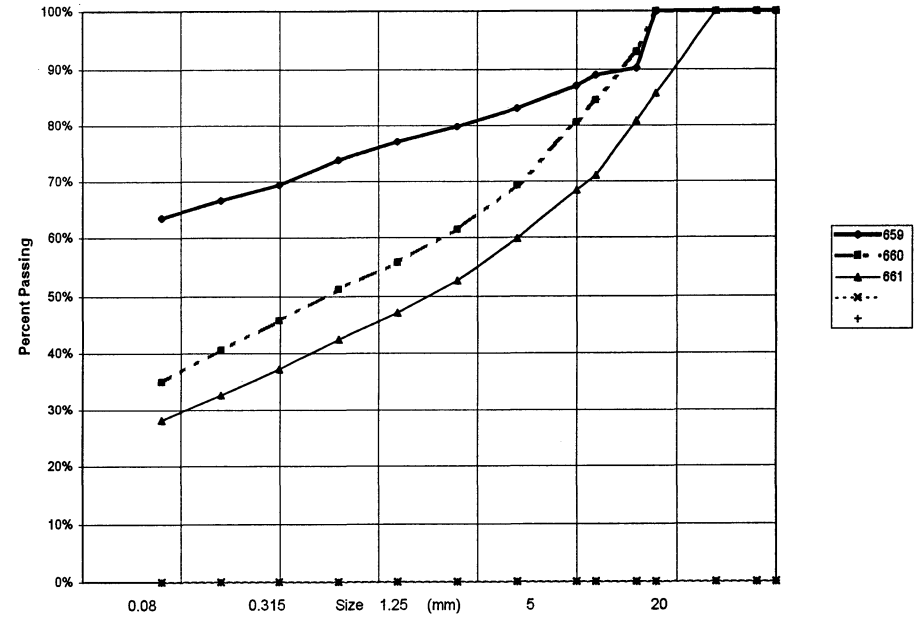
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-710
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1805+550 20 RT
 LOGGED BY: G.C. DATE COMP 99-08-17

FIELD NO: 659		FIELD No. 660		FIELD No: 661	
LAB NO: 758		LAB No. 759		LAB No: 760	
DEPTH: 1.2-1.4		DEPTH 2.0-2.2		DEPTH: 3.6-4.0	
TYPE: AUGER		TYPE AUGER		TYPE: AUGER	
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%	100.0	100%
80.0	100%	80.0	100%	80.0	100%
50.0	100%	50.0	100%	50.0	100%
25.0	100%	25.0	100%	25.0	86%
20.0	90%	20.0	93%	20.0	81%
12.5	89%	12.5	84%	12.5	71%
10.0	87%	10.0	81%	10.0	68%
5.0	83%	5.0	69%	5.0	60%
2.5	80%	2.5	61%	2.5	53%
1.25	77%	1.25	56%	1.25	47%
0.630	74%	0.630	51%	0.630	42%
0.315	69%	0.315	46%	0.315	37%
0.160	67%	0.160	40%	0.160	33%
0.080	63%	0.080	35%	0.080	28%
M.C.(%):	31%	M.C.(%):	12%	M.C.(%):	7%
LIMITS		LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0	P.I.:	0.0
% GRAVEL:	17	% GRAVEL:	31	% GRAVEL:	40
% SAND:	20	% SAND:	34	% SAND:	32
% FINES:	63	% FINES:	35	% FINES:	28
CLASSIFICATION:		CLASSIFICATION:		CLASSIFICATION:	
SANDY SILT WITH GRAVEL (ML)		SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)	

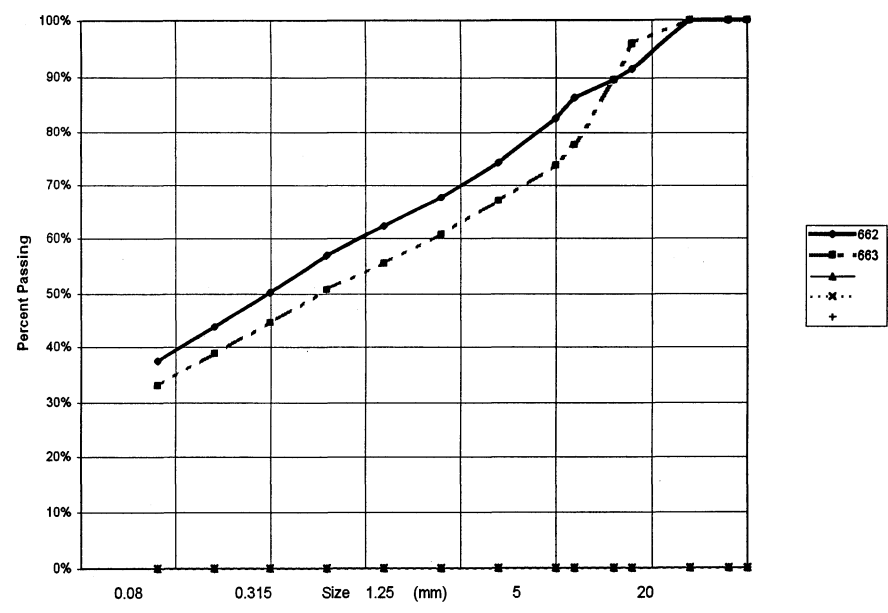
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-711
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1322 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1805+550 20M LT
 LOGGED BY: G.C. DATE COMP 99-08-17

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	92%	25.0	96%
20.0	90%	20.0	90%
12.5	86%	12.5	78%
10.0	83%	10.0	74%
5.0	74%	5.0	67%
2.5	68%	2.5	61%
1.25	62%	1.25	56%
0.630	57%	0.630	51%
0.315	50%	0.315	45%
0.160	44%	0.160	39%
0.080	38%	0.080	33%
M.C.(%): 7%		M.C.(%): 10%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	26	% GRAVEL:	33
% SAND:	37	% SAND:	34
% FINES:	38	% FINES:	33
CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)		CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-712
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1X22 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1805+450 20M LT
 LOGGED BY: G.C. DATE COMP 99-08-17

FIELD NO: 664	FIELD No. 665
LAB NO: 763	LAB No. 764
DEPTH: 1.8-2.0	DEPTH 2.8-3.0
TYPE: AUGER	TYPE AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	89%	25.0	94%
20.0	87%	20.0	88%
12.5	71%	12.5	79%
10.0	68%	10.0	75%
5.0	59%	5.0	63%
2.5	52%	2.5	53%
1.25	47%	1.25	46%
0.630	43%	0.630	40%
0.315	38%	0.315	33%
0.160	33%	0.160	28%
0.080	28%	0.080	24%

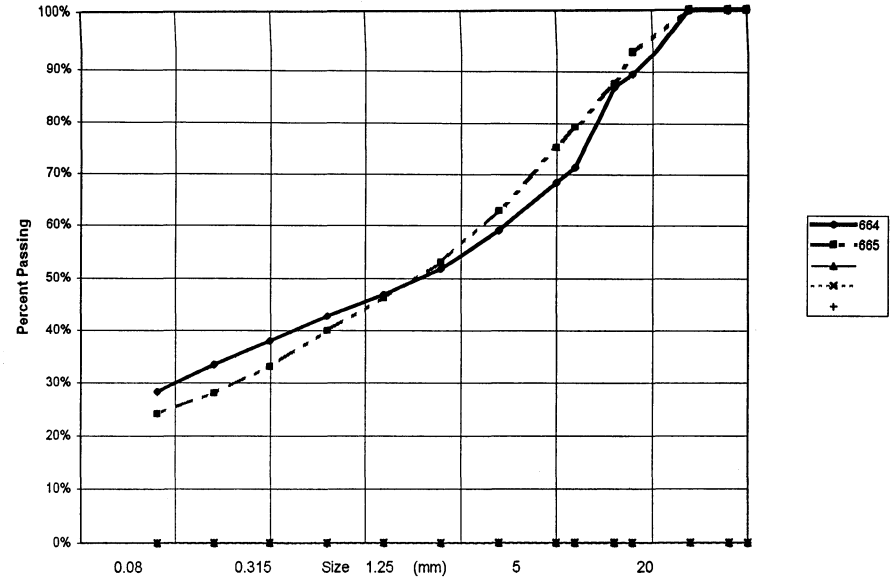
M.C.(%): 10% M.C.(%): 9%

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

% GRAVEL:	41	% GRAVEL:	37
% SAND:	31	% SAND:	39
% FINES:	28	% FINES:	24

CLASSIFICATION: SILTY GRAVEL WITH SAND (GM) CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)

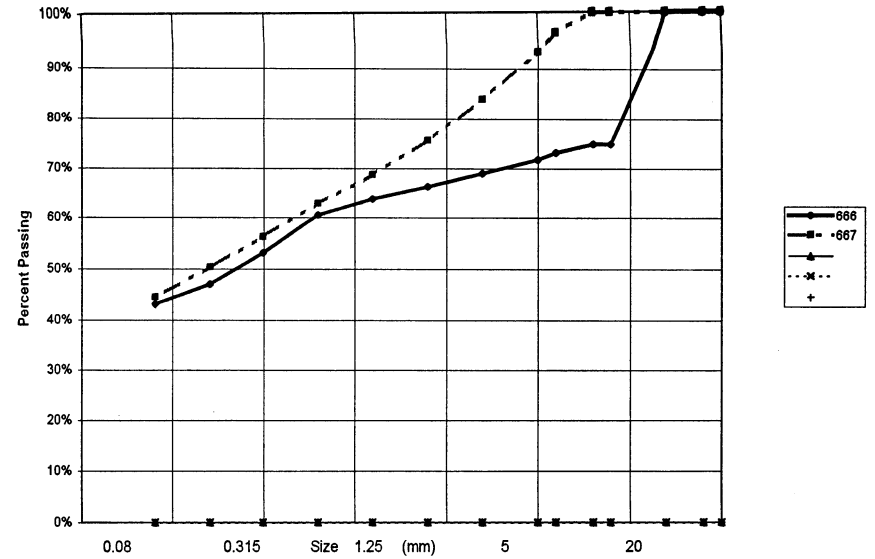
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-713
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1X22 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1805+550 20M RT
 LOGGED BY: G.C. DATE COMP 99-08-17

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	75%	25.0	100%
20.0	75%	20.0	100%
12.5	73%	12.5	97%
10.0	72%	10.0	93%
5.0	69%	5.0	84%
2.5	66%	2.5	76%
1.25	64%	1.25	69%
0.630	61%	0.630	63%
0.315	53%	0.315	56%
0.160	47%	0.160	50%
0.080	43%	0.080	45%
M.C.(%):	22%	M.C.(%):	12%
LIMITS			
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	31	% GRAVEL:	16
% SAND:	26	% SAND:	39
% FINES:	43	% FINES:	45
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-714
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1805+425 20M RT
 LOGGED BY: G.C. DATE COMP 99-08-17

FIELD NO: 668
 LAB NO: 767
 DEPTH: 2.8-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	85%
20.0	85%
12.5	81%
10.0	78%
5.0	69%
2.5	63%
1.25	60%
0.630	56%
0.315	51%
0.160	46%
0.080	42%

