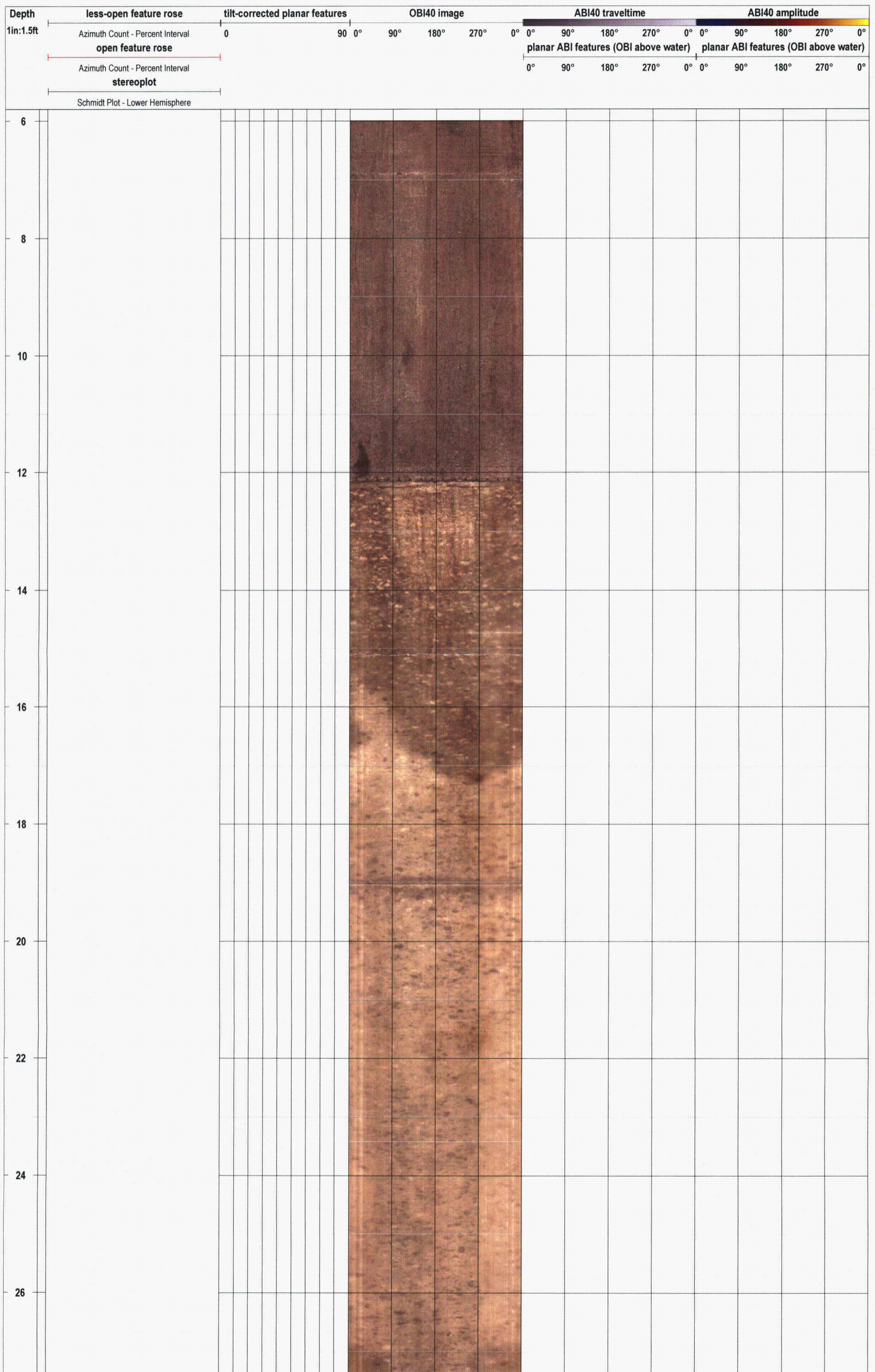
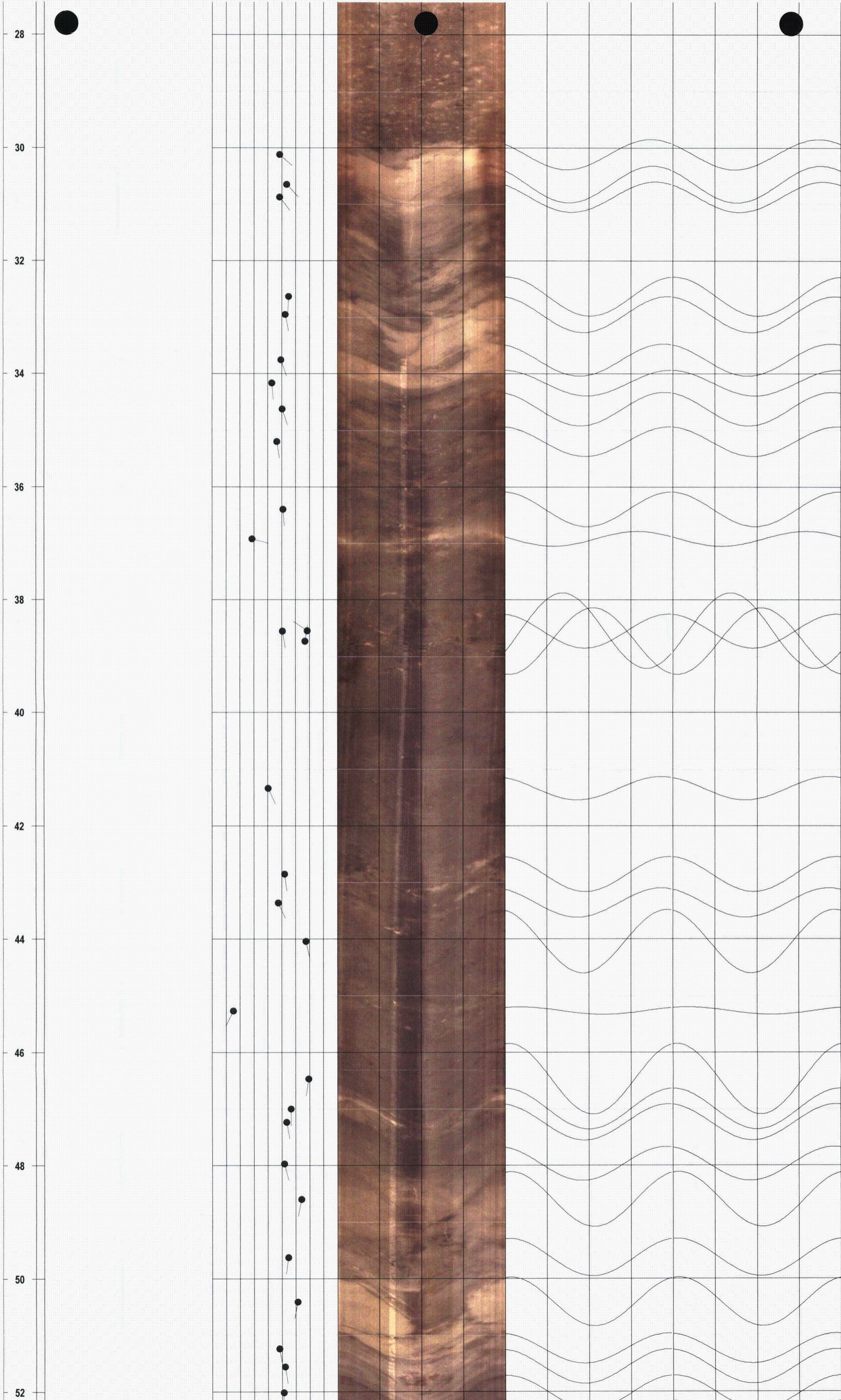
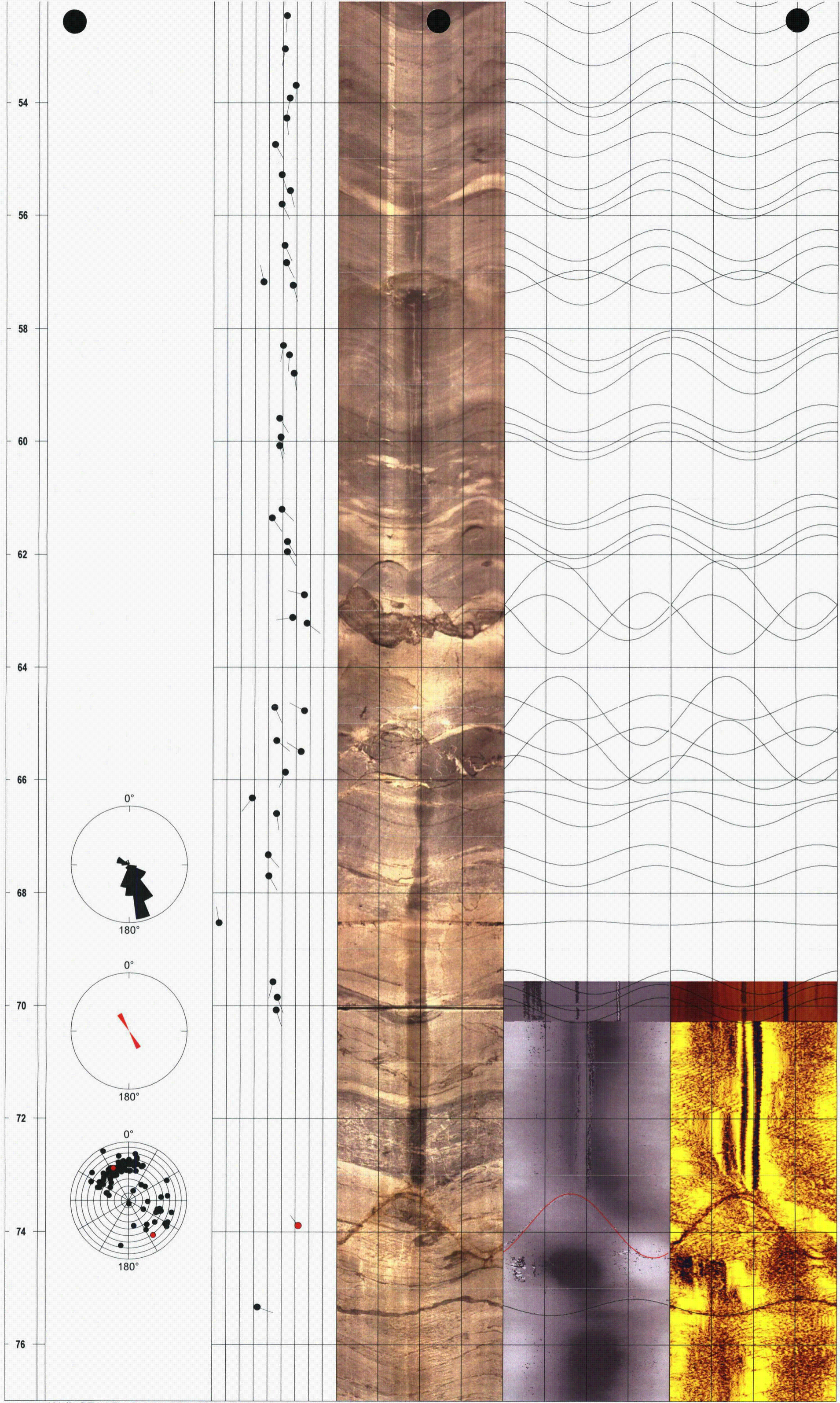
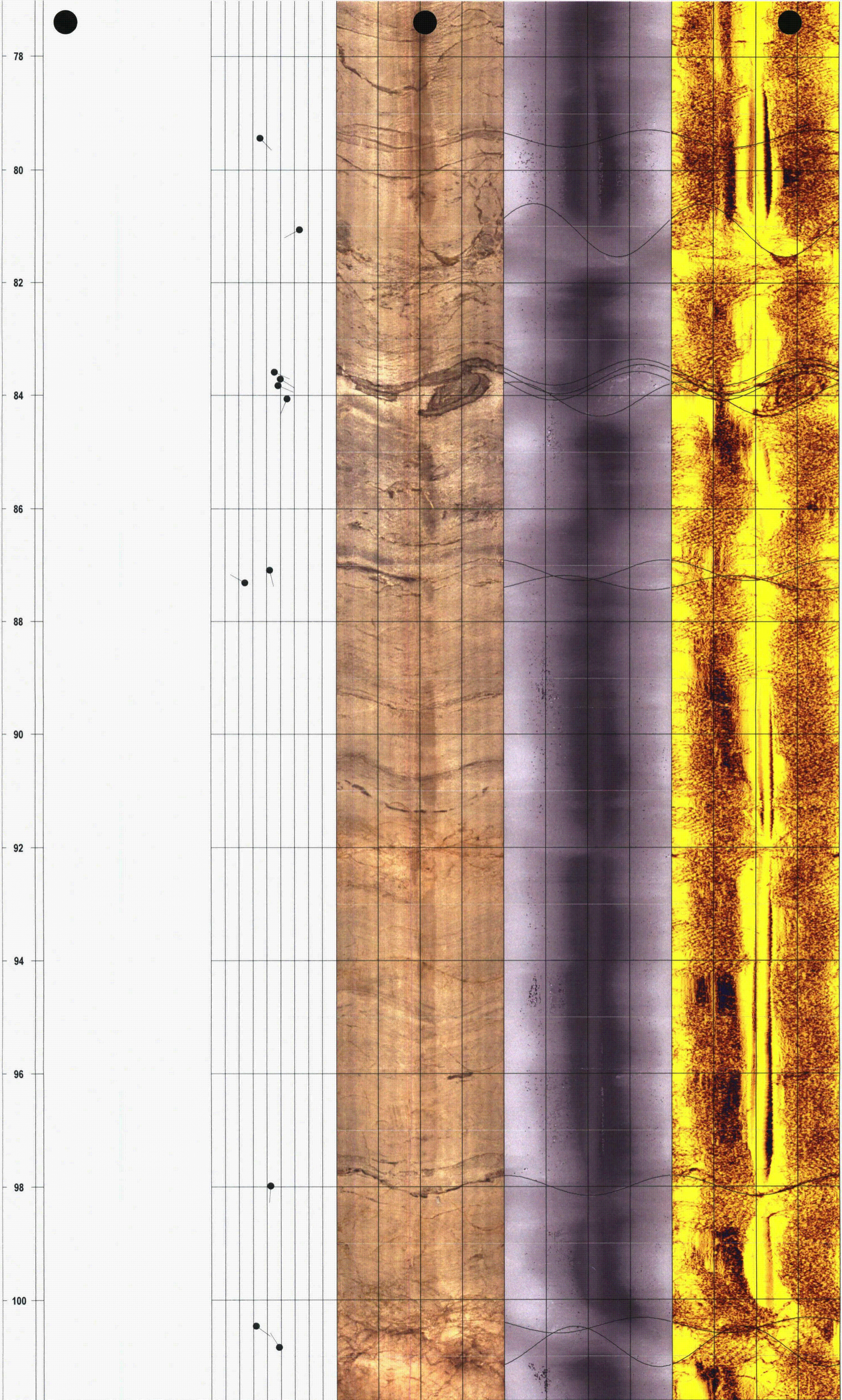


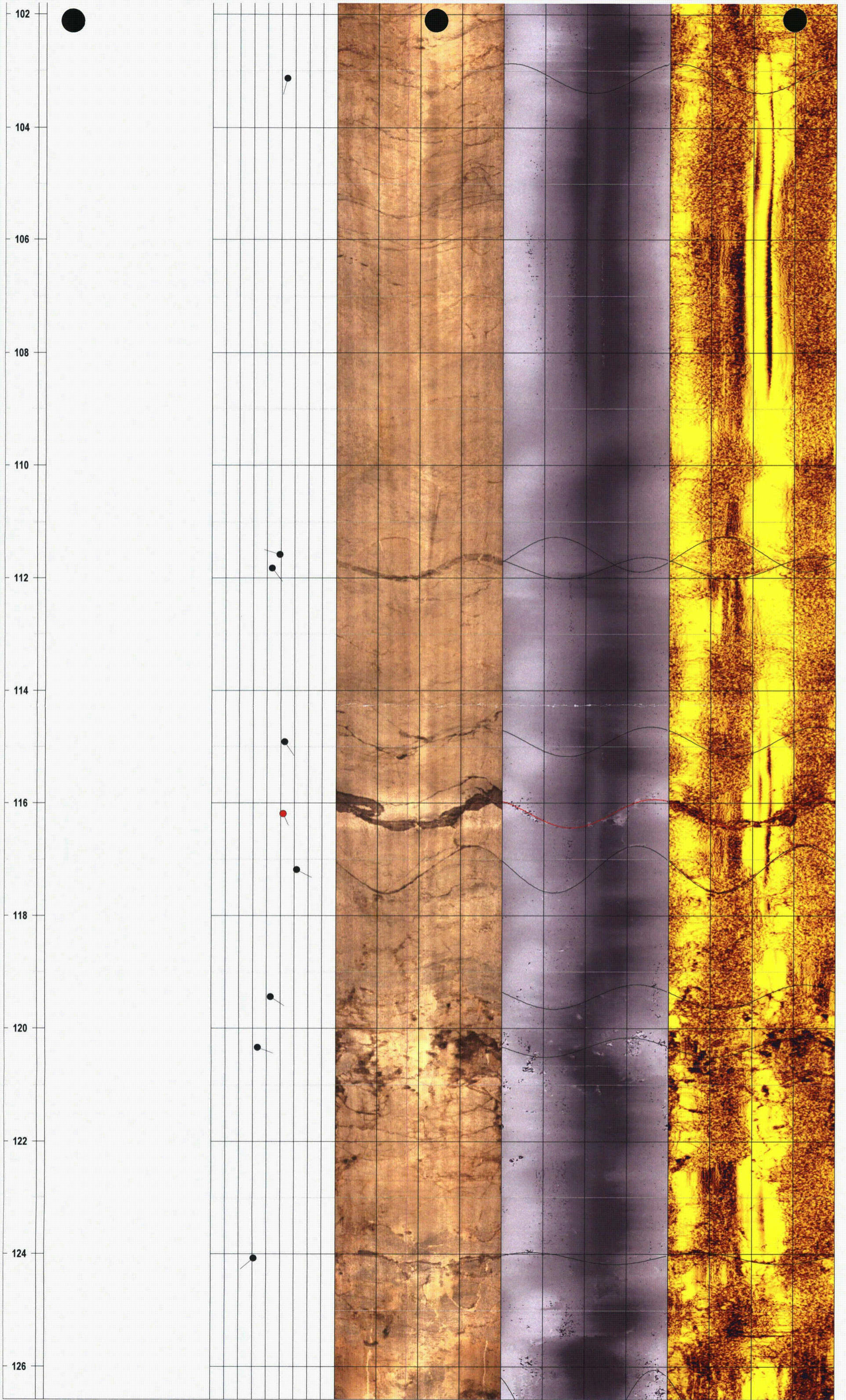
Project - Well: GZA / Buchanan, NY - RW-1 optical & acoustic televiewer logs

