Depth (feet)	Dip azimuth	Dip	Structure description
227.0	N159	30	Primary-structure Planar Bedding
228.1	N151	30	Primary-structure Planar Bedding
229.6	N168	34	Primary-structure Planar Bedding
230.3	N169	32	Primary-structure Planar Bedding
230.3	N330	62	Fracture Discontinuous Hairline-fracture
231.1	N159	34	Primary-structure Planar Bedding
231.7	N158	32	Primary-structure Planar Bedding
232.2	N163	27	Primary-structure Planar Bedding
232.3	N330	42	Fracture Discontinuous Hairline-fracture
233.1	N074	42	Fracture Planar Hairline-fracture
234.0	N153	30	Primary-structure Planar Bedding
234.8	N148	33	Primary-structure Planar Bedding
235.3	N159	28	Primary-structure Planar Bedding
236.2	N169	33	Primary-structure Planar Bedding
237.2	N160	29	Primary-structure Planar Bedding
238.0	N150	30	Primary-structure Planar Bedding
239.3	N161	29	Primary-structure Planar Bedding
240.2	N343	58	Fracture Discontinuous Hairline-fracture
240.2	N141	28	Primary-structure Planar Bedding
241.2	N144	42	Primary-structure Planar Bedding
242.8	N156	29	Primary-structure Planar Bedding
242.9	N331	53	Fracture Discontinuous Hairline-fracture
243.4	N156	31	Primary-structure Planar Bedding
244.8	N146	32	Primary-structure Planar Bedding
245.9	N158	30	Primary-structure Planar Bedding
247.4	N154	31	Primary-structure Planar Bedding
248.0	N160	28	Primary-structure Planar Bedding
248.4	N155	31	Primary-structure Planar Bedding
249.5	N160	33	Primary-structure Planar Bedding
250.8	N157	33	Primary-structure Planar Bedding
252.8	N156	33	Primary-structure Planar Bedding
254.7	N163	38	Primary-structure Planar Bedding
255.7	N157	31	Primary-structure Planar Bedding
256.7	N159	29	Primary-structure Planar Bedding
257.8	N157	29	Primary-structure Planar Bedding
259.2	N154	34	Primary-structure Planar Bedding
260.5	N155	26	Primary-structure Planar Bedding
261.9	N166	31	Primary-structure Planar Bedding
264.9	N179	40	Primary-structure Planar Bedding

Depth (feet)	Dip azimuth	Dip	Structure description
265.9	N162	33	Primary-structure Planar Bedding
267.0	N124	27	Fracture Planar Hairline-fracture
267.6	N327	72	Fracture Discontinuous Hairline-fracture
267.8	N146	36	Primary-structure Planar Bedding
268.6	N156	31	Primary-structure Planar Bedding
269.3	N159	30	Primary-structure Planar Bedding
269.8	N159	29	Primary-structure Planar Bedding
271.3	N155	33	Primary-structure Planar Bedding
272.6	N151	37	Primary-structure Planar Bedding
279.1	N148	27	Primary-structure Planar Bedding
280.6	N162	26	Primary-structure Planar Bedding
280.9	N331	71	Fracture Discontinuous Hairline-fracture
281.4	N153	34	Primary-structure Planar Bedding
282.3	N156	29	Primary-structure Planar Bedding
283.1	N163	33	Primary-structure Planar Bedding
284.3	N161	32	Primary-structure Planar Bedding
284.8	N152	41	Fracture Planar Open-fracture
285.0	N146	30	Primary-structure Irregular Bedding
285.4	N158	31	Primary-structure Irregular Bedding
287.0	N153	30	Primary-structure Planar Bedding
287.7	N150	31	Primary-structure Planar Bedding
287.9	N327	73	Fracture Discontinuous Hairline-fracture
288.5	N154	27	Primary-structure Planar Bedding
288.6	N327	54	Fracture Discontinuous Hairline-fracture
289.5	N334	57	Fracture Discontinuous Hairline-fracture
289.6	N155	32	Primary-structure Planar Bedding
290.2	N154	34	Primary-structure Planar Bedding
290.6	N331	40	Fracture Discontinuous Hairline-fracture
290.9	N156	31	Primary-structure Planar Bedding
291.1	N341	60	Fracture Discontinuous Hairline-fracture
291.6	N162	29	Primary-structure Planar Bedding
292.1	N294	58	Fracture Discontinuous Hairline-fracture
292.3	N154	31	Primary-structure Planar Bedding
292.8	N161	32	Primary-structure Planar Bedding
293.8	N348	73	Fracture Discontinuous Hairline-fracture
294.0	N168	43	Primary-structure Planar Bedding
294.4	N319	60	Fracture Discontinuous Hairline-fracture
295.2	N159	33	Primary-structure Planar Bedding
295.7	N318	64	Fracture Discontinuous Hairline-fracture

Depth (feet)	Dip azimuth	Dip	Structure description
295.8	N160	38	Primary-structure Planar Bedding
296.5	N020	53	Fracture Discontinuous Hairline-fracture
296.8	N155	38	Primary-structure Planar Bedding
298.3	N147	38	Primary-structure Planar Bedding
298.7	N320	70	Fracture Discontinuous Hairline-fracture
300.1	N166	52	Primary-structure Planar Bedding
301.1	N320	56	Fracture Irregular Hairline-fracture
305.1	N163	55	Primary-structure Planar Bedding
306.7	N161	36	Primary-structure Planar Bedding
307.0	N345	69	Fracture Discontinuous Hairline-fracture
307.3	N155	35	Primary-structure Planar Bedding
308.2	N328	64	Fracture Discontinuous Hairline-fracture
308.2	N151	35	Primary-structure Planar Bedding
308.8	N314	61	Fracture Discontinuous Hairline-fracture
309.5	N156	38	Primary-structure Planar Bedding
309.8	N329	62	Fracture Discontinuous Hairline-fracture
310.4	N162	36	Primary-structure Planar Bedding
310.5	N322	61	Fracture Discontinuous Hairline-fracture
311.0	N158	33	Primary-structure Planar Bedding
312.1	N155	36	Primary-structure Planar Bedding
313.0	N157	36	Primary-structure Planar Bedding
315.7	N160	36	Primary-structure Planar Bedding
316.2	N162	36	Primary-structure Planar Bedding
316.3	N328	52	Fracture Discontinuous Hairline-fracture
316.7	N340	63	Fracture Discontinuous Hairline-fracture
316.8	N158	34	Primary-structure Planar Bedding
317.6	N330	68	Fracture Discontinuous Hairline-fracture
317.7	N156	30	Primary-structure Planar Bedding
319.1	N159	34	Primary-structure Planar Bedding
319.4	N351	71	Fracture Discontinuous Hairline-fracture
320.6	N344	51	Fracture Discontinuous Hairline-fracture
320.6	N159	34	Primary-structure Planar Bedding
320.8	N339	66	Fracture Discontinuous Hairline-fracture
322.1	N326	64	Fracture Discontinuous Hairline-fracture
322.2	N335	78	Fracture Discontinuous Hairline-fracture
322.3	N156	31	Primary-structure Planar Bedding
322.9	N160	32	Primary-structure Irregular Bedding
323.6	N162	36	Primary-structure Planar Bedding
323.8	N294	45	Fracture Discontinuous Hairline-fracture

Depth (feet)	Dip azimuth	Dip	Structure description
324.2	N292	60	Fracture Discontinuous Hairline-fracture
324.3	N159	32	Primary-structure Planar Bedding
328.0	N011	70	Fracture Discontinuous Hairline-fracture
328.5	N158	40	Primary-structure Planar Bedding
330.1	N158	35	Primary-structure Planar Bedding
330.7	N160	43	Primary-structure Planar Bedding
331.3	N160	36	Primary-structure Planar Bedding
331.9	N153	38	Primary-structure Planar Bedding
333.4	N254	80	Fracture Irregular Hairline-fracture
333.6	N153	43	Primary-structure Planar Bedding
333.9	N283	66	Fracture Irregular Hairline-fracture
337.6	N170	41	Primary-structure Planar Bedding
338.8	N171	29	Primary-structure Planar Bedding
340.1	N179	33	Primary-structure Planar Bedding
341.2	N139	29	Primary-structure Planar Bedding
342.1	N179	82	Fracture Irregular Hairline-fracture
342.2	N154	35	Primary-structure Planar Bedding
342.9	N158	33	Primary-structure Planar Bedding
344.1	N152	32	Primary-structure Planar Bedding
345.4	N160	34	Primary-structure Planar Bedding
347.0	N018	65	Fracture Irregular Hairline-fracture

