HIGHWAY CONSTRUCTION

km 1949.6 to km 1966
ALASKA HIGHWAY, Y.T.

VOLUME 1
CENTRELINE TESTING

This Data Package prepared for project viewing:

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GEOTECHNICAL INVESTIGATION
HIGHWAY CONSTRUCTION
km 1949.6 to km 1966, ALASKA HIGHWAY, Y.T.
CENTRELINE, GRANULAR & BORROW TESTING

CONTENTS

VOLUME 1

Subsurface exploration and testing report sheets are provided. The reports for the centreline and backslope holes are arranged according to project location, starting at km 1949+625 and increasing to km 1965+595.

1990 testing

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	TEST HOLES 180 to 185	shown with prefix 110-
	TEST HOLES 190 to 202	shown with prefix 111-
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Subsurface exploration and testing report sheets are provided along with check test results from 1992 pit run production.

1992 testing

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Subsurface exploration and testing report sheets are provided.

1990 testing

1950+000	TEST HOLES 186 to 189	shown with prefix 110- and 111-
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GEOTECHNICAL INVESTIGATION
HIGHWAY CONSTRUCTION
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INTRODUCTION

GEOTECHNICAL INVESTIGATION
HIGHWAY CONSTRUCTION
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GEOTECHNICAL INVESTIGATION DATA

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

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

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

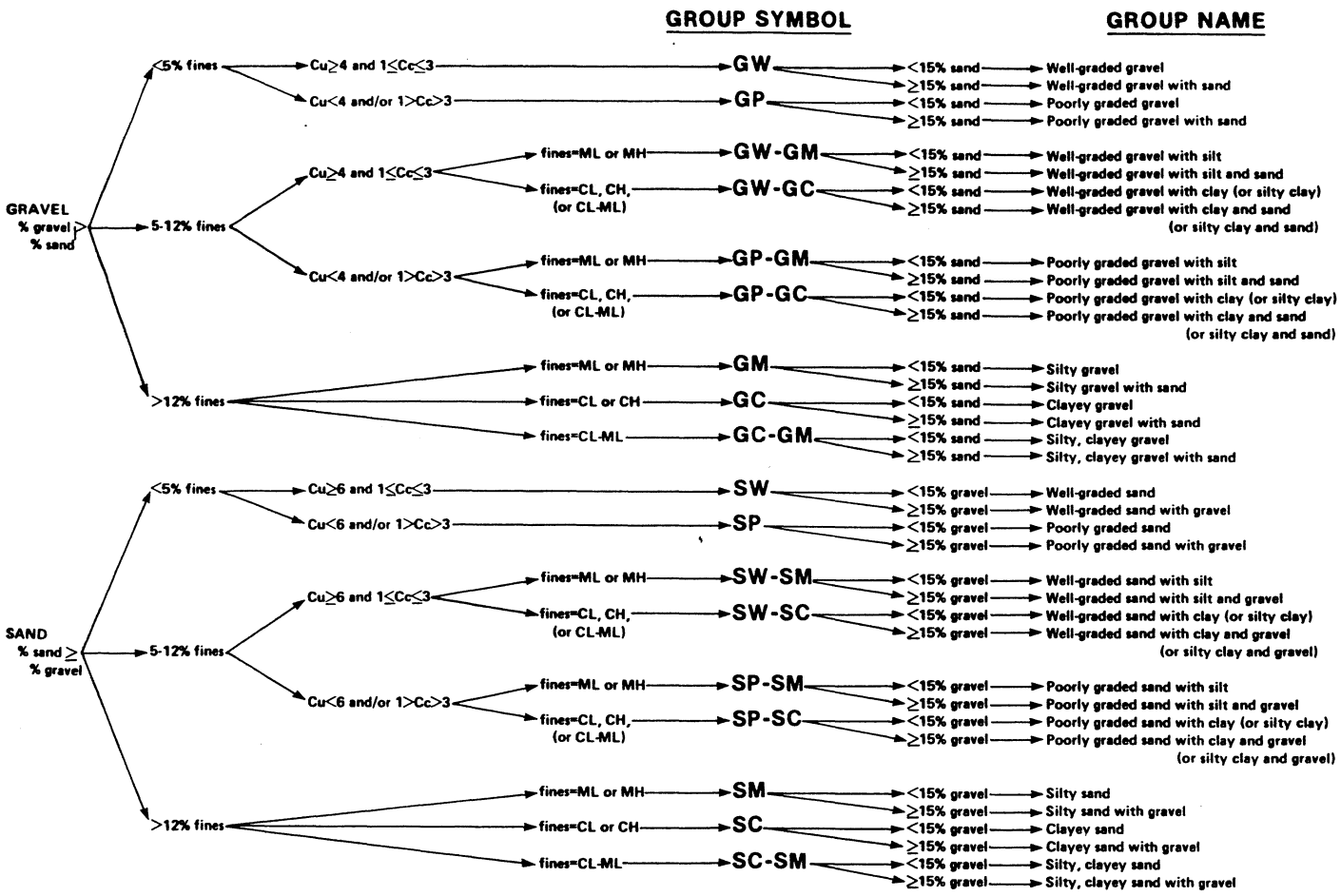
These descriptions are not intended to be conclusive as to the nature of any material encountered, or to conditions between or around the test borings/pits.

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

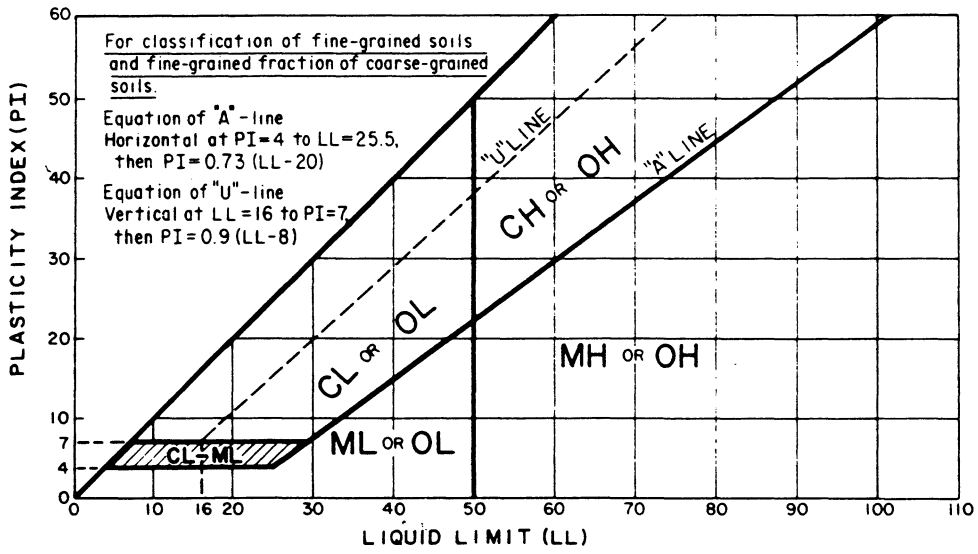
CRITERIA FOR ASSIGNING GROUP SYMBOLS AND GROUP NAMES USING LABORATORY TESTS [a]				SOIL CLASSIFICATION	
				GROUP SYMBOL	GROUP NAME [b]
COARSE-GRAINED SOILS more than 50% retained on No. 200 sieve	GRAVELS More than 50% of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS Less than 5% fines [c]	$C_u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

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

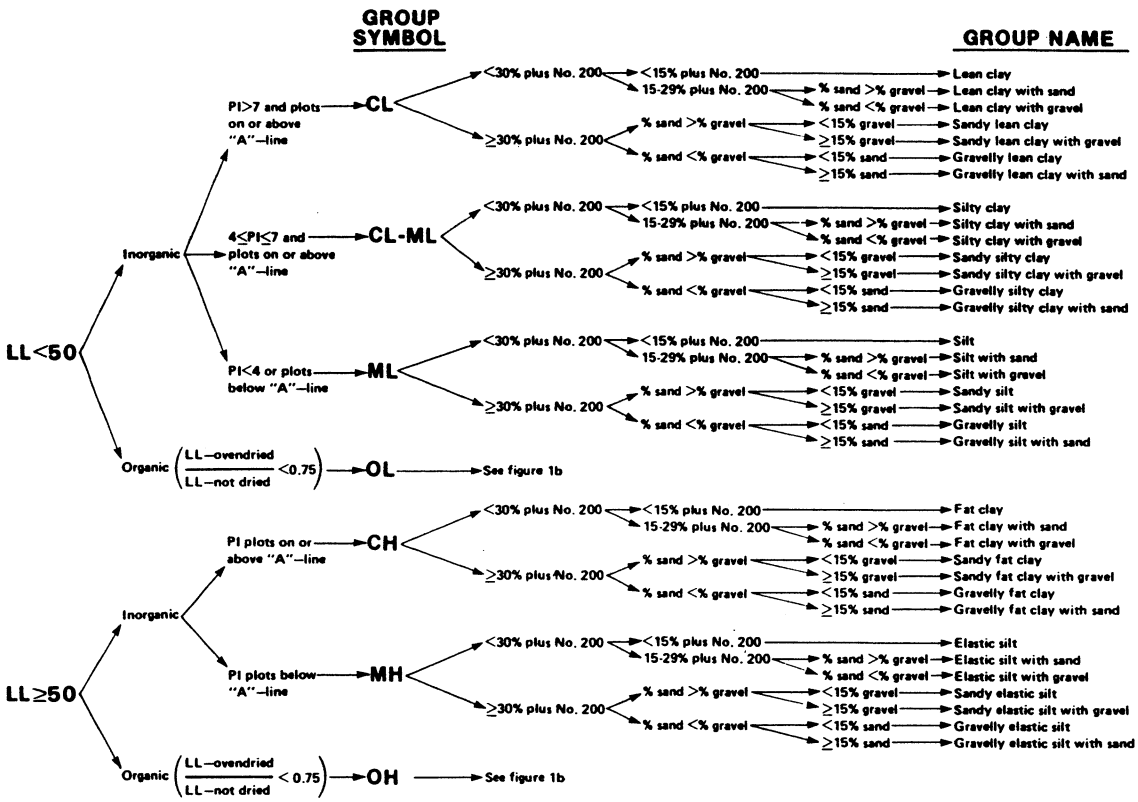
Soil classification chart



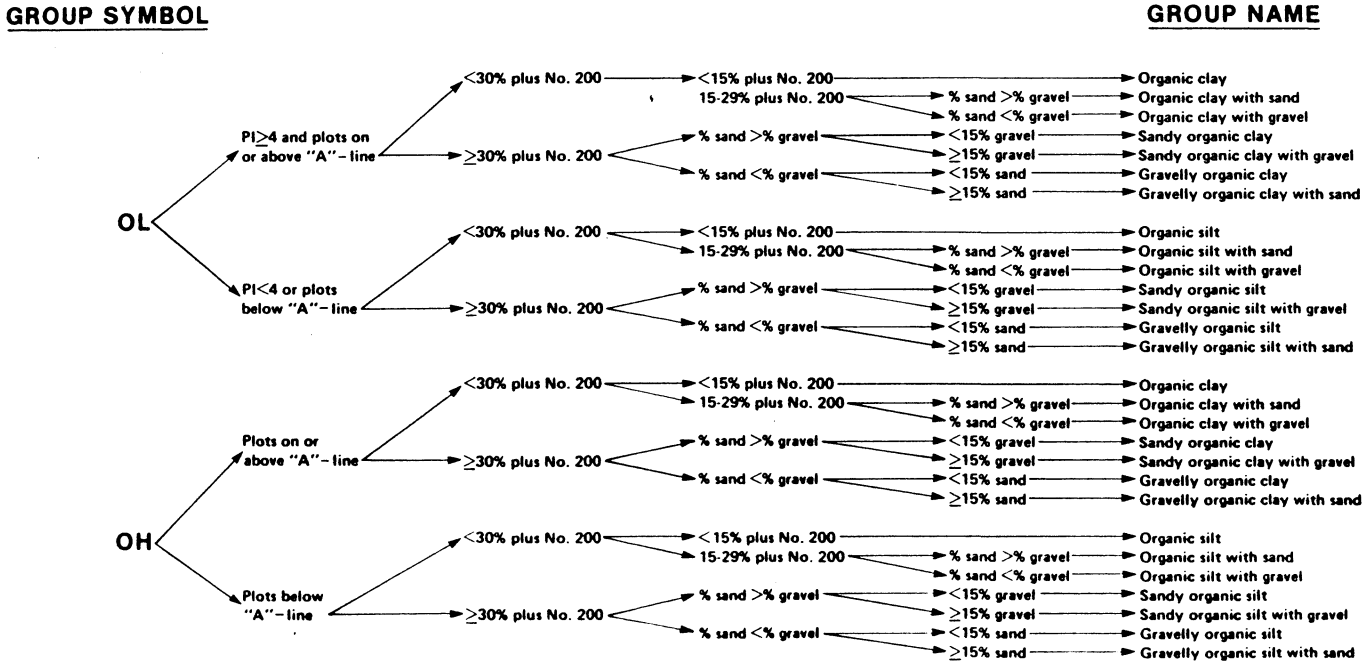
Flow chart for classifying coarse-grained soil.