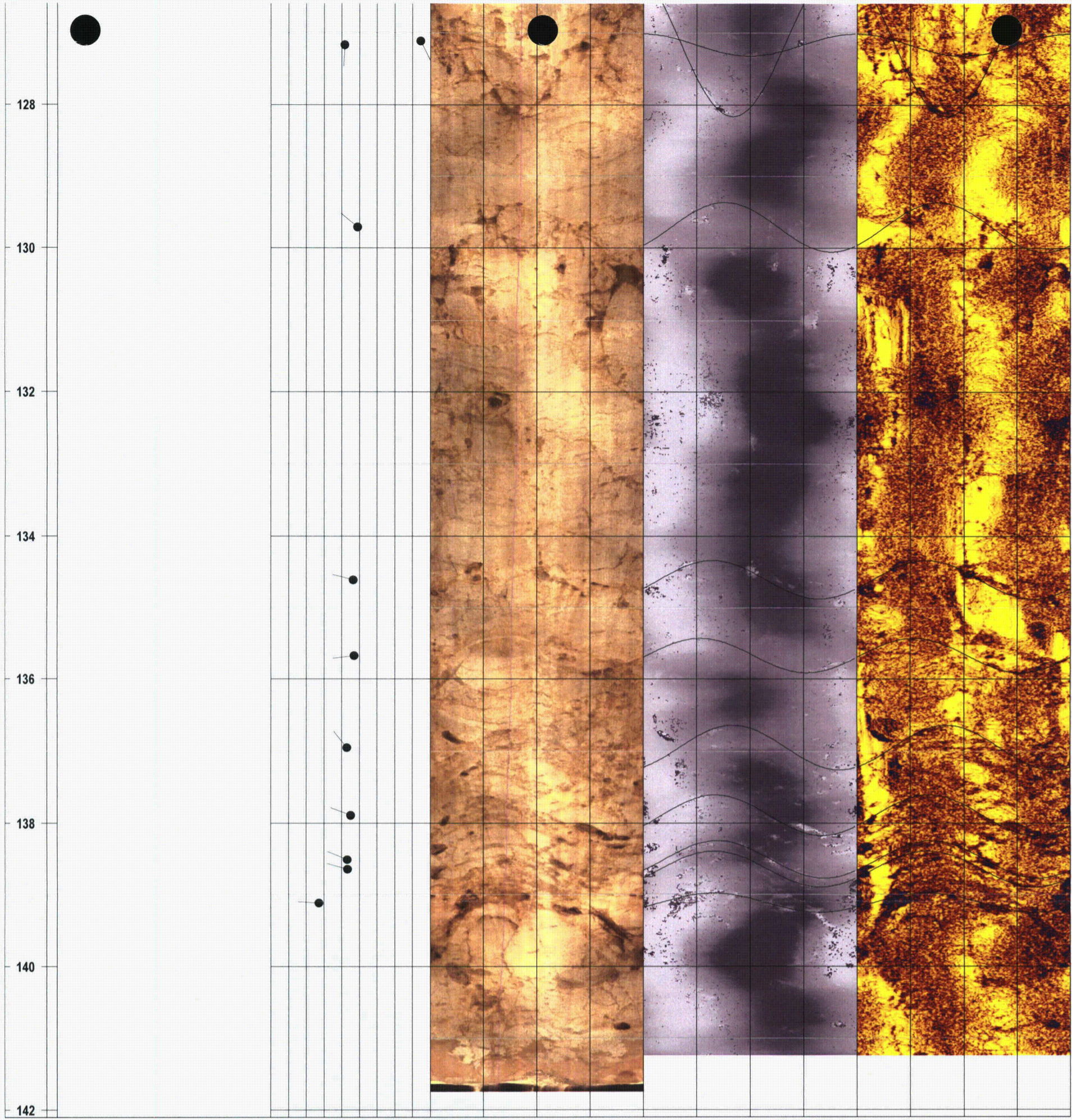












Appendix B

Planar-feature Orientations Measured from Acoustic Televiewer Logs



Fracture Orientations Interpreted from MW-46 Acoustic Televiewer Log  
 Indian Point Site  
 Buchanan, NY  
 Prepared for: GZA  
 105836 - mw46i.xls

depth (feet)	down-dip compass azimuth (degrees)	dip angle (degrees)	interpreted planar feature category
6.64	9.9	55.3	less-open
6.87	21.3	57.9	open
7.17	17.0	61.5	less-open
7.51	9.6	41.9	less-open
7.73	23.9	42.9	less-open
8.12	14.7	47.1	less-open
8.32	11.2	55.7	less-open
8.65	132.2	72.6	less-open
8.69	353.6	61.3	less-open
8.91	358.9	54.9	less-open
9.06	355.1	54.1	less-open
9.18	348.1	53.9	less-open
9.27	349.0	53.4	less-open
9.63	25.9	51.0	less-open
9.82	30.5	61.4	less-open
10.09	42.2	57.5	less-open
10.27	67.8	40.7	open
10.47	355.3	45.8	less-open
10.82	337.3	61.9	less-open
11.22	8.3	55.8	less-open
11.98	74.7	58.5	less-open
12.14	135.6	43.2	less-open
12.57	129.1	62.8	less-open
13.15	137.7	63.2	less-open
14.10	359.5	49.3	less-open
14.44	358.5	51.0	less-open
14.82	127.3	75.7	less-open
15.66	354.4	41.6	less-open
15.96	135.3	47.7	less-open
17.01	161.6	63.1	less-open
17.34	174.9	54.7	less-open
17.57	120.1	58.0	less-open
17.61	9.6	41.2	less-open
18.68	0.8	54.3	less-open
19.10	356.9	66.4	less-open
19.34	176.8	55.4	less-open
19.51	174.19	57.57	less-open
20.27	159.25	51.82	less-open
20.70	172.5	60.4	less-open
21.62	343.2	70.2	less-open
22.65	307.8	74.2	less-open
23.66	288.6	62.1	less-open
25.74	339.5	75.2	less-open
26.59	317.3	71.9	less-open

Note that down-dip compass azimuth is perpendicular to the strike direction.

Note that interpreted down-dip compass azimuths are with respect to magnetic north.

Down-dip azimuths & dip angles were corrected for borehole deviation from vertical.

Fracture Orientations Interpreted from MW-46 Acoustic Televiewer Log  
Indian Point Site  
Buchanan, NY  
Prepared for: GZA  
105836 - mw46i.xls

<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
26.87	170.5	58.6	less-open
27.80	325.8	68.9	less-open
29.58	154.7	89.9	less-open
29.83	182.1	89.5	less-open
30.10	160.7	89.5	less-open

Fracture Orientations Interpreted from MW-53 Acoustic Televiewer Log  
 Indian Point Site  
 Buchanan, NY  
 Prepared for: GZA  
 105836 - mw53i.xls

<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
59.49	212.0	35.9	less-open
59.87	91.4	66.4	less-open
60.26	9.2	22.5	less-open
61.46	186.0	21.4	less-open
61.52	239.1	80.2	less-open
62.51	246.1	76.4	less-open
63.02	234.1	16.3	less-open
63.35	243.8	76.1	less-open
63.96	248.8	80.1	less-open
64.71	249.7	81.5	less-open
64.93	210.7	23.7	less-open
65.30	200.0	20.3	less-open
66.26	110.1	55.4	less-open
66.92	208.2	30.9	less-open
66.93	243.4	73.6	less-open
67.07	49.5	58.9	less-open
67.58	339.7	16.7	less-open
68.22	244.1	78.7	less-open
68.89	101.2	50.7	less-open
69.39	298.0	17.5	less-open
70.71	81.8	43.0	less-open
72.16	225.0	45.6	less-open
72.43	72.0	46.6	less-open
72.64	60.7	44.5	less-open
72.87	81.0	37.1	less-open
72.97	304.5	65.7	less-open
73.11	81.7	46.4	less-open
73.29	267.3	10.4	less-open
73.32	113.4	37.6	less-open
73.64	331.3	32.8	less-open
73.84	83.1	63.7	less-open
73.94	88.7	64.5	less-open
74.26	93.2	52.8	less-open
74.36	96.8	53.6	less-open
74.47	84.6	56.2	less-open
74.69	73.1	50.8	less-open
75.09	94.2	56.8	less-open
75.44	94.9	57.8	less-open
75.55	86.8	52.7	less-open
75.73	127.6	57.6	less-open
76.20	90.8	59.6	less-open
76.35	84.4	35.3	less-open
76.39	80.7	43.6	less-open
76.80	79.2	43.2	less-open

Note that down-dip compass azimuth is perpendicular to the strike direction.

Note that interpreted down-dip compass azimuths are with respect to magnetic north.

Down-dip azimuths & dip angles were corrected for borehole deviation from vertical.

Fracture Orientations Interpreted from MW-53 Acoustic Televiewer Log  
 Indian Point Site  
 Buchanan, NY  
 Prepared for: GZA  
 105836 - mw53i.xls

<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
77.26	97.1	49.9	less-open
77.98	97.1	63.4	less-open
78.86	91.5	57.9	less-open
79.55	81.3	48.3	less-open
79.68	249.3	26.5	less-open
79.73	67.2	40.1	less-open
83.82	283.3	39.1	less-open
83.96	227.8	20.0	less-open
85.22	175.8	82.8	less-open
85.75	181.8	83.3	less-open
87.78	173.7	48.7	less-open
87.98	176.5	18.1	less-open
90.57	278.43	42.81	less-open
90.66	71.17	34.2	less-open
91.50	282.7	76.7	less-open
91.51	124.3	49.1	less-open
92.29	291.9	39.2	less-open
92.76	223.0	23.4	less-open
93.80	300.7	27.2	less-open
94.12	231.0	32.9	less-open
94.51	296.7	54.3	less-open
95.00	165.6	64.2	less-open
95.28	149.3	65.6	less-open
95.92	98.0	50.1	less-open
96.21	213.5	34.0	less-open
96.82	97.5	78.3	less-open
98.29	73.3	75.0	less-open
100.16	86.8	44.0	less-open
100.81	317.7	47.0	less-open
101.34	307.4	39.5	less-open
101.65	285.6	57.5	less-open
103.35	78.0	68.3	less-open
103.37	319.5	42.8	less-open
103.62	241.3	41.6	less-open
103.96	75.8	70.4	less-open
104.57	72.8	68.2	less-open
104.65	273.2	39.4	less-open
104.85	272.8	47.8	less-open
105.48	302.7	24.8	less-open
105.75	281.5	22.7	less-open
106.77	299.6	24.6	less-open
106.85	270.3	26.6	less-open
108.23	176.1	63.2	less-open
109.11	169.84	47.02	less-open

Fracture Orientations Interpreted from MW-53 Acoustic Televiewer Log  
 Indian Point Site  
 Buchanan, NY  
 Prepared for: GZA  
 105836 - mw53i.xls

<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
109.67	0.31	31.98	less-open
110.19	310.4	33.0	less-open
110.61	302.7	42.1	less-open
110.80	313.3	39.0	less-open
111.13	301.4	36.0	less-open
111.56	281.4	30.2	less-open
113.18	282.1	36.0	less-open
113.37	266.8	29.7	less-open
114.51	294.1	17.0	less-open
114.95	321.5	38.6	less-open
116.43	306.7	46.2	less-open
116.66	318.2	42.1	less-open
117.27	312.4	39.0	less-open
117.44	281.6	33.8	less-open
117.78	257.5	27.7	less-open
118.40	306.9	19.2	less-open
119.38	309.7	35.5	less-open
119.61	61.3	90.0	less-open
124.11	161.2	9.3	less-open

Fracture Orientations Interpreted from MW-54 Acoustic Televiewer Log  
 Indian Point Site  
 Buchanan, NY  
 Prepared for: GZA  
 105836 - mw54i.xls

<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
20.71	47.8	68.3	less-open
21.20	70.2	57.6	less-open
21.41	54.9	53.2	less-open
21.52	58.1	52.1	less-open
22.36	74.3	52.4	less-open
22.60	55.1	64.9	less-open
22.79	74.3	44.7	less-open
23.14	85.2	61.3	less-open
23.32	245.7	39.5	less-open
23.37	231.5	26.7	less-open
23.41	235.2	19.8	less-open
23.66	65.8	70.3	less-open
25.25	223.6	31.0	less-open
25.82	252.3	6.3	less-open
26.11	304.8	5.3	less-open
26.45	256.1	8.1	less-open
27.60	60.1	74.7	less-open
28.65	62.8	43.1	less-open
31.48	141.7	64.5	less-open
31.80	303.4	55.2	less-open
32.45	304.8	18.9	less-open
32.53	269.0	18.4	less-open
32.65	110.7	68.5	less-open
32.97	101.1	64.5	less-open
33.16	98.9	68.5	less-open
33.45	80.5	72.4	less-open
33.59	85.1	71.5	less-open
33.79	85.1	72.4	less-open
33.98	85.4	72.0	less-open
34.40	86.7	66.8	less-open
34.51	104.5	65.7	less-open
34.82	79.2	34.7	less-open
35.39	115.7	71.0	less-open
35.54	98.3	60.0	less-open
35.55	127.1	70.7	less-open
36.28	88.5	70.9	less-open
37.22	90.2	80.1	less-open
37.66	94.0	75.4	open
38.47	299.5	45.9	less-open
38.76	278.2	38.4	less-open
39.40	65.4	66.8	less-open
39.43	229.8	28.7	less-open
39.82	99.8	67.3	less-open
41.26	247.7	42.4	less-open

Note that down-dip compass azimuth is perpendicular to the strike direction.

Note that interpreted down-dip compass azimuths are with respect to magnetic north.

Down-dip azimuths & dip angles were corrected for borehole deviation from vertical.

Fracture Orientations Interpreted from MW-54 Acoustic Televiewer Log  
 Indian Point Site  
 Buchanan, NY  
 Prepared for: GZA  
 105836 - mw54i.xls

<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
43.44	356.7	68.7	less-open
43.64	96.9	71.8	less-open
43.64	75.2	61.1	less-open
44.43	112.5	20.7	less-open
45.99	285.6	67.6	less-open
47.02	312.1	76.5	less-open
48.78	90.7	76.9	less-open
49.92	93.2	75.5	less-open
50.11	95.55	65.96	less-open
50.18	137.24	39.76	less-open
50.30	97.0	71.4	less-open
50.74	101.8	66.8	less-open
51.21	91.8	67.2	less-open
52.70	213.1	34.3	less-open
53.21	97.7	58.9	less-open
53.26	126.7	17.8	less-open
54.21	173.1	11.4	less-open
54.29	254.6	4.7	less-open
55.13	116.4	66.0	less-open
55.52	117.7	61.3	less-open
55.82	110.5	56.9	less-open
56.38	99.6	55.3	less-open
56.70	102.4	65.5	less-open
57.66	75.8	76.0	less-open
58.87	345.5	32.6	less-open
59.20	325.5	60.1	less-open
59.43	110.4	38.7	less-open
59.56	334.4	58.7	less-open
60.81	76.6	50.6	less-open
61.18	322.9	63.1	less-open
61.48	289.3	69.8	open
61.77	292.6	54.4	less-open
62.54	342.7	40.4	less-open
62.90	346.7	36.8	less-open
64.24	316.9	21.8	less-open
64.90	131.8	76.8	less-open
65.14	129.3	75.3	less-open
66.50	315.0	67.5	less-open
67.36	0.6	51.5	less-open
68.03	353.27	59.96	less-open
68.45	346.94	56.72	less-open
68.52	358.3	70.8	less-open
68.92	340.8	74.2	less-open
69.29	343.9	64.2	less-open

Fracture Orientations Interpreted from MW-54 Acoustic Televiewer Log  
 Indian Point Site  
 Buchanan, NY  
 Prepared for: GZA  
 105836 - mw54i.xls

<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
69.38	105.2	53.7	less-open
70.25	97.8	60.2	less-open
70.72	115.4	63.4	less-open
70.86	342.3	51.5	less-open
71.09	307.6	43.8	less-open
71.27	324.1	54.9	less-open
72.00	106.8	72.3	less-open
72.19	104.2	69.3	less-open
72.71	108.2	66.6	less-open
73.48	100.3	68.3	less-open
74.00	101.8	67.2	less-open
74.48	106.8	74.3	less-open
75.56	279.3	71.4	less-open
76.13	320.9	75.6	less-open
76.24	102.1	65.0	less-open
77.22	106.1	42.62	less-open
77.25	97.79	65.54	less-open
77.43	111.9	59.8	less-open
78.78	108.2	82.2	less-open
79.9	208.0	54.9	less-open
80.4	200.9	43.2	less-open
80.97	197.1	50.5	less-open
81.31	151.8	36.7	less-open
82.49	64.7	38.6	less-open
84.73	201.1	55.5	less-open
85.38	342.2	68.5	less-open
86.44	330.2	76.1	less-open
87.15	354.5	48.7	less-open
87.27	343.5	48.6	less-open
88.01	326.4	60.7	less-open
88.18	323.1	54.6	less-open
88.95	114.6	72.2	less-open
89.87	330.1	66.8	less-open
90.03	356.9	60.7	less-open
90.32	6.4	67.8	less-open
90.45	90.1	22.3	less-open
91.5	330.31	61.41	less-open
91.8	312.63	54.48	less-open
92.37	147.5	74.6	less-open
92.5	345.8	57.4	less-open
93.33	150.1	65.9	less-open
93.85	147.9	76.8	less-open
95.47	267.1	37.5	less-open
96.07	119.9	57.9	less-open



Fracture Orientations Interpreted from MW-54 Acoustic Televiewer Log  
 Indian Point Site  
 Buchanan, NY  
 Prepared for: GZA  
 105836 - mw54i.xls

<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
97.15	306.9	64.7	less-open
97.62	145.05	64.89	less-open
97.65	297.43	63.7	less-open
97.78	126.9	32.0	less-open
98.28	89.7	49.3	less-open
98.33	203.7	41.3	less-open
98.89	117.7	79.7	less-open
100.31	90.0	64.9	less-open
101.02	140.4	72.7	less-open
101.48	133.7	59.9	less-open
101.99	340.7	68.1	less-open
102.21	86.5	58.4	less-open
102.57	97.69	54.19	less-open
102.96	88.35	57.77	less-open
103.22	93.9	64.2	less-open
104.37	130.5	66.3	less-open
105.64	182.9	60.3	less-open
105.7	296.0	71.7	less-open
106.64	128.6	50.2	less-open
106.65	300.8	72.4	less-open
107.08	301.8	72.0	less-open
107.56	285.5	41.0	less-open
107.82	284.9	58.4	less-open
108.11	137.9	49.5	less-open
108.41	143.9	56.2	less-open
108.86	280.2	49.5	less-open
109.19	145.8	47.1	less-open
109.71	291.7	64.6	less-open
109.73	117.7	47.4	less-open
109.97	129.3	58.5	less-open
110.15	129.6	63.3	less-open
110.52	131.5	64.9	less-open
110.85	147.7	54.2	less-open
111.47	144.8	67.6	less-open
111.78	125.0	66.1	less-open
112.62	320.3	62.8	less-open
112.89	327.8	53.9	less-open
113.88	105.5	67.5	less-open
114.08	108.9	61.8	less-open
115.33	154.1	68.2	less-open
115.48	156.6	67.9	less-open
116.64	145.5	37.2	less-open
117.38	117.4	65.1	less-open
117.96	100.1	57.8	less-open

