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ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND
SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No BH C40
SHEET 1 of 3
REFERENCE No H11129

PROJECT Bruce Highway Upgrade (Cooroy to Curra) Section C
LOCATION Cut 10/Woondum Rd Overpass Abut B COORDINATES 471632.9 E; 7094802.7 N
PROJECT No FG5799 SURFACE R.L. 82.40m PLUNGE DATE STARTED 27/07/11 GRID DATUM MGA94
JOB No 232/10A/2 HEIGHT DATUM AHD BEARING DATE COMPLETED 27/07/11 DRILLER Drillsure Pty Ltd

DEPTH (m)	R.L. (m)	CASING ROCK ROLLER WASH BORING CORE DRILLING	RQD () %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS	
									EH VH H M J VL EL	20 60 200 600 2000				
0	82.40													
0	82.30				TOPSOIL									
1					SANDSTONE (HW): Brown.	HW						Based on drillers logs only		
2	80.90		(70)		SANDSTONE (MW): Brown/red, medium to coarse grained, massive, medium strength, indurated and/or slightly metamorphosed.							XW Clay Seam J, 80°, Pl, T XW Clay Seam	Is(50) = 0.15MPa Is(50) = 0.21MPa	x o
3			100		Defects: -Joint at 45° (<1/m) -Joint at 50°-55° (1-2/m) -Joint at 80°-90° (<1/m)							XW Clay Seam J, 85°, I, O, FeSt, Clnf XW Clay Seam		
4			(27)		Defect spacing is mainly medium. Defect surfaces are planar to irregular, open to tight, slightly rough, clay infilled, iron stained.							J, 55°, Broken	DD = 2.41t/m ³ ; MC = 2.5%; UCS=5.07MPa	UCS
5			100		Conglomeritic in part. Conglomerate fraction is subrounded, sizing up to 35mm.							J, 50°, Pl, O, Clnf J, 50°, Pl, O, Clnf	Is(50) = 0.58MPa Is(50) = 0.73MPa	o x
6			(51)											
7			100			MW							Is(50) = 0.76MPa Is(50) = 0.68MPa	x o
8			(0)									Broken Zone Siltstone Interbed, Red XW Clay Seam		
9			(8)										Is(50) = 0.79MPa Is(50) = 0.38MPa	x o
10			100										DD = 2.51t/m ³ ; MC = 1.4%; UCS=16.13MPa	UCS
11			(27)											
12			(71)											
13			100											
14			(0)									HW Band		
15	72.90				SILTSTONE (MW): (See over)	MW								
16			100											

REMARKS *Point load failed along existing defect

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ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND
SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No **BH C40**
SHEET **2** of **3**
REFERENCE No **H11129**

PROJECT Bruce Highway Upgrade (Cooroy to Curra) Section C
LOCATION Cut 10/Woondum Rd Overpass Abut B COORDINATES 471632.9 E; 7094802.7 N
PROJECT No FG5799 SURFACE R.L. 82.40m PLUNGE _____ DATE STARTED 27/07/11 GRID DATUM MG94
JOB No 232/10A/2 HEIGHT DATUM AHD BEARING _____ DATE COMPLETED 27/07/11 DRILLER Drillsure Pty Ltd

DEPTH (m)	R.L. (m)	CASING DOWN ROLLER WASH BORING CORE DRILLING	RQD (%)	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
10	72.40		(7)		SILTSTONE (MW): Cont'd Red, fine grained, massive, subtly foliated, medium strength, indurated and/or slightly metamorphosed. Defects: -Foliation partings dip at 40° (8/m) -Joint at 50°-55° (3/m) Defect spacing is mainly close to medium. Defect surfaces are planar, tight, smooth, clay infilled. Sandstone interbeds present up to 450mm.	MW					J, 55°, Pl, O, Clnf J, 55°, Pl, O, Clnf J, 55°, Pl, O, Clnf Is(50) = 1.03MPa Sandstone Interbed J, 45°, O, Clnf J, 45°, O, Clnf	L	
11	70.65		(15)		SANDSTONE (MW): Brown/red, medium to coarse grained, massive, high strength, indurated and/or slightly metamorphosed. Defects: -Joint at 45° (<1/m) -Joint at 50°-55° (1-2/m) -Joint at 80°-90° (<1/m) Defect spacing is medium to wide. Defect surfaces are planar to irregular, open to tight, slightly rough, clay infilled, iron stained. Occasional pebbles up to 35mm.	MW						Is(50) = 0.86MPa Is(50) = 2.29MPa DD = 2.58t/m ³ ; MC = 1%; UCS=30.70MPa	x o
12			(71)		CONGLOMERATE (SW): Grey/brown, medium to coarse grained, massive, high strength, indurated and/or slightly metamorphosed. Defects: -Joint at 35° (1/m) -Joint at 50°-55° (1-2/m) Defect spacing is a mainly medium. Defect surfaces are generally planar, open, slightly rough, clay infilled and iron stained. Clasts are rounded to subrounded sizing up to 50mm.	SW						Is(50) = 1.01MPa Is(50) = 2.38MPa J, 50°, Pl, O, R, Clnf, FeSt J, 50°, Pl, O, R, Clnf, FeSt J, 35°, Pl, O, Clnf, FeSt J, 50°, Pl, O, R, Clnf, FeSt Is(50) = 2.26MPa Is(50) = 2.33MPa J, 35°, Pl, O, Clnf, FeSt, SR J, 55°, Broken, I, T, FeSt	x o
13	68.63		(89)		SANDSTONE (SW): Brown/red, medium to coarse grained, massive, high strength, indurated and/or slightly metamorphosed. Defects: -Joint at 15°-20° (1/m) -Joint at 80°-85° (2/m) Defect spacing is mainly medium. Defect surfaces are planar, tight, slightly rough, clay infilled.	SW						J, 80°-85°, I, O, SR, Clnf, FeSt Is(50) = 3.11MPa Is(50) = 3.03MPa J, 80°-85°, I, O, SR, Clnf, FeSt DD = 2.61t/m ³ ; MC = 0.9%; UCS=47.47MPa	x o
14			(80)		CONGLOMERITIC IN PART. CONGLOMERATE fraction is subrounded sizing up to 30mm.							Is(50) = 0.76MPa; * Is(50) = 2.39MPa J, 80°-85°, Pl, T, Clnf, FeSt	o x
15	65.40		(64)										
16													
17													
18													
19													
20													

REMARKS *Point load failed along existing defect

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ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND
SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No BH C40
SHEET 3 of 3
REFERENCE No H11129

PROJECT Bruce Highway Upgrade (Cooroy to Curra) Section C
LOCATION Cut 10/Woondum Rd Overpass Abut B COORDINATES 471632.9 E; 7094802.7 N
PROJECT No FG5799 SURFACE R.L. 82.40m PLUNGE _____ DATE STARTED 27/07/11 GRID DATUM MGA94
JOB No 232/10A/2 HEIGHT DATUM AHD BEARING _____ DATE COMPLETED 27/07/11 DRILLER Drillsure Pty Ltd

DEPTH (m)	R.L. (m)	CASING ROCK ROLLER WASH BORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
20	62.40					SANDSTONE (SW): Cont'd		SW				CJ, 15°-20°, I, T, Fast	
	61.82		100			Borehole terminated at 20.58m						XW Clay Seam Broken Zone	
21													
22													
23													
24													
25													
26													
27													
28													
29													
30													

REMARKS *Point load failed along existing defect.

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CORE PHOTO LOG - BH C40

Project Name:	BRUCE HIGHWAY UPGRADE - SECTION C		
Project No.:	FG5799	Date:	08/09/2011
Details:	Cut 10	Start Depth (m):	1.50
Reference No.:	H11129	Finish Depth (m):	20.58



CORE PHOTO LOG - BH C40

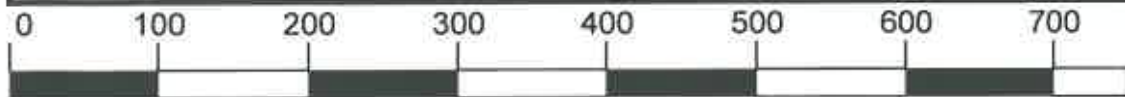
Project Name:	BRUCE HIGHWAY UPGRADE - SECTION C		
Project No.:	FG5799	Date:	08/09/2011
Details:	Cut 10	Start Depth (m):	1.50
Reference No.:	H11129	Finish Depth (m):	20.58



SCALE 1:5

CORE PHOTO LOG - BH C40

Project Name:	BRUCE HIGHWAY UPGRADE - SECTION C		
Project No.:	FG5799	Date:	08/09/2011
Details:	Cut 10	Start Depth (m):	1.50
Reference No.:	H11129	Finish Depth (m):	20.58



SCALE 1:5

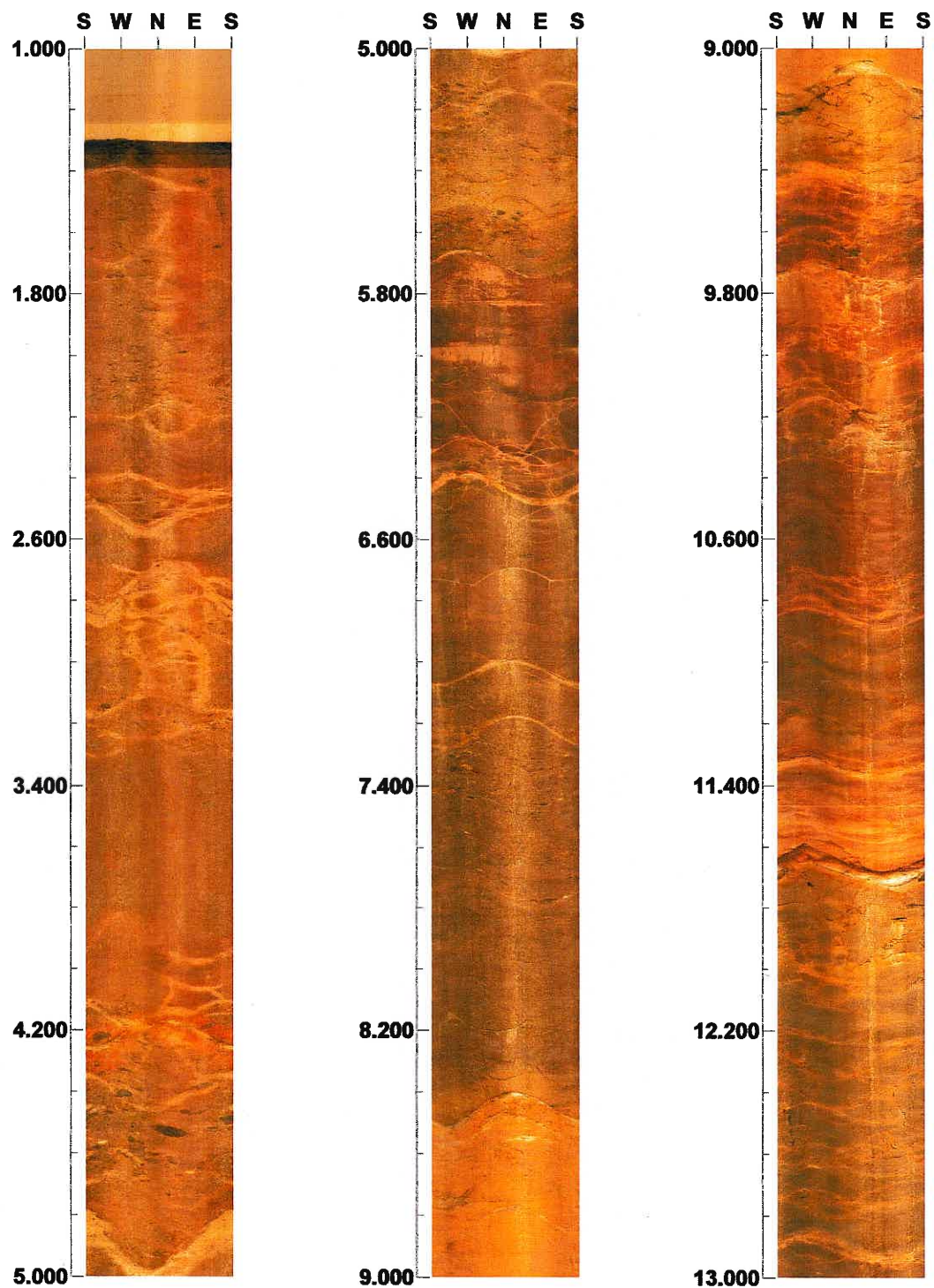
Project name: BRUCE HIGHWAY UPGRADE SECTION C

