

**HIGHWAY CONSTRUCTION**

**km 1915 to km 1932  
ALASKA HIGHWAY, Y.T.**

**VOLUME 1  
CENTRELINE TESTING**

This Data Package prepared for project viewing:

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GR-01-157

GEOTECHNICAL INVESTIGATION  
HIGHWAY CONSTRUCTION  
km 1915 to km 1932, ALASKA HIGHWAY, Y.T.  
CENTRELINE TESTING

CONTENTS

INTRODUCTION

Investigation notes, classification methods and legends

VOLUME 1

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 1915+600 and increasing to km 1932+900.

**Auger and Backhoe Testing**

1990	TEST HOLE 01	shown with prefix 107-
1991	TEST HOLES 56 to 138	shown with prefix 141- thru 144-
	TEST HOLES 158 to 183	shown with prefix 145-
	TEST HOLES 184 to 195	shown with prefix 157- and 158-
	TEST HOLES 200 to 215	shown with prefix 157-
1992	TEST HOLES 01 to 20	shown with prefix 174-
1993	TEST HOLES 05 to 18	shown with prefix 212-

**Air Rotary Test Drilling**

1993	TEST HOLES 100 to 118	shown with prefix 214- thru 216-
	TEST HOLES 119 to 122	shown with prefix 218-

**NOTE:** Gravel sizes larger than 12.5 mm are crushed during the air rotary drilling process, and therefore do not appear on the test hole logs. Maximum sizes are indicated in the backhoe test pit logs.

VOLUME 2

GRAIN SIZE SUMMARIES - CENTRELINE TESTING AND GRANULAR INVESTIGATIONS



GEOTECHNICAL INVESTIGATION  
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## **INTRODUCTION**

GEOTECHNICAL INVESTIGATION  
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km 1915 to km 1932, 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.

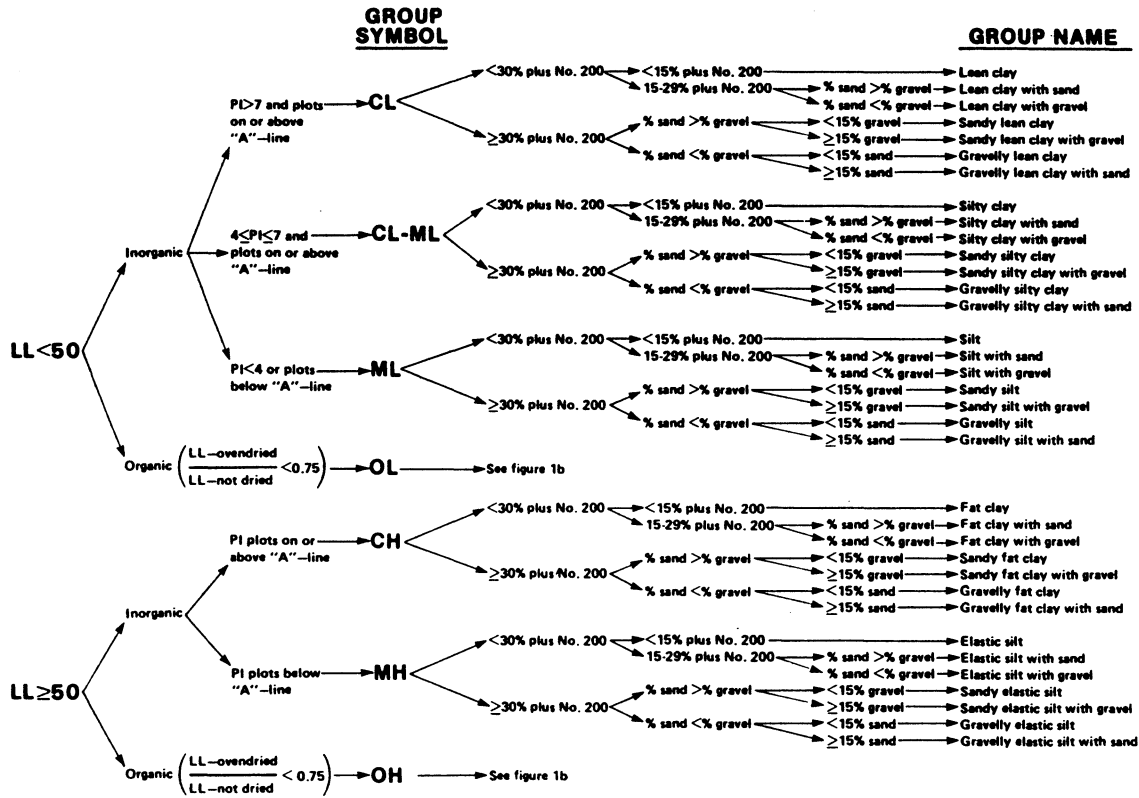
The description of material/soil description shown on the subsurface exploration and test reports is a textural description based on identification of retrieved material by the field drilling technician at the time of investigation. This description may be modified following laboratory testing and classification 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.

Offset distances recorded for test holes located between km 1917+600 and 1919+000 are no longer valid. Locations for these test holes are as shown on the plans.

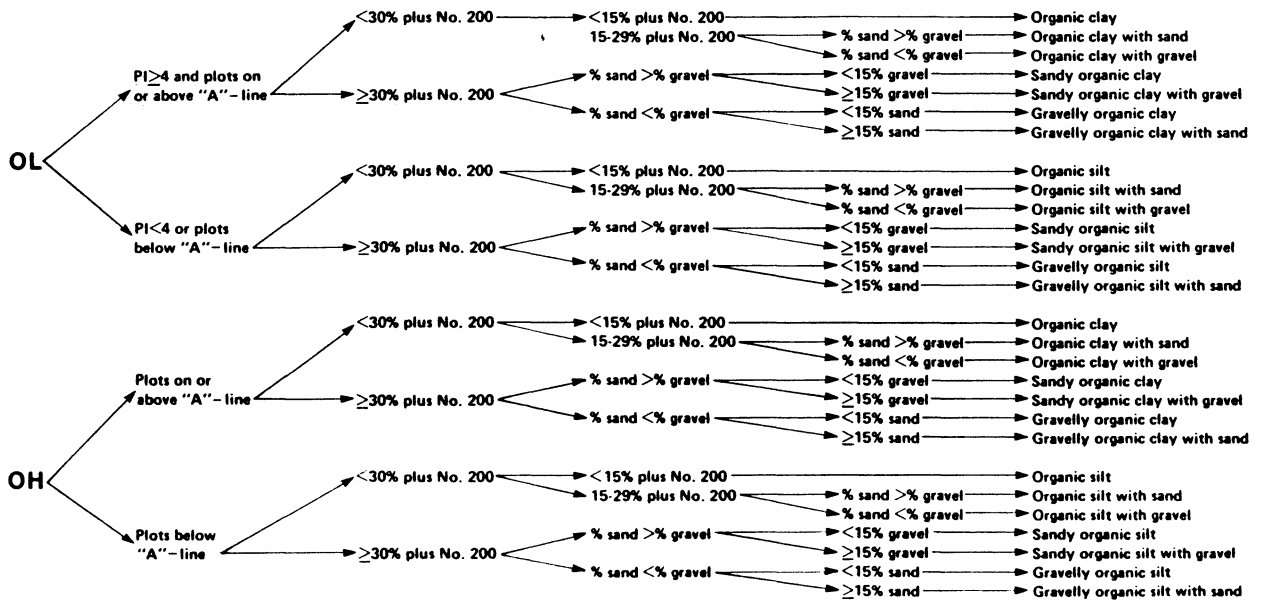
It is recommended that a site inspection, combined with consideration of the regional geology and climatic conditions be conducted. An evaluation of the investigation methods and development work done since the time of investigation should be done prior to interpreting the subsurface conditions for construction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



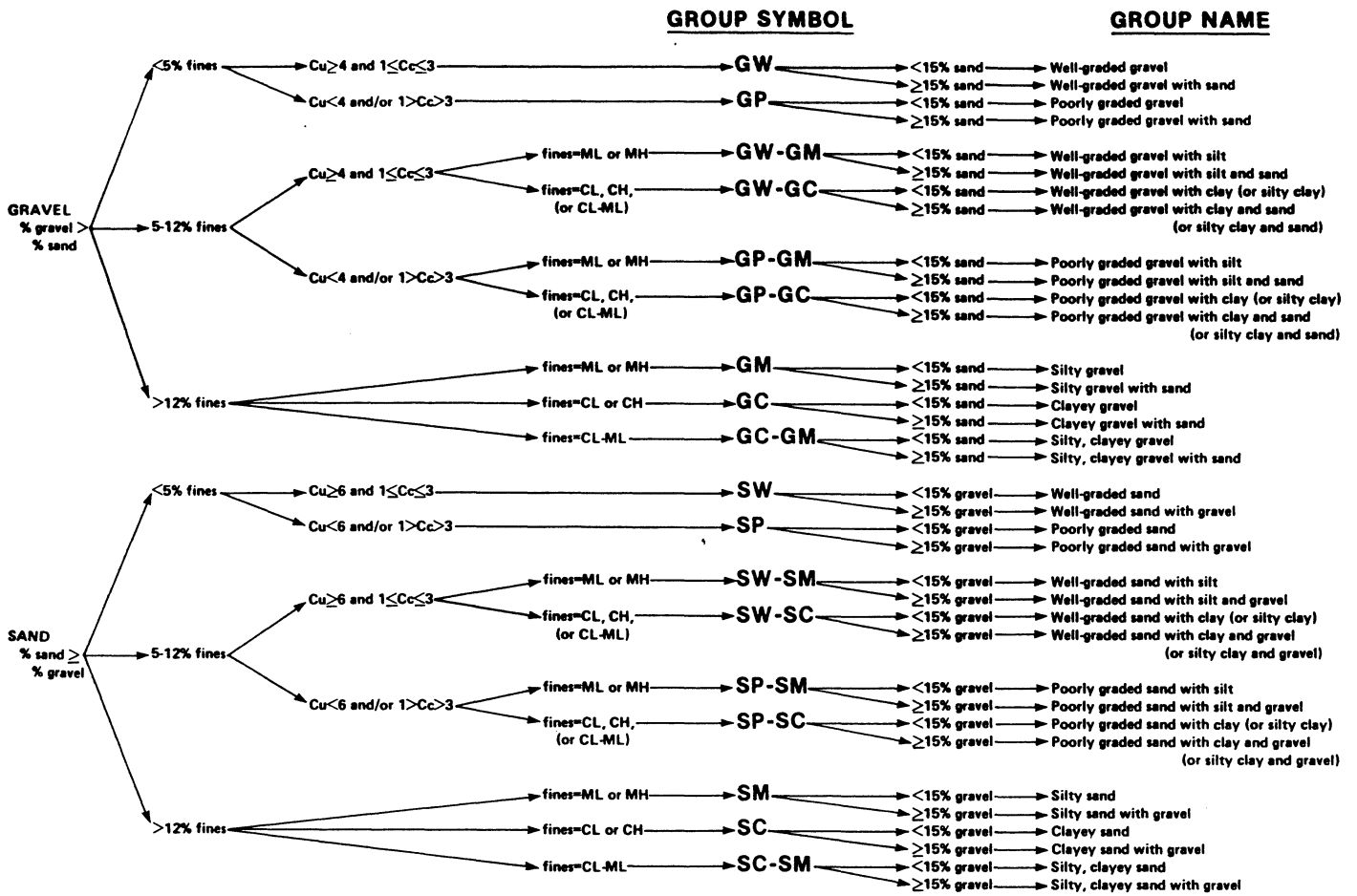
Flow chart for classifying fine-grained soil.

**GROUP SYMBOL**

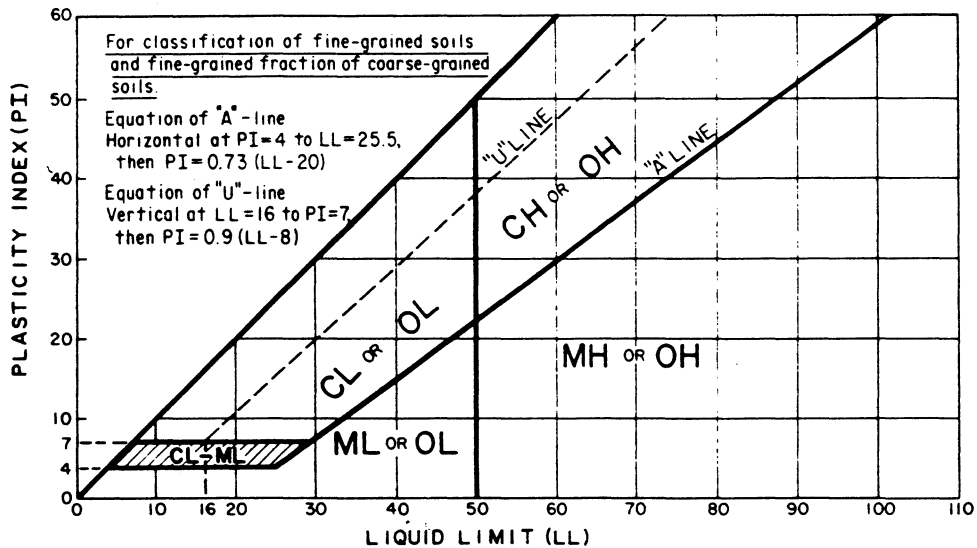
**GROUP NAME**



Flow chart for classifying organic soil.



Flow chart for classifying coarse-grained soil.



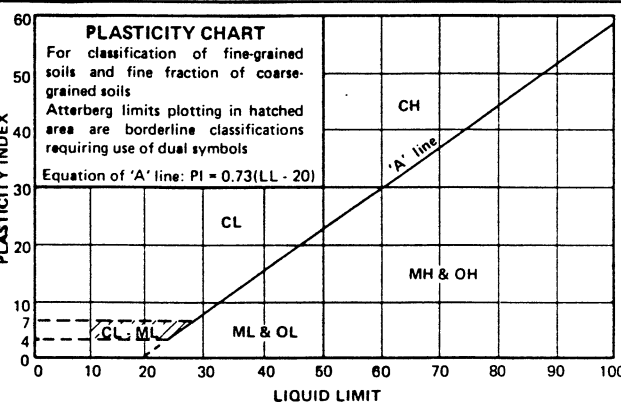
Plasticity chart.

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	$\frac{\text{Liquid limit - oven dried}}{\text{Liquid limit - not dried}} < 0.75$	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	$\frac{\text{Liquid limit - oven dried}}{\text{Liquid limit - not dried}} < 0.75$	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> More than 50% retained on No. 200 sieve*	<b>GRAVELS</b> 50% or more of coarse fraction retained on No. 4 sieve	GW	Well-graded gravels and gravel-sand mixtures, little or no fines	$C_u = D_{60}/D_{10}$ Greater than 4 $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3  Not meeting both criteria for GW  Atterberg limits plot below 'A' line or plasticity index less than 4  Atterberg limits plot above 'A' line and plasticity index greater than 7	
		GP	Poorly-graded gravels and gravel-sand mixtures, little or no fines		
		GM	Silty gravels, gravel-sand-silt mixtures		
		GC	Clayey gravels, gravel-sand clay mixtures		
	<b>SANDS</b> More than 50% of coarse fraction passes No. 4 sieve	<b>CLEAN SANDS</b>	SW	Well-graded sands and gravelly sands, little or no fines	$C_u = D_{60}/D_{10}$ Greater than 6 $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3  Not meeting both criteria for SW  Atterberg limits plot below 'A' line or plasticity index less than 4  Atterberg limits plot above 'A' line and plasticity index greater than 7
			SP	Poorly-graded sands and gravelly sands, little or no fines	
		<b>SANDS WITH FINES</b>	SM	Silty sands, sand-silt mixtures	
			SC	Clayey sands, sand-clay mixtures	
			ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands	
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	
<b>FINE-GRAINED SOILS</b> 50% or more passes No. 200 sieve*	<b>SILTS AND CLAYS</b> Liquid limit 50% or less	OL	Organic silts and organic silty clays of low plasticity		
		MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts		
		CH	Inorganic clay of high plasticity, fat clays		
	<b>SILTS AND CLAYS</b> Liquid limit greater than 50%	OH	Organic clays of medium to high plasticity		
				<b>PLASTICITY CHART</b> 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: $PI = 0.73(LL - 20)$ 	
<b>HIGHLY ORGANIC SOILS</b>		PT	Peat, muck and other highly organic soils		*Based on the material passing the 3 in. (75 mm) sieve †ASTM Designation D 2487, for identification procedure see D 2488

## GROUND ICE DESCRIPTION

### ICE NOT VISIBLE

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

**NOTE:**

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

**LEGEND**

Soil Ice

### VISIBLE ICE LESS THAN 50% BY VOLUME

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

### VISIBLE ICE GREATER THAN 50% BY VOLUME

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)	

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CENTRELINE TESTING

## **CENTRELINE TESTING**

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 174-18
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0304
DRILL: B40L 150mm SOLID STEM AUGER	LOCATION: STA 1915+625 o/s 20m Lt	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC MATERIAL -visible ice (Vx) -easy drilling							0.0	
1.0	SILT (ML) -gray -frozen with visible ice (Vx)							1.0	
2.0	-harder drilling below 2.2m							2.0	
3.0	ICE WITH SOIL							3.0	
4.0								4.0	
5.0	END HOLE at 4.5m							5.0	
6.0								6.0	

Public Works Canada  
Whitehorse, Yukon Territory.

COMPLETION DEPTH 4.5 m

COMPLETE 92/06/06

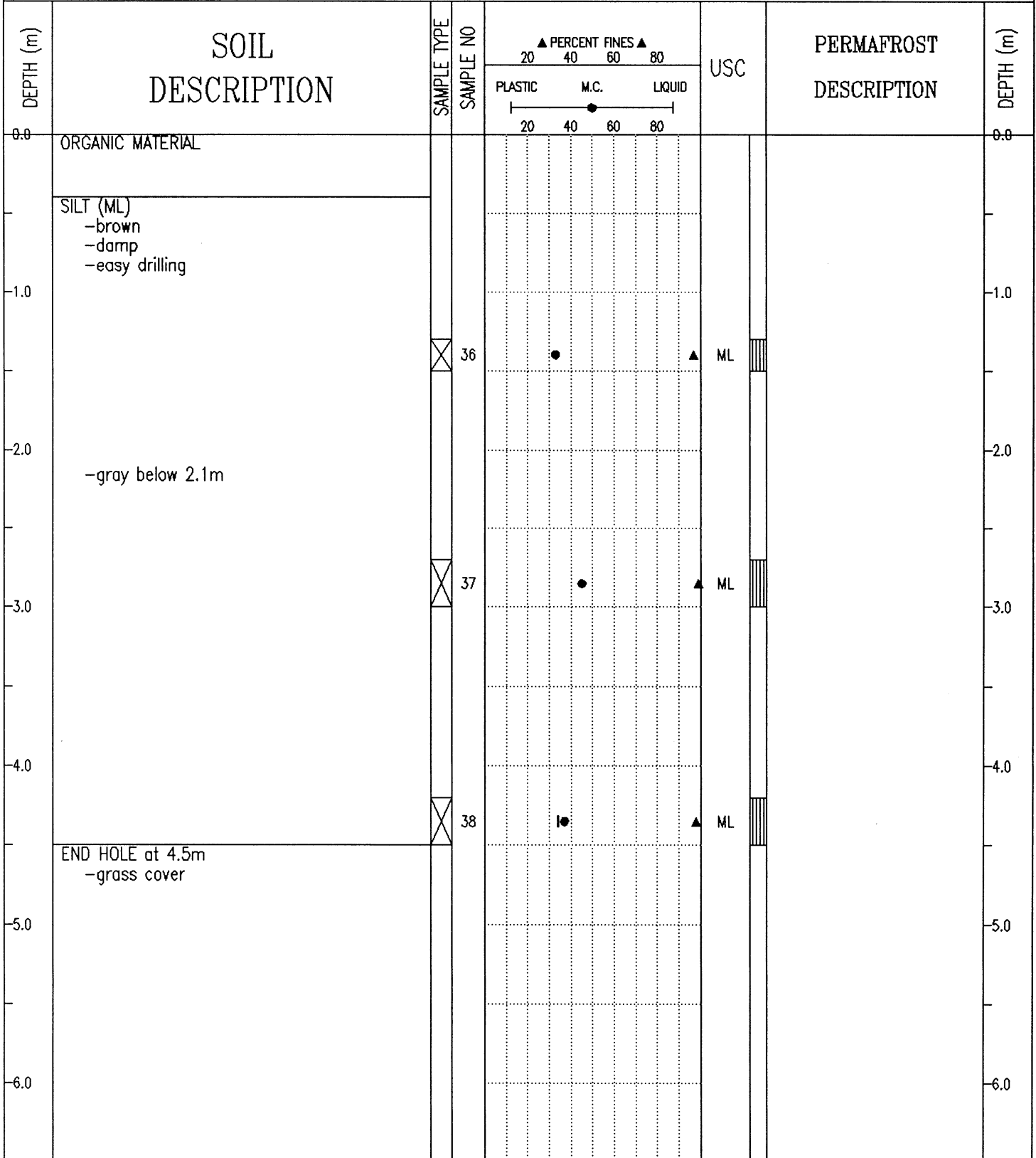
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DWG NO.

Page 1 of 1

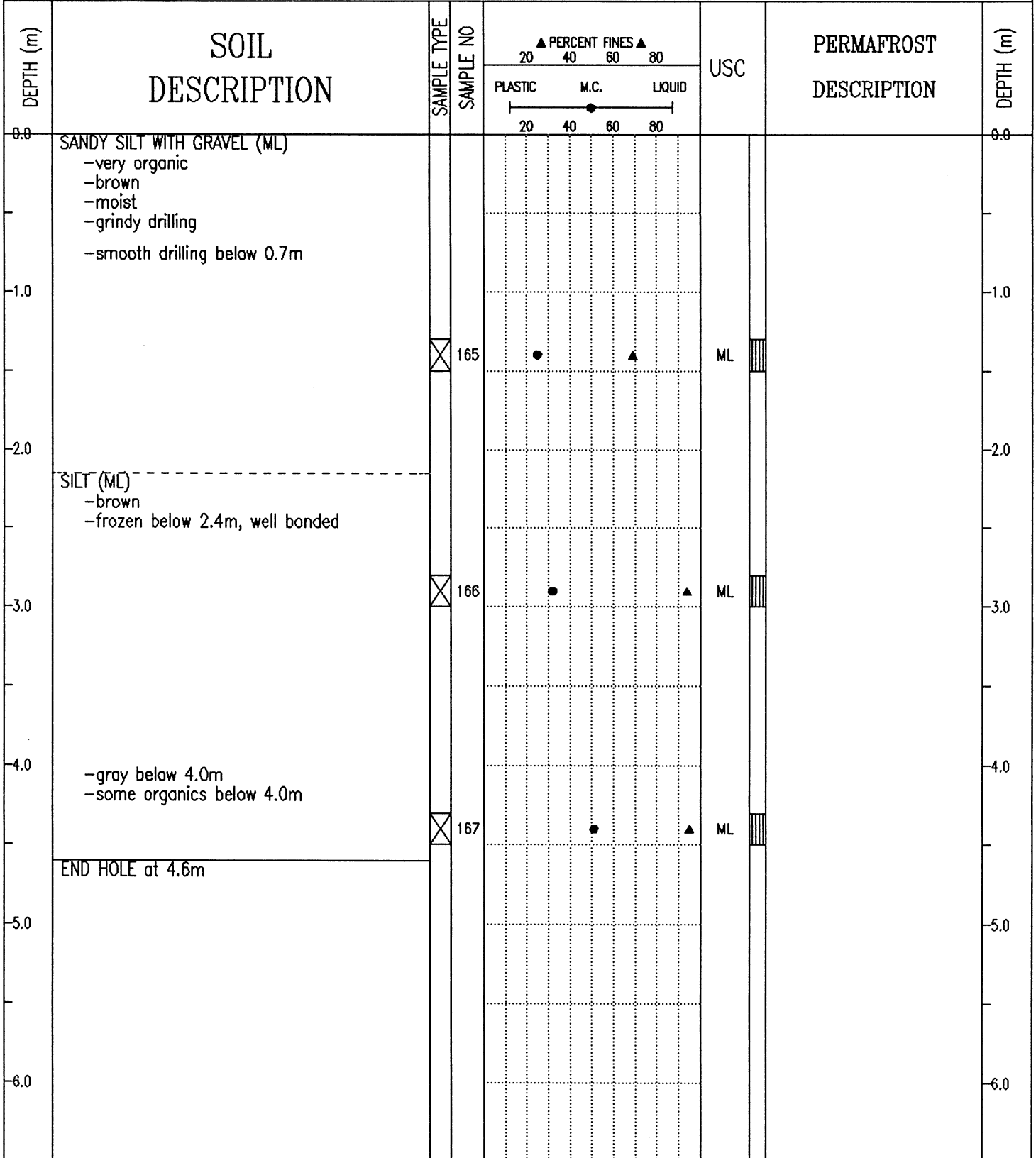
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 174-17
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0304
DRILL: B40L 150mm SOLID STEM AUGER	LOCATION: STA 1915+725 o/s 15m Lt	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 141-60
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1915+800 o/s 7m Rt.	ELEVATION 0.000 (m)

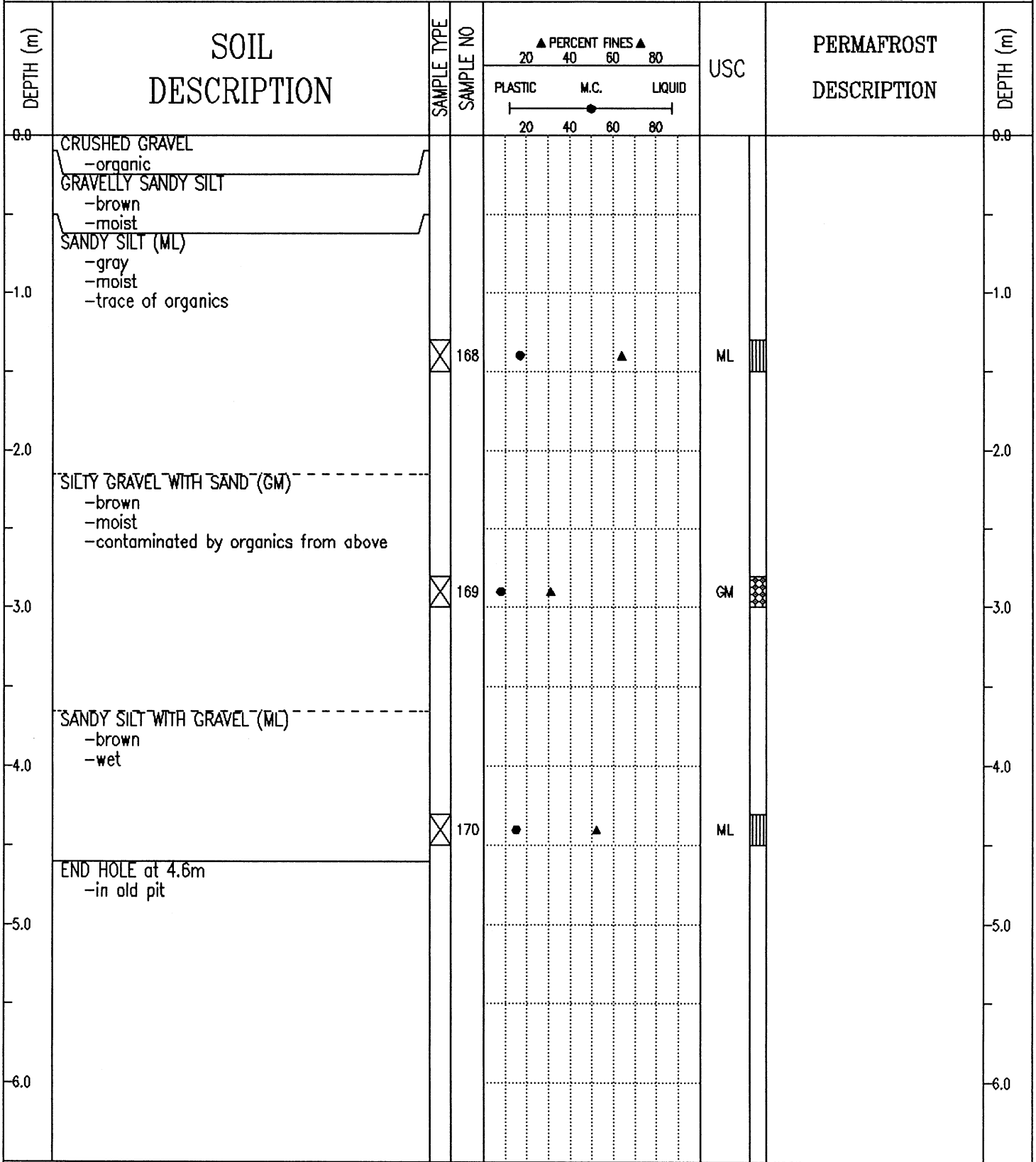
SAMPLE TYPE  RETURN  S.P.T.  AUGER  BULK  TUBE  CORE



Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 91/08/15
	LOGGED BY	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 141-61
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1915+975	ELEVATION 0.000 (m)

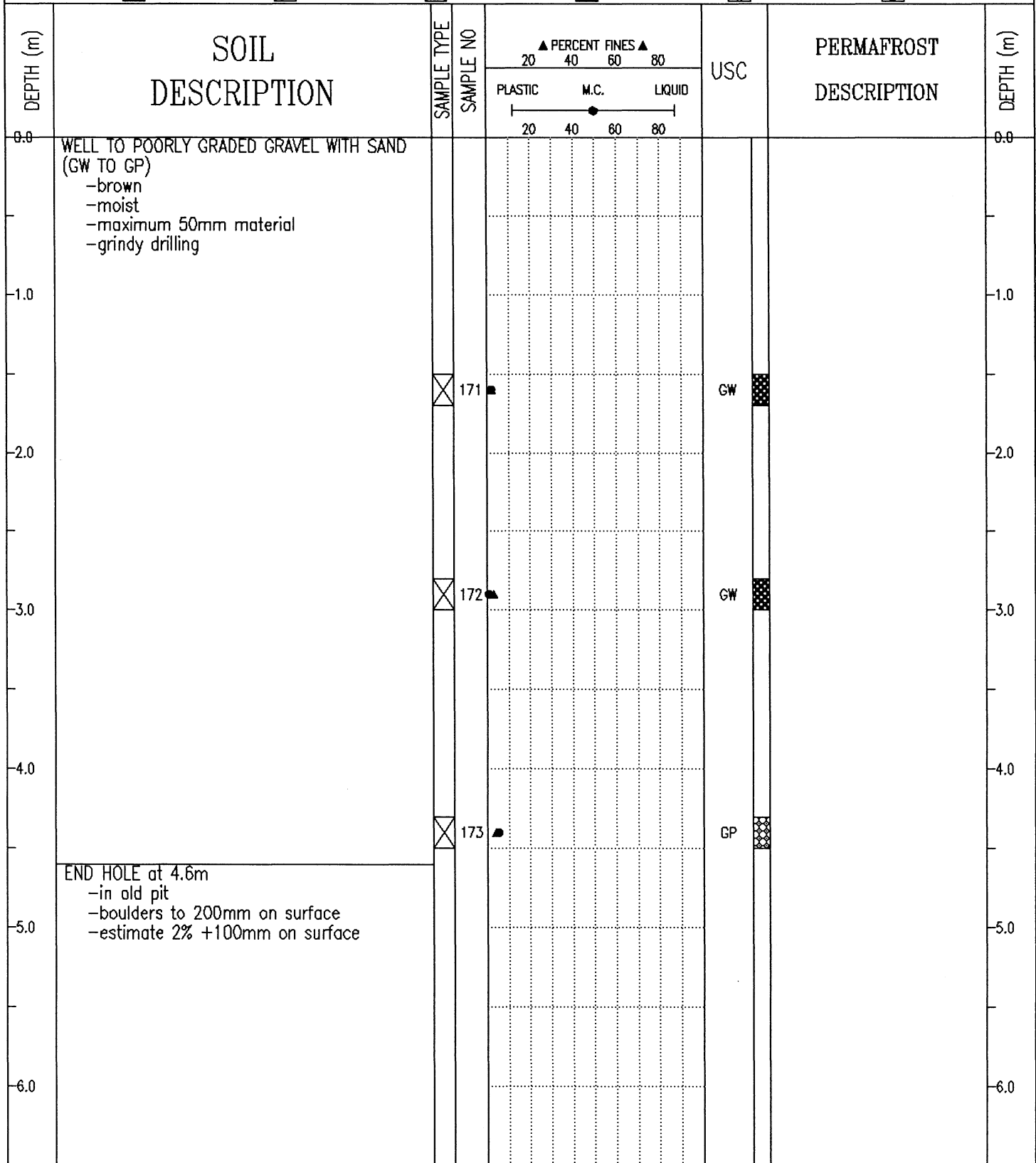
SAMPLE TYPE  RETURN  S.P.T.  AUGER  BULK  TUBE  CORE



Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 91/08/15
	LOGGED BY	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 141-62
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1916+060 o/s 5m Lt.	ELEVATION 0.000 (m)

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



Public Works Canada  
Whitehorse, Yukon Territory.

COMPLETION DEPTH 4.6 m

COMPLETE 91/08/15

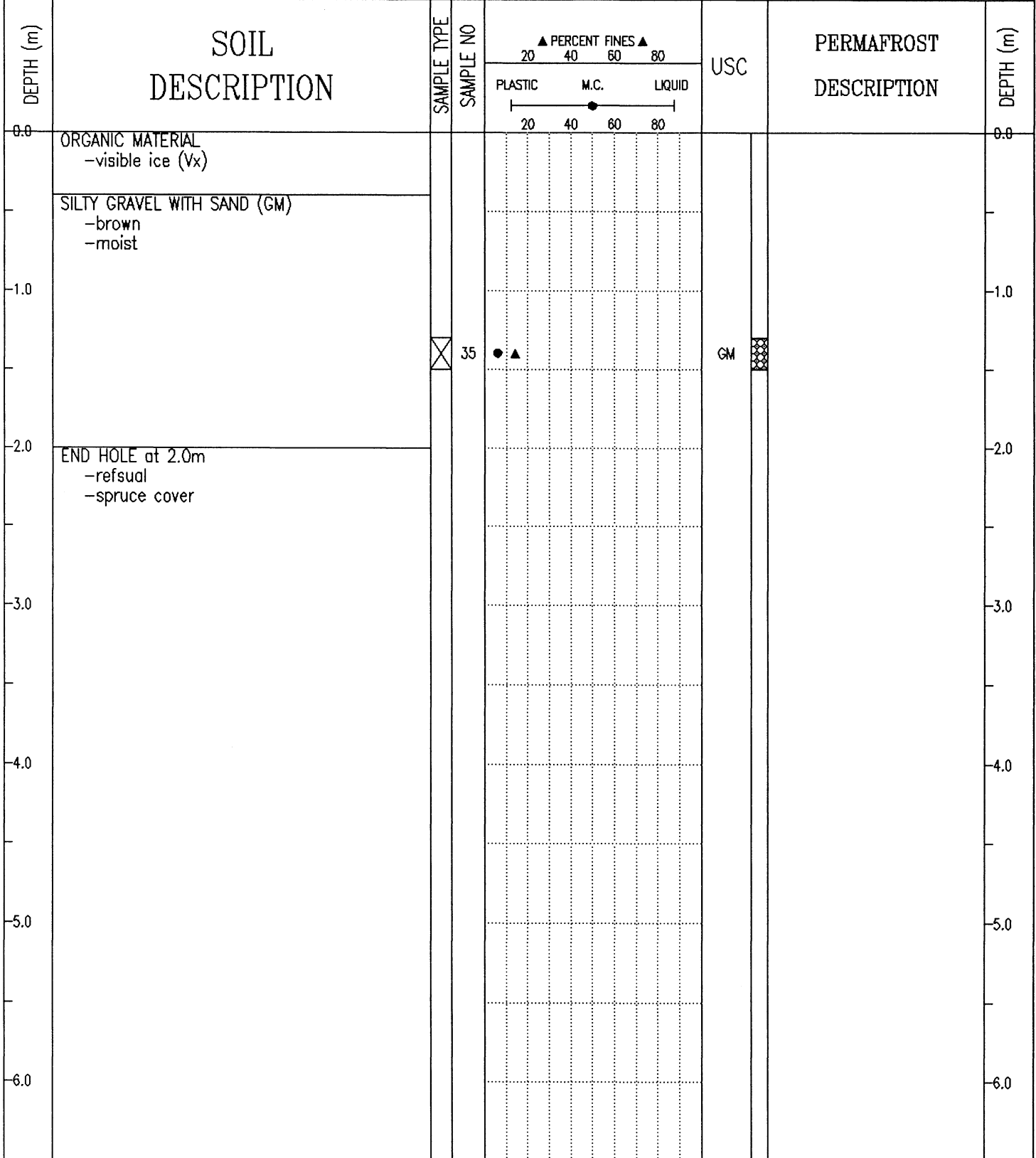
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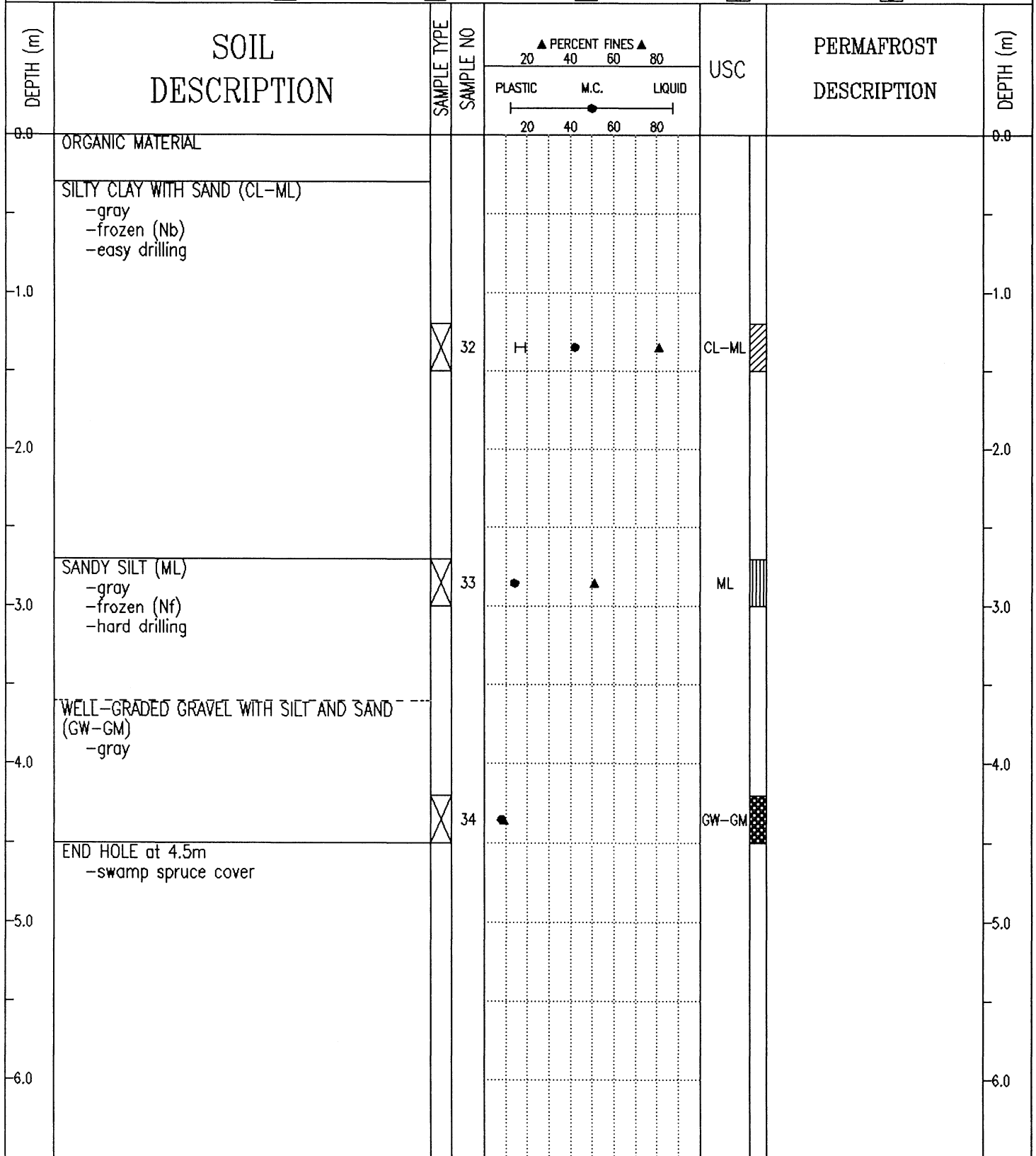
Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 174-16
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0304
DRILL: B40L 150mm SOLID STEM AUGER	LOCATION: STA 1916+175	ELEVATION 0.000 (m)

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

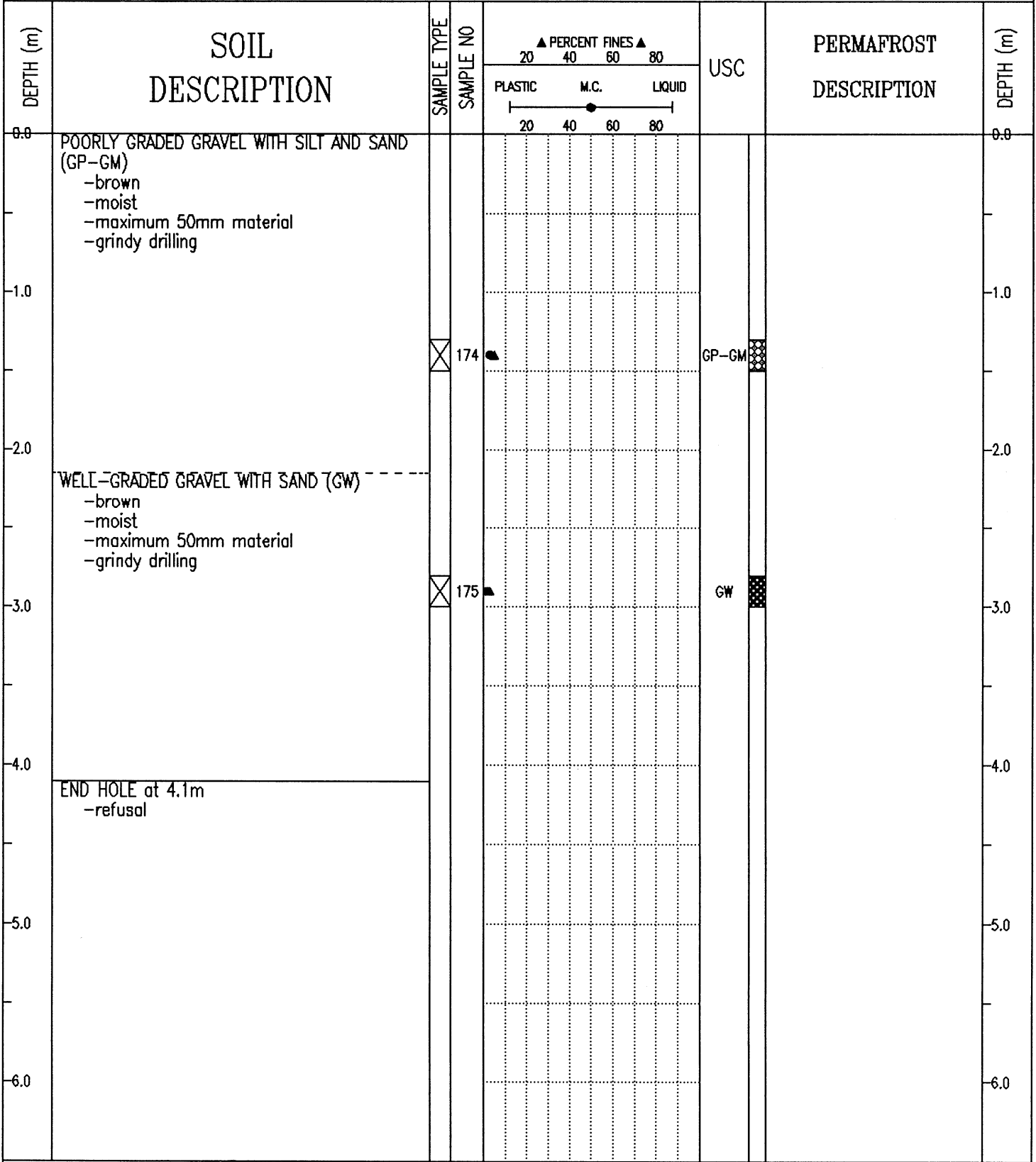


SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 174-15
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0304
DRILL: B40L 150mm SOLID STEM AUGER	LOCATION: STA 1916+275	ELEVATION 0.000 (m)
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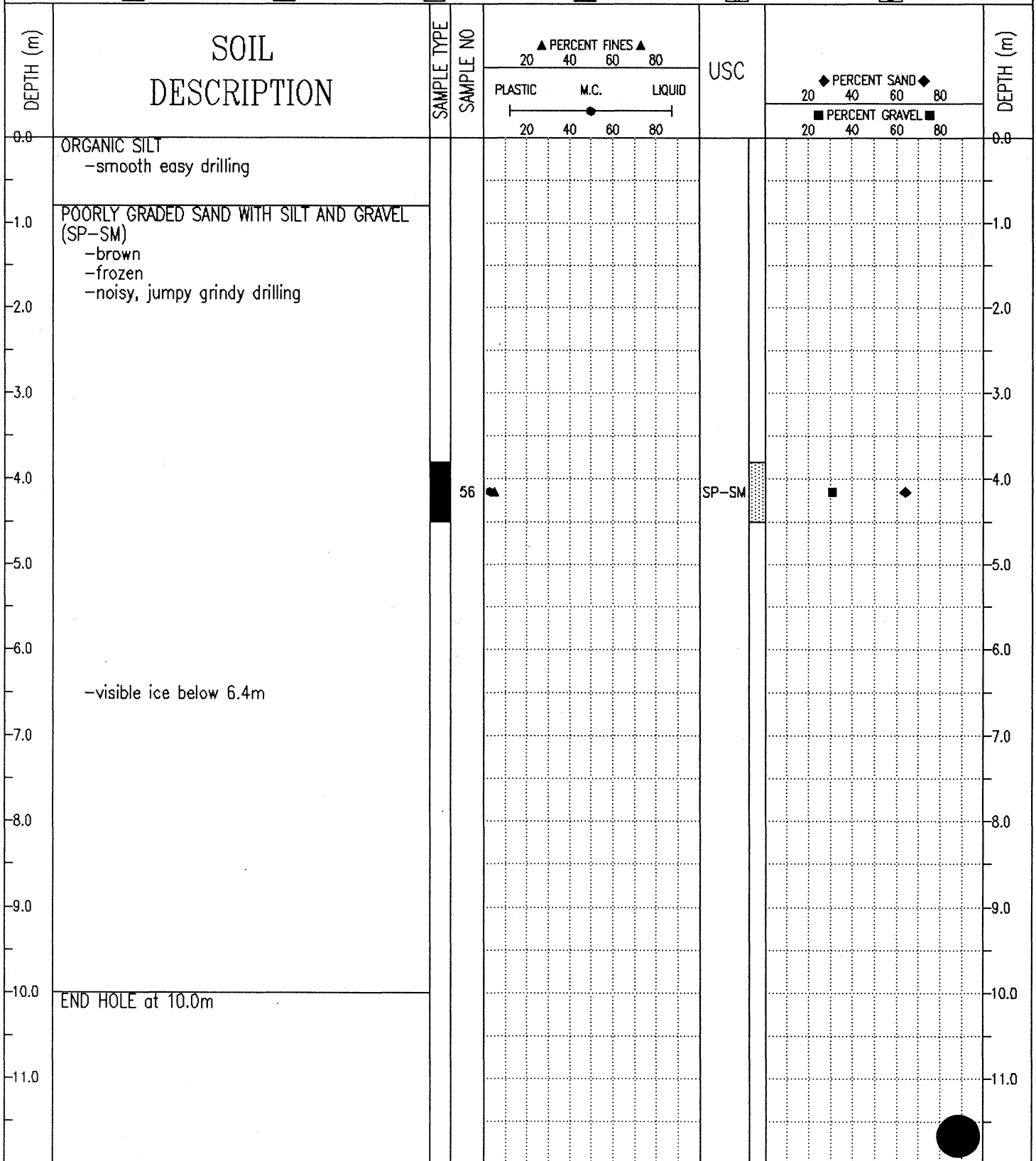


SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 141-63
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1916+375 o/s 4m Rt.	ELEVATION 0.000 (m)

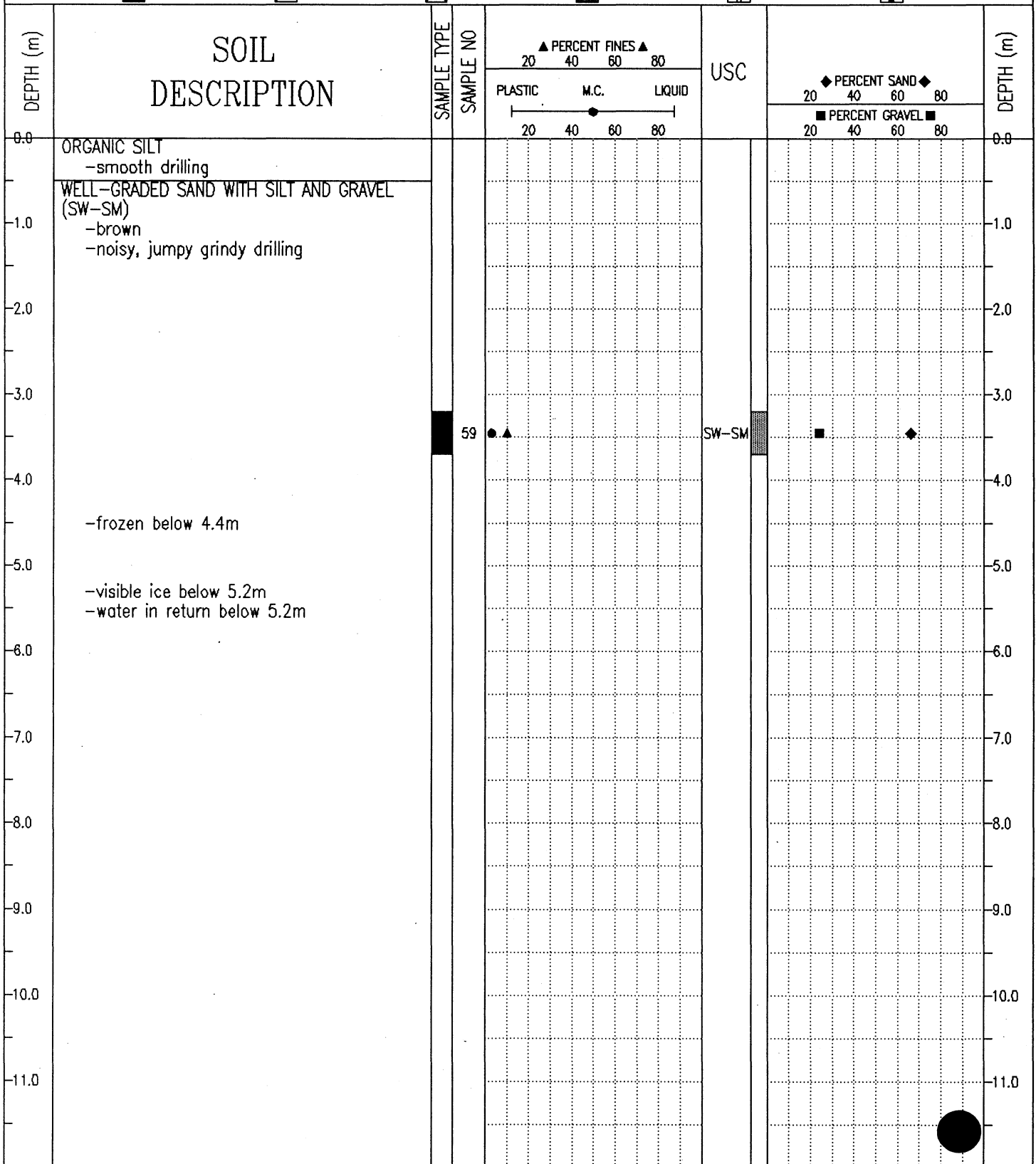
SAMPLE TYPE  RETURN  S.P.T.  AUGER  BULK  TUBE  CORE



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 218-119
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1916+450 o/s 50m Rt.	ELEVATION 0.000 (m)
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 218-122
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1916+450 o/s 100m Rt.	ELEVATION 0.000 (m)
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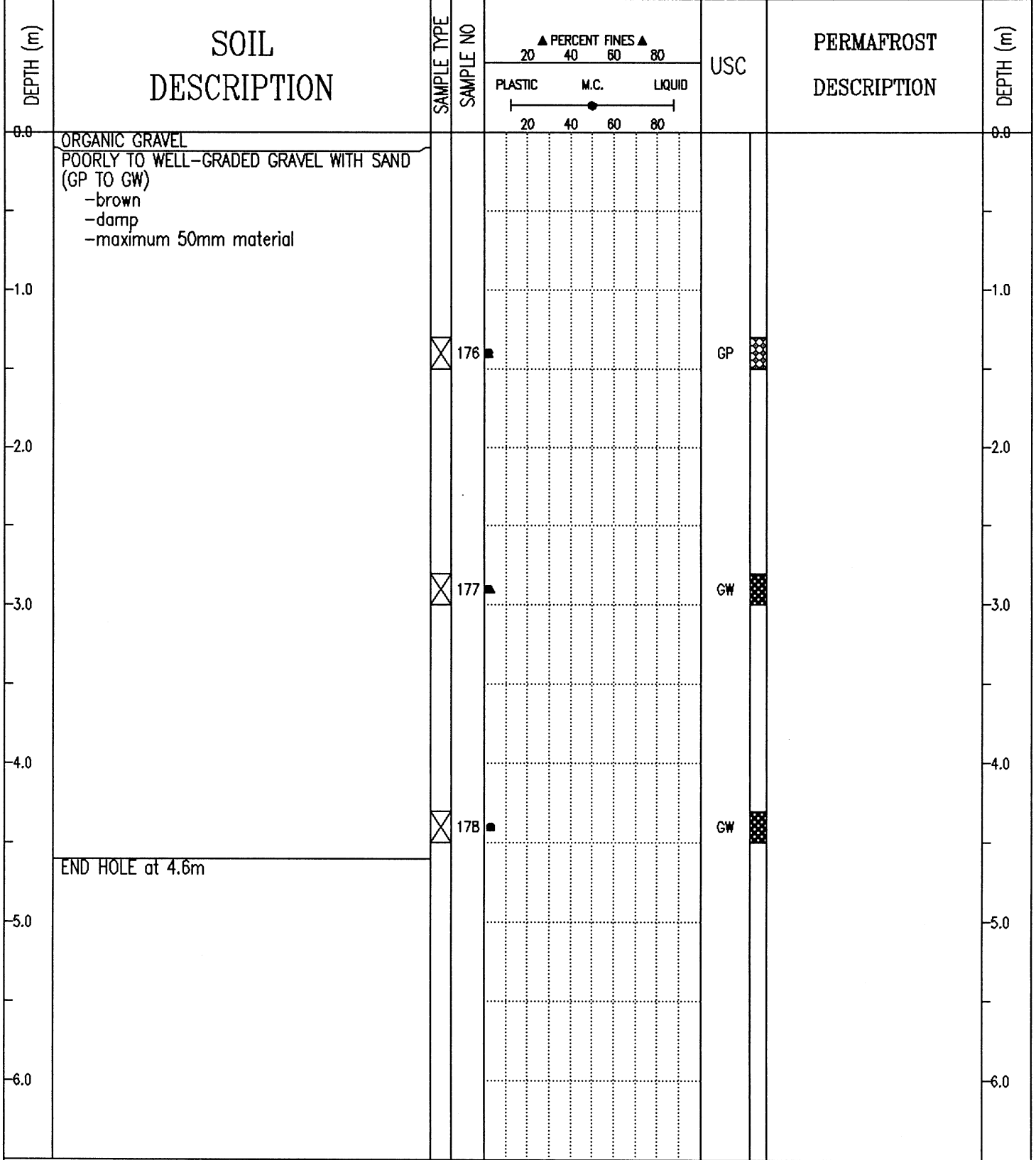


SUBSURFACE EXPLORATION AND TEST REPORT		ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 218-122
SHAKWAK PROJECT		SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL		LOCATION: STA 1916+450 o/s 100m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> 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	PERCENT SAND ◆		PERCENT GRAVEL ■	DEPTH (m)
				20	40	60		80	20		
12.0	END HOLE at 12.5m										12.0
-13.0											-13.0
-14.0											-14.0
-15.0											-15.0
-16.0											-16.0
-17.0											-17.0
-18.0											-18.0
-19.0											-19.0
-20.0											-20.0
-21.0											-21.0
-22.0											-22.0
-23.0											-23.0

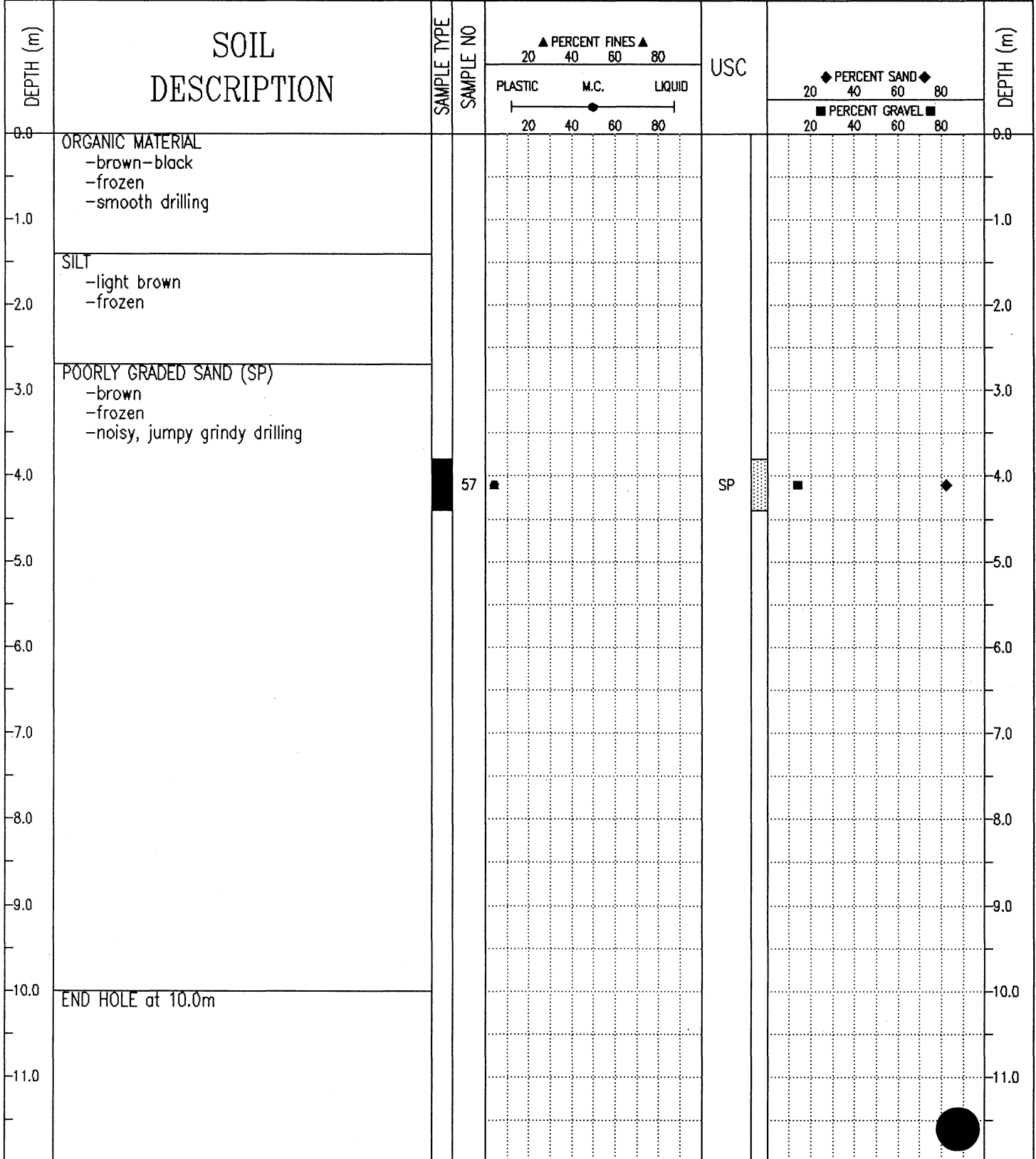
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SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1916+475 o/s 7m Lt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 218-120
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1916+550 o/s 50m Rt.	ELEVATION 0.000 (m)

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

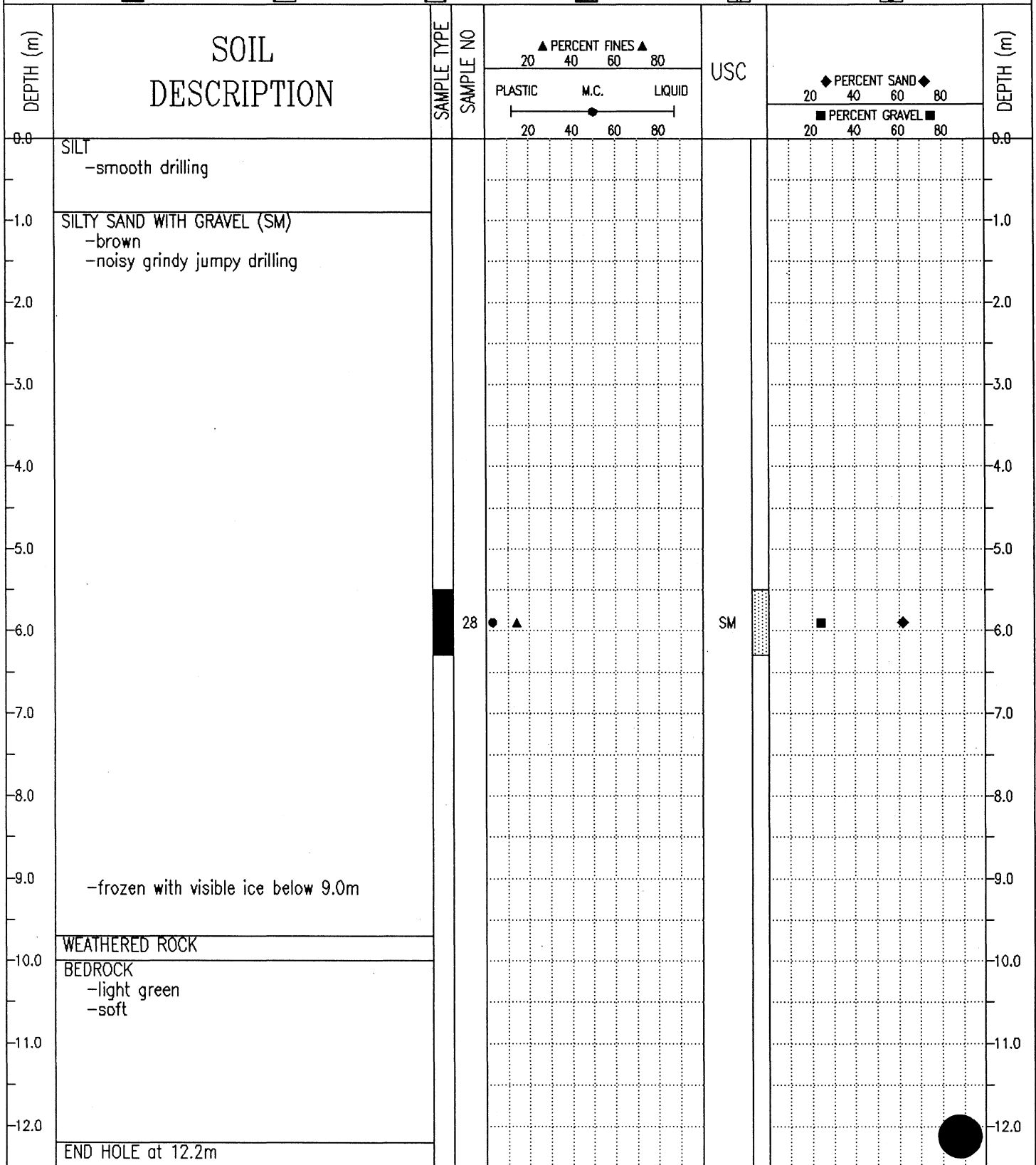


SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 141-65
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1916+575 o/s 8m Lt.	ELEVATION 0.000 (m)

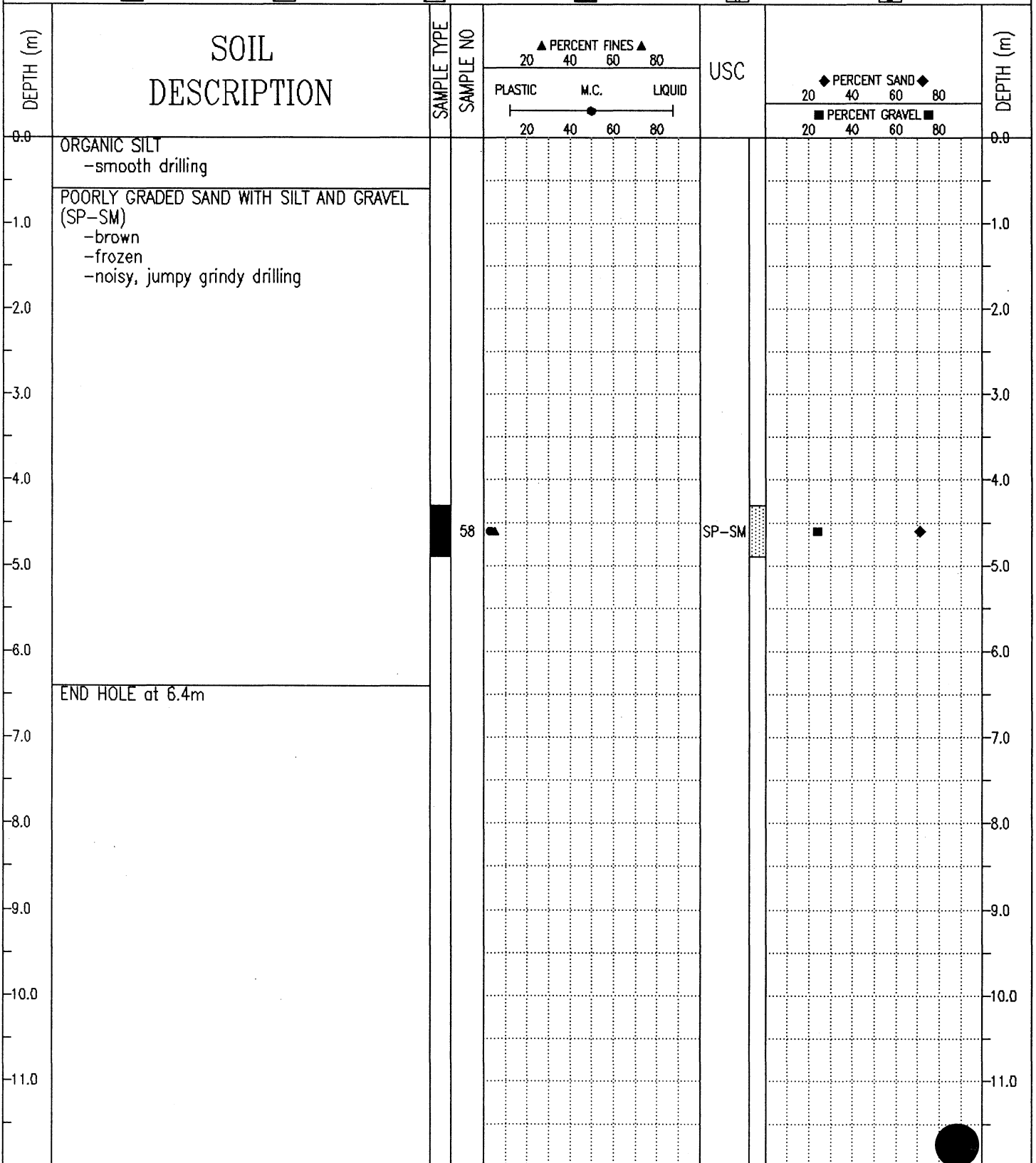
SAMPLE TYPE  RETURN  S.P.T.  AUGER  BULK  TUBE  CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	POORLY TO WELL-GRADED GRAVEL WITH SILT AND SAND (GP-GM TO GW-GM) -brown -moist -maximum 50mm material								0.0
1.79		<input checked="" type="checkbox"/>	179				GP-GM		
3.0		<input checked="" type="checkbox"/>	180				GW-GM		
4.6		<input checked="" type="checkbox"/>	181				GW-GM		
4.6	END HOLE at 4.6m -across road from old pit -boulders to 2500mm on surface								
6.0									6.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 214-107
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1917+600 o/s 50m Rt.	ELEVATION 0.000 (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		

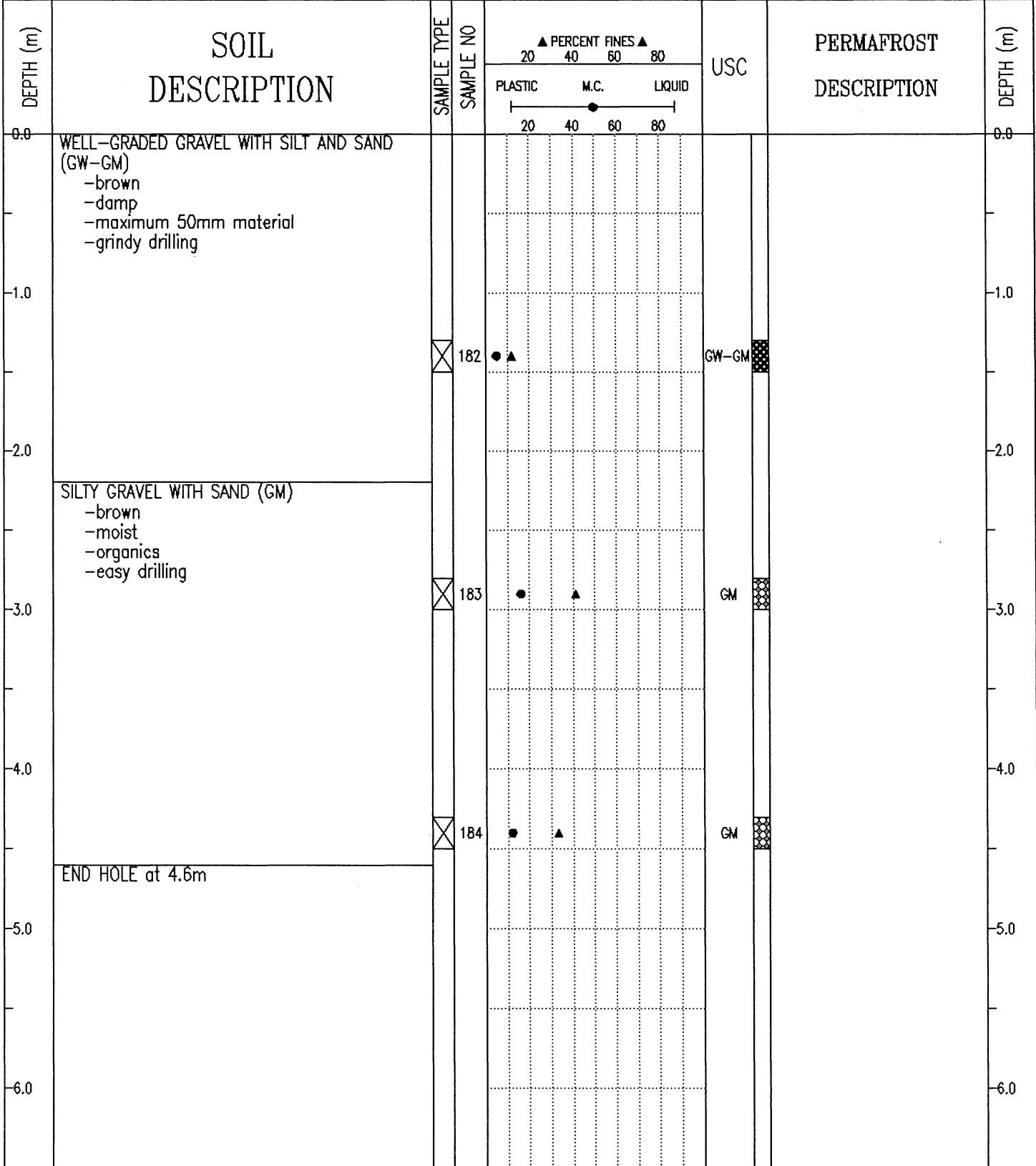


SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 218-121
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1916+650 o/s 75m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



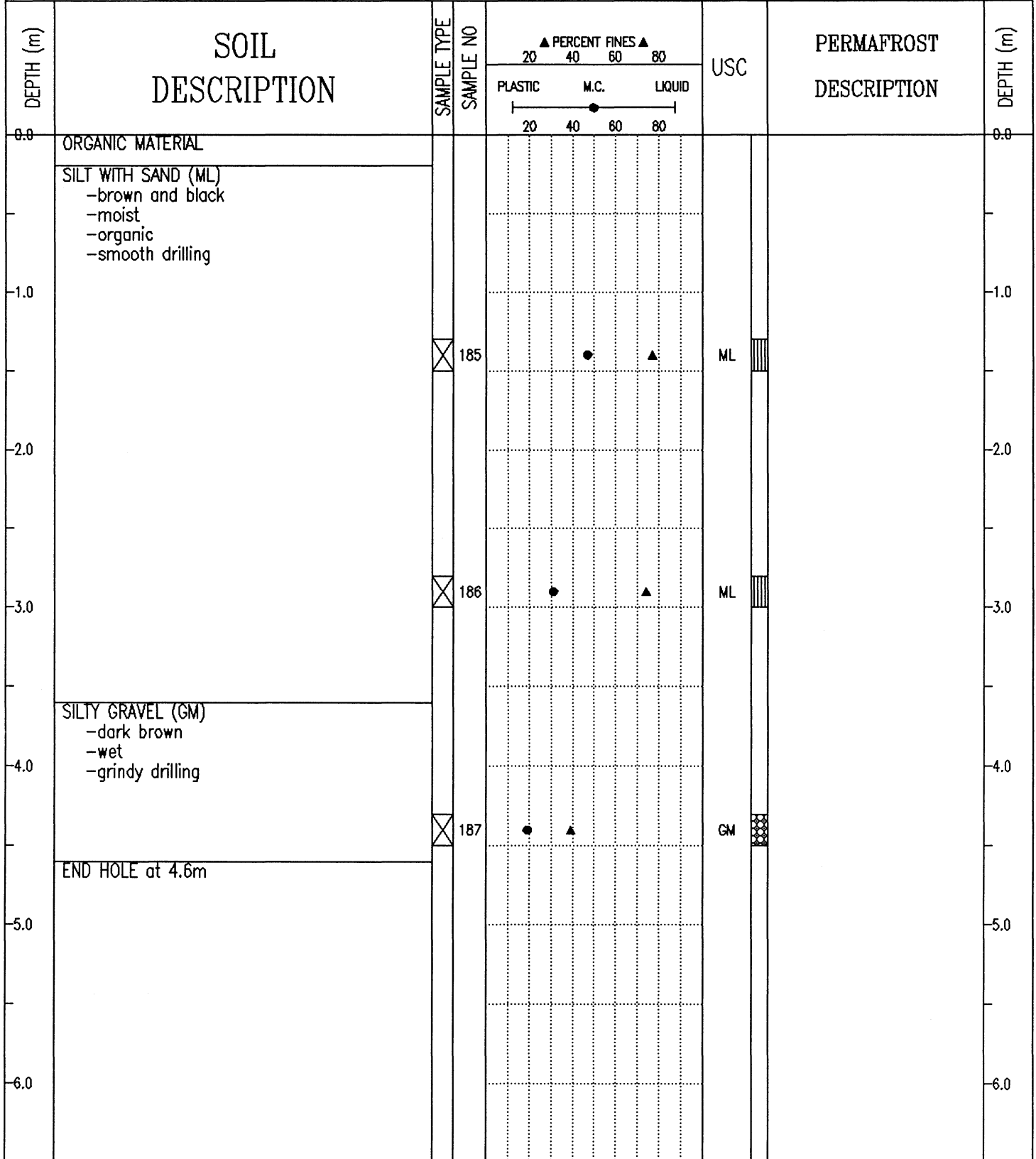
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 141-66
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1916+675 o/s 7m Rt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-67
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1916+780 o/s 7m Lt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-68
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1916+875 o/s 10m Rt.	ELEVATION 0.000 (m)

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

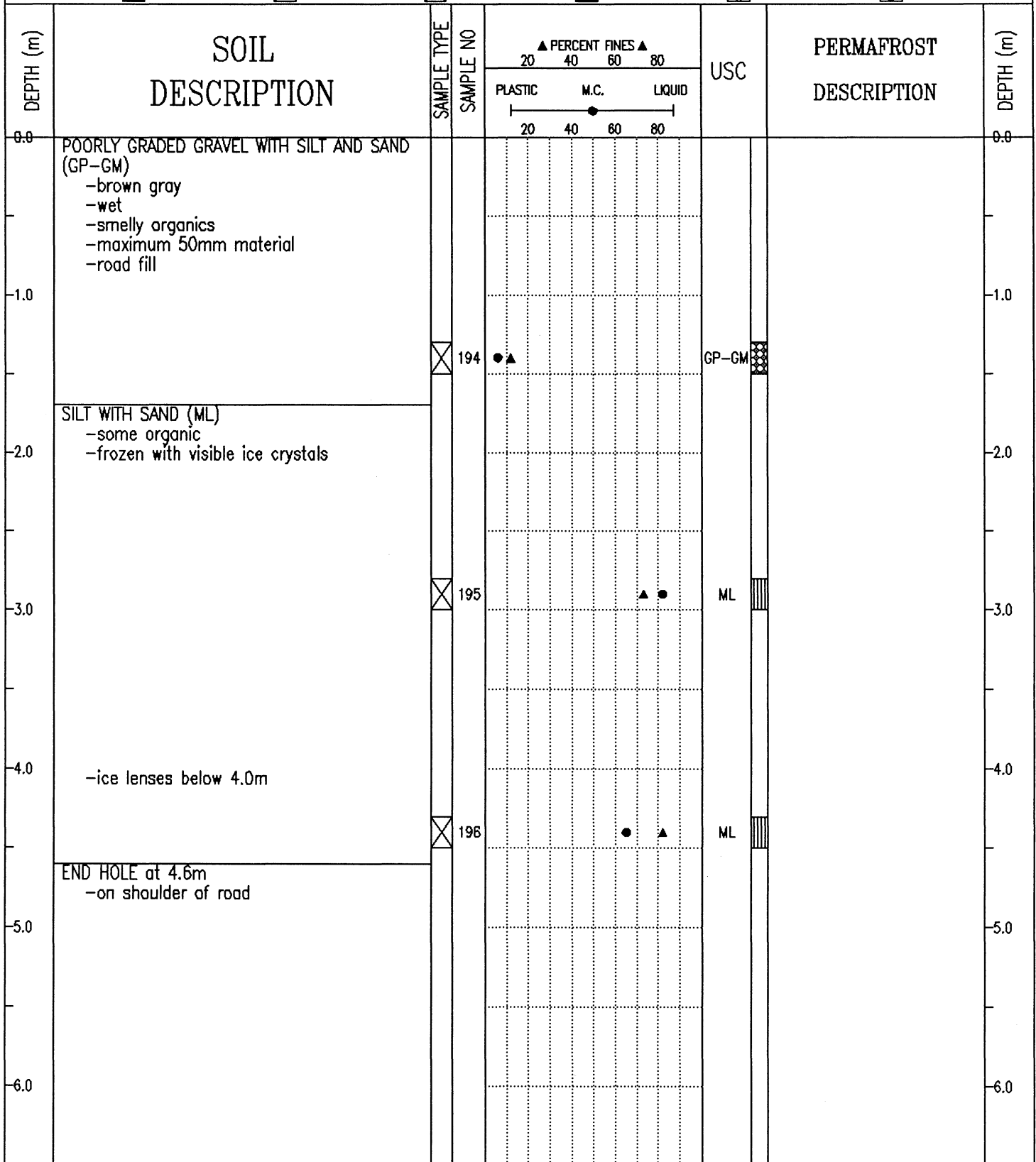
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	SILTY SANDY GRAVEL -brown -damp -road fill								0.0
1.0	SANDY SILT WITH GRAVEL (ML) -gray -wet -some organics	<input checked="" type="checkbox"/>	188	●	▲		ML		1.0
3.0	GRAVELLY SAND	<input checked="" type="checkbox"/>	189	●	▲		ML		3.0
4.0	SILTY SAND WITH GRAVEL (SM) -brown -saturated	<input checked="" type="checkbox"/>	190	●	▲		SM		4.0
5.0	END HOLE at 4.6m -on shoulder of road								5.0
6.0									6.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-69
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1916+975 o/s 9m Rt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	SANDY SILTY GRAVEL -brown -damp -road fill -maximum 50mm material								0.0
1.0									1.0
2.0	SILTY SAND WITH GRAVEL (SM) -brown -wet -smooth drilling								2.0
3.0									3.0
4.0	SILTY GRAVEL WITH SAND (GM) -dark brown -wet -grindy drilling								4.0
5.0	END HOLE at 4.6m -on shoulder of road								5.0
6.0									6.0

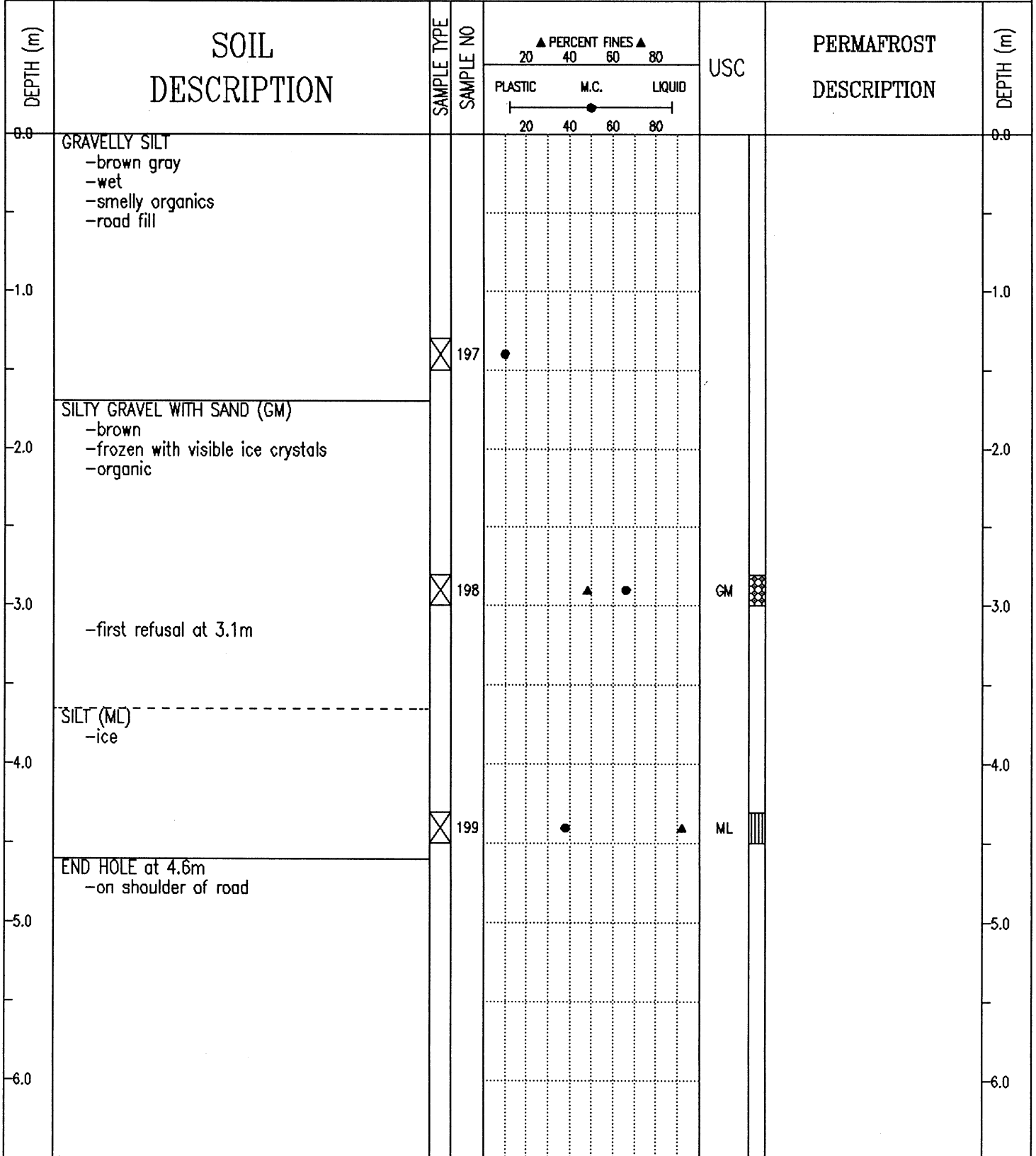
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-70
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1917+075 o/s 6m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 91/08/21
	LOGGED BY	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-71
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1917+175 o/s 5m Rt.	ELEVATION 0.000 (m)

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



Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 91/08/21
	LOGGED BY	DWG NO.

