

	SOIL ENGINEERING SERVICES (SES) خدمات مهندسی مکانیک خاک	
	PROJ NO: 1347-EE-PEP-GEO-001-B	REV: B
	SUBJECT: GEOTECHNICAL INVESTIGATION, PHASE I, FACTUAL REPORT, SOUTH ALUMINIUM SMELTER (SALCO) IRAN	

Enclosure E

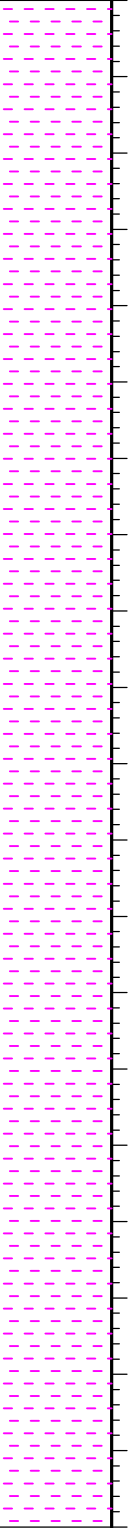
Sampling Boreholes Logs

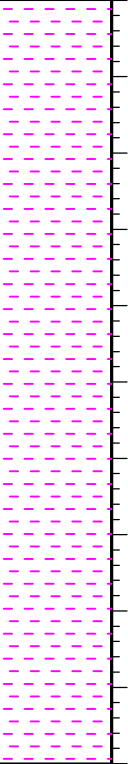
BOREHOLE No.: BH-002		DRILLED : 2015/03/26 - 2015/03/26		X : 722661.63 Y : 3031893.29 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY with gypsum	
1								
2								
3	D1	21	25	$\frac{50}{15}$			Light brown hard lean CLAY, CL	
4								
5	U1						Light brown lean CLAY, CL/CH	
6								
7								
8	U2						As above	
9								
10								
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 4
		Client : NFC						Fig.: 1
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-002		DRILLED : 2015/03/26 - 2015/03/26		X : 722661.63 Y : 3031893.29 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U3						Light brown lean CLAY, CL	
11								
12								
13	U4						Light brown lean CLAY with gypsum <CL/ML>	
14								
15								
16	U5						Light brown lean CLAY <CL/CH>	
17								
18								
19	U6						As above	
20								
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 4
		Client : NFC						Fig.: 2
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-002		DRILLED : 2015/03/26 - 2015/03/26		X : 722661.63 Y : 3031893.29 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20							Light brown lean CLAY	
21								
22	 U7						As above	
23								
24								
25	 CB1						As above	
26								
27								
28	 CB2						As above, CL	
29								
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks :
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 4
		Client : NFC						Fig.: 3
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-002		DRILLED : 2015/03/26 - 2015/03/26		X : 722661.63 Y : 3031893.29 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30								
31	CB3						Light brown lean CLAY	
32								
33								
34	CB4						Light brown lean CLAY, CL	
35								
36								
37								
38								
39								
40								
End of Borehole at : 40.00 m								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :	
							Project : SOUTH ALUMINUM SMELTER PLANT	
Client : NFC							Sheet: 4 Of 4	
							Fig.: 4	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-008		DRILLED : 2015/03/30 - 2015/03/30		X : 722700.62 Y : 3031843.08 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U3						Light brown lean CLAY	
11								
12	U4						As above	
13								
14	U5						Light brown lean CLAY <CL>	
15								
16	U6						As above	
17								
18	U7						As above, CL	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 6
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-008		DRILLED : 2015/03/30 - 2015/03/30		X : 722700.62 Y : 3031843.08 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U8						Light brown lean CLAY	
21								
22	U9						As above	
23								
24	U10						Light brown lean CLAY <CL>	
25							End of Borehole at : 25.00 m	
26								
27								
28								
29								
30								

 D: Disturbed
  CB: Core Barrel
  LU: Lugeon

 U: Undisturbed
  DE: Denison
  LE: Lefranc

Remarks :



Project : SOUTH ALUMINUM SMELTER PLANT

Client : NFC

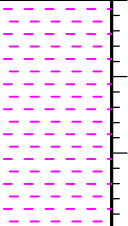
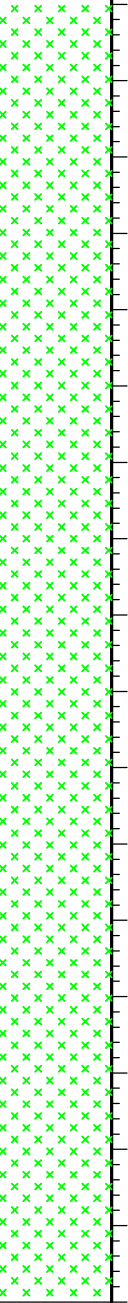
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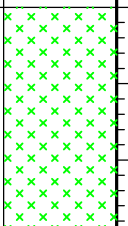
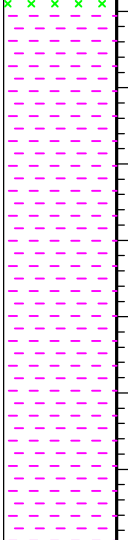
Fig.: 7

Soil Engineering Services Consultant & Contractor

Proj No. : 1347

BOREHOLE No.: BH-013		DRILLED : 2015/04/20 - 2015/04/20		X : 722638.37 Y : 3031787.86 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	 D1	13	16	24			Light brown hard lean CLAY	
3								
4	 D2	11	15	22			As above	
5								
6	LE01							
7								
8	U1						Light brown lean CLAY <CL/ML>	
9								
10	U2						As above	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC							Sheet: 1 Of 3 Fig.: 8	
Soil Engineering Services Consultant & Contractor						Proj No. : 1347		

BOREHOLE No.: BH-013		DRILLED : 2015/04/20 - 2015/04/20		X : 722638.37 Y : 3031787.86 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Light brown lean CLAY	
11								
12	U3						Light brown SILT <ML/CL>	
13								
14	U4						As above	
15								
16	U5						As above	
17								
18	U6						As above	
19								
20	U7						As above	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 9
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-013		DRILLED : 2015/04/20 - 2015/04/20		X : 722638.37 Y : 3031787.86 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20							Light brown SILT	
21								
22	U8						Light brown lean CLAY	
23								
24	U9						As above	
25							End of Borehole at : 25.00 m	
26								
27								
28								
29								
30								

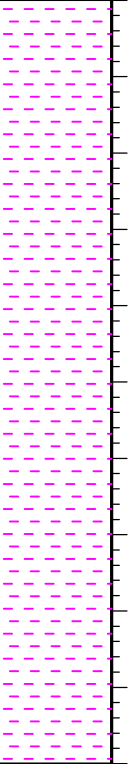
 D: Disturbed  U: Undisturbed	 CB: Core Barrel  DE: Denison	 LU: Lugeon  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 10

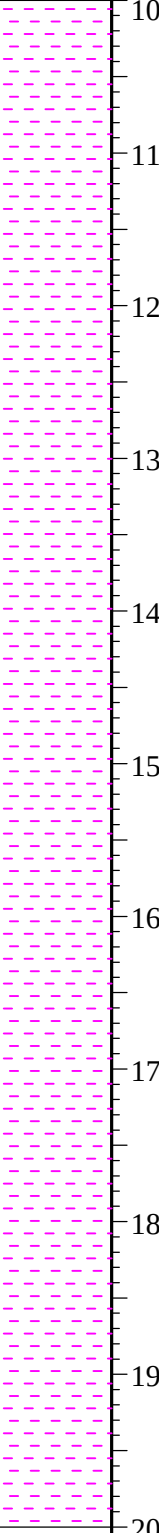
Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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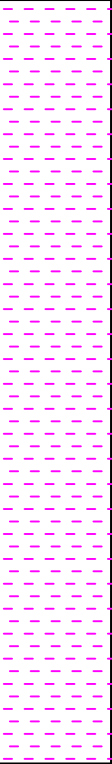
BOREHOLE No.: BH-018		DRILLED : 2015/04/21 - 2015/04/21		X : 722743.29 Y : 3031931.17 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Greyish brown lean CLAY	
1								
2	 D1	9	13	20			Brown hard lean CLAY	
3	 D2	7	15	21			As above	
4								
5	 D3	5	10	17			Light brown very stiff lean CLAY	
6	 D4	3	7	10			As above	
7	 U1						Light brown lean CLAY	
8								
9	 U2						As above	
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 11
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-018		DRILLED : 2015/04/21 - 2015/04/21		X : 722743.29 Y : 3031931.17 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Light brown lean CLAY	
11	U3						As above	
12								
13	U4						As above	
14								
15	U5						As above	
16								
17	U6						As above	
18								
19	U7						As above <CL/ML>	
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 12
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-018		DRILLED : 2015/04/21 - 2015/04/21		X : 722743.29 Y : 3031931.17 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20							Light brown lean CLAY	
21	U8						As above	
22								
23	U9						As above <CL/ML>	
24								
25							End of Borehole at : 25.00 m	
26								
27								
28								
29								
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks :
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 3
		Client : NFC						Fig.: 13
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-021		DRILLED : 2015/03/28 - 2015/03/28		X : 722708.24 Y : 3031908.23 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY with gypsum	
1								
2								
3	D1	13	20	27			Light brown hard lean CLAY, CL	
4	U1						Light brown lean CLAY, CL	
5								
6								
7	U2						Light brown SILT <ML>	
8								
9	U3						Light brown lean CLAY, CL	
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 14
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-021		DRILLED : 2015/03/28 - 2015/03/28		X : 722708.24 Y : 3031908.23 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
10							Light brown lean CLAY		
11									
12	U4						As above		
13									
14	U5						Light brown lean CLAY		
15									
16									
17	U6						Light brown lean CLAY, CL		
18									
19	U7						As above		
20									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :									
		Project : SOUTH ALUMINUM SMELTER PLANT							Sheet: 2 Of 3
		Client : NFC							Fig.: 15
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-021		DRILLED : 2015/03/28 - 2015/03/28		X : 722708.24 Y : 3031908.23 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20							Light brown lean CLAY	
21								
22	U8						As above	
23								
24	U9						As above, CL	
25							End of Borehole at : 25.00 m	
26								
27								
28								
29								
30								

 D: Disturbed

 CB: Core Barrel

 LU: Lugeon

 U: Undisturbed

 DE: Denison

 LE: Lefranc

Remarks :



Project : SOUTH ALUMINUM SMELTER PLANT

Client : NFC

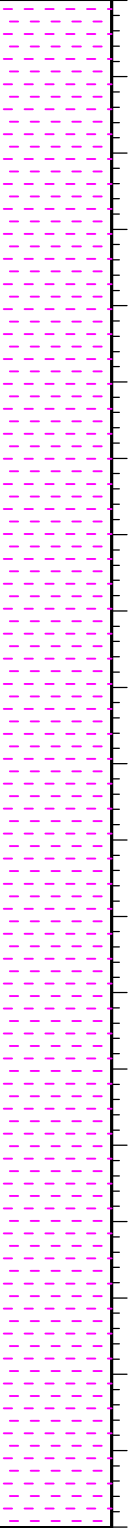
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Fig.: 16

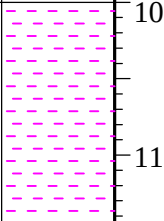
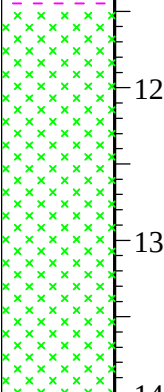
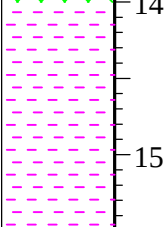
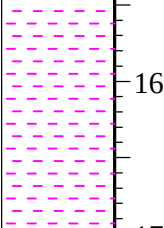
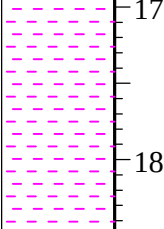
Soil Engineering Services Consultant & Contractor

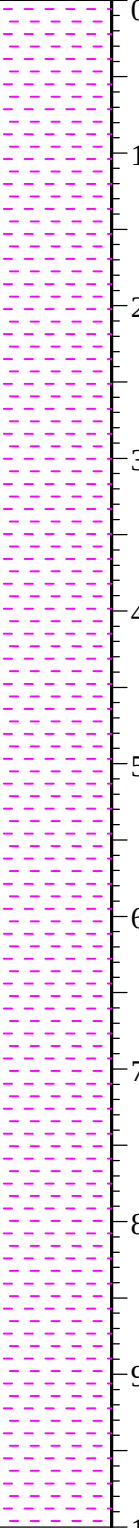
Proj No. : 1347

BOREHOLE No.: BH-025		DRILLED : 2015/03/28 - 2015/03/28		X : 722693.13 Y : 3031878.05 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2								
3	D1 U1	24	50	13			Light brown hard lean CLAY and lime, CL Light brown SILT <ML>	
4								
5								
6	U2						Light brown lean CLAY, CL	
7								
8								
9	U3						As above	
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 17
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

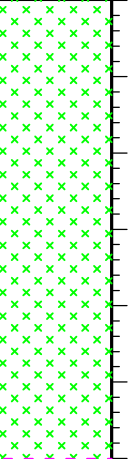
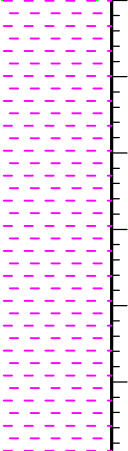
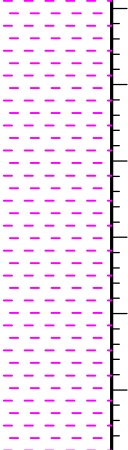
BOREHOLE No.: BH-025		DRILLED : 2015/03/28 - 2015/03/28		X : 722693.13 Y : 3031878.05 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
10							Light brown lean CLAY		
11									
12	U4						As above		
13									
14									
15	U5						Light brown lean CLAY <CL>		
16									
17									
18	U6						As above		
19									
20	U7						As above, CL		
End of Borehole at : 20.00 m									
 D: Disturbed  U: Undisturbed  CB: Core Barrel  DE: Denison  LU: Lugeon  LE: Lefranc							Remarks :		
							Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC		
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-027		DRILLED : 2015/03/29 - 2015/03/29		X : 722726.90 Y : 3031869.82 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	 D1	14	23	25			Light grey hard lean CLAY	
3								
4	 U1						Light brown lean CLAY, CL	
5								
6								
7	 U2						Light brown lean CLAY <CL>	
8								
9	 U3						As above	
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 19
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-027		DRILLED : 2015/03/29 - 2015/03/29		X : 722726.90 Y : 3031869.82 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
10							Light brown lean CLAY		10
11									11
12	U4						Light brown SILT <ML/CL>		12
13									13
14	U5						Light brown lean CLAY		14
15									15
16									16
17	U6						Light brown lean CLAY, CL		17
18									18
19	U7						As above		19
20									20
End of Borehole at : 20.00 m									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :		
Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC								Sheet: 2 Of 2 Fig.: 20	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

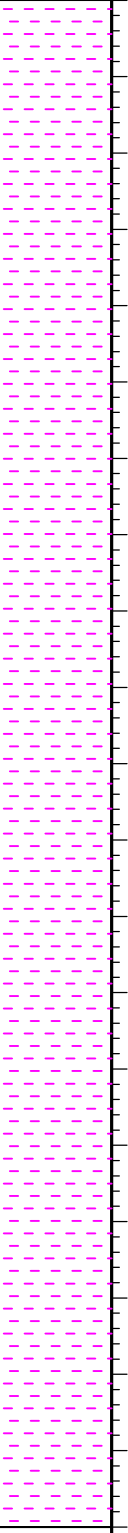
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DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2								
3	D1	30	34	$\frac{50}{9}$			Light brown hard lean CLAY and lime, CL	
4								
5	U1						Light brown fat CLAY <CH/CL>	
6								
7								
8	U2						As above	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
 Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC							Sheet: 1 Of 4 Fig.: 21	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-031		DRILLED : 2015/03/28 - 2015/03/29		X : 722816.99 Y : 3031821.86 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
10	U3						Light brown lean CLAY <CL/ML>		
11									
12	U4						Light brown SILT <ML/CL>		
13									
14	U5						Light brown lean CLAY <CL/ML>		
15									
16	U6						As above <CL/ML>		
17									
18	U7						As above, CL		
19									
20									
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks :									
		Project : SOUTH ALUMINUM SMELTER PLANT							Sheet: 2 Of 4
		Client : NFC							Fig.: 22
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

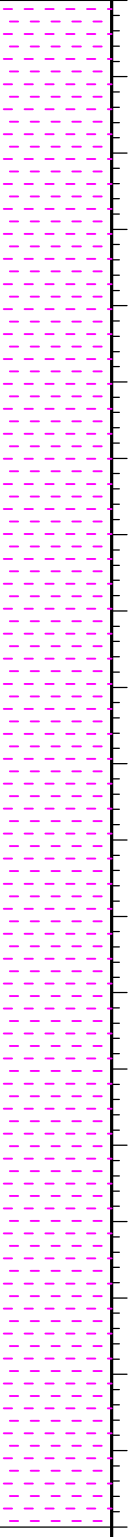
BOREHOLE No.: BH-031		DRILLED : 2015/03/28 - 2015/03/29		X : 722816.99 Y : 3031821.86 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U8						Light brown SILT <ML/CL>	
21								
22								
23	U9						Light brown lean CLAY, CL	
24								
25								
26	CB1						Light brown lean CLAY	
27								
28								
29	U10						Light brown lean CLAY <CL>	
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 4
		Client : NFC						Fig.: 23
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

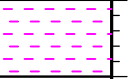
BOREHOLE No.: BH-031		DRILLED : 2015/03/28 - 2015/03/29		X : 722816.99 Y : 3031821.86 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30							Light brown lean CLAY	
31								
32	U11						Light brown lean CLAY, CL	
33								
34								
35								
36	U12						Light brown lean CLAY <CL/ML>	
37								
38								
39	U13						Light brown lean CLAY <CL>	
40								
End of Borehole at : 40.00 m								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :	
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 4
		Client : NFC						Fig.: 24
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-035		DRILLED : 2015/03/30 - 2015/03/30		X : 722905.27 Y : 3031774.87 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2								
3	D1	35	$\frac{50}{9}$				Light brown hard lean CLAY, CL	
4								
5								
6	U1 						Light brown lean CLAY <CL/ML>	
7								
8	U2						As above	
9								
10								
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc								Remarks : Sampling Borehole
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 25
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-035		DRILLED : 2015/03/30 - 2015/03/30		X : 722905.27 Y : 3031774.87 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
10	U3						Light brown lean CLAY, CL		
11									
12									
13	U4						As above		
14									
15									
16	U5						As above		
17									
18	U6						Light brown lean CLAY <CL/ML>		
19									
20	U7						As above		
End of Borehole at : 20.00 m									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :		
		Project : SOUTH ALUMINUM SMELTER PLANT							Sheet: 2 Of 2
		Client : NFC							Fig.: 26
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-039		DRILLED : 2015/04/13 - 2015/04/13		X : 722993.54 Y : 3031727.89 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	D1	17	18	18			Light brown hard lean CLAY, CL	
3								
4	D2	13	15	14			Light brown very stiff lean CLAY, CL	
5								
6	D3	4	6	6			Light brown stiff lean CLAY, CL	
7								
8	U1						Light brown lean CLAY	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 27
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-039		DRILLED : 2015/04/13 - 2015/04/13		X : 722993.54 Y : 3031727.89 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
10	U2						Light brown lean CLAY		
11									
12	U3						As above		
13									
14	U4						As above		
15									
16	U5						As above <CL/ML>		
17									
18	U6						As above		
19									
20									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks :	
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3	
		Client : NFC						Fig.: 28	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-039		DRILLED : 2015/04/13 - 2015/04/13		X : 722993.54 Y : 3031727.89 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	 U7						Light brown lean CLAY	
							End of Borehole at : 20.50 m	
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

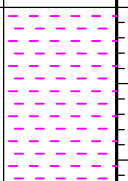
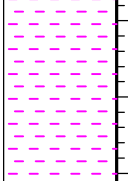
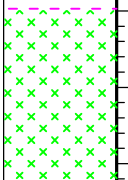
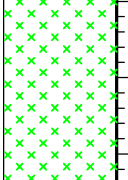
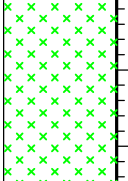
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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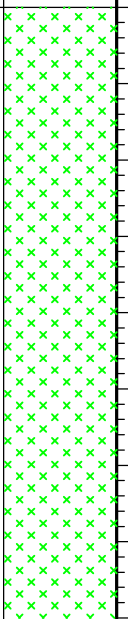
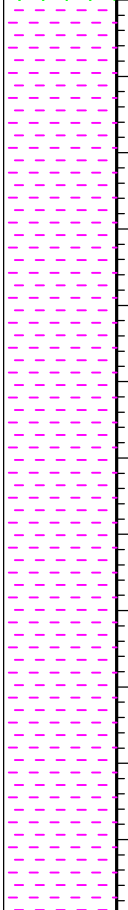
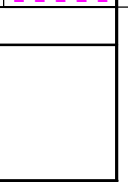
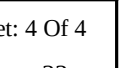
	Project : SOUTH ALUMINUM SMELTER PLANT	Sheet: 3 Of 3
	Client : NFC	Fig.: 29

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-042		DRILLED : 2015/04/04 - 2015/04/04		X : 723059.75 Y : 3031692.65 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	D1	21	21	32			Light grey hard lean CLAY, CL	
3								
4	D2	16	23	25			Light brown hard lean CLAY, CL	
5								
6	U1						Light brown lean CLAY, CL	
7								
8	U2						As above <CL/ML>	
9	LE01							
10								
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 4
		Client : NFC						Fig.: 30
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-042		DRILLED : 2015/04/04 - 2015/04/04		X : 723059.75 Y : 3031692.65 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U3						Light brown lean CLAY	
11								
12	U4						As above, CL	
13								
14	U5						As above, CL	
15								
16	U6						As above, CL	
17								
18	U7						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 4
		Client : NFC						Fig.: 31
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

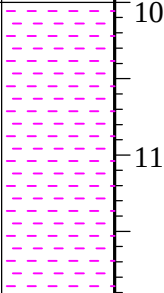
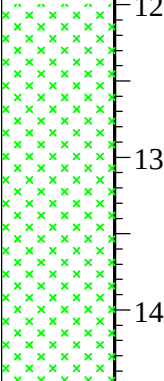
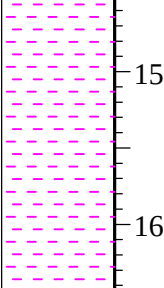
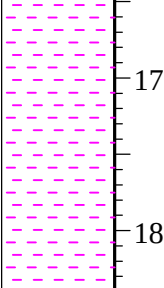
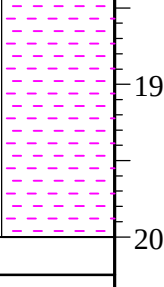
BOREHOLE No.: BH-042		DRILLED : 2015/04/04 - 2015/04/04		X : 723059.75 Y : 3031692.65 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U8						Light brown lean CLAY	
21								
22	CB1						As above, CL	
23								
24	U9						Light brown SILT <ML/CL>	
25								
26	U10						Light brown SILT <ML/CL>	
27								
28	U11						As above	
29								
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 4
		Client : NFC						Fig.: 32
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-042		DRILLED : 2015/04/04 - 2015/04/04		X : 723059.75 Y : 3031692.65 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30	U12						Light brown SILT <ML/MH/CL/CH>	
31								
32	U13						As above	
33								
34	U14						Light brown lean CLAY, CL	
35								
36	U15						As above	
37								
38	U16						As above	
39								
40	U17						As above, CL	
End of Borehole at : 40.00 m								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :	
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 4
		Client : NFC						Fig.: 33
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

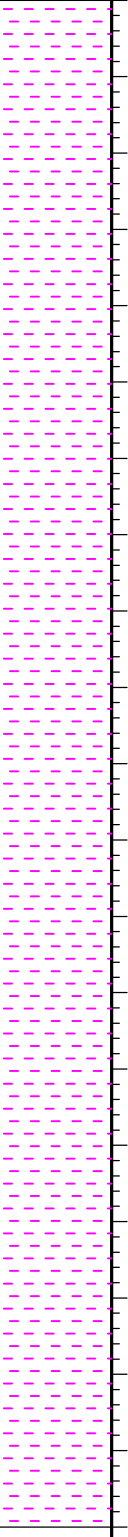
BOREHOLE No.: BH-044		DRILLED : 2015/03/30 - 2015/03/30		X : 723103.88 Y : 3031669.15 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2								
3	D1	26	32	43			Light brown hard lean CLAY, CL	
4								
5	U1						Light brown SILT, ML	
6								
7	U2						Light brown hard lean CLAY, CL	
8								
9								
10	U3						As above	

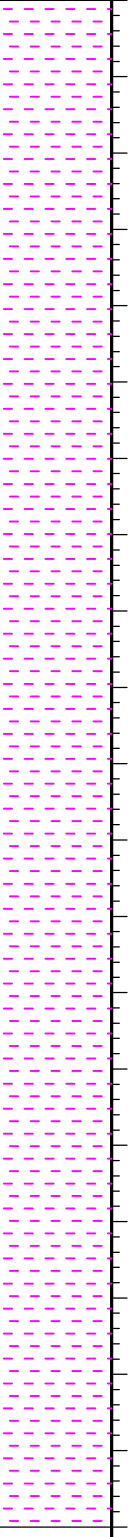
 D: Disturbed  U: Undisturbed	 CB: Core Barrel  DE: Denison	 LU: Lugeon  LE: Lefranc	Remarks : Sampling Borehole
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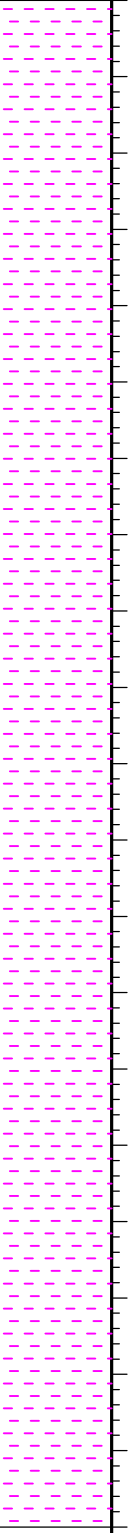
	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 1 Of 2
	Client : NFC		Fig.: 34
Soil Engineering Services Consultant & Contractor			Proj No. : 1347

