

**HIGHWAY CONSTRUCTION**

**km 1872 to km 1880.2  
ALASKA HIGHWAY, Y.T.**

**CENTRELINE TESTING**

This Data Package prepared for project viewing:

November, 1993

Transportation Engineering Branch  
Geotechnical Services  
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Whitehorse, Yukon

GR-01-147B

GEOTECHNICAL INVESTIGATION  
HIGHWAY CONSTRUCTION  
km 1872 to km 1880.2, ALASKA HIGHWAY, Y.T.  
CENTRELINE TESTING

CONTENTS

INTRODUCTION

Investigation notes, classification methods and legends.

CENTRELINE TESTING

Subsurface exploration and testing report sheets are provided. The reports for the centreline holes are arranged according to project location, starting at km 1872+160 and increasing to km 1880+050.

**Auger Testing**

1993	TEST HOLES 245 to 249	shown with prefix 261-
	TEST HOLES 215 to 224	shown with prefix 254-
	TEST HOLES 227 to 244	shown with prefix 254-
	TEST HOLES 201 to 214	shown with prefix 253-

**Backhoe Testing**

1993	TEST HOLE 45	shown with prefix 275-
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GEOTECHNICAL INVESTIGATION  
HIGHWAY CONSTRUCTION  
km 1872 to km 1880.2, ALASKA HIGHWAY, Y.T.  
CENTRELINE TESTING

## **INTRODUCTION**

GEOTECHNICAL INVESTIGATION  
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km 1872 to km 1880.2, ALASKA HIGHWAY, Y.T.  
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GEOTECHNICAL INVESTIGATION DATA

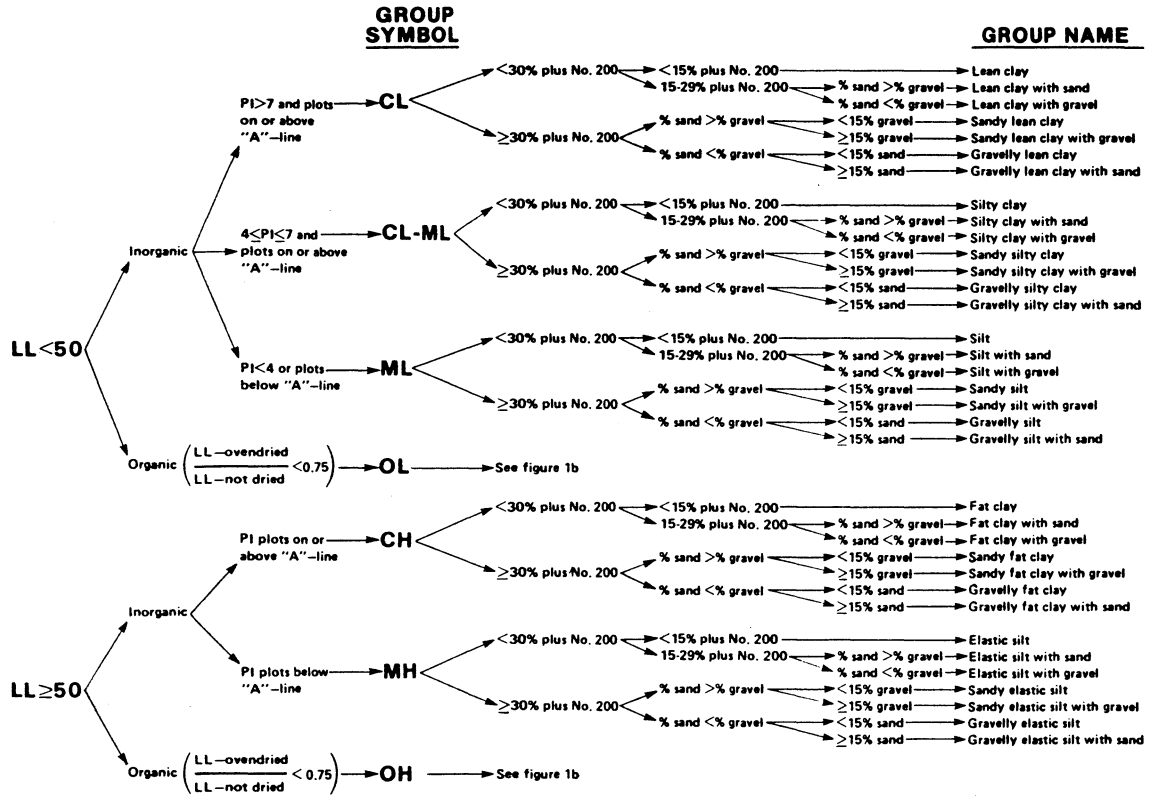
This geotechnical investigation data is provided to assist in the interpretation of soil conditions encountered within this project area. The data presented was prepared solely for Departmental designing and estimating purposes.

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

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

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.

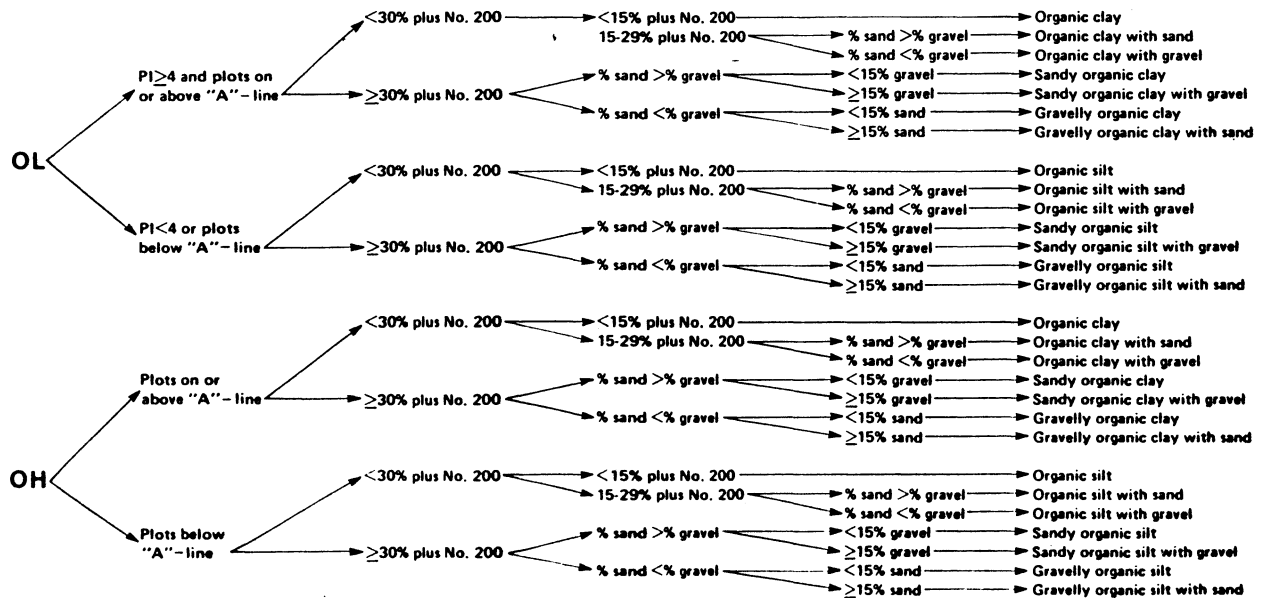
It is recommended that a site inspection, combined with consideration of the regional geology and climatic conditions be conducted. An evaluation of the investigation methods and development work done since the time of investigation should be done prior to interpreting the subsurface conditions for construction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



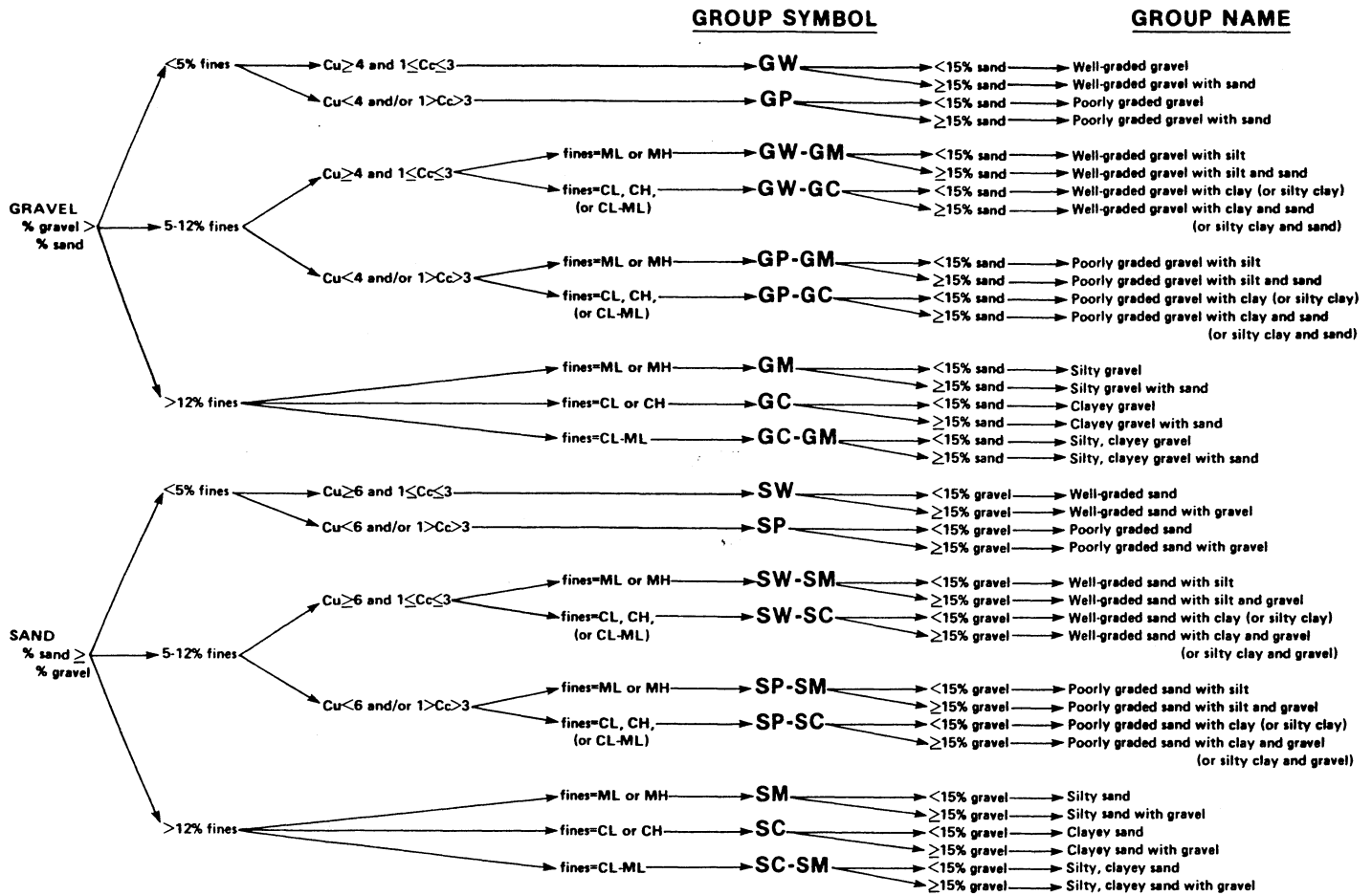
*Flow chart for classifying fine-grained soil.*

**GROUP SYMBOL**

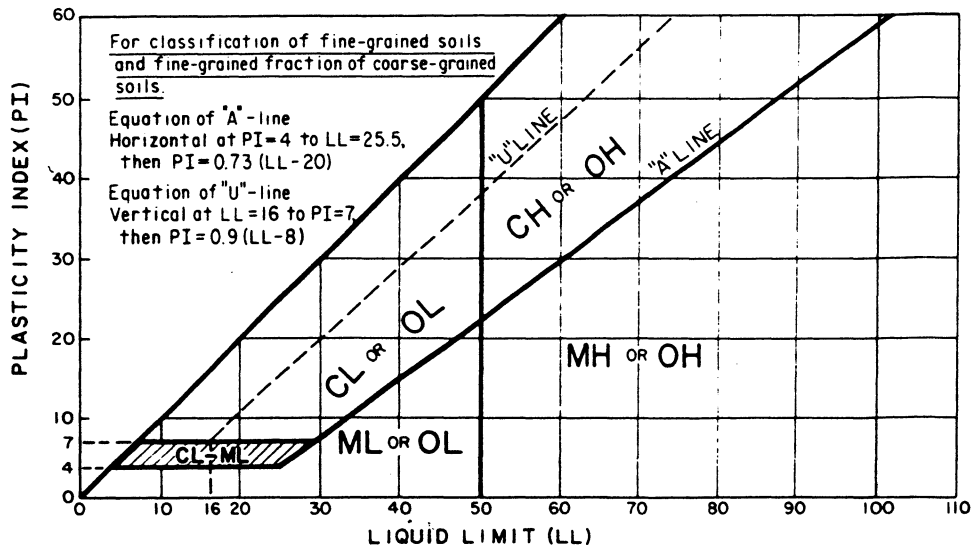
**GROUP NAME**



*Flow chart for classifying organic soil.*



Flow chart for classifying coarse-grained soil.



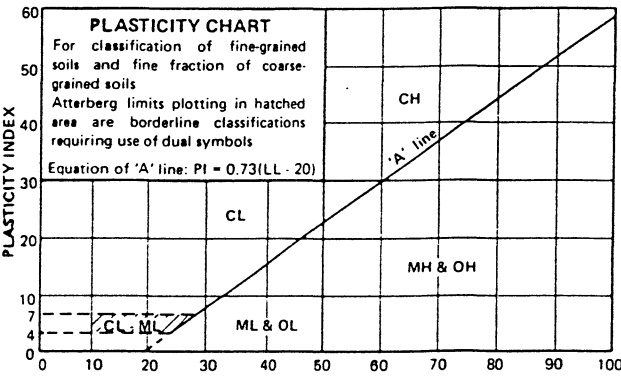
Plasticity chart.

CRITERIA FOR ASSIGNING GROUP SYMBOLS AND GROUP NAMES USING LABORATORY TESTS <sup>a</sup>				SOIL CLASSIFICATION	
				GROUP SYMBOL	GROUP NAME <sup>b</sup>
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 <sup>c</sup>	$C_u \geq 4$ and $1 \leq C_c \leq 3$ <sup>e</sup>	GW	Well-graded gravel <sup>f</sup>
			$C_u < 4$ and/or $1 > C_c > 3$ <sup>e</sup>	GP	Poorly graded gravel <sup>f</sup>
		GRAVELS WITH FINES More than 12% fines <sup>c</sup>	Fines classify as ML or MH	GM	Silty gravel <sup>f,g,h</sup>
	Fines classify as CL or CH		GC	Clayey gravel <sup>f,g,h</sup>	
	SANDS 50% or more of coarse fraction passes No. 4 sieve	CLEAN SANDS Less than 5% fines <sup>d</sup>	$C_u \geq 6$ and $1 \leq C_c \leq 3$ <sup>e</sup>	SW	Well-graded sand <sup>i</sup>
			$C_u < 6$ and/or $1 > C_c > 3$ <sup>e</sup>	SP	Poorly graded sand <sup>i</sup>
SANDS WITH FINES More than 12% fines <sup>d</sup>		Fines classify as ML or MH	SM	Silty sand <sup>g,h,i</sup>	
	Fines classify as CL or CH	SC	Clayey sand <sup>g,h,i</sup>		
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 <sup>j</sup>	CL	Lean clay <sup>k,l,m</sup>
			PI < 4 or plots below "A" line <sup>j</sup>	ML	Silt <sup>k,l,m</sup>
		organic	Liquid limit - oven dried < 0.75 Liquid limit - not dried	OL	Organic clay <sup>k, l, m, n</sup> Organic silt <sup>k, l, m, o</sup>
	SILTS AND CLAYS Liquid limit 50% or more	inorganic	PI plots on or above "A" line	CH	Fat clay <sup>k,l,m</sup>
			PI plots below "A" line	MH	Elastic silt <sup>k,l,m</sup>
		organic	Liquid limit - oven dried < 0.75 Liquid limit - not dried	OH	Organic clay <sup>k, l, m, p</sup> Organic silt <sup>k, l, m, q</sup>
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 > 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			
<b>COARSE-GRAINED SOILS</b> <small>More than 50% retained on No. 200 sieve*</small>	<b>GRAVELS</b> <small>50% or more of coarse fraction retained on No. 4 sieve</small>	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines	<small>Classification on basis of percentage of fines GW, GP, SW, SP GM, GC, SM, SC Borderline classification requiring use of dual symbols</small>		
		GRAVELS WITH FINES	GP	Poorly-graded gravels and gravel-sand mixtures, little or no fines			
		<b>SANDS</b> <small>More than 50% of coarse fraction passes No. 4 sieve</small>	CLEAN SANDS	SW		Well-graded sands and gravelly sands, little or no fines	$C_u = D_{60}/D_{10}$ Greater than 4 $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3 Not meeting both criteria for GW
			SANDS WITH FINES	SP		Poorly-graded sands and gravelly sands, little or no fines	Atterberg limits plot below 'A' line or plasticity index less than 4 Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
			SANDS WITH FINES	SM		Silty sands, sand-silt mixtures	Atterberg limits plot above 'A' line and plasticity index greater than 7 $C_u = D_{60}/D_{10}$ Greater than 6 $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3
			SANDS WITH FINES	SC		Clayey sands, sand-clay mixtures	Not meeting both criteria for SW Atterberg limits plot below 'A' line or plasticity index less than 4 Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
	SANDS WITH FINES		GM	Silty gravels, gravel-sand-silt mixtures			
	SANDS WITH FINES		GC	Clayey gravels, gravel-sand clay mixtures			
	<b>FINE-GRAINED SOILS</b> <small>50% or more passes No. 200 sieve*</small>	<b>SILTS AND CLAYS</b> <small>Liquid limit 50% or less</small>	ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;"><b>PLASTICITY CHART</b></p> <p>For classification of fine-grained soils and fine fraction of coarse-grained soils</p> <p>Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols</p> <p>Equation of 'A' line: <math>PI = 0.73(LL - 20)</math></p>  </div>		
			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			
			<b>SILTS AND CLAYS</b> <small>Liquid limit greater than 50%</small>	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					
ML		Inorganic silts, very fine sands, rock flour, silty or clayey fine sands					
<b>HIGHLY ORGANIC SOILS</b>		PT	Peat, muck and other highly organic soils	<small>*Based on the material passing the 3 in. (75 mm) sieve †ASTM Designation D 2487, for identification procedure see D 2488</small>			

## GROUND ICE DESCRIPTION

### ICE NOT VISIBLE

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





**NOTE:**

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



**LEGEND**

Soil Ice

### VISIBLE ICE LESS THAN 50% BY VOLUME

GROUP SYMBOLS	SYMBOLS	SUBGROUP DESCRIPTION	IMAGE
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	
	V		

### VISIBLE ICE GREATER THAN 50% BY VOLUME

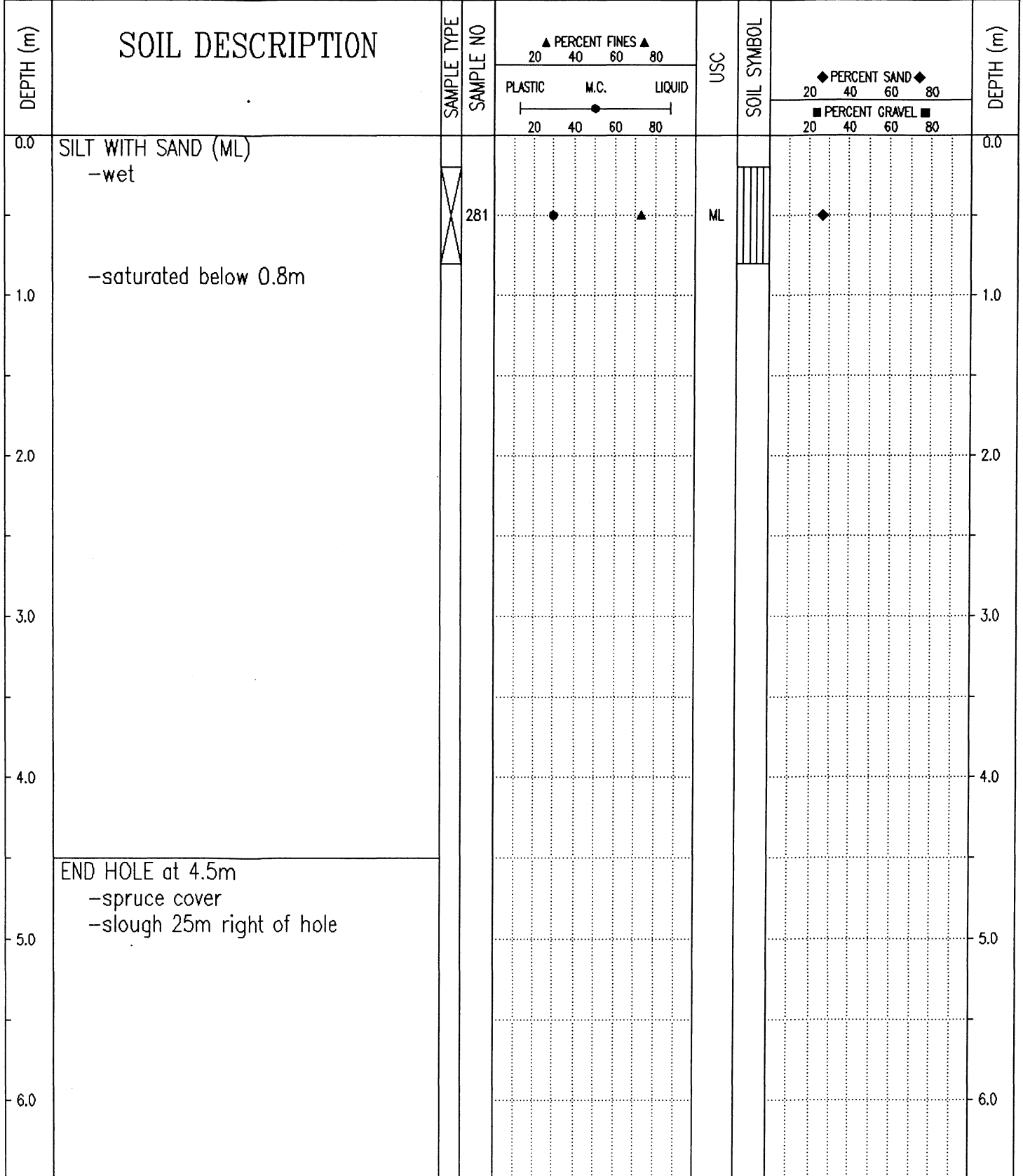
GROUP SYMBOLS	SYMBOLS	SUBGROUP DESCRIPTION	IMAGE
ICE	ICE + Soil Type	Ice with soil inclusions	
	ICE	Ice without soil inclusions (greater than 25 mm (1 in.) thick)	

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## **CENTRELINE TESTING**

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 261-249
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1872+160 o/s 12m Lt.	ELEVATION: 0.00 (m)

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



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LOGGED BY: GC

REVIEWED BY:

Fig. No:

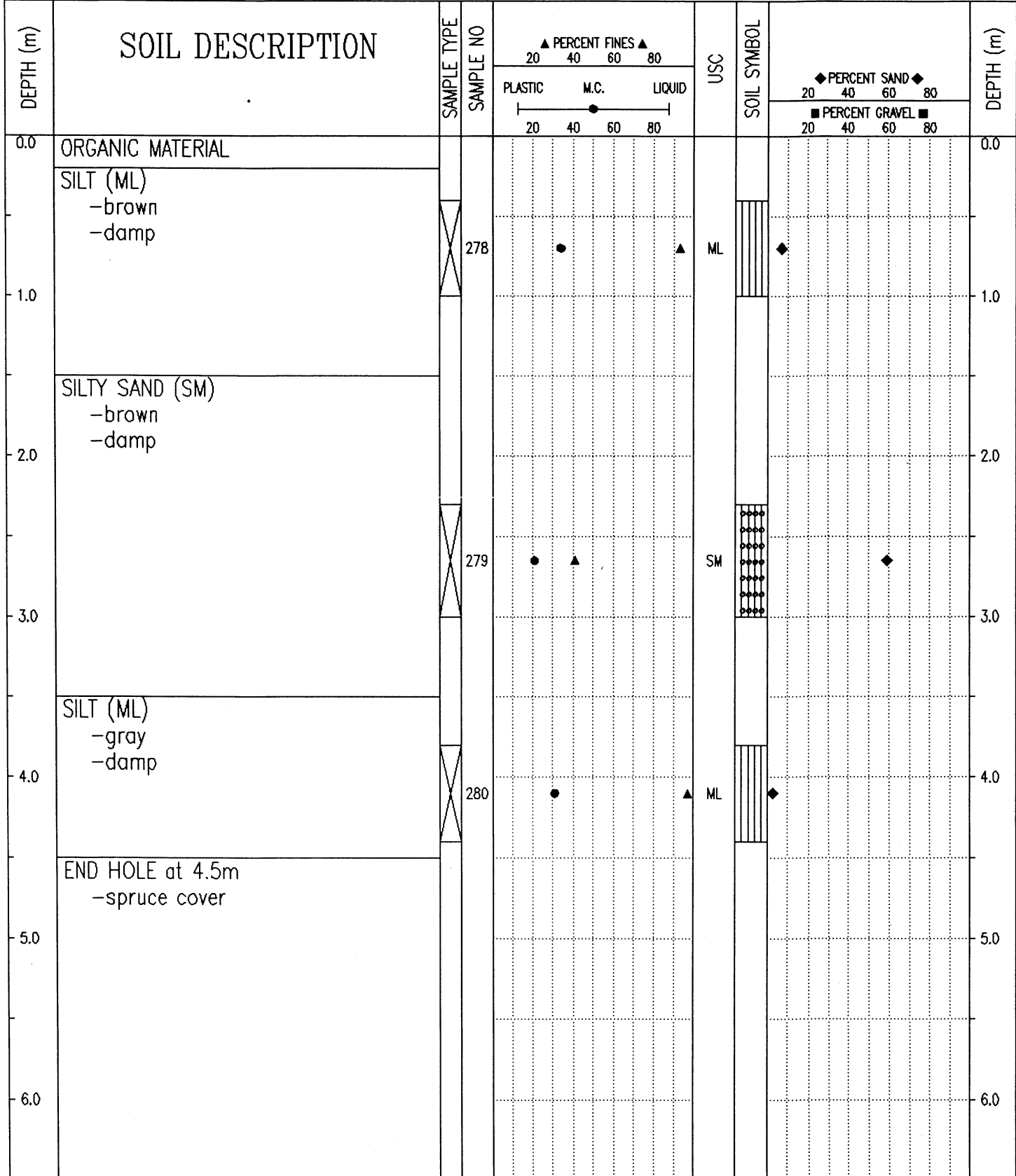
COMPLETION DEPTH: 4.5 m

COMPLETE: 93/09/28

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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 261-248
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1872+250 o/s 15m Lt.	ELEVATION: 0.00 (m)

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



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LOGGED BY: GC  
REVIEWED BY:  
Fig. No:  
COMPLETION DEPTH: 4.5 m  
COMPLETE: 93/09/28  
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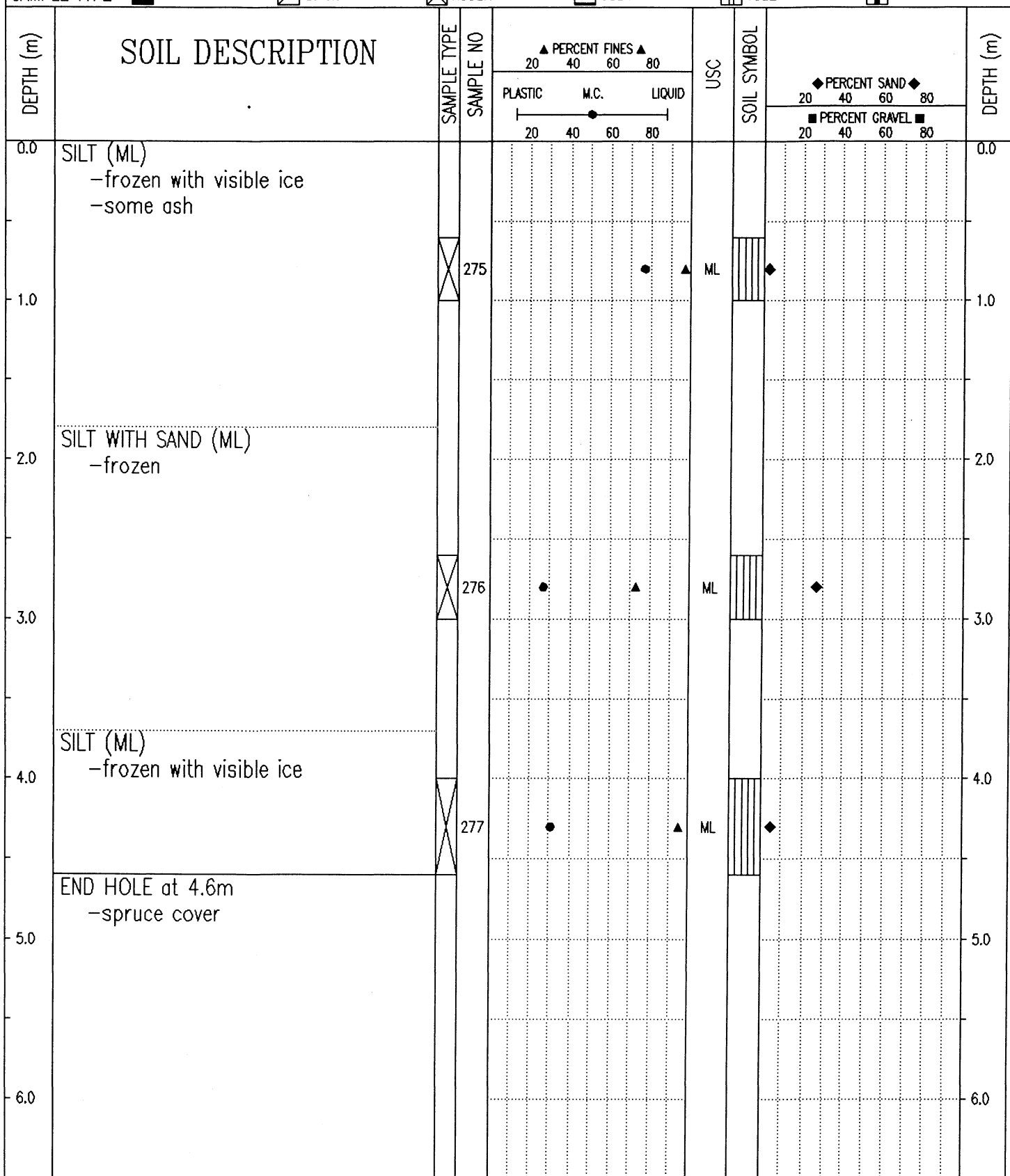
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 261-245
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1872+400	ELEVATION: 0.00 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	SOIL SYMBOL	PERCENT SAND		PERCENT GRAVEL	DEPTH (m)
				PLASTIC	M.C.	LIQUID			20	40		
0.0	SILT -wet to saturated											0.0
1.0	-saturated below 1.0m											1.0
2.0												2.0
3.0												3.0
3.3	END HOLE at 3.3m -spruce cover											3.3
4.0												4.0
5.0												5.0
6.0												6.0

