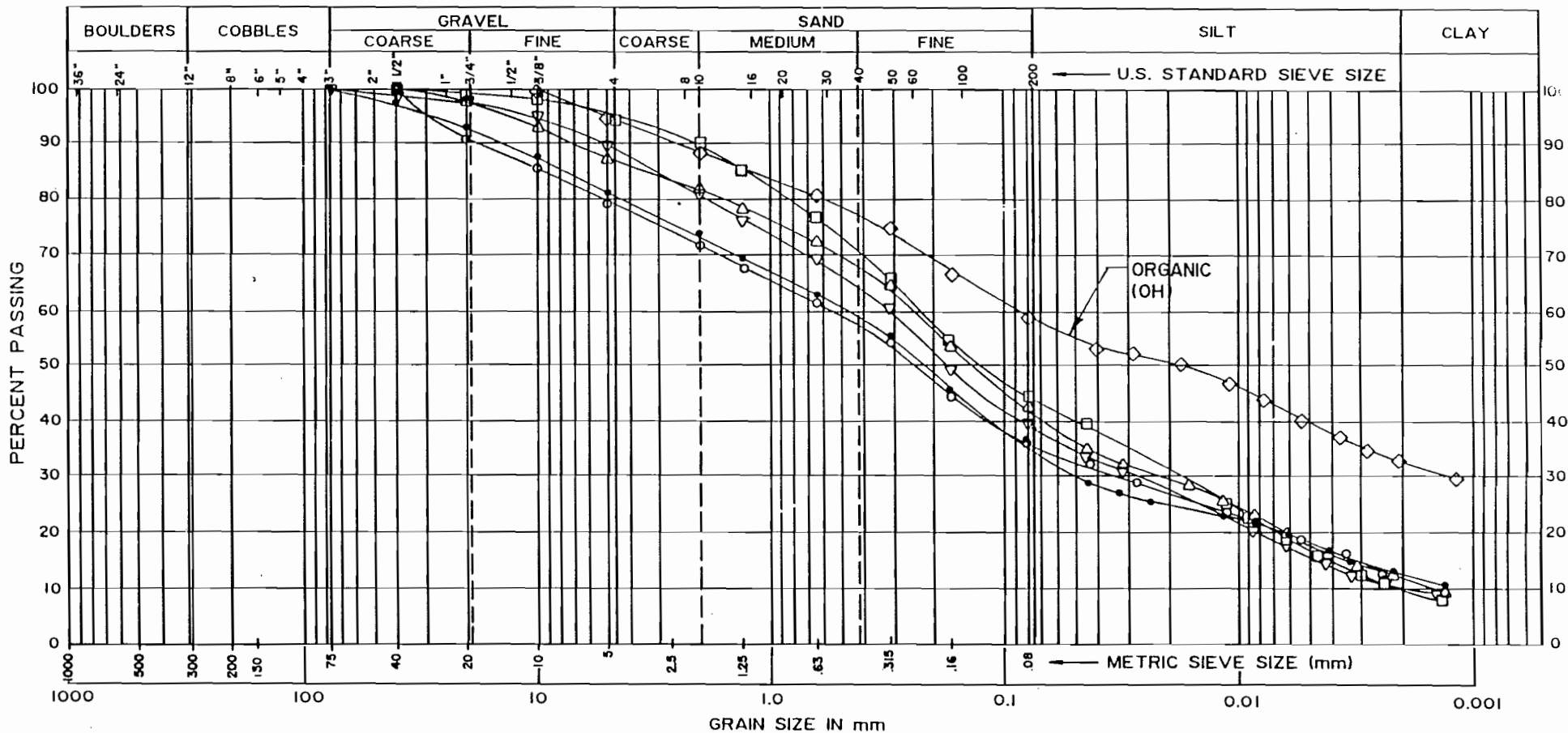


Attachment B Grain Size Distribution Curves

UNIFIED SOIL CLASSIFICATION SYSTEM



REMARKS: SILTY SAND TILL

Hole No.:
Sample No.:
Depth (m):
Dwn.:
Revw'd.:
Date:

SYMBOL	BH No.	Sa. No.	DEPTH (m)	I _p	UNIFIED CLASS.
•	BH88-IP5	AS2	0.45-0.85	5	SM-SC
◦	BH88-IP5	CRREL	0.85-1.20	4	SM-SC
Δ	BH88-IP6	AS1	0.0-1.20	NOT TESTED	
◻	BH88-IP7	AS4	0.76-1.06	3	SM
▽	BH88-IP8	AS5	0.10-1.50	NP	SM
◊	BH88-IP9	AS4	0.76-0.92	23	OH

Unified Soil Classification:

URANGESELLSCHAFT CANADA LIMITED
KIGGAVIK PROJECT

GRAIN SIZE DISTRIBUTION

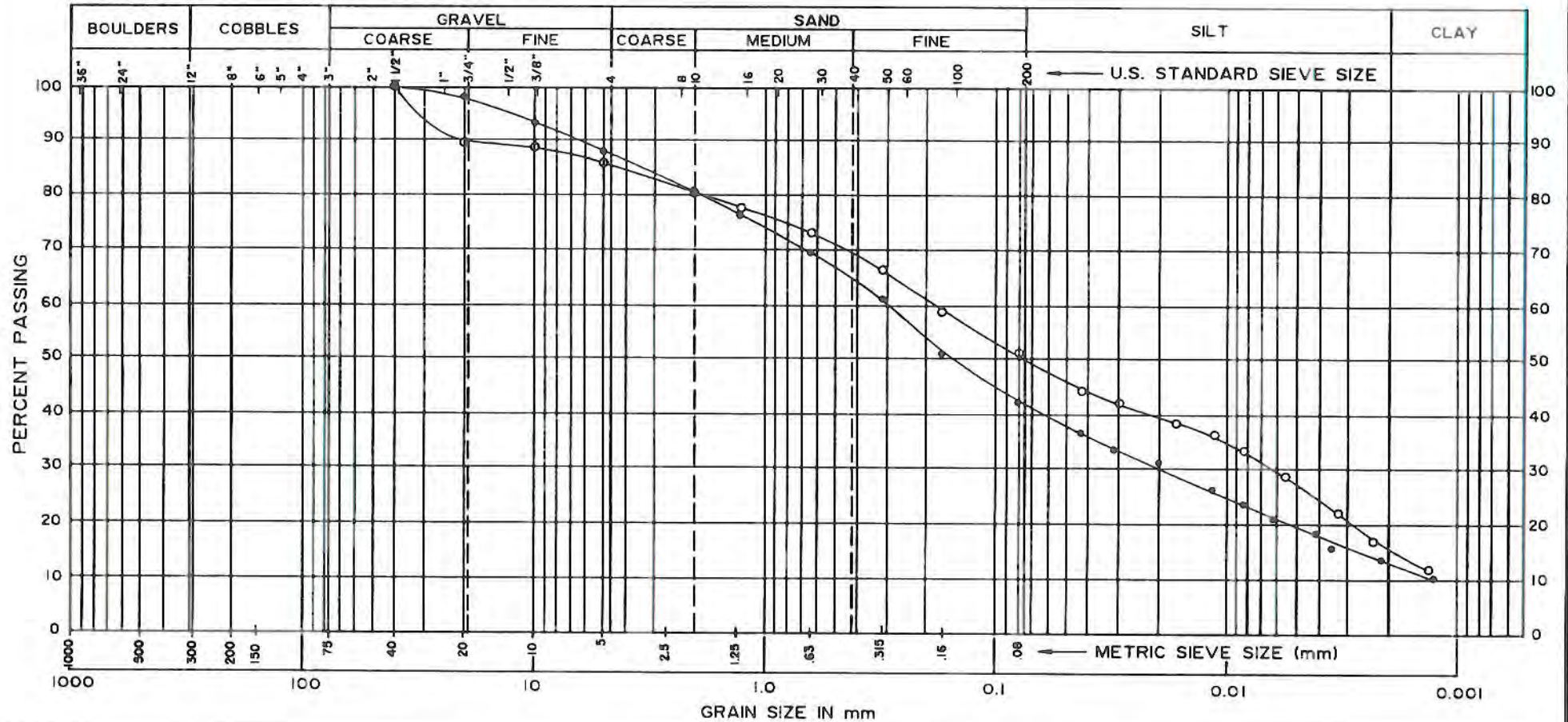
PLANTSITE No. 1

Golder Associates

Project No. 881-1814D

Figure B - 2

UNIFIED SOIL CLASSIFICATION SYSTEM



REMARKS: SILTY SAND TILL

Hole No.:

Sample No.:

Depth (m):

Dwn.:

Revw'd.:

Date:

SYMBOL BH No. Sa. No. DEPTH (m) I_p UNIFIED CLASS.

• BH88-2P2 ASI 0.52-0.90 4 SM-SC
○ BH88-2P4 CRREL 1.70-1.85 3 SM

Unified Soil Classification:

URANGESELLSCHAFT CANADA LIMITED
KIGGAVIK PROJECT

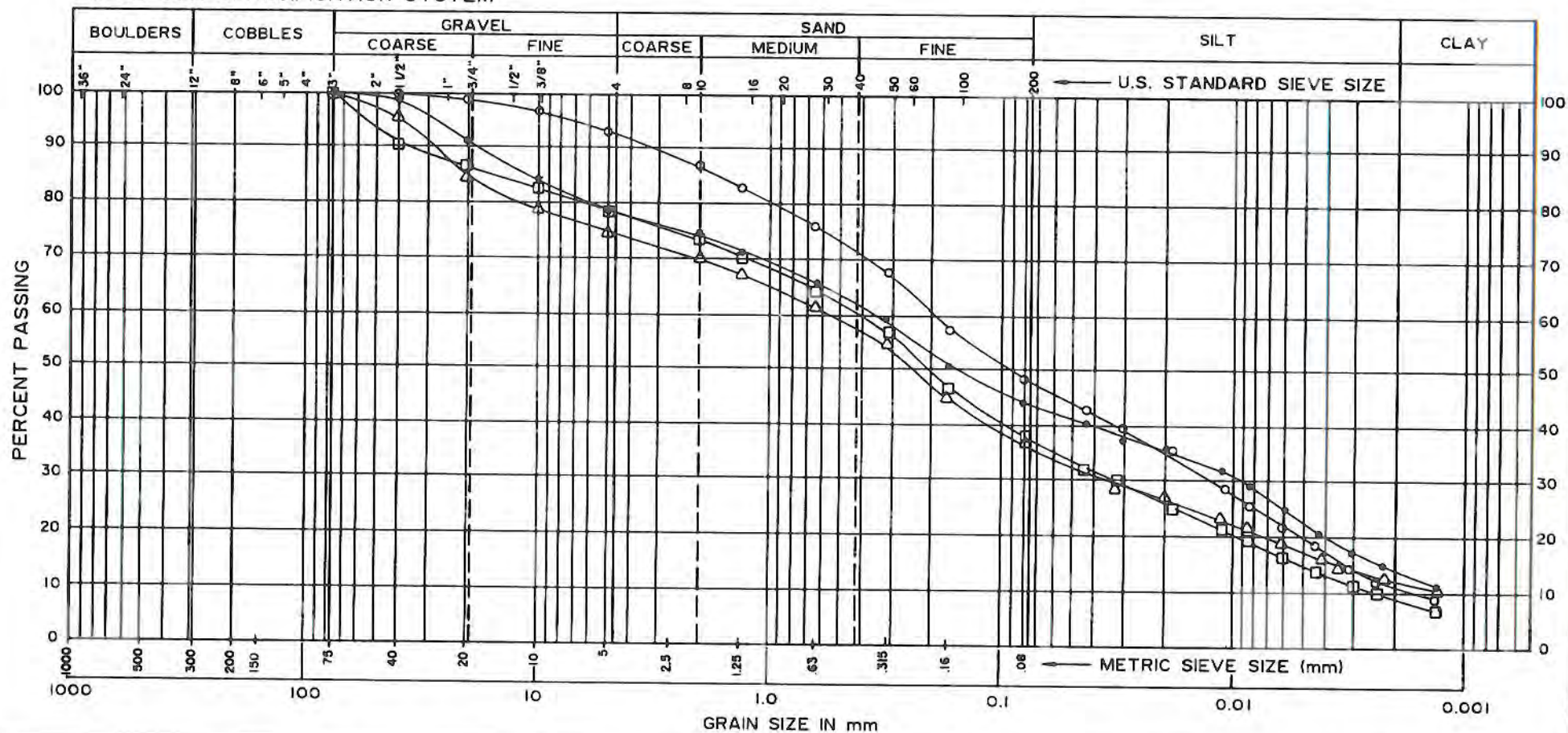
GRAIN SIZE DISTRIBUTION
PLANTSITE No. 2

Golder Associates

Project No. 881-1814D

Figure 5-1

UNIFIED SOIL CLASSIFICATION SYSTEM



REMARKS: SILTY SAND TILL

Hole No.:
Sample No.:
Depth (m):
Dwn.:
Revw'd.:
Date:

SYMBOL	BH No.	Sa. No.	DEPTH (m)	I_p	UNIFIED CLASS.
•	BH88-IT4	AS3	1.25-2.30	3	SM
◊	BH88-IT5	AS5	1.30-1.40	4	SM-SC
△	BH88-IT7	AS2	0.52-0.85	NOT TESTED	
□	BH88-IT7	AS4	1.25-2.30	3	SM

Unified Soil Classification:

URANGESELLSCHAFT CANADA LIMITED
KIGGAVIK PROJECT

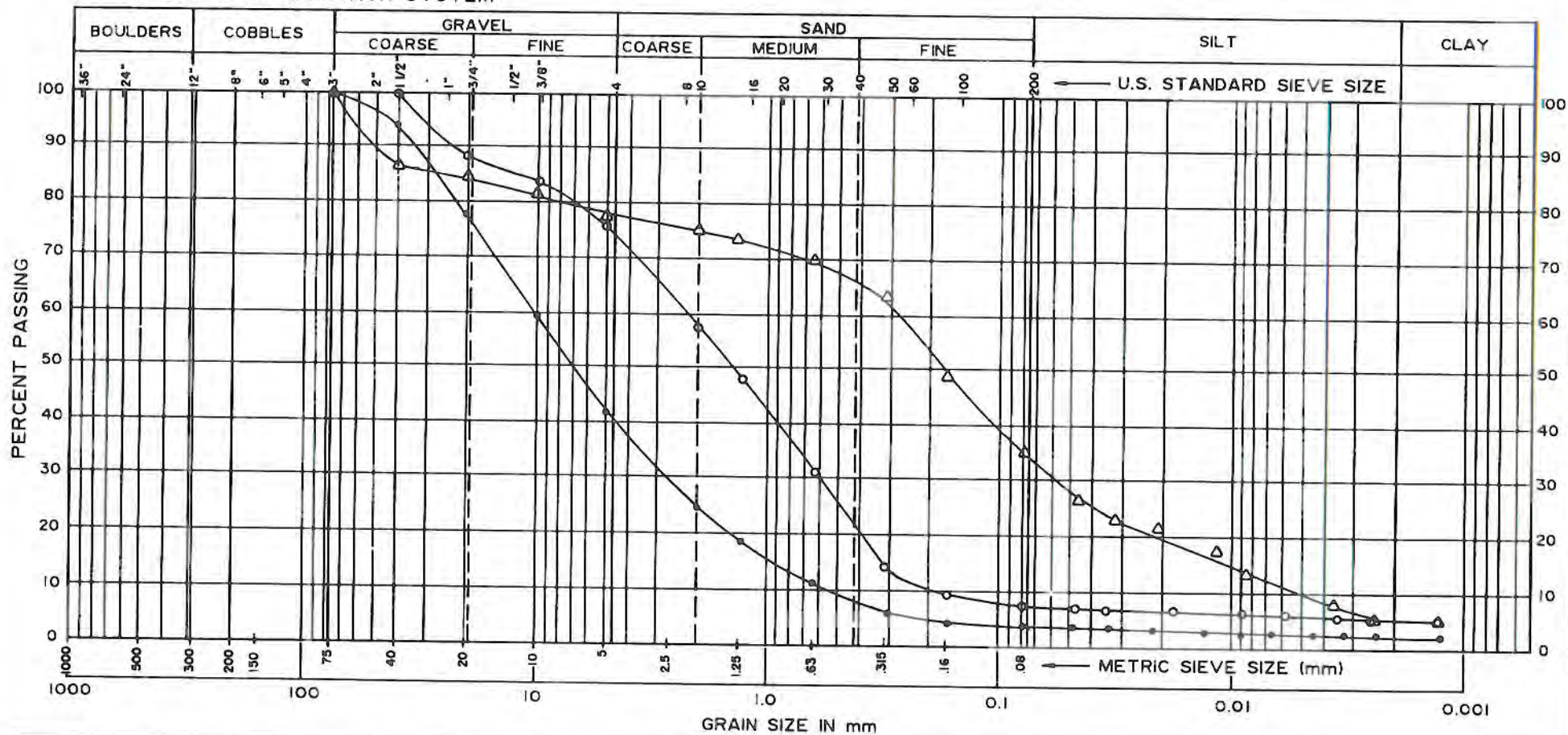
GRAIN SIZE DISTRIBUTION
TAILINGS DAM
RIDGE LAKE

Golder Associates

Project No. 881-1814D

Figure 6-1

UNIFIED SOIL CLASSIFICATION SYSTEM



REMARKS:

Hole No.:
Sample No.:
Depth (m):
Dwn.:
Revw'd.:
Date:

SYMBOL	BH No.	Sa. No.	DEPTH (m)	I _p	UNIFIED CLASS.
PUMPHOUSE SITE No. 1					
•	BH88-1PHI	AS2	0.50-1.20	NP	GW
◦	BH88-1PHI	CRREL	4.85-5.00	NP	SP-SM
PUMPHOUSE SITE No. 2					
Δ	BH88-2PHI	CRREL	0.80-1.20	NP	SM

Unified Soil Classification:

URANGESELLSCHAFT CANADA LIMITED
KIGGAVIK PROJECT

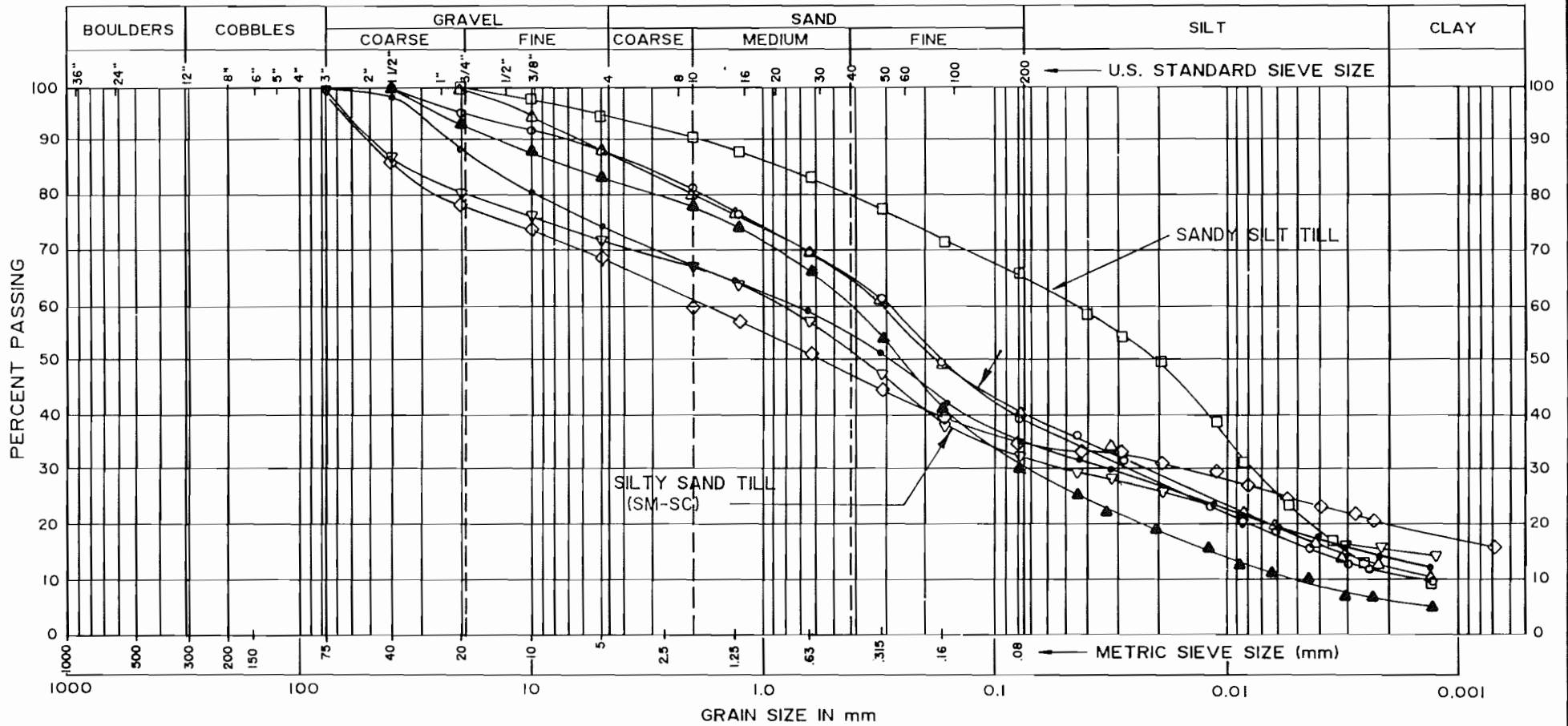
GRAIN SIZE DISTRIBUTION
PUMPHOUSE SITES

Golder Associates

Project No. 881-1814D

Figure 8-1

UNIFIED SOIL CLASSIFICATION SYSTEM



REMARKS: SILTY SAND TILL

Hole No.:	SYMBOL	BH No.	Sa. No.	DEPTH (m)	I _p	UNIFIED CLASS.
Sample No.:	•	BH88-4A1	AS2 & 3	0.58-1.10	5	SM-SC
Depth (m):	○	BH88-4A1	AS4	1.49-1.90	NOT TESTED	SM-SC
Dwn.:	△	BH88-4A3	AS1	0.0-0.60	6	SM-SC
Revw'd.:	□	BH88-4A3	CRREL	1.92-2.35	NOT TESTED	SM-SC
Date:	▽	BH88-4A5	AS2	0.55-0.83	↓	SM
	◇	BH88-4A5	CRREL	0.83-1.20	↓	SM
	▲	BH88-4A6	AS1	0.0-0.50	NON-PLASTIC	SM
Unified Soil Classification:						

URANGESELLSCHAFT CANADA LIMITED
KIGGAVIK PROJECT

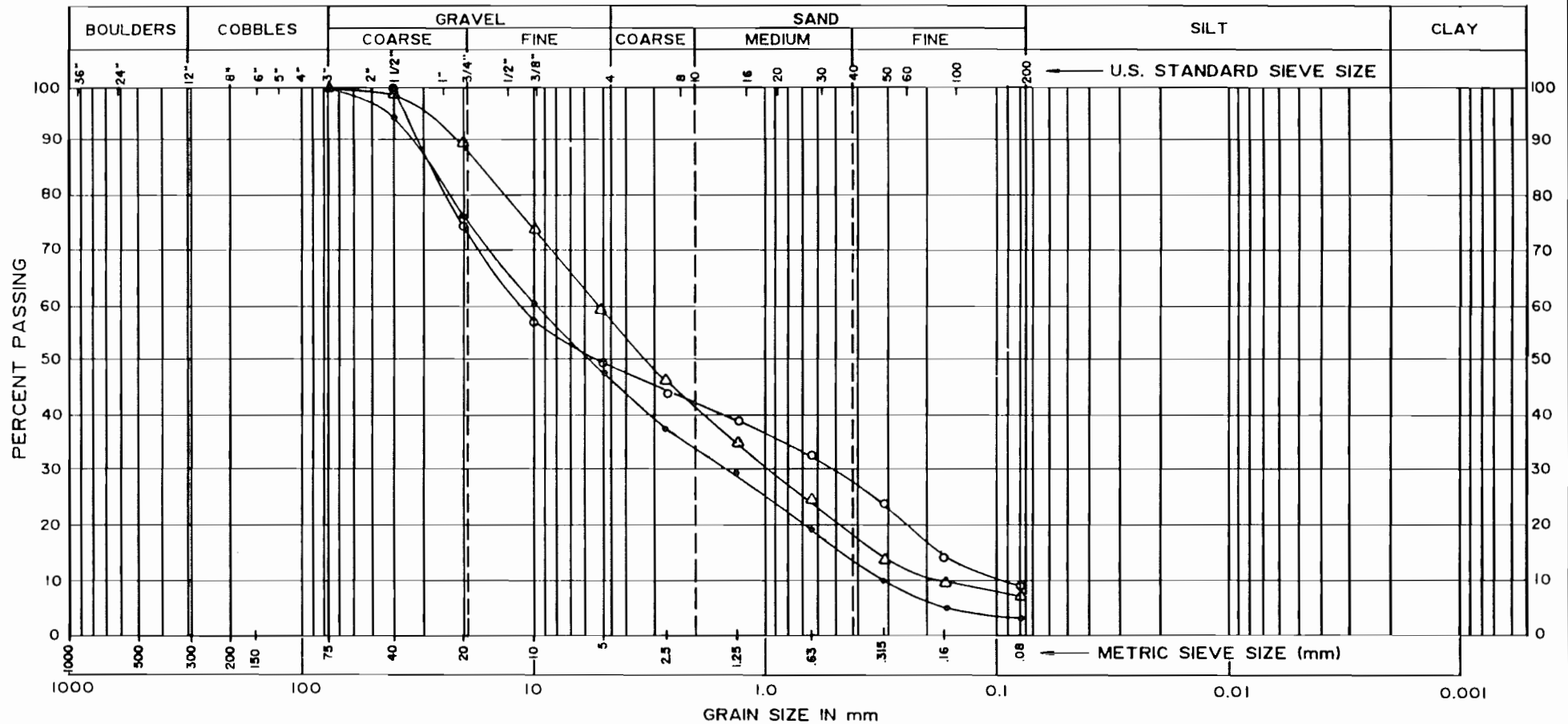
GRAIN SIZE DISTRIBUTION
POINTER LAKE AIRSTRIP

Golder Associates

Project No. 881-1814H

Figure 3

UNIFIED SOIL CLASSIFICATION SYSTEM



REMARKS: SAND AND GRAVEL

Hole No.:	
Sample No.:	
Depth (m):	
Dwn.:	CG
Rev'd.:	<i>Bloom</i>
Date:	OCT 89

SYMBOL	BH No.	Sa. No.	DEPTH (m)	I _p	UNIFIED CLASS.
•	BH88-IAI	ASI	0.0-1.22	NP	GP
○	BH88-IAI0	ASI	1.20-2.60	NP	GP-GM
△	BH88-IAI4	ASI	0.0-1.40	NP	GP-GM

Unified Soil Classification:

URANGESELLSCHAFT CANADA LIMITED
KIGGAVIK PROJECT

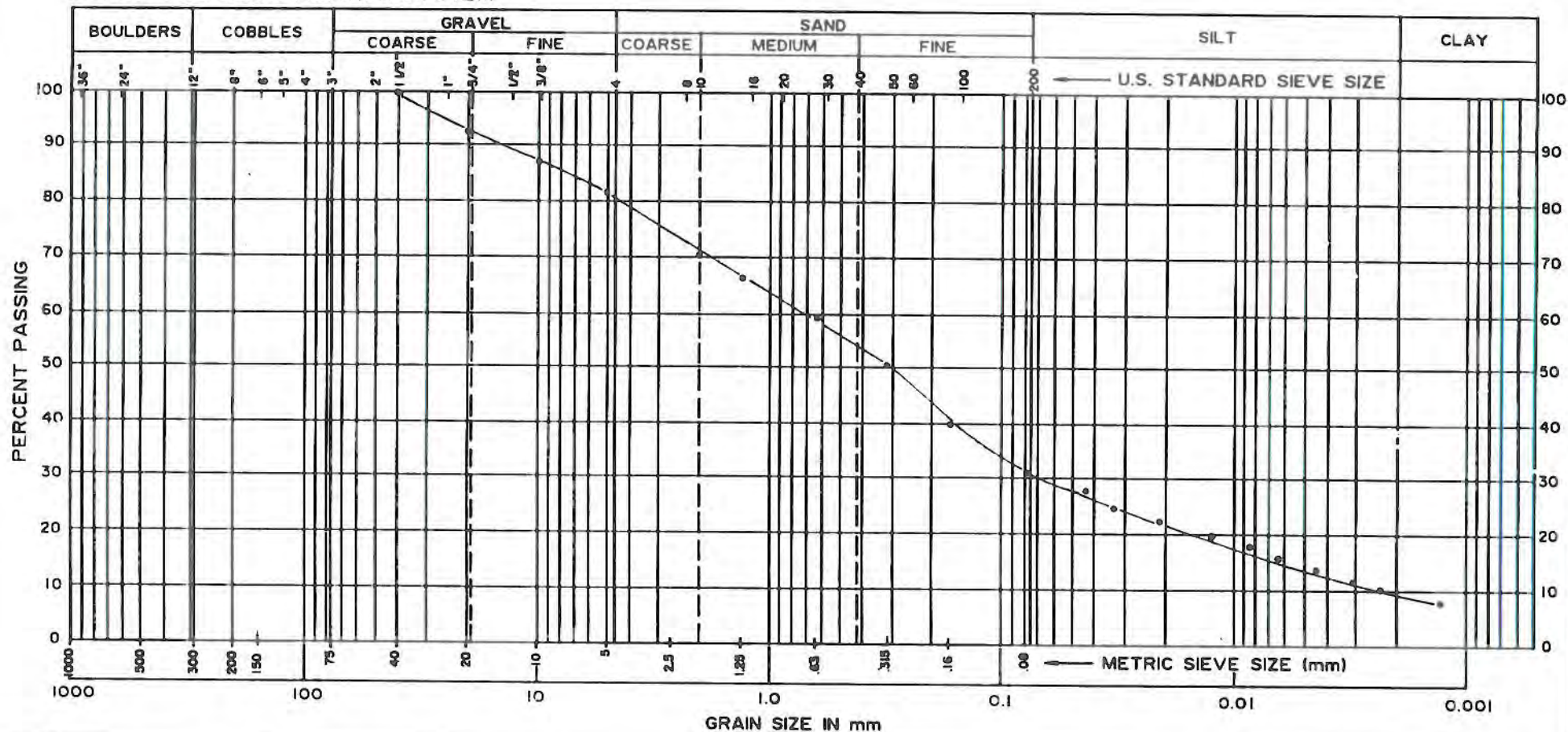
GRAIN SIZE DISTRIBUTION
SKINNY LAKE AIRSTRIP

Golder Associates

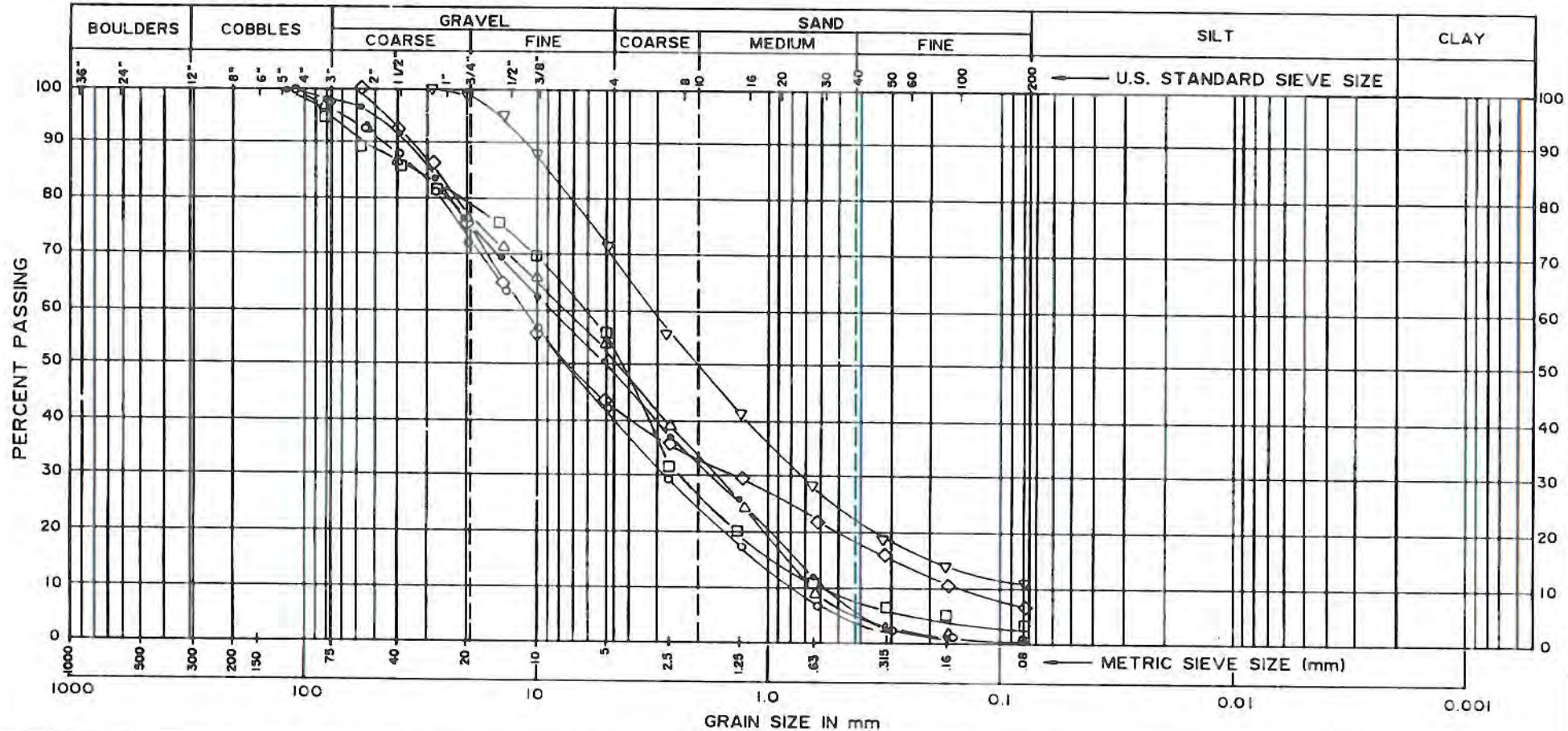
Project No. 881-1814D

Figure III-2

UNIFIED SOIL CLASSIFICATION SYSTEM



UNIFIED SOIL CLASSIFICATION SYSTEM



REMARKS: SAND AND GRAVEL

Hole No.:
Sample No.:
Depth (m):
Dwn.:
Revw'd.:
Date:

SYMBOL	BH/TP No.	DEPTH (m)	Cu	Cc	UNIFIED CLASS.
•	TP88-IB1	0.00-0.80	16	0.2	GP/SP
◊	TP88-IB2	0.00-1.10	15	0.8	GP
△	TP88-IB3	0.00-1.20	10	0.6	SP
□	BH88-IB2	0.00-1.98	10	2	SW
▽	BH88-IB4	1.50-2.50	-	-	SP-SM
◇	BH88-IB9	0.05-0.60	75	0.9	GP

Unified Soil Classification:

URANGESELLSCHAFT CANADA LIMITED
KIGGAVIK PROJECT

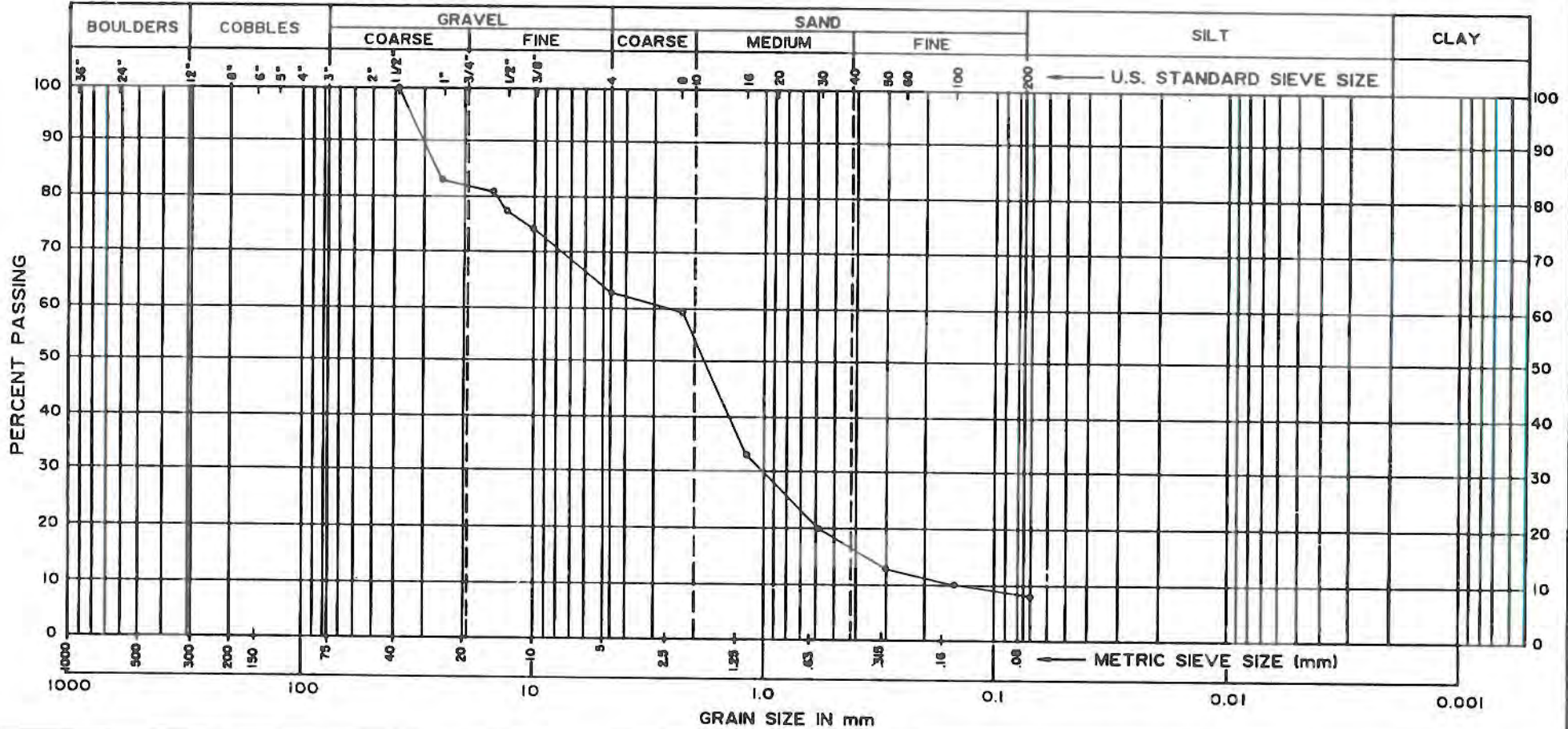
GRAIN SIZE DISTRIBUTION
SKINNY LAKE BORROW

Golder Associates

Project No. 881-1814D

Figure 14-1

UNIFIED SOIL CLASSIFICATION SYSTEM



REMARKS: GRAVELLY SAND, trace silt and clay, non-plastic

Hole No.: BH88-1B2

Sample No.: BULK SA.