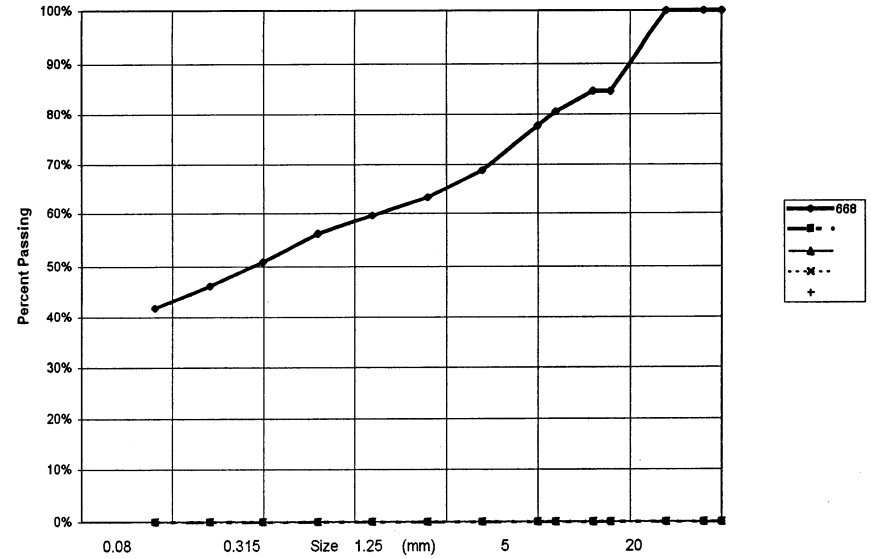
M.C.(%): 17%

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

% GRAVEL: 31
 % SAND: 27
 % FINES: 42

CLASSIFICATION:
 SILTY GRAVEL WITH SAND (GM)

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-715
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1X22 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1805+425 20M LT
 LOGGED BY: G.C. DATE COMP 99-08-17

FIELD NO: 669 FIELD No. 669A
 LAB NO: 768 LAB No. 769
 DEPTH: 1.5-1.7 DEPTH 2.8-3.0
 TYPE: AUGER TYPE AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	67%
20.0	100%	20.0	63%
12.5	100%	12.5	56%
10.0	100%	10.0	53%
5.0	100%	5.0	45%
2.5	99%	2.5	38%
1.25	99%	1.25	34%
0.630	97%	0.630	30%
0.315	94%	0.315	26%
0.160	90%	0.160	23%
0.080	81%	0.080	20%

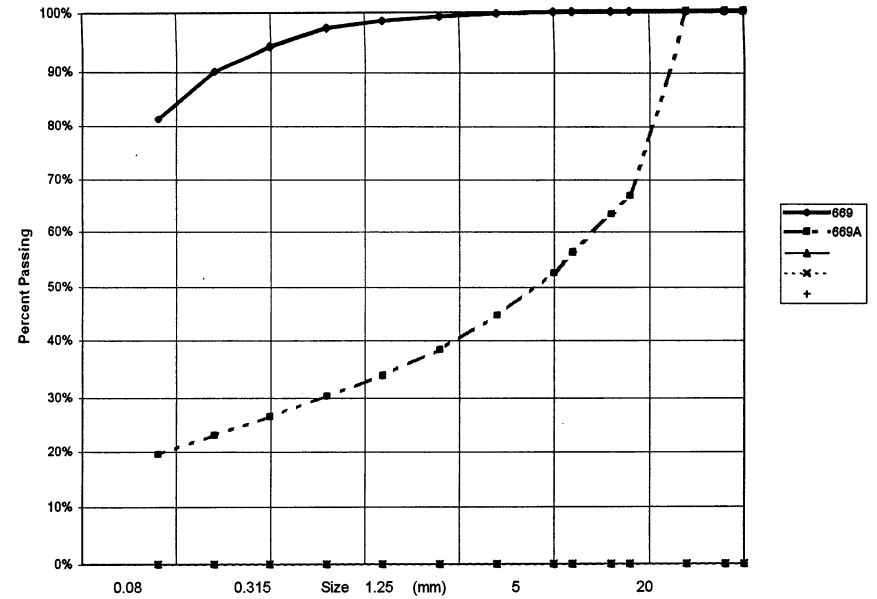
M.C.(%): 45% M.C.(%): 7%

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

% GRAVEL: 0 % GRAVEL: 55
 % SAND: 18 % SAND: 25
 % FINES: 81 % FINES: 20

CLASSIFICATION: CLASSIFICATION:
 SILT WITH SAND (ML) SILTY GRAVEL WITH SAND (GM)

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-716
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1822 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1805+425 20M RT
 LOGGED BY: G.C. DATE COMP 99-08-17

FIELD NO: 670
 LAB NO: 770
 DEPTH: 2.0-2.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	100%
12.5	88%
10.0	84%
5.0	73%
2.5	64%
1.25	58%
0.630	53%
0.315	47%
0.160	42%
0.080	36%

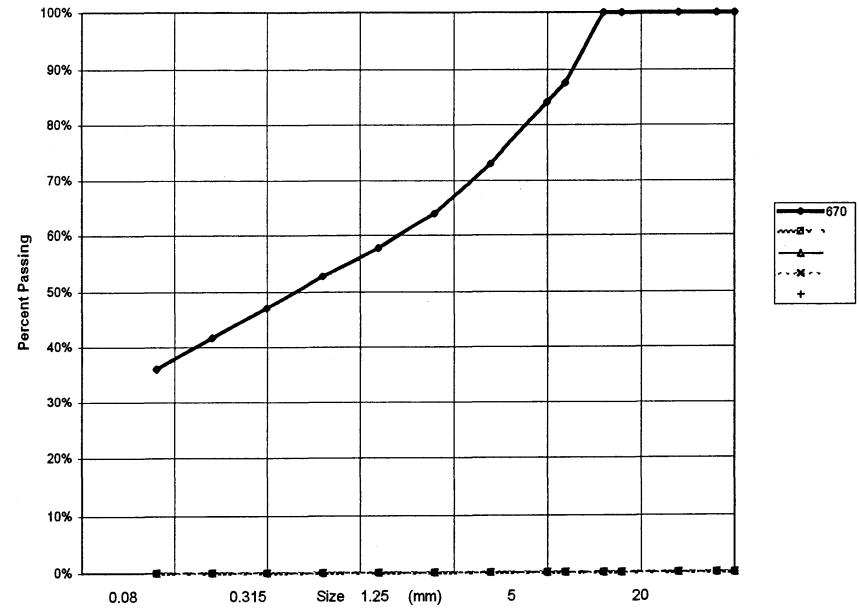
M.C.(%): 13%

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

% GRAVEL: 27
 % SAND: 37
 % FINES: 36

CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM)

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-717
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1322 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1805+325 20M LT
 LOGGED BY: G.C. DATE COMP 99-08-17

FIELD NO: 671
 LAB NO: 771
 DEPTH: 2.6-2.8
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	98%
20.0	98%
12.5	96%
10.0	94%
5.0	82%
2.5	74%
1.25	68%
0.630	63%
0.315	55%
0.160	49%
0.080	44%

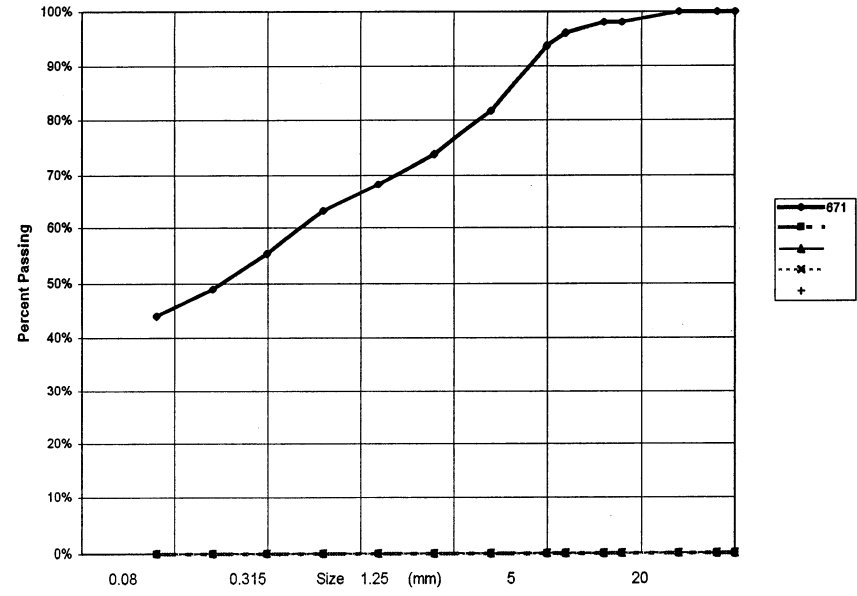
M.C.(%): 19%

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

% GRAVEL: 18
 % SAND: 38
 % FINES: 44

CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM)

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

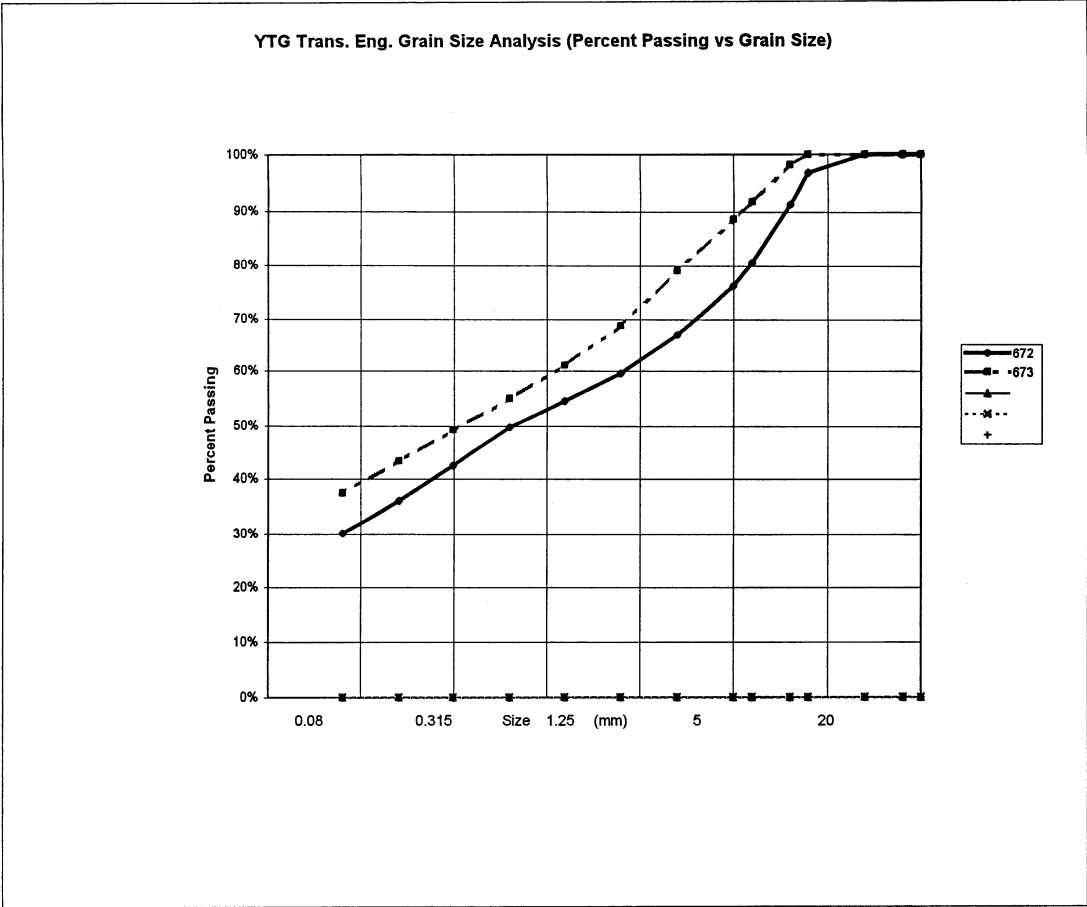


PROJECT NUMBER:	092-202101-0329	HOLE No.:	527-718
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK PROJECT		
PROJECT LOCATION:	SEG 13 KM 1799-1322 A/H		
DRILL UNIT:	NODWELL B40-L		
HOLE LOCATION:	1805+275 30M RT		
LOGGED BY:	G.C.	DATE COMP	99-08-17