Government of Yukon Transportation Engineering	LOGGED BY: GC	COMPLETION DEPTH: 3.3 m
	REVIEWED BY:	COMPLETE: 93/09/28
	Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 261-246
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1872+475 o/s 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: GC	COMPLETION DEPTH: 4.6 m
	REVIEWED BY:	COMPLETE: 93/09/28
	Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 261-247
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1872+550	ELEVATION: 0.00 (m)
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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	SILT -wet to saturated											0.0	
1.0												1.0	
2.0	END HOLE at 1.8m -spruce cover											2.0	
3.0												3.0	
4.0												4.0	
5.0												5.0	
6.0												6.0	

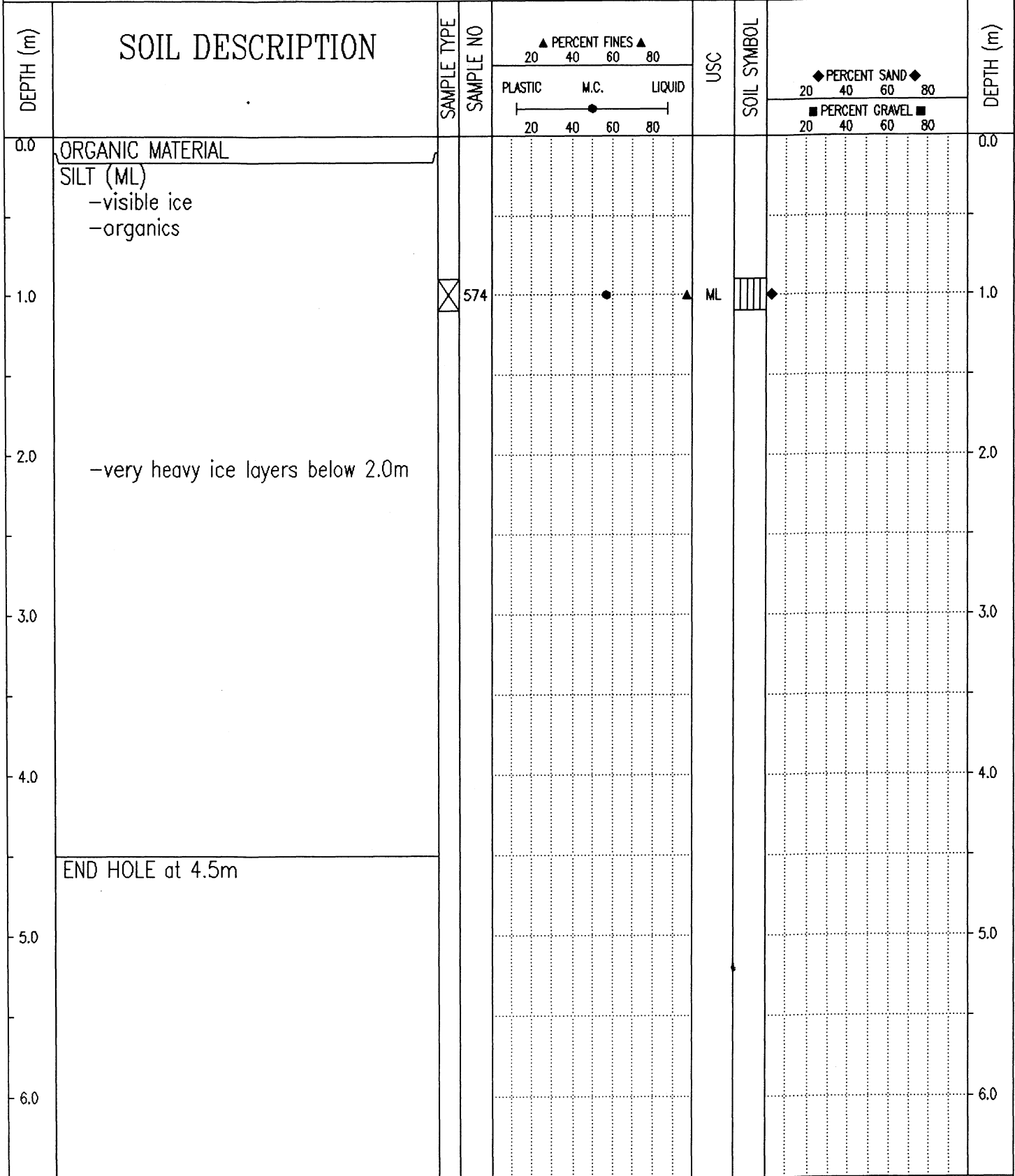
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	Fig. No:	Page 1 of 1

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SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1872+750	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 MATERIAL SANDY SILT										0.0
1.0											1.0
2.0	SILTY SAND -saturated										2.0
3.0											3.0
4.0											4.0
5.0	END HOLE at 4.5m										5.0
6.0											6.0

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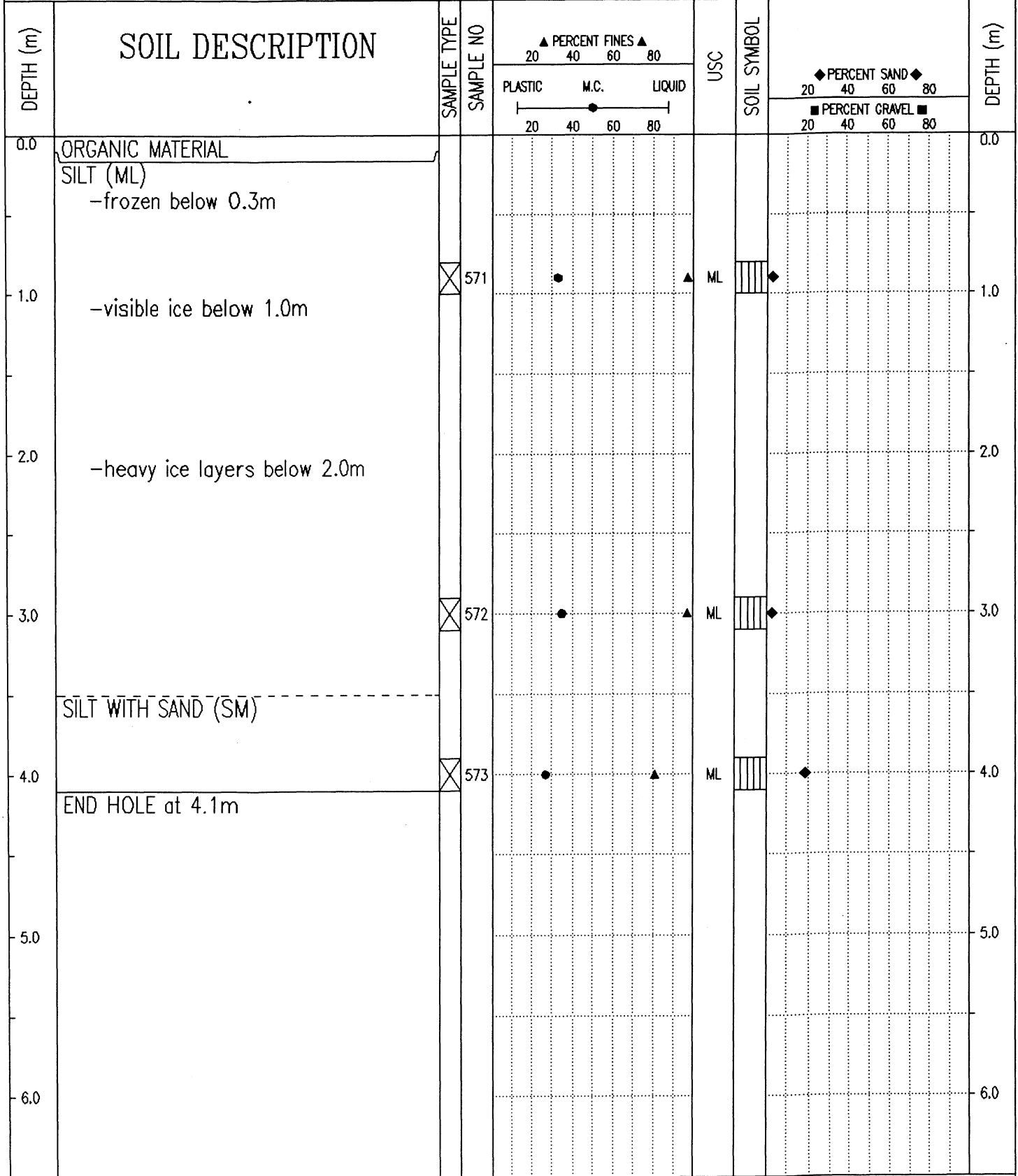
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SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
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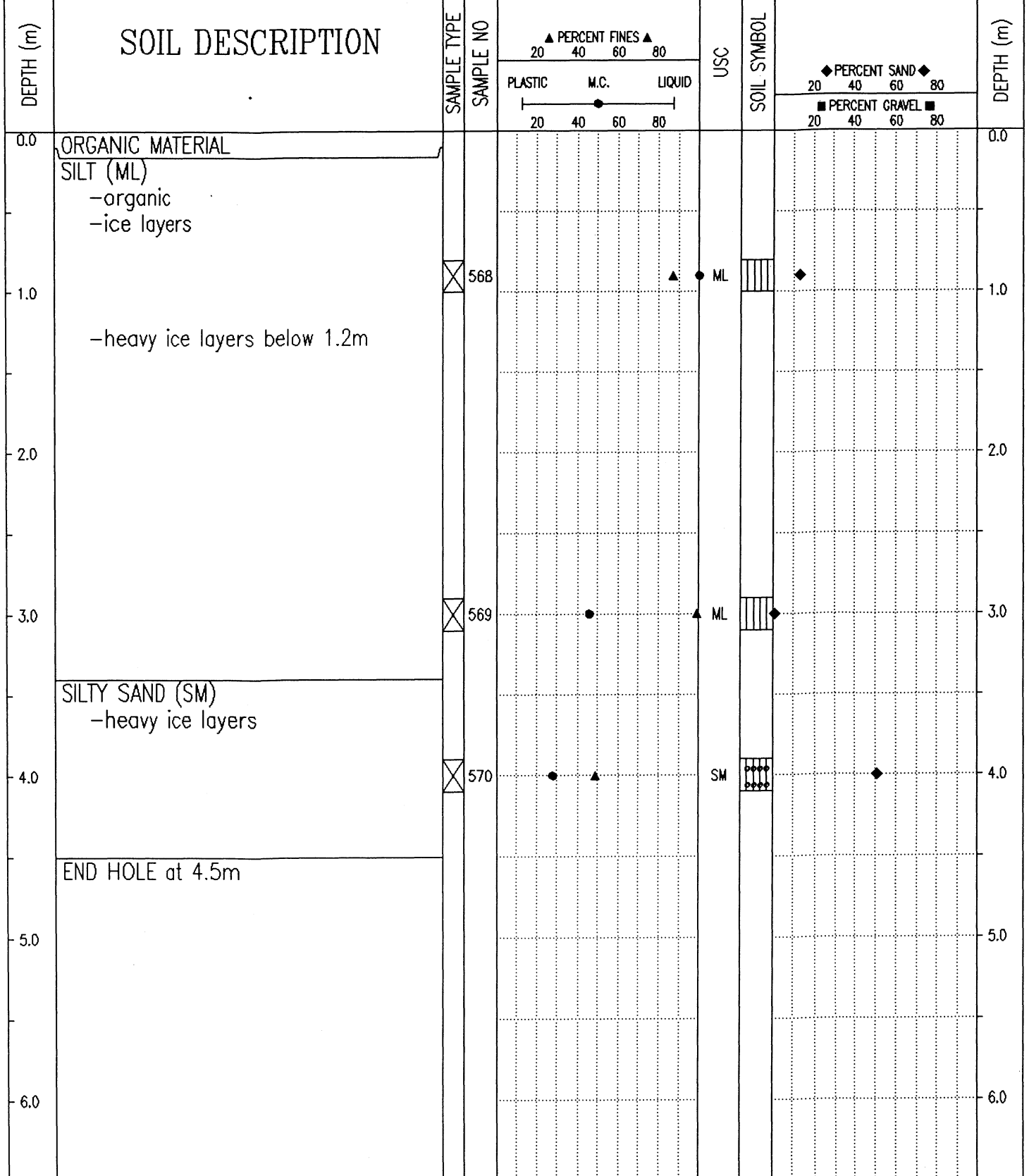
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Fig. No:	Page 1 of 1

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SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1872+925	ELEVATION: 0.00 (m)
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	<input type="checkbox"/> TUBE	<input type="checkbox"/> CORE



Government of Yukon Transportation Engineering	LOGGED BY: TF	COMPLETION DEPTH: 4.1 m
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	Fig. No:	Page 1 of 1

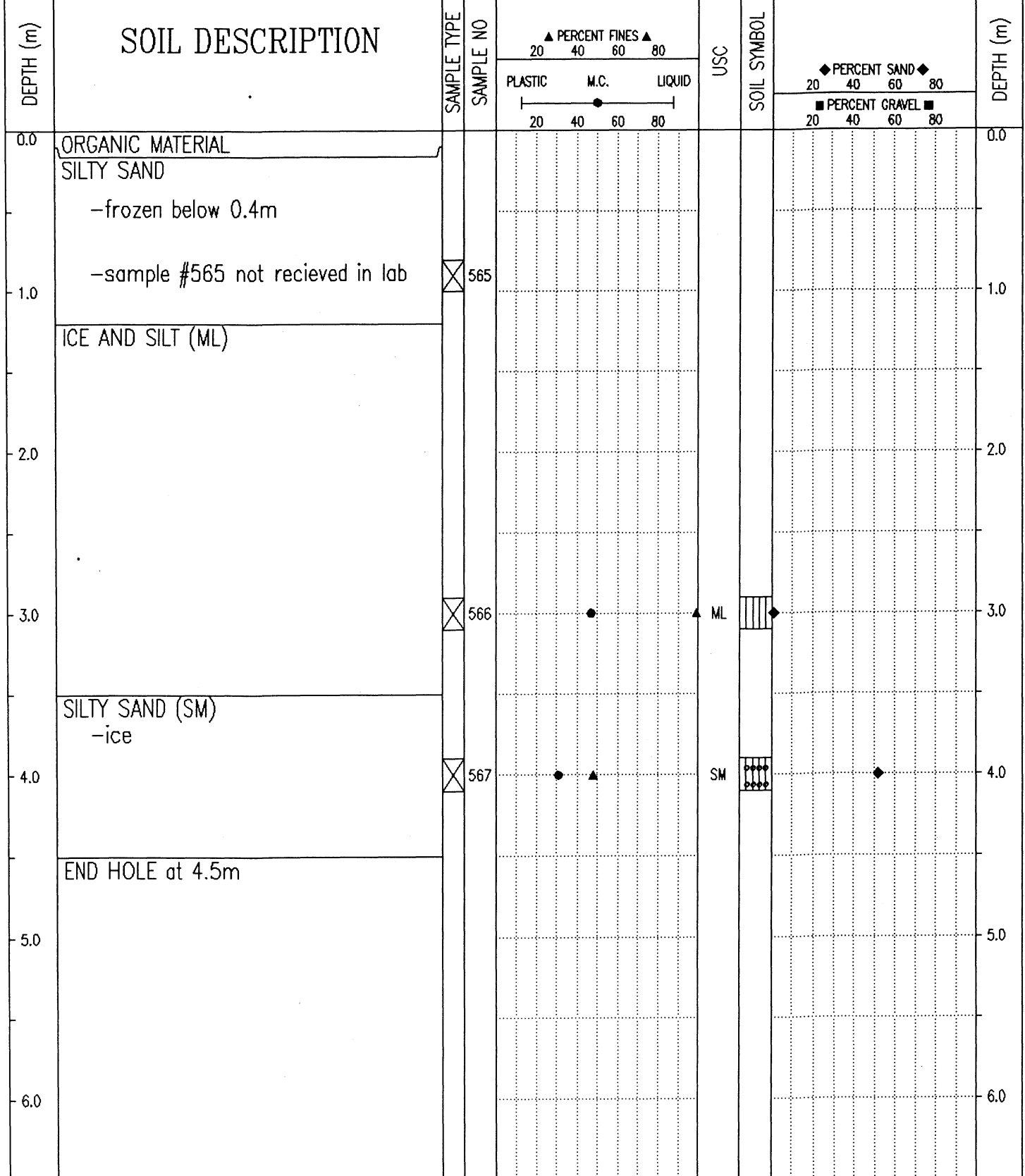
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93/11/04 10:23AM

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SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1873+125	ELEVATION: 0.00 (m)

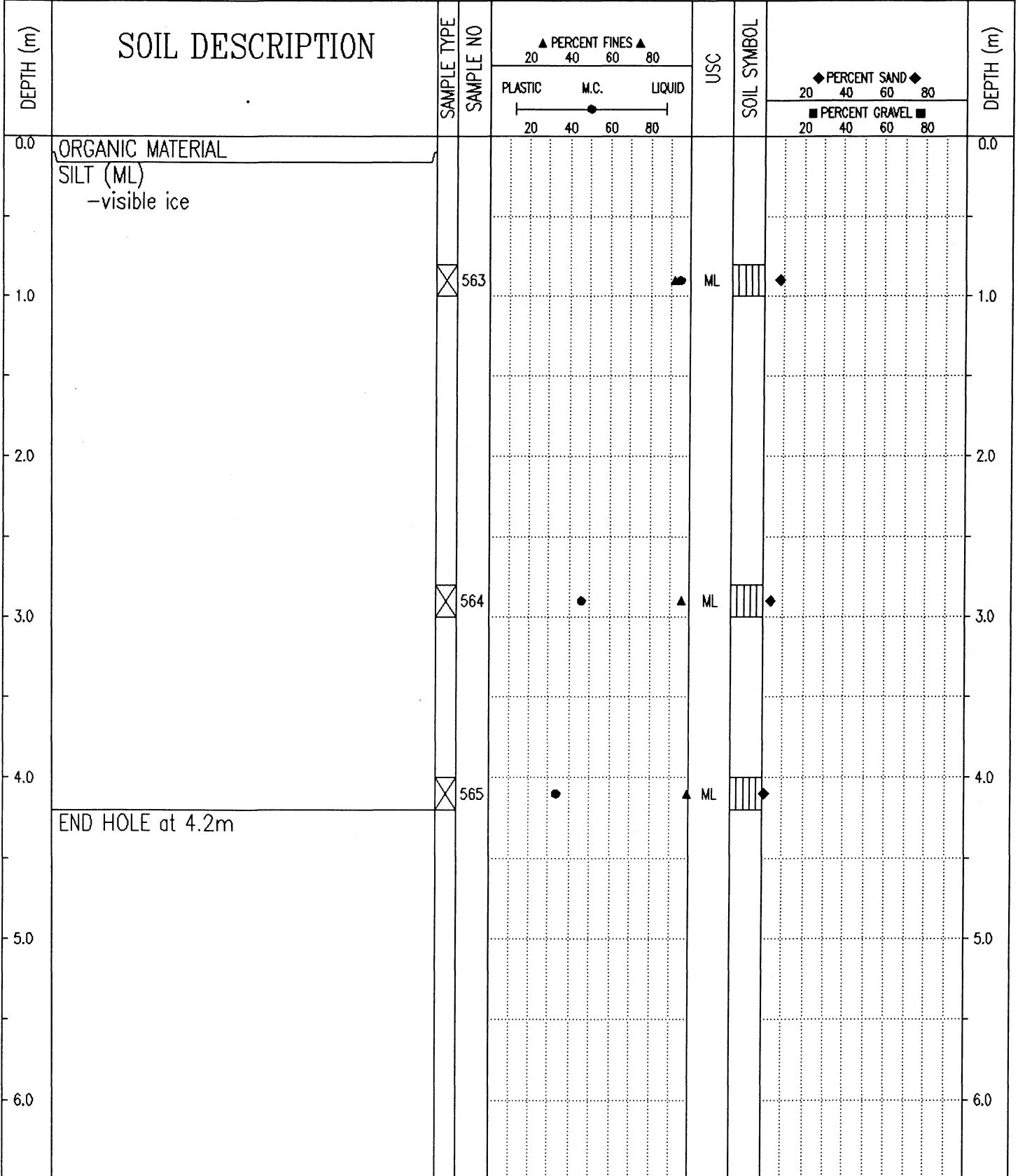
SAMPLE TYPE  RETURN  S.P.T.  AUGER  BULK  TUBE  CORE



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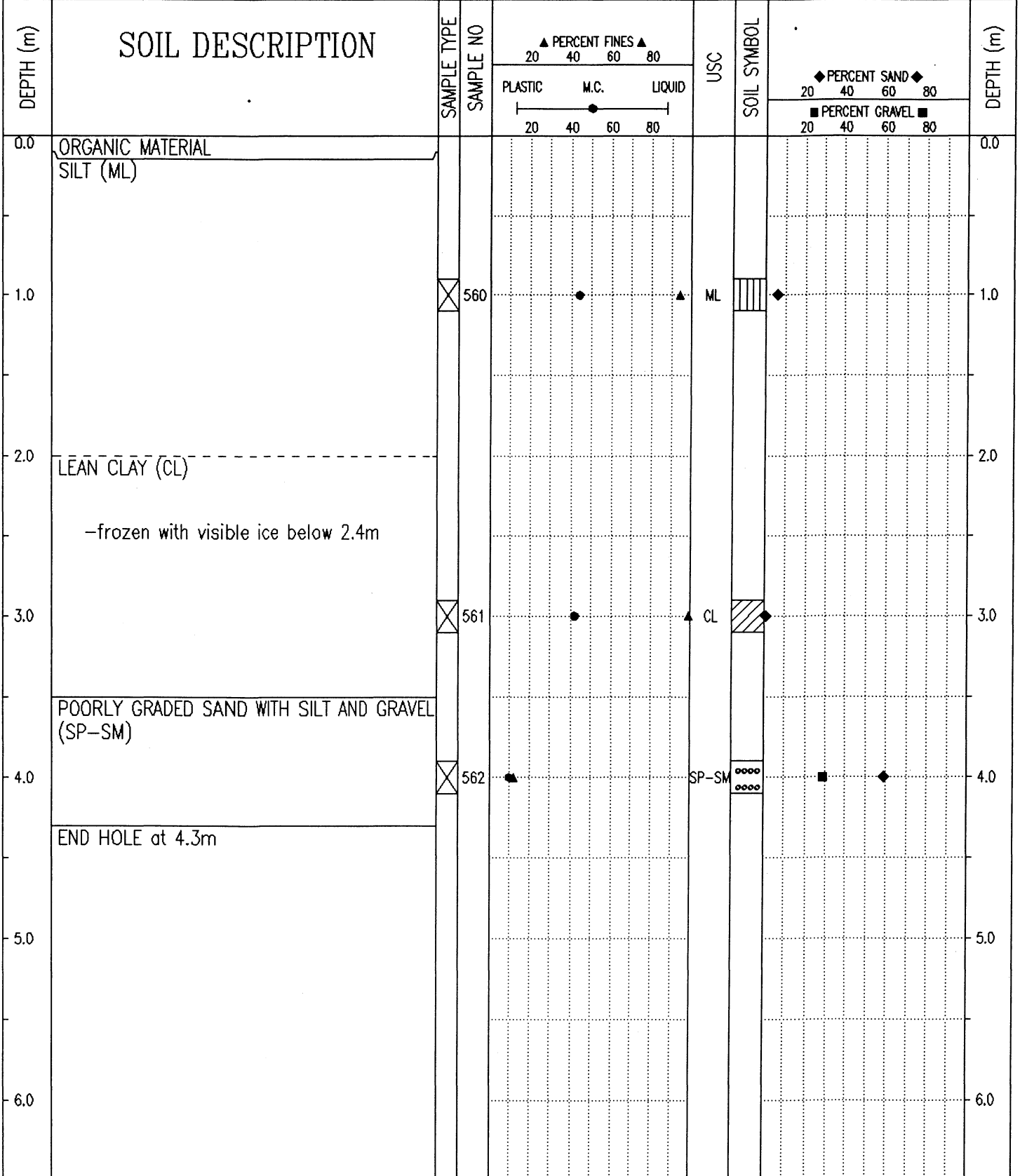
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REVIEWED BY:	COMPLETE: 93/09/27
Fig. No:	Page 1 of 1

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



93/11/04 10:00AM

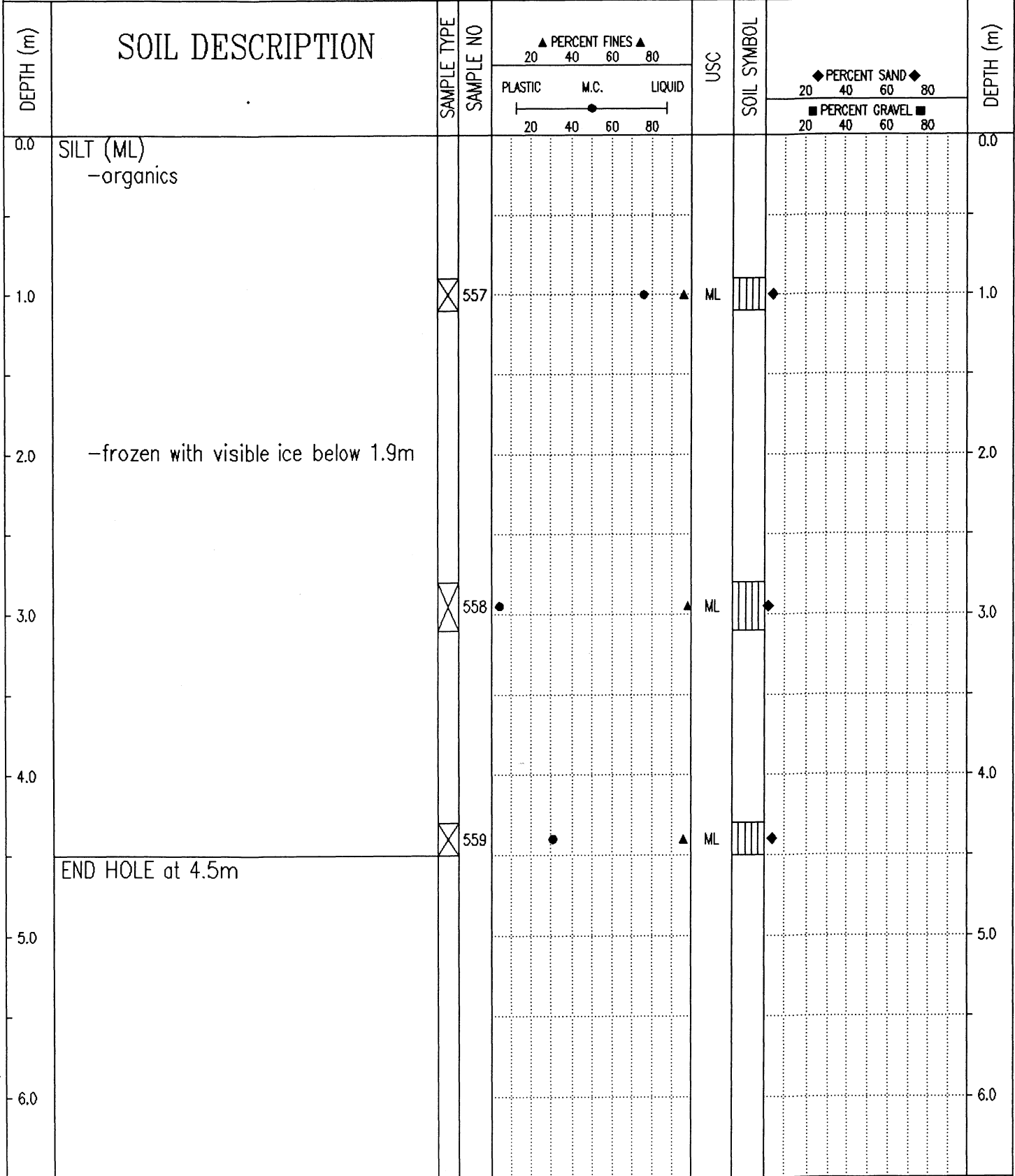
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93/11/04 09:59AM