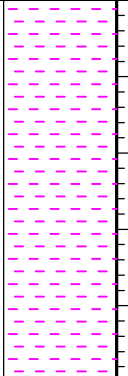
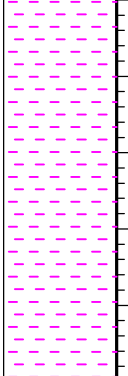
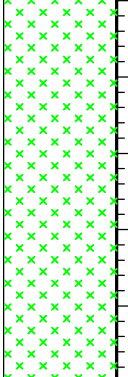
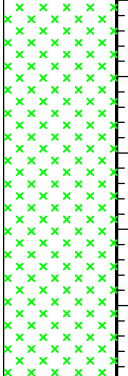
BOREHOLE No.: BH-044		DRILLED : 2015/03/30 - 2015/03/30		X : 723103.88 Y : 3031669.15 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B				
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend		
		15Cm	15Cm	15Cm	Und	Rem				
10							Light brown lean CLAY		10	
11									11	
12	U4						Light brown SILT <ML/CL>		12	
13									13	
14									14	
15	U5						Light brown lean CLAY, CL		15	
16									16	
17	U6						As above, CL		17	
18									18	
19									19	
20	U7						As above		20	
End of Borehole at : 20.00 m										
 D: Disturbed		 CB: Core Barrel		 LU: Lugeon		Remarks :				
 U: Undisturbed		 DE: Denison		 LE: Lefranc						
		Project : SOUTH ALUMINUM SMELTER PLANT							Sheet: 2 Of 2	
		Client : NFC							Fig.: 35	
Soil Engineering Services Consultant & Contractor						Proj No. : 1347				

BOREHOLE No.: BH-048		DRILLED : 2015/04/26 - 2015/04/26		X : 723192.16 Y : 3031622.16 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-2B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0								
1								
2								
3	D1						Brown lean CLAY	
4								
5	D2						As above	
6								
7								
8	U1						Brown lean CLAY <CL/ML>	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 6
		Client : NFC						Fig.: 36
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-048		DRILLED : 2015/04/26 - 2015/04/26		X : 723192.16 Y : 3031622.16 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-2B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
10	U2						Brown lean CLAY <CL/ML>		
11									
12									
13	U3						As above <CL>		
14									
15	U4						As above		
16									
17									
18	U5						Brown lean CLAY <CL/ML>		
19									
20									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks :	
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 6	
		Client : NFC						Fig.: 37	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-048		DRILLED : 2015/04/26 - 2015/04/26		X : 723192.16 Y : 3031622.16 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-2B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
20	U6						Brown lean CLAY		
21									
22									
23	U7						As above		
24									
25	U8						Brown lean CLAY <CL/ML>		
26									
27									
28	U9						As above		
29									
30									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks :	
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 6	
		Client : NFC						Fig.: 38	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-048		DRILLED : 2015/04/26 - 2015/04/26		X : 723192.16 Y : 3031622.16 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-2B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30	U10						Brown lean CLAY	
31								
32								
33	U11						As above	
34								
35	U12						Brown lean CLAY <CL/ML>	
36								
37								
38	U13						As above	
39								
40								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 6
		Client : NFC						Fig.: 39
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-048		DRILLED : 2015/04/26 - 2015/04/26		X : 723192.16 Y : 3031622.16 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-2B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
40	 U14						Brown lean CLAY <CL/ML>	
41								
42								
43	 U15						As above	
44								
45	 U16						Brown SILT with gypsum <ML/CL>	
46								
47								
48	 U17						Brown SILT	
49								
50								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks :
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 5 Of 6
		Client : NFC						Fig.: 40
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

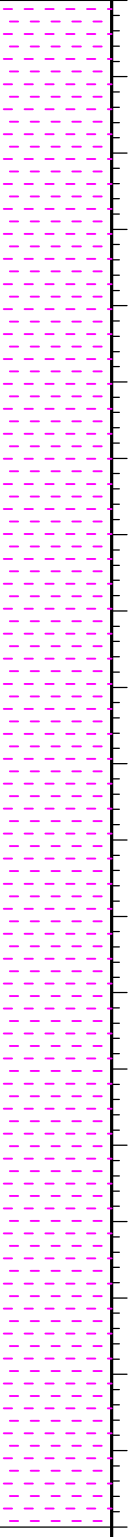
BOREHOLE No.: BH-048		DRILLED : 2015/04/26 - 2015/04/26		X : 723192.16 Y : 3031622.16 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-2B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
50	U18						Brown SILT with gypsum <ML/CL>	
							End of Borehole at : 50.25 m	
51								
52								
53								
54								
55								
56								
57								
58								
59								
60								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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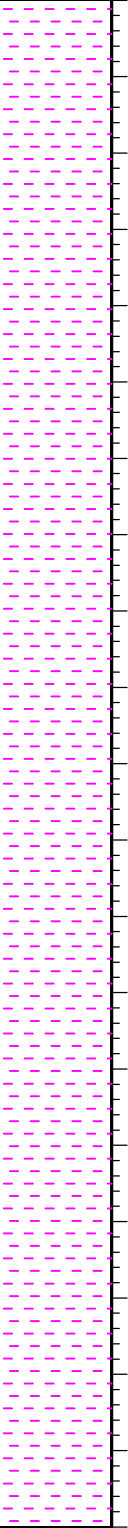
	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 6 Of 6
	Client : NFC		Fig.: 41

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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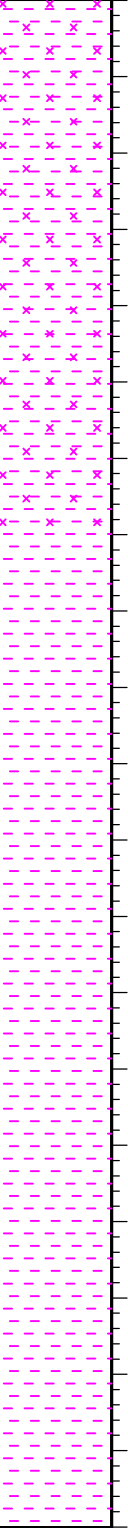
BOREHOLE No.: BH-049		DRILLED : 2015/04/01 - 2015/04/02		X : 723214.23 Y : 3031610.42 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	D1	11	22	22			Light brown hard lean CLAY, CL	
3								
4	D2	14	18	16			Light brown hard lean CLAY, CL	
5	U1						Light brown lean CLAY, CL	
6								
7	U2						Light brown lean CLAY	
8								
9	LE01							
10								
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks : Sampling Borehole								
Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC							Sheet: 1 Of 4 Fig.: 42	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

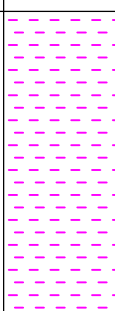
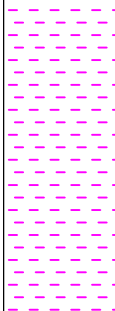
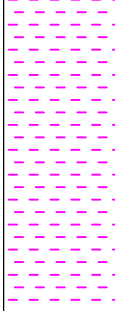
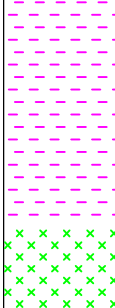
BOREHOLE No.: BH-049		DRILLED : 2015/04/01 - 2015/04/02		X : 723214.23 Y : 3031610.42 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
10							Light brown lean CLAY		
11	U3						Light brown lean CLAY, CL		
12									
13	U4						Light brown lean CLAY with gypsum <CL/ML>		
14									
15	U5						Light brown lean CLAY <CL>		
16									
17	U6						As above		
18									
19	U7						As above		
20									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks :	
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 4	
		Client : NFC						Fig.: 43	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-049		DRILLED : 2015/04/01 - 2015/04/02		X : 723214.23 Y : 3031610.42 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20							Light brown lean CLAY	
21	U8						As above	
22								
23	U9						Light brown lean CLAY <CL>	
24								
25	U10						As above	
26								
27	U11						Light brown lean CLAY <CL/ML>	
28								
29	U12						As above	
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 4
		Client : NFC						Fig.: 44
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-049		DRILLED : 2015/04/01 - 2015/04/02		X : 723214.23 Y : 3031610.42 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
30							Light brown lean CLAY		
31	U13						Light brown lean CLAY <CL/ML>		
32									
33	U14						As above		
34									
35	U15						Light brown lean CLAY, CL		
36									
37	U16						Light brown lean CLAY <CL/ML>		
38									
39	U17						As above, CL		
40	End of Borehole at : 40.00 m								
 D: Disturbed  U: Undisturbed  CB: Core Barrel  DE: Denison  LU: Lugeon  LE: Lefranc							Remarks :		
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 4	
		Client : NFC						Fig.: 45	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-053		DRILLED : 2015/03/31 - 2015/03/31		X : 723302.50 Y : 3031563.43 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	 D1	26	32	$\frac{50}{12}$			Light grey hard lean CLAY, CL	
3								
4	 D2	21	26	35			Light brown hard lean CLAY, CL	
5	 U1						Light brown lean CLAY, CL	
6								
7								
8	 U2						As above, CL	
9								
10	 U3						Light brown silty CLAY <CL-ML/CL>	
 D: Disturbed		 CB: Core Barrel		 LU: Lugeon		Remarks : Sampling Borehole		
 U: Undisturbed		 DE: Denison		 LE: Lefranc				
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 46
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-053		DRILLED : 2015/03/31 - 2015/03/31		X : 723302.50 Y : 3031563.43 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Light brown silty CLAY	
11								
12	U4						As above	
13								
14	U5						Light brown lean CLAY, CL	
15								
16	U6						Light brown lean CLAY <CL>	
17								
18	U7						Light brown lean CLAY <CL/ML>	
19								
20	U8						As above	
End of Borehole at : 20.00 m								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :	
 Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC							Sheet: 2 Of 2 Fig.: 47	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-058		DRILLED : 2015/04/05 - 2015/04/05		X : 723412.84 Y : 3031504.70 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	 D1	22	49	44			Light brown hard lean CLAY, CL	
3								
4	 D2	9	18	19			Light brown hard lean CLAY, CL	
5								
6	 U1						Light brown lean CLAY, CL	
7								
8	 U2						Light brown SILT <ML/CL-ML/CL>	
9	LE01							
10	 U3						As above	



D: Disturbed



CB: Core Barrel



LU: Lugeon



U: Undisturbed



DE: Denison



LE: Lefranc

Remarks :
Sampling Borehole



Project : SOUTH ALUMINUM SMELTER PLANT

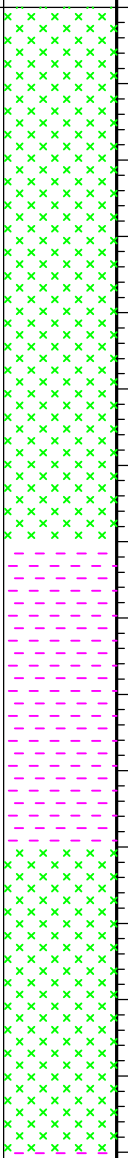
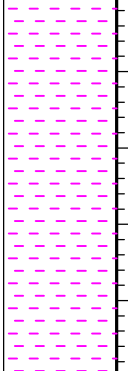
Client : NFC

Sheet: 1 Of 2

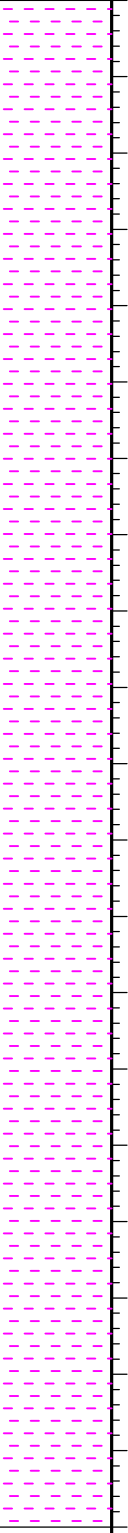
Fig.: 48

Proj No. : 1347

Soil Engineering Services Consultant & Contractor

BOREHOLE No.: BH-058		DRILLED : 2015/04/05 - 2015/04/05		X : 723412.84 Y : 3031504.70 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
10							Light brown SILT	 	
11									
12	U4						As above		
13									
14	U5						Light brown lean CLAY <CL>		
15									
16	U6						Light brown SILT <ML/CL-ML/CL>		
17									
18	U7						Light brown lean CLAY <CL/ML>		
19									
20	U8						As above, CL		
End of Borehole at : 20.00 m									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :		
 Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC							Sheet: 2 Of 2 Fig.: 49		
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-059		DRILLED : 2015/04/15 - 2015/04/16		X : 723434.99 Y : 3031492.95 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	 D1	21	16	18			Light brown hard lean CLAY, CL	
3								
4	 U1						Light brown lean CLAY <CL>	
5								
6	 U2						As above, CL	
7								
8	 U3						As above	
9								
10	 U4						As above, CL	
 D: Disturbed  CB: Core Barrel  LU: Lugeon Remarks : Sampling Borehole  U: Undisturbed  DE: Denison  LE: Lefranc								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 4
		Client : NFC						Fig.: 50
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-059		DRILLED : 2015/04/15 - 2015/04/16		X : 723434.99 Y : 3031492.95 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Light brown lean CLAY	
11								
12	U5						As above	
13								
14	U6						Light brown lean CLAY, CL	
15								
16	U7						As above	
17								
18	U8						As above	
19								
20								

 D: Disturbed  U: Undisturbed	 CB: Core Barrel  DE: Denison	 LU: Lugeon  LE: Lefranc	Remarks :
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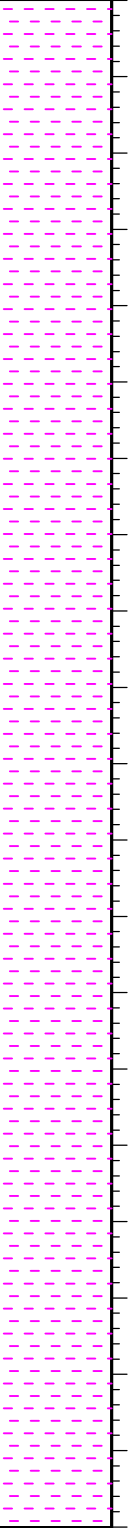
	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 2 Of 4
	Client : NFC		Fig.: 51

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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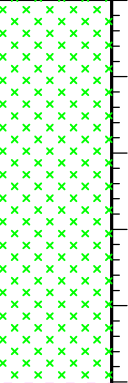
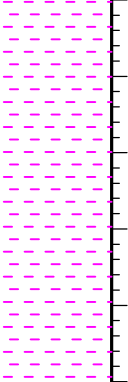
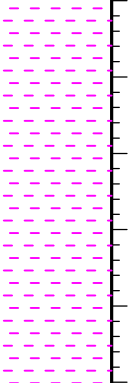
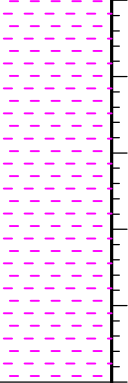
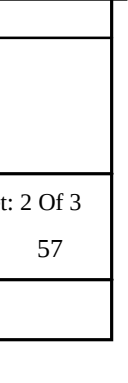
BOREHOLE No.: BH-059		DRILLED : 2015/04/15 - 2015/04/16		X : 723434.99 Y : 3031492.95 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
20	U9						Light brown SILT <ML>		
21									
22	U10						As above		
23									
24	U11						Light brown lean CLAY, CL		
25									
26	U12						As above		
27									
28	U13						As above		
29									
30	U14						As above, CL		
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks :									
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 4	
		Client : NFC						Fig.: 52	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

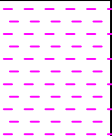
BOREHOLE No.: BH-059		DRILLED : 2015/04/15 - 2015/04/16		X : 723434.99 Y : 3031492.95 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30							Light brown lean CLAY	
31								
32	U15						As above	
33								
34	U16						Light brown lean CLAY <CL/ML>	
35								
36	U17						Light brown SILT <ML/CL>	
37								
38	U18						Light brown lean CLAY, CL	
39								
40	U19						As above	
End of Borehole at : 40.00 m								
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc							Remarks :	
Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC							Sheet: 4 Of 4 Fig.: 53	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-062		DRILLED : 2015/03/31 - 2015/03/31		X : 723501.11 Y : 3031457.71 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	D1	21	39	41			Light brown hard lean CLAY, CL	
3								
4	D2	23	29	43			Light brown hard lean CLAY, CL	
5								
6	U1						Light brown lean CLAY, CL	
7								
8	U2						Light brown silty CLAY <CL-ML>	
9								
10	U3						Light brown lean CLAY <CL/ML>	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 54
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-062		DRILLED : 2015/03/31 - 2015/03/31		X : 723501.11 Y : 3031457.71 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B				
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend		
		15Cm	15Cm	15Cm	Und	Rem				
10							Light brown lean CLAY			
11										
12	U4						As above			
13										
14	U5						Light brown lean CLAY, CL			
15										
16	U6						As above			
17										
18	U7						As above			
19										
20	U8						As above, CL			
End of Borehole at : 20.00 m										
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :			
		Project : SOUTH ALUMINUM SMELTER PLANT							Sheet: 2 Of 2	
		Client : NFC							Fig.: 55	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347			

BOREHOLE No.: BH-064		DRILLED : 2015/04/13 - 2015/04/13		X : 723545.25 Y : 3031434.22 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	D1	8	15	17			Light brown hard lean CLAY, CL	
3								
4	D2	15	16	18			As above, CL	
5	U1						Light brown lean CLAY	
6								
7	U2						Light brown SILT <ML/CL>	
8								
9	U3						As above	
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 56
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-064		DRILLED : 2015/04/13 - 2015/04/13		X : 723545.25 Y : 3031434.22 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U4						Light brown SILT	
11								
12	U5						Light brown lean CLAY	
13								
14	U6						As above	
15								
16	U7						As above	
17								
18	U8						Light brown lean CLAY <CL/ML>	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 57
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

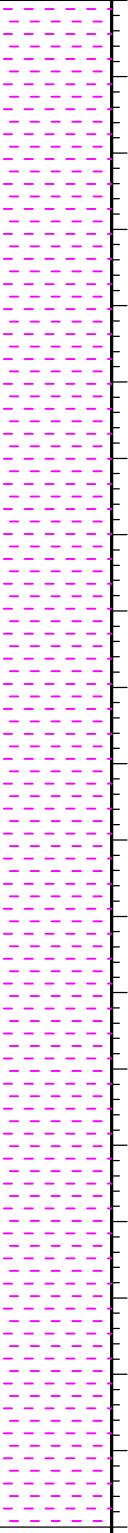
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DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U9						Light brown lean CLAY	
21		End of Borehole at : 20.95 m						
22								
23								
24								
25								
26								
27								
28								
29								
30								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 58

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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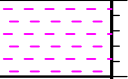
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DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light gray lean CLAY	
1								
2	D1	18	24	36			Light brown hard lean CLAY, CL	
3								
4	U1						Light brown lean CLAY <CL>	
5								
6	U2						As above, CL	
7								
8	U3						As above	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 59
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-069		DRILLED : 2015/03/30 - 2015/03/30		X : 722756.52 Y : 3031814.67 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U4						Light brown lean CLAY, CL	
11								
12	U5						As above	
13								
14	U6						Light brown lean CLAY <CL/ML>	
15								
16	U7						As above	
17								
18	U8						As above	
19								
20								

 D: Disturbed  U: Undisturbed	 CB: Core Barrel  DE: Denison	 LU: Lugeon  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 2 Of 3
	Client : NFC		Fig.: 60

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-069		DRILLED : 2015/03/30 - 2015/03/30		X : 722756.52 Y : 3031814.67 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	 U9						Light brown lean CLAY, CL	
		End of Borehole at : 20.50 m						
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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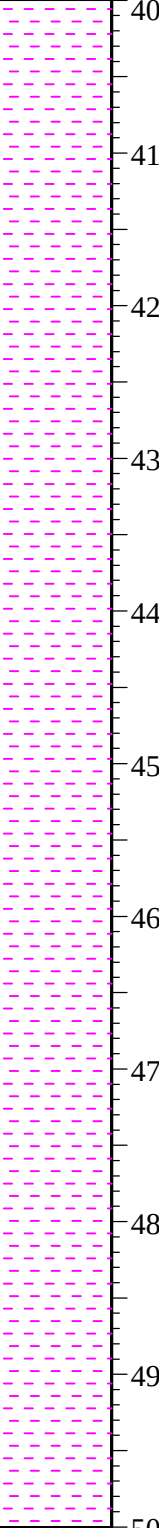
	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 61
Soil Engineering Services Consultant & Contractor			Proj No. : 1347

BOREHOLE No.: BH-073		DRILLED : 2015/04/26 - 2015/04/26		X : 722844.79 Y : 3031767.68 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-3		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0								
1								
2								
3	D1						Brown lean CLAY	
4								
5	D2						As above	
6								
7	U1						Brown lean CLAY	
8								
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 5
		Client : NFC						Fig.: 62
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-073		DRILLED : 2015/04/26 - 2015/04/26		X : 722844.79 Y : 3031767.68 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-3		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10								
11								
12								
13	U2						Brown lean CLAY <CL/ML>	
14								
15								
16								
17								
18	U3						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 5
		Client : NFC						Fig.: 63
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-073		DRILLED : 2015/04/26 - 2015/04/26		X : 722844.79 Y : 3031767.68 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-3		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20								
21								
22								
23	U4						Brown lean CLAY with gypsum <CL/ML>	
24								
25								
26								
27								
28	U5						Brown lean CLAY	
29								
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 5
		Client : NFC						Fig.: 64
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-073		DRILLED : 2015/04/26 - 2015/04/26		X : 722844.79 Y : 3031767.68 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-3		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30								
31								
32								
33	 U6						Brown lean CLAY with gypsum <CL>	
34								
35								
36								
37								
38	 U7						Brown lean CLAY	
39								
40								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 5
		Client : NFC						Fig.: 65
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

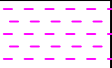
BOREHOLE No.: BH-073		DRILLED : 2015/04/26 - 2015/04/26		X : 722844.79 Y : 3031767.68 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-3		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
40							Brown lean CLAY	
41								
42								
43	 U8							
44								
45								
46								
47								
48								
49								
50								
End of Borehole at : 50.00 m								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :	
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 5 Of 5
		Client : NFC						Fig.: 66
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-078		DRILLED : 2015/03/31 - 2015/03/31		X : 722955.14 Y : 3031708.95 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	D1	22	22	26			Light grey hard lean CLAY and lime, CL	
3								
4	D2	17	19	32			Light brown hard lean CLAY and lime, CL	
5	LE01							
6								
7	U1						As above	
8								
9	U2						Light brown lean CLAY, CL	
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 67
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-078		DRILLED : 2015/03/31 - 2015/03/31		X : 722955.14 Y : 3031708.95 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Light brown lean CLAY	
11	U3						As above	
12								
13	U4						As above, CL	
14								
15	U5						As above	
16								
17	U6						As above	
18								
19	U7						As above, CL	
20							End of Borehole at : 20.00 m	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :	
 Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC							Sheet: 2 Of 2 Fig.: 68	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-082		DRILLED : 2015/04/09 - 2015/04/09		X : 723043.41 Y : 3031661.96 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	D1	17	20	20			Light brown hard lean CLAY, CL	
3								
4	D2	11	16	17			As above, CL	
5								
6	U1						Light brown lean CLAY	
7								
8	U2						Light brown lean CLAY <CL/ML>	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 69
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-082		DRILLED : 2015/04/09 - 2015/04/09		X : 723043.41 Y : 3031661.96 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U3						Light brown lean CLAY	
11								
12	U4						As above	
13								
14	U5						Light brown lean CLAY	
15								
16	U6						As above	
17								
18	U7						Light brown lean CLAY with gypsum <CL/ML>	
19								
20								
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 70
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-082		DRILLED : 2015/04/09 - 2015/04/09		X : 723043.41 Y : 3031661.96 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U8						Light brown lean CLAY	
		End of Borehole at : 20.50 m						
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 71

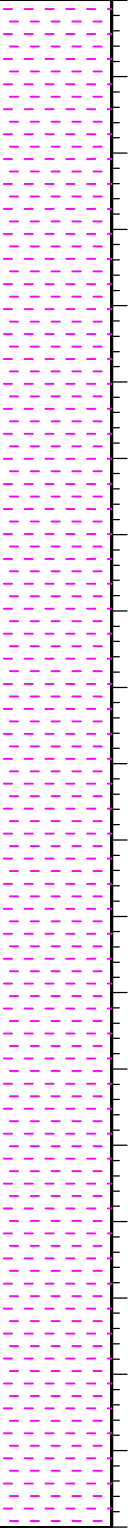
Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-086		DRILLED : 2015/04/02 - 2015/04/02		X : 723536.60 Y : 3031308.44 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light gray lean CLAY	
1								
2	 D1	21	21	16			Light gray hard lean CLAY, CL	
3								
4	 D2	12	20	24			Light brown hard lean CLAY, CL	
5	 U1						Light brown lean CLAY <CL/ML>	
6	LE01							
7								
8	 U2						Light brown lean CLAY, CL	
9								
10								