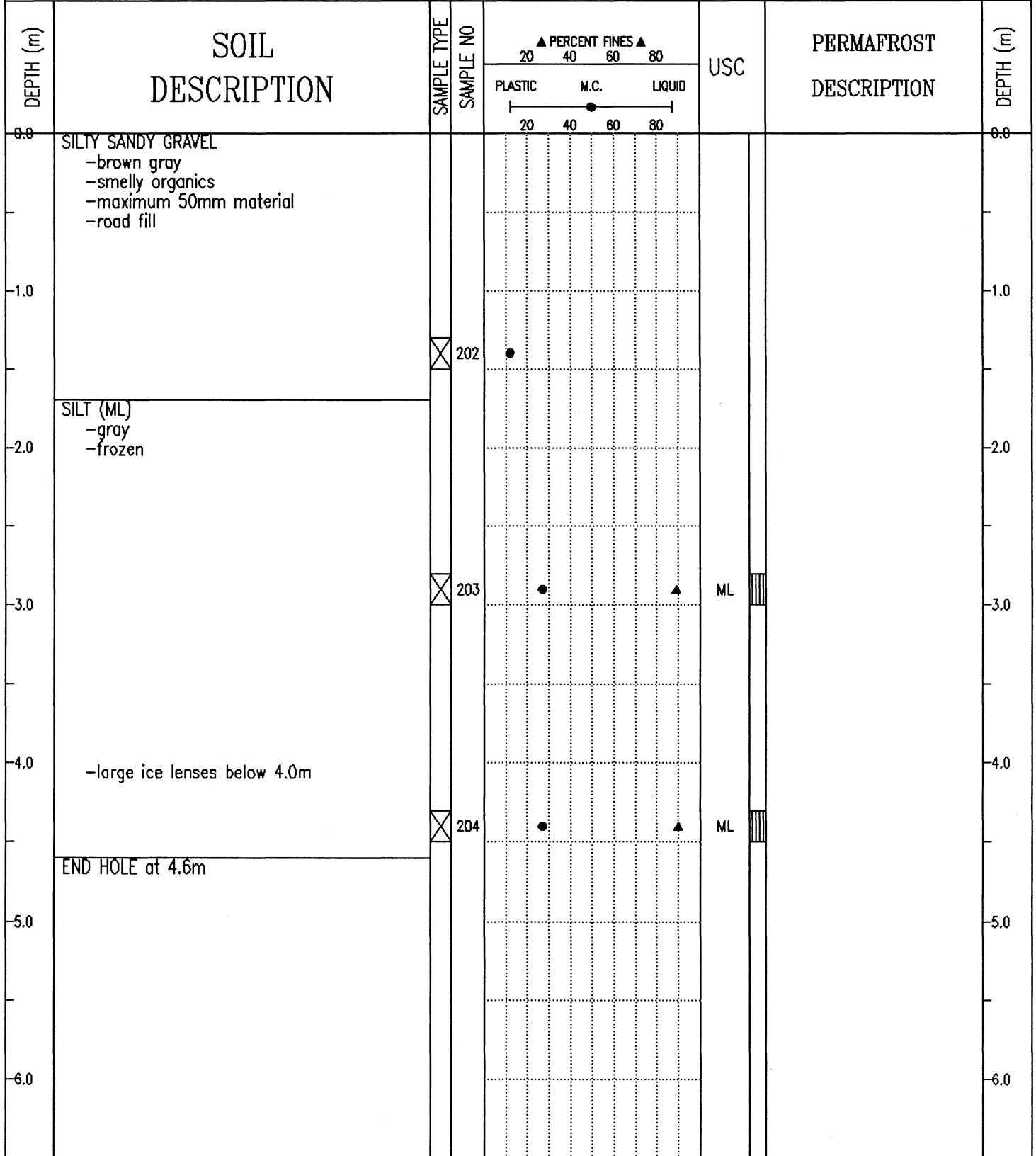
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-72
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1917+300 o/s 4m Rt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	SILTY SANDY GRAVEL -brown gray -wet -some organics -maximum 50mm material -road fill							0.0	
2.0	SANDY SILT (ML) -organic -frozen with visible ice crystals -well bonded		200					2.0	
3.0			201				ML	3.0	
4.0	END HOLE at 3.6m -refusal -on shoulder of road							4.0	
5.0								5.0	
6.0								6.0	

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-73
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1917+400 o/s 7m Rt.	ELEVATION 0.000 (m)

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





SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-75
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1917+700 o/s 5m Rt.	ELEVATION 0.000 (m)

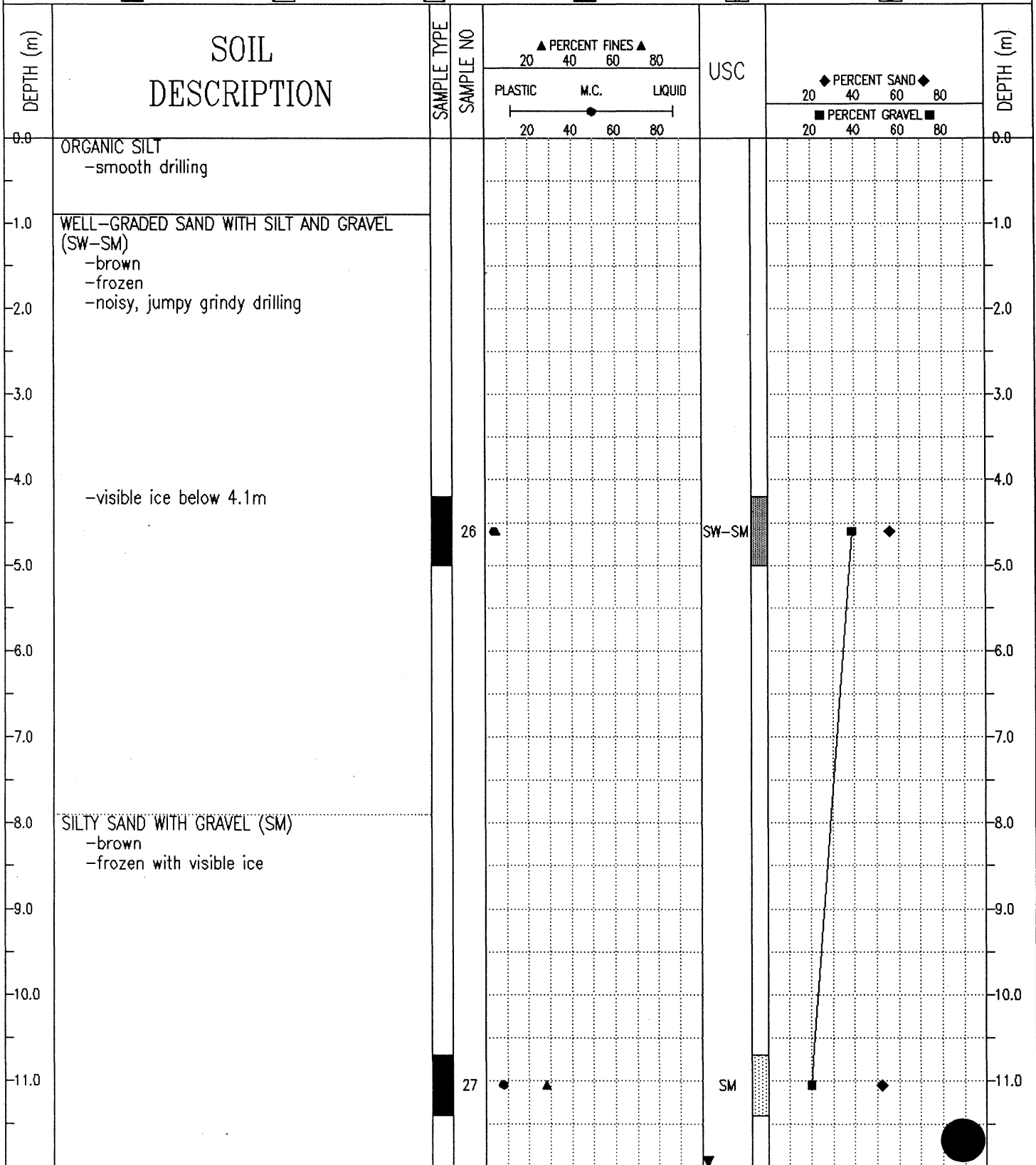
SAMPLE TYPE  RETURN  S.P.T.  AUGER  BULK  TUBE  CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	POORLY TO WELL-GRADED GRAVEL WITH SILT AND SAND (GP-GM TO GW-GM) -brown -moist -grindy drilling								0.0
1.0									1.0
2.0									2.0
3.0									3.0
4.0									4.0
5.0									5.0
6.0									6.0

END HOLE at 4.6m  
-on shoulder of road

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 91/08/21
	LOGGED BY	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 214-106
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1917+700 o/s 50m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input checked="" type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		

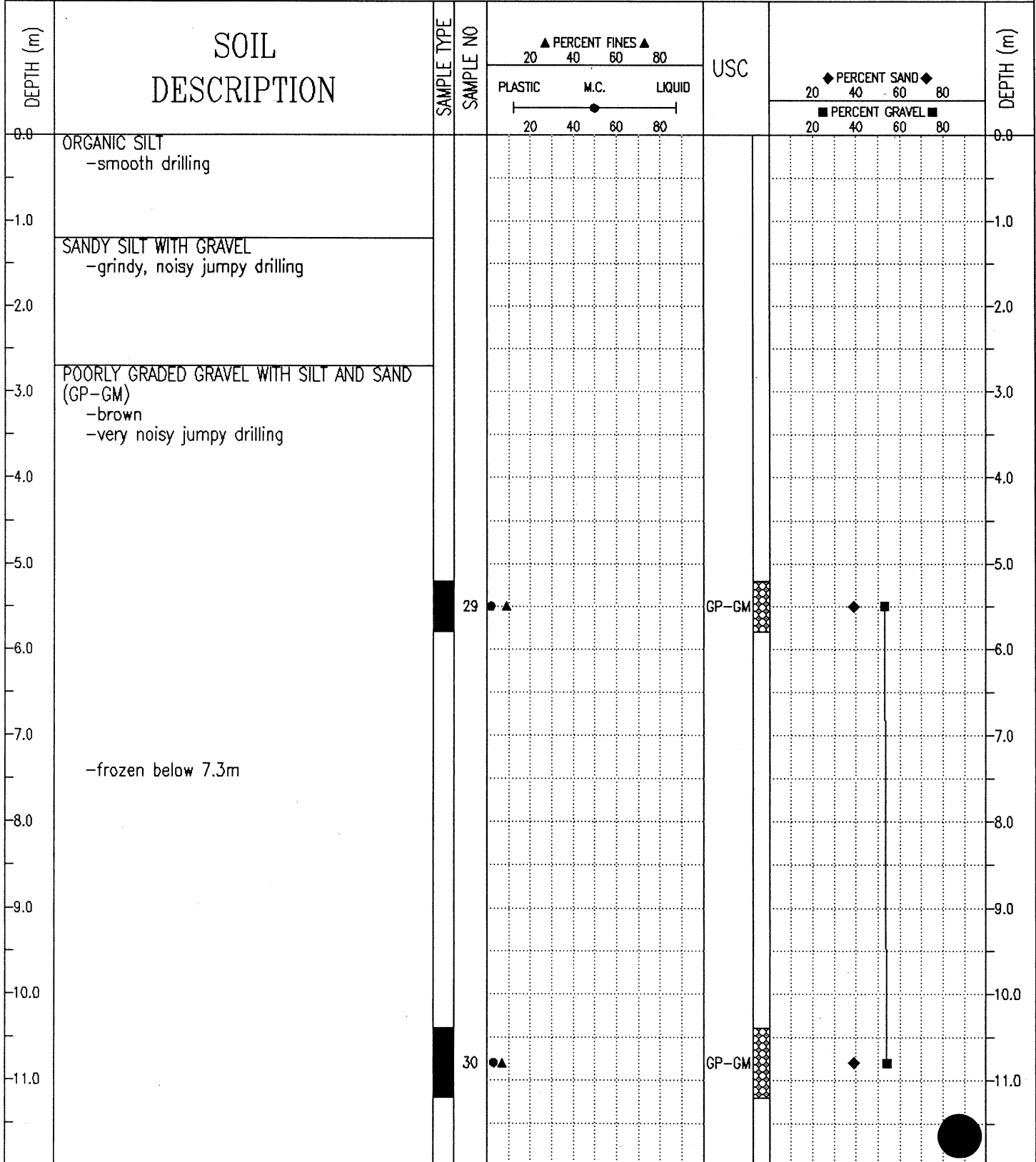


SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 214-106
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1917+700 o/s 50m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> 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	USC			DEPTH (m)
				▲ PERCENT FINES ▲ 20 40 60 80	PLASTIC M.C. LIQUID 20 40 60 80	◆ PERCENT SAND ◆ 20 40 60 80	
12.0	-water produced at 12.0m						12.0
13.0							13.0
14.0							14.0
15.0	END HOLE at 15.0m						15.0
16.0							16.0
17.0							17.0
18.0							18.0
19.0							19.0
20.0							20.0
21.0							21.0
22.0							22.0
23.0							23.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 215-108
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1917+750 o/s 100m Rt.	ELEVATION 0.000 (m)

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



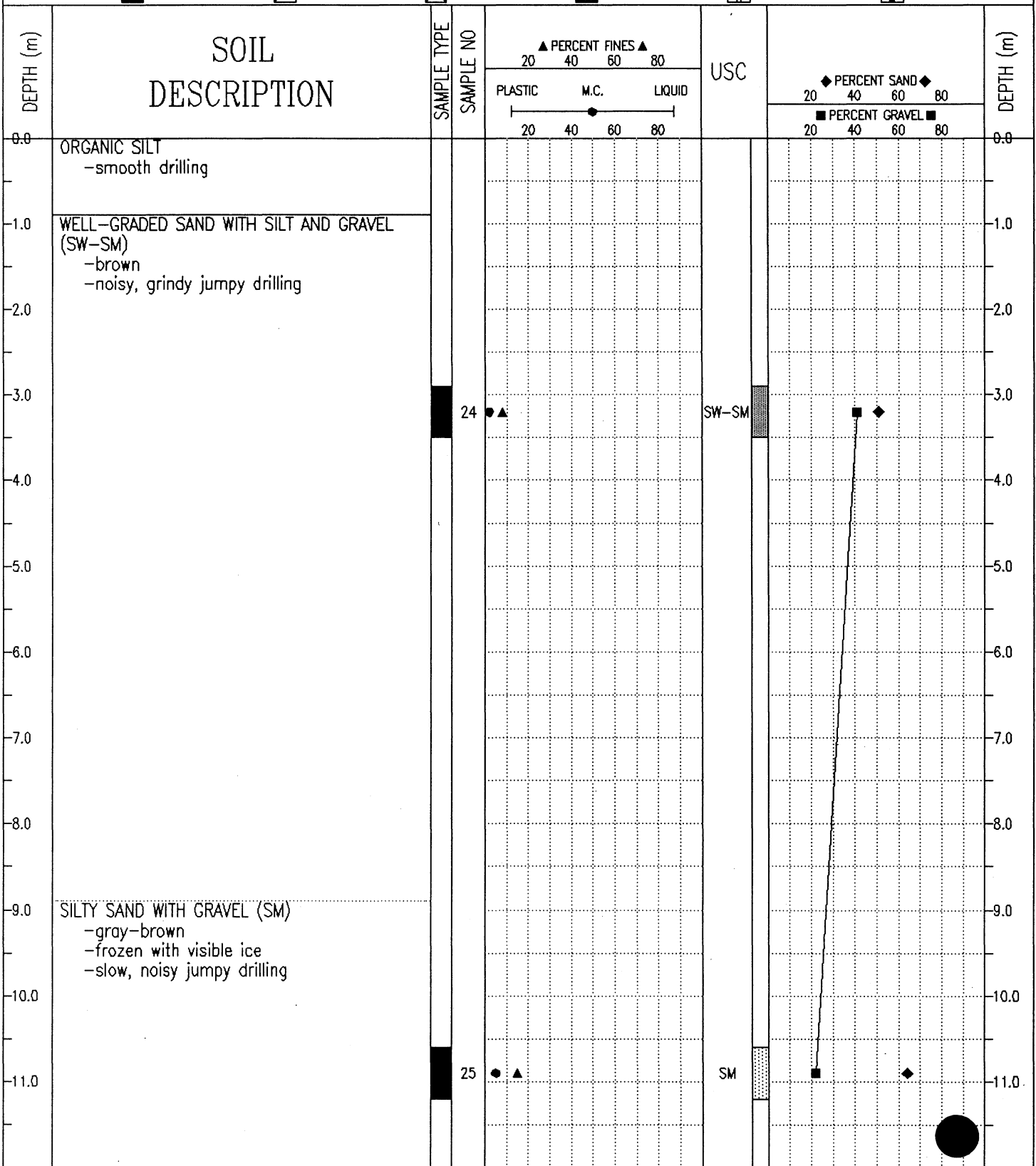
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 215-108
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1917+750 o/s 100m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> 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	USC			DEPTH (m)
				▲ PERCENT FINES ▲	◆ PERCENT SAND ◆	■ PERCENT GRAVEL ■	
				20 40 60 80	20 40 60 80	20 40 60 80	
				PLASTIC M.C. LIQUID			
				20 40 60 80			
12.0							12.0
-13.0	-frozen with visible ice below 13.1m						-13.0
-14.0							-14.0
-15.0							-15.0
-16.0	BEDROCK -green						-16.0
-17.0	END HOLE at 16.3m						-17.0
-18.0							-18.0
-19.0							-19.0
-20.0							-20.0
-21.0							-21.0
-22.0							-22.0
-23.0							-23.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-76
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1917+800 o/s 5m Rt.	ELEVATION 0.000 (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	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	POORLY TO WELL-GRADED GRAVEL WITH SAND (GP TO GW) -brown -damp -maximum 50mm material -grindy drilling								0.0
-1.0									-1.0
-2.0									-2.0
-3.0		<input checked="" type="checkbox"/>	211				GP		-3.0
-4.0									-4.0
-5.0		<input checked="" type="checkbox"/>	212				GW		-5.0
-6.0									-6.0
-7.0		<input checked="" type="checkbox"/>	213				GW		-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
-17.0									-17.0
-18.0									-18.0
-19.0									-19.0
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-21.0									-21.0
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-56.0									-56.0
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-87.0									-87.0
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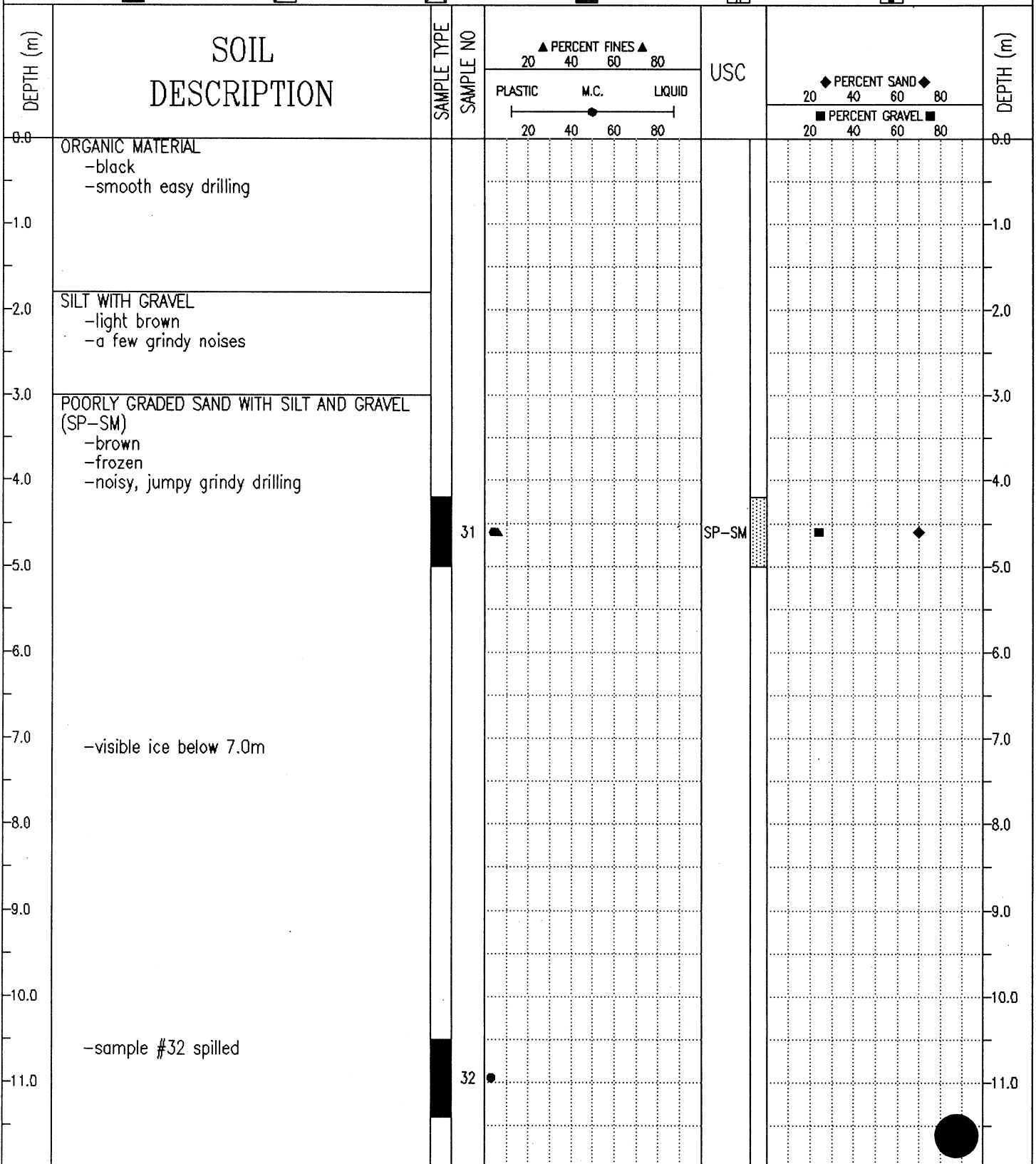
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 214-105
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1917+800 o/s 50m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 214-105
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1917+800 o/s 50m Rt.	ELEVATION 0.000 (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	USC			DEPTH (m)
				▲ PERCENT FINES ▲	◆ PERCENT SAND ◆	■ PERCENT GRAVEL ■	
				20 40 60 80	20 40 60 80	20 40 60 80	
				PLASTIC M.C. LIQUID			
				20 40 60 80			
12.8							12.8
-13.0							-13.0
-14.0							-14.0
-15.0	END HOLE at 15.0m						-15.0
-16.0							-16.0
-17.0							-17.0
-18.0							-18.0
-19.0							-19.0
-20.0							-20.0
-21.0							-21.0
-22.0							-22.0
-23.0							-23.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 215-109
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1917+850 o/s 100m Rt.	ELEVATION 0.000 (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		



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 215-109
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1917+850 o/s 100m Rt.	ELEVATION 0.000 (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		

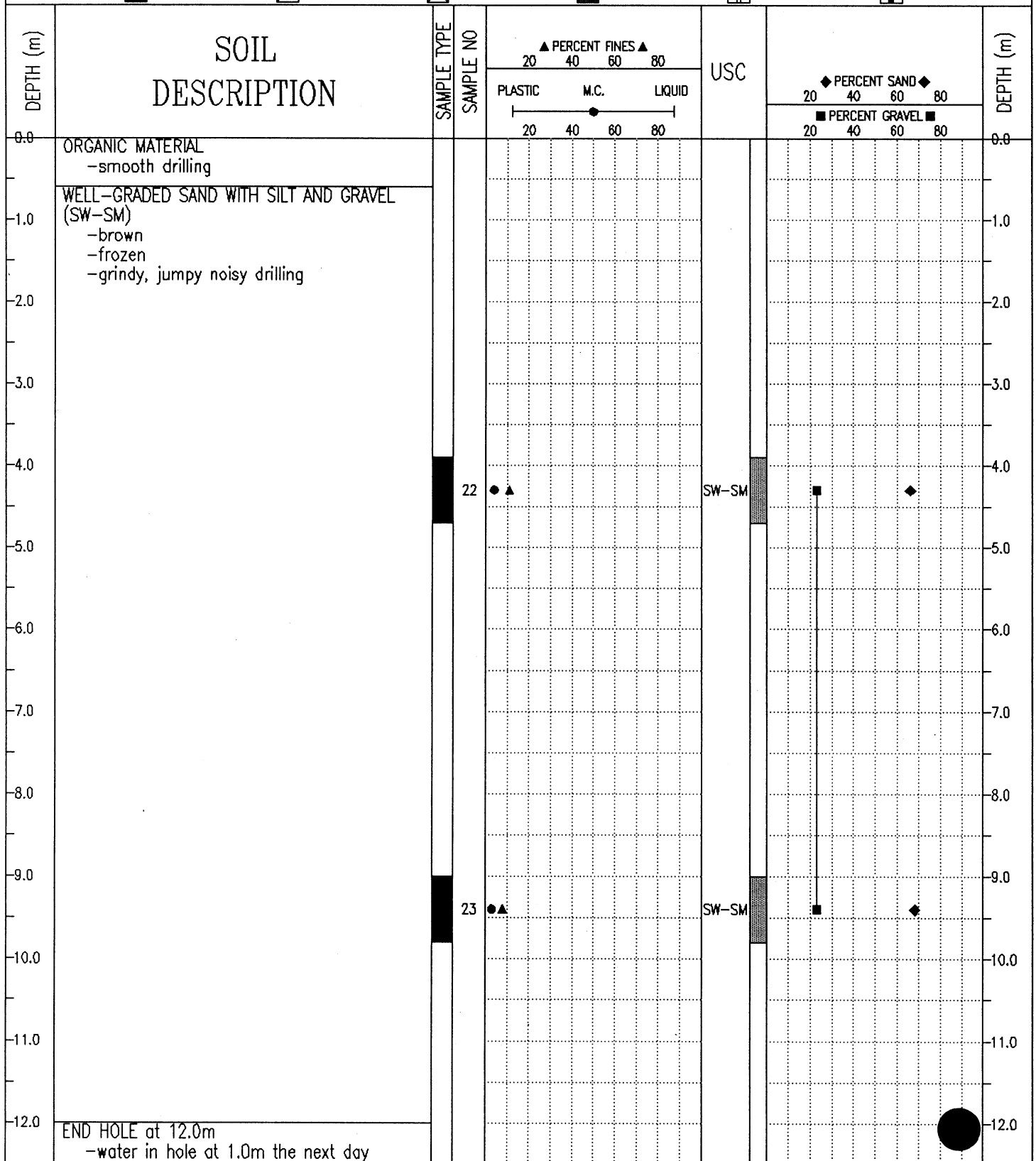
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERCENT SAND ◆		PERCENT GRAVEL ■	DEPTH (m)
				20	40	60		80	20		
12.0				PLASTIC	M.C.	LIQUID					12.0
13.0											13.0
14.0											14.0
15.0											15.0
16.0											16.0
17.0											17.0
18.0											18.0
18.6	END HOLE at 18.6m										18.6
19.0											19.0
20.0											20.0
21.0											21.0
22.0											22.0
23.0											23.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-77
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1917+900 o/s 9m Rt.	ELEVATION 0.000 (m)

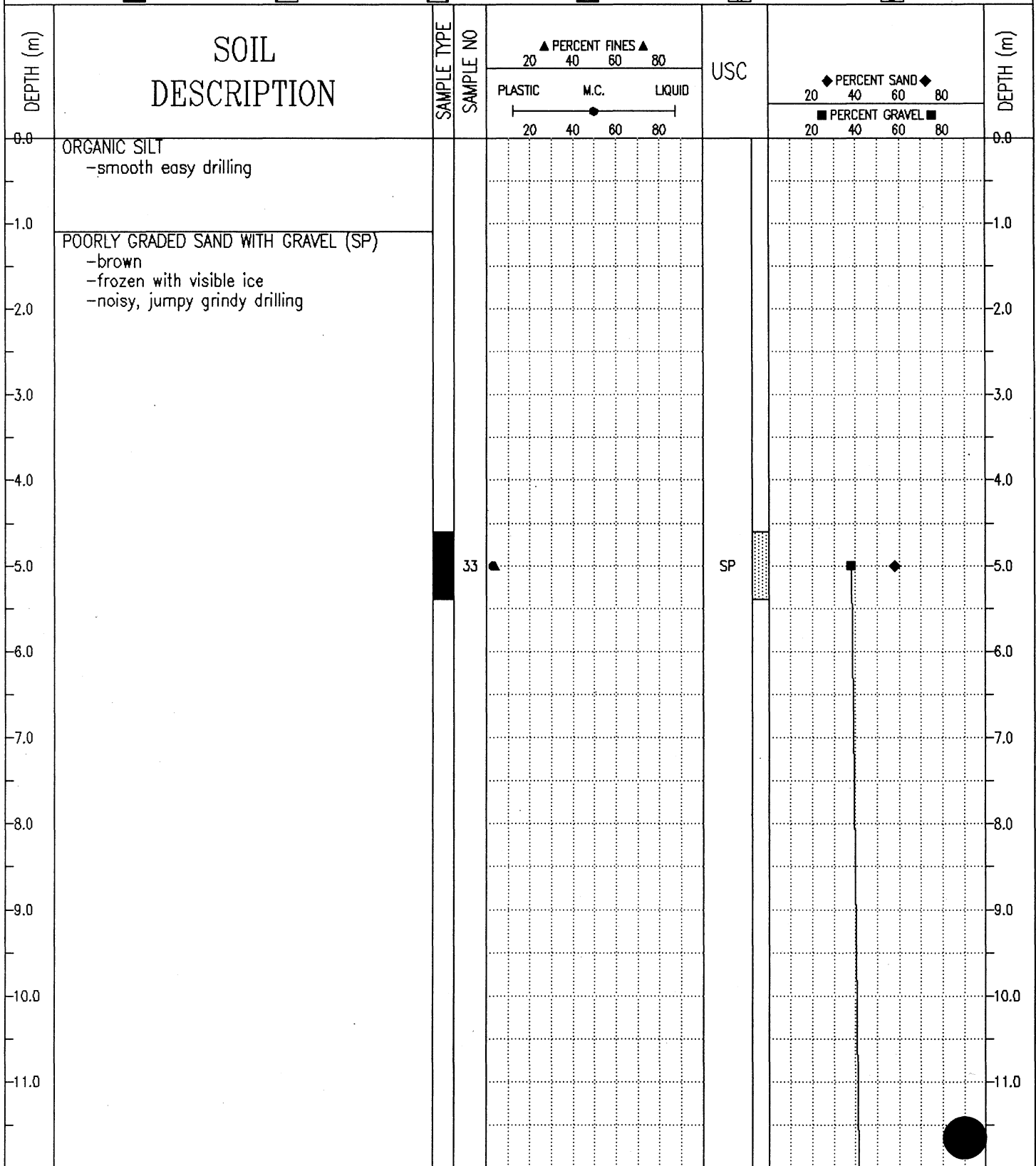
SAMPLE TYPE  RETURN  S.P.T.  AUGER  BULK  TUBE  CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM) -brown -damp -maximum 50mm material -grindy drilling								0.0
-1.0	-ash layer 1.0m to 1.1m								-1.0
-2.0			214	▲			GW-GM		-2.0
-3.0	POORLY GRADED GRAVEL WITH SAND (GP) -brown -damp -jumpy grindy drilling		215	▲			GP		-3.0
-4.0			216	▲			GP		-4.0
-5.0	END HOLE at 4.6m -on shoulder of road								-5.0
-6.0									-6.0

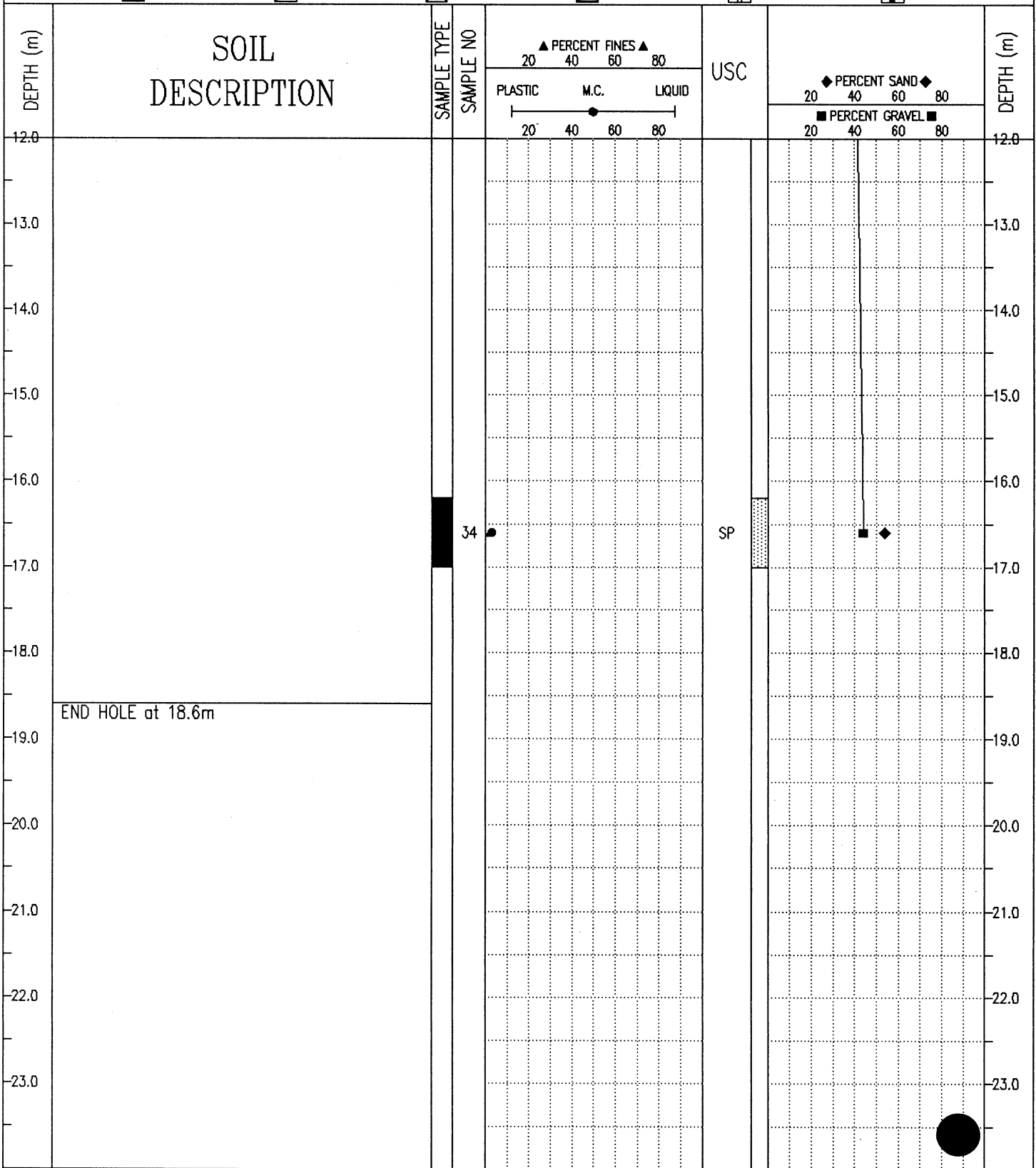
SUBSURFACE EXPLORATION AND TEST REPORT		ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 214-104
SHAKWAK PROJECT		SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL		LOCATION: STA 1917+900 o/s 50m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input checked="" type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 215-110
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1917+950 o/s 100m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input checked="" type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 215-110
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1917+950 o/s 100m Rt.	ELEVATION 0.000 (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		

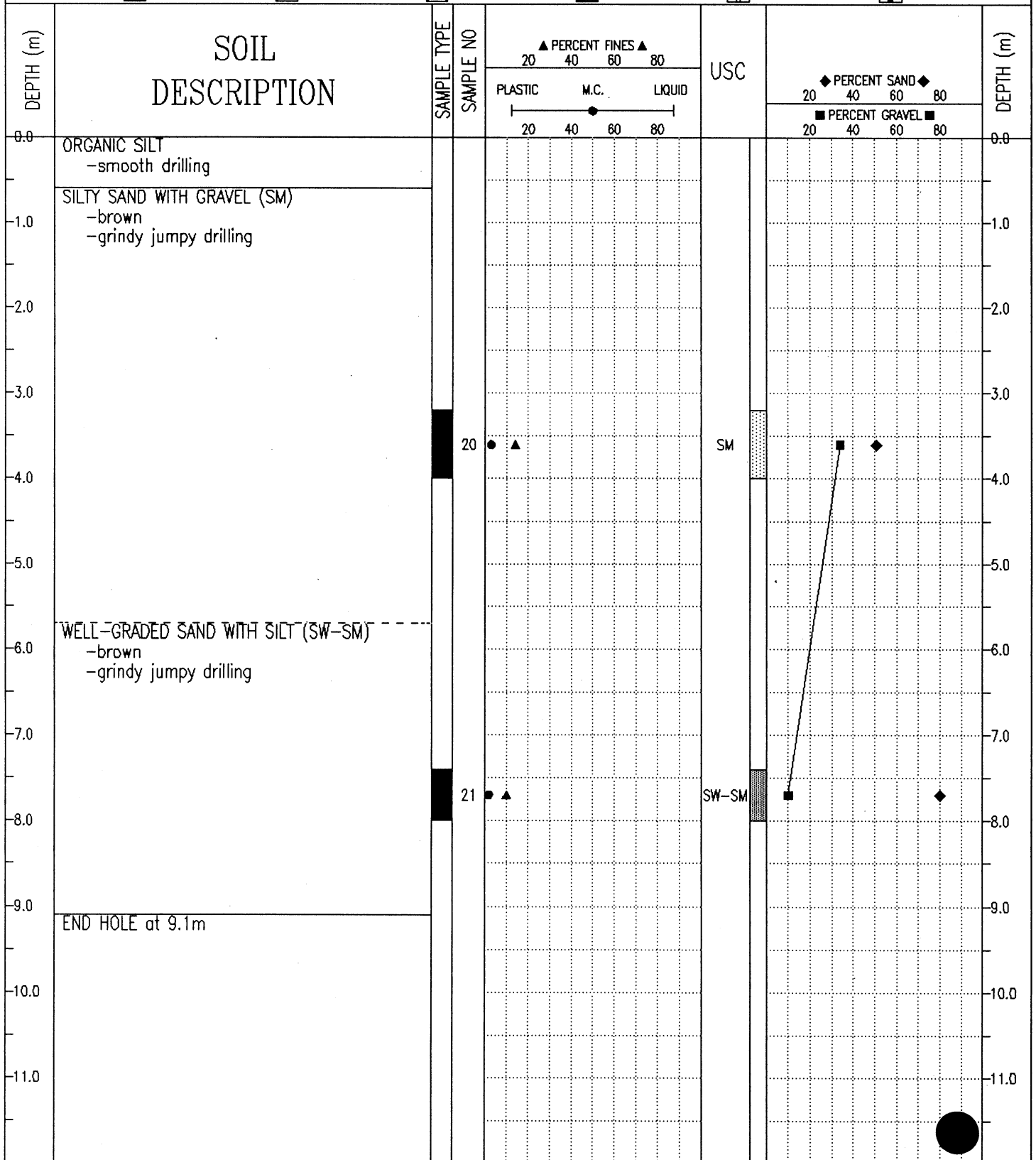


SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-78
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1918+000 o/s 3m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		

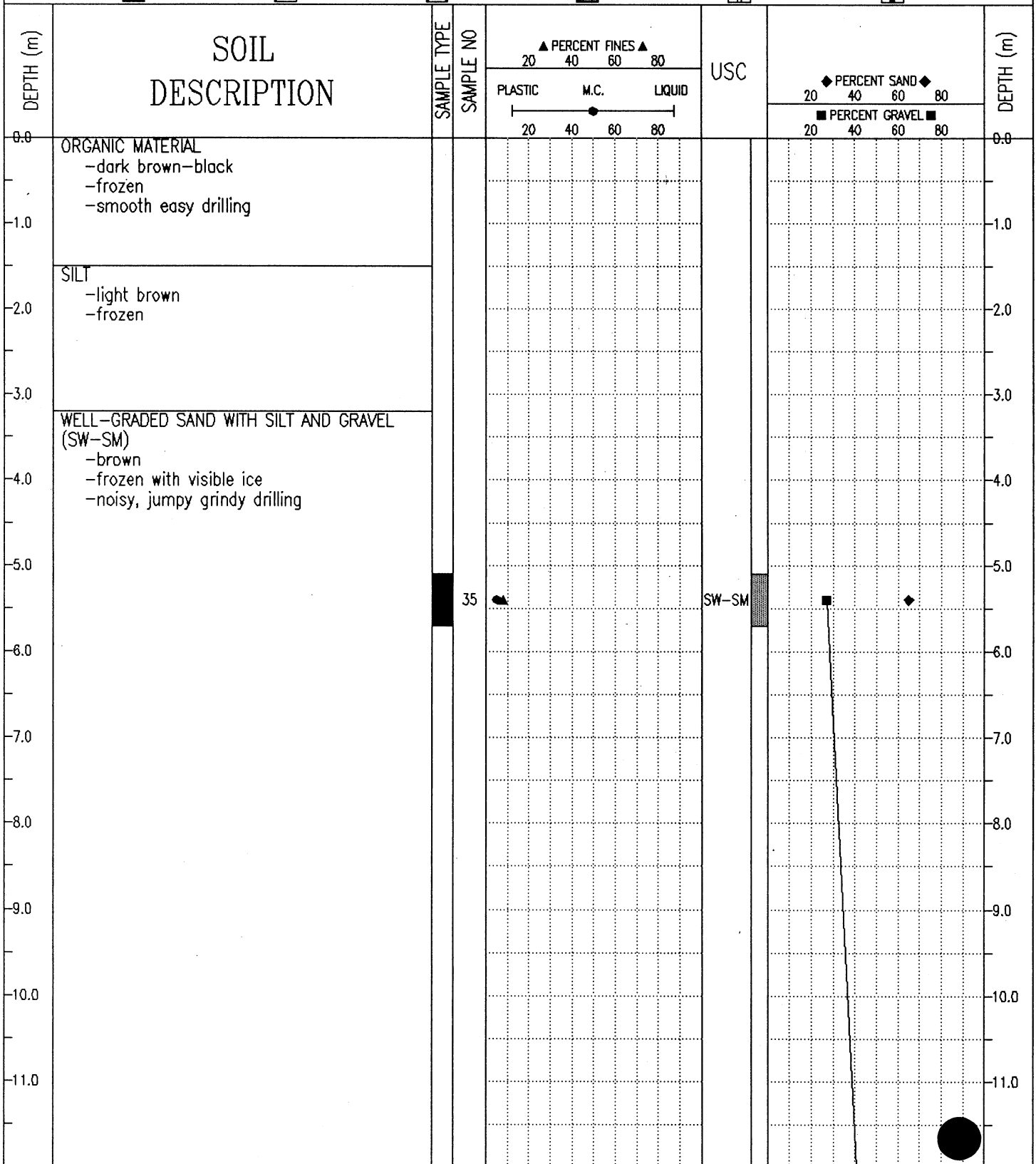
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM) -brown -damp -maximum 75mm material -grindy drilling								0.0
1.0									1.0
2.0									2.0
2.1		X	217				GP-GM		2.1
3.0	WELL-GRADED GRAVEL WITH SAND (GW) -brown -damp -maximum 50mm material -grindy drilling								3.0
3.1		X	218				GW		3.1
4.0									4.0
4.5		X	219				GW		4.5
5.0	END HOLE at 4.6m -on shoulder of road								5.0
6.0									6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 91/08/21
	LOGGED BY	DWG NO.

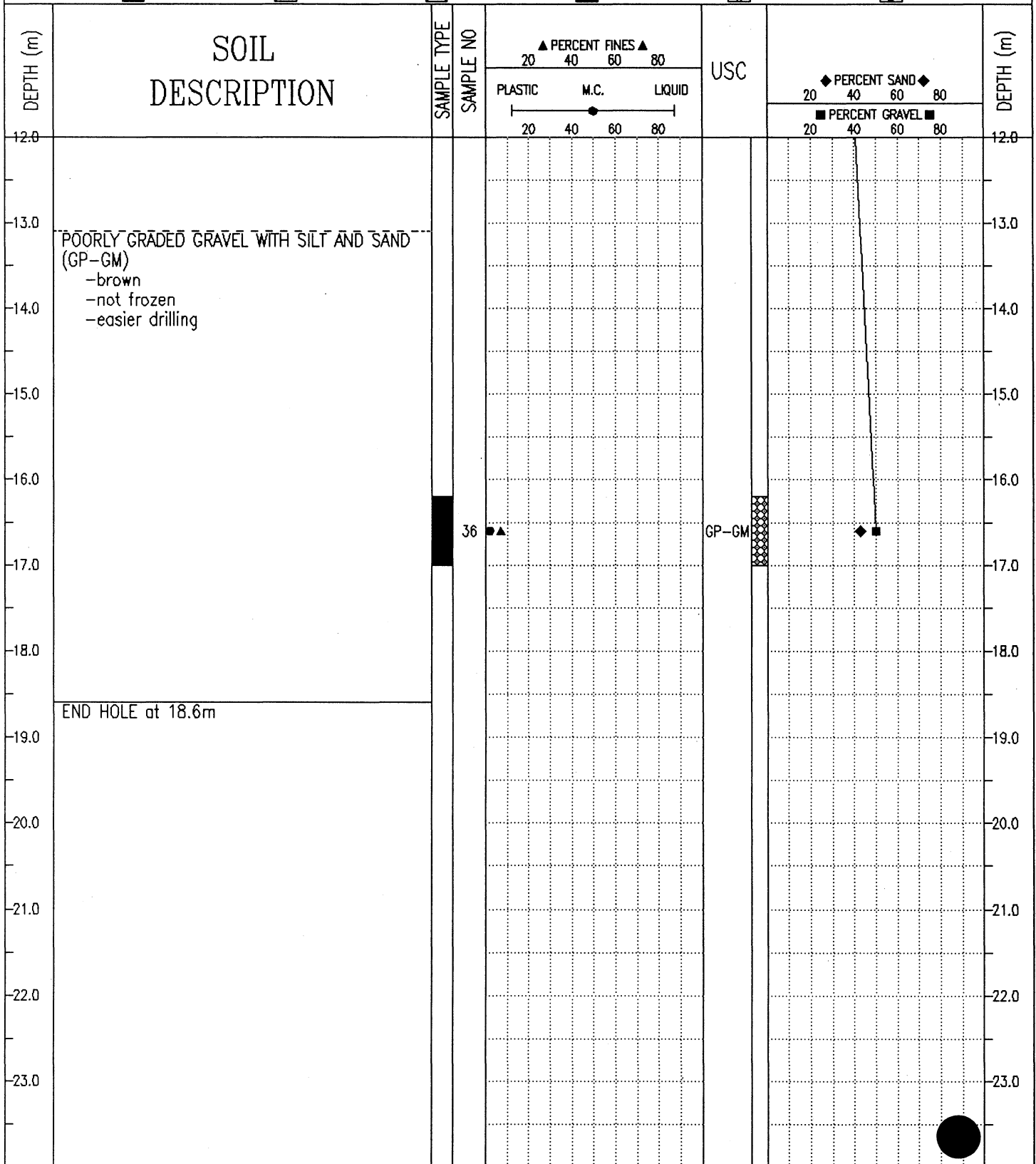
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 214-103
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1918+000 o/s 50m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 215-111
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1918+050 o/s 100m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input checked="" type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 215-111
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1918+050 o/s 100m Rt.	ELEVATION 0.000 (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		

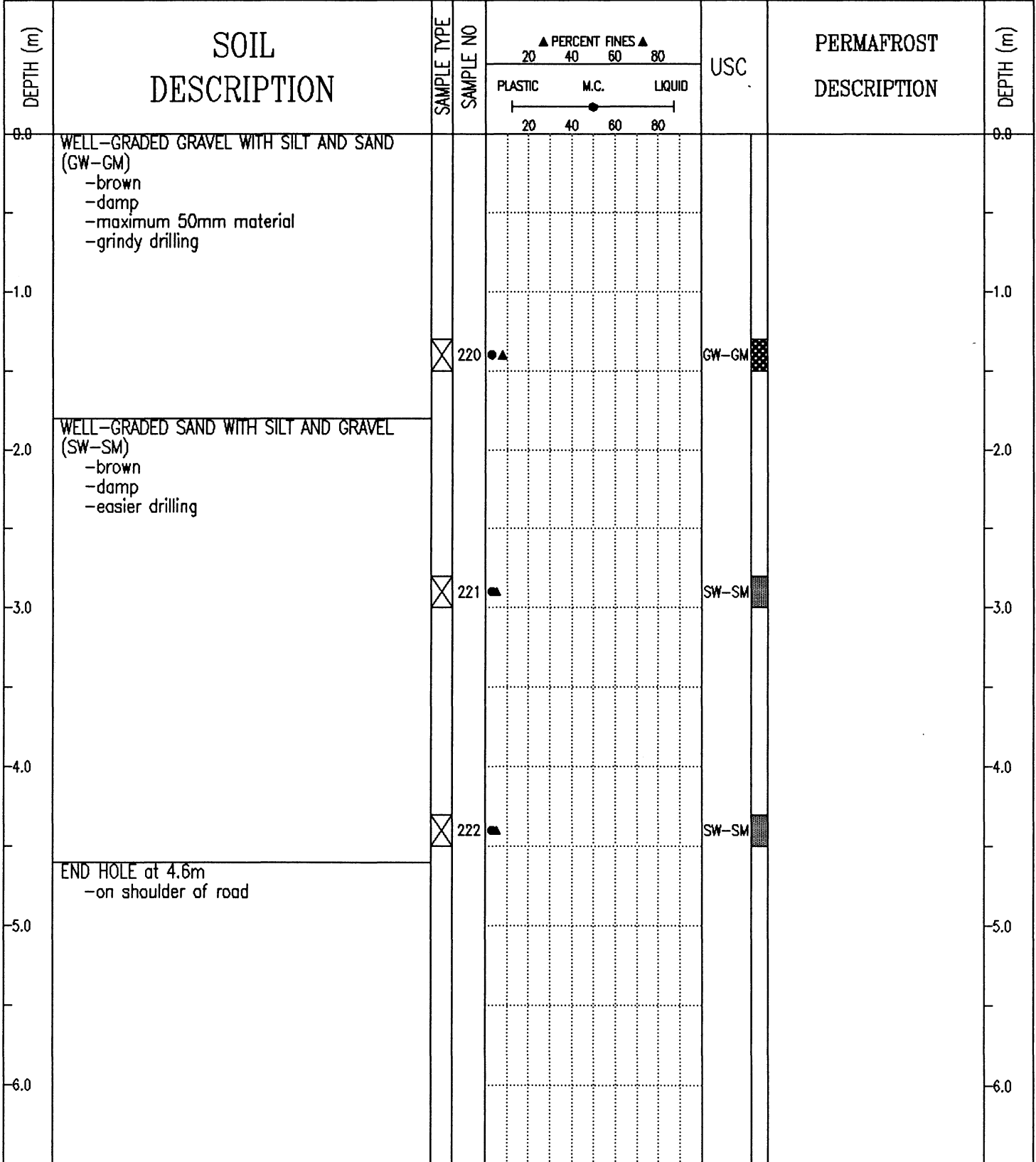


SUBSURFACE EXPLORATION AND TEST REPORT		ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 212-16
SHAKWAK PROJECT		SEGMENT 17B	Project No: 202101 0310
DRILL: BACKHOE: CAT 235		LOCATION: See Plan	ELEVATION 0.000 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input checked="" type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERCENT SAND ◆		PERCENT GRAVEL ■		DEPTH (m)
				20	40	60		80	20	40	60	
0.0	ORGANIC MATERIAL -frozen											0.0
1.0	SILT -frozen -some rock											1.0
2.0	GRAVEL -frozen -maximum 300mm material -very hard digging											2.0
2.0	END HOLE at 1.7m -refusal											2.0
3.0												3.0
4.0												4.0
5.0												5.0
6.0												6.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-79
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1918+100 o/s 2m Rt.	ELEVATION 0.000 (m)

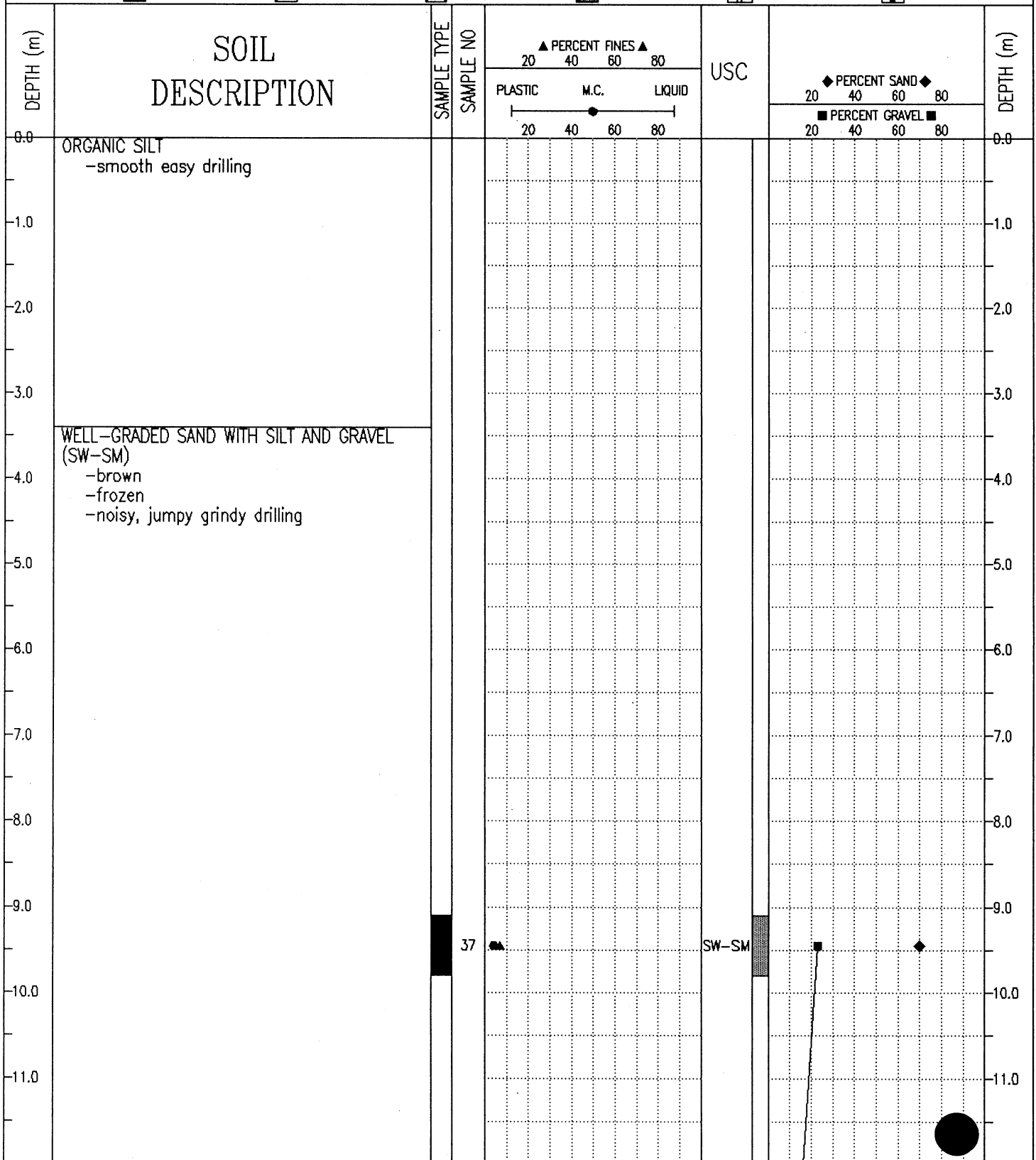
SAMPLE TYPE  RETURN  S.P.T.  AUGER  BULK  TUBE  CORE



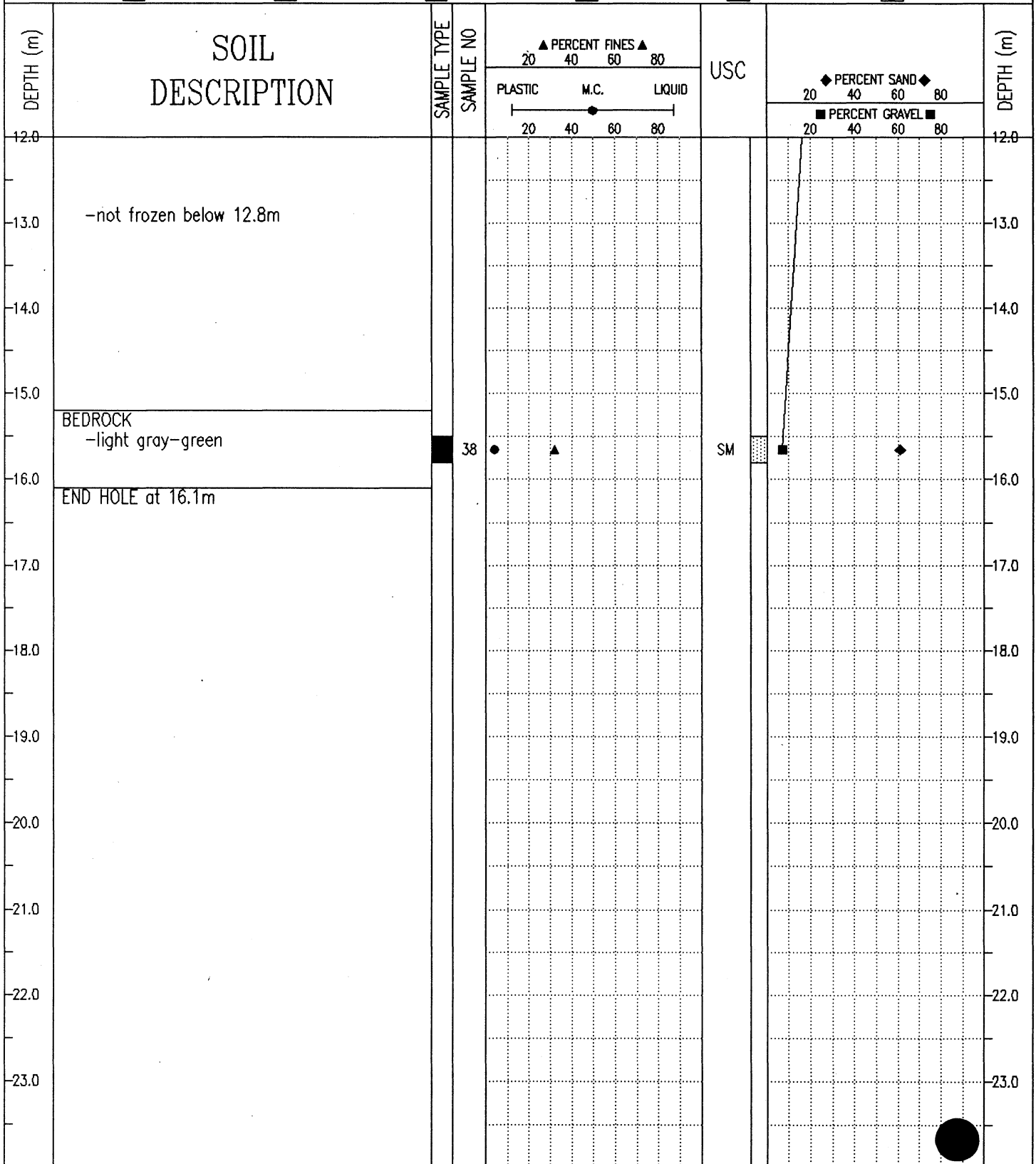
SUBSURFACE EXPLORATION AND TEST REPORT		ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 212-15
SHAKWAK PROJECT		SEGMENT 17B	Project No: 202101 0310
DRILL: BACKHOE: CAT 235		LOCATION: STA 1918+100 o/s 15m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input checked="" type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERCENT SAND ◆		PERCENT GRAVEL ■		DEPTH (m)
				20	40	60		80	20	40	60	
0.0	ORGANIC MATERIAL -frozen with visible ice											0.0
	SILT -frozen with visible ice											
-1.0												-1.0
-2.0												-2.0
-3.0												-3.0
-4.0	END HOLE at 3.3m -refusal -cobbles visible on bottom											-4.0
-5.0												-5.0
-6.0												-6.0

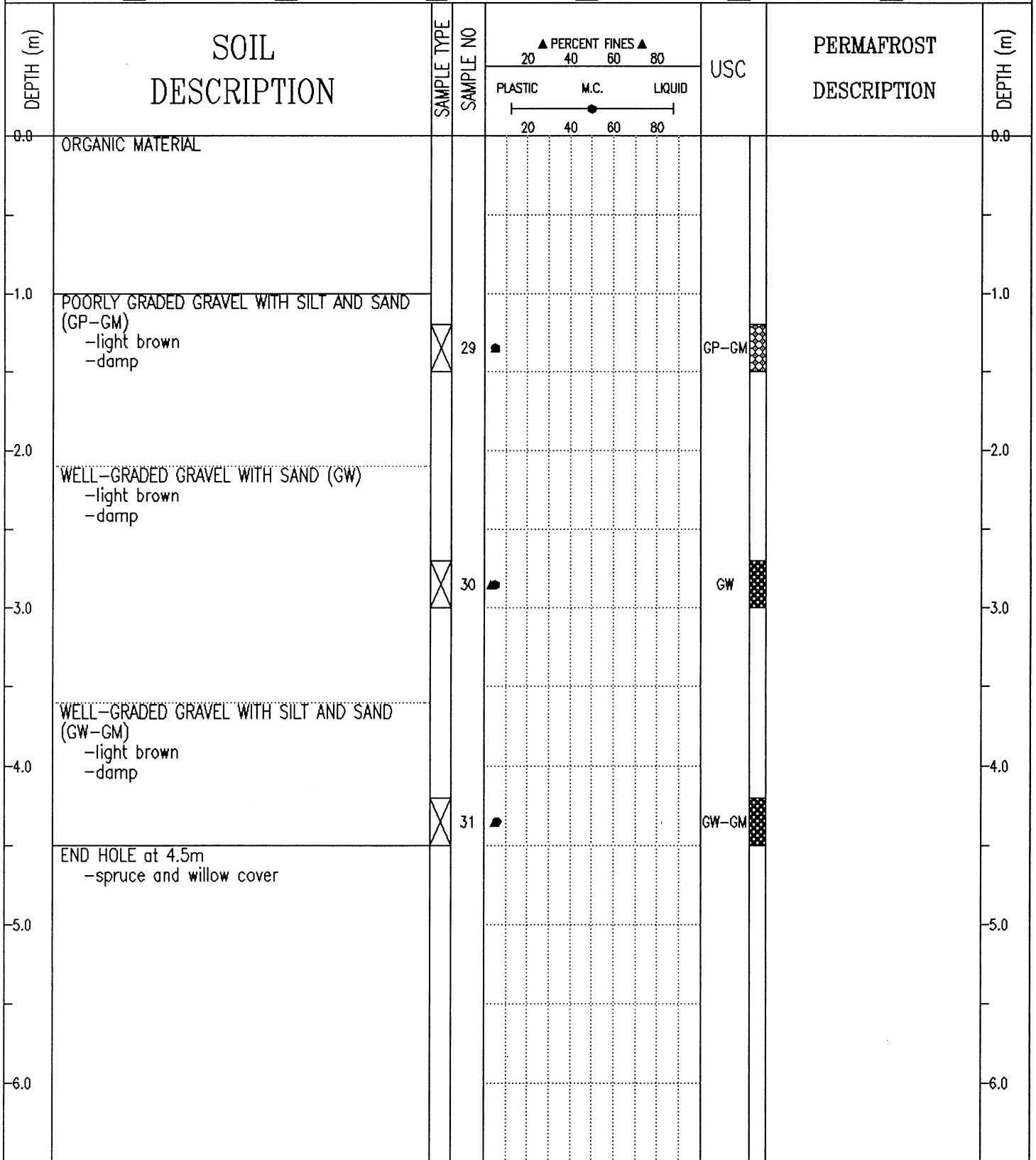
SUBSURFACE EXPLORATION AND TEST REPORT		ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 215-112
SHAKWAK PROJECT		SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL		LOCATION: STA 1918+175 o/s 100m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



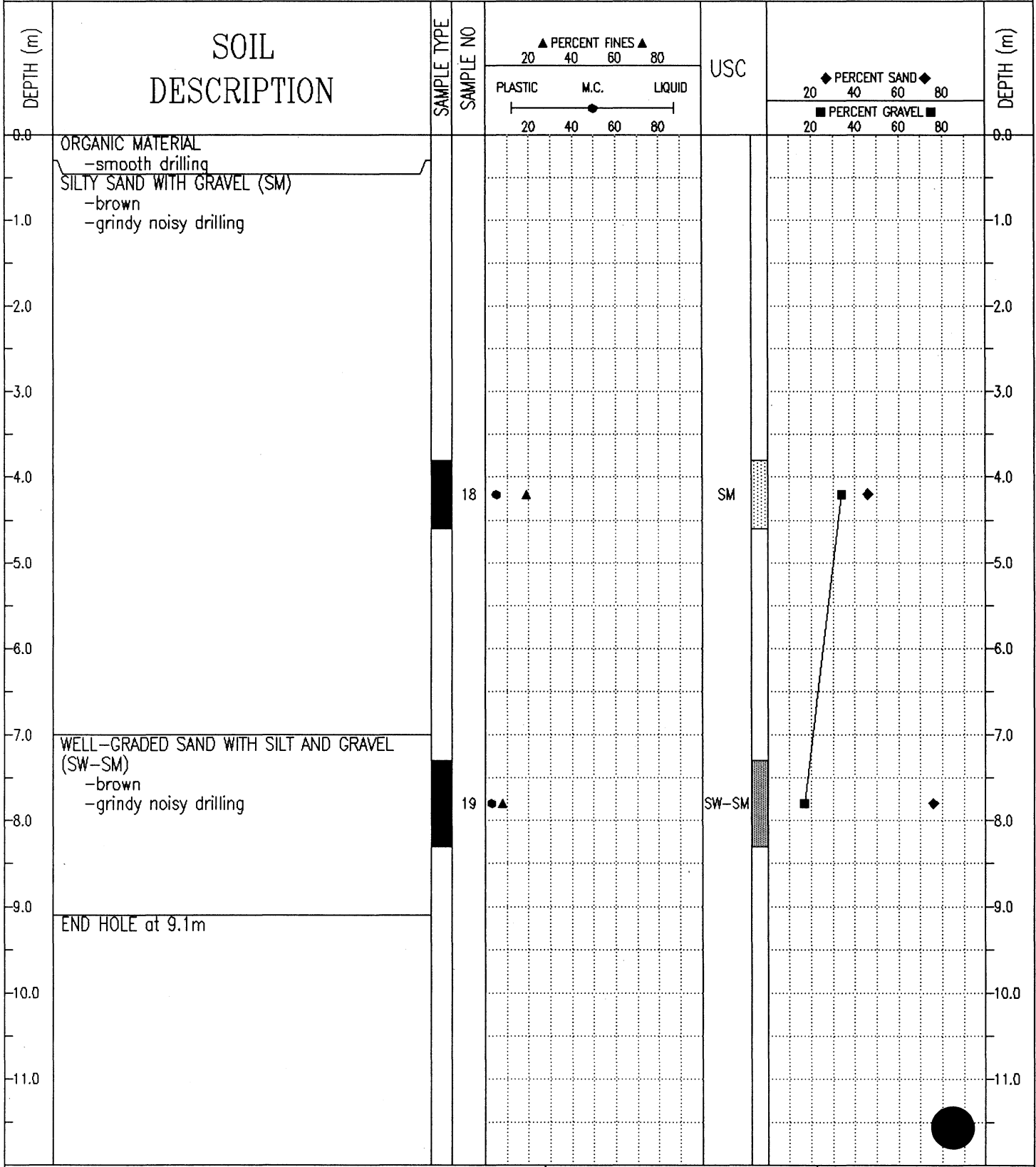
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 215-112
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1918+175 o/s 100m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



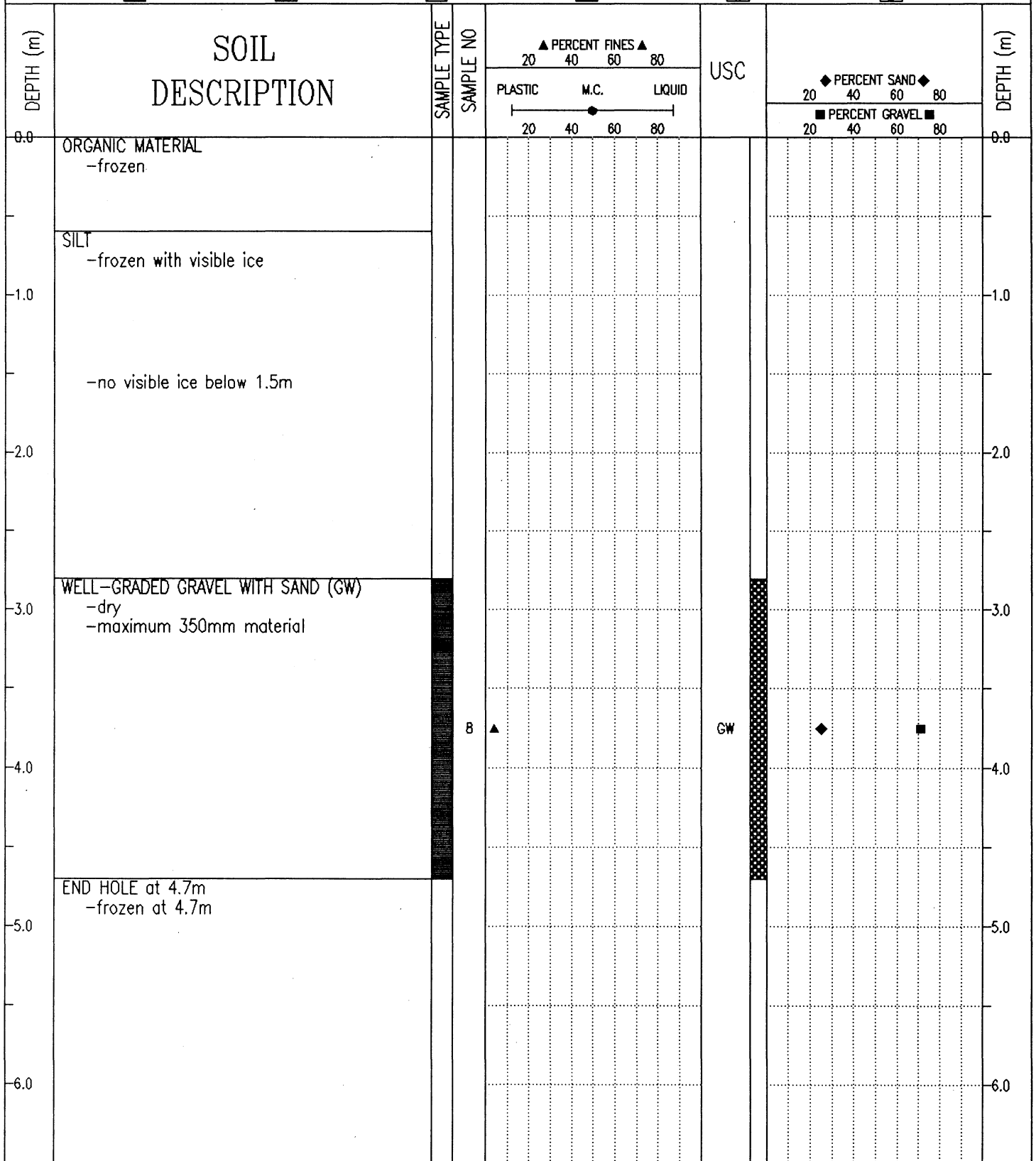
SUBSURFACE EXPLORATION AND TEST REPORT		ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 174-14
SHAKWAK PROJECT		SEGMENT 17	Project No: 202101 0304
DRILL: B40L 150mm SOLID STEM AUGER		LOCATION: STA 1918+200 o/s 12m Lt	ELEVATION 0.000 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input checked="" type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



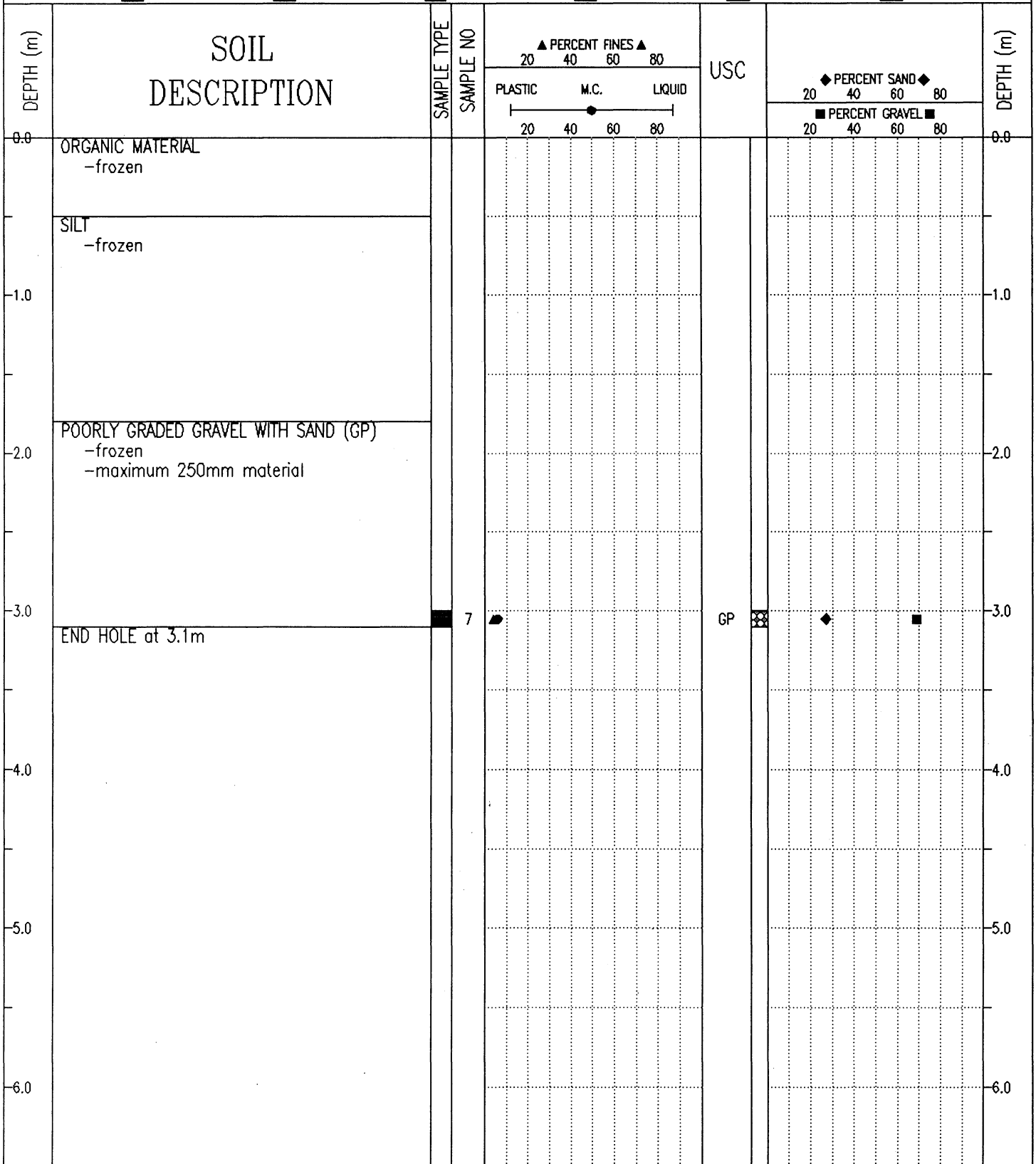
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 214-102
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1918+200 o/s 50m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input checked="" type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



SUBSURFACE EXPLORATION AND TEST REPORT		ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 212-18
SHAKWAK PROJECT		SEGMENT 17B	Project No: 202101 0310
DRILL: BACKHOE: CAT 235		LOCATION: STA 1918+230 o/s 100m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input checked="" type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



SUBSURFACE EXPLORATION AND TEST REPORT		ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 212-17
SHAKWAK PROJECT		SEGMENT 17B	Project No: 202101 0310
DRILL: BACKHOE: CAT 235		LOCATION: STA 1918+285 o/s 15m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input checked="" type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



Public Works Canada  
Whitehorse, Yukon Territory.

COMPLETION DEPTH 3.1 m

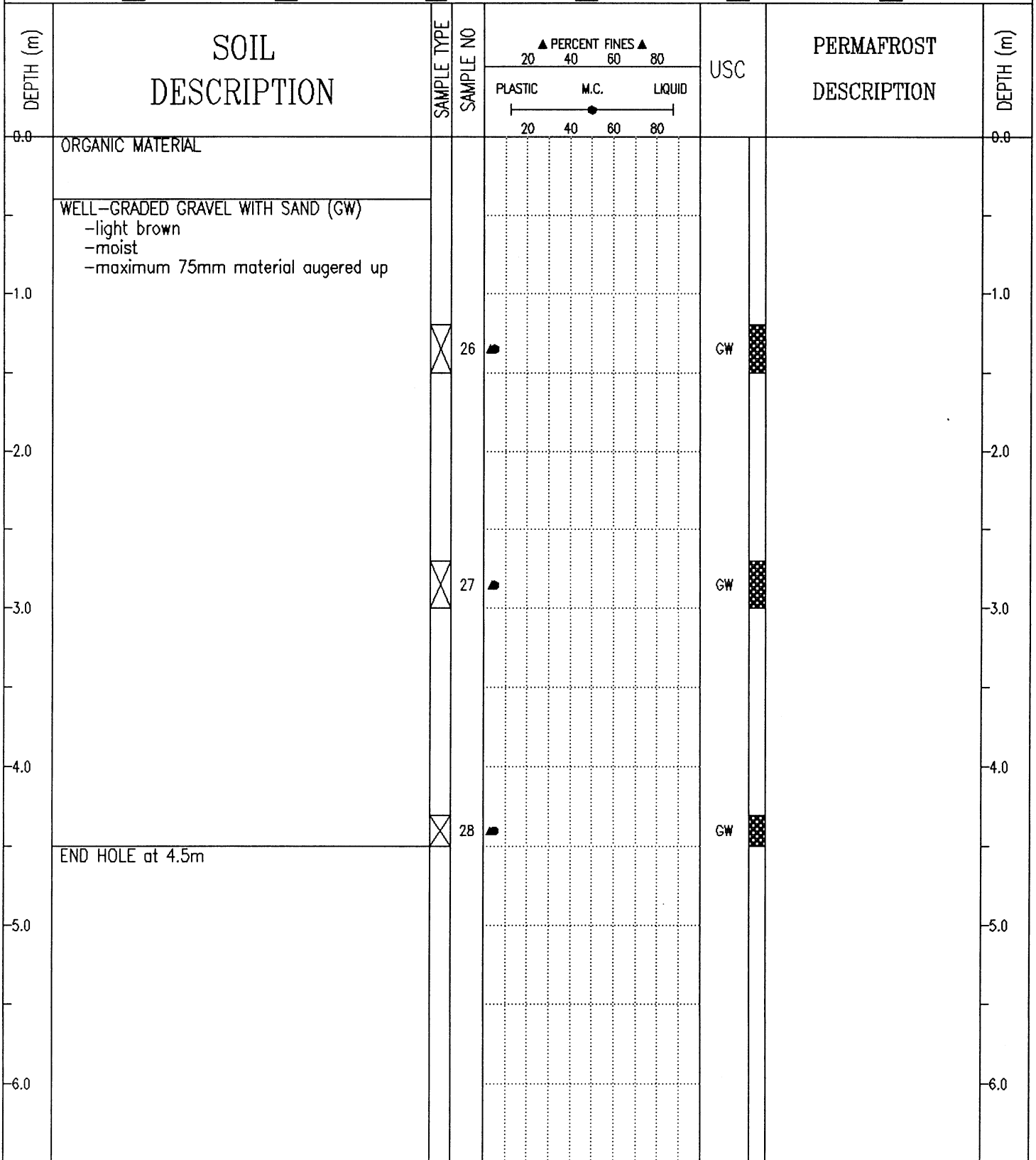
COMPLETE 93/04/02

LOGGED BY BS

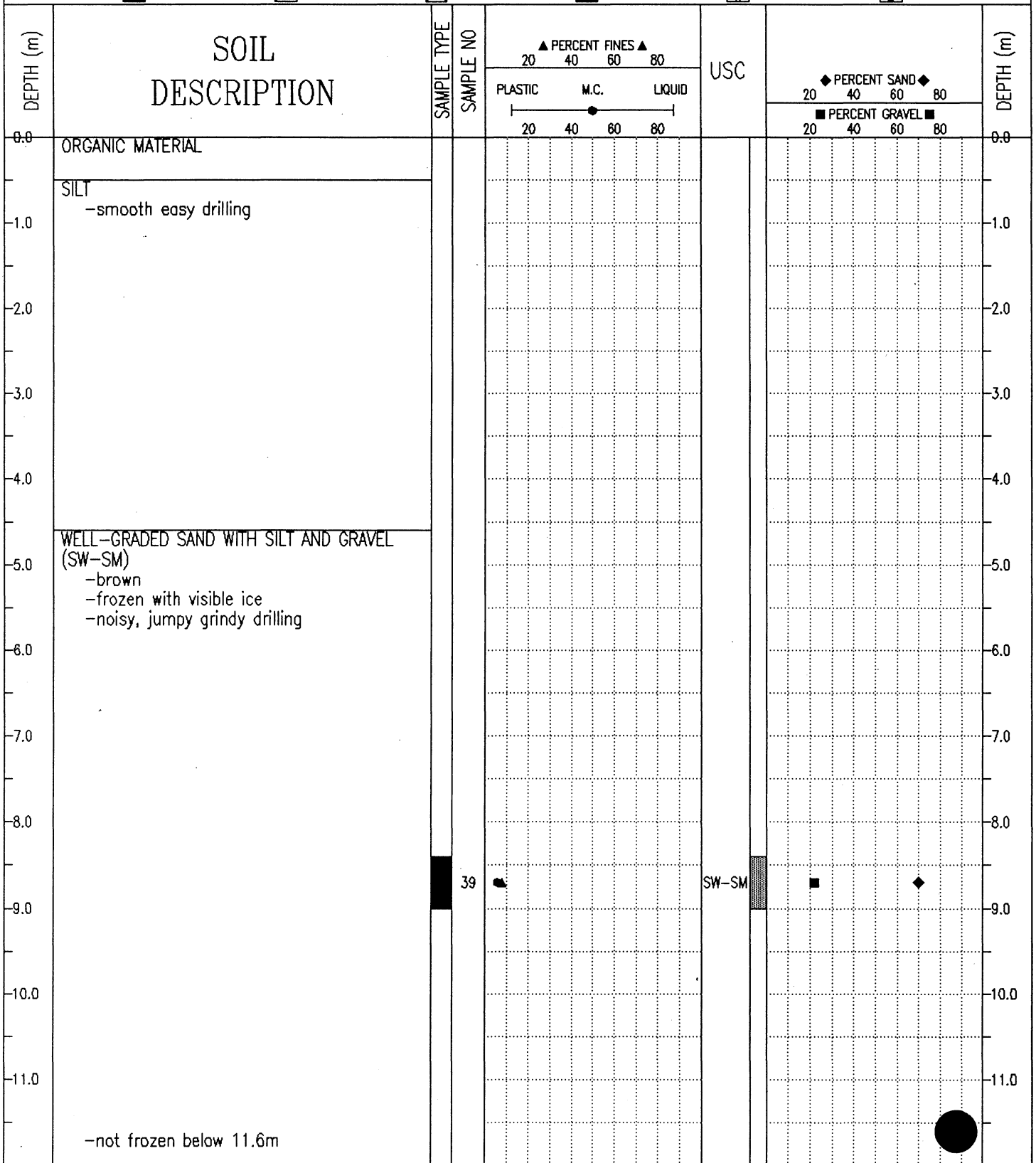
DWG NO.

Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT		ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 174-13
SHAKWAK PROJECT		SEGMENT 17	Project No: 202101 0304
DRILL: B40L 150mm SOLID STEM AUGER		LOCATION: STA 1918+300	ELEVATION 0.000 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input checked="" type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



SUBSURFACE EXPLORATION AND TEST REPORT		ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 215-113
SHAKWAK PROJECT		SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL		LOCATION: STA 1918+300 o/s 100m Rt.	ELEVATION 0.000 (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



Public Works Canada  
Whitehorse, Yukon Territory.

COMPLETION DEPTH 18.6 m

COMPLETE 93/04/14

LOGGED BY DT

DWG NO.

Page 1 of 2

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 215-113
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1918+300 o/s 100m Rt.	ELEVATION 0.000 (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	PERCENT SAND ◆		PERCENT GRAVEL ■	DEPTH (m)
				20	40	60		80	20		
12.0											12.0
-13.0											-13.0
-14.0											-14.0
-15.0											-15.0
-16.0											-16.0
-17.0											-17.0
-18.0											-18.0
-19.0	END HOLE at 18.6m										-19.0
-20.0											-20.0
-21.0											-21.0
-22.0											-22.0
-23.0											-23.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 174-12
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0304
DRILL: B40L 150mm SOLID STEM AUGER	LOCATION: STA 1918+400	ELEVATION 0.000 (m)

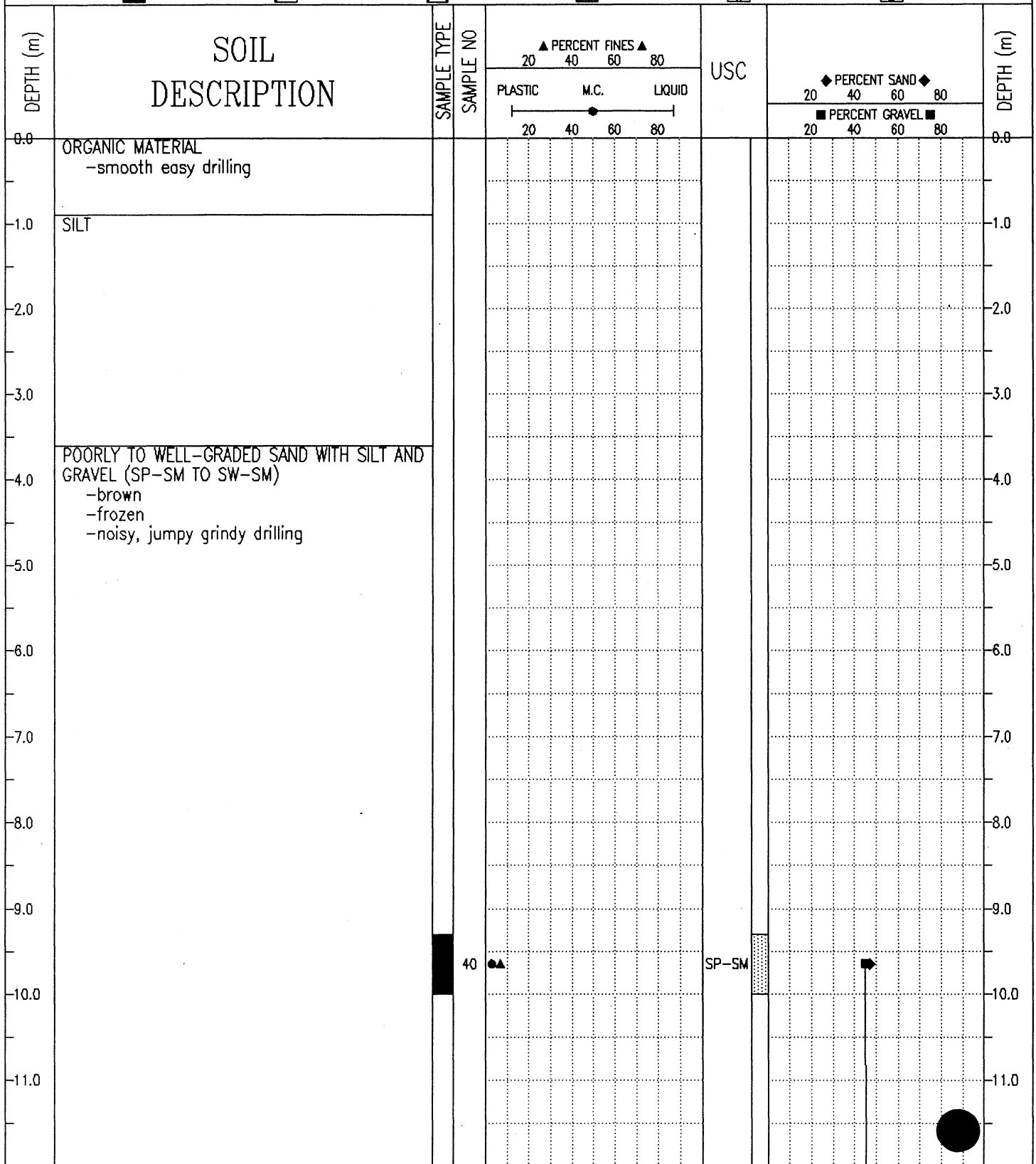
SAMPLE TYPE  RETURN  S.P.T.  AUGER  BULK  TUBE  CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC MATERIAL							0.0	
	ICE WITH SOIL								
1.0	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM) -brown -moist -maximum 40mm material augered up	<input checked="" type="checkbox"/>	25				GP-GM	1.0	
	END HOLE at 1.5m -refusal -small spruce cover								
2.0								2.0	
3.0								3.0	
4.0								4.0	
5.0								5.0	
6.0								6.0	

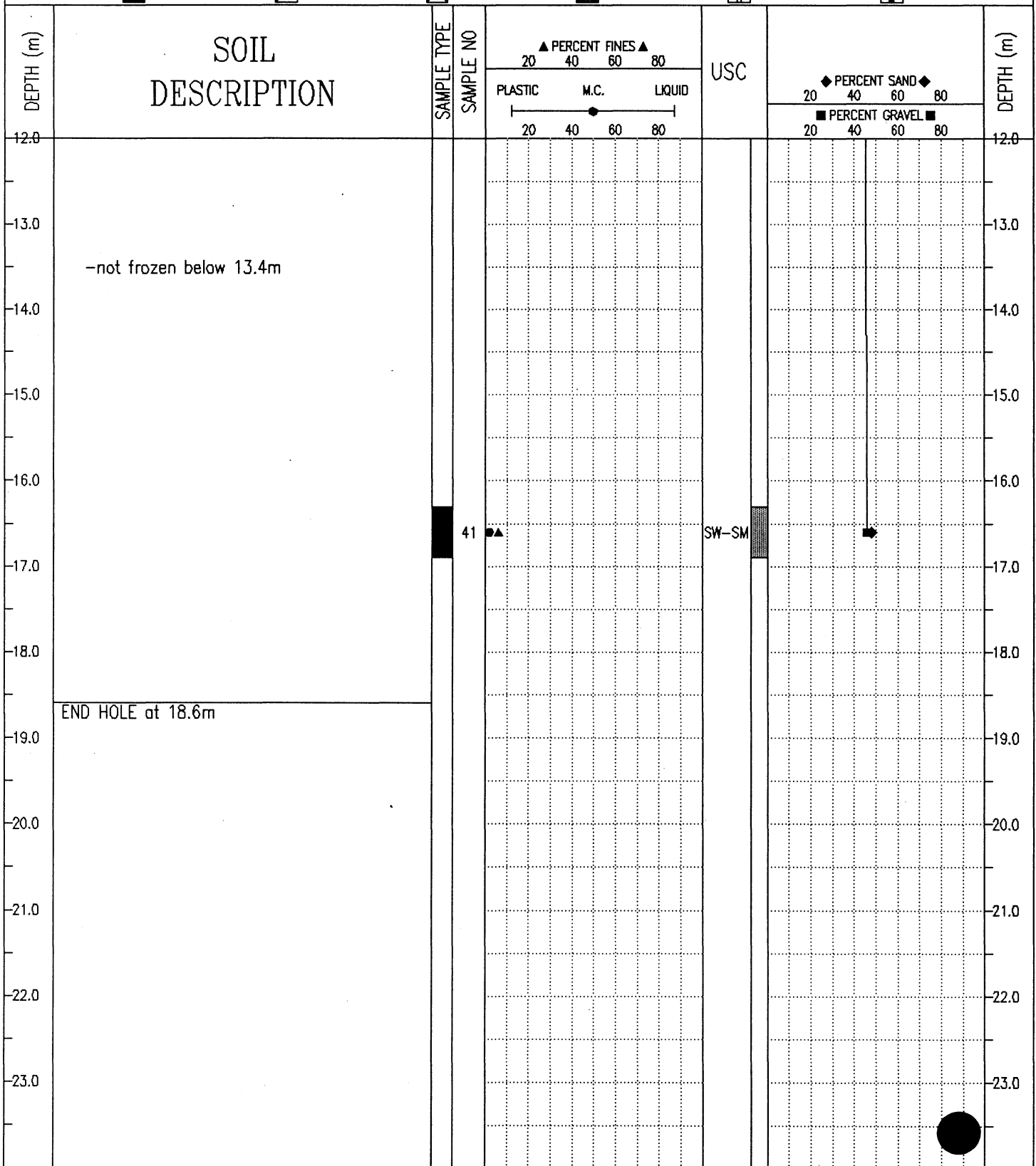
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 212-14
SHAKWAK PROJECT	SEGMENT 17B	Project No: 202101 0310
DRILL: BACKHOE: CAT 235	LOCATION: STA 1918+400 o/s 10m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> 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	◆ PERCENT SAND ◆		■ PERCENT GRAVEL ■	DEPTH (m)
				PLASTIC	M.C.	LIQUID		20	40		
0.0	ORGANIC MATERIAL										0.0
1.0	SILT										1.0
2.0	WELL-GRADED GRAVEL WITH SAND (GW) -frozen -maximum 300mm material										2.0
3.0											3.0
4.0											4.0
4.5	END HOLE at 4.5m -on pole line		6				GW				4.5
5.0											5.0
6.0											6.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 216-114
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1918+425 o/s 100m Rt.	ELEVATION 0.000 (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		



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 216-114
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1918+425 o/s 100m Rt.	ELEVATION 0.000 (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		

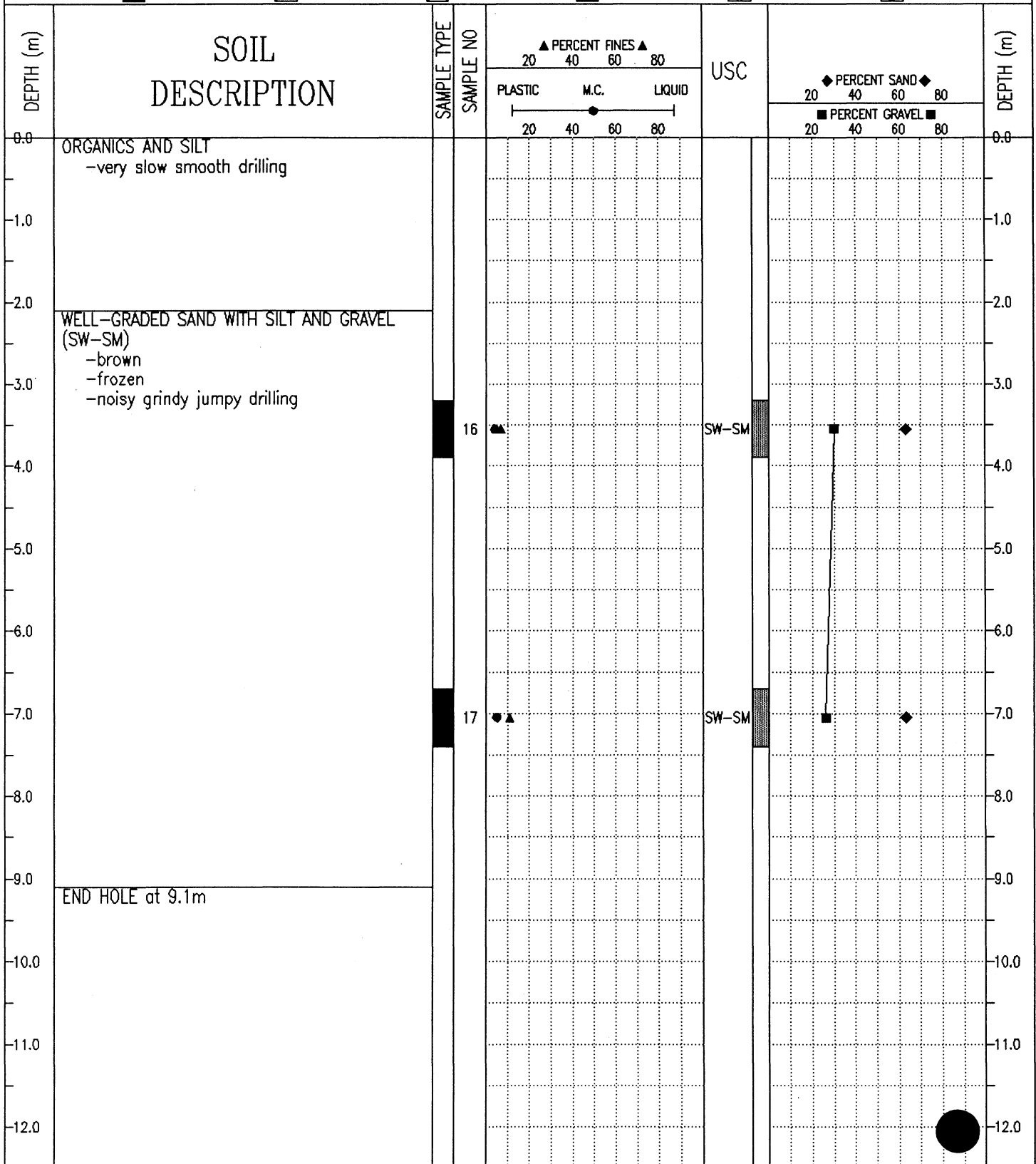


SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 174-11
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0304
DRILL: B40L 150mm SOLID STEM AUGER	LOCATION: STA 1918+500	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC MATERIAL -water at 0.5m								0.0
1.0	SILTY GRAVEL WITH SAND (GM) -brown -moist								1.0
1.6	END HOLE at 1.6m -refusal -swamp spruce cover	<input checked="" type="checkbox"/>	24	▲	●		GM		1.6
2.0									2.0
3.0									3.0
4.0									4.0
5.0									5.0
6.0									6.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 214-101
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1918+500 o/s 50m Rt.	ELEVATION 0.000 (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		



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 174-10
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0304
DRILL: B40L 150mm SOLID STEM AUGER	LOCATION: STA 1918+600	ELEVATION 0.000 (m)

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

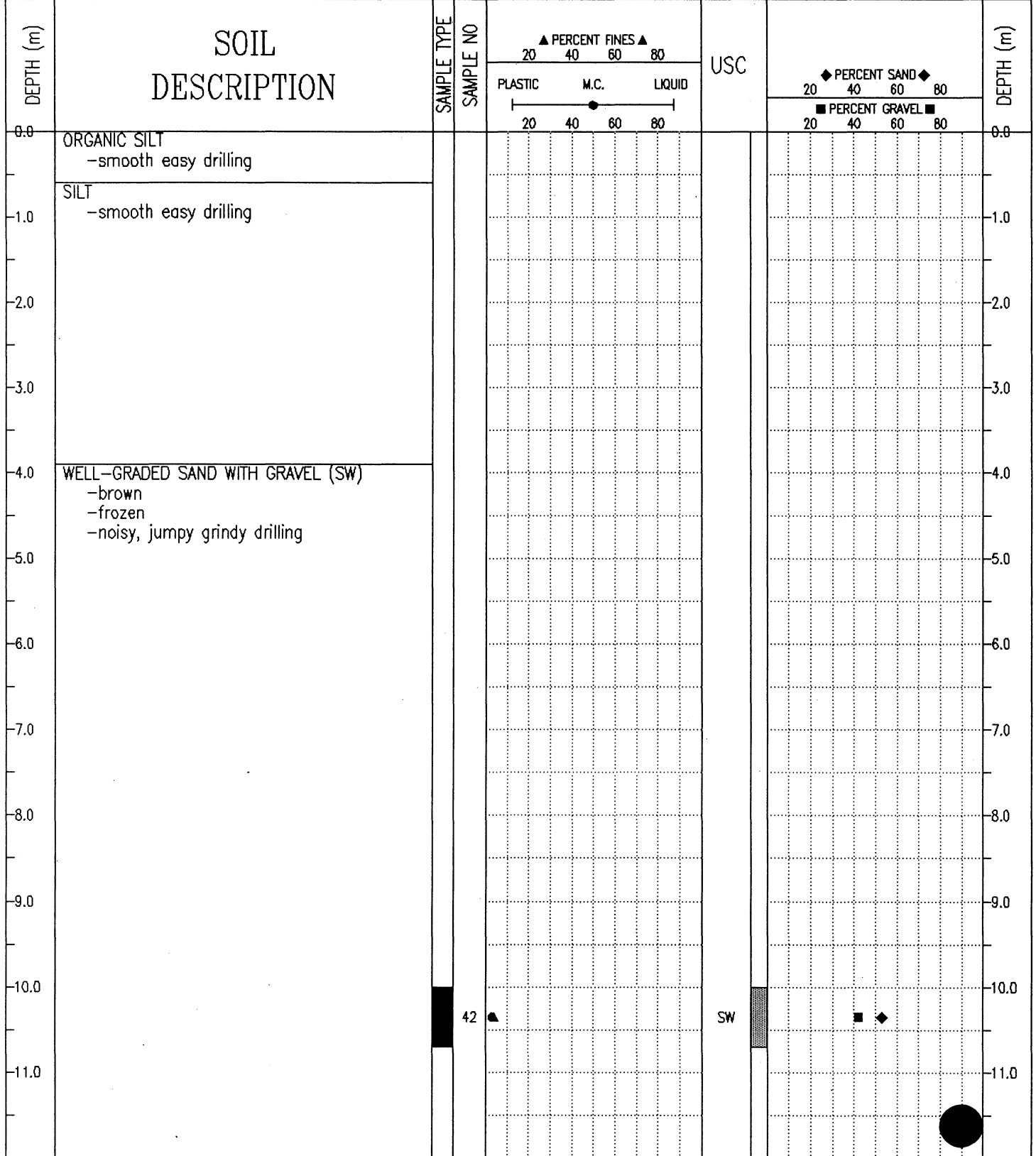
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC MATERIAL							0.0	
	SILTY SAND (SM) -gray -moist -easy drilling								
-1.0								-1.0	
	-harder drilling below 1.6m	<input checked="" type="checkbox"/>	23	●	▲		SM		
-2.0	END HOLE at 2.0m -refusal -spruce cover							-2.0	
-3.0								-3.0	
-4.0								-4.0	
-5.0								-5.0	
-6.0								-6.0	

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 212-13
SHAKWAK PROJECT	SEGMENT 17B	Project No: 202101 0310
DRILL: BACKHOE: CAT 235	LOCATION: STA 1918+600 o/s 10m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input checked="" type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERCENT SAND ◆		PERCENT GRAVEL ■		DEPTH (m)
				20	40	60		80	20	40	60	
0.0	ORGANIC MATERIAL -frozen											0.0
	SILT -frozen with visible ice											
-1.0												-1.0
	WELL-GRADED GRAVEL WITH SAND (GW) -frozen with visible ice -maximum 500mm material											
-2.0												-2.0
-3.0												-3.0
-4.0	END HOLE at 4.1m		5				GW	◆		■		-4.0
-5.0												-5.0
-6.0												-6.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 216-115
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1918+600 o/s 100m Rt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 216-115
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1918+600 o/s 100m Rt.	ELEVATION 0.000 (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	PERCENT SAND ◆		PERCENT GRAVEL ■	DEPTH (m)
				PLASTIC	M.C.	LIQUID		20	40		
12.0											12.0
13.0											13.0
14.0											14.0
15.0											15.0
16.0											16.0
17.0											17.0
18.0											18.0
18.3	END HOLE at 18.3m										18.3
19.0											19.0
20.0											20.0
21.0											21.0
22.0											22.0
23.0											23.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 216-118
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1918+625 o/s 75m Rt.	ELEVATION 0.000 (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	PERCENT SAND ◆		PERCENT GRAVEL ■	DEPTH (m)
				PLASTIC	M.C.	LIQUID		20	40		
0.0	ORGANIC SILT -smooth easy drilling										0.0
1.0	SANDY GRAVEL WITH SILT -brown -frozen with visible ice -noisy, jumpy grindy drilling										1.0
2.0											2.0
3.0											3.0
4.0											4.0
5.0	END HOLE at 4.6m -drill rods plugged up										5.0
6.0											6.0

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COMPLETION DEPTH 4.6 m

COMPLETE 93/04/14

LOGGED BY DT

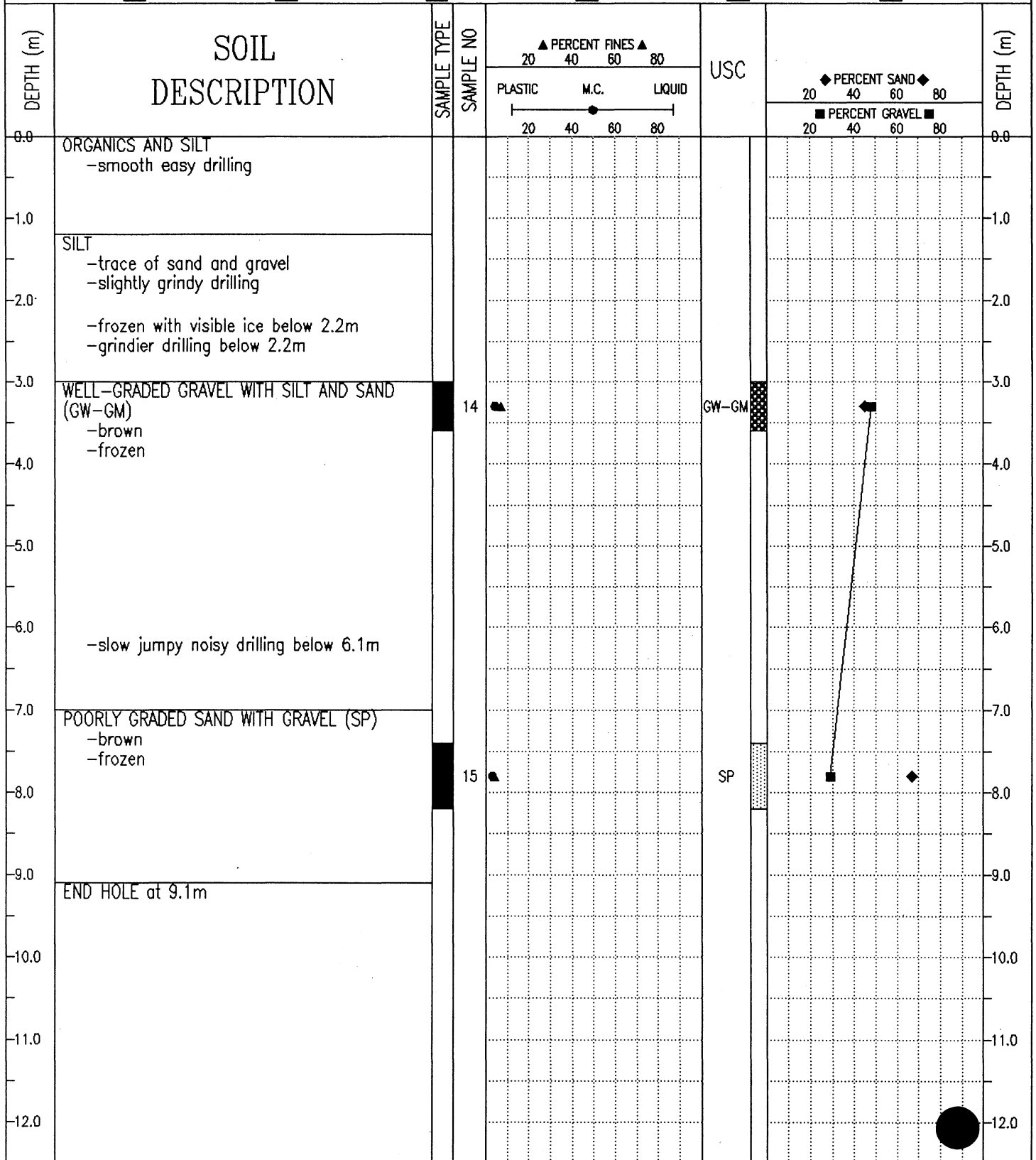
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Page 1 of 1

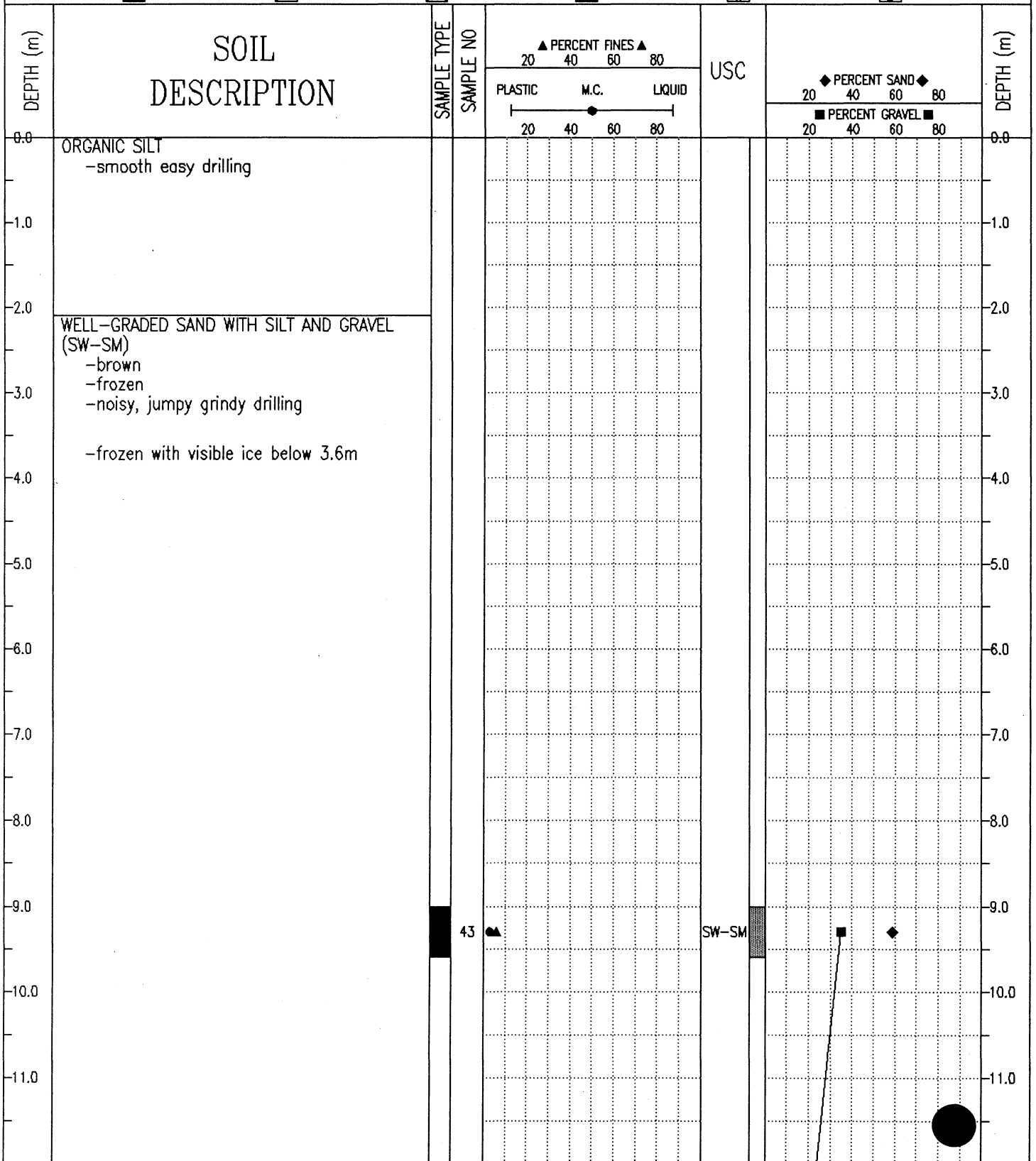
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 174-09
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0304
DRILL: B40L 150mm SOLID STEM AUGER	LOCATION: STA 1918+700	ELEVATION 0.000 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <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	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC MATERIAL								0.0
	SILTY GRAVEL WITH SAND (GM) -brown -moist -maximum 40mm material augered up -hard drilling								
-1.0			22	●▲			GM		-1.0
	END HOLE at 1.3m -refusal -spruce cover								
-2.0									-2.0
-3.0									-3.0
-4.0									-4.0
-5.0									-5.0
-6.0									-6.0

