

Appendices

Appendix A

Borehole Logs

TOTAL DEPTH: 84.00 m
 N: 4983850 E: 473585
 ELEVATION: 62 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 18, 2023
 DATE COMPLETED: AUG 25, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0 m 2023-08-18

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES				UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS	
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240			300
0	62.0			▼												
	61.9	TOPSOIL: Organics. Soft to hard Sandy Clayey SILT, trace to some gravel, fine grained, low plasticity, angular to sub rounded, well graded, wet, reddish to brown in colour.				SS	1	430	4							
1						SS	2	430	20							
2						SS	3	305	11							
						SS	4	560	37							
3																
						SS	5	485	22	SH						
4						SS	6	330	23							
5	57.4	Compact Silty SAND, some gravel, fine to coarse grained, sub angular to sub rounded, well graded, wet, brown in colour.				SS	7	50	21							
	56.8	Very stiff to Hard Clayey Sandy SILT, trace to some gravel and cobbles, fine to coarse grained, low to medium plasticity, sub angular to sub rounded, well graded, wet, brown in colour				SS	8	610	35							
6						SS	9	280	24							
	55.3	Hard Clayey SAND and SILT to Clayey Sandy SILT, trace to some gravel and cobbles, fine to coarse grained, low plasticity, angular to sub rounded, well graded, wet, brown in colour.				SS	10	510	38							
7																
						SS	11	495	34	SH						
8						SS	12	445	42							
9																
						SS	13	420	37							
10																

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 84.00 m
 N: 4983850 E: 473585
 ELEVATION: 62 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 18, 2023
 DATE COMPLETED: AUG 25, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0 m 2023-08-18

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300		
										WATER CONTENT & ATTERBERG LIMITS						
10	51.4	Very stiff to hard Sandy SILT, trace to some clay and gravel, fine to coarse grained, low plasticity, angular to sub rounded, well graded, wet, brown in colour.														
11				SS	14	255	22									
12																
13				SS	15	100	34									
14	48.3	Hard Clayey SAND and SILT, trace to some gravel and cobbles, fine to coarse grained, low plasticity, angular to sub rounded, poorly to well graded, wet, brown in colour.														
15				SS	16	560	33	SH								
16																
17				SS	17	610	43									
18																
19				SS	18	355	35									
20																
				SS	19	535	37	SH								

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 84.00 m
 N: 4983850 E: 473585
 ELEVATION: 62 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 18, 2023
 DATE COMPLETED: AUG 25, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0 m 2023-08-18

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS	
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE	OR RQD %	LAB TESTS	60	120	180	240			300
											WATER CONTENT & ATTERBERG LIMITS						
20		Hard Clayey SAND and SILT, trace to some gravel and cobbles, fine to coarse grained, low plasticity, angular to sub rounded, poorly to well graded, wet, brown in colour. (continued...)															
21																	
22				SS	21	455	42										
23				SS	22	0	45										
24																	
25			SS	23	0	65											
26			SS	24	535	70											
27																	
28	34.6	Hard Sandy SILT, some clay and gravel, fine to coarse grained, low plasticity, angular to sub rounded, well graded, wet, brown in colour.															
29				SS	25	535	58										
30	33.1	Hard Sandy Silty CLAY, some gravel and cobbles, fine to coarse grained, low to medium plasticity, angular to sub rounded, well graded, wet to moist, brown in colour.															
				SS	26	510	61										

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 84.00 m
 N: 4983850 E: 473585
 ELEVATION: 62 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 18, 2023
 DATE COMPLETED: AUG 25, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0 m 2023-08-18

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS				
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300			WATER CONTENT & ATTERBERG LIMITS	W _p	W	W _L
30		Hard Sandy Silty CLAY, some gravel and cobbles, fine to coarse grained, low to medium plasticity, angular to sub rounded, well graded, wet to moist, brown in colour. (continued...)																		
31				SS 27	430	78														
32	30.0	Very dense SILTY SAND, fine to coarse grained, well graded, wet, grey in colour.																		
33				SS 28	75	50/75mm														
34	28.3	GYPSUM: Light grey to tan, fine grained, with laminations of mud/karst fill, dark brown mud/clay and quartz fragments/sand.																		
35				HQ3 29	100	57														
36																				
37				HQ3 30	94	74														
38																				
39																				
40																				

△ Unconfined Compression Test
 □ Field Vane Test ■ (Remolded)
 ◇ Fall Cone Test ◆ (Remolded)
 ▽ Hand Penetrometer Test ▣ Torvane
 LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 84.00 m
 N: 4983850 E: 473585
 ELEVATION: 62 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 18, 2023
 DATE COMPLETED: AUG 25, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0 m 2023-08-18

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300		
										WATER CONTENT & ATTERBERG LIMITS						
40	19.9	GYPSUM: Light grey to tan, fine grained, with laminations of mud/karst fill, dark brown mud/clay and quartz fragments/sand. (continued...)	[Strata Plot]		HQ3 31	100	75									
41																
42		GYPSUM/KARST FILL: Light grey, massive with 30% karst fill. Karst fill is soft dark brown mud/clay with fine to coarse grained quartz over 5-10 scale.	[Strata Plot]		HQ3 32	100	47									
43																
44			[Strata Plot]		HQ3 33	98	73									
45																
46			[Strata Plot]		HQ3 34	99	41									
47																
48			[Strata Plot]													
49			[Strata Plot]													
50			[Strata Plot]													

