APPENDIX A

SUSPENSION VELOCITY MEASUREMENT QUALITY ASSURANCE SUSPENSION SOURCE TO RECEIVER ANALYSIS RESULTS

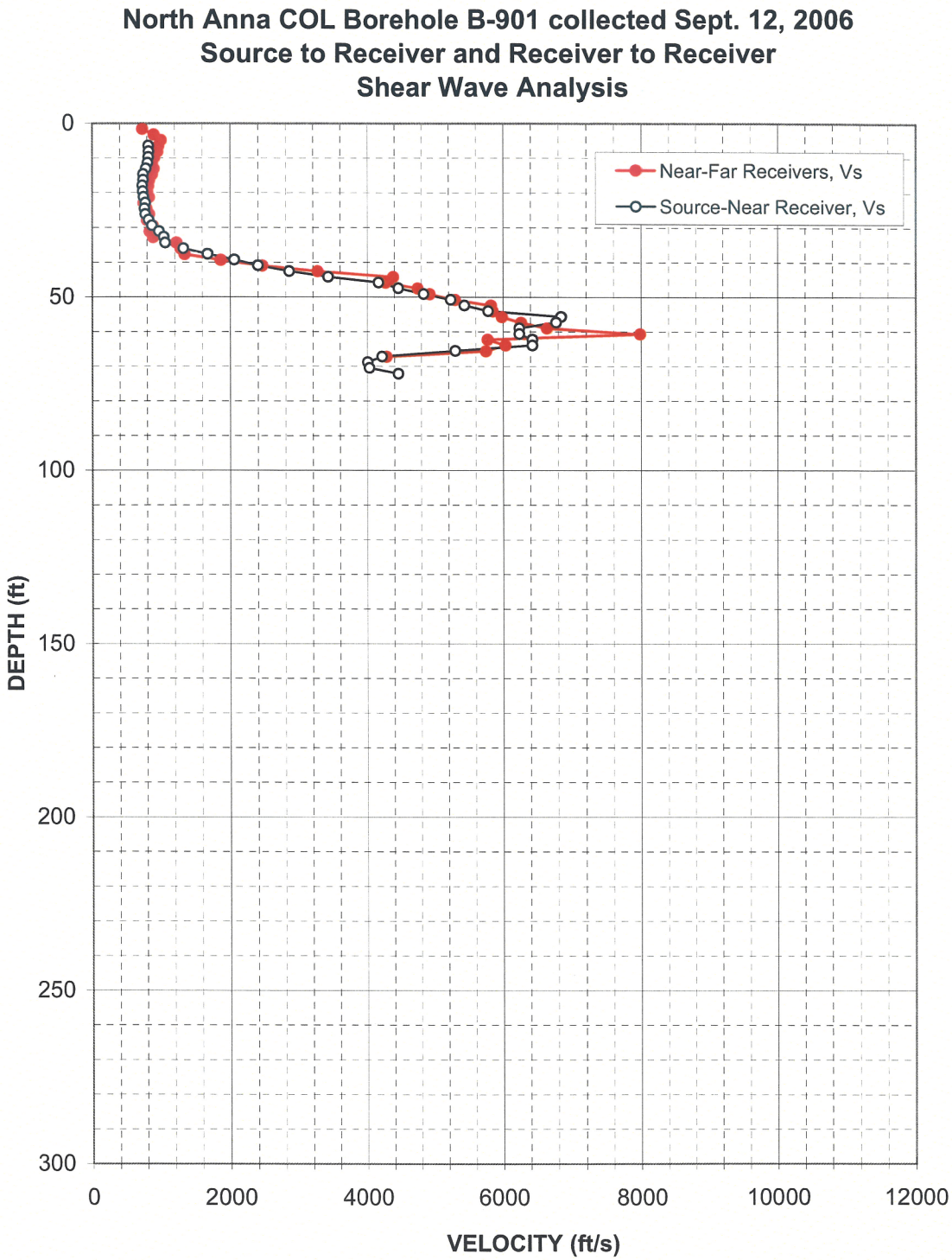

Figure A-1: Boring B-901, Top Section, Suspension S-R1 P- and S_H-wave velocities