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SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1873+500	ELEVATION: 0.00 (m)

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



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LOGGED BY: TF

COMPLETION DEPTH: 4.5 m

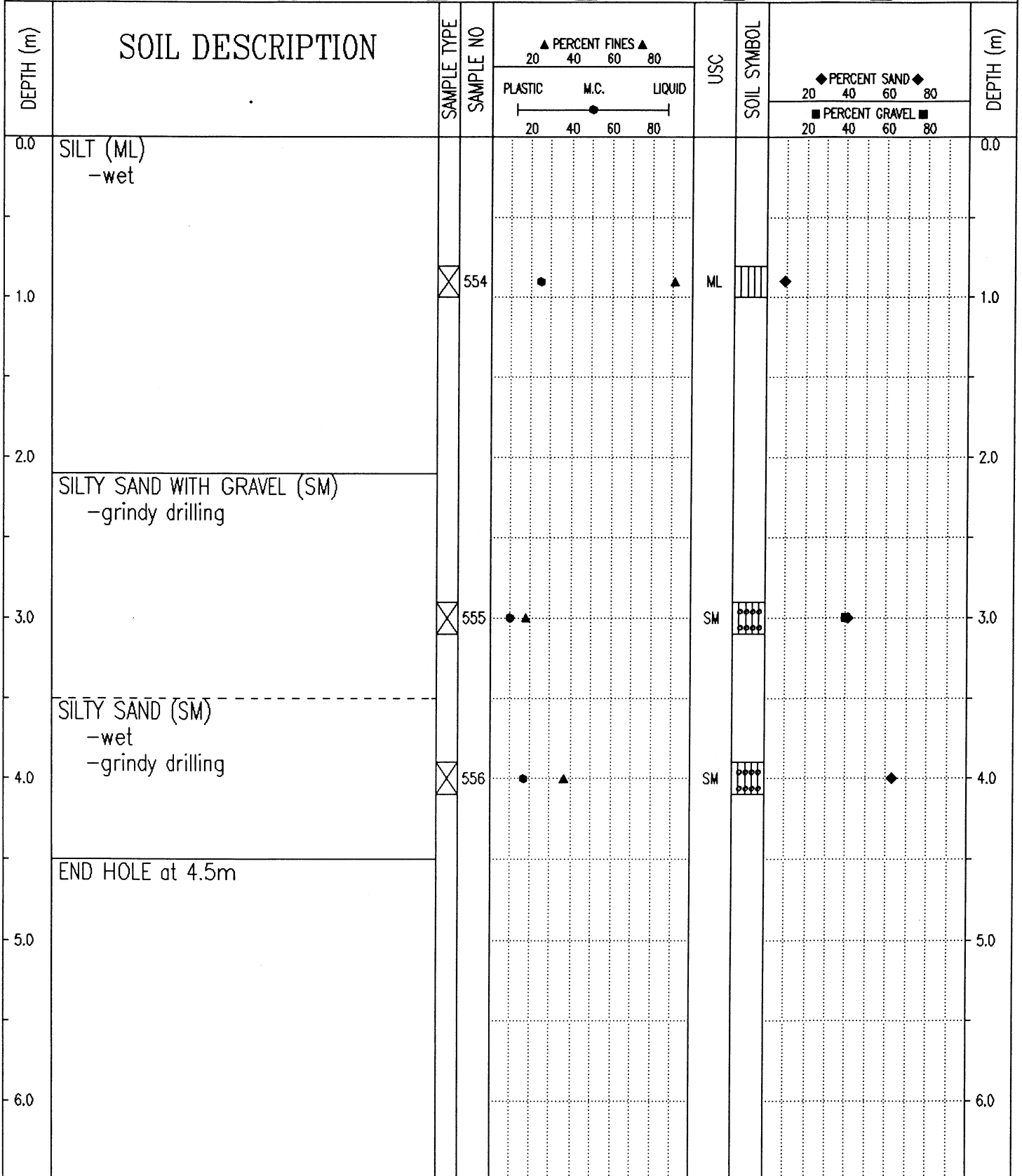
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COMPLETE: 93/09/27

Fig. No:

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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 254-236
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1873+600	ELEVATION: 0.00 (m)
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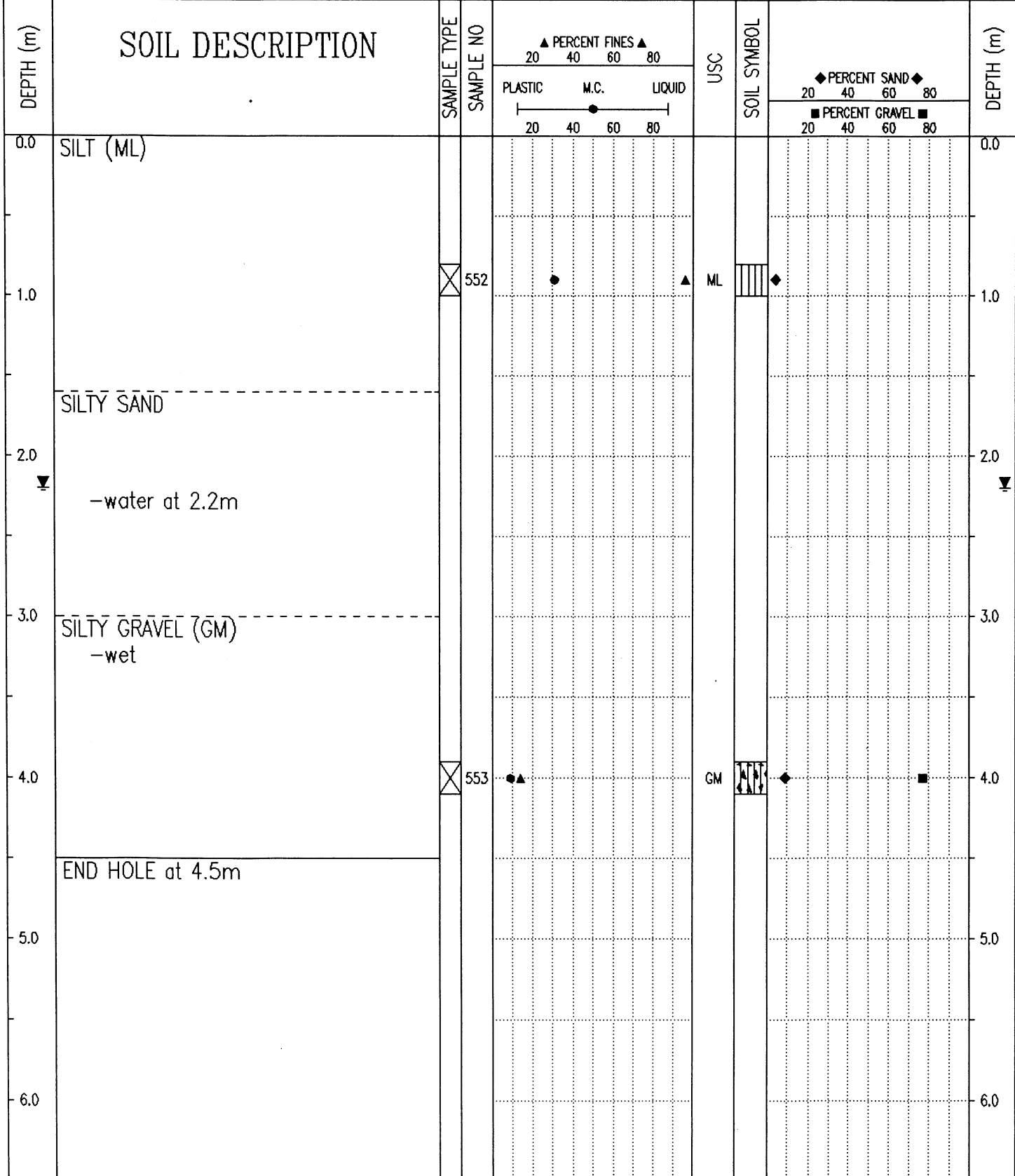
Government of Yukon  
Transportation Engineering

LOGGED BY: TF  
REVIEWED BY:  
Fig. No:

COMPLETION DEPTH: 4.5 m  
COMPLETE: 93/09/27

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 254-235
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1873+950	ELEVATION: 0.00 (m)

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

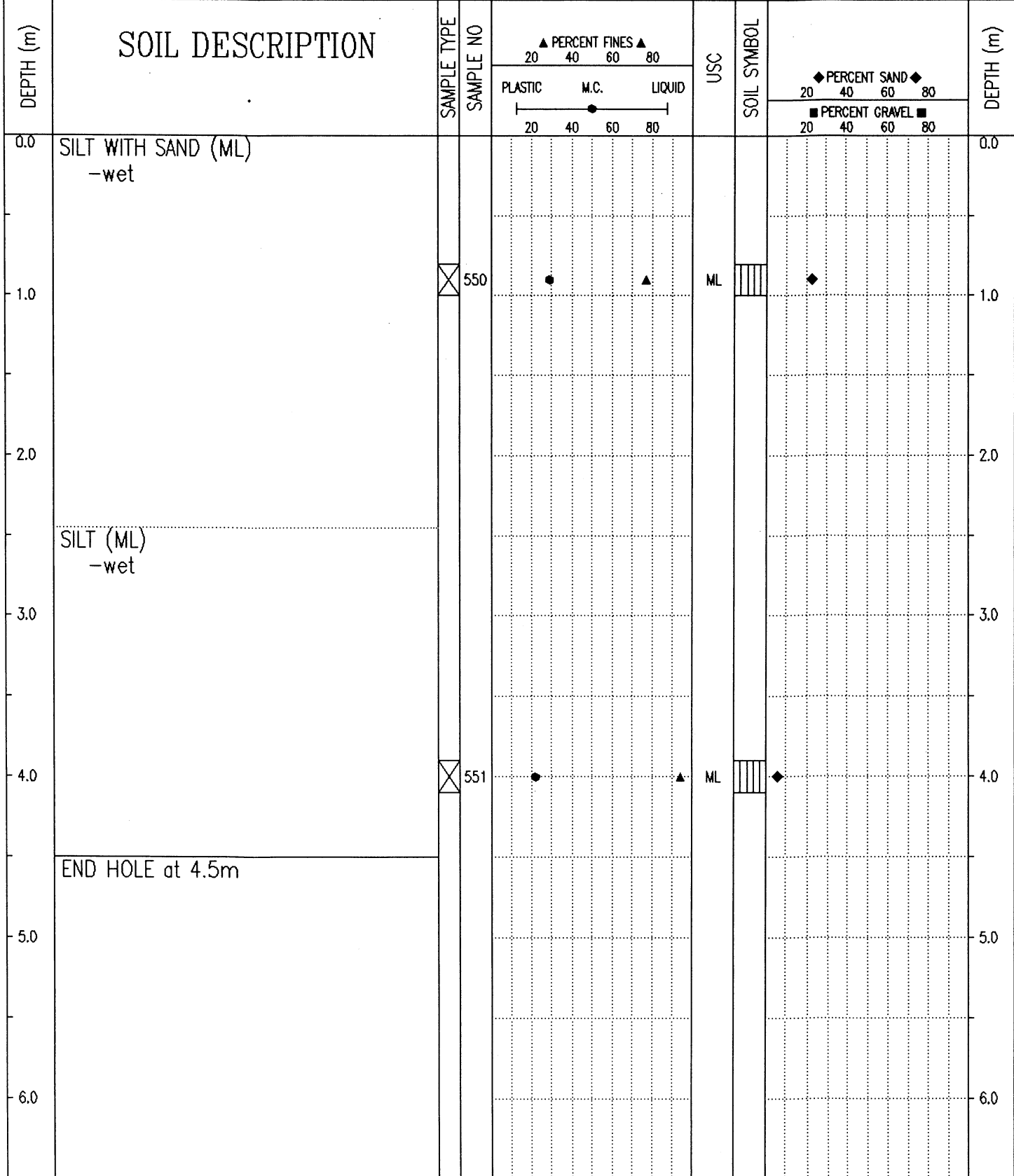


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LOGGED BY: TF	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 93/09/27
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 254-234
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1874+150	ELEVATION: 0.00 (m)

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

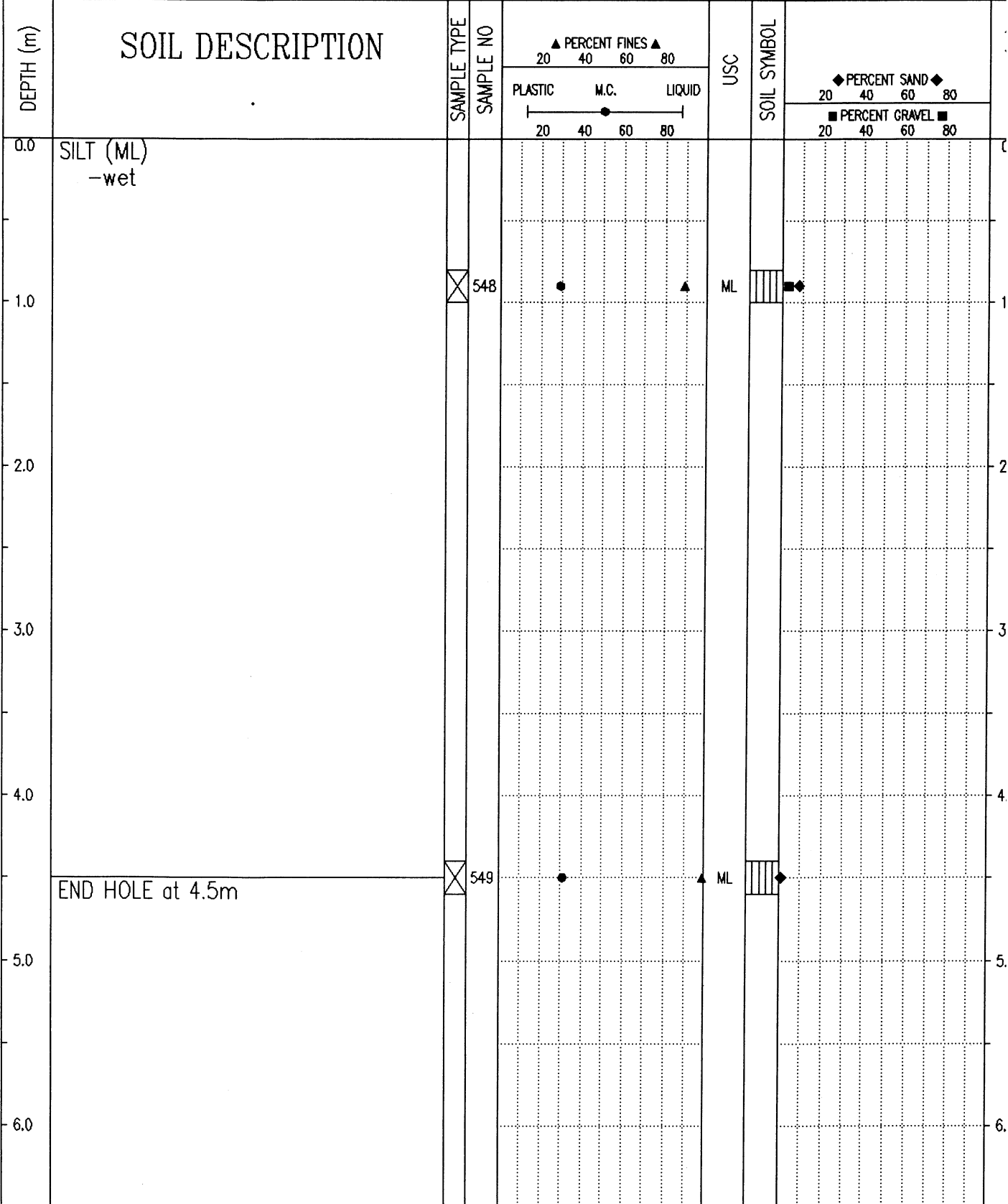


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LOGGED BY: TF	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 93/09/27
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 254-233
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1874+350	ELEVATION: 0.00 (m)

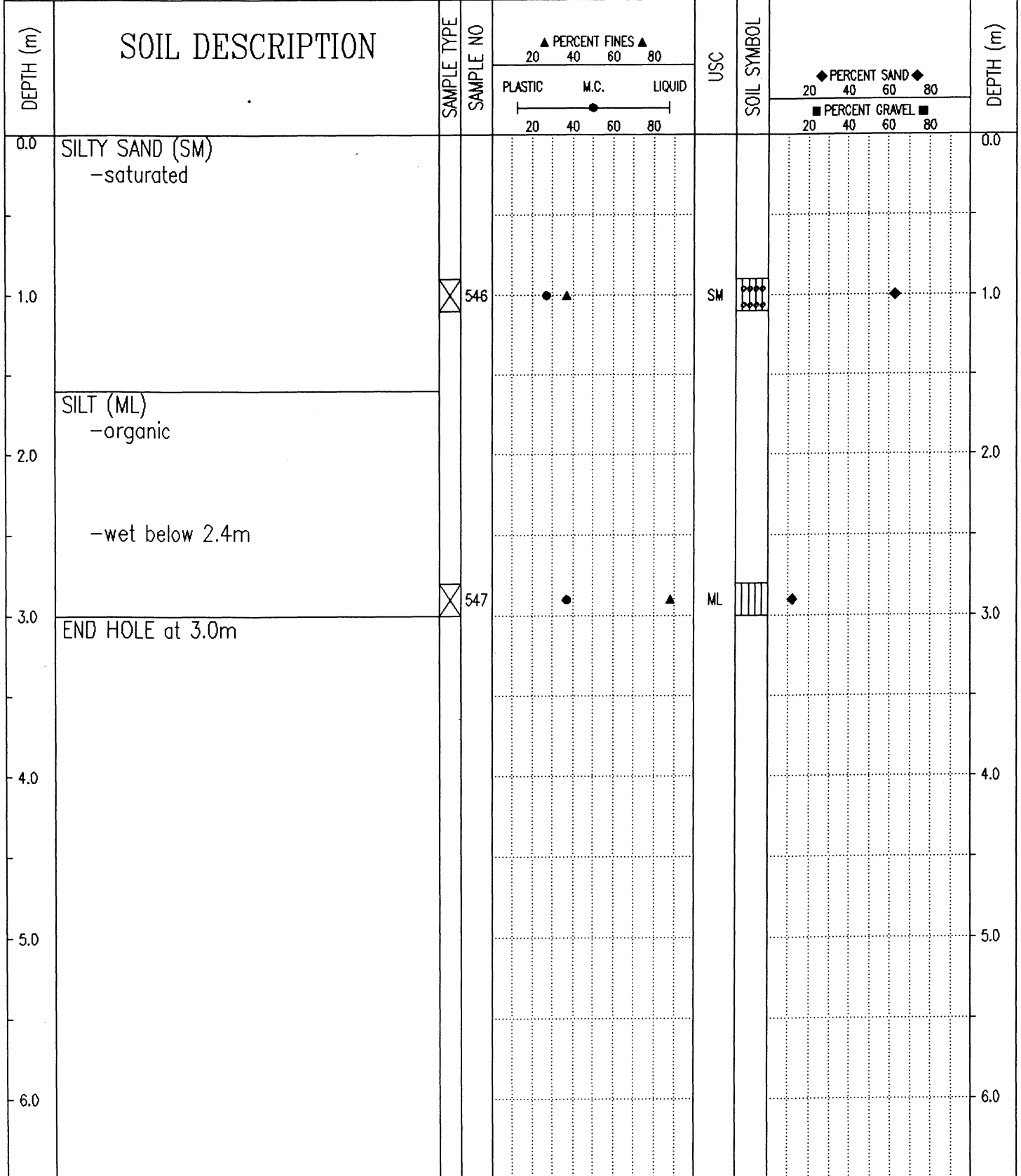
SAMPLE TYPE  RETURN  S.P.T.  AUGER  BULK  TUBE  CORE



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LOGGED BY: TF	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 93/09/27
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 254-232
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1874+550	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		



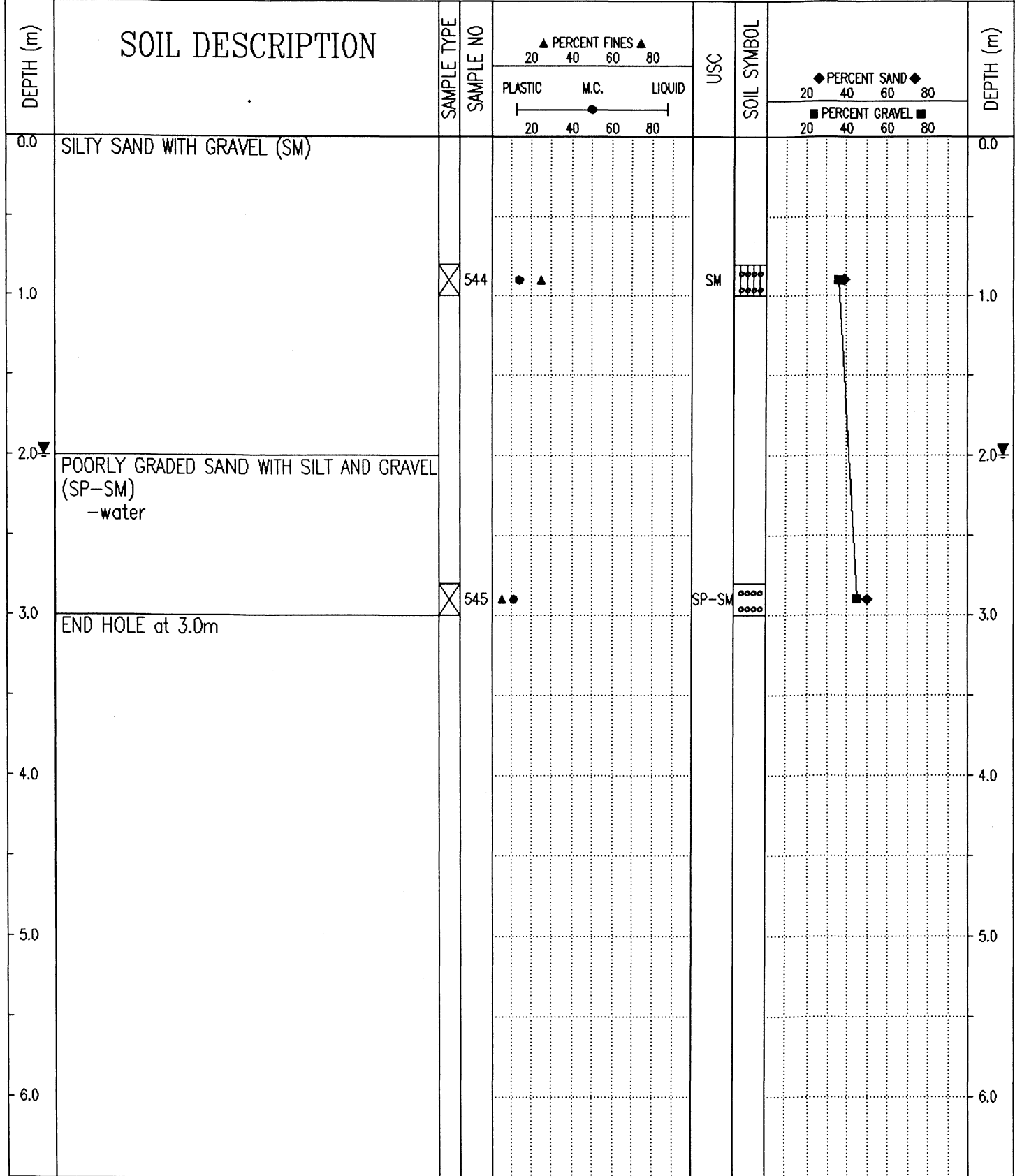
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REVIEWED BY:  
Fig. No:

COMPLETION DEPTH: 3.0 m  
COMPLETE: 93/09/27

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 254-231
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1874+750	ELEVATION: 0.00 (m)

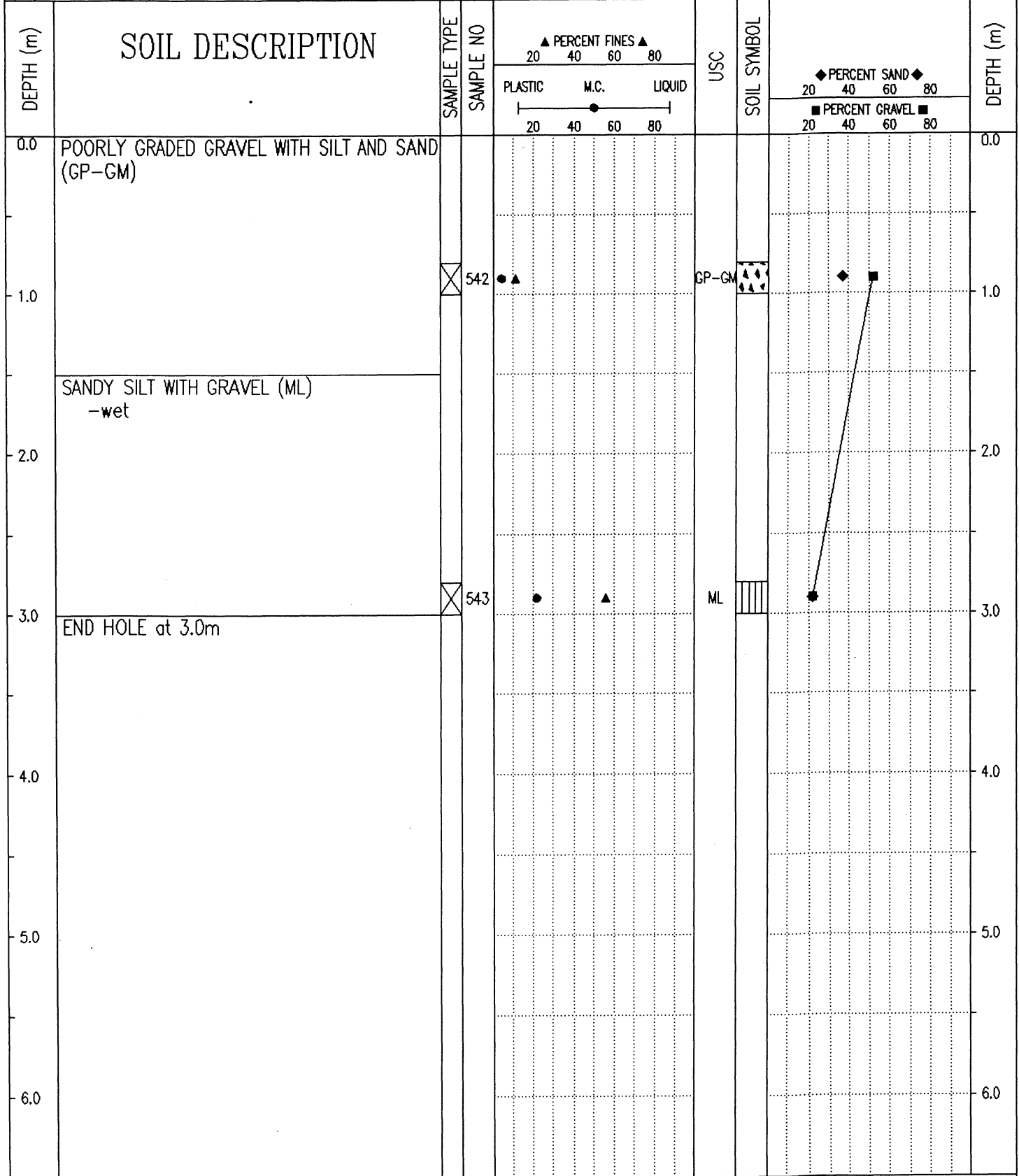
SAMPLE TYPE  RETURN  S.P.T.  AUGER  BULK  TUBE  CORE



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LOGGED BY: TF	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 93/09/27
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 254-230
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1874+950	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		



