HATCH

Sample Photographs

Borehole Name:	BH17-BR86-1	Mary River Expansion Study Stage 2
Location:	17 W 542257 7922182	2017 Geotechnical Investigation
Completion Date:	October 3, 2017	Baffinland Iron Mines

HATCH

Sample Photographs

Borehole Name:	BH17-BR86-1	Mary River Expansion Study Stage 2
Location:	17 W 542257 7922182	
Completion Date:	October 3, 2017	Baffinland Iron Mines

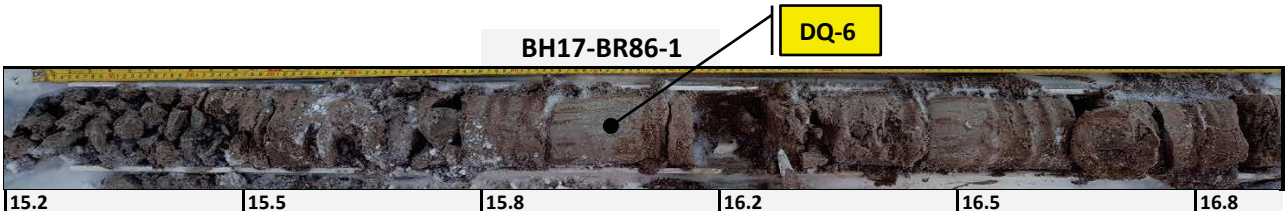
BH17-BR86-1

BH17-BR86-1

BH17-BR86-1

BH17-BR86-1

BH17-BR86-1



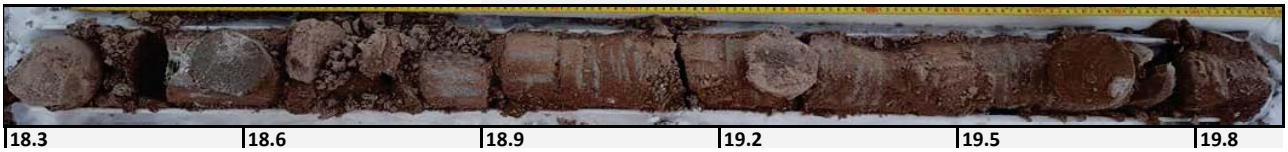
BH17-BR86-1

HATCH

Sample Photographs

Borehole Name:	BH17-BR86-1	Mary River Expansion Study Stage 2
Location:	17 W 542257 7922182	
Completion Date:	October 3, 2017	Baffinland Iron Mines

BH17-BR86-1



18.3 | 18.6 | 18.9 | 19.2 | 19.5 | 19.8

BH17-BR86-1

19.8 | 20.1 | 20.4 | 20.7 | 21.0 | 21.3

BH17-BR86-1

21.3 | 21.6 | 21.9 | 22.3 | 22.6 | 22.9

BH17-BR86-1

22.9 | 23.2 | 23.5 | 23.8 | 24.1 | 24.4

BH17-BR86-1

24.4 | 24.7 | 25.0 | 25.3 | 25.6 | 25.9

BH17-BR86-1

25.9 | 26.2 | 26.5 | 26.8 | 27.1 | 27.4

HATCH

Sample Photographs

Borehole Name:	BH17-BR86-1	Mary River Expansion Study Stage 2
Location:	17 W 542257 7922182	
Completion Date:	October 3, 2017	Baffinland Iron Mines

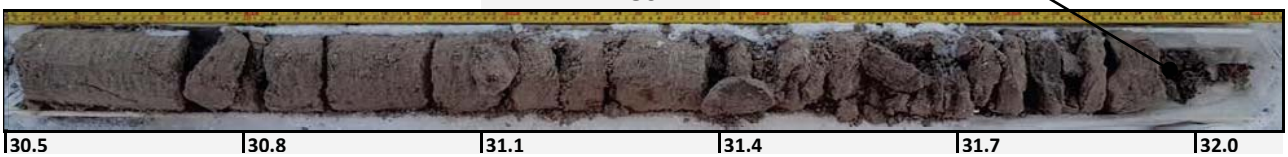
BH17-BR86-1

DQ-10

BH17-BR86-1

DQ-11

BH17-BR86-1



BH17-BR86-1

BH17-BR86-1

DQ-12

BH17-BR86-1

HATCH

Sample Photographs

Borehole Name:	BH17-BR86-1	Mary River Expansion Study Stage 2
Location:	17 W 542257 7922182	
Completion Date:	October 3, 2017	Baffinland Iron Mines

BH17-BR86-1

BH17-BR86-1

HATCH

Sample Photographs

Borehole Name:	BH17-BR86-2	Mary River Expansion Study Stage 2
Location:	17 W 542269 7922171	2017 Geotechnical Investigation
Completion Date:	October 26, 2017	Baffinland Iron Mines

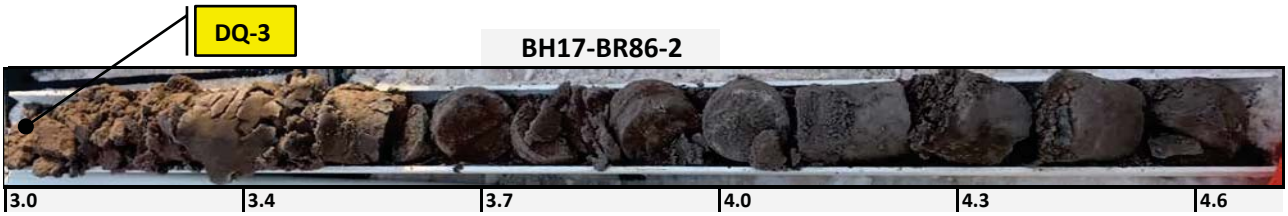
BH17-BR86-2

0 | 0.3 | 0.6 | 0.9 | 1.2 | 1.5

BH17-BR86-2

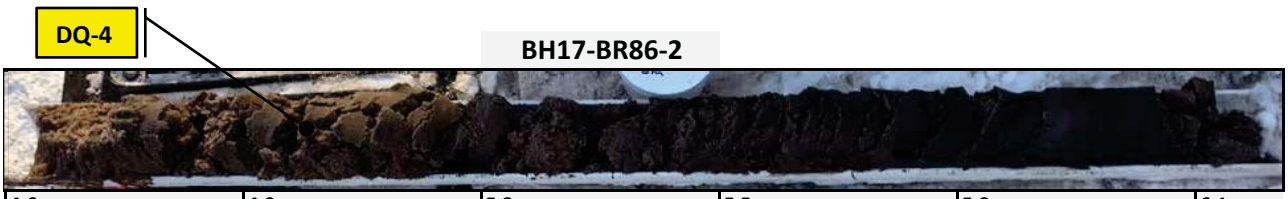
1.5 | 1.8 | 2.1 | 2.4 | 2.7 | 3.0

BH17-BR86-2



3.0 | 3.4 | 3.7 | 4.0 | 4.3 | 4.6

BH17-BR86-2



4.6 | 4.9 | 5.2 | 5.5 | 5.8 | 6.1

BH17-BR86-2

6.1 | 6.4 | 6.7 | 7.0 | 7.3 | 7.6

BH17-BR86-2

7.6 | 7.9 | 8.2 | 8.5 | 8.8 | 9.1

HATCH

Sample Photographs

Borehole Name:	BH17-BR86-2	Mary River Expansion Study Stage 2
Location:	17 W 542269 7922171	
Completion Date:	October 26, 2017	Baffinland Iron Mines

DQ-5

BH17-BR86-2

9.1 | 9.4 | 9.8 | 10.1 | 10.4 | 10.7

DQ-6

BH17-BR86-2

10.7 | 11.0 | 11.3 | 11.6 | 11.9 | 12.2

BH17-BR86-2

12.2 | 12.5 | 12.8 | 13.1 | 13.4 | 13.7

BH17-BR86-2

13.7 | 14.0 | 14.3 | 14.6 | 14.9 | 15.2

BH17-BR86-2

15.2 | 15.5 | 15.8 | 16.2 | 16.5 | 16.8

BH17-BR86-2

16.8 | 17.1 | 17.4 | 17.7 | 18.0 | 18.3

HATCH

Sample Photographs

Borehole Name:	BH17-BR86-2	Mary River Expansion Study Stage 2
Location:	17 W 542269 7922171	
Completion Date:	October 26, 2017	Baffinland Iron Mines

BH17-BR86-2

18.3 | 18.6 | 18.9 | 19.2 | 19.5 | 19.8

BH17-BR86-2

19.8 | 20.1 | 20.4 | 20.7 | 21.0 | 21.3

BH17-BR86-2

21.3 | 21.6 | 21.9 | 22.3 | 22.6 | 22.9

BH17-BR86-2

22.9 | 23.2 | 23.5 | 23.8 | 24.1 | 24.4

BH17-BR86-2

24.4 | 24.7 | 25.0 | 25.3 | 25.6 | 25.9

BH17-BR86-2

25.9 | 26.2 | 26.5 | 26.8 | 27.1 | 27.4

HATCH

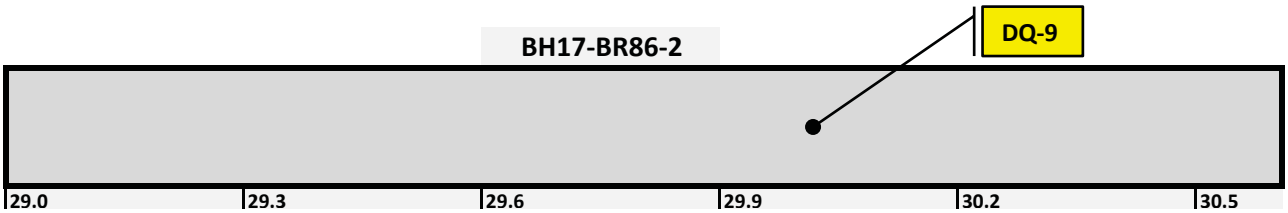
Sample Photographs

Borehole Name:	BH17-BR86-2	Mary River Expansion Study Stage 2
Location:	17 W 542269 7922171	
Completion Date:	October 26, 2017	Baffinland Iron Mines

BH17-BR86-2

27.4 | 27.7 | 28.0 | 28.3 | 28.7 | 29.0

BH17-BR86-2



29.0 | 29.3 | 29.6 | 29.9 | 30.2 | 30.5

BH17-BR86-2

30.5 | 30.8 | 31.1 | 31.4 | 31.7 | 32.0

BH17-BR86-2

32.0 | 32.3 | 32.6 | 32.9 | 33.2 | 33.5

BH17-BR86-2

33.5 | 33.8 | 34.1 | 34.4 | 34.7 | 35.1

BH17-BR86-2

35.1 | 35.4 | 35.7 | 36.0 | 36.3 | 36.6

Sample Photographs

Borehole Name:	BH17-BR86-2	Mary River Expansion Study Stage 2
Location:	17 W 542269 7922171	
Completion Date:	October 26, 2017	Baffinland Iron Mines

BH17-BR86-2

36.6 | 36.9 | 37.2 | 37.5 | 37.8 | 38.1

BH17-BR86-2

38.1 | 38.4 | 38.7 | 39.0 | 39.3 | 39.6

HATCH

Sample Photographs

Borehole Name:	BH17-BR86-3	Mary River Expansion Study Stage 2
Location:	17 W 542305 7922141	2017 Geotechnical Investigation
Completion Date:		Baffinland Iron Mines

HATCH

Sample Photographs

Borehole Name:	BH17-BR86-3	Mary River Expansion Study Stage 2
Location:	17 W 542305 7922141	
Completion Date:		Baffinland Iron Mines

BH17-BR86-3

9.1 | 9.4 | 9.8 | 10.1 | 10.4 | 10.7

BH17-BR86-3

10.7 | 11.0 | 11.3 | 11.6 | 11.9 | 12.2

BH17-BR86-3

12.2 | 12.5 | 12.8 | 13.1 | 13.4 | 13.7

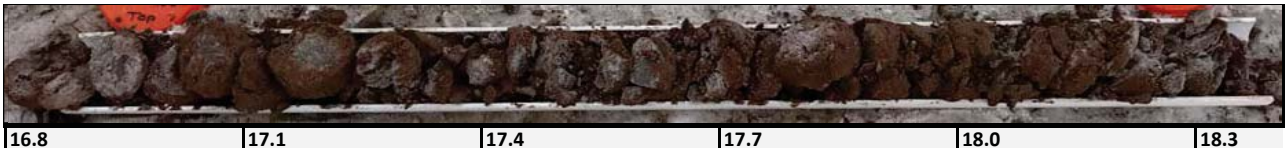
BH17-BR86-3

13.7 | 14.0 | 14.3 | 14.6 | 14.9 | 15.2

BH17-BR86-3

15.2 | 15.5 | 15.8 | 16.2 | 16.5 | 16.8

BH17-BR86-3



16.8 | 17.1 | 17.4 | 17.7 | 18.0 | 18.3

HATCH

Sample Photographs

Borehole Name:	BH17-BR86-3	Mary River Expansion Study Stage 2
Location:	17 W 542305 7922141	
Completion Date:		Baffinland Iron Mines

BH17-BR86-3

18.3 | 18.6 | 18.9 | 19.2 | 19.5 | 19.8

DQ-7

BH17-BR86-3

19.8 | 20.1 | 20.4 | 20.7 | 21.0 | 21.3

BH17-BR86-3

21.3 | 21.6 | 21.9 | 22.3 | 22.6 | 22.9

BH17-BR86-3

22.9 | 23.2 | 23.5 | 23.8 | 24.1 | 24.4

BH17-BR86-3

24.4 | 24.7 | 25.0 | 25.3 | 25.6 | 25.9

BH17-BR86-3

25.9 | 26.2 | 26.5 | 26.8 | 27.1 | 27.4

HATCH

Sample Photographs

Borehole Name:	BH17-BR86-3	Mary River Expansion Study Stage 2
Location:	17 W 542305 7922141	
Completion Date:		Baffinland Iron Mines

BH17-BR86-3

27.4 | 27.7 | 28.0 | 28.3 | 28.7 | 29.0

BH17-BR86-3

29.0 | 29.3 | 29.6 | 29.9 | 30.2 | 30.5

BH17-BR86-3

30.5 | 30.8 | 31.1 | 31.4 | 31.7 | 32.0

BH17-BR86-3

32.0 | 32.3 | 32.6 | 32.9 | 33.2 | 33.5

BH17-BR86-3

33.5 | 33.8 | 34.1 | 34.4 | 34.7 | 35.1

BH17-BR86-3

35.1 | 35.4 | 35.7 | 36.0 | 36.3 | 36.6

HATCH

Sample Photographs

Borehole Name:	BH17-BR86-3	Mary River Expansion Study Stage 2
Location:	17 W 542305 7922141	
Completion Date:		Baffinland Iron Mines

BH17-BR86-3

36.6 | 36.9 | 37.2 | 37.5 | 37.8 | 38.1

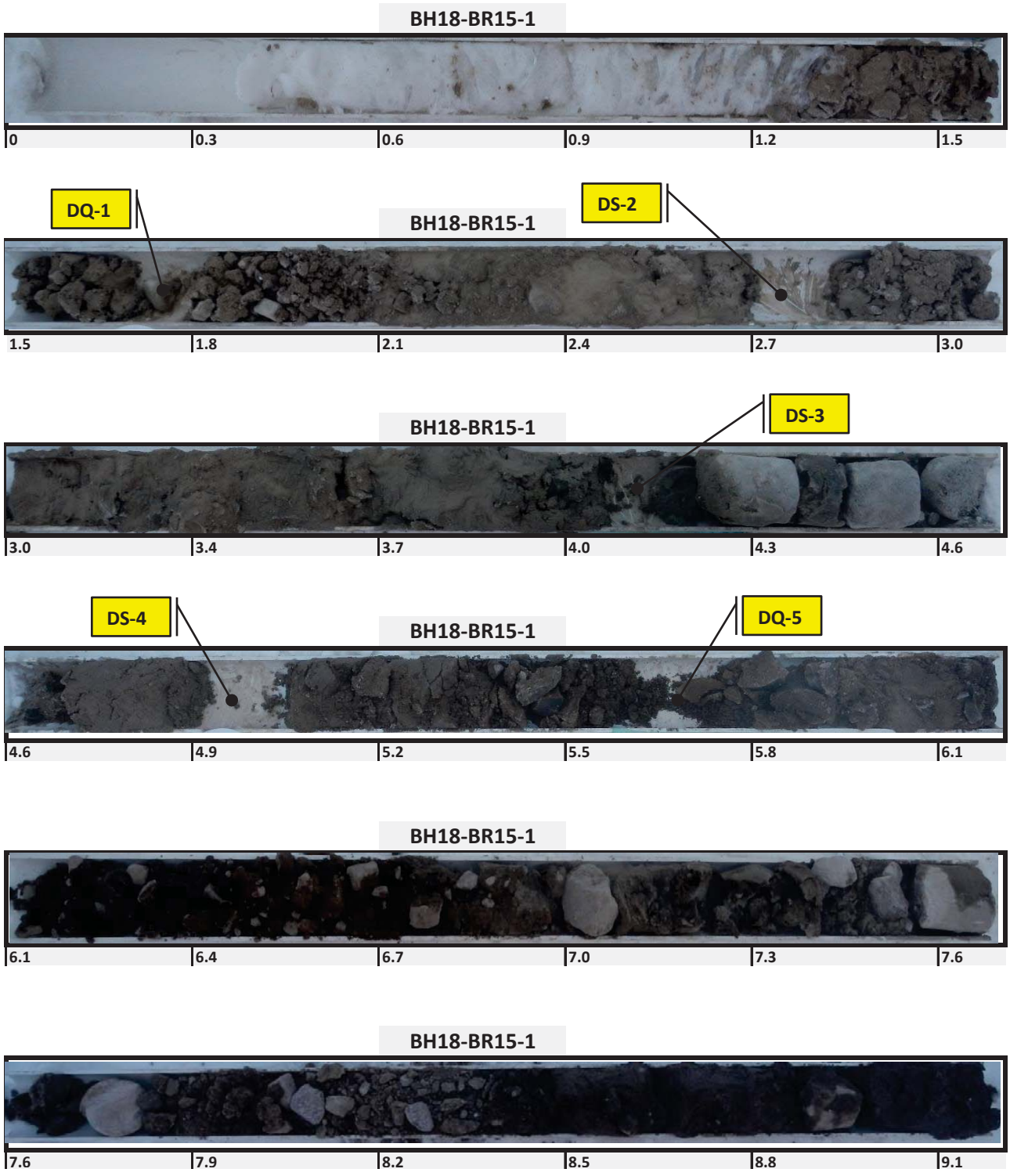
BH17-BR86-3

38.1 | 38.4 | 38.7 | 39.0 | 39.3 | 39.6

HATCH

Sample Photographs

Borehole Name:	BH18-BR15-1	Mary River Expansion Study Stage 2
Location:	17 W 514260 7965610	2018 Geotechnical Investigation
Completion Date:	March 14, 2018	Baffinland Iron Mines



HATCH

Sample Photographs

Borehole Name:	BH18-BR15-1	Mary River Expansion Study Stage 2
Location:	17 W 514260 7965610	
Completion Date:	March 14, 2018	Baffinland Iron Mines

BH18-BR15-1

9.1 | 9.4 | 9.8 | 10.1 | 10.4 | 10.7

BH18-BR15-1

10.7 | 10.8 | 10.9 | 10.9 | 11.0 | 11.1

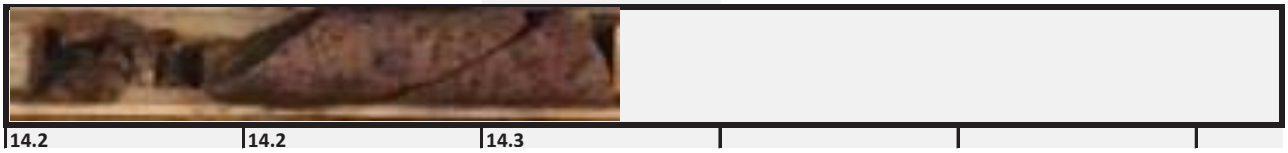
BH18-BR15-1

11.1 | 11.4 | 11.7 | 12.0 | 12.3 | 12.6

BH18-BR15-1

12.6 | 13.0 | 13.3 | 13.6 | 13.9 | 14.2

BH18-BR15-1



14.2 | 14.2 | 14.3

BH18-BR15-1

14.3 | 14.6 | 14.9 | 15.2 | 15.5 | 15.8

HATCH

Sample Photographs

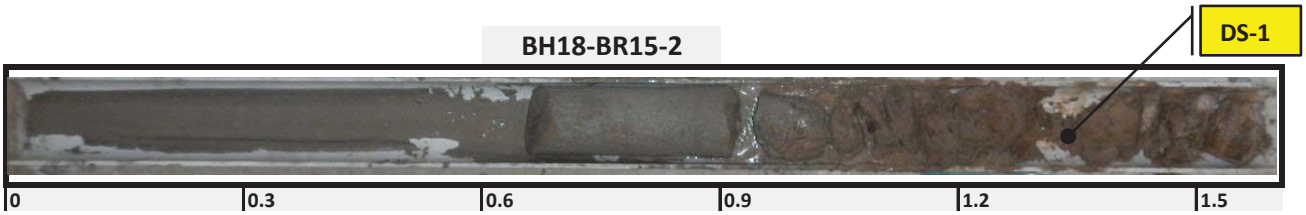
Borehole Name:	BH18-BR15-1	Mary River Expansion Study Stage 2
Location:	17 W 514260 7965610	
Completion Date:	March 14, 2018	Baffinland Iron Mines

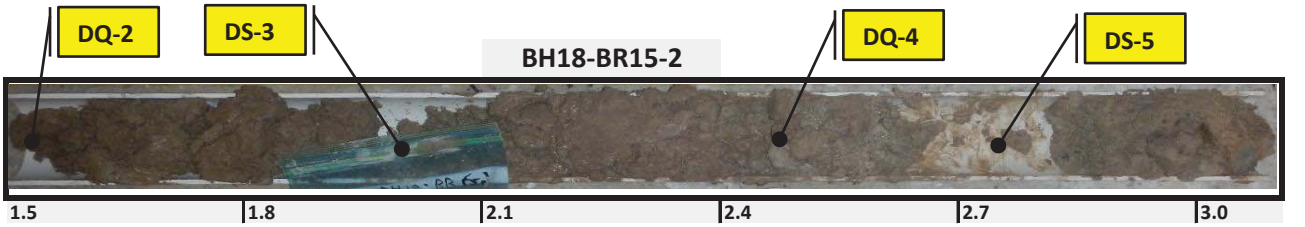
BH18-BR15-1

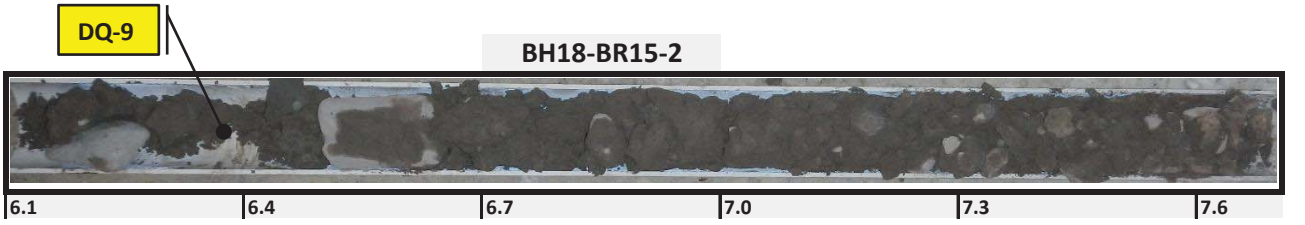
15.8 | 16.1 | 16.4 | 16.7 | 17.0 | 17.3

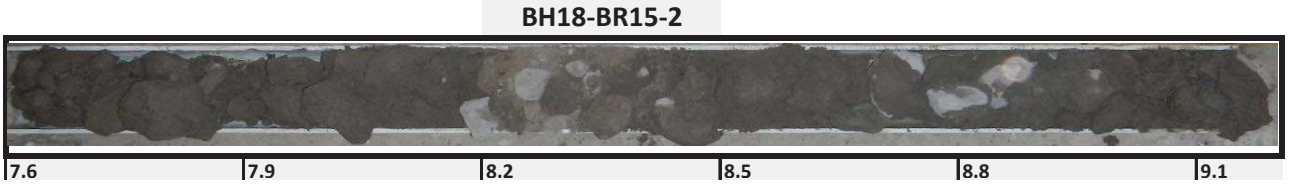
Sample Photographs

Borehole Name:	BH18-BR15-2	Mary River Expansion Study Stage 2
Location:	17 W 514211 7965645	2018 Geotechnical Investigation
Completion Date:	March 12, 2018	Baffinland Iron Mines









HATCH

Sample Photographs

Borehole Name:	BH18-BR15-2	Mary River Expansion Study Stage 2
Location:	17 W 514211 7965645	
Completion Date:	March 12, 2018	Baffinland Iron Mines

DS-10

BH18-BR15-2

9.1 | 9.4 | 9.8 | 10.1 | 10.4 | 10.7

BH18-BR15-2

10.7 | 11.0 | 11.3 | 11.6 | 11.9 | 12.2

BH18-BR15-2

12.2 | 12.5 | 12.8 | 13.1 | 13.4 | 13.7

BH18-BR15-2

13.7 | 14.0 | 14.3 | 14.6 | 14.9 | 15.2

BH18-BR15-2

15.2 | 15.5 | 15.8 | 16.2 | 16.5 | 16.8

HATCH

Sample Photographs

Borehole Name:	BH18-BR70-1	Mary River Expansion Study Stage 2
Location:	17 W 529138 7916667	2018 Geotechnical Investigation
Completion Date:	April 16, 2018	Baffinland Iron Mines

BH18-BR70-1

0 | 0.3 | 0.6 | 0.9 | 1.2 | 1.5

DQ-1 DS-2

BH18-BR70-1

1.5 | 1.8 | 2.1 | 2.4 | 2.7 | 3.0

BH18-BR70-1

3.0 | 3.4 | 3.7 | 4.0 | 4.3 | 4.6

BH18-BR70-1

4.6 | 4.9 | 5.2 | 5.5 | 5.8 | 6.1

DQ-3 DS-4

BH18-BR70-1

6.1 | 6.4 | 6.7 | 7.0 | 7.3 | 7.6

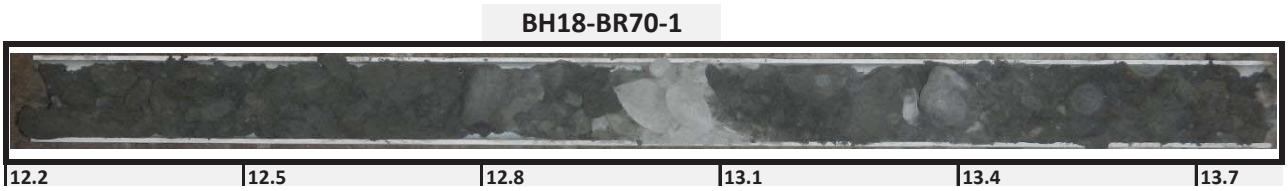
BH18-BR70-1

7.6 | 7.9 | 8.2 | 8.5 | 8.8 | 9.1

HATCH

Sample Photographs

Borehole Name:	BH18-BR70-1	Mary River Expansion Study Stage 2
Location:	17 W 529138 7916667	
Completion Date:	April 16, 2018	Baffinland Iron Mines



Sample Photographs

Borehole Name:	BH18-BR70-1	Mary River Expansion Study Stage 2
Location:	17 W 529138 7916667	
Completion Date:	April 16, 2018	Baffinland Iron Mines

BH18-BR70-1

18.3	18.6	18.9	19.2	19.5	19.8

BH18-BR70-1

19.8	20.1	20.4	20.7	21.0	21.3

BH18-BR70-1

21.3	21.6	21.9	22.3	22.6	22.9

BH18-BR70-1

22.9	23.2	23.5	23.8	24.1	24.4

BH18-BR70-1

24.4	24.7	25.0	25.3	25.6	25.9

BH18-BR70-1

25.9	26.2	26.5	26.8	27.1	27.4

HATCH

Sample Photographs

Borehole Name:	BH18-BR70-1	Mary River Expansion Study Stage 2
Location:	17 W 529138 7916667	
Completion Date:	April 16, 2018	Baffinland Iron Mines

BH18-BR70-1

27.4 | 27.7 | 27.9 | 28.1 | 28.3 | 28.6

BH18-BR70-1

28.6 | 28.8 | 28.9 | 29.1 | 29.3 | 29.5

BH18-BR70-1

29.5 | 29.8 | 30.1 | 30.4 | 30.7 | 31.0

BH18-BR70-1

31.0 | 31.3 | 31.6 | 31.9 | 32.2 | 32.5

HATCH

Sample Photographs

Borehole Name:	BH18-BR70-2	Mary River Expansion Study Stage 2
Location:	17 W 529107 7916700	2018 Geotechnical Investigation
Completion Date:	April 18, 2018	Baffinland Iron Mines

BH18-BR70-2

0 | 0.3 | 0.6 | 0.9 | 1.2 | 1.5

BH18-BR70-2

1.5 | 1.8 | 2.1 | 2.4 | 2.7 | 3.0

BH18-BR70-2

3.0 | 3.4 | 3.7 | 4.0 | 4.3 | 4.6

BH18-BR70-2

4.6 | 4.9 | 5.2 | 5.5 | 5.8 | 6.1

BH18-BR70-2

6.1 | 6.4 | 6.7 | 7.0 | 7.3 | 7.6

BH18-BR70-2

7.6 | 7.9 | 8.2 | 8.5 | 8.8 | 9.1

HATCH

Sample Photographs

Borehole Name:	BH18-BR70-2	Mary River Expansion Study Stage 2
Location:	17 W 529107 7916700	
Completion Date:	April 18, 2018	Baffinland Iron Mines

DQ-3

BH18-BR70-2

9.1 | 9.4 | 9.8 | 10.1 | 10.4 | 10.7

BH18-BR70-2

10.7 | 11.0 | 11.3 | 11.6 | 11.9 | 12.2

BH18-BR70-2

12.2 | 12.5 | 12.8 | 13.1 | 13.4 | 13.7

BH18-BR70-2

13.7 | 14.0 | 14.3 | 14.6 | 14.9 | 15.2

BH18-BR70-2

15.2 | 15.5 | 15.8 | 16.2 | 16.5 | 16.8

BH18-BR70-2

16.8 | 17.1 | 17.4 | 17.7 | 18.0 | 18.3

HATCH

Sample Photographs

Borehole Name:	BH18-BR70-2	Mary River Expansion Study Stage 2
Location:	17 W 529107 7916700	
Completion Date:	April 18, 2018	Baffinland Iron Mines

BH18-BR70-2

18.3	18.6	18.9	19.2	19.5	19.8

BH18-BR70-2

19.8	20.1	20.4	20.7	21.0	21.3

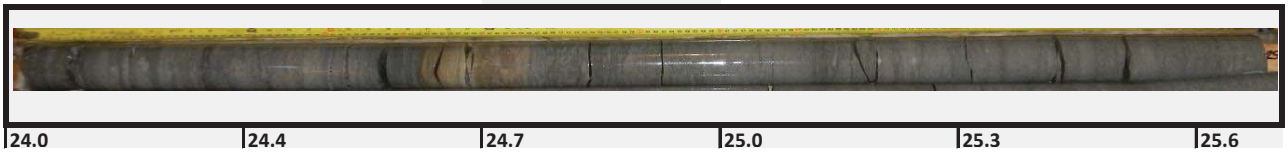
BH18-BR70-2

21.3	21.5	21.6	21.8	21.9	22.1

BH18-BR70-2

22.1	22.5	22.9	23.3	23.7	24.0

BH18-BR70-2



24.0	24.4	24.7	25.0	25.3	25.6

BH18-BR70-2

25.6	25.9	26.2	26.5	26.8	27.1

Sample Photographs

Borehole Name:	BH18-BR70-2	Mary River Expansion Study Stage 2
Location:	17 W 529107 7916700	
Completion Date:	April 18, 2018	Baffinland Iron Mines

BH18-BR70-2

27.1 | 27.4 | 27.7 | 28.0 | 28.3 | 28.6

Sample Photographs

Borehole Name:	BH18-BR102-1	Mary River Expansion Study Stage 2
Location:	17 W 555763 7915435	2018 Geotechnical Investigation
Completion Date:	April 7, 2018	Baffinland Iron Mines

BH18-BR102-1

0	0.3	0.6	0.9	1.2	1.5

BH18-BR102-1

1.5	1.7	1.8	2.0		

BH18-BR102-1

2.0	2.3	2.6	2.9	3.2	3.5

BH18-BR102-1

3.5	3.8	4.1	4.4	4.7	5.0

BH18-BR102-1

5.0	5.3	5.6	5.9	6.2	6.6

BH18-BR102-1

6.6	6.9	7.2	7.5	7.8	8.1

HATCH

Sample Photographs

Borehole Name:	BH18-BR102-1	Mary River Expansion Study Stage 2
Location:	17 W 555763 7915435	
Completion Date:	April 7, 2018	Baffinland Iron Mines

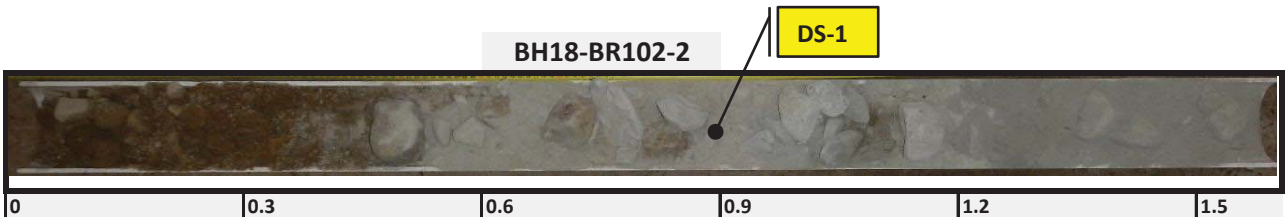
BH18-BR102-1

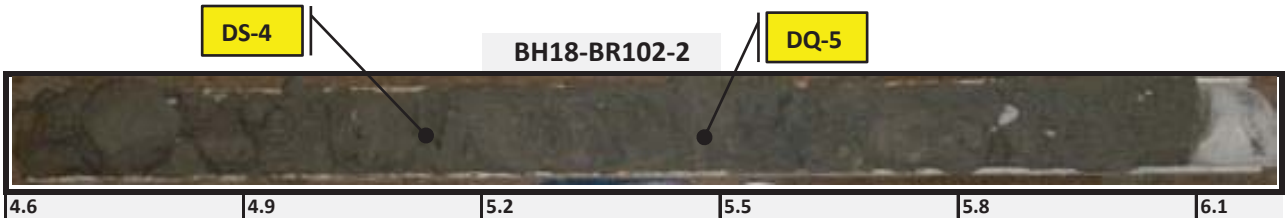
8.1 | 8.4 | 8.7 | 9.0 | 9.3 | 9.6

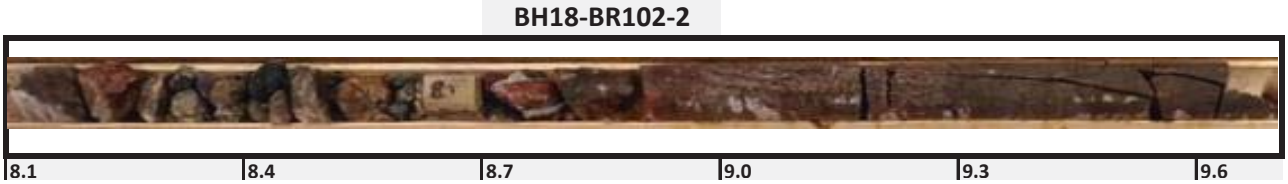
HATCH

Sample Photographs

Borehole Name:	BH18-BR102-2	Mary River Expansion Study Stage 2
Location:	17 W 555674 7915443	2018 Geotechnical Investigation
Completion Date:	April 10, 2018	Baffinland Iron Mines







HATCH

Sample Photographs

Borehole Name:	BH18-BR102-2	Mary River Expansion Study Stage 2
Location:	17 W 555674 7915443	
Completion Date:	April 10, 2018	Baffinland Iron Mines

BH18-BR102-2

9.6 | 9.9 | 10.2 | 10.5 | 10.8 | 11.1

BH18-BR102-2

11.1 | 11.4 | 11.7 | 12.0 | 12.3 | 12.6

BH18-BR102-2

12.6 | 13.0 | 13.3 | 13.6 | 13.9 | 14.2

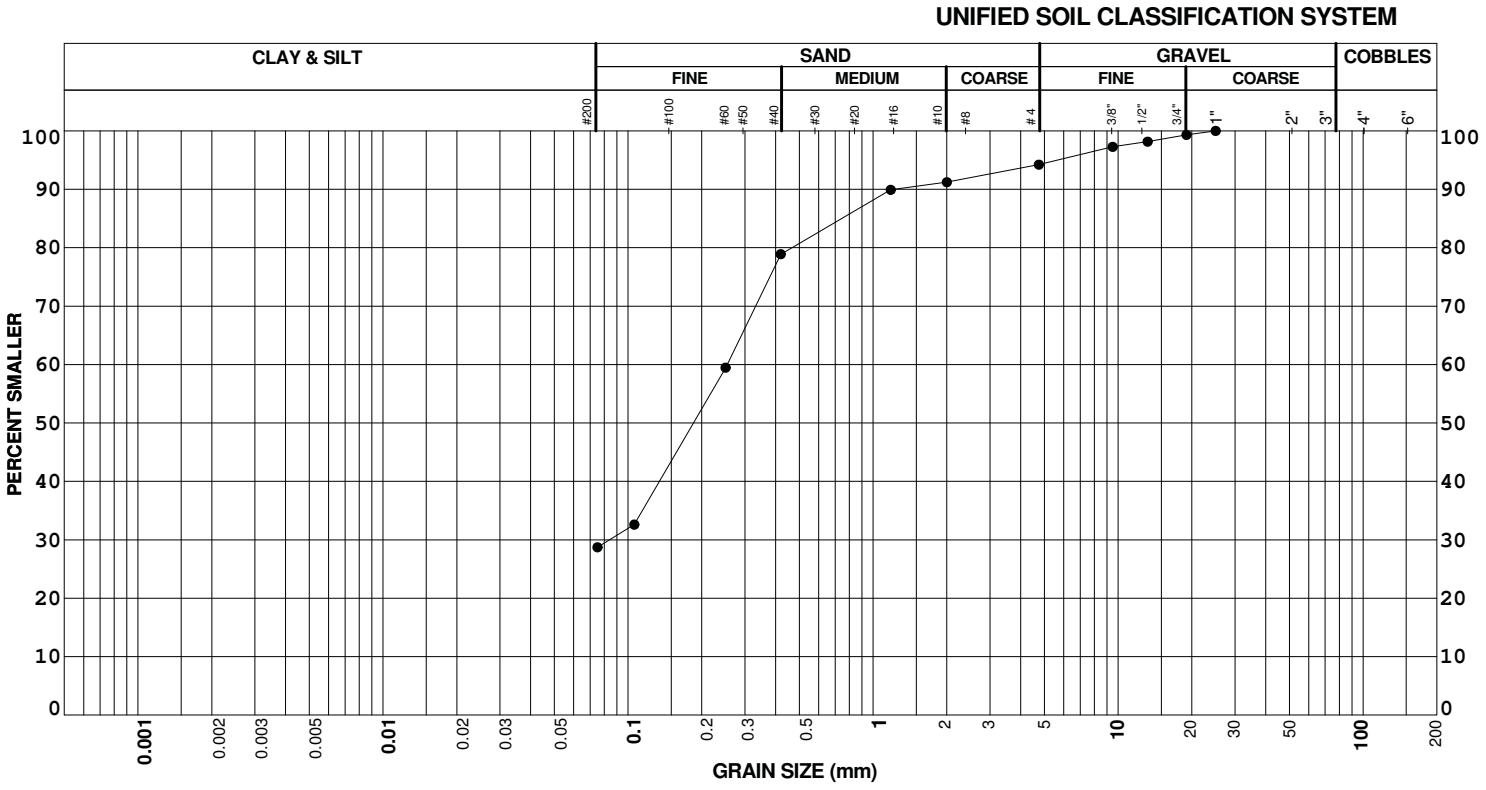
BH18-BR102-2

14.2 | 14.5 | 14.8 | 15.1 | 15.4 | 15.7

BH18-BR102-2

15.7 | 16.0 | 16.3 | 16.6 | 16.9 | 17.2

Appendix D
Laboratory Reports



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B001	BS3	3.50	6	66	29		

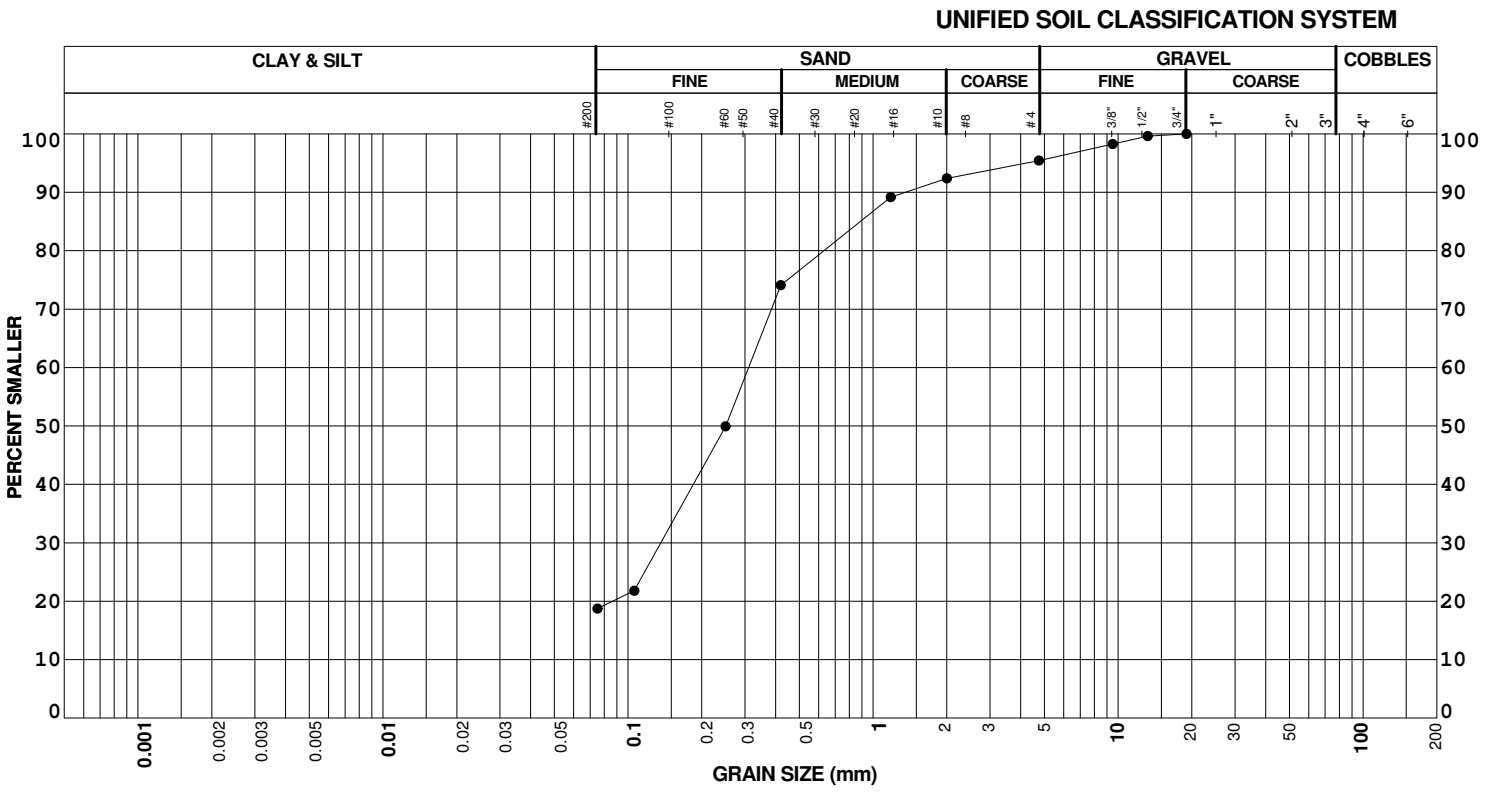
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B002	BS4	5.90	5	77	19		

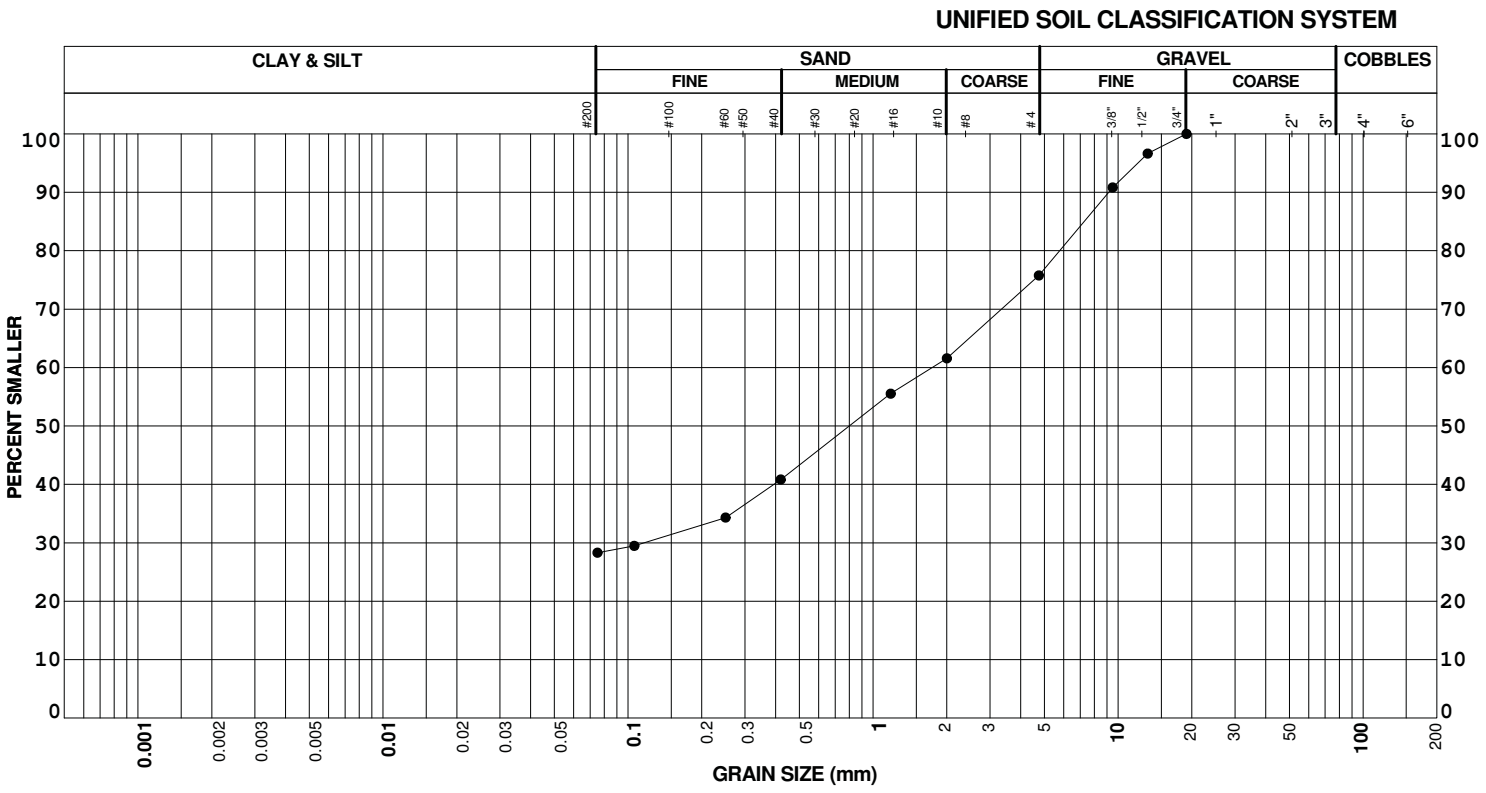
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B003	BS2	1.90	24	47	28		

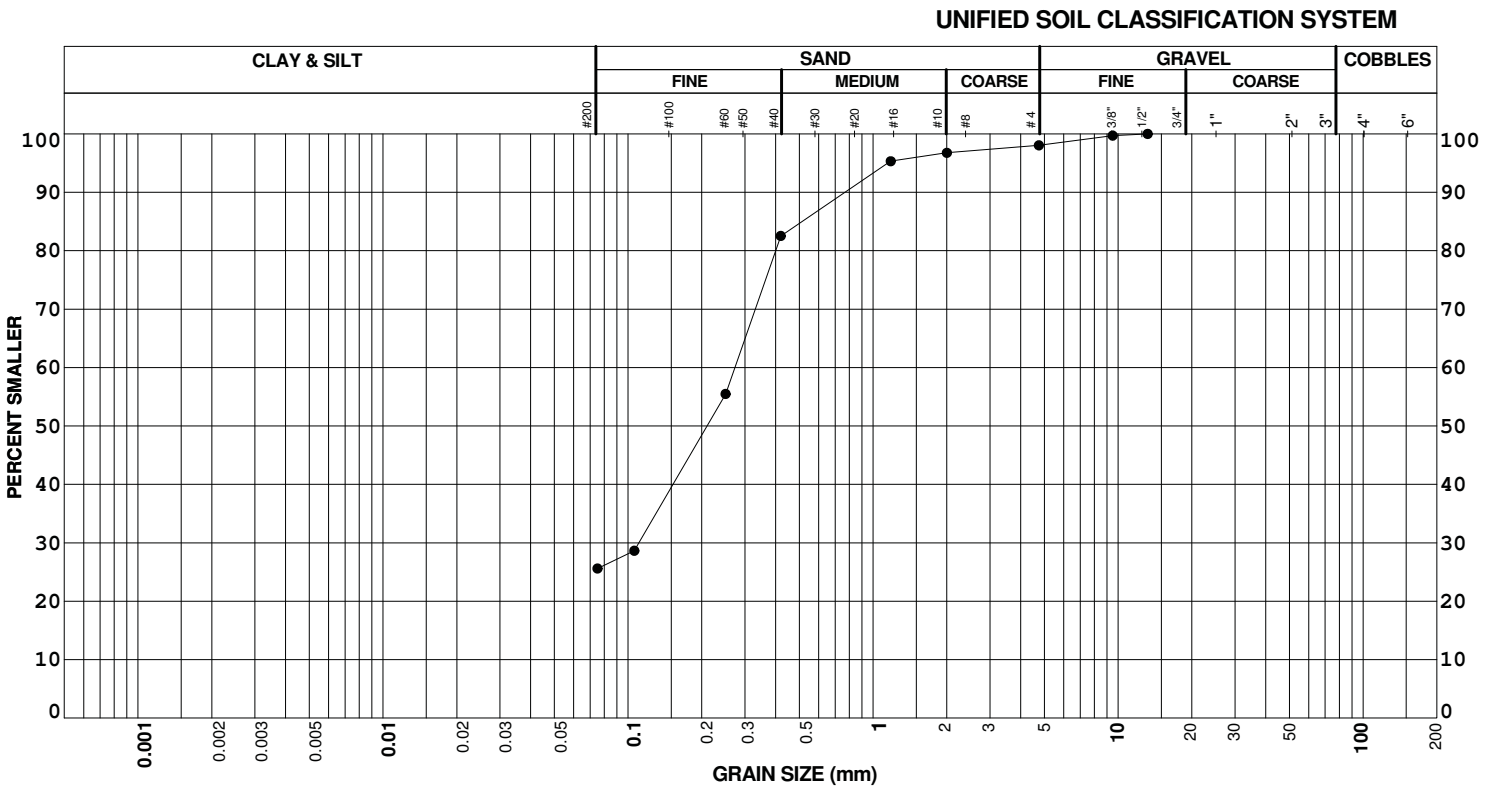
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B003	BS4	5.80	2	72	26		

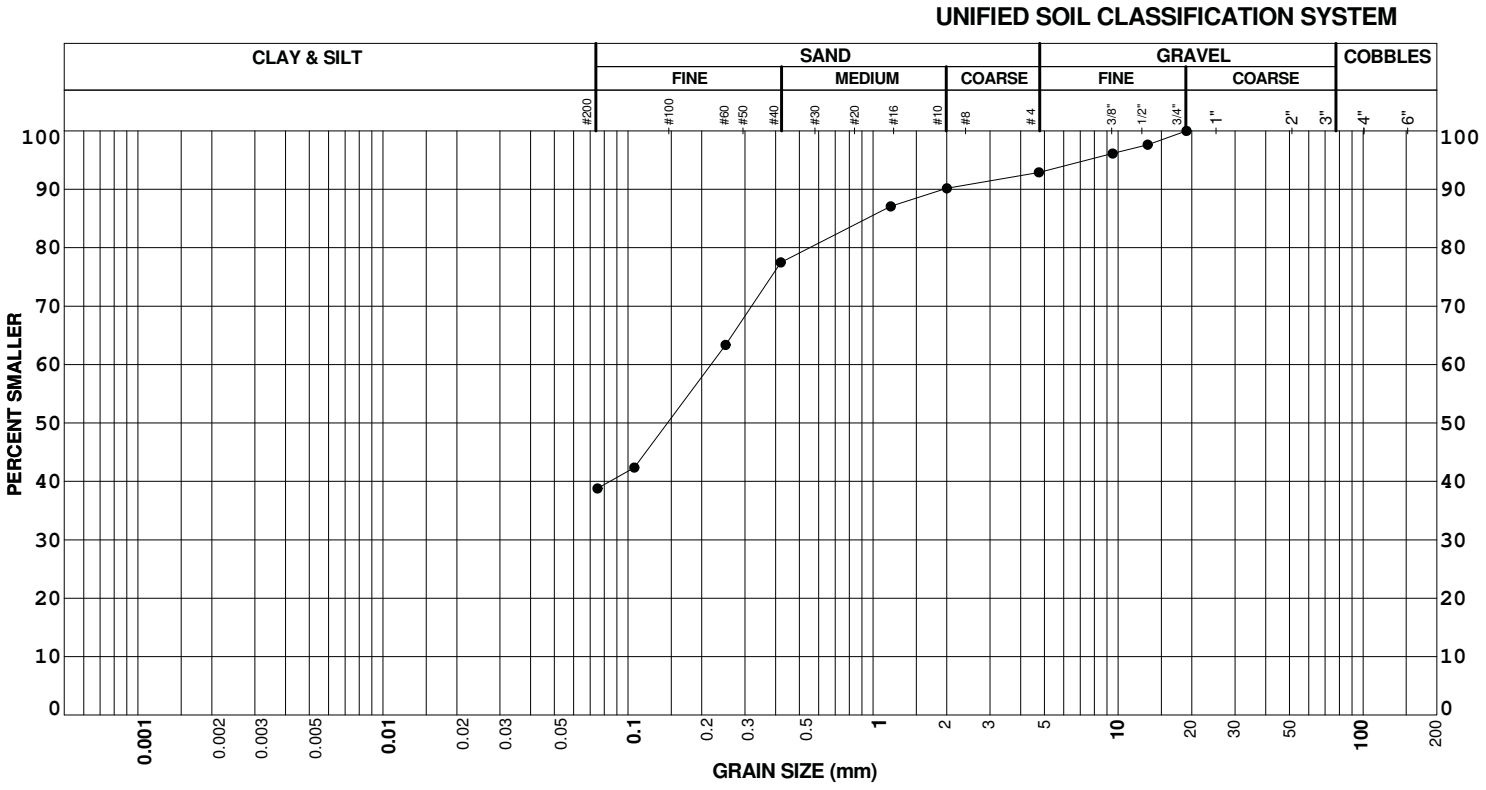
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B004	BS4	5.80	7	54	39		

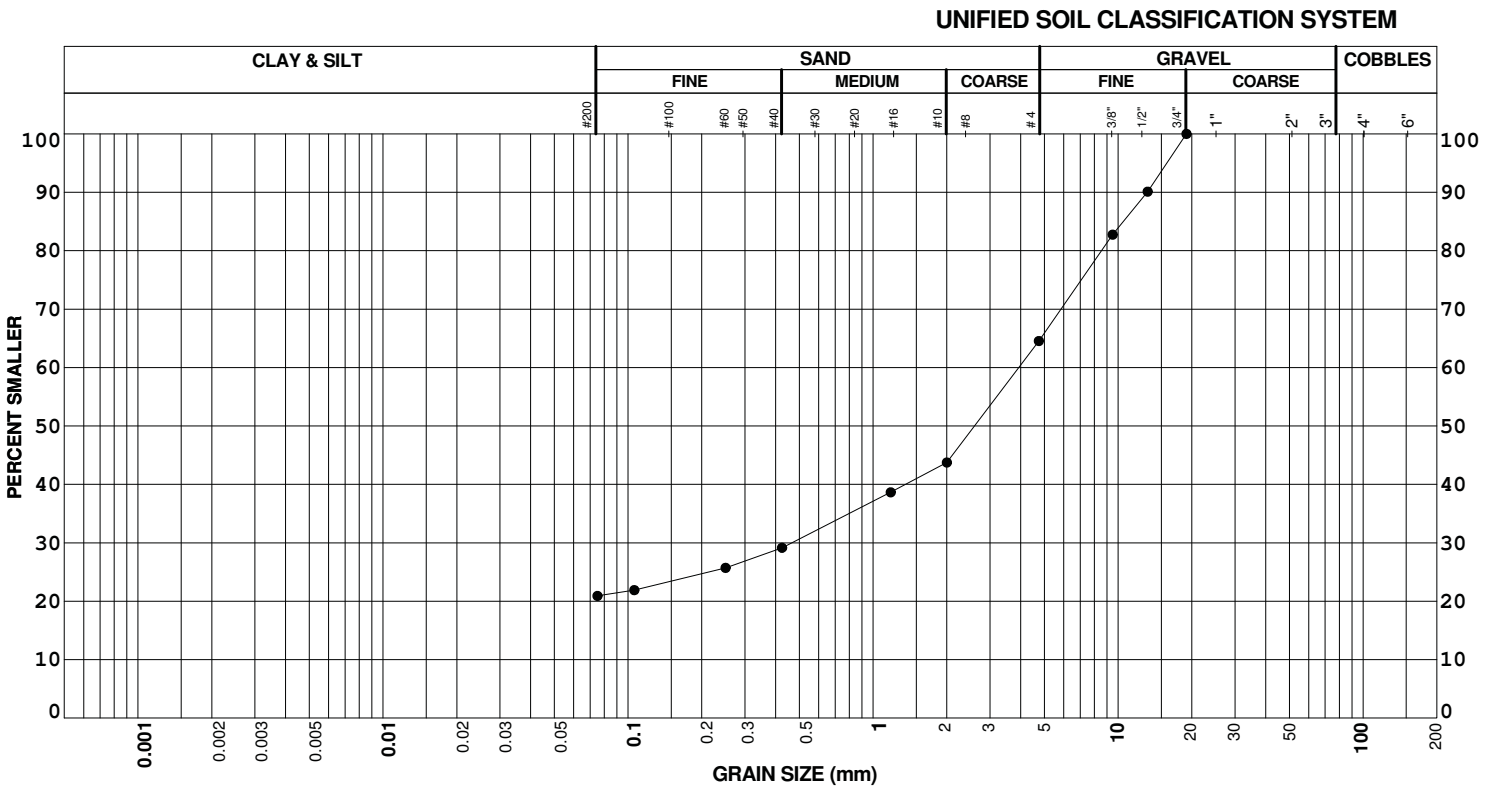
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B004	BS5	7.30	35	44	21		

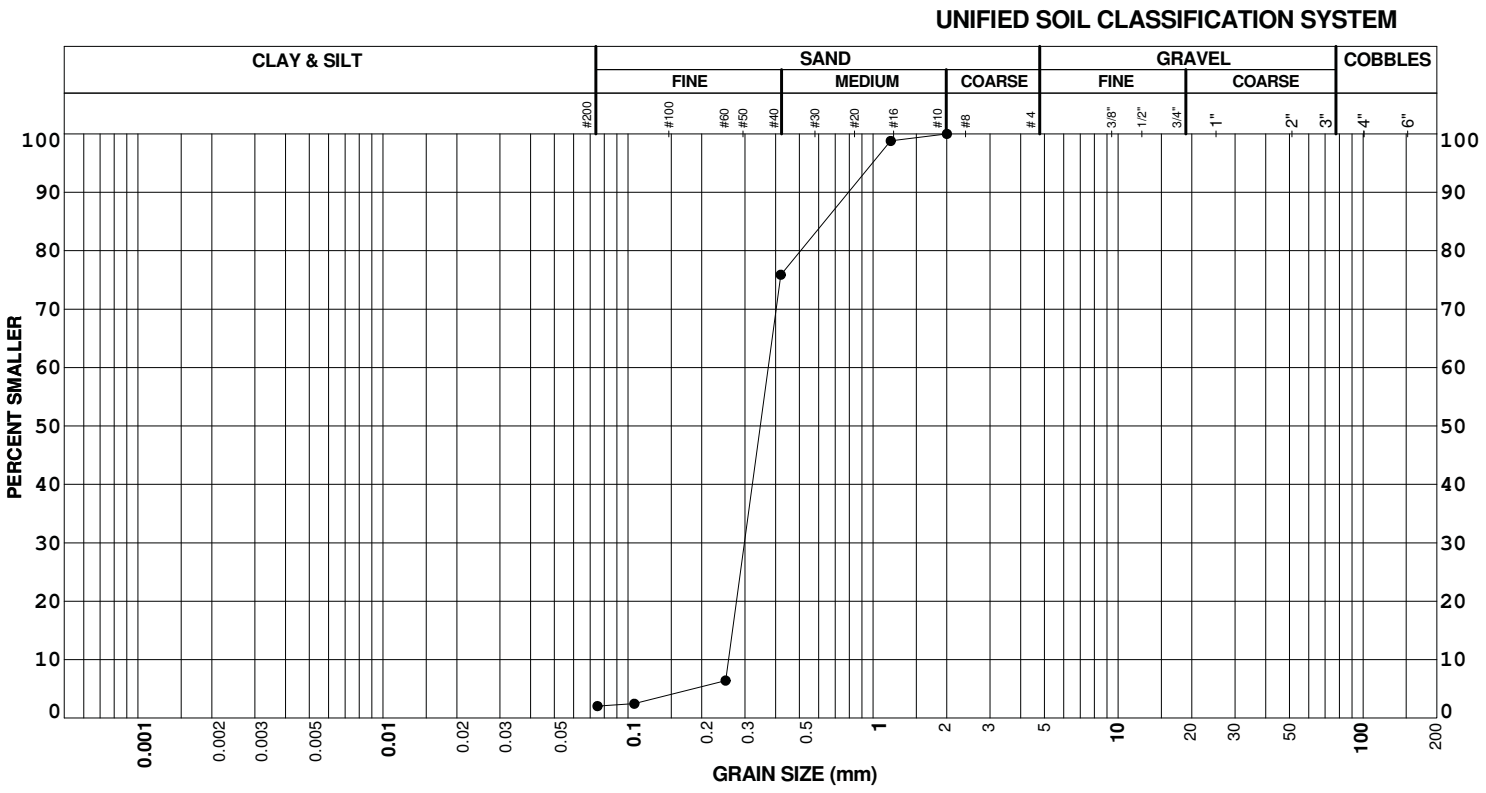
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B009	BS3	9.80	0	98	2		

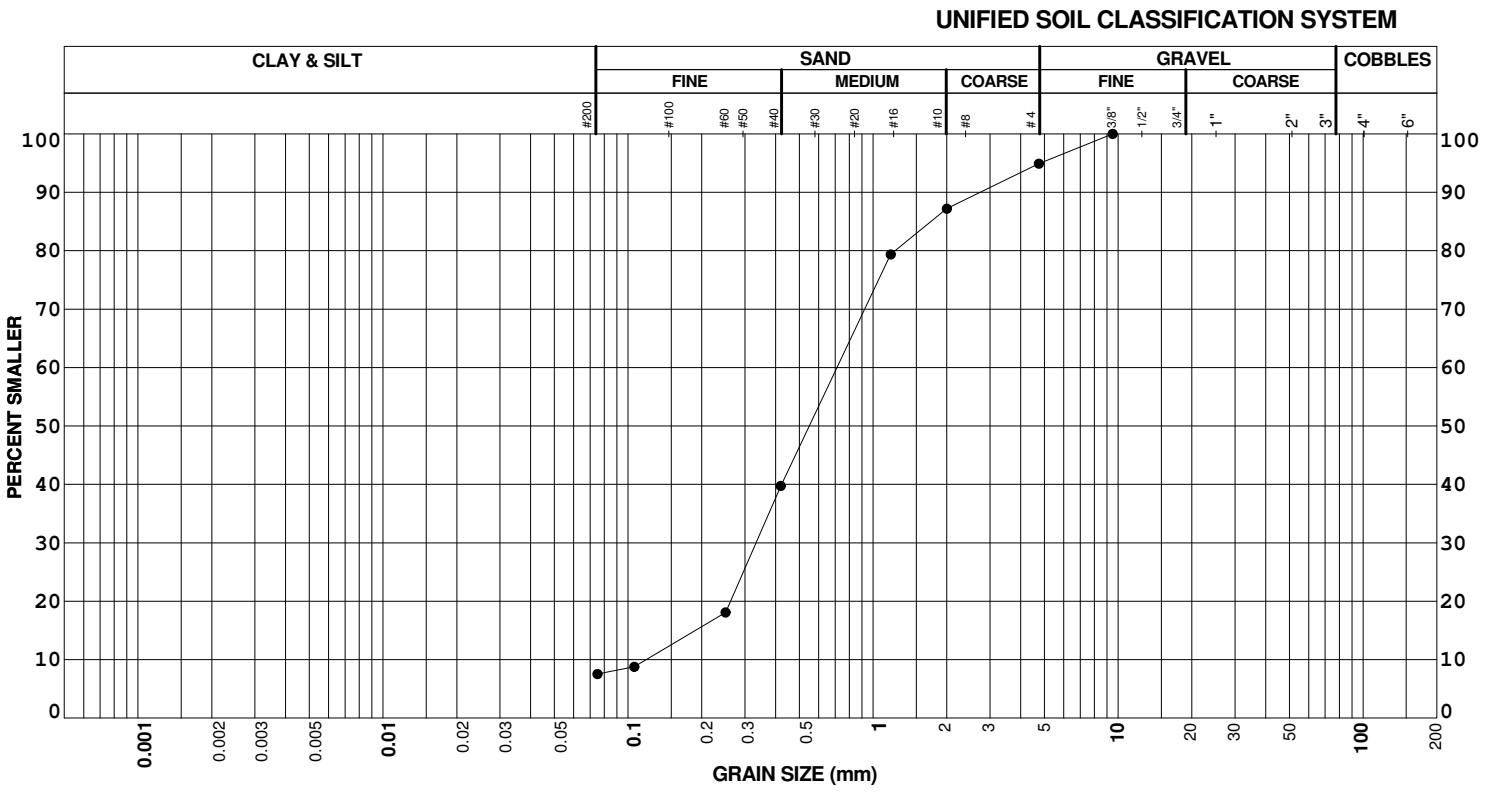
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B010	BS2	2.90	5	87	8		

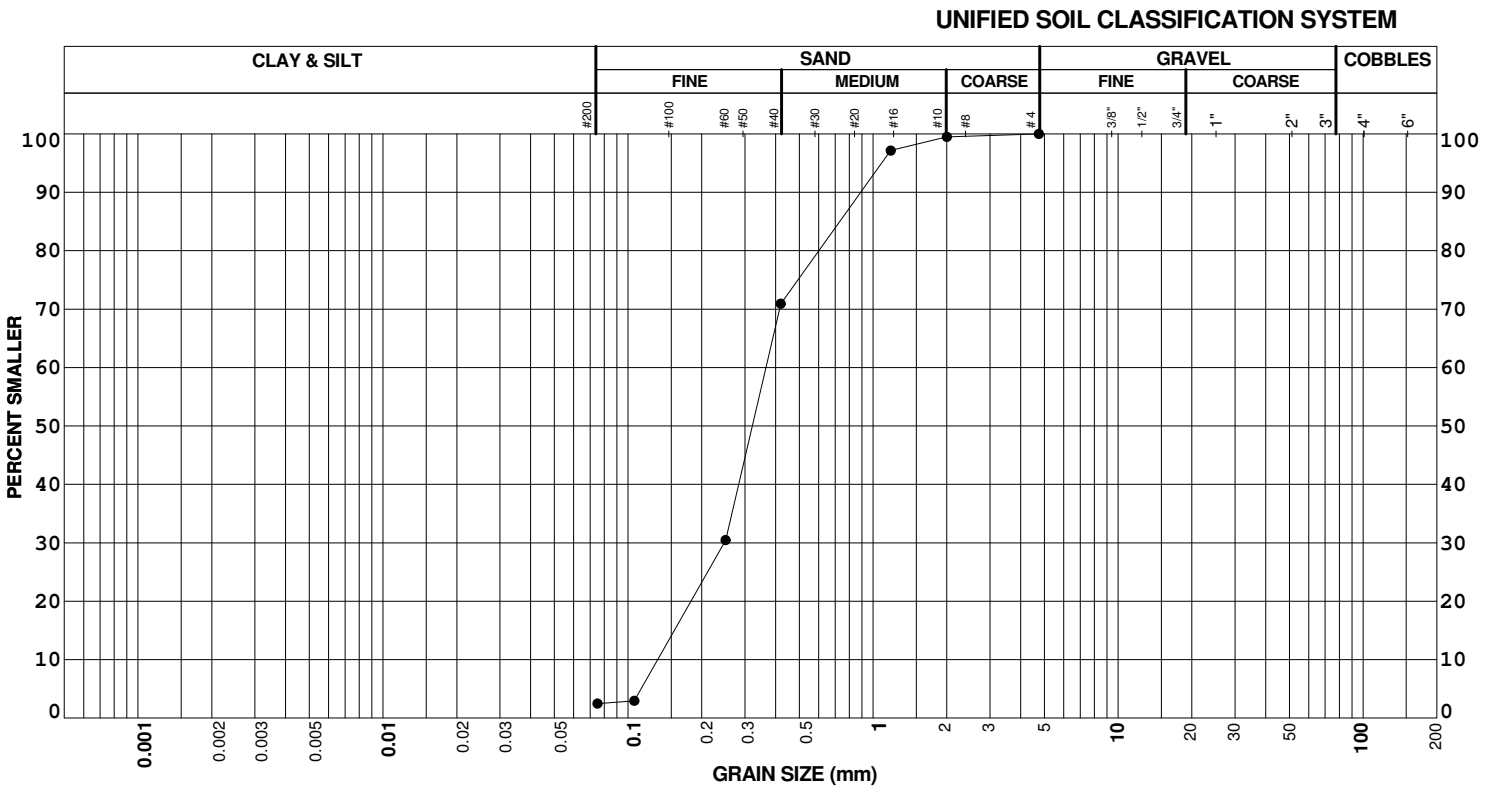
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B010	BS4	5.10	0	98	2		

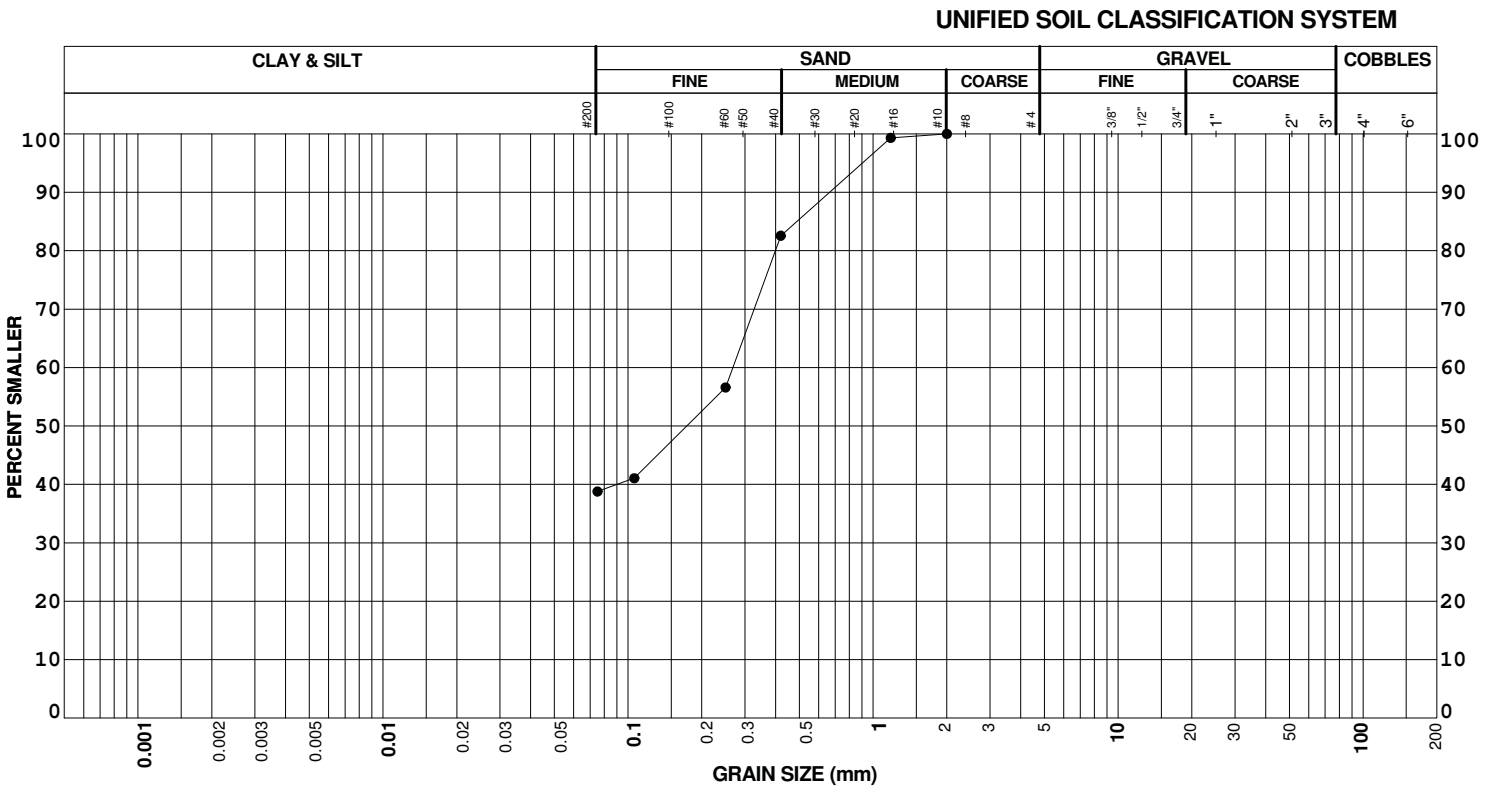
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



	BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
●	BH16-B010	BS6	9.50	0	61	39		

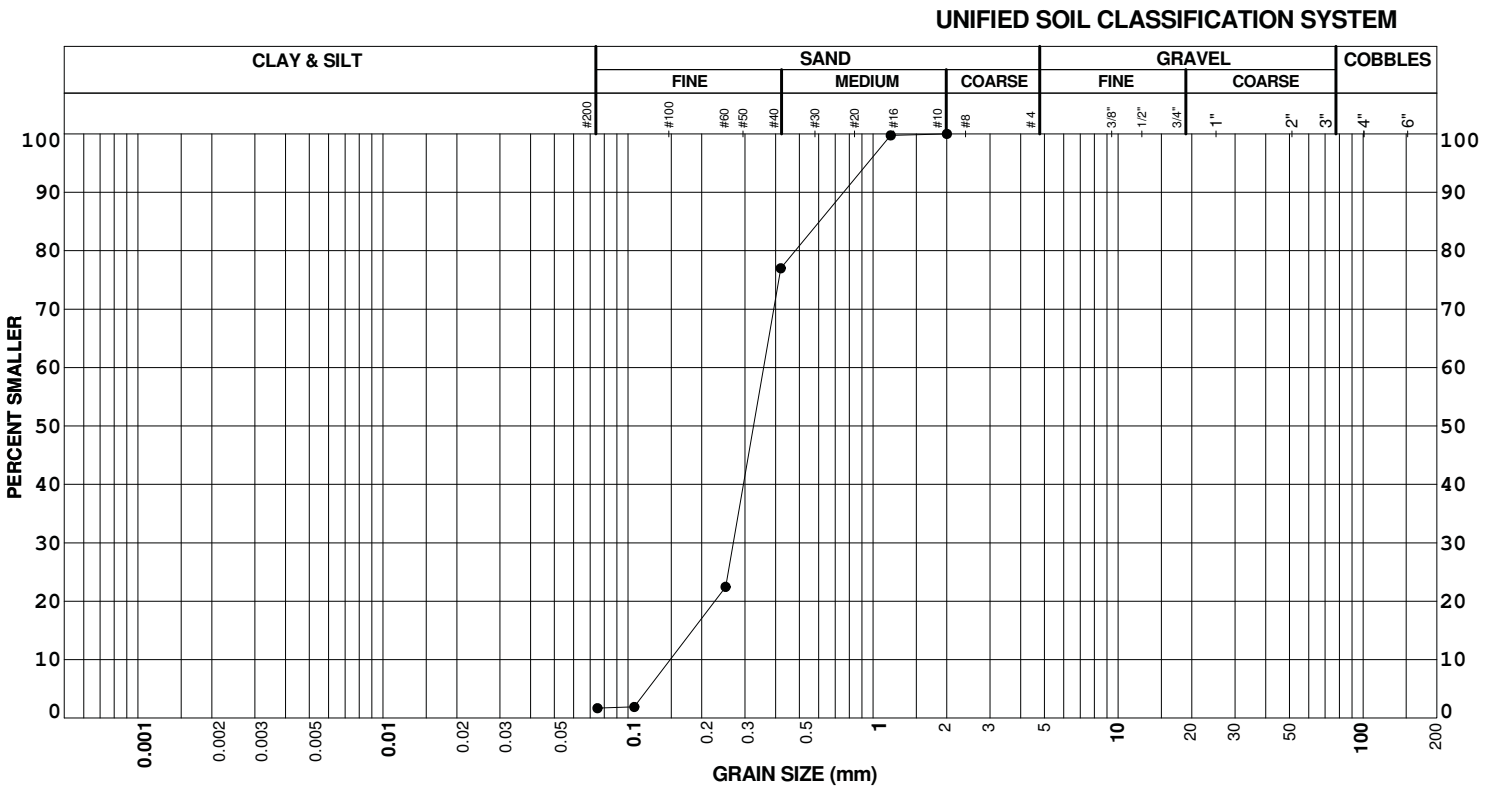
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B011	BS2	9.00	0	98	2		