Plasticity chart.



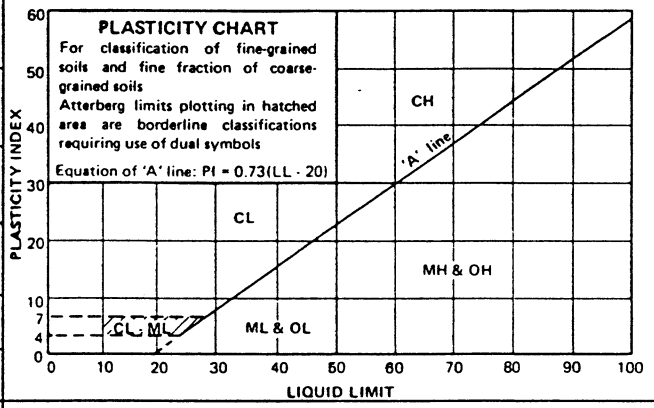
Flow chart for classifying fine-grained soil.



Flow chart for classifying organic soil.

UNIFIED SOIL CLASSIFICATION†

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES	CLASSIFICATION CRITERIA	
COARSE-GRAINED SOILS More than 50% retained on No. 200 sieve*	GRAVELS 50% or more of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines	Classification on basis of percentage of fines Less than 5% pass No. 200 sieve GW, GP, SW, SP More than 12% pass No. 200 sieve GM, GC, SM, SC 5% to 12% pass No. 200 sieve Borderline classification requiring use of dual symbols	$C_u = D_{60}/D_{10}$ Greater than 4; $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3
			GP	Poorly-graded gravels and gravel-sand mixtures, little or no fines		Not meeting both criteria for GW
		GRAVELS WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures		Atterberg limits plot below 'A' line or plasticity index less than 4
			GC	Clayey gravels, gravel-sand clay mixtures		Atterberg limits plot above 'A' line and plasticity index greater than 7
	SANDS More than 50% of coarse fraction passes No. 4 sieve	CLEAN SANDS	SW	Well-graded sands and gravelly sands, little or no fines		$C_u = D_{60}/D_{10}$ Greater than 6; $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3
			SP	Poorly-graded sands and gravelly sands, little or no fines		Not meeting both criteria for SW
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures		Atterberg limits plot below 'A' line or plasticity index less than 4
			SC	Clayey sands, sand-clay mixtures		Atterberg limits plot above 'A' line and plasticity index greater than 7
FINE-GRAINED SOILS 50% or more passes No. 200 sieve*	SILTS AND CLAYS Liquid limit 50% or less		ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands	Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols	
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays		
			OL	Organic silts and organic silty clays of low plasticity		
	SILTS AND CLAYS Liquid limit greater than 50%		MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts		
			CH	Inorganic clay of high plasticity, fat clays		
			OH	Organic clays of medium to high plasticity		
HIGHLY ORGANIC SOILS			PT	Peat, muck and other highly organic soils		



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

GROUND ICE DESCRIPTION

ICE NOT VISIBLE

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

VISIBLE ICE LESS THAN 50% BY VOLUME

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

VISIBLE ICE GREATER THAN 50% BY VOLUME

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

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

LEGEND
Soil  Ice 

GEOTECHNICAL INVESTIGATION
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CENTRELINE TESTING

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 108-87
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1949+625 o/s 1m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill -easy grindy drilling						
1.0							1.0
	SANDY SILT -gray -wet						
2.0							2.0
	ORGANIC MATERIAL -wet						
	SILT WITH SAND (ML) -gray -frozen with visible ice	☒	187	● ▲	ML		
3.0							3.0
	END HOLE at 3.2m -refusal -on existing road						
4.0							4.0
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 3.2 m	COMPLETE 90/10/05
	LOGGED BY JM	DWG NO.
		Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 110-180
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1949+625 o/s 15m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -wet						0.0
	SILT (ML) -organics -brown -wet -easy drilling						
1.0	-frozen with visible ice below 1.0m -tighter drilling -13mm ice lenses	☒	345	● ▲	ML		1.0
2.0							2.0
3.0		☒	346	●			3.0
4.0							4.0
		☒	347	●			
	END HOLE at 4.6m -willow, spruce and poplar cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/16
	LOGGED BY JM	DWG NO.
		Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 108-88
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION. STA 1949+850 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill -grindy easy drilling						
1.0							1.0
	-water below 1.7m -smooth easy drilling				▼		
2.0	SILTY GRAVEL WITH SAND (GM) -gray -wet	☒	188	● ▲	GM		2.0
	ORGANIC MATERIAL -black -wet						
	ORGANIC SANDY SILT -wet						
3.0	-frozen with visible ice below 3.1m -tighter drilling						3.0
	SILTY SAND -frozen with visible ice						
4.0	GRAVELLY SILTY SAND -frozen						4.0
	-saturated below 4.4m	☒	189	●			
	END HOLE at 4.6m -on existing road						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/05
	LOGGED BY JM	DWG NO. Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 110-181
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1949+850 o/s 15m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SANDY SILT (ML) -organics -wet -frozen with visible ice below 0.6m -tight drilling	☒	348	▲ ●	ML		
1.0							1.0
2.0	SILTY SAND -frozen -easy drilling						2.0
	-visible ice below 2.7m	☒	349	●			
3.0							3.0
	ICE WITH SOIL						
4.0							4.0
	SILTY SAND -frozen	☒	350	●			
	END HOLE at 4.6m -spruce cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/16
	LOGGED BY JM	DWG NO.
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 108-89
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1949+960 o/s 18m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -in rock pit						0.0
	END HOLE at 0.4m -refusal						
1.0							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 0.4 m	COMPLETE 90/10/06	
	LOGGED BY JM	DWG NO.	Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 108-90
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1950+060 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	SILTY GRAVEL WITH SAND (GM) -brown -damp						0.0
1.0		☒	190 ● ▲		GM		1.0
	DECOMPOSED ROCK -harder grindy drilling						
	END HOLE at 1.8m -refusal						
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 1.8 m	COMPLETE 90/10/06
	LOGGED BY JM	DWG NO.	Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 108-91
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1950+165 o/s 2m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	GRAVEL -pitrun road fill						
1.0							1.0
	GRAVELLY SILT -gray -damp -water below 1.7m						
2.0							2.0
	SILTY GRAVEL -brown -saturated						
3.0							3.0
	ORGANIC MATERIAL						
	SILTY GRAVEL WITH SAND (GM) -gray -wet -some organics -smooth easy drilling						
4.0		⊠	191	●	GM		4.0
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 7.6 m	COMPLETE 90/10/06
	LOGGED BY JM	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 108-91
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1950+165 o/s 2m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
6.5	SAND -black -saturated -easy smooth drilling						7.0
7.5	END HOLE at 7.6m -on existing road						8.0
8.5							9.0
9.5							10.0
10.5							11.0
11.5							12.0
12.5							

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 7.6 m	COMPLETE 90/10/06
	LOGGED BY JM	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 110-182
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1950+175 o/s 15m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SANDY SILT (ML) -organics -brown -frozen below 0.6m						
1.0	-visible ice below 1.2m -tight drilling	☒	351	▲ ●	ML		1.0
2.0	-wet below 2.0m -easy drilling						2.0
		☒	352	●			
3.0							3.0
	GRAVELLY SAND -saturated						
4.0		☒	353	●			4.0
	END HOLE at 4.6m -willow and spruce cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/16
	LOGGED BY JM	DWG NO.	Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 108-92
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1950+350 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -ROAD FILL -damp -easy drilling						
1.0	-moist below 1.1m						1.0
	ORGANIC MATERIAL -wet						
2.0	SILT WITH SAND (ML) -gray -moist to wet						2.0
	-saturated below 2.4m	⊠	192	● ▲	ML		
	-frozen with visible ice below 2.7m -tighter drilling						
3.0							3.0
	SILTY SAND -gray -frozen						
4.0							4.0
		⊠	193	●			
	END HOLE at 4.6m -on existing road						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/06	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 110-183
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1950+350 o/s 14m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -organics -wet -frozen with visible ice below 0.6m -tight drilling						
1.0		☒	354		ML		1.0
2.0	SILT WITH WOOD -frozen with visible ice						2.0
3.0		☒	355				3.0
4.0	GRAVELLY SAND -frozen						4.0
		☒	356				
	END HOLE at 4.6m -willow and spruce cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/16
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 108-93
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1950+550 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill -damp						
1.0	-moist below 1.0m						1.0
	ORGANIC MATERIAL -wet						
	SILT (ML) -gray -wet						
2.0	-smooth easy drilling -saturated below 1.7m -frozen with visible ice below 2.2m -tighter drilling	X	194	● ▲	ML		2.0
	SILTY SAND -gray -frozen						
3.0	END HOLE at 3.0m -on existing road						3.0
4.0							4.0
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 3.0 m	COMPLETE 90/10/06
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 110-184
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1950+560 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -moist -frozen with visible ice below 0.6m -tight drilling						
1.0		☒	357	● ▲	ML		1.0
2.0							2.0
3.0		☒	358	●			3.0
4.0	ICE WITH SOIL						4.0
	SANDY SILT -gray -saturated -easy drilling	☒	359	●			
	END HOLE at 4.6m -spruce and willow cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/16	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 108-94A
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1950+685 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill -damp						
1.0	-saturated below 1.5m						1.0
2.0	ORGANIC MATERIAL -wet						2.0
	SILT WITH SAND (ML) -some organics -gray -moist -wet below 2.4m -easy drilling -frozen with visible ice below 2.8m -tight drilling	☒	195	● ▲	ML		
3.0	ORGANIC MATERIAL -frozen	☒	196	●			3.0
	END HOLE at 3.7m -refusal -on existing road						
4.0							4.0
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 3.7 m	COMPLETE 90/10/06
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 110-185
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1950+700 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -organics -wet -frozen with visible ice below 0.6m -tight drilling	☒	360	▲ ●	ML		
1.0							1.0
2.0	ICE WITH SOIL -approximately half and half						2.0
		☒	361	●			
3.0							3.0
	GRAVELLY SILTY SAND -gray -frozen -easier drilling	☒	362	●			
4.0							4.0
	END HOLE at 4.6m -willow and spruce cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/16	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 108-94B
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1950+860 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM) -damp -weathered bedrock -easy drilling						0.0
1.0		☒	197	● ▲	GW-GM		1.0
2.0	-put on finger bit at 2.5m -easy drilling						2.0
3.0		☒	196	●			3.0
	END HOLE at 3.2m -refusal -on side of existing road						
4.0							4.0
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 3.2 m	COMPLETE 90/10/06
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-190
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1950+885 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SAND WITH ASH -brown -moist						
1.0	SILT WITH SAND (ML) -organics -moist	☒	365	▲ ●	ML		1.0
2.0	-frozen with visible ice below 1.8m -tight drilling below 1.8m						2.0
3.0		☒	366	▲ ●	ML		3.0
	SILTY SAND -organics -brown -frozen with visible ice						
4.0	-frozen with out ice below 4.2m	☒	367	●			4.0
	END HOLE at 4.6m -willow and poplar cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/17
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 108-95
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1950+950 o/s 25m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -dry -hard drilling						0.0
1.0	-easyier drilling below 1.0m	⊠	199	●			1.0
2.0	-layered -maximum 25mm material augered up						2.0
3.0	-moist to wet below 3.0m -water seeping in below 3.0m				▼		3.0
4.0		⊠	200	●			4.0
	END HOLE at 4.6m -in rock cut						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/06	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 108-96
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1951+050 o/s 40m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -damp -grindy drilling -maximum 25mm material augered up						0.0
1.0		☒	201	●			1.0
2.0	-water from 2.3m to 3.0m -easier drilling				▼		2.0
3.0	-wet below 3.0m -smooth easy drilling						3.0
4.0	-harder drilling below 4.0m	☒	202	●			4.0
	END HOLE at 4.6m -in rock cut						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/06
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-191
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1951+075 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT WITH SAND (ML) -brown -easy drilling -frozen with visible ice below 0.6m -tight drilling						
1.0		⊠	368	● ▲	ML		1.0
2.0							2.0
3.0		⊠	369	●			3.0
4.0	SILTY SAND -organics -gray -frozen	⊠	370	●			4.0
	END HOLE at 4.6m -spruce cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/17
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 108-97
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1951+150 o/s 40m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	SILTY SAND WITH GRAVEL (SM) -damp -hard grindy drilling						0.0
1.0		⊠	203	● ▲	SM		1.0
	-wet below 1.7m -smooth easy drilling						
2.0							2.0
3.0		⊠	204	●			3.0
	-frozen with visible ice below 3.1m						
	-saturated below 3.5m						
4.0	-moist below 4.0m -tighter drilling						4.0
		⊠	205	●			
	END HOLE at 4.6m -in rock cut						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/06
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-192
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1951+250 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SANDY SILT (ML) -brown -moist -frozen below 0.7m -tight drilling						
1.0		☒	371	● ▲	ML		1.0
2.0	-layer with organics from 2.1m to 2.4m						2.0
3.0		☒	372	● ▲	ML		3.0
	SILTY SAND -gray -organics -frozen						
4.0		☒	373	●			4.0
	END HOLE at 4.6m -willow and spruce cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/17
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-98
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1951+250 o/s 25m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -dry						0.0
1.0		⊠	206 ●				1.0
	END HOLE at 1.8m -refusal -in rock cut						
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 1.8 m	COMPLETE 90/10/06
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-193
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1951+455 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -wet -frozen below 0.4m -tight drilling -visible ice below 0.8m						0.0
1.0	SILTY GRAVEL WITH SAND (GM) -brown -visible ice -some grindy drilling	⊠	374	▲	GM		1.0
2.0	-hard grindy drilling 2.2m to 2.4m						2.0
3.0		⊠	375	●			3.0
	END HOLE at 3.4m -refusal -spruce cover						
4.0							4.0
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 3.4 m	COMPLETE 90/10/17
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-194
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1951+550 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILTY GRAVEL WITH SAND (GM) – organics –frozen with visible ice below 0.5m –grindy drilling	⊠	376	● ▲	GM		
1.0							1.0
2.0	SILTY SAND WITH GRAVEL (SM) –frozen –organics –hard grindy drilling						2.0
3.0		⊠	377	● ▲	SM		3.0
4.0	SANDY SILT (ML) –frozen –organics						4.0
		⊠	378	● ▲	ML		
5.0							5.0
	SILTY GRAVEL WITH SAND (GM) –organics –frozen –grindy tight drilling	⊠	379	● ▲	GM		
6.0							6.0
	SILTY SAND WITH GRAVEL (SM) –moist –easier drilling						
7.0							7.0
	–wet below 7.6m	⊠	380	● ▲	SM		
8.0	END HOLE at 8.1m –refusal –spruce cover						8.0
9.0							9.0
10.0							10.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 8.1 m	COMPLETE 90/10/17
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-99
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1951+685 o/s 3m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -easy drilling						0.0
	-dry below 0.7m -grindy, hard drilling below 0.7m						
1.0		☒	207 ●				1.0
2.0	-damp below 2.1m -smooth tight drilling below 2.1m						2.0
3.0							3.0
4.0		☒	208 ●				4.0
	END HOLE at 4.6m -in rock cut						
5.0							5.0
6.0							6.0