Bore hole No.: C-40

Azimuth: 0

Inclination: -90

Depth range: 1.000 - 13.000 m



Scale: 1/20

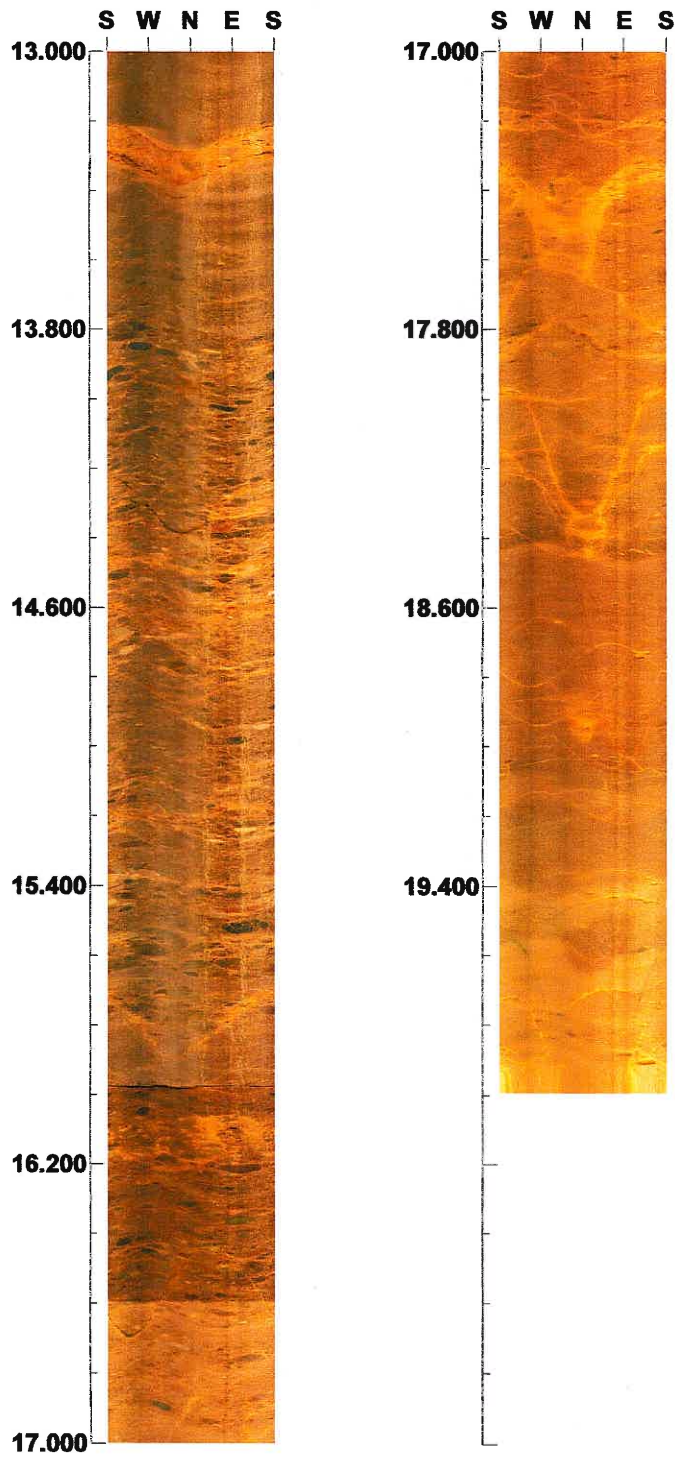
Aspect ratio: 200 %

Project name: BRUCE HIGHWAY UPGRADE SECTION C
Bore hole No.: C-40

Azimuth: 0

Inclination: -90

Depth range: 13.000 - 19.994 m



Scale: 1/20 Aspect ratio: 200 %

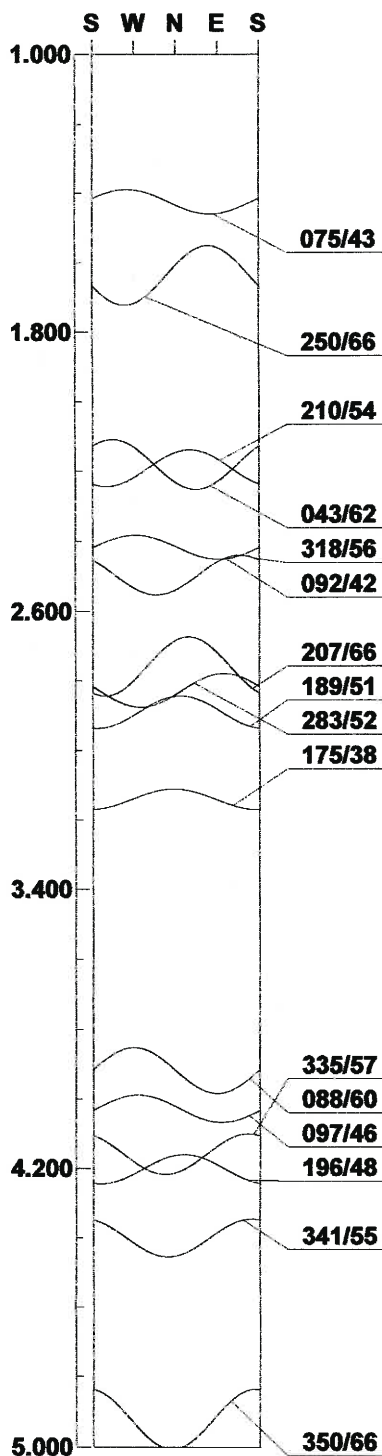
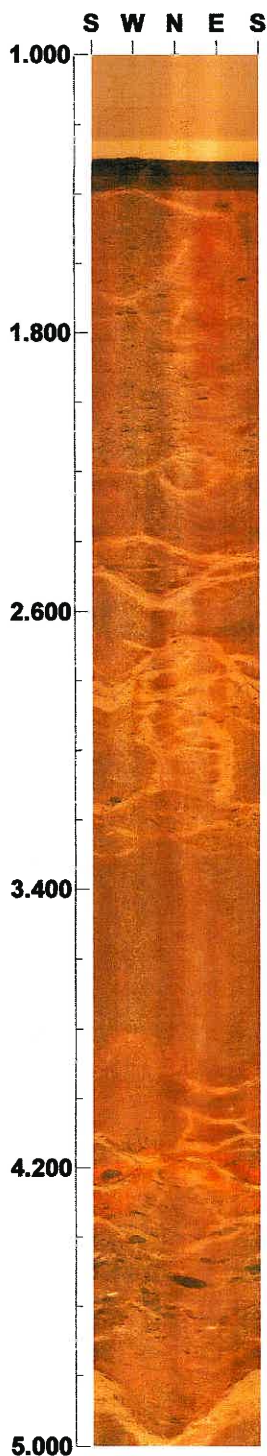
Project name: BRUCE HIGHWAY UPGRADE SECTION C

Bore hole No.: C-40

Azimuth: 0

Inclination: -90

Depth range: 1.000 - 5.000 m



Scale: 1/20

Aspect ratio: 200 %

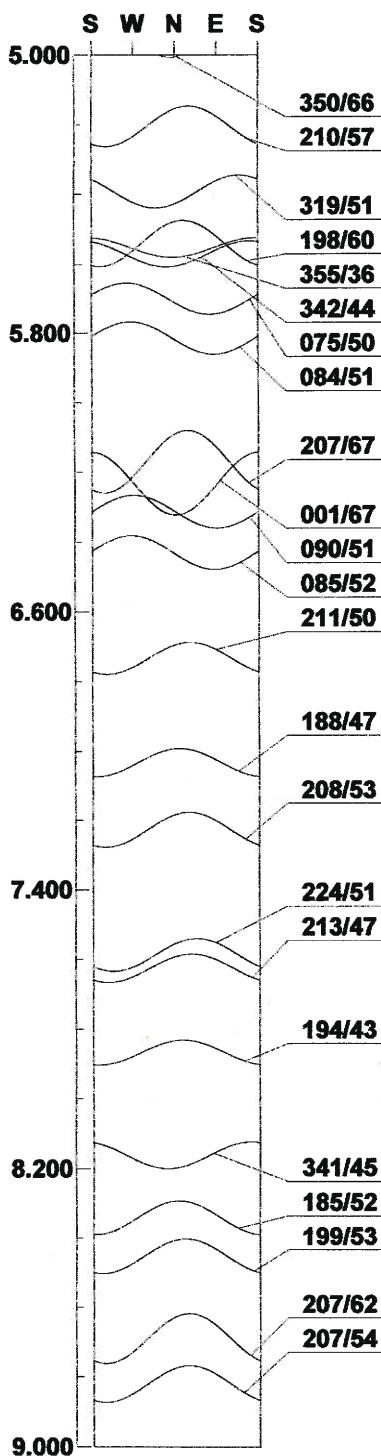
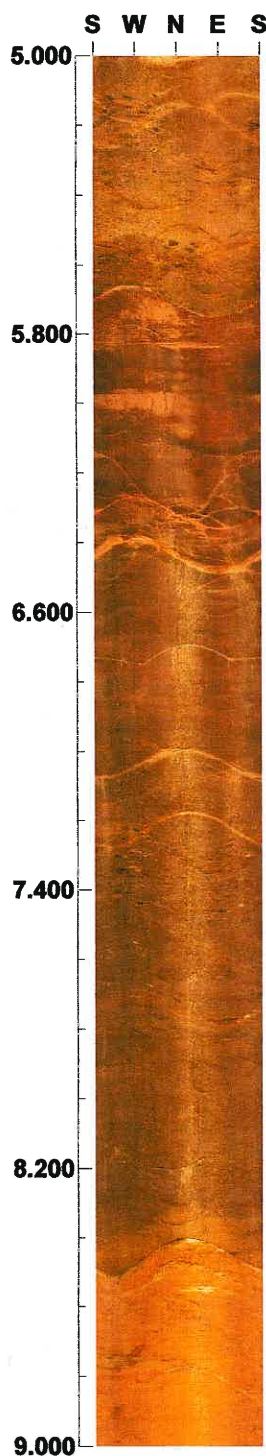
Project name: BRUCE HIGHWAY UPGRADE SECTION C