Fracture Orientations Interpreted from MW-54 Acoustic Televiewer Log  
 Indian Point Site  
 Buchanan, NY  
 Prepared for: GZA  
 105836 - mw54i.xls

<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
118.31	93.8	55.9	less-open
118.44	97.3	56.6	less-open
118.71	110.0	55.2	less-open
119.21	128.0	67.3	less-open
119.85	126.4	61.4	less-open
120.39	131.7	54.2	less-open
120.72	126.9	64.2	less-open
120.78	193.1	43.6	less-open
121.03	114.6	62.1	less-open
121.93	137.7	66.0	less-open
122.49	153.7	75.5	less-open
122.66	299.4	77.0	less-open
122.85	149.8	80.7	less-open
123.08	300.8	73.4	less-open
123.32	177.6	46.3	less-open
123.44	309.9	60.1	less-open
123.94	142.8	60.1	less-open
123.96	283.4	60.4	less-open
124.35	243.0	32.4	less-open
124.59	245.8	33.1	less-open
124.66	253.4	34.8	less-open
124.87	114.2	51.7	less-open
125.01	111.6	80.2	less-open
125.49	113.3	42.0	less-open
125.8	164.6	74.0	less-open
126.33	152.7	75.7	less-open
127.48	297.9	46.9	less-open
129.57	107.9	45.4	less-open
129.83	236.0	55.1	less-open
130.24	103.3	62.9	less-open
130.68	96.4	57.97	less-open
130.89	93.06	38.06	less-open
131.08	106.7	51.1	less-open
131.82	123.8	41.6	less-open
133.03	314.0	29.5	less-open
133.16	308.6	48.8	less-open
133.99	129.5	55.8	less-open
135.09	331.1	56.6	less-open
136.35	111.8	49.4	less-open
137.05	98.6	57.6	less-open
137.38	74.1	43.6	less-open
137.47	115.1	63.8	less-open
137.58	95.4	51.2	less-open
137.78	88.1	56.6	less-open

Fracture Orientations Interpreted from MW-54 Acoustic Televiewer Log  
 Indian Point Site  
 Buchanan, NY  
 Prepared for: GZA  
 105836 - mw54i.xls

<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
137.9	337.5	71.8	less-open
137.97	88.8	68.3	less-open
138.09	295.0	53.4	less-open
138.66	119.7	40.0	less-open
138.94	99.2	50.4	less-open
139.27	122.5	64.1	less-open
139.51	96.5	59.2	less-open
139.57	286.5	61.6	less-open
139.59	124.8	45.9	less-open
139.97	68.8	58.3	less-open
140.15	169.3	49.5	less-open
140.41	44.7	21.1	less-open
140.45	226.2	31.8	less-open
140.5	83.7	63.1	less-open
140.74	219.4	63.0	less-open
141.23	244.3	26.9	less-open
142.24	185.0	36.8	less-open
142.43	119.6	78.1	less-open
144.42	123.5	38.1	less-open
144.49	113.1	67.7	less-open
144.61	114.4	39.6	open
144.84	124.6	41.3	open
145.01	115.8	44.3	open
145.55	95.2	44.0	less-open
145.86	114.4	41.5	less-open
146.02	104.1	46.0	less-open
146.14	97.6	44.5	less-open
146.96	175.8	75.4	less-open
147.41	187.5	36.8	less-open
148.09	325.3	56.8	less-open
148.52	214.8	60.0	less-open
148.68	196.9	35.0	less-open
148.82	178.9	53.2	less-open
149.33	188.4	40.3	less-open
149.42	236.3	48.3	less-open
149.49	183.0	40.8	less-open
149.8	138.8	68.3	less-open
150.35	81.1	49.7	less-open
150.59	90.2	44.7	less-open
150.88	122.6	69.4	less-open
151.01	104.1	62.2	less-open
151.11	357.7	80.9	less-open
151.24	101.0	40.6	less-open
151.41	109.44	47.09	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
151.51	326.3	82.15	less-open
151.56	111.92	50.04	less-open
151.94	122	34.76	less-open
152.29	141.66	34.49	less-open
152.67	136.37	19.09	less-open
152.9	115.89	49.52	less-open
153	128.63	48.23	less-open
154.36	80.63	51.46	less-open
155.49	97.7	80.56	less-open
155.63	74.18	55.48	less-open
155.69	108.38	80.21	less-open
155.85	149.48	55.4	less-open
156.47	141.61	44.08	less-open
156.79	144.32	44.71	less-open
156.99	138.16	44.02	less-open
157.19	181.39	22.46	less-open
157.47	155.01	35.6	less-open
157.75	137.27	24.69	less-open
157.97	117.06	34.56	less-open
158.23	112.25	54.24	less-open
158.56	95.88	60.66	less-open
158.81	92.67	66.08	less-open
159	118.76	63.56	less-open
159.12	106.72	64.15	less-open
159.25	199.16	54.36	less-open
159.38	102.96	57.88	less-open
159.42	200.96	54.21	less-open
159.52	96.59	65.17	less-open
160.2	174.24	23.28	less-open
160.44	109.22	72.43	less-open
161.52	97.62	61.34	less-open
161.59	101.72	72.06	less-open
162.09	67.69	48.77	less-open
162.15	189.75	62.14	less-open
162.29	102.22	55.01	less-open
162.66	270.05	67.01	less-open
162.79	112.42	79.94	less-open
163.16	257.7	23.17	less-open
163.81	41.53	67.27	less-open
164.21	75.9	76.37	less-open
164.5	111.68	76.13	less-open
164.67	136.22	76.2	less-open
166.59	110.49	70.45	less-open
166.77	103.34	56.55	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
167.12	115.01	51.46	less-open
167.78	90.05	48.31	less-open
168.4	104.05	45.28	less-open
168.58	114.26	45.14	less-open
168.8	120.57	50.57	less-open
168.84	299.18	72.09	less-open
169.27	347.29	44.11	less-open
169.48	336.05	39.28	less-open
169.61	126.83	57.28	less-open
170.51	108.91	75.55	less-open
170.9	119.85	55.09	less-open
171.09	145.65	57.06	less-open
172.27	260.45	69.61	less-open
172.59	266.38	74.6	less-open
172.65	301.97	54.36	less-open
173.22	107.06	57.71	less-open
173.55	96.22	57.95	less-open
173.82	319.98	54.15	open
173.9	282.49	63.83	open
174.28	304.29	70.31	open
175.46	99.29	65.69	open
175.68	100.21	58.12	open
176.3	107.58	61.63	less-open
176.53	114.7	60.28	less-open
177.18	131.56	74.71	less-open
177.33	133.76	69.94	less-open
177.56	127.71	70.44	less-open
177.71	115.46	74.43	less-open
178.62	205.95	58.43	less-open
178.62	356.98	34.55	less-open
179.28	135.8	57.17	less-open
179.55	357.58	85.59	less-open
179.58	125.84	51.24	less-open
179.94	111.69	32.09	less-open
180.6	102.82	40.97	less-open
181.37	174.85	68.71	less-open
181.72	337.5	38.08	less-open
181.84	37.21	32.02	less-open
181.94	215.29	69.44	less-open
182.26	252.59	30.92	less-open
182.43	138.73	66.74	less-open
183.02	113.3	71.43	less-open
183.3	353.99	74.75	less-open
183.5	106.78	73.85	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
183.85	348.1	56.02	less-open
183.9	88.16	75.46	less-open
184.48	324.09	45.12	less-open
184.71	104.66	50.09	less-open
185.31	143.73	62.28	less-open
185.43	312.61	58.3	less-open
185.58	202.59	43.8	less-open
186.25	323.48	70.49	less-open
186.28	351.99	49.28	less-open
186.63	108.02	73.31	less-open
186.71	349.1	79.18	less-open
187.43	85.19	64.98	less-open
187.66	191.18	39.72	less-open
187.71	133.74	56.02	less-open
187.98	120.92	63.88	less-open
189.96	174.43	53.43	less-open
189.98	172.49	83.74	less-open
190.27	163.97	44.03	less-open
190.76	201.7	48.33	open
191.04	146.33	46.61	open
192.42	306.81	74.35	open
193.1	101.31	40.74	less-open
193.48	132.81	42.37	less-open
193.95	201.15	59.7	less-open
194	186.46	64.05	less-open
194.17	101.92	63.2	less-open
194.72	151.66	21.52	less-open
194.74	180.84	70.53	less-open
194.94	185.74	66.82	less-open
195.41	320.64	38.82	less-open
195.58	277.04	70.22	less-open
195.95	107.66	36.37	less-open
196.75	131.09	77.23	less-open
196.9	319.35	73	less-open
197.52	305.11	62.94	less-open
197.68	106.8	43.25	less-open
197.8	301.62	57.49	less-open
198.26	165.02	82.73	less-open
198.32	144.69	75.02	less-open
199.48	49.16	41.62	open
200.29	118.03	33.85	less-open
200.52	264.76	50.98	open
200.83	290.39	44.84	less-open
201.07	302.31	50.48	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
201.24	278.07	43.53	less-open
201.72	88.77	51.77	less-open
201.89	111.94	55.94	less-open
201.97	91.13	81.6	open
202.85	134.08	53.6	less-open
203.08	131.77	89.57	less-open
203.46	271.73	89.31	less-open
203.68	268.77	89.79	less-open
203.94	289.97	89.99	less-open
204.3	99.47	89.68	less-open

Fracture Orientations Interpreted from MW-55 Acoustic Televiewer Log  
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 Prepared for: GZA  
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depth (feet)	down-dip compass azimuth (degrees)	dip angle (degrees)	interpreted planar feature category
12.43	73.7	62.7	less-open
13.14	63.9	66.6	less-open
13.38	48.5	66.9	less-open
13.89	316.3	61.1	less-open
14.29	137.6	60.9	less-open
14.61	113.4	54.5	less-open
15.20	170.0	58.7	less-open
15.79	143.1	50.6	less-open
15.91	161.0	79.3	less-open
16.75	226.4	67.8	less-open
16.91	194.7	78.6	less-open
17.09	161.4	60.0	less-open
17.21	142.2	69.7	less-open
18.38	73.2	70.2	less-open
19.43	29.1	43.8	less-open
19.75	108.2	38.3	less-open
20.01	224.4	28.0	less-open
20.45	203.3	24.3	less-open
20.52	51.6	61.4	less-open
20.97	328.2	61.3	less-open
21.94	270.5	40.0	less-open
22.08	310.2	75.2	less-open
23.31	194.2	37.0	less-open
23.55	316.6	68.4	less-open
23.73	246.0	21.6	less-open
24.09	140.7	39.0	less-open
24.50	152.3	43.3	less-open
24.83	174.2	24.4	less-open
25.04	249.8	26.7	less-open
25.29	160.3	30.5	less-open
25.62	200.1	20.9	less-open
26.15	138.5	24.3	less-open
26.95	222.6	31.1	less-open
27.61	197.7	49.5	less-open
27.66	49.2	44.1	less-open
28.36	269.6	68.4	less-open
29.50	255.6	22.9	less-open
30.14	119.8	40.4	less-open
32.29	151.6	39.7	less-open
32.64	85.1	52.9	less-open
32.73	83.2	36.8	less-open
33.07	112.3	73.0	less-open
33.23	94.4	54.6	less-open
33.26	313.6	82.7	less-open

Note that down-dip compass azimuth is perpendicular to the strike direction.

Note that interpreted down-dip compass azimuths are with respect to magnetic north.

Down-dip azimuths & dip angles were corrected for borehole deviation from vertical.



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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
33.57	141.2	63.3	less-open
34.29	315.6	68.3	less-open
34.46	168.6	63.4	less-open
35.59	151.6	72.1	less-open
35.61	290.2	75.7	less-open
36.09	310.1	39.9	less-open
37.59	244.8	53.0	less-open
37.80	140.9	78.2	less-open
38.51	114.6	78.5	less-open
39.67	308.4	69.0	less-open
41.54	185.5	53.9	less-open
43.38	165.0	63.7	less-open
44.26	177.8	63.7	less-open
44.96	226.7	59.0	less-open
45.70	23.9	33.5	less-open
45.89	148.2	75.6	less-open
46.07	203.62	70.35	less-open
46.13	332.99	79.09	less-open
46.72	102.0	45.2	less-open
47.04	105.6	51.3	less-open
47.46	93.7	21.0	open
48.73	70.8	68.1	less-open
49.35	249.2	33.3	less-open
49.84	214.1	12.9	less-open
50.99	283.2	55.2	less-open
51.23	315.3	49.1	less-open
51.40	124.3	14.2	less-open
51.59	317.6	52.7	less-open
52.45	85.7	36.4	less-open
52.91	101.0	66.5	less-open
53.44	80.8	43.1	open
53.61	91.6	43.6	open
54.48	287.2	38.3	less-open
55.31	274.9	16.6	less-open
56.84	63.9	58.8	less-open
57.34	72.1	63.9	less-open
57.78	97.0	58.5	less-open
58.59	303.4	63.0	less-open
58.98	288.8	62.5	less-open
59.13	179.1	63.4	less-open
59.90	321.0	41.8	less-open
60.36	175.2	44.3	less-open
60.44	315.2	56.9	less-open
60.45	78.9	61.5	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
60.68	96.1	73.6	less-open
61.30	75.6	75.9	less-open
61.41	103.2	77.8	less-open
61.55	254	73.52	less-open
61.73	74.96	65.95	less-open
61.82	290.3	41.2	less-open
62.24	268.3	51.6	less-open
62.47	89.2	50.8	less-open
62.70	311.2	43.6	less-open
63.25	304.4	37.5	less-open
63.38	87.5	51.2	less-open
63.50	325.4	55.4	less-open
63.72	238.9	29.7	less-open
64.04	95.2	73.6	less-open
64.38	87.1	68.2	less-open
64.53	280.0	51.7	less-open
64.61	295.5	48.5	less-open
64.90	74.6	31.0	less-open
64.97	85.4	70.3	less-open
65.01	313.3	78.0	less-open
65.51	359.9	52.5	less-open
65.75	170.2	78.9	less-open
65.86	324.3	43.7	less-open
66.06	105.7	51.6	less-open
66.28	62.5	68.9	less-open
66.74	340.3	49.6	less-open
66.97	358.6	55.5	less-open
67.33	5.8	56.8	less-open
67.77	1.3	54.6	less-open
68.07	5.4	46.9	less-open
68.36	338.9	47.3	less-open
68.58	207.9	71.8	less-open
69.24	302.5	48.3	less-open
69.78	121.9	57.0	less-open
69.85	201.0	60.4	less-open
70.55	295.3	38.8	less-open
71.09	270.1	26.7	less-open
71.44	187.9	48.3	less-open
71.75	203.4	59.7	less-open
72.14	93.1	65.7	less-open
72.41	187.4	56.0	less-open
73.92	255.3	27.0	less-open
74.06	178.9	59.6	less-open
74.29	162.8	60.1	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
74.74	330.0	46.9	less-open
75.26	332.0	52.9	less-open
75.96	307.2	5.1	less-open
76.15	296.8	7.5	less-open
76.57	174.6	12.0	less-open

Fracture Orientations Interpreted from MW-56 Optical & Acoustic Televiewer Logs  
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depth (feet)	down-dip compass azimuth (degrees)	dip angle (degrees)	interpreted planar feature category
31.02	193.2	77.7	less-open
32.45	172.6	51.9	less-open
32.56	223.5	79.8	less-open
32.91	228.3	79.4	less-open
33.01	11.8	73.6	less-open
33.68	338.5	40.3	less-open
35.65	144.0	20.1	less-open
36.90	147.2	63.8	less-open
37.81	346.6	49.7	less-open
38.79	5.3	73.1	less-open
39.83	85.6	30.5	less-open
40.01	115.0	34.2	less-open
41.21	13.2	67.1	less-open
41.71	301.2	52.2	less-open
42.54	1.9	59.5	less-open
42.60	155.1	64.4	open
43.33	79.6	20.0	less-open
43.83	0.8	65.0	less-open
44.42	1.0	68.8	less-open
44.83	176.1	66.8	less-open
45.02	4.3	65.8	less-open
45.29	6.9	70.5	less-open
45.70	8.3	73.7	less-open
46.96	173.3	36.4	less-open
47.05	10.0	70.6	less-open
48.10	166.9	17.8	less-open
48.39	4.4	74.6	less-open
50.31	212.2	14.6	less-open
51.62	188.2	3.2	less-open
51.70	329.9	5.7	less-open
51.78	155.6	8.3	less-open
51.94	10.3	9.4	less-open
52.50	6.0	65.7	less-open
52.84	198.0	4.6	less-open
53.20	220.7	62.2	less-open
53.68	341.3	43.8	less-open
54.13	121.1	13.3	less-open
56.09	330.9	38.3	less-open
57.17	351.7	52.6	less-open
57.20	320.9	47.7	less-open
57.22	203.7	37.4	less-open
57.59	200.8	70.3	less-open
57.62	290.5	14.6	less-open
58.17	207.9	78.3	less-open

Note that down-dip compass azimuth is perpendicular to the strike direction.

Note that interpreted down-dip compass azimuths are with respect to magnetic north.

Down-dip azimuths & dip angles were corrected for borehole deviation from vertical.