Public Works Canada
Whitehorse, Yukon Territory.

COMPLETION DEPTH 4.6 m	COMPLETE 90/10/06
LOGGED BY JM	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-198
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1951+720 o/s 40m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	GRAVELLY SAND	⊠	388	●			
	END HOLE at 0.3m -refusal -may have been a borrow area in past -spruce, willows and birch cover						
1.0							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 0.3 m	COMPLETE 90/10/18
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-195
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1951+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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black						0.0
	SILTY GRAVEL WITH SAND (GM) -dark brown -moist to wet -easy grindy drilling						
1.0		⊠	381	● ▲	GM		1.0
	-frozen below 1.6m -hard grindy drilling below 1.8m						
2.0							2.0
	END HOLE at 2.4m -first refusal at 2.2m -some water at bottom of hole -poplar and spruce cover						
3.0							3.0
4.0							4.0
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 2.4 m	COMPLETE 90/10/18
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-100
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1951+825 o/s 40m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -hard grindy drilling below 0.5m						0.0
1.0	END HOLE at 0.8m -two refusals at 0.8m						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 0.8 m	COMPLETE 90/10/06
LOGGED BY JM	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-196
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1951+950 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -frozen below 0.2m -some silt						0.0
1.0	-visible ice below 1.0m	⊠	382				1.0
	GRAVELLY SANDY SILT -frozen						
	ORGANIC MATERIAL -frozen -some silt -tight smooth drilling						
2.0							2.0
	SILTY SAND WITH GRAVEL (SM) -visible ice -some organics -some grindy drilling						
		⊠	383	●	SM		
3.0							3.0
	-frozen but no ice below 3.4m						
4.0							4.0
		⊠	384	●			
	END HOLE at 4.6m -first refusal at 1.5m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/18
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-197
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1952+100 o/s 3m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black						0.0
	SILT (ML) -damp -organic -frozen -easy smooth drilling						
1.0		☒	385	● ▲	ML		1.0
	-visible ice below 1.8m						
2.0							2.0
		☒	386	●			
3.0							3.0
4.0		☒	387	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/18
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-101
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1952+225 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill						
1.0	ORGANIC MATERIAL -wet						1.0
	SILTY SAND WITH GRAVEL (SM) -brown -wet -some organics -saturated below 1.8m	X	209	● ▲	SM		
2.0							2.0
	SILT (ML) -gray -frozen -tighter drilling	X	210	● ▲	ML		
3.0							3.0
4.0		X	211	●			4.0
	END HOLE at 4.6m -on existing road						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/06
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-199
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1952+225 o/s11m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black						0.0
	SILT (ML) -light brown -organic -frozen -smooth easy drilling						
1.0		⊠	389	● ▲	ML		1.0
	-same material, light gray below 1.7m -tighter drilling						
2.0							2.0
		⊠	390	●			
3.0							3.0
4.0							4.0
	SANDY SILTY GRAVEL -brown -visible ice -noisy grindy drilling	⊠	391	●			
5.0	END HOLE at 4.6m						5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/18
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-102
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1952+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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill -grindy easy drilling						
1.0							1.0
	ORGANIC MATERIAL						
2.0	SILT TO SILT WITH SAND (ML) -gray -wet -some organics -saturated below 2.4m -frozen below 2.7m -tight drilling below 2.7m	☒	212	● ▲	ML		2.0
3.0	-visible ice below 3.5m						3.0
4.0		☒	213	● ▲	ML		4.0
	END HOLE at 4.6m -in existing road						
5.0							5.0
6.0							6.0

Public Works Canada
Whitehorse, Yukon Territory.

COMPLETION DEPTH 4.6 m	COMPLETE 90/10/06
LOGGED BY JM	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-200
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1952+400 o/s 10m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -trace organic -frozen -smooth drilling -stiffer drilling below 0.8m						
1.0		⊠	392	● ▲	ML		1.0
	-visible ice below 1.3m						
2.0							2.0
		⊠	393	●			
3.0							3.0
4.0		⊠	394	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/18	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-201
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1952+525 o/s 7m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILTY GRAVEL (GM) -brown -moist -smooth easy drilling						
1.0		☒	394	● ▲	GM		1.0
	GRAVELLY SILT WTH SAND (ML) -brown -saturated						
2.0							2.0
	-slightly grindy drilling below 2.5m	☒	395	● ▲	ML		
3.0							3.0
4.0		☒	396	● ▲	ML		4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/18
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-202
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1952+650 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black						0.0
	SANDY SILT -brown -moist -smooth drilling						
1.0							1.0
	SILTY GRAVEL WITH SAND (GM) -light brown -wet	⊠	397	● ▲	GM		
2.0	-saturated below 2.1m						2.0
		⊠	398	● ▲	GM		
3.0							3.0
4.0		⊠	399	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/18
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-208
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1952+800 o/s 2m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -saturated -smooth easy drilling						
1.0		☒	414	● ▲	ML		1.0
2.0	GRAVELLY SILT WITH SAND (ML) -saturated						2.0
3.0		☒	415	● ▲	ML		3.0
4.0		☒	416	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/18
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-209
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1952+900 o/s 2m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	SILT -organic -dry -smooth drilling						0.0
	SILTY GRAVEL WITH SAND (GM) -light brown -dry -grindy drilling	⊠	417	● ▲	GM		
1.0							1.0
	SILTY GRAVEL (GM) -dry						
2.0		⊠	418	● ▲	GM		2.0
3.0	SILTY GRAVEL WITH SAND (GM)						3.0
		⊠	419	● ▲	GM		
4.0	-hard grindy drilling below 4.0m						4.0
	END HOLE at 4.2m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.2 m	COMPLETE 90/10/18
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-210
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1952+955 o/s 35 m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK						0.0
1.0	END HOLE at 1.1m -refusal						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 1.1 m	COMPLETE 90/10/18	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-211
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1953+025 o/s 2m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -brown -wet -organics						
1.0		⊠	420	● ▲	ML		1.0
2.0	-frozen below 2.4m	⊠	421	●			2.0
3.0							3.0
4.0	-some gravels below 3.7m -visible ice below 4.0m	⊠	422	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/19	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-212
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1953+162	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ (20 40 60 80) / PLASTIC M.C. LIQUID (20 40 60 80)	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -wet						0.0
	SILT (ML) -organics -smooth tight drilling -frozen below 0.6m						
1.0		AUGER	423		ML		1.0
2.0							2.0
	SANDY SILT -light brown -visible ice						
3.0		AUGER	424				3.0
	SANDY SILT -gray -visible ice						
4.0		AUGER	425				4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/19
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-213
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1953+270 o/s 3m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	SILTY GRAVEL WITH SAND (GM) -brown -wet -easy grindy drilling						0.0
1.0		⊠	426	● ▲	GM		1.0
2.0	-orange and brown below 2.4m -wet below 2.4m -easier drilling below 2.4m	⊠	427	● ▲	GM		2.0
3.0	-water below 3.0m						3.0
4.0		⊠	428	● ▲	GM		4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/19
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-103
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1953+450 o/s 50m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	GRAVELLY SILT WITH SAND (ML) -brown -moist to wet -easy drilling						0.0
1.0		⊠	214	● ▲	ML		1.0
2.0	SILTY SAND WITH GRAVEL (SM) -brown -wet						2.0
3.0		⊠	215	● ▲	SM		3.0
	-grindy easy drilling below 3.1m -saturated below 3.3m						
4.0	-frozen with visible ice below 3.8m						4.0
	-not frozen, saturated below 4.5m	⊠	216	●	▼		
5.0	SILTY GRAVEL -gray -water -rough grindy drilling						5.0
	END HOLE at 5.6m -refusal -in existing ditch						
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 5.6 m	COMPLETE 90/10/06
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-214
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1953+455	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲PERCENT FINES▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	SANDY SILT -moist -trace of gravel -smooth drilling						0.0
1.0	SILTY GRAVEL WITH SAND (GM) -brown -moist -grindy drilling -hard grindy drilling below 1.8m	⊠	429	● ▲	GM		1.0
2.0							2.0
3.0	-more +4 below 2.8m	⊠	430	● ▲	GM		3.0
4.0	SILTY SAND WITH GRAVEL (SM) -light brown -dry -decomposed rock -easier drilling	⊠	431	● ▲	SM		4.0
5.0							5.0
6.0							6.0
7.0							7.0
8.0	-grindy drilling below 8.1m -easy drilling below 8.4m						8.0
9.0		⊠	432	●			9.0
	END HOLE at 9.1m						
10.0							10.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 9.1 m	COMPLETE 90/10/19
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-104
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1953+525 o/s 35m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILTY GRAVEL WITH SAND (GM) -brown -moist -easy drilling						
1.0		⊠	217	● ▲	GM		1.0
2.0	-damp to moist below 2.1m						2.0
3.0	-coarser material below 3.0m -damp below 3.3m	⊠	218	● ▲	GM		3.0
	WEATHERED ROCK -hard grindy drilling below 3.7m -maximum 50mm material augered up						
4.0							4.0
5.0							5.0
		⊠	219	●			
6.0	END HOLE at 6.1m						6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 6.1 m	COMPLETE 90/10/06
	LOGGED BY JM	DWG NO.
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-215
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1953+915 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -hard grindy drilling						0.0
	END HOLE at 0.6m -refusal						
1.0							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 0.6 m	COMPLETE 90/10/19
	LOGGED BY JG	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-218
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1953+975 o/s 1m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SANDY SILT WITH GRAVEL (ML) -brown -dry -smooth easy drilling	⊠	437	● ▲	ML		
1.0	-noisy grindy drilling below 1.2m						1.0
2.0							2.0
	SILT (ML) -brown -damp -smooth drilling	⊠	438	● ▲	ML		
3.0							3.0
	END HOLE at 3.6m -refusal at 3.6m twice						
4.0							4.0
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 3.6 m	COMPLETE 90/10/19
	LOGGED BY JG	DWG NO.
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-105
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1954+175	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill						
1.0							1.0
2.0	ORGANIC MATERIAL						2.0
	SILT WITH SAND (ML) -brown -moist -organic -saturated below 2.5m	⊠	220	● ▲	ML		
3.0	-frozen below 3.0m -tighter drilling below 3.0m						3.0
	GRAVELLY SANDY SILT -brown -frozen						
4.0	-visible ice below 4.1m	⊠	221	●			4.0
	END HOLE at 4.6m -on existing road						
5.0							5.0
6.0							6.0

