

PARTICLE SIZE ANALYSIS OF SOILS

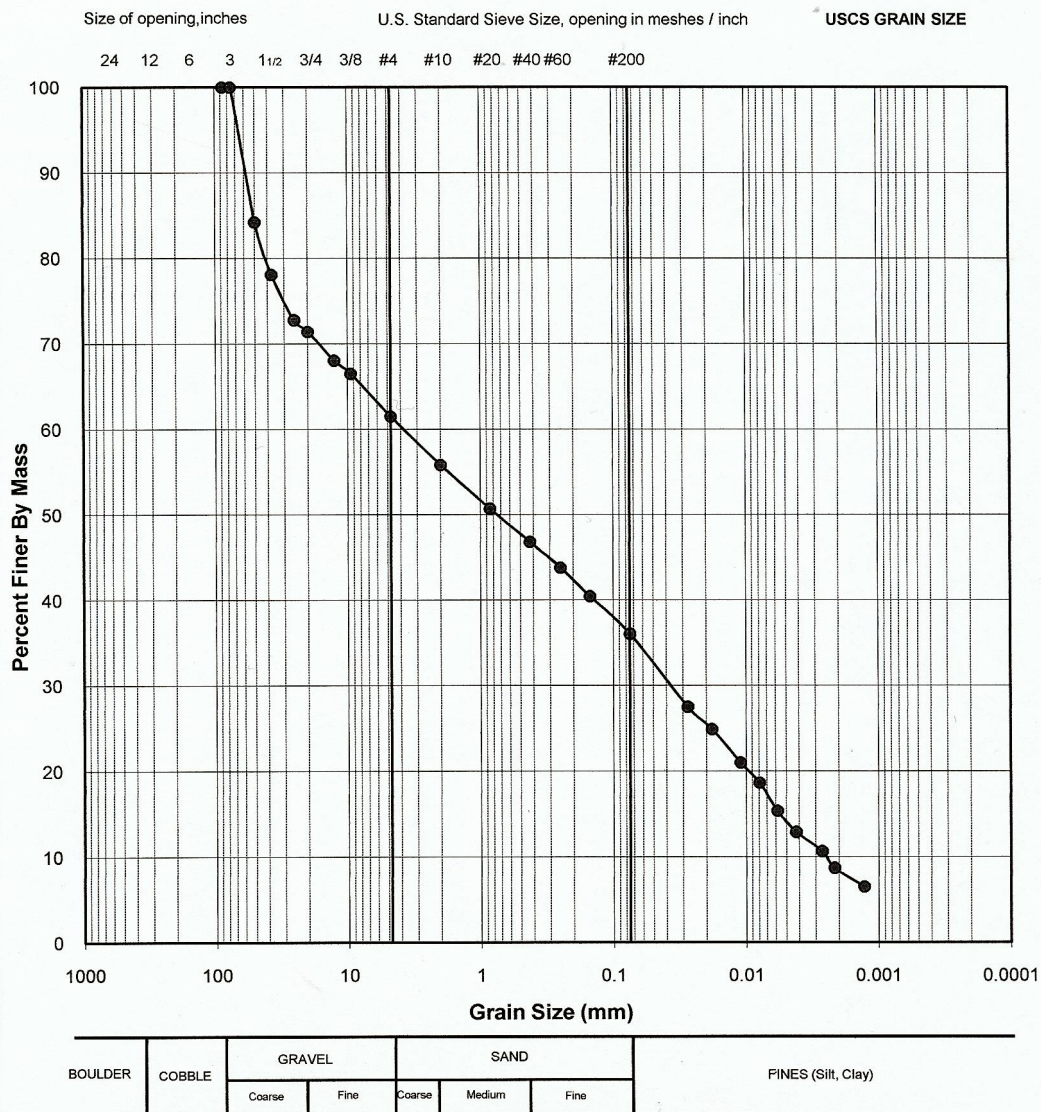
Reference
ASTM D 422-63 (2007)

Project No.:	09-1428-5007 (2000)	Field ID	SD1090710-2
Client:	AEM	Sample No.:	305
Project:	Meadowbank Gold Project	Depth (m):	NA
Location:	Nunavut	Lab ID No:	SA 305

Specific Gravity (assumed):	2.70	Other	Till from borrow source, Water content = 12.8%
Date sampled:	September 7, 2010	Remarks:	

Dispersion Method:	Stirring		
Dispersion Period (min):	5.00		

Sieve Size (US) (mm)	% Passing
3.5"	87.50
3"	76.20
2"	50.00
1.5"	37.50
1"	25.40
3/4"	20.00
1/2"	12.70
3/8"	9.50
#4	4.76
#10	2.00
#20	0.850
#40	0.425
#60	0.250
#100	0.150
#200	0.075
-	0.0275
-	0.0181
-	0.0110
-	0.0079
-	0.0058
-	0.0042
-	0.0027
-	0.0022
-	0.0013



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B. Dieudonne	September 11, 2010	YB	Sept. 27, 2010
TESTED BY	DATE	CHECKED BY	DATE