DIP DATA INTERPRETATION
RGLDIP vsn 6.2
DIP-AZIMUTH, FRACTURE ROSE-DIAGRAM

AMEC

Borehole: MP-120

CLINCH RIVER

top of borehole.....
East:_
North:
Alt: _

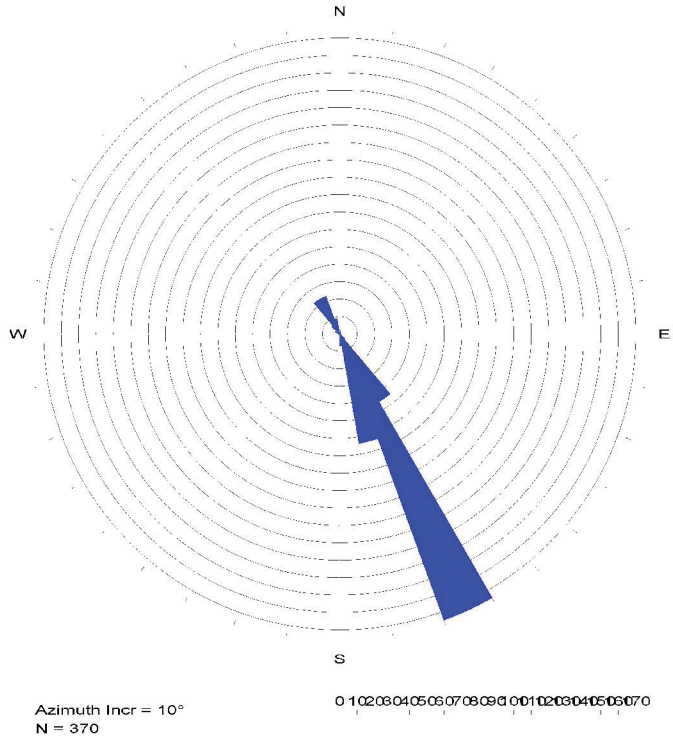
North ref. is true
Depth units are feet

Zone from 347.503 to 25.520ft

Interpretation 1

Dip data sets .....
BHTV dips

MP-120
25.520 - 347.503ft
Dip-azimuth, fracture rose-diagram



MP-120, Interpretation 1 347.503 to 25.520ft 1

Figure 29. Boring MP-120, Rose Diagram

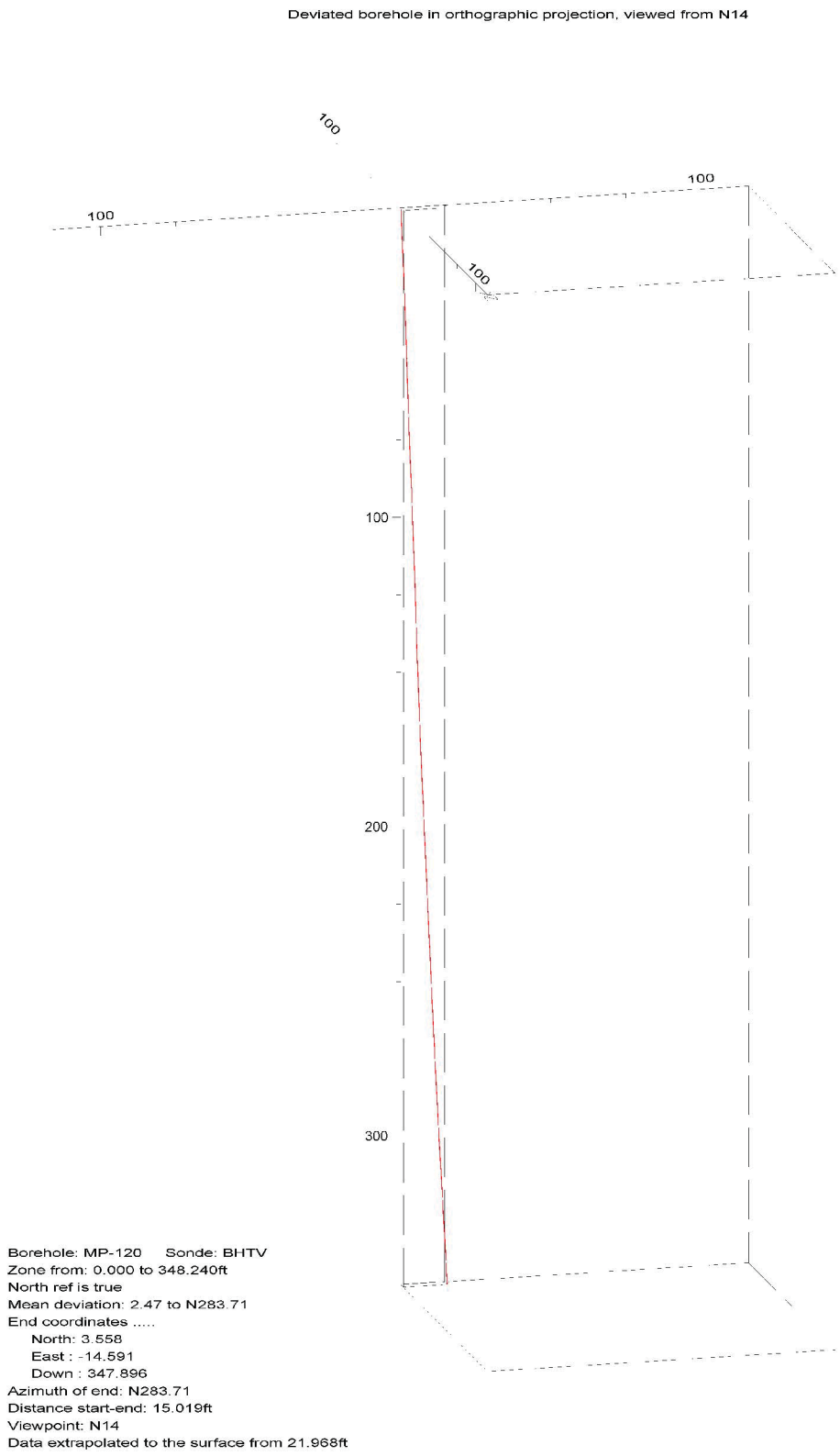


Figure 30. Boring MP-120, Up Deviation Projection

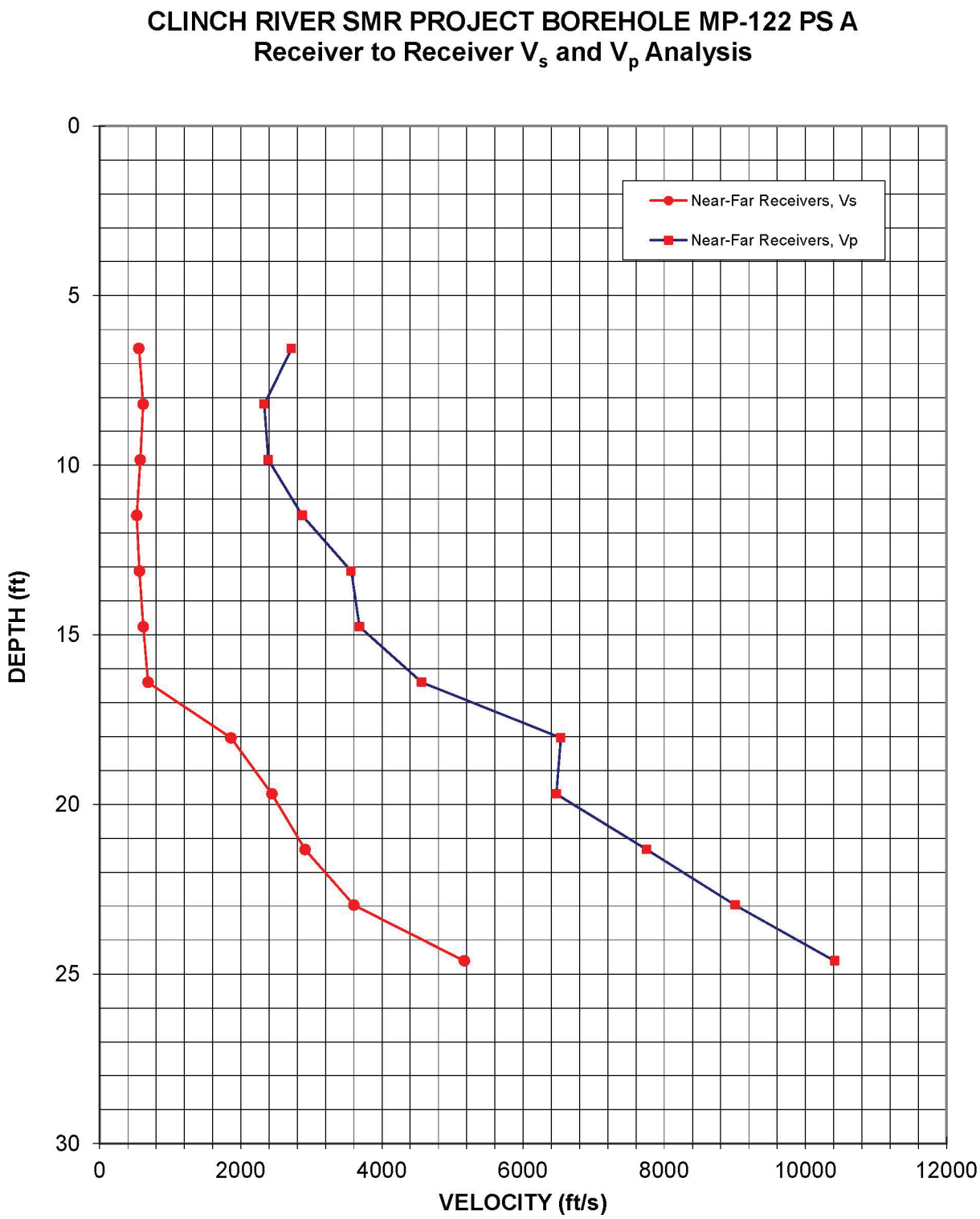


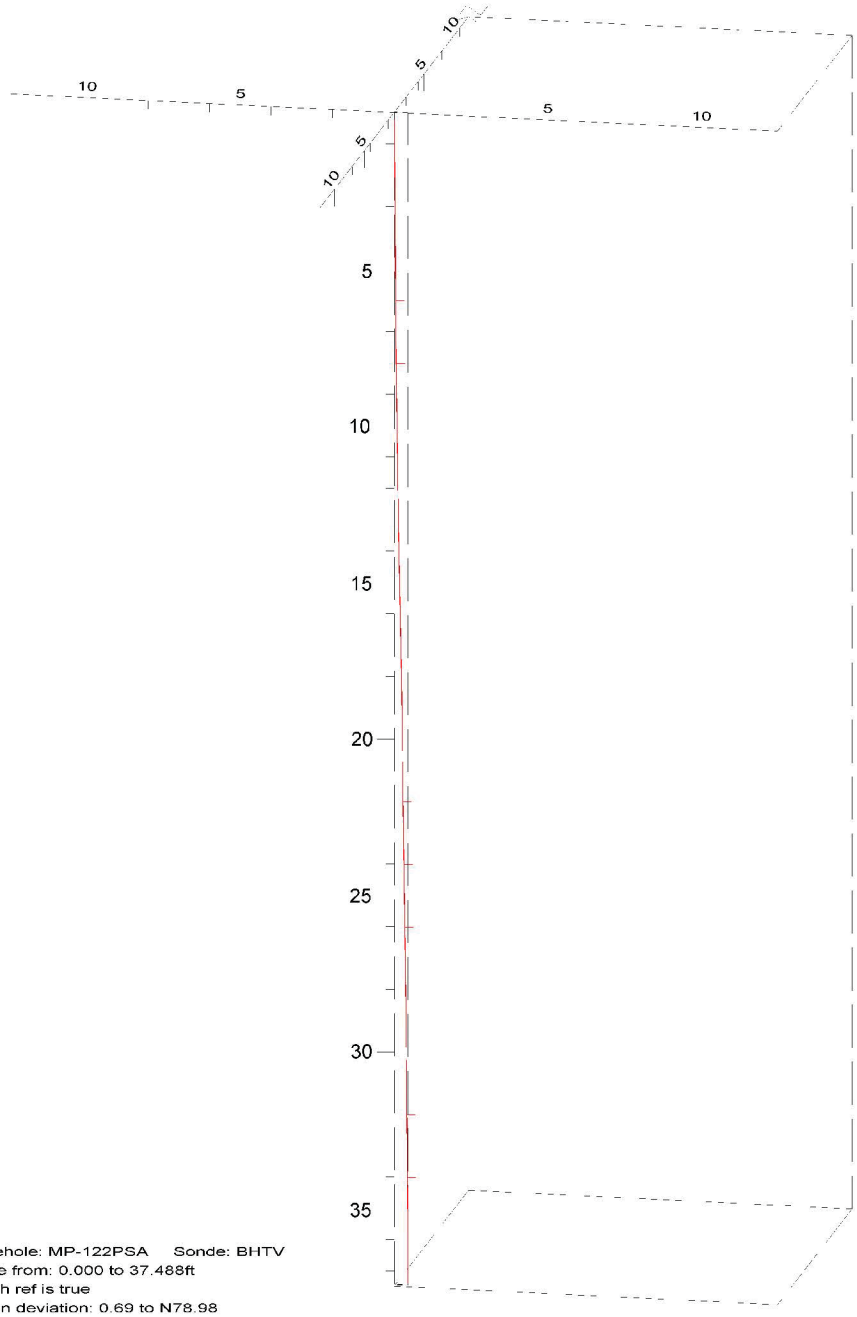
Figure 31: Boring MP-122PSA, Suspension R1-R2 P- and S_H-wave velocities

Table 18. Boring MP-122PSA, Suspension R1-R2 depths and P- and S_H-wave velocities

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Receiver-to-Receiver Travel Time Data - Borehole MP-122A

American Units				Metric Units			
Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio	Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
6.6	560	2720	0.48	2.0	170	830	0.48
8.2	620	2330	0.46	2.5	190	710	0.46
9.8	580	2390	0.47	3.0	180	730	0.47
11.5	530	2870	0.48	3.5	160	880	0.48
13.1	570	3570	0.49	4.0	170	1090	0.49
14.8	620	3680	0.49	4.5	190	1120	0.49
16.4	690	4570	0.49	5.0	210	1390	0.49
18.0	1860	6540	0.46	5.5	570	1990	0.46
19.7	2440	6470	0.42	6.0	740	1970	0.42
21.3	2910	7750	0.42	6.5	890	2360	0.42
23.0	3600	9010	0.40	7.0	1100	2750	0.40
24.6	5170	10420	0.34	7.5	1580	3180	0.34

Deviated borehole in orthographic projection, viewed from N169



Borehole: MP-122PSA Sonde: BHTV
Zone from: 0.000 to 37.488ft
North ref is true
Mean deviation: 0.69 to N78.98
End coordinates .....
North: 0.087
East : 0.439
Down : 37.485
Azimuth of end: N78.84
Distance start-end: 0.448ft
Viewpoint: N169
Data extrapolated to the surface from 2.168ft

Figure 32. Boring MP-122PSA, Up Deviation Projection

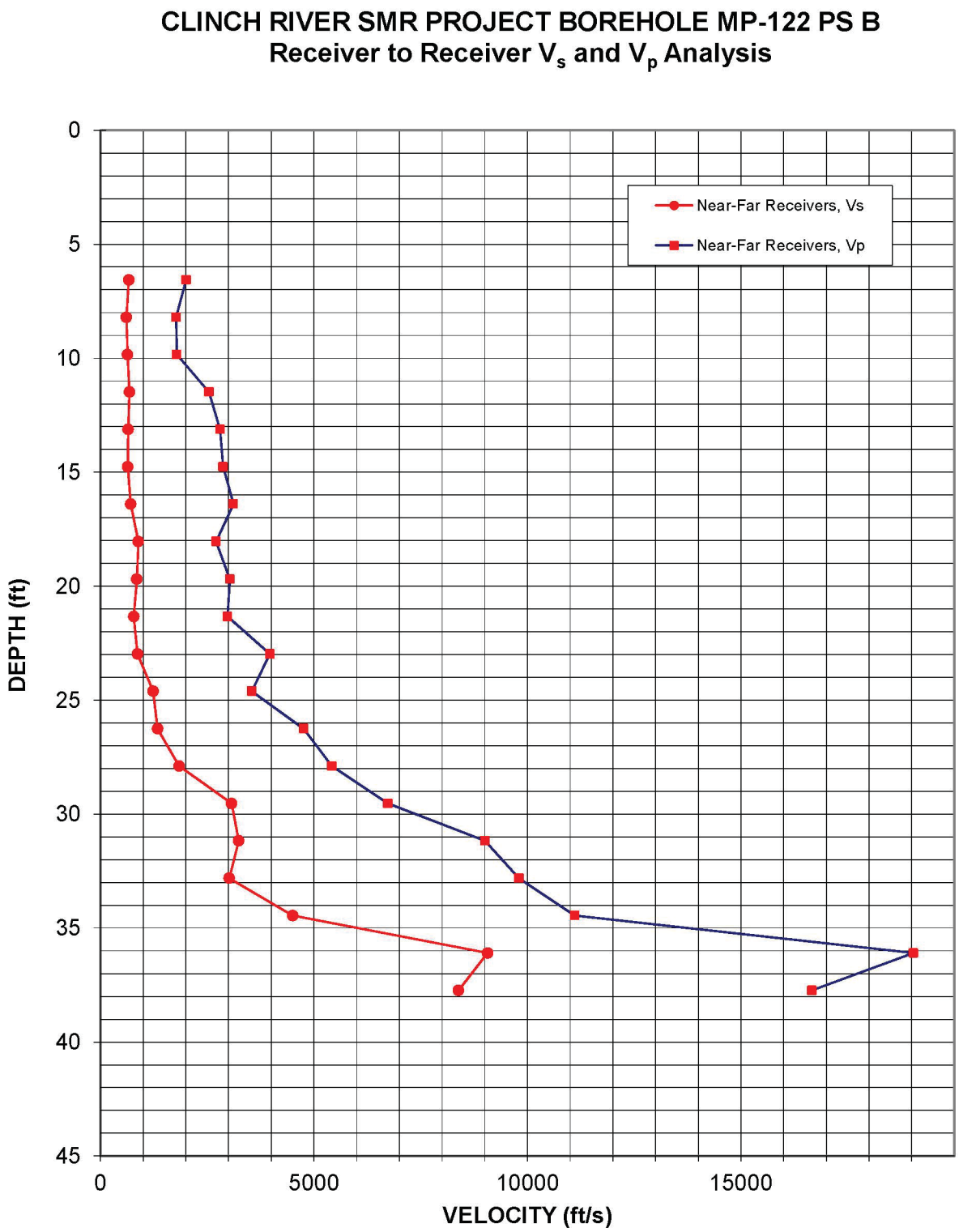


Figure 33: Boring MP-122PSB, Suspension R1-R2 P- and S_H-wave velocities

Table 19. Boring MP-122PSB, Suspension R1-R2 depths and P- and S_H-wave velocities

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Receiver-to-Receiver Travel Time Data - Borehole MP-122B

American Units				Metric Units			
Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio	Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
6.6	660	2010	0.44	2.0	200	610	0.44
8.2	610	1770	0.43	2.5	180	540	0.43
9.8	630	1790	0.43	3.0	190	550	0.43
11.5	680	2540	0.46	3.5	210	780	0.46
13.1	650	2800	0.47	4.0	200	850	0.47
14.8	640	2870	0.47	4.5	200	880	0.47
16.4	710	3120	0.47	5.0	220	950	0.47
18.0	890	2710	0.44	5.5	270	830	0.44
19.7	850	3030	0.46	6.0	260	920	0.46
21.3	780	2980	0.46	6.5	240	910	0.46
23.0	870	3970	0.48	7.0	260	1210	0.48
24.6	1230	3550	0.43	7.5	380	1080	0.43
26.3	1340	4760	0.46	8.0	410	1450	0.46
27.9	1840	5420	0.43	8.5	560	1650	0.43
29.5	3070	6730	0.37	9.0	940	2050	0.37
31.2	3240	9010	0.43	9.5	990	2750	0.43
32.8	3020	9800	0.45	10.0	920	2990	0.45
34.5	4500	11110	0.40	10.5	1370	3390	0.40
36.1	9070	19050	0.35	11.0	2760	5810	0.35
37.7	8390	16670	0.33	11.5	2560	5080	0.33