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
59.12	84.6	8.1	less-open
59.84	119.3	74.4	less-open
60.90	341.3	46.4	less-open
61.10	220.9	68.9	less-open
61.53	223.12	61.57	less-open
61.69	234.02	57.02	less-open
61.80	27.8	9.2	less-open
61.86	147.3	27.2	less-open
62.52	357.3	41.1	less-open
62.52	143.2	67.8	less-open
63.10	274.6	35.7	less-open
63.33	34.3	32.4	less-open
63.94	307.3	36.8	less-open
64.50	303.3	53.4	less-open
65.12	171.8	59.2	less-open
65.40	175.2	58.2	less-open
66.67	328.3	61.1	less-open
67.98	274.2	66.2	less-open
68.04	275.4	62.9	less-open
68.71	230.9	57.0	less-open
69.08	271.2	8.0	less-open
69.29	339.9	7.6	less-open
69.45	173.0	50.2	less-open
69.86	236.5	7.9	less-open
69.97	325.9	18.3	less-open
70.17	276.6	57.6	less-open
70.20	176.3	71.9	less-open
70.33	29.0	45.6	less-open
70.92	294.8	6.0	less-open
71.00	313.7	23.1	less-open
71.02	294.5	65.8	less-open
71.54	277.9	18.2	less-open
71.57	179.0	75.8	less-open
71.68	351.3	39.1	less-open
71.80	19.0	36.1	less-open
72.66	292.75	17.01	less-open
72.85	220.08	79.25	less-open
73.30	224.5	77.9	less-open
73.49	218.8	26.4	less-open
73.79	1.1	32.7	less-open
73.93	171.5	63.2	less-open
74.41	272.7	52.3	less-open
74.73	254.2	45.0	less-open
75.28	142.4	75.3	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
75.59	351.8	24.1	less-open
75.77	206.1	60.7	less-open
76.08	170.7	70.9	less-open
76.61	264.1	57.9	less-open
76.96	258.2	57.5	less-open
77.04	92.8	23.8	less-open
77.07	263.1	56.8	less-open
77.33	170.4	49.3	less-open
77.53	203.97	61.43	less-open
77.54	186.69	58.9	less-open
78.64	161.9	71.6	less-open
78.80	357.0	82.9	less-open
78.92	162.2	54.7	less-open
79.13	171.07	80.07	less-open
79.25	179.42	63.94	less-open
79.39	122.5	78.8	less-open
79.77	255.8	40.1	less-open
79.96	171.5	50.8	less-open
80.5	175.0	23.6	less-open
80.66	178.2	71.3	less-open
80.75	220.7	34.8	less-open
80.83	318.4	53.0	less-open
80.98	178.3	78.0	less-open
81.11	239.4	52.6	less-open
81.19	180.2	75.5	less-open
81.58	181.1	72.7	less-open
81.72	173.8	36.1	less-open
81.9	154.6	70.5	less-open
83.01	185.9	80.3	less-open
83.93	150.2	59.4	less-open
84.27	228.9	31.3	less-open
84.28	341.8	67.2	less-open
84.59	221.0	38.6	less-open
84.86	207.4	54.4	less-open
85.35	235.87	62.96	less-open
85.61	59.54	89.93	less-open
86.14	70.5	87.3	less-open
86.51	215.7	89.5	less-open

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depth (feet)	down-dip compass azimuth (degrees)	dip angle (degrees)	interpreted planar feature category
6.17	133.4	77.5	less-open
6.44	64.8	16.0	open
6.61	300.2	5.1	less-open
6.88	162.4	44.0	less-open
7.36	235.1	36.9	less-open
7.46	41.7	16.4	less-open
7.75	25.6	21.9	less-open
7.86	336.3	8.6	open
8.53	345.4	16.3	less-open
9.12	254.4	72.8	less-open
9.44	352.5	48.0	less-open
10.25	45.9	29.2	less-open
10.52	40.1	18.0	less-open
10.74	355.5	20.8	less-open
10.87	15.1	31.0	less-open
11.03	28.8	25.5	open
11.12	308.4	26.8	less-open
11.24	332.1	27.3	less-open
11.41	99.0	56.1	less-open
11.99	101.7	61.8	less-open
12.20	356.5	18.4	less-open
12.70	41.0	11.0	less-open
13.42	97.9	68.3	less-open
15.90	314.5	16.3	less-open
16.34	4.4	15.5	less-open
16.34	105.8	80.4	less-open
17.61	355.4	16.2	less-open
18.44	172.2	55.9	less-open
19.58	291.9	32.1	less-open
19.82	90.1	67.9	less-open
21.17	7.9	26.3	less-open
21.76	336.3	15.9	less-open
22.01	266.5	22.1	less-open
22.85	311.4	32.7	less-open
22.86	194.6	64.5	less-open
23.76	343.6	47.0	less-open
24.19	131.9	59.8	less-open
25.08	146.6	68.2	less-open
25.76	169.6	69.0	less-open
28.16	109.9	59.0	less-open
28.35	257.3	73.2	less-open
29.15	115.3	73.5	less-open
29.71	279.9	20.8	open
29.77	82.1	74.8	less-open

Note that down-dip compass azimuth is perpendicular to the strike direction.

Note that interpreted down-dip compass azimuths are with respect to magnetic north.

Down-dip azimuths & dip angles were corrected for borehole deviation from vertical.

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
30.12	76.8	74.2	less-open
30.46	90.7	77.5	less-open
30.95	94.5	73.0	less-open
31.81	143.4	77.6	less-open
32.02	129.2	73.3	less-open
32.04	331.4	37.0	less-open
32.37	291.45	33.23	less-open
32.5	247.4	80.52	less-open
32.72	115.1	35.5	less-open
32.87	284.4	60.6	less-open
32.96	286.0	38.2	less-open
33.37	89.9	73.8	less-open
33.37	287.5	73.5	less-open
34.23	298.4	76.8	less-open
34.57	328.7	63.4	less-open
35.30	292.2	46.1	less-open
35.59	105.1	48.3	less-open
35.64	318.2	55.7	less-open
35.81	311.9	21.7	less-open
36.08	303.6	53.3	less-open
36.37	311.8	47.1	less-open
36.53	307.1	53.3	less-open
36.73	87.2	69.4	less-open
36.79	312.2	44.7	less-open
36.97	287.1	47.9	less-open
37.16	307.1	42.9	less-open
38.09	317.2	42.2	less-open
38.31	316.3	56.1	less-open
38.45	126.8	77.5	less-open
38.76	306.4	66.3	less-open
38.85	320.7	65.4	less-open
38.96	311.7	63.9	less-open
39.15	306.6	32.2	less-open
39.38	325.6	53.3	less-open
39.64	316.6	62.8	less-open
39.80	322.6	65.5	less-open
40.03	125.5	76.3	less-open
40.7	215.86	52.44	less-open
41.35	57.99	39.92	less-open
41.44	214.6	46.7	less-open
42.13	121.6	57.1	less-open
43.03	30.7	15.2	less-open
43.06	312.4	74.4	less-open
43.26	324.9	28.7	less-open



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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
43.37	290.4	67.5	less-open
43.66	115.8	52.1	less-open
43.78	83.3	82.9	less-open
43.84	92.6	53.7	less-open
44.11	72.2	66.9	less-open
44.13	349.5	76.3	less-open
44.33	85.8	78.0	less-open
44.91	327.7	89.7	less-open
45.17	309.9	89.3	less-open
45.73	305.7	89.7	less-open

Fracture Orientations Interpreted from MW-58 Acoustic Televiewer Log  
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 Prepared for: GZA  
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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
16.76	344.0	36.5	less-open
16.95	340.6	42.7	less-open
17.41	171.3	66.7	less-open
17.82	357.3	67.1	less-open
17.99	349.1	58.7	less-open
18.30	11.6	53.0	less-open
18.72	204.5	72.9	less-open
18.75	20.8	32.8	less-open
18.86	3.6	67.5	less-open
19.14	15.5	29.9	less-open
19.28	352.8	34.8	less-open
19.43	344.0	29.1	open
19.96	164.5	66.1	less-open
20.28	335.1	57.0	less-open
20.34	162.4	70.2	less-open
20.53	170.9	62.2	less-open
20.64	340.2	35.2	less-open
20.94	158.1	65.8	less-open
21.03	345.1	31.5	less-open
21.11	351.1	34.7	less-open
21.30	351.7	41.8	less-open
21.56	342.8	41.9	open
21.81	354.9	39.1	less-open
21.97	343.2	39.8	less-open
22.40	314.6	55.7	less-open
22.94	320.7	26.7	less-open
23.23	307.1	49.5	less-open
23.38	133.0	73.2	less-open
23.49	333.7	49.8	less-open
23.92	325.0	45.9	less-open
24.04	118.5	71.6	less-open
24.40	319.2	43.7	less-open
25.06	121.2	63.5	less-open
25.10	326.9	63.3	less-open
25.16	338.6	56.7	less-open
25.31	117.1	68.6	less-open
25.38	328.5	61.5	less-open
26.18	317.0	61.1	less-open
26.28	322.3	45.0	less-open
26.46	342.8	46.6	less-open
26.94	120.7	65.7	less-open
27.37	345.2	58.7	less-open
28.08	341.1	59.6	less-open
28.36	176.3	62.7	less-open

Note that down-dip compass azimuth is perpendicular to the strike direction.

Note that interpreted down-dip compass azimuths are with respect to magnetic north.

Down-dip azimuths & dip angles were corrected for borehole deviation from vertical.

Fracture Orientations Interpreted from MW-58 Acoustic Televiewer Log  
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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
28.98	339.7	58.4	less-open
29.42	328.8	40.7	less-open
30.06	319.5	43.1	less-open
30.77	312.6	42.0	less-open
31.20	149.6	64.0	less-open
32.00	311.1	36.1	less-open
32.46	313.7	32.7	less-open
33.06	290.8	35.1	less-open
33.20	300.3	28.6	less-open
33.56	310.0	32.1	less-open
34.03	339.91	41.14	less-open
34.37	132.58	60.75	less-open
34.68	282.7	29.2	less-open
35.02	113.0	66.1	less-open
35.37	102.5	62.2	less-open
35.84	100.5	67.9	less-open
35.92	332.5	66.3	less-open
36.38	312.3	43.3	less-open
36.52	111.3	64.8	less-open
36.60	302.6	53.1	less-open
37.10	312.6	45.5	less-open
37.22	326.6	40.7	less-open
37.58	323.4	39.8	less-open
38.17	314.9	50.4	less-open
38.25	314.7	47.1	less-open
38.40	311.2	58.6	less-open
38.82	332.8	32.9	less-open
39.06	95.3	70.2	less-open
39.22	298.1	40.0	less-open
39.54	297.3	47.8	less-open
39.94	327.2	56.5	less-open
40.08	96.7	70.8	less-open
40.62	94.2	70.8	less-open
41.16	313.6	32.5	less-open
41.35	78.7	70.7	less-open
41.53	296.7	24.6	less-open
42.27	305.6	52.1	less-open
42.70	333.9	42.2	less-open
43.04	301.5	47.4	less-open
43.16	295.0	52.6	less-open
43.74	316.6	46.6	less-open
44.46	101.8	63.02	less-open
44.5	335.9	45.32	less-open
45.32	342.3	39.0	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
46.27	301.2	40.8	less-open
46.98	310.0	34.9	less-open
48.89	351.1	22.6	less-open
52.82	96.6	58.6	less-open
53.46	107.2	65.3	less-open
53.77	107.0	65.8	less-open
54.36	305.0	38.6	open
56.84	290.2	40.6	less-open
57.63	295.5	50.2	less-open
58.41	162.9	73.1	less-open
59.02	105.5	63.5	less-open
59.22	302.9	61.9	less-open
59.63	282.8	64.5	less-open
60.77	297.1	61.0	less-open
60.99	101.8	66.7	less-open
61.41	122.4	63.8	less-open
61.77	103.0	67.9	less-open
63.25	301.09	37.77	less-open
64.06	71.9	66.14	less-open
64.34	143.2	63.6	less-open
64.38	319.0	35.9	less-open
64.81	291.8	41.4	less-open
64.92	181.4	67.9	less-open
65.13	177.0	69.9	less-open
65.22	170.8	68.1	less-open
65.71	178.8	70.2	less-open
65.96	323.2	53.5	less-open
66.21	110.7	61.3	less-open
66.33	107.7	65.6	less-open
66.68	288.1	55.7	less-open
66.94	111.8	59.3	less-open
67.26	115.3	67.2	less-open
67.89	100.5	69.9	less-open
67.96	108.1	71.0	less-open
68.07	305.7	53.9	less-open
68.28	108.8	72.9	less-open
68.93	95.9	65.1	less-open
70.24	192.9	6.4	less-open

Fracture Orientations Interpreted from MW-59 Acoustic Televiewer Log  
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depth (feet)	down-dip compass azimuth (degrees)	dip angle (degrees)	interpreted planar feature category
20.77	253.8	29.3	open
21.69	221.7	62.6	less-open
21.76	213.1	72.2	less-open
23.51	225.7	60.8	open
23.68	217.0	69.7	less-open
24.14	220.2	78.0	less-open
24.14	219.1	75.4	less-open
24.43	132.3	48.1	less-open
24.77	354.0	50.4	less-open
24.99	207.9	77.2	less-open
25.11	357.9	45.9	less-open
25.19	150.9	41.4	less-open
25.33	135.7	34.0	less-open
25.51	147.6	51.7	less-open
26.12	142.0	57.0	less-open
26.19	147.3	58.4	less-open
26.79	188.0	84.0	less-open
26.88	135.2	59.9	less-open
26.94	324.5	39.0	less-open
27.18	284.7	46.2	less-open
27.25	141.6	37.0	less-open
27.30	187.5	85.0	less-open
27.34	129.3	48.1	less-open
27.99	123.9	59.1	less-open
28.14	159.0	46.2	less-open
28.45	229.4	47.1	less-open
28.83	132.6	65.8	less-open
29.09	135.8	51.6	less-open
29.40	120.2	53.7	less-open
29.43	317.1	38.4	open
29.81	141.3	54.8	less-open
30.13	324.8	43.2	open
30.19	148.0	61.5	less-open
30.43	313.3	41.8	open
30.56	317.5	45.1	less-open
31.17	195.2	41.0	less-open
31.54	183.5	38.5	less-open
31.78	304.2	45.4	less-open
32.04	305.6	46.4	less-open
32.15	114.5	65.7	less-open
32.34	120.6	57.4	less-open
32.46	120.9	58.8	less-open
32.59	211.3	64.0	less-open
32.83	123.8	68.3	less-open

Note that down-dip compass azimuth is perpendicular to the strike direction.

Note that interpreted down-dip compass azimuths are with respect to magnetic north.

Down-dip azimuths & dip angles were corrected for borehole deviation from vertical.

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
33.54	127.6	45.9	less-open
34.06	204.3	63.6	less-open
34.16	7.1	63.4	less-open
34.27	199.7	46.9	less-open
34.99	340.4	69.6	less-open
35.68	182.9	55.9	less-open
36.78	116.3	60.4	less-open
37.07	189.0	59.3	less-open
37.63	137.0	55.1	less-open
37.88	132.2	56.9	less-open
38.22	198.2	70.9	less-open
38.64	175.4	62.1	less-open
39.66	165.5	42.6	less-open
41.65	339.1	43.9	less-open
42.24	212.49	15.37	less-open
42.47	254.48	49.31	less-open
42.79	156.3	54.4	less-open
42.90	157.8	45.8	less-open
43.11	146.5	23.5	less-open
43.37	120.2	47.9	less-open
43.47	180.5	18.6	less-open
43.52	197.0	66.7	less-open
43.68	179.6	40.7	less-open
44.60	182.0	45.7	less-open
44.66	214.0	14.0	less-open
45.10	195.7	65.7	less-open
45.95	167.4	51.6	less-open
46.44	325.3	50.5	less-open
46.44	186.8	38.4	less-open
46.69	208.9	60.7	less-open
47.60	338.7	42.2	less-open
47.99	329.3	45.2	less-open
48.25	135.7	55.0	less-open
48.37	157.4	59.2	less-open
48.46	322.6	43.1	less-open
48.67	140.6	56.8	less-open
49.41	310.2	35.3	less-open
49.75	305.3	36.4	less-open
50.23	343.3	42.2	less-open
50.41	328.9	40.3	less-open
50.57	211.7	45.0	less-open
50.93	135.0	48.0	less-open
51.43	332.3	42.3	less-open
51.65	323.8	30.0	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
51.78	320.0	42.8	less-open
52.16	314.36	42.53	less-open
52.49	203.3	60.67	less-open
52.93	320.0	36.1	less-open
53.06	193.1	66.2	less-open
53.31	338.0	39.4	less-open
53.48	319.9	36.0	less-open
54.20	324.8	34.5	less-open
55.03	213.7	71.5	less-open
55.31	203.4	70.2	less-open
55.44	326.6	35.9	less-open
55.49	208.0	66.2	less-open
55.66	297.7	31.1	less-open
56.74	311.9	18.1	less-open
57.18	330.7	39.2	less-open
57.30	318.3	33.7	less-open
57.46	324.0	47.3	less-open
57.80	189.0	74.8	less-open
58.15	319.6	26.6	less-open
58.23	312.2	31.6	less-open
58.27	309.7	48.4	less-open
58.42	314.4	36.1	less-open
58.76	186.1	56.0	less-open
59.88	335.6	36.2	less-open
60.12	351.1	40.1	less-open
60.31	329.1	33.6	less-open
60.42	340.0	38.4	less-open
60.64	184.3	73.4	less-open
60.66	323.3	34.6	less-open
61.01	104.0	71.5	less-open
61.48	116.1	66.1	less-open
61.96	328.3	40.4	less-open
62.14	144.1	62.3	less-open
62.6	12.0	9.6	less-open
62.94	310.4	22.3	less-open
63.2	134.8	66.7	less-open
63.23	313.5	51.3	less-open
63.81	123.0	26.0	less-open
65.41	297.1	30.2	less-open
65.5	301.1	31.0	less-open
67.42	158.5	60.1	less-open
67.66	320.2	40.3	less-open
67.92	321.8	41.2	less-open
68.12	318.8	41.3	less-open

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Buchanan, NY  
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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
70.44	321.5	44.9	less-open
70.83	305.9	45.6	less-open
70.92	310.8	45.1	less-open
70.98	312.44	47.62	less-open
71.18	317.72	39.27	less-open
71.32	306.7	41.6	less-open
71.44	306.6	37.3	less-open
72.32	304.0	39.4	less-open
73.58	120.6	61.9	less-open
73.71	33.5	13.6	less-open
74.25	315.6	22.7	less-open
74.72	304.5	29.3	less-open
75.17	341.8	87.4	less-open
76.25	315.8	87.6	less-open



Fracture Orientations Interpreted from MW-60 Acoustic Televiewer Log  
 Indian Point Site  
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depth (feet)	down-dip compass azimuth (degrees)	dip angle (degrees)	interpreted planar feature category
10.40	296.3	36.1	less-open
11.96	104.0	35.7	less-open
12.08	300.3	50.7	less-open
13.20	304.0	38.7	less-open
14.40	275.6	62.4	less-open
14.49	143.9	34.6	less-open
16.02	103.6	57.7	less-open
16.86	115.8	59.7	less-open
18.00	282.9	61.1	less-open
19.74	37.5	49.1	less-open
20.11	249.5	31.2	less-open
20.46	112.6	47.3	less-open
22.94	315.4	51.9	less-open
27.05	134.0	35.0	less-open
29.75	99.8	53.9	less-open
36.27	221.8	56.7	less-open
36.47	331.5	61.0	less-open
36.99	302.7	48.2	open
37.39	323.2	39.3	less-open
38.54	24.7	13.4	less-open
39.31	118.5	63.4	less-open
39.73	110.4	59.4	less-open
40.60	125.3	72.0	less-open
43.20	205.1	57.5	less-open
49.41	132.4	45.1	less-open
50.09	147.4	86.1	less-open
52.30	313.7	42.3	less-open
52.64	9.1	31.1	less-open
52.82	336.8	41.9	less-open
53.12	354.1	61.8	less-open
53.64	331.3	23.5	less-open
54.14	273.9	67.7	less-open
54.14	258.6	59.2	less-open
54.42	341.7	22.1	open
55.83	324.8	58.6	open
55.86	253.8	4.9	less-open
56.89	325.8	42.0	less-open
57.06	303.9	58.3	less-open
57.62	326.3	73.2	less-open
58.23	327.4	74.8	less-open
58.78	336.8	77.8	less-open
59.00	351.8	76.3	less-open
60.03	306.9	52.6	less-open
60.07	147.5	52.1	less-open

Note that down-dip compass azimuth is perpendicular to the strike direction.

Note that interpreted down-dip compass azimuths are with respect to magnetic north.

Down-dip azimuths & dip angles were corrected for borehole deviation from vertical.