FIELD NO:	672	FIELD No.	673
LAB NO:	772	LAB No.	773
DEPTH:	1.3-1.5	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	97%	25.0	100%
20.0	91%	20.0	98%
12.5	81%	12.5	92%
10.0	76%	10.0	89%
5.0	67%	5.0	79%
2.5	60%	2.5	69%
1.25	55%	1.25	61%
0.630	50%	0.630	55%
0.315	42%	0.315	49%
0.160	36%	0.160	43%
0.080	30%	0.080	37%

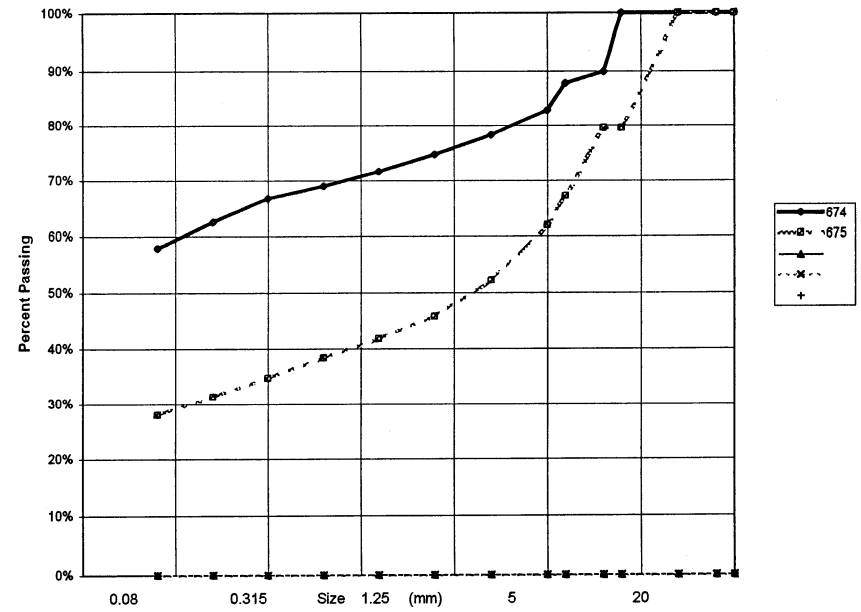
M.C.(%):	17%	M.C.(%):	17%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	33	% GRAVEL:	21
% SAND:	37	% SAND:	42
% FINES:	30	% FINES:	37
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	



PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-719
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1822 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1805+172 30 RT
 LOGGED BY: G.C. DATE COMP 99-08-17

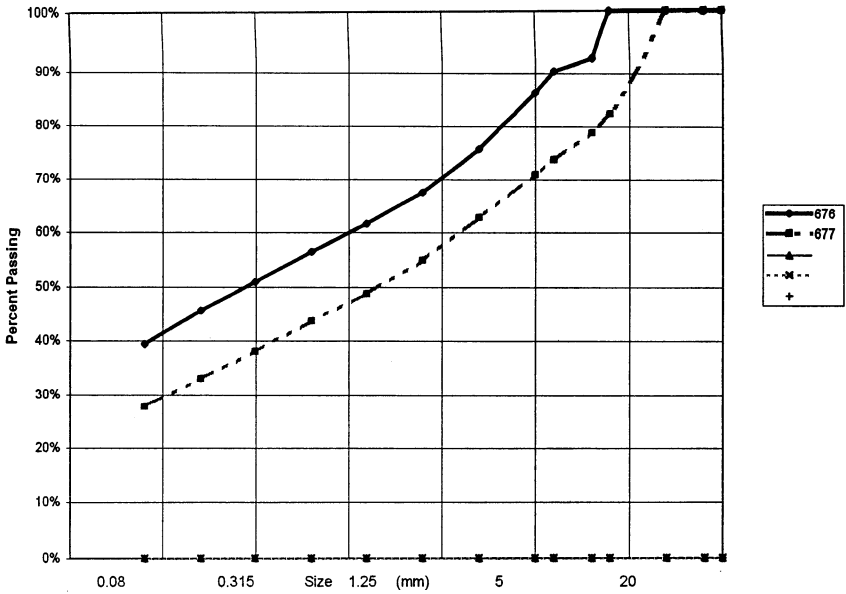
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	80%
20.0	90%	20.0	80%
12.5	88%	12.5	67%
10.0	83%	10.0	62%
5.0	78%	5.0	52%
2.5	75%	2.5	46%
1.25	72%	1.25	42%
0.630	69%	0.630	38%
0.315	67%	0.315	35%
0.160	62%	0.160	31%
0.080	58%	0.080	28%
M.C.(%): 26%		M.C.(%): 11%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	22	% GRAVEL:	48
% SAND:	20	% SAND:	24
% FINES:	58	% FINES:	28
CLASSIFICATION: GRAVELLY SILT WITH SAND (ML)		CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)	

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



PROJECT NUMBER:	092-202101-0329	HOLE No.:	527-720
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK PROJECT		
PROJECT LOCATION:	SEG 13 KM 1799-1322 A/H		
DRILL UNIT:	NODWELL B40-L		
HOLE LOCATION:	1805+070 30M RT		
LOGGED BY:	G.C.	DATE COMP	99-08-17
=====			
FIELD NO:	676	FIELD No.	677
LAB NO:	776	LAB No.	777
DEPTH:	1.4-1.6	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER
=====			
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	82%
20.0	93%	20.0	79%
12.5	90%	12.5	74%
10.0	86%	10.0	71%
5.0	76%	5.0	63%
2.5	67%	2.5	55%
1.25	62%	1.25	49%
0.630	57%	0.630	44%
0.315	51%	0.315	38%
0.160	45%	0.160	33%
0.080	39%	0.080	28%
=====			
M.C.(%):	19%	M.C.(%):	10%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	24	% GRAVEL:	37
% SAND:	36	% SAND:	35
% FINES:	39	% FINES:	28
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY GRAVEL WITH SAND (GM)	

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-721
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1X22 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1804+960 20M RT
 LOGGED BY: G.C. DATE COMP 99-08-17

FIELD NO: 678
 LAB NO: 778
 DEPTH: 2.0-2.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	72%
20.0	66%
12.5	62%
10.0	58%
5.0	52%
2.5	47%
1.25	43%
0.630	40%
0.315	35%
0.160	30%
0.080	26%

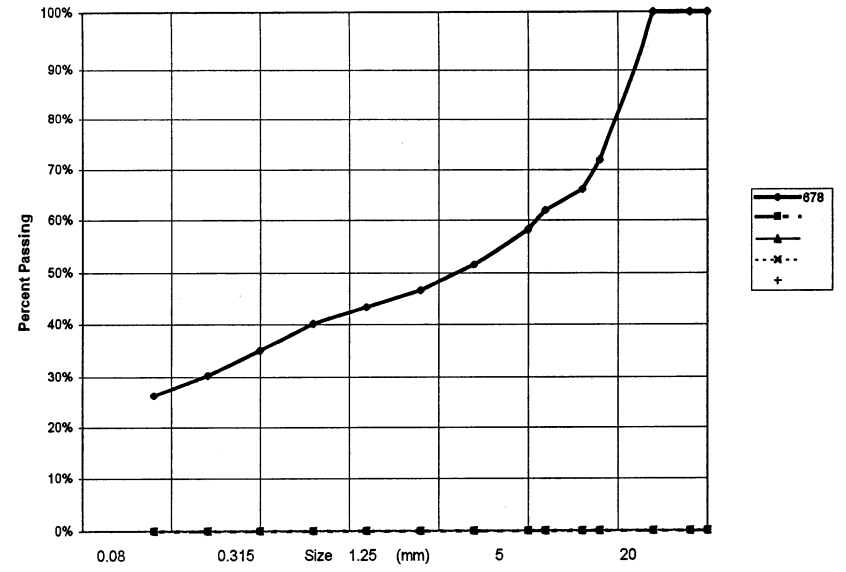
M.C.(%): 15%

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

% GRAVEL: 48
 % SAND: 26
 % FINES: 26

CLASSIFICATION:
 SILTY GRAVEL WITH SAND (GM)

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



PROJECT NUMBER:	092-202101-0329	HOLE No.:	527-722
CLIENT:	ENGINEERING-CAPITAL		
PROJECT NAME:	SHAKWAK PROJECT		
PROJECT LOCATION:	SEG 13 KM 1799-1X22 A/H		
DRILL UNIT:	NODWELL B40-L		
HOLE LOCATION:	1804+960 20M LT		
LOGGED BY:	G.C.	DATE COMP	99-08-17

FIELD NO:	679	FIELD No.	680
LAB NO:	779	LAB No.	780
DEPTH:	2.0-2.2	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER

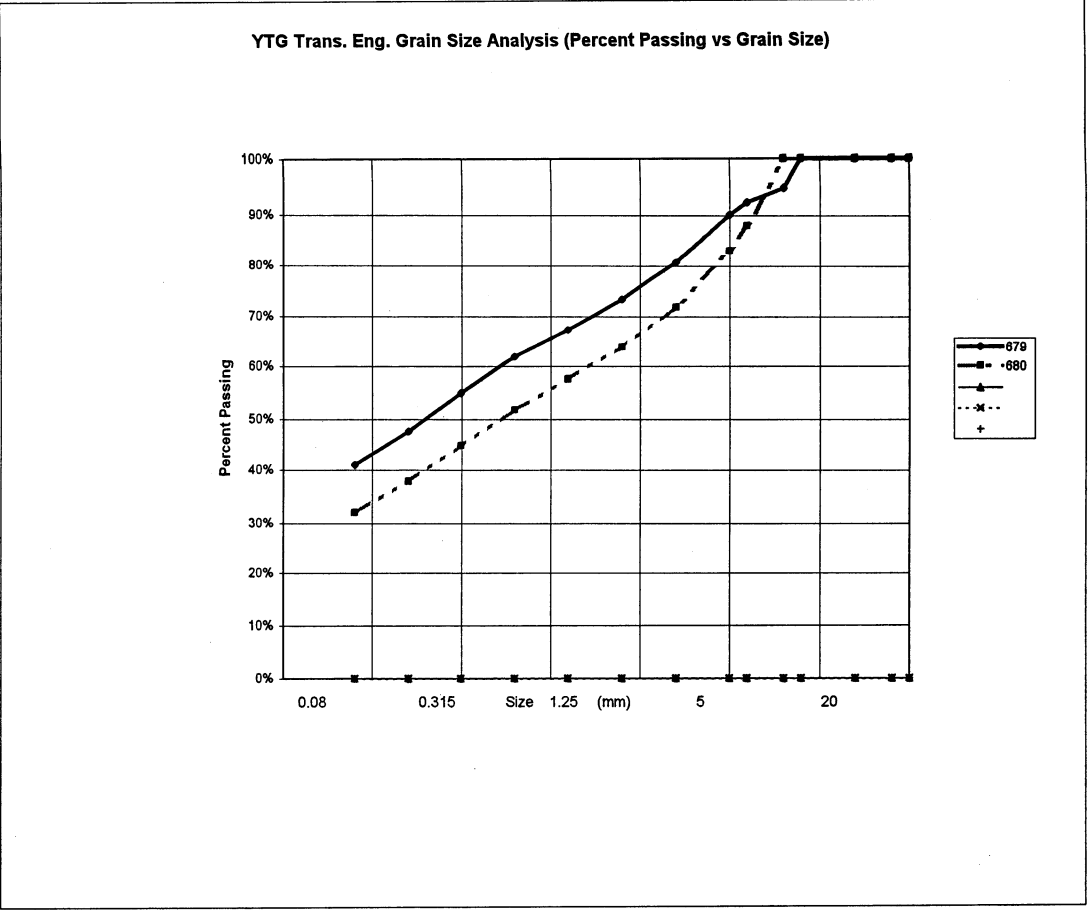
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	95%	20.0	100%
12.5	92%	12.5	88%
10.0	90%	10.0	83%
5.0	81%	5.0	72%
2.5	73%	2.5	64%
1.25	67%	1.25	58%
0.630	62%	0.630	52%
0.315	55%	0.315	45%
0.160	48%	0.160	38%
0.080	41%	0.080	32%