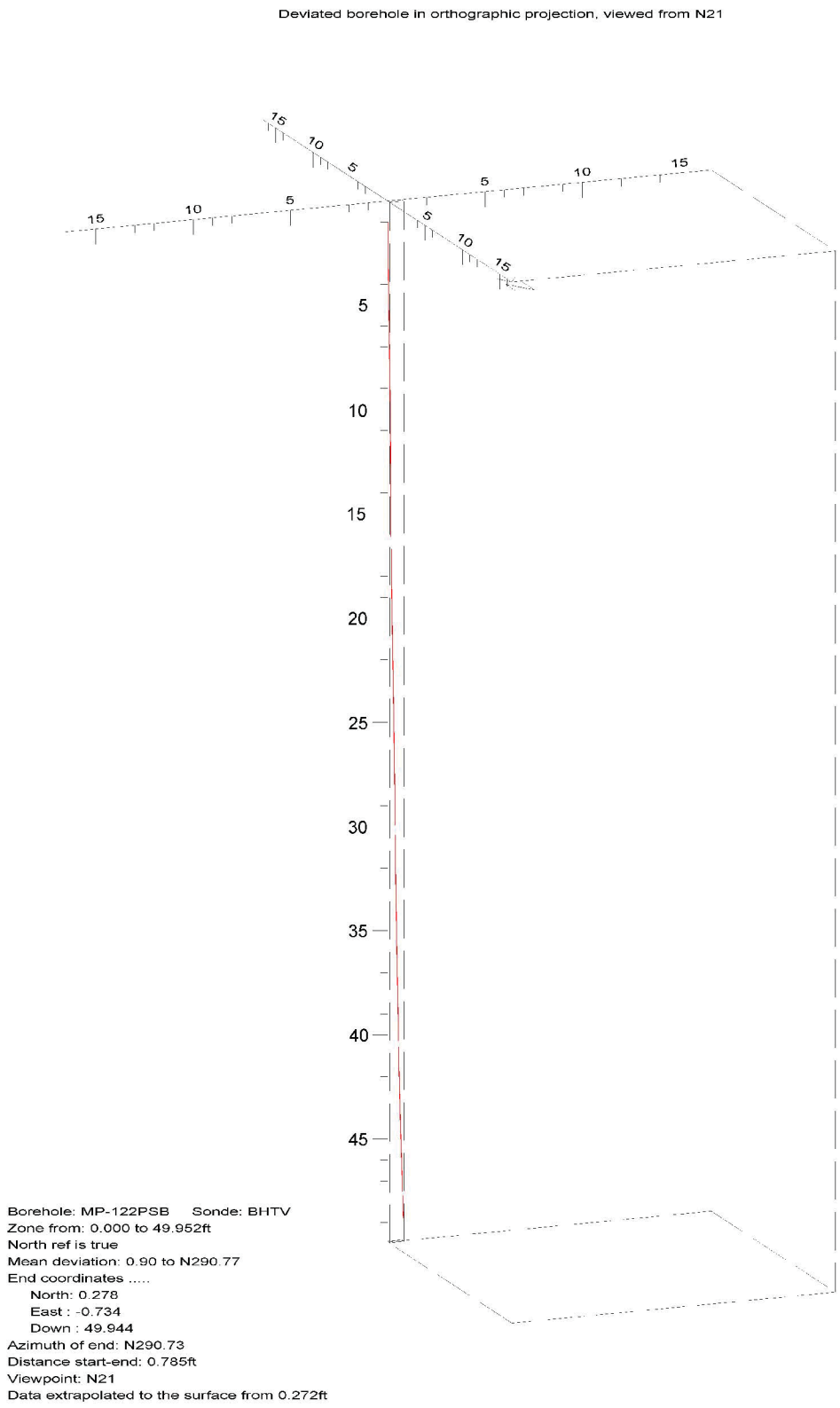


Figure 34. Boring MP-122PSB, Up Deviation Projection

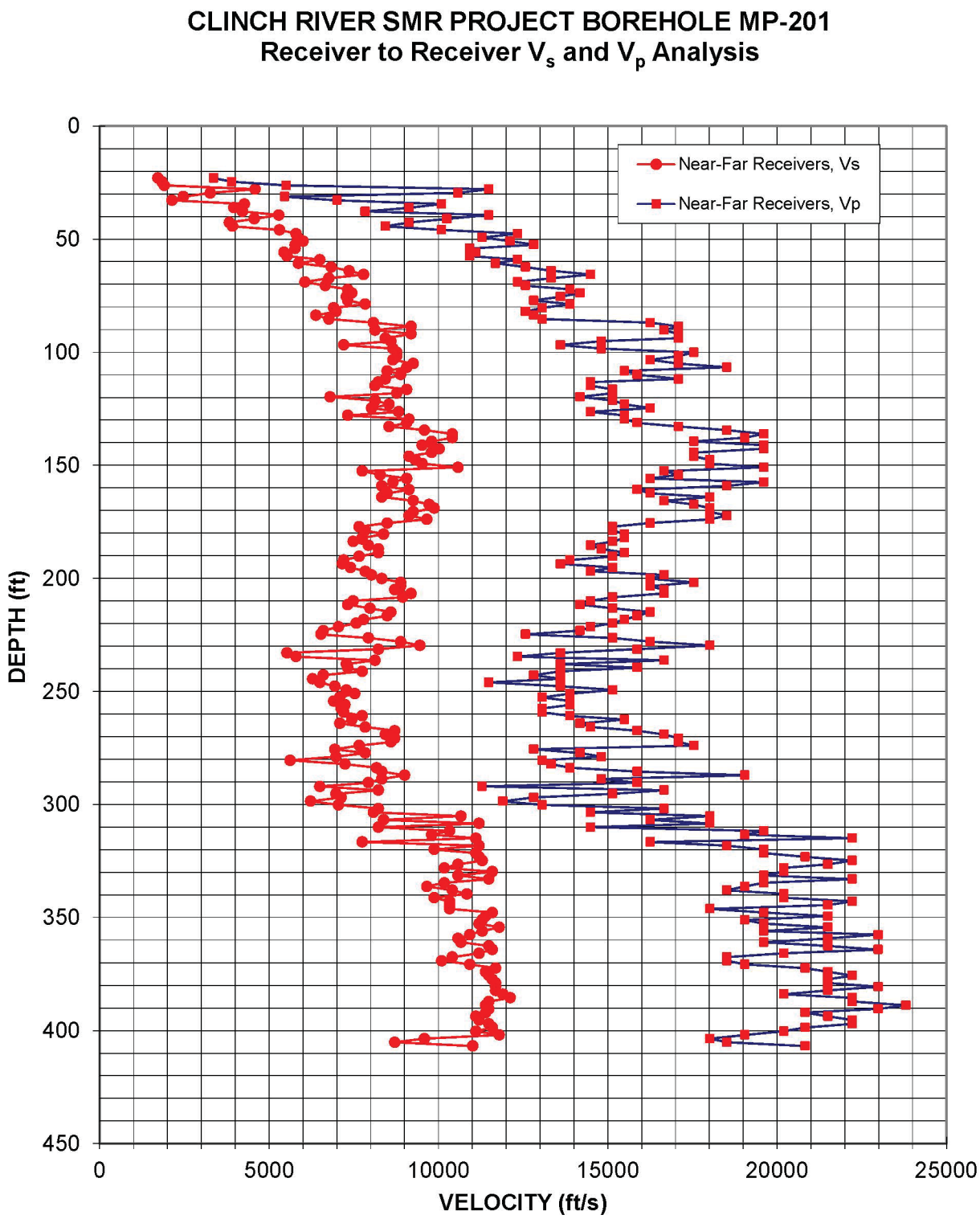


Figure 35: Boring MP-201, Suspension R1-R2 P- and S_H-wave velocities

Table 20. Boring MP-201, Suspension R1-R2 depths and P- and S_H-wave velocities

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Receiver-to-Receiver Travel Time Data - Borehole MP-201

American Units				Metric Units			
Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio	Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
19.7	-	-	-	6.0	-	-	-
21.3	-	-	-	6.5	-	-	-
23.0	1720	3370	0.32	7.0	520	1030	0.32
24.6	1840	3900	0.36	7.5	560	1190	0.36
26.3	1910	5510	0.43	8.0	580	1680	0.43
27.9	4600	11490	0.40	8.5	1400	3500	0.40
29.5	3270	10580	0.45	9.0	1000	3230	0.45
31.2	2470	5460	0.37	9.5	750	1670	0.37
32.8	2140	7020	0.45	10.0	650	2140	0.45
34.5	4270	10100	0.39	10.5	1300	3080	0.39
36.1	3970	9130	0.38	11.0	1210	2780	0.38
37.7	4220	7840	0.30	11.5	1290	2390	0.30
39.4	5290	11490	0.37	12.0	1610	3500	0.37
41.0	4570	10260	0.38	12.5	1390	3130	0.38
42.7	3830	9130	0.39	13.0	1170	2780	0.39
44.3	3920	8440	0.36	13.5	1200	2570	0.36
45.9	5310	10100	0.31	14.0	1620	3080	0.31
47.6	5800	12350	0.36	14.5	1770	3760	0.36
49.2	5850	11300	0.32	15.0	1780	3440	0.32
50.9	6010	12120	0.34	15.5	1830	3690	0.34
52.5	5770	12820	0.37	16.0	1760	3910	0.37
54.1	5770	10930	0.31	16.5	1760	3330	0.31
55.8	5440	11110	0.34	17.0	1660	3390	0.34
57.4	5530	10930	0.33	17.5	1690	3330	0.33
59.1	6500	12350	0.31	18.0	1980	3760	0.31
60.7	5870	11700	0.33	18.5	1790	3560	0.33
62.3	6840	12580	0.29	19.0	2080	3830	0.29
64.0	7370	13330	0.28	19.5	2250	4060	0.28
65.6	7800	14490	0.30	20.0	2380	4420	0.30
67.3	6770	13330	0.33	20.5	2060	4060	0.33
68.9	6060	12350	0.34	21.0	1850	3760	0.34
70.5	6670	12580	0.30	21.5	2030	3830	0.30
72.2	7330	13890	0.31	22.0	2230	4230	0.31
73.8	7450	14180	0.31	22.5	2270	4320	0.31
75.5	7290	13610	0.30	23.0	2220	4150	0.30
77.1	7330	12820	0.26	23.5	2230	3910	0.26
78.7	7840	13890	0.27	24.0	2390	4230	0.27

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Receiver-to-Receiver Travel Time Data - Borehole MP-201

American Units				Metric Units			
Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio	Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
80.4	6910	13070	0.31	24.5	2110	3980	0.31
82.0	6980	12580	0.28	25.0	2130	3830	0.28
83.7	6380	12820	0.34	25.5	1940	3910	0.34
85.3	6770	13070	0.32	26.0	2060	3980	0.32
86.9	8080	16260	0.34	26.5	2460	4960	0.34
88.6	9200	17090	0.30	27.0	2800	5210	0.30
90.2	8130	16670	0.34	27.5	2480	5080	0.34
91.9	9200	17090	0.30	28.0	2800	5210	0.30
93.8	8440	17090	0.34	28.6	2570	5210	0.34
95.1	8600	14810	0.25	29.0	2620	4520	0.25
96.8	7210	13610	0.30	29.5	2200	4150	0.30
98.4	8660	14810	0.24	30.0	2640	4520	0.24
100.1	8770	17540	0.33	30.5	2670	5350	0.33
101.7	8770	17090	0.32	31.0	2670	5210	0.32
103.4	8660	16260	0.30	31.5	2640	4960	0.30
105.0	9260	17090	0.29	32.0	2820	5210	0.29
106.6	9070	18520	0.34	32.5	2760	5640	0.34
108.3	8490	15500	0.29	33.0	2590	4730	0.29
109.9	8890	15870	0.27	33.5	2710	4840	0.27
111.9	8440	17090	0.34	34.1	2570	5210	0.34
113.2	8230	14490	0.26	34.5	2510	4420	0.26
114.8	8130	14490	0.27	35.0	2480	4420	0.27
116.5	9070	15150	0.22	35.5	2760	4620	0.22
118.1	8770	15150	0.25	36.0	2670	4620	0.25
119.8	6800	14180	0.35	36.5	2070	4320	0.35
121.4	8130	15150	0.30	37.0	2480	4620	0.30
123.0	8550	15500	0.28	37.5	2610	4730	0.28
124.7	8030	16260	0.34	38.0	2450	4960	0.34
126.3	8830	14490	0.20	38.5	2690	4420	0.20
128.0	7330	15500	0.36	39.0	2230	4730	0.36
129.6	9130	15500	0.23	39.5	2780	4730	0.23
131.2	9070	15870	0.26	40.0	2760	4840	0.26
132.9	8550	17090	0.33	40.5	2610	5210	0.33
134.5	9590	18520	0.32	41.0	2920	5640	0.32
136.2	10420	19610	0.30	41.5	3180	5980	0.30
137.8	10420	19050	0.29	42.0	3180	5810	0.29
139.4	9800	17540	0.27	42.5	2990	5350	0.27
141.1	9520	19610	0.35	43.0	2900	5980	0.35
142.7	10030	19610	0.32	43.5	3060	5980	0.32

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Receiver-to-Receiver Travel Time Data - Borehole MP-201

American Units				Metric Units			
Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio	Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
144.4	9800	17540	0.27	44.0	2990	5350	0.27
146.0	9130	17540	0.31	44.5	2780	5350	0.31
147.6	9320	18020	0.32	45.0	2840	5490	0.32
149.3	9520	18020	0.31	45.5	2900	5490	0.31
150.9	10580	19610	0.29	46.0	3230	5980	0.29
152.6	7750	16670	0.36	46.5	2360	5080	0.36
154.2	8280	17090	0.35	47.0	2520	5210	0.35
155.8	9070	16260	0.27	47.5	2760	4960	0.27
157.5	8660	19610	0.38	48.0	2640	5980	0.38
159.1	8330	18520	0.37	48.5	2540	5640	0.37
160.8	9130	15870	0.25	49.0	2780	4840	0.25
162.4	8490	16260	0.31	49.5	2590	4960	0.31
164.0	8330	18020	0.36	50.0	2540	5490	0.36
165.7	9260	16670	0.28	50.5	2820	5080	0.28
167.3	9730	17540	0.28	51.0	2970	5350	0.28
169.0	9880	18020	0.29	51.5	3010	5490	0.29
170.6	9260	18020	0.32	52.0	2820	5490	0.32
172.2	9130	18520	0.34	52.5	2780	5640	0.34
173.9	9660	18020	0.30	53.0	2940	5490	0.30
175.5	8490	16260	0.31	53.5	2590	4960	0.31
177.2	7660	15150	0.33	54.0	2340	4620	0.33
178.8	7840	15150	0.32	54.5	2390	4620	0.32
180.5	8390	15500	0.29	55.0	2560	4730	0.29
182.1	7750	15500	0.33	55.5	2360	4730	0.33
183.7	7490	15150	0.34	56.0	2280	4620	0.34
185.4	7940	14490	0.29	56.5	2420	4420	0.29
187.0	8230	14810	0.28	57.0	2510	4520	0.28
188.7	8230	15500	0.30	57.5	2510	4730	0.30
190.3	7660	15150	0.33	58.0	2340	4620	0.33
191.9	7210	13890	0.32	58.5	2200	4230	0.32
193.6	7170	13610	0.31	59.0	2180	4150	0.31
195.2	7410	15150	0.34	59.5	2260	4620	0.34
196.9	7840	14490	0.29	60.0	2390	4420	0.29
198.5	8030	16670	0.35	60.5	2450	5080	0.35
200.1	8330	16260	0.32	61.0	2540	4960	0.32
201.8	8890	17540	0.33	61.5	2710	5350	0.33
203.4	8890	16260	0.29	62.0	2710	4960	0.29
205.1	8710	16670	0.31	62.5	2660	5080	0.31
206.7	9200	16670	0.28	63.0	2800	5080	0.28

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Receiver-to-Receiver Travel Time Data - Borehole MP-201

American Units				Metric Units			
Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio	Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
208.3	8950	15150	0.23	63.5	2730	4620	0.23
210.0	7490	14490	0.32	64.0	2280	4420	0.32
211.6	7330	14180	0.32	64.5	2230	4320	0.32
213.3	7980	15150	0.31	65.0	2430	4620	0.31
214.9	8600	16260	0.31	65.5	2620	4960	0.31
216.5	8490	15870	0.30	66.0	2590	4840	0.30
218.2	7800	15500	0.33	66.5	2380	4730	0.33
219.8	7580	15150	0.33	67.0	2310	4620	0.33
221.5	7050	14490	0.34	67.5	2150	4420	0.34
223.1	6600	14180	0.36	68.0	2010	4320	0.36
224.7	6540	12580	0.32	68.5	1990	3830	0.32
226.4	7940	15150	0.31	69.0	2420	4620	0.31
228.0	8890	16260	0.29	69.5	2710	4960	0.29
229.7	9460	18020	0.31	70.0	2880	5490	0.31
231.3	8230	15870	0.32	70.5	2510	4840	0.32
232.9	5530	13610	0.40	71.0	1690	4150	0.40
234.6	5800	12350	0.36	71.5	1770	3760	0.36
236.2	8130	16670	0.34	72.0	2480	5080	0.34
237.9	7290	13610	0.30	72.5	2220	4150	0.30
239.5	7330	15870	0.36	73.0	2230	4840	0.36
241.1	7750	13610	0.26	73.5	2360	4150	0.26
242.8	6600	12820	0.32	74.0	2010	3910	0.32
244.4	6290	13610	0.36	74.5	1920	4150	0.36
246.1	6500	11490	0.26	75.0	1980	3500	0.26
247.7	6940	13610	0.32	75.5	2120	4150	0.32
249.3	7290	15150	0.35	76.0	2220	4620	0.35
251.0	7530	13890	0.29	76.5	2300	4230	0.29
252.6	7090	13070	0.29	77.0	2160	3980	0.29
254.3	6910	13890	0.34	77.5	2110	4230	0.34
255.9	7250	13890	0.31	78.0	2210	4230	0.31
257.6	7130	13070	0.29	78.5	2170	3980	0.29
259.2	7210	13070	0.28	79.0	2200	3980	0.28
260.8	7750	13890	0.27	79.5	2360	4230	0.27
262.5	7450	15500	0.35	80.0	2270	4730	0.35
264.1	7090	14180	0.33	80.5	2160	4320	0.33
265.8	7840	14490	0.29	81.0	2390	4420	0.29
267.4	8710	15870	0.28	81.5	2660	4840	0.28
269.0	8440	16670	0.33	82.0	2570	5080	0.33
270.7	8710	17090	0.32	82.5	2660	5210	0.32

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Receiver-to-Receiver Travel Time Data - Borehole MP-201

American Units				Metric Units			
Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio	Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
272.3	8600	17090	0.33	83.0	2620	5210	0.33
274.0	7660	17540	0.38	83.5	2340	5350	0.38
275.6	6940	12820	0.29	84.0	2120	3910	0.29
277.2	7840	14180	0.28	84.5	2390	4320	0.28
278.9	6980	14810	0.36	85.0	2130	4520	0.36
280.5	5630	13070	0.39	85.5	1710	3980	0.39
282.2	7250	13330	0.29	86.0	2210	4060	0.29
283.8	8180	13890	0.23	86.5	2490	4230	0.23
285.4	8330	15870	0.31	87.0	2540	4840	0.31
287.1	9010	19050	0.36	87.5	2750	5810	0.36
288.7	8330	14810	0.27	88.0	2540	4520	0.27
290.4	7940	15870	0.33	88.5	2420	4840	0.33
292.0	6500	11300	0.25	89.0	1980	3440	0.25
293.6	8230	16670	0.34	89.5	2510	5080	0.34
295.3	6980	15150	0.37	90.0	2130	4620	0.37
296.9	7130	12820	0.28	90.5	2170	3910	0.28
298.6	6230	11900	0.31	91.0	1900	3630	0.31
300.2	7050	13070	0.29	91.5	2150	3980	0.29
301.8	8230	16670	0.34	92.0	2510	5080	0.34
303.5	8080	14490	0.27	92.5	2460	4420	0.27
305.1	10670	18020	0.23	93.0	3250	5490	0.23
306.8	8390	16260	0.32	93.5	2560	4960	0.32
308.4	11200	18020	0.18	94.0	3420	5490	0.18
310.0	8230	14490	0.26	94.5	2510	4420	0.26
311.7	10340	19610	0.31	95.0	3150	5980	0.31
313.3	9800	19050	0.32	95.5	2990	5810	0.32
315.0	11110	22220	0.33	96.0	3390	6770	0.33
316.6	7750	16260	0.35	96.5	2360	4960	0.35
318.2	11200	18520	0.21	97.0	3420	5640	0.21
319.9	9880	19610	0.33	97.5	3010	5980	0.33
321.5	11110	19610	0.26	98.0	3390	5980	0.26
323.2	11200	20830	0.30	98.5	3420	6350	0.30
324.8	11300	22220	0.33	99.0	3440	6770	0.33
326.4	10580	21510	0.34	99.5	3230	6550	0.34
328.1	10180	20200	0.33	100.0	3100	6160	0.33
329.7	11590	20200	0.25	100.5	3530	6160	0.25
331.4	10580	19610	0.29	101.0	3230	5980	0.29
333.0	11490	22220	0.32	101.5	3500	6770	0.32
334.7	10180	19610	0.32	102.0	3100	5980	0.32