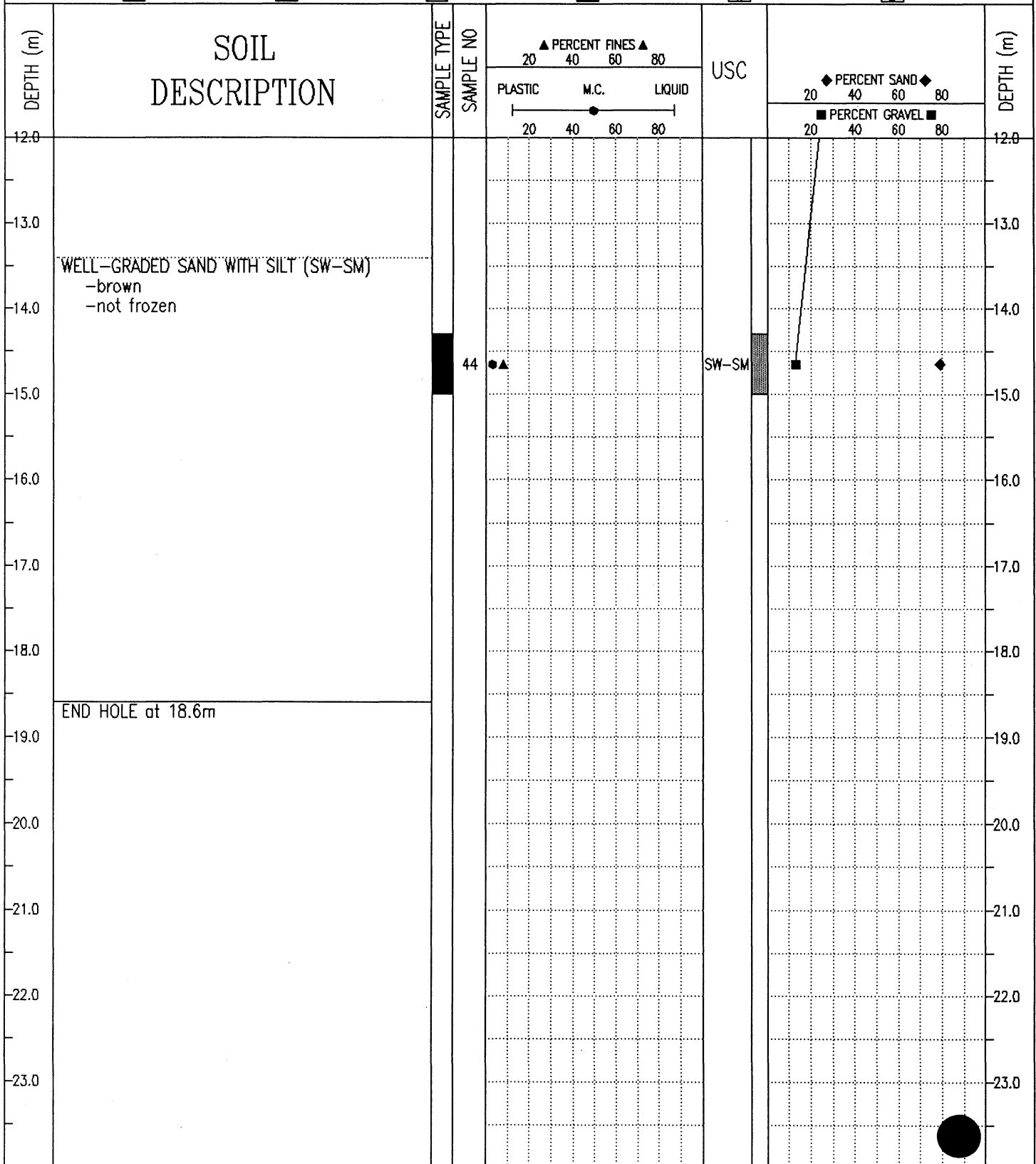
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 214-100
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1918+700	ELEVATION 0.000 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 216-116
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1918+700 o/s 75m Rt.	ELEVATION 0.000 (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		



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 216-116
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1918+700 o/s 75m Rt.	ELEVATION 0.000 (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		



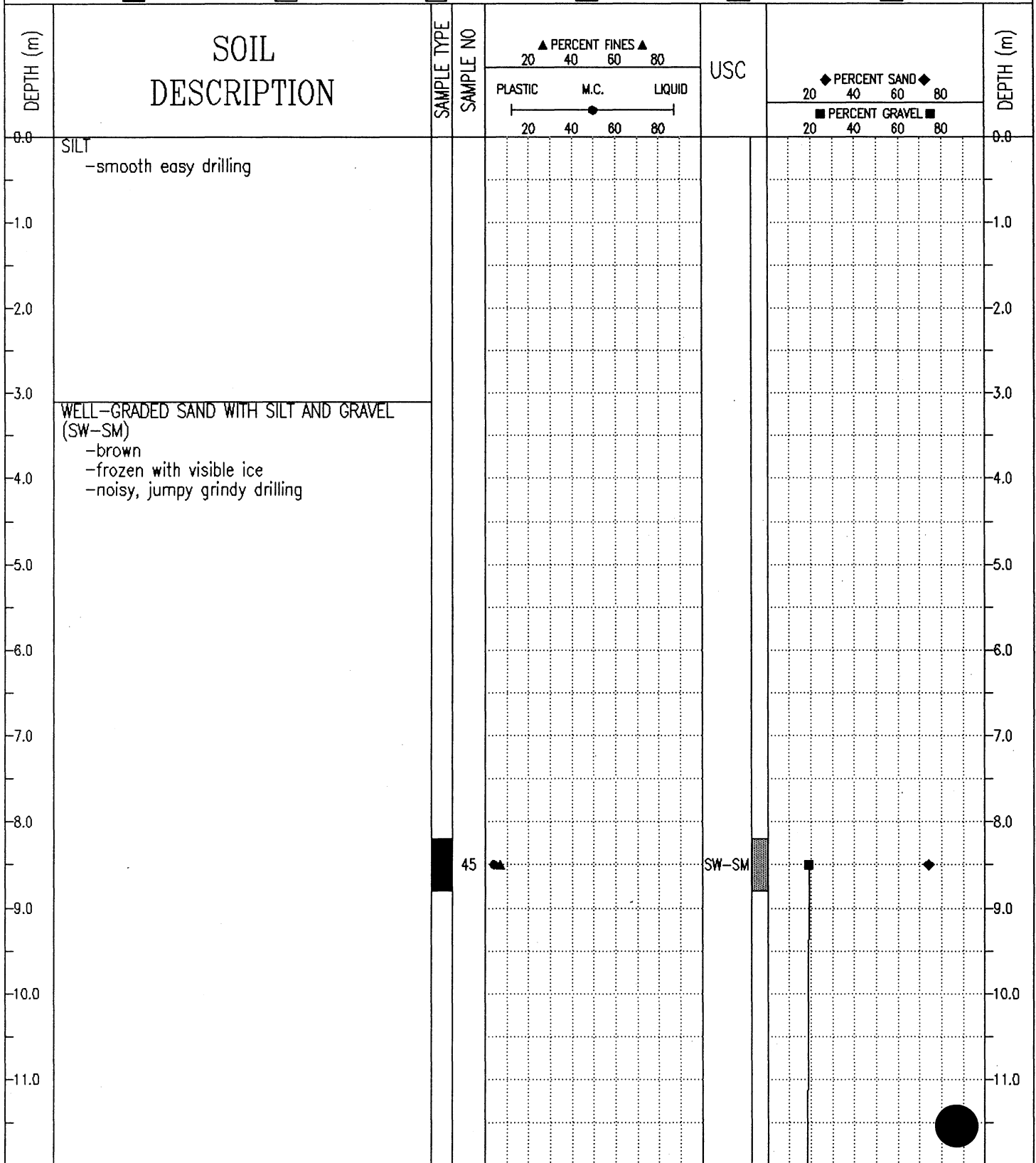
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 174-08
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0304
DRILL: B40L 150mm SOLID STEM AUGER	LOCATION: STA 1918+800	ELEVATION 0.000 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <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	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC MATERIAL -frozen (Nf)								0.0
1.0	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM) -brown -dry -maximum 100mm material augered up -tight drilling  -refusal at 1.5m		20	● ▲			GW-GM		1.0
2.0	END HOLE at 1.7m -refusal -spruce and willow cover								2.0
3.0									3.0
4.0									4.0
5.0									5.0
6.0									6.0

SUBSURFACE EXPLORATION AND TEST REPORT		ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 212-12
SHAKWAK PROJECT		SEGMENT 17B	Project No: 202101 0310
DRILL: BACKHOE: CAT 235		LOCATION: STA 1918+800 o/s 10m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input checked="" type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERCENT SAND ◆		PERCENT GRAVEL ■	DEPTH (m)
				20	40	60		80	20		
0.0	ORGANIC MATERIAL -frozen										0.0
	SILT -frozen with visible ice										
-1.0											-1.0
-2.0											-2.0
	WELL-GRADED GRAVEL WITH SAND (GW) -frozen with ice particles to 100mm -maximum 400mm material -very hard digging										
-3.0	END HOLE at 3.1m		4	▲			GW	◆	■		-3.0
-4.0											-4.0
-5.0											-5.0
-6.0											-6.0

SUBSURFACE EXPLORATION AND TEST REPORT		ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 216-117
SHAKWAK PROJECT		SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL		LOCATION: STA 1918+800 o/s 75m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
		<input checked="" type="checkbox"/> BULK	<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



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COMPLETION DEPTH 17.7 m

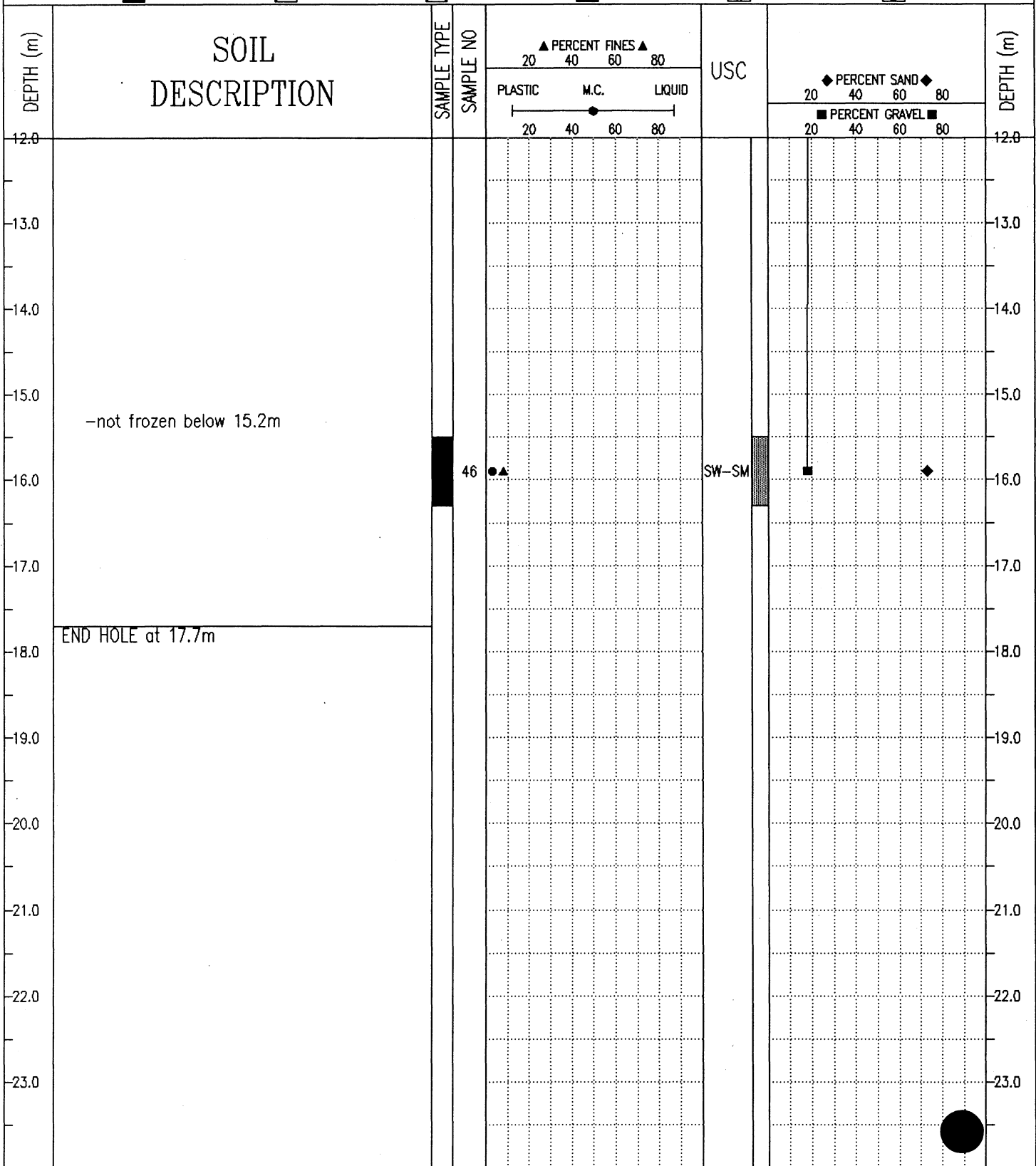
COMPLETE 93/04/14

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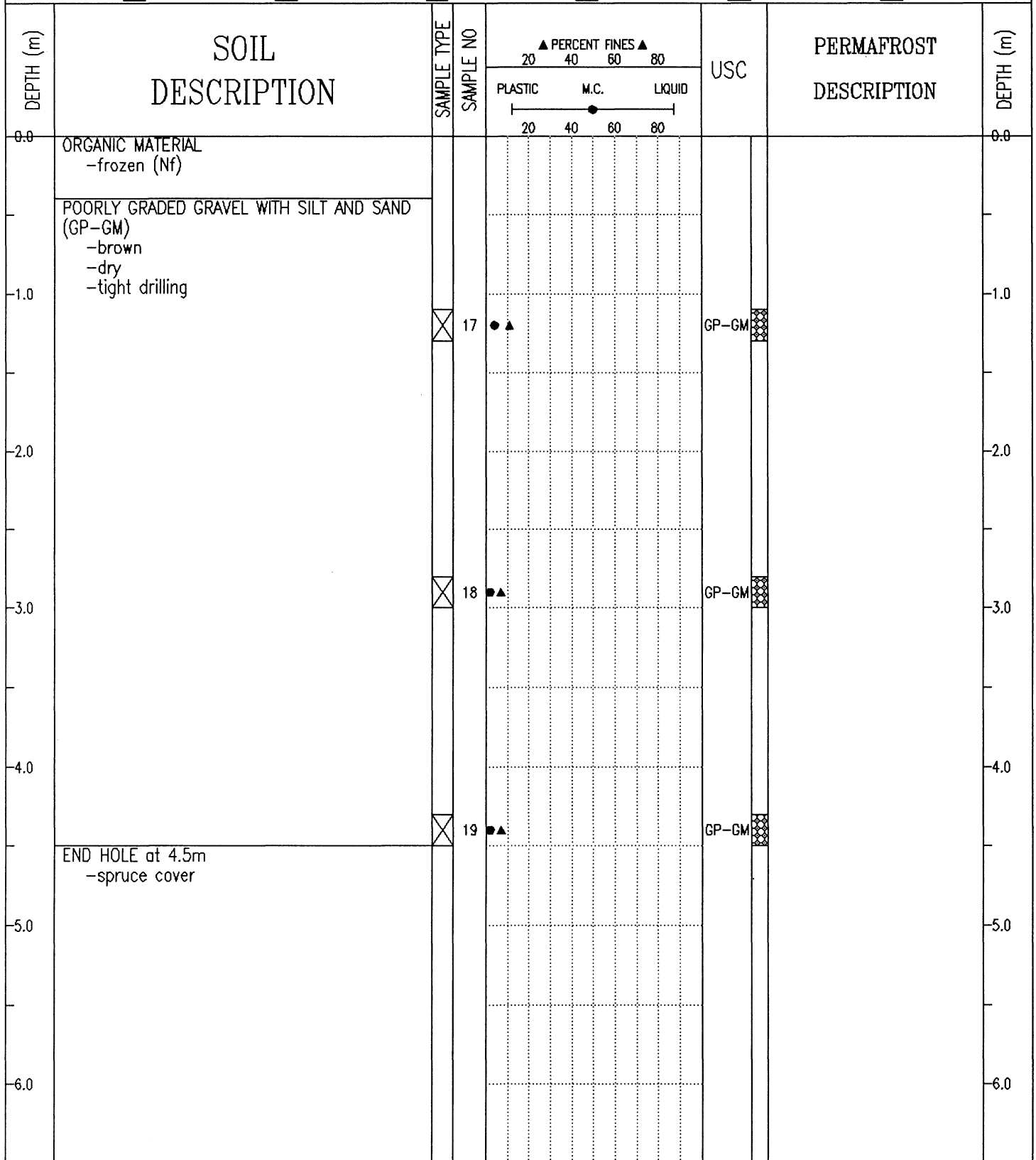
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Page 1 of 2

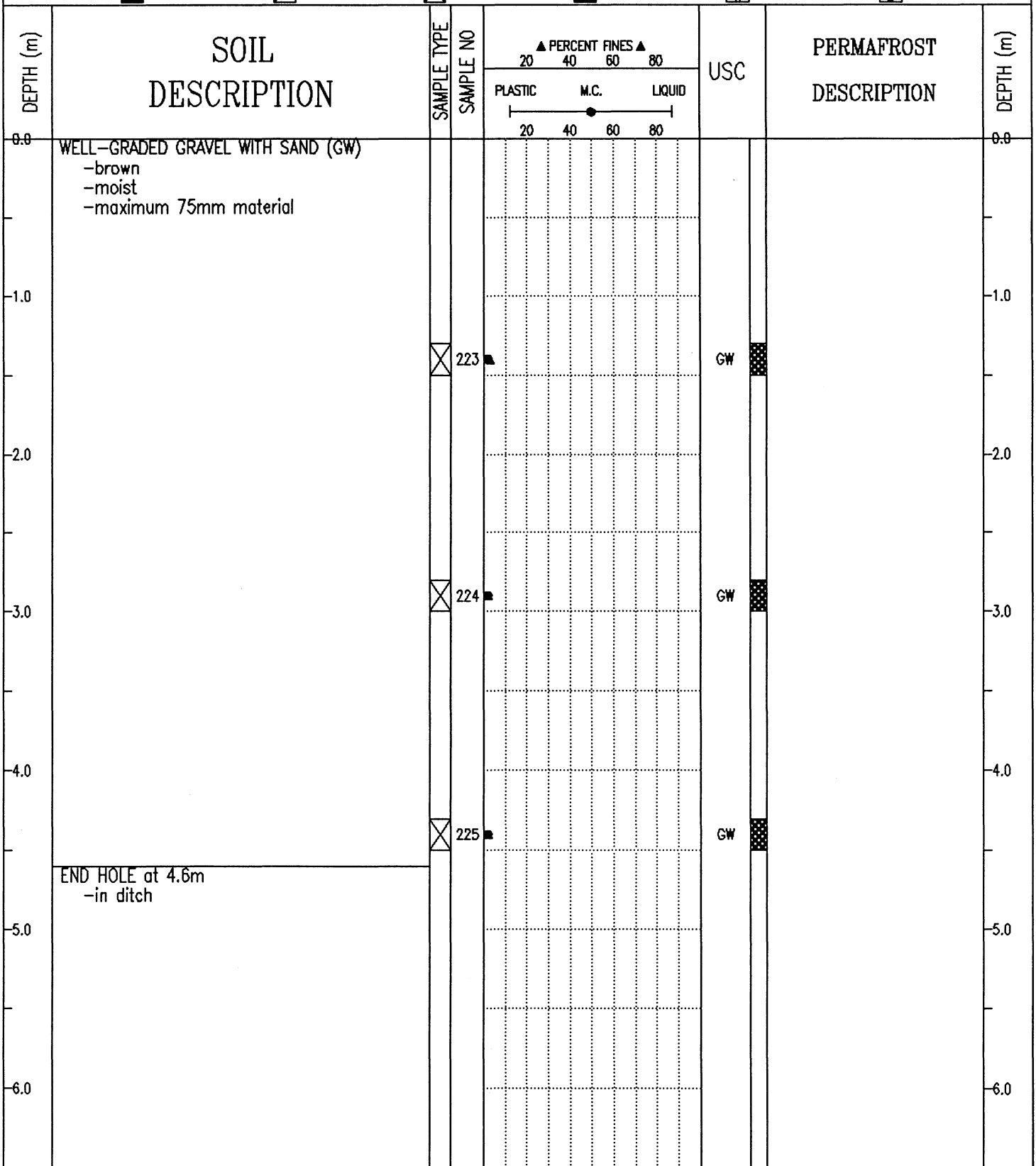
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 216-117
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0302
DRILL: SCHRAMM ROTARY DRILL	LOCATION: STA 1918+800 o/s 75m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



SUBSURFACE EXPLORATION AND TEST REPORT		ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 174-07
SHAKWAK PROJECT		SEGMENT 17	Project No: 202101 0304
DRILL: B40L 150mm SOLID STEM AUGER		LOCATION: STA 1918+900 o/s 4m Lt	ELEVATION 0.000 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input checked="" type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



SUBSURFACE EXPLORATION AND TEST REPORT		ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-80
SHAKWAK PROJECT		A/H KM 1904-1932	Project No: 745927
17-225 & 17-174		LOCATION: 1919+000 o/s 3m Lt.	ELEVATION 0.000 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input checked="" type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE



Public Works Canada		COMPLETION DEPTH 4.6 m	COMPLETE 91/08/21
Whitehorse, Yukon Territory.		LOGGED BY	DWG NO.
			Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-81
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1919+100 o/s 4m Rt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM) -brown -moist -maximum 75mm material -very grindy jumpy drilling								0.0
1.0									1.0
2.0									2.0
2.6		X	226				GW-GM		2.6
3.0	WELL-GRADED GRAVEL WITH SAND (GW) -brown -moist -maximum 75mm material -very jumpy grindy drilling								3.0
3.2		X	227				GW		3.2
4.0									4.0
4.6		X	228				GW		4.6
5.0	END HOLE at 4.6m -boulders to 600mm on surface -in old side borrow area								5.0
6.0									6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 91/08/21
	LOGGED BY	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-82
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1919+200 o/s 7m Rt.	ELEVATION 0.000 (m)

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

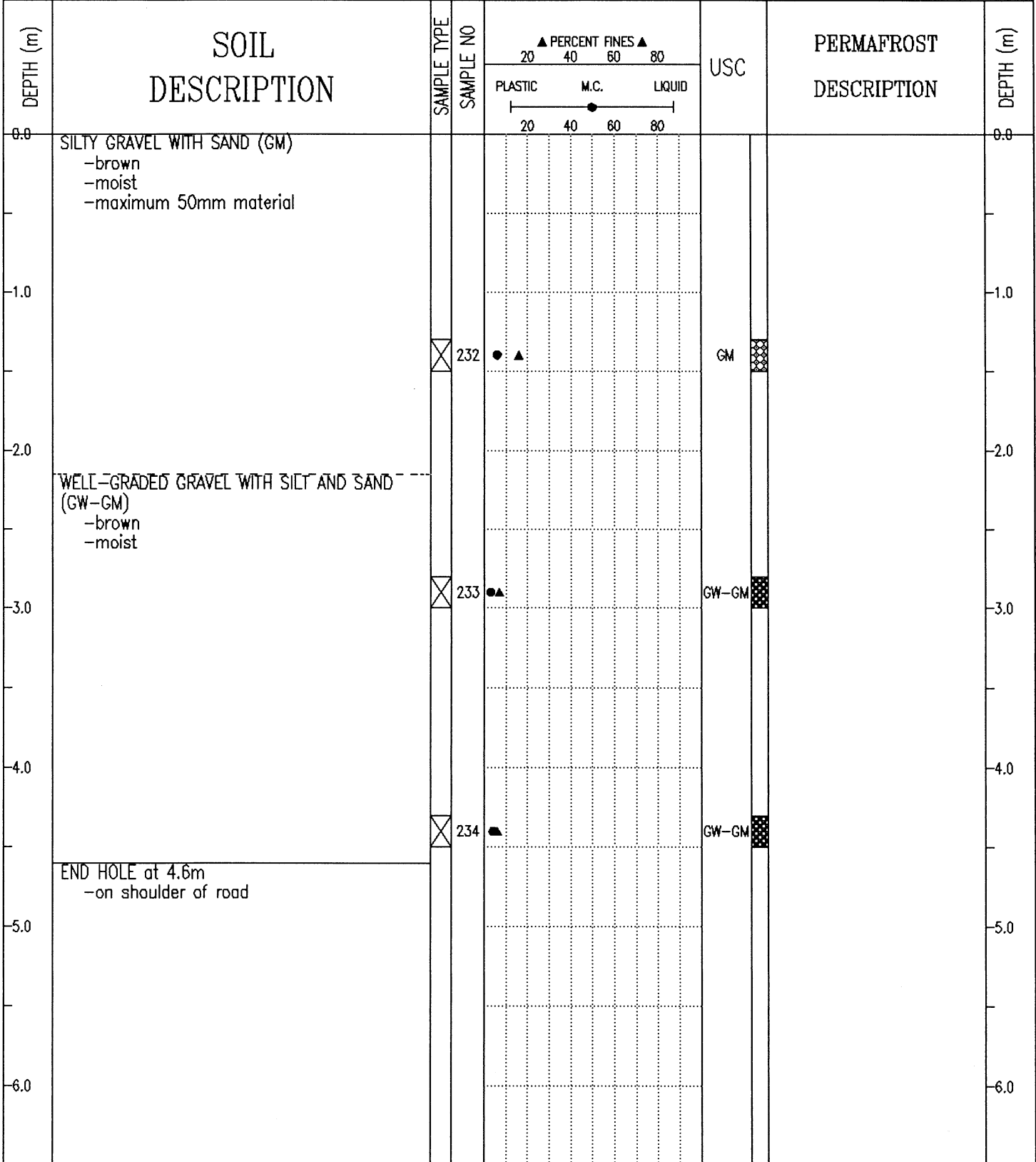
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	WELL-GRADED GRAVEL WITH SAND (GW) -brown -moist -maximum 75mm material -jumpy grindy drilling								0.0
1.0									1.0
2.0									2.0
3.0									3.0
4.0									4.0
5.0									5.0
6.0									6.0

END HOLE at 4.6m  
-boulders to 450mm on surface  
-in ditch

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 91/08/21
	LOGGED BY	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-83
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1919+300 o/s 2m Rt.	ELEVATION 0.000 (m)

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



Public Works Canada  
Whitehorse, Yukon Territory.

COMPLETION DEPTH 4.6 m      COMPLETE 91/08/21  
LOGGED BY      DWG NO.      Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-84
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1919+400	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	SANDY GRAVEL -some silt -grindy drilling								0.0
1.0	ASH WELL TO POORLY GRADED GRAVEL WITH SILT AND SAND (GW-GM TO GP-GM) -brown -damp -maximum 50mm material		235				GW-GM		1.0
3.0			236				GP-GM		3.0
4.0	WELL-GRADED GRAVEL WITH SAND (GW) -brown -damp		237				GW		4.0
5.0	END HOLE at 4.6m -in ditch								5.0
6.0									6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 91/08/21
	LOGGED BY	DWG NO.

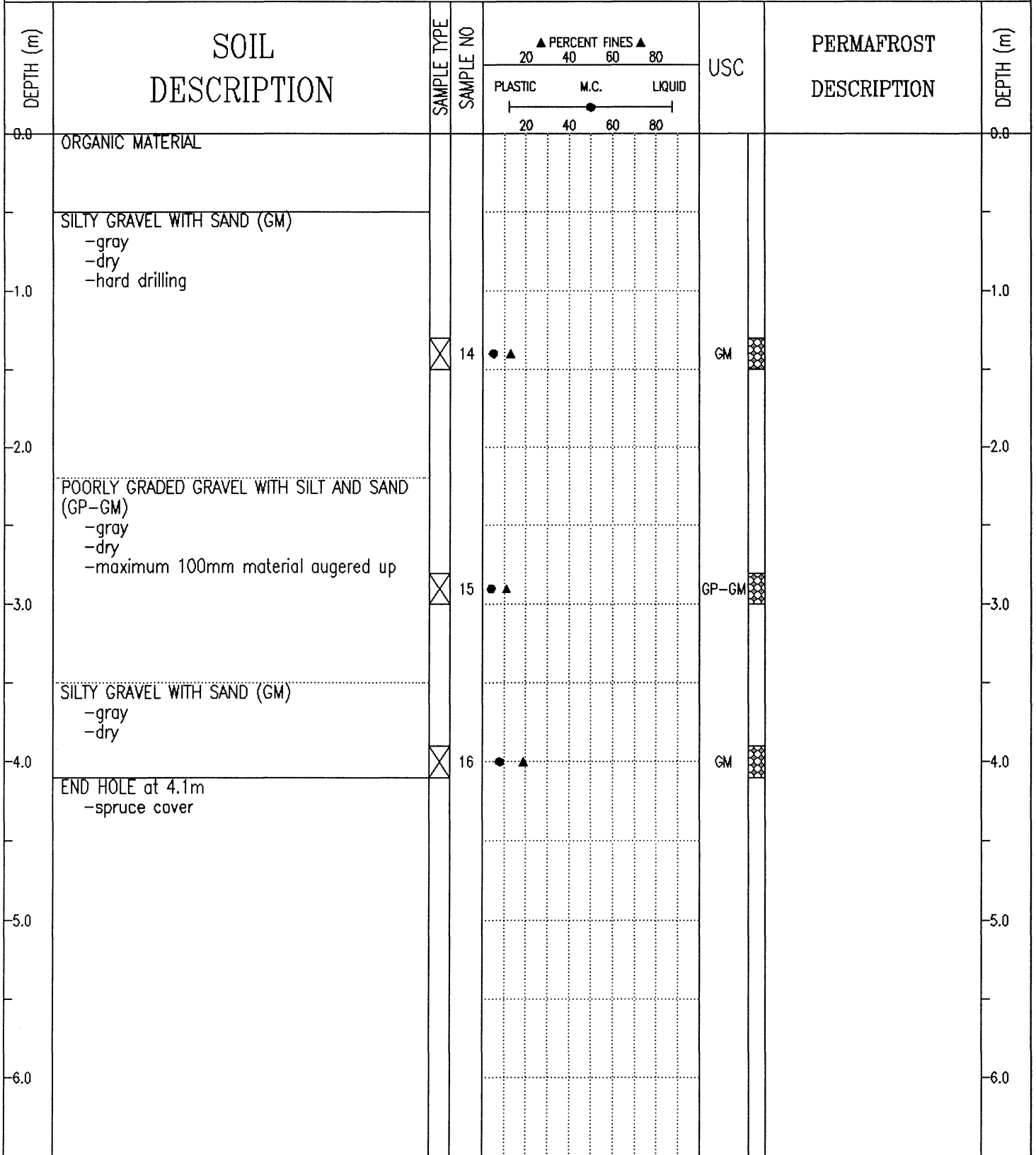
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-85
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1919+500 o/s 2m Lt.	ELEVATION 0.000 (m)

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

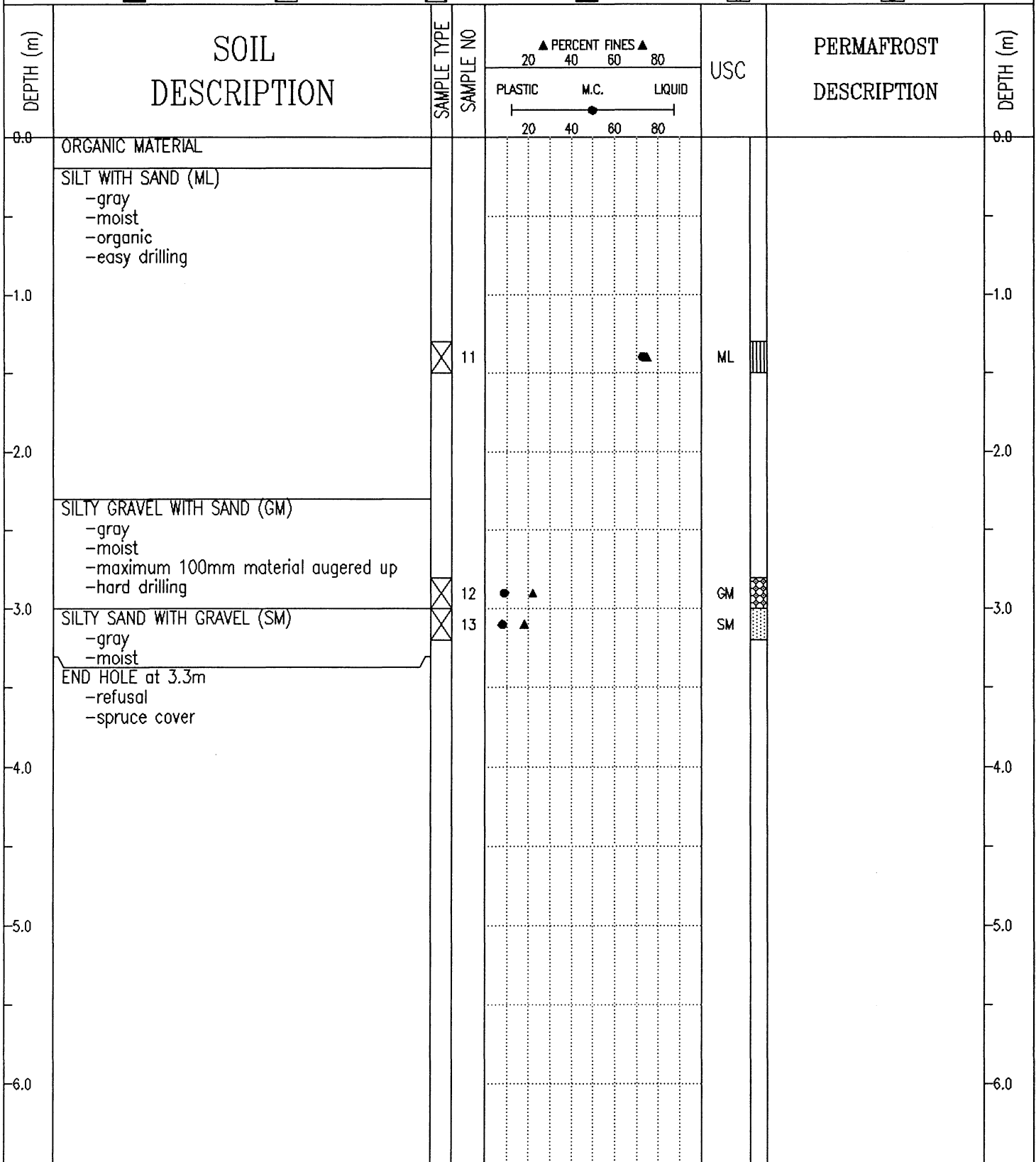
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	WELL-GRADED GRAVEL WITH SAND (GW) -brown -damp -maximum 50mm material -grindy drilling								0.0
1.0									1.0
2.0									2.0
3.0			238				GW		3.0
4.0									4.0
5.0			239				GW		5.0
6.0									6.0
7.0			240				GW		7.0
8.0									8.0
9.0									9.0
10.0									10.0
11.0									11.0
12.0									12.0
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97.0									97.0
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99.0									99.0
100.0									100.0

END HOLE at 4.6m  
-boulders to 300mm on surface  
-in old side borrow

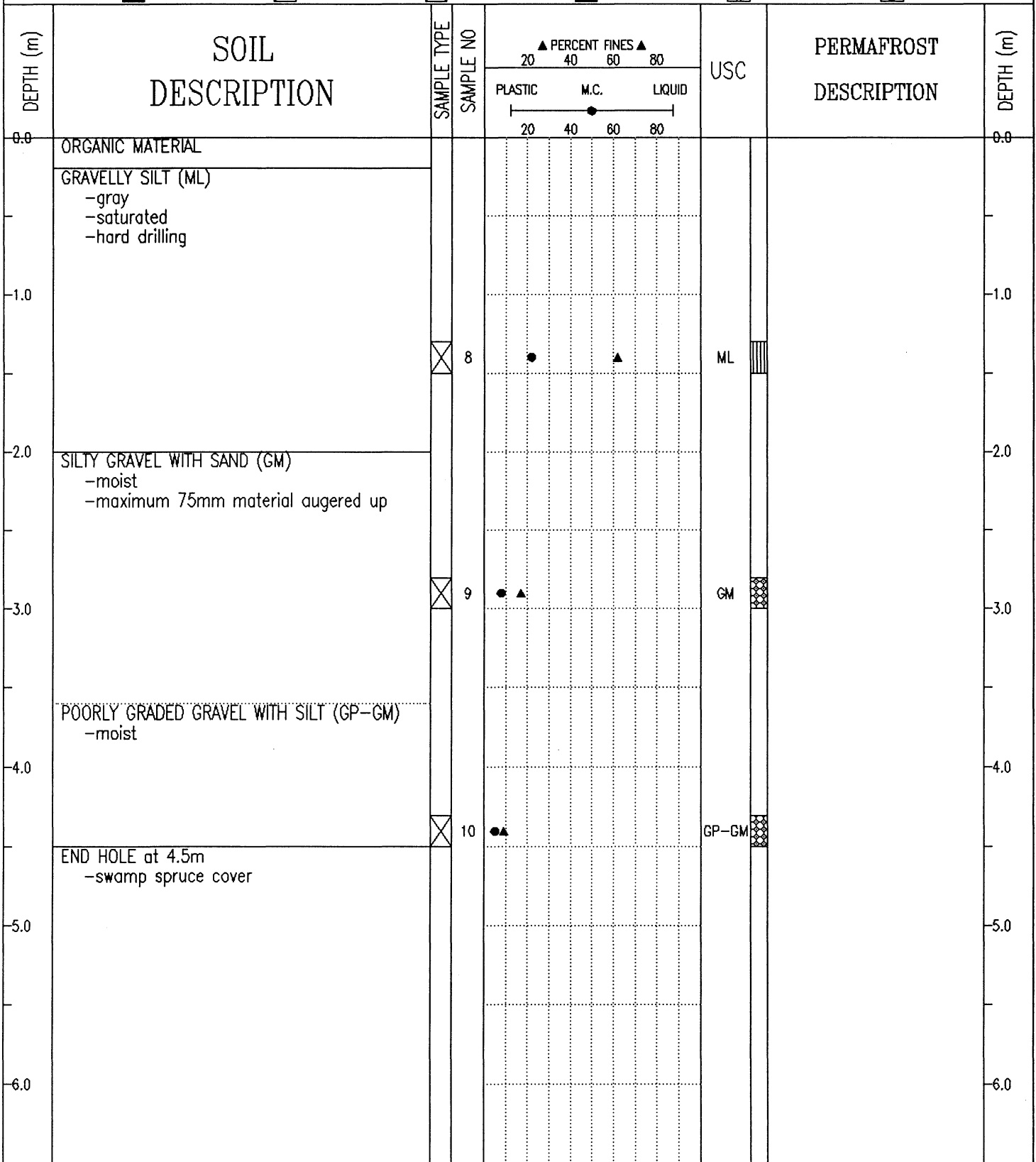
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 174-06
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0304
DRILL: B40L 150mm SOLID STEM AUGER	LOCATION: STA 1919+600 o/s 2m Lt	ELEVATION 0.000 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input checked="" type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



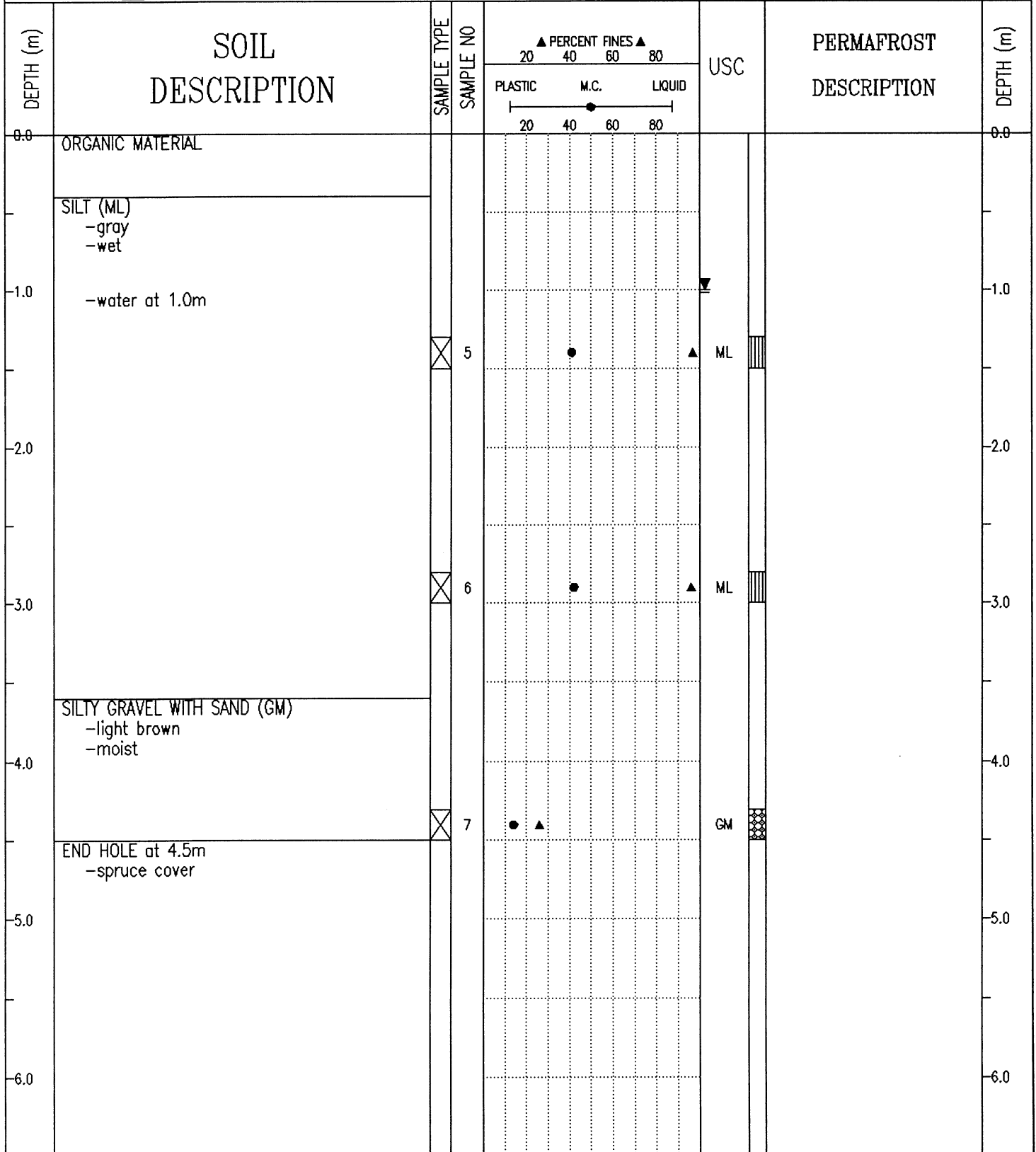
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 174-05
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0304
DRILL: B40L 150mm SOLID STEM AUGER	LOCATION: STA 1919+700 o/s 2m Lt	ELEVATION 0.000 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input checked="" type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



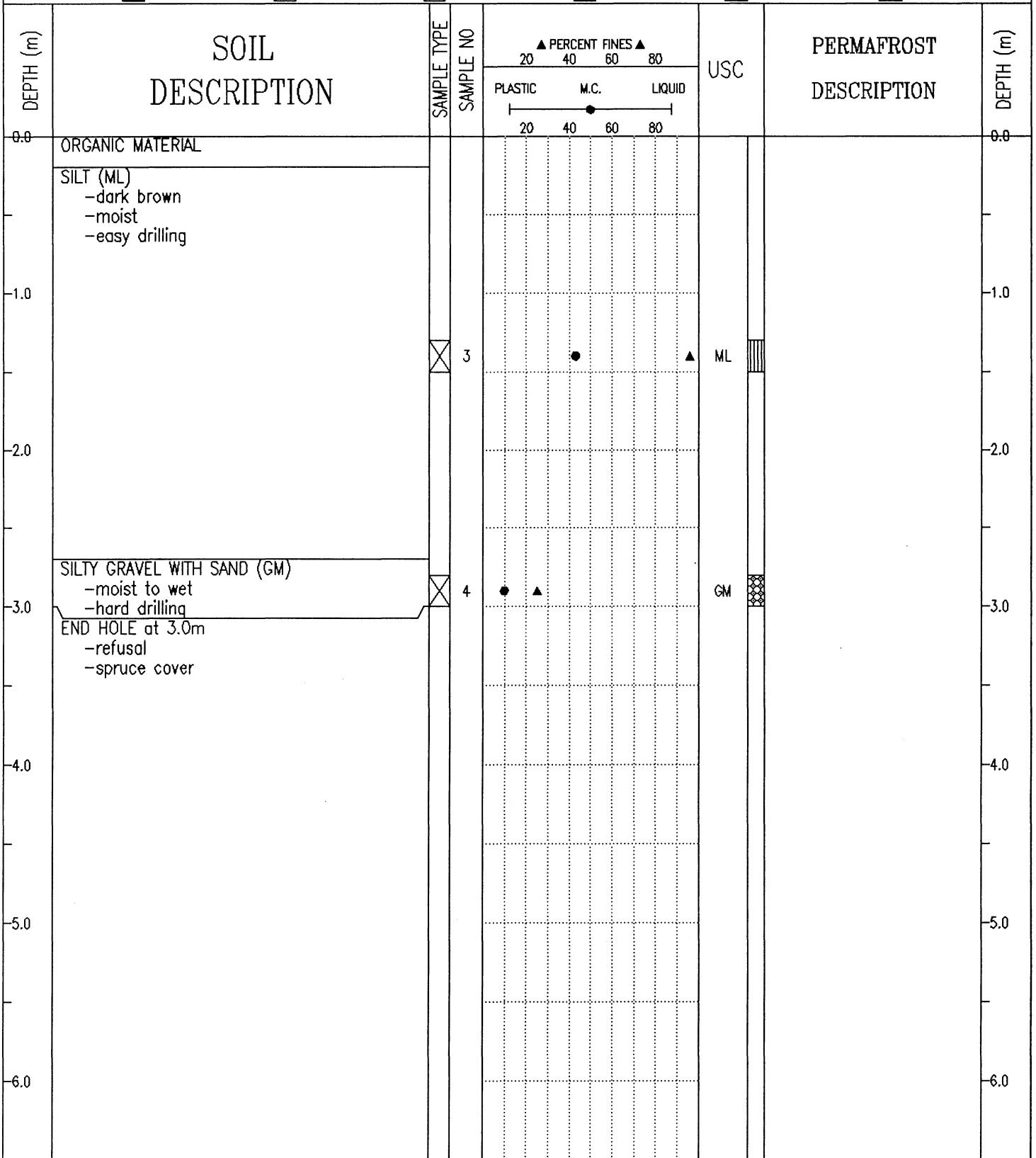
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 174-04
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0304
DRILL: B40L 150mm SOLID STEM AUGER	LOCATION: STA 1919+800 o/s 2m Lt	ELEVATION 0.000 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input checked="" type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 174-03
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0304
DRILL: B40L 150mm SOLID STEM AUGER	LOCATION: STA 1919+900 o/s 2m Rt	ELEVATION 0.000 (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		



SUBSURFACE EXPLORATION AND TEST REPORT		ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 174-02
SHAKWAK PROJECT		SEGMENT 17	Project No: 202101 0304
DRILL: B40L 150mm SOLID STEM AUGER		LOCATION: STA 1920+000 o/s 2m Lt	ELEVATION 0.000 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input checked="" type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE

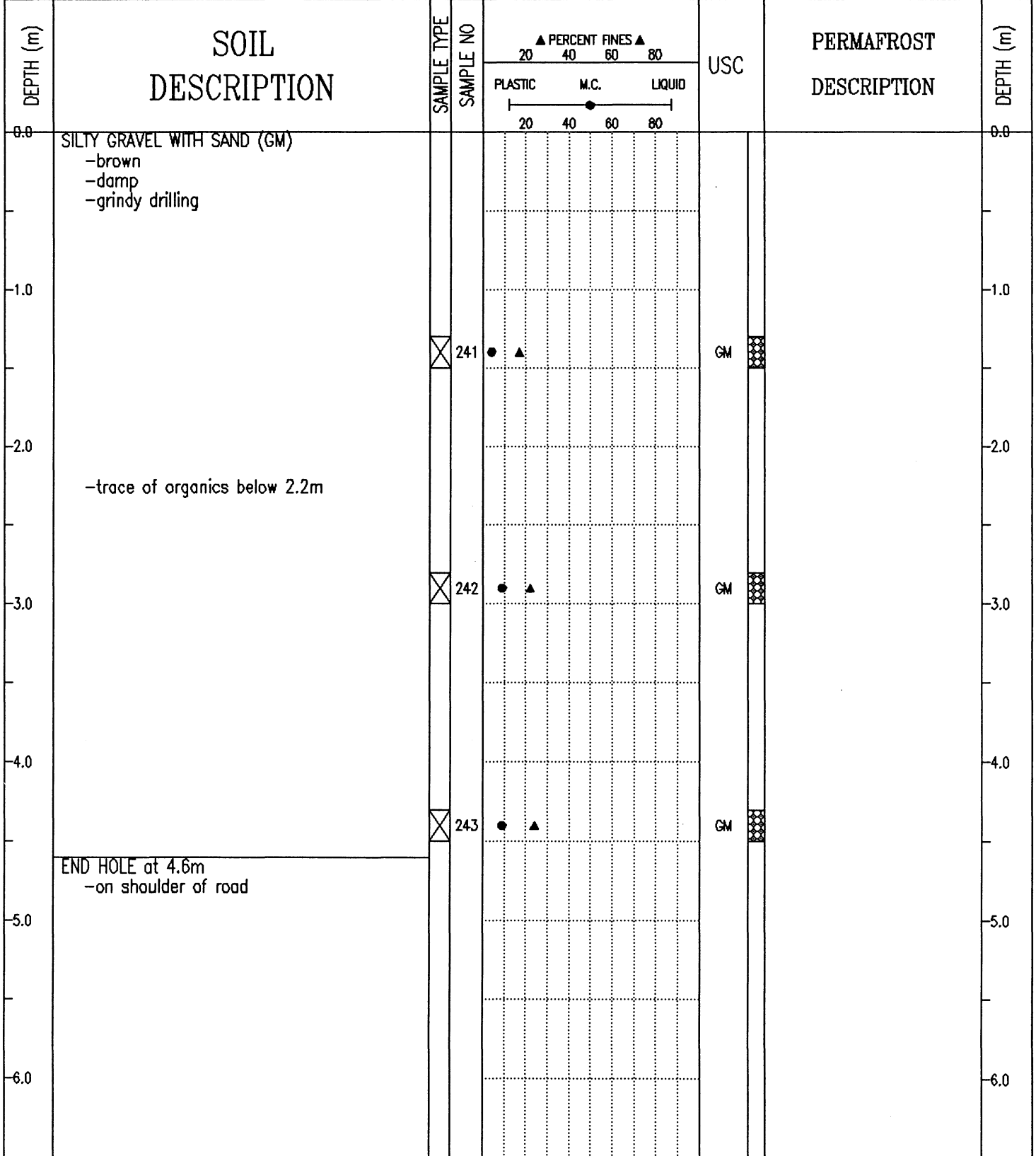


SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 174-01
SHAKWAK PROJECT	SEGMENT 17	Project No: 202101 0304
DRILL: B40L 150mm SOLID STEM AUGER	LOCATION: STA 1920+100	ELEVATION 0.000 (m)
SAMPLE TYPE <input type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <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	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC MATERIAL -wet								0.0
1.0	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM) -dry -hard drilling								1.0
1.8		X	1	●▲			GP-GM		
2.0		X	2	●▲			GP-GM		
2.0	END HOLE at 2.0m -refusal -willow and spruce cover								2.0
3.0									3.0
4.0									4.0
5.0									5.0
6.0									6.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-86
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1920+175 o/s 4m Rt.	ELEVATION 0.000 (m)

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

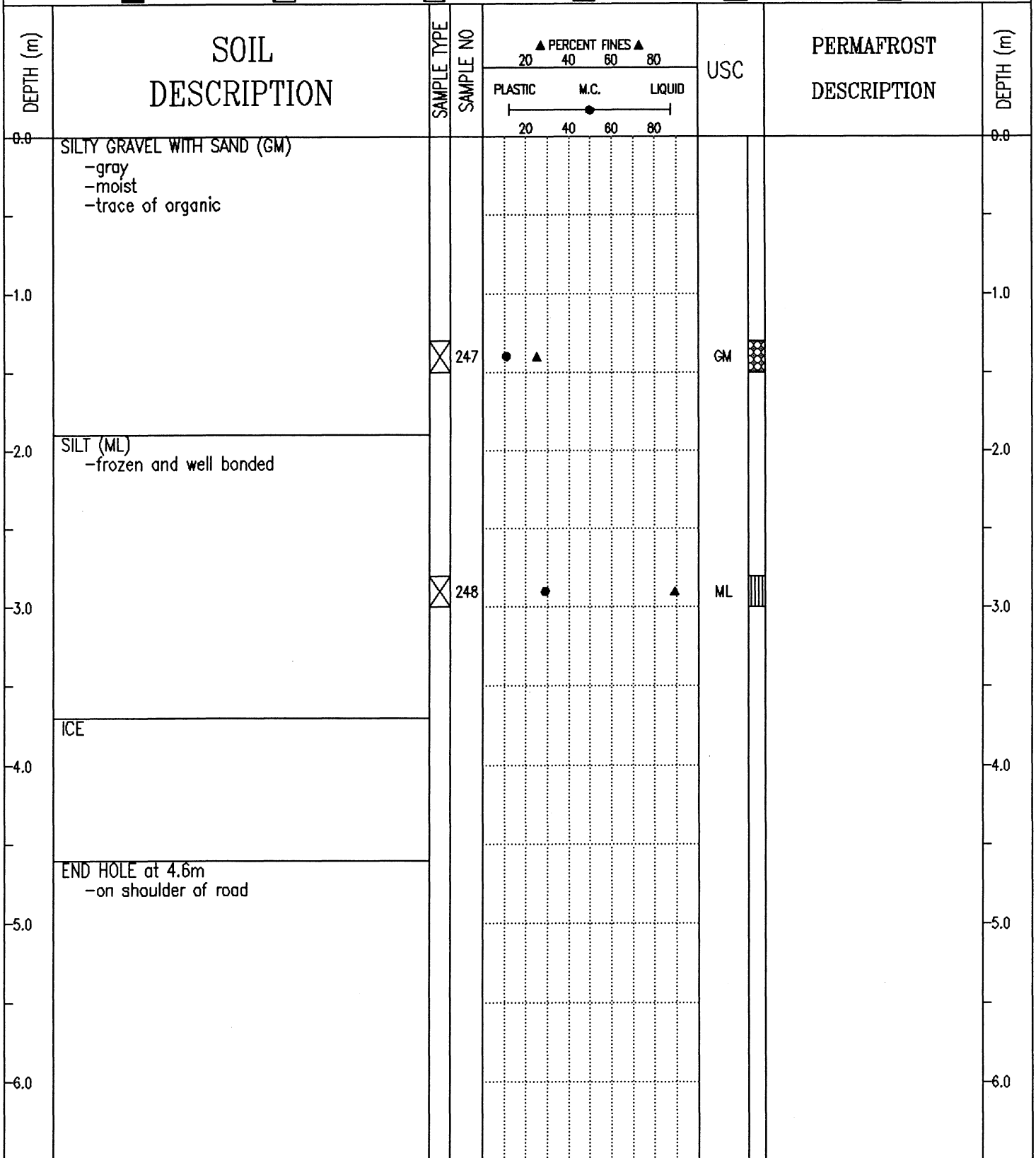


SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-87
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1920+275 o/s 8m Rt.	ELEVATION 0.000 (m)

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

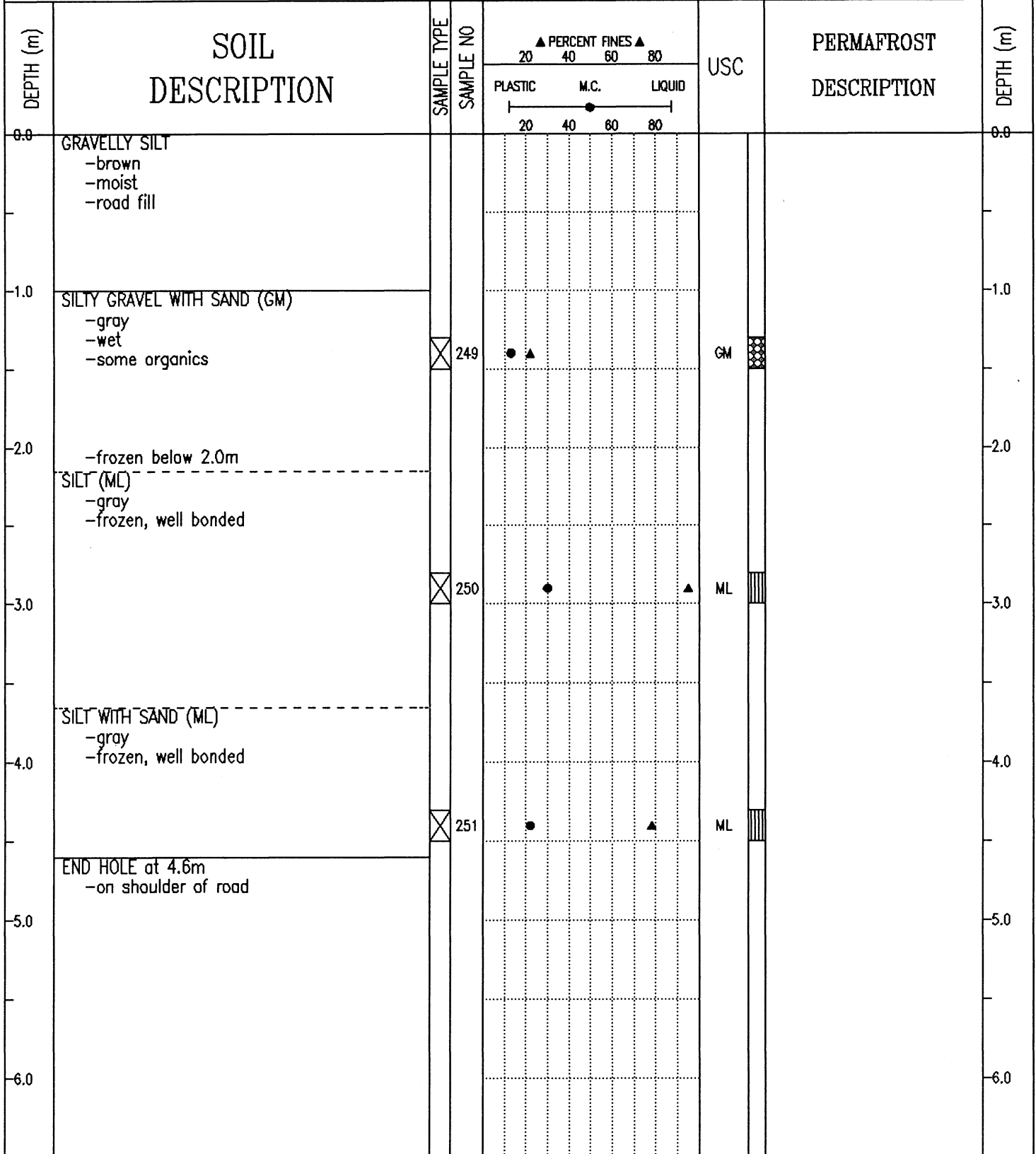
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	SILTY GRAVEL WITH SAND (GM) -brown -moist -maximum 50mm material -grindy drilling								0.0
1.0		X	244	● ▲			GM		1.0
2.0	SILT (ML) -brown -saturated								2.0
3.0		X	245	● ▲			ML		3.0
4.0	-frozen, well bonded below 3.6m								4.0
5.0		X	246	● ▲			ML		5.0
6.0	END HOLE at 4.6m -on shoulder of road								6.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-88
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1920+375 o/s 7m Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input checked="" type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		



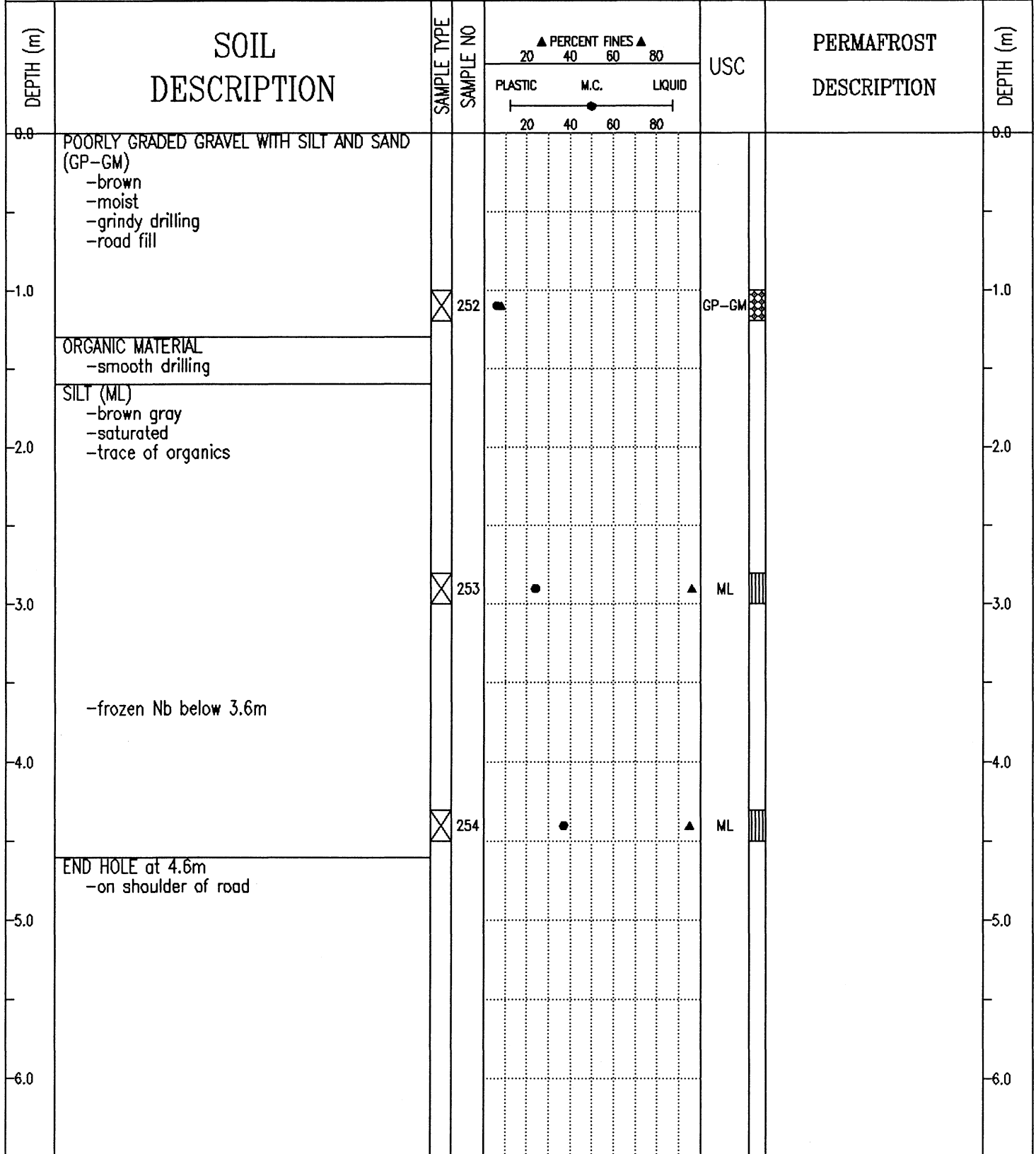
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-89
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1920+475 o/s 7m Rt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-90
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1920+575 o/s 4m Lt.	ELEVATION 0.000 (m)

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

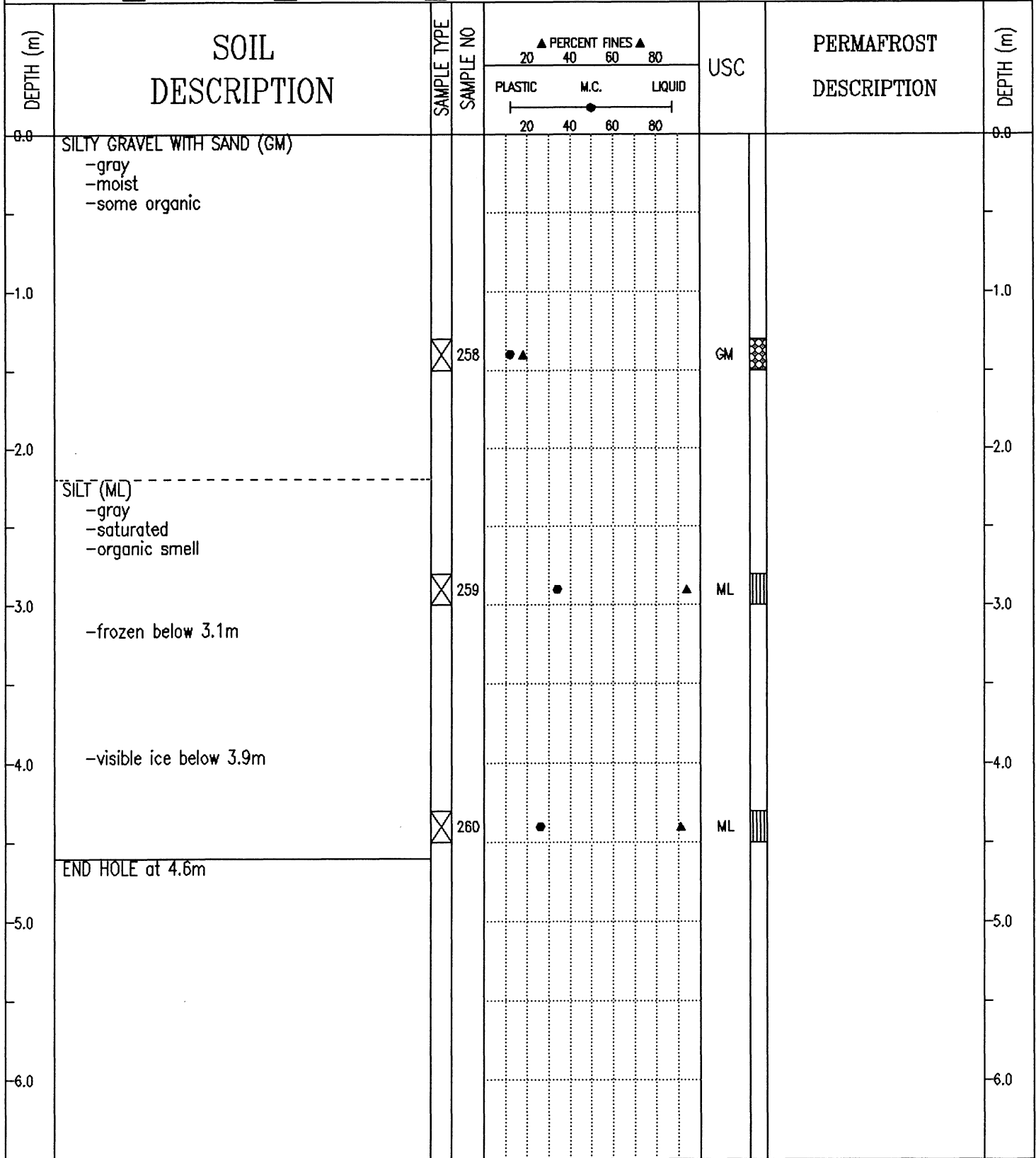


SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 142-91
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1920+675 o/s 5m Lt.	ELEVATION 0.000 (m)

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

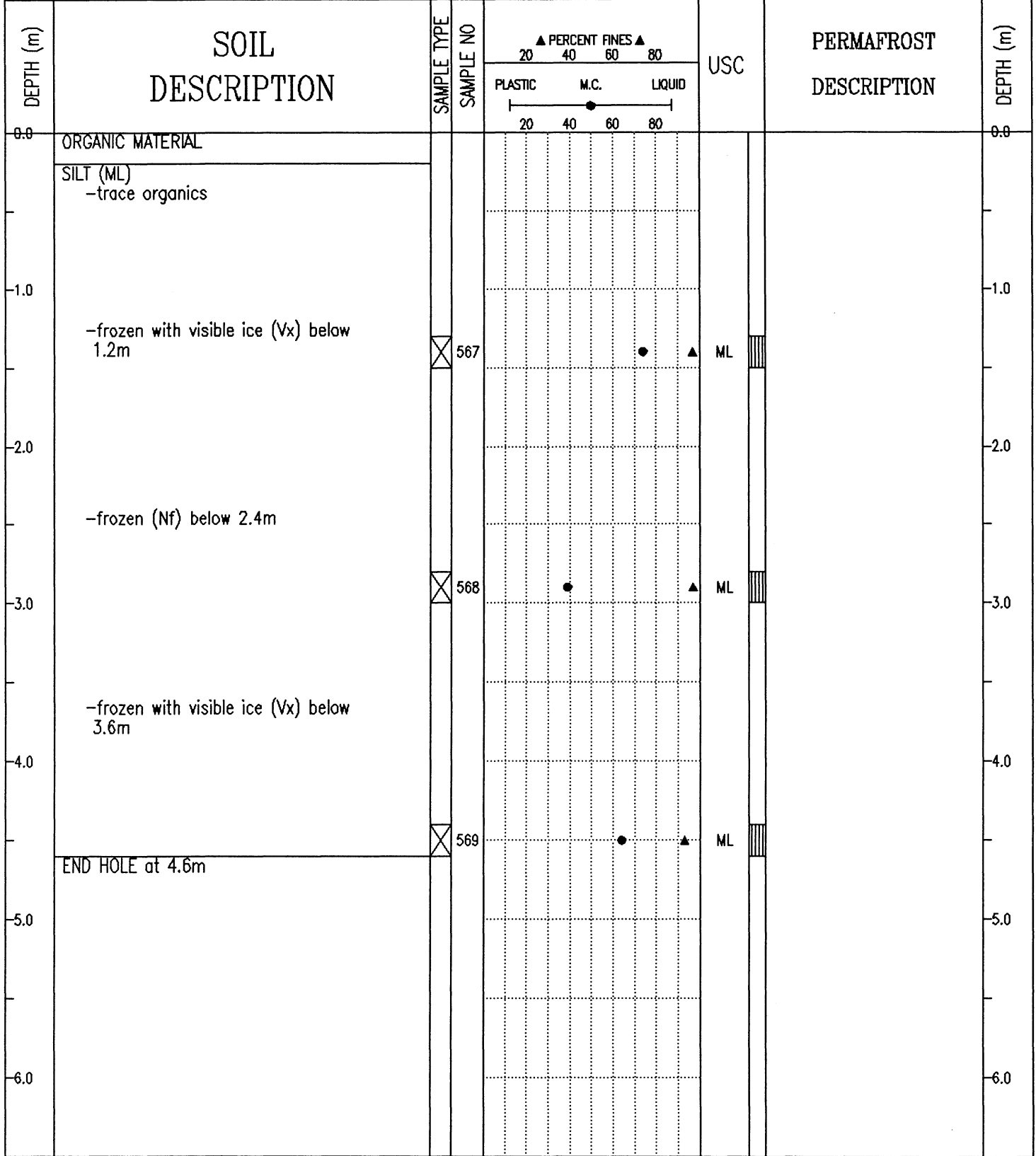
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM) -brown -moist -maximum 50mm material -road fill								0.0
1.0		X	255	●			GP-GM		1.0
2.0	SILT (ML) -brown gray -saturated -trace of organics								2.0
3.0	-frozen Vx below 2.9m	X	256	●		▲	ML		3.0
4.0	-more organics below 3.65m								4.0
5.0	END HOLE at 4.6m -on shoulder of road	X	257	●		▲	ML		5.0
6.0									6.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-92
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1920+775 o/s 5m Lt.	ELEVATION 0.000 (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		



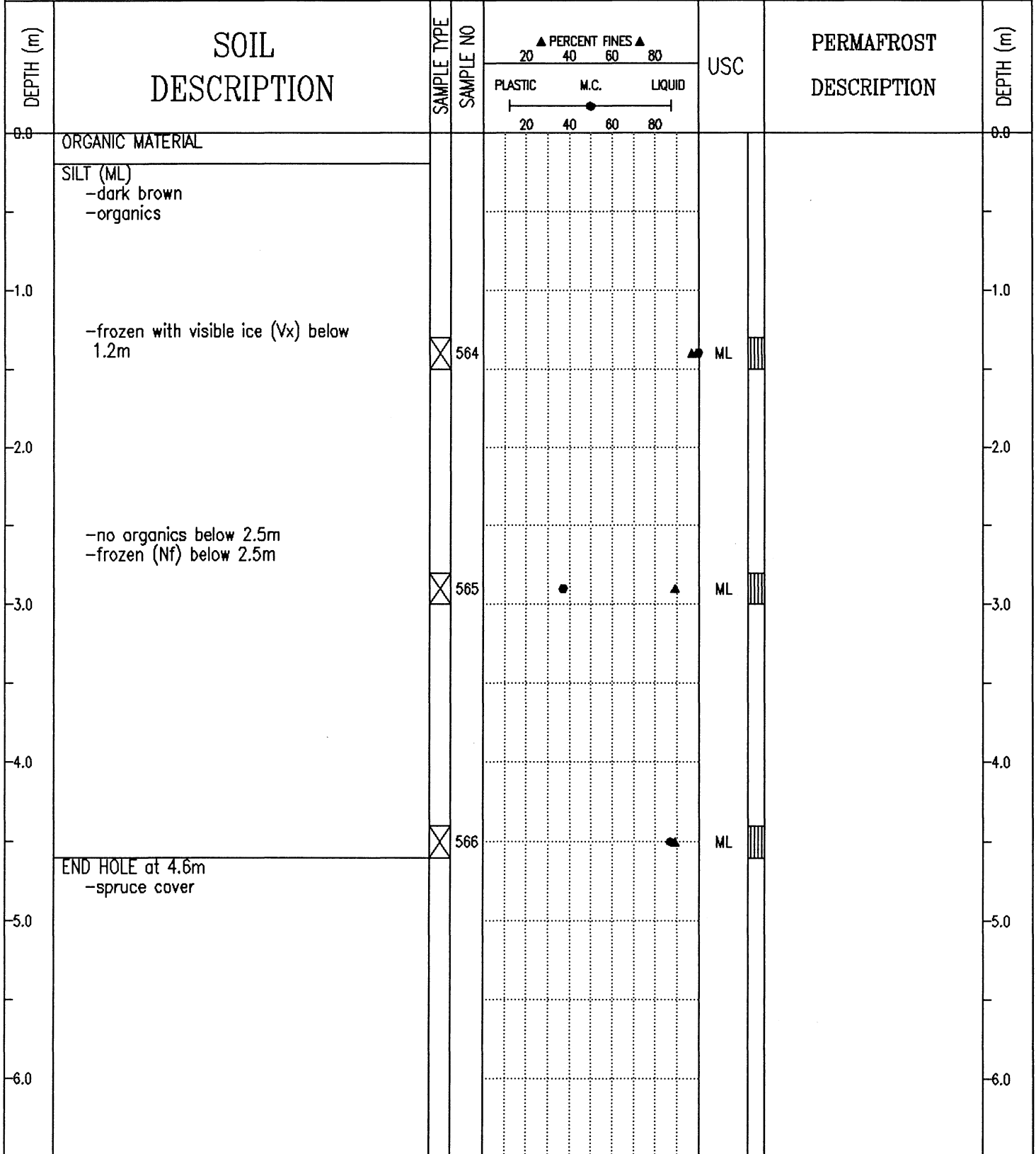
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 158-215
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1920+850 o/s 15m Rt.	ELEVATION 0.000 (m)

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



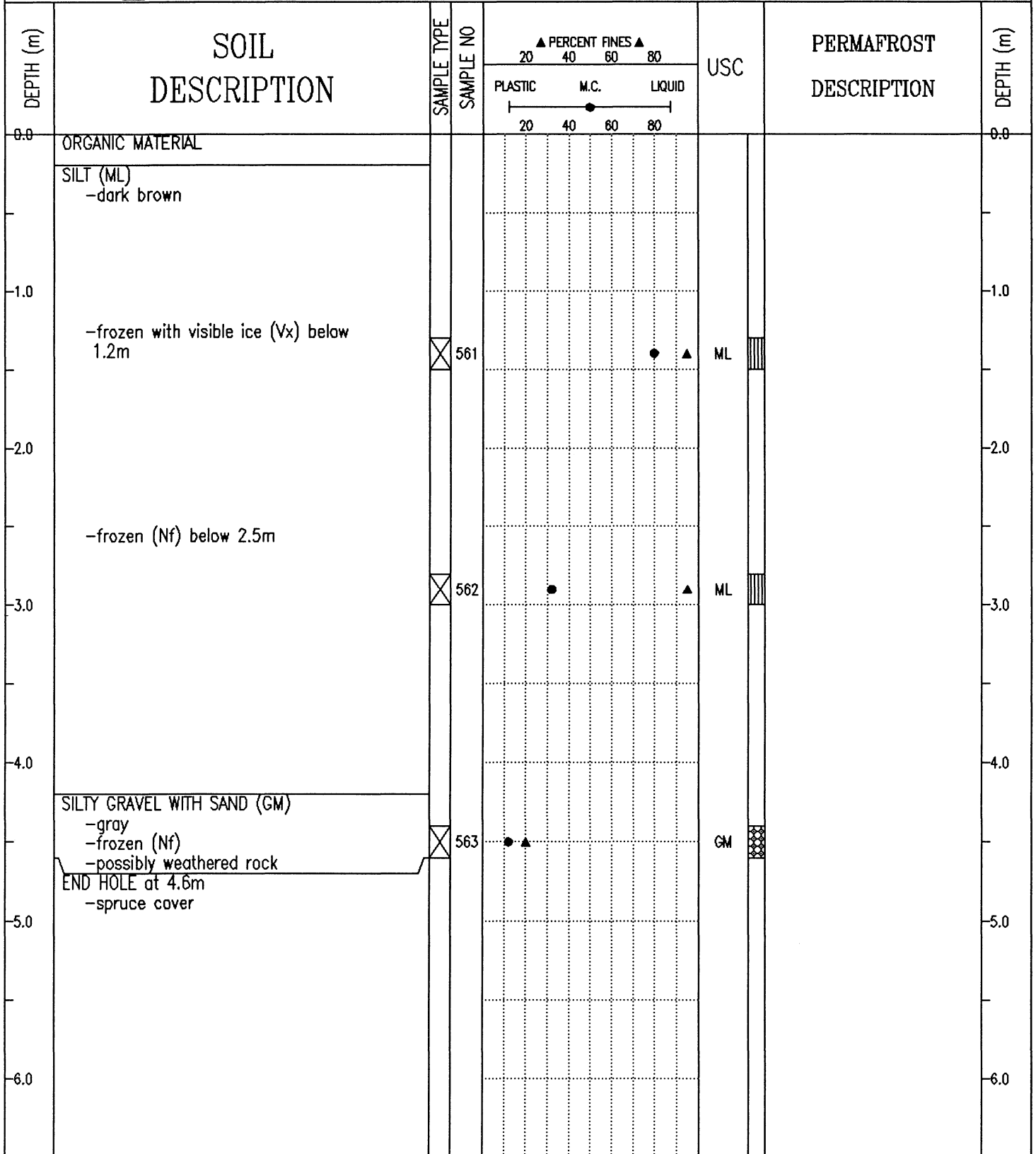
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 158-214
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1920+950 o/s 15m Rt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 158-213
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1921+050 o/s 15m Rt.	ELEVATION 0.000 (m)

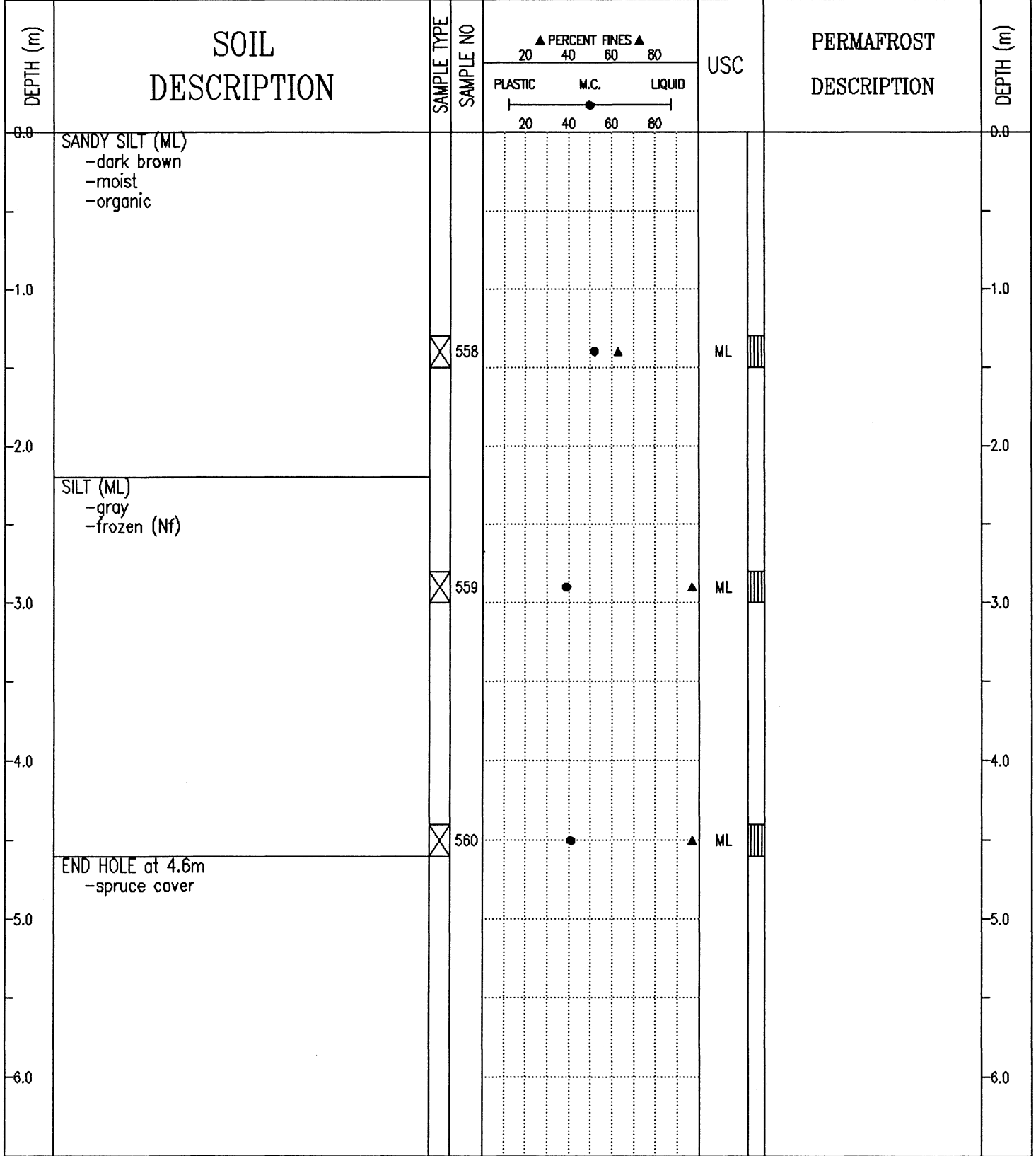
SAMPLE TYPE  RETURN  S.P.T.  AUGER  BULK  TUBE  CORE



Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 91/11/17
	LOGGED BY CB	DWG NO.

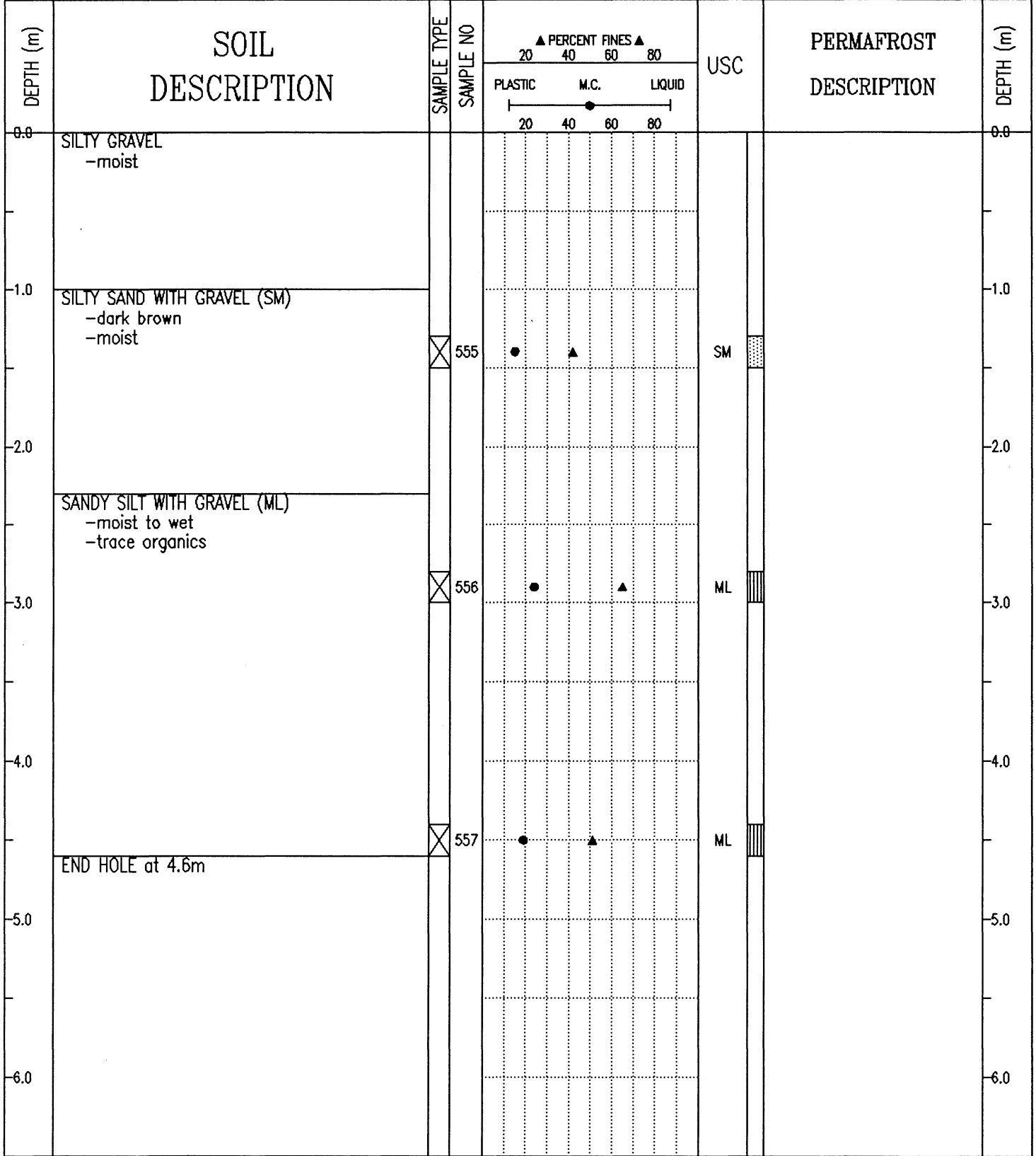
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 158-212
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1921+175 o/s 15m Rt.	ELEVATION 0.000 (m)

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



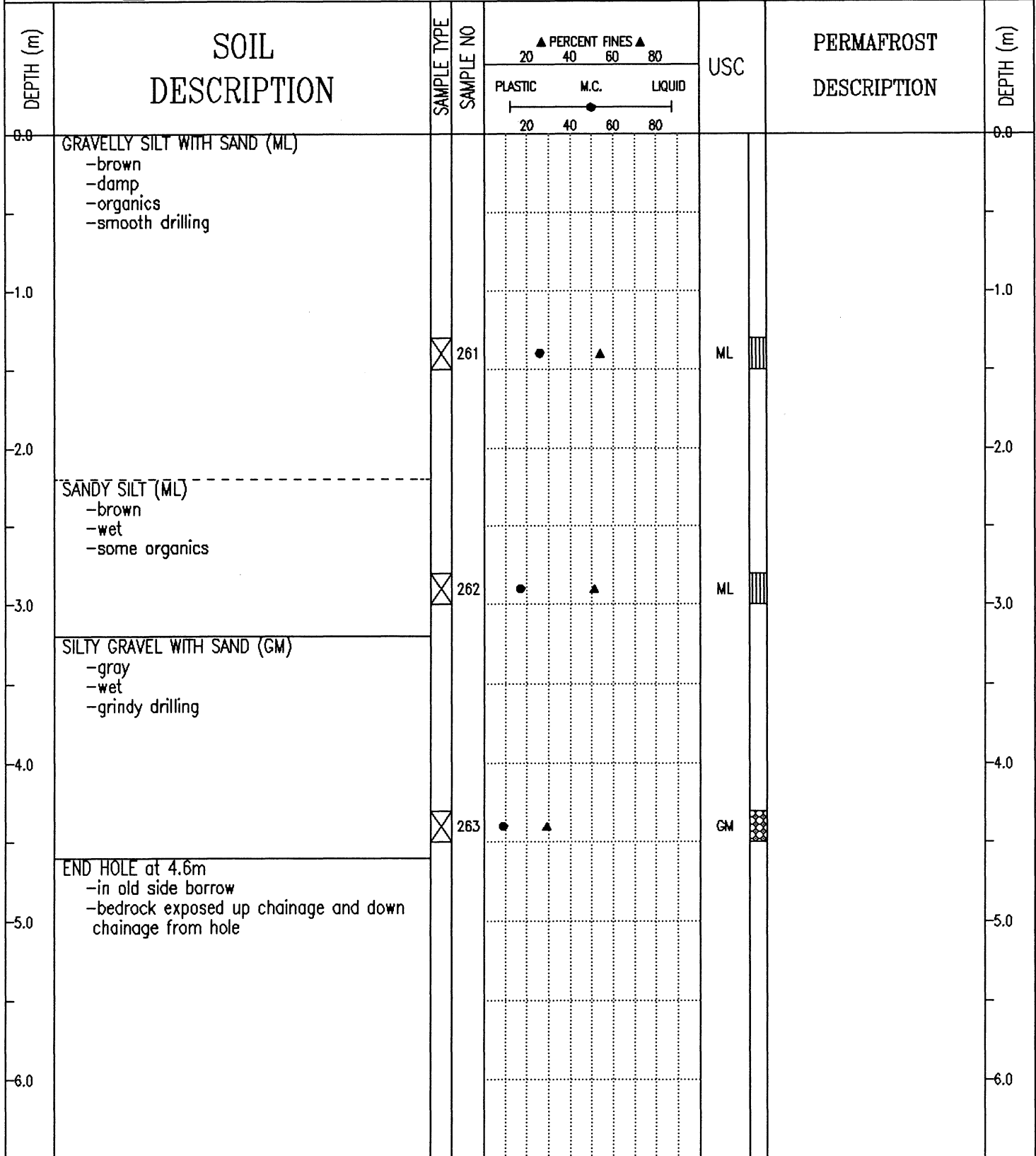
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 158-211
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1921+275 o/s 15m Rt.	ELEVATION 0.000 (m)

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



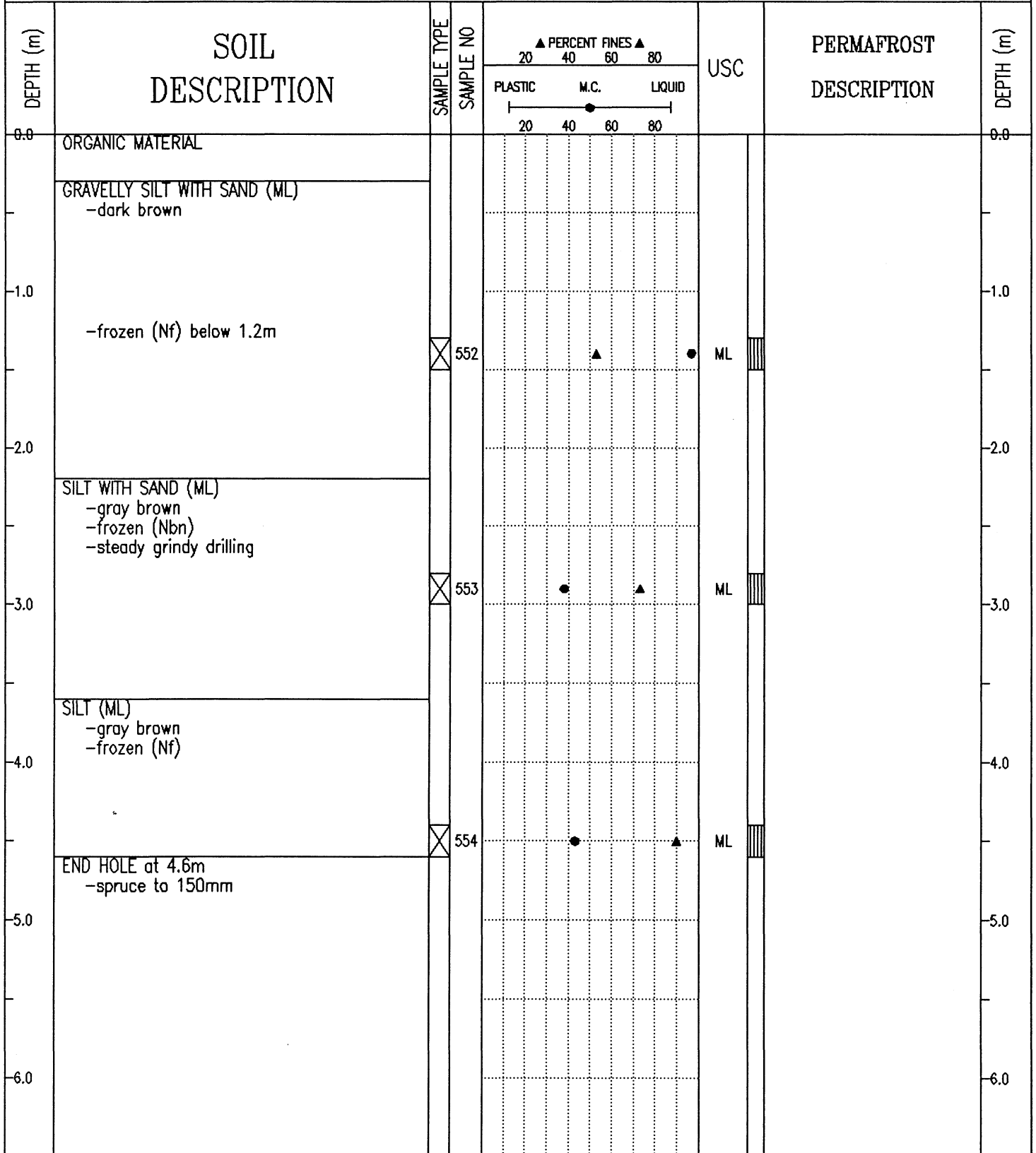
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-93
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1921+325 o/s 7m Rt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 158-210
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1921+502	ELEVATION 0.000 (m)

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



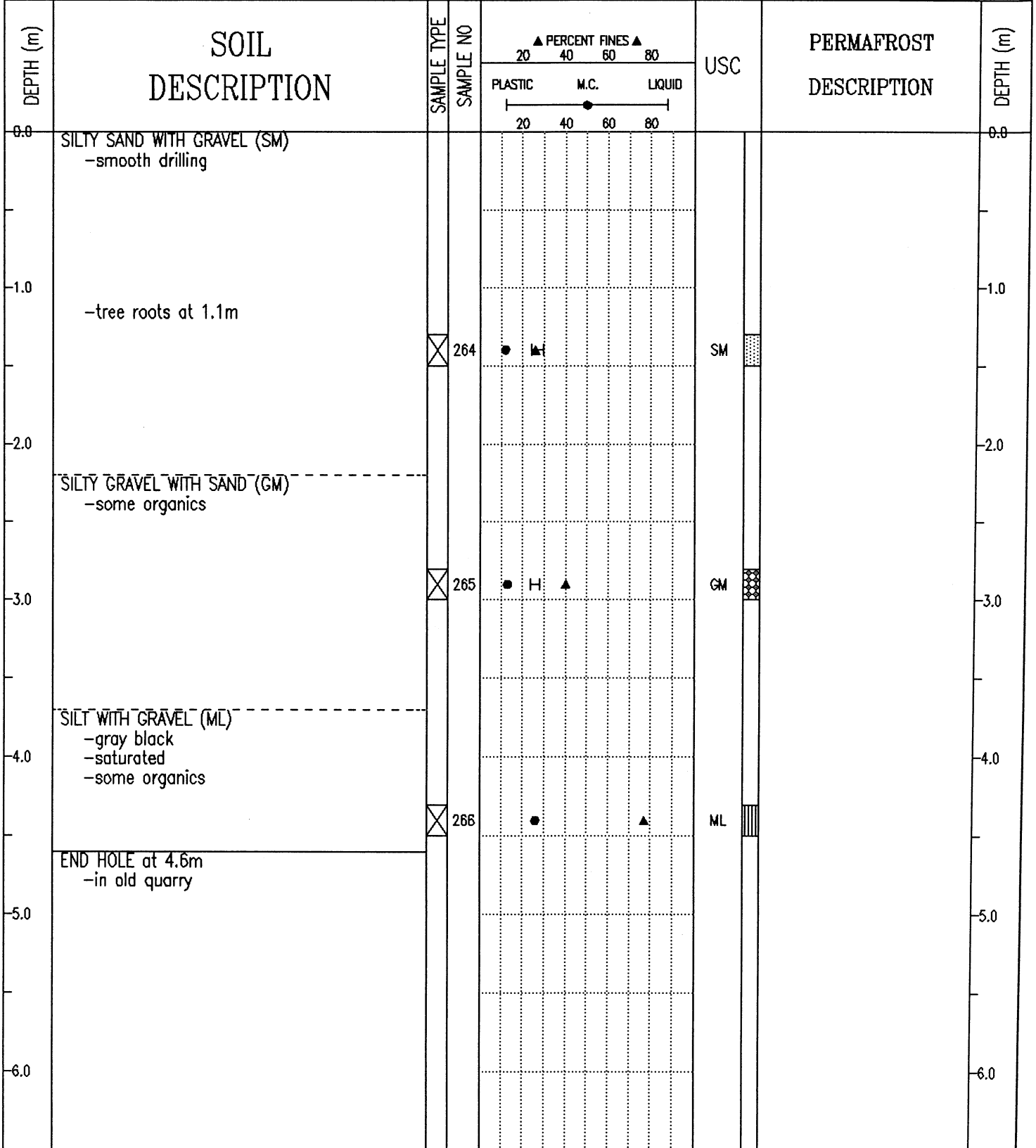
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 158-209
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1921+625 o/s 2m Lt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC MATERIAL							0.0	
0.0 - 1.0	SANDY SILT WITH GRAVEL (ML) -dark brown								
1.0 - 2.5	-frozen with visible ice (Vr) below 1.2m								
2.5 - 3.0	-frozen (Nbn) below 2.5m								
3.0		⊗	549	●	▲		ML		
3.0		⊗	550	●	▲		ML		
3.0 - 4.0	SILT (ML) -gray -frozen (Nf)								
4.0		⊗	551	●	▲		ML		
4.0 - 4.6	END HOLE at 4.6m -in rock quarry area								
4.6 - 6.0									

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-94
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1921+675 o/s 8m Lt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 158-208
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1921+775	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	WEATHERED BEDROCK -black -moist -decomposed rock -steady grindy drilling								0.0
1.0									1.0
2.0									2.0
2.5		<input checked="" type="checkbox"/>	546	●	▲		GM		2.5
3.0	WEATHERED BEDROCK -black -moist -decomposed rock -steady grindy drilling								3.0
3.5		<input checked="" type="checkbox"/>	547	●	▲		SM		3.5
4.0									4.0
4.5		<input checked="" type="checkbox"/>	548	●	▲		SM		4.5
5.0	END HOLE at 4.6m -in rock quarry area								5.0
6.0									6.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-207
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1921+925 o/s 2m Lt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC MATERIAL								0.0
	SILT -organics								
1.0	SILTY SAND WITH GRAVEL (SM) -gray brown -moist -grinding drilling	<input checked="" type="checkbox"/>	544	●	▲		SM		1.0
2.0									2.0
3.0	SILT (ML) -gray brown -frozen (Nf)  -dark brown below 3.0m	<input checked="" type="checkbox"/>	545	●	▲		ML		3.0
4.0	END HOLE at 4.0m -refusal								4.0
5.0									5.0
6.0									6.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-206
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1922+075 o/s 2m Lt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC MATERIAL							0.0	
	SILT (ML) -dark brown								
-1.0	-frozen with visible ice (Vr) below 0.9m							-1.0	
		<input checked="" type="checkbox"/>	542			● ▲	ML		
-2.0	SILTY SAND WITH GRAVEL (SM) -frozen (Nf) -slow grindy drilling							-2.0	
		<input checked="" type="checkbox"/>	543	● ▲			SM		
-3.0	END HOLE at 2.7m -refusal -spruce cover							-3.0	
-4.0								-4.0	
-5.0								-5.0	
-6.0								-6.0	

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 2.7 m	COMPLETE 91/11/15
	LOGGED BY CB	DWG NO.