Bore hole No.: C-40

Azimuth: 0

Inclination: -90

Depth range: 5.000 - 9.000 m



Scale: 1/20

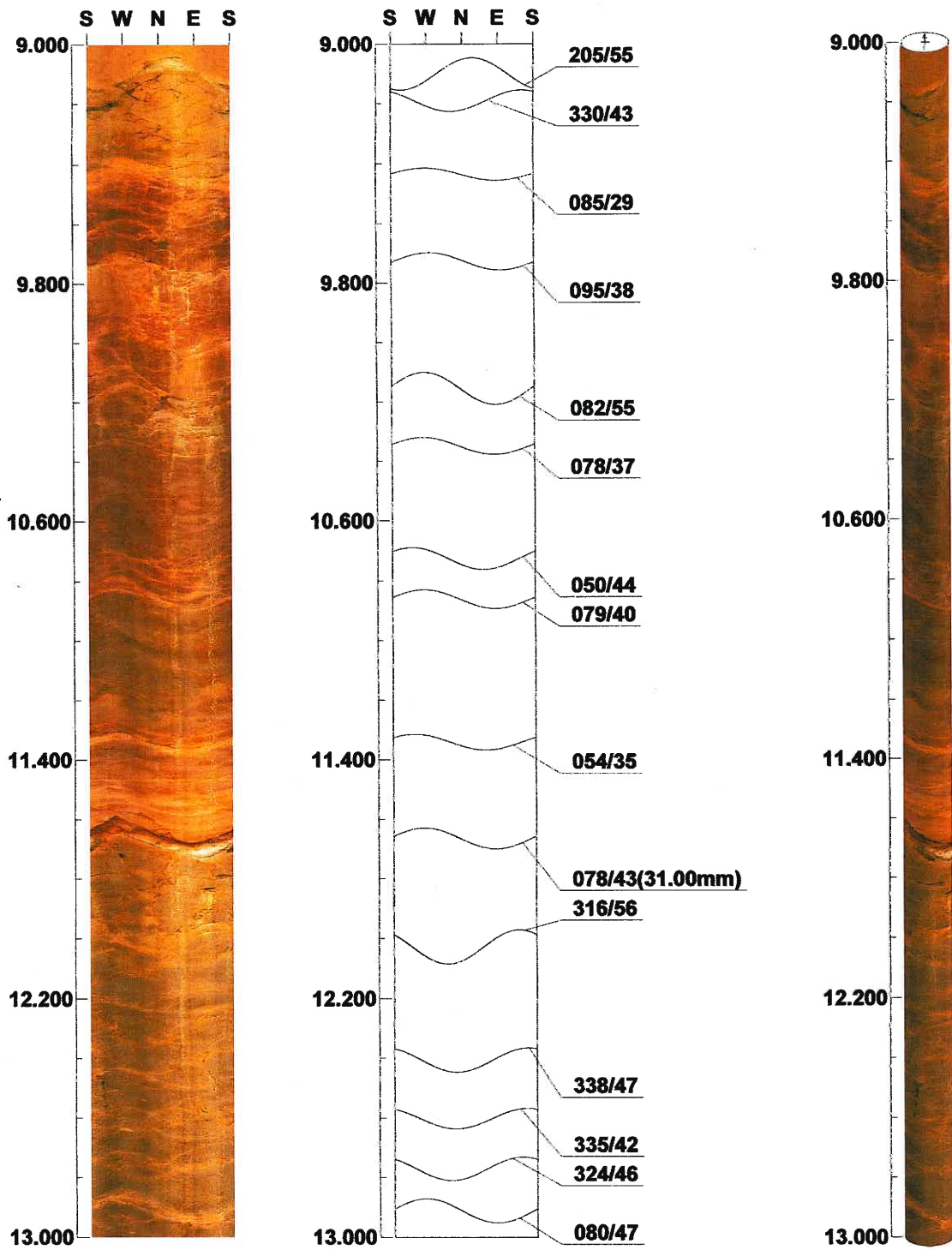
Aspect ratio: 200 %

Project name: BRUCE HIGHWAY UPGRADE SECTION C
Bore hole No.: C-40

Azimuth: 0

Inclination: -90

Depth range: 9.000 - 13.000 m



Scale: 1/20

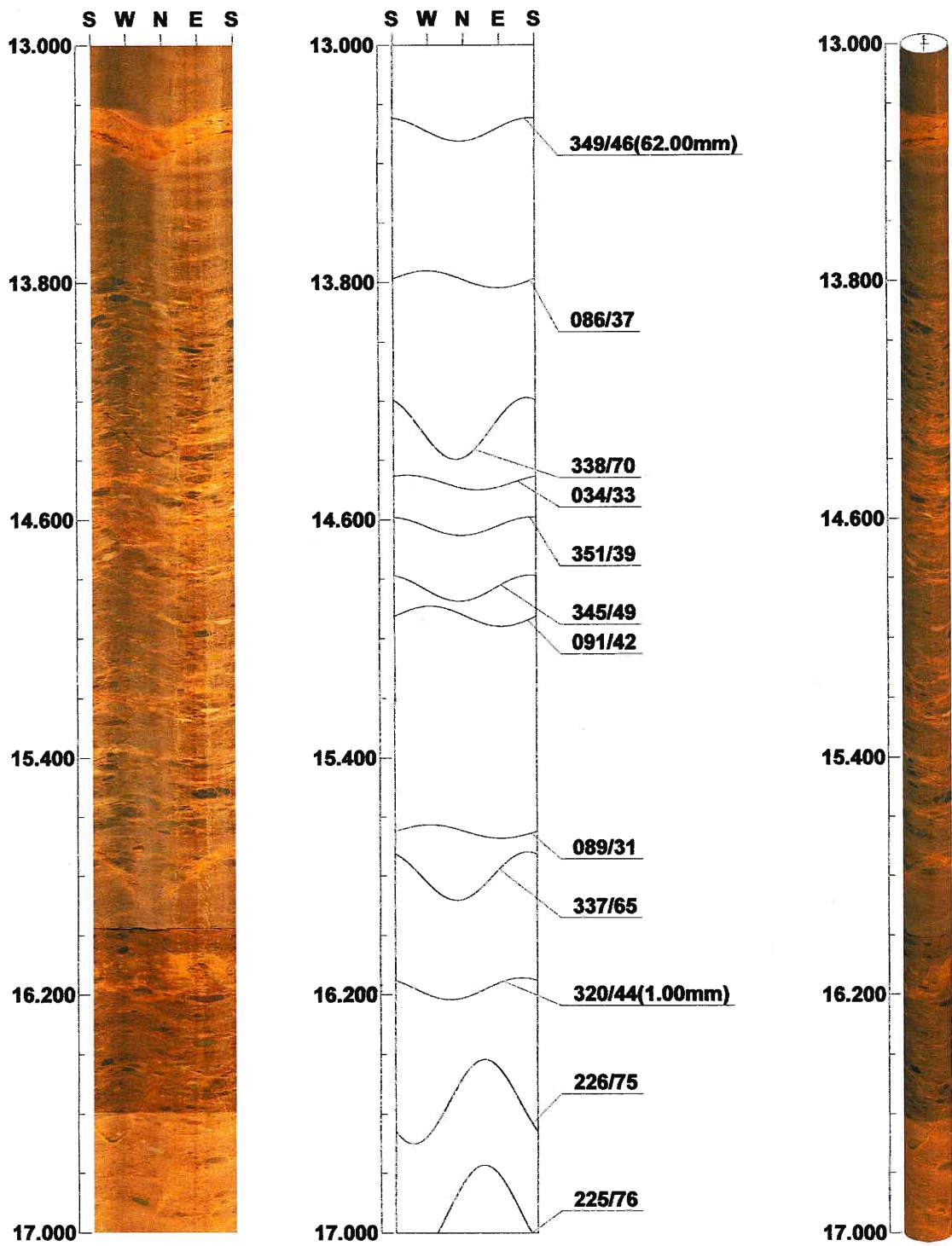
Aspect ratio: 200 %

Project name: BRUCE HIGHWAY UPGRADE SECTION C
Bore hole No.: C-40

Azimuth: 0

Inclination: -90

Depth range: 13.000 - 17.000 m



Scale: 1/20

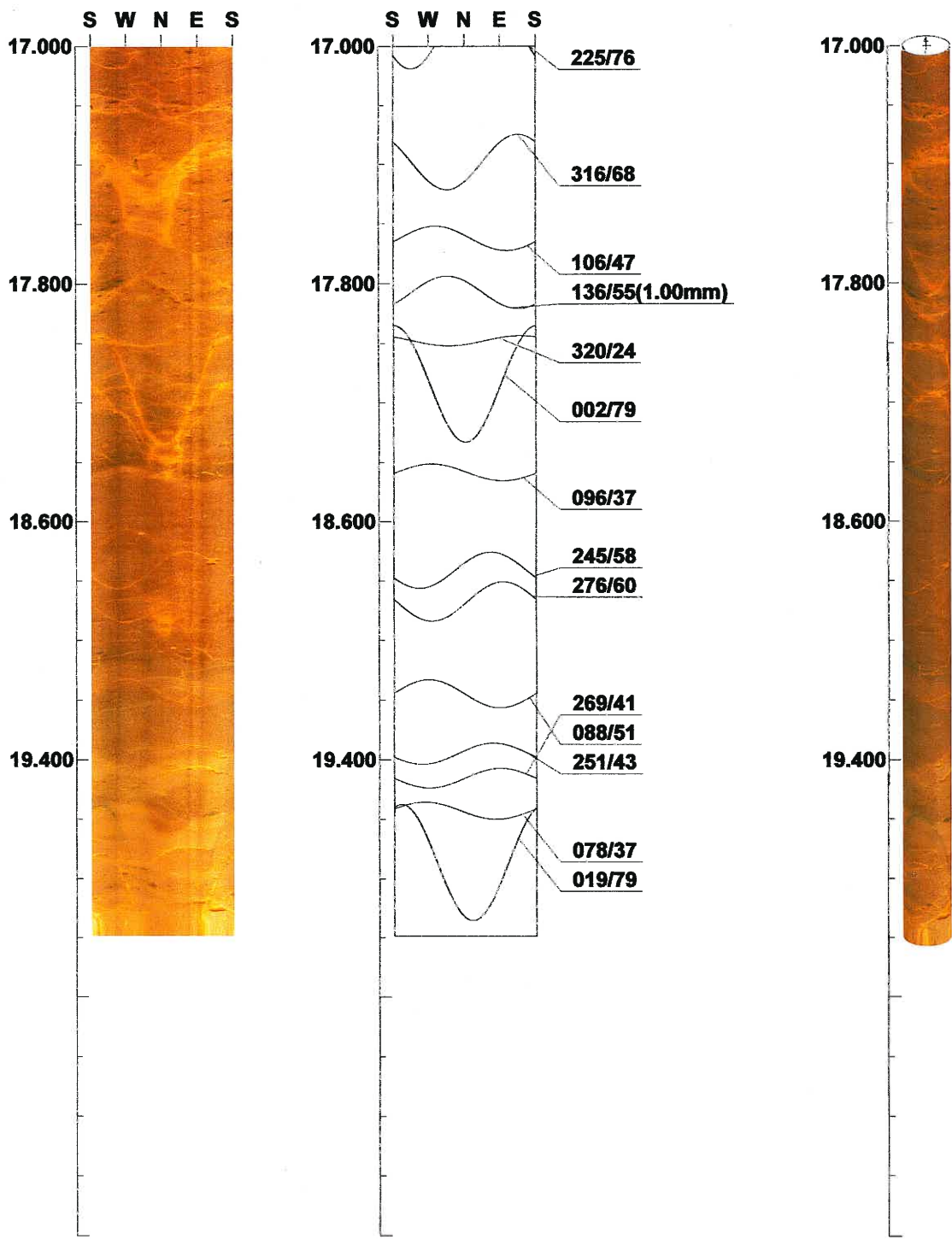
Aspect ratio: 200 %

Project name: BRUCE HIGHWAY UPGRADE SECTION C
Bore hole No.: C-40

Azimuth: 0

Inclination: -90

Depth range: 17.000 - 19.994 m



Scale: 1/20 Aspect ratio: 200 %

Tab. Table of Discontinuity (1 / 2)

File name: C-40.STR
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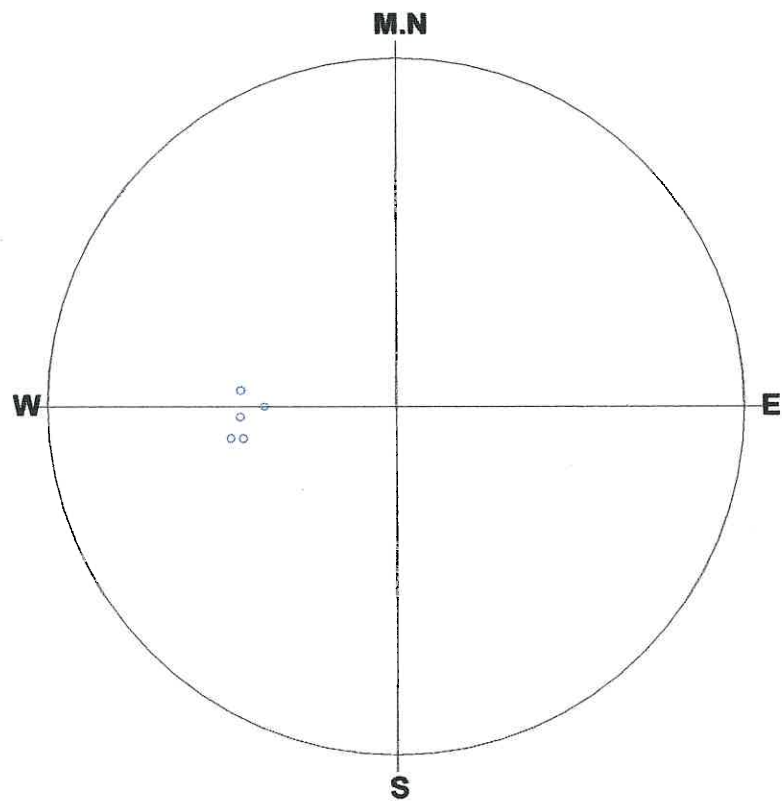
No.	Depth (m)	Dir/Dip	Sort	Aperture (mm)	Form	Condition	Remark
1	1.425	075/43	Joint	0.3	Planar	Smooth	Open
2	1.637	250/66	Joint	0.3	Planar	Rough	Open
3	2.180	043/62	Joint	0.3	Planar	Smooth	Tight
4	2.191	210/54	Joint	0.3	Planar	Smooth	Open
5	2.416	092/42	Parting	0.3	Planar	Smooth	Open
6	2.495	318/56	ShearZone	5.0	Planar	Brec/crus'd	Open
7	2.758	207/66	Joint	1.0	Planar	Smooth	Open
8	2.827	283/52	Joint	0.3	Planar	Smooth	Open
9	2.890	189/51	Joint	0.5	Planar	Smooth	Open
10	3.140	175/38	Joint	0.3	Planar	Smooth	Open
11	3.917	088/60	Joint	0.3	Planar	Smooth	Open
12	4.027	097/46	Joint	0.3	Planar	Smooth	Open
13	4.158	335/57	Joint	0.3	Planar	Smooth	Open
14	4.202	196/48	Joint	7.0	Planar	Weathered	Open/loose
15	4.400	341/55	Joint	0.3	Planar	Rough	Open
16	4.921	350/66	ShearZone	39.0	Planar	Weathered	Open/loose
17	5.205	210/57	Joint	0.3	Planar	Smooth	Open
18	5.393	319/51	Joint	0.5	Planar	Rough	Open
19	5.541	198/60	Joint	0.3	Planar	Smooth	Open
20	5.553	005/36	Joint	0.3	Planar	Smooth	Open
21	5.571	342/44	Joint	0.5	Planar	Rough	Open
22	5.700	075/50	Parting	2.0	Planar	Smooth	Open/fil'd
23	5.814	084/51	Joint	0.3	Planar	Smooth	Tight
24	6.170	207/67	Joint	0.3	Planar	Smooth	Open
25	6.233	000/67	Joint	0.5	Planar	Smooth	Open
26	6.313	090/51	Joint	2.0	Planar	Brec/crus'd	Open
27	6.430	085/52	ShearZone	11.0	Planar	Brec/crus'd	Open/loose
28	6.733	211/50	Joint	0.3	Planar	Smooth	Tight
29	7.032	188/47	Joint	1.0	Planar	Smooth	Open
30	7.227	208/53	Joint	0.5	Planar	Smooth	Open
31	7.587	224/51	Joint	0.3	Planar	Smooth	Tight
32	7.625	213/47	Joint	0.3	Planar	Smooth	Tight
33	7.867	194/43	Joint	0.5	Planar	Smooth	Open
34	8.161	341/45	Joint	0.5	Planar	Smooth	Tight
35	8.340	185/52	Joint	0.5	Planar	Rough	Tight
36	8.452	199/53	ShearZone	49.0	Planar	Brec/crus'd	Open
37	8.690	207/62	Joint	0.5	Planar	Rough	Open
38	8.820	207/54	Joint	0.5	Planar	Smooth	Open/fil'd
39	9.101	205/55	ShearZone	35.0	Planar	Brec/crus'd	Open/loose
40	9.191	330/43	Joint	0.5	Planar	Smooth	Open
41	9.436	085/29	ShearZone	15.0	Planar	Brec/crus'd	Open
42	9.728	095/38	ShearZone	21.0	Planar	Brec/crus'd	Open/loose
43	10.155	082/55	ShearZone	20.0	Planar	Brec/crus'd	Open
44	10.349	078/37	Parting	0.5	Planar	Smooth	Open
45	10.725	050/44	ShearZone	13.0	Planar	Brec/crus'd	Open
46	10.861	079/40	Foliation	0.0	Planar	Smooth	Tight
47	11.341	054/35	ShearZone	7.0	Planar	Brec/crus'd	Open/loose
48	11.665	078/43	ShearZone	31.0	Planar	Brec/crus'd	Open/caved
49	12.028	316/56	Joint	0.3	Planar	Smooth	Tight
50	12.406	338/47	Joint	0.5	Planar	Smooth	Open

Tab. Table of Discontinuity (2 / 2)

File name: C-40.STR
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No.	Depth (m)	Dir/Dip	Sort	Aperture (mm)	Form	Condition	Remark
51	12.602	335/42	Joint	0.5	Planar	Smooth	Open
52	12.770	324/46	Joint	0.5	Planar	Smooth	Open
53	12.912	080/47	ShearZone	24.0	Planar	Brec/crus'd	Open
54	13.285	349/46	ShearZone	62.0	Planar	Brec/crus'd	Open/loose
55	13.790	086/37	Foliation	0.0	Planar	Smooth	Tight
56	14.293	338/70	Joint	1.0	Planar	Rough	Open
57	14.475	034/33	Parting	1.0	Planar	Rough	Open
58	14.622	351/39	ShearZone	19.0	Planar	Brec/crus'd	Open
59	14.831	345/49	Joint	0.5	Planar	Smooth	Open
60	14.925	090/42	ShearZone	12.0	Planar	Brec/crus'd	Open
61	15.649	090/31	Foliation	0.0	Planar	Smooth	Tight
62	15.800	337/65	Joint	0.3	Planar	Rough	Open
63	16.179	320/44	Joint	1.0	Planar	Rough	Open
64	16.558	226/75	Joint	0.5	Planar	Rough	Open
65	16.924	225/76	Joint	0.5	Undulating	Rough	Open
66	17.392	316/68	Joint	7.0	Planar	Brec/crus'd	Open
67	17.649	106/47	Joint	0.5	Planar	Smooth	Open
68	17.829	136/55	Joint	1.0	Undulating	Rough	Open/fil'd
69	17.991	320/24	Joint	0.5	Planar	Smooth	Open
70	18.136	002/79	Joint	0.5	Planar	Smooth	Open
71	18.433	096/37	Foliation	0.0	Planar	Smooth	Tight
72	18.764	245/58	Joint	1.0	Planar	Smooth	Tight/fil'd
73	18.869	276/60	Joint	0.5	Planar	Smooth	Tight/fil'd
74	19.178	088/51	Joint	1.0	Planar	Smooth	Tight/fil'd
75	19.379	251/43	Joint	0.5	Planar	Smooth	Tight
76	19.461	270/41	Joint	1.0	Planar	Smooth	Tight/fil'd
77	19.570	078/37	Foliation	0.0	Planar	Smooth	Tight
78	19.745	019/79	Joint	0.3	Planar	Smooth	Open