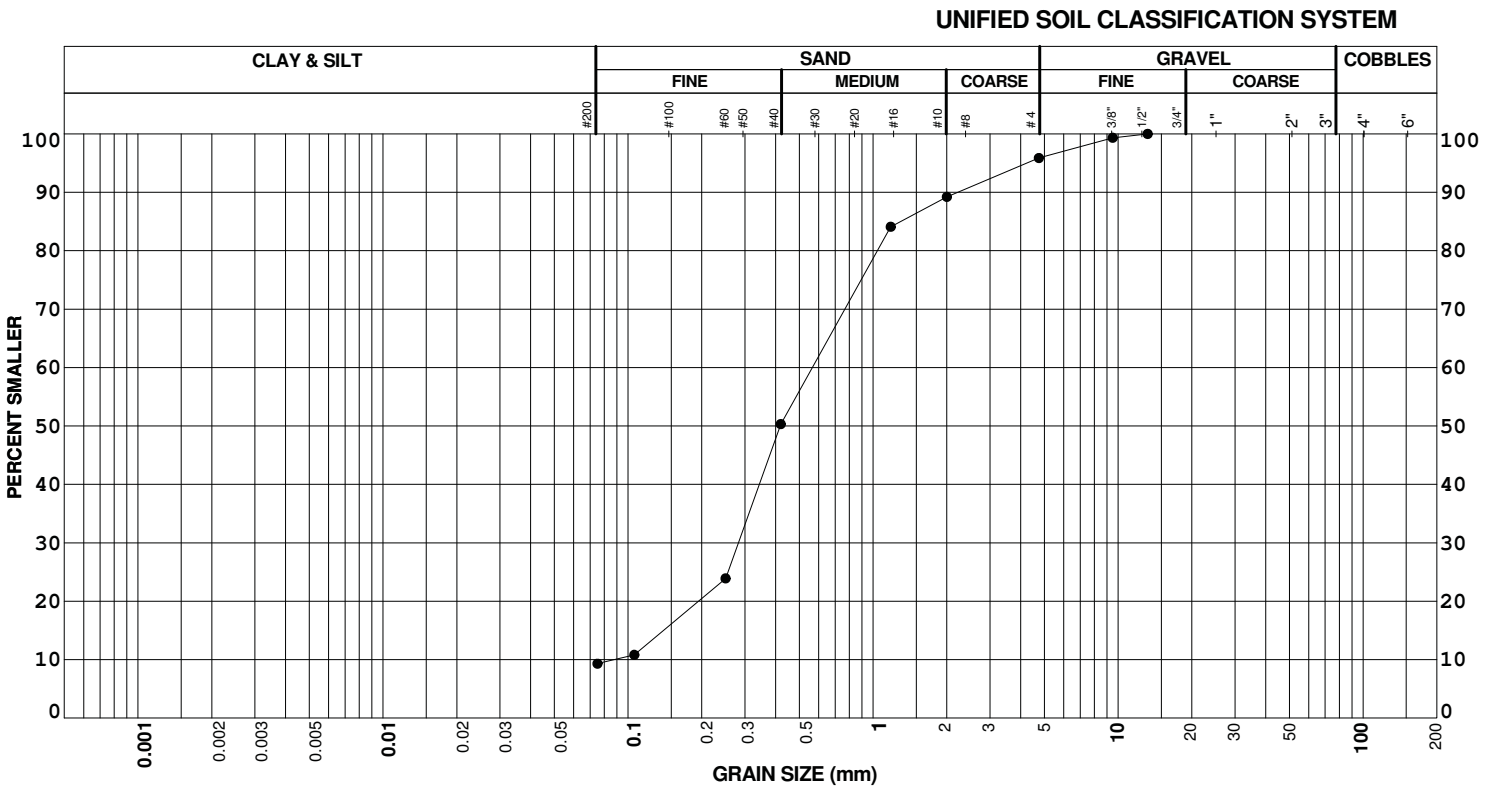
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B012	BS1	3.00	4	87	9		

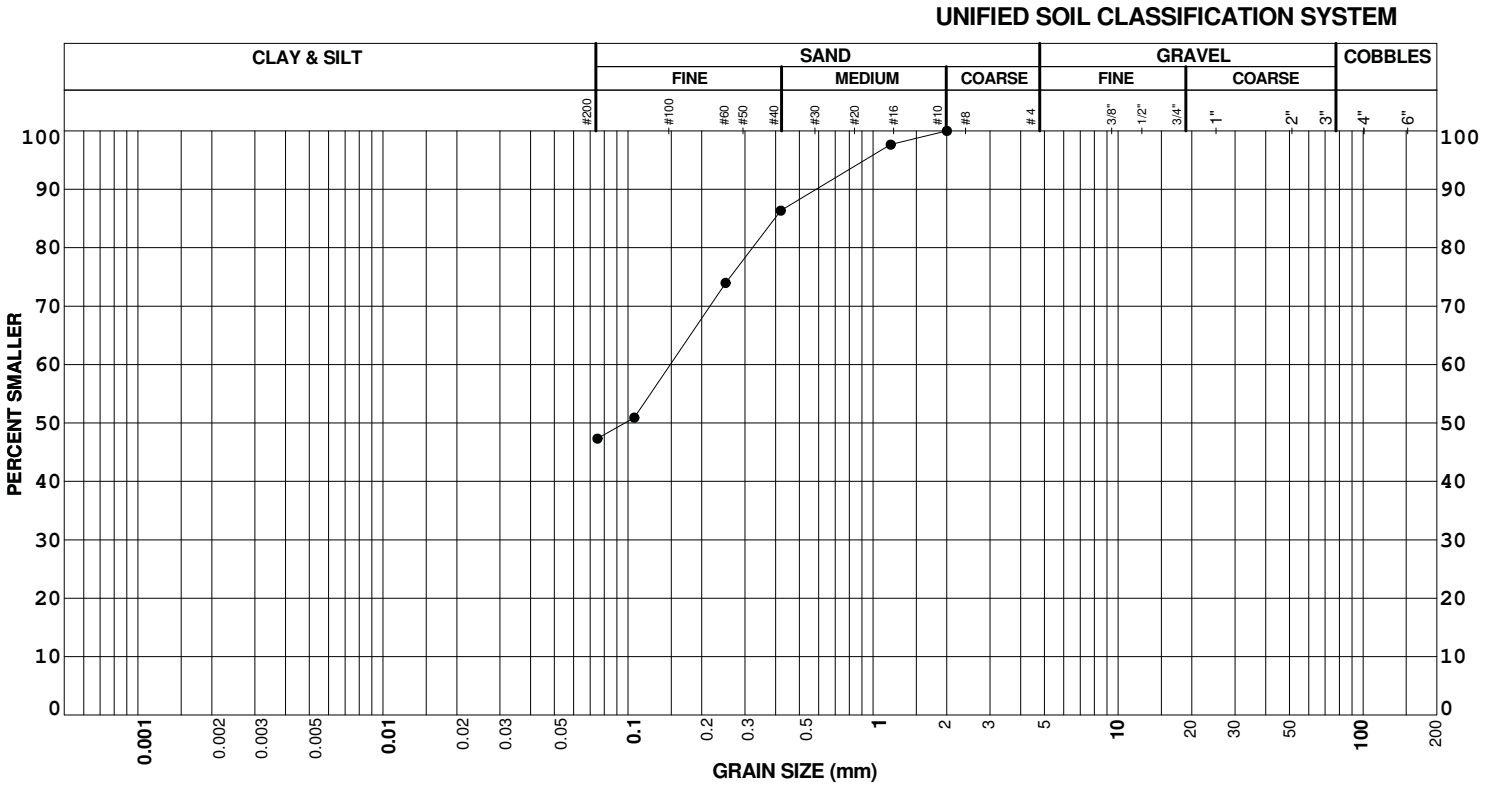
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B013	BS3	4.00	0	53	47		

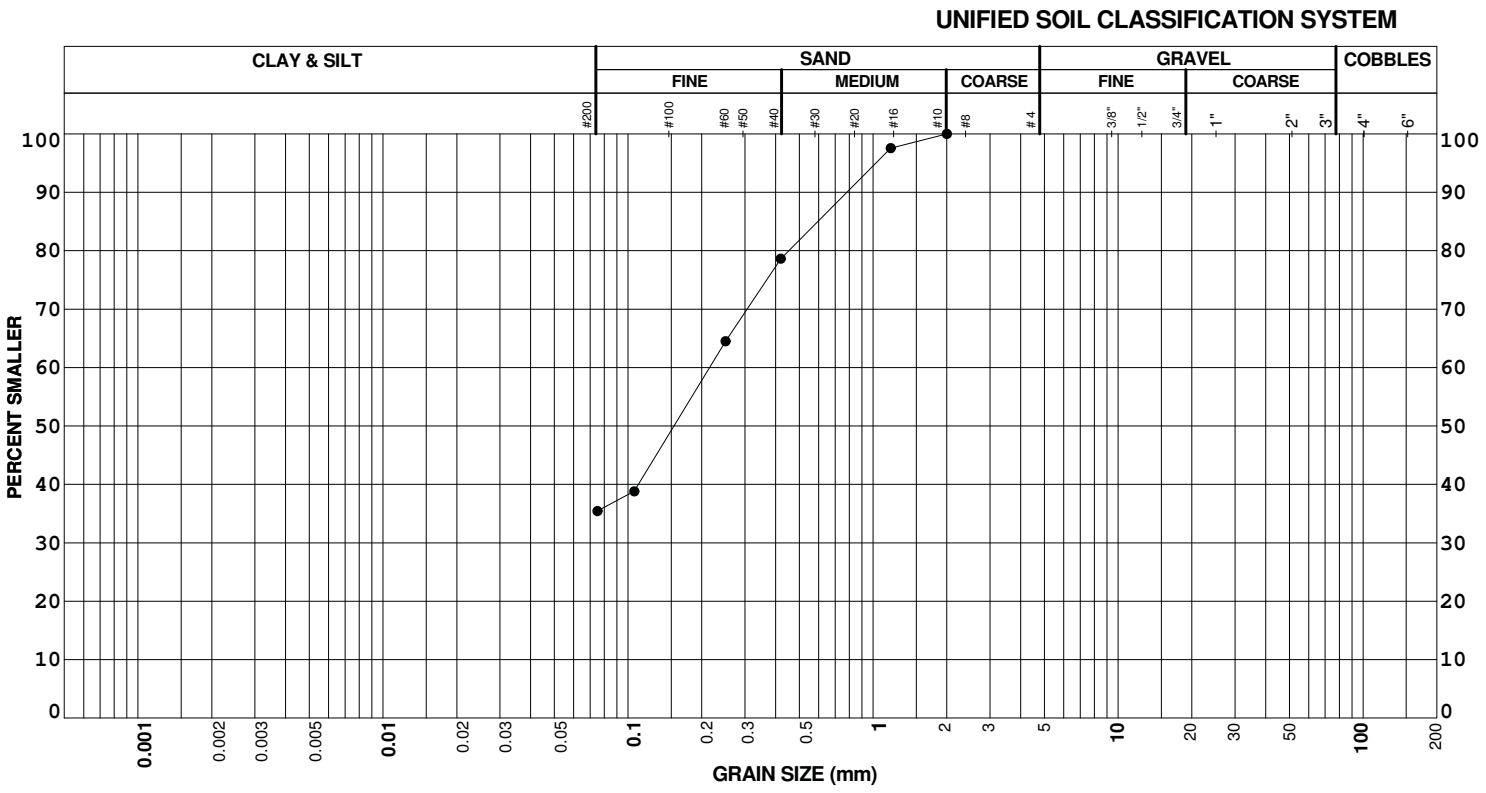
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B014	BS3	3.50	0	65	35		

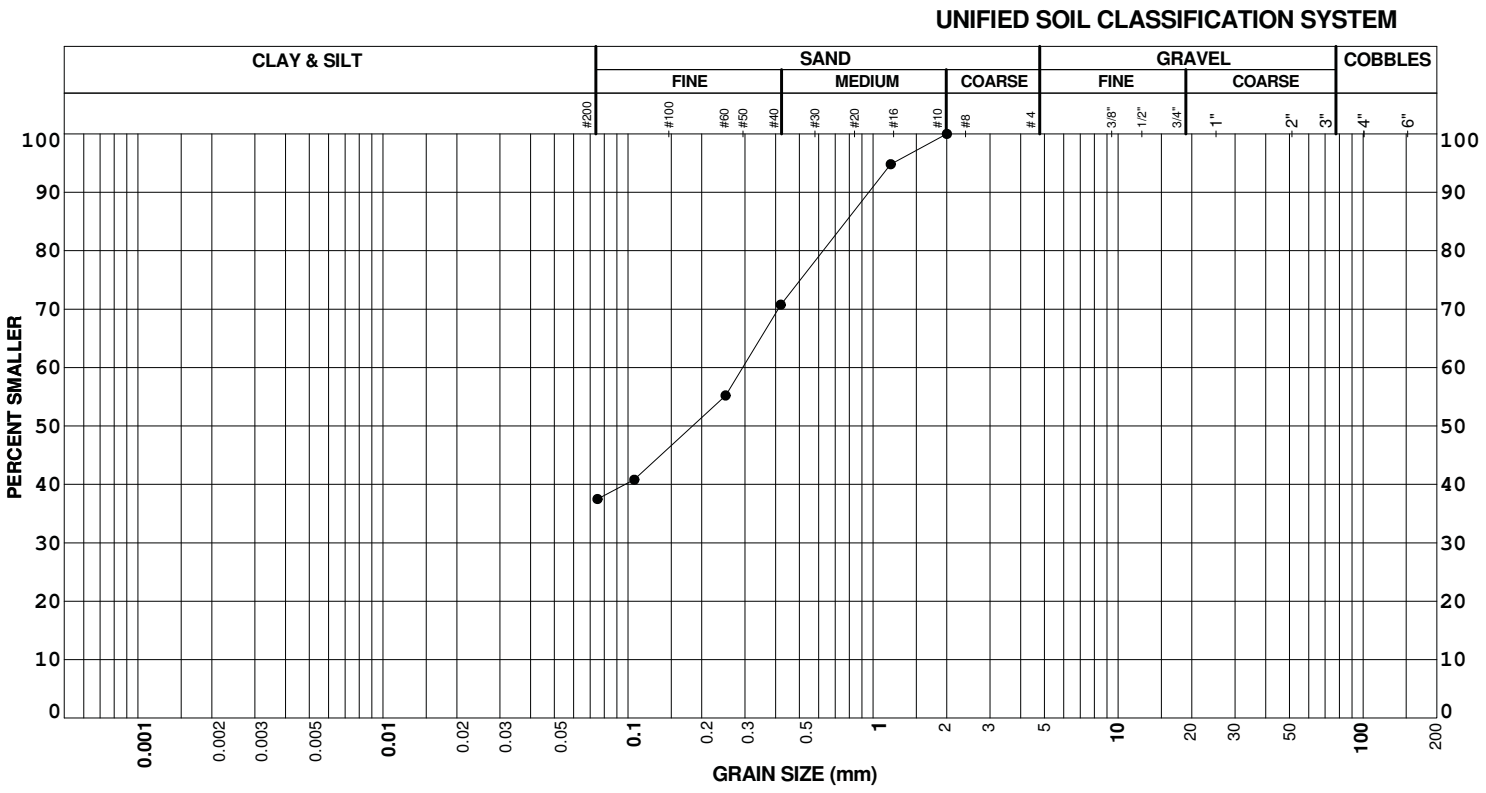
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B014	BS5	7.00	0	63	37		

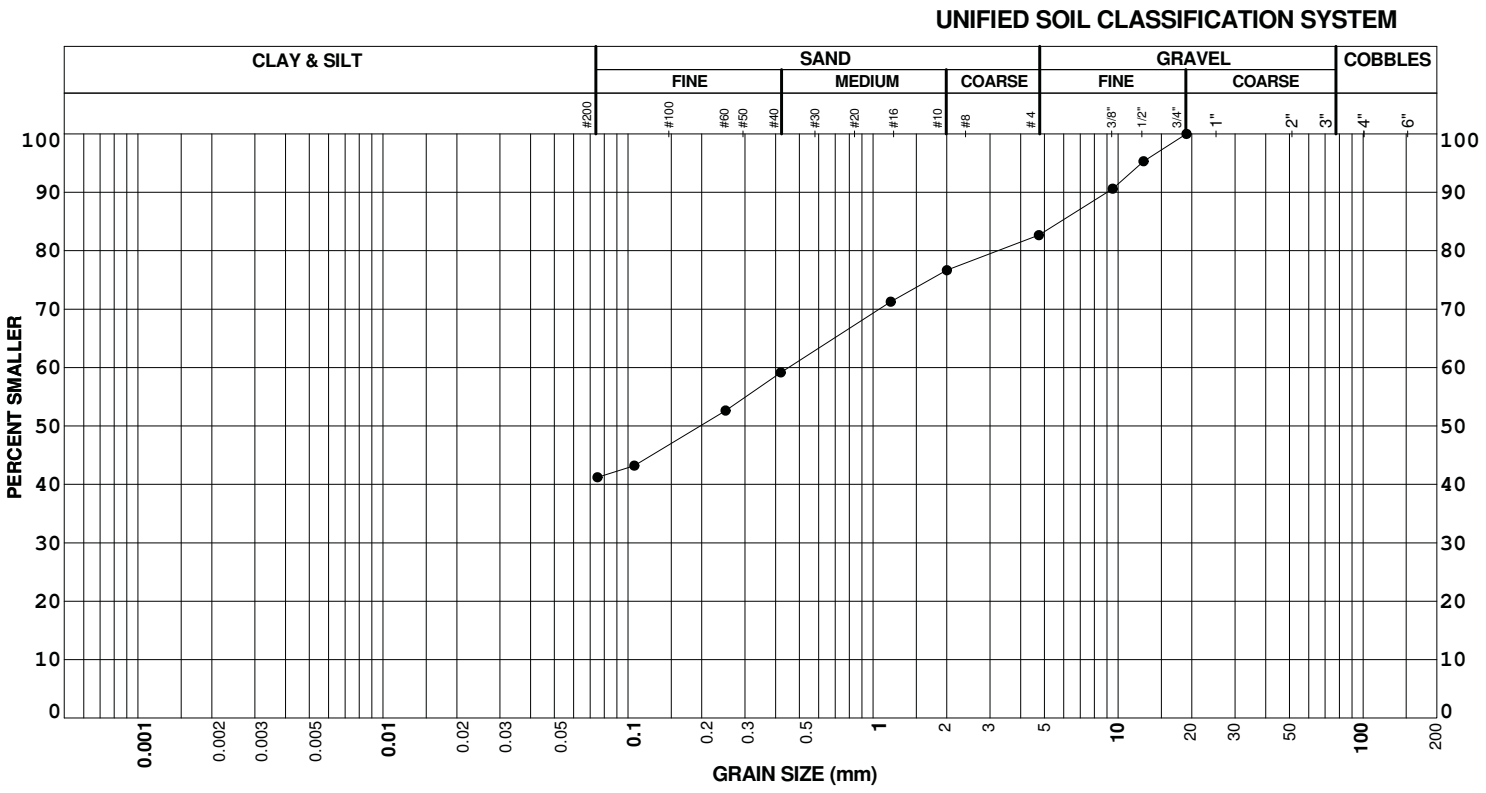
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B015	BS2	2.50	17	41	41		

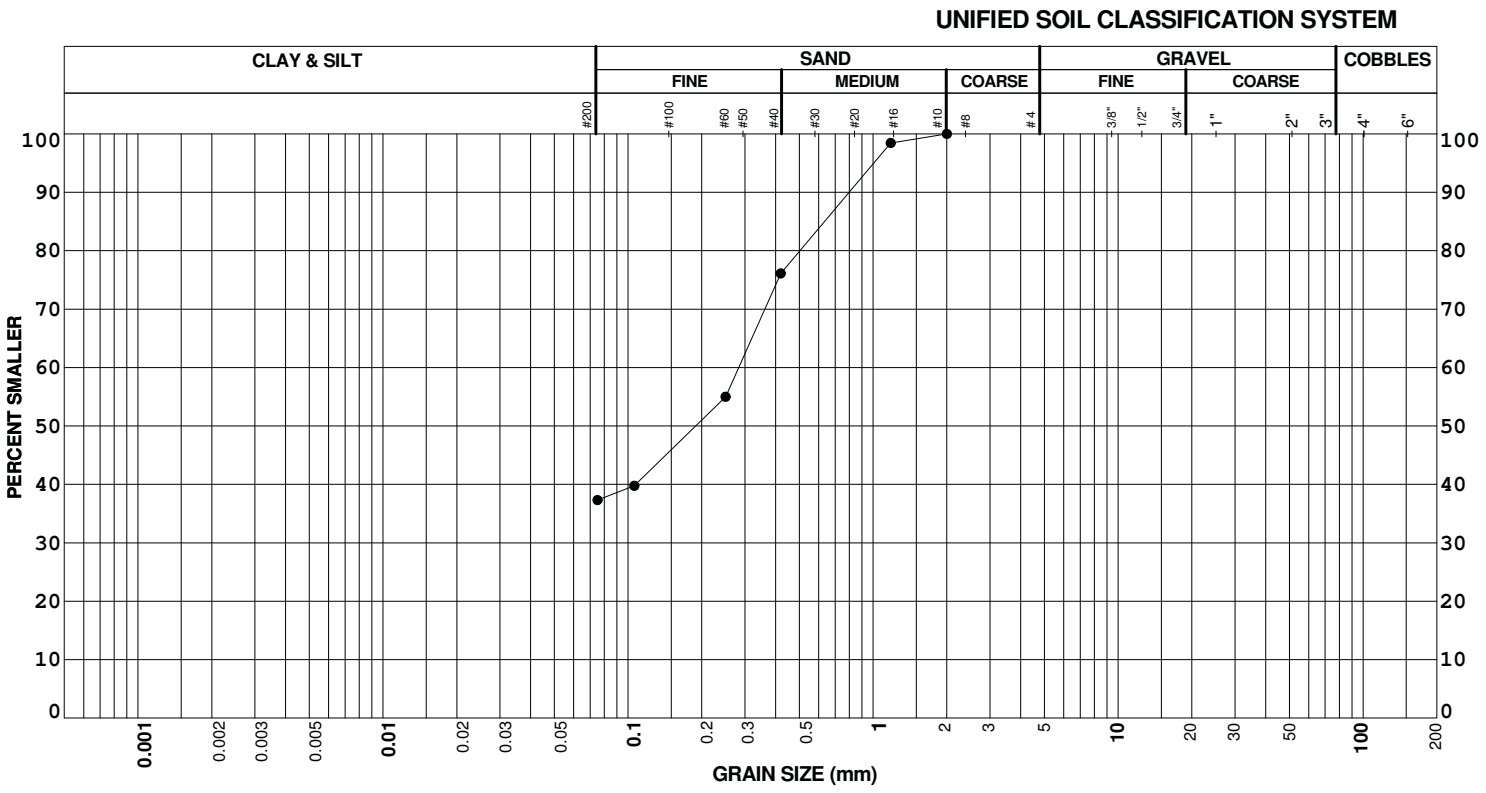
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B015	BS4	5.00	0	63	37		

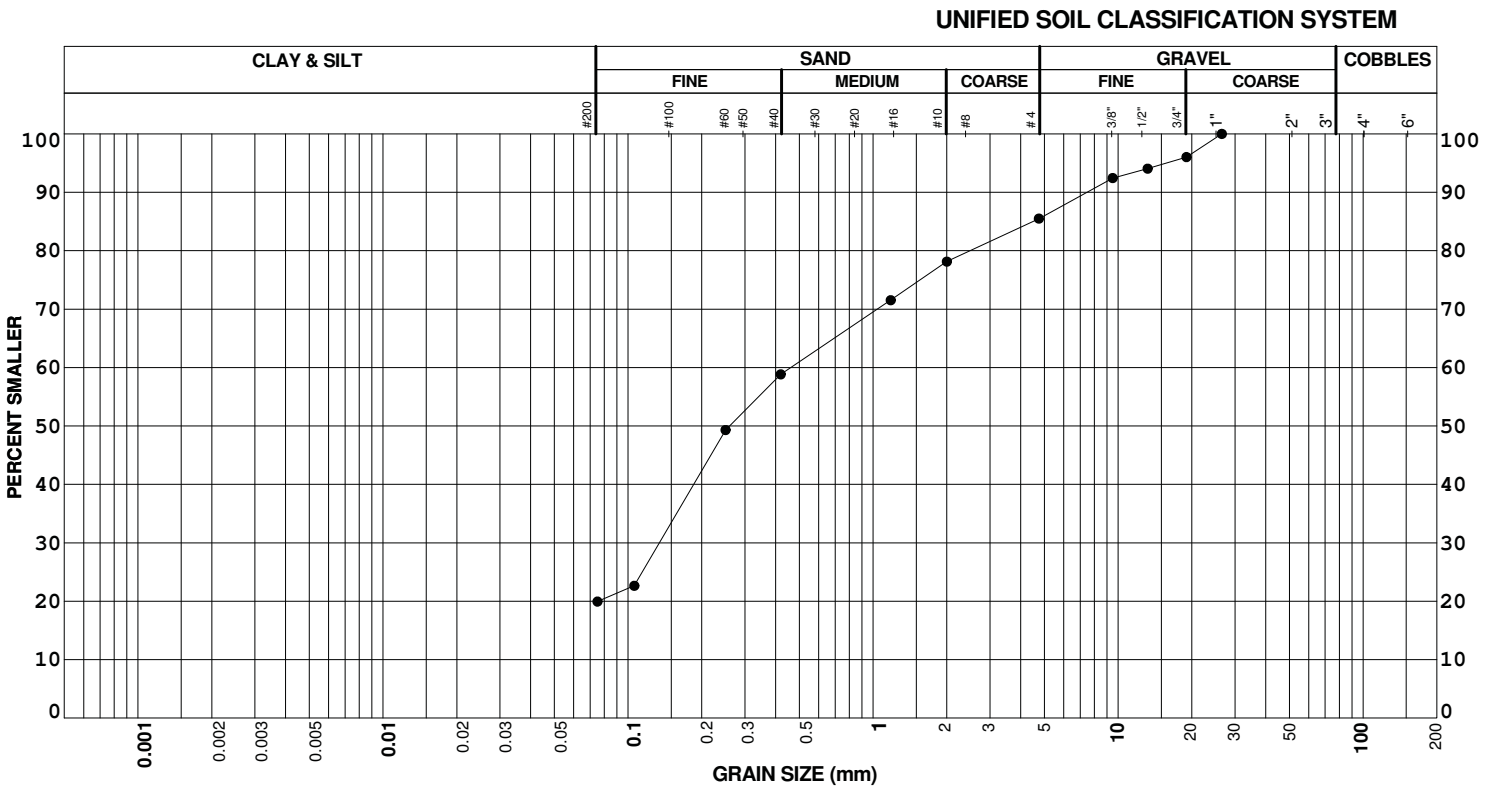
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B015	BS7	10.00	15	66	20		

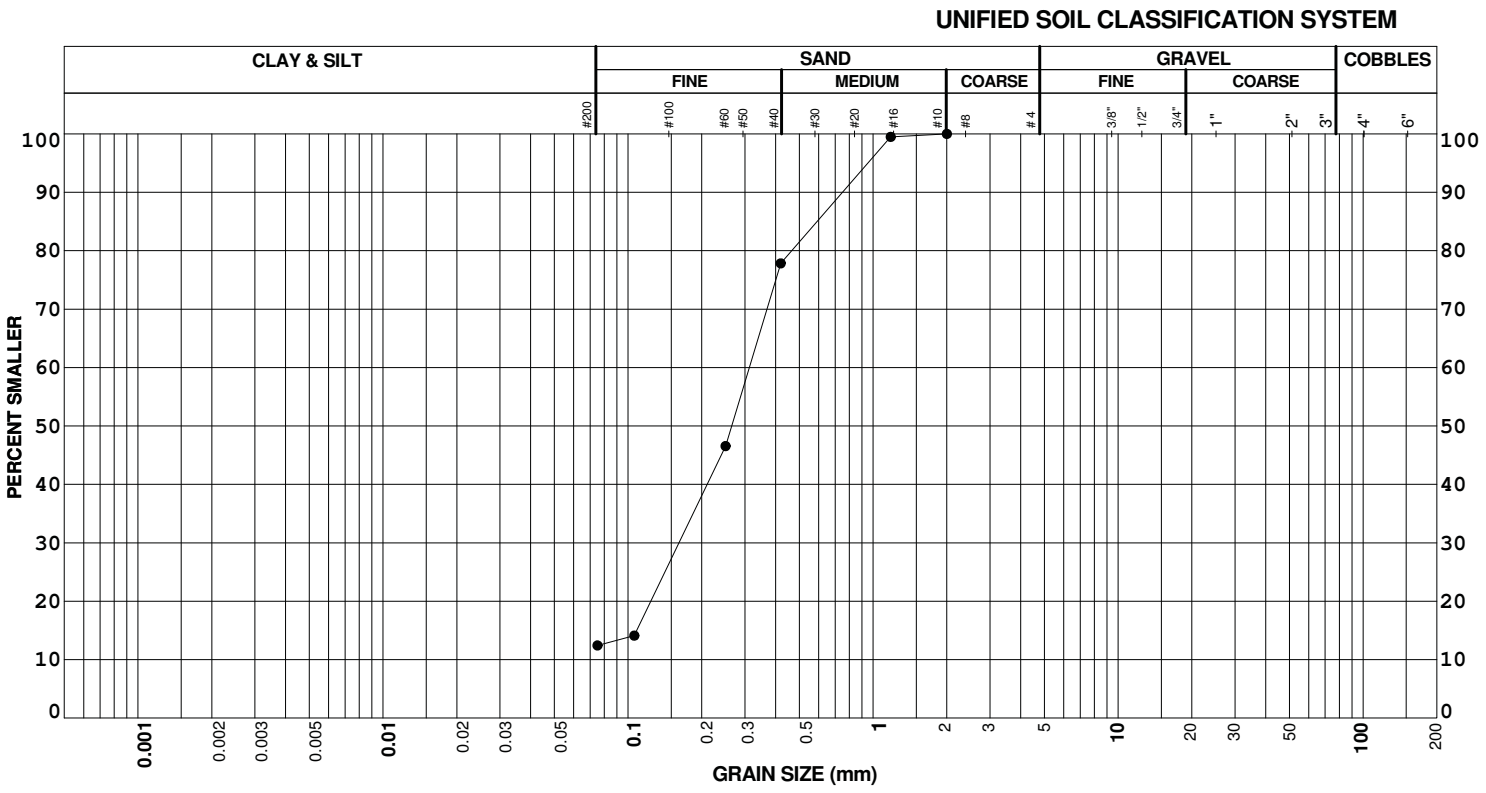
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B016	BS3	3.60	0	88	12		

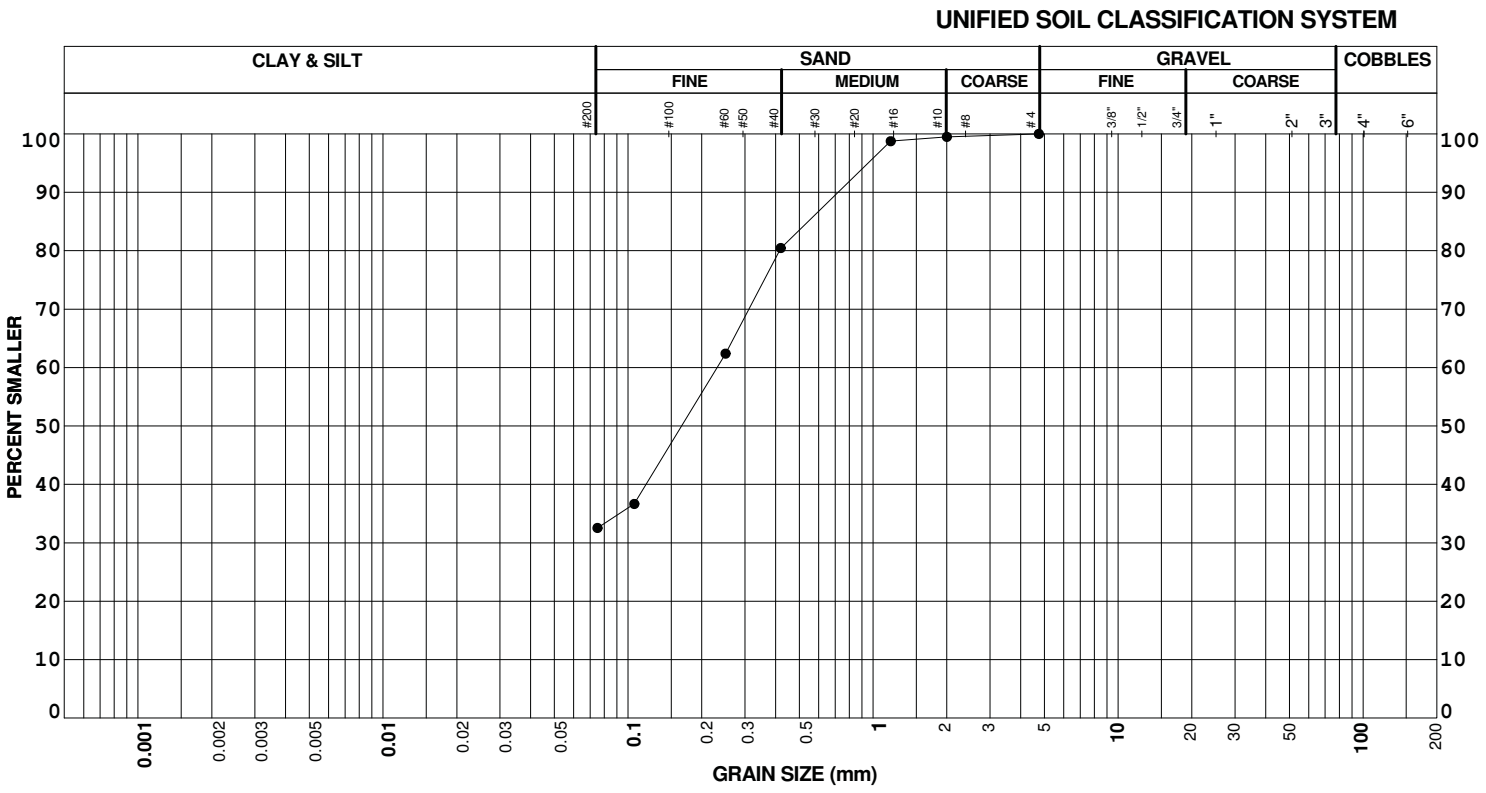
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B016	BS4	5.30	0	67	33		

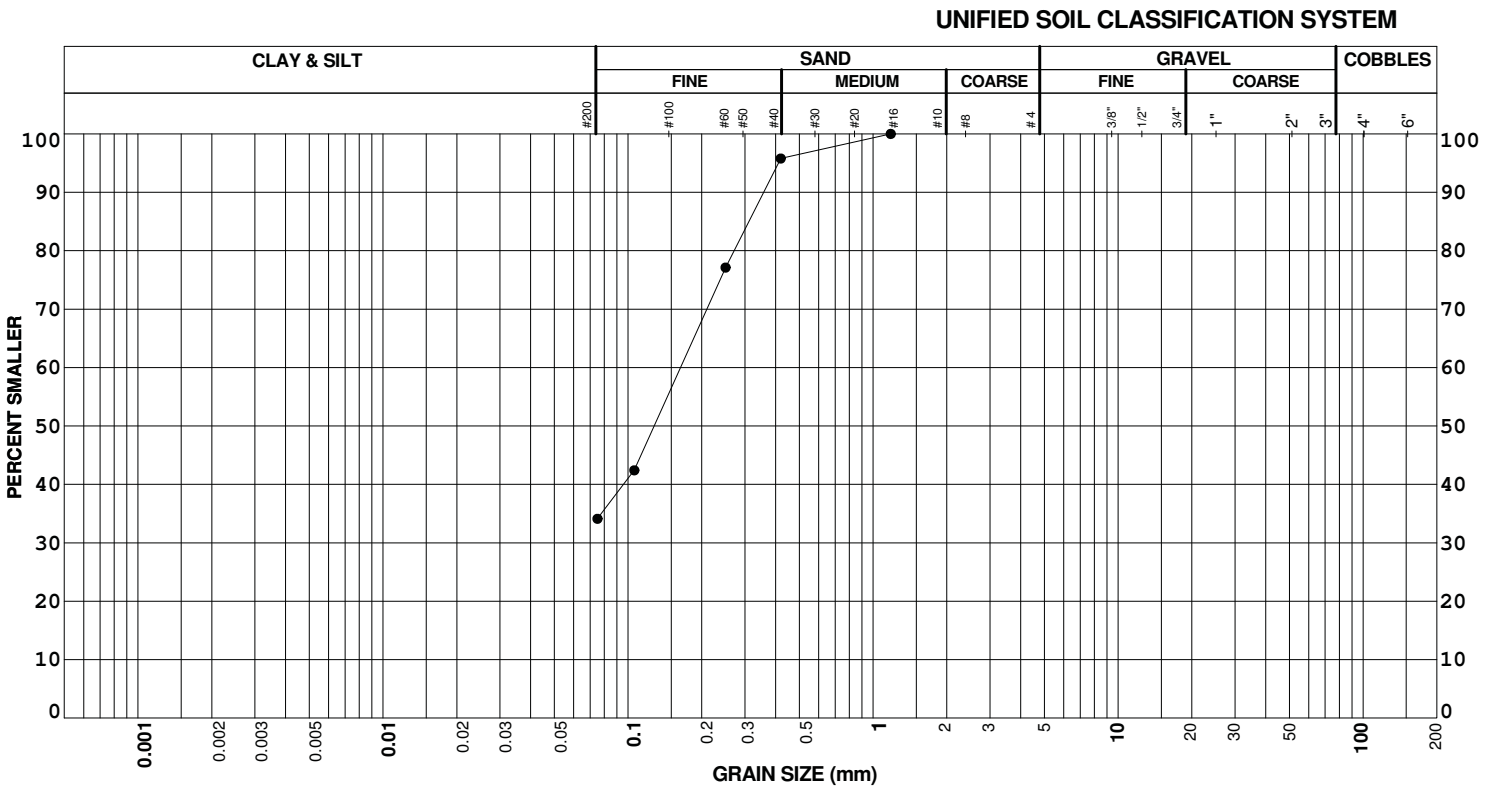
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-B016	BS5	7.20	0	66	34		

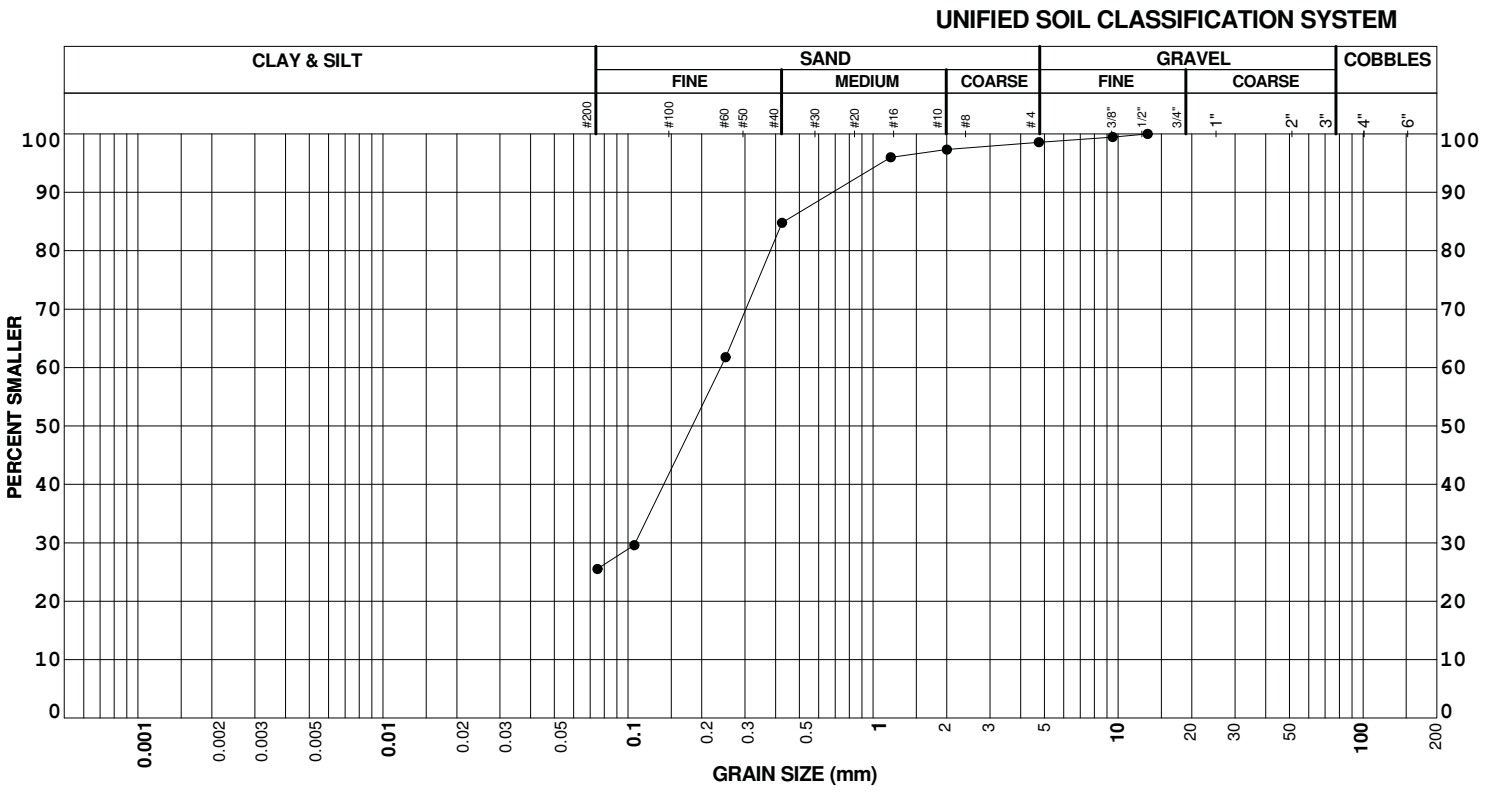
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C007	BS3	3.50	1	73	26		

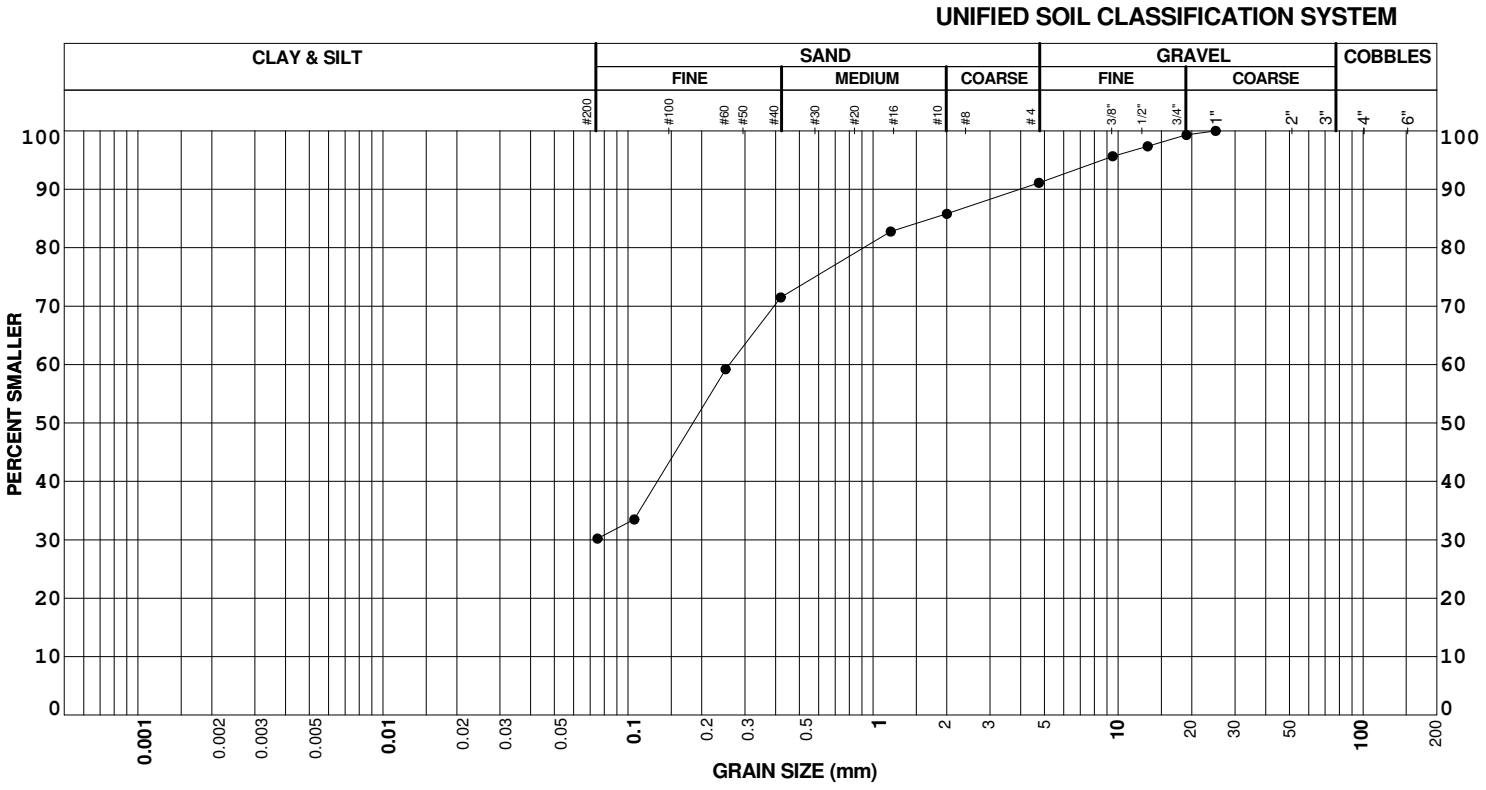
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C009	BS2	2.60	9	61	30		

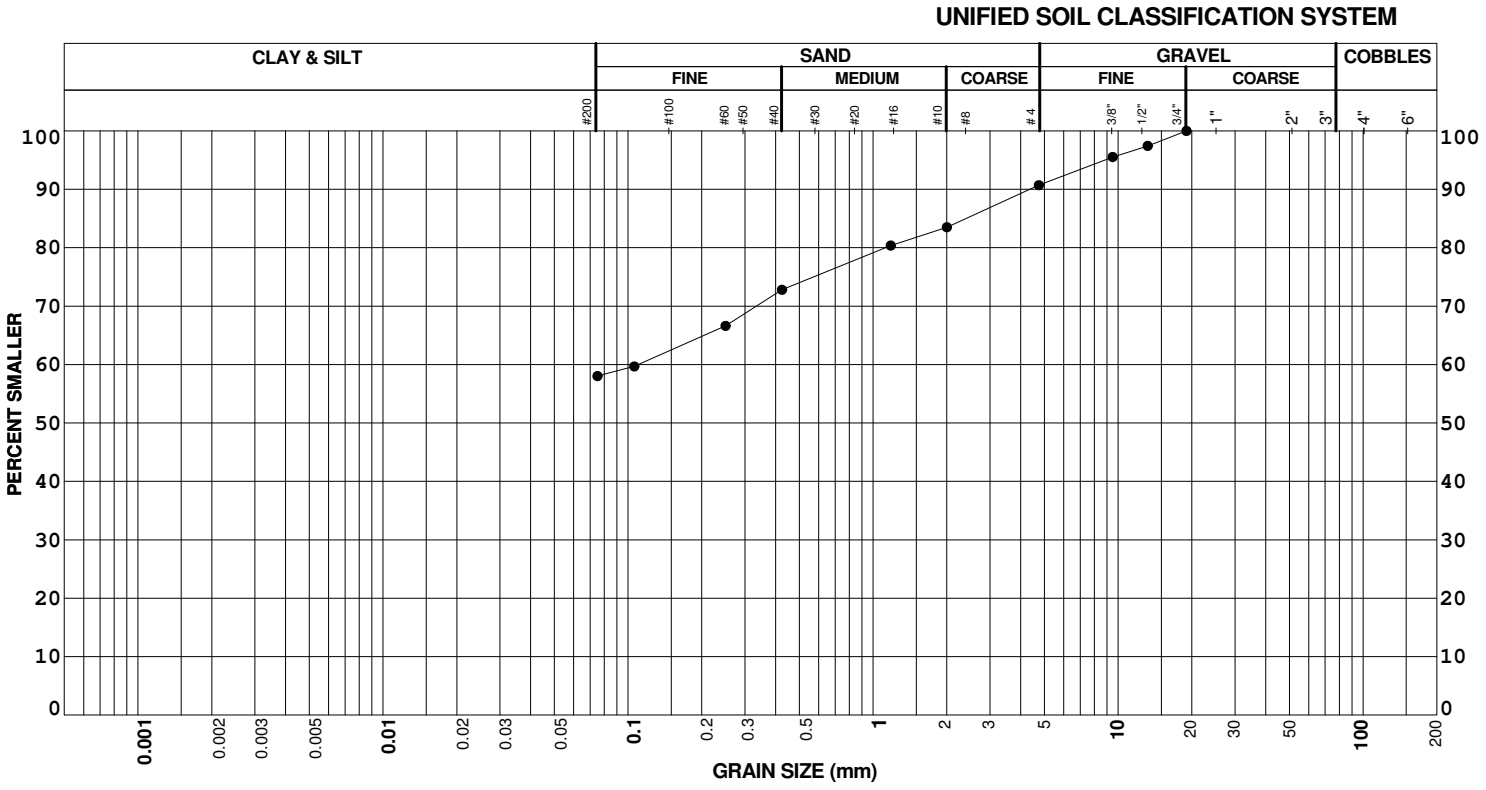
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C010	BS2	2.50	9	33	58		

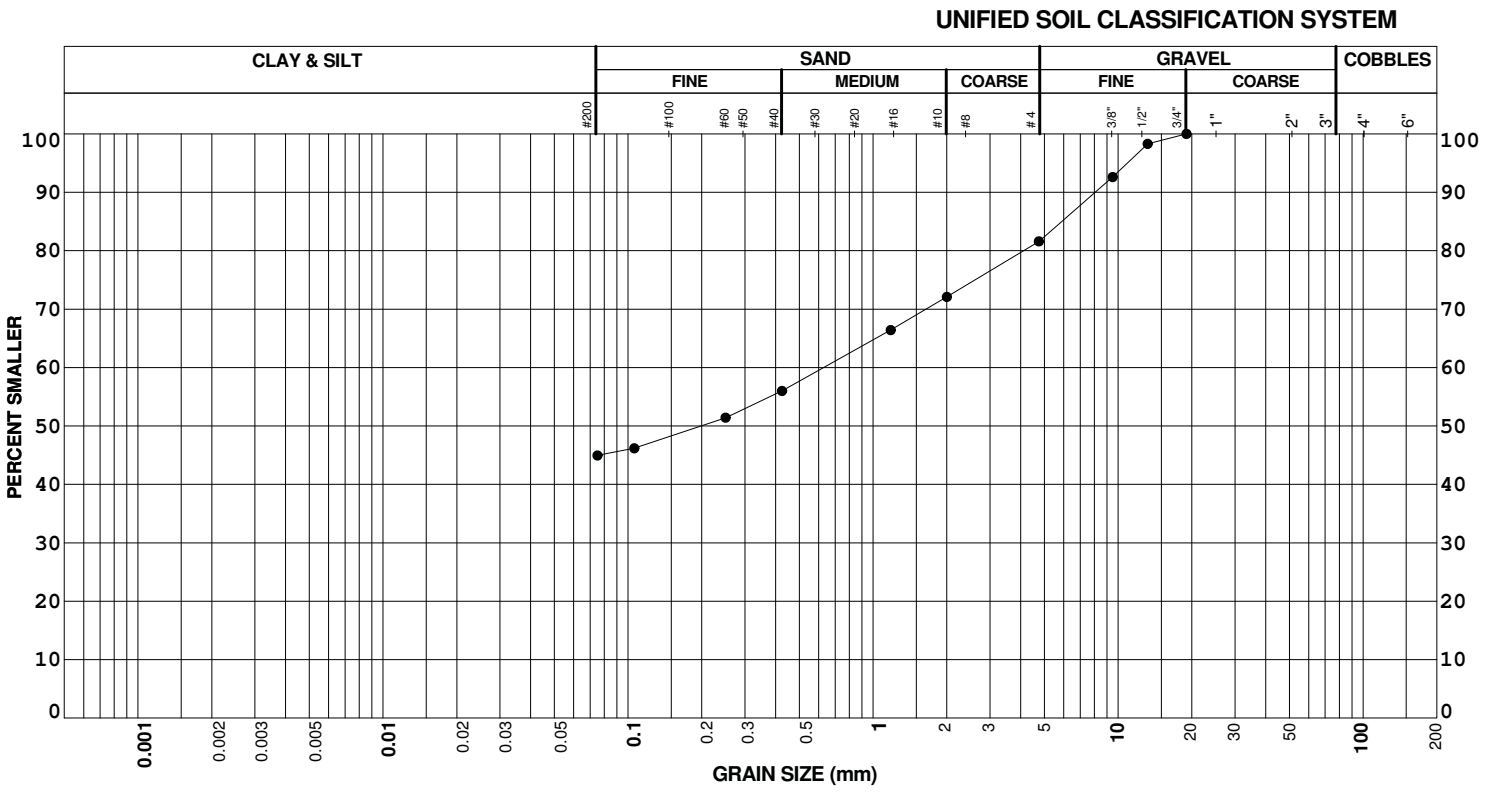
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C012	BS3	4.00	18	37	45		

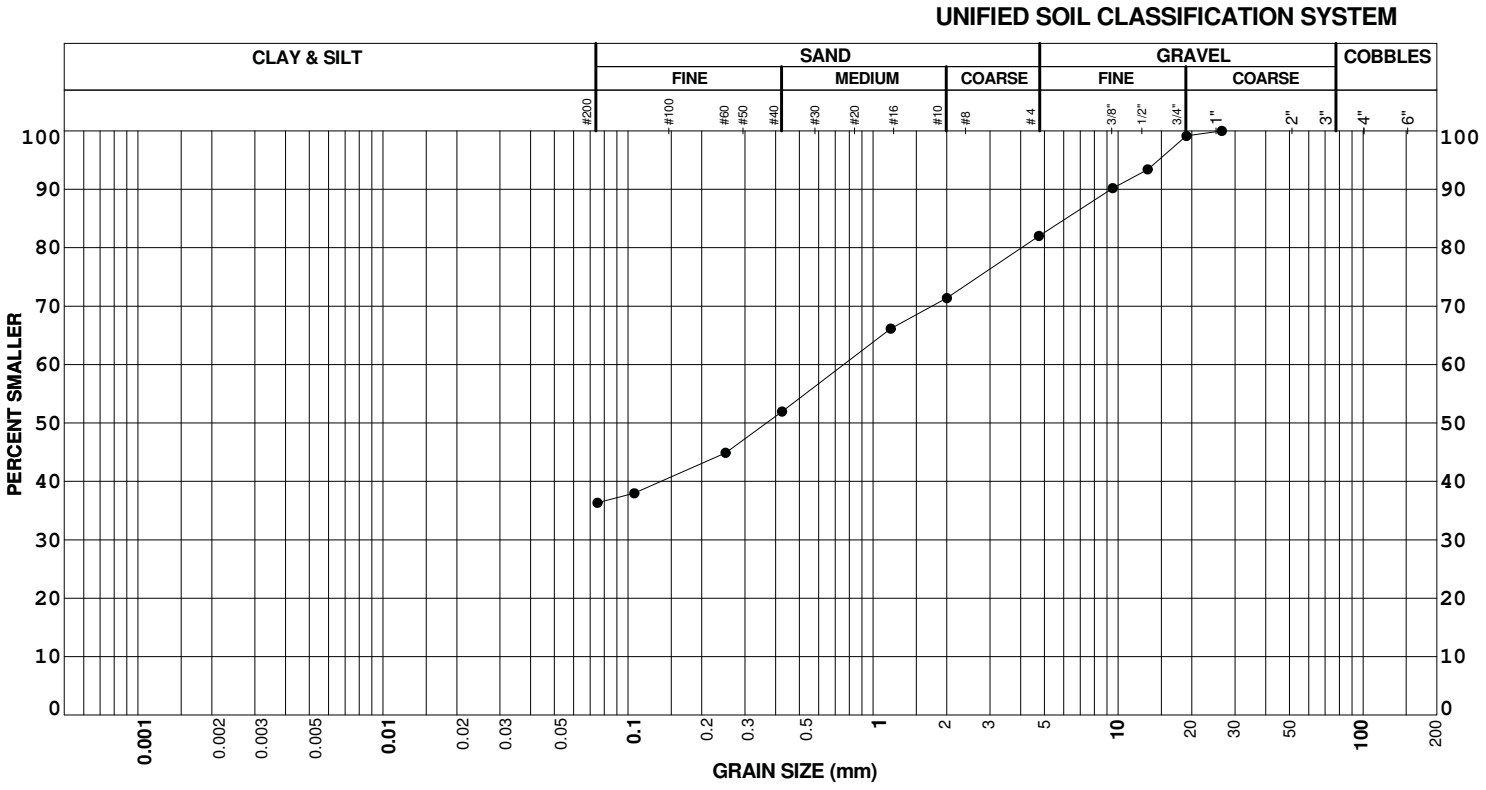
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C015	BS2	2.50	18	46	36		

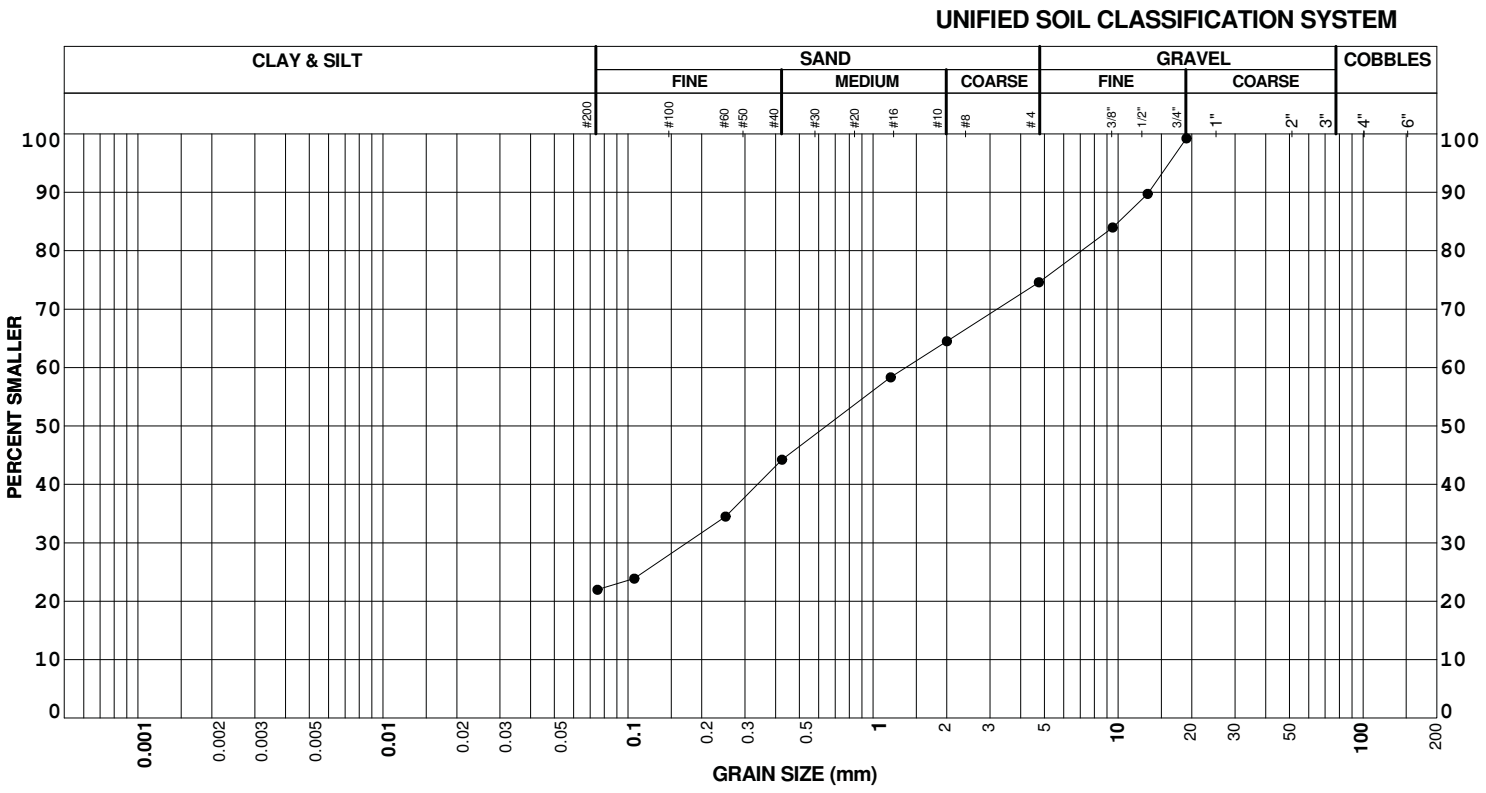
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C016	BS2	2.70	25	53	22		

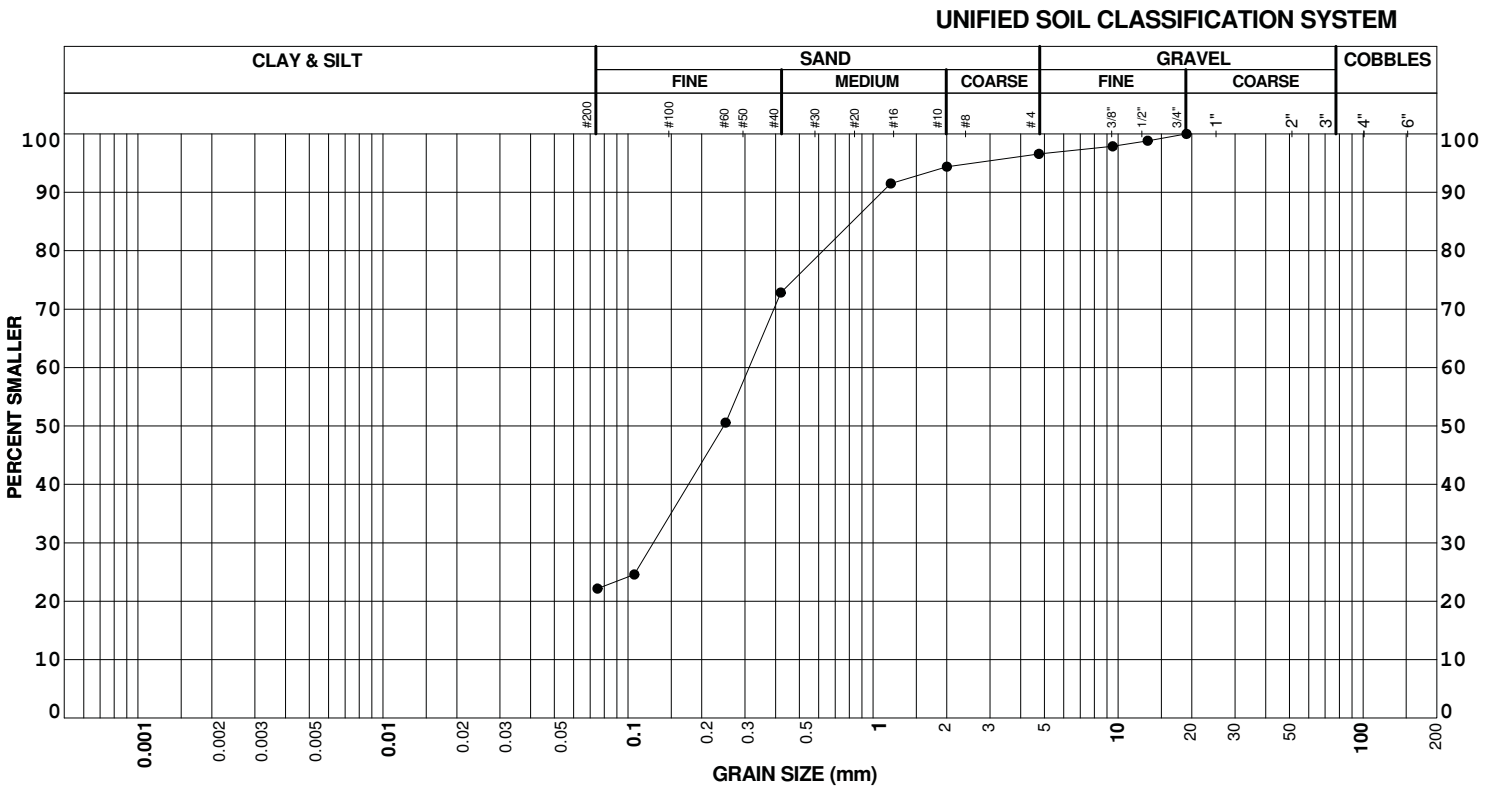
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C017	BS1	0.50	3	74	22		

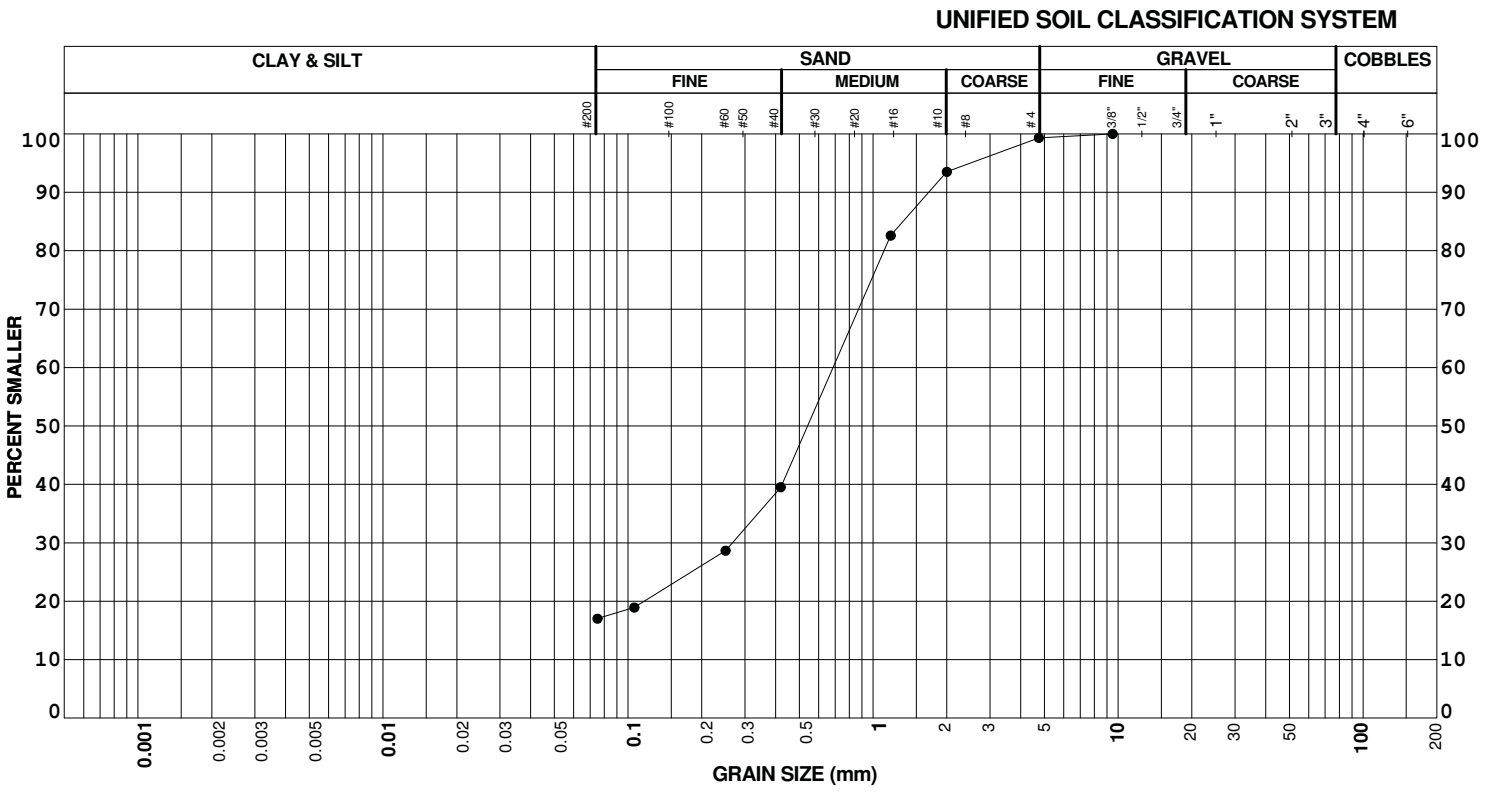
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C018	BS2	2.20	1	82	17		

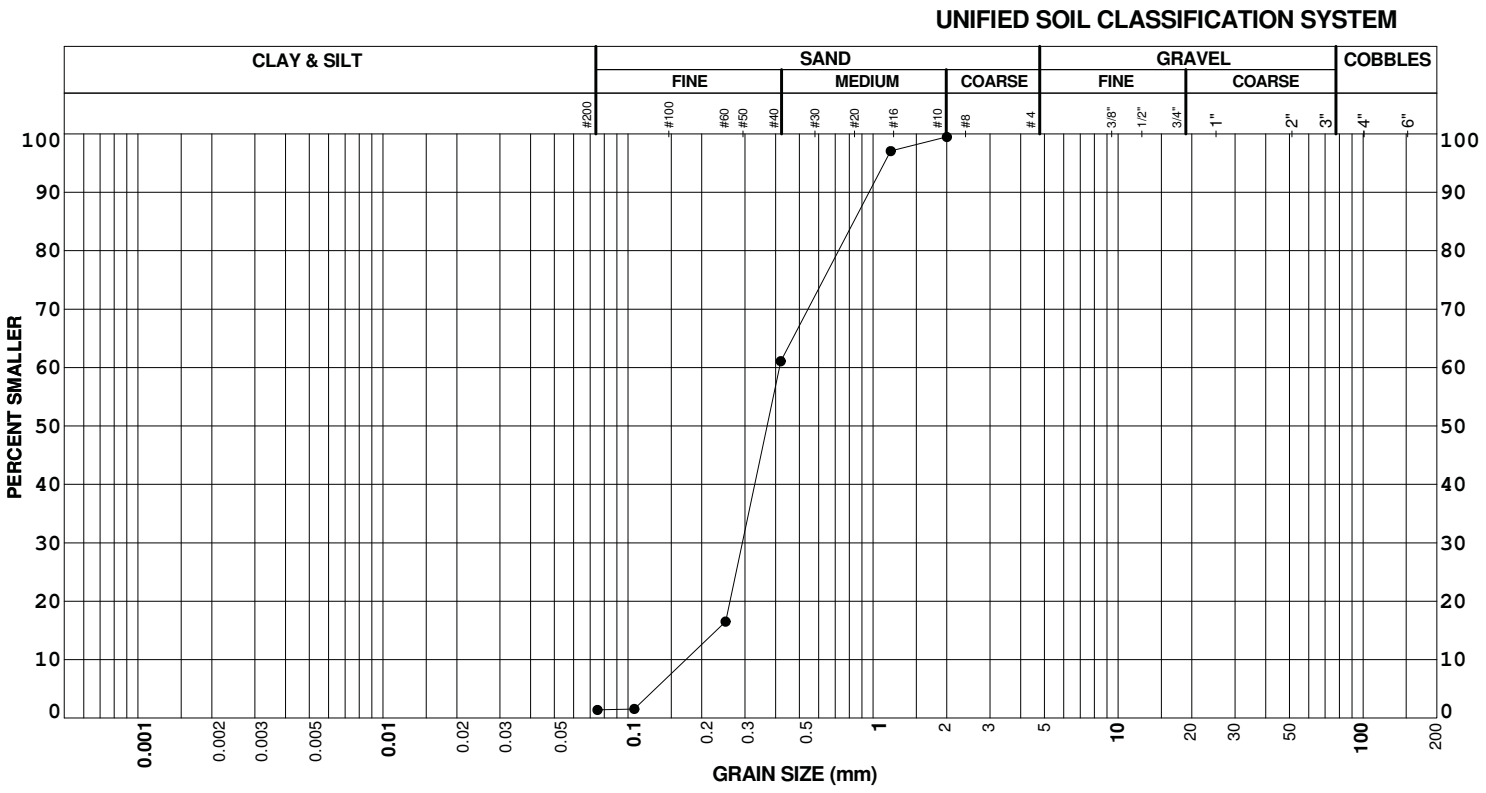
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C019B	BS1	5.80	0	98	1		

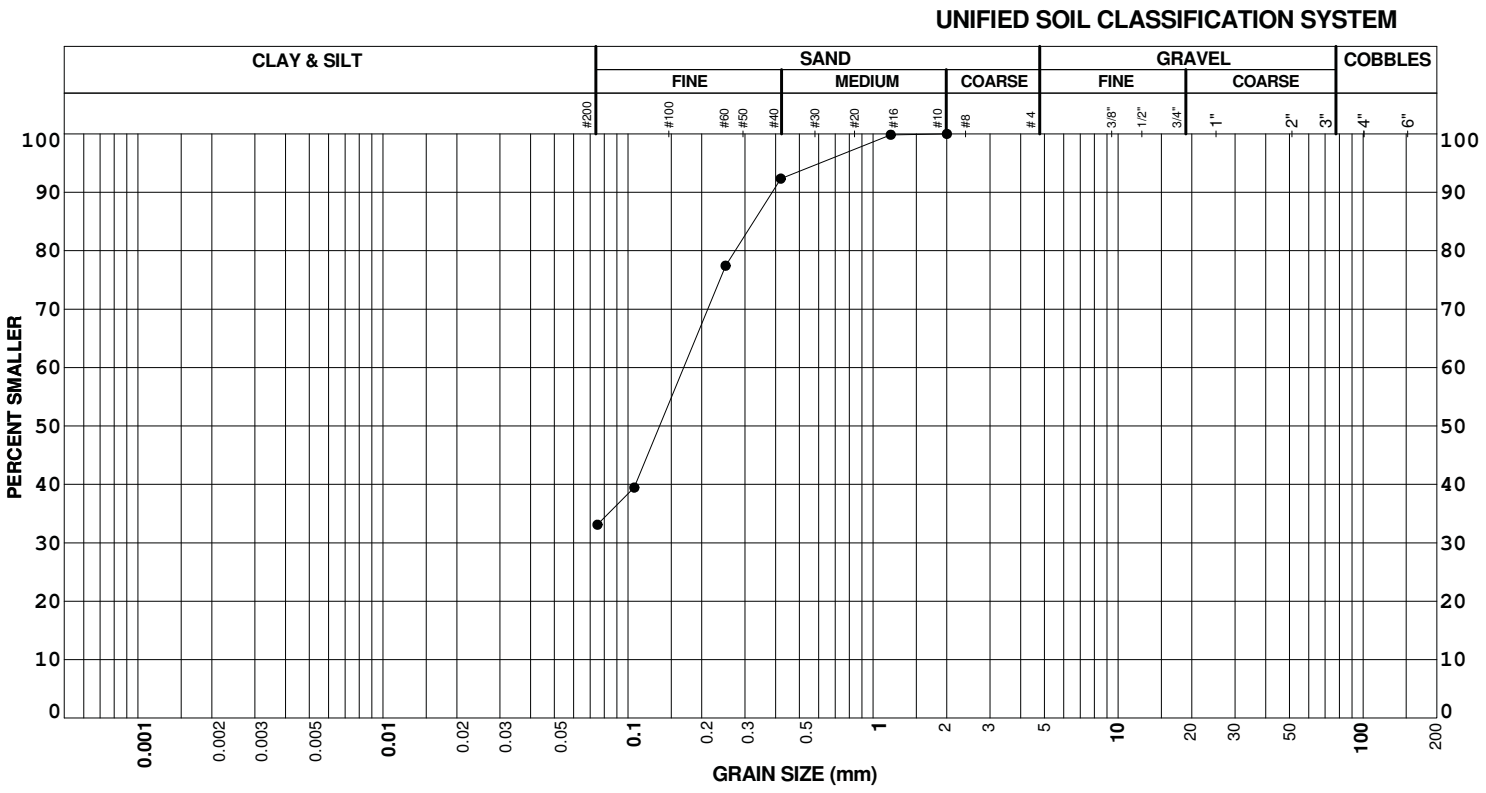
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C021	BS5	8.70	0	67	33		

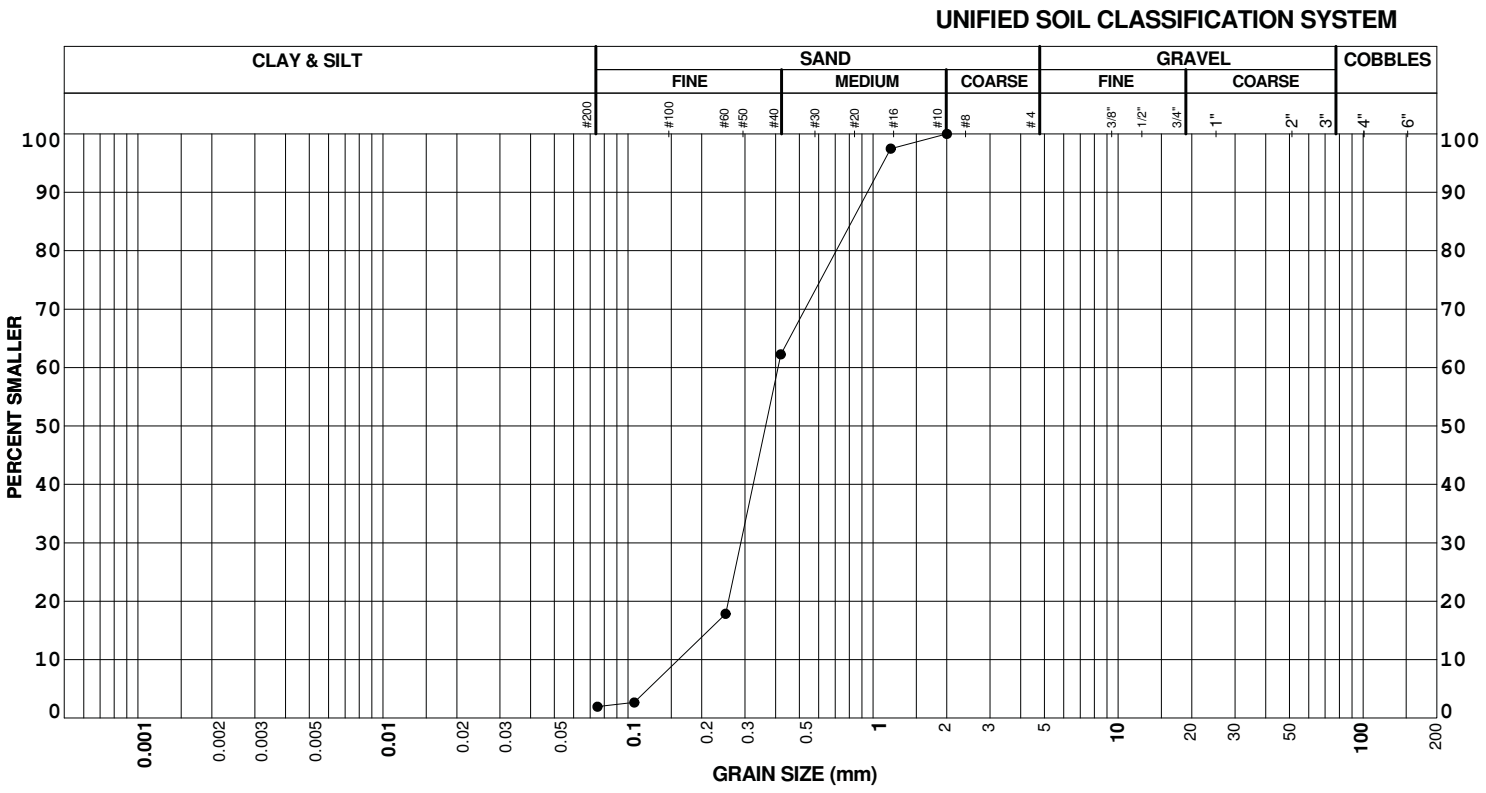
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C022	BS2	4.40	0	98	2		