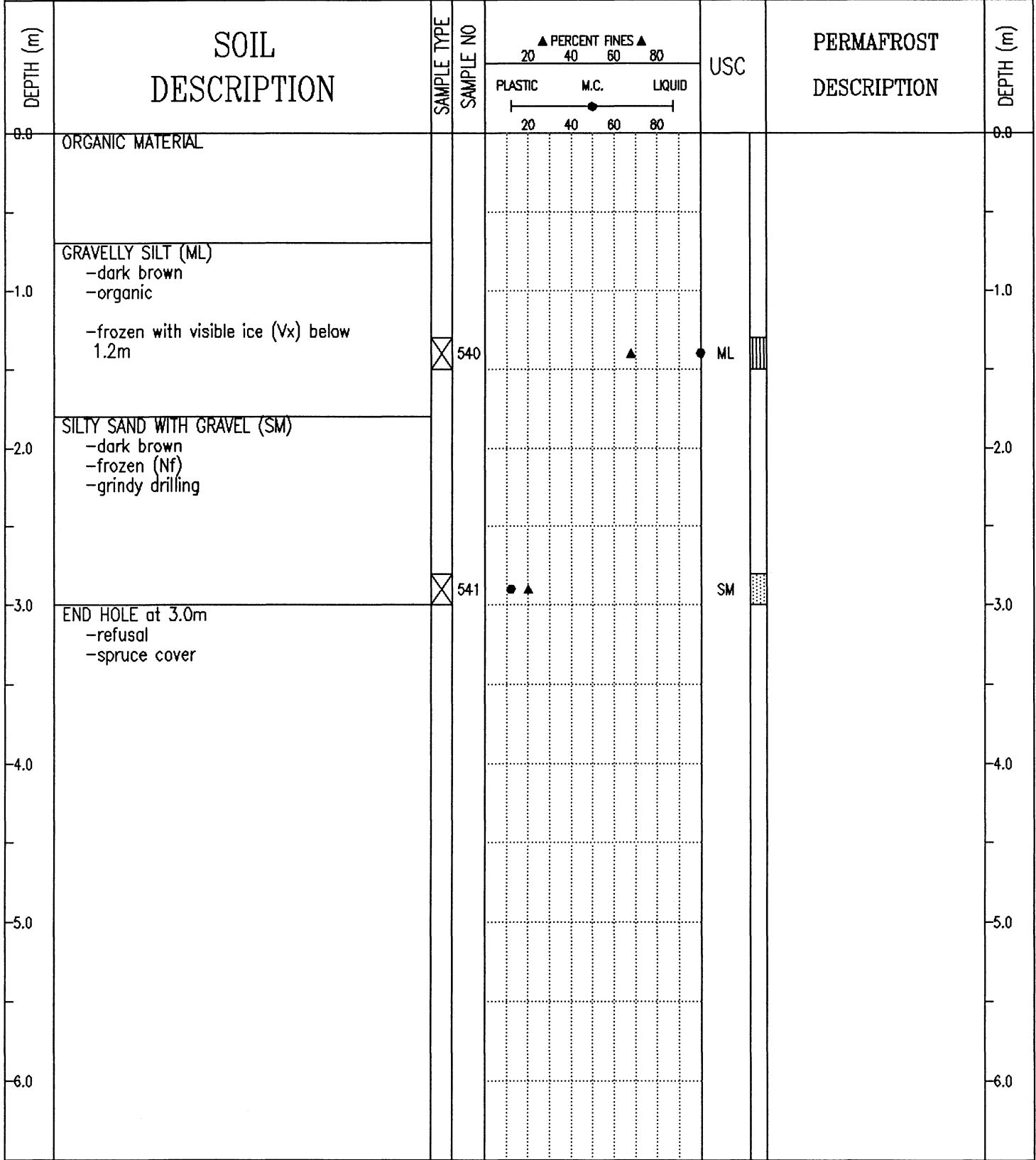
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 212-08
SHAKWAK PROJECT	SEGMENT 17B	Project No: 202101 0310
DRILL: BACKHOE: CAT 235	LOCATION: See Plan	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲			USC	◆ PERCENT SAND ◆		■ PERCENT GRAVEL ■	DEPTH (m)
				PLASTIC	M.C.	LIQUID		20	40		
0.0	ORGANIC MATERIAL -frozen										0.0
	SILT -frozen with visible ice										
-1.0											-1.0
	-some gravel below 1.2m										
-2.0											-2.0
	END HOLE at 2.5m										
-3.0											-3.0
-4.0											-4.0
-5.0											-5.0
-6.0											-6.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-205
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1922+200 o/s 2m Lt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 212-07
SHAKWAK PROJECT	SEGMENT 17B	Project No: 202101 0310
DRILL: BACKHOE: CAT 235	LOCATION: STA 1922+300 o/s Rt.	ELEVATION 0.000 (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	PERCENT SAND ◆		PERCENT GRAVEL ■		DEPTH (m)
				20	40	60		80	20	40	60	
0.0	FRACTURED ROCK -rippable											0.0
-1.0												-1.0
-2.0	END HOLE at 1.7m -bottom of old pit											-2.0
-3.0												-3.0
-4.0												-4.0
-5.0												-5.0
-6.0												-6.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 212-11
SHAKWAK PROJECT	SEGMENT 17B	Project No: 202101 0310
DRILL: BACKHOE: CAT 235	LOCATION: STA 1922+300	ELEVATION 0.000 (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	PERCENT SAND ◆		PERCENT GRAVEL ■		DEPTH (m)
				20	40	60		80	20	40	60	
0.0	ORGANIC MATERIAL -frozen											0.0
	SILT -frozen											
1.0												1.0
	END HOLE at 1.6m											
2.0												2.0
3.0												3.0
4.0												4.0
5.0												5.0
6.0												6.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 212-10
SHAKWAK PROJECT	SEGMENT 17B	Project No: 202101 0310
DRILL: BACKHOE: CAT 235	LOCATION: See Plan	ELEVATION 0.000 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input checked="" type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERCENT SAND ◆		PERCENT GRAVEL ■		DEPTH (m)
				PLASTIC	M.C.	LIQUID		20	40	60	80	
0.0	ORGANIC MATERIAL -frozen											0.0
	SILT -frozen -easy digging											
	FRACTURED ROCK											
1.0	END HOLE at 1.0m -on steep slope facing southwest											1.0
2.0												2.0
3.0												3.0
4.0												4.0
5.0												5.0
6.0												6.0

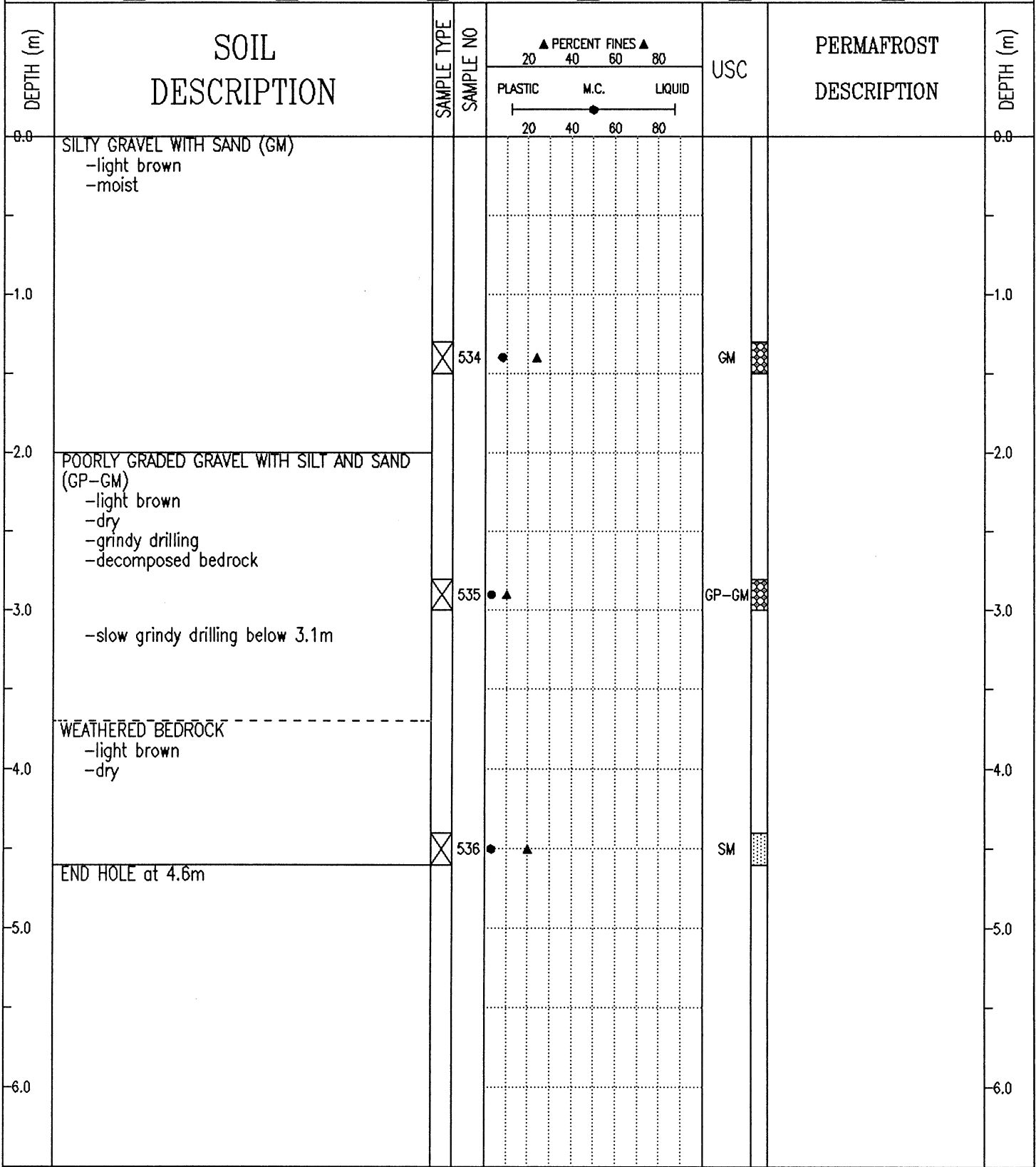
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-204
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1922+325 o/s 2m Lt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC MATERIAL							0.0	
1.0	SANDY SILT WITH GRAVEL (ML) -dark brown  -frozen with visible ice (Vx) below 1.2m	<input checked="" type="checkbox"/>	537		55	75	ML	1.0	
3.0	SANDY SILT (ML) -dark brown -frozen (Nf)	<input checked="" type="checkbox"/>	538	25	45	70	ML	3.0	
4.0	SILT (ML) -dark brown -frozen (Nf)	<input checked="" type="checkbox"/>	539	25	45	70	ML	4.0	
5.0	END HOLE at 4.6m -spruce cover							5.0	

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-203
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1922+400 o/s 15m Rt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT		ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 212-09
SHAKWAK PROJECT		SEGMENT 17B	Project No: 202101 0310
DRILL: BACKHOE: CAT 235		LOCATION: STA 1922+400 o/s Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER
			<input checked="" type="checkbox"/> BULK
			<input type="checkbox"/> TUBE
			<input type="checkbox"/> CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERCENT SAND ◆		PERCENT GRAVEL ■	DEPTH (m)
				20	40	60		80	20		
0.0	ORGANIC MATERIAL -frozen SILT -frozen with thin layers of ice										0.0
1.0	FRACTURED ROCK -dry -some silt										1.0
2.0											2.0
3.0											3.0
4.0											4.0
5.0											5.0
6.0											6.0
	END HOLE at 3.2m -on pole line										

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-95
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1922+425 o/s 11m Rt.	ELEVATION 0.000 (m)

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

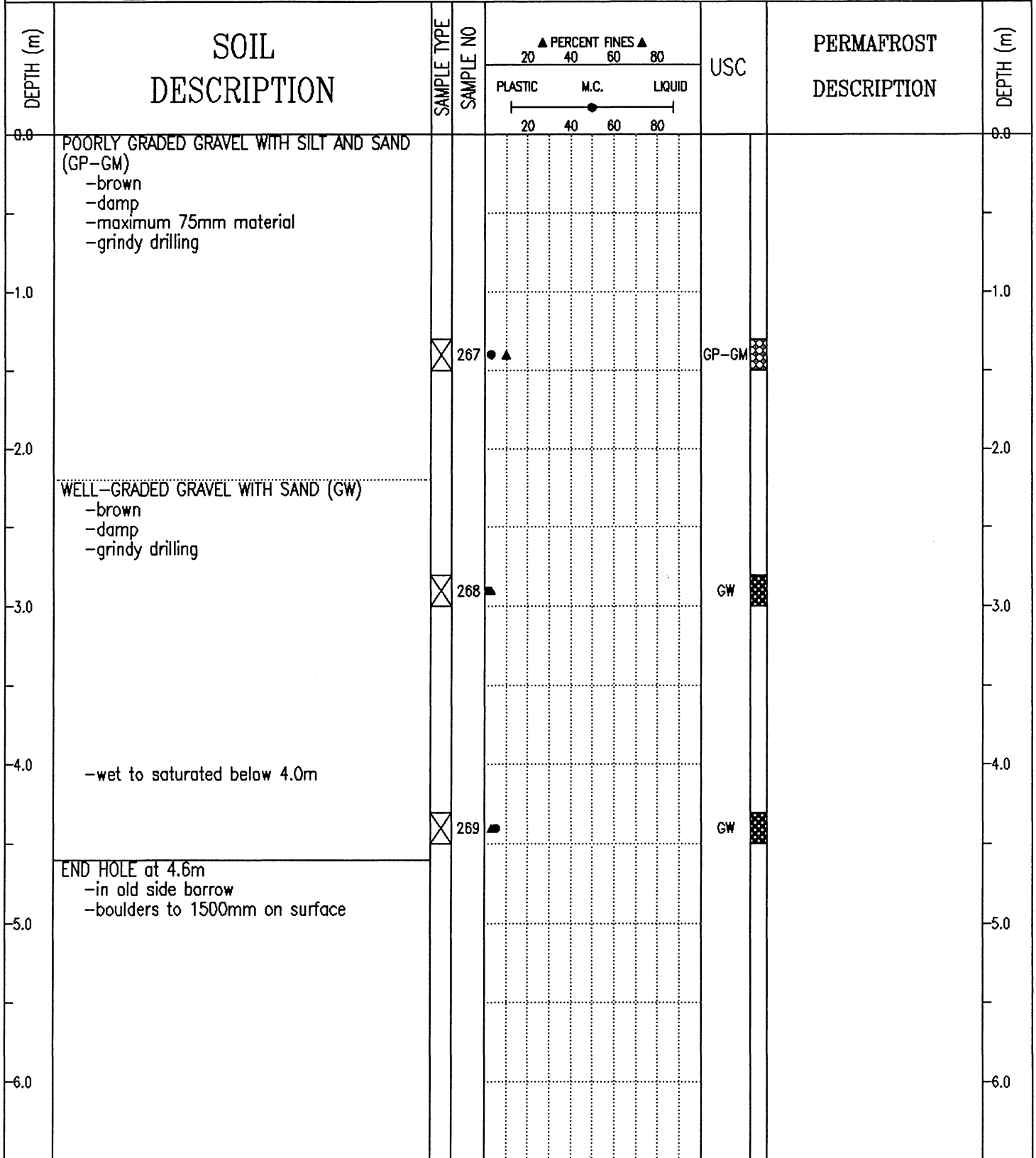
DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	SILTY GRAVEL WITH SAND (GM) -brown -damp								0.0
1.0									1.0
2.0									2.0
2.67		X	267	●	▲		GM		2.67
3.0									3.0
3.6		X	268	●	▲		GM		3.6
4.0									4.0
5.0	END HOLE at 3.6m -refusal -in ditch								5.0
6.0									6.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 212-06
SHAKWAK PROJECT	SEGMENT 17B	Project No: 202101 0310
DRILL: BACKHOE: CAT 235	LOCATION: STA 1922+500 o/s Rt.	ELEVATION 0.000 (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	PERCENT SAND ◆		PERCENT GRAVEL ■		DEPTH (m)
				20	40	60		80	20	40	60	
0.0	ORGANIC MATERIAL -frozen SILT -frozen with visible ice											0.0
-1.0												-1.0
-2.0												-2.0
-3.0	END HOLE at 2.2m -on pole line											-3.0
-4.0												-4.0
-5.0												-5.0
-6.0												-6.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-96
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1922+525 o/s 7m Rt.	ELEVATION 0.000 (m)

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



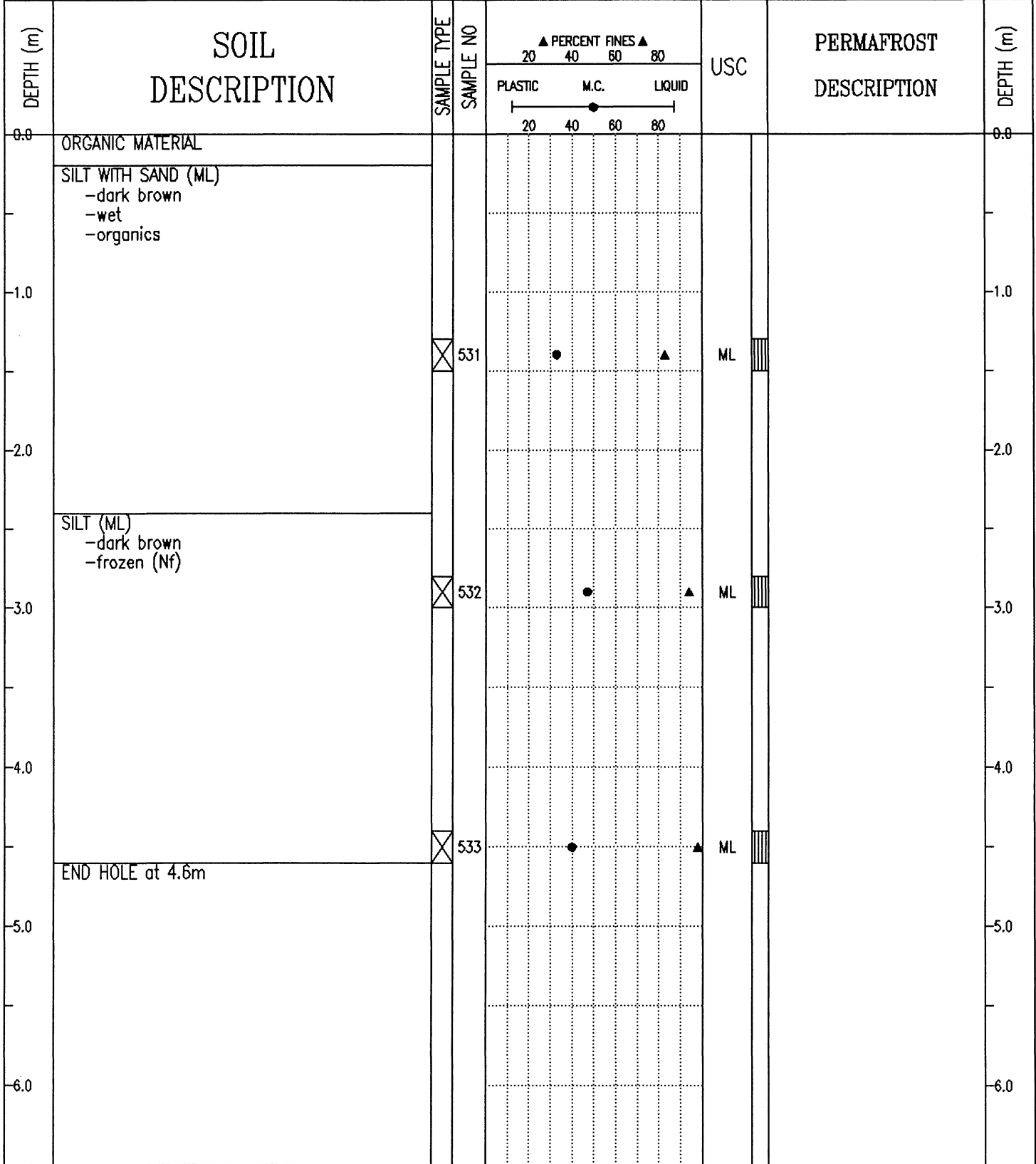
Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 91/08/22
	LOGGED BY	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RE-CONSTRUCTION	BOREHOLE No. 212-05
SHAKWAK PROJECT	SEGMENT 17B	Project No: 202101 0310
DRILL: BACKHOE: CAT 235	LOCATION: STA 1922+570 o/s Rt.	ELEVATION 0.000 (m)
SAMPLE TYPE <input checked="" type="checkbox"/> RETURN <input checked="" type="checkbox"/> S.P.T. <input checked="" type="checkbox"/> AUGER <input checked="" type="checkbox"/> BULK <input type="checkbox"/> TUBE <input type="checkbox"/> CORE		

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERCENT SAND ◆		PERCENT GRAVEL ■		DEPTH (m)
				20	40	60		80	20	40	60	
0.0	ORGANIC MATERIAL -frozen											0.0
	SILT -frozen with ice lenses											
-1.0												-1.0
-2.0	END HOLE at 2.0m -on pole line											-2.0
-3.0												-3.0
-4.0												-4.0
-5.0												-5.0
-6.0												-6.0

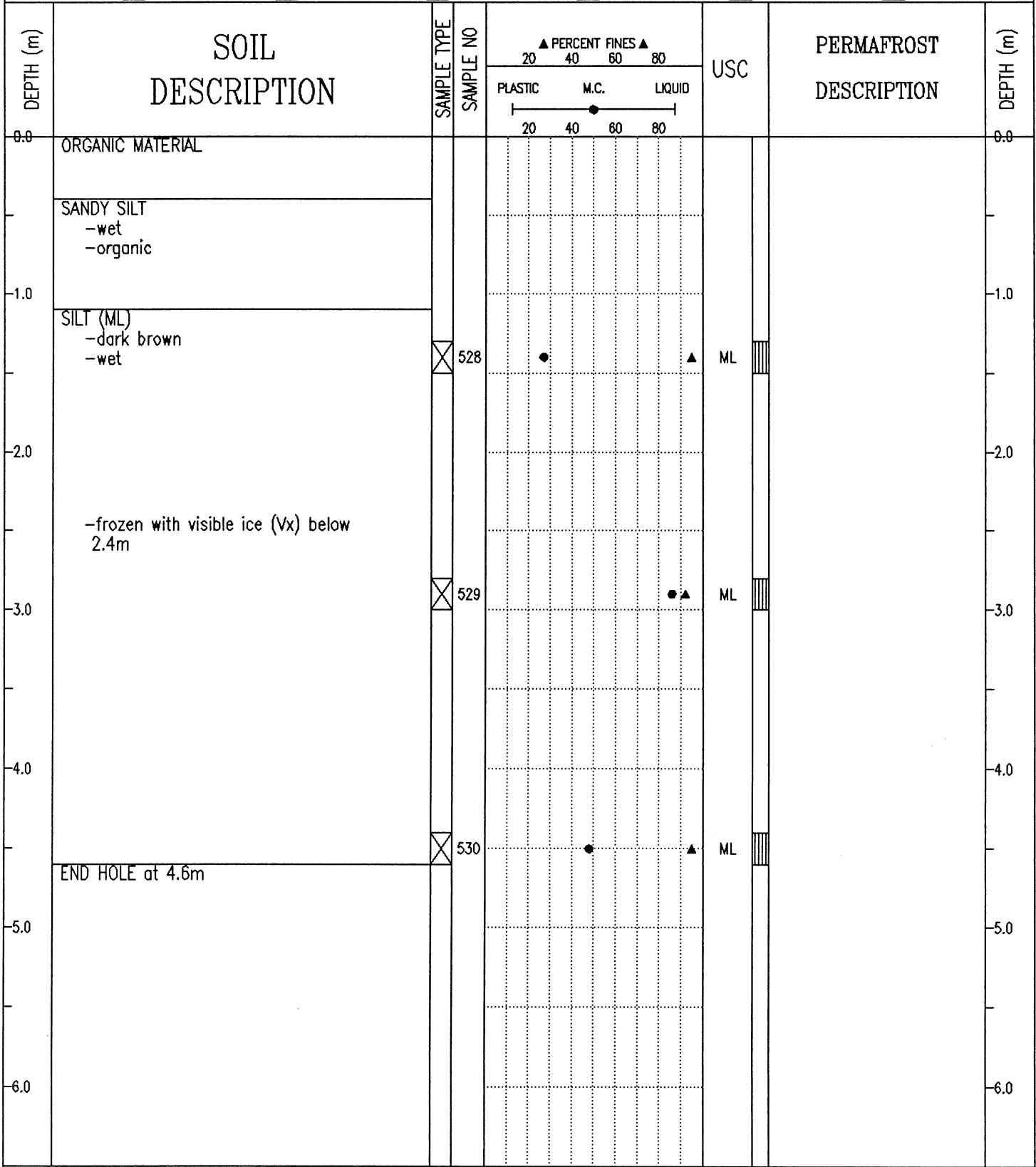
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-202
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1922+630 o/s 5m Rt.	ELEVATION 0.000 (m)

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



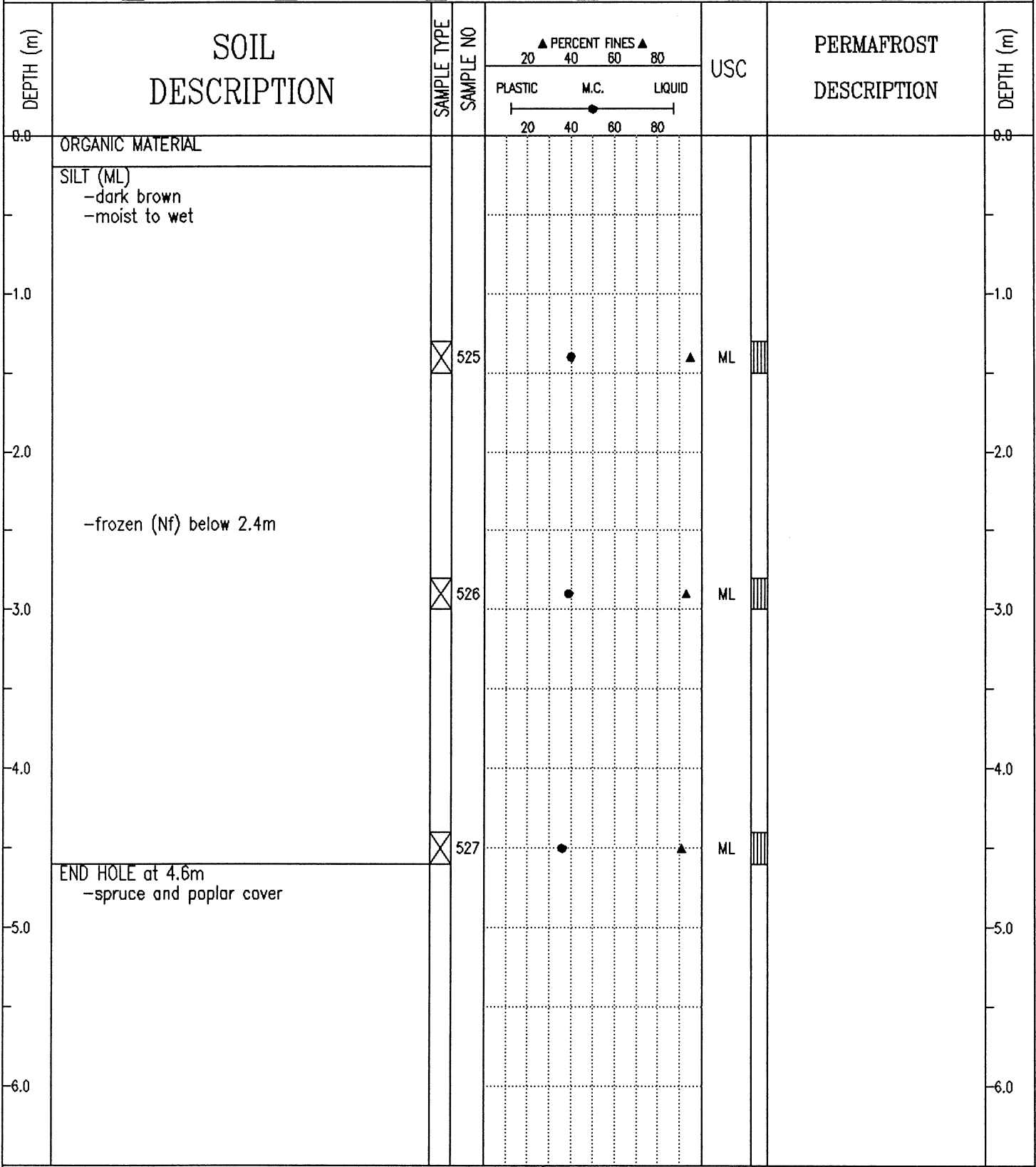
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-201
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1922+725 o/s 5m Rt.	ELEVATION 0.000 (m)

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



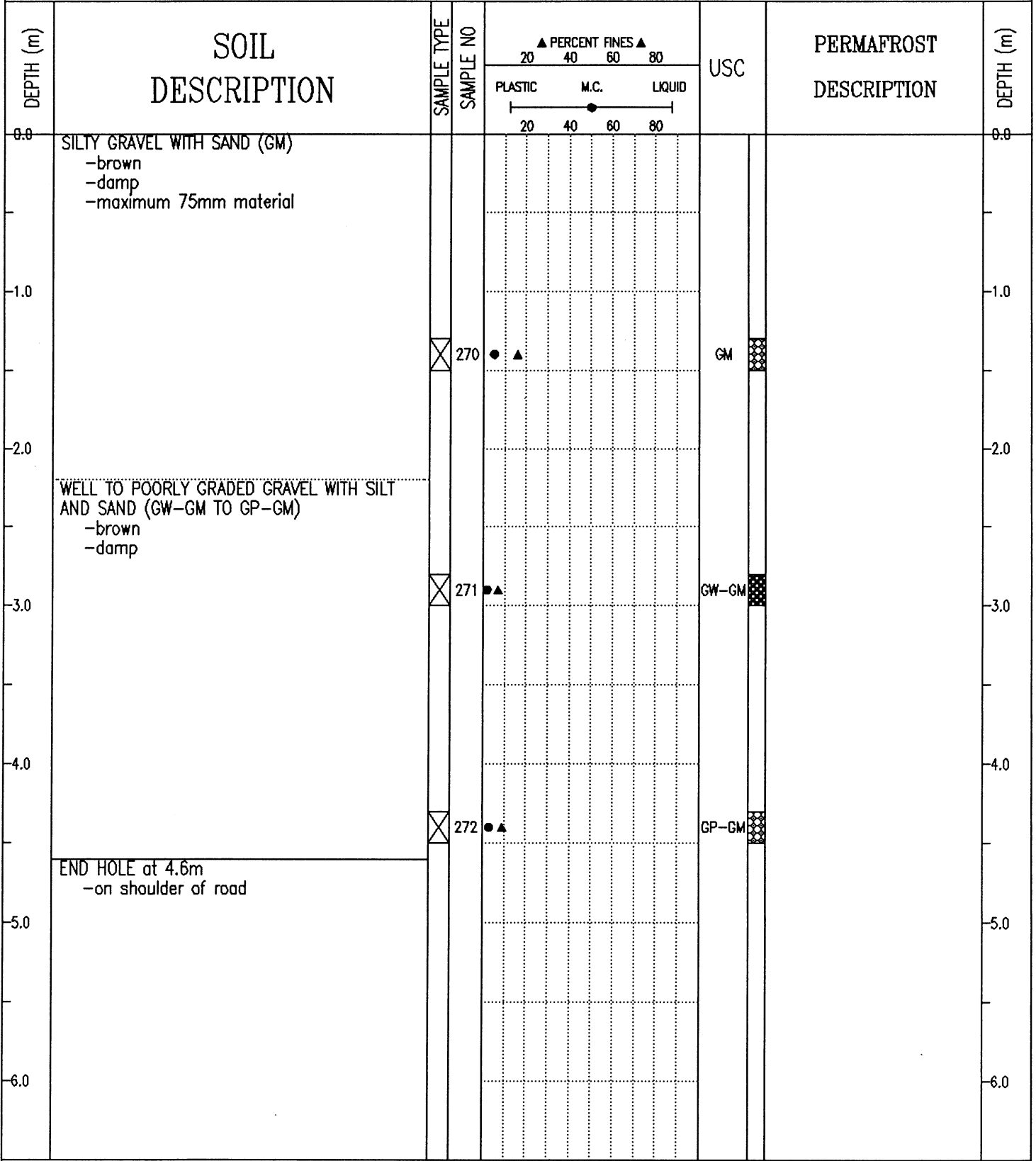
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-200
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1922+825 o/s 11m Lt.	ELEVATION 0.000 (m)

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



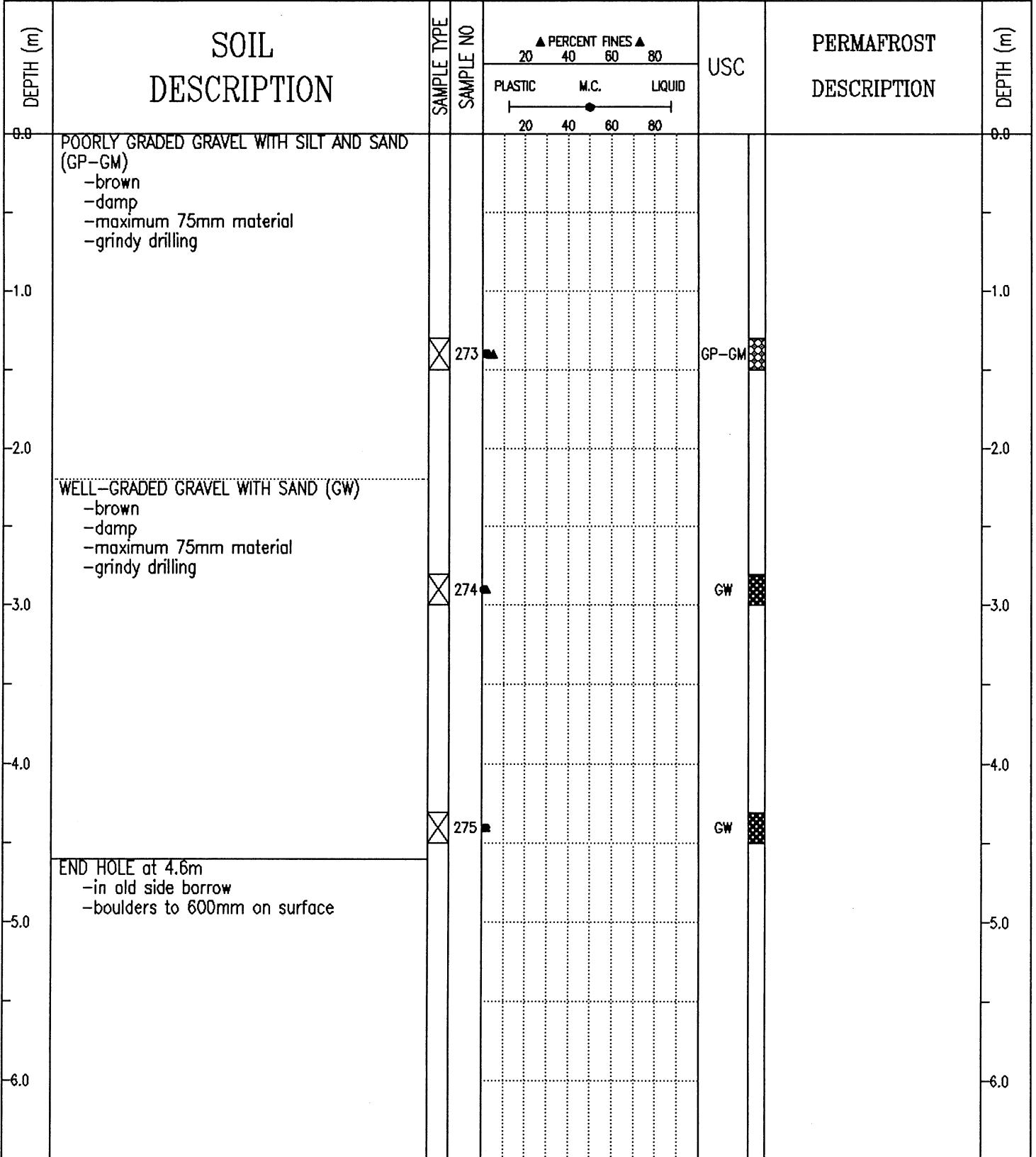
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-97
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1922+925 o/s 8m Rt.	ELEVATION 0.000 (m)

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



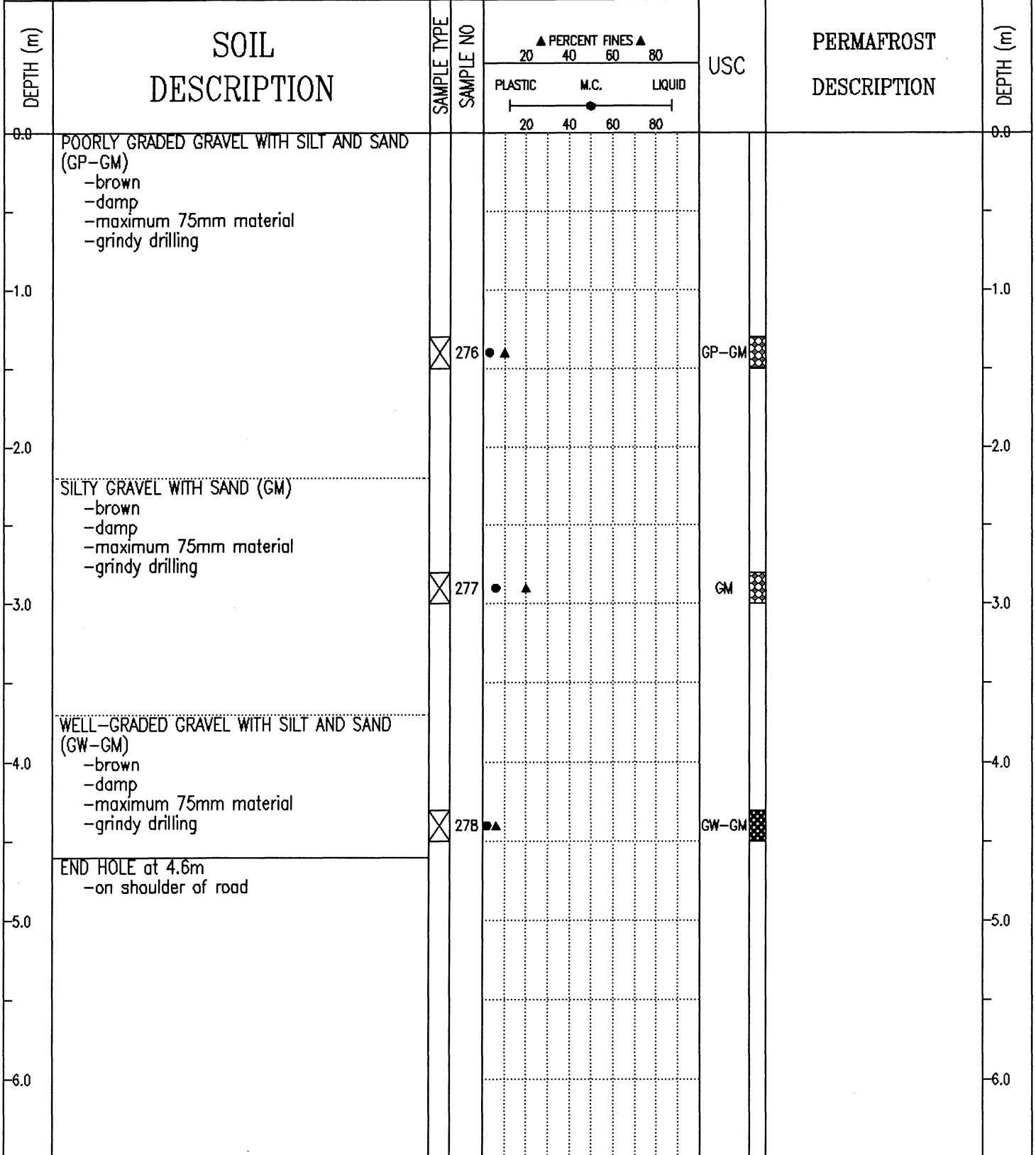
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-98
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1923+025 o/s 9m Lt.	ELEVATION 0.000 (m)

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



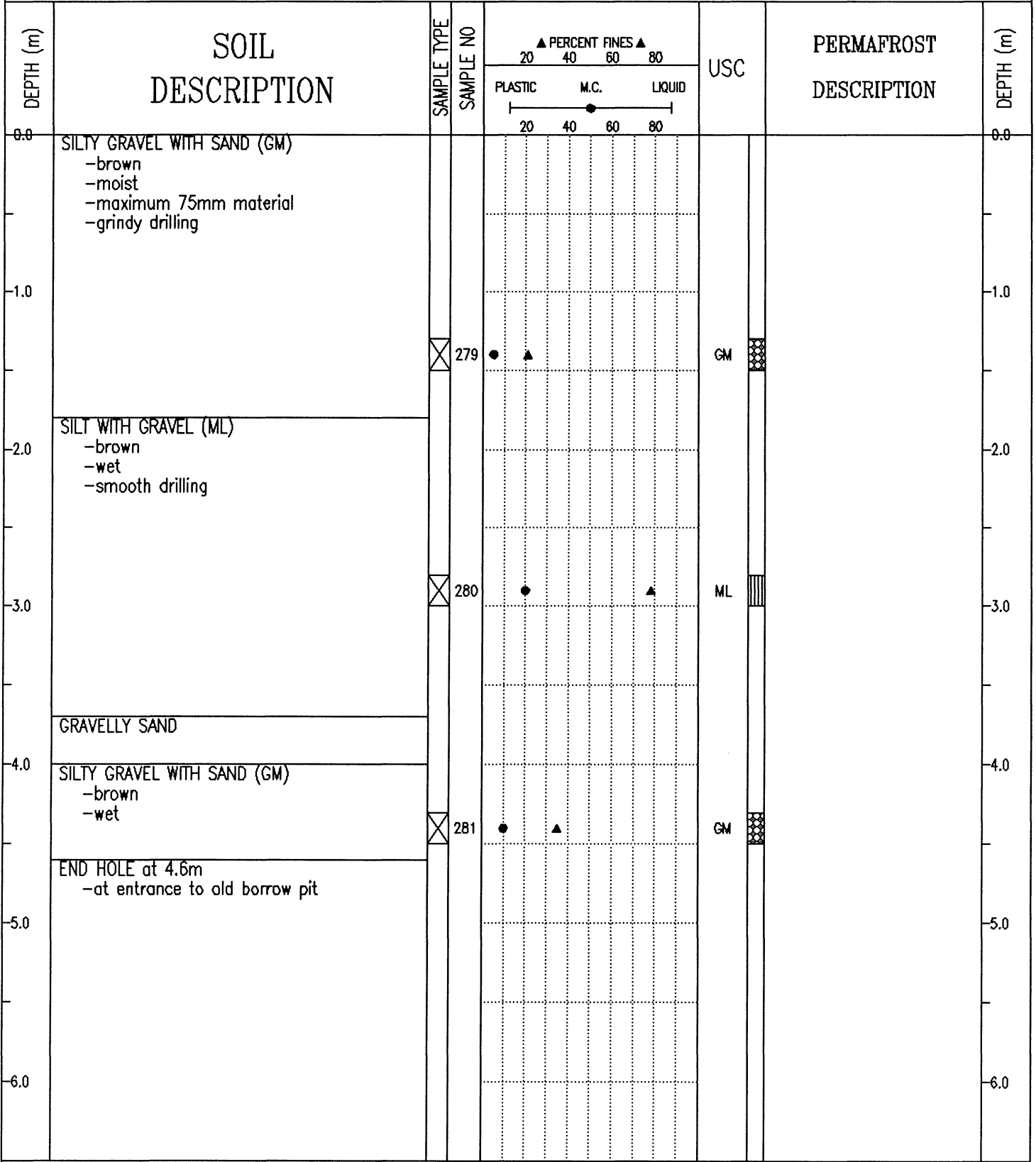
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-99
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1923+125 o/s 5m Rt.	ELEVATION 0.000 (m)

SAMPLE TYPE	<input checked="" type="checkbox"/> RETURN	<input checked="" type="checkbox"/> S.P.T.	<input checked="" type="checkbox"/> AUGER	<input checked="" type="checkbox"/> BULK	<input type="checkbox"/> TUBE	<input type="checkbox"/> CORE
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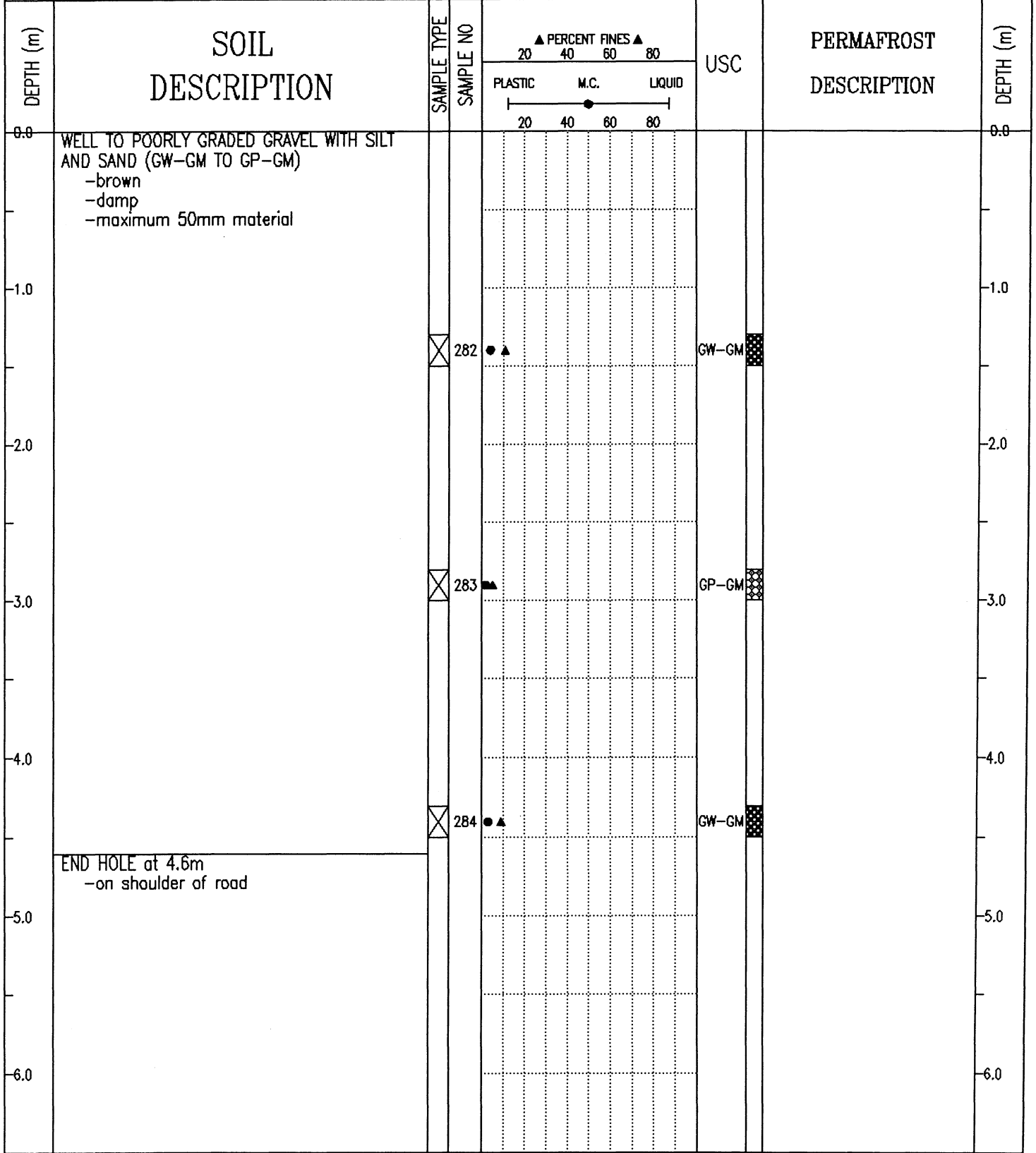
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-100
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1923+225 o/s 9m Rt.	ELEVATION 0.000 (m)

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



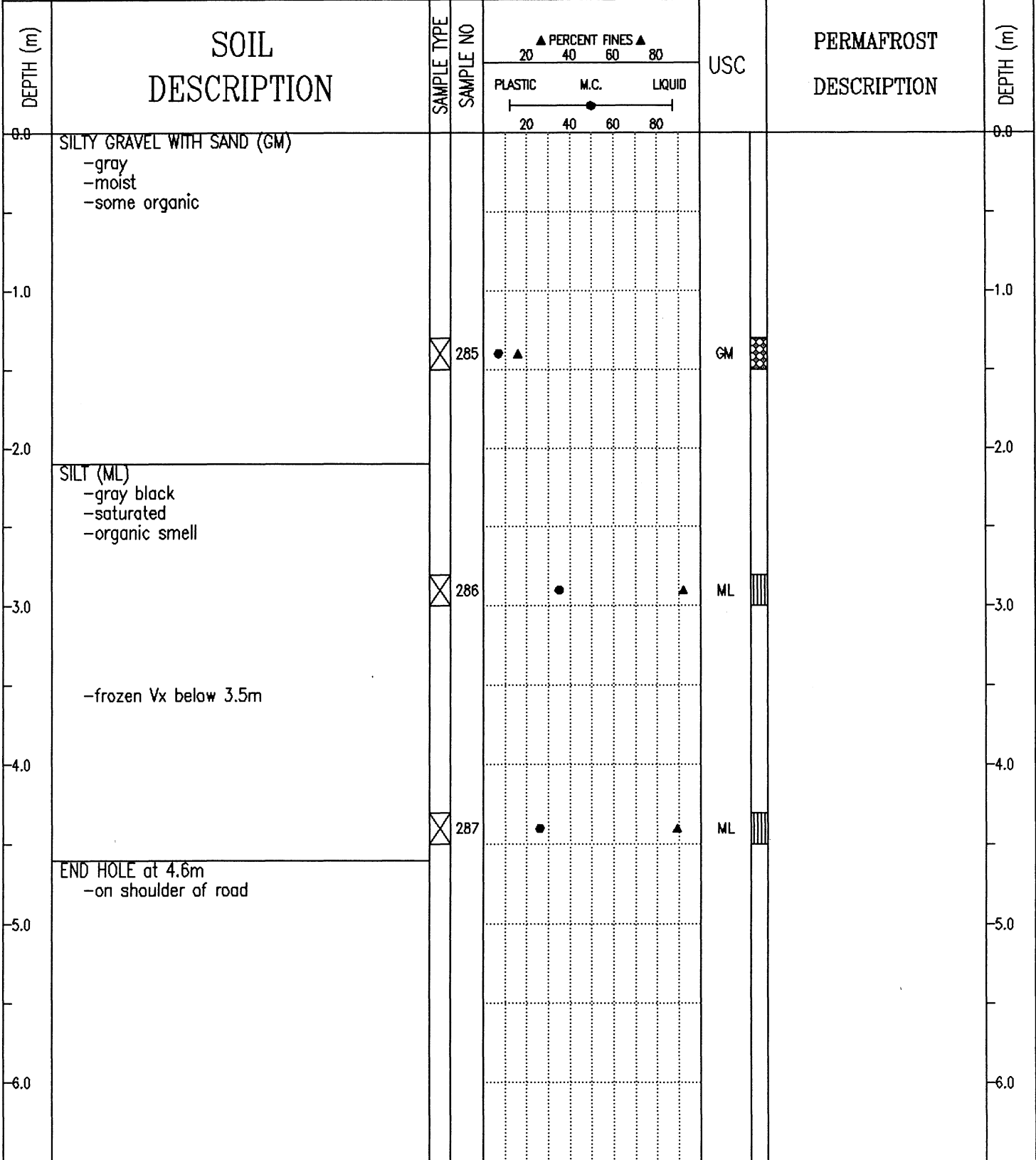
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-101
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1923+325 o/s 7m Rt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-102
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1923+425 o/s 7m Rt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-103
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1923+525 o/s 6m Rt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	SILTY GRAVEL -brown -moist -road fill -grindy drilling								0.0
1.0	SILTY GRAVEL WITH SAND (GM) -gray -moist -organic smell								1.0
2.0									2.0
3.0									3.0
4.0									4.0
5.0									5.0
6.0									6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 91/08/24
	LOGGED BY	DWG NO.

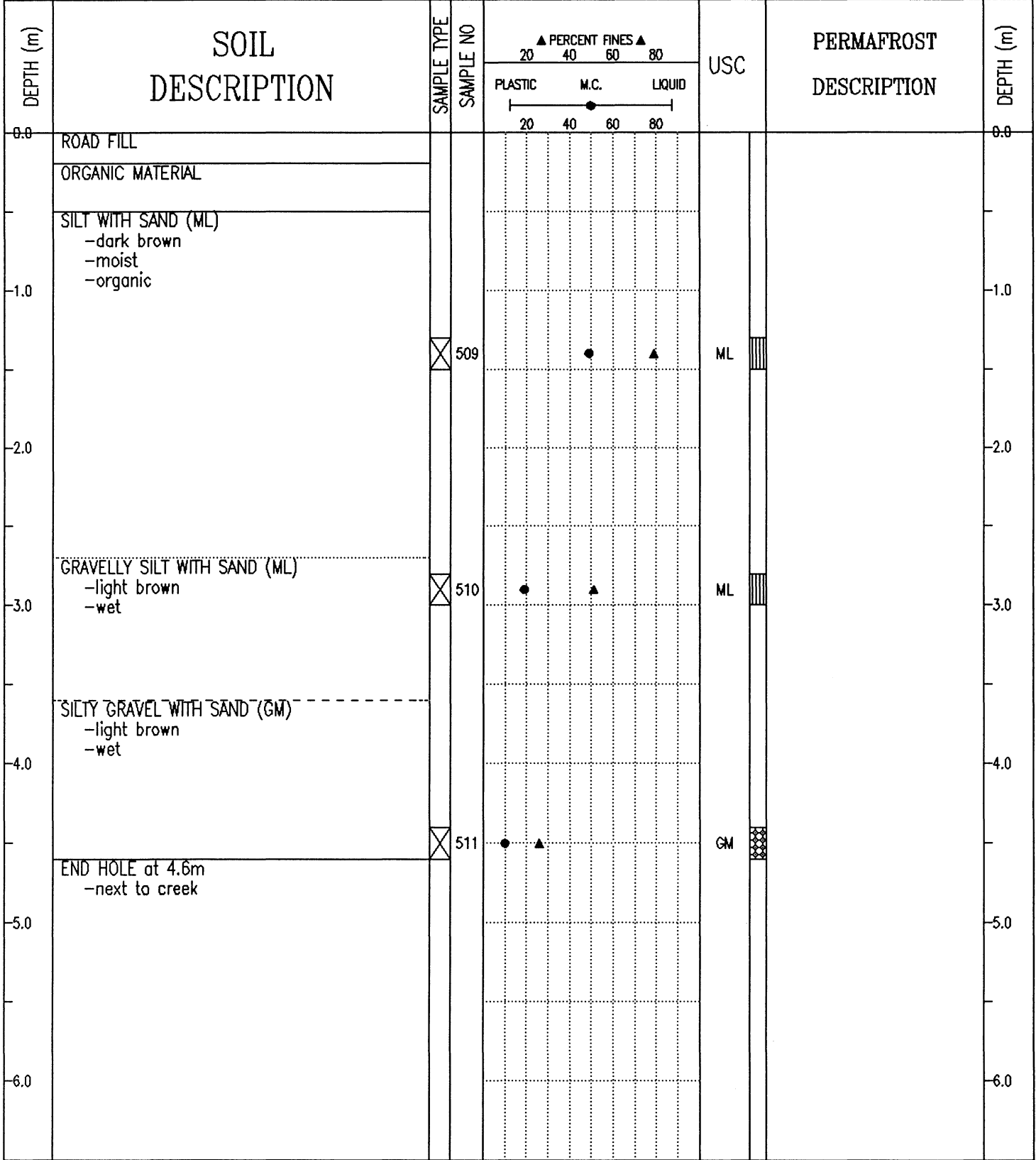
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-195
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1923+625 o/s 8m Lt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC MATERIAL							0.0	
	SILTY SAND WITH GRAVEL -road fill -wet								
1.0	ORGANIC MATERIAL -wet							1.0	
	SANDY SILT (ML) -wet -organics -grindy drilling	<input checked="" type="checkbox"/>	512				SM		
2.0								2.0	
		<input checked="" type="checkbox"/>	513				ML		
3.0								3.0	
	SILTY SAND WITH GRAVEL (SM) -wet -slow grindy drilling	<input checked="" type="checkbox"/>	514				SM		
4.0								4.0	
	END HOLE at 4.2m -refusal -near creek								
5.0								5.0	
6.0								6.0	

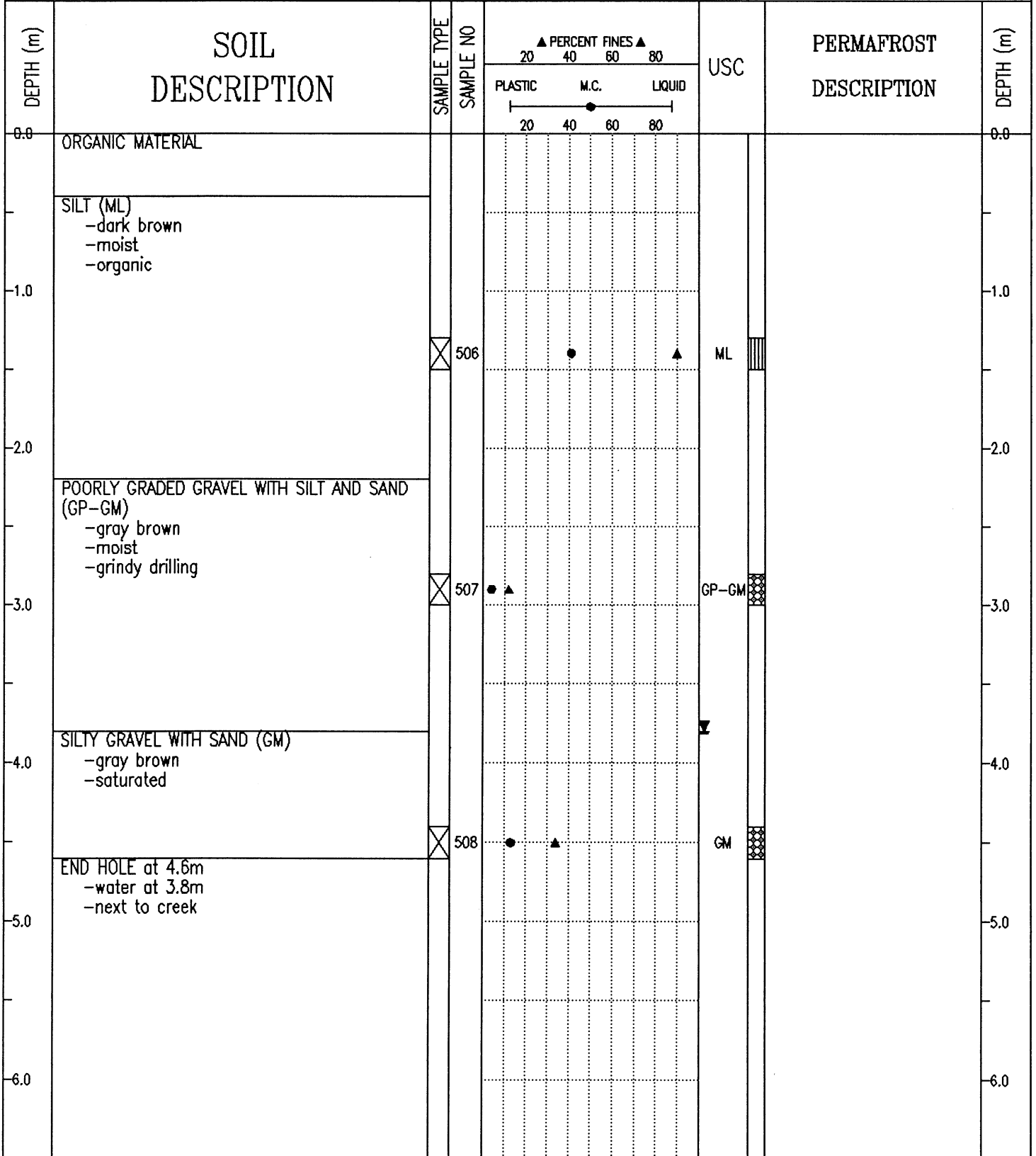
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-194
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1923+725 o/s 10m Lt.	ELEVATION 0.000 (m)

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



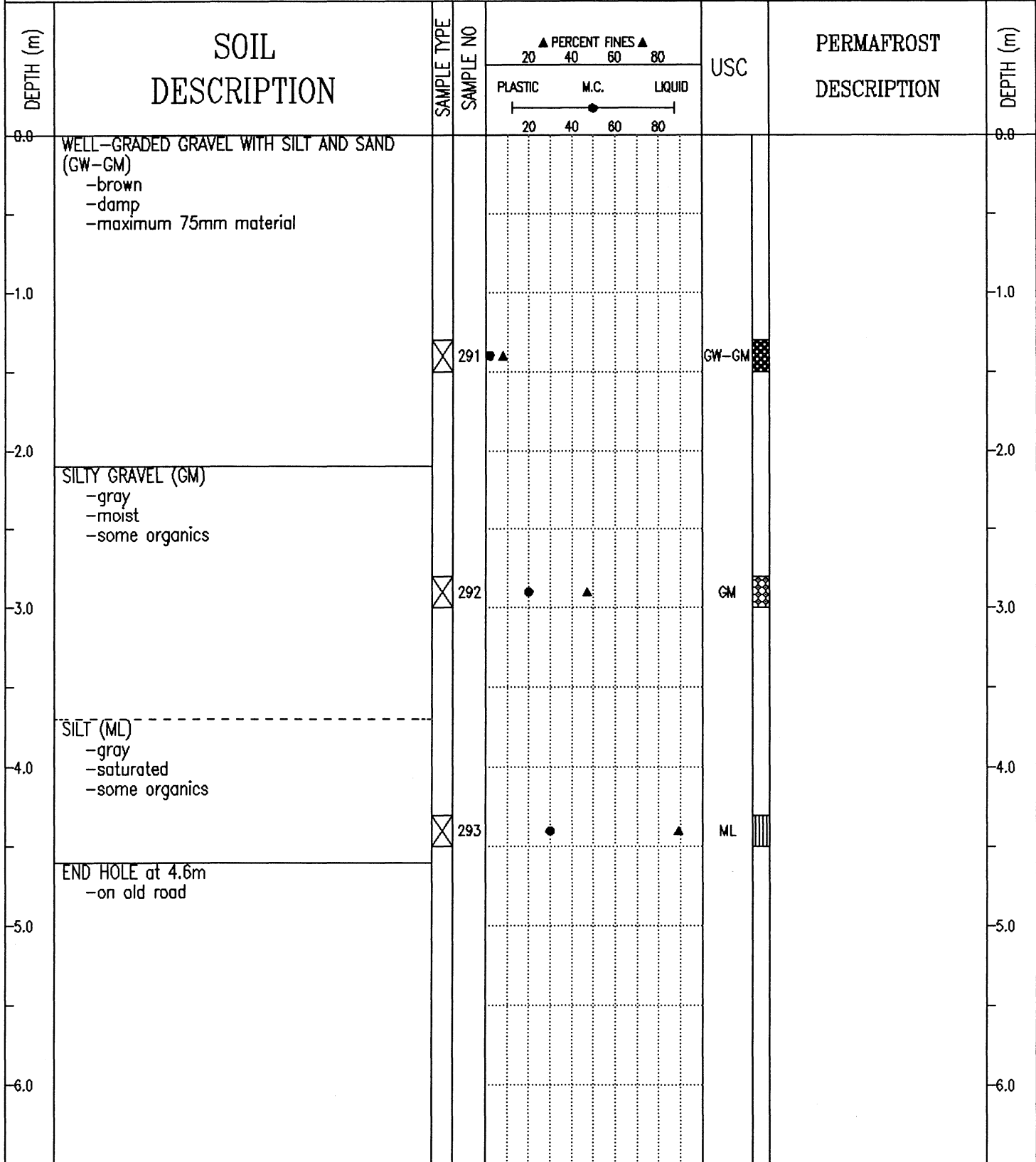
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-193
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1923+825 o/s 11m Lt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-104
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1923+900 o/s 7m Rt.	ELEVATION 0.000 (m)

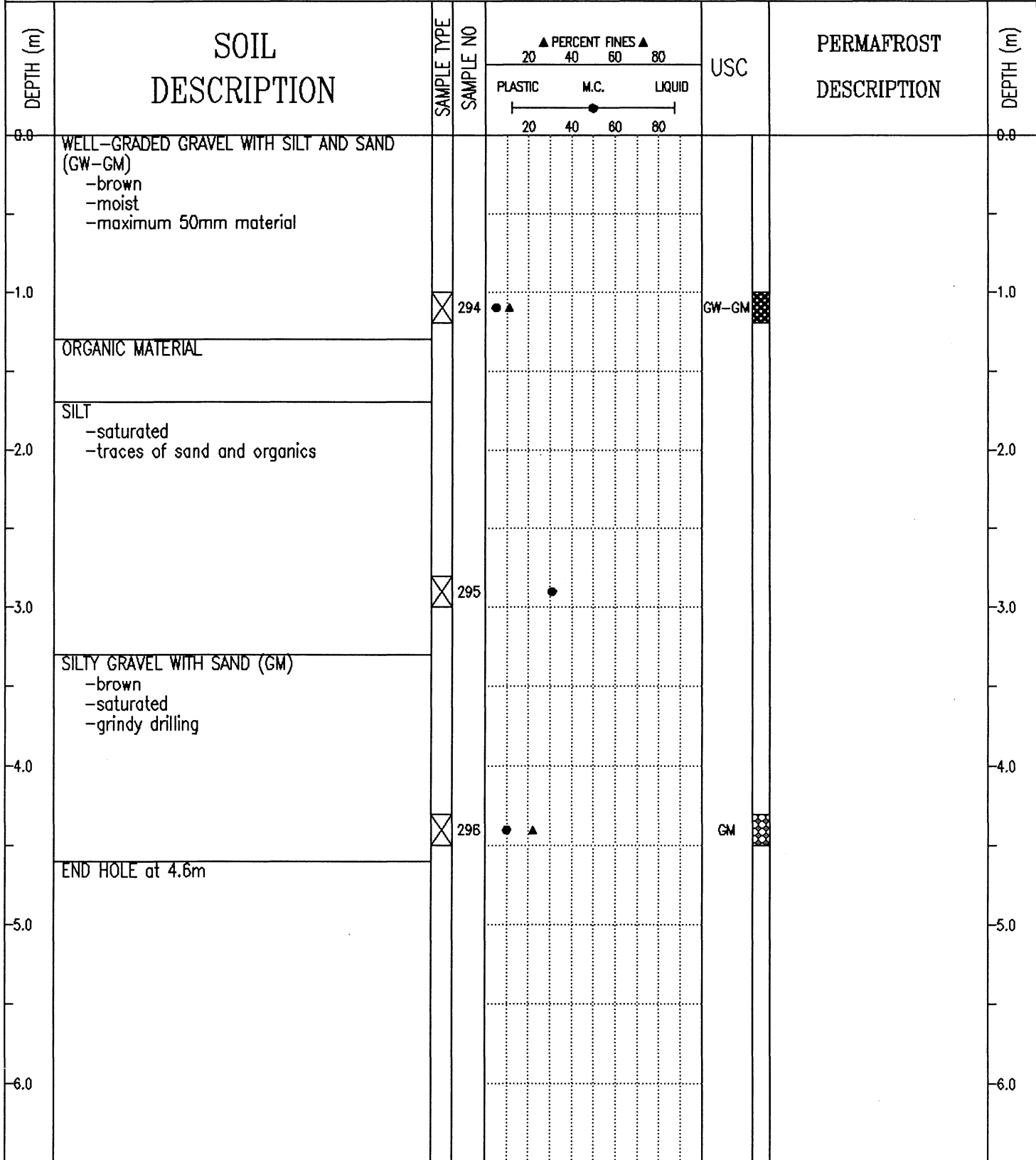
SAMPLE TYPE  RETURN  S.P.T.  AUGER  BULK  TUBE  CORE



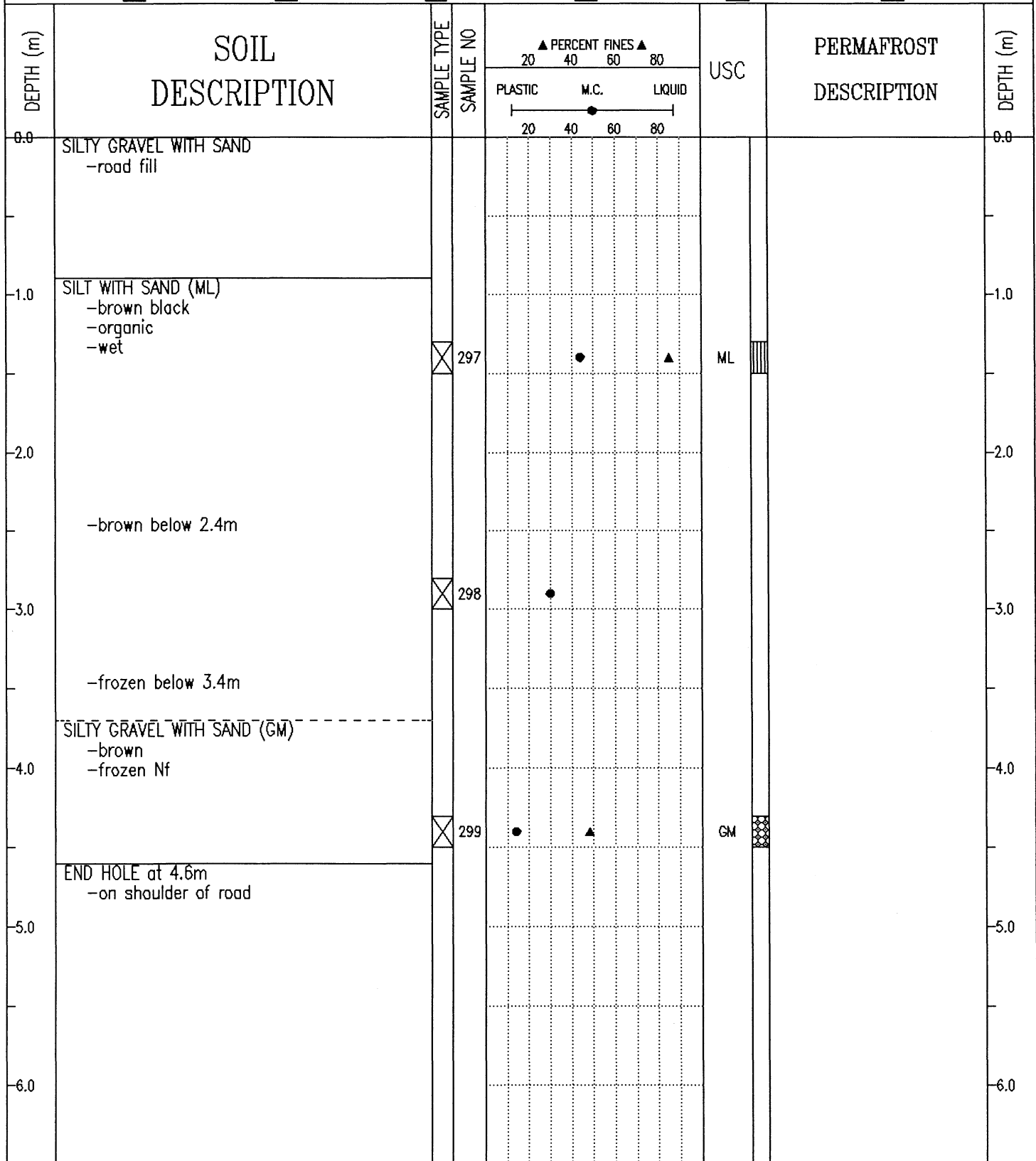
Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 91/08/24
	LOGGED BY	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-105
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1924+010 o/s 5m Lt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-106
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1924+100 o/s 5m Lt.	ELEVATION 0.000 (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		



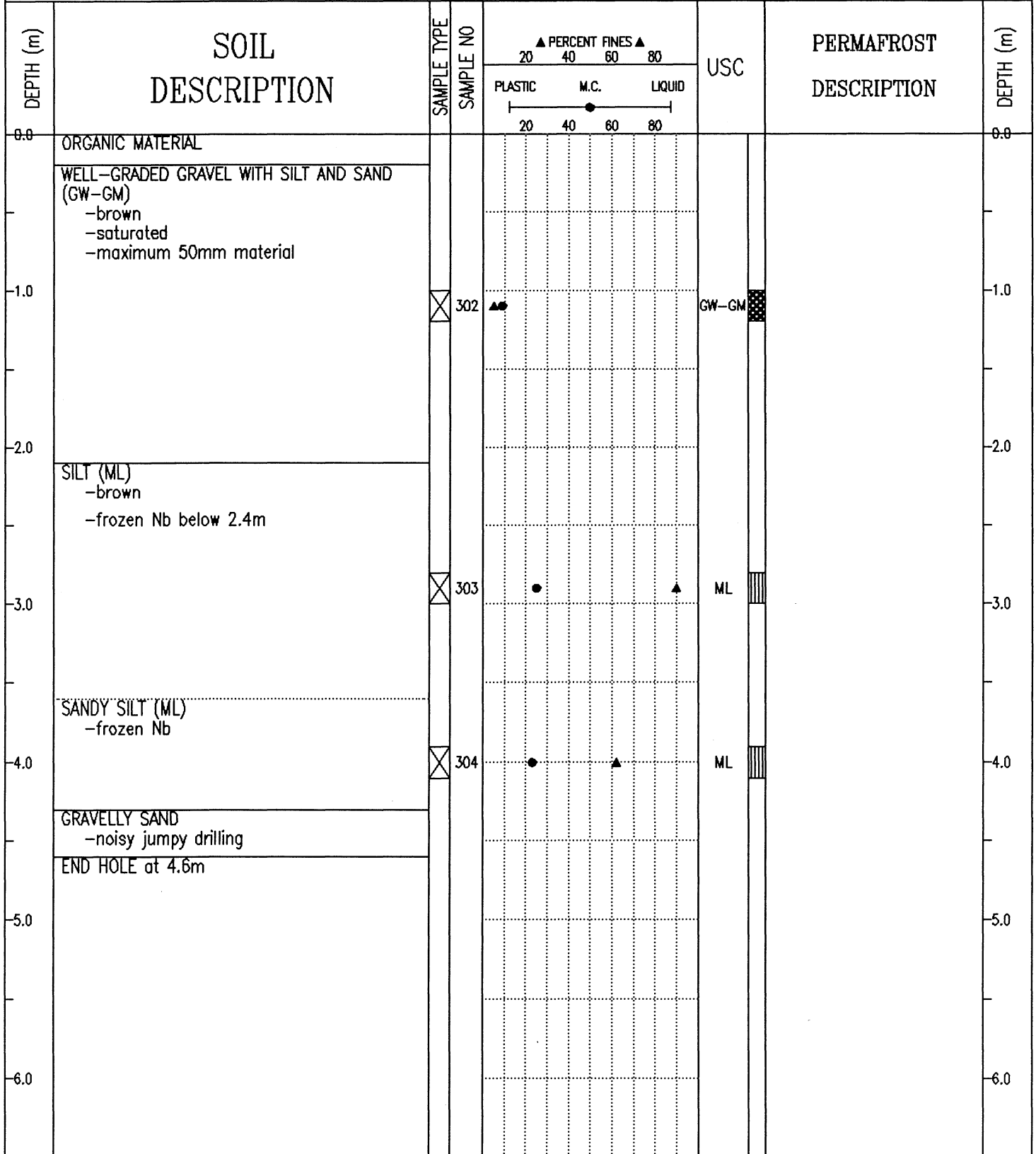
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-107
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1924+200 o/s 5m Lt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	SILTY GRAVEL WITH SAND -road fill							0.0	
1.0	ORGANIC MATERIAL		300	●				1.0	
2.0	SILT WITH SAND (ML) -brown  -frozen Vx below 2.1m							2.0	
3.0			301	●		▲	ML	3.0	
4.0	END HOLE at 3.9m -refusal -on shoulder of road							4.0	
5.0								5.0	
6.0								6.0	

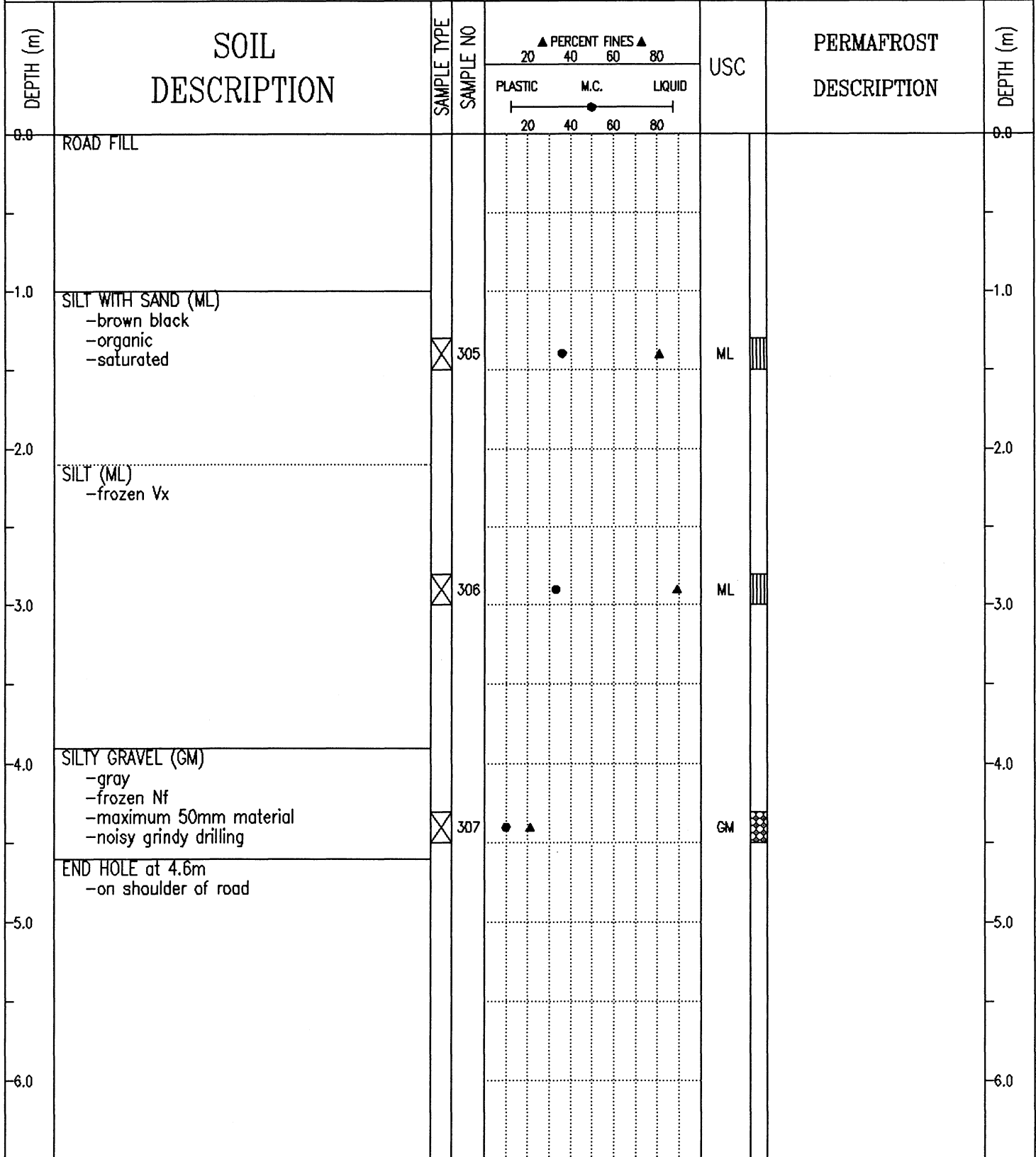
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-108
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1924+300 o/s 6m Lt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-109
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1924+400 o/s 6m Lt.	ELEVATION 0.000 (m)

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



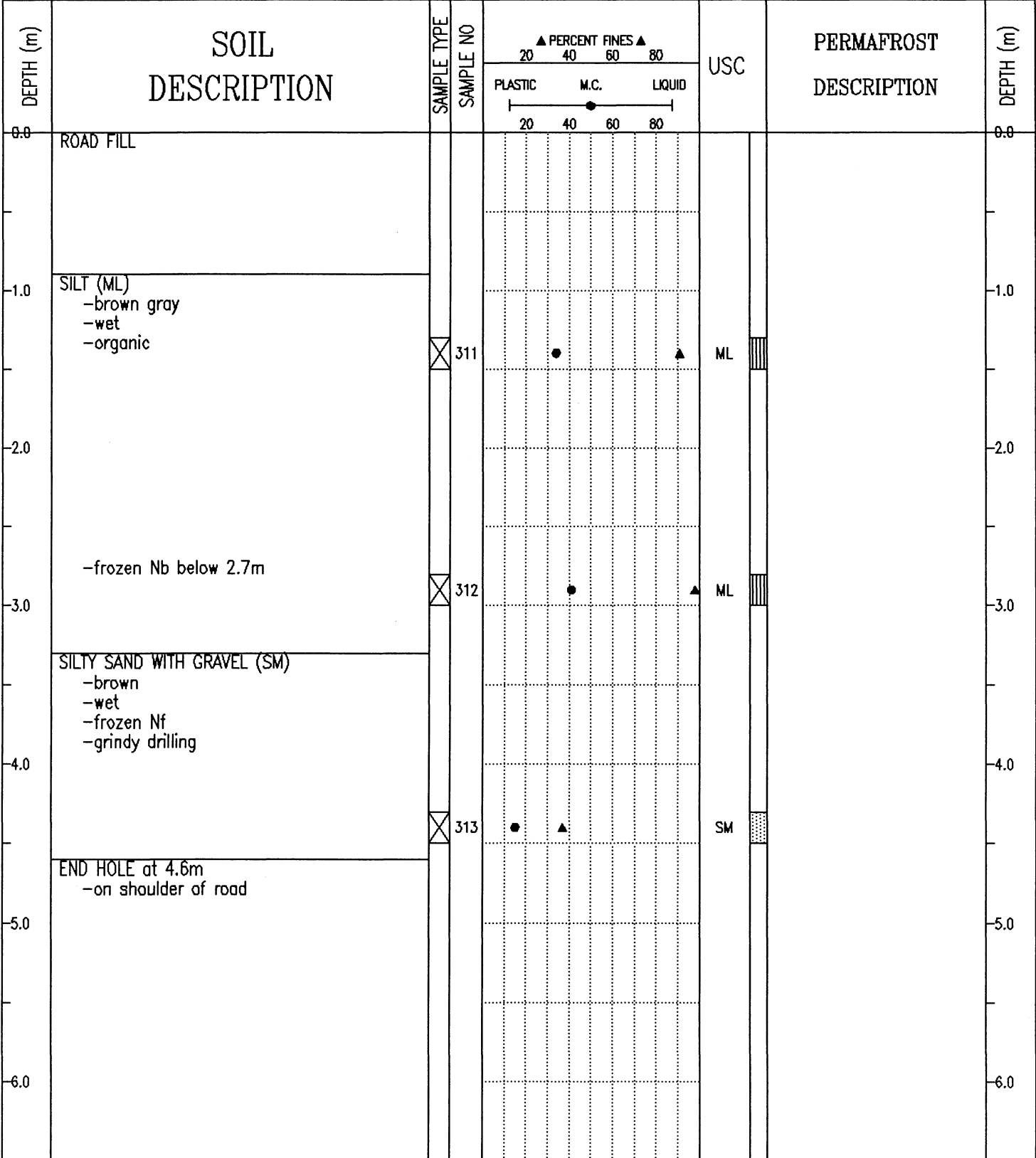
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-110
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1924+500 o/s 6m Lt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ROAD FILL								0.0
1.0	SILT WITH SAND (ML) -brown black -wet -organic	<input checked="" type="checkbox"/>	308	●		▲	ML		1.0
2.0									2.0
3.0	SILT (ML) -brown -wet	<input checked="" type="checkbox"/>	309	●		▲	ML		3.0
4.0	SILTY GRAVEL WITH SAND (GM) -brown -saturated -very noisy grindy jumpy drilling	<input checked="" type="checkbox"/>	310	●	▲		GM		4.0
5.0	END HOLE at 4.6m -on shoulder of road								5.0
6.0									6.0

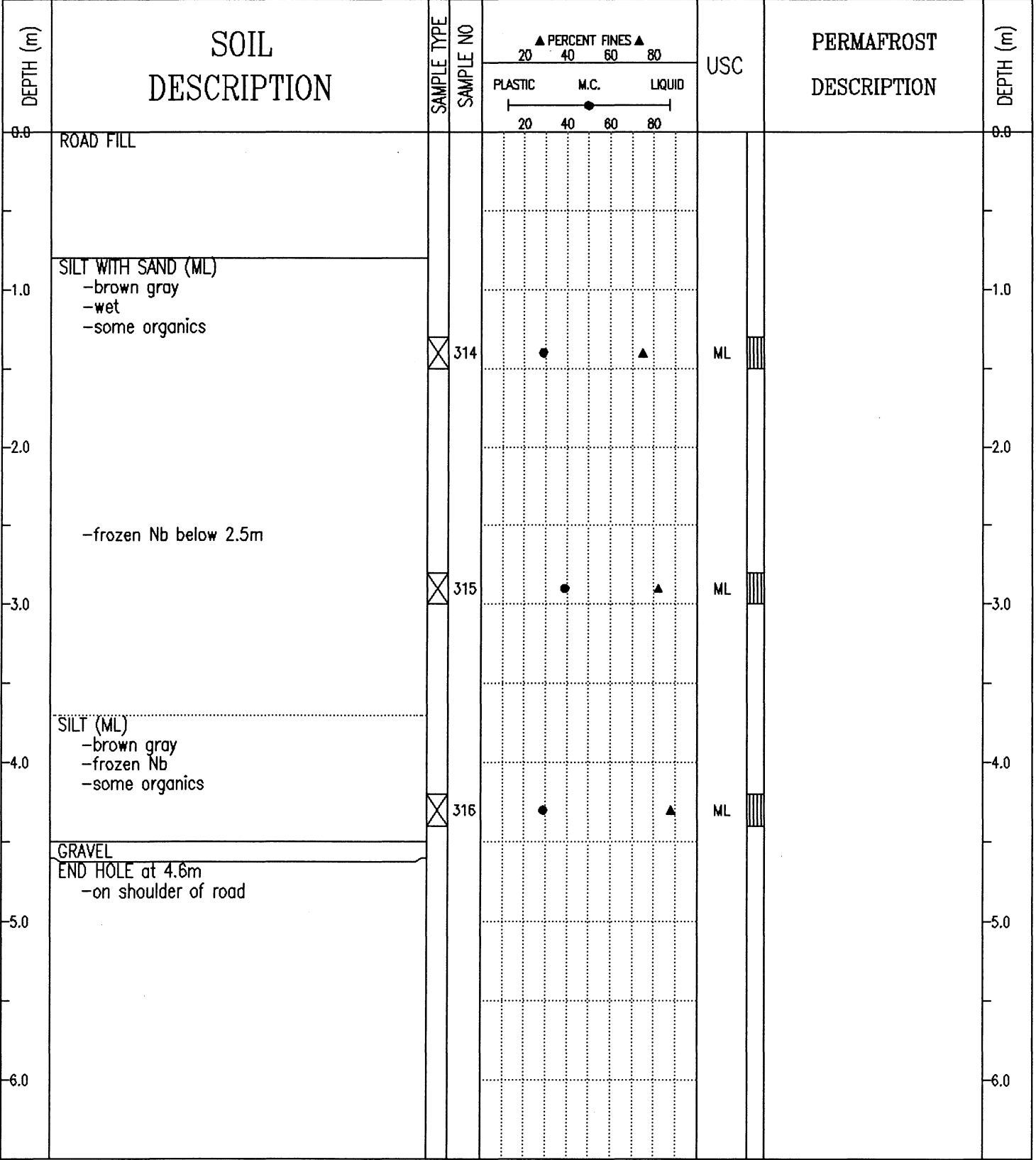
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-111
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1924+600 o/s 6m Lt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-112
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1924+700 o/s 6m Lt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-113
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1924+800 o/s 4m Lt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ROAD FILL							0.0	
1.0	SILT WITH SAND (ML) -brown black -wet -some organics	<input checked="" type="checkbox"/>	317	●		▲	ML	1.0	
2.0								2.0	
3.0	SILT (ML) -brown black -wet -some organics  -frozen below 3.0m	<input checked="" type="checkbox"/>	318	●		▲	ML	3.0	
4.0	GRAVELLY SAND -some silt -frozen Nf -grindy drilling	<input checked="" type="checkbox"/>	319	●				4.0	
5.0	END HOLE at 4.6m -on shoulder of road							5.0	
6.0								6.0	

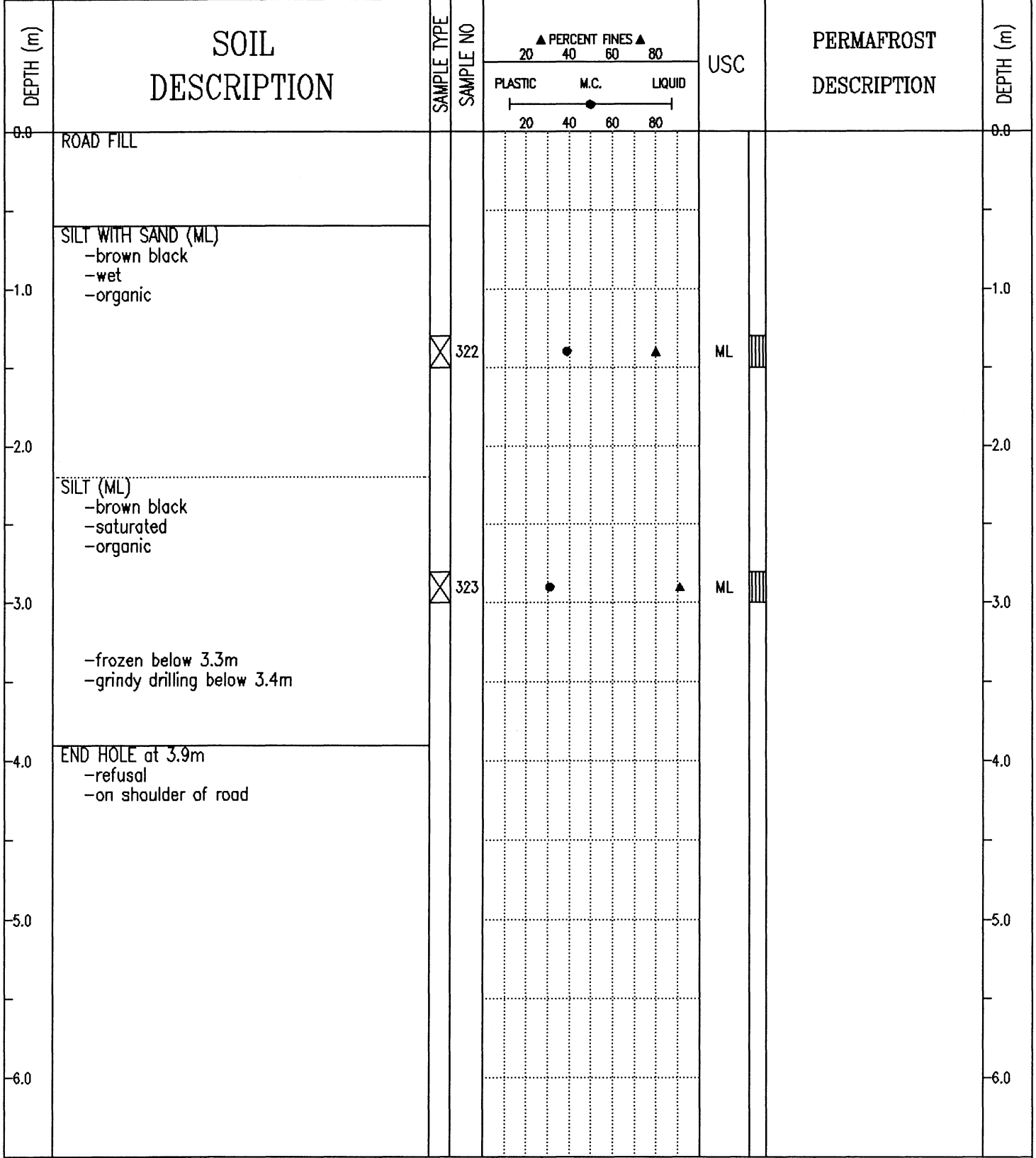
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-114
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1924+900 o/s 3m Rt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ROAD FILL								0.0
0.0 - 1.0	SANDY SILT (ML) -brown black -wet -organic -some ash								1.0
1.0 - 2.4		<input checked="" type="checkbox"/>	320	45	55	75	ML		2.4
2.4 - 3.0	SILT WITH SAND (ML) -brown -frozen Nb below 2.4m								3.0
3.0 - 3.8	-grindy drilling below 3.0m	<input checked="" type="checkbox"/>	321	45	55	75	ML		3.8
3.8 - 4.0	END HOLE at 3.8m -refusal -on shoulder of road								4.0
4.0 - 5.0									5.0
5.0 - 6.0									6.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-115
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1925+000 o/s 4m Lt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 143-116
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1925+100 o/s 5m Lt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ROAD FILL							0.0	
1.0	SILT (ML) -brown black -wet -organic	<input checked="" type="checkbox"/>	324				ML	1.0	
2.0	SILT WITH SAND (ML) -brown -frozen Nb -organic	<input checked="" type="checkbox"/>	325				ML	2.0	
3.0								3.0	
4.0	WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM) -brown -frozen Nf -grindy drilling	<input checked="" type="checkbox"/>	326				SW-SM	4.0	
5.0	END HOLE at 4.6m -on shoulder of road							5.0	
6.0								6.0	

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-117
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1925+200 o/s 3m Rt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ROAD FILL							0.0	
1.0	ORGANIC MATERIAL		327					1.0	
2.0	SILT -organics  -frozen below 2.1m							2.0	
3.0	SILTY SAND WITH GRAVEL (SM) -brown -frozen Nf -grindy drilling		328				SM	3.0	
4.0	END HOLE at 3.6m -refusal -on shoulder of road							4.0	
5.0								5.0	
6.0								6.0	

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-118
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1925+300 o/s 3m Rt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ROAD FILL							0.0	
1.0	GRAVELLY SILT WITH SAND (ML) -brown -wet -organic	<input checked="" type="checkbox"/>	329		55	75	ML	1.0	
2.0	SILT (ML) -frozen Nb -organics	<input checked="" type="checkbox"/>	330		55	75	ML	2.0	
3.0	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM) -brown -frozen Nf -grindy drilling	<input checked="" type="checkbox"/>	331	15	55	75	GW-GM	3.0	
4.0								4.0	
5.0	END HOLE at 4.6m -on shoulder of road							5.0	
6.0								6.0	

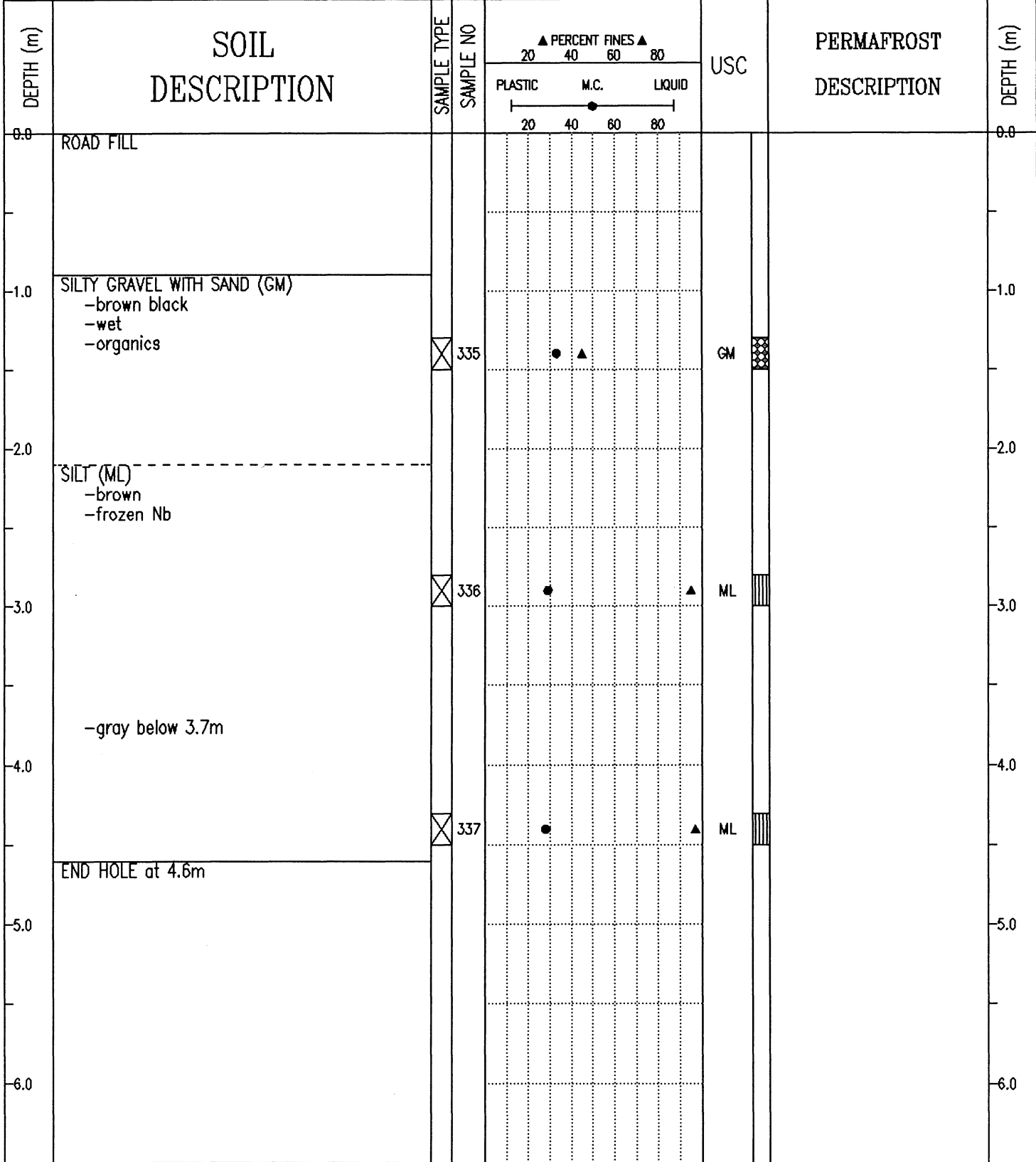
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-119
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1925+425 o/s 6m Lt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ROAD FILL							0.0	
1.0								1.0	
1.8	ORGANIC MATERIAL		332	●					
2.0	SILT (ML) -brown -trace organics -frozen below 2.1m							2.0	
3.0			333		●	▲	ML	3.0	
3.8	SILTY SAND WITH GRAVEL (SM) -brown -frozen Nf -grindy drilling							4.0	
4.0			334	●	▲		SM	4.0	
4.6	END HOLE at 4.6m							5.0	
5.0								5.0	
6.0								6.0	

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-120
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1925+525 o/s 5m Lt.	ELEVATION 0.000 (m)

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



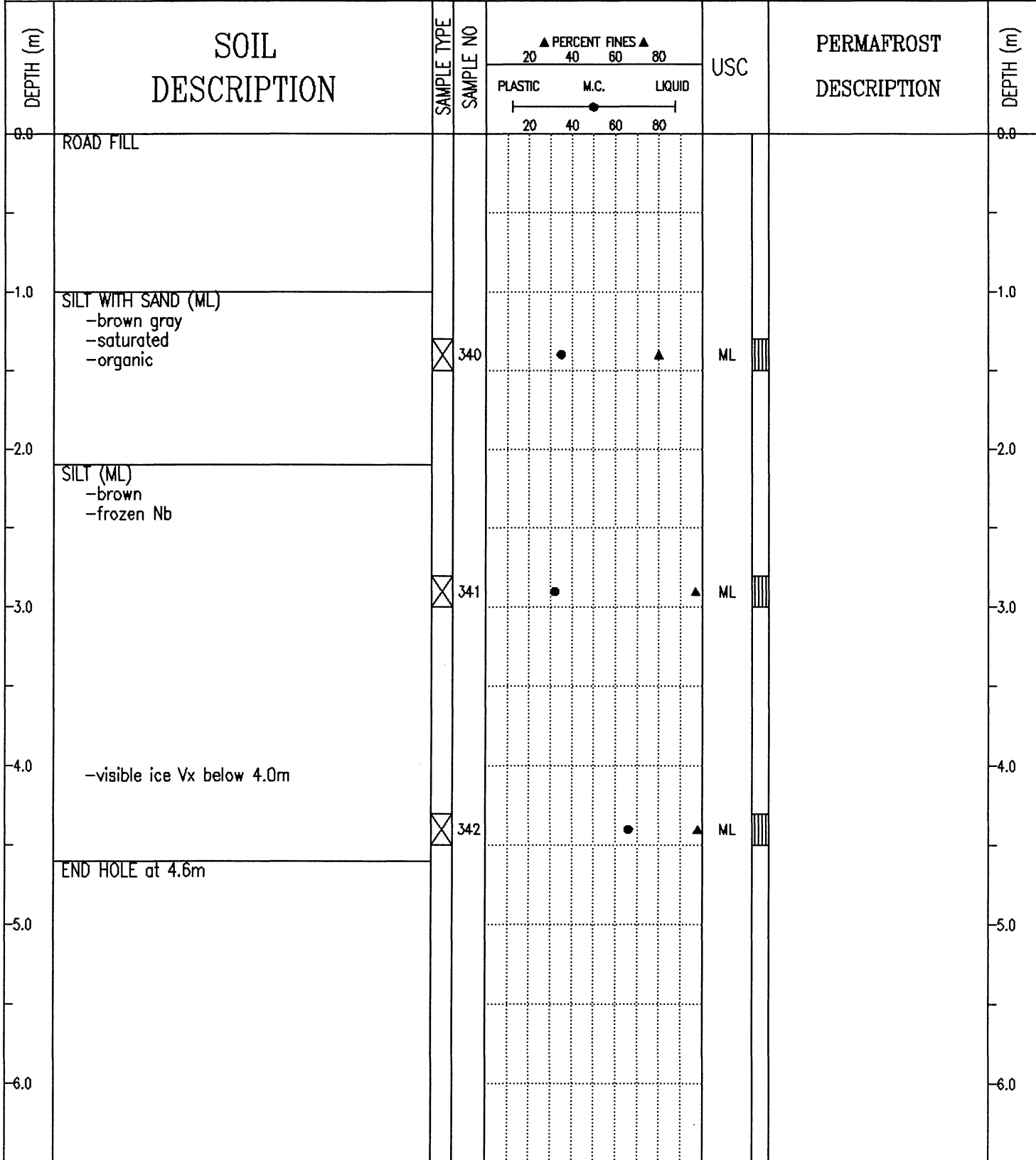
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-121
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1925+625 o/s 6m Lt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ROAD FILL							0.0	
1.0		<input checked="" type="checkbox"/>	338					1.0	
	ORGANIC MATERIAL								
2.0	SILT (ML) -saturated -trace of organics							2.0	
3.0		<input checked="" type="checkbox"/>	339				ML	3.0	
	ICE								
4.0								4.0	
5.0	END HOLE at 4.6m							5.0	
6.0								6.0	

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-122
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1925+725 o/s 5m Lt.	ELEVATION 0.000 (m)

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



Public Works Canada  
Whitehorse, Yukon Territory.