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Receiver-to-Receiver Travel Time Data - Borehole MP-201

American Units				Metric Units			
Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio	Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
336.3	9660	19050	0.33	102.5	2940	5810	0.33
337.9	10420	18520	0.27	103.0	3180	5640	0.27
339.6	10840	20200	0.30	103.5	3300	6160	0.30
341.2	9880	20200	0.34	104.0	3010	6160	0.34
342.9	10340	22220	0.36	104.5	3150	6770	0.36
344.5	10340	21510	0.35	105.0	3150	6550	0.35
346.1	10340	18020	0.25	105.5	3150	5490	0.25
347.8	11590	19610	0.23	106.0	3530	5980	0.23
349.4	11400	21510	0.30	106.5	3470	6550	0.30
351.1	11300	19050	0.23	107.0	3440	5810	0.23
352.7	11200	19610	0.26	107.5	3420	5980	0.26
354.3	11800	21510	0.28	108.0	3600	6550	0.28
356.0	11300	19610	0.25	108.5	3440	5980	0.25
357.6	10930	22990	0.35	109.0	3330	7010	0.35
359.3	10580	21510	0.34	109.5	3230	6550	0.34
360.9	10670	19610	0.29	110.0	3250	5980	0.29
362.5	11490	21510	0.30	110.5	3500	6550	0.30
364.2	11590	22990	0.33	111.0	3530	7010	0.33
365.8	11200	20200	0.28	111.5	3420	6160	0.28
367.5	10420	18520	0.27	112.0	3180	5640	0.27
369.1	10100	18520	0.29	112.5	3080	5640	0.29
370.7	10930	19050	0.25	113.0	3330	5810	0.25
372.4	11700	20830	0.27	113.5	3560	6350	0.27
374.0	11400	21510	0.30	114.0	3470	6550	0.30
375.7	11490	22220	0.32	114.5	3500	6770	0.32
377.3	11590	21510	0.30	115.0	3530	6550	0.30
378.9	11700	21510	0.29	115.5	3560	6550	0.29
380.6	11700	22990	0.33	116.0	3560	7010	0.33
382.2	11700	21510	0.29	116.5	3560	6550	0.29
383.9	11900	20200	0.23	117.0	3630	6160	0.23
385.5	12120	22220	0.29	117.5	3690	6770	0.29
387.1	11490	22220	0.32	118.0	3500	6770	0.32
388.8	11400	23810	0.35	118.5	3470	7260	0.35
390.4	11490	22990	0.33	119.0	3500	7010	0.33
392.1	11400	20830	0.29	119.5	3470	6350	0.29
393.7	11110	21510	0.32	120.0	3390	6550	0.32
395.3	11200	22220	0.33	120.5	3420	6770	0.33
397.0	11490	22220	0.32	121.0	3500	6770	0.32
398.6	11590	20830	0.28	121.5	3530	6350	0.28

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Receiver-to-Receiver Travel Time Data - Borehole MP-201

American Units				Metric Units			
Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio	Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
400.3	11110	20200	0.28	122.0	3390	6160	0.28
401.9	11800	19050	0.19	122.5	3600	5810	0.19
403.5	9590	18020	0.30	123.0	2920	5490	0.30
405.2	8710	18520	0.36	123.5	2660	5640	0.36
406.8	11020	20830	0.31	124.0	3360	6350	0.31

Notes: "-" means no data available at that particular interval of depth.

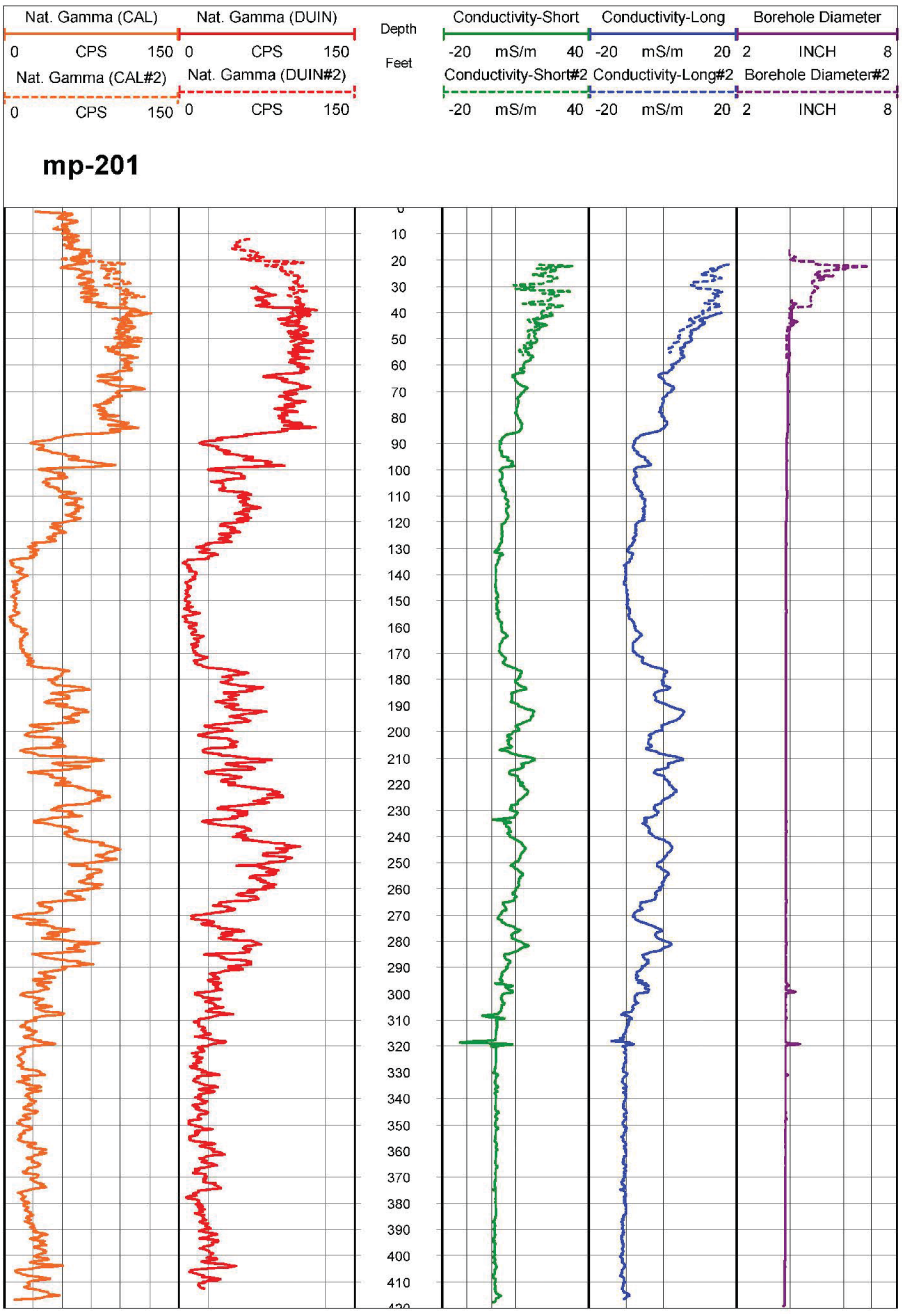


Figure 36. Boring MP-201, Induction, Natural Gamma and Caliper logs

Table 21. Boring MP-201, Acoustic Televiewer Feature depth, dip azimuth, dip and description

Depth (feet)	Dip azimuth	Dip	Structure description
22.8	N141	43	Primary-structure Planar Bedding
24.5	N041	72	Fracture Planar Hairline-fracture
25.6	N142	45	Primary-structure Planar Bedding
26.2	N307	80	Fracture Planar Open-fracture
27.4	N151	41	Fracture Planar Hairline-fracture
27.8	N146	39	Primary-structure Planar Bedding
29.3	N151	40	Primary-structure Planar Bedding
30.3	N011	67	Fracture Planar Open-fracture
31.1	N345	51	Fracture Planar Open-fracture
31.7	N152	31	Fracture Planar Open-fracture
33.4	N004	30	Fracture Planar Hairline-fracture
36.6	N343	52	Fracture Planar Hairline-fracture
37.3	N336	46	Fracture Planar Hairline-fracture
38.1	N153	36	Primary-structure Planar Bedding
39.6	N155	41	Primary-structure Planar Bedding
40.2	N325	52	Fracture Discontinuous Hairline-fracture
40.3	N136	35	Primary-structure Planar Bedding
41.7	N163	34	Primary-structure Planar Bedding
43.1	N157	32	Primary-structure Planar Bedding
43.4	N144	49	Fracture Planar Open-fracture
43.8	N145	43	Fracture Planar Open-fracture
44.1	N138	44	Fracture Planar Hairline-fracture
44.5	N167	38	Primary-structure Planar Bedding
45.0	N128	38	Primary-structure Planar Bedding
46.6	N150	33	Primary-structure Planar Bedding
47.6	N146	34	Primary-structure Planar Bedding
48.6	N149	34	Primary-structure Planar Bedding
49.6	N147	34	Primary-structure Planar Bedding
52.1	N156	32	Primary-structure Planar Bedding
53.3	N138	33	Primary-structure Planar Bedding
53.8	N341	56	Fracture Discontinuous Hairline-fracture
54.7	N150	34	Primary-structure Planar Bedding
55.5	N152	33	Fracture Planar Hairline-fracture
56.2	N178	44	Fracture Planar Hairline-fracture
56.8	N152	36	Primary-structure Planar Bedding
57.6	N288	62	Fracture Planar Hairline-fracture
57.7	N153	39	Primary-structure Planar Bedding

Depth (feet)	Dip azimuth	Dip	Structure description
57.8	N131	40	Fracture Planar Hairline-fracture
59.3	N142	30	Primary-structure Planar Bedding
59.9	N322	55	Fracture Discontinuous Hairline-fracture
60.8	N148	33	Primary-structure Planar Bedding
62.3	N147	33	Primary-structure Planar Bedding
62.7	N147	32	Primary-structure Planar Bedding
63.7	N155	30	Primary-structure Planar Bedding
64.2	N331	63	Fracture Discontinuous Hairline-fracture
64.6	N149	29	Primary-structure Planar Bedding
66.1	N322	75	Fracture Discontinuous Hairline-fracture
66.9	N144	31	Primary-structure Planar Bedding
67.9	N145	31	Primary-structure Planar Bedding
70.3	N151	31	Primary-structure Planar Bedding
72.3	N161	31	Primary-structure Planar Bedding
73.7	N150	31	Primary-structure Planar Bedding
76.7	N144	33	Primary-structure Planar Bedding
78.1	N148	28	Primary-structure Planar Bedding
78.7	N329	60	Fracture Discontinuous Hairline-fracture
79.7	N148	29	Primary-structure Planar Bedding
81.0	N146	33	Primary-structure Planar Bedding
82.1	N152	29	Primary-structure Planar Bedding
82.8	N152	33	Primary-structure Planar Bedding
86.1	N157	24	Primary-structure Planar Bedding
89.2	N151	31	Primary-structure Planar Bedding
89.9	N153	24	Primary-structure Planar Bedding
90.5	N147	31	Primary-structure Planar Bedding
91.9	N149	32	Primary-structure Planar Bedding
92.2	N337	58	Fracture Planar Hairline-fracture
93.3	N154	31	Primary-structure Planar Bedding
96.6	N138	29	Primary-structure Planar Bedding
98.3	N146	30	Primary-structure Planar Bedding
98.9	N148	29	Primary-structure Planar Bedding
99.5	N335	48	Fracture Irregular Hairline-fracture
100.4	N156	27	Primary-structure Planar Bedding
102.1	N149	31	Primary-structure Planar Bedding
103.2	N145	33	Primary-structure Planar Bedding
104.0	N339	64	Fracture Irregular Hairline-fracture
105.1	N140	32	Primary-structure Planar Bedding
106.0	N150	27	Primary-structure Planar Bedding

Depth (feet)	Dip azimuth	Dip	Structure description
107.5	N141	32	Primary-structure Planar Bedding
108.8	N148	30	Primary-structure Planar Bedding
110.2	N138	32	Primary-structure Planar Bedding
111.0	N146	40	Primary-structure Planar Bedding
113.8	N151	35	Primary-structure Planar Bedding
116.0	N151	29	Primary-structure Planar Bedding
117.1	N166	30	Primary-structure Planar Bedding
118.2	N146	33	Primary-structure Planar Bedding
119.9	N148	33	Primary-structure Planar Bedding
120.9	N155	30	Primary-structure Planar Bedding
122.3	N155	34	Primary-structure Planar Bedding
123.1	N153	31	Primary-structure Planar Bedding
124.2	N152	31	Primary-structure Planar Bedding
125.0	N332	63	Fracture Discontinuous Hairline-fracture
125.1	N163	29	Primary-structure Planar Bedding
125.7	N146	31	Primary-structure Planar Bedding
126.9	N161	26	Primary-structure Planar Bedding
128.0	N163	29	Primary-structure Planar Bedding
129.7	N148	29	Primary-structure Planar Bedding
130.9	N151	26	Primary-structure Planar Bedding
132.3	N139	12	Primary-structure Planar Bedding
133.2	N155	25	Primary-structure Planar Bedding
134.0	N161	28	Primary-structure Planar Bedding
136.0	N159	28	Primary-structure Planar Bedding
136.3	N333	76	Fracture Discontinuous Hairline-fracture
137.4	N143	21	Primary-structure Planar Bedding
140.6	N152	29	Primary-structure Planar Bedding
142.3	N165	25	Primary-structure Planar Bedding
143.0	N165	24	Primary-structure Planar Bedding
144.5	N162	19	Primary-structure Planar Bedding
145.1	N156	31	Primary-structure Planar Bedding
145.7	N146	30	Primary-structure Planar Bedding
147.0	N165	30	Primary-structure Planar Bedding
147.4	N345	60	Fracture Discontinuous Hairline-fracture
148.5	N160	31	Primary-structure Planar Bedding
148.8	N161	34	Primary-structure Planar Bedding
149.6	N160	34	Primary-structure Planar Bedding
150.1	N341	57	Fracture Discontinuous Hairline-fracture
150.7	N148	38	Primary-structure Planar Bedding

Depth (feet)	Dip azimuth	Dip	Structure description
151.5	N160	41	Primary-structure Planar Bedding
151.7	N157	42	Primary-structure Planar Bedding
152.5	N158	37	Primary-structure Planar Bedding
152.9	N152	37	Primary-structure Planar Bedding
153.1	N158	37	Primary-structure Planar Bedding
153.5	N163	36	Primary-structure Planar Bedding
153.9	N167	34	Primary-structure Planar Bedding
154.0	N337	52	Fracture Discontinuous Hairline-fracture
154.9	N322	59	Fracture Discontinuous Hairline-fracture
155.3	N160	29	Primary-structure Planar Bedding
155.4	N329	43	Fracture Discontinuous Hairline-fracture
156.4	N153	29	Primary-structure Planar Bedding
156.9	N324	59	Fracture Discontinuous Hairline-fracture
157.3	N159	31	Primary-structure Planar Bedding
157.7	N154	34	Primary-structure Planar Bedding
158.2	N160	31	Primary-structure Planar Bedding
158.7	N158	27	Primary-structure Planar Bedding
159.2	N170	28	Primary-structure Planar Bedding
159.3	N318	61	Fracture Discontinuous Hairline-fracture
160.0	N166	33	Primary-structure Planar Bedding
160.6	N154	31	Primary-structure Planar Bedding
160.9	N323	63	Fracture Discontinuous Hairline-fracture
161.3	N155	36	Primary-structure Planar Bedding
162.2	N328	64	Fracture Discontinuous Hairline-fracture
162.4	N152	30	Primary-structure Planar Bedding
163.3	N151	38	Primary-structure Planar Bedding
168.2	N167	31	Primary-structure Planar Bedding
170.7	N175	32	Primary-structure Planar Bedding
172.1	N161	28	Primary-structure Planar Bedding
176.8	N156	23	Primary-structure Planar Bedding
179.1	N155	31	Primary-structure Planar Bedding
183.9	N153	28	Primary-structure Planar Bedding
184.8	N162	26	Primary-structure Planar Bedding
185.8	N153	26	Primary-structure Planar Bedding
186.9	N154	30	Primary-structure Planar Bedding
187.3	N156	29	Primary-structure Planar Bedding
188.5	N175	23	Primary-structure Planar Bedding
189.9	N156	29	Primary-structure Planar Bedding
192.0	N161	32	Primary-structure Planar Bedding