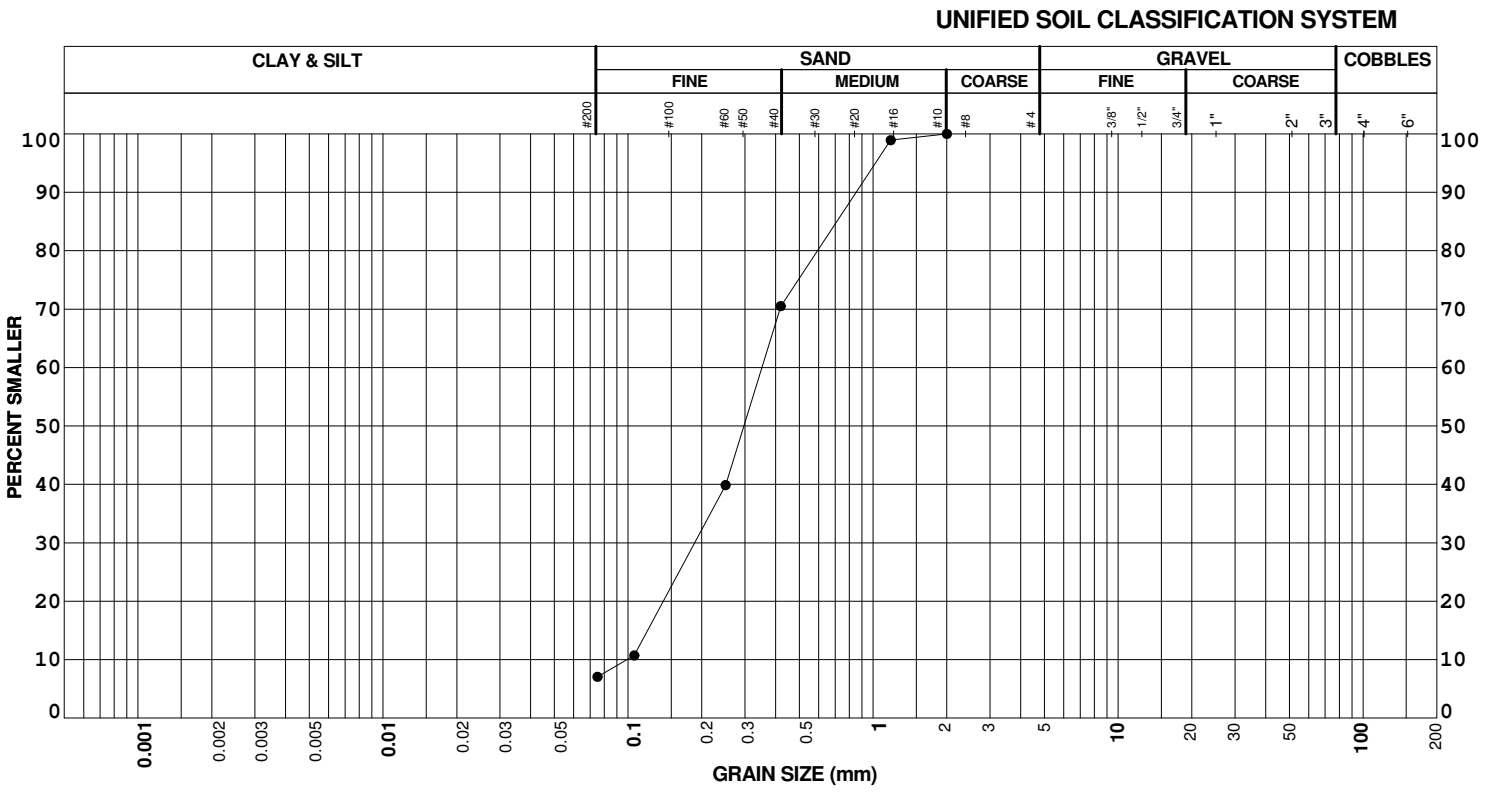
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C023	BS1	3.70	0	93	7		

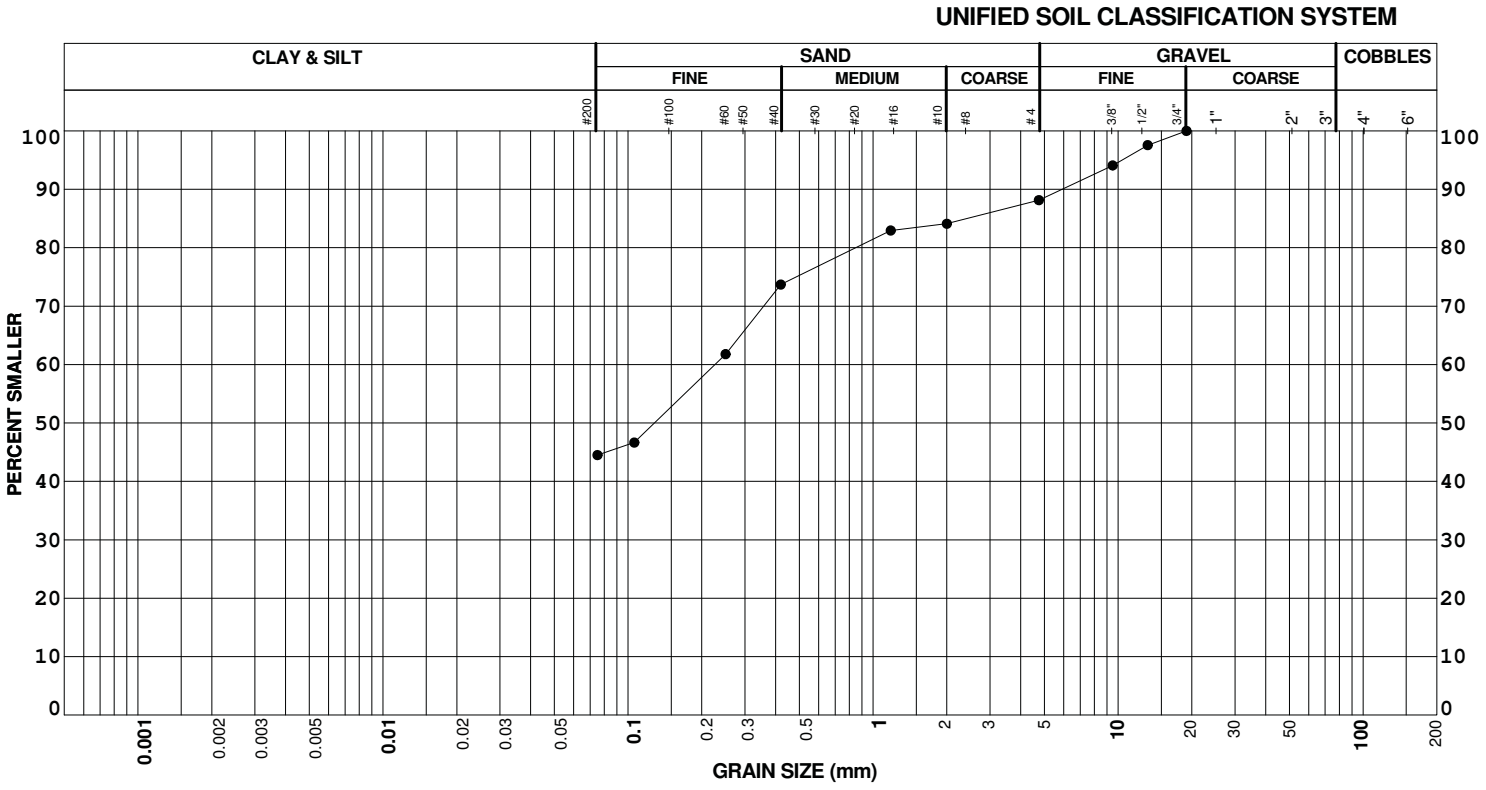
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C023	BS2	5.00	12	44	45		

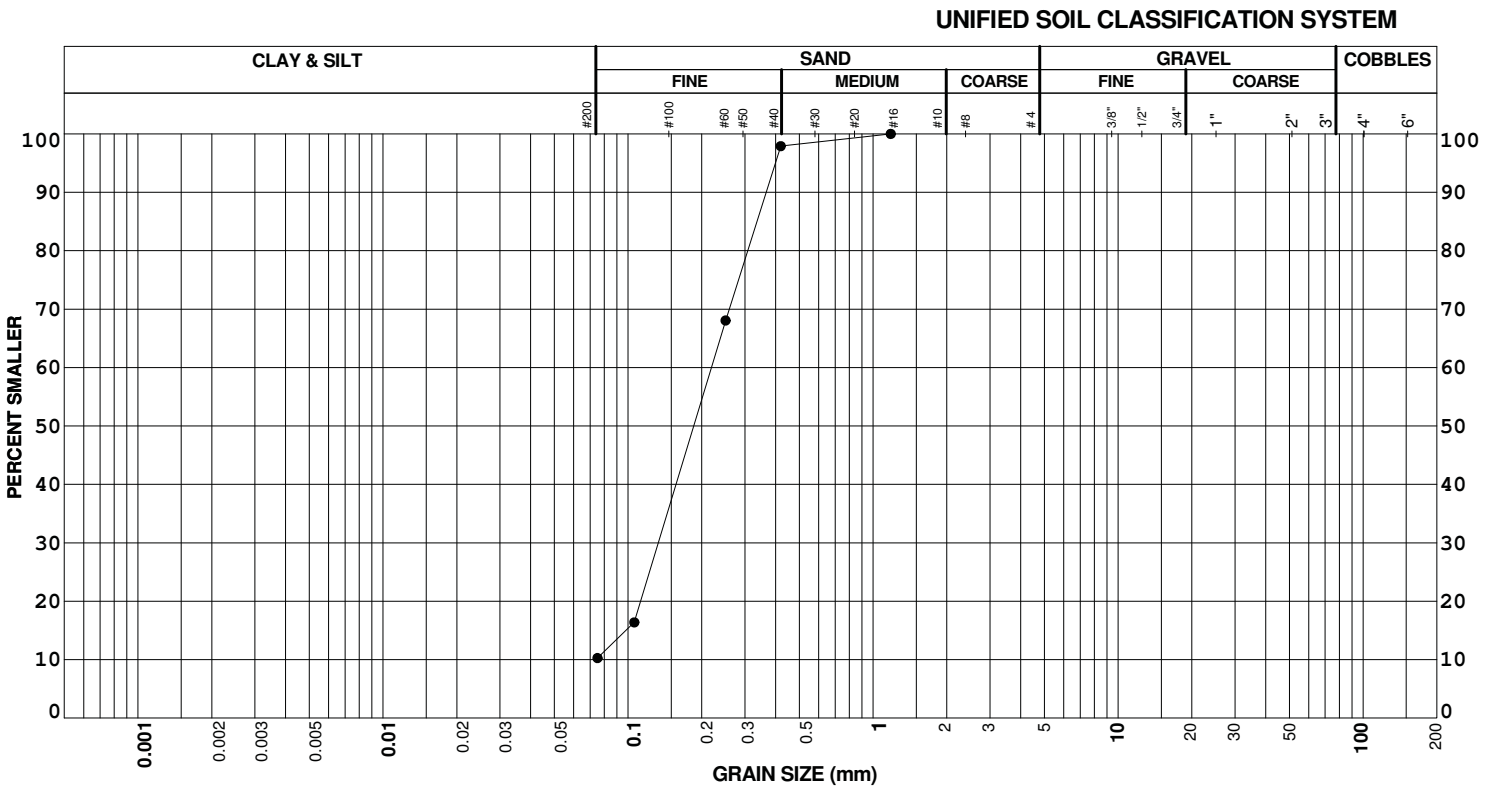
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C024	BS2	5.00	0	90	10		

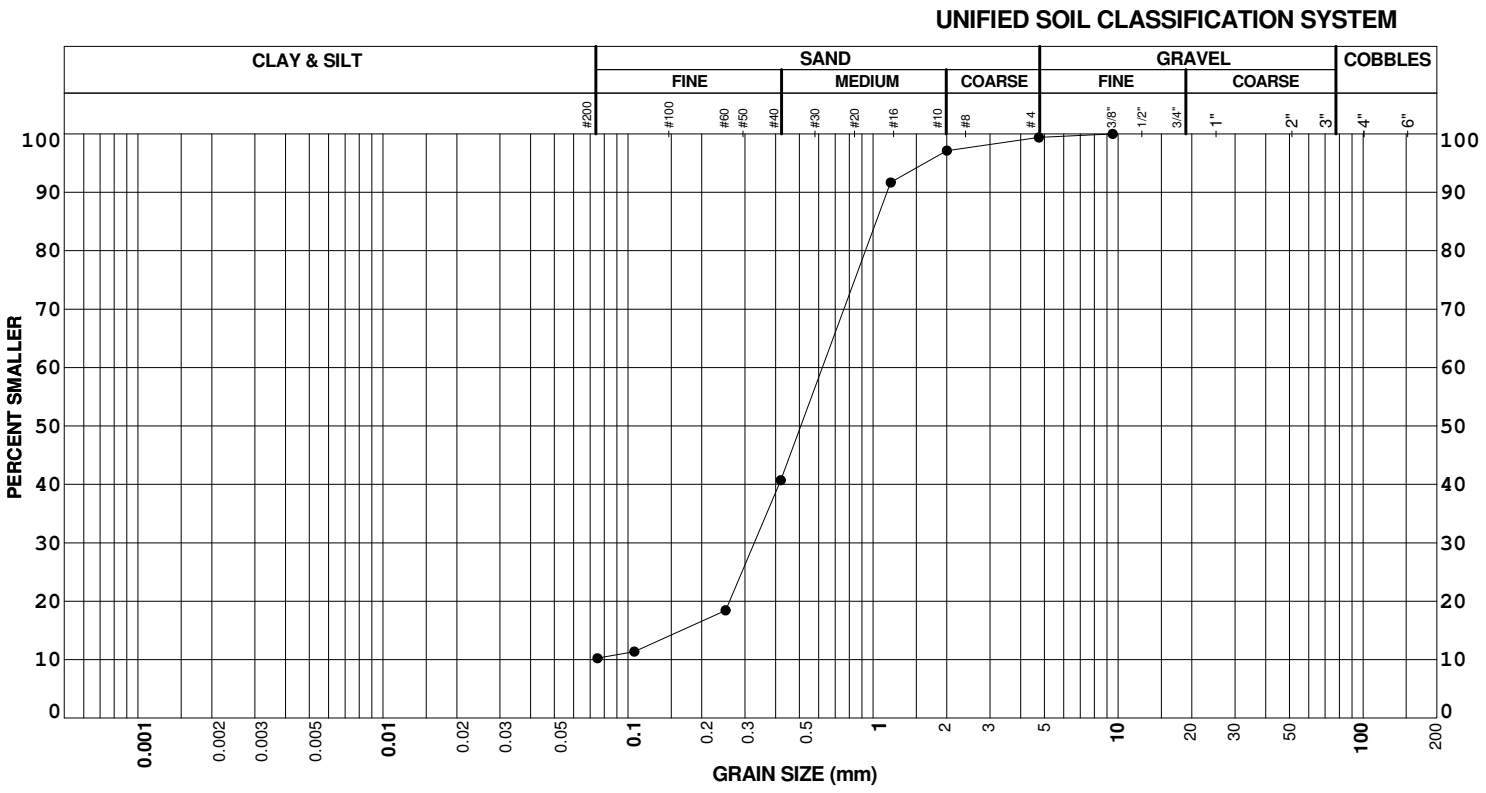
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C025	BS2	4.00	1	89	10		

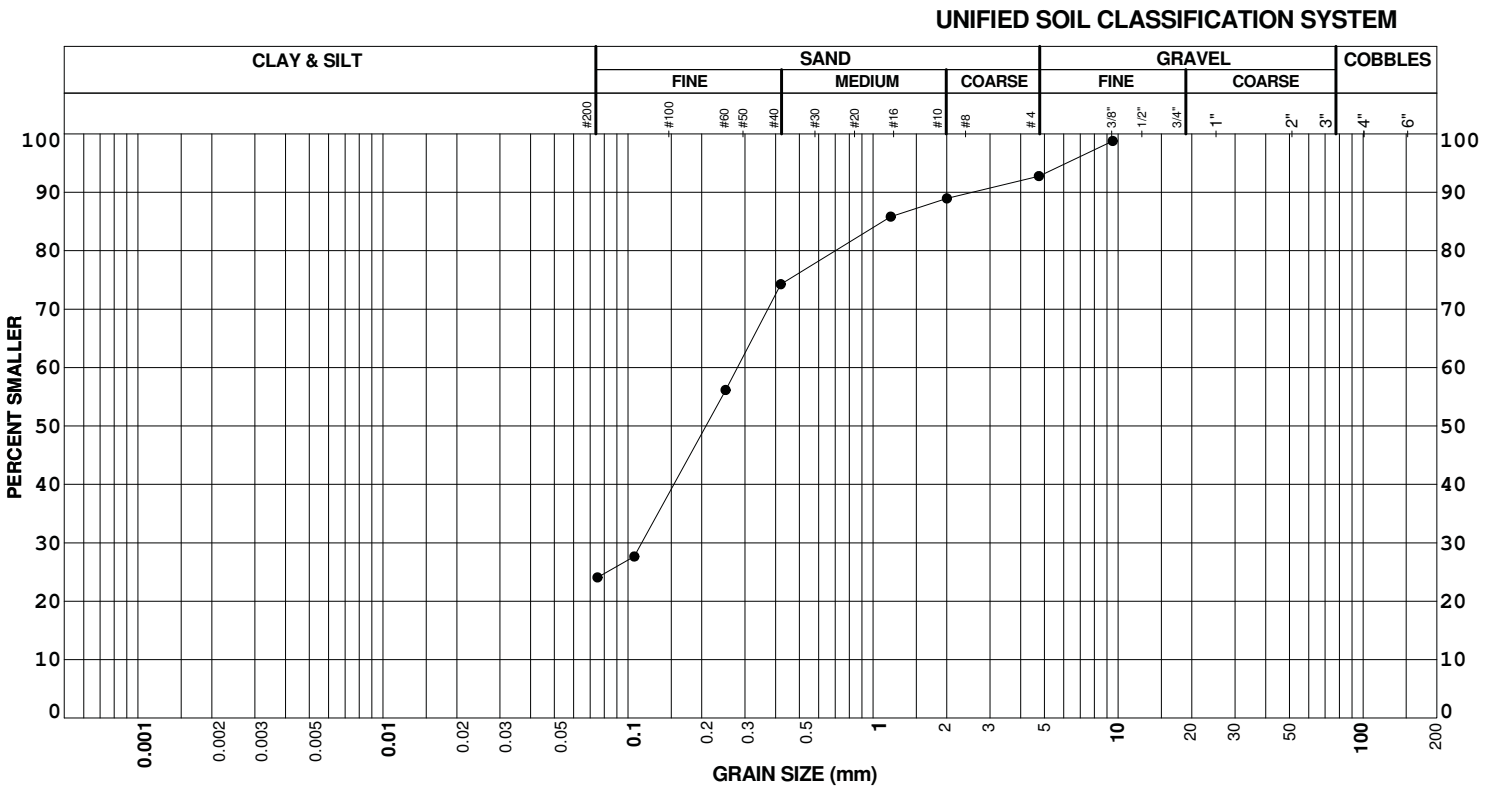
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C026	BS1	2.40	6	69	24		

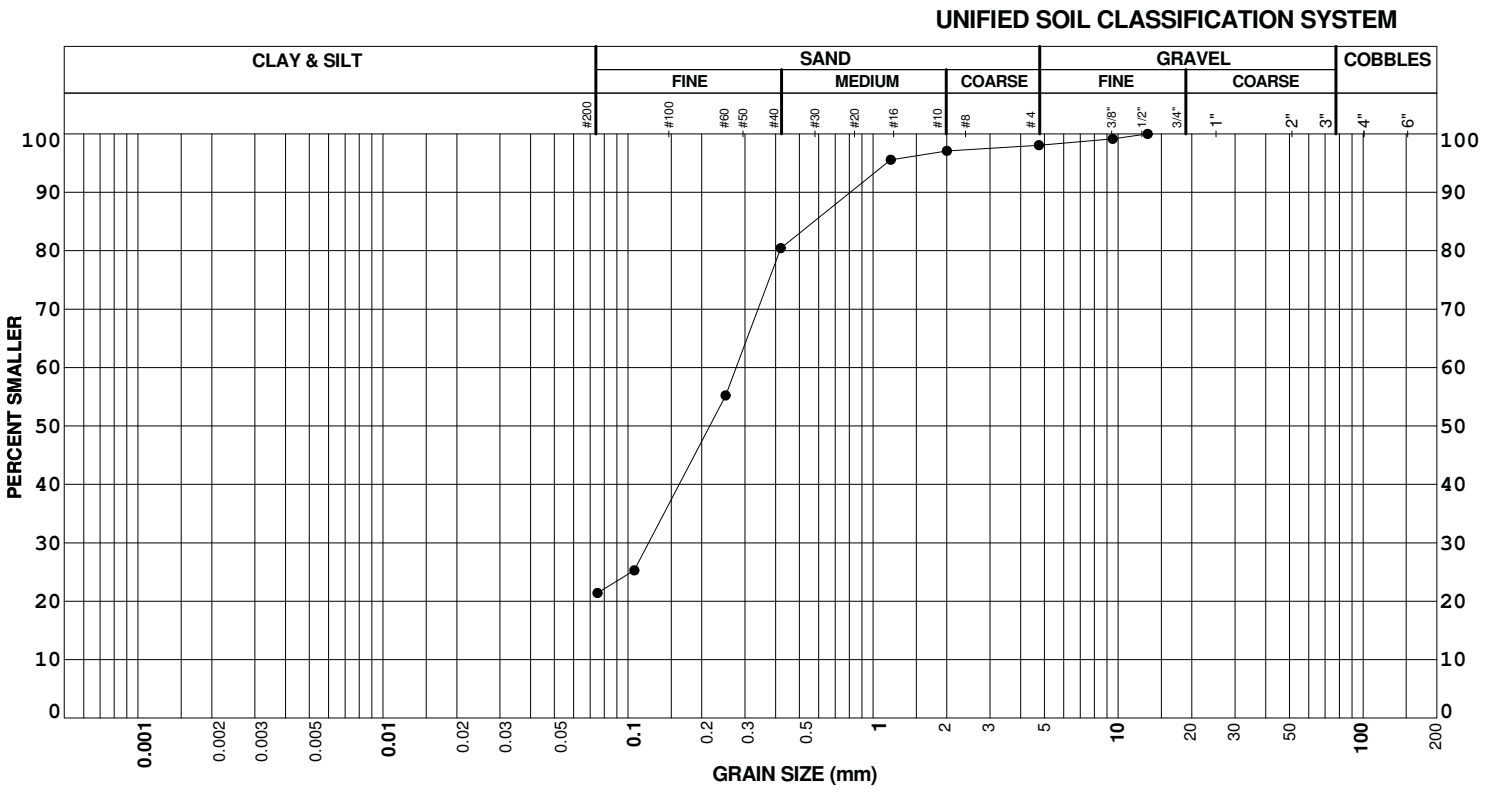
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C026	BS2	4.00	2	77	21		

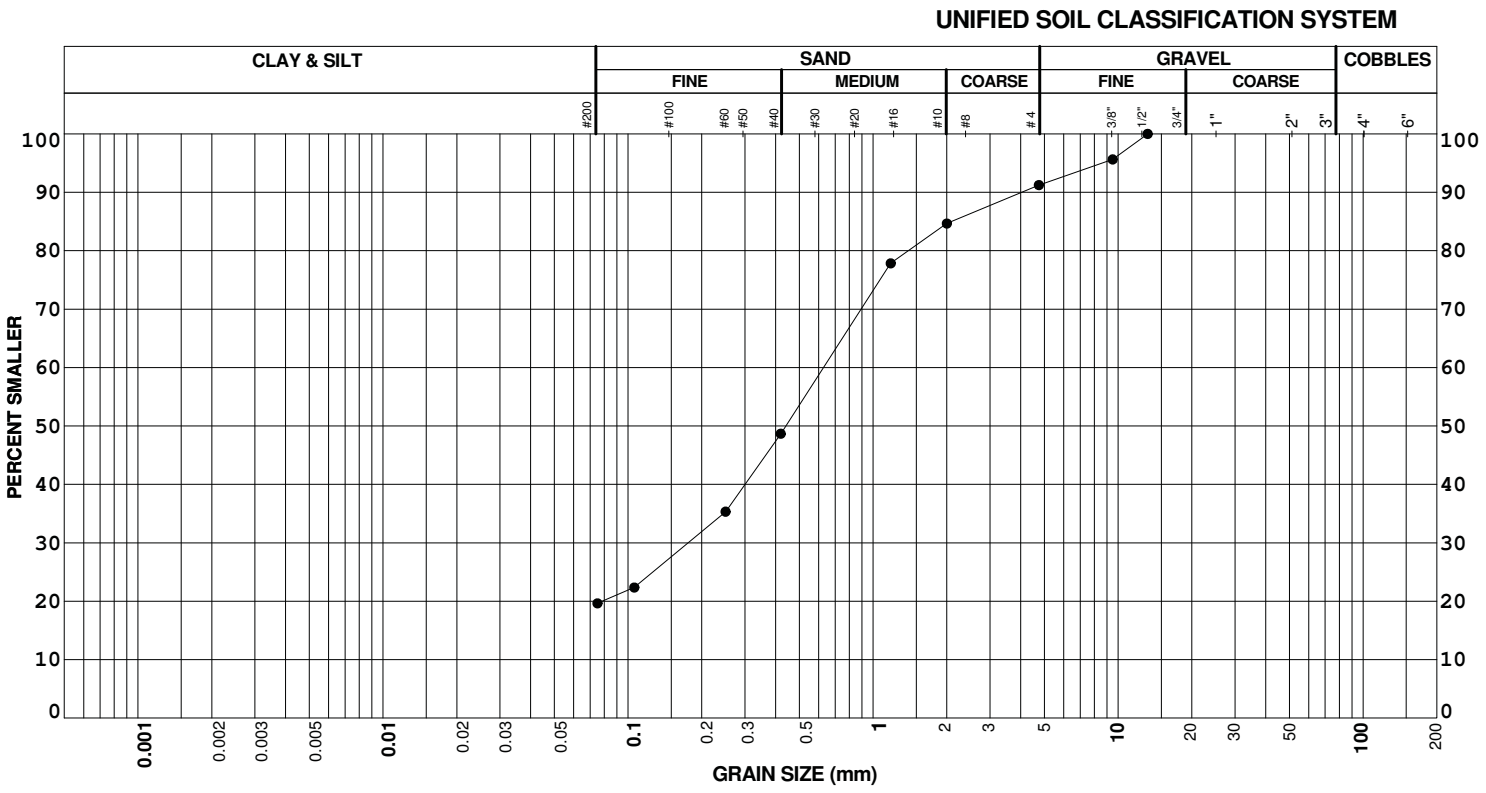
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C027	BS1	4.00	9	72	20		

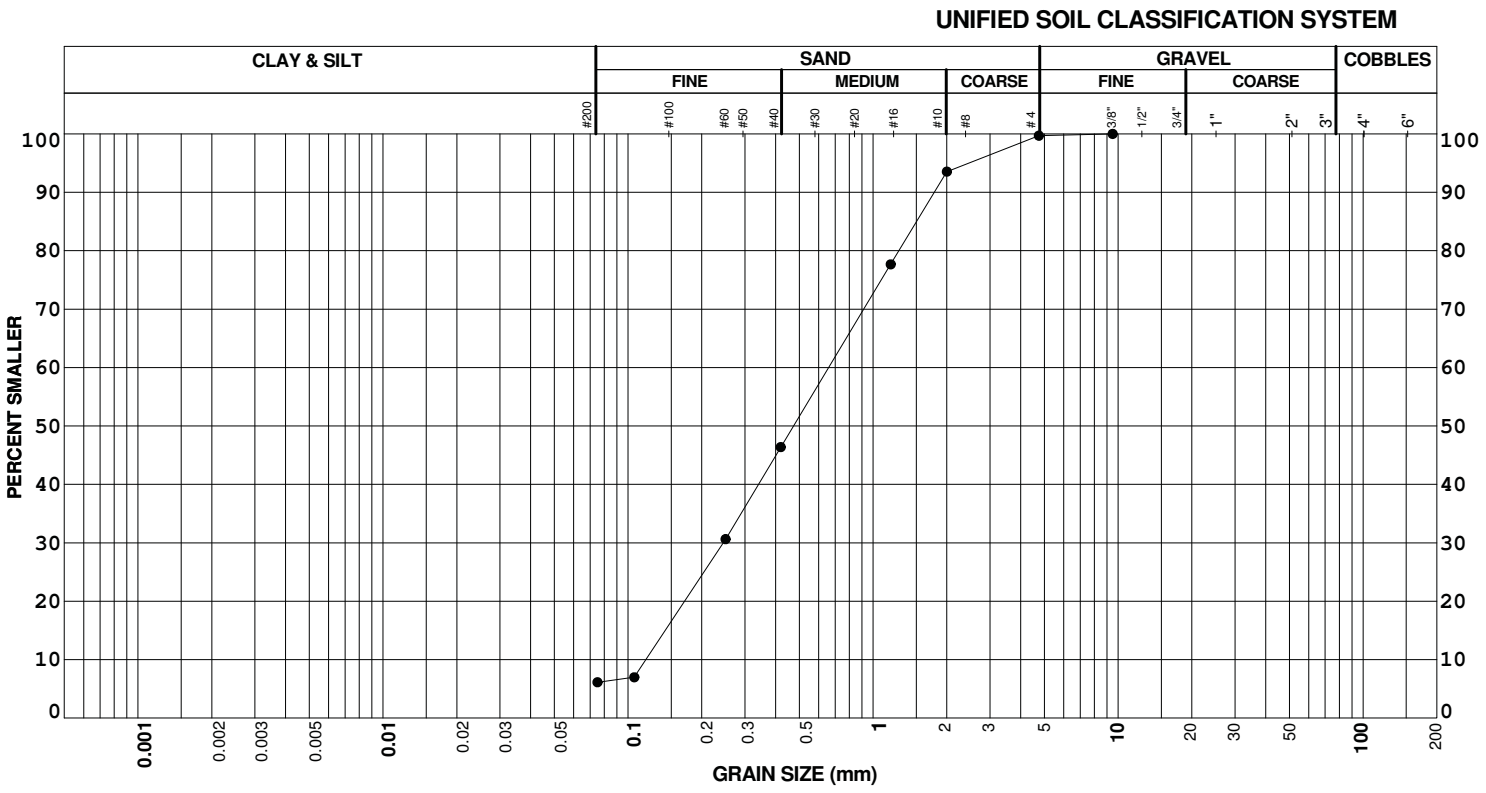
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C028	BS2	8.80	0	94	6		

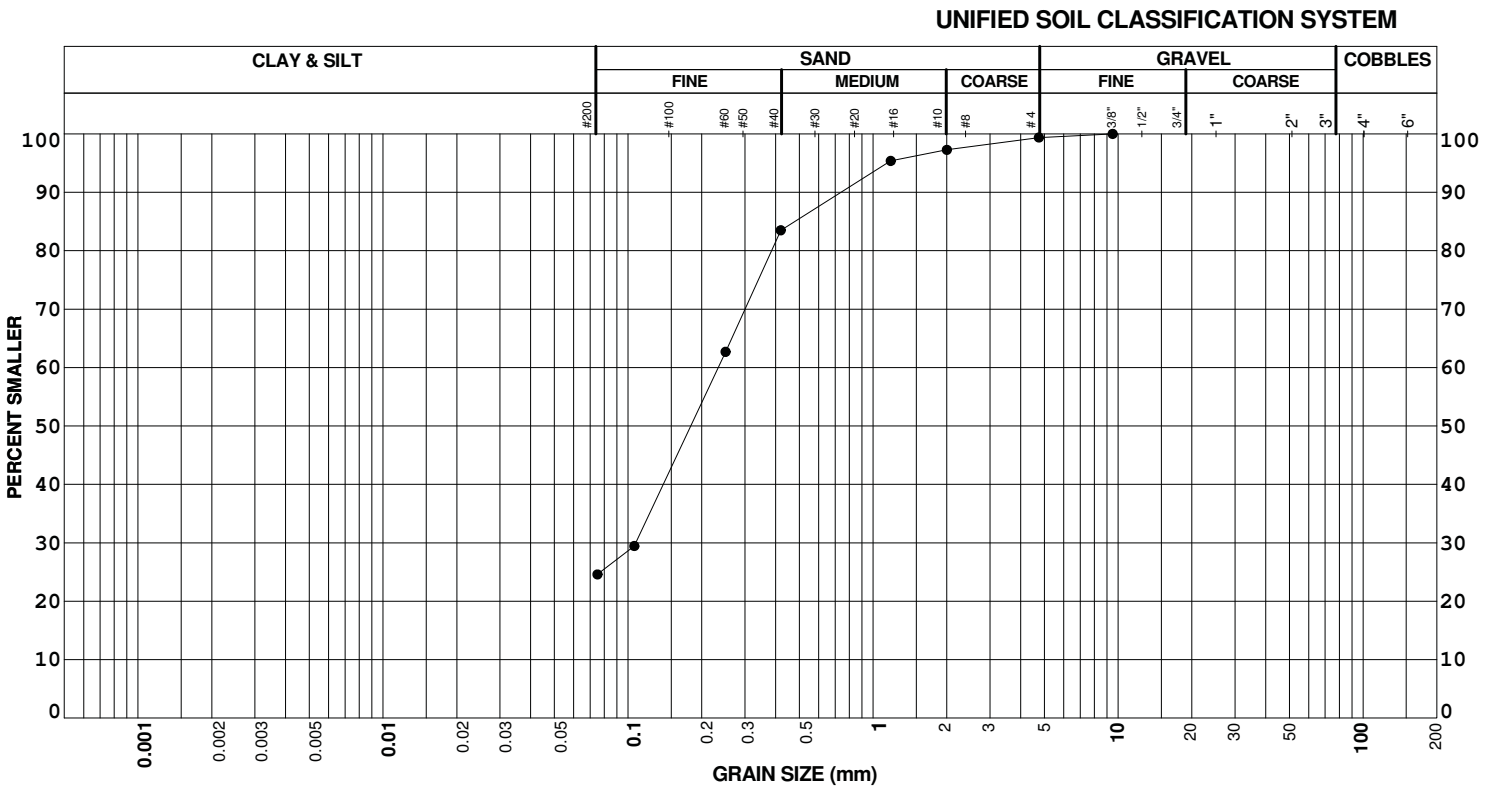
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C029	BS2	2.40	1	75	25		

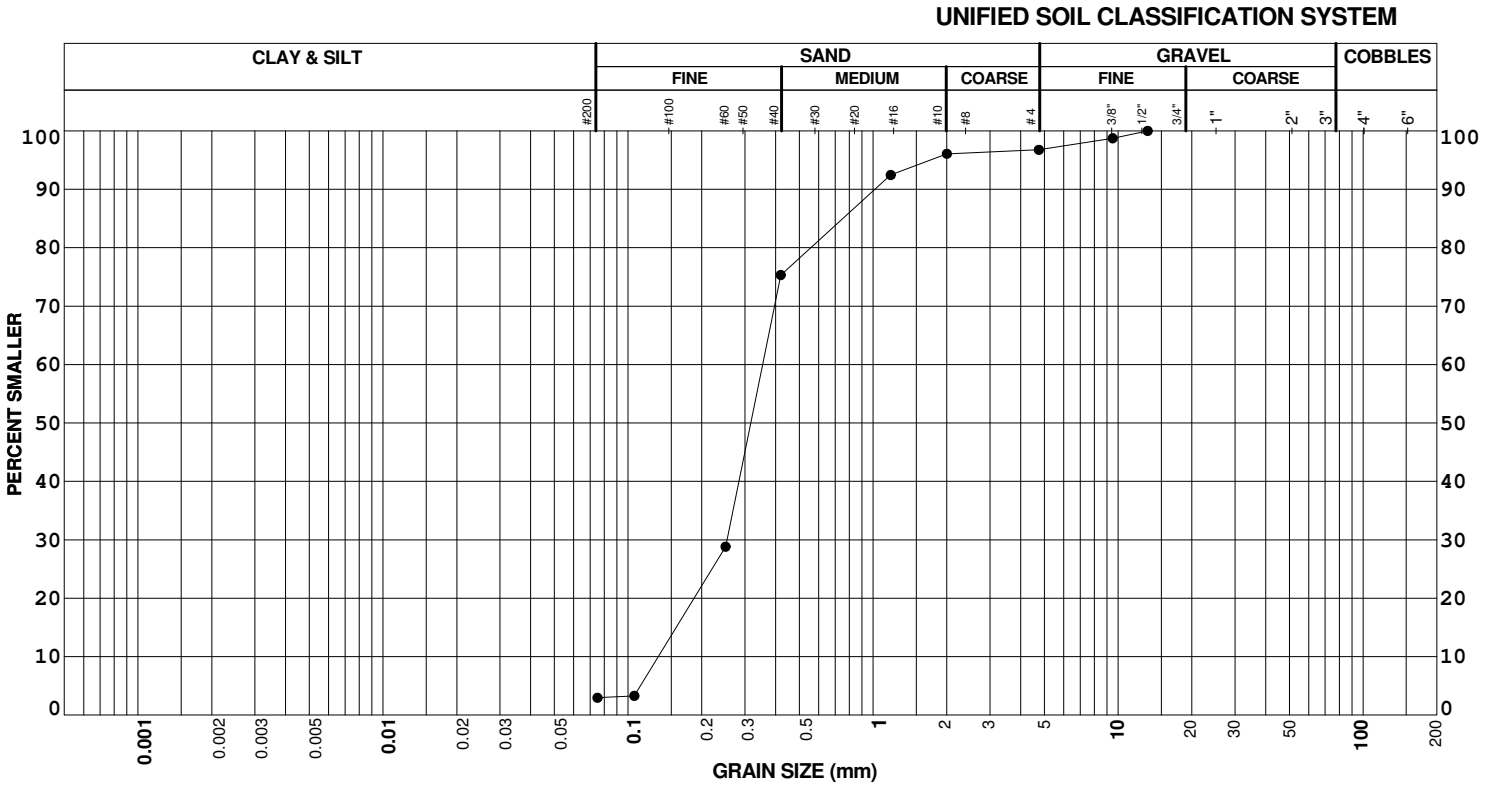
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C030	BS4	5.00	3	94	3		

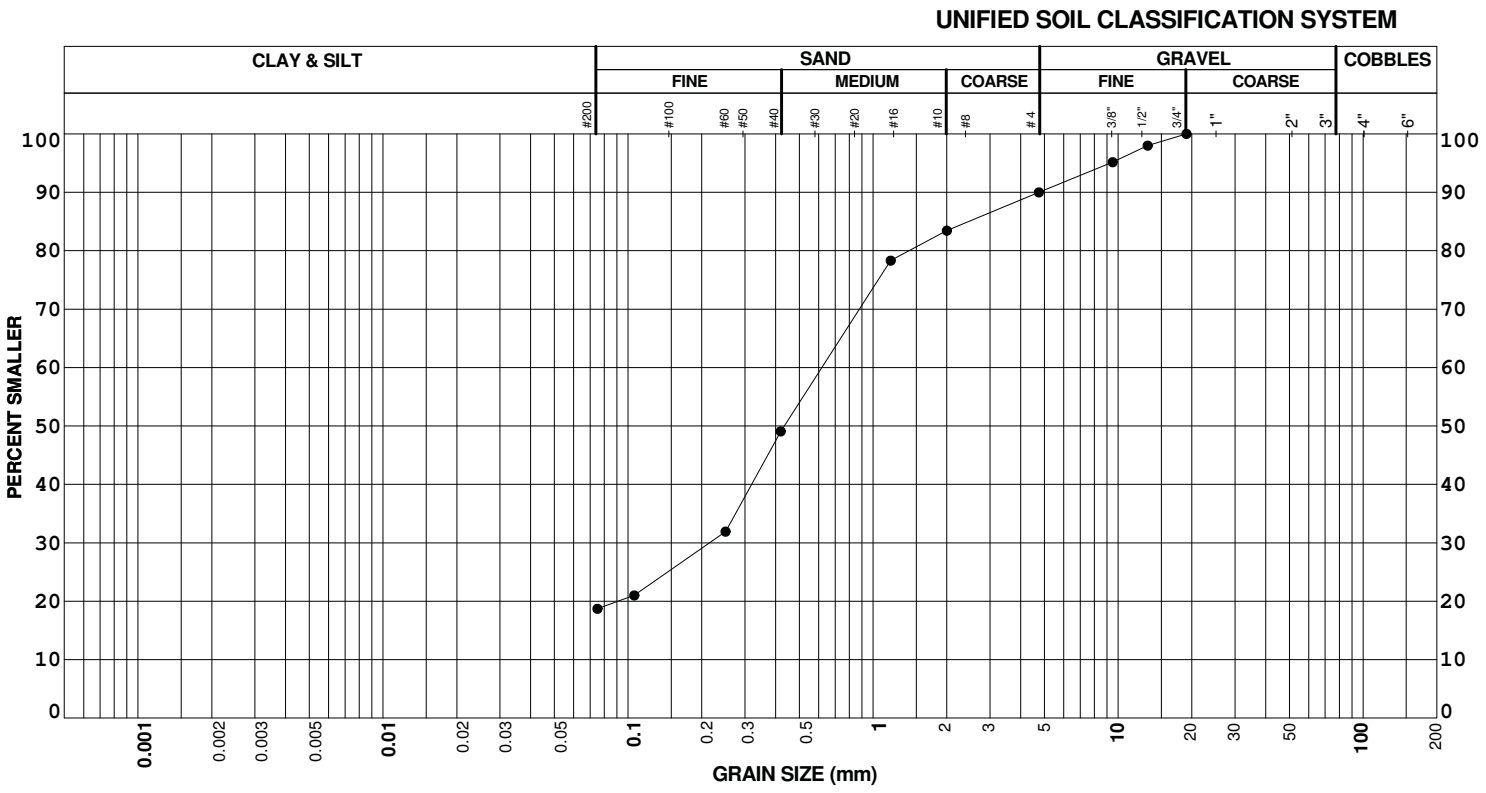
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C032	BS2	2.40	10	71	19		

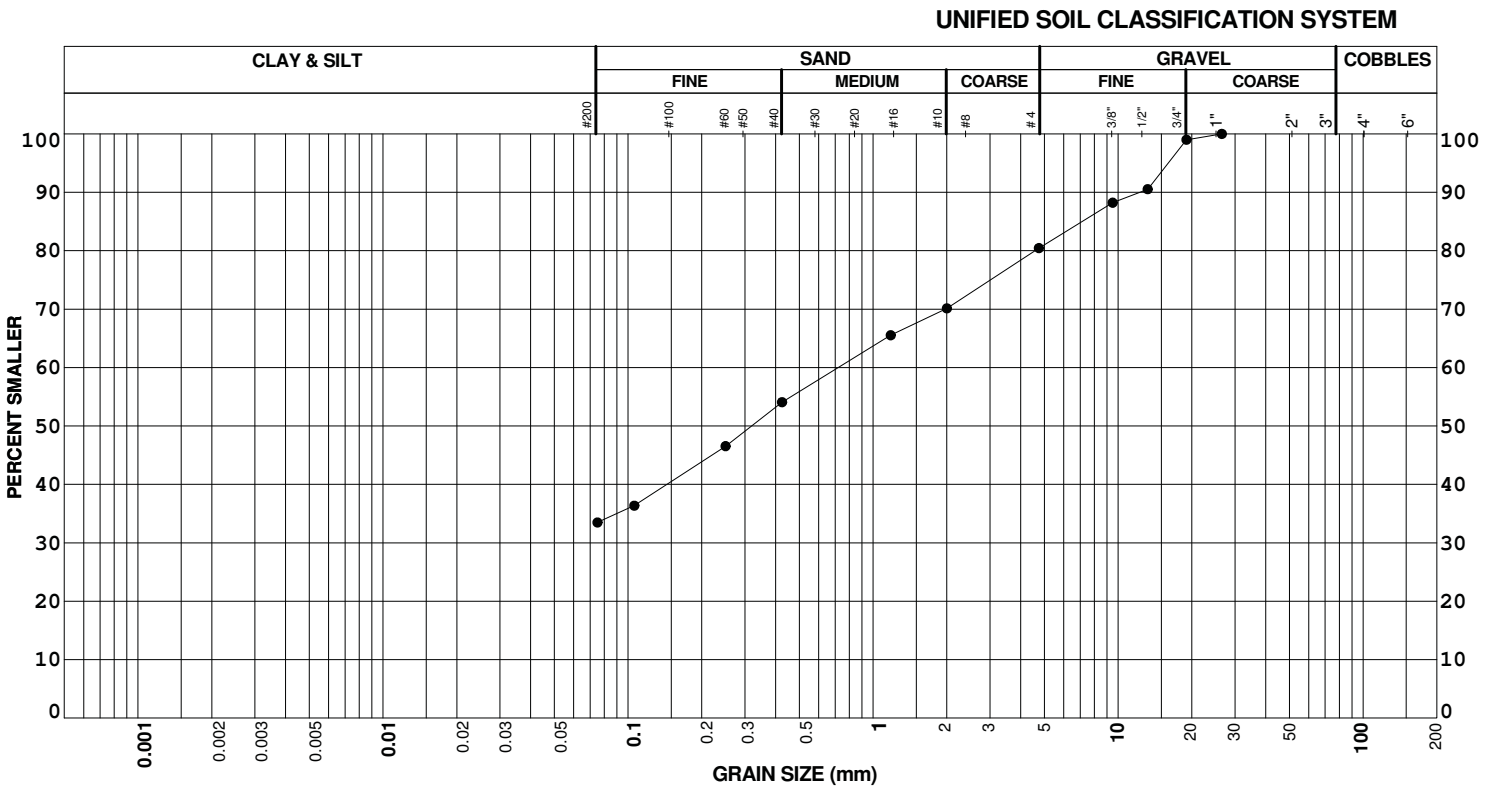
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-C205	BS3	4.00	20	47	33		

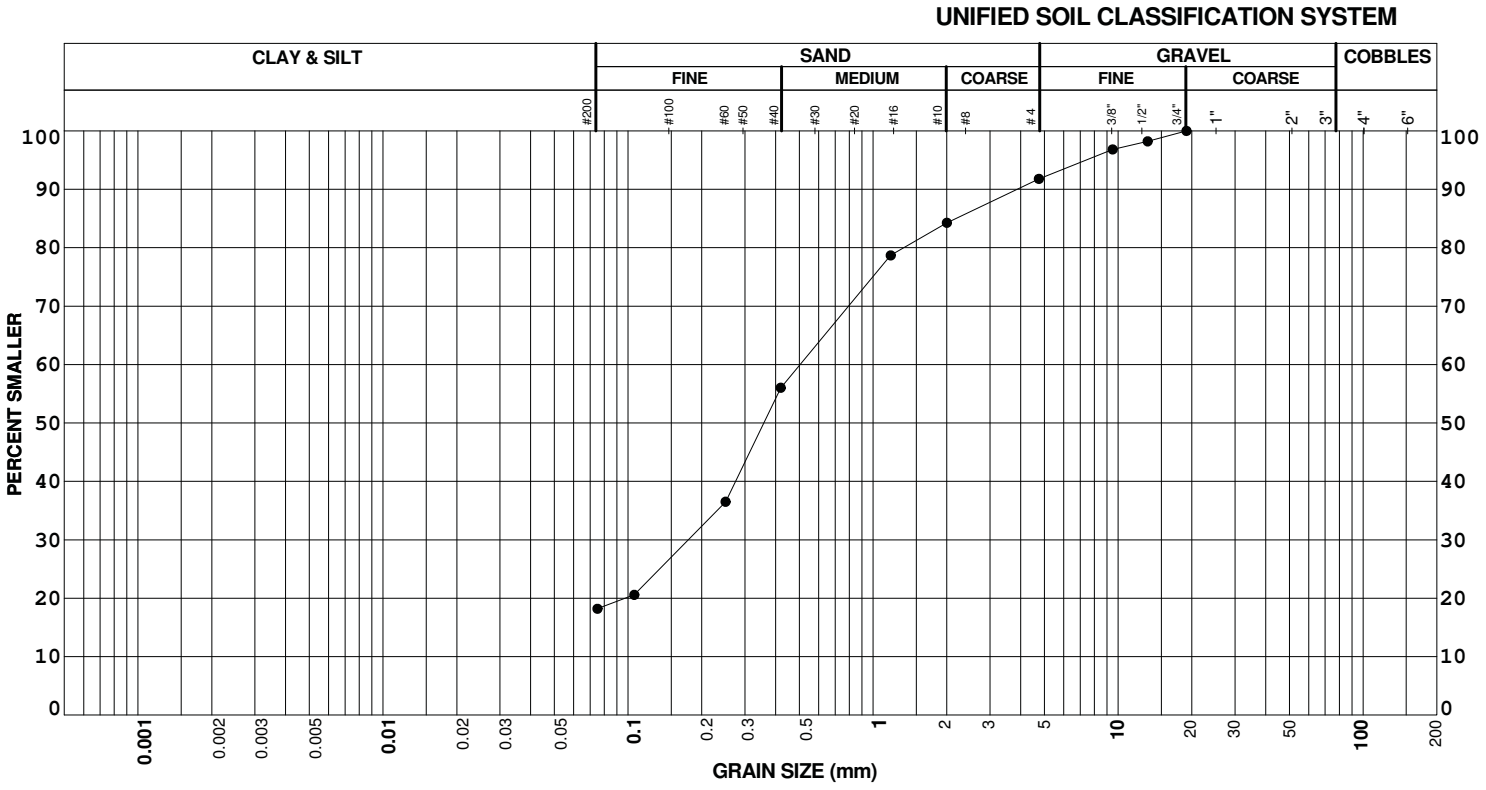
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R004	BS2	2.51	8	74	18		

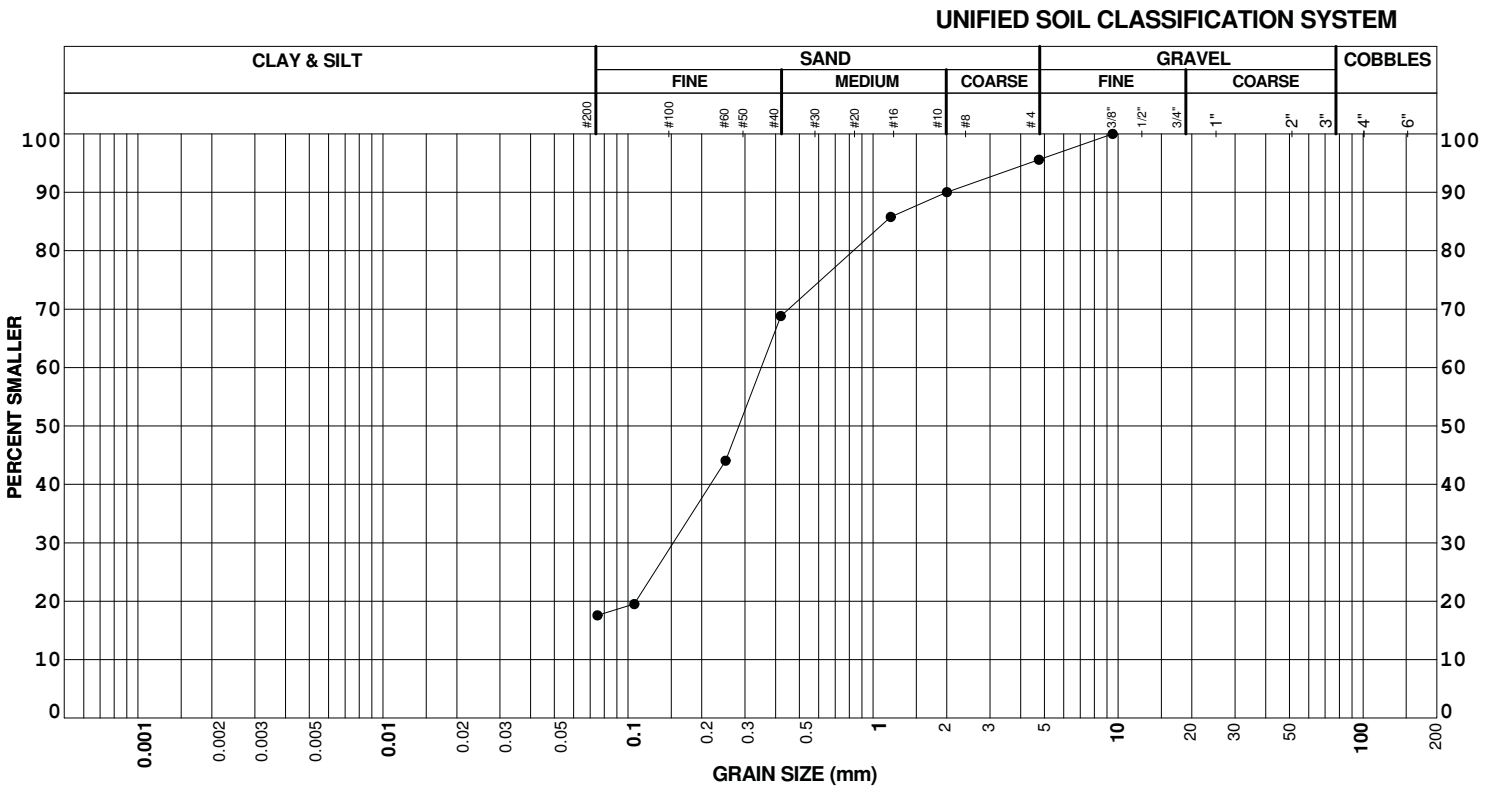
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R005	BS2	2.50	4	78	18		

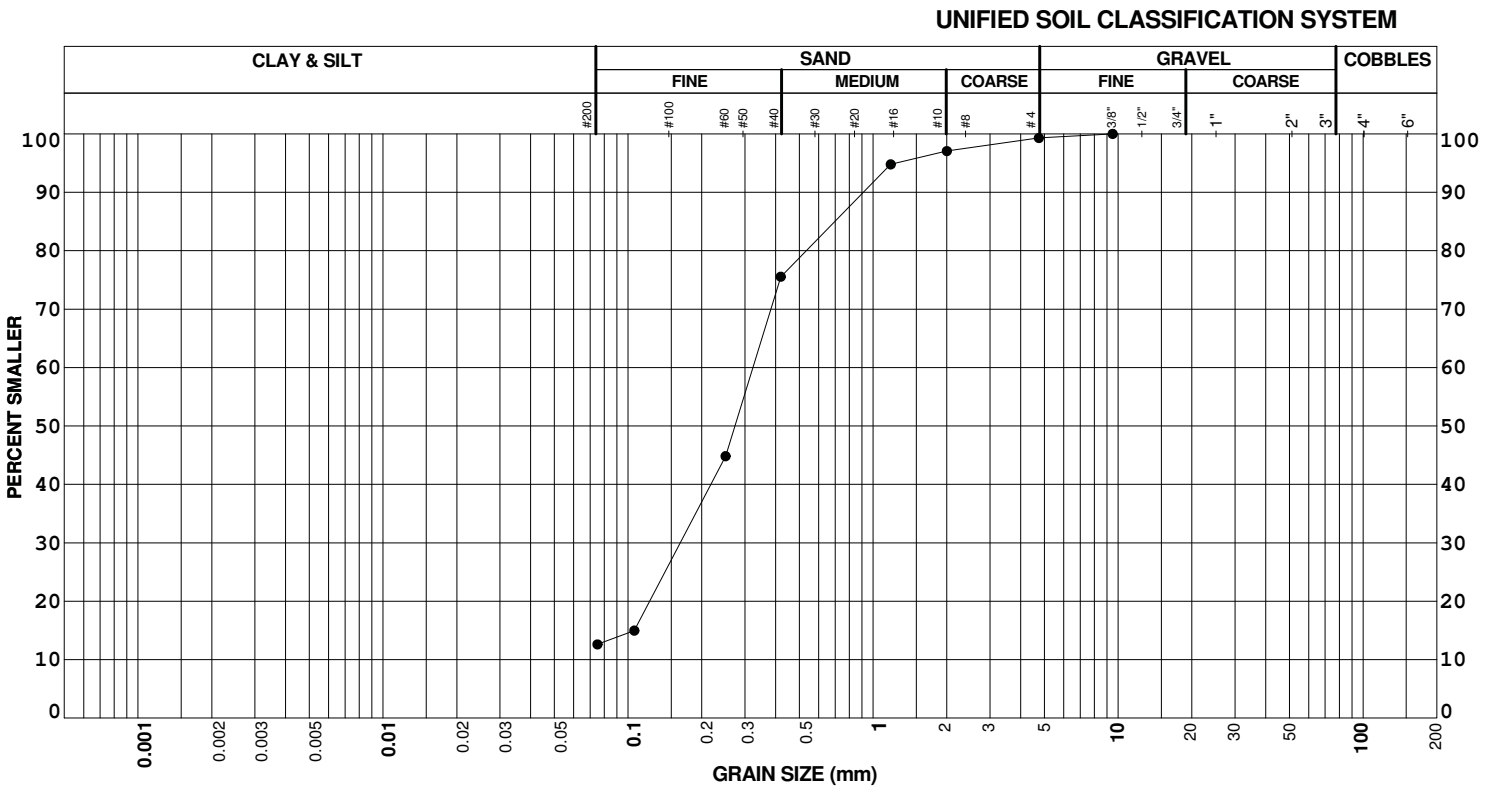
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R007	BS2	2.50	1	87	13		

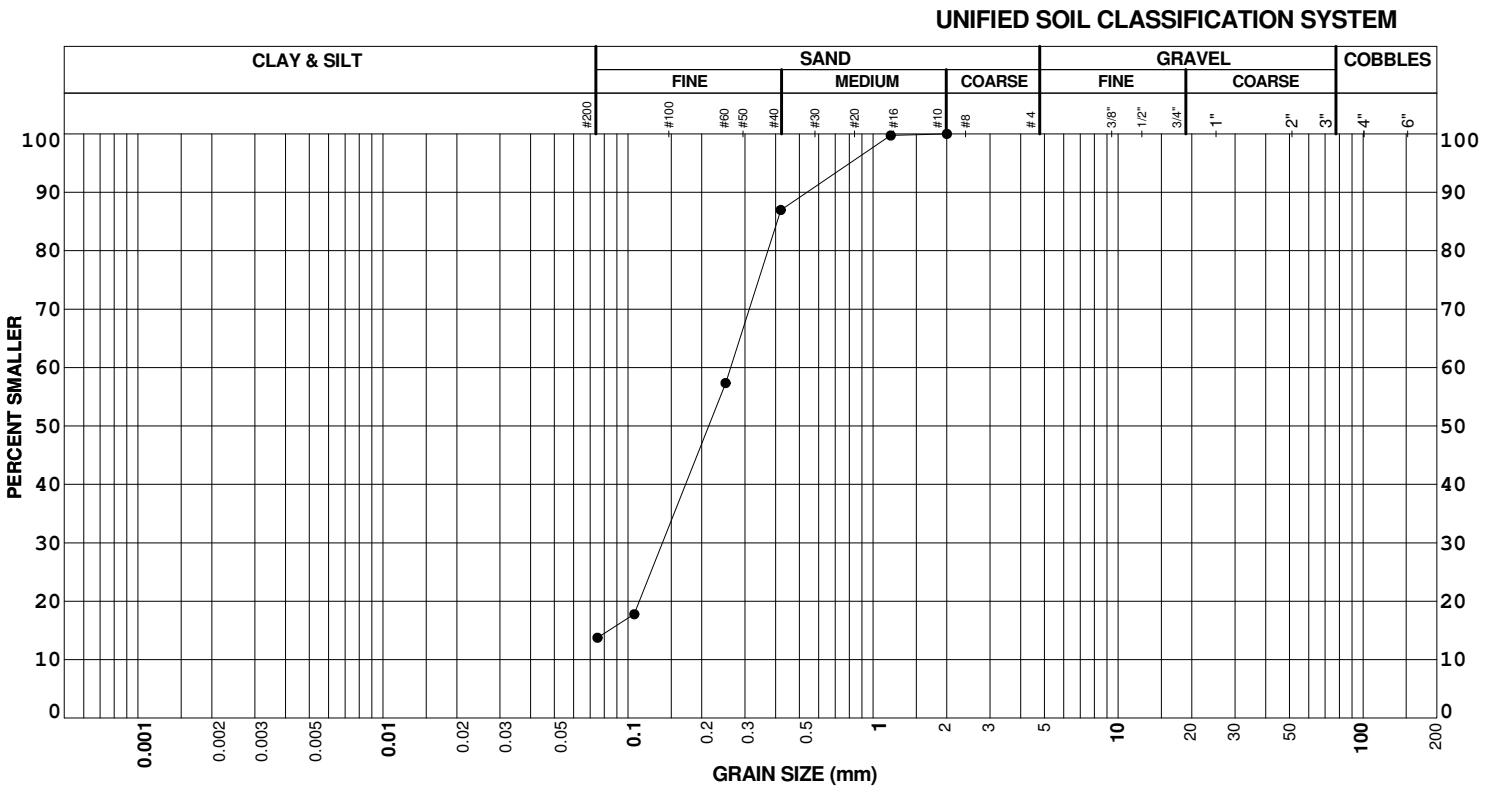
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R011	BS2	2.50	0	86	14		

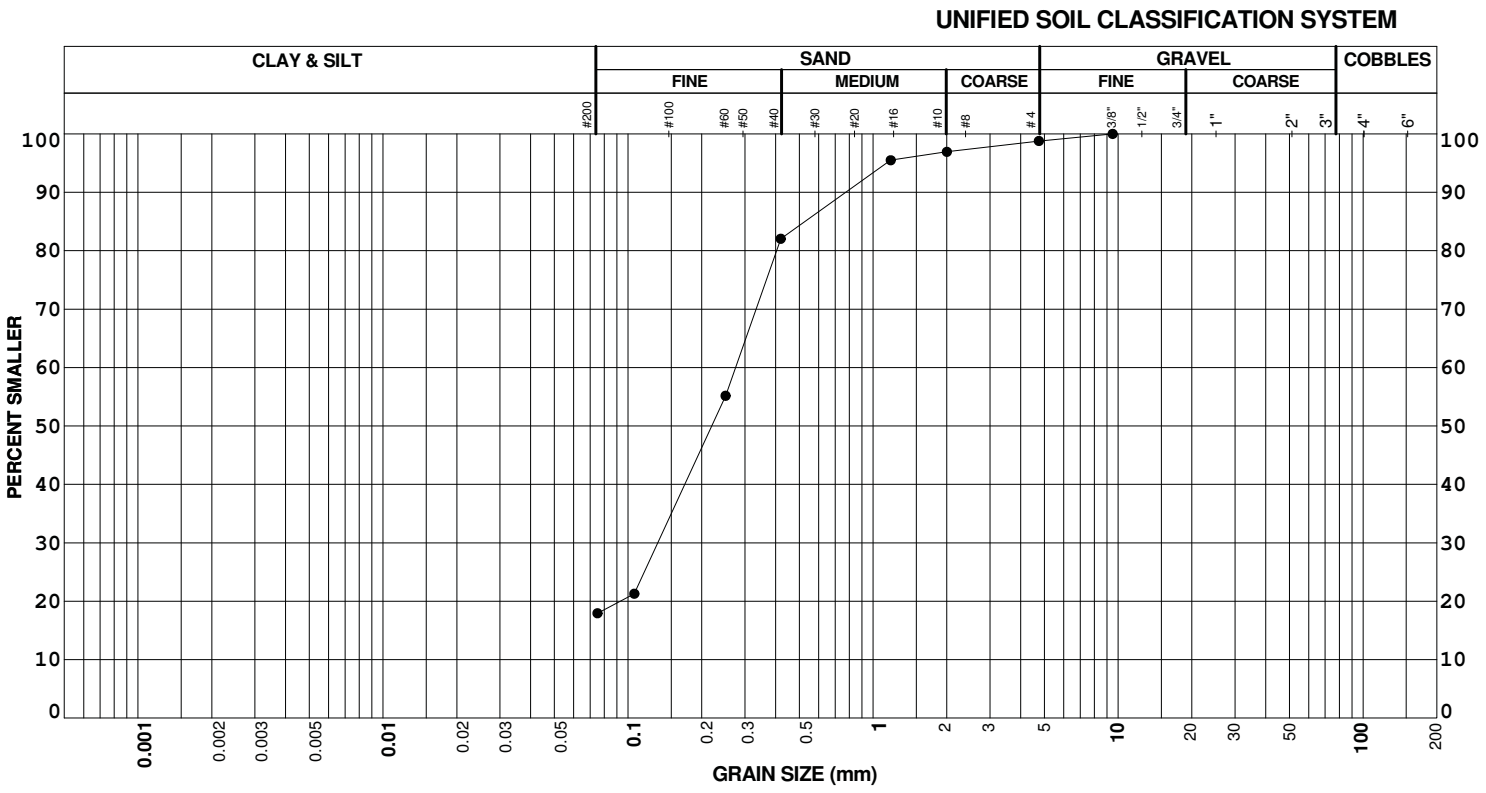
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R012	BS2	2.50	1	81	18		

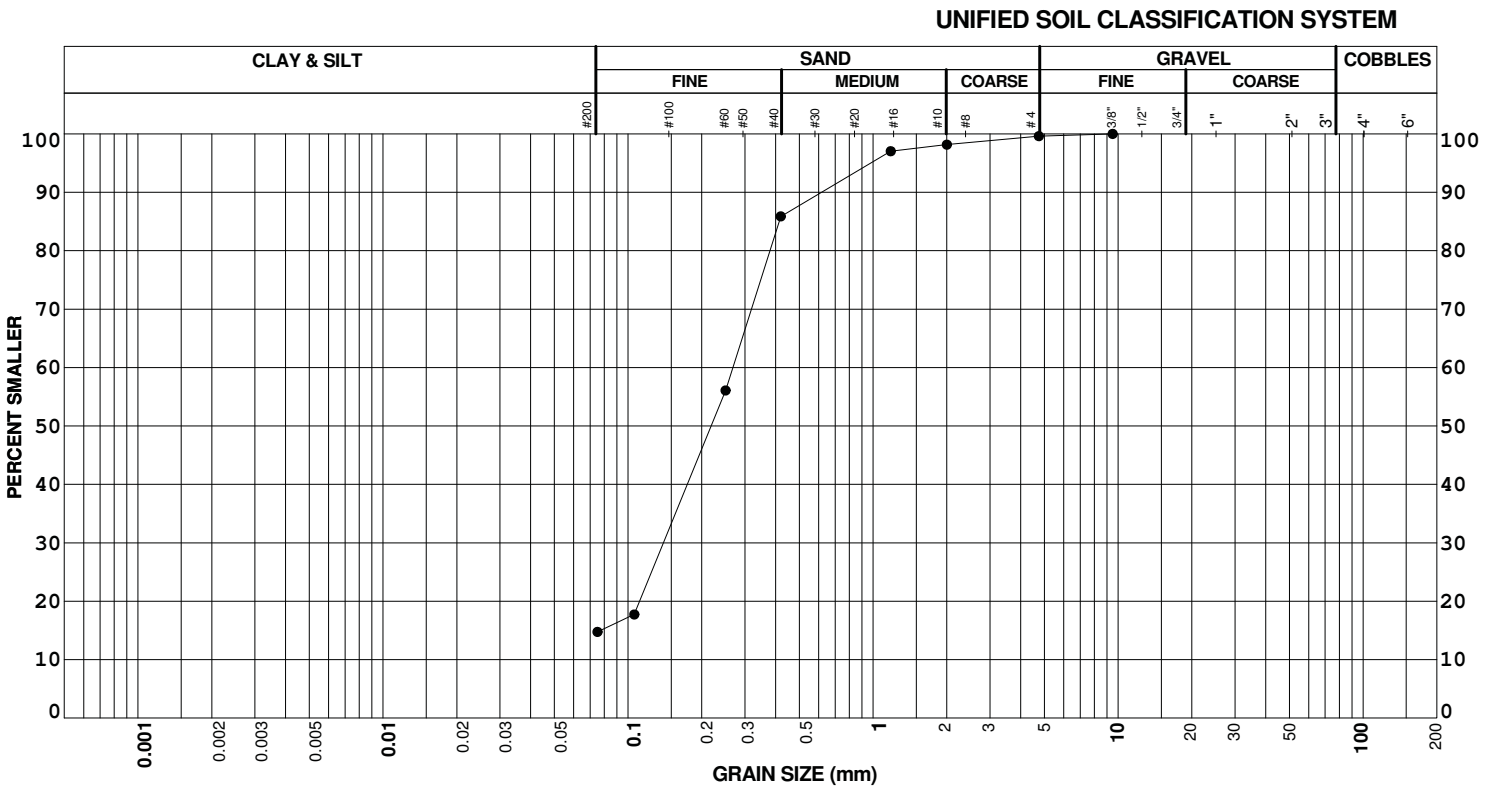
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R013	BS2	2.50	0	85	15		

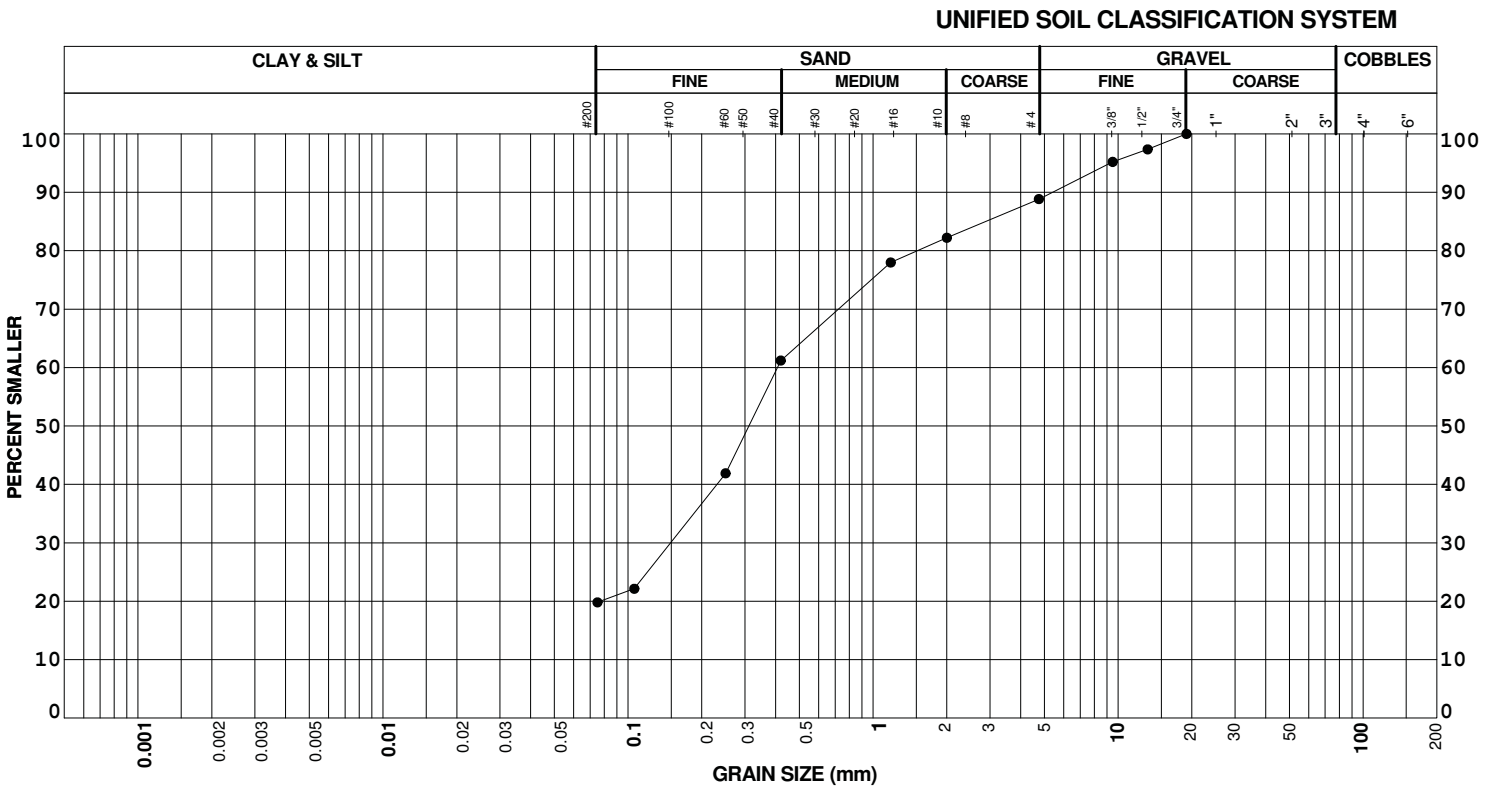
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R014	BS2	2.00	11	69	20		

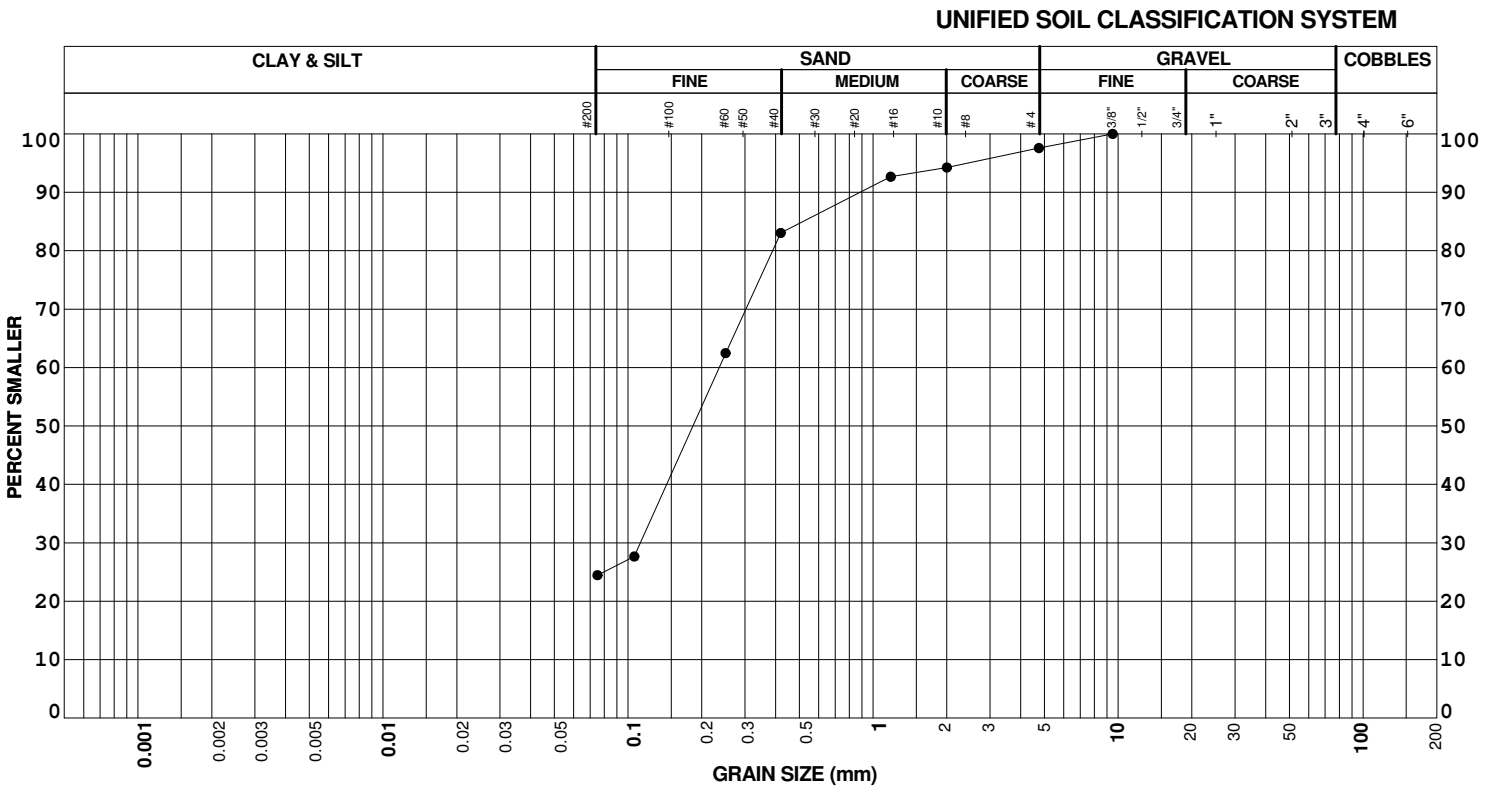
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R015	BS3	4.00	2	73	24		

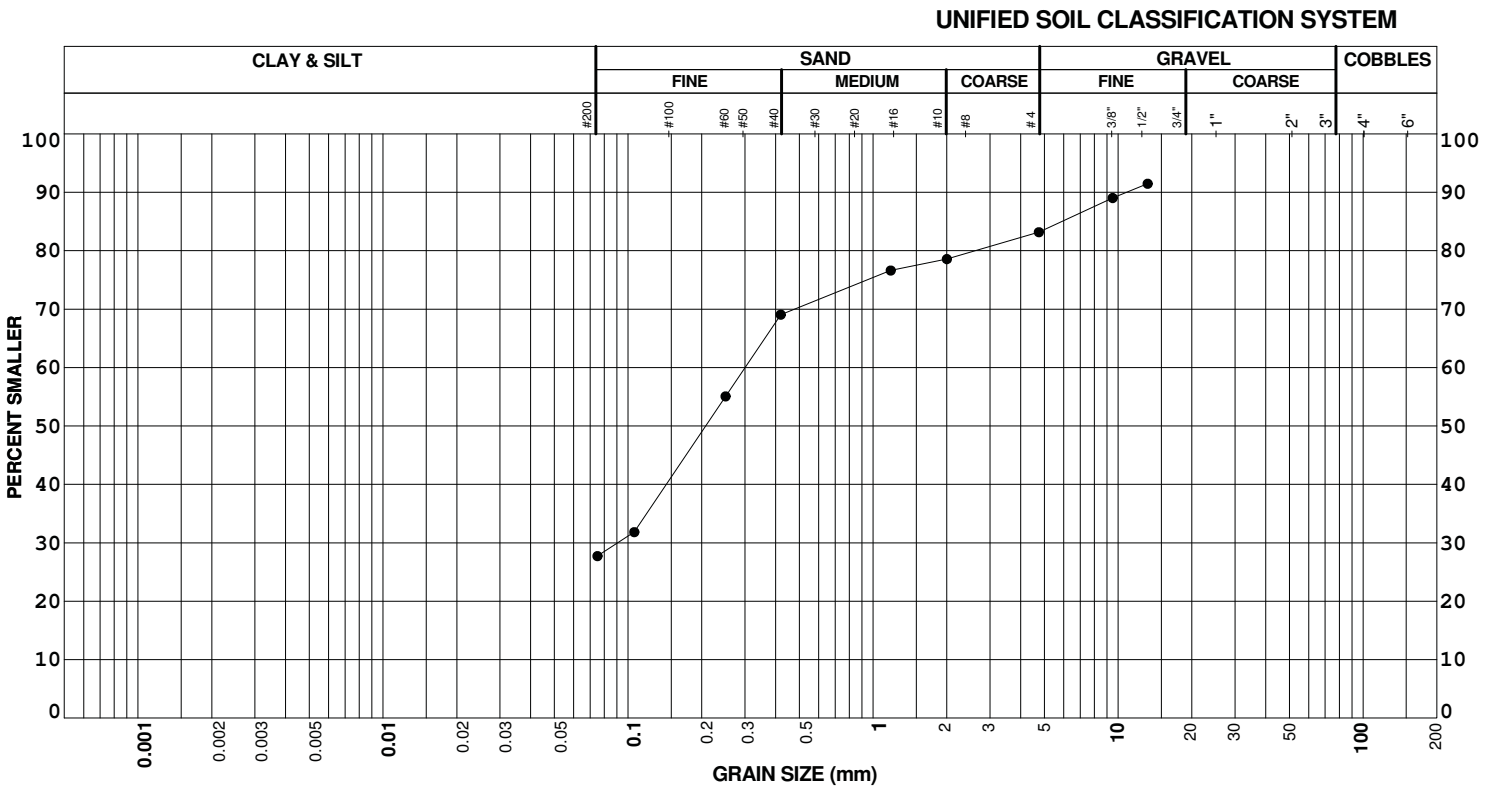
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R016	BS2	2.00	8	55	28		