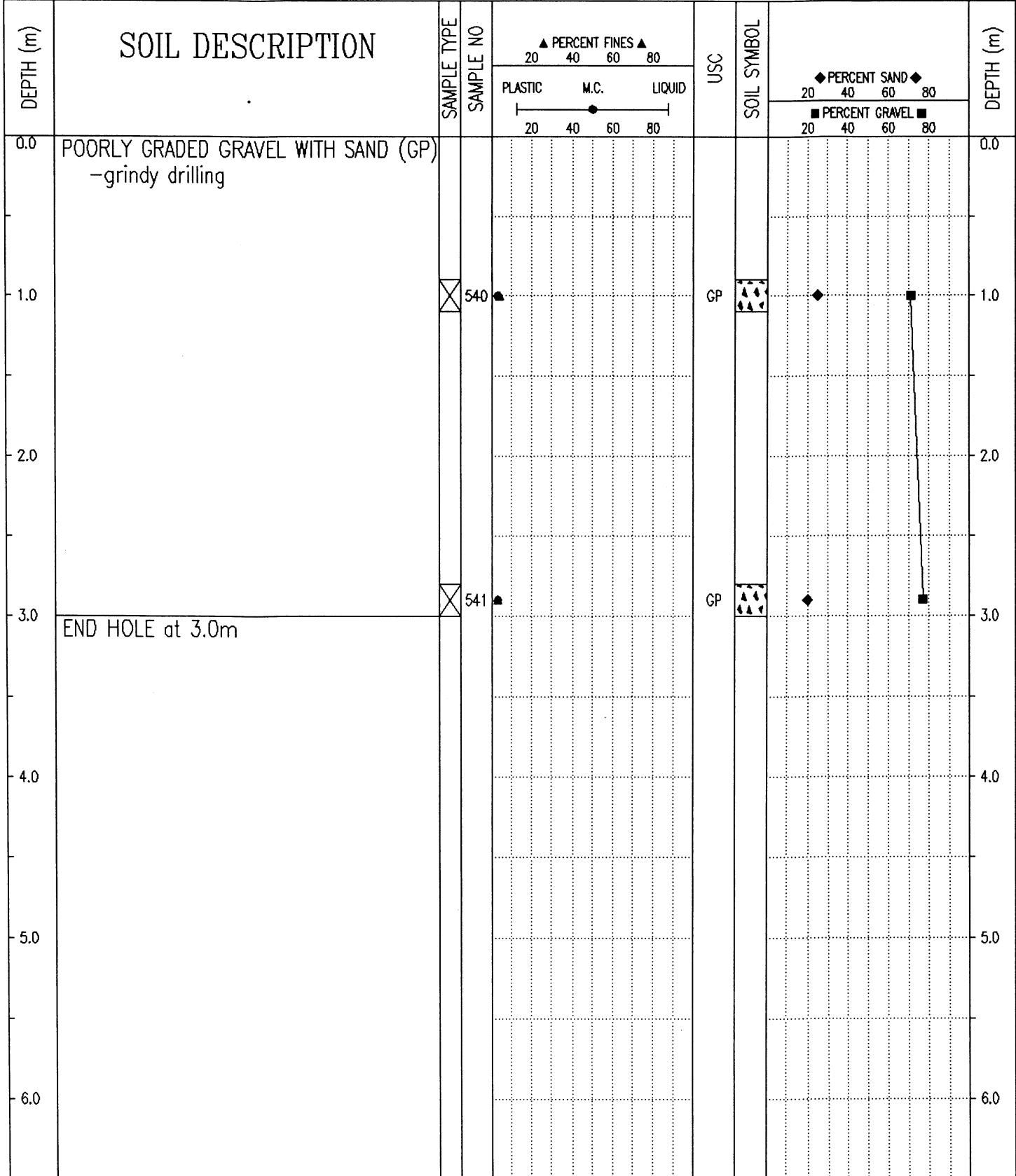
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LOGGED BY: TF  
REVIEWED BY:  
Fig. No:

COMPLETION DEPTH: 3.0 m  
COMPLETE: 93/09/27

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 254-229
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1875+150	ELEVATION: 0.00 (m)

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

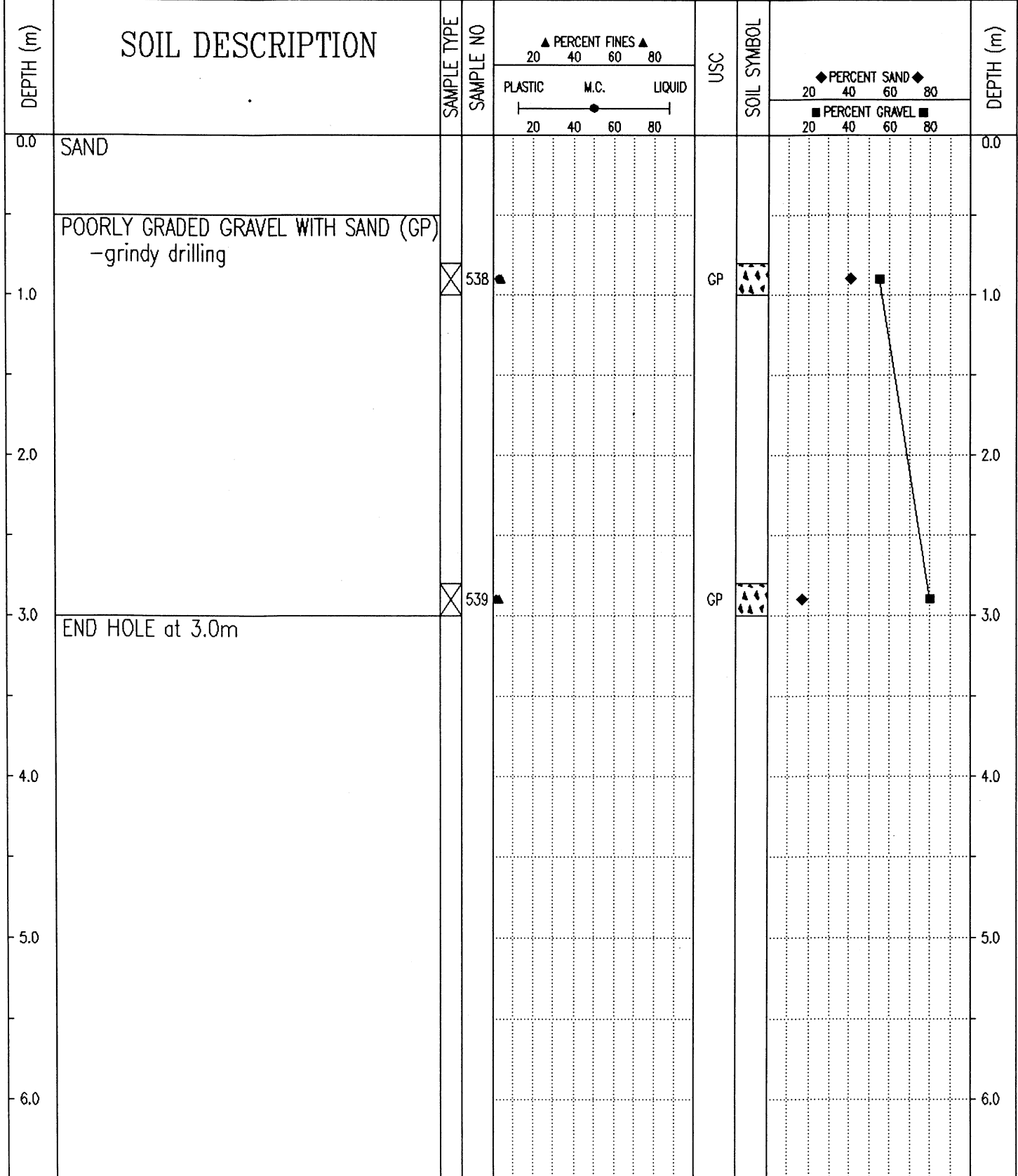


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LOGGED BY: TF	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 93/09/27
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 254-228
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1875+350	ELEVATION: 0.00 (m)

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



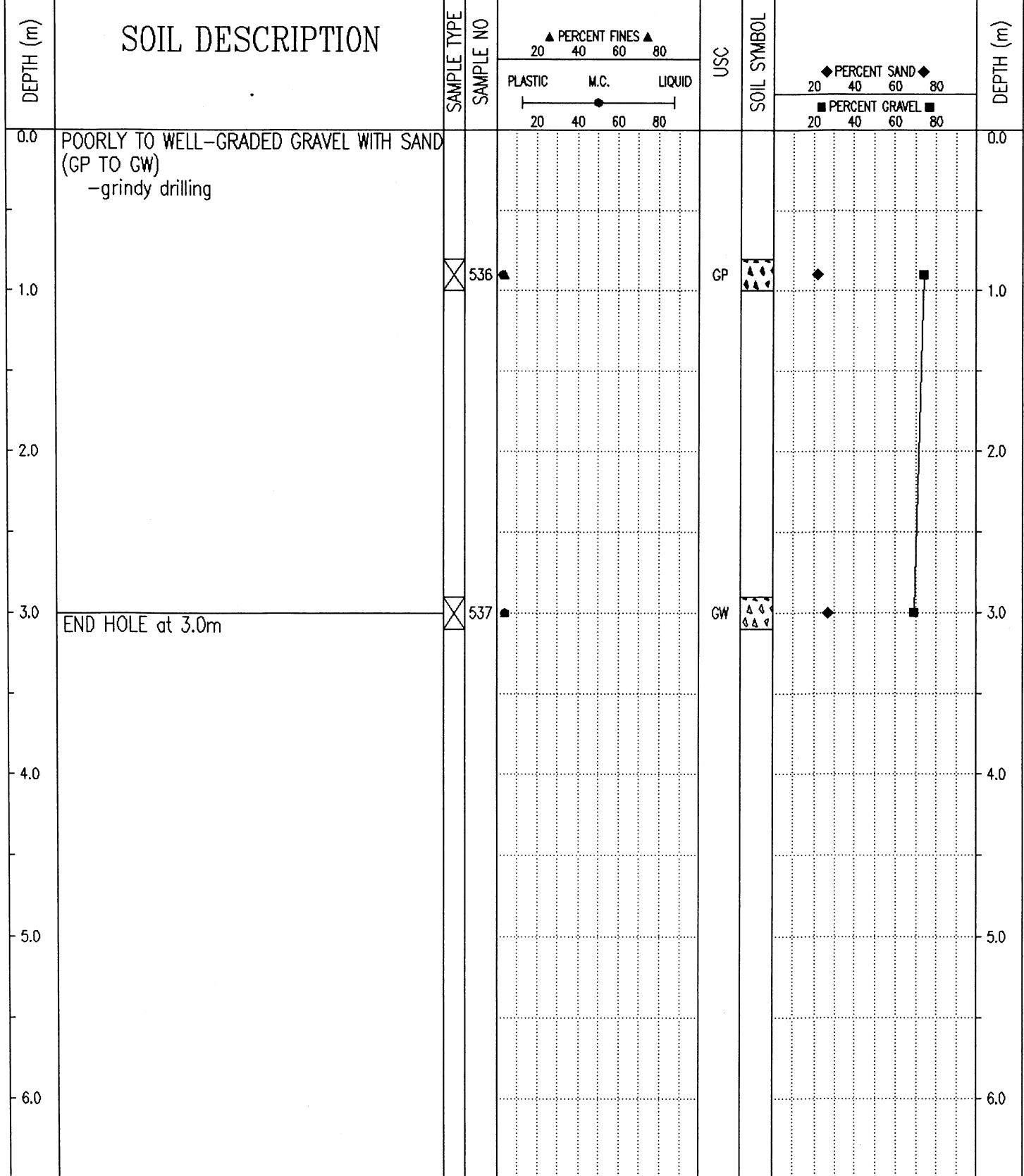
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Transportation Engineering

LOGGED BY: TF  
REVIEWED BY:  
Fig. No:

COMPLETION DEPTH: 3.0 m  
COMPLETE: 93/09/27

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 254-227
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1875+550	ELEVATION: 0.00 (m)

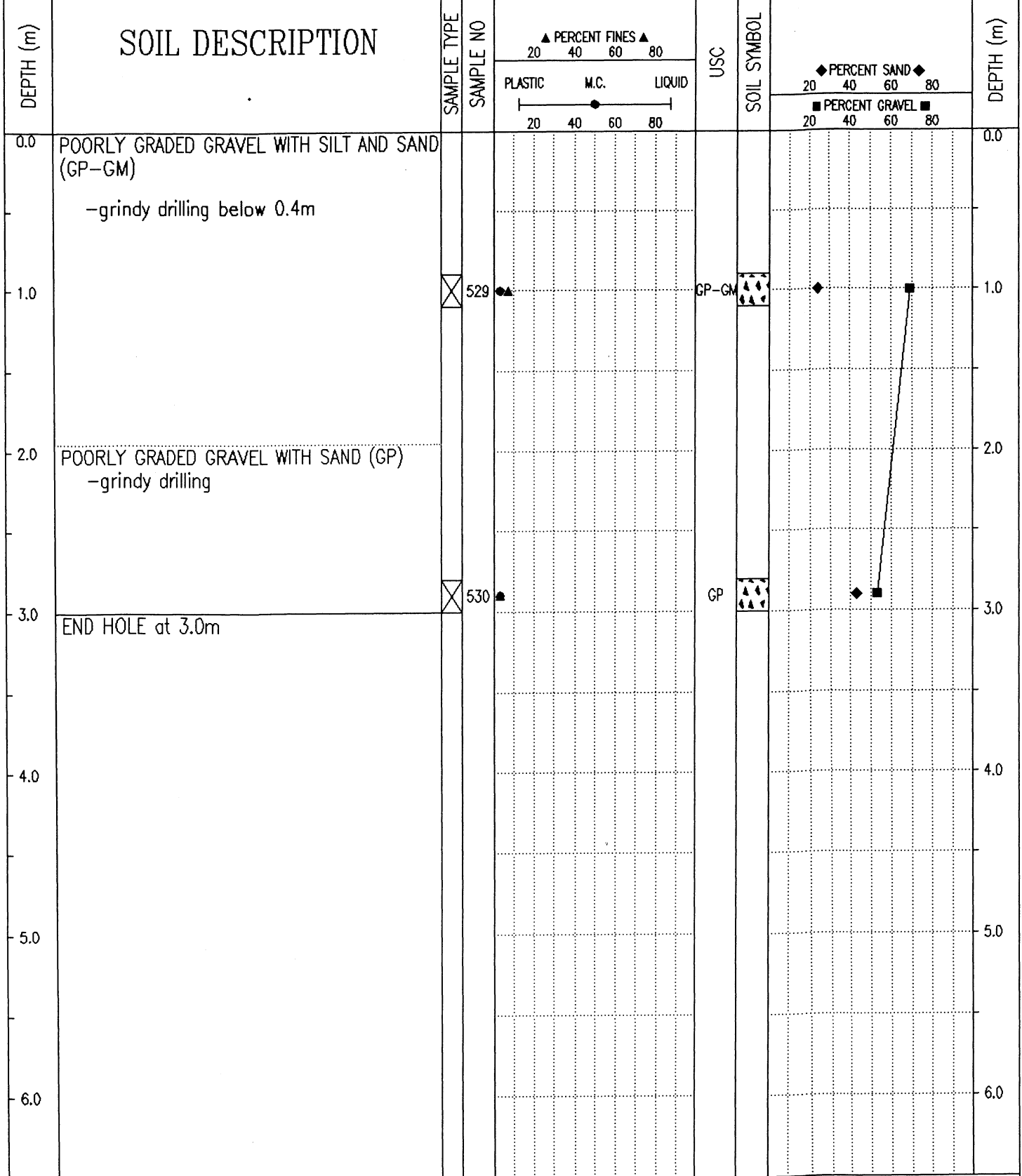
SAMPLE TYPE  RETURN  S.P.T.  AUGER  BULK  TUBE  CORE



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LOGGED BY: TF	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 93/09/27
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 254-224
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1875+750	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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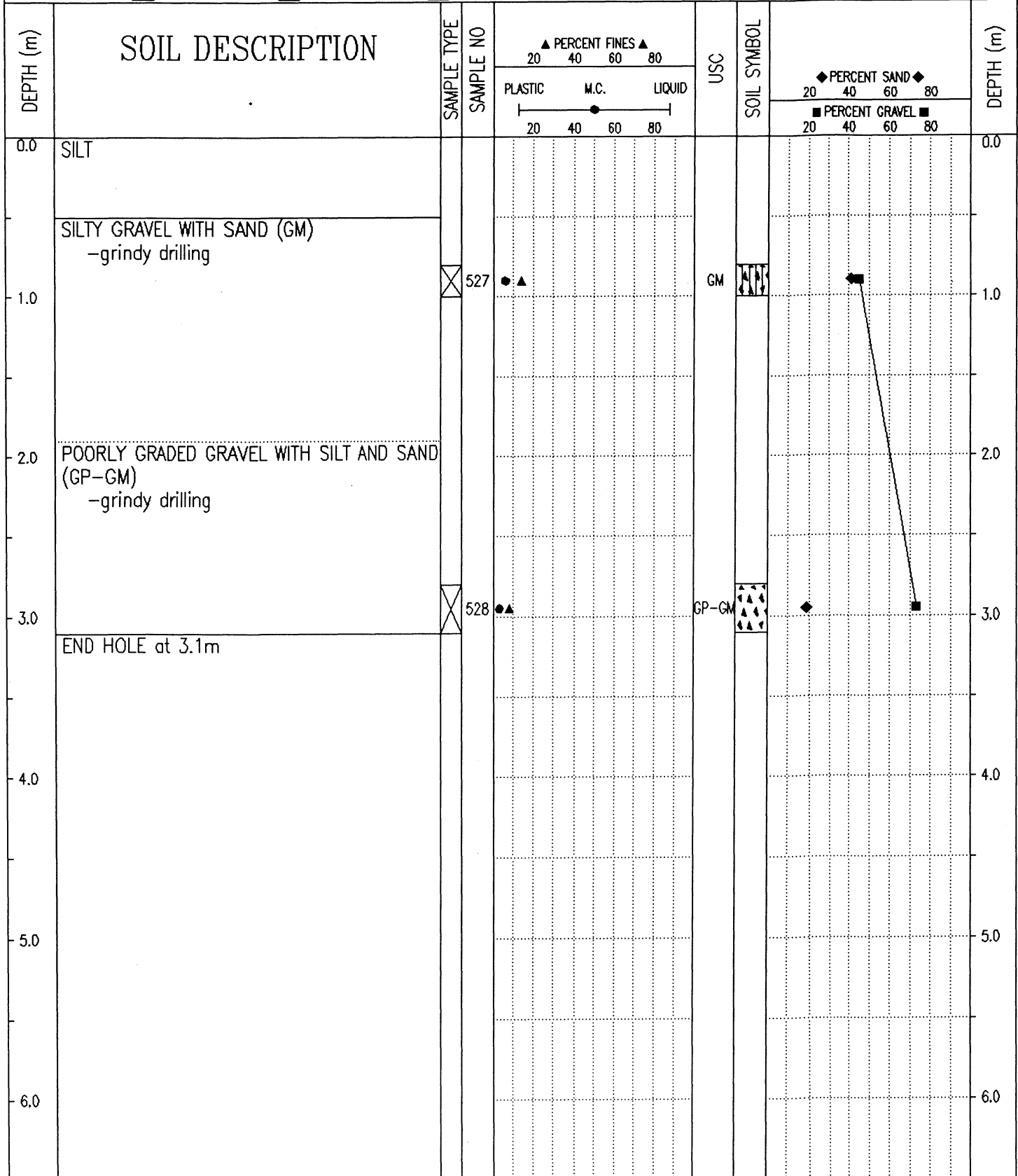
Fig. No:

COMPLETION DEPTH: 3.0 m

COMPLETE: 93/09/26

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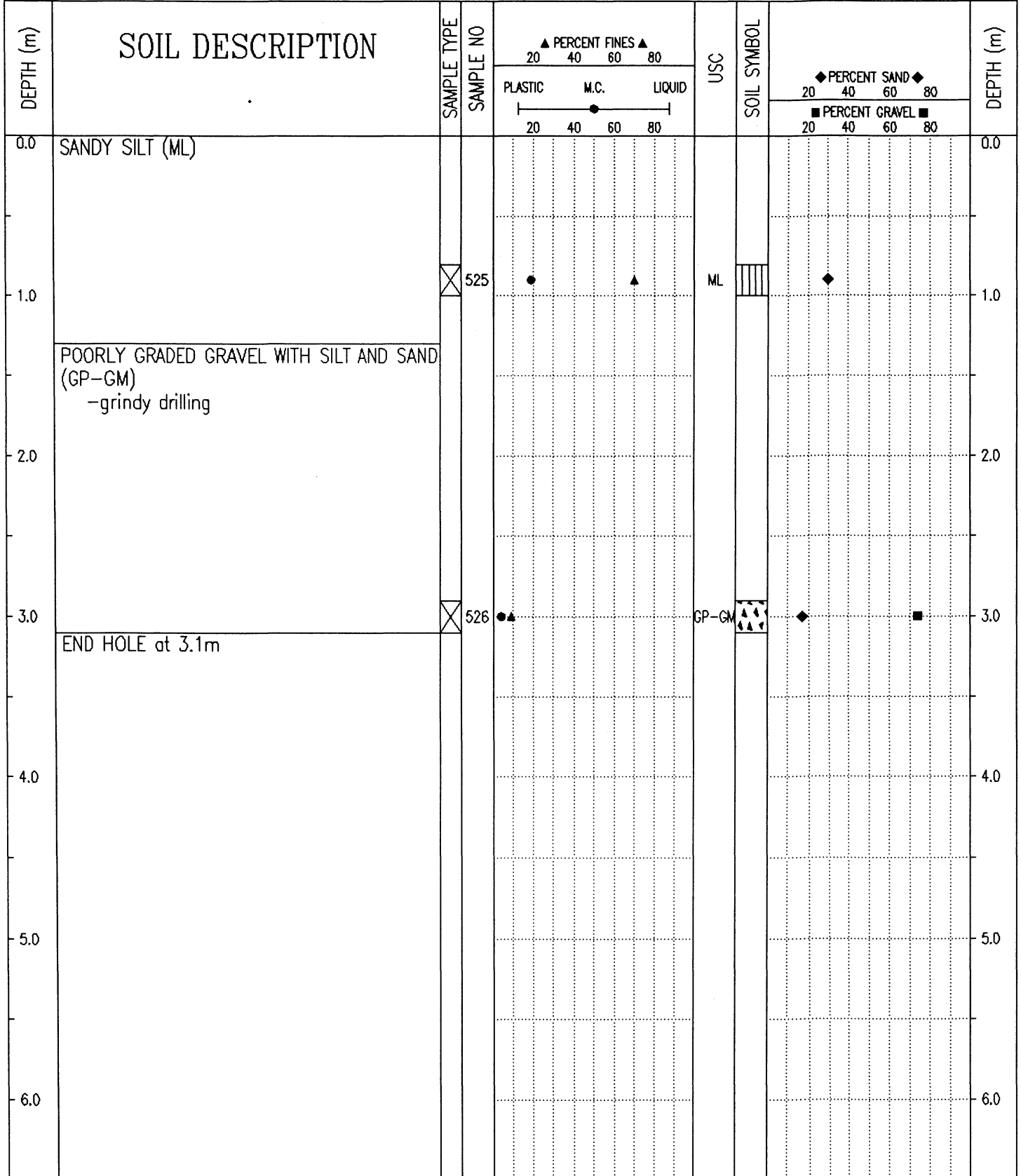
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 254-223
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1875+950	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.
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	<input type="checkbox"/> TUBE	<input type="checkbox"/> CORE



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	REVIEWED BY:	COMPLETE: 93/09/26
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 254-222
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1876+050	ELEVATION: 0.00 (m)

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

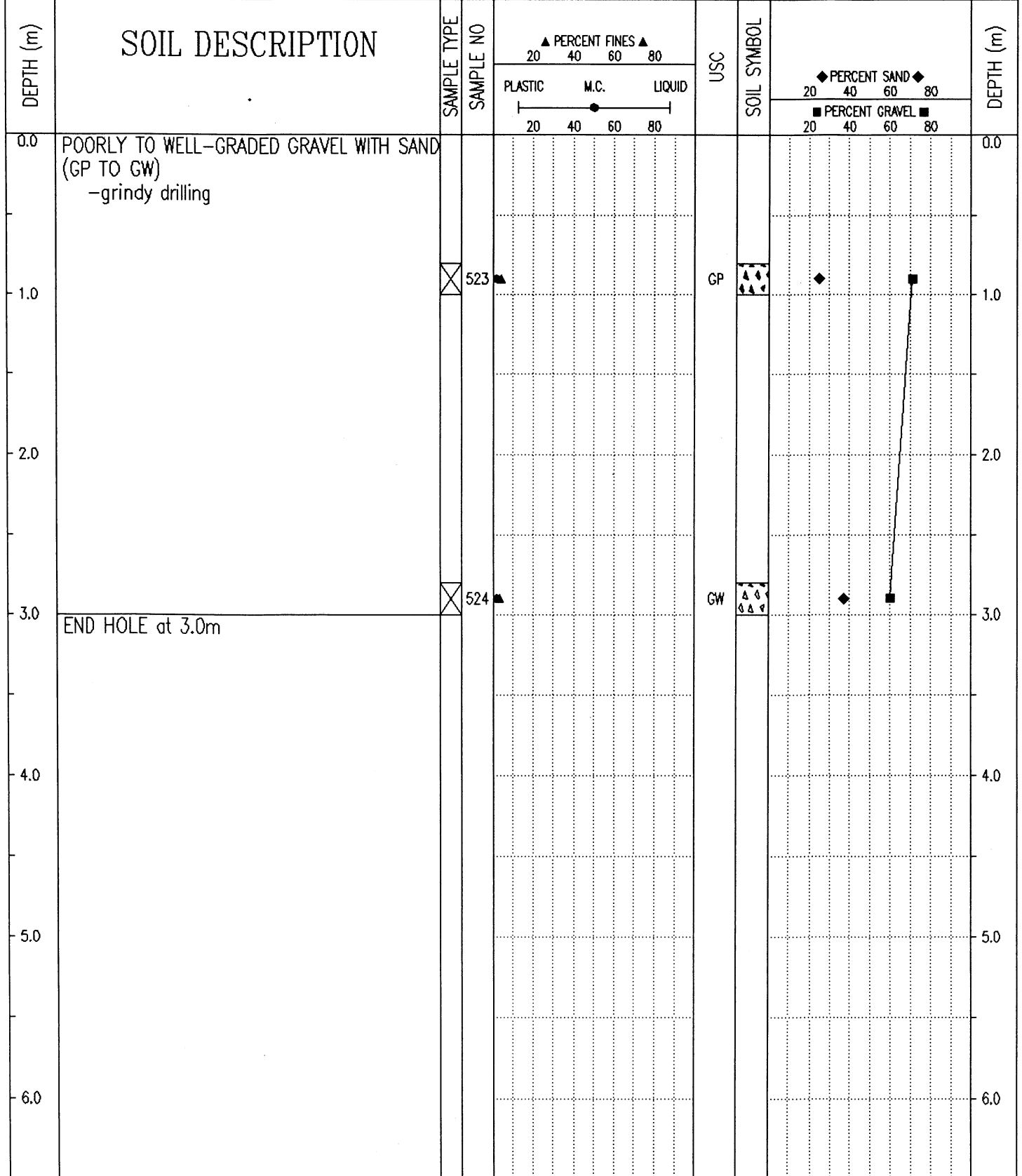


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LOGGED BY: TF	COMPLETION DEPTH: 3.1 m
REVIEWED BY:	COMPLETE: 93/09/26
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 254-221
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1876+150	ELEVATION: 0.00 (m)

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

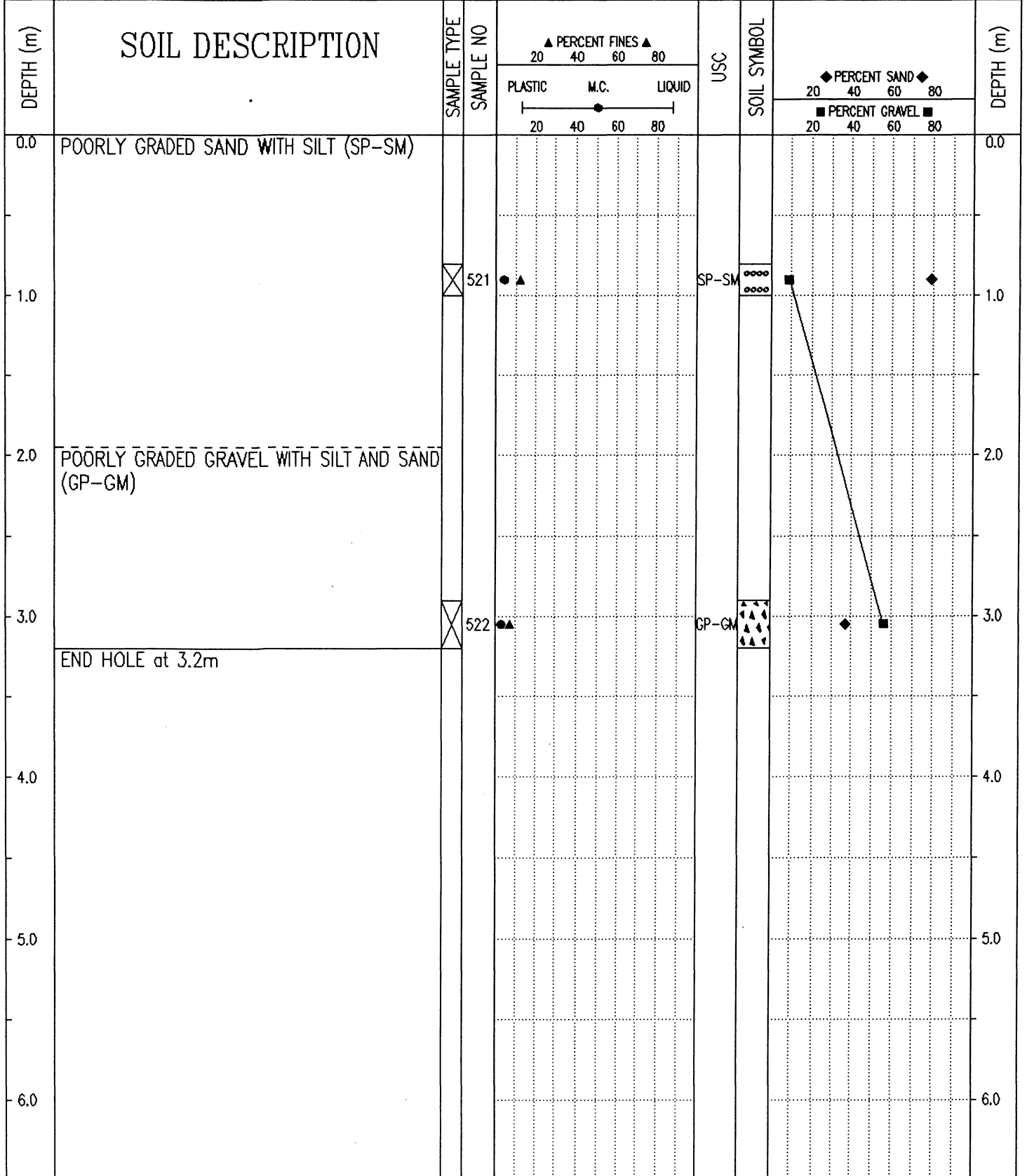


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LOGGED BY: TF	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 93/09/26
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 254-220
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1876+250	ELEVATION: 0.00 (m)