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
60.65	336.8	61.9	less-open
60.67	148.9	70.3	less-open
61.21	109.9	36.2	less-open
61.99	330.3	53.0	less-open
62.23	325.0	59.4	less-open
63.97	307.1	63.1	less-open
64.16	325.5	68.7	less-open
64.25	311.8	49.4	less-open
64.32	201.8	67.6	less-open
64.33	298.9	45.9	less-open
65.01	197.35	72.97	less-open
65.45	312.86	63.37	less-open
66.44	307.7	63.6	less-open
68.01	323.4	77.1	less-open
68.29	300.2	74.1	less-open
69.39	126.8	42.4	less-open
69.59	131.2	39.7	less-open
69.83	292.7	67.5	less-open
70.53	309.2	70.3	less-open
70.67	103.4	53.9	less-open
71.50	323.6	70.7	less-open
71.80	319.6	63.5	less-open
72.77	319.5	60.2	less-open
73.78	324.9	59.6	less-open
74.10	309.6	61.8	less-open
74.40	274.5	67.2	less-open
74.83	80.5	15.5	less-open
74.95	185.8	65.6	less-open
75.20	186.9	68.5	less-open
75.96	315.5	46.2	less-open
76.39	323.4	42.6	less-open
77.23	353.9	17.3	less-open
77.34	38.5	21.2	less-open
78.12	284.1	68.3	less-open
78.69	220.5	79.9	less-open
84.49	318.3	48.1	less-open
84.71	324.9	56.1	less-open
85.36	303.7	48.1	less-open
90.85	31.4	31.4	less-open
91.38	158.4	73.3	less-open
91.64	310.8	32.4	less-open
92.9	169.38	80.19	less-open
93.3	191.92	32.75	less-open
93.73	172.1	66.6	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
93.81	232.1	45.3	less-open
94.97	303.6	39.1	less-open
95.18	195.9	53.5	less-open
95.39	98.1	77.3	less-open
96.46	327.0	44.5	less-open
98.00	288.1	68.1	less-open
98.23	311.6	69.6	less-open
99.24	313.0	66.3	less-open
99.43	341.8	64.4	less-open
100.51	267.9	67.9	less-open
100.83	135.4	58.0	less-open
101.41	158.3	26.9	less-open
102.04	151.1	31.3	less-open
102.54	192.9	67.8	less-open
102.94	191.2	79.4	less-open
103.87	209.9	81.2	less-open
104.51	357.4	49.7	less-open
104.85	344.1	46.6	less-open
107.14	93.6	67.0	less-open
107.23	139.0	44.3	less-open
107.82	94.5	19.7	less-open
108.3	126.3	27.6	less-open
108.86	334.8	76.3	less-open
109.35	309.5	70.1	less-open
110.23	319.3	58.7	less-open
110.43	311.4	58.7	less-open
110.61	313.3	59.5	less-open
111.11	192.3	31.1	less-open
111.35	150.0	33.6	less-open
111.84	167.5	66.4	less-open
112.38	148.7	65.4	less-open
113.09	307.1	32.5	less-open
113.72	329.2	31.4	less-open
114.14	111.6	55.3	less-open
116.59	14.3	53.0	less-open
116.89	99.6	66.8	less-open
117.53	117.0	44.7	less-open
117.91	117.7	37.1	less-open
118.37	139.2	38.5	less-open
118.62	120.6	46.7	less-open
119.19	329.5	73.8	less-open
119.59	145.6	50.4	less-open
119.87	143.2	36.5	less-open
120.16	120.86	29.75	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
120.64	118.02	67.72	less-open
122.21	136.9	29.9	less-open
122.37	123.2	41.5	less-open
122.54	126.0	29.7	less-open
122.7	146.6	35.6	less-open
122.93	131.4	33.7	less-open
123.15	130.8	42.4	less-open
123.35	126.0	29.9	less-open
125.48	118.1	57.0	less-open
126.31	139.8	35.1	less-open
127.91	141.48	38.06	less-open
128.72	332.45	58.01	less-open
128.78	144.1	40.2	less-open
129.39	155.9	53.1	less-open
129.83	133.6	46.7	less-open
131.48	119.5	28.8	less-open
133.43	165.6	33.2	less-open
135.7	132.4	56.3	less-open
136.57	143.5	33.1	open
136.69	122.1	31.3	open
136.82	123.7	30.3	less-open
137.19	132.7	45.3	less-open
137.34	119.4	46.6	less-open
137.87	146.9	33.0	less-open
138.06	176.7	26.3	less-open
139.39	150.8	33.4	less-open
140.27	131.2	34.9	less-open
140.74	133.9	34.2	less-open
141.43	106.5	40.4	less-open
142.39	141.5	33.0	less-open
142.5	142.2	28.7	less-open
142.63	149.9	27.8	less-open
142.94	137.2	30.1	less-open
145.3	127.9	31.1	less-open
145.38	130.2	30.1	less-open
146.06	151.5	33.2	less-open
146.73	137.1	34.0	less-open
148.94	321.3	80.5	less-open
149.76	133.2	33.0	less-open
150.12	129.0	35.1	less-open
150.35	130.7	38.7	less-open
150.46	119.7	35.2	less-open
150.58	116.2	42.8	less-open
151.1	157.0	37.2	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
151.51	158.6	36.7	less-open
151.62	150.1	34.3	less-open
151.68	146.2	31.7	less-open
151.84	143.7	30.2	less-open
152.01	143.4	35.1	less-open
152.55	144.5	38.7	less-open
152.81	141.9	37.6	less-open
153.39	134.3	39.4	less-open
153.46	147.9	37.8	less-open
153.74	140.9	38.9	less-open
155.22	117.0	45.1	less-open
155.58	128.6	51.7	less-open
155.66	342.4	34.3	less-open
155.86	124.9	35.6	open
156.17	142.8	35.7	less-open
156.49	123.4	45.6	less-open
156.91	152.7	38.7	less-open
157.09	142.1	37.2	less-open
158.08	133.7	42.1	less-open
158.3	320.2	70.8	less-open
158.42	115.2	48.3	less-open
158.9	104.4	60.3	less-open
159.11	95.3	75.4	less-open
160.01	99.7	77.5	less-open
160.54	305.9	42.2	less-open
160.83	93.4	77.3	less-open
162.32	312.4	46.4	less-open
162.55	4.4	26.0	less-open
163.17	118.2	49.93	less-open
163.43	115.25	61.31	less-open
163.81	310.1	48.5	less-open
163.92	105.7	58.3	less-open
164.64	323.3	74.6	less-open
165.75	3.0	45.2	less-open
166.1	131.9	48.6	less-open
166.44	150.5	46.7	less-open
166.79	230.8	30.3	less-open
166.87	240.9	30.3	less-open
167.59	141.5	25.5	less-open
167.96	168.2	29.5	less-open
168.6	164.2	33.4	less-open
169.15	147.4	37.3	less-open
169.76	137.2	36.0	less-open
170.01	140.3	46.1	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
170.5	179.7	38.7	less-open
171.33	165.6	35.5	less-open
172.15	135.5	42.0	less-open
172.77	340.7	32.7	less-open
173.92	123.0	34.3	less-open
174.02	160.0	40.8	open
174.25	7.8	53.2	less-open
174.31	100.4	35.5	less-open
174.67	135.3	44.5	less-open
174.92	128.2	41.4	less-open
175.11	151.7	34.5	less-open
175.79	179.4	51.3	less-open
176.98	193.5	40.0	less-open
177.26	127.4	47.1	less-open
177.75	121.6	44.9	less-open
178.07	108.3	50.0	open
178.31	111.9	45.7	open
179.73	336.4	54.6	less-open
180.35	123.4	54.8	less-open
180.85	263.5	66.5	less-open
182.89	268.7	78.7	less-open
184.41	123.3	63.0	less-open
186.09	219.5	33.0	less-open
186.31	264.8	67.7	less-open
187.15	317.3	66.3	less-open
187.83	276.3	64.5	less-open
188.27	114.2	60.8	less-open
189.48	344.8	54.3	less-open
189.98	109.2	55.9	less-open
190.74	139.3	31.4	less-open
190.91	109.0	57.6	less-open
191.56	132.5	47.1	less-open
192.04	110.6	53.71	less-open
192.27	351.37	75.1	less-open
192.91	116.9	52.3	less-open
193.4	114.9	39.3	less-open
193.65	140.1	38.6	less-open
193.71	165.7	32.6	less-open
193.9	129.4	40.5	less-open
194.13	129.4	53.2	less-open
194.41	139.4	42.9	less-open
195.27	101.0	62.9	less-open
195.54	93.2	71.9	less-open
197.4	122.53	46.45	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
198.21	230.33	27.44	less-open
199.28	162.06	53.05	less-open
200.14	116.4	89.22	less-open
200.31	152.88	89.64	less-open
200.52	233.74	88.98	less-open
200.95	121.87	89.1	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
43.33	35.9	38.3	less-open
43.47	95.5	68.3	less-open
44.24	351.6	50.0	less-open
44.28	99.9	71.1	less-open
44.46	327.2	50.8	less-open
44.56	347.2	32.2	less-open
44.77	346.3	33.4	less-open
44.82	105.2	74.2	less-open
45.40	315.6	44.6	less-open
45.80	98.5	63.9	less-open
46.10	100.7	67.0	less-open
46.48	105.9	64.3	less-open
46.77	331.1	31.5	less-open
47.01	92.8	51.8	less-open
47.38	331.4	49.6	less-open
47.65	292.9	33.8	less-open
47.97	117.7	73.2	less-open
47.98	102.3	73.0	less-open
48.31	109.2	68.9	less-open
48.89	337.6	21.2	less-open
49.14	98.5	64.8	less-open
49.83	111.8	70.0	less-open
50.44	90.0	69.5	less-open
50.63	99.3	74.3	less-open
51.40	94.9	77.7	less-open
51.67	100.1	72.2	less-open
52.71	11.7	24.5	less-open
52.95	99.0	72.4	less-open
53.32	306.1	38.7	less-open
53.44	203.3	72.9	less-open
53.82	300.6	35.3	less-open
53.89	107.9	68.9	less-open
54.26	206.8	69.2	less-open
54.71	207.4	65.3	less-open
54.97	213.7	67.6	less-open
55.12	204.9	63.8	less-open
55.35	207.2	71.4	less-open
55.84	300.8	44.9	less-open
56.20	309.6	43.1	less-open
56.73	198.6	73.3	less-open
57.74	74.2	12.2	less-open
58.29	85.2	68.2	less-open
58.70	66.5	75.5	less-open
58.70	108.1	67.7	less-open

Note that down-dip compass azimuth is perpendicular to the strike direction.

Note that interpreted down-dip compass azimuths are with respect to magnetic north.

Down-dip azimuths & dip angles were corrected for borehole deviation from vertical.



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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
59.43	312.0	49.1	less-open
60.12	104.9	66.7	less-open
60.33	197.2	81.0	less-open
60.43	291.01	65.26	less-open
61.73	5.58	24.04	less-open
62.36	306.8	31.7	less-open
62.73	99.58	67.95	less-open
63	300.07	64.71	less-open
63.61	208.7	60.1	less-open
63.84	111.3	63.5	less-open
64.65	100.0	65.8	less-open
64.78	213.5	59.6	less-open
64.94	303.2	46.6	less-open
65.35	108.3	70.5	less-open
65.89	111.7	67.7	less-open
66.36	112.5	63.7	less-open
66.56	122.2	64.8	less-open
66.92	110.3	62.7	less-open
67.54	109.0	49.7	less-open
67.86	104.0	67.8	less-open
68.16	283.7	42.9	less-open
68.29	99.0	74.7	less-open
68.38	93.3	58.3	less-open
68.82	97.4	64.8	less-open
69.19	215.7	67.2	less-open
69.83	220.4	71.7	less-open
70.09	116.0	61.7	less-open
71.06	114.9	60.0	less-open
71.45	130.4	61.9	less-open
72.05	107.2	67.4	less-open
72.09	209.1	58.5	less-open
72.22	100.4	70.3	less-open
72.64	295.4	36.4	less-open
72.72	90.5	67.1	less-open
73.46	119.2	65.5	less-open
73.85	346.1	45.7	less-open
74.13	108.9	65.4	less-open
74.29	344.76	45.71	less-open
74.55	306.53	60.33	less-open
74.93	351.2	49.7	less-open
75.12	107.5	62.8	less-open
75.38	117.5	67.4	less-open
75.64	107.7	67.5	less-open
75.89	352.2	48.6	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
76.02	355.5	52.1	less-open
76.46	112.2	70.7	less-open
76.82	357.3	36.6	less-open
77.33	300.6	26.5	less-open
78.19	2.9	55.3	less-open
78.56	127.1	63.0	less-open
79.56	110.2	64.1	less-open
81.07	262.3	69.5	less-open
81.48	318.5	54.3	less-open
81.60	347.7	54.7	less-open
81.67	306.4	38.3	less-open
82.28	332.0	28.2	less-open
82.53	1.1	23.5	open
82.88	337.7	35.1	less-open
82.95	355.3	45.5	less-open
82.99	94.5	69.6	less-open
83.02	304.8	45.7	less-open
83.26	122.0	72.0	less-open
84.02	305.3	38.2	less-open
84.4	279.7	61.5	less-open
84.81	108.4	66.6	less-open
85.95	34.3	32.8	less-open
86.49	349.5	48.7	less-open
86.68	104.4	69.1	less-open
87.44	112.1	67.8	less-open
87.83	67.7	68.3	less-open
88.01	102.5	67.7	less-open
88.66	112.3	68.7	less-open
88.8	286.2	48.2	less-open
89.82	325.0	47.7	less-open
89.98	289.4	54.1	less-open
90.35	338.8	30.9	less-open
90.72	331.3	56.5	less-open
90.84	1.6	52.8	less-open
91.04	108.4	65.0	less-open
91.09	296.1	50.4	less-open
91.75	354.8	56.1	less-open
92.53	325.1	52.1	less-open
92.68	320.4	48.3	less-open
93	356.7	53.62	less-open
93.47	330.48	64.81	less-open
93.59	357.1	54.3	less-open
93.7	303.6	53.9	less-open
94.19	327.0	43.8	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
94.46	322.0	43.5	less-open
94.65	319.2	46.9	less-open
95.09	321.0	48.9	less-open
95.91	328.5	47.8	less-open
97.76	278.0	47.8	less-open
99.14	105.1	61.9	less-open
99.17	308.41	44.25	less-open
99.61	304.96	62.27	less-open
100.51	311.6	41.5	less-open
100.78	356.9	55.7	less-open
100.97	344.5	25.3	less-open
103.47	115.5	63.8	less-open
103.57	114.8	61.6	less-open
103.72	316.3	39.8	less-open
104.45	87.5	63.1	less-open
105.87	303.7	60.8	less-open
106.43	113.8	59.2	less-open
106.86	282.5	56.1	less-open
107.54	29.6	53.5	less-open
108.05	29.6	56.8	less-open
108.86	252.0	50.2	less-open
109.21	302.7	45.9	less-open
110.54	307.5	36.3	less-open
110.77	310.9	41.7	less-open
111.1	110.5	62.8	less-open
111.23	293.4	36.0	less-open
111.82	107.8	66.2	less-open
113.15	314.8	38.1	less-open
113.3	305.8	39.9	less-open
114.7	312.2	37.3	less-open
115.95	1.0	43.1	less-open
116.56	359.6	52.3	less-open
116.74	111.4	66.2	less-open
117.49	336.6	50.4	less-open
117.73	316.9	47.8	less-open
117.99	50.0	44.5	less-open
118.14	111.4	66.2	less-open
118.98	96.6	64.1	less-open
119.33	302.6	43.2	less-open
119.88	115.9	60.9	less-open
120.41	295.8	49.9	less-open
120.65	108.5	63.8	less-open
120.66	329.1	32.6	less-open
120.98	101.6	66.2	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
120.99	2.9	37.6	less-open
121.36	315.0	46.6	less-open
121.64	309.9	43.0	less-open
122.18	296.2	38.7	less-open
122.6	340.8	48.8	less-open
122.89	294.8	67.7	less-open
123.41	324.7	57.0	less-open
123.8	311.7	75.7	less-open
123.86	127.1	58.9	less-open
124.75	295.9	60.3	less-open
124.92	52.2	60.8	less-open
128.82	61.4	67.8	less-open
129.8	351.1	69.6	less-open
130.28	281.2	33.4	less-open
130.56	121.5	59.9	less-open
130.85	115.6	56.4	less-open
131	281.5	37.7	less-open
132.23	101.4	67.3	less-open
132.57	109.0	64.0	less-open
132.85	119.5	62.0	less-open
133.13	92.3	67.5	less-open
134.06	119.4	63.1	less-open
134.32	118.5	62.1	less-open
134.65	106.2	58.5	less-open
135.19	114.44	64.63	less-open
135.39	125.78	61.15	less-open
135.64	114.8	62.9	less-open
135.84	108.8	66.4	less-open
136.54	105.2	63.6	less-open
137.03	299.8	62.2	less-open
138.54	315.7	69.8	less-open
139.01	100.4	69.4	less-open
139.21	92.9	71.0	less-open
139.63	116.7	63.0	less-open
140.52	325.6	50.5	less-open
140.76	104.7	71.8	less-open
143.61	332.3	10.6	less-open
144.4	328.6	55.8	less-open
144.91	110.5	63.9	less-open
145.54	340.0	33.4	less-open
148.71	105.1	70.2	less-open
149.95	332.8	64.3	less-open
150.24	101.7	68.8	less-open
150.7	190.2	27.0	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
150.74	207.1	69.6	less-open
151.03	83.0	70.5	less-open
151.24	83.0	66.2	less-open
152.27	339.3	57.7	less-open
152.42	336.7	58.9	less-open
153.24	240.4	24.2	less-open
153.31	254.0	34.0	less-open
153.75	340.8	50.7	less-open
153.89	339.0	55.8	less-open
155.3	343.2	54.0	less-open
156.87	328.7	47.9	less-open
158.23	333.8	33.5	less-open
158.38	332.6	46.9	less-open
159.03	322.2	54.7	less-open
159.32	321.8	39.5	open
159.7	332.4	48.9	less-open
159.78	325.5	47.2	less-open
160.5	332.1	47.0	less-open
160.51	115.5	60.8	less-open
160.8	105.3	63.8	less-open
161.15	320.5	45.4	less-open
161.56	315.0	48.7	less-open
161.69	325.6	45.3	less-open
161.93	320.6	49.5	less-open
162.2	324.0	45.8	less-open
162.37	322.0	44.7	less-open
163.38	84.0	46.1	less-open
163.87	25.8	21.2	less-open
164.07	101.5	70.2	less-open
164.41	98.79	72.05	less-open
165.42	359.5	47.5	less-open
165.44	285.4	34.9	less-open
166.03	342.8	47.4	less-open
168.12	6.2	49.2	less-open
168.67	31.4	16.3	less-open
169.28	28.3	58.3	less-open
169.37	332.8	50.6	less-open
169.67	43.7	42.9	less-open
170.28	44.1	67.9	less-open
170.37	57.11	35.34	less-open
170.77	34.39	27.47	less-open
171.24	65.69	35.01	less-open
171.73	341.53	57.13	less-open
172.57	335.41	56.48	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
173.46	10.43	53.91	less-open
173.99	323.84	58.9	less-open
174.16	338.07	51.91	less-open
174.49	335.32	49.31	less-open
174.83	311.21	59.01	less-open
175.71	332.86	65.51	less-open
175.84	92.52	71.41	less-open
179.07	95.76	67.85	less-open
179.24	97.17	70.62	less-open
179.92	329.87	71.17	less-open
181.48	249.48	62.23	less-open
182.32	12.37	42.33	less-open
184.03	151.01	68.38	less-open
184.23	322.28	71.21	less-open
184.42	307.68	45.33	less-open
185.34	249.46	58.86	less-open
185.79	349.03	30.78	less-open
186.81	76.35	45.93	less-open
188.54	303.13	39.12	less-open
188.89	317.52	47.22	less-open
189.81	298	73.28	less-open
190.68	31.9	14.42	less-open
190.91	346.94	22.29	less-open
193.29	296.54	77.33	less-open
193.65	294.57	42.41	less-open
195.42	301.71	16.23	less-open
195.91	332.07	16.06	less-open
196.37	333.48	49.34	less-open
196.49	98.98	72.33	less-open
196.68	130.8	76.02	less-open
196.71	128.03	52.57	less-open
197.12	57.65	41.03	less-open
197.2	45.38	37.82	less-open
197.32	127.06	65.5	less-open
197.34	129.94	68.23	less-open
197.67	113.41	69.54	less-open
198.24	13.18	32.18	less-open
198.71	19.77	87.87	less-open
199.02	11.6	87.35	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
36.98	87.0	56.2	less-open
37.28	84.2	48.8	less-open
37.41	282.4	39.6	less-open
37.44	87.1	49.4	less-open
37.46	64.5	57.1	less-open
37.49	257.0	42.6	less-open
38.08	79.2	57.1	less-open
38.33	266.2	26.9	less-open
39.01	143.8	76.0	less-open
39.69	147.1	75.5	less-open
40.12	283.5	24.5	less-open
40.53	193.5	42.5	less-open
40.90	275.8	26.0	less-open
41.22	275.0	20.6	less-open
41.31	248.9	67.4	less-open
41.47	236.3	49.5	less-open
41.76	213.0	55.1	less-open
42.53	287.8	14.3	less-open
42.80	280.5	14.9	less-open
42.89	308.5	16.3	less-open
43.10	83.9	53.7	less-open
43.17	241.5	64.5	less-open
43.31	100.1	41.9	less-open
43.78	90.3	43.7	less-open
44.27	89.3	60.1	less-open
44.45	269.4	63.8	less-open
44.57	109.5	79.6	less-open
45.14	316.0	58.4	less-open
45.20	7.2	22.6	less-open
45.59	83.1	57.7	less-open
45.69	277.9	41.6	less-open
45.75	280.4	38.5	less-open
45.78	96.6	39.4	less-open
45.78	97.5	57.6	less-open
45.98	103.2	50.0	less-open
46.30	89.5	55.2	less-open
46.55	305.9	33.1	less-open
46.59	81.6	50.0	less-open
46.68	98.0	57.4	less-open
46.87	89.9	69.2	less-open
47.12	278.9	39.0	less-open
47.48	267.9	43.1	less-open
48.32	259.9	46.4	less-open
48.34	108.6	63.5	less-open

Note that down-dip compass azimuth is perpendicular to the strike direction.