C-40.STR
<<FOLIATION>>



Number of Data : 5/78

<Legend>

○:Foliation	--	5	+ :Mineraiban-	0
◇:Joint	--	0		
□:Parting	--	0		
△:Fault	--	0		
▽:ShearZone-		0		
×:Vein	--	0		

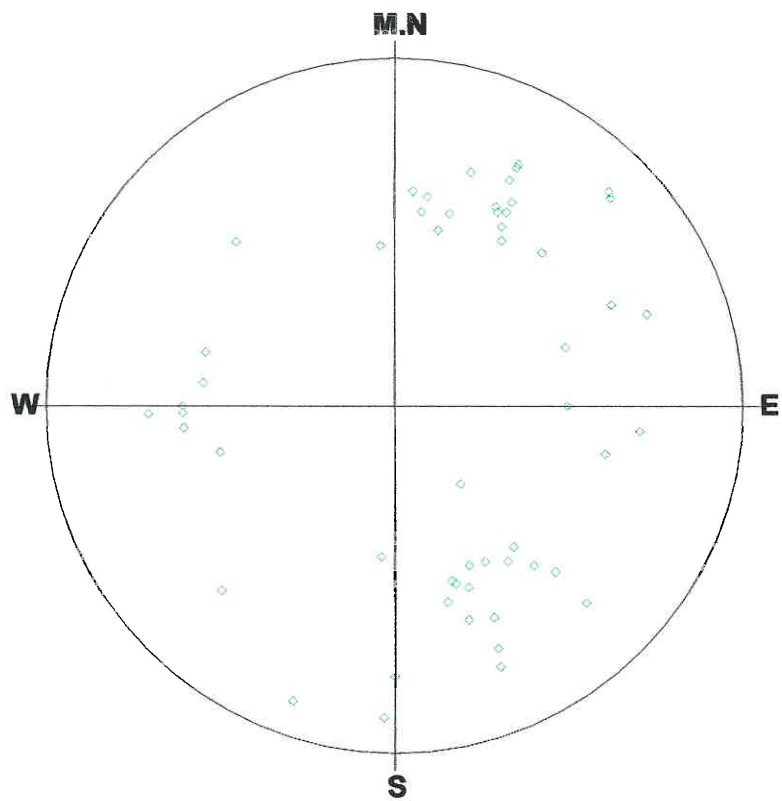
Schmidt (L.H)

Depth : 1.425 - 19.745 m

Aperture : 0.0 - 62.0 mm

C-40.STR

<<JOINT>>



Number of Data : 54/78

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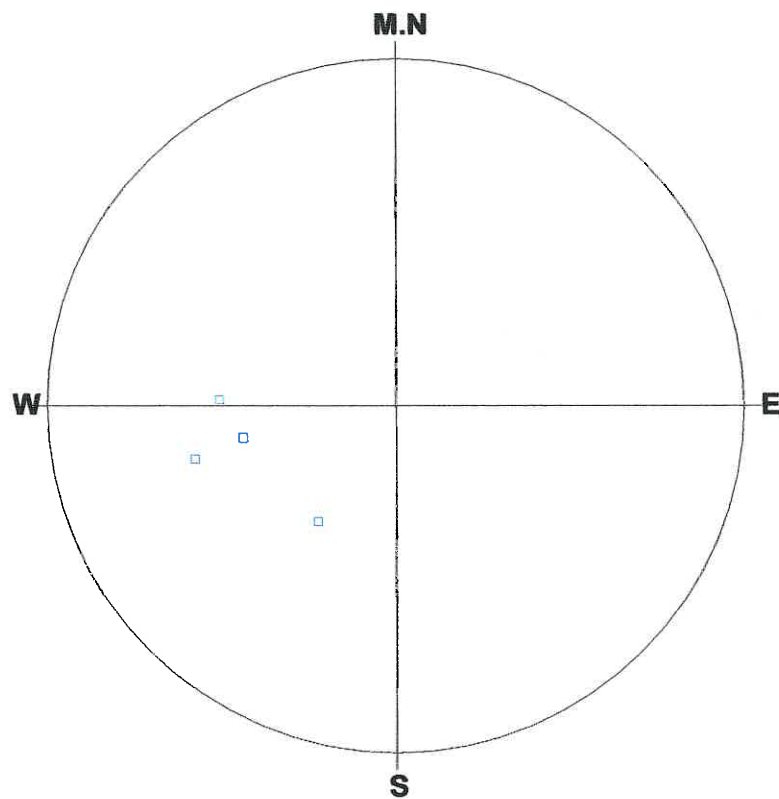
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◇:Joint	--	54			
□:Parting	--	0			
△:Fault	--	0			
▽:ShearZone	--	0			
×:Vein	--	0			

Schmidt (L.H)

Depth : 1.425 - 19.745 m

Aperture : 0.0 - 62.0 mm

C-40.STR
<<PARTING>>



Number of Data : 4/78

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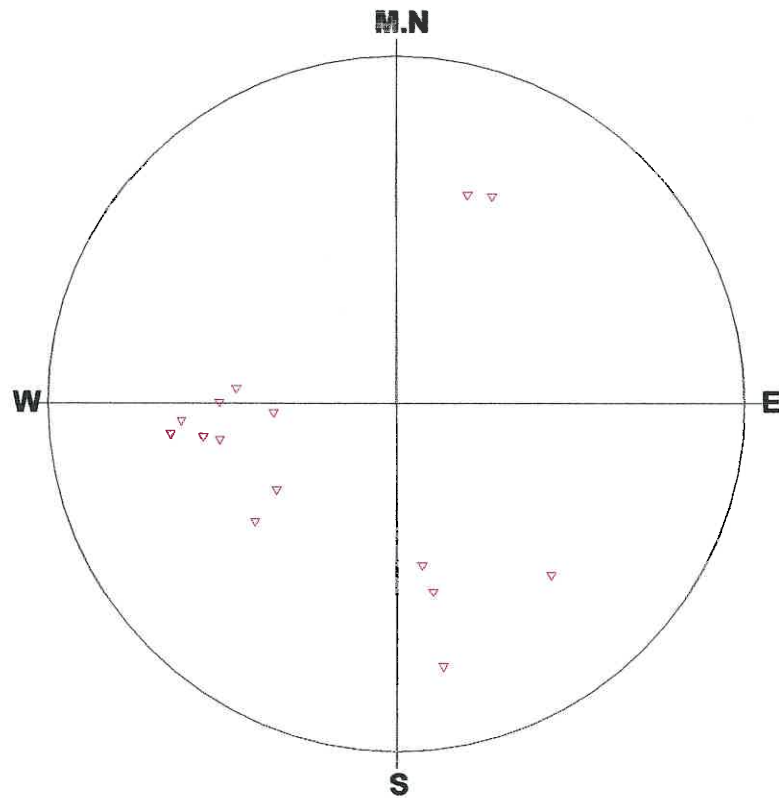
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◇:Joint	--	0		
□:Parting	--	4		
△:Fault	--	0		
▽:ShearZone	--	0		
×:Vein	--	0		

Schmidt (L.H)

Depth : 1.425 - 19.745 m

Aperture : 0.0 - 62.0 mm

C-40.STR
<<SHEAR ZONE>>



Number of Data : 15/78

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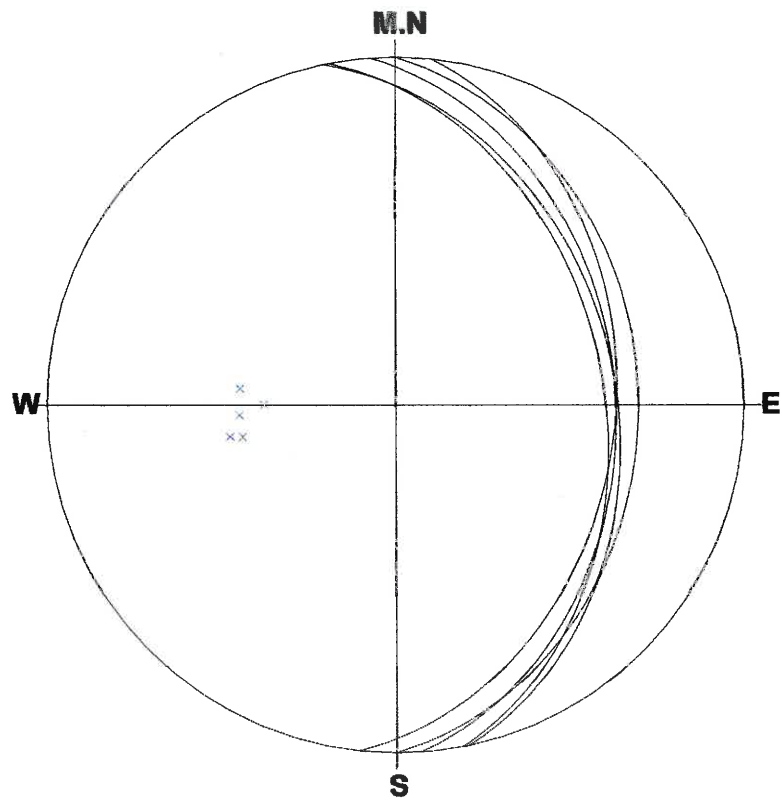
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|-------------|----|----|----------------|---|
| ○:Foliation | -- | 0 | + :Mineralban- | 0 |
| ◇:Joint | -- | 0 | | |
| □:Parting | -- | 0 | | |
| △:Fault | -- | 0 | | |
| ▽:ShearZone | -- | 15 | | |
| ×:Vein | -- | 0 | | |

Schmidt (L.H)

Depth : 1.425 - 19.745 m

Aperture : 0.0 - 62.0 mm

C-40.STR
<<FOLIATION>>



Number of Data:5/78

- 1 : 079/40(46)**
- 2 : 086/37(55)**
- 3 : 090/31(61)**
- 4 : 096/37(71)**
- 5 : 078/37(77)**

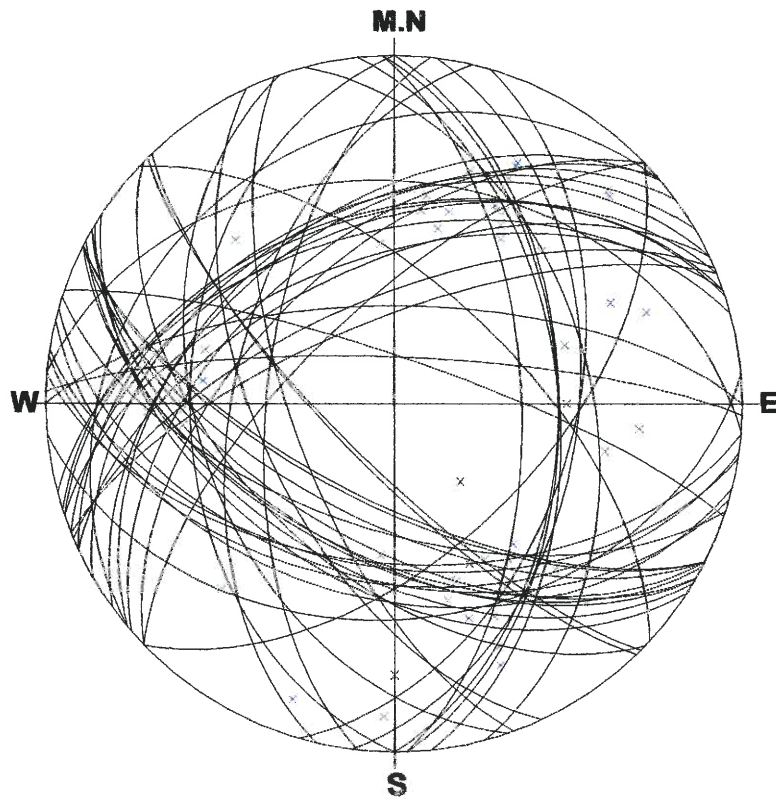
Schmidt (L.H)

Depth : 1.425 - 19.745 m

Aperture : 0.0 - 62.0 mm

C-40.STR

<<JOINT>>



Number of Data:54/78

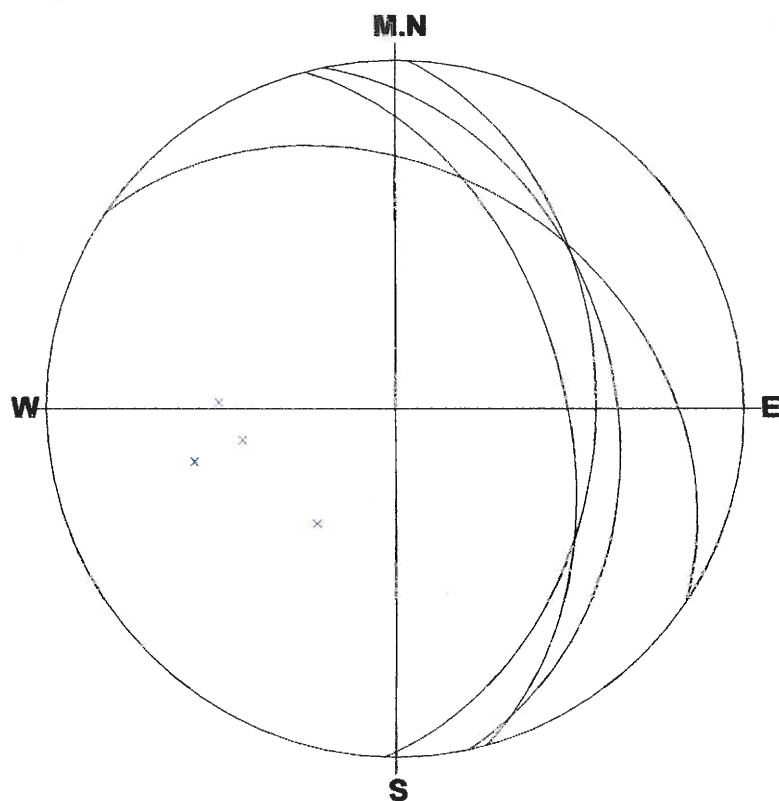
1 : 075/43(1)	6 : 283/52(8)
2 : 250/66(2)	7 : 189/51(9)
3 : 043/62(3)	8 : 175/38(10)
4 : 210/54(4)	9 : 088/60(11)
5 : 207/66(7)	10 : 097/46(12)