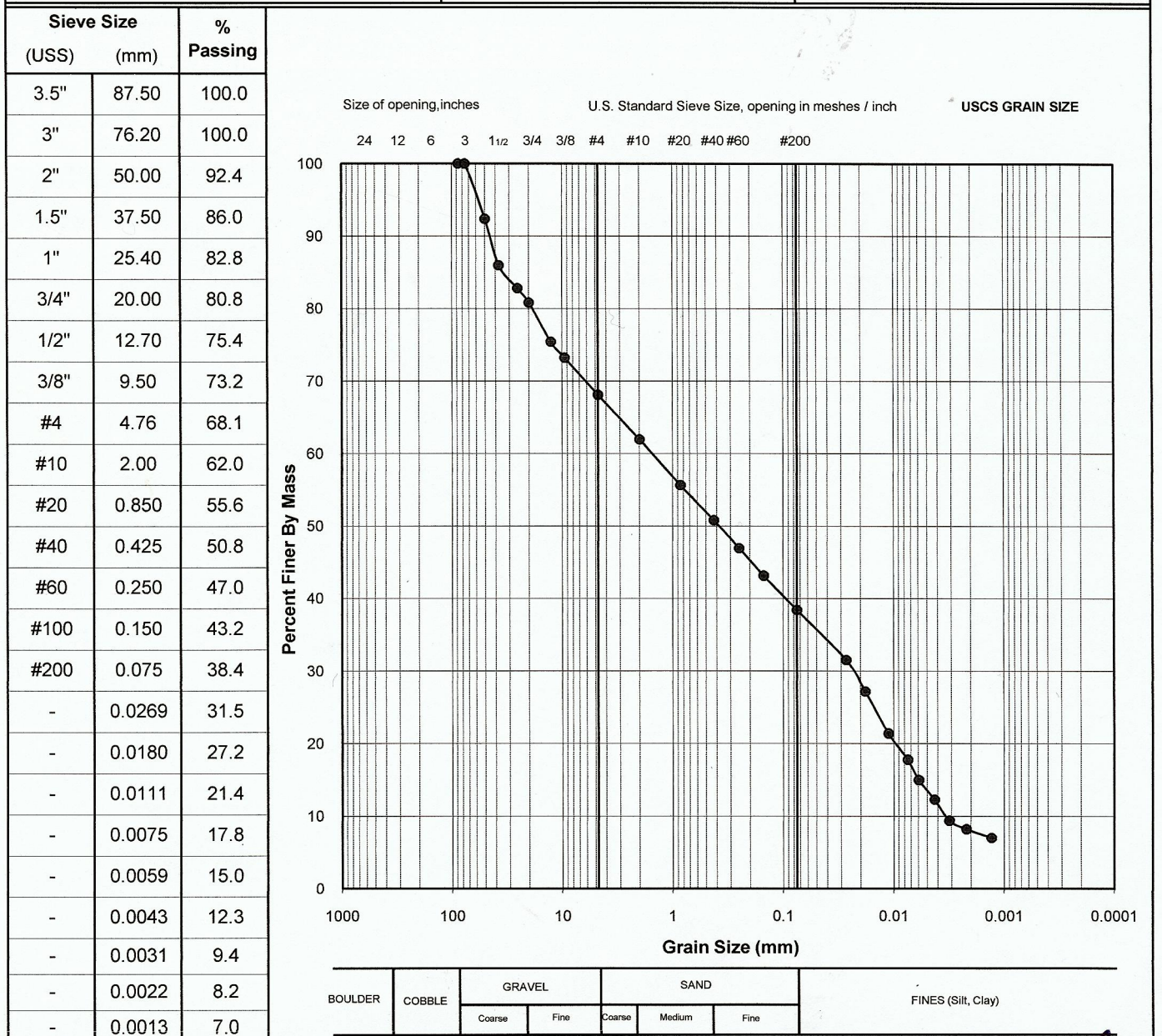
PARTICLE SIZE ANALYSIS OF SOILS

Reference
ASTM D 422-63 (2007)

Project No.:	09-1428-5007 (2000)	Field ID	SWD090710-1
Client:	AEM	Sample No.:	306
Project:	Meadowbank Gold Project	Depth (m):	NA
Location:	Nunavut	Lab ID No:	SA 306

Specific Gravity (assumed):	2.70	Other	Till underneath liner toe tie-in, water content=9.2%
Date sampled:	September 7, 2010	Remarks:	SWD 11+060