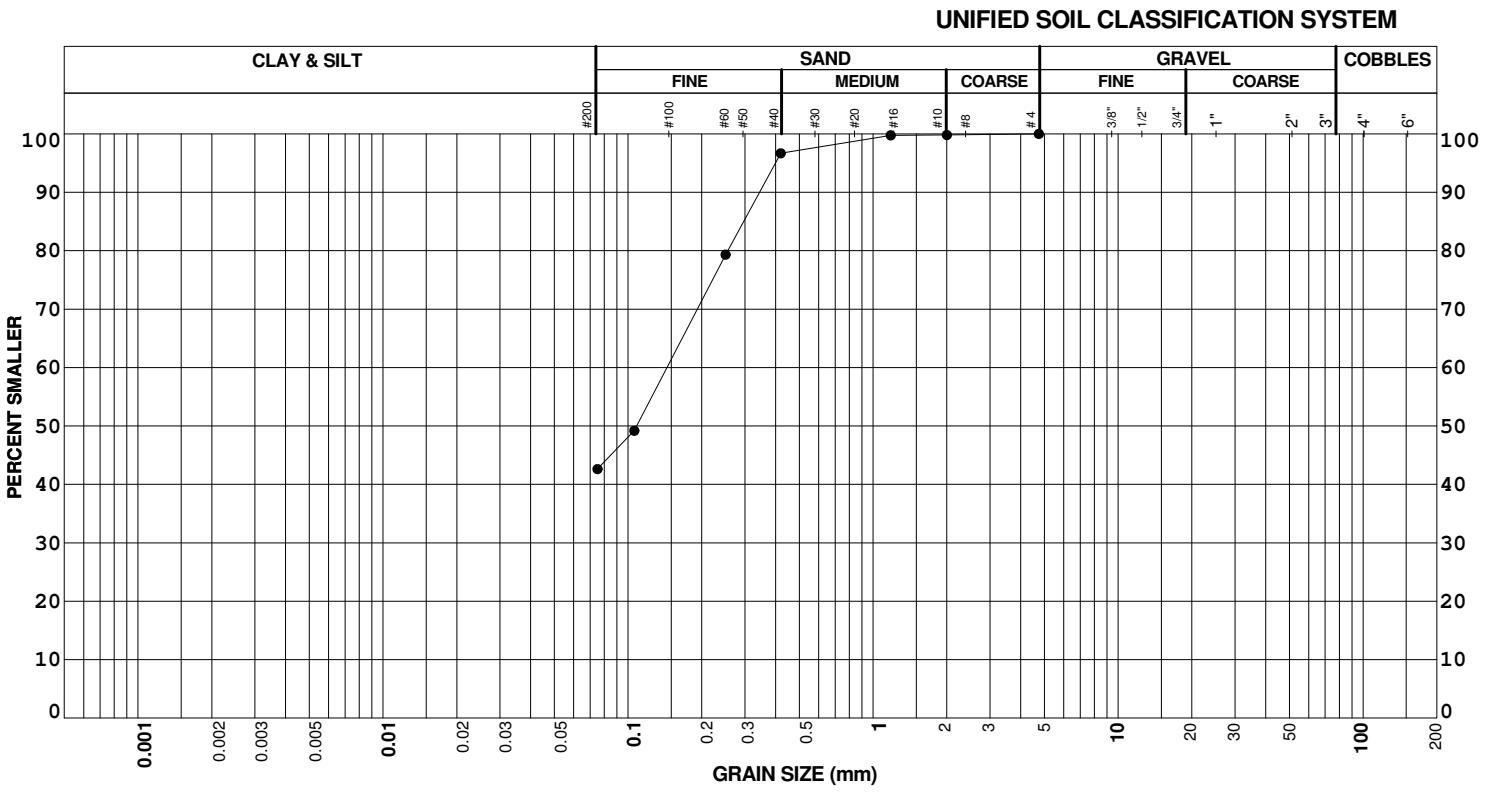
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R020	BS3	4.00	0	57	43		

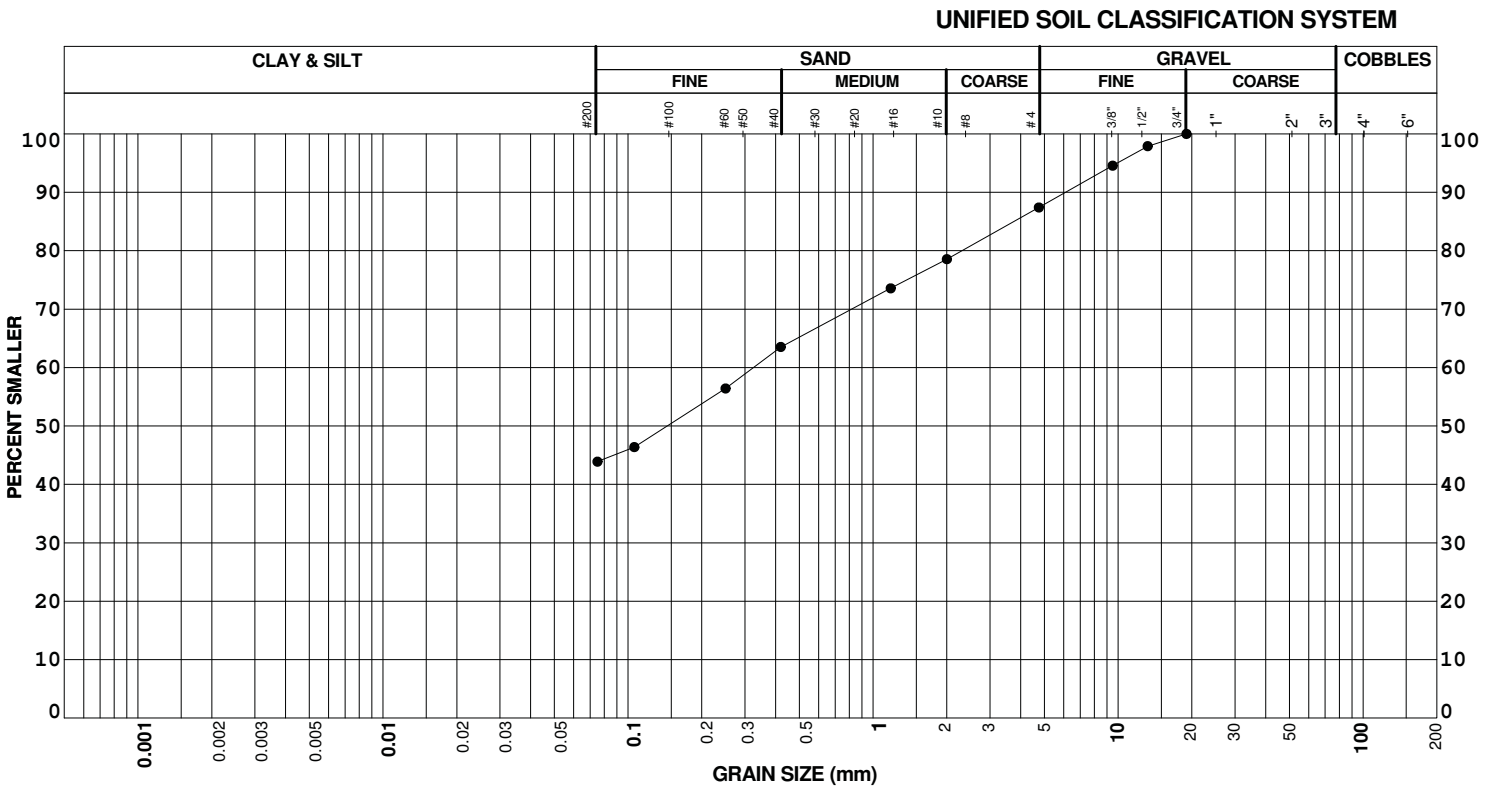
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R022	BS3	4.00	13	44	44		

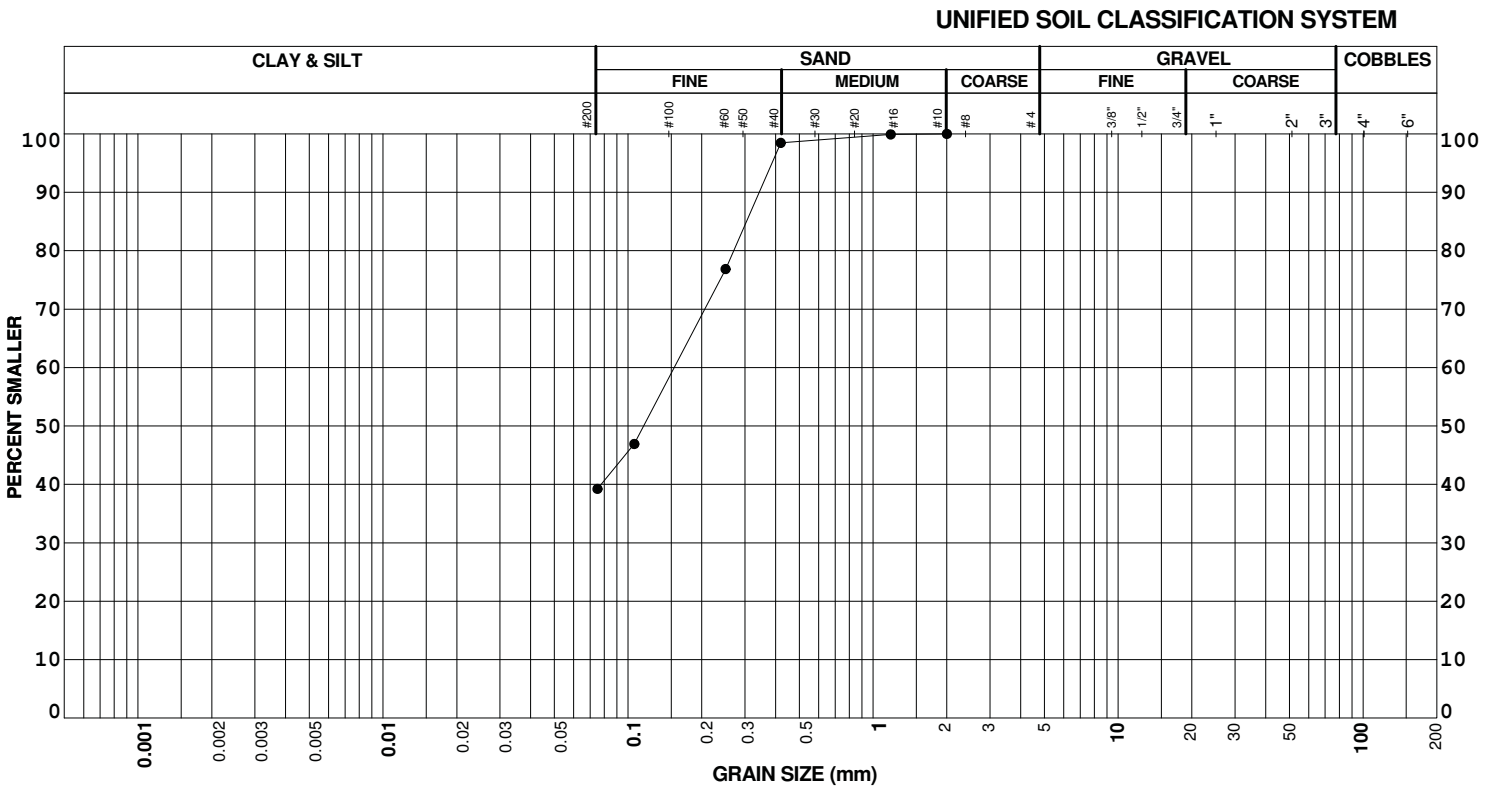
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R023	BS2	2.00	0	61	39		

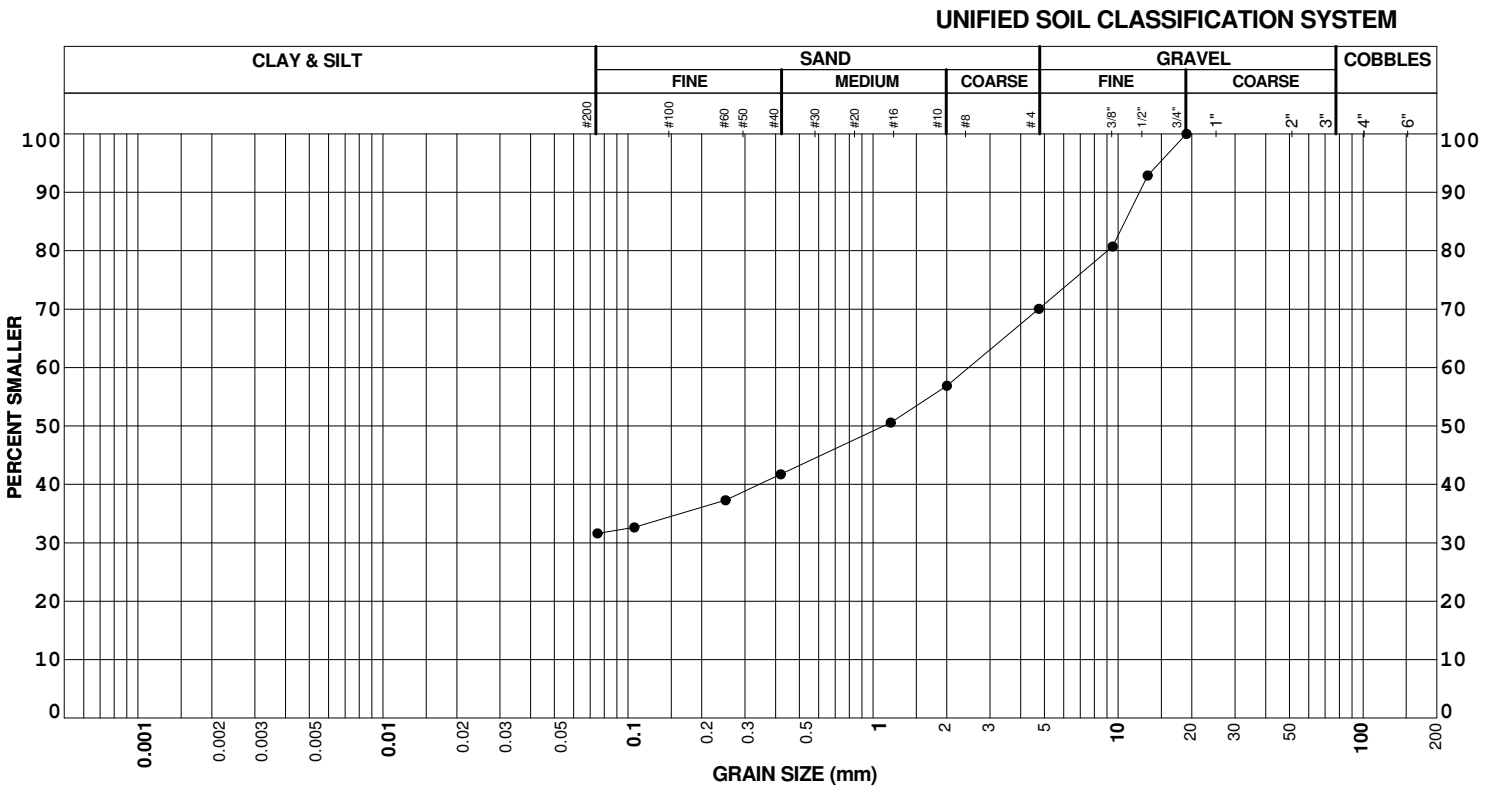
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R024	BS2	1.50	30	38	32		

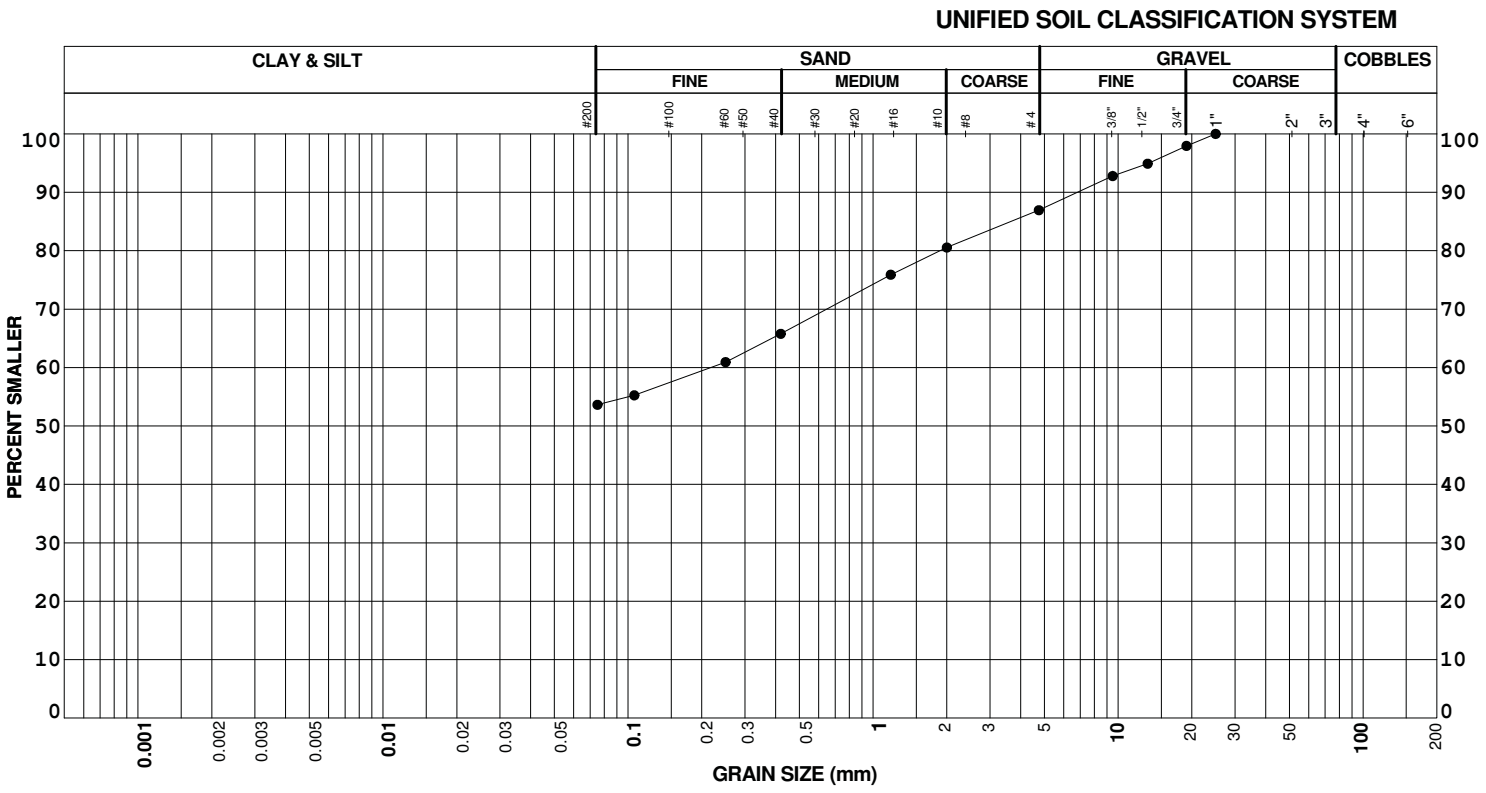
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R025	BS1	1.00	13	33	54		

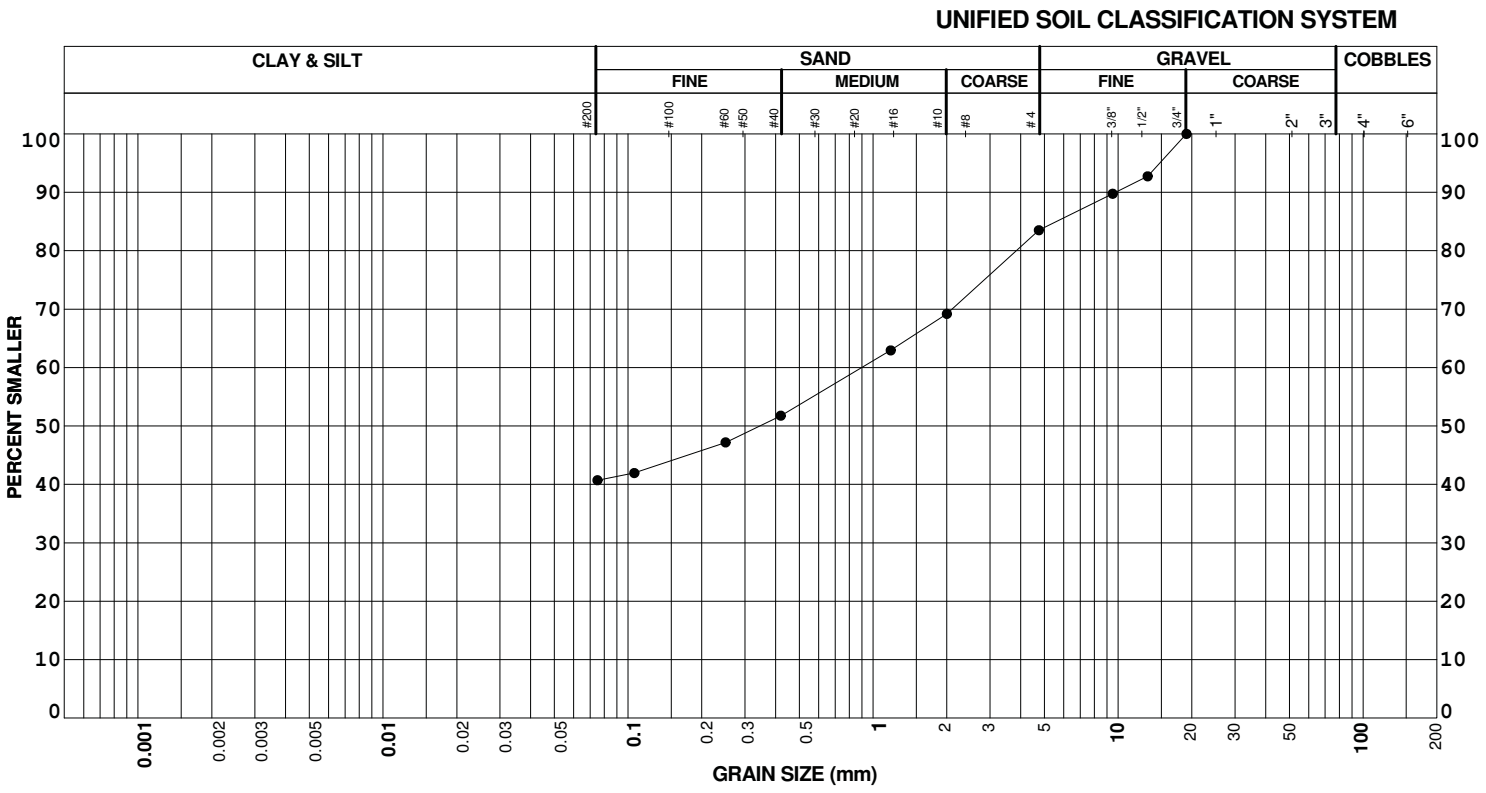
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R025	BS2	2.50	16	43	41		

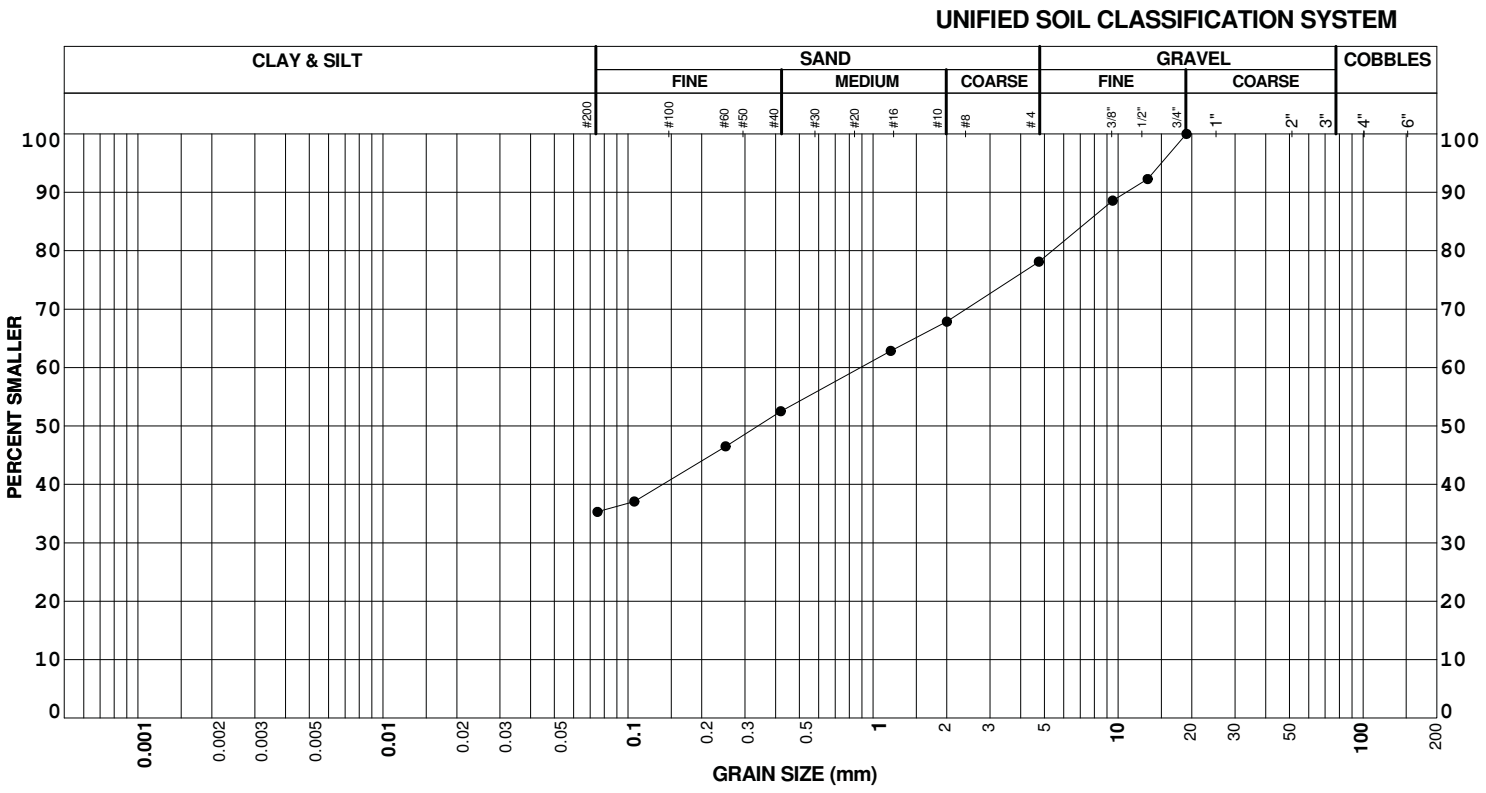
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R027	BS1	1.00	22	43	35		

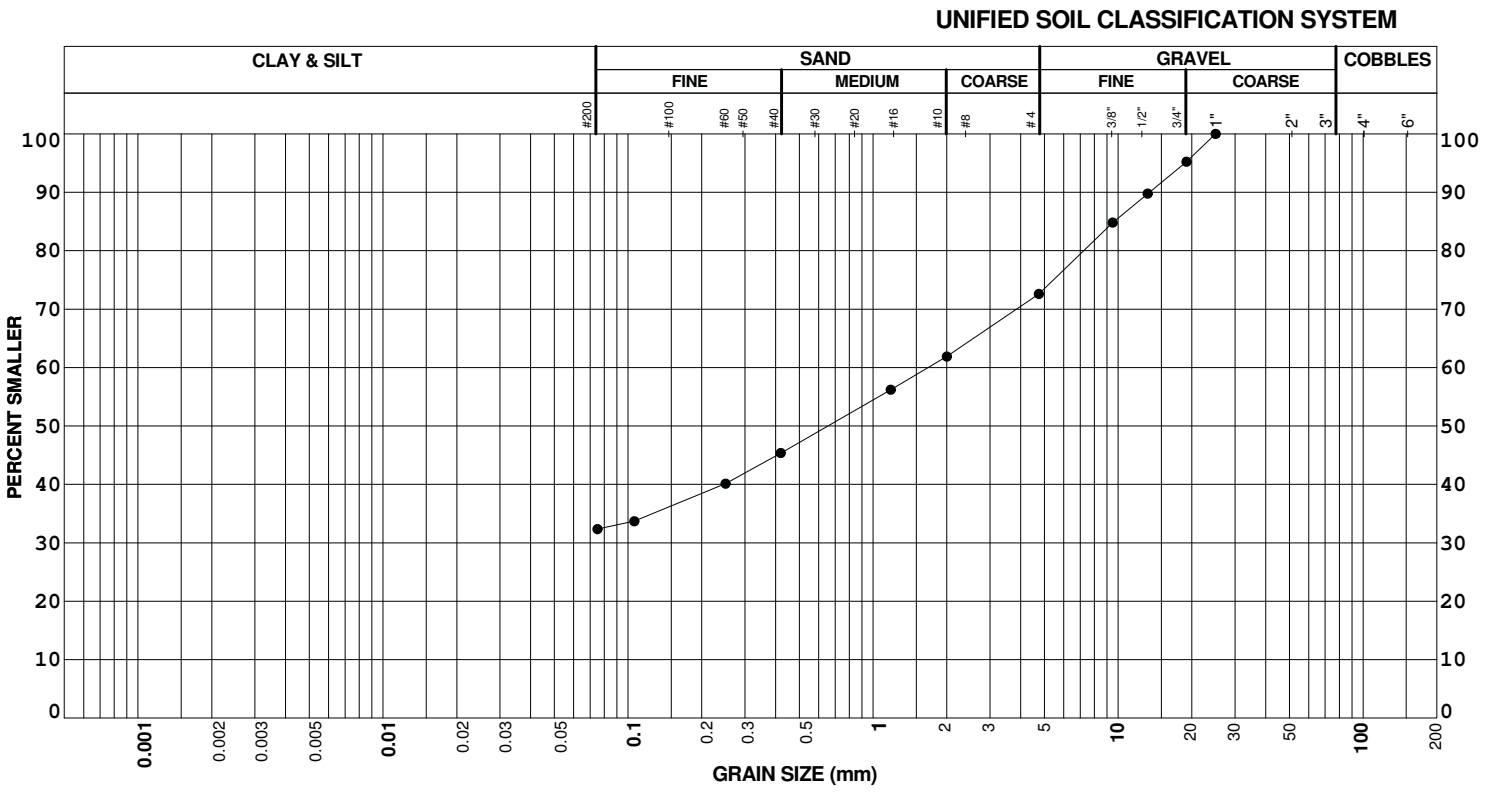
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R034	BS2	2.50	27	40	32		

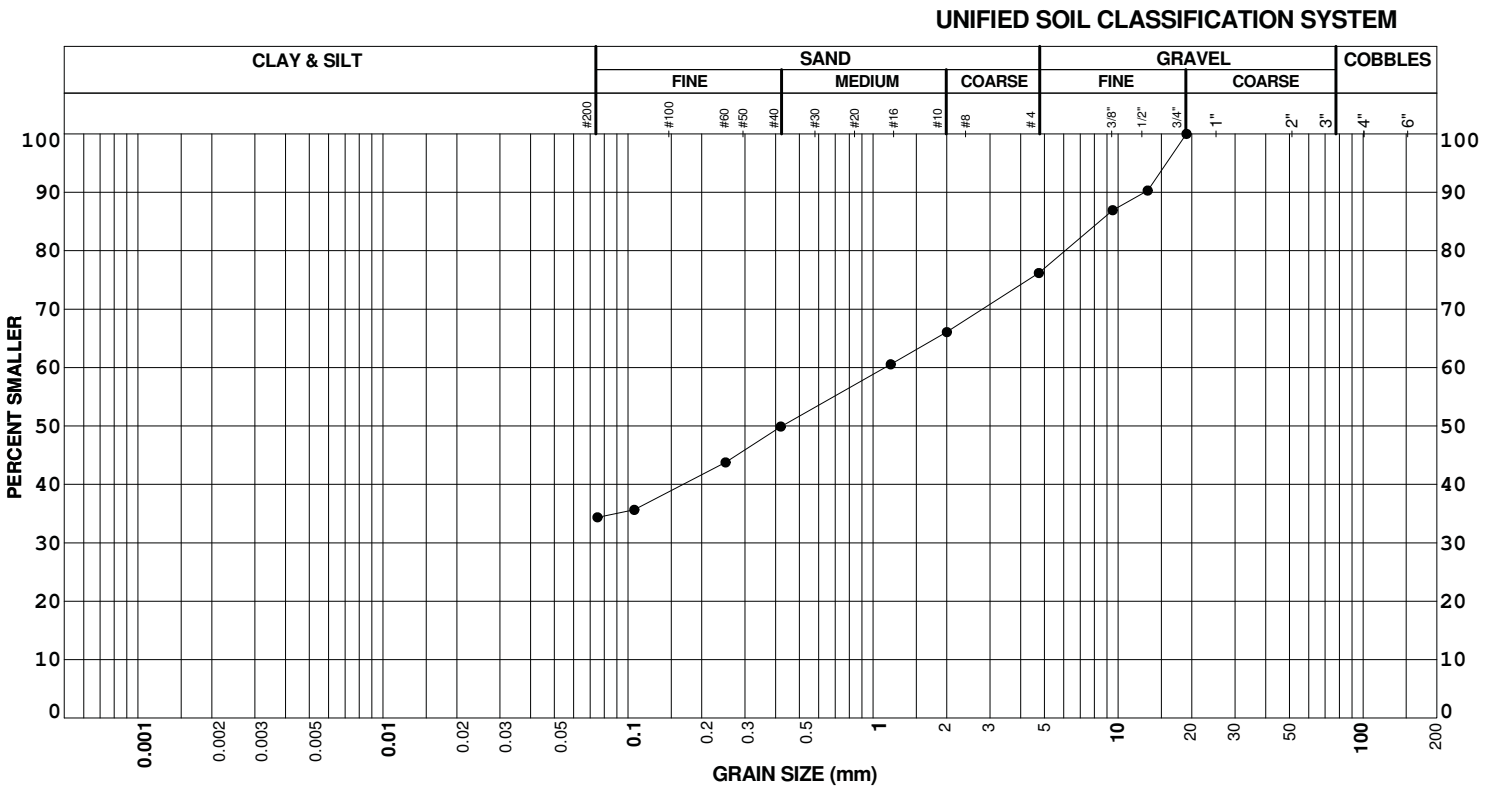
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R035	BS2	2.50	24	42	34		

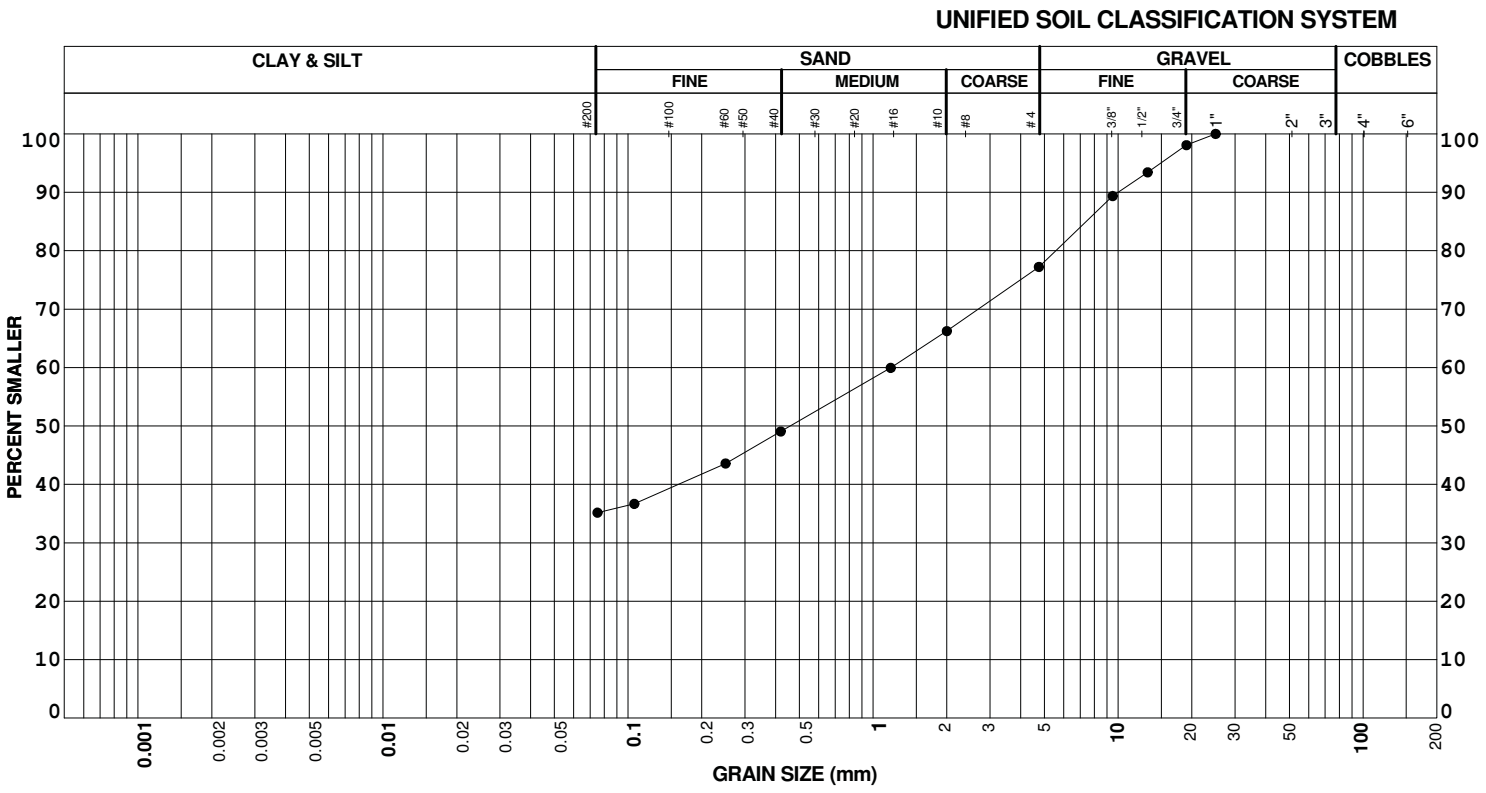
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R036	BS2	2.50	23	42	35		

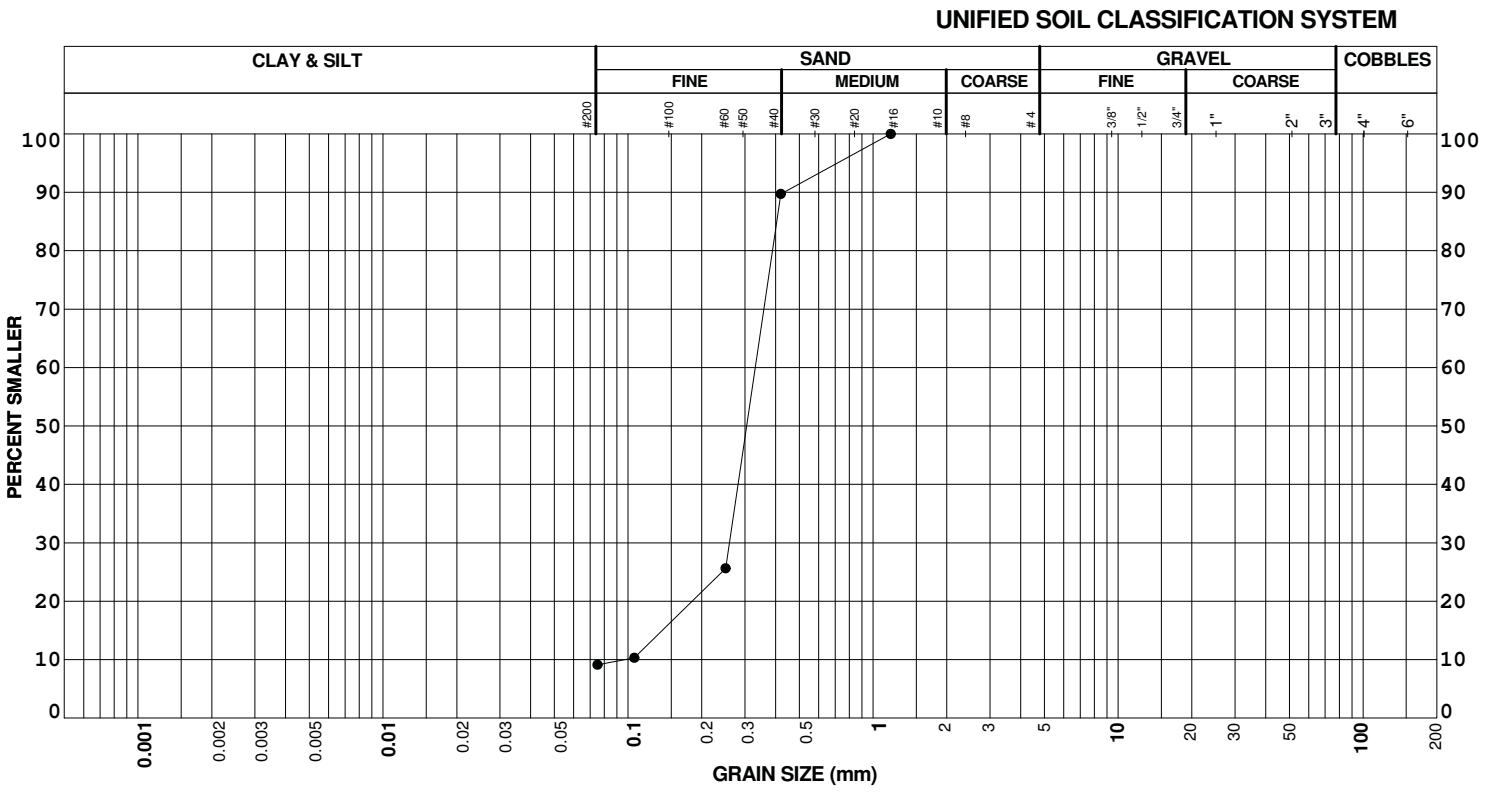
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R037	BS2	2.50	0	91	9		

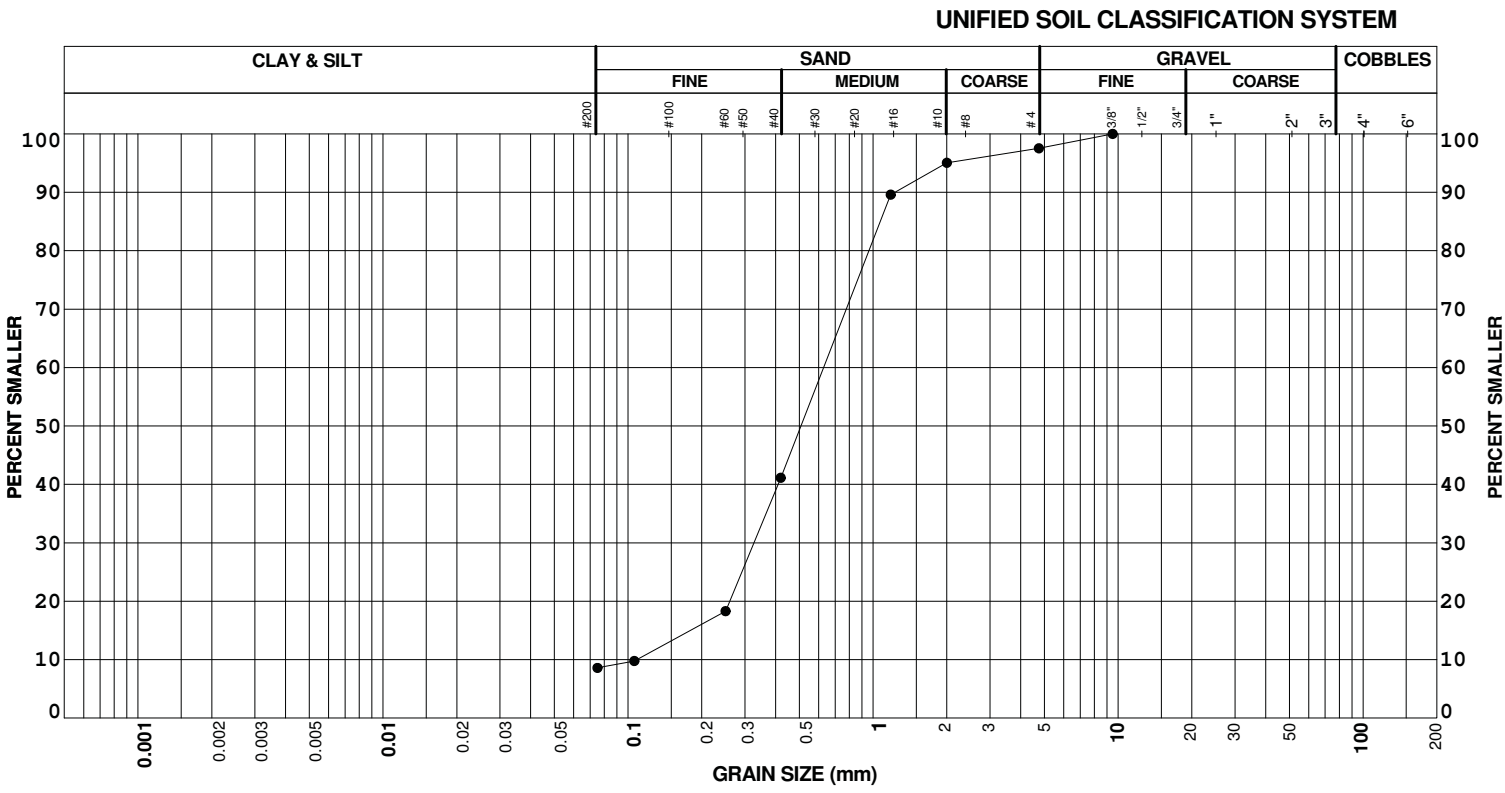
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R038	BS2	2.00	2	89	9		

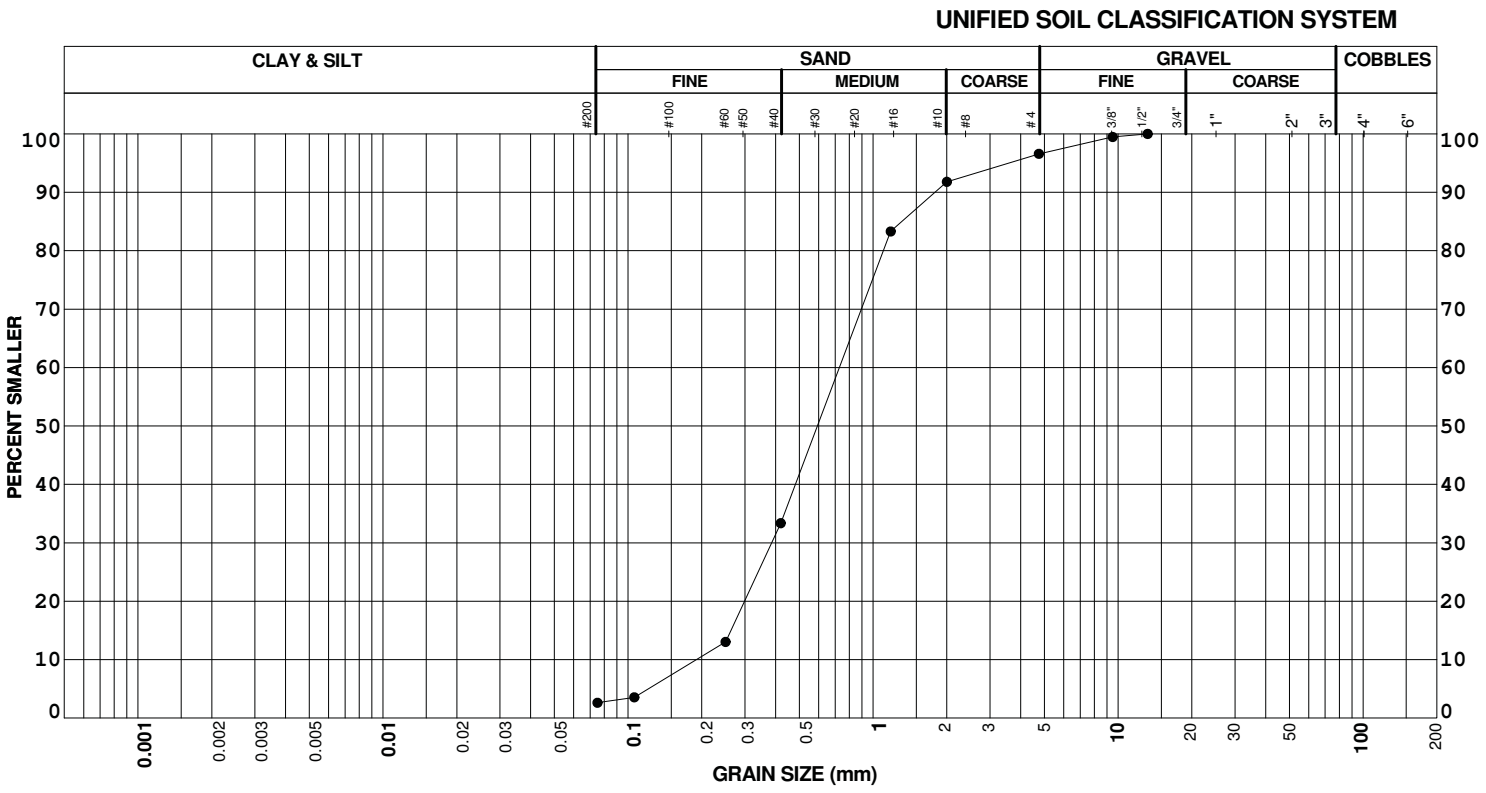
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R039	BS1	1.00	3	94	3		

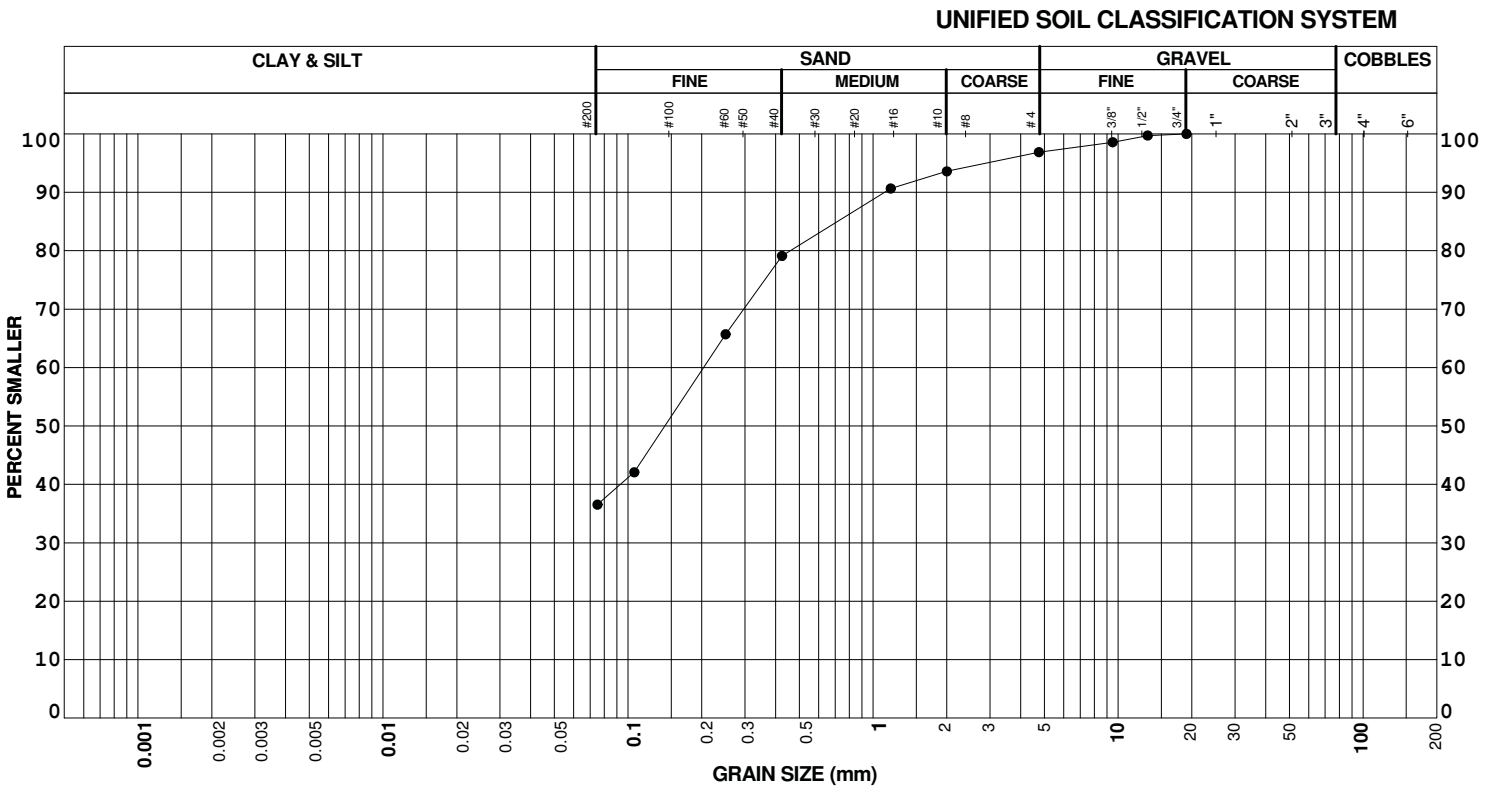
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R067	BS1	1.20	3	60	37		

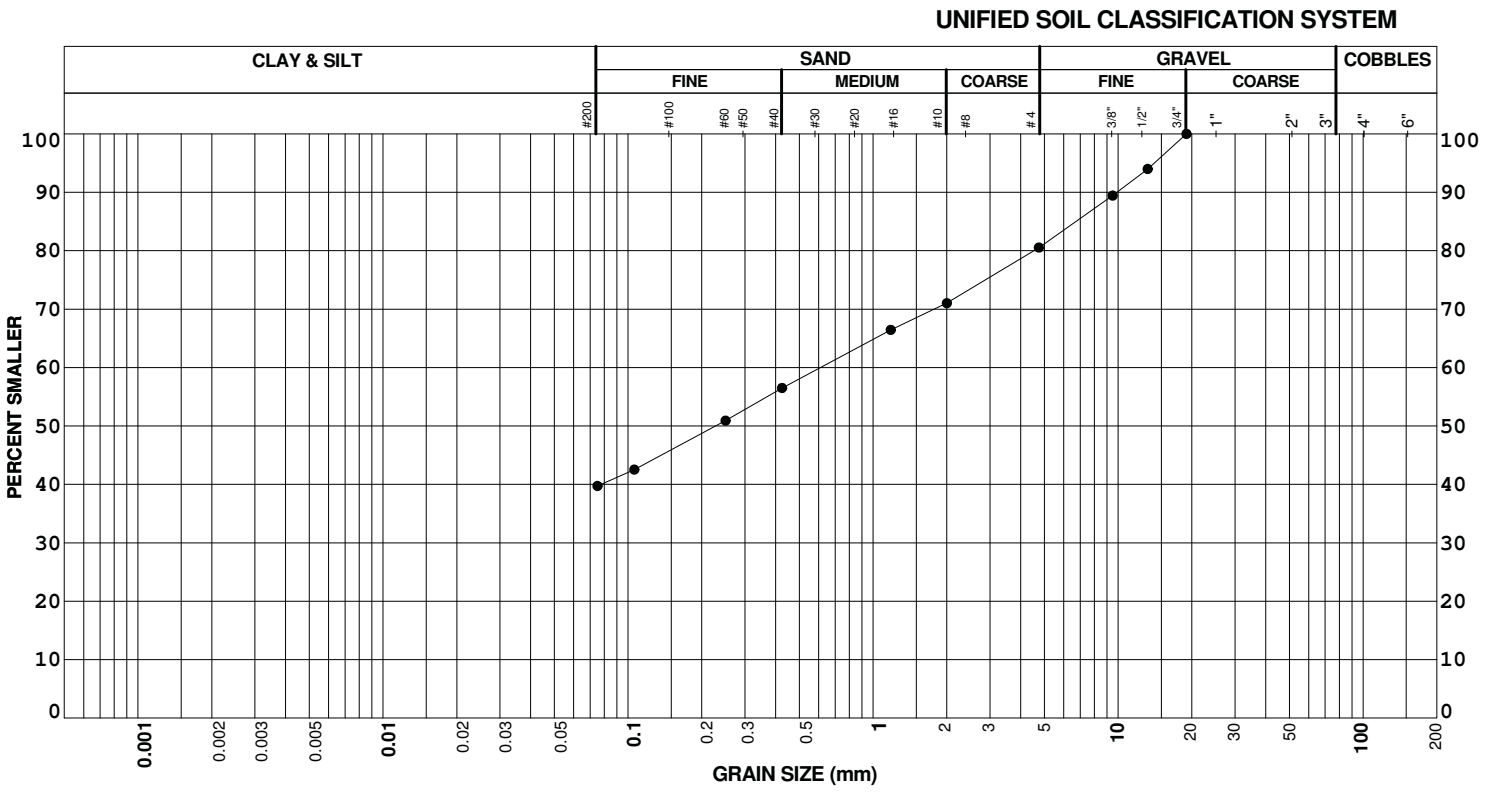
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH16-R069	BS1	1.00	19	41	40		

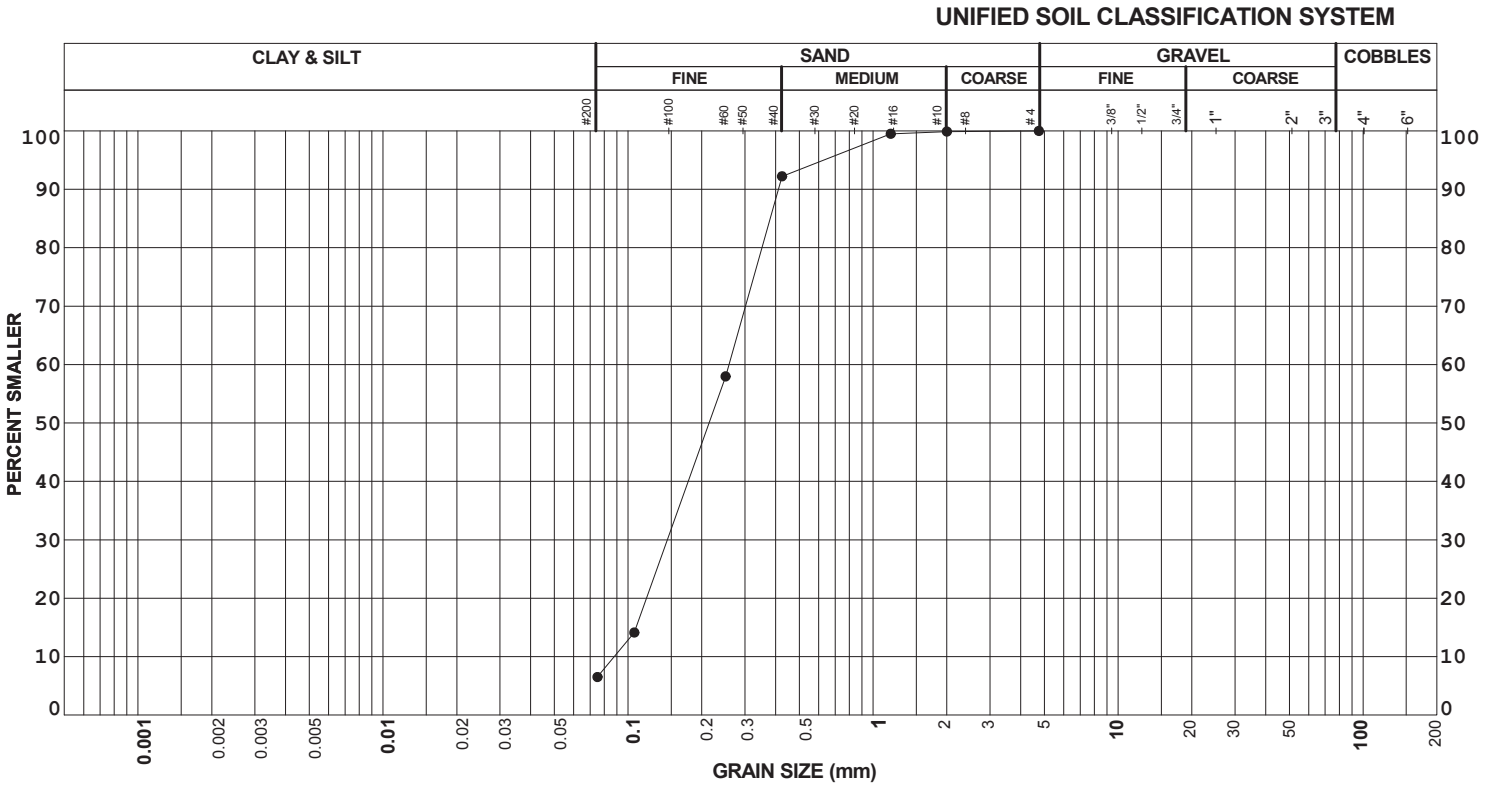
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-B001	DS2	2.40	0	93	7		

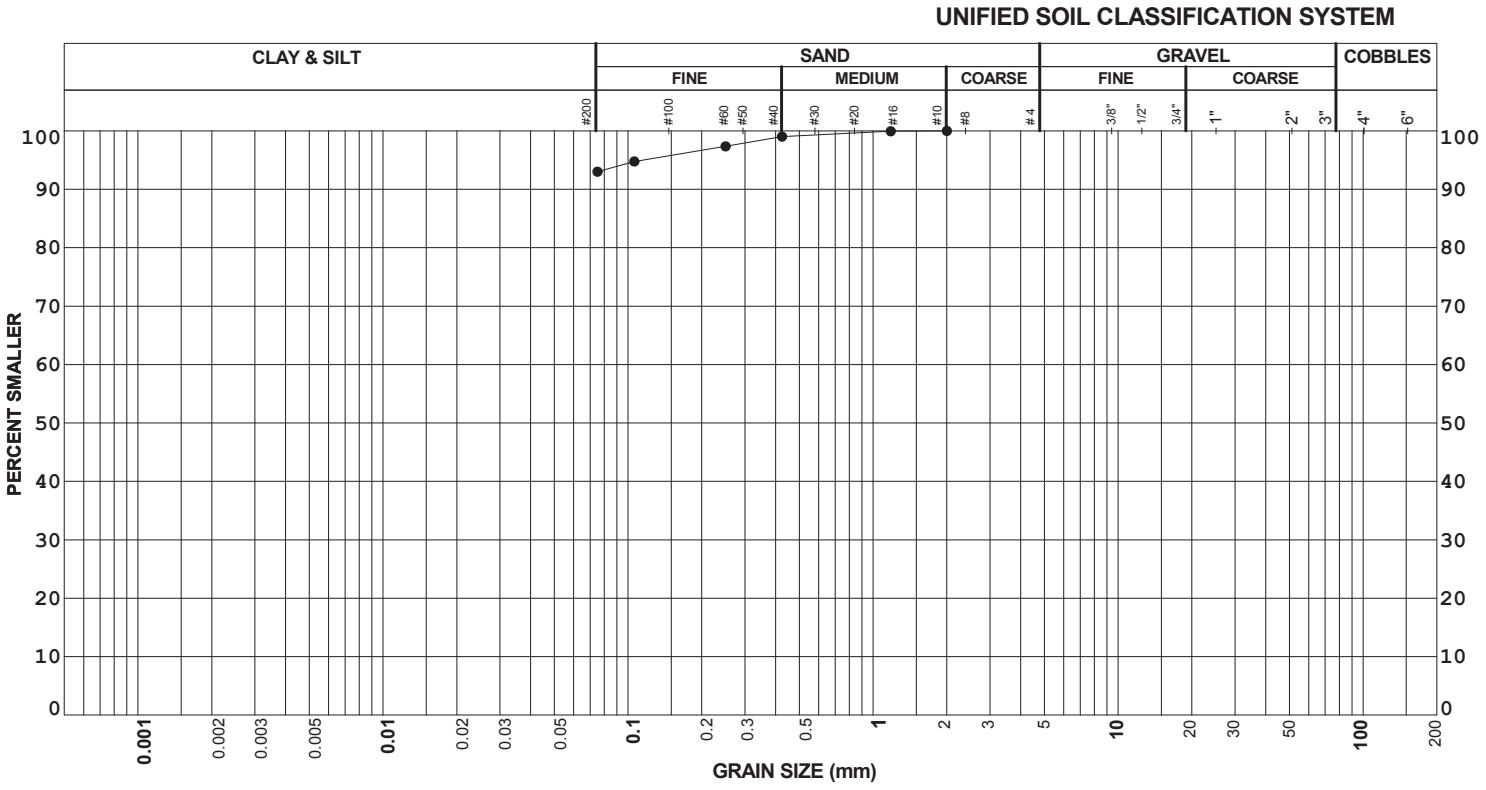
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-B001	DS4	5.50	0	7	93		

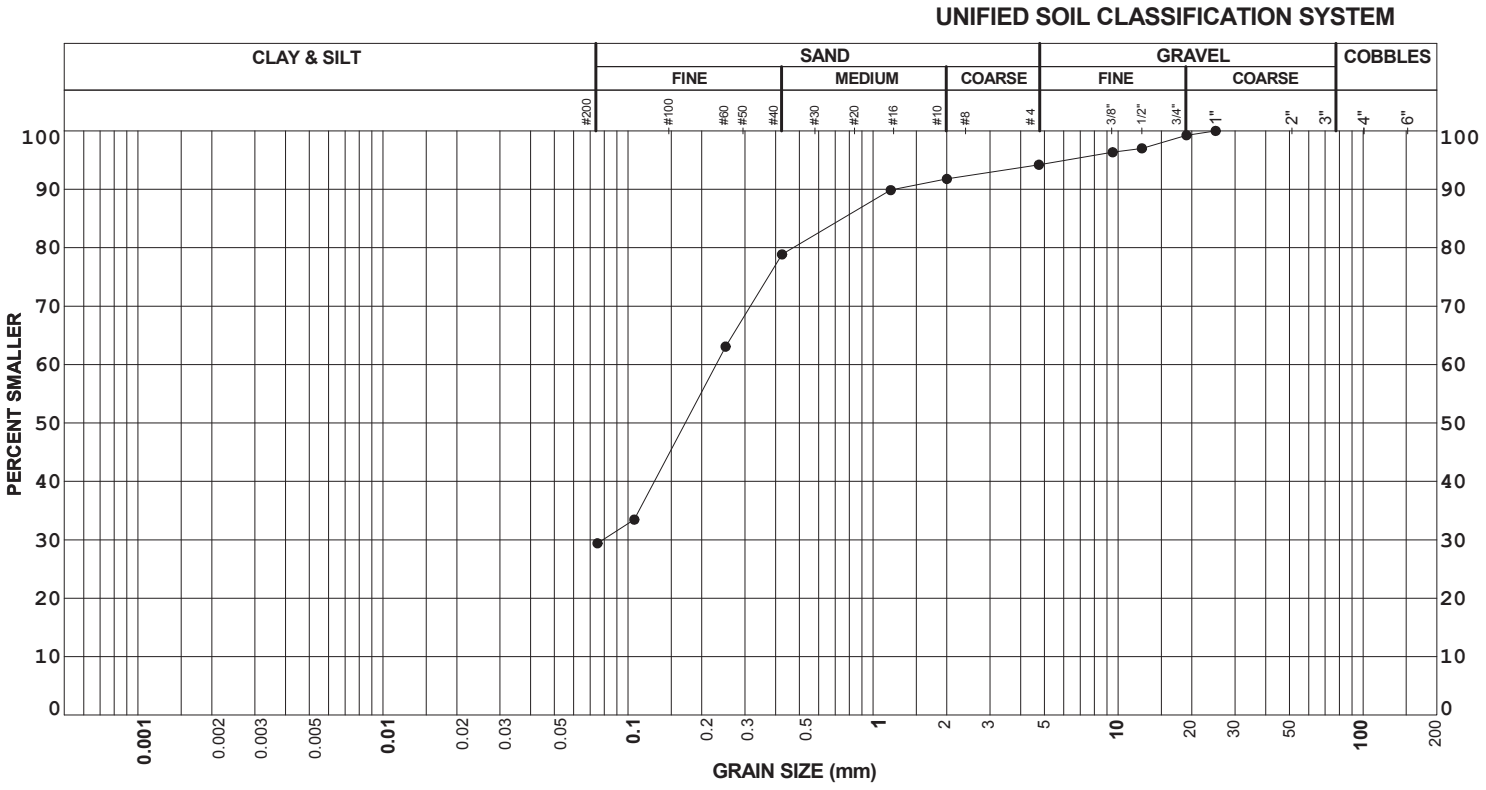
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-B001	DS6	8.50	6	65	29		

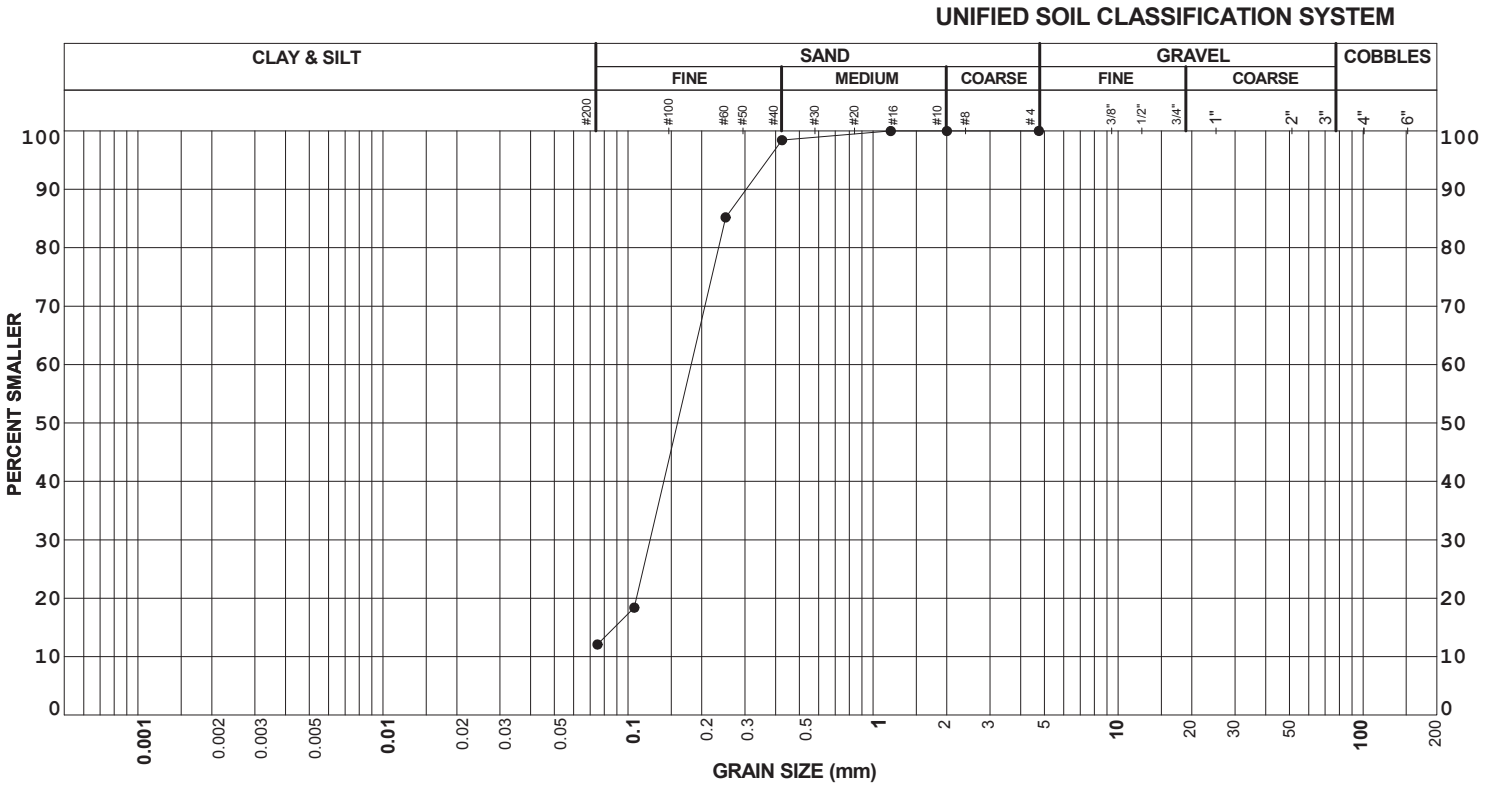
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-B002	DS1	0.50	0	88	12		

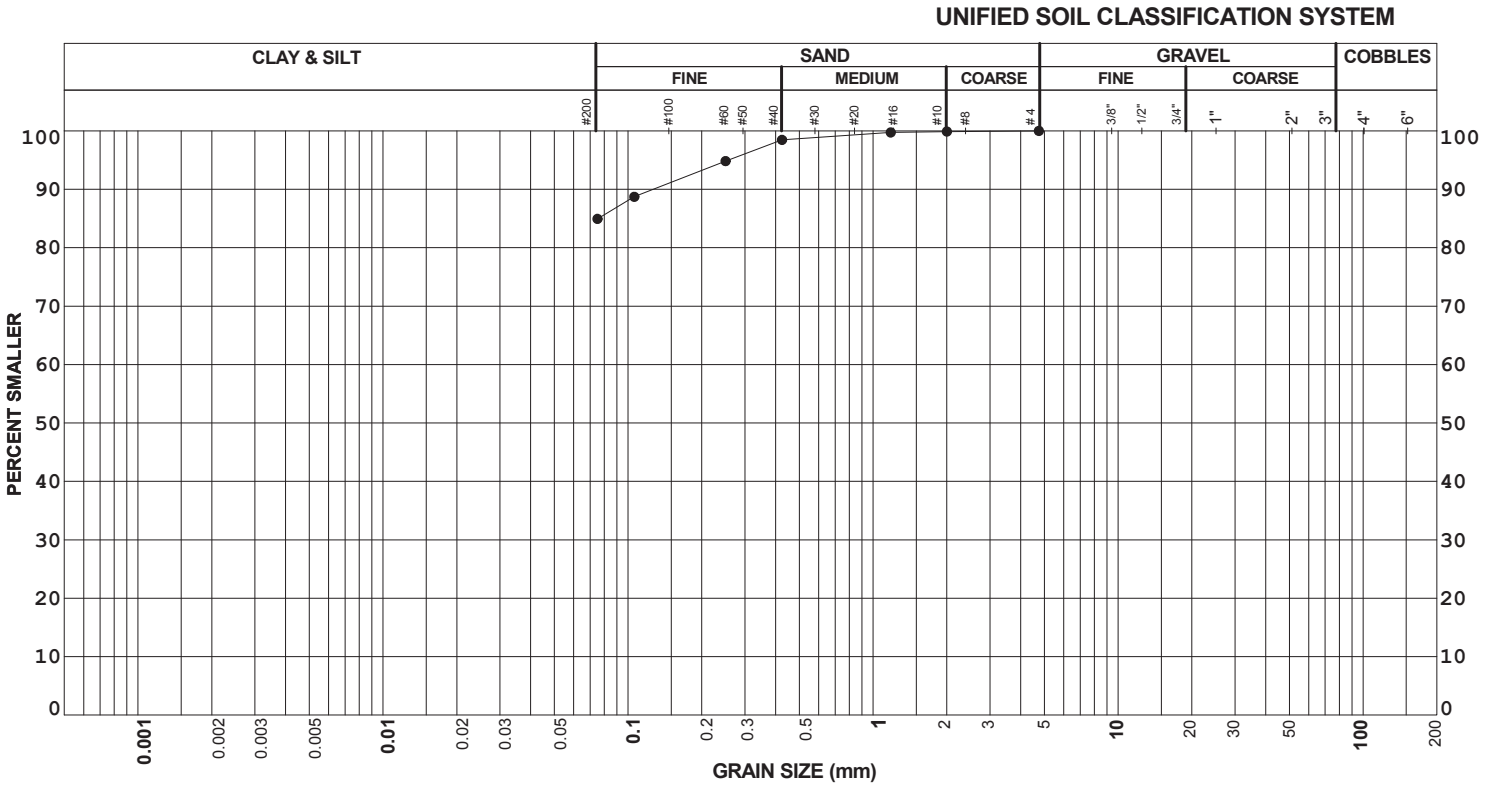
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-B002	DS3	3.70	0	15	85		

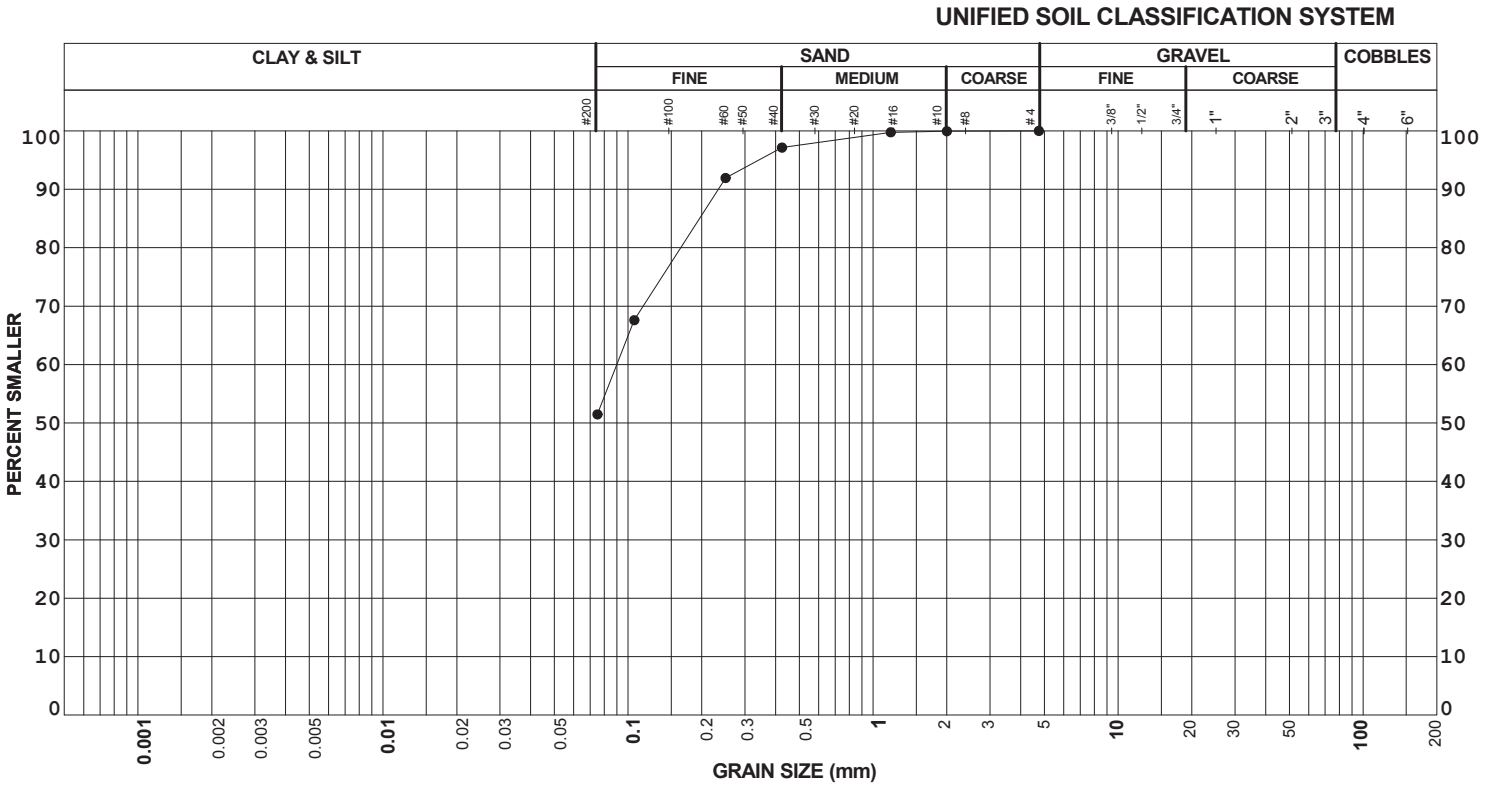
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-B002	DS5	6.70	0	49	51		

