



Public Works
Canada

Travaux publics
Canada

GRO1-097

GEOTECHNICAL INVESTIGATION

SHAKWAK RELOCATION PROJECT
ALASKA HWY Km 1634.5-1664.5 (SEG.8)

BORROW AREA DRILLING
VOLUME I OF I

GEOTECHNICAL & MATERIAL SERVICES
WHITEHORSE, YUKON

VOLUME 1

CONTENTS

Borrow Area 1	Km. 1650 + 600
April 1978 Drilling	Holes 78-8-1B to 78-8-8B
Nov. 1978 Test Pits	Pits 8-1-1 to 8-1-5
Borrow Area 2	Km 1648 + 000
April 1978 Drilling	Holes 78-8-9B to 78-8-16B
Borrow Area 3	Km. 1645 + 700
April 1978 Drilling	Holes 78-8-17B to 78-8-26B
Nov. 1978 Test Pits	Pits 8-3-1 to 8-3-5
Borrow Area 4	Km. 1654 + 400
April 1978 Drilling	Holes 78-8-27B to 78-8-34B
June 1978 Test Pits	Pits 8-4-1 to 8-4-3
Borrow Area 5	Km 1656 + 850
April 1978 Drilling	Holes 78-8-35B to 78-8-41B
June 1978 Test Pits	Pits 8-5-1 to 8-5-9
Nov. 1978 Test Pits	Pits 8-5-10 to 8-5-13
Borrow Area 6	Km. 1659 + 300
April 1978 Drilling	Holes 78-8-42B to 78-8-46B
Borrow Area 7	Km. 1661 + 100
April 1978 Drilling	Holes 78-8-53B to 78-8-58B
Borrow Area 8	Km. 1662 + 300
April 1978 Drilling	Holes 78-8-47B to 78-8-52B



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.		HOLE NO.: B5M	
DATE DRILLED: 19-5-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 8.0		MECHANICAL ANALYSIS		UNIFIED CLASSIFICATION	
TYPE OF DRILL: B30-6" AUGERS		<.005mm % <.074mm % >.005mm %		STANDARD PENETRATION RESISTANCE	
WATER LEVEL		SAND %		DRY DENSITY	
SOIL DESCRIPTION		GRAVEL %		LBS. CU. FT.	
SILTY SANDY GRAVEL 0.2		PLASTICITY INDEX %		BLOWS FT.	
		PLASTIC LIMIT %		N.P.	
		LIQUID LIMIT %		69.9	
		NATURAL MOISTURE CONTENT %		26.2	
N.R.C. PERMAFROST CLASSIFICATION		N.P.		3.9	
SAMPLE IDENTIFICATION DATA		LABORATORY NUMBER		N.P.	
SAMPLE TYPE		SAMPLE NUMBER (FIELD)		69.9	
SAMPLE NUMBER (FIELD)		SAMPLE DEPTH (M)		26.2	
SAMPLE DEPTH (M)		0.9		3.9	
		1.8		GP	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE ELEVATION:		HOLE NO.: B 5 M	
DATE DRILLED: 19-5-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.			
HOLE DEPTH: 8.8		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL: _____		UNIFIED CLASSIFICATION	
SOIL DESCRIPTION		N.R.C. PERMAFROST CLASSIFICATION		MECHANICAL ANALYSIS		STANDARD PENETRATION RESISTANCE	
SANDY GRAVEL				GRAVEL		BLOWS / FT.	
				SAND		LBS. / CU. FT.	
				PLASTICITY INDEX			
				PLASTIC LIMIT			
				LIQUID LIMIT			
DEPTH (M)		NATURAL MOISTURE CONTENT		CONSISTENCY LIMITS		DRY DENSITY	
5		%		PLASTIC LIMIT		%	
6		%		LIQUID LIMIT		%	
7		%		PLASTICITY INDEX		%	
8		%		GRAVEL		%	
9		%		SAND		%	
10		%		SANDY GRAVEL		%	

8.8

REFUSAL



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.		HOLE NO.: B6 M	
DATE DRILLED: 19-5-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 9.9		MECHANICAL ANALYSIS		UNIFIED CLASSIFICATION	
TYPE OF DRILL: B30-6" AUGERS		SAND		STANDARD PENETRATION RESISTANCE	
WATER LEVEL		GRAVEL		BLOWS / FT.	
SOIL DESCRIPTION		PLASTICITY INDEX		DRY DENSITY	
		PLASTIC LIMIT		LBS. / CU. FT.	
0 1 2 3 4 5		LIQUID LIMIT		MECHANICAL ANALYSIS	
		NATURAL MOISTURE CONTENT		<.005 mm % <.074 mm % >.005 mm %	
N.R.C. PERMAFROST CLASSIFICATION		LABORATORY DATA		UNIFIED CLASSIFICATION	
SAND - GRAVEL 0.2		SAMPLE IDENTIFICATION DATA		UNIFIED CLASSIFICATION	
		LABORATORY NUMBER		UNIFIED CLASSIFICATION	
3.0 4.0		SAMPLE TYPE		UNIFIED CLASSIFICATION	
		SAMPLE NUMBER (FIELD)		UNIFIED CLASSIFICATION	
B5M Ave. 1216 N.P. 56.5 39.3 4.2		SAMPLE DEPTH (ft)		UNIFIED CLASSIFICATION	
		SAMPLE DEPTH (ft)		UNIFIED CLASSIFICATION	

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: B6M	
DATE DRILLED: 19-5-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 9.9		TYPE OF DRILL: B30-6" AUGERS		UNIFIED CLASSIFICATION:	
WATER LEVEL		SOIL DESCRIPTION		STANDARD PENETRATION RESISTANCE	
DEPTH (M)		SOIL DESCRIPTION		BLOWS / FT.	
5		SANDY GRAVEL			
6		COURSE GRAVEL			
7					
8					
9					
10		REFUSAL			
				DRY DENSITY	
				LBS. / CU. FT.	
				MECHANICAL ANALYSIS	
				<.005 mm	
				%	
				<.074 mm	
				%	
				>.005 mm	
				%	
				SAND	
				%	
				GRAVEL	
				%	
				CONSISTENCY LIMITS	
				PLASTICITY INDEX	
				%	
				PLASTIC LIMIT	
				%	
				LIQUID LIMIT	
				%	
				NATURAL MOISTURE CONTENT	
				%	
				SAMPLE IDENTIFICATION DATA	
				LABORATORY NUMBER	
				SAMPLE TYPE	
				SAMPLE NUMBER (FIELD)	
				SAMPLE DEPTH (M)	
				N.R.C. PERMAFROST CLASSIFICATION	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKIVAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 19-5-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION: B 7 M
HOLE DEPTH: 7.9	UNIFIED CLASSIFICATION		
TYPE OF DRILL: B30-6" AUGERS	STANDARD PENETRATION RESISTANCE		
WATER LEVEL	BLOWS / FT.		
DEPTH (M)	DRY DENSITY (LBS. CU. FT.)		
	MECHANICAL ANALYSIS		
	< .005 mm	%	
	< .074 mm	%	
	> .005 mm	%	
	SAND	%	
	GRAVEL	%	
	CONSISTENCY LIMITS		
	PLASTICITY INDEX	%	
	PLASTIC LIMIT	%	
	LIQUID LIMIT	%	
	NATURAL MOISTURE CONTENT		
	%		
	LABORATORY NUMBER		
	SAMPLE TYPE		
	SAMPLE NUMBER (FIELD)		
	SAMPLE DEPTH (M)		
	N.R.C. PERMAFROST CLASSIFICATION		
	SOIL DESCRIPTION		
0	SANDY GRAVEL		
0.2			
1			
2			
3			
4	B6MAUG. 1215 1.6		
4.0	N.P. 76.4 19.2 4.4		
5	GP		

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE ELEVATION:		HOLE NO.:	
DATE DRILLED: 19-5-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.		B7M	
HOLE DEPTH: 7.9		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:		UNIFIED CLASSIFICATION:	
DEPTH (M)		SOIL DESCRIPTION		NATURAL MOISTURE CONTENT		CONSISTENCY LIMITS	
5		SANDY GRAVEL		%		LIQUID LIMIT	
6				PLASTIC LIMIT			
7		REFUSAL - 7.9		PLASTICITY INDEX		MECHANICAL ANALYSIS	
8				GRAVEL		SAND	
9				DRY DENSITY		STANDARD PENETRATION RESISTANCE	
10				LBS. CU. FT.		BLOWS FT.	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 19-5-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION: 138 M
HOLE DEPTH: 7.6	UNIFIED CLASSIFICATION		
TYPE OF DRILL: B30-6" AUGERS	STANDARD PENETRATION RESISTANCE		
WATER LEVEL	DRY DENSITY		
DEPTH (M)	MECHANICAL ANALYSIS		BLOWS / FT.
0	< .005 mm	%	
1	< .074 mm	%	
2	> .005 mm	%	
3	SAND	%	
4	GRAVEL	%	
5	PLASTICITY INDEX	%	
	PLASTIC LIMIT	%	
	LIQUID LIMIT	%	
	NATURAL MOISTURE CONTENT	%	
	LABORATORY NUMBER		
	SAMPLE TYPE		
	SAMPLE NUMBER (FIELD)		
	SAMPLE DEPTH (M)		
	N.R.C. PERMAFROST CLASSIFICATION		
	SOIL DESCRIPTION		
	SANDY GRAVEL	0.2	
		GRAVEL	60.7
		SAND	33.2
		< .074 mm	6.1
		< .005 mm	
		PLASTIC LIMIT	N.P.
		LIQUID LIMIT	N.P.
		NATURAL MOISTURE CONTENT	1.8
		SAMPLE NUMBER (FIELD)	B7 M
		SAMPLE TYPE	AUG. 12/14
		LABORATORY NUMBER	
	4.6		
		GW-6M	

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS

DATE DRILLED: 19-5-78

HOLE DEPTH: 7.6

TYPE OF DRILL: B30-6" AUGERS

WATER LEVEL: _____

DRILL TECHNICIAN: H. R. _____

PLOTTED BY: R. S. _____

HOLE ELEVATION: _____

HOLE NO.: B 8 M

UNIFIED CLASSIFICATION: GW-GM

STANDARD PENETRATION RESISTANCE: _____

DRY DENSITY: _____

MECHANICAL ANALYSIS:

<.005 mm	%	
<.074 mm	%	
>.005 mm	%	6.1
SAND	%	33.2
GRAVEL	%	60.7

CONSISTENCY LIMITS:

PLASTICITY INDEX	%	N.P.
PLASTIC LIMIT	%	
LIQUID LIMIT	%	

NATURAL MOISTURE CONTENT: 1.8 %

SAMPLE IDENTIFICATION DATA:

LABORATORY NUMBER	1214
SAMPLE TYPE	Aug.
SAMPLE NUMBER (FIELD)	B7 M
SAMPLE DEPTH (M)	5.5

N.R.C. PERMAFROST CLASSIFICATION: _____

SOIL DESCRIPTION: SANDY GRAVEL

END HOLE 7.6

DEPTH (M) 5 6 7 8 9 10



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKVAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 19-5-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION: 29 M
HOLE DEPTH: 4.3	HOLE NO.: B9 M		
TYPE OF DRILL: B30-6" AUGERS	UNIFIED CLASSIFICATION		
WATER LEVEL	STANDARD PENETRATION RESISTANCE		
DEPTH (M)	SOIL DESCRIPTION		BLOWS / FT.
	SANDY GRAVEL		
0			
1			
2			
3			
4			
5			
REFUSAL 4.3			

MECHANICAL ANALYSIS

GRAVEL %
SAND %
PLASTICITY INDEX %
PLASTIC LIMIT %
LIQUID LIMIT %

NATURAL MOISTURE CONTENT %

GRAVEL 66.3
SAND 28.4
PLASTICITY INDEX N.P.
PLASTIC LIMIT
LIQUID LIMIT
NATURAL MOISTURE CONTENT 1.4

LABORATORY NUMBER
SAMPLE TYPE
SAMPLE NUMBER (FIELD)
SAMPLE DEPTH (M)

1213
AUG. 1213
B8 M

0.6
1.5

GP-GM



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKIVAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 22-5-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION: B 10 M
HOLE DEPTH: 5.8			
TYPE OF DRILL: B30-6" AUGERS			
WATER LEVEL			
DEPTH (M)	SOIL DESCRIPTION		
0	SILTY SAND (ORGANIC) 0.3		
1	SANDY GRAVEL		
2			
3			
4			
5			

SAMPLE IDENTIFICATION DATA	NATURAL MOISTURE CONTENT	CONSISTENCY LIMITS			MECHANICAL ANALYSIS			DRY DENSITY	STANDARD PENETRATION RESISTANCE	UNIFIED CLASSIFICATION
		LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	GRAVEL	SAND	<074mm			
LABORATORY NUMBER	%	%	%	%	%	%	%			
SAMPLE TYPE										
SAMPLE NUMBER (FIELD)										
SAMPLE DEPTH (M)										
1.5										
2.4	1.8	N.P.			61.5	34.0	4.5			GP



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: B10M	
DATE DRILLED: 22-5-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 5.8		MECHANICAL ANALYSIS		STANDARD PENETRATION RESISTANCE	
TYPE OF DRILL: B30-6" AUGERS		PLASTICITY INDEX		BLOWS FT.	
WATER LEVEL		PLASTIC LIMIT		LBS. CU. FT.	
SOIL DESCRIPTION		LIQUID LIMIT		DRY DENSITY	
REFUSAL 5.8		NATURAL MOISTURE CONTENT		SAND	
		LABORATORY NUMBER		GRAVEL	
		SAMPLE TYPE		PLASTICITY INDEX	
		SAMPLE NUMBER (FIELD)		PLASTIC LIMIT	
DEPTH (M)		SAMPLE DEPTH (M)		UNIFIED CLASSIFICATION	
5					
6					
7					
8					
9					
10					



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.											
DATE DRILLED: 22-5-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION:										
HOLE DEPTH: 10.7		HOLE NO.: B 11 M											
TYPE OF DRILL: B30-6" AUGERS		UNIFIED CLASSIFICATION											
WATER LEVEL		STANDARD PENETRATION RESISTANCE											
DEPTH (M)		BLOWS / FT.											
SOIL DESCRIPTION		DRY DENSITY											
0		LBS. / CU. FT.											
1		MECHANICAL ANALYSIS											
2		<table border="1"> <tr> <td>< 0.075 mm</td> <td>%</td> </tr> <tr> <td>< 0.425 mm</td> <td>%</td> </tr> <tr> <td>> 0.075 mm</td> <td>%</td> </tr> <tr> <td>SAND</td> <td>%</td> </tr> <tr> <td>GRAVEL</td> <td>%</td> </tr> </table>		< 0.075 mm	%	< 0.425 mm	%	> 0.075 mm	%	SAND	%	GRAVEL	%
< 0.075 mm	%												
< 0.425 mm	%												
> 0.075 mm	%												
SAND	%												
GRAVEL	%												
3		CONSISTENCY LIMITS											
4		<table border="1"> <tr> <td>PLASTICITY INDEX</td> <td>%</td> </tr> <tr> <td>PLASTIC LIMIT</td> <td>%</td> </tr> <tr> <td>LIQUID LIMIT</td> <td>%</td> </tr> </table>		PLASTICITY INDEX	%	PLASTIC LIMIT	%	LIQUID LIMIT	%				
PLASTICITY INDEX	%												
PLASTIC LIMIT	%												
LIQUID LIMIT	%												
5		NATURAL MOISTURE CONTENT											
N.R.C. PERMAFROST CLASSIFICATION		LABORATORY NUMBER											
SAMPLE IDENTIFICATION DATA		SAMPLE TYPE											
SAMPLE NUMBER (FIELD)		SAMPLE DEPTH (M)											
SAMPLE DEPTH (M)		SAMPLE NUMBER (FIELD)											
SOIL DESCRIPTION		LABORATORY NUMBER											
SILTY (ORGANIC) SAND 0.3		SAMPLE TYPE											
SANDY GRAVEL		SAMPLE NUMBER (FIELD)											
		SAMPLE DEPTH (M)											

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE ELEVATION:		HOLE NO.:	
DATE DRILLED: 22-5-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.		BIM	
HOLE DEPTH: 10.7		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:		UNIFIED CLASSIFICATION:	
DEPTH (M)		SOIL DESCRIPTION		N.R.C. PERMAFROST CLASSIFICATION		STANDARD PENETRATION RESISTANCE	
5						BLOWS / FT.	
6						DRY DENSITY	
7						LBS. / CU. FT.	
8						MECHANICAL ANALYSIS	
9						GRAVEL	
10						SAND	
						PLASTICITY INDEX	
						PLASTIC LIMIT	
						LIQUID LIMIT	
						NATURAL MOISTURE CONTENT	
						SAMPLE IDENTIFICATION DATA	
						LABORATORY NUMBER	
						SAMPLE TYPE	
						SAMPLE NUMBER (FIELD)	
						SAMPLE DEPTH (M)	
6.1		B10 AUG. 1247		N.P.		71.2	
7.0		M		2.3		24.6	
						4.2	
						G.P.	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:	
DATE DRILLED: 22-5-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: P.S.	HOLE ELEVATION:
HOLE DEPTH: 10.7	HOLE NO.: B11M		
TYPE OF DRILL: B30-6" AUGERS	MECHANICAL ANALYSIS		
WATER LEVEL: _____	GRAVEL	%	
SOIL DESCRIPTION	SAND	%	
DEPTH (M)	CONSISTENCY LIMITS		
	LIQUID LIMIT	%	
	PLASTIC LIMIT	%	
	PLASTICITY INDEX	%	
10	NATURAL MOISTURE CONTENT		
	%		
	SAMPLE IDENTIFICATION DATA		
	SAMPLE DEPTH (M)		
11	N.R.C. PERMAFROST CLASSIFICATION		
	SAMPLE NUMBER (FIELD)		
	SAMPLE TYPE		
	LABORATORY NUMBER		
12	DRY DENSITY		
	LBS./CU. FT.		
	STANDARD PENETRATION RESISTANCE		
	BLOWS/FT.		
13	UNIFIED CLASSIFICATION		
	%		
	%		
	%		
14	%		
	%		
	%		
	%		
15	%		
	%		
	%		
	%		

END HOLE 10.7

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 22-5-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION:
HOLE DEPTH: 10.4		HOLE NO.: B 12 M	
TYPE OF DRILL: B 30-6" AUGERS			
WATER LEVEL:			
SOIL DESCRIPTION			
SANDY GRAVEL		N.R.C. PERMAFROST CLASSIFICATION	
SAMPLE IDENTIFICATION DATA		CONSISTENCY LIMITS	
SAMPLE DEPTH (ft)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER
2.1	B 11 M	Aug.	1248
3.0			
		NATURAL MOISTURE CONTENT	
		%	
		LIQUID LIMIT	
		%	
		PLASTIC LIMIT	
		%	
		PLASTICITY INDEX	
		%	
		GRAVEL	
		%	
		SAND	
		%	
		>.005 mm	
		%	
		<.074 mm	
		%	
		<.005 mm	
		%	
		DRY DENSITY	
		LBS. CU.FT.	
		STANDARD PENETRATION RESISTANCE	
		BLOWS FT.	
		UNIFIED CLASSIFICATION	
		GP	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE ELEVATION:		HOLE NO.: B 12 M	
DATE DRILLED: 22-5-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.			
HOLE DEPTH: 10.4		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:		SOIL DESCRIPTION	
DEPTH (M)		N.R.C. PERMAFROST CLASSIFICATION		SAMPLE IDENTIFICATION DATA		UNIFIED CLASSIFICATION	
5			LABORATORY NUMBER	CONSISTENCY LIMITS		STANDARD PENETRATION RESISTANCE	
6			SAMPLE TYPE	PLASTICITY INDEX		BLOWS / FT.	
7			SAMPLE NUMBER (FIELD)	PLASTIC LIMIT		DRY DENSITY	
8			SAMPLE DEPTH (M)	LIQUID LIMIT		LBS. / CU. FT.	
9				NATURAL MOISTURE CONTENT			
10				MECHANICAL ANALYSIS			
				GRAVEL			
				SAND			
				V.005 mm			
				V.074 mm			
				V.005 mm			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:	
DATE DRILLED: 22-5-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: P.S.	HOLE ELEVATION:
HOLE DEPTH: 10.4	HOLE NO.: B 12M		
TYPE OF DRILL: B30-6" AUGERS	UNIFIED CLASSIFICATION		
WATER LEVEL	STANDARD PENETRATION RESISTANCE		
DEPTH (M.)	DRY DENSITY		BLOWS/FT.
10	LBS./CU.FT.		
	MECHANICAL ANALYSIS		
	GRAVEL		%
	SAND		%
	PLASTICITY INDEX		%
	PLASTIC LIMIT		%
	LIQUID LIMIT		%
	NATURAL MOISTURE CONTENT		%
	CONSISTENCY LIMITS		
	SAMPLE IDENTIFICATION DATA		
	LABORATORY NUMBER		
	SAMPLE TYPE		
	SAMPLE NUMBER (FIELD)		
	SAMPLE DEPTH (I)		
	N.R.C. PERMAFROST CLASSIFICATION		
	SOIL DESCRIPTION		
10	END HOLE 10.4		
11			
12			
13			
14			
15			



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.											
DATE DRILLED: 22-5-78		HOLE ELEVATION: B 13 M											
DRILL TECHNICIAN: H. R.		R. S.											
HOLE DEPTH: 8.8		MECHANICAL ANALYSIS											
TYPE OF DRILL: B30-6" AUGERS		<table border="1"> <tr> <td><.005 mm</td> <td>%</td> </tr> <tr> <td><.074 mm</td> <td>%</td> </tr> <tr> <td>>.005 mm</td> <td>%</td> </tr> <tr> <td>SAND</td> <td>%</td> </tr> <tr> <td>GRAVEL</td> <td>%</td> </tr> </table>		<.005 mm	%	<.074 mm	%	>.005 mm	%	SAND	%	GRAVEL	%
<.005 mm	%												
<.074 mm	%												
>.005 mm	%												
SAND	%												
GRAVEL	%												
WATER LEVEL		<table border="1"> <tr> <td>PLASTICITY INDEX</td> <td>%</td> </tr> <tr> <td>PLASTIC LIMIT</td> <td>%</td> </tr> <tr> <td>LIQUID LIMIT</td> <td>%</td> </tr> </table>		PLASTICITY INDEX	%	PLASTIC LIMIT	%	LIQUID LIMIT	%				
PLASTICITY INDEX	%												
PLASTIC LIMIT	%												
LIQUID LIMIT	%												
DEPTH (M)		NATURAL MOISTURE CONTENT %											
SOIL DESCRIPTION		LABORATORY NUMBER											
SANDY GRAVEL		SAMPLE TYPE											
		SAMPLE NUMBER (FIELD)											
0		SAMPLE DEPTH (M)											
1		30											
2		40											
3		B 12 AUG. 1249 M											
4		1.7											
5		N.P. 66.1 31.8 2.1											
		GP											



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE ELEVATION:		HOLE NO.: B13M	
DATE DRILLED: 22-5-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.		UNIFIED CLASSIFICATION	
HOLE DEPTH: 8.8		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:		STANDARD PENETRATION RESISTANCE	
DEPTH (M)		SOIL DESCRIPTION		CONSISTENCY LIMITS		MECHANICAL ANALYSIS	
				LIQUID LIMIT		SAND	
				PLASTIC LIMIT		GRAVEL	
				PLASTICITY INDEX		<.005 mm	
				NATURAL MOISTURE CONTENT		<.074 mm	
				LABORATORY NUMBER		>.005 mm	
				SAMPLE TYPE		DRY DENSITY	
				SAMPLE NUMBER (FIELD)		LBS. CU.FT.	
				SAMPLE DEPTH (M)		BLOWS FT.	
				N.R.C. PERMAFROST CLASSIFICATION			
5							
6							
7							
8							
9							
10							

8.8
END HOLE



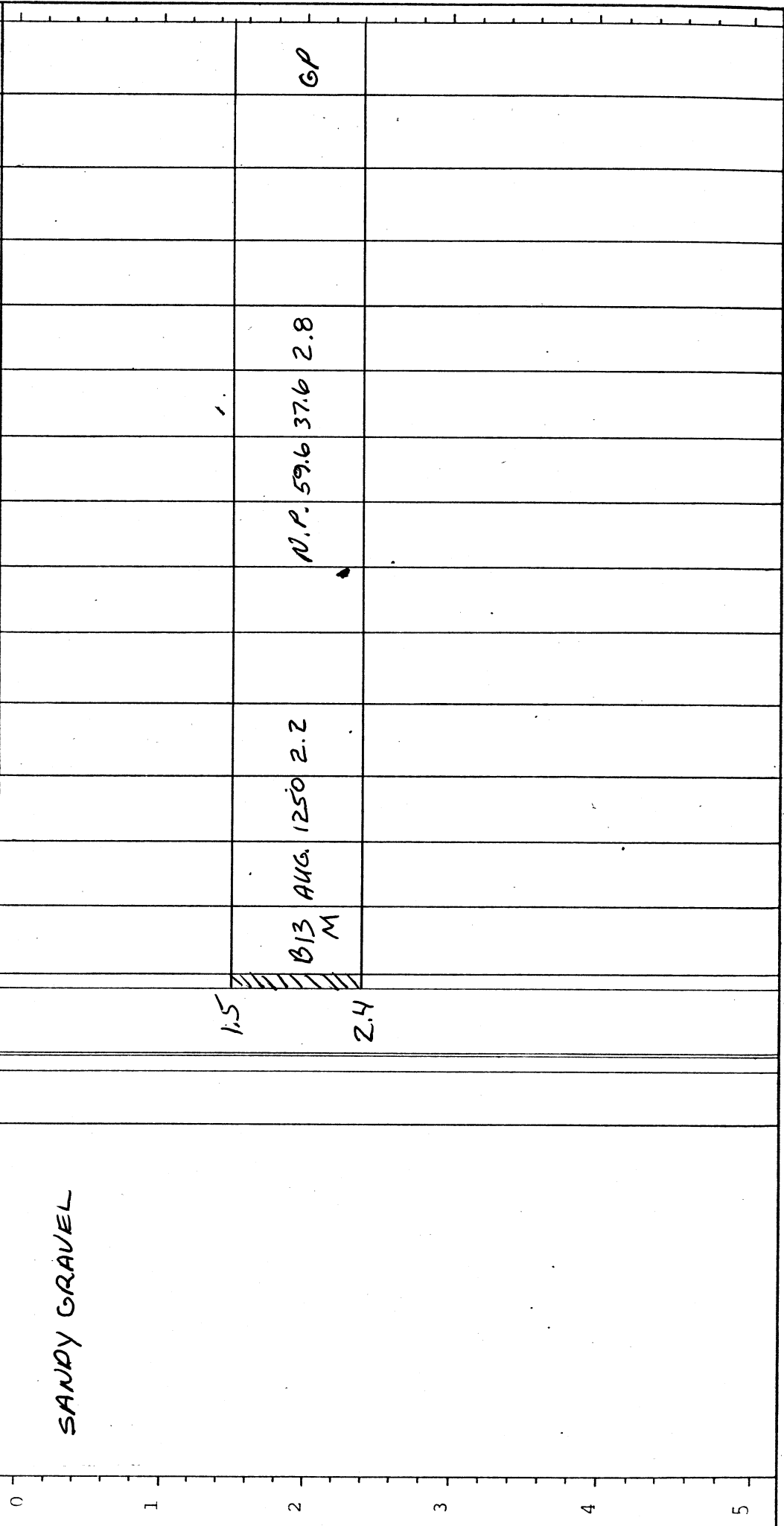
Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS STA. HOLE LOCATION: HOLE NO.: B14M
 DATE DRILLED: 22-5-78 DRILL TECHNICIAN: II.R. PLOTTED BY: R.S. HOLE ELEVATION:

HOLE DEPTH (M)	SOIL DESCRIPTION	N.R.C. PERMAFROST CLASSIFICATION		SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS			MECHANICAL ANALYSIS				DRY DENSITY (LBS. CU.FT.)	STANDARD PENETRATION RESISTANCE (BLOWS FT.)	UNIFIED CLASSIFICATION
		LABORATORY NUMBER	SAMPLE TYPE	SAMPLE NUMBER (FIELD)	SAMPLE DEPTH (M)	LIQUID LIMIT (%)	PLASTIC LIMIT (%)		PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	<.074 mm (%)	<.005 mm (%)					
7.5	SANDY GRAVEL																	
1.5				B13 AUG. 1250 M														
2.4																	GP	





Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: B14M	
DATE DRILLED: 22-5-78		DRILL TECHNICIAN: H.R.		HOLE ELEVATION: R.S.	
HOLE DEPTH: 7.5		PLOTTED BY:		MECHANICAL ANALYSIS	
TYPE OF DRILL: B30-6" AUGERS		SAMPLE IDENTIFICATION DATA		UNIFIED CLASSIFICATION	
WATER LEVEL		LABORATORY NUMBER		STANDARD PENETRATION RESISTANCE	
SOIL DESCRIPTION		SAMPLE TYPE		BLOWS / FT.	
END HOLE 7.5 (Scale: 5, 6, 7, 8, 9, 10)		SAMPLE NUMBER (FIELD)		< .005 mm	
		SAMPLE DEPTH (M)		< .074 mm	
		N.R.C. PERMAFROST CLASSIFICATION		> .005 mm	
				SAND	
				GRAVEL	
		LIQUID LIMIT		PLASTICITY INDEX	
		PLASTIC LIMIT		DRY DENSITY	
		NATURAL MOISTURE CONTENT		LBS. / CU. FT.	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.		HOLE NO.: B15M	
DATE DRILLED: 22-5-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 7.6		CONSISTENCY LIMITS		MECHANICAL ANALYSIS	
TYPE OF DRILL: B30-6" AUGERS		LIQUID LIMIT		SAND	
WATER LEVEL		PLASTIC LIMIT		GRAVEL	
SOIL DESCRIPTION		PLASTICITY INDEX		UNIFIED CLASSIFICATION	
SANDY GRAVEL		NATURAL MOISTURE CONTENT		STANDARD PENETRATION RESISTANCE	
		%		BLOWS / FT.	
N.R.C. PERMAFROST CLASSIFICATION		LABORATORY NUMBER		DRY DENSITY	
		SAMPLE TYPE		LBS. / CU. FT.	
		SAMPLE NUMBER (FIELD)		%	
		SAMPLE DEPTH (ft)		%	
		1.5		%	
		2.4		%	
		B14 AUG. 1251 M		%	
		1.9		%	
		N.P.		%	
		75.4		%	
		22.3		%	
		2.3		%	
		GP		%	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS

HOLE LOCATION:

DATE DRILLED: 22-5-78

DRILL TECHNICIAN: H.R.