M.C.(%):	17%	M.C.(%):	16%
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LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0

% GRAVEL:	19	% GRAVEL:	28
% SAND:	40	% SAND:	40
% FINES:	41	% FINES:	32

CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	



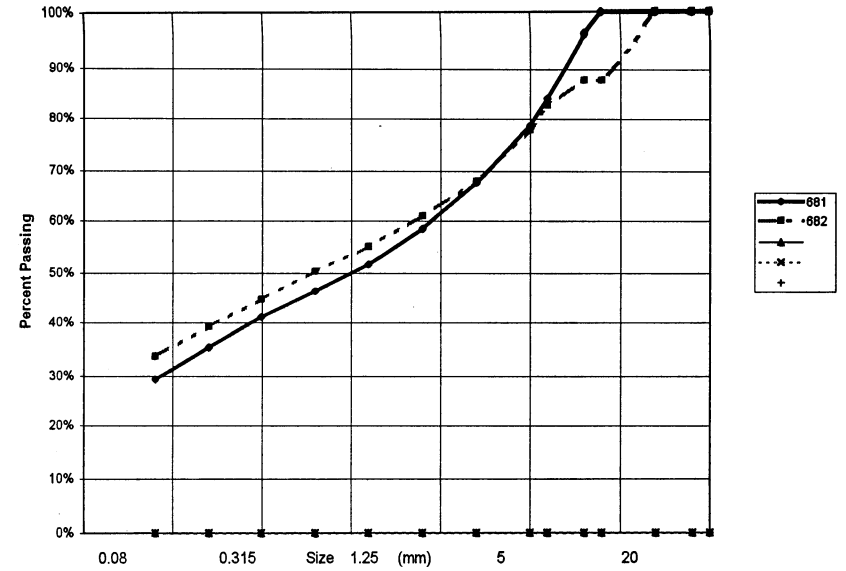
PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-723
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1804+870 30M LT
 LOGGED BY: G.C. DATE COMP 99-08-17

FIELD NO:	681	FIELD No.	682
LAB NO:	781	LAB No.	782
DEPTH:	1.8-2.0	DEPTH	2.8-3.0
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	88%
20.0	97%	20.0	88%
12.5	84%	12.5	83%
10.0	79%	10.0	78%
5.0	68%	5.0	68%
2.5	58%	2.5	61%
1.25	52%	1.25	55%
0.630	46%	0.630	50%
0.315	41%	0.315	45%
0.160	35%	0.160	39%
0.080	29%	0.080	34%

M.C.(%):	9%	M.C.(%):	11%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	32	% GRAVEL:	32
% SAND:	38	% SAND:	34
% FINES:	29	% FINES:	34
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

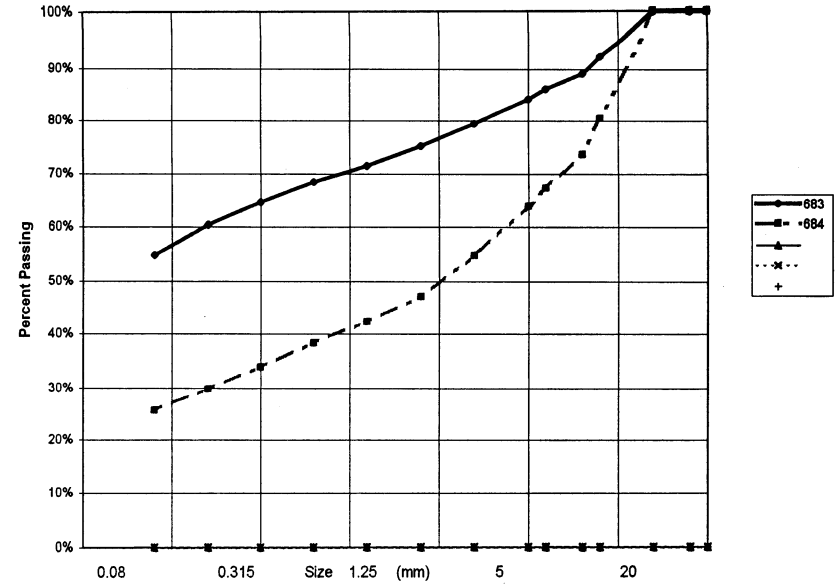
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-724
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1822 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1804+775 30M LT
 LOGGED BY: G.C. DATE COMP 99-08-17

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	92%	25.0	81%
20.0	89%	20.0	74%
12.5	86%	12.5	67%
10.0	84%	10.0	64%
5.0	79%	5.0	55%
2.5	75%	2.5	47%
1.25	71%	1.25	42%
0.630	68%	0.630	38%
0.315	65%	0.315	34%
0.160	60%	0.160	30%
0.080	55%	0.080	26%
M.C.(%):	23%	M.C.(%):	9%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	21	% GRAVEL:	45
% SAND:	25	% SAND:	29
% FINES:	55	% FINES:	26
CLASSIFICATION:		CLASSIFICATION:	
SANDY SILT WITH GRAVEL (ML)		SILTY GRAVEL WITH SAND (GM)	

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



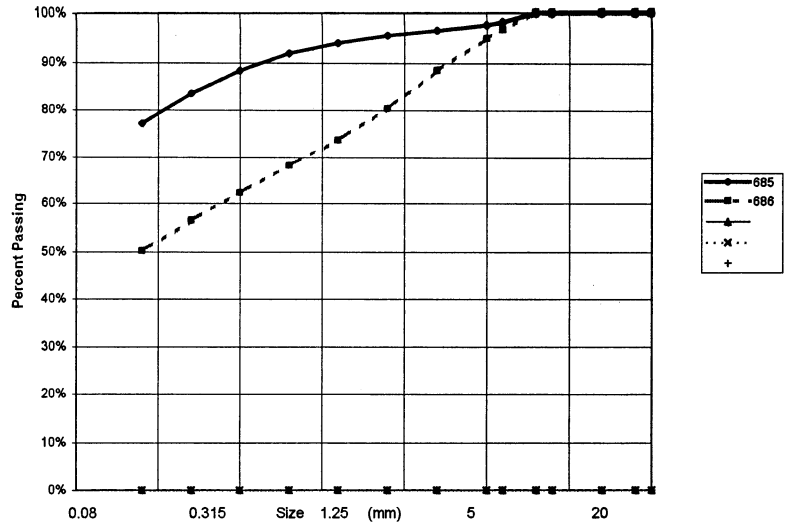
PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-725
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1522 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1804+650 30M LT
 LOGGED BY: G.C. DATE COMP 99-08-17

FIELD NO:	LAB NO:	DEPTH:	TYPE:	FIELD No.	LAB No.	DEPTH	TYPE
685	785	2.0-2.2	AUGER	686	786	2.8-3.0	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	100%
12.5	98%	12.5	97%
10.0	98%	10.0	95%
5.0	97%	5.0	88%
2.5	96%	2.5	80%
1.25	94%	1.25	74%
0.630	92%	0.630	68%
0.315	88%	0.315	62%
0.160	84%	0.160	57%
0.080	77%	0.080	50%

M.C.(%):	34%	M.C.(%):	17%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	3	% GRAVEL:	12
% SAND:	20	% SAND:	38
% FINES:	77	% FINES:	50
CLASSIFICATION:	SILT WITH SAND (ML)	CLASSIFICATION:	SANDY SILT (ML)

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-726
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1322 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1804+575 20M LT
 LOGGED BY: G.C. DATE COMP 99-08-17

FIELD NO: 687
 LAB NO: 787
 DEPTH: 2.8-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	94%
12.5	92%
10.0	89%
5.0	82%
2.5	72%
1.25	63%
0.630	58%
0.315	52%
0.160	46%
0.080	40%

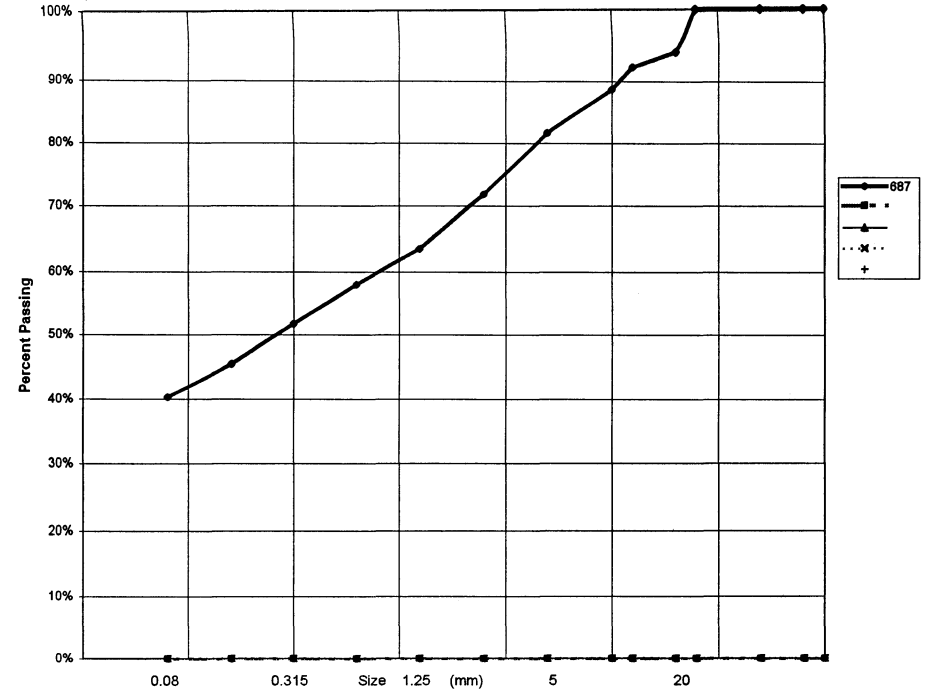
M.C.(%): 17%

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

% GRAVEL: 18
 % SAND: 41
 % FINES: 40

CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM)