Dispersion Method:	Stirring		
Dispersion Period (min):	5.00		



B. Dieudonne	September 13, 2010	YB	Sept. 27, 2010
TESTED BY	DATE	CHECKED BY	DATE

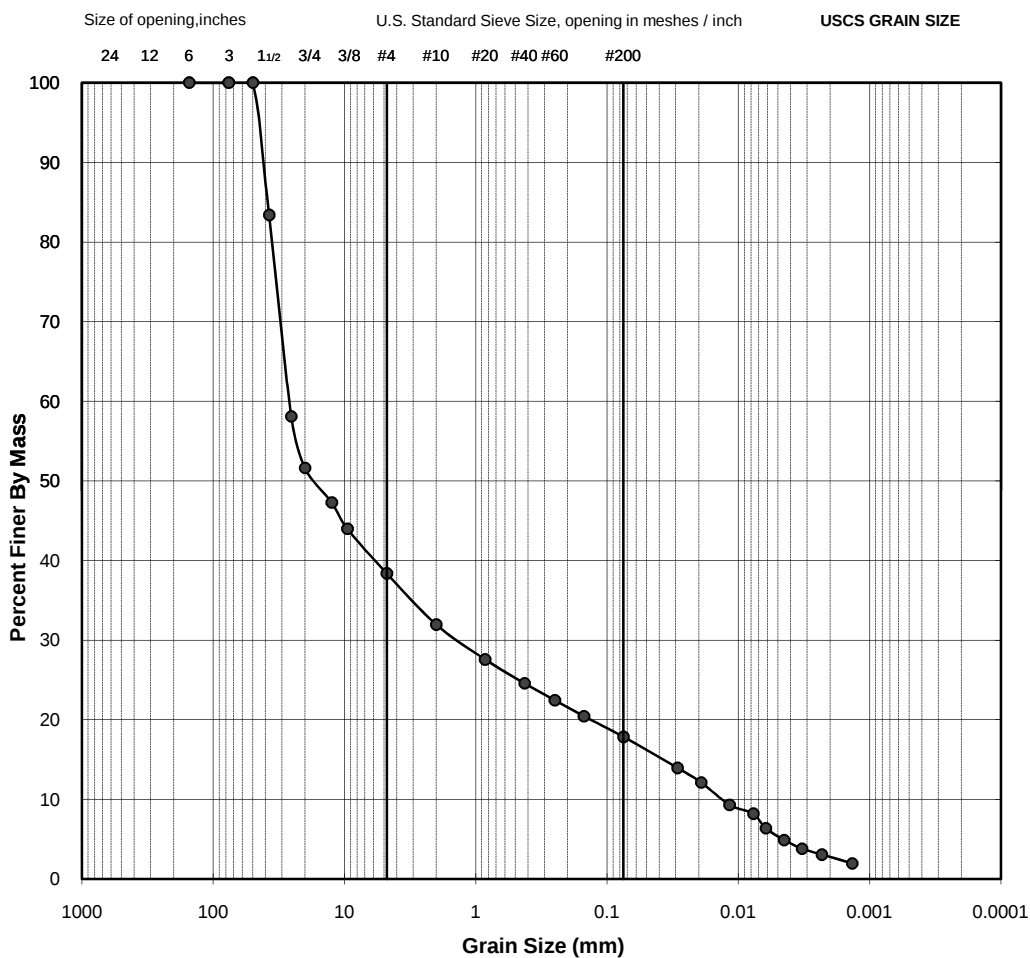
PARTICLE SIZE ANALYSIS OF SOILS

Reference

ASTM D 422-63 (2007)

Project No.:	09-1428-5007 (2000)	Field label:	SD091510-4
Client:	AEM	Sample No.:	334
Project:	Meadowbank Gold Project	Depth (m):	NA
Location:	Nunavut	Lab ID No:	SA 334
Specific Gravity (assumed):	2.70	Other	Till from Till plug, in situ compacted,
Date sampled:	September 15, 2010	Remarks:	SD2 Sta20+100 N:7215558; E: 637123; Water content: 8.4%
Dispersion Method:	Stirring	Remarks: Particulates over 50mm were not included into the analysis.	
Dispersion Period (min):	5.00		

Sieve Size (US)	(mm)	% Passing
8"	200.00	100.0
6"	152.40	100.0
3"	76.20	100.0
2"	50.00	100.0
1.5"	37.50	83.4
1"	25.40	58.1
3/4"	20.00	51.6
1/2"	12.50	47.3
3/8"	9.50	44.0
#4	4.76	38.4
#10	2.00	32.0
#20	0.850	27.6
#40	0.425	24.6
#60	0.250	22.5
#100	0.150	20.4
#200	0.075	17.9
-	0.0290	13.9
-	0.0192	12.1
-	0.0116	9.3
-	0.0077	8.2
-	0.0062	6.4
-	0.0045	4.9
-	0.0033	3.8
-	0.0023	3.1
-	0.0014	2.0



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MO and DB	September 25, 2010	YB	Sept. 27, 2010
TESTED BY	DATE	CHECKED BY	DATE