△ Unconfined Compression Test
 □ Field Vane Test ■ (Remolded)
 ◇ Fall Cone Test ◆ (Remolded)
 ▽ Hand Penetrometer Test ▣ Torvane
 LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 84.00 m
 N: 4983850 E: 473585
 ELEVATION: 62 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 18, 2023
 DATE COMPLETED: AUG 25, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0 m 2023-08-18

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS												
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300														
										WATER CONTENT & ATTERBERG LIMITS							W _p	W	W _L									
STANDARD PENETRATION TEST, BLOWS/0.3m												★																
50		GYPSUM/KARST FILL: Light grey, massive with 30% karst fill. Karst fill is soft dark brown mud/clay with fine to coarse grained quartz over 5-10 scale. (continued...)	[Symbol]																									
51																												
52																												
9.5		KARST FILL: Dark brown, soft mud/clay with <5% angular gypsum wall rock. Faint tan laminations/bedding.	[Symbol]																									
53																												
8.4		GYPSUM/KARST FILL: Grey to tan, brecciated and crystallized gypsum with 25% karst fill.	[Symbol]																									
54																												
		GYPSUM: White to light grey, fine grained	[Symbol]																									
55																												
5.7		GYPSUM: White to light grey, fine grained	[Symbol]																									
56																												
		KARST FILL: Dark brown, soft mud/clay with 2-5 cm angular gypsum wall rock, some lamination and minor fine to coarse grained quartz fragments.	[Symbol]																									
57																												
3.6		KARST FILL: Dark brown, soft mud/clay with 2-5 cm angular gypsum wall rock, some lamination and minor fine to coarse grained quartz fragments.	[Symbol]																									
58																												
		KARST FILL: Dark brown, soft mud/clay with 2-5 cm angular gypsum wall rock, some lamination and minor fine to coarse grained quartz fragments.	[Symbol]																									
59																												
60																												

PT Test 2
57.00 to 60.00 m

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 84.00 m
 N: 4983850 E: 473585
 ELEVATION: 62 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 18, 2023
 DATE COMPLETED: AUG 25, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0 m 2023-08-18

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS						
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300			60	120	180	240	300	
60	1.4	GYPSUM: Light grey to white, fine grained, weakly interbedded with tan dolomitic mud. Selenite crystals visible.																				
61					HQ338	100	83													42		
62																						
63																						
64																						
65																						
66																						
67																						
68																						
69																						
70	-7.6																					
										STANDARD PENETRATION TEST, BLOWS/0.3m												
										10	20	30	40	50	60	70	80	20	40	60	80	
										WATER CONTENT & ATTERBERG LIMITS												
										W _p W W _L												
										★												
										●												

PT Test 1
69.00 to 84.00 m

ST - Shelby Tube △ Unconfined Compression Test
 SS - Split Spoon □ Field Vane Test ■ (Remolded)
 ◇ Fall Cone Test ◆ (Remolded)
 ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
REVIEWED: AG

TOTAL DEPTH: 84.00 m
 N: 4983850 E: 473585
 ELEVATION: 62 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 18, 2023
 DATE COMPLETED: AUG 25, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0 m 2023-08-18

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300		
										WATER CONTENT & ATTERBERG LIMITS						
70	-8.8	DOLOMITE: Tan to dark brown, distinct lamination/bedding, soft sediment deformation. (continued...)			HQ3 41	98	87									
71		GYPSUM/ANHYDRITE: Light grey to white, with fragments of anhydrite (20-50%) increasing with depth. Common selenite crystals.														
72																
73																
74					HQ3 42	100	99									
75																
76																
77					HQ3 43	99	99									
78																
79	-17.0	ANHYDRITE/GYPSUM: Light grey to white, with fragments of gypsum (30-40%) increasing with depth. Common selenite crystals and minor dolomite.			HQ3 44	100	95									
80																

△ Unconfined Compression Test
 □ Field Vane Test ■ (Remolded)
 ◇ Fall Cone Test ◆ (Remolded)
 ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 84.00 m
 N: 4983850 E: 473585
 ELEVATION: 62 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 18, 2023
 DATE COMPLETED: AUG 25, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0 m 2023-08-18

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS			
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300			W _p	W	W _L
										STANDARD PENETRATION TEST, BLOWS/0.3m									
	-18.8	DOLOMITE: Tan, laminated, common selenite veins with dolomite wall rock.	◇																
	-19.3	ANHYDRITE: Light grey-blue, with, 20% tan dolomite, selenite veins.	◇																
			◇			HQ3	45	100	95										
	-22.0	End of Drillhole at 84.0 m.	◇																
80																			
81																			
82																			
83																			
84																			
85																			
86																			
87																			
88																			
89																			
90																			

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY:MM
 REVIEWED:AG

TOTAL DEPTH: 69.00 m
 N: 4984289 E: 473749
 ELEVATION: 39 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 16, 2023
 DATE COMPLETED: AUG 17, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0 m 2023-08-16