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

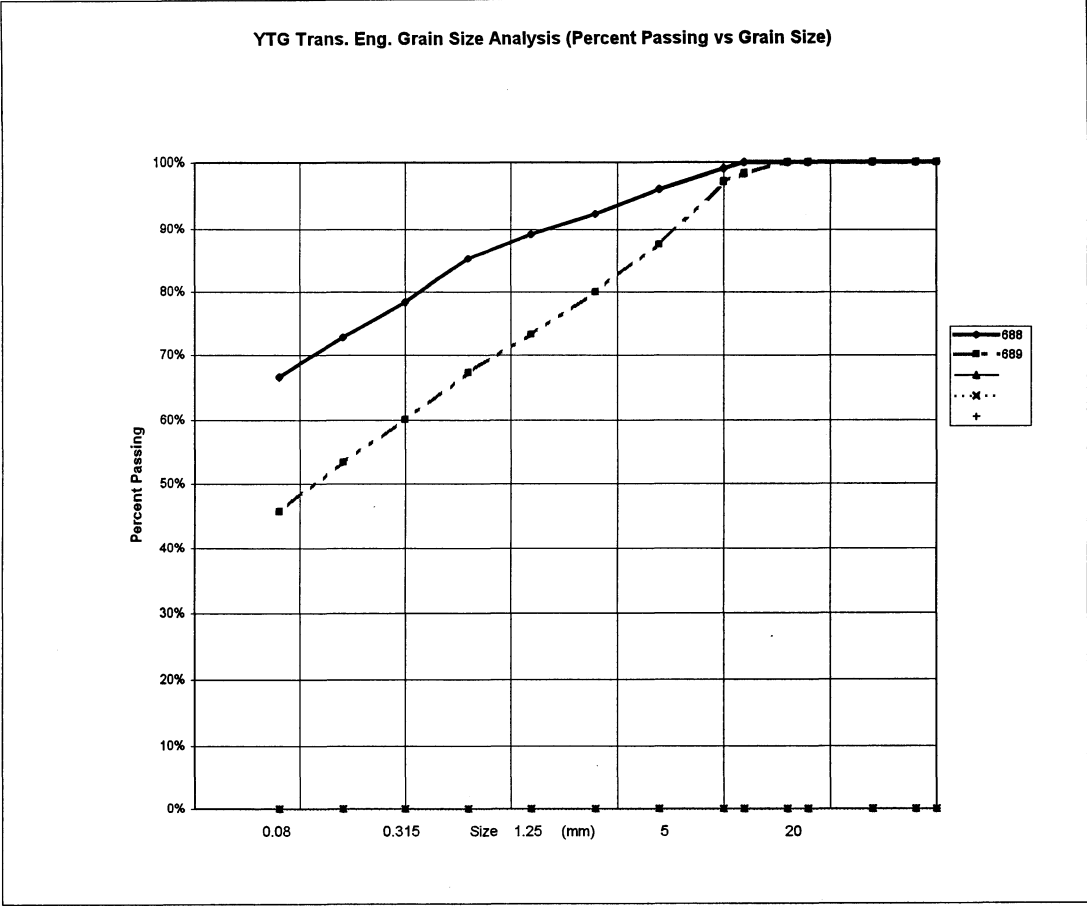


PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-727
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1X22 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1804+575 20M RT
 LOGGED BY: G.C. DATE COMP 99-08-17

FIELD NO:	688	FIELD No:	689
LAB NO:	788	LAB No:	789
DEPTH:	1.0-1.2	DEPTH:	2.6-3.0
TYPE:	AUGER	TYPE:	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	100%
12.5	100%	12.5	98%
10.0	99%	10.0	97%
5.0	96%	5.0	88%
2.5	92%	2.5	80%
1.25	89%	1.25	73%
0.630	85%	0.630	67%
0.315	78%	0.315	60%
0.160	73%	0.160	53%
0.080	67%	0.080	46%

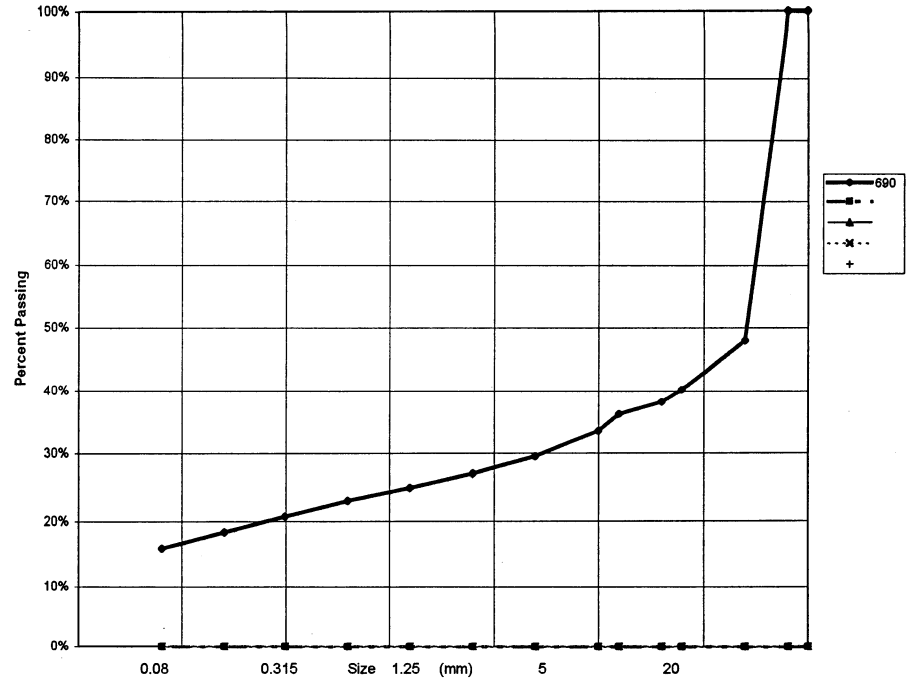
M.C.(%):	37%	M.C.(%):	15%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	4	% GRAVEL:	12
% SAND:	30	% SAND:	42
% FINES:	67	% FINES:	46
CLASSIFICATION:	SANDY SILT (ML)	CLASSIFICATION:	SILTY SAND (SM)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-728
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1804+420 30M LT
 LOGGED BY: G.C. DATE COMP 99-08-18

FIELD NO: 690			
LAB NO: 790			
DEPTH: 2.8-3.0			
TYPE: AUGER			
SIEVE SIZE	PERCENT PASSING		
100.0	100%		
80.0	100%		
50.0	48%		
25.0	40%		
20.0	38%		
12.5	36%		
10.0	33%		
5.0	30%		
2.5	27%		
1.25	25%		
0.630	23%		
0.315	21%		
0.160	18%		
0.080	16%		
M.C. (%)	10%		
LIMITS			
LIQUID:	0.0		
PLASTIC:	0.0		
P.I.:	0.0		
% GRAVEL:	70		
% SAND:	14		
% FINES:	16		
CLASSIFICATION:			
SILTY GRAVEL (GM)			

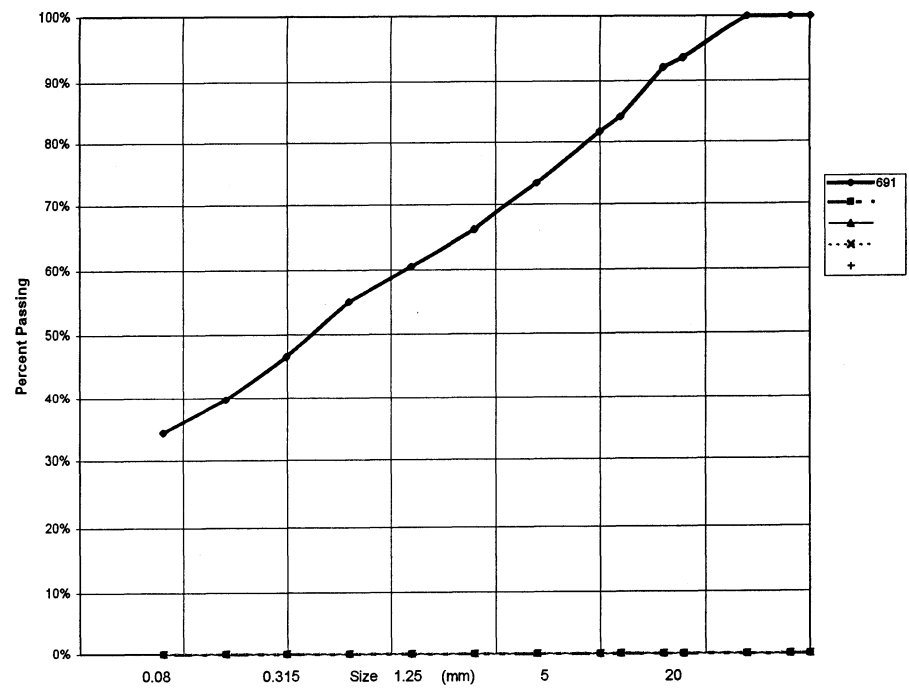
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-729
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1#22 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1804+325 30M LT
 LOGGED BY: G.C. DATE COMP 99-08-18

FIELD NO: 691			
LAB NO: 791			
DEPTH: 2.75-3.0			
TYPE: AUGER			
SIEVE SIZE	PERCENT PASSING		
100.0	100%		
80.0	100%		
50.0	100%		
25.0	94%		
20.0	92%		
12.5	84%		
10.0	82%		
5.0	73%		
2.5	66%		
1.25	60%		
0.630	55%		
0.315	47%		
0.160	40%		
0.080	34%		
M.C.(%): 16%			
LIMITS			
LIQUID: 0.0			
PLASTIC: 0.0			
P.I.: 0.0			
% GRAVEL: 27			
% SAND: 39			
% FINES: 34			
CLASSIFICATION:			
SILTY SAND WITH GRAVEL (SM)			

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



PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-730
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1#22 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1804+125 20M LT
 LOGGED BY: G.C. DATE COMP 99-08-18

FIELD NO: 692	FIELD No. 693
LAB NO: 792	LAB No. 793
DEPTH: 1.4-1.8	DEPTH 2.6-3.0
TYPE: AUGER	TYPE AUGER

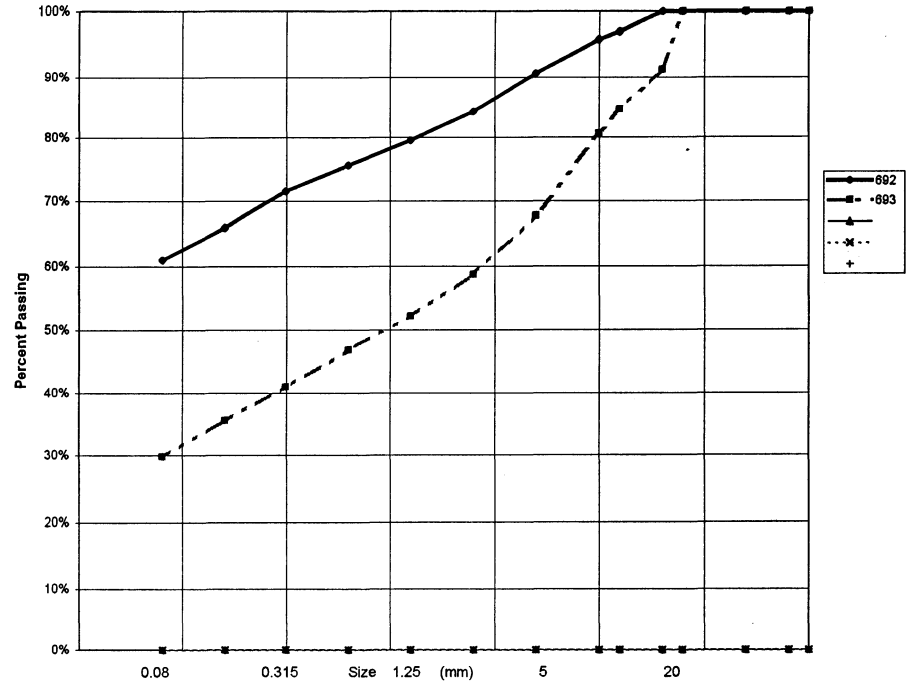
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	91%
12.5	97%	12.5	85%
10.0	96%	10.0	81%
5.0	91%	5.0	68%
2.5	84%	2.5	59%
1.25	80%	1.25	52%
0.630	76%	0.630	47%
0.315	71%	0.315	41%
0.160	66%	0.160	36%
0.080	61%	0.080	30%