Schmidt (L.H)

Depth : 1.425 - 19.745 m

Aperture : 0.0 - 62.0 mm

C-40.STR
<<PARTING>>



Number of Data:4/78

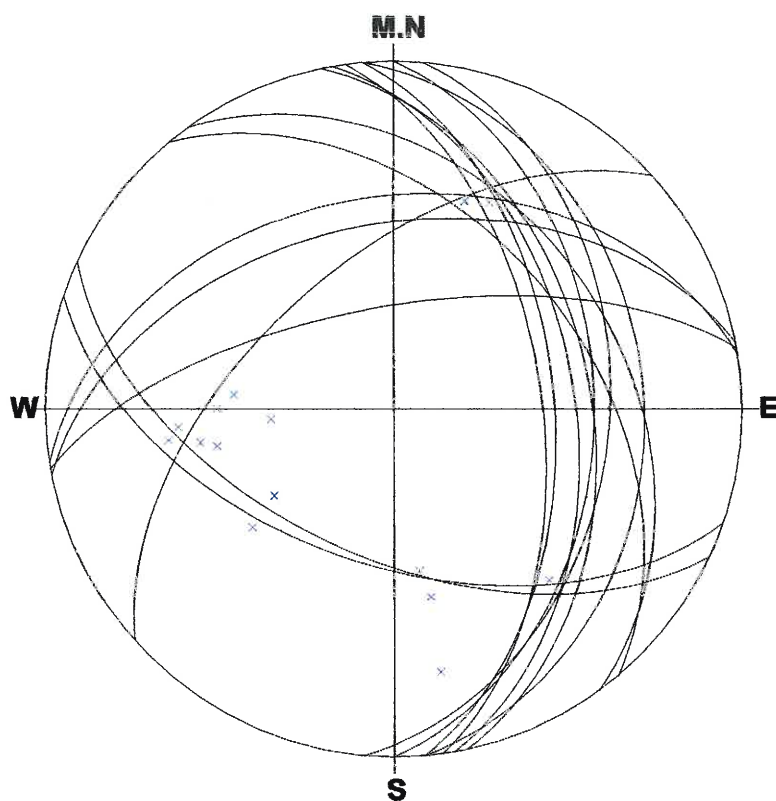
- 1 : 092/42(5)**
- 2 : 075/50(22)**
- 3 : 078/37(44)**
- 4 : 034/33(57)**

Schmidt (L.H)

Depth : 1.425 - 19.745 m

Aperture : 0.0 - 62.0 mm

C-40.STR
<<SHEAR ZONE>>



Number of Data:15/78

1 : 318/56(6)	6 : 085/29(41)
2 : 350/66(16)	7 : 095/38(42)
3 : 085/52(27)	8 : 082/55(43)
4 : 199/53(36)	9 : 050/44(45)
5 : 205/55(39)	10 : 054/35(47)

Schmidt (L.H)

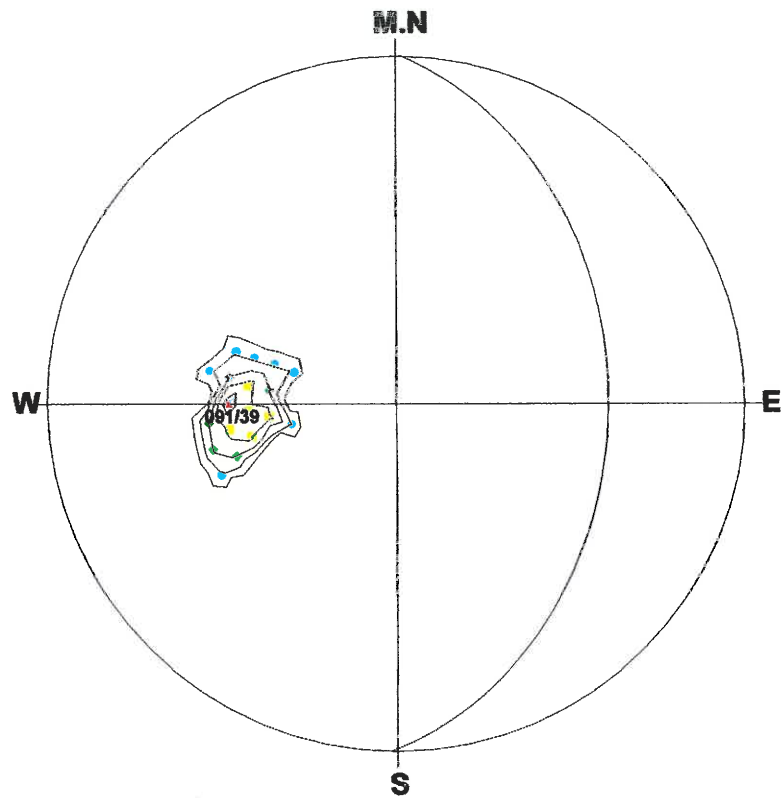
Depth : 1.425 - 19.745 m

Aperture : 0.0 - 62.0 mm

C-40.STR

<<FOLIATION>>

******* % Diagram *******



Number of Data : 5

<Legend> Sym. (%)

- ▲ : 80
- ▼ : 64 - 80
- : 48 - 64
- ◆ : 32 - 48
- : 16 - 32
- + : 0 - 16

Contour Value (%)

- Contour 1 : 0 ☐
- Contour 2 : 16 ☐
- Contour 3 : 32 ☐
- Contour 4 : 48 ☐
- Contour 5 : 64 ☐
- Contour 6 : 80 ☐

Schmidt (L.H)

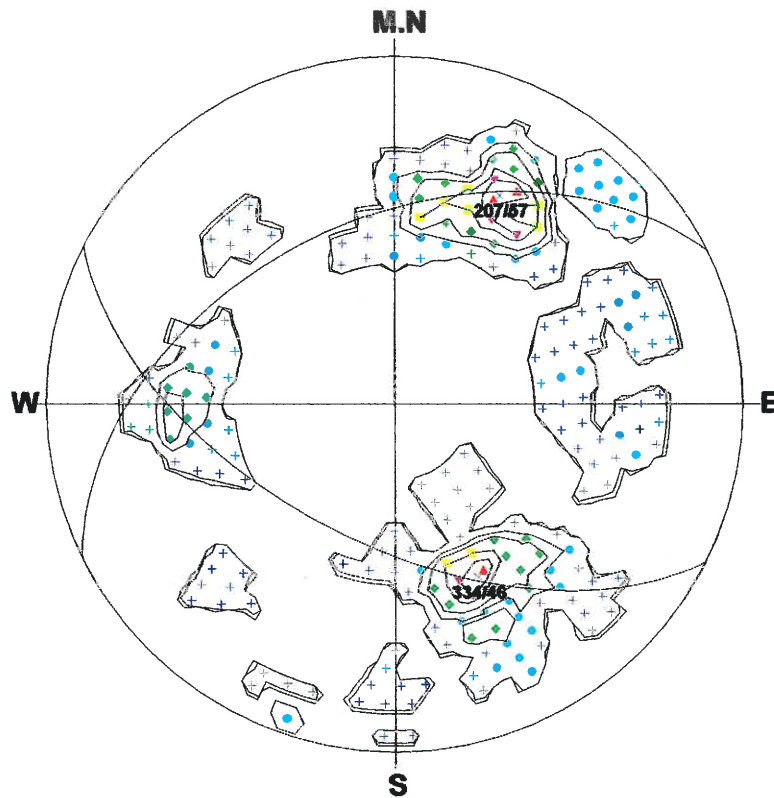
Depth : 1.425 - 19.745 m

Aperture : 0.0 - 62.0 mm

C-40.STR

<<JOINT>>

******* % Diagram *******



Number of Data : 54

<Legend> Sym. (%)

- ▲ : 12
- ▼ : 10 - 12
- : 7 - 10
- ◆ : 5 - 7
- : 2 - 5
- + : 0 - 2

Contour Value (%)

- Contour 1 : 0 ☐
- Contour 2 : 2 ☐
- Contour 3 : 5 ☐
- Contour 4 : 7 ☐
- Contour 5 : 10 ☐
- Contour 6 : 12 ☐

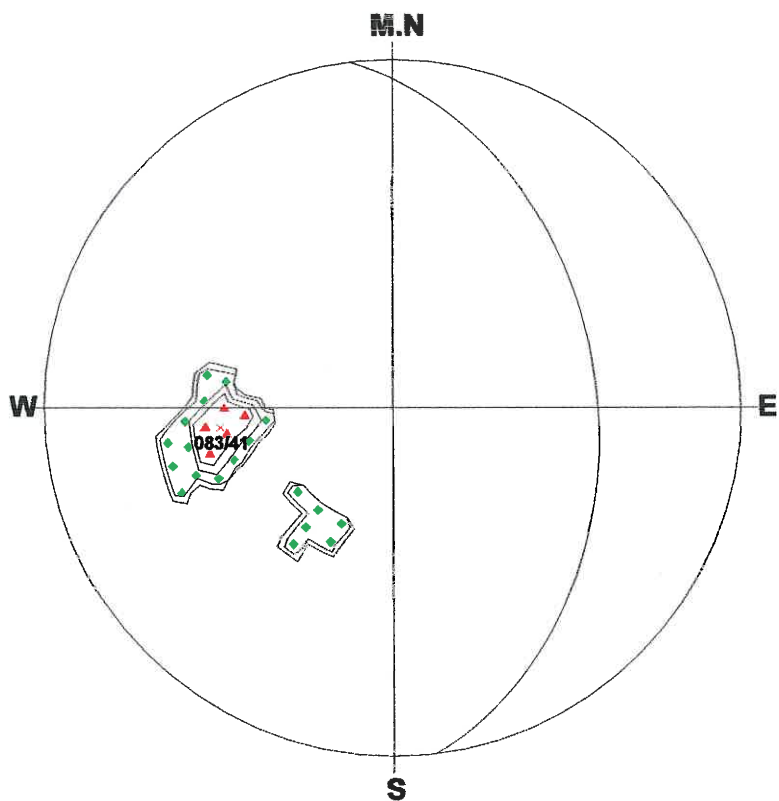
Schmidt (L.H)

Depth : 1.425 - 19.745 m

Aperture : 0.0 - 62.0 mm

C-40.STR
<<PARTING>>

***** % Diagram *****



Number of Data : 4

<Legend> Sym. (%)

- ▲ : 50
- ▼ : 40 - 50
- : 30 - 40
- ◆ : 20 - 30
- : 10 - 20
- + : 0 - 10

Contour Value (%)

- Contour 1 : 0 ☐
- Contour 2 : 10 ☐
- Contour 3 : 20 ☐
- Contour 4 : 30 ☐
- Contour 5 : 40 ☐
- Contour 6 : 50 ☐

Schmidt (L.H)

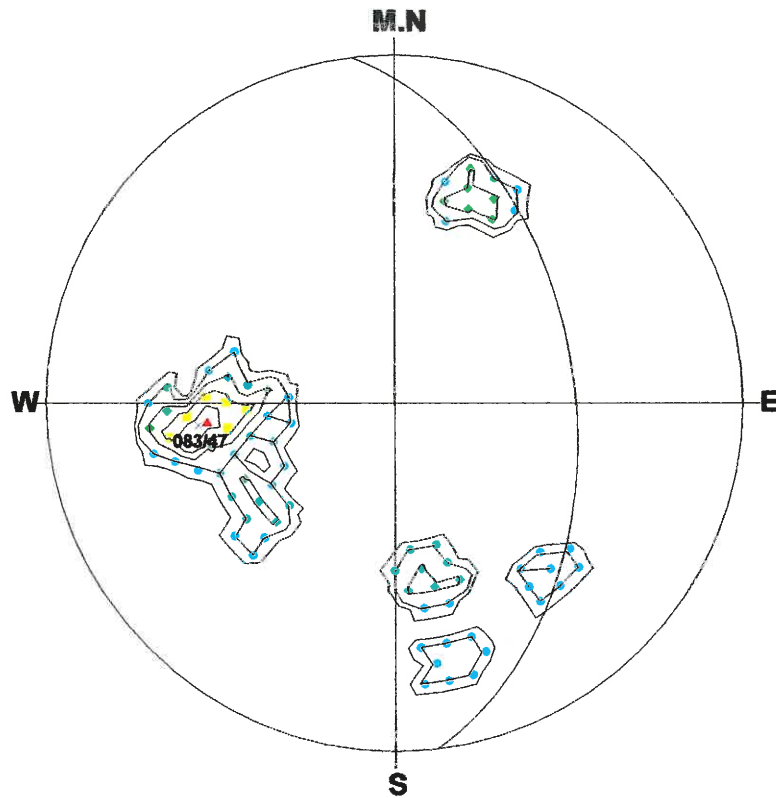
Depth : 1.425 - 19.745 m

Aperture : 0.0 - 62.0 mm

C-40.STR

<<SHEAR ZONE>>

******* % Diagram *******



Number of Data : 15

<Legend> Sym. (%)

- ▲ : 26
- ▼ : 21 - 26
- : 16 - 21
- ◆ : 10 - 16
- : 5 - 10
- + : 0 - 5

Contour Value (%)

- Contour 1 : 0
- Contour 2 : 5
- Contour 3 : 10
- Contour 4 : 16
- Contour 5 : 21
- Contour 6 : 26