PLOTTED BY: R.S.

HOLE ELEVATION:

HOLE NO.: B15M

HOLE DEPTH 7.6
TYPE OF DRILL B30-6" AUGERS
WATER LEVEL
DEPTH (M) 5 6 7 8 9 10

SOIL DESCRIPTION

END HOLE 7.6

N.R.C. PERMAFROST CLASSIFICATION

SAMPLE IDENTIFICATION DATA
LABORATORY NUMBER
SAMPLE TYPE
SAMPLE NUMBER (FIELD)
SAMPLE DEPTH (M)

NATURAL MOISTURE CONTENT %

CONSISTENCY LIMITS
LIQUID LIMIT %
PLASTIC LIMIT %
PLASTICITY INDEX %

GRAVEL %
SAND %

MECHANICAL ANALYSIS
< .074 mm %
> .005 mm %
< .005 mm %

DRY DENSITY LBS. CU. FT.

STANDARD PENETRATION RESISTANCE BLOWS FT.

UNIFIED CLASSIFICATION



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 22-5-78		HOLE ELEVATION: 1316 M	
HOLE DEPTH: 7.5		HOLE NO.: B16 M	
TYPE OF DRILL: B30-6" AUGERS		DRILL TECHNICIAN: H.R.	
WATER LEVEL: _____		PLOTTED BY: R.S.	
DEPTH (M)		N.R.C. PERMAFROST CLASSIFICATION	
SOIL DESCRIPTION			
SANDY GRAVEL			
0			
1			
2			
3			
4			
5			
SAMPLE DEPTH (M)		UNIFIED CLASSIFICATION	
0.6		GP	
1.5		GP	
SAMPLE NUMBER (FIELD)		STANDARD PENETRATION RESISTANCE	
B15A M		BLOWS / FT.	
B15B M			
SAMPLE TYPE		DRY DENSITY	
AUG.		LBS. / CU. FT.	
AUG.			
LABORATORY NUMBER		MECHANICAL ANALYSIS	
1252		SAND	
1253		GRAVEL	
		PLASTICITY INDEX	
		PLASTIC LIMIT	
		LIQUID LIMIT	
		NATURAL MOISTURE CONTENT	
		CONSISTENCY LIMITS	
		GRAND	
		SAND	
		V. 005 mm	
		V. 074 mm	
		V. 005 mm	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE ELEVATION:		HOLE NO.: B16 M			
DATE DRILLED: 22-5-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.					
HOLE DEPTH: 7.5		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL: _____					
DEPTH (M)		SOIL DESCRIPTION							
5 6 7 8 9 10		N.R.C. PERMAFROST CLASSIFICATION							
		SAMPLE IDENTIFICATION DATA		LABORATORY NUMBER					
				SAMPLE TYPE					
				SAMPLE NUMBER (FIELD)					
				SAMPLE DEPTH (M)					
				NATURAL MOISTURE CONTENT		%			
				CONSISTENCY LIMITS		LIQUID LIMIT		%	
						PLASTIC LIMIT		%	
						PLASTICITY INDEX		%	
				MECHANICAL ANALYSIS		GRAVEL		%	
				SAND		%			
				> 0.075 mm		%			
				> 0.005 mm		%			
				< 0.005 mm		%			
		DRY DENSITY		LBS. CU. FT.					
		STANDARD PENETRATION RESISTANCE		BLOWS FT.					
		UNIFIED CLASSIFICATION							

END HOLE 7.5

PROJECT: SUAKVAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 22-5-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION: .
HOLE DEPTH: 8.8		HOLE NO.: B17M	
TYPE OF DRILL: B30-6" AUGERS		UNIFIED CLASSIFICATION	
WATER LEVEL		STANDARD PENETRATION RESISTANCE	
DEPTH (M)		BLOWS / FT.	
SOIL DESCRIPTION SANDY GRAVEL		DRY DENSITY	
		LBS. / CU. FT.	
		MECHANICAL ANALYSIS	
		<.005 mm	%
		<.074 mm	%
		>.005 mm	%
		CONSISTENCY LIMITS	
		PLASTIC LIMIT	%
		NATURAL MOISTURE CONTENT	
		LIQUID LIMIT	%
		N.R.C. PERMAFROST CLASSIFICATION	
		LABORATORY NUMBER	
		SAMPLE IDENTIFICATION DATA	
		SAMPLE TYPE	
		SAMPLE NUMBER (FIELD)	
		SAMPLE DEPTH (M)	

SANDY GRAVEL

0 1 2 3 4 5



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

DEPTH (M)	SOIL DESCRIPTION	N.R.C. PERMAFROST CLASSIFICATION		SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS			MECHANICAL ANALYSIS				DRY DENSITY (LBS. CU. FT.)	STANDARD PENETRATION RESISTANCE (BLOWS FT.)	UNIFIED CLASSIFICATION
		DRILL TECHNICIAN: H. R.		LABORATORY DATA		LIQUID LIMIT (%)	PLASTIC LIMIT (%)		PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	> .005 mm (%)	> .074 mm (%)	< .005 mm (%)				
		DATE DRILLED: 22-5-78	H. R.	SAMPLE NUMBER (FIELD)	SAMPLE TYPE			SAMPLE DEPTH (M)							PLOTTED BY: R. S.	HOLE ELEVATION:	HOLE NO.:	
5																		
6																		
7																		
6.1				6.1														
7.0				7.0														
				8.8														
				8.8														
8																		
9																		
8.8				8.8														
9				8.8														
10																		



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS			HOLE LOCATION: STA.		
DATE DRILLED: 18-4-78		DRILL TECHNICIAN: II.R.	PLOTTED BY: R.S.		HOLE ELEVATION: 1 B
HOLE DEPTH: 7.5					
TYPE OF DRILL: B30-6" AUGERS					
WATER LEVEL					
DEPTH (M)					
0	ORGANIC				
1	SILTY SANDY TILL GRAVELLY				
2	SILTY SANDY GRAVEL				
3					
4					
5					

UNIFIED CLASSIFICATION	STANDARD PENETRATION RESISTANCE	BLOWS / FT.	DRY DENSITY LBS. / CU. FT.	MECHANICAL ANALYSIS					CONSISTENCY LIMITS			NATURAL MOISTURE CONTENT %	SAMPLE IDENTIFICATION DATA								
				<.005mm	<.074mm	>.005mm	SAND	GRAVEL	PLASTICITY INDEX	PLASTIC LIMIT	LIQUID LIMIT		LABORATORY NUMBER	SAMPLE TYPE	SAMPLE NUMBER (FIELD)	SAMPLE DEPTH (M)					
SM							40.9	33.1	26.0	TRACE			9.0	5117	AUGER	B1	1.2				



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS

HOLE LOCATION:

DATE DRILLED: 18-4-78

DRILL TECHNICIAN: H.R.

R.S.

HOLE ELEVATION:

HOLE NO.: 13

HOLE DEPTH 7.5

TYPE OF DRILL B 30-6" AUGERS

WATER LEVEL _____

DEPTH (M) _____

SOIL DESCRIPTION

SILTY SANDY GRAVEL

REUSAL @ 7.5

N.R.C.
PERMAFROST
CLASSIFICATION

SAMPLE IDENTIFICATION DATA	
LABORATORY NUMBER	
SAMPLE TYPE	
SAMPLE NUMBER (FIELD)	
SAMPLE DEPTH (M)	

NATURAL MOISTURE CONTENT

LIQUID LIMIT

PLASTIC LIMIT

PLASTICITY INDEX

MECHANICAL ANALYSIS

GRAVEL	%
SAND	%
>.005 mm	%
<.074 mm	%
<.005 mm	%

DRY DENSITY

STANDARD PENETRATION RESISTANCE

UNIFIED CLASSIFICATION

5 6 7 8 9 10



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: S.T.A.		HOLE NO.: 2-B	
DATE DRILLED: 10-4-78		DRILL TECHNICIAN: H.R.		HOLE ELEVATION:	
HOLE DEPTH: 9.0		PLOTTED BY: R.S.		MECHANICAL ANALYSIS	
TYPE OF DRILL: B30-6" AUGERS		NATURAL MOISTURE CONTENT: %		GRAVEL: %	
WATER LEVEL: _____		LIQUID LIMIT: %		SAND: %	
DEPTH (M):		PLASTIC LIMIT: %		< 0.075 mm: %	
SOIL DESCRIPTION		PLASTICITY INDEX: %		> 0.075 mm: %	
0 ORGANIC _____ .1		CONSISTENCY LIMITS		DRY DENSITY: LBS. / CU. FT.	
SILTY SAND TILL _____ .8		PLASTIC LIMIT		STANDARD PENETRATION RESISTANCE: BLOWS / FT.	
SILTY SANDY GRAVEL		LIQUID LIMIT		UNIFIED CLASSIFICATION	
		N.R.C. PERMAFROST CLASSIFICATION		GM	
		SAMPLE IDENTIFICATION DATA			
		LABORATORY NUMBER			
		SAMPLE TYPE			
		SAMPLE NUMBER (FIELD)			
		SAMPLE DEPTH (M)			
3.0		B2		51.8 21.5 26.7	
3.7		AUGER S1118		TRACE 4.8	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS

HOLE LOCATION:

DATE DRILLED: 18-4-78

R.S.

HOLE ELEVATION:

HOLE NO.: 2B

DRILL TECHNICIAN: H.R.

PLOTTED BY:

HOLE DEPTH 9.0

TYPE OF DRILL B30-6" AUGERS

WATER LEVEL

SOIL DESCRIPTION

SILTY SANDY GRAVEL

END HOLE @ 9.0

N.R.C.
PERMAFROST
CLASSIFICATION

SAMPLE IDENTIFICATION DATA

LABORATORY NUMBER

SAMPLE TYPE

SAMPLE NUMBER (FIELD)

SAMPLE DEPTH (M)

NATURAL MOISTURE CONTENT

%

CONSISTENCY LIMITS

PLASTICITY INDEX

%

PLASTIC LIMIT

%

LIQUID LIMIT

%

SAND

%

GRAVEL

%

MECHANICAL ANALYSIS

<.005 mm

%

<.074 mm

%

>.005 mm

%

DRY DENSITY

LBS. CU.FT.

STANDARD PENETRATION RESISTANCE

BLOWS FT.

UNIFIED CLASSIFICATION

DEPTH (M)

5

6

7

8

9

10



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS

HOLE LOCATION:

DATE DRILLED: 18-4-78

DRILL TECHNICIAN: H.R.

PLOTTED BY: R.S.

HOLE ELEVATION:

HOLE NO.: 3-B

HOLE DEPTH 7.5
TYPE OF DRILL B30-6" AUGERS
WATER LEVEL _____
DEPTH (M) _____

SOIL DESCRIPTION

Silt Sand Till
GRAVELLY

END HOLE @ 7.5

N.R.C.
PERMAFROST
CLASSIFICATION

SAMPLE IDENTIFICATION DATA
LABORATORY NUMBER
SAMPLE TYPE
SAMPLE NUMBER (FIELD)
SAMPLE DEPTH (M)

NATURAL
MOISTURE
CONTENT
%

CONSISTENCY LIMITS
LIQUID LIMIT %
PLASTIC LIMIT %
PLASTICITY INDEX %

MECHANICAL ANALYSIS
GRAVEL %
SAND %

<.005 mm %
<.074 mm %
>.005 mm %
DRY DENSITY LBS. CU.FT.
STANDARD PENETRATION RESISTANCE BLOWS FT.

UNIFIED CLASSIFICATION



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.																																									
DATE DRILLED: 18-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION:																																								
HOLE DEPTH: 7.5	HOLE NO.: 4.B																																										
TYPE OF DRILL: B30-6" AUGERS																																											
MATER LEVEL:																																											
DEPTH (M.)	SOIL DESCRIPTION																																										
0	ORGANIC .1																																										
1	SILTY SANDY GRAVEL																																										
2																																											
3																																											
4																																											
5																																											
<table border="1"> <thead> <tr> <th rowspan="2">DEPTH (M.)</th> <th colspan="4">MECHANICAL ANALYSIS</th> <th rowspan="2">NATURAL MOISTURE CONTENT (%)</th> <th colspan="3">CONSISTENCY LIMITS</th> <th rowspan="2">STANDARD PENETRATION RESISTANCE (BLOWS/FT.)</th> <th rowspan="2">UNIFIED CLASSIFICATION</th> </tr> <tr> <th>GRAVEL (%)</th> <th>SAND (%)</th> <th><.074 mm (%)</th> <th><.005 mm (%)</th> <th>LIQUID LIMIT (%)</th> <th>PLASTIC LIMIT (%)</th> <th>PLASTICITY INDEX (%)</th> </tr> </thead> <tbody> <tr> <td>3.0</td> <td>33.5</td> <td>35.4</td> <td>16.5</td> <td>14.6</td> <td>6.7</td> <td>TRACE</td> <td></td> <td></td> <td></td> <td>SM</td> </tr> <tr> <td>4.0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				DEPTH (M.)	MECHANICAL ANALYSIS				NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS			STANDARD PENETRATION RESISTANCE (BLOWS/FT.)	UNIFIED CLASSIFICATION	GRAVEL (%)	SAND (%)	<.074 mm (%)	<.005 mm (%)	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	3.0	33.5	35.4	16.5	14.6	6.7	TRACE				SM	4.0										
DEPTH (M.)	MECHANICAL ANALYSIS				NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS				STANDARD PENETRATION RESISTANCE (BLOWS/FT.)	UNIFIED CLASSIFICATION																																
	GRAVEL (%)	SAND (%)	<.074 mm (%)	<.005 mm (%)		LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)																																			
3.0	33.5	35.4	16.5	14.6	6.7	TRACE				SM																																	
4.0																																											
<table border="1"> <thead> <tr> <th rowspan="2">DEPTH (M.)</th> <th colspan="4">SAMPLE IDENTIFICATION DATA</th> </tr> <tr> <th>SAMPLE DEPTH (M)</th> <th>SAMPLE NUMBER (FIELD)</th> <th>SAMPLE TYPE</th> <th>LABORATORY NUMBER</th> </tr> </thead> <tbody> <tr> <td>3.0</td> <td>B4</td> <td>AUGER</td> <td>S1120</td> <td>6.7</td> </tr> <tr> <td>4.0</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				DEPTH (M.)	SAMPLE IDENTIFICATION DATA				SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER	3.0	B4	AUGER	S1120	6.7	4.0																									
DEPTH (M.)	SAMPLE IDENTIFICATION DATA																																										
	SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER																																							
3.0	B4	AUGER	S1120	6.7																																							
4.0																																											
N.R.C. PERMAFROST CLASSIFICATION																																											



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS

HOLE LOCATION:

DATE DRILLED: 18-4-78

DRILL TECHNICIAN: H.R.

R.S.

HOLE ELEVATION:

HOLE NO.: 4-B

HOLE DEPTH 7.5
TYPE OF DRILL B30-6" AUGERS
WATER LEVEL _____
DEPTH (M) _____

SOIL DESCRIPTION

SILTY SANDY GRAVEL

END HOLE @ 7.5

N.R.C.
PERMAFROST
CLASSIFICATION

SAMPLE IDENTIFICATION DATA
LABORATORY NUMBER _____
SAMPLE TYPE _____
SAMPLE NUMBER (FIELD) _____
SAMPLE DEPTH (M) _____

NATURAL MOISTURE CONTENT
% _____

CONSISTENCY LIMITS
LIQUID LIMIT % _____
PLASTIC LIMIT % _____
PLASTICITY INDEX % _____

MECHANICAL ANALYSIS
GRAVEL % _____
SAND % _____
<.074 mm % _____
>.005 mm % _____
<.005 mm % _____

DRY DENSITY
LBS. CU.FT. _____

STANDARD PENETRATION RESISTANCE
BLOWS FT. _____

UNIFIED CLASSIFICATION



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT & BORROW PITS

HOLE LOCATION: STA.

DATE DRILLED: 18-4-78

DRILL TECHNICIAN: H.R.

PLOTTED BY: R.S.

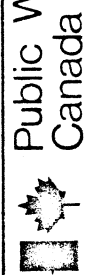
HOLE ELEVATION: HOLE NO.: 5-B

HOLE DEPTH 9.1
TYPE OF DRILL B30-6" AUGERS
WATER LEVEL
DEPTH (ft) SOIL DESCRIPTION

DEPTH (ft)	N.R.C. PERMAFROST CLASSIFICATION	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT %	CONSISTENCY LIMITS			MECHANICAL ANALYSIS				DRY DENSITY LBS./CU. FT.	STANDARD PENETRATION RESISTANCE BLOWS/FT.	UNIFIED CLASSIFICATION	
		SAMPLE DEPTH (ft)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER		LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GRAVEL %	SAND %	>.005 mm %	>.074 mm %				>.005 mm %
0																	
0.1																	
2.7		2.7	B5	AUGER S1R1		4.9	N.P.		53.4	21.4	25.2					GM	
3.7		3.7															
4.0		4.0															
5																	

ORGANIC
SILTY SANDY GRAVEL

GRAVEL



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS

HOLE LOCATION:

DATE DRILLED: 18-4-78 HOLE ELEVATION: HOLE NO: 5-B

HOLE ELEVATION: 5-B

R.S.

PLOTTED BY:

DRILL TECHNICIAN: H.R.

HOLE DEPTH 9.1
 TYPE OF DRILL B30-6" AUGERS
 WATER LEVEL _____
 SOIL DESCRIPTION

N.R.C. PERMAFROST CLASSIFICATION

LABORATORY NUMBER
 SAMPLE TYPE
 SAMPLE NUMBER (FIELD)
 SAMPLE DEPTH (M)

CONSISTENCY LIMITS
 LIQUID LIMIT %
 PLASTIC LIMIT %
 PLASTICITY INDEX %

MECHANICAL ANALYSIS
 GRAVEL %
 SAND %
 <.074mm %
 >.005mm %
 <.005mm %

DRY DENSITY LBS. CU.FT.
 STANDARD PENETRATION RESISTANCE BLOWS FT.

UNIFIED CLASSIFICATION

5										
6										
7										
8										
9										
10										

GRAVEL

END HOLE @ 9.1



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS

HOLE LOCATION:

DATE DRILLED: 18-4-78

DRILL TECHNICIAN: H.R.

PLOTTED BY: R.S.

HOLE ELEVATION:

HOLE NO.: 6-B

HOLE DEPTH 7.9

TYPE OF DRILL B30-6" AUGERS

WATER LEVEL

DEPTH (M) SOIL DESCRIPTION

5

6

7

8

9

10

GRAVEL

REFUSAL @ 7.9

N.R.C. PERMAFROST CLASSIFICATION

SAMPLE IDENTIFICATION DATA
LABORATORY NUMBER
SAMPLE TYPE
SAMPLE NUMBER (FIELD)
SAMPLE DEPTH (M)

NATURAL MOISTURE CONTENT %

CONSISTENCY LIMITS
LIQUID LIMIT %
PLASTIC LIMIT %
PLASTICITY INDEX %

MECHANICAL ANALYSIS
GRAVEL %
SAND %
>.005 mm %
<.074 mm %
<.005 mm %

DRY DENSITY LBS. CU. FT.

STANDARD PENETRATION RESISTANCE BLOWS FT.

UNIFIED CLASSIFICATION



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 18-4-78		HOLE ELEVATION:	
DRILL TECHNICIAN: H. R.		R. S.	
PLOTTED BY:		HOLE NO.: 7-3	
HOLE DEPTH: 7.5		MECHANICAL ANALYSIS	
TYPE OF DRILL: B30-6" AUGERS		< .005 mm % < .074 mm % > .005 mm %	
WATER LEVEL		SAND % GRAVEL %	
DEPTH (M)		CONSISTENCY LIMITS PLASTIC LIMIT % LIQUID LIMIT % PLASTICITY INDEX %	
SOIL DESCRIPTION		NATURAL MOISTURE CONTENT %	
0 ORGANIC .1		SAMPLE IDENTIFICATION DATA LABORATORY NUMBER SAMPLE TYPE SAMPLE NUMBER (FIELD) SAMPLE DEPTH (M)	
SILT SAND TILL		N.R.C. PERMAFROST CLASSIFICATION	
1 SILTY SANDY GRAVEL .8		B7 AUGER S1123 10.2 19.8 15.7 4.1 13.1 30.9 56.0 1.5 2.4	
		UNIFIED CLASSIFICATION	
		STANDARD PENETRATION RESISTANCE	
		DRY DENSITY	
		BLOWS / FT.	
		LBS. / CU. FT.	
		CL-ML	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS

HOLE LOCATION:

DATE DRILLED: 18-4-78

DRILL TECHNICIAN: H.R.

PLOTTED BY: R.S.

HOLE ELEVATION:

HOLE NO.: 7-B

HOLE DEPTH 7.5
TYPE OF DRILL B30-6" AUGERS
WATER LEVEL _____

SOIL DESCRIPTION

SILTY SANDY GRAVEL

END HOLE @ 7.5

N.R.C.
PERMAFROST
CLASSIFICATION

SAMPLE IDENTIFICATION DATA
LABORATORY NUMBER
SAMPLE TYPE
SAMPLE NUMBER (FIELD)
SAMPLE DEPTH (M)

NATURAL MOISTURE CONTENT
%

CONSISTENCY LIMITS
LIQUID LIMIT %
PLASTIC LIMIT %
PLASTICITY INDEX %

MECHANICAL ANALYSIS
GRAVEL %
SAND %

DRY DENSITY LBS./CU.FT.
STANDARD PENETRATION RESISTANCE BLOWS/FT.

UNIFIED CLASSIFICATION

DEPTH (M) 5 6 7 8 9 10



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.		HOLE NO.: 8-B	
DATE DRILLED: 18-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 6.7		CONSISTENCY LIMITS		MECHANICAL ANALYSIS	
TYPE OF DRILL: B30-6" AUGERS		PLASTIC LIMIT		SAND	
WATER LEVEL		LIQUID LIMIT		GRAVEL	
DEPTH (M)		PLASTICITY INDEX		NATURAL MOISTURE CONTENT	
SOIL DESCRIPTION		N.R.C. PERMAFROST CLASSIFICATION		LABORATORY NUMBER	
ORGANIC		SAMPLE DEPTH (M)		SAMPLE NUMBER (FIELD)	
SILT SAND TILL		1.2		B8	
SILTY SANDY GRAVEL		2.1		AUGER S1124	
				7.2	
				N.P.	
				26.3	
				33.4	
				40.3	
				SM	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS

HOLE LOCATION:

DATE DRILLED: 18-4-78

DRILL TECHNICIAN: H.R.

R.S.

HOLE ELEVATION:

HOLE NO.: 8-13

HOLE DEPTH 8.7
TYPE OF DRILL B30-6" AUGERS
WATER LEVEL _____
SOIL DESCRIPTION

N.R.C.
PERMAFROST
CLASSIFICATION

SAMPLE IDENTIFICATION DATA
LABORATORY NUMBER _____
SAMPLE TYPE _____
SAMPLE NUMBER (FIELD) _____
SAMPLE DEPTH (M) _____

NATURAL MOISTURE CONTENT %

CONSISTENCY LIMITS
LIQUID LIMIT %
PLASTIC LIMIT %
PLASTICITY INDEX %

MECHANICAL ANALYSIS
GRAVEL %
SAND %
> 0.075 mm %
< 0.075 mm %

DRY DENSITY LBS. CU. FT.
STANDARD PENETRATION RESISTANCE BLOWS FT.

UNIFIED CLASSIFICATION

5 6 7 8 9 10

SILTY SANDY GRAVEL

REFUSAL @ 8.7



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.		
DATE DRILLED: 20-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION: .	
HOLE DEPTH: 6.1		HOLE NO.: 9-B		
TYPE OF DRILL: B30-6" AUGERS		STANDARD PENETRATION RESISTANCE		
WATER LEVEL		BLOWS / FT.		
DEPTH (M)		LBS. / CU. FT.		
SOIL DESCRIPTION		UNIFIED CLASSIFICATION		
<p>SILTY SANDY GRAVEL</p>		GRAVEL		GM
		SAND		
		PLASTICITY INDEX		
		PLASTIC LIMIT		
		LIQUID LIMIT		
		NATURAL MOISTURE CONTENT		
		MECHANICAL ANALYSIS		
		CONSISTENCY LIMITS		
		SAMPLE IDENTIFICATION DATA		
		N.R.C. PERMAFROST CLASSIFICATION		
0				
1				
2				
3				
4				
5				

SILTY SANDY GRAVEL

B9

AUGER S1125

4.5

N.P.

57.9 26.0 16.1

GM

.9

1.7



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS

HOLE LOCATION:

DATE DRILLED: 20-4-78

DRILL TECHNICIAN: H.R.

PLOTTED BY: R.S.

HOLE ELEVATION:

HOLE NO.: 9-B

HOLE DEPTH 6.1
TYPE OF DRILL B30-6" AUGERS
WATER LEVEL _____
DEPTH (M) _____
SOIL DESCRIPTION

N.R.C. PERMAFROST CLASSIFICATION

LABORATORY NUMBER _____
SAMPLE TYPE _____
SAMPLE NUMBER (FIELD) _____
SAMPLE DEPTH (M) _____

NATURAL MOISTURE CONTENT %

CONSISTENCY LIMITS
LIQUID LIMIT %
PLASTIC LIMIT %
PLASTICITY INDEX %

MECHANICAL ANALYSIS
GRAVEL %
SAND %
< 0.075 mm %
< 0.005 mm %

DRY DENSITY LBS./CU. FT.

STANDARD PENETRATION RESISTANCE BLOWS/FT.

UNIFIED CLASSIFICATION

SILTY SANDY GRAVEL

END HOLE @ 6.1



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 20-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION: 10.3
HOLE DEPTH: 6.1	HOLE NO.: 10-B		
TYPE OF DRILL: B30-6" AUGERS	MECHANICAL ANALYSIS		
WATER LEVEL:	GRAVEL	%	
DEPTH (M)	PLASTIC LIMIT	%	
	LIQUID LIMIT	%	
SOIL DESCRIPTION	PLASTICITY INDEX	%	
	NATURAL MOISTURE CONTENT	%	
0	SAMPLE IDENTIFICATION DATA		UNIFIED CLASSIFICATION
	SAMPLE DEPTH (M)	LABORATORY NUMBER	
1	1.5	BIO	GP
2	2.4	AUGER S1126	
3			
4			
5			

SANDY GRAVEL

N.P. 96.4 1.7 1.9

1.1

1.5

2.4



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 10-B	
DATE DRILLED: 20-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 6.1		MECHANICAL ANALYSIS		UNIFIED CLASSIFICATION	
TYPE OF DRILL: B30-6" AUGERS		<.005 mm % <.074 mm % >.005 mm %		STANDARD PENETRATION RESISTANCE	
WATER LEVEL		SAND %		BLOWS / FT.	
DEPTH (M)		GRAVEL %			
		PLASTICITY INDEX %			
		PLASTIC LIMIT %			
		LIQUID LIMIT %			
		NATURAL MOISTURE CONTENT %			
		CONSISTENCY LIMITS			
		LABORATORY NUMBER			
		SAMPLE TYPE			
		SAMPLE NUMBER (FIELD)			
		SAMPLE DEPTH (M)			
		N.R.C. PERMAFROST CLASSIFICATION			
SOIL DESCRIPTION					
SANDY GRAVEL					
END HOLE @ 6.1					



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 20-4-78		HOLE ELEVATION: 11 - B	
DRILL TECHNICIAN: H.R.		R.S.	
HOLE DEPTH 6.1		PLOTTED BY:	
TYPE OF DRILL B30-6" AUGERS		MECHANICAL ANALYSIS	
WATER LEVEL		<.005 mm % <.074 mm % >.005 mm % SAND % GRAVEL %	
DEPTH (M)		CONSISTENCY LIMITS	
SOIL DESCRIPTION		PLASTICITY INDEX % PLASTIC LIMIT % LIQUID LIMIT %	
0 ORGANIC .1		NATURAL MOISTURE CONTENT %	
GRAVEL		LABORATORY MOISTURE DATA	
		LABORATORY NUMBER	
		SAMPLE TYPE	
		SAMPLE NUMBER (FIELD)	
		SAMPLE DEPTH (M)	
		N.R.C. PERMAFROST CLASSIFICATION	
1	1.5	B-11 AUG. 1127	1.4
2	2.4		
3			
4			
5			

UNIFIED CLASSIFICATION

GP

N.P. 81.8 14.0 4.2



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 11-13															
DATE DRILLED: 20-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.															
HOLE DEPTH: 6.1		MECHANICAL ANALYSIS		UNIFIED CLASSIFICATION															
TYPE OF DRILL: B30-6" AUGERS		<table border="1"> <tr><td><.005mm</td><td>%</td></tr> <tr><td><.074mm</td><td>%</td></tr> <tr><td>>.005mm</td><td>%</td></tr> <tr><td>SAND</td><td>%</td></tr> <tr><td>GRAVEL</td><td>%</td></tr> </table>		<.005mm	%	<.074mm	%	>.005mm	%	SAND	%	GRAVEL	%	<table border="1"> <tr><td>STANDARD PENETRATION RESISTANCE</td><td>BLOWS/FT.</td></tr> <tr><td>DRY DENSITY</td><td>LBS./CU. FT.</td></tr> </table>		STANDARD PENETRATION RESISTANCE	BLOWS/FT.	DRY DENSITY	LBS./CU. FT.
<.005mm	%																		
<.074mm	%																		
>.005mm	%																		
SAND	%																		
GRAVEL	%																		
STANDARD PENETRATION RESISTANCE	BLOWS/FT.																		
DRY DENSITY	LBS./CU. FT.																		
WATER LEVEL		CONSISTENCY LIMITS		NATURAL MOISTURE CONTENT															
DEPTH (M)		<table border="1"> <tr><td>PLASTIC LIMIT</td><td>%</td></tr> <tr><td>LIQUID LIMIT</td><td>%</td></tr> <tr><td>PLASTICITY INDEX</td><td>%</td></tr> </table>		PLASTIC LIMIT	%	LIQUID LIMIT	%	PLASTICITY INDEX	%	%									
PLASTIC LIMIT	%																		
LIQUID LIMIT	%																		
PLASTICITY INDEX	%																		
SOIL DESCRIPTION		SAMPLE IDENTIFICATION DATA		N.R.C. PERMAFROST CLASSIFICATION															
GRAVEL		LABORATORY NUMBER																	
		SAMPLE TYPE																	
END HOLE @ 6.1		SAMPLE NUMBER (FIELD)																	
		SAMPLE DEPTH (M)																	
5																			
6																			
7																			
8																			
9																			
10																			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.		HOLE NO.: 12-B	
DATE DRILLED: 20-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 6.1		CONSISTENCY LIMITS		MECHANICAL ANALYSIS	
TYPE OF DRILL: B30-6" AUGERS		PLASTIC LIMIT		SAND	
WATER LEVEL		LIQUID LIMIT		GRAVEL	
DEPTH (M)		NATURAL MOISTURE CONTENT		PLASTICITY INDEX	
SOIL DESCRIPTION		LABORATORY DATA		STANDARD PENETRATION RESISTANCE	
0		SAMPLE DEPTH (M)		DRY DENSITY	
1		SAMPLE NUMBER (FIELD)		LBS. CU. FT.	
2		SAMPLE TYPE		BLOWS FT.	
3		SAMPLE NUMBER		UNIFIED CLASSIFICATION	
4		N.R.C. PERMAFROST CLASSIFICATION			
5		N.R.C. PERMAFROST CLASSIFICATION			

0	ORGANIC								
1	GRAVEL								
2	SILTY SANDY GRAVEL	2.1	BIZ AUG 1128	N.P.	26.5	37.0	35.7		SM
3		3.0							



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE ELEVATION:		HOLE NO.: 12-B	
DATE DRILLED: 20-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.			
HOLE DEPTH: 6.1		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:			
DEPTH (M)		SOIL DESCRIPTION		N.R.C. PERMAFROST CLASSIFICATION			
5	SILTY SANDY GRAVEL						
6	REFUSAL @ 6.1						
7							
8							
9							
10							
				NATURAL MOISTURE CONTENT		%	
				LIQUID LIMIT		%	
				PLASTIC LIMIT		%	
				PLASTICITY INDEX		%	
				GRAVEL		%	
				SAND		%	
				> 0.075 mm		%	
				> 0.075 mm		%	
				< 0.075 mm		%	
				DRY DENSITY		LBS. / CU. FT.	
				STANDARD PENETRATION RESISTANCE		BLOWS / FT.	
				UNIFIED CLASSIFICATION			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 20-4-78	DRILL TECHNICIAN: H. R.	PLOTTED BY: R. S.	HOLE ELEVATION: .
HOLE DEPTH: 7.3		HOLE NO.: 13-B	
TYPE OF DRILL: B30-6" AUGERS			
WATER LEVEL			
DEPTH (M)			
SOIL DESCRIPTION			
0 - ORGANIC			
SILTY SANDY GRAVEL			
1 -			
2 -			
3 -			
4 -			
5 -			
N.R.C. PERMAFROST CLASSIFICATION			
SAMPLE IDENTIFICATION DATA			
SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)		
0.6	B13 Aug 1129		
1.2			
NATURAL MOISTURE CONTENT			
%			
CONSISTENCY LIMITS			
LIQUID LIMIT	%		
PLASTIC LIMIT	%		
PLASTICITY INDEX	%	N.P.	
MECHANICAL ANALYSIS			
GRAVEL	%	82.8	
SAND	%	13.0	
> .005 mm	%	4.2	
< .074 mm	%		
< .005 mm	%		
DRY DENSITY			
LBS. CU. FT.			
STANDARD PENETRATION RESISTANCE			
BLOWS FT.		GP	
UNIFIED CLASSIFICATION			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS

HOLE LOCATION:

DATE DRILLED: 20-4-78

DRILL TECHNICIAN: H.R.