M.C.(%): 21%	M.C.(%): 10%
LIMITS	LIMITS
LIQUID: 0.0	LIQUID: 0.0
PLASTIC: 0.0	PLASTIC: 0.0
P.I.: 0.0	P.I.: 0.0

% GRAVEL: 9	% GRAVEL: 32
% SAND: 30	% SAND: 38
% FINES: 61	% FINES: 30

CLASSIFICATION: SANDY SILT (ML)	CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)
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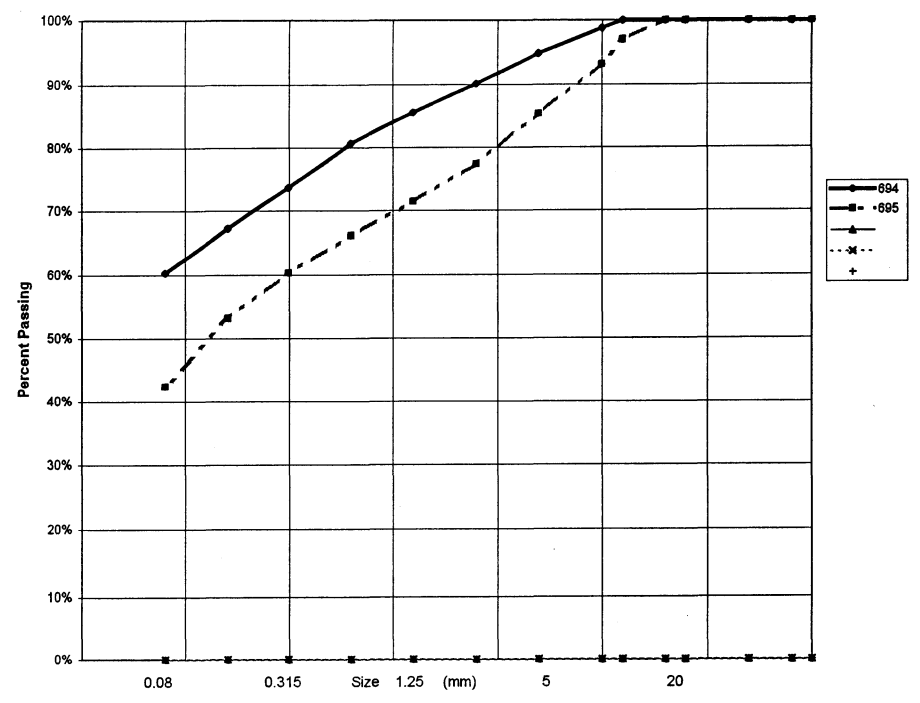
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 092-202101-0329 HOLE No.: 527-731
 CLIENT: ENGINEERING-CAPITAL
 PROJECT NAME: SHAKWAK PROJECT
 PROJECT LOCATION: SEG 13 KM 1799-1722 A/H
 DRILL UNIT: NODWELL B40-L
 HOLE LOCATION: 1804+125 20M RT
 LOGGED BY: G. C. DATE COMP 99-08-18

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	100%
12.5	100%	12.5	97%
10.0	99%	10.0	93%
5.0	95%	5.0	85%
2.5	90%	2.5	77%
1.25	86%	1.25	71%
0.630	81%	0.630	66%
0.315	74%	0.315	60%
0.160	67%	0.160	53%
0.080	60%	0.080	43%
M.C.(%):	42%	M.C.(%):	15%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	5	% GRAVEL:	15
% SAND:	35	% SAND:	43
% FINES:	60	% FINES:	43
CLASSIFICATION:		CLASSIFICATION:	
SANDY SILT (ML)		SILTY SAND (SM)	

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 531-834
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1815+600 10M RT
 LOGGED BY: DT DATE COMP 99-10-20

FIELD NO: 850 FIELD No. 851
 LAB NO: 952 LAB No. 953
 DEPTH: 4.0-4.3 DEPTH 7.6-8.0
 TYPE: AUGER TYPE AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	73%	25.0	100%
20.0	71%	20.0	100%
12.5	59%	12.5	93%
10.0	54%	10.0	89%
5.0	45%	5.0	77%
2.5	39%	2.5	67%
1.25	35%	1.25	59%
0.630	31%	0.630	52%
0.315	27%	0.315	45%
0.160	23%	0.160	38%
0.080	20%	0.080	31%

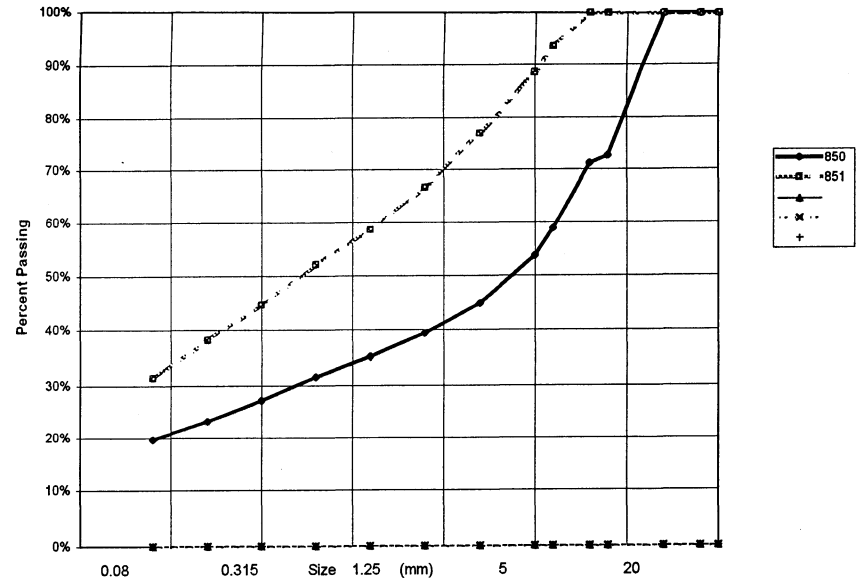
M.C.(%): 7% M.C.(%): 7%

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

% GRAVEL: 55 % GRAVEL: 23
 % SAND: 25 % SAND: 46
 % FINES: 20 % FINES: 31

CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)
 CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)

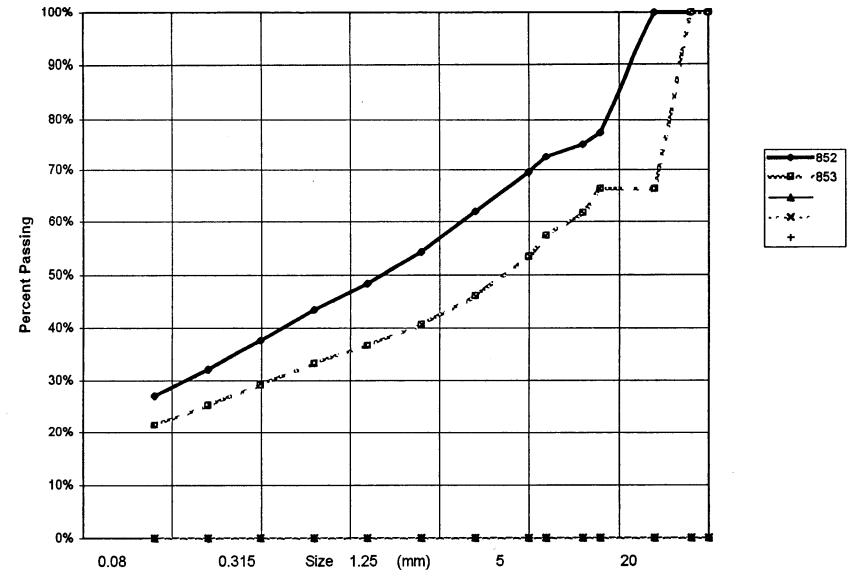
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 531-835
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1815+700 10M RT
 LOGGED BY: DT DATE COMP 99-10-20

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	66%
25.0	77%	25.0	66%
20.0	75%	20.0	62%
12.5	73%	12.5	57%
10.0	70%	10.0	53%
5.0	62%	5.0	46%
2.5	54%	2.5	41%
1.25	48%	1.25	37%
0.630	43%	0.630	33%
0.315	37%	0.315	29%
0.160	32%	0.160	25%
0.080	27%	0.080	22%
M.C.(%):	9%	M.C.(%):	6%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	38	% GRAVEL:	54
% SAND:	35	% SAND:	24
% FINES:	27	% FINES:	22
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 531-836
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1815+800 10M RT
 LOGGED BY: DT DATE COMP 99-10-20

FIELD NO:	854	FIELD No:	855
LAB NO:	956	LAB No:	957
DEPTH:	4.2-4.6	DEPTH:	7.4-7.8
TYPE:	AUGER	TYPE:	AUGER

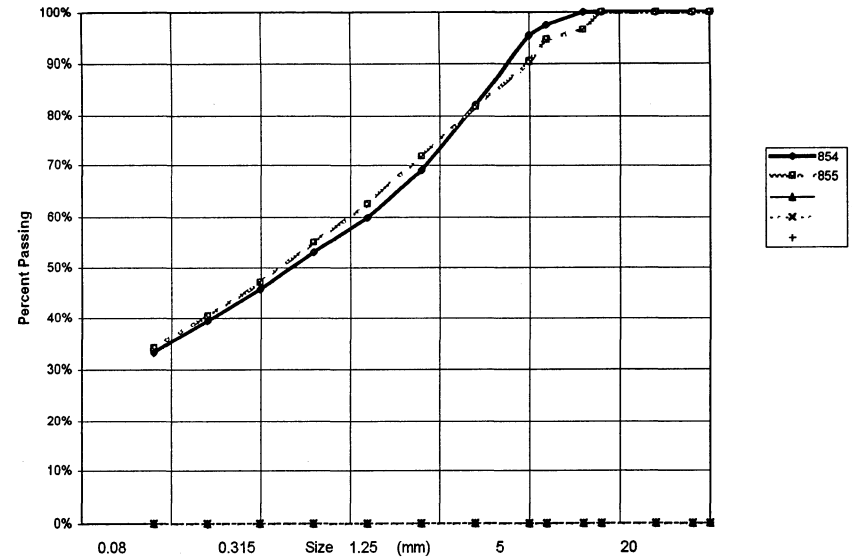
SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	100%	25.0	100%
20.0	100%	20.0	96%
12.5	97%	12.5	94%
10.0	95%	10.0	90%
5.0	82%	5.0	82%
2.5	69%	2.5	72%
1.25	60%	1.25	63%
0.630	53%	0.630	55%
0.315	46%	0.315	47%
0.160	39%	0.160	40%
0.080	33%	0.080	34%