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES				UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS	
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	WATER CONTENT & ATTERBERG LIMITS						
										60	120	180	240			300
0	39.0	TOPSOIL: Organics.														
0.4	38.4	Loose Silty SAND, trace clay and gravel, fine grained, low plasticity, sub angular to rounded, well graded, wet, brown in colour, organics.			SS	1	125	5								
0.8		Stiff Sandy silty CLAY, some gravel, fine grained, low plasticity, sub rounded to rounded, well graded, wet, brown in colour.			SS	2	180	11								
1.6					SS	3	150	9								
2.4					SS	4	455	14								
3.2	36.3	Dense SAND and SILT, some clay, trace gravel, fine to coarse grained, low plasticity, angular to rounded, well graded, wet, brown in colour, organics.			SS	5	40	30								
4.0					SS	6	215	42								
4.8					SS	7	50	36								
5.6					SS	8	535	34	SH							
6.4		Hard Sandy Silty CLAY, some gravel, fine to coarse grained, low plasticity, angular to rounded, well graded, wet, brown in colour.			SS	9	345	55								
7.2																
8.0					SS	10	510	89								
8.8	30.8	Hard Silty Clayey SAND, some gravel, fine grained, low plasticity, sub rounded to rounded, well graded, wet, brown in colour.			SS	11	320	67								
9.6																
10.4					SS	12	455	24/150 mm	SH							

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 69.00 m
 N: 4984289 E: 473749
 ELEVATION: 39 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 16, 2023
 DATE COMPLETED: AUG 17, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0 m 2023-08-16

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS	
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300			
										WATER CONTENT & ATTERBERG LIMITS							W _p
10		Hard Silty Clayey SAND, some gravel, fine grained, low plasticity, sub rounded to rounded, well graded, wet, brown in colour. (continued...)															
11																	
12	27.2	GYPSUM: Light grey to dark grey, fine grained, soft sediment deformation.			HQ3 13	100	50								35		
13																	
14							HQ3 14	55	27								31
15																	
16							HQ3 15	67	45								32
17																	
18																	
19																	
20					HQ3 16	8	0								16		

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 69.00 m
 N: 4984289 E: 473749
 ELEVATION: 39 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 16, 2023
 DATE COMPLETED: AUG 17, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0 m 2023-08-16

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS			
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300			WATER CONTENT & ATTERBERG LIMITS	W _p	W
20		GYPSUM: Light grey to dark grey, fine grained, soft sediment deformation. (continued...)	[Strata Plot]	[Water Level]															
21																			
22																			
23					HQ3 17	42	14										18		
24																			
25					HQ3 18	70	55	DS									41		
26																			
27																			
28					HQ3 19	51	40										41		
29																			
30																			

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 69.00 m
 N: 4984289 E: 473749
 ELEVATION: 39 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 16, 2023
 DATE COMPLETED: AUG 17, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0 m 2023-08-16

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300		
										WATER CONTENT & ATTERBERG LIMITS						
30		GYPSUM: Light grey to dark grey, fine grained, soft sediment deformation. (continued...)	[Symbol]													
31																
32																
33																
34	5.3	DOLOMITE: Light grey to tan, dolomitic gypsum, fine grained, bedded.	[Symbol]													
35	4.5	GYPSUM: Light grey, fine to medium grained, rare selenite porphyroblasts.	[Symbol]													
36	3.6	ANHYDRITE: Light grey-blue, fine grained, massive, selenite veins.	[Symbol]													
37																
38	1.4	GYPSUM: Mix of gypsum and anhydrite, patches of blue-grey, fine grained, vuggy texture.	[Symbol]													
39																
40																

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 69.00 m
 N: 4984289 E: 473749
 ELEVATION: 39 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 16, 2023
 DATE COMPLETED: AUG 17, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0 m 2023-08-16

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300		
										WATER CONTENT & ATTERBERG LIMITS						
-40	-1.1	DOLOMITE: Tan-brown, fine grained, finely bedded.														
-41	-1.6	GYPSUM: Light grey to white, patched of white massive gypsum with no texture.			HQ3 23	100	99							53		
-42	-3.2	ANHYDRITE: Grey, blue, tan, fine grained, banded texture with anhydrite/dolomite, 30% dolomitic mud.														
-43					HQ3 24	100	97							60		
-44																
-45																
-46																
-47					HQ3 25	100	100							61		
-48	-8.7	GYPSUM: Light grey to white, patched of white massive gypsum with no texture.														
-49														53		
-50					HQ3 26	95	88									

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 69.00 m
 N: 4984289 E: 473749
 ELEVATION: 39 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 16, 2023
 DATE COMPLETED: AUG 17, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0 m 2023-08-16

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300		
										WATER CONTENT & ATTERBERG LIMITS						
50		GYPSUM: Light grey to white, patched of white massive gypsum with no texture. (continued...)	◇													
51			◇													
52	-13.3		◇													
53		DOLOMITE: Tan-brown, fine grained, finely bedded.	◇		HQ3 27	100	99									53
54	-14.7		◇													
55		ANHYDRITE: Grey-blue, fine grained, massive with minor dolomitic content less than 5%.	◇													
56			◇		HQ3 28	100	100									61
57			◇													
58			◇													
59			◇		HQ3 29	100	100									61
60			◇													

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 69.00 m
 N: 4984289 E: 473749
 ELEVATION: 39 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 16, 2023
 DATE COMPLETED: AUG 17, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0 m 2023-08-16