Note that interpreted down-dip compass azimuths are with respect to magnetic north.

Down-dip azimuths & dip angles were corrected for borehole deviation from vertical.

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
48.43	191.9	48.2	less-open
48.72	269.04	42.11	less-open
48.95	290	42.87	less-open
49.01	94.3	61.2	less-open
49.41	311.47	31.1	less-open
49.95	289.66	35.66	less-open
50.33	279.3	44.4	less-open
50.51	90.4	57.5	less-open
50.55	306.5	38.2	less-open
50.74	320.4	34.2	less-open
50.97	87.5	54.3	less-open
51.04	96.8	52.0	less-open
51.17	253.2	62.6	less-open
51.25	85.6	35.1	less-open
51.56	149.4	78.6	less-open
51.93	316.1	42.7	open
52.11	307.0	32.6	less-open
52.27	325.6	39.8	less-open
52.43	319.0	47.3	open
52.62	301.9	36.7	less-open
52.69	102.4	42.1	less-open
52.81	102.6	44.9	less-open
52.92	265.4	51.3	less-open
53.56	102.4	66.7	less-open
53.59	300.7	41.9	less-open
53.70	53.8	51.9	less-open
53.77	112.5	41.7	less-open
54.09	312.1	42.1	less-open
54.16	102.7	38.5	less-open
54.50	251.0	55.1	less-open
54.70	310.0	46.7	less-open
54.79	299.1	44.7	less-open
54.91	295.6	49.2	open
55.11	80.7	42.5	less-open
55.51	105.3	39.9	less-open
55.67	299.14	41.72	less-open
55.73	107.05	44.95	less-open
56.01	290.6	46.6	less-open
56.38	301.6	47.2	less-open
56.39	89.1	40.8	less-open
56.64	308.3	62.0	less-open
57.19	97.2	47.6	less-open
57.25	307.9	53.1	less-open
57.36	307.6	56.4	less-open



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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
57.49	316.1	52.0	less-open
57.61	314.9	52.9	less-open
57.80	315.0	47.8	less-open
57.96	307.0	48.2	less-open
58.41	144.9	64.2	less-open
58.49	272.6	33.4	less-open
58.58	101.0	52.4	less-open
58.76	91.8	46.7	less-open
58.95	301.0	47.2	less-open
59.22	79.0	32.5	less-open
59.48	97.2	42.9	less-open
59.92	94.4	36.3	less-open
60.26	295.0	40.2	less-open
60.37	78.0	54.2	less-open
60.43	305.6	36.9	less-open
60.49	102.7	52.6	less-open
60.72	325.0	68.6	less-open
60.95	114.8	46.4	less-open
61.39	109.4	53.0	less-open
61.54	319.3	75.4	less-open
62.55	127.4	46.2	less-open
62.98	123.1	72.5	less-open
63.26	295.3	44.6	less-open
63.59	258.3	31.2	less-open
63.82	103.5	59.2	less-open
64.23	264.9	36.5	less-open
64.33	98.2	65.0	less-open
64.42	92.8	64.4	less-open
64.84	91.8	55.1	less-open
64.89	127.6	23.1	less-open
65	98.3	55.7	less-open
65.14	91.9	44.7	less-open
65.6	95.8	41.8	less-open
65.92	86.3	52.4	less-open
66.05	89.0	57.4	less-open
66.19	95.9	44.7	less-open
66.2	250.9	62.7	less-open
66.22	297.83	80.36	less-open
66.3	99.31	42.17	less-open
66.5	323.7	23.9	less-open
66.66	324.1	40.3	less-open
66.83	308.7	29.0	less-open
66.99	83.0	43.5	less-open
67.12	91.3	58.4	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
67.21	86.6	42.6	less-open
67.28	290.1	48.9	less-open
67.52	329.3	51.2	less-open
67.74	79.7	43.2	less-open
67.88	90.74	30.17	less-open
68.18	260.41	33.48	less-open
68.53	292.4	70.1	less-open
68.55	306.6	47.8	less-open
68.67	82.1	29.7	less-open
68.97	294.4	67.6	less-open
69.27	335.9	31.2	less-open
69.42	111.0	24.3	less-open
69.72	101.5	45.9	less-open
69.95	281.3	28.0	less-open
70.03	97.0	30.2	less-open
70.4	90.4	59.0	less-open
70.95	102.0	50.4	less-open
70.97	290.9	32.5	less-open
71.99	99.7	49.8	less-open
72.15	341.3	81.2	less-open
72.32	88.9	54.5	less-open
72.65	101.9	51.8	less-open
72.67	269.8	31.1	less-open
72.92	94.6	39.3	less-open
73.31	104.7	53.3	less-open
73.32	323.8	44.1	less-open
73.53	66.1	51.0	less-open
73.79	92.5	41.0	less-open
74.28	107.1	51.3	less-open
74.37	100.8	47.3	less-open
74.6	314.1	68.0	less-open
75.33	97.0	41.8	less-open
75.36	211.1	63.0	less-open
75.46	110.9	39.9	less-open
75.57	122.7	38.2	less-open
75.79	100.7	51.2	less-open
76.21	101.3	44.8	less-open
76.33	105.6	45.6	less-open
76.96	95.9	47.4	less-open
77.13	90.5	60.4	less-open
77.65	100.3	45.5	less-open
77.88	79.2	51.1	less-open
78.05	319.7	63.4	less-open
78.07	104.6	50.7	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
78.58	245.5	32.7	less-open
78.69	256.2	32.1	less-open
78.79	244.7	33.6	less-open
78.95	249.8	37.1	less-open
79.4	231.6	49.1	less-open
79.44	309.4	49.0	less-open
79.54	101.2	55.0	less-open
79.89	218.7	63.0	less-open
80.26	128.0	50.4	less-open
80.52	99.1	52.9	less-open
80.58	335.5	72.1	less-open
80.75	194.3	36.4	less-open
81.68	333.1	78.0	less-open
83.34	160.9	36.1	less-open
84.36	148.0	44.6	less-open
84.37	307.4	70.5	less-open
84.46	331.5	63.6	less-open
84.95	94.5	44.7	less-open
85.13	158.3	15.7	less-open
85.31	201.6	36.5	less-open
85.45	315.6	19.8	less-open
85.69	213.3	9.6	less-open
86.14	150.27	78.24	less-open
86.31	261.63	34.99	less-open
86.98	89.5	62.9	less-open
87.16	265.1	47.0	open
87.19	95.7	56.7	less-open
87.64	159.2	80.2	open
87.85	312.1	35.8	less-open
88.37	164.5	74.7	open
89.71	139.9	73.7	open
89.86	166.0	73.1	open
90.21	162.5	34.9	less-open
90.56	169.1	58.2	less-open
90.67	155.4	45.2	less-open
91.76	339.7	80.2	less-open
91.76	135.4	65.9	open
92.43	147.6	66.0	open
92.49	344.8	60.5	open
92.88	130.2	61.4	open
93.11	178.9	62.4	open
93.72	167.6	70.2	less-open
94.16	164.5	69.1	less-open
94.84	139.7	51.5	open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
95	289.52	81.78	open
95.17	153.6	70.0	less-open
95.45	151.6	67.8	less-open
96.8	124.73	82.15	open
97.09	1.7	43.5	open
97.49	315.0	43.7	open
97.71	300.8	50.0	less-open
98.09	306.7	40.0	less-open
98.31	291.1	33.8	less-open
98.51	331.4	79.6	less-open
98.53	286.5	33.8	less-open
98.7	246.0	48.0	less-open
99.03	241.6	28.7	less-open
99.19	161.9	75.8	less-open
99.4	248.4	49.3	less-open
99.65	305.6	31.7	less-open
99.83	269.7	25.6	less-open
100.14	255.2	36.7	less-open
100.31	97.0	41.7	less-open
100.84	260.5	28.9	less-open
100.93	155.3	64.5	less-open
101.62	323.7	77.3	less-open
101.8	316.2	44.8	less-open
102.05	312.0	46.9	less-open
102.34	274.9	28.5	less-open
102.95	195.1	51.1	less-open
103.65	154.2	60.3	less-open
103.7	261.8	34.8	less-open
104.08	109.93	49.01	less-open
104.64	253.58	31.29	less-open
104.73	243.4	36.9	less-open
105.1	68.3	69.1	less-open
105.45	98.3	54.4	less-open
106.07	311.6	46.5	less-open
107.43	306.0	43.6	less-open
108.01	278.8	36.6	less-open
110.53	319.0	51.6	less-open
110.61	320.0	44.9	less-open
110.67	320.0	52.4	less-open
112.57	263.36	33.15	less-open
113.73	344.04	58.34	less-open
113.74	252.12	31.8	less-open
114.13	350.58	31.52	less-open
114.32	137.01	64.52	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
114.53	274.06	27.43	less-open
115.43	253.24	30.36	less-open
115.87	95.72	62.81	less-open
116.6	139.87	65.13	less-open
117.6	146.1	61.22	less-open
117.85	160.56	61.64	less-open
117.87	258.22	31.98	less-open
118.6	216.1	43.4	less-open
119.11	288.79	31.64	less-open
119.37	121.55	59.66	less-open
119.84	314.73	33.02	less-open
120.11	97.44	72.18	less-open
120.27	311.77	36.3	less-open
120.71	316.07	36.53	less-open
120.99	314.29	28.93	less-open
121.06	114.79	58.17	less-open
121.37	325.61	37.73	less-open
121.59	137.4	65.71	less-open
121.83	292.8	55.32	less-open
122.97	316.23	64.58	less-open
124.04	326.69	37.69	open
124.44	104.86	65.55	less-open
124.75	298.26	48.02	less-open
124.99	103.52	62.67	less-open
125.24	120.19	60.36	less-open
125.45	121.65	60.88	less-open
125.58	103.59	61.89	less-open
125.71	114.58	65.9	less-open
126	127.51	53.02	less-open
126.38	113.83	60.37	less-open
126.62	122.56	56.86	less-open
126.73	117.71	55.11	less-open
126.89	122.66	65.44	less-open
127.06	94.3	49.84	less-open
127.44	121.63	54.99	less-open
127.49	339.35	81.93	less-open
127.69	139.26	61.23	less-open
127.88	134.59	53.84	less-open
128.15	137.43	56.86	less-open
128.55	135.86	60.24	less-open
129.15	107.96	55.03	less-open
129.73	112.9	54.93	less-open
130.1	116.18	47.05	less-open
130.27	282.59	65.52	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
130.51	116.82	56.56	less-open
131.23	300.7	59.97	less-open
131.66	119.68	58.83	less-open
133.15	106.33	58.99	less-open
133.36	102.79	74.86	less-open
133.38	103.52	59.27	less-open
133.91	105.11	61.26	less-open
134.06	109.88	60.85	less-open
134.3	112.33	57.91	less-open
134.37	346.22	82.76	less-open
134.45	110.86	58.15	less-open
134.82	103.53	54.67	less-open
136.59	293.56	35.63	less-open
136.77	107.88	59.84	less-open
137.48	117.24	59.87	less-open
137.51	214.7	35.92	less-open
137.98	114.83	59.32	less-open
138.02	338.68	41.3	less-open
138.11	329.41	49.84	less-open
138.2	116.27	54.34	less-open
138.37	117.06	57.88	less-open
139.52	127.22	48.78	less-open
139.96	105.12	61.48	less-open
140.22	255.56	39.02	less-open
140.73	277.76	12.19	less-open
140.76	274.08	15.38	less-open
142.05	282.23	20.24	less-open
142.92	350.42	30.4	less-open
143.3	316.45	30.54	less-open
143.73	81.93	39.87	less-open
144.08	119.88	60.02	less-open
144.36	106.92	50.78	less-open
144.94	260.66	37.76	less-open
146.06	255.39	42.3	less-open
146.07	124.13	65.09	less-open
146.92	115.71	60.8	less-open
147.26	319.9	51.04	less-open
147.83	124.7	54.58	less-open
148.14	112.31	60.59	less-open
148.47	330.59	65.8	less-open
148.77	116.25	58.39	less-open
149.09	114.78	60.42	less-open
149.22	106.13	65.22	less-open
149.64	116.23	59.94	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
150.34	106.99	59.72	less-open
151.25	109.84	59.43	less-open
151.37	112.33	57.71	less-open
151.64	122.62	58.33	less-open
151.91	111.62	39.26	less-open
152.17	98.68	60.91	less-open
153.02	334.34	52.01	less-open
153.16	117.27	61.38	less-open
153.47	121.62	63.63	less-open
153.66	118.75	64.78	less-open
154.4	130.48	60.1	less-open
154.4	353.57	43.1	less-open
154.62	127.18	57.43	less-open
154.76	104.09	67.8	less-open
154.85	124.56	65.62	less-open
155.01	103.18	53.16	less-open
155.09	343.8	50.71	less-open
155.2	116.29	57.05	less-open
156.03	350.76	43.44	less-open
156.69	348.73	47.92	less-open
156.85	337.43	40.13	less-open
157.09	351.56	53.05	less-open
157.62	342.85	53.98	less-open
158.24	131.99	58.32	less-open
159.36	294.35	28.72	less-open
159.67	131.91	58.9	less-open
160.18	124.08	57.21	less-open
160.22	342.65	52.51	less-open
161.54	128.07	54.83	less-open
161.7	124.38	56.83	less-open
161.93	142.26	43.55	less-open
162.15	107.97	66.86	less-open
162.68	350.1	47.24	less-open
162.69	124.02	65.53	less-open
162.94	325.41	61.76	less-open
163.26	342.33	43.27	less-open
163.49	351.46	54.91	less-open
163.86	332.9	40.56	less-open
163.98	305.8	44.52	less-open
164.13	140.85	58.56	less-open
164.37	342.46	39.91	less-open
164.6	122.62	53.51	less-open
164.95	139.88	49.65	less-open
165.21	131.9	48.54	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
165.45	144.99	53.61	less-open
166.06	82.48	51.05	less-open
166.6	69.69	55.95	less-open
166.98	108.49	68.11	less-open
168.52	136.96	64.22	less-open
168.82	237.18	33.63	less-open
168.92	133.44	70.67	less-open
169.65	279.07	27.48	less-open
170.45	107.96	63.68	less-open
170.84	92.7	61.18	less-open
171.09	128.76	54.02	less-open
171.39	108.42	60.73	less-open
171.76	287.77	60.83	less-open
171.98	263.41	23.64	less-open
172.56	295.17	28.02	less-open
173.05	351.76	34.68	less-open
173.74	112.22	69.34	less-open
174.05	129.07	57.49	less-open
174.76	26.99	38.98	less-open
175.57	24.15	39.51	less-open
175.65	278.15	60.07	less-open
175.77	314.81	61.53	less-open
175.94	346.81	51.68	less-open
177.35	9.14	33.44	less-open
177.47	319.98	31.74	less-open
177.81	349.83	62.33	less-open
178.29	319.35	62.48	less-open
179.02	106.98	60.95	less-open
179.24	99.37	61.16	less-open
180.05	243.82	32.39	less-open
181.5	317.12	15.72	less-open
181.94	50.37	45.09	less-open
182.03	245.15	34.86	less-open
182.65	94.26	67.91	less-open
182.87	260.05	43.53	less-open
182.98	356.15	75.44	less-open
183.9	343.91	65.59	less-open
184.13	260.33	76.33	less-open
184.15	347.41	68.25	less-open
185.77	318.7	40.4	less-open
186.13	73.7	41.56	less-open
186.35	226.61	44.51	less-open
186.96	118.81	58.6	less-open
187.67	100.64	66.57	less-open



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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
188.52	109.8	64.59	less-open
189.02	114.26	53.4	less-open
189.31	69.75	34.35	less-open
189.7	56.5	34.53	less-open
190.61	342.45	78.68	less-open
191.63	349.37	89.46	less-open

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depth (feet)	down-dip compass azimuth (degrees)	dip angle (degrees)	interpreted planar feature category
38.18	236.7	20.7	less-open
38.34	145.7	46.5	less-open
38.86	147.3	59.9	less-open
38.99	331.5	83.1	less-open
40.82	351.6	70.3	less-open
41.03	354.4	66.8	less-open
42.35	297.4	80.3	less-open
42.51	139.7	46.7	less-open
42.70	137.8	32.0	less-open
42.90	124.3	36.2	less-open
43.19	163.5	27.3	less-open
43.47	290.7	69.0	less-open
43.73	145.0	46.6	less-open
44.15	130.4	43.3	less-open
44.65	125.7	32.2	open
45.01	152.0	44.4	less-open
45.10	130.0	21.2	less-open
45.34	177.3	82.5	less-open
45.58	144.5	46.7	less-open
46.63	132.8	42.0	less-open
46.90	145.7	38.5	less-open
47.13	159.5	50.4	less-open
47.61	175.0	82.7	less-open
48.46	132.6	40.1	less-open
51.70	133.0	45.7	less-open
52.01	146.9	44.8	less-open
52.15	186.6	31.2	less-open
52.34	350.6	77.7	less-open
53.61	132.0	44.4	less-open
55.55	126.7	51.6	less-open
56.32	310.0	77.7	less-open
56.64	137.1	51.6	less-open
58.01	101.9	55.1	less-open
59.26	75.2	46.8	less-open
60.32	232.8	28.4	less-open
61.57	248.0	18.6	less-open
64.21	286.3	54.4	less-open
65.18	190.3	19.9	less-open
66.22	293.0	24.2	less-open
66.66	80.0	36.2	less-open
68.54	181.9	77.9	less-open
69.51	90.1	36.1	less-open
70.58	68.0	28.7	less-open
70.89	82.0	29.8	less-open

Note that down-dip compass azimuth is perpendicular to the strike direction.