Public Works Canada
Whitehorse, Yukon Territory.

COMPLETION DEPTH 4.6 m	COMPLETE 90/10/06
LOGGED BY JM	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-219
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1954+175 o/s 7m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	SILT (ML) -dark brown -wet -smooth easy drilling						0.0
1.0		⊠	439	● ▲	ML		1.0
2.0							2.0
	-saturated below 2.6m -trace organics below 2.6m	⊠	440	●			
3.0							3.0
	-frozen below 3.8m						
4.0		⊠	441	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/19	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-106
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1954+350 o/s 1m 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 ▲ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill -grindy easy drilling						
1.0	ORGANIC MATERIAL -moist to wet -smooth easy drilling						1.0
	SILT (ML) -wet -some organics -saturated below 1.9m						
2.0	-frozen below 2.5m -tight drilling below 2.5m	⊠	222	▲ ●	ML	▯	2.0
3.0	SILTY SAND -some gravels -frozen with visible ice						3.0
4.0		⊠	223	●			4.0
	END HOLE at 4.6m -on existing road						
5.0							5.0
6.0							6.0

Public Works Canada
Whitehorse, Yukon Territory.

COMPLETION DEPTH 4.6 m	COMPLETE 90/10/07
LOGGED BY JM	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-220
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1954+350 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -some silt below 0.2m -smooth easy drilling						0.0
1.0	SILT (ML) -dark brown -frozen with visible ice -organics	⊠	442	H ● ▲	ML		1.0
2.0							2.0
		⊠	443	● ▲	ML		
3.0							3.0
4.0	-grindy drilling below 3.9m	⊠	444	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/19
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-107
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1954+525	ELEVATION 0.000 (m)

SAMPLE TYPE ■ RETURN ☒ S.P.T. ☒ AUGER ■ BULK ▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill -damp						
1.0							1.0
	ORGANIC MATERIAL -wet -smooth easy drilling						
2.0	SILT WITH SAND (ML) -brown -wet -some organics -saturated below 2.3m -frozen with visible ice below 2.6m -tight drilling below 2.6m	☒	224	▲ ●	ML		2.0
3.0							3.0
	SILTY SAND WITH GRAVEL -some organics -frozen with visible ice						
4.0		☒	225	●			4.0
	END HOLE at 4.6m -on existing road						
5.0							5.0
6.0							6.0

Public Works Canada
Whitehorse, Yukon Territory.

COMPLETION DEPTH 4.6 m	COMPLETE 90/10/07
LOGGED BY JM	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-221
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1954+525 o/s 15m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black						0.0
	SILT WITH SAND (ML) -dark brown -smooth drilling -frozen with visible ice below 0.8m -tighter drilling						
1.0		⊠	445	● ▲	ML		1.0
	SILT (ML) -dark brown -organics -visible ice						
2.0							2.0
		⊠	446	● ▲	ML		
3.0							3.0
4.0							4.0
		⊠	447	▲●	ML		
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/19
	LOGGED BY JG	DWG NO.
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-108
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1954+725 o/s 3m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -brown -damp -easy grindy drilling						0.0
1.0		⊠	226	● ▲	GM		1.0
	-smooth stiff drilling below 1.7m -maximum 25mm material augered up						
2.0							2.0
	-tighter drilling below 2.5m						
3.0							3.0
	WEATHERED ROCK -dry -grindy hard drilling below 3.5m						
4.0		⊠	227	◆			4.0
	END HOLE at 4.6m -in ditch						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/07
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-109
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1954+850 o/s 25m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	SILTY SAND WITH GRAVEL (SM) -brown -damp -easy drilling						0.0
1.0		⊠	228 ● ▲		SM		1.0
2.0	DECOMPOSED ROCK -damp -grindy drilling						2.0
3.0		⊠	229 ●				3.0
	END HOLE at 3.2m -refusal -in ditch						
4.0							4.0
5.0							5.0
6.0							6.0

Public Works Canada
Whitehorse, Yukon Territory.

COMPLETION DEPTH 3.2 m	COMPLETE 90/10/07
LOGGED BY JM	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-110
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1954+975 o/s 2m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK						0.0
	-dry below 0.6m -hard drilling below 0.6m						
1.0							1.0
	-damp below 1.2m -easy drilling below 1.2m	AUGER	230	●			
	-dry below 1.8m -hard grindy drilling below 1.8m						
2.0							2.0
3.0	-easier drilling below 3.0m						3.0
	-harder drilling below 3.8m						
4.0							4.0
5.0							5.0
		AUGER	231	●			
6.0							6.0
	END HOLE at 6.1m -in ditch						

Public Works Canada
Whitehorse, Yukon Territory.

COMPLETION DEPTH 6.1 m	COMPLETE 90/10/07
LOGGED BY JM	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-111
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1955+075 o/s 40m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	SANDY SILT -damp						0.0
	DECOMPOSED ROCK -dry -grindy drilling						
1.0		☒	232	●			1.0
	-hard grindy drilling with soft layers below 1.4m						
2.0							2.0
3.0							3.0
4.0							4.0
5.0	-hard grindy drilling below 5.0m						5.0
6.0							6.0
7.0							7.0
8.0							8.0
		☒	233	●			
9.0	END HOLE at 9.1m -existing rock cut						9.0
10.0							10.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 9.1 m	COMPLETE 90/10/07
	LOGGED BY JM	DWG NO.
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-112
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1955+225 o/s 30m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	GRAVELLY SILTY SAND -damp						0.0
	SILTY SAND (SM) -brown -damp -grindy drilling						
1.0		AUGER	234	● ▲	SM		1.0
	DECOMPOSED ROCK -dry -harder grindy drilling						
2.0							2.0
3.0	-very hard drilling below 3.4m						3.0
4.0							4.0
	END HOLE at 4.6m -existing rock cut						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/07
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-225
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1955+282 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	DECOMPOSED ROCK						
1.0		⊠	454 ●				1.0
	ROCK						
2.0	END HOLE at 2.0m -refusal						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 2.0 m	COMPLETE 90/10/20
	LOGGED BY JG	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-113
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1955+300 o/s 35m Rt.	ELEVATION 0.000 (m)

SAMPLE TYPE: DENISON | S.P.T. | AUGER | BULK | TUBE | PROBE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	PERCENT FINES / PLASTIC – M.C. – LIQUID	USC	PERMAFROST DESCRIPTION
0.0	SILTY GRAVEL WITH SAND (GM) -brown -damp -grindy drilling					
1.4		AUGER	235	● ▲	GM	
2.6	DECOMPOSED ROCK -dry -hard grindy drilling -some softer layers					
8.0	-very hard drilling below 8.0m					
8.5		AUGER	236	●		
9.1	END HOLE at 9.1m					

Public Works Canada
Whitehorse, Yukon Territory.

COMPLETION DEPTH 9.1 m	COMPLETE 90/10/07	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-226
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1955+375 o/s 7m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILTY SAND WITH GRAVEL (SM) -brown -damp -easy drilling -grindy drilling below 0.6m						
1.0		⊠	455	● ▲	SM		1.0
2.0	-wet below 2.2m -easy drilling below 2.2m						2.0
		⊠	456	● ▲	SM		
3.0	END HOLE at 3.3m -refusal						3.0
4.0							4.0
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 3.3 m	COMPLETE 90/10/20	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-114
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1955+440 o/s 25m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	SILTY GRAVEL WITH SAND (GM) -brown -moist -grindy drilling						0.0
1.0		AUGER	237	● ▲	GM		1.0
2.0	-easy drilling below 2.2m, some cobbles						2.0
3.0							3.0
4.0	-wet below 4.3m						4.0
5.0							5.0
6.0	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM) -rougher easy drilling	AUGER	238	● ▲	GP-GM		6.0
7.0	-water below 7.0m						7.0
8.0							8.0
9.0	DECOMPOSED ROCK -dry -harder drilling END HOLE at 9.1m						9.0
10.0							10.0

Public Works Canada
Whitehorse, Yukon Territory.