COMPLETION DEPTH 4.6 m

COMPLETE 91/08/27

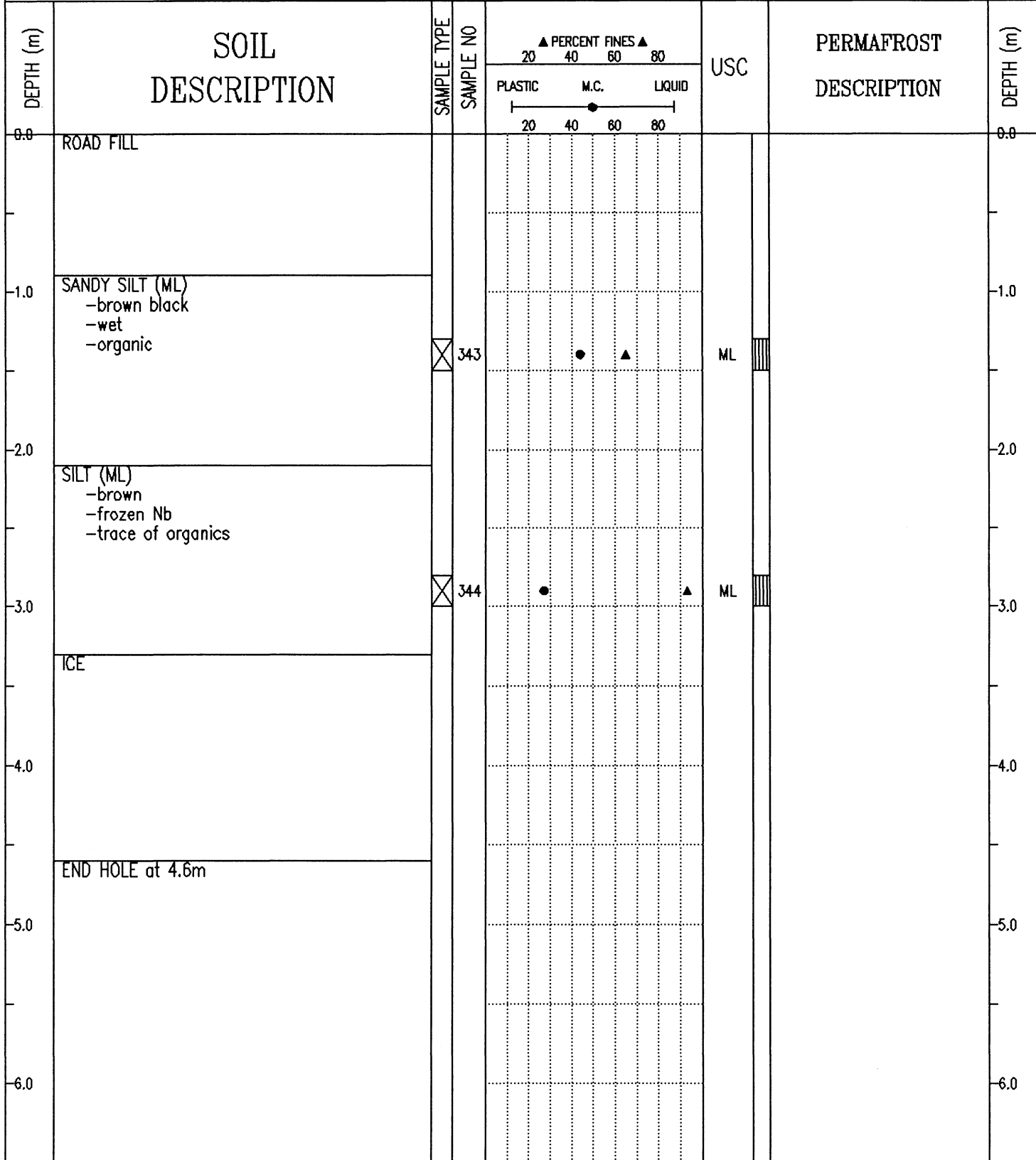
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Page 1 of 1

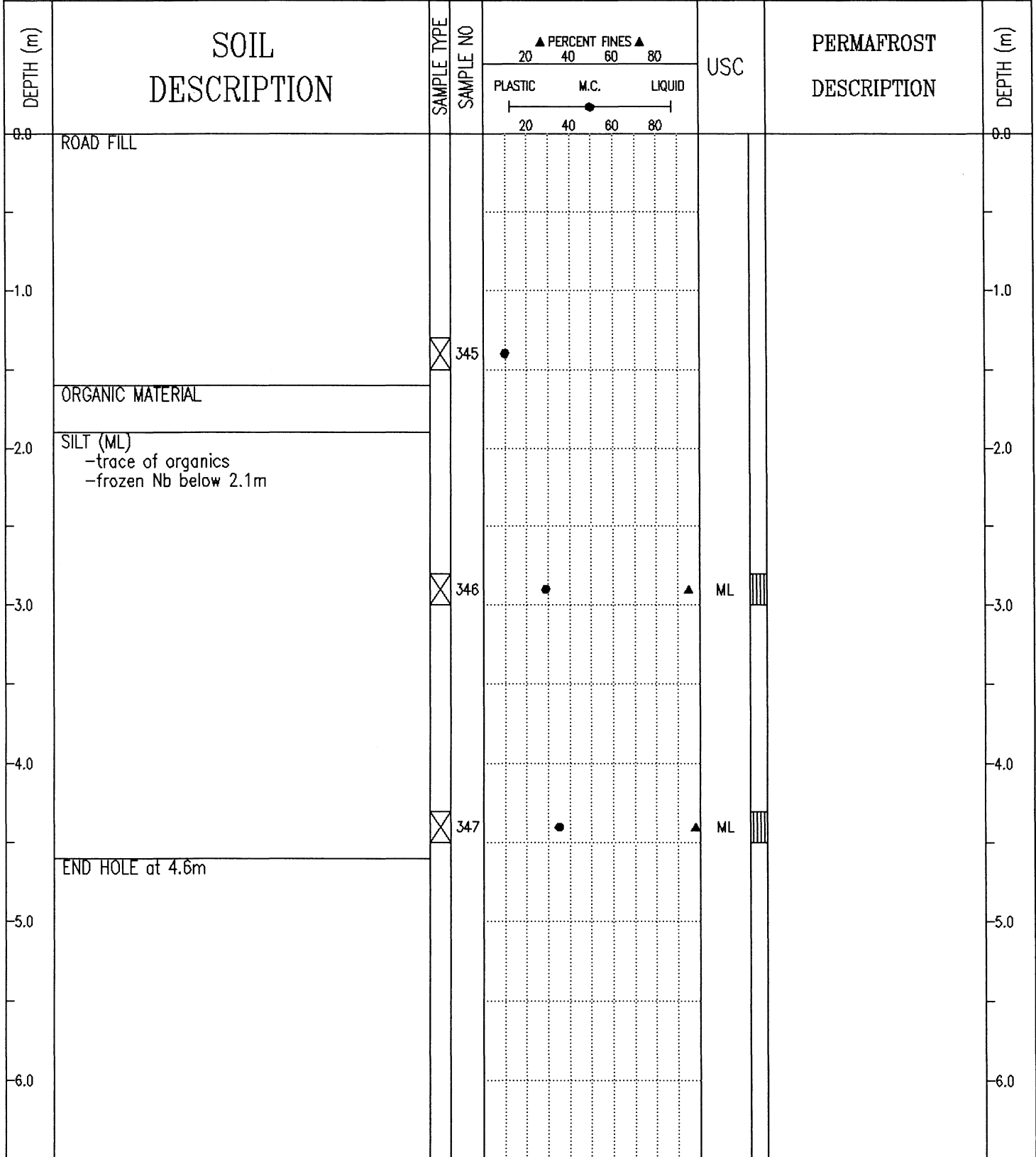
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-123
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1925+825 o/s 5m Lt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-124
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1925+925	ELEVATION 0.000 (m)

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



Public Works Canada  
Whitehorse, Yukon Territory.

COMPLETION DEPTH 4.6 m

COMPLETE 91/08/27

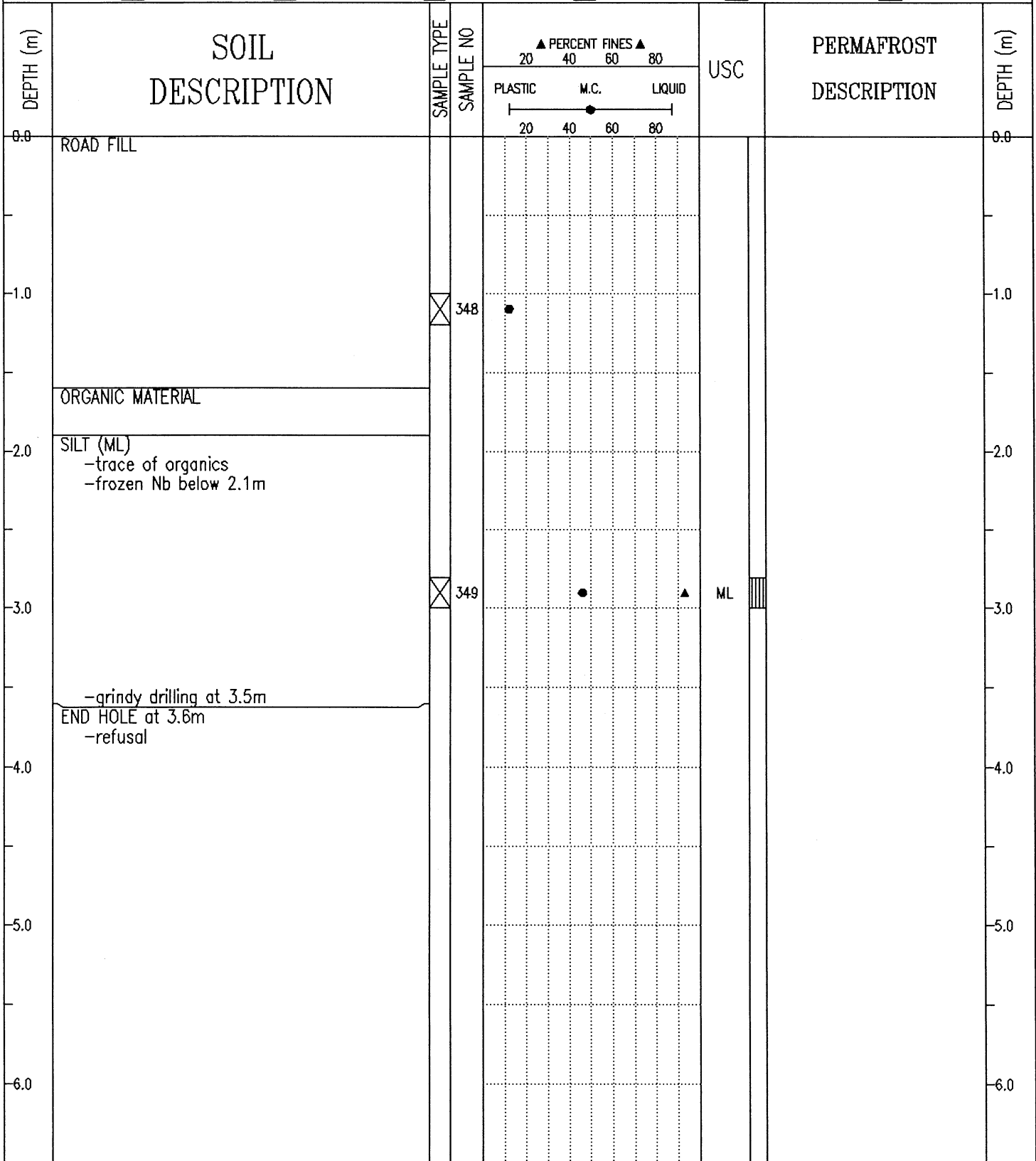
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Page 1 of 1

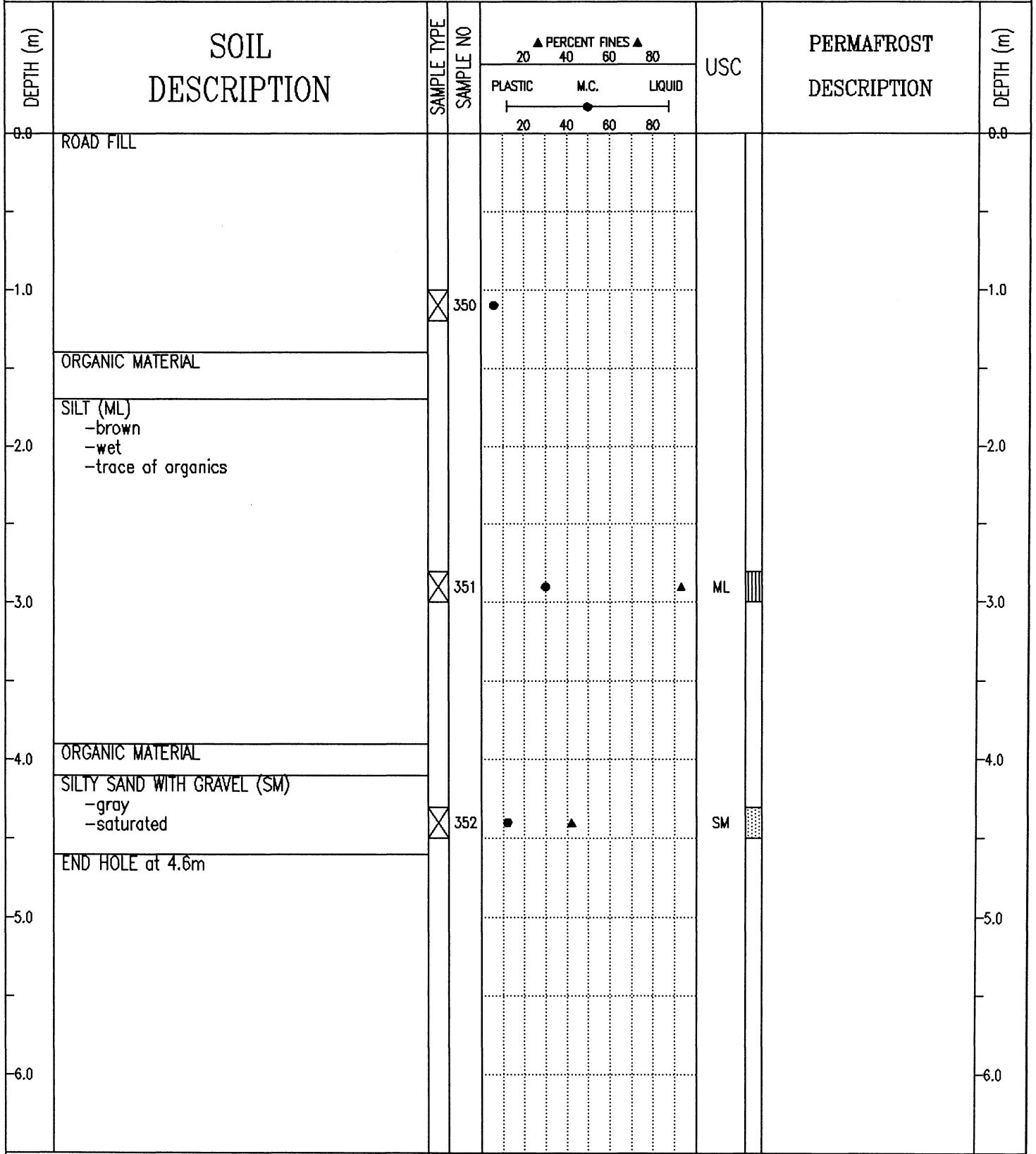
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-125
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1926+025 o/s 4m Rt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-126
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1926+125 o/s 7m Rt.	ELEVATION 0.000 (m)

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



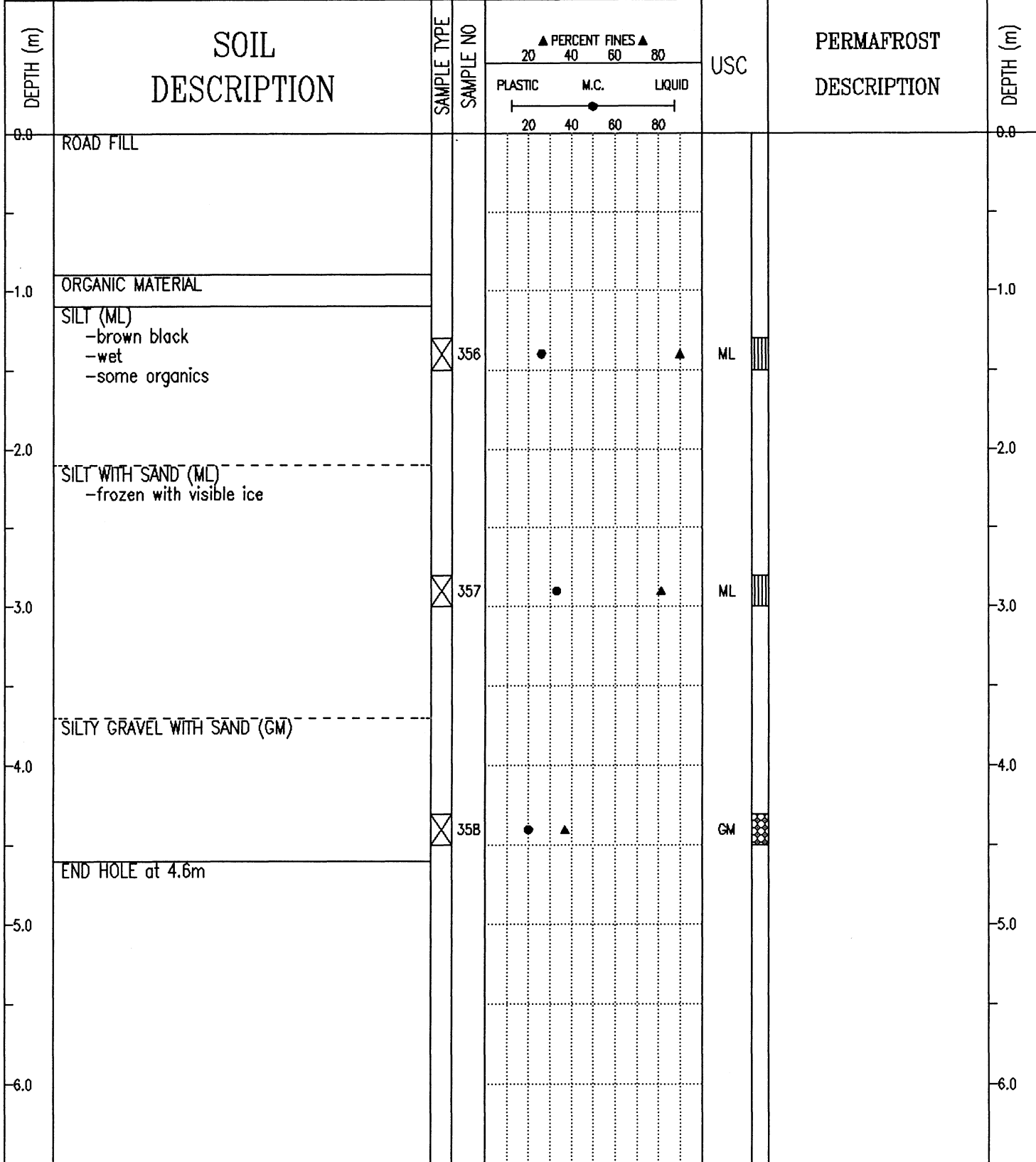
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-127
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1926+225 o/s 5m Lt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ROAD FILL								0.0
1.0	SILT -gray brown -wet -some sand and organics	<input checked="" type="checkbox"/>	353	●					1.0
2.0	ORGANIC MATERIAL								2.0
3.0	SILT (ML) -gray brown -frozen Nb	<input checked="" type="checkbox"/>	354	●		▲	ML		3.0
4.0	-visible ice Vr	<input checked="" type="checkbox"/>	355			●	ML		4.0
5.0	END HOLE at 4.6m								5.0
6.0									6.0

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-128
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1926+325 o/s 5m Lt.	ELEVATION 0.000 (m)

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



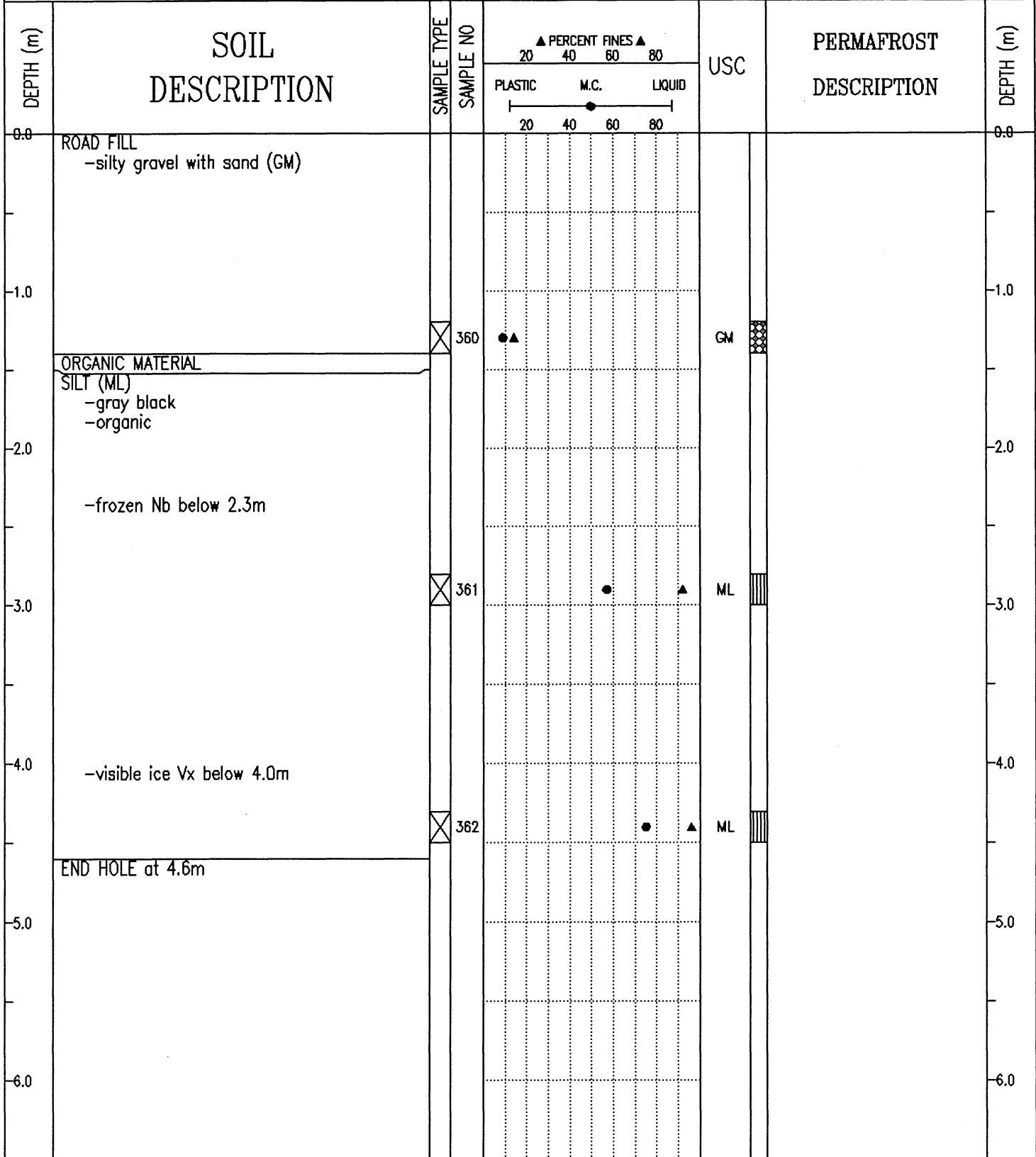
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-129
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1926+425 o/s 5m Lt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ROAD FILL -silty gravel with sand (GM)							0.0	
1.0		<input checked="" type="checkbox"/>	359	●	▲		GM	1.0	
1.5	ORGANIC MATERIAL								
2.0	SILT -brown -saturated								
3.0	ICE								
4.0	END HOLE at 3.6m -refusal								

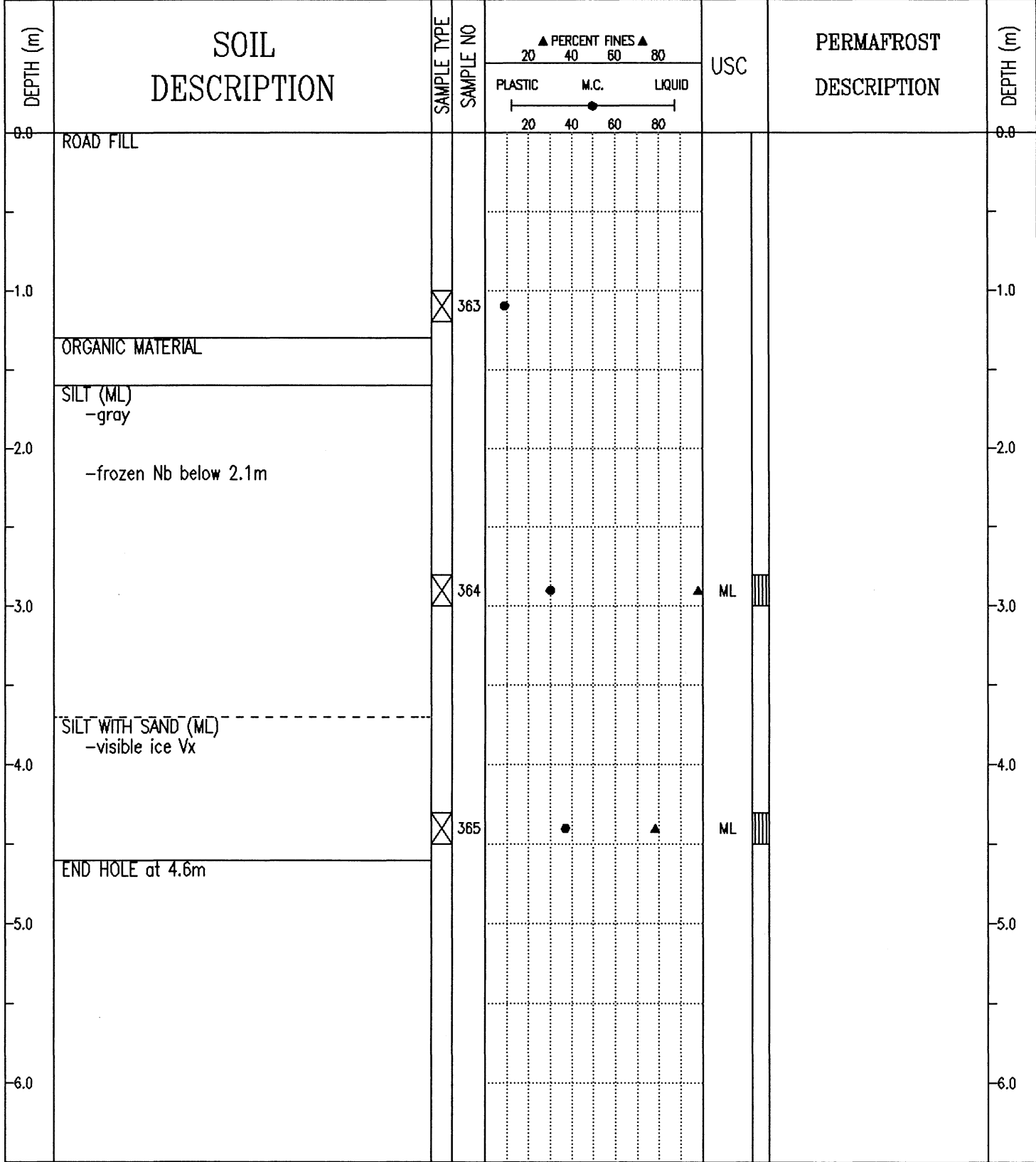
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-130
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1926+525 o/s 4m Lt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-131
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1926+625 o/s 5m Lt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-132
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1926+725 o/s 5m Lt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ROAD FILL -poorly graded gravel with silt and sand (GP-GM)								0.0
1.0	ORGANIC MATERIAL		366	●			GP-GM		1.0
2.0	SILT (ML) -brown -organic -frozen Nb below 2.1m								2.0
3.0			367		●	▲	ML		3.0
4.0	-visible ice Vx below 4.0m								4.0
5.0	END HOLE at 4.6m		368	●		▲	ML		5.0
6.0									6.0

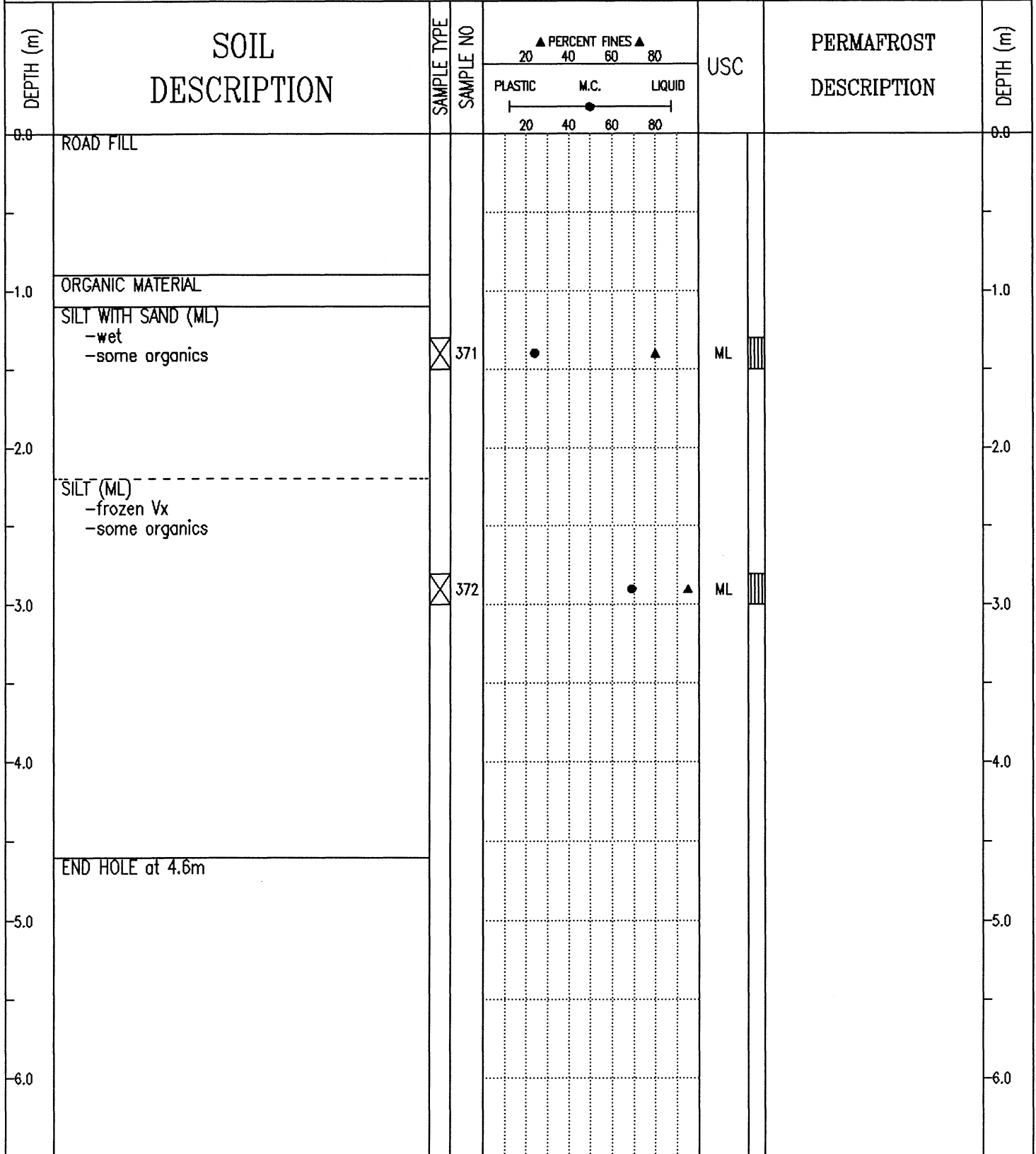
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-133
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1926+925 o/s 4m Lt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ROAD FILL							0.0	
1.0			369					1.0	
2.0	ORGANIC MATERIAL							2.0	
	-frozen Vx below 2.1m								
3.0			370				OL	3.0	
	END HOLE at 3.1m -refusal								
4.0								4.0	
5.0								5.0	
6.0								6.0	

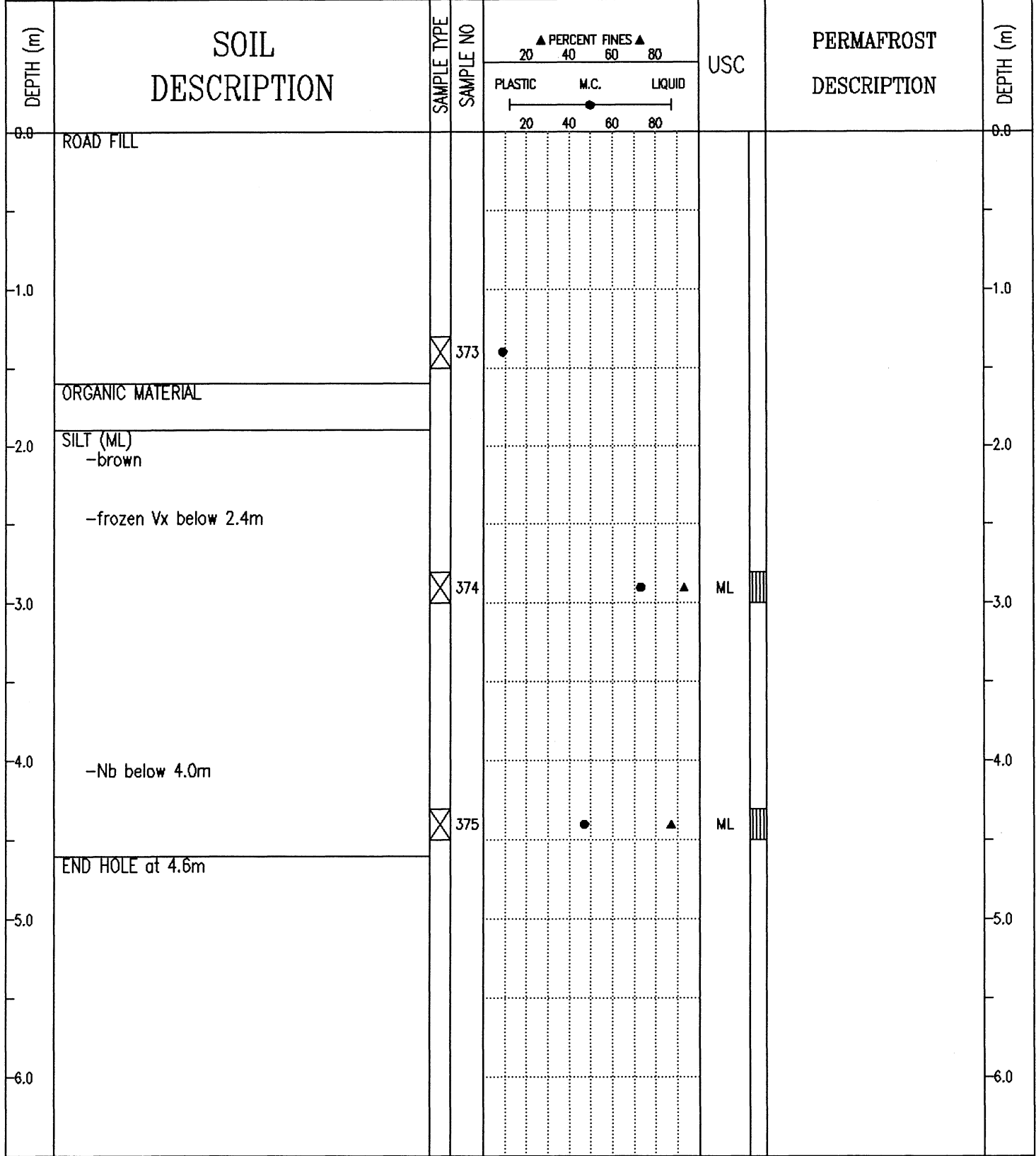
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-134
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1927+125 o/s 4m Lt.	ELEVATION 0.000 (m)

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



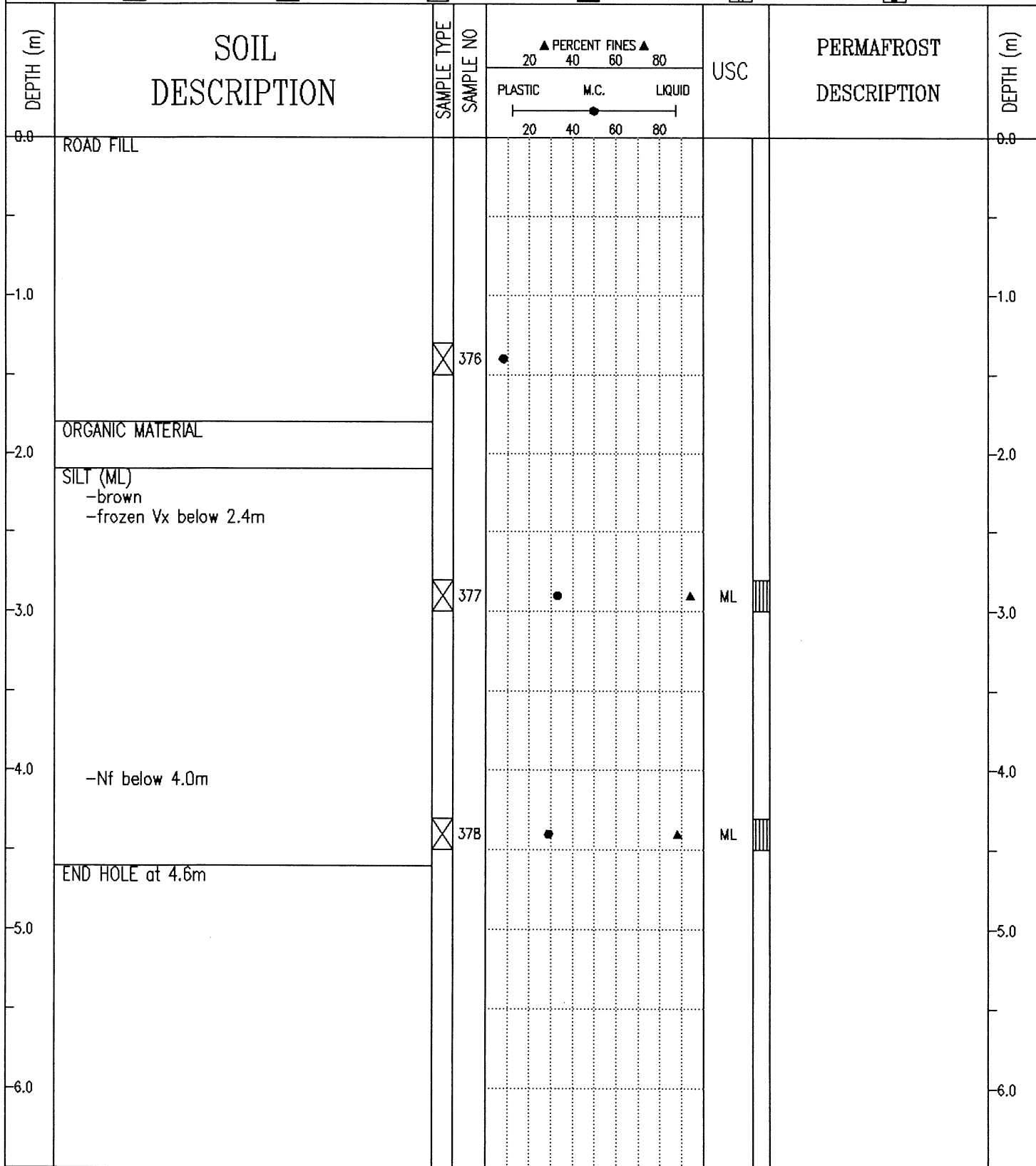
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-135
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1927+325 o/s 4m Lt.	ELEVATION 0.000 (m)

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



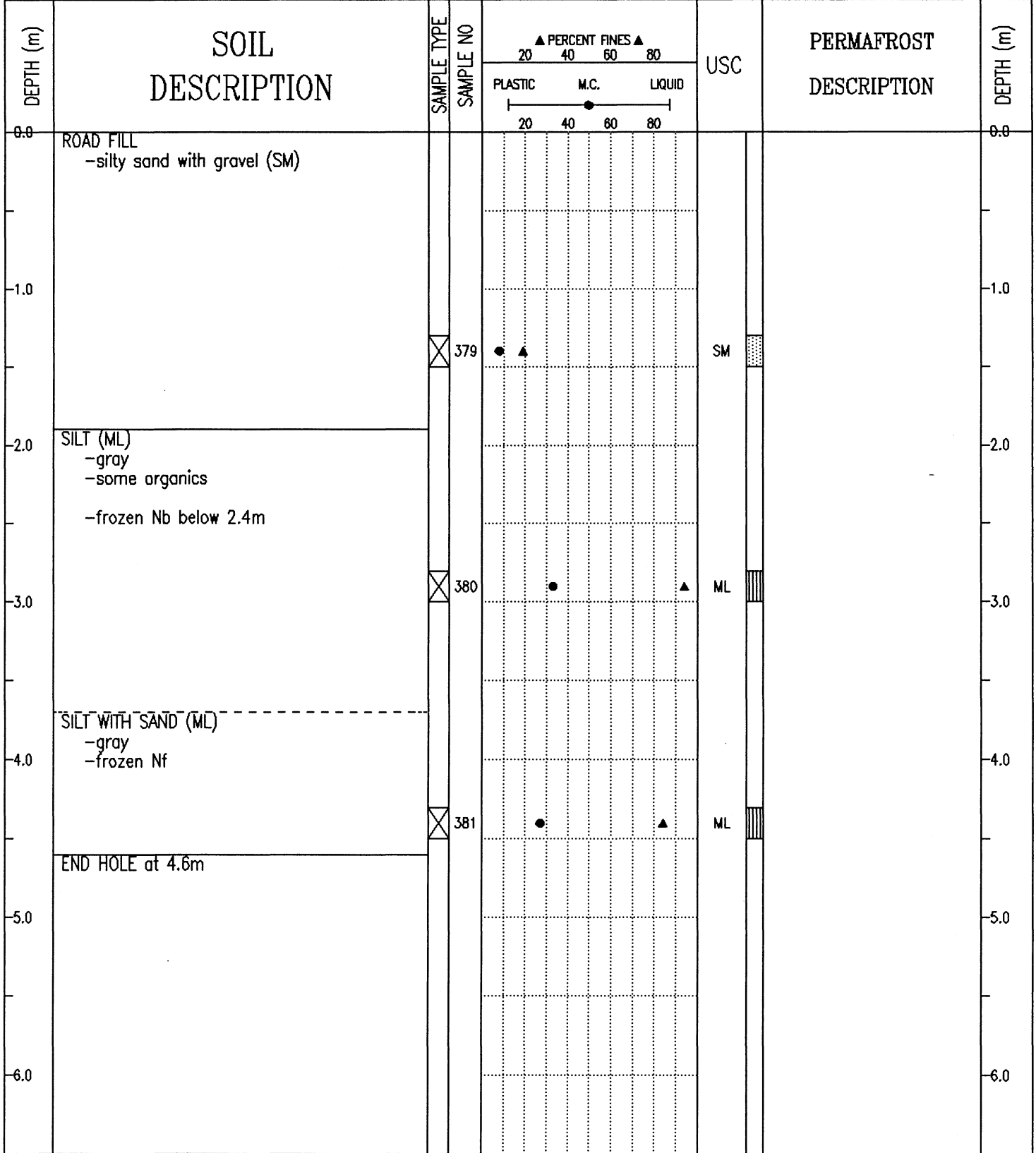
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-136
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1927+525 o/s 5m Lt.	ELEVATION 0.000 (m)

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



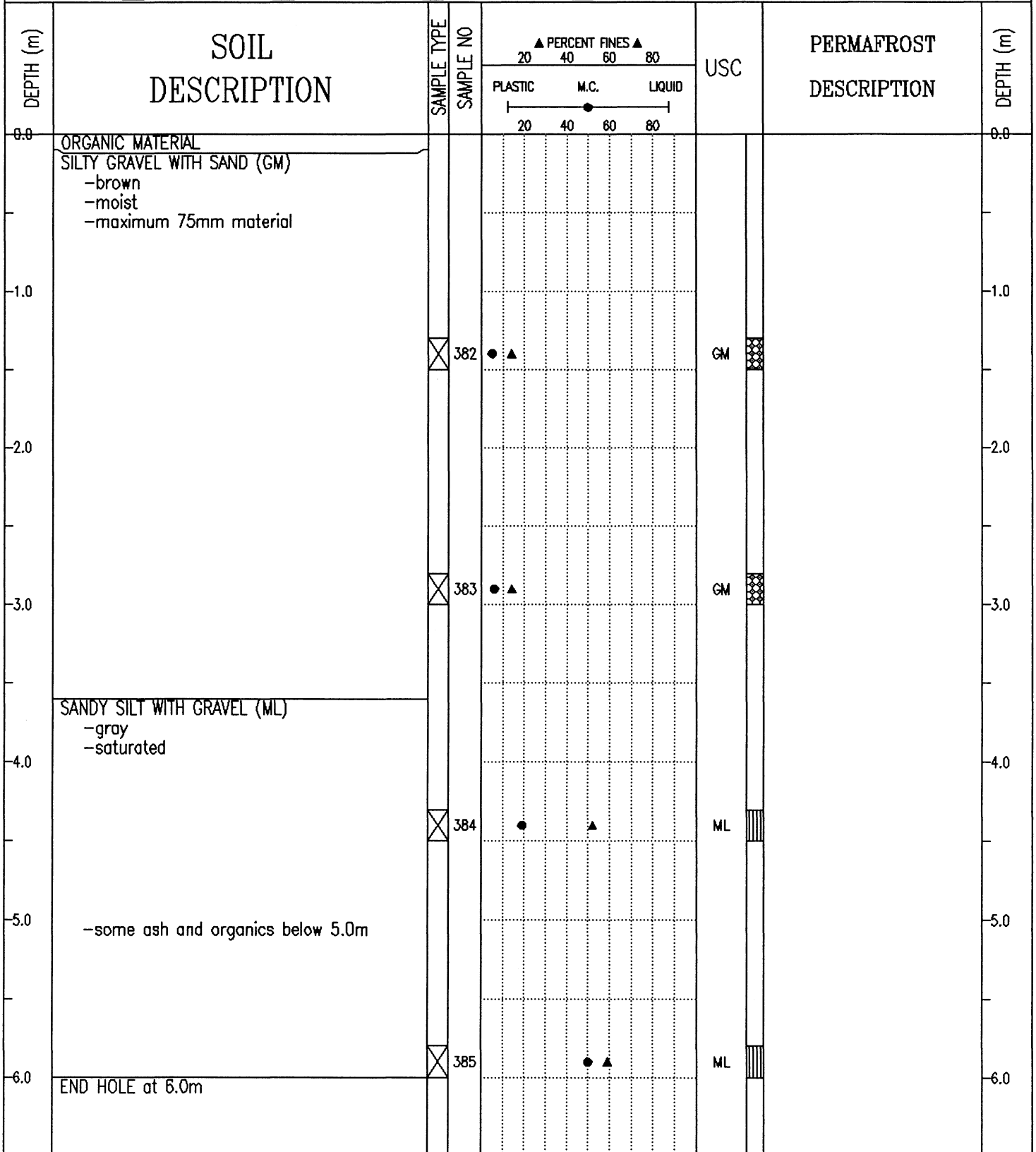
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-137
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1927+725 o/s 6m Lt.	ELEVATION 0.000 (m)

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



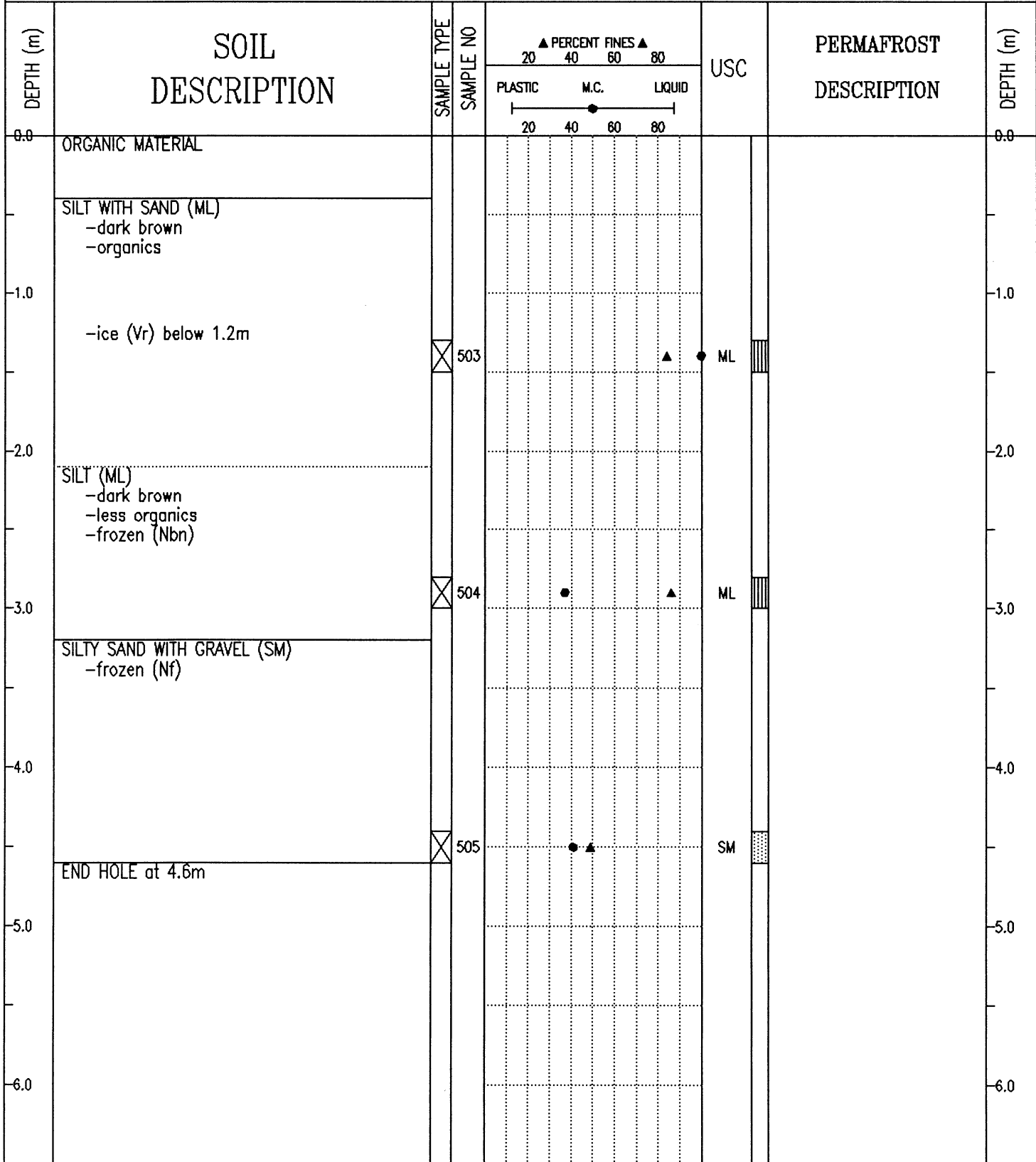
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 144-138
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1927+925 o/s 7m Rt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-192
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1928+095	ELEVATION 0.000 (m)

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



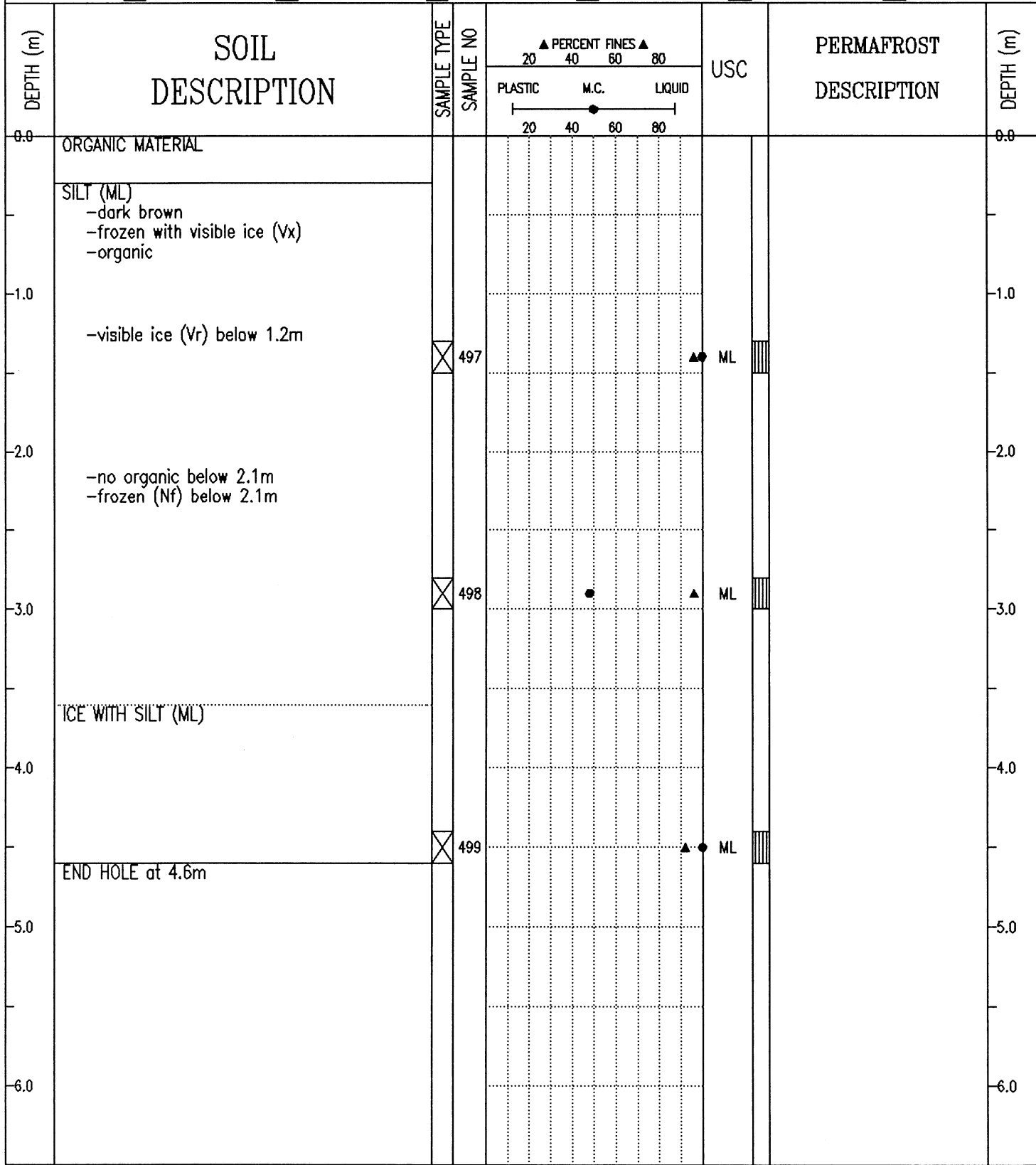
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-191
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1928+225	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC MATERIAL							0.0	
	SILT (ML) -dark brown								
-1.0	-frozen with visible ice (Vr) below 1.0m							-1.0	
		<input checked="" type="checkbox"/>	500				ML		
-2.0								-2.0	
-3.0	ICE WITH SILT (ML)							-3.0	
		<input checked="" type="checkbox"/>	501				ML		
-4.0	SILT (ML) -frozen with visible ice (Vr) -organic -foul odor							-4.0	
		<input checked="" type="checkbox"/>	502				ML		
-5.0	END HOLE at 4.6m							-5.0	
-6.0								-6.0	

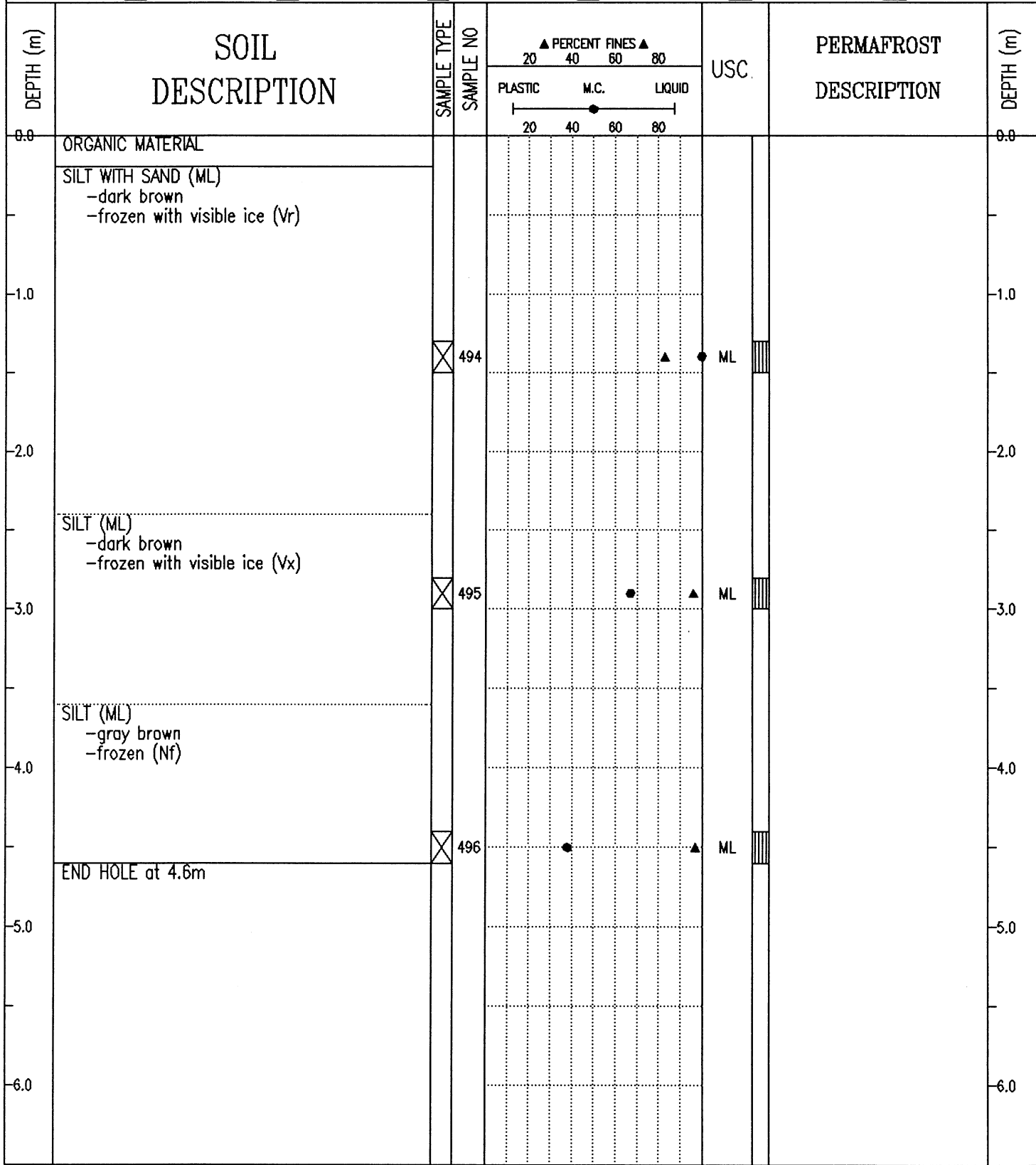
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-190
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1928+375	ELEVATION 0.000 (m)

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



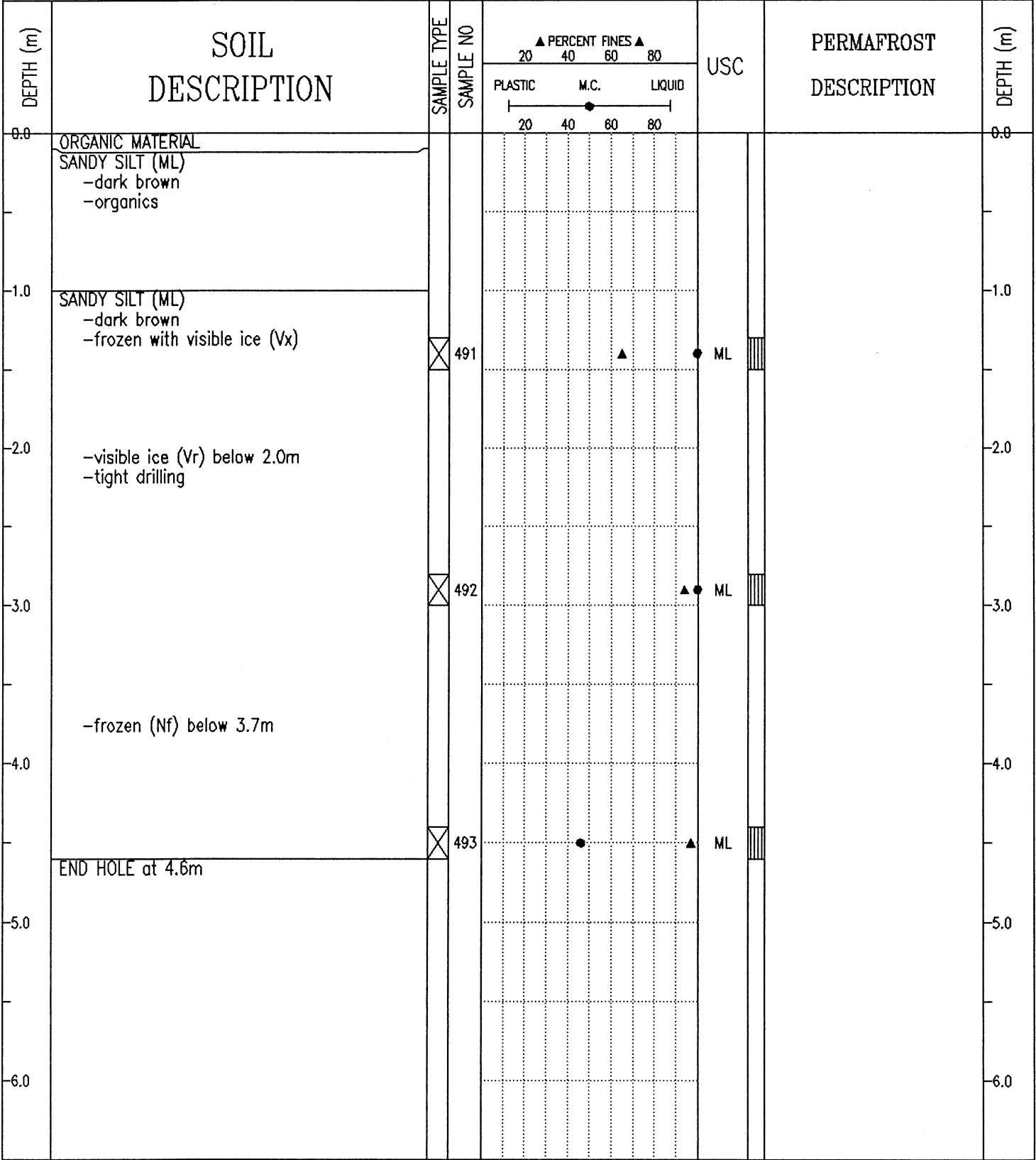
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-189
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1928+500	ELEVATION 0.000 (m)

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



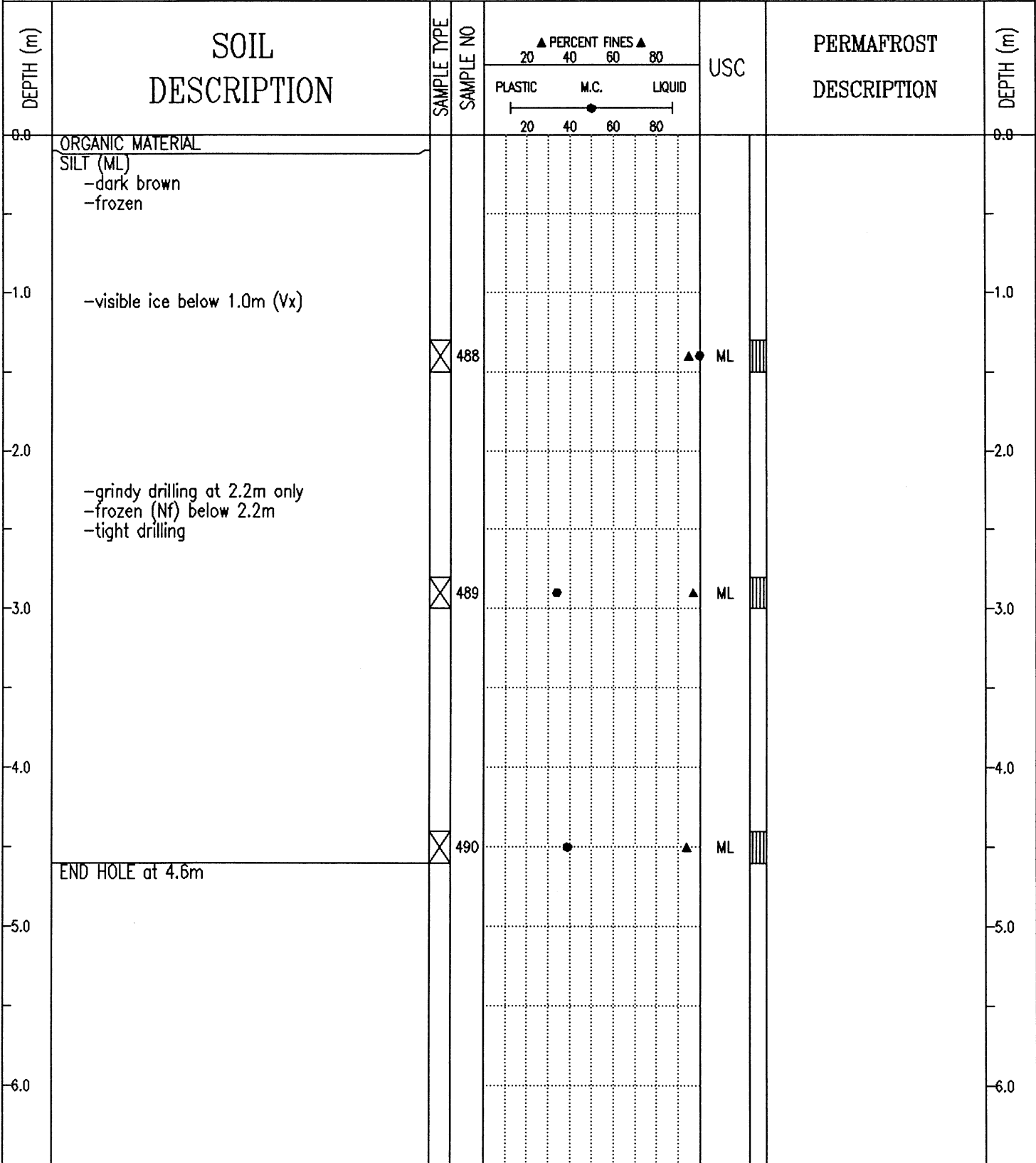
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-188
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1928+600	ELEVATION 0.000 (m)

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



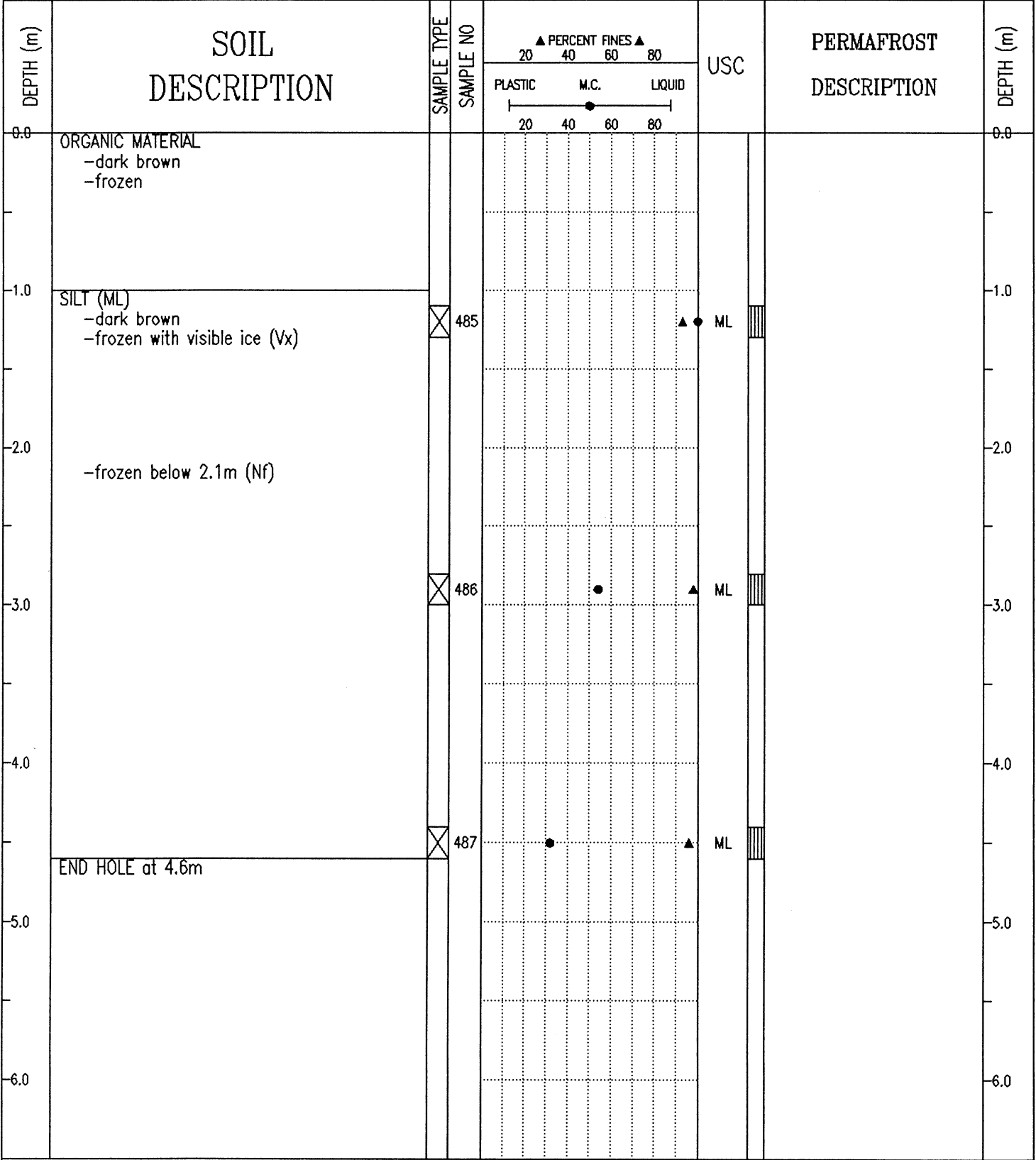
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-187
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1928+725	ELEVATION 0.000 (m)

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



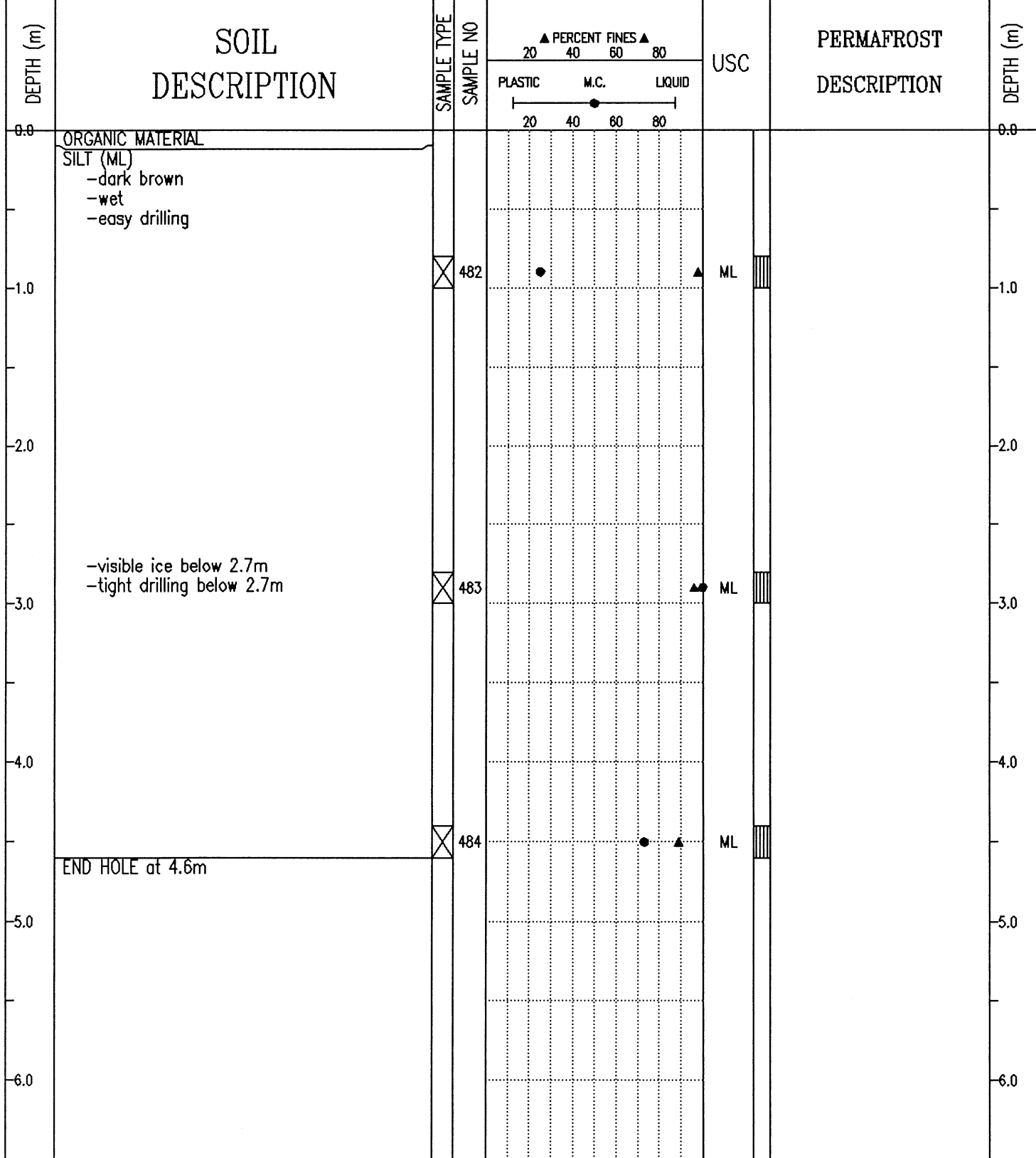
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-186
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1928+850	ELEVATION 0.000 (m)

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



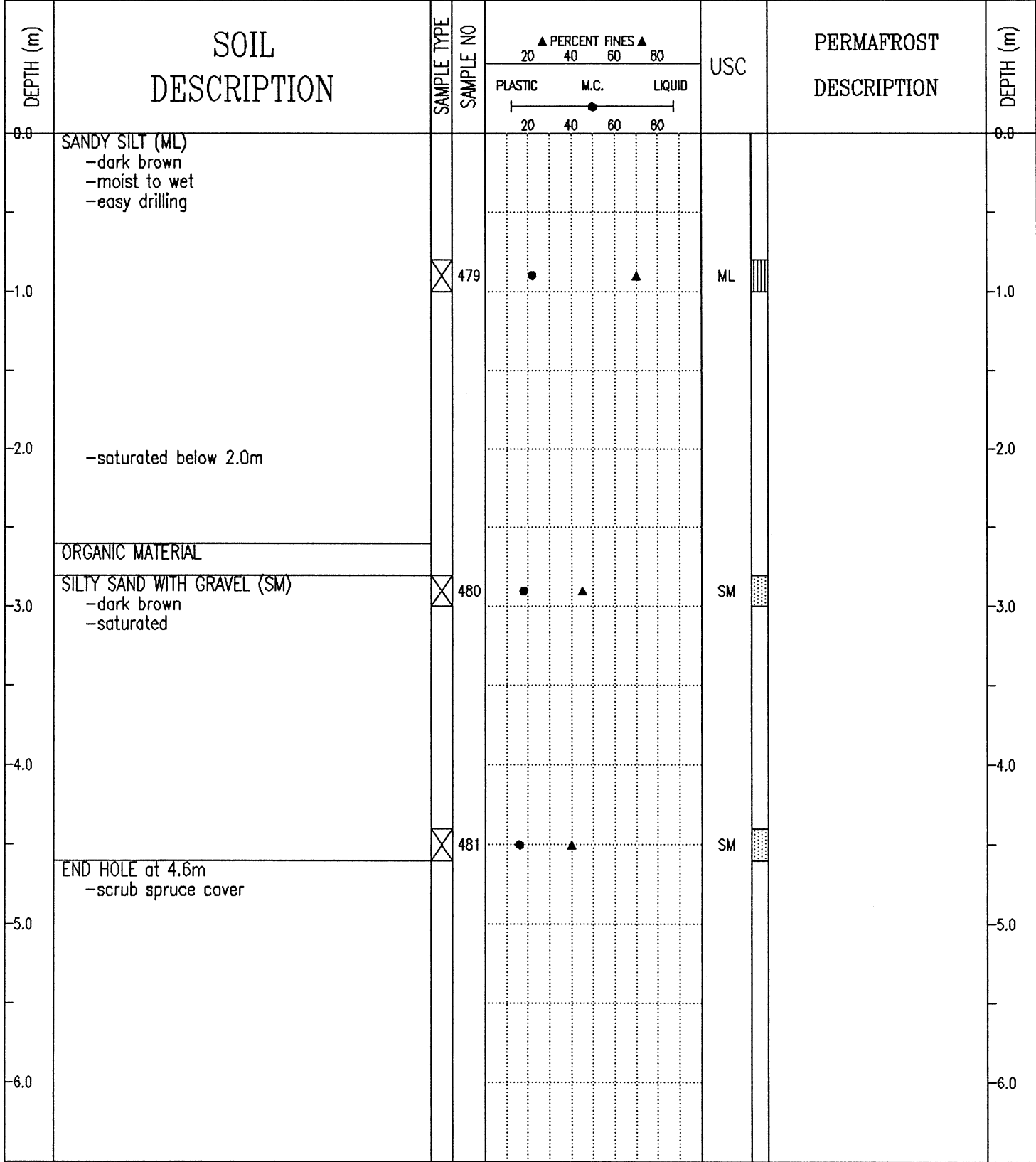
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-185
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1929+025 o/s 11m Lt.	ELEVATION 0.000 (m)

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



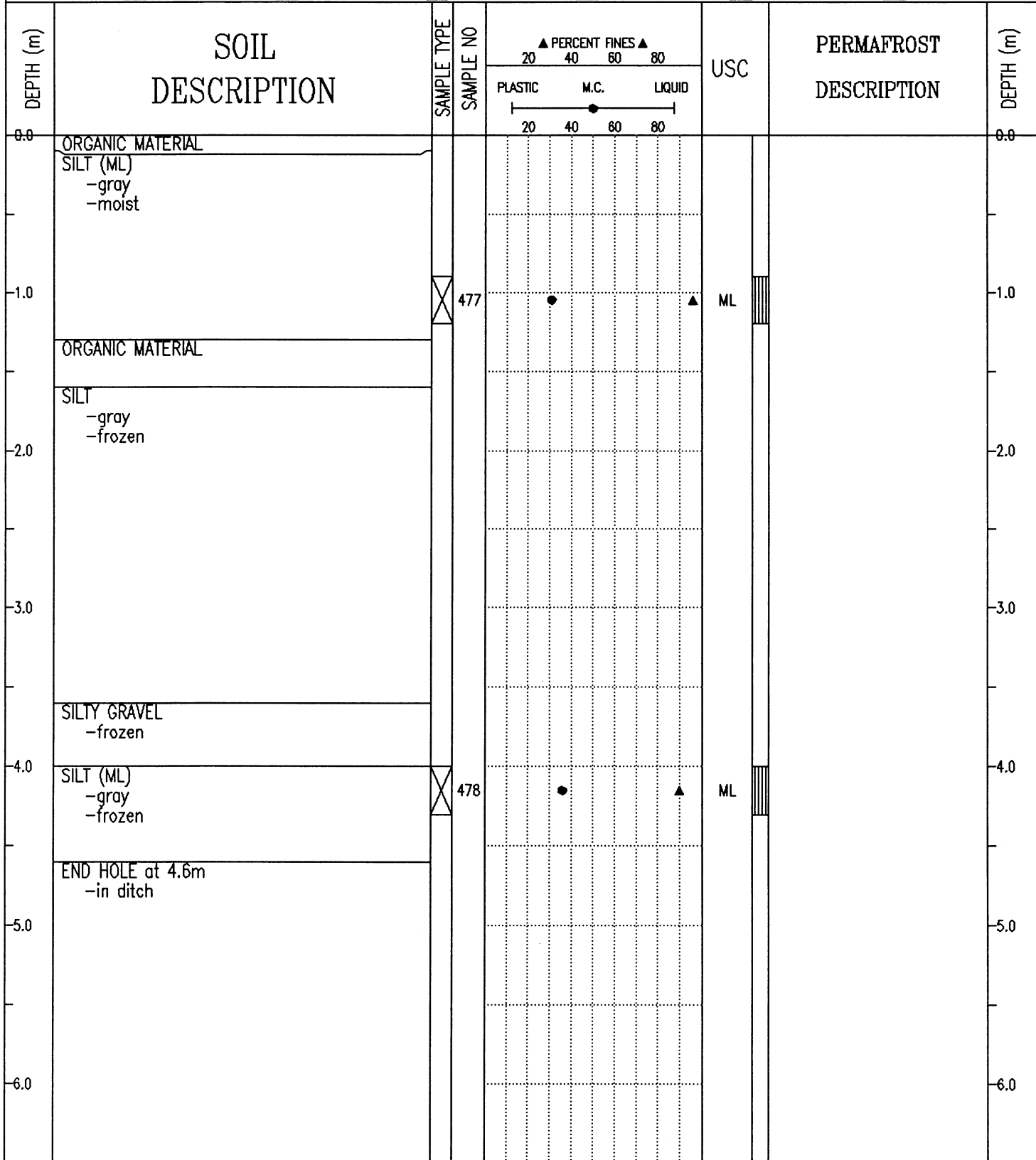
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 157-184
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-174	LOCATION: 1929+225 o/s 9m Lt.	ELEVATION 0.000 (m)

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



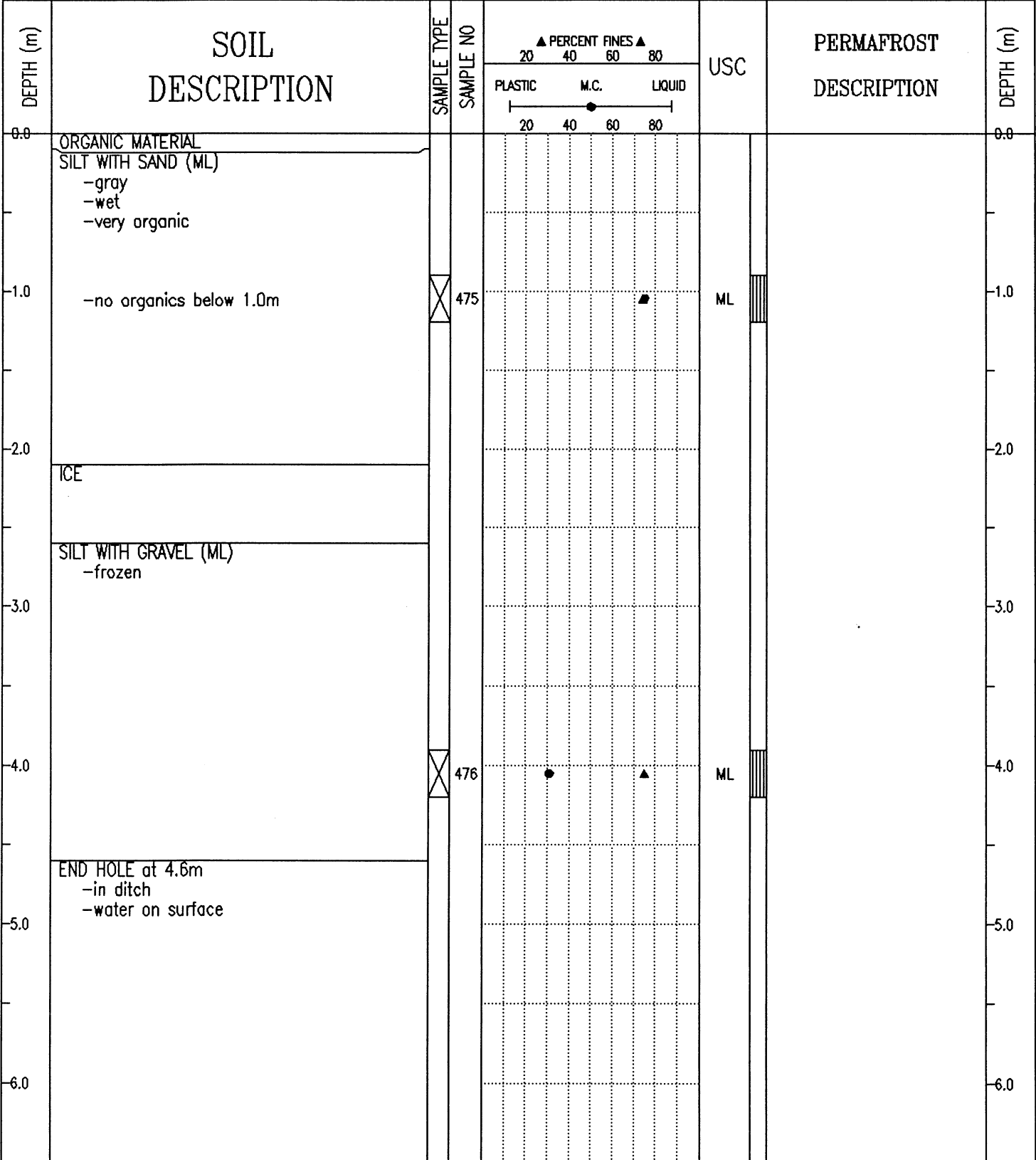
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-183
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-132	LOCATION: 1929+325 o/s 9m Lt.	ELEVATION 0.000 (m)