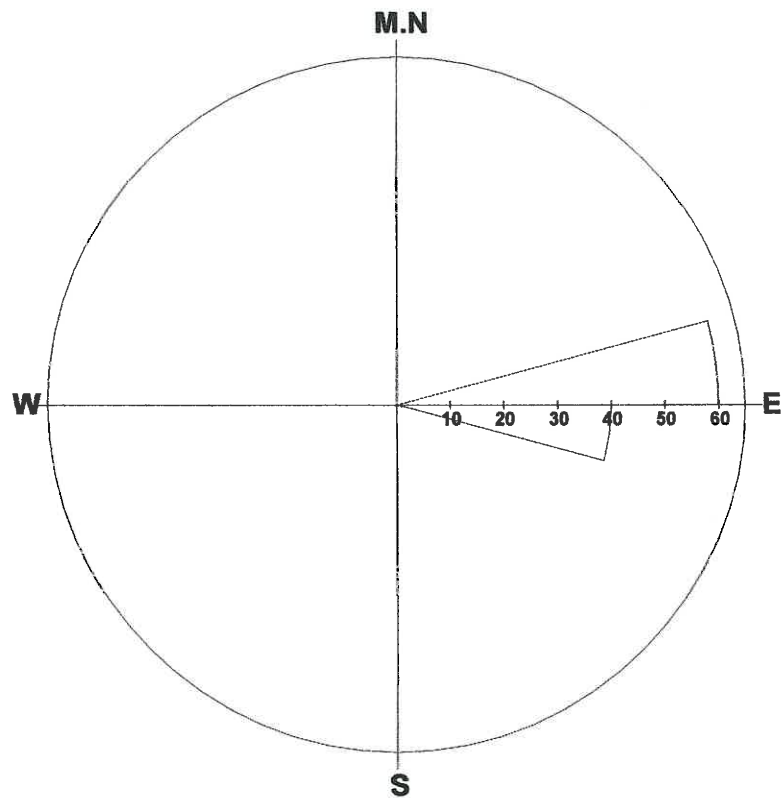
Schmidt (L.H)

Depth : 1.425 - 19.745 m

Aperture : 0.0 - 62.0 mm

C-40.STR

<<FOLIATION>>



Number of Data : 5/78

Max : 60.0%

Grouping Angle : 15 deg

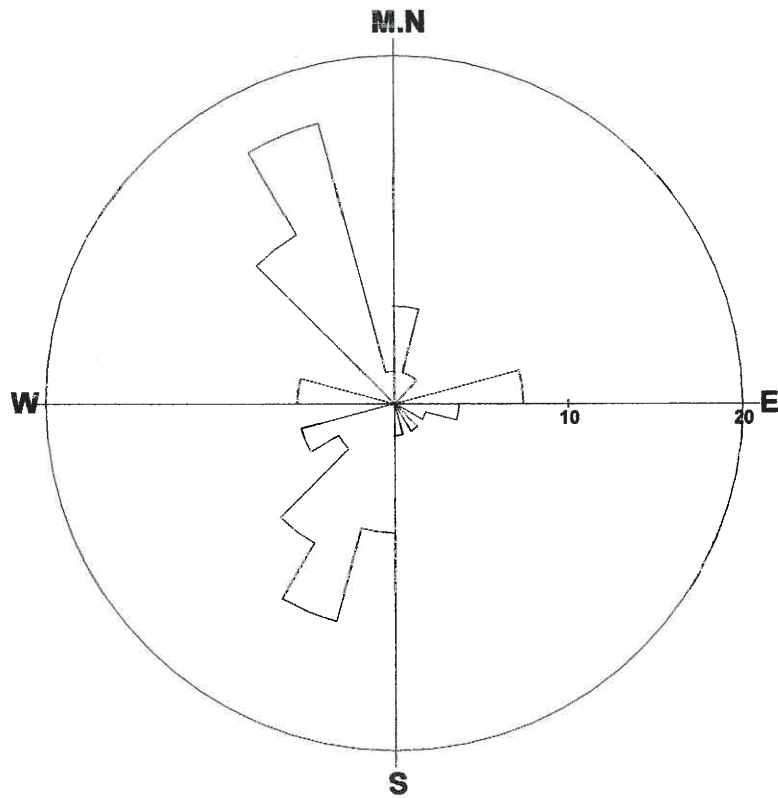
Dir	%	Dir	%	Dir	%
0-	0	135-	0	270-	0
15-	0	150-	0	285-	0
30-	0	165-	0	300-	0
45-	0	180-	0	315-	0
60-	0	195-	0	330-	0
75-	60	210-	0	345-	0
90-	40	225-	0		
105-	0	240-	0		
120-	0	255-	0		

Depth : 1.425 - 19.745 m

Aperture : 0.0 - 62.0 mm

C-40.STR

<<JOINT>>



Number of Data : 54/78

Max : 16.7%

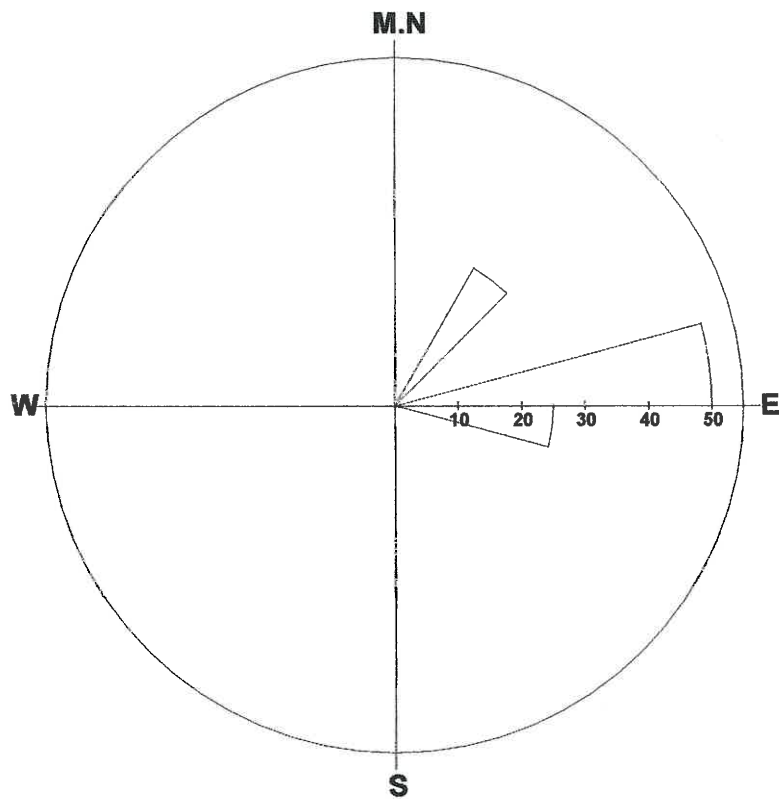
Grouping Angle : 15 deg

Dir	%	Dir	%	Dir	%
0-	6	135-	2	270-	6
15-	2	150-	0	285-	0
30-	2	165-	2	300-	0
45-	0	180-	7	315-	11
60-	0	195-	13	330-	17
75-	7	210-	9	345-	2
90-	4	225-	4		
105-	2	240-	6		
120-	0	255-	0		

Depth : 1.425 - 19.745 m

Aperture : 0.0 - 62.0 mm

C-40.STR
<<PARTING>>



Number of Data : 4/78

Max : 50.0%

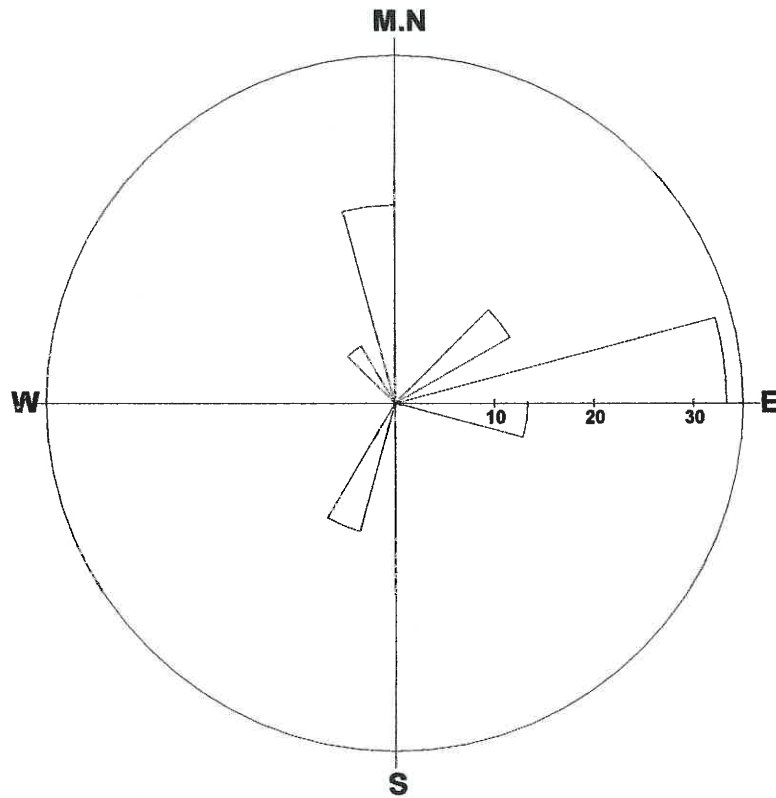
Grouping Angle : 15 deg

Dir	%	Dir	%	Dir	%
0-	0	135-	0	270-	0
15-	0	150-	0	285-	0
30-	25	165-	0	300-	0
45-	0	180-	0	315-	0
60-	0	195-	0	330-	0
75-	50	210-	0	345-	0
90-	25	225-	0		
105-	0	240-	0		
120-	0	255-	0		

Depth : 1.425 - 19.745 m

Aperture : 0.0 - 62.0 mm

C-40.STR
<<SHEAR ZONE>>



Number of Data : 15/78

Max : 33.3%

Grouping Angle : 15 deg

Dir	%	Dir	%	Dir	%
0-	0	135-	0	270-	0
15-	0	150-	0	285-	0
30-	0	165-	0	300-	0
45-	13	180-	0	315-	7
60-	0	195-	13	330-	0
75-	33	210-	0	345-	20
90-	13	225-	0		
105-	0	240-	0		
120-	0	255-	0		

Depth : 1.425 - 19.745 m

Aperture : 0.0 - 62.0 mm

Title: C-40.STR
 Comment: JOINT
 Depth: 1.425 - 19.745 m
 Aperture: 0.0 - 62.0 mm

Sort: 1/ 7
 Form: 5/ 5
 Condition: 11/11
 Remark: 9/ 9

2011/ 8/ 31
 Elevation: 0.000m
 Water Level: 15.977m

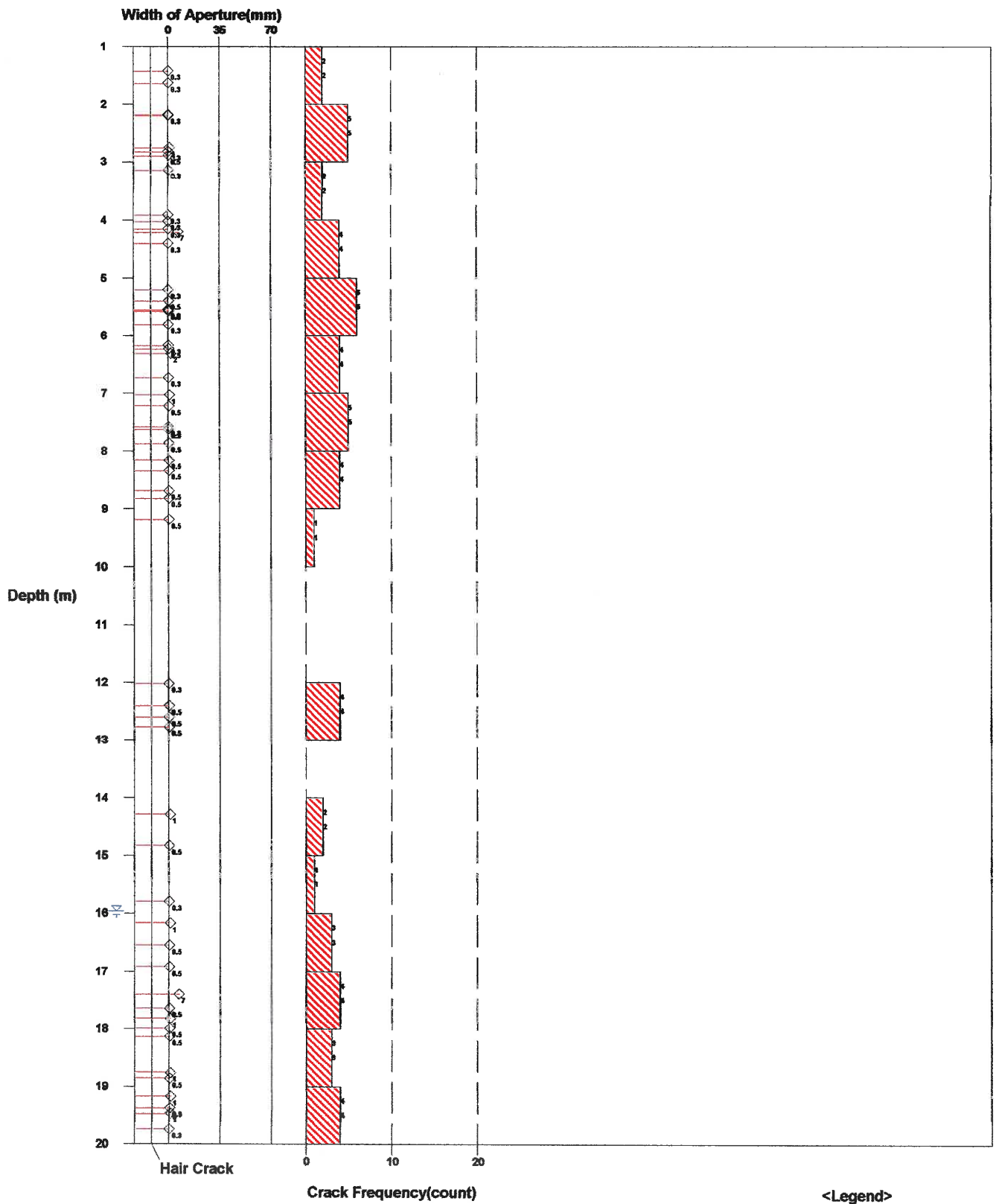


Fig. Rock Mass Condition Graph

Title: C-40.STR
 Comment: PARTING
 Depth: 1.425 - 19.745 m
 Aperture: 0.0 - 62.0 mm