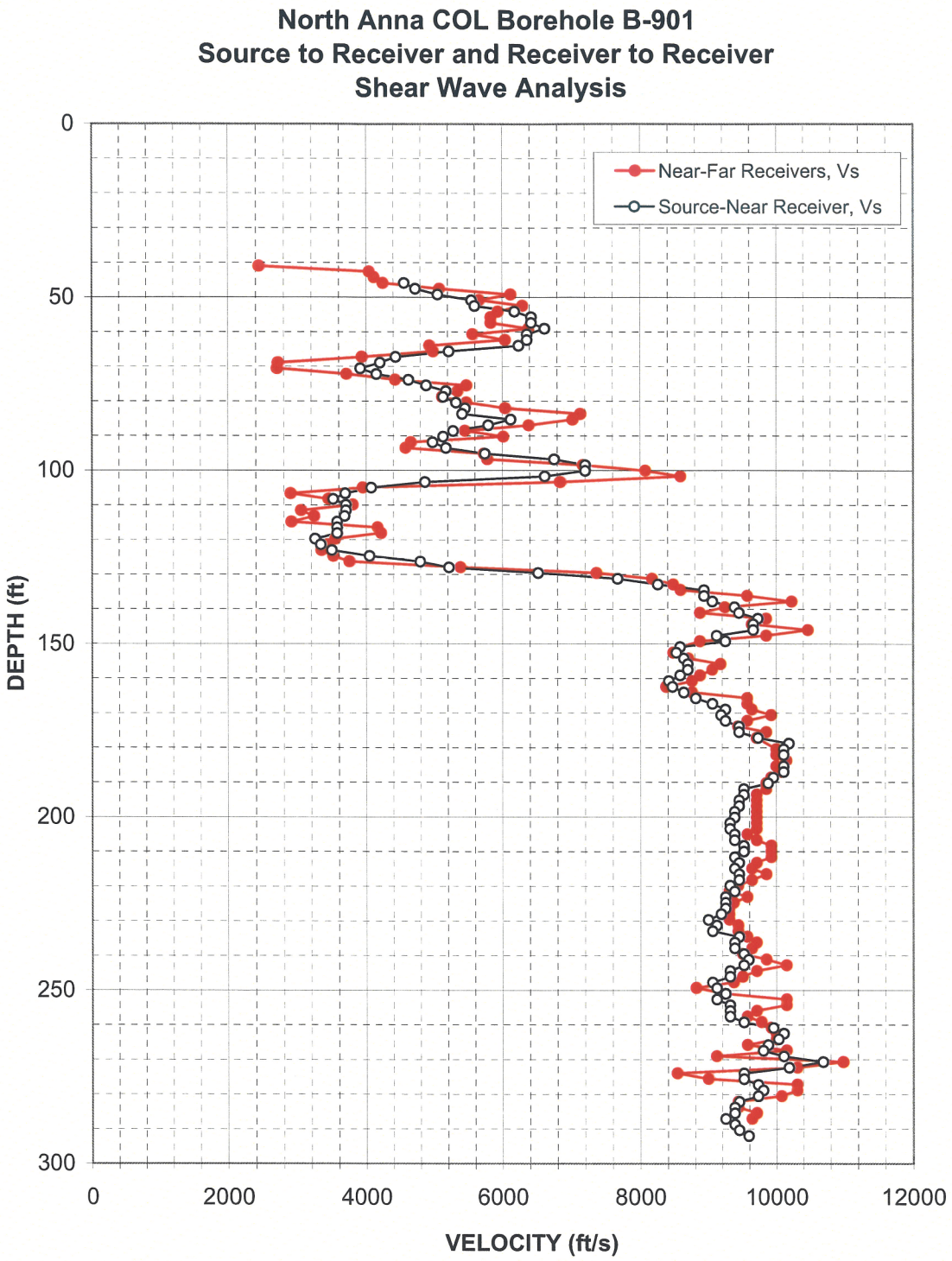

Figure A-2: Boring B-901, Bottom Section, Suspension S-R1 P- and S_H-wave velocities

Table A-1. Boring B-901, Top Section, Suspension S-R1 depths and P- and S_H-wave velocities

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Source-to-Receiver Travel Time Data - Borehole B-901