PLOTTED BY:

R.S.

HOLE ELEVATION:

HOLE NO.: 13-B

HOLE DEPTH 7.3
TYPE OF DRILL B30-6" AUGERS
WATER LEVEL _____

SOIL DESCRIPTION

SILTY SANDY GRAVEL

END HOLE @ 7.3

N.R.C.
PERMAFROST
CLASSIFICATION

LABORATORY NUMBER
SAMPLE TYPE
SAMPLE NUMBER (FIELD)
SAMPLE DEPTH (M)

NATURAL MOISTURE CONTENT %

CONSISTENCY LIMITS
LIQUID LIMIT %
PLASTIC LIMIT %
PLASTICITY INDEX %

MECHANICAL ANALYSIS
GRAVEL %
SAND %

<.074 mm %
>.005 mm %
<.005 mm %

DRY DENSITY LBS. CU.FT.

STANDARD PENETRATION RESISTANCE BLOWS FT.

UNIFIED CLASSIFICATION

5 6 7 8 9 10



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 20-4-78	DRILL TECHNICIAN: H. R.	PLOTTED BY: R. S.	HOLE ELEVATION: 14-B
HOLE DEPTH: 6.1	TYPE OF DRILL: B30-6" AUGERS		
WATER LEVEL: _____			
DEPTH (M)	SOIL DESCRIPTION		
0	ORGANIC .2		
1	SILTY SAND TILL		
2	ORGANIC TRACES		
3			
4			
5			

UNIFIED CLASSIFICATION	STANDARD PENETRATION RESISTANCE	BLOWS / FT.	DRY DENSITY	LBS. / CU. FT.	MECHANICAL ANALYSIS			CONSISTENCY LIMITS			NATURAL MOISTURE CONTENT	SAMPLE IDENTIFICATION DATA												
					<.005 mm	<.074 mm	>.005 mm	SAND	GRAVEL	PLASTICITY INDEX		PLASTIC LIMIT	LIQUID LIMIT	%	LABORATORY NUMBER	SAMPLE TYPE	SAMPLE NUMBER (FIELD)	SAMPLE DEPTH (M)						
SM							13.6	28.8	37.3	20.3	N.P.					4-B	AUG.	130	10.3				0.9	1.8

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE ELEVATION:		HOLE NO.: 14-3	
DATE DRILLED: 20-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.			
HOLE DEPTH 6.1		TYPE OF DRILL B30-6" AUGERS		WATER LEVEL		UNIFIED CLASSIFICATION	
DEPTH (M)		SOIL DESCRIPTION		CONSISTENCY LIMITS		MECHANICAL ANALYSIS	
5		SILTY SAND TILL		LIQUID LIMIT		<.005 mm	
				PLASTIC LIMIT		.074 mm	
6		END HOLE @ 6.1		GRAVEL		.005 mm	
				SAND			
7				PLASTICITY INDEX			
				STANDARD PENETRATION RESISTANCE		BLOWS / FT.	
8				DRY DENSITY			
				NATURAL MOISTURE CONTENT			
9				LABORATORY NUMBER			
				SAMPLE TYPE			
10				SAMPLE NUMBER (FIELD)			
				SAMPLE DEPTH (M)			
				N.R.C. PERMAFROST CLASSIFICATION			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.		HOLE NO.: 15-B	
DATE DRILLED: 20-4-78		DRILL TECHNICIAN: H.R.		R.S.	
HOLE DEPTH: 6.1		PLASTICITY INDEX		GRAVEL	
TYPE OF DRILL: B30-6" AUGERS		PLASTIC LIMIT		SAND	
WATER LEVEL		LIQUID LIMIT		N.P.	
DEPTH (M)		NATURAL MOISTURE CONTENT		20.3	
SOIL DESCRIPTION		LABORATORY NUMBER		24.5	
SANDY SILT		SAMPLE TYPE		55.2	
SILT SANDY GRAVEL		SAMPLE NUMBER (FIELD)		15	
		SAMPLE DEPTH (M)		2.1	
		N.R.C. PERMAFROST CLASSIFICATION		3.0	
		UNIFIED CLASSIFICATION		ML	
		STANDARD PENETRATION RESISTANCE		BLOWS/FT.	
		DRY DENSITY		LBS./CU.FT.	
		MECHANICAL ANALYSIS			
		< .005 mm		%	
		< .074 mm		%	
		> .005 mm		%	

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 15-B	
DATE DRILLED: 20-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 6.1		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:	
DEPTH (M)		SOIL DESCRIPTION		UNIFIED CLASSIFICATION	
5		SILTY SANDY GRAVEL			
6		END HOLE @ 6.1			
7					
8					
9					
10					
		N.R.C. PERMAFROST CLASSIFICATION		MECHANICAL ANALYSIS	
		SAMPLE IDENTIFICATION DATA		GRAVEL %	
		SAMPLE DEPTH (M)		SAND %	
		SAMPLE NUMBER (FIELD)		PLASTICITY INDEX %	
		SAMPLE TYPE		PLASTIC LIMIT %	
		LABORATORY NUMBER		LIQUID LIMIT %	
		NATURAL MOISTURE CONTENT %		<.005 mm %	
				>.005 mm %	
				<.074 mm %	
				STANDARD PENETRATION RESISTANCE	
				BLOWS / FT.	
				DRY DENSITY LBS. / CU. FT.	



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 16-B	
DATE DRILLED: 20-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 6.1		MECHANICAL ANALYSIS		UNIFIED CLASSIFICATION	
TYPE OF DRILL: B30-6" AUGERS		GRAVEL		STANDARD PENETRATION RESISTANCE	
WATER LEVEL		SAND		BLOWS / FT.	
SOIL DESCRIPTION		PLASTIC LIMIT		DRY DENSITY	
		LIQUID LIMIT		LBS. / CU. FT.	
SILTY SANDY GRAVEL		CONSISTENCY LIMITS		MECHANICAL ANALYSIS	
		NATURAL MOISTURE CONTENT		GRAVEL	
END HOLE @ 6.1		PLASTIC INDEX		SAND	
		LABORATORY NUMBER		PLASTIC LIMIT	
5		SAMPLE DEPTH (M)		PLASTICITY INDEX	
		SAMPLE NUMBER (FIELD)		GRAVEL	
6		SAMPLE TYPE		SAND	
		N.R.C. PERMAFROST CLASSIFICATION		PLASTICITY INDEX	
7		LABORATORY NUMBER		SAND	
		SAMPLE DEPTH (M)		PLASTICITY INDEX	
8		SAMPLE TYPE		GRAVEL	
		LABORATORY NUMBER		PLASTICITY INDEX	
9		SAMPLE NUMBER (FIELD)		SAND	
		SAMPLE DEPTH (M)		PLASTICITY INDEX	
10		SAMPLE TYPE		GRAVEL	
		LABORATORY NUMBER		PLASTICITY INDEX	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.		HOLE NO.: 17-B	
DATE DRILLED: 21-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 9.0		TYPE OF DRILL: B30-6" AUGERS		MATERIAL ANALYSIS	
MATERIAL LEVEL		SOIL DESCRIPTION		UNIFIED CLASSIFICATION	
DEPTH (M)		N.R.C. PERMAFROST CLASSIFICATION		STANDARD PENETRATION RESISTANCE	
0		ORGANIC		BLOWS / FT.	
1		SILT		LBS. / CU. FT.	
2		SANDY GRAVEL		DRY DENSITY	
3				MECHANICAL ANALYSIS	
4				GRAVEL	
5				SAND	
				PLASTICITY INDEX	
				PLASTIC LIMIT	
				LIQUID LIMIT	
				NATURAL MOISTURE CONTENT	
				CONSISTENCY LIMITS	
				SAMPLE IDENTIFICATION DATA	
				LABORATORY NUMBER	
				SAMPLE TYPE	
				SAMPLE NUMBER (FIELD)	
				SAMPLE DEPTH (M)	
				GRAVEL	
				SAND	
				> 0.075 mm	
				< 0.075 mm	
				< 0.005 mm	
				UNIFIED CLASSIFICATION	

1.5

2.4

817 AUG. 1133

1.2

14.3

2.9

GP



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE ELEVATION:		HOLE NO.: 17-13	
DATE DRILLED: 21-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.			
HOLE DEPTH: 9.0		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:			
DEPTH (M)		SOIL DESCRIPTION					
5		SANDY GRAVEL					
6							
7							
8							
9		END HOLE @ 9.0					
10							
		N.R.C. PERMAFROST CLASSIFICATION					
		SAMPLE IDENTIFICATION DATA					
		LABORATORY NUMBER					
		SAMPLE TYPE					
		SAMPLE NUMBER (FIELD)					
		SAMPLE DEPTH (M)					
		NATURAL MOISTURE CONTENT					
		LIQUID LIMIT					
		PLASTIC LIMIT					
		PLASTICITY INDEX					
		GRAVEL					
		SAND					
		MECHANICAL ANALYSIS					
		<.005 mm					
		<.074 mm					
		>.005 mm					
		DRY DENSITY					
		LBS. CU. FT.					
		STANDARD PENETRATION RESISTANCE					
		BLOWS FT.					
		UNIFIED CLASSIFICATION					



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 21-4-78	DRILL TECHNICIAN: II. R.	PLOTTED BY: R. S.	HOLE ELEVATION:
HOLE DEPTH: 10.5		HOLE NO.: 18-B	
TYPE OF DRILL: B30-6" AUGERS		UNIFIED CLASSIFICATION	
WATER LEVEL		STANDARD PENETRATION RESISTANCE	
DEPTH (M)		BLOWS / FT.	
SOIL DESCRIPTION		DRY DENSITY	
0 ORGANIC		LBS. / CU. FT.	
SANDY SILT		MECHANICAL ANALYSIS	
SANDY GRAVEL		GRAVEL	
		SAND	
		PLASTICITY INDEX	
		PLASTIC LIMIT	
		LIQUID LIMIT	
		NATURAL MOISTURE CONTENT	
		LABORATORY NUMBER	
		SAMPLE TYPE	
		SAMPLE NUMBER (FIELD)	
		SAMPLE DEPTH (M)	
		N.R.C. PERMAFROST CLASSIFICATION	
0			
1	0.9	B19 AUG. 1134	N.P. 59.9 30.7 9.4
2	1.5		GP-GM
3			
4			
5			



**Public Works
Canada**

**MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.**

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 18-B		
DATE DRILLED: 21-4-78		DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION:		
HOLE DEPTH: 10.5	UNIFIED CLASSIFICATION					
TYPE OF DRILL: B30-6" AUGERS	MECHANICAL ANALYSIS		STANDARD PENETRATION RESISTANCE		BLAWS / FT.	
WATER LEVEL	< .005 mm	%	DRY DENSITY			LBS. / CU. FT.
DEPTH (M)	< .074 mm	%	GRAVEL			%
5	> .005 mm	%	SAND			%
	CONSISTENCY LIMITS		PLASTICITY INDEX			%
	LIQUID LIMIT		PLASTIC LIMIT			%
	NATURAL MOISTURE CONTENT		PLASTIC LIMIT			%
	SAMPLE IDENTIFICATION DATA		LABORATORY NUMBER			
	SAMPLE DEPTH (M)		SAMPLE TYPE			
	N.R.C. PERMAFROST CLASSIFICATION		SAMPLE NUMBER (FIELD)			
	SOIL DESCRIPTION		SAMPLE NUMBER			
	SANDY GRAVEL		LABORATORY NUMBER			
	SAND & GRAVEL		SAMPLE TYPE			
	_____ 5.8		SAMPLE NUMBER (FIELD)			
			SAMPLE DEPTH (M)			
			N.R.C. PERMAFROST CLASSIFICATION			
6						
7						
8						
9						
10						



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:	
DATE DRILLED: 21-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: P.S.	HOLE ELEVATION: 18-3
HOLE DEPTH: 10.5	MECHANICAL ANALYSIS		
TYPE OF DRILL: B30-6" AUGERS	<.005mm	%	UNIFIED CLASSIFICATION
WATER LEVEL: _____	<.074mm	%	
DEPTH (M):	>.005mm	%	STANDARD PENETRATION RESISTANCE
10	SAND	%	
	GRAVEL	%	DRY DENSITY
	PLASTICITY INDEX	%	
	PLASTIC LIMIT	%	UNIFIED CLASSIFICATION
	LIQUID LIMIT	%	
	NATURAL MOISTURE CONTENT	%	BLOWS / FT.
	LABORATORY NUMBER		
	SAMPLE TYPE		LBS. / CU. FT.
	SAMPLE NUMBER (FIELD)		
	SAMPLE DEPTH (M)		STANDARD PENETRATION RESISTANCE
	N.R.C. PERMAFROST CLASSIFICATION		
	SOIL DESCRIPTION		UNIFIED CLASSIFICATION
	SAND & GRAVEL		
	END HOLE @ 10.5		BLOWS / FT.
11			
12			STANDARD PENETRATION RESISTANCE
13			
14			UNIFIED CLASSIFICATION
15			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 21-4-78	DRILL TECHNICIAN: H. R.	PLOTTED BY: R. S.	HOLE ELEVATION:
HOLE DEPTH: 9.0		HOLE NO.: 19-B	
TYPE OF DRILL: B30-6" AUGERS		STANDARD PENETRATION RESISTANCE	
WATER LEVEL:		UNIFIED CLASSIFICATION	
DEPTH (M)		SOIL DESCRIPTION	
0		SANDY GRAVEL	
1			
2			
3			
4			
5			
		N.R.C. PERMAFROST CLASSIFICATION	
		NATURAL MOISTURE CONTENT	
		CONSISTENCY LIMITS	
		MECHANICAL ANALYSIS	
		DRY DENSITY	
		STANDARD PENETRATION RESISTANCE	
		UNIFIED CLASSIFICATION	
		GRAVEL	
		SAND	
		>.074 mm	
		<.005 mm	
		PLASTIC LIMIT	
		PLASTICITY INDEX	
		LIQUID LIMIT	
		LABORATORY NUMBER	
		SAMPLE TYPE	
		SAMPLE NUMBER (FIELD)	
		SAMPLE DEPTH (M)	
4.6		B20 AUG. 1135	
5.2		3.8	
		51.8	
		35.6	
		12.6	
		GM	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 19-B	
DATE DRILLED: 21-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 9.0		MECHANICAL ANALYSIS		UNIFIED CLASSIFICATION	
TYPE OF DRILL: B30-6" AUGERS		GRAVEL		STANDARD PENETRATION RESISTANCE	
WATER LEVEL		SAND		BLOWS / FT.	
SOIL DESCRIPTION		PLASTIC LIMIT		DRY DENSITY	
SANDY GRAVEL		LIQUID LIMIT		LBS. / CU. FT.	
		NATURAL MOISTURE CONTENT		%	
		CONSISTENCY LIMITS		%	
		PLASTICITY INDEX		%	
DEPTH (M)		SAMPLE IDENTIFICATION DATA		%	
5		LABORATORY NUMBER		%	
6		SAMPLE TYPE		%	
7		SAMPLE NUMBER (FIELD)		%	
8		SAMPLE DEPTH (M)		%	
9		N.R.C. PERMAFROST CLASSIFICATION		%	
10		END HOLE @ 9.0		%	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS

HOLE LOCATION: STA.

DATE DRILLED: 21-4-78

DRILL TECHNICIAN: H.R.

PLOTTED BY: R.S.

HOLE ELEVATION:

HOLE NO.: 20-B

HOLE DEPTH 10.7
TYPE OF DRILL B30-6" AUGERS
WATER LEVEL
DEPTH (M)
SOIL DESCRIPTION

N.R.C. PERMAFROST CLASSIFICATION

LABORATORY NUMBER
SAMPLE TYPE
SAMPLE NUMBER (FIELD)
SAMPLE DEPTH (M)

NATURAL MOISTURE CONTENT %

CONSISTENCY LIMITS
LIQUID LIMIT %
PLASTIC LIMIT %
PLASTICITY INDEX %

MECHANICAL ANALYSIS
GRAVEL %
SAND %

MECHANICAL ANALYSIS
<.074 mm %
>.005 mm %
<.005 mm %

DRY DENSITY LBS./CU.FT.
STANDARD PENETRATION RESISTANCE BLOWS/FT.

UNIFIED CLASSIFICATION

0 ORGANIC .2

SANDY GRAVEL

1.8

GRAVELLY SAND

B21 AUG. 1136

3.1

N.P. 33.9 55.1 11.0

SP-SM

2.7



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 20-B		HOLE ELEVATION:		UNIFIED CLASSIFICATION	
DATE DRILLED: 21-4-78		DRILL TECHNICIAN: H. R.		PLOTTED BY: R. S.		MECHANICAL ANALYSIS		STANDARD PENETRATION RESISTANCE	
HOLE DEPTH: 10.7		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:		GRAVEL		BLOWS/FT.	
SOIL DESCRIPTION		N.R.C. PERMAFROST CLASSIFICATION		SAMPLE IDENTIFICATION DATA		SAND		LBS./CU.FT.	
GRAVELLY SAND				LABORATORY NUMBER		PLASTICITY INDEX		<.005 mm	
				SAMPLE TYPE		PLASTIC LIMIT		<.074 mm	
				SAMPLE NUMBER (FIELD)		LIQUID LIMIT		>.005 mm	
				SAMPLE DEPTH (M)		NATURAL MOISTURE CONTENT			
5		6		7		8		9	
10									



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:	
DATE DRILLED: 21-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: P.S.	HOLE ELEVATION: 20.8
HOLE DEPTH: 10.7	UNIFIED CLASSIFICATION		
TYPE OF DRILL: B30-6" AUGERS	STANDARD PENETRATION RESISTANCE		
WATER LEVEL:	BLOWS / FT.		
DEPTH (M)	DRY DENSITY (LBS. / CU. FT.)		
10	MECHANICAL ANALYSIS		
	<.005mm	%	
	<.074mm	%	
	>.005mm	%	
	SAND	%	
	GRAVEL	%	
	CONSISTENCY LIMITS		
	PLASTICITY INDEX	%	
	PLASTIC LIMIT	%	
	LIQUID LIMIT	%	
	NATURAL MOISTURE CONTENT (%)		
	LABORATORY NUMBER		
	SAMPLE TYPE		
	SAMPLE NUMBER (FIELD)		
	SAMPLE DEPTH (FT.)		
	N.R.C. PERMAFROST CLASSIFICATION		
10	SOIL DESCRIPTION		
	GRAVELLY SAND		
	END HOLE @ 10.7		
11			
12			
13			
14			
15			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 21-4-78	DRILL TECHNICIAN: H. R.	PLOTTED BY: R. S.	HOLE ELEVATION: 21-5
HOLE DEPTH: 2.1	TYPE OF DRILL: B30-6" AUGERS		
WATER LEVEL:	SOIL DESCRIPTION		
DEPTH (M):	ORGANIC SILT .3		
0	SANDY GRAVEL		
1			
2			
3			
4			
5			

SAMPLE DEPTH (M)	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS			MECHANICAL ANALYSIS			DRY DENSITY (LBS./CU. FT.)	STANDARD PENETRATION RESISTANCE (BLOWS/FT.)	UNIFIED CLASSIFICATION	
	SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER		LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	<.074mm (%)				<.005mm (%)
1.5															
2.4		B22	AVG.	1137	2.6	N.P.	61.1	31.4	7.5						GW-GM



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 21-13	
DATE DRILLED: 21-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 9.1		MECHANICAL ANALYSIS		UNIFIED CLASSIFICATION	
TYPE OF DRILL: B30-6" AUGERS		<.005mm % <.074mm % >.005mm %		STANDARD PENETRATION RESISTANCE	
WATER LEVEL		SAND %		DRY DENSITY	
SOIL DESCRIPTION		GRAVEL %		LBS. / CU. FT.	
SANDY GRAVEL		PLASTICITY INDEX %			
		PLASTIC LIMIT %			
		LIQUID LIMIT %			
END HOLE @ 9.1		NATURAL MOISTURE CONTENT %			
		CONSISTENCY LIMITS			
		LABORATORY NUMBER			
		SAMPLE TYPE			
DEPTH (M)		SAMPLE NUMBER (FIELD)			
		SAMPLE DEPTH (M)			
N.R.C. PERMAFROST CLASSIFICATION					



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 21-4-78	DRILL TECHNICIAN: H. R.	PLOTTED BY: R. S.	HOLE ELEVATION:
HOLE DEPTH: 10.5	HOLE NO.: 22-B		
TYPE OF DRILL: B30-6" AUGERS	MECHANICAL ANALYSIS		
WATER LEVEL	<.005 mm	%	
DEPTH (M)	<.074 mm	%	
	>.005 mm	%	
SOIL DESCRIPTION	SAND	%	
	GRAVEL	%	
0	PLASTIC LIMIT	%	
	PLASTICITY INDEX	%	
	NATURAL MOISTURE CONTENT	%	
1	SAMPLE IDENTIFICATION DATA		
	SAMPLE DEPTH (M)	LABORATORY NUMBER	
		SAMPLE TYPE	
		SAMPLE NUMBER (FIELD)	
2	1.5	B23 AUG. 1138	
	2.4		
3			
4			
5			

SILTY SANDY GRAVEL

1.8

N.P. 88.0 9.1 2.9

GP



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 22-B	
DATE DRILLED: 21-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 10.5		MECHANICAL ANALYSIS		STANDARD PENETRATION RESISTANCE	
TYPE OF DRILL: B30-6" AUGERS		PLASTICITY INDEX		BLOWS / FT.	
WATER LEVEL		PLASTIC LIMIT		LBS. / CU. FT.	
SOIL DESCRIPTION		LIQUID LIMIT		DRY DENSITY	
SILTY SANDY GRAVEL		NATURAL MOISTURE CONTENT		GRAVEL	
		N.R.C. PERMAFROST CLASSIFICATION		SAND	
		SAMPLE IDENTIFICATION DATA		<.074 mm	
		LABORATORY NUMBER		>.005 mm	
DEPTH (M)		CONSISTENCY LIMITS		UNIFIED CLASSIFICATION	
5		PLASTIC LIMIT		5	
6		LIQUID LIMIT		6	
7		NATURAL MOISTURE CONTENT		7	
8		N.R.C. PERMAFROST CLASSIFICATION		8	
9		SAMPLE IDENTIFICATION DATA		9	
10		LABORATORY NUMBER		10	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 3 BORROW PITS

HOLE LOCATION:

DATE DRILLED: 21-4-78

DRILL TECHNICIAN: H.R.

PLOTTED BY: P.S.

HOLE ELEVATION:

HOLE NO.: 22-B

HOLE DEPTH 10.5
TYPE OF DRILL B30-6" AUGERS
WATER LEVEL
DEPTH (M)
SOIL DESCRIPTION

SILTY SANDY GRAVEL
END HOLE @ 10.5

N.R.C.
PERMAFROST
CLASSIFICATION

SAMPLE IDENTIFICATION DATA
LABORATORY NUMBER
SAMPLE TYPE
SAMPLE NUMBER (FIELD)
SAMPLE DEPTH (M)

NATURAL MOISTURE CONTENT %

CONSISTENCY LIMITS
LIQUID LIMIT %
PLASTIC LIMIT %
PLASTICITY INDEX %

GRAVEL %
SAND %

MECHANICAL ANALYSIS
<.074mm %
>.005mm %
<.005mm %

DRY DENSITY LBS. CU. FT.

STANDARD PENETRATION RESISTANCE BLOWS FT.

UNIFIED CLASSIFICATION

10 11 12 13 14 15



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 21-4-78	DRILL TECHNICIAN: H. R.	PLOTTED BY: R. S.	HOLE ELEVATION:
HOLE DEPTH: 9.1		HOLE NO.: 23-B	
TYPE OF DRILL: B30-6" AUGERS		UNIFIED CLASSIFICATION	
WATER LEVEL		STANDARD PENETRATION RESISTANCE	
DEPTH (M)		BLOWS/FT.	
SOIL DESCRIPTION		DRY DENSITY	
		LBS./CU. FT.	
SANDY GRAVEL		MECHANICAL ANALYSIS	
		PLASTICITY INDEX	
0		PLASTIC LIMIT	
		LIQUID LIMIT	
1		NATURAL MOISTURE CONTENT	
		%	
2		SAMPLE IDENTIFICATION DATA	
		LABORATORY NUMBER	
3		SAMPLE TYPE	
		SAMPLE NUMBER (FIELD)	
4		SAMPLE DEPTH (M)	
		N.R.C. PERMAFROST CLASSIFICATION	
5		GRAVEL	
		SAND	
1.5		<.005 mm	
		<.074 mm	
2.4		>.005 mm	
		5.6	
N.P.		82.4	
		12.0	
1.3		N.P.	
		5.6	
B24 AUG. 1139		1.3	
		1.3	
1.5		1.3	
		1.3	
2.4		1.3	
		1.3	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE ELEVATION:		HOLE NO.: 23-0	
DATE DRILLED: 21-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.			
HOLE DEPTH: 9.1		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:			
DEPTH (M)		SOIL DESCRIPTION		N.R.C. PERMAFROST CLASSIFICATION			
5	SANDY GRAVEL						
6							
7							
8							
9	END HOLE @ 9.1						
10							
				NATURAL MOISTURE CONTENT			
				LIQUID LIMIT			
				PLASTIC LIMIT			
				PLASTICITY INDEX			
				GRAVEL			
				SAND			
				> .005 mm			
				< .074 mm			
				< .005 mm			
				DRY DENSITY		LBS. / CU. FT.	
				STANDARD PENETRATION RESISTANCE		BLOWS / FT.	
				UNIFIED CLASSIFICATION			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 21-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION: 24-13
HOLE DEPTH: 9.0		UNIFIED CLASSIFICATION	
TYPE OF DRILL: B30-6" AUGERS		STANDARD PENETRATION RESISTANCE	
WATER LEVEL		BLOWS / FT.	
DEPTH (M)		DRY DENSITY (LBS./CU.FT.)	
SOIL DESCRIPTION		MECHANICAL ANALYSIS	
0 ORGANIC _____ .2 SANDY GRAVEL		< .005 mm % .074 mm % > .005 mm %	
		SAND % GRAVEL %	
		PLASTICITY INDEX % PLASTIC LIMIT % LIQUID LIMIT %	
		NATURAL MOISTURE CONTENT %	
N.R. PERMAFROST CLASSIFICATION		CONSISTENCY LIMITS	
SAMPLE IDENTIFICATION DATA		MECHANICAL ANALYSIS	
LABORATORY NUMBER		PLASTICITY INDEX %	
SAMPLE TYPE		PLASTIC LIMIT %	
SAMPLE NUMBER (FIELD)		LIQUID LIMIT %	
SAMPLE DEPTH (M)		NATURAL MOISTURE CONTENT %	
1.2		77.7	
2.1		19.0 2.5 .8	
		N.I.P.	
		BRS AUG. 1140	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

DEPTH (M)	SOIL DESCRIPTION	N.R.C. PERMAFROST CLASSIFICATION	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS			MECHANICAL ANALYSIS				STANDARD PENETRATION RESISTANCE (BLOWS/FT.)	UNIFIED CLASSIFICATION
			LABORATORY NUMBER	SAMPLE TYPE	SAMPLE NUMBER (FIELD)	SAMPLE DEPTH (M)		LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	< 0.075 mm (%)	< 0.074 mm (%)		
5	SANDY GRAVEL															
6						6.1										
7	GRAVEL & SAND					7.0										SP-SM
8																
9	END HOLE @ 9.0															
10																

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS
 HOLE LOCATION: HOLE NO.: 24-B
 DATE DRILLED: 21-4-78
 PLOTTED BY: R.S.
 DRILL TECHNICIAN: H.R.