COMPLETION DEPTH 9.1 m	COMPLETE 90/10/07
LOGGED BY JM	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-227
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1955+475 o/s 3m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -some silt						0.0
	SILTY SAND (SM) -brown -frozen -grindy drilling						
1.0	-visible ice below 1.2m	⊠	457	● ▲	SM		1.0
2.0	SILTY GRAVEL WITH SAND (GM) -brown -visible ice						2.0
	-frozen, no visible ice below 2.2m -slow smooth drilling	⊠	458	● ▲	GM		
3.0	-slower grindy drilling below 2.8m						3.0
4.0							4.0
5.0							5.0
6.0	SILTY SAND WITH GRAVEL (SM) -visible ice	⊠	459	● ▲	SM		6.0
	-smooth slow drilling	⊠	460	● ▲	SM		
	ICE WITH GRAVELLY SILTY SAND -hard grindy drilling						
7.0	END HOLE at 6.6m -refusal						7.0
8.0							8.0
9.0							9.0
10.0							10.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 6.6 m	COMPLETE 90/10/20
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-228
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1955+650 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT WITH SAND (ML) -black -organics -smooth drilling						
1.0	-frozen below 0.8m	⊠	461	▲ ●	ML		1.0
2.0							2.0
		⊠	462	● ▲	ML		
3.0	-visible ice below 3.0m						3.0
4.0		⊠	463	●			4.0
5.0							5.0
	GRAVELLY SILTY SAND -moist -grindy drilling	⊠	464	●			
6.0	END HOLE at 6.0m -12m up-chain from creek						6.0
7.0							7.0
8.0							8.0
9.0							9.0
10.0							10.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 6.0 m	COMPLETE 90/10/20
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 111-229
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1955+800 o/s 3m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -smooth tight drilling						0.0
	SANDY SILT TO SILT WITH SAND (ML) -brown -frozen						
1.0		☒	465	● ▲	ML		1.0
2.0							2.0
	-tighter drilling below 2.4m						
3.0		☒	466	● ▲	ML		3.0
4.0	-lighter brown below 4.0m	☒	467	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/20
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 112-230
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1955+918	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲PERCENT FINES▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT WITH SAND (ML) -dark brown -organics -frozen						
1.0	-smooth tight drilling -visible ice below 0.6m	⊠	468	● ▲	ML		1.0
2.0							2.0
		⊠	469	▲ ●	ML		
3.0							3.0
4.0		⊠	470	●			4.0
5.0							5.0
	SILT -light gray -frozen						
6.0	-smooth tight drilling	⊠	471	●			6.0
7.0							7.0
8.0							8.0
	-trace of sand below 8.4	⊠	472	●			
9.0	END HOLE at 9.1m -10m up chain from creek						9.0
10.0							10.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 9.1 m	COMPLETE 90/10/20
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 112-231
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1956+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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -brown -smooth drilling -smooth tight drilling below 0.7m -frozen with visible ice below 0.8m						
1.0		⊠	473	● ▲	ML		1.0
2.0	-frozen but no ice below 2.2m						2.0
3.0		⊠	474	●			3.0
	SILTY GRAVELLY SAND -light brown -grindy drilling						
4.0		⊠	475	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/20	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-115
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1956+100 o/s 40m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -damp -hard drilling						0.0
	-dry below 0.6m						
1.0							1.0
2.0							2.0
	-very hard drilling below 2.8m	AUGER	239	●			
3.0							3.0
	END HOLE at 3.3m -refusal						
4.0							4.0
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 3.3 m	COMPLETE 90/10/07	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-116
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1956+175 o/s 18m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -damp -dry -hard drilling below .4m						0.0
1.0							1.0
	END HOLE at 1.6m -refusal						
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 1.6 m	COMPLETE 90/10/07
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-117
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1956+515 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	SANDY SILT WITH GRAVEL (ML) -brown -wet -smooth easy drilling						0.0
1.0		AUGER	240	● ▲	ML		1.0
	ORGANIC MATERIAL -wet						
2.0	SILTY GRAVEL WITH SAND (GM) -brown -water				▼		2.0
3.0		AUGER	241	● ▲	GM		3.0
	SILTY SAND WITH GRAVEL (SM) -brown -frozen -hard drilling						
4.0		AUGER	242	● ▲	SM		4.0
	END HOLE at 4.6m -in ditch						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/07	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-118
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1956+608 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 ▲ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill						
1.0	WEATHERED SHALE -gray -moist -water below 1.0m -smooth easy drilling	☒	243	● ▲	SM		1.0
2.0							2.0
	SHALE -gray -damp -harder drilling	☒	244	●			
3.0							3.0
	END HOLE at 3.7m -refusal						
4.0							4.0
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 3.7 m	COMPLETE 90/10/07	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 112-244
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1956+725 o/s 7m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -some silt below 0.2m -smooth drilling						0.0
	SILT (ML) -dark gray -saturated						
1.0		⊠	521	● ▲	ML		1.0
2.0							2.0
		⊠	522	● ▲	ML		
3.0							3.0
	-frozen with visible ice below 3.8m -stiff drilling						
4.0		⊠	523	● ▲	ML		4.0
	END HOLE at 4.4m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.4 m	COMPLETE 90/10/21
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 112-245
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1956+610 o/s 30m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT -very organic -saturated						
	SILTY GRAVEL WITH SAND (GM) -brown -frozen with visible ice below 0.9m	⊠	524	● ▲	GM		
1.0							1.0
	-refusal at 1.8m twice						
2.0							2.0
	SILTY SAND (SM) -light brown -saturated -grindy drilling	⊠	525	● ▲	SM		
3.0	END HOLE at 2.9m -refusal						3.0
4.0							4.0
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 2.9 m	COMPLETE 90/10/21
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 112-246
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1956+470 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT WITH SAND (ML) -dark brown -organic -smooth drilling						
1.0	-frozen below 0.9m	⊠	526	● ▲	ML		1.0
	SILTY GRAVEL WITH SAND (GM) -brown -visible ice						
2.0							2.0
3.0	-grindy drilling below 3.0m	⊠	527	● ▲	GM		3.0
	GRAVELLY SILT SILT WITH SAND (ML)						
4.0		⊠	528	● ▲	ML		4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/22
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 112-247
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1956+325 o/s 13m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILTY GRAVEL WITH SAND (GM) -dark brown -wet -some organics -smooth drilling						
1.0		⊠	529	● ▲	GM		1.0
	-frozen below 1.6m -tighter drilling						
2.0	SILT (ML) -gray						2.0
		⊠	530	● ▲	ML		
3.0							3.0
4.0		⊠	531	● ▲	ML		4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/22	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 113-253
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1956+855 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	GRAVELLY SILT (ML) -brown -moist						0.0
1.0		⊠	543	● ▲	ML		1.0
2.0	SANDY SILT WITH GRAVEL (ML) -brown -moist -wet below 2.4m						2.0
3.0		⊠	544	● ▲	ML		3.0
	-saturated below 3.3m						
4.0							4.0
	-frozen with visible ice below 4.2m	⊠	545	● ▲	ML		
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/22
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 113-254
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1957+050 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	SILT -organic -dark brown -frozen below 0.2m -smooth tight drilling						0.0
	SILTY GRAVEL WITH SAND (GM) -brown -frozen with visible ice						
1.0		⊠	546	●	GM		1.0
	-harder drilling						
2.0							2.0
	-more ice below 2.6m						
		⊠	547	●			
3.0							3.0
4.0	SILT -organic -visible ice	⊠	548	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/22
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 113-255
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1957+250 o/s 3m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC SANDY SILT -dark brown -wet -smooth tight drilling						0.0
	SANDY SILT WITH GRAVEL (ML) -brown -frozen with visible ice						
1.0		⊠	549	● ▲	ML		1.0
2.0	-some grindy drilling at 2.0m						2.0
3.0		⊠	550	● ▲	ML		3.0
	SILT -brown -visible ice						
4.0		⊠	551	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/22
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 113-256
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1957+446 o/s 3m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	ORGANIC SILT -frozen below 0.4m -tight drilling						
	SILT -brown -frozen						
1.0	-visible ice below 1.2m	⊠	552	● ▲	ML		1.0
2.0	-light brown below 2.2m						2.0
		⊠	553	●			
3.0	-more ice below 3.3m						3.0
4.0		⊠	554	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/22
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 113-257
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1957+650 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT WITH SAND (ML) -organic -dark brown						
	-frozen with visible ice below 0.8m						
1.0	-brown below 1.1m	⊠	555	▲ ●	ML		1.0
2.0	SILT -gray -frozen with visible ice						2.0
		⊠	556	●			
3.0	-no ice below 3.4m						3.0
		⊠	557	●			
4.0	END HOLE at 4.6m -45m from creek						4.0
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/22
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 113-258
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1957+850 o/s 3m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT -organic -dark brown -frozen below 0.3m -tight drilling						
1.0	SANDY SILT (ML) -brown -some organic	⊠	55B	▲ ●	ML		1.0
2.0	SILT (ML) -visible ice below 2.2m						2.0
		⊠	559	● ▲	ML		
3.0	-more ice from 3.1m to 3.4m						3.0
4.0	-gray below 4.3m	⊠	560	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/22
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 113-259
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1958+075 o/s 3m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SANDY SILT (ML) -organic -frozen with visible ice below 0.4						
1.0		⊠	561	▲ ●	ML		1.0
	SILT (ML) -light brown -trace organic -frozen with visible ice						
2.0							2.0
		⊠	562	● ▲	ML		
3.0							3.0
4.0		⊠	563	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/22
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 113-260
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1958+250 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -brown -frozen with visible ice below 0.4m -tight drilling						
1.0		⊠	564	● ▲	ML		1.0
	-gray below 1.7m						
2.0							2.0
		⊠	565	● ▲	ML		
3.0							3.0
4.0		⊠	566	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/23
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 113-261
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1958+450 o/s 3m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT -organic -brown -tight drilling -frozen with visible ice below 0.6m						
1.0	SILT WITH SAND (ML) -brown -frozen with visible ice	⊠	567	▲ ●	ML		1.0
2.0							2.0
	SILT (ML) -gray -frozen						
3.0		⊠	568	● ▲	ML		3.0
4.0							4.0
		⊠	569	●			
	END HOLE at 4.6m -spruce cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/23
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 113-262
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1958+650 o/s 3m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -silty below 0.2m						0.0
	SILT (ML) -gray -frozen						
1.0		⊠	570	▲ ●	ML		1.0
2.0							2.0
3.0		⊠	571	● ▲	ML		3.0
4.0		⊠	572	● ▲	ML		4.0
	END HOLE at 4.6m -spruce cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/23
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 113-263
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1958+850 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -brown -wet -smooth easy drilling						
1.0		⊠	573	● ▲	ML		1.0
2.0	-saturated below 2.2m						2.0
3.0		⊠	574	● ▲	ML		3.0
	-frozen below 3.4m						
4.0		⊠	575	● ▲	ML		4.0
	END HOLE at 4.6m -spruce and willow cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/23
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 114-270
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1958+975 o/s 12m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	ORGANIC SILT						
	SILT (ML) -brownish gray -frozen						
1.0		⊠	596	● ▲	ML		1.0
2.0							2.0
		⊠	597	● ▲	ML		
3.0	-visible ice below 3.0m						3.0
	ICE -some soil						
	SILT (ML) -brownish gray -visible ice						
4.0		⊠	598	● ▲	ML		4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/23	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 114-271
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1959+125 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	ORGANIC SILT						
	SILT (ML) -brown -wet						
1.0	-smooth drilling	⊠	599	● ▲	ML		1.0
2.0							2.0
	-saturated below 2.8m	⊠	600	● ▲	ML		
3.0							3.0
	-frozen with visible ice below 3.8m -gray below 3.8m						
4.0		⊠	601	● ▲	ML		4.0
	END HOLE at 4.6m -in existing ditch						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/23
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 114-274
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1958+905 o/s 15m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -wet						0.0
	SILT (ML) -organic -black -saturated	⊠	612	● ▲	ML		
1.0							1.0
2.0	-frozen with visible ice below 2.5m						2.0
3.0		⊠	613	● ▲	ML		3.0
	-light brown below 3.4m -frozen no ice below 3.4m						
4.0		⊠	614	● ▲	ML		4.0
	ICE						
5.0	SILT (ML) -visible ice						5.0
6.0		⊠	615	● ▲	ML		6.0
7.0							7.0
	ICE						
8.0	SILT (ML) -visible ice						8.0
9.0		⊠	616	● ▲	ML		9.0
	END HOLE at 9.0m -in existing ditch						
10.0							10.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 9.0 m	COMPLETE 90/10/24
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 114-275
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1959+050 o/s 12m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML)						
	-light brown						
	-moist						
1.0		⊠	617	● ▲	ML		1.0
	-gray below 1.6m						
	-saturated below 1.6m						
2.0							2.0
		⊠	618	● ▲	ML		
3.0							3.0
	-frozen below 3.6m						
4.0							4.0
	-brown below 4.2m	⊠	619	● ▲	ML		
5.0							5.0
		⊠	620	● ▲	ML		
6.0							6.0
7.0							7.0
8.0	-visible ice below 8.1m						8.0
		⊠	621	● ▲	ML		
9.0	END HOLE at 9.0m						9.0
10.0							10.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 9.0 m	COMPLETE 90/10/24
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 114-276
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1959+200 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -light brown -wet -smooth drilling						