Depth (feet)	Dip azimuth	Dip	Structure description
193.2	N153	39	Primary-structure Planar Bedding
197.6	N153	23	Primary-structure Planar Bedding
198.3	N326	60	Fracture Planar Hairline-fracture
201.2	N156	30	Primary-structure Planar Bedding
201.4	N329	62	Fracture Discontinuous Hairline-fracture
201.7	N150	31	Primary-structure Planar Bedding
202.4	N157	28	Primary-structure Planar Bedding
203.5	N161	27	Primary-structure Planar Bedding
205.0	N153	25	Primary-structure Planar Bedding
205.4	N149	26	Primary-structure Planar Bedding
207.9	N322	57	Fracture Irregular Hairline-fracture
208.6	N168	27	Primary-structure Planar Bedding
213.1	N156	33	Primary-structure Planar Bedding
214.6	N158	32	Primary-structure Planar Bedding
215.1	N327	55	Fracture Irregular Hairline-fracture
215.8	N152	30	Primary-structure Planar Bedding
216.0	N331	61	Fracture Discontinuous Hairline-fracture
220.3	N159	29	Primary-structure Planar Bedding
221.8	N149	24	Primary-structure Planar Bedding
223.5	N161	26	Primary-structure Planar Bedding
224.4	N167	35	Primary-structure Planar Bedding
226.4	N157	29	Primary-structure Planar Bedding
228.6	N170	27	Primary-structure Planar Bedding
229.7	N165	28	Primary-structure Planar Bedding
230.2	N162	27	Primary-structure Planar Bedding
233.1	N159	25	Primary-structure Planar Bedding
234.5	N159	26	Primary-structure Planar Bedding
238.1	N159	28	Primary-structure Planar Bedding
239.5	N177	37	Primary-structure Planar Bedding
240.7	N165	29	Primary-structure Planar Bedding
242.1	N163	29	Primary-structure Planar Bedding
243.9	N158	30	Primary-structure Planar Bedding
245.2	N153	39	Primary-structure Planar Bedding
251.3	N334	65	Fracture Discontinuous Hairline-fracture
253.0	N159	31	Primary-structure Planar Bedding
257.4	N333	71	Fracture Discontinuous Hairline-fracture
262.5	N167	31	Primary-structure Planar Bedding
262.7	N076	34	Fracture Planar Hairline-fracture
265.0	N172	26	Primary-structure Planar Bedding

Depth (feet)	Dip azimuth	Dip	Structure description
265.3	N144	72	Fracture Discontinuous Hairline-fracture
265.3	N303	52	Fracture Discontinuous Hairline-fracture
265.8	N339	57	Fracture Discontinuous Hairline-fracture
265.9	N169	31	Primary-structure Planar Bedding
269.4	N152	28	Primary-structure Planar Bedding
270.4	N179	25	Primary-structure Planar Bedding
271.2	N170	21	Primary-structure Planar Bedding
271.4	N319	54	Fracture Discontinuous Hairline-fracture
272.2	N165	32	Primary-structure Planar Bedding
273.1	N156	29	Primary-structure Planar Bedding
273.5	N165	28	Primary-structure Planar Bedding
274.3	N312	67	Fracture Discontinuous Hairline-fracture
276.2	N174	35	Primary-structure Planar Bedding
276.9	N167	30	Primary-structure Planar Bedding
277.0	N318	83	Fracture Discontinuous Hairline-fracture
277.4	N168	32	Primary-structure Planar Bedding
277.6	N317	48	Fracture Discontinuous Hairline-fracture
278.5	N335	69	Fracture Discontinuous Hairline-fracture
279.1	N163	31	Primary-structure Planar Bedding
280.8	N167	29	Primary-structure Planar Bedding
283.1	N188	41	Primary-structure Planar Bedding
284.5	N165	28	Primary-structure Planar Bedding
285.1	N165	34	Primary-structure Planar Bedding
285.4	N321	59	Fracture Discontinuous Hairline-fracture
285.4	N160	25	Primary-structure Planar Bedding
286.5	N166	28	Primary-structure Planar Bedding
287.0	N334	21	Fracture Planar Hairline-fracture
287.8	N164	31	Primary-structure Planar Bedding
288.5	N169	30	Primary-structure Planar Bedding
289.7	N028	38	Fracture Discontinuous Hairline-fracture
289.9	N176	30	Primary-structure Planar Bedding
290.3	N164	35	Primary-structure Planar Bedding
290.5	N165	32	Primary-structure Planar Bedding
292.2	N171	32	Primary-structure Planar Bedding
292.3	N339	41	Fracture Discontinuous Hairline-fracture
293.4	N172	32	Primary-structure Planar Bedding
293.7	N313	50	Fracture Discontinuous Hairline-fracture
293.8	N181	32	Primary-structure Planar Bedding
294.7	N191	28	Primary-structure Planar Bedding

Depth (feet)	Dip azimuth	Dip	Structure description
295.2	N157	30	Primary-structure Planar Bedding
295.9	N178	32	Primary-structure Planar Bedding
297.1	N169	35	Primary-structure Planar Bedding
297.4	N173	32	Primary-structure Planar Bedding
297.6	N177	35	Primary-structure Planar Bedding
298.4	N182	41	Primary-structure Planar Bedding
298.7	N165	42	Primary-structure Planar Bedding
299.7	N179	38	Primary-structure Planar Bedding
300.3	N171	29	Primary-structure Planar Bedding
301.1	N161	29	Primary-structure Planar Bedding
301.4	N163	28	Primary-structure Planar Bedding
301.7	N314	64	Fracture Discontinuous Hairline-fracture
301.8	N170	40	Primary-structure Planar Bedding
303.5	N173	32	Primary-structure Planar Bedding
304.1	N164	31	Primary-structure Planar Bedding
304.7	N169	33	Primary-structure Planar Bedding
305.5	N164	33	Primary-structure Planar Bedding
305.7	N053	80	Fracture Discontinuous Hairline-fracture
306.6	N160	29	Primary-structure Planar Bedding
307.4	N157	33	Primary-structure Planar Bedding
308.8	N301	52	Fracture Irregular Hairline-fracture
309.1	N166	32	Primary-structure Planar Bedding
309.5	N162	32	Primary-structure Planar Bedding
309.8	N147	39	Primary-structure Planar Bedding
313.7	N343	50	Fracture Irregular Hairline-fracture
314.1	N169	36	Primary-structure Planar Bedding
314.5	N337	55	Fracture Irregular Hairline-fracture
315.2	N138	32	Primary-structure Planar Bedding
315.5	N157	35	Primary-structure Planar Bedding
316.4	N165	36	Primary-structure Planar Bedding
316.5	N303	60	Fracture Planar Hairline-fracture
316.7	N305	46	Fracture Planar Hairline-fracture
317.4	N334	46	Fracture Planar Hairline-fracture
317.9	N337	80	Fracture Planar Hairline-fracture
318.0	N155	37	Primary-structure Planar Bedding
318.8	N168	41	Primary-structure Planar Bedding
319.4	N189	41	Fracture Planar Open-fracture
319.7	N146	46	Primary-structure Planar Bedding
320.1	N158	37	Primary-structure Planar Bedding

Depth (feet)	Dip azimuth	Dip	Structure description
320.7	N161	31	Primary-structure Planar Bedding
320.9	N355	71	Fracture Planar Hairline-fracture
321.1	N342	68	Fracture Discontinuous Hairline-fracture
322.2	N350	66	Fracture Planar Hairline-fracture
322.3	N152	38	Primary-structure Planar Bedding
322.5	N108	80	Fracture Planar Hairline-fracture
323.4	N175	32	Primary-structure Planar Bedding
324.7	N144	26	Primary-structure Planar Bedding
326.6	N312	64	Fracture Planar Hairline-fracture
327.8	N095	32	Fracture Planar Hairline-fracture
328.2	N322	49	Fracture Irregular Hairline-fracture
329.7	N161	32	Primary-structure Irregular Bedding
330.5	N082	34	Fracture Planar Hairline-fracture
331.1	N151	32	Fracture Planar Open-fracture
332.4	N167	29	Primary-structure Planar Bedding
333.9	N019	38	Fracture Planar Hairline-fracture
334.6	N347	57	Fracture Discontinuous Hairline-fracture
335.7	N170	34	Primary-structure Planar Bedding
337.3	N136	75	Fracture Discontinuous Hairline-fracture
338.5	N331	70	Fracture Discontinuous Hairline-fracture
339.7	N342	51	Fracture Discontinuous Hairline-fracture
339.9	N161	36	Primary-structure Planar Bedding
340.2	N177	34	Primary-structure Planar Bedding
340.5	N164	33	Primary-structure Planar Bedding
340.6	N166	33	Primary-structure Planar Bedding
341.1	N167	33	Primary-structure Planar Bedding
341.8	N329	67	Fracture Discontinuous Hairline-fracture
342.0	N162	30	Primary-structure Planar Bedding
342.8	N150	80	Fracture Discontinuous Hairline-fracture
343.3	N169	32	Primary-structure Planar Bedding
345.4	N172	42	Fracture Planar Open-fracture
347.8	N153	39	Primary-structure Planar Bedding
348.0	N155	42	Primary-structure Planar Bedding
348.5	N337	49	Fracture Planar Hairline-fracture
350.3	N161	33	Primary-structure Planar Bedding
351.4	N163	41	Primary-structure Planar Bedding
351.7	N163	37	Primary-structure Planar Bedding
353.3	N175	38	Primary-structure Irregular Bedding
355.7	N168	33	Primary-structure Planar Bedding

Depth (feet)	Dip azimuth	Dip	Structure description
356.3	N164	44	Primary-structure Planar Bedding
357.4	N160	42	Primary-structure Irregular Bedding
359.7	N159	29	Primary-structure Irregular Bedding
360.7	N269	34	Fracture Planar Hairline-fracture
360.7	N172	45	Primary-structure Irregular Bedding
361.2	N205	53	Fracture Planar Hairline-fracture
364.2	N170	39	Primary-structure Planar Bedding
364.5	N182	34	Primary-structure Planar Bedding
365.2	N167	37	Primary-structure Planar Bedding
366.1	N163	27	Fracture Planar Open-fracture
367.3	N168	38	Primary-structure Planar Bedding
367.7	N187	39	Primary-structure Planar Bedding
368.1	N128	71	Fracture Planar Hairline-fracture
369.9	N173	35	Primary-structure Planar Bedding
370.1	N169	31	Primary-structure Planar Bedding
370.3	N170	34	Primary-structure Planar Bedding
371.1	N160	30	Primary-structure Planar Bedding
371.5	N168	29	Primary-structure Planar Bedding
372.1	N151	36	Primary-structure Planar Bedding
372.7	N166	32	Primary-structure Planar Bedding
373.5	N156	38	Primary-structure Planar Bedding
374.5	N187	61	Primary-structure Irregular Bedding
375.4	N327	60	Fracture Discontinuous Hairline-fracture
376.0	N330	71	Fracture Discontinuous Hairline-fracture
376.9	N148	19	Primary-structure Planar Bedding
377.6	N152	28	Primary-structure Irregular Bedding
379.1	N158	40	Primary-structure Planar Bedding
379.6	N155	26	Primary-structure Planar Bedding
380.2	N149	40	Primary-structure Irregular Bedding
382.6	N316	49	Fracture Discontinuous Hairline-fracture
384.0	N161	35	Primary-structure Planar Bedding
384.7	N336	62	Fracture Discontinuous Hairline-fracture
388.3	N160	31	Primary-structure Planar Bedding
390.1	N164	35	Primary-structure Planar Bedding
390.8	N326	49	Fracture Discontinuous Hairline-fracture
390.8	N140	65	Fracture Discontinuous Hairline-fracture
391.2	N160	29	Primary-structure Irregular Bedding
392.7	N179	34	Primary-structure Irregular Bedding
394.4	N175	43	Primary-structure Irregular Bedding

Depth (feet)	Dip azimuth	Dip	Structure description
395.5	N071	19	Fracture Planar Hairline-fracture
397.3	N152	27	Primary-structure Planar Bedding
400.0	N150	25	Primary-structure Irregular Bedding
400.9	N157	56	Fracture Planar Hairline-fracture
401.6	N327	23	Fracture Discontinuous Hairline-fracture
401.9	N161	24	Primary-structure Irregular Bedding
403.5	N150	32	Primary-structure Planar Bedding
404.1	N153	23	Primary-structure Planar Bedding
404.9	N161	29	Primary-structure Planar Bedding
406.8	N147	35	Primary-structure Planar Bedding
406.8	N344	77	Fracture Planar Hairline-fracture
407.9	N163	29	Primary-structure Planar Bedding
408.5	N165	29	Primary-structure Planar Bedding
409.2	N155	28	Primary-structure Planar Bedding
411.9	N130	23	Primary-structure Planar Bedding
412.9	N298	22	Fracture Planar Hairline-fracture
413.5	N165	24	Primary-structure Planar Bedding
414.1	N158	36	Primary-structure Planar Bedding
415.4	N143	31	Primary-structure Planar Bedding
415.9	N163	31	Primary-structure Planar Bedding
416.4	N148	26	Primary-structure Planar Bedding
417.9	N146	30	Primary-structure Planar Bedding