Depth (m): 0.00-1.78

Dwn.:

Rev'd.:

Date:

PETROGRAPHIC ANALYSIS ON THIS SAMPLE IN ACCORDANCE
WITH ONTARIO MINISTRY OF TRANSPORT & COMMUNICATION
TEST No. MTCLS-609

Cu = 16

Cc = 3.2

Unified Soil Classification: SP-SM

URANGESELLSCHAFT CANADA LIMITED
KIGGAVIK PROJECT

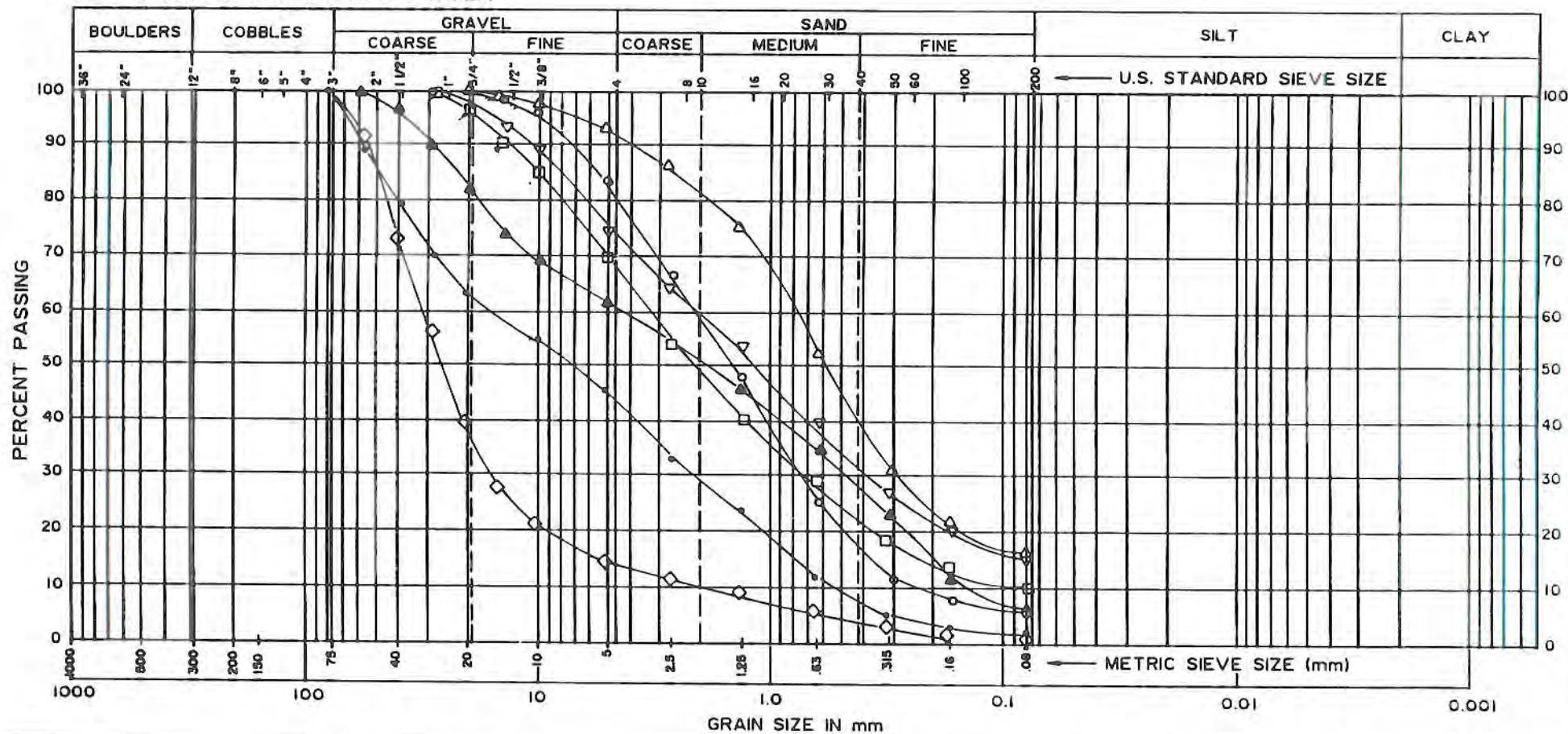
GRAIN SIZE DISTRIBUTION
SKINNY LAKE BORROW
PETROGRAPHIC ANALYSIS SAMPLE

Golder Associates

Project No. 881-1814D

Figure 14-2

UNIFIED SOIL CLASSIFICATION SYSTEM



REMARKS:

Hole No.:
Sample No.:
Depth (m):
Dwn.:
Rev'd.:
Date:

	SYMBOL	BH/TP No.	DEPTH (m)	Cu	Cc	UNIFIED CLASS.
BORROW PROSPECT No. 8	•	BH88-8B1	0.00-1.10	1.5	0.6	GP
	◦	BH88-8B1	1.10-2.40	7.7	1.2	SW
	△	BH88-8B1	3.00-4.20	-	-	SM
	◻	BH88-8B2	1.50-2.40	43	1.8	SW-SM
	▽	BH88-8B2	3.00-3.80	-	-	SM
BORROW PROSPECT No. 9	◊	BH88-9B1	0.00-0.40	19	5	GP
	▲	BH88-9B1	2.00-2.45	31	0.4	SP-SM

Unified Soil Classification:

URANGESELLSCHAFT CANADA LIMITED
KIGGAVIK PROJECT

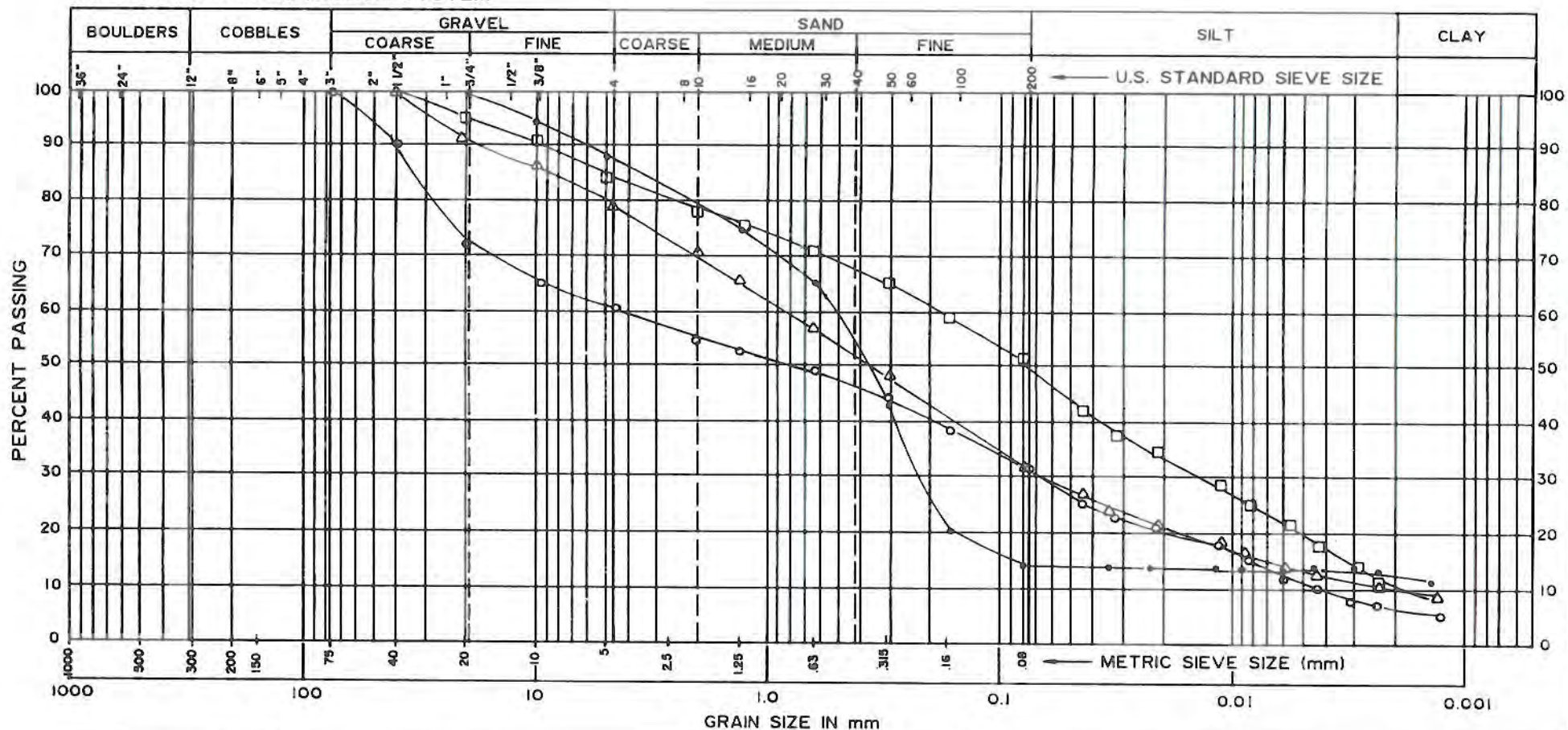
GRAIN SIZE DISTRIBUTION
SQUIGGLY LAKE (EAST) BORROW

Golder Associates

Project No. 881-1814D

Figure 14-3

UNIFIED SOIL CLASSIFICATION SYSTEM



REMARKS: GLACIAL TILL

Hole No.:

Sample No.:

Depth (m):

Dwn.:

Revw'd.:

Date:

SYMBOL	BH No.	Sa. No.	DEPTH (m)	I _p	UNIFIED CLASS.
•	BH88-MZ1	AS3	0.70-1.25	NP	SM
◊	BH88-MZ1	AS4	1.49-1.60	NP	GM
△	BH88-MZ1	AS5	1.67-2.30	NP	SM
□	BH88-MZ2	AS2	0.42-0.92	NP	ML

Unified Soil Classification:

URANGESELLSCHAFT CANADA LIMITED
KIGGAVIK PROJECT

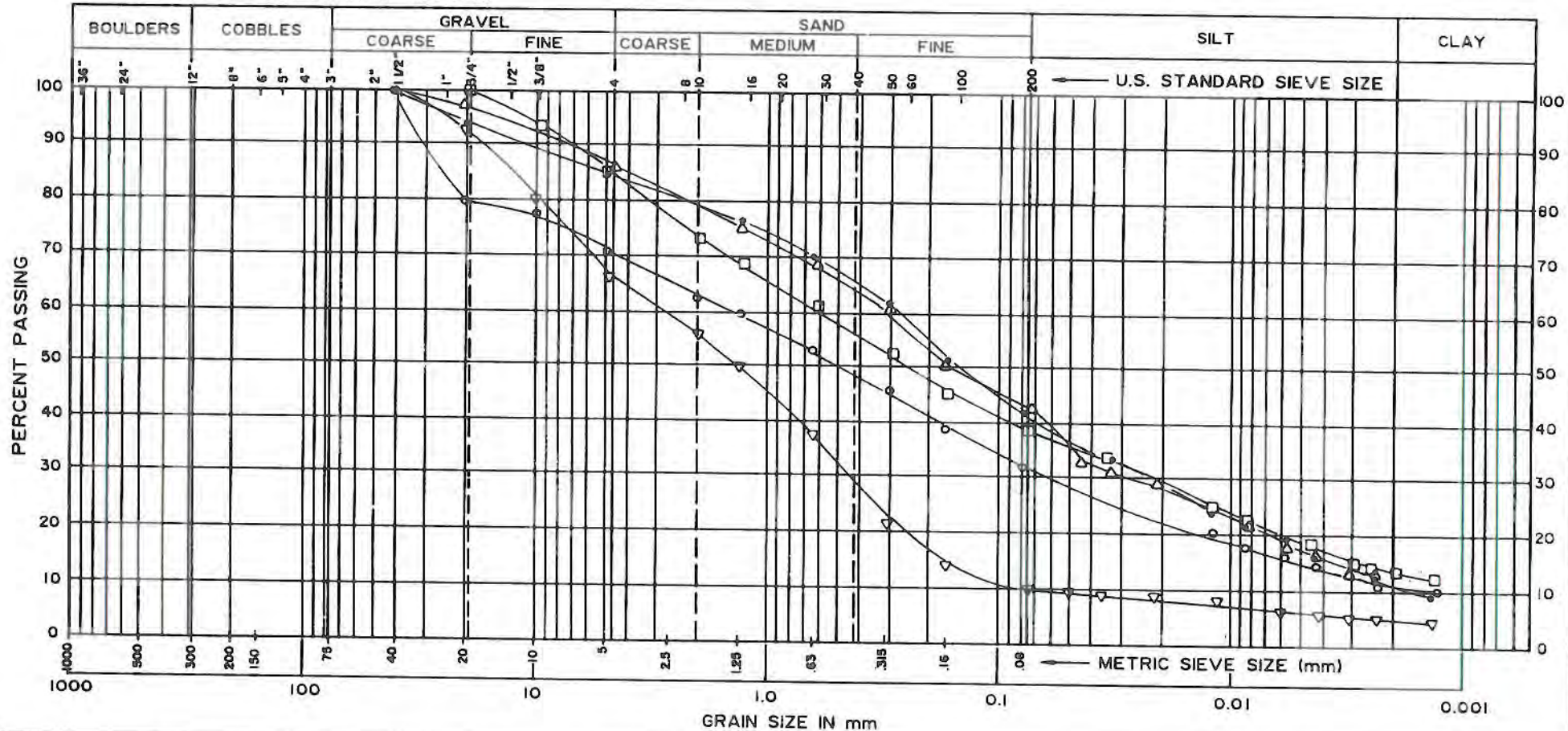
GRAIN SIZE DISTRIBUTION
MINE OVERBURDEN
MAIN ZONE

Golder Associates

Project No. 881-1814C

Figure 16-1

UNIFIED SOIL CLASSIFICATION SYSTEM



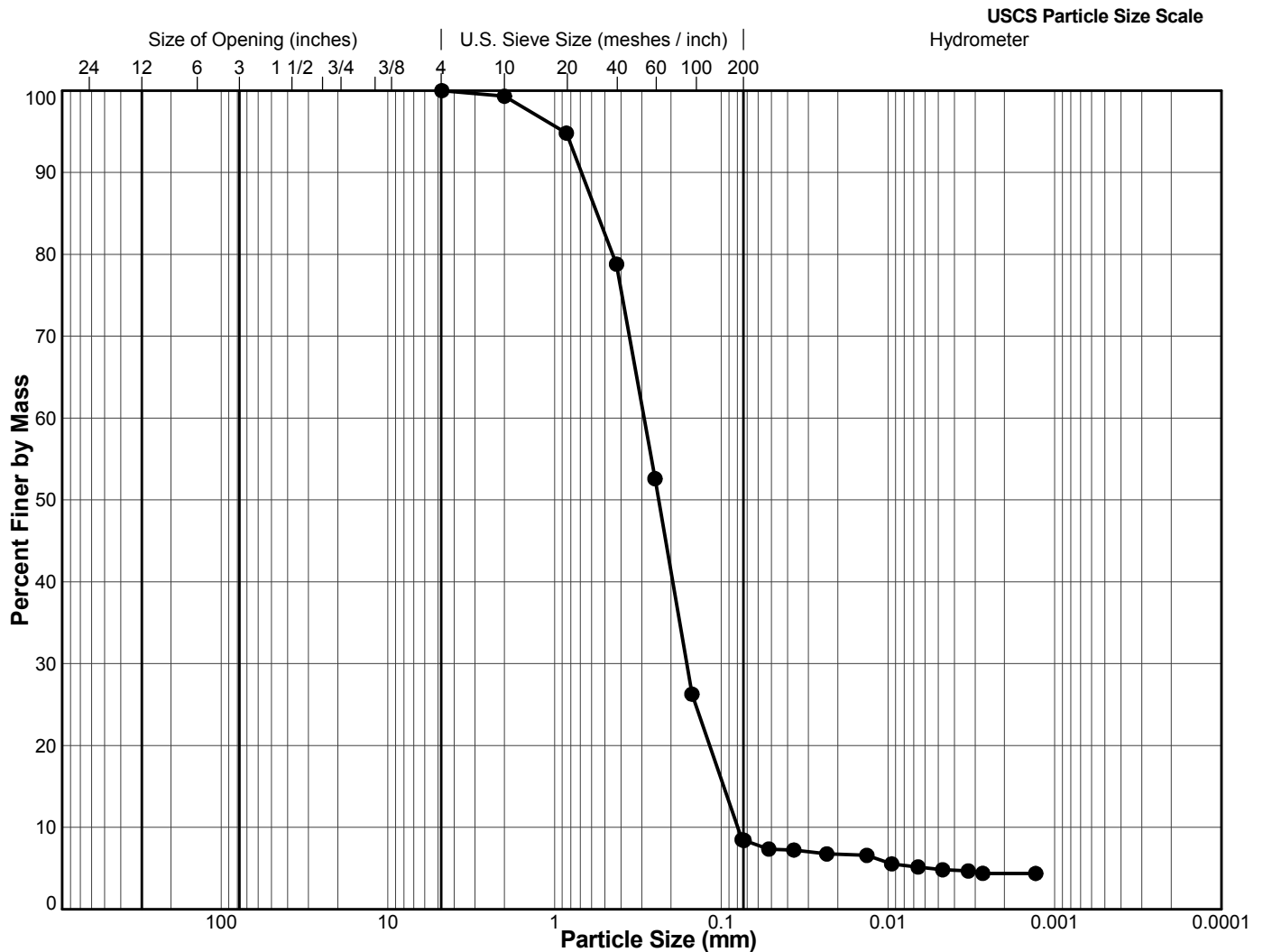
PARTICLE SIZE ANALYSIS OF SOILS

Reference(s)
ASTM D 422-63 (2007)

Client: Areva	Sample Location: SD
Project: Kiggavik	Sample No.: 01
Location: Nunavut	Depth Interval (m): 0.00 to 0.00
Project No.: 10-1345-0026	Lab Schedule No.: 217

Other Remarks: N/A

Specific Gravity (assumed): 2.65	Shape: N/A
Max. Particle Size Passing (mm): 4.75	Hardness: N/A
Method: Split, Washed	Dispersion Method: Air-Jet Cup
Hydrometer ID: BURNABY - 87024	Dispersion Period (min): 5



BOULDER	COBBLE	GRAVEL		SAND			FINES (Silt, Clay)
		Coarse	Fine	Coarse	Medium	Fine	

EB/KG	20/10/2010	LP	20/10/2010
Tech	Date	Checked	Date

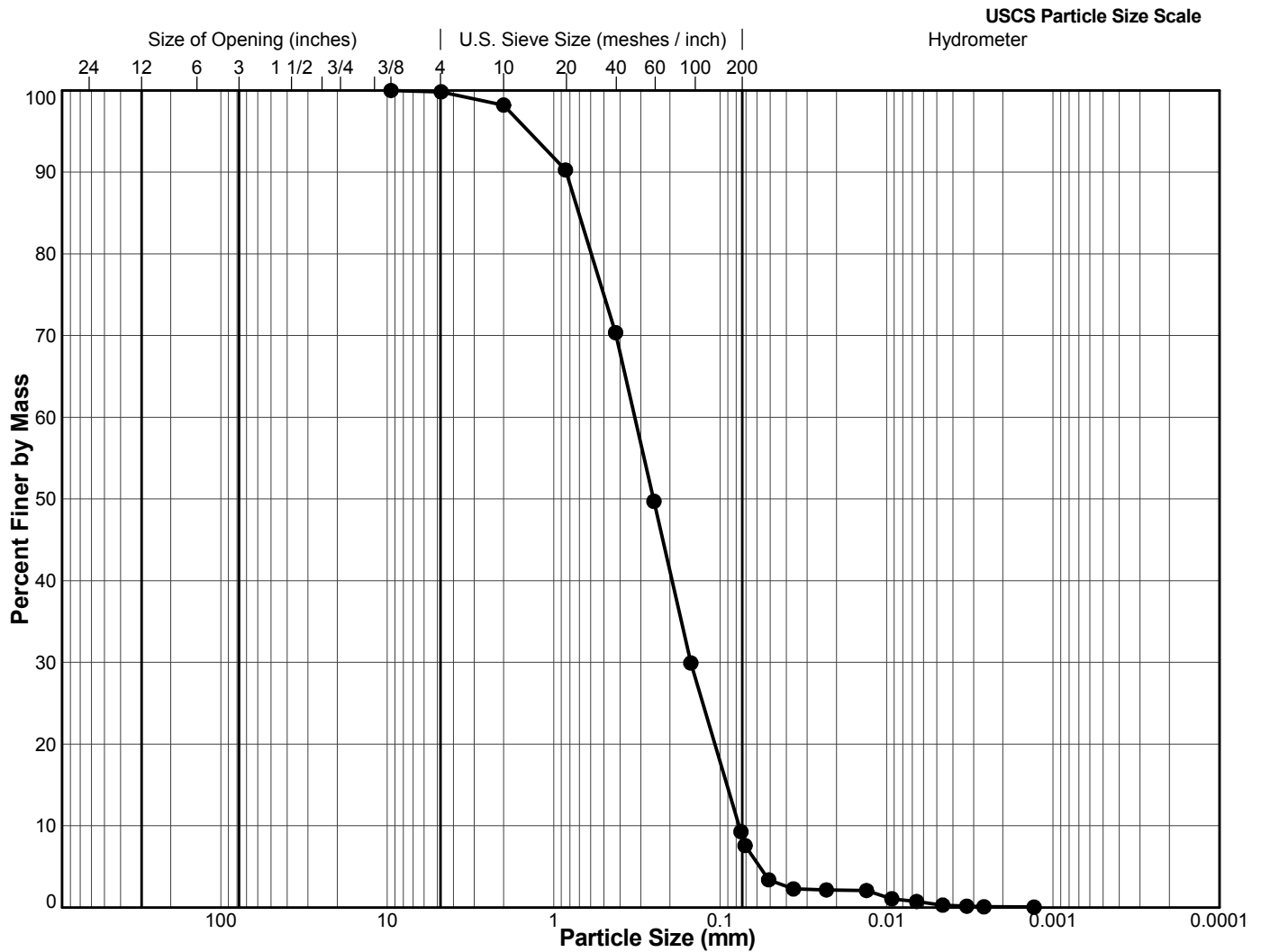
PARTICLE SIZE ANALYSIS OF SOILS

Reference(s)
ASTM D 422-63 (2007)

Client: Areva	Sample Location: SD
Project: Kiggavik	Sample No.: 02
Location: Nunavut	Depth Interval (m): 0.00 to 0.00
Project No.: 10-1345-0026	Lab Schedule No.: 217

Other Remarks: N/A

Specific Gravity (assumed): 2.65	Shape: N/A
Max. Particle Size Passing (mm): 9.5	Hardness: N/A
Method: Split, Washed	Dispersion Method: Air-Jet Cup
Hydrometer ID: BURNABY - 541360	Dispersion Period (min): 5



BOULDER	COBBLE	GRAVEL		SAND			FINES (Silt, Clay)
		Coarse	Fine	Coarse	Medium	Fine	

EB/KG	20/10/2010	LP	20/10/2010
Tech	Date	Checked	Date

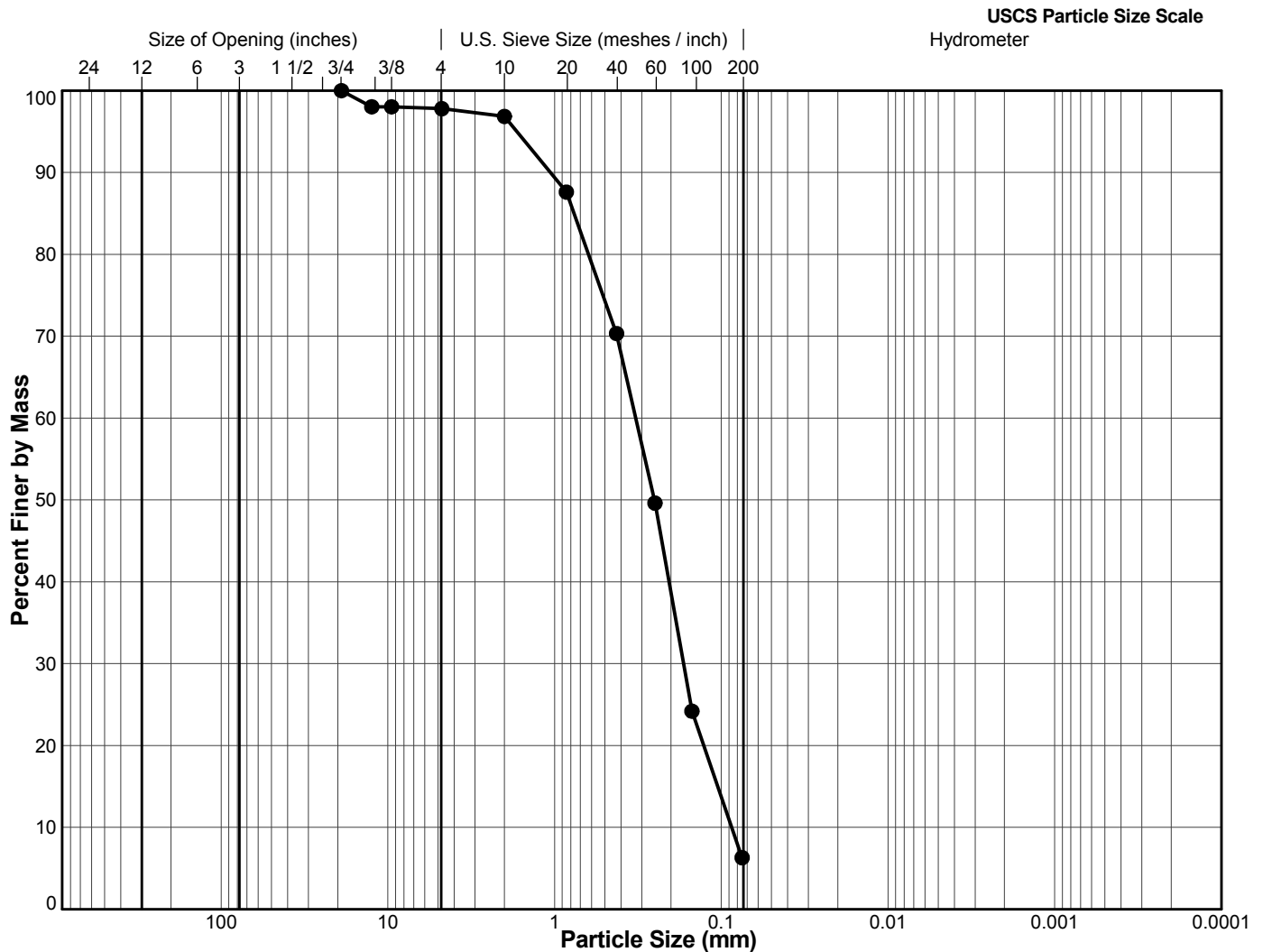
PARTICLE SIZE ANALYSIS OF SOILS

Reference(s)
ASTM D 422-63 (2007)

Client: Areva	Sample Location: SD
Project: Kiggavik	Sample No.: 03
Location: Nunavut	Depth Interval (m): 0.00 to 0.00
Project No.: 10-1345-0026	Lab Schedule No.: 217

Other Remarks: N/A

Specific Gravity (assumed): 2.65	Shape: N/A
Max. Particle Size Passing (mm): 19	Hardness: N/A
Method: Combined, Washed	



BOULDER	COBBLE	GRAVEL		SAND			FINES (Silt, Clay)
		Coarse	Fine	Coarse	Medium	Fine	

EB/KG	20/10/2010	LP	20/10/2010
Tech	Date	Checked	Date

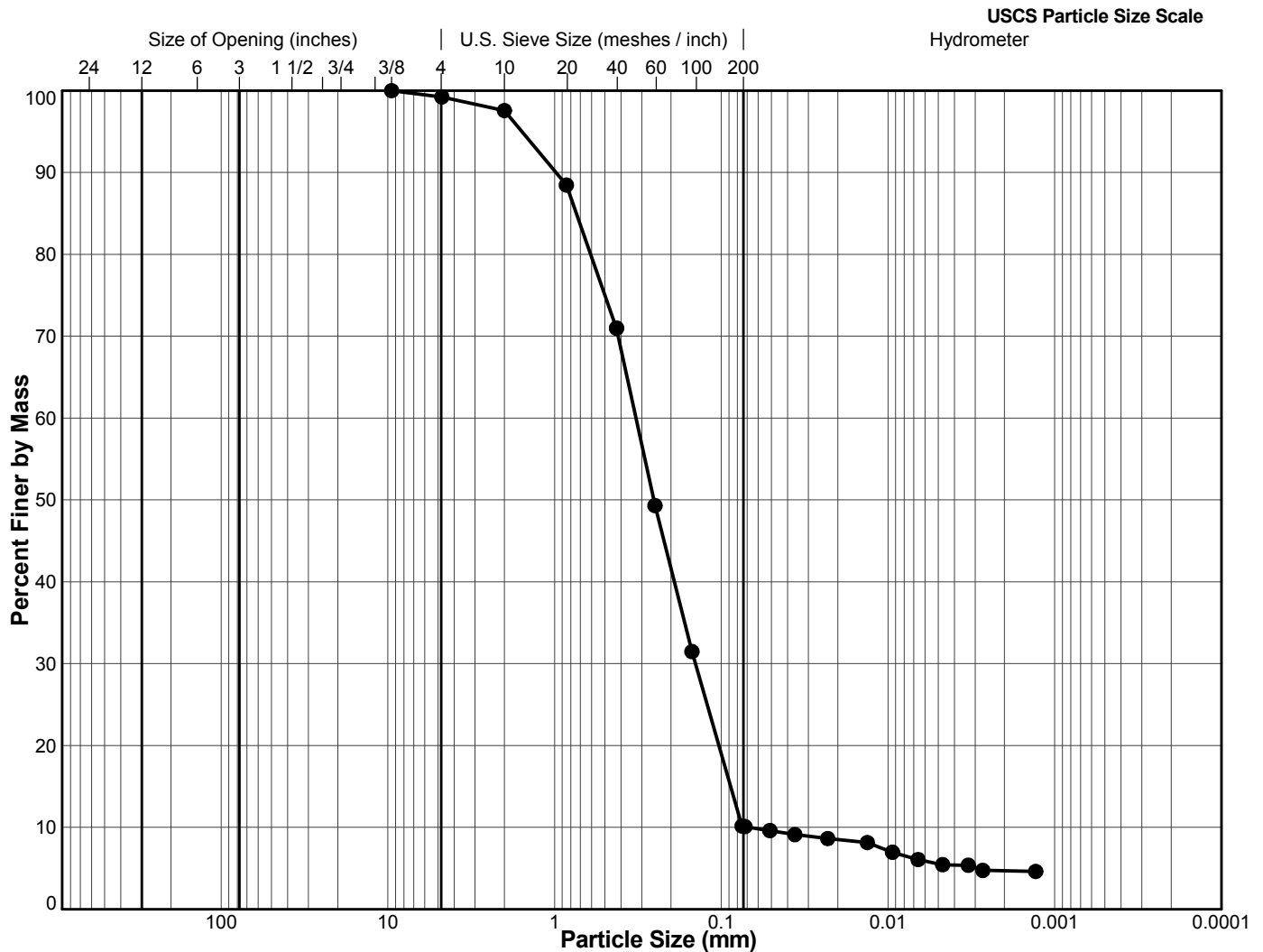
PARTICLE SIZE ANALYSIS OF SOILS

Reference(s)
ASTM D 422-63 (2007)

Client: Areva	Sample Location: SD
Project: Kiggavik	Sample No.: 04
Location: Nunavut	Depth Interval (m): 0.00 to 0.00
Project No.: 10-1345-0026	Lab Schedule No.: 217

Other Remarks: N/A

Specific Gravity (assumed): 2.65	Shape: N/A
Max. Particle Size Passing (mm): 9.5	Hardness: N/A
Method: Split, Washed	Dispersion Method: Air-Jet Cup
Hydrometer ID: BURNABY - 87024	Dispersion Period (min): 5



BOULDER	COBBLE	GRAVEL		SAND			FINES (Silt, Clay)
		Coarse	Fine	Coarse	Medium	Fine	

EB/KG	20/10/2010	LP	20/10/2010
Tech	Date	Checked	Date

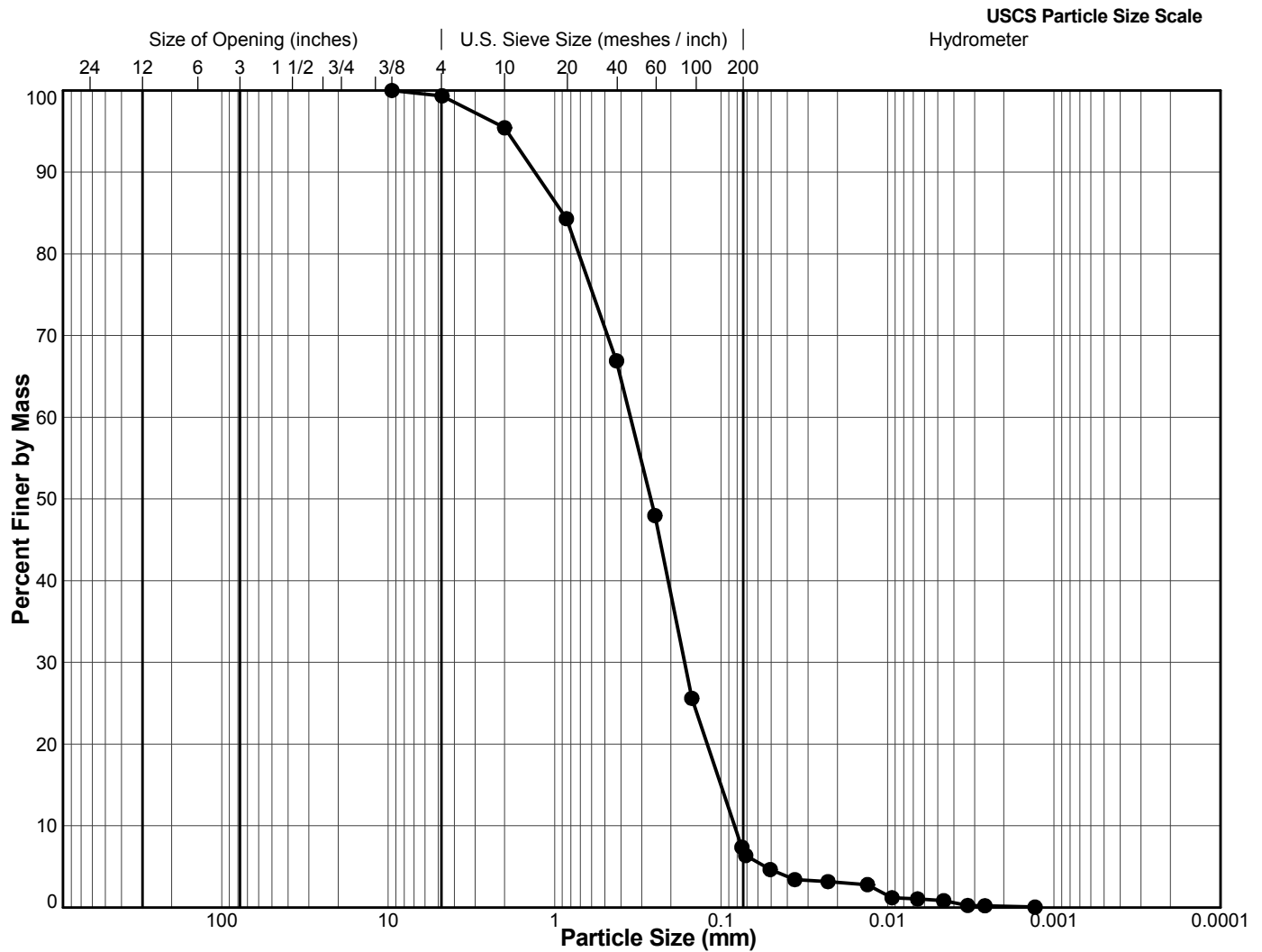
PARTICLE SIZE ANALYSIS OF SOILS

Reference(s)
ASTM D 422-63 (2007)

Client: Areva	Sample Location: SD
Project: Kiggavik	Sample No.: 05
Location: Nunavut	Depth Interval (m): 0.00 to 0.00
Project No.: 10-1345-0026	Lab Schedule No.: 217

Other Remarks: N/A

Specific Gravity (assumed): 2.65	Shape: N/A
Max. Particle Size Passing (mm): 9.5	Hardness: N/A
Method: Split, Washed	Dispersion Method: Air-Jet Cup
Hydrometer ID: BURNABY - 541360	Dispersion Period (min): 5



BOULDER	COBBLE	GRAVEL		SAND			FINES (Silt, Clay)
		Coarse	Fine	Coarse	Medium	Fine	

EB/KG	20/10/2010	LP	20/10/2010
Tech	Date	Checked	Date

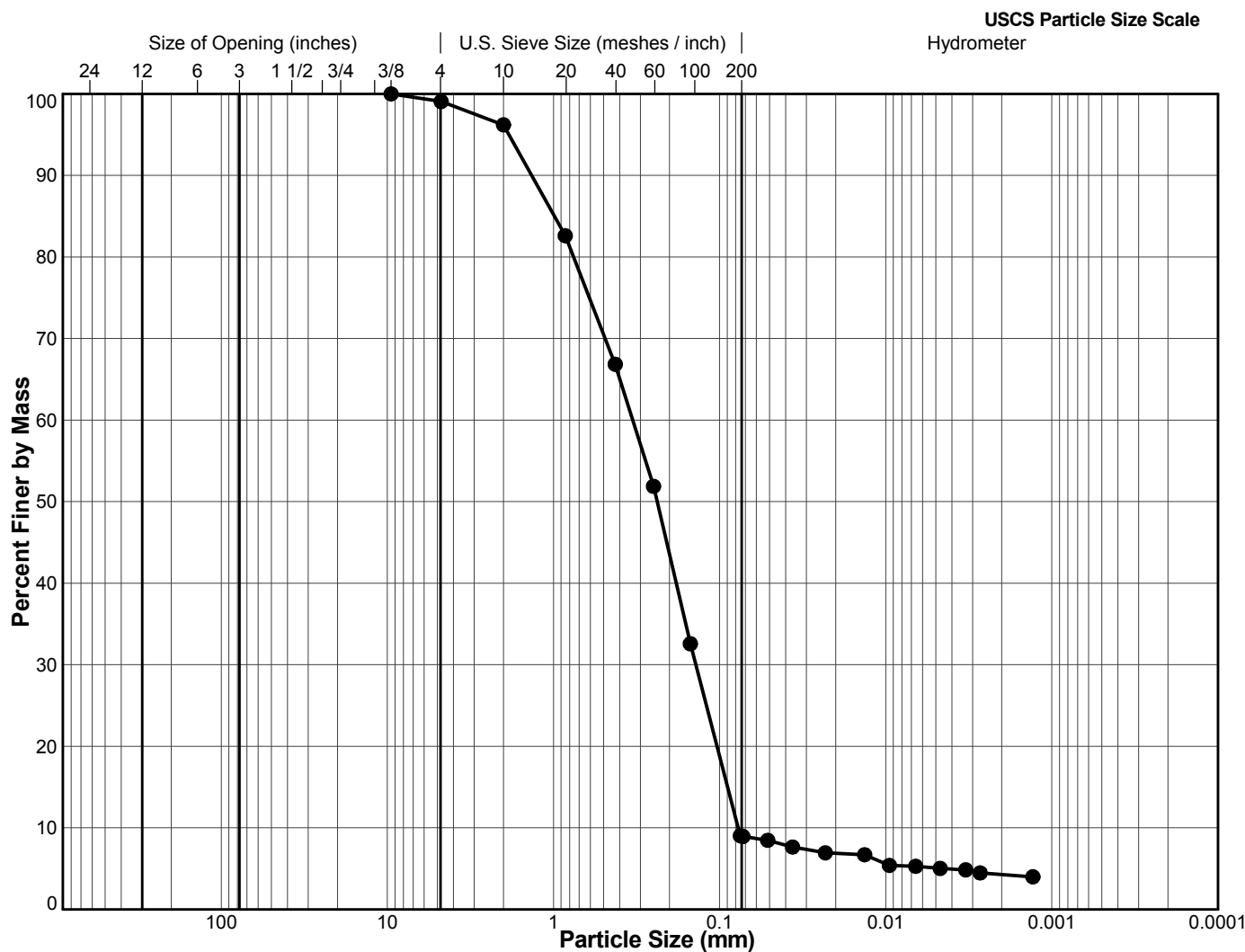
PARTICLE SIZE ANALYSIS OF SOILS

Reference(s)
ASTM D 422-63 (2007)

Client: Areva	Sample Location: SD
Project: Kiggavik	Sample No.: 11
Location: Nunavut	Depth Interval (m): 0.00 to 0.00
Project No.: 10-1345-0026	Lab Schedule No.: 217

Other Remarks: N/A

Specific Gravity (assumed): 2.65	Shape: N/A
Max. Particle Size Passing (mm): 9.5	Hardness: N/A
Method: Split, Washed	Dispersion Method: Air-Jet Cup
Hydrometer ID: BURNABY - 87024	Dispersion Period (min): 5