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300		
										WATER CONTENT & ATTERBERG LIMITS						
ANHYDRITE: Grey-blue, fine grained, massive with minor dolomitic content less than 5%. (continued...)																
60			◇													
61			◇													
62			◇		HQ330	100	100							71		
63			◇													
64			◇													
65			◇		HQ331	100	100	BTS						61		
66			◇													
67			◇													
68			◇		HQ332	100	100							56		
69	-30.0	End of Drillhole at 69.0 m.	◇													
70																

△ Unconfined Compression Test
 □ Field Vane Test ■ (Remolded)
 ◇ Fall Cone Test ◆ (Remolded)
 ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 71.00 m
 N: 4984864 E: 474096
 ELEVATION: 29 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 11, 2023
 DATE COMPLETED: AUG 15, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0.61 m 2023-08-11

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS	
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300			
										WATER CONTENT & ATTERBERG LIMITS							W _p
0	29.0	TOPSOIL: Organics.															
0	29.0	Very soft to stiff Sandy SILT to silty SAND, trace to some gravel, trace clay, fine to course grained, sub angular to sub rounded, well graded, moist to wet, reddish brown to grey in colour.		▼	SS	1	345	5									
0.5	SS				2	520	9										
1.5	SS				3	65	1										
2.5	SS				4	355	5/150mm	SH									
3	26.0	GYPSUM: light grey to dark grey, fine grained, laminated, soft sedimentation deformation. Brecciated gypsum with fine to coarse clasts, selenite veins. Selenite veins increase in frequency with depth.			HQ3	5	98	46							22		
6	HQ3				6	100	84	BTS							37		
8																	
9	HQ3				7	96	86									47	

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 71.00 m
 N: 4984864 E: 474096
 ELEVATION: 29 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 11, 2023
 DATE COMPLETED: AUG 15, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0.61 m 2023-08-11

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS															
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300																	
										WATER CONTENT & ATTERBERG LIMITS							W _p	W	W _L												
10		GYPSUM: light grey to dark grey, fine grained, laminated, soft sedimentation deformation. Brecciated gypsum with fine to coarse clasts, selenite veins. Selenite veins increase in frequency with depth. (continued...)	◊																												
11																															
12																															
13																															
14																															
15																															
16																															
17																															
18																															
19																															
20																															

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 71.00 m
 N: 4984864 E: 474096
 ELEVATION: 29 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 11, 2023
 DATE COMPLETED: AUG 15, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0.61 m 2023-08-11

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300		
										WATER CONTENT & ATTERBERG LIMITS						
GYPSUM: light grey to dark grey, fine grained, laminated, soft sedimentation deformation. Brecciated gypsum with fine to coarse clasts, selenite veins. Selenite veins increase in frequency with depth. (continued...)																
20			◇													
21			◇													
22			◇													
23			◇													
24			◇													
25			◇													
26			◇													
27			◇													
28			◇													
29			◇													
30			◇													

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 71.00 m
 N: 4984864 E: 474096
 ELEVATION: 29 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 11, 2023
 DATE COMPLETED: AUG 15, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0.61 m 2023-08-11

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300		
										WATER CONTENT & ATTERBERG LIMITS						
GYPSUM: light grey to dark grey, fine grained, laminated, soft sedimentation deformation. Brecciated gypsum with fine to coarse clasts, selenite veins. Selenite veins increase in frequency with depth. (continued...)																
30			◇		HQ3 14	100	100									
31			◇											58		
32			◇													
33			◇		HQ3 15	100	95							57		
34			◇													
35			◇													
36			◇		HQ3 16	100	83							37		
37			◇													
38			◇													
39			◇													
40			◇		HQ3 17	97	79							36		

△ Unconfined Compression Test
 □ Field Vane Test ■ (Remolded)
 ◇ Fall Cone Test ◆ (Remolded)
 ▽ Hand Penetrometer Test ▣ Torvane
 LOGGED BY:MM
 REVIEWED:AG

TOTAL DEPTH: 71.00 m
 N: 4984864 E: 474096
 ELEVATION: 29 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 11, 2023
 DATE COMPLETED: AUG 15, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0.61 m 2023-08-11

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS			
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300					
										WATER CONTENT & ATTERBERG LIMITS							W _p	W	W _L
40		GYPSUM: light grey to dark grey, fine grained, laminated, soft sedimentation deformation. Brecciated gypsum with fine to coarse clasts, selenite veins. Selenite veins increase in frequency with depth. <i>(continued...)</i>	[Strata Plot Symbols]	[Water Level]															
41																			
42																			
43								HQ3	18	98	77								
44																			
45																			
46																			
47																			
48																			
49																			
50																			

△ Unconfined Compression Test
 □ Field Vane Test ■ (Remolded)
 ◇ Fall Cone Test ◆ (Remolded)
 ▽ Hand Penetrometer Test ▣ Torvane
 LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 71.00 m
N: 4984864 E: 474096
ELEVATION: 29 m
UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 11, 2023
DATE COMPLETED: AUG 15, 2023
INCLINATION: 90°
AZIMUTH: 000°
WATER LEVEL: 0.61 m 2023-08-11