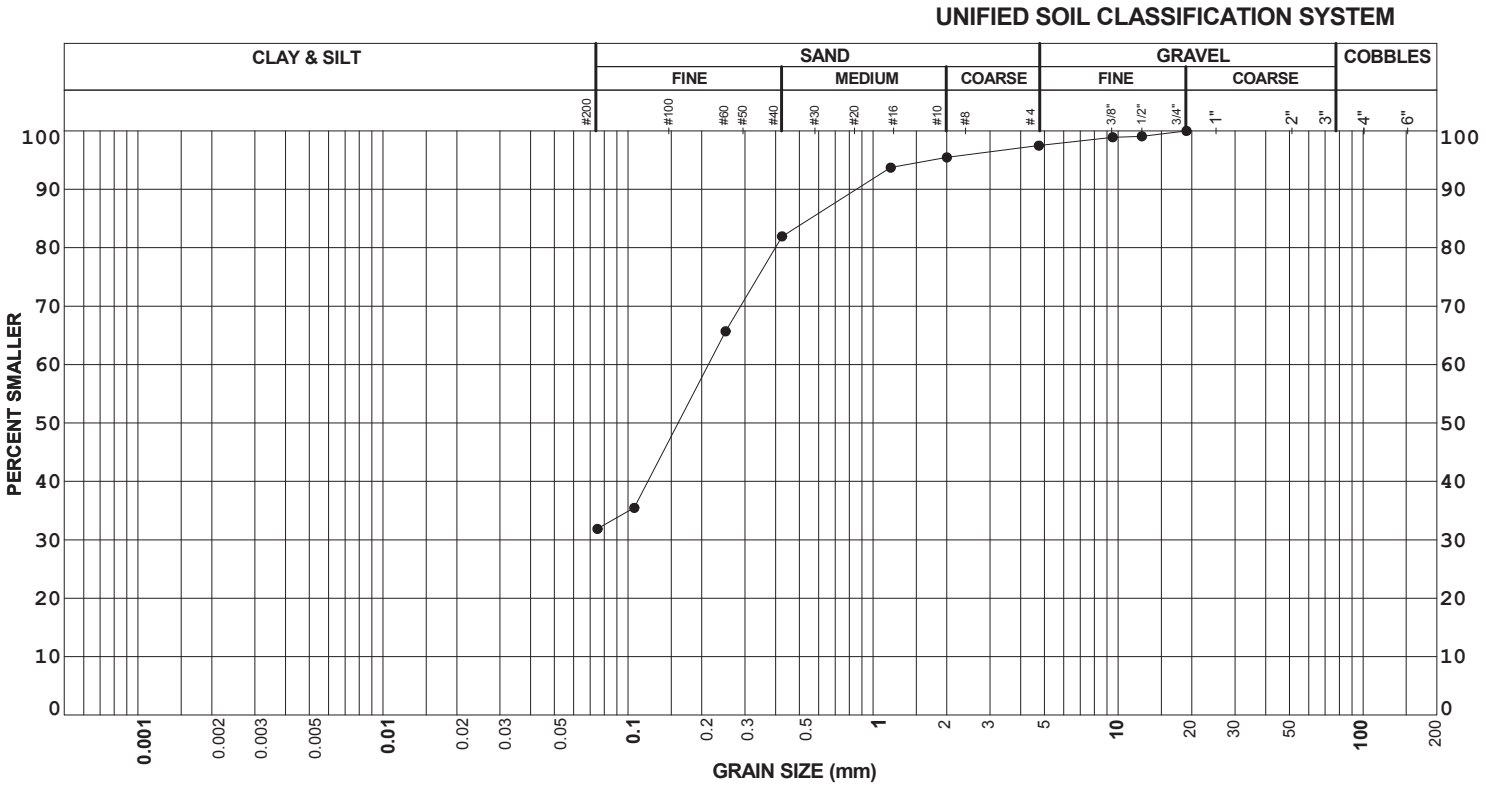
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-B002	DS8	11.50	3	66	32		

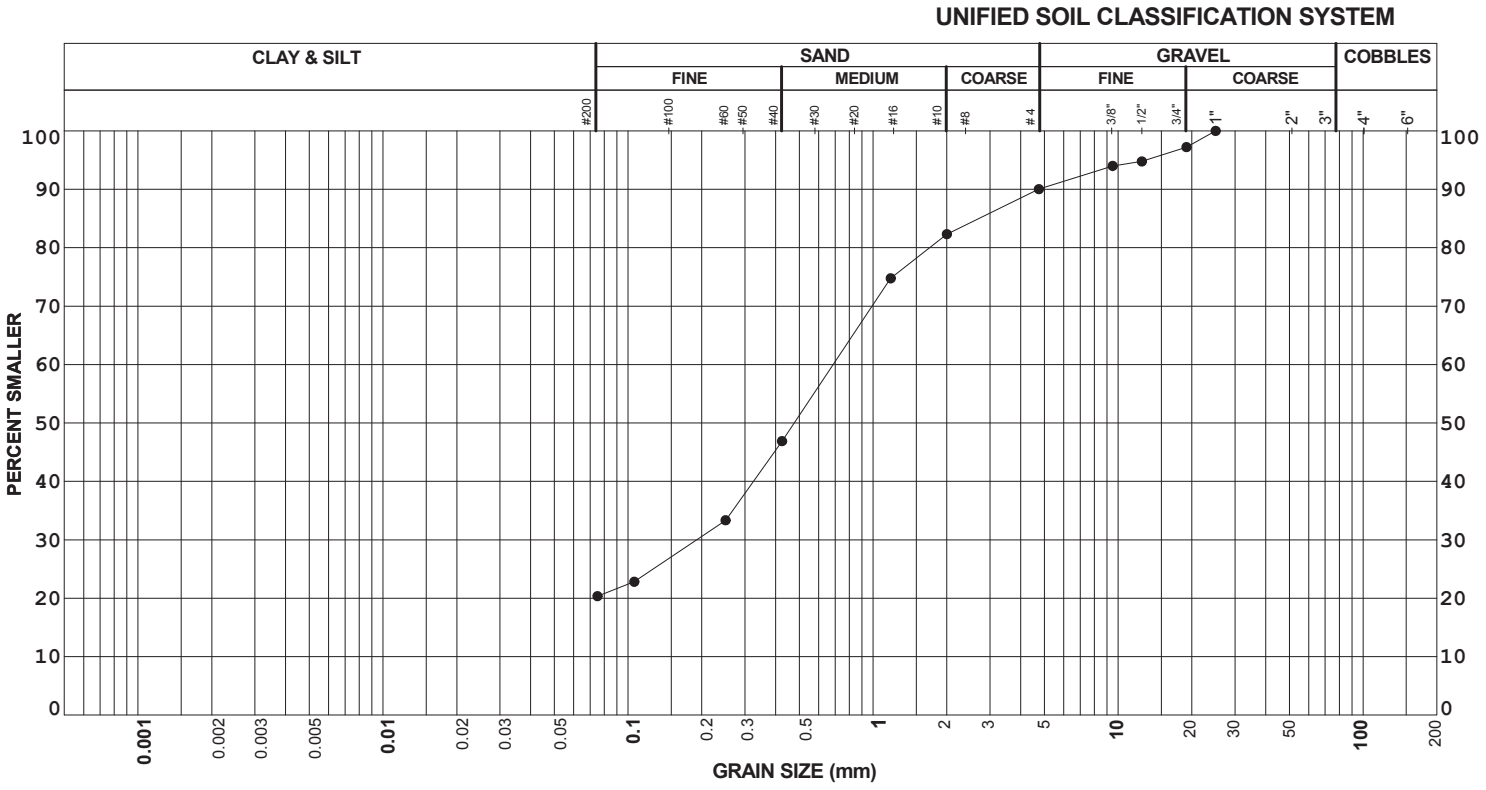
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-B002	DS11	15.80	10	70	20		

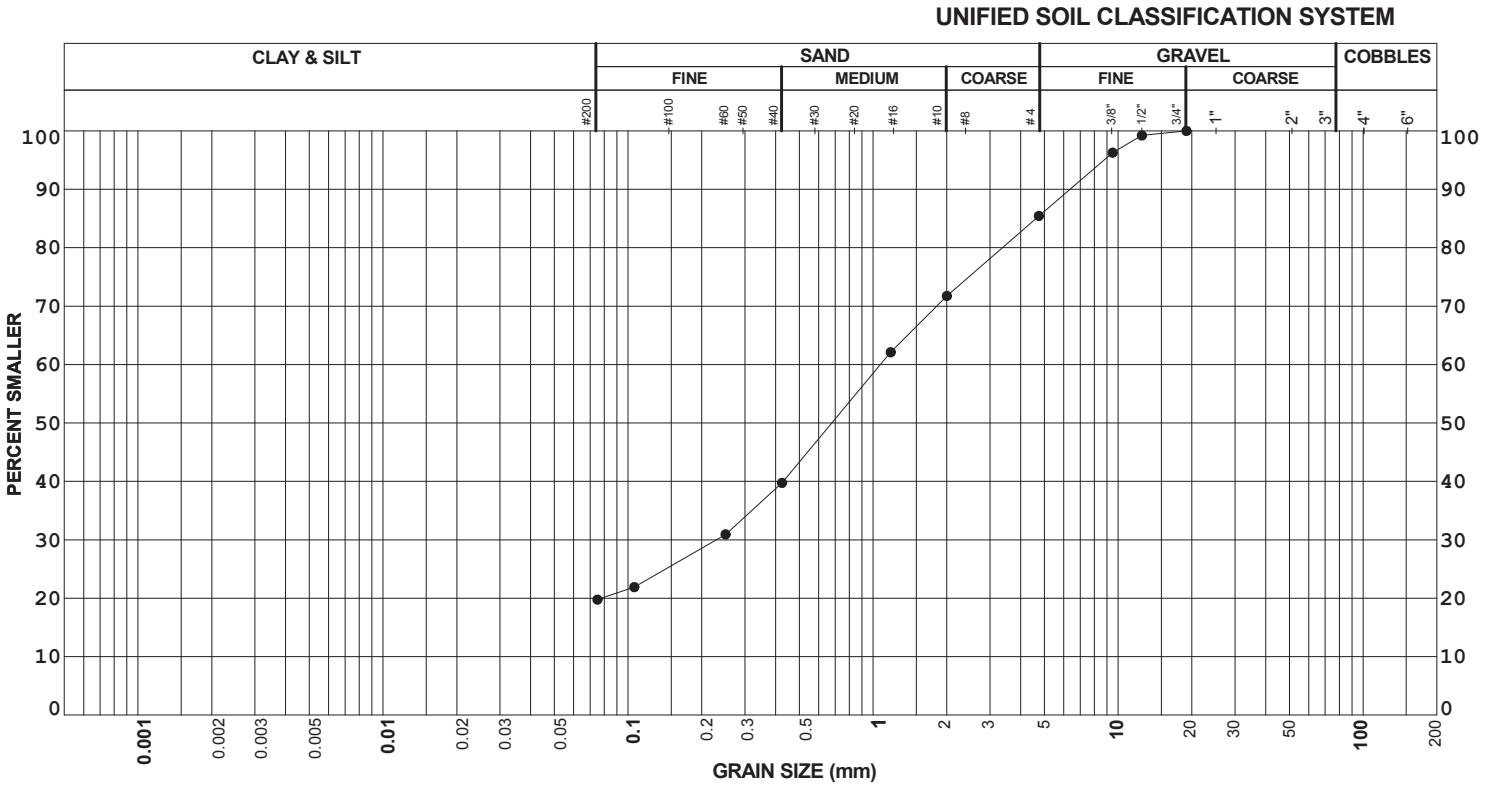
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-B002	DS13	18.60	15	66	20		

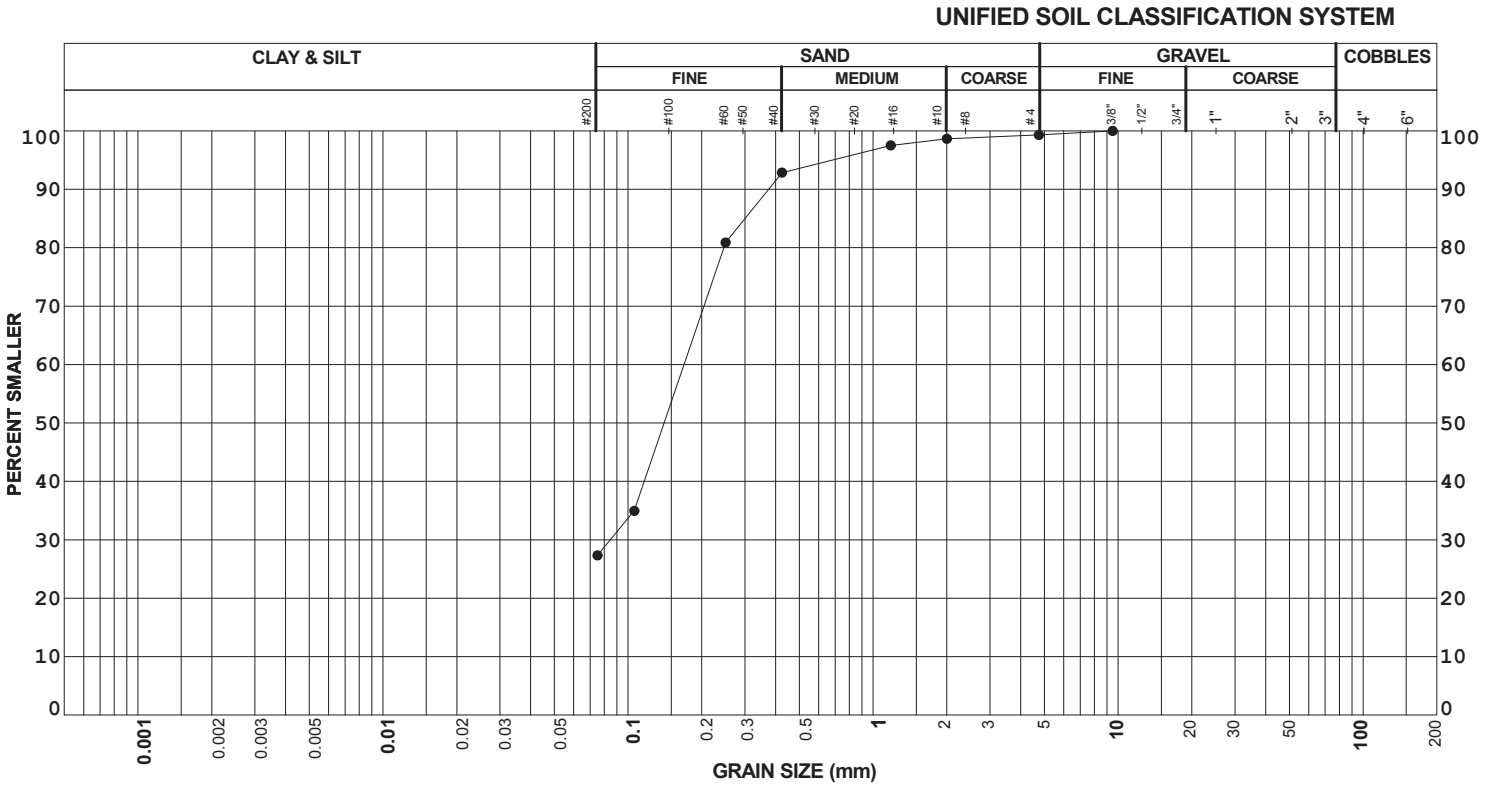
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-B002	DS16	23.50	1	72	27		

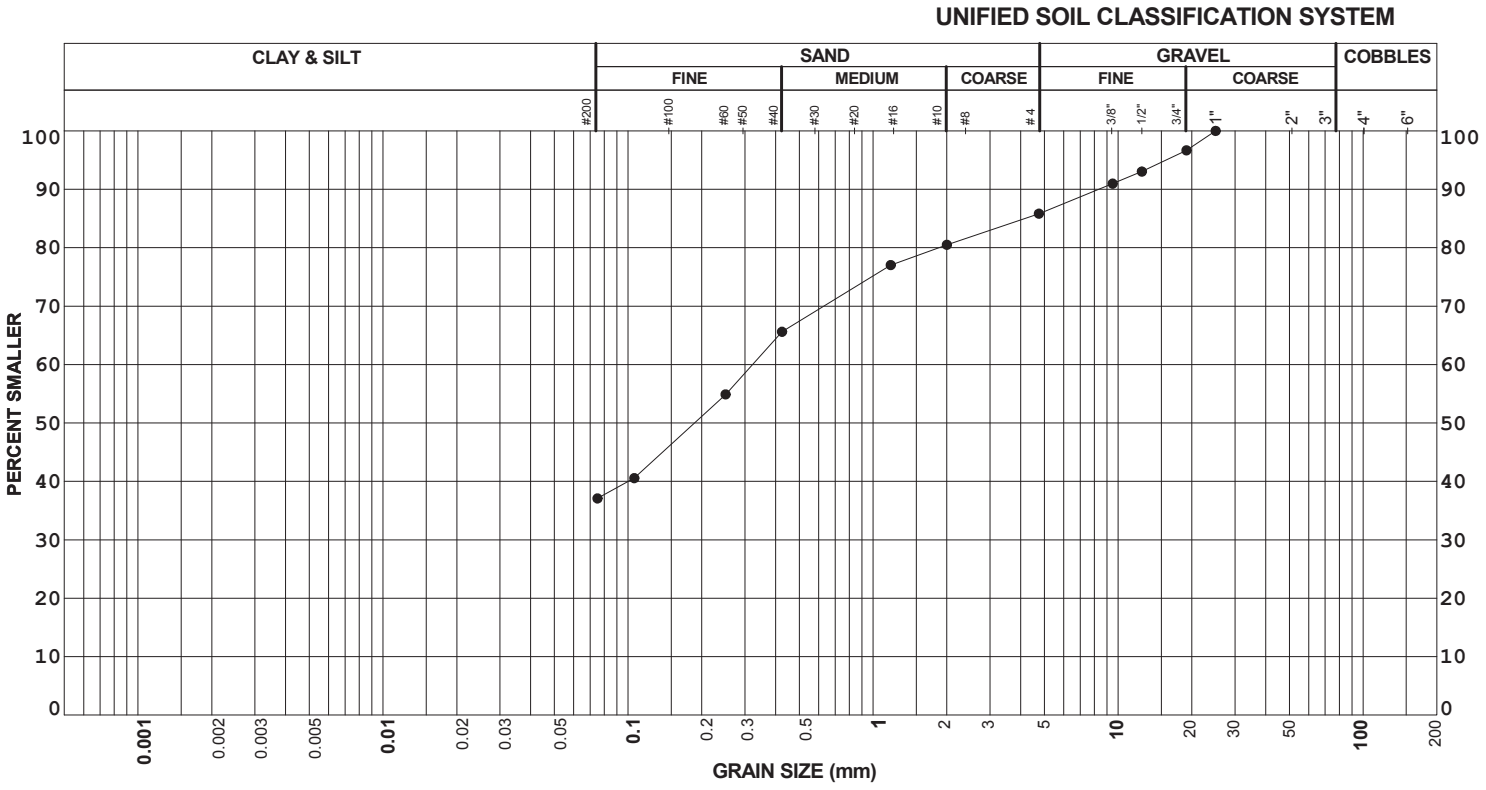
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-C001	DS3	3.10	14	49	37		

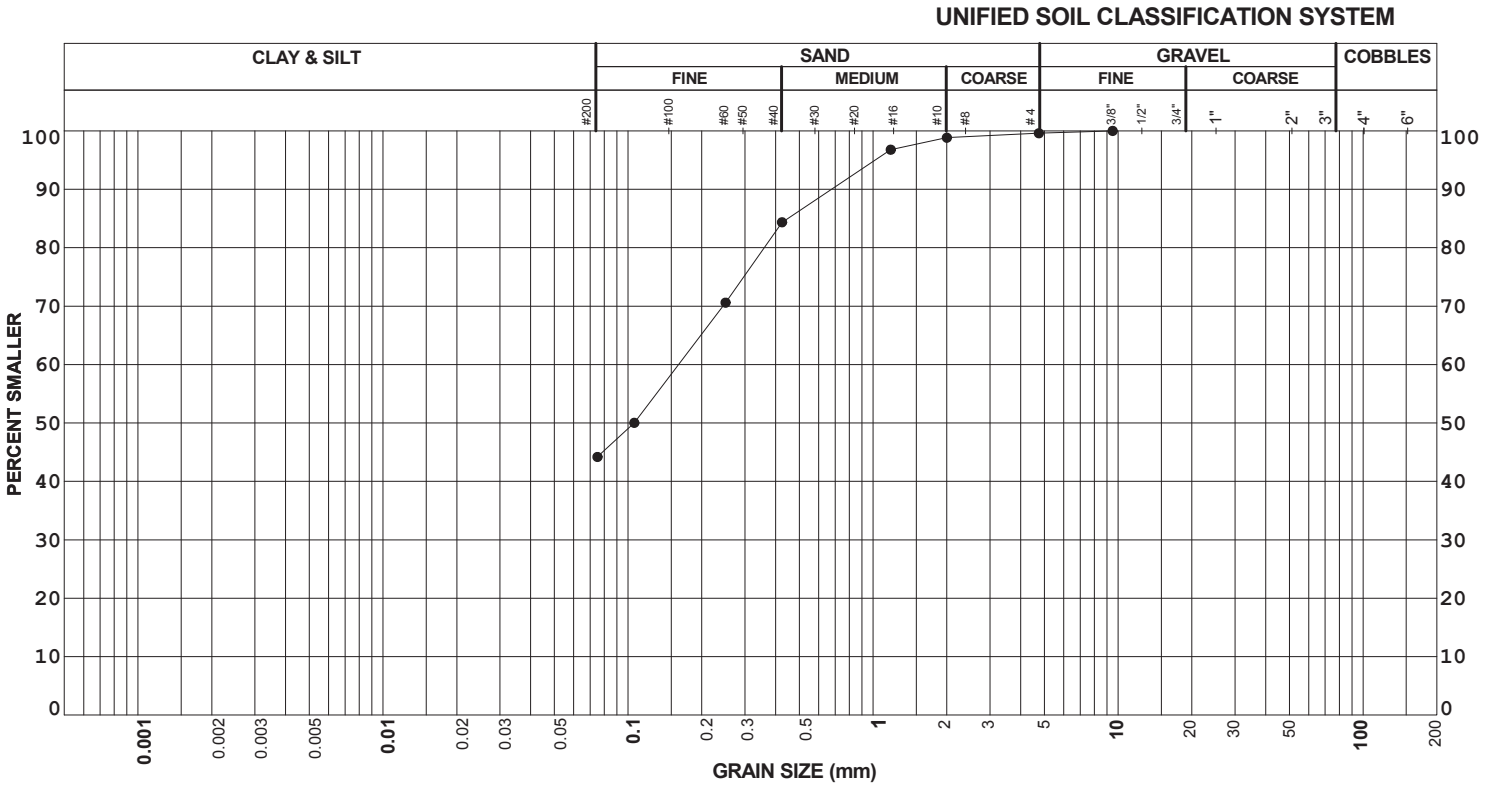
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-C001	DS5	7.00	0	55	44		

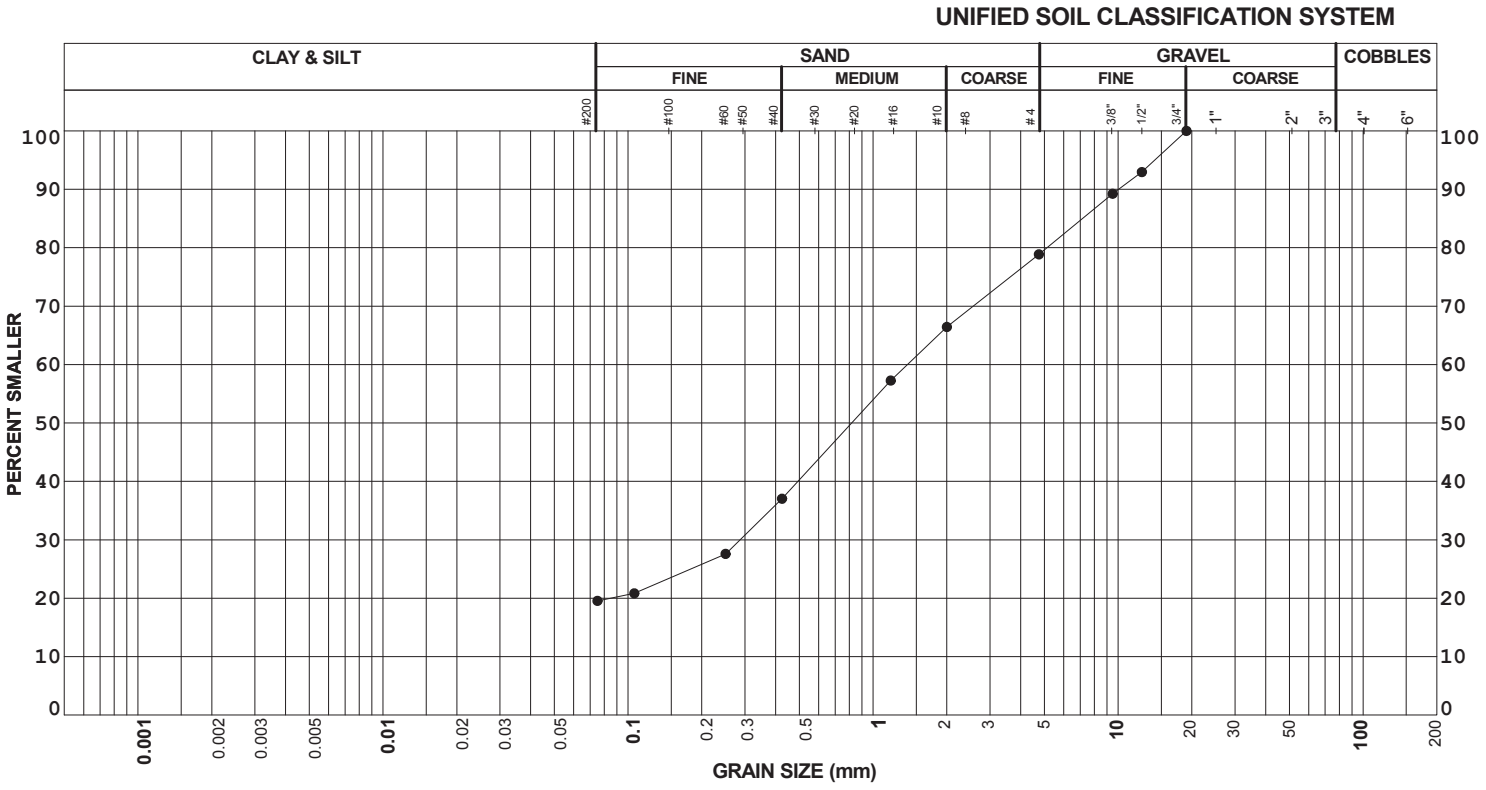
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-C002	DS2	2.40	21	59	20		

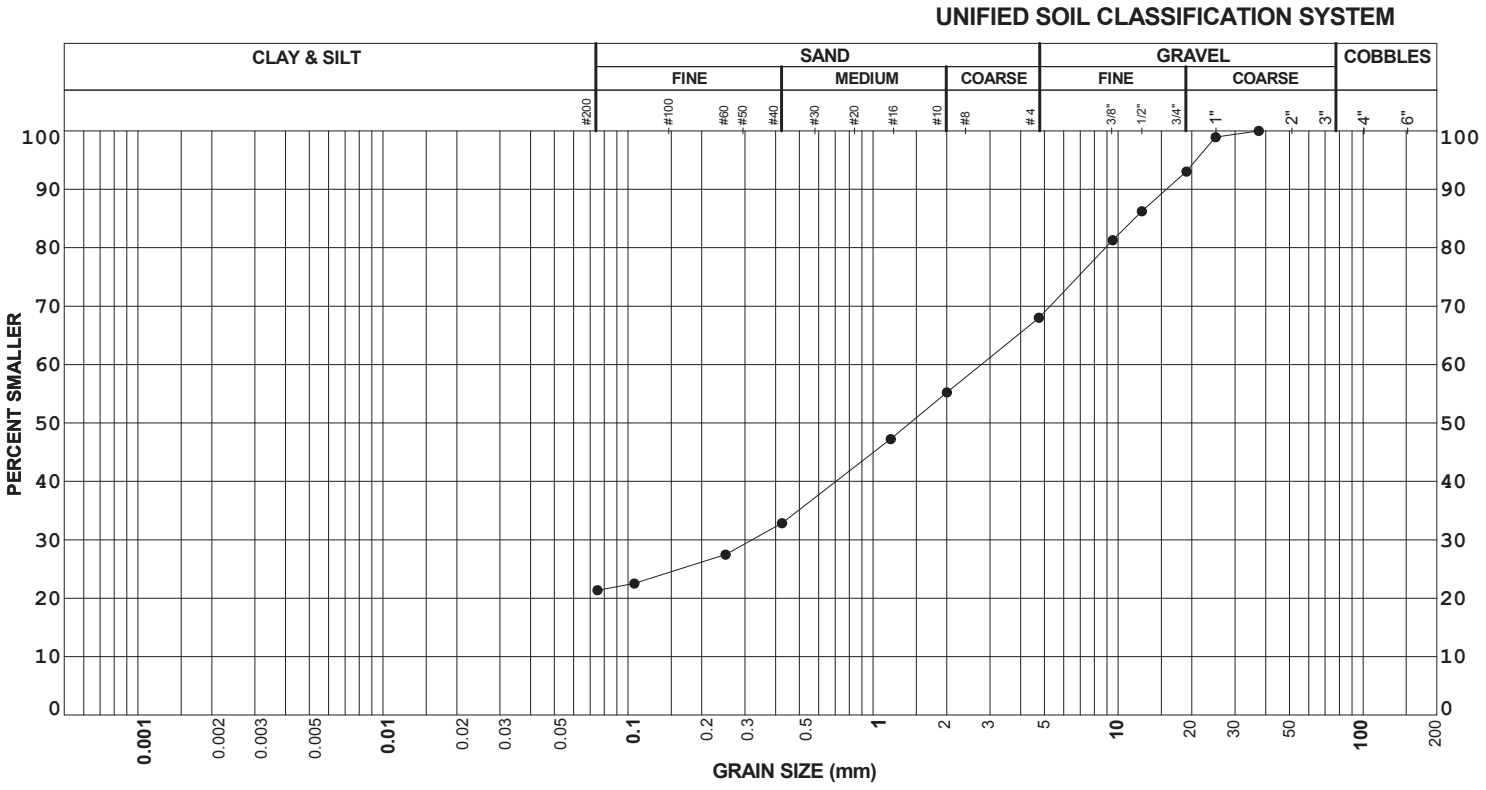
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-C003	DS3	3.40	32	47	21		

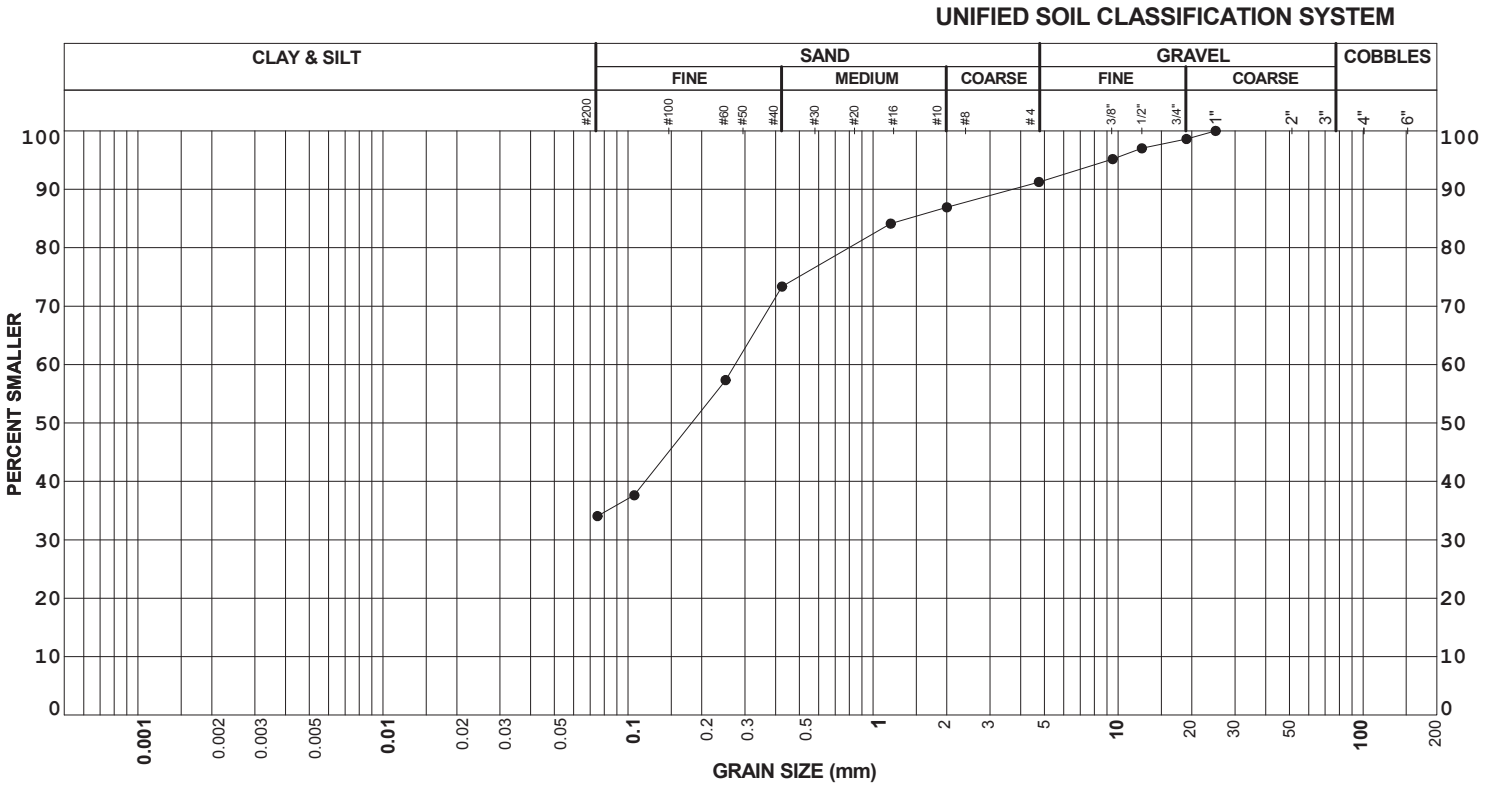
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-C003	DS6	8.80	9	57	34		

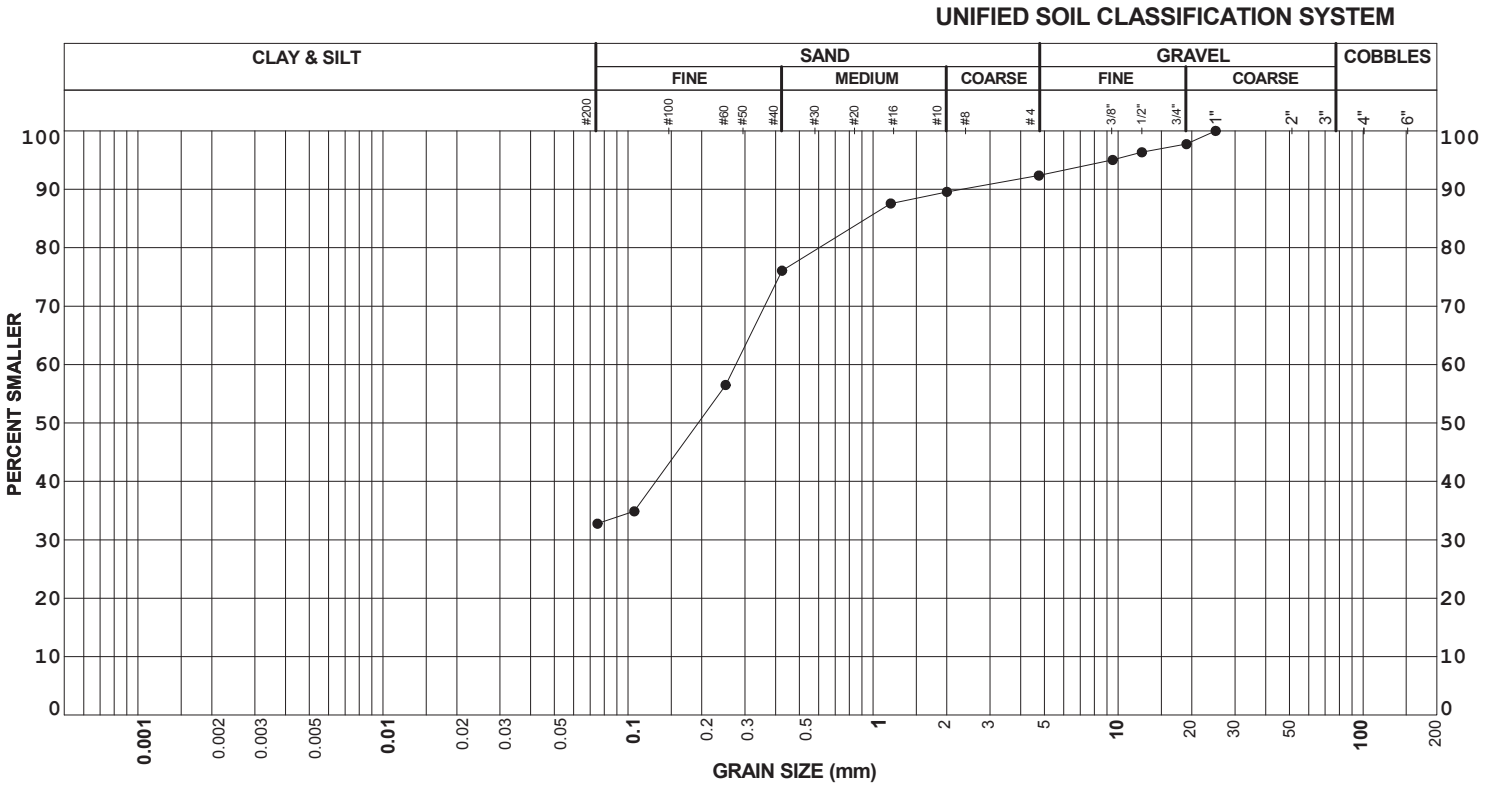
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-C004	DS7	9.80	8	60	33		

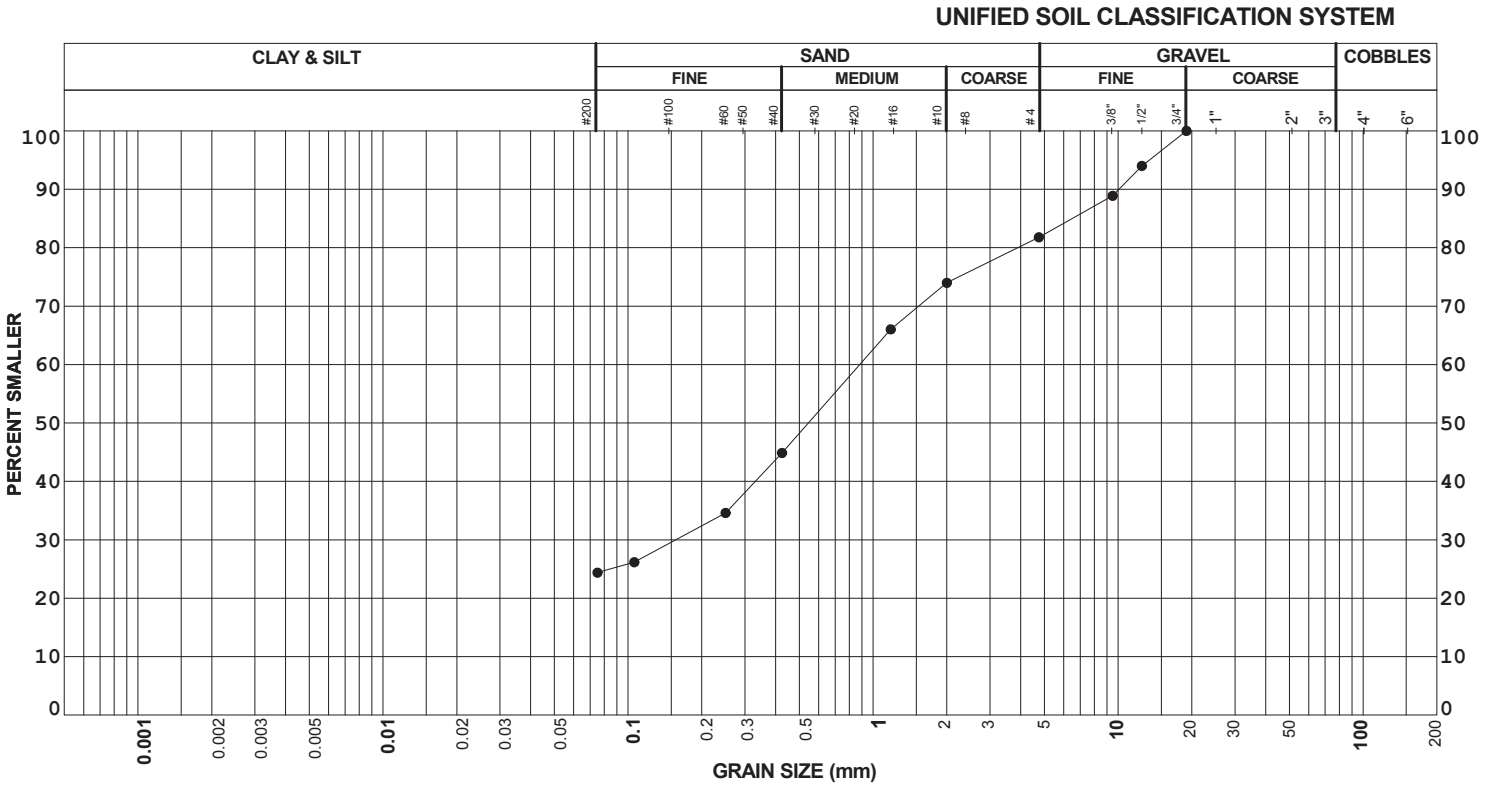
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-C005	DS4	5.50	18	57	24		

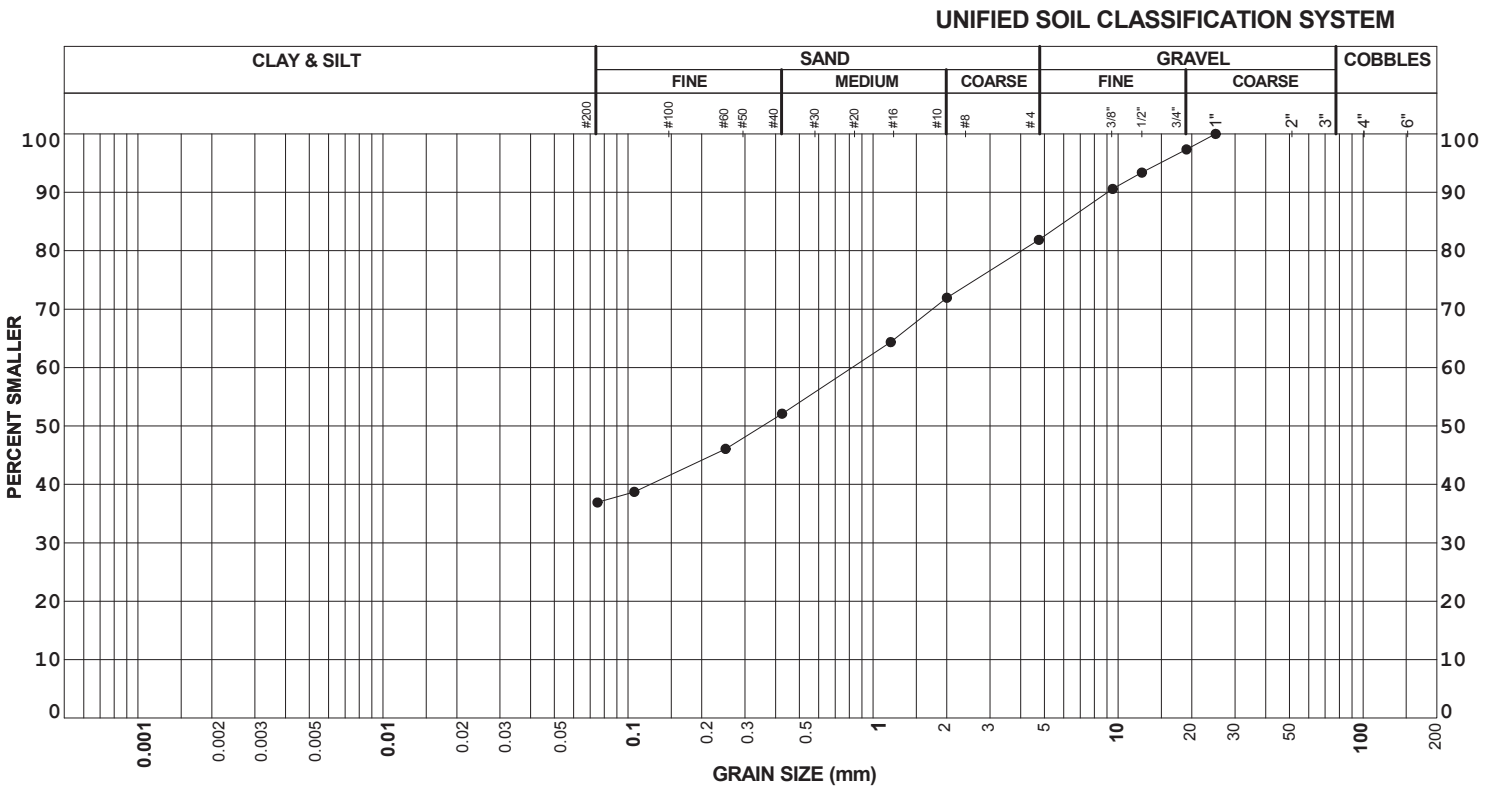
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-C006	DS3	3.70	18	45	37		

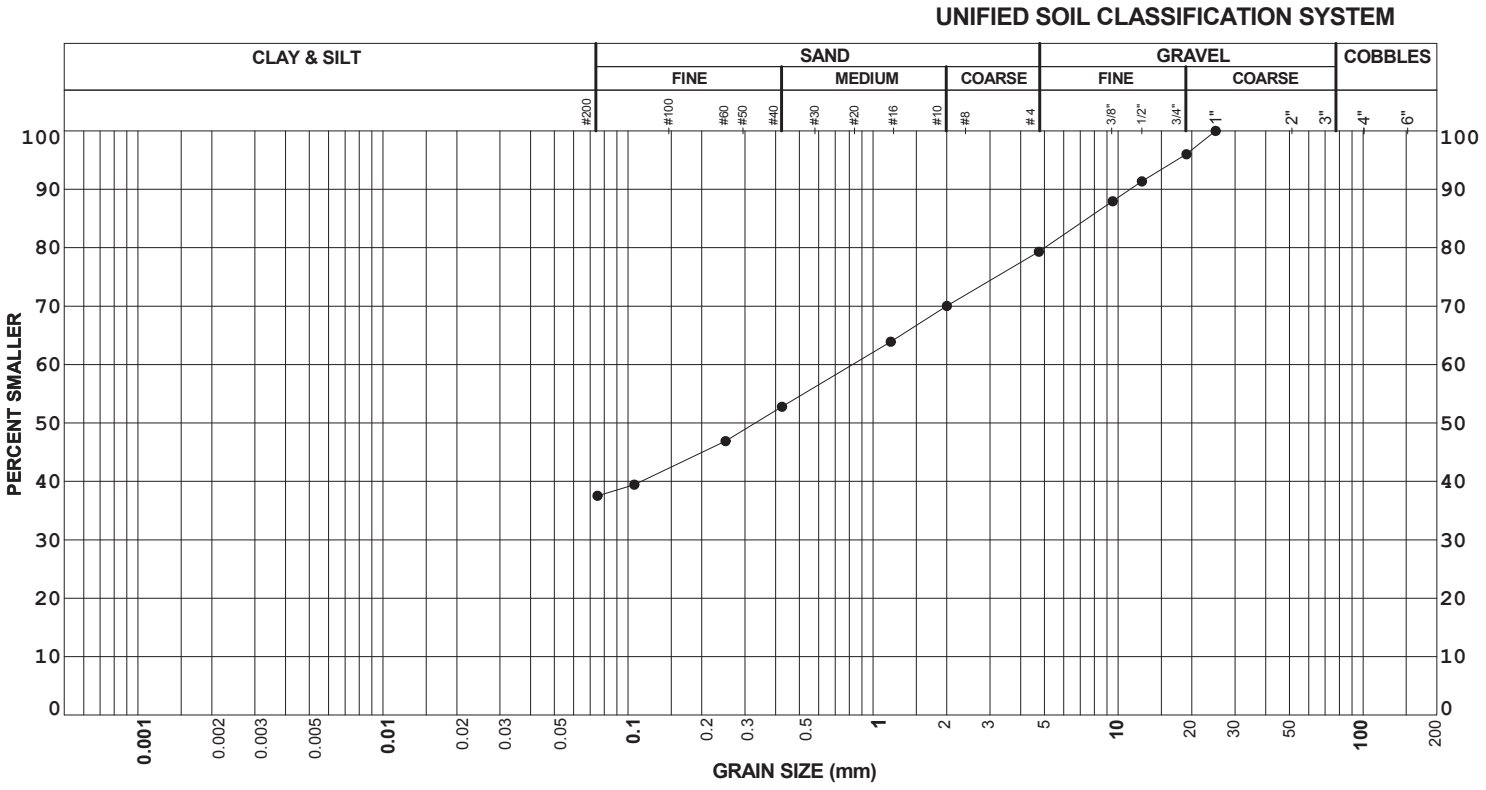
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-C006	DS6	8.20	21	42	38		

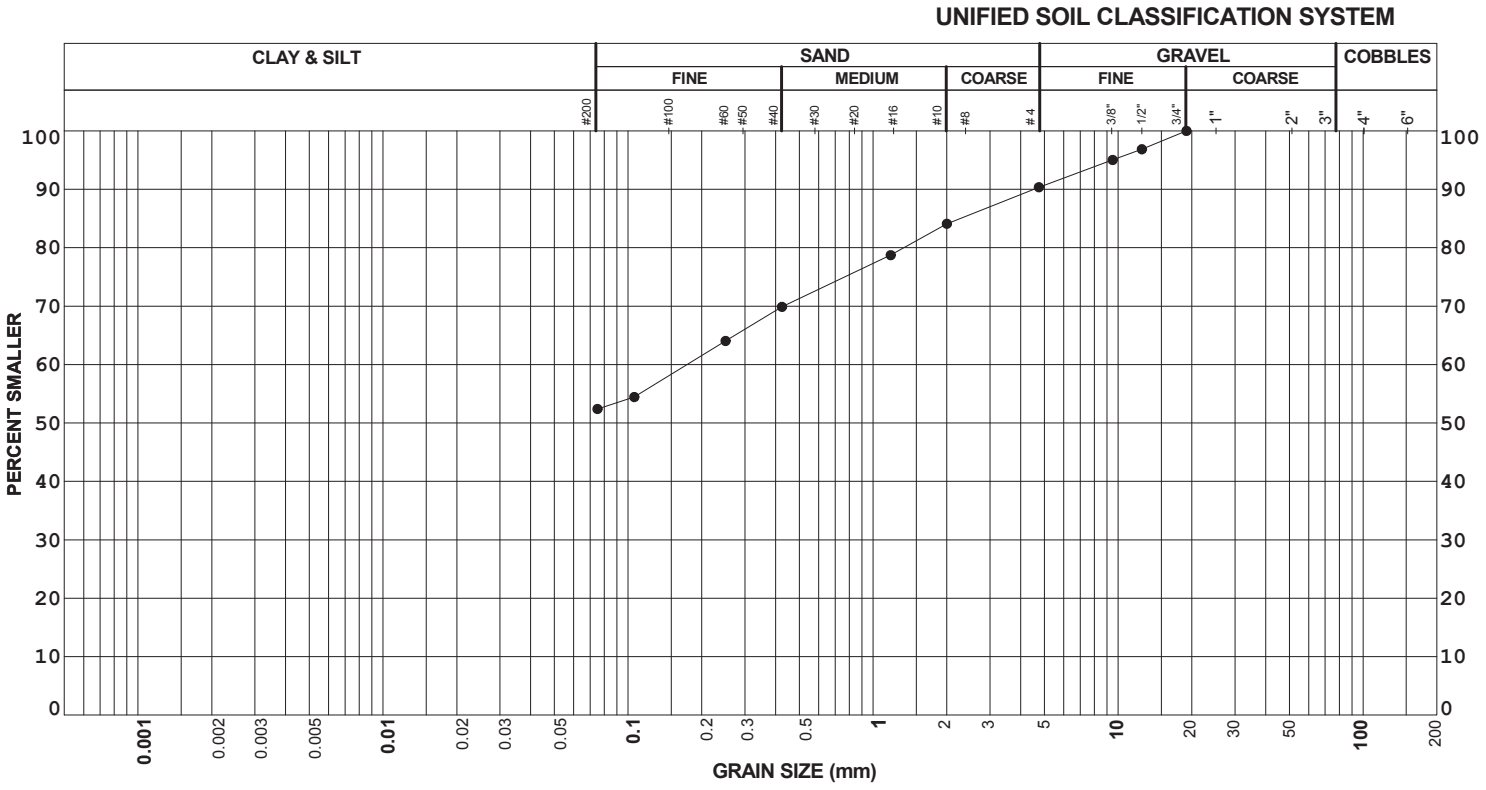
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-C007	DS3	4.00	10	38	52		

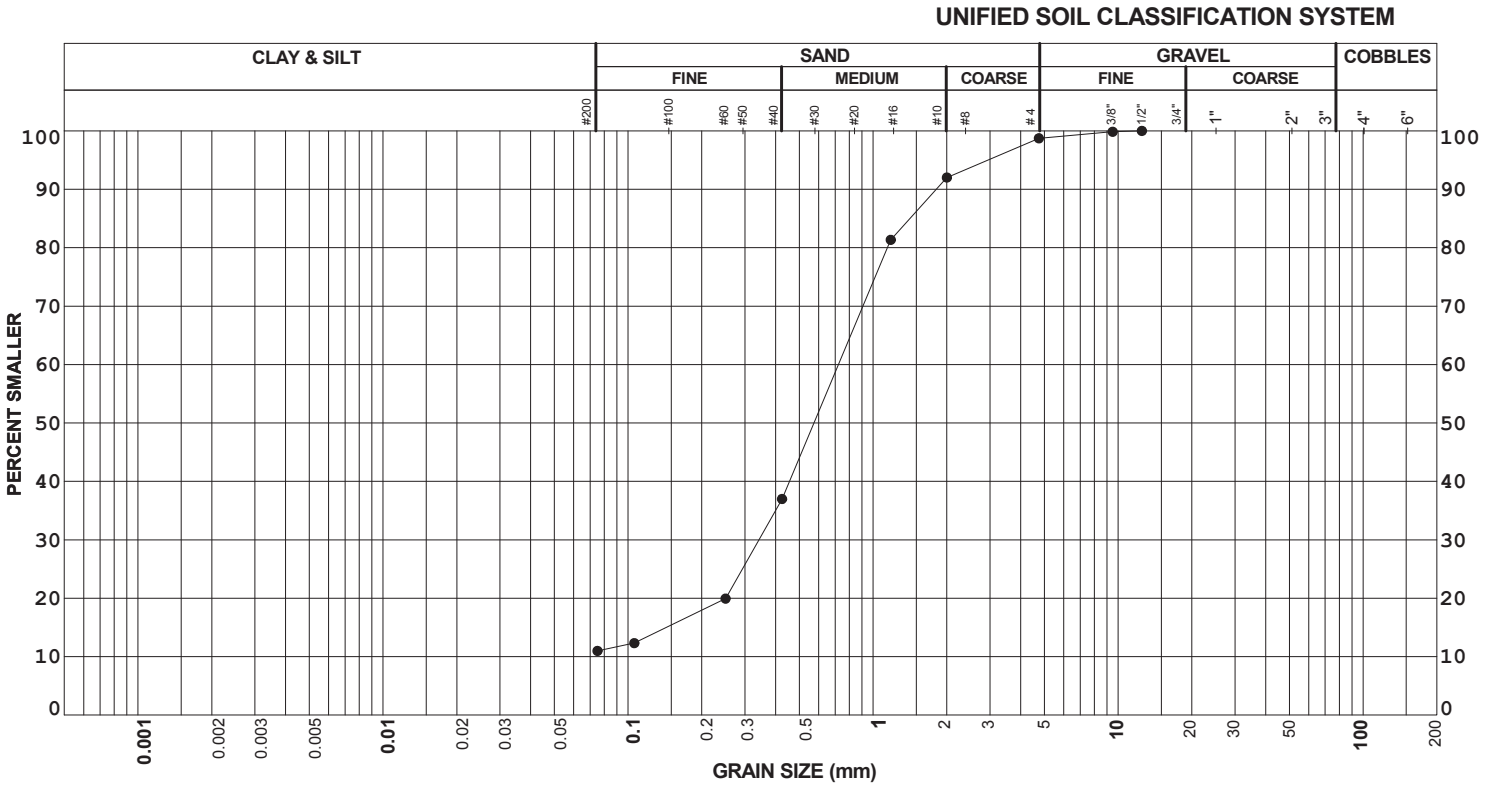
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-C010	DS2	2.40	1	88	11		

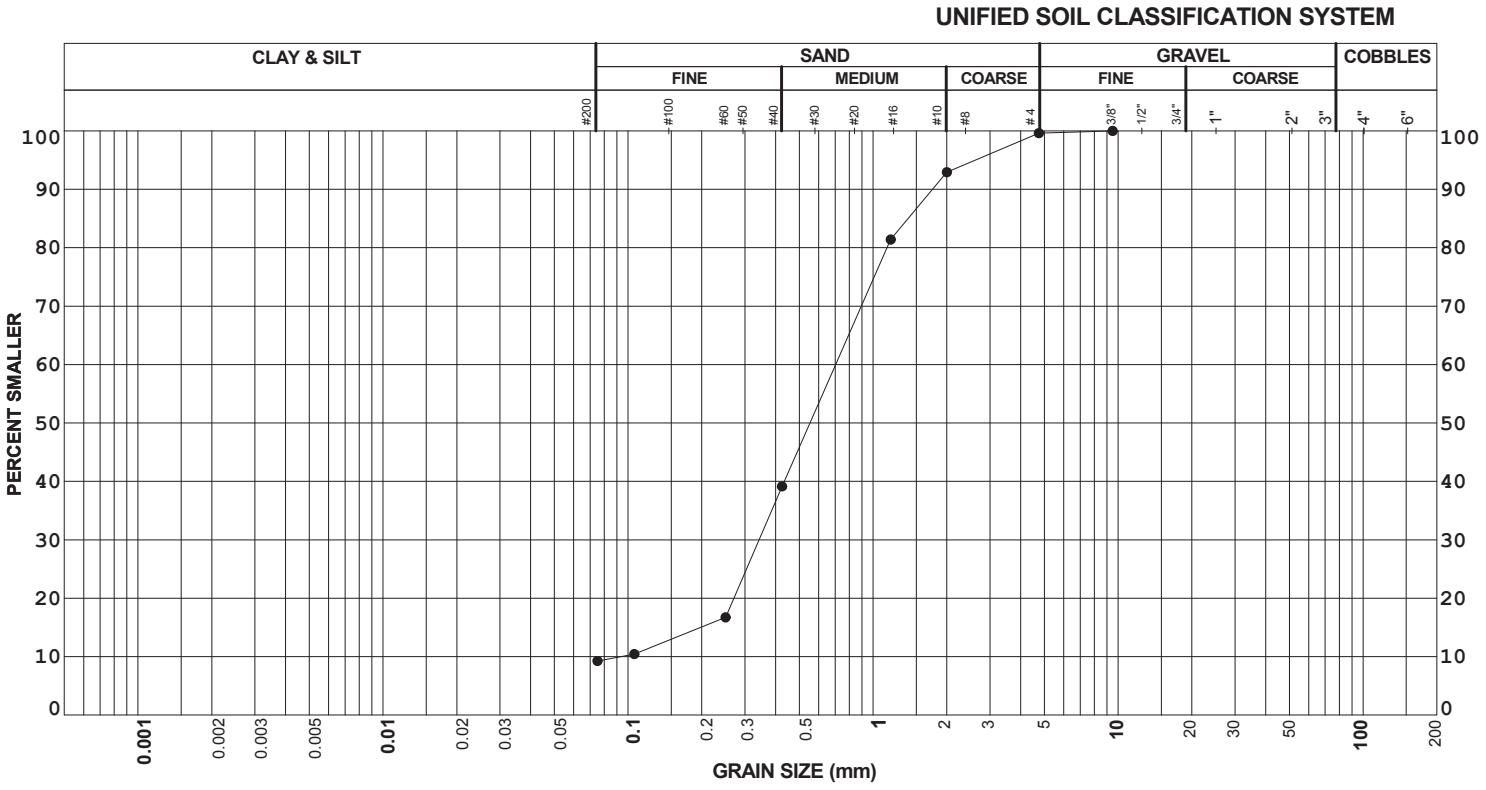
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-C010	DS3	3.70	0	90	9		

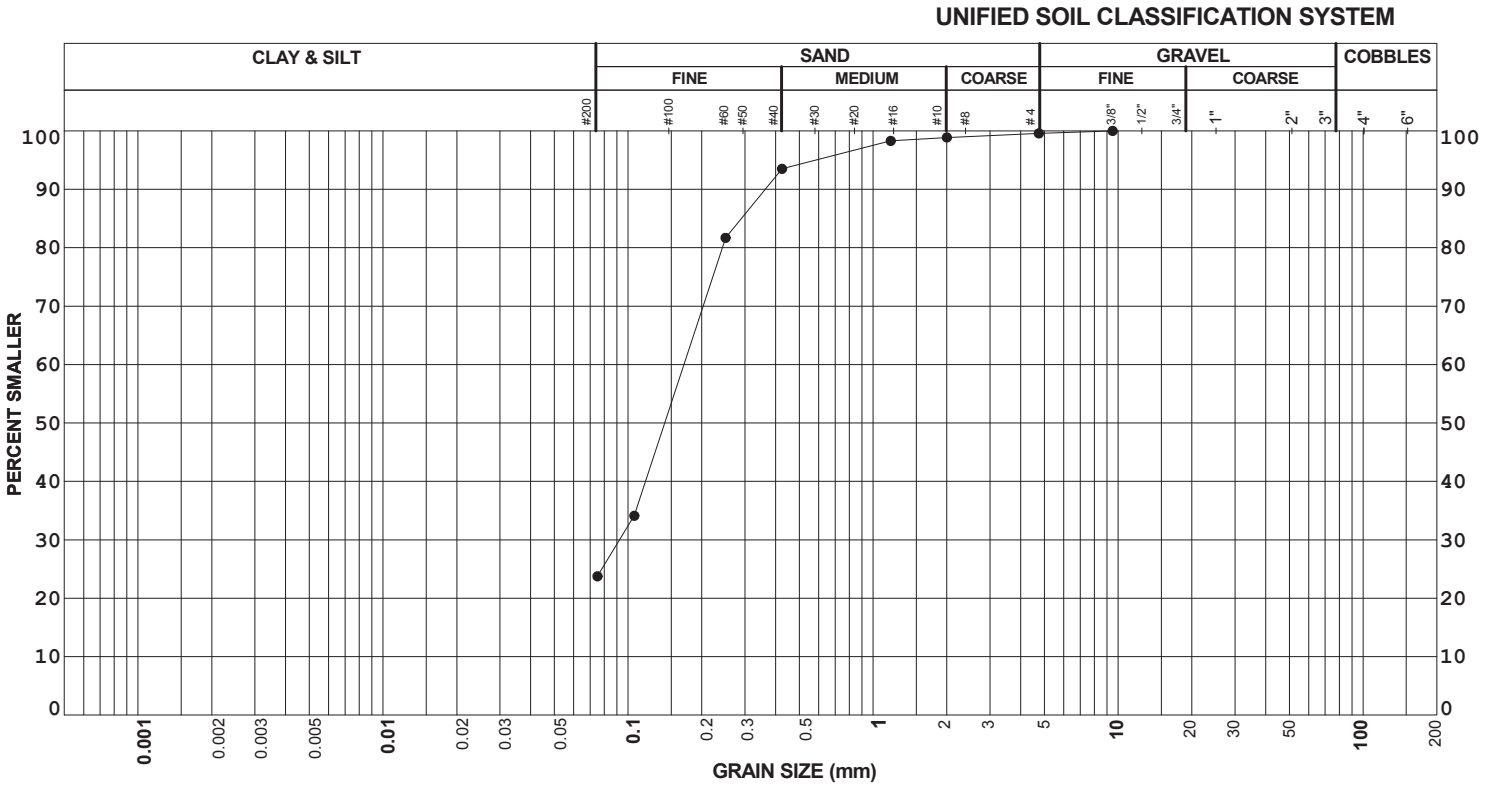
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-C011	DS3	4.00	0	76	24		

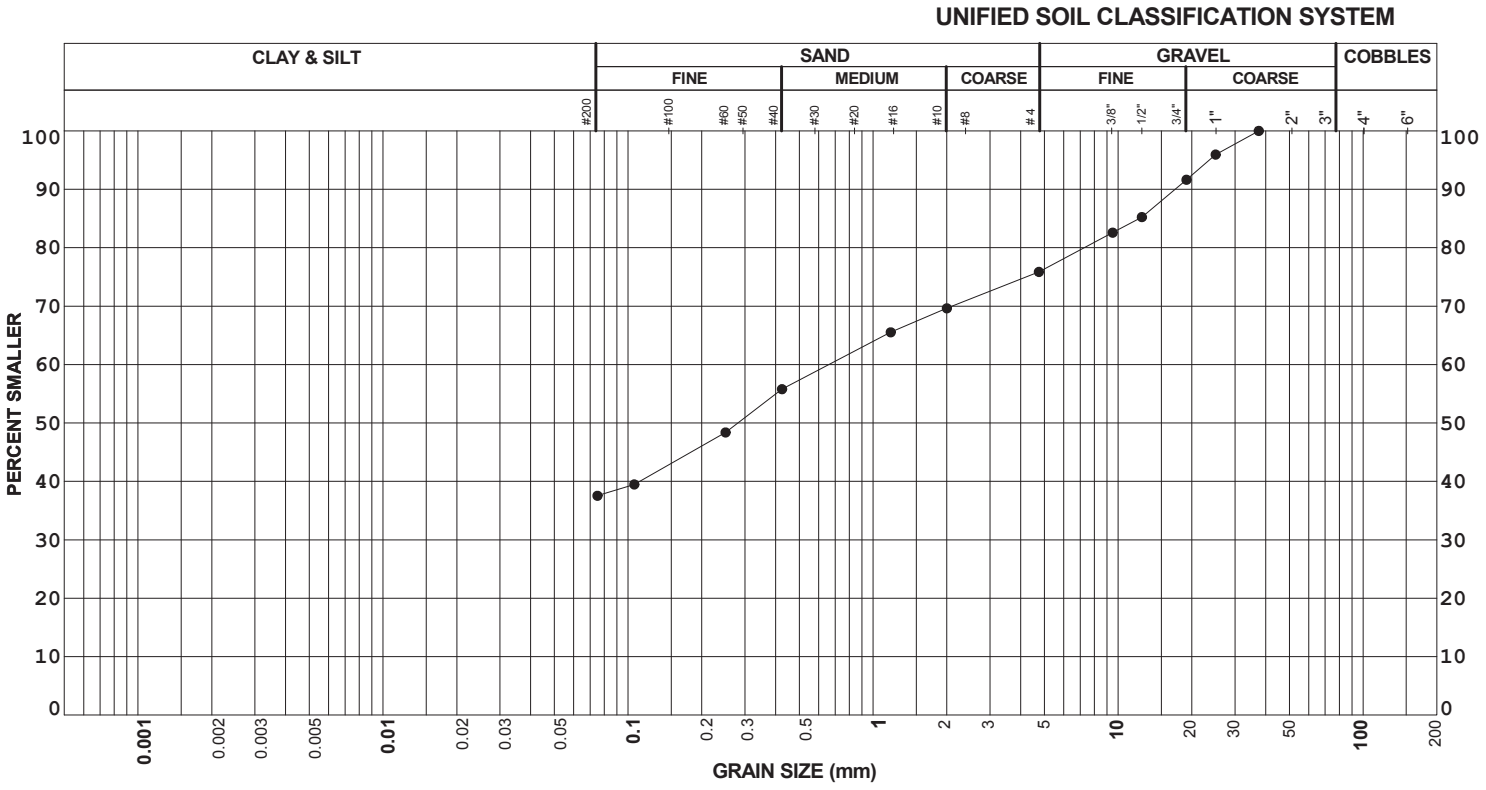
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-C012	DS3	4.00	24	38	38		

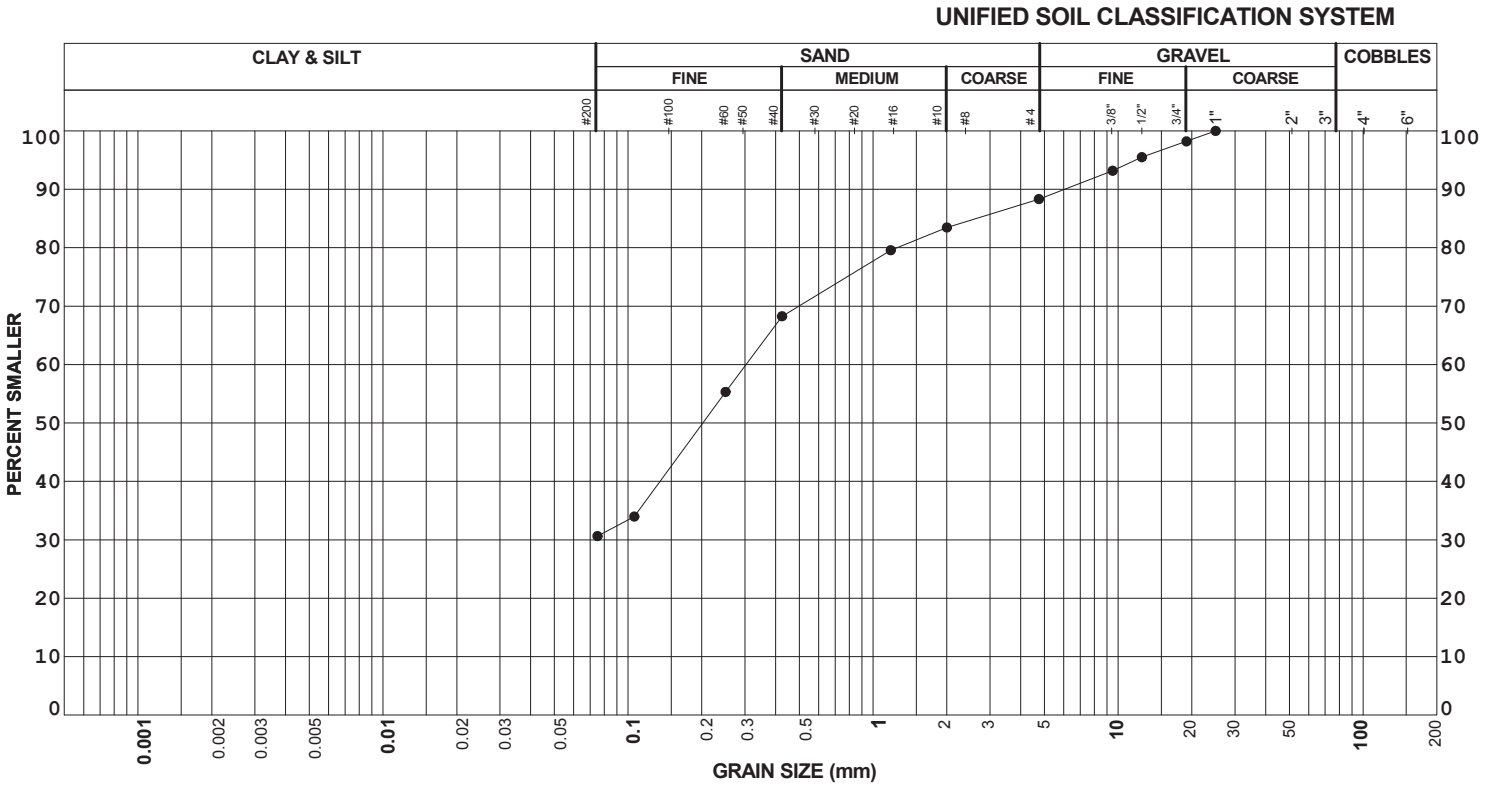
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-C013	DS1	0.90	12	58	31		

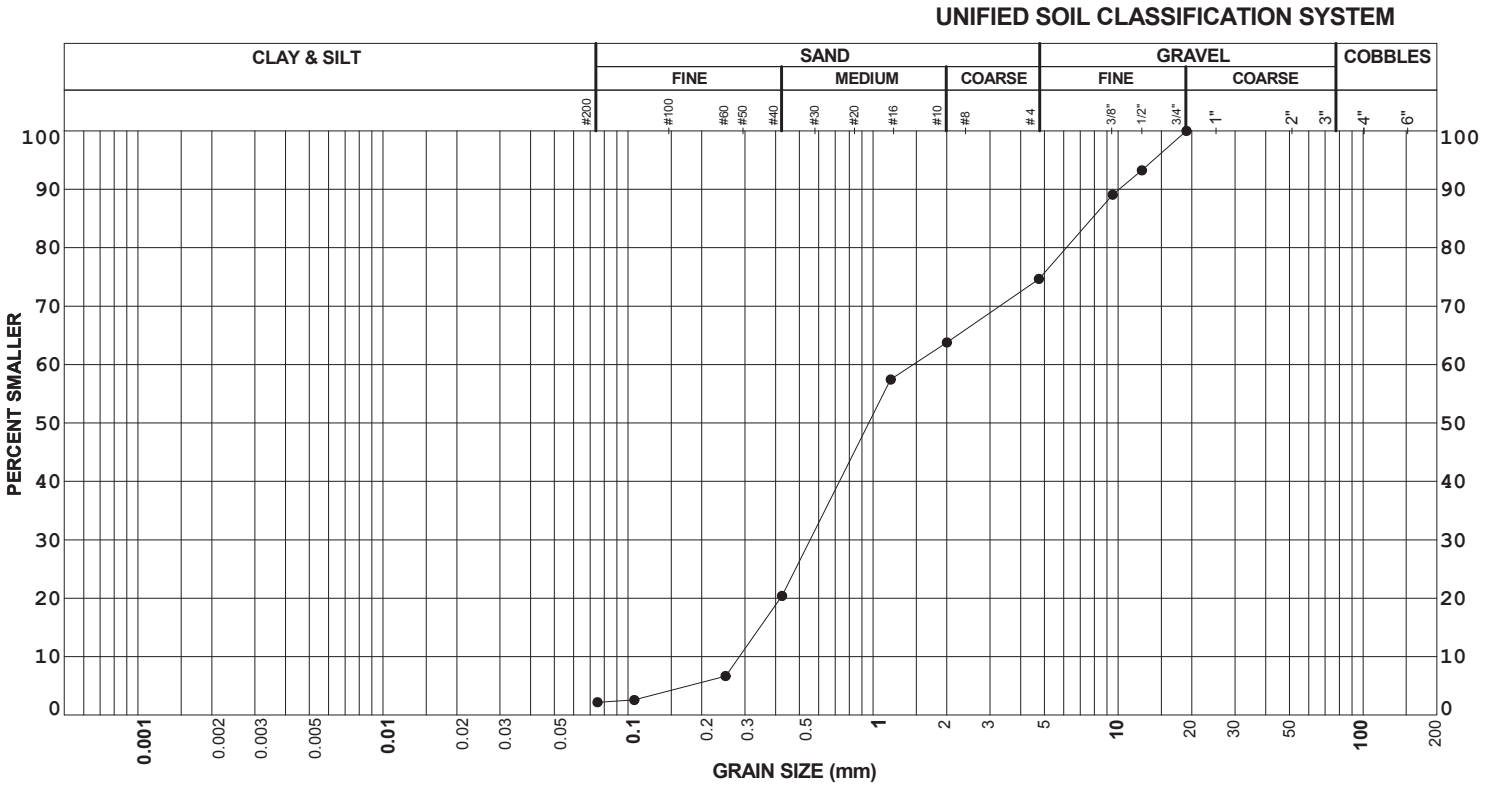
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-BR86-2	DQ1	1.00	25	72	2		

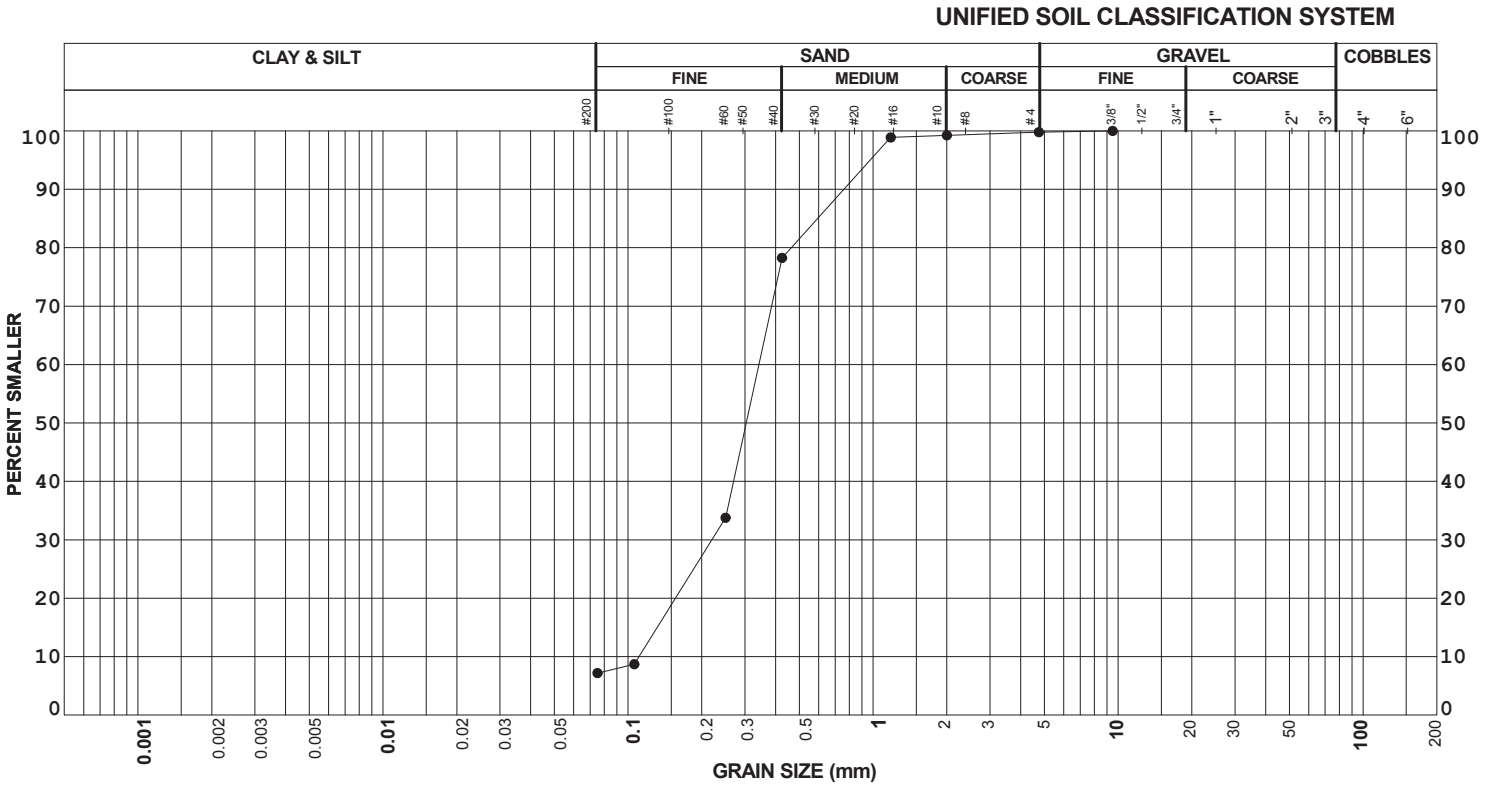
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines Corporation