BOULDER	COBBLE	GRAVEL		SAND			FINES (Silt, Clay)
		Coarse	Fine	Coarse	Medium	Fine	

EB/KG	20/10/2010	LP	20/10/2010
Tech	Date	Checked	Date

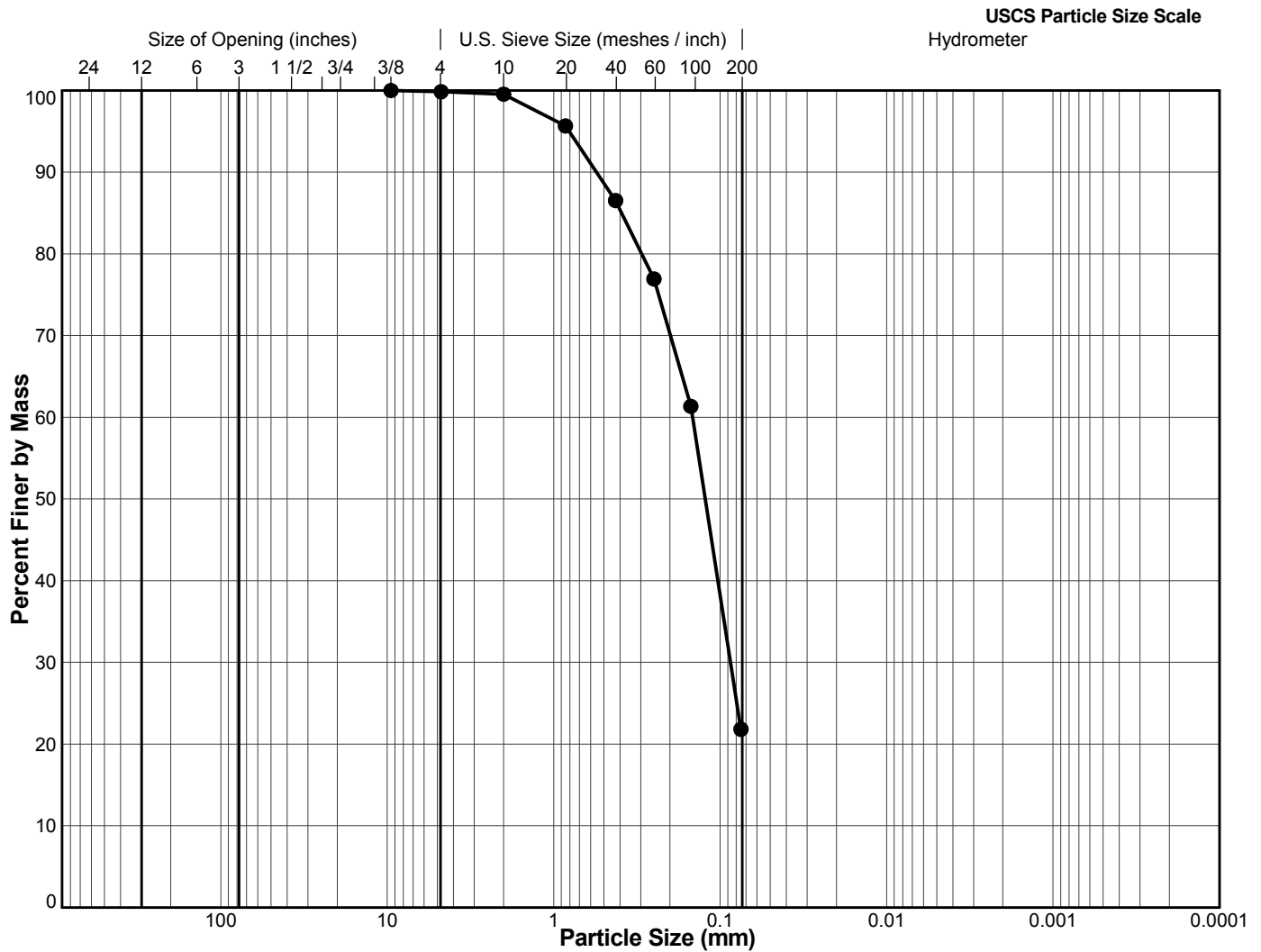
PARTICLE SIZE ANALYSIS OF SOILS

Reference(s)
ASTM D 422-63 (2007)

Client: Areva	Sample Location: SD
Project: Kiggavik	Sample No.: 12
Location: Nunavut	Depth Interval (m): 0.00 to 0.00
Project No.: 10-1345-0026	Lab Schedule No.: 217

Other Remarks: N/A

Specific Gravity (assumed): 2.65	Shape: N/A
Max. Particle Size Passing (mm): 9.5	Hardness: N/A
Method: Combined, Washed	



BOULDER	COBBLE	GRAVEL		SAND			FINES (Silt, Clay)
		Coarse	Fine	Coarse	Medium	Fine	

EB/KG	20/10/2010	LP	20/10/2010
Tech	Date	Checked	Date

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

Reference(s)
ASTM D 4318-05

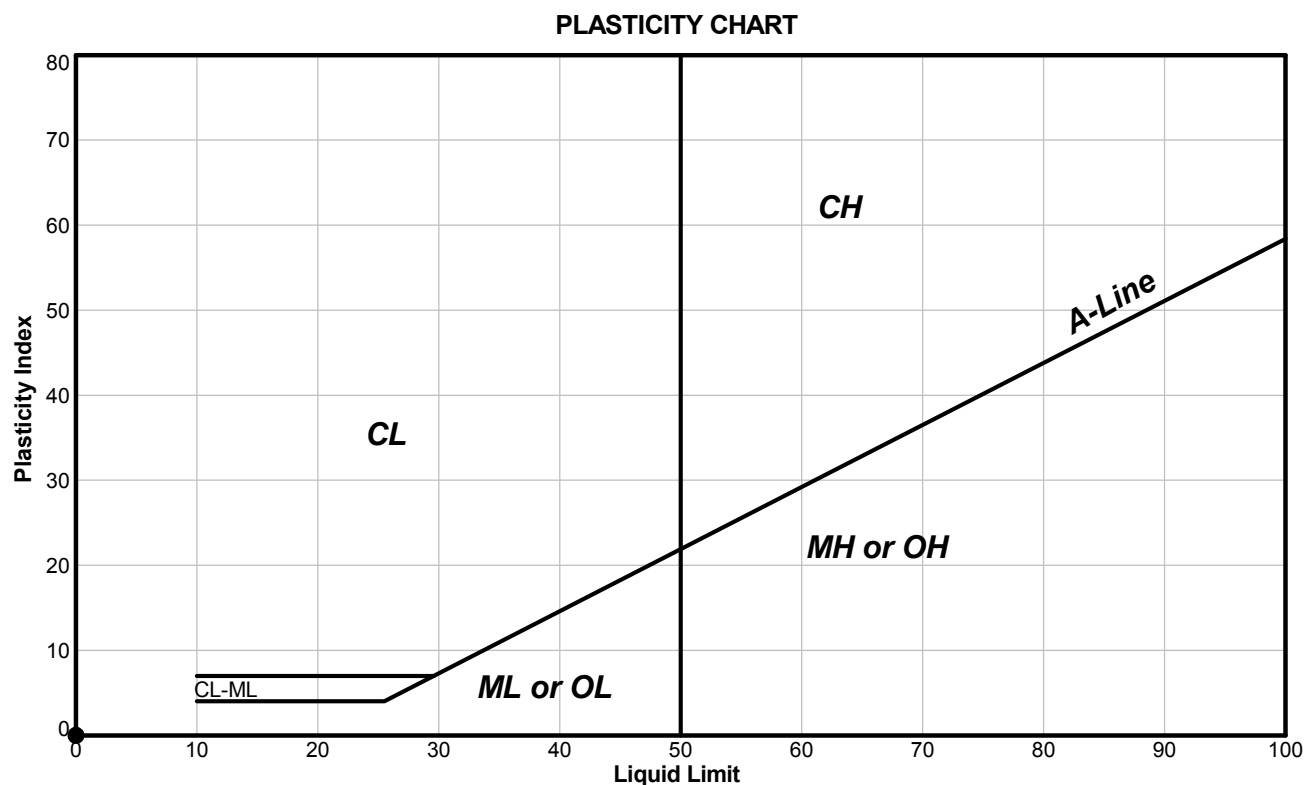
Client: Areva	Sample Location: SD
Project: Kiggavik	Sample No.: 04
Location: Nunavut	Depth Interval (m): 0.00 to 0.00
Project No.: 10-1345-0026	Lab Schedule No.: 217

Classification and Definition: Non-Plastic Soil (NP).

Other Remarks:

Test Method: A-Multi Point

Preparation Method: Nonplastic Soil (NP)



Sym.	Sample Location	Sample Number	Depth (m)	Bottom (m)	Percent Passing #40 Sieve (%)	Liquid Limit	Plastic Limit	Plasticity Index	Natural Water Content (%)	Liquidity Index
●	SD	04	0.00	0.00	71	NP	NP	NP	26.3	NP

Note: The test data given herein pertain to the sample provided only. This report constitutes a testing service only.

EB	18/10/2010	LP	18/10/2010
Tech	Date	Checked	Date

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

Reference(s)
ASTM D 4318-05

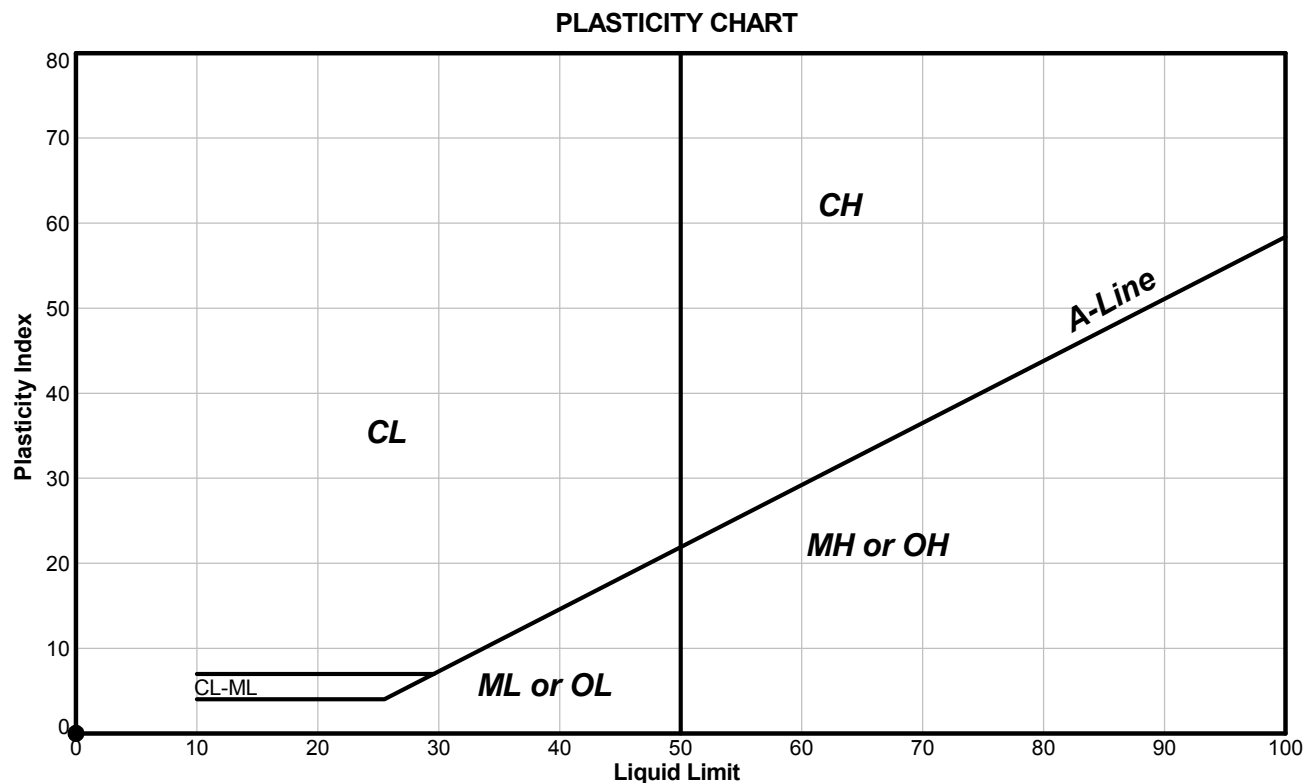
Client: Areva	Sample Location: SD
Project: Kiggavik	Sample No.: 11
Location: Nunavut	Depth Interval (m): 0.00 to 0.00
Project No.: 10-1345-0026	Lab Schedule No.: 217

Classification and Definition: Non-Plastic Soil (NP).

Other Remarks:

Test Method: A-Multi Point

Preparation Method: Nonplastic Soil (NP)



Sym.	Sample Location	Sample Number	Depth (m)	Bottom (m)	Percent Passing #40 Sieve (%)	Liquid Limit	Plastic Limit	Plasticity Index	Natural Water Content (%)	Liquidity Index
●	SD	11	0.00	0.00	67	NP	NP	NP	29.6	NP

Note: The test data given herein pertain to the sample provided only. This report constitutes a testing service only.

EB	18/10/2010	LP	18/10/2010
Tech	Date	Checked	Date

PARTICLE SIZE ANALYSIS OF SOILS

Reference

ASTM C136-06 & C117-04

Project No.: 09-1426-0001/4000

Borehole: **END-0B-09**
Client: Areva

Sample No.: 1

Project: Kiggavik

Depth (m): 0.30

Location: NWT

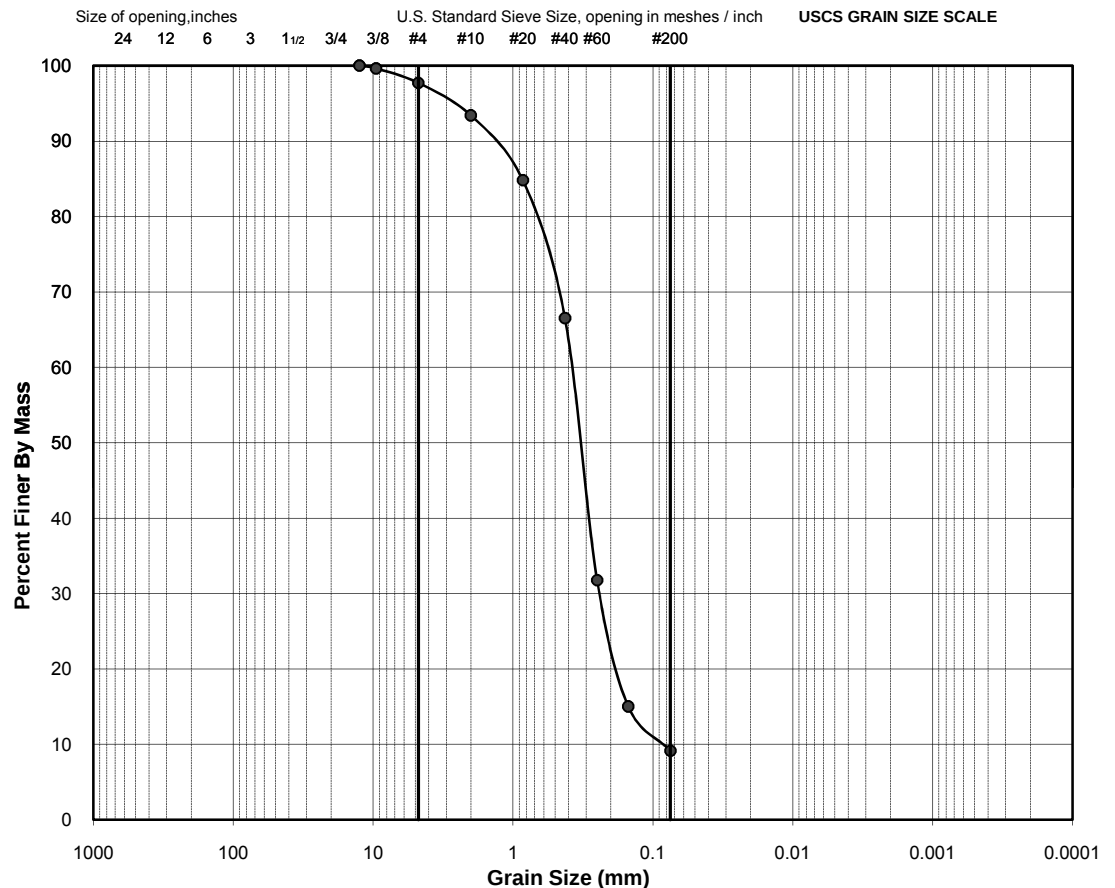
Lab ID No: 140

Remarks:
Other:
Material Specification: NONE

Method: SPLIT, WASHED

Date Tested: 07/08/2009

Sieve Size (USS)	(mm)	Passing %
3.5"	87.5	100.0
3"	75.0	100.0
2"	50.0	100.0
1.5"	37.5	100.0
1"	25.0	100.0
3/4"	19.0	100.0
1/2"	12.5	100.0
3/8"	9.5	99.6
#4	4.8	97.7
#10	2.0	93.4
#20	0.9	84.8
#40	0.4	66.5
#60	0.3	31.8
#100	0.2	15.0
#200	0.1	9.2



BOULDER	COBBLE	GRAVEL		SAND			FINES (Silt, Clay)
		Coarse	Fine	Coarse	Medium	Fine	

* The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data can be provided upon request.

EB/TD

August 7, 2009

LP

August 11, 2009

TESTED BY

DATE

CHECKED BY

DATE

PARTICLE SIZE ANALYSIS OF SOILS

Reference

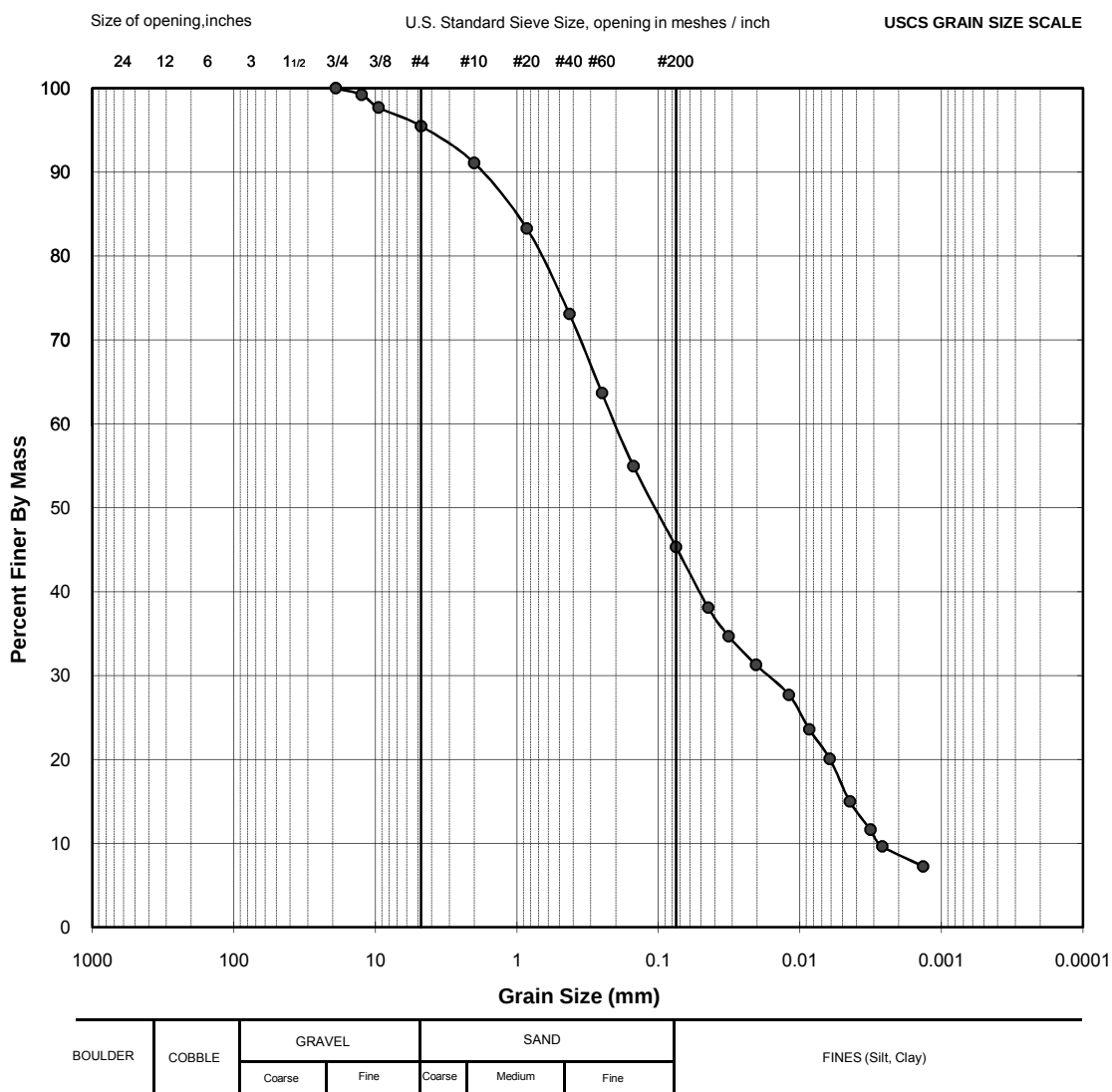
ASTM D 422-63 (2007)

Project No.:	09-1426-0001/4000	Borehole:	END-0B-09
Client:	Areva	Sample No.:	2
Project:	Kiggavik	Depth (m):	0.20-0.30
Location:	NWT	Lab ID No:	140

Specific Gravity (assumed):	2.76	Other Remarks:	
------------------------------------	------	-----------------------	--

Dispersion Method:	Stirring		
Dispersion Period (min):	0.00		

Sieve Size (US)	(mm)	% Passing
3.5"	87.50	100.0
3"	75.00	100.0
2"	50.00	100.0
1.5"	37.50	100.0
1"	25.00	100.0
3/4"	19.00	100.0
1/2"	12.50	99.2
3/8"	9.50	97.7
#4	4.75	95.5
#10	2.00	91.1
#20	0.850	83.3
#40	0.425	73.1
#60	0.250	63.7
#100	0.150	55.0
#200	0.075	45.3
-	0.0445	38.1
-	0.0319	34.7
-	0.0204	31.3
-	0.0119	27.7
-	0.0086	23.6
-	0.0062	20.1
-	0.0044	15.0
-	0.0032	11.7
-	0.0026	9.7
-	0.0013	7.3



* The test data given herein pertain to the sample provided only. This report constitutes a testing service only.
 Interpretation of the data can be provided upon request.

EB	Aug 9, 2009	LP	August 11, 2009
TESTED BY	DATE	CHECKED BY	DATE

PARTICLE SIZE ANALYSIS OF SOILS

Reference

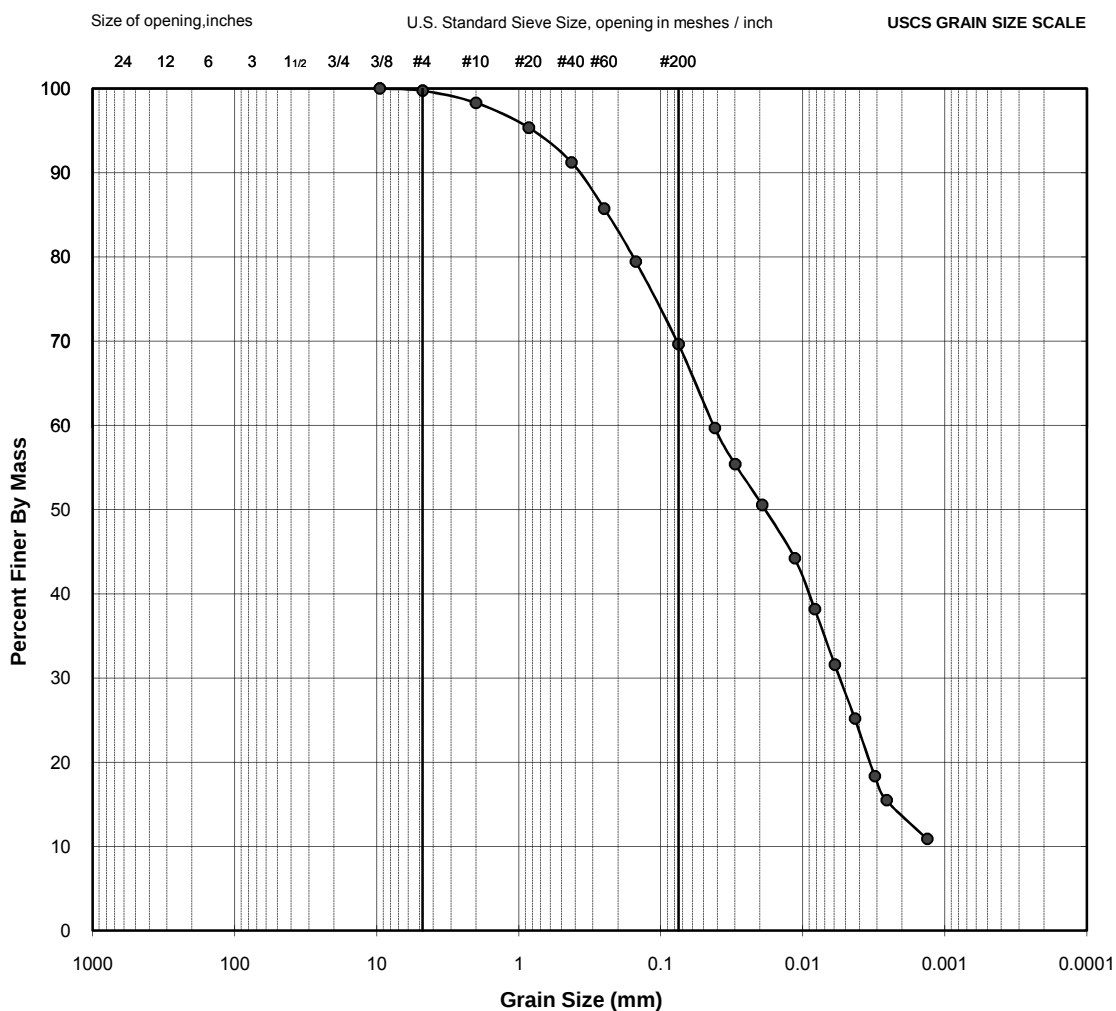
ASTM D 422-63 (2007)

Project No.:	09-1426-0001/4000	Borehole:	END-0B-09
Client:	Areva	Sample No.:	3
Project:	Kiggavik	Depth (m):	0.20-0.30
Location:	NWT	Lab ID No:	140

Specific Gravity (assumed):	2.76	Other Remarks:	
------------------------------------	------	-----------------------	--

Dispersion Method:	Stirring		
Dispersion Period (min):	0.00		

Sieve Size (US)	(mm)	% Passing
3.5"	87.50	100.0
3"	75.00	100.0
2"	50.00	100.0
1.5"	37.50	100.0
1"	25.00	100.0
3/4"	19.00	100.0
1/2"	12.50	100.0
3/8"	9.50	100.0
#4	4.75	99.7
#10	2.00	98.3
#20	0.850	95.3
#40	0.425	91.2
#60	0.250	85.7
#100	0.150	79.4
#200	0.075	69.6
-	0.0416	59.7
-	0.0299	55.4
-	0.0193	50.5
-	0.0114	44.2
-	0.0082	38.2
-	0.0059	31.6
-	0.0043	25.2
-	0.0031	18.3
-	0.0026	15.5
-	0.0013	10.9



* The test data given herein pertain to the sample provided only. This report constitutes a testing service only.
 Interpretation of the data can be provided upon request.

EB	Aug 9, 2009		
TESTED BY	DATE	CHECKED BY	DATE

PARTICLE SIZE ANALYSIS OF SOILS

Reference

ASTM C136-06 & C117-04

Project No.: 09-1426-0001/4000

Client: Areva

Project: Kiggavik

Location: NWT

Borehole: **END-0B-09**
Sample No.: 4

Depth (m): 0.20-0.30

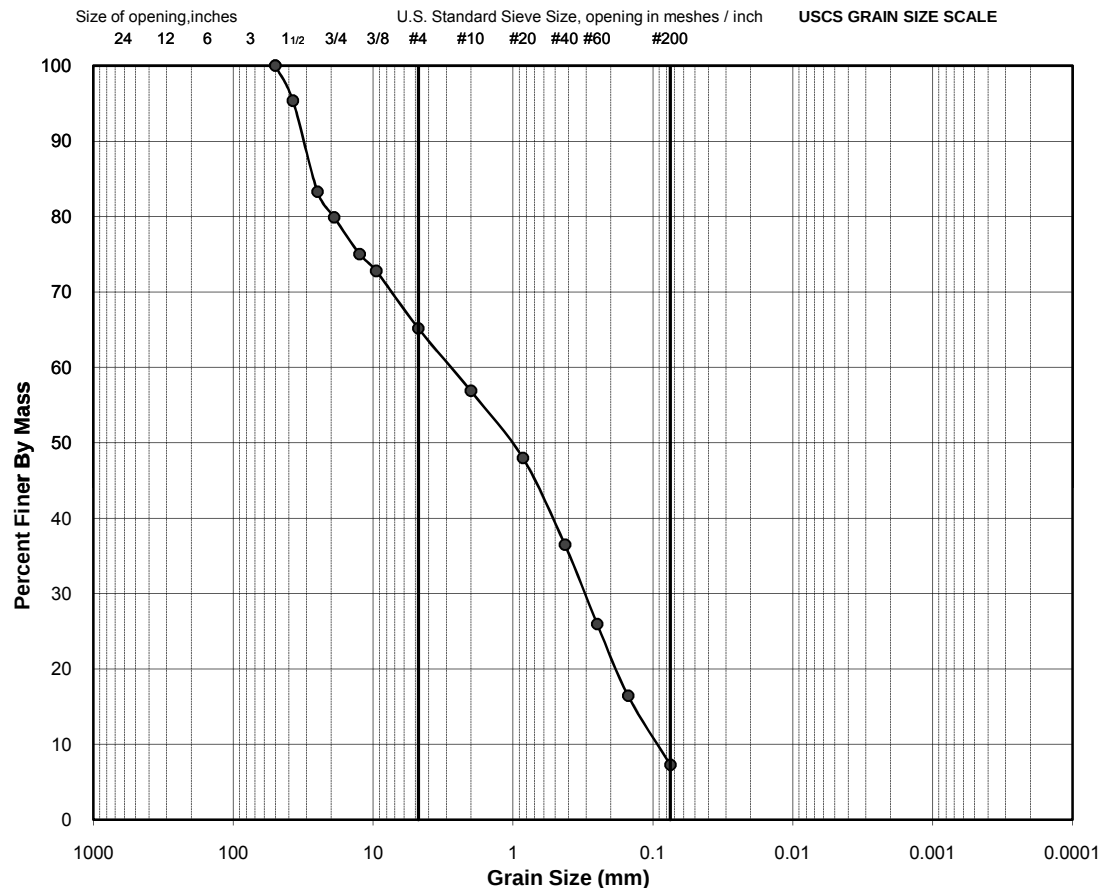
Lab ID No: 140

Remarks:
Other:
Material Specification: NONE

Method: SPLIT, WASHED

Date Tested: 8/7/2009

Sieve Size (USS)	(mm)	Passing %
3.5"	87.5	100.0
3"	75.0	100.0
2"	50.0	100.0
1.5"	37.5	95.4
1"	25.0	83.3
3/4"	19.0	79.9
1/2"	12.5	75.0
3/8"	9.5	72.8
#4	4.8	65.2
#10	2.0	56.9
#20	0.9	48.0
#40	0.4	36.5
#60	0.3	26.0
#100	0.2	16.4
#200	0.1	7.3



BOULDER	COBBLE	GRAVEL		SAND			FINES (Silt, Clay)
		Coarse	Fine	Coarse	Medium	Fine	

* The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data can be provided upon request.

EB/TD

August 7, 2009

LP

August 11, 2009

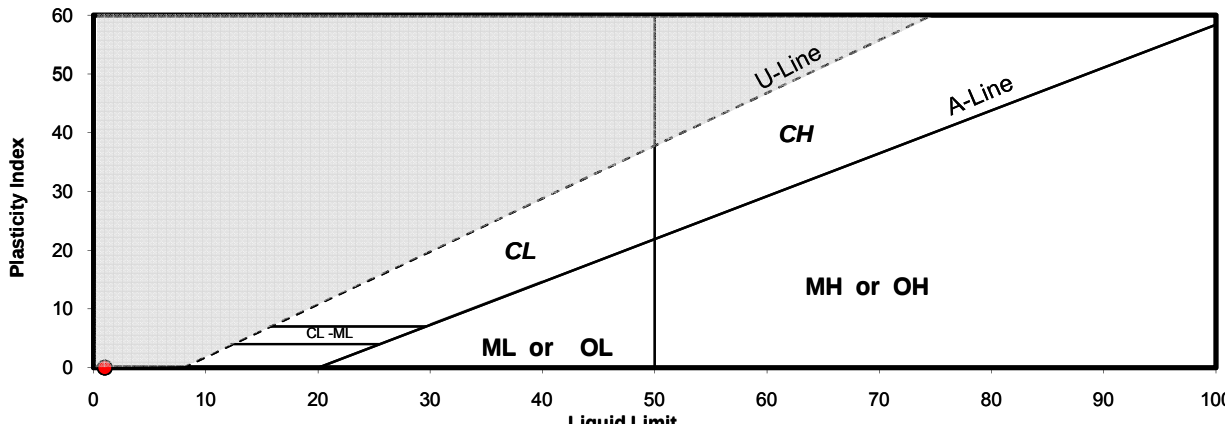
TESTED BY

DATE

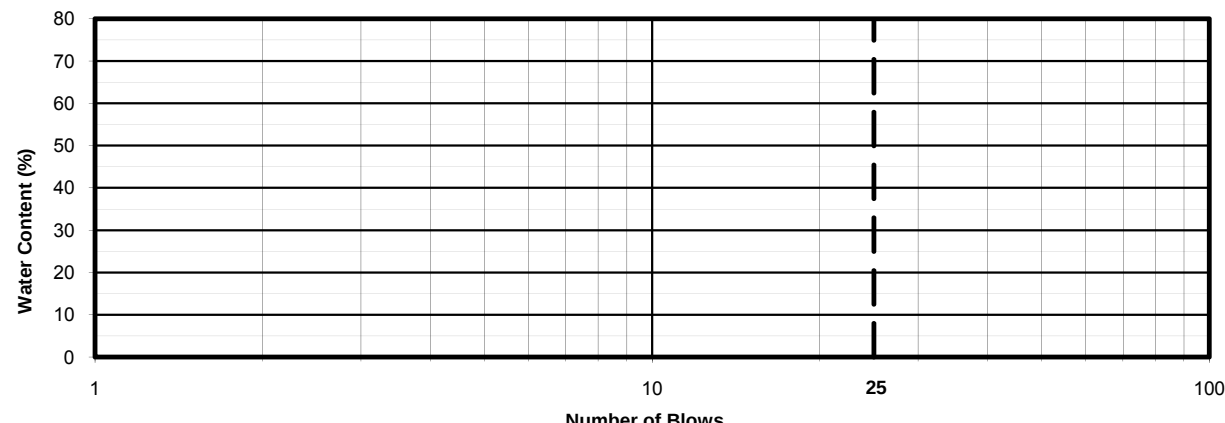
CHECKED BY

DATE

Liquid Limit, Plastic Limit and Plasticity Index of Soils				Reference ASTM D 4318-05
Project No.:	09-1426-0001/4000	Borehole:	END-0B-09	
Client:	Areva	Sample No.:	2	
Project:	Kiggavik	Depth (m):	0.20-0.30	
Location:	NWT	Lab ID No.:	140	
Method:	A-Multi Point	Preparation Method:	Air-Dried	
Sample Description:			Classification Definition	



Liquid Limit



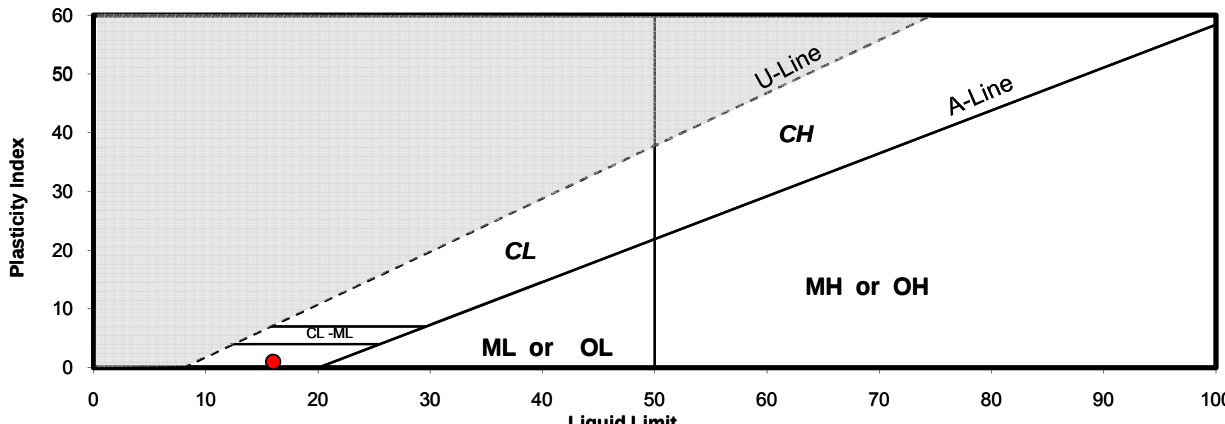
Number of Blows

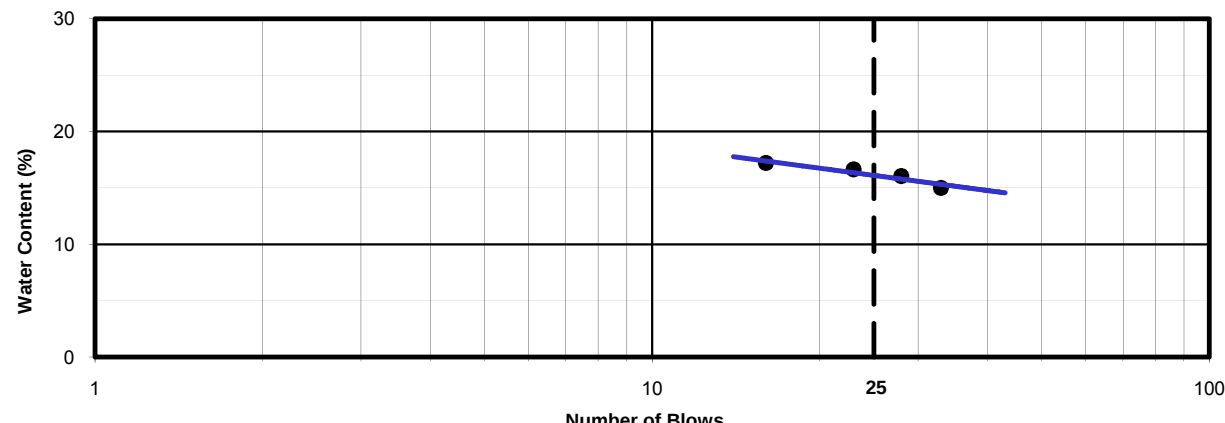
Test Summary		Remarks
Percent passing #40 Sieve (%)	N/A	Non-Plastic sample
Liquid Limit	Non Plastic	
Plastic Limit	N/A	
Plasticity Index	11	
Natural water content (%)	N/A	

* The test data given herein pertain to the sample provided only. This report constitutes a testing service only.