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



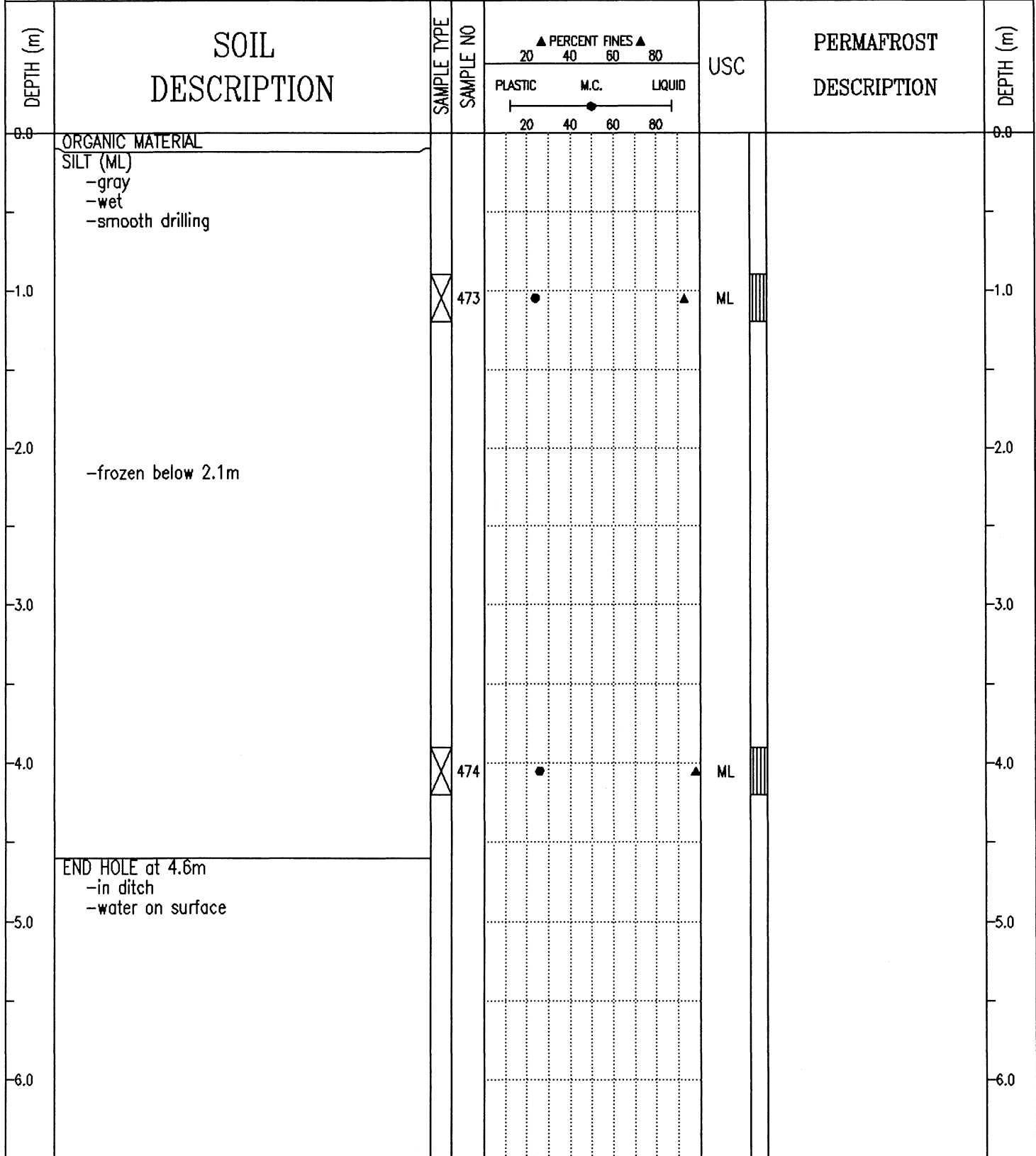
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-182
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-132	LOCATION: 1929+450 o/s 8m Lt.	ELEVATION 0.000 (m)

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



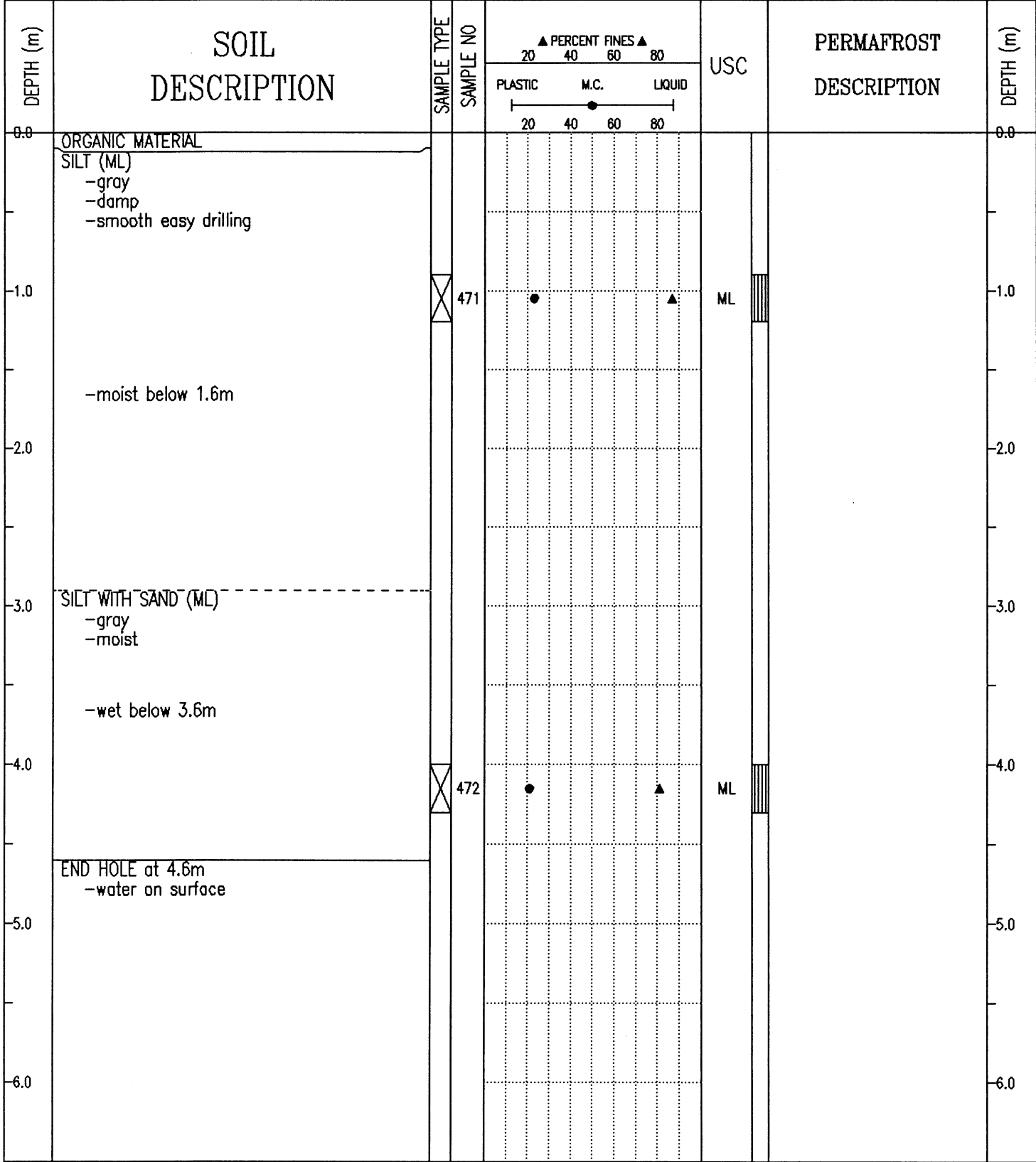
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-181
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-132	LOCATION: 1929+550 o/s 10m Lt.	ELEVATION 0.000 (m)

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



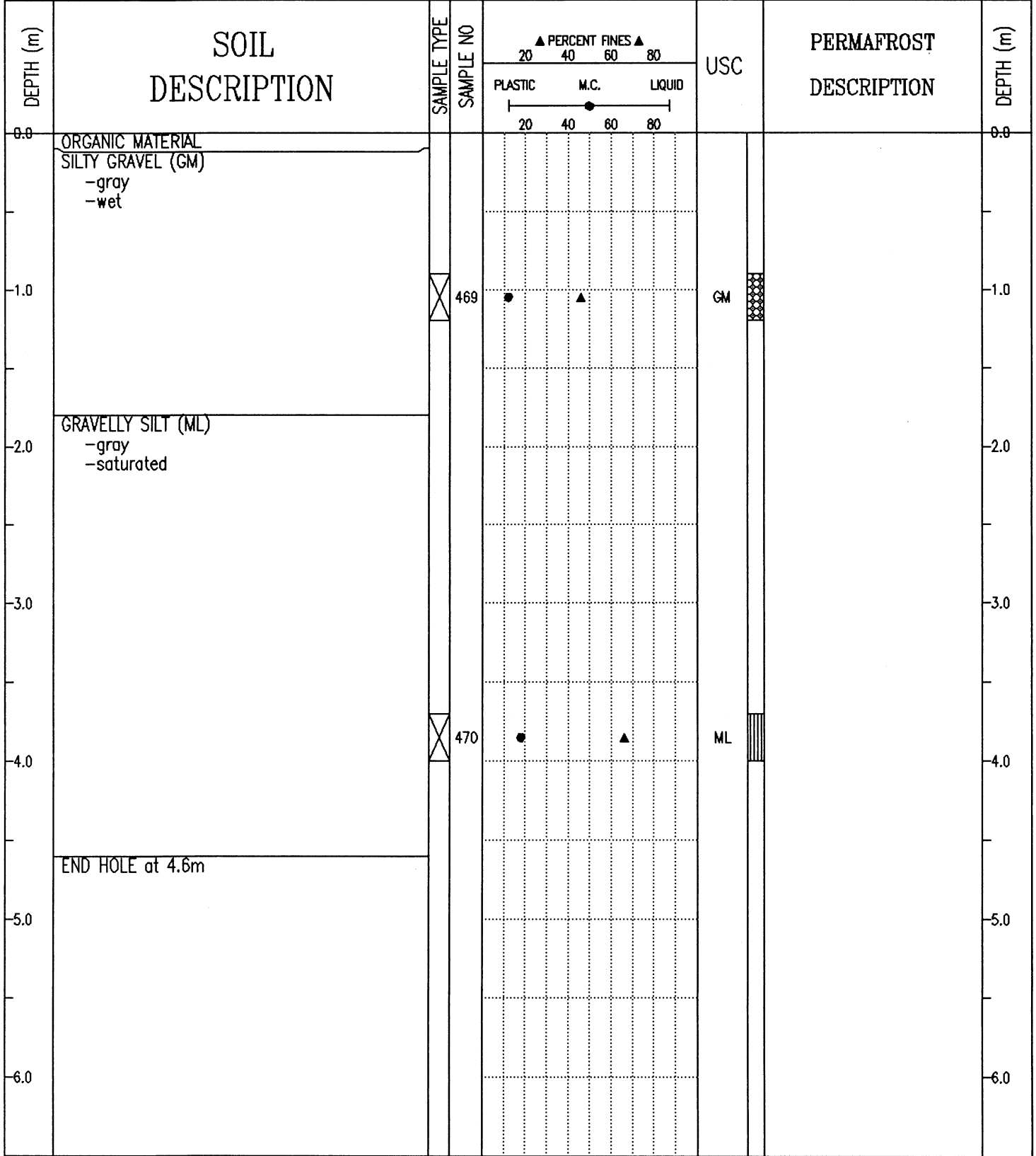
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-180
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-132	LOCATION: 1929+650 o/s 16m Lt.	ELEVATION 0.000 (m)

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



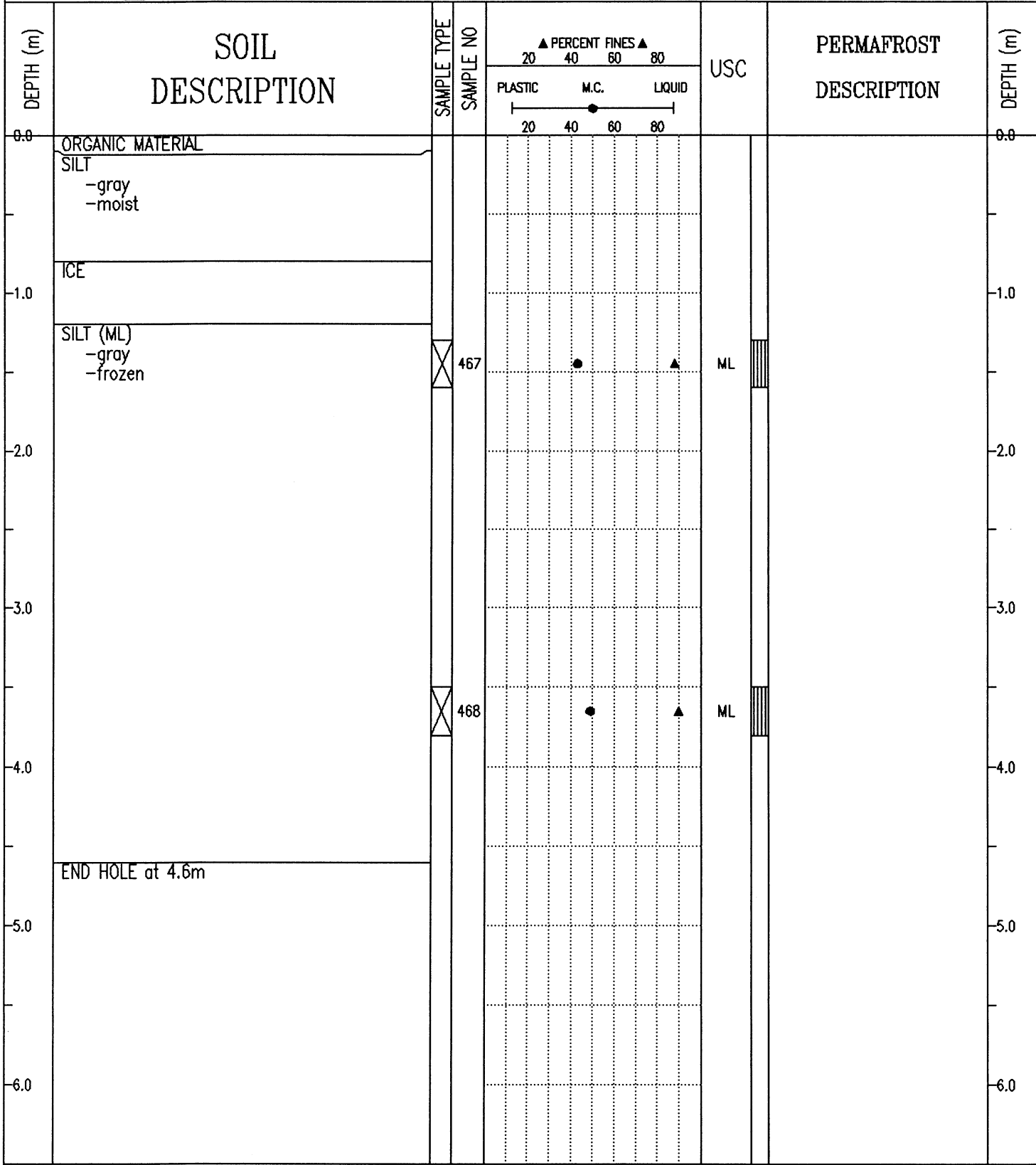
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-179
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-132	LOCATION: 1929+750 o/s 18m Lt.	ELEVATION 0.000 (m)

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



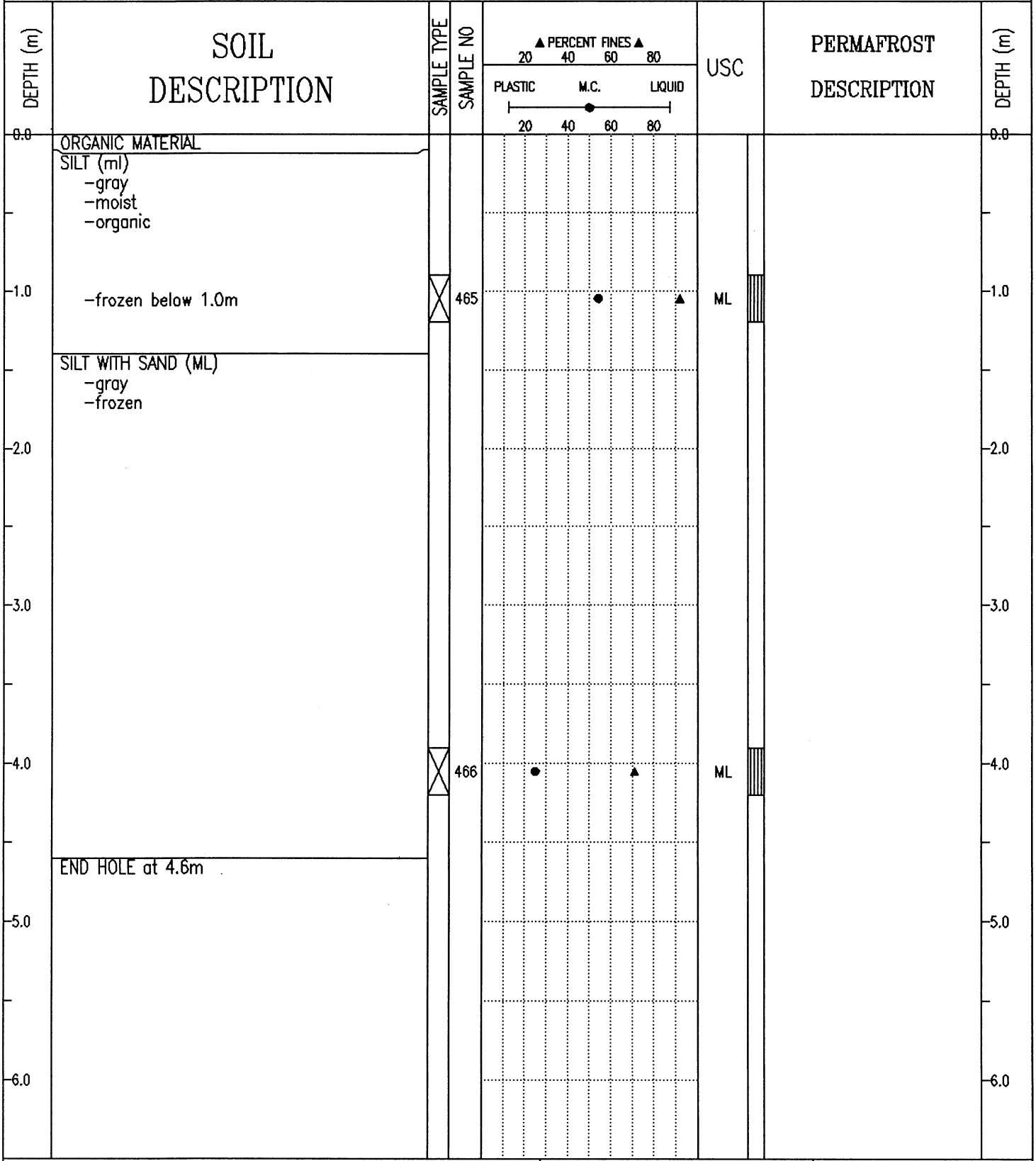
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-178
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-132	LOCATION: 1929+850 o/s 1m Lt.	ELEVATION 0.000 (m)

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



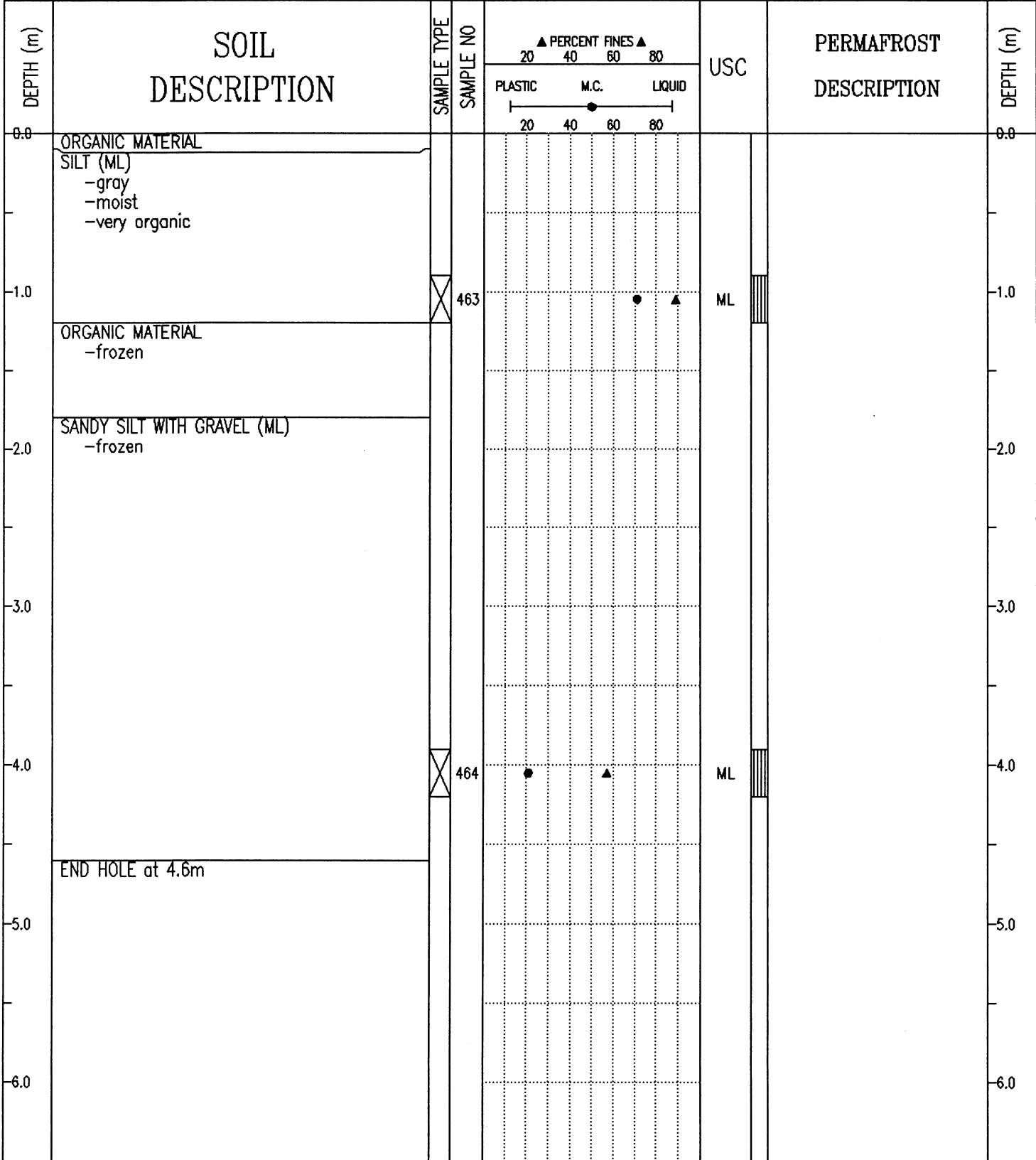
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-177
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-132	LOCATION: 1929+950 o/s 2m Rt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-176
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-132	LOCATION: 1930+050 o/s 2m Rt.	ELEVATION 0.000 (m)

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



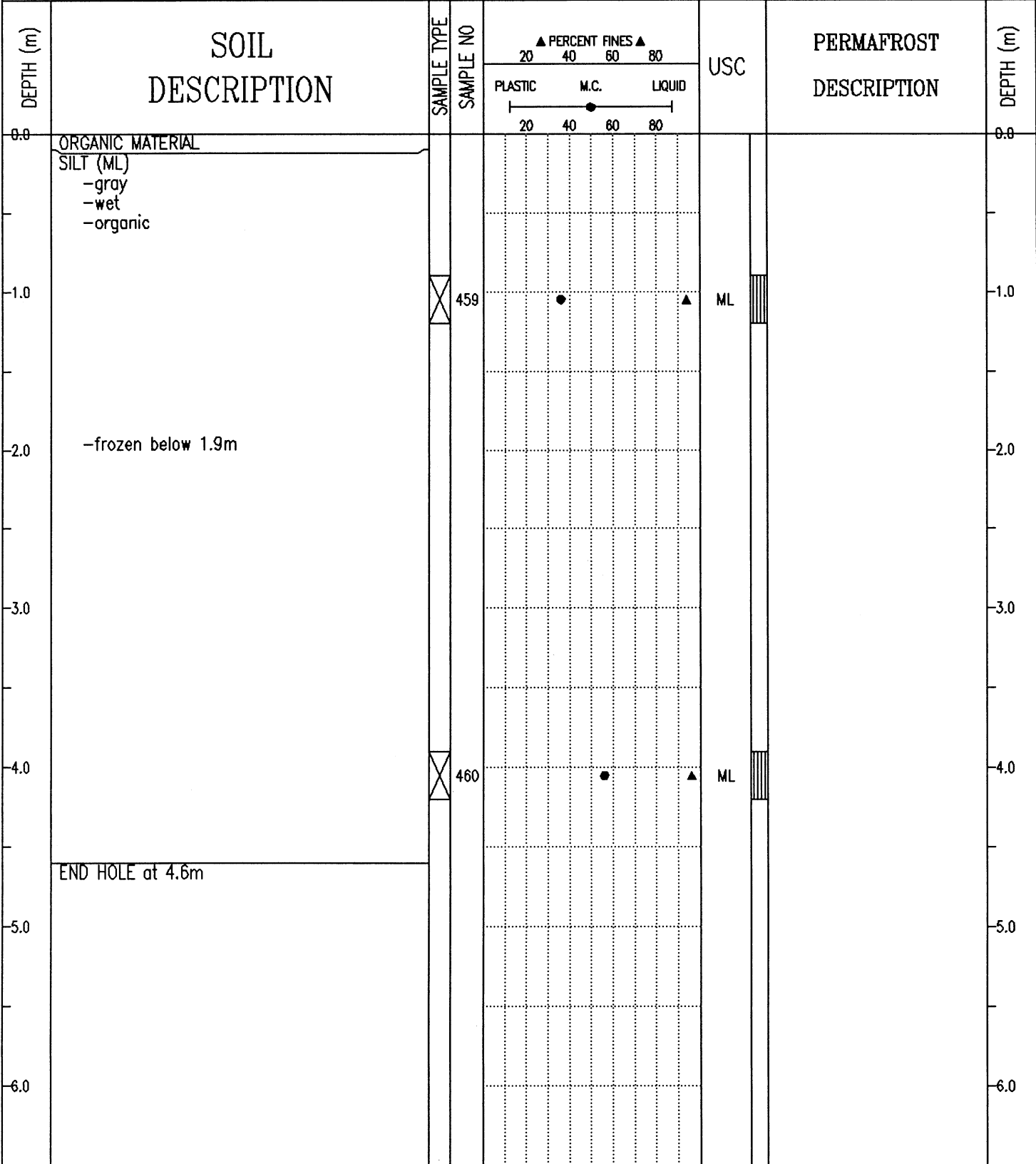
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-175
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-132	LOCATION: 1930+150	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC MATERIAL SILT -gray -moist								0.0
1.0	SILTY GRAVEL WITH SAND (GM) -gray -wet	<input checked="" type="checkbox"/>	461	●	▲		GM		1.0
2.0									2.0
3.0									3.0
4.0	SILTY SAND WITH GRAVEL (SM) -gray -wet	<input checked="" type="checkbox"/>	462	●	▲		SM		4.0
5.0	END HOLE at 4.6m -in ditch								5.0
6.0									6.0

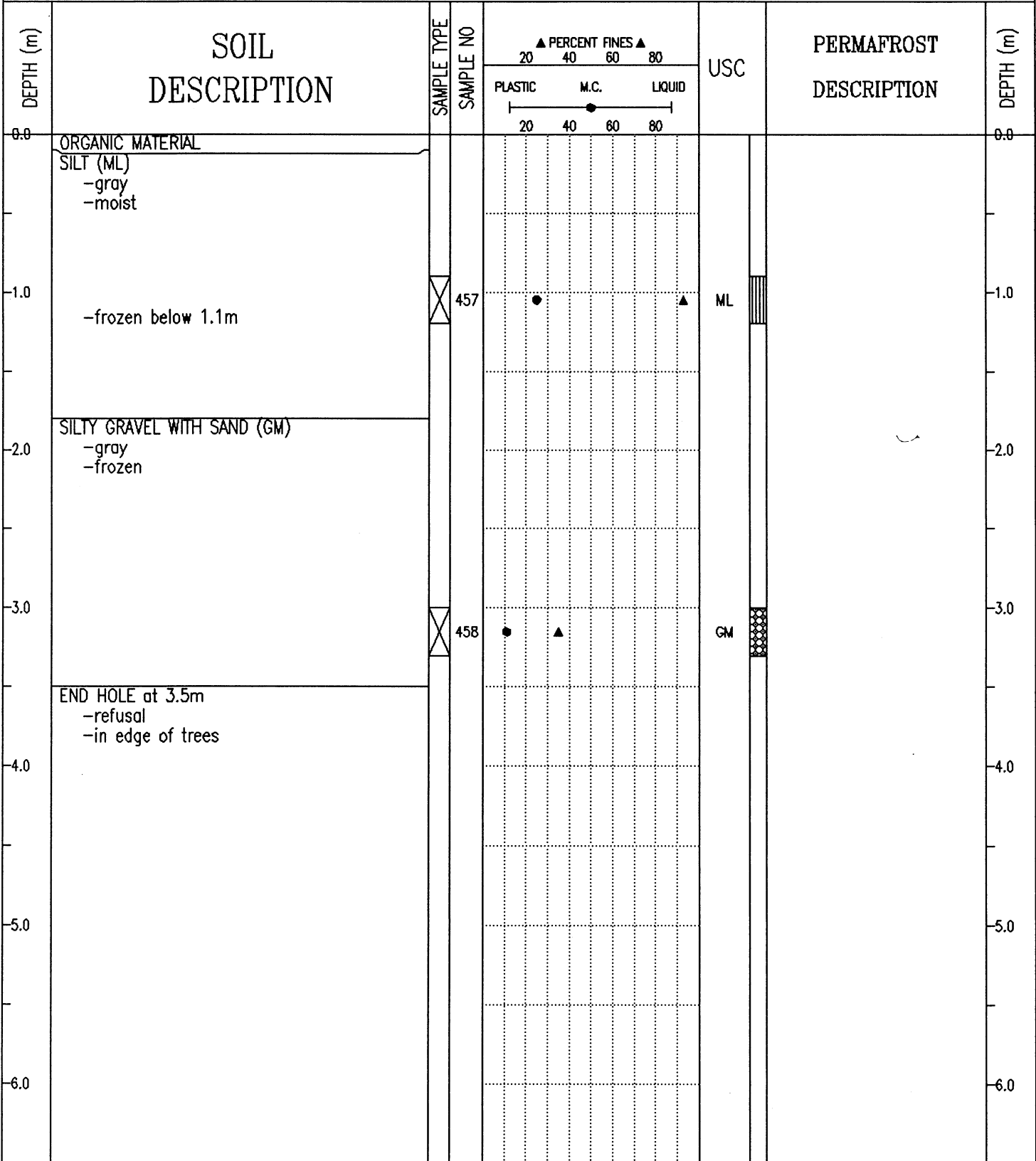
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-174
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-132	LOCATION: 1930+250 o/s 5m Rt.	ELEVATION 0.000 (m)

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



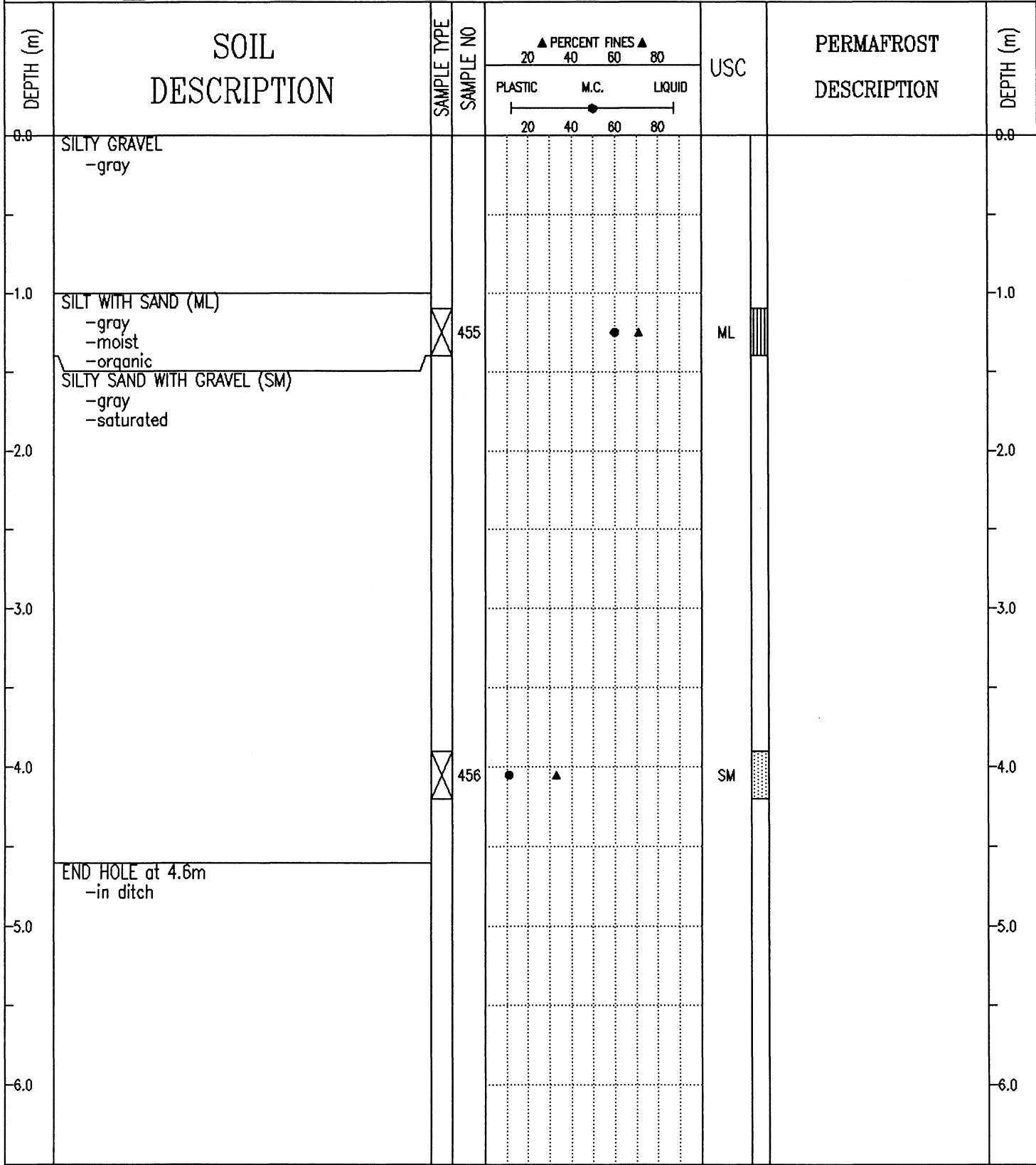
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-173
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-132	LOCATION: 1930+373	ELEVATION 0.000 (m)

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



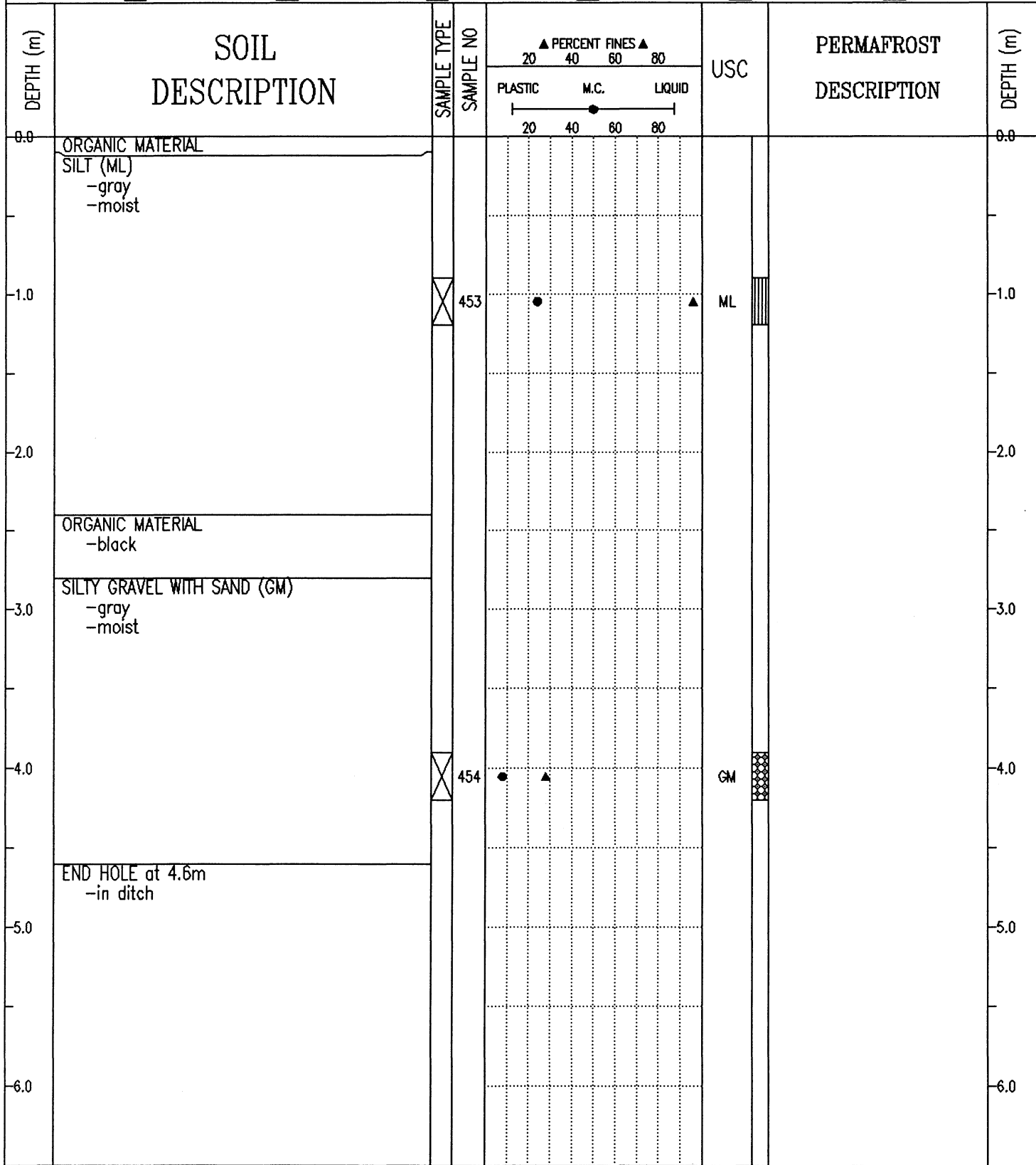
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-172
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-132	LOCATION: 1930+475 o/s 17m Lt.	ELEVATION 0.000 (m)

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



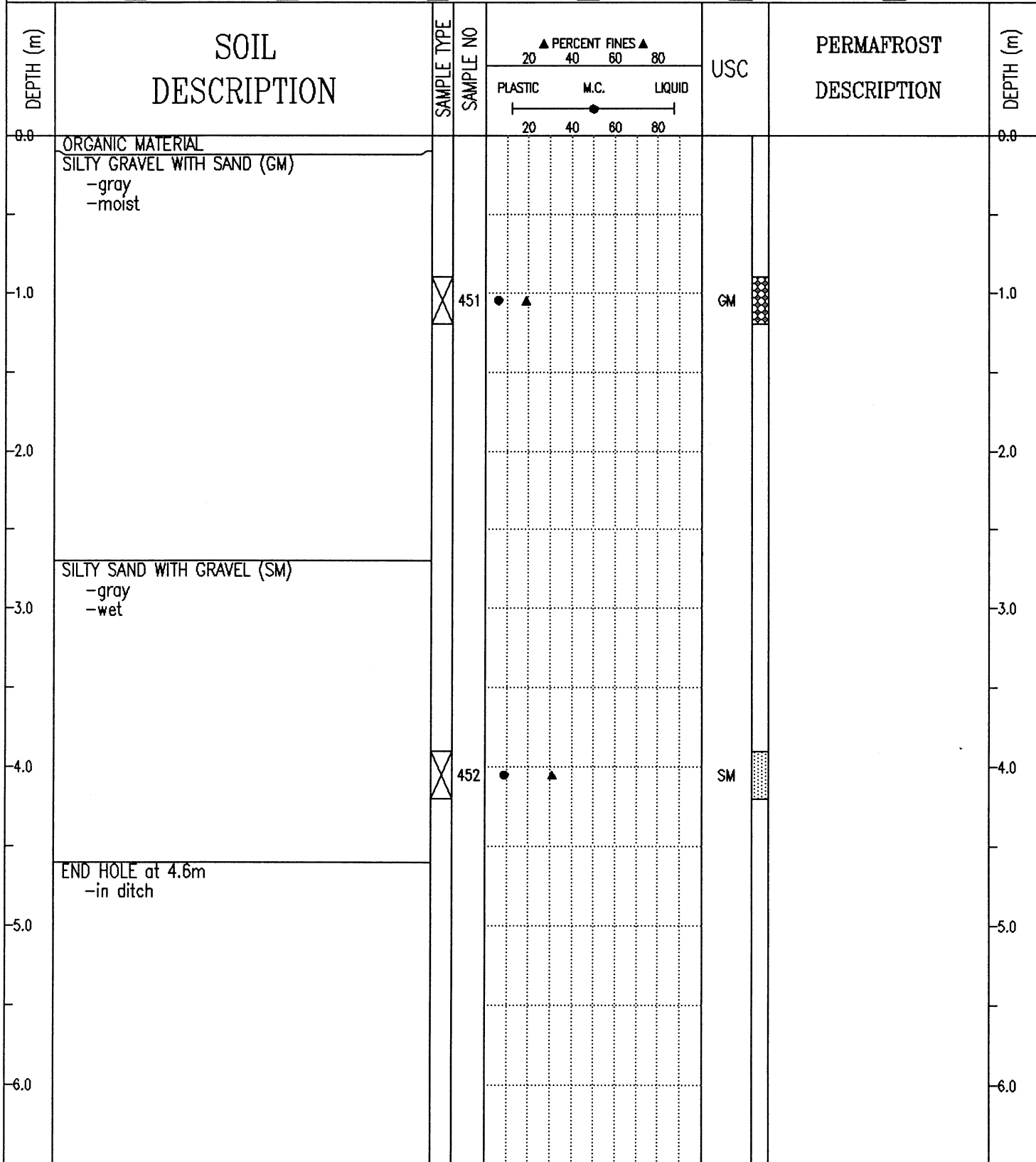
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-171
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-132	LOCATION: 1930+575 o/s 18m Lt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-170
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-132	LOCATION: 1930+675 o/s 13m Lt.	ELEVATION 0.000 (m)

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



Public Works Canada  
Whitehorse, Yukon Territory.

COMPLETION DEPTH 4.6 m

COMPLETE 91/09/24

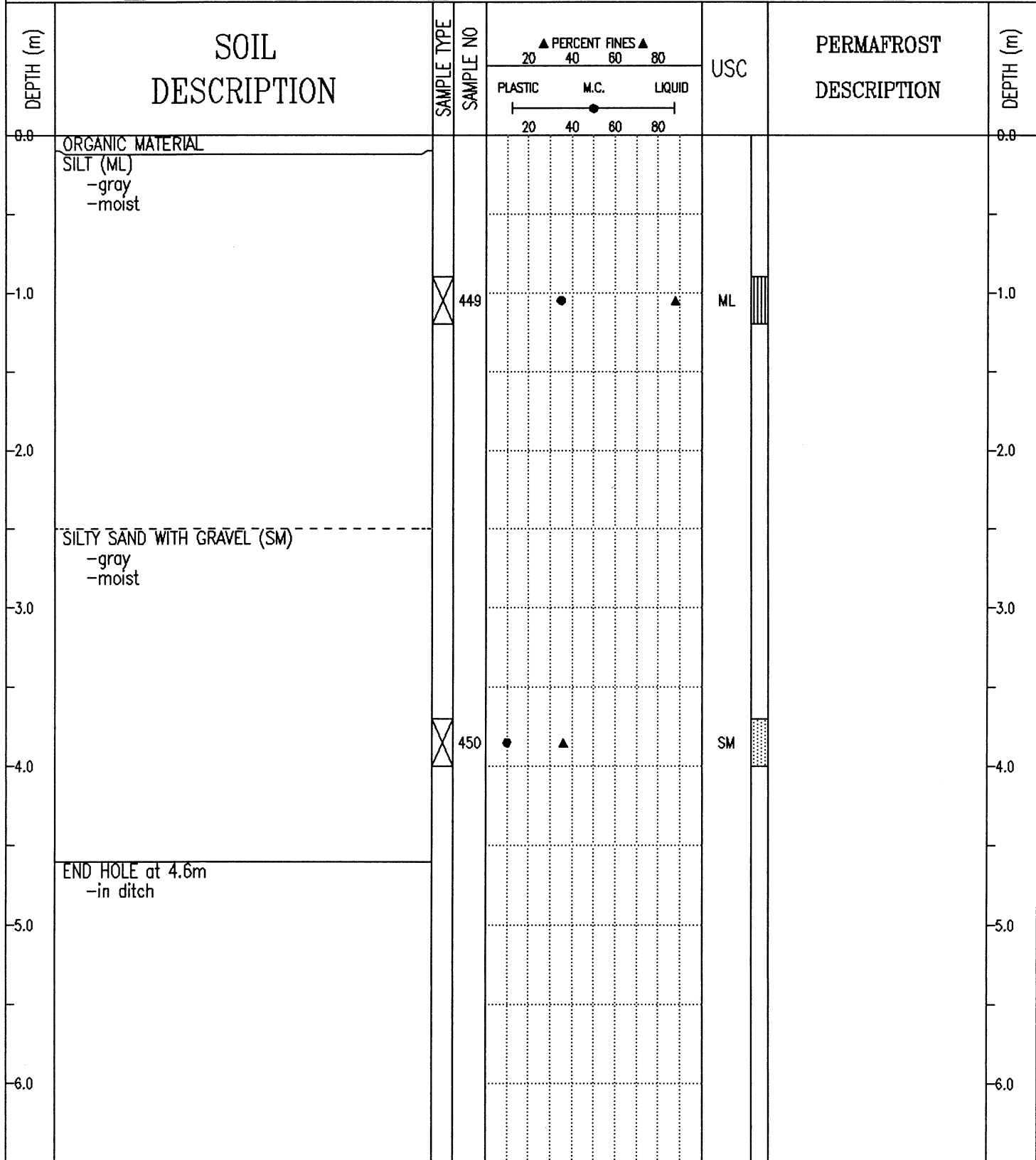
LOGGED BY

DWG NO.

Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-169
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1930+775 o/s 11m Lt.	ELEVATION 0.000 (m)

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



Public Works Canada  
Whitehorse, Yukon Territory.

COMPLETION DEPTH 4.6 m	COMPLETE 91/09/24
LOGGED BY	DWG NO.
	Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-168
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1930+876 o/s 1m Lt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC MATERIAL							0.0	
	SILTY GRAVEL WITH SAND (GM) -moist								
-1.0		<input checked="" type="checkbox"/>	448	●	▲		GM	-1.0	
	-frozen below 1.4m								
-2.0	ICE -no soil							-2.0	
-3.0								-3.0	
-4.0								-4.0	
-5.0	END HOLE at 4.6m -in ditch							-5.0	
-6.0								-6.0	

Public Works Canada  
Whitehorse, Yukon Territory.

COMPLETION DEPTH 4.6 m

COMPLETE 91/09/24

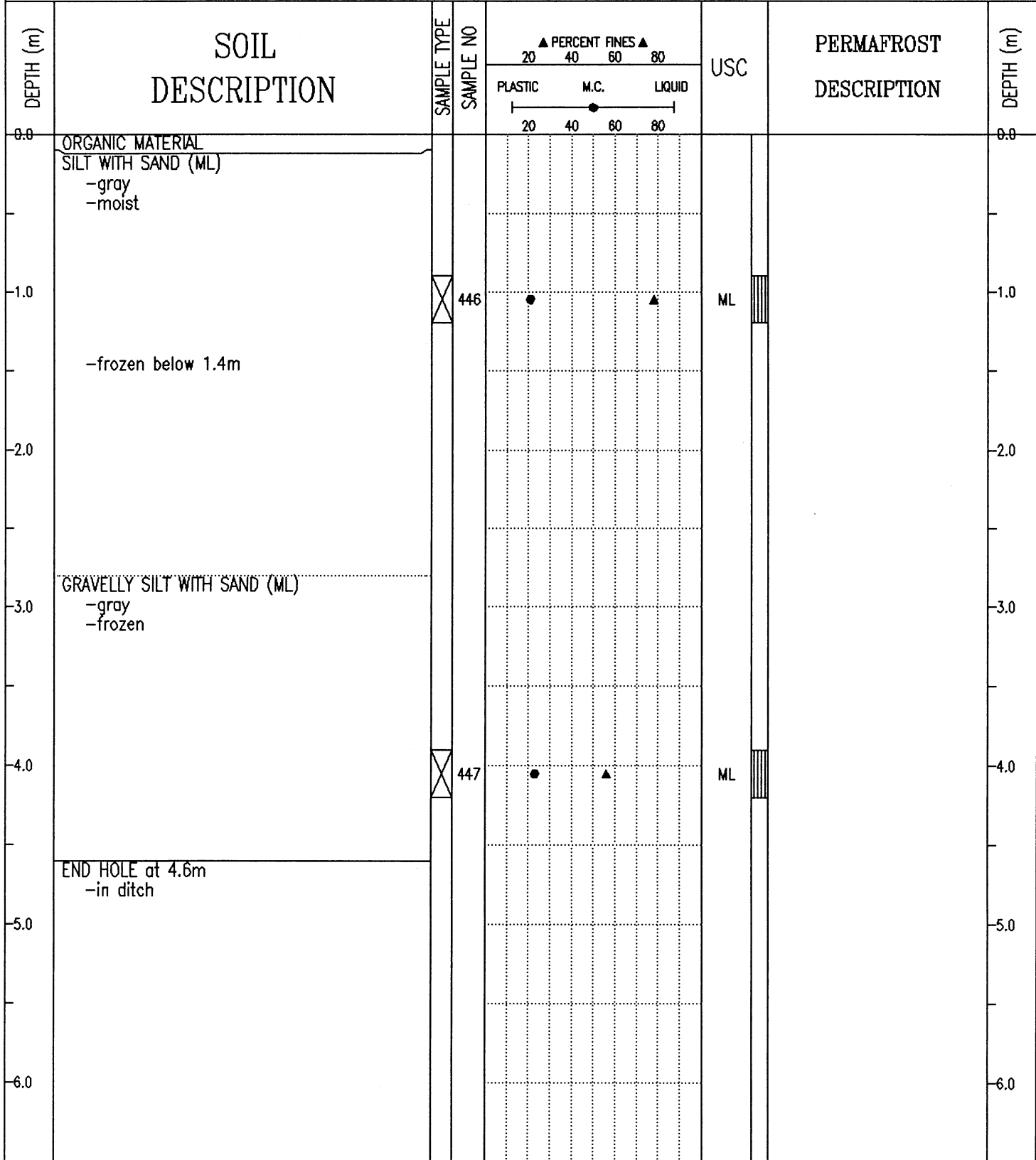
LOGGED BY

DWG NO.

Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-167
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1930+950	ELEVATION 0.000 (m)

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



Public Works Canada  
Whitehorse, Yukon Territory.

COMPLETION DEPTH 4.6 m

COMPLETE 91/09/24

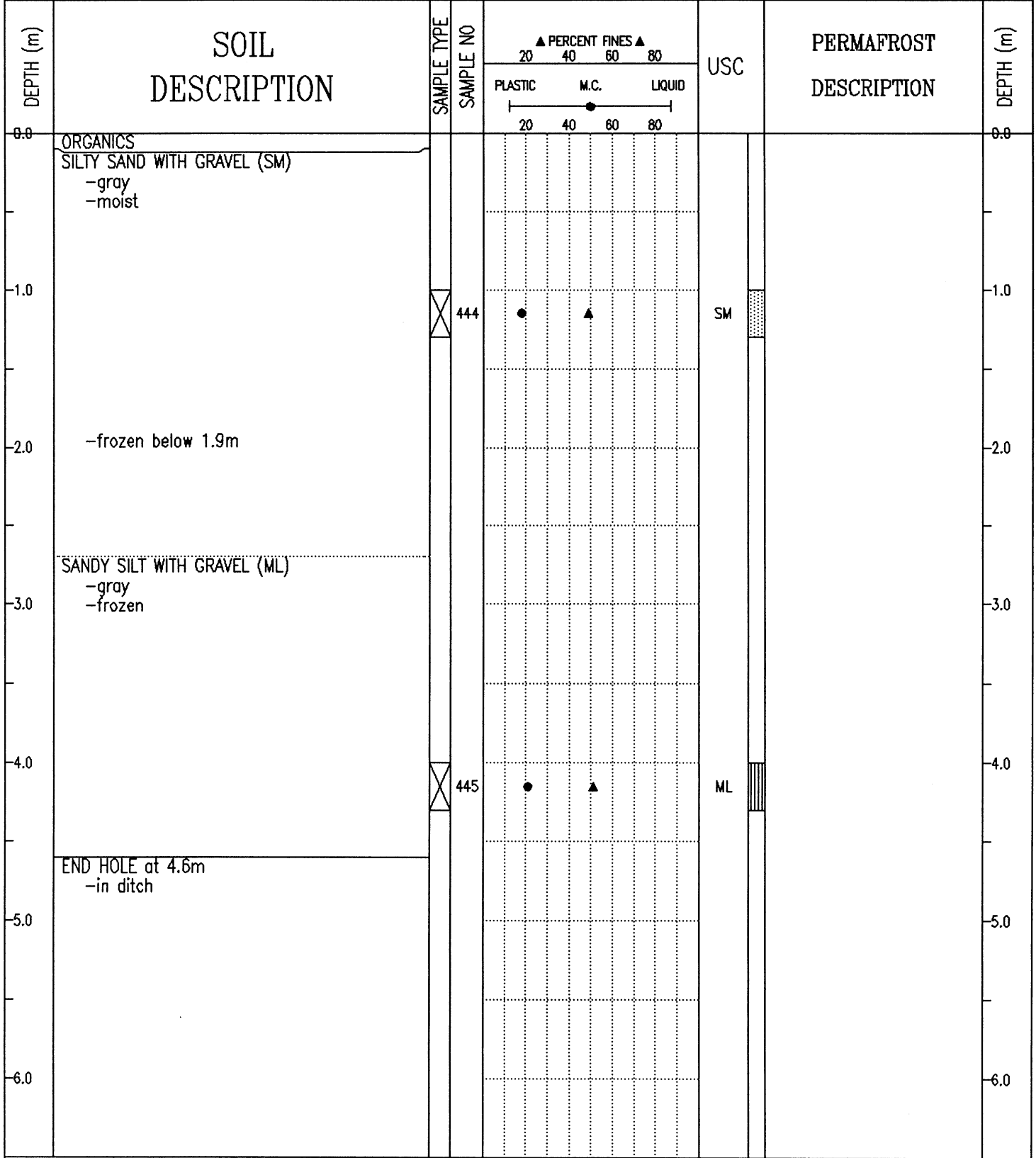
LOGGED BY

DWG NO.

Page 1 of 1

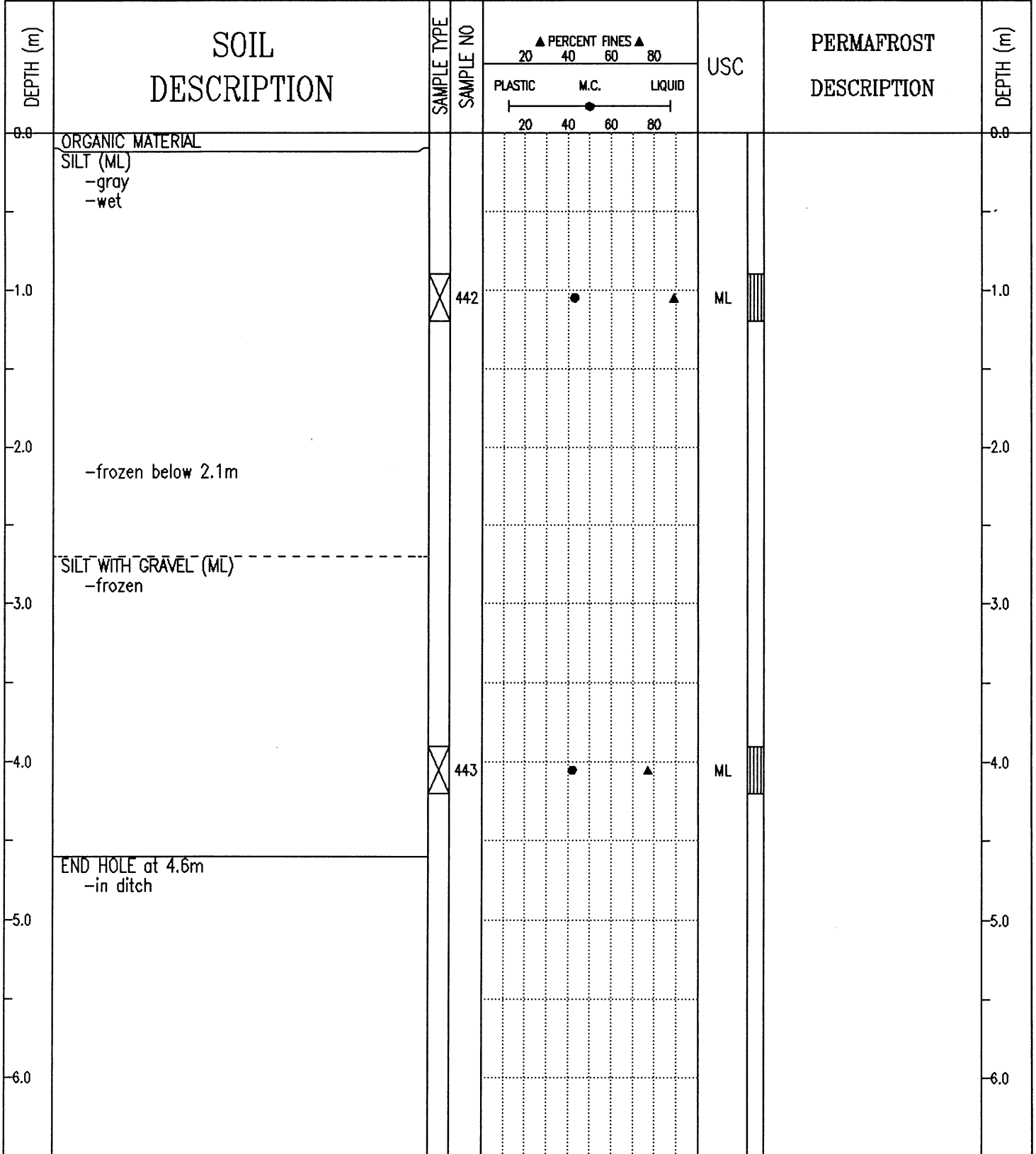
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-166
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1931+050 o/s 19m Lt.	ELEVATION 0.000 (m)

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



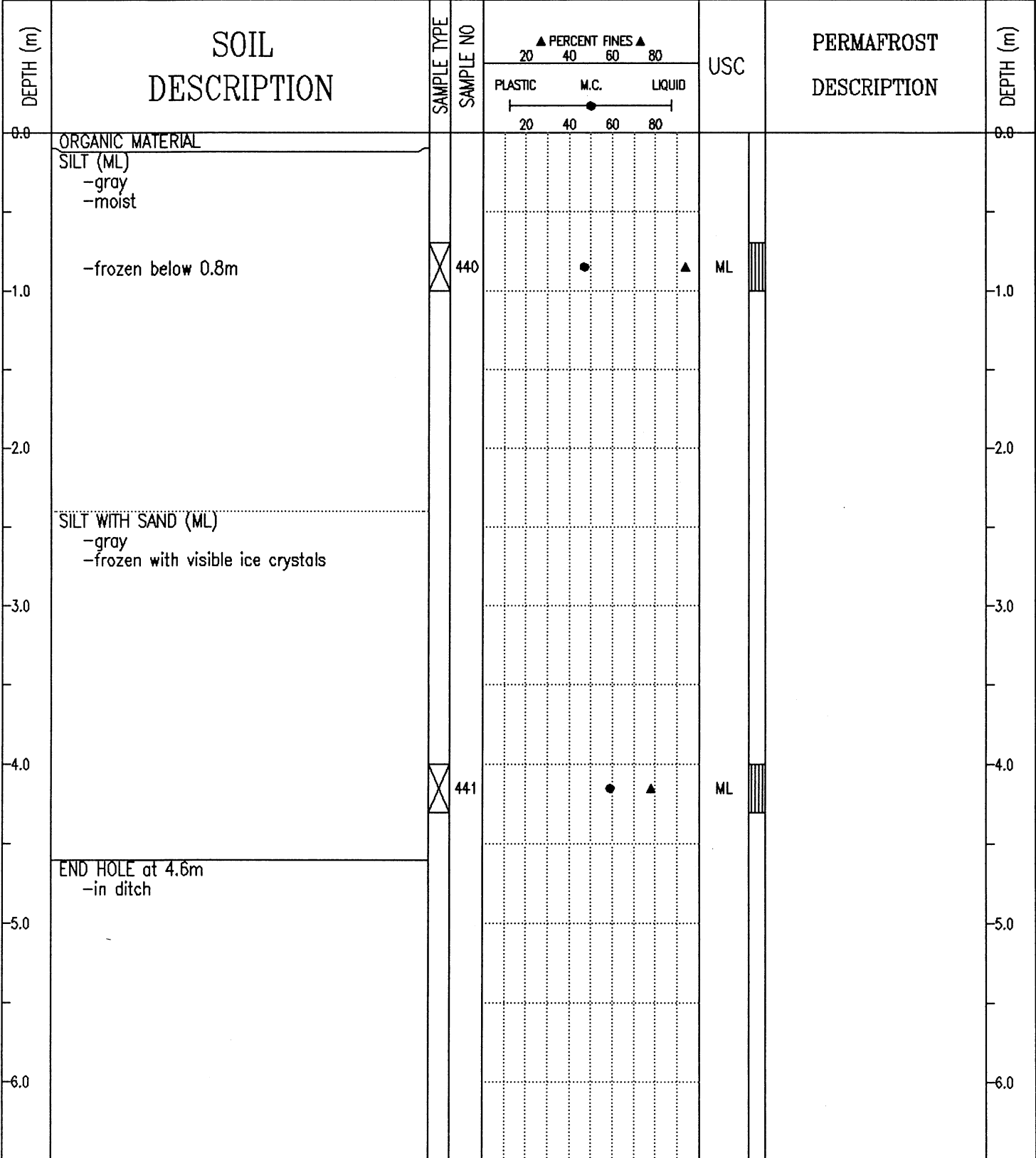
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-165
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1931+150 c/s 18m Lt.	ELEVATION 0.000 (m)

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



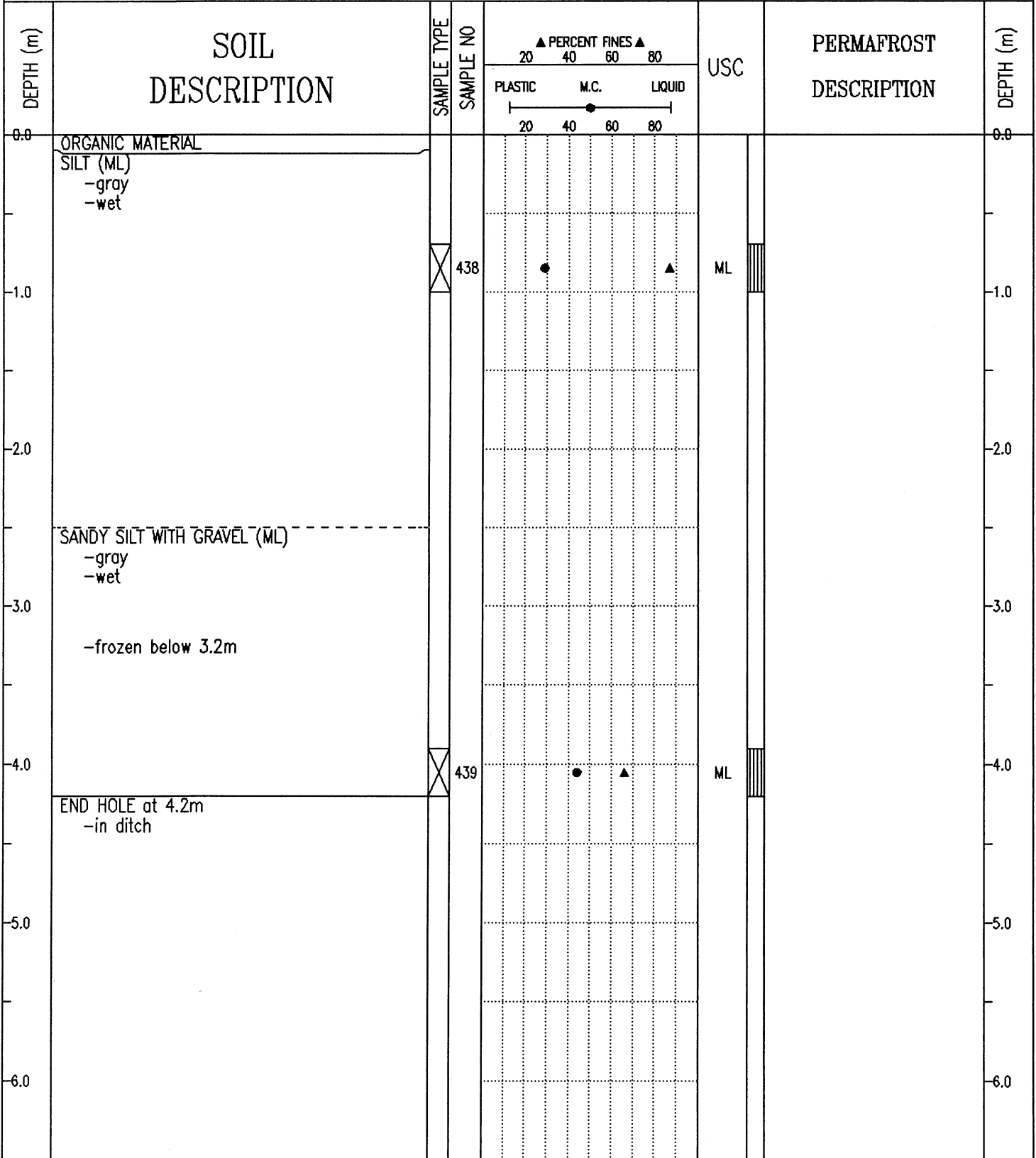
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-164
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1931+250 o/s 1m Lt.	ELEVATION 0.000 (m)

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



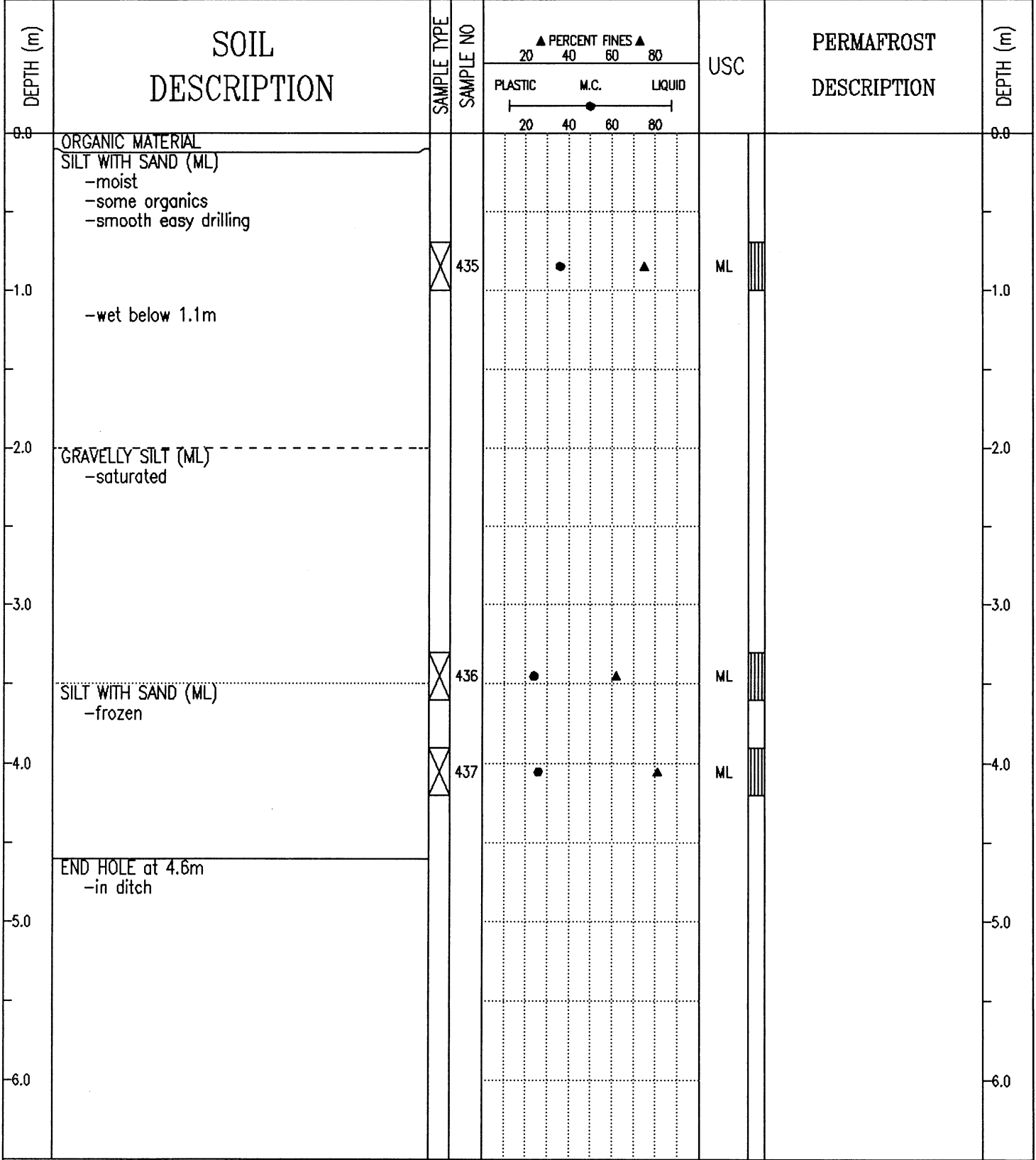
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-163
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1931+350 o/s 5m Lt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-162
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1931+452 o/s 13m Lt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-161
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1931+550 o/s 11m Lt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC MATERIAL SILT -damp							0.0	
1.0	POORLY TO WELL-GRADED GRAVEL WITH SILT AND SAND (GP-GM TO GW-GM ) -gray -moist -maximum 50mm material augered up -slow grindy drilling	X	433				GP-GM	1.0	
3.0		X	434				GW-GM	3.0	
4.0	END HOLE at 3.5m -refusal -in ditch							4.0	
5.0								5.0	
6.0								6.0	

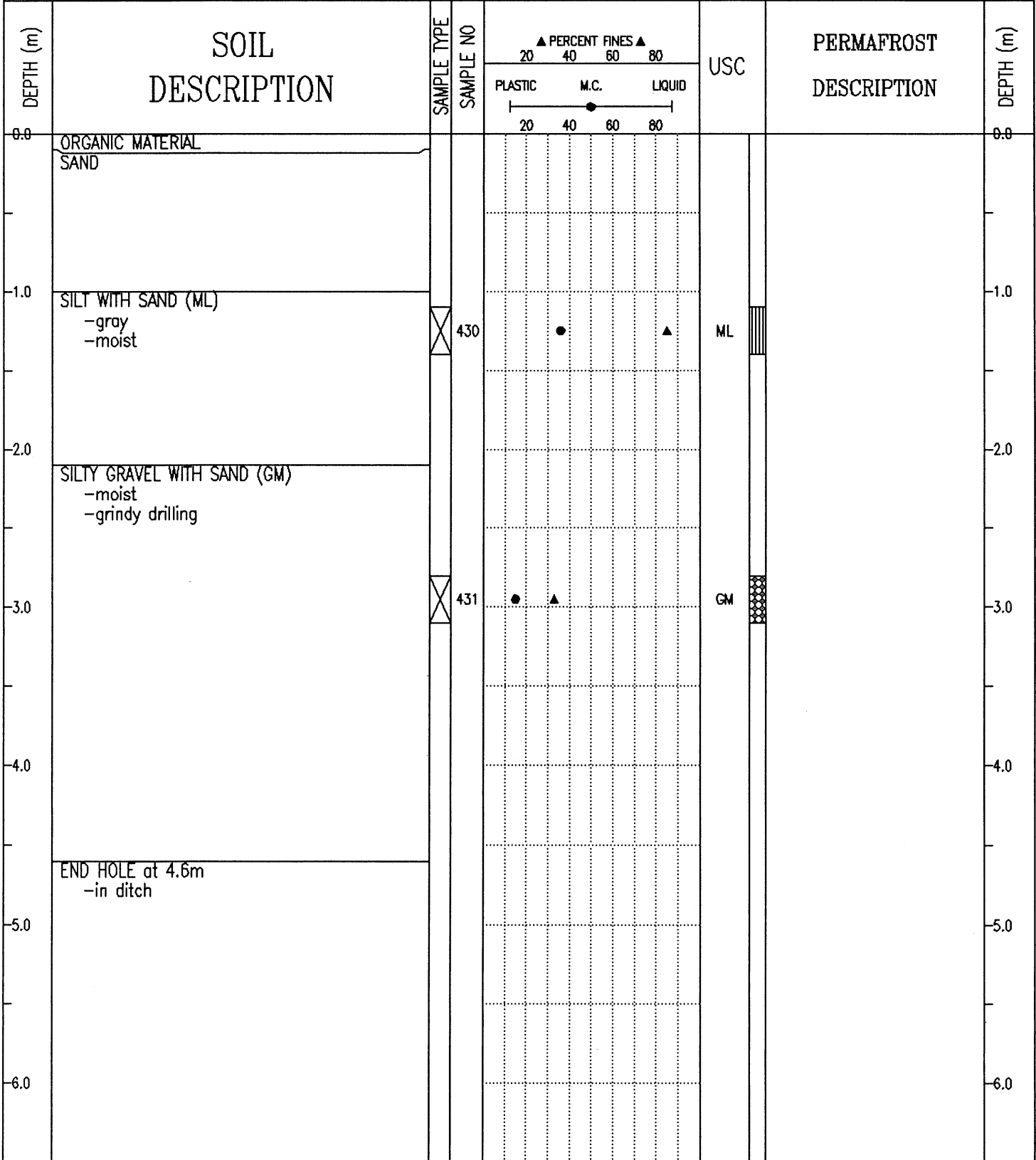
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-160
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1931+650 o/s 11m Lt.	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲			USC	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	ORGANIC MATERIAL POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM) -brown -damp -slow grindy drilling								0.0
1.0			432				GP-GM		1.0
2.0	END HOLE at 1.5m -refusal -in ditch								2.0
3.0									3.0
4.0									4.0
5.0									5.0
6.0									6.0

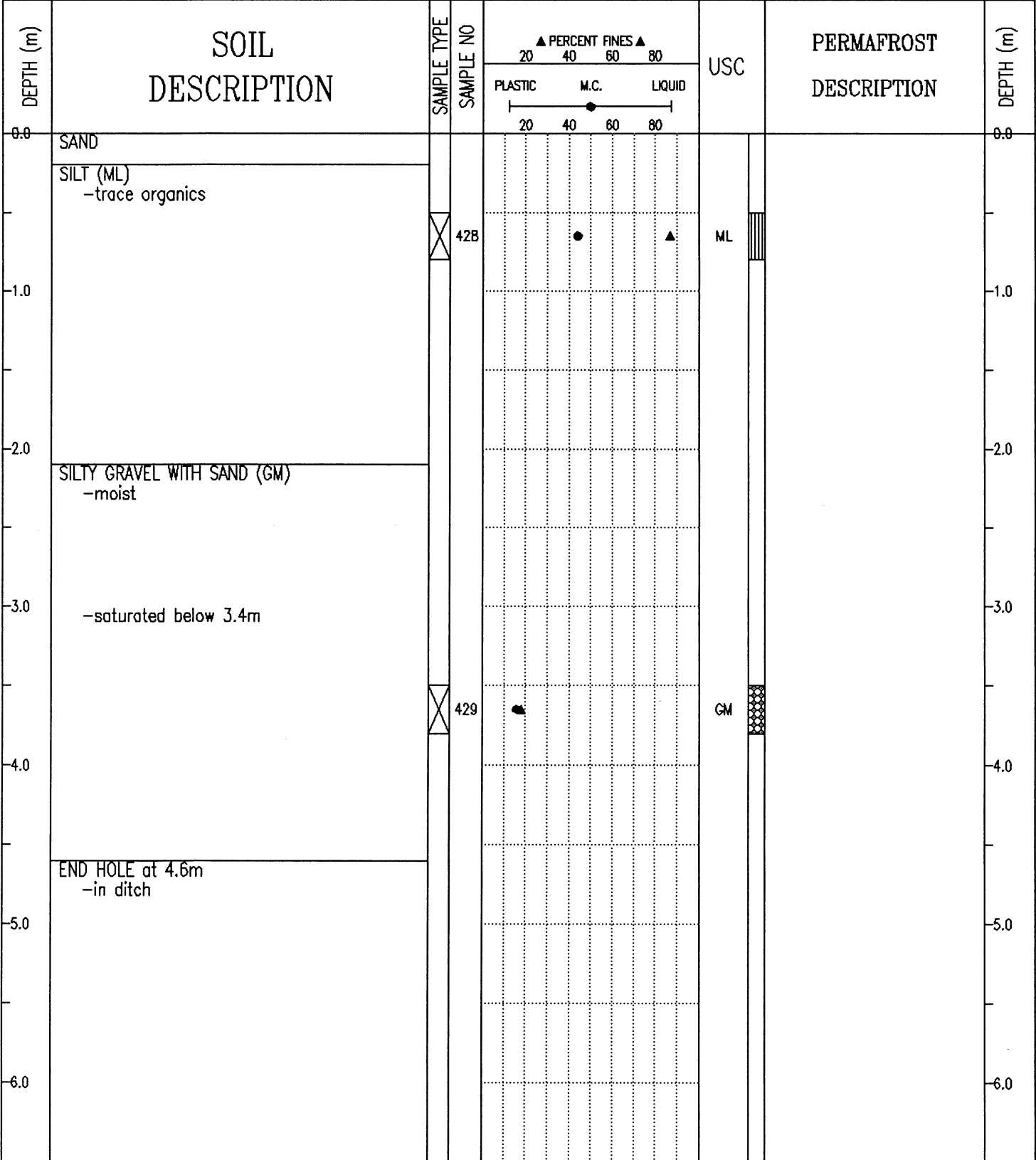
SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-159
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1931+775 o/s 7m Lt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 145-158
SHAKWAK PROJECT	A/H KM 1904-1932	Project No: 745927
17-225 & 17-174	LOCATION: 1931+878 o/s 9m Lt.	ELEVATION 0.000 (m)

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



SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 107-01
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1932+000 o/s 12m Rt.	ELEVATION 0.000 (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	PERMAFROST DESCRIPTION	DEPTH (m)
				PLASTIC	M.C.	LIQUID			
0.0	SILTY SAND (SM) -brown -damp -smooth drilling	<input checked="" type="checkbox"/>	1	▲	●	▲	SM	0.0	
-1.0								-1.0	
-2.0	POORLY GRADED SAND WITH GRAVEL (SP) -brown -moist	<input checked="" type="checkbox"/>	2	▲	●	▲	SP	-2.0	
-3.0	-more gravel sizes below 2.7m  -fewer gravel sizes below 3.1m -smoother drilling below 3.1m							-3.0	
-4.0	-wet below 4.0m	<input checked="" type="checkbox"/>	3	●				-4.0	
-5.0	END HOLE at 4.2m -poplar and spruce cover							-5.0	
-6.0								-6.0	

**HIGHWAY CONSTRUCTION**

**km 1915 to km 1932  
ALASKA HIGHWAY, Y.T.**

**VOLUME 2  
GRAIN SIZE SUMMARIES  
CENTRELINE TESTING**

This Data Package prepared for project viewing:

April, 1993

Transportation Engineering Branch  
Geotechnical Services  
201 Range Road  
Whitehorse, Yukon  
Y1A 3A4

GR-01-157

GEOTECHNICAL INVESTIGATION  
HIGHWAY CONSTRUCTION  
km 1915 to km 1932, ALASKA HIGHWAY, Y.T.  
CENTRELINE TESTING

CONTENTS

INTRODUCTION

Investigation notes, classification methods and legends

VOLUME 1

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 1915+600 and increasing to km 1932+900.

**Auger and Backhoe Testing**

1990	TEST HOLE 01	shown with prefix 107-
1991	TEST HOLES 56 to 138	shown with prefix 141- thru 144-
	TEST HOLES 158 to 183	shown with prefix 145-
	TEST HOLES 184 to 195	shown with prefix 157- and 158-
	TEST HOLES 200 to 215	shown with prefix 157-
1992	TEST HOLES 01 to 20	shown with prefix 174-
1993	TEST HOLES 05 to 18	shown with prefix 212-
<b>Air Rotary Test Drilling</b>		
1993	TEST HOLES 100 to 118	shown with prefix 214- thru 216-
	TEST HOLES 119 to 122	shown with prefix 218-

**NOTE:** Gravel sizes larger than 12.5 mm are crushed during the air rotary drilling process, and therefore do not appear on the test hole logs. Maximum sizes are indicated in the backhoe test pit logs.

VOLUME 2

GRAIN SIZE SUMMARIES - CENTRELINE TESTING AND GRANULAR INVESTIGATIONS

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-18  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 36002  
 HOLE LOCATION: 1915+625 O/S 20M LT  
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 39  
 LAB NO: 5794  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 40  
 LAB NO: 5795  
 DEPTH: 2.7-3.0  
 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	100
2.0	--
1.25	100
0.840	--
0.630	99
0.420	--
0.315	99
0.160	97
0.150	--
0.080	95

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	100
0.420	--
0.315	99
0.160	98
0.150	--
0.080	96

M.C. (%): 48

M.C. (%): 29

LIMITS

LIQUID: 39.4  
 PLASTIC: 36.4  
 P.I.: 3.0

LIMITS

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

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

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

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-17  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 36002  
 HOLE LOCATION: 1915+725 O/S 15M LT  
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 36  
 LAB NO: 5791  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 37  
 LAB NO: 5792  
 DEPTH: 2.7-3.0  
 TYPE: AUGER  
 ORGANIC

FIELD NO: 38  
 LAB NO: 5793  
 DEPTH: 4.2-4.5  
 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	99
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	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	100
0.160	99
0.150	--
0.080	98

M.C. (%): 33

M.C. (%): 45

M.C. (%): 37

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

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

LIMITS  
 LIQUID: 35.0  
 PLASTIC: 34.1  
 P.I.: 0.9

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

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

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

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 141-60  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1915+800 O/S 7M RT.  
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 165  
 LAB NO: 4542  
 DEPTH: 1.3-1.5  
 TYPE: AUGER  
 ORGANICS

FIELD NO: 166  
 LAB NO: 4543  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 167  
 LAB NO: 4544  
 DEPTH: 4.3-4.5  
 TYPE: AUGER  
 ORGANICS

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	92
19.0	90
12.7	87
9.5	87
4.76	85
2.38	--
2.00	82
1.19	--
0.841	79
0.595	--
0.42	77
0.297	--
0.177	--
0.149	74
0.074	69

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	100
4.76	99
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	97
0.074	94

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	96
0.074	95

M.C. (%): 25

M.C. (%): 32

M.C. (%): 51

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

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

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

% GRAVEL: 15  
 % SAND: 16  
 % FINES: 69

% GRAVEL: 1  
 % SAND: 6  
 % FINES: 94

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

CLASSIFICATION:  
 SANDY SILT WITH  
 GRAVEL (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 141-61  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1915+975  
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 168  
 LAB NO: 4545  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 169  
 LAB NO: 4546  
 DEPTH: 2.8-3.0  
 TYPE: AUGER  
 ORGANIC

FIELD NO: 170  
 LAB NO: 4547  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	96
19.0	93
12.7	92
9.5	90
4.76	86
2.38	--
2.00	81
1.19	--
0.841	77
0.595	--
0.42	74
0.297	--
0.177	--
0.149	68
0.074	64

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

101.6	--
76.2	--
50.8	100
38.1	80
25.4	80
19.0	78
12.7	73
9.5	67
4.76	60
2.38	--
2.00	52
1.19	--
0.841	47
0.595	--
0.42	43
0.297	--
0.177	--
0.149	38
0.074	31

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	97
19.0	90
12.7	87
9.5	85
4.76	79
2.38	--
2.00	74
1.19	--
0.841	69
0.595	--
0.42	65
0.297	--
0.177	--
0.149	58
0.074	52

M.C. (%): 17

M.C. (%): 8

M.C. (%): 15

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 14  
 % SAND: 22  
 % FINES: 64

% GRAVEL: 40  
 % SAND: 28  
 % FINES: 31

% GRAVEL: 21  
 % SAND: 27  
 % FINES: 52

CLASSIFICATION:  
 SANDY SILT (ML)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SANDY SILT WITH  
 GRAVEL (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 141-62  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1916+060 O/S 5M LT.  
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 171  
 LAB NO: 4548  
 DEPTH: 1.5-1.7  
 TYPE: AUGER

FIELD NO: 172  
 LAB NO: 4549  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 173  
 LAB NO: 4550  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	100
38.1	93
25.4	83
19.0	74
12.7	57
9.5	48
4.76	33
2.38	--
2.00	21
1.19	--
0.841	12
0.595	--
0.42	6
0.297	--
0.177	--
0.149	3
0.074	2

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

101.6	--
76.2	--
50.8	100
38.1	92
25.4	85
19.0	79
12.7	61
9.5	50
4.76	32
2.38	--
2.00	19
1.19	--
0.841	12
0.595	--
0.42	6
0.297	--
0.177	--
0.149	3
0.074	3

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

101.6	--
76.2	--
50.8	100
38.1	85
25.4	76
19.0	63
12.7	54
9.5	48
4.76	39
2.38	--
2.00	30
1.19	--
0.841	21
0.595	--
0.42	13
0.297	--
0.177	--
0.149	7
0.074	4

M.C. (%): 2

M.C. (%): 1

M.C. (%): 5

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 67  
 % SAND: 31  
 % FINES: 2

% GRAVEL: 68  
 % SAND: 30  
 % FINES: 3

% GRAVEL: 61  
 % SAND: 34  
 % FINES: 4

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

CLASSIFICATION:  
 POORLY GRADED  
 GRAVEL WITH SAND  
 (GP)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-16  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 36002  
 HOLE LOCATION: 1916+175  
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 35  
 LAB NO: 5790  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	89
20.0	81
12.5	67
10.0	62
5.0	49
2.5	42
2.0	--
1.25	35
0.840	--
0.630	28
0.420	--
0.315	23
0.160	17
0.150	--
0.080	14

M.C. (%): 6

LIMITS

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

% GRAVEL: 51  
 % SAND: 36  
 % FINES: 14

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-15  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 36002  
 HOLE LOCATION: 1916+275  
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 32  
 LAB NO: 5787  
 DEPTH: 1.2-1.5  
 TYPE: AUGER

FIELD NO: 33  
 LAB NO: 5788  
 DEPTH: 2.7-3.0  
 TYPE: AUGER

FIELD NO: 34  
 LAB NO: 5789  
 DEPTH: 4.2-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	100
5.0	98
2.5	97
2.0	--
1.25	95
0.840	--
0.630	92
0.420	--
0.315	89
0.160	86
0.150	--
0.080	81

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	95
10.0	92
5.0	86
2.5	80
2.0	--
1.25	75
0.840	--
0.630	69
0.420	--
0.315	63
0.160	58
0.150	--
0.080	51

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	75
20.0	71
12.5	58
10.0	54
5.0	43
2.5	35
2.0	--
1.25	27
0.840	--
0.630	19
0.420	--
0.315	12
0.160	10
0.150	--
0.080	9

M.C. (%): 42

M.C. (%): 14

M.C. (%): 8

LIMITS  
 LIQUID: 19.2  
 PLASTIC: 14.2  
 P.I.: 5.0

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

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

% GRAVEL: 2  
 % SAND: 16  
 % FINES: 81

% GRAVEL: 14  
 % SAND: 34  
 % FINES: 51

% GRAVEL: 57  
 % SAND: 34  
 % FINES: 9

CLASSIFICATION:  
 SILTY CLAY WITH  
 SAND (CL-ML)

CLASSIFICATION:  
 SANDY SILT (ML)

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

PROJECT NUMBER: 745927 HOLE NUMBER: 141-63  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1916+375 O/S 4M RT.  
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 174  
 LAB NO: 4551  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 175  
 LAB NO: 4552  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	100
38.1	89
25.4	83
19.0	78
12.7	65
9.5	59
4.76	48
2.38	--
2.00	38
1.19	--
0.841	25
0.595	--
0.42	15
0.297	--
0.177	--
0.149	8
0.074	5

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	86
19.0	70
12.7	54
9.5	46
4.76	31
2.38	--
2.00	20
1.19	--
0.841	12
0.595	--
0.42	8
0.297	--
0.177	--
0.149	4
0.074	3

M.C. (%): 3

M.C. (%): 2

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

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

% GRAVEL: 52  
 % SAND: 43  
 % FINES: 5

% GRAVEL: 69  
 % SAND: 28  
 % FINES: 3

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

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 218-119  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAM ROTARY DRILL  
 HOLE LOCATION: 1916+450 O/S 50M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04.16

FIELD NO: 56  
 LAB NO: 97  
 DEPTH: 3.8-4.5  
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	99
10.0	97
5.0	69
2.5	36
2.0	--
1.25	13
0.840	--
0.630	9
0.420	--
0.315	7
0.160	6
0.150	--
0.080	5

M.C. (%): 3

LIMITS

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

% GRAVEL: 31  
 % SAND: 64  
 % FINES: 5

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

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 218-122  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAM ROTARY DRILL  
 HOLE LOCATION: 1916+450 O/S 100M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04.16

FIELD NO: 59  
 LAB NO: 100  
 DEPTH: 3.2-3.7  
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	97
10.0	94
5.0	76
2.5	59
2.0	--
1.25	43
0.840	--
0.630	29
0.420	--
0.315	19
0.160	13
0.150	--
0.080	10

M.C. (%): 3

LIMITS

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

% GRAVEL: 24  
 % SAND: 66  
 % FINES: 10

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT &  
 GRAVEL (SW-SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 141-64  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1916+475 O/S 7M LT.  
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 176  
 LAB NO: 4553  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 177  
 LAB NO: 4554  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 178  
 LAB NO: 4555  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	86
19.0	73
12.7	59
9.5	53
4.76	44
2.38	--
2.00	34
1.19	--
0.841	21
0.595	--
0.42	9
0.297	--
0.177	--
0.149	5
0.074	2

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	92
19.0	86
12.7	65
9.5	55
4.76	37
2.38	--
2.00	26
1.19	--
0.841	17
0.595	--
0.42	11
0.297	--
0.177	--
0.149	4
0.074	3

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

101.6	--
76.2	--
50.8	100
38.1	93
25.4	87
19.0	77
12.7	63
9.5	53
4.76	39
2.38	--
2.00	27
1.19	--
0.841	18
0.595	--
0.42	11
0.297	--
0.177	--
0.149	4
0.074	3

M.C. (%): 2

M.C. (%): 2

M.C. (%): 3

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 56  
 % SAND: 41  
 % FINES: 2

% GRAVEL: 63  
 % SAND: 34  
 % FINES: 3

% GRAVEL: 61  
 % SAND: 36  
 % FINES: 3

CLASSIFICATION:  
 POORLY GRADED  
 GRAVEL WITH SAND  
 (GP)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 218-120  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAM ROTARY DRILL  
 HOLE LOCATION: 1916+550 O/S 50M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04.16

FIELD NO: 57  
 LAB NO: 98  
 DEPTH: 3.8-4.4  
 TYPE: RETURN

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

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	100
10.0	100
5.0	86
2.5	50
2.0	--
1.25	18
0.840	--
0.630	6
0.420	--
0.315	4
0.160	4
0.150	--
0.080	4

M.C. (%): 4

LIMITS

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

% GRAVEL: 14  
 % SAND: 82  
 % FINES: 4

CLASSIFICATION:  
 POORLY GRADED  
 SAND (SP)

PROJECT NUMBER: 745927 HOLE NUMBER: 141-65  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1916+575 O/S 8M LT.  
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 179  
 LAB NO: 4556  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 180  
 LAB NO: 4557  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 181  
 LAB NO: 4558  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

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

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

101.6	--
76.2	--
50.8	100
38.1	87
25.4	63
19.0	57
12.7	43
9.5	39
4.76	32
2.38	--
2.00	26
1.19	--
0.841	20
0.595	--
0.42	14
0.297	--
0.177	--
0.149	11
0.074	9

101.6	--
76.2	--
50.8	100
38.1	90
25.4	78
19.0	62
12.7	49
9.5	41
4.76	29
2.38	--
2.00	21
1.19	--
0.841	14
0.595	--
0.42	9
0.297	--
0.177	--
0.149	7
0.074	5

101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	77
12.7	64
9.5	56
4.76	41
2.38	--
2.00	28
1.19	--
0.841	17
0.595	--
0.42	11
0.297	--
0.177	--
0.149	7
0.074	6

M.C. (%): 6

M.C. (%): 3

M.C. (%): 3

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

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

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

% GRAVEL: 68  
 % SAND: 22  
 % FINES: 9

% GRAVEL: 71  
 % SAND: 24  
 % FINES: 5

% GRAVEL: 59  
 % SAND: 36  
 % FINES: 6

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

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

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

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 218-121  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAM ROTARY DRILL  
 HOLE LOCATION: 1916+650 O/S 75M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04.16

FIELD NO: 58  
 LAB NO: 99  
 DEPTH: 4.3-4.9  
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	100
10.0	99
5.0	76
2.5	44
2.0	--
1.25	17
0.840	--
0.630	7
0.420	--
0.315	6
0.160	5
0.150	--
0.080	5

M.C. (%): 3

LIMITS

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

% GRAVEL: 24  
 % SAND: 71  
 % FINES: 5

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

PROJECT NUMBER: 745927 HOLE NUMBER: 141-66  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1916+675 O/S 7M RT.  
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 182  
 LAB NO: 4559  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 183  
 LAB NO: 4560  
 DEPTH: 2.8-3.0  
 TYPE: AUGER  
 ORGANIC

FIELD NO: 184  
 LAB NO: 4561  
 DEPTH: 4.3-4.5  
 TYPE: AUGER  
 ORGANICS

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	89
19.0	81
12.7	72
9.5	65
4.76	49
2.38	--
2.00	37
1.19	--
0.841	28
0.595	--
0.42	22
0.297	--
0.177	--
0.149	15
0.074	12

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	93
25.4	93
19.0	88
12.7	82
9.5	78
4.76	69
2.38	--
2.00	61
1.19	--
0.841	54
0.595	--
0.42	49
0.297	--
0.177	--
0.149	45
0.074	41

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	85
19.0	75
12.7	70
9.5	66
4.76	57
2.38	--
2.00	49
1.19	--
0.841	42
0.595	--
0.42	39
0.297	--
0.177	--
0.149	35
0.074	33

M.C. (%): 5

M.C. (%): 16

M.C. (%): 12

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

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

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

% GRAVEL: 51  
 % SAND: 37  
 % FINES: 12

% GRAVEL: 31  
 % SAND: 27  
 % FINES: 41

% GRAVEL: 43  
 % SAND: 24  
 % FINES: 33

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

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-67  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1916+780 O/S 7M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 185  
 LAB NO: 4562  
 DEPTH: 1.3-1.5  
 TYPE: AUGER  
 EST. 80% ORGANIC

FIELD NO: 186  
 LAB NO: 4563  
 DEPTH: 2.8-3.0  
 TYPE: AUGER  
 ORGANICS

FIELD NO: 187  
 LAB NO: 4564  
 DEPTH: 4.3-4.5  
 TYPE: AUGER  
 ORGANICS

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	98
2.38	--
2.00	98
1.19	--
0.841	94
0.595	--
0.42	89
0.297	--
0.177	--
0.149	81
0.074	77

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	98
12.7	96
9.5	95
4.76	91
2.38	--
2.00	88
1.19	--
0.841	85
0.595	--
0.42	82
0.297	--
0.177	--
0.149	78
0.074	74

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	77
38.1	77
25.4	67
19.0	63
12.7	59
9.5	57
4.76	53
2.38	--
2.00	51
1.19	--
0.841	48
0.595	--
0.42	45
0.297	--
0.177	--
0.149	42
0.074	39

M.C. (%): 47

M.C. (%): 31

M.C. (%): 19

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

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

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

% GRAVEL: 2  
 % SAND: 22  
 % FINES: 77

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

% GRAVEL: 47  
 % SAND: 14  
 % FINES: 39

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILTY GRAVEL (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-68  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1916+875 O/S 10M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 188  
 LAB NO: 4565  
 DEPTH: 1.3-1.5  
 TYPE: AUGER  
 ORGANICS

FIELD NO: 189  
 LAB NO: 4566  
 DEPTH: 2.8-3.0  
 TYPE: AUGER  
 ORGANICS

FIELD NO: 190  
 LAB NO: 4567  
 DEPTH: 4.3-4.5  
 TYPE: AUGER  
 ORGANICS

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	99
12.7	94
9.5	91
4.76	83
2.38	--
2.00	76
1.19	--
0.841	70
0.595	--
0.42	66
0.297	--
0.177	--
0.149	58
0.074	53

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	93
9.5	88
4.76	83
2.38	--
2.00	78
1.19	--
0.841	74
0.595	--
0.42	70
0.297	--
0.177	--
0.149	66
0.074	64

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	95
19.0	94
12.7	88
9.5	83
4.76	74
2.38	--
2.00	68
1.19	--
0.841	62
0.595	--
0.42	50
0.297	--
0.177	--
0.149	41
0.074	40

M.C. (%): 21

M.C. (%): 24

M.C. (%): 15

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

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

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

% GRAVEL: 17  
 % SAND: 30  
 % FINES: 53

% GRAVEL: 17  
 % SAND: 19  
 % FINES: 64

% GRAVEL: 26  
 % SAND: 34  
 % FINES: 40

CLASSIFICATION:  
 SANDY SILT WITH  
 GRAVEL (ML)

CLASSIFICATION:  
 SANDY SILT WITH  
 GRAVEL (ML)

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-69  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1916+975 O/S 9M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 191  
 LAB NO: 4568  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 192  
 LAB NO: 4569  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 193  
 LAB NO: 4570  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

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

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

101.6	--
76.2	--
50.8	--
38.1	100
25.4	95
19.0	94
12.7	90
9.5	88
4.76	81
2.38	--
2.00	73
1.19	--
0.841	64
0.595	--
0.42	54
0.297	--
0.177	--
0.149	44
0.074	39

101.6	--
76.2	--
50.8	--
38.1	100
25.4	71
19.0	61
12.7	53
9.5	47
4.76	38
2.38	--
2.00	31
1.19	--
0.841	26
0.595	--
0.42	22
0.297	--
0.177	--
0.149	19
0.074	15

M.C. (%): 3

M.C. (%): 14

M.C. (%): 6

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

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

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

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

% GRAVEL: 19  
 % SAND: 42  
 % FINES: 39

% GRAVEL: 62  
 % SAND: 22  
 % FINES: 15

CLASSIFICATION:

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-70  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1917+075 O/S 6M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 194  
 LAB NO: 4766  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 195  
 LAB NO: 4767  
 DEPTH: 2.8-3.0  
 TYPE: AUGER  
 ORGANIC

FIELD NO: 196  
 LAB NO: 4768  
 DEPTH: 4.3-4.5  
 TYPE: AUGER  
 ORGANIC

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	82
12.7	69
9.5	59
4.76	46
2.38	--
2.00	35
1.19	--
0.841	27
0.595	--
0.42	22
0.297	--
0.177	--
0.149	15
0.074	12

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	86
0.595	--
0.42	81
0.297	--
0.177	--
0.149	76
0.074	73

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	99
1.19	--
0.841	95
0.595	--
0.42	92
0.297	--
0.177	--
0.149	85
0.074	82

M.C. (%): 6

M.C. (%): 82

M.C. (%): 65

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

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

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

% GRAVEL: 54  
 % SAND: 34  
 % FINES: 12

% GRAVEL: 1  
 % SAND: 26  
 % FINES: 73

% GRAVEL: 1  
 % SAND: 17  
 % FINES: 82

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

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-71  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1917+175 O/S 5M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 197  
 LAB NO: 4769  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 198  
 LAB NO: 4770  
 DEPTH: 2.8-3.0  
 TYPE: AUGER  
 ORGANICS

FIELD NO: 199  
 LAB NO: 4771  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	72
19.0	72
12.7	70
9.5	68
4.76	65
2.38	--
2.00	62
1.19	--
0.841	59
0.595	--
0.42	57
0.297	--
0.177	--
0.149	52
0.074	48

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	95
0.074	92

M.C. (%): 10

M.C. (%): 66

M.C. (%): 38

LIMITS

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

LIMITS

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

LIMITS

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

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

% GRAVEL: 35  
 % SAND: 18  
 % FINES: 48

% GRAVEL: 0  
 % SAND: 7  
 % FINES: 92

CLASSIFICATION:

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-72  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1917+300 O/S 4M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 200  
 LAB NO: 4772  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 201  
 LAB NO: 4773  
 DEPTH: 2.8-3.0  
 TYPE: AUGER  
 ORGANIC

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

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	97
2.38	--
2.00	94
1.19	--
0.841	80
0.595	--
0.42	74
0.297	--
0.177	--
0.149	65
0.074	61

M.C. (%): 7

M.C. (%): 112

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

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

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

% GRAVEL: 3  
 % SAND: 36  
 % FINES: 61

CLASSIFICATION:

CLASSIFICATION:  
 SANDY SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-73  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1917+400 O/S 7M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 202  
 LAB NO: 4774  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 203  
 LAB NO: 4775  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 204  
 LAB NO: 4776  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	97
9.5	97
4.76	96
2.38	--
2.00	96
1.19	--
0.841	95
0.595	--
0.42	94
0.297	--
0.177	--
0.149	91
0.074	89

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	98
0.297	--
0.177	--
0.149	94
0.074	90

M.C. (%): 12

M.C. (%): 27

M.C. (%): 27

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

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

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

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

% GRAVEL: 4  
 % SAND: 8  
 % FINES: 89

% GRAVEL: 0  
 % SAND: 10  
 % FINES: 90

CLASSIFICATION:

CLASSIFICATION:  
SILT (ML)

CLASSIFICATION:  
SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-74  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1917+600 O/S 15M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 205  
 LAB NO: 4777  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 206  
 LAB NO: 4778  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 207  
 LAB NO: 4779  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	82
19.0	77
12.7	72
9.5	67
4.76	62
2.38	--
2.00	56
1.19	--
0.841	51
0.595	--
0.42	48
0.297	--
0.177	--
0.149	45
0.074	43

M.C. (%): 12

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

% GRAVEL: 38  
 % SAND: 19  
 % FINES: 43

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

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

101.6	--
76.2	100
50.8	78
38.1	71
25.4	54
19.0	45
12.7	35
9.5	32
4.76	28
2.38	--
2.00	24
1.19	--
0.841	21
0.595	--
0.42	19
0.297	--
0.177	--
0.149	16
0.074	13

M.C. (%): 4

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

% GRAVEL: 72  
 % SAND: 14  
 % FINES: 13

CLASSIFICATION:  
 SILTY GRAVEL (GM)

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

101.6	--
76.2	--
50.8	100
38.1	89
25.4	68
19.0	64
12.7	49
9.5	43
4.76	32
2.38	--
2.00	26
1.19	--
0.841	23
0.595	--
0.42	20
0.297	--
0.177	--
0.149	11
0.074	8

M.C. (%): 3

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

% GRAVEL: 68  
 % SAND: 23  
 % FINES: 8

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

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 214-107  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAMM ROTORY DRILL  
 HOLE LOCATION: 1917+600 O/S 50M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04

FIELD NO: 28  
 LAB NO: 69  
 DEPTH: 5.5-6.3  
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	99
10.0	95
5.0	76
2.5	57
2.0	--
1.25	41
0.840	--
0.630	31
0.420	--
0.315	23
0.160	18
0.150	--
0.080	14

M.C. (%): 3

LIMITS

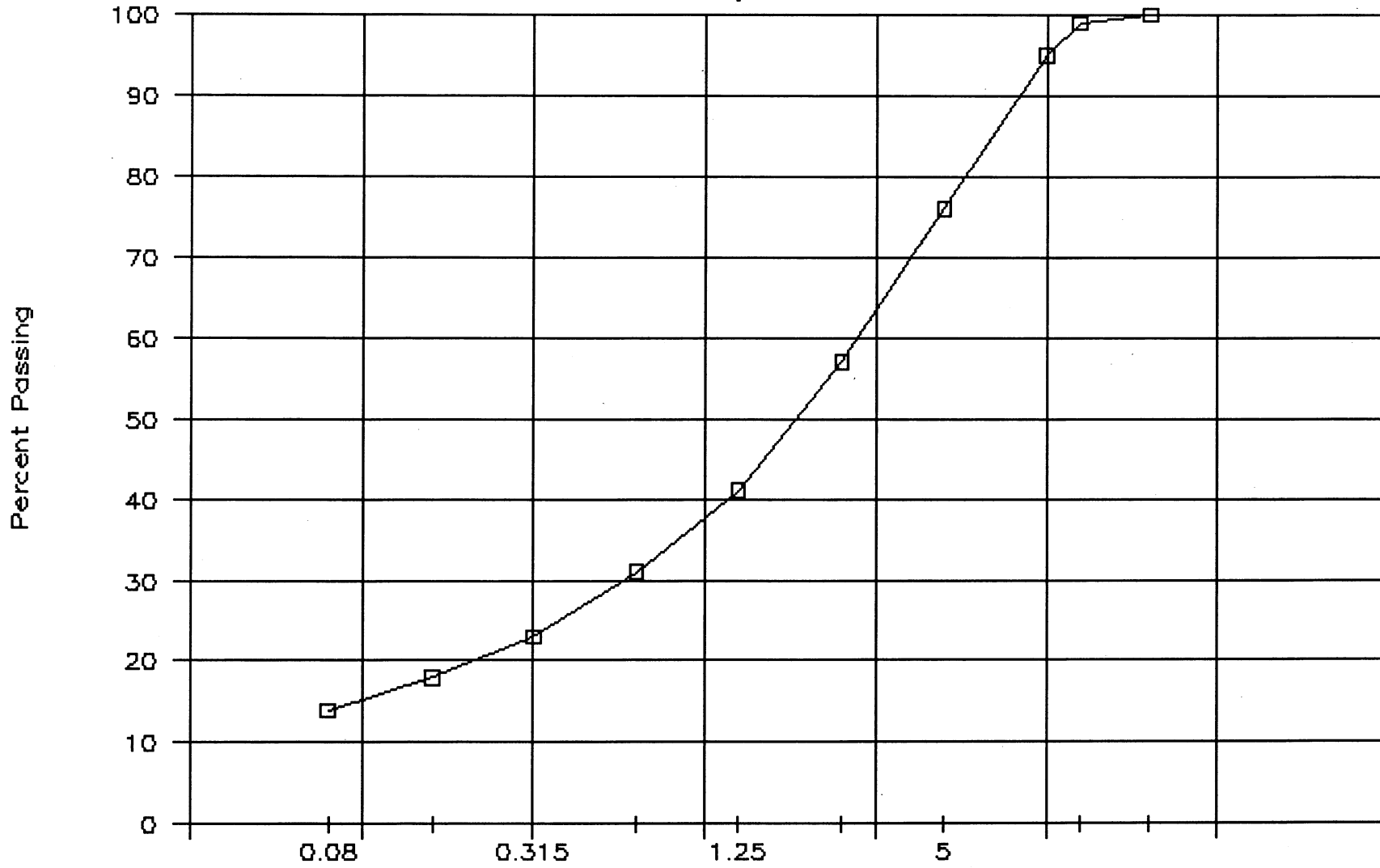
LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 24  
 % SAND: 62  
 % FINES: 14

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

# Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 107



□ SAMP. 28

◇ SAMP.