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.		HOLE NO.: 25-B	
DATE DRILLED: 21-4-78		DRILL TECHNICIAN: H. R.		PLOTTED BY: R. S.	
HOLE DEPTH: 9.1		CONSISTENCY LIMITS		MECHANICAL ANALYSIS	
TYPE OF DRILL: B30-6" AUGERS		PLASTIC LIMIT		SAND	
WATER LEVEL		LIQUID LIMIT		GRAVEL	
DEPTH (M)		NATURAL MOISTURE CONTENT		PLASTICITY INDEX	
SOIL DESCRIPTION		LABORATORY NUMBER		STANDARD PENETRATION RESISTANCE	
SANDY GRAVEL		SAMPLE TYPE		UNIFIED CLASSIFICATION	
		SAMPLE NUMBER (FIELD)		BLOWS/FT.	
		SAMPLE DEPTH (M)		LBS./CU.FT.	
		N.R.C. PERMAFROST CLASSIFICATION			
		1.5			
		2.4			
		B.27 AUG. 1142			
		1.5			
		N.P. 76.1			
		20.1			
		3.8			
		GP			



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 25-B	
DATE DRILLED: 21-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 9.1		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:	
DEPTH (M)		SOIL DESCRIPTION		UNIFIED CLASSIFICATION	
5	SANDY GRAVEL		MECHANICAL ANALYSIS		STANDARD PENETRATION RESISTANCE
6			GRAVEL		BLOWS / FT.
7			SAND		LBS. / CU. FT.
8			PLASTIC LIMIT		< .005 mm
9	END HOLE @ 9.1		LIQUID LIMIT		< .074 mm
10			PLASTICITY INDEX		> .005 mm



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 24-4-78	DRILL TECHNICIAN: H. R.	PLOTTED BY: R. S.	HOLE ELEVATION:
HOLE DEPTH: 6.1	HOLE NO.: 26-B		
TYPE OF DRILL: B30-6" AUGERS	MECHANICAL ANALYSIS		
WATER LEVEL:	<.005 mm	%	
DEPTH (M)	<.074 mm	%	
	>.005 mm	%	
SOIL DESCRIPTION	SAND	%	
	GRAVEL	%	
0	PLASTIC LIMIT	%	
	PLASTICITY INDEX	%	
	NATURAL MOISTURE CONTENT	%	
1	SAMPLE IDENTIFICATION DATA		
	SAMPLE DEPTH (M)		
	SAMPLE NUMBER (FIELD)		
	SAMPLE TYPE		
2	LABORATORY NUMBER		
	UNIFIED CLASSIFICATION		GP-GM
3	STANDARD PENETRATION RESISTANCE	BLOWS/FT.	
	DRY DENSITY	LBS./CU.FT.	
4	MECHANICAL ANALYSIS		
	GRAVEL	%	
5	SAND	%	
	PLASTICITY INDEX	%	

N.P. 82.2 12.5 5.3

1.1

B28 AUG. 1167

2.1

3.0

ORGANIC .2
SILTY SANDY GRAVEL

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE ELEVATION:		HOLE NO.: 26-B	
DATE DRILLED: 24-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.			
HOLE DEPTH: 6.1		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:			
DEPTH (M)		SOIL DESCRIPTION					
5	SILTY SANDY GRAVEL						
6	END HOLE @ 6.1						
7							
8							
9							
10							
N.R.C. PERMAFROST CLASSIFICATION				NATURAL MOISTURE CONTENT			
SAMPLE IDENTIFICATION DATA				LABORATORY NUMBER			
				SAMPLE TYPE			
				SAMPLE NUMBER (FIELD)			
				SAMPLE DEPTH (M)			
CONSISTENCY LIMITS		GRAVEL		PLASTICITY INDEX			
LIQUID LIMIT		SAND		PLASTIC LIMIT			
MECHANICAL ANALYSIS		GRAVEL		PLASTICITY INDEX			
< .005 mm		SAND		PLASTIC LIMIT			
< .074 mm		GRAVEL		LIQUID LIMIT			
> .005 mm		SAND		PLASTICITY INDEX			
DRY DENSITY		GRAVEL		PLASTIC LIMIT			
LBS. CU. FT.		SAND		PLASTICITY INDEX			
STANDARD PENETRATION RESISTANCE		GRAVEL		PLASTICITY INDEX			
BLOWS FT.		SAND		PLASTICITY INDEX			
UNIFIED CLASSIFICATION		GRAVEL		PLASTICITY INDEX			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKNAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 25-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION: 27-B
HOLE DEPTH: 5.2	TYPE OF DRILL: B30-6" AUGERS		
WATER LEVEL			
DEPTH (ft)	SOIL DESCRIPTION		
0	Silty SANDY GRAVEL		
1	0.9		
2	1.5		
3			
4			
5			
N.R.C. PERMAFROST CLASSIFICATION		UNIFIED CLASSIFICATION	
		GW	
SAMPLE IDENTIFICATION DATA		MECHANICAL ANALYSIS	
SAMPLE DEPTH (ft)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER
	B29	AVG.	1168
NATURAL MOISTURE CONTENT		CONSISTENCY LIMITS	
%		LIQUID LIMIT	PLASTIC LIMIT
1.5		%	%
		PLASTICITY INDEX	
		%	
		GRAVEL	SAND
		%	%
		77.8	17.8
			4.4
			N.P.
		> .005 mm	> .074 mm
		%	%
		DRY DENSITY	STANDARD PENETRATION RESISTANCE
		LBS./CU.FT.	BLOWS/FT.

REFUSAL @ 5.2



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.													
DATE DRILLED: 25-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION:												
HOLE DEPTH: 6.1	HOLE NO.: 28-B														
TYPE OF DRILL: B30-6" AUGERS	CONSISTENCY LIMITS	PLASTIC LIMIT	%												
WATER LEVEL		LIQUID LIMIT	%												
DEPTH (ft)	N.R.C. PERMAFROST CLASSIFICATION	NATURAL MOISTURE CONTENT													
		%													
SOIL DESCRIPTION	SAMPLE IDENTIFICATION DATA		UNIFIED CLASSIFICATION												
	SAMPLE DEPTH (ft)	SAMPLE NUMBER (FIELD)		MECHANICAL ANALYSIS											
0	SILTY SANDY GRAVEL	LABORATORY NUMBER	GRAVEL	%	SAND	%	<.074mm	%	<.005mm	%	DRY DENSITY	LBS. CU. FT.	STANDARD PENETRATION RESISTANCE	BLOWS FT.	
		SAMPLE TYPE													GRAVEL
1															
2															
3															
4															
5															

308 Aug. 1169 6.1

TRACE 69.9 16.8 13.3

GM

3.0

4.0



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 28-B	
DATE DRILLED: 25-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 6.1		MECHANICAL ANALYSIS		UNIFIED CLASSIFICATION	
TYPE OF DRILL: B30-6" AUGERS		GRAVEL		STANDARD PENETRATION RESISTANCE	
WATER LEVEL		SAND		BLOWS / FT.	
SOIL DESCRIPTION SILTY SANDY GRAVEL END HOLE @ 6.1		LIQUID LIMIT		DRY DENSITY	
		PLASTIC LIMIT		LBS. / CU. FT.	
		PLASTICITY INDEX		<.005 mm	
		NATURAL MOISTURE CONTENT		<.074 mm	
N.R.C. PERMAFROST CLASSIFICATION		GRAVEL		>.005 mm	
N.R.C. PERMAFROST CLASSIFICATION		PLASTICITY INDEX			
N.R.C. PERMAFROST CLASSIFICATION		PLASTIC LIMIT			
N.R.C. PERMAFROST CLASSIFICATION		LIQUID LIMIT			
N.R.C. PERMAFROST CLASSIFICATION		NATURAL MOISTURE CONTENT			
N.R.C. PERMAFROST CLASSIFICATION		SAMPLE IDENTIFICATION DATA			
N.R.C. PERMAFROST CLASSIFICATION		SAMPLE DEPTH (M)			
N.R.C. PERMAFROST CLASSIFICATION		SAMPLE NUMBER (FIELD)			
N.R.C. PERMAFROST CLASSIFICATION		SAMPLE TYPE			
N.R.C. PERMAFROST CLASSIFICATION		LABORATORY NUMBER			

PROJECT: <u>SILAKIVAK SEGMENT 8 BORROW PITS</u>		HOLE LOCATION: <u>STA.</u>		HOLE NO.: <u>29B</u>	
DATE DRILLED: <u>25-4-78</u>		DRILL TECHNICIAN: <u>H.R.</u>		PLOTTED BY: <u>R.S.</u>	
HOLE DEPTH: <u>6.1</u>		CONSISTENCY LIMITS		MECHANICAL ANALYSIS	
TYPE OF DRILL: <u>B30-6" AUGERS</u>		LIQUID LIMIT		<u>< .005 mm</u> % <u>< .074 mm</u> % <u>> .005 mm</u> %	
WATER LEVEL		PLASTIC LIMIT		DRY DENSITY	
DEPTH (M)		NATURAL MOISTURE CONTENT		LBS. CU. FT.	
SOIL DESCRIPTION		N.R.C. PERMAFROST CLASSIFICATION		STANDARD PENETRATION RESISTANCE	
				BLOWS FT.	
0 1 2 3 4 5 SILTY SANDY GRAVEL SANDY GRAVELLY SILT		LABORATORY NUMBER		UNIFIED CLASSIFICATION	
		SAMPLE TYPE		GM	
SAMPLE NUMBER (FIELD)		PLASTICITY INDEX		GRAVEL	
SAMPLE DEPTH (M)		SAND		SAND	
3.7		24.3		52.5	
4.6		21.2		21.2	
		3.1		17.6	
		8.7		8.7	



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 29-B	
DATE DRILLED: 25-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 6.1		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:	
SOIL DESCRIPTION		N.R.C. PERMAFROST CLASSIFICATION		UNIFIED CLASSIFICATION	
SANDY GRAVELLY SILT		END HOLE @ 6.1		MECHANICAL ANALYSIS	
				STANDARD PENETRATION RESISTANCE	
5		6		7	
9		10		DRY DENSITY	
				LBS. / CU. FT.	
GRAVEL		SAND		PLASTICITY INDEX	
LIQUID LIMIT		PLASTIC LIMIT		<.074mm	
NATURAL MOISTURE CONTENT		>.005mm		<.005mm	



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.									
DATE DRILLED: 25-4-78	DRILL TECHNICIAN: H. R.	PLOTTED BY: R. S.	HOLE ELEVATION:								
HOLE DEPTH: 6.1		HOLE NO.: 30-B									
TYPE OF DRILL: B30-6" AUGERS		UNIFIED CLASSIFICATION									
WATER LEVEL		STANDARD PENETRATION RESISTANCE									
DEPTH (M)		BLOWS / FT.									
SOIL DESCRIPTION		DRY DENSITY									
		LBS. / CU. FT.									
GRAVEL		MECHANICAL ANALYSIS									
		<table border="1"> <tr> <td><.005mm</td> <td>%</td> </tr> <tr> <td><.074mm</td> <td>%</td> </tr> <tr> <td>>.005mm</td> <td>%</td> </tr> <tr> <td>SAND</td> <td>%</td> </tr> <tr> <td>GRAVEL</td> <td>%</td> </tr> </table>		<.005mm	%	<.074mm	%	>.005mm	%	SAND	%
<.005mm	%										
<.074mm	%										
>.005mm	%										
SAND	%										
GRAVEL	%										
GRAVEL		CONSISTENCY LIMITS									
		<table border="1"> <tr> <td>PLASTIC LIMIT</td> <td>%</td> </tr> <tr> <td>PLASTICITY INDEX</td> <td>%</td> </tr> <tr> <td>LIQUID LIMIT</td> <td>%</td> </tr> </table>		PLASTIC LIMIT	%	PLASTICITY INDEX	%	LIQUID LIMIT	%		
PLASTIC LIMIT	%										
PLASTICITY INDEX	%										
LIQUID LIMIT	%										
GRAVEL		NATURAL MOISTURE CONTENT									
		% 0.8									
GRAVEL		LABORATORY NUMBER									
		171									
GRAVEL		SAMPLE TYPE									
		AUG.									
GRAVEL		SAMPLE NUMBER (FIELD)									
		B32									
GRAVEL		SAMPLE DEPTH (M)									
		1.5, 2.4									
N.R.C. PERMAFROST CLASSIFICATION		N.P. 962 1.9 1.9									
GRAVEL		GP									

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 30 - B	
DATE DRILLED: 25-4-78		DRILL TECHNICIAN: H. R.		PLOTTED BY: R. S.	
HOLE DEPTH: 6.1		MECHANICAL ANALYSIS		DRY DENSITY	
TYPE OF DRILL: B30-6" AUGERS		GRAVEL		LBS. CU. FT.	
WATER LEVEL		SAND		BLOWS FT.	
SOIL DESCRIPTION		PLASTICITY INDEX		UNIFIED CLASSIFICATION	
		PLASTIC LIMIT			
GRAVEL		LIQUID LIMIT			
		NATURAL MOISTURE CONTENT			
END HOLE @ 6.1		CONSISTENCY LIMITS			
		LABORATORY NUMBER			
		SAMPLE TYPE			
		SAMPLE NUMBER (FIELD)			
5		SAMPLE DEPTH (M)			
		N.R.C. PERMAFROST CLASSIFICATION			
6					
7					
8					
9					
10					



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.													
DATE DRILLED: 25-4-78		HOLE ELEVATION: 31-8													
DRILL TECHNICIAN: H. R.		PLOTTED BY: R. S.													
HOLE DEPTH 5.9	TYPE OF DRILL B30-6" AUGERS	WATER LEVEL	SOIL DESCRIPTION	UNIFIED CLASSIFICATION	STANDARD PENETRATION RESISTANCE BLOWS FT.	DRY DENSITY LBS. CU. FT.	MECHANICAL ANALYSIS			PLASTICITY INDEX %	NATURAL MOISTURE CONTENT %	CONSISTENCY LIMITS			
							<.005 mm	%	<.074 mm			%	>.005 mm	%	SAND
N.R.C. PERMAFROST CLASSIFICATION				LABORATORY NUMBER		SAMPLE TYPE		SAMPLE NUMBER (FIELD)		SAMPLE DEPTH (M)		N.R.			
SILTY SANDY GRAVEL				B333 AUG. 1172		1.5		2.4		1.7		N.P. 71.2 23.2 5.6			
SILTY SANDY TILL GRAVELLY				3.2											



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 31-B	
DATE DRILLED: 25-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 5.9		MECHANICAL ANALYSIS		DRY DENSITY	
TYPE OF DRILL: B30-6" AUGERS		< .005 mm % < .074 mm % > .005 mm %		LBS. / CU. FT.	
WATER LEVEL		SAND %		BLOWS / FT.	
SOIL DESCRIPTION SILTY SANDY TILL GRAVELLY END HOLE @ 5.9		CONSISTENCY LIMITS			
		LIQUID LIMIT %			
		PLASTIC LIMIT %			
N.R.C. PERMAFROST CLASSIFICATION		GRAVEL %			
NATURAL MOISTURE CONTENT %		PLASTICITY INDEX %			
LABORATORY NUMBER		PLASTIC LIMIT %			
SAMPLE IDENTIFICATION DATA		LIQUID LIMIT %			
SAMPLE TYPE		NATURAL MOISTURE CONTENT %			
SAMPLE NUMBER (FIELD)		LABORATORY NUMBER			
SAMPLE DEPTH (M)		SAMPLE TYPE			
5		SAMPLE NUMBER (FIELD)			
6		SAMPLE DEPTH (M)			
7		N.R.C. PERMAFROST CLASSIFICATION			
8		NATURAL MOISTURE CONTENT %			
9		LABORATORY NUMBER			
10		SAMPLE TYPE			
		SAMPLE NUMBER (FIELD)			
		SAMPLE DEPTH (M)			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 25-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION:
HOLE DEPTH: 6.1		HOLE NO.: 32-B	
TYPE OF DRILL: B30-6" AUGERS		UNIFIED CLASSIFICATION	
WATER LEVEL		STANDARD PENETRATION RESISTANCE	
DEPTH (M)		BLOWS/FT.	
SOIL DESCRIPTION		DRY DENSITY	
0		LBS./CU.FT.	
1		MECHANICAL ANALYSIS	
2		GRAVEL	
3		SAND	
4		PLASTICITY INDEX	
5		PLASTIC LIMIT	
		LIQUID LIMIT	
		NATURAL MOISTURE CONTENT	
		CONSISTENCY LIMITS	
		PLASTIC INDEX	
		GRAVEL	
		SAND	
		<.074 mm	
		>.005 mm	
		<.005 mm	
		UNIFIED CLASSIFICATION	
		GM	
		N.P.	
		66.7	
		19.1	
		14.2	
		6.0	
		1173	
		634 AUG.	
		2.1	
		3.0	
		1.5	
		SILTY SAND	
		SILTY SANDY GRAVEL	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE ELEVATION:		HOLE NO.: 32-13	
DATE DRILLED: 25-4-76		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.			
HOLE DEPTH: 6.1		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:		UNIFIED CLASSIFICATION	
SOIL DESCRIPTION		N.R.C. PERMAFROST CLASSIFICATION		SAMPLE IDENTIFICATION DATA		CONSISTENCY LIMITS	
				LABORATORY NUMBER		PLASTICITY INDEX	
				SAMPLE TYPE		PLASTIC LIMIT	
				SAMPLE NUMBER (FIELD)		LIQUID LIMIT	
				SAMPLE DEPTH (M)		NATURAL MOISTURE CONTENT	
						GRAVEL	
						SAND	
						> .075mm	
						< .075mm	
						< .005mm	
						DRY DENSITY	
						STANDARD PENETRATION RESISTANCE	
						BLOWS / FT.	
5							
6							
7							
8							
9							
10							

SILTY SANDY GRAVEL

END HOLE @ 6.1



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 33-B	
DATE DRILLED: 25-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 6.1		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:	
SOIL DESCRIPTION		N.R.C. PERMAFROST CLASSIFICATION		UNIFIED CLASSIFICATION	
SILTY SANDY GRAVEL END HOLE @ 6.1		SAMPLE IDENTIFICATION DATA		MECHANICAL ANALYSIS	
		LABORATORY NUMBER: 1174		SAND: 32.9	
		SAMPLE TYPE: AUG.		GRAVEL: 38.9	
		SAMPLE NUMBER (FIELD): B35		PLASTICITY INDEX: N.P.	
		SAMPLE DEPTH (M): 5.5		PLASTIC LIMIT: %	
		NATURAL MOISTURE CONTENT: 13.4		LIQUID LIMIT: %	
		CONSISTENCY LIMITS		DRY DENSITY: LBS. CU.FT.	
		PLASTIC LIMIT: %		STANDARD PENETRATION RESISTANCE: BLOWS FT.	
		LIQUID LIMIT: %			
		PLASTICITY INDEX: %			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: <u>SIIAKWAK SEGMENT 8 BORROW PITS</u>		HOLE LOCATION: <u>STA.</u>	
DATE DRILLED: <u>25-4-78</u>	DRILL TECHNICIAN: <u>H.R.</u>	PLOTTED BY: <u>R.S.</u>	HOLE ELEVATION: <u>34-β</u>
HOLE DEPTH: <u>4.6</u>	MECHANICAL ANALYSIS		
TYPE OF DRILL: <u>B30-6" AUGERS</u>	GRAVEL	SAND	<.074mm
WATER LEVEL: _____	%	%	>.005mm
DEPTH (M)	CONSISTENCY LIMITS		UNIFIED CLASSIFICATION
0	PLASTIC LIMIT	PLASTICITY INDEX	GP-GM
	%	%	
1	NATURAL MOISTURE CONTENT	PLASTIC LIMIT	N.P.
	%	%	
2	LABORATORY NUMBER	GRAVEL	10.0
	SAMPLE TYPE	%	
3	SAMPLE NUMBER (FIELD)	SAND	6.2
	SAMPLE DEPTH (M)	%	
4	N.R.C. PERMAFROST CLASSIFICATION	DRY DENSITY	N.P.
		LBS. CU. FT.	
5		STANDARD PENETRATION RESISTANCE	6.2
		BLOWS FT.	

SILTY SANDY GRAVEL

3.0

4.0

B36 AUG. 1175

2.6

83.0

10.0

END HOLE @ 4.6

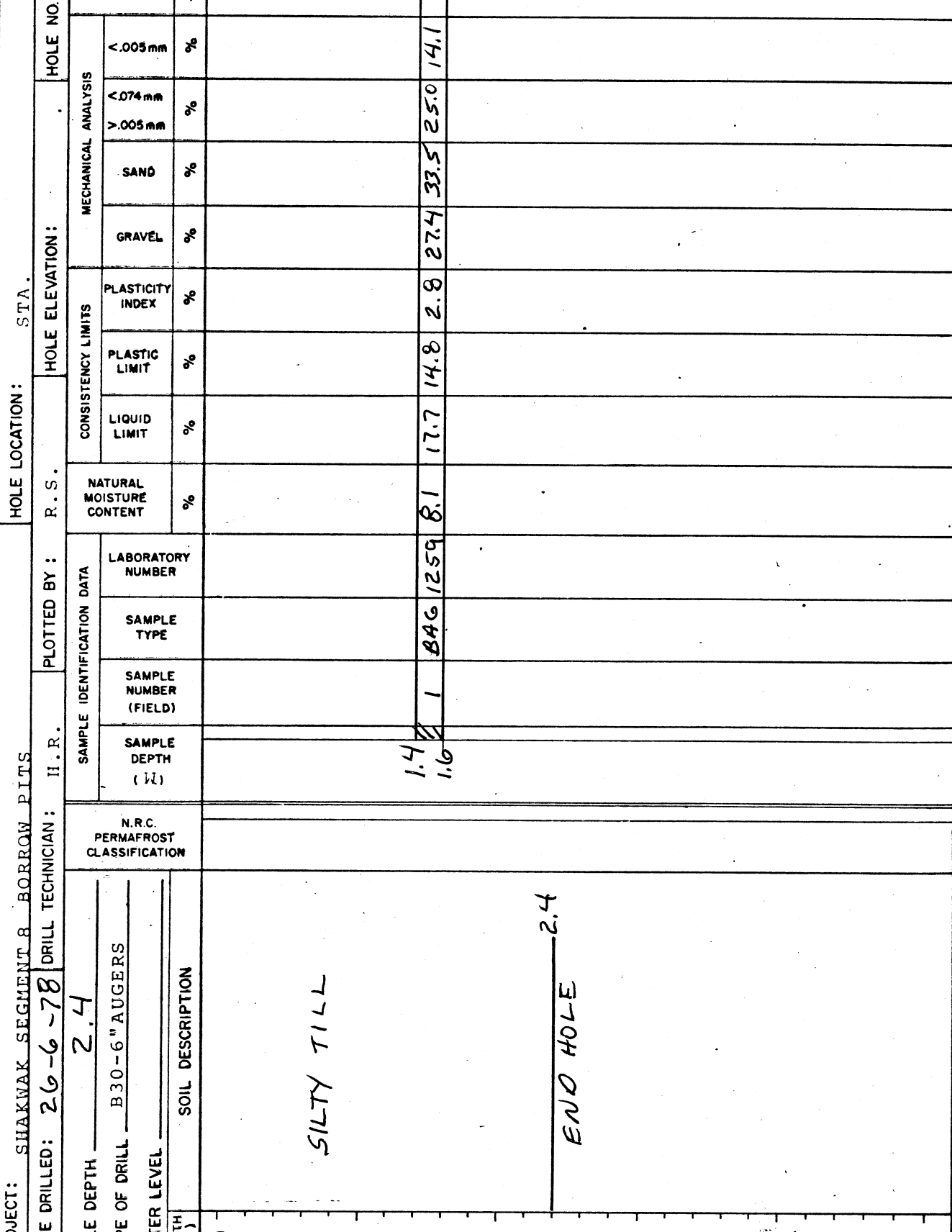


Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 26-6-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION: 8-4-1
HOLE DEPTH: 2.4	MECHANICAL ANALYSIS		
TYPE OF DRILL: B30-6" AUGERS	<.005 mm	%	
WATER LEVEL	<.074 mm	%	
DEPTH (M)	>.005 mm	%	
SOIL DESCRIPTION	SAND	%	
	GRAVEL	%	
	PLASTICITY INDEX	%	
	PLASTIC LIMIT	%	
	LIQUID LIMIT	%	
	NATURAL MOISTURE CONTENT	%	
	SAMPLE IDENTIFICATION DATA		
	LABORATORY NUMBER		
	SAMPLE TYPE		
	SAMPLE NUMBER (FIELD)		
	SAMPLE DEPTH (M)		
	N.R.C. PERMAFROST CLASSIFICATION		
	STANDARD PENETRATION RESISTANCE	BLOWS/FT.	
	DRY DENSITY	LBS./CU.FT.	
	UNIFIED CLASSIFICATION		





Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 26-6-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION:
HOLE DEPTH: 2.4	HOLE NO.: TP 8-4-2		
TYPE OF DRILL: B30-6" AUGERS	MECHANICAL ANALYSIS		
WATER LEVEL	<.005 mm	%	UNIFIED CLASSIFICATION
DEPTH (M)	<.074 mm	%	
	SOIL DESCRIPTION		STANDARD PENETRATION RESISTANCE
0	SILTY TILL		DRY DENSITY
			LBS. CU. FT.
1	SILTY TILL		BLOWS FT.
2	SILTY TILL		GRAVEL
3	SILTY TILL		PLASTIC LIMIT
4	SILTY TILL		PLASTICITY INDEX
5	SILTY TILL		LABORATORY NUMBER
SAMPLE IDENTIFICATION DATA		TRACE	
SAMPLE NUMBER (FIELD)			50.4
SAMPLE DEPTH (M)		24.0	
1.4		17.4	
1.6		8.2	
N.R.C. PERMAFROST CLASSIFICATION		7.1	
END HOLE		GM	
2.4			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 26-6-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION:
HOLE DEPTH: 1.7		HOLE NO.: TP 8-4-3	
TYPE OF DRILL: B30-6" AUGERS			
WATER LEVEL			
DEPTH (M)	SOIL DESCRIPTION		
0	SILT TILL		
1			
2	END HOLE 1.7		
3			
4			
5			

SAMPLE DEPTH (M)	SAMPLE IDENTIFICATION DATA			NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS (%)			MECHANICAL ANALYSIS (%)			DRY DENSITY (LBS./CU. FT.)	STANDARD PENETRATION RESISTANCE (BLOWS/FT.)	UNIFIED CLASSIFICATION
	LABORATORY NUMBER	SAMPLE TYPE	SAMPLE NUMBER (FIELD)		LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	GRAVEL	SAND	>.005mm			
1.7			1	6.0			36.7	41.8	16.3	5.2		SM	
1.4			2	15.6		TRACE	16.4	27.8	45.6	10.2		ML	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 26-4-78	DRILL TECHNICIAN: H. R.	PLOTTED BY: R. S.	HOLE ELEVATION: 35 - B
HOLE DEPTH: 5.9	MECHANICAL ANALYSIS		
TYPE OF DRILL: B30-6" AUGERS	< .005 mm	%	
WATER LEVEL	< .074 mm	%	
DEPTH (M)	> .005 mm	%	
	SAND	%	
	GRAVEL	%	
	PLASTICITY INDEX	%	
	PLASTIC LIMIT	%	
	LIQUID LIMIT	%	
	NATURAL MOISTURE CONTENT	%	
	LABORATORY NUMBER		
	SAMPLE TYPE		
	SAMPLE NUMBER (FIELD)		
	SAMPLE DEPTH (M)		
	N.R.C. PERMAFROST CLASSIFICATION		
	UNIFIED CLASSIFICATION		
	STANDARD PENETRATION RESISTANCE	BLOWS FT.	
	DRY DENSITY	LBS. CU. FT.	