DIP DATA INTERPRETATION
RGLDIP vsn 6.2
DIP-AZIMUTH, FRACTURE ROSE-DIAGRAM

AMEC

Borehole: MP-201

CLINCH RIVER

top of borehole.....
East:_
North:
Alt: _

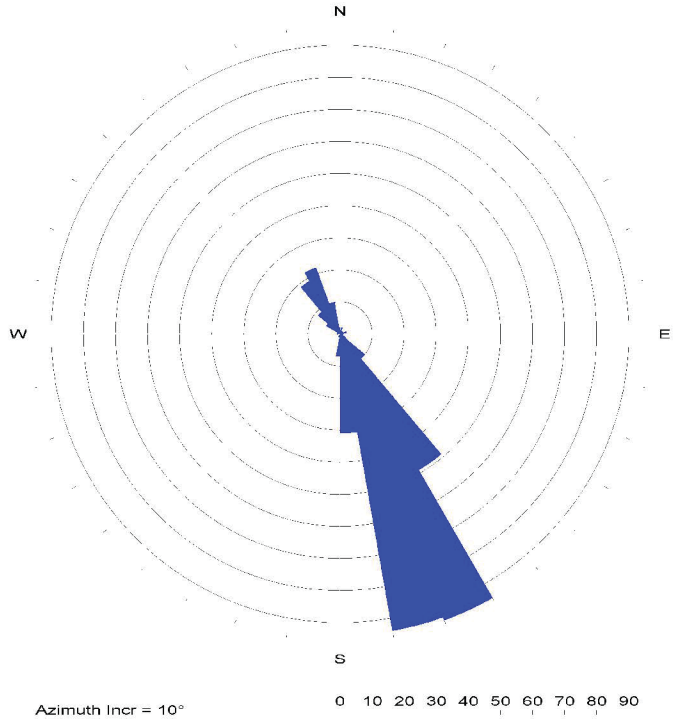
North ref. is true
Depth units are feet

Zone from 418.361 to 22.268ft

Interpretation 1

Dip data sets .....
BHTV dips

MP-201
22.268 - 418.361ft
Dip-azimuth, fracture rose-diagram



Azimuth Incr = 10°
N = 371

MP-201, Interpretation 1 418.361 to 22.268ft 1

Figure 37. Boring MP-201, Rose Diagram

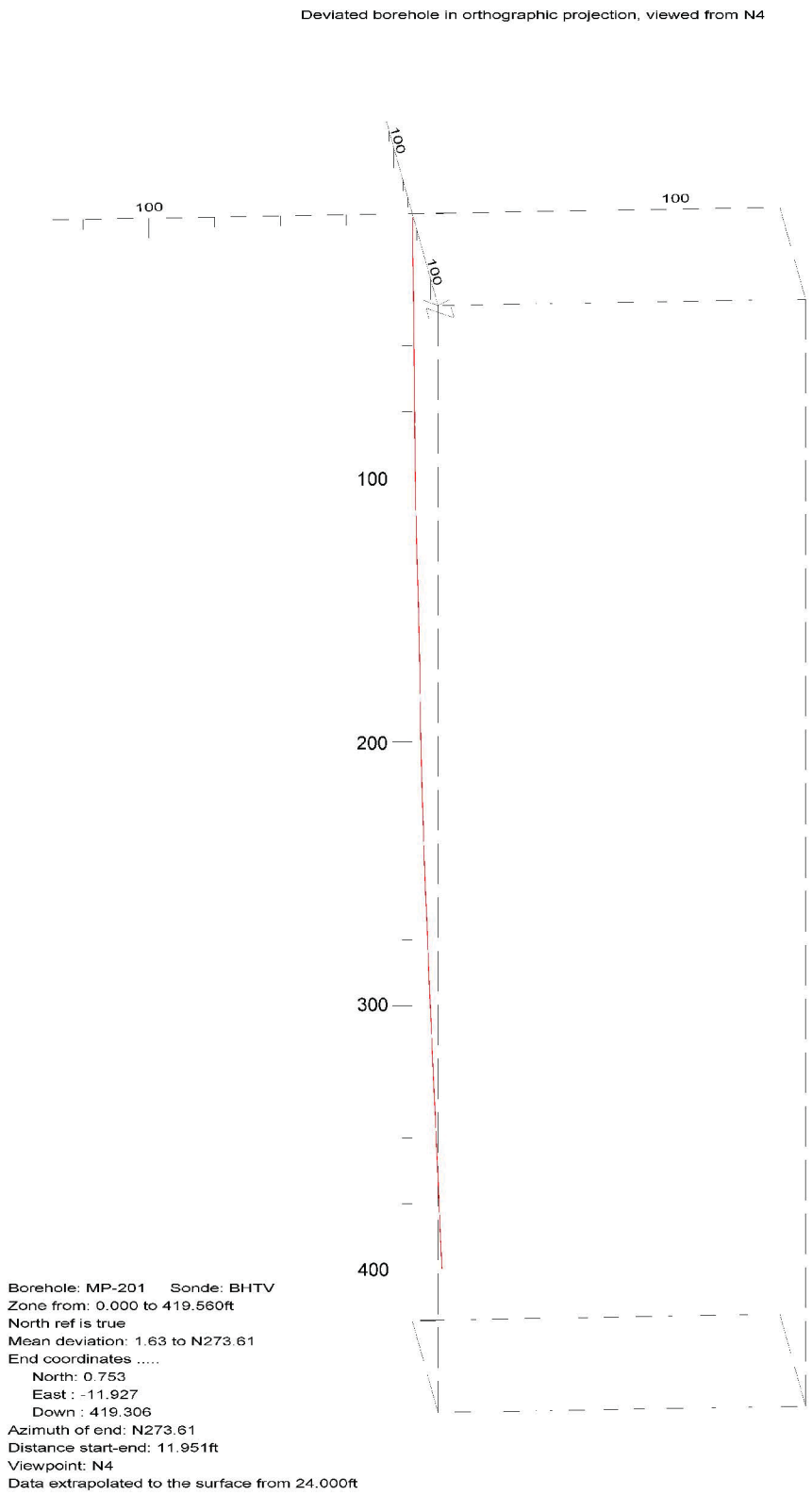


Figure 38. Boring MP-201, Up Deviation Projection

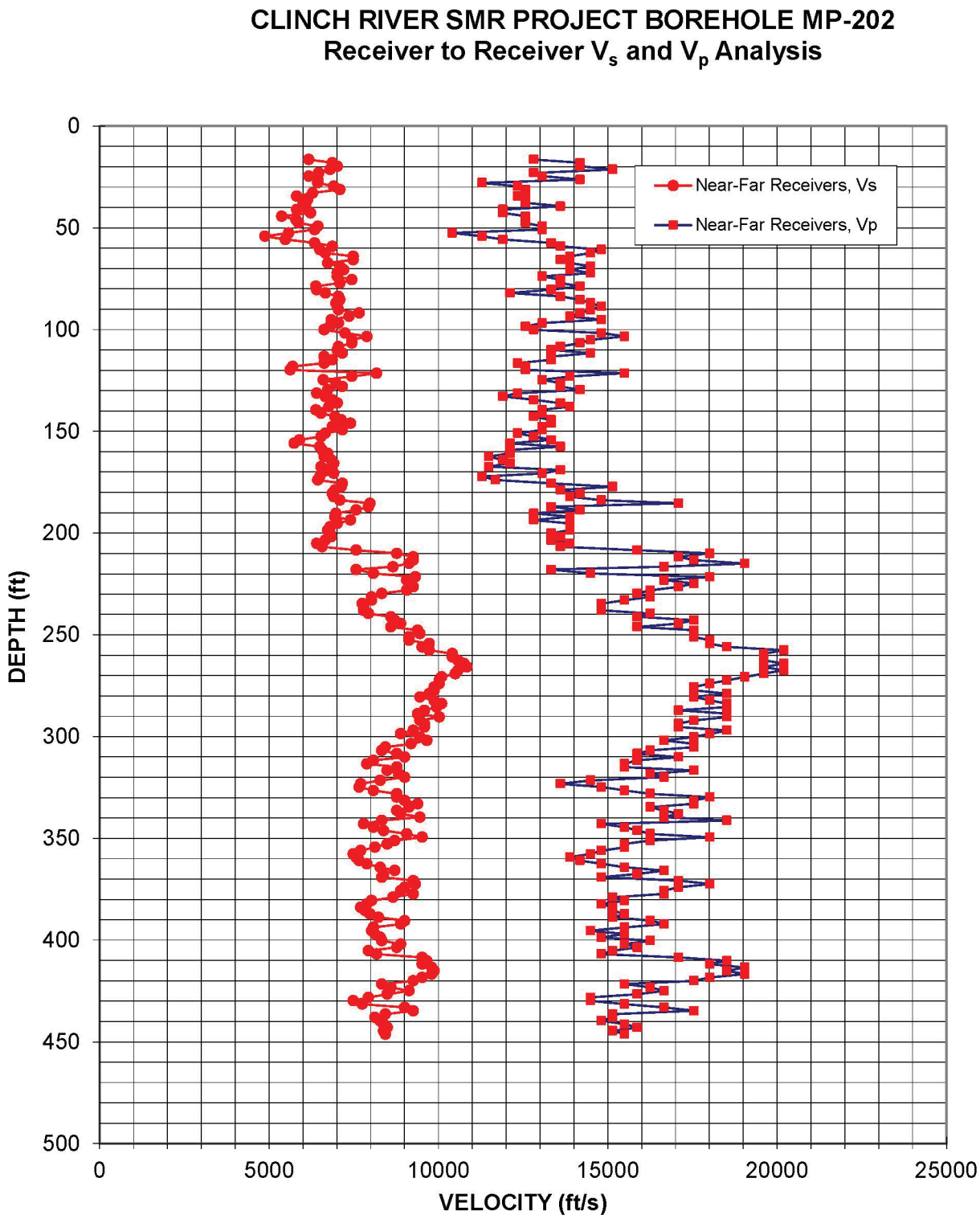


Figure 39: Boring MP-202, Suspension R1-R2 P- and S_H-wave velocities

Table 22. Boring MP-202, Suspension R1-R2 depths and P- and S_H-wave velocities

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Receiver-to-Receiver Travel Time Data - Borehole MP-202

American Units				Metric Units			
Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio	Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
14.8	-	-	-	4.5	-	-	-
16.4	6170	12820	0.35	5.0	1880	3910	0.35
18.0	6870	14180	0.35	5.5	2090	4320	0.35
19.7	7020	14180	0.34	6.0	2140	4320	0.34
21.3	6800	15150	0.37	6.5	2070	4620	0.37
23.0	6470	12820	0.33	7.0	1970	3910	0.33
24.6	6170	13070	0.36	7.5	1880	3980	0.36
26.3	6440	14180	0.37	8.0	1960	4320	0.37
27.9	6440	11300	0.26	8.5	1960	3440	0.26
29.5	6910	12350	0.27	9.0	2110	3760	0.27
31.2	7090	12580	0.27	9.5	2160	3830	0.27
32.8	6290	12580	0.33	10.0	1920	3830	0.33
34.5	5820	12350	0.36	10.5	1770	3760	0.36
36.1	6140	12580	0.34	11.0	1870	3830	0.34
37.7	6010	12580	0.35	11.5	1830	3830	0.35
39.4	6090	13610	0.37	12.0	1860	4150	0.37
41.0	5820	11900	0.34	12.5	1770	3630	0.34
42.7	6230	11900	0.31	13.0	1900	3630	0.31
44.3	5380	12580	0.39	13.5	1640	3830	0.39
45.9	5800	12580	0.37	14.0	1770	3830	0.37
47.6	5870	12580	0.36	14.5	1790	3830	0.36
49.2	6440	13070	0.34	15.0	1960	3980	0.34
50.9	6350	13070	0.35	15.5	1940	3980	0.35
52.5	5580	10420	0.30	16.0	1700	3180	0.30
54.1	4880	11300	0.39	16.5	1490	3440	0.39
55.8	5490	11900	0.37	17.0	1670	3630	0.37
57.4	6350	13330	0.35	17.5	1940	4060	0.35
59.1	6870	13610	0.33	18.0	2090	4150	0.33
60.7	6500	14810	0.38	18.5	1980	4520	0.38
62.3	6670	14490	0.37	19.0	2030	4420	0.37
64.0	7490	13890	0.29	19.5	2280	4230	0.29
65.6	7490	13610	0.28	20.0	2280	4150	0.28
67.3	6730	13890	0.35	20.5	2050	4230	0.35
68.9	7090	14490	0.34	21.0	2160	4420	0.34
70.5	7210	13890	0.32	21.5	2200	4230	0.32
72.2	7020	14490	0.35	22.0	2140	4420	0.35
73.8	7020	13070	0.30	22.5	2140	3980	0.30

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Receiver-to-Receiver Travel Time Data - Borehole MP-202

American Units				Metric Units			
Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio	Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
75.5	7450	13610	0.29	23.0	2270	4150	0.29
77.1	7090	13610	0.31	23.5	2160	4150	0.31
78.7	6380	14180	0.37	24.0	1940	4320	0.37
80.4	6410	13330	0.35	24.5	1950	4060	0.35
82.0	6670	12120	0.28	25.0	2030	3690	0.28
83.7	7050	13610	0.32	25.5	2150	4150	0.32
85.3	7090	14180	0.33	26.0	2160	4320	0.33
86.9	6980	14490	0.35	26.5	2130	4420	0.35
88.6	7020	14810	0.36	27.0	2140	4520	0.36
90.2	7050	14490	0.34	27.5	2150	4420	0.34
91.9	7660	14180	0.29	28.0	2340	4320	0.29
93.5	7370	13890	0.30	28.5	2250	4230	0.30
95.1	6840	14810	0.36	29.0	2080	4520	0.36
96.8	7050	13070	0.29	29.5	2150	3980	0.29
98.4	6800	12580	0.29	30.0	2070	3830	0.29
100.1	6630	12820	0.32	30.5	2020	3910	0.32
101.7	7250	14810	0.34	31.0	2210	4520	0.34
103.4	7890	15500	0.33	31.5	2400	4730	0.33
105.0	7450	14490	0.32	32.0	2270	4420	0.32
106.6	7450	14180	0.31	32.5	2270	4320	0.31
108.3	7050	13610	0.32	33.0	2150	4150	0.32
109.9	7020	13330	0.31	33.5	2140	4060	0.31
111.6	7170	14490	0.34	34.0	2180	4420	0.34
113.2	6630	13330	0.34	34.5	2020	4060	0.34
114.8	6870	13330	0.32	35.0	2090	4060	0.32
116.5	6630	12350	0.30	35.5	2020	3760	0.30
118.1	5700	12580	0.37	36.0	1740	3830	0.37
119.8	5630	12580	0.37	36.5	1710	3830	0.37
121.4	8180	15500	0.31	37.0	2490	4730	0.31
123.0	7450	13890	0.30	37.5	2270	4230	0.30
124.7	6600	13070	0.33	38.0	2010	3980	0.33
126.3	6980	13610	0.32	38.5	2130	4150	0.32
128.0	7170	13610	0.31	39.0	2180	4150	0.31
129.6	6730	14180	0.35	39.5	2050	4320	0.35
131.2	6410	12350	0.32	40.0	1950	3760	0.32
132.9	6670	11900	0.27	40.5	2030	3630	0.27
134.5	6870	12820	0.30	41.0	2090	3910	0.30
136.2	7020	13610	0.32	41.5	2140	4150	0.32
137.8	6770	13890	0.34	42.0	2060	4230	0.34

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Receiver-to-Receiver Travel Time Data - Borehole MP-202

American Units				Metric Units			
Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio	Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
139.4	6380	13070	0.34	42.5	1940	3980	0.34
141.1	6540	13070	0.33	43.0	1990	3980	0.33
142.7	6940	12820	0.29	43.5	2120	3910	0.29
144.4	7130	13330	0.30	44.0	2170	4060	0.30
146.0	7410	13330	0.28	44.5	2260	4060	0.28
147.6	6870	13070	0.31	45.0	2090	3980	0.31
149.3	7170	13070	0.28	45.5	2180	3980	0.28
150.9	6670	12350	0.29	46.0	2030	3760	0.29
152.6	6540	12820	0.32	46.5	1990	3910	0.32
154.2	5900	13330	0.38	47.0	1800	4060	0.38
155.8	5750	12120	0.35	47.5	1750	3690	0.35
157.5	6500	13610	0.35	48.0	1980	4150	0.35
159.1	6570	12120	0.29	48.5	2000	3690	0.29
160.8	6730	12120	0.28	49.0	2050	3690	0.28
162.4	6630	11490	0.25	49.5	2020	3500	0.25
164.0	6840	11900	0.25	50.0	2080	3630	0.25
165.7	6910	12120	0.26	50.5	2110	3690	0.26
167.3	6540	11490	0.26	51.0	1990	3500	0.26
169.0	6700	13610	0.34	51.5	2040	4150	0.34
170.6	6910	13070	0.31	52.0	2110	3980	0.31
172.2	6500	11300	0.25	52.5	1980	3440	0.25
173.9	6440	11700	0.28	53.0	1960	3560	0.28
175.5	7170	13330	0.30	53.5	2180	4060	0.30
177.2	7130	15150	0.36	54.0	2170	4620	0.36
178.8	6940	13610	0.32	54.5	2120	4150	0.32
180.5	6870	14180	0.35	55.0	2090	4320	0.35
182.1	6910	13890	0.34	55.5	2110	4230	0.34
183.7	7090	14810	0.35	56.0	2160	4520	0.35
185.4	7980	17090	0.36	56.5	2430	5210	0.36
187.0	7940	13330	0.23	57.0	2420	4060	0.23
188.7	7580	14180	0.30	57.5	2310	4320	0.30
190.3	6980	12820	0.29	58.0	2130	3910	0.29
191.9	6940	13890	0.33	58.5	2120	4230	0.33
193.6	7410	12820	0.25	59.0	2260	3910	0.25
195.2	7020	13890	0.33	59.5	2140	4230	0.33
196.9	6800	13890	0.34	60.0	2070	4230	0.34
198.5	6730	13890	0.35	60.5	2050	4230	0.35
200.1	6800	13330	0.32	61.0	2070	4060	0.32
201.8	6840	13610	0.33	61.5	2080	4150	0.33

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Receiver-to-Receiver Travel Time Data - Borehole MP-202