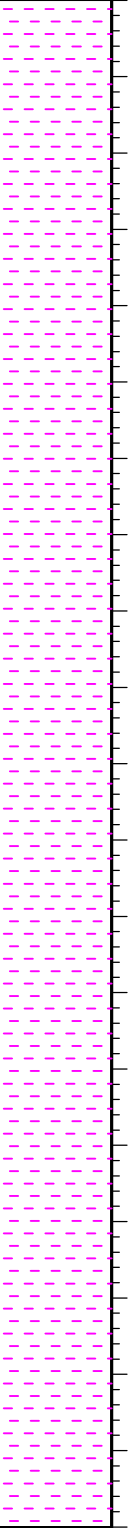
 D: Disturbed	 CB: Core Barrel	 LU: Lugeon	Remarks : Sampling Borehole
 U: Undisturbed	 DE: Denison	 LE: Lefranc	

	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 1 Of 2
	Client : NFC		Fig.: 72

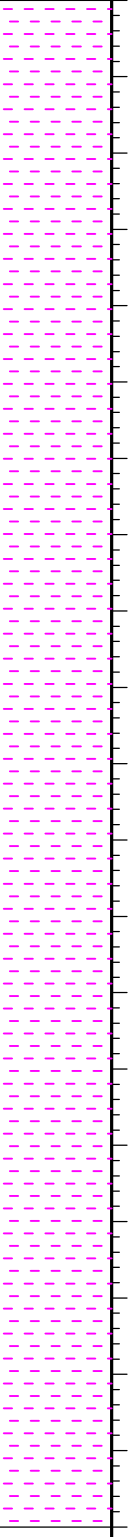
Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-086		DRILLED : 2015/04/02 - 2015/04/02		X : 723536.60 Y : 3031308.44 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U3						Light brown lean CLAY	
11								
12								
13	U4						As above	
14								
15	U5						Light brown lean CLAY, CL	
16								
17								
18	U6						As above, CL	
19								
20	U7						As above, CL	
End of Borehole at : 20.00 m								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :	
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 2
		Client : NFC						Fig.: 73
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

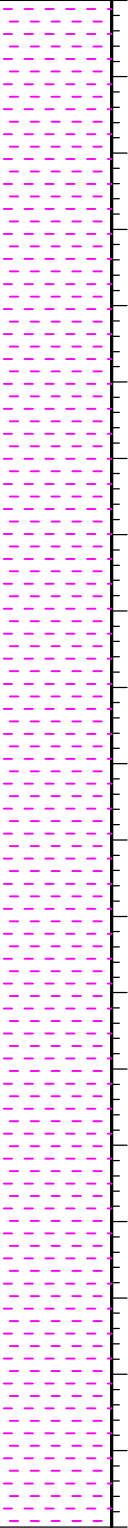
BOREHOLE No.: BH-095		DRILLED : 2015/04/02 - 2015/04/02		X : 723330.30 Y : 3031509.25 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	D1	22	50 13				Light grey hard lean CLAY, CL	
3								
4	D2	27	45	48			Light brown hard lean CLAY, CL	
5								
6	U1						Light brown lean CLAY, CL	
7								
8	U2						As above, CL	
9	LE01							
10	U3						As above	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 74
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

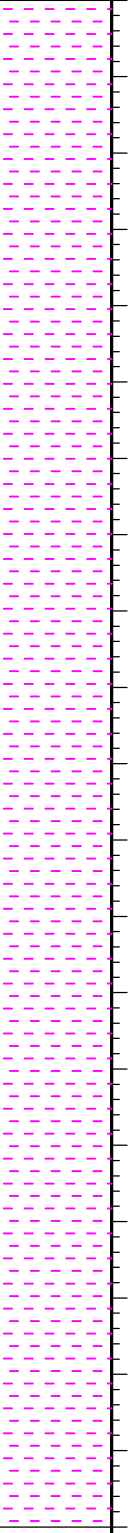
BOREHOLE No.: BH-095		DRILLED : 2015/04/02 - 2015/04/02		X : 723330.30 Y : 3031509.25 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
10							Light brown lean CLAY		
11									
12	U4						As above		
13									
14	U5						Light brown lean CLAY		
15									
16	U6						Light brown lean CLAY, CL		
17									
18	U7						As above, CL		
19									
20	U8						As above		
End of Borehole at : 20.00 m									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :		
		Project : SOUTH ALUMINUM SMELTER PLANT							Sheet: 2 Of 2
		Client : NFC							Fig.: 75
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-096		DRILLED : 2015/04/22 - 2015/04/22		X : 723352.37 Y : 3031497.51 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Brown lean CLAY	
1								
2	D1	9	14	19			Light brown hard lean CLAY	
3								
4	D2	9	9	8			Light brown very stiff lean CLAY	
5								
6	LE01							
7								
8	U1						Light brown lean CLAY	
9								
10								
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 6
		Client : NFC						Fig.: 76
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-096		DRILLED : 2015/04/22 - 2015/04/22		X : 723352.37 Y : 3031497.51 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U2						Light brown lean CLAY	
11								
12	U3						As above	
13								
14	U4						As above	
15								
16	U5						As above	
17								
18	U6						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 6
		Client : NFC						Fig.: 77
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-096		DRILLED : 2015/04/22 - 2015/04/22		X : 723352.37 Y : 3031497.51 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U7						Light brown lean CLAY	
21								
22	U8						As above	
23								
24	U9						As above	
25								
26	U10						As above	
27								
28	U11						As above	
29								
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 6
		Client : NFC						Fig.: 78
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

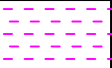
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DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30	U12						Light brown lean CLAY	
31								
32	U13						As above	
33								
34	U14						As above	
35								
36	U15						As above	
37								
38	U16						As above <CL>	
39								
40								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 6
		Client : NFC						Fig.: 79
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-096		DRILLED : 2015/04/22 - 2015/04/22		X : 723352.37 Y : 3031497.51 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
40	U17						Light brown lean CLAY <CL>	
41								
42	U18						As above <CL>	
43								
44	U19						As above	
45								
46	U20						As above <CL/ML>	
47								
48	U21						As above <CL/ML>	
49								
50								

 D: Disturbed  U: Undisturbed	 CB: Core Barrel  DE: Denison	 LU: Lugeon  LE: Lefranc	Remarks :
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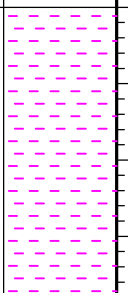
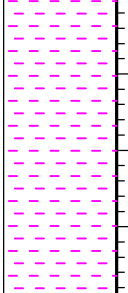
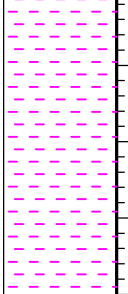
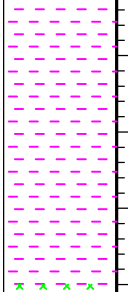
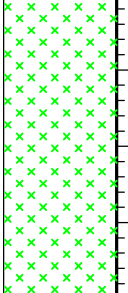
	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 5 Of 6
	Client : NFC		Fig.: 80

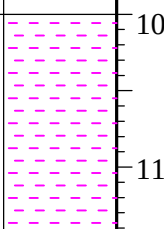
Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-096		DRILLED : 2015/04/22 - 2015/04/22		X : 723352.37 Y : 3031497.51 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
50	U22						Light brown lean CLAY <CL>	
		End of Borehole at : 50.50 m						
51								
52								
53								
54								
55								
56								
57								
58								
59								
60								

 D: Disturbed  U: Undisturbed	 CB: Core Barrel  DE: Denison	 LU: Lugeon  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 6 Of 6
	Client : NFC		Fig.: 81
Soil Engineering Services Consultant & Contractor			Proj No. : 1347

BOREHOLE No.: BH-100		DRILLED : 2015/04/11 - 2015/04/11		X : 723440.60 Y : 3031450.50 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	 D1	14	20	24			Light brown hard lean CLAY	
3								
4	 D2	12	15	14			Light brown very stiff lean CLAY	
5								
6	 U1 LE01						Light brown lean CLAY with gypsum <CL/ML>	
7								
8	 U2						Light brown SILT <ML/CL>	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
 Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC Sheet: 1 Of 3 Fig.: 82							Soil Engineering Services Consultant & Contractor	
							Proj No. : 1347	

BOREHOLE No.: BH-100		DRILLED : 2015/04/11 - 2015/04/11		X : 723440.60 Y : 3031450.50 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U3						Light brown lean CLAY <CL/ML>	
11								
12	U4						As above	
13								
14	U5						Light brown lean CLAY	
15								
16	U6						As above	
17								
18	U7						As above	
19								
20								20

 D: Disturbed

 CB: Core Barrel

 LU: Lugeon

 U: Undisturbed

 DE: Denison

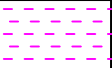
 LE: Lefranc

Remarks :

	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 2 Of 3
	Client : NFC		Fig.: 83

Soil Engineering Services Consultant & Contractor

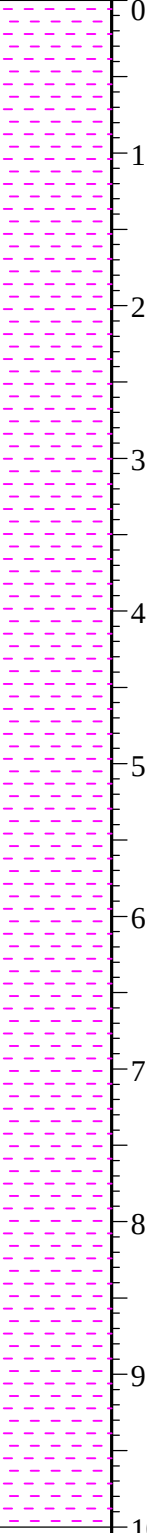
Proj No. : 1347

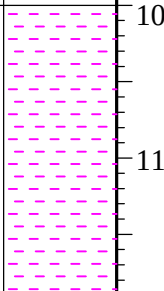
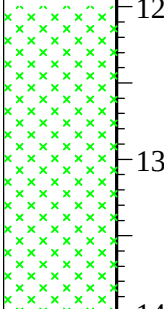
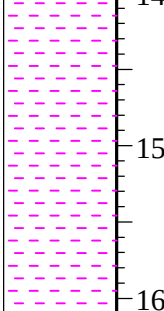
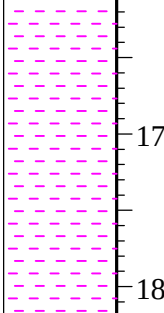
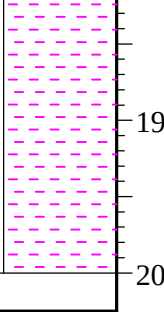
BOREHOLE No.: BH-100		DRILLED : 2015/04/11 - 2015/04/11		X : 723440.60 Y : 3031450.50 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U8						Light brown lean CLAY	
		End of Borehole at : 20.50 m						
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 84

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-104		DRILLED : 2015/04/01 - 2015/04/01		X : 723528.91 Y : 3031403.53 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Brown lean CLAY	
1								
2	 D1	21	30	34			Brown hard lean CLAY, CL	
3								
4	 D2	11	20	21			Brown hard lean CLAY, CL	
5								
6	 U1						Brown lean CLAY, CL	
7								
8	 U2						Brown lean CLAY <CL/ML>	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon Remarks : Sampling Borehole  U: Undisturbed  DE: Denison  LE: Lefranc								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 85
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-104		DRILLED : 2015/04/01 - 2015/04/01		X : 723528.91 Y : 3031403.53 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U3						Brown lean CLAY	
11								
12	U4						Brown SILT, ML	
13								
14	U5						Brown lean CLAY, CL	
15								
16	U6						As above	
17								
18	U7						Brown lean CLAY <CL>	
19								
20								

 D: Disturbed

 CB: Core Barrel

 LU: Lugeon

 U: Undisturbed

 DE: Denison

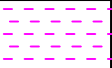
 LE: Lefranc

Remarks :

	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 2 Of 3
	Client : NFC		Fig.: 86

Soil Engineering Services Consultant & Contractor

Proj No. : 1347

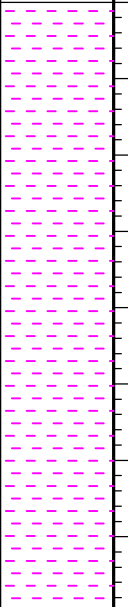
BOREHOLE No.: BH-104		DRILLED : 2015/04/01 - 2015/04/01		X : 723528.91 Y : 3031403.53 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U8						Brown lean CLAY	
							End of Borehole at : 20.50 m	
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

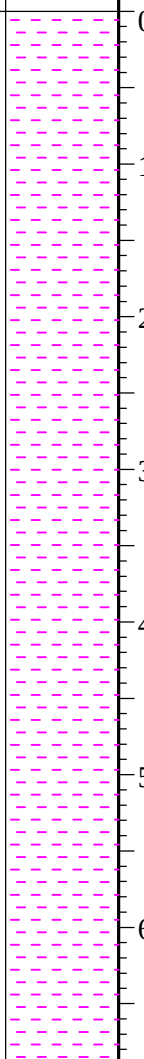
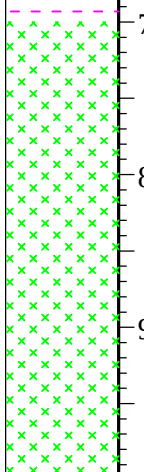
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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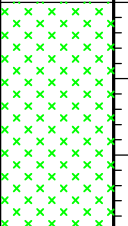
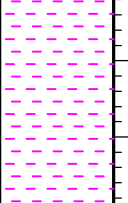
	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 87

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-107		DRILLED : 2015/03/29 - 2015/03/29		X : 722689.06 Y : 3031798.74 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	D1	27	34	38			Light brown hard lean CLAY, CL	
3								
4	U1						Light brown SILT <ML>	
5								
6	U2						Light brown lean CLAY, CL	
7								
8								
9	U3						Light brown lean CLAY <CL/ML>	
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 88
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-107		DRILLED : 2015/03/29 - 2015/03/29					X : 722689.06 Y : 3031798.74 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B	
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend		
		15Cm	15Cm	15Cm	Und	Rem				
10							Light brown lean CLAY		10	
11									11	
12	U4						Light brown lean CLAY, CL		12	
13									13	
14	U5						Light brown SILT <ML>		14	
15									15	
16	U6						As above		16	
17									17	
18									18	
19	U7						Light brown lean CLAY, CL		19	
20									20	
End of Borehole at : 20.00 m										
 D: Disturbed  U: Undisturbed  CB: Core Barrel  DE: Denison  LU: Lugeon  LE: Lefranc							Remarks :			
Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC								Sheet: 2 Of 2 Fig.: 89		
Soil Engineering Services Consultant & Contractor							Proj No. : 1347			

BOREHOLE No.: BH-109		DRILLED : 2015/04/16 - 2015/04/16		X : 722735.02 Y : 3031774.28 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	 D1	12	30	27			Light brown hard lean CLAY	
3	 D2	14	28	24			As above	
4								
5	 D3	11	17	19			As above	
6	 D4	9	7	10			Light brown very stiff lean CLAY	
7	 U1						Light brown SILT <ML/CL-ML/CL>	
8								
9	 U2						Light brown SILT with gypsum <ML/CL>	
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
 Project : SOUTH ALUMINUM SMELTER PLANT  Client : NFC							Sheet: 1 Of 5 Fig.: 90	
Soil Engineering Services Consultant & Contractor						Proj No. : 1347		

BOREHOLE No.: BH-109		DRILLED : 2015/04/16 - 2015/04/16		X : 722735.02 Y : 3031774.28 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Light brown SILT	
11								
12	U3						Light brown lean CLAY <CL/ML>	
13	U4						As above	
14								
15	U5						As above	
16								
17	U6						As above	
18								
19	U7						As above	
20								
 D: Disturbed  U: Undisturbed  CB: Core Barrel  DE: Denison  LU: Lugeon  LE: Lefranc Remarks :								
Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC							Sheet: 2 Of 5 Fig.: 91	
Soil Engineering Services Consultant & Contractor						Proj No. : 1347		

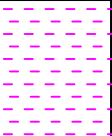
BOREHOLE No.: BH-109		DRILLED : 2015/04/16 - 2015/04/16		X : 722735.02 Y : 3031774.28 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20								
21	U8						Light brown lean CLAY	
22								
23	U9						As above	
24								
25	U10						As above	
26								
27	U11						As above	
28								
29	U12						Light brown lean CLAY, CL	
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 5
		Client : NFC						Fig.: 92
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-109		DRILLED : 2015/04/16 - 2015/04/16		X : 722735.02 Y : 3031774.28 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30								
31	U13						Light brown lean CLAY	
32								
33	U14						Light brown lean CLAY <CL>	
34								
35	U15						As above	
36								
37	U16						As above	
38								
39	U17						As above	
40								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 5
		Client : NFC						Fig.: 93
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-109		DRILLED : 2015/04/16 - 2015/04/16		X : 722735.02 Y : 3031774.28 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
40								
41	U18						Light brown lean CLAY	
42								
43	U19						As above	
44								
45	U20						As above	
46								
47								
48								
49								
50	CB1						As above <CL/ML>	
End of Borehole at : 50.00 m								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :	
							Project : SOUTH ALUMINUM SMELTER PLANT	
Client : NFC							Sheet: 5 Of 5	
Soil Engineering Services Consultant & Contractor							Fig.: 94	
Proj No. : 1347								

BOREHOLE No.: BH-111		DRILLED : 2015/04/14 - 2015/04/14		X : 722779.16 Y : 3031750.79 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	D1	8	15	17			Light brown hard lean CLAY, CL	
3								
4	D2	15	16	18			As above, CL	
5								
6								
7	U1						Light brown lean CLAY <CL/ML>	
8								
9	U2						As above	
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 95
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

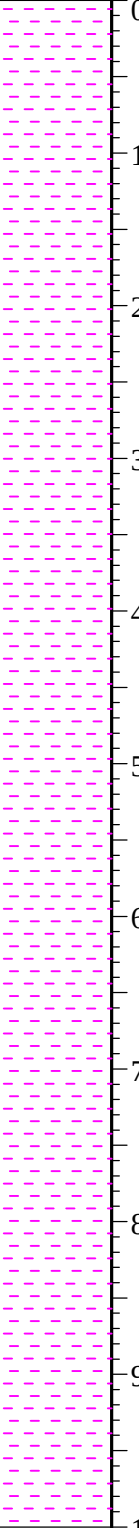
BOREHOLE No.: BH-111		DRILLED : 2015/04/14 - 2015/04/14		X : 722779.16 Y : 3031750.79 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U3						Light brown lean CLAY	
11								
12	U4						Light brown lean CLAY <CL/ML>	
13								
14	U5						As above	
15								
16	U6						Light brown lean CLAY	
17								
18	U7						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 96
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

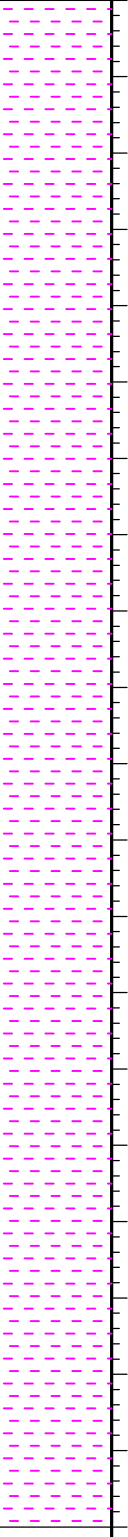
BOREHOLE No.: BH-111		DRILLED : 2015/04/14 - 2015/04/14		X : 722779.16 Y : 3031750.79 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U8						Light brown lean CLAY	
21		End of Borehole at : 20.95 m						
22								
23								
24								
25								
26								
27								
28								
29								
30								

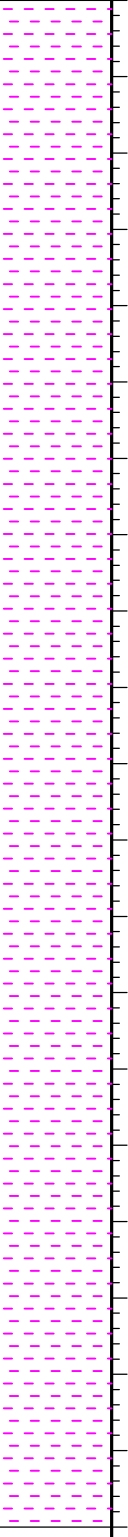
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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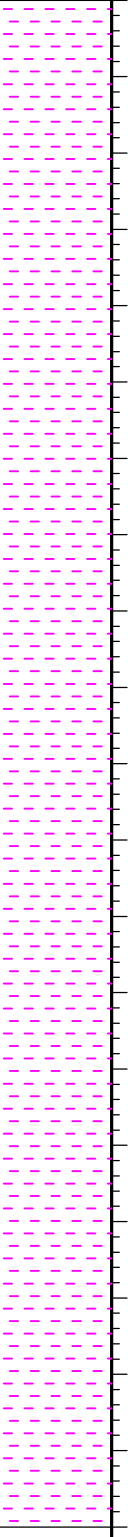
	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 97

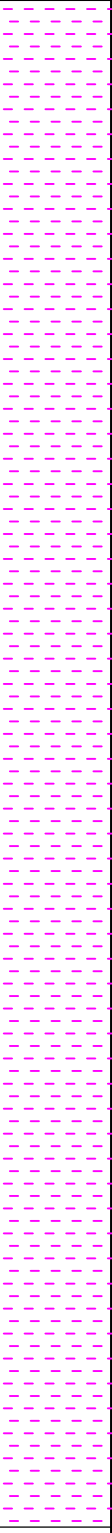
Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-112		DRILLED : 2015/04/29 - 2015/04/30		X : 722801.23 Y : 3031739.04 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-3			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
0							Brown lean CLAY		
1									
2									
3									
4									
5									
6									
7									
8	U1						Brown lean CLAY		
9									
10									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks : Sampling Borehole	
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 6	
		Client : NFC						Fig.: 98	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-112		DRILLED : 2015/04/29 - 2015/04/30		X : 722801.23 Y : 3031739.04 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-3			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
10	U2						Brown lean CLAY with gypsum <CL/ML>		
11									
12									
13	U3						Brown lean CLAY		
14									
15	U4						Brown lean CLAY with gypsum <CL/ML>		
16									
17									
18	U5						Brown lean CLAY		
19									
20									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks :	
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 6	
		Client : NFC						Fig.: 99	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-112		DRILLED : 2015/04/29 - 2015/04/30		X : 722801.23 Y : 3031739.04 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-3		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U6						Brown lean CLAY with lens of sand <CL/ML>	
21								
22								
23	U7						Brown lean CLAY	
24								
25	U8						As above	
26								
27								
28	U9						Brown lean CLAY with gypsum <CL/ML>	
29								
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 6
		Client : NFC						Fig.: 100
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-112		DRILLED : 2015/04/29 - 2015/04/30		X : 722801.23 Y : 3031739.04 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-3			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
30	U10						Brown lean CLAY		
31									
32									
33	U11						As above		
34									
35	U12						As above <CL/ML>		
36									
37									
38	U13						As above		
39									
40									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks :	
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 6	
		Client : NFC						Fig.: 101	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-112		DRILLED : 2015/04/29 - 2015/04/30		X : 722801.23 Y : 3031739.04 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-3		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
40	U14						Brown lean CLAY <CL/ML>	
41								
42								
43	U15						As above	
44								
45	U16						As above	
46								
47								
48	U17						As above	
49								
50								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 5 Of 6
		Client : NFC						Fig.: 102
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

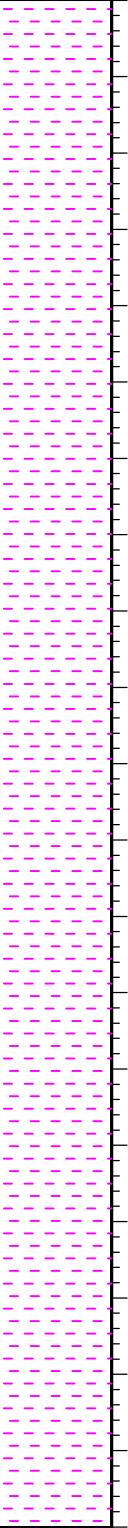
BOREHOLE No.: BH-112		DRILLED : 2015/04/29 - 2015/04/30		X : 722801.23 Y : 3031739.04 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-3		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
50	 U18						Brown lean CLAY	
		End of Borehole at : 50.25 m						
51								
52								
53								
54								
55								
56								
57								
58								
59								
60								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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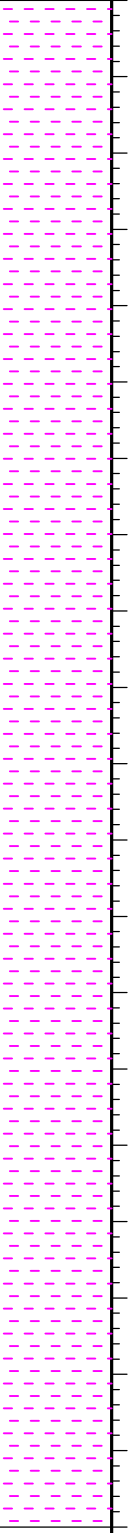
	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 6 Of 6
	Client : NFC		Fig.: 103