Note that interpreted down-dip compass azimuths are with respect to magnetic north.

Down-dip azimuths & dip angles were corrected for borehole deviation from vertical.

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
71.09	45.9	40.6	less-open
71.56	293.7	38.0	less-open
71.92	343.7	62.8	less-open
78.01	108.8	76.7	less-open
79.38	275.6	32.1	less-open

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depth (feet)	down-dip compass azimuth (degrees)	dip angle (degrees)	interpreted planar feature category
38.15	354.8	22.8	open
38.35	336.5	28.3	open
39.06	308.3	13.5	less-open
39.83	332.3	30.0	open
40.18	281.5	19.9	less-open
40.40	180.8	63.0	less-open
40.52	328.2	16.2	less-open
41.46	309.0	41.9	less-open
41.79	197.6	77.0	less-open
41.81	167.1	76.5	less-open
41.98	314.6	32.6	less-open
42.17	280.7	29.9	less-open
43.15	4.9	23.3	open
43.27	184.9	75.5	less-open
43.75	189.6	61.9	open
44.00	191.1	66.1	open
44.19	185.5	66.4	less-open
44.82	213.2	69.9	less-open
44.86	202.1	36.7	less-open
45.88	149.2	31.4	less-open
46.24	321.8	56.2	less-open
46.27	232.6	32.9	less-open
46.59	291.5	42.1	less-open
46.97	131.7	37.5	less-open
47.38	159.3	32.7	less-open
47.44	153.5	29.9	less-open
47.68	338.6	38.4	less-open
47.96	325.2	55.0	open
48.39	177.9	81.5	less-open
48.54	21.4	78.2	less-open
49.07	185.1	32.3	less-open
49.67	146.4	19.0	less-open
49.78	190.7	42.5	open
50.32	345.5	33.6	less-open
50.61	341.1	24.7	open
51.15	134.4	76.5	less-open
51.34	132.2	48.6	less-open
52.95	121.8	57.4	less-open
53.58	110.6	47.7	less-open
53.68	225.2	70.3	open
54.66	345.6	28.8	less-open
54.99	287.8	34.2	less-open
56.72	324.2	52.4	less-open
57.44	96.3	76.7	less-open

Note that down-dip compass azimuth is perpendicular to the strike direction.

Note that interpreted down-dip compass azimuths are with respect to magnetic north.

Down-dip azimuths & dip angles were corrected for borehole deviation from vertical.

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
58.45	86.7	82.3	less-open
59.46	91.1	83.0	less-open
59.75	244.8	74.1	less-open
61.20	316.6	29.3	less-open
61.56	288.9	24.5	less-open
63.81	209.5	53.9	less-open
64.52	118.5	45.1	less-open
65.84	128.2	50.1	less-open
66.17	98.8	28.4	less-open
66.20	259.5	70.3	less-open
66.39	134.4	37.8	less-open
69.24	191.0	56.9	less-open
70.05	116.98	45.29	less-open
71.3	271.1	82.12	less-open
72.28	85.1	28.4	less-open
73.02	269.9	77.3	less-open
74.39	346.8	29.7	less-open
74.85	178.1	74.2	less-open
75.92	189.6	82.3	less-open
81.78	124.0	39.9	less-open
82.61	356.2	80.1	less-open
84.24	193.9	41.2	less-open
85.01	177.4	79.2	less-open
85.30	178.0	80.9	less-open
86.06	186.1	55.1	less-open
86.61	192.8	57.9	less-open
87.23	174.3	67.5	less-open
87.92	189.1	65.9	less-open
88.08	176.6	72.9	less-open
88.59	189.9	79.5	less-open
89.39	157.2	77.5	less-open
89.59	165.4	82.0	less-open
90.41	170.5	77.0	less-open
90.69	152.1	71.0	less-open
90.97	168.4	76.7	less-open
92.04	163.5	84.6	less-open
93.29	169.6	81.9	less-open
94.19	169.6	83.6	less-open
94.86	162.7	26.5	less-open
95.13	160.7	42.0	less-open
96.44	179.8	79.1	less-open
96.45	51.6	16.1	less-open
100.43	292.4	59.7	less-open
100.92	179.91	78.76	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
101.1	111.7	55.83	less-open
101.87	322.5	63.2	less-open
101.92	174.9	76.3	less-open
103.15	130.6	42.7	less-open
103.49	127.9	51.0	less-open
104.35	337.9	35.9	less-open
108.02	178.9	78.9	less-open
108.03	5.0	38.8	less-open
109.47	189.2	42.4	less-open
110.60	29.7	70.5	less-open
111.91	214.8	54.0	less-open
112.63	348.9	65.7	less-open
112.76	351.9	62.2	less-open
112.80	73.1	47.3	less-open
113.18	170.8	77.8	less-open
113.89	191.5	72.2	less-open
114.01	188.5	75.5	less-open
114.77	172.1	86.0	less-open
115.82	182.8	75.5	less-open
116.06	183.8	75.7	less-open
116.66	180.3	78.7	less-open
117.61	305.0	31.3	open
117.88	336.1	38.3	less-open
118.17	216.6	50.1	less-open
119.53	232.5	61.9	less-open
120.57	353.8	56.5	less-open
121.42	334.0	58.6	less-open
122.12	189.7	40.4	less-open
122.97	208.5	51.6	less-open
123.23	354.9	58.1	less-open
126.72	355.7	36.0	less-open
127.43	350.5	51.2	less-open
127.94	343.9	40.5	less-open
128.25	338.6	39.6	less-open
129.69	341.0	55.6	less-open
130.05	333.5	60.8	less-open
130.16	205.0	53.1	less-open
130.62	279.6	46.0	less-open
130.97	213.0	38.7	less-open
131.21	282.1	43.0	less-open
131.38	203.5	46.4	less-open
131.84	204.2	51.8	less-open
131.88	351.7	75.8	less-open
132.13	210.0	53.2	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
132.66	341.5	45.3	less-open
132.69	15.59	76.88	less-open
132.77	325.59	42.93	less-open
132.88	329.9	42.2	less-open
133.42	338.9	29.2	less-open
133.81	311.5	58.5	less-open
133.85	10.0	59.8	less-open
134.61	94.9	74.5	less-open
134.76	205.9	36.9	less-open
135.04	302.0	37.3	less-open
135.47	334.0	51.8	less-open
135.71	326.7	41.4	less-open
135.87	286.93	44.93	less-open
135.88	157.81	54.39	less-open
136.39	327.9	51.9	less-open
136.64	313.0	34.9	less-open
136.82	301.1	44.4	less-open
137.43	296.8	40.8	less-open
137.5	291.8	36.0	less-open
137.55	257.6	20.7	less-open
137.68	171.1	63.8	less-open
137.79	296.7	37.3	less-open
138.22	325.4	48.7	less-open
138.45	337.4	52.3	less-open
138.71	185.1	31.5	less-open
138.98	200.0	45.3	less-open
139.16	213.2	41.8	less-open
139.36	167.4	43.8	less-open
139.86	308.2	67.9	less-open
139.96	205.0	56.6	less-open
140.9	312.3	72.7	less-open
141.11	336.7	23.1	less-open
141.74	303.2	36.2	less-open
141.86	109.2	55.4	less-open
141.88	283.6	39.8	less-open
142.72	124.3	58.4	less-open
143.02	320.6	61.8	less-open
143.5	240.7	59.4	less-open
143.56	303.9	75.5	less-open
143.58	316.2	56.3	less-open
144.04	115.3	55.9	less-open
144.76	114.2	62.8	less-open
144.85	297.7	44.0	less-open
145.44	310.9	53.7	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
145.44	123.2	48.6	less-open
146.66	336.8	54.8	less-open
146.93	328.9	48.6	less-open
147.24	158.9	42.2	less-open
148.77	109.2	71.4	less-open
148.99	102.0	56.1	less-open
149.16	107.5	57.2	less-open
149.3	101.9	51.8	less-open
150.56	123.2	61.4	less-open
150.78	102.6	51.0	less-open
151.33	230.5	70.3	less-open
152.83	143.0	38.0	less-open
154.53	115.0	57.1	less-open
155.03	109.2	63.4	less-open
155.39	106.6	65.8	less-open
155.81	112.0	62.6	less-open
156.19	299.6	24.6	less-open
156.45	332.2	30.3	less-open
157.03	120.1	55.8	less-open
157.16	321.8	34.9	less-open
157.75	355.6	54.1	less-open
158.47	144.1	55.2	less-open
158.7	349.9	57.6	less-open
159.02	329.3	41.8	less-open
159.95	343.6	50.2	less-open
159.95	109.2	44.1	less-open
160.58	213.3	50.4	less-open
161.16	288.4	36.4	less-open
161.73	299.8	29.9	less-open
163.11	104.2	43.9	less-open
163.45	107.98	40.85	less-open
163.89	353.09	41.88	less-open
164.15	104.5	68.5	less-open
164.26	108.0	58.1	less-open
164.37	108.8	60.0	less-open
164.61	349.9	54.0	less-open
164.67	347.8	47.1	less-open
165.88	316.6	44.0	less-open
166.51	168.5	81.1	less-open
166.53	322.0	42.7	less-open
167.67	327.1	36.9	less-open
167.79	313.4	42.2	less-open
167.81	202.2	71.1	less-open
168.7	230.2	71.6	less-open



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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
169.15	219.3	63.1	less-open
170.67	335.1	51.5	less-open
170.94	8.6	56.6	less-open
171.24	318.0	60.3	less-open
173.63	344.2	50.8	less-open
174.63	322.0	44.6	less-open
175.1	44.3	70.2	less-open
175.73	324.8	52.4	less-open
175.98	101.1	61.0	less-open
176.02	283.3	38.1	less-open
176.57	102.0	56.8	less-open
177.31	332.2	59.9	less-open
178.31	322.9	50.4	less-open
179.3	326.3	41.4	less-open
179.86	132.4	60.1	less-open
180.13	308.3	41.7	less-open
180.66	125.4	60.0	less-open
180.83	333.1	57.7	less-open
180.88	126.4	56.0	less-open
183	185.2	76.0	less-open
184.01	295.5	45.6	less-open
184.85	126.2	41.8	less-open
187.41	302.4	42.6	less-open
187.94	302.9	52.6	less-open
189.36	331.7	76.7	less-open
189.65	287.1	32.8	less-open
190.39	127.7	37.7	less-open
190.45	328.1	48.4	less-open
190.72	338.7	45.3	less-open
191.53	289.8	29.6	less-open
195.62	62.9	73.9	less-open
197.85	124.3	51.9	less-open
198.36	309.1	88.6	less-open
198.79	311.6	86.7	less-open

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depth (feet)	down-dip compass azimuth (degrees)	dip angle (degrees)	interpreted planar feature category
32.54	251.1	60.4	less-open
33.17	346.9	72.1	less-open
33.71	309.7	72.5	open
33.80	297.4	53.4	less-open
34.14	188.2	71.4	less-open
34.32	189.6	72.9	less-open
34.76	272.8	51.7	less-open
34.77	82.1	73.7	less-open
35.05	19.9	19.8	less-open
35.09	171.0	62.3	less-open
35.15	282.2	47.2	less-open
35.29	192.5	70.5	less-open
35.74	292.3	27.8	open
37.07	319.2	68.9	less-open
37.13	284.4	46.7	less-open
37.13	291.7	29.6	less-open
37.59	68.8	44.4	less-open
37.60	274.1	50.6	less-open
38.06	137.9	51.0	less-open
38.27	255.9	54.9	less-open
38.75	257.1	33.2	less-open
39.27	206.6	45.7	less-open
40.58	309.6	43.7	open
41.15	167.4	23.4	less-open
41.29	204.8	71.4	open
41.52	161.3	41.0	less-open
41.59	316.2	39.9	less-open
41.74	171.9	65.0	less-open
41.75	212.8	75.7	less-open
42.03	207.9	72.5	less-open
42.31	245.0	52.8	less-open
42.43	139.8	69.4	less-open
42.57	240.9	45.8	less-open
42.57	319.9	67.2	less-open
42.66	225.3	30.7	less-open
43.12	275.1	37.3	open
43.58	231.6	39.3	less-open
43.72	165.5	60.3	less-open
43.89	179.7	77.9	less-open
44.33	245.3	33.9	less-open
44.38	150.3	43.8	less-open
44.60	231.7	78.2	less-open
44.90	281.3	24.1	less-open
45.77	134.8	27.6	less-open

Note that down-dip compass azimuth is perpendicular to the strike direction.

Note that interpreted down-dip compass azimuths are with respect to magnetic north.

Down-dip azimuths & dip angles were corrected for borehole deviation from vertical.

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
46.53	122.7	69.9	less-open
46.56	145.4	68.4	less-open
48.20	202.0	69.5	less-open
48.63	208.3	65.9	less-open
48.75	200.9	66.2	less-open
49.00	221.4	63.9	less-open
49.23	330.3	69.0	less-open
49.27	201.9	62.0	less-open
50.13	10.6	24.4	open
50.58	92.7	20.0	less-open
52.47	115.39	61.75	less-open
53.59	122.52	57.78	less-open
54.25	154.0	47.3	less-open
54.77	179.6	30.5	less-open
56.60	332.4	65.3	less-open
58.73	315.0	44.9	less-open
58.90	228.0	48.1	less-open
61.26	178.4	59.5	less-open
62.04	223.6	46.4	less-open
62.21	229.9	39.5	less-open
64.34	303.8	45.0	less-open
65.20	138.9	46.1	less-open
66.52	125.0	46.4	less-open
67.47	332.4	74.7	less-open
67.64	341.4	63.3	less-open
67.90	321.9	57.1	less-open
69.65	112.3	73.6	less-open
70.77	343.3	56.4	less-open
71.36	135.9	53.5	less-open
71.96	319.4	54.4	less-open
73.58	337.7	68.9	less-open
73.71	322.0	62.2	less-open
73.92	136.5	55.9	less-open
74.74	121.7	61.6	less-open
76.06	333.4	67.6	less-open
76.24	124.8	67.3	less-open
77.54	325.1	63.1	less-open
77.77	331.9	65.8	less-open
77.93	203.8	78.5	less-open
78.82	108.2	62.5	less-open
79.05	115.4	61.9	less-open
79.72	327.21	68.85	less-open
81.25	31.4	76.5	less-open
81.72	343.7	34.7	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
82.67	341.4	75.7	less-open
83.25	116.0	69.4	less-open
84.12	122.8	67.8	less-open
84.73	106.7	73.9	less-open
85.10	100.7	24.6	less-open
85.17	121.3	71.5	less-open
85.39	186.2	78.0	less-open
86.26	322.6	57.4	less-open
87.30	185.1	71.1	less-open
88.14	327.9	69.2	less-open
88.17	130.5	73.0	less-open
89.61	329.2	58.5	less-open
91.21	335.4	63.3	less-open
93.22	259.6	49.8	less-open
94.34	238.6	66.4	less-open
94.67	221.6	71.8	less-open
94.94	211.4	74.9	less-open
95.82	108.0	78.0	less-open
97.07	93.7	62.2	less-open
97.72	179.2	79.8	less-open
97.86	193.0	79.1	less-open
98.1	342.6	61.5	less-open
99.51	39.1	35.3	less-open
99.54	182.4	75.1	less-open
100.58	5.2	24.3	less-open
101.27	8.2	35.4	less-open
101.78	228.3	48.4	less-open
102.46	196.0	40.9	less-open
102.47	345.6	69.8	less-open
102.85	201.5	25.8	less-open
103.38	117.7	51.3	less-open
103.47	131.3	45.9	less-open
103.75	350.9	73.6	less-open
104.23	164.8	46.5	less-open
104.59	215.5	61.3	less-open
104.68	347.3	66.5	less-open
105.26	352.8	55.8	less-open
105.27	344.2	74.3	less-open
106.01	323.1	71.8	less-open
106.13	244.3	53.3	open
106.46	119.5	76.6	less-open
106.69	183.5	81.7	less-open
107.03	334.9	70.6	less-open
107.18	124.36	64.36	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
107.4	336.82	70.01	less-open
107.62	209.9	56.7	less-open
108.31	350.6	65.0	open
108.36	191.6	30.4	less-open
108.48	208.4	44.4	less-open
109	173.4	26.5	less-open
109.37	352.5	66.1	less-open
109.55	121.3	34.7	less-open
109.72	118.3	68.1	less-open
110.42	28.6	5.7	less-open
110.53	49.31	9.32	less-open
112.27	354.12	75.52	less-open
112.28	312.0	65.8	less-open
112.68	350.2	71.1	less-open
112.99	345.8	72.3	less-open
113.18	343.0	67.1	less-open
113.24	215.8	40.8	less-open
114.56	348.5	61.7	less-open
115.13	155.4	32.3	less-open
115.27	334.0	64.3	less-open
115.99	140.2	52.0	less-open
116.04	304.8	63.3	less-open
116.04	342.4	62.4	less-open
116.8	331.8	56.1	less-open
117.03	334.3	46.8	less-open
117.2	322.6	38.5	less-open
118.85	315.5	58.3	less-open
120.13	325.0	51.6	less-open
120.85	76.0	64.2	less-open
121.48	74.9	65.1	less-open
121.97	105.4	64.5	less-open
122.32	353.7	80.5	less-open
122.56	211.3	74.7	less-open
122.97	109.4	74.0	less-open
123.33	359.1	52.1	less-open
124.1	315.0	48.4	less-open
124.52	187.6	72.6	less-open
124.66	302.8	63.6	less-open
125.41	306.4	38.3	less-open
125.5	309.1	41.3	less-open
125.64	168.7	38.3	less-open
125.86	105.7	64.6	less-open
127.43	349.8	40.4	less-open
128.1	224.6	70.5	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
130.01	341.1	31.3	less-open
130.59	178.3	69.5	less-open
130.71	316.6	37.1	less-open
130.83	177.1	71.2	less-open
131.18	167.6	75.9	less-open
131.76	182.6	69.5	less-open
133.27	173.7	71.0	less-open
134.59	16.9	37.1	less-open
135.11	176.5	75.4	less-open
135.36	346.1	35.5	less-open
136.09	183.1	74.4	less-open
136.51	176.0	74.4	less-open
136.6	333.7	47.3	less-open
136.83	191.7	70.3	less-open
137.64	185.2	69.8	less-open
137.85	184.4	68.3	less-open
138.38	244.4	66.6	less-open
138.95	240.5	57.3	less-open
140.07	169.7	70.7	less-open
140.49	203.9	13.8	less-open
140.99	197.0	48.1	less-open
141.34	204.2	45.2	less-open
141.81	10.2	63.8	less-open
142.07	113.5	49.1	less-open
142.37	2.8	80.3	less-open
143.37	356.8	80.7	less-open
144.77	344.6	52.0	less-open
145.31	340.5	48.9	less-open
146.19	336.8	74.42	less-open
147.42	135.33	51.39	less-open
148.03	134.6	51.9	less-open
148.44	116.6	54.8	less-open
148.94	133.5	46.8	less-open
149.37	108.1	44.7	less-open
149.49	320.3	40.9	less-open
149.57	141.1	48.1	less-open
149.82	126.1	57.0	less-open
150.44	306.0	49.1	less-open
150.84	186.8	47.4	less-open
154.45	340.5	42.8	less-open
156.42	191.3	35.2	less-open
156.77	175.9	54.7	less-open
157.68	0.9	73.1	less-open
158.63	188.0	53.7	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
158.92	346.9	72.0	less-open
159.12	226.3	38.8	less-open
159.52	210.9	58.1	less-open
159.79	268.3	26.6	less-open
159.92	253.8	27.5	less-open
160.54	123.3	56.8	less-open
160.83	109.0	58.7	less-open
160.83	181.5	77.7	less-open
160.83	292.0	29.0	less-open
160.97	193.5	67.0	less-open
161.46	199.2	54.1	less-open
161.73	198.1	64.2	less-open
161.82	218.8	57.8	less-open
161.99	129.5	68.0	less-open
162.3	109.2	57.9	less-open
163.27	171.6	77.0	less-open
163.87	338.6	26.7	less-open
164.42	172.0	24.1	less-open
165.78	169.0	30.8	less-open
166.02	283.5	60.5	less-open
166.38	3.1	56.2	less-open
166.47	179.7	49.2	less-open
167.12	225.4	52.6	less-open
167.9	171.0	57.9	less-open
168.36	233.4	45.9	less-open
168.86	9.3	35.6	less-open
170.74	347.1	75.4	less-open
171.11	291.1	26.1	less-open
173.3	311.9	69.7	less-open
173.37	99.3	68.7	less-open
174.02	291.8	68.5	less-open
174.84	288.8	69.9	less-open
175.07	1.78	46.13	less-open
175.4	96.71	66.18	less-open
175.8	97.8	64.9	less-open
176.32	286.0	79.0	less-open
176.37	104.9	48.6	less-open
176.71	99.0	51.6	less-open
176.75	297.4	55.8	less-open
177.1	299.5	82.6	less-open
178.98	130.4	26.6	less-open
179.14	204.5	24.2	less-open
179.62	129.1	59.6	less-open
180.05	110.45	64.54	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
180.14	113.2	64.5	less-open
180.98	100.55	61.17	less-open
181.27	104.26	35.35	less-open
181.47	115.67	72.62	less-open
182.81	313.72	58.29	less-open
183.4	324.21	76.37	less-open
184.36	294.02	63.7	less-open
184.66	331.65	74.92	less-open
186.3	329.3	59.12	less-open
187.1	111.22	69.92	less-open
187.45	323	54.33	less-open
188.04	326.34	39.07	less-open
188.4	145.95	42.86	less-open
188.51	325.8	33.15	less-open
188.78	93.75	67.49	less-open
190.61	128.68	70.64	less-open
190.63	124.39	64.52	less-open
190.83	348.16	69.86	less-open
191.14	304.9	44.31	less-open
192.68	115.36	49.55	less-open
192.71	300.78	54.16	less-open
193	108.94	53.4	less-open
193.18	126.62	62.27	less-open
193.4	112.41	66.14	less-open
193.67	102.94	66.99	less-open
193.98	100.61	61.3	less-open
194.33	329.91	64.28	less-open
194.84	106.59	64.38	less-open
195.16	297.94	67.89	less-open
195.27	107.19	60.91	less-open
196.97	335.89	41.99	less-open
197.37	334.78	51.7	less-open
197.93	4.69	65.65	less-open
198.49	327.17	66.62	less-open
198.82	345.72	58.97	less-open
198.99	324.32	55.1	less-open
199.33	307.22	56.71	less-open
201.26	331.48	43.72	less-open
203.52	341.76	66.03	less-open
203.65	330.43	67.69	less-open
204.51	326.22	42.42	less-open
206.48	341.55	60.23	less-open
206.88	331.01	55.49	less-open
207.55	317.44	29.34	less-open