△ SAMP.

× SAMP.

PROJECT NUMBER: 745927 HOLE NUMBER: 142-75  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1917+700 O/S 5M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 208  
 LAB NO: 4780  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 209  
 LAB NO: 4781  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 210  
 LAB NO: 4782  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	100
50.8	83
38.1	83
25.4	56
19.0	52
12.7	40
9.5	35
4.76	28
2.38	--
2.00	23
1.19	--
0.841	19
0.595	--
0.42	14
0.297	--
0.177	--
0.149	10
0.074	8

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	80
19.0	63
12.7	48
9.5	39
4.76	29
2.38	--
2.00	23
1.19	--
0.841	18
0.595	--
0.42	13
0.297	--
0.177	--
0.149	8
0.074	6

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	88
19.0	75
12.7	57
9.5	48
4.76	35
2.38	--
2.00	27
1.19	--
0.841	21
0.595	--
0.42	15
0.297	--
0.177	--
0.149	7
0.074	6

M.C. (%): 6

M.C. (%): 2

M.C. (%): 3

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 72  
 % SAND: 20  
 % FINES: 8

% GRAVEL: 71  
 % SAND: 23  
 % FINES: 6

% GRAVEL: 65  
 % SAND: 30  
 % FINES: 6

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

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

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

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 214-106  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAMM ROTORY DRILL  
 HOLE LOCATION: 1917+700 O/S 50M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04

FIELD NO: 26  
 LAB NO: 67  
 DEPTH: 4.2-5.0  
 TYPE: RETURN

FIELD NO: 27  
 LAB NO: 68  
 DEPTH: 10.7-11.  
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	98
10.0	93
5.0	61
2.5	35
2.0	--
1.25	19
0.840	--
0.630	10
0.420	--
0.315	7
0.160	6
0.150	--
0.080	5

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	99
10.0	96
5.0	80
2.5	67
2.0	--
1.25	56
0.840	--
0.630	49
0.420	--
0.315	42
0.160	34
0.150	--
0.080	28

M.C. (%): 4

M.C. (%): 8

LIMITS

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

LIMITS

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

% GRAVEL: 39  
 % SAND: 56  
 % FINES: 5

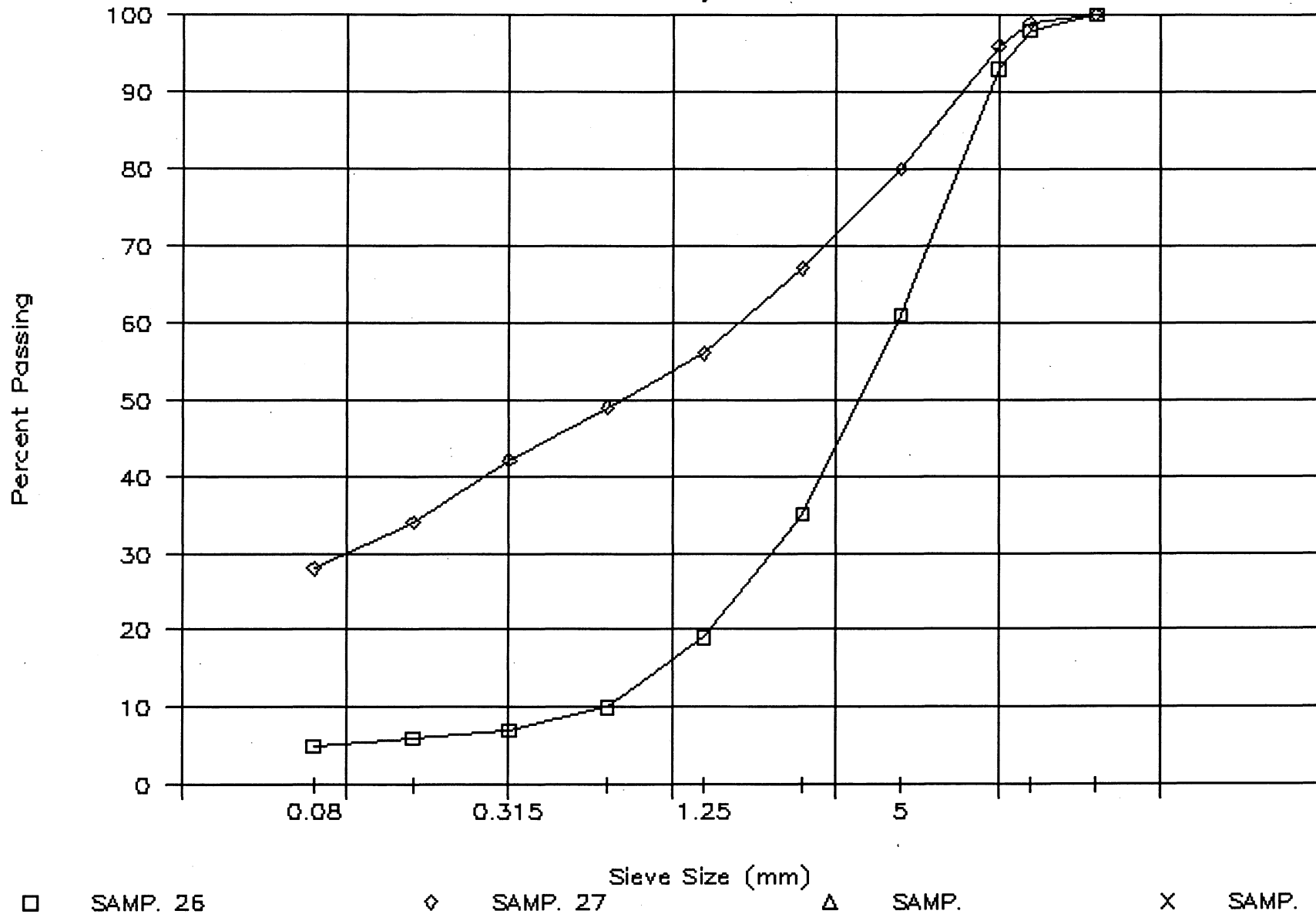
% GRAVEL: 20  
 % SAND: 52  
 % FINES: 28

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT &  
 GRAVEL (SW-SM)

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

# Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis — Hole 106



PROJECT NUMBER: 202101 0302 HOLE NUMBER: 215-108  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAM ROTARY DRILL  
 HOLE LOCATION: 1917+750 O/S 100M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04.13

FIELD NO: 29  
 LAB NO: 70  
 DEPTH: 5.2-5.8  
 TYPE: RETURN

FIELD NO: 30  
 LAB NO: 71  
 DEPTH: 10.4-11.  
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	88
10.0	76
5.0	47
2.5	31
2.0	--
1.25	20
0.840	--
0.630	15
0.420	--
0.315	13
0.160	11
0.150	--
0.080	9

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	94
10.0	85
5.0	46
2.5	26
2.0	--
1.25	16
0.840	--
0.630	12
0.420	--
0.315	10
0.160	9
0.150	--
0.080	7

M.C. (%): 2

M.C. (%): 3

LIMITS

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

LIMITS

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

% GRAVEL: 53  
 % SAND: 39  
 % FINES: 9

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

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

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

PROJECT NUMBER: 745927 HOLE NUMBER: 142-76  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1917+800 O/S 5M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 211  
 LAB NO: 4783  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 212  
 LAB NO: 4784  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 213  
 LAB NO: 4785  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

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

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	84
19.0	75
12.7	62
9.5	52
4.76	38
2.38	--
2.00	25
1.19	--
0.841	19
0.595	--
0.42	16
0.297	--
0.177	--
0.149	7
0.074	4

101.6	--
76.2	--
50.8	--
38.1	100
25.4	96
19.0	80
12.7	55
9.5	41
4.76	21
2.38	--
2.00	12
1.19	--
0.841	9
0.595	--
0.42	7
0.297	--
0.177	--
0.149	5
0.074	4

101.6	--
76.2	--
50.8	--
38.1	100
25.4	83
19.0	70
12.7	55
9.5	46
4.76	32
2.38	--
2.00	23
1.19	--
0.841	15
0.595	--
0.42	9
0.297	--
0.177	--
0.149	5
0.074	3

M.C. (%): 2

M.C. (%): 3

M.C. (%): 3

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 62  
 % SAND: 34  
 % FINES: 4

% GRAVEL: 79  
 % SAND: 17  
 % FINES: 4

% GRAVEL: 68  
 % SAND: 29  
 % FINES: 3

CLASSIFICATION:  
 POORLY GRADED  
 GRAVEL WITH SAND  
 (GP)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 214-105  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAMM ROTORY DRILL  
 HOLE LOCATION: 1917+800 O/S 50M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04

FIELD NO: 24  
 LAB NO: 65  
 DEPTH: 2.9-3.5  
 TYPE: RETURN

FIELD NO: 25  
 LAB NO: 66  
 DEPTH: 10.6-11.  
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	94
10.0	88
5.0	59
2.5	43
2.0	--
1.25	29
0.840	--
0.630	19
0.420	--
0.315	14
0.160	10
0.150	--
0.080	8

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	98
10.0	95
5.0	78
2.5	64
2.0	--
1.25	48
0.840	--
0.630	36
0.420	--
0.315	24
0.160	17
0.150	--
0.080	15

M.C. (%): 2

M.C. (%): 5

LIMITS

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

LIMITS

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

% GRAVEL: 41  
 % SAND: 51  
 % FINES: 8

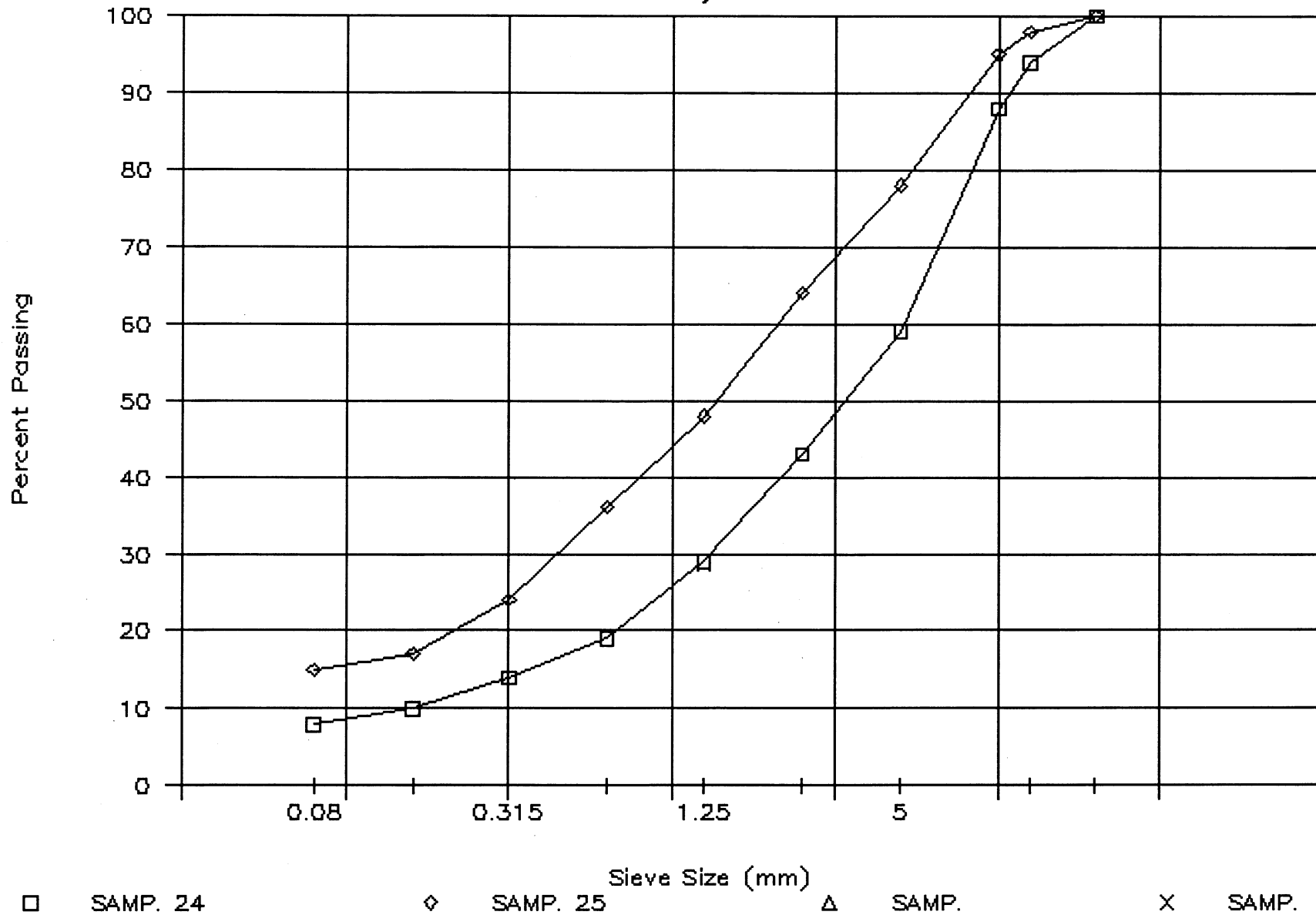
% GRAVEL: 22  
 % SAND: 64  
 % FINES: 15

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT &  
 GRAVEL (SW-SM)

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

# Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 105



PROJECT NUMBER: 202101 0302 HOLE NUMBER: 215-109  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAM ROTARY DRILL  
 HOLE LOCATION: 1917+850 O/S 100M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04.13

FIELD NO: 31  
 LAB NO: 72  
 DEPTH: 4.2-5.0  
 TYPE: RETURN

FIELD NO: 32  
 LAB NO: 73  
 DEPTH: 10.5-11.  
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	100
10.0	97
5.0	76
2.5	51
2.0	--
1.25	37
0.840	--
0.630	21
0.420	--
0.315	10
0.160	7
0.150	--
0.080	6

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	98
10.0	91
5.0	50
2.5	16
2.0	--
1.25	5
0.840	--
0.630	-9
0.420	--
0.315	-9
0.160	-9
0.150	--
0.080	-10

M.C. (%): 4

M.C. (%): 3

LIMITS

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

LIMITS

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

% GRAVEL: 24  
 % SAND: 70  
 % FINES: 6

% GRAVEL: 50  
 % SAND: 60  
 % FINES: -10

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

CLASSIFICATION:  
 POORLY GRADED  
 SAND WITH GRAVEL  
 (SP)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-77  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1917+900 O/S 9M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 214  
 LAB NO: 4786  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 215  
 LAB NO: 4787  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 216  
 LAB NO: 4788  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

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

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	93
19.0	84
12.7	60
9.5	53
4.76	38
2.38	--
2.00	29
1.19	--
0.841	21
0.595	--
0.42	15
0.297	--
0.177	--
0.149	10
0.074	8

101.6	--
76.2	--
50.8	100
38.1	88
25.4	75
19.0	60
12.7	43
9.5	36
4.76	24
2.38	--
2.00	17
1.19	--
0.841	12
0.595	--
0.42	8
0.297	--
0.177	--
0.149	5
0.074	3

101.6	--
76.2	--
50.8	100
38.1	80
25.4	63
19.0	51
12.7	40
9.5	35
4.76	27
2.38	--
2.00	20
1.19	--
0.841	15
0.595	--
0.42	10
0.297	--
0.177	--
0.149	6
0.074	4

M.C. (%): 3

M.C. (%): 2

M.C. (%): 2

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

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

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

% GRAVEL: 62  
 % SAND: 31  
 % FINES: 8

% GRAVEL: 76  
 % SAND: 21  
 % FINES: 3

% GRAVEL: 73  
 % SAND: 23  
 % FINES: 4

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

CLASSIFICATION:  
 POORLY GRADED  
 GRAVEL WITH SAND  
 (GP)

CLASSIFICATION:  
 POORLY GRADED  
 GRAVEL WITH SAND  
 (GP)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 214-104  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAMM ROTORY DRILL  
 HOLE LOCATION: 1917+900 O/S 50M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04

FIELD NO: 22  
 LAB NO: 63  
 DEPTH: 3.9-4.7  
 TYPE: RETURN

FIELD NO: 23  
 LAB NO: 64  
 DEPTH: 9.0-9.8  
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	99
10.0	95
5.0	77
2.5	58
2.0	--
1.25	38
0.840	--
0.630	23
0.420	--
0.315	15
0.160	12
0.150	--
0.080	11

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	77
2.5	58
2.0	--
1.25	39
0.840	--
0.630	24
0.420	--
0.315	14
0.160	10
0.150	--
0.080	8

M.C. (%): 4

M.C. (%): 3

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

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

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

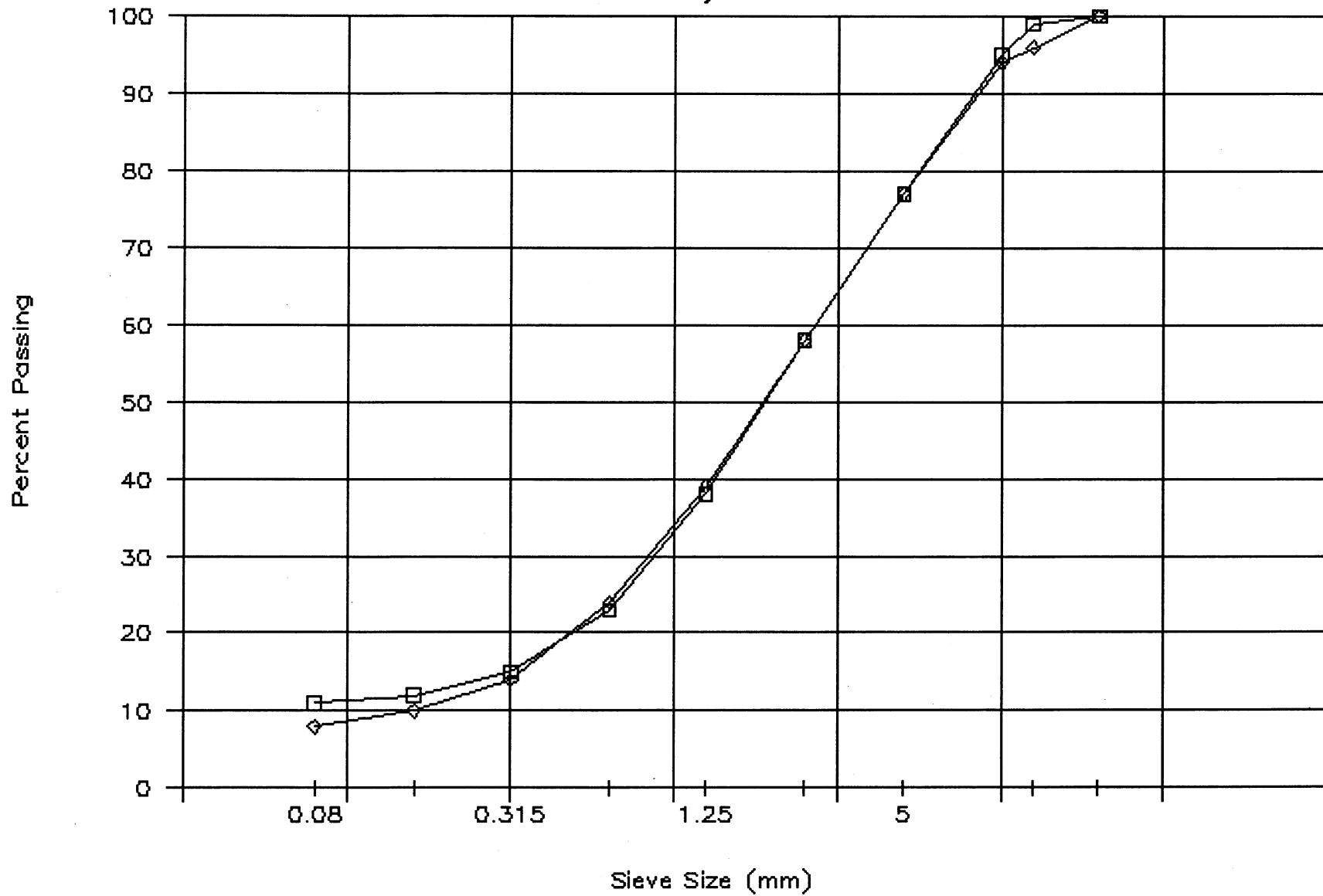
% GRAVEL: 23  
 % SAND: 68  
 % FINES: 8

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT &  
 GRAVEL (SW-SM)

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT &  
 GRAVEL (SW-SM)

# Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 104



□ SAMP. 22      ◇ SAMP. 23      △ SAMP.      × SAMP.

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 215-110  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAM ROTARY DRILL  
 HOLE LOCATION: 1917+950 O/S 100M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04.13

FIELD NO: 33  
 LAB NO: 74  
 DEPTH: 4.6-5.4  
 TYPE: RETURN

FIELD NO: 34  
 LAB NO: 75  
 DEPTH: 16.2-17.  
 TYPE: RETURN

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

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

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	100
10.0	95
5.0	62
2.5	33
2.0	--
1.25	14
0.840	--
0.630	6
0.420	--
0.315	6
0.160	5
0.150	--
0.080	4

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	98
10.0	91
5.0	56
2.5	28
2.0	--
1.25	8
0.840	--
0.630	3
0.420	--
0.315	2
0.160	2
0.150	--
0.080	2

M.C. (%): 3

M.C. (%): 3

LIMITS

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

LIMITS

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

% GRAVEL: 38  
 % SAND: 58  
 % FINES: 4

% GRAVEL: 44  
 % SAND: 54  
 % FINES: 2

CLASSIFICATION:  
 POORLY GRADED  
 SAND WITH GRAVEL  
 (SP)

CLASSIFICATION:  
 POORLY GRADED  
 SAND WITH GRAVEL  
 (SP)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-78  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1918+000 O/S 3M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 217  
 LAB NO: 4789  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 218  
 LAB NO: 4790  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 219  
 LAB NO: 4791  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

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

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

101.6	--
76.2	--
50.8	100
38.1	89
25.4	78
19.0	70
12.7	55
9.5	45
4.76	32
2.38	--
2.00	24
1.19	--
0.841	18
0.595	--
0.42	14
0.297	--
0.177	--
0.149	7
0.074	5

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	86
12.7	65
9.5	54
4.76	36
2.38	--
2.00	26
1.19	--
0.841	19
0.595	--
0.42	11
0.297	--
0.177	--
0.149	5
0.074	4

101.6	--
76.2	--
50.8	--
38.1	100
25.4	91
19.0	82
12.7	68
9.5	59
4.76	42
2.38	--
2.00	25
1.19	--
0.841	14
0.595	--
0.42	9
0.297	--
0.177	--
0.149	4
0.074	3

M.C. (%): 3

M.C. (%): 2

M.C. (%): 2

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

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

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

% GRAVEL: 68  
 % SAND: 28  
 % FINES: 5

% GRAVEL: 64  
 % SAND: 32  
 % FINES: 4

% GRAVEL: 58  
 % SAND: 39  
 % FINES: 3

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

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 214-103  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAMM ROTARY DRILL  
 HOLE LOCATION: 1918+000 O/S 50M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04

FIELD NO: 20  
 LAB NO: 61  
 DEPTH: 3.2-4.0  
 TYPE: RETURN

FIELD NO: 21  
 LAB NO: 62  
 DEPTH: 7.4-8.0  
 TYPE: RETURN

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

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

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	99
10.0	92
5.0	66
2.5	50
2.0	--
1.25	38
0.840	--
0.630	29
0.420	--
0.315	23
0.160	18
0.150	--
0.080	14

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	100
10.0	99
5.0	90
2.5	78
2.0	--
1.25	60
0.840	--
0.630	42
0.420	--
0.315	25
0.160	14
0.150	--
0.080	10

M.C. (%): 3

M.C. (%): 2

LIMITS

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

LIMITS

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

% GRAVEL: 34  
 % SAND: 51  
 % FINES: 14

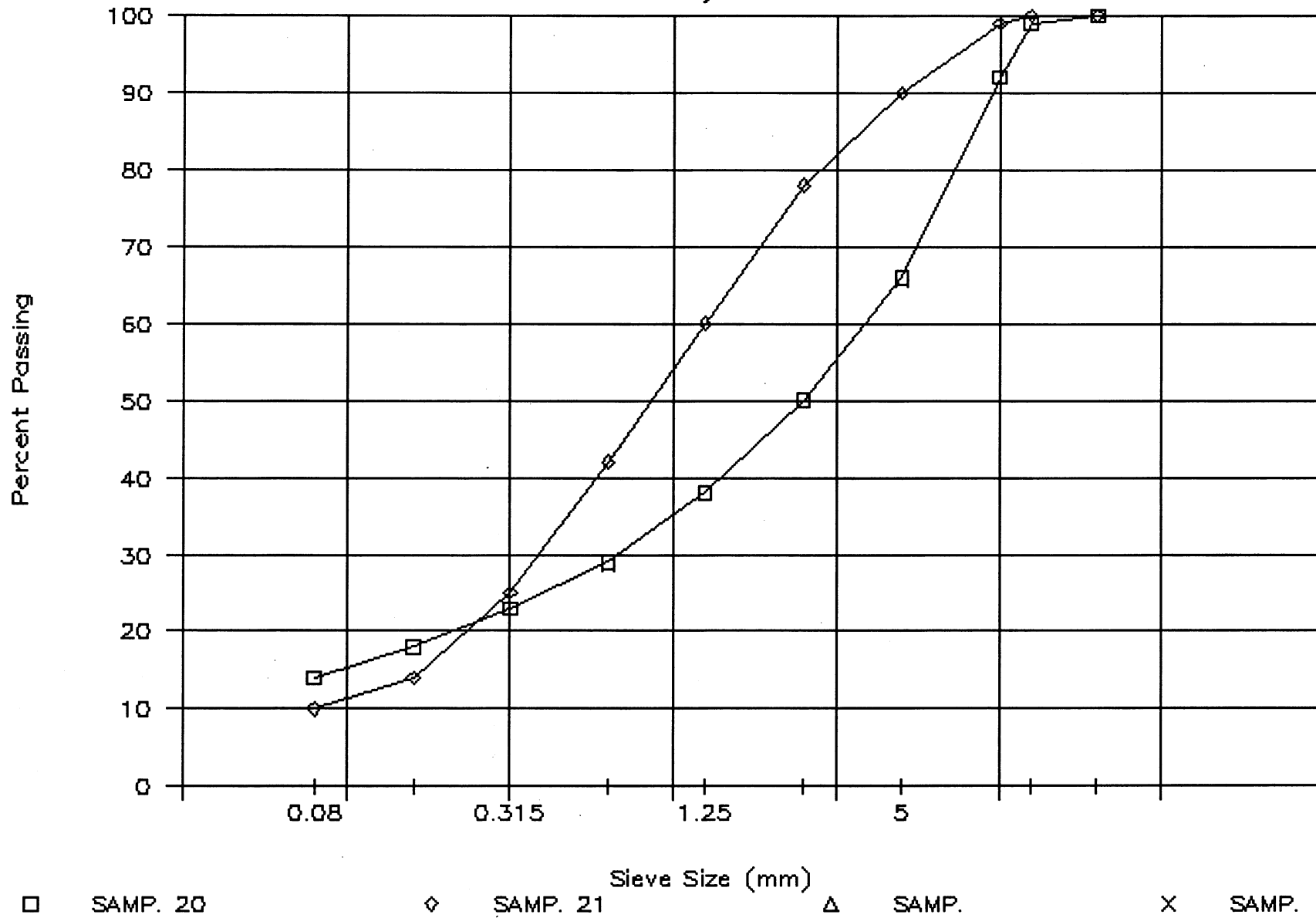
% GRAVEL: 10  
 % SAND: 80  
 % FINES: 10

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT (SW-SM)

# Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 103



PROJECT NUMBER: 202101 0302 HOLE NUMBER: 215-111  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAM ROTARY DRILL  
 HOLE LOCATION: 1918+050 O/S 100M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04.13

FIELD NO: 35  
 LAB NO: 76  
 DEPTH: 5.1-5.7  
 TYPE: RETURN

FIELD NO: 36  
 LAB NO: 77  
 DEPTH: 16.2-17.  
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	100
10.0	97
5.0	73
2.5	49
2.0	--
1.25	29
0.840	--
0.630	17
0.420	--
0.315	11
0.160	9
0.150	--
0.080	8

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	91
10.0	81
5.0	50
2.5	31
2.0	--
1.25	20
0.840	--
0.630	14
0.420	--
0.315	11
0.160	9
0.150	--
0.080	7

M.C. (%): 5

M.C. (%): 2

LIMITS

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

LIMITS

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

% GRAVEL: 27  
 % SAND: 65  
 % FINES: 8

% GRAVEL: 50  
 % SAND: 43  
 % FINES: 7

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT &  
 GRAVEL (SW-SM)

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

PROJECT NUMBER: 745927 HOLE NUMBER: 142-79  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1918+100 O/S 2M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 220  
 LAB NO: 4792  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 221  
 LAB NO: 4793  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 222  
 LAB NO: 4794  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

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

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

101.6	--
76.2	--
50.8	100
38.1	89
25.4	80
19.0	62
12.7	55
9.5	50
4.76	38
2.38	--
2.00	28
1.19	--
0.841	20
0.595	--
0.42	14
0.297	--
0.177	--
0.149	9
0.074	8

101.6	--
76.2	--
50.8	--
38.1	100
25.4	91
19.0	89
12.7	80
9.5	74
4.76	57
2.38	--
2.00	40
1.19	--
0.841	26
0.595	--
0.42	16
0.297	--
0.177	--
0.149	9
0.074	5

101.6	--
76.2	--
50.8	--
38.1	100
25.4	91
19.0	84
12.7	74
9.5	68
4.76	53
2.38	--
2.00	37
1.19	--
0.841	24
0.595	--
0.42	15
0.297	--
0.177	--
0.149	10
0.074	5

M.C. (%): 3

M.C. (%): 3

M.C. (%): 3

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 62  
 % SAND: 30  
 % FINES: 8

% GRAVEL: 43  
 % SAND: 52  
 % FINES: 5

% GRAVEL: 47  
 % SAND: 48  
 % FINES: 5

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

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT &  
 GRAVEL (SW-SM)

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT &  
 GRAVEL (SW-SM)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 215-112  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAM ROTARY DRILL  
 HOLE LOCATION: 1918+175 O/S 100M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04.14

FIELD NO: 37  
 LAB NO: 78  
 DEPTH: 9.1-9.8  
 TYPE: RETURN

FIELD NO: 38  
 LAB NO: 79  
 DEPTH: 15.5-15.  
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	98
10.0	96
5.0	77
2.5	56
2.0	--
1.25	31
0.840	--
0.630	16
0.420	--
0.315	10
0.160	8
0.150	--
0.080	7

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	100
10.0	98
5.0	93
2.5	88
2.0	--
1.25	81
0.840	--
0.630	71
0.420	--
0.315	57
0.160	43
0.150	--
0.080	32

M.C. (%): 4

M.C. (%): 4

LIMITS

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

LIMITS

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

% GRAVEL: 23  
 % SAND: 70  
 % FINES: 7

% GRAVEL: 7  
 % SAND: 61  
 % FINES: 32

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT &  
 GRAVEL (SW-SM)

CLASSIFICATION:  
 SILTY SAND (SM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-14  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 36002  
 HOLE LOCATION: 1918+200 O/S 12M LT  
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 29  
 LAB NO: 5765  
 DEPTH: 1.2-1.5  
 TYPE: AUGER

FIELD NO: 30  
 LAB NO: 5766  
 DEPTH: 2.7-3.0  
 TYPE: AUGER

FIELD NO: 31  
 LAB NO: 5767  
 DEPTH: 4.2-4.5  
 TYPE: AUGER

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

100.0	--
80.0	--
50.0	100
31.5	--
25.0	91
20.0	79
12.5	62
10.0	57
5.0	43
2.5	33
2.0	--
1.25	25
0.840	--
0.630	14
0.420	--
0.315	8
0.160	6
0.150	--
0.080	5

M.C. (%): 5

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

% GRAVEL: 57  
 % SAND: 38  
 % FINES: 5

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

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

100.0	--
80.0	--
50.0	100
31.5	--
25.0	63
20.0	54
12.5	44
10.0	41
5.0	31
2.5	25
2.0	--
1.25	18
0.840	--
0.630	12
0.420	--
0.315	6
0.160	4
0.150	--
0.080	3

M.C. (%): 5

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

% GRAVEL: 69  
 % SAND: 28  
 % FINES: 3

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

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

100.0	--
80.0	--
50.0	100
31.5	--
25.0	79
20.0	70
12.5	64
10.0	56
5.0	40
2.5	29
2.0	--
1.25	20
0.840	--
0.630	12
0.420	--
0.315	8
0.160	6
0.150	--
0.080	5

M.C. (%): 6

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

% GRAVEL: 60  
 % SAND: 36  
 % FINES: 5

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

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 214-102  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAMM ROTORY DRILL  
 HOLE LOCATION: 1918+200 O/S 50M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04

FIELD NO: 18  
 LAB NO: 59  
 DEPTH: 3.8-4.6  
 TYPE: RETURN

FIELD NO: 19  
 LAB NO: 60  
 DEPTH: 7.3-8.3  
 TYPE: RETURN

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

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	93
10.0	87
5.0	66
2.5	52
2.0	--
1.25	41
0.840	--
0.630	33
0.420	--
0.315	28
0.160	23
0.150	--
0.080	19

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

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	100
10.0	99
5.0	83
2.5	66
2.0	--
1.25	42
0.840	--
0.630	23
0.420	--
0.315	12
0.160	8
0.150	--
0.080	8

M.C. (%): 5

M.C. (%): 3

LIMITS

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

LIMITS

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

% GRAVEL: 34  
 % SAND: 46  
 % FINES: 19

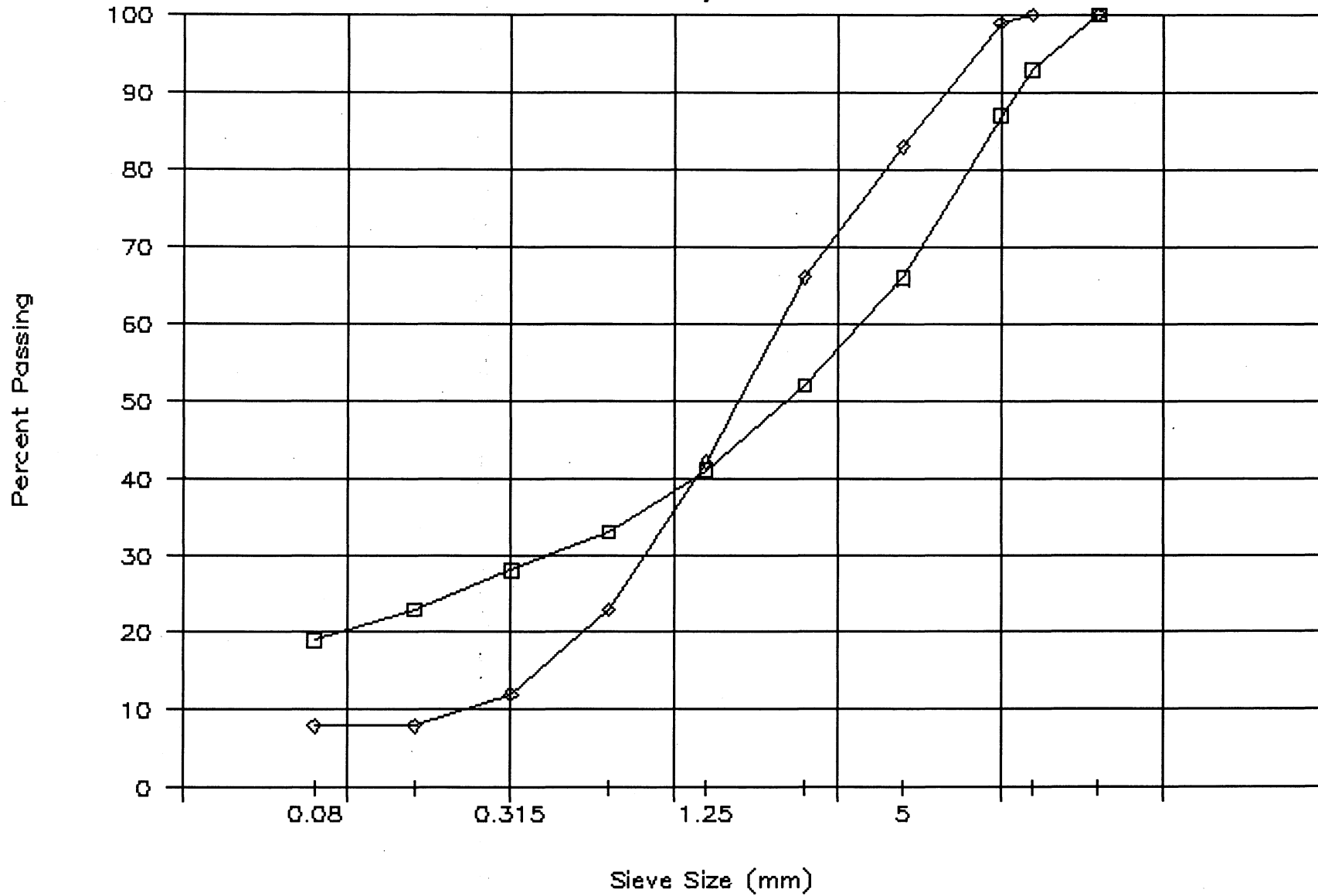
% GRAVEL: 17  
 % SAND: 76  
 % FINES: 8

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT &  
 GRAVEL (SW-SM)

# Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 102



□ SAMP. 18

◇ SAMP. 19

△ SAMP.

X SAMP.

PROJECT NUMBER: 202101 0310 HOLE NUMBER: 212-18  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17B  
 DRILL UNIT: BACKHOE: CAT 235  
 HOLE LOCATION: 1918+230 O/S 90-100M RT  
 LOGGED BY: BS DATE COMPLETED: 92.04.02

FIELD NO: 8  
 LAB NO: 41  
 DEPTH: 2.8-4.7  
 TYPE: BULK

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

100.0	--
80.0	100
50.0	91
31.5	--
25.0	65
20.0	58
12.5	46
10.0	41
5.0	29
2.5	21
2.0	--
1.25	14
0.840	--
0.630	10
0.420	--
0.315	6
0.160	5
0.150	--
0.080	4

M.C. (%): --

LIMITS

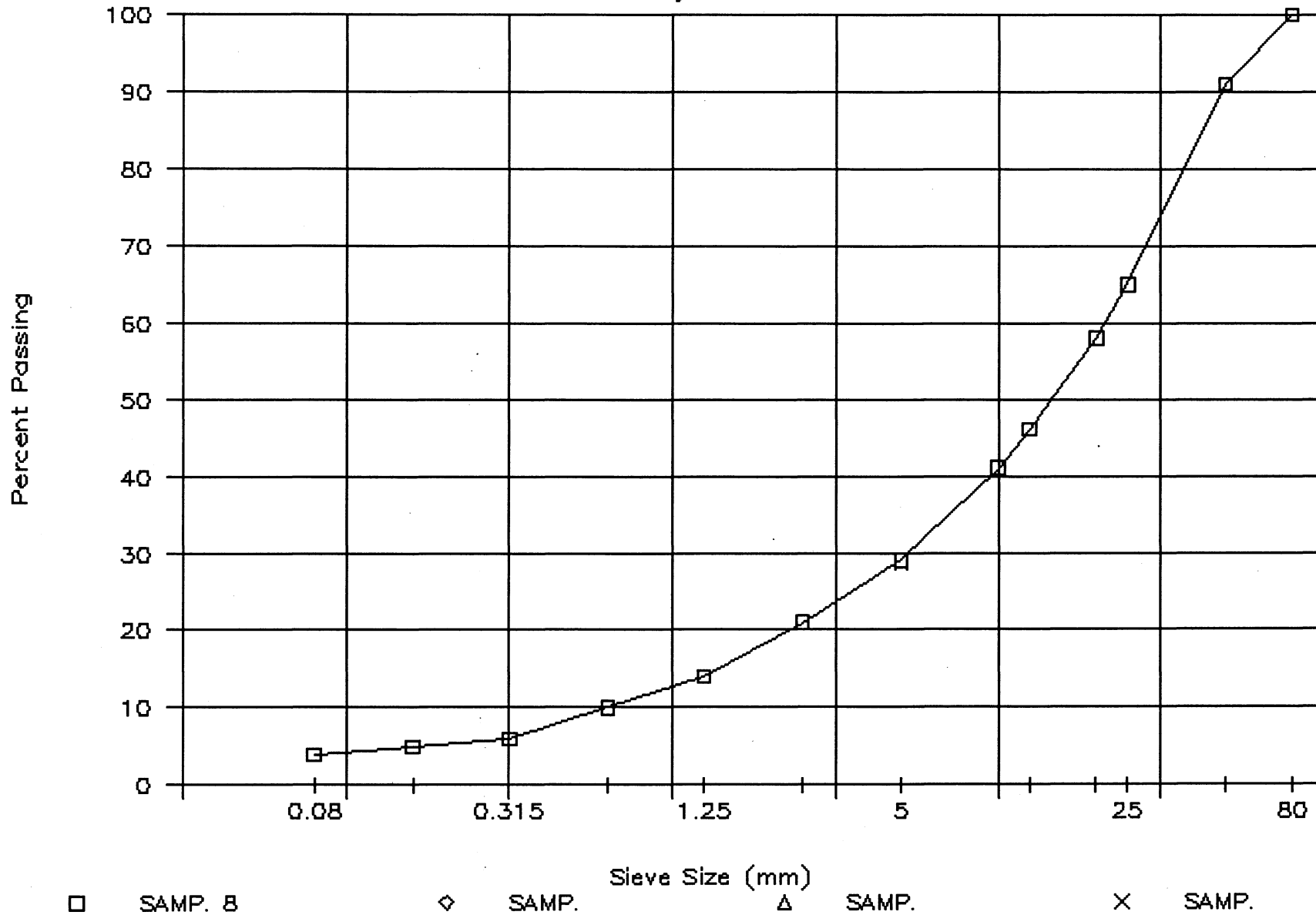
LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

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

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

# Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis — Hole 212-18



PROJECT NUMBER: 202101 0310 HOLE NUMBER: 212-17  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17B  
 DRILL UNIT: BACKHOE: CAT 235  
 HOLE LOCATION: 1918+285 O/S 15M RT  
 LOGGED BY: BS DATE COMPLETED: 92.04.02

FIELD NO: 7  
 LAB NO: 40  
 DEPTH: 3.0-3.1  
 TYPE: BULK

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	100
50.0	82
31.5	--
25.0	69
20.0	60
12.5	49
10.0	44
5.0	31
2.5	24
2.0	--
1.25	20
0.840	--
0.630	16
0.420	--
0.315	10
0.160	6
0.150	--
0.080	4

M.C. (%): 6

LIMITS

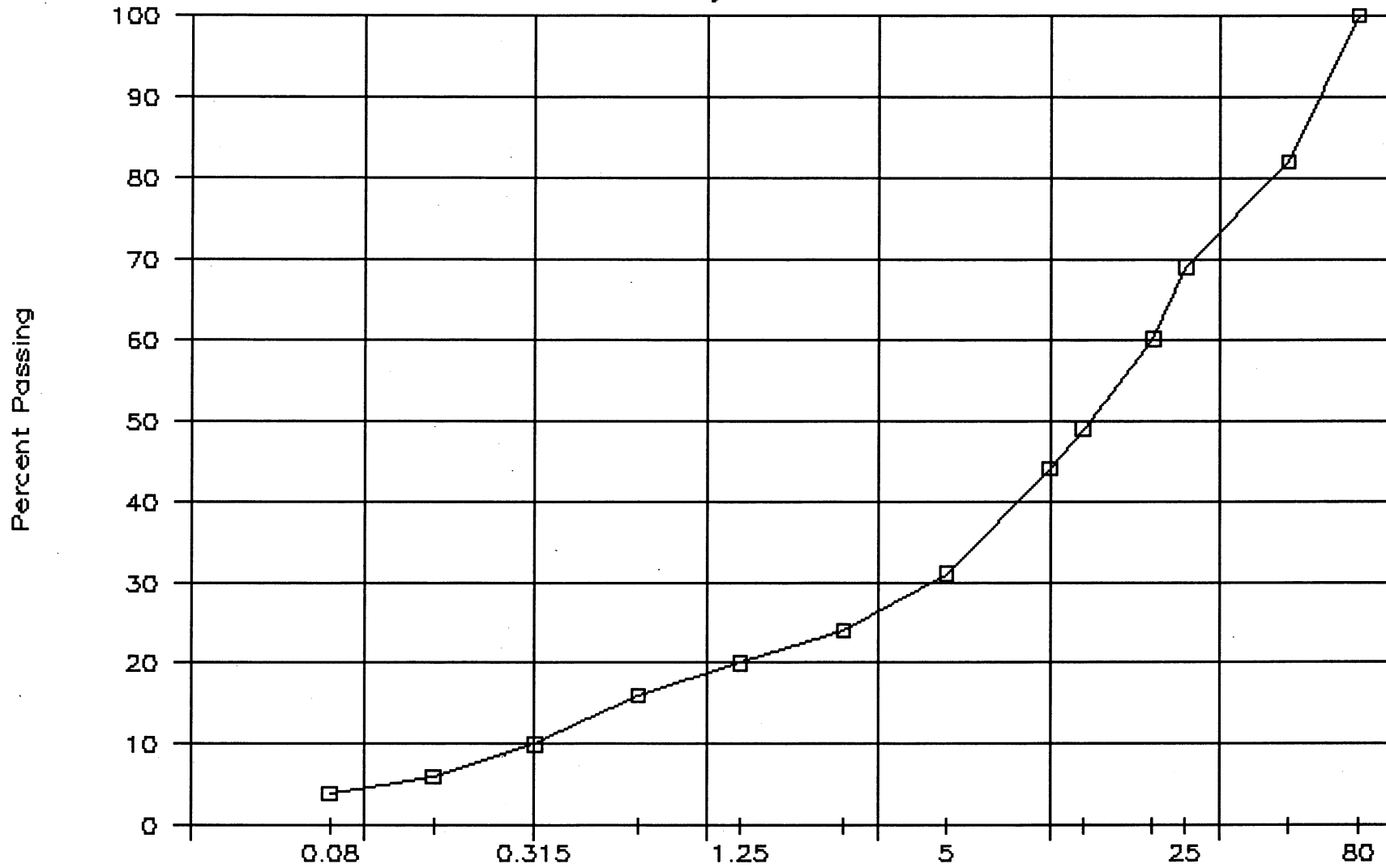
LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

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

CLASSIFICATION:  
 POORLY GRADED  
 GRAVEL WITH SAND  
 (GP)

# Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 212-17



□ SAMP. 7

◇ SAMP.

△ SAMP.

× SAMP.

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-13  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 36002  
 HOLE LOCATION: 1918+300  
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 26  
 LAB NO: 5762  
 DEPTH: 1.2-1.5  
 TYPE: AUGER

FIELD NO: 27  
 LAB NO: 5763  
 DEPTH: 2.7-3.0  
 TYPE: AUGER

FIELD NO: 28  
 LAB NO: 5764  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

100.0	--
80.0	--
50.0	100
31.5	--
25.0	82
20.0	76
12.5	59
10.0	52
5.0	34
2.5	24
2.0	--
1.25	17
0.840	--
0.630	11
0.420	--
0.315	7
0.160	4
0.150	--
0.080	3

M.C. (%): 5

LIMITS

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

% GRAVEL: 66  
 % SAND: 31  
 % FINES: 3

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

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

100.0	--
80.0	--
50.0	100
31.5	--
25.0	78
20.0	66
12.5	55
10.0	49
5.0	35
2.5	25
2.0	--
1.25	17
0.840	--
0.630	12
0.420	--
0.315	8
0.160	5
0.150	--
0.080	4

M.C. (%): 5

LIMITS

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

% GRAVEL: 65  
 % SAND: 31  
 % FINES: 4

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

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

100.0	--
80.0	--
50.0	100
31.5	--
25.0	72
20.0	65
12.5	53
10.0	48
5.0	33
2.5	23
2.0	--
1.25	16
0.840	--
0.630	10
0.420	--
0.315	6
0.160	4
0.150	--
0.080	3

M.C. (%): 5

LIMITS

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

% GRAVEL: 67  
 % SAND: 30  
 % FINES: 3

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 215-113  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAM ROTARY DRILL  
 HOLE LOCATION: 1918+300 O/S 100M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04.14

FIELD NO: 39  
 LAB NO: 80  
 DEPTH: 8.4-9.0  
 TYPE: RETURN

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	78
2.5	52
2.0	--
1.25	30
0.840	--
0.630	17
0.420	--
0.315	11
0.160	9
0.150	--
0.080	8

M.C. (%): 6

LIMITS

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

% GRAVEL: 22  
 % SAND: 70  
 % FINES: 8

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT &  
 GRAVEL (SW-SM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-12  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 36002  
 HOLE LOCATION: 1918+400  
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 25  
 LAB NO: 5761  
 DEPTH: 1.2-1.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	95
20.0	87
12.5	74
10.0	64
5.0	44
2.5	34
2.0	--
1.25	27
0.840	--
0.630	23
0.420	--
0.315	18
0.160	13
0.150	--
0.080	9

M.C. (%): 6

LIMITS

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

% GRAVEL: 56  
 % SAND: 35  
 % FINES: 9

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

PROJECT NUMBER: 202101 0310 HOLE NUMBER: 212-14  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17B  
 DRILL UNIT: BACKHOE: CAT 235  
 HOLE LOCATION: 1918+400 O/S 10M RT  
 LOGGED BY: BS DATE COMPLETED: 93.04.02

FIELD NO: 6  
 LAB NO: 39  
 DEPTH: 4.4-4.5  
 TYPE: BULK

SIEVE SIZE	PERCENT PASSING
100.0	100
80.0	66
50.0	66
31.5	--
25.0	42
20.0	37
12.5	31
10.0	27
5.0	18
2.5	12
2.0	--
1.25	8
0.840	--
0.630	6
0.420	--
0.315	3
0.160	2
0.150	--
0.080	2

M.C. (%): 4

LIMITS

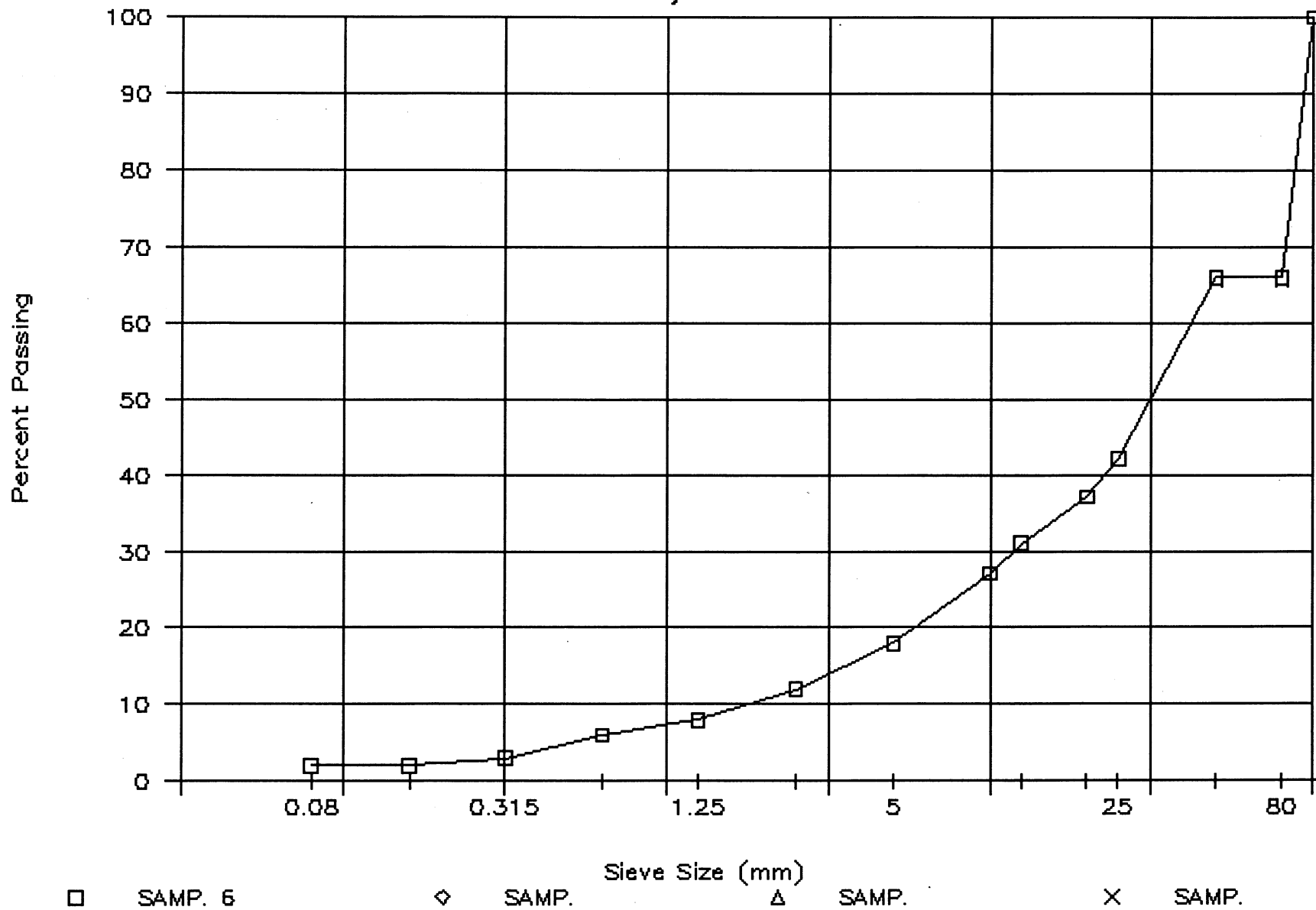
LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 82  
 % SAND: 16  
 % FINES: 2

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

# Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 212-14



PROJECT NUMBER: 202101 0302 HOLE NUMBER: 216-114  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAM ROTARY DRILL  
 HOLE LOCATION: 1918+425 O/S 100M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04.14

FIELD NO: 40  
 LAB NO: 81  
 DEPTH: 9.3-10.0  
 TYPE: RETURN

FIELD NO: 41  
 LAB NO: 82  
 DEPTH: 16.3-16.  
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	93
10.0	86
5.0	55
2.5	32
2.0	--
1.25	20
0.840	--
0.630	14
0.420	--
0.315	11
0.160	9
0.150	--
0.080	7

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	97
10.0	88
5.0	54
2.5	34
2.0	--
1.25	20
0.840	--
0.630	14
0.420	--
0.315	10
0.160	7
0.150	--
0.080	6

M.C. (%): 3

M.C. (%): 2

LIMITS

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

LIMITS

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

% GRAVEL: 45  
 % SAND: 47  
 % FINES: 7

% GRAVEL: 46  
 % SAND: 48  
 % FINES: 6

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

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT &  
 GRAVEL (SW-SM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-11  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 36002  
 HOLE LOCATION: 1918+500  
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 24  
 LAB NO: 5760  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

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

100.0	--
80.0	100
50.0	87
31.5	--
25.0	68
20.0	64
12.5	55
10.0	51
5.0	41
2.5	34
2.0	--
1.25	29
0.840	--
0.630	25
0.420	--
0.315	22
0.160	18
0.150	--
0.080	15

M.C. (%): 8

LIMITS

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

% GRAVEL: 59  
 % SAND: 26  
 % FINES: 15

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 2/4- 101  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAMM ROTORY DRILL  
 HOLE LOCATION: 1918+500 O/S 50M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04

FIELD NO: 16  
 LAB NO: 57  
 DEPTH: 3.2-3.9  
 TYPE: RETURN

FIELD NO: 17  
 LAB NO: 58  
 DEPTH: 6.7-7.4  
 TYPE: RETURN

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

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	99
10.0	96
5.0	70
2.5	48
2.0	--
1.25	28
0.840	--
0.630	16
0.420	--
0.315	10
0.160	8
0.150	--
0.080	7

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

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	100
10.0	98
5.0	74
2.5	52
2.0	--
1.25	32
0.840	--
0.630	19
0.420	--
0.315	15
0.160	13
0.150	--
0.080	11

M.C. (%): 4

M.C. (%): 5

LIMITS

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

LIMITS

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

% GRAVEL: 30  
 % SAND: 63  
 % FINES: 7

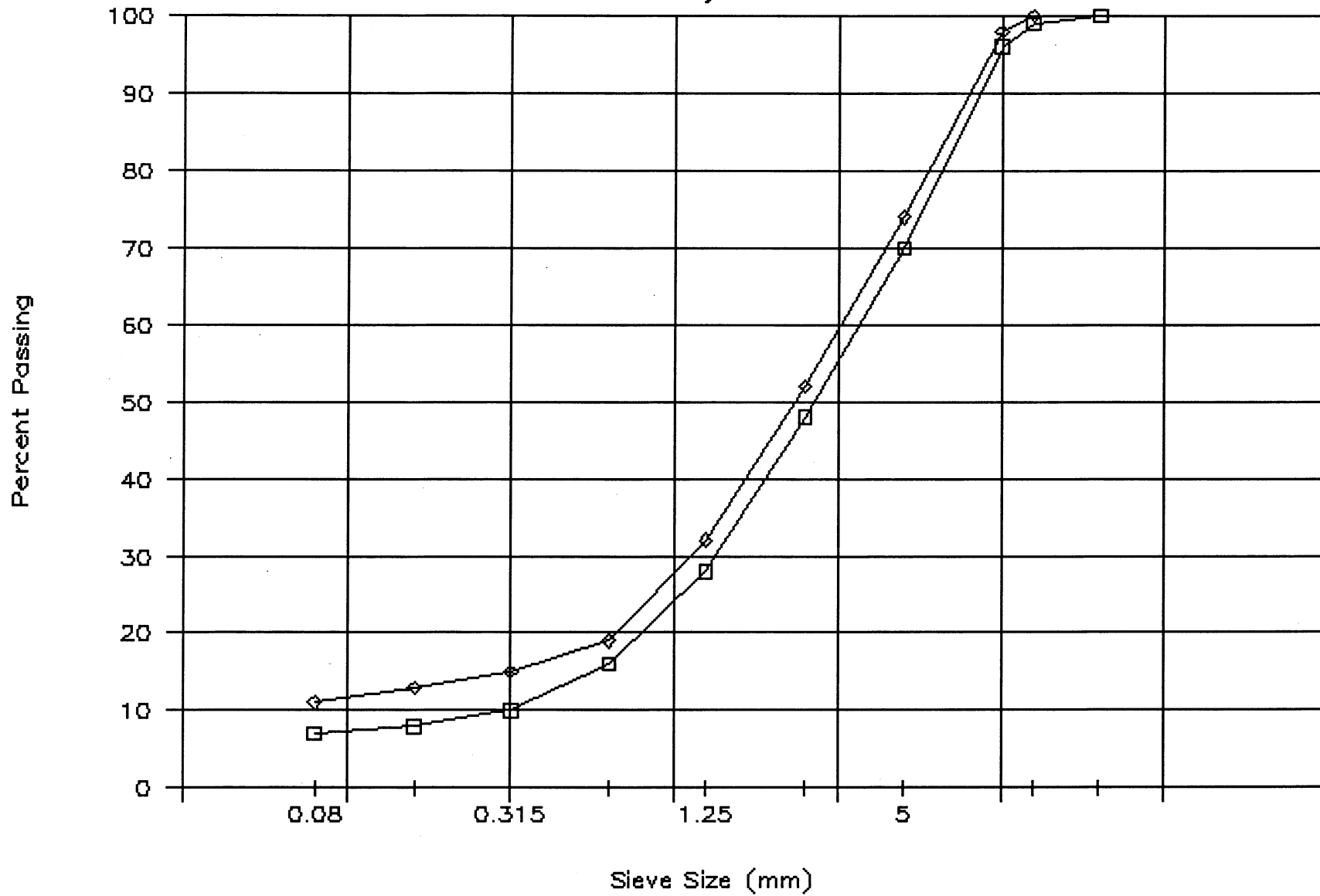
% GRAVEL: 26  
 % SAND: 63  
 % FINES: 11

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT &  
 GRAVEL (SW-SM)

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT &  
 GRAVEL (SW-SM)

# Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 101



□ SAMP. 16

◇ SAMP. 17

△ SAMP.

× SAMP.

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-10  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 36002  
 HOLE LOCATION: 1918+600  
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 23  
 LAB NO: 5759  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	94
20.0	94
12.5	94
10.0	94
5.0	91
2.5	89
2.0	--
1.25	87
0.840	--
0.630	83
0.420	--
0.315	70
0.160	35
0.150	--
0.080	24

M.C. (%): 14

LIMITS

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

% GRAVEL: 9  
 % SAND: 67  
 % FINES: 24

CLASSIFICATION:  
 SILTY SAND (SM)

PROJECT NUMBER: 202101 0310 HOLE NUMBER: 212-13  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17B  
 DRILL UNIT: BACKHOE: CAT 235  
 HOLE LOCATION: 1918+600 O/S 10M RT  
 LOGGED BY: BS DATE COMPLETED: 93.04.02

FIELD NO: 5  
 LAB NO: 38  
 DEPTH: 4.0-4.1  
 TYPE: BULK

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

100.0	--
80.0	100
50.0	78
31.5	--
25.0	55
20.0	51
12.5	40
10.0	36
5.0	25
2.5	18
2.0	--
1.25	13
0.840	--
0.630	8
0.420	--
0.315	5
0.160	3
0.150	--
0.080	2

M.C. (%): 4

LIMITS

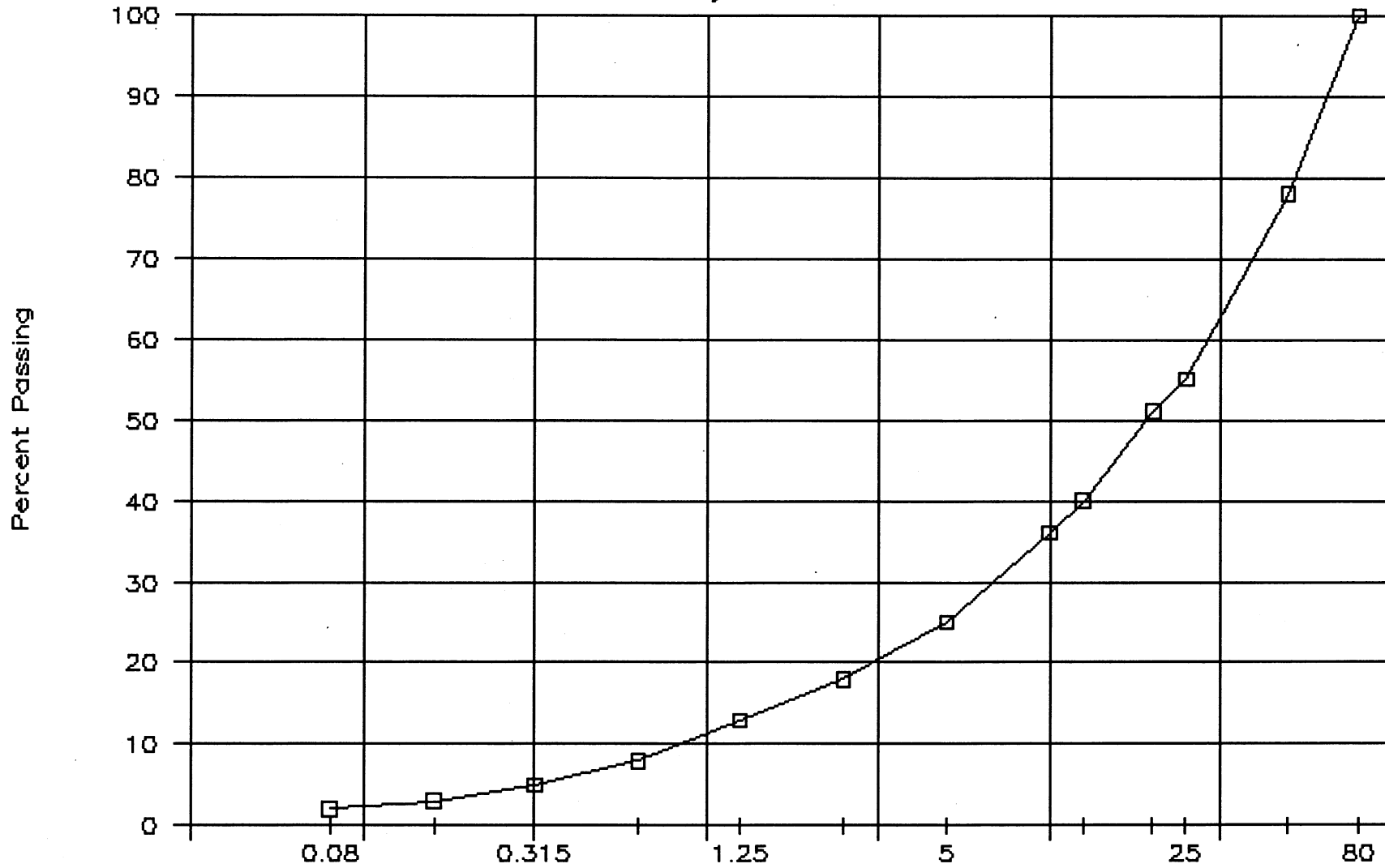
LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 75  
 % SAND: 22  
 % FINES: 2

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

# Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis — Hole 212-13



□ SAMP. 5      ◇ SAMP.      △ SAMP.      × SAMP.

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 216-115  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAM ROTARY DRILL  
 HOLE LOCATION: 1918+600 O/S 100M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04.14

FIELD NO: 42  
 LAB NO: 83  
 DEPTH: 10.0-10.  
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	100
10.0	90
5.0	58
2.5	36
2.0	--
1.25	20
0.840	--
0.630	10
0.420	--
0.315	7
0.160	5
0.150	--
0.080	4

M.C. (%): 3

LIMITS

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

% GRAVEL: 42  
 % SAND: 53  
 % FINES: 4

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH GRAVEL (SW)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-09  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 36002  
 HOLE LOCATION: 1918+700  
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 22  
 LAB NO: 5758  
 DEPTH: 1.1-1.3  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	100
20.0	98
12.5	79
10.0	71
5.0	50
2.5	42
2.0	--
1.25	36
0.840	--
0.630	32
0.420	--
0.315	26
0.160	18
0.150	--
0.080	14

M.C. (%): 8

LIMITS

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

% GRAVEL: 50  
 % SAND: 36  
 % FINES: 14

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 214-100  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAMM ROTORY DRILL  
 HOLE LOCATION: 1918+700 O/S 50M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04

FIELD NO: 14  
 LAB NO: 55  
 DEPTH: 3.0-3.6  
 TYPE: RETURN

FIELD NO: 15  
 LAB NO: 56  
 DEPTH: 7.4-8.2  
 TYPE: RETURN

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

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	99
10.0	94
5.0	52
2.5	32
2.0	--
1.25	17
0.840	--
0.630	12
0.420	--
0.315	9
0.160	8
0.150	--
0.080	7

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

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	99
10.0	97
5.0	71
2.5	44
2.0	--
1.25	21
0.840	--
0.630	8
0.420	--
0.315	5
0.160	5
0.150	--
0.080	4

M.C. (%): 4

M.C. (%): 3

LIMITS

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

LIMITS

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

% GRAVEL: 48  
 % SAND: 45  
 % FINES: 7

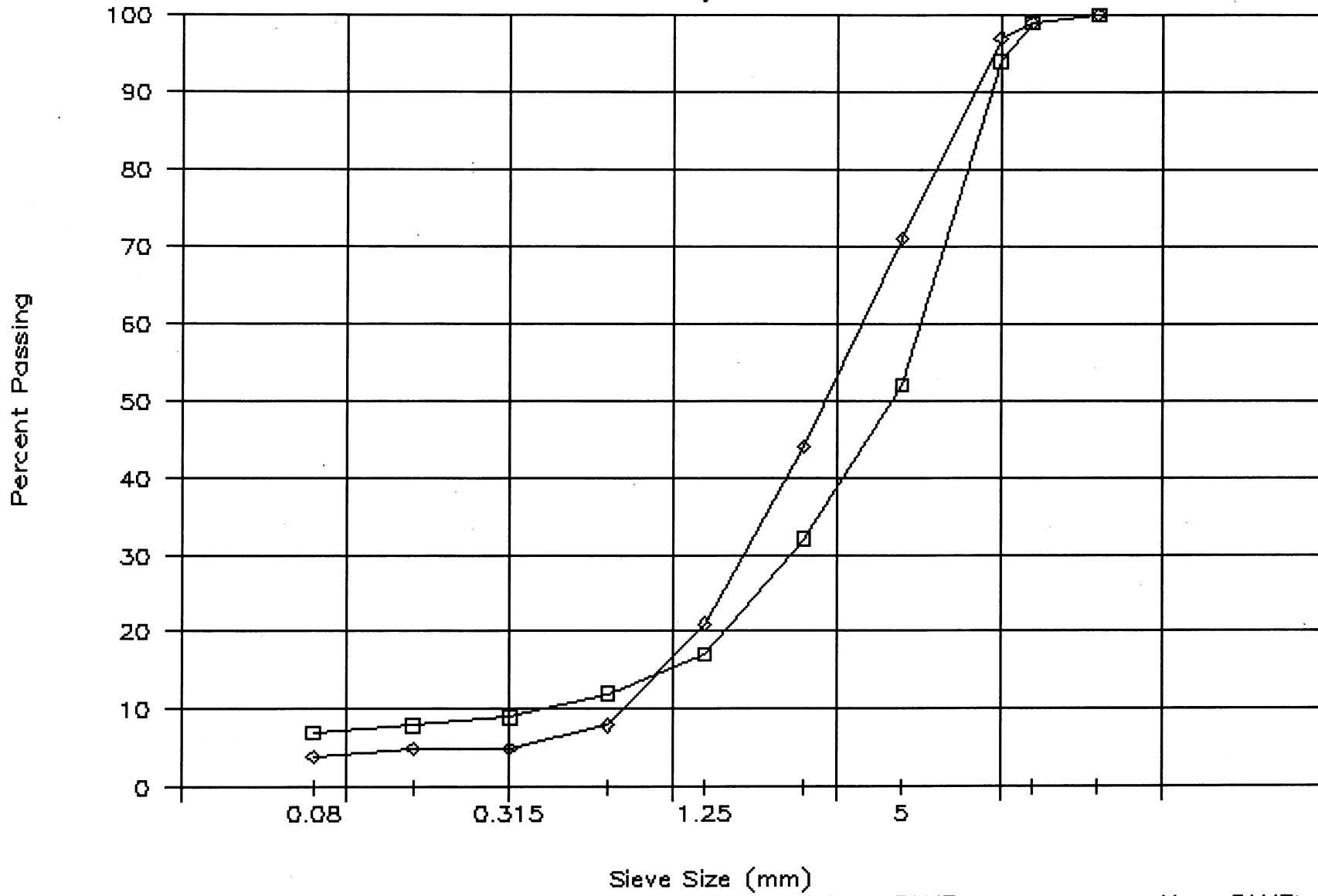
% GRAVEL: 29  
 % SAND: 67  
 % FINES: 4

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

CLASSIFICATION:  
 POORLY GRADED  
 SAND WITH GRAVEL  
 (SP)

# Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 100



□ SAMP. 14

◇ SAMP. 15

△ SAMP.

× SAMP.

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 216-116  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAM ROTARY DRILL  
 HOLE LOCATION: 1918+700 O/S 75M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04.14

FIELD NO: 43  
 LAB NO: 84  
 DEPTH: 9.0-9.6  
 TYPE: RETURN

FIELD NO: 44  
 LAB NO: 85  
 DEPTH: 14.3-15.  
 TYPE: RETURN

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

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	100
10.0	97
5.0	65
2.5	36
2.0	--
1.25	17
0.840	--
0.630	10
0.420	--
0.315	8
0.160	7
0.150	--
0.080	6

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

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	100
10.0	100
5.0	87
2.5	64
2.0	--
1.25	39
0.840	--
0.630	22
0.420	--
0.315	12
0.160	9
0.150	--
0.080	8

M.C. (%): 3

M.C. (%): 3

LIMITS

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

LIMITS

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

% GRAVEL: 35  
 % SAND: 59  
 % FINES: 6

% GRAVEL: 13  
 % SAND: 79  
 % FINES: 8

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT &  
 GRAVEL (SW-SM)

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT (SW-SM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-08  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 36002  
 HOLE LOCATION: 1918+800  
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 20  
 LAB NO: 5756  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 21  
 LAB NO: 5757  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

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

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

100.0	--
80.0	100
50.0	78
31.5	--
25.0	63
20.0	60
12.5	51
10.0	46
5.0	34
2.5	27
2.0	--
1.25	23
0.840	--
0.630	20
0.420	--
0.315	17
0.160	15
0.150	--
0.080	12

100.0	--
80.0	--
50.0	100
31.5	--
25.0	66
20.0	58
12.5	37
10.0	32
5.0	23
2.5	18
2.0	--
1.25	16
0.840	--
0.630	14
0.420	--
0.315	13
0.160	11
0.150	--
0.080	9

M.C. (%): 5

M.C. (%): 6

LIMITS

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

LIMITS

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

% GRAVEL: 66  
 % SAND: 21  
 % FINES: 12

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

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

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

PROJECT NUMBER: 202101 0310 HOLE NUMBER: 212-12  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17B  
 DRILL UNIT: BACKHOE: CAT 235  
 HOLE LOCATION: 1918+800 O/S 10M RT  
 LOGGED BY: BS DATE COMPLETED: 93.04.02

FIELD NO: 4  
 LAB NO: 37  
 DEPTH: 3.0-3.1  
 TYPE: BULK

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	100
50.0	88
31.5	--
25.0	65
20.0	64
12.5	54
10.0	49
5.0	32
2.5	23
2.0	--
1.25	15
0.840	--
0.630	9
0.420	--
0.315	6
0.160	5
0.150	--
0.080	4

M.C. (%): --

LIMITS

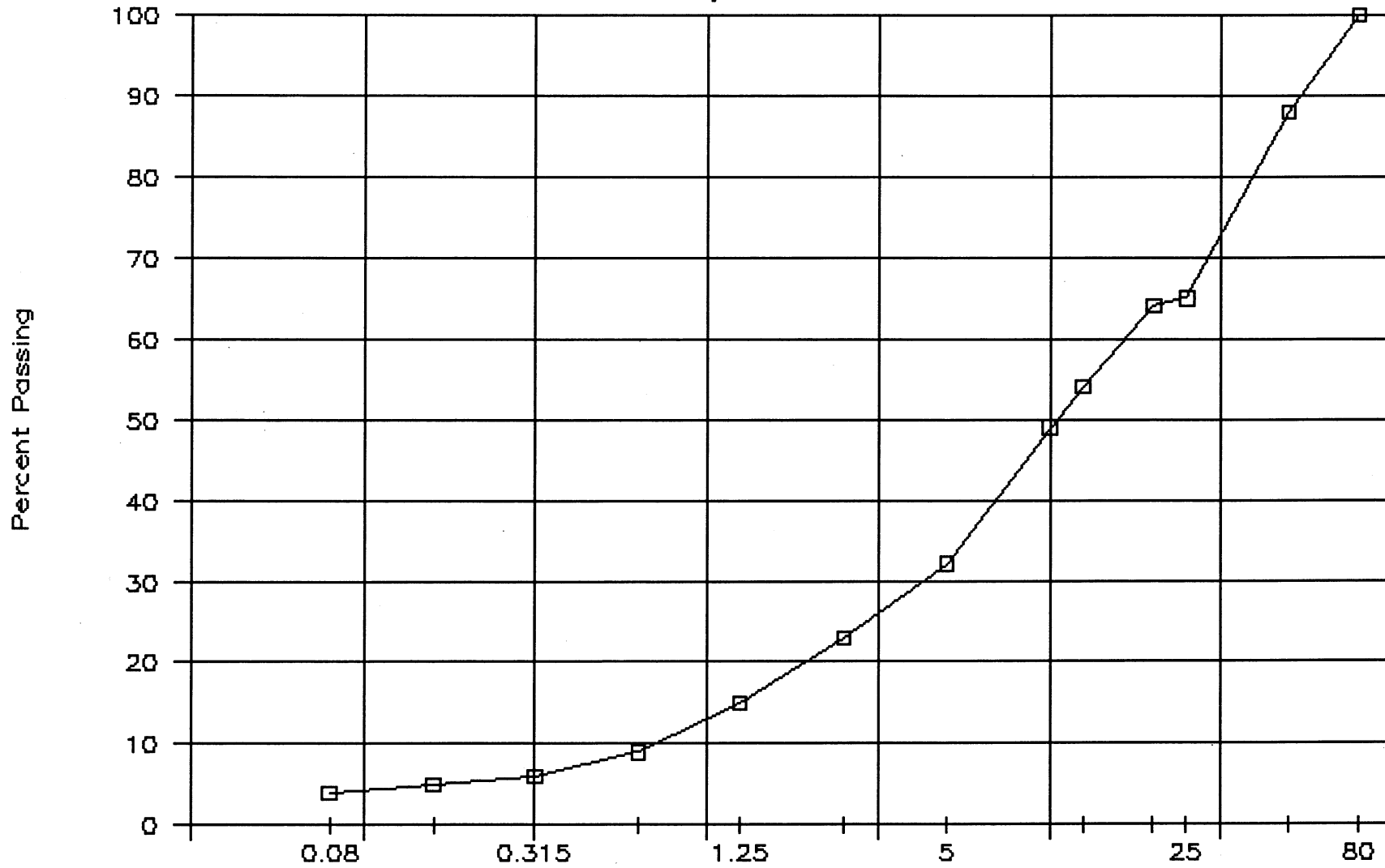
LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 68  
 % SAND: 28  
 % FINES: 4

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

# Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis — Hole 212-12



□ SAMP. 4      ◇ SAMP.      △ SAMP.      × SAMP.