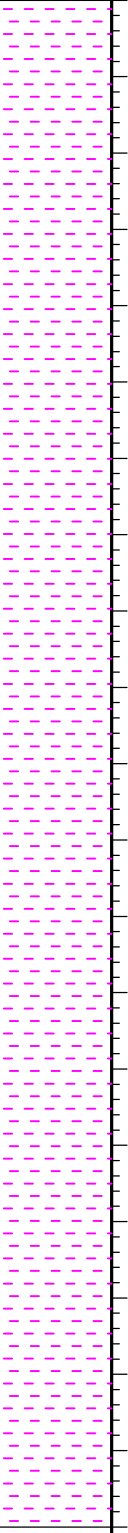
Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-114		DRILLED : 2015/03/30 - 2015/03/31		X : 722845.36 Y : 3031705.55 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	 D1	21	32	24			Light grey hard lean CLAY, CL	
3	 D2	18	30	32			Light grey hard lean CLAY and lime, CL	
4								
5	 U1						Light brown lean CLAY, CL	
6								
7	 U2						Light brown lean CLAY <CL/ML>	
8								
9	 U3						As above	
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
 Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC							Sheet: 1 Of 2	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-114		DRILLED : 2015/03/30 - 2015/03/31		X : 722845.36 Y : 3031705.55 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Light brown lean CLAY	
11	U4						Light brown lean CLAY, CL	
12								
13	U5						As above	
14								
15	U6						As above	
16								
17	U7						Light brown lean CLAY <CL/ML>	
18								
19	U8						As above	
20								
End of Borehole at : 20.00 m								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :	
 Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC							Sheet: 2 Of 2 Fig.: 105	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-119		DRILLED : 2015/03/31 - 2015/04/01		X : 722955.71 Y : 3031656.81 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	 D1	24	31	42			Light brown hard lean CLAY, CL	
3								
4	 U1						Light brown lean CLAY, CL	
5								
6	 U2						Light brown lean CLAY <CL>	
7								
8								
9	 U3						As above, CL	
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon Remarks : Sampling Borehole  U: Undisturbed  DE: Denison  LE: Lefranc								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 5
		Client : NFC						Fig.: 106
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-119		DRILLED : 2015/03/31 - 2015/04/01		X : 722955.71 Y : 3031656.81 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Light brown lean CLAY	
11	U4						As above	
12								
13								
14	U5						As above	
15								
16	U6						Light brown lean CLAY <CL>	
17								
18								
19	U7						As above	
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 5
		Client : NFC						Fig.: 107
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-119		DRILLED : 2015/03/31 - 2015/04/01		X : 722955.71 Y : 3031656.81 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20							Light brown lean CLAY	
21	U8						Light brown lean CLAY, CL	
22								
23								
24	U9						As above, CL	
25								
26	U10						Light brown lean CLAY <CL>	
27								
28								
29	U11						As above	
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 5
		Client : NFC						Fig.: 108
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-119		DRILLED : 2015/03/31 - 2015/04/01		X : 722955.71 Y : 3031656.81 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30							Light brown lean CLAY	
31	U12						As above, CL	
32								
33								
34	U13						As above	
35								
36	U14						Light brown lean CLAY, CL	
37								
38								
39	U15						As above	
40								
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 5
		Client : NFC						Fig.: 109
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-119		DRILLED : 2015/03/31 - 2015/04/01		X : 722955.71 Y : 3031656.81 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
40								
41	U16						Light brown lean CLAY, CL	
42								
43								
44	U17						As above	
45								
46	U18						Light brown lean CLAY <CL>	
47								
48								
49	U19						As above	
50								
End of Borehole at : 50.00 m								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :	
							Project : SOUTH ALUMINUM SMELTER PLANT	
Client : NFC							Sheet: 5 Of 5	
							Fig.: 110	
Proj No. : 1347								

BOREHOLE No.: BH-124		DRILLED : 2015/04/01 - 2015/04/01		X : 723066.05 Y : 3031598.08 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	 D1	21	47	27			Light brown hard lean CLAY, CL	
3								
4	 D2 LE01	18	35	24			Light brown hard lean CLAY, CL	
5	 U1						Light brown lean CLAY, CL	
6								
7								
8	 U2						As above, CL	
9	LE02							
10								

 D: Disturbed  CB: Core Barrel  LU: Lugeon

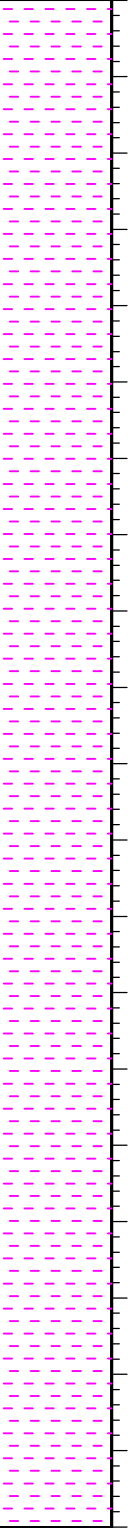
 U: Undisturbed  DE: Denison  LE: Lefranc

Remarks :
Sampling Borehole

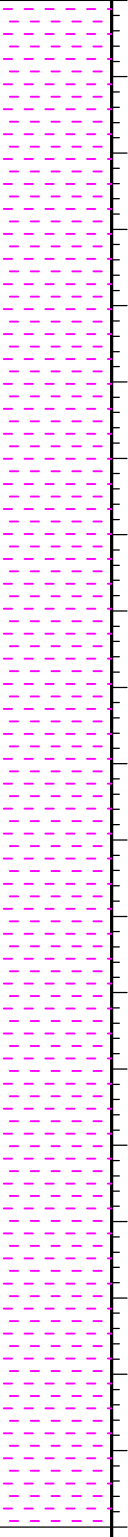
	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 1 Of 2
	Client : NFC		Fig.: 111

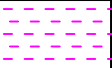
Soil Engineering Services Consultant & Contractor

Proj No. : 1347

BOREHOLE No.: BH-124		DRILLED : 2015/04/01 - 2015/04/01		X : 723066.05 Y : 3031598.08 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
10	U3						Light brown lean CLAY		
11									
12									
13	U4						Light brown lean CLAY, CL		
14									
15	U5						As above		
16									
17									
18	U6						Light brown lean CLAY, CL		
19									
20	U7						As above, CL		
End of Borehole at : 20.00 m									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :		
 Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC							Sheet: 2 Of 2 Fig.: 112		
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-130		DRILLED : 2015/04/13 - 2015/04/14		X : 723148.40 Y : 3031527.50 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	 D1	16	25	34			Light brown hard lean CLAY, CL	
3								
4	 U1						Light brown lean CLAY <CL/ML>	
5								
6	 U2						As above <CL/ML>	
7								
8	 U3						As above	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks : Sampling Borehole
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 113
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

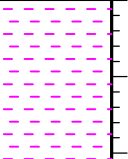
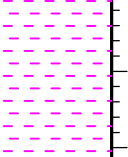
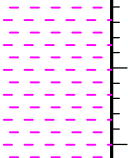
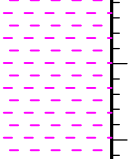
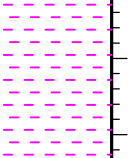
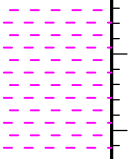
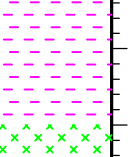
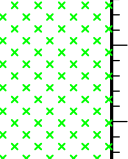
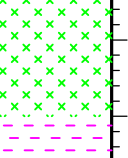
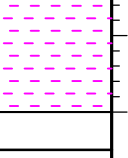
BOREHOLE No.: BH-130		DRILLED : 2015/04/13 - 2015/04/14		X : 723148.40 Y : 3031527.50 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U4						Light brown lean CLAY	
11								
12	U5						As above <CL/ML>	
13								
14	U6						As above	
15								
16	U7						As above	
17								
18	U8						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 114
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

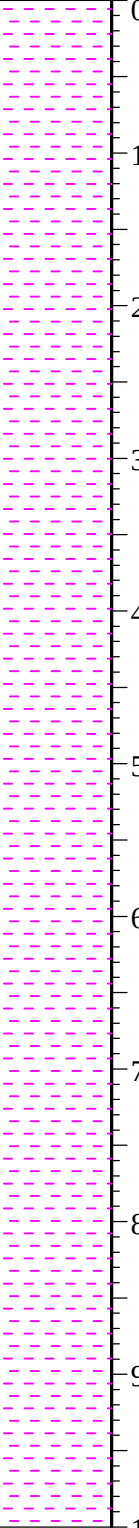
BOREHOLE No.: BH-130		DRILLED : 2015/04/13 - 2015/04/14		X : 723148.40 Y : 3031527.50 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U9						Light brown lean CLAY	
		End of Borehole at : 20.50 m						
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

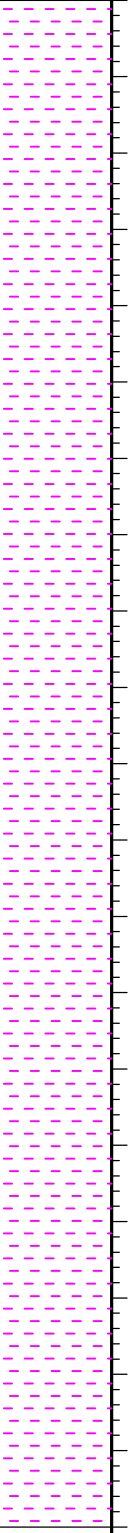
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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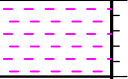
	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 115
Soil Engineering Services Consultant & Contractor			Proj No. : 1347

BOREHOLE No.: BH-133		DRILLED : 2015/04/02 - 2015/04/03		X : 723264.66 Y : 3031492.36 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	 D1	17	28	35			Light brown hard lean CLAY, CL	
3								
4	 D2	10	24	30			Light brown hard lean CLAY, CL	
5	 U1						Light brown lean CLAY, CL	
6	 LE01							
7	 U2						Light brown lean CLAY <CL>	
8								
9	 U3						As above	
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC							Sheet: 1 Of 2 Fig.: 116	
Soil Engineering Services Consultant & Contractor						Proj No. : 1347		

BOREHOLE No.: BH-133		DRILLED : 2015/04/02 - 2015/04/03		X : 723264.66 Y : 3031492.36 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Light brown lean CLAY	
11	U4						Light brown lean CLAY, CL	
12								
13	U5						As above, CL	
14								
15	U6						As above, CL	
16								
17	U7						Light brown SILT <ML/CL>	
18								
19	U8						Light brown lean CLAY <CL>	
20							End of Borehole at : 20.00 m	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc		Remarks :						
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 2
		Client : NFC						Fig.: 117
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-136		DRILLED : 2015/04/19 - 2015/04/19		X : 723330.86 Y : 3031457.12 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
0							Light brown lean CLAY		
1									
2	D1	16	30	30			Light brown hard lean CLAY		
3	D2	12	27	34			As above		
4									
5	D3	6	6	8			Light brown stiff lean CLAY		
6	U1						Light brown lean CLAY		
7									
8	U2						As above		
9									
10									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks : Sampling Borehole	
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3	
		Client : NFC						Fig.: 118	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-136		DRILLED : 2015/04/19 - 2015/04/19		X : 723330.86 Y : 3031457.12 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U3						Light brown lean CLAY	
11								
12	U4						As above	
13								
14	U5						As above	
15								
16	U6						As above	
17								
18	U7						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 119
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-136		DRILLED : 2015/04/19 - 2015/04/19		X : 723330.86 Y : 3031457.12 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	 U8						Light brown lean CLAY	
		End of Borehole at : 20.50 m						
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 120

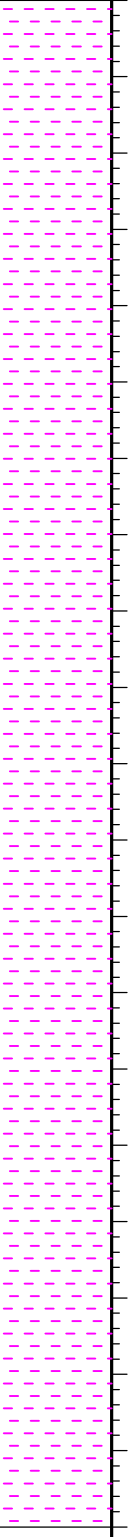
Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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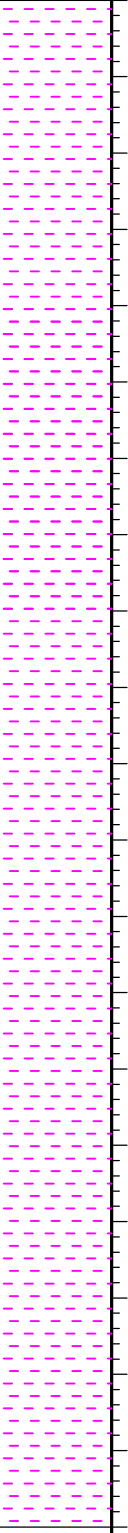
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DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	 D1	19	28	39			Light grey hard lean CLAY, CL	
3								
4	 D2	13	16	18			Light brown hard lean CLAY, CL	
5								
6	 U1						Light brown lean CLAY, CL	
7	LE01							
8								
9								
10								

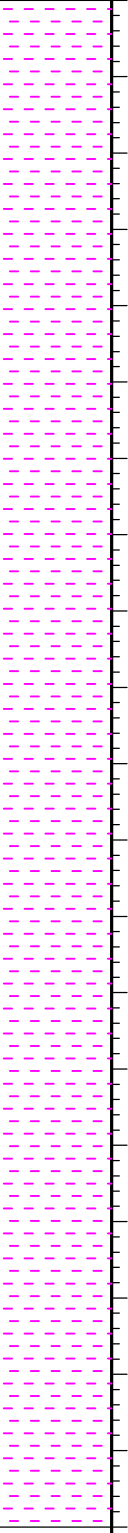
 D: Disturbed	 CB: Core Barrel	 LU: Lugeon	Remarks : Sampling Borehole
 U: Undisturbed	 DE: Denison	 LE: Lefranc	

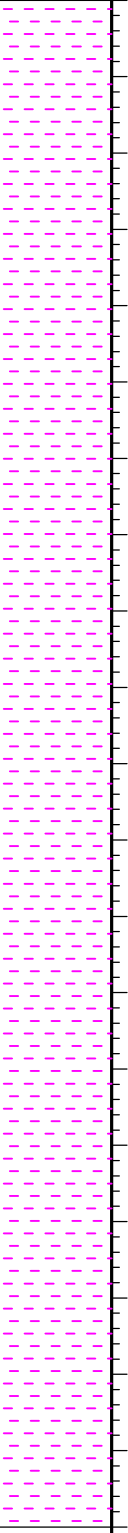
	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 1 Of 6
	Client : NFC		Fig.: 121

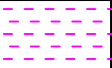
Soil Engineering Services Consultant & Contractor		Proj No. : 1347
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BOREHOLE No.: BH-139		DRILLED : 2015/04/02 - 2015/04/04		X : 723397.07 Y : 3031421.88 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
10	U2						Light brown lean CLAY <CL>		
11									
12	U3						As above <CL/ML>		
13									
14	U4						As above, CL		
15									
16	U5						Light brown lean CLAY <CL/ML>		
17									
18	U6						As above <CL>		
19									
20									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks :	
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 6	
		Client : NFC						Fig.: 122	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-139		DRILLED : 2015/04/02 - 2015/04/04		X : 723397.07 Y : 3031421.88 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U7						Light brown lean CLAY <CL/ML>	
21								
22	U8						Light brown lean CLAY <CL/ML>	
23								
24	U9						Light brown lean CLAY, CL	
25								
26	U10						As above, CL	
27								
28	U11						As above, CL	
29								
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 6
		Client : NFC						Fig.: 123
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-139		DRILLED : 2015/04/02 - 2015/04/04		X : 723397.07 Y : 3031421.88 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30	U12						Light brown lean CLAY	
31								
32	U13						As above	
33								
34	U14						As above, CL	
35								
36	U15						As above	
37								
38	U16						As above, CL	
39								
40								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 6
		Client : NFC						Fig.: 124
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

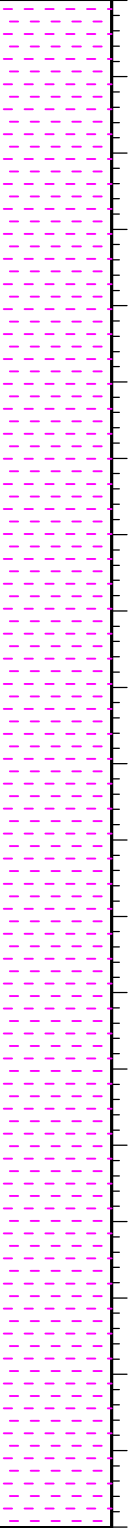
BOREHOLE No.: BH-139		DRILLED : 2015/04/02 - 2015/04/04		X : 723397.07 Y : 3031421.88 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
40	U17						Light brown lean CLAY	
41								
42	U18						As above	
43								
44	U19						As above, CL	
45								
46	U20						As above, CL	
47								
48	U21						Light brown lean CLAY <CL/ML>	
49								
50								50
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 5 Of 6
		Client : NFC						Fig.: 125
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-139		DRILLED : 2015/04/02 - 2015/04/04		X : 723397.07 Y : 3031421.88 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
50	U22						Light brown lean CLAY <CL>	
		End of Borehole at : 50.50 m						
51								
52								
53								
54								
55								
56								
57								
58								
59								
60								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 6 Of 6
	Client : NFC		Fig.: 126
Soil Engineering Services Consultant & Contractor			Proj No. : 1347

BOREHOLE No.: BH-143		DRILLED : 2015/04/01 - 2015/04/01		X : 723485.35 Y : 3031374.89 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	D1	24	33	30			Light brown hard lean CLAY, CL	
3								
4	D2	10	13	15			Light brown very stiff lean CLAY, CL	
5								
6	U1						Light brown lean CLAY	
7								
8	U2						Light brown lean CLAY <CL/ML>	
9	LE01							
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 127
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-143		DRILLED : 2015/04/01 - 2015/04/01		X : 723485.35 Y : 3031374.89 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B				
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend		
		15Cm	15Cm	15Cm	Und	Rem				
10							Light brown lean CLAY			
11										
12	U3						Light brown lean CLAY, CL			
13										
14	U4						As above			
15										
16	U5						As above, CL			
17										
18	U6						As above			
19										
20	U7						As above, CL			
End of Borehole at : 20.00 m										
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :			
		Project : SOUTH ALUMINUM SMELTER PLANT							Sheet: 2 Of 2	
		Client : NFC							Fig.: 128	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347			

BOREHOLE No.: BH-148		DRILLED : 2015/03/29 - 2015/03/29		X : 722696.71 Y : 3031755.51 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	 D1	12	16	19			Light grey hard lean CLAY, CL	
3								
4	 U1						Light brown lean CLAY <CL>	
5								
6	 U2						Light brown lean CLAY, CL	
7								
8								
9	 U3						As above	
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 129
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-148		DRILLED : 2015/03/29 - 2015/03/29					X : 722696.71 Y : 3031755.51 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B	
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend		
		15Cm	15Cm	15Cm	Und	Rem				
10										
11	U4						Light brown lean CLAY, CL			
12										
13										
14	U5						Light brown SILT <ML/CL>			
15										
16	U6						As above			
17										
18										
19	U7						As above			
20										
End of Borehole at : 20.00 m										
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks :										
Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC								Sheet: 2 Of 2 Fig.: 130		
Soil Engineering Services Consultant & Contractor								Proj No. : 1347		

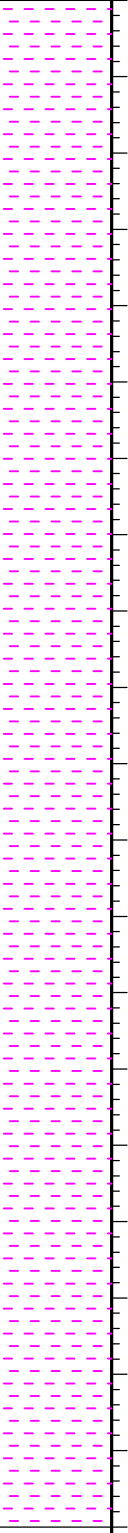
BOREHOLE No.: BH-151		DRILLED : 2015/04/04 - 2015/04/04		X : 722762.91 Y : 3031720.26 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	D1	20	50 11				Light grey hard lean CLAY, CL	
3								
4	D2	22	45	46			Light brown hard lean CLAY, CL	
5	CB1						Light brown lean CLAY, CL	
6								
7	LE01							
8								
9								
10	U1						Light brown lean CLAY <CL>	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 131
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

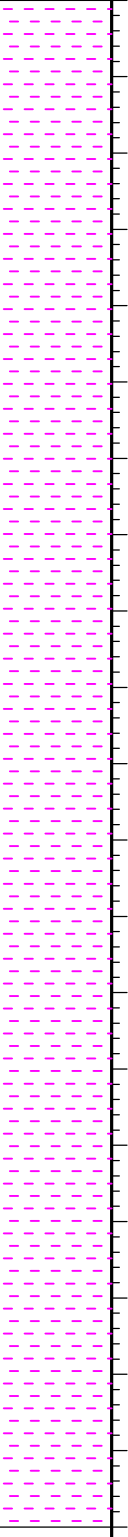
BOREHOLE No.: BH-151		DRILLED : 2015/04/04 - 2015/04/04		X : 722762.91 Y : 3031720.26 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Light brown lean CLAY	
11								
12	U2						Light brown silty CLAY <CL-ML/CL>	
13								
14	U3						As above	
15								
16	U4						Light brown lean CLAY <CL>	
17								
18	U5						As above, CL	
19								
20	U6						As above	
End of Borehole at : 20.00 m								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
 Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC Sheet: 2 Of 2							Fig.: 132	
Soil Engineering Services Consultant & Contractor						Proj No. : 1347		

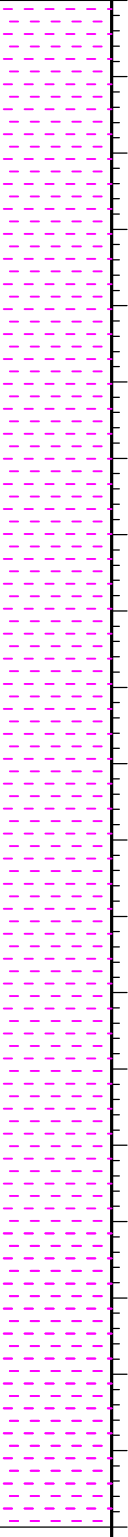
BOREHOLE No.: BH-156		DRILLED : 2015/03/30 - 2015/03/30		X : 722873.25 Y : 3031661.53 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	 D1	9	24	32			Light grey hard lean CLAY and lime, CL	
3								
4	 U1						Light brown lean CLAY, CL	
5								
6	 U2						Light brown lean CLAY <CL>	
7								
8								
9	 U3						As above	
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 133
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

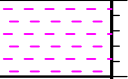
BOREHOLE No.: BH-156		DRILLED : 2015/03/30 - 2015/03/30		X : 722873.25 Y : 3031661.53 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10								
11	U4						Light brown lean CLAY <CL/ML>	
12								
13								
14	U5						Light brown lean CLAY, CL	
15								
16	U6						As above	
17								
18								
19	U7						Light brown lean CLAY, CL	
20								
End of Borehole at : 20.00 m								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :	
							Project : SOUTH ALUMINUM SMELTER PLANT	
Client : NFC							Sheet: 2 Of 2	
Soil Engineering Services Consultant & Contractor							Fig.: 134	
Proj No. : 1347								

BOREHOLE No.: BH-157		DRILLED : 2015/04/05 - 2015/04/05		X : 722895.32 Y : 3031644.79 LEVEL :0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	 D1	29	34	46			Light grey hard lean CLAY, CL	
3								
4	 D2	25	27	33			Light brown hard lean CLAY, CL	
5								
6	  U1						Light brown lean CLAY	
7	 LE01							
8	 U2						As above	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 5
		Client : NFC						Fig.: 135
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-157		DRILLED : 2015/04/05 - 2015/04/05		X : 722895.32 Y : 3031644.79 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U3						Light brown lean CLAY <CL>	
11								
12	U4						Light brown lean CLAY <CL/ML>	
13								
14	U5						Light brown lean CLAY, CL	
15								
16	U6						As above	
17								
18	U7						As above, CL	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 5
		Client : NFC						Fig.: 136
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-157		DRILLED : 2015/04/05 - 2015/04/05		X : 722895.32 Y : 3031644.79 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U8						Light brown lean CLAY, CL	
21								
22	U9						As above	
23								
24	U10						Light brown lean CLAY <CL>	
25								
26	U11						As above	
27								
28	U12						As above	
29								
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 5
		Client : NFC						Fig.: 137
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-157		DRILLED : 2015/04/05 - 2015/04/05		X : 722895.32 Y : 3031644.79 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30	U13						Light brown lean CLAY	
31								
32	U14						Light brown lean CLAY, CL	
33								
34	U15						As above	
35								
36	U16						As above	
37								
38	U17						Light brown lean CLAY, CL	
39								
40								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 5
		Client : NFC						Fig.: 138
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

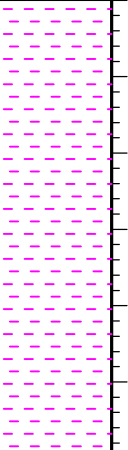
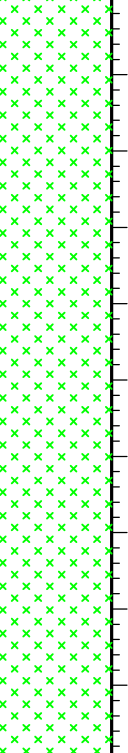
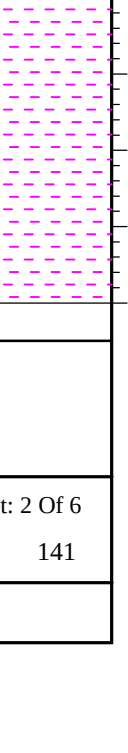
BOREHOLE No.: BH-157		DRILLED : 2015/04/05 - 2015/04/05		X : 722895.32 Y : 3031644.79 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
40	 U18						Light brown lean CLAY	
							End of Borehole at : 40.50 m	
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT	Sheet: 5 Of 5
	Client : NFC	Fig.: 139