1.0	-saturated below 1.0m	⊠	622	● ▲	ML		1.0
2.0	-frozen below 2.1m						2.0
3.0		⊠	623	● ▲	ML		3.0
	ICE						
	SILT WITH SAND (ML) -brown -frozen -organic odor						
4.0		⊠	624	● ▲	ML		4.0
5.0	-grindy drilling						5.0
	END HOLE at 5.5m -refusal twice -in existing ditch						
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 5.5 m	COMPLETE 90/10/24
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 114-277
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1959+450 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -organic -brown -saturated -smooth drilling	⊠	625	▲ ●	ML		
1.0							1.0
	-frozen below 1.6m -tight drilling below 1.6m						
2.0							2.0
		⊠	626	● ▲	ML		
3.0							3.0
4.0							4.0
	-organic odor below 4.2m	⊠	627	● ▲	ML		
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/24
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-119
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1959+565 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill -moist -grindy drilling						
1.0							1.0
	-wet below 1.5m -easy drilling						
2.0							2.0
	ORGANIC MATERIAL -wet -0.2m layer of ice from 2.6m to 2.8m -tight drilling below 2.6m						
3.0	ORGANIC MATERIAL -frozen with visible ice	☒	245				3.0
	SANDY SILT -some organics -frozen with visible ice						
4.0	ICE						4.0
5.0							5.0
	END HOLE at 5.6m -refusal -on existing road						
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 5.6 m	COMPLETE 90/10/07	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 114-278
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1959+565 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -wet -smooth drilling -frozen below 0.6m -tight drilling -wood chunks						0.0
1.0		⊠	628	●			1.0
2.0	-visible ice below 2.3m						2.0
3.0	-dark brown below 2.8m	⊠	629	●			3.0
4.0	SANDY SILT -brown -approximatly 30% ice	⊠	630	●			4.0
5.0	END HOLE at 4.6m						5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/24
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-120
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1959+770 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill -moist						
1.0	SANDY SILT -gray -saturated						1.0
	ORGANIC MATERIAL -wet -easy drilling						
2.0	SILT (ML) -gray -some organics -frozen -tight drilling -visible ice below 2.4m						2.0
		⊠	246	▲ ●	ML		
3.0	ORGANIC MATERIAL -some sandy silt -frozen -first refusal at 3.2m						3.0
	END HOLE at 3.4m -second refusal at 3.4m -on existing road						
4.0							4.0
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 3.4 m	COMPLETE 90/10/07
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 114-279
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1959+770 o/s 12m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -some silt -frozen -smooth drilling						0.0
	ICE -jumpy drilling						
1.0							1.0
2.0							2.0
3.0							3.0
4.0							4.0
	sandy silt -brown -visible ice						
5.0	-frozen without ice below 5.2m						5.0
		⊠	631	●			
6.0	END HOLE at 6.0m						6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 6.0 m	COMPLETE 90/10/24
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-121
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1959+975 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	SILTY SAND -gray -moist to wet -road fill						
1.0		⊠	247	●			1.0
	ORGANIC MATERIAL -wet						
	SANDY SILT -wet -some organics						
2.0	-frozen, tighter drilling below 1.9m						2.0
	ORGANIC MATERIAL -some silt -frozen with visible ice						
		⊠	248		●		
3.0	-frozen, no visible ice below 3.0m						3.0
	END HOLE at 3.4m -refusal -on existing road						
4.0							4.0
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 3.4 m	COMPLETE 90/10/08
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 114-280
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1959+975 o/s 12m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -dark brown -trace of silt						0.0
	SILT (ML) -brown -frozen						
1.0		⊠	632	● ▲	ML		1.0
2.0							2.0
	SILT WITH SAND (ML) -brown -visible ice						
3.0		⊠	633	▲ ●	ML		3.0
4.0							4.0
		⊠	634	●			
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/24
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-122
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1960+175	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill						
1.0	ORGANIC MATERIAL						1.0
	SANDY SILT -wet -organics -easy smooth drilling						
2.0	-frozen below 2.0m -tight drilling below 2.0m						2.0
	SILT -visible ice crystals -organic						
	SILT (ML) -frozen	⊠	249	● ▲	ML		
3.0	-organics						3.0
	-no organics below 3.3m						
4.0	-visible ice crystals below 3.9m						4.0
		⊠	250	●			
	END HOLE at 4.6m -in existing road						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/08	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 114-281
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1960+175 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -brown -wet						
1.0		⊠	635	● ▲	ML		1.0
	-frozen below 1.8m						
2.0							2.0
		⊠	636	● ▲	ML		
3.0							3.0
	-light brown below 3.4m						
4.0		⊠	637	● ▲	ML		4.0
	END HOLE at 4.6m -in existing ditch						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/24
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-123
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1960+380 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill -damp -easy drilling						
1.0	-moist below 1.1m						1.0
	ORGANIC MATERIAL -wet						
2.0	SILT WITH SAND (ML) -brown -wet -saturated below 2.2m						2.0
	-frozen below 2.5m -tighter drilling below 2.5m	⊠	251	● ▲	ML		
3.0							3.0
	-visible ice crystals below 3.7m						
4.0		⊠	252	●			4.0
	END HOLE at 4.6m -in existing road						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/08
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 114-282
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1960+380 o/s 15m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC SILT						0.0
	SILT (ML) -brown -smooth drilling -frozen below 0.6m -tight drilling below 0.6m						
1.0	-visible ice below 1.0m	⊠	638	● ▲	ML		1.0
2.0							2.0
		⊠	639	●			
3.0							3.0
4.0	-light brown below 4.2m	⊠	640	●			4.0
	END HOLE at 4.6m -in existing ditch						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/24
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 114-283
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1960+550 o/s 12m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -brown -wet						
1.0	-gray and frozen below 1.2m	⊠	641	● ▲	ML		1.0
2.0	-visible ice below 2.2m						2.0
		⊠	642	● ▲	ML		
3.0							3.0
	ORGANIC SILT -gray						
4.0	-frozen with visible ice	⊠	643	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/24
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 114-284
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1960+700 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -smooth drilling						0.0
	ORGANIC SILT -black -frozen below 0.4m -tight drilling						
1.0	SILT (ML) -brown -trace organic	⊠	644	● ▲	ML		1.0
2.0	-visible ice below 1.9m						2.0
	SILT (ML) -gray -visible ice -tight drilling	⊠	645	● ▲	ML		
3.0							3.0
4.0		⊠	646	● ▲	ML		4.0
5.0	SILT WITH SAND (ML) -gray -visible ice -tight drilling	⊠	647	● ▲	ML		5.0
6.0							6.0
	SILT (ML) -gray -frozen no ice -tight drilling						
7.0							7.0
8.0							8.0
		⊠	648	● ▲	ML		
9.0	END HOLE at 9.1m -pine and willow cover						9.0
10.0							10.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 9.1 m	COMPLETE 90/10/24
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 115-285
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1960+825 o/s 3m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -smooth drilling -some silt below 0.2m						0.0
	SILT (ML) -brown -organic						
1.0	-frozen with visible ice -tight drilling	☒	649	● ▲	ML		1.0
	-light brown below 1.8m						
2.0		☒	650	● ▲	ML		2.0
3.0							3.0
4.0		☒	651	● ▲	ML		4.0
5.0	-frozen but no ice below 5.1m						5.0
		☒	652	● ▲	ML		
6.0	-gray below 5.8m -grindy drilling at 6.0m -visible ice below 6.4m						6.0
7.0							7.0
8.0							8.0
		☒	653	● ▲	ML		
9.0	END HOLE at 9.1m -pine, spruce and willow cover						9.0
10.0							10.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 9.1 m	COMPLETE 90/10/25
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 115-286
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1960+975 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -smooth drilling -some silt below 0.2m						0.0
	ICE						
1.0	SILT (ML) -brown -frozen with visible ice -tight drilling	⊠	654	● ▲	ML		1.0
2.0	-no visible ice below 2.3m						2.0
3.0	-gray below 2.8m	⊠	655	● ▲	ML		3.0
4.0		⊠	656	● ▲	ML		4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/25
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 115-287
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1961+125 o/s 3m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -brown -wet -tight drilling -frozen below 0.6m -light brown						
1.0		⊠	657	● ▲	ML		1.0
2.0	-visible ice below 2.1m -gray						2.0
		⊠	658	● ▲	ML		
3.0	-frozen, no visible ice below 3.1m						3.0
4.0	-brown below 4.2m	⊠	659	● ▲	ML		4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/25
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 115-288
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1961+275 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -smooth drilling						0.0
	ORGANIC SILT -dark brown -frozen						
1.0	SILT (ML) -visible ice below 0.9m -tight drilling below 0.9m	⊠	660	● ▲	ML		1.0
2.0	SILTY SAND WITH GRAVEL (SM) -brown -damp -grindy drilling -maximum 25mm material augered up	⊠	661	● ▲	SM		2.0
3.0							3.0
	SILT (ML) -brown -frozen with visible ice -smooth tight drilling						
4.0		⊠	662	● ▲	ML		4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/25
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 115-289
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1961+425 o/s 2m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	ORGANIC SILT -saturated						
1.0							1.0
	SILT (ML) -light brown -frozen	⊠	663	● ▲	ML		
	-visible ice below 1.8m						
2.0							2.0
	-some organic below 2.6m	⊠	664	● ▲	ML		
3.0							3.0
	ICE						
	SILT -brown						
4.0		⊠	665	●			4.0
	END HOLE at 4.6m -on existing highway						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/25
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 115-294
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1961+575	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲PERCENT FINES▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -smooth drilling -some silt below 0.2m -wet below 0.2m						0.0
	SILT WITH SAND (ML) -brown -wet						
1.0		⊠	672	●H ▲	ML		1.0
	-light brown below 1.8m						
2.0		⊠	673	● ▲	ML		2.0
	SILT (ML) -gray -wet						
3.0		⊠	674	● ▲	ML		3.0
4.0	-saturated below 4.2m	⊠	675	● ▲	ML		4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/25
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-137
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1961+600 o/s 50m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	SILT WITH SAND (ML) -brown -damp -easy drilling						0.0
1.0		☒	272	● ▲	ML		1.0
2.0	-moist below 2.3m						2.0
3.0	-wet below 3.5m -some cobbles below 3.5m						3.0
4.0							4.0
5.0	SANDY SILT (ML) -moist -tighter drilling, some grinding	☒	273	● ▲	ML		5.0
6.0	ROCK -damp END HOLE at 6.1m -in ditch						6.0
7.0							7.0
8.0							8.0
9.0							9.0
10.0							10.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 6.1 m	COMPLETE 90/10/08
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 115-295
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1961+725	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲PERCENT FINES▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -light brown -wet -organic -smooth drilling -saturated below 0.7m						
1.0		⊠	676	● ▲	ML		1.0
2.0							2.0
3.0		⊠	677	● ▲	ML		3.0
	-no organics below 3.6m -frozen below 3.6m -tight drilling below 3.6m						
4.0		⊠	678	● ▲	ML		4.0
	END HOLE at 4.6m -poplar and spruce cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/25
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 115-296
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1961+800 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -organic -saturated -smooth drilling						
1.0		⊠	679	● ▲	ML		1.0
2.0	-frozen with visible ice below 2.1m -tight drilling below 2.1m						2.0
3.0		⊠	680	● ▲	ML		3.0
4.0		⊠	681	●			4.0
	END HOLE at 4.6m -poplar, spruce and birch cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/25
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 115-297
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1961+825 o/s 25m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -organic -brown -tight drilling -frozen below 0.6m						
1.0		⊠	682	▲ ●	ML		1.0
	-black below 1.8m -stiffer drilling below 1.8m						
2.0							2.0
	-brown below 2.3m						
		⊠	683	▲ ●	ML		
3.0							3.0
	-visible ice below 3.2m						
4.0							4.0
		⊠	684	▲ ●	ML		
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/29
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 115-298
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1961+985 o/s 17m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -brown -organic						
1.0	-frozen below 1.0m -stiffer drilling below 1.0m	☒	685	● ▲	ML		1.0
2.0	-gray below 2.1m -less organics below 2.1m -visible ice below 2.1m						2.0
		☒	686	● ▲	ML		
3.0	-no organics below 3.3m						3.0
4.0		☒	687	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/29
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-136
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1962+000 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED SHALE -road fill						0.0
1.0							1.0
	ORGANIC MATERIAL						
	SANDY SILT -brown -wet -saturated below 1.8m						
2.0	-water below 2.0m				▼		2.0
	SILT (ML) -gray -frozen -tight drilling						
3.0							3.0
		☒	271	● ▲	ML		
4.0							4.0
	END HOLE at 4.6m -in existing road						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/08
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 115-299
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1962+135 o/s 17m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -brown -frozen						
1.0		⊠	687	● ▲	ML		1.0
	-light brown below 1.7m						
2.0	-visible ice below 2.1m						2.0
		⊠	688	●			
3.0							3.0
4.0	-gray below 4.0m	⊠	689	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/29
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-138
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1962+300 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -damp						0.0
	ROCK -dry -hard drilling						
1.0							1.0
2.0							2.0
3.0							3.0
4.0							4.0
5.0							5.0
6.0							6.0
7.0							7.0
8.0							8.0
9.0	END HOLE at 9.1m -in ditch						9.0
10.0							10.0