1.5
2.4
B37 AUG. 1176
N.P. 60.4 22.2 17.4
5.6
GM

ORGANIC .2
SILTY SANDY GRAVEL

0 1 2 3 4 5



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 35-B	
DATE DRILLED: 26-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 5.9		MECHANICAL ANALYSIS		STANDARD PENETRATION RESISTANCE	
TYPE OF DRILL: B30-6" AUGERS		GRAVEL		BLOWS / FT.	
WATER LEVEL		SAND		LBS. / CU. FT.	
DEPTH (M)		PLASTICITY INDEX			
SOIL DESCRIPTION		PLASTIC LIMIT			
SILTY SANDY GRAVEL END HOLE @ 5.9		LIQUID LIMIT			
		NATURAL MOISTURE CONTENT			
		CONSISTENCY LIMITS			
		SAMPLE IDENTIFICATION DATA			
		LABORATORY NUMBER			
		SAMPLE TYPE			
		SAMPLE NUMBER (FIELD)			
		SAMPLE DEPTH (M)			
		N.R.C. PERMAFROST CLASSIFICATION			
		UNIFIED CLASSIFICATION			

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.		HOLE NO.: 36-B	
DATE DRILLED: 26-4-78		DRILL TECHNICIAN: H.R.		HOLE ELEVATION:	
HOLE DEPTH: 5.9		R.S.		HOLE ELEVATION:	
TYPE OF DRILL: B 30-6" AUGERS		PLOTTED BY:		HOLE ELEVATION:	
WATER LEVEL:		SAMPLE IDENTIFICATION DATA		MECHANICAL ANALYSIS	
SOIL DESCRIPTION		LABORATORY NUMBER		GRAVEL	
		SAMPLE TYPE		SAND	
ORGANIC SILTY SAND & GRAVEL		SAMPLE NUMBER (FIELD)		PLASTIC LIMIT	
		SAMPLE DEPTH (M)		LIQUID LIMIT	
0		NATURAL MOISTURE CONTENT		PLASTICITY INDEX	
1		4.1		N.P.	
2		B38 AUG. 1177		68.4 18.2 13.4	
3		1.2		GM	
4		2.1			
5					



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE ELEVATION:		HOLE NO.: 36 - D	
DATE DRILLED: 26-4-78		DRILL TECHNICIAN: H. R.		PLOTTED BY: R. S.			
HOLE DEPTH: 5.9		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:			
DEPTH (M)		SOIL DESCRIPTION					
5		SILTY SANDY GRAVEL					
6		END HOLE @ 5.9					
7							
8							
9							
10							
				N.R.C. PERMAFROST CLASSIFICATION			
				SAMPLE IDENTIFICATION DATA			
		SAMPLE DEPTH (M)		SAMPLE NUMBER (FIELD)		SAMPLE TYPE	
				LABORATORY NUMBER			
				NATURAL MOISTURE CONTENT			
				LIQUID LIMIT			
				PLASTIC LIMIT			
				PLASTICITY INDEX			
				GRAVEL			
				SAND			
				> 0.075 mm			
				> 0.005 mm			
				< 0.005 mm			
				DRY DENSITY		LBS. CU. FT.	
				STANDARD PENETRATION RESISTANCE		BLOWS FT.	
				UNIFIED CLASSIFICATION			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKIVAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 26-4-78	DRILL TECHNICIAN: H.R.R.	PLOTTED BY: R.S.	HOLE ELEVATION:
HOLE DEPTH: 5.2		HOLE NO.: 37-B	
TYPE OF DRILL: B30-6" AUGERS		UNIFIED CLASSIFICATION	
WATER LEVEL		STANDARD PENETRATION RESISTANCE	
DEPTH (M)		BLOWS / FT.	
SOIL DESCRIPTION		DRY DENSITY	
SILTY SANDY GRAVEL		LBS. / CU. FT.	
		MECHANICAL ANALYSIS	
		< 0.075 mm	%
		< 0.425 mm	%
		> 0.075 mm	%
CONSISTENCY LIMITS		GRAVEL	
NATURAL MOISTURE CONTENT		SAND	
LABORATORY NUMBER		PLASTIC LIMIT	
SAMPLE TYPE		LIQUID LIMIT	
SAMPLE NUMBER (FIELD)		PLASTICITY INDEX	
SAMPLE DEPTH (M)		NATURAL MOISTURE CONTENT	
N.R.C. PERMAFROST CLASSIFICATION		%	

REFUSAL 0.5.2



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 26-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION: .
HOLE DEPTH: 5.8	HOLE NO.: 38-B		
TYPE OF DRILL: B30-6" AUGERS	MECHANICAL ANALYSIS		
WATER LEVEL: _____	GRAVEL	%	
SOIL DESCRIPTION	SAND	%	
	<.074mm	%	
0	>.005mm	%	
	PLASTIC LIMIT	%	
1	LIQUID LIMIT	%	
	PLASTICITY INDEX	%	
2	NATURAL MOISTURE CONTENT	%	
	LABORATORY NUMBER		
3	SAMPLE IDENTIFICATION DATA		
	SAMPLE TYPE		
4	SAMPLE NUMBER (FIELD)		
	SAMPLE DEPTH (ft)		
5	N.R.C. PERMAFROST CLASSIFICATION		
	UNIFIED CLASSIFICATION		GC-GM

SILTY SANDY GRAVEL

3.7

SANDY SILTY GRAVEL

4/6

B39 AUG. 1178

37.5

26.8

4.9

20.3

7.0

15.4

35.7

37.5

GC-GM



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS

DATE DRILLED: 26-4-78

DRILL TECHNICIAN: H.R.R.

PLOTTED BY: R.S.S.

HOLE ELEVATION:

HOLE NO.: 38-B

HOLE LOCATION:

HOLE DEPTH 5.8
TYPE OF DRILL B30-6" AUGERS
WATER LEVEL
DEPTH (M)
SOIL DESCRIPTION

SANDY SILTY GRAVEL

REFUSAL @ 5.8

N.R.C.
PERMAFROST
CLASSIFICATION

SAMPLE IDENTIFICATION DATA

LABORATORY NUMBER
SAMPLE TYPE
SAMPLE NUMBER (FIELD)
SAMPLE DEPTH (M)

B-39
Aug. 1178
5.5

NATURAL MOISTURE CONTENT

%

7.0

CONSISTENCY LIMITS

LIQUID LIMIT
PLASTIC LIMIT
PLASTICITY INDEX

%
%
%

20.3
15.4
4.9

MECHANICAL ANALYSIS

GRAVEL
SAND
> 0.075 mm
< 0.075 mm
< .005 mm

%
%
%
%

35.7
26.8
37.5

STANDARD PENETRATION RESISTANCE

BLOWS
FT.

DRY DENSITY

LBS.
CU. FT.

UNIFIED CLASSIFICATION

GC-GM



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 26-4-78	DRILL TECHNICIAN: H. R.	PLOTTED BY: R. S.	HOLE ELEVATION:
HOLE DEPTH: 5.9		HOLE NO.: 39-B	
TYPE OF DRILL: B30-6" AUGERS		UNIFIED CLASSIFICATION	
WATER LEVEL		STANDARD PENETRATION RESISTANCE	
DEPTH (M)		BLOWS / FT.	
SOIL DESCRIPTION		DRY DENSITY	
SILTY SANDY GRAVEL		LBS. / CU. FT.	
		MECHANICAL ANALYSIS	
		<.005mm	
		<.074mm	
		>.005mm	
CONSISTENCY LIMITS		GRAVEL	
PLASTICITY INDEX		SAND	
PLASTIC LIMIT		LIQUID LIMIT	
LIQUID LIMIT		NATURAL MOISTURE CONTENT	
NATURAL MOISTURE CONTENT		SAMPLE IDENTIFICATION DATA	
LABORATORY NUMBER		LABORATORY NUMBER	
SAMPLE TYPE		SAMPLE TYPE	
SAMPLE NUMBER (FIELD)		SAMPLE NUMBER (FIELD)	
SAMPLE DEPTH (M)		SAMPLE DEPTH (M)	
N.R.C. PERMAFROST CLASSIFICATION		N.R.C. PERMAFROST CLASSIFICATION	

SILTY SANDY GRAVEL

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 39 - B													
DATE DRILLED: 26-4-78		DRILL TECHNICIAN: H. R.		PLOTTED BY: R. S.													
HOLE DEPTH: 5.9		MECHANICAL ANALYSIS		STANDARD PENETRATION RESISTANCE													
TYPE OF DRILL: B30-6" AUGERS		<table border="1"> <tr><td><.005 mm</td><td>%</td></tr> <tr><td><.074 mm</td><td>%</td></tr> <tr><td>>.005 mm</td><td>%</td></tr> <tr><td>SAND</td><td>%</td></tr> <tr><td>GRAVEL</td><td>%</td></tr> </table>		<.005 mm	%	<.074 mm	%	>.005 mm	%	SAND	%	GRAVEL	%	<table border="1"> <tr><td>BLWS</td><td>FT.</td></tr> </table>		BLWS	FT.
<.005 mm	%																
<.074 mm	%																
>.005 mm	%																
SAND	%																
GRAVEL	%																
BLWS	FT.																
WATER LEVEL		CONSISTENCY LIMITS		DRY DENSITY													
SOIL DESCRIPTION		<table border="1"> <tr><td>PLASTICITY INDEX</td><td>%</td></tr> <tr><td>PLASTIC LIMIT</td><td>%</td></tr> <tr><td>LIQUID LIMIT</td><td>%</td></tr> </table>		PLASTICITY INDEX	%	PLASTIC LIMIT	%	LIQUID LIMIT	%	<table border="1"> <tr><td>LBS.</td><td>CU. FT.</td></tr> </table>		LBS.	CU. FT.				
PLASTICITY INDEX	%																
PLASTIC LIMIT	%																
LIQUID LIMIT	%																
LBS.	CU. FT.																
N.R.C. PERMAFROST CLASSIFICATION		NATURAL MOISTURE CONTENT		UNIFIED CLASSIFICATION													
<table border="1"> <tr><td>LABORATORY NUMBER</td></tr> <tr><td>SAMPLE TYPE</td></tr> <tr><td>SAMPLE NUMBER (FIELD)</td></tr> <tr><td>SAMPLE DEPTH (M)</td></tr> </table>		LABORATORY NUMBER	SAMPLE TYPE	SAMPLE NUMBER (FIELD)	SAMPLE DEPTH (M)	<table border="1"> <tr><td>%</td></tr> </table>		%	<table border="1"> <tr><td>%</td></tr> </table>		%						
LABORATORY NUMBER																	
SAMPLE TYPE																	
SAMPLE NUMBER (FIELD)																	
SAMPLE DEPTH (M)																	
%																	
%																	
SILTY SANDY GRAVEL		END HOLE @ 5.9															
5		6		7													
8		9		10													



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: <u>SHAKIWAK SEGMENT 8 BORROW PITS</u>		HOLE LOCATION: <u>STA.</u>	
DATE DRILLED: <u>26-4-78</u>	DRILL TECHNICIAN: <u>H.R.</u>	PLOTTED BY: <u>R.S.</u>	HOLE ELEVATION: <u>40-B</u>
HOLE DEPTH: <u>5.9</u>	HOLE NO.: <u>40-B</u>		
TYPE OF DRILL: <u>B30-6" AUGERS</u>	MECHANICAL ANALYSIS		
WATER LEVEL: _____	GRAVEL	%	
DEPTH (M)	SAND	%	
0	PLASTIC LIMIT	%	
1	PLASTICITY INDEX	%	
2	LIQUID LIMIT	%	
3	NATURAL MOISTURE CONTENT	%	
4	LABORATORY NUMBER		
5	SAMPLE TYPE		
	SAMPLE NUMBER (FIELD)		
	SAMPLE DEPTH (M)		
	N.R.C. PERMAFROST CLASSIFICATION		
	UNIFIED CLASSIFICATION		
	STANDARD PENETRATION RESISTANCE	BLOWS / FT.	
	DRY DENSITY	LBS. / CU. FT.	
	< .005 mm	%	
	< .074 mm	%	
	> .005 mm	%	

0.3	B-40 AUG. 179	7.5	34.0	28.9	37.1	GM
1.2						

SOIL DESCRIPTION	
SILTY SANDY GRAVEL	



**Public Works
Canada**

**MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.**

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS

HOLE LOCATION:

DATE DRILLED: 26-4-78

DRILL TECHNICIAN: H. R.

PLOTTED BY: R. S.

HOLE ELEVATION:

HOLE NO.: 40-B

HOLE DEPTH 5.9
TYPE OF DRILL B30-6" AUGERS
WATER LEVEL
DEPTH (M)
SOIL DESCRIPTION

N.R.C. PERMAFROST CLASSIFICATION

SAMPLE IDENTIFICATION DATA

LABORATORY NUMBER
SAMPLE TYPE
SAMPLE NUMBER (FIELD)
SAMPLE DEPTH (M)

NATURAL MOISTURE CONTENT %

CONSISTENCY LIMITS

LIQUID LIMIT %
PLASTIC LIMIT %
PLASTICITY INDEX %

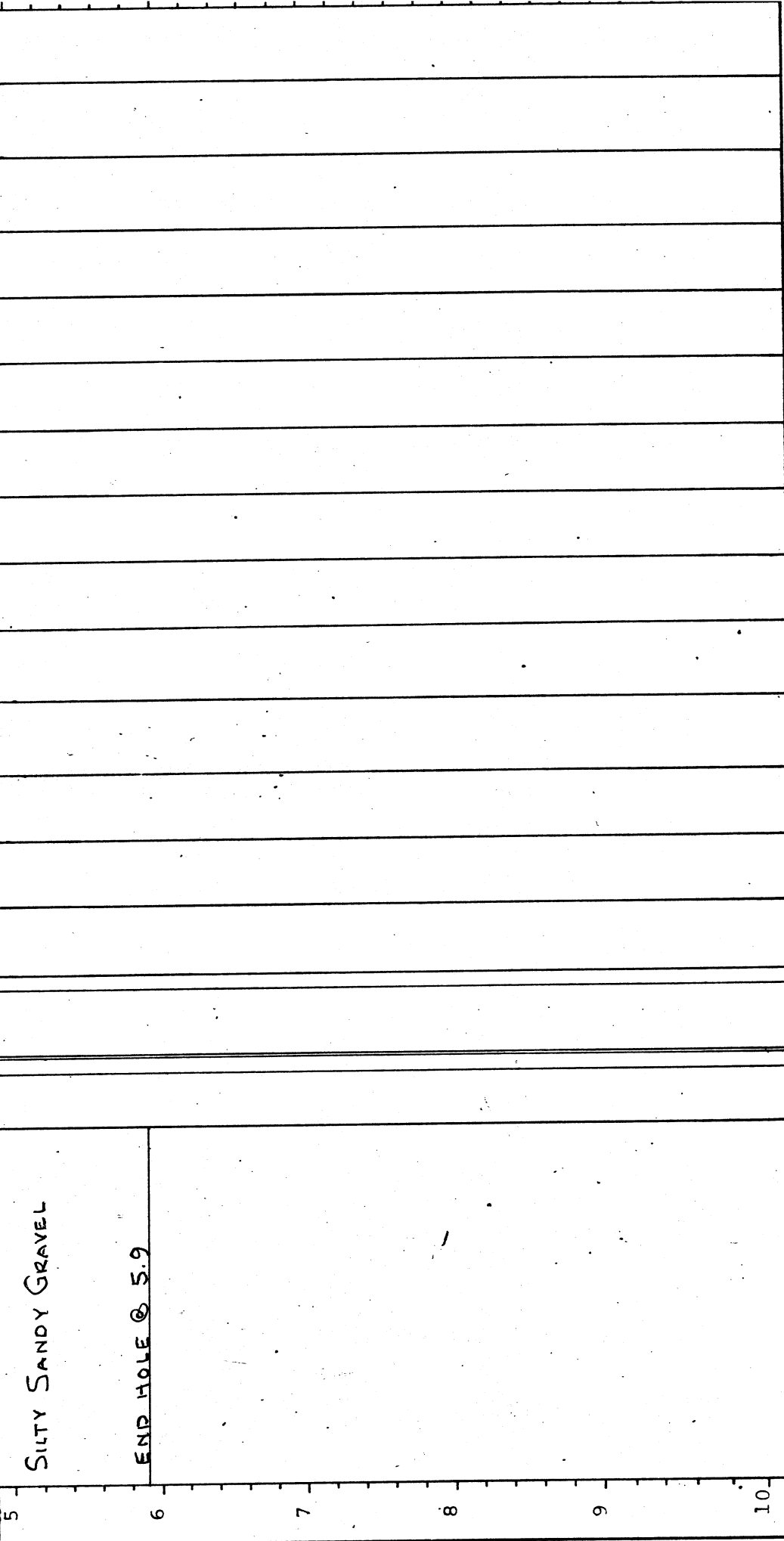
MECHANICAL ANALYSIS

GRAVEL %
SAND %
<.074mm %
<.005mm %

DRY DENSITY LBS./CU.FT.
STANDARD PENETRATION RESISTANCE BLOWS/FT.

UNIFIED CLASSIFICATION

SILTY SANDY GRAVEL
END HOLE @ 5.9





Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS

HOLE LOCATION: S.T.A.

DATE DRILLED: 26-4-78

HOLE ELEVATION: 41-B

DRILL TECHNICIAN: H.R.

PLOTTED BY: R.S.

HOLE DEPTH 5.9
 TYPE OF DRILL B30-6" AUGERS
 WATER LEVEL _____

DEPTH (M) SOIL DESCRIPTION

0 ORGANIC .2

SILTY SANDY GRAVEL

1

2

3

4

5

N.R.C.
PERMAFROST
CLASSIFICATION

LABORATORY NUMBER _____
 SAMPLE TYPE _____
 SAMPLE NUMBER (FIELD) _____
 SAMPLE DEPTH (M) _____

NATURAL MOISTURE CONTENT %

LIQUID LIMIT %
 PLASTIC LIMIT %
 PLASTICITY INDEX %

GRAVEL %
 SAND %

< .005 mm %
 < .074 mm %
 > .005 mm %

DRY DENSITY LBS. CU. FT.

STANDARD PENETRATION RESISTANCE BLOWS FT.

UNIFIED CLASSIFICATION

4.0

B41 AUG. 1180

N.P.

20.9

42.6

27.5

9.0

SM

4.9

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 41-B	
DATE DRILLED: 26-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 5.9		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL: _____	
SOIL DESCRIPTION		N.R.C. PERMAFROST CLASSIFICATION		UNIFIED CLASSIFICATION	
SILTY SANDY GRAVEL		END HOLE @ 5.9		STANDARD PENETRATION RESISTANCE	
				BLOWS / FT.	
5		6		7	
9		10		MECHANICAL ANALYSIS	
				GRAVEL	
PLASTIC LIMIT		LIQUID LIMIT		NATURAL MOISTURE CONTENT	
SAMPLE IDENTIFICATION DATA		CONSISTENCY LIMITS		DRY DENSITY	
LABORATORY NUMBER		PLASTIC LIMIT		LBS. / CU. FT.	
SAMPLE TYPE		LIQUID LIMIT		UNIFIED CLASSIFICATION	
SAMPLE NUMBER (FIELD)		GRAVEL		UNIFIED CLASSIFICATION	
SAMPLE DEPTH (M)		SAND		UNIFIED CLASSIFICATION	
		< .075 mm		UNIFIED CLASSIFICATION	
		> .075 mm		UNIFIED CLASSIFICATION	
		> .005 mm		UNIFIED CLASSIFICATION	
		< .005 mm		UNIFIED CLASSIFICATION	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: TP8-01-1	
DATE DRILLED: 24-11-78		DRILL TECHNICIAN: T.M.		PLOTTED BY: R.S.	
HOLE DEPTH: 4.6		TYPE OF DRILL: BACKHOE		WATER LEVEL:	
DEPTH (M)		SOIL DESCRIPTION		UNIFIED CLASSIFICATION	
0		ORGANIC CLAY .5		GW	
1		CLAYEY GRAVEL .9		GW	
2		SANDY GRAVEL		GP	
3					
4					
5		END HOLE @ 4.6			

DEPTH (M)	SAMPLE DEPTH (M)	SAMPLE IDENTIFICATION DATA			NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS			MECHANICAL ANALYSIS			DRY DENSITY (LBS. CU. FT.)	STANDARD PENETRATION RESISTANCE (BLOWS FT.)	UNIFIED CLASSIFICATION
		LABORATORY NUMBER	SAMPLE TYPE	SAMPLE NUMBER (FIELD)		LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	<.074 mm (%)			
	1.8				1 1/2"				67.0	29.9	3.1			GW
	3.6	5	TP/P	2626	3/4"				63.2	33.0	3.8			GW
					PIT RUN				71.1	26.4	2.5			GP



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKNAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: TP8-01-2	
DATE DRILLED: 24-11-78		DRILL TECHNICIAN: T.M.		PLOTTED BY: R.S.	
HOLE DEPTH: 4.9		HOLE ELEVATION:		UNIFIED CLASSIFICATION	
TYPE OF DRILL: BACKHOE		MECHANICAL ANALYSIS		STANDARD PENETRATION RESISTANCE	
WATER LEVEL:		GRAVEL		BLOWS/FT.	
SOIL DESCRIPTION		SAND		LBS./CU.FT.	
ORGANIC GRAVELLY CLAY .5		PLASTICITY INDEX		DRY DENSITY	
		PLASTIC LIMIT		LBS./CU.FT.	
SANDY GRAVEL		LIQUID LIMIT		MECHANICAL ANALYSIS	
		NATURAL MOISTURE CONTENT		SAND	
END HOLE @ 4.9		LABORATORY NUMBER		GRAVEL	
		SAMPLE TYPE		PLASTICITY INDEX	
0		SAMPLE NUMBER (FIELD)		PLASTIC LIMIT	
		SAMPLE DEPTH (ft)		LIQUID LIMIT	
1		SAMPLE IDENTIFICATION DATA		CONSISTENCY LIMITS	
		N.R.C. PERMAFROST CLASSIFICATION		PLASTICITY INDEX	
2		LABORATORY NUMBER		PLASTIC LIMIT	
		SAMPLE TYPE		LIQUID LIMIT	
3		SAMPLE NUMBER (FIELD)		PLASTICITY INDEX	
		SAMPLE DEPTH (ft)		PLASTIC LIMIT	
4		LABORATORY NUMBER		PLASTICITY INDEX	
		SAMPLE TYPE		PLASTIC LIMIT	
5		SAMPLE NUMBER (FIELD)		LIQUID LIMIT	
		SAMPLE DEPTH (ft)		PLASTICITY INDEX	

1.2

1 1/2"

3 TP/P 2631

3.0

P.T RUN

65.4 30.6 4.0

67.0 29.3 3.7

62.1 33.5 4.4

GP

GP

GP

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: TP8-01-3	
DATE DRILLED: 24-11-78		DRILL TECHNICIAN: T.M.		PLOTTED BY: R.S.	
HOLE DEPTH: 4.9		HOLE ELEVATION:		UNIFIED CLASSIFICATION	
TYPE OF DRILL: BACKHOE		MECHANICAL ANALYSIS		STANDARD PENETRATION RESISTANCE	
WATER LEVEL:		SAND		LBS. CU. FT.	
DEPTH (M)		GRAVEL		BLOWS / FT.	
SOIL DESCRIPTION		PLASTICITY INDEX			
		PLASTIC LIMIT			
		LIQUID LIMIT			
		NATURAL MOISTURE CONTENT			
		CONSISTENCY LIMITS			
		LABORATORY NUMBER			
		SAMPLE TYPE			
		SAMPLE NUMBER (FIELD)			
		SAMPLE DEPTH (M)			
		N.R.C. PERMAFROST CLASSIFICATION			
GRAVELLY CLAY		1 1/2"		GW	
CLAYEY SANDY GRAVEL		3/4"		GP	
END HOLE @ 4.9		PIT RUN		GW	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: T.P. 8-01-5	
DATE DRILLED: 24-11-78		DRILL TECHNICIAN: T.M.		PLOTTED BY: R.S.	
HOLE DEPTH: 4.6		HOLE ELEVATION:		UNIFIED CLASSIFICATION	
TYPE OF DRILL: BACKSHOE		MECHANICAL ANALYSIS		STANDARD PENETRATION RESISTANCE	
WATER LEVEL		SAND		LBS. CU. FT.	
DEPTH (M)		GRAVEL		BLOWS FT.	
SOIL DESCRIPTION		PLASTICITY INDEX		DRY DENSITY	
0		PLASTIC LIMIT		LBS. CU. FT.	
1		LIQUID LIMIT		LBS. CU. FT.	
2		NATURAL MOISTURE CONTENT		LBS. CU. FT.	
3		LABORATORY NUMBER		LBS. CU. FT.	
4		SAMPLE TYPE		LBS. CU. FT.	
5		SAMPLE NUMBER (FIELD)		LBS. CU. FT.	
END HOLE @ 4.6		SAMPLE DEPTH (M)		LBS. CU. FT.	

ORGANIC CLAY .3
CLAYEY GRAVEL .9

SANDY GRAVEL

60.2 35.0 4.8
58.4 36.5 5.1
50.0 44.2 5.8

1 1/2"
3/4"

2 TP/P 2627

PIT RUN

GP
GP-6M
GPGM



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:	
DATE DRILLED: 20-11-78	DRILL TECHNICIAN: T.M.	PLOTTED BY: R.S.	HOLE ELEVATION:
HOLE DEPTH: 4.3	HOLE NO.: TP8-03-2		
TYPE OF DRILL: BACKHOLE	MECHANICAL ANALYSIS		
WATER LEVEL	GRAVEL	SAND	< .005 mm
DEPTH (M)	%	%	%
SOIL DESCRIPTION	PLASTIC LIMIT	PLASTICITY INDEX	> .074 mm
0	%	%	%
1	LIQUID LIMIT	%	> .005 mm
2	%	%	%
3	NATURAL MOISTURE CONTENT	%	UNIFIED CLASSIFICATION
4	%	%	GP
5	%	%	GP

SAMPLE DEPTH (M)	SAMPLE IDENTIFICATION DATA			N.R.C. PERMAFROST CLASSIFICATION
	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER	
1.5	2	TP/P	2629	
3.6				

0	ORGANIC CLAYEY SANDY GRAVEL	0.6
1.5	CLAYEY SANDY GRAVEL	
3.6	CLAY	
4.3	END HOLE @ 4.3	3.9



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS HOLE LOCATION: HOLE NO.: TP8-03-3

DATE DRILLED: 28-11-78 DRILL TECHNICIAN: T.M PLOTTED BY: R.S. HOLE ELEVATION: HOLE NO.: TP8-03-3

HOLE DEPTH (M)	TYPE OF DRILL	WATER LEVEL	SOIL DESCRIPTION	SAMPLE IDENTIFICATION DATA				CONSISTENCY LIMITS			MECHANICAL ANALYSIS				DRY DENSITY (LBS./CU. FT.)	STANDARD PENETRATION RESISTANCE (BLOWS/FT.)	UNIFIED CLASSIFICATION
				N.R.C. PERMAFROST CLASSIFICATION	LABORATORY NUMBER	SAMPLE TYPE	SAMPLE NUMBER (FIELD)	SAMPLE DEPTH (M)	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	> 0.075 mm (%)			
0		2.1	ORGANIC CLAYEY SANDY GRAVEL .5														
1			SANDY GRAVEL SOME SILT & CLAY MATERIAL FROZEN			3 TP/P 2632											
2			END HOLE @ 2.1														
3																	
4																	
5																	

Additional data from table:
 Sample 3 at 1.8m depth:
 Liquid Limit: N.P.
 Plastic Limit: N.P.
 Plasticity Index: N.P.
 Gravel: 6.6%
 Sand: 33.8%
 > 0.075 mm: 44.7%
 > 0.05 mm: 44.7%
 > 0.005 mm: 14.9%
 Unified Classification: ML



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS

HOLE LOCATION:

DATE DRILLED: 28-11-78

DRILL TECHNICIAN: T.M.

PLOTTED BY: R.S.

HOLE ELEVATION: HOLE NO.: TP8-03-4

HOLE DEPTH (M)	SOIL DESCRIPTION	N.R.C. PERMAFROST CLASSIFICATION	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT %	CONSISTENCY LIMITS			MECHANICAL ANALYSIS				DRY DENSITY LBS. / CU. FT.	STANDARD PENETRATION RESISTANCE BLOWS / FT.	UNIFIED CLASSIFICATION
			SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER		LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GRAVEL %	SAND %	> 0.075 mm %	< 0.075 mm %			
0	CLAYEY SILTY SANDY GRAVEL																
1.8	CLAYEY GRAVELLY SILTY SAND		1.8	4	TP/P	2637											
3.3	GRAVEL & CLAY TILL		3.0														
4.6	END HOLE @ 4.6																

PIT RUN

GM



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.		HOLE NO.: TP 8-5-1	
DATE DRILLED: 26-6-78		DRILL TECHNICIAN: H. R.		PLOTTED BY: R. S.	
HOLE DEPTH: 0.9		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL: _____	
DEPTH (M)		SOIL DESCRIPTION		UNIFIED CLASSIFICATION	
0		CLAYEY SILT			
1		END HOLE			
2					
3					
4					
5					
N.R.C. PERMAFROST CLASSIFICATION		SAMPLE IDENTIFICATION DATA		NATURAL MOISTURE CONTENT	
		LABORATORY NUMBER		%	
		SAMPLE TYPE		PLASTIC LIMIT	
		SAMPLE NUMBER (FIELD)		%	
		SAMPLE DEPTH (M)		LIQUID LIMIT	
				%	
				CONSISTENCY LIMITS	
				PLASTICITY INDEX	
				%	
				GRAVEL	
				%	
				SAND	
				%	
				> .005 mm	
				%	
				< .074 mm	
				%	
				< .005 mm	
				%	
				DRY DENSITY	
				LBS. CU. FT.	
				STANDARD PENETRATION RESISTANCE	
				BLOWS FT.	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 26-6-78		HOLE ELEVATION: 8-5-2	
DRILL TECHNICIAN: H.R.		R.S.	
HOLE DEPTH: 1.4		PLOTTED BY:	
TYPE OF DRILL: B30-6" AUGERS		MECHANICAL ANALYSIS	
WATER LEVEL:		GRAVEL %	
DEPTH (M)		SAND %	
SOIL DESCRIPTION		PLASTIC LIMIT %	
0		LIQUID LIMIT %	
1		PLASTICITY INDEX %	
2		NATURAL MOISTURE CONTENT %	
3		CONSISTENCY LIMITS	
4		MECHANICAL ANALYSIS	
5		UNIFIED CLASSIFICATION	

DEPTH (M)	SAMPLE IDENTIFICATION DATA				N.R.C. PERMAFROST CLASSIFICATION
	SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER	
1.3	1	BAG	1263	9.0	SP-SM
1.2	2	BAG	1264	17.0	SM
1.4					



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: S.T.A.		HOLE NO.: TP-8-5-3	
DATE DRILLED: 26-6-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 2.1		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL: 2.1	
DEPTH (M)		SOIL DESCRIPTION		UNIFIED CLASSIFICATION	
0		ORGANIC	0.3		
1		GRAVEL ORGANIC	1.1		SP-SM
2		SANDY GRAVEL	1.8		SP-SM
3		GRAVEL			
4		END HOLE	2.1		
5					



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.				
DATE DRILLED: 26-6-78		HOLE ELEVATION:				
DRILL TECHNICIAN: H.R.		HOLE NO.: TP 8-5-4				
HOLE DEPTH _____ 2.4	TYPE OF DRILL _____ B30-6" AUGERS	MECHANICAL ANALYSIS	DRY DENSITY	STANDARD PENETRATION RESISTANCE	UNIFIED CLASSIFICATION	
						GRAVEL
WATER LEVEL _____ 2.0	SOIL DESCRIPTION	CONSISTENCY LIMITS	NATURAL MOISTURE CONTENT	PLASTIC LIMIT	PLASTICITY INDEX	
						LIQUID LIMIT
DEPTH (M)						
0	ORGANIC SILT _____ 0.3					
1	SANDY GRAVEL _____ 1.2 ORGANIC		4.3	N.P.	5.8	6W-GM
2	GRAVELLY SAND _____ 2.0		9.7	N.P.	2.4	GP
3	SILT TILL _____ 2.4					
4	END HOLE _____ 2.4					
5						



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: S.T.A.				
DATE DRILLED: 26-6-78		HOLE ELEVATION:				
DRILL TECHNICIAN: H.R.		HOLE NO.: TP 8-5-5				
HOLE DEPTH: 2.3						
TYPE OF DRILL: B30-6" AUGERS						
WATER LEVEL: 2.0						
DEPTH (M)	SOIL DESCRIPTION	MECHANICAL ANALYSIS		UNIFIED CLASSIFICATION		
		GRAVEL	SAND	< 0.075 mm	< 0.005 mm	
		%	%	%	%	
		CONSISTENCY LIMITS		DRY DENSITY		
		LIQUID LIMIT	PLASTIC LIMIT	LBS. / CU. FT.		
		%	%	BLOWS / FT.		
		NATURAL MOISTURE CONTENT				
		%				
		SAMPLE IDENTIFICATION DATA				
		SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER	
0	ORGANIC	.2	1	BAG	1269	GW
1	COURSE GRAVEL	.8	2	BAG	1270	GM
2	SANDY GRAVEL	1.4	3	BAG	1271	SM
2	SAND	2.0				
3	SILT					
4	END HOLE					
5						



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 26-6-78	H.R.	PLOTTED BY: R.S.	HOLE ELEVATION:
HOLE DEPTH: 2.1		HOLE NO.: TP-8-5-6	
TYPE OF DRILL: B30-6" AUGERS			
WATER LEVEL: 2.0			
DEPTH (M)			
SOIL DESCRIPTION			
0			
1			
2			
3			
4			
5			
N.R.C. PERMAFROST CLASSIFICATION			
SAMPLE IDENTIFICATION DATA			
SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER
1.2	1	BAG	1272
1.1	2	BAG	1273
2.0			
NATURAL MOISTURE CONTENT			
%			
CONSISTENCY LIMITS			
LIQUID LIMIT	%		
PLASTIC LIMIT	%		
PLASTICITY INDEX	%		
GRAVEL	%	54.7	
SAND	%	38.4	
<0.075 mm	%	6.9	
<0.005 mm	%		
DRY DENSITY	LBS. / CU. FT.		
STANDARD PENETRATION RESISTANCE	BLOWS / FT.	GP-6M	
UNIFIED CLASSIFICATION	GP-6M		

ORGANIC .2

SANDY GRAVEL

2.0
SILT
2.1
END HOLE



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.															
DATE DRILLED: 26 6 78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION:														
HOLE DEPTH: 2.6		HOLE NO.: TP-8-5-7															
TYPE OF DRILL: B30-6" AUGERS																	
WATER LEVEL: 2.3																	
DEPTH (M)	SOIL DESCRIPTION	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT %	CONSISTENCY LIMITS			MECHANICAL ANALYSIS			UNIFIED CLASSIFICATION				
		SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER		LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GRAVEL %	SAND %	>.005mm %		<.074mm %	<.005mm %	DRY DENSITY LBS. CU.FT.	STANDARD PENETRATION RESISTANCE BLOWS FT.
0	ORGANIC	1.2	1	BAG	1274	3.3	N.P.	44.6	50.8	4.6							
1	GRAVEL	1.6															
	SANDY GRAVEL																
2	GRAVEL																
	SILT TILL																
	END HOLE																
3																	
4																	
5																	

PRIME INC.