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-161		DRILLED : 2015/04/29 - 2015/04/30		X : 722983.60 Y : 3031602.80 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-2B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0								
1								
2								
3								
4								
5								
6								
7								
8	U1						Brown lean CLAY with lens of sand <CL/CH>	
9								
10								
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 6
		Client : NFC						Fig.: 140
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-161		DRILLED : 2015/04/29 - 2015/04/30		X : 722983.60 Y : 3031602.80 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-2B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Brown lean CLAY	
11	U2							
12								
13	U3						Brown elastic SILT <MH/CH>	
14								
15	U4							
16							As above	
17								
18	U5							
19							Brown lean CLAY <CL/ML>	
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks :
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 6
		Client : NFC						Fig.: 141
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-161		DRILLED : 2015/04/29 - 2015/04/30		X : 722983.60 Y : 3031602.80 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-2B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U6						Brown lean CLAY	
21								
22								
23	U7						As above <CL/ML>	
24								
25								
26	U8						As above	
27								
28	U9						As above <CL>	
29								
30								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 6
	Client : NFC		Fig.: 142

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-161		DRILLED : 2015/04/29 - 2015/04/30		X : 722983.60 Y : 3031602.80 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-2B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30	U10						Brown lean CLAY	
31								
32								
33	U11						As above <CL/ML>	
34								
35								
36	U12						As above	
37								
38	U13						As above <CL/ML>	
39								
40								

D: Disturbed

CB: Core Barrel

LU: Lugeon

U: Undisturbed

DE: Denison

LE: Lefranc

Remarks :

Project : SOUTH ALUMINUM SMELTER PLANT
Client : NFC

Sheet: 4 Of 6
Fig.: 143

Soil Engineering Services Consultant & Contractor

Proj No. : 1347

BOREHOLE No.: BH-161		DRILLED : 2015/04/29 - 2015/04/30		X : 722983.60 Y : 3031602.80 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-2B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
40	U14						Brown lean CLAY	
41								
42								
43	U15						As above <CL>	
44								
45								
46	U16						As above	
47								
48	U17						As above	
49								
50								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 5 Of 6
	Client : NFC		Fig.: 144

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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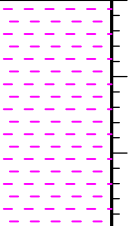
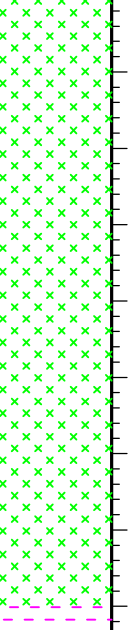
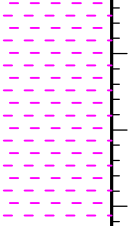
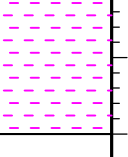
BOREHOLE No.: BH-161		DRILLED : 2015/04/29 - 2015/04/30		X : 722983.60 Y : 3031602.80 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : XY-2B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
50	 U18						Brown lean CLAY	
							End of Borehole at : 50.20 m	
51								
52								
53								
54								
55								
56								
57								
58								
59								
60								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 6 Of 6
	Client : NFC		Fig.: 145

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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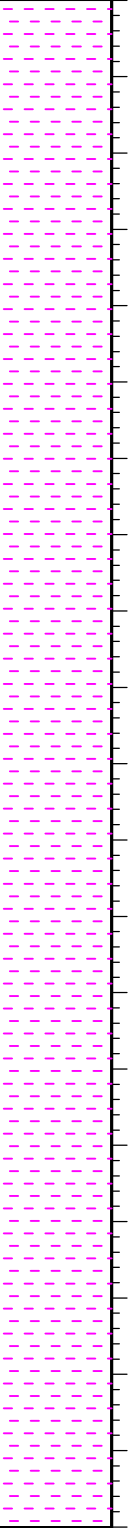
BOREHOLE No.: BH-164		DRILLED : 2015/04/10 - 2015/04/11		X : 723049.80 Y : 3031567.56 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	 D1	30	50 11				Light brown hard lean CLAY, CL	
3								
4	 D2	28	44	46			Brown hard lean CLAY	
5								
6	 U1						Brown lean CLAY with gypsum <CL/ML>	
7								
8	 U2						Brown lean CLAY <CL/ML>	
9	LE01							
10	 U3						As above	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 146
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-164		DRILLED : 2015/04/10 - 2015/04/11		X : 723049.80 Y : 3031567.56 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Brown lean CLAY	
11								
12	U4						As above	
13								
14	U5						Brown SILT <ML/CL-ML/CL>	
15								
16	U6						As above	
17								
18	U7						Brown lean CLAY	
19								
20	U8						Brown lean CLAY with gypsum <CL/ML>	
End of Borehole at : 20.00 m								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :	
							Project : SOUTH ALUMINUM SMELTER PLANT	
Client : NFC							Sheet: 2 Of 2	
Soil Engineering Services Consultant & Contractor							Fig.: 147	
Proj No. : 1347								

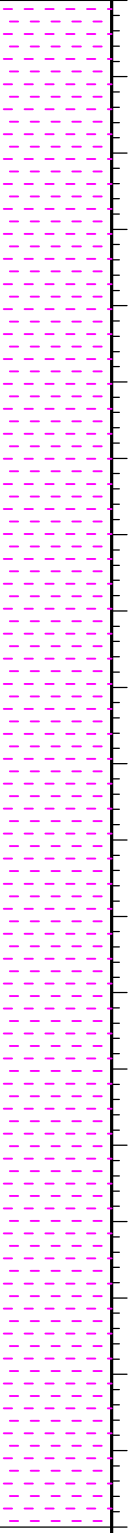
BOREHOLE No.: BH-166		DRILLED : 2015/04/01 - 2015/04/02		X : 723093.94 Y : 3031544.06 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	D1	17	22	20			Light grey hard lean CLAY, CL	
3								
4	D2	14	24	25			Light brown hard lean CLAY, CL	
5								
6	LE01							
7	U1						Light brown lean CLAY, CL	
8								
9	U2						Light brown lean CLAY <CL>	
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 148
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-166		DRILLED : 2015/04/01 - 2015/04/02		X : 723093.94 Y : 3031544.06 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10								
11	U3						Light brown lean CLAY	
12								
13	U4						As above	
14								
15	U5						Light brown lean CLAY, CL	
16								
17	U6						Light brown lean CLAY, CL	
18								
19	U7						As above	
20								
End of Borehole at : 20.00 m								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :	
							Project : SOUTH ALUMINUM SMELTER PLANT	
Client : NFC							Sheet: 2 Of 2	
							Fig.: 149	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

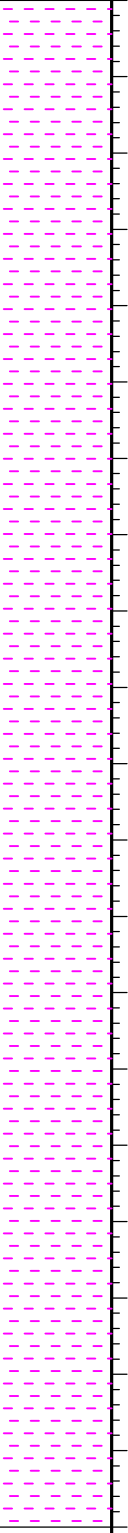
BOREHOLE No.: BH-169		DRILLED : 2015/04/09 - 2015/04/10		X : 723160.14 Y : 3031508.82 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Grey lean CLAY	
1								
2	D1	21	48	$\frac{50}{10}$			Light brown hard lean CLAY, CL	
3								
4	D2	13	19	25			Light brown hard lean CLAY, CL	
5								
6	U1						Brown lean CLAY <CL/ML>	
7								
8	U2						As above	
9								
10	U3						Brown lean CLAY with gypsum <CL/ML>	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 150
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-169		DRILLED : 2015/04/09 - 2015/04/10		X : 723160.14 Y : 3031508.82 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Brown lean CLAY	
11								
12	U4						As above	
13								
14	U5						As above	
15								
16	U6						Brown lean CLAY with gypsum <CL/ML>	
17								
18	U7						Brown lean CLAY	
19								
20	U8						Brown lean CLAY with gypsum <CL/ML>	
End of Borehole at : 20.00 m								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :	
 Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC							Sheet: 2 Of 2 Fig.: 151	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-173		DRILLED : 2015/04/07 - 2015/04/07		X : 723248.40 Y : 3031461.80 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	D1	15	23	28			Light brown hard lean CLAY and lime, CL	
3								
4	D2	4	7	6			Light brown stiff lean CLAY and lime, CL	
5								
6	U1						Brown lean CLAY	
7								
8	U2						As above	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 5
		Client : NFC						Fig.: 152
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-173		DRILLED : 2015/04/07 - 2015/04/07		X : 723248.40 Y : 3031461.80 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U3						Brown lean CLAY <CL>	
11								
12	U4						As above	
13								
14	U5						As above	
15								
16	U6						As above, CL	
17								
18	U7						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 5
		Client : NFC						Fig.: 153
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-173		DRILLED : 2015/04/07 - 2015/04/07		X : 723248.40 Y : 3031461.80 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U8						Light brown lean CLAY, CL	
21								
22	U9						As above	
23								
24	U10						As above, CL	
25								
26	U11						As above	
27								
28	U12						Light brown lean CLAY <CL>	
29								
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 5
		Client : NFC						Fig.: 154
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-173		DRILLED : 2015/04/07 - 2015/04/07		X : 723248.40 Y : 3031461.80 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30	U13						Light brown lean CLAY	
31								
32	U14						Light brown lean CLAY, CL	
33								
34	U15						As above	
35								
36	U16						As above	
37								
38	U17						As above	
39								
40								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 5
		Client : NFC						Fig.: 155
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

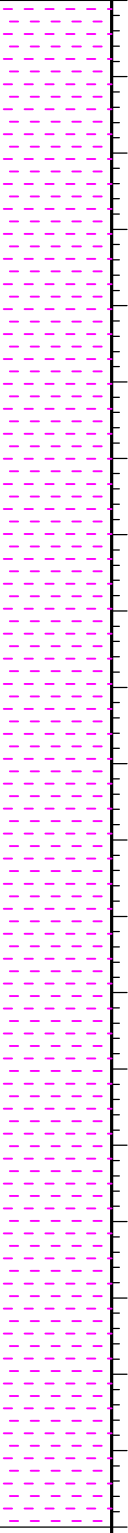
BOREHOLE No.: BH-173		DRILLED : 2015/04/07 - 2015/04/07		X : 723248.40 Y : 3031461.80 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
40	U18						Light brown lean CLAY	
		End of Borehole at : 40.50 m						
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 5 Of 5
	Client : NFC		Fig.: 156

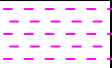
Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-175		DRILLED : 2015/04/01 - 2015/04/01		X : 723292.55 Y : 3031438.34 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	D1	18	42	60			Light brown hard lean CLAY, CL	
3								
4	D2	15	27	39			Light brown hard lean CLAY, CL	
5								
6	U1						Light brown lean CLAY, CL	
7	LE01							
8								
9								
10								
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 157
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-175		DRILLED : 2015/04/01 - 2015/04/01		X : 723292.55 Y : 3031438.34 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U2						Light brown lean CLAY <CL/ML>	
11								
12	U3						As above	
13								
14	U4						As above	
15								
16	U5						Light brown lean CLAY, CL	
17								
18	U6						As above	
19								
20								

 D: Disturbed  U: Undisturbed	 CB: Core Barrel  DE: Denison	 LU: Lugeon  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 2 Of 3
	Client : NFC		Fig.: 158
Soil Engineering Services Consultant & Contractor			Proj No. : 1347

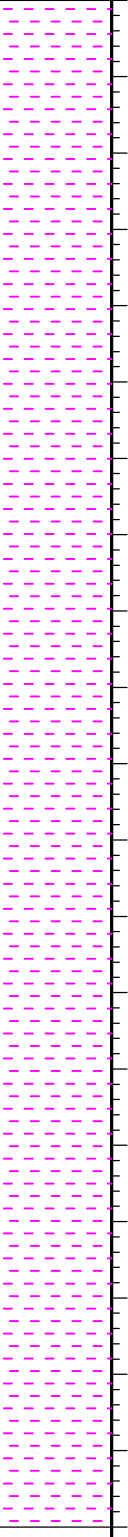
BOREHOLE No.: BH-175		DRILLED : 2015/04/01 - 2015/04/01		X : 723292.55 Y : 3031438.34 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U7						Light brown lean CLAY <CL>	
		End of Borehole at : 20.50 m						
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 159

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-180		DRILLED : 2015/04/06 - 2015/04/06		X : 723513.24 Y : 3031320.88 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	D1	8	12	19			Light brown hard lean CLAY, CL	
3								
4	D2	4	8	10			Light brown very stiff lean CLAY, CL	
5								
6	U1						Light brown lean CLAY, CL	
7								
8	U2						As above	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 160
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

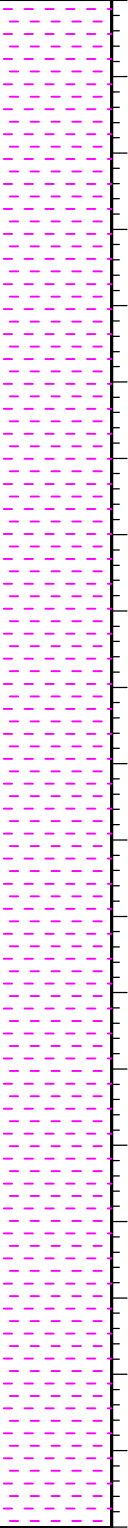
BOREHOLE No.: BH-180		DRILLED : 2015/04/06 - 2015/04/06		X : 723513.24 Y : 3031320.88 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U3						Light brown lean CLAY, CL	
11								
12	U4						As above, CL	
13								
14	U5						As above	
15								
16	U6						Light brown lean CLAY <CL>	
17								
18	U7						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 161
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-180		DRILLED : 2015/04/06 - 2015/04/06		X : 723513.24 Y : 3031320.88 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	 U8						Light brown lean CLAY, CL	
		End of Borehole at : 20.50 m						
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 162
Soil Engineering Services Consultant & Contractor			Proj No. : 1347

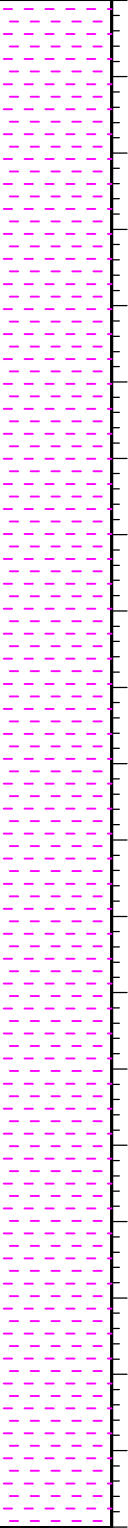
BOREHOLE No.: BH-184		DRILLED : 2015/04/01 - 2015/04/01		X : 723491.17 Y : 3031332.62 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	 D1	17	$\frac{50}{13}$				Light grey hard lean CLAY, CL	
3								
4	 D2	7	9	12			Light grey very stiff lean CLAY, CL	
5								
6	 U1 LE01						Light grey lean CLAY, CL	
7								
8	 U2						As above, CL	
9								
10	 U3						As above	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 163
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-184		DRILLED : 2015/04/01 - 2015/04/01		X : 723491.17 Y : 3031332.62 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Light grey lean CLAY	
11								
12	U4						Light brown lean CLAY <CL>	
13								
14	U5						As above	
15								
16	U6						As above, CL	
17								
18	U7						As above	
19								
20	U8						As above, CL	
End of Borehole at : 20.00 m								
 D: Disturbed  U: Undisturbed  CB: Core Barrel  DE: Denison  LU: Lugeon  LE: Lefranc							Remarks :	
							Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC	
Soil Engineering Services Consultant & Contractor							Sheet: 2 Of 2 Fig.: 164	
Proj No. : 1347								

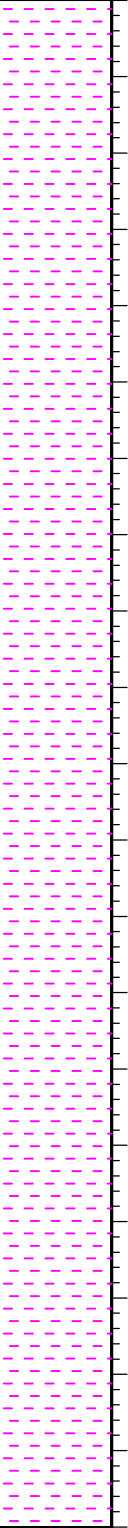
BOREHOLE No.: BH-185		DRILLED : 2015/04/06 - 2015/04/07		X : 723513.24 Y : 3031320.88 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	 D1	7	17	22			Light brown hard lean CLAY, CL	
3								
4	 U1						Light brown silty CLAY <CL-ML/CL>	
5								
6	 U2						Light brown lean CLAY <CL/ML>	
7								
8	 U3						Light brown SILT <ML/CL>	
9								
10	 U4						Light brown lean CLAY, CL	
 D: Disturbed		 CB: Core Barrel		 LU: Lugeon		Remarks : Sampling Borehole		
 U: Undisturbed		 DE: Denison		 LE: Lefranc				
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 4
		Client : NFC						Fig.: 165
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-185		DRILLED : 2015/04/06 - 2015/04/07		X : 723513.24 Y : 3031320.88 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Light brown lean CLAY	
11								
12	U5						As above	
13								
14	U6						Light brown lean CLAY, CL	
15								
16	U7						Light brown sandy lean CLAY, CL	
17								
18	U8						As above	
19								
20	U9						As above	
☒ D: Disturbed ▨ CB: Core Barrel ● LU: Lugeon ■ U: Undisturbed ⬮ DE: Denison ○ LE: Lefranc Remarks :								
 Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC Sheet: 2 Of 4 Fig.: 166								
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

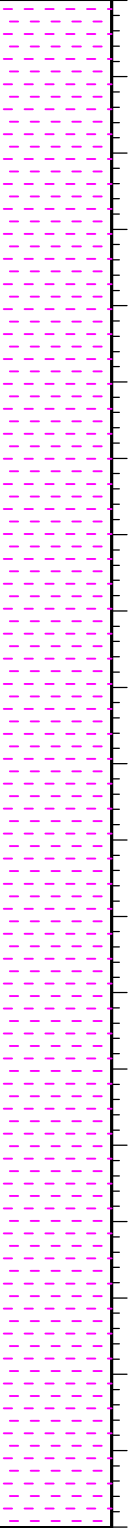
BOREHOLE No.: BH-185		DRILLED : 2015/04/06 - 2015/04/07		X : 723513.24 Y : 3031320.88 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20								
21								
22	U10						Light brown lean CLAY <CL/ML>	
23								
24	U11						As above	
25								
26	U12						Light brown lean CLAY <CL/ML>	
27								
28	U13						As above	
29								
30	U14						Light brown lean CLAY <CL/ML>	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 4
		Client : NFC						Fig.: 167
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-185		DRILLED : 2015/04/06 - 2015/04/07		X : 723513.24 Y : 3031320.88 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
30							Light brown lean CLAY		
31									
32	U15						Light brown lean CLAY <CL/ML>		
33									
34	U16						Light brown lean CLAY <CL/ML>		
35									
36	U17						As above		
37									
38	U18						As above		
39									
40	U19						As above		
End of Borehole at : 40.00 m									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :		
							Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC		
Soil Engineering Services Consultant & Contractor							Sheet: 4 Of 4 Fig.: 168		
Proj No. : 1347									

BOREHOLE No.: BH-186		DRILLED : 2015/04/09 - 2015/04/09		X : 723536.60 Y : 3031308.44 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Grey lean CLAY	
1								
2	 D1	30	45	50			Grey hard lean CLAY, CL	
3								
4	 D2	12	15	18			Light brown hard lean CLAY, CL	
5								
6	 U1						As above	
7								
8	 U2						As above	
9								
10	 U3						Light brown lean CLAY <CL/ML>	
 D: Disturbed  CB: Core Barrel  LU: Lugeon Remarks : Sampling Borehole  U: Undisturbed  DE: Denison  LE: Lefranc								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 169
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-186		DRILLED : 2015/04/09 - 2015/04/09		X : 723536.60 Y : 3031308.44 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
10							Light brown lean CLAY, CL		
11									
12	U4						As above		
13									
14	U5						As above		
15									
16	U6						As above		
17									
18	U7						Light brown lean CLAY <CL/ML>		
19									
20	U8						As above <CL>		
End of Borehole at : 20.00 m									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :		
							Project : SOUTH ALUMINUM SMELTER PLANT		
Client : NFC							Sheet: 2 Of 2		
Soil Engineering Services Consultant & Contractor							Fig.: 170		
Proj No. : 1347									

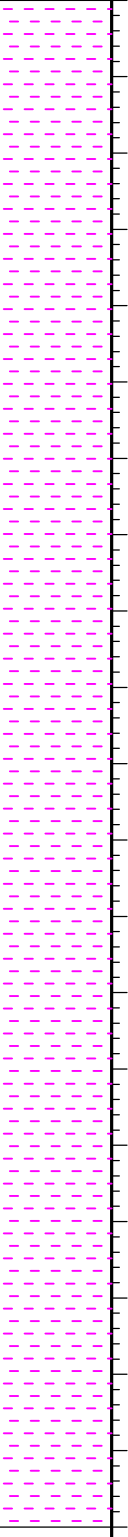
BOREHOLE No.: BH-198		DRILLED : 2015/04/03 - 2015/04/03		X : 723190.54 Y : 3031709.02 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	D1	30	50	50			Light grey hard lean CLAY and lime, CL	
3								
4	D2	22	40	41			As above, CL	
5								
6	U1						Light brown lean CLAY, CL	
7								
8	U2						As above	
9								
10	U3						As above, CL	
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 171
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-198		DRILLED : 2015/04/03 - 2015/04/03		X : 723190.54 Y : 3031709.02 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
10							Light brown lean CLAY		
11									
12	U4						As above		
13									
14	U5						As above, CL		
15									
16	U6						As above		
17									
18	U7						Light brown lean CLAY <CL>		
19									
20	U8						As above		
End of Borehole at : 20.00 m									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :		
		Project : SOUTH ALUMINUM SMELTER PLANT							Sheet: 2 Of 2
		Client : NFC							Fig.: 172
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

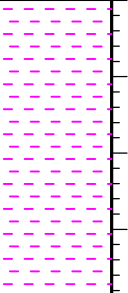
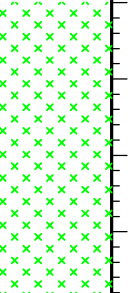
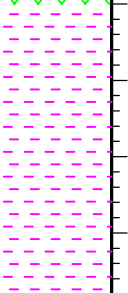
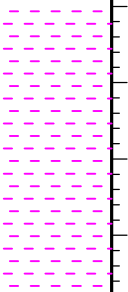
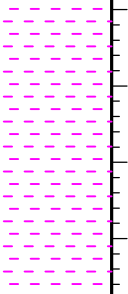
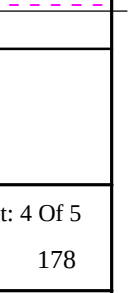
BOREHOLE No.: BH-199		DRILLED : 2015/04/03 - 2015/04/03		X : 723195.38 Y : 3031718.90 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	D1	8	14	17			Light grey hard lean CLAY, CL	
3								
4	D2	11	13	15			Light grey very stiff lean CLAY, CL	
5								
6	U1						Light grey lean CLAY, CL	
7								
8	U2						Light brown lean CLAY	
9	LE01							
10								
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 2
		Client : NFC						Fig.: 173
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-199		DRILLED : 2015/04/03 - 2015/04/03		X : 723195.38 Y : 3031718.90 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10								
11								
12	U3						Light grey lean CLAY, CL	
13	U4						Light brown lean CLAY, CL	
14								
15	U5						As above	
16								
17	U6						As above	
18								
19								
20	U7						As above, CL	
End of Borehole at : 20.00 m								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :	
							Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-202		DRILLED : 2015/04/20 - 2015/04/22		X : 723184.66 Y : 3031627.96 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	D1	11	15	21			Light brown hard lean CLAY	
3								
4	D2	10	14	22			As above	
5								
6	U1						Light brown lean CLAY	
7								
8	U2						As above	
9								
10								
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 5
		Client : NFC						Fig.: 175
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-202		DRILLED : 2015/04/20 - 2015/04/22		X : 723184.66 Y : 3031627.96 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U3						Light brown lean CLAY	
11								
12	U4						As above	
13								
14	U5						As above	
15								
16	U6						As above	
17								
18	U7						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 5
		Client : NFC						Fig.: 176
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-202		DRILLED : 2015/04/20 - 2015/04/22		X : 723184.66 Y : 3031627.96 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U8						Light brown lean CLAY	
21								
22	U9						As above	
23								
24	U10						As above	
25								
26	U11						As above <CL/ML>	
27								
28	CB1						As above <CL/ML>	
29								
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 5
		Client : NFC						Fig.: 177
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-202		DRILLED : 2015/04/20 - 2015/04/22		X : 723184.66 Y : 3031627.96 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30	CB2						Light brown lean CLAY <CL/ML>	
31								
32	CB3						Light brown SILT <ML/CL>	
33								
34	CB4						Light brown lean CLAY <CL/ML>	
35								
36	CB5						As above	
37								
38	CB6						As above <CL/ML>	
39								
40								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 5
		Client : NFC						Fig.: 178
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