American Units				Metric Units			
Depth at Midpoint Between Source and Near Receiver	Velocity		Poisson's Ratio	Depth at Midpoint Between Source and Near Receiver	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
6.5	820	1710	0.35	2.0	250	520	0.35
8.1	820	1850	0.38	2.5	250	560	0.38
9.8	820	1990	0.40	3.0	250	610	0.40
11.4	810	2000	0.40	3.5	250	610	0.40
13.0	780	2120	0.42	4.0	240	650	0.42
14.7	740	2000	0.42	4.5	230	610	0.42
16.3	740	1880	0.41	5.0	230	570	0.41
18.0	730	1930	0.42	5.5	220	590	0.42
19.6	740	1800	0.40	6.0	220	550	0.40
21.2	750	1880	0.41	6.5	230	570	0.41
22.9	770	1770	0.38	7.0	240	540	0.38
24.5	760	1940	0.41	7.5	230	590	0.41
26.2	770	1970	0.41	8.0	240	600	0.41
27.8	820	1980	0.40	8.5	250	600	0.40
29.4	870	1880	0.36	9.0	270	570	0.36
31.1	970	2120	0.37	9.5	300	650	0.37
32.7	1040	2350	0.38	10.0	320	720	0.38
34.4	1060	3330	0.44	10.5	320	1020	0.44
36.0	1320	5190	0.47	11.0	400	1580	0.47
37.6	1670	5230	0.44	11.5	510	1590	0.44
39.3	2060	5550	0.42	12.0	630	1690	0.42
40.9	2400	6030	0.41	12.5	730	1840	0.41
42.6	2850	6810	0.39	13.0	870	2070	0.39
44.2	3420	7490	0.37	13.5	1040	2280	0.37
45.8	4160	9810	0.39	14.0	1270	2990	0.39
47.5	4460	9740	0.37	14.5	1360	2970	0.37
49.1	4830	10130	0.35	15.0	1470	3090	0.35
50.8	5230	10640	0.34	15.5	1590	3240	0.34
52.4	5430	11010	0.34	16.0	1660	3360	0.34
54.0	5780	10640	0.29	16.5	1760	3240	0.29
55.7	6840	10820	0.17	17.0	2090	3300	0.17
57.3	6770	11830	0.26	17.5	2060	3610	0.26
59.0	6240	11610	0.30	18.0	1900	3540	0.30
60.6	6240	11300	0.28	18.5	1900	3450	0.28
62.2	6430	11510	0.27	19.0	1960	3510	0.27

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Source-to-Receiver Travel Time Data - Borehole B-901

American Units			
Depth at Midpoint Between Source and Near Receiver	Velocity		Poisson's Ratio
	V_s	V_p	
(ft)	(ft/s)	(ft/s)	
63.9	6430	10550	0.21
65.5	5300	9590	0.28
67.2	4220	8380	0.33
68.8	4010	8170	0.34
70.5	4030	8610	0.36
72.1	4460	9520	0.36

Metric Units			
Depth at Midpoint Between Source and Near Receiver	Velocity		Poisson's Ratio
	V_s	V_p	
(m)	(m/s)	(m/s)	
19.5	1960	3220	0.21
20.0	1610	2920	0.28
20.5	1290	2560	0.33
21.0	1220	2490	0.34
21.5	1230	2630	0.36
22.0	1360	2900	0.36

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

Table A-2. Boring B-901, Bottom Section, 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 Source-to-Receiver Travel Time Data - Borehole B-901

American Units				Metric Units			
Depth at Midpoint Between Source and Near Receiver	Velocity		Poisson's Ratio	Depth at Midpoint Between Source and Near Receiver	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
45.9	4560	11150	0.40	14.0	1390	3400	0.40
47.6	4720	11640	0.40	14.5	1440	3550	0.40
49.2	5050	12190	0.40	15.0	1540	3710	0.40
50.9	5550	12300	0.37	15.5	1690	3750	0.37
52.5	5600	12300	0.37	16.0	1710	3750	0.37
54.1	6180	12780	0.35	16.5	1880	3900	0.35
55.8	6420	12780	0.33	17.0	1960	3900	0.33
57.4	6420	12780	0.33	17.5	1960	3900	0.33
59.1	6620	12660	0.31	18.0	2020	3860	0.31
60.7	6360	12070	0.31	18.5	1940	3680	0.31
62.3	6360	11750	0.29	19.0	1940	3580	0.29
64.0	6240	11440	0.29	19.5	1900	3490	0.29
65.6	5220	10780	0.35	20.0	1590	3280	0.35
67.3	4440	9950	0.38	20.5	1350	3030	0.38
68.9	4210	9380	0.37	21.0	1280	2860	0.37
70.6	3920	8990	0.38	21.5	1190	2740	0.38
72.2	4150	9800	0.39	22.0	1270	2990	0.39
73.8	4620	11240	0.40	22.5	1410	3430	0.40
75.5	4880	12070	0.40	23.0	1490	3680	0.40
77.1	5170	12540	0.40	23.5	1580	3820	0.40
78.8	5130	13040	0.41	24.0	1560	3970	0.41
80.4	5320	12910	0.40	24.5	1620	3940	0.40
82.0	5460	12910	0.39	25.0	1660	3940	0.39
83.7	5410	12780	0.39	25.5	1650	3900	0.39
85.3	6120	12780	0.35	26.0	1870	3900	0.35
87.0	5800	13040	0.38	26.5	1770	3970	0.38
88.6	5280	12780	0.40	27.0	1610	3900	0.40
90.2	5130	13170	0.41	27.5	1560	4010	0.41
91.9	4980	12910	0.41	28.0	1520	3940	0.41
93.5	5170	12300	0.39	28.5	1580	3750	0.39
95.2	5740	13040	0.38	29.0	1750	3970	0.38
96.8	6760	13440	0.33	29.5	2060	4100	0.33
98.4	7200	14490	0.34	30.0	2200	4420	0.34
100.1	7200	14490	0.34	30.5	2200	4420	0.34
101.7	6620	13870	0.35	31.0	2020	4230	0.35