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depth (feet)	down-dip compass azimuth (degrees)	dip angle (degrees)	interpreted planar feature category
207.72	314.89	46.24	less-open
207.83	6.66	39.9	less-open
208.58	348.9	40.4	less-open
208.71	349.28	38.4	less-open
209.24	334.4	60.54	less-open
212.04	225.55	72.68	less-open
212.81	140.24	58.69	less-open
213.09	339.84	61.08	less-open
213.27	335.45	63.39	less-open
213.5	343.13	55.3	less-open
214	351.87	47.84	less-open
214.28	341.34	55.32	less-open
214.77	4.92	55.47	less-open
216.96	10.21	67.31	less-open
218	322.02	69.09	less-open
218.57	342.81	68.05	less-open
219.58	223.95	52.5	less-open
220.28	338.13	58.73	less-open
220.41	329.03	61.11	less-open
220.7	324.84	55.53	less-open
221.23	323.59	55.11	less-open
221.64	321.08	42.12	open
222.15	330.46	38.41	less-open
222.83	312.19	49.43	less-open
222.94	330.19	49.1	less-open
222.99	313.91	47.21	less-open
223.16	256.86	9.07	less-open
223.71	335.55	65.01	less-open
224.72	25.4	32.49	less-open
225.59	128.46	53.91	less-open
226.14	190.24	60.82	less-open
226.28	107.06	45.9	less-open
226.77	117.51	26.6	less-open
226.85	305.23	35.88	less-open
227.02	118.67	56.89	less-open
227.78	162.25	68.4	less-open
227.9	129.83	40.18	less-open
228.61	222.04	66.65	less-open
229.48	120.05	48.11	less-open
230.58	238.4	81.26	less-open
230.6	160.82	60.93	less-open
231.31	256.82	71.24	less-open
231.35	306.5	30.05	less-open
231.55	193.1	31.97	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
233.46	102.97	49.58	less-open
233.57	330.04	57.59	less-open
234.85	124.92	59.51	less-open
235.75	127.27	45.84	less-open
235.96	352.45	65.23	less-open
236.92	281.92	19.01	less-open
237.66	116.75	55.68	less-open
238	118.21	50.12	less-open
238.46	295.47	43.36	less-open
239.9	341.54	61.1	less-open
240.35	26.33	73.9	less-open
244.22	140.43	49.32	less-open
244.39	332.41	71.72	less-open
244.72	43.47	30.31	less-open
244.86	298.98	29.98	less-open
245.15	121.34	42.7	less-open
245.4	124.97	52.18	less-open
245.69	114.34	52.67	less-open
245.9	119.2	52.2	less-open
246.03	119.2	52.14	less-open
246.62	121.77	56.09	less-open
247.7	329.25	66.69	less-open
248.07	111.64	42.2	less-open
249.33	338.82	58.63	less-open
250.03	338.23	56.9	less-open
250.1	340.16	57.78	less-open
250.31	341.31	52.17	less-open
250.61	355.65	62.41	less-open
250.79	333.56	50.58	less-open
250.97	347.82	59.71	less-open
251.21	346.66	56.54	less-open
252.2	355.82	62.4	less-open
252.28	4.83	59.16	less-open
252.51	109.46	44.65	less-open
252.56	116.17	51.66	less-open
252.88	324.65	33.13	less-open
253.2	344.67	53.97	less-open
253.58	349.67	54.17	less-open
253.7	108.44	42.94	less-open
253.96	95.13	40.23	less-open
254.18	190.25	38.88	less-open
254.33	106.5	31.86	less-open
254.4	294.77	58.97	less-open
254.55	285.04	49.66	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
254.61	106.52	37.12	less-open
254.96	110.09	28.37	less-open
255.2	99.62	39.6	less-open
255.24	343.52	68.83	less-open
255.56	352.44	68.07	less-open
256.09	105.44	41.56	less-open
257.1	112.27	45.91	less-open
257.3	351.26	76.53	less-open
257.44	97.05	34.35	less-open
258.58	188.99	84.17	less-open
259.28	113.01	62.31	less-open
259.92	354.62	77.79	less-open
260.82	354.71	77.56	less-open
261.25	352.49	80.01	less-open
261.43	109.94	67	less-open
261.58	357.47	76.58	less-open
262.6	354.53	83.34	less-open
262.71	328.47	34.86	less-open
262.77	333.42	28.6	less-open
262.92	316.43	27.58	less-open
263.21	109.44	46.47	less-open
263.55	304.16	59.64	less-open
264.85	119.73	50.52	less-open
265.04	116.22	48.51	less-open
265.3	117.35	60.48	less-open
265.51	349.33	78.79	less-open
265.82	115.72	47.01	less-open
266.2	346.61	72.49	less-open
266.31	322.38	58.28	less-open
266.71	73.22	60.38	less-open
267	61.38	62.1	less-open
267.69	122.42	48.71	less-open
267.88	65.82	76.42	less-open
268.32	334.82	62.39	open
268.48	321.8	57.88	less-open
268.68	330.71	70.06	less-open
269.16	342.06	67.28	less-open
269.28	341.3	62.55	less-open
269.57	121	46.42	less-open
269.91	111.37	62.53	less-open
269.99	341.17	74.91	less-open
270.34	132.53	46.04	less-open
270.5	321.55	54.74	less-open
270.96	32.23	24.54	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
271.77	333.34	55.66	less-open
272.43	120.11	48.41	less-open
273.19	316.51	39.86	less-open
274.02	172.61	75.74	less-open
274.82	170.35	44.48	less-open
275.32	123.78	39.27	less-open
275.5	133.52	52.64	less-open
276.26	311.15	44.95	less-open
276.36	309.79	40.68	less-open
276.47	311.22	51.82	less-open
276.75	316.57	37.79	open
276.89	319.77	37.09	less-open
277.73	182.23	56.4	less-open
277.99	346.04	74.18	less-open
278.4	347	70.77	less-open
278.57	224.02	20.46	less-open
279.91	324.13	42.46	open
280.01	143.87	42.13	less-open
280.34	133.51	39.91	less-open
280.82	148.22	46.88	less-open
280.95	138.04	44.54	less-open
281.18	142.02	44.93	less-open
281.73	124.93	44.4	less-open
282.15	330.66	48.8	less-open
282.72	346.89	66.37	less-open
282.77	324.08	36.31	less-open
282.88	126.34	56.23	less-open
283.98	288.8	22.41	less-open
285.37	339.67	61.38	less-open
286.52	298.28	68.16	less-open
287.64	283.55	24.78	less-open
287.9	296.84	73.64	less-open
288.15	139.56	40.09	less-open
288.23	124	38.51	less-open
288.23	307.26	72.25	less-open
288.33	144.78	41.82	less-open
288.47	128	53.19	less-open
288.66	112.43	55.52	less-open
290.53	303.72	79.05	less-open
290.72	309.21	58.71	less-open
291.17	306.01	46.3	less-open
291.5	313.58	39.27	less-open
292.38	327.15	51.84	less-open
293.27	267.07	75.88	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
293.35	348.8	44.17	less-open
294.94	303.29	33.74	less-open
295.94	286.86	30.32	less-open
296.75	295.71	44.93	less-open
298.89	94.5	57.99	less-open
301.24	114.52	36.62	less-open
301.28	140.69	45.56	less-open
301.53	112.5	52.03	less-open
301.99	76.34	65.3	less-open
302.53	348.53	45.5	less-open
302.62	101.83	50.54	less-open
302.63	338.76	50.85	less-open
302.78	131.4	30.04	less-open
302.89	326.77	51.97	less-open
302.98	326.01	54.75	less-open
303.06	99.07	55.62	less-open
303.23	105.66	48.9	less-open
303.36	326.15	52.41	less-open
303.63	333.18	55.53	less-open
303.78	306.16	34.56	less-open
303.96	127.25	49.87	less-open
304.42	337.37	23.63	less-open
304.43	119.96	52.43	less-open
304.57	120.81	47.62	less-open
304.7	100.84	57.37	less-open
304.75	146.97	34.46	less-open
304.77	323.9	36.73	less-open
305.12	123.36	47.54	less-open
305.52	331.02	53.53	less-open
306.65	325.5	50.83	less-open
308.35	170.02	48.13	less-open
308.74	316.59	53.17	less-open
308.86	110.12	41.37	less-open
309.23	337.69	67.75	less-open
309.64	306.86	63.02	less-open
310.28	123.5	45.9	less-open
311.91	125.65	45.35	less-open
313.23	172.72	43.66	less-open
313.41	194.1	52.02	less-open
313.81	133.97	45.58	less-open
315.1	178.69	42.09	less-open
315.62	156.26	45.65	less-open
316.36	116.02	44.64	less-open
316.66	121.77	36.29	less-open

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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
318.2	264.89	26.31	less-open
321.7	345.84	75.33	less-open
322.52	326.26	64.07	less-open
324.79	355.46	51.14	less-open
324.94	354.22	45.36	less-open
325.2	133.66	50.55	less-open
325.83	116.85	59.07	less-open
326.35	84.85	41.55	less-open
326.38	95.84	66.25	less-open
326.7	92.13	42.06	less-open
326.92	120.62	61.35	less-open
327.09	133.81	37.99	less-open
327.18	342.4	61.29	less-open
327.25	117.36	57.42	less-open
327.44	297.04	38.86	less-open
327.77	138.65	40.12	less-open
328.32	111.04	40.69	less-open
328.42	95	70.18	less-open
328.75	118.57	63.83	less-open
328.95	123.47	58.16	less-open
329.39	129.95	50.85	less-open
329.71	113.89	48.32	less-open
329.84	114.28	39.07	less-open
329.97	116.57	46.26	less-open
332.51	337.86	48.59	less-open
333.59	337.13	60.34	less-open
334.4	104.55	50.05	less-open
334.53	326.15	38.93	less-open
335.73	67.24	43.85	less-open
335.82	219.16	37.64	less-open
336.02	295.18	33.32	less-open
336.78	287.45	83.11	less-open
337.91	218.78	41.71	less-open

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depth (feet)	down-dip compass azimuth (degrees)	dip angle (degrees)	interpreted planar feature category
30.12	132.5	48.5	less-open
30.65	136.9	53.6	less-open
30.88	142.7	48.5	less-open
32.63	182.9	54.9	less-open
32.95	168.8	52.6	less-open
33.76	160.5	49.4	less-open
34.17	175.3	43.0	less-open
34.63	161.6	50.4	less-open
35.19	171.3	46.5	less-open
36.39	175.6	51.0	less-open
36.92	104.6	28.7	less-open
38.55	303.6	68.4	less-open
38.55	170.5	50.6	less-open
38.73	9.7	66.7	less-open
41.34	154.3	40.3	less-open
42.85	171.9	52.1	less-open
43.36	154.6	47.6	less-open
44.05	167.2	67.4	less-open
45.27	206.2	15.2	less-open
46.47	188.2	69.4	less-open
47.00	179.5	56.6	less-open
47.24	170.0	53.5	less-open
47.97	165.1	51.8	less-open
48.60	191.3	64.1	less-open
49.62	187.1	54.9	less-open
50.41	191.5	61.6	less-open
51.24	169.6	48.3	less-open
51.55	170.6	52.5	less-open
52.01	182.2	51.3	less-open
52.47	184.4	52.9	less-open
53.06	189.9	51.4	less-open
53.69	180.5	59.2	less-open
53.92	190.8	55.1	less-open
54.27	174.47	52.55	less-open
54.75	150.1	44.4	less-open
55.28	162.5	49.2	less-open
55.56	165.54	55.28	less-open
55.81	152.59	49.12	less-open
56.53	155.2	51.3	less-open
56.83	153.2	52.5	less-open
57.17	348.0	36.3	less-open
57.22	164.4	57.5	less-open
58.30	189.6	50.3	less-open
58.47	184.5	54.8	less-open

Note that down-dip compass azimuth is perpendicular to the strike direction.

Note that interpreted down-dip compass azimuths are with respect to magnetic north.

Down-dip azimuths & dip angles were corrected for borehole deviation from vertical.

Fracture Orientations Interpreted from RW-1 Acoustic Televiewer Log  
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 Buchanan, NY  
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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
58.80	172.1	58.1	less-open
59.60	148.4	47.7	less-open
59.93	168.2	48.7	less-open
60.08	166.76	47.7	less-open
61.2	134.08	49.41	less-open
61.36	144.4	42.5	less-open
61.77	150.6	53.5	less-open
61.95	149.2	53.6	less-open
62.72	285.5	65.8	less-open
63.12	263.1	57.3	less-open
63.22	126.99	67.86	less-open
64.71	154.72	44.73	less-open
64.77	298.4	66.0	less-open
65.31	129.0	46.1	less-open
65.50	302.3	63.7	less-open
65.87	201.1	52.4	less-open
66.33	218.7	28.6	less-open
66.60	172.0	46.2	less-open
67.32	139.3	40.0	less-open
67.70	150.3	40.6	less-open
68.53	351.6	4.7	less-open
69.58	194.5	43.6	less-open
69.85	158.6	46.8	less-open
70.08	162.2	46.0	less-open
73.89	324.2	62.2	open
75.33	109.3	32.8	less-open
79.44	135.7	35.3	less-open
81.07	242.2	63.6	less-open
83.58	114.4	45.7	less-open
83.71	122.3	50.0	less-open
83.82	112.7	48.3	less-open
84.06	202.7	54.7	less-open
87.09	166.2	42.2	less-open
87.31	299.8	24.5	less-open
97.98	183.8	42.7	less-open
100.46	125.5	32.1	less-open
100.84	328.4	48.8	less-open
103.13	194.6	54.0	less-open
111.58	287.9	49.2	less-open
111.82	141.5	43.8	less-open
114.91	146.0	52.9	less-open
116.19	154.43	51.91	open
117.18	116.62	61.61	less-open
119.45	122.1	42.9	less-open



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<b>depth (feet)</b>	<b>down-dip compass azimuth (degrees)</b>	<b>dip angle (degrees)</b>	<b>interpreted planar feature category</b>
120.34	108.7	33.7	less-open
124.07	229.6	30.8	less-open
127.11	152.4	84.5	less-open
127.16	182.4	41.8	less-open
129.71	309.2	48.9	less-open
134.61	284.5	46.5	less-open
135.67	263.7	47.0	less-open
136.95	322.0	43.0	less-open
137.89	290.6	45.2	less-open
138.51	293.1	43.1	less-open
138.64	286.6	43.4	less-open
139.11	273.7	27.2	less-open