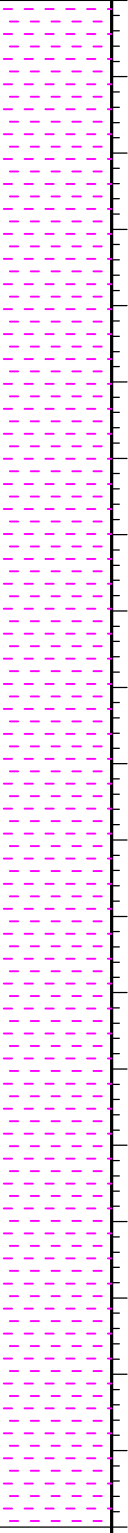
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DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
40	CB7						Light brown SILT <ML/CL>	
		End of Borehole at : 40.50 m						
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								

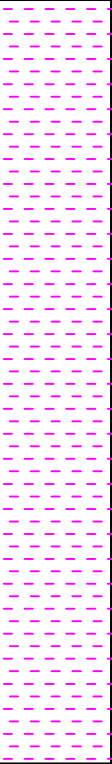
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 5 Of 5
	Client : NFC		Fig.: 179

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-216		DRILLED : 2015/04/20 - 2015/04/20		X : 722824.82 Y : 3031752.53 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	D1	26	27	32			Light grey hard lean CLAY	
3								
4								
5	D2	13	20	25			Light brown hard lean CLAY	
6								
7	U1						Brown lean CLAY	
8								
9								
10	U2						As above	
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 180
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-216		DRILLED : 2015/04/20 - 2015/04/20		X : 722824.82 Y : 3031752.53 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Brown lean CLAY	
11								
12	U3						As above <CL/ML>	
13								
14								
15	U4						As above	
16								
17	U5						As above	
18								
19								
20	U6						As above	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 181
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

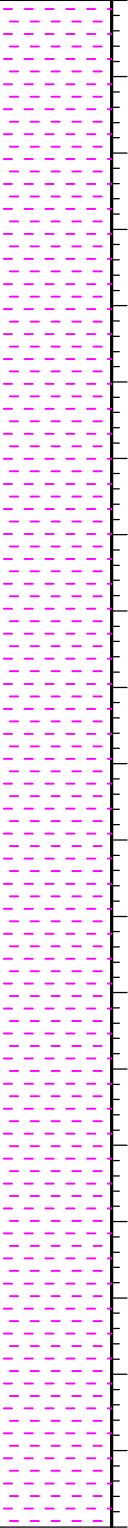
BOREHOLE No.: BH-216		DRILLED : 2015/04/20 - 2015/04/20		X : 722824.82 Y : 3031752.53 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20							Brown lean CLAY	
21								
22	U7						As above <CL/ML>	
23								
24								
25	U8						As above	
25							End of Borehole at : 25.00 m	
26								
27								
28								
29								
30								

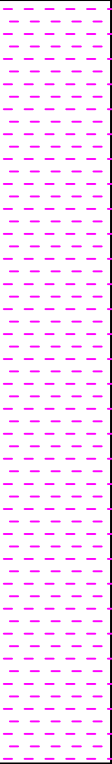
 D: Disturbed  U: Undisturbed	 CB: Core Barrel  DE: Denison	 LU: Lugeon  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 182

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-220		DRILLED : 2015/04/20 - 2015/04/20		X : 722857.49 Y : 3031735.14 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	D1	22	42	43			Light grey hard lean CLAY	
3								
4								
5	D2	28	24	27			Brown hard lean CLAY	
6								
7	U1						Brown lean CLAY	
8								
9	LE01							
10								
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 183
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

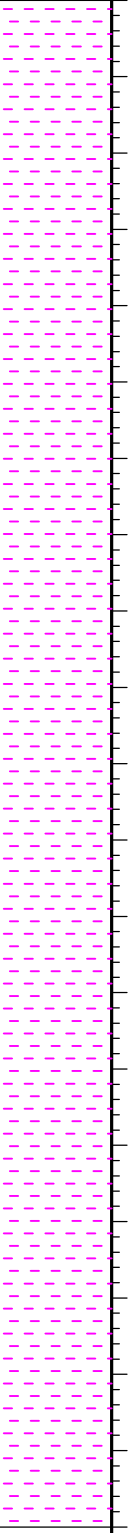
BOREHOLE No.: BH-220		DRILLED : 2015/04/20 - 2015/04/20		X : 722857.49 Y : 3031735.14 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Brown lean CLAY	
11								
12	U2						As above	
13								
14								
15	U3						Brown lean CLAY with gypsum <CL>	
16								
17	U4						Brown lean CLAY	
18								
19								
20	U5						As above	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 184
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

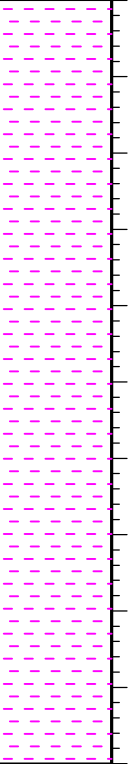
BOREHOLE No.: BH-220		DRILLED : 2015/04/20 - 2015/04/20		X : 722857.49 Y : 3031735.14 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20							Brown lean CLAY	
21								
22	 U6						As above	
23								
24								
25	 U7						As above	
25							End of Borehole at : 25.00 m	
26								
27								
28								
29								
30								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 185
Soil Engineering Services Consultant & Contractor			Proj No. : 1347

BOREHOLE No.: BH-222		DRILLED : 2015/04/11 - 2015/04/12		X : 722892.80 Y : 3031716.35 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	D1	15	14	15			Light brown very stiff lean CLAY, CL	
3								
4	D2	12	14	14			As above, CL	
5								
6	U1						As above	
7								
8	U2						As above	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 186
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-222		DRILLED : 2015/04/11 - 2015/04/12		X : 722892.80 Y : 3031716.35 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U3						Light brown lean CLAY	
11								
12	U4						As above	
13								
14	U5						As above	
15								
16	U6						Light brown lean CLAY	
17								
18	U7						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 187
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-222		DRILLED : 2015/04/11 - 2015/04/12		X : 722892.80 Y : 3031716.35 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U8						Light brown lean CLAY <CL/ML>	
21								
22	U9						As above	
23								
24	U10						As above <CL/ML>	
25							End of Borehole at : 25.00 m	
26								
27								
28								
29								
30								

 D: Disturbed  U: Undisturbed	 CB: Core Barrel  DE: Denison	 LU: Lugeon  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 188

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-234		DRILLED : 2015/04/18 - 2015/04/18		X : 723129.82 Y : 3031590.21 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2								
3	 D1	13	26	32			Light brown hard lean CLAY	
4								
5	 D2	9	15	13			Brown very stiff lean CLAY	
6								
7	 U1						Brown SILT <ML/CL>	
8								
9								
10	 U2						As above	

 D: Disturbed

 CB: Core Barrel

 LU: Lugeon

 U: Undisturbed

 DE: Denison

 LE: Lefranc

Remarks :
Sampling Borehole



Project : SOUTH ALUMINUM SMELTER PLANT

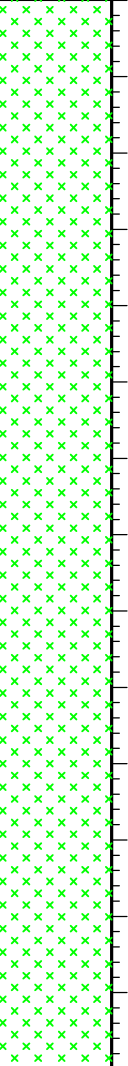
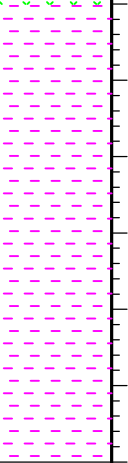
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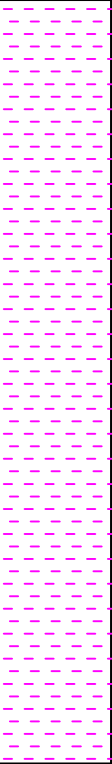
Sheet: 1 Of 3

Fig.: 189

Proj No. : 1347

Soil Engineering Services Consultant & Contractor

BOREHOLE No.: BH-234		DRILLED : 2015/04/18 - 2015/04/18		X : 723129.82 Y : 3031590.21 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Brown SILT	
11								
12	U3						As above	
13								
14								
15	U4						As above	
16								
17	U5						Light brown lean CLAY	
18								
19								
20	U6						As above	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 190
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

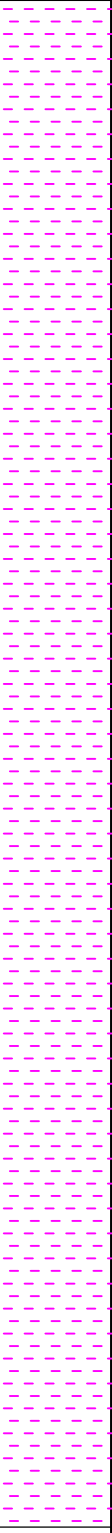
BOREHOLE No.: BH-234		DRILLED : 2015/04/18 - 2015/04/18		X : 723129.82 Y : 3031590.21 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20							Light brown lean CLAY	
21								
22	U7						As above <CL/ML>	
23								
24								
25	U8						Light brown lean CLAY with gypsum <CL/ML>	
							End of Borehole at : 25.00 m	
26								
27								
28								
29								
30								

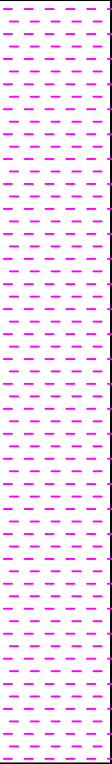
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 191

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-237		DRILLED : 2015/04/21 - 2015/04/22		X : 723173.02 Y : 3031567.18 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	 D1	20	26	42			Light grey hard lean CLAY	
3								
4								
5	 D2	18	25	32			Light brown hard lean CLAY	
6								
7	 U1						Brown lean CLAY	
8								
9								
10	 U2						As above	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 192
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-237		DRILLED : 2015/04/21 - 2015/04/22		X : 723173.02 Y : 3031567.18 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Brown lean CLAY	
11								
12	U3						As above	
13								
14								
15	U4						As above <CL/ML>	
16								
17	U5						As above	
18								
19								
20	U6						As above	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 193
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-237		DRILLED : 2015/04/21 - 2015/04/22		X : 723173.02 Y : 3031567.18 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20							Brown lean CLAY	
21								
22	 U7						As above	
23								
24								
25	 U8						As above	
25							End of Borehole at : 25.00 m	
26								
27								
28								
29								
30								

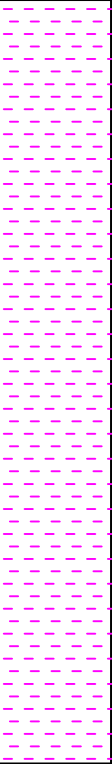
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 194

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-243		DRILLED : 2015/04/19 - 2015/04/19		X : 723215.19 Y : 3031538.94 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	D1	12	14	18			Light brown hard lean CLAY	
3								
4	D2	8	13	16			Light brown very stiff lean CLAY	
5								
6	U1						Light brown lean CLAY	
7								
8	U2						As above	
9								
10								
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 195
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-243		DRILLED : 2015/04/19 - 2015/04/19		X : 723215.19 Y : 3031538.94 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U3						Light brown lean CLAY	
11								
12	U4						As above	
13								
14	U5						As above	
15								
16	U6						As above	
17								
18	U7						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 196
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-243		DRILLED : 2015/04/19 - 2015/04/19		X : 723215.19 Y : 3031538.94 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U8						Light brown lean CLAY <CL/ML>	
21								
22	U9						Light brown lean CLAY with gypsum <CL/ML>	
23								
24	U10						Light brown lean CLAY <CL>	
25							End of Borehole at : 25.00 m	
26								
27								
28								
29								
30								

 D: Disturbed
 CB: Core Barrel
 LU: Lugeon

 U: Undisturbed
 DE: Denison
 LE: Lefranc

Remarks :



Project : SOUTH ALUMINUM SMELTER PLANT
Client : NFC

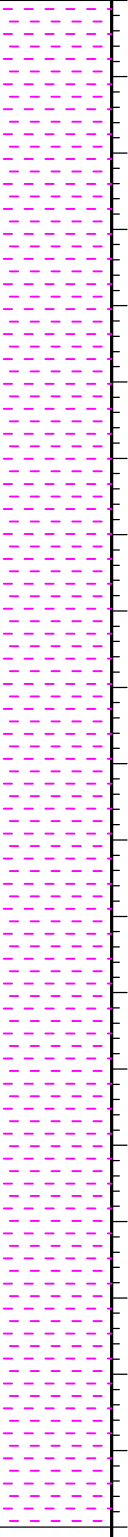
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Fig.: 197

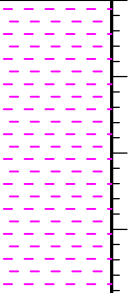
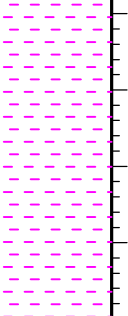
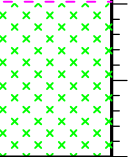
Soil Engineering Services Consultant & Contractor

Proj No. : 1347

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BOREHOLE No.: BH-249		DRILLED : 2015/04/19 - 2015/04/19		X : 723407.81 Y : 3031442.27 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	 D1	11	12	16			Light brown very stiff lean CLAY	
3								
4	 U1						Light brown lean CLAY <CL/ML>	
5								
6	 U2						As above	
7								
8	 U3						As above	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 198
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-249		DRILLED : 2015/04/19 - 2015/04/19		X : 723407.81 Y : 3031442.27 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U4						Light brown lean CLAY	
11								
12	U5						As above	
13								
14	U6						As above	
15								
16	U7						As above	
17								
18	U8						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 199
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

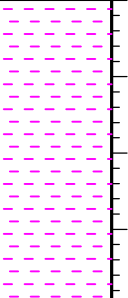
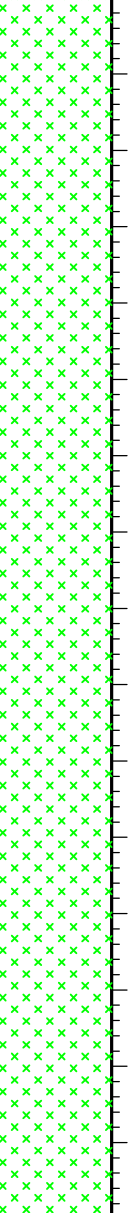
BOREHOLE No.: BH-249		DRILLED : 2015/04/19 - 2015/04/19		X : 723407.81 Y : 3031442.27 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U9						Light brown lean CLAY <CL/ML>	
21								
22	U10						Light brown lean CLAY	
23								
24	U11						Light brown SILT <ML/CL>	
25								
End of Borehole at : 25.00 m								
26								
27								
28								
29								
30								

 D: Disturbed  U: Undisturbed	 CB: Core Barrel  DE: Denison	 LU: Lugeon  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 200

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-251		DRILLED : 2015/04/18 - 2015/04/18		X : 723433.41 Y : 3031428.54 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	D1	10	12	17			Light brown very stiff lean CLAY	
3								
4	U1						As above <CL/ML>	
5								
6	U2						As above	
7								
8	U3						As above	
9								
10								
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 201
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-251		DRILLED : 2015/04/18 - 2015/04/18		X : 723433.41 Y : 3031428.54 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U4						Light brown lean CLAY	
11								
12	U5						Light brown SILT <ML/CL-ML/CL>	
13								
14	U6						As above	
15								
16	U7						As above	
17								
18	U8						As above	
19								
20								

 D: Disturbed
 CB: Core Barrel
 LU: Lugeon

 U: Undisturbed
 DE: Denison
 LE: Lefranc

Remarks :



Project : SOUTH ALUMINUM SMELTER PLANT

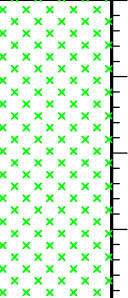
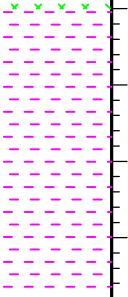
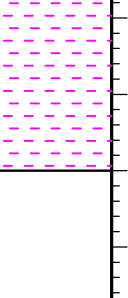
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Sheet: 2 Of 3

Fig.: 202

Soil Engineering Services Consultant & Contractor

Proj No. : 1347

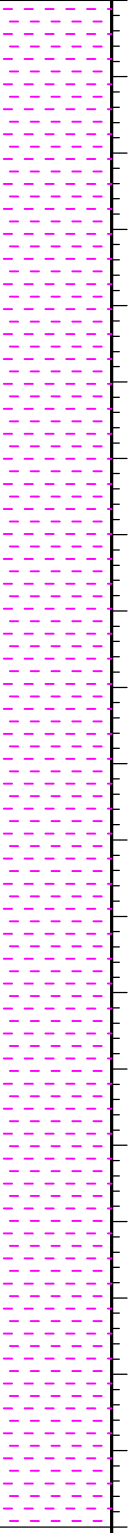
BOREHOLE No.: BH-251		DRILLED : 2015/04/18 - 2015/04/18		X : 723433.41 Y : 3031428.54 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U9						Light brown SILT	
21								
22	U10						Light brown lean CLAY	
23								
24	U11						As above	
25								
25							End of Borehole at : 25.00 m	
26								
27								
28								
29								
30								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 203

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-254		DRILLED : 2015/04/18 - 2015/04/18		X : 723493.31 Y : 3031397.24 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	 D1	17	18	22			Light brown hard lean CLAY	
3								
4	 U1						Light brown lean CLAY <CL/ML>	
5								
6	 U2						As above	
7								
8	 U3						As above	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 204
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-254		DRILLED : 2015/04/18 - 2015/04/18		X : 723493.31 Y : 3031397.24 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U4						Light brown lean CLAY	
11								
12	U5						As above	
13								
14	U6						As above	
15								
16	U7						As above	
17								
18	U8						As above	
19								
20								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 2 Of 3
	Client : NFC		Fig.: 205

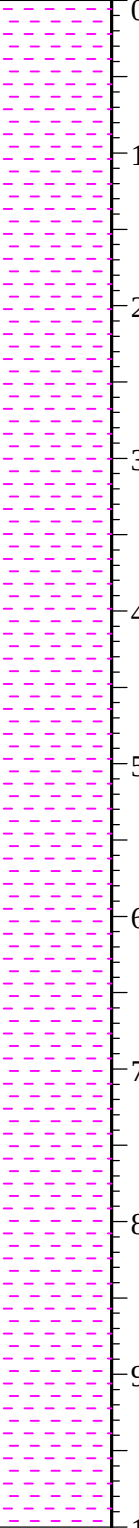
Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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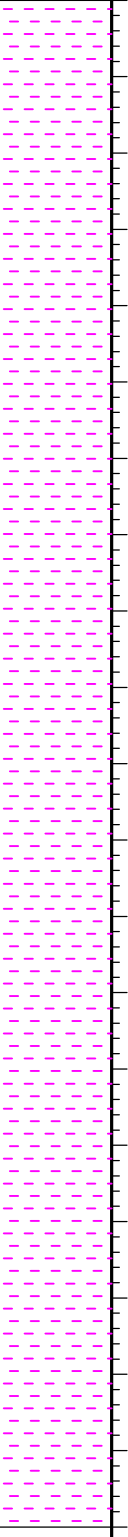
BOREHOLE No.: BH-254		DRILLED : 2015/04/18 - 2015/04/18		X : 723493.31 Y : 3031397.24 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U9						Light brown lean CLAY <CL/ML>	
21								
22	U10						As above	
23								
24	U11						As above <CL/ML>	
25								
25							End of Borehole at : 25.00 m	
26								
27								
28								
29								
30								

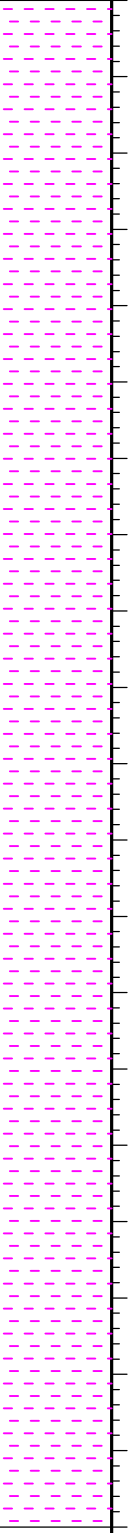
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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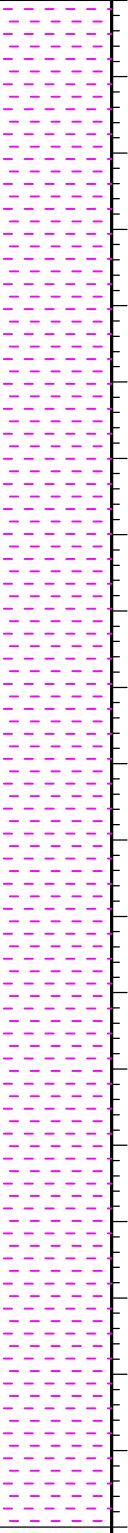
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	Client : NFC		Fig.: 206

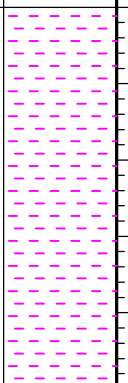
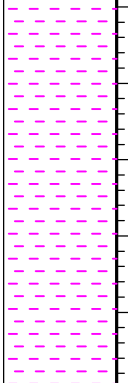
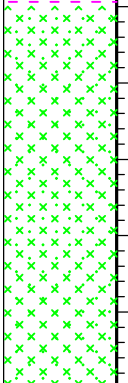
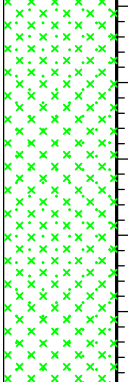
Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-256		DRILLED : 2015.04.29 - 2015/05/02		X : 723403.58 Y : 3031434.32 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : GX-1TD			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
0							Brown lean CLAY		
1									
2									
3									
4									
5									
6									
7									
8	U1						Brown lean CLAY <CL/ML>		
9									
10									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks : Sampling Borehole	
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 6	
		Client : NFC						Fig.: 207	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-256		DRILLED : 2015.04.29 - 2015/05/02		X : 723403.58 Y : 3031434.32 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : GX-1TD		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U2						Brown lean CLAY	
11								
12								
13	U3						Brown lean CLAY <CL/ML>	
14								
15	U4						As above	
16								
17								
18	U5						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 6
		Client : NFC						Fig.: 208
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-256		DRILLED : 2015.04.29 - 2015/05/02		X : 723403.58 Y : 3031434.32 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : GX-1TD		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U6						Brown lean CLAY	
21								
22								
23	U7						As above	
24								
25								
26								
27								
28	U8						As above	
29								
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 6
		Client : NFC						Fig.: 209
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-256		DRILLED : 2015.04.29 - 2015/05/02		X : 723403.58 Y : 3031434.32 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : GX-1TD		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30	U9						Brown lean CLAY with roots of plants <CL/ML>	
31								
32								
33	U10						Brown lean CLAY	
34								
35	U11						As above	
36								
37								
38	U12						As above	
39								
40								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 6
		Client : NFC						Fig.: 210
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

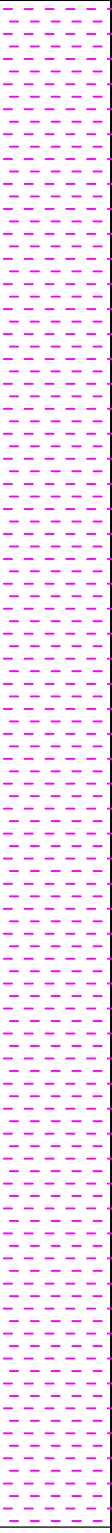
BOREHOLE No.: BH-256		DRILLED : 2015.04.29 - 2015/05/02		X : 723403.58 Y : 3031434.32 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : GX-1TD		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
40	U13						Brown lean CLAY	
41								
42								
43	U14						As above	
44								
45	U15						Brown SILT with sand <ML>	
46								
47								
48	U16						As above	
49								
50								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks :
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 5 Of 6
		Client : NFC						Fig.: 211
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-256		DRILLED : 2015.04.29 - 2015/05/02		X : 723403.58 Y : 3031434.32 LEVEL : 0.00		METHOD : Rotary drilling DRILL MACHINE : GX-1TD		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
50	 U17						Brown SILT with sand	
								End of Borehole at : 50.37 m
51								
52								
53								
54								
55								
56								
57								
58								
59								
60								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 6 Of 6
	Client : NFC		Fig.: 212
Soil Engineering Services Consultant & Contractor			Proj No. : 1347

BOREHOLE No.: BH-262		DRILLED : 2015/04/21 - 2015/04/21		X : 722983.73 Y : 3031818.12 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	D1	13	14	15			Light brown very stiff lean CLAY, CL	
3								
4	D2	11	12	14			As above	
5								
6	U1						Light brown SILT <ML/CL>	
7								
8	U2						Light brown lean CLAY <CL/ML>	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 213
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-262		DRILLED : 2015/04/21 - 2015/04/21		X : 722983.73 Y : 3031818.12 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U3						Light brown lean CLAY	
11								
12	U4						As above	
13								
14	U5						As above	
15								
16	U6						As above	
17								
18	U7						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 214
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

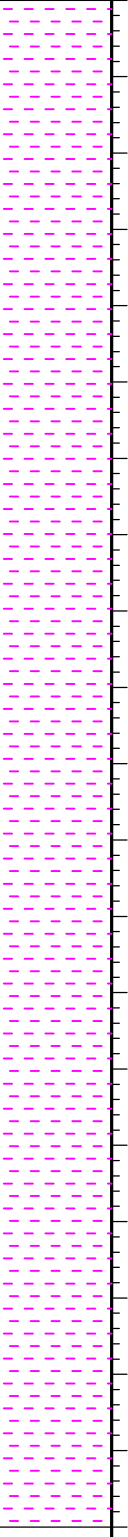
BOREHOLE No.: BH-262		DRILLED : 2015/04/21 - 2015/04/21		X : 722983.73 Y : 3031818.12 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U8						Light brown lean CLAY	
21								
22	U9						As above	
23								
24	U10						As above	
25							End of Borehole at : 25.00 m	
26								
27								
28								
29								
30								