American Units				Metric Units			
Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio	Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
203.4	6670	13330	0.33	62.0	2030	4060	0.33
205.1	6410	13890	0.36	62.5	1950	4230	0.36
206.7	6570	13610	0.35	63.0	2000	4150	0.35
208.3	7580	15870	0.35	63.5	2310	4840	0.35
210.0	8770	18020	0.34	64.0	2670	5490	0.34
211.6	9260	17090	0.29	64.5	2820	5210	0.29
213.3	9260	17540	0.31	65.0	2820	5350	0.31
214.9	9130	19050	0.35	65.5	2780	5810	0.35
216.5	8660	16670	0.32	66.0	2640	5080	0.32
217.9	7580	13330	0.26	66.4	2310	4060	0.26
219.8	8080	14490	0.27	67.0	2460	4420	0.27
221.5	9320	18020	0.32	67.5	2840	5490	0.32
223.1	9070	16670	0.29	68.0	2760	5080	0.29
224.7	9130	17540	0.31	68.5	2780	5350	0.31
226.4	9260	17090	0.29	69.0	2820	5210	0.29
228.0	9070	16260	0.27	69.5	2760	4960	0.27
229.7	8330	15870	0.31	70.0	2540	4840	0.31
231.3	8030	16260	0.34	70.5	2450	4960	0.34
232.9	8030	15500	0.32	71.0	2450	4730	0.32
234.6	7750	14810	0.31	71.5	2360	4520	0.31
236.2	7800	14810	0.31	72.0	2380	4520	0.31
237.9	7800	14810	0.31	72.5	2380	4520	0.31
239.5	7940	16260	0.34	73.0	2420	4960	0.34
241.1	8600	15870	0.29	73.5	2620	4840	0.29
242.8	8710	17540	0.34	74.0	2660	5350	0.34
244.4	8890	17090	0.31	74.5	2710	5210	0.31
246.1	8600	15870	0.29	75.0	2620	4840	0.29
247.7	9390	17540	0.30	75.5	2860	5350	0.30
249.3	9460	17540	0.30	76.0	2880	5350	0.30
251.0	9130	17540	0.31	76.5	2780	5350	0.31
252.6	9130	18020	0.33	77.0	2780	5490	0.33
254.3	9730	18020	0.29	77.5	2970	5490	0.29
255.9	9520	18520	0.32	78.0	2900	5640	0.32
257.6	9730	20200	0.35	78.5	2970	6160	0.35
259.2	10420	19610	0.30	79.0	3180	5980	0.30
260.8	10420	19610	0.30	79.5	3180	5980	0.30
262.5	10580	19610	0.29	80.0	3230	5980	0.29
264.1	10750	20200	0.30	80.5	3280	6160	0.30
265.8	10840	19610	0.28	81.0	3300	5980	0.28

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Receiver-to-Receiver Travel Time Data - Borehole MP-202

American Units				Metric Units			
Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio	Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
267.4	10580	20200	0.31	81.5	3230	6160	0.31
269.0	10500	19610	0.30	82.0	3200	5980	0.30
270.7	10100	19050	0.30	82.5	3080	5810	0.30
272.3	10030	18520	0.29	83.0	3060	5640	0.29
274.0	10030	18020	0.28	83.5	3060	5490	0.28
275.6	9880	17540	0.27	84.0	3010	5350	0.27
277.2	9880	17540	0.27	84.5	3010	5350	0.27
278.9	9730	18520	0.31	85.0	2970	5640	0.31
280.5	9460	17540	0.30	85.5	2880	5350	0.30
282.2	9880	18020	0.29	86.0	3010	5490	0.29
283.8	10100	18520	0.29	86.5	3080	5640	0.29
285.4	9950	18520	0.30	87.0	3030	5640	0.30
287.1	9590	17090	0.27	87.5	2920	5210	0.27
288.7	9390	18520	0.33	88.0	2860	5640	0.33
290.4	10030	18520	0.29	88.5	3060	5640	0.29
292.0	9460	17540	0.30	89.0	2880	5350	0.30
293.6	9590	17090	0.27	89.5	2920	5210	0.27
295.3	9590	17090	0.27	90.0	2920	5210	0.27
296.9	9260	18520	0.33	90.5	2820	5640	0.33
298.6	8890	18020	0.34	91.0	2710	5490	0.34
300.2	9460	17540	0.30	91.5	2880	5350	0.30
301.8	9660	16670	0.25	92.0	2940	5080	0.25
303.5	9200	17540	0.31	92.5	2800	5350	0.31
305.1	8440	17540	0.35	93.0	2570	5350	0.35
306.8	8330	16260	0.32	93.5	2540	4960	0.32
308.4	8770	15870	0.28	94.0	2670	4840	0.28
310.0	9010	17090	0.31	94.5	2750	5210	0.31
311.7	8080	15870	0.33	95.0	2460	4840	0.33
313.3	7890	15500	0.33	95.5	2400	4730	0.33
315.0	8770	15500	0.26	96.0	2670	4730	0.26
316.6	8490	17540	0.35	96.5	2590	5350	0.35
318.2	8830	16260	0.29	97.0	2690	4960	0.29
319.9	9010	16670	0.29	97.5	2750	5080	0.29
321.5	8280	14490	0.26	98.0	2520	4420	0.26
323.2	7710	13610	0.26	98.5	2350	4150	0.26
324.8	7660	14810	0.32	99.0	2340	4520	0.32
326.4	8080	15500	0.31	99.5	2460	4730	0.31
328.1	8770	16260	0.29	100.0	2670	4960	0.29
329.7	8770	18020	0.34	100.5	2670	5490	0.34

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Receiver-to-Receiver Travel Time Data - Borehole MP-202

American Units				Metric Units			
Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio	Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
331.4	9010	17540	0.32	101.0	2750	5350	0.32
333.0	9390	17540	0.30	101.5	2860	5350	0.30
334.7	9130	16260	0.27	102.0	2780	4960	0.27
336.3	8770	16670	0.31	102.5	2670	5080	0.31
337.9	8890	17090	0.31	103.0	2710	5210	0.31
339.6	9460	16670	0.26	103.5	2880	5080	0.26
341.2	8330	18520	0.37	104.0	2540	5640	0.37
342.9	7800	14810	0.31	104.5	2380	4520	0.31
344.5	8080	15500	0.31	105.0	2460	4730	0.31
346.1	8390	15870	0.31	105.5	2560	4840	0.31
347.8	9070	16260	0.27	106.0	2760	4960	0.27
349.4	9520	18020	0.31	106.5	2900	5490	0.31
351.1	8710	16260	0.30	107.0	2660	4960	0.30
352.7	8490	15500	0.29	107.5	2590	4730	0.29
354.3	8130	15500	0.31	108.0	2480	4730	0.31
356.0	7710	14810	0.31	108.5	2350	4520	0.31
357.6	7490	14490	0.32	109.0	2280	4420	0.32
359.3	7580	13890	0.29	109.5	2310	4230	0.29
360.9	7660	14180	0.29	110.0	2340	4320	0.29
362.5	7890	14810	0.30	110.5	2400	4520	0.30
364.2	8280	15500	0.30	111.0	2520	4730	0.30
365.8	8710	16670	0.31	111.5	2660	5080	0.31
367.5	8390	15870	0.31	112.0	2560	4840	0.31
369.1	8330	14810	0.27	112.5	2540	4520	0.27
370.7	9260	17090	0.29	113.0	2820	5210	0.29
372.4	9320	18020	0.32	113.5	2840	5490	0.32
374.0	9010	17090	0.31	114.0	2750	5210	0.31
375.7	8890	16670	0.30	114.5	2710	5080	0.30
377.3	9260	16670	0.28	115.0	2820	5080	0.28
378.9	8660	15150	0.26	115.5	2640	4620	0.26
380.6	8030	15500	0.32	116.0	2450	4730	0.32
382.2	7890	14810	0.30	116.5	2400	4520	0.30
383.9	7710	15150	0.33	117.0	2350	4620	0.33
385.5	7840	15150	0.32	117.5	2390	4620	0.32
387.1	7980	15500	0.32	118.0	2430	4730	0.32
388.8	8230	15150	0.29	118.5	2510	4620	0.29
390.4	9010	16260	0.28	119.0	2750	4960	0.28
392.1	8890	16670	0.30	119.5	2710	5080	0.30
393.7	8080	15500	0.31	120.0	2460	4730	0.31

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Receiver-to-Receiver Travel Time Data - Borehole MP-202

American Units				Metric Units			
Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio	Depth at Midpoint Between Receivers	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
395.3	8030	14490	0.28	120.5	2450	4420	0.28
397.0	8130	15500	0.31	121.0	2480	4730	0.31
398.6	8280	14810	0.27	121.5	2520	4520	0.27
400.3	8330	16260	0.32	122.0	2540	4960	0.32
401.9	8890	15500	0.26	122.5	2710	4730	0.26
403.5	8770	15870	0.28	123.0	2670	4840	0.28
405.2	7940	15150	0.31	123.5	2420	4620	0.31
406.8	8180	14810	0.28	124.0	2490	4520	0.28
408.5	9520	17090	0.27	124.5	2900	5210	0.27
410.1	9660	18520	0.31	125.0	2940	5640	0.31
411.8	9520	18020	0.31	125.5	2900	5490	0.31
413.4	9800	19050	0.32	126.0	2990	5810	0.32
415.0	9880	18520	0.30	126.5	3010	5640	0.30
416.7	9800	19050	0.32	127.0	2990	5810	0.32
418.3	9520	18020	0.31	127.5	2900	5490	0.31
420.0	9260	17540	0.31	128.0	2820	5350	0.31
421.6	8330	15500	0.30	128.5	2540	4730	0.30
423.2	8600	16260	0.31	129.0	2620	4960	0.31
424.9	9130	16670	0.29	129.5	2780	5080	0.29
426.5	8490	15870	0.30	130.0	2590	4840	0.30
428.2	7940	14490	0.29	130.5	2420	4420	0.29
429.8	7490	14490	0.32	131.0	2280	4420	0.32
431.4	7750	15500	0.33	131.5	2360	4730	0.33
433.1	9010	16670	0.29	132.0	2750	5080	0.29
434.7	9260	17540	0.31	132.5	2820	5350	0.31
436.4	8440	15150	0.28	133.0	2570	4620	0.28
438.0	8130	15150	0.30	133.5	2480	4620	0.30
439.6	8280	14810	0.27	134.0	2520	4520	0.27
441.3	8390	15500	0.29	134.5	2560	4730	0.29
442.9	8490	15870	0.30	135.0	2590	4840	0.30
444.6	8390	15150	0.28	135.5	2560	4620	0.28
446.2	8440	15500	0.29	136.0	2570	4730	0.29

Notes: "-" means no data available at that particular interval of depth.

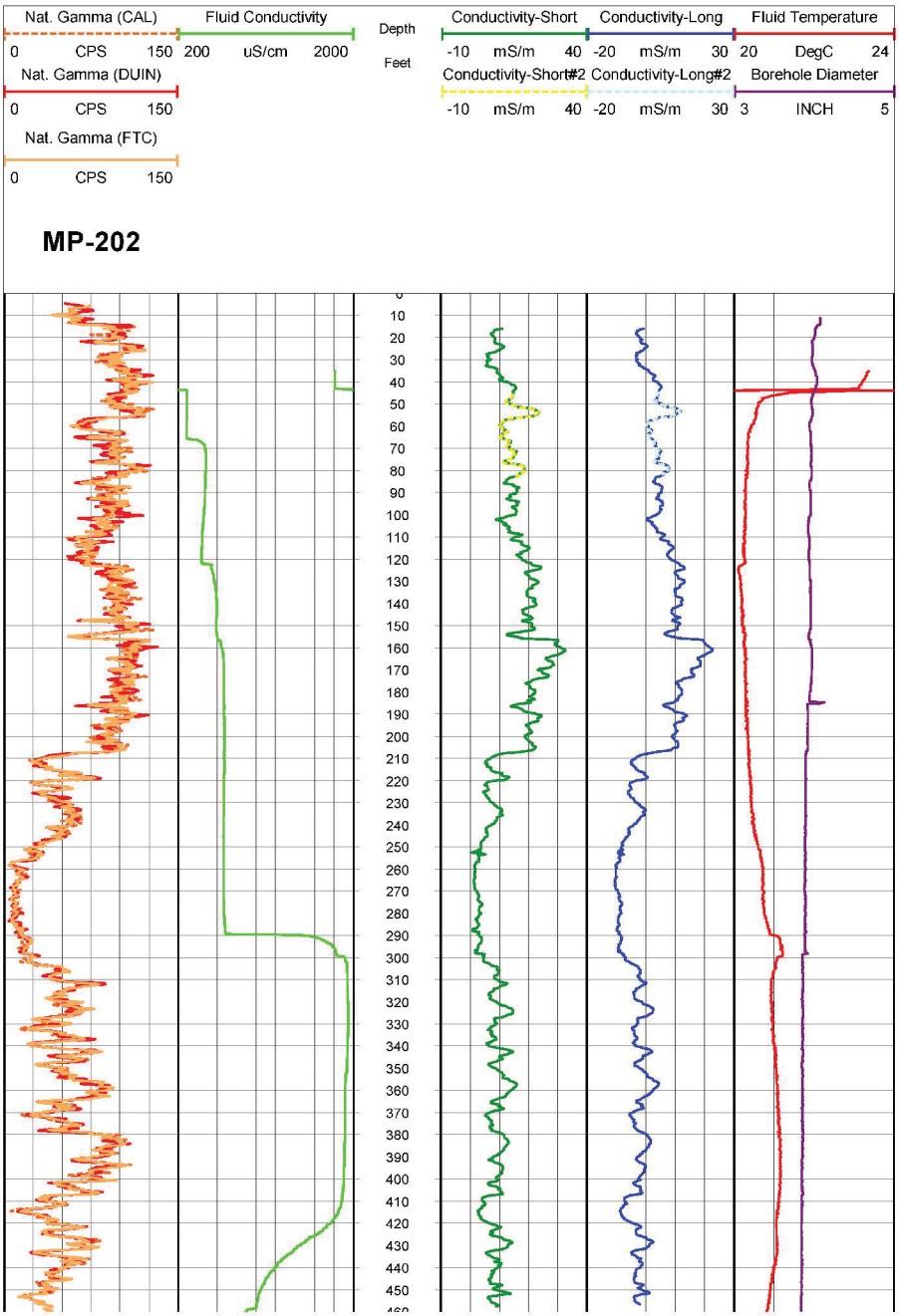


Figure 40. Boring MP-202, Induction, Fluid Temperature/Conductivity, Natural Gamma and Caliper logs

Table 23. Boring MP-202, Acoustic Televiewer Feature depth, dip azimuth, dip and description

Depth (feet)	Dip azimuth	Dip	Structure description
14.4	N165	31	Primary-structure Planar Bedding
15.6	N156	29	Primary-structure Planar Bedding
16.0	N159	34	Fracture Planar Hairline-fracture
16.1	N151	31	Primary-structure Planar Bedding
16.3	N330	45	Fracture Planar Hairline-fracture
16.4	N155	31	Primary-structure Planar Bedding
18.0	N149	29	Primary-structure Planar Bedding
20.1	N154	36	Primary-structure Planar Bedding
21.5	N325	59	Fracture Planar Hairline-fracture
22.8	N334	60	Fracture Planar Hairline-fracture
24.4	N148	33	Primary-structure Planar Bedding
27.5	N325	57	Fracture Planar Hairline-fracture
27.7	N326	67	Fracture Planar Hairline-fracture
29.1	N319	66	Fracture Planar Hairline-fracture
29.4	N321	60	Fracture Planar Hairline-fracture
30.6	N325	53	Fracture Planar Hairline-fracture
31.3	N330	68	Fracture Planar Hairline-fracture
31.4	N162	28	Primary-structure Planar Bedding
32.6	N321	68	Fracture Planar Hairline-fracture
33.5	N325	65	Fracture Planar Hairline-fracture
34.0	N153	29	Primary-structure Planar Bedding
34.2	N153	30	Primary-structure Planar Bedding
34.6	N148	30	Primary-structure Planar Bedding
43.1	N171	35	Fracture Planar Hairline-fracture
43.2	N165	43	Fracture Planar Hairline-fracture
43.3	N164	33	Fracture Planar Hairline-fracture
48.5	N332	66	Fracture Planar Hairline-fracture
48.8	N154	36	Primary-structure Planar Bedding
49.1	N143	33	Primary-structure Planar Bedding
49.2	N333	63	Fracture Planar Hairline-fracture
49.4	N153	35	Primary-structure Planar Bedding
57.4	N325	63	Fracture Planar Hairline-fracture
60.2	N152	31	Primary-structure Planar Bedding
60.7	N327	57	Fracture Planar Hairline-fracture
61.4	N332	57	Fracture Planar Hairline-fracture
65.0	N339	54	Fracture Planar Hairline-fracture
68.0	N154	31	Primary-structure Planar Bedding