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-BR86-2	DQ2	2.00	0	93	7		

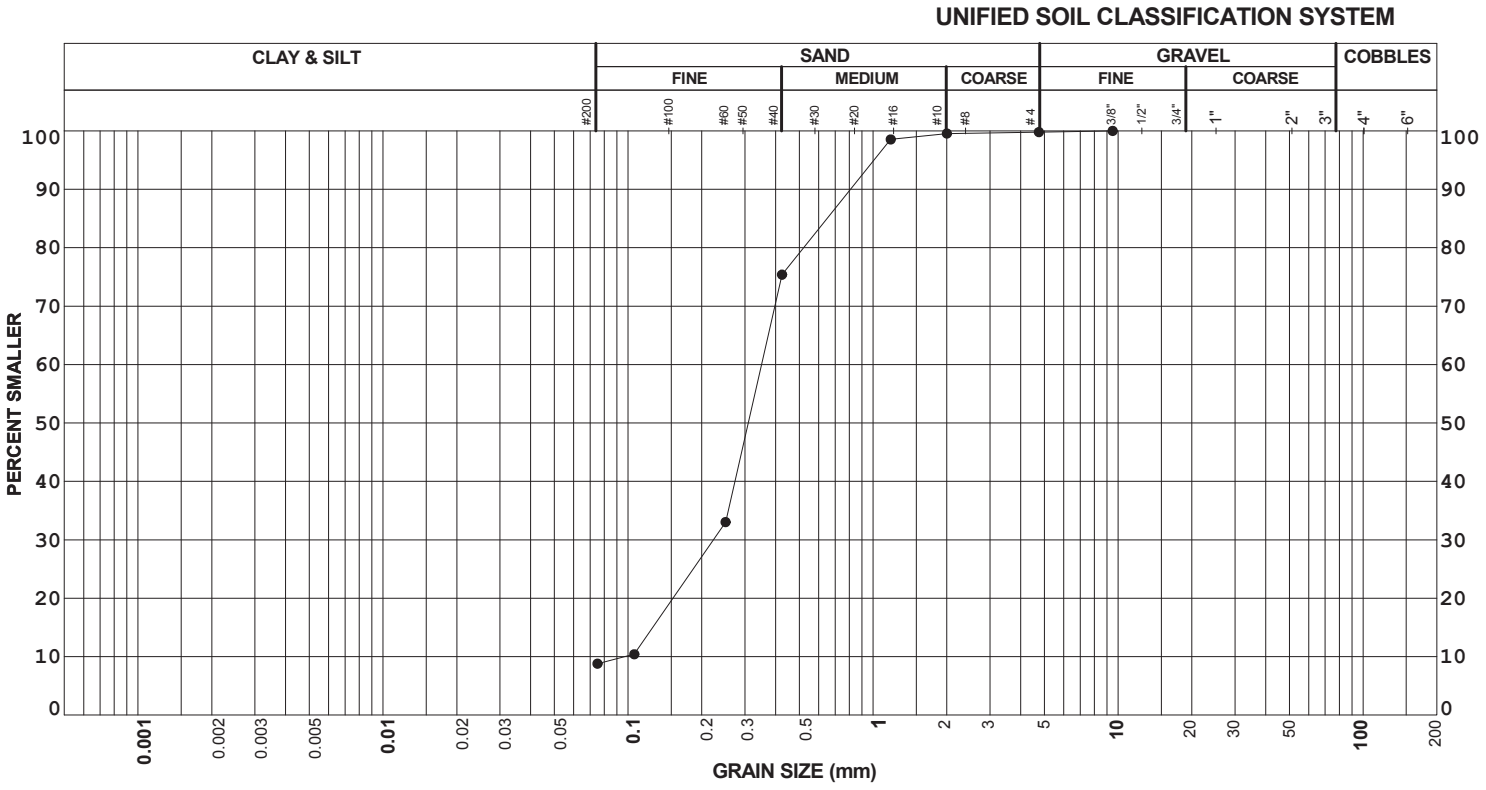
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines Corporation

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-BR86-2	DQ3	3.00	0	91	9		

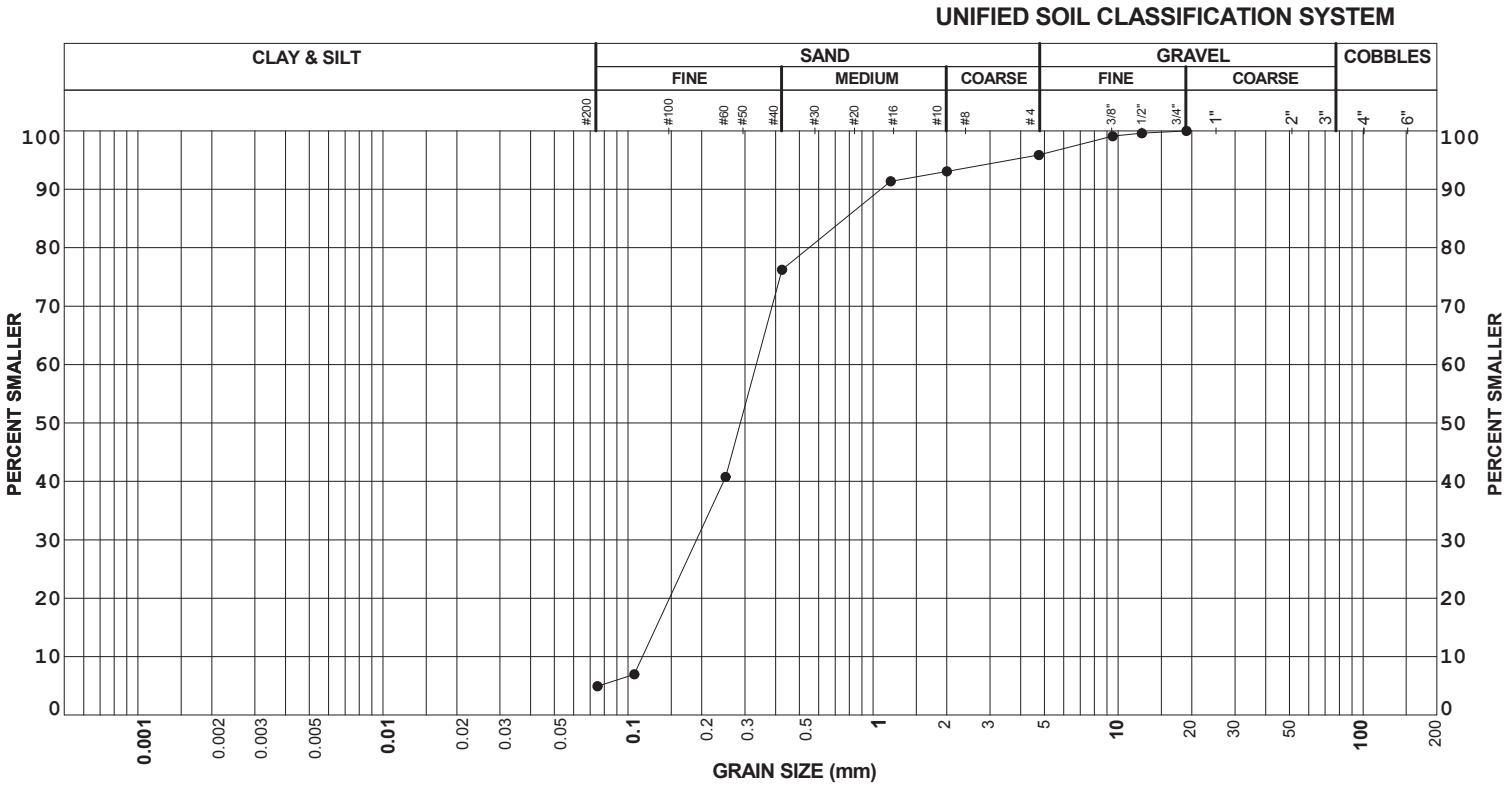
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines Corporation

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-BR86-2	DQ4	5.00	4	91	5		

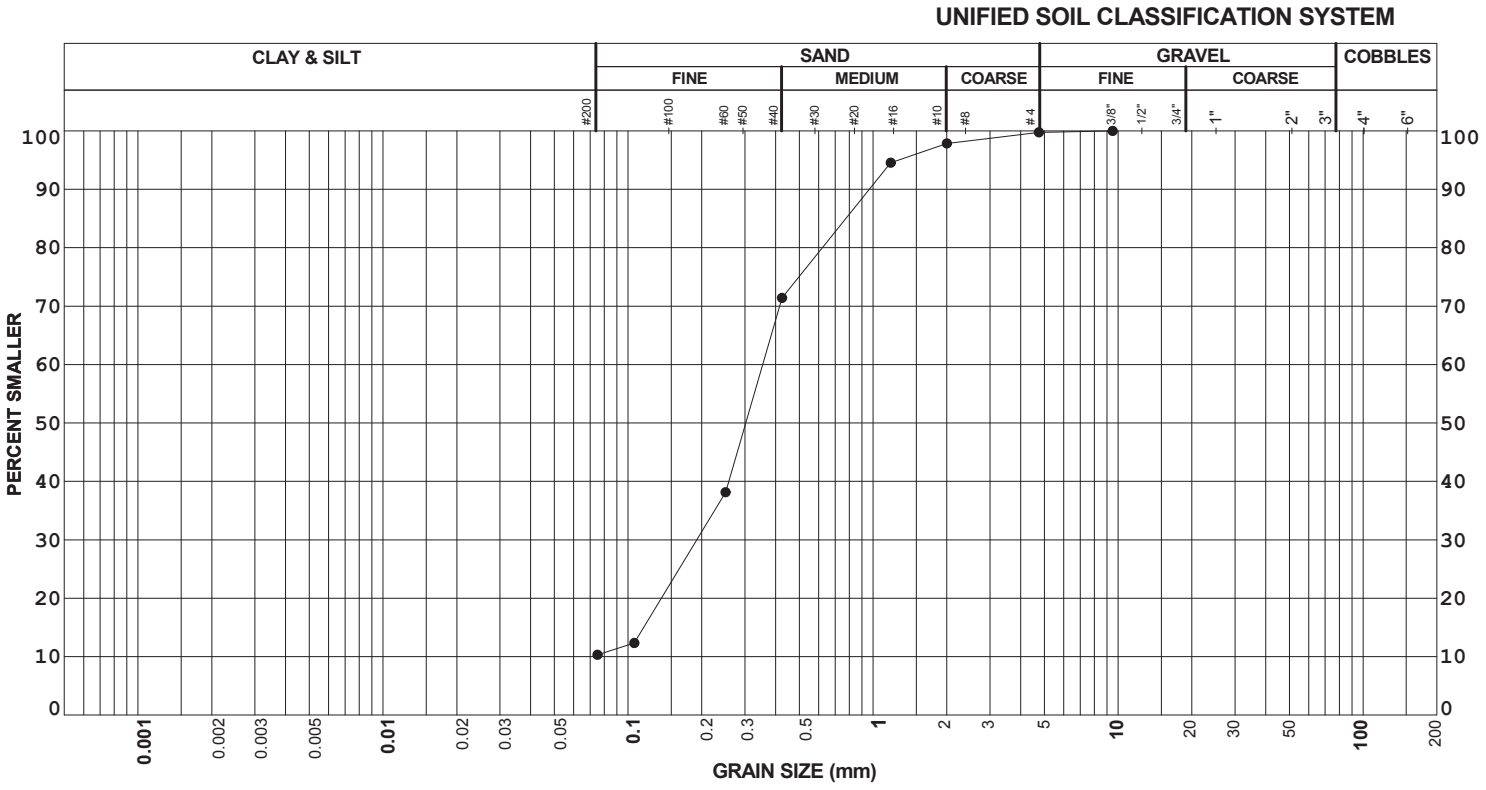
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines Corporation

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-BR86-2	DQ5	10.00	0	89	10		

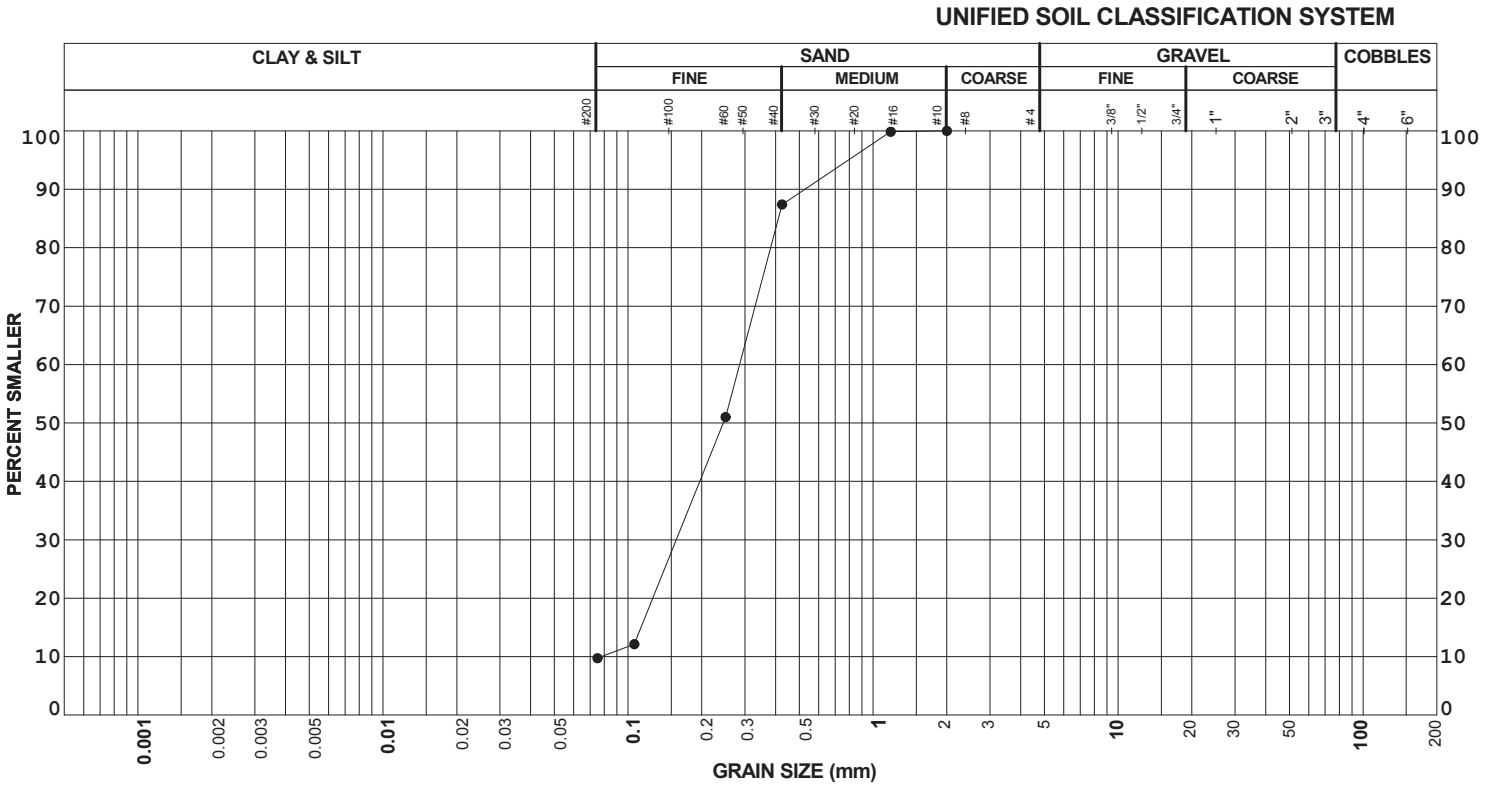
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines Corporation

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-BR86-2	DQ7	20.00	0	90	10		

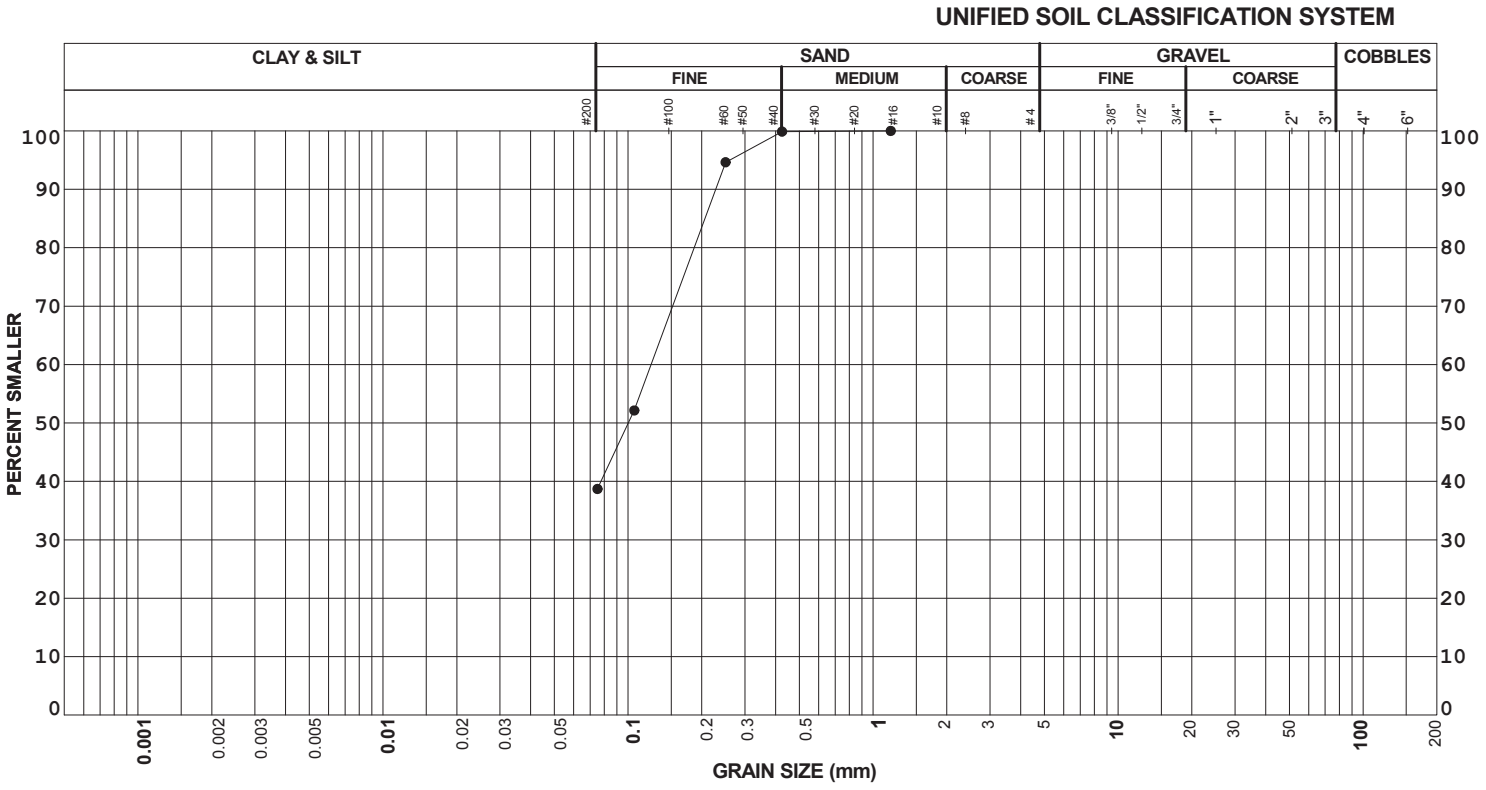
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines Corporation

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-BR86-2	DQ13	39.30	0	61	39		

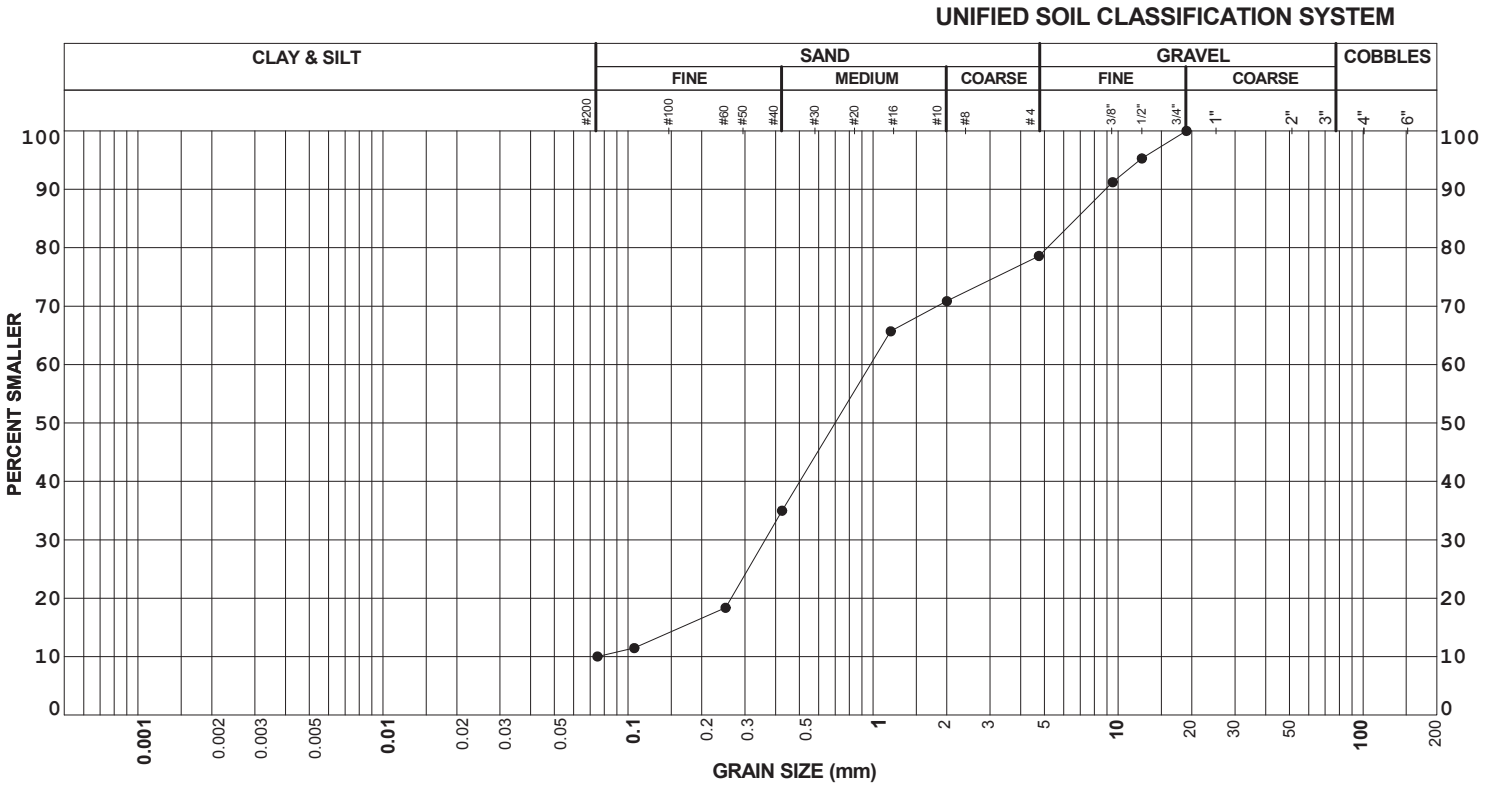
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines Corporation

HATCH

Project



REMARKS:

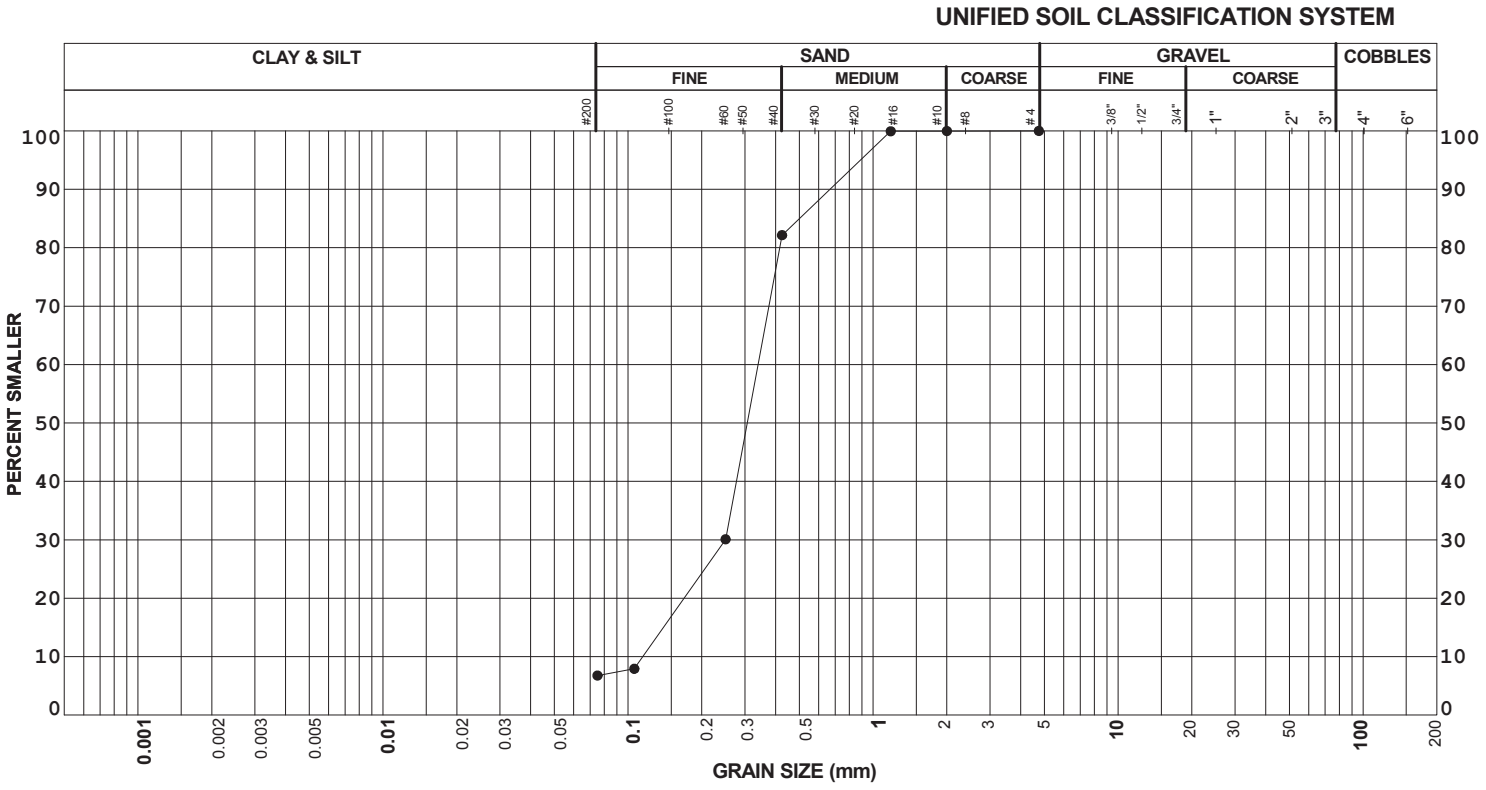
BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-BR86-3	DQ1	1.00	21	69	10		

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines Corporation

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-BR86-3	DQ2	2.00	0	93	7		

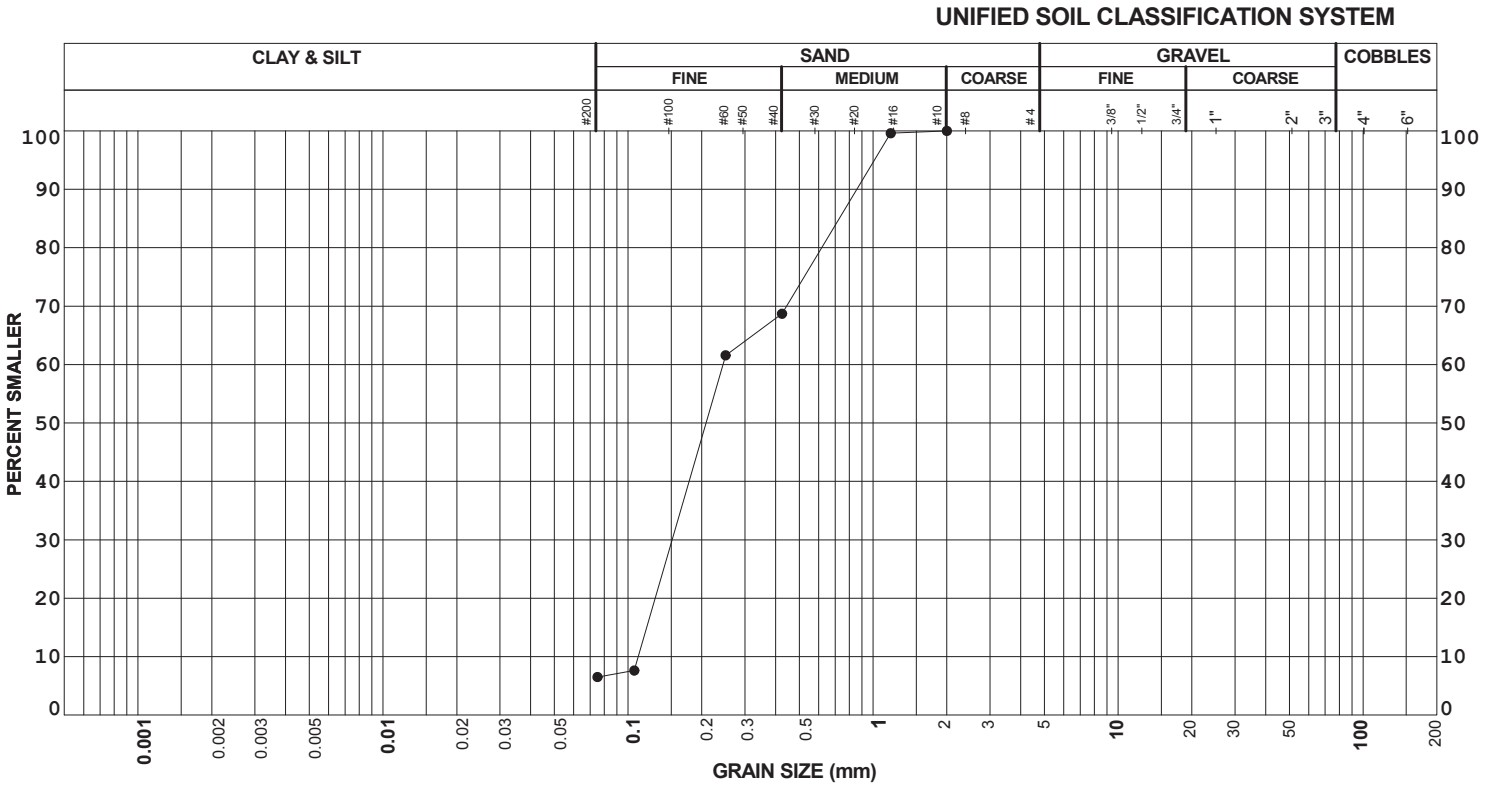
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines Corporation

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-BR86-3	DQ3	3.00	0	94	6		

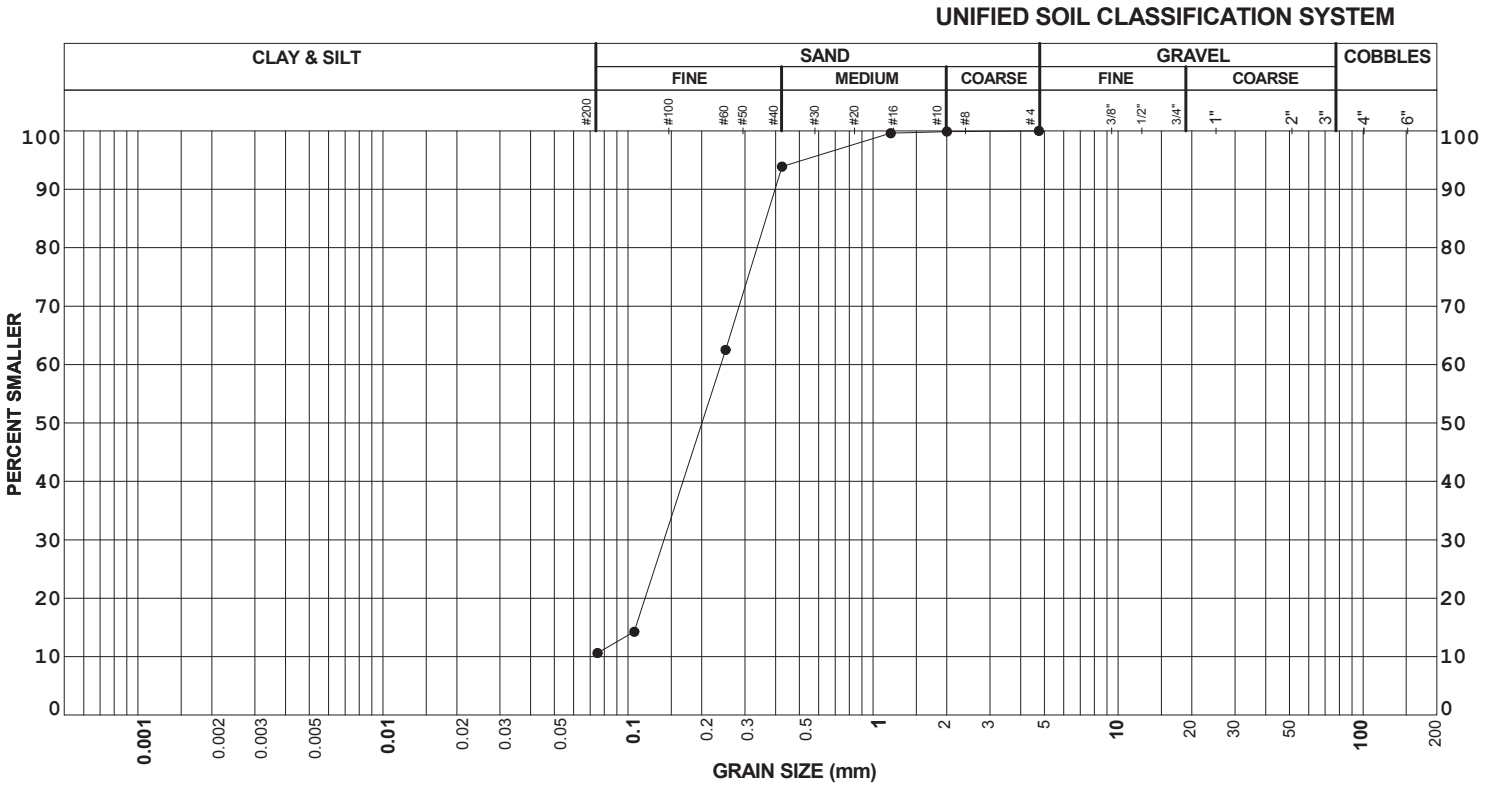
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines Corporation

HATCH

Project



REMARKS:

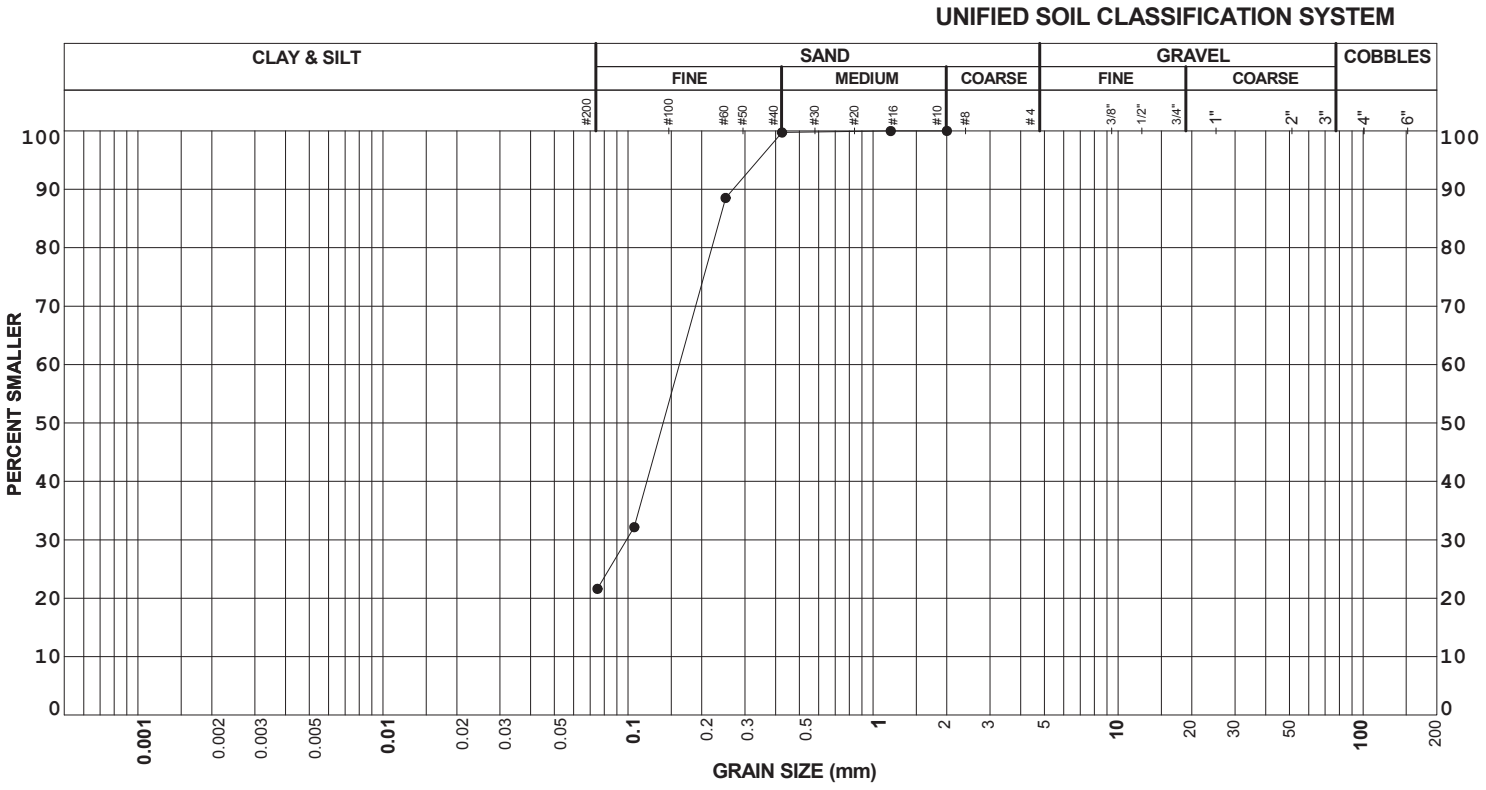
BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-BR86-3	DQ4	5.00	0	89	11		

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines Corporation

HATCH

Project



REMARKS:

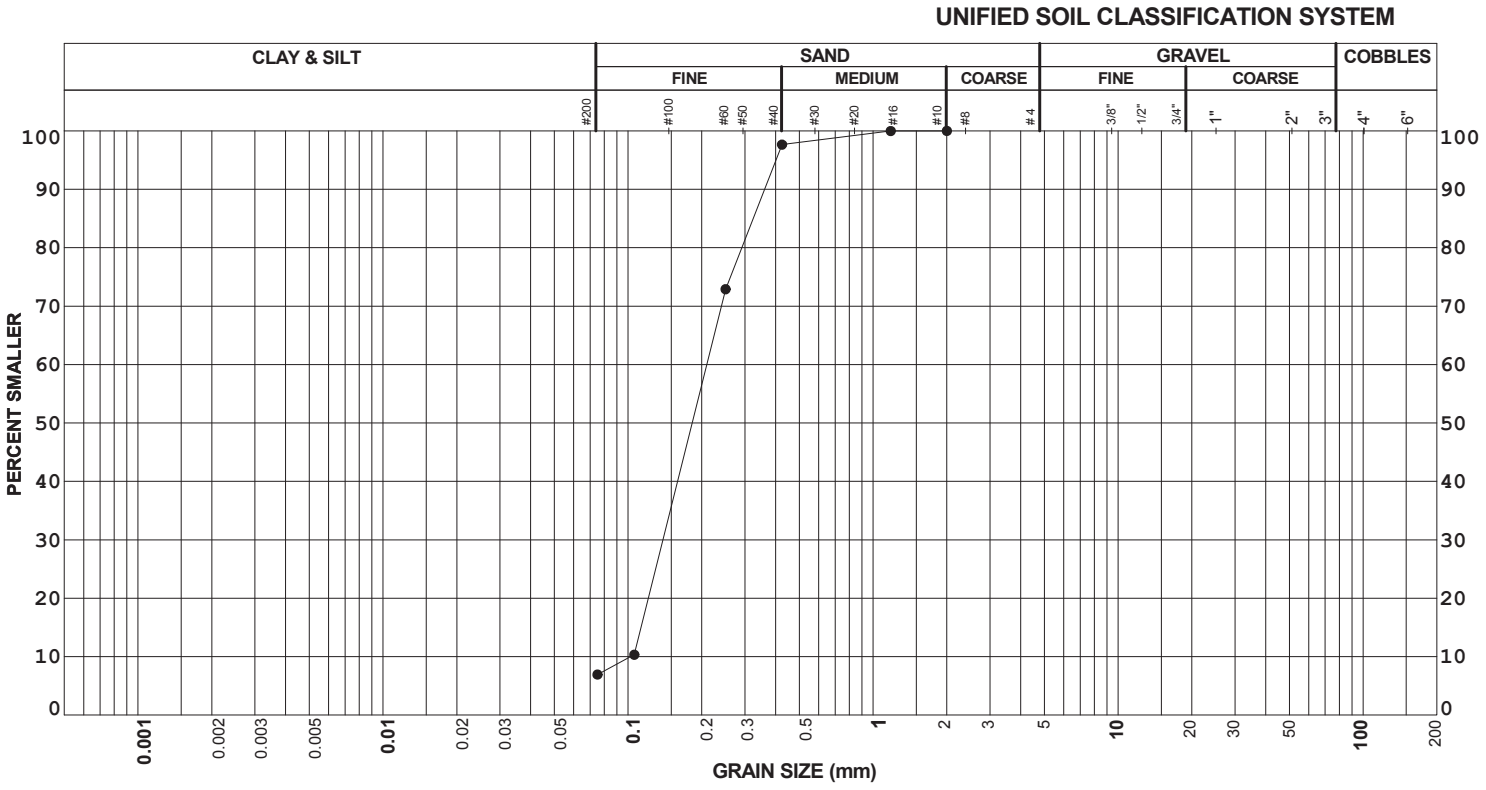
BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-BR86-3	DQ5	8.00	0	78	22		

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines Corporation

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-BR86-3	DQ6	12.00	0	93	7		

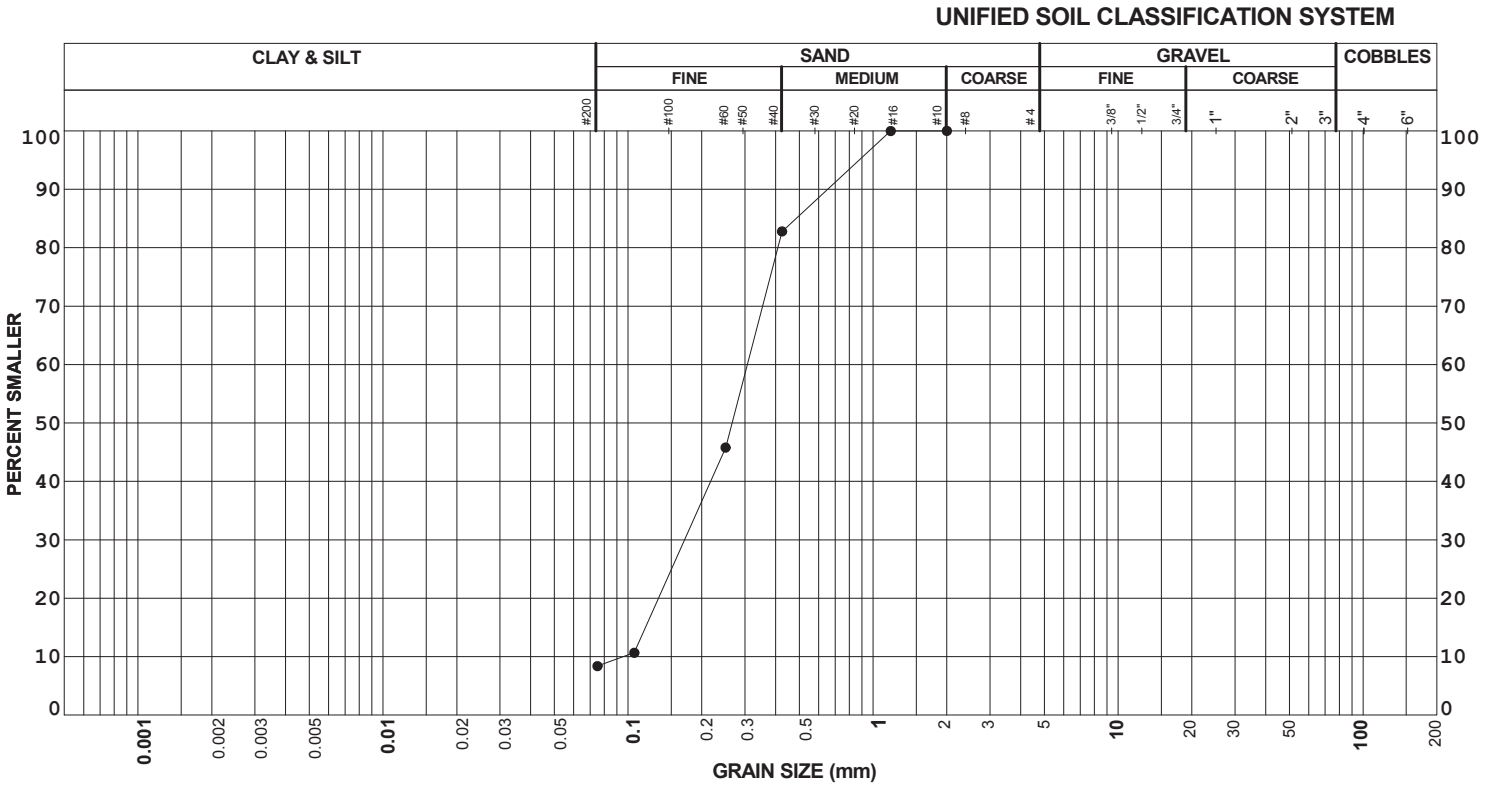
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines Corporation

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH17-BR86-3	DQ8	30.00	0	92	8		

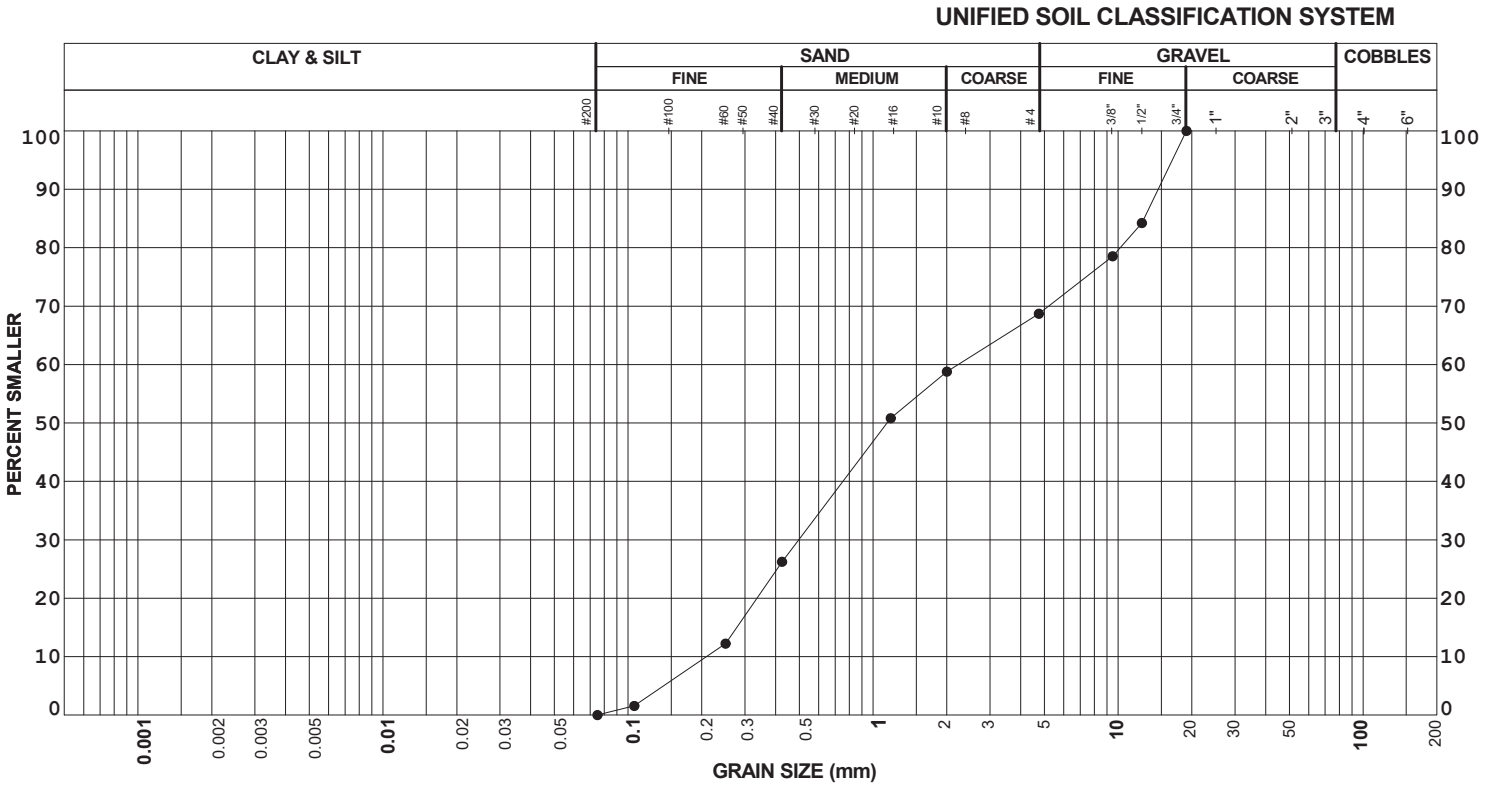
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mines Corporation

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-102-2	DQ-3	3.01	31	69	0		

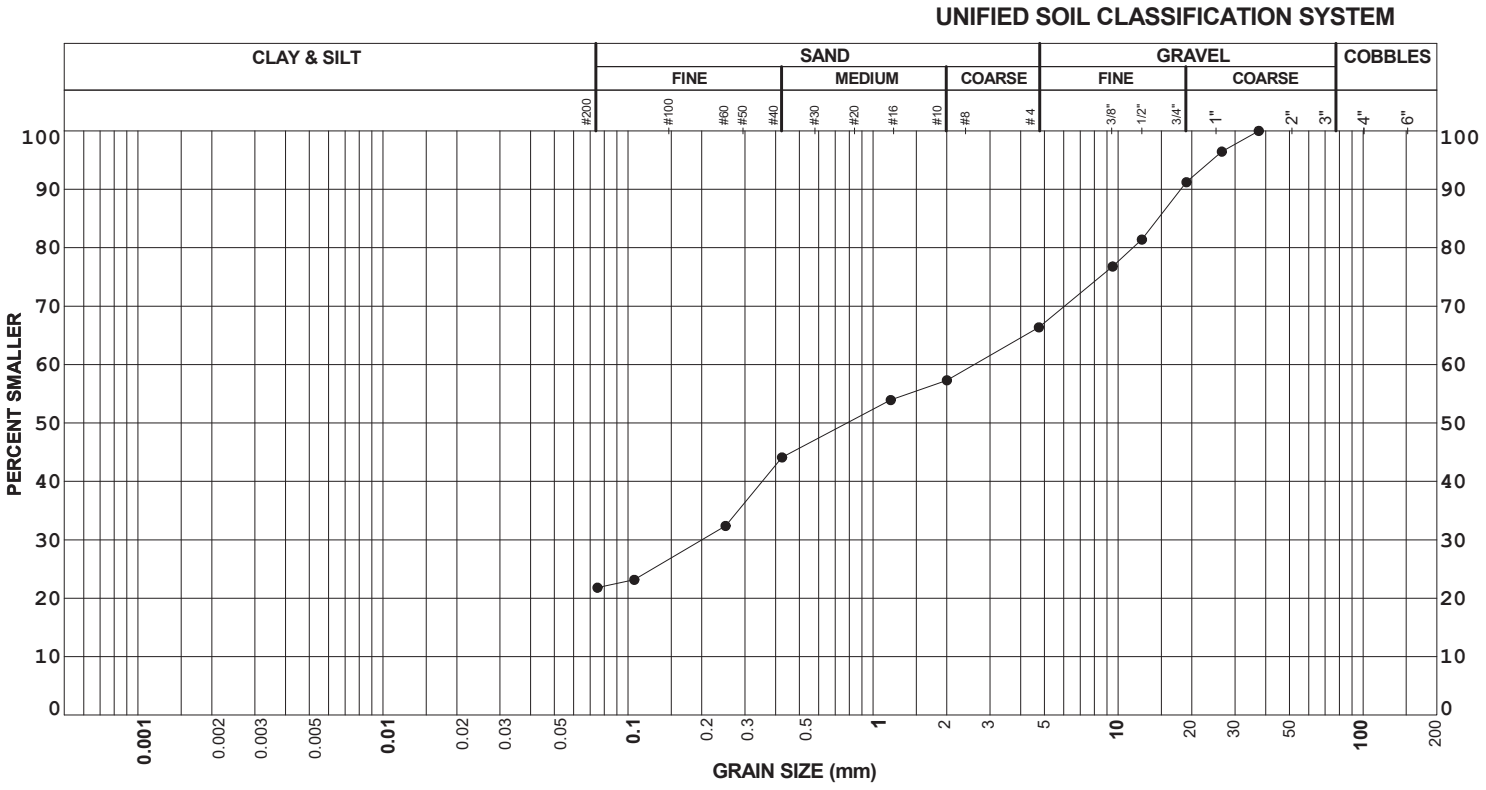
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-BR15-1	DS-2	2.60	34	44	22		

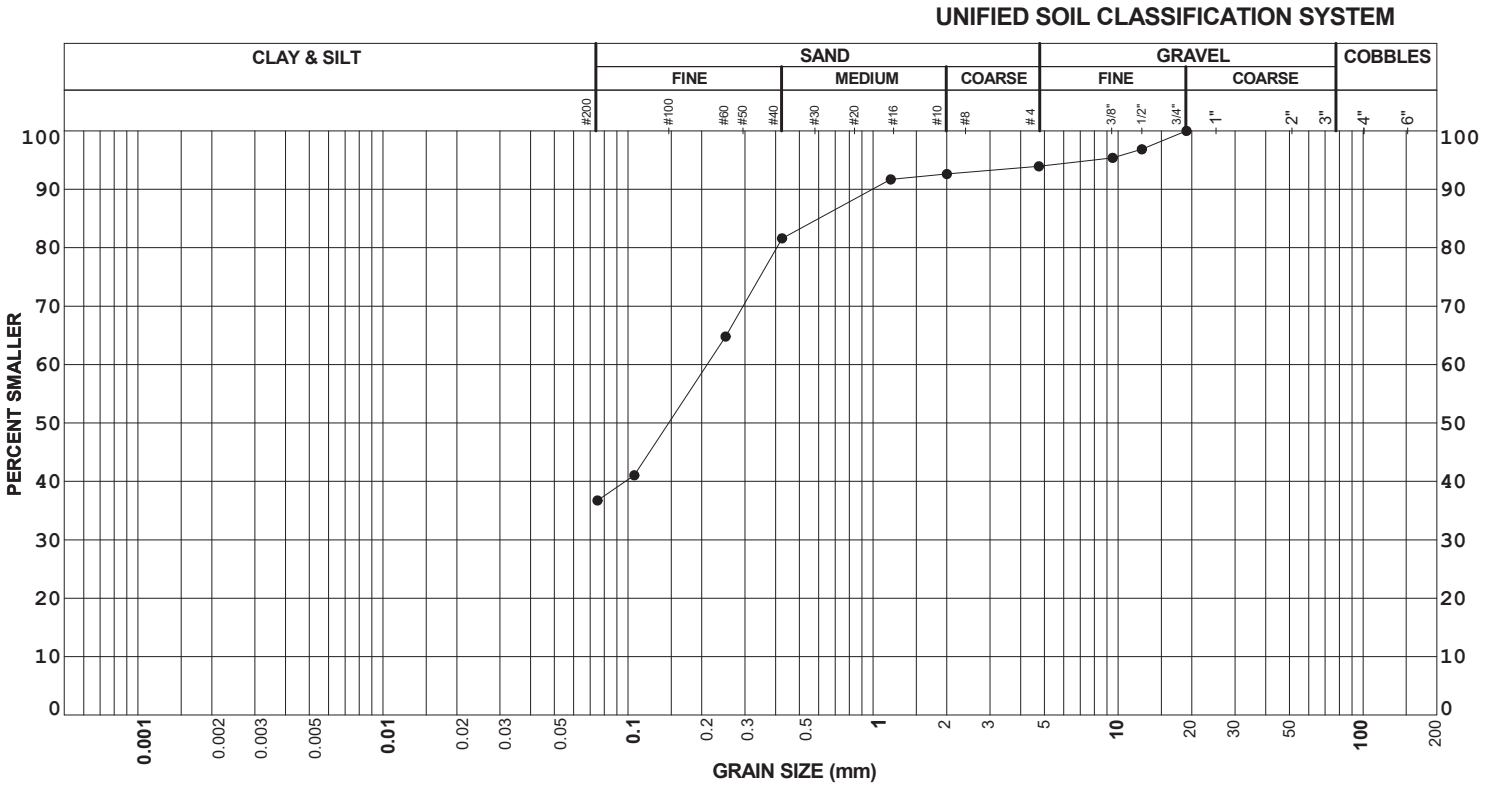
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-BR15-1	DS-3	3.90	6	57	37		

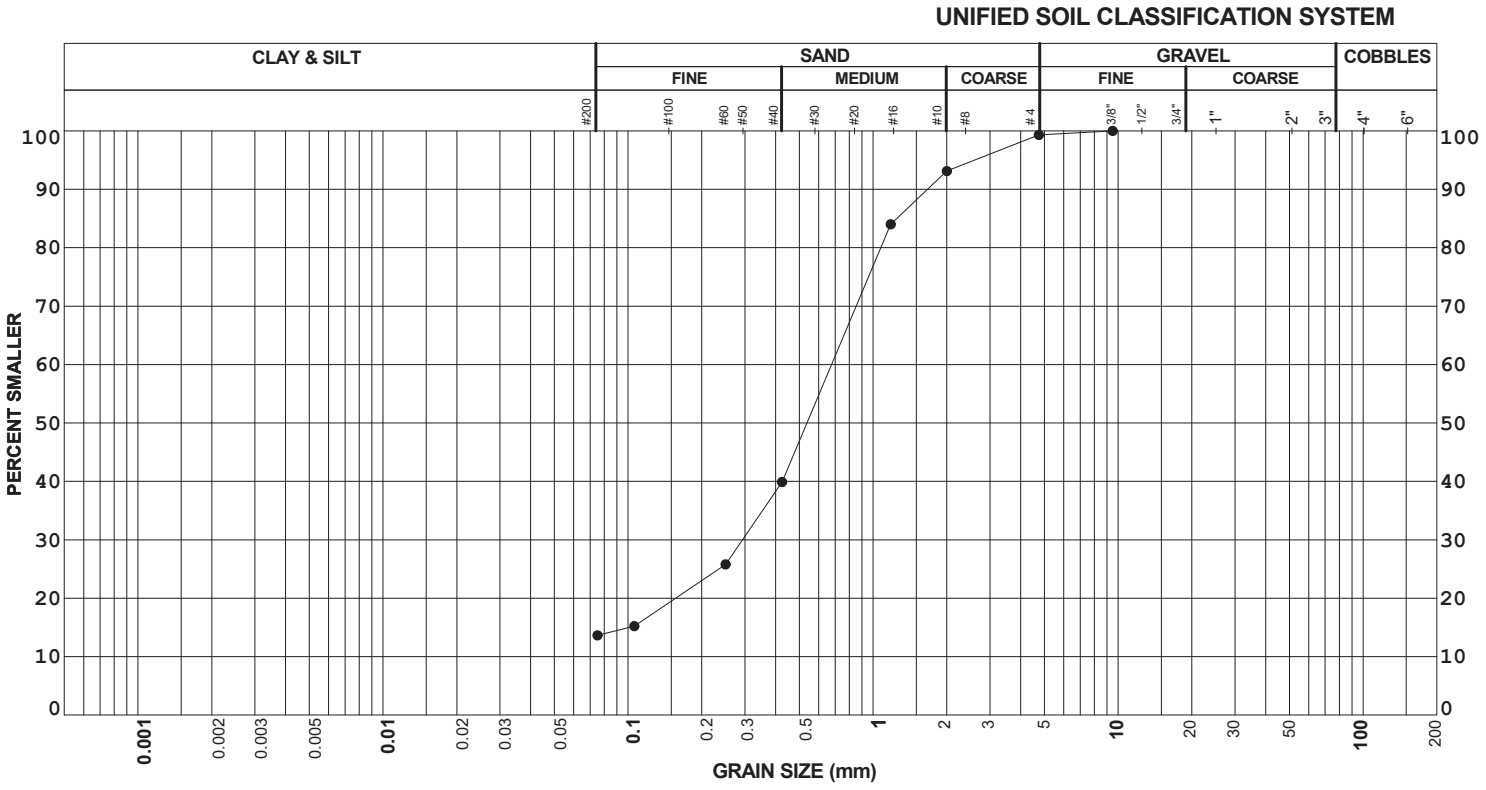
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project



REMARKS:

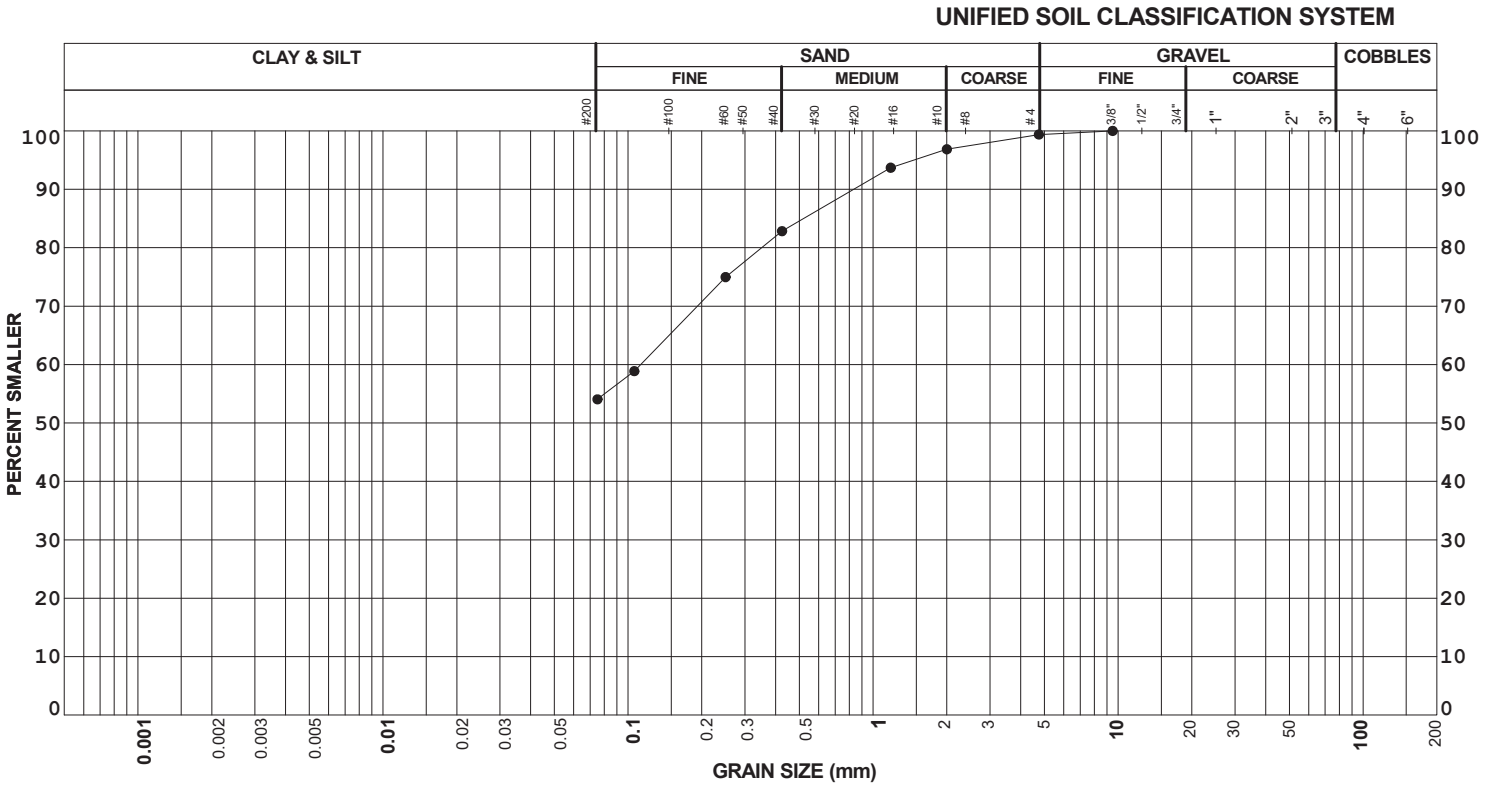
BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-BR15-2	DS-1	1.20	1	85	14		

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-BR15-2	DS-3	2.00	1	45	54		

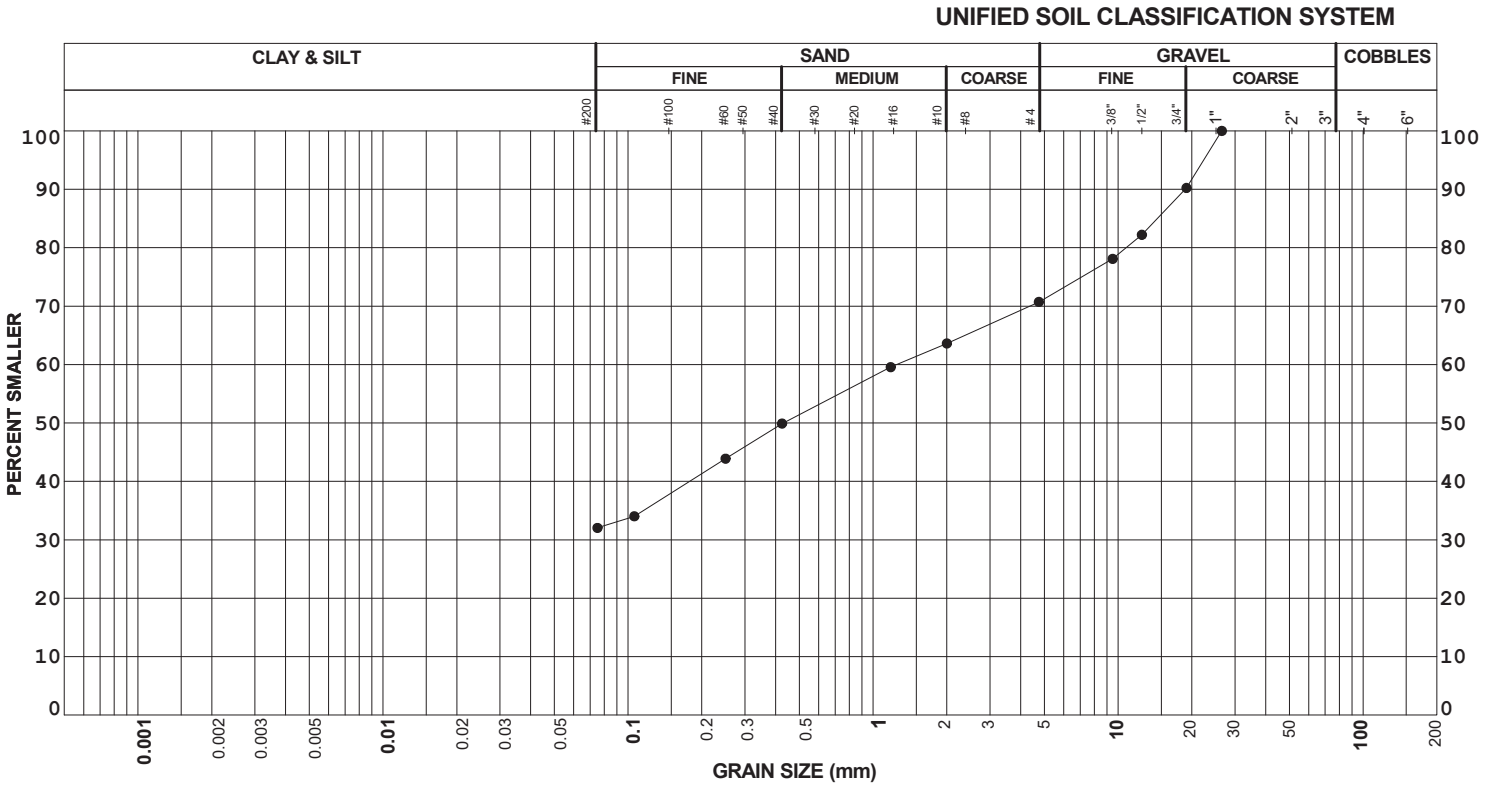
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-BR15-2	DS-5	2.55	29	39	32		

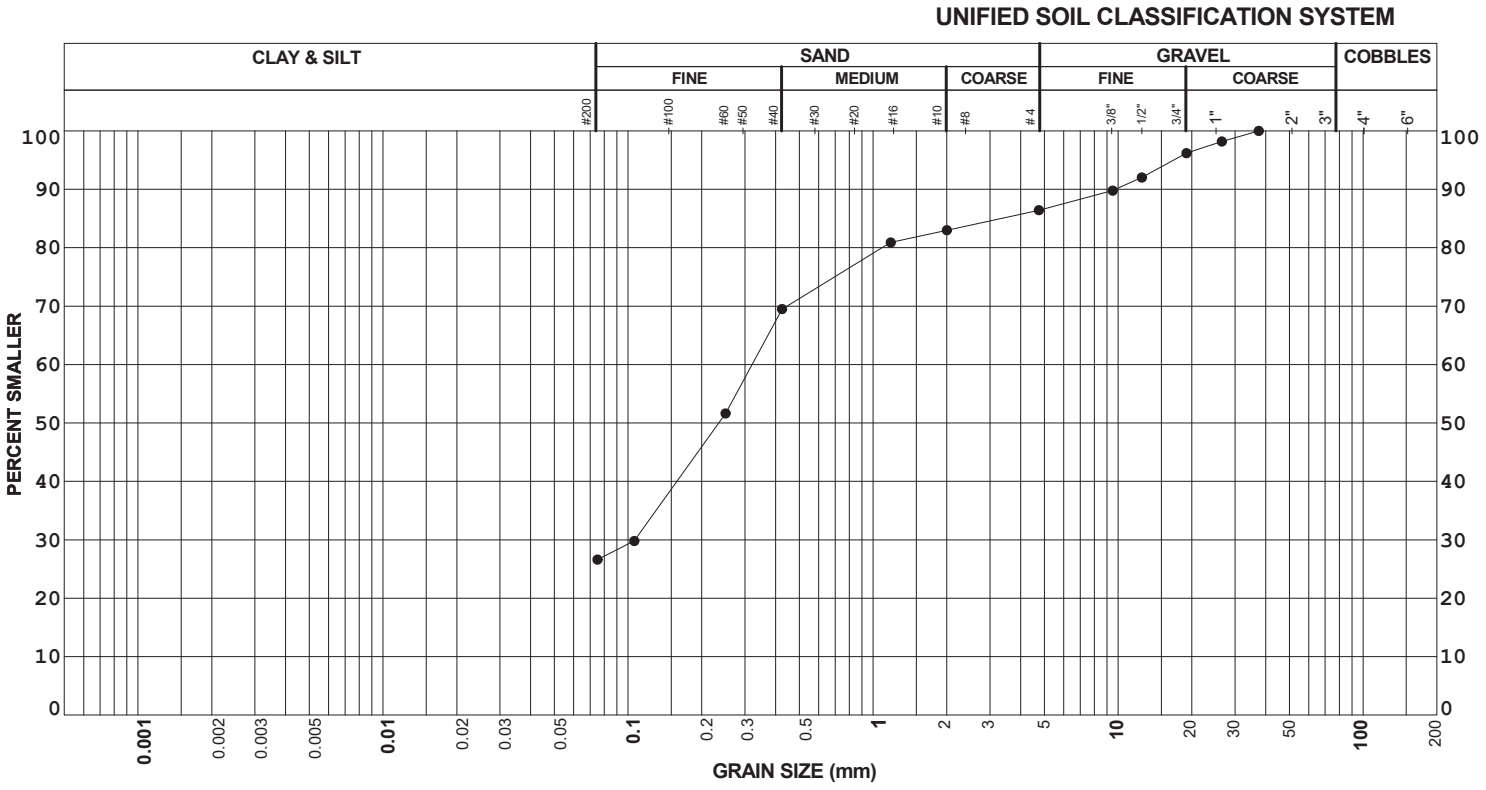
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-BR15-2	DS-7	4.20	14	60	26		

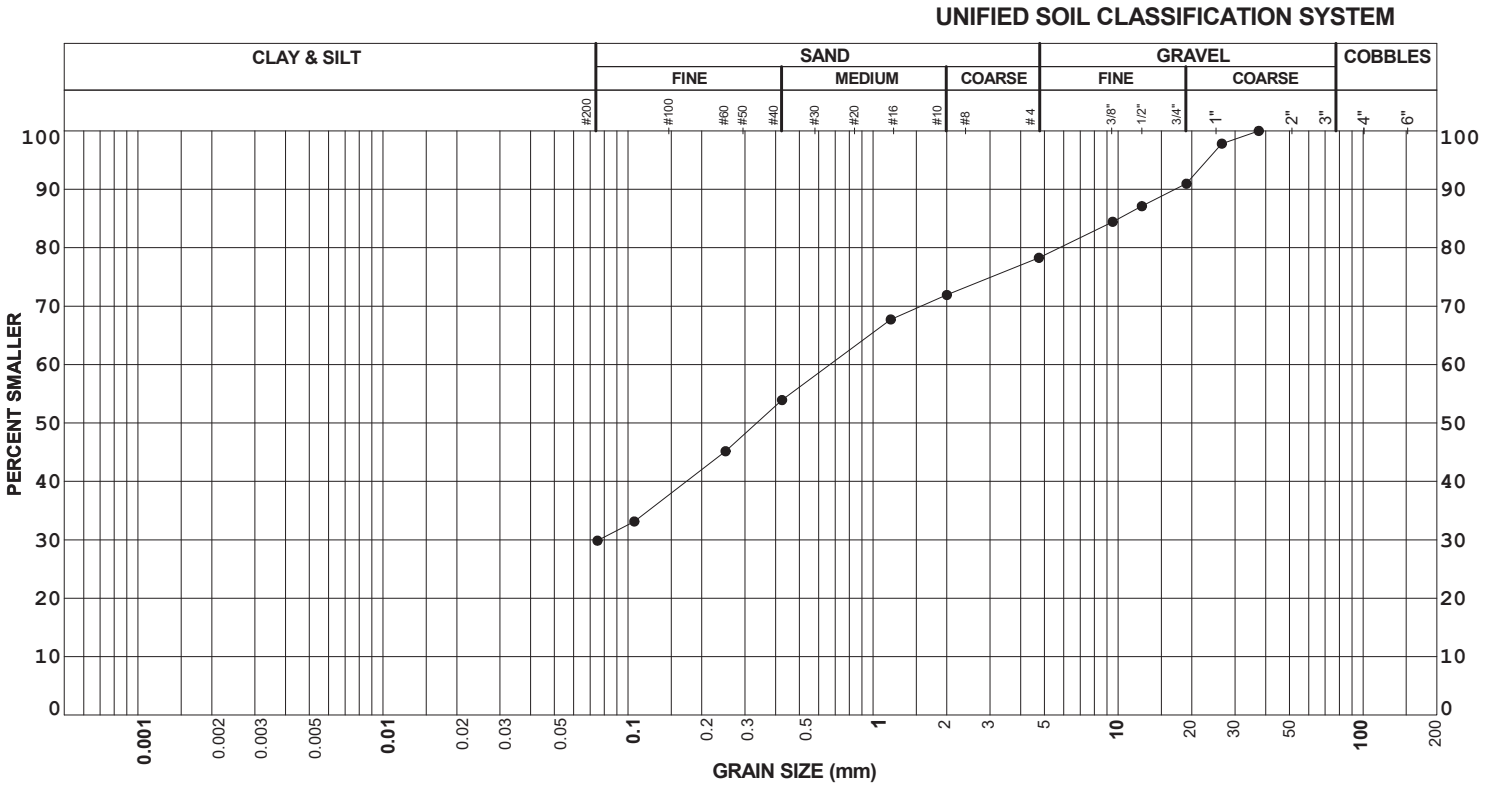
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-BR15-2	DS-8	5.80	22	48	30		

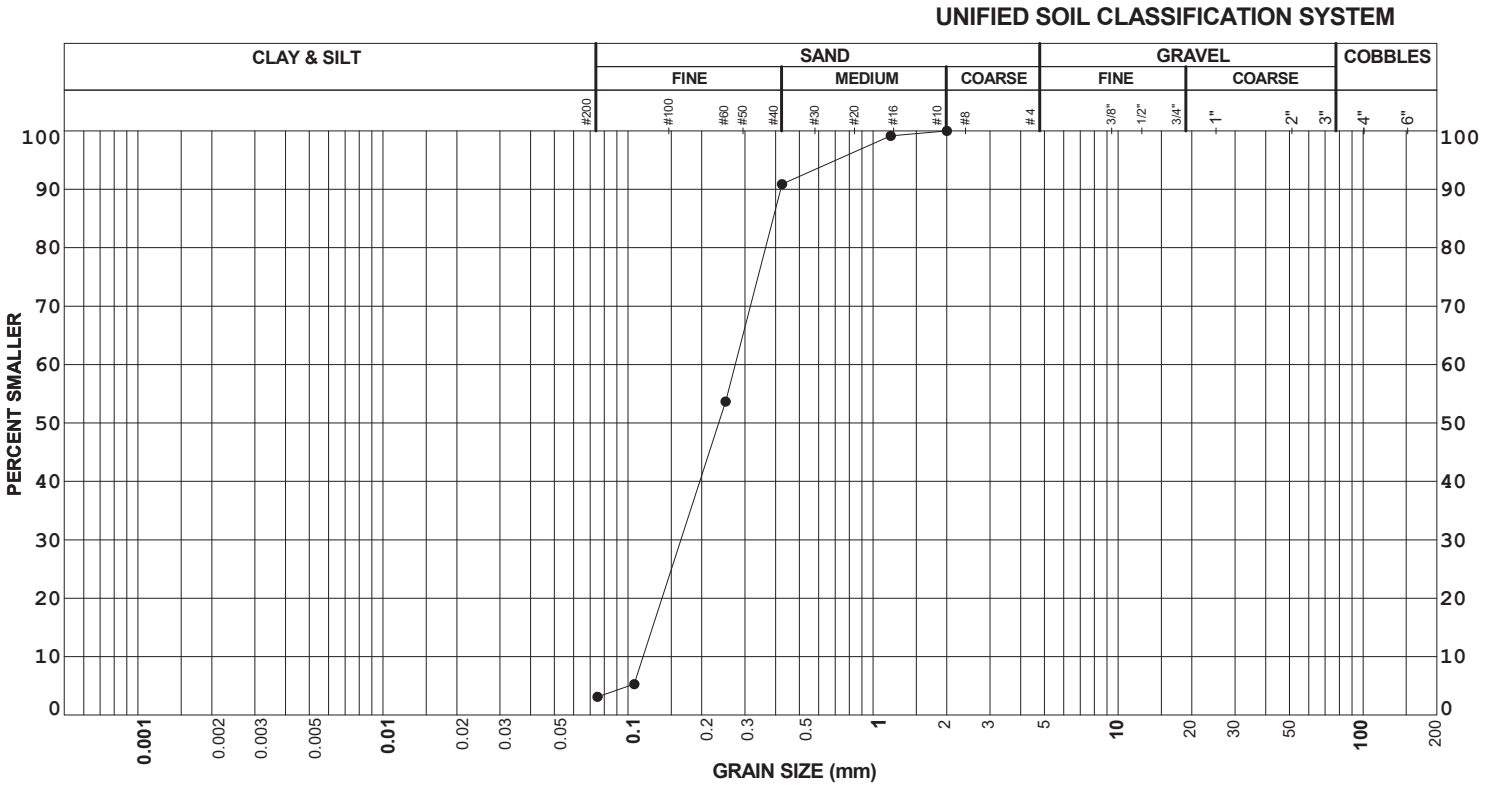
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-BR70-1	DS-2	2.60	0	97	3		