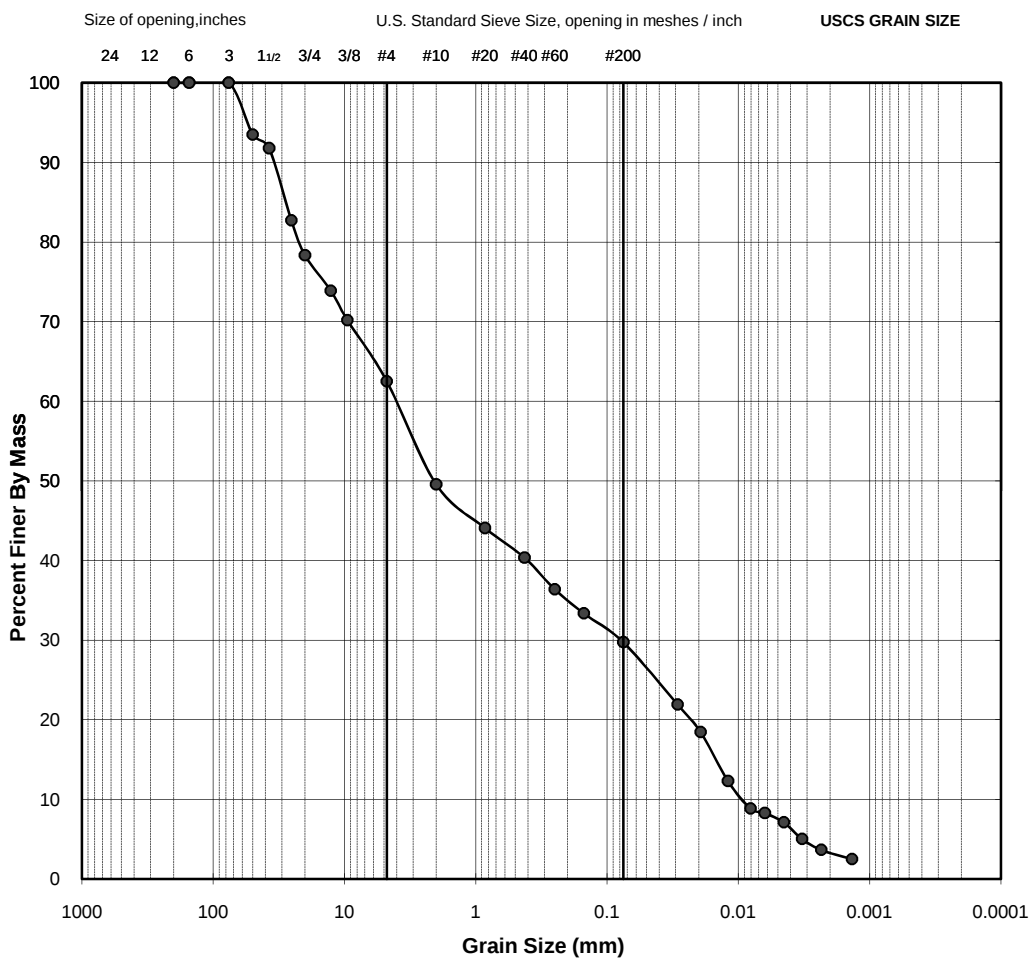
PARTICLE SIZE ANALYSIS OF SOILS

Reference

ASTM D 422-63 (2007)

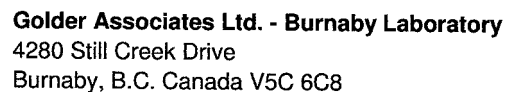
Project No.:	09-1428-5007 (2000)	Field label:	SD091510-5
Client:	AEM	Sample No.:	335
Project:	Meadowbank Gold Project	Depth (m):	N A
Location:	Nunavut	Lab ID No:	SA 335
Specific Gravity (assumed):	2.70	Other	Till from borrow pit to be used for tie-in till plug
Date sampled:	September 15, 2010	Remarks:	SD2
Dispersion Method:	Stirring	Remarks: Particulates over 76mm were removed from the analysis.	
Dispersion Period (min):	5.00		

Sieve Size (US)	(mm)	% Passing
8"	200.00	100.0
6"	152.40	100.0
3"	76.20	100.0
2"	50.00	93.5
1.5"	37.50	91.8
1"	25.40	82.7
3/4"	20.00	78.3
1/2"	12.70	73.9
3/8"	9.50	70.2
#4	4.76	62.5
#10	2.00	49.6
#20	0.850	44.1
#40	0.425	40.3
#60	0.250	36.4
#100	0.150	33.4
#200	0.075	29.7
-	0.0290	21.9
-	0.0193	18.5
-	0.0120	12.3
-	0.0081	8.8
-	0.0063	8.3
-	0.0045	7.1
-	0.0033	5.0
-	0.0023	3.7
-	0.0014	2.5



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MO	September 25, 2010	YB	Sept. 27, 2010
TESTED BY	DATE	CHECKED BY	DATE



Reference
ASTM C136-06 & C117-04

Sample No.: SA 371

Field Label: SD2 101610-01

Depth (m): NA

Lab ID No: 371

Date Sampled: October 16, 2010

Material Specification: NATIVE BORROW

Method:	SPLIT, WASHED
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Date Tested: October 25, 2010

Size of opening, inches
24 12 6 3 1 1/2 3/4 3/8 #4 #10 #20 #40 #60 #200

U.S. Standard Sieve Size, opening in meshes / inch

USCS GRAIN SIZE SCALE

Percent Finer By Mass

Grain Size (mm)

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

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Grant Burns

October 30, 2010

CHECKED BY

DATE _____

PARTICLE SIZE ANALYSIS OF SOILS

Reference

ASTM C136-06 & C117-04

Project No.: 09-1428-5007 (2000)