D: Disturbed U: Undisturbed	CB: Core Barrel DE: Denison	LU: Lugeon LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 215

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-267		DRILLED : 2015/04/20 - 2015/04/20		X : 723116.14 Y : 3031747.64 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	D1	15	15	22			Light brown hard lean CLAY	
3								
4	D2	10	13	11			Light brown very stiff lean CLAY	
5								
6	U1						Light brown lean CLAY	
7								
8	U2						As above <CL/ML>	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 216
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-267		DRILLED : 2015/04/20 - 2015/04/20		X : 723116.14 Y : 3031747.64 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U3						Light brown lean CLAY	
11								
12	U4						Light brown lean CLAY with gypsum <CL/ML>	
13								
14	U5						Light brown lean CLAY	
15								
16	U6						As above	
17								
18	U7						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 217
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-267		DRILLED : 2015/04/20 - 2015/04/20		X : 723116.14 Y : 3031747.64 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U8						Light brown lean CLAY	
21								
22	U9						As above	
23								
24	U10						As above	
25								
25							End of Borehole at : 25.00 m	
26								
27								
28								
29								
30								

D: Disturbed

CB: Core Barrel

LU: Lugeon

U: Undisturbed

DE: Denison

LE: Lefranc

Remarks :

Project : SOUTH ALUMINUM SMELTER PLANT
Client : NFC

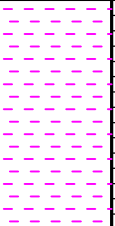
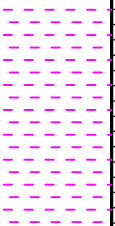
Sheet: 3 Of 3
Fig.: 218

Soil Engineering Services Consultant & Contractor

Proj No. : 1347

BOREHOLE No.: BH-269		DRILLED : 2015/04/22 - 2015/04/22		X : 722914.08 Y : 3031814.96 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Grey lean CLAY	
1								
2	D1	11	13	17			Grey very stiff lean CLAY	
3								
4	D2	9	14	17			Light brown hard lean CLAY	
5								
6	D3	5	7	11			Light brown very stiff lean CLAY	
7	U1						Brown lean CLAY	
8								
9	U2						As above	
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 219
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-269		DRILLED : 2015/04/22 - 2015/04/22		X : 722914.08 Y : 3031814.96 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10								
11	U3						Brown lean CLAY	
12								
13	U4						Light brown lean CLAY	
14								
15	U5						As above	
16								
17	U6						As above	
18								
19	U7						As above	
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 220
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

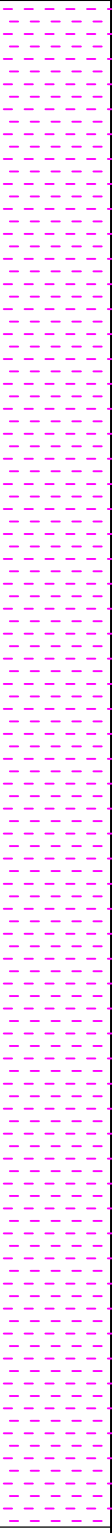
BOREHOLE No.: BH-269		DRILLED : 2015/04/22 - 2015/04/22		X : 722914.08 Y : 3031814.96 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20							Light brown lean CLAY	
21	U8							
22								
23	U9						Brown lean CLAY	
24								
25								
End of Borehole at : 25.00 m								
26								
27								
28								
29								
30								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 221

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-273		DRILLED : 2015/03/30 - 2015/03/30		X : 723020.01 Y : 3031758.57 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2								
3	D1	21	36	37			Light brown hard lean CLAY, CL	
4								
5	U1						Light brown lean CLAY, CL	
6								
7	U2						As above	
8								
9								
10	U3						As above <CL/ML>	
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 222
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-273		DRILLED : 2015/03/30 - 2015/03/30		X : 723020.01 Y : 3031758.57 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Light brown lean CLAY	
11								
12	U4						As above	
13								
14	U5						As above, CL	
15								
16								
17	U6						As above	
18								
19								
20	U7						As above	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 223
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

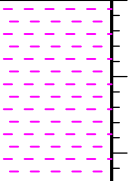
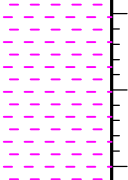
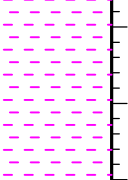
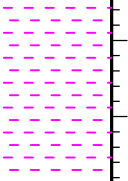
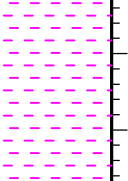
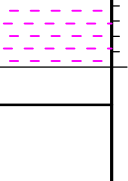
BOREHOLE No.: BH-273		DRILLED : 2015/03/30 - 2015/03/30		X : 723020.01 Y : 3031758.57 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20							Light brown lean CLAY	
21								
22	U8						Light brown lean CLAY <CL>	
23								
24								
25	U9						As above <CL/ML>	
25							End of Borehole at : 25.00 m	
26								
27								
28								
29								
30								

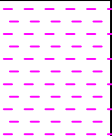
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT	Sheet: 3 Of 3
	Client : NFC	Fig.: 224

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-277		DRILLED : 2015/04/11 - 2015/04/12		X : 724078.65 Y : 3031005.84 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Brown lean CLAY	
1								
2	 D1	11	17	18			Brown hard lean CLAY, CL	
3								
4	 D2	11	13	14			Light brown very stiff lean CLAY	
5								
6								
7	 U1 LE01						Light brown lean CLAY	
8								
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 225
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-277		DRILLED : 2015/04/11 - 2015/04/12		X : 724078.65 Y : 3031005.84 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U2						Light brown lean CLAY	
11							Light brown lean CLAY <CL/ML>	
12	U3						Light brown lean CLAY	
13								
14	U4						Light brown lean CLAY <CL>	
15								
16	U5						As above	
17								
18	U6						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 226
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-277		DRILLED : 2015/04/11 - 2015/04/12		X : 724078.65 Y : 3031005.84 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U7						Light brown lean CLAY	
21		End of Borehole at : 20.95 m						
22								
23								
24								
25								
26								
27								
28								
29								
30								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 227

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-279		DRILLED : 2015/04/16 - 2015/04/17		X : 724043.43 Y : 3031006.54 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Grey lean CLAY	
1								
2	D1	10	13	11			Grey very stiff lean CLAY	
3								
4	U1						Brown lean CLAY <CL/ML>	
5								
6	U2						As above	
7								
8	U3						As above	
9								
10	U4						As above	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 4
		Client : NFC						Fig.: 228
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-279		DRILLED : 2015/04/16 - 2015/04/17		X : 724043.43 Y : 3031006.54 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Brown lean CLAY	
11								
12	U5						As above	
13								
14	U6						As above	
15								
16	U7						As above	
17								
18	U8						As above	
19								
20	U9						As above	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 4
		Client : NFC						Fig.: 229
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-279		DRILLED : 2015/04/16 - 2015/04/17		X : 724043.43 Y : 3031006.54 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U10						Brown lean CLAY	
21								
22	U11						As above	
23								
24	U12						As above <CL/ML>	
25								
26	U13						As above <CL/ML>	
27								
28								
29								
30								

 D: Disturbed

 CB: Core Barrel

 LU: Lugeon

 U: Undisturbed

 DE: Denison

 LE: Lefranc

Remarks :



Project : SOUTH ALUMINUM SMELTER PLANT

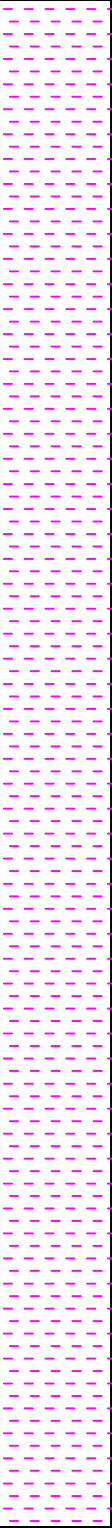
Client : NFC

Sheet: 3 Of 4

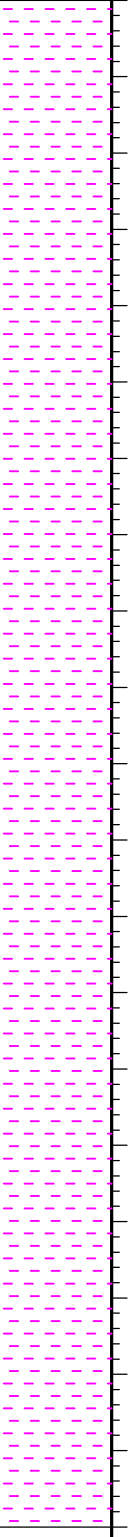
Fig.: 230

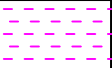
Soil Engineering Services Consultant & Contractor

Proj No. : 1347

BOREHOLE No.: BH-279		DRILLED : 2015/04/16 - 2015/04/17		X : 724043.43 Y : 3031006.54 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30							Brown lean CLAY	
31								
32	U14						As above	
33								
34	U15						As above	
35								
36								
37	U16						As above <CL/ML>	
38								
39								
40	U17						As above	
End of Borehole at : 40.00 m								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :	
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 4
		Client : NFC						Fig.: 231
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-282		DRILLED : 2015/04/08 - 2015/04/08		X : 723977.22 Y : 3031041.78 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	D1	13	18	23			Light brown hard lean CLAY, CL	
3								
4	U1						Light brown lean CLAY <CL>	
5								
6	U2						As above	
7								
8	U3						As above, CL	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 232
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

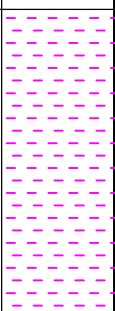
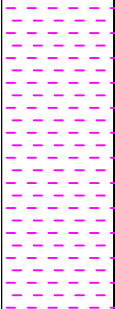
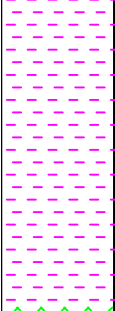
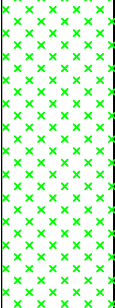
BOREHOLE No.: BH-282		DRILLED : 2015/04/08 - 2015/04/08		X : 723977.22 Y : 3031041.78 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U4						Light brown lean CLAY	
11								
12	U5						Light brown lean CLAY, CL	
13								
14	U6						As above	
15								
16	U7						As above, CL	
17								
18	U8						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 233
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

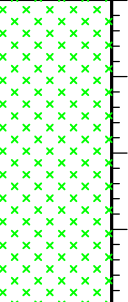
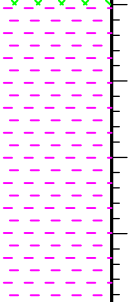
BOREHOLE No.: BH-282		DRILLED : 2015/04/08 - 2015/04/08		X : 723977.22 Y : 3031041.78 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U9						Light brown lean CLAY	
		End of Borehole at : 20.50 m						
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

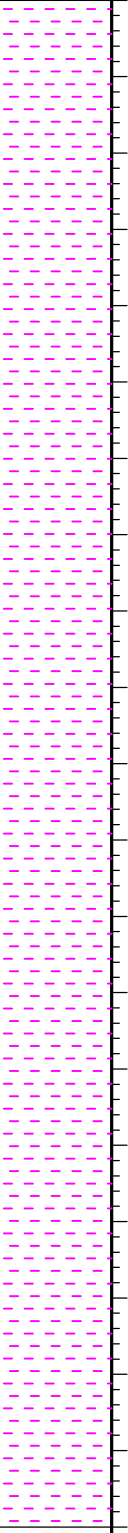
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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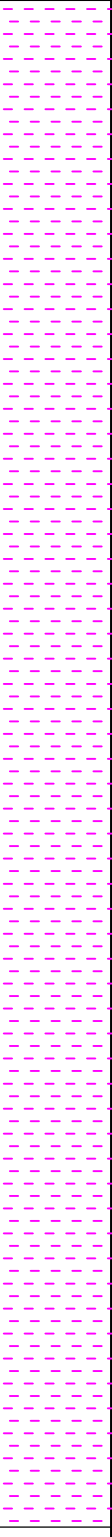
	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 234

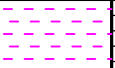
Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-284		DRILLED : 2015/04/18 - 2015/04/19		X : 724052.42 Y : 3030970.30 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
0							Light brown lean CLAY		0
1									1
2	 D1	15	16	19			Light brown hard lean CLAY		2
3									3
4	 D2	6	8	10			Light brown very stiff lean CLAY		4
5									5
6	 U1						Light brown SILT with gypsum <ML/CL>		6
7									7
8	LE01								8
9									9
10									10
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole									
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 5	
		Client : NFC						Fig.: 235	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-284		DRILLED : 2015/04/18 - 2015/04/19		X : 724052.42 Y : 3030970.30 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U2						Light brown SILT	
11								
12	U3						Light brown lean CLAY <CL/ML>	
13								
14	U4						As above	
15								
16	U5						As above	
17								
18	U6						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 5
		Client : NFC						Fig.: 236
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-284		DRILLED : 2015/04/18 - 2015/04/19		X : 724052.42 Y : 3030970.30 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U7						Light brown lean CLAY	
21								
22	U8						Light brown lean CLAY	
23								
24	U9						As above	
25								
26	U10						As above	
27								
28	U11						Light brown lean CLAY	
29								
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 5
		Client : NFC						Fig.: 237
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-284		DRILLED : 2015/04/18 - 2015/04/19		X : 724052.42 Y : 3030970.30 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30	U12						Light brown lean CLAY	
31								
32	U13						As above	
33								
34	U14						As above	
35								
36	U15						As above	
37								
38	U16						As above	
39								
40								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 5
		Client : NFC						Fig.: 238
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

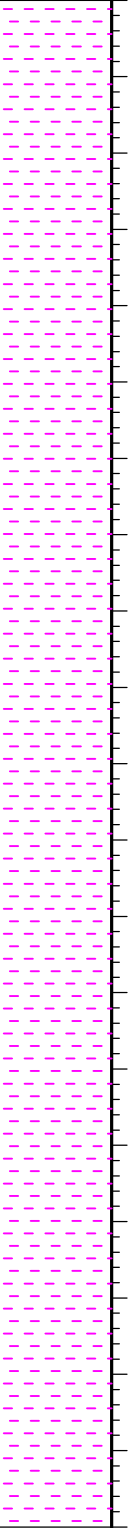
BOREHOLE No.: BH-284		DRILLED : 2015/04/18 - 2015/04/19		X : 724052.42 Y : 3030970.30 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
40	 U17						Light brown lean CLAY	
							End of Borehole at : 40.50 m	
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								

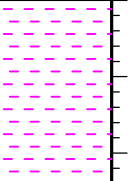
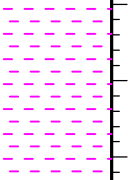
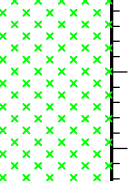
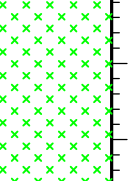
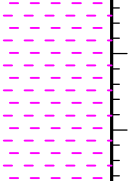
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 5 Of 5
	Client : NFC		Fig.: 239

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-286		DRILLED : 2015/04/12 - 2015/04/14		X : 724008.28 Y : 3030993.72 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Grey lean CLAY	
1								
2	D1	8	9	14			Brown very stiff lean CLAY	
3								
4	D2	8	8	11			As above	
5								
6	U1						Brown lean CLAY	
7								
8	U2						As above	
9	LE01							
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 5
		Client : NFC						Fig.: 240
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-286		DRILLED : 2015/04/12 - 2015/04/14		X : 724008.28 Y : 3030993.72 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Brown lean CLAY	
11								
12	U3						As above	
13								
14	U4						Brown lean CLAY with gypsum <CL/ML>	
15								
16	U5						Brown lean CLAY	
17								
18	U6						As above	
19								
20	U7						As above	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 5
		Client : NFC						Fig.: 241
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-286		DRILLED : 2015/04/12 - 2015/04/14		X : 724008.28 Y : 3030993.72 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20							Brown lean CLAY	
21								
22	U8						As above	
23								
24	U9						Brown elastic SILT and gypsum <MH/ML/CH/CL>	
25								
26	U10						Brown elastic SILT	
27								
28	U11						Brown lean CLAY <CL/ML>	
29								
30	U12						As above	

 D: Disturbed
  CB: Core Barrel
  LU: Lugeon

 U: Undisturbed
  DE: Denison
  LE: Lefranc

Remarks :



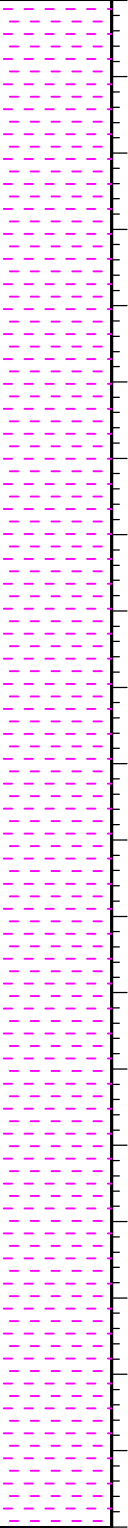
Project : SOUTH ALUMINUM SMELTER PLANT
 Client : NFC

Sheet: 3 Of 5
 Fig.: 242

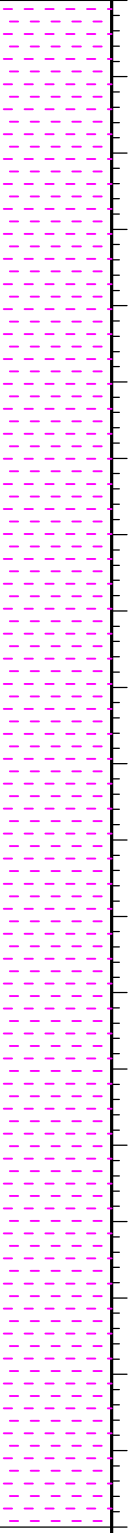
Soil Engineering Services Consultant & Contractor

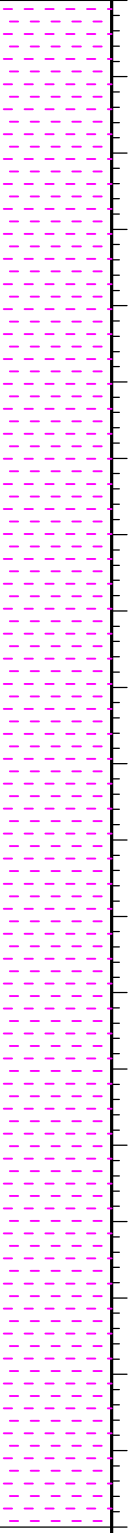
Proj No. : 1347

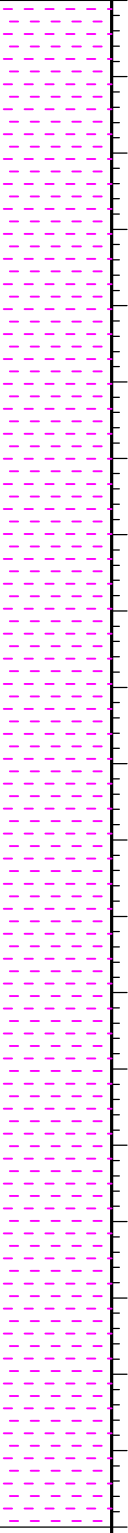
BOREHOLE No.: BH-286		DRILLED : 2015/04/12 - 2015/04/14		X : 724008.28 Y : 3030993.72 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30							Brown lean CLAY	
31								
32	U13						As above	
33								
34	U14						As above	
35								
36	U15						Brown lean CLAY <CL/ML>	
37								
38	U16						As above	
39								
40	U17						As above	
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 5
		Client : NFC						Fig.: 243
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

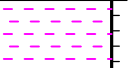
BOREHOLE No.: BH-286		DRILLED : 2015/04/12 - 2015/04/14		X : 724008.28 Y : 3030993.72 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
40							Brown lean CLAY	
41								
42	U18						As above	
43								
44	U19						As above <CL/ML>	
45								
46	U20						As above	
47								
48	U21						As above	
49								
50	U22						As above	
End of Borehole at : 50.00 m								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :	
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 5 Of 5
		Client : NFC						Fig.: 244
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-288		DRILLED : 2015/04/09 - 2015/04/09		X : 723964.15 Y : 3031017.22 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	 D1	16	21	25			Light brown hard lean CLAY, CL	
3								
4	 U1						Light brown lean CLAY, CL	
5								
6	 U2						As above	
7	LE01							
8	 U3						As above	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 5
		Client : NFC						Fig.: 245
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-288		DRILLED : 2015/04/09 - 2015/04/09		X : 723964.15 Y : 3031017.22 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U4						Light brown lean CLAY	
11								
12	U5						As above	
13								
14	U6						Light brown lean CLAY <CL>	
15								
16	U7						As above	
17								
18	U8						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 5
		Client : NFC						Fig.: 246
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-288		DRILLED : 2015/04/09 - 2015/04/09		X : 723964.15 Y : 3031017.22 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U9						Light brown lean CLAY	
21								
22	U10						Light brown lean CLAY, CL	
23								
24	U11						As above	
25								
26	U12						As above, CL	
27								
28	U13						As above	
29								
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 5
		Client : NFC						Fig.: 247
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

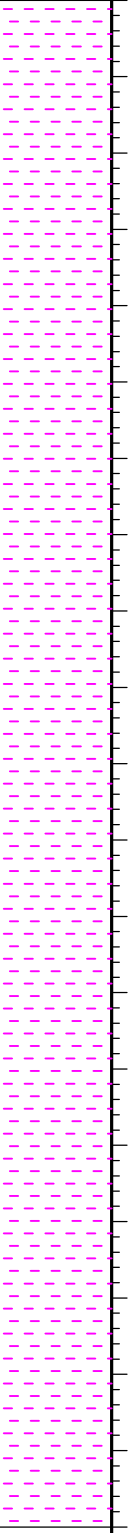
BOREHOLE No.: BH-288		DRILLED : 2015/04/09 - 2015/04/09		X : 723964.15 Y : 3031017.22 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30	U14						Light brown lean CLAY <CL>	
31								
32	U15						Light brown lean CLAY	
33								
34	U16						As above	
35								
36	U17						As above, CL	
37								
38	U18						As above	
39								
40								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 5
		Client : NFC						Fig.: 248
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

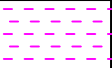
BOREHOLE No.: BH-288		DRILLED : 2015/04/09 - 2015/04/09		X : 723964.15 Y : 3031017.22 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
40	 U19						Light brown lean CLAY	
							End of Borehole at : 40.50 m	
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 5 Of 5
	Client : NFC		Fig.: 249
Soil Engineering Services Consultant & Contractor			Proj No. : 1347

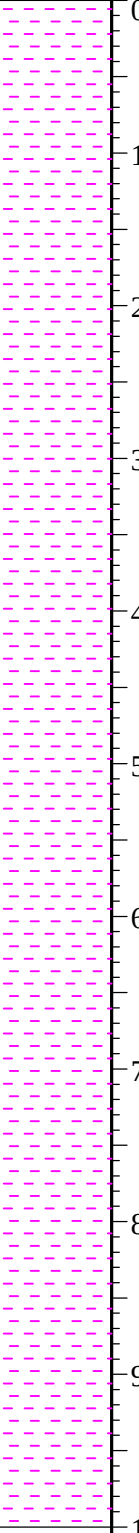
BOREHOLE No.: BH-298		DRILLED : 2015/04/07 - 2015/04/08		X : 723926.90 Y : 3031093.60 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	D1	12	13	18			Light brown hard lean CLAY, CL	
3								
4	D2	7	10	18			Light brown very stiff lean CLAY, CL	
5	LE01							
6								
7								
8	U1						Light brown lean CLAY, CL	
9								
10								
D: Disturbed CB: Core Barrel LU: Lugeon U: Undisturbed DE: Denison LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 250
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

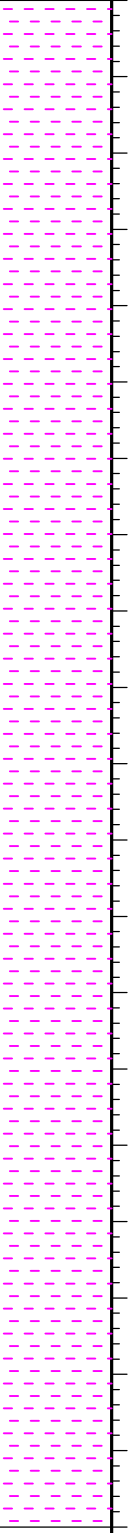
BOREHOLE No.: BH-298		DRILLED : 2015/04/07 - 2015/04/08		X : 723926.90 Y : 3031093.60 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U2						Light brown lean CLAY	
11								
12	U3						As above, CL	
13								
14	U4						As above, CL	
15								
16	U5						As above, CL	
17								
18	U6						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 251
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

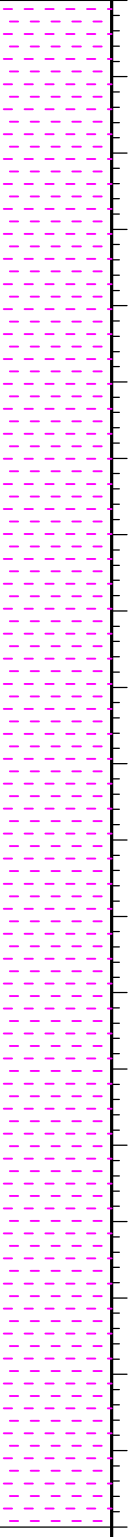
BOREHOLE No.: BH-298		DRILLED : 2015/04/07 - 2015/04/08		X : 723926.90 Y : 3031093.60 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U7						Light brown lean CLAY, CL	
		End of Borehole at : 20.50 m						
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