M.C. (%):	11%	M.C. (%):	9%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0

% GRAVEL:	18	% GRAVEL:	18
% SAND:	49	% SAND:	48
% FINES:	33	% FINES:	34

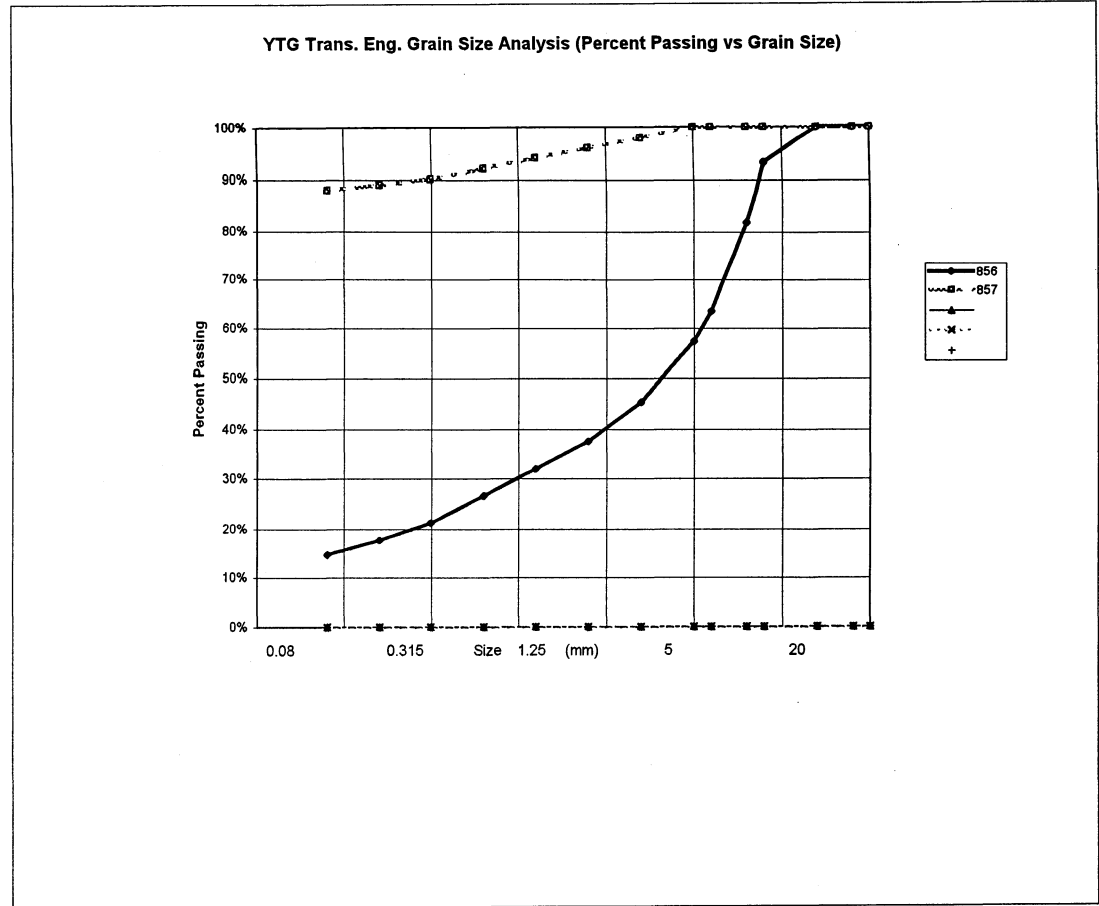
CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)	CLASSIFICATION:	SILTY SAND WITH GRAVEL (SM)
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YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 531-838
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1816+000 25M RT
 LOGGED BY: DT DATE COMP 99-10-21

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	93%	25.0	100%
20.0	82%	20.0	100%
12.5	64%	12.5	100%
10.0	57%	10.0	100%
5.0	45%	5.0	98%
2.5	38%	2.5	96%
1.25	32%	1.25	94%
0.630	27%	0.630	92%
0.315	21%	0.315	90%
0.160	18%	0.160	89%
0.080	15%	0.080	88%
M.C.(%):	8%	M.C.(%):	29%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	55	% GRAVEL:	2
% SAND:	31	% SAND:	10
% FINES:	15	% FINES:	88
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILT (ML)	

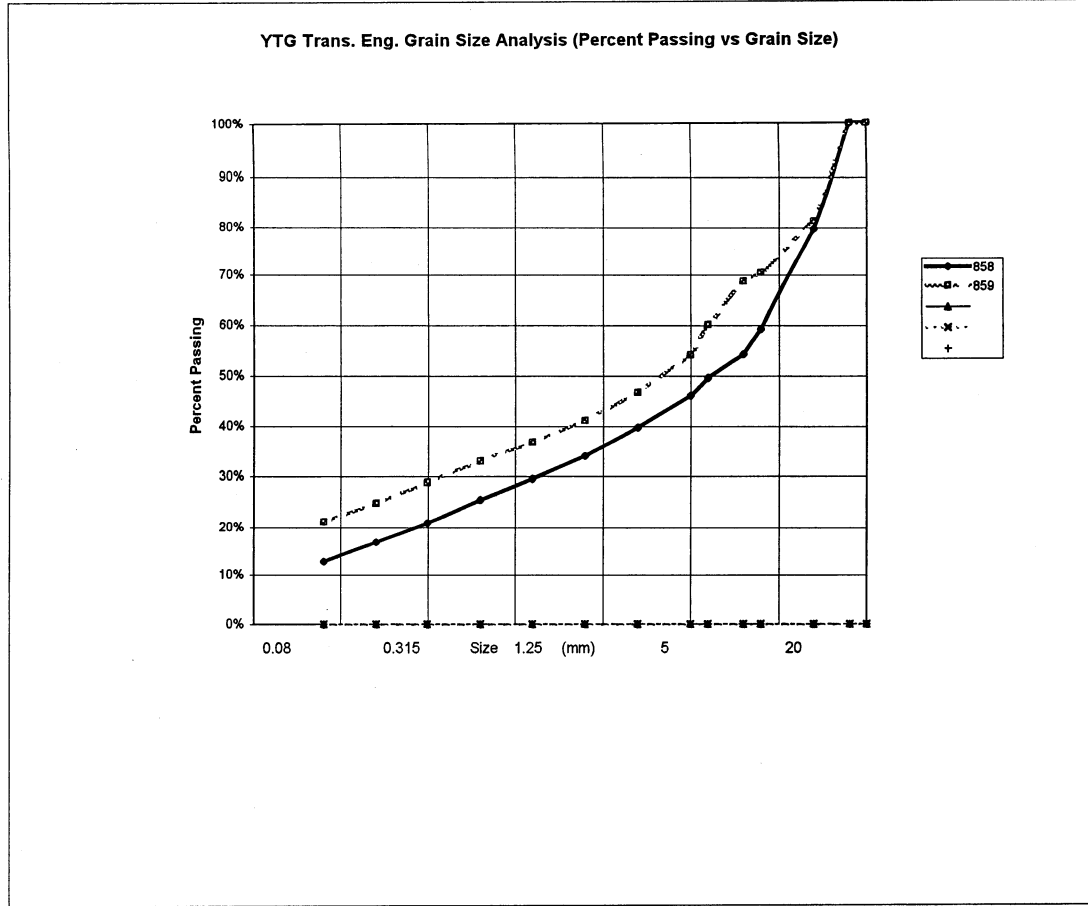


PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 531-842
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1817+500 25M RT
 LOGGED BY: DT DATE COMP 99-10-21

FIELD NO:	858	FIELD No.	859
LAB NO:	960	LAB No.	961
DEPTH:	4.3-4.7	DEPTH	8.4-8.8
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	80%	50.0	81%
25.0	59%	25.0	71%
20.0	54%	20.0	69%
12.5	50%	12.5	60%
10.0	46%	10.0	54%
5.0	40%	5.0	47%
2.5	34%	2.5	41%
1.25	29%	1.25	37%
0.630	25%	0.630	33%
0.315	21%	0.315	29%
0.160	17%	0.160	25%
0.080	13%	0.080	21%

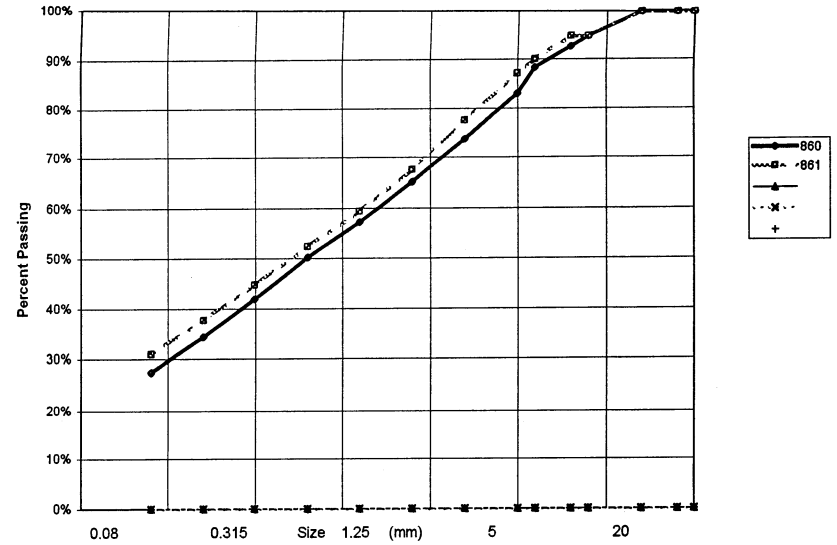
M.C.(%):	9%	M.C.(%):	7%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	60	% GRAVEL:	53
% SAND:	27	% SAND:	26
% FINES:	13	% FINES:	21
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 531-843
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1817+601 12M RT
 LOGGED BY: DT DATE COMP 99-10-21

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	95%	25.0	95%
20.0	93%	20.0	95%
12.5	88%	12.5	90%
10.0	83%	10.0	87%
5.0	74%	5.0	78%
2.5	65%	2.5	68%
1.25	57%	1.25	59%
0.630	50%	0.630	52%
0.315	42%	0.315	45%
0.160	34%	0.160	38%
0.080	27%	0.080	31%
M.C.(%):	15%	M.C.(%):	10%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	26	% GRAVEL:	22
% SAND:	46	% SAND:	47
% FINES:	27	% FINES:	31
CLASSIFICATION:		CLASSIFICATION:	
SILTY SAND WITH GRAVEL (SM)		SILTY SAND WITH GRAVEL (SM)	

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 831-844
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1817+706 14M RT
 LOGGED BY: DT DATE COMP 99-10-22

FIELD NO: 862
 LAB NO: 964
 DEPTH: 3.6-4.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	95%
12.5	88%
10.0	83%
5.0	72%
2.5	64%
1.25	58%
0.630	53%
0.315	47%
0.160	42%
0.080	37%

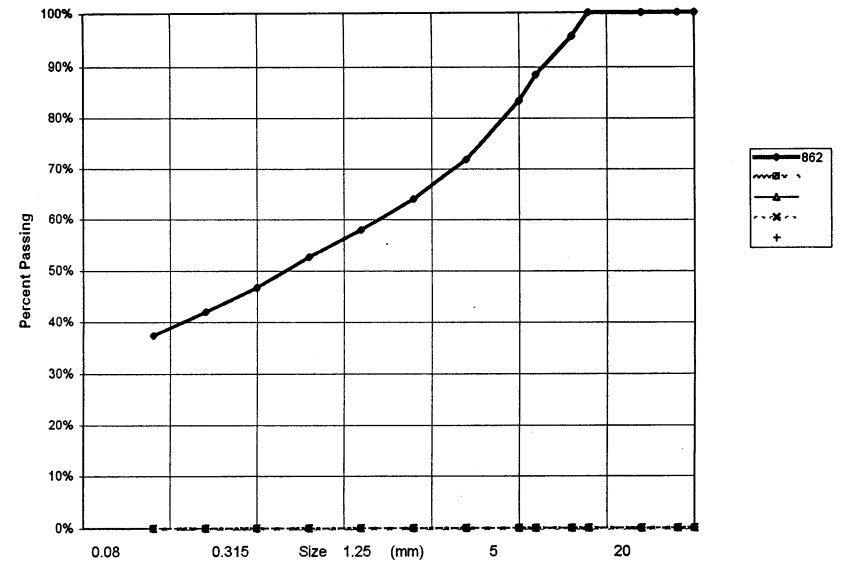
M.C.(%): 19%

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

% GRAVEL: 28
 % SAND: 34
 % FINES: 37

CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM)