EB	August 9, 2009	LP	August 11, 2009
TESTED BY	DATE	CHECKED BY	DATE

Liquid Limit, Plastic Limit and Plasticity Index of Soils				Reference ASTM D 4318-05
Project No.:	09-1426-0001/4000	Borehole:	END-0B-09	
Client:	Areva	Sample No.:	3	
Project:	Kiggavik	Depth (m):	0.20-0.30	
Location:	NWT	Lab ID No.:	140	
Method:	A-Multi Point	Preparation Method:	Air-Dried	
Sample Description:	ML	Classification Definition <i>Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity</i>		





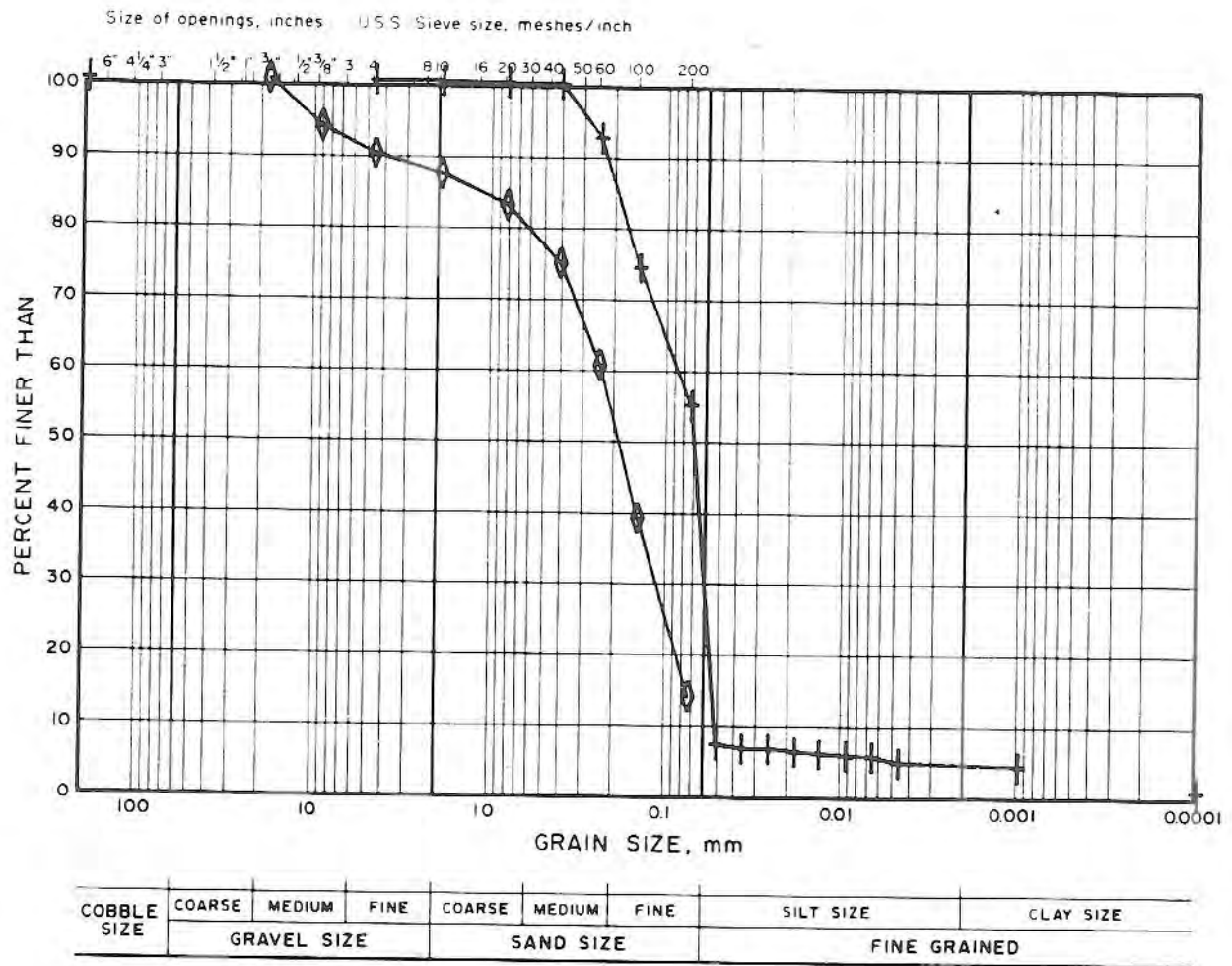
Test Summary		Remarks
Percent passing #40 Sieve (%)	16	
Liquid Limit	15	
Plastic Limit	1	
Plasticity Index	15	
Natural water content (%)	0.0	

* The test data given herein pertain to the sample provided only. This report constitutes a testing service only.

EB	August 9, 2009	LP	August 11, 2009
TESTED BY	DATE	CHECKED BY	DATE

GRAIN SIZE DISTRIBUTION

FIGURE 17-2

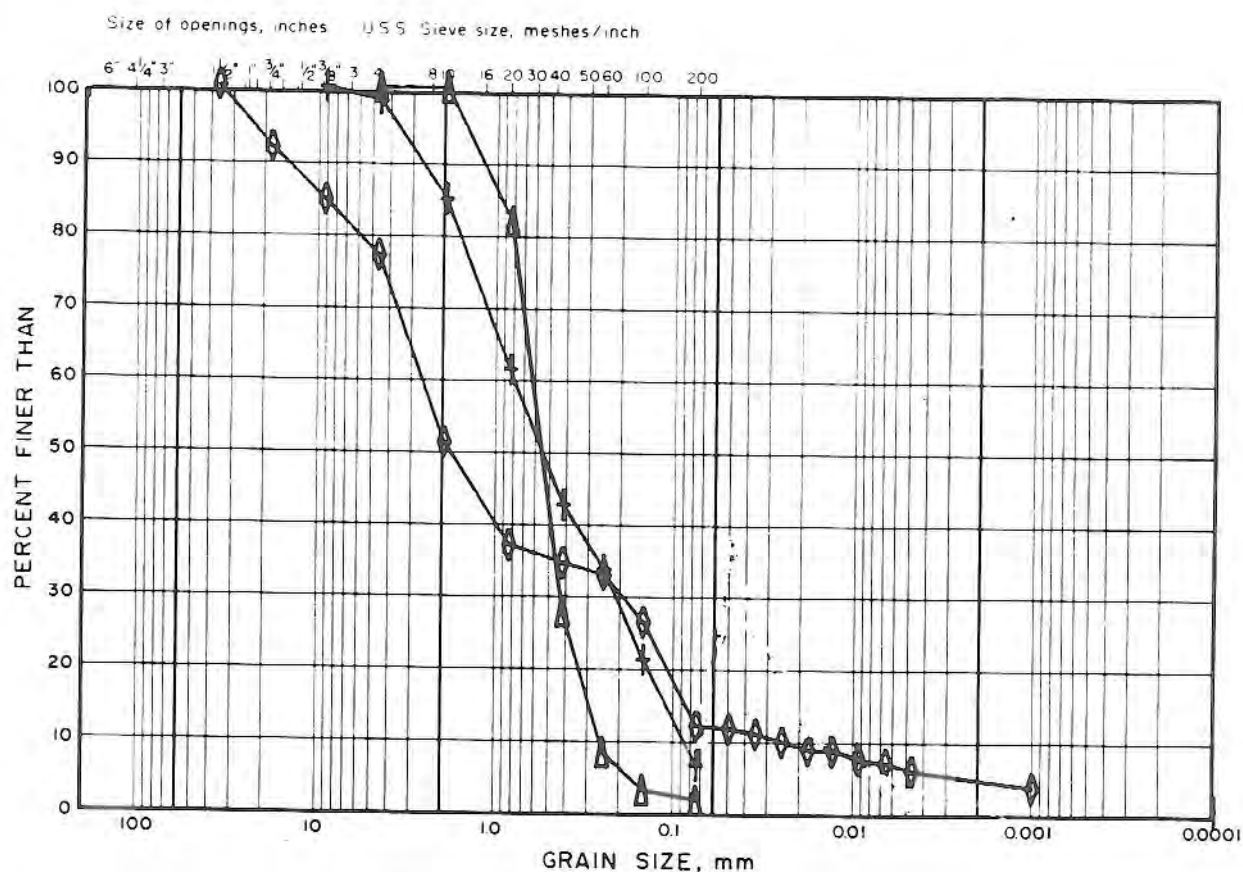


LEGEND

SYMBOL	BOREHOLE SAMPLE	DEPTH (m)
+	88-D100 2	6.25
o	88-D100 3	7.77

GRAIN SIZE DISTRIBUTION

FIGURE 17-3



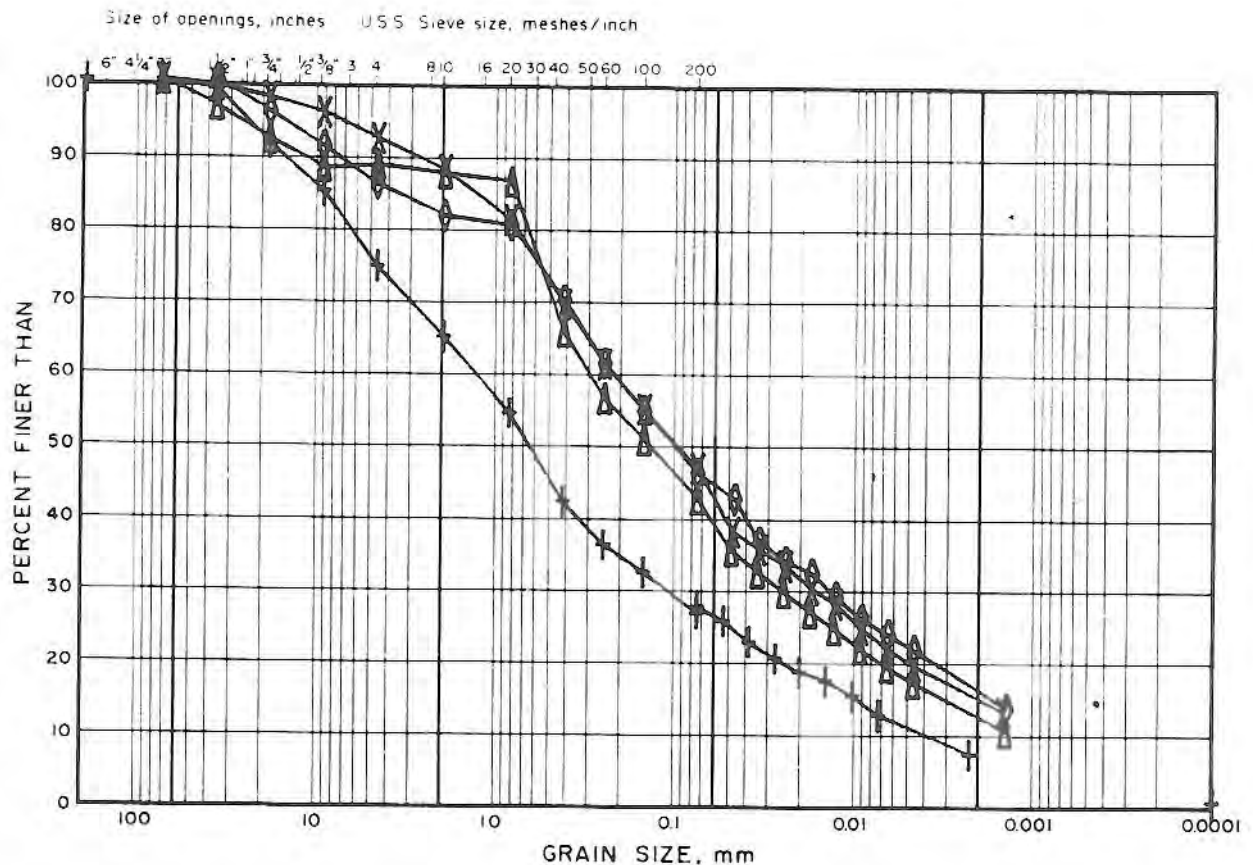
COBBLE SIZE	COARSE	MEDIUM	FINE	COARSE	MEDIUM	FINE	SILT SIZE	CLAY SIZE
	GRAVEL SIZE			SAND SIZE			FINE GRAINED	

LEGEND

SYMBOL	BOREHOLE SAMPLE	DEPTH (m)
+	88-D101 3	7.62
◇	88-D101 4	9.15
△	88-D101 5	10.82

GRAIN SIZE DISTRIBUTION

FIGURE 17-4



COBBLE SIZE	COARSE	MEDIUM	FINE	COARSE	MEDIUM	FINE	SILT SIZE	CLAY SIZE
	GRAVEL SIZE			SAND SIZE			FINE GRAINED	

LEGEND

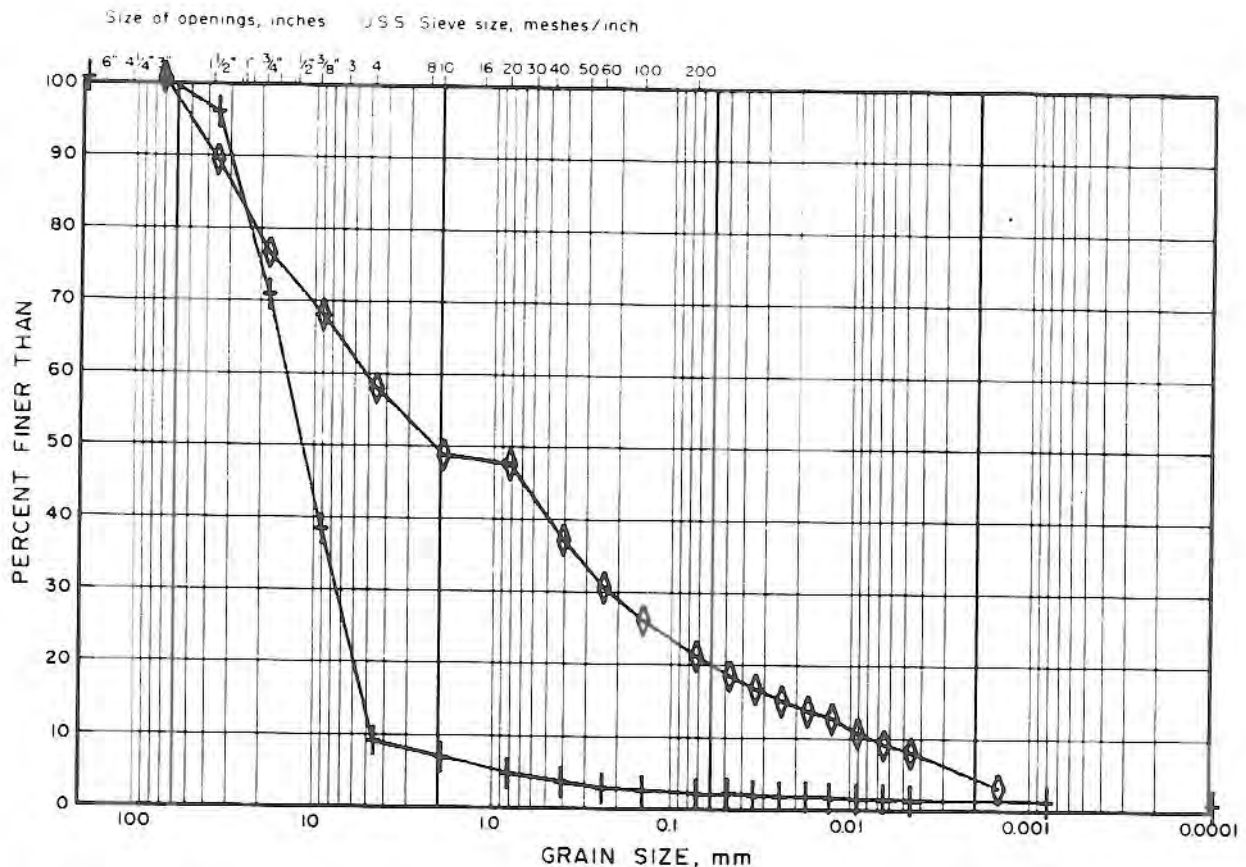
SYMBOL	BOREHOLE SAMPLE	DEPTH (m)
+	88-D102	1
◇	88-D102	2
Δ	88-D102	3
X	88-D102	4

Project 881-1814E

Golder Associates

GRAIN SIZE DISTRIBUTION

FIGURE 17-5



LEGEND

SYMBOL	BOREHOLE SAMPLE	DEPTH (m)
+	88-D103	1
◇	88-D103	2

Attachment C Laboratory Testing Results of Soil and Rock

TABLE 1 :

SUMMARY OF LABORATORY TEST RESULTS - PLANTSITE No. 1

Borehole No.	Sample No.	Depth (m)	Grain Size Distribution - %				Plasticity			Unified Class'n	W _x	*Other Tests	
			Gravel	Sand	Silt	Clay	W _L	W _p	I _p				
BH88-1P5	AS2	0.46-0.85	18	47	22	13	19	14	5	SH-SC	8.8		
			SAND TILL, some Silt, some Gravel, some Clay										
BH88-1P5	AS3 (CRREL)	0.85-1.20	21	44	23	12	21	17	4	SH-SC	33.9	γ _{bf} 1882, γ _d 1405 Gs 2.64	
			SAND TILL, some Silt, some Gravel, some Clay										
BH88-1P6	AS1	0.00-1.12	13	45	30	12	Not Tested			-	10.2	Soluble Sulphate <0.10%	
			SILTY SAND TILL, some Gravel, some Clay										
BH88-1P7	AS4	0.76-1.06	5	51	34	10	21	18	3	SH	13.7	Nil	
			SILTY SAND TILL, some Clay, trace Gravel										
BH88-1P8	AS2	0.62-1.25				Not Tested						6.9	Nil
BH88-1P8	AS4	1.48-1.55				Not Tested						8.2	Nil
BH88-1P8	AS5	0.10-1.50	11	50	29	10	Non-Plastic			SH	7.7	Compaction test Max Density 2140 kg/cum optimum w/c 7.1% Gs 2.68	
			SILTY SAND TILL, some Gravel, some Clay										
BH88-1P9	AS2 (CRREL)	0.36-0.42				Not Tested						46.3	γ _{bf} 1982, γ _d 1355 (Organic)
BH88-1P9	AS3 (CRREL)	0.42-0.76				Not Tested						132.2	γ _{bf} 1271, γ _d 536 (Organic)
BH88-1P9	AS4	0.76-0.92	6	36	26	32	54	31	23	OH	137.2		
			ORGANIC CLAYEY, SILTY SAND TILL, trace fine Gravel										

* Other Tests - γ_{bf} = Bulk Frozen Density (kg/cu.m), γ_d = Dry Density (kg/cu.m),
Gs = Specific Gravity Soil Solids

August, 1989

TABLE 5-1

881-1814D

SUMMARY OF LABORATORY TEST RESULTS - PLANTSITE No. 2

Borehole No.	Sample No.	Depth (m)	Grain Size Distribution - %				Plasticity			Unified Class'n	W%	*Other Tests	
			Gravel	Sand	Silt	Clay	W_L	W_p	I_p				
BH88-2P2	AS1	0.52-0.90	13	45	29	13	18	14	4	SM-SC	11.9	Nil	-
			SILTY SAND TILL, some Clay, some Gravel										
BH88-2P4	AS4 (CRREL)	1.70-1.85	15	35	34	16	19	16	3	SM	50.6	γ_{bf} 1953 G_s 2.69	γ_d 1297
			SILTY SAND TILL, some Clay, some Gravel										
BH88-2P4	AS2	0.50-1.65				Not Tested					20.7	Nil	-

* Other Tests - γ_{bf} = Bulk Frozen Density (kg/cu.m), γ_d = Dry Density (kg/cu.m),
 G_s = Specific Gravity Soil Solids

August, 1989

TABLE 6-1

881-1814D

SUMMARY OF LABORATORY TEST RESULTS - TAILINGS DAM - RIDGE LAKE

Borehole No.	Sample No.	Depth (m)	Grain Size Distribution - %				Plasticity			Unified Class'n	W%	Other Tests
			Gravel	Sand	Silt	Clay	W _L	W _p	I _p			
BH88-1T4	AS3	1.25-2.30	22	35	29	14	20	17	3	SM	13.7%	Nil
			SILTY SAND TILL, some Clay, some Gravel									
BH88-1T5	AS5	1.30-1.40	7	45	37	11	23	19	4	SM-SC	8.7 (?)	Nil
			SILTY SAND TILL, some Clay, trace Gravel									
BH88-1T7	AS2	0.52-0.85	25	38	25	12	Not Tested			-	6.2 (?)	Nil
			SILTY SAND TILL, some Clay, trace Gravel									
BH88-1T7	AS4	1.25-2.30	22	41	29	8	19	16	3	SM	10.0	Nil
			SILTY SAND TILL, some Gravel, trace Clay									

(?) Bag damaged - w/c questionable

August, 1989

TABLE 7-1

881-18140

SUMMARY OF LABORATORY TEST RESULTS - LIVING QUARTERS

Borehole No.	Sample No.	Depth (m)	Grain Size Distribution - %				Plasticity			Unified Class'n	W%	*Other Tests
			Gravel	Sand	Silt	Clay	W _g	W _p	I _p			
BH88-1L3	AS2 (CRREL)	0.50-1.20	17	36	40	7	(Non-Plastic)			SM	60.6	γ _{bf} 1469 γ _d 915
			SANDY SILT TILL, trace Clay, some Gravel									

* Other Tests - γ_{bf} = Bulk Frozen Density (kg/cu.m), γ_d = Dry Density (kg/cu.m),
G_s = Specific Gravity Soil Solids

August, 1989

TABLE 8-1

881-1814D

SUMMARY OF LABORATORY TEST RESULTS - PUMPHOUSE SITES

Borehole No.	Sample No.	Depth (m)	Grain Size Distribution - %				Plasticity			Unified Class'n	W%	*Other Tests	
			Gravel	Sand	Silt	Clay	W _L	W _p	I _p				
PUMPHOUSE SITE NO. 1													
BH88-1PH1	AS1	0.00-0.50	-	-	-	-	-	-	-	-	18.6	Nil	
BH88-1PH1	AS2	0.50-1.20	60	36	1	3	Non-Plastic			GW	4.8	Nil	
			SANDY GRAVEL, trace Silt & Clay										
BH88-1PH1	AS5 (CRREL)	4.85-5.00	25	68	1	5	Non-Plastic			SP-SM	18.6	γ_{bf} 2176 Gs=2.67	γ_d 1835
			GRAVELLY SAND TILL, trace Silt and Clay										
PUMPHOUSE SITE NO. 2													
BH88-2PH1	AS2 (CRREL)	0.80-1.20	23	44	28	5	Non-Plastic			SM	43.3	γ_{bf} 1629	γ_d 1137
			SILTY SAND, some Gravel, trace Clay										

* Other Tests - γ_{bf} = Bulk Frozen Density (kg/cu.m), γ_d = Dry Density (kg/cu.m),
Gs = Specific Gravity Soil Solids

TABLE II

SUMMARY OF LABORATORY TEST RESULTS - MINE HAUL ROAD

Borehole No.	Sample No.	Depth (m)	Grain Size Distribution - %				Plasticity			Unified Class'n	W%	*Other Tests
			Gravel	Sand	Silt	Clay	W _L	W _p	I _p			
BH88-1MHR1	AS3	0.92-1.50	17	45	26	12	Not Tested			SM-SC	9.5	Nil
			SILTY SAND TILL, some clay, some Gravel									
BH88-1MHR2	AS2	0.90-1.45		Not Tested							13.1	Nil
BH88-1MHR3	AS1	0.00-0.60		Not Tested							9.2	Nil
BH88-1MHR3	AS3 (CRREL)	1.35-1.46	32	38	22	8	Not Tested			SM-SC	23.2	γ_{bf} 1324 γ_d 1074
			GRAVELLY SAND TILL, some Silt, trace Clay									
BH88-1MHR3	AS4	1.45-1.95		Not Tested							8.4	Nil
BH88-1MHR5	AS2	0.92-1.35	22	41	24	13	Not Tested			SM-SC	10.5	Nil
			SAND TILL, some Silt, some Gravel, some Clay									
BH88-1MHR6	AS3	1.25-2.80	25	41	22	12	Not Tested			SM-SC	9.1	Nil
			GRAVELLY SAND TILL, some Silt, some Clay									

* Other Tests - γ_{bf} = Bulk Frozen Density (kg/cu.m), γ_d = Dry Density (kg/cu.m),
 G_s = Specific Gravity Soil Solids

TABLE II

SUMMARY OF LABORATORY TEST RESULTS - POINTER LAKE AIRSTRIP

Borehole No.	Sample No.	Depth (m)	Grain Size Distribution - %				Plasticity			Unified Class'n	W%	*Other Tests
			Gravel	Sand	Silt	Clay	W _L	W _p	Ip			
BH88-4A1	AS2	0.58-(?)	26	39	21	14	22	17	5	SM-SC	13.5	Nil
	AS3	Combined (?) -1.10										
	GRAVELLY SAND TILL, some Silt, some Clay											
	AS4	1.40-1.90	13	48	28	11	Not Tested			12.5	Nil	
SILTY SAND TILL, some Gravel, some Clay												
	AS5 (CRREL)	1.95-2.09				Not Tested				14.8	γ_{bf} 2393 (Nbn)	γ_d 2085
BH88-4A2	AS2	0.66-1.08				Not Tested				9.1	Nil	
	AS3 (CRREL)	1.19-1.50				Not Tested				16.0 17.5	γ_{bf} 2468 (Nbn)	γ_d 2128
	AS4	2.08-2.50				Not Tested				11.7	Nil	
BH88-4A3	AS1	0.00-0.60	12	48	28	12	24	18	6	SM-SC	13.7	Nil
	SILTY SAND TILL, some Gravel, some Clay											
	AS3	1.06-1.40				Not Tested				12.4	Nil	
	AS4	1.55-1.95				Not Tested				27.4	Nil	
	AS5 (CRREL)	1.92-2.35	5	30	53	12	Not Tested			78.9 46.9	γ_{bf} 1597 Gs=2.69	γ_d 893 (Vs & Vc)
	AS6 (CRREL)	2.51-3.05				Not Tested				36.7	γ_{bf} 2149 (Vs, 2-5 mm)	γ_d 1572
	AS7	3.60-4.60				Not Tested				20.0	Nil	

(Cont'd)

TABLE II (Cont'd)

SUMMARY OF LABORATORY TEST RESULTS - POINTER LAKE AIRSTRIP

Borehole No.	Sample No.	Depth (m)	Grain Size Distribution - %				Plasticity			Unified Class'n	W%	*Other Tests
			Gravel	Sand	Silt	Clay	W _L	W _p	I _p			
BH88-4A4	AS1	0.00-0.38					Not Tested				14.1	Nil
	AS3	1.07-1.37					Not Tested				10.0	Nil
BH88-4A5	AS2	0.55-0.83	28	40	17	15	Not Tested				26.0	Nil
			GRAVELLY SAND TILL, some Silt, some Clay									
	AS2 (CRREL)	0.83-1.20	32	34	15	19	Not Tested				20.8, 20.7	γ_{bf} 2054 γ_d 1701 (Nbn)
	AS4 (CRREL)	1.86-2.27					Not Tested				103.9	γ_{bf} 1707 γ_d 837 (Vs, 1-3 mm)
BH88-4A6	AS1	0.00-0.50	17	53	25	5	Non-Plastic			SM	14.1	Nil
	AS3 (CRREL)	1.23-1.46					Not Tested				21.5	γ_{bf} 2147 γ_d 1767 (Vx to Vc)
	AS4 (CRREL)	2.25-2.60					Not Tested				44.3	γ_{bf} 1691 γ_d 1172 (Vs, 1-5 mm)

* Other Tests - γ_{bf} = Bulk Frozen Density (kg/cu.m), γ_d = Dry Density (kg/cu.m),
 G_s = Specific Gravity Soil Solids

881-1814D

SUMMARY OF LABORATORY TEST RESULTS - SKINNY LAKE AIRSTRIIP BORROW

Borehole No.	Sample No.	Depth (m)	Grain Size Distribution - %				Plasticity			Unified Class'n	W%	Other Tests
			Gravel	Sand	Silt	Clay	W _L	W _p	Ip			
BH88-1A1	AS1	0.00-1.22	53	44	3	Non-Plastic			GP	3.9	Nil	
			SAND AND GRAVEL, trace Silt & Clay									
BH88-1A10	AS1	1.20-2.60	52	39	9	Non-Plastic			GP-GM	5.3	Nil	
			SANDY GRAVEL, trace Silt & Clay									
BH88-1A14	AS1	0.00-1.40	42	51	7	Non-Plastic			GP-GM	5.2	Nil	
			SAND AND GRAVEL, trace Silt & Caly									

August, 1989

TABLE 12-1

881-1814D

SUMMARY OF LABORATORY TEST RESULTS - DRUMLIN AIRSTRIP

Borehole No.	Sample No.	Depth (m)	Grain Size Distribution - %				Plasticity			Unified Class'n	W%	*Other Tests
			Gravel	Sand	Silt	Clay	W _L	W _p	I _p			
<u>BH88-2A1</u>	AS1 (CRREL)	0.30-0.92					Not Tested				12.9	Nil
	AS2 (CRREL)	0.92-1.70					Not Tested				16.5	Nil
	AS3	1.70-2.45					Not Tested				11.3	Nil
<u>BH88-2A5</u>	AS2	0.45-0.92	19	51	21	9	16	14	2	SM	6.7	Nil
			SAND TILL, some Silt, some Gravel, trace Clay									
	AS3	1.82-2.75					Not Tested				5.1	Nil
	AS4	2.75-4.26					Not Tested				8.5	Nil
<u>BH88-2A8</u>	AS2 (CRREL)	0.50-1.00					Not Tested				9.2	Nil
	AS5	1.60-1.80					Not Tested				43.5	Nil
	AS6	1.80-2.70					Not Tested				6.9	Nil

TABLE II-1

SUMMARY OF LABORATORY TEST RESULTS - SKINNY LAKE BORROW

Borehole No.	Sample No.	Depth (m)	Grain Size Distribution - %				Plasticity			Unified Class'n	W%	*Remarks
			Gravel	Sand	Silt	Clay	W _L	W _p	Ip			
<u>TEST PIT SAMPLES</u>												
TP88-1B1	CS1 & CS2	0.00-0.40 0.40-0.80	48	49	1	0	Non-Plastic			GP/SP	0.0	Combined Sample 2% cobbles to 127mm dia. FM 1.5
TP88-1B2	CS1 & CS2	0.00-0.55 0.55-1.10	57	39	1	0	Non-Plastic			GP	1.6 0.0	Combined Sample 3% Cobbles to 112 mm dia. FM 4.3
TP88-1B3	CS1 & CS2	0.00-0.60 0.60-1.20	45	51	1	0	Non-Plastic			SP	0.2 0.4	Combined Sample 3% Cobbles to 112mm dia. FM 4.0

Note: Samples from TP88-1B2 and 1B3 combined for further testing:

- ASTM C40 - Organic Color Plate Test
- ASTM C289 - Potential Reactivity (Chemical Method)
- ASTM C127 - Specific Gravity and Absorption
- ASTM C88 - Soundness Test (Magnesium Sulphate)

Refer to Appendix II for these test results

BOREHOLE SAMPLES

BH88-1B2	Bulk Sa.	0.00-1.98	41	50	3	0	Non-Plastic			SW	3.6 4.7	6% Cobbles to 112 mm dia. FM 4.0
BH88-1B4	AS2	1.50-2.50	32	56	12		Non-Plastic			SP-SM	6.9 6.8	No Cobbles FM 3.4
BH88-1B9	AS1	0.05-0.60	57	36	7		Non-Plastic			GP	3.5 3.9	No Cobbles FM 3.2

PETROGRAPHIC ANALYSISDATE Aug. 16, 1988PROJECT: UG/KIGGAVIKPROJECT No. 881-1814DAGGREGATE SOURCE: Skinny Lake Borrow - Lower TerraceTEST FRACTIONS: Passing 20 mm, Retained on 9.5 mm (Coarse Aggregate)From BH88-1B2, Sa. 1, 0.00 - 1.78m

ROCK CLASSIFICATION	DESCRIPTION	QUALITY DESIGNATION (Percent by Mass)			
		Good	Fair	Poor	Deleterious
SANDSTONE- ARKOSE	hard	3.7			
GNEISS-SCHIST MICA-QUARTZ	hard	4.2			
QUARTZITE	coarse and fine grained	27.8			
GREYWACKE- ARGILLITE	hard	7.5			
VOLCANIC	hard and slightly weathered	34.8			
GRANITE- DIORITE- GABBRO		14.2			
SCHIST	medium hard mica-quartz		1.5		
GREYWACKE- ARGILLITE	medium hard		6.3		
TOTALS		92.2	7.8		

PETROGRAPHIC NUMBER	
HOT MIX, MULCH AND CONCRETE (125 Max.)	P.N. 115.6
GRANULAR AND 16 mm CRUSHED (200 Max.)	P.N. 100

REMARKS: P.N. value for fine aggregate is 120.

Coarser fractions of fine aggregate are composed of granitic,
schistic and sandstone chips. Finer fractions of fine aggregate
are composed of quartz grains.

TEST CARRIED OUT IN CONFORMANCE WITH M.T.C. LS-609

TABLE II-3
MAGNESIUM SULPHATE SOUNDNESS TEST RESULTS
 (ASTM C88)

SKINNY LAKE BORROW

SAMPLE:

Combined samples from TP 88-1B2-C.S.1 and C.S.2, and TP 88-1B3-CS1 and CS2

TEST RESULTS:

• For Natural Fine Aggregate:

<u>Sample Fraction</u> <u>(U.S. Standard Sieve)</u>	<u>Weighted Percentage Loss</u> <u>(Basis original sample)</u>
No. 4 to No. 8	4.36%
No. 8 to No. 16	2.38
No. 16 to No. 30	0.65
No. 30 to No. 50	<u>0.26</u>
Total Weight Loss	7.65%

• For Crushed Aggregate:

Fine Aggregate - (Crusher fines only - excluding natural fines)

<u>Sample Fraction</u> <u>(U.S. Standard Sieve)</u>	<u>Weighted Percentage Loss</u> <u>(Basis original sample)</u>
3/8 in to No. 4	15.90
No. 4 to No. 8	3.03
No. 8 to No. 16	Not tested
No. 16 to No. 30	1.03
No. 30 to No. 50	<u>Not tested</u>
Total Weight Loss	19.96%

Coarse Aggregate (Crushed Aggregate)

<u>Sample Fraction</u> <u>(U.S. Standard Sieve)</u>	<u>Weighted Percentage Loss</u> <u>(Basis original sample)</u>
3/4 in. to 3/8 in.	8.11
3/8 in. to No. 4	<u>6.73</u>
Total weight loss	14.84%

Remarks: 5 Cycles in MgSO₄ solution which was not previously used.