PROJECT NO.: 23-053-H
CLIENT: Mercator Geological Services
PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS																		
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300																				
										WATER CONTENT & ATTERBERG LIMITS							W _p	W	W _L															
STANDARD PENETRATION TEST, BLOWS/0.3m												★																						
50		GYPSUM: light grey to dark grey, fine grained, laminated, soft sedimentation deformation. Brecciated gypsum with fine to coarse clasts, selenite veins. Selenite veins increase in frequency with depth. (continued...)	◇																															
51																		HQ3 21	100	100														
52																																		
53			◇																															
54																			HQ3 22	99	99	BTS												
55																																		
56			◇																															
57																			HQ3 23	98	98													
58																																		
59	-30.0	DOLOMITE and GYPSUM TRANSITION ZONE: Grey to tan, fine grained, bedded, frequent selenite veins.	◇																															
60			◇																															

ST - Shelby Tube
SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
REVIEWED: AG

TOTAL DEPTH: 71.00 m
 N: 4984864 E: 474096
 ELEVATION: 29 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 11, 2023
 DATE COMPLETED: AUG 15, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0.61 m 2023-08-11

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300		
										WATER CONTENT & ATTERBERG LIMITS						
ANHYDRITE: Light to dark grey, massive, with patchy dolomite relic beds.												★				
60	-31.1				HQ3 24	100	100									
61														56		
62																
63																
64					HQ3 25	100	91	BTS						54		
65																
66																
67					HQ3 26	97	90							54		
68																
69																
70	-40.6				HQ3 27	100	99							56		
DOLOMITE: Light grey to tan, fine grained, heavily bedded with frequent selenite veins (1-5 cm).												●				

ST - Shelby Tube
 SS - Split Spoon

△ Unconfined Compression Test
 □ Field Vane Test ■ (Remolded)
 ◇ Fall Cone Test ◆ (Remolded)
 ▽ Hand Penetrometer Test ▣ Torvane
 LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 71.00 m
 N: 4984864 E: 474096
 ELEVATION: 29 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 11, 2023
 DATE COMPLETED: AUG 15, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 0.61 m 2023-08-11

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS	
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300			WATER CONTENT & ATTERBERG LIMITS
70	-42.0	ANHYDRITE: Light to dark grey, massive, with patchy dolomite relic beds. (continued...)	◇													56	
71		End of Drillhole at 71.0 m.															
72																	
73																	
74																	
75																	
76																	
77																	
78																	
79																	
80																	

ST - Shelby Tube Unconfined Compression Test
 SS - Split Spoon Field Vane Test (Remolded)
 Fall Cone Test (Remolded)
 Hand Penetrometer Test Torvane

LOGGED BY: MM
REVIEWED: AG

TOTAL DEPTH: 75.50 m
 N: 4983776 E: 474149
 ELEVATION: 51 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 23, 2023
 DATE COMPLETED: AUG 30, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 39.22 m 2023-08-31

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES				UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS	
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240			300
0	51.0	TOPSOIL: Organics.														
0.9	50.9	Loose Silty SAND, trace to some gravel, fine grained, sub rounded to rounded, well graded, moist, brown in colour, organics. Stiff to very stiff SILT and CLAY, some sand, gravel, and cobbles, fine grained, low plasticity, angular to rounded, well graded, wet, dark brown in colour			SS	1	430	7								
0.4	50.4				SS	2	510	11								
1.0					SS	3	405	14								
2.0					SS	4	520	27								
3.0	48.0	Hard Silty SAND, some clay and gravel, fine grained, low plasticity, angular to rounded, well graded, wet, brown in colour.			SS	5	75	38								
4.0					SS	6	520	42	SH							
5.0					SS	7	405	41								
6.0					SS	8	305	85								
7.0					SS	9	0	54								
8.0					SS	10	610	61								
9.0					SS	11	520	58								
9.8					SS	12	190	83								
9.8	41.8	GYPSUM: light grey, fine grained, massive.														
10.0																

TOTAL DEPTH: 75.50 m
 N: 4983776 E: 474149
 ELEVATION: 51 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 23, 2023
 DATE COMPLETED: AUG 30, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 39.22 m 2023-08-31

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS						
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300			WATER CONTENT & ATTERBERG LIMITS	W _p	W	W _L		
10		GYPSUM: light grey, fine grained, massive. (continued...)	◇		HQ3 13	100	58															
11																						
12																						
13								HQ3 14	80	42												
14																						
15					HQ3 15	92	47															
16																						
17																						
18																						
19																						
20					HQ3 16	100	92															

△ Unconfined Compression Test
 □ Field Vane Test ■ (Remolded)
 ◇ Fall Cone Test ◆ (Remolded)
 ▽ Hand Penetrometer Test ▣ Torvane
 LOGGED BY: MM/JT
 REVIEWED: AG

TOTAL DEPTH: 75.50 m
 N: 4983776 E: 474149
 ELEVATION: 51 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 23, 2023
 DATE COMPLETED: AUG 30, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 39.22 m 2023-08-31

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services
 PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS			
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300					
										WATER CONTENT & ATTERBERG LIMITS							W _p	W	W _L
20		GYPSUM: light grey, fine grained, massive. (continued...)	[Strata Plot]	[Water Level]															
21																			
22																			
23																			
24																			
25																			
26																			
27																			
28																			
29																			
30																			

ST - Shelby Tube Δ Unconfined Compression Test
 SS - Split Spoon \square Field Vane Test \blacksquare (Remolded)
 \diamond Fall Cone Test \blacklozenge (Remolded)
 ∇ Hand Penetrometer Test \blacksquare Torvane