Sort: 1/ 7
 Form: 5/ 5
 Condition: 11/11
 Remark: 9/ 9

2011/ 8/ 31
 Elevation: 0.000m
 Water Level: 15.977m

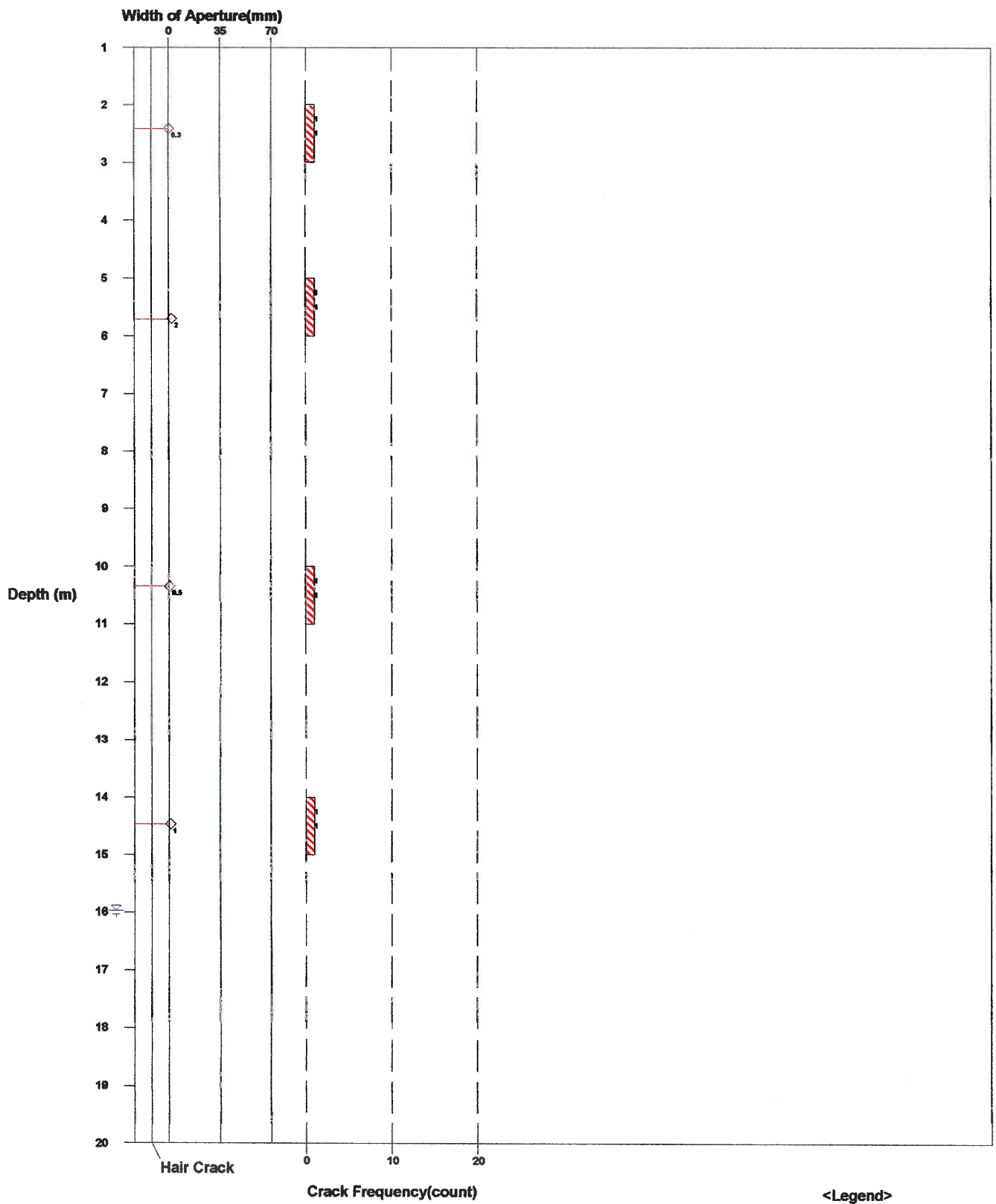


Fig. Rock Mass Condition Graph

☐ All Crack Frequency
☐ Open Crack Frequency
☐ Water Level

Title: C-40.STR
 Comment: SHEAR ZONE
 Depth: 1.425 - 19.745 m
 Aperture: 0.0 - 62.0 mm

Sort: 1/7
 Form: 5/5
 Condition: 11/11
 Remark: 9/9

2011/ 8/ 31
 Elevation: 0.000m
 Water Level: 15.977m

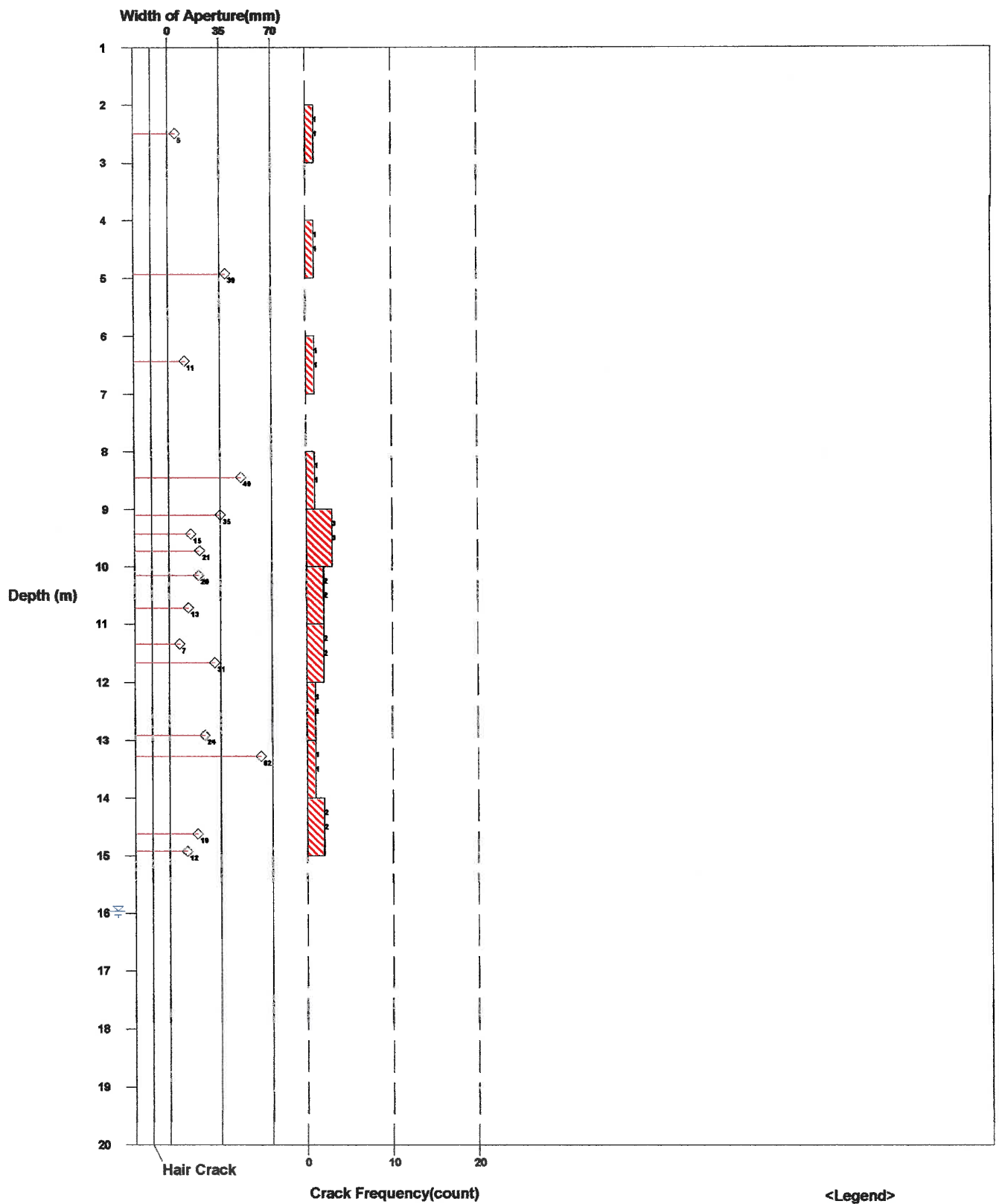
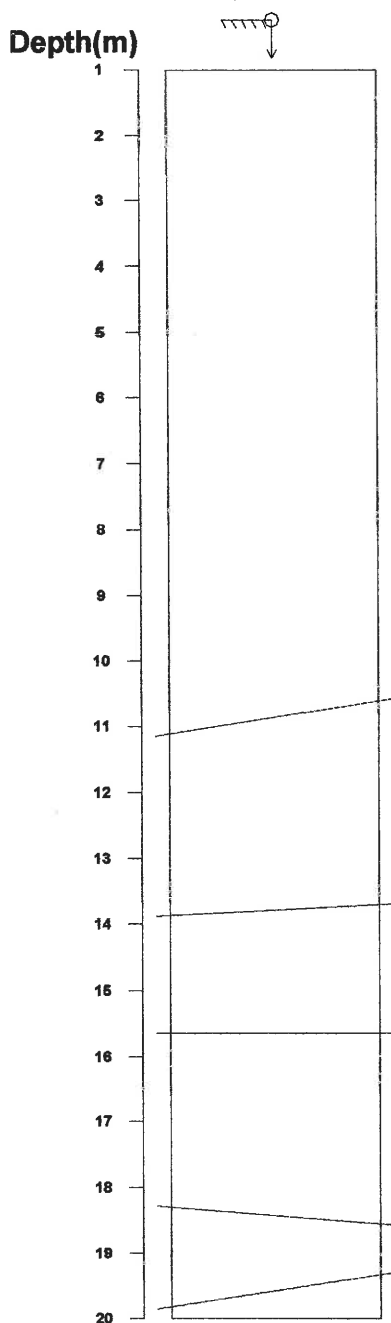


Fig. Rock Mass Condition Graph

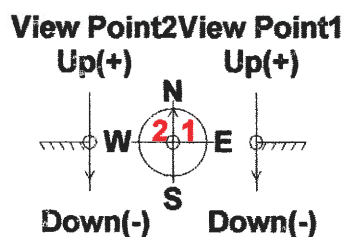
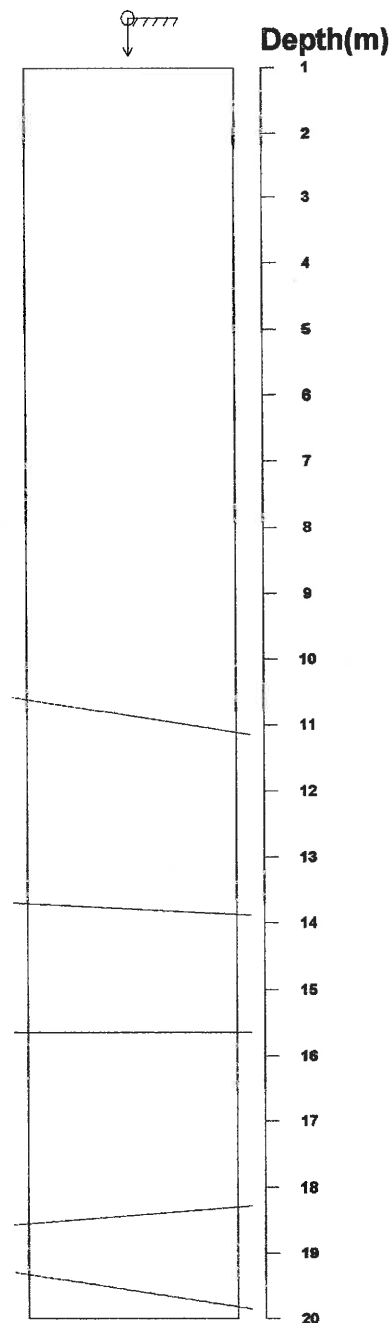
Title: C-40.STR
 Comment: FOLIATION
 Depth: 1.425 - 19.745 m
 Aperture: 0.0 - 62.0 mm