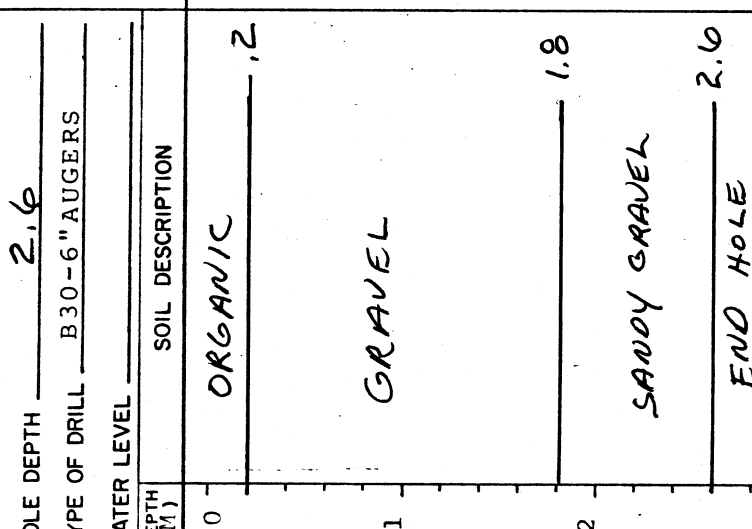


Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: S.T.A.	
DATE DRILLED: 26-6-78		HOLE ELEVATION: 8-5-8	
DRILL TECHNICIAN: H.R.		R.S.	
PLOTTED BY:			
HOLE DEPTH: 2.6			
TYPE OF DRILL: B30-6" AUGERS			
WATER LEVEL:			
DEPTH (M)			
SOIL DESCRIPTION			
0	ORGANIC		
1	GRAVEL		GP
2	SANDY GRAVEL		GP
3	END HOLE		
4			
5			



SAMPLE DEPTH (M)	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS (%)			MECHANICAL ANALYSIS (%)			DRY DENSITY (LBS. CU. FT.)	STANDARD PENETRATION RESISTANCE (BLOWS FT.)	UNIFIED CLASSIFICATION
	LABORATORY NUMBER	SAMPLE TYPE	SAMPLE NUMBER (FIELD)	SAMPLE DEPTH (M)		LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	GRAVEL	SAND	> 0.075 mm			
1.3			1	1.6	4.1				60.1	35.3	4.6			GP
1.7			2	1.7	3.4				58.0	37.6	4.4			GP



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS STA. _____

DATE DRILLED: _____ HOLE ELEVATION: _____ HOLE NO.: TP 8-5-9

DRILL TECHNICIAN: H.R. _____ PLOTTED BY: R.S. _____

HOLE LOCATION: _____

DEPTH (M)	SOIL DESCRIPTION	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS			MECHANICAL ANALYSIS			DRY DENSITY (LBS./CU. FT.)	STANDARD PENETRATION RESISTANCE (BLOWS/FT.)	UNIFIED CLASSIFICATION	
		SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER		LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	>.005 mm (%)				<.074 mm (%)
0	ORGANIC .2															
1.0 1.2	GRAVEL	1.0 1.2	1	BAG	1277	0.7	N.P.	63.2	34.0	2.8						GP
2.3	END HOLE															



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: TP8-5-10	
DATE DRILLED: 29-11-78		DRILL TECHNICIAN: T.M		PLOTTED BY: R.S.	
HOLE DEPTH: 4.3		TYPE OF DRILL: BACKHOE		WATER LEVEL:	
DEPTH (M)		SOIL DESCRIPTION		UNIFIED CLASSIFICATION	
0	ORGANIC CLAY	0.3			
1	CLAYEY SANDY GRAVEL				
2		1.8			
3	GRAVELLY CLAY				
4					
5					

SAMPLE DEPTH (M)	SAMPLE IDENTIFICATION DATA	NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS			MECHANICAL ANALYSIS			DRY DENSITY (LBS. CU. FT.)	STANDARD PENETRATION RESISTANCE (BLOWS FT.)	UNIFIED CLASSIFICATION
			LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	< 0.075 mm (%)			
0.6	LABORATORY NUMBER: TP/P 2634 SAMPLE TYPE: 3 SAMPLE NUMBER (FIELD): TP/P 2634 SAMPLE DEPTH (M): 0.6										
2.4	LABORATORY NUMBER: TP/P 2634 SAMPLE TYPE: 3 SAMPLE NUMBER (FIELD): TP/P 2634 SAMPLE DEPTH (M): 2.4	P.I.T RUN			N.P.	47.7	30.9	17.4	4.0	GM	

END HOLE @ 4.3



Public Works
Canada

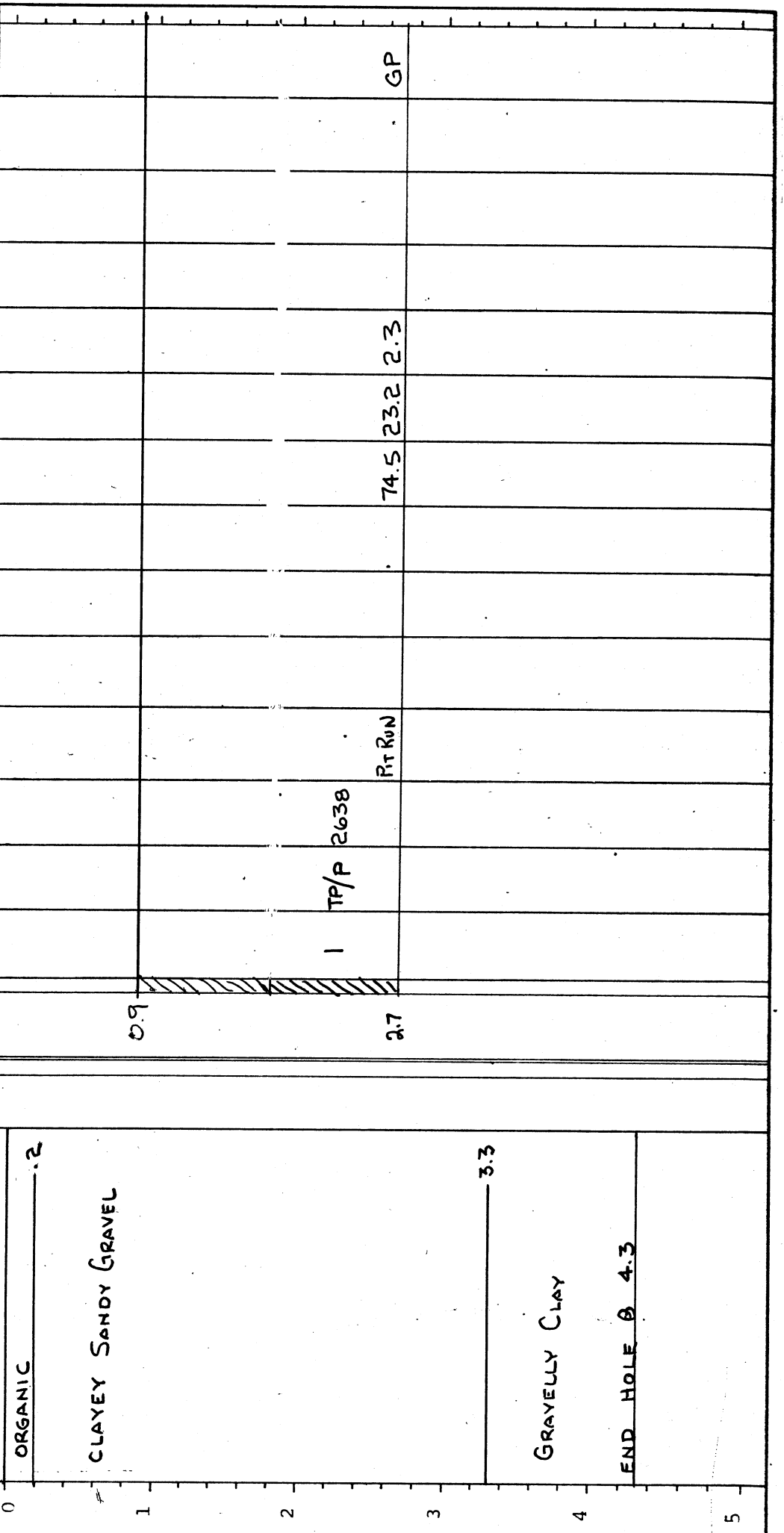
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKNAK SEGMENT 8 BORROW PITS HOLE LOCATION:

DATE DRILLED: 29-11-78 DRILL TECHNICIAN: T.M. PLOTTED BY: R.S. HOLE ELEVATION: HOLE NO.: TP8-5-11

HOLE DEPTH (M)	WATER LEVEL	TYPE OF DRILL	SOIL DESCRIPTION	N.R.C. PERMAFROST CLASSIFICATION	SAMPLE IDENTIFICATION DATA			NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS			MECHANICAL ANALYSIS			DRY DENSITY (LBS./CU. FT.)	STANDARD PENETRATION RESISTANCE (BLOWS/FT.)	UNIFIED CLASSIFICATION
					SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE		LABORATORY NUMBER	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)			
0			ORGANIC														
0.9			CLAYEY SANDY GRAVEL														
2.7			GRAVELLY CLAY		1	TP/P	2638	Rt Run					74.5	23.2	2.3		GP
3.3			END HOLE @ 4.3														





Public Works
Canada

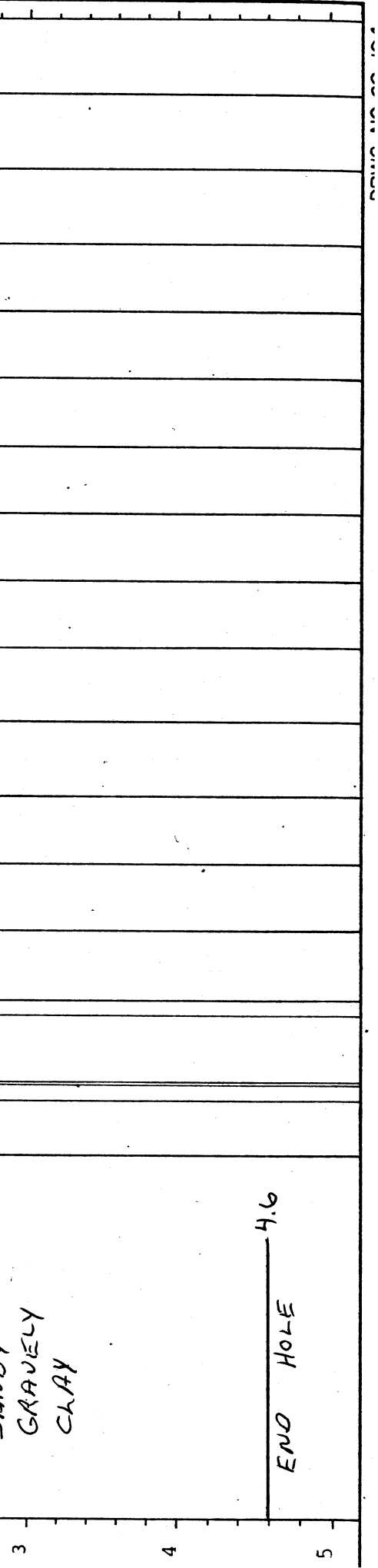
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS
 DATE DRILLED: 29-11-78
 HOLE LOCATION: D. 5
 PLOTTED BY: D. 5
 HOLE ELEVATION: TP 8-5-12
 HOLE NO: TP 8-5-12

HOLE DEPTH 4.6	TYPE OF DRILL BACKHOLE		SOIL DESCRIPTION	UNIFIED CLASSIFICATION
	WATER LEVEL			
DEPTH (M)				

DEPTH (M)	N.R.C. PERMAFROST CLASSIFICATION	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS			MECHANICAL ANALYSIS				DRY DENSITY (LBS./CU. FT.)	STANDARD PENETRATION RESISTANCE (BLOWS/FT.)
		LABORATORY NUMBER	SAMPLE TYPE	SAMPLE NUMBER (FIELD)	SAMPLE DEPTH (M)		LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	<.005 mm (%)	<.074 mm (%)		
0.6															
2.1			2	TP/P 2633											
2.4															
4.6															



PIT RUN

N.P.

56.7

27.5

10.8

5.0

GM



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: TP8-5-13	
DATE DRILLED: 29-11-78	DRILL TECHNICIAN: T.M.	PLOTTED BY: R.S.	HOLE ELEVATION:		
HOLE DEPTH: 4.3	TYPE OF DRILL: BACKHOE				
WATER LEVEL:	SOIL DESCRIPTION				
DEPTH (M)	N.R.C. PERMAFROST CLASSIFICATION				
0	ORGANIC CLAY 3				
1	CLAYEY SANDY GRAVEL				
2	1.8				
3	GRAVELLY CLAY				
4	END HOLE @ 4.3				
5					
SAMPLE IDENTIFICATION DATA		CONSISTENCY LIMITS		MECHANICAL ANALYSIS	
SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER	LIQUID LIMIT %	PLASTIC LIMIT %
				PLASTICITY INDEX %	GRAVEL %
				SAND %	
				>.074 mm %	
				<.005 mm %	
				DRY DENSITY LBS./CU. FT.	STANDARD PENETRATION RESISTANCE BLOWS/FT.
					UNIFIED CLASSIFICATION



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 27-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION: 42-B
HOLE DEPTH: 3.7			
TYPE OF DRILL: B30-6" AUGERS			
WATER LEVEL:			
DEPTH (M)	SOIL DESCRIPTION		
0	SILTY SANDY GRAVEL		
1			
2			
3			
4	REFUSAL @ 3.7		
5			
N.R.C. PERMAFROST CLASSIFICATION			
SAMPLE IDENTIFICATION DATA			
SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)		
0.6	B42		
1.5	AUG. 1181		
LABORATORY NUMBER			
SAMPLE TYPE			
NATURAL MOISTURE CONTENT			
%			
CONSISTENCY LIMITS			
LIQUID LIMIT	%		
PLASTIC LIMIT	%		
PLASTICITY INDEX	%		
MECHANICAL ANALYSIS			
GRAVEL	%		
SAND	%		
> .005 mm	%		
> .074 mm	%		
< .005 mm	%		
DRY DENSITY	LBS./CU.FT.		
STANDARD PENETRATION RESISTANCE	BLOWS/FT.		
UNIFIED CLASSIFICATION	SM		



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS

STA.

HOLE LOCATION:

DATE DRILLED: 27-4-78

DRILL TECHNICIAN: H.R.R.

PLOTTED BY: R.S.

HOLE ELEVATION:

HOLE NO.: 43-B

HOLE DEPTH 3.5
TYPE OF DRILL B30-6" AUGERS
WATER LEVEL _____
DEPTH (M) SOIL DESCRIPTION

SILTY SANDY GRAVEL

REFUSAL @ 3.5

N.R.C. PERMAFROST CLASSIFICATION

SAMPLE IDENTIFICATION DATA
SAMPLE DEPTH (M)
SAMPLE NUMBER (FIELD)
SAMPLE TYPE
LABORATORY NUMBER

NATURAL MOISTURE CONTENT %

LIQUID LIMIT %

PLASTIC LIMIT %

PLASTICITY INDEX %

GRAVEL %

SAND %

MECHANICAL ANALYSIS
> .005 mm %
< .074 mm %
> .005 mm %

DRY DENSITY LBS. CU.FT.

STANDARD PENETRATION RESISTANCE BLOWS FT.

UNIFIED CLASSIFICATION

SM

22.1

41.2

36.7

N.P.

4.7

B43 AUG. 1182

0.9

1.5



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 27-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION: 44-B
HOLE DEPTH: 1.5	TYPE OF DRILL: B30-6" AUGERS		
WATER LEVEL: _____			
DEPTH (M)	SOIL DESCRIPTION	UNIFIED CLASSIFICATION	
0	SILTY SANDY GRAVEL	GM	
1	ORGANIC TRACES		
1.2	REFUSAL @ 1.5		
2			
3			
4			
5			

MECHANICAL ANALYSIS	CONSISTENCY LIMITS		NATURAL MOISTURE CONTENT (%)	SAMPLE IDENTIFICATION DATA				STANDARD PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (LBS./CU.FT.)
	LIQUID LIMIT (%)	PLASTIC LIMIT (%)		PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	<.074mm (%)		
			13.1						
			N.P.	40.4	20.6	39.0			

0.3
1.2

B44 AUG 1183



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.		HOLE ELEVATION:		HOLE NO: 45-B	
DATE DRILLED: 27-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.			
HOLE DEPTH: 1.8		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:			
SOIL DESCRIPTION		N.R.C. PERMAFROST CLASSIFICATION		SAMPLE IDENTIFICATION DATA		CONSISTENCY LIMITS	
SILTY SANDY GRAVEL REUSAL @ 1.8		0.3 1.2		SAMPLE NUMBER (FIELD)		LIQUID LIMIT	
				B45		%	
				AUG 1184		PLASTIC LIMIT	
				LABORATORY NUMBER		PLASTICITY INDEX	
						%	
				SAMPLE TYPE		SAND	
						%	
				GRAVEL		%	
				N.P.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	
				49.5		%	
				N.A.		%	
				20.3		%	
				30.2		%	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 27-4-78	DRILL TECHNICIAN: H. R.	PLOTTED BY: R. S.	HOLE ELEVATION: .
HOLE DEPTH: 2.0		HOLE NO.: 46-13	
TYPE OF DRILL: B30-6" AUGERS		UNIFIED CLASSIFICATION	
WATER LEVEL: _____		STANDARD PENETRATION RESISTANCE	
DEPTH (M)		BLOWS / FT.	
SOIL DESCRIPTION		DRY DENSITY	
SILTY SANDY GRAVEL		LBS. / CU. FT.	
REFUSAL @ 2.0		MECHANICAL ANALYSIS	
		SAND	
		GRAVEL	
		PLASTICITY INDEX	
		PLASTIC LIMIT	
		LIQUID LIMIT	
		NATURAL MOISTURE CONTENT	
		N.R.C. PERMAFROST CLASSIFICATION	
		SAMPLE IDENTIFICATION DATA	
		LABORATORY NUMBER	
		SAMPLE TYPE	
		SAMPLE NUMBER (FIELD)	
		SAMPLE DEPTH (M)	
0.3		B46 AUG. 1185	
1.2		N.P. 60.1 23.8 16.1	
		GM	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 27-4-78	DRILL TECHNICIAN: H.R.R.	PLOTTED BY: R.S.	HOLE ELEVATION: 59-B
HOLE DEPTH: 7.0	TYPE OF DRILL: B30-6" AUGERS		
WATER LEVEL:	SOIL DESCRIPTION		
DEPTH (M)	UNIFIED CLASSIFICATION		
0	STANDARD PENETRATION RESISTANCE		
1	BLOWS / FT.		
2	DRY DENSITY		
3	LBS. / CU. FT.		
4	MECHANICAL ANALYSIS		
5	GRAVEL		
	SAND		
	V.005 mm		
	V.074 mm		
	V.005 mm		
	PLASTICITY INDEX		
	PLASTIC LIMIT		
	LIQUID LIMIT		
	NATURAL MOISTURE CONTENT		
	CONSISTENCY LIMITS		
	LABORATORY NUMBER		
	SAMPLE TYPE		
	SAMPLE NUMBER (FIELD)		
	SAMPLE DEPTH (M)		
	N.R.C. PERMAFROST CLASSIFICATION		

SILTY SAND

3.0

SILTY SANDY GRAVEL

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 59-B	
DATE DRILLED: 27-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 7.0		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:	
DEPTH (M)		SOIL DESCRIPTION		UNIFIED CLASSIFICATION	
5	SILTY SANDY GRAVEL		DRY DENSITY		STANDARD PENETRATION RESISTANCE
6			LBS. CU. FT.		BLOWS FT.
7	END HOLE @ 7.0		MECHANICAL ANALYSIS		
8			GRAVEL		
9			SAND		
10			PLASTICITY INDEX		
			PLASTIC LIMIT		
			LIQUID LIMIT		
			NATURAL MOISTURE CONTENT		
			SAMPLE IDENTIFICATION DATA		
			LABORATORY NUMBER		
			SAMPLE TYPE		
			SAMPLE NUMBER (FIELD)		
			SAMPLE DEPTH (M)		
			N.R.C. PERMAFROST CLASSIFICATION		



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 60 - B		HOLE ELEVATION:		UNIFIED CLASSIFICATION	
DATE DRILLED: 27-4-77		DRILL TECHNICIAN: H.R.		R.S.		PLOTTED BY:		STANDARD PENETRATION RESISTANCE	
HOLE DEPTH: 7.9		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:		SOIL DESCRIPTION:		DRY DENSITY	
DEPTH (M): 5		SILTY SAND		REUSAL @ 7.9				LBS. CU. FT.	
								BLOWS FT.	
								MECHANICAL ANALYSIS	
								GRAVEL %	
								SAND %	
								PLASTICITY INDEX %	
								PLASTIC LIMIT %	
								LIQUID LIMIT %	
								NATURAL MOISTURE CONTENT %	
								CONSISTENCY LIMITS	
								SAMPLE IDENTIFICATION DATA	
								LABORATORY NUMBER	
								SAMPLE TYPE	
								SAMPLE NUMBER (FIELD)	
								SAMPLE DEPTH (M)	
								N.R.C. PERMAFROST CLASSIFICATION	



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 27-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION: 53-0
HOLE DEPTH: 4.4	TYPE OF DRILL: B30-6" AUGERS		
WATER LEVEL			
DEPTH (M)	SOIL DESCRIPTION	UNIFIED CLASSIFICATION	
0	SANDY GRAVEL	STANDARD PENETRATION RESISTANCE	
1		BLOWS FT.	
2	SILTY SAND SAT.	DRY DENSITY	
3		LBS. CU.FT.	
4	END HOLE @ 4.4	MECHANICAL ANALYSIS	
5		UNIFIED CLASSIFICATION	
N.R.C. PERMAFROST CLASSIFICATION		CONSISTENCY LIMITS	
SAMPLE IDENTIFICATION DATA		PLASTIC LIMIT	
LABORATORY NUMBER		LIQUID LIMIT	
SAMPLE TYPE		PLASTICITY INDEX	
SAMPLE NUMBER (FIELD)		SAND	
SAMPLE DEPTH (M)		GRAVEL	
0.6	854 AUG. 1193	N.P. 48.3 47.6 4.1	
1.5		4.8	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 27-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION: 54-B
HOLE DEPTH: 7.5	TYPE OF DRILL: B30-6" AUGERS		
WATER LEVEL: _____			
DEPTH (M)	SOIL DESCRIPTION	UNIFIED CLASSIFICATION	
0	SAND	SM	
1			
2			
3			
4			
5			

SAMPLE DEPTH (M)	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS (%)			MECHANICAL ANALYSIS (%)				DRY DENSITY (LBS./CU. FT.)	STANDARD PENETRATION RESISTANCE (BLOWS/FT.)	UNIFIED CLASSIFICATION
	SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER		LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	GRAVEL	SAND	>.005 mm	>.074 mm			
0.3					4.6										
1.2	B55	AUG.	1194				N.P.		75.8	24.2					

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 54-B	
DATE DRILLED: 27-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 7.5		MECHANICAL ANALYSIS		UNIFIED CLASSIFICATION	
TYPE OF DRILL: B30-6" AUGERS		GRAVEL		STANDARD PENETRATION RESISTANCE	
WATER LEVEL		SAND		BLOWS / FT.	
SOIL DESCRIPTION		PLASTICITY INDEX		DRY DENSITY	
		PLASTIC LIMIT			
5		LIQUID LIMIT		LBS. / CU. FT.	
		NATURAL MOISTURE CONTENT			
6		CONSISTENCY LIMITS		%	
		LABORATORY NUMBER			
7		SAMPLE IDENTIFICATION DATA		%	
		SAMPLE TYPE			
8		SAMPLE NUMBER (FIELD)		%	
		SAMPLE DEPTH (M)			
9		N.R.C. PERMAFROST CLASSIFICATION		%	
		END HOLE @ 7.5			
10					



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 27-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION:
HOLE DEPTH: 4.6		HOLE NO.: 55-B	
TYPE OF DRILL: B30-6" AUGERS		UNIFIED CLASSIFICATION	
WATER LEVEL		STANDARD PENETRATION RESISTANCE	
DEPTH (M)		BLOWS / FT.	
SOIL DESCRIPTION		DRY DENSITY	
SAND		LBS. / CU. FT.	
		MECHANICAL ANALYSIS	
END HOLE @ 4.6		< .005 mm	
		%	
		< .074 mm	
		%	
		> .005 mm	
		%	
		SAND	
		%	
		GRAVEL	
		%	
		PLASTICITY INDEX	
		%	
		PLASTIC LIMIT	
		%	
		LIQUID LIMIT	
		%	
		NATURAL MOISTURE CONTENT	
		%	
		SAMPLE IDENTIFICATION DATA	
		LABORATORY NUMBER	
		SAMPLE TYPE	
		SAMPLE NUMBER (FIELD)	
		SAMPLE DEPTH (ft)	
		N.R.C. PERMAFROST CLASSIFICATION	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKIVAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 27-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION:
HOLE DEPTH: 4.6		HOLE NO.: 56-B	
TYPE OF DRILL: B30-6" AUGERS			
WATER LEVEL:			
DEPTH (M)			
SOIL DESCRIPTION			
GRAVELLY SAND			
SAND			
END HOLE @ 4.6			
N.R.C. PERMAFROST CLASSIFICATION			
SAMPLE IDENTIFICATION DATA			
SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER
0.3	B56	AUG.	1195
1.2			
NATURAL MOISTURE CONTENT			
%		2.8	
CONSISTENCY LIMITS			
LIQUID LIMIT	%		
PLASTIC LIMIT	%		
PLASTICITY INDEX	%	N.P.	
MECHANICAL ANALYSIS			
GRAVEL	%	54.9	
SAND	%	40.8	
> 0.075 mm	%	4.3	
< 0.075 mm	%		
< 0.005 mm	%		
DRY DENSITY	LBS. CU. FT.		
STANDARD PENETRATION RESISTANCE	BLOWS FT.	GP	
UNIFIED CLASSIFICATION			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 27-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION: 57-B
HOLE DEPTH: 4.6	TYPE OF DRILL: B30-6" AUGERS		
WATER LEVEL	SOIL DESCRIPTION		
DEPTH (M)	UNIFIED CLASSIFICATION		
0	SAND		
1			
2			
3			
4			
5	END HOLE @ 4.6		
	MECHANICAL ANALYSIS		
	GRAVEL	%	
	SAND	%	
	<.074mm	%	
	>.005mm	%	
	<.005mm	%	
	CONSISTENCY LIMITS		
	LIQUID LIMIT	%	
	PLASTIC LIMIT	%	
	PLASTICITY INDEX	%	
	NATURAL MOISTURE CONTENT		
	%		
	SAMPLE IDENTIFICATION DATA		
	SAMPLE DEPTH (M)		
	SAMPLE NUMBER (FIELD)		
	SAMPLE TYPE		
	LABORATORY NUMBER		
	STANDARD PENETRATION RESISTANCE		
	BLOWS	FT.	
	DRY DENSITY		
	LBS.	CU.FT.	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 27-4-78	DRILL TECHNICIAN: H.R.R.	PLOTTED BY: R.S.S.	HOLE ELEVATION:
HOLE DEPTH: 4.6		HOLE NO.: 58-B	
TYPE OF DRILL: B30-6" AUGERS		UNIFIED CLASSIFICATION	
WATER LEVEL		STANDARD PENETRATION RESISTANCE	
DEPTH (M)		BLOWS / FT.	
SOIL DESCRIPTION		DRY DENSITY	
SAND		LBS. / CU. FT.	
		%	
SAND		MECHANICAL ANALYSIS	
		%	
SAND		CONSISTENCY LIMITS	
		%	
SAND		NATURAL MOISTURE CONTENT	
		%	
SAND		LABORATORY NUMBER	
		%	
SAND		SAMPLE TYPE	
		%	
SAND		SAMPLE NUMBER (FIELD)	
		%	
SAND		SAMPLE DEPTH (M)	
		%	
SAND		N.R.C. PERMAFROST CLASSIFICATION	
		%	
SAND		GRAVEL	
		%	
SAND		SAND	
		%	
SAND		PLASTIC LIMIT	
		%	
SAND		PLASTICITY INDEX	
		%	
SAND		< 0.075 mm	
		%	
SAND		< 0.005 mm	
		%	
SAND		UNIFIED CLASSIFICATION	
		SM	