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



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COMPLETION DEPTH: 3.2 m

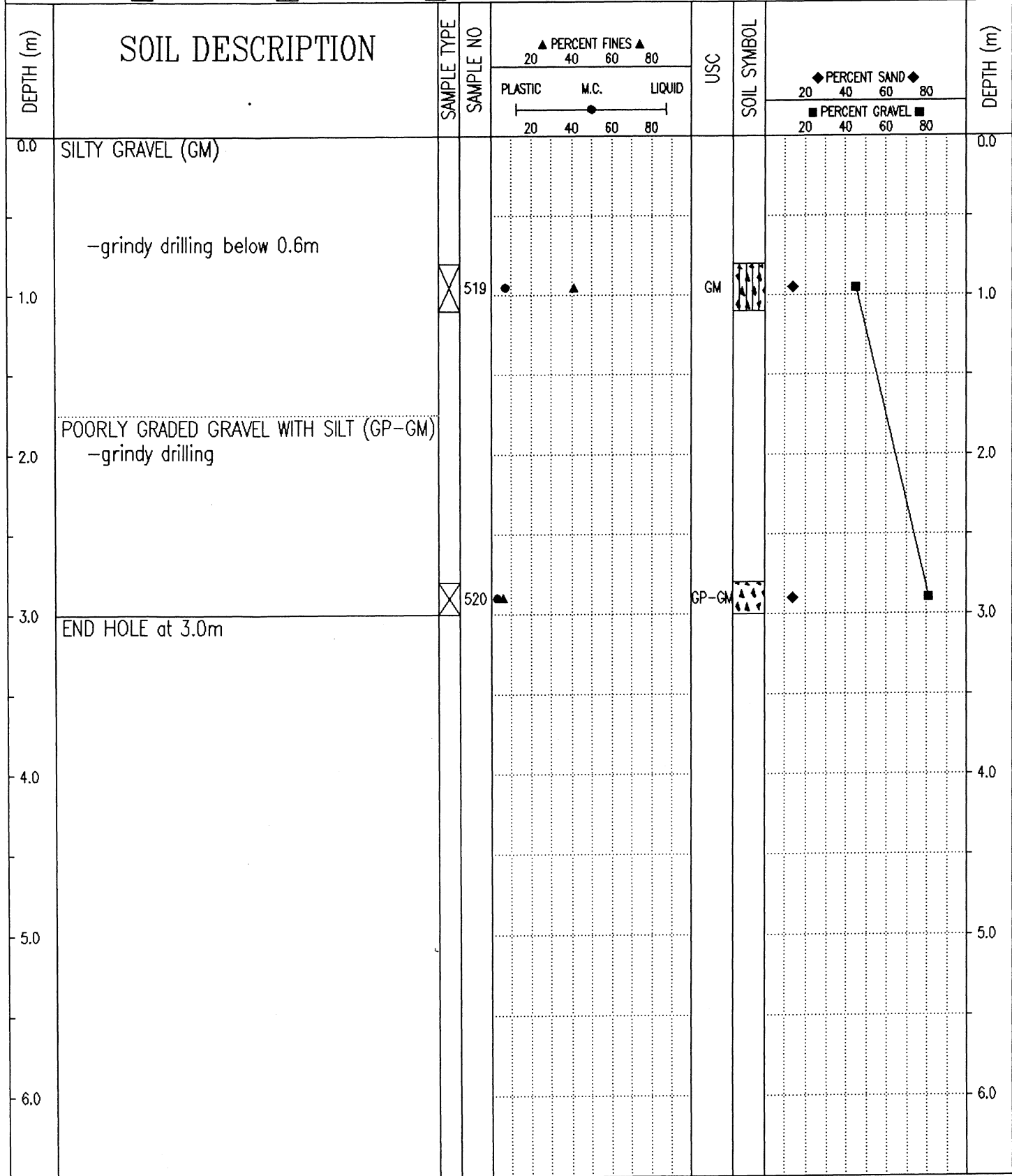
REVIEWED BY:

COMPLETE: 93/09/26

Fig. No:

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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 254-218
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1876+350 o/s 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		

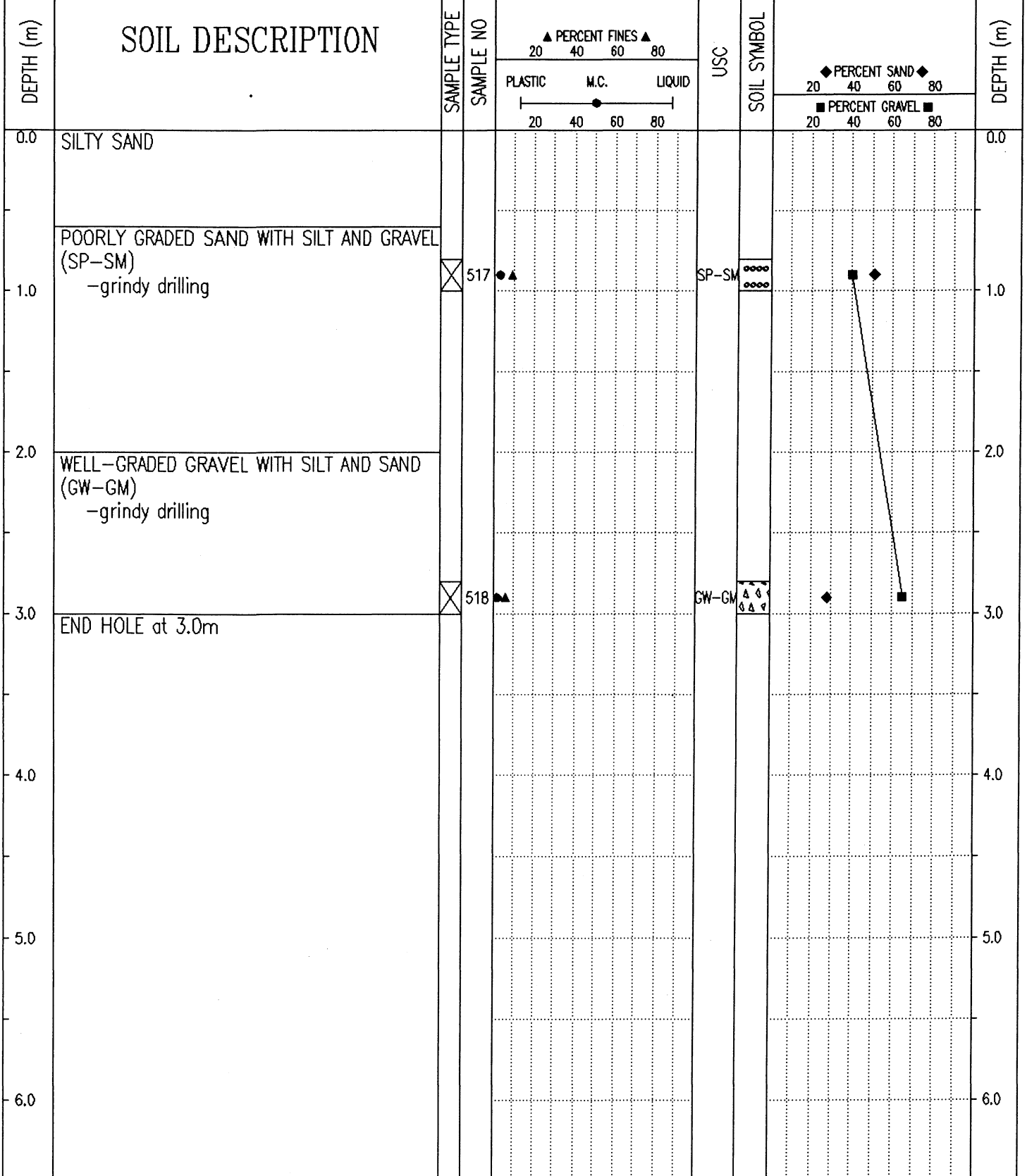


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Fig. No:

COMPLETION DEPTH: 3.0 m  
COMPLETE: 93/09/26

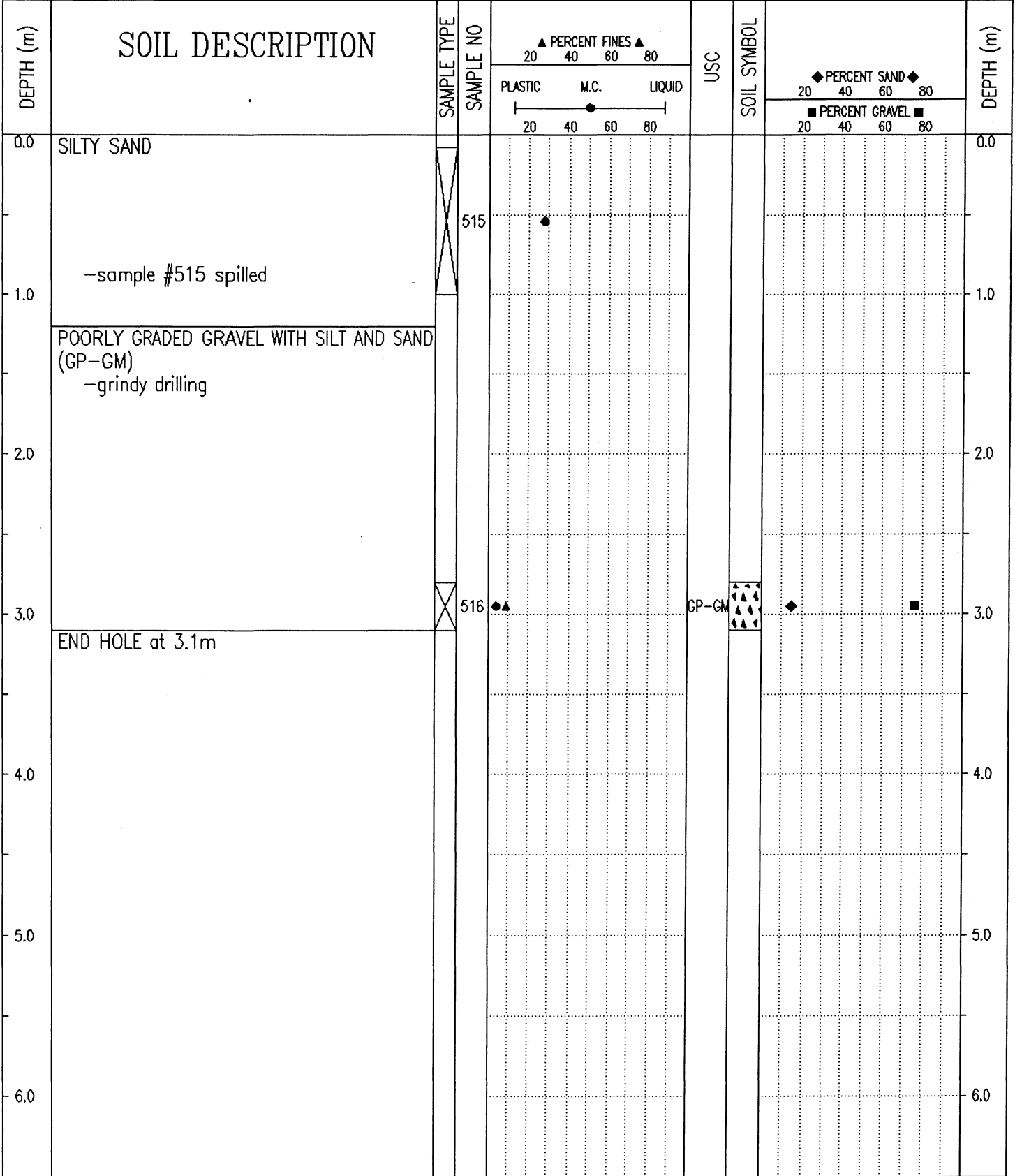
SAMPLE TYPE  RETURN  S.P.T.  AUGER  BULK  TUBE  CORE



93/11/02 04:32PM

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 254-216
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1876+750 o/s Rt.	ELEVATION: 0.00 (m)

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

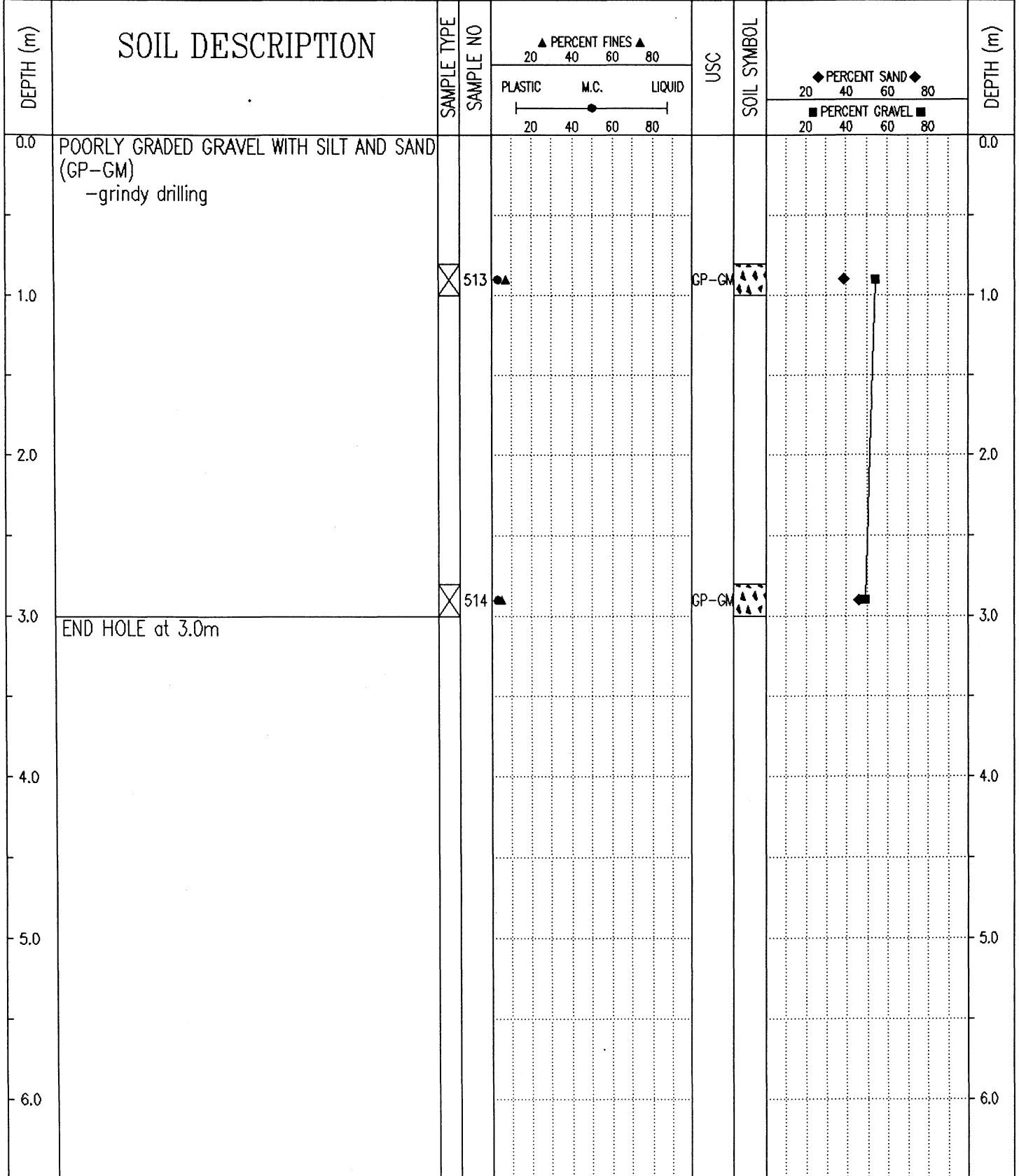


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REVIEWED BY:	COMPLETE: 93/09/26
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 254-215
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1876+950 o/s Rt.	ELEVATION: 0.00 (m)

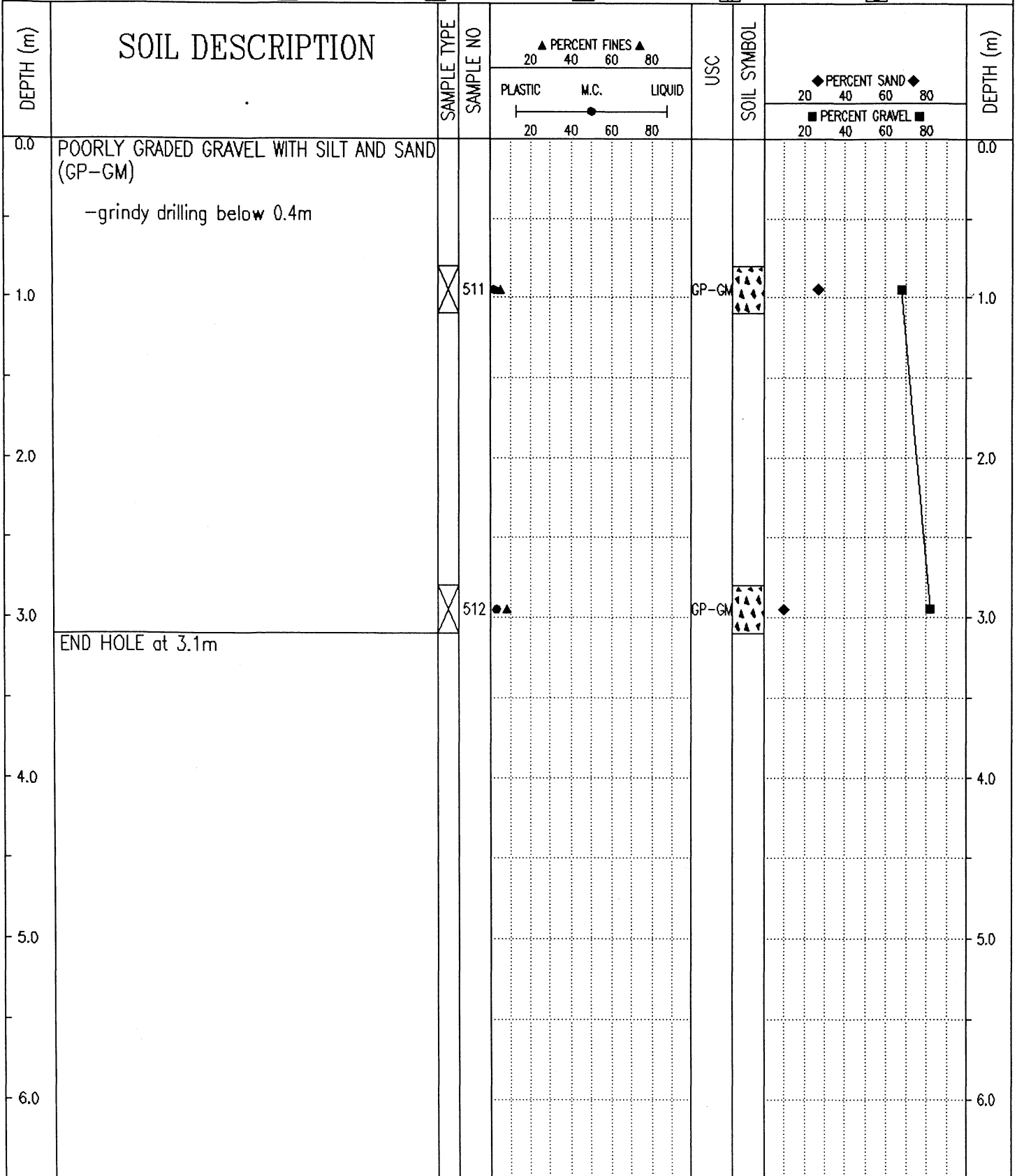
SAMPLE TYPE  RETURN  S.P.T.  AUGER  BULK  TUBE  CORE



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LOGGED BY: TF	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 93/09/26
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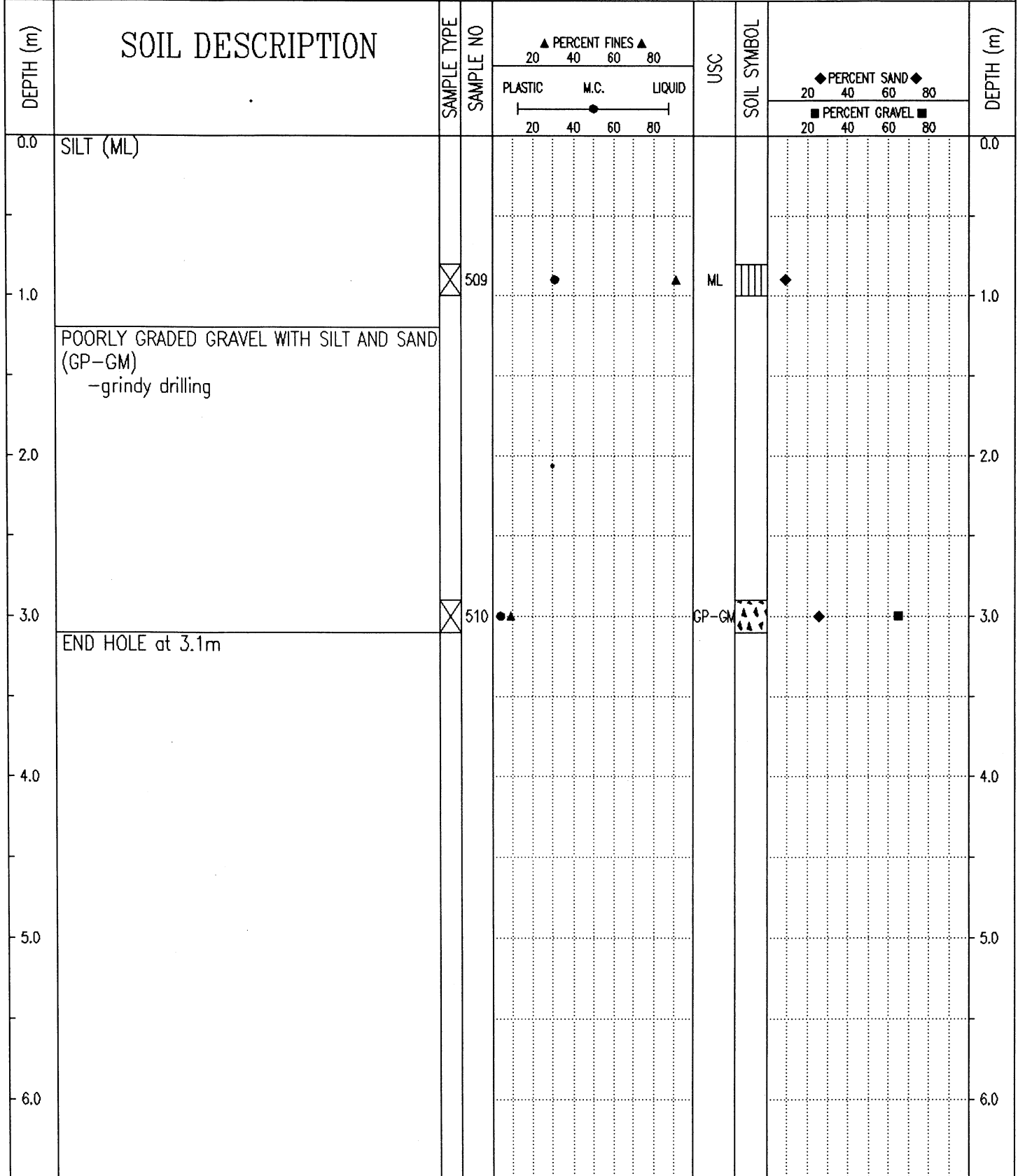
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 253-214
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1877+150 o/s Rt.	ELEVATION: 0.00 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" 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:	COMPLETE: 93/09/26
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 253-213
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1877+350 o/s Rt.	ELEVATION: 0.00 (m)

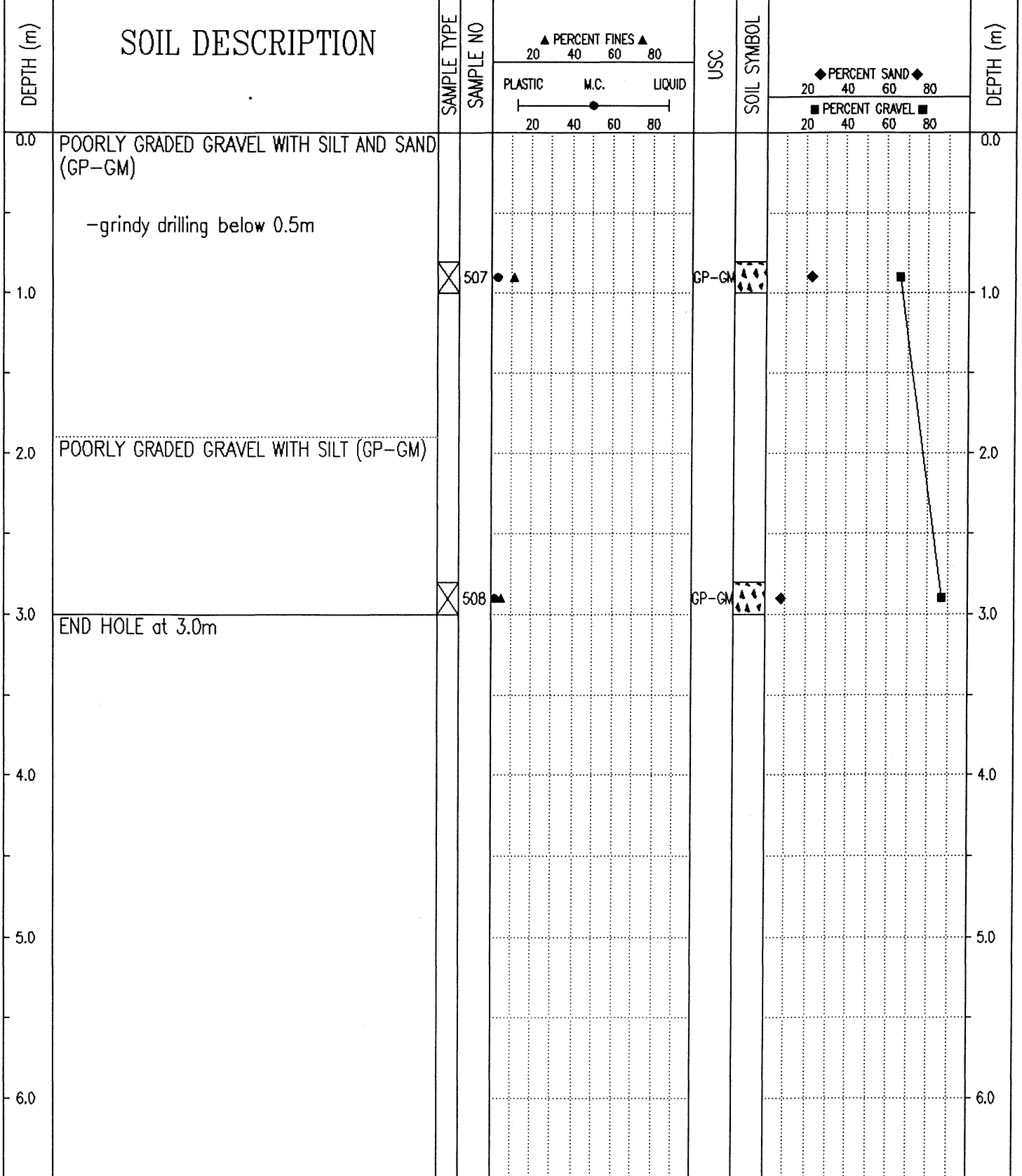
SAMPLE TYPE  RETURN  S.P.T.  AUGER  BULK  TUBE  CORE



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LOGGED BY: TF	COMPLETION DEPTH: 3.1 m
REVIEWED BY:	COMPLETE: 93/09/26
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 253-212
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1877+550 o/s Rt.	ELEVATION: 0.00 (m)
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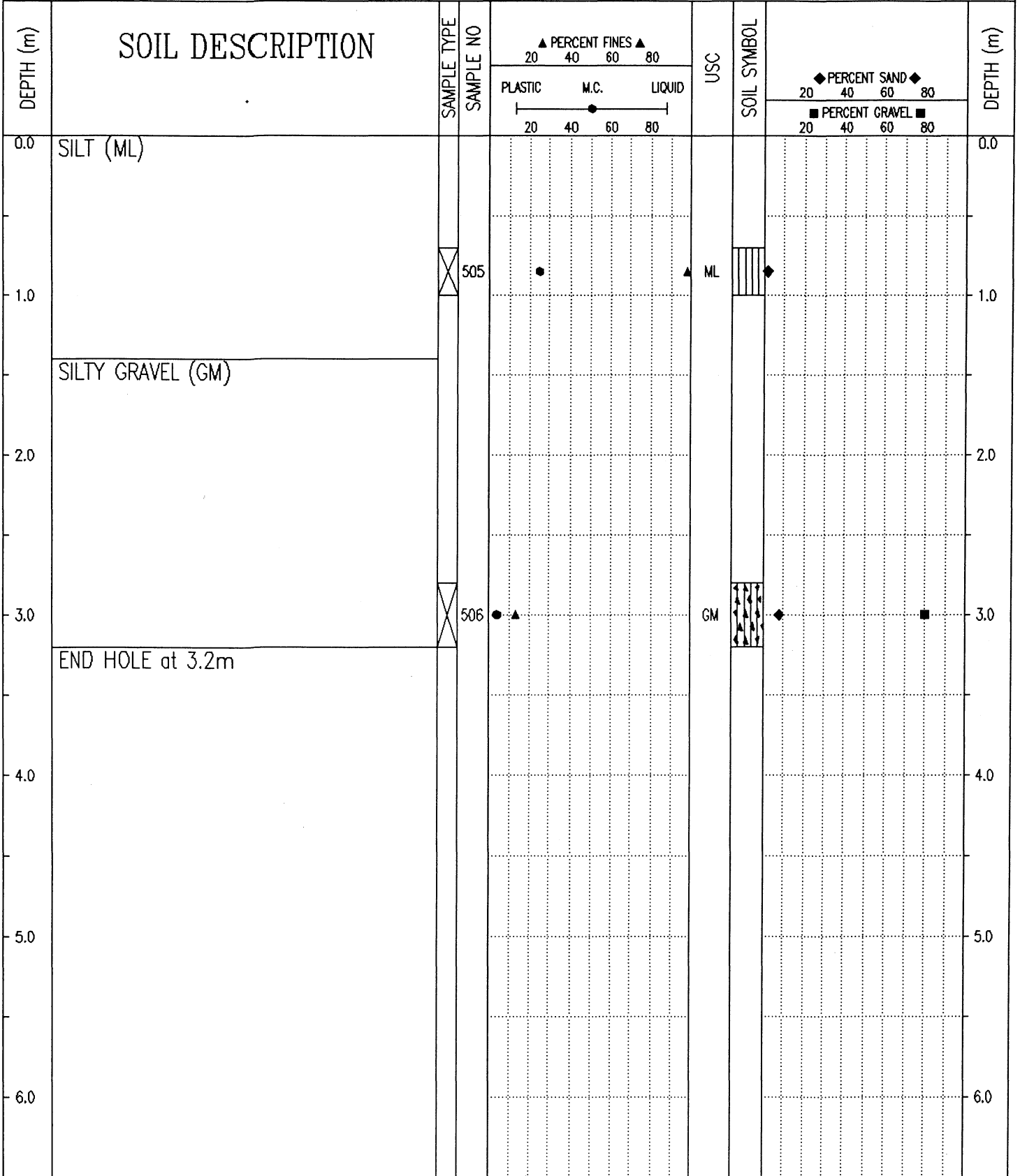
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LOGGED BY: TF  
REVIEWED BY:  
Fig. No:

COMPLETION DEPTH: 3.0 m  
COMPLETE: 93/09/26

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 253-211
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1877+750 o/s Rt.	ELEVATION: 0.00 (m)

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



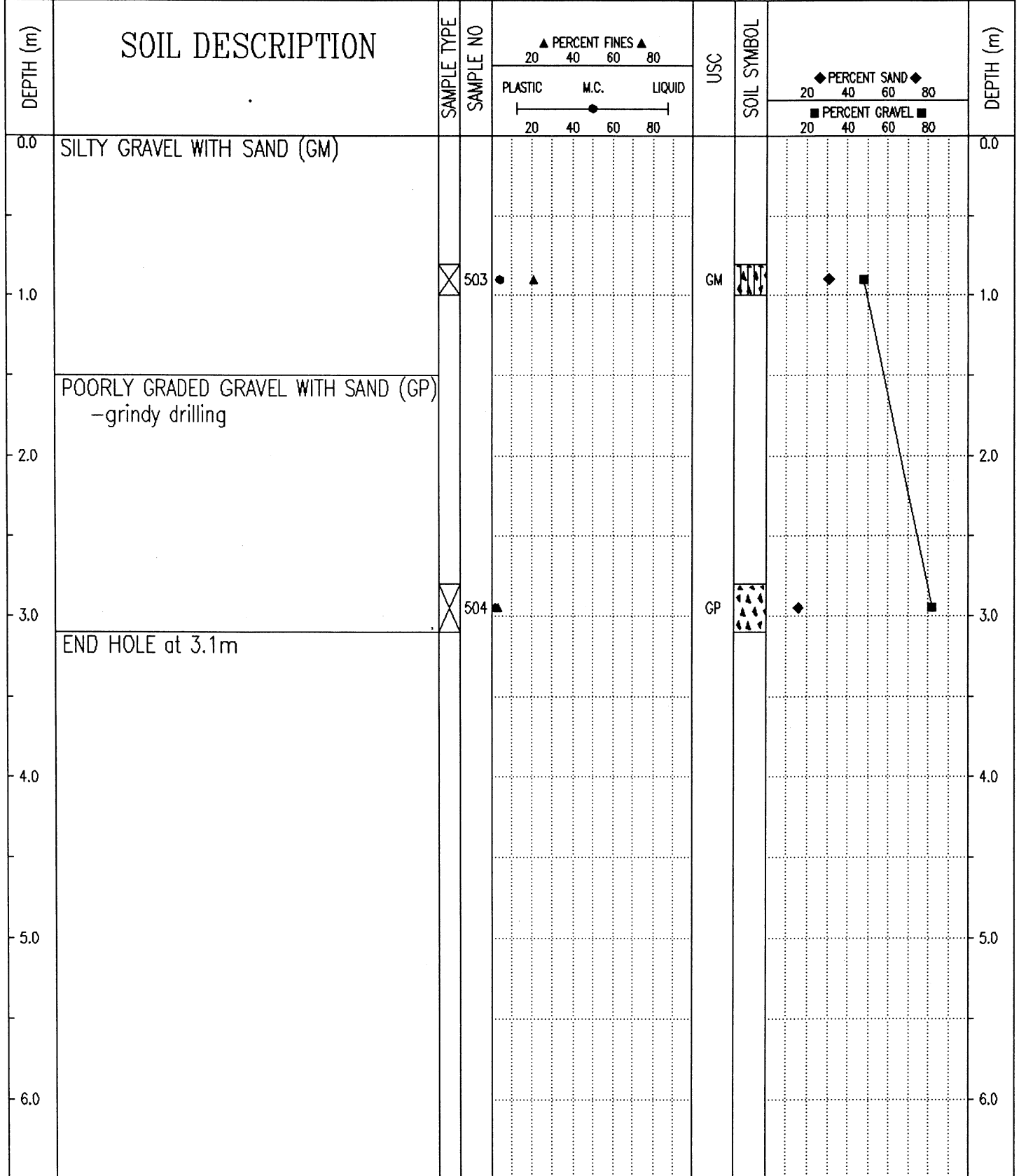
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REVIEWED BY:  
Fig. No:

COMPLETION DEPTH: 3.2 m  
COMPLETE: 93/09/26

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 253-210
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1877+950 o/s Rt.	ELEVATION: 0.00 (m)

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



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LOGGED BY: TF

REVIEWED BY:

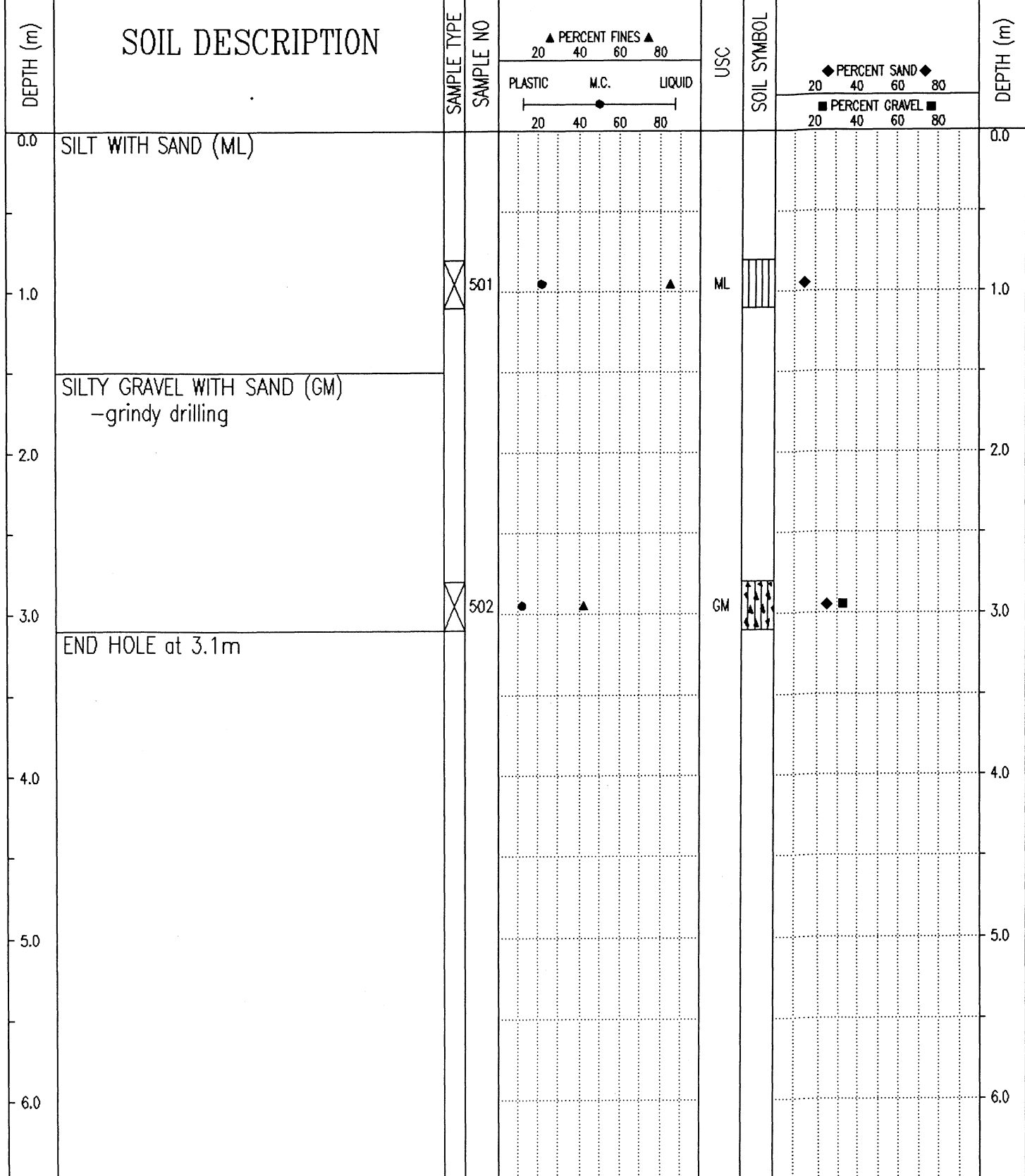
Fig. No:

COMPLETION DEPTH: 3.1 m

COMPLETE: 93/09/26

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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 253-209
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1878+250 o/s Rt.	ELEVATION: 0.00 (m)
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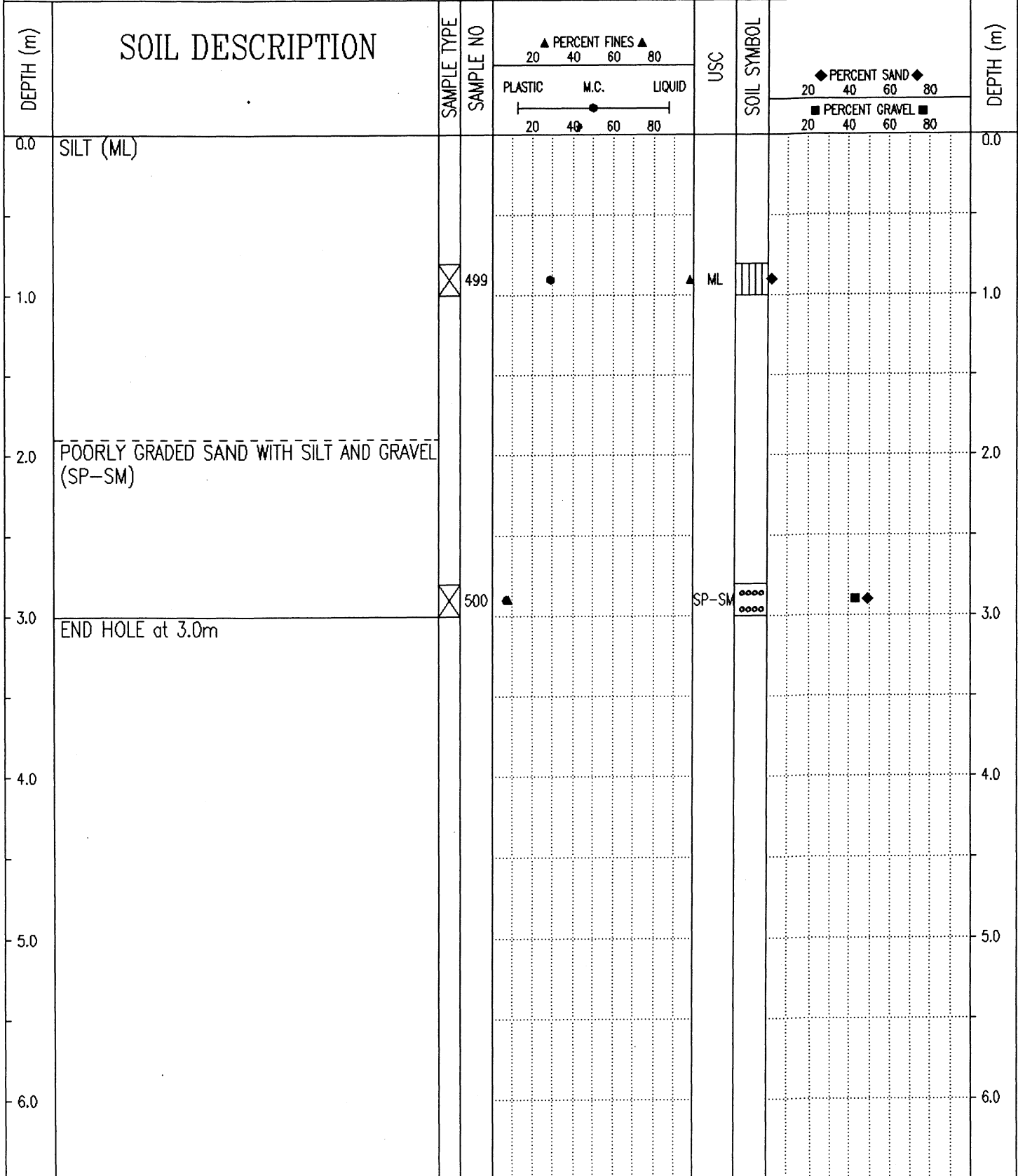


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LOGGED BY: TF	COMPLETION DEPTH: 3.1 m
REVIEWED BY:	COMPLETE: 93/09/26
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 253-208
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1878+450 o/s Rt.	ELEVATION: 0.00 (m)

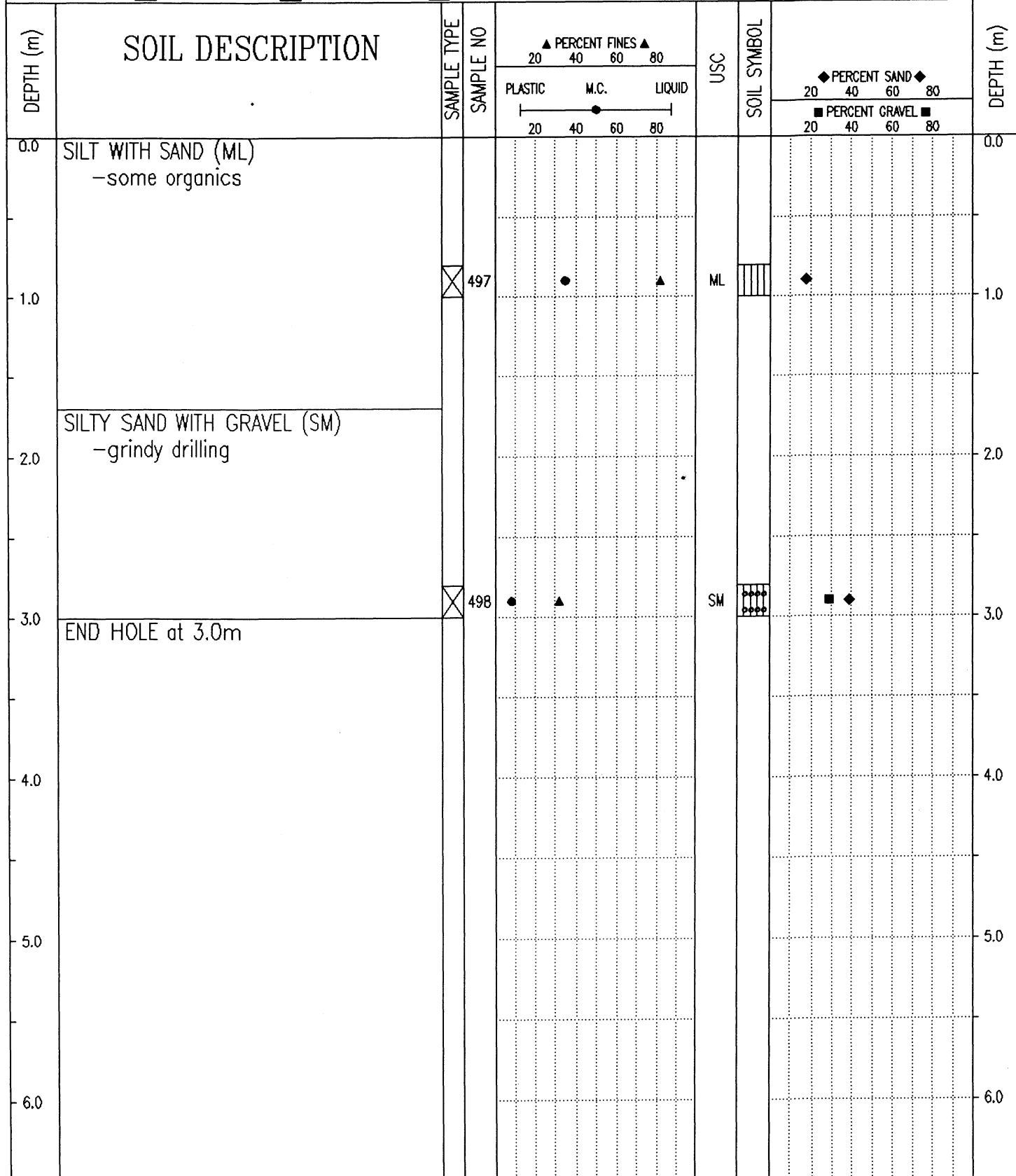
SAMPLE TYPE  RETURN  S.P.T.  AUGER  BULK  TUBE  CORE



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LOGGED BY: TF	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 93/09/26
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 253-207
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL:CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1878+650 o/s Rt.	ELEVATION: 0.00 (m)
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	<input type="checkbox"/> TUBE	<input type="checkbox"/> CORE

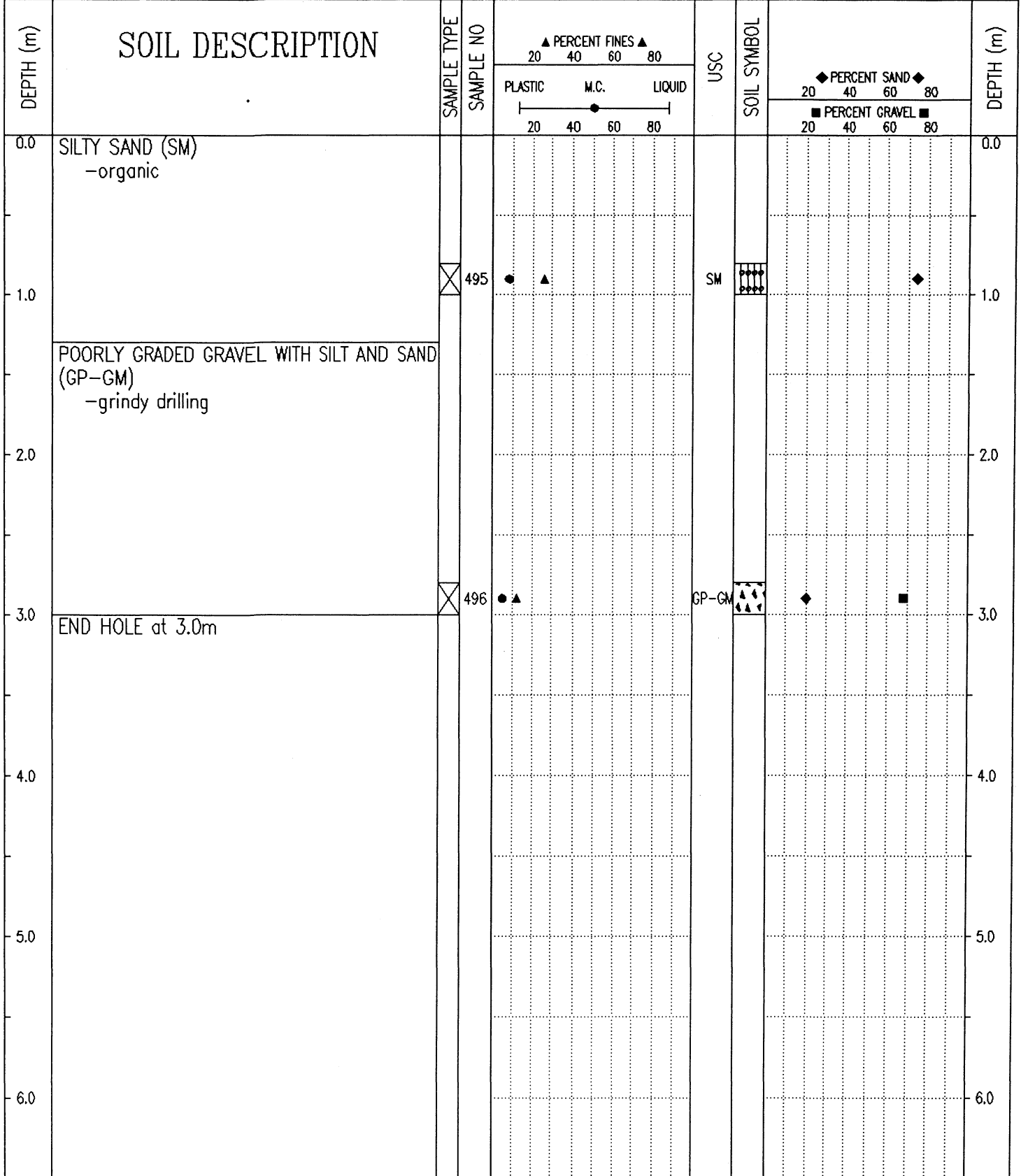


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LOGGED BY: TF	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 93/09/26
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 253-206
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1878+850 o/s Rt.	ELEVATION: 0.00 (m)

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

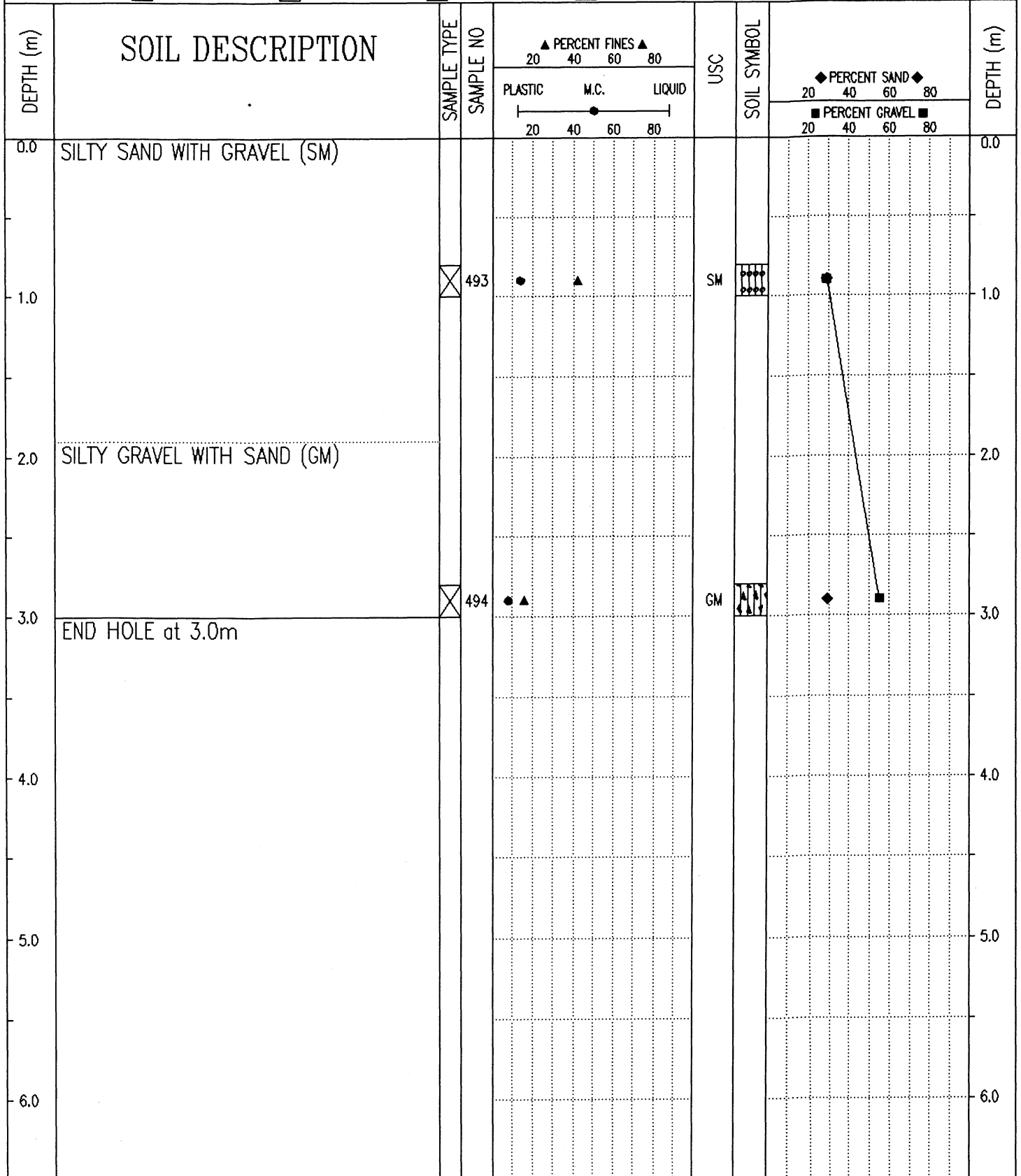


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REVIEWED BY:  
Fig. No:

COMPLETION DEPTH: 3.0 m  
COMPLETE: 93/09/26

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 253-205
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1879+075 o/s Rt.	ELEVATION: 0.00 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.
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	<input type="checkbox"/> TUBE	<input type="checkbox"/> CORE