October, 1989

881-18140

TABLE IV-1

SUMMARY OF LABORATORY TEST RESULTS - SQUIGGLY LAKE (EAST) BORROW

Borehole No.	Sample No.	Depth (m)	Grain Size Distribution - %				Plasticity			Unified Class'n	W%	*Remarks
			Gravel	Sand	Silt	Clay	W _L	W _p	I _p			
<u>BORROW PROSPECT NO. 8</u>											*FM = Fineness Modulus of sample Fraction passing 10 mm Sieve.	
BH88-8B1	AS1	0.00-1.10	56 SAND AND GRAVEL,	42	2	0	Non-Plastic			GP	4.0 3.6	No Cobbles, FM 3.8
BH88-8B1	AS2	1.10-2.40	19 SAND,	76	5	0	Non-Plastic			SW	8.1	No Cobbles, FM 4.4
BH88-8B1	AS3	3.00-4.20	7 SAND,	76	17		Not Tested			SM	12.2 12.8	FM 2.3
BH88-BH2	AS2	1.50-2.40	32 GRAVELLY SAND,	58	10		Not Tested			SW-SM	5.9	No Cobbles, FM 3.4
BH88-8B2	AS3	3.00-3.80	27	58	15		Not Tested			SM	11.2	No Cobbles, FM 2.8
<u>BORROW PROSPECT No. 9</u>												
BH88-9B1	AS1	0.00-0.40	86	12	2	0	Non-Plastic			GP	1.2	FM 3.8
BH88-9B1	AS2	2.00-2.45	40	54	6	0	Non-Plastic			SP-SM	2.8	No Cobbles, FM 2.7

TABLE 6 **SUMMARY OF LABORATORY TEST RESULTS**
MINE AND DUMP OVERBURDEN

Borehole No.	Sample No.	Depth (m)	Grain Size Distribution - %				Plasticity			Unified Class'n	W%	*Other Tests
			Gravel	Sand	Silt	Clay	W	W _p	I _p			
<u>MAIN ZONE</u>												
<u>BH88-MZ1</u>	AS3 (CRREL)	0.70-1.25	13	73	1	13	Non-Plastic			SM	23.7	γ_{bf} 1920 γ_d 1552
			SAND TILL, some Gravel, some Clay, trace Silt									
<u>BH88-MZ1</u>	AS3 (CRREL)	1.49-1.60	40	30	24	6	Non-Plastic			GM	54.2	γ_{bf} 1640 γ_d 1064
			SANDY GRAVEL TILL, some Silt, trace Clay									
<u>BH88-MZ1</u>	AS5	1.67-2.30	21	48	22	9	Non-Plastic			SM	9.0	Nil
			SAND TILL, some Gravel, some silt, trace Clay									
<u>BH88-MZ2</u>	AS2	0.51-1.25	17	32	40	11	Non-Plastic			ML	10.5	Nil
			SANDY SILT TILL, some Gravel, some Clay									
<u>CENTRE ZONE</u>												
<u>BH88-CZ1</u>	AS2	0.42-0.92	16	43	30	11	Non-Plastic			SM	6.4	Nil
			SILTY SAND TILL, some Gravel, some Clay									
<u>BH88-CZ1</u>	AS3 (CRREL)	0.92-1.14	30	39	21	10	Non-Plastic			SM	22.8	γ_{bf} 2109 γ_d 1717
			GRAVELLY SAND TILL, some Silt, some Clay									
<u>BH88-CZ1</u>	AS4	1.13-1.85	15	44	30	11	Non-Plastic			SM	6.6	Nil
			SILTY SAND TILL, some Gravel, some Clay									
<u>WASTE DUMPS</u>												
<u>BH88-1WD1</u>	AS2	0.53-1.29	17	45	25	13	Non-Plastic			SM	7.7	Nil
			SILTY SAND TILL, some Gravel, some Clay									
<u>BH88-1WD2</u>	AS3	1.25-1.50	35	56	5	4	Non-Plastic			SP	4.4	Nil
			GRAVELLY SAND TILL, trace Silt, trace Clay									

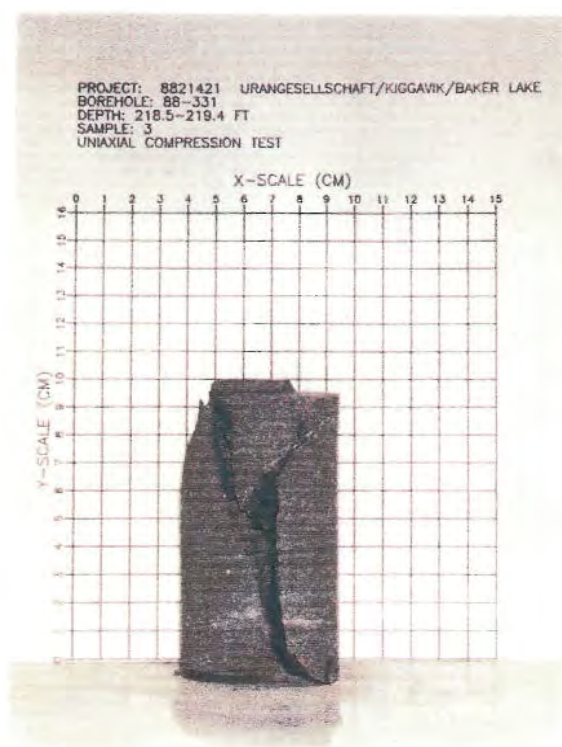
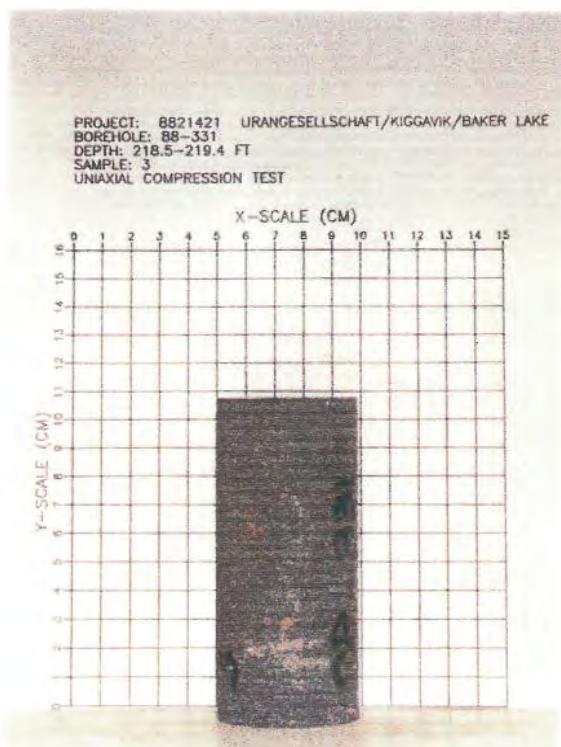
* Other Tests - γ_{bf} = Bulk Frozen Density (kg/cu.m). γ_d = Dry Density (kg/cu.m)
Gs = Specific Gravity Soil Solids

TABLE 1 LABORATORY TEST RESULTS

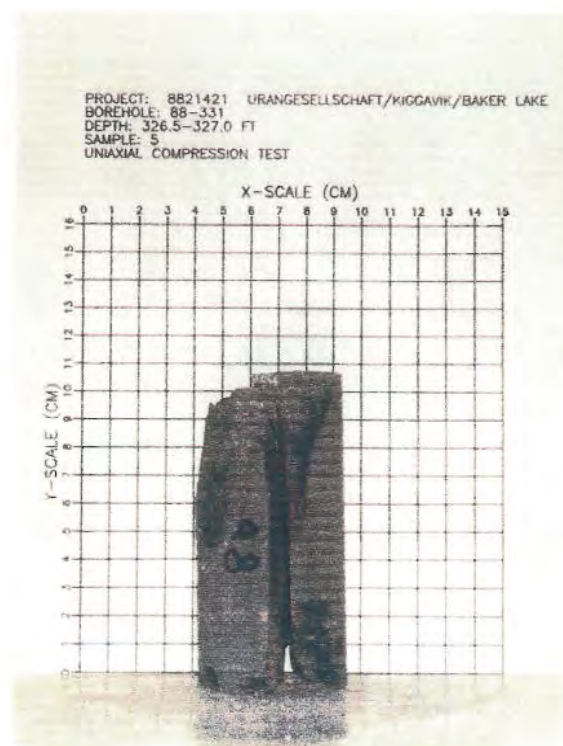
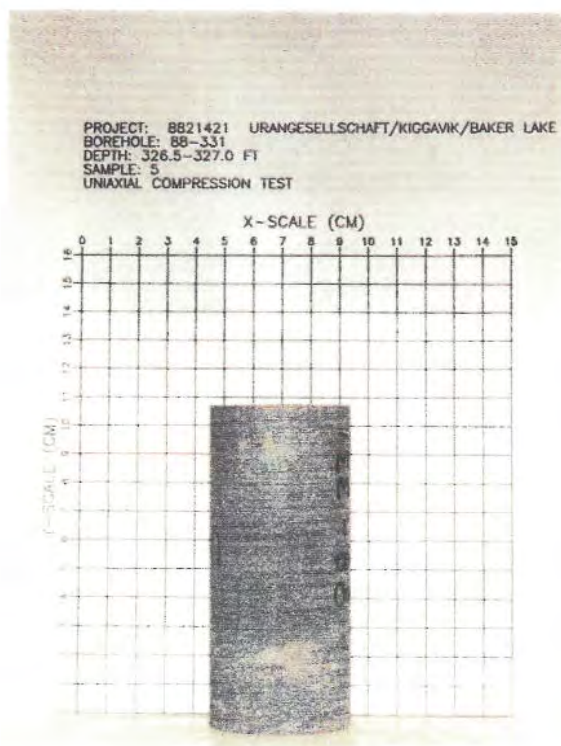
Drillhole	Sample No.	Depth		U.C.S. (MPa)	Young's Modulus (MPa)	Poissons Ratio	Brazilian (MPa)	Density (gm/cm ³)	Sample Description and Remarks
		From (ft.)	To (ft.)						
88-331	1	71.5	72.8	128	7.53E + 04	0.24	28.0	2.67	Silicified foliated meta-arkose
	2	166.0	167.1				-	-	Foliated meta-arkose
	3	218.5	219.4	117			-	2.77	Lamprophyre
	4	274.5	276.5	62.3	5.60E + 04	0.20	-	2.76	Chloritic meta-arkose (sheared)
	5	326.5	327.0	159			-	2.69	Meta-arkose
	6	360.2	362.0	254	7.52E + 04	0.22	17.1	2.65	Felspar-Porphyry
	7	412	412.8				32.2	-	Mafic meta-arkose
	8	493.7	494.8	65.8	8.54E + 04	0.20	28.3	2.66	Silicified, chloritic meta-arkose
	9	522	523				33.5	-	Haematite stained meta-arkose
	10	604.8	605.7	210			-	2.68	Silicified meta-arkose
88-332	1	57.0	57.7				33.1	-	Mafic meta-arkose
	2	124.7	125.4	66.9				2.71	Mafic meta-arkose
	3	299.5	300.4	97.2				2.71	Foliated meta-arkose
	4	319.2	320.2	182				2.74	Silicified meta-arkose
	5	386.1	387.0	61.3				2.84	Meta-arkose
88-333	1	143.3	144.4	120			-	2.63	Orthoquartzite
	2	394.5	395.4	-			-		Haematised meta-arkose
	4	443.4	444.1	28.7			-	2.41	Slightly altered meta-arkose
	6	464.5	465.7	9.68			-	2.08	Altered meta-arkose
	7	487.9	488.6	39.1	3.94E + 03	0.11	-	2.42	Slightly altered meta-arkose
	8	525.8	526.8	135.0	7.61E + 04	0.24	25.2	2.68	Unaltered meta-arkose
86-231	1	357.5	358.5	109	5.91E + 04	0.17	15.6		Biotite Granite

UNIAXIAL COMPRESSION TEST SAMPLES BOREHOLE 88-331

Figure



Lamprophyre

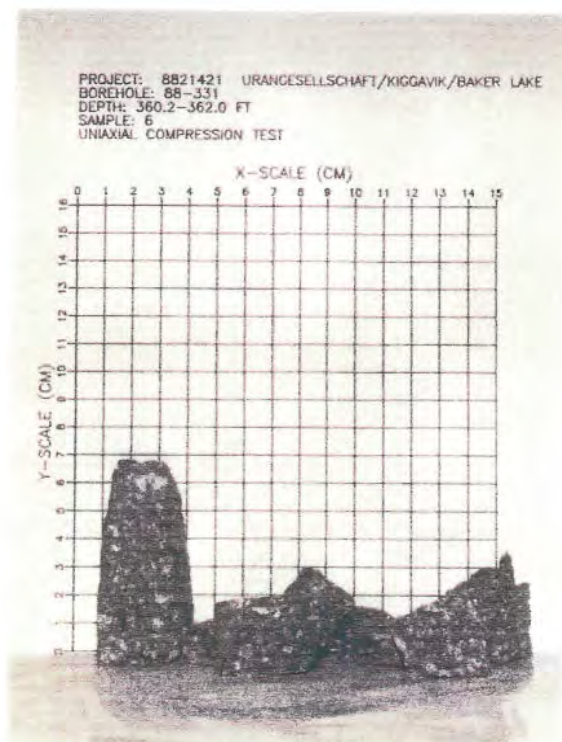
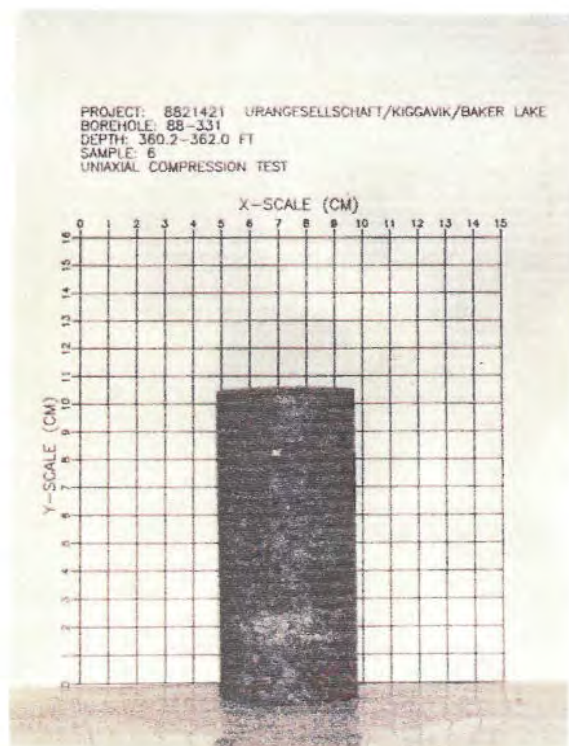


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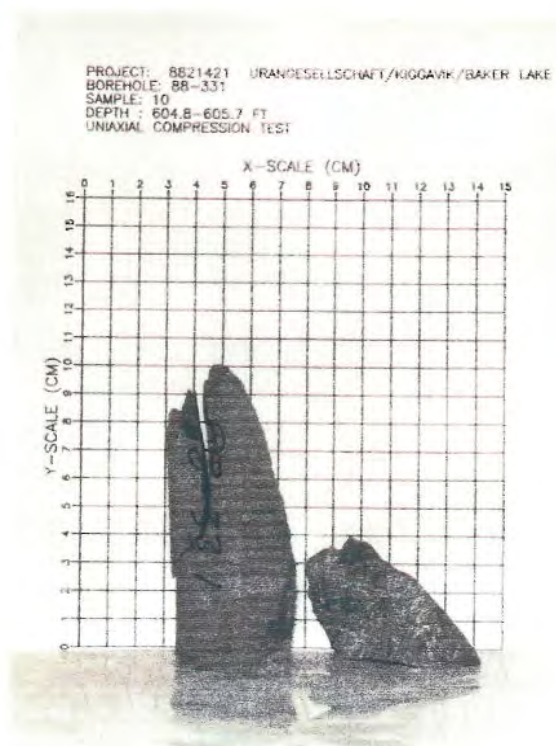
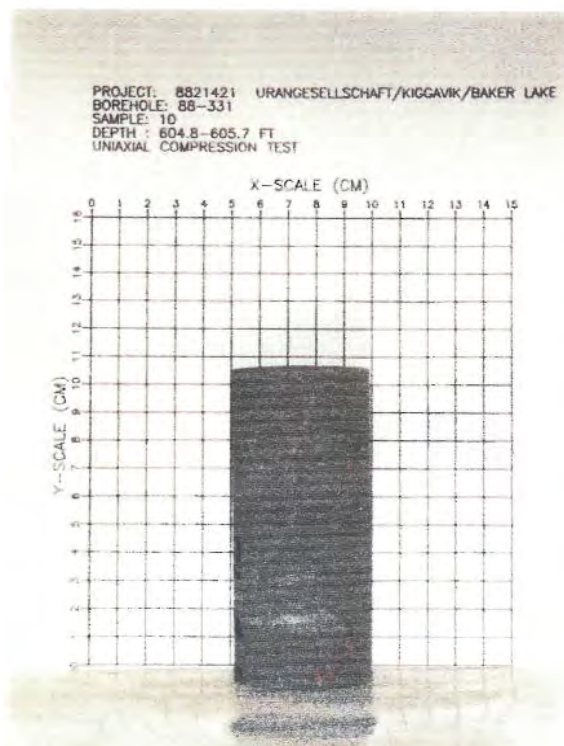
PROJECT NO. 8821421 DRAWN REVIEWED DATE

UNIAXIAL COMPRESSION TEST SAMPLES BOREHOLE 88-331

Figure



Felspar-Porphyry

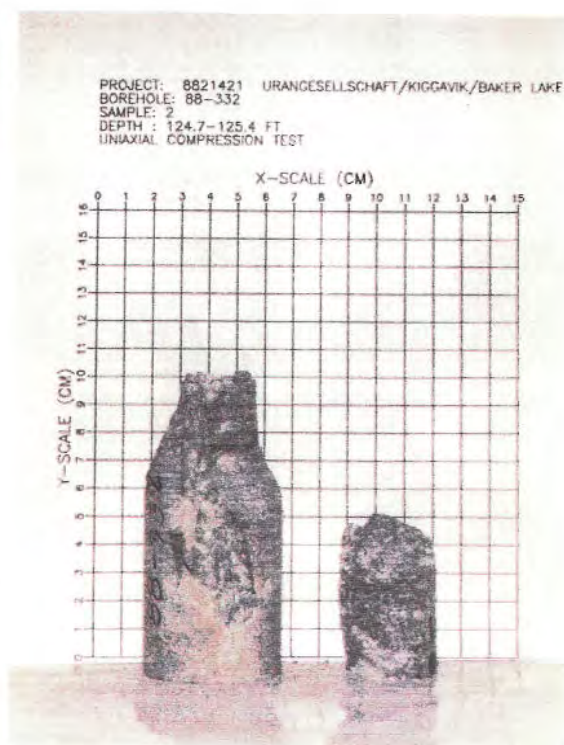
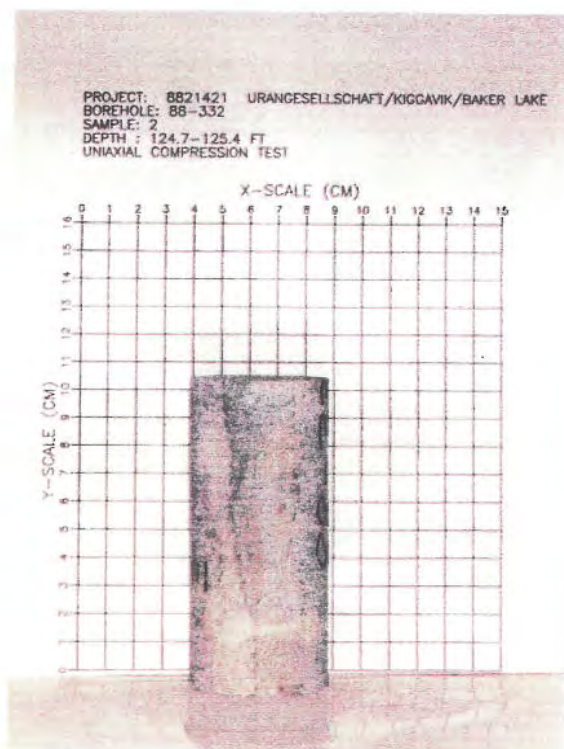


Silicified meta-arkose

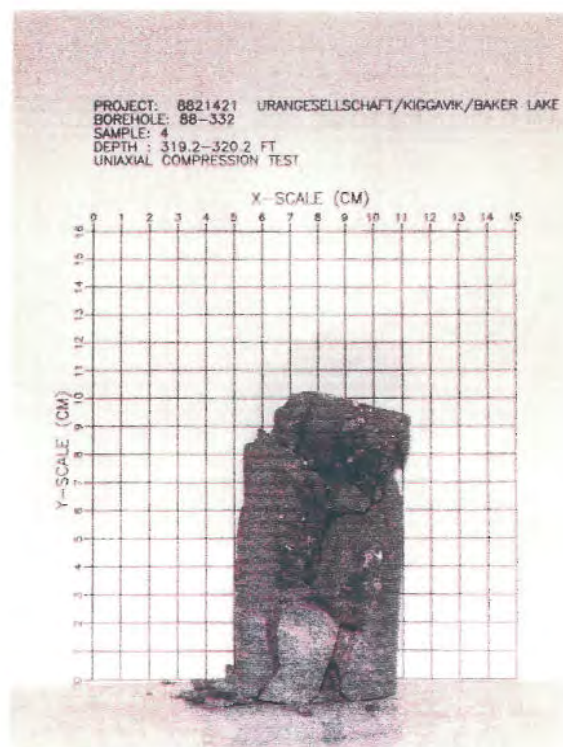
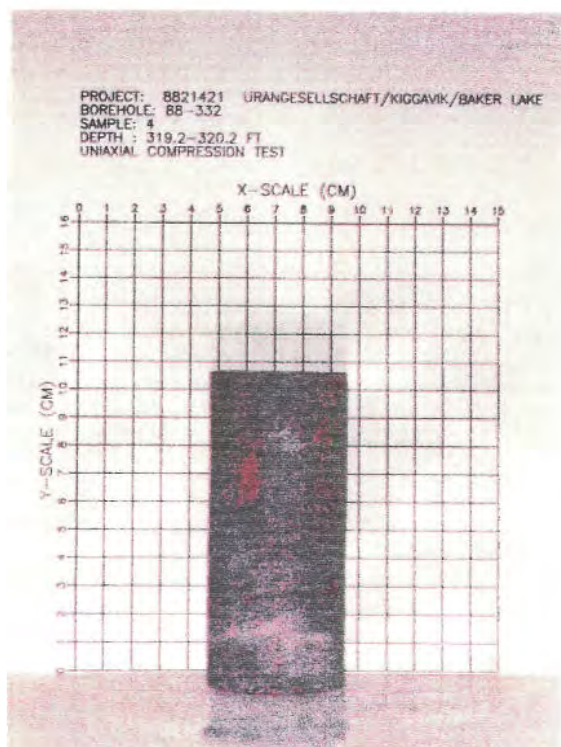
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UNIAXIAL COMPRESSION TEST SAMPLES BOREHOLE 88-332

Figure



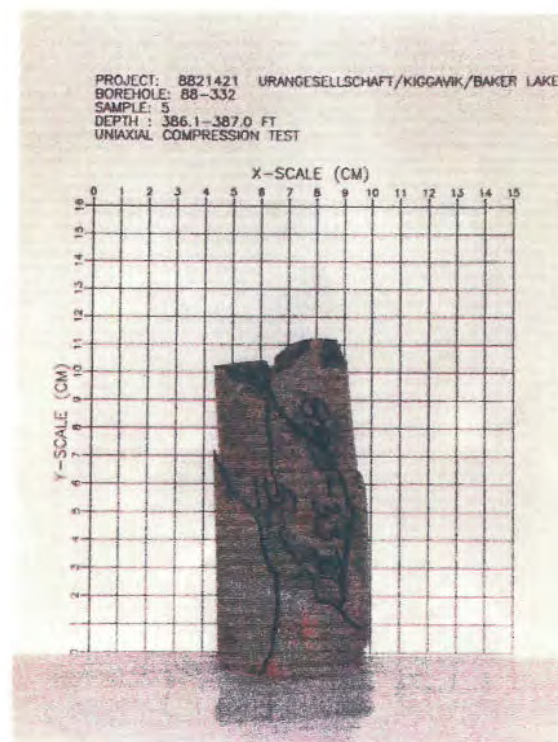
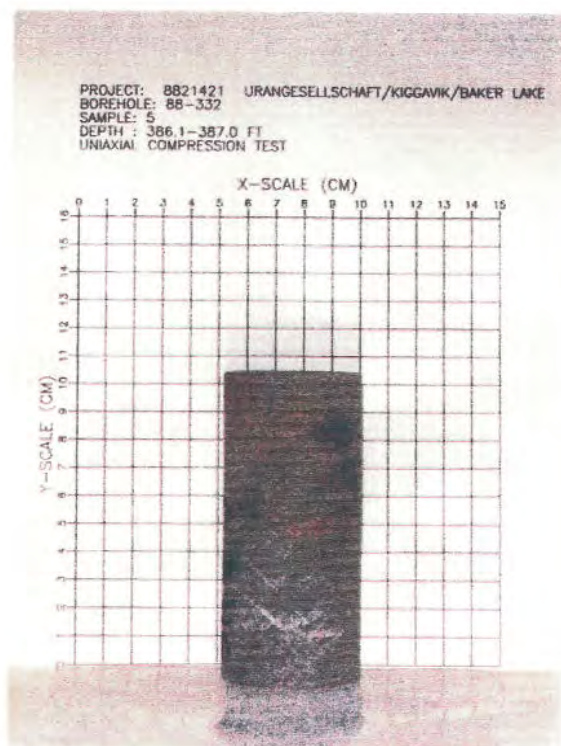
Mafic meta-arkose



Silicified meta-arkose

UNIAXIAL COMPRESSION TEST SAMPLES BOREHOLE 88-332

Figure

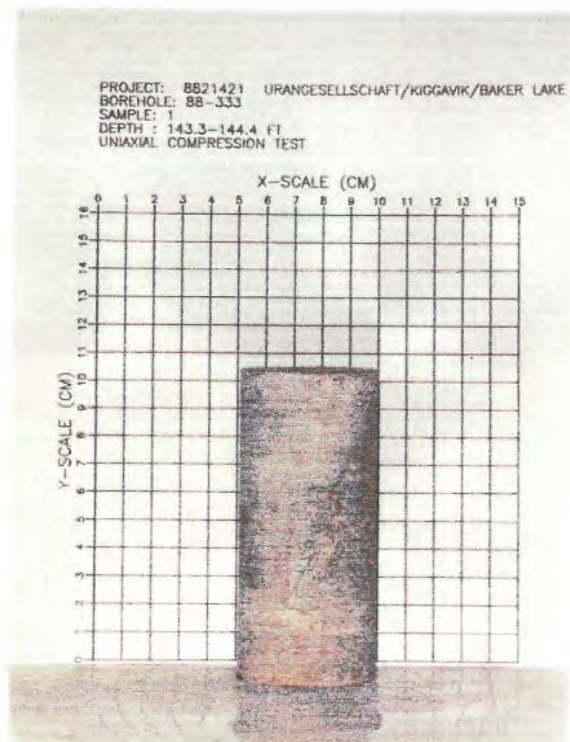


Meta-arkose

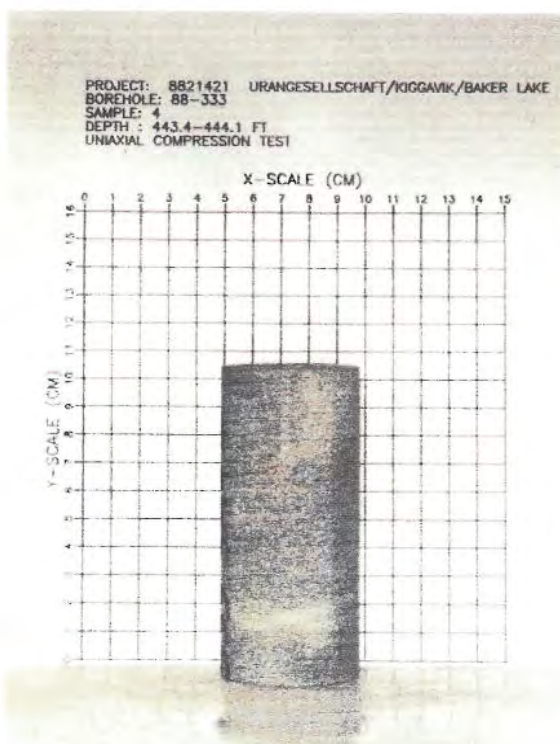
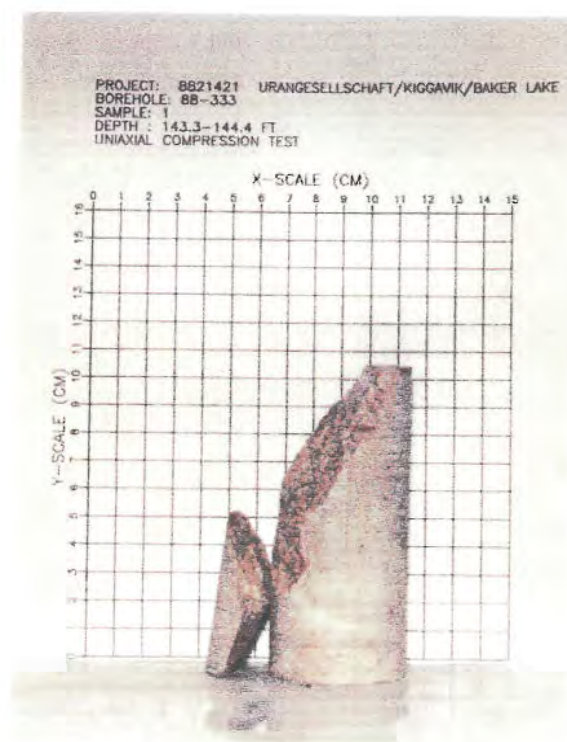
PROJECT NO. 8821421... DRAWN REVIEWED DATE

UNIAXIAL COMPRESSION TEST SAMPLES BOREHOLE 88-333

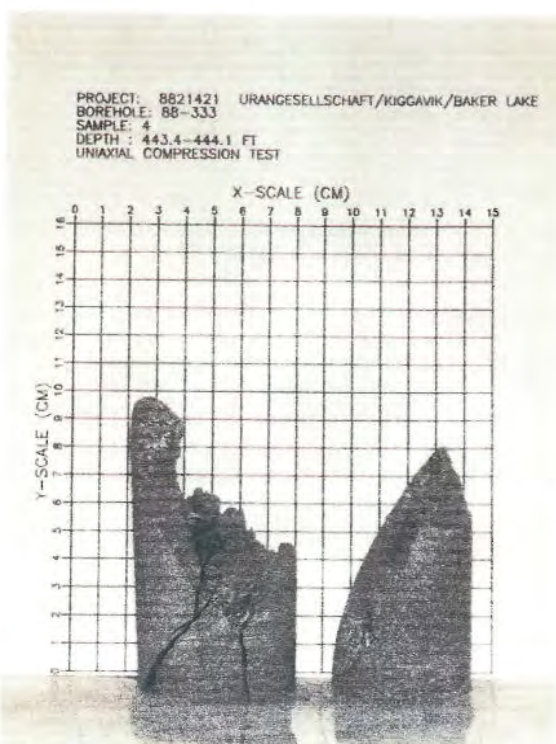
Figure



Orthoquartzite



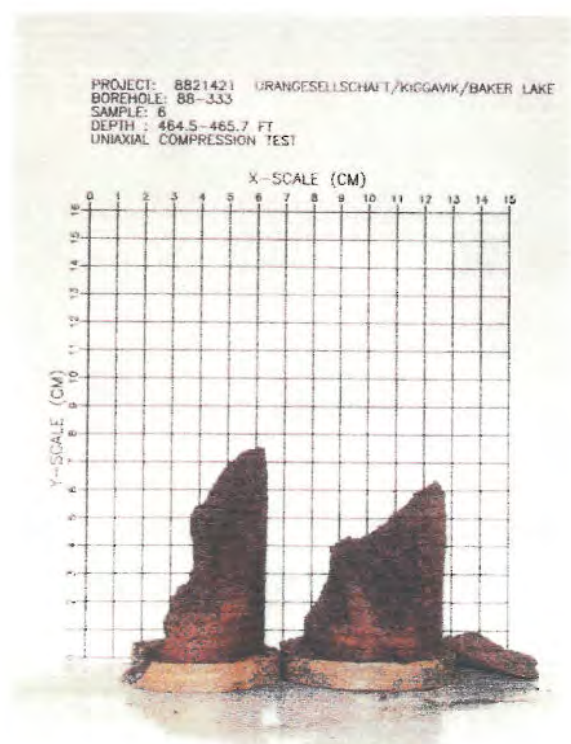
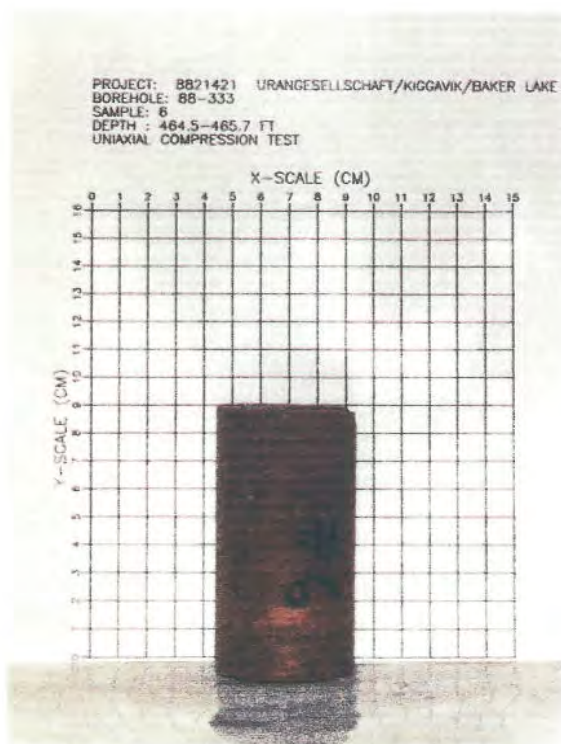
Slightly altered meta-arkose



PROJECT NO. 8821421 DRAWN REVIEWED DATE

UNIAXIAL COMPRESSION TEST SAMPLES BOREHOLE 88-333

Figure

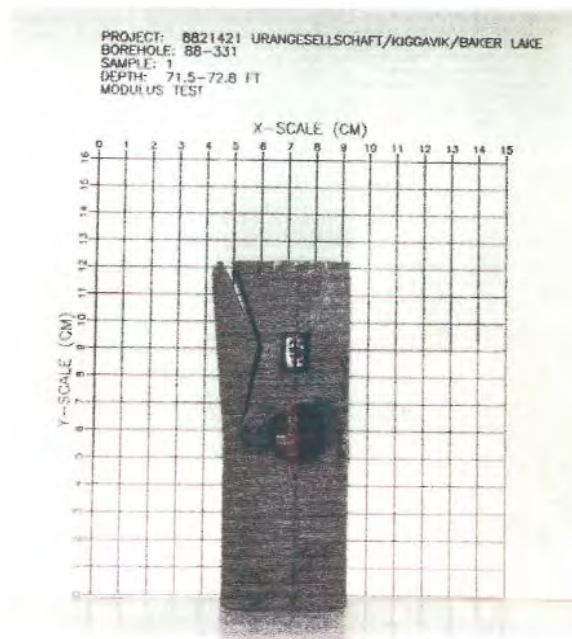
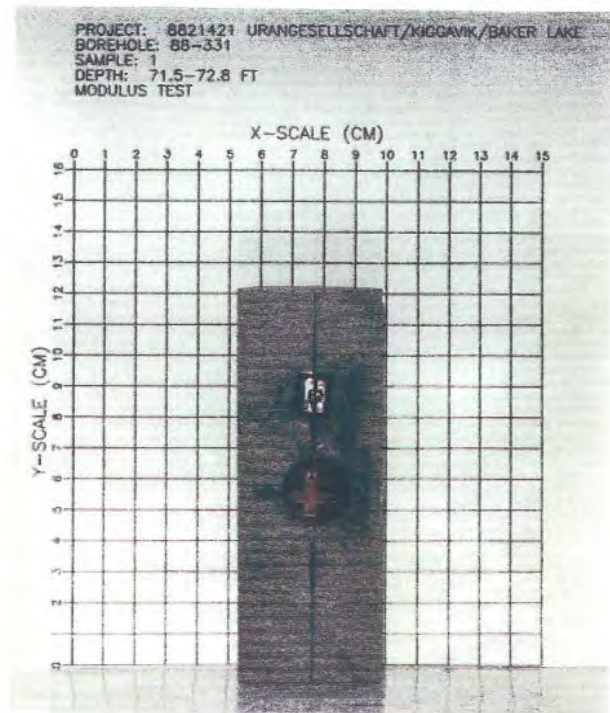


Altered meta-arkose

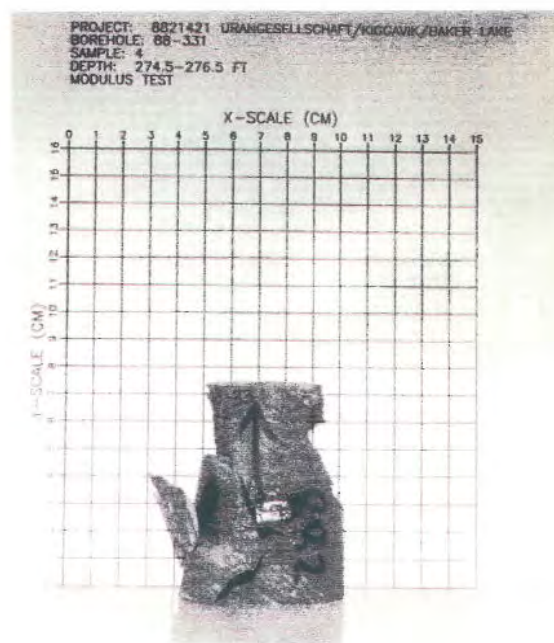
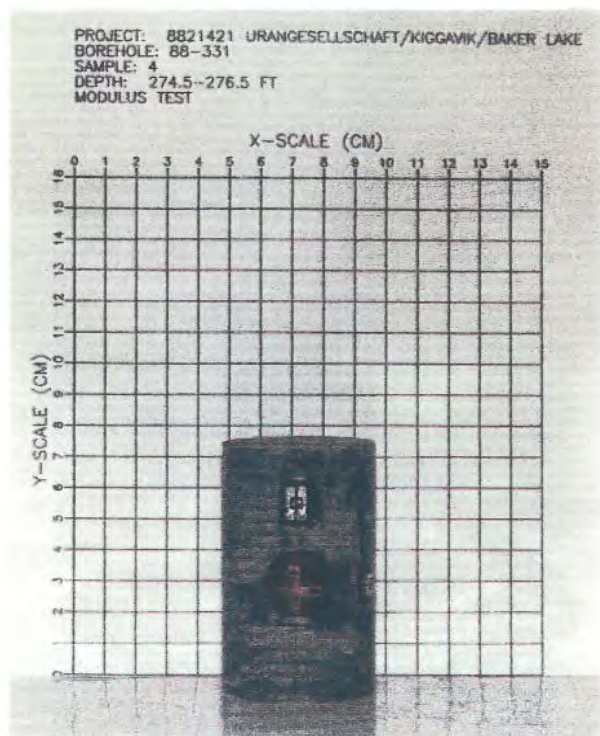
PROJECT NO. 8821421 DRAWN REVIEWED DATE

MODULUS TEST SAMPLES BOREHOLE 88-331

Figure



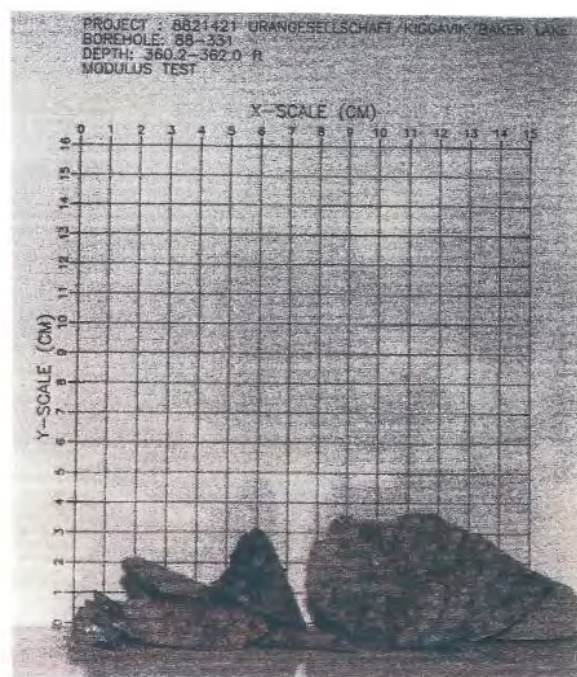
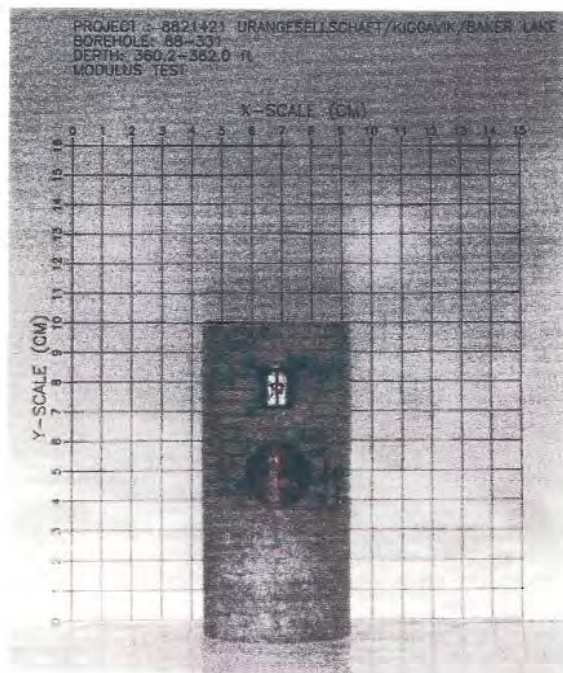
Silicified foliated meta-arkose



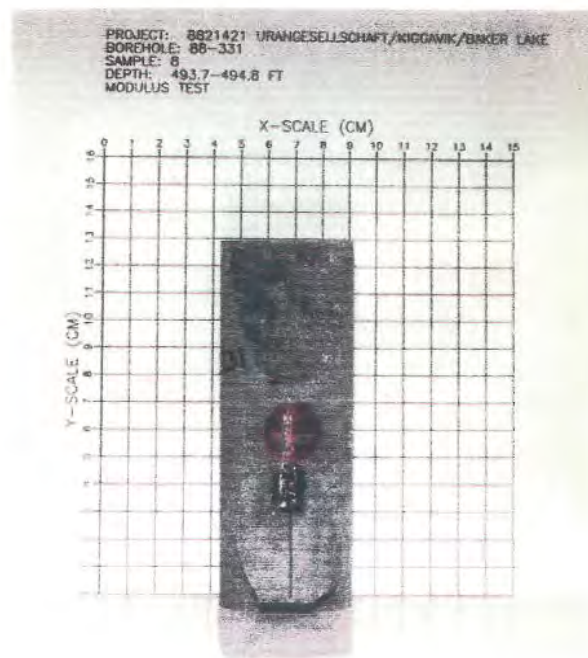
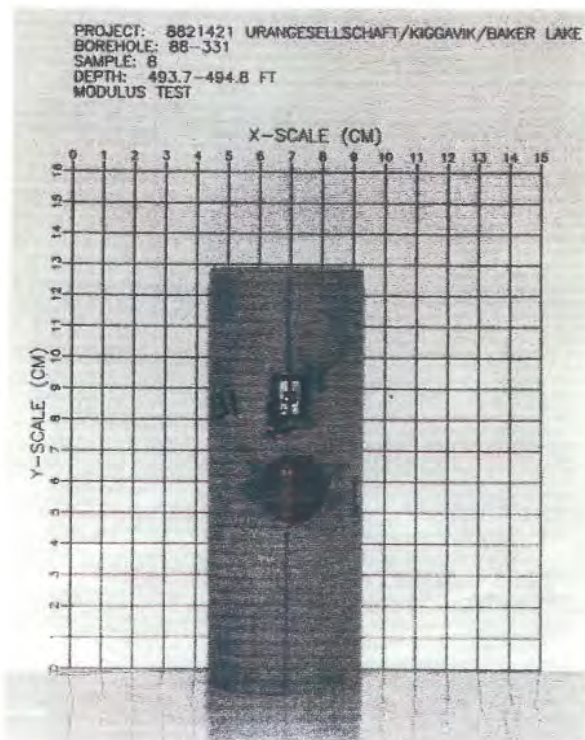
Chloritic meta-arkose (sheared)