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



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 532-845
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1817+815 20M RT
 LOGGED BY: DT DATE COMP 99-10-22

FIELD NO: 863
 LAB NO: 965
 DEPTH: 5.5-5.9
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	100%
80.0	100%
50.0	100%
25.0	100%
20.0	92%
12.5	84%
10.0	77%
5.0	65%
2.5	54%
1.25	47%
0.630	42%
0.315	36%
0.160	30%
0.080	24%

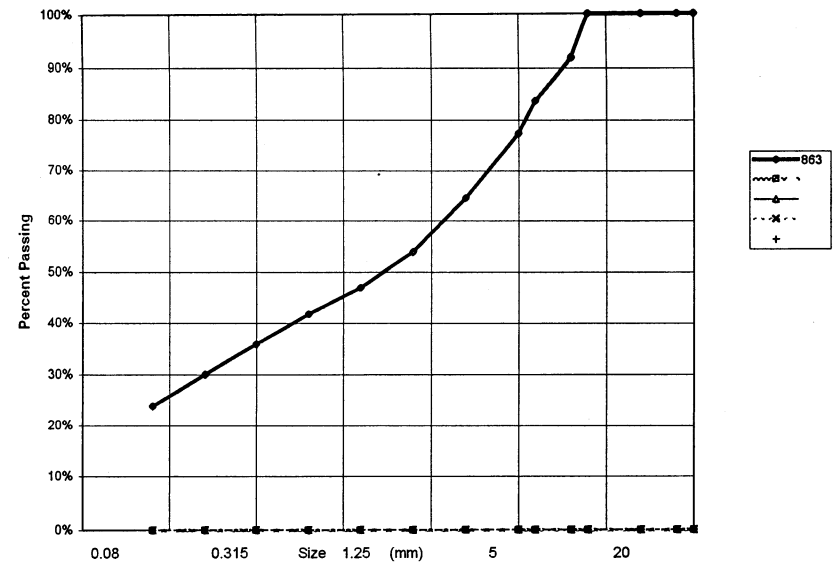
M.C.(%): 11%

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

% GRAVEL: 35
 % SAND: 41
 % FINES: 24

CLASSIFICATION:
 SILTY SAND WITH GRAVEL (SM)

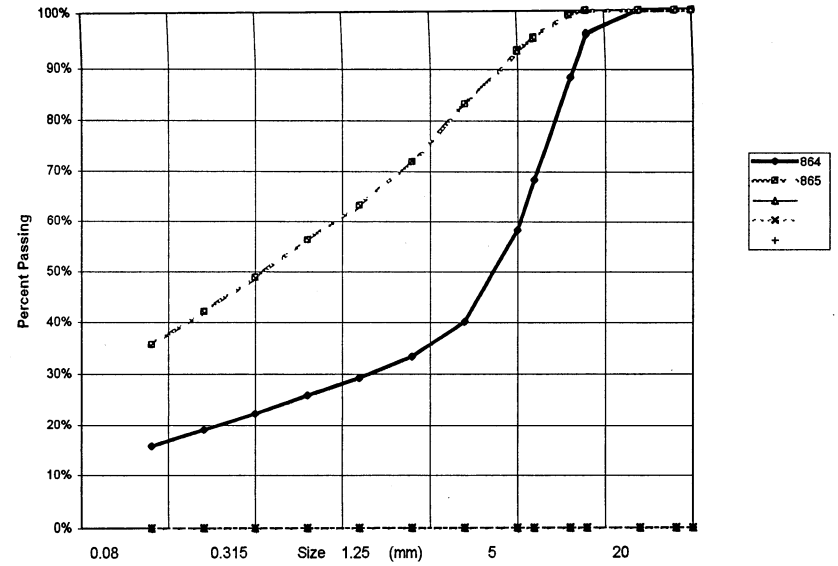
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 532-846
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1817+890 15M RT
 LOGGED BY: DT DATE COMP 99-10-25

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	96%	25.0	100%
20.0	88%	20.0	99%
12.5	68%	12.5	95%
10.0	58%	10.0	93%
5.0	40%	5.0	83%
2.5	33%	2.5	72%
1.25	29%	1.25	63%
0.630	26%	0.630	56%
0.315	22%	0.315	49%
0.160	19%	0.160	42%
0.080	16%	0.080	36%
M.C.(%): 9%		M.C.(%): 13%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	60	% GRAVEL:	17
% SAND:	24	% SAND:	48
% FINES:	16	% FINES:	36
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY SAND WITH GRAVEL (SM)	

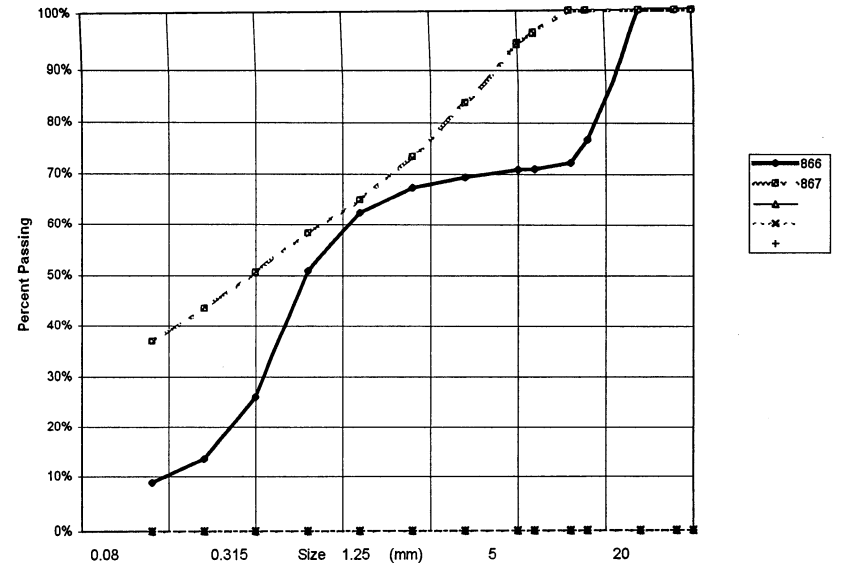
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 532-847
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1818+325 15M RT
 LOGGED BY: DT DATE COMP 99-10-25

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	77%	25.0	100%
20.0	72%	20.0	100%
12.5	71%	12.5	96%
10.0	71%	10.0	94%
5.0	69%	5.0	84%
2.5	67%	2.5	73%
1.25	62%	1.25	65%
0.630	51%	0.630	58%
0.315	26%	0.315	51%
0.160	13%	0.160	43%
0.080	9%	0.080	37%
M.C.(%): 14%		M.C.(%): 13%	
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	31	% GRAVEL:	16
% SAND:	61	% SAND:	47
% FINES:	9	% FINES:	37
CLASSIFICATION: POORLY GRADED SAND WITH SILT & GRAVEL (SP-SM)		CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)	

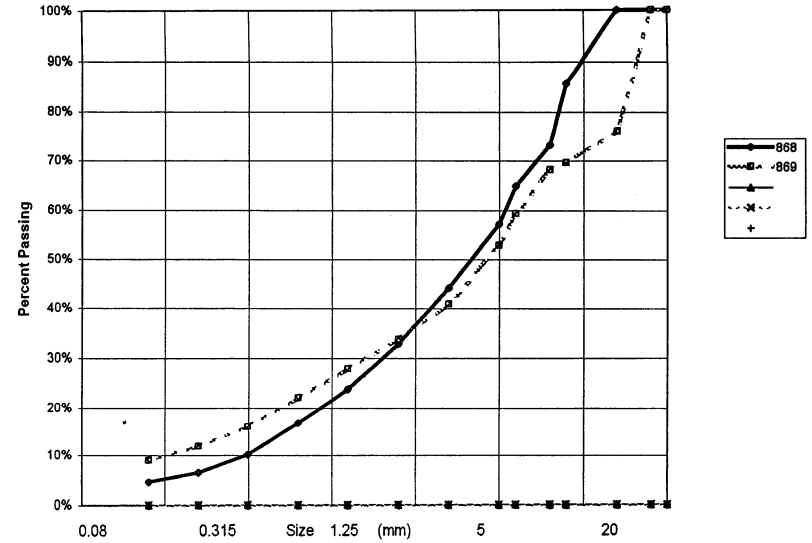
YTG Trans. Eng. Grain Size Analysis (Percent Passing vs Grain Size)



PROJECT NUMBER: 091-202101-0329-199 HOLE No.: 532-848
 CLIENT: ENGINEERING CAPITAL
 PROJECT NAME: SHAKWAK SEG 13
 PROJECT LOCATION: KM 1799-1822 A/H
 DRILL UNIT: B-40-L Nodwell
 HOLE LOCATION: 1818+477 15M RT
 LOGGED BY: DT DATE COMP 99-10-25

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	78%
25.0	86%	25.0	70%
20.0	73%	20.0	68%
12.5	65%	12.5	59%
10.0	57%	10.0	53%
5.0	44%	5.0	41%
2.5	33%	2.5	34%
1.25	24%	1.25	28%
0.630	17%	0.630	22%
0.315	10%	0.315	16%
0.160	6%	0.160	12%
0.080	4%	0.080	9%
M.C.(%):	2%	M.C.(%):	3%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	56	% GRAVEL:	59
% SAND:	40	% SAND:	32
% FINES:	4	% FINES:	9
CLASSIFICATION:		CLASSIFICATION:	
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:	091-202101-0329-199	HOLE No.:	532-849
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 13		
PROJECT LOCATION:	KM 1799-1822 A/H		
DRILL UNIT:	B-40-L Nodwell		
HOLE LOCATION:	1818+600+10M RT		
LOGGED BY:	DT	DATE COMP	99-10-26

FIELD NO:	870	FIELD No.	871
LAB NO:	972	LAB No.	973
DEPTH:	2.6-3.0	DEPTH	5.6-6.0
TYPE:	AUGER	TYPE	AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	100%	100.0	100%
80.0	100%	80.0	100%
50.0	100%	50.0	100%
25.0	77%	25.0	86%
20.0	69%	20.0	79%
12.5	55%	12.5	59%
10.0	50%	10.0	52%
5.0	43%	5.0	41%
2.5	36%	2.5	33%
1.25	32%	1.25	29%
0.630	28%	0.630	25%
0.315	24%	0.315	21%
0.160	20%	0.160	18%
0.080	16%	0.080	15%

M.C.(%):	17%	M.C.(%):	10%
LIMITS		LIMITS	
LIQUID:	0.0	LIQUID:	0.0
PLASTIC:	0.0	PLASTIC:	0.0
P.I.:	0.0	P.I.:	0.0
% GRAVEL:	57	% GRAVEL:	59
% SAND:	26	% SAND:	26
% FINES:	16	% FINES:	15
CLASSIFICATION:		CLASSIFICATION:	
SILTY GRAVEL WITH SAND (GM)		SILTY GRAVEL WITH SAND (GM)	