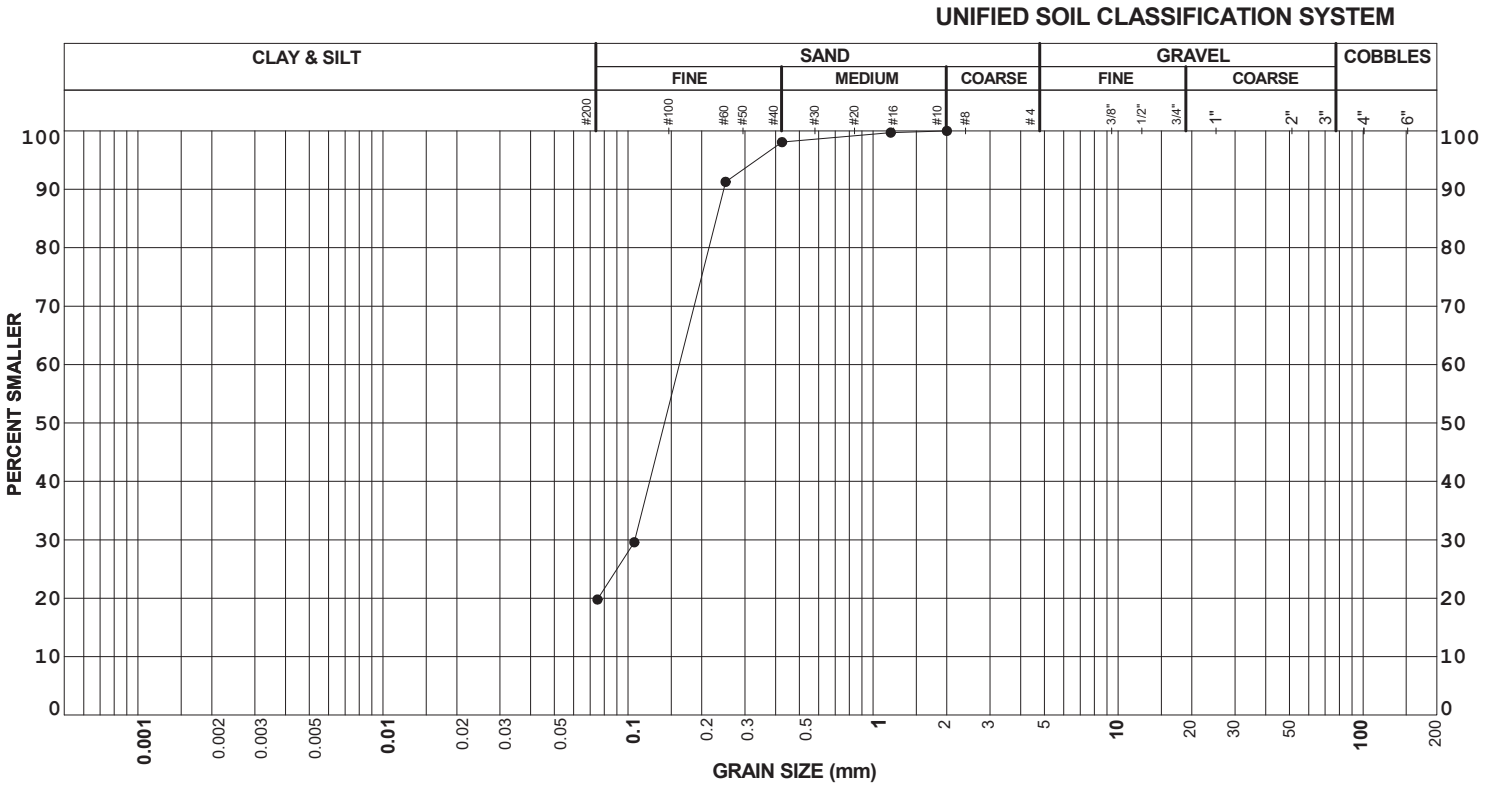
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-BR70-1	DS-4	6.80	0	80	20		

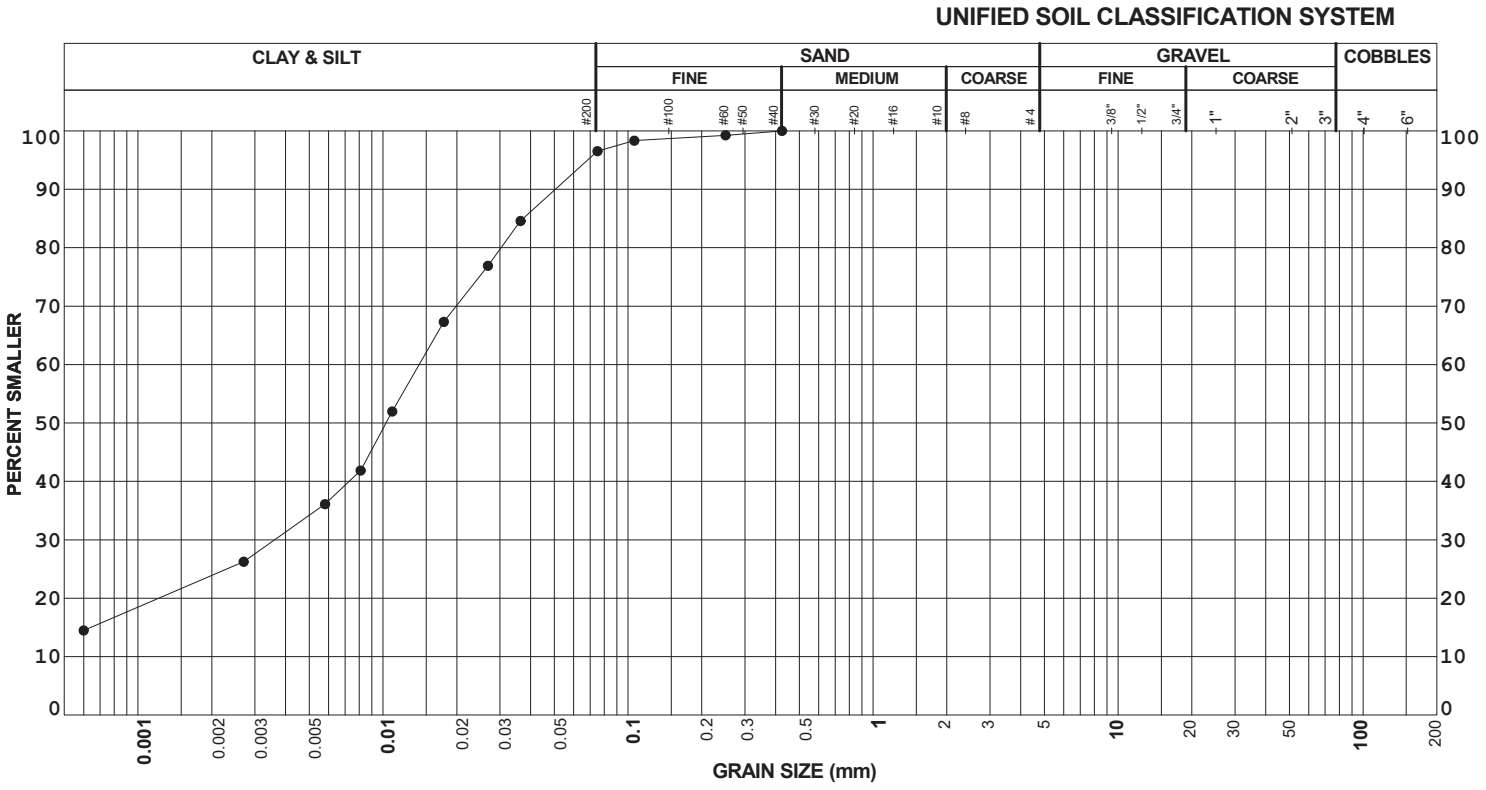
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-BR70-1	DS-5	9.44	0	3	97		

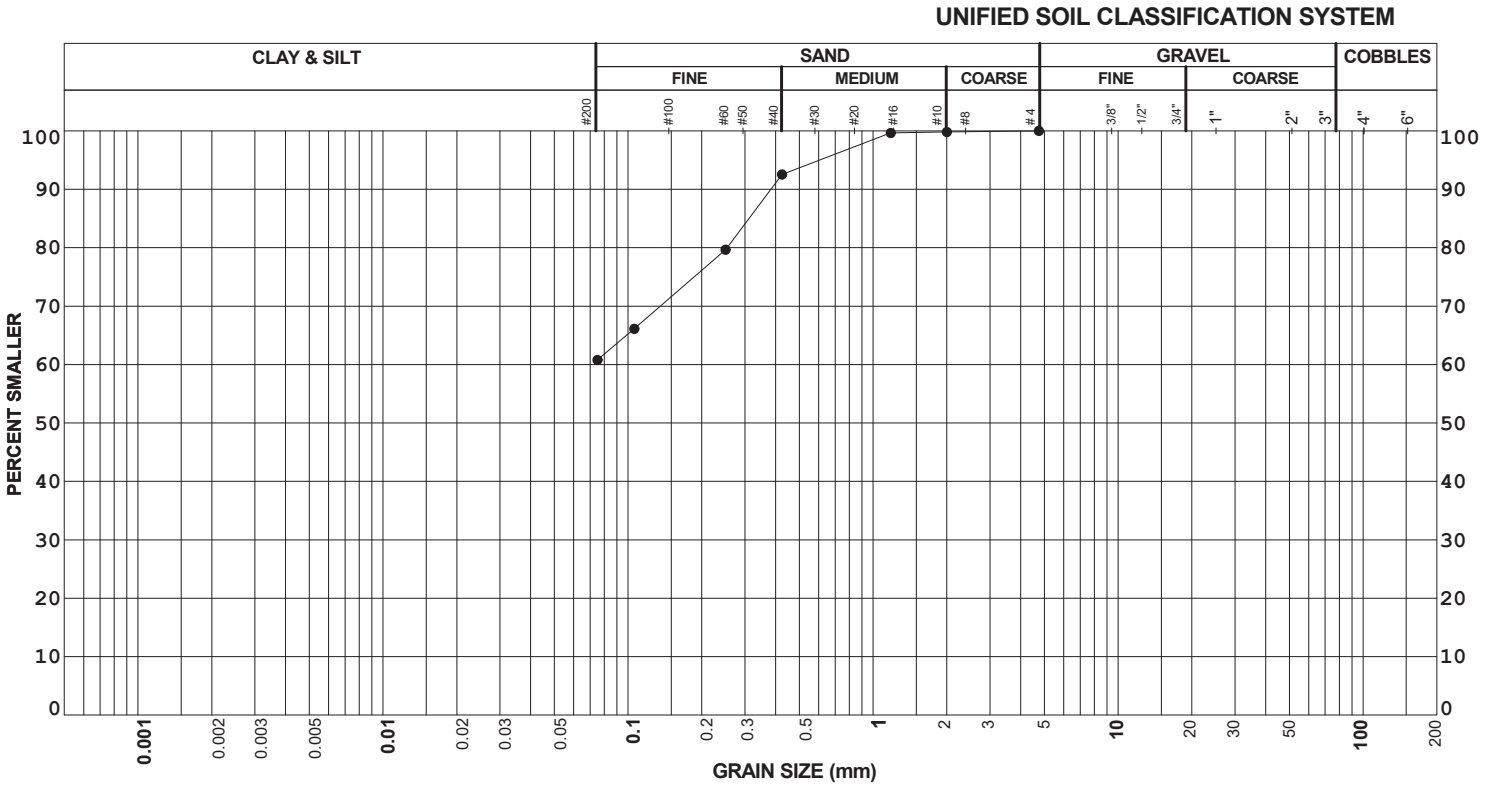
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-BR70-1	DS-6	11.30	0	39	61		

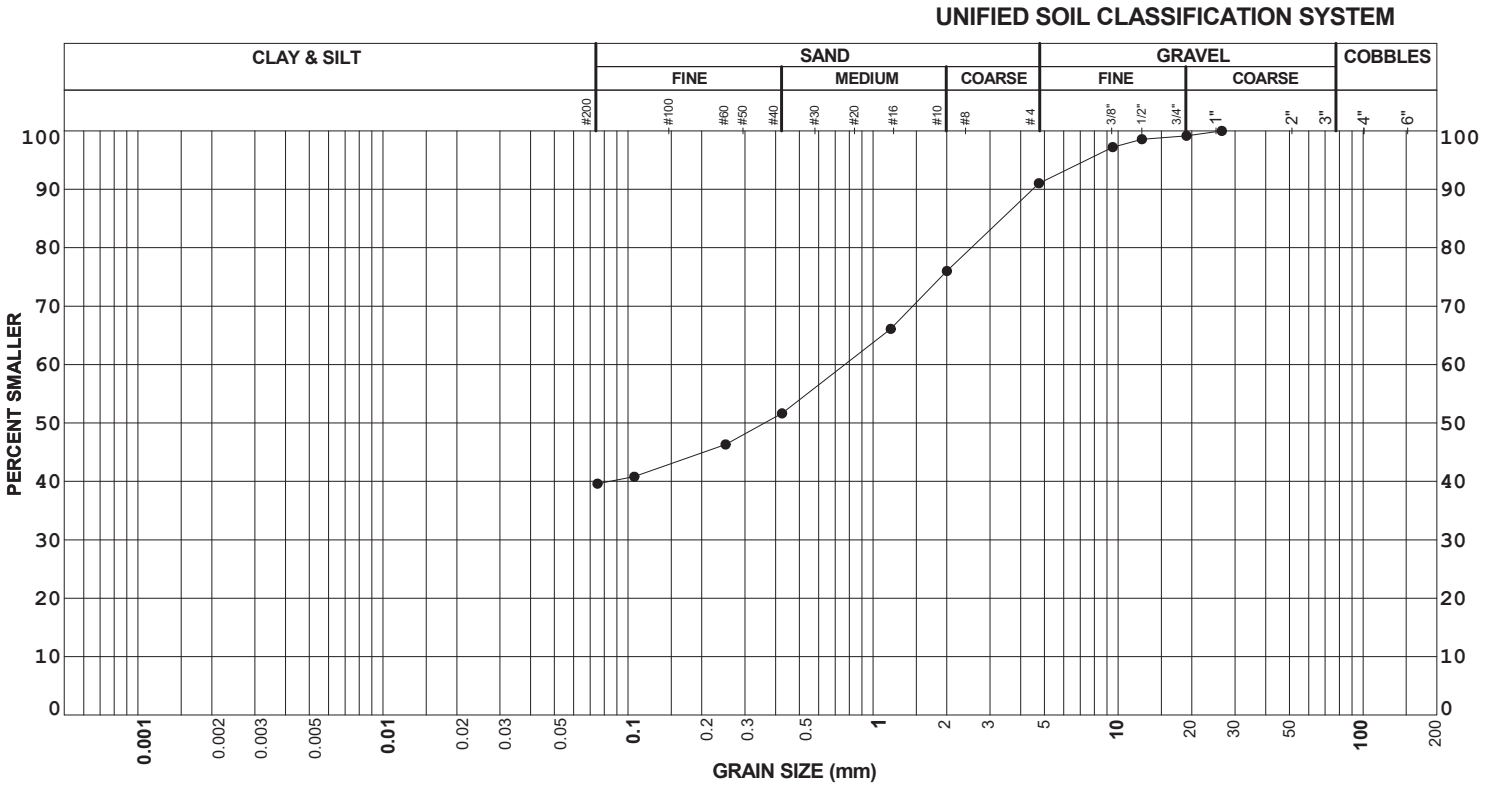
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-BR70-1	DS-8	14.60	9	51	40		

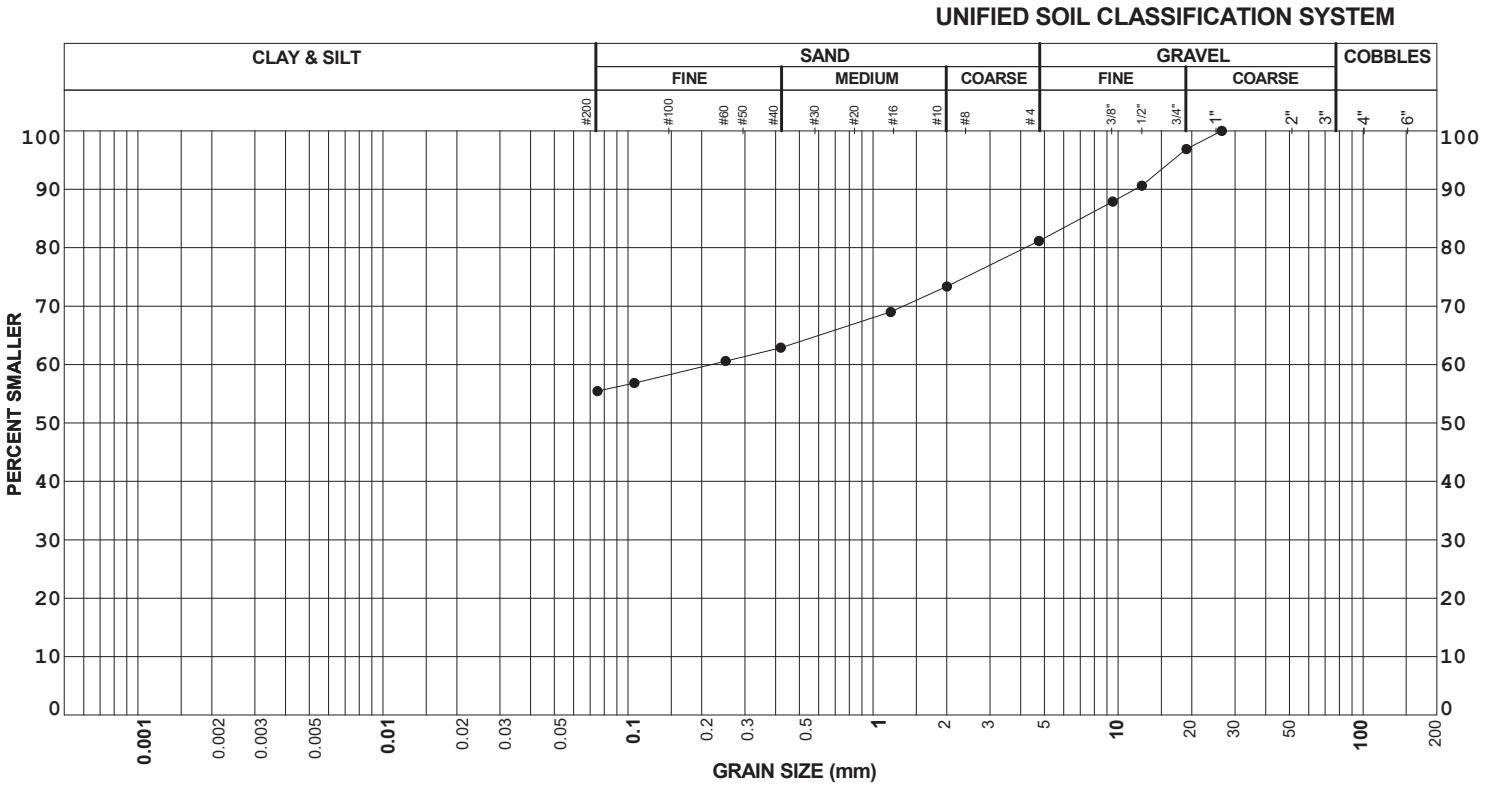
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-BR70-1	DQ-9	16.50	19	26	55		

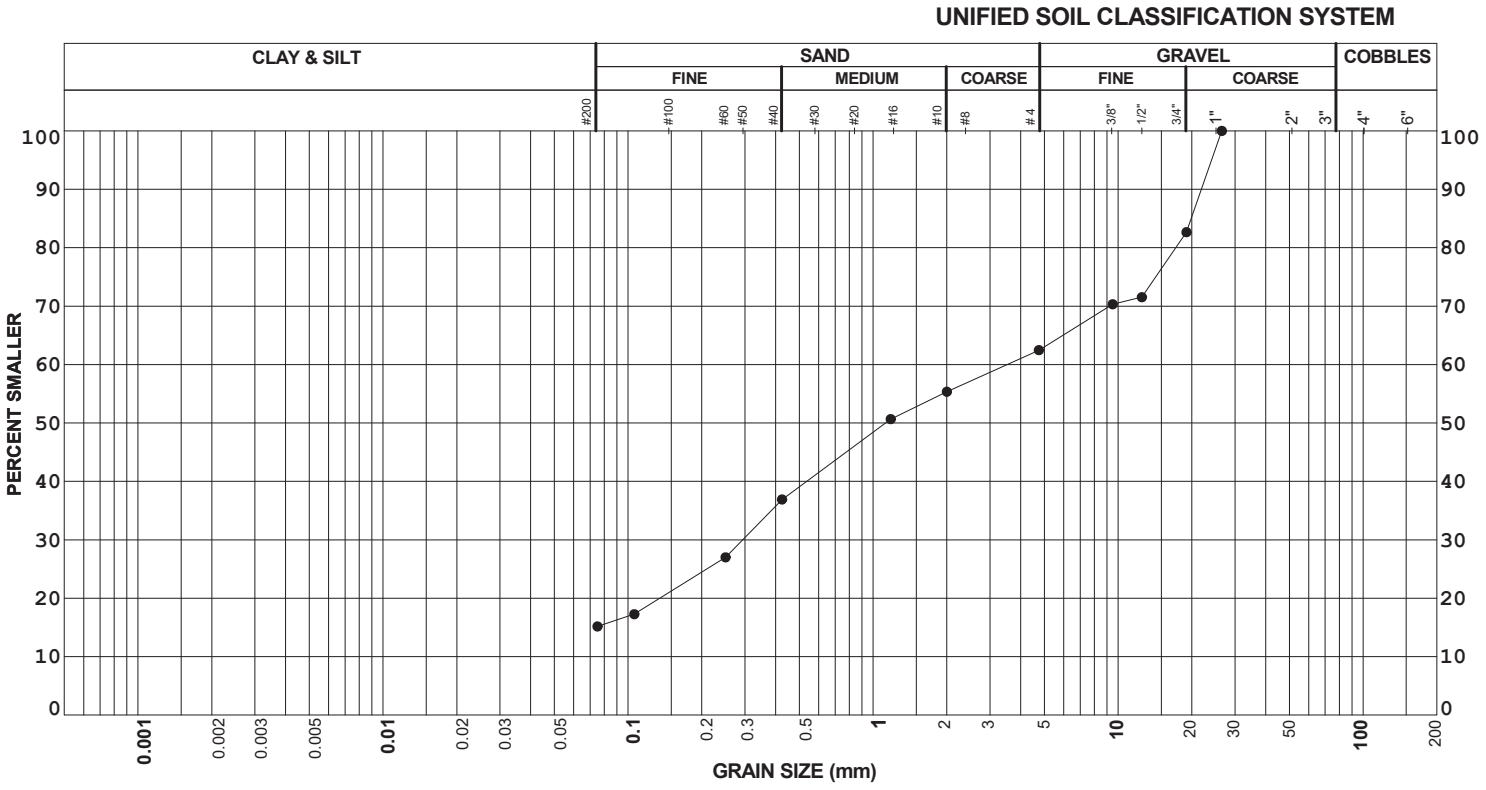
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-BR70-2	DS-1	0.80	38	47	15		

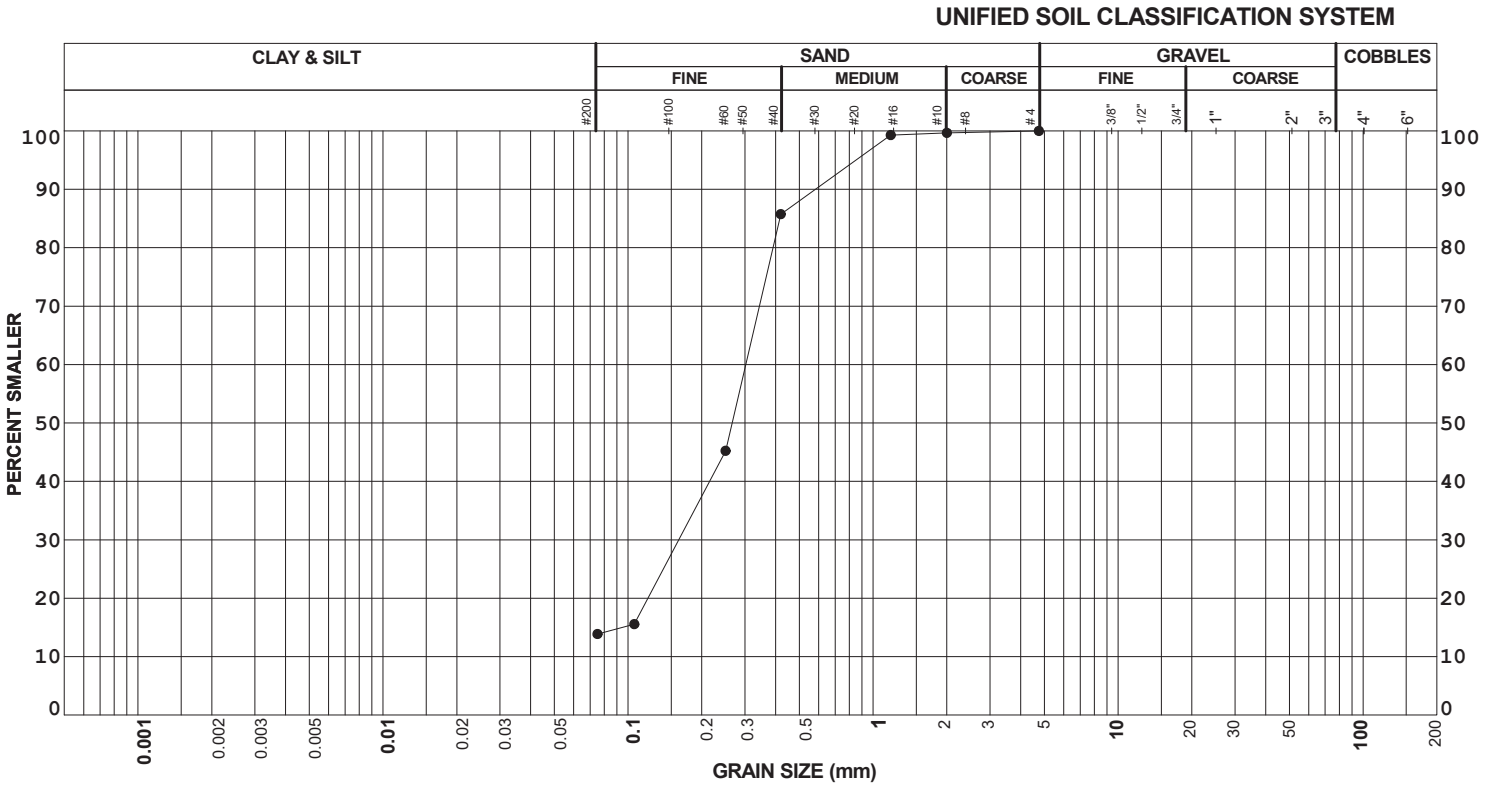
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project



BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-BR70-2	DQ-1	1.20	0	86	14		

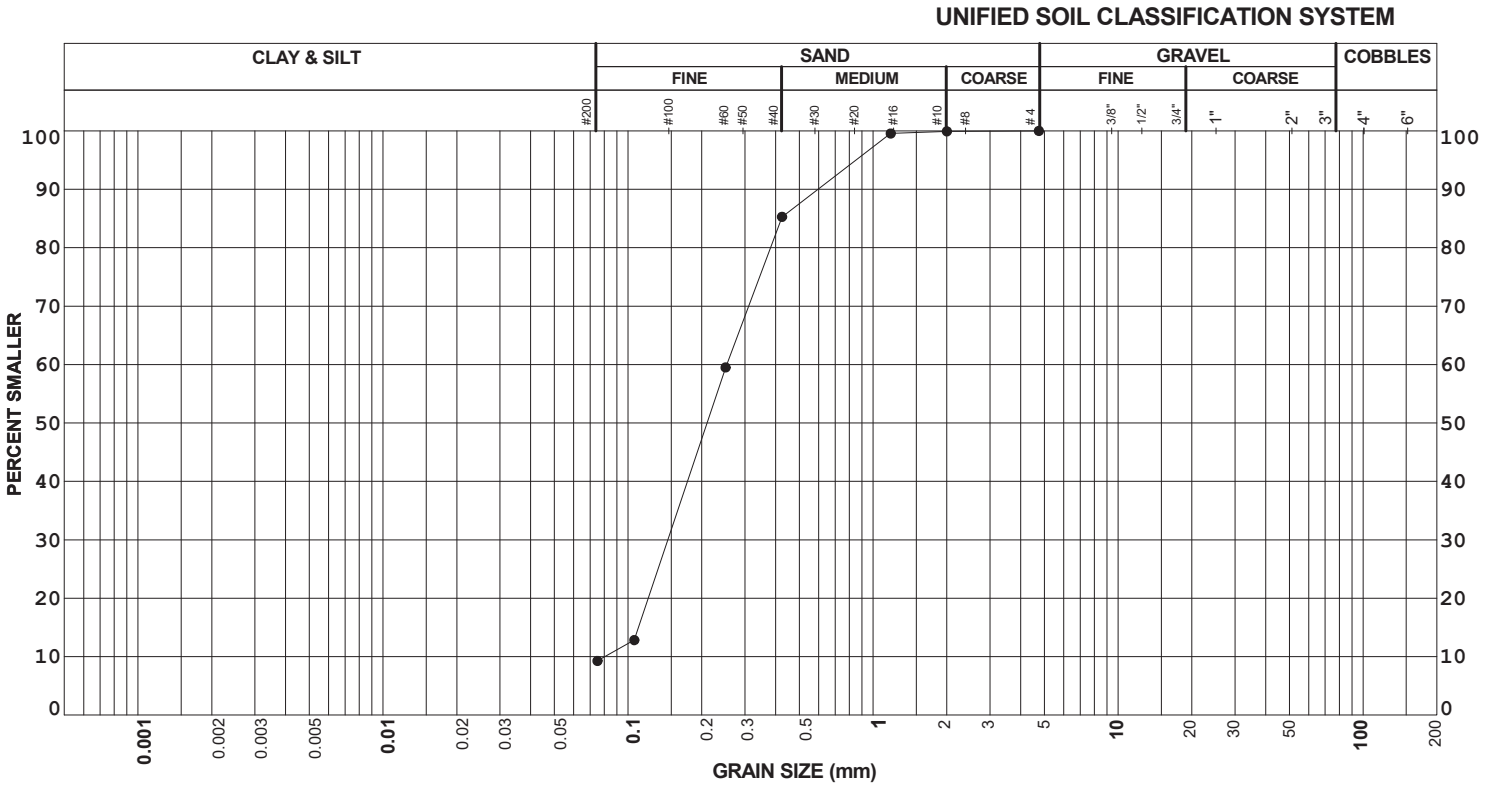
REMARKS:

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project



REMARKS:

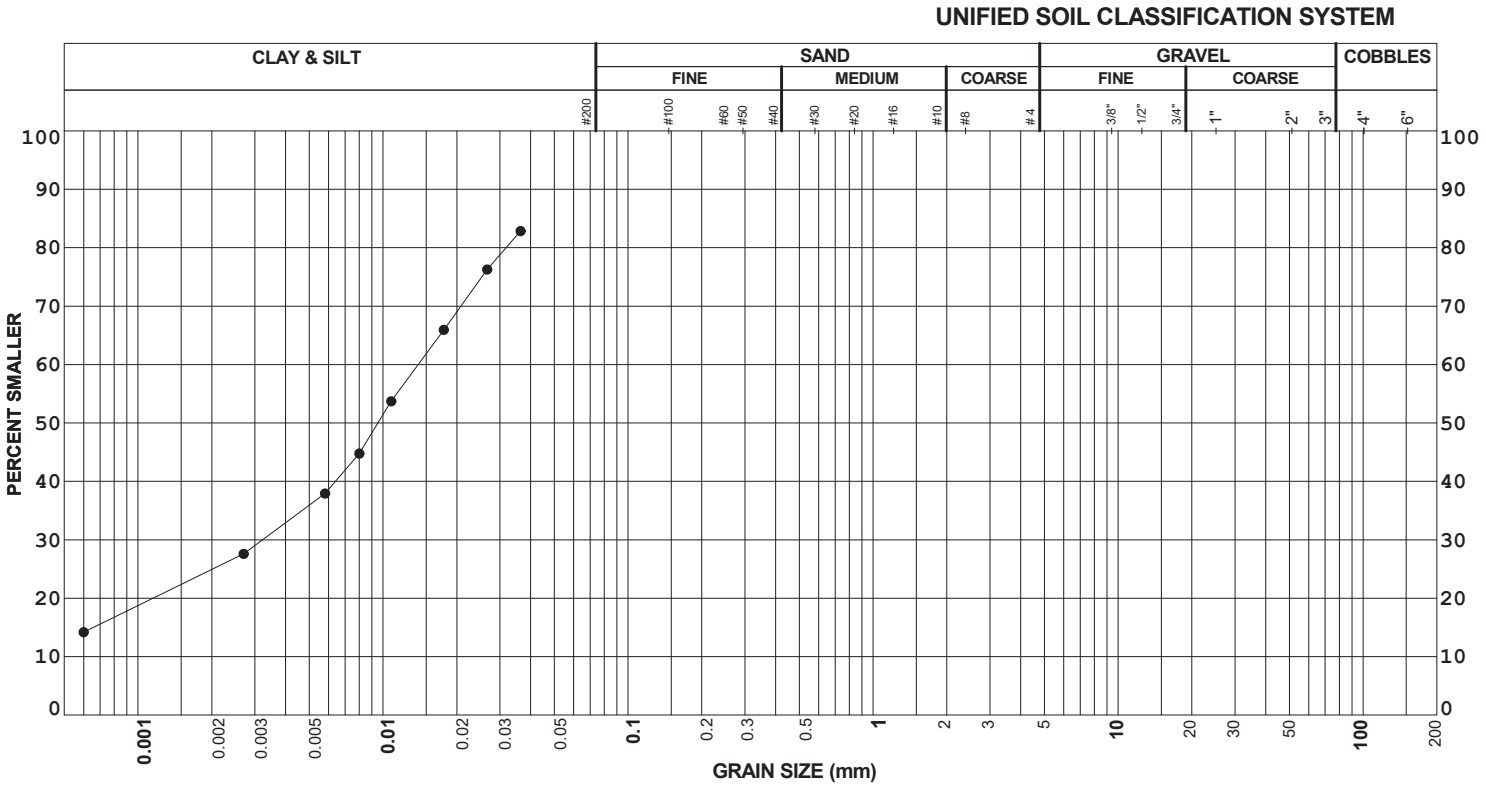
BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-BR70-2	DS-2	3.20	0	91	9		

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project



REMARKS:

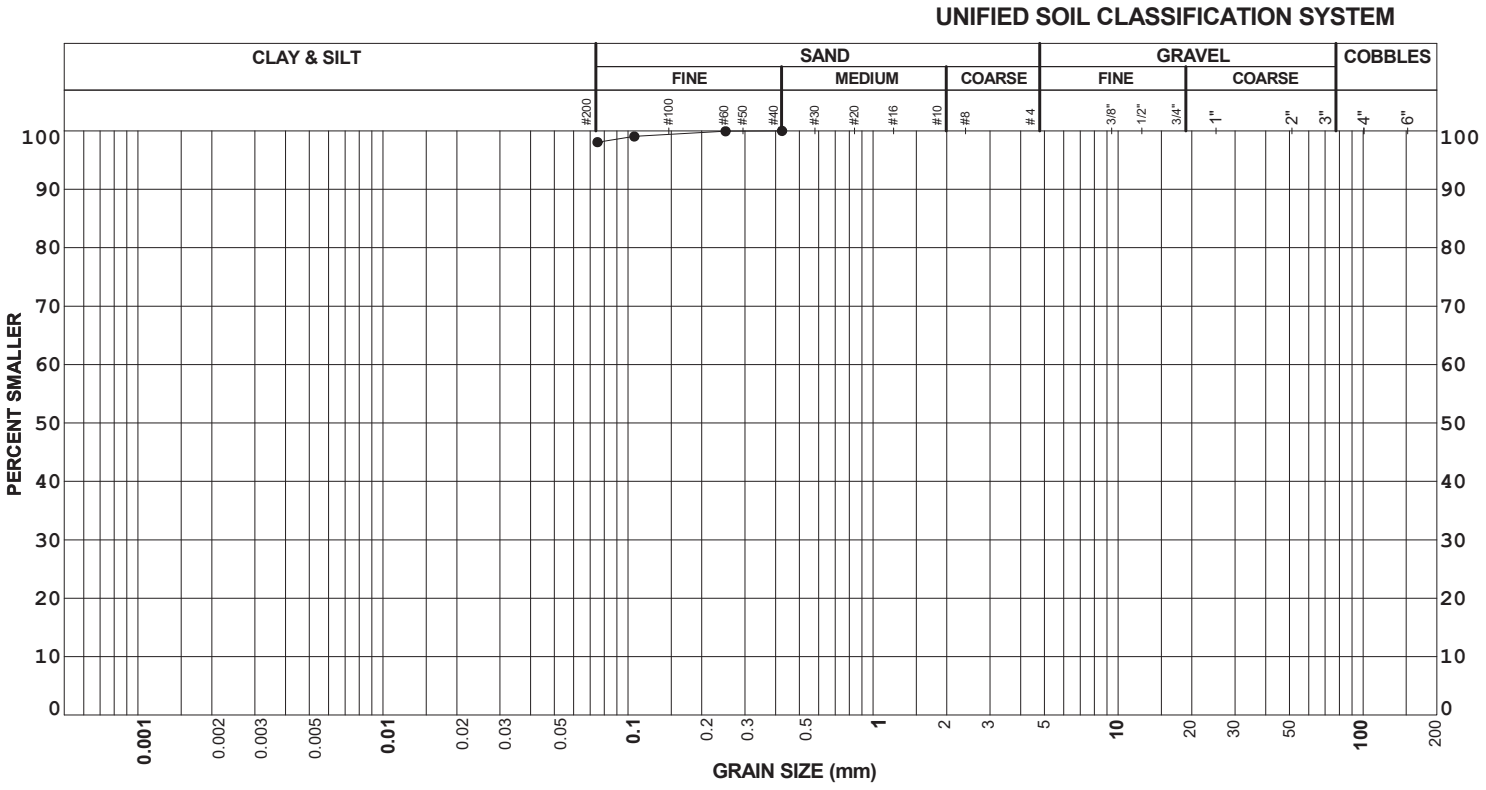
BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-BR70-2	DQ-3	9.50					

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project



REMARKS:

BOREHOLE	SAMPLE	DEPTH	GRAVEL (%)	SAND (%)	FINES (%)	LL (%)	PI (%)
● BH18-BR70-2	DS-5	19.60	0	2	98		

GRAIN SIZE DISTRIBUTION

Baffinland Iron Mine

HATCH

Project

Pore Water Extraction and Determination of Soluble Salt Content of Soils by Refractometer

ASTM D4542-15

HATCH Geotechnical Laboratory

Date:	December 17, 2017	Baffinland Iron Mines Corporation
Project Number:	H/353004	2275 Upper Middle Rd, Oakville Ontario.
Project:	**Mary River Expansion Project**	**Attention:**

Sample	**As Listed Below**
Source	**BH17-BR86- 2 – Km 86 Rail Bridge N/W Abutment**

Sample I.D	Depth (m)	Salinity Scale (ppt)	Notes
BLANK	NA	0.0	Distilled Water
DQ1	1.00	1.0	
DQ2	2.00	1.0	
DQ4	5.00	1.0	
DQ5	10.00	1.0	
DQ6	11.30	1.0	
BLANK	NA	0.0	Distilled Water
DQ7	20.00	1.0	
DQ8	24.00	1.0	
DQ11	36.40	4.0	
BLANK	NA	0.0	Distilled Water

Comments: Tested with EXTECH Model RF20 Refractometer with automatic temperature compensation.

Reported by: R. Serluca, Lab Tech., Dec. 17, 2017

Name, Title, Date

Reviewed by: W. Hoyle, Feb.16, 2018

Name. Title. Date

Notice: the test data given herein pertain to the sample provided, and may not be applicable to material from other production zones/periods. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

Pore Water Extraction and Determination of Soluble Salt Content of Soils by Refractometer

ASTM D4542-15

HATCH Geotechnical Laboratory

Date:	December 17, 2017	Baffinland Iron Mines Corporation
Project Number:	H/353004	2275 Upper Middle Rd, Oakville Ontario.
Project:	**Mary River Expansion Project**	**Attention:**

Sample	**As Listed Below**
Source	**BH17- BR86 - 3 – Km 86 Rail Bridge S/E Abutment**

Sample I.D	Depth (m)	Salinity Scale (ppt)	Notes
BLANK	NA	0.0	Distilled Water
DQ1	1.00	1.0	
DQ2	2.00	1.0	
DQ3	3.00	1.0	
DQ4	5.00	1.0	
BLANK	NA	0.0	Distilled Water
DQ5	8.00	1.0	
DQ6	12.00	1.0	
DQ8	30.00	1.0	
BLANK	NA	0.0	Distilled Water

Comments: Tested with EXTECH Model RF20 Refractometer with automatic temperature compensation.

Reported by: R. Serluca, Lab Tech., Dec. 17, 2017

Name, Title, Date

Reviewed by: W. Hoyle, Feb. 16, 2018

Name. Title. Date

Notice: the test data given herein pertain to the sample provided, and may not be applicable to material from other production zones/periods. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

Pore Water Extraction and Determination of Soluble Salt Content of Soils by Refractometer

ASTM D4542-15

HATCH Geotechnical Laboratory

Date:	April 20, 2018	Baffinland Iron Mines
Project Number:	H/353004	2275 Upper Middle Rd, Oakville Ontario.
Project:	**Mary River Expansion Project**	**Attention:** G. Qu

Sample	**As Listed Below**
Source	**BH18-BR15-2 Milne Port**

Sample I.D	Depth (m)	Salinity Scale (ppt)	Notes
BLANK	NA	0.0	Distilled Water
DQ1	1.17	NA	Not enough moisture
DQ2	1.5	3.0	
DQ4	2.00	NA	Not enough moisture
DQ9	11.25	NA	Not enough moisture
BLANK	NA	0.0	Distilled Water

Comments: Tested with EXTECH Model RF20 Refractometer with automatic temperature compensation.

Reported by: P. Snable, G.I.T. April 20, 2018

Name, Title, Date

Reviewed by: G. Qu, July 10, 2018.

Name. Title. Date

Notice: the test data given herein pertain to the sample provided, and may not be applicable to material from other production zones/periods. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

Pore Water Extraction and Determination of Soluble Salt Content of Soils by Refractometer

ASTM D4542-15

HATCH Geotechnical Laboratory

Date:	June 10, 2018	Baffinland Iron Mines
Project Number:	H/353004	2275 Upper Middle Rd, Oakville Ontario.
Project:	**Mary River Expansion Project**	**Attention:** H. Ghiabi

Sample	**As Listed Below**
Source	**BH18-BR70-1**

Sample I.D	Depth (m)	Salinity Scale (ppt)	Notes
BLANK	NA	0.0	Distilled Water
DQ1	1.50	0.0	
DQ3	6.20	0.0	
BLANK	NA	0.0	Distilled Water

Comments: Tested with EXTECH Model RF20 Refractometer with automatic temperature compensation.

Reported by: R. Serluca, Lab Tech. June 10, 2018

Name, Title, Date

Reviewed by: G. Qu, July 10, 2018.

Name. Title. Date

Notice: the test data given herein pertain to the sample provided, and may not be applicable to material from other production zones/periods. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

Pore Water Extraction and Determination of Soluble Salt Content of Soils by Refractometer

ASTM D4542-15

HATCH Geotechnical Laboratory

Date:	June 10, 2018	Baffinland Iron Mines
Project Number:	H/353004	2275 Upper Middle Rd, Oakville Ontario.
Project:	**Mary River Expansion Project**	**Attention:** H. Ghiabi

Sample	**As Listed Below**
Source	**BH18-BR70-2**

Sample I.D	Depth (m)	Salinity Scale (ppt)	Notes
BLANK	NA	0.0	Distilled Water
DQ1	1.20	0.0	
DQ3	9.50	12.0	
BLANK	NA	0.0	Distilled Water

Comments: Tested with EXTECH Model RF20 Refractometer with automatic temperature compensation.

Reported by: R. Serluca, Lab Tech. June 10, 2018

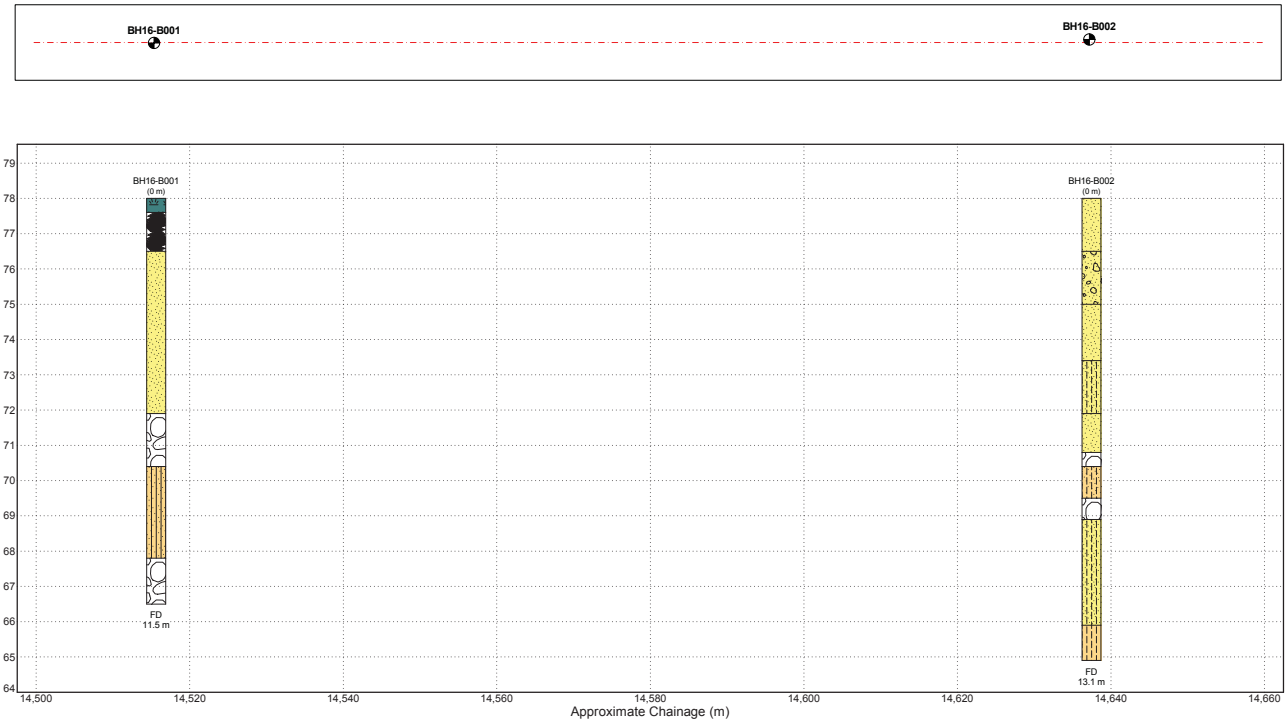
Name, Title, Date

Reviewed by: G. Qu, July 10, 2018.

Name. Title. Date

Notice: the test data given herein pertain to the sample provided, and may not be applicable to material from other production zones/periods. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.

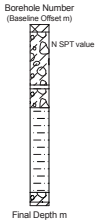
Appendix E
Fence Diagrams



MAP KEY

- BH03 — INVESTIGATION ON SECTION
- TP03 — INVESTIGATION OFF SECTION
- SECTION LINES

POST LEGEND

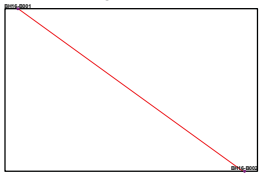


STRATAGRAPHIC BOUNDARIES

MATERIAL GRAPHICS

- PEAT
- Ice
- Poorly-graded SAND
- BOULDERS
- Elastic Sandy SILT
- Poorly-graded Gravelly SAND
- Silty SAND
- Sandy SILT
- SILT

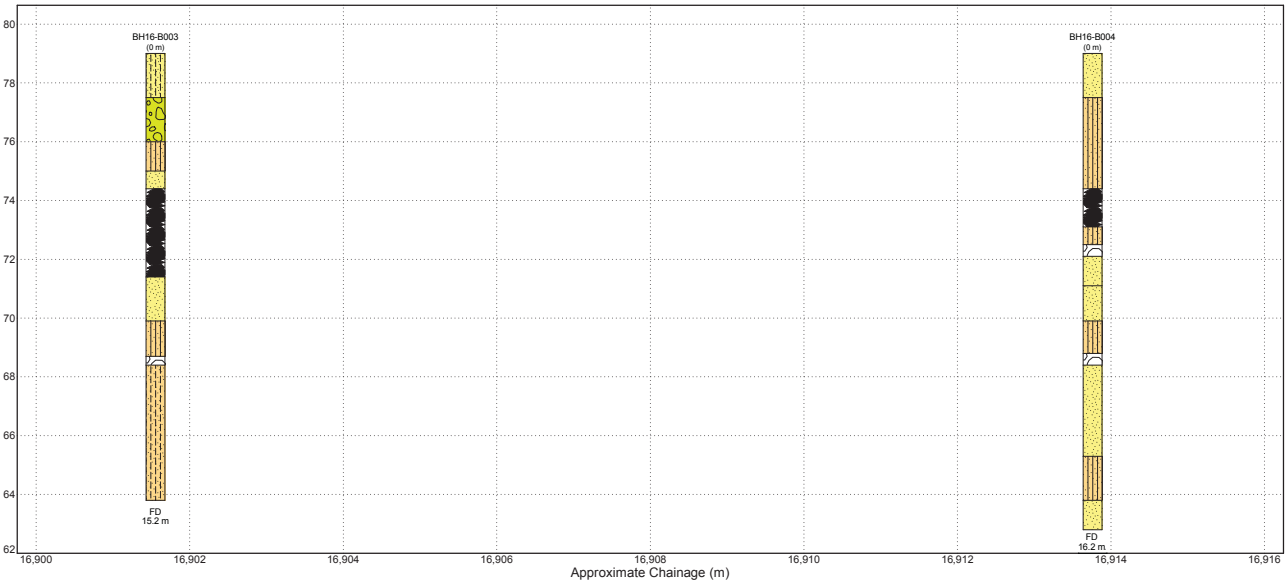
SITE MAP



H 1:492
0 5 10 15 20 25m
V 1:107
0 1 2 3 4 5m
Coord.System: UTM Zone 17 Height Datum: NAD83

HATCH

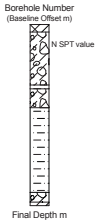
CLIENT Baffinland Iron Mines		PROJECT Mary River Expansion Study Stage 2	
DRAWN AB/CH	DATE 5/21/2017	TITLE BRIDGE No 1 FENCE DIAGRAM (1 OF 2)	
CHECKED WH	DATE 5/22/2017		
SCALE H 1:492 V 1:107 VE=5X		PROJECT No H352034	FIGURE No E1



MAP KEY

- BH03 — INVESTIGATION ON SECTION
- TP03 — INVESTIGATION OFF SECTION
- SECTION LINES

POST LEGEND

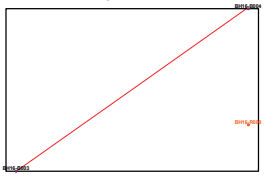


STRATAGRAPHIC BOUNDARIES

MATERIAL GRAPHICS

- Silty SAND
- Poorly-graded GRAVEL
- Elastic Sandy SILT
- Poorly-graded SAND
- Ice
- BOULDERS
- Sandy SILT

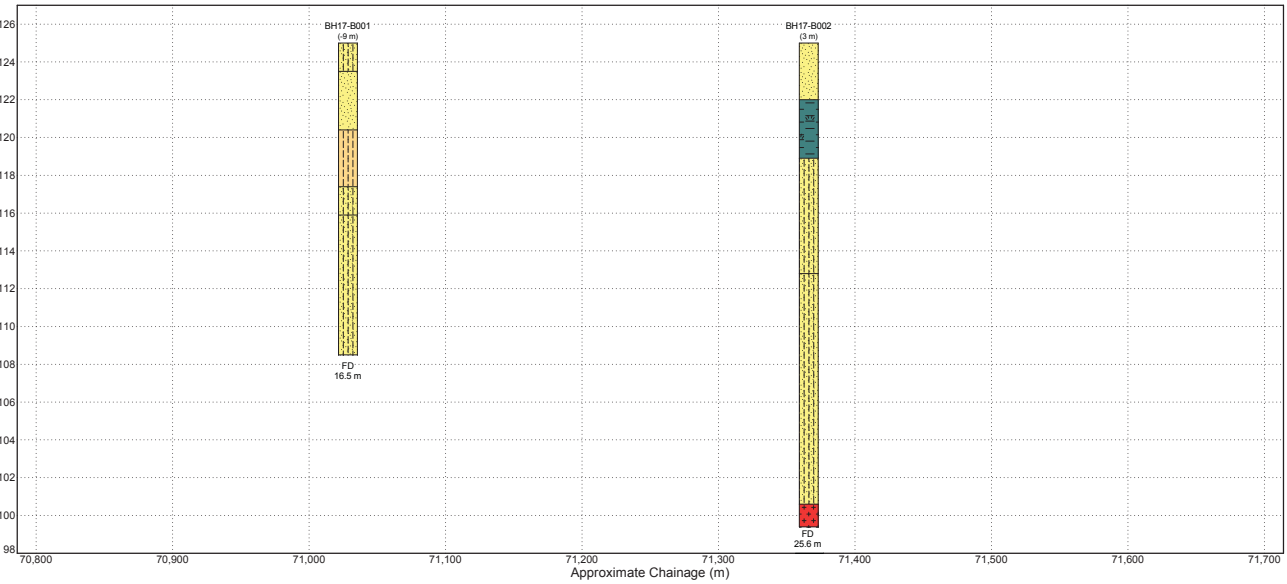
SITE MAP



H 1:49
0 0.5 1 1.5 2 2.5m
V 1:129
0 1 2 3 4 5m
Coord.System: UTM Zone 17 Height Datum: NAD83

HATCH

CLIENT Baffinland Iron Mines		PROJECT Mary River Expansion Study Stage 2	
DRAWN AB/CH	DATE 5/21/2017	TITLE BRIDGE No 1 FENCE DIAGRAM (2 OF 2)	
CHECKED WH	DATE 5/22/2017		
SCALE H 1:49 V 1:129 VE=0X		PROJECT No H352034	FIGURE No E2



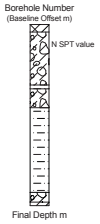
MAP KEY

BH03 INVESTIGATION ON SECTION

TP03 INVESTIGATION OFF SECTION

SECTION LINES

POST LEGEND

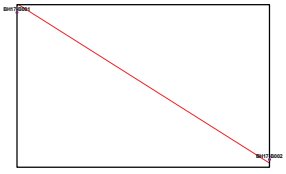


STRATAGRAPHIC BOUNDARIES

MATERIAL GRAPHICS

- Silty SAND
- Poorly-graded SAND
- SILT
- Organic SILT or CLAY
- Inferred Bedrock

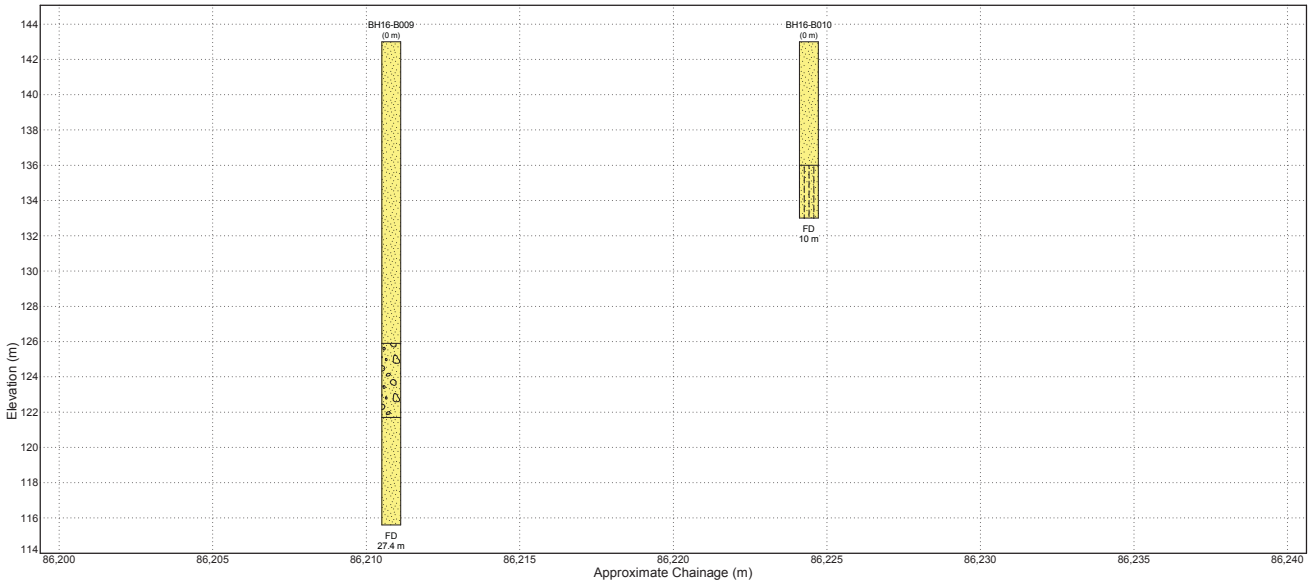
SITE MAP



H 1:2769
0 30 60 90 120 150m
V 1:200
0 2 4 6 8 10m
Coord.System: UTM Zone 17 Height Datum: NAD83

HATCH

CLIENT Baffinland Iron Mines		PROJECT Mary River Expansion Study Stage 2	
DRAWN AB/CH	DATE 5/21/2017	TITLE BRIDGE No 2 FENCE DIAGRAM	
CHECKED WH	DATE 5/22/2017		
SCALE H 1:2769 V 1:200 VE=14X		PROJECT No H352034	FIGURE No E3



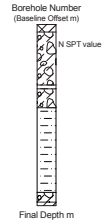
MAP KEY

BH03 INVESTIGATION ON SECTION

TP03 INVESTIGATION OFF SECTION

SECTION LINES

POST LEGEND



STRATAGRAPHIC BOUNDARIES

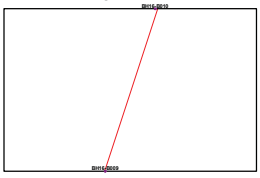
MATERIAL GRAPHICS

Poorly-graded SAND

Poorly-graded Gravelly SAND

Silty SAND

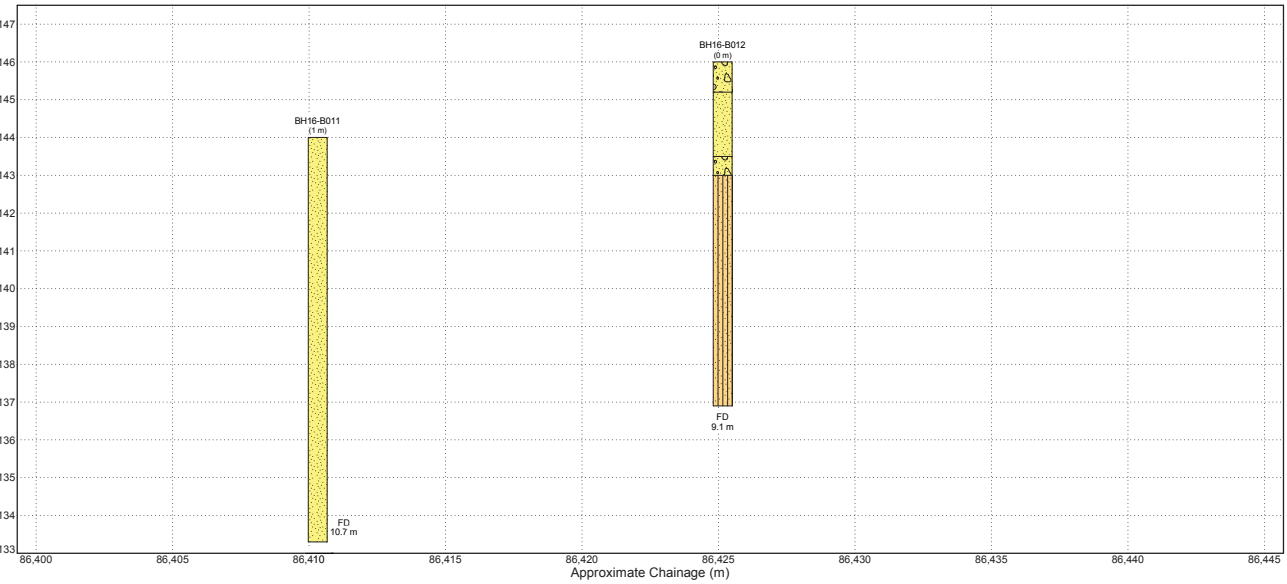
SITE MAP



H 1:123
0 1 2 3 4 5m
V 1:214
0 2 4 6 8 10m
Coord.System: UTM Zone 17 Height Datum: NAD83

HATCH

CLIENT Baffinland Iron Mines		PROJECT Mary River Expansion Study Stage 2	
DRAWN AB/CH	DATE 5/23/2017	TITLE BRIDGE No 3 FENCE DIAGRAM (1 OF 2)	
CHECKED WH	DATE 5/23/2017		
SCALE H 1:123 V 1:214 VE=1X		PROJECT No H352034	FIGURE No E4



MAP KEY

- BH03 — INVESTIGATION ON SECTION
- TP03 — INVESTIGATION OFF SECTION
- SECTION LINES

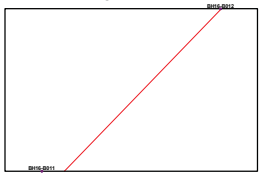
POST LEGEND

STRATAGRAPHIC BOUNDARIES

MATERIAL GRAPHICS

- Poorly-graded SAND
- Poorly-graded Gravelly SAND
- Elastic Sandy SILT

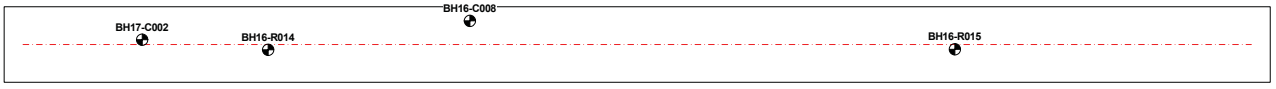
SITE MAP

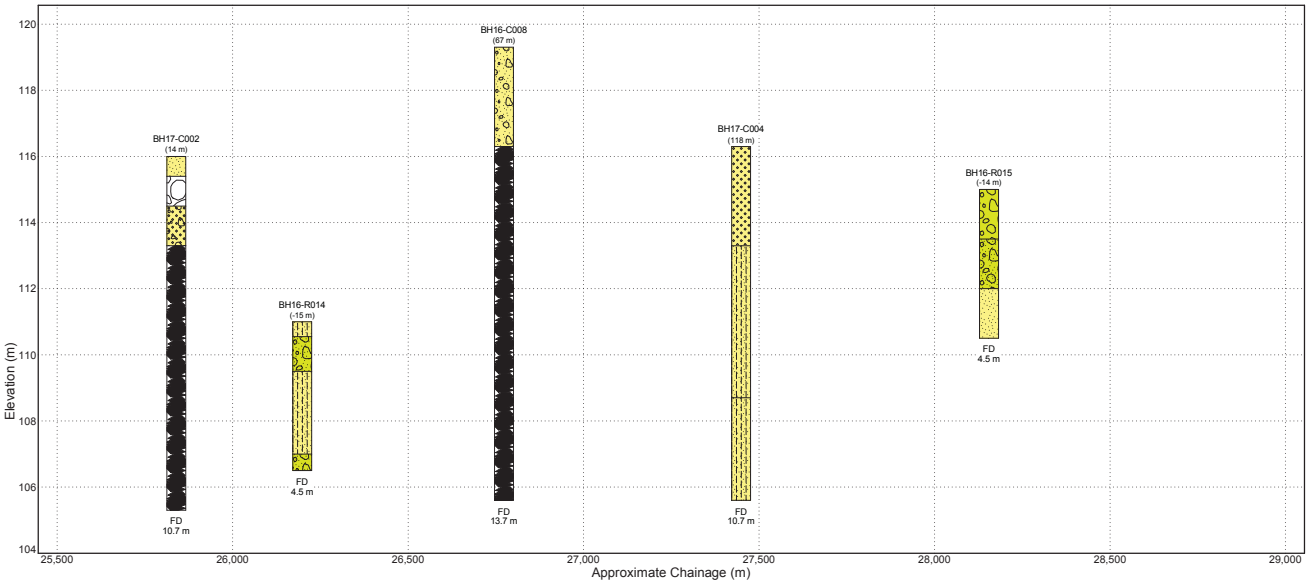


H 1:138
0 1 2 3 4 5m
V 1:100
0 1 2 3 4 5m
Coord.System: UTM Zone 17 Height Datum: NAD83

HATCH

CLIENT Baffinland Iron Mines		PROJECT Mary River Expansion Study Stage 2	
DRAWN AB/CH	DATE 5/23/2017	TITLE BRIDGE No 3 FENCE DIAGRAM (2 OF 2)	
CHECKED WH	DATE 5/23/2017		
SCALE H 1:138 V 1:100 VE=1X		PROJECT No H352034	FIGURE No E5

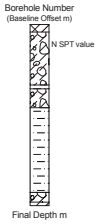




MAP KEY

- BH03 — INVESTIGATION ON SECTION
- TP03 — INVESTIGATION OFF SECTION
- SECTION LINES

POST LEGEND

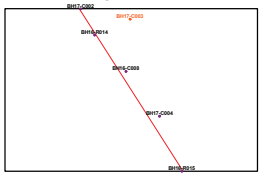


STRATAGRAPHIC BOUNDARIES

MATERIAL GRAPHICS

- Poorly-graded Gravelly SAND
- Poorly-graded SAND
- Ice
- BOULDERS
- Silty SAND
- Well-graded Gravelly SAND
- Poorly-graded Sandy GRAVEL
- Well-graded SAND
- Poorly-graded GRAVEL

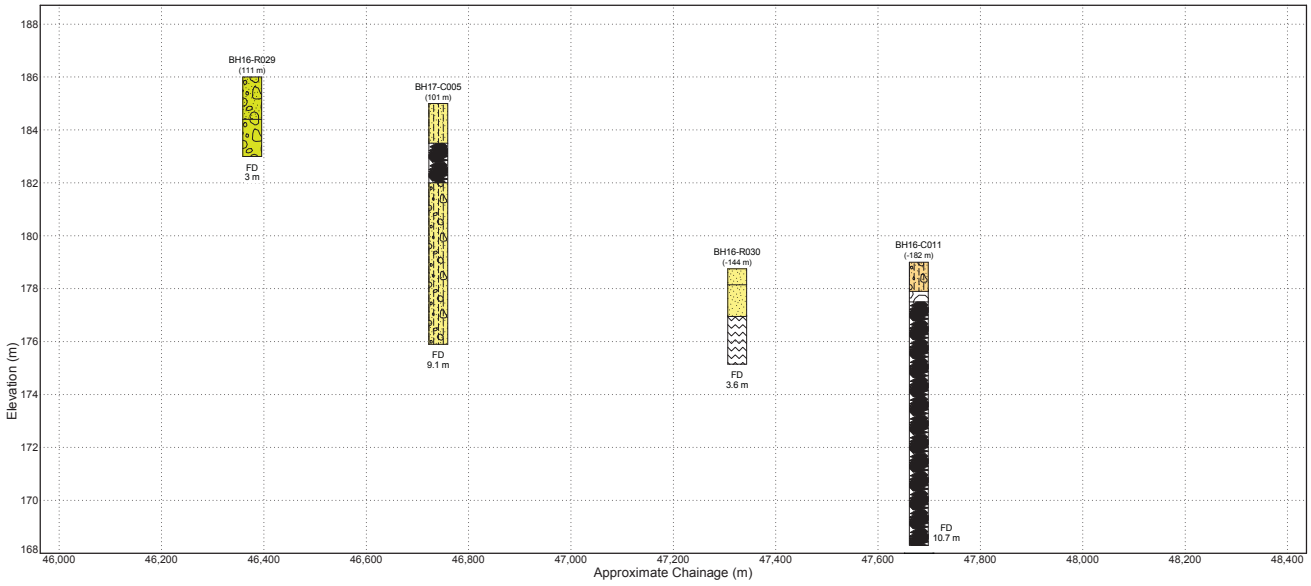
SITE MAP



H 1:10769
0 100 200 300 400 500m
V 1:114
0 1 2 3 4 5m
Coord.System: UTM Zone 17 Height Datum: NAD83

HATCH

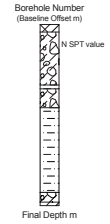
CLIENT Baffinland Iron Mines		PROJECT Mary River Expansion Study Stage 2	
DRAWN AB/CH	DATE 6/21/2017	TITLE ICE RICH AREA 1	
CHECKED WH	DATE 6/21/2017		
SCALE H 1:10769 V 1:114 VE=94X		PROJECT No H352034	FIGURE No E6



MAP KEY

- BH03 — INVESTIGATION ON SECTION
- TP03 — INVESTIGATION OFF SECTION
- SECTION LINES

POST LEGEND

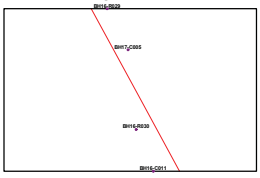


STRATAGRAPHIC BOUNDARIES

MATERIAL GRAPHICS

- Gravelly Sandy SILT
- BOULDERS
- Ice
- Poorly-graded Sandy GRAVEL
- Poorly-graded GRAVEL
- Poorly-graded SAND
- Pulverized Rock
- Silty SAND
- Silty SAND with Gravel

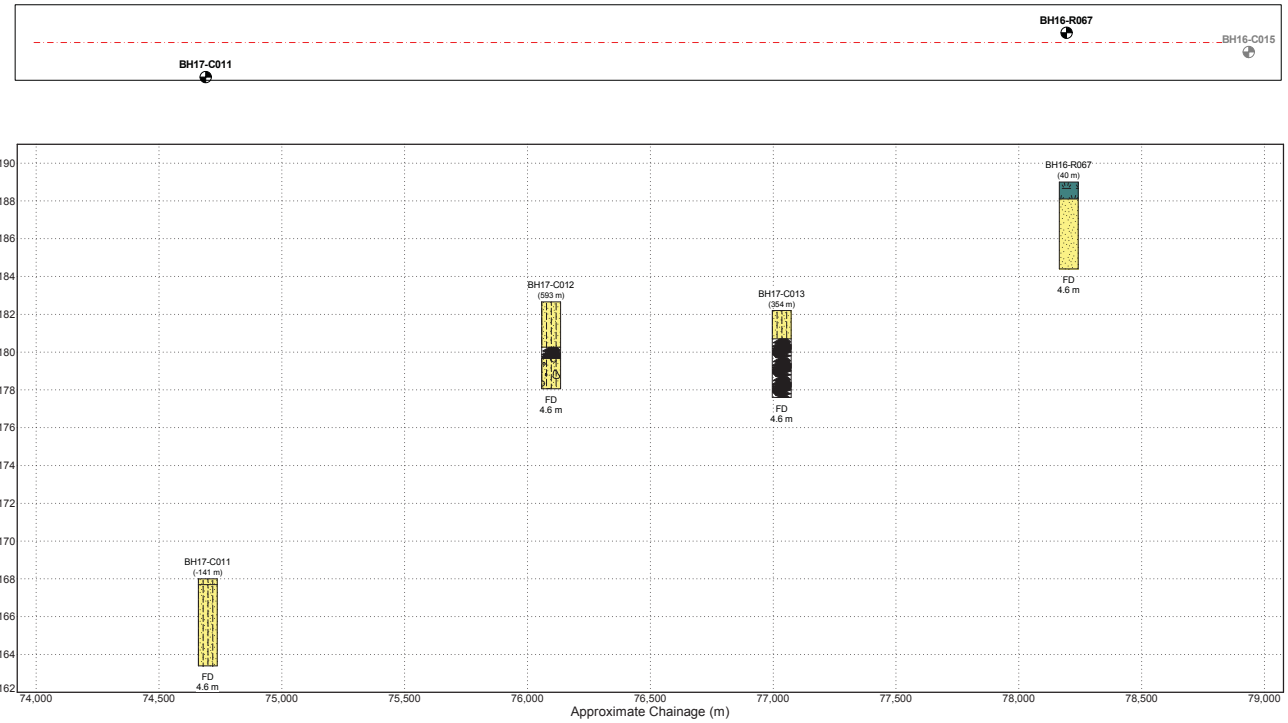
SITE MAP



H 1:7385
0 80 160 240 320 400m
V 1:143
0 1 2 3 4 5m
Coord.System: UTM Zone 17 Height Datum: NAD83

HATCH

CLIENT Baffinland Iron Mines		PROJECT Mary River Expansion Study Stage 2	
DRAWN AB/CH	DATE 6/21/2017	TITLE ICE RICH AREA 2	
CHECKED WH	DATE 6/21/2017		
SCALE H 1:7385 V 1:143 VE=52X		PROJECT No H352034	FIGURE No E7



MAP KEY

- BH03 — INVESTIGATION ON SECTION
- TP03 — INVESTIGATION OFF SECTION
- SECTION LINES

POST LEGEND

Borehole Number
(Baseline Offset m)

N SPT value

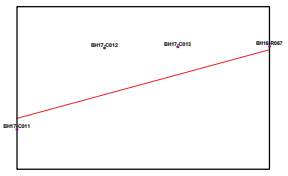
Final Depth m

STRATAGRAPHIC BOUNDARIES

MATERIAL GRAPHICS

- PEAT
- Poorly-graded SAND
- Silty SAND
- Ice
- Silty SAND with Gravel

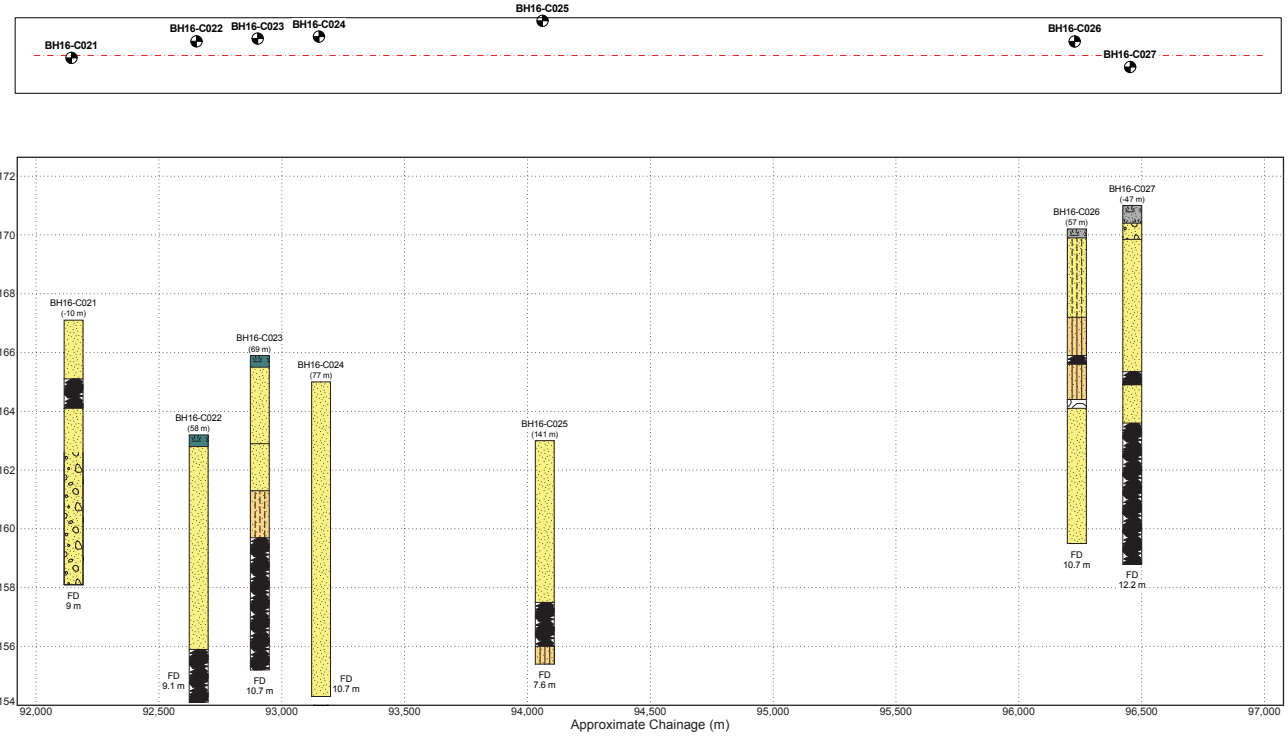
SITE MAP



H 1:15385
0 150 300 450 600 750m
V 1:200
0 2 4 6 8 10m
Coord.System: UTM Zone 17 Height Datum: NAD83

HATCH

CLIENT Baffinland Iron Mines		PROJECT Mary River Expansion Study Stage 2	
DRAWN AB/CH	DATE 6/21/2017	TITLE ICE RICH AREA 3	
CHECKED WH	DATE 6/21/2017		
SCALE H 1:15385 V 1:200 VE=77X		PROJECT No H352034	FIGURE No E8



MAP KEY

- BH03 — INVESTIGATION ON SECTION
- TP03 — INVESTIGATION OFF SECTION
- SECTION LINES

POST LEGEND

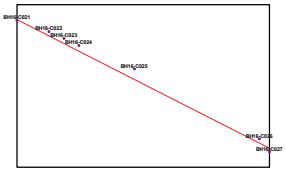
Borehole Number
(Baseline Offset m)
N SPT value
Final Depth m

STRATAGRAPHIC BOUNDARIES

MATERIAL GRAPHICS

- Poorly-graded SAND
- Ice
- Poorly-graded Gravelly SAND
- PEAT
- Sandy SILT
- Elastic Sandy SILT
- Topsoil
- Silty SAND
- BOULDERS