2.1

3.0

B57 AUG, 1196 3.8

N.P. 5.1 74.7 20.2

END HOLE @ 4.6



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 27-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION: 47-B
HOLE DEPTH: 5.2	TYPE OF DRILL: B30-6" AUGERS		
WATER LEVEL: _____			
DEPTH (M)	SOIL DESCRIPTION	UNIFIED CLASSIFICATION	
0	ORGANIC	CL	
1	SILTY SANDY GRAVEL		
2			
3			
4			
5			

MECHANICAL ANALYSIS	CONSISTENCY LIMITS	NATURAL MOISTURE CONTENT	DRY DENSITY		STANDARD PENETRATION RESISTANCE
			LBS./CU.FT.	BLOWS/FT.	
<.005 mm	PLASTIC LIMIT	%			
<.074 mm	LIQUID LIMIT	%			
>.005 mm	PLASTICITY INDEX	%			
SAND					
GRAVEL					

SAMPLE IDENTIFICATION DATA	N.R.C. PERMAFROST CLASSIFICATION	MECHANICAL ANALYSIS		CONSISTENCY LIMITS	NATURAL MOISTURE CONTENT	DRY DENSITY		STANDARD PENETRATION RESISTANCE
		LBS./CU.FT.	BLOWS/FT.			LBS./CU.FT.	BLOWS/FT.	
LABORATORY NUMBER								
SAMPLE TYPE								
SAMPLE NUMBER (FIELD)								
SAMPLE DEPTH (M)								

1.5								
2.4								

REFUSAL @ 5.2



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.		HOLE NO.: 48-B	
DATE DRILLED: 27-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.	
HOLE DEPTH: 5.9		PLASTICITY LIMIT		MECHANICAL ANALYSIS	
TYPE OF DRILL: B30-6" AUGERS		LIQUID LIMIT		GRAVEL	
WATER LEVEL		PLASTIC INDEX		SAND	
SOIL DESCRIPTION		NATURAL MOISTURE CONTENT		DRY DENSITY	
0 ORGANIC		%		LBS. CU.FT.	
1 SILTY CLAY		%		STANDARD PENETRATION RESISTANCE	
GRAVELLY SANDY SILT		%		BLOWS FT.	
2		%		UNIFIED CLASSIFICATION	
3		%		SM	
4		%			
5		%			

SAMPLE DEPTH (FT)	SAMPLE IDENTIFICATION DATA				N.R.C. PERMAFROST CLASSIFICATION
	LABORATORY NUMBER	SAMPLE TYPE	SAMPLE NUMBER (FIELD)	SAMPLE DEPTH (FT)	
2.1			B48 AUG. 1187		
3.0					

2.1 N.P. 29.5 40.4 30.1

3.0 5.4

3.3



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE NO.: 48-B		HOLE ELEVATION:	
DATE DRILLED: 27-4-78		DRILL TECHNICIAN: H. R.		PLOTTED BY: R. S.		HOLE ELEVATION:	
HOLE DEPTH: 5.9		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:		SOIL DESCRIPTION	
DEPTH (M)		N.R.C. PERMAFROST CLASSIFICATION		SAMPLE IDENTIFICATION DATA		NATURAL MOISTURE CONTENT	
5				SAMPLE DEPTH (M)		%	
6				B 49 AUG. 1188		17.7	
7				SAMPLE NUMBER (FIELD)		25.2	
8				SAMPLE TYPE		18.1	
9				LABORATORY NUMBER		7.1	
10				GRAVEL		2.9	
				SAND		10.5	
				MECHANICAL ANALYSIS		86.6	
				> 0.075 mm		%	
				> 0.005 mm		%	
				< 0.075 mm		%	
				< 0.005 mm		%	
				DRY DENSITY		LBS. CU. FT.	
				STANDARD PENETRATION RESISTANCE		BLOWS FT.	
				UNIFIED CLASSIFICATION		CL	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 27-4-78	DRILL TECHNICIAN: H. R.	PLOTTED BY: R. S.	HOLE ELEVATION: 49-B
HOLE DEPTH: 4.1		HOLE NO.: 49-B	
TYPE OF DRILL: B30-6" AUGERS		UNIFIED CLASSIFICATION	
WATER LEVEL		STANDARD PENETRATION RESISTANCE	
DEPTH (M)		BLOWS / FT.	
SOIL DESCRIPTION		DRY DENSITY	
0	ORGANIC	LBS. / CU. FT.	
	SILT		
	SANDY SILT TILL		SM
	SILTY SANDY GRAVEL		
	REFUSAL @ 4.1		
1			
2			
3			
4			
5			

CONSISTENCY LIMITS		MECHANICAL ANALYSIS	
LIQUID LIMIT	%	< 0.075 mm	%
PLASTIC LIMIT	%	> 0.075 mm	%
PLASTICITY INDEX	%	SAND	%
NATURAL MOISTURE CONTENT	%	GRAVEL	%

SAMPLE IDENTIFICATION DATA	
SAMPLE DEPTH (M)	LABORATORY NUMBER
SAMPLE NUMBER (FIELD)	SAMPLE TYPE

0.6	B50 AUG. 1189	N.P.	16.6	41.2	42.2
1.5					



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.																
DATE DRILLED: 27-4-78	DRILL TECHNICIAN: H. R.	PLOTTED BY: R. S.	HOLE ELEVATION:															
HOLE DEPTH: 5.9	HOLE NO.: 50-B																	
TYPE OF DRILL: B30-6" AUGERS	MECHANICAL ANALYSIS																	
WATER LEVEL: _____	<table border="1"> <tr> <td><.005 mm</td> <td>%</td> <td></td> </tr> <tr> <td><.074 mm</td> <td>%</td> <td></td> </tr> <tr> <td>>.005 mm</td> <td>%</td> <td></td> </tr> <tr> <td>SAND</td> <td>%</td> <td></td> </tr> <tr> <td>GRAVEL</td> <td>%</td> <td></td> </tr> </table>			<.005 mm	%		<.074 mm	%		>.005 mm	%		SAND	%		GRAVEL	%	
<.005 mm	%																	
<.074 mm	%																	
>.005 mm	%																	
SAND	%																	
GRAVEL	%																	
DEPTH (M)	CONSISTENCY LIMITS		UNIFIED CLASSIFICATION															
	LIQUID LIMIT	PLASTIC LIMIT																
SOIL DESCRIPTION	NATURAL MOISTURE CONTENT		STANDARD PENETRATION RESISTANCE															
	%																	
Silt SANDY SILT TILL		PLASTICITY INDEX																
		%																
		DRY DENSITY																
		LBS. CU.FT.																
		MECHANICAL ANALYSIS																
		<table border="1"> <tr> <td><.005 mm</td> <td>%</td> <td></td> </tr> <tr> <td><.074 mm</td> <td>%</td> <td></td> </tr> <tr> <td>>.005 mm</td> <td>%</td> <td></td> </tr> <tr> <td>SAND</td> <td>%</td> <td></td> </tr> <tr> <td>GRAVEL</td> <td>%</td> <td></td> </tr> </table>		<.005 mm	%		<.074 mm	%		>.005 mm	%		SAND	%		GRAVEL	%	
<.005 mm	%																	
<.074 mm	%																	
>.005 mm	%																	
SAND	%																	
GRAVEL	%																	
		UNIFIED CLASSIFICATION																
		CL																

0
1
2
3
4
5

LABORATORY NUMBER
SAMPLE TYPE
SAMPLE NUMBER (FIELD)
SAMPLE DEPTH (M)
4.6

10.4 21.2 14.0 7.2 14.6 28.3 31.1 26.0

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION:		HOLE ELEVATION:		HOLE NO.: 50-B	
DATE DRILLED: 27-4-78		DRILL TECHNICIAN: H.R.		PLOTTED BY: R.S.			
HOLE DEPTH: 5.9		TYPE OF DRILL: B30-6" AUGERS		WATER LEVEL:			
DEPTH (M)		SOIL DESCRIPTION		N.R.C. PERMAFROST CLASSIFICATION			
5	SANDY SILT TILL						
6	END HOLE @ 5.9						
7							
8							
9							
10							
				SAMPLE IDENTIFICATION DATA		NATURAL MOISTURE CONTENT	
				LABORATORY NUMBER		%	
				SAMPLE TYPE		%	
				SAMPLE NUMBER (FIELD)		%	
				SAMPLE DEPTH (M)		%	
				B51 AUG. 1190		10.4	
				5.5		21.2	
				LIQUID LIMIT		%	
				PLASTIC LIMIT		%	
				PLASTICITY INDEX		%	
				GRAVEL		%	
				SAND		%	
				> 0.075 mm		%	
				> 0.05 mm		%	
				> 0.005 mm		%	
				DRY DENSITY		LBS. CU. FT.	
				STANDARD PENETRATION RESISTANCE		BLOWS FT.	
				UNIFIED CLASSIFICATION		CL	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 27-4-78	DRILL TECHNICIAN: H. R.	PLOTTED BY: R. S.	HOLE ELEVATION: 51-0
HOLE DEPTH: 4.4	HOLE NO.: 51-0		
TYPE OF DRILL: B30-6" AUGERS	MECHANICAL ANALYSIS		
WATER LEVEL	GRAVEL %		
DEPTH (M)	SAND %		
	PLASTIC LIMIT %		
SOIL DESCRIPTION	LIQUID LIMIT %		
	PLASTICITY INDEX %		
0	NATURAL MOISTURE CONTENT %		
	UNIFIED CLASSIFICATION		
1	CONSISTENCY LIMITS		
	STANDARD PENETRATION RESISTANCE		
2	DRY DENSITY		
	BLOWS / FT.		
3	MECHANICAL ANALYSIS		
	GRAVEL %		
4	SAND %		
	PLASTIC LIMIT %		
5	LIQUID LIMIT %		
	PLASTICITY INDEX %		
N.R.C. PERMAFROST CLASSIFICATION			
SAMPLE IDENTIFICATION DATA			
LABORATORY NUMBER			
SAMPLE TYPE			
SAMPLE NUMBER (FIELD)			
SAMPLE DEPTH (M)			
0.6	B52 AUG.	1191	37.3
1.5			22.2
			15.0
			7.2
			2.1
			18.6
			79.3
			CL
ORGANIC .2			
SILTY CLAY			
GRAVELLY SILTY CLAY			
END HOLE @ 4.4			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKWAK SEGMENT 8 BORROW PITS		HOLE LOCATION: STA.	
DATE DRILLED: 27-4-78	DRILL TECHNICIAN: H.R.	PLOTTED BY: R.S.	HOLE ELEVATION:
HOLE DEPTH: 4.0	HOLE NO.: 52-B		
TYPE OF DRILL: B30-6" AUGERS	MECHANICAL ANALYSIS		
WATER LEVEL:	GRAVEL	SAND	UNIFIED CLASSIFICATION
DEPTH (M)	PLASTIC LIMIT	PLASTICITY INDEX	STANDARD PENETRATION RESISTANCE
0	LIQUID LIMIT	NATURAL MOISTURE CONTENT	DRY DENSITY
1	LABORATORY NUMBER	PLASTIC LIMIT	LBS. CU. FT.
2	SAMPLE TYPE	PLASTICITY INDEX	BLOWS FT.
3	SAMPLE NUMBER (FIELD)	GRAVEL	
4	SAMPLE DEPTH (M)	SAND	
5	N.R.C. PERMAFROST CLASSIFICATION		

ORGANIC 0.2

SILTY SANDY GRAVEL

REFUSAL @ 4.0

1.5

2.4

B53 AUG. 1192

17.5 16.0 1.5 25.9 33.1 41.0

22.6

SM



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHANAWAK SEGMENT 8		BORROW AREA 1 A	
DATE DRILLED: Mar 9, 1979		HOLE ELEVATION:	
DRILL TECHNICIAN:		HOLE NO.: AP-08-300-A	
PLOTTED BY: S.C.		S.C.	
N.R.C. PERMAFROST CLASSIFICATION			
HOLE DEPTH	3.0		
TYPE OF DRILL	6" AUGERS		
WATER LEVEL			
DEPTH ()	SOIL DESCRIPTION		
0	Frost .3		
1	Silty GRAVEL Rock 1-2"	GR-6M	
2	REFUSAL 2.1		
3	3 Attempts 3.0		
4			
5			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

DEPTH (M)	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT %	CONSISTENCY LIMITS			MECHANICAL ANALYSIS			DRY DENSITY LBS. CU. FT.	STANDARD PENETRATION RESISTANCE BLOWS FT.	UNIFIED CLASSIFICATION						
	SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER		LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GRAVEL %	SAND %	>.005 mm %				>.074 mm %	>.005 mm %				
																	SOIL DESCRIPTION			
																	S.C.			
0	FROST SANDY SILTY GRAVEL																			
1	0.3	2	AP	2904	3.0		NP	52.0	32.0	16.0				GM						
2	1.5																			
3	2.4	3	AP	2905	2.0		NP	40.9	46.2	12.9				SM						
4	3.0																			
5	3.7	4	AP	2906	2.2		NP	44.0	43.1	12.9				GM						
	4.5																			

PROJECT: SHAKWAK SEGMENT 8

DATE DRILLED: Mar 9 1979

HOLE DEPTH: 15.2

TYPE OF DRILL: B40L 6" AUGERS

WATER LEVEL: _____

DRILL TECHNICIAN: _____

SOIL DESCRIPTION

FROST

SANDY SILTY GRAVEL

FEW LARGE ROCKS 3-4"
HARD DEBRIS

HOLE LOCATION: Borrow Area 1

PLOTTED BY: S.C.

HOLE ELEVATION: _____

HOLE NO.: AD-08-301-B



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUKIAWAK SEGMENT 8		HOLE LOCATION: BORROW AREA 1 B		HOLE NO. AP-08 - 301-B			
DATE DRILLED: May 9/79		DRILL TECHNICIAN: S.C.		PLOTTED BY: S.C.			
HOLE DEPTH: 15.2		HOLE ELEVATION:		UNIFIED CLASSIFICATION			
TYPE OF DRILL: 40L 6" AUGERS		CONSISTENCY LIMITS		STANDARD PENETRATION RESISTANCE			
WATER LEVEL		LIQUID LIMIT		BLOWS / FT.			
SOIL DESCRIPTION		PLASTIC LIMIT		DRY DENSITY			
<p>5 6 7 8 9 10</p> <p>MORE S.I.T</p> <p>GRAVELLY SANDS ROCK 1-4"</p>		PLASTICITY INDEX		MECHANICAL ANALYSIS			
		NATURAL MOISTURE CONTENT		SAND		GRAVEL	
SAMPLE IDENTIFICATION DATA		GRAVEL		SAND		PLASTICITY INDEX	
LABORATORY NUMBER		PLASTIC LIMIT		LIQUID LIMIT		NATURAL MOISTURE CONTENT	
SAMPLE TYPE		PLASTICITY INDEX		GRAVEL		SAND	
SAMPLE NUMBER (FIELD)		PLASTICITY INDEX		SAND		GRAVEL	
SAMPLE DEPTH (M)		PLASTICITY INDEX		SAND		GRAVEL	
6.1		6.7		7.5		9.1	
5		6		7		8	
6		7		8		9	
7		8		9		10	
8		9		10		11	
9		10		11		12	
10		11		12		13	
11		12		13		14	
12		13		14		15	
13		14		15		16	
14		15		16		17	
15		16		17		18	
16		17		18		19	
17		18		19		20	
18		19		20		21	
19		20		21		22	
20		21		22		23	
21		22		23		24	
22		23		24		25	
23		24		25		26	
24		25		26		27	
25		26		27		28	
26		27		28		29	
27		28		29		30	
28		29		30		31	
29		30		31		32	
30		31		32		33	
31		32		33		34	
32		33		34		35	
33		34		35		36	
34		35		36		37	
35		36		37		38	
36		37		38		39	
37		38		39		40	
38		39		40		41	
39		40		41		42	
40		41		42		43	
41		42		43		44	
42		43		44		45	
43		44		45		46	
44		45		46		47	
45		46		47		48	
46		47		48		49	
47		48		49		50	
48		49		50		51	
49		50		51		52	
50		51		52		53	
51		52		53		54	
52		53		54		55	
53		54		55		56	
54		55		56		57	
55		56		57		58	
56		57		58		59	
57		58		59		60	
58		59		60		61	
59		60		61		62	
60		61		62		63	
61		62		63		64	
62		63		64		65	
63		64		65		66	
64		65		66		67	
65		66		67		68	
66		67		68		69	
67		68		69		70	
68		69		70		71	
69		70		71		72	
70		71		72		73	
71		72		73		74	
72		73		74		75	
73		74		75		76	
74		75		76		77	
75		76		77		78	
76		77		78		79	
77		78		79		80	
78		79		80		81	
79		80		81		82	
80		81		82		83	
81		82		83		84	
82		83		84		85	
83		84		85		86	
84		85		86		87	
85		86		87		88	
86		87		88		89	
87		88		89		90	
88		89		90		91	
89		90		91		92	
90		91		92		93	
91		92		93		94	
92		93		94		95	
93		94		95		96	
94		95		96		97	
95		96		97		98	
96		97		98		99	
97		98		99		100	

PROJECT: Shaktwak Segment 8		Borrow Area 1 B		HOLE LOCATION:		HOLE ELEVATION:		HOLE NO.: 80-08-301-																						
DATE DRILLED: Mar 9 1979		DRILL TECHNICIAN: S.C.		PLOTTED BY: S.C.		CONSISTENCY LIMITS		MECHANICAL ANALYSIS		DRY DENSITY		STANDARD PENETRATION RESISTANCE		UNIFIED CLASSIFICATION																
HOLE DEPTH: 15.2		TYPE OF DRILL: B40L 6" AUGERS		WATER LEVEL:		LIQUID LIMIT: %		PLASTIC LIMIT: %		PLASTICITY INDEX: %		GRAVEL: %		SAND: %		<.005 mm: %		<.074 mm: %		>.005 mm: %		LBS. / CU. FT.		BLOWS / FT.						
DEPTH (FT.)		SOIL DESCRIPTION		N.R.C. PERMAFROST CLASSIFICATION		SAMPLE DEPTH (FT.)		SAMPLE IDENTIFICATION DATA		NATURAL MOISTURE CONTENT: %		GRAVEL: %		SAND: %		<.005 mm: %		<.074 mm: %		>.005 mm: %		LBS. / CU. FT.		BLOWS / FT.		UNIFIED CLASSIFICATION				
10		Coarsely Sand				10.6	7	AP	2909	4.3	N.P.	40.1	47.0	12.9																
11						2.1																								
12																														
13																														
14																														
15		End Hole				15.2																								

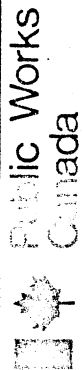
Public Works Canada
 MATERIALS QUALITY CONTROL LABORATORY
 WHITEHORSE, Y.T.

PROJECT: SHAKWAK SEGMENT 8
 BORROW AREA 1
 HOLE LOCATION: C

DATE DRILLED: May 9, 1979
 DRILL TECHNICIAN: S.C.
 PLOTTED BY: S.C.
 HOLE ELEVATION:
 HOLE NO.: 80-08-302-C

SUBSURFACE TESTING REPORT

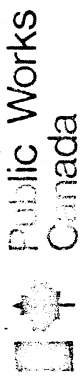
DEPTH (M)	SOIL DESCRIPTION	N.R.C. PERMAFROST CLASSIFICATION	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS			MECHANICAL ANALYSIS				DRY DENSITY (LBS./CU. FT.)	STANDARD PENETRATION RESISTANCE (BLOWS/FT.)	UNIFIED CLASSIFICATION
			DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER		LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	> 0.075 mm (%)	< 0.075 mm (%)			
0	Frost																
0.3	Silt Gravel Sand		9	AP	2911	2.5	NP	56.4	34.6	9.0							GP-6M
3.0	harder Rocks		10	AP	2912	1.8	NP	62.8	30.7	6.5							GP-6M
4.5																	



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: <u>WAK SEGMENT 8</u>		HOLE LOCATION: <u>Borrow Area 1</u>		HOLE NO.: <u>80-08-302-C</u>	
DATE DRILLED: <u>Mar. 9, 1979</u>		DRILL TECHNICIAN: <u>S.C.</u>		PLOTTED BY: <u>S.C.</u>	
HOLE DEPTH: <u>15.2</u>		HOLE ELEVATION:		UNIFIED CLASSIFICATION	
TYPE OF DRILL: <u>40L 6" AUGERS</u>		NATURAL MOISTURE CONTENT: <u>2.2</u>		STANDARD PENETRATION RESISTANCE: <u>BLOWS / FT.</u>	
WATER LEVEL:		CONSISTENCY LIMITS		DRY DENSITY: <u>LBS. / CU. FT.</u>	
DEPTH (M):		LIQUID LIMIT: <u>%</u>		LBS. / CU. FT.	
SOIL DESCRIPTION: <u>SILT GRAVELLY SAND</u>		PLASTIC LIMIT: <u>%</u>		LBS. / CU. FT.	
5		PLASTICITY INDEX: <u>%</u>		LBS. / CU. FT.	
6		GRAVEL: <u>%</u>		LBS. / CU. FT.	
7		SAND: <u>%</u>		LBS. / CU. FT.	
8		MECHANICAL ANALYSIS		LBS. / CU. FT.	
9		GRAVEL: <u>36.6</u>		LBS. / CU. FT.	
10		SAND: <u>50.7</u>		LBS. / CU. FT.	
		< .074 mm: <u>12.7</u>		LBS. / CU. FT.	
		> .005 mm: <u>14.3</u>		LBS. / CU. FT.	
		< .005 mm: <u>%</u>		LBS. / CU. FT.	
		PLASTICITY INDEX: <u>NP</u>		LBS. / CU. FT.	
		PLASTIC LIMIT: <u>%</u>		LBS. / CU. FT.	
		LIQUID LIMIT: <u>%</u>		LBS. / CU. FT.	
		NATURAL MOISTURE CONTENT: <u>2.2</u>		LBS. / CU. FT.	
		LABORATORY NUMBER		LBS. / CU. FT.	
		SAMPLE TYPE		LBS. / CU. FT.	
		SAMPLE NUMBER (FIELD)		LBS. / CU. FT.	
		SAMPLE DEPTH (M)		LBS. / CU. FT.	
		N.R.C. PERMAFROST CLASSIFICATION		LBS. / CU. FT.	
		6.1		LBS. / CU. FT.	
		7.5		LBS. / CU. FT.	
		9.1		LBS. / CU. FT.	
		11 AP 29/3		LBS. / CU. FT.	
		12 AP 29/4		LBS. / CU. FT.	
		SM		LBS. / CU. FT.	
		SM		LBS. / CU. FT.	
		GRAVELLY SAND MORE SAND		LBS. / CU. FT.	



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: Shawkak Segment 8		HOLE LOCATION: Borrow Area 1		HOLE NO: 40-08-302 C	
DATE DRILLED: Mar. 9, 1979		DRILL TECHNICIAN: S.C.		PLOTTED BY: S.C.	
HOLE DEPTH: 15.2		HOLE ELEVATION:		MECHANICAL ANALYSIS	
TYPE OF DRILL: B40L 6" Augers		CONSISTENCY LIMITS		GRAVEL	
WATER LEVEL		LIQUID LIMIT		SAND	
DEPTH (FT.)		PLASTIC LIMIT		PLASTICITY INDEX	
SOIL DESCRIPTION		NATURAL MOISTURE CONTENT		PLASTICITY INDEX	
GRAVELLY SAND MORE SAND		%		%	
10		LABORATORY NUMBER		UNIFIED CLASSIFICATION	
11		SAMPLE TYPE		SM	
12		SAMPLE NUMBER (FIELD)		SM	
13		SAMPLE DEPTH (FT.)		SM	
14		N.R.C. PERMAFROST CLASSIFICATION			
15		END HOLE 15.2			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8		HOLE LOCATION: Borrow Area 1		HOLE NO.: A0-08-303 D	
DATE DRILLED: Mar 9/79		DRILL TECHNICIAN: S.C.		PLOTTED BY: S.C.	
HOLE DEPTH: 15.2 m		HOLE ELEVATION:		MECHANICAL ANALYSIS	
TYPE OF DRILL: B40L 6" AUGERS		CONSISTENCY LIMITS		< 0.075 mm % < 0.05 mm % SAND % GRAVEL %	
WATER LEVEL:		PLASTIC LIMIT %		< 0.005 mm % < 0.074 mm % < 0.005 mm %	
SOIL DESCRIPTION		LIQUID LIMIT %		PLASTICITY INDEX % PLASTIC LIMIT % LIQUID LIMIT %	
0 Frost		NATURAL MOISTURE CONTENT %		DRY DENSITY LBS./CU. FT. STANDARD PENETRATION RESISTANCE BLOWS/FT. UNIFIED CLASSIFICATION	
GRAVEL - SAND		SAMPLE IDENTIFICATION DATA			
		SAMPLE DEPTH (M) SAMPLE NUMBER (FIELD) SAMPLE TYPE LABORATORY NUMBER			
		3.0 4.5 ↓			
		N.R.C. PERMAFROST CLASSIFICATION			
		2.2 2.0		NP NP	
		48.2 31.8		48.2 31.8	
		11.4 8.7		11.4 8.7	
		SW-SM GP-6M		SW-SM GP-6M	

PROJECT: SHAKWAK SEGMENT 8		HOLE LOCATION: Borrow Area 1	
DATE DRILLED: Nov. 9, 1979		HOLE ELEVATION:	
DRILL TECHNICIAN: S.C.		PLOTTED BY: S.C.	
HOLE DEPTH 15.2		HOLE NO.: AD-08-303.0	
TYPE OF DRILL B40L 6" AUGERS		UNIFIED CLASSIFICATION	
WATER LEVEL		STANDARD PENETRATION RESISTANCE	
DEPTH (M)		BLOWS / FT.	
SOIL DESCRIPTION		DRY DENSITY	
		LBS. / CU. FT.	
		MECHANICAL ANALYSIS	
		SAND	
		GRAVEL	
		PLASTICITY INDEX	
		PLASTIC LIMIT	
		LIQUID LIMIT	
		NATURAL MOISTURE CONTENT	
		LABORATORY NUMBER	
		SAMPLE TYPE	
		SAMPLE NUMBER (FIELD)	
		SAMPLE DEPTH (M)	
		N.R.C. PERMAFROST CLASSIFICATION	
5	GRAVELLY SAND MORE SAND		GP-6M
6.1			
7.5			GP-6M
9.1	SAND FEW ROCKS		SM



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: Shakwak Segment 8		HOLE LOCATION: Borrow Area 1		HOLE NO.: 80-07-303 0	
DATE DRILLED: Mar 9, 1979		DRILL TECHNICIAN: S.C.		PLOTTED BY: S.C.	
HOLE DEPTH: 15.2		N.R.C. PERMAFROST CLASSIFICATION:		UNIFIED CLASSIFICATION: SM	
TYPE OF DRILL: B40L 6" AUGERS		CONSISTENCY LIMITS:		STANDARD PENETRATION RESISTANCE:	
WATER LEVEL:		LIQUID LIMIT: %		BLOWS / FT.:	
DEPTH (FT.):		PLASTIC LIMIT: %		LBS. / CU. FT.:	
SOIL DESCRIPTION:		NATURAL MOISTURE CONTENT: %		DRY DENSITY:	
SAND		PLASTICITY INDEX: %		MECHANICAL ANALYSIS:	
Few Rocks		GRAVEL: %		< .005 mm: % < .074 mm: % > .005 mm: %	
10		LABORATORY NUMBER: 2921		4.1	
11		SAMPLE TYPE: AP		19.9	
12		SAMPLE NUMBER (FIELD): 19		48.3	
13		SAMPLE DEPTH (FT.): 10.6		27.7	
14		SAMPLE DEPTH (FT.): 13.7		NP	
15		SAMPLE DEPTH (FT.): 15.2		NP	
15		SAMPLE DEPTH (FT.): 15.2		18.3	
15		SAMPLE DEPTH (FT.): 15.2		56.3	
15		SAMPLE DEPTH (FT.): 15.2		19.0	
15		SAMPLE DEPTH (FT.): 15.2		6.4	
15		SAMPLE DEPTH (FT.): 15.2		SM	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8		HOLE LOCATION: BORROW AREA 1		HOLE NO.: 80-08-304E	
DATE DRILLED: Mar 9, 1979		DRILL TECHNICIAN: S.C.		PLOTTED BY: S.C.	
HOLE DEPTH: 15.2		MECHANICAL ANALYSIS		UNIFIED CLASSIFICATION	
TYPE OF DRILL: B40L 6" AUGERS		GRAVEL		STANDARD PENETRATION RESISTANCE	
WATER LEVEL		SAND		BLOWS / FT.	
SOIL DESCRIPTION		PLASTICITY INDEX		DRY DENSITY	
		PLASTIC LIMIT		LBS. / CU. FT.	
N.R.C. PERMAFROST CLASSIFICATION		LIQUID LIMIT		MECHANICAL ANALYSIS	
Frost Silty SANDY GRAVEL		NATURAL MOISTURE CONTENT		A.005 mm	
		LABORATORY NUMBER		A.074 mm	
SANDY GRAVEL		PLASTIC LIMIT		A.005 mm	
1.5		GRAVEL		SAND	
3.0		PLASTICITY INDEX		GRAVEL	
4.5		LIQUID LIMIT		SAND	
5		NATURAL MOISTURE CONTENT		GRAVEL	
		LABORATORY NUMBER		SAND	
		SAMPLE TYPE		GRAVEL	
		SAMPLE NUMBER (FIELD)		SAND	
		SAMPLE DEPTH (M)		GRAVEL	
		LABORATORY NUMBER		SAND	
		SAMPLE TYPE		GRAVEL	
		SAMPLE NUMBER (FIELD)		SAND	
		SAMPLE DEPTH (M)		GRAVEL	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SIAKVAK SEGMENT 8 HOLE LOCATION: Borrow Area 1 HOLE NO.: AD-08-304 F
 DATE DRILLED: Mar. 9. 1979 DRILL TECHNICIAN: S.C. PLOTTED BY: S.C. HOLE ELEVATION:

DEPTH (M)	SOIL DESCRIPTION	N.R.C. PERMAFROST CLASSIFICATION	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT %	CONSISTENCY LIMITS			MECHANICAL ANALYSIS				DRY DENSITY LBS./CU. FT.	STANDARD PENETRATION RESISTANCE BLOWS/FT.	UNIFIED CLASSIFICATION
			LABORATORY NUMBER	SAMPLE TYPE	SAMPLE NUMBER (FIELD)	SAMPLE DEPTH (M)		PLASTIC LIMIT %	PLASTICITY INDEX %	GRAVEL %	SAND %	< 0.075 mm %	< 0.005 mm %				
15.2																	
6.1	Sandy Gravel		23	AP	2975	2.1				NP		65.7	25.0	9.3			GP-6M
7.5	More Sand		24	AP	2976	2.0				NP		62.2	27.4	10.4			GP-6M
9.1	Sand																

10



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: Shakwak Segment 8

HOLE LOCATION: Borrow Area 1

DATE DRILLED: Mar 9/79

DRILL TECHNICIAN: S.C.