Sort: 1/ 7
 Form: 5/ 5
 Condition: 11/11
 Remark: 9/ 9

View Point 2
Profile of Apparent Borehole



View Point 1
Profile of Apparent Borehole



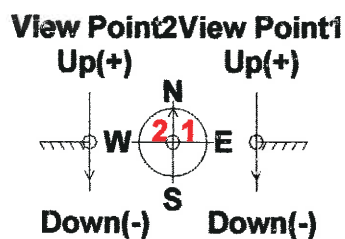
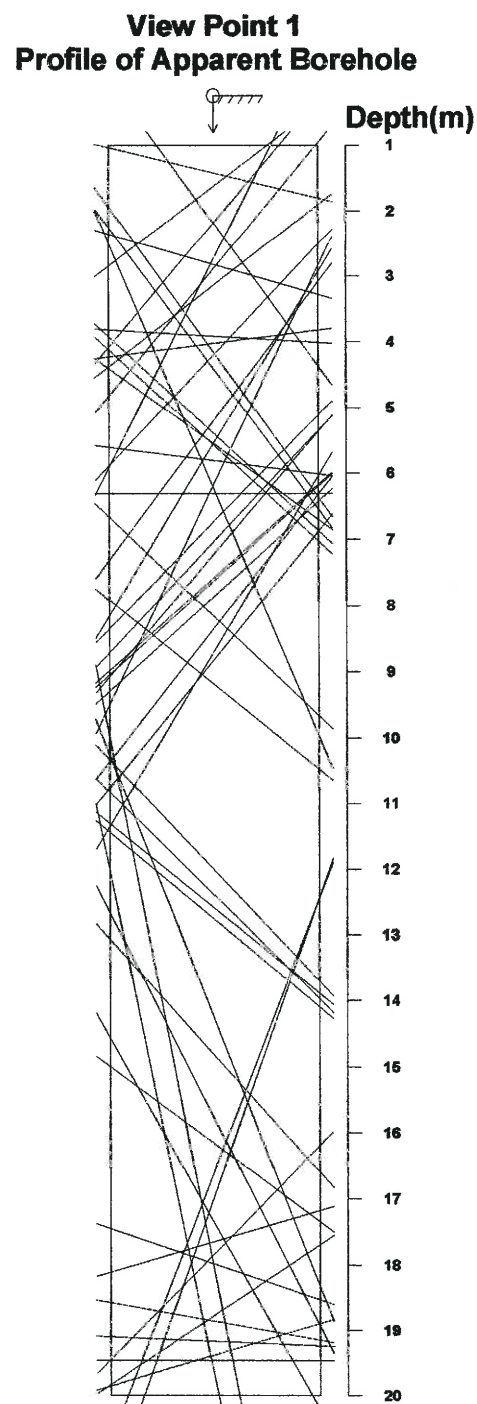
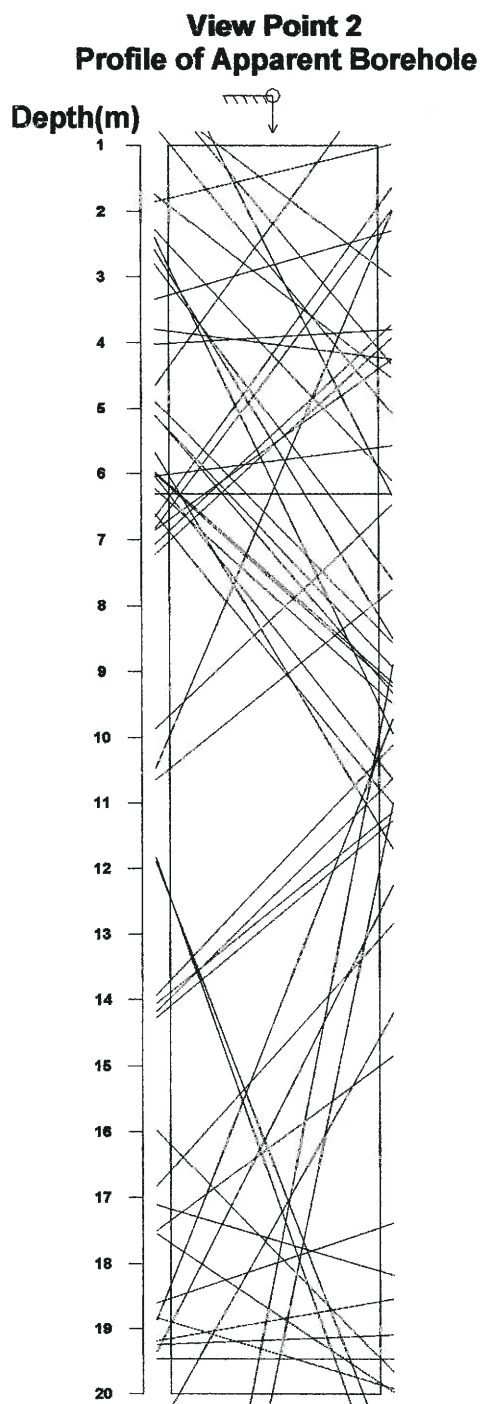
Direction: 0 deg
Inclination: Vertical(Down)

<Legend>
Entrance **G.L.**
Bottom

Fig. Apparent Dip

Title: C-40.STR
 Comment: JOINT
 Depth: 1.425 - 19.745 m
 Aperture: 0.0 - 62.0 mm

Sort: 1/ 7
 Form: 5/ 5
 Condition: 11/11
 Remark: 9/ 9



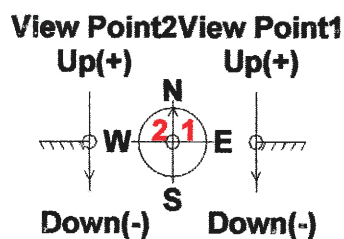
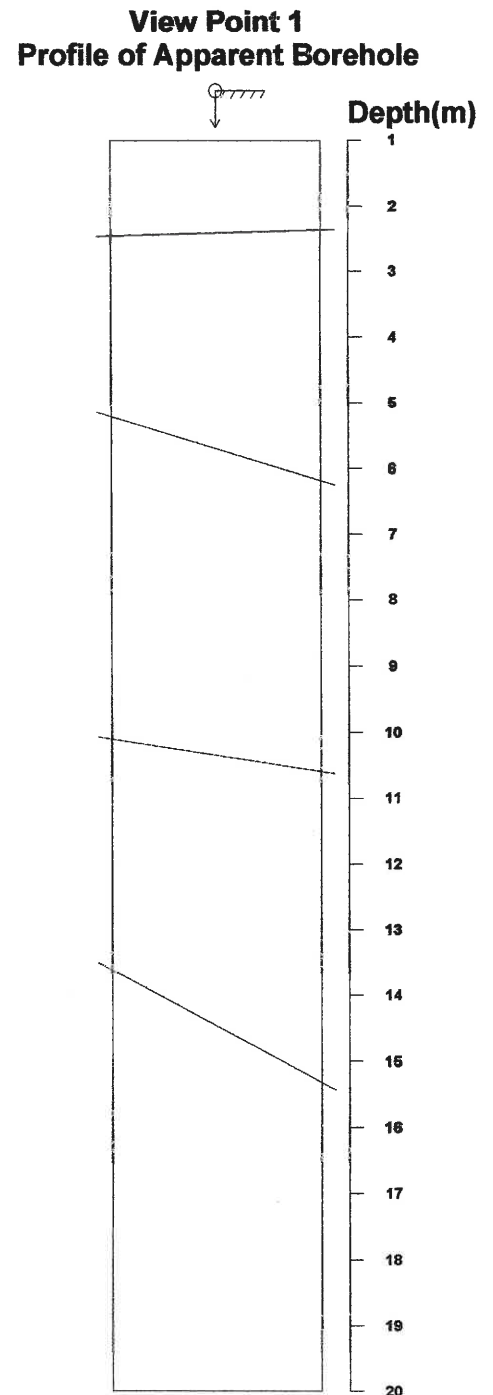
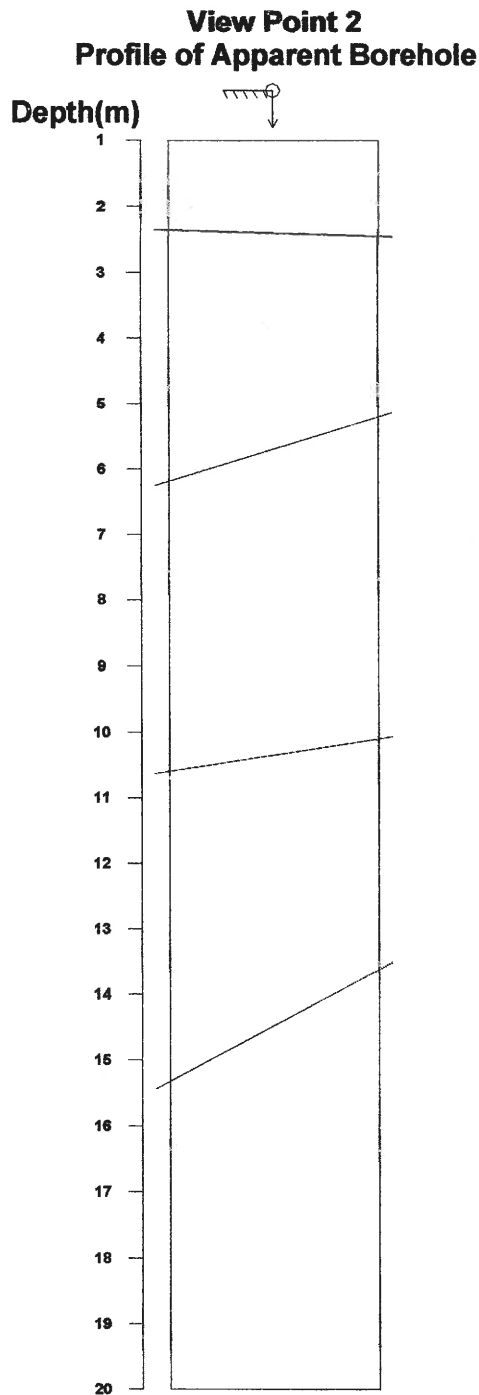
Direction: 0 deg
 Inclination: Vertical(Down)

<Legend>
 Entrance G.L.
 Bottom

Fig. Apparent Dip

Title: C-40.STR
 Comment: PARTING
 Depth: 1.425 - 19.745 m
 Aperture: 0.0 - 62.0 mm

Sort: 1/ 7
 Form: 5/ 5
 Condition: 11/11
 Remark: 9/ 9



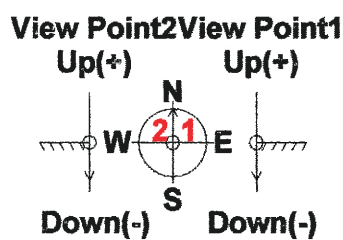
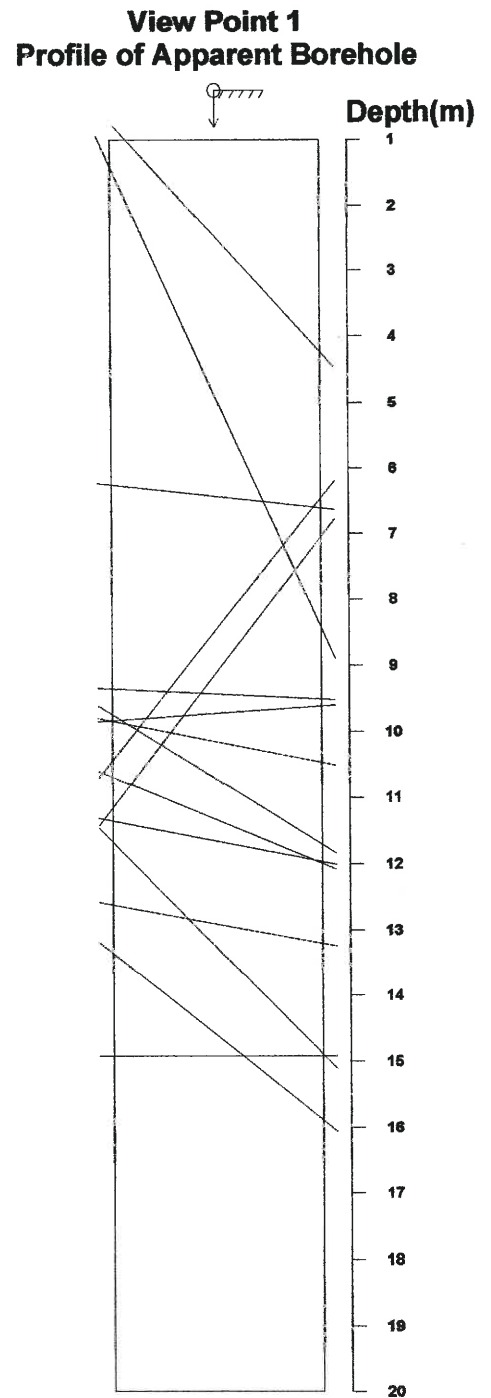
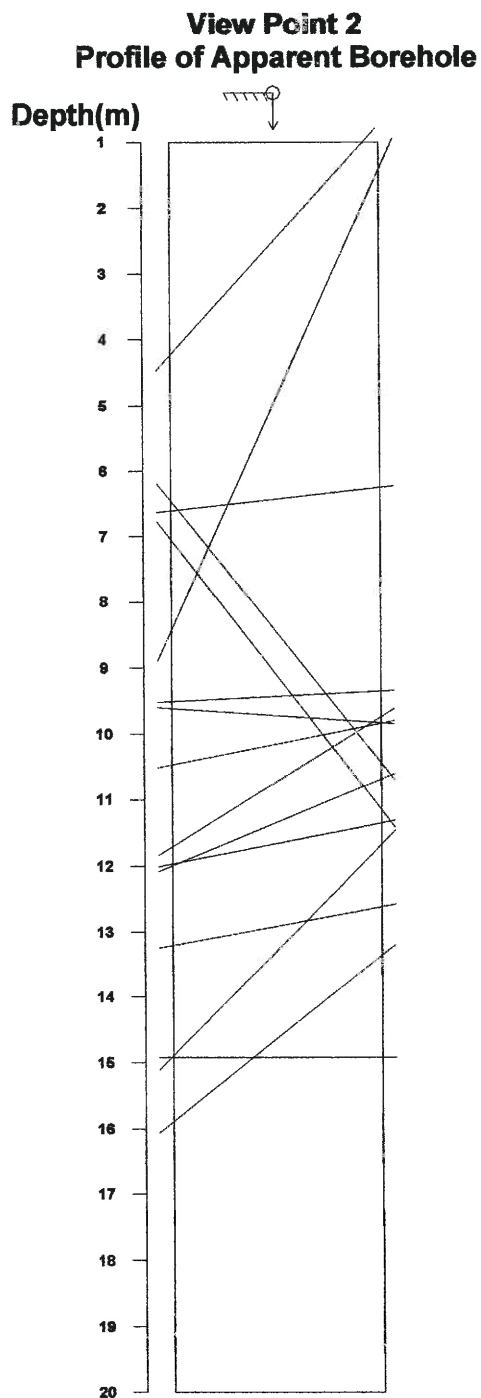
Direction: 0 deg
 Inclination: Vertical(Down)

<Legend>
 Entrance G.L.
 Bottom

Fig. Apparent Dip

Title: C-40.STR
 Comment: SHEAR ZONE
 Depth: 1.425 - 19.745 m
 Aperture: 0.0 - 62.0 mm

Sort: 1/ 7
 Form: 5/ 5
 Condition: 11/11
 Remark: 9/ 9



Direction: 0 deg
 Inclination: Vertical(Down)

<Legend>
 Entrance G.L.
 Bottom

Fig. Apparent Dip