MODULUS TEST SAMPLES BOREHOLE 88-331

Figure



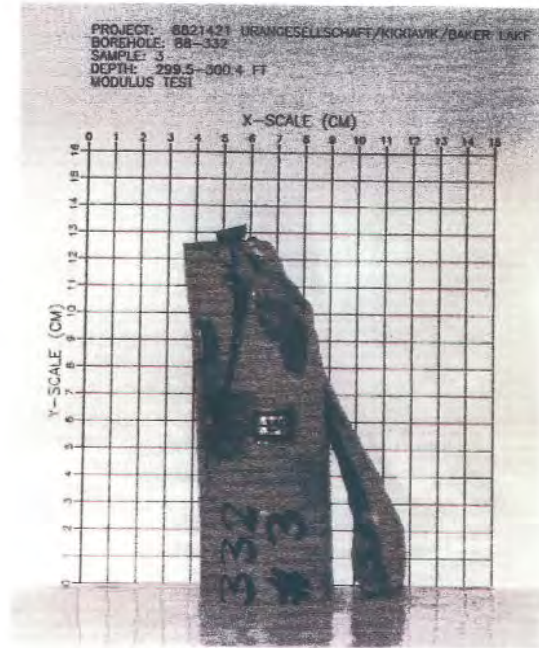
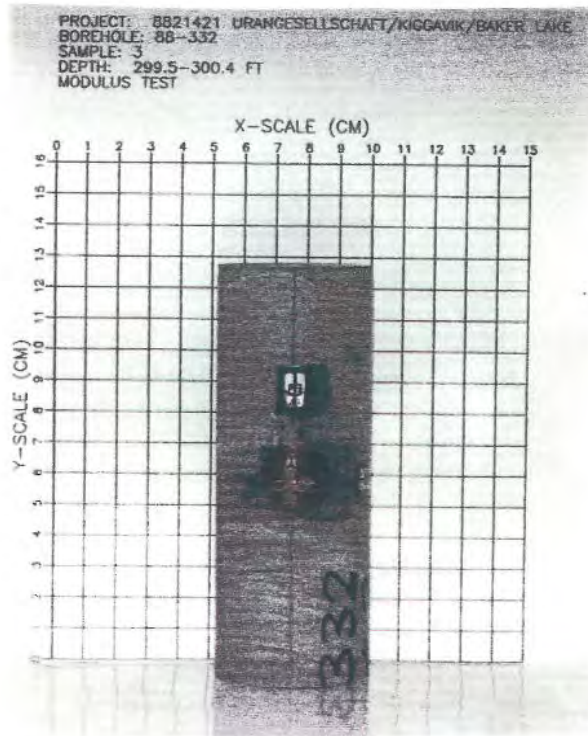
Felspar-Porphyry



Silicified, chloritic meta-arkose

**MODULUS TEST SAMPLES
BOREHOLE 88-332**

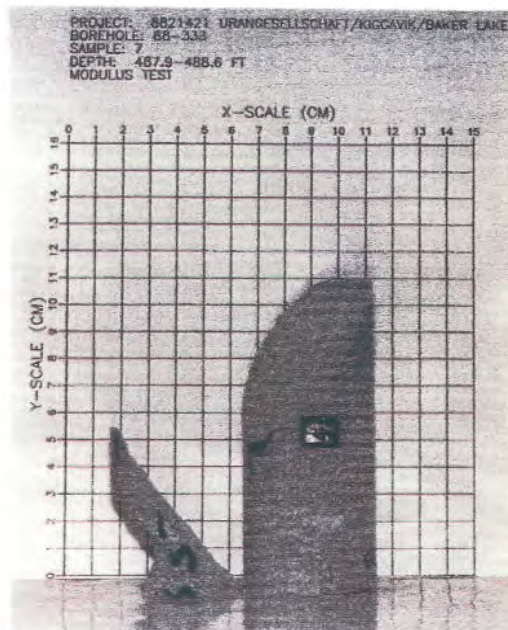
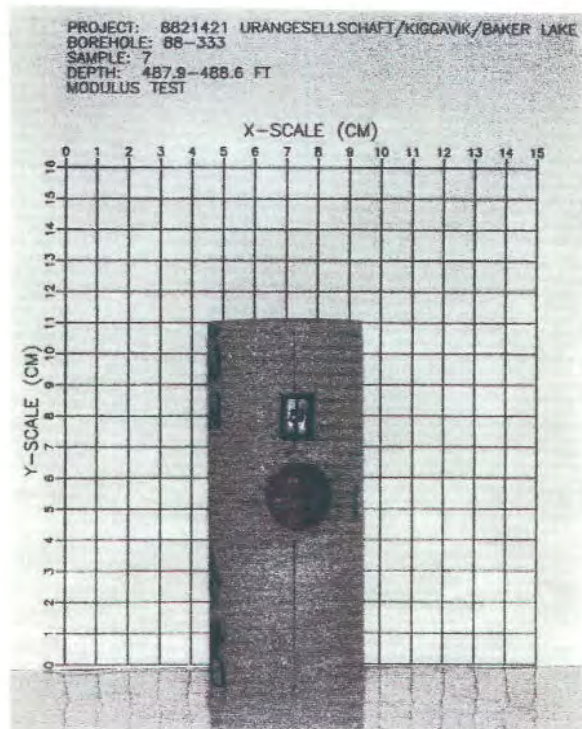
Figure



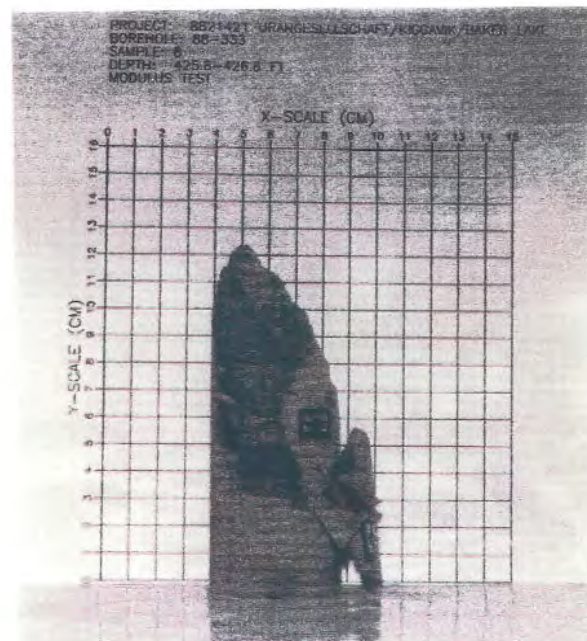
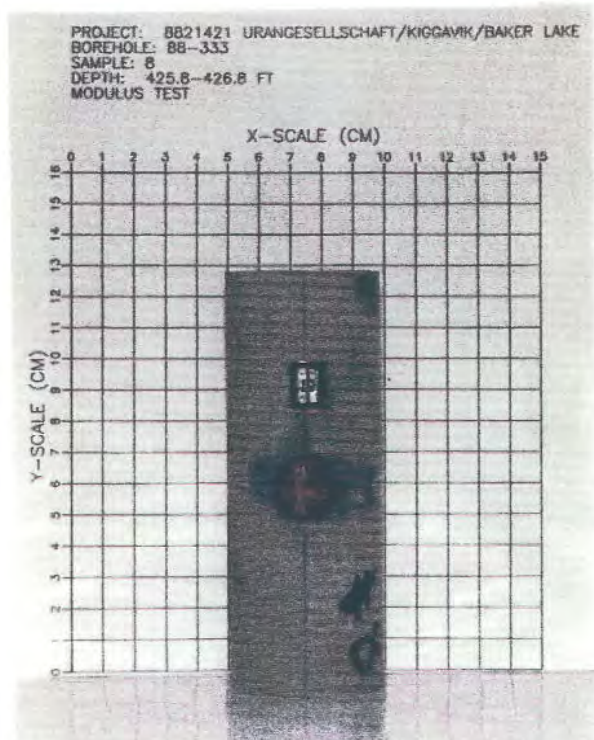
Foliated meta-arkose

MODULUS TEST SAMPLES BOREHOLE 88-333

Figure



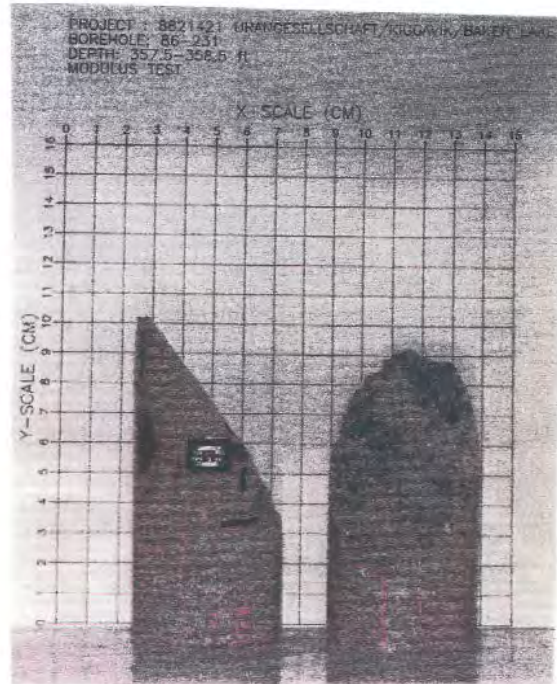
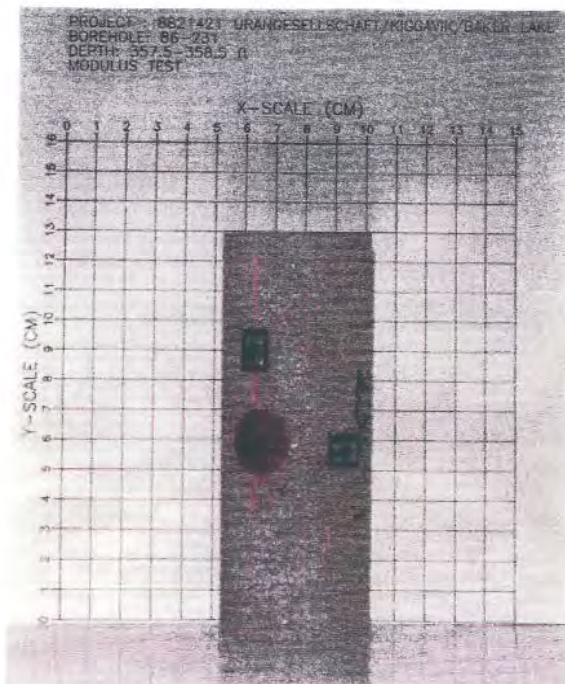
Slightly altered meta-arkose



Unaltered meta-arkose

MODULUS TEST SAMPLES BOREHOLE 86-231

Figure



Biotite Granite

PROJECT NO. DRAWN REVIEWED DATE

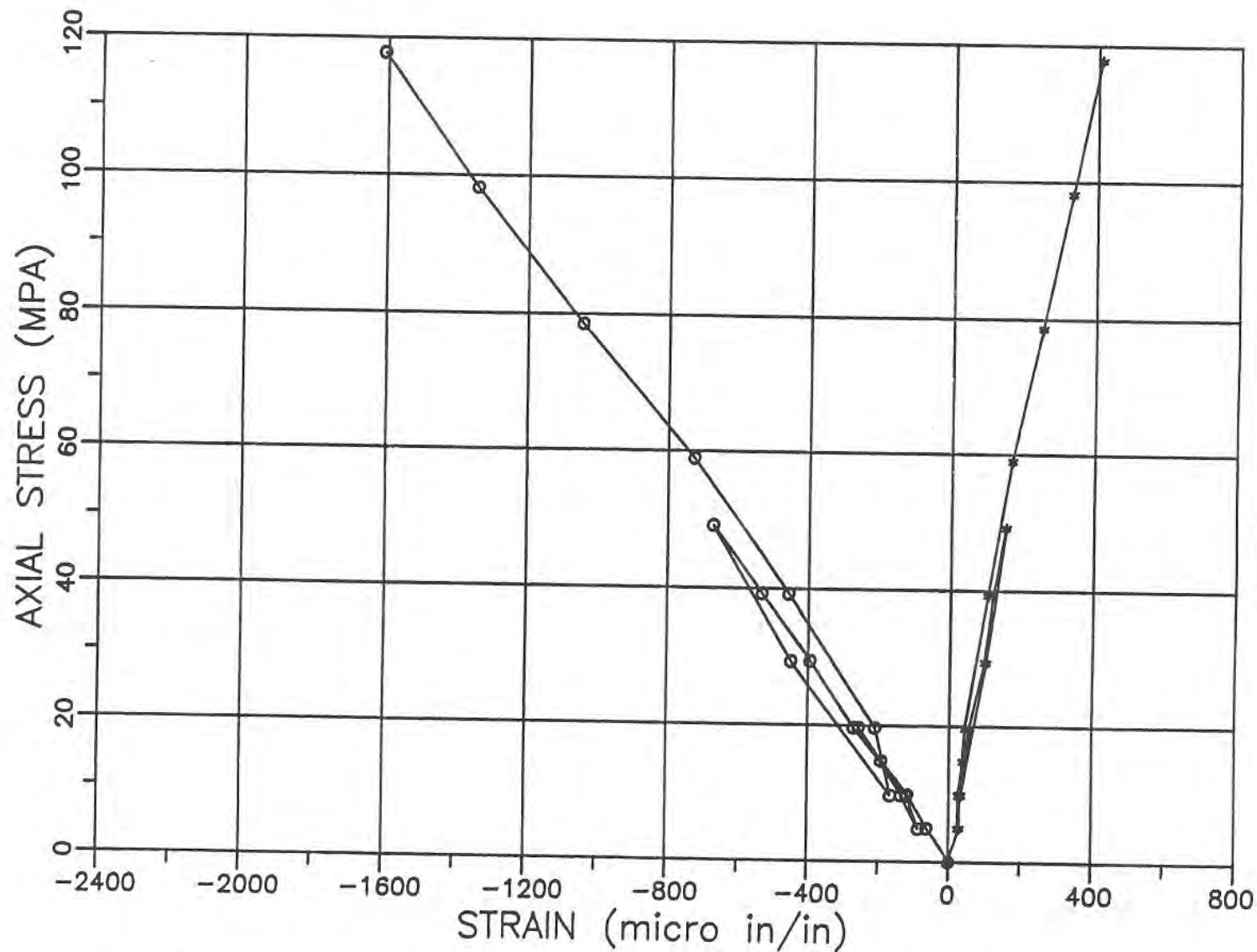
TABLE 1 LABORATORY TEST RESULTS

Drillhole	Sample No.	Depth		U.C.S. (MPa)	Young's Modulus (MPa)	Poissons Ratio	Brazilian (MPa)	Density (gm/cm ³)	Sample Description and Remarks
		From (ft.)	To (ft.)						
88-331	1	71.5	72.8	128	7.53E + 04	0.24	28.0	2.67	Silicified foliated meta-arkose
	2	166.0	167.1				-	-	Foliated meta-arkose
	3	218.5	219.4	117			-	2.77	Lamprophyre
	4	274.5	276.5	62.3	5.60E + 04	0.20	-	2.76	Chloritic meta-arkose (sheared)
	5	326.5	327.0	159			-	2.69	Meta-arkose
	6	360.2	362.0	254	7.52E + 04	0.22	17.1	2.65	Felspar-Porphyry
	7	412	412.8				32.2	-	Mafic meta-arkose
	8	493.7	494.8	65.8	8.54E + 04	0.20	28.3	2.66	Silicified, chloritic meta-arkose
	9	522	523				33.5	-	Haematite stained meta-arkose
	10	604.8	605.7	210			-	2.68	Silicified meta-arkose
88-332	1	57.0	57.7				33.1	-	Mafic meta-arkose
	2	124.7	125.4	66.9				2.71	Mafic meta-arkose
	3	299.5	300.4	97.2				2.71	Foliated meta-arkose
	4	319.2	320.2	182				2.74	Silicified meta-arkose
	5	386.1	387.0	61.3				2.84	Meta-arkose
88-333	1	143.3	144.4	120			-	2.63	Orthoquartzite
	2	394.5	395.4	-			-		Haematised meta-arkose
	4	443.4	444.1	28.7			-	2.41	Slightly altered meta-arkose
	6	464.5	465.7	9.68			-	2.08	Altered meta-arkose
	7	487.9	488.6	39.1	3.94E + 03	0.11	-	2.42	Slightly altered meta-arkose
	8	525.8	526.8	135.0	7.61E + 04	0.24	25.2	2.68	Unaltered meta-arkose
86-231	1	357.5	358.5	109	5.91E + 04	0.17	15.6		Biotite Granite

UNIAXIAL COMPRESSION TEST

PROJECT# : 8821421	BOREHOLE : 88-331	LENGTH (cm) : 12.37
	SAMPLE : 1	DIAMETER (cm) : 4.47
PROJECT : KIGGAVIK	DEPTH : 71.5-72.8 ft	AREA (sqcm) : 15.69
CLIENT : URANGESELLSCHAFT	DATE : 09/14/88	RAM AREA (sqcm) : 223.40
LOCATION : BAKER LAKE		LOAD CALIB (KN/PSI) : 0.154

READING#	GAUGE	AXIAL	AXIAL	VERTICAL			DIAMETRICAL			YOUNG'S	POISSON'S
	LOAD	LOAD	STRESS	GAUGE1	GAUGE2	AVERAGE	GAUGE3	GAUGE4	AVERAGE	MODULUS	RATIO
	(psi)	(kN)	(MPA)	(micro in/in)			(micro in/in)			(MPA)	
0	0	0.0	0.00	0	0	0	0	0	0		
1	50	7.7	4.91	-116	-7	-62	48	10	29	7.98E+04	0.47
2	100	15.4	9.82	-218	-17	-118	51	4	28	8.35E+04	0.23
3	150	23.1	14.72	-318	-66	-192	70	6	38	7.67E+04	0.20
4	200	30.8	19.63	-391	-120	-256	92	23	58	7.68E+04	0.23
5	100	15.4	9.82	-251	-20	-136	57	0	29	7.24E+04	0.21
6	50	7.7	4.91	-153	-18	-88	43	5	24	5.74E+04	0.28
7	100	15.4	9.82	-222	-20	-121	48	2	25	8.11E+04	0.21
8	200	30.8	19.63	-395	-146	-271	86	26	56	7.26E+04	0.21
9	300	46.2	29.45	-535	-255	-395	142	51	97	7.45E+04	0.24
10	400	61.6	39.26	-692	-376	-534	159	78	119	7.35E+04	0.22
11	500	77.0	49.08	-840	-504	-672	198	108	153	7.30E+04	0.23
12	300	46.2	29.45	-605	-295	-450	141	60	101	6.54E+04	0.22
13	100	15.4	9.82	-269	-65	-167	61	4	33	5.88E+04	0.19
14	200	30.8	19.63	-317	-102	-210	72	16	44	9.37E+04	0.21
15	400	61.6	39.26	-619	-297	-458	146	62	104	8.57E+04	0.23
16	600	92.4	58.89	-910	-544	-727	215	120	168	8.10E+04	0.23
17	800	123.2	78.52	-1247	-839	-1043	307	194	251	7.53E+04	0.24
18	1000	154.0	98.16	-1569	-1118	-1344	395	267	331	7.31E+04	0.25
19	1200	184.8	117.79	-1852	-1365	-1609	487	333	410	7.32E+04	0.25
20	1300	200.2	127.60								



* - DIAMETRICAL STRAIN
o - VERTICAL STRAIN

BOREHOLE : 88-331
SAMPLE : 1
DEPTH : 71.5-72.8 FT
PEAK AXIAL STRESS = 127.6 MPA

Figure

UNIAXIAL COMPRESSION TEST

PROJECT#: 8821421

BOREHOLE: 88-331

LENGTH (cm): 7.81

PROJECT: KIGGAVER

SAMPLE: 4

DIAMETER (cm): 4.73

CLIENT: URANGESELLSCHAFT

DEPTH: 274.5-276.5 ft

AREA (sqcm): 17.57

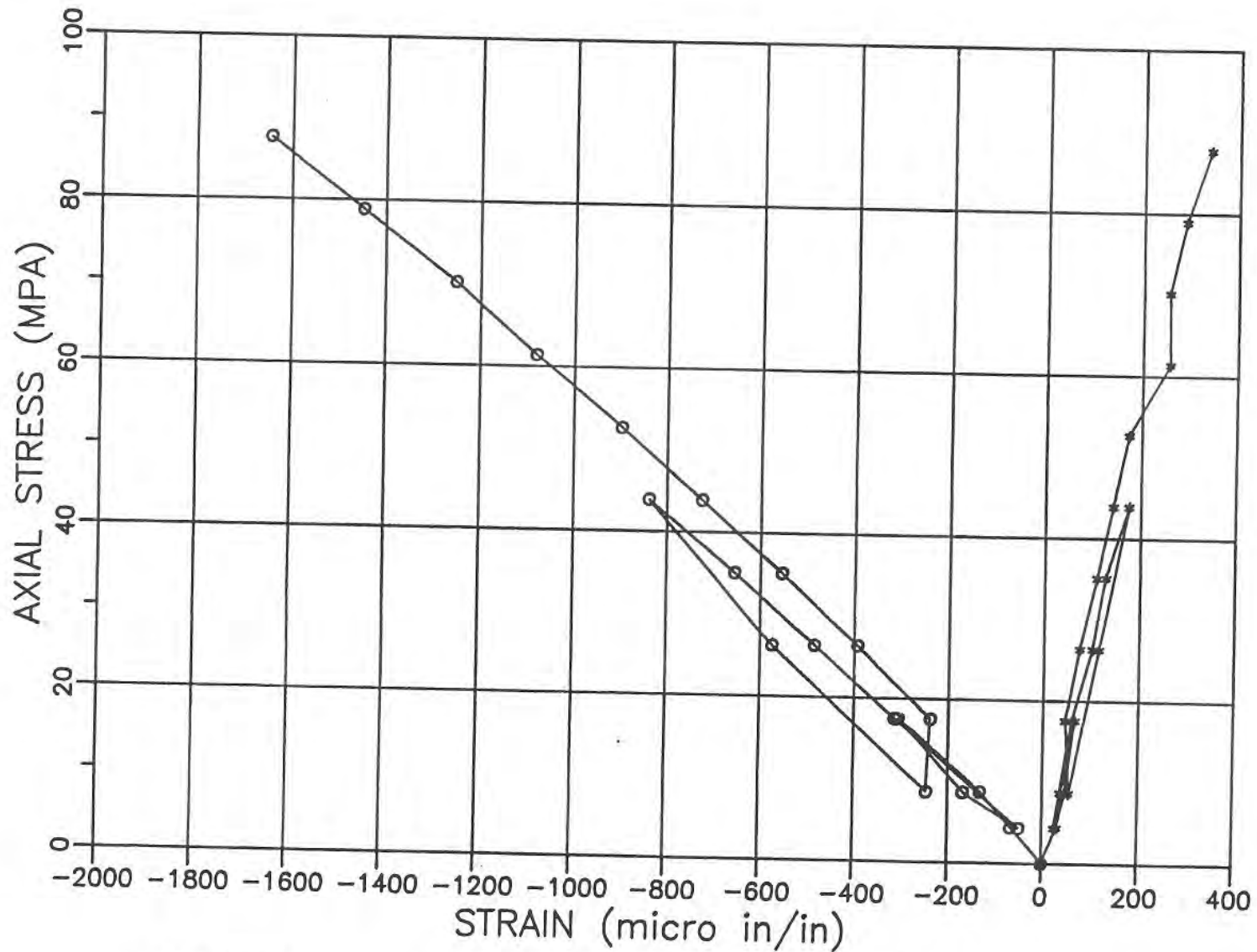
LOCATION: BAKER LAKE

DATE: 09/16/88

RAM AREA (sqcm): 223.40

LOAD CALIB (KN/PSI): 0.154

READING#	GAUGE	AXIAL	AXIAL	VERTICAL			DIAMETRICAL			YOUNG'S	POISSON'S
	LOAD	LOAD	STRESS	GAUGE1	GAUGE2	AVERAGE	GAUGE3	GAUGE4	AVERAGE	MODULUS	RATIO
	(psi)	(kN)	(MPA)	(micro in/in)			(micro in/in)			(MPA)	
0	0	0.0	0.00	0	0	0	0	0	0		
1	50	7.7	4.38	-3	-128	-66	16	44	30	6.69E+04	0.46
2	100	15.4	8.77	-39	-222	-131	36	57	47	6.72E+04	0.36
3	200	30.8	17.53	-198	-414	-306	50	83	67	5.73E+04	0.22
4	100	15.4	8.77	-68	-268	-168	21	53	37	5.22E+04	0.22
5	50	7.7	4.38	-4	-93	-49	9	41	25	9.04E+04	0.52
6	200	30.8	17.53	-218	-408	-313	45	77	61	5.60E+04	0.19
7	300	46.2	26.30	-380	-589	-485	92	113	103	5.43E+04	0.21
8	400	61.6	35.06	-548	-763	-656	110	147	129	5.35E+04	0.20
9	500	77.0	43.83	-715	-960	-832	164	188	176	5.23E+04	0.21
10	300	46.2	26.30	-451	-698	-575	91	141	116	4.58E+04	0.20
11	100	15.4	8.77	-140	-351	-246	46	64	55	3.57E+04	0.22
12	200	30.8	17.53	-156	-320	-238	35	59	47	7.37E+04	0.20
13	300	46.2	26.30	-306	-478	-392	60	92	76	6.71E+04	0.19
14	400	61.6	35.06	-469	-640	-555	105	116	111	6.32E+04	0.20
15	500	77.0	43.83	-636	-816	-726	125	160	143	6.04E+04	0.20
16	600	92.4	52.60	-801	-993	-897	158	189	174	5.86E+04	0.19
17	700	107.8	61.36	-907	-1252	-1080	263	251	257	5.68E+04	0.24
18	800	123.2	70.13	-1028	-1475	-1252	216	294	255	5.60E+04	0.20
19	900	138.6	78.89	-968	-1927	-1448	193	387	290	5.45E+04	0.20
20	1000	154.0	87.66	-904	-2383	-1644	183	496	340	5.33E+04	0.21
21	1120	172.5	98.18								



* - DIAMETRICAL STRAIN
o - VERTICAL STRAIN

BOREHOLE : 88-331
SAMPLE : 4
DEPTH : 274.5-276.5 FT
PEAK AXIAL STRESS = 98.2 MPA

Figure

UNIAXIAL COMPRESSION TEST

PROJECT#: 8821421

BOREHOLE: 88-331

LENGTH (cm): 10.18

PROJECT: KIGGAVIK

SAMPLE: 8

DIAMETER (cm): 4.73

CLIENT: URANGESLSCHAFT

DEPTH: 380.2-382.0 ft

AREA (sqcm): 17.57

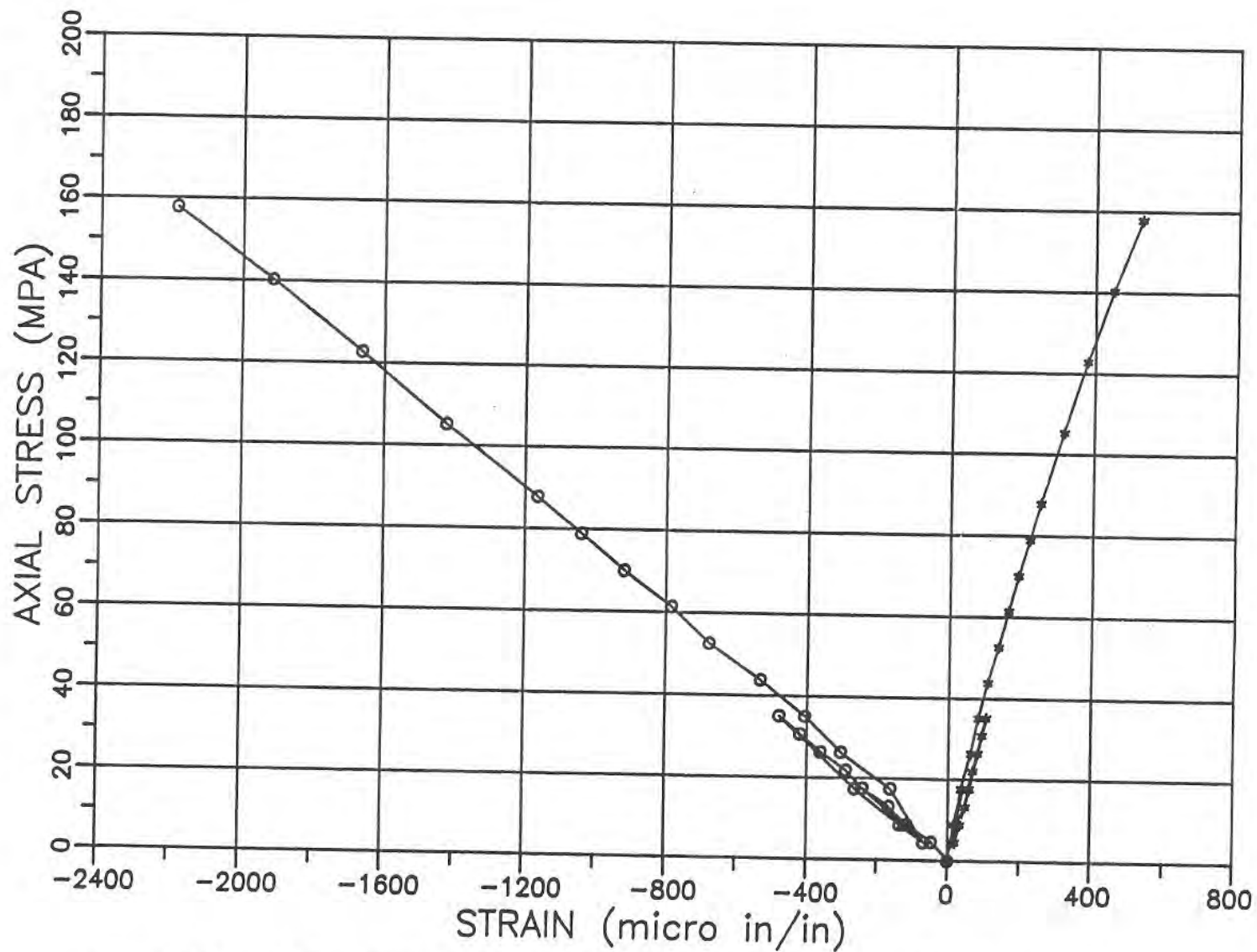
LOCATION: BAKER LAKE

DATE: 09/16/88

RAM AREA (sqcm): 223.40

LOAD CALIB (KN/PSI): 0.154

READING#	GAUGE LOAD	AXIAL LOAD	AXIAL STRESS	VERTICAL			DIAMETRICAL			YOUNG'S MODULUS	POISSON'S RATIO
	(psi)	(kN)	(MPA)	GAUGE1	GAUGE2	AVERAGE	GAUGE3	GAUGE4	AVERAGE	(MPA)	
0	0	0.0	0.00	0	0	0	0	0	0		
1	60	7.7	4.38	-3	-81	-47	18	0	9	9.33E+04	0.19
2	100	15.4	8.77	-56	-178	-117	29	1	15	7.52E+04	0.13
3	200	30.8	17.53	-186	-294	-240	49	33	41	7.31E+04	0.17
4	100	15.4	8.77	-72	-173	-123	33	8	20	7.18E+04	0.18
5	50	7.7	4.38	-16	-120	-68	19	0	10	6.45E+04	0.14
6	100	15.4	8.77	-58	-176	-116	29	15	22	7.58E+04	0.19
7	150	23.1	13.15	-156	-177	-167	52	43	48	7.90E+04	0.29
8	200	30.8	17.53	-250	-233	-242	51	68	59	7.28E+04	0.24
9	250	38.5	21.92	-268	-308	-288	62	76	69	7.61E+04	0.24
10	300	46.2	26.30	-327	-395	-361	77	89	83	7.28E+04	0.23
11	350	53.9	30.68	-375	-465	-420	88	100	94	7.31E+04	0.22
12	400	61.6	35.08	-427	-528	-478	103	107	105	7.34E+04	0.22
13	200	30.8	17.53	-238	-287	-263	58	60	59	6.68E+04	0.22
14	100	15.4	8.77	-124	-145	-135	32	34	33	6.52E+04	0.25
15	50	7.7	4.38	-58	-77	-68	20	18	19	6.49E+04	0.28
16	200	30.8	17.53	-157	-167	-162	33	39	36	1.08E+05	0.22
17	300	46.2	26.30	-283	-322	-303	58	69	64	8.69E+04	0.21
18	400	61.6	35.08	-370	-444	-407	79	88	84	8.82E+04	0.21
19	500	77.0	43.83	-488	-596	-532	107	113	110	8.24E+04	0.21
20	600	92.4	52.80	-580	-775	-678	137	140	139	7.76E+04	0.20
21	700	107.8	61.36	-669	-903	-786	167	164	166	7.81E+04	0.21
22	800	123.2	70.13	-775	-1080	-918	199	185	192	7.64E+04	0.21
23	900	138.6	78.89	-876	-1204	-1040	230	213	222	7.58E+04	0.21
24	1000	154.0	87.66	-988	-1342	-1165	260	241	251	7.52E+04	0.22
25	1200	184.8	105.19	-1221	-1628	-1425	325	303	314	7.38E+04	0.22
26	1400	215.6	122.73	-1448	-1880	-1664	385	371	378	7.38E+04	0.23
27	1600	246.5	140.26	-1680	-2149	-1915	452	450	451	7.33E+04	0.24
28	1800	277.3	157.79	-1933	-2436	-2185	526	532	529	7.22E+04	0.24
29	1920	295.7	168.31								



* - DIAMETRICAL STRAIN
o - VERTICAL STRAIN

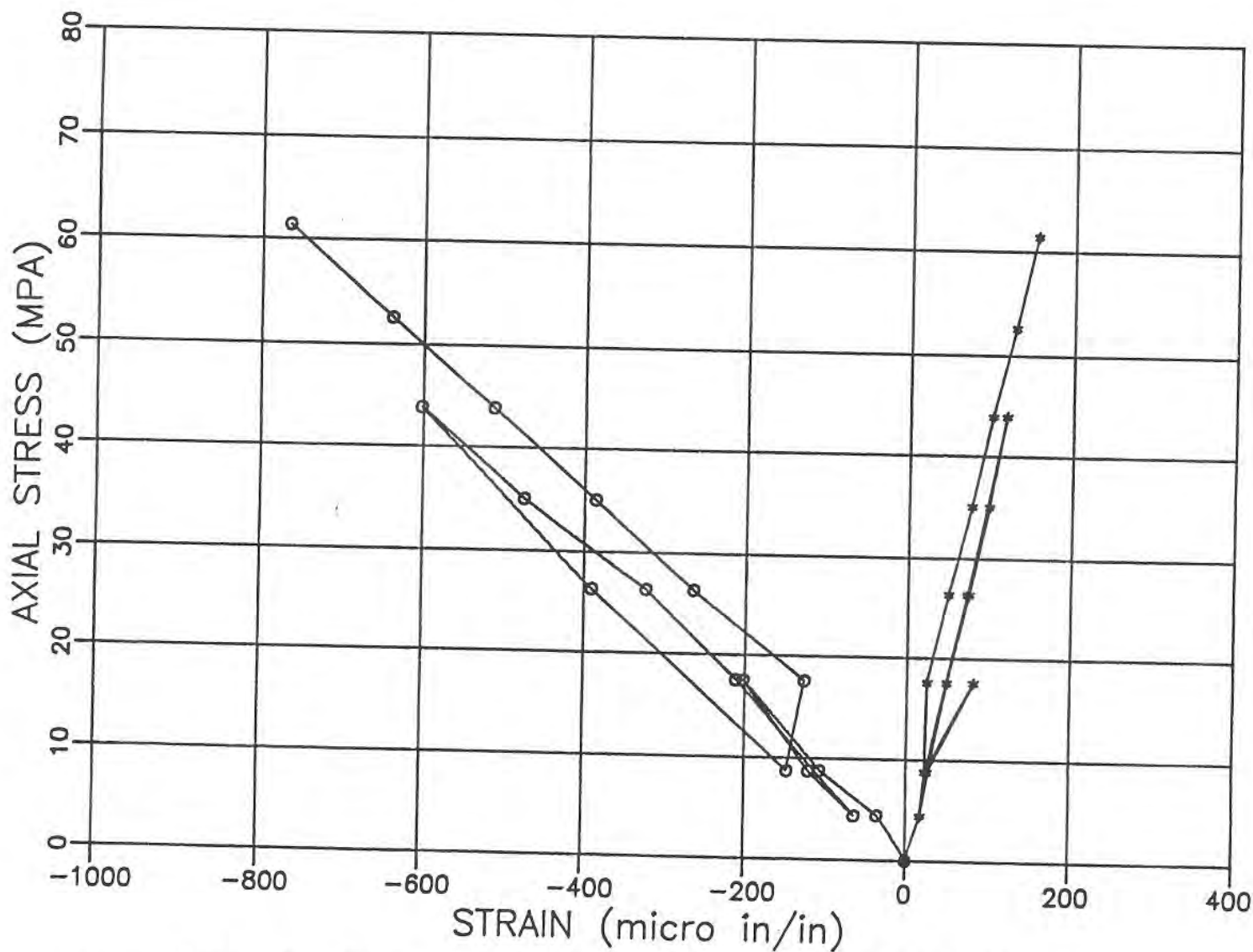
BOREHOLE : 88-331
SAMPLE : 6
DEPTH : 360.2-362.0 FT
PEAK AXIAL STRESS = 168.3 MPa

Figure

UNIAXIAL COMPRESSION TEST

PROJECT# : 8821421	BOREHOLE : 88-331	LENGTH (cm) :	13.01
	SAMPLE : 8	DIAMETER (cm) :	4.73
PROJECT : KIGGAVIK	DEPTH : 493.7-494.8 ft	AREA (sqcm) :	17.57
CLIENT : URANGESELLSCHAFT	DATE : 09/16/88	RAM AREA (sqcm) :	223.40
LOCATION : BAKER LAKE		LOAD CALIB (KN/PSI) :	0.154

READING#	GAUGE LOAD	AXIAL LOAD	AXIAL STRESS	VERTICAL			DIAMETRICAL			YOUNG'S MODULUS	POISSON'S RATIO
	(psi)	(kN)	(MPA)	GAUGE1	GAUGE2	AVERAGE	GAUGE3	GAUGE4	AVERAGE	(MPA)	
				(micro in/in)			(micro in/in)				
0	0	0.0	0.00	0	0	0	0	0	0		
1	50	7.7	4.38	0	-71	-36	11	25	18	1.23E+05	0.51
2	100	15.4	8.77	0	-212	-106	0	45	23	8.27E+04	0.21
3	200	30.8	17.53	-32	-372	-202	75	87	81	8.68E+04	0.40
4	100	15.4	8.77	0	-240	-120	0	51	26	7.31E+04	0.21
5	50	7.7	4.38	0	-128	-64	0	33	17	6.85E+04	0.26
6	200	30.8	17.53	-36	-386	-211	11	86	49	8.31E+04	0.23
7	300	46.2	26.30	-117	-528	-323	36	113	75	8.15E+04	0.23
8	400	61.6	35.06	-218	-732	-475	51	144	98	7.38E+04	0.21
9	500	77.0	43.83	-321	-882	-602	67	168	118	7.29E+04	0.20
10	300	46.2	26.30	-144	-636	-390	30	113	72	6.74E+04	0.18
11	100	15.4	8.77	0	-294	-147	0	45	23	6.96E+04	0.15
12	200	30.8	17.53	-10	-242	-126	6	43	25	1.39E+05	0.19
13	300	46.2	26.30	-98	-430	-264	20	80	50	9.96E+04	0.19
14	400	61.6	35.06	-187	-585	-386	43	111	77	9.08E+04	0.20
15	500	77.0	43.83	-292	-734	-513	60	142	101	8.54E+04	0.20
16	600	92.4	52.60	-399	-878	-639	86	170	128	8.24E+04	0.20
17	700	107.8	61.36	-513	-1018	-766	115	192	154	8.02E+04	0.20
18	750	115.5	65.75								