PLOTTED BY: S.C.

HOLE ELEVATION:

HOLE NO.: 40-08-304 F

HOLE DEPTH (FT.)	WATER LEVEL	TYPE OF DRILL	SOIL DESCRIPTION	N.R.C. PERMAFROST CLASSIFICATION	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT %	CONSISTENCY LIMITS			MECHANICAL ANALYSIS				DRY DENSITY LBS. CU. FT.	STANDARD PENETRATION RESISTANCE BLOWS FT.	UNIFIED CLASSIFICATION
					SAMPLE DEPTH (FT.)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER		LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GRAVEL %	SAND %	>.005 mm %	.074 mm %			
10			SAND Few Rocks																
11					10.6	25	AP	2927	8.7				24.4	48.8	22.4	4.4		SM	
12					12.1														
13																			
14					13.7	26	AP	2928	7.0				37.2	41.6	14.6	6.6		SM	
15					15.2														

End Hole 15.2m



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: ELIATNAK SEGMENT 8 HOLE LOCATION: Borrow Area 1 HOLE NO. AP-08-305 G

DATE DRILLED: March 9, 1978 DRILL TECHNICIAN: S.C. PLOTTED BY: S.C. HOLE ELEVATION:

HOLE DEPTH (M)	TYPE OF DRILL	WATER LEVEL	SOIL DESCRIPTION	N.R.C. PERMAFROST CLASSIFICATION	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS			MECHANICAL ANALYSIS			DRY DENSITY (LBS./CU. FT.)	STANDARD PENETRATION RESISTANCE (BLOWS/FT.)	UNIFIED CLASSIFICATION	
					SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER		LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	< 0.075 mm (%)				> 0.075 mm (%)
5			GRAVELLY SAND SILT																
6			GRAVELLY SAND																
6.1					29	AP	2931		3.9		NP		16.6	65.5	17.9			SM	
7.5																			
9.1					30	AP	2932		3.6		NP		32.5	49.0	18.5			SM	

PROJECT: Shakwak Segment 8		HOLE LOCATION: Borrow Area 1		HOLE NO.: 00-08-305 G							
DATE DRILLED: March 9/79		DRILL TECHNICIAN: S.C.		PLOTTED BY: S.C.							
HOLE DEPTH: 15.2		N.R.C. PERMAFROST CLASSIFICATION:		MECHANICAL ANALYSIS							
TYPE OF DRILL: 40L 6" Augers		CONSISTENCY LIMITS		MECHANICAL ANALYSIS							
WATER LEVEL:		PLASTIC LIMIT		MECHANICAL ANALYSIS							
SOIL DESCRIPTION		LIQUID LIMIT		MECHANICAL ANALYSIS							
Gravelly Sand		PLASTICITY INDEX		MECHANICAL ANALYSIS							
DEPTH (FT.)		NATURAL MOISTURE CONTENT		MECHANICAL ANALYSIS							
		LABORATORY NUMBER		MECHANICAL ANALYSIS							
		SAMPLE TYPE		MECHANICAL ANALYSIS							
		SAMPLE NUMBER (FIELD)		MECHANICAL ANALYSIS							
		SAMPLE DEPTH (FT.)		MECHANICAL ANALYSIS							
		DRY DENSITY		MECHANICAL ANALYSIS							
		STANDARD PENETRATION RESISTANCE		MECHANICAL ANALYSIS							
		UNIFIED CLASSIFICATION		MECHANICAL ANALYSIS							
10	10.6	30	AP	2932	3.0	NP	49.0	18.5	51.1	17.3	SM
11	12.1										
12	13.7	31	AP	2933	3.3	NP	31.6	51.1	17.3		SM
13											
14											
15											



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAWWAK SEGMENT 8		HOLE LOCATION: Borrow Area 1		HOLE ELEVATION:		HOLE NO.: 00-02-306 H											
DATE DRILLED: March 10 1979		DRILL TECHNICIAN: 8		PLOTTED BY: S.C.		S.C.											
HOLE DEPTH (M)	TYPE OF DRILL HOLE 6" AUGERS	WATER LEVEL DEPTH ()	SOIL DESCRIPTION	SAMPLE IDENTIFICATION DATA				CONSISTENCY LIMITS			MECHANICAL ANALYSIS			STANDARD PENETRATION RESISTANCE BLOWS / FT.	UNIFIED CLASSIFICATION		
				SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER	NATURAL MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GRAVEL %	SAND %			< 0.075 mm %	< 0.005 mm %
0			Frost														
0.3			Silt - Sand - Gravel	32	AP	2934	2.7	NP	71.6	22.3	6.1						GP-6M
1.5																	
3.0				33	AP	2935	1.8	NP	81.1	15.2	3.7						GP
4.5																	
5																	

PROJECT: SHAKVAK SEGMENT 8		HOLE LOCATION: BORROW AREA 1		HOLE NO.: 40-08-306 H	
DATE DRILLED: November 79		DRILL TECHNICIAN: S.C.		PLOTTED BY: S.C.	
HOLE DEPTH: 15.2		HOLE ELEVATION:		UNIFIED CLASSIFICATION	
TYPE OF DRILL: B40L 6" AUGERS		MECHANICAL ANALYSIS		STANDARD PENETRATION RESISTANCE	
WATER LEVEL		GRAVEL		BLOWS / FT.	
DEPTH (M)		SAND		LBS. / CU. FT.	
SOIL DESCRIPTION		PLASTICITY INDEX		DRY DENSITY	
5 Silt - SAND GRAVEL		PLASTIC LIMIT		MECHANICAL ANALYSIS	
6 GRAVEL Some SAND + Silt		LIQUID LIMIT		<.005mm	
7		NATURAL MOISTURE CONTENT		<.074mm	
8		LABORATORY NUMBER		>.005mm	
9		SAMPLE TYPE		SAND	
10		SAMPLE NUMBER (FIELD)		GRAVEL	
		SAMPLE DEPTH (M)		PLASTICITY INDEX	
		N.R.C. PERMAFROST CLASSIFICATION		PLASTIC LIMIT	
		6.1		LIQUID LIMIT	
		7.5		NATURAL MOISTURE CONTENT	
		9.1		LABORATORY NUMBER	
		34 AP 2935		SAMPLE TYPE	
		35 AP 2937		SAMPLE NUMBER (FIELD)	
		NP		SAMPLE DEPTH (M)	
		NP		N.R.C. PERMAFROST CLASSIFICATION	
		80.4 17.1 2.5		LABORATORY NUMBER	
		72.5 23.8 3.7		SAMPLE TYPE	
		6P		SAMPLE NUMBER (FIELD)	
		6P		SAMPLE DEPTH (M)	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8
 DATE DRILLED: March 10/79
 HOLE DEPTH: 15.2
 TYPE OF DRILL: 340L 6" AUGERS
 WATER LEVEL: _____
 SOIL DESCRIPTION: Frost, Gravel, SANDY GRAVEL

PROJECT LOCATION: BORROW AREA 1
 HOLE NO.: 40-02-307K
 HOLE ELEVATION: _____

PLOTTED BY: S.C.
 S.C.
 S.C.
 DRILL TECHNICIAN: _____

DEPTH (M)	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS			MECHANICAL ANALYSIS				DRY DENSITY (LBS./CU. FT.)	STANDARD PENETRATION RESISTANCE (BLOWS/FT.)	UNIFIED CLASSIFICATION	
	SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER		LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	<.005mm (%)	<.074mm (%)				<.005mm (%)
3	38	AP	2940	1.5	NP	75.0	22.1	2.9							GP	
1.5																
3.0	39	AP	2941	1.5	NP	72.7	24.2	3.1							GP	
4.5																



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: Shakwak Segment 8		HOLE LOCATION: Borrow Area 1		HOLE NO.: A0-08-307 JK																
DATE DRILLED: Mar 10, 1979		DRILL TECHNICIAN: S.C.		PLOTTED BY: S.C.																
HOLE DEPTH (FT.)	SOIL DESCRIPTION	SAMPLE IDENTIFICATION DATA		CONSISTENCY LIMITS		MECHANICAL ANALYSIS	DRY DENSITY LBS. CU. FT.	STANDARD PENETRATION RESISTANCE BLOWS FT.	UNIFIED CLASSIFICATION											
		SAMPLE DEPTH (FT.)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER					LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	<.074 mm %	>.005 mm %	<.005 mm %					
10	GRAVELLY SAND	10.6	42	AP	2944															
11		12.1																		
12																				
13																				
14																				
15																				

Ewo Hole



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8

HOLE LOCATION: BORROW AREA 1

DATE DRILLED: March 10/79

DRILL TECHNICIAN: S.C.

PLOTTED BY: S.C.

HOLE ELEVATION:

HOLE NO: AD-08-308 J

HOLE DEPTH 15.2
TYPE OF DRILL BEOL 6" AUGERS
WATER LEVEL _____

SOIL DESCRIPTION

Frost
Sandy Gravel

N.R.C. PERMAFROST CLASSIFICATION

DEPTH (M)	SAMPLE IDENTIFICATION DATA			NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS			MECHANICAL ANALYSIS			DRY DENSITY (LBS./CU. FT.)	STANDARD PENETRATION RESISTANCE (BLOWS/FT.)	UNIFIED CLASSIFICATION
	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER		LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	< 0.075 mm (%)			
0 - 0.3													
0.3 - 1.5	<u>43</u>	<u>AP</u>	<u>2945</u>	<u>3.5</u>		<u>NP</u>	<u>41.4</u>	<u>47.7</u>	<u>10.9</u>				<u>SW-SM</u>
1.5 - 3.0													
3.0 - 4.5	<u>44</u>	<u>AP</u>	<u>2946</u>	<u>2.4</u>		<u>NP</u>	<u>58.7</u>	<u>34.4</u>	<u>6.9</u>				<u>GW-SM</u>
4.5 - 5.0													

Gravelly Sand

PROJECT: QUAKWAK SEGMENT 8		HOLE LOCATION: BORROW AREA 1	
DATE DRILLED: MAR 10 1979		HOLE ELEVATION:	
DRILL TECHNICIAN: S.C.C.		PLOTTED BY: S.C.C.	
HOLE DEPTH: 15.2		HOLE NO: 40-08-308 I	
TYPE OF DRILL: 1340 L 6" AUGERS			
WATER LEVEL:			
DEPTH (M)		UNIFIED CLASSIFICATION	
SOIL DESCRIPTION		STANDARD PENETRATION RESISTANCE	
GRAVELLY SAND		BLOWS / FT.	
		DRY DENSITY	
		LBS. / CU. FT.	
		MECHANICAL ANALYSIS	
		<.005 mm	
		<.074 mm	
		>.005 mm	
		.SAND	
		GRAVEL	
		PLASTICITY INDEX	
		PLASTIC LIMIT	
		LIQUID LIMIT	
		NATURAL MOISTURE CONTENT	
		LABORATORY NUMBER	
		SAMPLE TYPE	
		SAMPLE NUMBER (FIELD)	
		SAMPLE DEPTH (ft)	
		N.R.C. PERMAFROST CLASSIFICATION	
		6.1	
		7.5	
		9.1	
		45 AP 2947 2.1	
		46 AP 2948 2.5	
		NP 46.0 44.8 9.2	
		NP 41.4 47.6 11.0	
		GP-SM	
		SP-SM	



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: Shakwak Segment 8

HOLE LOCATION: Borrow Area 1

DATE DRILLED: MAR 10/79

DRILL TECHNICIAN: S.C.

PLOTTED BY: S.C.

HOLE ELEVATION: HOLE NO.: AP-08-3083

DEPTH (FT.)	SOIL DESCRIPTION	N.R.C. PERMAFROST CLASSIFICATION	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT %	CONSISTENCY LIMITS			MECHANICAL ANALYSIS				DRY DENSITY LBS/CU.FT.	STANDARD PENETRATION RESISTANCE BLOWS/FT.	UNIFIED CLASSIFICATION
			SAMPLE DEPTH (FT.)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER		LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GRAVEL %	SAND %	<.074 mm %	>.005 mm %			
10	GRAVELLY SAND																
11	SAND 10.6		10.6	47	AP	2949	3.5	NP	9.0	75.2	15.8						SM
12			12.1														
13																	
14			13.7	48	AP	2950	3.5	NP	14.5	70.7	14.8						SM
15	END Hole 15.2		15.2														



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAGWAK SEGMENT 8		HOLE LOCATION: Borrow Area 1		HOLE NO. AD-28-309-E															
DATE DRILLED: MAR 10/79		DRILL TECHNICIAN:		HOLE ELEVATION:															
HOLE DEPTH: 15.2		S.C.C.		S.C.C.															
TYPE OF DRILL: 4" BORE 6" AUGERS		SAMPLE IDENTIFICATION DATA		MECHANICAL ANALYSIS															
WATER LEVEL:		LABORATORY NUMBER		GRAVEL															
DEPTH (M)		SAMPLE TYPE		SAND															
SOIL DESCRIPTION		SAMPLE NUMBER (FIELD)		PLASTICITY INDEX															
		SAMPLE DEPTH (M)		PLASTIC LIMIT															
		N.C.C. PERMAFROST CLASSIFICATION		LIQUID LIMIT															
		NATURAL MOISTURE CONTENT		DRY DENSITY															
		UNIFIED CLASSIFICATION		STANDARD PENETRATION RESISTANCE															
		BLOWS / FT.		LBS. / CU. FT.															
0	Frost																		
1	SAND - GRAVEL		49 AP 2951			46.9	42.9	10.2											
2																			
3																			
4			50 AP 2952			55.2	38.0	6.8											
5																			

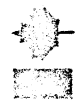


MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8		BORROW AREA 2		HOLE LOCATION:		HOLE ELEVATION:		HOLE NO: 80-08-310 G				
DATE DRILLED: MAR 12, 1979		DRILL TECHNICIAN: S.C.		PLOTTED BY: S.C.		CONSISTENCY LIMITS		MECHANICAL ANALYSIS				
DEPTH (M)	SOIL DESCRIPTION	SAMPLE IDENTIFICATION DATA		NATURAL MOISTURE CONTENT (%)	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	DRY DENSITY (LBS. CU.FT.)	STANDARD PENETRATION RESISTANCE (BLOWS FT.)	UNIFIED CLASSIFICATION
		SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)									
0	Frost 0-15 SANDY SILTY GRAVEL											
0.9		54	AP	2956	4.9	N.P.	9.8	66.4	23.8			GRGM
1.5												
2.4		55	AP	2957	3.2	TRACE	19.7	53.3	23.0	4.0		GM
3.0												
4.0		56	AP	2958	9.9	NP	18.2	34.0	38.7	9.1		SM
4.8												

3.0
SANDY GRAVELLY SILT
TRACE OF CLAY



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8		BORROW AREA 2		HOLE NO.: AD-08-310 G	
DATE DRILLED: MAR 12 1979		DRILL TECHNICIAN: S.C.		HOLE ELEVATION:	
HOLE DEPTH: 7.5		PLOTTED BY: S.C.		MECHANICAL ANALYSIS	
TYPE OF DRILL: 140 L 6" AUGERS		SAMPLE IDENTIFICATION DATA		<.005 mm % <.074 mm % >.005 mm %	
WATER LEVEL:		LABORATORY NUMBER		SAND %	
DEPTH (M.):		SAMPLE TYPE		GRAVEL %	
SOIL DESCRIPTION: Sandy Gravelly silt		SAMPLE NUMBER (FIELD): 57		PLASTICITY INDEX %	
		SAMPLE DEPTH (M.): 6.4		PLASTIC LIMIT %	
		7.5		LIQUID LIMIT %	
				NATURAL MOISTURE CONTENT %	
				CONSISTENCY LIMITS	
				UNIFIED CLASSIFICATION: SM	
				STANDARD PENETRATION RESISTANCE: BLOWS / FT.	
				DRY DENSITY: LBS / CU. FT.	

Ends here 7.5

5

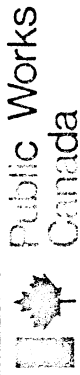
6

7

8

9

10



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8		BORROW AREA: 2		HOLE NO.: 10-08-311-A	
DATE DRILLED: MAR 12, 1979		DRILL TECHNICIAN: S.C.		HOLE ELEVATION:	
HOLE DEPTH: 7.5		PLOTTED BY: S.C.			
TYPE OF DRILL: 6" AUGERS		SAMPLE IDENTIFICATION DATA			
WATER LEVEL:		LABORATORY NUMBER			
DEPTH (M)		SAMPLE TYPE			
		SAMPLE NUMBER (FIELD)			
		SAMPLE DEPTH (M)			
		N.R.C. PERMAFROST CLASSIFICATION			
SOIL DESCRIPTION		CONSISTENCY LIMITS		MECHANICAL ANALYSIS	
0 Frost 0.45 Sandy Silty Gravel		LIQUID LIMIT %		SAND %	
		PLASTIC LIMIT %		GRAVEL %	
3.0 GRAVELLY SANDY SILT TRACE OF CLAY		PLASTICITY INDEX %		SILT > 0.075mm %	
		NATURAL MOISTURE CONTENT %		CLAY > 0.005mm %	
		DRY DENSITY LBS./CU. FT.		STANDARD PENETRATION RESISTANCE BLOWS/FT.	
		UNIFIED CLASSIFICATION			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: CHAKWAK SEGMENT 8		HOLE LOCATION: Borrow Area 2		HOLE NO.: 40-08-311-H	
DATE DRILLED: Mar 12, 1979		DRILL TECHNICIAN: S.C.		HOLE ELEVATION:	
HOLE DEPTH: 7.5		PLOTTED BY: S.C.		MECHANICAL ANALYSIS	
TYPE OF TOOL: 140L 6" AUGERS		SAMPLE IDENTIFICATION DATA		<.005 mm % <.074 mm % >.005 mm % SAND % GRAVEL %	
WATER LEVEL:		LABORATORY NUMBER		UNIFIED CLASSIFICATION	
DEPTH (M)		SAMPLE TYPE		STANDARD PENETRATION RESISTANCE	
SOIL DESCRIPTION		SAMPLE NUMBER (FIELD)		BLOWS / FT.	
6.7		61		LBS. / CU. FT.	
7.3		AP 2963		DRY DENSITY	
7.5		N.R.C. PERMAFROST CLASSIFICATION		<.005 mm % <.074 mm % >.005 mm % SAND % GRAVEL % PLASTICITY INDEX % PLASTIC LIMIT % LIQUID LIMIT % NATURAL MOISTURE CONTENT %	
Coarsely sandy silt Trace of clay		6.7		19.6	
End Hole		7.3		22.1	
				22.5	
				20.2	
				11.1	
				SM	



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: NARNAK SEGMENT 8		HOLE LOCATION: BORROW AREA 2		HOLE ELEVATION:		HOLE NO.: AD-08-312 E	
DATE DRILLED: MAR 12, 1979		DRILL TECHNICIAN: S.C.		PLOTTED BY: S.C.			
HOLE DEPTH: 7.5		TYPE OF DRILL: 3 1/2" 6" AUGERS		WATER LEVEL:			
DEPTH ()		SOIL DESCRIPTION					
0		Frost 0-1.5 CLAY Silt till					
1		1.5		Silt Clay Till		SM	
2							
3		2.4				SM	
4		3.0					
5							



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8		BORROW AREA 2		HOLE NO.: 40-08-312 E	
DATE DRILLED: MAR 12, 1979		DRILL TECHNICIAN: S.C.		HOLE ELEVATION:	
HOLE DEPTH: 7.5		TYPE OF DRILL: B40L 6" AUGERS		WATER LEVEL	
DEPTH (M)		SOIL DESCRIPTION		UNIFIED CLASSIFICATION	
5		Silt clay till		SM	
6					
7					
8					
9					
10					

SAMPLE DEPTH (M)	SAMPLE IDENTIFICATION DATA			NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS			MECHANICAL ANALYSIS				DRY DENSITY (LBS./CU. FT.)	STANDARD PENETRATION RESISTANCE (BLOWS/FT.)	UNIFIED CLASSIFICATION
	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER		LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	< 0.075 mm (%)	> 0.005 mm (%)			
5.4	64	AP	2966	11.6	22.7	19.0	3.7	23.1	40.1	24.0	12.8			SM
6.1														
7.0	65	AP	2967	13.7			DP	20.2	39.3	27.4	13.1			SM
7.5														

End Hole 7.5



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8		BOYROW AREA 2		HOLE LOCATION:		HOLE ELEVATION:		HOLE NO.: 80-08-313 J				
DATE DRILLED: MAR 17, 1979		DRILL TECHNICIAN: S.C.		PLOTTED BY: S.C.		CONSISTENCY LIMITS		MECHANICAL ANALYSIS				
HOLE DEPTH (M)	SOIL DESCRIPTION	SAMPLE IDENTIFICATION DATA		NATURAL MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GRAVEL %	SAND %	DRY DENSITY LBS. CU.FT.	STANDARD PENETRATION RESISTANCE BLOWS / FT.	UNIFIED CLASSIFICATION
		SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)									
0	Frost 0 - 1.5 m Clay silt till Some sand											
1		1.0	66	AP	2968	2.4	N.P.	34.4	53.3	12.3		SM
2		1.2										
3		2.4	67	AP	2969	2.9	TRACE	40.1	48.0	11.9		SW-SM
4	SAND, GRAVEL S.I.T TRACE CLAY	3.0										
5		4.8	68	AP	2970		LOST					



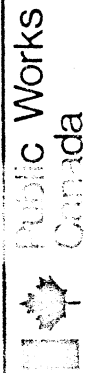
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8 HOLE LOCATION: BORROW AREA 2 HOLE ELEVATION: HOLE NO.: **AD-28-314 B**

DATE DRILLED: **MAR 12, 1979** DRILL TECHNICIAN: S.C. PLOTTED BY: S.C.

DEPTH (M)	SOIL DESCRIPTION	N.R.C. PERMAFROST CLASSIFICATION	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS			MECHANICAL ANALYSIS				DRY DENSITY (LBS/CU.FT.)	STANDARD PENETRATION RESISTANCE (BLOWS/FT.)	UNIFIED CLASSIFICATION
			SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER		LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	>.005mm (%)	>.074mm (%)			
0	Frost 0-.3 GRAVELLY SILT CLAY TRACE CLAY																
1			1.5	70	AP	2972	11.7	24.7	21.1	3.6	34.1	30.8	25.6	9.5			SM
3			3.0														
4			3.7	71	AD	2973	10.1			N.P.	56.0	21.5	16.3	6.2			GM
5			4.8	72	AD	2974	13.0			N.P.	27.0	36.5	24.5	12.0			SM



MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: DEERWAK SEGMENT 8 HOLE LOCATION: BORROW AREA 2 HOLE ELEVATION: HOLE NO.: AD-08 - 315 A

DATE DRILLED: March 12/79 DRILL TECHNICIAN: S.C. PLOTTED BY: S.C.

DEPTH (M)	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS			MECHANICAL ANALYSIS				DRY DENSITY (LBS. CU. FT.)	STANDARD PENETRATION RESISTANCE (BLOWS / FT.)	UNIFIED CLASSIFICATION	
	SAMPLE DEPTH (M)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER		LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	>.005mm (%)	<.074mm (%)				<.005mm (%)
0																
1	1.0	74	AP	2976	6.5			N.P.	49.7	34.5	11.1	4.7				GM
2	1.5															
3	2.4	75	AP	2977	6.2			TRACE	56.3	32.0	11.7					GW-GM
4	3.0															
5	4.2	77	AP	2979	10.7	24.5	20.0	4.6	18.5	14.4	23.0	14.1				SC-SM
	4.5															

SOIL DESCRIPTION: FROST 0-1.5 GRAVEL SAND S.I.T. GRAVELLY SANDY CLAY 3.0

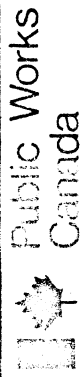


MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SUAKWAK SEGMENT 8
 HOLE LOCATION: Borrow Area 2
 DATE DRILLED: MARCH 17 1979
 DRILL TECHNICIAN: S.C.
 PLOTTED BY: S.C.
 HOLE ELEVATION:
 HOLE NO. 40-DB-315 A

DEPTH (FT.)	SOIL DESCRIPTION	N.R.C. PERMAFROST CLASSIFICATION	SAMPLE IDENTIFICATION DATA				NATURAL MOISTURE CONTENT (%)	CONSISTENCY LIMITS			MECHANICAL ANALYSIS				DRY DENSITY (LBS./CU. FT.)	STANDARD PENETRATION RESISTANCE (BLOWS/FT.)	UNIFIED CLASSIFICATION
			SAMPLE DEPTH (W)	SAMPLE NUMBER (FIELD)	SAMPLE TYPE	LABORATORY NUMBER		LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	< 0.075 mm (%)	< 0.005 mm (%)			
7.5	GRAVEL SAND CLAY		7.5	76	AO	2978	19.2	25.9	24.9	1.0	11.5	37.7	34.9	15.9		ML	
7.0	END HOLE		7.0														



Public Works
Cambridge

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHAKWAK SEGMENT 8		HOLE LOCATION: Borrow Area 2		HOLE ELEVATION:		HOLE NO.: AO-08-317-E								
DATE DRILLED: MARCH 12/79		DRILL TECHNICIAN: S.C.		PLOTTED BY: S.C.										
HOLE DEPTH	TYPE OF DRILL	SAMPLE IDENTIFICATION DATA		CONSISTENCY LIMITS		MECHANICAL ANALYSIS		UNIFIED CLASSIFICATION						
		DEPTH (M)	NUMBER (FIELD)	TYPE	LABORATORY NUMBER	LIQUID LIMIT (%)	PLASTIC LIMIT (%)		PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	< 0.075 mm (%)	< 0.005 mm (%)	DRY DENSITY (LBS./CU.FT.)
0														
1														
1.2		1.2	82	AD	2984									
1.5		1.5												
2.4		2.4												
3.0		3.0												
3														
4														
5														

Frost 0 - 2.1 m
Gravelly Sand silt

3.0
Gravel silt till
Trace sand

Trace clay



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHANAWAK SEGMENT 8		HOLE LOCATION: Borrow Area 2		HOLE NO. 80-02-317-E	
DATE DRILLED: MARCH 12/79		DRILL TECHNICIAN: S.C.		PLOTTED BY: S.C.	
HOLE DEPTH: 7.5		HOLE ELEVATION:		MECHANICAL ANALYSIS	
TYPE OF DRILL: 1340 L 6" AUGERS		N.R.C. PERMAFROST CLASSIFICATION:		<.005 mm % <.074 mm % >.005 mm % SAND % GRAVEL %	
WATER LEVEL:		CONSISTENCY LIMITS		PLASTICITY INDEX % PLASTIC LIMIT % LIQUID LIMIT %	
DEPTH (M)		NATURAL MOISTURE CONTENT %		PLASTIC INDEX % PLASTIC LIMIT % LIQUID LIMIT %	
SOIL DESCRIPTION		LABORATORY DATA		UNIFIED CLASSIFICATION STANDARD PENETRATION RESISTANCE BLOWS / FT.	
GRADUAL Silt Till TRACE SAND & CLAY		SAMPLE DEPTH (M) 5.4 6.1 7.0 7.5		DRY DENSITY LBS. / CU. FT.	
END OF HOLE 7.5		SAMPLE NUMBER (FIELD) 84 85		UNIFIED CLASSIFICATION GM GM	
		SAMPLE TYPE AP AP			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: KILAWAK SEGMENT 8		HOLE LOCATION: Borrow Area 2		HOLE NO.: 00-08-318 J	
DATE DRILLED: MAR 12/79		PLOTTED BY: S.C.		HOLE ELEVATION:	
DRILL TECHNICIAN: 8		S.C.		S.C.	
HOLE DEPTH: 7.5		SAMPLE IDENTIFICATION DATA		MECHANICAL ANALYSIS	
TYPE OF DRILL: 6" AUGERS		LABORATORY NUMBER		≤ 0.075 mm % ≤ 0.075 mm % ≤ 0.075 mm % SAND % GRAVEL %	
WATER LEVEL		SAMPLE TYPE		PLASTICITY INDEX %	
SOIL DESCRIPTION		SAMPLE NUMBER (FIELD)		PLASTIC LIMIT %	
Frost 0 - 1.5		86 AP		LIQUID LIMIT %	
GRAVEL SAND SILT		87 AP		NATURAL MOISTURE CONTENT %	
SAND CLAY Till		88 AP		UNIFIED CLASSIFICATION	
4.0		1.2		SM	
4.0		1.5		GW-GM	
4.0		3.0			
4.0		5.7			



Public Works
Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE TESTING REPORT

PROJECT: SHASKWAK SEGMENT 8		BORROW AREA 2		HOLE LOCATION:		HOLE ELEVATION:		HOLE NO.: 80-82-318-7								
DATE DRILLED: MAR 12/79		DRILL TECHNICIAN: S.C.		PLOTTED BY: S.C.		NATURAL MOISTURE CONTENT		UNIFIED CLASSIFICATION								
HOLE DEPTH	TYPE OF DRILL	WATER LEVEL	SAMPLE IDENTIFICATION DATA				CONSISTENCY LIMITS			MECHANICAL ANALYSIS			STANDARD PENETRATION RESISTANCE	UNIFIED CLASSIFICATION		
			DEPTH (M)	FIELD NO.	SAMPLE TYPE	LABORATORY NUMBER	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)	<.005mm (%)			<.075mm (%)	>.005mm (%)
5	SAND CLAY TILL		5.4	88	AP	2990	14.4	24.9	21.2	3.7	19.6	39.8	26.9	13.7		SM
6	SAND CLAY TILL		6.1													
7			7.0	89	AP	2991	12.3	23.4	20.3	3.1	15.3	46.7	26.5	11.5		SM
8			7.5													
9																
10																