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 216-117  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: SCHRAM ROTARY DRILL  
 HOLE LOCATION: 1918+800 O/S 75M RT  
 LOGGED BY: DT DATE COMPLETED: 93.04.14

FIELD NO: 45  
 LAB NO: 86  
 DEPTH: 8.2-8.8  
 TYPE: RETURN

FIELD NO: 46  
 LAB NO: 87  
 DEPTH: 15.5-16.  
 TYPE: RETURN

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

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	100
10.0	98
5.0	81
2.5	65
2.0	--
1.25	43
0.840	--
0.630	18
0.420	--
0.315	9
0.160	8
0.150	--
0.080	7

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

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	100
10.0	97
5.0	82
2.5	64
2.0	--
1.25	42
0.840	--
0.630	22
0.420	--
0.315	11
0.160	9
0.150	--
0.080	8

M.C. (%): 4

M.C. (%): 3

LIMITS

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

LIMITS

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

% GRAVEL: 19  
 % SAND: 74  
 % FINES: 7

% GRAVEL: 18  
 % SAND: 73  
 % FINES: 8

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT &  
 GRAVEL (SW-SM)

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT &  
 GRAVEL (SW-SM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-07  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 36002  
 HOLE LOCATION: 1918+900 O/S 4M LT  
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 17  
 LAB NO: 5753  
 DEPTH: 1.1-1.3  
 TYPE: AUGER

FIELD NO: 18  
 LAB NO: 5754  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 19  
 LAB NO: 5755  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

100.0	--
80.0	--
50.0	100
31.5	--
25.0	76
20.0	71
12.5	54
10.0	49
5.0	38
2.5	31
2.0	--
1.25	26
0.840	--
0.630	21
0.420	--
0.315	16
0.160	13
0.150	--
0.080	11

M.C. (%): 4

LIMITS

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

% GRAVEL: 62  
 % SAND: 27  
 % FINES: 11

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

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

100.0	--
80.0	100
50.0	83
31.5	--
25.0	62
20.0	54
12.5	43
10.0	38
5.0	29
2.5	23
2.0	--
1.25	19
0.840	--
0.630	15
0.420	--
0.315	12
0.160	9
0.150	--
0.080	7

M.C. (%): 2

LIMITS

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

% GRAVEL: 71  
 % SAND: 22  
 % FINES: 7

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

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

100.0	--
80.0	--
50.0	100
31.5	--
25.0	79
20.0	72
12.5	59
10.0	55
5.0	42
2.5	32
2.0	--
1.25	18
0.840	--
0.630	18
0.420	--
0.315	12
0.160	9
0.150	--
0.080	7

M.C. (%): 2

LIMITS

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

% GRAVEL: 58  
 % SAND: 35  
 % FINES: 7

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

PROJECT NUMBER: 745927 HOLE NUMBER: 142-80  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1919+000 O/S 3M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 223  
 LAB NO: 4795  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 224  
 LAB NO: 4796  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 225  
 LAB NO: 4797  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

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

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

101.6	--
76.2	100
50.8	80
38.1	80
25.4	66
19.0	60
12.7	52
9.5	45
4.76	30
2.38	--
2.00	18
1.19	--
0.841	9
0.595	--
0.42	6
0.297	--
0.177	--
0.149	4
0.074	3

101.6	--
76.2	--
50.8	100
38.1	81
25.4	71
19.0	56
12.7	41
9.5	33
4.76	21
2.38	--
2.00	12
1.19	--
0.841	7
0.595	--
0.42	5
0.297	--
0.177	--
0.149	3
0.074	2

101.6	--
76.2	--
50.8	100
38.1	90
25.4	72
19.0	64
12.7	53
9.5	43
4.76	31
2.38	--
2.00	19
1.19	--
0.841	10
0.595	--
0.42	6
0.297	--
0.177	--
0.149	2
0.074	2

M.C. (%): 2

M.C. (%): 2

M.C. (%): 2

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 70  
 % SAND: 27  
 % FINES: 3

% GRAVEL: 79  
 % SAND: 19  
 % FINES: 2

% GRAVEL: 69  
 % SAND: 29  
 % FINES: 2

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-81  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1919+100 O/S 4M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 226  
 LAB NO: 4798  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 227  
 LAB NO: 4799  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 228  
 LAB NO: 4800  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	79
19.0	71
12.7	60
9.5	51
4.76	38
2.38	--
2.00	26
1.19	--
0.841	17
0.595	--
0.42	12
0.297	--
0.177	--
0.149	7
0.074	5

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

101.6	--
76.2	--
50.8	100
38.1	91
25.4	87
19.0	78
12.7	62
9.5	54
4.76	38
2.38	--
2.00	26
1.19	--
0.841	16
0.595	--
0.42	10
0.297	--
0.177	--
0.149	5
0.074	4

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

101.6	--
76.2	100
50.8	79
38.1	79
25.4	73
19.0	71
12.7	58
9.5	52
4.76	40
2.38	--
2.00	27
1.19	--
0.841	17
0.595	--
0.42	10
0.297	--
0.177	--
0.149	5
0.074	4

M.C. (%): 3

M.C. (%): 2

M.C. (%): 3

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 62  
 % SAND: 33  
 % FINES: 5

% GRAVEL: 62  
 % SAND: 35  
 % FINES: 4

% GRAVEL: 60  
 % SAND: 35  
 % FINES: 4

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

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-82  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1919+200 O/S 7M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 229  
 LAB NO: 4801  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 230  
 LAB NO: 4802  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 231  
 LAB NO: 4803  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	77
19.0	67
12.7	59
9.5	51
4.76	37
2.38	--
2.00	25
1.19	--
0.841	19
0.595	--
0.42	10
0.297	--
0.177	--
0.149	4
0.074	3

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

101.6	--
76.2	--
50.8	100
38.1	95
25.4	71
19.0	64
12.7	52
9.5	43
4.76	28
2.38	--
2.00	19
1.19	--
0.841	12
0.595	--
0.42	7
0.297	--
0.177	--
0.149	3
0.074	2

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

101.6	--
76.2	--
50.8	100
38.1	87
25.4	64
19.0	60
12.7	52
9.5	45
4.76	31
2.38	--
2.00	20
1.19	--
0.841	12
0.595	--
0.42	6
0.297	--
0.177	--
0.149	3
0.074	2

M.C. (%): 2

M.C. (%): 2

M.C. (%): 2

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 63  
 % SAND: 34  
 % FINES: 3

% GRAVEL: 72  
 % SAND: 26  
 % FINES: 2

% GRAVEL: 69  
 % SAND: 29  
 % FINES: 2

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-83  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1919+300 O/S 2M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 232  
 LAB NO: 4804  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 233  
 LAB NO: 4805  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 234  
 LAB NO: 4806  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	90
25.4	72
19.0	66
12.7	59
9.5	52
4.76	42
2.38	--
2.00	34
1.19	--
0.841	28
0.595	--
0.42	23
0.297	--
0.177	--
0.149	18
0.074	16

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	85
38.1	85
25.4	73
19.0	72
12.7	58
9.5	51
4.76	38
2.38	--
2.00	27
1.19	--
0.841	19
0.595	--
0.42	14
0.297	--
0.177	--
0.149	9
0.074	7

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	66
38.1	52
25.4	46
19.0	42
12.7	38
9.5	34
4.76	26
2.38	--
2.00	19
1.19	--
0.841	14
0.595	--
0.42	10
0.297	--
0.177	--
0.149	7
0.074	6

M.C. (%): 6

M.C. (%): 3

M.C. (%): 4

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

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

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

% GRAVEL: 58  
 % SAND: 27  
 % FINES: 16

% GRAVEL: 62  
 % SAND: 31  
 % FINES: 7

% GRAVEL: 74  
 % SAND: 21  
 % FINES: 6

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

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

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

PROJECT NUMBER: 745927 HOLE NUMBER: 142-84  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1919+400  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 235  
 LAB NO: 4807  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 236  
 LAB NO: 4808  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 237  
 LAB NO: 4809  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	87
19.0	79
12.7	61
9.5	56
4.76	43
2.38	--
2.00	32
1.19	--
0.841	24
0.595	--
0.42	16
0.297	--
0.177	--
0.149	8
0.074	6

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	76
19.0	70
12.7	53
9.5	44
4.76	31
2.38	--
2.00	22
1.19	--
0.841	16
0.595	--
0.42	13
0.297	--
0.177	--
0.149	7
0.074	6

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

101.6	--
76.2	--
50.8	100
38.1	91
25.4	80
19.0	74
12.7	66
9.5	55
4.76	39
2.38	--
2.00	25
1.19	--
0.841	16
0.595	--
0.42	11
0.297	--
0.177	--
0.149	6
0.074	4

M.C. (%): 4

M.C. (%): 3

M.C. (%): 3

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 57  
 % SAND: 37  
 % FINES: 6

% GRAVEL: 69  
 % SAND: 25  
 % FINES: 6

% GRAVEL: 61  
 % SAND: 34  
 % FINES: 4

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

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

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-85  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1919+500 O/S 2M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 238  
 LAB NO: 4810  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 239  
 LAB NO: 4811  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 240  
 LAB NO: 4812  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

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

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

101.6	--
76.2	--
50.8	100
38.1	90
25.4	63
19.0	56
12.7	50
9.5	43
4.76	31
2.38	--
2.00	20
1.19	--
0.841	13
0.595	--
0.42	9
0.297	--
0.177	--
0.149	5
0.074	4

101.6	--
76.2	100
50.8	87
38.1	79
25.4	74
19.0	62
12.7	50
9.5	41
4.76	30
2.38	--
2.00	22
1.19	--
0.841	15
0.595	--
0.42	8
0.297	--
0.177	--
0.149	4
0.074	3

101.6	--
76.2	--
50.8	100
38.1	90
25.4	75
19.0	66
12.7	53
9.5	45
4.76	32
2.38	--
2.00	23
1.19	--
0.841	15
0.595	--
0.42	8
0.297	--
0.177	--
0.149	6
0.074	3

M.C. (%) : 5

M.C. (%) : 3

M.C. (%) : 3

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

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

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

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

% GRAVEL: 70  
 % SAND: 27  
 % FINES: 3

% GRAVEL: 68  
 % SAND: 29  
 % FINES: 3

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-06  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 36002  
 HOLE LOCATION: 1919+600 O/S 2M LT  
 LOGGED BY: AW DATE COMPLETED: 92.06.04

FIELD NO: 14  
 LAB NO: 5750  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 15  
 LAB NO: 5751  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 16  
 LAB NO: 5752  
 DEPTH: 3.9-4.1  
 TYPE: AUGER

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

100.0	--
80.0	--
50.0	100
31.5	--
25.0	66
20.0	55
12.5	44
10.0	36
5.0	29
2.5	25
2.0	--
1.25	23
0.840	--
0.630	20
0.420	--
0.315	18
0.160	16
0.150	--
0.080	13

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

100.0	--
80.0	100
50.0	76
31.5	--
25.0	65
20.0	54
12.5	41
10.0	38
5.0	29
2.5	24
2.0	--
1.25	21
0.840	--
0.630	18
0.420	--
0.315	15
0.160	13
0.150	--
0.080	11

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

100.0	--
80.0	--
50.0	100
31.5	--
25.0	82
20.0	71
12.5	51
10.0	47
5.0	37
2.5	33
2.0	--
1.25	30
0.840	--
0.630	27
0.420	--
0.315	25
0.160	22
0.150	--
0.080	19

M.C. (%): 5

M.C. (%): 4

M.C. (%): 8

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 71  
 % SAND: 16  
 % FINES: 13

% GRAVEL: 71  
 % SAND: 18  
 % FINES: 11

% GRAVEL: 63  
 % SAND: 18  
 % FINES: 19

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

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

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-05  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 36002  
 HOLE LOCATION: 1919+700 O/S 2M LT  
 LOGGED BY: AW DATE COMPLETED: 92.06.04

FIELD NO: 11  
 LAB NO: 5747  
 DEPTH: 1.3-1.5  
 TYPE: AUGER  
 ORGANIC

FIELD NO: 12  
 LAB NO: 5748  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 13  
 LAB NO: 5749  
 DEPTH: 3.0-3.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	98
2.0	--
1.25	94
0.840	--
0.630	90
0.420	--
0.315	87
0.160	81
0.150	--
0.080	75

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	95
20.0	86
12.5	70
10.0	62
5.0	47
2.5	39
2.0	--
1.25	34
0.840	--
0.630	30
0.420	--
0.315	27
0.160	25
0.150	--
0.080	22

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	96
20.0	93
12.5	86
10.0	80
5.0	62
2.5	49
2.0	--
1.25	39
0.840	--
0.630	33
0.420	--
0.315	27
0.160	22
0.150	--
0.080	18

M.C. (%): 73

M.C. (%): 9

M.C. (%): 8

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

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

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

% GRAVEL: 0  
 % SAND: 25  
 % FINES: 75

% GRAVEL: 53  
 % SAND: 26  
 % FINES: 22

% GRAVEL: 38  
 % SAND: 43  
 % FINES: 18

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-04  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 36002  
 HOLE LOCATION: 1919+800 O/S 2M LT  
 LOGGED BY: AW DATE COMPLETED: 92.06.04

FIELD NO: 8  
 LAB NO: 5744  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 9  
 LAB NO: 5745  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 10  
 LAB NO: 5746  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

100.0	--
80.0	--
50.0	100
31.5	--
25.0	79
20.0	73
12.5	72
10.0	72
5.0	70
2.5	70
2.0	--
1.25	69
0.840	--
0.630	68
0.420	--
0.315	67
0.160	65
0.150	--
0.080	62

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

100.0	--
80.0	--
50.0	100
31.5	--
25.0	77
20.0	67
12.5	51
10.0	48
5.0	37
2.5	32
2.0	--
1.25	28
0.840	--
0.630	24
0.420	--
0.315	21
0.160	19
0.150	--
0.080	17

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

100.0	--
80.0	--
50.0	100
31.5	--
25.0	62
20.0	50
12.5	33
10.0	27
5.0	20
2.5	17
2.0	--
1.25	15
0.840	--
0.630	13
0.420	--
0.315	12
0.160	11
0.150	--
0.080	9

M.C. (%): 22

M.C. (%): 8

M.C. (%): 5

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 30  
 % SAND: 8  
 % FINES: 62

% GRAVEL: 63  
 % SAND: 20  
 % FINES: 17

% GRAVEL: 80  
 % SAND: 10  
 % FINES: 9

CLASSIFICATION:  
 GRAVELLY SILT  
 (ML)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

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

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-03  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 36002  
 HOLE LOCATION: 1919+900 O/S 2M RT  
 LOGGED BY: AW DATE COMPLETED: 92.06.04

FIELD NO: 5  
 LAB NO: 5741  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 6  
 LAB NO: 5742  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 7  
 LAB NO: 5743  
 DEPTH: 4.3-4.5  
 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	97
0.150	--
0.080	97

M.C. (%): 41

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

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

CLASSIFICATION: SILT (ML)

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	99
0.160	98
0.150	--
0.080	96

M.C. (%): 42

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

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

CLASSIFICATION: SILT (ML)

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

100.0	--
80.0	--
50.0	100
31.5	--
25.0	79
20.0	62
12.5	57
10.0	48
5.0	43
2.5	39
2.0	--
1.25	36
0.840	--
0.630	33
0.420	--
0.315	31
0.160	29
0.150	--
0.080	26

M.C. (%): 14

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

% GRAVEL: 57  
 % SAND: 17  
 % FINES: 26

CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-02  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 36002  
 HOLE LOCATION: 1920+000 O/S 2M LT  
 LOGGED BY: AW DATE COMPLETED: 92.06.04

FIELD NO: 3	FIELD NO: 4
LAB NO: 5739	LAB NO: 5740
DEPTH: 1.3-1.5	DEPTH: 2.8-3.0
TYPE: AUGER	TYPE: AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	--	100.0	--
80.0	--	80.0	--
50.0	--	50.0	100
31.5	--	31.5	--
25.0	--	25.0	87
20.0	--	20.0	84
12.5	--	12.5	74
10.0	--	10.0	70
5.0	--	5.0	55
2.5	--	2.5	48
2.0	--	2.0	--
1.25	100	1.25	43
0.840	--	0.840	--
0.630	100	0.630	37
0.420	--	0.420	--
0.315	99	0.315	32
0.160	98	0.160	28
0.150	--	0.150	--
0.080	96	0.080	25

M.C. (%): 43 M.C. (%): 10

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

% GRAVEL: 0	% GRAVEL: 45
% SAND: 4	% SAND: 31
% FINES: 96	% FINES: 25

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

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-01  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 36002  
 HOLE LOCATION: 1920+100  
 LOGGED BY: AW DATE COMPLETED: 92.06.04

FIELD NO: 1  
 LAB NO: 5737  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 2  
 LAB NO: 5738  
 DEPTH: 1.8-2.0  
 TYPE: AUGER

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

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

100.0	--
80.0	--
50.0	100
31.5	--
25.0	74
20.0	66
12.5	58
10.0	53
5.0	41
2.5	33
2.0	--
1.25	27
0.840	--
0.630	22
0.420	--
0.315	18
0.160	13
0.150	--
0.080	11

100.0	--
80.0	--
50.0	100
31.5	--
25.0	71
20.0	65
12.5	59
10.0	52
5.0	35
2.5	26
2.0	--
1.25	21
0.840	--
0.630	17
0.420	--
0.315	13
0.160	10
0.150	--
0.080	8

M.C. (%): 7

M.C. (%): 5

LIMITS

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

LIMITS

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

% GRAVEL: 59  
 % SAND: 31  
 % FINES: 11

% GRAVEL: 65  
 % SAND: 28  
 % FINES: 8

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

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

PROJECT NUMBER: 745927 HOLE NUMBER: 142-86  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1920+175 O/S 4M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 241  
 LAB NO: 4813  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 242  
 LAB NO: 4814  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 243  
 LAB NO: 4815  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	95
19.0	88
12.7	71
9.5	65
4.76	52
2.38	--
2.00	41
1.19	--
0.841	33
0.595	--
0.42	26
0.297	--
0.177	--
0.149	19
0.074	17

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

101.6	--
76.2	--
50.8	100
38.1	80
25.4	64
19.0	61
12.7	53
9.5	49
4.76	42
2.38	--
2.00	36
1.19	--
0.841	32
0.595	--
0.42	28
0.297	--
0.177	--
0.149	24
0.074	22

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

101.6	--
76.2	100
50.8	77
38.1	77
25.4	73
19.0	65
12.7	55
9.5	51
4.76	44
2.38	--
2.00	37
1.19	--
0.841	32
0.595	--
0.42	29
0.297	--
0.177	--
0.149	28
0.074	24

M.C. (%): 4

M.C. (%): 9

M.C. (%): 9

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

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

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

% GRAVEL: 48  
 % SAND: 36  
 % FINES: 17

% GRAVEL: 58  
 % SAND: 20  
 % FINES: 22

% GRAVEL: 56  
 % SAND: 19  
 % FINES: 24

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-87  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1920+275 O/S 8M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 244  
 LAB NO: 4816  
 DEPTH: 1.0-1.2  
 TYPE: AUGER

FIELD NO: 245  
 LAB NO: 4817  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 246  
 LAB NO: 4818  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	77
12.7	72
9.5	65
4.76	53
2.38	--
2.00	43
1.19	--
0.841	35
0.595	--
0.42	28
0.297	--
0.177	--
0.149	24
0.074	19

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	98
9.5	98
4.76	96
2.38	--
2.00	96
1.19	--
0.841	95
0.595	--
0.42	95
0.297	--
0.177	--
0.149	93
0.074	91

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	100
9.5	99
4.76	99
2.38	--
2.00	98
1.19	--
0.841	98
0.595	--
0.42	98
0.297	--
0.177	--
0.149	97
0.074	96

M.C. (%): 7

M.C. (%): 26

M.C. (%): 37

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

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

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

% GRAVEL: 47  
 % SAND: 35  
 % FINES: 19

% GRAVEL: 4  
 % SAND: 6  
 % FINES: 91

% GRAVEL: 1  
 % SAND: 3  
 % FINES: 96

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-88  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1920+375 O/S 7M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 247  
 LAB NO: 4819  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 248  
 LAB NO: 4820  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	82
19.0	77
12.7	68
9.5	62
4.76	52
2.38	--
2.00	44
1.19	--
0.841	38
0.595	--
0.42	33
0.297	--
0.177	--
0.149	27
0.074	25

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	94
0.074	89

M.C. (%): 11

M.C. (%): 29

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

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

% GRAVEL: 48  
 % SAND: 27  
 % FINES: 25

% GRAVEL: 0  
 % SAND: 10  
 % FINES: 89

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-89  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1920+475 O/S 7M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 249  
 LAB NO: 4821  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 250  
 LAB NO: 4822  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 251  
 LAB NO: 4823  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	100
38.1	93
25.4	88
19.0	82
12.7	77
9.5	70
4.76	58
2.38	--
2.00	48
1.19	--
0.841	41
0.595	--
0.42	35
0.297	--
0.177	--
0.149	26
0.074	22

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	95

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	87
0.074	78

M.C. (%): 13

M.C. (%): 30

M.C. (%): 22

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 42  
 % SAND: 36  
 % FINES: 22

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

% GRAVEL: 0  
 % SAND: 22  
 % FINES: 78

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-90  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1920+575 O/S 4M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 252  
 LAB NO: 4824  
 DEPTH: 1.0-1.2  
 TYPE: AUGER

FIELD NO: 253  
 LAB NO: 4825  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 254  
 LAB NO: 4826  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	81
19.0	69
12.7	58
9.5	51
4.76	37
2.38	--
2.00	27
1.19	--
0.841	20
0.595	--
0.42	16
0.297	--
0.177	--
0.149	10
0.074	8

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	96

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	95

M.C. (%): 6

M.C. (%): 24

M.C. (%): 37

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 63  
 % SAND: 29  
 % FINES: 8

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

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

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

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-91  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1920+675 O/S 5M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 255  
 LAB NO: 4827  
 DEPTH: 1.0-1.2  
 TYPE: AUGER

FIELD NO: 256  
 LAB NO: 4828  
 DEPTH: 2.6-2.8  
 TYPE: AUGER

FIELD NO: 257  
 LAB NO: 4829  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	92
25.4	82
19.0	74
12.7	58
9.5	52
4.76	36
2.38	--
2.00	25
1.19	--
0.841	17
0.595	--
0.42	12
0.297	--
0.177	--
0.149	11
0.074	6

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	97
0.595	--
0.42	97
0.297	--
0.177	--
0.149	97
0.074	93

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	96

M.C. (%): 4

M.C. (%): 23

M.C. (%): 46

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

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

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

% GRAVEL: 64  
 % SAND: 30  
 % FINES: 6

% GRAVEL: 1  
 % SAND: 5  
 % FINES: 93

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

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

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-92  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1920+775 O/S 5M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 258  
 LAB NO: 4930  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 259  
 LAB NO: 4831  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 260  
 LAB NO: 4832  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	85
19.0	76
12.7	68
9.5	62
4.76	50
2.38	--
2.00	41
1.19	--
0.841	34
0.595	--
0.42	29
0.297	--
0.177	--
0.149	21
0.074	18

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	96
0.074	94

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	95
0.074	91

M.C. (%): 12

M.C. (%): 34

M.C. (%): 25

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 50  
 % SAND: 32  
 % FINES: 18

% GRAVEL: 1  
 % SAND: 5  
 % FINES: 94

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

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 158-215  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1920+850 O/S 15M RT  
 LOGGED BY: B DATE COMPLETED: 91.11.17

FIELD NO: 567  
 LAB NO: 5544  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 568  
 LAB NO: 5545  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 569  
 LAB NO: 5546  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	97

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	97

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	93

M.C. (%): 74

M.C. (%): 39

M.C. (%): 64

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

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

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

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

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

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

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 158-214  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1920+950 O/S 15M RT  
 LOGGED BY: CB DATE COMPLETED: 91.11.17

FIELD NO: 564  
 LAB NO: 5541  
 DEPTH: 1.3-1.5  
 TYPE: AUGER  
 95% ORGANIC

FIELD NO: 565  
 LAB NO: 5542  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 566  
 LAB NO: 5543  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	97

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	95
0.074	89

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	94
0.074	89

M.C. (%): 109

M.C. (%): 37

M.C. (%): 87

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: 11  
 % FINES: 89

% GRAVEL: 0  
 % SAND: 11  
 % FINES: 89

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 158-213  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1921+050 O/S 15M RT  
 LOGGED BY: CB DATE COMPLETED: 91.11.17

FIELD NO: 561  
 LAB NO: 5538  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 562  
 LAB NO: 5539  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 563  
 LAB NO: 5540  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	97
0.074	95

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	95

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	95
19.0	80
12.7	74
9.5	64
4.76	47
2.38	--
2.00	37
1.19	--
0.841	31
0.595	--
0.42	27
0.297	--
0.177	--
0.149	22
0.074	20

M.C. (%): 80

M.C. (%): 32

M.C. (%): 12

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

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

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

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

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

% GRAVEL: 53  
 % SAND: 27  
 % FINES: 20

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 158-212  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1921+175 O/S 15M RT  
 LOGGED BY: CB DATE COMPLETED: 91.11.17

FIELD NO: 558  
 LAB NO: 5535  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 559  
 LAB NO: 5536  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 560  
 LAB NO: 5537  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	95
9.5	94
4.76	91
2.38	--
2.00	88
1.19	--
0.841	84
0.595	--
0.42	82
0.297	--
0.177	--
0.149	71
0.074	63

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	99
0.074	97

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	97

M.C. (%): 52

M.C. (%): 39

M.C. (%): 41

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

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

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

% GRAVEL: 9  
 % SAND: 27  
 % FINES: 63

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

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

CLASSIFICATION:  
 SANDY SILT (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 158-211  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1921+275 O/S 15M RT  
 LOGGED BY: CB DATE COMPLETED: 91.11.17

FIELD NO: 555  
 LAB NO: 5532  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 556  
 LAB NO: 5533  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 557  
 LAB NO: 5534  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	90
9.5	84
4.76	75
2.38	--
2.00	67
1.19	--
0.841	60
0.595	--
0.42	56
0.297	--
0.177	--
0.149	47
0.074	42

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	96
19.0	96
12.7	92
9.5	89
4.76	85
2.38	--
2.00	80
1.19	--
0.841	77
0.595	--
0.42	74
0.297	--
0.177	--
0.149	69
0.074	65

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	90
12.7	88
9.5	85
4.76	77
2.38	--
2.00	71
1.19	--
0.841	66
0.595	--
0.42	62
0.297	--
0.177	--
0.149	54
0.074	51

M.C. (%): 15

M.C. (%): 24

M.C. (%): 19

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

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

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: *NP*

% GRAVEL: 25  
 % SAND: 32  
 % FINES: 42

% GRAVEL: 15  
 % SAND: 19  
 % FINES: 65

% GRAVEL: 23  
 % SAND: 27  
 % FINES: 51

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

CLASSIFICATION:  
 SANDY SILT WITH  
 GRAVEL (ML)

CLASSIFICATION:  
 SANDY SILT WITH  
 GRAVEL (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-93  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1921+325 O/S 7M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 261  
 LAB NO: 4833  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 262  
 LAB NO: 4834  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 263  
 LAB NO: 4835  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	87
9.5	84
4.76	77
2.38	--
2.00	70
1.19	--
0.841	66
0.595	--
0.42	63
0.297	--
0.177	--
0.149	63
0.074	54

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	96
9.5	93
4.76	88
2.38	--
2.00	79
1.19	--
0.841	72
0.595	--
0.42	67
0.297	--
0.177	--
0.149	56
0.074	51

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	76
38.1	76
25.4	76
19.0	72
12.7	66
9.5	64
4.76	56
2.38	--
2.00	50
1.19	--
0.841	45
0.595	--
0.42	42
0.297	--
0.177	--
0.149	39
0.074	29

M.C. (%): 26

M.C. (%): 17

M.C. (%): 9

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

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

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

% GRAVEL: 23  
 % SAND: 22  
 % FINES: 54

% GRAVEL: 12  
 % SAND: 36  
 % FINES: 51

% GRAVEL: 44  
 % SAND: 27  
 % FINES: 29

CLASSIFICATION:  
 GRAVELLY SILT  
 WITH SAND (ML)

CLASSIFICATION:  
 SANDY SILT (ML)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 158-210  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1921+502  
 LOGGED BY: CB DATE COMPLETED: 91.11.15

FIELD NO: 552  
 LAB NO: 5529  
 DEPTH: 1.3-1.5  
 TYPE: AUGER  
 ORGANIC

FIELD NO: 553  
 LAB NO: 5530  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 554  
 LAB NO: 5531  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	85
19.0	85
12.7	80
9.5	78
4.76	76
2.38	--
2.00	72
1.19	--
0.841	67
0.595	--
0.42	63
0.297	--
0.177	--
0.149	56
0.074	53

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	99
9.5	96
4.76	92
2.38	--
2.00	88
1.19	--
0.841	83
0.595	--
0.42	80
0.297	--
0.177	--
0.149	76
0.074	73

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	96
0.595	--
0.42	95
0.297	--
0.177	--
0.149	92
0.074	90

M.C. (%): 97

M.C. (%): 38

M.C. (%): 43

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

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

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

% GRAVEL: 24  
 % SAND: 23  
 % FINES: 53

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

% GRAVEL: 1  
 % SAND: 9  
 % FINES: 90

CLASSIFICATION:  
 GRAVELLY SILT  
 WITH SAND (ML)

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 158-209  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1921+625 O/S 2M LT  
 LOGGED BY: CB DATE COMPLETED: 91.11.15

FIELD NO: 549  
 LAB NO: 5526  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 550  
 LAB NO: 5527  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 551  
 LAB NO: 5528  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	96
12.7	94
9.5	92
4.76	82
2.38	--
2.00	76
1.19	--
0.841	70
0.595	--
0.42	66
0.297	--
0.177	--
0.149	58
0.074	51

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	95
9.5	90
4.76	82
2.38	--
2.00	75
1.19	--
0.841	69
0.595	--
0.42	64
0.297	--
0.177	--
0.149	56
0.074	51

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	97
0.074	95

M.C. (%): 44

M.C. (%): 31

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: 18  
 % SAND: 30  
 % FINES: 51

% GRAVEL: 18  
 % SAND: 32  
 % FINES: 51

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

CLASSIFICATION:  
 SANDY SILT WITH  
 GRAVEL (ML)

CLASSIFICATION:  
 SANDY SILT WITH  
 GRAVEL (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-94  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1921+675 O/S 8M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 264  
 LAB NO: 4836  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 265  
 LAB NO: 4837  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 266  
 LAB NO: 4838  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	95
19.0	95
12.7	84
9.5	77
4.76	64
2.38	--
2.00	51
1.19	--
0.841	42
0.595	--
0.42	36
0.297	--
0.177	--
0.149	29
0.074	26

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	95
19.0	93
12.7	85
9.5	79
4.76	69
2.38	--
2.00	59
1.19	--
0.841	52
0.595	--
0.42	48
0.297	--
0.177	--
0.149	48
0.074	40

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	90
12.7	90
9.5	89
4.76	87
2.38	--
2.00	85
1.19	--
0.841	82
0.595	--
0.42	80
0.297	--
0.177	--
0.149	80
0.074	77

M.C. (%): 12

M.C. (%): 13

M.C. (%): 26

LIMITS

LIQUID: 29.5  
 PLASTIC: 24.0  
 P.I.: 5.5

LIMITS

LIQUID: 28.0  
 PLASTIC: 23.5  
 P.I.: 4.5

LIMITS

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

% GRAVEL: 36  
 % SAND: 38  
 % FINES: 26

% GRAVEL: 31  
 % SAND: 30  
 % FINES: 40

% GRAVEL: 13  
 % SAND: 10  
 % FINES: 77

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILT WITH GRAVEL  
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 158-208  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1921 + 775  
 LOGGED BY: CB DATE COMPLETED: 91.11.15

FIELD NO: 546  
 LAB NO: 5523  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 547  
 LAB NO: 5524  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 548  
 LAB NO: 5525  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

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

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

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

101.6	--
76.2	--
50.8	100
38.1	91
25.4	91
19.0	79
12.7	68
9.5	64
4.76	55
2.38	--
2.00	44
1.19	--
0.841	35
0.595	--
0.42	29
0.297	--
0.177	--
0.149	22
0.074	19

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	95
12.7	83
9.5	80
4.76	69
2.38	--
2.00	54
1.19	--
0.841	40
0.595	--
0.42	32
0.297	--
0.177	--
0.149	24
0.074	20

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	96
9.5	93
4.76	79
2.38	--
2.00	62
1.19	--
0.841	46
0.595	--
0.42	37
0.297	--
0.177	--
0.149	27
0.074	23

M.C. (%): 6

M.C. (%): 5

M.C. (%): 5

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

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

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

% GRAVEL: 45  
 % SAND: 36  
 % FINES: 19

% GRAVEL: 31  
 % SAND: 49  
 % FINES: 20

% GRAVEL: 21  
 % SAND: 56  
 % FINES: 23

CLASSIFICATION:  
 WEATHERED  
 BEDROCK

CLASSIFICATION:  
 WEATHERED  
 BEDROCK

CLASSIFICATION:  
 WEATHERED  
 BEDROCK

PROJECT NUMBER: 745927 HOLE NUMBER: 157-207  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1921+925 O/S 2M LT  
 LOGGED BY: CB DATE COMPLETED: 91.11.15

FIELD NO: 544  
 LAB NO: 5521  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 545  
 LAB NO: 5522  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

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

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	92
19.0	90
12.7	85
9.5	80
4.76	69
2.38	--
2.00	58
1.19	--
0.841	49
0.595	--
0.42	42
0.297	--
0.177	--
0.149	35
0.074	31

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	96
0.074	92

M.C. (%): 16

M.C. (%): 32

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

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

% GRAVEL: 31  
 % SAND: 37  
 % FINES: 31

% GRAVEL: 0  
 % SAND: 7  
 % FINES: 92

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-206  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1922+075 O/S 2M LT  
 LOGGED BY: CB DATE COMPLETED: 91.11.15

FIELD NO: 542  
 LAB NO: 5519  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 543  
 LAB NO: 5520  
 DEPTH: 2.5-2.7  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	94

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	89
9.5	85
4.76	68
2.38	--
2.00	49
1.19	--
0.841	35
0.595	--
0.42	27
0.297	--
0.177	--
0.149	18
0.074	14

M.C. (%): 141

M.C. (%): 9

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

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

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

% GRAVEL: 32  
 % SAND: 54  
 % FINES: 14

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-205  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1922+200 O/S 2M LT  
 LOGGED BY: CB DATE COMPLETED: 91.11.15

FIELD NO: 540  
 LAB NO: 5517  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 541  
 LAB NO: 5518  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

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

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	89
19.0	84
12.7	82
9.5	82
4.76	81
2.38	--
2.00	79
1.19	--
0.841	78
0.595	--
0.42	77
0.297	--
0.177	--
0.149	72
0.074	68

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	95
12.7	85
9.5	81
4.76	65
2.38	--
2.00	48
1.19	--
0.841	36
0.595	--
0.42	30
0.297	--
0.177	--
0.149	23
0.074	20

M.C. (%): 101

M.C. (%): 12

LIMITS

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

LIMITS

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

% GRAVEL: 19  
 % SAND: 12  
 % FINES: 68

% GRAVEL: 35  
 % SAND: 45  
 % FINES: 20

CLASSIFICATION:  
 GRAVELLY SILT  
 (ML)

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-204  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1922+325 O/S 2M LT  
 LOGGED BY: CB DATE COMPLETED: 91.11.15

FIELD NO: 537  
 LAB NO: 5514  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 538  
 LAB NO: 5515  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 539  
 LAB NO: 5516  
 DEPTH: 4.4-4.6  
 TYPE: AUGER  
 ORGANICS

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	92
12.7	92
9.5	88
4.76	82
2.38	--
2.00	77
1.19	--
0.841	73
0.595	--
0.42	69
0.297	--
0.177	--
0.149	64
0.074	59

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	96
9.5	94
4.76	88
2.38	--
2.00	83
1.19	--
0.841	78
0.595	--
0.42	75
0.297	--
0.177	--
0.149	71
0.074	68

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	97

M.C. (%): 48

M.C. (%): 28

M.C. (%): 34

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

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

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

% GRAVEL: 18  
 % SAND: 23  
 % FINES: 59

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

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

CLASSIFICATION:  
 SANDY SILT WITH  
 GRAVEL (ML)

CLASSIFICATION:  
 SANDY SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-203  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1922+400 O/S 15M RT  
 LOGGED BY: CB DATE COMPLETED: 91.11.14

FIELD NO: 534  
 LAB NO: 5511  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 535  
 LAB NO: 5512  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 536  
 LAB NO: 5513  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	100
38.1	83
25.4	83
19.0	80
12.7	73
9.5	67
4.76	58
2.38	--
2.00	48
1.19	--
0.841	41
0.595	--
0.42	37
0.297	--
0.177	--
0.149	29
0.074	24

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	91
9.5	78
4.76	50
2.38	--
2.00	29
1.19	--
0.841	20
0.595	--
0.42	16
0.297	--
0.177	--
0.149	12
0.074	10

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	93
12.7	91
9.5	89
4.76	78
2.38	--
2.00	58
1.19	--
0.841	42
0.595	--
0.42	34
0.297	--
0.177	--
0.149	25
0.074	20

M.C. (%): 8

M.C. (%): 3

M.C. (%): 3

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

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

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

% GRAVEL: 42  
 % SAND: 33  
 % FINES: 24

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

% GRAVEL: 22  
 % SAND: 58  
 % FINES: 20

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

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

CLASSIFICATION:  
 WEATHERED  
 BEDROCK

PROJECT NUMBER: 745927 HOLE NUMBER: 143-95  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1922+425 O/S 11M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 267A  
 LAB NO: 4839  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 268A  
 LAB NO: 4840  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	89
25.4	76
19.0	63
12.7	57
9.5	55
4.76	49
2.38	--
2.00	45
1.19	--
0.841	41
0.595	--
0.42	38
0.297	--
0.177	--
0.149	35
0.074	33

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	75
19.0	66
12.7	57
9.5	53
4.76	44
2.38	--
2.00	36
1.19	--
0.841	30
0.595	--
0.42	26
0.297	--
0.177	--
0.149	21
0.074	18

M.C. (%): 11

M.C. (%): 6

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

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

% GRAVEL: 51  
 % SAND: 16  
 % FINES: 33

% GRAVEL: 56  
 % SAND: 26  
 % FINES: 18

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-96  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1922+525 O/S 7M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 267  
 LAB NO: 4841  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 268  
 LAB NO: 4842  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 269  
 LAB NO: 4843  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	100
38.1	75
25.4	57
19.0	52
12.7	43
9.5	38
4.76	28
2.38	--
2.00	20
1.19	--
0.841	15
0.595	--
0.42	12
0.297	--
0.177	--
0.149	12
0.074	10

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	74
19.0	62
12.7	47
9.5	39
4.76	26
2.38	--
2.00	17
1.19	--
0.841	11
0.595	--
0.42	7
0.297	--
0.177	--
0.149	7
0.074	3

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	85
19.0	84
12.7	71
9.5	62
4.76	46
2.38	--
2.00	31
1.19	--
0.841	19
0.595	--
0.42	12
0.297	--
0.177	--
0.149	5
0.074	3

M.C. (%): 3

M.C. (%): 2

M.C. (%): 5

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 72  
 % SAND: 18  
 % FINES: 10

% GRAVEL: 74  
 % SAND: 23  
 % FINES: 3

% GRAVEL: 54  
 % SAND: 43  
 % FINES: 3

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

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-202  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1922+630 O/S 5M RT  
 LOGGED BY: CB DATE COMPLETED: 91.11.14

FIELD NO: 531  
 LAB NO: 5508  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 532  
 LAB NO: 5509  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 533  
 LAB NO: 5510  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	96
0.297	--
0.177	--
0.149	89
0.074	83

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	98
0.297	--
0.177	--
0.149	96
0.074	94

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	98

M.C. (%): 33

M.C. (%): 47

M.C. (%): 40

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 1  
 % SAND: 16  
 % FINES: 83

% GRAVEL: 1  
 % SAND: 5  
 % FINES: 94

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

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-201  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1922+725 O/S 5M RT  
 LOGGED BY: CB DATE COMPLETED: 91.11.14

FIELD NO: 528  
 LAB NO: 5505  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 529  
 LAB NO: 5506  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 530  
 LAB NO: 5507  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	95

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	96
0.074	92

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	95

M.C. (%): 27

M.C. (%): 86

M.C. (%): 48

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

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

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

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

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

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

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-200  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1922+825 O/S 11M LT  
 LOGGED BY: CB DATE COMPLETED: 91.11.14

FIELD NO: 525  
 LAB NO: 5502  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 526  
 LAB NO: 5503  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 527  
 LAB NO: 5504  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	97
0.074	95

M.C. (%): 40

LIMITS

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

% GRAVEL: 0  
 % SAND: 4  
 % FINES: 95

CLASSIFICATION:  
 SILT (ML)

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	96
0.074	93

M.C. (%): 39

LIMITS

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

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

CLASSIFICATION:  
 SILT (ML)

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	96
0.074	91

M.C. (%): 36

LIMITS

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

% GRAVEL: 0  
 % SAND: 8  
 % FINES: 91

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-97  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1922+925 O/S 8M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 270  
 LAB NO: 4844  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 271  
 LAB NO: 4845  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 272  
 LAB NO: 4846  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	100
50.8	78
38.1	78
25.4	74
19.0	67
12.7	56
9.5	50
4.76	41
2.38	--
2.00	32
1.19	--
0.841	30
0.595	--
0.42	21
0.297	--
0.177	--
0.149	21
0.074	16

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

101.6	--
76.2	100
50.8	83
38.1	83
25.4	63
19.0	60
12.7	51
9.5	44
4.76	33
2.38	--
2.00	23
1.19	--
0.841	17
0.595	--
0.42	12
0.297	--
0.177	--
0.149	8
0.074	7

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

101.6	--
76.2	--
50.8	100
38.1	77
25.4	69
19.0	62
12.7	50
9.5	41
4.76	31
2.38	--
2.00	23
1.19	--
0.841	18
0.595	--
0.42	14
0.297	--
0.177	--
0.149	10
0.074	9

M.C. (%): 5

M.C. (%): 2

M.C. (%): 3

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

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

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

% GRAVEL: 59  
 % SAND: 25  
 % FINES: 16

% GRAVEL: 67  
 % SAND: 26  
 % FINES: 7

% GRAVEL: 69  
 % SAND: 22  
 % FINES: 9

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

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

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

PROJECT NUMBER: 745927 HOLE NUMBER: 143-98  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1923+025 O/S 9M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 273  
 LAB NO: 4847  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 274  
 LAB NO: 4848  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 275  
 LAB NO: 4849  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	74
19.0	58
12.7	46
9.5	39
4.76	29
2.38	--
2.00	20
1.19	--
0.841	14
0.595	--
0.42	10
0.297	--
0.177	--
0.149	6
0.074	5

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	80
19.0	64
12.7	49
9.5	39
4.76	25
2.38	--
2.00	15
1.19	--
0.841	9
0.595	--
0.42	5
0.297	--
0.177	--
0.149	2
0.074	2

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

101.6	--
76.2	100
50.8	81
38.1	81
25.4	66
19.0	60
12.7	47
9.5	40
4.76	29
2.38	--
2.00	21
1.19	--
0.841	12
0.595	--
0.42	7
0.297	--
0.177	--
0.149	3
0.074	2

M.C. (%): 2

M.C. (%): 1

M.C. (%): 2

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

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

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

% GRAVEL: 71  
 % SAND: 24  
 % FINES: 5

% GRAVEL: 75  
 % SAND: 23  
 % FINES: 2

% GRAVEL: 71  
 % SAND: 27  
 % FINES: 2

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

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SAND  
 (GW)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-99  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1923+125 O/S 5M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 276  
 LAB NO: 4850  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 277  
 LAB NO: 4851  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 278  
 LAB NO: 4852  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

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

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	88
19.0	74
12.7	58
9.5	51
4.76	41
2.38	--
2.00	31
1.19	--
0.841	23
0.595	--
0.42	19
0.297	--
0.177	--
0.149	13
0.074	10

101.6	--
76.2	--
50.8	--
38.1	100
25.4	86
19.0	80
12.7	70
9.5	64
4.76	52
2.38	--
2.00	43
1.19	--
0.841	36
0.595	--
0.42	30
0.297	--
0.177	--
0.149	23
0.074	20

101.6	--
76.2	100
50.8	81
38.1	75
25.4	57
19.0	53
12.7	45
9.5	40
4.76	29
2.38	--
2.00	21
1.19	--
0.841	15
0.595	--
0.42	11
0.297	--
0.177	--
0.149	7
0.074	6

M.C. (%): 3

M.C. (%): 6

M.C. (%): 2

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

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

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

% GRAVEL: 59  
 % SAND: 30  
 % FINES: 10

% GRAVEL: 48  
 % SAND: 32  
 % FINES: 20

% GRAVEL: 71  
 % SAND: 23  
 % FINES: 6

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

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

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

PROJECT NUMBER: 745927 HOLE NUMBER: 143-100  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1923+225 O/S 9M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 279  
 LAB NO: 4853  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 280  
 LAB NO: 4854  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 281  
 LAB NO: 4855  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	72
25.4	71
19.0	58
12.7	54
9.5	49
4.76	42
2.38	--
2.00	35
1.19	--
0.841	30
0.595	--
0.42	26
0.297	--
0.177	--
0.149	22
0.074	21

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	92
12.7	90
9.5	89
4.76	86
2.38	--
2.00	84
1.19	--
0.841	83
0.595	--
0.42	82
0.297	--
0.177	--
0.149	82
0.074	78

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	80
25.4	72
19.0	72
12.7	59
9.5	57
4.76	52
2.38	--
2.00	47
1.19	--
0.841	43
0.595	--
0.42	40
0.297	--
0.177	--
0.149	39
0.074	35

M.C. (%): 5

M.C. (%): 20

M.C. (%): 10

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

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

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

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

% GRAVEL: 14  
 % SAND: 8  
 % FINES: 78

% GRAVEL: 48  
 % SAND: 17  
 % FINES: 35

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILT WITH GRAVEL  
 (ML)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-101  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1923+325 O/S 7M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 282  
 LAB NO: 4856  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 283  
 LAB NO: 4857  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 284  
 LAB NO: 4858  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	93
25.4	63
19.0	55
12.7	46
9.5	41
4.76	33
2.38	--
2.00	28
1.19	--
0.841	22
0.595	--
0.42	19
0.297	--
0.177	--
0.149	15
0.074	11

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	95
19.0	85
12.7	61
9.5	50
4.76	33
2.38	--
2.00	24
1.19	--
0.841	17
0.595	--
0.42	12
0.297	--
0.177	--
0.149	7
0.074	5

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	97
19.0	90
12.7	77
9.5	65
4.76	50
2.38	--
2.00	38
1.19	--
0.841	28
0.595	--
0.42	19
0.297	--
0.177	--
0.149	14
0.074	9

M.C. (%): 4

M.C. (%): 2

M.C. (%): 3

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

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

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

% GRAVEL: 67  
 % SAND: 22  
 % FINES: 11

% GRAVEL: 67  
 % SAND: 28  
 % FINES: 5

% GRAVEL: 50  
 % SAND: 40  
 % FINES: 9

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

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

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

PROJECT NUMBER: 745927 HOLE NUMBER: 143-102  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1923+425 O/S 7M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.24

FIELD NO: 285  
 LAB NO: 4859  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 286  
 LAB NO: 4860  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 287  
 LAB NO: 4861  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	82
25.4	78
19.0	72
12.7	63
9.5	56
4.76	46
2.38	--
2.00	37
1.19	--
0.841	30
0.595	--
0.42	24
0.297	--
0.177	--
0.149	18
0.074	16

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	94
0.074	92

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	94
0.074	89

M.C. (%): 7

M.C. (%): 35

M.C. (%): 26

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

LIMITS  
 LIQUID: 26.1  
 PLASTIC: 28.0  
 P.I.: TRACE

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

% GRAVEL: 54  
 % SAND: 31  
 % FINES: 16

% GRAVEL: 1  
 % SAND: 8  
 % FINES: 92

% GRAVEL: 0  
 % SAND: 11  
 % FINES: 89

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-103  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1923+525 O/S 6M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.24

FIELD NO: 288  
 LAB NO: 4862  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 289  
 LAB NO: 4863  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 290  
 LAB NO: 4864  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	91
19.0	88
12.7	81
9.5	74
4.76	64
2.38	--
2.00	54
1.19	--
0.841	48
0.595	--
0.42	43
0.297	--
0.177	--
0.149	36
0.074	32

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	86
25.4	78
19.0	70
12.7	63
9.5	59
4.76	52
2.38	--
2.00	45
1.19	--
0.841	40
0.595	--
0.42	36
0.297	--
0.177	--
0.149	31
0.074	28

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	93
19.0	88
12.7	73
9.5	66
4.76	53
2.38	--
2.00	42
1.19	--
0.841	33
0.595	--
0.42	28
0.297	--
0.177	--
0.149	23
0.074	21

M.C. (%): 11

M.C. (%): 11

M.C. (%): 10

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

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

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

% GRAVEL: 36  
 % SAND: 32  
 % FINES: 32

% GRAVEL: 48  
 % SAND: 24  
 % FINES: 28

% GRAVEL: 47  
 % SAND: 32  
 % FINES: 21

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-195  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1923+625 O/S 8M LT  
 LOGGED BY: CB DATE COMPLETED: 91.11.14

FIELD NO: 512  
 LAB NO: 5489  
 DEPTH: 1.3-1.5  
 TYPE: AUGER  
 95% ORGANIC

FIELD NO: 513  
 LAB NO: 5490  
 DEPTH: 2.8-3.0  
 TYPE: AUGER  
 ORGANICS

FIELD NO: 514  
 LAB NO: 5491  
 DEPTH: 4.0-4.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	68
2.38	--
2.00	54
1.19	--
0.841	44
0.595	--
0.42	38
0.297	--
0.177	--
0.149	30
0.074	27

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	95
9.5	92
4.76	88
2.38	--
2.00	84
1.19	--
0.841	80
0.595	--
0.42	77
0.297	--
0.177	--
0.149	71
0.074	68

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	92
19.0	92
12.7	87
9.5	82
4.76	69
2.38	--
2.00	55
1.19	--
0.841	44
0.595	--
0.42	36
0.297	--
0.177	--
0.149	27
0.074	24

M.C. (%): 105

M.C. (%): 46

M.C. (%): 12

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

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

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

% GRAVEL: 32  
 % SAND: 40  
 % FINES: 27

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

% GRAVEL: 31  
 % SAND: 45  
 % FINES: 24

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

CLASSIFICATION:  
 SANDY SILT (ML)

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-194  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1923+725 O/S 10M LT  
 LOGGED BY: CB DATE COMPLETED: 91.11.14

FIELD NO: 509  
 LAB NO: 5486  
 DEPTH: 1.3-1.5  
 TYPE: AUGER  
 85% ORGANIC

FIELD NO: 510  
 LAB NO: 5487  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 511  
 LAB NO: 5488  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	96
1.19	--
0.841	92
0.595	--
0.42	89
0.297	--
0.177	--
0.149	82
0.074	79

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	96
12.7	88
9.5	78
4.76	68
2.38	--
2.00	63
1.19	--
0.841	61
0.595	--
0.42	59
0.297	--
0.177	--
0.149	54
0.074	51

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	95
19.0	84
12.7	77
9.5	71
4.76	61
2.38	--
2.00	52
1.19	--
0.841	43
0.595	--
0.42	37
0.297	--
0.177	--
0.149	30
0.074	26

M.C. (%): 49

M.C. (%): 19

M.C. (%): 10

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

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

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

% GRAVEL: 1  
 % SAND: 19  
 % FINES: 79

% GRAVEL: 32  
 % SAND: 16  
 % FINES: 51

% GRAVEL: 39  
 % SAND: 34  
 % FINES: 26

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 GRAVELLY SILT  
 WITH SAND (ML)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-193  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1923+825 O/S 11M LT  
 LOGGED BY: CB DATE COMPLETED: 91.11.14

FIELD NO: 506  
 LAB NO: 5483  
 DEPTH: 1.3-1.5  
 TYPE: AUGER  
 ORGANICS

FIELD NO: 507  
 LAB NO: 5484  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 508  
 LAB NO: 5485  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	97
0.595	--
0.42	96
0.297	--
0.177	--
0.149	93
0.074	90

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	85
19.0	78
12.7	70
9.5	64
4.76	51
2.38	--
2.00	37
1.19	--
0.841	25
0.595	--
0.42	17
0.297	--
0.177	--
0.149	13
0.074	12

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	95
19.0	81
12.7	77
9.5	74
4.76	64
2.38	--
2.00	54
1.19	--
0.841	44
0.595	--
0.42	39
0.297	--
0.177	--
0.149	35
0.074	34

M.C. (%): 41

M.C. (%): 4

M.C. (%): 13

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 0  
 % SAND: 10  
 % FINES: 90

% GRAVEL: 49  
 % SAND: 39  
 % FINES: 12

% GRAVEL: 36  
 % SAND: 30  
 % FINES: 34

CLASSIFICATION:  
 SILT (ML)

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

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-104  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1923+900 O/S 7M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.24

FIELD NO: 291  
 LAB NO: 4865  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 292  
 LAB NO: 4866  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 293  
 LAB NO: 4867  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	87
19.0	72
12.7	59
9.5	51
4.76	39
2.38	--
2.00	29
1.19	--
0.841	21
0.595	--
0.42	15
0.297	--
0.177	--
0.149	9
0.074	8

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

101.6	--
76.2	--
50.8	100
38.1	62
25.4	62
19.0	59
12.7	56
9.5	55
4.76	54
2.38	--
2.00	52
1.19	--
0.841	51
0.595	--
0.42	50
0.297	--
0.177	--
0.149	48
0.074	47

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	97
2.38	--
2.00	95
1.19	--
0.841	94
0.595	--
0.42	93
0.297	--
0.177	--
0.149	91
0.074	89

M.C. (%): 3

M.C. (%): 20

M.C. (%): 30

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 61  
 % SAND: 31  
 % FINES: 8

% GRAVEL: 46  
 % SAND: 7  
 % FINES: 47

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

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

CLASSIFICATION:  
 SILTY GRAVEL (GM)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-105  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1924+010 O/S 5M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.24

FIELD NO: 294  
 LAB NO: 4868  
 DEPTH: 1.0-1.2  
 TYPE: AUGER

FIELD NO: 295  
 LAB NO: 4869  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 296  
 LAB NO: 4870  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	93
19.0	81
12.7	71
9.5	62
4.76	45
2.38	--
2.00	33
1.19	--
0.841	24
0.595	--
0.42	18
0.297	--
0.177	--
0.149	12
0.074	11

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	85
12.7	74
9.5	65
4.76	53
2.38	--
2.00	43
1.19	--
0.841	36
0.595	--
0.42	28
0.297	--
0.177	--
0.149	26
0.074	22

M.C. (%): 5

M.C. (%): 31

M.C. (%): 10

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

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

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

% GRAVEL: 55  
 % SAND: 34  
 % FINES: 11

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

% GRAVEL: 47  
 % SAND: 30  
 % FINES: 22

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

CLASSIFICATION:

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-106  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1924+100 O/S 5M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.24

FIELD NO: 297  
 LAB NO: 4871  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 298  
 LAB NO: 4872  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 299  
 LAB NO: 4873  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	98
2.38	--
2.00	96
1.19	--
0.841	93
0.595	--
0.42	91
0.297	--
0.177	--
0.149	89
0.074	85

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	89
19.0	85
12.7	74
9.5	69
4.76	63
2.38	--
2.00	60
1.19	--
0.841	57
0.595	--
0.42	54
0.297	--
0.177	--
0.149	53
0.074	48

M.C. (%): 44

M.C. (%): 30

M.C. (%): 14

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

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

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

% GRAVEL: 2  
 % SAND: 13  
 % FINES: 85

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

% GRAVEL: 37  
 % SAND: 15  
 % FINES: 48

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-107  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1924+200 O/S 5M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.24

FIELD NO: 300  
 LAB NO: 4874  
 DEPTH: 1.0-1.2  
 TYPE: AUGER

FIELD NO: 301  
 LAB NO: 4875  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

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

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	96
9.5	95
4.76	93
2.38	--
2.00	91
1.19	--
0.841	89
0.595	--
0.42	86
0.297	--
0.177	--
0.149	83
0.074	76

M.C. (%) : 7

M.C. (%) : 30

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

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

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

% GRAVEL: 7  
 % SAND: 17  
 % FINES: 76

CLASSIFICATION:

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-108  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1924+300 O/S 6M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.24

FIELD NO: 302  
 LAB NO: 4876  
 DEPTH: 1.0-1.2  
 TYPE: AUGER

FIELD NO: 303  
 LAB NO: 4877  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 304  
 LAB NO: 4878  
 DEPTH: 3.9-4.1  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	89
25.4	80
19.0	76
12.7	57
9.5	50
4.76	35
2.38	--
2.00	25
1.19	--
0.841	16
0.595	--
0.42	11
0.297	--
0.177	--
0.149	6
0.074	5

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	98
2.38	--
2.00	98
1.19	--
0.841	96
0.595	--
0.42	95
0.297	--
0.177	--
0.149	94
0.074	90

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	97
9.5	94
4.76	90
2.38	--
2.00	85
1.19	--
0.841	78
0.595	--
0.42	69
0.297	--
0.177	--
0.149	67
0.074	62

M.C. (%): 9

M.C. (%): 25

M.C. (%): 23

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

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

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

% GRAVEL: 65  
 % SAND: 30  
 % FINES: 5

% GRAVEL: 2  
 % SAND: 8  
 % FINES: 90

% GRAVEL: 10  
 % SAND: 27  
 % FINES: 62

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

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SANDY SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-109  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1924+400 O/S 6M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.24

FIELD NO: 305  
 LAB NO: 4879  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 306  
 LAB NO: 4880  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 307  
 LAB NO: 4881  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	99
4.76	98
2.38	--
2.00	97
1.19	--
0.841	94
0.595	--
0.42	92
0.297	--
0.177	--
0.149	85
0.074	81

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	99
4.76	99
2.38	--
2.00	97
1.19	--
0.841	95
0.595	--
0.42	94
0.297	--
0.177	--
0.149	93
0.074	89

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	59
38.1	59
25.4	45
19.0	45
12.7	41
9.5	37
4.76	32
2.38	--
2.00	29
1.19	--
0.841	26
0.595	--
0.42	24
0.297	--
0.177	--
0.149	22
0.074	21

M.C. (%): 36

M.C. (%): 33

M.C. (%): 10

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

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

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

% GRAVEL: 2  
 % SAND: 17  
 % FINES: 81

% GRAVEL: 1  
 % SAND: 10  
 % FINES: 89

% GRAVEL: 68  
 % SAND: 11  
 % FINES: 21

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILTY GRAVEL (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-110  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1924+500 O/S 5M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.24

FIELD NO: 308  
 LAB NO: 4882  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 309  
 LAB NO: 4883  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 310  
 LAB NO: 4884  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	99
4.76	98
2.38	--
2.00	96
1.19	--
0.841	94
0.595	--
0.42	92
0.297	--
0.177	--
0.149	88
0.074	85

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	93
0.074	90

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	92
12.7	84
9.5	78
4.76	67
2.38	--
2.00	58
1.19	--
0.841	51
0.595	--
0.42	46
0.297	--
0.177	--
0.149	43
0.074	40

M.C. (%) : 26

M.C. (%) : 23

M.C. (%) : 12

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

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

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

% GRAVEL: 2  
 % SAND: 13  
 % FINES: 85

% GRAVEL: 1  
 % SAND: 9  
 % FINES: 90

% GRAVEL: 33  
 % SAND: 28  
 % FINES: 40

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-111  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1924+600 O/S 6M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.26

FIELD NO: 311  
 LAB NO: 4885  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 312  
 LAB NO: 4886  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 313  
 LAB NO: 4887  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	97
0.595	--
0.42	96
0.297	--
0.177	--
0.149	94
0.074	91

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	98

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	95
12.7	86
9.5	80
4.76	71
2.38	--
2.00	61
1.19	--
0.841	54
0.595	--
0.42	47
0.297	--
0.177	--
0.149	41
0.074	37

M.C. (%): 34

M.C. (%): 41

M.C. (%): 15

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

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

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

% GRAVEL: 1  
 % SAND: 8  
 % FINES: 91

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

% GRAVEL: 29  
 % SAND: 33  
 % FINES: 37

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-112  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1924+700 O/S 6M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.26

FIELD NO: 314  
 LAB NO: 4888  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 315  
 LAB NO: 4889  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 316  
 LAB NO: 4890  
 DEPTH: 4.2-4.4  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	97
9.5	95
4.76	92
2.38	--
2.00	89
1.19	--
0.841	86
0.595	--
0.42	84
0.297	--
0.177	--
0.149	80
0.074	75

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	98
4.76	95
2.38	--
2.00	91
1.19	--
0.841	89
0.595	--
0.42	88
0.297	--
0.177	--
0.149	86
0.074	82

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	97
0.595	--
0.42	94
0.297	--
0.177	--
0.149	92
0.074	88

M.C. (%): 29

M.C. (%): 39

M.C. (%): 29

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

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

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

% GRAVEL: 8  
 % SAND: 17  
 % FINES: 75

% GRAVEL: 5  
 % SAND: 12  
 % FINES: 82

% GRAVEL: 1  
 % SAND: 11  
 % FINES: 88

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-113  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1924+800 O/S 4M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.26

FIELD NO: 317  
 LAB NO: 4891  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 318  
 LAB NO: 4892  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 319  
 LAB NO: 4893  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	96
9.5	95
4.76	93
2.38	--
2.00	91
1.19	--
0.841	89
0.595	--
0.42	86
0.297	--
0.177	--
0.149	82
0.074	78

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	98
2.38	--
2.00	97
1.19	--
0.841	94
0.595	--
0.42	92
0.297	--
0.177	--
0.149	90
0.074	88

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

M.C. (%): 28

M.C. (%): 45

M.C. (%): 8

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 7  
 % SAND: 16  
 % FINES: 78

% GRAVEL: 2  
 % SAND: 10  
 % FINES: 88

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

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:

PROJECT NUMBER: 745927 HOLE NUMBER: 143-114  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1924+900 O/S 3M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.26

FIELD NO: 320  
 LAB NO: 4894  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 321  
 LAB NO: 4895  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

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

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	97
2.38	--
2.00	94
1.19	--
0.841	90
0.595	--
0.42	87
0.297	--
0.177	--
0.149	78
0.074	68

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	97
12.7	96
9.5	95
4.76	94
2.38	--
2.00	93
1.19	--
0.841	91
0.595	--
0.42	89
0.297	--
0.177	--
0.149	85
0.074	82

M.C. (%) : 36

M.C. (%) : 32

LIMITS

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

LIMITS

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

% GRAVEL: 3  
 % SAND: 28  
 % FINES: 68

% GRAVEL: 6  
 % SAND: 12  
 % FINES: 82

CLASSIFICATION:  
 SANDY SILT (ML)

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-115  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1925+000 O/S 4M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.26

FIELD NO: 322  
 LAB NO: 4896  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 323  
 LAB NO: 4897  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	97
4.76	94
2.38	--
2.00	91
1.19	--
0.841	88
0.595	--
0.42	86
0.297	--
0.177	--
0.149	82
0.074	80

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	98
2.38	--
2.00	97
1.19	--
0.841	95
0.595	--
0.42	95
0.297	--
0.177	--
0.149	93
0.074	91

M.C. (%): 39

M.C. (%): 31

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

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

% GRAVEL: 6  
 % SAND: 15  
 % FINES: 80

% GRAVEL: 2  
 % SAND: 8  
 % FINES: 91

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-116  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-225 & 17-174  
 HOLE LOCATION: 1925+100 O/S 5M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.26

FIELD NO: 324  
 LAB NO: 4898  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 325  
 LAB NO: 4899  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 326  
 LAB NO: 4900  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	99
4.76	98
2.38	--
2.00	97
1.19	--
0.841	95
0.595	--
0.42	93
0.297	--
0.177	--
0.149	90
0.074	86

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	100
4.76	99
2.38	--
2.00	97
1.19	--
0.841	94
0.595	--
0.42	91
0.297	--
0.177	--
0.149	88
0.074	84

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	84
9.5	77
4.76	63
2.38	--
2.00	51
1.19	--
0.841	39
0.595	--
0.42	26
0.297	--
0.177	--
0.149	14
0.074	12

M.C. (%): 41

M.C. (%): 32

M.C. (%): 9

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

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

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

% GRAVEL: 2  
 % SAND: 12  
 % FINES: 86

% GRAVEL: 1  
 % SAND: 15  
 % FINES: 84

% GRAVEL: 37  
 % SAND: 50  
 % FINES: 12

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 WELL-GRADED SAND  
 WITH SILT &  
 GRAVEL (SW-SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-117  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1925+200 O/S 3M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.26

FIELD NO: 327  
 LAB NO: 4901  
 DEPTH: 1.0-1.2  
 TYPE: AUGER

FIELD NO: 328  
 LAB NO: 4902  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

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

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	90
12.7	82
9.5	74
4.76	64
2.38	--
2.00	51
1.19	--
0.841	42
0.595	--
0.42	35
0.297	--
0.177	--
0.149	27
0.074	24

M.C. (%): 7

M.C. (%): 13

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

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

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

% GRAVEL: 36  
 % SAND: 40  
 % FINES: 24

CLASSIFICATION:

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-118  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1925+300 O/S 3M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.26

FIELD NO: 329  
 LAB NO: 4903  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 330  
 LAB NO: 4904  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 331  
 LAB NO: 4905  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	94
12.7	82
9.5	80
4.76	74
2.38	--
2.00	70
1.19	--
0.841	67
0.595	--
0.42	64
0.297	--
0.177	--
0.149	57
0.074	54

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	96
0.074	95

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	94
19.0	90
12.7	82
9.5	67
4.76	45
2.38	--
2.00	30
1.19	--
0.841	22
0.595	--
0.42	15
0.297	--
0.177	--
0.149	9
0.074	7

M.C. (%): 42

M.C. (%): 53

M.C. (%): 7

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

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

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

% GRAVEL: 26  
 % SAND: 20  
 % FINES: 54

% GRAVEL: 1  
 % SAND: 4  
 % FINES: 95

% GRAVEL: 55  
 % SAND: 38  
 % FINES: 7

CLASSIFICATION:  
 GRAVELLY SILT  
 WITH SAND (ML)

CLASSIFICATION:  
 SILT (ML)

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

PROJECT NUMBER: 745927 HOLE NUMBER: 144-119  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1925+425 O/S 6M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 332  
 LAB NO: 4906  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 333  
 LAB NO: 4907  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 334  
 LAB NO: 4908  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	98
0.074	91

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	90
9.5	86
4.76	70
2.38	--
2.00	54
1.19	--
0.841	44
0.595	--
0.42	38
0.297	--
0.177	--
0.149	32
0.074	28

M.C. (%) : 10

M.C. (%) : 54

M.C. (%) : 14

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

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

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

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

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

% GRAVEL: 30  
 % SAND: 42  
 % FINES: 28

CLASSIFICATION:

CLASSIFICATION:  
SILT (ML)

CLASSIFICATION:  
SILTY SAND WITH GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-120  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1925+525 O/S 5M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 335  
 LAB NO: 4909  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 336  
 LAB NO: 4910  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 337  
 LAB NO: 4911  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	100
38.1	64
25.4	64
19.0	64
12.7	64
9.5	64
4.76	63
2.38	--
2.00	60
1.19	--
0.841	56
0.595	--
0.42	54
0.297	--
0.177	--
0.149	51
0.074	45

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	99
4.76	98
2.38	--
2.00	98
1.19	--
0.841	97
0.595	--
0.42	97
0.297	--
0.177	--
0.149	96
0.074	95

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	97

M.C. (%): 33

M.C. (%): 29

M.C. (%): 28

LIMITS

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

LIMITS

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

LIMITS

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

% GRAVEL: 37  
 % SAND: 18  
 % FINES: 45

% GRAVEL: 2  
 % SAND: 4  
 % FINES: 95

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

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-121  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1925+625 O/S 6M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 338  
 LAB NO: 4912  
 DEPTH: 1.0-1.2  
 TYPE: AUGER

FIELD NO: 339  
 LAB NO: 4913  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	98
9.5	98
4.76	97
2.38	--
2.00	96
1.19	--
0.841	96
0.595	--
0.42	95
0.297	--
0.177	--
0.149	93
0.074	90

M.C. (%) : 6

M.C. (%) : 21

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

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

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

% GRAVEL: 3  
 % SAND: 7  
 % FINES: 90

CLASSIFICATION:

CLASSIFICATION:  
SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-122  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1925+725 O/S 5M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 340  
 LAB NO: 4914  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 341  
 LAB NO: 4915  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 342  
 LAB NO: 4916  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	98
1.19	--
0.841	94
0.595	--
0.42	91
0.297	--
0.177	--
0.149	86
0.074	80

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	98
0.074	97

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	98

M.C. (%): 35

M.C. (%): 32

M.C. (%): 66

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

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

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

% GRAVEL: 0  
 % SAND: 20  
 % FINES: 80

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

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

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-123  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1925+825 O/S 5M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 343  
 LAB NO: 4917  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 344  
 LAB NO: 4918  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	94
12.7	92
9.5	89
4.76	87
2.38	--
2.00	83
1.19	--
0.841	80
0.595	--
0.42	77
0.297	--
0.177	--
0.149	70
0.074	65

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	98
9.5	98
4.76	98
2.38	--
2.00	98
1.19	--
0.841	97
0.595	--
0.42	97
0.297	--
0.177	--
0.149	96
0.074	93

M.C. (%): 44

M.C. (%): 27

LIMITS

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

LIMITS

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

% GRAVEL: 13  
 % SAND: 22  
 % FINES: 65

% GRAVEL: 2  
 % SAND: 5  
 % FINES: 93

CLASSIFICATION:  
 SANDY SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-124  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1925+925  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 345  
 LAB NO: 4919  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 346  
 LAB NO: 4920  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 347  
 LAB NO: 4921  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	95

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	99
0.074	98

M.C. (%): 10

M.C. (%): 29

M.C. (%): 35

LIMITS

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

LIMITS

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

LIMITS

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

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

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

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

CLASSIFICATION:

CLASSIFICATION:  
SILT (ML)

CLASSIFICATION:  
SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-125  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1926+025 O/S 4M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 348  
 LAB NO: 4922  
 DEPTH: 1.0-1.2  
 TYPE: AUGER

FIELD NO: 349  
 LAB NO: 4923  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	96
0.074	93

M.C. (%): 12

M.C. (%): 46

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

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

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

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

CLASSIFICATION:

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-126  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1926+125 O/S 7M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 350  
 LAB NO: 4924  
 DEPTH: 1.0-1.2  
 TYPE: AUGER

FIELD NO: 351  
 LAB NO: 4925  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 352  
 LAB NO: 4926  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	96
0.074	93

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	92
19.0	92
12.7	86
9.5	83
4.76	76
2.38	--
2.00	68
1.19	--
0.841	61
0.595	--
0.42	56
0.297	--
0.177	--
0.149	47
0.074	42

M.C. (%): 6

M.C. (%): 30

M.C. (%): 12

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

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

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

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

% GRAVEL: 0  
 % SAND: 6  
 % FINES: 93

% GRAVEL: 24  
 % SAND: 34  
 % FINES: 42

CLASSIFICATION:

CLASSIFICATION:  
SILT (ML)

CLASSIFICATION:  
SILTY SAND WITH GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-127  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1926+225 O/S 5M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 353  
 LAB NO: 4927  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 354  
 LAB NO: 4928  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 355  
 LAB NO: 4929  
 DEPTH: 4.3-4.5  
 TYPE: AUGER  
 MOSTLY ORGANIC

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	94

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	99
1.19	--
0.841	97
0.595	--
0.42	96
0.297	--
0.177	--
0.149	93
0.074	90

M.C. (%): 24

M.C. (%): 44

M.C. (%): 92

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

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

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

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

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

% GRAVEL: 0  
 % SAND: 10  
 % FINES: 90

CLASSIFICATION:

CLASSIFICATION:  
SILT (ML)

CLASSIFICATION:  
SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-128  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1926+325 O/S 5M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 356  
 LAB NO: 4930  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 357  
 LAB NO: 4931  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 358  
 LAB NO: 4932  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	94
0.074	90

M.C. (%): 26

LIMITS

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

% GRAVEL: 0  
 % SAND: 10  
 % FINES: 90

CLASSIFICATION:  
SILT (ML)

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	97
9.5	96
4.76	93
2.38	--
2.00	90
1.19	--
0.841	88
0.595	--
0.42	86
0.297	--
0.177	--
0.149	83
0.074	81

M.C. (%): 33

LIMITS

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

% GRAVEL: 7  
 % SAND: 13  
 % FINES: 81

CLASSIFICATION:  
SILT WITH SAND  
(ML)

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

101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	82
12.7	73
9.5	68
4.76	60
2.38	--
2.00	53
1.19	--
0.841	49
0.595	--
0.42	46
0.297	--
0.177	--
0.149	40
0.074	37

M.C. (%): 20

LIMITS

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

% GRAVEL: 40  
 % SAND: 22  
 % FINES: 37

CLASSIFICATION:  
SILTY GRAVEL  
WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-129  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1926+425 O/S 5M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 359  
 LAB NO: 4933  
 DEPTH: 1.0-1.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	80
38.1	80
25.4	80
19.0	74
12.7	60
9.5	56
4.76	48
2.38	--
2.00	41
1.19	--
0.841	35
0.595	--
0.42	32
0.297	--
0.177	--
0.149	29
0.074	25

M.C. (%): 9

LIMITS

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

% GRAVEL: 52  
 % SAND: 23  
 % FINES: 25

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-130  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1926+525 O/S 4M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 360  
 LAB NO: 4934  
 DEPTH: 1.2-1.4  
 TYPE: AUGER

FIELD NO: 361  
 LAB NO: 4935  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 362  
 LAB NO: 4936  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	92
19.0	81
12.7	69
9.5	60
4.76	49
2.38	--
2.00	39
1.19	--
0.841	29
0.595	--
0.42	23
0.297	--
0.177	--
0.149	17
0.074	14

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	94
0.074	92

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	96

M.C. (%) : 9

M.C. (%) : 57

M.C. (%) : 75

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

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

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

% GRAVEL: 51  
 % SAND: 35  
 % FINES: 14

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

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

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-131  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1926+625 O/S 5M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 363  
 LAB NO: 4937  
 DEPTH: 1.0-1.2  
 TYPE: AUGER

FIELD NO: 364  
 LAB NO: 4938  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 365  
 LAB NO: 4939  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	100
0.074	98

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	99
9.5	96
4.76	92
2.38	--
2.00	88
1.19	--
0.841	85
0.595	--
0.42	83
0.297	--
0.177	--
0.149	80
0.074	78

M.C. (%): 9

M.C. (%): 30

M.C. (%): 37

LIMITS

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

LIMITS

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

LIMITS

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

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

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

% GRAVEL: 8  
 % SAND: 14  
 % FINES: 78

CLASSIFICATION:

CLASSIFICATION:  
SILT (ML)

CLASSIFICATION:  
SILT WITH SAND  
(ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-132  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1926+725 O/S 5M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 366  
 LAB NO: 4940  
 DEPTH: 1.1-1.3  
 TYPE: AUGER

FIELD NO: 367  
 LAB NO: 4941  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 368  
 LAB NO: 4942  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	89
25.4	79
19.0	64
12.7	54
9.5	47
4.76	35
2.38	--
2.00	27
1.19	--
0.841	20
0.595	--
0.42	15
0.297	--
0.177	--
0.149	11
0.074	8

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	97
0.595	--
0.42	96
0.297	--
0.177	--
0.149	94
0.074	92

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	99
4.76	97
2.38	--
2.00	95
1.19	--
0.841	93
0.595	--
0.42	92
0.297	--
0.177	--
0.149	91
0.074	86

M.C. (%): 8

M.C. (%): 59

M.C. (%): 32

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

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

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

% GRAVEL: 65  
 % SAND: 28  
 % FINES: 8

% GRAVEL: 1  
 % SAND: 7  
 % FINES: 92

% GRAVEL: 3  
 % SAND: 11  
 % FINES: 86

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

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-133  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1926+925 O/S 4M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 369  
 LAB NO: 4943  
 DEPTH: 1.1-1.3  
 TYPE: AUGER

FIELD NO: 370  
 LAB NO: 4944  
 DEPTH: 2.8-3.0  
 TYPE: AUGER  
 100% ORGANIC

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

M.C. (%): 7

M.C. (%): 444

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

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

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

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

CLASSIFICATION:

CLASSIFICATION:

PROJECT NUMBER: 745927 HOLE NUMBER: 144-134  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1927+125 O/S 4M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 371  
 LAB NO: 4945  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 372  
 LAB NO: 4946  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

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

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	98
12.7	97
9.5	97
4.76	95
2.38	--
2.00	93
1.19	--
0.841	90
0.595	--
0.42	88
0.297	--
0.177	--
0.149	84
0.074	80

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	95

M.C. (%) : 24

M.C. (%) : 69

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

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

% GRAVEL: 5  
 % SAND: 15  
 % FINES: 80

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

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-135  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1927+325 O/S 4M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 373  
 LAB NO: 4947  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 374  
 LAB NO: 4948  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 375  
 LAB NO: 4949  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	96
0.297	--
0.177	--
0.149	94
0.074	93

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	99
9.5	99
4.76	97
2.38	--
2.00	96
1.19	--
0.841	94
0.595	--
0.42	92
0.297	--
0.177	--
0.149	90
0.074	87

M.C. (%): 9

M.C. (%): 73

M.C. (%): 47

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

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

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

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

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

% GRAVEL: 3  
 % SAND: 10  
 % FINES: 87

CLASSIFICATION:

CLASSIFICATION:  
SILT (ML)

CLASSIFICATION:  
SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-136  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1927+525 O/S 5M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 376  
 LAB NO: 4950  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 377  
 LAB NO: 4951  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 378  
 LAB NO: 4952  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

M.C. (%): 8

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

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

CLASSIFICATION:

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	96
0.074	94

M.C. (%): 33

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

% GRAVEL: 1  
 % SAND: 5  
 % FINES: 94

CLASSIFICATION:  
SILT (ML)

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

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	93
0.074	88

M.C. (%): 29

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

% GRAVEL: 0  
 % SAND: 12  
 % FINES: 88

CLASSIFICATION:  
SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-137  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1927+725 O/S 6M LT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 379  
 LAB NO: 4953  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 380  
 LAB NO: 4954  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 381  
 LAB NO: 4955  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	97
19.0	95
12.7	86
9.5	79
4.76	64
2.38	--
2.00	51
1.19	--
0.841	62
0.595	--
0.42	31
0.297	--
0.177	--
0.149	23
0.074	19

M.C. (%): 8

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: TRACE

% GRAVEL: 36  
 % SAND: 45  
 % FINES: 19

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	97
0.595	--
0.42	97
0.297	--
0.177	--
0.149	96
0.074	94

M.C. (%): 33

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 1  
 % SAND: 5  
 % FINES: 94

CLASSIFICATION:  
 SILT (ML)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	98
2.38	--
2.00	95
1.19	--
0.841	92
0.595	--
0.42	90
0.297	--
0.177	--
0.149	87
0.074	84

M.C. (%): 27

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 2  
 % SAND: 13  
 % FINES: 84

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-138  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-225 17-174  
 HOLE LOCATION: 1927+925 O/S 7M RT  
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 382  
 LAB NO: 4956  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 383  
 LAB NO: 4957  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 384  
 LAB NO: 4958  
 DEPTH: 4.3-4.5  
 TYPE: AUGER

FIELD NO: 385  
 LAB NO: 4959  
 DEPTH: 5.8-6.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	92
19.0	82
12.7	73
9.5	65
4.76	51
2.38	--
2.00	40
1.19	--
0.841	31
0.595	--
0.42	25
0.297	--
0.177	--
0.149	17
0.074	14

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	90
25.4	90
19.0	80
12.7	69
9.5	64
4.76	50
2.38	--
2.00	39
1.19	--
0.841	31
0.595	--
0.42	25
0.297	--
0.177	--
0.149	17
0.074	14

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	94
12.7	89
9.5	86
4.76	78
2.38	--
2.00	71
1.19	--
0.841	65
0.595	--
0.42	61
0.297	--
0.177	--
0.149	55
0.074	52

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	90
12.7	88
9.5	85
4.76	82
2.38	--
2.00	78
1.19	--
0.841	74
0.595	--
0.42	70
0.297	--
0.177	--
0.149	63
0.074	59

M.C. (%): 5

M.C. (%): 6

M.C. (%): 19

M.C. (%): 50

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 49  
 % SAND: 37  
 % FINES: 14

% GRAVEL: 50  
 % SAND: 36  
 % FINES: 14

% GRAVEL: 22  
 % SAND: 26  
 % FINES: 52

% GRAVEL: 18  
 % SAND: 23  
 % FINES: 59

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SANDY SILT WITH  
 GRAVEL (ML)

CLASSIFICATION:  
 SANDY SILT WITH  
 GRAVEL (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-192  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1928+095  
 LOGGED BY: CB DATE COMPLETED: 91.11.13

FIELD NO: 503  
 LAB NO: 5480  
 DEPTH: 1.3-1.5  
 TYPE: AUGER  
 ORGANICS

FIELD NO: 504  
 LAB NO: 5481  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 505  
 LAB NO: 5482  
 DEPTH: 4.4-4.6  
 TYPE: AUGER  
 ORGANICS

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	98
2.38	--
2.00	95
1.19	--
0.841	92
0.595	--
0.42	90
0.297	--
0.177	--
0.149	87
0.074	84

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	99
12.7	97
9.5	96
4.76	95
2.38	--
2.00	93
1.19	--
0.841	92
0.595	--
0.42	90
0.297	--
0.177	--
0.149	88
0.074	86

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	94
12.7	88
9.5	85
4.76	76
2.38	--
2.00	69
1.19	--
0.841	63
0.595	--
0.42	59
0.297	--
0.177	--
0.149	53
0.074	49

M.C. (%): 123

M.C. (%): 37

M.C. (%): 41

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 2  
 % SAND: 14  
 % FINES: 84

% GRAVEL: 5  
 % SAND: 9  
 % FINES: 86

% GRAVEL: 24  
 % SAND: 27  
 % FINES: 49

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-191  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1928+225  
 LOGGED BY: CB DATE COMPLETED: 91.11.13

FIELD NO: 500  
 LAB NO: 5477  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 501  
 LAB NO: 5478  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 502  
 LAB NO: 5479  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	95

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	98
0.074	95

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	95

M.C. (%): 82

M.C. (%): 95

M.C. (%): 96

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 0  
 % SAND: 5  
 % FINES: 95

% GRAVEL: 0  
 % SAND: 5  
 % FINES: 95

% GRAVEL: 0  
 % SAND: 5  
 % FINES: 95

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-190  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1928+375  
 LOGGED BY: CB DATE COMPLETED: 91.11.13

FIELD NO: 497  
 LAB NO: 5474  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 498  
 LAB NO: 5475  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 499  
 LAB NO: 5476  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	97
0.074	96

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	99
0.074	96

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	92

M.C. (%): 159

M.C. (%): 48

M.C. (%): 1077

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: 4  
 % FINES: 96

% GRAVEL: 0  
 % SAND: 8  
 % FINES: 92

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-189  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1928+500  
 LOGGED BY: CB DATE COMPLETED: 91.11.13

FIELD NO: 494  
 LAB NO: 5471  
 DEPTH: 1.3-1.5  
 TYPE: AUGER  
 ORGANIC

FIELD NO: 495  
 LAB NO: 5472  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 496  
 LAB NO: 5473  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	99
1.19	--
0.841	96
0.595	--
0.42	91
0.297	--
0.177	--
0.149	86
0.074	83

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	99
0.074	96

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	97

M.C. (%): 143

M.C. (%): 67

M.C. (%): 38

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 0  
 % SAND: 17  
 % FINES: 83

% GRAVEL: 0  
 % SAND: 4  
 % FINES: 96

% GRAVEL: 0  
 % SAND: 3  
 % FINES: 97

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-188  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1928+600  
 LOGGED BY: CB DATE COMPLETED: 91.11.13

FIELD NO: 491  
 LAB NO: 5468  
 DEPTH: 1.3-1.5  
 TYPE: AUGER  
 100% ORGANIC

FIELD NO: 492  
 LAB NO: 5469  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 493  
 LAB NO: 5470  
 DEPTH: 4.4-4.6  
 TYPE: AUGER  
 ORGANICS

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	93
2.38	--
2.00	87
1.19	--
0.841	79
0.595	--
0.42	73
0.297	--
0.177	--
0.149	67
0.074	65

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	94

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	97

M.C. (%): 148

M.C. (%): 121

M.C. (%): 46

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 7  
 % SAND: 28  
 % FINES: 65

% GRAVEL: 0  
 % SAND: 6  
 % FINES: 94

% GRAVEL: 0  
 % SAND: 3  
 % FINES: 97

CLASSIFICATION:  
 SANDY SILT (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-187  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1928+725  
 LOGGED BY: CB DATE COMPLETED: 91.11.13

FIELD NO: 488  
 LAB NO: 5465  
 DEPTH: 1.3-1.5  
 TYPE: AUGER

FIELD NO: 489  
 LAB NO: 5466  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 490  
 LAB NO: 5467  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	98
0.074	95

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	97

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	97
0.595	--
0.42	96
0.297	--
0.177	--
0.149	95
0.074	94

M.C. (%): 104

M.C. (%): 34

M.C. (%): 39

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: TRACE

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 0  
 % SAND: 5  
 % FINES: 95

% GRAVEL: 0  
 % SAND: 3  
 % FINES: 97

% GRAVEL: 1  
 % SAND: 5  
 % FINES: 94

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-186  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1928+850  
 LOGGED BY: CB DATE COMPLETED: 91.11.13

FIELD NO: 485  
 LAB NO: 5462  
 DEPTH: 1.1-1.3  
 TYPE: AUGER  
 ORGANIC

FIELD NO: 486  
 LAB NO: 5463  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 487  
 LAB NO: 5464  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	96
0.074	93

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	99
0.074	98

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	96

M.C. (%): 109

M.C. (%): 54

M.C. (%): 32

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: 2  
 % FINES: 98

% GRAVEL: 0  
 % SAND: 4  
 % FINES: 96

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-185  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1929+025 O/S 11M L  
 LOGGED BY: CB DATE COMPLETED: 91.11.13

FIELD NO: 482  
 LAB NO: 5459  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 483  
 LAB NO: 5460  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 484  
 LAB NO: 5461  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	99
0.074	98

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	96

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	95
0.074	89

M.C. (%): 25

M.C. (%): 130

M.C. (%): 73

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 0  
 % SAND: 2  
 % FINES: 98

% GRAVEL: 0  
 % SAND: 4  
 % FINES: 96

% GRAVEL: 0  
 % SAND: 11  
 % FINES: 89

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-184  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: SEGMENT 17  
 DRILL UNIT: 17-174  
 HOLE LOCATION: 1929+225 O/S 9M L  
 LOGGED BY: CB DATE COMPLETED: 91.11.13

FIELD NO: 479  
 LAB NO: 5456  
 DEPTH: 0.8-1.0  
 TYPE: AUGER

FIELD NO: 480  
 LAB NO: 5457  
 DEPTH: 2.8-3.0  
 TYPE: AUGER

FIELD NO: 481  
 LAB NO: 5458  
 DEPTH: 4.4-4.6  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	99
9.5	96
4.76	93
2.38	--
2.00	88
1.19	--
0.841	83
0.595	--
0.42	80
0.297	--
0.177	--
0.149	74
0.074	70

M.C. (%): 22

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: TRACE

% GRAVEL: 7  
 % SAND: 22  
 % FINES: 70

CLASSIFICATION:  
SANDY SILT (ML)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	94
9.5	91
4.76	83
2.38	--
2.00	75
1.19	--
0.841	68
0.595	--
0.42	61
0.297	--
0.177	--
0.149	51
0.074	45

M.C. (%): 18

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 17  
 % SAND: 38  
 % FINES: 45

CLASSIFICATION:  
SILTY SAND WITH GRAVEL (SM)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	97
19.0	96
12.7	91
9.5	87
4.76	75
2.38	--
2.00	63
1.19	--
0.841	55
0.595	--
0.42	49
0.297	--
0.177	--
0.149	43
0.074	40

M.C. (%): 16

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 25  
 % SAND: 35  
 % FINES: 40

CLASSIFICATION:  
SILTY SAND WITH GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-183  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1929+325 O/S 9M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.25

FIELD NO: 477  
 LAB NO: 5397  
 DEPTH: 0.9-1.2  
 TYPE: AUGER

FIELD NO: 478  
 LAB NO: 5398  
 DEPTH: 4.0-4.3  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	96

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	97
1.19	--
0.841	96
0.595	--
0.42	95
0.297	--
0.177	--
0.149	92
0.074	90

M.C. (%) : 31

M.C. (%) : 36

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 0  
 % SAND: 4  
 % FINES: 96

% GRAVEL: 1  
 % SAND: 9  
 % FINES: 90

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-182  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1929+450 O/S 8M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.25

FIELD NO: 475  
 LAB NO: 5395  
 DEPTH: 0.9-1.2  
 TYPE: AUGER  
 80-85% ORGANIC

FIELD NO: 476  
 LAB NO: 5396  
 DEPTH: 3.9-4.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	94
2.38	--
2.00	89
1.19	--
0.841	84
0.595	--
0.42	81
0.297	--
0.177	--
0.149	77
0.074	74

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	95
9.5	91
4.76	85
2.38	--
2.00	82
1.19	--
0.841	80
0.595	--
0.42	79
0.297	--
0.177	--
0.149	77
0.074	75

M.C. (%) : 75

M.C. (%) : 31

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 6  
 % SAND: 19  
 % FINES: 74

% GRAVEL: 15  
 % SAND: 11  
 % FINES: 75

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILT WITH GRAVEL  
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-181  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1929+550 O/S 10M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.25

FIELD NO: 473  
 LAB NO: 5393  
 DEPTH: 0.9-1.2  
 TYPE: AUGER

FIELD NO: 474  
 LAB NO: 5394  
 DEPTH: 3.9-4.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	98
2.38	--
2.00	98
1.19	--
0.841	97
0.595	--
0.42	96
0.297	--
0.177	--
0.149	95
0.074	93

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	99
0.074	98

M.C. (%) : 24

M.C. (%) : 26

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 2  
 % SAND: 5  
 % FINES: 93

% GRAVEL: 0  
 % SAND: 2  
 % FINES: 98

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-180  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1929+650 O/S 16M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.25

FIELD NO: 471  
 LAB NO: 5391  
 DEPTH: 0.9-1.2  
 TYPE: AUGER

FIELD NO: 472  
 LAB NO: 5392  
 DEPTH: 4.0-4.3  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	94
0.074	87

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	97
9.5	96
4.76	95
2.38	--
2.00	93
1.19	--
0.841	91
0.595	--
0.42	89
0.297	--
0.177	--
0.149	88
0.074	81

M.C. (%) : 23

M.C. (%) : 21

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 0  
 % SAND: 13  
 % FINES: 87

% GRAVEL: 5  
 % SAND: 13  
 % FINES: 81

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-179  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1929+750 O/S 18M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 469  
 LAB NO: 5389  
 DEPTH: 0.9-1.2  
 TYPE: AUGER

FIELD NO: 470  
 LAB NO: 5390  
 DEPTH: 3.7-4.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	82
19.0	74
12.7	68
9.5	64
4.76	60
2.38	--
2.00	57
1.19	--
0.841	55
0.595	--
0.42	53
0.297	--
0.177	--
0.149	49
0.074	46

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	93
19.0	88
12.7	86
9.5	83
4.76	79
2.38	--
2.00	75
1.19	--
0.841	73
0.595	--
0.42	71
0.297	--
0.177	--
0.149	68
0.074	66

M.C. (%): 12

M.C. (%): 18

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 40  
 % SAND: 14  
 % FINES: 46

% GRAVEL: 21  
 % SAND: 13  
 % FINES: 66

CLASSIFICATION:  
 SILTY GRAVEL (GM)

CLASSIFICATION:  
 GRAVELLY SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-178  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1929+850 O/S 1M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 467  
 LAB NO: 5387  
 DEPTH: 1.3-1.6  
 TYPE: AUGER

FIELD NO: 468  
 LAB NO: 5388  
 DEPTH: 3.5-3.8  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	97
1.19	--
0.841	95
0.595	--
0.42	94
0.297	--
0.177	--
0.149	90
0.074	88

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	98
9.5	98
4.76	98
2.38	--
2.00	97
1.19	--
0.841	95
0.595	--
0.42	94
0.297	--
0.177	--
0.149	91
0.074	90

M.C. (%): 43

M.C. (%): 49

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 1  
 % SAND: 11  
 % FINES: 88

% GRAVEL: 2  
 % SAND: 8  
 % FINES: 90

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-177  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1929+950 O/S 2M RT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 465  
 LAB NO: 5385  
 DEPTH: 0.9-1.2  
 TYPE: AUGER

FIELD NO: 466  
 LAB NO: 5386  
 DEPTH: 3.9-4.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	97
0.074	92

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	97
2.38	--
2.00	94
1.19	--
0.841	90
0.595	--
0.42	85
0.297	--
0.177	--
0.149	76
0.074	71

M.C. (%): 54

M.C. (%): 25

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 0  
 % SAND: 8  
 % FINES: 92

% GRAVEL: 3  
 % SAND: 26  
 % FINES: 71

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-176  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1930+050 O/S 2M RT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 463  
 LAB NO: 5383  
 DEPTH: 0.9-1.2  
 TYPE: AUGER  
 75% ORGANICS

FIELD NO: 464  
 LAB NO: 5384  
 DEPTH: 3.9-4.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	97
0.297	--
0.177	--
0.149	92
0.074	89

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	96
12.7	94
9.5	90
4.76	83
2.38	--
2.00	74
1.19	--
0.841	68
0.595	--
0.42	64
0.297	--
0.177	--
0.149	63
0.074	57

M.C. (%): 71

M.C. (%): 21

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: TRACE

% GRAVEL: 0  
 % SAND: 11  
 % FINES: 89

% GRAVEL: 17  
 % SAND: 27  
 % FINES: 57

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SANDY SILT WITH  
 GRAVEL (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-175  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1930+150  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 461  
 LAB NO: 5381  
 DEPTH: 1.1-1.4  
 TYPE: AUGER

FIELD NO: 462  
 LAB NO: 5382  
 DEPTH: 3.9-4.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	86
12.7	75
9.5	68
4.76	57
2.38	--
2.00	49
1.19	--
0.841	41
0.595	--
0.42	34
0.297	--
0.177	--
0.149	24
0.074	19

101.6	--
76.2	--
50.8	--
38.1	100
25.4	85
19.0	85
12.7	83
9.5	80
4.76	71
2.38	--
2.00	63
1.19	--
0.841	56
0.595	--
0.42	50
0.297	--
0.177	--
0.149	44
0.074	34

M.C. (%): 7

M.C. (%): 12

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 43  
 % SAND: 38  
 % FINES: 19

% GRAVEL: 29  
 % SAND: 37  
 % FINES: 34

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-174  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1930+250 O/S 5M RT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 459  
 LAB NO: 5379  
 DEPTH: 0.9-1.2  
 TYPE: AUGER

FIELD NO: 460  
 LAB NO: 5380  
 DEPTH: 3.9-4.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	97
0.074	94

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	96

M.C. (%): 36

M.C. (%): 56

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 0  
 % SAND: 6  
 % FINES: 94

% GRAVEL: 0  
 % SAND: 4  
 % FINES: 96

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-173  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1930+373  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 457  
 LAB NO: 5377  
 DEPTH: 0.9-1.2  
 TYPE: AUGER

FIELD NO: 458  
 LAB NO: 5378  
 DEPTH: 3.0-3.3  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	95
0.074	93

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	92
12.7	82
9.5	76
4.76	67
2.38	--
2.00	59
1.19	--
0.841	53
0.595	--
0.42	47
0.297	--
0.177	--
0.149	43
0.074	35

M.C. (%): 25

M.C. (%): 11

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: TRACE

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 1  
 % SAND: 6  
 % FINES: 93

% GRAVEL: 33  
 % SAND: 32  
 % FINES: 35

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-172  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1930+475 O/S 17M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 455  
 LAB NO: 5375  
 DEPTH: 1.1-1.4  
 TYPE: AUGER

FIELD NO: 456  
 LAB NO: 5376  
 DEPTH: 3.9-4.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	92
12.7	90
9.5	90
4.76	88
2.38	--
2.00	86
1.19	--
0.841	84
0.595	--
0.42	82
0.297	--
0.177	--
0.149	76
0.074	71

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	97
12.7	85
9.5	78
4.76	67
2.38	--
2.00	58
1.19	--
0.841	51
0.595	--
0.42	45
0.297	--
0.177	--
0.149	37
0.074	33

M.C. (%) : 60

M.C. (%) : 11

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 12  
 % SAND: 16  
 % FINES: 71

% GRAVEL: 33  
 % SAND: 34  
 % FINES: 33

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-171  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1930+575 O/S 18M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 453  
 LAB NO: 5373  
 DEPTH: 0.9-1.2  
 TYPE: AUGER

FIELD NO: 454  
 LAB NO: 5374  
 DEPTH: 3.9-4.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	96

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	88
19.0	84
12.7	75
9.5	72
4.76	62
2.38	--
2.00	55
1.19	--
0.841	47
0.595	--
0.42	40
0.297	--
0.177	--
0.149	32
0.074	28

M.C. (%) : 24

M.C. (%) : 8

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: TRACE

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 0  
 % SAND: 4  
 % FINES: 96

% GRAVEL: 38  
 % SAND: 35  
 % FINES: 28

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-170  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1930+675 O/S 13M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 451  
 LAB NO: 5371  
 DEPTH: 0.9-1.2  
 TYPE: AUGER

FIELD NO: 452  
 LAB NO: 5372  
 DEPTH: 3.9-4.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	86
19.0	75
12.7	70
9.5	62
4.76	50
2.38	--
2.00	42
1.19	--
0.841	35
0.595	--
0.42	30
0.297	--
0.177	--
0.149	23
0.074	19

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	97
19.0	92
12.7	88
9.5	84
4.76	74
2.38	--
2.00	64
1.19	--
0.841	55
0.595	--
0.42	48
0.297	--
0.177	--
0.149	37
0.074	31

M.C. (%): 6

M.C. (%): 9

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 50  
 % SAND: 30  
 % FINES: 19

% GRAVEL: 26  
 % SAND: 42  
 % FINES: 31

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-169  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: SEGMENT 17  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1930+775 O/S 11M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 449  
 LAB NO: 5369  
 DEPTH: 0.9-1.2  
 TYPE: AUGER

FIELD NO: 450  
 LAB NO: 5370  
 DEPTH: 3.7-4.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	96
0.297	--
0.177	--
0.149	93
0.074	88

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	89
25.4	89
19.0	89
12.7	85
9.5	81
4.76	74
2.38	--
2.00	66
1.19	--
0.841	58
0.595	--
0.42	51
0.297	--
0.177	--
0.149	41
0.074	36

M.C. (%): 35

M.C. (%): 10

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 0  
 % SAND: 11  
 % FINES: 88

% GRAVEL: 26  
 % SAND: 38  
 % FINES: 36

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-168  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: SEGMENT 17  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1930+876 O/S 1M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 448  
 LAB NO: 5368  
 DEPTH: 0.9-1.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	85
19.0	77
12.7	73
9.5	68
4.76	58
2.38	--
2.00	50
1.19	--
0.841	43
0.595	--
0.42	37
0.297	--
0.177	--
0.149	29
0.074	26

M.C. (%): 11

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 42  
 % SAND: 32  
 % FINES: 26

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-167  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: SEGMENT 17  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1930+950  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 446  
 LAB NO: 5366  
 DEPTH: 0.9-1.2  
 TYPE: AUGER

FIELD NO: 447  
 LAB NO: 5367  
 DEPTH: 3.9-4.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	98
9.5	97
4.76	95
2.38	--
2.00	92
1.19	--
0.841	89
0.595	--
0.42	86
0.297	--
0.177	--
0.149	82
0.074	78

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	92
19.0	89
12.7	84
9.5	81
4.76	75
2.38	--
2.00	71
1.19	--
0.841	67
0.595	--
0.42	64
0.297	--
0.177	--
0.149	59
0.074	56

M.C. (%) : 21

M.C. (%) : 23

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 5  
 % SAND: 16  
 % FINES: 78

% GRAVEL: 25  
 % SAND: 19  
 % FINES: 56

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 GRAVELLY SILT  
 WITH SAND (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-166  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: SEGMENT 17  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1931+050 O/S 19M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 444  
 LAB NO: 5364  
 DEPTH: 1.0-1.3  
 TYPE: AUGER

FIELD NO: 445  
 LAB NO: 5365  
 DEPTH: 4.0-4.3  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	95
9.5	90
4.76	82
2.38	--
2.00	75
1.19	--
0.841	68
0.595	--
0.42	64
0.297	--
0.177	--
0.149	56
0.074	49

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	97
12.7	90
9.5	88
4.76	79
2.38	--
2.00	72
1.19	--
0.841	66
0.595	--
0.42	62
0.297	--
0.177	--
0.149	60
0.074	51

M.C. (%) : 18

M.C. (%) : 21

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 18  
 % SAND: 33  
 % FINES: 49

% GRAVEL: 21  
 % SAND: 28  
 % FINES: 51

CLASSIFICATION:  
 SILTY SAND WITH  
 GRAVEL (SM)

CLASSIFICATION:  
 SANDY SILT WITH  
 GRAVEL (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-165  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: SEGMENT 17  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1931+150 O/S 18M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 442  
 LAB NO: 5362  
 DEPTH: 0.9-1.2  
 TYPE: AUGER

FIELD NO: 443  
 LAB NO: 5363  
 DEPTH: 3.9-4.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	97
0.595	--
0.42	96
0.297	--
0.177	--
0.149	92
0.074	89

101.6	--
76.2	--
50.8	--
38.1	100
25.4	87
19.0	87
12.7	87
9.5	87
4.76	87
2.38	--
2.00	86
1.19	--
0.841	85
0.595	--
0.42	83
0.297	--
0.177	--
0.149	80
0.074	77

M.C. (%): 43

M.C. (%): 42

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 0  
 % SAND: 10  
 % FINES: 89

% GRAVEL: 13  
 % SAND: 9  
 % FINES: 77

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT WITH GRAVEL  
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-164  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: SEGMENT 17  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1931+250 O/S 1M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 440  
 LAB NO: 5360  
 DEPTH: 0.7-1.0  
 TYPE: AUGER

FIELD NO: 441  
 LAB NO: 5361  
 DEPTH: 4.0-4.3  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	96
0.074	94

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	98
2.38	--
2.00	97
1.19	--
0.841	94
0.595	--
0.42	91
0.297	--
0.177	--
0.149	83
0.074	78

M.C. (%): 47

M.C. (%): 59

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 0  
 % SAND: 6  
 % FINES: 94

% GRAVEL: 2  
 % SAND: 20  
 % FINES: 78

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-163  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: SEGMENT 17  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1931+350 O/S 5M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 438  
 LAB NO: 5358  
 DEPTH: 0.7-1.0  
 TYPE: AUGER

FIELD NO: 439  
 LAB NO: 5359  
 DEPTH: 3.9-4.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	96
0.595	--
0.42	94
0.297	--
0.177	--
0.149	90
0.074	87

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	95
12.7	91
9.5	89
4.76	84
2.38	--
2.00	79
1.19	--
0.841	76
0.595	--
0.42	74
0.297	--
0.177	--
0.149	72
0.074	66

M.C. (%) : 29

M.C. (%) : 44

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 1  
 % SAND: 12  
 % FINES: 87

% GRAVEL: 16  
 % SAND: 18  
 % FINES: 66

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SANDY SILT WITH  
 GRAVEL (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-162  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: SEGMENT 17  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1931+452 O/S 13M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 435  
 LAB NO: 5355  
 DEPTH: 0.7-1.0  
 TYPE: AUGER

FIELD NO: 436  
 LAB NO: 5356  
 DEPTH: 3.3-3.6  
 TYPE: AUGER

FIELD NO: 437  
 LAB NO: 5357  
 DEPTH: 3.9-4.2  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	99
9.5	97
4.76	95
2.38	--
2.00	91
1.19	--
0.841	88
0.595	--
0.42	85
0.297	--
0.177	--
0.149	79
0.074	75

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	81
12.7	79
9.5	78
4.76	75
2.38	--
2.00	72
1.19	--
0.841	70
0.595	--
0.42	68
0.297	--
0.177	--
0.149	65
0.074	62

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	99
9.5	97
4.76	97
2.38	--
2.00	96
1.19	--
0.841	92
0.595	--
0.42	89
0.297	--
0.177	--
0.149	85
0.074	81

M.C. (%) : 36

M.C. (%) : 24

M.C. (%) : 26

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 5  
 % SAND: 19  
 % FINES: 75

% GRAVEL: 25  
 % SAND: 13  
 % FINES: 62

% GRAVEL: 3  
 % SAND: 17  
 % FINES: 81

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 GRAVELLY SILT  
 (ML)

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-161  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: SEGMENT 17  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1931+550 O/S 11M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 433  
 LAB NO: 535  
 DEPTH: 0.7-1.0  
 TYPE: AUGER

FIELD NO: 434  
 LAB NO: 5354  
 DEPTH: 3.0-3.3  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	95
12.7	69
9.5	54
4.76	35
2.38	--
2.00	20
1.19	--
0.841	17
0.595	--
0.42	15
0.297	--
0.177	--
0.149	14
0.074	6

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	83
19.0	83
12.7	73
9.5	65
4.76	46
2.38	--
2.00	34
1.19	--
0.841	26
0.595	--
0.42	20
0.297	--
0.177	--
0.149	12
0.074	9

M.C. (%): 5

M.C. (%): 5

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS  
 LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 65  
 % SAND: 28  
 % FINES: 6

% GRAVEL: 54  
 % SAND: 37  
 % FINES: 9

CLASSIFICATION:  
 POORLY GRADED  
 GRAVEL WITH SILT  
 & SAND (GP-GM)

CLASSIFICATION:  
 WELL-GRADED  
 GRAVEL WITH SILT  
 & SAND (GW-GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-160  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: SEGMENT 17  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1931+650 O/S 11M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 432  
 LAB NO: 5352  
 DEPTH: 0.7-1.0  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	87
12.7	73
9.5	63
4.76	47
2.38	--
2.00	37
1.19	--
0.841	29
0.595	--
0.42	24
0.297	--
0.177	--
0.149	11
0.074	7

M.C. (%): 9

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 53  
 % SAND: 40  
 % FINES: 7

CLASSIFICATION:  
 POORLY GRADED  
 GRAVEL WITH SILT  
 & SAND (GP-GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-159  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: SEGMENT 17  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1931+775 O/S 7M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 430  
 LAB NO: 5350  
 DEPTH: 1.1-1.4  
 TYPE: AUGER

FIELD NO: 431  
 LAB NO: 5351  
 DEPTH: 2.8-3.1  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	92
0.074	85

101.6	--
76.2	--
50.8	100
38.1	74
25.4	74
19.0	74
12.7	67
9.5	62
4.76	54
2.38	--
2.00	48
1.19	--
0.841	45
0.595	--
0.42	44
0.297	--
0.177	--
0.149	38
0.074	33

M.C. (%) : 36

M.C. (%) : 15

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: TRACE

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 0  
 % SAND: 15  
 % FINES: 85

% GRAVEL: 46  
 % SAND: 21  
 % FINES: 33

CLASSIFICATION:  
 SILT WITH SAND  
 (ML)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-158  
 CLIENT: SHAKWAK PROJECT  
 PROJECT NAME: SEGMENT 17  
 PROJECT LOCATION: A/H KM 1904-1932  
 DRILL UNIT: 17-132  
 HOLE LOCATION: 1931+878 O/S 9M LT  
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 428  
 LAB NO: 5348  
 DEPTH: 0.5-0.8  
 TYPE: AUGER

FIELD NO: 429  
 LAB NO: 5349  
 DEPTH: 3.5-3.8  
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	97
0.297	--
0.177	--
0.149	92
0.074	87

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	81
25.4	74
19.0	71
12.7	58
9.5	56
4.76	48
2.38	--
2.00	42
1.19	--
0.841	38
0.595	--
0.42	31
0.297	--
0.177	--
0.149	23
0.074	18

M.C. (%) : 44

M.C. (%) : 16

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

LIMITS

LIQUID: --  
 PLASTIC: --  
 P.I.: N.P.

% GRAVEL: 0  
 % SAND: 13  
 % FINES: 87

% GRAVEL: 52  
 % SAND: 30  
 % FINES: 18

CLASSIFICATION:  
 SILT (ML)

CLASSIFICATION:  
 SILTY GRAVEL  
 WITH SAND (GM)