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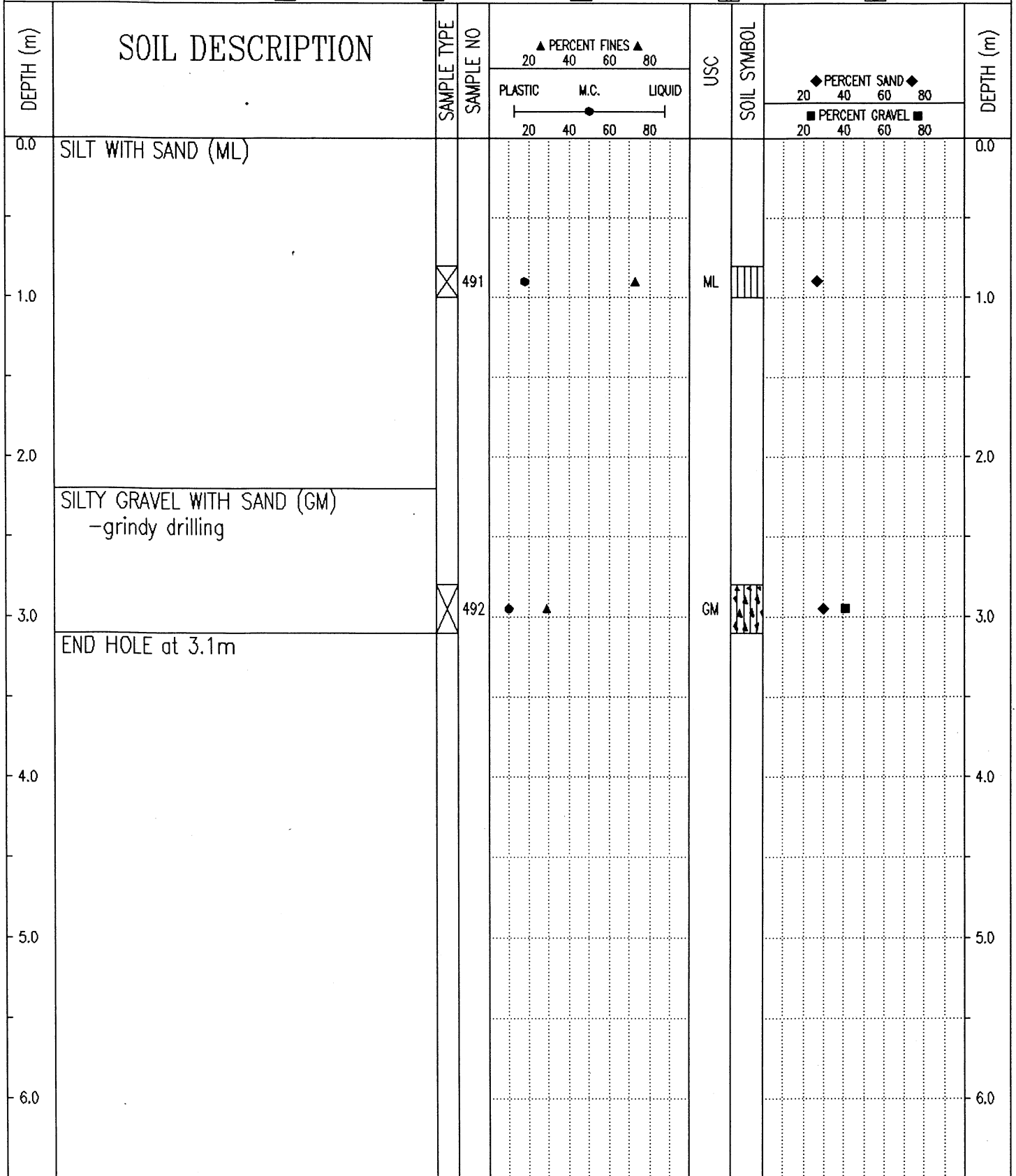
Fig. No:

COMPLETION DEPTH: 3.0 m

COMPLETE: 93/09/26

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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 253-204
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1879+275 o/s 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		

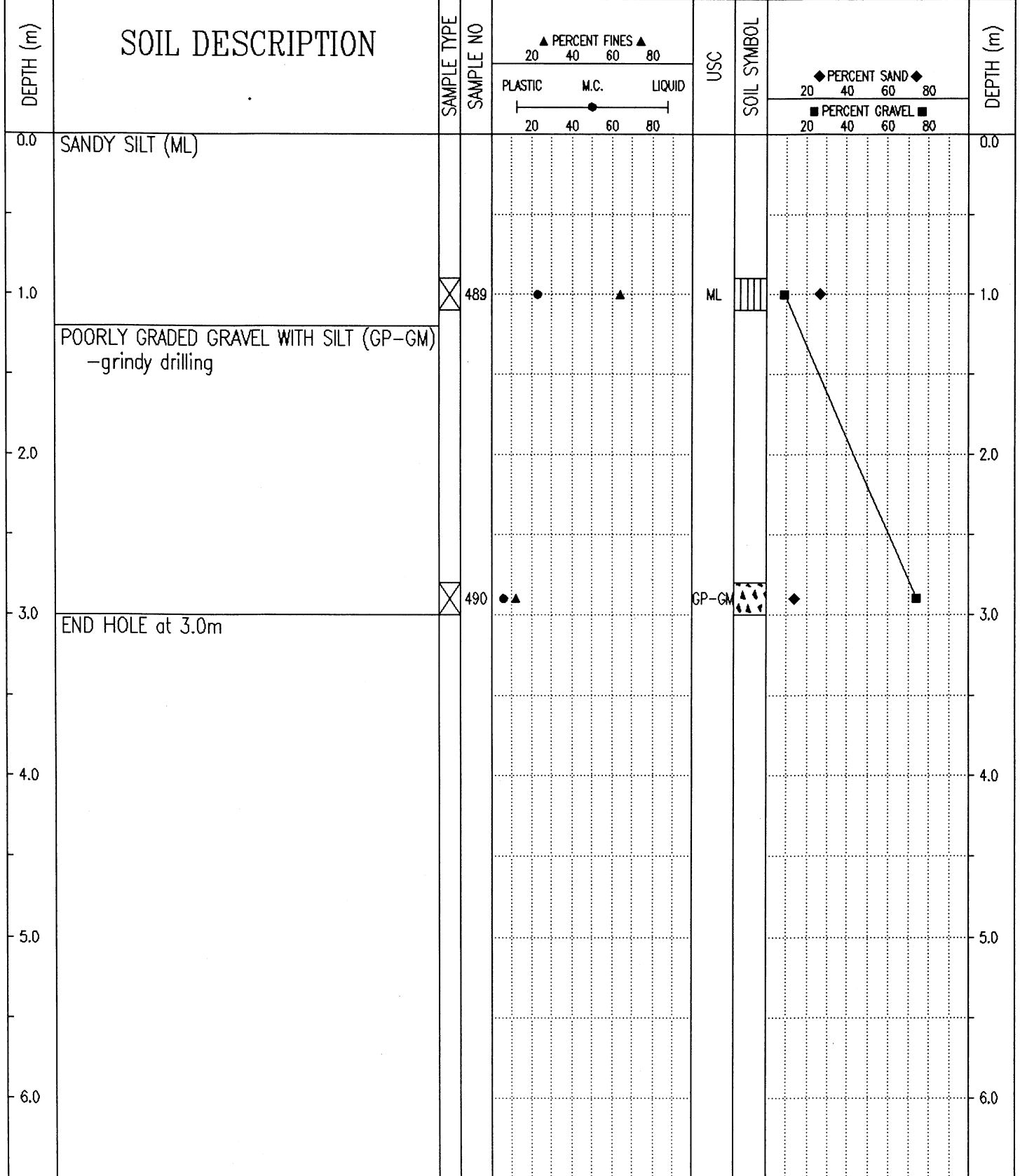


Government of Yukon  
Transportation Engineering

LOGGED BY: TF	COMPLETION DEPTH: 3.1 m
REVIEWED BY:	COMPLETE: 93/09/26
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 253-203
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1879+475 o/s Rt.	ELEVATION: 0.00 (m)

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

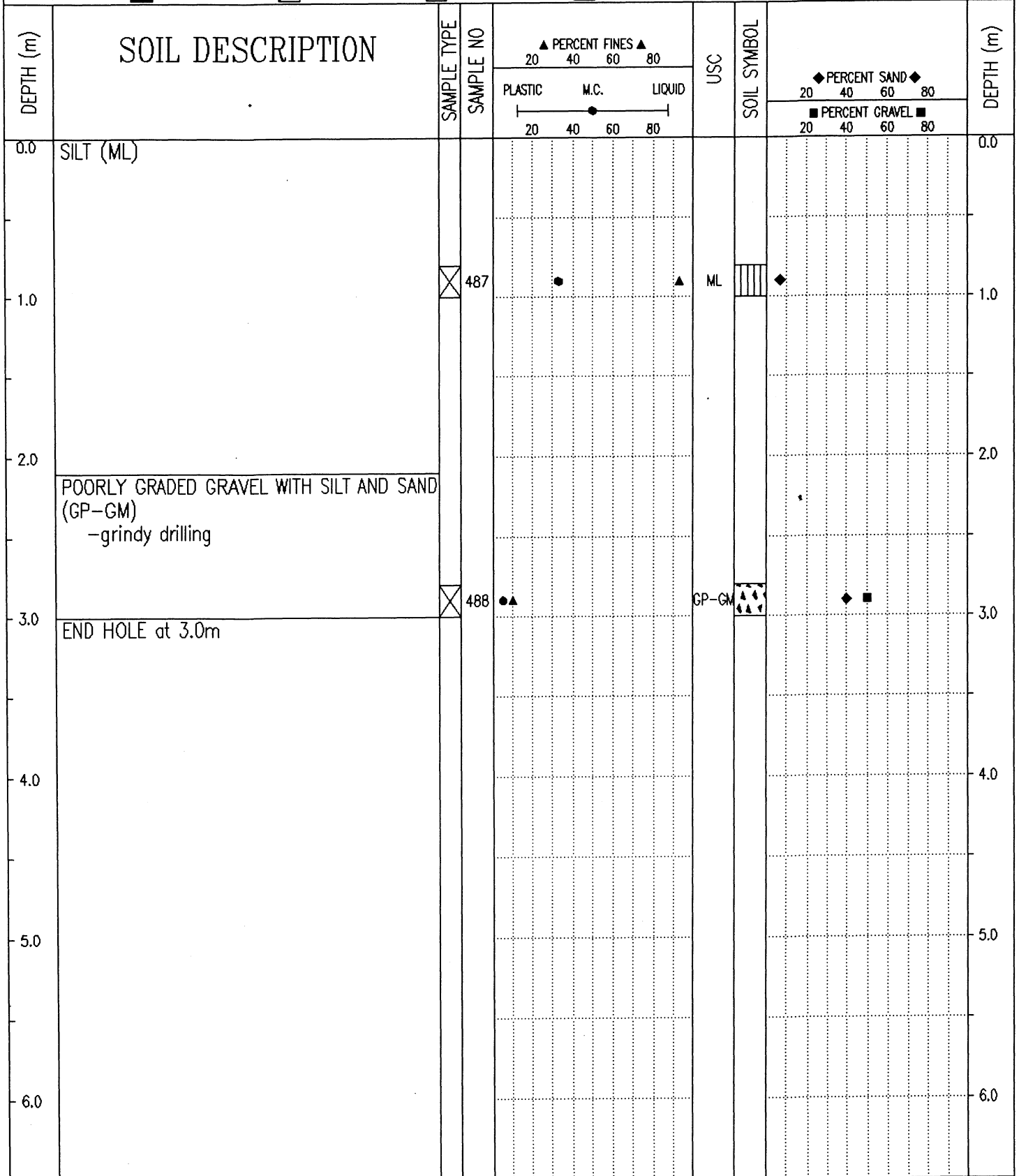


Government of Yukon  
Transportation Engineering

LOGGED BY: TF  
REVIEWED BY:  
Fig. No:

COMPLETION DEPTH: 3.0 m  
COMPLETE: 93/09/26

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 253-202
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1879+675 o/s 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

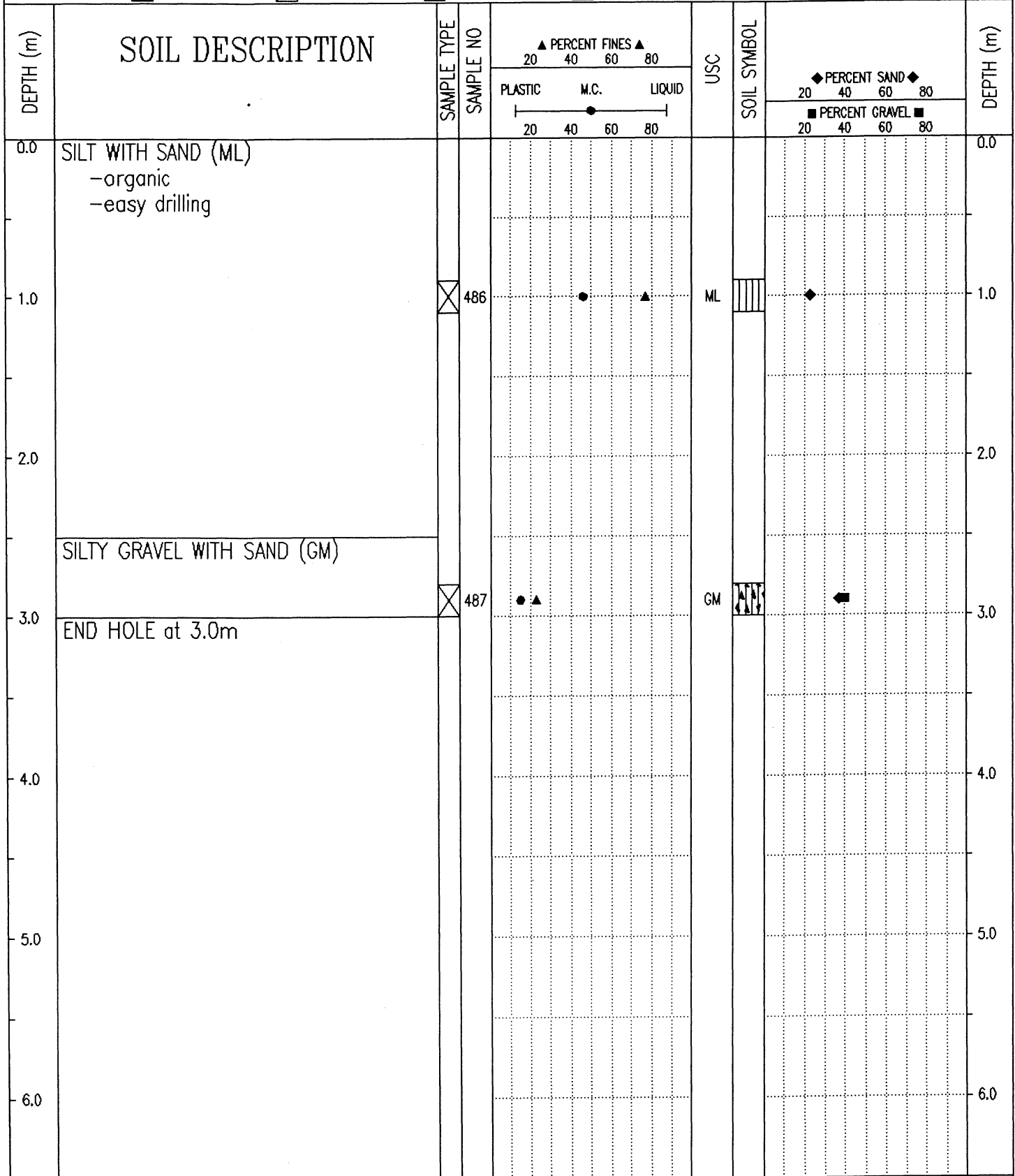


Government of Yukon  
Transportation Engineering

LOGGED BY: TF  
REVIEWED BY:  
Fig. No:

COMPLETION DEPTH: 3.0 m  
COMPLETE: 93/09/26

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	TEST HOLE NO: 253-201
SHAKWAK PROJECT	SEGMENT 15	Project No: 202101-0311-193
DRILL: CME 750 150mm Dia SOLID STEM AUGER	LOCATION: STA 1879+875 o/s 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	

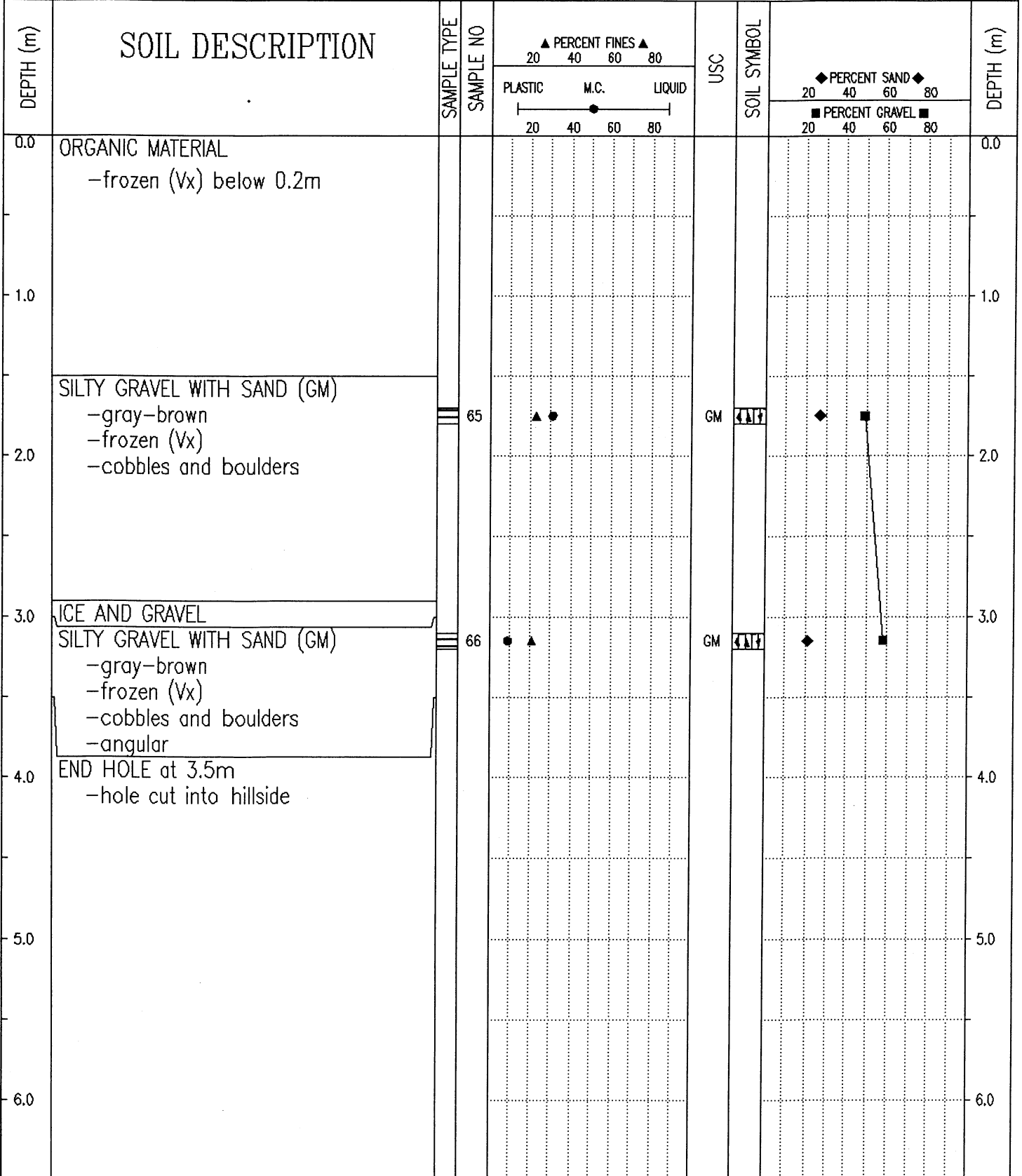


Government of Yukon  
Transportation Engineering

LOGGED BY: TF	COMPLETION DEPTH: 3.0 m
REVIEWED BY:	COMPLETE: 93/09/26
Fig. No:	Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY GRANULAR INVESTIGATION	TEST PIT NO: 275-45
SHAKWAK PROJECT	SEGMENT 16	Project No: 092-202101-0312
BACKHOE: CAT 235	LOCATION: Sta. 1880+050 o/s 8m Lt.	ELEVATION: 0.00 (m)

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



Government of Yukon  
Transportation Engineering

LOGGED BY: DT	COMPLETION DEPTH: 3.5 m
REVIEWED BY:	COMPLETE: 93/11/14
Fig. No:	Page 1 of 1

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 253-201  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1879+875 O/S RT  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 486  
 LAB NO: 1463  
 DEPTH: 0.9-1.1  
 TYPE: AUGER

FIELD NO: 487  
 LAB NO: 1464  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	100
2.0	--
1.25	100
0.840	--
0.630	99
0.420	--
0.315	98
0.160	93
0.150	--
0.080	77

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	83
20.0	83
12.5	74
10.0	71
5.0	60
2.5	54
2.0	--
1.25	49
0.840	--
0.630	44
0.420	--
0.315	37
0.160	31
0.150	--
0.080	23

M.C. (%) : 46

M.C. (%) : 15

LIMITS

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

LIMITS

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

% GRAVEL: 0  
 % SAND: 23  
 % FINES: 77

% GRAVEL: 40  
 % SAND: 37  
 % FINES: 23

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 253-202  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1879+675 O/S RT  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 487  
 LAB NO: 1465  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 488  
 LAB NO: 1466  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	99
2.0	--
1.25	99
0.840	--
0.630	99
0.420	--
0.315	98
0.160	97
0.150	--
0.080	93

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	88
20.0	82
12.5	70
10.0	63
5.0	50
2.5	41
2.0	--
1.25	36
0.840	--
0.630	30
0.420	--
0.315	21
0.160	15
0.150	--
0.080	10

M.C. (%) : 33

M.C. (%) : 5

LIMITS

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

LIMITS

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

% GRAVEL: 0  
 % SAND: 7  
 % FINES: 93

% GRAVEL: 50  
 % SAND: 40  
 % FINES: 10

CLASSIFICATION:  
 SILT (ML)

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

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 253-203  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1879+475 O/S RT  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 489  
 LAB NO: 1467  
 DEPTH: 0.9-1.1  
 TYPE: AUGER

FIELD NO: 490  
 LAB NO: 1468  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	96
10.0	94
5.0	91
2.5	89
2.0	--
1.25	88
0.840	--
0.630	87
0.420	--
0.315	86
0.160	82
0.150	--
0.080	64

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	77
20.0	64
12.5	42
10.0	36
5.0	26
2.5	23
2.0	--
1.25	22
0.840	--
0.630	21
0.420	--
0.315	20
0.160	16
0.150	--
0.080	12

M.C. (%) : 23

M.C. (%) : 6

LIMITS

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

LIMITS

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

% GRAVEL: 9  
 % SAND: 27  
 % FINES: 64

% GRAVEL: 74  
 % SAND: 14  
 % FINES: 12

CLASSIFICATION:  
 SANDY SILT (ML)

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

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 253-204  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1879+275 O/S RT  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 491  
 LAB NO: 1469  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 492  
 LAB NO: 1470  
 DEPTH: 2.8-3.1  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	100
2.0	--
1.25	100
0.840	--
0.630	100
0.420	--
0.315	99
0.160	95
0.150	--
0.080	73

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	100
20.0	95
12.5	81
10.0	73
5.0	59
2.5	54
2.0	--
1.25	51
0.840	--
0.630	48
0.420	--
0.315	44
0.160	37
0.150	--
0.080	29

M.C. (%): 18

M.C. (%): 10

LIMITS

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

LIMITS

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

% GRAVEL: 0  
 % SAND: 27  
 % FINES: 73

% GRAVEL: 41  
 % SAND: 30  
 % FINES: 29

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 253-205  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1879+075 O/S RT  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 493  
 LAB NO: 1471  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 494  
 LAB NO: 1472  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	100
20.0	98
12.5	89
10.0	83
5.0	71
2.5	67
2.0	--
1.25	65
0.840	--
0.630	64
0.420	--
0.315	61
0.160	54
0.150	--
0.080	42

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	92
20.0	88
12.5	64
10.0	56
5.0	45
2.5	39
2.0	--
1.25	36
0.840	--
0.630	34
0.420	--
0.315	29
0.160	21
0.150	--
0.080	16

M.C. (%) : 14

M.C. (%) : 8

LIMITS

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

LIMITS

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

% GRAVEL: 29  
 % SAND: 29  
 % FINES: 42

% GRAVEL: 55  
 % SAND: 29  
 % FINES: 16

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 253-206  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1878+850 O/S RT  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 495  
 LAB NO: 1473  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 496  
 LAB NO: 1474  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	98
2.0	--
1.25	97
0.840	--
0.630	96
0.420	--
0.315	90
0.160	58
0.150	--
0.080	26

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	72
20.0	68
12.5	51
10.0	42
5.0	32
2.5	27
2.0	--
1.25	24
0.840	--
0.630	22
0.420	--
0.315	20
0.160	16
0.150	--
0.080	12

M.C. (%) : 8

M.C. (%) : 5

LIMITS

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

LIMITS

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

% GRAVEL: 0  
 % SAND: 74  
 % FINES: 26

% GRAVEL: 68  
 % SAND: 20  
 % FINES: 12

CLASSIFICATION:  
 SILTY SAND (SM)

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

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 253-207  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1878+650 O/S RT  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 497  
 LAB NO: 1475  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 498  
 LAB NO: 1476  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	100
0.840	--
0.630	100
0.420	--
0.315	99
0.160	95
0.150	--
0.080	82

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	93
20.0	87
12.5	80
10.0	76
5.0	71
2.5	66
2.0	--
1.25	65
0.840	--
0.630	64
0.420	--
0.315	58
0.160	47
0.150	--
0.080	32

M.C. (%) : 35

M.C. (%) : 8

LIMITS

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

LIMITS

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

% GRAVEL: 0  
 % SAND: 18  
 % FINES: 82

% GRAVEL: 29  
 % SAND: 39  
 % FINES: 32

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 253-208  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1878+450 O/S RT  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 499  
 LAB NO: 1477  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 500  
 LAB NO: 1478  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	100
0.840	--
0.630	100
0.420	--
0.315	99
0.160	99
0.150	--
0.080	98

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	75
20.0	75
12.5	69
10.0	67
5.0	57
2.5	52
2.0	--
1.25	49
0.840	--
0.630	45
0.420	--
0.315	29
0.160	12
0.150	--
0.080	8

M.C. (%) : 29

M.C. (%) : 7

LIMITS

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

LIMITS

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

% GRAVEL: 0  
 % SAND: 2  
 % FINES: 98

% GRAVEL: 43  
 % SAND: 49  
 % FINES: 8

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 POORLY GRADED  
 SAND WITH SILT &  
 GRAVEL (SP-SM)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 253-209  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1878+2500/S RT  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 501  
 LAB NO: 1479  
 DEPTH: 0.8-1.1  
 TYPE: AUGER

FIELD NO: 502  
 LAB NO: 1480  
 DEPTH: 2.8-3.1  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	--
0.840	--
0.630	100
0.420	--
0.315	100
0.160	98
0.150	--
0.080	85

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	87
20.0	81
12.5	78
10.0	74
5.0	67
2.5	62
2.0	--
1.25	60
0.840	--
0.630	57
0.420	--
0.315	54
0.160	49
0.150	--
0.080	42

M.C. (%) : 22

M.C. (%) : 12

LIMITS

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

LIMITS

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

% GRAVEL: 0  
 % SAND: 15  
 % FINES: 85

% GRAVEL: 33  
 % SAND: 25  
 % FINES: 42

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 253-210  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1877+950 O/S RT  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 503  
 LAB NO: 1481  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 504  
 LAB NO: 1482  
 DEPTH: 2.8-3.1  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	95
20.0	82
12.5	71
10.0	65
5.0	52
2.5	45
2.0	--
1.25	42
0.840	--
0.630	39
0.420	--
0.315	35
0.160	27
0.150	--
0.080	21

M.C. (%) : 4

LIMITS

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

% GRAVEL: 48  
 % SAND: 31  
 % FINES: 21

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	97
20.0	84
12.5	54
10.0	38
5.0	18
2.5	13
2.0	--
1.25	11
0.840	--
0.630	10
0.420	--
0.315	8
0.160	4
0.150	--
0.080	3

M.C. (%) : 2

LIMITS

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

% GRAVEL: 82  
 % SAND: 16  
 % FINES: 3

CLASSIFICATION:  
 POORLY GRADED  
 GRAVEL WITH SAND  
 (GP)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 253-211  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1877+750 O/S RT  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 505  
 LAB NO: 1483  
 DEPTH: 0.7-1.0  
 TYPE: AUGER

FIELD NO: 506  
 LAB NO: 1484  
 DEPTH: 2.8-3.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	--
0.840	--
0.630	--
0.420	--
0.315	100
0.160	100
0.150	--
0.080	98

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	53
20.0	39
12.5	27
10.0	25
5.0	20
2.5	19
2.0	--
1.25	18
0.840	--
0.630	17
0.420	--
0.315	16
0.160	14
0.150	--
0.080	13

M.C. (%) : 25

M.C. (%) : 4

LIMITS

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

LIMITS

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

% GRAVEL: 0  
 % SAND: 2  
 % FINES: 98

% GRAVEL: 80  
 % SAND: 8  
 % FINES: 13

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILTY GRAVEL (GM)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 253-212  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1877+550 O/S RT  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 507  
 LAB NO: 1485  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 508  
 LAB NO: 1486  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	78
20.0	63
12.5	51
10.0	45
5.0	34
2.5	27
2.0	--
1.25	24
0.840	--
0.630	23
0.420	--
0.315	20
0.160	15
0.150	--
0.080	11

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	71
20.0	51
12.5	29
10.0	22
5.0	13
2.5	11
2.0	--
1.25	10
0.840	--
0.630	9
0.420	--
0.315	9
0.160	7
0.150	--
0.080	5

M.C. (%): 3

M.C. (%): 2

LIMITS

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

LIMITS

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

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

% GRAVEL: 87  
 % SAND: 8  
 % FINES: 5

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

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

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 253-213  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1877+350 O/S RT  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 509  
 LAB NO: 1487  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 510  
 LAB NO: 1488  
 DEPTH: 2.9-3.1  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	100
2.0	--
1.25	100
0.840	--
0.630	99
0.420	--
0.315	98
0.160	94
0.150	--
0.080	91

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	85
20.0	73
12.5	52
10.0	46
5.0	35
2.5	30
2.0	--
1.25	28
0.840	--
0.630	25
0.420	--
0.315	19
0.160	13
0.150	--
0.080	9

M.C. (%) : 31

M.C. (%) : 4

LIMITS

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

LIMITS

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

% GRAVEL: 0  
 % SAND: 9  
 % FINES: 91

% GRAVEL: 65  
 % SAND: 26  
 % FINES: 9

CLASSIFICATION:  
 SILT (ML)

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

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 253-214  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1877+150 O/S RT  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 511  
 LAB NO: 1489  
 DEPTH: 0.8-1.1  
 TYPE: AUGER