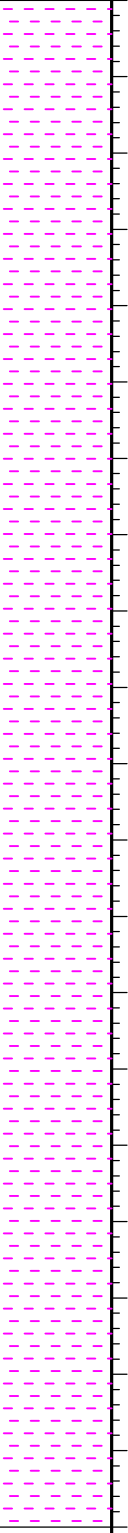
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
---	-----------

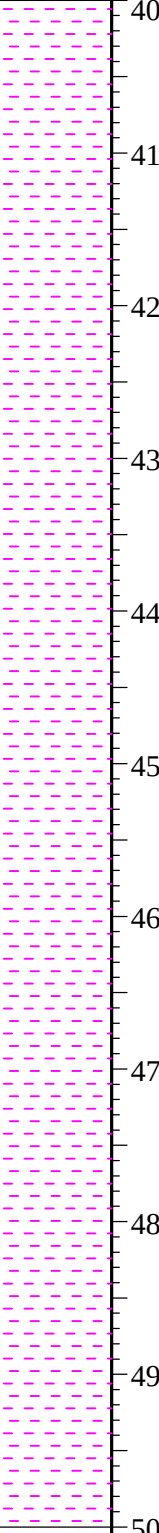
	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 252
Soil Engineering Services Consultant & Contractor			Proj No. : 1347

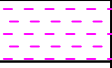
BOREHOLE No.: BH-317		DRILLED : 2015/05/01 - 2015/05/02		X : 724081.35 Y : 3030918.17 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : XY-2B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
0							Brown lean CLAY		
1									
2									
3									
4									
5									
6									
7									
8	U1						Brown lean CLAY <CL/ML>		
9									
10									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks : Sampling Borehole	
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 6	
		Client : NFC						Fig.: 253	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

BOREHOLE No.: BH-317		DRILLED : 2015/05/01 - 2015/05/02		X : 724081.35 Y : 3030918.17 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : XY-2B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U2						Brown lean CLAY	
11								
12								
13	U3						As above <CL/ML>	
14								
15	U4						As above	
16								
17								
18	U5						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 6
		Client : NFC						Fig.: 254
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-317		DRILLED : 2015/05/01 - 2015/05/02		X : 724081.35 Y : 3030918.17 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : XY-2B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U6						Brown lean CLAY with gypsum <CL>	
21								
22								
23	U7						Brown lean CLAY	
24								
25	U8						As above <CL/ML>	
26								
27								
28	U9						As above	
29								
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 6
		Client : NFC						Fig.: 255
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

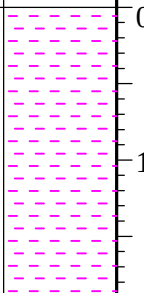
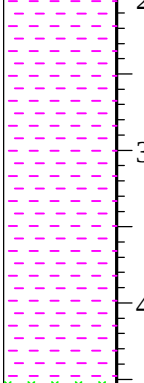
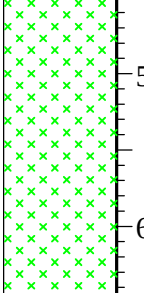
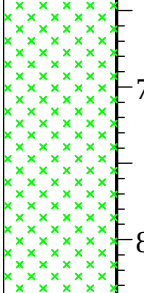
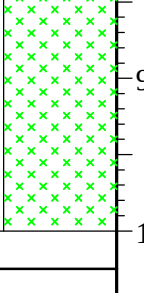
BOREHOLE No.: BH-317		DRILLED : 2015/05/01 - 2015/05/02		X : 724081.35 Y : 3030918.17 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : XY-2B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30	U10						Brown lean CLAY	
31								
32								
33	U11						As above <CL/ML>	
34								
35	U12						As above	
36								
37								
38	U13						As above	
39								
40								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 6
		Client : NFC						Fig.: 256
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

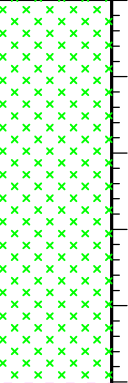
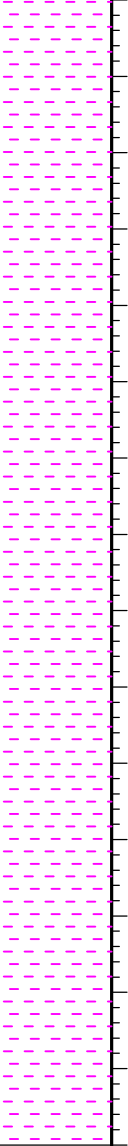
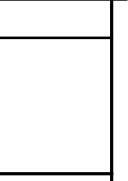
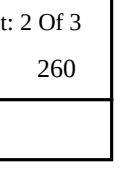
BOREHOLE No.: BH-317		DRILLED : 2015/05/01 - 2015/05/02		X : 724081.35 Y : 3030918.17 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : XY-2B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
40	U14						Brown lean CLAY	
41								
42								
43	U15						As above	
44								
45	U16						As above	
46								
47								
48	U17						As above <CL/ML>	
49								
50								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks :
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 5 Of 6
		Client : NFC						Fig.: 257
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

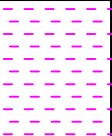
BOREHOLE No.: BH-317		DRILLED : 2015/05/01 - 2015/05/02		X : 724081.35 Y : 3030918.17 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : XY-2B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
50	 U18						Brown lean CLAY	
		End of Borehole at : 50.40 m						
51								
52								
53								
54								
55								
56								
57								
58								
59								
60								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 6 Of 6
	Client : NFC		Fig.: 258
Soil Engineering Services Consultant & Contractor			Proj No. : 1347

BOREHOLE No.: BH-320		DRILLED : 2015/04/11 - 2015/04/11		X : 724147.56 Y : 3030882.93 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	 D1	14	12	18			Brown very stiff lean CLAY, CL	
3								
4								
5	 U1						Light brown SILT <ML/CL>	
6								
7	 U2 LE01						As above	
8								
9	 U3						As above	
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 259
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

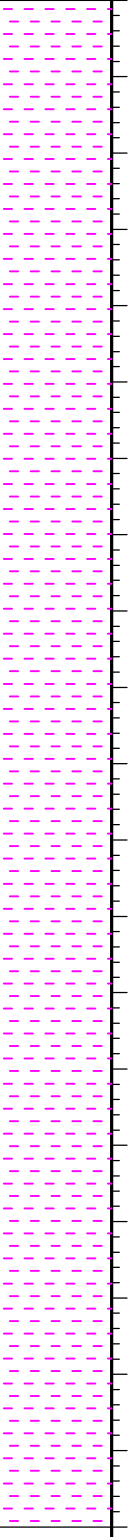
BOREHOLE No.: BH-320		DRILLED : 2015/04/11 - 2015/04/11		X : 724147.56 Y : 3030882.93 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U4						Light brown SILT	
11								
12	U5						Light brown lean CLAY	
13								
14	U6						As above	
15								
16	U7						As above	
17								
18	U8						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 260
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

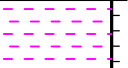
BOREHOLE No.: BH-320		DRILLED : 2015/04/11 - 2015/04/11		X : 724147.56 Y : 3030882.93 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U9						Light brown lean CLAY	
21		End of Borehole at : 20.95 m						
22								
23								
24								
25								
26								
27								
28								
29								
30								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 261
Soil Engineering Services Consultant & Contractor			Proj No. : 1347

BOREHOLE No.: BH-322		DRILLED : 2015/04/10 - 2015/04/11		X : 723899.93 Y : 3030956.00 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	 D1	10	13	17			Light brown very stiff lean CLAY, CL	
3								
4	 U1						As above, CL	
5								
6	 U2						Light brown lean CLAY <CL>	
7	LE01							
8	 U3						As above	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks : Sampling Borehole								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 262
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

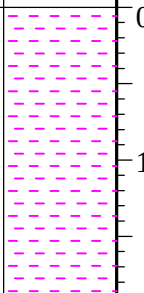
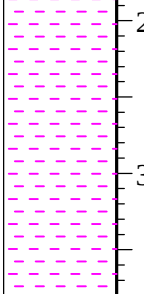
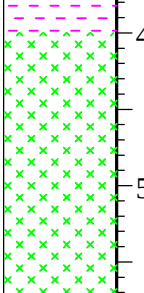
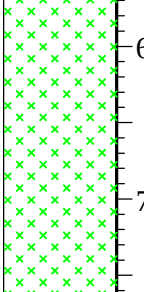
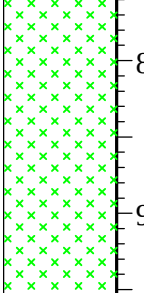
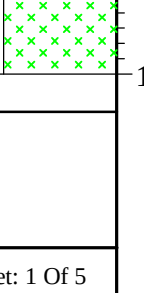
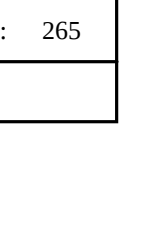
BOREHOLE No.: BH-322		DRILLED : 2015/04/10 - 2015/04/11		X : 723899.93 Y : 3030956.00 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B			
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend	
		15Cm	15Cm	15Cm	Und	Rem			
10	U4						Light brown lean CLAY <CL>		
11									
12	U5						As above		
13									
14	U6						Brown lean CLAY, CL		
15									
16	U7						As above, CL		
17									
18	U8						As above		
19									
20									
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks :	
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3	
		Client : NFC						Fig.: 263	
Soil Engineering Services Consultant & Contractor							Proj No. : 1347		

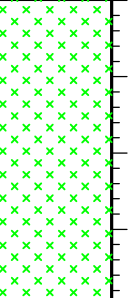
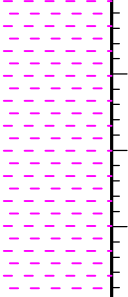
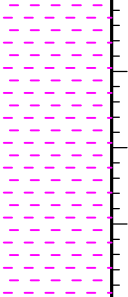
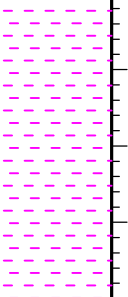
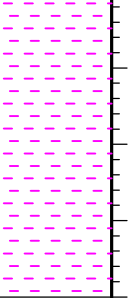
BOREHOLE No.: BH-322		DRILLED : 2015/04/10 - 2015/04/11		X : 723899.93 Y : 3030956.00 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	 U9						Brown lean CLAY, CL-ML	
		End of Borehole at : 20.50 m						
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

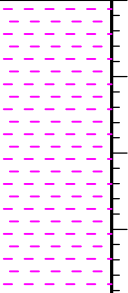
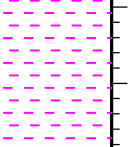
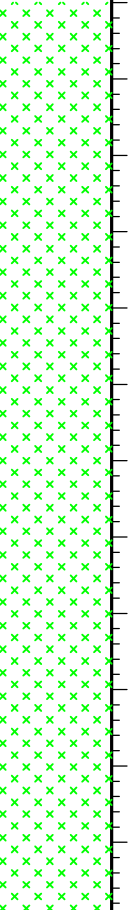
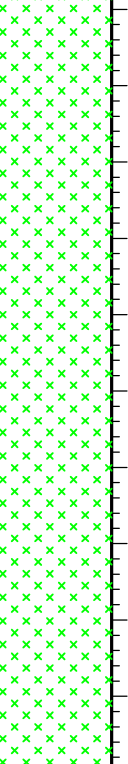
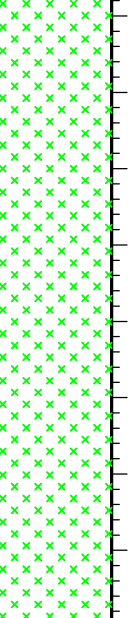
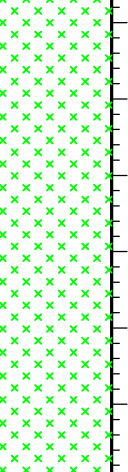
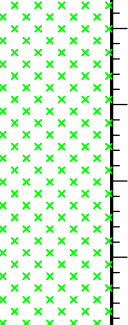
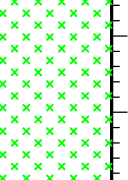
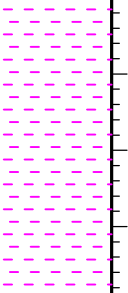
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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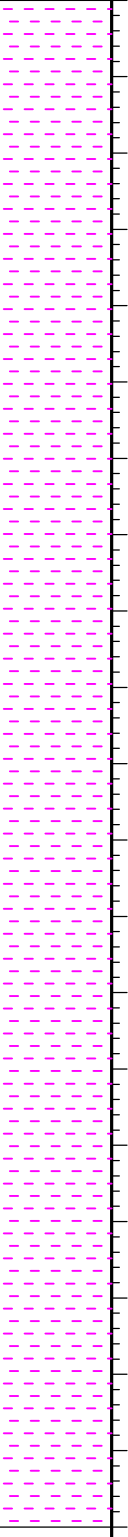
	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 264

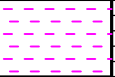
Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-329		DRILLED : 2015/04/12 - 2015/04/13		X : 724060.50 Y : 3030879.00 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	 D1	6	9	12			Light brown very stiff lean CLAY	
3								
4	 U1						Light brown SILT <ML>	
5								
6	 U2 LE01						As above	
7								
8	 U3						As above	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon Remarks : Sampling Borehole  U: Undisturbed  DE: Denison  LE: Lefranc								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 5
		Client : NFC						Fig.: 265
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-329		DRILLED : 2015/04/12 - 2015/04/13		X : 724060.50 Y : 3030879.00 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U4						Light brown SILT	
11								
12	U5						Light brown lean CLAY	
13								
14	U6						Light brown lean CLAY <CL/ML>	
15								
16	U7						As above	
17								
18	U8						As above	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 5
		Client : NFC						Fig.: 266
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-329		DRILLED : 2015/04/12 - 2015/04/13		X : 724060.50 Y : 3030879.00 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U9						Light brown lean CLAY	
21								
22	U10						Light brown SILT <ML/CL>	
23								
24	U11						As above	
25								
26	U12						As above	
27								
28	U13						Light brown lean CLAY <CL/ML>	
29								
30								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc								Remarks :
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 3 Of 5
		Client : NFC						Fig.: 267
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-329		DRILLED : 2015/04/12 - 2015/04/13		X : 724060.50 Y : 3030879.00 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30	U14						Light brown lean CLAY	
31								
32	U15						Light brown lean CLAY with gypsum <CL/ML>	
33								
34	U16						Light brown lean CLAY	
35								
36	U17						As above	
37								
38	U18						As above	
39								
40								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 5
		Client : NFC						Fig.: 268
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

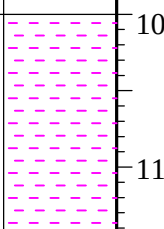
BOREHOLE No.: BH-329		DRILLED : 2015/04/12 - 2015/04/13		X : 724060.50 Y : 3030879.00 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
40	 U19						Light brown lean CLAY	
							End of Borehole at : 40.50 m	
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 5 Of 5
	Client : NFC		Fig.: 269

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-337		DRILLED : 2015/04/08 - 2015/04/09		X : 723778.40 Y : 3031293.58 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	 D1	8	10	11			Light brown very stiff lean CLAY, CL	
3								
4	 U1						Light brown lean CLAY <CL>	
5								
6	 U2						As above, CL	
7								
8	 U3						As above	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon Remarks : Sampling Borehole  U: Undisturbed  DE: Denison  LE: Lefranc								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 6
		Client : NFC						Fig.: 270
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-337		DRILLED : 2015/04/08 - 2015/04/09		X : 723778.40 Y : 3031293.58 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U4						Light brown lean CLAY, CL	
11								
12	U5						As above	
13								
14	U6						As above	
15								
16	U7						Light brown lean CLAY <CL/ML>	
17								
18	U8						As above	
19								
20								

 D: Disturbed

 CB: Core Barrel

 LU: Lugeon

 U: Undisturbed

 DE: Denison

 LE: Lefranc

Remarks :



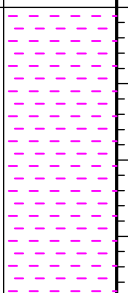
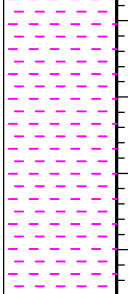
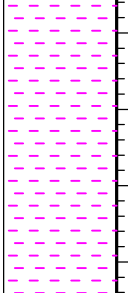
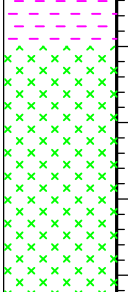
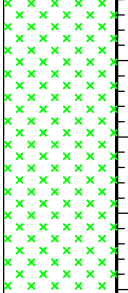
Project : SOUTH ALUMINUM SMELTER PLANT

Client : NFC

Sheet: 2 Of 6
Fig.: 271

Soil Engineering Services Consultant & Contractor

Proj No. : 1347

BOREHOLE No.: BH-337		DRILLED : 2015/04/08 - 2015/04/09		X : 723778.40 Y : 3031293.58 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	U9						Light brown lean CLAY	
21								
22	U10						Light brown lean CLAY with gypsum <CL>	
23								
24	U11						As above	
25								
26	U12						Light brown SILT <ML/CL-ML/CL>	
27								
28	U13						As above	
29								
30								

 D: Disturbed
 CB: Core Barrel
 LU: Lugeon

 U: Undisturbed
 DE: Denison
 LE: Lefranc

Remarks :



Project : SOUTH ALUMINUM SMELTER PLANT

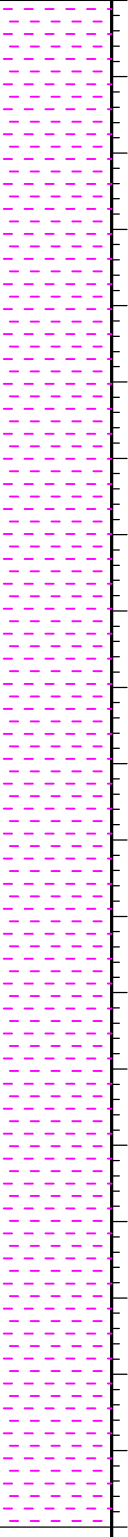
Client : NFC

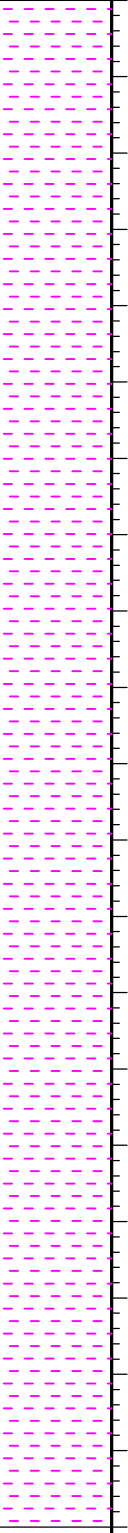
Sheet: 3 Of 6

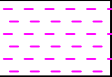
Fig.: 272

Soil Engineering Services Consultant & Contractor

Proj No. : 1347

BOREHOLE No.: BH-337		DRILLED : 2015/04/08 - 2015/04/09		X : 723778.40 Y : 3031293.58 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
30	U14						Light brown lean CLAY and gypsum, CL	
31								
32	U15						As above	
33								
34	U16						Light brown lean CLAY, CL	
35								
36	U17						As above	
37								
38	U18						As above	
39								
40								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 4 Of 6
		Client : NFC						Fig.: 273
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

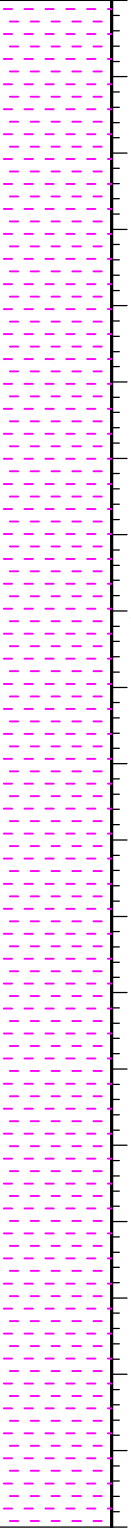
BOREHOLE No.: BH-337		DRILLED : 2015/04/08 - 2015/04/09		X : 723778.40 Y : 3031293.58 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
40	U19						Light brown lean CLAY, CL	
41								
42	U20						Light brown lean CLAY	
43								
44	U21						As above	
45								
46	U22						Light brown lean CLAY, CL	
47								
48	U23						As above	
49								
50								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 5 Of 6
		Client : NFC						Fig.: 274
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

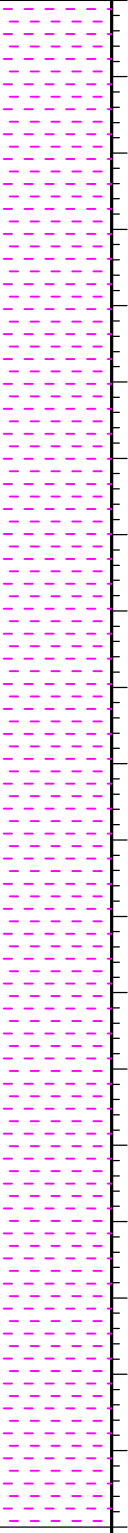
BOREHOLE No.: BH-337		DRILLED : 2015/04/08 - 2015/04/09		X : 723778.40 Y : 3031293.58 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
50	 U24						Light brown lean CLAY	
							End of Borehole at : 50.50 m	
51								
52								
53								
54								
55								
56								
57								
58								
59								
60								

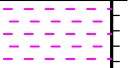
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 6 Of 6
	Client : NFC		Fig.: 275

Soil Engineering Services Consultant & Contractor	Proj No. : 1347
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BOREHOLE No.: BH-343		DRILLED : 2015/04/08 - 2015/04/08		X : 723910.87 Y : 3031223.10 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light grey lean CLAY	
1								
2	 D1	7	12	7			Light grey very stiff lean CLAY, CL	
3								
4	 D2	7	11	10			As above, CL	
5								
6	 U1						Light grey lean CLAY	
7								
8	 U2						Light brown lean CLAY	
9								
10								
 D: Disturbed  CB: Core Barrel  LU: Lugeon Remarks : Sampling Borehole  U: Undisturbed  DE: Denison  LE: Lefranc								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 1 Of 3
		Client : NFC						Fig.: 276
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-343		DRILLED : 2015/04/08 - 2015/04/08		X : 723910.87 Y : 3031223.10 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10	U3						Light brown lean CLAY	
11								
12	U4						As above	
13								
14	U5						As above	
15								
16	U6						Light brown lean CLAY	
17								
18	U7						As above, CL	
19								
20								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc Remarks :								
		Project : SOUTH ALUMINUM SMELTER PLANT						Sheet: 2 Of 3
		Client : NFC						Fig.: 277
Soil Engineering Services Consultant & Contractor							Proj No. : 1347	

BOREHOLE No.: BH-343		DRILLED : 2015/04/08 - 2015/04/08		X : 723910.87 Y : 3031223.10 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
20	 U8						Light brown lean CLAY	
							End of Borehole at : 20.50 m	
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc	Remarks :
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	Project : SOUTH ALUMINUM SMELTER PLANT		Sheet: 3 Of 3
	Client : NFC		Fig.: 278
Soil Engineering Services Consultant & Contractor			Proj No. : 1347

BOREHOLE No.: BH-354		DRILLED : 2015/04/07 - 2015/04/08		X : 723863.05 Y : 3031186.47 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
0							Light brown lean CLAY	
1								
2	D1	14	20	19			Brown hard lean CLAY, CL	
3								
4	D2	10	13	18			As above, CL	
5								
6	U1						Brown lean CLAY	
7								
8	U2						As above <CL/ML>	
9	LE01							
10								
☒ D: Disturbed ▨ CB: Core Barrel ● LU: Lugeon ■ U: Undisturbed ⚡ DE: Denison ○ LE: Lefranc Remarks : Sampling Borehole								
 Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC Sheet: 1 Of 2 Fig.: 279								
Soil Engineering Services Consultant & Contractor Proj No. : 1347								

BOREHOLE No.: BH-354		DRILLED : 2015/04/07 - 2015/04/08		X : 723863.05 Y : 3031186.47 LEVEL : 0.00		METHOD : Rotary Drilling DRILL MACHINE : O.G.B		
DEPTH (m)	SAMPLE AND TYPE	S.P.T			VANE Kg/Cm ²		Description	Legend
		15Cm	15Cm	15Cm	Und	Rem		
10							Brown lean CLAY	
11								
12	U3						As above	
13								
14	U4						Brown lean CLAY <CL/ML>	
15								
16	U5						Brown SILT <ML/CL-ML/CL>	
17								
18	U6						Brown lean CLAY, CL	
19								
20	U7						Brown lean CLAY <CL>	
End of Borehole at : 20.00 m								
 D: Disturbed  CB: Core Barrel  LU: Lugeon  U: Undisturbed  DE: Denison  LE: Lefranc							Remarks :	
							Project : SOUTH ALUMINUM SMELTER PLANT Client : NFC	
Soil Engineering Services Consultant & Contractor							Sheet: 2 Of 2 Fig.: 280	
Proj No. : 1347								