Depth (feet)	Dip azimuth	Dip	Structure description
68.6	N339	55	Fracture Planar Hairline-fracture
73.9	N334	61	Fracture Planar Hairline-fracture
76.4	N337	63	Fracture Planar Hairline-fracture
76.5	N331	56	Fracture Planar Hairline-fracture
85.9	N332	61	Fracture Discontinuous Hairline-fracture
86.1	N334	63	Fracture Discontinuous Hairline-fracture
86.8	N159	34	Primary-structure Planar Bedding
87.3	N331	55	Fracture Planar Hairline-fracture
101.0	N153	29	Primary-structure Planar Bedding
102.4	N337	62	Fracture Planar Hairline-fracture
103.2	N150	34	Primary-structure Planar Bedding
103.5	N331	65	Fracture Discontinuous Hairline-fracture
106.5	N321	61	Fracture Discontinuous Hairline-fracture
107.6	N148	34	Primary-structure Planar Bedding
108.3	N338	59	Fracture Discontinuous Hairline-fracture
108.5	N153	31	Primary-structure Planar Bedding
109.8	N319	74	Fracture Discontinuous Hairline-fracture
112.1	N332	63	Fracture Discontinuous Hairline-fracture
113.5	N144	34	Primary-structure Planar Bedding
116.5	N137	36	Primary-structure Planar Bedding
116.9	N334	68	Fracture Discontinuous Hairline-fracture
118.5	N332	64	Fracture Discontinuous Hairline-fracture
122.2	N144	30	Primary-structure Planar Bedding
122.4	N334	64	Fracture Discontinuous Hairline-fracture
125.1	N160	33	Primary-structure Planar Bedding
130.9	N340	66	Fracture Discontinuous Hairline-fracture
139.0	N176	27	Primary-structure Planar Bedding
147.6	N161	32	Primary-structure Planar Bedding
148.0	N335	64	Fracture Planar Hairline-fracture
153.1	N166	27	Primary-structure Planar Bedding
153.8	N158	30	Primary-structure Planar Bedding
153.9	N337	58	Fracture Planar Hairline-fracture
154.4	N158	33	Primary-structure Planar Bedding
155.3	N150	39	Primary-structure Planar Bedding
155.9	N172	37	Primary-structure Planar Bedding
156.0	N007	34	Fracture Discontinuous Hairline-fracture
156.4	N154	39	Primary-structure Irregular Bedding
156.7	N152	30	Fracture Planar Hairline-fracture
175.7	N315	72	Fracture Planar Hairline-fracture

Depth (feet)	Dip azimuth	Dip	Structure description
184.7	N167	60	Fracture Planar Hairline-fracture
185.1	N174	26	Fracture Planar Open-fracture
198.3	N163	36	Primary-structure Planar Bedding
199.1	N173	28	Primary-structure Planar Bedding
200.5	N332	53	Fracture Discontinuous Hairline-fracture
201.7	N168	29	Primary-structure Planar Bedding
203.3	N167	30	Primary-structure Planar Bedding
204.1	N161	30	Primary-structure Planar Bedding
207.1	N161	29	Primary-structure Planar Bedding
207.7	N165	36	Primary-structure Planar Bedding
208.0	N329	49	Fracture Planar Hairline-fracture
212.1	N160	32	Primary-structure Planar Bedding
213.5	N160	30	Primary-structure Planar Bedding
214.6	N153	29	Primary-structure Planar Bedding
217.5	N342	59	Fracture Discontinuous Hairline-fracture
219.9	N149	30	Primary-structure Planar Bedding
220.5	N336	60	Fracture Planar Hairline-fracture
221.0	N160	33	Primary-structure Planar Bedding
223.7	N157	30	Primary-structure Planar Bedding
224.7	N156	29	Primary-structure Planar Bedding
224.9	N334	51	Fracture Discontinuous Hairline-fracture
225.2	N158	30	Primary-structure Planar Bedding
226.5	N159	35	Primary-structure Planar Bedding
230.4	N164	34	Primary-structure Planar Bedding
232.5	N162	32	Primary-structure Planar Bedding
242.5	N159	32	Primary-structure Planar Bedding
244.4	N329	51	Fracture Planar Hairline-fracture
245.9	N155	32	Primary-structure Planar Bedding
247.0	N163	37	Primary-structure Planar Bedding
247.5	N159	37	Primary-structure Planar Bedding
248.9	N158	38	Primary-structure Planar Bedding
250.1	N152	33	Primary-structure Planar Bedding
250.8	N156	32	Primary-structure Planar Bedding
251.7	N162	34	Primary-structure Planar Bedding
252.0	N348	66	Fracture Discontinuous Hairline-fracture
252.5	N158	33	Primary-structure Planar Bedding
252.8	N327	54	Fracture Planar Hairline-fracture
253.9	N163	36	Primary-structure Planar Bedding
254.6	N159	34	Primary-structure Planar Bedding

Depth (feet)	Dip azimuth	Dip	Structure description
256.5	N156	35	Primary-structure Planar Bedding
257.3	N159	33	Primary-structure Planar Bedding
257.5	N337	77	Fracture Discontinuous Hairline-fracture
258.2	N162	36	Primary-structure Planar Bedding
258.7	N154	31	Primary-structure Planar Bedding
259.2	N157	33	Primary-structure Planar Bedding
259.5	N344	67	Fracture Discontinuous Hairline-fracture
259.9	N158	31	Primary-structure Planar Bedding
260.1	N162	28	Primary-structure Planar Bedding
260.4	N156	29	Primary-structure Planar Bedding
260.7	N197	53	Fracture Discontinuous Hairline-fracture
261.5	N335	77	Fracture Discontinuous Hairline-fracture
261.7	N169	33	Primary-structure Planar Bedding
263.5	N158	30	Primary-structure Planar Bedding
266.9	N161	35	Primary-structure Planar Bedding
268.0	N163	39	Primary-structure Planar Bedding
268.8	N151	36	Primary-structure Planar Bedding
269.9	N148	31	Primary-structure Planar Bedding
271.4	N167	37	Primary-structure Planar Bedding
272.2	N160	33	Primary-structure Planar Bedding
273.2	N323	70	Fracture Discontinuous Hairline-fracture
273.4	N158	40	Primary-structure Planar Bedding
274.9	N147	33	Primary-structure Planar Bedding
275.0	N355	72	Fracture Discontinuous Hairline-fracture
275.8	N162	35	Primary-structure Planar Bedding
276.4	N162	38	Primary-structure Planar Bedding
277.7	N155	37	Primary-structure Planar Bedding
278.6	N151	36	Primary-structure Planar Bedding
279.6	N167	35	Primary-structure Planar Bedding
280.0	N098	64	Fracture Planar Hairline-fracture
280.2	N152	35	Primary-structure Planar Bedding
280.6	N161	69	Fracture Planar Hairline-fracture
281.0	N157	35	Primary-structure Planar Bedding
281.6	N149	35	Primary-structure Planar Bedding
282.3	N151	40	Primary-structure Planar Bedding
282.8	N161	38	Primary-structure Planar Bedding
284.2	N163	37	Primary-structure Planar Bedding
284.8	N162	34	Primary-structure Planar Bedding
285.7	N171	35	Primary-structure Planar Bedding

Depth (feet)	Dip azimuth	Dip	Structure description
286.7	N316	48	Fracture Planar Hairline-fracture
287.0	N136	40	Primary-structure Planar Bedding
287.6	N353	58	Fracture Planar Hairline-fracture
288.1	N163	35	Primary-structure Planar Bedding
288.4	N302	52	Fracture Planar Open-fracture
289.4	N167	41	Primary-structure Planar Bedding
290.0	N320	44	Fracture Discontinuous Hairline-fracture
290.3	N165	42	Primary-structure Planar Bedding
291.1	N314	53	Fracture Discontinuous Hairline-fracture
291.9	N341	53	Fracture Discontinuous Hairline-fracture
295.4	N162	32	Primary-structure Planar Bedding
296.2	N167	33	Primary-structure Planar Bedding
296.7	N167	43	Primary-structure Planar Bedding
297.7	N164	40	Primary-structure Planar Bedding
297.9	N173	37	Primary-structure Planar Bedding
298.2	N333	50	Fracture Planar Open-fracture
299.9	N160	35	Primary-structure Planar Bedding
301.0	N170	36	Primary-structure Planar Bedding
305.0	N002	48	Fracture Discontinuous Hairline-fracture
305.1	N165	34	Primary-structure Planar Bedding
307.6	N167	38	Primary-structure Planar Bedding
314.6	N166	38	Primary-structure Planar Bedding
316.2	N164	34	Primary-structure Planar Bedding
317.4	N167	32	Primary-structure Planar Bedding
318.0	N165	38	Primary-structure Planar Bedding
318.8	N335	58	Fracture Discontinuous Hairline-fracture
318.9	N163	39	Primary-structure Planar Bedding
320.5	N163	33	Primary-structure Planar Bedding
321.6	N158	35	Primary-structure Planar Bedding
321.9	N333	40	Fracture Discontinuous Hairline-fracture
321.9	N167	35	Primary-structure Planar Bedding
328.3	N168	36	Primary-structure Planar Bedding
328.4	N163	33	Primary-structure Planar Bedding
328.5	N321	56	Fracture Discontinuous Hairline-fracture
329.1	N159	35	Primary-structure Planar Bedding
332.1	N172	37	Primary-structure Planar Bedding
332.2	N344	56	Fracture Discontinuous Hairline-fracture
332.7	N156	35	Primary-structure Planar Bedding
332.9	N328	40	Fracture Planar Hairline-fracture

Depth (feet)	Dip azimuth	Dip	Structure description
333.6	N159	33	Primary-structure Planar Bedding
334.3	N163	33	Primary-structure Planar Bedding
334.5	N333	42	Fracture Planar Hairline-fracture
335.8	N165	34	Primary-structure Planar Bedding
337.7	N165	35	Primary-structure Planar Bedding
337.9	N333	59	Fracture Discontinuous Hairline-fracture
338.2	N160	36	Primary-structure Planar Bedding
339.9	N154	35	Primary-structure Planar Bedding
340.4	N335	50	Fracture Discontinuous Hairline-fracture
341.1	N156	30	Primary-structure Planar Bedding
349.3	N166	41	Primary-structure Planar Bedding
354.5	N177	38	Primary-structure Planar Bedding
354.6	N325	48	Fracture Discontinuous Hairline-fracture
355.1	N157	34	Primary-structure Planar Bedding
358.1	N167	43	Primary-structure Planar Bedding
360.6	N173	35	Primary-structure Planar Bedding
361.7	N159	36	Primary-structure Planar Bedding
363.7	N166	36	Primary-structure Planar Bedding
364.7	N155	35	Primary-structure Planar Bedding
365.9	N335	36	Fracture Planar Hairline-fracture
366.5	N155	37	Primary-structure Planar Bedding
367.1	N158	36	Primary-structure Planar Bedding
367.3	N337	60	Fracture Discontinuous Hairline-fracture
367.6	N323	49	Fracture Discontinuous Hairline-fracture
368.0	N174	38	Primary-structure Planar Bedding
369.4	N163	43	Primary-structure Planar Bedding
370.1	N346	36	Fracture Discontinuous Hairline-fracture
370.6	N158	37	Primary-structure Planar Bedding
371.1	N341	35	Fracture Discontinuous Hairline-fracture
374.8	N164	35	Primary-structure Planar Bedding
375.4	N162	37	Primary-structure Planar Bedding
377.2	N158	41	Primary-structure Planar Bedding
377.5	N161	38	Primary-structure Planar Bedding
378.7	N156	40	Primary-structure Planar Bedding
381.2	N147	41	Primary-structure Planar Bedding
381.3	N160	39	Primary-structure Planar Bedding
385.7	N167	35	Primary-structure Planar Bedding
386.6	N169	37	Primary-structure Planar Bedding
387.5	N160	41	Primary-structure Planar Bedding

Depth (feet)	Dip azimuth	Dip	Structure description
389.3	N153	36	Primary-structure Planar Bedding
390.2	N331	42	Fracture Discontinuous Hairline-fracture
391.6	N335	50	Fracture Discontinuous Hairline-fracture
391.7	N164	38	Primary-structure Planar Bedding
392.8	N162	35	Primary-structure Planar Bedding
395.5	N158	34	Primary-structure Planar Bedding
397.8	N157	37	Primary-structure Planar Bedding
398.8	N151	38	Primary-structure Planar Bedding
402.4	N152	38	Primary-structure Planar Bedding
403.3	N324	45	Fracture Discontinuous Hairline-fracture
403.4	N165	36	Primary-structure Planar Bedding
407.0	N156	42	Primary-structure Planar Bedding
407.2	N135	30	Primary-structure Planar Bedding
407.4	N144	43	Primary-structure Planar Bedding
407.6	N314	37	Fracture Discontinuous Hairline-fracture
407.8	N157	39	Primary-structure Planar Bedding
408.5	N151	41	Primary-structure Planar Bedding
409.3	N156	39	Primary-structure Planar Bedding
412.2	N160	38	Primary-structure Planar Bedding
412.8	N003	55	Fracture Discontinuous Hairline-fracture
413.0	N152	38	Primary-structure Planar Bedding
414.0	N312	52	Fracture Planar Hairline-fracture
414.6	N142	38	Primary-structure Planar Bedding
415.3	N150	39	Primary-structure Planar Bedding
415.7	N154	40	Primary-structure Planar Bedding
416.2	N139	42	Primary-structure Planar Bedding
416.9	N324	51	Fracture Discontinuous Hairline-fracture
416.9	N155	39	Primary-structure Planar Bedding
417.3	N346	81	Fracture Discontinuous Hairline-fracture
417.5	N154	42	Primary-structure Planar Bedding
417.6	N337	50	Fracture Discontinuous Hairline-fracture
418.2	N152	46	Primary-structure Planar Bedding
418.5	N306	49	Fracture Discontinuous Hairline-fracture
419.3	N139	36	Primary-structure Planar Bedding
423.1	N153	38	Primary-structure Planar Bedding
423.2	N317	47	Fracture Discontinuous Hairline-fracture
423.8	N146	40	Primary-structure Planar Bedding
424.4	N152	37	Primary-structure Planar Bedding
425.3	N273	33	Fracture Planar Hairline-fracture

Depth (feet)	Dip azimuth	Dip	Structure description
426.7	N114	83	Fracture Planar Hairline-fracture
428.5	N192	35	Fracture Planar Hairline-fracture
429.7	N112	81	Fracture Planar Hairline-fracture
430.8	N171	51	Fracture Planar Hairline-fracture
431.7	N138	41	Primary-structure Planar Bedding
432.8	N310	37	Fracture Discontinuous Hairline-fracture
433.0	N143	40	Primary-structure Planar Bedding
433.4	N148	36	Primary-structure Planar Bedding
435.1	N151	39	Primary-structure Planar Bedding
437.6	N149	39	Primary-structure Planar Bedding
439.2	N149	36	Primary-structure Planar Bedding
440.0	N146	41	Primary-structure Planar Bedding
441.8	N149	36	Primary-structure Planar Bedding
444.2	N156	43	Primary-structure Planar Bedding
444.8	N162	44	Primary-structure Planar Bedding
445.5	N138	35	Primary-structure Planar Bedding
445.9	N333	64	Fracture Discontinuous Hairline-fracture
446.0	N142	39	Primary-structure Planar Bedding
447.0	N139	41	Primary-structure Planar Bedding
447.6	N143	40	Primary-structure Planar Bedding
448.1	N147	37	Primary-structure Planar Bedding
448.4	N045	83	Fracture Planar Hairline-fracture
448.7	N329	68	Fracture Planar Hairline-fracture
449.6	N148	48	Primary-structure Planar Bedding
450.6	N156	45	Primary-structure Planar Bedding
451.3	N153	42	Primary-structure Planar Bedding
451.8	N148	45	Primary-structure Planar Bedding
452.3	N145	44	Primary-structure Planar Bedding
453.0	N155	36	Primary-structure Planar Bedding
454.6	N144	39	Primary-structure Planar Bedding
455.9	N147	40	Primary-structure Planar Bedding
457.2	N146	38	Primary-structure Planar Bedding
457.9	N148	35	Primary-structure Planar Bedding
458.0	N278	60	Fracture Planar Hairline-fracture
458.8	N149	37	Primary-structure Planar Bedding