* - DIAMETRICAL STRAIN
o - VERTICAL STRAIN

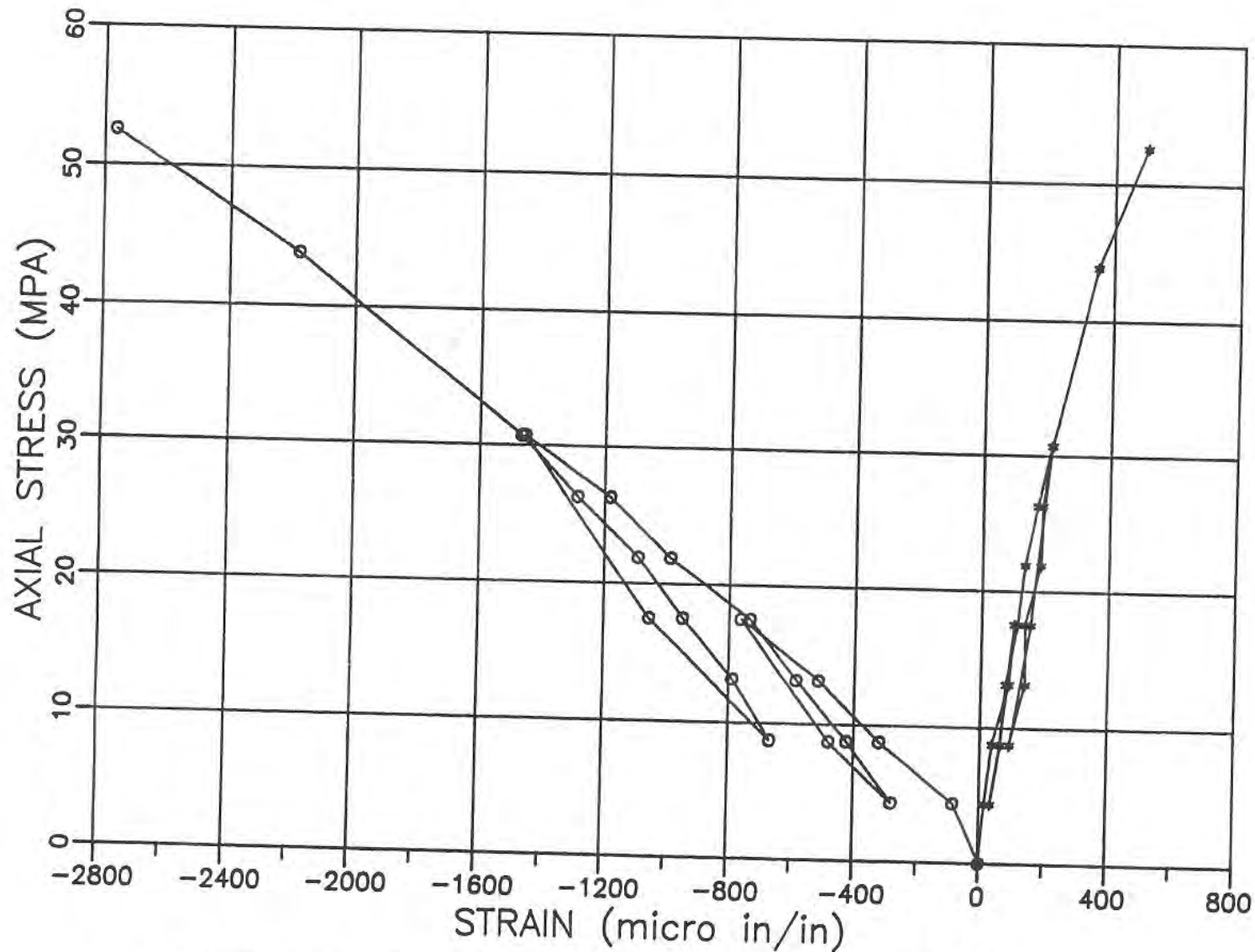
BOREHOLE : 88-331
SAMPLE : 8
DEPTH : 493.7-494.8 FT
PEAK AXIAL STRESS = 65.8 MPa

Figure

UNIAXIAL COMPRESSION TEST

PROJECT#: 8821421	BOREHOLE: 88-332	LENGTH (cm): 7.61
PROJECT: KIGGAVIK	SAMPLE: 3	DIAMETER (cm): 4.73
CLIENT: URANGESELLSCHAFT	DEPTH: 299.5-300.4 ft	AREA (sqcm): 17.57
LOCATION: BAKER LAKE	DATE: 09/14/88	RAM AREA (sqcm): 223.40
		LOAD CALIB (KN/PSI): 0.154

READING#	GAUGE	AXIAL	AXIAL	VERTICAL			DIAMETRICAL			YOUNG'S	POISSON'S
	LOAD	LOAD	STRESS	GAUGE1	GAUGE2	AVERAGE	GAUGE3	GAUGE4	AVERAGE	MODULUS	RATIO
	(psi)	(kN)	(MPA)	(micro in/in)			(micro in/in)			(MPA)	
0	0	0.0	0.00	0	0	0	0	0	0		
1	50	7.7	4.38	-139	-33	-86	25	4	15	5.10E+04	0.17
2	100	15.4	8.77	-347	-292	-320	54	20	37	2.74E+04	0.12
3	150	23.1	13.15	-567	-462	-515	119	54	87	2.56E+04	0.17
4	200	30.8	17.53	-814	-712	-763	121	81	101	2.30E+04	0.13
5	100	15.4	8.77	-515	-447	-481	81	38	60	1.82E+04	0.12
6	50	7.7	4.38	-300	-259	-280	48	18	33	1.57E+04	0.12
7	100	15.4	8.77	-442	-403	-423	81	45	63	2.07E+04	0.15
8	150	23.1	13.15	-592	-580	-586	91	64	78	2.24E+04	0.13
9	200	30.8	17.53	-778	-691	-735	140	83	112	2.39E+04	0.15
10	250	38.5	21.92	-998	-981	-990	153	113	133	2.21E+04	0.13
11	300	46.2	26.30	-1212	-1154	-1183	192	149	171	2.22E+04	0.14
12	350	53.9	30.68	-1448	-1466	-1457	232	189	211	2.11E+04	0.14
13	200	30.8	17.53	-1045	-1067	-1056	173	131	152	1.66E+04	0.14
14	100	15.4	8.77	-641	-697	-669	105	77	91	1.31E+04	0.14
15	150	23.1	13.15	-761	-817	-789	174	101	138	1.67E+04	0.17
16	200	30.8	17.53	-929	-970	-950	148	121	135	1.85E+04	0.14
17	250	38.5	21.92	-1097	-1089	-1093	221	144	183	2.01E+04	0.17
18	300	46.2	26.30	-1272	-1303	-1288	205	169	187	2.04E+04	0.15
19	350	53.9	30.68	-1445	-1493	-1469	231	196	214	2.09E+04	0.15
20	500	77.0	43.83	-2042	-2318	-2180	357	345	351	2.01E+04	0.16
21	600	92.4	52.60	-2089	-3437	-2763	388	614	501	1.90E+04	0.18
22	650	100.1	56.98								

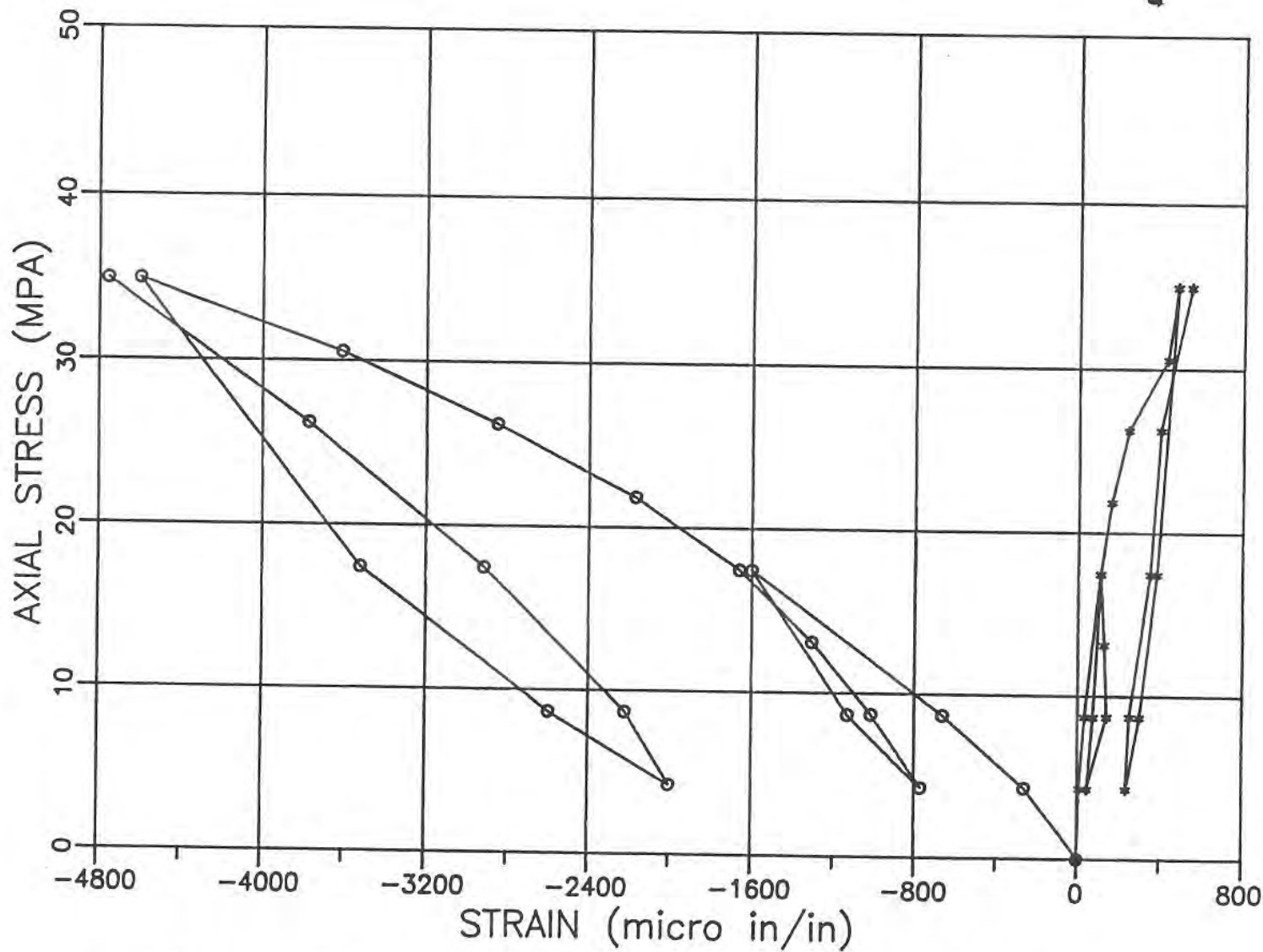


Figure

UNIAXIAL COMPRESSION TEST

PROJECT# : 8821421	BOREHOLE : 88-333	LENGTH (cm) : 11.31
PROJECT : KIGGAVER	SAMPLE : 7	DIAMETER (cm) : 4.74
CLIENT : URANGESELLSCHAFT	DEPTH : 487.9-488.8 ft	AREA (sqcm) : 17.65
LOCATION : BAKER LAKE	DATE : 09/18/88	RAM AREA (sqcm) : 223.40
		LOAD CALIB (KN/PSI) : 0.154

READING#	GAUGE LOAD	AXIAL LOAD	AXIAL STRESS	VERTICAL			DIAMETRICAL			YOUNG'S MODULUS	POISSON'S RATIO
	(psi)	(kN)	(MPA)	GAUGE1	GAUGE2	AVERAGE	GAUGE3	GAUGE4	AVERAGE	(MPA)	
0	0	0.0	0.00	0	0	0	0	0	0		
1	50	7.7	4.36	-441	-76	-259	14	5	10	1.69E+04	0.04
2	100	15.4	8.73	-1014	-312	-663	45	23	34	1.32E+04	0.05
3	200	30.8	17.46	-2280	-919	-1600	142	77	110	1.09E+04	0.07
4	100	15.4	8.73	-1690	-568	-1129	103	44	74	7.73E+03	0.07
5	50	7.7	4.36	-1230	-308	-769	69	23	46	5.68E+03	0.06
6	100	15.4	8.73	-1521	-503	-1012	246	37	142	8.63E+03	0.14
7	150	23.1	13.09	-1877	-733	-1305	200	56	128	1.00E+04	0.10
8	200	30.8	17.46	-2340	-980	-1660	144	75	110	1.05E+04	0.07
9	250	38.5	21.82	-3027	-1312	-2170	214	108	161	1.01E+04	0.07
10	300	46.2	26.19	-3993	-1715	-2854	338	145	242	9.18E+03	0.08
11	350	53.9	30.55	-5076	-2143	-3610	672	188	430	8.46E+03	0.12
12	400	61.6	34.92	-6582	-2616	-4599	717	237	477	7.59E+03	0.10
13	200	30.8	17.46	-5204	-1831	-3518	604	162	383	4.96E+03	0.11
14	100	15.4	8.73	-3976	-1213	-2595	498	103	301	3.36E+03	0.12
15	50	7.7	4.36	-3195	-805	-2000	406	67	237	2.18E+03	0.12
16	100	15.4	8.73	-3432	-1004	-2218	424	84	254	3.94E+03	0.11
17	200	30.8	17.46	-4328	-1505	-2917	569	133	351	5.99E+03	0.12
18	300	46.2	26.19	-5476	-2068	-3771	607	166	397	6.94E+03	0.11
19	400	61.6	34.92	-6829	-2682	-4756	840	245	543	7.34E+03	0.11
20	450	69.3	39.28								



* - DIAMETRICAL STRAIN
o - VERTICAL STRAIN

BOREHOLE : 88-333
SAMPLE : 7
DEPTH : 487.9-488.6 FT
PEAK AXIAL STRESS = 39.3 MPA

Figure

UNIAXIAL COMPRESSION TEST

PROJECT#: 8821421

BOREHOLE: 88-333

LENGTH (cm): 13.00

SAMPLE: 8

DIAMETER (cm): 4.75

PROJECT: KIGGAVIK

DEPTH: 425.8-426.8 ft

AREA (sqcm): 17.72

CLIENT: URANGESELLSCHAFT

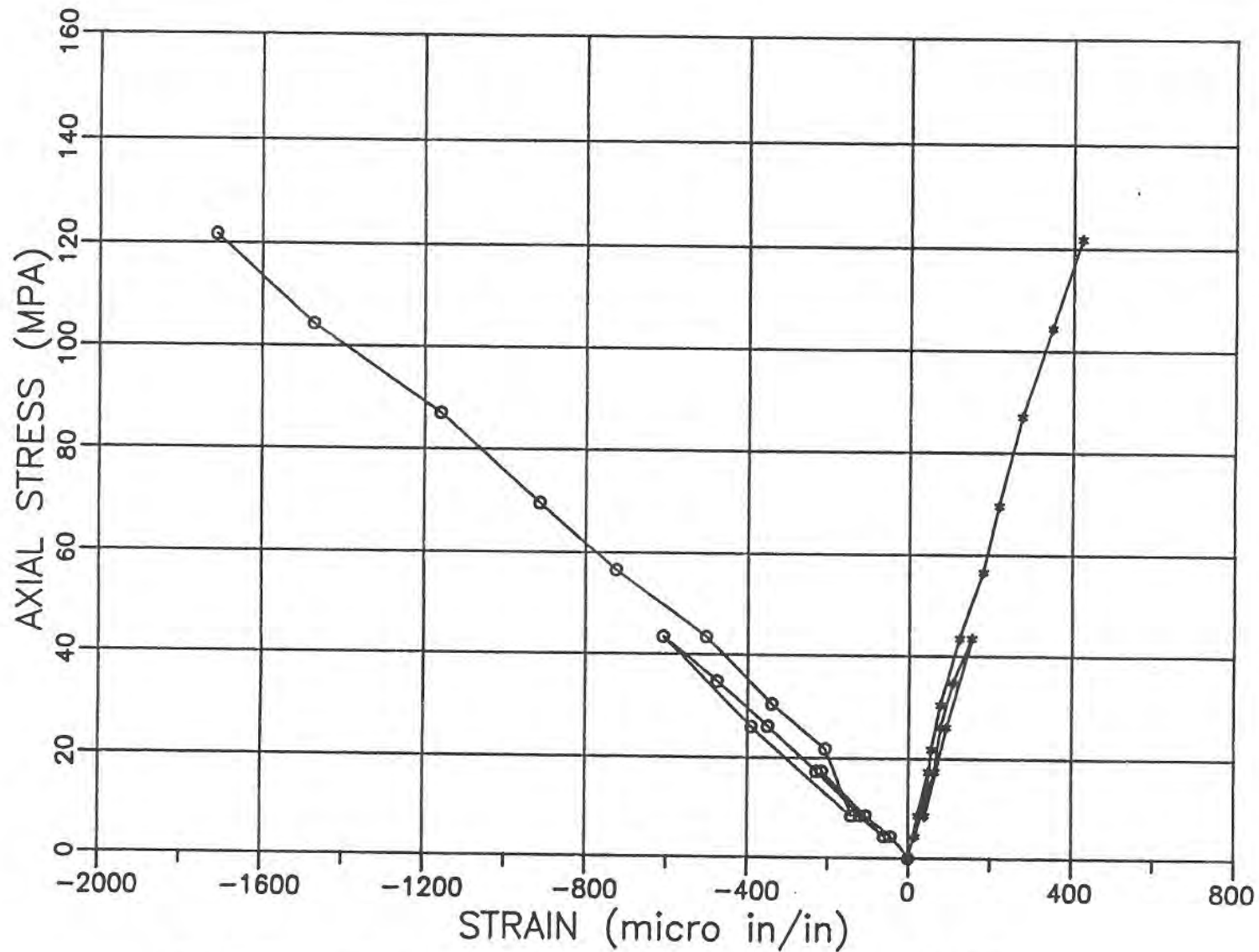
DATE: 09/18/88

RAM AREA (sqcm): 223.40

LOCATION: BAKER LAKE

LOAD CALIB (KN/PSI): 0.154

READING#	GAUGE	AXIAL	AXIAL	VERTICAL			DIAMETRICAL			YOUNG'S	POISSON'S
	LOAD	LOAD	STRESS	GAUGE1	GAUGE2	AVERAGE	GAUGE3	GAUGE4	AVERAGE	MODULUS	RATIO
	(psi)	(kN)	(MPA)	(micro in/in)			(micro in/in)			(MPA)	
0	0	0.0	0.00	0	0	0	0	0	0		
1	50	7.7	4.35	-42	-48	-45	9	17	13	9.68E+04	0.29
2	100	15.4	8.69	-91	-120	-106	15	30	23	8.24E+04	0.21
3	200	30.8	17.38	-218	-211	-215	42	56	49	8.10E+04	0.23
4	100	15.4	8.69	-108	-132	-120	20	32	26	7.24E+04	0.22
5	50	7.7	4.35	-46	-74	-60	11	21	16	7.24E+04	0.27
6	200	30.8	17.38	-219	-239	-229	70	58	64	7.59E+04	0.28
7	300	46.2	26.08	-348	-350	-349	73	85	79	7.47E+04	0.23
8	400	61.6	34.77	-475	-474	-475	103	112	108	7.33E+04	0.23
9	500	77.0	43.46	-618	-598	-608	168	140	154	7.15E+04	0.25
10	300	46.2	26.08	-395	-385	-390	92	90	91	6.69E+04	0.23
11	100	15.4	8.69	-132	-149	-141	35	45	40	6.19E+04	0.28
12	250	38.5	21.73	-205	-206	-206	60	54	57	1.06E+05	0.28
13	350	53.9	30.42	-347	-330	-339	76	79	78	8.99E+04	0.23
14	500	77.0	43.46	-636	-468	-502	130	117	124	8.66E+04	0.25
15	650	100.1	56.50	-760	-688	-724	181	180	181	7.80E+04	0.25
16	800	123.2	69.54	-959	-868	-914	215	222	219	7.61E+04	0.24
17	1000	154.0	86.92	-1236	-1085	-1161	279	271	275	7.49E+04	0.24
18	1200	184.8	104.31	-1542	-1403	-1473	352	344	348	7.08E+04	0.24
19	1400	215.6	121.69	-2150	-1274	-1712	518	324	421	7.11E+04	0.25
20	1560	240.3	135.60								



* - DIAMETRICAL STRAIN
o - VERTICAL STRAIN

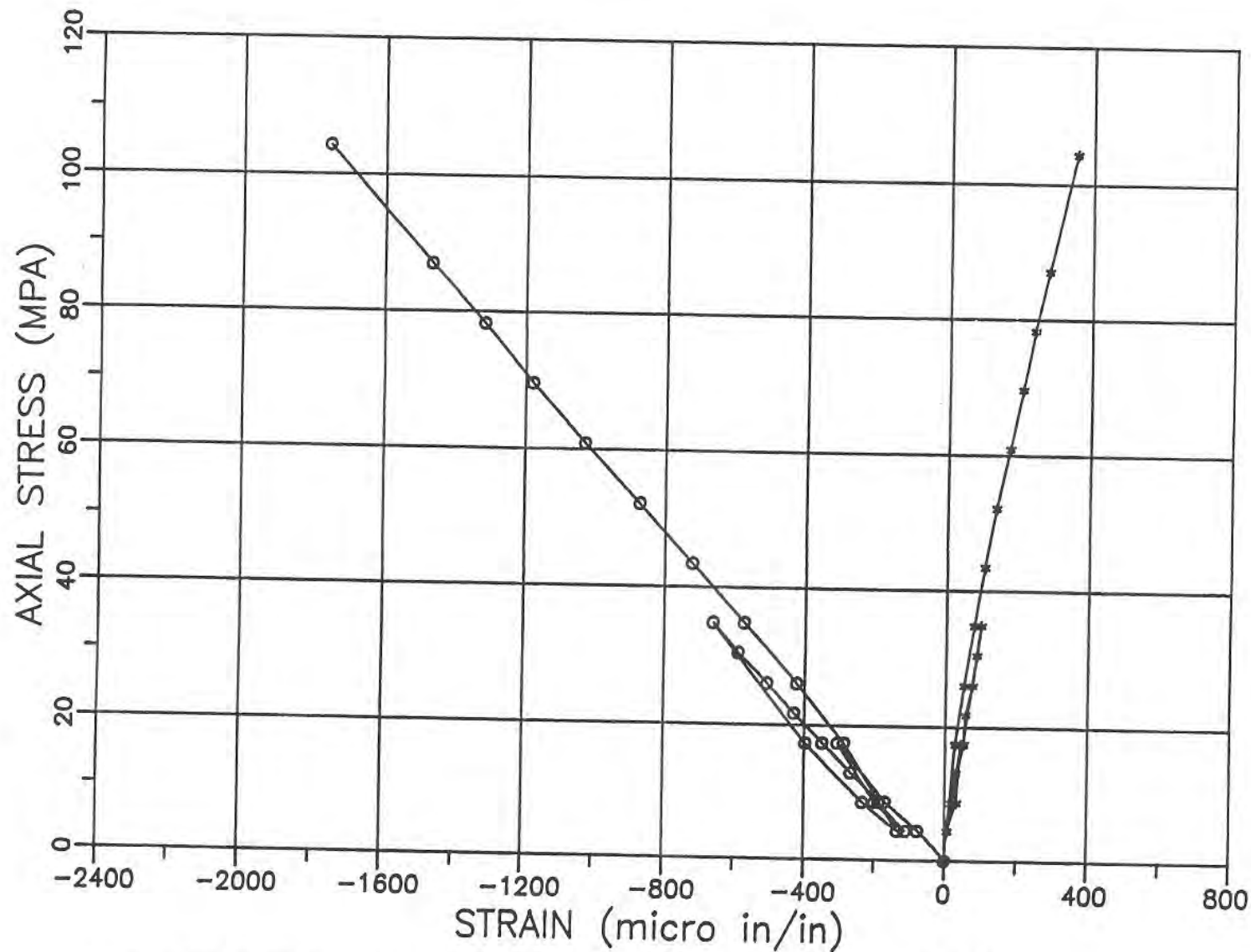
BOREHOLE : 88-333
SAMPLE : 8
DEPTH : 425.8-426.8 FT
PEAK AXIAL STRESS = 135.6 MPa

Figure

UNIAXIAL COMPRESSION TEST

PROJECT# : 8821421	BOREHOLE : 88-231	LENGTH (cm) : 13.06
	SAMPLE : 1	DIAMETER (cm) : 4.75
PROJECT : KIGGAVIK	DEPTH : 357.5-358.5 ft	AREA (sqcm) : 17.72
CLIENT : URANGESELLSCHAFT	DATE : 09/15/88	RAM AREA (sqcm) : 223.40
LOCATION : BAKER LAKE		LOAD CALIB (KN/PSI) : 0.154

READING#	GAUGE LOAD	AXIAL LOAD	AXIAL STRESS	VERTICAL			DIAMETRICAL			YOUNG'S MODULUS	POISSON'S RATIO
	(psi)	(kN)	(MPA)	GAUGE1	GAUGE2	AVERAGE	GAUGE3	GAUGE4	AVERAGE	(MPA)	
				(micro in/in)			(micro in/in)				
0	0	0.0	0.00	0	0	0	0	0	0		
1	50	7.7	4.35	-35	-121	-78	0	13	7	5.57E+04	0.08
2	100	15.4	8.69	-71	-266	-169	36	30	33	5.16E+04	0.20
3	200	30.8	17.38	-103	-506	-305	20	66	43	5.71E+04	0.14
4	100	15.4	8.69	-90	-307	-199	4	31	18	4.38E+04	0.09
5	50	7.7	4.35	-50	-177	-114	0	14	7	3.83E+04	0.06
6	100	15.4	8.69	-92	-262	-187	11	27	19	4.65E+04	0.10
7	150	23.1	13.04	-139	-394	-267	14	45	30	4.89E+04	0.11
8	200	30.8	17.38	-201	-497	-349	38	63	51	4.98E+04	0.14
9	250	38.5	21.73	-268	-593	-431	31	80	56	5.05E+04	0.13
10	300	46.2	26.08	-336	-681	-509	45	106	76	5.13E+04	0.15
11	350	53.9	30.42	-405	-775	-590	53	121	87	5.16E+04	0.15
12	400	61.6	34.77	-465	-860	-663	63	133	98	5.25E+04	0.15
13	200	30.8	17.38	-250	-546	-398	24	72	48	4.37E+04	0.12
14	100	15.4	8.69	-133	-332	-233	4	34	19	3.74E+04	0.08
15	50	7.7	4.35	-79	-189	-134	1	13	7	3.24E+04	0.05
16	200	30.8	17.38	-174	-400	-287	12	44	28	6.06E+04	0.10
17	300	46.2	26.08	-283	-564	-424	30	72	51	6.16E+04	0.12
18	400	61.6	34.77	-413	-735	-574	51	104	78	6.06E+04	0.14
19	500	77.0	43.46	-541	-904	-723	74	137	106	6.02E+04	0.15
20	600	92.4	52.15	-672	-1073	-873	101	173	137	5.98E+04	0.16
21	700	107.8	60.85	-809	-1251	-1030	131	214	173	5.91E+04	0.17
22	800	123.2	69.54	-943	-1414	-1179	159	252	208	5.90E+04	0.17
23	900	138.6	78.23	-1068	-1568	-1317	188	290	239	5.94E+04	0.18
24	1000	154.0	86.92	-1208	-1727	-1468	221	333	277	5.92E+04	0.19
25	1200	184.8	104.31	-1468	-2045	-1757	289	417	353	5.94E+04	0.20
26	1250	192.5	108.66								



* - DIAMETRICAL STRAIN
o - VERTICAL STRAIN

BOREHOLE : 88-231
SAMPLE : 1
DEPTH : 357.5-358.5 FT
PEAK AXIAL STRESS = 108.7 MPA

Figure

WATER CONTENT DETERMINATION

Reference(s)
ASTM D 4959

Client: Areva

Project No.: 10-1345-0026

Project: Kiggavik

Lab Schedule No.: 217

Location: Nunavut

Sample Location	Sample No.	Sample Interval		Water Content (%)
		Depth (m)	Bottom (m)	
SD	01	0.00	0.00	19.9
SD	02	0.00	0.00	20.7
SD	03	0.00	0.00	23.6
SD	04	0.00	0.00	26.3
SD	05	0.00	0.00	24.1
SD	11	0.00	0.00	29.6
SD	12	0.00	0.00	44.8

LP

22/10/2010

Checked

Date

Golder Associates Ltd.

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Golder Associates: Operations in Africa, Asia, Australasia, Europe, North America and South America

Moisture, Ash, and Organic Matter of Peat and Other Organic Soils			Reference ASTM D 2974-07
---	--	--	-----------------------------

Project No.:	10-1345-0026	Borehole	N/A
Client:	Areva	Sample No.:	SD 11
Project:	Kiggavik	Depth (m):	N/A
Location:	Nunavut	Lab Sch No:	217

Method:	C	Other Remarks:
Oven Temperature	50 degrees Centigrade	
Furnace Temperature	440 degrees Centigrade	
Moisture Determination	As-received mass	

Moisture Content %	29.6	
% Passing #4	99.1	
Trial #	1	2
Ash Content %	98.1	98.1
Organic Matter %	1.9	1.9
UCS Description	Slightly Organic	
Average Organic Matter %	1.9	

** The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data can be provided upon request.*

EB	October 20, 2010	LP	October 22, 2010
TESTED BY	DATE	CHECKED BY	DATE

Moisture, Ash, and Organic Matter of Peat and Other Organic Soils			Reference ASTM D 2974-07
---	--	--	-----------------------------

Project No.:	10-1345-0026	Borehole	N/A
Client:	Areva	Sample No.:	SD 05
Project:	Kiggavik	Depth (m):	N/A
Location:	Nunavut	Lab Sch No:	217

Method:	C	Other Remarks:
Oven Temperature	50 degrees Centigrade	
Furnace Temperature	440 degrees Centigrade	
Moisture Determination	As-received mass	

Moisture Content %	24.1	
% Passing #4	99.3	
Trial #	1	2
Ash Content %	98.9	98.9
Organic Matter %	1.1	1.1
UCS Description	Slightly Organic	
Average Organic Matter %	1.1	

** The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data can be provided upon request.*

EB	October 19, 2010	LP	October 22, 2010
TESTED BY	DATE	CHECKED BY	DATE

Moisture, Ash, and Organic Matter of Peat and Other Organic Soils			Reference ASTM D 2974-07
---	--	--	-----------------------------

Project No.:	10-1345-0026	Borehole	N/A
Client:	Areva	Sample No.:	SD 04
Project:	Kiggavik	Depth (m):	N/A
Location:	Nunavut	Lab Sch No:	217

Method:	C	Other Remarks:
Oven Temperature	50 degrees Centigrade	
Furnace Temperature	440 degrees Centigrade	
Moisture Determination	As-received mass	

Moisture Content %	26.3	
% Passing #4	99.2	
Trial #	1	2
Ash Content %	97.7	97.7
Organic Matter %	2.3	2.3
UCS Description	Slightly Organic	
Average Organic Matter %	2.3	

** The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data can be provided upon request.*

EB	October 19, 2010	LP	October 22, 2010
TESTED BY	DATE	CHECKED BY	DATE

Moisture, Ash, and Organic Matter of Peat and Other Organic Soils			Reference ASTM D 2974-07
---	--	--	-----------------------------

Project No.:	10-1345-0026	Borehole	N/A
Client:	Areva	Sample No.:	SD 02
Project:	Kiggavik	Depth (m):	N/A
Location:	Nunavut	Lab Sch No:	217

Method:	C	Other Remarks:
Oven Temperature	50 degrees Centigrade	
Furnace Temperature	440 degrees Centigrade	
Moisture Determination	As-received mass	

Moisture Content %	20.7	
% Passing #4	99.8	
Trial #	1	2
Ash Content %	99.5	99.4
Organic Matter %	0.5	0.6
UCS Description	Slightly Organic	
Average Organic Matter %	0.6	

** The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data can be provided upon request.*

EB	October 18, 2010	LP	October 22, 2010
TESTED BY	DATE	CHECKED BY	DATE

Moisture, Ash, and Organic Matter of Peat and Other Organic Soils			Reference ASTM D 2974-07
---	--	--	-----------------------------

Project No.:	10-1345-0026	Borehole	N/A
Client:	Areva	Sample No.:	SD 01
Project:	Kiggavik	Depth (m):	N/A
Location:	Nunavut	Lab Sch No:	217

Method:	C	Other Remarks:
Oven Temperature	50 degrees Centigrade	
Furnace Temperature	440 degrees Centigrade	
Moisture Determination	As-received mass	

Moisture Content %	19.9	
% Passing #4	100.0	
Trial #	1	2
Ash Content %	99.4	99.4
Organic Matter %	0.6	0.6
UCS Description	Slightly Organic	
Average Organic Matter %	0.6	

** The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data can be provided upon request.*

EB	October 18. 2010	LP	October 22,2010
TESTED BY	DATE	CHECKED BY	DATE

Sounding ID	Grain size distribution (by weight)			Plastic limit	Water content (%)	Organic mater (%)
	Gravel	Sand	Fines (silt and clay)			
SD01	0.0	91.5	8.5	N/T	19.9	0.6
SD02	0.2	90.5	9.3	N/T	20.7	0.6
SD03	2.2	91.5	6.3	N/T	23.6	N/T
SD04	0.8	89.0	10.2	Non Plastic	26.3	2.3
SD05	0.7	91.9	7.4	N/T	24.1	1.1
SD11	0.9	90.1	9.0	Non Plastic	29.6	1.9
SD12	0.2	78	21.8	N/T	44.8	N/T

N/T = not tested

Sounding ID	Location	Northing (m)	Easting (m)	Water Depth (m)	Sediments thickness² (m)
SD01	Andrew Lake	7134728	552855	0.54	0.31
SD02	Andrew Lake	7134594	552889	0.71	0.32
SD03	Andrew Lake	7134492	552952	0.71	0.27
SD04	Andrew Lake	7134431	553008	0.68	0.54
SD05	Andrew Lake	7134381	553050	0.63	0.20
SD06 ¹	Andrew Lake	7134329	553096	0.43	0.04
SD07	Andrew Lake	7134344	553184	0.38	0.32
SD08 ¹	Andrew Lake	7134328	553199	0.21	0.17
SD09 ¹	Andrew Lake	7134338	553144	0.41	0.50
SD10 ¹	Andrew Lake	7134357	553094	0.47	0.32
SD11	Andrew Lake	7134386	553084	0.61	0.34
SD12	Andrew Lake	7134759	552864	0.42	0.04
SD13	Andrew Lake	7134716	552881	0.63	0.05
SD14	Andrew Lake	7134678	552863	0.52	0.43
SD15	Andrew Lake	7134641	552856	0.71	0.25
SD16	Andrew Lake	7134624	552875	0.58	0.38
SD17	Andrew Lake	7134613	552890	0.64	0.14
SD18	Andrew Lake	7134547	552886	0.69	0.35
SD19	Andrew Lake	7134531	552910	0.75	0.22
SD20	Andrew Lake	7134520	552934	0.62	0.35
SD21	Andrew Lake	7134459	552942	0.63	0.22
SD22	Andrew Lake	7134447	552971	0.62	0.37
SD23	Andrew Lake	7134414	553008	0.62	0.31
SD24	Andrew Lake	7134390	553017	0.62	0.16

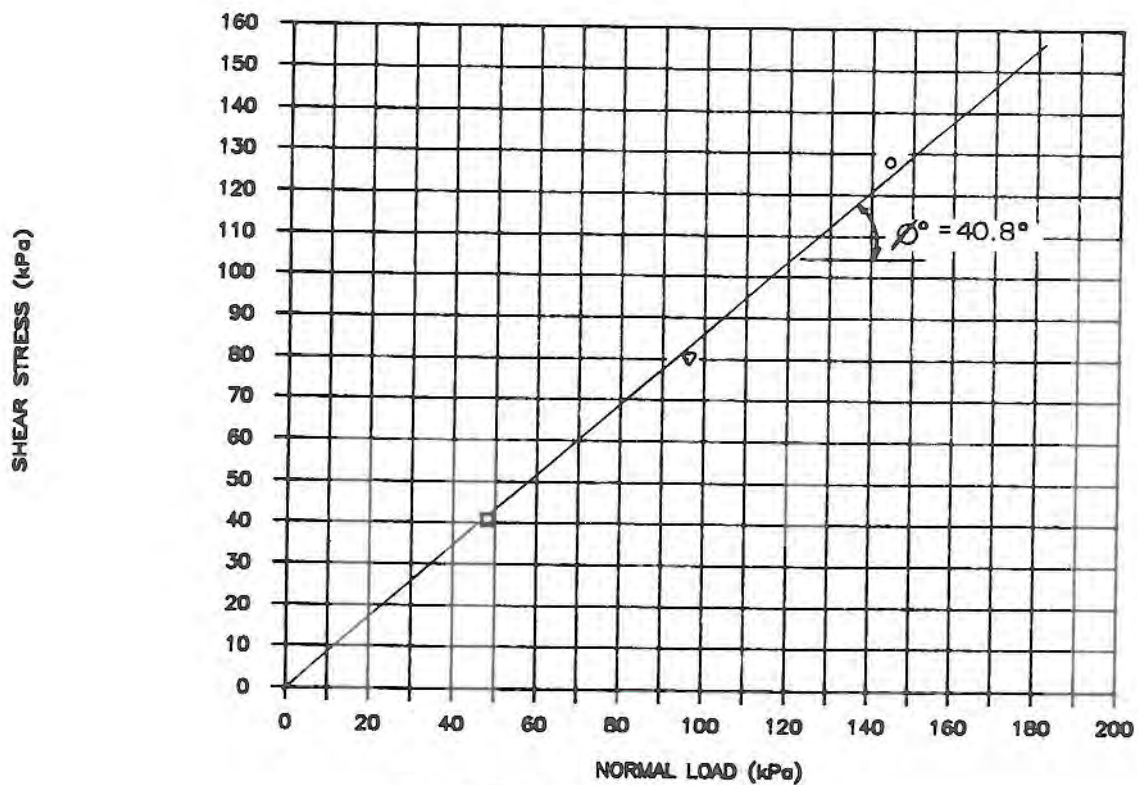
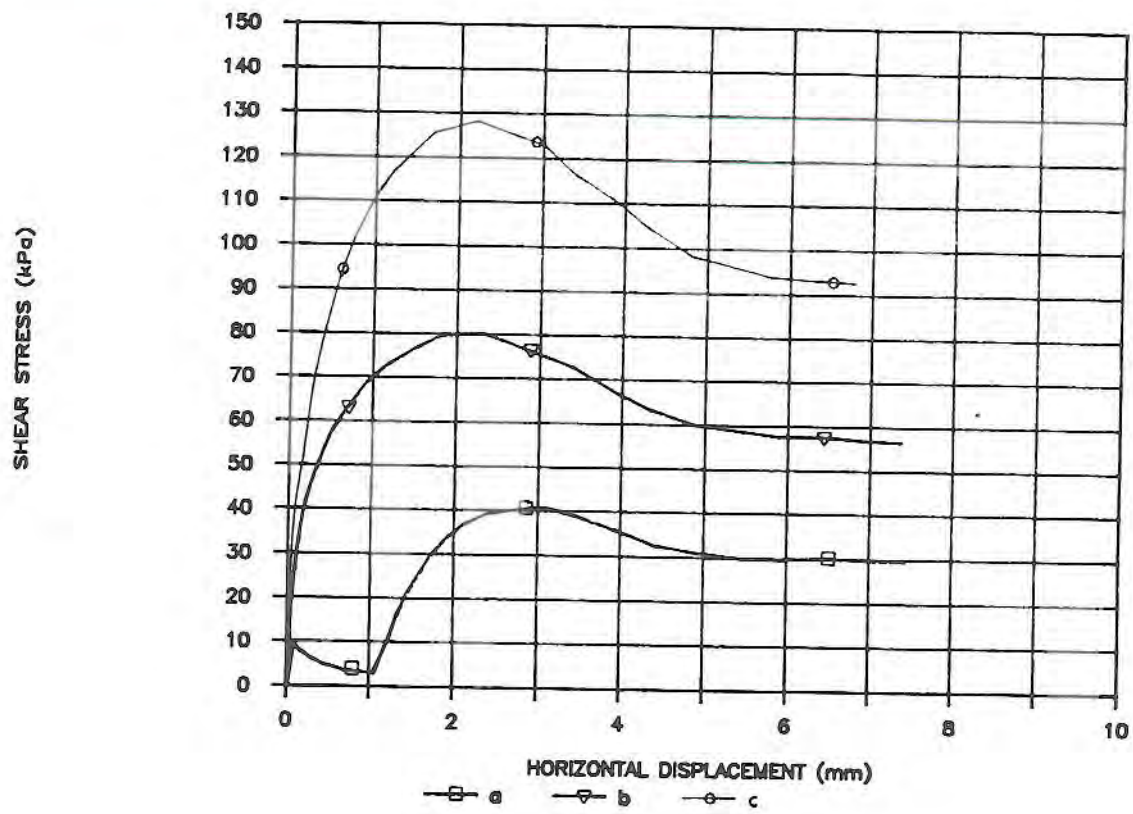
Notes: 1) Unable to collect sediment sample
2) Field crew recorded sediment thickness as maximum distance that the sample tool could be advance working from the boat.