Client: AEM

Project: Meadowbank Gold Project

Location: Nunavut

Sample No.: **SA 372**
Field Label: SD2 101910-01

Depth (m): NA

Lab ID No: 372

Remarks: Water Content = 3.4%

Sa. Location: SD2 STA 20+380 @146-150masl

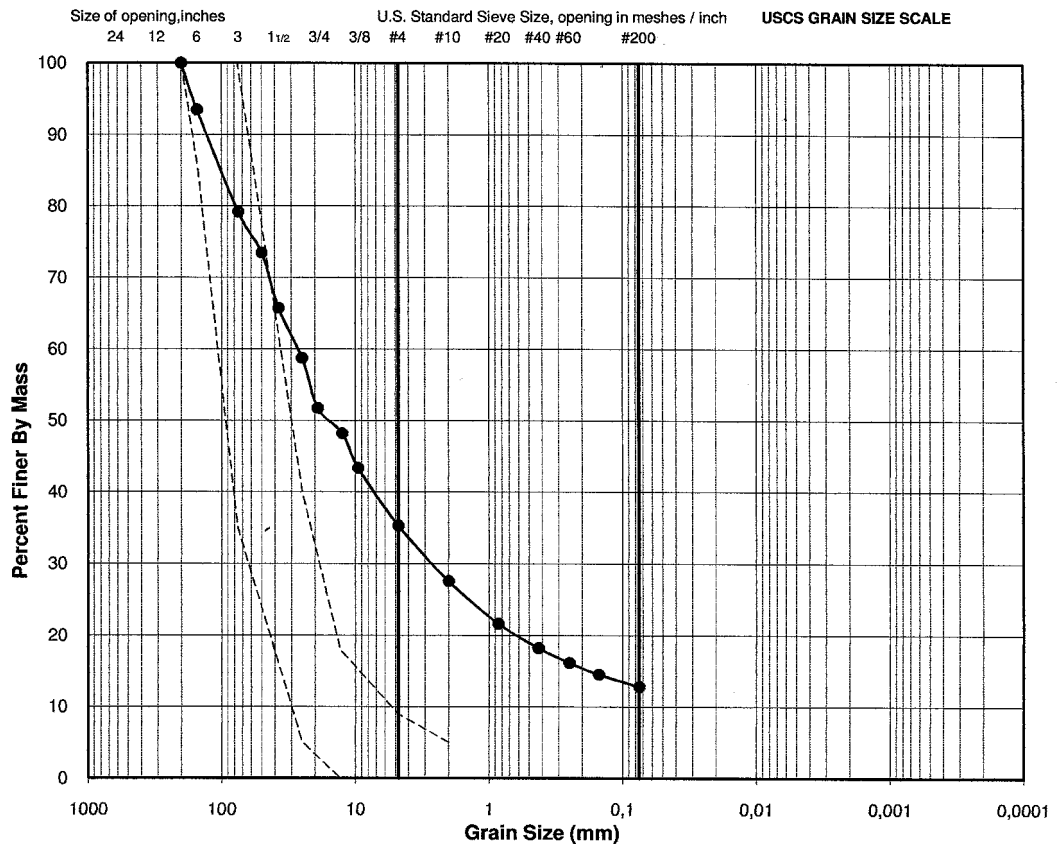
Date Sampled: October 19, 2010

Material Specification: COARSE FILTER

Method: SPLIT, WASHED

Date Tested: October 25, 2010

Sieve Size (USS)	(mm)	Passing %
8"	200,0	100,0
6"	152,4	93,5
3"	75,0	79,2
2"	50,0	73,5
1.5"	37,5	65,7
1"	25,0	58,7
3/4"	19,0	51,7
1/2"	12,5	48,2
3/8"	9,5	43,4
#4	4,75	35,3
#10	2,00	27,5
#20	0,850	21,7
#40	0,425	18,2
#60	0,250	16,2
#100	0,150	14,5
#200	0,075	12,8



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

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Damian Edwards

TESTED BY

October 25, 2010

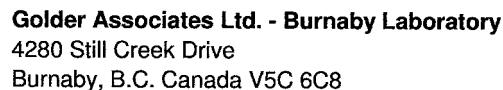
DATE

Grant Burns

CHECKED BY

October 30, 2010

DATE



Reference
ASTM C136-06 & C117-04

Sample No.: SA 373

Field Label:	SD2 102010-01
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Depth (m): NA

Lab ID No: 373

Date Sampled: October 20, 2010

Material Specification: FINE FILTER

Method: COMBINED, WASHED

Date Tested: October 25, 2010

Size of opening, inches
24 12 6 3 1 1/2 3/4 3/8 #4 #10 #20 #40 #60 #200

U.S. Standard Sieve Size, opening in meshes / inch

USCS GRAIN SIZE SCALE

Percent Finer By Mass

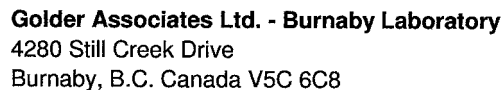
Grain Size (mm)

Grain Size (mm)	Percent Finer By Mass (%)
2.0	100
1.18	88
0.85	74
0.60	66
0.425	49
0.25	33
0.15	24
0.075	19
0.0425	15
0.025	13
0.015	11

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October 30, 2010

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Reference

ASTM C136-06 & C117-04

Sample No.: SA 374

Field Label: SD2 102010-02

Depth (m): NA

Lab ID No: 374

Date Sampled: October 20, 2010

Material Specification: NATIVE BORROW

Method:	SPLIT, WASHED
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Date Tested: October 25, 2010

The figure is a semi-logarithmic plot of Percent Finer By Mass versus Grain Size (mm). The y-axis ranges from 0 to 100 percent finer by mass. The x-axis ranges from 1000 mm to 0.0001 mm. A solid black curve represents the grain size distribution. Two vertical dashed lines are drawn at approximately 2.0 mm and 0.075 mm. At the top of the plot, U.S. Standard Sieve Sizes are listed: #24, #12, #6, #3, #1 1/2, #3/4, #3/8, #4, #10, #20, #40, #60, #200. At the bottom, the USCS Grain Size Scale categories are defined: BOULDER (> 250 mm), COBBLE (250 - 4.75 mm), GRAVEL (4.75 - 0.075 mm), SAND (0.075 - 0.002 mm), and FINES (Silt, Clay) (< 0.002 mm).