LOGGED BY: MM/JT
 REVIEWED: AG

TOTAL DEPTH: 75.50 m
 N: 4983776 E: 474149
 ELEVATION: 51 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 23, 2023
 DATE COMPLETED: AUG 30, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 39.22 m 2023-08-31

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS								
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300										
										WATER CONTENT & ATTERBERG LIMITS							W _p	W	W _L					
											STANDARD PENETRATION TEST, BLOWS/0.3m													
											10	20	30	40	50	60	70	80	20	40	80			
30		GYPSUM: light grey, fine grained, massive. (continued...)	[Strata Plot]	[Water Level]	HQ3 20	99	88												47					
31																								
32																								
33								HQ3 21	99	87												52		
34																								
35																								
36																								
37					HQ3 22	97	94													52				
38																								
39																								
40					HQ3 23	100	96													54				

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM/JT
 REVIEWED: AG

TOTAL DEPTH: 75.50 m
 N: 4983776 E: 474149
 ELEVATION: 51 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 23, 2023
 DATE COMPLETED: AUG 30, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 39.22 m 2023-08-31

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS					
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300			WATER CONTENT & ATTERBERG LIMITS	W _p	W	W _L	
40		GYPSUM: light grey, fine grained, massive. (continued...)	[Strata Plot]																		
41																					
42																					
43								HQ3 24	100	96										54	
44																					
45																					
46																					
47																					
48																					
49																					
50																					

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM/JT
 REVIEWED: AG

TOTAL DEPTH: 75.50 m
 N: 4983776 E: 474149
 ELEVATION: 51 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 23, 2023
 DATE COMPLETED: AUG 30, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 39.22 m 2023-08-31

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS												
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300														
										WATER CONTENT & ATTERBERG LIMITS							W _p	W	W _L									
											STANDARD PENETRATION TEST, BLOWS/0.3m																	
											10	20	30	40	50	60	70	80	20	40	60	80						
50		GYPSUM: light grey, fine grained, massive. (continued...)	◊																									
51																												
52										HQ327	100	100	BTS														58	
53																												
54																												
55										HQ328	100	100																55
56																												
57																												
58										HQ329	94	94																57
59																												
60																								57				

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◊ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM/JT
 REVIEWED: AG

TOTAL DEPTH: 75.50 m
 N: 4983776 E: 474149
 ELEVATION: 51 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 23, 2023
 DATE COMPLETED: AUG 30, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 39.22 m 2023-08-31

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300		
										WATER CONTENT & ATTERBERG LIMITS						
GYPSUM: light grey, fine grained, massive. (continued...)																
60			◇		HQ3 30	100	98									
61			◇											57		
62			◇													
63			◇		HQ3 31	100	100							53		
64			◇													
65			◇													
66			◇		HQ3 32	100	100							58		
67			◇													
68			◇													
69	-17.3	ANHYDRITE: Light blue to grey, massive, Selenite veins with brecciated dolomite wallrock 1-5 cm throughout.	◇		HQ3 33	100	100							58		
70			◇													

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM/JT
 REVIEWED: AG

TOTAL DEPTH: 75.50 m
 N: 4983776 E: 474149
 ELEVATION: 51 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 23, 2023
 DATE COMPLETED: AUG 30, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 39.22 m 2023-08-31

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS			
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300			WATER CONTENT & ATTERBERG LIMITS	W _p	W
70		ANHYDRITE: Light blue to grey, massive, Selenite veins with brecciated dolomite wallrock 1-5 cm throughout. (continued...)	◊																
71																			
72																			
73						HQ334	100	100										58	
74																			
75						HQ335	100	100										61	
76	-24.5	End of Drillhole at 75.5 m.																	
77																			
78																			
79																			
80																			

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM/JT
 REVIEWED: AG

TOTAL DEPTH: 48.00 m
 N: 4983180 E: 474661
 ELEVATION: 57 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 30, 2023
 DATE COMPLETED: SEP 05, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 13.45 m 2023-09-06

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300		
										WATER CONTENT & ATTERBERG LIMITS						
0	57.0															
	56.9	TOPSOIL: Organics.														
		Firm to hard Sandy Silty CLAY to Clayey Silty SAND, trace to some gravel, fine to medium grained, low to medium plasticity, angular to rounded, well graded, wet, reddish brown in colour.														
1					SS	1	100	7								
2					SS	2	75	18								
3					SS	3	380	10								
4					SS	4	535	27								
5					SS	5	230	24								
6					SS	6	430	46								
7					SS	7	255	36								
8					SS	8	355	42								
9					SS	9	455	43								
10					SS	10	535	63	SH							
11					SS	11	535	33								
12					SS	12	305	78								
13					SS	13	585	48								

△ Unconfined Compression Test
 □ Field Vane Test ■ (Remolded)
 ◇ Fall Cone Test ◆ (Remolded)
 ▽ Hand Penetrometer Test ▣ Torvane
LOGGED BY: JT
REVIEWED: AG

TOTAL DEPTH: 48.00 m
 N: 4983180 E: 474661
 ELEVATION: 57 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 30, 2023
 DATE COMPLETED: SEP 05, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 13.45 m 2023-09-06