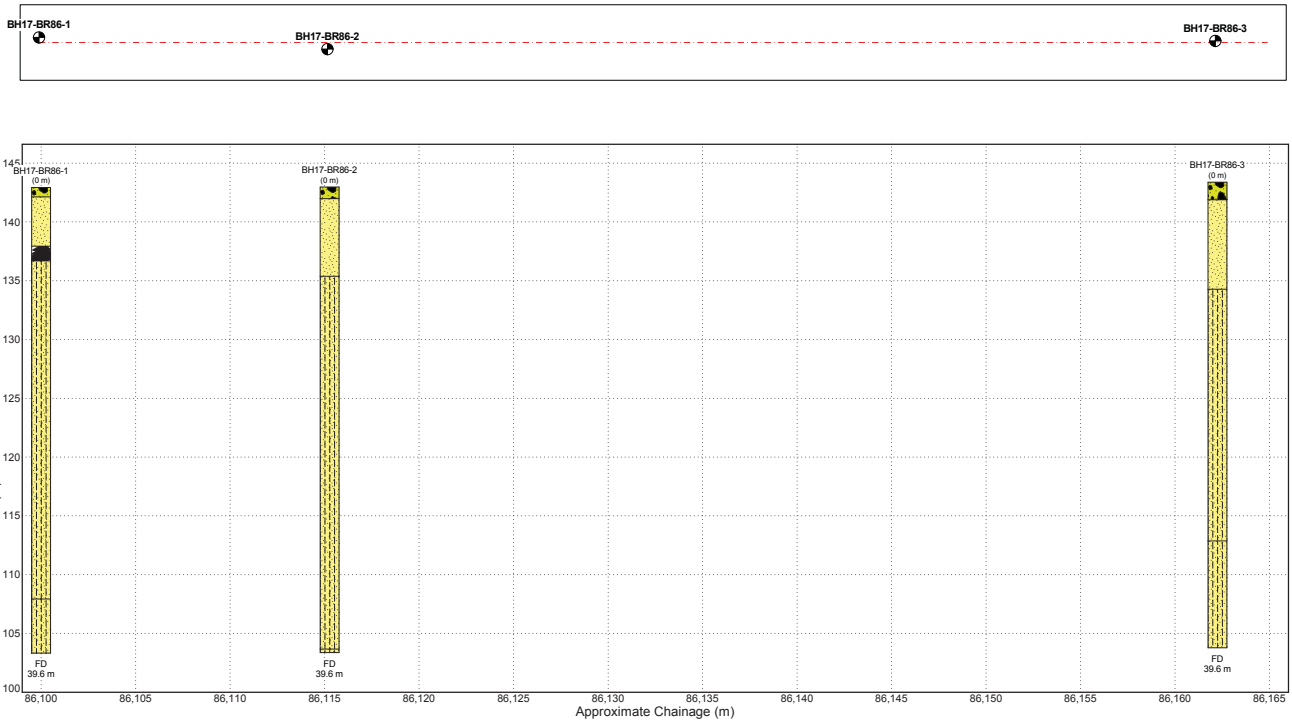
SITE MAP



H 1:15385
0 150 300 450 600 750m
V 1:129
0 1 2 3 4 5m
Coord.System: UTM Zone 17 Height Datum: NAD83

HATCH

CLIENT Baffinland Iron Mines		PROJECT Mary River Expansion Study Stage 2	
DRAWN AB/CH	DATE 6/21/2017	TITLE ICE RICH AREA 4	
CHECKED WH	DATE 6/21/2017		
SCALE H 1:15385 V 1:129 VE=120X		PROJECT No H352034	FIGURE No E9



MAP KEY

- BH03 — INVESTIGATION ON SECTION
- TP03 — INVESTIGATION OFF SECTION
- SECTION LINES

POST LEGEND

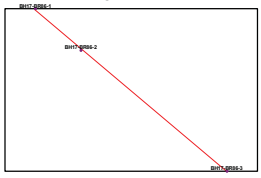
Borehole Number
(Baseline Offset m)
N SPT value
Final Depth m

STRATAGRAPHIC BOUNDARIES

MATERIAL GRAPHICS

- Well-graded Sandy GRAVEL
- Poorly-graded SAND
- Ice
- Silty SAND

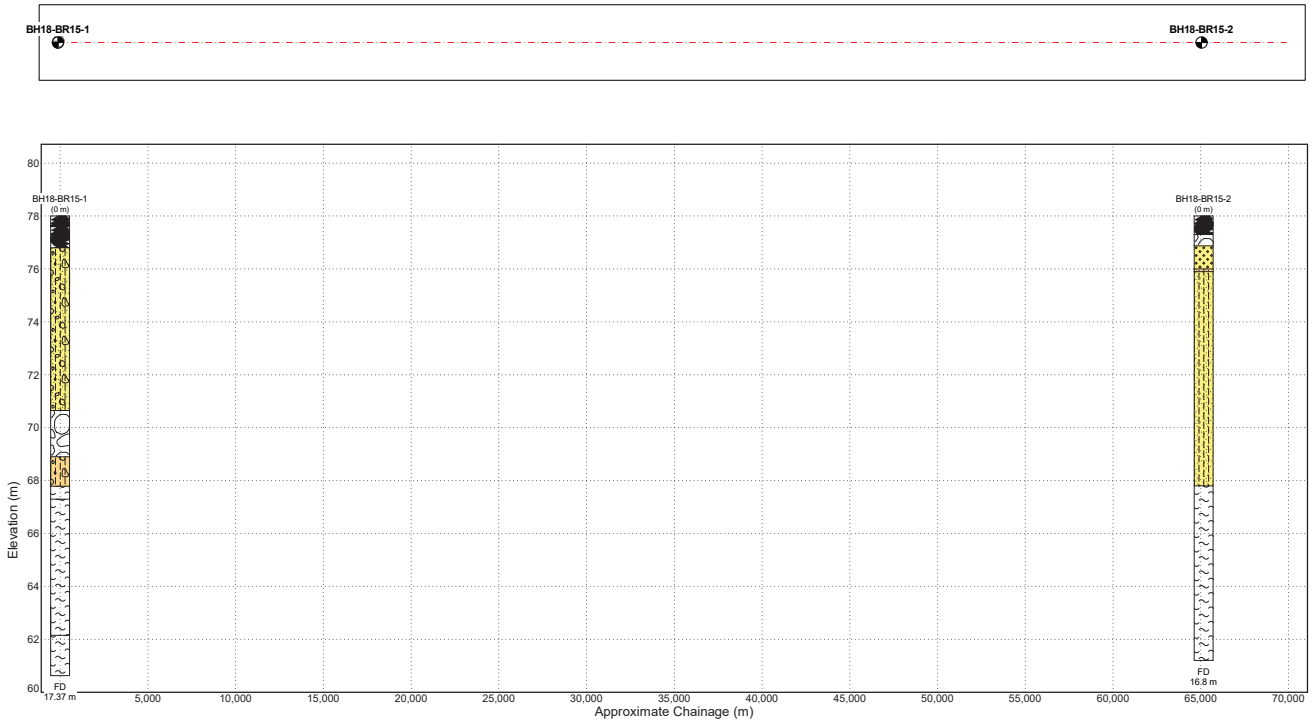
SITE MAP



H 1:200
0 2 4 6 8 10m
V 1:321
0 2 4 6 8 10m
Coord.System: UTM Zone 17 Height Datum: NAD83

HATCH

CLIENT Baffinland Iron Mines Corporation		PROJECT Mary River Expansion Project	
DRAWN JH	DATE 4/4/2018	TITLE BRIDGE KM 86	
CHECKED HG	DATE 4/4/2018		
SCALE H 1:200 V 1:321 VE=1X		PROJECT No H353004	FIGURE No E10



MAP KEY

- BH03 — INVESTIGATION ON SECTION
- TP03 — INVESTIGATION OFF SECTION
- SECTION LINES

POST LEGEND

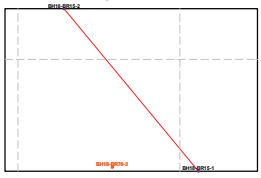
Borehole Number
(Baseline Offset m)
N SPT value
Final Depth m

STRATAGRAPHIC BOUNDARIES

MATERIAL GRAPHICS

- Ice
- Silty SAND with Gravel
- BOULDERS
- Gravelly SILT
- GNEISS
- Well-graded SAND
- Sandy SILT
- Silty SAND

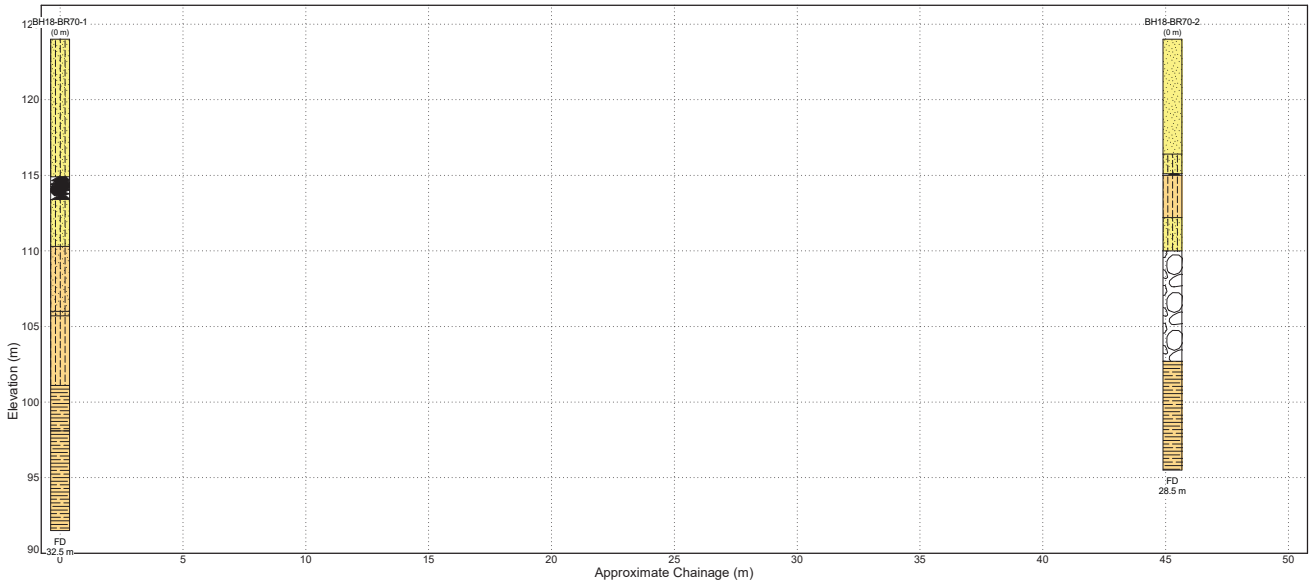
SITE MAP



H 1:215385
0 2000 4000 6000 8000 10000m
V 1:143
0 1 2 3 4 5m
Coord.System: "NAD83" Zone 17 Height Datum: NAD83

HATCH

CLIENT Baffinland Iron Mine		PROJECT Mary River Expansion Study	
DRAWN CL	DATE 8/15/2018	TITLE BRIDGE KM 15	
CHECKED MY	DATE 8/15/2018		
SCALE H 1:215385 V 1:143 VE=1508X		PROJECT No H353004	FIGURE No E11



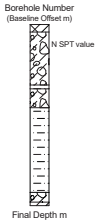
MAP KEY

BH03 INVESTIGATION ON SECTION

TP03 INVESTIGATION OFF SECTION

SECTION LINES

POST LEGEND



STRATAGRAPHIC BOUNDARIES

MATERIAL GRAPHICS

- Silty SAND
- Poorly-graded SAND
- Ice
- BOULDERS
- Sandy SILT
- SILT
- SILTSTONE

SITE MAP

H 1:154

0 1 2 3 4 5m

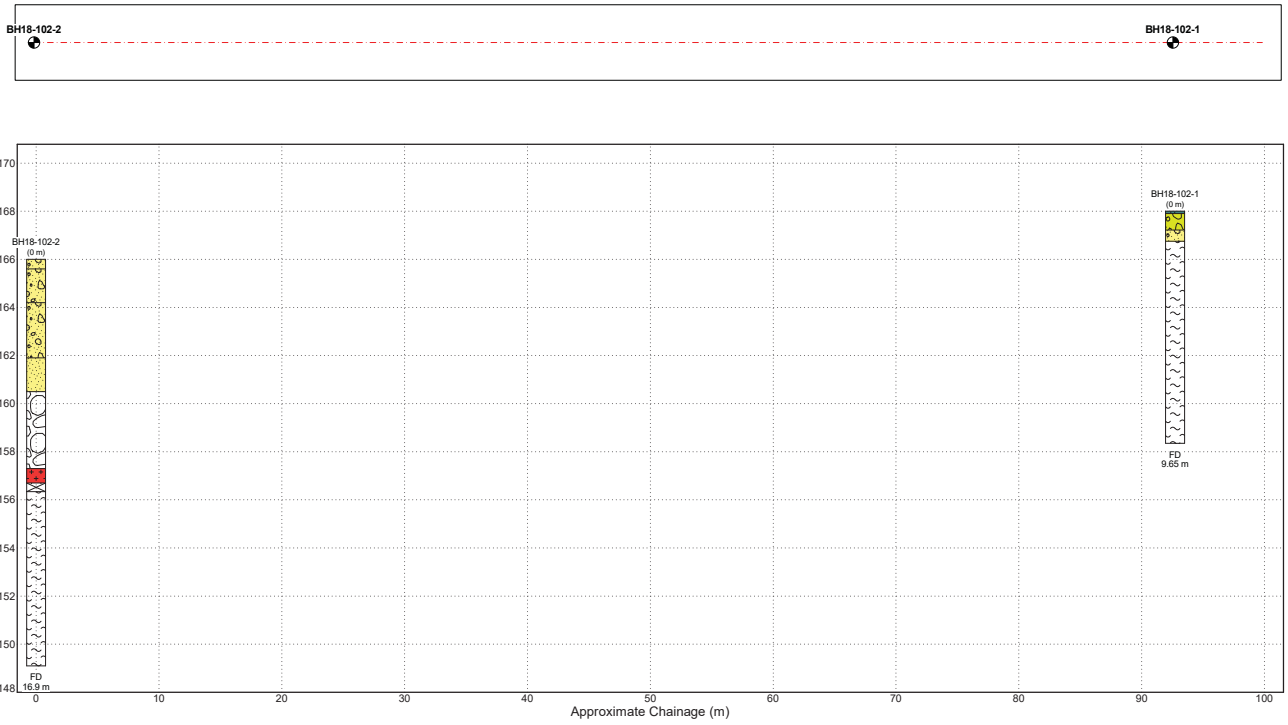
V 1:250

0 2 4 6 8 10m

Coord.System: "NAD83" Zone 17 Height Datum: NAD83

HATCH

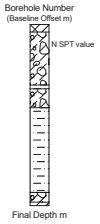
CLIENT Baffinland Iron Mine		PROJECT Mary River Expansion Study	
DRAWN CL	DATE 8/15/2018	TITLE BRIDGE KM 70	
CHECKED MY	DATE 8/15/2018		
SCALE H 1:154 V 1:250 VE=1X		PROJECT No H353004	FIGURE No E12



MAP KEY

- BH03 — INVESTIGATION ON SECTION
- TP03 — INVESTIGATION OFF SECTION
- SECTION LINES

POST LEGEND

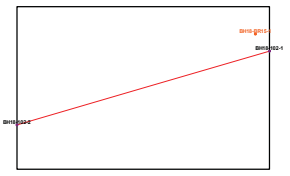


STRATAGRAPHIC BOUNDARIES

MATERIAL GRAPHICS

- PEAT
- Poorly-graded GRAVEL
- Poorly-graded Gravelly SAND
- GNEISS
- Poorly-graded SAND
- BOULDERS
- Granite, Diorite, Gabbro
- Core Loss

SITE MAP



H 1:308
0 2 4 6 8 10m
V 1:157
0 1 2 3 4 5m
Coord.System: "NAD83" Zone 17 Height Datum: NAD83

HATCH

CLIENT Baffinland Iron Mine		PROJECT Mary River Expansion Study	
DRAWN CL	DATE 8/15/2018	TITLE BRIDGE KM 102	
CHECKED MY	DATE 8/15/2018		
SCALE H 1:308 V 1:157 VE=2X		PROJECT No H353004	FIGURE No E13

Appendix F
Summary of Laboratory Results

Borehole No.	Sample No.	Depth	Moisture Content (%)	Gravel (%)	Sand (%)	Fines (%)
BH16-R003	BS-1	1.0				
	BS-2					
	BS-3					
BH16-R004	BS-1	0.9	30			
	BS-2	2.5	10	8	74	18
	BS-3	4.3				
BH16-R005	BS-1	1.0	11			
	BS-2	2.5		4	78	18
	BS-3	3.6	10			
BH16-R006	BS-1					
	BS-2					
	BS-3					
BH16-R007	BS-1	1.0	13			
	BS-2	2.5	10	1	87	13
	BS-3	4.0				
BH16-R008	BS-1					
	BS-2					
	BS-3					
BH16-R009	BS-1	0.9	23			
	BS-2	2.1				
	BS-3	4.2				
BH16-R010	BS-1	1.0				
	BS-2	3.0				
	BS-3	4.0				
BH16-R011	BS-1	1.0				
	BS-2	2.5	19	0	86	14
	BS-3	4.0	15			
BH16-R012	BS-1	1.0				
	BS-2	2.5	10	1	81	18
	BS-3	3.8				
BH16-R013	BS-1	1.0				
	BS-2	2.5	16	0	85	15
	BS-3	3.5	16			
BH16-R014	BS-1	0.8				
	BS-2	2.0	11	11	69	20
	BS-3	3.8				
BH16-R015	BS-1	1.0				
	BS-2	2.5		2	73	24
	BS-3	4.0	13			
BH16-R016	BS-1	1.0	32			
	BS-2	2.0	15	8	55	28
	BS-3	4.0				
BH16-R017	BS-1	0.0	29			
	BS-2	2.5				
	BS-3	4.0				
BH16-R018	BS-1	1.0				
	BS-2	2.5				
	BS-3	4.0				

Borehole No.	Sample No.	Depth	Moisture Content (%)	Gravel (%)	Sand (%)	Fines (%)
BH16-R019	BS-1	1.0				
	BS-2	2.5				
	BS-3	4.0				
BH16-R020	BS-1	0.5				
	BS-2	2.0				
	BS-3	3.5	20	0	57	43
BH16-R021	BS-1	1.0				
	BS-2	2.5				
	BS-3	3.4				
BH16-R022	BS-1	0.7				
	BS-2	1.9				
	BS-3	4.0	9	13	44	44
BH16-R023	BS-1	0.8				
	BS-2	2.0		0	61	39
	BS-3	3.7				
BH16-R024	BS-1	0.0				
	BS-2	1.5	9	30	38	32
	BS-3	3.0	8			
BH16-R025	BS-1	1.0	18	16	43	41
	BS-2	2.5	15			
	BS-3	4.0	16			
BH16-R026	BS-1	1.0	27			
	BS-2	2.5				
	BS-3	4.0	8			
BH16-R027	BS-1	1.0	8	22	43	35
	BS-2	2.5				
	BS-3	4.0	9			
BH16-R028	BS-1	0.8	3			
	BS-2	2.0				
	BS-3	3.0				
BH16-R029	BS-1	1.0				
	BS-2	2.5				
	BS-3					
BH16-R030	BS-1	1.0				
	BS-3	1.5	10			
	BS-2	2.5				
BH16-R032	BS-1	0.3				
	BS-2	2.5				
	BS-3					
BH16-R033	BS-1	1.0				
	BS-2	2.5	7			
	BS-3	4.0				
BH16-R034	BS-1	1.0				
	BS-2	2.5	8	27	40	32
	BS-3	3.5	9			
BH16-R035	BS-1	1.0				
	BS-2	2.5		24	42	34
	BS-3	4.0				

Borehole No.	Sample No.	Depth	Moisture Content (%)	Gravel (%)	Sand (%)	Fines (%)
BH16-R036	BS-1	1.0				
	BS-2	2.5	10	23	42	35
	BS-3	4.0				
BH16-R037	BS-1	1.0				
	BS-2	2.5	20	0	91	9
	BS-3	4.0	20			
BH16-R038	BS-1	1.0				
	BS-2	2.0	16	2	89	9
	BS-3	4.0	8			
BH16-R039	BS-1	1.0	20	3	94	3
	BS-2	2.5				
	BS-3	4.0				
BH16-R040	BS-1	1.0				
	BS-2	2.5	19			
	BS-3	4.0				
BH16-R041	BS-1					
	BS-2					
	BS-3					
BH16-R042	BS-1	1.0				
	BS-2	2.5				
	BS-3	4.0	15			
BH16-R043	BS-1	1.0				
	BS-2	2.5				
	BS-3	4.0	15			
	BS-4	6.5				
	BS-5	8.8	7			
BH16-R044	BS-1	1.0				
	BS-2	2.0	11			
	BS-3	4.0	16			
BH16-R045	BS-1	1.0	8			
	BS-2					
	BS-3	3.6	21			
BH16-R046	BS-1	0.6				
	BS-2	1.3	6			
	BS-3	2.3	40			
	BS-4	3.9	22			
BH16-R053	BS-1	1.3				
	BS-2	5.5	23			
BH16-R067	BS-1	1.2		3	60	37
	BS-2	2.4				
	BS-3	4.5				
BH16-R068	BS-1	1.0				
	BS-2	2.0				
	BS-3	3.6				
BH16-R069	BS-1	1.0		19	41	40
	BS-2	2.5				
	BS-3	4.0				
BH16-R070	BS-1	1.0		0	84	16
	BS-2	2.4				
	BS-3	3.9				

Borehole No.	Sample No.	Depth	Moisture Content (%)	Gravel (%)	Sand (%)	Fines (%)
BH16-C007	BS-1	1.2	17			
	BS-2	2.5				
	BS-3	3.5		1	73	26
	BS-4	5.0				
	BS-5	7.3	39			
BH16-C008	BS-1	1.0				
	BS-2	2.5				
BH16-C009	BS-1	0.9				
	BS-2	2.6	13	9	61	30
	BS-3	3.5				
	BS-4	5.5				
	BS-5	7.3				
	BS-6	8.8				
BH16-C010	BS-1	1.0				
	BS-2	2.5		9	33	58
	BS-3	4.3				
	BS-4	5.3				
BH16-C011	BS-1	1.0				
	BS-2	2.5	100			
	BS-3	4.0	100			
	BS-4	5.8	100			
	BS-5	7.6	100			
	BS-6	8.8	100			
	BS-7	10.0	100			
BH16-C012	BS-1	1.2				
	BS-2	2.0				
	BS-3	4.0				
BH16-C015	BS-1	1.0				
	BS-2	2.5				
	BS-3	3.4				
	BS-4	5.2				
	BS-5	7.0				
BH16-C016	BS-1	1.0				
	BS-2	2.7		25	53	22
	BS-3	4.0				
	BS-4	5.8				
	BS-5	7.3				
BH16-C017	BS-1	1.0				
	BS-2	2.4		3	74	22
	BS-3	4.0				
	BS-4	5.5				
BH16-C018	BS-1	0.6				
	BS-2	2.2	9	1	82	17
	BS-3	4.0				
	BS-4	5.5				

Borehole No.	Sample No.	Depth	Moisture Content (%)	Gravel (%)	Sand (%)	Fines (%)
BH16-C019	BS-1	1.0				
	BS-2					
	BS-3	4.5	8			
BH16-C019B	BS-1	5.8	0	0	98	1
BH16-C020	BS-1	1.0				
	BS-2	2.5	8			
	BS-3	4.3				
	BS-4	5.5	8			
	BS-5	6.7				
	BS-6	8.5	11			
BH16-C021	BS-1	1.0				
	BS-2	2.5	14			
	BS-3	3.5	12			
	BS-4	7.0				
	BS-5	8.7	5	0	67	33
BH16-C022	BS-1	2.4				
	BS-2	4.4	19	0	98	2
	BS-3	6.3				
	BS-4	7.3	24			
	BS-5	8.2				
BH16-C023	BS-1	3.7	16	0	93	7
	BS-2	5.0	17	12	44	45
	BS-3	6.2	15			
BH16-C024	BS-1	3.4				
	BS-2	5.0	18	0	90	10
	BS-3	7.0	18			
	BS-4	8.5				
	BS-5	10.0	14			
BH16-C025	BS-1	2.7				
	BS-2	4.0	15	1	89	10
	BS-3	5.2				
	BS-4	7.0				
BH16-C026	BS-1	2.4		6	69	24
	BS-2	4.0	14	2	77	21
	BS-3	5.5				
	BS-4	7.0	19			
	BS-5	8.5	13			
	BS-6	10.0				
BH16-C027	BS-1	4.0	10	9	72	20
	BS-2	5.0				
	BS-3	7.0	16			
BH16-C028	BS-1	6.3				
	BS-2	8.8	7	0	94	6
	BS-3	9.6	18			
	BS-4	11.4				

Borehole No.	Sample No.	Depth	Moisture Content (%)	Gravel (%)	Sand (%)	Fines (%)
BH16-C029	BS-1	0.9				
	BS-2	2.4	21	1	75	25
	BS-3	4.0				
	BS-4	7.0				
BH16-C030	BS-1	1.0				
	BS-2	2.0	14			
	BS-3	4.0				
	BS-4	5.0	19	3	94	3
BH16-C031	BS-1	1.4				
BH16-C032	BS-1	0.9				
	BS-2	2.4	11	10	71	19
	BS-3	4.4				
	BS-4	5.5				
	BS-5	6.9				
	BS-6	8.9				
BH16-C201	BS-1	1.4				
	BS-2	2.1				
BH16-C202	BS-1	0.9				
	BS-2	2.5				
	BS-3	4.0				
	BS-4	5.0				
	BS-5	6.1				
BH16-C203	BS-1	0.9				
	BS-2	2.4				
	BS-3	4.3				
	BS-4	5.5				
	BS-5	7.0				
	BS-6	8.8				
BH16-C204	BS-1	0.9				
	BS-2	2.6				
BH16-C205	BS-1	1.1				
	BS-2	2.5				
	BS-3	4.0		20	47	35
	BS-4	5.5				
	BS-5	7.0				
BH16-C206	BS-1	1.2				
	BS-2	2.7	53			
	BS-3	4.0	22			
	BS-4	5.5				
	BS-5	7.3				
BH16-C207	BS-1	0.9				
	BS-2	1.9	12			
	BS-3	4.0				
	BS-4	5.5				
	BS-5	7.4				

BH17-C001	DS1	0.9				
	DS2	2.1				
	DS3	3.1	7	14	49	37
	DS4	4.9				
	DS5	7	3	0	55	44
BH17-C002	DS1	0.9				
	DS2	2.4	10	21	59	20
	DS3	4				
	DS4	5.5				
	DS5	7				
	DS6	8.2				
	DS7	10.1				
BH17-C003	DS1	0.9				
	DS2	1.8				
	DS3	3.4	7	32	47	21
	DS4	5.5	9	4	73	23
	DS5	7				
	DS6	8.8	10	9	57	34
BH17-C004	DS1	0.6				
	DS2	2.4				
	DS3	3.7				
	DS4	5.2				
	DS5	7		9	75	17
	DS6	7.9				
	DS7	9.8		8	60	33
BH17-C005	DS1	0.9				
	DS2	2.4				
	DS3	4				
	DS4	5.5	7	18	57	24
	DS5	7				
	DS6	8.5				
BH17-C006	DS1	0.6				
	DS2	2.4				
	DS3	3.7	14	18	45	37
	DS4	5.2				
	DS5	6.7				
	DS6	8.2	16	21	42	38
BH17-C006B	DS1	0.9				
	DS2	2.4				
	DS3	4				
	DS4	5.5				
BH17-C007	DS1	1				
	DS2	1.9				
	DS3	4	14	10	38	52
BH17-C010	DS1	0.6				
	DS2	2.4	14	1	88	11
	DS3	3.7	15	0	90	9
BH17-C011	DS1	0.9				
	DS2	2.4				
	DS3	4	17	0	76	24

Borehole No.	Sample No.	Depth	Moisture Content (%)	Gravel (%)	Sand (%)	Fines (%)
BH17-C012	DS1	0.9				
	DS2	2.1				
	DS3	4	8	24	38	38
BH17-C013	DS1	0.9	14	12	58	31
	DS2	2.1				
	DS3	4				
BH16-B001	BS-1	0.3				
	BS-2	2.7				
	BS-3	3.5	19	6	66	29
	BS-4	5.5				
	BS-5	6.7				
	BS-6	8.5				
	BS-7	10.3				
BH16-B002	BS-1	1.2				
	BS-2	2.7	11			
	BS-3	4.3				
	BS-4	5.9	14	5	77	19
	BS-5	7.3				
	BS-6	8.4				
	BS-7	8.8				
	BS-8	11.5				
	BS-9	12.8				
BH16-B003	BS-1	1.1				
	BS-2	1.9	9	24	47	28
	BS-3	4.0				
	BS-4	5.8	100	2	72	26
	BS-5	7.3	23			
	BS-6	8.8				
	BS-7	10.3				
	BS-8	11.5				
	BS-9	13.4				
	BS-10	14.6				
BH16-B004	BS-1	1.0				
	BS-2	2.7				
	BS-3	4.3				
	BS-4	5.8	100	7	54	39
	BS-5	7.3	19	35	44	21
	BS-6	8.8				
	BS-7	10.5				
	BS-8	11.8				
	BS-9	13.2				
	BS-10	14.5				
	BS-11	15.5				

BH16-B009	BS-1	0.6				
	BS-2	5.0				
	BS-3	9.8	22	0	98	2
BH16-B010	BS-1	0.9				
	BS-2	2.9	11	5	87	8
	BS-3	4.2				
	BS-4	5.1	21	0	98	2
	BS-5	6.4				
	BS-6	9.5	20	0	61	39
BH16-B011	BS-1	4.2				
	BS-2	9.0	19	0	98	2
BH16-B012	BS-1	3.0	12	4	87	9
	BS-2	8.0				
BH16-B013	BS-1	0.6				
	BS-2	2.7				
	BS-3	4.0				
	BS-4	5.8	12	0	53	47
	BS-5	7.3				
	BS-6	8.5				
	BS-7	10.0				
BH16-B014	BS-1	1.0				
	BS-2	2.5				
	BS-3	3.5	12	0	65	35
	BS-4	5.0				
	BS-5	7.0	1	0	63	37
	BS-6	8.9				
BH16-B015	BS-1	1.0				
	BS-2	2.5	100	17	41	41
	BS-3	4.0				
	BS-4	5.0	11	0	63	37
	BS-5	6.7				
	BS-6	8.0				
	BS-7	10.0	100	15	66	20
	BS-8	11.5				
	BS-9	13.4				
BH16-B016	BS-1	1.0				
	BS-2	2.6				
	BS-3	3.6	15	0	88	12
	BS-4	5.3		0	67	33
	BS-5	7.2	7	0	66	34

Borehole No.	Sample No.	Depth	Moisture Content (%)	Gravel (%)	Sand (%)	Fines (%)
BH17-B001	DS1	0.9				
	DS2	2.4	26	0	93	7
	DS3	4				
	DS4	5.5	37	0	7	93
	DS5	7				
	DS6	8.5	10	6	65	29
	DS7	9.4				
	DS8	11.4		7	30	63
	DS9	13.1	12			
	DS10	14.3				
	DS11	15.5	12			
BH17-B002	DS1	0.5	19	0	88	12
	DS2	2				
	DS3	3.7	37	0	15	85
	DS4	5.1				
	DS5	6.7	24	0	49	51
	DS6	8.2				
	DS7	10.1				
	DS8	11.5	9	3	66	32
	DS9	12.8				
	DS10	14.5				
	DS11	15.8	11	10	70	20
	DS12	17.4				
	DS13	18.6	8	15	66	20
	DS14	20.1				
	DS15	22.3				
	DS16	23.5	15	1	72	27

Borehole No.	Sample No.	Depth	Moisture Content	Gravel (%)	Sand (%)	Fines (%)
BH17-BR86-1	DQ-1	0.5				
	DQ-2	4.4				
	DQ-3	5.6				
	DQ-4	8.9				
	DQ-5	11.9				
	DQ-6	16.0				
	DQ-7	17.0				
	DQ-8	21.0				
	DQ-9	25.5				
	DQ-10	29.5				
	DQ-11	31.9				
	DQ-12	36.0				
	DQ-13	39.0				
BH17-BR86-2	DQ-1	1.0	13.9	25	72	2
	DQ-2	2.0	22.7	0	93	7
	DQ-3	3.0	17.9	0	91	9
	DQ-4	5.0	36.8	4	91	5
	DQ-5	10.0	22.1	0	89	10
	DQ-6	11.3	22.9			
	DQ-7	20.0	21.9	0	90	10
	DQ-8	24.0	24.5			
	DQ-9	30.0	25.9			
	DQ-10	32.5				
	DQ-11	36.4	26.5			
	DQ-12	37.8				
	DQ-13	39.3	25.3	0	61	39
BH17-BR86-3	DQ-1	1.0	13.8	21	69	10
	DQ-2	2.0	22.8	0	93	7
	DQ-3	3.0	24.3	0	94	6
	DQ-4	5.0	25.4	0	89	11
	DQ-5	8.0	26.0	0	78	22
	DQ-6	12.0	26.0	0	93	7
	DQ-7	20.0				
	DQ-8	30.0	24.6	0	92	8

Borehole No.	Sample No.	Depth	Moisture Content	Gravel (%)	Sand (%)	Fines (%)
BH18-BR15-1	DQ-1	1.7				
	DS-2	2.6	6	34	44	22
	DS-3	3.9	11	6	57	37
	DS-4	5.1	7			
	DQ-5	5.8				
BH18-BR15-2	DS-1	1.2	14	1	85	14
	DQ-2	1.5				
	DS-3	2.0	63	1	45	54
	DQ-4	2.5				
	DS-5	2.6	9	29	39	32
	DS-6	3.5				
	DS-7	4.2	11	14	60	26
	DS-8	5.8	5	22	48	30
	DQ-9	6.3				
BH18-BR70-1	DQ-1	1.5				
	DS-2	2.6	22	0	97	3
	DQ-3	6.3				
	DS-4	6.8	28	0	80	20
	DS-5	9.4	36	0	3	97
	DQ-6	9.6				
	DS-6	11.3	19	0	39	61
	DQ-7	14.3				
	DS-8	14.6	15	9	51	40
	DQ-9	16.5	14.0	19	26	55
	DQ-10	18.2				
	DQ-11	20.9				
BH18-BR70-2	DS-1	0.8	1.0	38	47	15
	DQ-1	1.2	20.0	0	86	14
	DS-2	3.2	15.0	0	91	9
	DQ-3	9.5	23.0	0	2	98
	DQ-4	19.5				
	DS-5	19.6		0	2	98
BH18-BR102-2	DS-2	2.1				
	DQ-3	3.0		31	69	0
	DS-4	5.1				
	DQ-5	5.4				

Borehole No.	Sample No.	Depth	Salinity Scale (ppt)
BH17-BR86-2	DQ-1	1.0	1.0
	DQ-2	2.0	1.0
	DQ-4	5.0	1.0
	DQ-5	10.0	1.0
	DQ-6	11.3	1.0
	DQ-7	20.0	1.0
	DQ-8	24.0	1.0
	DQ-11	36.4	4.0
BH17-BR86-3	DQ-1	1.0	1.0
	DQ-2	2.0	1.0
	DQ-3	3.0	1.0
	DQ-4	5.0	1.0
	DQ-5	8.0	1.0
	DQ-6	12.0	1.0
	DQ-8	30.0	1.0
BH18-BR15-2	DQ-1	1.2	N/A
	DQ-2	1.5	3.0
	DQ-4	2.0	N/A
	DQ-9	11.3	N/A
BH18-BR70-1	DQ-1	1.5	0.0
	DQ-3	6.2	0.0
BR18-BR70-2	DQ-1	1.2	0.0
	DQ-3	9.5	12.0

Appendix G
Laboratory Certificate of Conformance

Canadian Council of Independent Laboratories

CERTIFICATE OF CONFORMANCE

AGGREGATE LABORATORY CERTIFICATION

This is to certify that

Hatch Geotechnical Laboratory

Located at:

Niagara Falls ON

Has met the Standardization and Interlaboratory Testing Requirements of the CCIL/OSSGA AGGREGATE LABORATORY CERTIFICATION PROGRAM and has qualified under the following categories and test methods:

AGGREGATE QUALITY CONTROL LABORATORY (TYPE C)

LS-600/C-702; LS-601/C-117; LS-602/C-136; LS-607; LS-608; LS-621

AGGREGATE PHYSICAL PROPERTY LABORATORY (TYPE D)

LS-706/D698; LS-702/AASHTO T88; LS-703,704/D4318; LS-705/D854; LS-709/D2434

GIB MCINTEE, P. ENG.
CHAIRMAN, CERTIFICATION PROGRAM ADMINISTRATION COMMITTEE

May 1, 2018 - April 30, 2019

Date

GORDON H. LEAMAN, P. ENG.
PRESIDENT

Canadian Council of Independent Laboratories

CERTIFICATE OF CONFORMANCE

AGGREGATE LABORATORY CERTIFICATION

This is to certify that

Hatch

Located at:

Niagara Falls ON

Has met the Standardization and Interlaboratory Testing Requirements of the CCIL/OSSGA AGGREGATE LABORATORY CERTIFICATION PROGRAM and has qualified under the following categories and test methods:

AGGREGATE QUALITY CONTROL LABORATORY (TYPE C)

LS-600/C-702; LS-601/C-117; LS-602/C-136; LS-607; LS-608; LS-621

AGGREGATE PHYSICAL PROPERTY LABORATORY (TYPE D)

LS-706/D698; LS-702/AASHTO T88; LS-703,704/D4318; LS-705/D854; LS-709/D2434

GIB MCINTEE, P. ENG.
CHAIRMAN, CERTIFICATION PROGRAM ADMINISTRATION COMMITTEE

May 1, 2017 - April 30, 2018

Date

GORDON H. LEAMAN, P. ENG.
PRESIDENT

CCIL

Canadian Council of Independent Laboratories

CERTIFICATE OF CONFORMANCE

AGGREGATE LABORATORY CERTIFICATION

This is to certify that

Amec Foster Wheeler Environment & Infrastructure
A Division of Amec Foster Wheeler Americas Limited

Located at:

Hamilton ON

Has met the Standardization and Interlaboratory Testing Requirements of the CCIL/OSSGA AGGREGATE LABORATORY CERTIFICATION PROGRAM and has qualified under the following categories and test methods:

AGGREGATE QUALITY CONTROL LABORATORY (TYPE C)

LS-600/C-702; LS-601/C-117; LS-602/C-136; LS-607; LS-608; LS-621

AGGREGATE PHYSICAL PROPERTY LABORATORY (TYPE D)

LS-412/CSA A23.2-2C,-4C; LS-603/C131&535; LS-604/C127; LS-605/C128; LS-606/C88; LS-609/C294,5 (Petrographic Analysts : John Balinski, Martin Little, Amy McCulloch & Ivan Severenski); LS-610/C40; LS-613/D3042; LS-614/CSA A23.2-24A; LS-615/CSA A23.2-26A; LS-617; LS-618/D6928; LS-619/D7428; LS-620/CSA A23.2-25A; LS-623/D698; LS-709/D2434

Superpave Aggregate Consensus Properties

AASHTO T176/D2419; LS-629/AASHTO T304; ASTM D4791; ASTM D5821

May 1, 2016 - April 30, 2017

Date

GIB MCINTEE, P. ENG.
CHAIRMAN, CERTIFICATION PROGRAM ADMINISTRATION COMMITTEE

GORDON H. LEAMAN, P. ENG.
PRESIDENT

Appendix H
Coarse Aggregate Physical Testing Reports

21 July 2017
File: TB152049

Hatch Ltd.
4342 Queen St. Suite 500
Niagara Falls, Ont.
L2E 7J7

Attention: Mr. Ralph Serluca

Dear Sir,

RE: AGGREGATE TESTING – 10" ROCK
GRANITE & DIABASE

We are pleased to present the results of laboratory testing conducted on two samples of 10"rock received in our Amec Foster Wheeler Hamilton laboratory on 27 June 2017. It is understood that a representative of Hatch Ltd. obtained the sample from an unspecified source.

Testing of the 10" rock materials was limited to Mill Abrasion using TMS-004, Track Rock Ballast Specification, rev. 22 Aug. 2013. Oversized samples were crushed to required particle sizes using laboratory Jaw-crusher.

Results of the physical testing can be found in Table 1.

Table 1 – Physical Laboratory Testing Results

Testing Required	NF17-05 (Granitic Gneiss)	NF17-06 (Diabase)
Mill Abrasion	2.7% loss	5.8% loss

If there are any questions concerning this report, please do not hesitate to contact our office.

Yours truly,

Amec Foster Wheeler Environment & Infrastructure
a Division of Amec Foster Wheeler Americas Limited

Reviewed by,

Kristen Hand
Soils & Aggregate Laboratory Supervisor
kh:OL

Ognjenko Lazic
Concrete & Asphalt Laboratory Supervisor

Amec Foster Wheeler Environment and Infrastructure
a Division Amec Foster Wheeler Americas Limited
505 Woodward Avenue, Unit 1
Hamilton, ON L8H 6N6
Canada
Tel (905) 312-0700
Fax (905) 312-0771

15 February 2017
File: TB152049

Hatch Ltd.
4342 Queen St., Suite 500
Niagara Falls, ON
L2E 7J7 Canada

Attention: **Mr. Warren R. Hoyle, P.Geo.**

RE: **PHYSICAL TESTING OF BEDROCK CORE AND ROCK LUMPS**

1.0 INTRODUCTION

We are pleased to present the results of our Amec Foster Wheeler Hamilton laboratory testing conducted on rock lump samples provided by HATCH Limited (HATCH). It is understood the rock lump and bedrock core samples were sampled in January 2017 by a representative of Hatch. These samples were received in our laboratory on 26 January 2017.

2.0 METHODLOGY

A total of four pails of rock grab samples (4-8 inch) and bedrock cores were provided for physical durability testing. The aggregate was crushed using a laboratory crusher at Amec Foster Wheeler Hamilton Laboratory. The material was crushed to produce a 20mm coarse aggregate to be tested.

Testing of the 20mm crushed core samples was limited to:

Resistance of Coarse Aggregate to Degradation by Abrasion in the Micro-Deval Apparatus	(CSA A23.2 - 29A)
Sieve Analysisof Coarse and Fine Aggregate	(CSA A23.2 - 2A)
Relative Density and Absorption of Coarse Aggregate	(CSA A23.2 - 12A)
Resistance of Unconfined Coarse Aggregate to Freezing and Thawing	(CSA A23.2 - 24A)

505 Woodward Avenue, Unit 1
Hamilton, Ontario L8H 6N6
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Fax +1 905 312 0771
amecfw.com

The results of testing are summarized in Table 1.

3.0 RESULTS

Table 1. Results of the Physical Testing Crushed Aggregate Sample

Test Required	Test Method	Laboratory Test Results			
		NF17-01	NF17-02	NF17-03	NF17-04
Relative Density (Specific Gravity)	CSA A23.2 - 12A	**2.662**	**2.655**	**2.618**	**2.995**
Absorption (%)	CSA A23.2 - 12A	**0.82**	**0.90**	**0.37**	**0.45**
Micro-Deval Abrasion (% loss)	CSA A23.2 - 29A	**10.5**	**11.0**	**4.5**	**7.9**
Unconfined Freeze-Thaw (% loss)	CSA A23.2 - 24A	**6.7**	**11.1**	**1.6**	**0.8**

Presented in Enclosures 1 through 4 are the gradation results of the coarse portion of each sample.

Please contact us if you have any questions, or if we can be of further service evaluating aggregate sources.

Regards,

Amec Foster Wheeler Environment & Infrastructure
a Division of Amec Foster Wheeler Americas Limited

Reviewed by,

Ognjenko Lazic
Asphalt & Concrete
Laboratory Supervisor

Kristen Hand
Soils & Aggregate
Laboratory Supervisor

LIMITS FOR DELETERIOUS SUBSTANCES AND PHYSICAL PROPERTIES OF AGGREGATE

CSA A23.1 - 14, Table 11 & 12 and A23.2 - 15A & 27A, Rev. August 2014

Clauses 4.2.3.2.2, 4.2.3.4.3, 4.2.3.5.1, 4.2.3.5.3.3, 4.2.3.5.3.4, 4.2.3.7 & 4.2.3.10.1

Job No.:	Client:	Sampled By:	Enclosure:
TB152049	Hatch Ltd.	Client	2

Name of Testing Laboratory:	Telephone No.:	Fax No.:
Amec Foster Wheeler Environment & Infrastructure	(905) 312 - 0700	(905) 312 - 0771

Sample Lab No.:	Sample Source:
S018-17	NF17-01

Sample Type:	Date Sampled:	Stockpile Quantity (t)
Crushed Core	January 2017	--

COARSE AGGREGATE

Nominal Max. Size (mm):	Aggregrate Inventory No.:	Gradation Results:	Meets Spec.: (Y/N)
20 mm	n/a	n/a	n/a

Limits for Deleterious Substances and Physical Properties of Aggregates

CSA Laboratory Test and Number	Acceptance Limits		Reference Material Results	Sample Results	Meets Spec.
	Maximum percentage by mass of total sample				
Standard Requirements	**Concrete exposed to freezing & thawing**	**Other exposure conditions**			**Y / N**
Clay lumps - A23.2 - 3A †****	0.3 % maximum	0.5 % maximum	-	-	-
Low - density granular materials - A23.2 - 4A‡****	0.5 % maximum	1 % maximum	-	-	-
Material finer than 80 µm - A23.2 - 5A**	1% maximum[1]	1% maximum[1]	-	-	-
Absorption - A23.2 - 12A	-		0.37%	**0.82%**	-
Flat & elongated particles, Procedure A, 4:1 - A23.2-13A	20.0 % maximum	20.0 % maximum	-	-	-
Micro-Deval test - A23.2 - 29A	17 % maximum	21 % maximum	14.0%	**10.5%**	**Y**
Unconfined freeze-thaw test - A23.2 - 24A‡‡	6 % maximum	10 % maximum	9.5%	**6.7%**	**N/Y**
Abrasion loss - A23.2 - 16A and A23.2 - 17A§§	50 % maximum	50 % maximum	-	-	-
Petrographic examination of aggregate - A23.2 -15A	125 maximum	140 maximum	-	-	-
Alkali-Carbonate reactivity - A23.2 - 26A	chem. comp. must plot in non-exp. field		-	-	-
Accelerated mortar bar - A23.2 - 25A	maximum 0.150% at 14 days		-	-	-
Concrete prism - A23.2 - 14A	maximum 0.040% at one year		-	-	-
Alternative Requirements* **					
$MgSO_4$ soundness loss - A23.2 - 9A	12 % maximum	18 % maximum	-	-	-

Issued By: Kristen Hand (Print Name)

Testing Laboratory Representative Signature

14 February 2017 (Date)

LIMITS FOR DELETERIOUS SUBSTANCES AND PHYSICAL PROPERTIES OF AGGREGATE

CSA A23.1 - 14, Table 11 & 12 and A23.2-15A & 27A, Rev. August 2014

Clauses 4.2.3.2.2, 4.2.3.4.3, 4.2.3.5.1, 4.2.3.5.3.3, 4.2.3.5.3.4, 4.2.3.7 & 4.2.3.10.1

Enclosure: **2**

*Limits for deleterious substances not listed in this Table, such as coal, ochre (ironstone), shalestone, siltstone, or argillaceous limestone, shall be specified by the owner to encompass deleterious materials known to be present in a particular region. In the absence of such information, aggregate shall be accepted or rejected in accordance with clause 4.2.3.9

†Clay lumps are defined as fine-grained, consolidated, sedimentary materials of a hydrous aluminosilicate nature.

‡A liquid with a relative density of 2.0 is generally used to separate particles classified as coal or lignite. Liquids with relative densities higher or lower than 2.0 might be required to identify other deleterious low-density materials.

The amount of material of clay size shall be determined by performing a hydrometer analysis as per ASTM D 422 on a sample washed through an 80 µm sieve.

**In the case of crushed aggregate, if material finer than the 80 µm sieve consists of the dust of fracture, essentially free from clay or shale, the maximum shall be 2.0%

‡‡CSA A23.2-24A, a test for coarse aggregate, has good precision and shows fair correlation with the MgSO4 soundness test. For further information, see Rogers, Senior, & Boothe (1989)

§§The abrasion loss shall not be greater than 35% when the aggregate is used in concrete paving or for other concrete surfaces subjected to significant wear. This does not refer to air- cooled iron blast-furnace-slag coarse aggregate. The abrasion loss requirements for coarse aggregate shall be waived provided that the material meets the alternative requirements for Micro-deval detailed in this Table.

***The freeze-thaw requirements for coarse aggregate shall be waived provided that the material meets the laternative requirements for $MgSO_4$ soundness loss detailed in this Table.

****If the Coarse Aggregate when tested according to A23.2-15A does not show the presence of either clay lumps or low-density granular materials, the requirements for testing in accordance with 3A and 4A may be waived.

[1]This limit applies to the amount of material finer than 80µm as determined by washing only.

Amec Foster Wheeler Environment & Infrastructure
a Division of Amec Foster Wheeler Americas Limited
505 Woodward Avenue, Unit 1
Hamilton, Ontario
Canada L8H 6N6

SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE

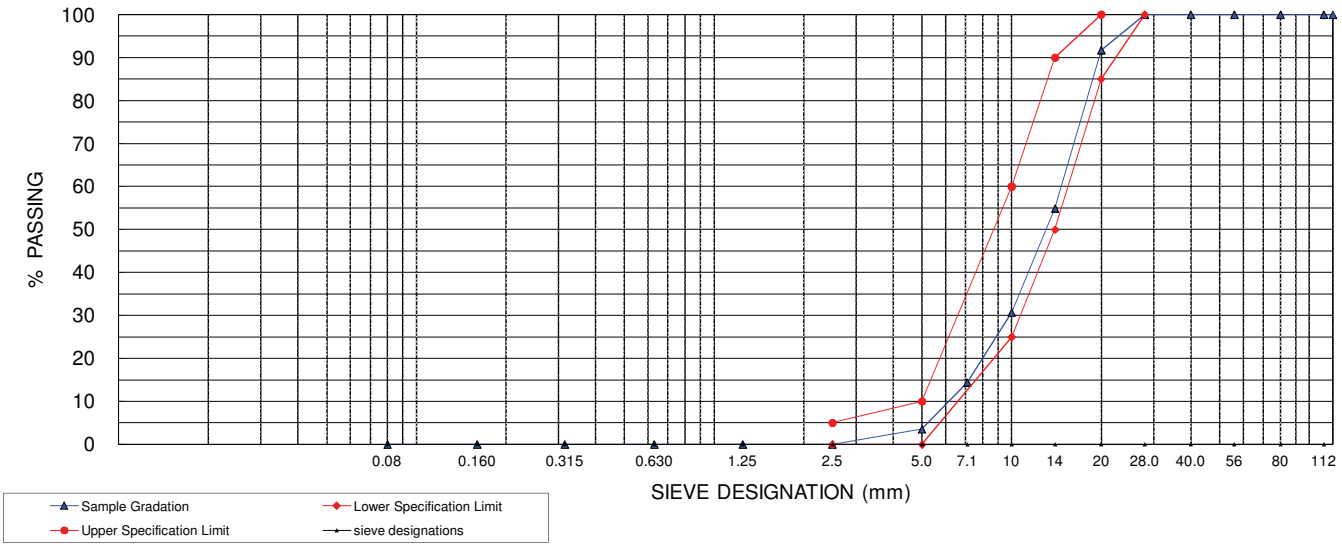
CSA A23.2-2A

Enclosure: 1
Date: 14 February 2017
Project No: TB152049

Client: Hatch
Sample Source: NF17-01
Sampled By: Client
Date Sampled: January 2017
Sample Type: Crushed Core
Specification: CSA A23.1-14, August 2014, Table 11, Group I, 20-5mm Concrete Stone Grading Requirements for Coarse Aggregate

Lab No: S018-17
Date Received: 26 January 2017
Date Tested: 6 February 2017
Lab Technician: KH

SIEVE SIZES (mm)	120	112	80	56	40.0	28.0	20	14	10	7.1	5	2.5	1.25	0.630	0.315	0.160	0.08
SPECIFICATIONS	-	-	-	-	-	100.0	85-100	50-90	25-60	-	0-10	0-5	-	-	-	-	-
% PASSING	100.0	100.0	100.0	100.0	100.0	100.0	91.7	54.9	30.7	14.4	3.5						
% RETAINING	0.0	0.0	0.0	0.0	0.0	0.0	8.3	45.1	69.3	85.6	96.5						



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FX: 905 312 0771

LIMITS FOR DELETERIOUS SUBSTANCES AND PHYSICAL PROPERTIES OF AGGREGATE

CSA A23.1 - 14, Table 11 & 12 and A23.2 - 15A & 27A, Rev. August 2014

Clauses 4.2.3.2.2, 4.2.3.4.3, 4.2.3.5.1, 4.2.3.5.3.3, 4.2.3.5.3.4, 4.2.3.7 & 4.2.3.10.1

Job No.:	Client:	Sampled By:	Enclosure:
TB152049	Hatch Ltd	Client	2

Name of Testing Laboratory:	Telephone No.:	Fax No.:
Amec Foster Wheeler Environment & Infrastructure	(905) 312 - 0700	(905) 312 - 0771

Sample Lab No.:	Sample Source:
S019-17	NF17-02

Sample Type:	Date Sampled:	Stockpile Quantity (t)
Crushed Core	January 2017	--

COARSE AGGREGATE

Nominal Max. Size (mm):	Aggregrate Inventory No.:	Gradation Results:	Meets Spec.: (Y/N)
20 mm	n/a	n/a	n/a

Limits for Deleterious Substances and Physical Properties of Aggregates

CSA Laboratory Test and Number	Acceptance Limits		Reference Material Results	Sample Results	Meets Spec.
	Maximum percentage by mass of total sample				
Standard Requirements	**Concrete exposed to freezing & thawing**	**Other exposure conditions**			**Y / N**
Clay lumps - A23.2 - 3A †****	0.3 % maximum	0.5 % maximum	-	-	-
Low - density granular materials - A23.2 - 4A‡****	0.5 % maximum	1 % maximum	-	-	-
Material finer than 80 µm - A23.2 - 5A**	1% maximum[1]	1% maximum[1]	-	-	-
Absorption - A23.2 - 12A	-		0.37%	**0.90%**	-
Flat & elongated particles, Procedure A, 4:1 - A23.2-13A	20.0 % maximum	20.0 % maximum	-	-	-
Micro-Deval test - A23.2 - 29A	17 % maximum	21 % maximum	14.0%	**11.0%**	**Y**
Unconfined freeze-thaw test - A23.2 - 24A‡‡	6 % maximum	10 % maximum	9.5%	**11.1%**	**N**
Abrasion loss - A23.2 - 16A and A23.2 - 17A§§	50 % maximum	50 % maximum	-	-	-
Petrographic examination of aggregate - A23.2 -15A	125 maximum	140 maximum	-	-	-
Alkali-Carbonate reactivity - A23.2 - 26A	chem. comp. must plot in non-exp. field		-	-	-
Accelerated mortar bar - A23.2 - 25A	maximum 0.150% at 14 days		-	-	-
Concrete prism - A23.2 - 14A	maximum 0.040% at one year		-	-	-
Alternative Requirements* **					
$MgSO_4$ soundness loss - A23.2 - 9A	12 % maximum	18 % maximum			

Issued By: Kristen Hand (Print Name)

Testing Laboratory Representative Signature

14 February 2017 (Date)

LIMITS FOR DELETERIOUS SUBSTANCES AND PHYSICAL PROPERTIES OF AGGREGATE

CSA A23.1 - 14, Table 11 & 12 and A23.2-15A & 27A, Rev. August 2014

Clauses 4.2.3.2.2, 4.2.3.4.3, 4.2.3.5.1, 4.2.3.5.3.3, 4.2.3.5.3.4, 4.2.3.7 & 4.2.3.10.1

Enclosure: **2**

*Limits for deleterious substances not listed in this Table, such as coal, ochre (ironstone), shalestone, siltstone, or argillaceous limestone, shall be specified by the owner to encompass deleterious materials known to be present in a particular region. In the absence of such information, aggregate shall be accepted or rejected in accordance with clause 4.2.3.9

†Clay lumps are defined as fine-grained, consolidated, sedimentary materials of a hydrous aluminosilicate nature.

‡A liquid with a relative density of 2.0 is generally used to separate particles classified as coal or lignite. Liquids with relative densities higher or lower than 2.0 might be required to identify other deleterious low-density materials.

The amount of material of clay size shall be determined by performing a hydrometer analysis as per ASTM D 422 on a sample washed through an 80 µm sieve.

**In the case of crushed aggregate, if material finer than the 80 µm sieve consists of the dust of fracture, essentially free from clay or shale, the maximum shall be 2.0%

‡‡CSA A23.2-24A, a test for coarse aggregate, has good precision and shows fair correlation with the MgSO4 soundness test. For further information, see Rogers, Senior, & Boothe (1989)

§§The abrasion loss shall not be greater than 35% when the aggregate is used in concrete paving or for other concrete surfaces subjected to significant wear. This does not refer to air- cooled iron blast-furnace-slag coarse aggregate. The abrasion loss requirements for coarse aggregate shall be waived provided that the material meets the alternative requirements for Micro-deval detailed in this Table.

***The freeze-thaw requirements for coarse aggregate shall be waived provided that the material meets the laternative requirements for $MgSO_4$ soundness loss detailed in this Table.

****If the Coarse Aggregate when tested according to A23.2-15A does not show the presence of either clay lumps or low-density granular materials, the requirements for testing in accordance with 3A and 4A may be waived.

[1]This limit applies to the amount of material finer than 80µm as determined by washing only.

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SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE

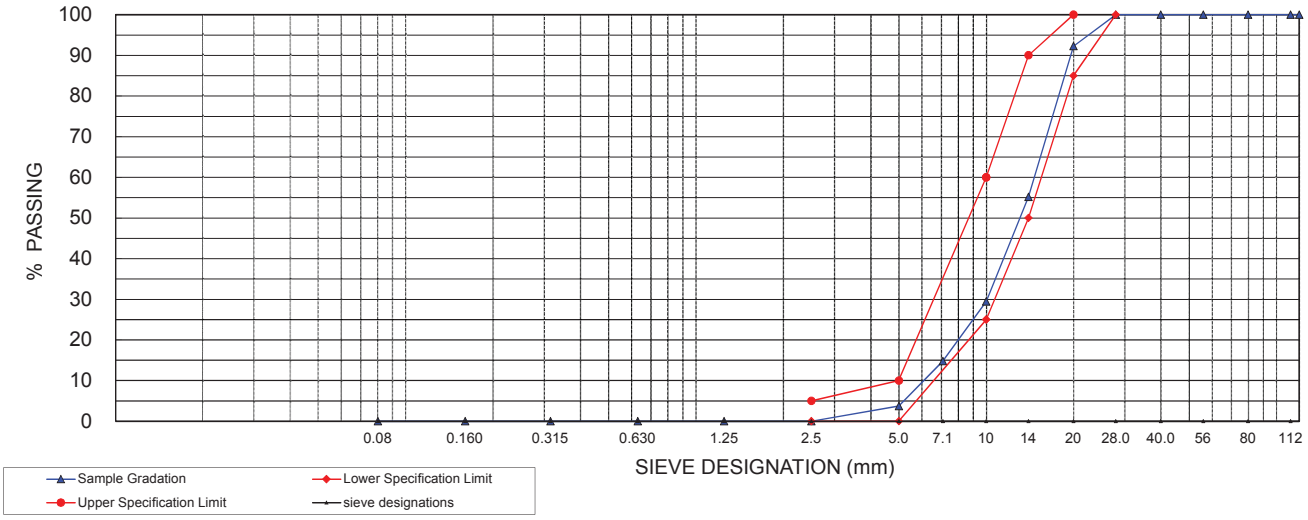
CSA A23.2-2A

Enclosure: 1
Date: 14 February 2017
Project No: TB152049

Client: Hatch Ltd
Sample Source: NF17-02
Sampled By: Client
Date Sampled: January 2017
Sample Type: Crushed Core
Specification: CSA A23.1-14, August 2014, Table 11, Group I, 20-5mm Concrete Stone Grading Requirements for Coarse Aggregate

Lab No: S019-17
Date Received: 26 January 2017
Date Tested: 6 February 2017
Lab Technician: KH

SIEVE SIZES (mm)	120	112	80	56	40.0	28.0	20	14	10	7.1	5	2.5	1.25	0.630	0.315	0.160	0.08
SPECIFICATIONS	-	-	-	-	-	100.0	85-100	50-90	25-60	-	0-10	0-5	-	-	-	-	-
% PASSING	100.0	100.0	100.0	100.0	100.0	100.0	92.3	55.2	29.4	14.8	3.7						
% RETAINING	0.0	0.0	0.0	0.0	0.0	0.0	7.7	44.8	70.6	85.2	96.3						



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LIMITS FOR DELETERIOUS SUBSTANCES AND PHYSICAL PROPERTIES OF AGGREGATE

CSA A23.1 - 14, Table 11 & 12 and A23.2 - 15A & 27A, Rev. August 2014

Clauses 4.2.3.2.2, 4.2.3.4.3, 4.2.3.5.1, 4.2.3.5.3.3, 4.2.3.5.3.4, 4.2.3.7 & 4.2.3.10.1

Job No.:	Client:	Sampled By:	Enclosure:
TB152049	Hatch Ltd.	Client	2

Name of Testing Laboratory:	Telephone No.:	Fax No.:
Amec Foster Wheeler Environment & Infrastructure	(905) 312 - 0700	(905) 312 - 0771

Sample Lab No.:	Sample Source:
S020-17	NF17-03

Sample Type:	Date Sampled:	Stockpile Quantity (t)
Crushed Core	Janaury 2017	--

COARSE AGGREGATE

Nominal Max. Size (mm):	Aggregrate Inventory No.:	Gradation Results:	Meets Spec.: (Y/N)
20 mm	n/a	n/a	n/a

Limits for Deleterious Substances and Physical Properties of Aggregates

CSA Laboratory Test and Number	Acceptance Limits		Reference Material Results	Sample Results	Meets Spec.
	Maximum percentage by mass of total sample				
Standard Requirements	**Concrete exposed to freezing & thawing**	**Other exposure conditions**			**Y / N**
Clay lumps - A23.2 - 3A †****	0.3 % maximum	0.5 % maximum	-	-	-
Low - density granular materials - A23.2 - 4A‡****	0.5 % maximum	1 % maximum	-	-	-
Material finer than 80 µm - A23.2 - 5A**	1% maximum[1]	1% maximum[1]	-	-	-
Absorption - A23.2 - 12A	-		0.37%	**0.37%**	-
Flat & elongated particles, Procedure A, 4:1 - A23.2-13A	20.0 % maximum	20.0 % maximum	-	-	-
Micro-Deval test - A23.2 - 29A	17 % maximum	21 % maximum	14.0%	**4.5%**	**Y**
Unconfined freeze-thaw test - A23.2 - 24A‡‡	6 % maximum	10 % maximum	9.5%	**1.6%**	**Y**
Abrasion loss - A23.2 - 16A and A23.2 - 17A§§	50 % maximum	50 % maximum	-	-	-
Petrographic examination of aggregate - A23.2 -15A	125 maximum	140 maximum	-	-	-
Alkali-Carbonate reactivity - A23.2 - 26A	chem. comp. must plot in non-exp. field		-	-	-
Accelerated mortar bar - A23.2 - 25A	maximum 0.150% at 14 days		-	-	-
Concrete prism - A23.2 - 14A	maximum 0.040% at one year		-	-	-
Alternative Requirements* **					
$MgSO_4$ soundness loss - A23.2 - 9A	12 % maximum	18 % maximum			

Issued By: Kristen Hand (Print Name)

Testing Laboratory Representative Signature

14 February 2017 (Date)

LIMITS FOR DELETERIOUS SUBSTANCES AND PHYSICAL PROPERTIES OF AGGREGATE

CSA A23.1 - 14, Table 11 & 12 and A23.2-15A & 27A, Rev. August 2014

Clauses 4.2.3.2.2, 4.2.3.4.3, 4.2.3.5.1, 4.2.3.5.3.3, 4.2.3.5.3.4, 4.2.3.7 & 4.2.3.10.1

Enclosure: **2**

*Limits for deleterious substances not listed in this Table, such as coal, ochre (ironstone), shalestone, siltstone, or argillaceous limestone, shall be specified by the owner to encompass deleterious materials known to be present in a particular region. In the absence of such information, aggregate shall be accepted or rejected in accordance with clause 4.2.3.9

†Clay lumps are defined as fine-grained, consolidated, sedimentary materials of a hydrous aluminosilicate nature.

‡A liquid with a relative density of 2.0 is generally used to separate particles classified as coal or lignite. Liquids with relative densities higher or lower than 2.0 might be required to identify other deleterious low-density materials.

The amount of material of clay size shall be determined by performing a hydrometer analysis as per ASTM D 422 on a sample washed through an 80 µm sieve.

**In the case of crushed aggregate, if material finer than the 80 µm sieve consists of the dust of fracture, essentially free from clay or shale, the maximum shall be 2.0%

‡‡CSA A23.2-24A, a test for coarse aggregate, has good precision and shows fair correlation with the MgSO4 soundness test. For further information, see Rogers, Senior, & Boothe (1989)

§§The abrasion loss shall not be greater than 35% when the aggregate is used in concrete paving or for other concrete surfaces subjected to significant wear. This does not refer to air- cooled iron blast-furnace-slag coarse aggregate. The abrasion loss requirements for coarse aggregate shall be waived provided that the material meets the alternative requirements for Micro-deval detailed in this Table.

***The freeze-thaw requirements for coarse aggregate shall be waived provided that the material meets the laternative requirements for $MgSO_4$ soundness loss detailed in this Table.

****If the Coarse Aggregate when tested according to A23.2-15A does not show the presence of either clay lumps or low-density granular materials, the requirements for testing in accordance with 3A and 4A may be waived.

[1]This limit applies to the amount of material finer than 80µm as determined by washing only.

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SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE

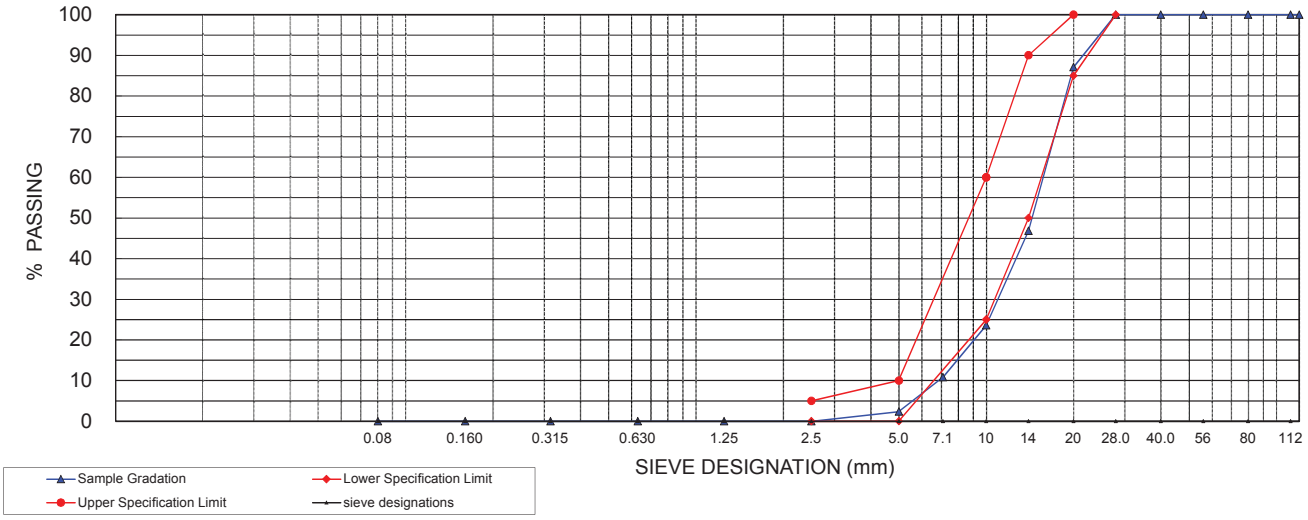
CSA A23.2-2A

Enclosure: 1
Date: 14 February 2017
Project No: TB152049

Client: Hatch Ltd.
Sample Source: NF17-03
Sampled By: Client
Date Sampled: January 2017
Sample Type: Crushed Core
Specification: CSA A23.1-14, August 2014, Table 11, Group I, 20-5mm Concrete Stone Grading Requirements for Coarse Aggregate

Lab No: S020-17
Date Received: 26 January 2017
Date Tested: 6 February 2017
Lab Technician: KH
Fineness Modulus: #DIV/0!

SIEVE SIZES (mm)	120	112	80	56	40.0	28.0	20	14	10	7.1	5	2.5	1.25	0.630	0.315	0.160	0.08
SPECIFICATIONS	-	-	-	-	-	100.0	85-100	50-90	25-60	-	0-10	0-5	-	-	-	-	-
% PASSING	100.0	100.0	100.0	100.0	100.0	100.0	87.1	46.8	23.6	10.8	2.4						
% RETAINING	0.0	0.0	0.0	0.0	0.0	0.0	12.9	53.2	76.4	89.2	97.6						



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LIMITS FOR DELETERIOUS SUBSTANCES AND PHYSICAL PROPERTIES OF AGGREGATE

CSA A23.1 - 14, Table 11 & 12 and A23.2 - 15A & 27A, Rev. August 2014

Clauses 4.2.3.2.2, 4.2.3.4.3, 4.2.3.5.1, 4.2.3.5.3.3, 4.2.3.5.3.4, 4.2.3.7 & 4.2.3.10.1

Job No.:	Client:	Sampled By:	Enclosure:
TB152049	Hatch Ltd.	Client	2

Name of Testing Laboratory:	Telephone No.:	Fax No.:
Amec Foster Wheeler Environment & Infrastructure	(905) 312 - 0700	(905) 312 - 0771

Sample Lab No.:	Sample Source:
S021-17	NF17-04

Sample Type:	Date Sampled:	Stockpile Quantity (t)
Crushed Rock	January 2017	--

COARSE AGGREGATE

Nominal Max. Size (mm):	Aggregrate Inventory No.:	Gradation Results:	Meets Spec.: (Y/N)
20 mm	n/a	n/a	n/a

Limits for Deleterious Substances and Physical Properties of Aggregates

CSA Laboratory Test and Number	Acceptance Limits		Reference Material Results	Sample Results	Meets Spec.
	Maximum percentage by mass of total sample				
Standard Requirements	**Concrete exposed to freezing & thawing**	**Other exposure conditions**			**Y / N**
Clay lumps - A23.2 - 3A †****	0.3 % maximum	0.5 % maximum	-	-	-
Low - density granular materials - A23.2 - 4A‡****	0.5 % maximum	1 % maximum	-	-	-
Material finer than 80 µm - A23.2 - 5A**	1% maximum[1]	1% maximum[1]	-	-	-
Absorption - A23.2 - 12A	-		0.37%	**0.45%**	-
Flat & elongated particles, Procedure A, 4:1 - A23.2-13A	20.0 % maximum	20.0 % maximum	-	-	-
Micro-Deval test - A23.2 - 29A	17 % maximum	21 % maximum	14.0%	**7.9%**	**Y**
Unconfined freeze-thaw test - A23.2 - 24A‡‡	6 % maximum	10 % maximum	9.5%	**0.8%**	**Y**
Abrasion loss - A23.2 - 16A and A23.2 - 17A§§	50 % maximum	50 % maximum	-	-	-
Petrographic examination of aggregate - A23.2 -15A	125 maximum	140 maximum	-	-	-
Alkali-Carbonate reactivity - A23.2 - 26A	chem. comp. must plot in non-exp. field		-	-	-
Accelerated mortar bar - A23.2 - 25A	maximum 0.150% at 14 days		-	-	-
Concrete prism - A23.2 - 14A	maximum 0.040% at one year		-	-	-
Alternative Requirements* **					
$MgSO_4$ soundness loss - A23.2 - 9A	12 % maximum	18 % maximum			

Issued By: Kristen Hand (Print Name) _____ (Testing Laboratory Representative Signature) 14 February 2017 (Date)

LIMITS FOR DELETERIOUS SUBSTANCES AND PHYSICAL PROPERTIES OF AGGREGATE

CSA A23.1 - 14, Table 11 & 12 and A23.2-15A & 27A, Rev. August 2014

Clauses 4.2.3.2.2, 4.2.3.4.3, 4.2.3.5.1, 4.2.3.5.3.3, 4.2.3.5.3.4, 4.2.3.7 & 4.2.3.10.1

Enclosure: **2**

*Limits for deleterious substances not listed in this Table, such as coal, ochre (ironstone), shalestone, siltstone, or argillaceous limestone, shall be specified by the owner to encompass deleterious materials known to be present in a particular region. In the absence of such information, aggregate shall be accepted or rejected in accordance with clause 4.2.3.9

†Clay lumps are defined as fine-grained, consolidated, sedimentary materials of a hydrous aluminosilicate nature.

‡A liquid with a relative density of 2.0 is generally used to separate particles classified as coal or lignite. Liquids with relative densities higher or lower than 2.0 might be required to identify other deleterious low-density materials.

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‡‡CSA A23.2-24A, a test for coarse aggregate, has good precision and shows fair correlation with the MgSO4 soundness test. For further information, see Rogers, Senior, & Boothe (1989)

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***The freeze-thaw requirements for coarse aggregate shall be waived provided that the material meets the laternative requirements for $MgSO_4$ soundness loss detailed in this Table.

****If the Coarse Aggregate when tested according to A23.2-15A does not show the presence of either clay lumps or low-density granular materials, the requirements for testing in accordance with 3A and 4A may be waived.

[1]This limit applies to the amount of material finer than 80µm as determined by washing only.

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SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE

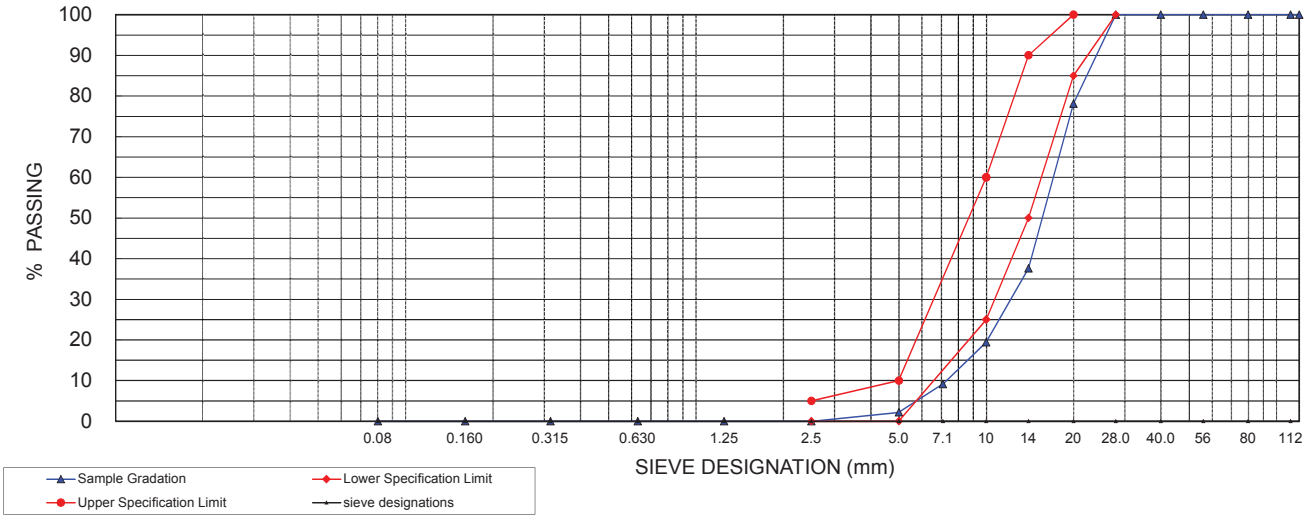
CSA A23.2-2A

Enclosure: 1
Date: 14 February 2017
Project No: TB152049

Client: Hatch Ltd.
Sample Source: NF17-04
Sampled By: Client
Date Sampled: January 2017
Sample Type: Crushed Rock
Specification: CSA A23.1-14, August 2014, Table 11, Group I, 20-5mm Concrete Stone Grading Requirements for Coarse Aggregate

Lab No: S021-17
Date Received: 26 January 2017
Date Tested: 6 February 2017
Lab Technician: KH

SIEVE SIZES (mm)	120	112	80	56	40.0	28.0	20	14	10	7.1	5	2.5	1.25	0.630	0.315	0.160	0.08
SPECIFICATIONS	-	-	-	-	-	100.0	85-100	50-90	25-60	-	0-10	0-5	-	-	-	-	-
% PASSING	100.0	100.0	100.0	100.0	100.0	100.0	78.1	37.6	19.4	9.2	2.2						
% RETAINING	0.0	0.0	0.0	0.0	0.0	0.0	21.9	62.4	80.6	90.8	97.8						



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SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

10-July-2017

Hatch LTD
Attn : Ralph Serluca

4342 Queen St Suite500
Niagara Falls, ON
L2E 6W1,

Phone: 905-374-5200
Fax:905-374-0701

Date Rec. : 27 June 2017
LR Report: **CA13857-JUN17**

Copy: #1

CERTIFICATE OF ANALYSIS

Partial Report

Analysis	5: NF17-07	6: NF17-08	7: NF17-09
Sample Date & Time	Date:N/A	Date:N/A	Date:N/A
Paste pH	9.89	8.89	8.24
Fizz Rate [---]	1	1	3
Sample weight [g]	2.05	1.99	2.00
HCl Added [mL]	20.00	20.00	540.00
HCl [Normality]	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10
NaOH to [pH=8.3 mL]	17.48	15.50	109
Final pH	1.14	1.73	1.68
NP [t CaCO3/1000 t]	6.1	11	1077
AP [t CaCO3/1000 t]	0.67	0.67	0.67
Net NP [t CaCO3/1000 t]	5.43	10.6	1077
NP/AP [ratio]	9.10	16.9	1608
Sulphur (total) [%]	0.035	0.042	0.029
Acid Leachable SO4-S [%]	0.04	0.04	0.03
Sulphide [%]	< 0.02	< 0.02	< 0.02
Carbon (total) [%]	0.044	0.061	11.1
Carbonate [%]	0.110	< 0.025	54.1

Brian Graham B.Sc.
Project Specialist
Environmental Services, Analytical

OnLine LIMS

0001059049

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

LR Report : **CA13857-JUN17**

*NP (Neutralization Potential)

$$= \frac{50 \times (\text{N of HCL} \times \text{Total HCL added} - \text{N NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.02 will be calculated using a 0.02 value.

Appendix I
Geological Investigation Safety Plan

Safety Management Plan - Geotechnical Drilling Program		Project Number: H352034
Hatch requires a site-specific Occupational Health and Safety Management Plan for all construction projects. Note that backup documentation is required to demonstrate the veracity of any statements made in this plan. If any are is not applicable to your project please provide an explanation as to why.		
1. Project Definition	Project name	12Mtpa 2016 Field Investigation Program
	Project description	Geotechnical drilling investigation for Baffinland Iron Mines (BIM) including (i) along proposed rail alignment from Mary River to Milne Port, (ii) Milne Port Infrastructure area, (iii) Bridge structures, (iv) quarries and (v) offshore (marine area associated with dock location.
	Project location(s) and project work site location(s)	Locations as noted above.
	What are the safety targets for this project? (Consider LTIs, MTIs, audits etc.)	No incidents.
	How will safety statistics be measured and reported?	Will be recorded along with weekly progress meeting/reports.
2. Project Roles and Responsibilities	Who is the Project Manager?	James Cleland.
	Who is the Principal Contractor for the project?	Boart Longyear (BLY).
	Who is the person on the project team responsible for ensuring compliance with the obligations of the Principal Contractor under the applicable legislation?	BIM, with Hatch as site representative.

Safety Management Plan - Geotechnical Drilling Program			Project Number: H352034	
	Who is responsible for:	**Responsible:**	**Who is responsible for:**	**Responsible:**
	• identifying, controlling (through elimination or mitigation) and documenting the risks during the design phase of the project	Hatch	• managing compliance of all contractors and persons on site with Safe Work Method Statements and the Site Safety Rules.	BLY Lead supported by Hatch Staff
	• reporting safety aspects of the design to the construction team and plant owner	BLY supported by Hatch.	• making sure that all personnel attend the required safety inductions, have been appropriately trained and keeping records of attendance at inductions and other safety training.	BLY Lead supported by Hatch Staff
	• identifying hazards and assessing the risks associated with all other aspects of the work, and determining and documenting the risk control measures necessary	BLY for all equipment operation	• providing contractors and any person involved in the work with the Site-specific Safety Management Plan and any updates.	BLY SMP supported by Hatch
	• regularly reviewing and updating hazard identification, risk assessment and measures to control risks	BLY supported by Hatch	• managing OHS communication and consultation provisions in accordance with the regulatory and other requirements.	BIM – supported by BLY and Hatch
	• managing compliance on the project with OHS, workplace injury management and workers compensation legislation, regulations, standards and codes	BIM – supported by BLY and Hatch	• preparing, maintaining and making available the register of hazardous substances.	BLY – oversight by Hatch
	• assessing and monitoring the safety management capability of contractors and other service providers	BIM	• ensuring first aid is always available and maintaining first aid stocks.	BLY supported by Hatch FA trained individuals