FIELD NO: 512  
 LAB NO: 1490  
 DEPTH: 2.8-3.1  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	94
20.0	81
12.5	55
10.0	47
5.0	32
2.5	24
2.0	--
1.25	21
0.840	--
0.630	20
0.420	--
0.315	18
0.160	11
0.150	--
0.080	5

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	65
20.0	48
12.5	26
10.0	23
5.0	18
2.5	16
2.0	--
1.25	15
0.840	--
0.630	14
0.420	--
0.315	12
0.160	9
0.150	--
0.080	8

M.C. (%): 2

M.C. (%): 3

LIMITS

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

LIMITS

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

% GRAVEL: 68  
 % SAND: 27  
 % FINES: 5

% GRAVEL: 82  
 % SAND: 10  
 % FINES: 8

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

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

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-215  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1876+950 O/S RT  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 513  
 LAB NO: 1491  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 514  
 LAB NO: 1492  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	100
20.0	92
12.5	73
10.0	64
5.0	46
2.5	39
2.0	--
1.25	38
0.840	--
0.630	35
0.420	--
0.315	21
0.160	10
0.150	--
0.080	7

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	100
20.0	94
12.5	81
10.0	72
5.0	51
2.5	38
2.0	--
1.25	30
0.840	--
0.630	22
0.420	--
0.315	12
0.160	6
0.150	--
0.080	5

M.C. (%) : 3

M.C. (%) : 3

LIMITS

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

LIMITS

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

% GRAVEL: 54  
 % SAND: 39  
 % FINES: 7

% GRAVEL: 49  
 % SAND: 46  
 % FINES: 5

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

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

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-216  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1876+750 O/S RT  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 515  
 LAB NO: 1493  
 DEPTH: 0.8-1.0  
 TYPE: AUGER  
 SPILLED

FIELD NO: 516  
 LAB NO: 1494  
 DEPTH: 2.8-3.1  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	--
0.840	--
0.630	--
0.420	--
0.315	--
0.160	--
0.150	--
0.080	--

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	71
20.0	59
12.5	36
10.0	31
5.0	24
2.5	22
2.0	--
1.25	21
0.840	--
0.630	19
0.420	--
0.315	16
0.160	12
0.150	--
0.080	9

M.C. (%) : 28

M.C. (%) : 4

LIMITS

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

LIMITS

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

% GRAVEL: --  
 % SAND: --  
 % FINES: --

% GRAVEL: 76  
 % SAND: 15  
 % FINES: 9

CLASSIFICATION:

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

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-217  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1876+550 O/S RT  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 517  
 LAB NO: 1495  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 518  
 LAB NO: 1496  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	89
20.0	79
12.5	70
10.0	67
5.0	60
2.5	54
2.0	--
1.25	48
0.840	--
0.630	39
0.420	--
0.315	25
0.160	13
0.150	--
0.080	9

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	89
20.0	74
12.5	52
10.0	46
5.0	35
2.5	30
2.0	--
1.25	27
0.840	--
0.630	24
0.420	--
0.315	18
0.160	10
0.150	--
0.080	6

M.C. (%) : 3

M.C. (%) : 3

LIMITS

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

LIMITS

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

% GRAVEL: 40  
 % SAND: 51  
 % FINES: 9

% GRAVEL: 65  
 % SAND: 28  
 % FINES: 6

CLASSIFICATION:  
 POORLY GRADED  
 SAND WITH SILT &  
 GRAVEL (SP-SM)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SILT  
 & SAND (GW-GM)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-218  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1876+350 O/S RT  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 519  
 LAB NO: 1497  
 DEPTH: 0.8-1.1  
 TYPE: AUGER

FIELD NO: 520  
 LAB NO: 1498  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	85
20.0	72
12.5	63
10.0	60
5.0	55
2.5	53
2.0	--
1.25	52
0.840	--
0.630	51
0.420	--
0.315	50
0.160	47
0.150	--
0.080	41

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	71
20.0	55
12.5	36
10.0	28
5.0	19
2.5	16
2.0	--
1.25	15
0.840	--
0.630	13
0.420	--
0.315	11
0.160	8
0.150	--
0.080	6

M.C. (%): 7

M.C. (%): 3

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

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

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

% GRAVEL: 81  
 % SAND: 14  
 % FINES: 6

CLASSIFICATION:  
 SILTY GRAVEL (GM)

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

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-220  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1876+250  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 521  
 LAB NO: 1499  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 522  
 LAB NO: 1500  
 DEPTH: 2.9-3.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	100
20.0	94
12.5	94
10.0	94
5.0	91
2.5	88
2.0	--
1.25	86
0.840	--
0.630	83
0.420	--
0.315	61
0.160	23
0.150	--
0.080	12

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	76
20.0	70
12.5	59
10.0	55
5.0	44
2.5	39
2.0	--
1.25	36
0.840	--
0.630	32
0.420	--
0.315	21
0.160	9
0.150	--
0.080	7

M.C. (%) : 4

M.C. (%) : 3

LIMITS

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

LIMITS

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

% GRAVEL: 9  
 % SAND: 79  
 % FINES: 12

% GRAVEL: 56  
 % SAND: 37  
 % FINES: 7

CLASSIFICATION:  
 POORLY GRADED  
 SAND WITH SILT  
 (SP-SM)

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

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-221  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1876+150  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 523  
 LAB NO: 1501  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 524  
 LAB NO: 1502  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	80
20.0	68
12.5	47
10.0	42
5.0	29
2.5	23
2.0	--
1.25	18
0.840	--
0.630	15
0.420	--
0.315	11
0.160	7
0.150	--
0.080	4

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	79
20.0	78
12.5	66
10.0	58
5.0	40
2.5	31
2.0	--
1.25	25
0.840	--
0.630	19
0.420	--
0.315	8
0.160	4
0.150	--
0.080	3

M.C. (%): 2

M.C. (%): 2

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

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

% GRAVEL: 71  
 % SAND: 25  
 % FINES: 4

% GRAVEL: 60  
 % SAND: 37  
 % FINES: 3

CLASSIFICATION:  
 POORLY GRADED  
 GRAVEL WITH SAND  
 (GP)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-222  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1876+050  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 525  
 LAB NO: 1503  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 526  
 LAB NO: 1504  
 DEPTH: 2.9-3.1  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	100
0.840	--
0.630	100
0.420	--
0.315	97
0.160	86
0.150	--
0.080	70

100.0	--
80.0	--
50.0	100
31.5	--
25.0	55
20.0	53
12.5	40
10.0	34
5.0	26
2.5	22
2.0	--
1.25	19
0.840	--
0.630	18
0.420	--
0.315	16
0.160	12
0.150	--
0.080	9

M.C. (%) : 19

M.C. (%) : 4

LIMITS

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

LIMITS

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

% GRAVEL: 0  
 % SAND: 30  
 % FINES: 70

% GRAVEL: 74  
 % SAND: 17  
 % FINES: 9

CLASSIFICATION:  
 SANDY SILT (ML)

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

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-223  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1875+950  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 527  
 LAB NO: 1505  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 528  
 LAB NO: 1506  
 DEPTH: 2.8-3.1  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	96
20.0	85
12.5	71
10.0	66
5.0	55
2.5	50
2.0	--
1.25	48
0.840	--
0.630	47
0.420	--
0.315	40
0.160	24
0.150	--
0.080	14

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	75
20.0	60
12.5	45
10.0	39
5.0	27
2.5	22
2.0	--
1.25	19
0.840	--
0.630	16
0.420	--
0.315	12
0.160	9
0.150	--
0.080	8

M.C. (%) : 6

M.C. (%) : 3

LIMITS

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

LIMITS

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

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

% GRAVEL: 73  
 % SAND: 19  
 % FINES: 8

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

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

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-224  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1875+750  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 529  
 LAB NO: 1507  
 DEPTH: 0.9-1.1  
 TYPE: AUGER

FIELD NO: 530  
 LAB NO: 1508  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	69
20.0	58
12.5	46
10.0	40
5.0	31
2.5	25
2.0	--
1.25	22
0.840	--
0.630	19
0.420	--
0.315	11
0.160	8
0.150	--
0.080	7

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	85
20.0	79
12.5	65
10.0	59
5.0	47
2.5	42
2.0	--
1.25	39
0.840	--
0.630	34
0.420	--
0.315	21
0.160	7
0.150	--
0.080	3

M.C. (%): 3

M.C. (%): 3

LIMITS

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

LIMITS

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

% GRAVEL: 69  
 % SAND: 24  
 % FINES: 7

% GRAVEL: 53  
 % SAND: 43  
 % FINES: 3

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

CLASSIFICATION:  
 POORLY GRADED  
 GRAVEL WITH SAND  
 (GP)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-227  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1875+550  
 LOGGED BY: TF DATE COMPLETED: 93.09.26

FIELD NO: 536  
 LAB NO: 1514  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 537  
 LAB NO: 1515  
 DEPTH: 2.9-3.1  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	73
20.0	65
12.5	46
10.0	38
5.0	26
2.5	21
2.0	--
1.25	18
0.840	--
0.630	14
0.420	--
0.315	9
0.160	5
0.150	--
0.080	4

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	75
20.0	63
12.5	51
10.0	44
5.0	31
2.5	25
2.0	--
1.25	21
0.840	--
0.630	16
0.420	--
0.315	7
0.160	4
0.150	--
0.080	4

M.C. (%) : 3

M.C. (%) : 4

LIMITS

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

LIMITS

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

% GRAVEL: 74  
 % SAND: 22  
 % FINES: 4

% GRAVEL: 69  
 % SAND: 27  
 % FINES: 4

CLASSIFICATION:  
 POORLY GRADED  
 GRAVEL WITH SAND  
 (GP)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-228  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1875+350  
 LOGGED BY: TF DATE COMPLETED: 93.09.27

FIELD NO: 538  
 LAB NO: 1516  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 539  
 LAB NO: 1517  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	82
20.0	75
12.5	63
10.0	56
5.0	45
2.5	37
2.0	--
1.25	29
0.840	--
0.630	22
0.420	--
0.315	11
0.160	5
0.150	--
0.080	4

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	60
20.0	41
12.5	28
10.0	26
5.0	20
2.5	17
2.0	--
1.25	15
0.840	--
0.630	14
0.420	--
0.315	8
0.160	4
0.150	--
0.080	3

M.C. (%) : 3

M.C. (%) : 2

LIMITS

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

LIMITS

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

% GRAVEL: 55  
 % SAND: 41  
 % FINES: 4

% GRAVEL: 80  
 % SAND: 17  
 % FINES: 3

CLASSIFICATION:  
 POORLY GRADED  
 GRAVEL WITH SAND  
 (GP)

CLASSIFICATION:  
 POORLY GRADED  
 GRAVEL WITH SAND  
 (GP)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-229  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1875+150  
 LOGGED BY: TF DATE COMPLETED: 93.09.27

FIELD NO: 540  
 LAB NO: 1518  
 DEPTH: 0.9-1.1  
 TYPE: AUGER

FIELD NO: 541  
 LAB NO: 1519  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	80
20.0	65
12.5	48
10.0	41
5.0	29
2.5	23
2.0	--
1.25	20
0.840	--
0.630	16
0.420	--
0.315	9
0.160	5
0.150	--
0.080	4

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	77
20.0	66
12.5	45
10.0	34
5.0	23
2.5	19
2.0	--
1.25	16
0.840	--
0.630	13
0.420	--
0.315	7
0.160	4
0.150	--
0.080	3

M.C. (%): 3

M.C. (%): 3

LIMITS

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

LIMITS

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

% GRAVEL: 71  
 % SAND: 25  
 % FINES: 4

% GRAVEL: 77  
 % SAND: 20  
 % FINES: 3

CLASSIFICATION:  
 POORLY GRADED  
 GRAVEL WITH SAND  
 (GP)

CLASSIFICATION:  
 POORLY GRADED  
 GRAVEL WITH SAND  
 (GP)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-230  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1874+950  
 LOGGED BY: TF DATE COMPLETED: 93.09.27

FIELD NO: 542  
 LAB NO: 1520  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 543  
 LAB NO: 1521  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	91
20.0	83
12.5	73
10.0	66
5.0	48
2.5	37
2.0	--
1.25	29
0.840	--
0.630	24
0.420	--
0.315	17
0.160	13
0.150	--
0.080	11

100.0	--
80.0	--
50.0	100
31.5	--
25.0	96
20.0	93
12.5	88
10.0	84
5.0	78
2.5	75
2.0	--
1.25	73
0.840	--
0.630	70
0.420	--
0.315	64
0.160	59
0.150	--
0.080	56

M.C. (%) : 4

M.C. (%) : 22

LIMITS

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

LIMITS

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

% GRAVEL: 52  
 % SAND: 37  
 % FINES: 11

% GRAVEL: 22  
 % SAND: 22  
 % FINES: 56

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

CLASSIFICATION:  
 SANDY SILT WITH  
 GRAVEL (ML)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-231  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1874+750  
 LOGGED BY: TF DATE COMPLETED: 93.09.27

FIELD NO: 544  
 LAB NO: 1522  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 545  
 LAB NO: 1523  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	91
20.0	87
12.5	76
10.0	73
5.0	64
2.5	60
2.0	--
1.25	59
0.840	--
0.630	57
0.420	--
0.315	49
0.160	32
0.150	--
0.080	25

M.C. (%) : 14

LIMITS

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

% GRAVEL: 36  
 % SAND: 39  
 % FINES: 25

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	--
31.5	--
25.0	100
20.0	95
12.5	84
10.0	73
5.0	55
2.5	46
2.0	--
1.25	41
0.840	--
0.630	32
0.420	--
0.315	15
0.160	7
0.150	--
0.080	5

M.C. (%) : 11

LIMITS

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

% GRAVEL: 45  
 % SAND: 50  
 % FINES: 5

CLASSIFICATION:  
 POORLY GRADED  
 SAND WITH SILT &  
 GRAVEL (SP-SM)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-232  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1874+550  
 LOGGED BY: TF DATE COMPLETED: 93.09.27

FIELD NO: 546  
 LAB NO: 1524  
 DEPTH: 0.9-1.1  
 TYPE: AUGER

FIELD NO: 547  
 LAB NO: 1525  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	100
2.0	--
1.25	99
0.840	--
0.630	97
0.420	--
0.315	80
0.160	52
0.150	--
0.080	37

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	100
2.0	--
1.25	99
0.840	--
0.630	99
0.420	--
0.315	98
0.160	94
0.150	--
0.080	88

M.C. (%): 27

M.C. (%): 37

LIMITS

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

LIMITS

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

% GRAVEL: 0  
 % SAND: 63  
 % FINES: 37

% GRAVEL: 0  
 % SAND: 12  
 % FINES: 88

CLASSIFICATION:  
 SILTY SAND (SM)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-233  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1874+350  
 LOGGED BY: TF DATE COMPLETED: 93.09.27

FIELD NO: 548  
 LAB NO: 1526  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 549  
 LAB NO: 1527  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	99
10.0	98
5.0	97
2.5	97
2.0	--
1.25	97
0.840	--
0.630	96
0.420	--
0.315	96
0.160	95
0.150	--
0.080	89

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	--
0.840	--
0.630	100
0.420	--
0.315	100
0.160	100
0.150	--
0.080	99

M.C. (%) : 29

M.C. (%) : 31

LIMITS

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

LIMITS

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

% GRAVEL: 3  
 % SAND: 8  
 % FINES: 89

% GRAVEL: 0  
 % SAND: 1  
 % FINES: 99

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-234  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1874+150  
 LOGGED BY: TF DATE COMPLETED: 93.09.27

FIELD NO: 550  
 LAB NO: 1528  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 551  
 LAB NO: 1529  
 DEPTH: 3.9-4.1  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	99
2.0	--
1.25	98
0.840	--
0.630	98
0.420	--
0.315	96
0.160	93
0.150	--
0.080	77

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	100
0.840	--
0.630	100
0.420	--
0.315	100
0.160	99
0.150	--
0.080	94

M.C. (%) : 29

M.C. (%) : 22

LIMITS

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

LIMITS

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

% GRAVEL: 0  
 % SAND: 23  
 % FINES: 77

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

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-235  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1873+950  
 LOGGED BY: TF DATE COMPLETED: 93.09.27

FIELD NO: 552  
 LAB NO: 1530  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 553  
 LAB NO: 1531  
 DEPTH: 3.9-4.1  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	100
2.0	--
1.25	99
0.840	--
0.630	99
0.420	--
0.315	99
0.160	97
0.150	--
0.080	96

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	65
20.0	59
12.5	50
10.0	37
5.0	23
2.5	20
2.0	--
1.25	19
0.840	--
0.630	18
0.420	--
0.315	16
0.160	15
0.150	--
0.080	14

M.C.(%): 31

M.C.(%): 9

LIMITS

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

LIMITS

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

% GRAVEL: 0  
 % SAND: 4  
 % FINES: 96

% GRAVEL: 77  
 % SAND: 9  
 % FINES: 14

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILTY GRAVEL (GM)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-236  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1873+600  
 LOGGED BY: TF DATE COMPLETED: 93.09.27

FIELD NO: 554  
 LAB NO: 1532  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 555  
 LAB NO: 1533  
 DEPTH: 2.9-3.1  
 TYPE: AUGER

FIELD NO: 556  
 LAB NO: 1534  
 DEPTH: 3.9-4.1  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	100
0.840	--
0.630	100
0.420	--
0.315	100
0.160	98
0.150	--
0.080	91

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	100
20.0	93
12.5	82
10.0	76
5.0	60
2.5	52
2.0	--
1.25	48
0.840	--
0.630	43
0.420	--
0.315	33
0.160	24
0.150	--
0.080	18

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	94
2.0	--
1.25	93
0.840	--
0.630	90
0.420	--
0.315	73
0.160	46
0.150	--
0.080	37

M.C. (%): 25

M.C. (%): 10

M.C. (%): 17

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

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

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

% GRAVEL: 0  
 % SAND: 9  
 % FINES: 91

% GRAVEL: 40  
 % SAND: 41  
 % FINES: 18

% GRAVEL: 0  
 % SAND: 63  
 % FINES: 37

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

CLASSIFICATION:  
 SILTY SAND (SM)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-237  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1873+500  
 LOGGED BY: TF DATE COMPLETED: 93.09.27

FIELD NO: 557  
 LAB NO: 1535  
 DEPTH: 0.9-1.1  
 TYPE: AUGER

FIELD NO: 558  
 LAB NO: 1536  
 DEPTH: 2.8-3.1  
 TYPE: AUGER

FIELD NO: 559  
 LAB NO: 1537  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	100
2.0	--
1.25	100
0.840	--
0.630	100
0.420	--
0.315	99
0.160	98
0.150	--
0.080	96

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	--
0.840	--
0.630	--
0.420	--
0.315	100
0.160	99
0.150	--
0.080	98

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	--
0.840	--
0.630	--
0.420	--
0.315	100
0.160	99
0.150	--
0.080	96

M.C. (%): 76

M.C. (%): 4

M.C. (%): 31

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 0  
 % SAND: 4  
 % FINES: 96

% GRAVEL: 0  
 % SAND: 2  
 % FINES: 98

% GRAVEL: 0  
 % SAND: 4  
 % FINES: 96

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-238  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1873+325  
 LOGGED BY: TF DATE COMPLETED: 93.09.27

FIELD NO: 560  
 LAB NO: 1538  
 DEPTH: 0.9-1.1  
 TYPE: AUGER

FIELD NO: 561  
 LAB NO: 1539  
 DEPTH: 2.9-3.1  
 TYPE: AUGER

FIELD NO: 562  
 LAB NO: 1540  
 DEPTH: 3.9-4.1  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	100
2.0	--
1.25	100
0.840	--
0.630	99
0.420	--
0.315	97
0.160	95
0.150	--
0.080	94

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	100
2.0	--
1.25	100
0.840	--
0.630	100
0.420	--
0.315	100
0.160	99
0.150	--
0.080	99

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	100
5.0	71
2.5	52
2.0	--
1.25	43
0.840	--
0.630	34
0.420	--
0.315	22
0.160	16
0.150	--
0.080	12

M.C. (%) : 44

M.C. (%) : 42

M.C. (%) : 10

LIMITS  
 LIQUID: 40.4  
 PLASTIC: 28.9  
 P.I.: 11.5

LIMITS  
 LIQUID: 33.6  
 PLASTIC: 21.7  
 P.I.: 11.9

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

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

% GRAVEL: 0  
 % SAND: 1  
 % FINES: 99

% GRAVEL: 29  
 % SAND: 59  
 % FINES: 12

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 LEAN CLAY (CL)

CLASSIFICATION:  
 POORLY GRADED  
 SAND WITH SILT &  
 GRAVEL (SP-SM)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-239  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1873+225  
 LOGGED BY: TF DATE COMPLETED: 93.09.27

FIELD NO: 563  
 LAB NO: 1541  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 564  
 LAB NO: 1542  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 565  
 LAB NO: 1543  
 DEPTH: 4.0-4.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	100
2.0	--
1.25	99
0.840	--
0.630	99
0.420	--
0.315	96
0.160	94
0.150	--
0.080	92

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	100
0.840	--
0.630	100
0.420	--
0.315	99
0.160	97
0.150	--
0.080	96

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	100
0.840	--
0.630	100
0.420	--
0.315	100
0.160	100
0.150	--
0.080	99

M.C. (%) : 95

M.C. (%) : 46

M.C. (%) : 34

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

LIMITS  
 LIQUID: 31.2  
 PLASTIC: 23.6  
 P.I.: 7.6

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

% GRAVEL: 0  
 % SAND: 8  
 % FINES: 92

% GRAVEL: 0  
 % SAND: 4  
 % FINES: 96

% GRAVEL: 0  
 % SAND: 1  
 % FINES: 99

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-240  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1873+125  
 LOGGED BY: TF DATE COMPLETED: 93.09.27

FIELD NO: 566  
 LAB NO: 1544  
 DEPTH: 2.9-3.1  
 TYPE: AUGER

FIELD NO: 567  
 LAB NO: 1545  
 DEPTH: 3.9-4.1  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	--
0.840	--
0.630	100
0.420	--
0.315	100
0.160	100
0.150	--
0.080	99

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	--
0.840	--
0.630	100
0.420	--
0.315	98
0.160	63
0.150	--
0.080	48

M.C. (%) : 47

M.C. (%) : 31

LIMITS

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

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: TRACE

% GRAVEL: 0  
 % SAND: 1  
 % FINES: 99

% GRAVEL: 0  
 % SAND: 52  
 % FINES: 48

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILTY SAND (SM)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-241  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1873+025  
 LOGGED BY: TF DATE COMPLETED: 93.09.27

FIELD NO: 568  
 LAB NO: 1546  
 DEPTH: 0.8-1.0  
 TYPE: AUGER  
 ORGANIC

FIELD NO: 569  
 LAB NO: 1547  
 DEPTH: 2.9-3.1  
 TYPE: AUGER

FIELD NO: 570  
 LAB NO: 1548  
 DEPTH: 3.9-4.1  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	100
2.0	--
1.25	98
0.840	--
0.630	95
0.420	--
0.315	92
0.160	90
0.150	--
0.080	87

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	--
0.840	--
0.630	--
0.420	--
0.315	100
0.160	100
0.150	--
0.080	99

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	100
0.840	--
0.630	100
0.420	--
0.315	96
0.160	68
0.150	--
0.080	49

M.C. (%): 151

M.C. (%): 46

M.C. (%): 28

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 0  
 % SAND: 13  
 % FINES: 87

% GRAVEL: 0  
 % SAND: 1  
 % FINES: 99

% GRAVEL: 0  
 % SAND: 51  
 % FINES: 49

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILTY SAND (SM)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-242  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1872+925  
 LOGGED BY: TF DATE COMPLETED: 93.09.27

FIELD NO: 571  
 LAB NO: 1549  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 572  
 LAB NO: 1550  
 DEPTH: 2.9-3.1  
 TYPE: AUGER

FIELD NO: 573  
 LAB NO: 1551  
 DEPTH: 3.9-4.1  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	--
0.840	--
0.630	--
0.420	--
0.315	--
0.160	100
0.150	--
0.080	97

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	100
0.840	--
0.630	100
0.420	--
0.315	100
0.160	100
0.150	--
0.080	97

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	--
0.840	--
0.630	100
0.420	--
0.315	100
0.160	95
0.150	--
0.080	81

M.C. (%) : 33

M.C. (%) : 35

M.C. (%) : 27

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

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

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

% GRAVEL: 0  
 % SAND: 3  
 % FINES: 97

% GRAVEL: 0  
 % SAND: 3  
 % FINES: 97

% GRAVEL: 0  
 % SAND: 19  
 % FINES: 81

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 254-243  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1872+825  
 LOGGED BY: TF DATE COMPLETED: 93.09.27

FIELD NO: 574  
 LAB NO: 1552  
 DEPTH: 0.9-1.1  
 TYPE: AUGER  
 ORGANIC

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	100
2.0	--
1.25	100
0.840	--
0.630	100
0.420	--
0.315	99
0.160	98
0.150	--
0.080	97

M.C. (%): 57

LIMITS

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

% GRAVEL: 0  
 % SAND: 3  
 % FINES: 97

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 261-246  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1872+475 O/S 25M RT  
 LOGGED BY: GC DATE COMPLETED: 93.09.28

FIELD NO: 275  
 LAB NO: 1553  
 DEPTH: 0.6-1.0  
 TYPE: AUGER

FIELD NO: 276  
 LAB NO: 1554  
 DEPTH: 2.6-3.0  
 TYPE: AUGER

FIELD NO: 277  
 LAB NO: 1555  
 DEPTH: 4.0-4.6  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	100
2.0	--
1.25	99
0.840	--
0.630	99
0.420	--
0.315	99
0.160	98
0.150	--
0.080	97

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	--
0.840	--
0.630	100
0.420	--
0.315	100
0.160	95
0.150	--
0.080	73

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	99
2.0	--
1.25	99
0.840	--
0.630	99
0.420	--
0.315	97
0.160	96
0.150	--
0.080	95

M.C. (%): 77

M.C. (%): 27

M.C. (%): 31

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

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

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

% GRAVEL: 0  
 % SAND: 3  
 % FINES: 97

% GRAVEL: 0  
 % SAND: 27  
 % FINES: 73

% GRAVEL: 0  
 % SAND: 5  
 % FINES: 95

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 261-248  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1872+250 O/S 15M LT  
 LOGGED BY: GC DATE COMPLETED: 93.09.28

FIELD NO: 278  
 LAB NO: 1556  
 DEPTH: 0.4-1.0  
 TYPE: AUGER

FIELD NO: 279  
 LAB NO: 1557  
 DEPTH: 2.3-3.0  
 TYPE: AUGER

FIELD NO: 280  
 LAB NO: 1558  
 DEPTH: 3.8-4.4  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	99
2.0	--
1.25	98
0.840	--
0.630	96
0.420	--
0.315	95
0.160	94
0.150	--
0.080	93

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	100
0.840	--
0.630	100
0.420	--
0.315	98
0.160	62
0.150	--
0.080	41

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	100
2.0	--
1.25	100
0.840	--
0.630	100
0.420	--
0.315	99
0.160	98
0.150	--
0.080	97

M.C. (%) : 34

M.C. (%) : 21

M.C. (%) : 31

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

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

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

% GRAVEL: 0  
 % SAND: 7  
 % FINES: 93

% GRAVEL: 0  
 % SAND: 59  
 % FINES: 41

% GRAVEL: 0  
 % SAND: 3  
 % FINES: 97

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILTY SAND (SM)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 092-202101-0311-193 HOLE NUMBER: 261-249  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK  
 PROJECT LOCATION: SEGMENT 15  
 DRILL UNIT: CME 750  
 HOLE LOCATION: 1872+160 O/S 12M LT  
 LOGGED BY: GC DATE COMPLETED: 93.09.28

FIELD NO: 281  
 LAB NO: 1559  
 DEPTH: 0.2-0.8  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	100
0.840	--
0.630	100
0.420	--
0.315	98
0.160	86
0.150	--
0.080	73

M.C. (%): 30

LIMITS

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

% GRAVEL: 0  
 % SAND: 27  
 % FINES: 73

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

PROJECT NUMBER: 092-202101-0312-193 HOLE NUMBER: 275-45  
 CLIENT: ENGINEERING-CAPITAL  
 PROJECT NAME: SHAKWAK PROJECT  
 PROJECT LOCATION: SEGMENT 16  
 DRILL UNIT: BACKHOE: CAT 235  
 HOLE LOCATION: 1880+050 O/S 8M LT  
 LOGGED BY: DT DATE COMPLETED: 93.11.14

FIELD NO: 65  
 LAB NO: 2361  
 DEPTH: 1.7-1.8  
 TYPE: BULK

FIELD NO: 66  
 LAB NO: 2362  
 DEPTH: 3.1-3.2  
 TYPE: BULK

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	84
20.0	79
12.5	65
10.0	61
5.0	51
2.5	43
2.0	--
1.25	37
0.840	--
0.630	33
0.420	--
0.315	28
0.160	25
0.150	--
0.080	23

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	73
20.0	60
12.5	54
10.0	51
5.0	42
2.5	38
2.0	--
1.25	35
0.840	--
0.630	34
0.420	--
0.315	30
0.160	25
0.150	--
0.080	21

M.C. (%): 31

M.C. (%): 9

LIMITS

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

LIMITS

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

% GRAVEL: 49  
 % SAND: 27  
 % FINES: 23

% GRAVEL: 58  
 % SAND: 21  
 % FINES: 21

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

# Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 275-45