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS	
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300			
										WATER CONTENT & ATTERBERG LIMITS							W _p
						STANDARD PENETRATION TEST, BLOWS/0.3m					20	40	80				
10		Firm to hard Sandy Silty CLAY to Clayey Silty SAND, trace to some gravel, fine to medium grained, low to medium plasticity, angular to rounded, well graded, wet, reddish brown in colour. (continued...)															
11				SS 14	280	25											
12																	
13				SS 15	0	56											
13				SS 16	405	83											
14				SS 17	610	31											
15																	
16				SS 18	230	40											
17				SS 19	380	61											
19	38.0	GREYWACKE: Greenish grey, fine to medium grained, with green- grey slate. Overall trace disseminated/veinlets of sulphides. Rare Hematite stains and calcite breccia.															
20																	

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: JT
 REVIEWED: AG

TOTAL DEPTH: 48.00 m
 N: 4983180 E: 474661
 ELEVATION: 57 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 30, 2023
 DATE COMPLETED: SEP 05, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 13.45 m 2023-09-06

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS		
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300				
										WATER CONTENT & ATTERBERG LIMITS							W _p	W
20		GREYWACKE: Greenish grey, fine to medium grained, with green- grey slate. Overall trace disseminated/veinlets of sulphides. Rare Hematite stains and calcite breccia. (continued...)			HQ3	20	100	23										
21																		
22						HQ3	21	83	12									
23																		
24						HQ3	22	89	10									
25																		
26																		
27																		
28																		
29																		
30																		

△ Unconfined Compression Test
 □ Field Vane Test ■ (Remolded)
 ◇ Fall Cone Test ◆ (Remolded)
 ▽ Hand Penetrometer Test ▣ Torvane
LOGGED BY: JT
REVIEWED: AG

TOTAL DEPTH: 48.00 m
 N: 4983180 E: 474661
 ELEVATION: 57 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 30, 2023
 DATE COMPLETED: SEP 05, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 13.45 m 2023-09-06

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES						UNDRAINED SHEAR STRENGTH - kPa					OTHER TESTS			
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60 120 180 240 300					RMR 1976				
										WATER CONTENT & ATTERBERG LIMITS									
30		GREYWACKE: Greenish grey, fine to medium grained, with green- grey slate. Overall trace disseminated/veinlets of sulphides. Rare Hematite stains and calcite breccia. (continued...)																	
31																			
32																			
33																			
34																			
35																			
36																			
37																			
38																			
39																			
40																			

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: JT
 REVIEWED: AG

TOTAL DEPTH: 48.00 m
 N: 4983180 E: 474661
 ELEVATION: 57 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 30, 2023
 DATE COMPLETED: SEP 05, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 13.45 m 2023-09-06

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300		
										WATER CONTENT & ATTERBERG LIMITS						
40		GREYWACKE: Greenish grey, fine to medium grained, with green- grey slate. Overall trace disseminated/veinlets of sulphides. Rare Hematite stains and calcite breccia. (continued...)														
41			HQ3 27	63	7											
42																
43				HQ3 28	61	14										
44																
45																
46																
47																
48	9.0	End of Drillhole at 48.0 m.														
49																
50																

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: JT
 REVIEWED: AG

TOTAL DEPTH: 75.00 m
 N: 4984712 E: 474579
 ELEVATION: 42 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 07, 2023
 DATE COMPLETED: AUG 09, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 17.2 m 2023-08-22

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300		
										WATER CONTENT & ATTERBERG LIMITS						
0	42.0															
	41.9	TOPSOIL: ORGANICS.														
		Loose to compact SILT and SAND, trace to some gravel, fine to medium grained, sub angular to sub rounded, well graded, moist, reddish brown in colour.			SS	1	355	6								
1					SS	2	395	17								
	40.8	Loose to compact SAND and GRAVEL to Silty SAND, very fine to fine grained, sub angular to angular, well graded, wet, brown in colour.			SS	3	125	15								
2					SS	4	25	5								
3																
					SS	5	0	16								
4					SS	6	280	26	S							
	37.5	Very stiff to hard Sandy SILT to Silty SAND, trace to some clay and gravel, fine to coarse grained, low plasticity, sub angular to sub rounded, well graded, wet, brown in colour.			SS	7	240	32								
5					SS	8	445	38								
6																
					SS	9	405	24								
7					SS	10	610	34	SH							
8																
					SS	11	280	22								
					SS	12	610	25								
9																
					SS	13	405	35								
10																

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 75.00 m
N: 4984712 E: 474579
ELEVATION: 42 m
UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 07, 2023
DATE COMPLETED: AUG 09, 2023
INCLINATION: 90°
AZIMUTH: 000°
WATER LEVEL: 17.2 m 2023-08-22

PROJECT NO.: 23-053-H
CLIENT: Mercator Geological Services
PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES			UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180		
10		Very stiff to hard Sandy SILT to Silty SAND, trace to some clay and gravel, fine to coarse grained, low plasticity, sub angular to sub rounded, well graded, wet, brown in colour. (continued...)			SS	14	305	42						
11			SS	15	305	21								
12			SS	16	610	27								
13			SS	17	405	17								
14			SS	18	420	37								
15			SS	19	485	28								
16			SS	20	430	44								
17			SS	21	495	35	SH							
18			SS	22	455	64								
19			SS	23	255	48								
20	22.2				SS	24	610	42						


△ Unconfined Compression Test
 □ Field Vane Test ■ (Remolded)
 ◇ Fall Cone Test ◆ (Remolded)
 ▽ Hand Penetrometer Test ▣ Torvane
 LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 75.00 m
 N: 4984712 E: 474579
 ELEVATION: 42 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 07, 2023
 DATE COMPLETED: AUG 09, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 17.2 m 2023-08-22