Public Works Canada
Whitehorse, Yukon Territory.

COMPLETION DEPTH 9.1 m	COMPLETE 90/10/08
LOGGED BY JM	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 115-300
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1962+300 o/s 57m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	GRAVELLY SANDY SILT -light brown -grindy drilling -probably weathered rock						
1.0		⊠	690 ●				1.0
2.0							2.0
3.0							3.0
4.0		⊠	691 ●				4.0
5.0	-coarser drilling below 5.1m						5.0
	END HOLE at 5.8m -refusal -poplar and spruce cover						
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 5.8 m	COMPLETE 90/10/29
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-135
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1962+465 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	SILTY SAND (SM) -decomposed rock -brown -damp -easy drilling						0.0
1.0		⊠	270	● ▲	SM		1.0
2.0	-harder drilling below 1.9m						2.0
	END HOLE at 2.7m -refusal -in existing road						
3.0							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 90/10/08
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 115-301
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1962+470 o/s 42m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILTY SAND WITH GRAVEL (SM) -light brown -grindy drilling -maximum 50mm material augered up -may be weathered rock						
1.0		⊠	692	● ▲	SM		1.0
2.0							2.0
	ROCK -harder drilling						
3.0		⊠	693	●			3.0
	END HOLE at 3.4m -refusal						
4.0							4.0
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 3.4 m	COMPLETE 90/10/29
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 115-302
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1962+640 o/s 65m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILTY GRAVEL WITH SAND (GM) -light brown -grindy drilling -may be weathered rock						
1.0		⊠	694	● ▲	GM		1.0
	ROCK -hard grindy drilling						
2.0	END HOLE at 2.1m -refusal						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 2.1 m	COMPLETE 90/10/29
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 115-303
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1962+700 o/s 56m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ROCK						0.0
	END HOLE at 0.5m -refusal -in old borrow area						
1.0							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 0.5 m	COMPLETE 90/10/29
	LOGGED BY JG	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-134
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1962+735 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -edge of road fill						0.0
	ROCK -dry -very hard drilling						
1.0		☒	269 ●				1.0
2.0	END HOLE at 2.1m -refusal						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 2.1 m	COMPLETE 90/10/08
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 115-304
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1962+775 o/s 45m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ROCK						0.0
1.0		⊠	695	●			1.0
2.0							2.0
3.0		⊠	696	●			3.0
	END HOLE at 3.6m -refusal						
4.0							4.0
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 3.6 m	COMPLETE 90/10/29
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-124
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1962+940 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill -damp						
1.0							1.0
	-moist below 1.5m						
2.0					▼		2.0
	-water at 2.4m -smooth easy drilling						
	ORGANIC MATERIAL -wet						
3.0							3.0
	SANDY SILT -organics -tighter drilling						
	-saturated below 3.6m						
	-frozen below 3.8m						
4.0	-visible ice crystals 4.0m to 4.2m						4.0
	-frozen below 4.2m						
		☒	253	●			
	END HOLE at 4.6m -in existing road						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/08
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 115-305
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1962+940 o/s 15m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -brown -frozen -smooth tight drilling -visible ice below 0.8m						
1.0		⊠	697	● ▲	ML		1.0
2.0	-frozen, no ice below 2.2m						2.0
		⊠	698	●			
3.0							3.0
	SILTY SAND -light brown -visible ice						
4.0		⊠	699	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/29
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-125
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1963+112 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill -damp						
1.0							1.0
	-moist below 1.6m						
2.0	ORGANIC MATERIAL -wet						2.0
	SILT WITH SAND (ML) -brown -wet -organics -smooth easy drilling	⊠	254	● ▲	ML		
3.0	-frozen below 3.2m -tighter drilling below 3.2m						3.0
4.0		⊠	255	●			4.0
	END HOLE at 4.6m -in existing road						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/08	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 115-306
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: 1963+112 o/s 15m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -brown -saturated -organic -smooth tight drilling -frozen with visible ice below 0.8m						
1.0		☒	700	● ▲	ML		1.0
2.0							2.0
		☒	701	●			
3.0							3.0
	SILTY SAND -gray -frozen, no ice						
4.0		☒	702	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/29
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-126
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1963+325 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill -damp						
1.0							1.0
	-moist below 1.6m						
2.0	GRAVELLY SILT -gray -moist -road fill						2.0
	ORGANIC MATERIAL						
3.0	SANDY SILT -wet -organics -saturated below 3.2m -frozen below 3.5m -tight drilling below 3.5m						3.0
4.0	SILT WITH SAND (ML) -gray -frozen	☒	256	● ▲	ML		4.0
	END HOLE at 4.6m -in existing road						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/08
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 116-307
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1963+325 o/s 15m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -wet						0.0
	SILT (ML) -brown -frozen with visible ice -tight drilling						
1.0		☒	703	● ▲	ML		1.0
2.0	SILT WITH SAND (ML) -gray -frozen, no ice						2.0
		☒	704	● ▲	ML		
3.0							3.0
4.0		☒	705	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/29
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 116-308
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1963+490 o/s 12m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	ORGANIC SILT -black -smooth drilling						
1.0	SILT (ML) -brown -saturated	⊠	706	● ▲	ML		1.0
2.0	SILT WITH SAND (ML) -light brown -saturated						2.0
3.0		⊠	707	● ▲	ML		3.0
4.0		⊠	708	●			4.0
	END HOLE at 4.6m -in existing ditch						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/29
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 116-313
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1963+625 o/s 25m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -slightly grindy drilling						0.0
1.0		⊠	720	●			1.0
2.0							2.0
3.0		⊠	721	●			3.0
4.0							4.0
5.0							5.0
6.0		⊠	722	●			6.0
	END HOLE at 6.0m -in existing borrow pit						
7.0							7.0
8.0							8.0
9.0							9.0
10.0							10.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 6.0 m	COMPLETE 90/10/29
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 116-314
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1963+840 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT (ML) -brown -saturated -smooth easy drilling						
1.0		⊠	722	● ▲	ML		1.0
2.0	SILT WITH SAND (ML) -brown -saturated						2.0
		⊠	723	● ▲	ML		
3.0							3.0
	-frozen below 3.6m -stiffer drilling						
4.0		⊠	724	●			4.0
	END HOLE at 4.6m -in existing ditch						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/29
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 117-333
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1963+840 o/s 21m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -brown						0.0
	SILT -organic -brown -wet -smooth drilling						
1.0	SILT (ML) -brown -frozen -tight drilling	⊠	779	● ▲	ML		1.0
2.0							2.0
	-dark gray below 2.6m	⊠	780	●			
3.0							3.0
4.0		⊠	781	●			4.0
	END HOLE at 4.6m -willow and spruce cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/30
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-127
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1963+845	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill						
1.0							1.0
	ORGANIC MATERIAL						
	SILT WITH SAND (ML) -gray -wet -organics						
2.0	-smooth easy drilling -saturated below 2.2m						2.0
	-frozen below 2.6m -tighter drilling below 2.6m	⊠	257	● ▲	ML		
3.0							3.0
	SILTY SAND -gray -frozen						
4.0		⊠	258	●			4.0
	END HOLE at 4.6m -in existing road						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/08
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 117-332
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1964+000 o/s 20m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black						0.0
	SILT -organic -wet						
1.0	SILT WITH SAND (ML) -brown -saturated	⊠	776	● ▲	ML		1.0
2.0							2.0
		⊠	777	●			
3.0							3.0
4.0		⊠	778	●			4.0
	END HOLE at 4.6m -willow cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/30	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-128
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1964+137	ELEVATION 0.000 (m)

SAMPLE TYPE ■ RETURN ⟋ S.P.T. ☒ AUGER ▬ BULK ▯ TUBE ◧ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	CRUSHED GRAVEL -road fill						0.0
	DECOMPOSED ROCK -road fill -damp						
1.0	-moist below 0.8m						1.0
	GRAVELLY SILT -wet						
	ORGANIC MATERIAL						
2.0	SILT WITH SAND (ML) -saturated -organics -easy drilling						2.0
	-frozen below 2.3m						
	-visible ice crystals below 2.6m -tight drilling	☒	259	● ▲	ML		
3.0							3.0
	ICE WITH SOME SOIL						
	ICE						
4.0							4.0
	ICE WITH SOME SOIL						
	ORGANIC MATERIAL -visible ice crystals						
	END HOLE at 4.6m -in existing road						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/08
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 116-315
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1964+135 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -smooth easy drilling						0.0
	SILT WITH SAND (ML) -brown -saturated						
1.0		⊠	725	● ▲	ML		1.0
2.0	-gray below 2.0m -frozen below 2.0m -tight drilling						2.0
		⊠	726	●			
3.0							3.0
4.0		⊠	727	●			4.0
	END HOLE at 4.6m -in existing ditch						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/29	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 117-331
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1964+135 o/s 20m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -dry						0.0
	SILT -organic -dark brown -frozen						
1.0	SILT (ML) -brown -visible ice -tighter drilling	⊠	773	▲ ●	ML		1.0
2.0	-light brown below 2.2m -frozen, no ice below 2.2m						2.0
		⊠	774	●			
3.0							3.0
4.0		⊠	775	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/30	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 117-330
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1964+300 o/s 37m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -frozen with visible ice -tight drilling						0.0
	ICE -auger vibrating						
1.0							1.0
	SILT -50% ice						
2.0							2.0
	SILT WITH SAND (ML) -brown -visible ice -tight drilling	⊠	771	● ▲	ML		
3.0							3.0
4.0	-organic below 4.2m	⊠	772	●			4.0
	END HOLE at 4.6m -spruce and willow cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/30
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-129
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1964+450	ELEVATION 0.000 (m)

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

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -road fill -damp						0.0
1.0	-wet below 1.4m -smooth easy drilling						1.0
2.0	ORGANIC MATERIAL -wet SILT (ML) -gray -saturated -frozen below 2.5m -tighter drilling	⊠	260	● ▲	ML		2.0
3.0							3.0
4.0		⊠	261	●			4.0
	END HOLE at 4.6m -in existing road						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/08
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 116-316
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1964+458 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -wet -smooth easy drilling -some silt below 0.4m -brown and black below 0.4m -saturated below 0.4m						0.0
1.0	SILT (ML) -brown -saturated	⊠	728	● ▲	ML		1.0
2.0	-gray below 1.8m -frozen below 1.8m -tight drilling below 1.8m						2.0
		⊠	729	●			
3.0							3.0
4.0		⊠	730	●			4.0
	END HOLE at 4.6m -in existing ditch						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/30
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 117-329
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1964+458 o/s 31m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -frozen -tight drilling						0.0
	SILT -organic -dark brown -visible ice	⊠	768	●			
1.0							1.0
2.0	SILT (ML) -brown -no ice						2.0
		⊠	769	● ▲	ML		
3.0							3.0
4.0	SILT -organic	⊠	770	●			4.0
	END HOLE at 4.6m -birch and spruce cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/30
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 116-328
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1964+625 o/s 30m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -brown -dry -dark brown below 0.3m -frozen with visible ice below 0.3m -tight drilling						0.0
1.0	SILT (ML) -gray -frozen, no ice	⊠	765	● ▲	ML		1.0
2.0	-visible ice below 2.4m						2.0
3.0		⊠	766	●			3.0
4.0		⊠	767	●			4.0
	END HOLE at 4.6m -spruce and willow cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/30
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-130
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1964+775 o/s 1m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -road fill -damp						0.0
1.0	-moist below 1.0m -easy drilling						1.0
	GRAVELLY SILT -wet						
2.0	ORGANIC MATERIAL -wet -frozen below 2.2m						2.0
	SILT WITH SAND (ML) -gray -frozen -organics -tight drilling	☒	262	▲ ●	ML	▯	
3.0	ICE WITH SOME SOIL						3.0
	SANDY SILT -organics -visible ice crystals below 3.2m						
4.0		☒	263	●			4.0
	END HOLE at 4.6m -in existing road						
5.0							5.0
6.0							6.0

Public Works Canada
Whitehorse, Yukon Territory.