Grain Size (mm)	Percent Finer (%)
1000	100
600	100
425	98
300	95
250	92
200	90
150	86
125	83
100	78
75	71
60	65
425	59
300	55
250	50
200	42

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October 25, 2010

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PARTICLE SIZE ANALYSIS OF SOILS

Reference

ASTM C136-06 & C117-04

Project No.: 09-1428-5007 (2000)

Sample No.: SA 375

Client: AEM

Field Label:	SWD 102410-01
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Project: Meadowbank Gold Project

Depth (m): NA

Location: Nunavut

Lab ID No: 375

Remarks:	Water Content =	21.1%
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Date Sampled: October 24, 2010

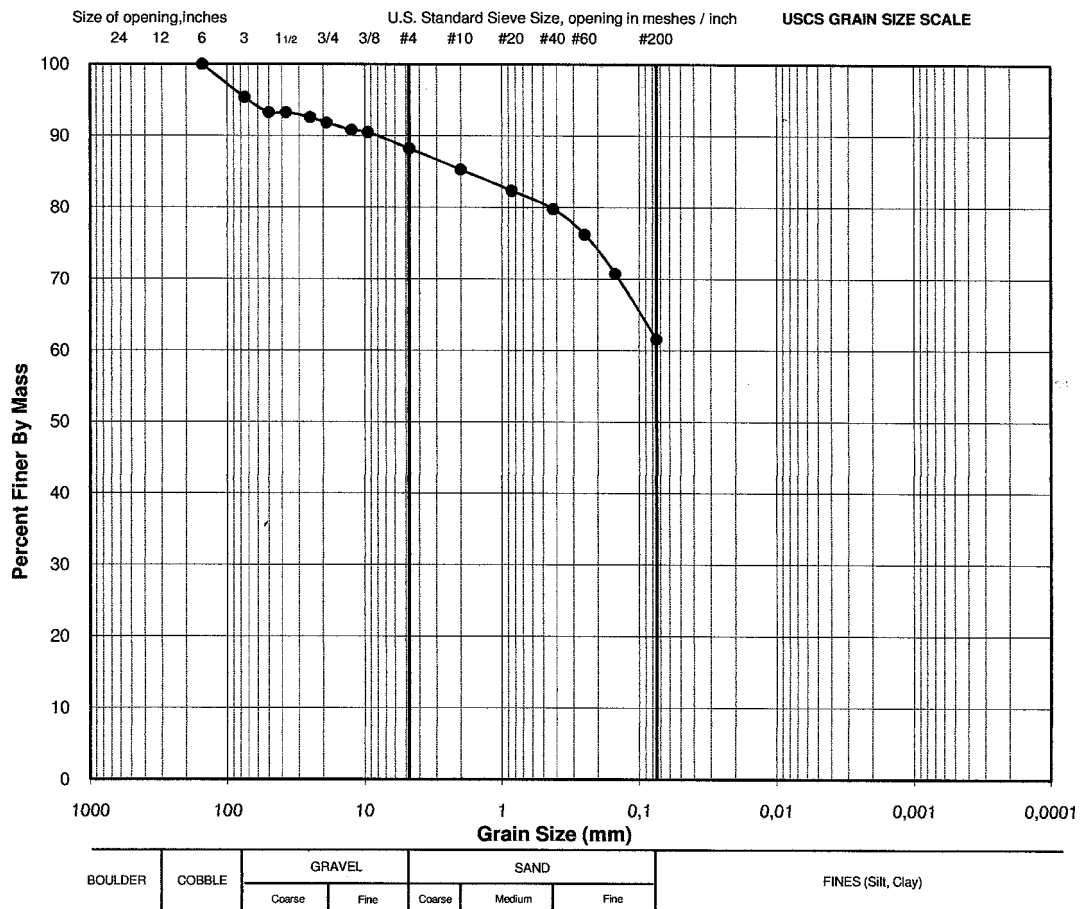
Sa. Location: SWD underneath toe of liner STA 10+150

Material Specification: N/A

Note: material TILL LIKE - sandy SILT, little gravel, trace clay, contains cobbles

Method:	SPLIT, WASHED
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Date Tested: October 25, 2010

[illegible]

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Damian Edwards

October 25, 2010

Grant Burns

October 30, 2010

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PARTICLE SIZE ANALYSIS OF SOILS

Reference
ASTM C136-06 & C117-04

Project No.: 09-1428-5007 (2000)