FIGURE 17-6

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DIRECT SHEAR TEST RESULTS SERIES I

FIGURE 17-7



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DIRECT SHEAR TEST RESULTS
SERIES I

FIGURE 17-8

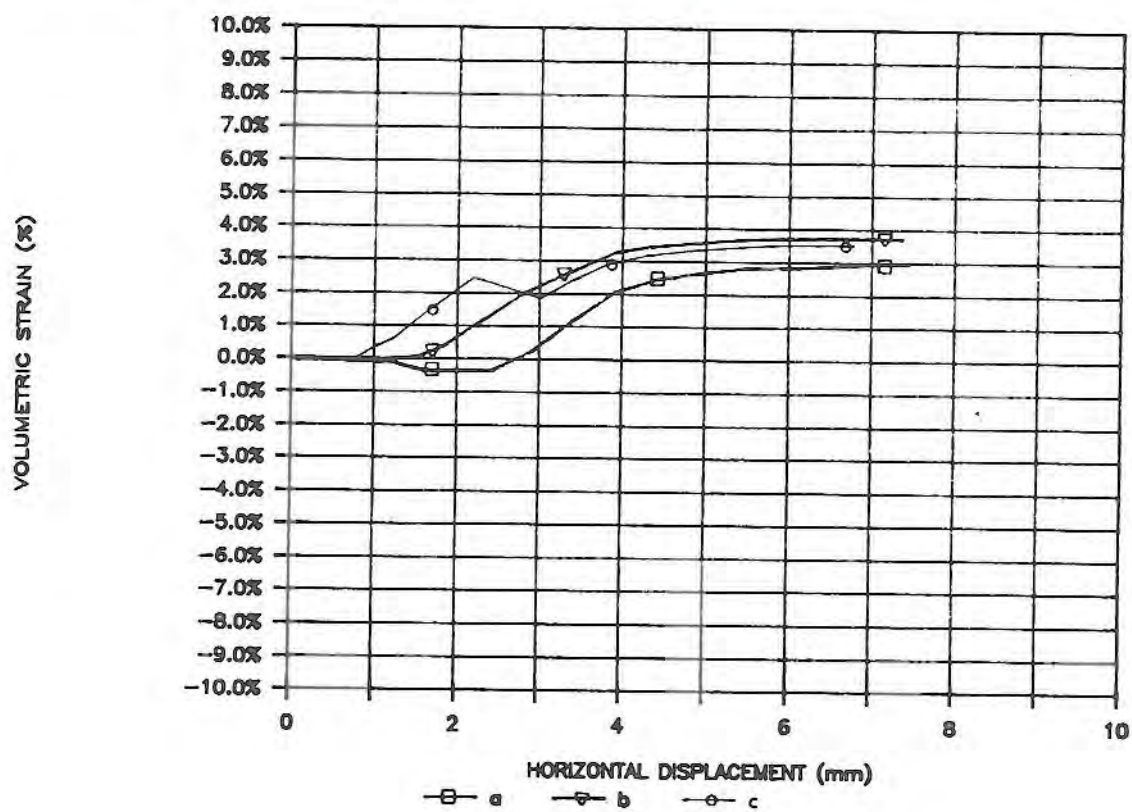
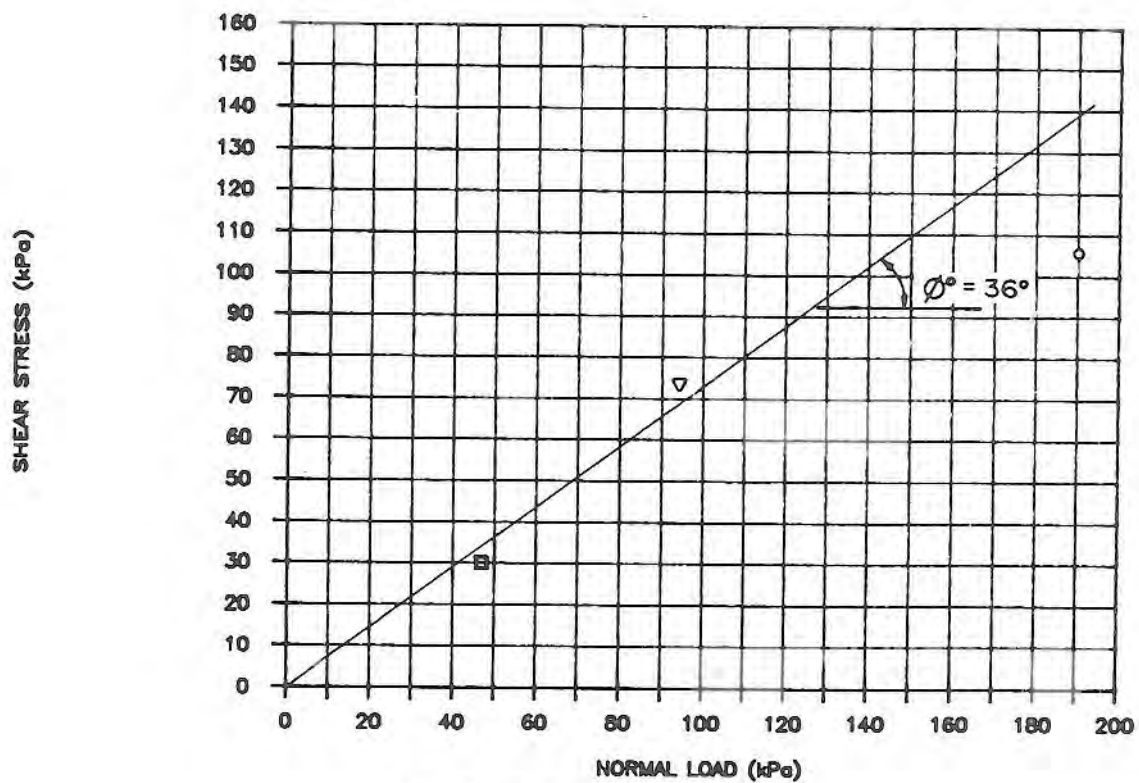
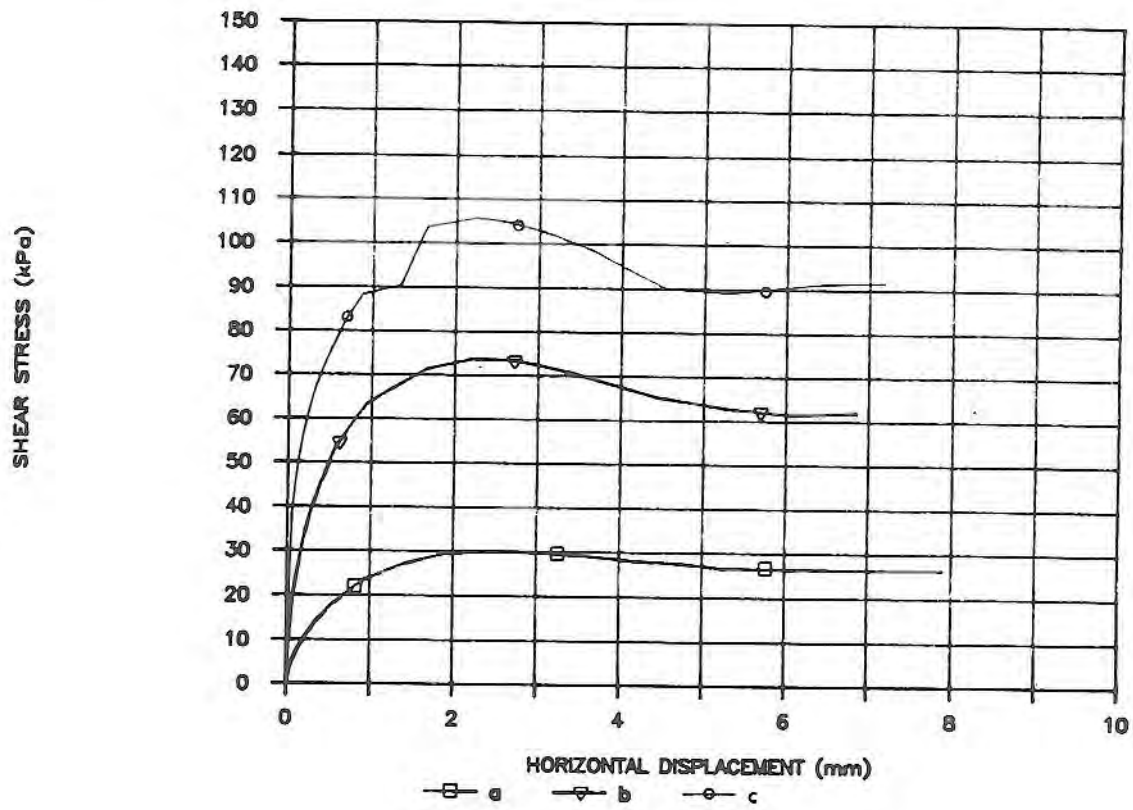


FIGURE 17-9

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DIRECT SHEAR TEST RESULTS SERIES 2

FIGURE 17-10



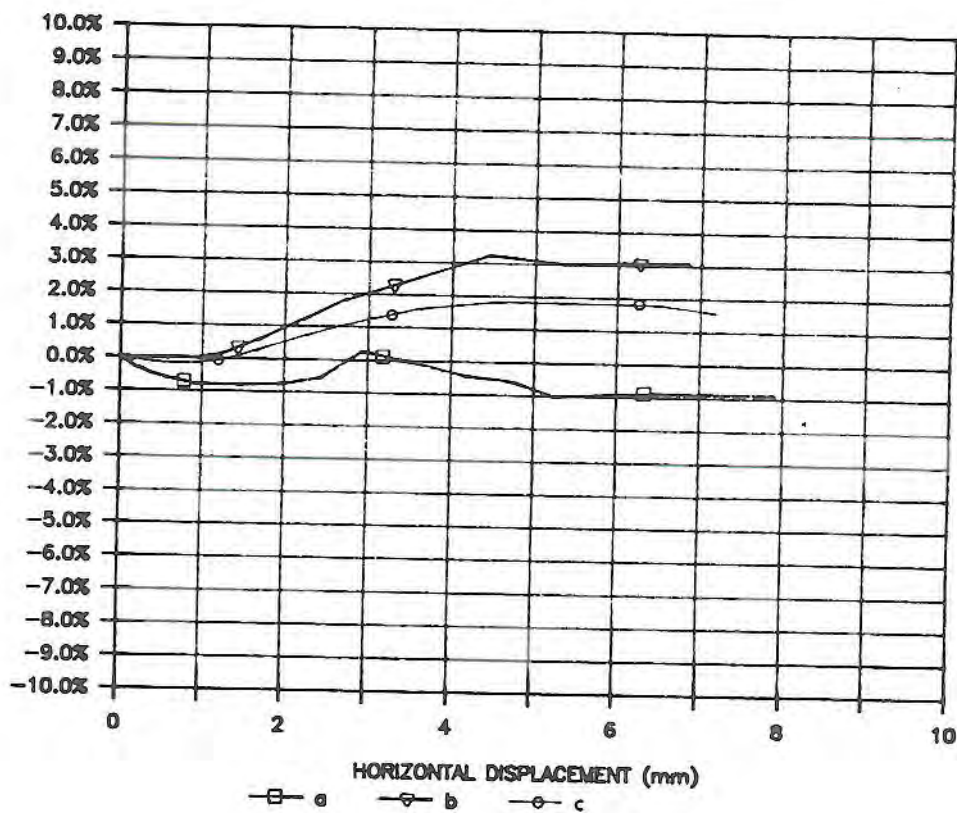
Golder Associates

DIRECT SHEAR TEST RESULTS

SERIES 2

FIGURE 17-11

VOLUMETRIC STRAIN (%)

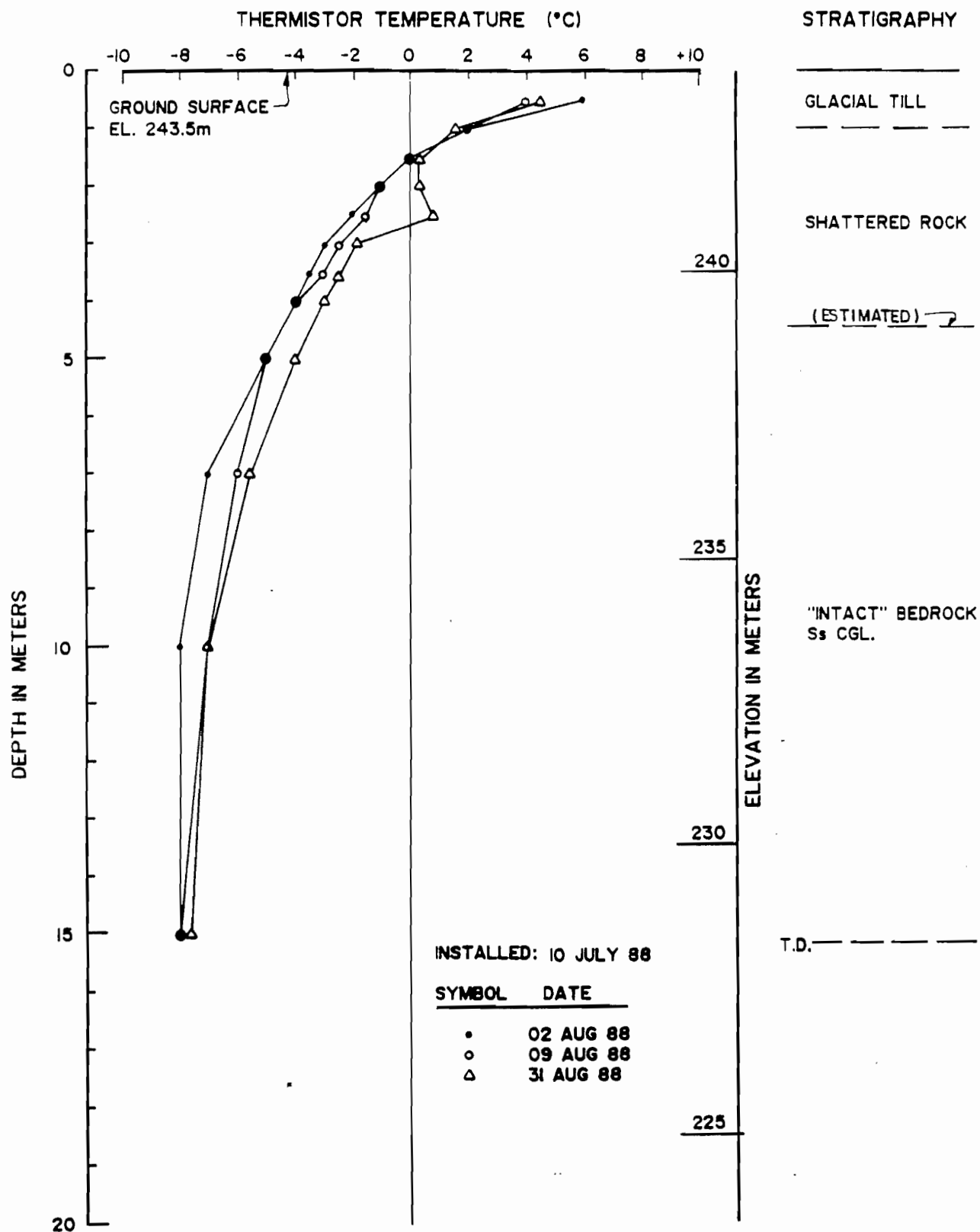


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Attachment D Thermistor and Frost Depth Indicator Data

THERMISTOR TEMPERATURES PLANTSITE No. 1
 URANGESELLSCHAFT CANADA LIMITED
 KIGGAVIK PROJECT, N.W.T.

FIGURE 4



Date NOV. 24, 1988
 Project 881-1814-1

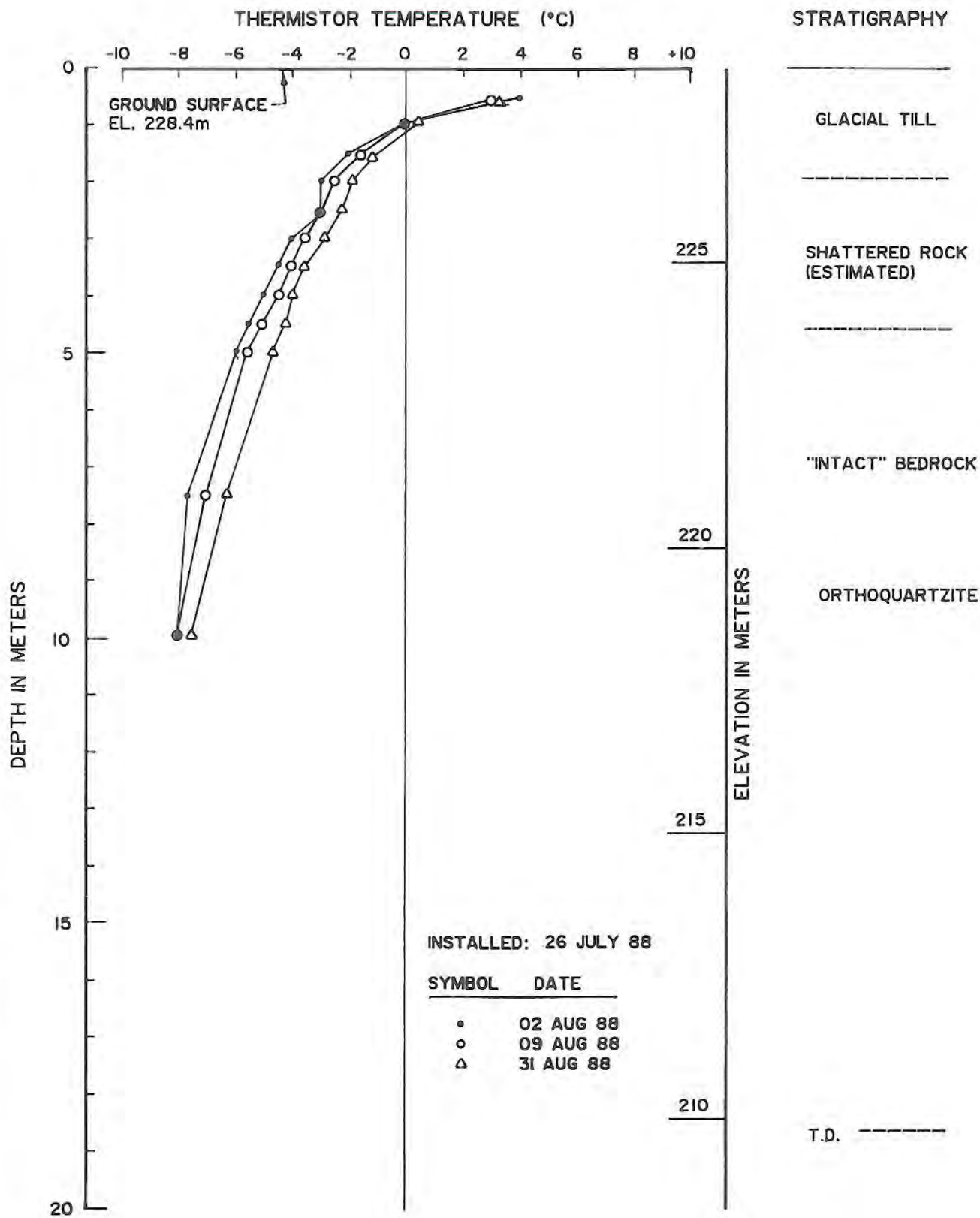
Golder Associates

Drawn D. M.
 Chkd. *JB*

THERMISTOR TEMPERATURES PLANTSITE No. 2

Figure 5-2

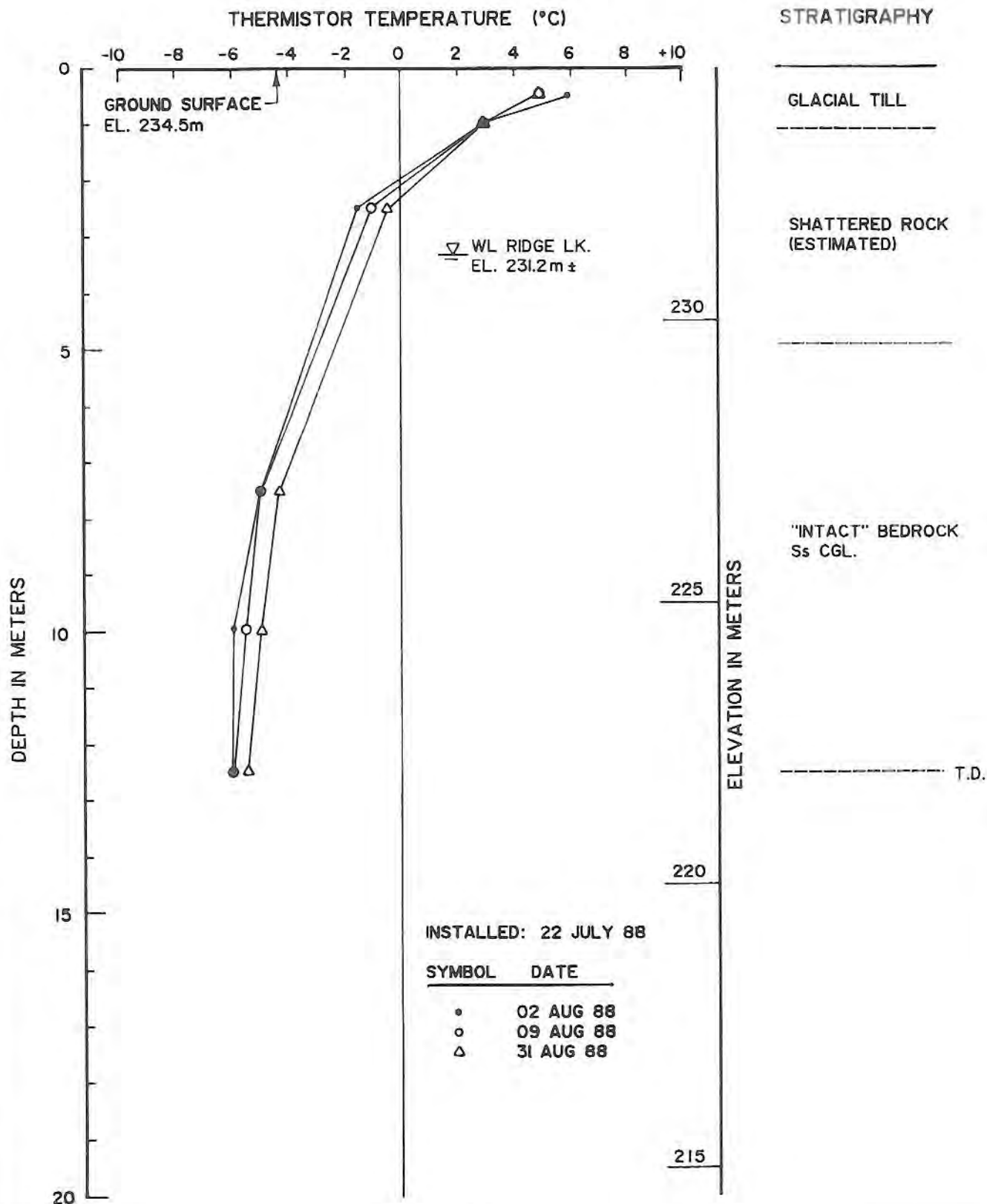
LOCATION: BH88-2P2



THERMISTOR TEMPERATURES RIDGE LAKE TAILINGS DAM

Figure 6-2

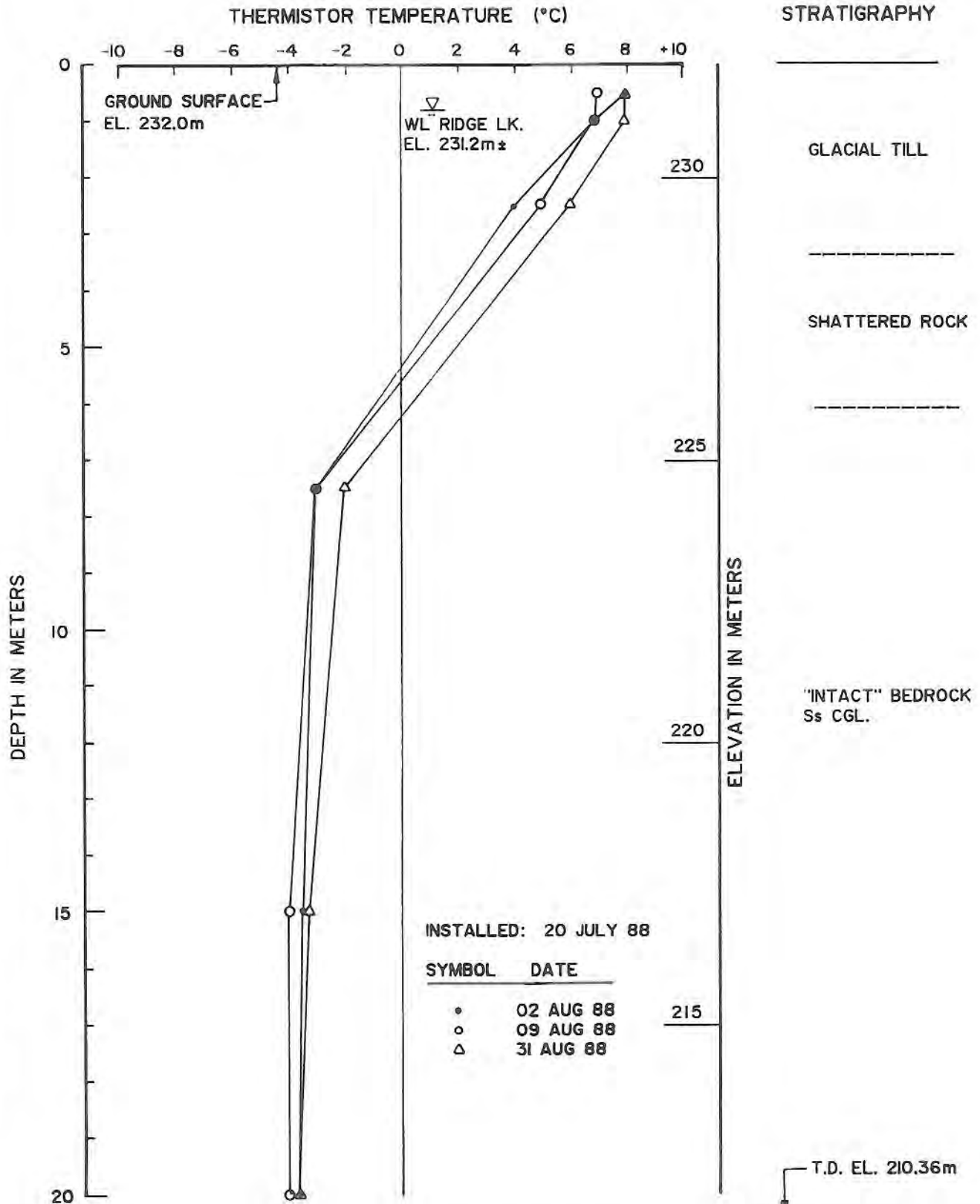
LOCATION: BH88-IT1



THERMISTOR TEMPERATURES RIDGE LAKE TAILINGS DAM

Figure 6-3

LOCATION: BH88-IT3



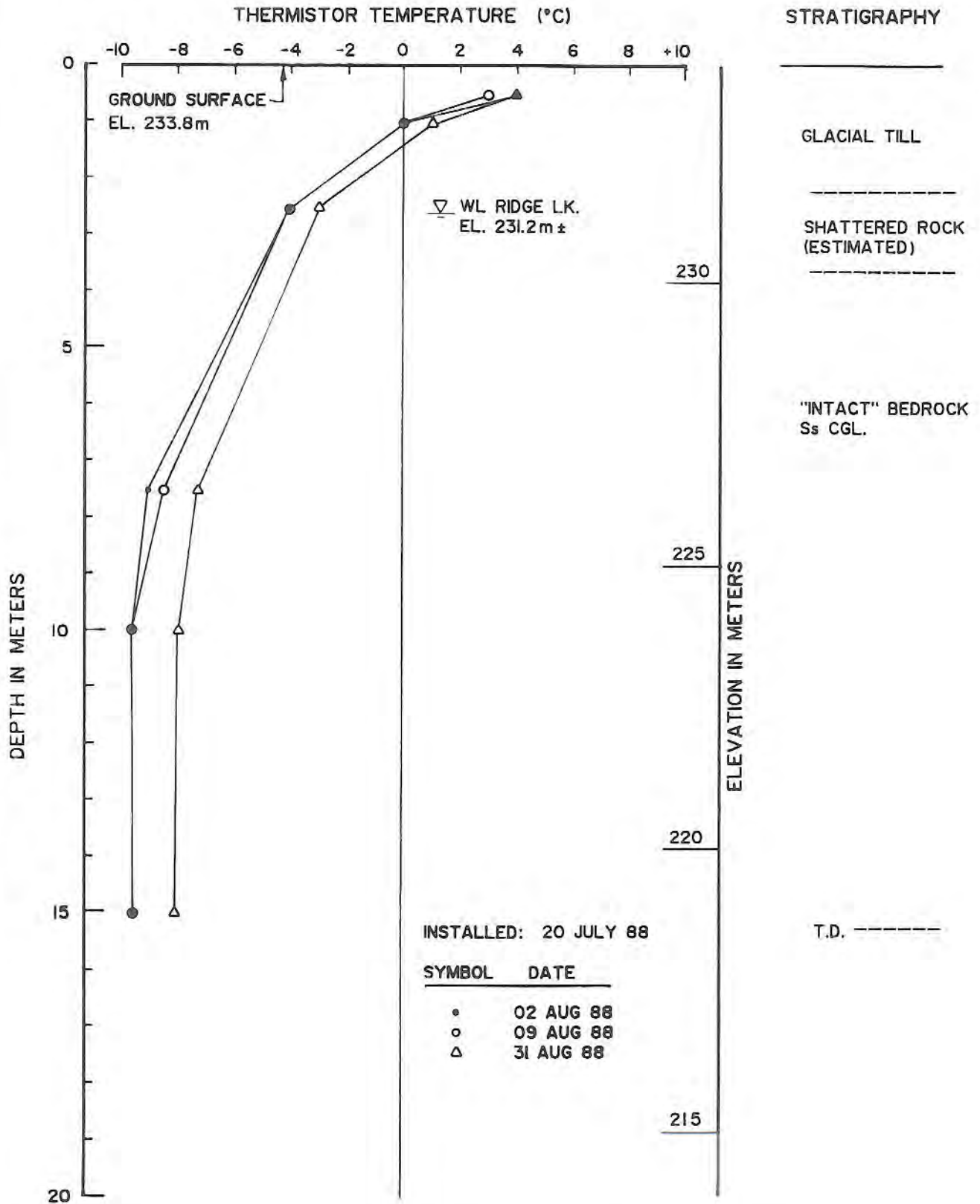
Golder Associates

PROJECT No. 881-1814D DRAWN RK REVIEWED DATE OCT 88

THERMISTOR TEMPERATURES RIDGE LAKE TAILINGS DAM

Figure 6-4

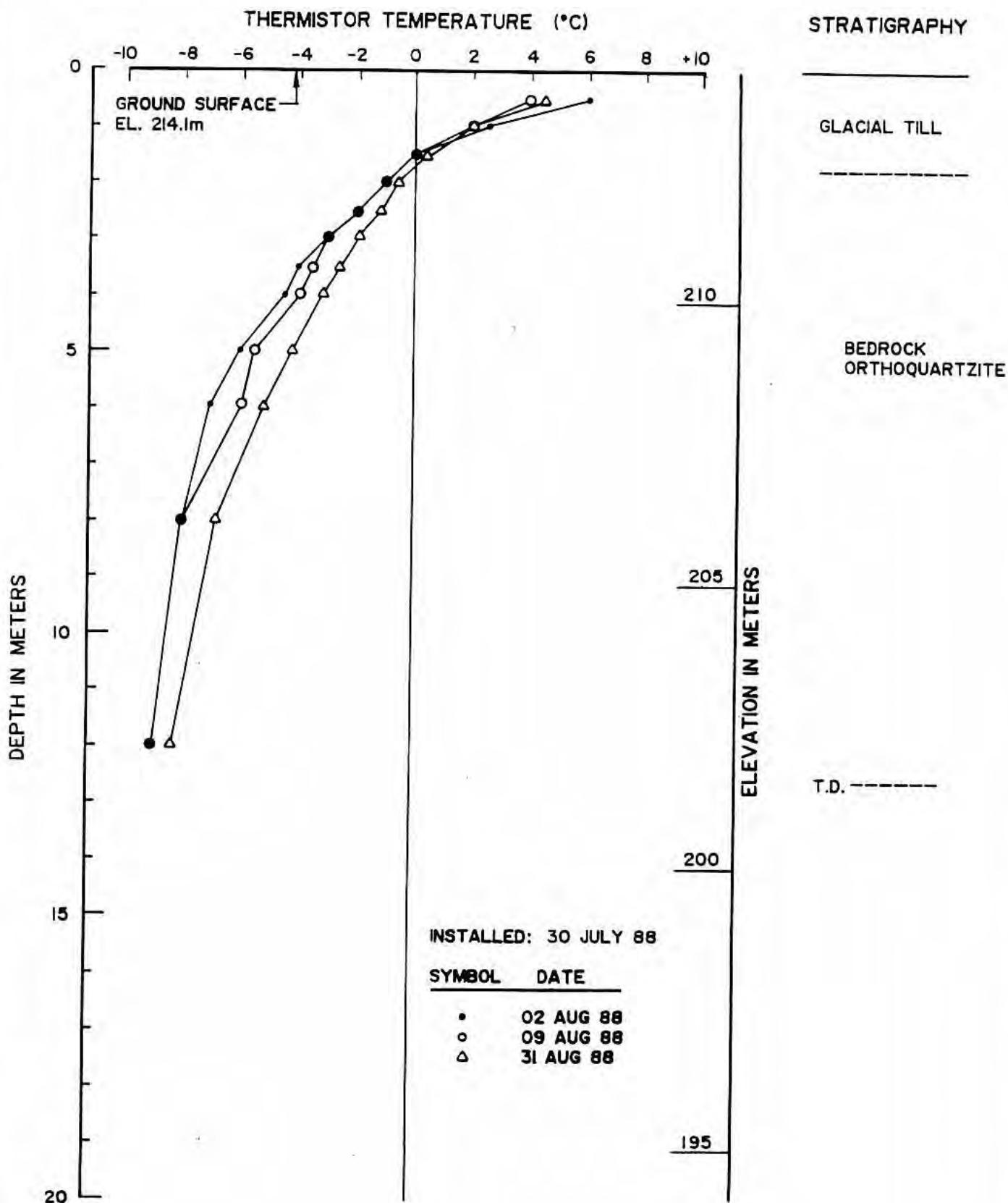
LOCATION: BH88-IT5



THERMISTOR TEMPERATURES LIVING QUARTERS-ESCARPMENT LAKE

Figure 5

LOCATION: BH88-ILI



PROJECT No. 88-1814 J DRAWN RK REVIEWED *RB* DATE OCT 88

THERMISTOR TEMPERATURES SKINNY LAKE AIRSTRIP

Figure III-1

LOCATION: BH88-1A10

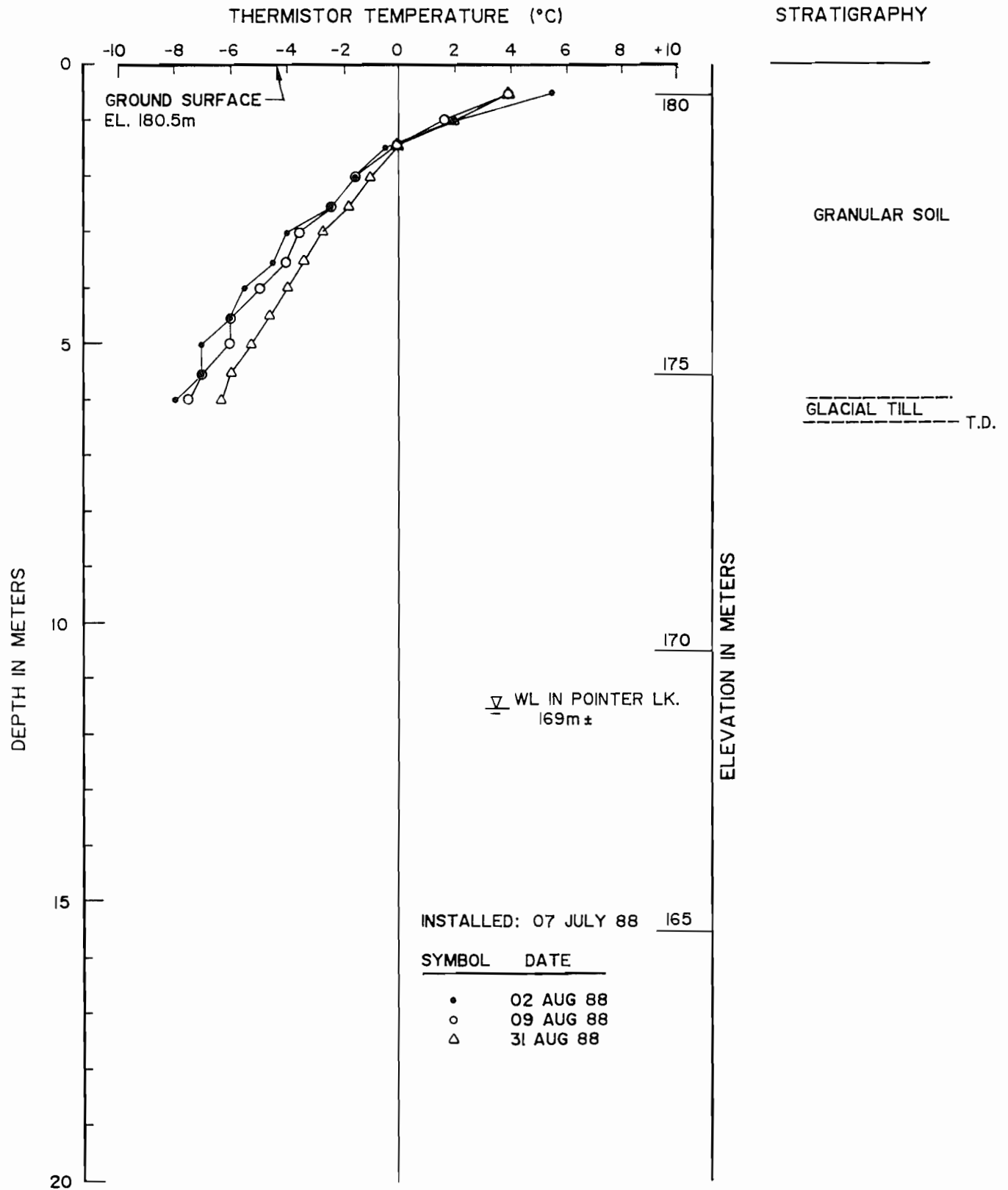


TABLE 2

SUMMARY OF MAXIMUM RECORDED THAW DEPTHS
KIGGAVIK, PROJECT N.W.T.

Borehole	Depth to Shattered Rock (m)	Max. Recorded Thaw Depth (m)	
		Thermistor	FDI
88 - 1P1	0.89	2.7	-
88 - 1P3	0.71	-	2.64
88 - 1P5	>2.1	-	0.88
88 - 2P2	1.90	1.1	-
88 - 2P3	0.30	-	2.82
88 - 1T1	1.09	2.3	-
88 - 1T3	3.35	6.3*	-
88 - 1T4	2.77	-	2.13*
88 - 1T5	>1.25	1.4	-
88 - 1T7	>3.20	-	1.76
88 - 1L1	1.68	1.7	-
88 - 1L2	0.45	-	3.10
88 - 4A1	>4.50	-	1.20
88 - 4A5	>3.90	-	1.33
88 - 1A5	>3.20	-	1.48
88 - 1A10	>6.40	1.4	-
88 - 1A14	>3.65	-	1.59
88 - MZ1	>2.30	-	1.01

Notes: -- 'FDI' indicates Frost Depth Indicator.

- "Maximum" thaw depths are those recorded
on August 31, 1988

- *Thaw depths affected by adjacent water bodies