COMPLETION DEPTH 4.6 m	COMPLETE 90/10/08
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 116-327
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1964+775 o/s 22m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -wet -smooth drilling						0.0
	SILTY ORGANIC MATERIAL -dark brown -frozen with visible ice -tight drilling	⊠	762	●			
1.0							1.0
2.0	SILT (ML) -gray -visible ice	⊠	763	● ▲	ML		2.0
3.0							3.0
4.0		⊠	764	●			4.0
	END HOLE at 4.6m -spruce and birch cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/30
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 116-317
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1964+780 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -wet						0.0
	SILT (ML) -very organic -light brown -saturated -smooth easy drilling						
1.0	-frozen with visible ice below 1.0m -tight drilling below 1.0m	⊠	731	▲	ML		1.0
2.0	-strong odor below 2.4m	⊠	732	●			2.0
3.0							3.0
	SILT -gray -frozen with visible ice	⊠	733	●			
4.0							4.0
	END HOLE at 4.6m -in existing ditch						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/30
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 116-326
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1964+925 o/s 20m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -wet						0.0
	SILT (ML) -gray -frozen						
1.0		⊠	759	● ▲	ML		1.0
2.0	-light brown below 2.0m	⊠	760	●			2.0
3.0							3.0
4.0	SILTY SAND -light brown -frozen	⊠	761	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/30
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-131
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1965+058 o/s 2m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -road fill -damp						0.0
1.0	-moist below 1.0m						1.0
	ORGANIC MATERIAL						
2.0	SILT WITH SAND (ML) -gray -wet -organics -saturated below 2.5m						2.0
		☒	264	● ▲	ML		
	-frozen below 2.8m -tighter drilling						
3.0	-no organics below 3.5m						3.0
4.0		☒	265	●			4.0
	END HOLE at 4.6m -in existing road						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/08	
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 116-318
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1965+058 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -wet						0.0
	SILT -organic -dark brown -wet -smooth easy drilling						
1.0	SILT WITH SAND (ML) -light brown -wet	⊠	734	● ▲	ML		1.0
2.0	-frozen below 2.1m -tight drilling below 2.1m						2.0
	-more sand sizes below 2.6m	⊠	735	●			
3.0							3.0
4.0		⊠	736	●			4.0
	END HOLE at 4.6m -in existing ditch						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/30
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 116-325
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1965+058 o/s 17m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -frozen with visible ice						0.0
	SILT (ML) -brown -frozen, no ice						
1.0		⊠	755	● ▲	ML		1.0
2.0							2.0
		⊠	756	●			
3.0							3.0
	SAND -some silt -light brown -frozen	⊠	757	●			
4.0							4.0
	SILT -dark gray -frozen	⊠	758	●			
	END HOLE at 4.6m -spruce cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/30
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 116-324
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1965+200 o/s 34m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -frozen -smooth drilling						0.0
	SILT WITH SAND (ML) -dark brown -visible ice -tight drilling						
1.0		⊠	752	▲ ●	ML		1.0
2.0	-gray below 2.1m						2.0
		⊠	753	● ▲	ML		
3.0							3.0
4.0	SILTY SAND -light brown -frozen	⊠	754	●			4.0
	END HOLE at 4.6m -spruce cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/30
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-132
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1965+350 o/s 15m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -road fill -damp -easy drilling						0.0
1.0	-moist below 1.0m -wet below 1.4m						1.0
2.0	ORGANIC MATERIAL -wet -frozen with visible ice crystals below 2.0m -tighter drilling below 2.0m						2.0
	SILT -organics -visible ice crystals						
	ICE						
3.0	ORGANIC MATERIAL -visible ice crystals						3.0
4.0	SANDY SILT -brown -organics -visible ice crystals						4.0
		☒	266	●			
	END HOLE at 4.6m -in existing road						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/08
	LOGGED BY JM	DWG NO.
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 116-319
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1965+350 o/s 22m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -smooth drilling						0.0
	SILT WITH SAND (ML) -organic -black and brown -frozen with visible ice -tight drilling						
1.0		⊠	737	▲ ●	ML		1.0
	-gray below 1.7m						
2.0							2.0
		⊠	738	●			
3.0							3.0
4.0	-organic odor below 4.0m						4.0
		⊠	739	●			
	END HOLE at 4.6m -in existing ditch						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/30
	LOGGED BY JG	DWG NO.
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 116-320
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1965+350 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -saturated -smooth drilling						0.0
	SILT (ML) -gray						
1.0	-frozen below 0.9m -tight drilling below 0.9m	⊠	740	▲●	ML		1.0
2.0							2.0
		⊠	741	●			
3.0							3.0
4.0	-organic odor below 4.2m	⊠	742	●			4.0
	END HOLE at 4.6m -in existing ditch						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/30
	LOGGED BY JG	DWG NO.
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 116-323
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1965+350 o/s 18m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -frozen -smooth drilling						0.0
1.0	SANDY SILT (ML) -light brown -visible ice below 0.7m -tight drilling	⊠	749	▲ ●	ML		1.0
2.0							2.0
	SILT (ML) -gray -approximately 30% ice	⊠	750	● ▲	ML		
3.0							3.0
	-frozen, no ice below 3.4m						
4.0		⊠	751	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada
Whitehorse, Yukon Territory.

COMPLETION DEPTH 4.6 m	COMPLETE 90/10/30
LOGGED BY JG	DWG NO.

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 116-321
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1965+590 o/s 14m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -frozen						0.0
	SILT (ML) -light brown -organic -frozen -smooth drilling -visible ice below 0.6m -tight drilling	☒	743	▲ ●	ML		
1.0							1.0
2.0							2.0
		☒	744	●			
3.0							3.0
4.0							4.0
		☒	745	●			
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/30
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY RECONSTRUCTION	BOREHOLE No. 116-322
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B40L 150mm Dia. SOLID STEM AUGER	LOCATION: 1965+590 o/s 45m 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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL -black -frozen -smooth drilling						0.0
	SILT (ML) -organic -light brown -visible ice -tight drilling	⊠	746	▲ ●	ML		
1.0							1.0
2.0	SANDY SILT -gray -frozen -tighter drilling						2.0
		⊠	747	●			
3.0							3.0
4.0							4.0
		⊠	748	●			
	END HOLE at 4.6m -small spruce cover						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/30
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 109-133
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	LOCATION: STA 1965+595 o/s 14m 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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -road fill -damp -easy drilling						0.0
1.0	-moist below 0.9m						1.0
2.0	GRAVELLY SILT -wet						2.0
	ORGANIC MATERIAL -wet						
	ORGANIC SANDY SILT -frozen below 2.6m -tighter drilling -visible ice crystals below 2.8m	☒	267	●			
3.0							3.0
4.0	SANDY SILT -frozen -visible ice crystals below 4.3m	☒	268	●			4.0
	END HOLE at 4.6m -in existing road						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/08
	LOGGED BY JM	DWG NO.
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 112-232
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	SANDY SILT -brown -smooth easy drilling						0.0
1.0	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM) -light brown -damp -grindy drilling	⊠	476	● ▲	GP-GM		1.0
2.0	SHALE -dark gray -dry -smooth grindy drilling	⊠	477	●			2.0
3.0							3.0
4.0		⊠	478	●			4.0
5.0							5.0
6.0		⊠	479	●			6.0
7.0							7.0
8.0	-gray below 7.7m -moist below 7.7m						8.0
9.0		⊠	480	●			9.0
	END HOLE at 9.1m -birch, spruce and pine cover						
10.0							10.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 9.1 m	COMPLETE 90/10/20
	LOGGED BY JG	DWG NO.
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 112-233
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	SILTY SAND -trace gravel -dark brown -damp -smooth drilling						0.0
1.0	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM) -dry -grindy drilling	⊠	481	●▲	GP-GM		1.0
2.0	SHALE -gray -damp -smooth grindy drilling	⊠	482	●			2.0
3.0							3.0
4.0							4.0
		⊠	483	●			
5.0							5.0
6.0	SANDSTONE -light brown -dry -harder drilling	⊠	484	●			6.0
7.0	SHALE -gray -dry						7.0
8.0							8.0
9.0		⊠	485	●			9.0
	END HOLE at 9.1m						
10.0							10.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 9.1 m	COMPLETE 90/10/20
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 112-234
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	DECOMPOSED ROCK -slow smooth slightly grindy drilling						0.0
1.0							1.0
		☒	486	●			
2.0							2.0
3.0	END HOLE at 3.2m						3.0
4.0							4.0
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 3.2 m	COMPLETE 90/10/21
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 112-235
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILTY SAND -brown -dry -smooth easy drilling						
	SILTY SAND WITH GRAVEL (SM) -light brown -dry -smooth easy drilling	⊠	487	● ▲	SM		
1.0							1.0
2.0	-more gravels below 2.1m -slightly grindy drilling below 2.1m						2.0
	SHALE -light brown -damp -grindy drilling	⊠	488	●			
3.0							3.0
4.0		⊠	489	●			4.0
	DECOMPOSED ROCK						
5.0		⊠	490	●			5.0
	END HOLE at 5.4m						
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 5.4 m	COMPLETE 90/10/21
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 112-236
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SANDY SILT WITH GRAVEL (ML) -brown -moist -smooth drilling						
1.0		☒	491	● H ▲	ML		1.0
	ORGANIC MATERIAL -black -wet						
2.0							2.0
	SILT WITH SAND (ML) -gray -frozen -grindy drilling						
3.0		☒	492	● ▲	ML		3.0
4.0		☒	493	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/21
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 112-237
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SANDY SILT -organic -black -smooth drilling						
	SANDY SILT WITH GRAVEL (ML) -black -moist						
1.0		⊠	494	● ▲	ML		1.0
2.0	-gray below 2.2m -wet below 2.2m						2.0
		⊠	495	● ▲	ML		
3.0	-more gravels below 3.2m -saturated below 3.2m						3.0
4.0		⊠	496	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/21
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 112-238
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILT -organic						
	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM) -brown -damp	⊠	497	● ▲	GP-GM		
1.0							1.0
2.0	SHALE						2.0
3.0		⊠	498	●			3.0
	SANDSTONE -light brown -moist						
4.0		⊠	499	●			4.0
	-grindy drilling below 4.8m -water below 5.0m				▼		
5.0							5.0
6.0		⊠	500	●			6.0
	SHALE						
7.0							7.0
		⊠	501	●			
	END HOLE at 7.7m -refusal						
8.0							8.0
9.0							9.0
10.0							10.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 7.7 m	COMPLETE 90/10/21
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 112-239
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SILTY GRAVEL WITH SAND (GM) -dark brown -damp -smooth drilling						
1.0		⊠	502	● ▲	GM		1.0
	SHALE						
2.0							2.0
		⊠	503	●			
3.0							3.0
	-slow grindy drilling below 3.4m						
4.0		⊠	504	●			4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/21
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 112-240
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SANDY SILT -black -very organic -smooth drilling -frozen below 0.4m						
1.0		⊠	505	▲ ●	ML		1.0
	SILTY SAND WITH GRAVEL (SM) -very organic -visible ice						
2.0		⊠	506	▲ ●	SM		2.0
3.0							3.0
4.0		⊠	507	● ▲	SM		4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/21
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 112-241
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	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 ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	ORGANIC SILT						
	SILTY GRAVEL WITH SAND (GM) -brown -moist						
1.0		☒	508	● ▲	GM		1.0
2.0	-wet below 2.0m						2.0
3.0		☒	509	● ▲	GM		3.0
4.0	-saturated below 4.2m	☒	510	● ▲	GM		4.0
	END HOLE at 4.6m						
5.0							5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 4.6 m	COMPLETE 90/10/21
	LOGGED BY JG	DWG NO.
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 112-242
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	SANDY SILT WITH GRAVEL (ML) -brown -moist						
1.0		⊠	511	● ▲	ML		1.0
2.0							2.0
	-wet below 2.6m	⊠	512	● ▲	ML		
3.0							3.0
4.0							4.0
		⊠	513	● ▲	GM		
5.0	SHALE -grindy drilling						5.0
6.0		⊠	514	●			6.0
7.0							7.0
8.0							8.0
		⊠	515	●			
9.0	END HOLE at 9.1m						9.0
10.0							10.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 9.1 m	COMPLETE 90/10/21
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SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY PRE-ENGINEERING	BOREHOLE No. 112-243
SHAKWAK PROJECT	A/H KM 1931.9-1965.5	Project No: SEGMENT 18
DRILL: B61 150mm Dia. SOLID STEM AUGER	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▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	PERMAFROST DESCRIPTION	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	GRAVELLY SILT -smooth drilling						
	SHALE -dark gray	⊠	516	●			
1.0							1.0
2.0							2.0
	-lighter gray below 2.8m	⊠	517	●			
3.0	-harder drilling below 3.3m						3.0
4.0		⊠	518	●			4.0
	-grindy drilling below 4.8m						
5.0							5.0
6.0		⊠	519	●			6.0
		⊠	520	●			
7.0	END HOLE at 6.9m -refusal						7.0
8.0							8.0
9.0							9.0
10.0							10.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 6.9 m	COMPLETE 90/10/21
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