Client: AEM

Project: Meadowbank Gold Project

Location: Nunavut

Remarks: Water content=2.7%

Sa. Location: SWD 10+150

Sample No.: **SA 376**
Field Label: SWD 102410-01

Depth (m): NA

Lab ID No: 376

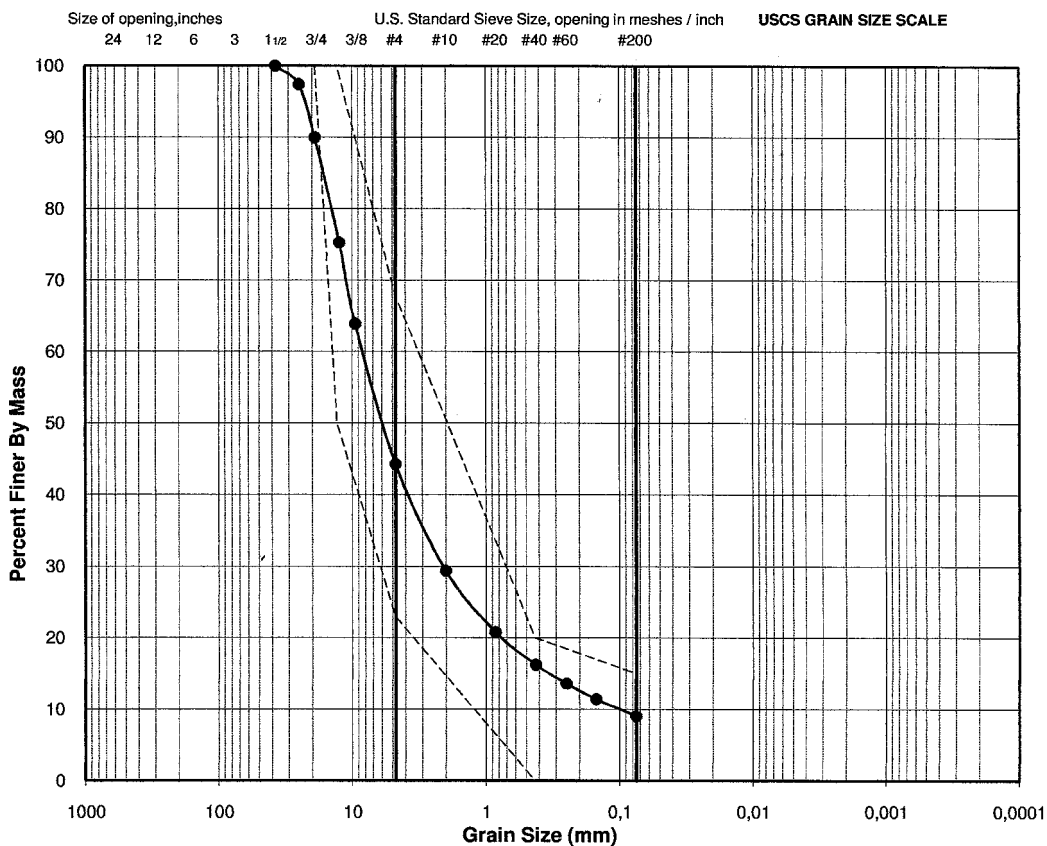
Date Sampled: October 24, 2010

Material Specification: FINE FILTER

Method: COMBINED, WASHED

Date Tested: October 25, 2010

Sieve Size (US)	(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	97,4
3/4"	19,0	90,0
1/2"	12,5	75,3
3/8"	9,5	63,9
#4	4,75	44,3
#10	2,00	29,4
#20	0,850	20,8
#40	0,425	16,2
#60	0,250	13,6
#100	0,150	11,4
#200	0,075	9,1



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

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PARTICLE SIZE ANALYSIS OF SOILS

Reference

ASTM C136-06 & C117-04

Project No.: 09-1428-5007 (2000)