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES				LAB TESTS	UNDRAINED SHEAR STRENGTH - kPa					WATER CONTENT & ATTERBERG LIMITS <small>W_p W W_L</small>	RMR 1976	OTHER TESTS	
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %		60	120	180	240	300				
20	18.5	Very loose to dense SAND and GRAVEL to SAND some gravel, trace to some silt and cobbles, fine to coarse grained, well graded, wet, brown to grey in colour. <i>(continued...)</i>			SS	25	180	32										
21																		
22																		
23							SS	26	345	29								
24							SS	27	570	33	S							
25							SS	28	240	15								
26							SS	29	485	19	S							
27							SS	30	0	14								
28							SS	31	15	0								
29							SS	32	140	9								
30					SS	33	205	0										

ST - Shelby Tube Unconfined Compression Test

SS - Split Spoon Field Vane Test (Remolded)

Fall Cone Test (Remolded)

Hand Penetrometer Test Torvane

LOGGED BY: MM

REVIEWED: AG

TOTAL DEPTH: 75.00 m
 N: 4984712 E: 474579
 ELEVATION: 42 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 07, 2023
 DATE COMPLETED: AUG 09, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 17.2 m 2023-08-22

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS				
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300			WATER CONTENT & ATTERBERG LIMITS	W _p	W	W _L
30																				
31					SS	34	75	28												
32					SS	35	180	50/150mm												
33		GYPSUM: light to dark grey, fine grained, altered rock with frequent selenite crystallization, interbedded with areas of brecciated gypsum.	◇																	
34																				
35				HQ3	36	100	24													
36																				
37																				
38																				
39																				
40																				

△ Unconfined Compression Test
 □ Field Vane Test ■ (Remolded)
 ◇ Fall Cone Test ◆ (Remolded)
 ▽ Hand Penetrometer Test ▣ Torvane
LOGGED BY:MM
REVIEWED:AG

TOTAL DEPTH: 75.00 m
 N: 4984712 E: 474579
 ELEVATION: 42 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 07, 2023
 DATE COMPLETED: AUG 09, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 17.2 m 2023-08-22

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300		
										WATER CONTENT & ATTERBERG LIMITS						
GYPSUM: light to dark grey, fine grained, altered rock with frequent selenite crystallization, interbedded with areas of brecciated gypsum. (continued...)																
40			◇		HQ3 38	96	86									
41			◇											50		
42			◇													
43			◇													
44			◇		HQ3 39	97	81	BTS						46		
45			◇													
46			◇													
47			◇		HQ3 40	99	81							49		
48	-6.1		◇													
49		GYPSUM and ANHYDRITE TRANSITIONAL ZONE: light to dark grey, fine grained, altered rock with frequent selenite crystallization, interbedded with areas of brecciated gypsum and light grey, massive with patchy dolomitic lamination, vuggy.	◇											46		
50			◇		HQ3 41	100	83									

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 75.00 m
 N: 4984712 E: 474579
 ELEVATION: 42 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 07, 2023
 DATE COMPLETED: AUG 09, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 17.2 m 2023-08-22

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300		
										WATER CONTENT & ATTERBERG LIMITS						
60		DOLOMITE: light grey to tan, fine grained, heavily bedded, with frequent selenite veins (continued...)														
	-19.4	ANHYDRITE: light grey, massive, with patchy dolomitic laminations.			HQ3 45	100	95								55	
62																
63																
64					HQ3 46	100	100								56	
65																
66																
67	-24.7	DOLOMITE: light grey to tan, fine grained, heavily bedded, with frequent selenite veins			HQ3 47	100	97								55	
68																
69	-26.9	ANHYDRITE: light grey, massive, with patchy dolomitic laminations.													60	
70																

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG

TOTAL DEPTH: 75.00 m
 N: 4984712 E: 474579
 ELEVATION: 42 m
 UTM ZONE: NAD83 UTM Z20N

DATE STARTED: AUG 07, 2023
 DATE COMPLETED: AUG 09, 2023
 INCLINATION: 90°
 AZIMUTH: 000°
 WATER LEVEL: 17.2 m 2023-08-22

PROJECT NO.: 23-053-H
 CLIENT: Mercator Geological Services

PROJECT NAME: Antrim Prefeasibility Level Open Pit Slope Design

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					UNDRAINED SHEAR STRENGTH - kPa					RMR 1976	OTHER TESTS
					TYPE	NUMBER	RECOVERY (mm) OR TCR %	N-VALUE OR RQD %	LAB TESTS	60	120	180	240	300		
										WATER CONTENT & ATTERBERG LIMITS						
70		ANHYDRITE: light grey, massive, with patchy dolomitic laminations. (continued...)	◇			HQ348	100	97								
71																60
72			◇													
73			◇													
74			◇			HQ349	100	100						61		
75	-33.0	End of Drillhole at 75.0 m.	◇													
76																
77																
78																
79																
80																

ST - Shelby Tube
 SS - Split Spoon

- △ Unconfined Compression Test
- Field Vane Test ■ (Remolded)
- ◇ Fall Cone Test ◆ (Remolded)
- ▽ Hand Penetrometer Test ▣ Torvane

LOGGED BY: MM
 REVIEWED: AG