Client: AEM

Project: Meadowbank Gold Project

Location: Nunavut

Sample No.: SA 377

Field Label: SWD 102410-03

Depth (m): NA

Lab ID No: 377

Remarks: Water Content = 12.1%

Date Sampled: October 24, 2010

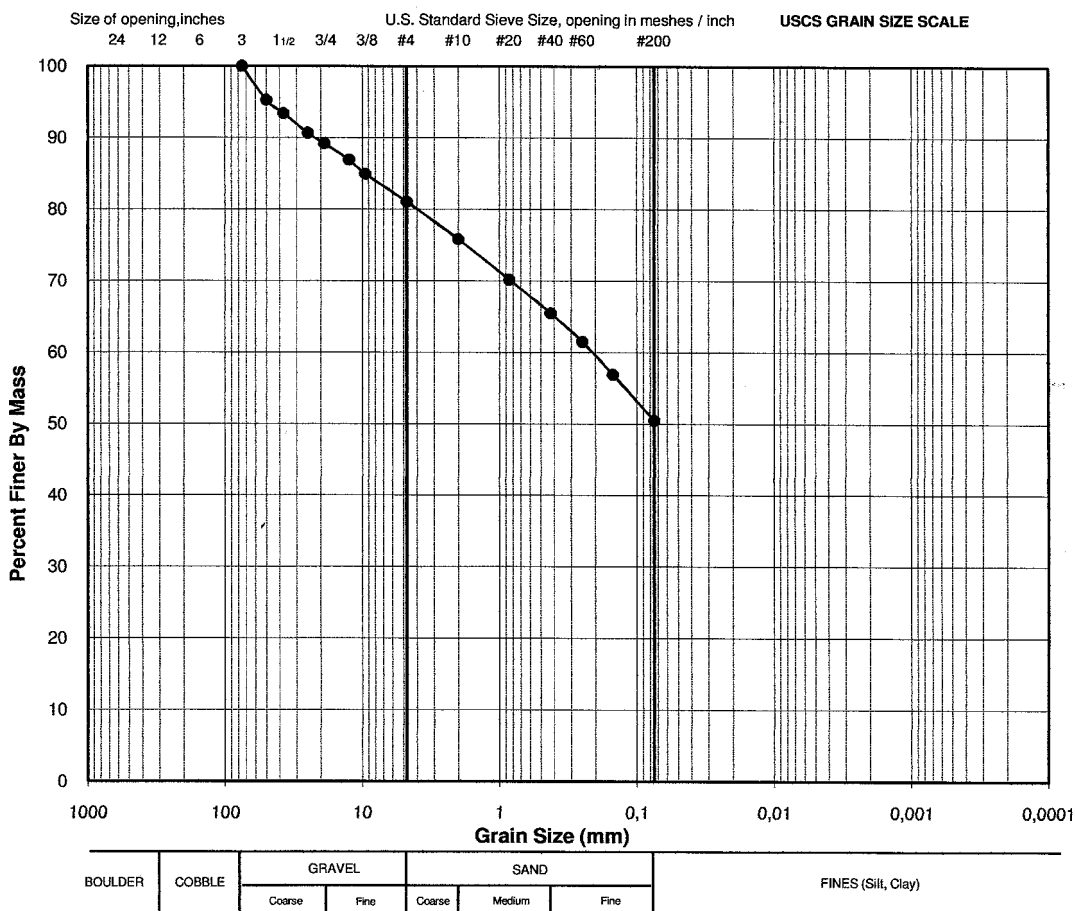
Sa. Location: Sampled *in-situ* (frozen) under SWD toe of tie in STA 10+080

Material Specification: NATIVE BORROW

Method: SPLIT, WASHED

Date Tested: October 25, 2010

Sieve Size (USS)	(mm)	Passing %
8"	200,0	100,0
6"	152,4	100,0
3"	75,0	100,0
2"	50,0	95,3
1.5"	37,5	93,4
1"	25,0	90,7
3/4"	19,0	89,2
1/2"	12,5	87,0
3/8"	9,5	85,0
#4	4,75	81,1
#10	2,00	75,8
#20	0,850	70,2
#40	0,425	65,5
#60	0,250	61,5
#100	0,150	56,9
#200	0,075	50,5



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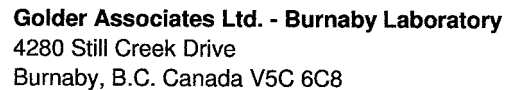
October 30, 2010

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Reference
ASTM C136-06 & C117-04

Sample No.: SA 379

Field Label: SWD 102510-01

Depth (m): NA

Lab ID No: 379

Date Sampled: October 25, 2010

Material Specification: NATIVE BORROW

Method: SPLIT, WASHED

Date Tested: October 25, 2010

Grain Size Distribution Data

Grain Size (mm)	Percent Finer (%)
100	100
75	90
60	89
47.5	85
37.5	81
30	79
25	77
20	72
15	68
12.5	63
10	60
7.5	58
6	54
4.75	50
3.75	44

USCS Grain Size Scale

Grain Size (mm)	USCS Classification
100	COBBLE
75	COBBLE
60	COBBLE
47.5	COBBLE
37.5	COBBLE
30	COBBLE
25	COBBLE
20	COBBLE
15	COBBLE
12.5	COBBLE
10	COBBLE
7.5	COBBLE
6	COBBLE
4.75	COBBLE
3.75	COBBLE
3	COBBLE
2.5	COBBLE
2	COBBLE
1.5	COBBLE
1.25	COBBLE
1	COBBLE
0.85	COBBLE
0.75	COBBLE
0.6	COBBLE
0.425	COBBLE
0.3	COBBLE
0.25	COBBLE
0.2	COBBLE
0.15	COBBLE
0.125	COBBLE
0.1	COBBLE
0.075	COBBLE
0.06	COBBLE
0.05	COBBLE
0.0425	COBBLE
0.0375	COBBLE
0.03	COBBLE
0.025	COBBLE
0.02	COBBLE
0.015	COBBLE
0.0125	COBBLE
0.01	COBBLE
0.0075	COBBLE
0.006	COBBLE
0.00425	COBBLE
0.003	COBBLE
0.0025	COBBLE
0.002	COBBLE
0.0015	COBBLE
0.00125	COBBLE
0.001	COBBLE
0.00075	COBBLE
0.0006	COBBLE
0.000425	COBBLE
0.0003	COBBLE
0.00025	COBBLE
0.0002	COBBLE
0.00015	COBBLE
0.000125	COBBLE
0.0001	COBBLE

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