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Source-to-Receiver Travel Time Data - Borehole B-901

American Units				Metric Units			
Depth at Midpoint Between Source and Near Receiver	Velocity		Poisson's Ratio	Depth at Midpoint Between Source and Near Receiver	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
103.4	4870	11750	0.40	31.5	1480	3580	0.40
105.0	4080	11340	0.43	32.0	1240	3460	0.43
106.6	3690	10270	0.43	32.5	1130	3130	0.43
108.3	3510	9730	0.42	33.0	1070	2970	0.42
109.9	3700	9800	0.42	33.5	1130	2990	0.42
111.6	3700	10030	0.42	34.0	1130	3060	0.42
113.2	3680	10030	0.42	34.5	1120	3060	0.42
114.8	3570	10870	0.44	35.0	1090	3310	0.44
116.5	3570	10780	0.44	35.5	1090	3280	0.44
118.1	3570	10690	0.44	36.0	1090	3260	0.44
119.8	3250	9520	0.43	36.5	990	2900	0.43
121.4	3340	9120	0.42	37.0	1020	2780	0.42
123.0	3500	8750	0.41	37.5	1070	2670	0.41
124.7	4050	9250	0.38	38.0	1230	2820	0.38
126.3	4790	10030	0.35	38.5	1460	3060	0.35
128.0	5220	12070	0.39	39.0	1590	3680	0.39
129.6	6520	13870	0.36	39.5	1990	4230	0.36
131.2	7670	14490	0.31	40.0	2340	4420	0.31
132.9	8250	15900	0.32	40.5	2520	4850	0.32
134.5	8930	16100	0.28	41.0	2720	4910	0.28
136.2	8930	15520	0.25	41.5	2720	4730	0.25
137.8	9060	15900	0.26	42.0	2760	4850	0.26
139.4	9380	16720	0.27	42.5	2860	5100	0.27
141.1	9450	16300	0.25	43.0	2880	4970	0.25
142.7	9730	16510	0.23	43.5	2970	5030	0.23
144.4	9660	16720	0.25	44.0	2940	5100	0.25
146.0	9660	16510	0.24	44.5	2940	5030	0.24
147.7	9120	15710	0.25	45.0	2780	4790	0.25
149.3	9250	15340	0.21	45.5	2820	4680	0.21
150.9	8580	15160	0.26	46.0	2610	4620	0.26
152.6	8520	15340	0.28	46.5	2600	4680	0.28
154.2	8640	15710	0.28	47.0	2630	4790	0.28
155.9	8690	15520	0.27	47.5	2650	4730	0.27
157.5	8690	15160	0.26	48.0	2650	4620	0.26
159.1	8580	15520	0.28	48.5	2610	4730	0.28
160.8	8410	15520	0.29	49.0	2560	4730	0.29
162.4	8470	15710	0.30	49.5	2580	4790	0.30
164.1	8640	16300	0.30	50.0	2630	4970	0.30
165.7	8810	16510	0.30	50.5	2690	5030	0.30

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Source-to-Receiver Travel Time Data - Borehole B-901

American Units				Metric Units			
Depth at Midpoint Between Source and Near Receiver	Velocity		Poisson's Ratio	Depth at Midpoint Between Source and Near Receiver	Velocity		Poisson's Ratio
	V_s	V_p			V_s	V_p	
(ft)	(ft/s)	(ft/s)		(m)	(m/s)	(m/s)	
167.3	9060	16510	0.28	51.0	2760	5030	0.28
169.0	9250	16510	0.27	51.5	2820	5030	0.27
170.6	9180	16300	0.27	52.0	2800	4970	0.27
172.3	9250	16510	0.27	52.5	2820	5030	0.27
173.9	9450	17160	0.28	53.0	2880	5230	0.28
175.5	9450	17390	0.29	53.5	2880	5300	0.29
177.2	9730	17390	0.27	54.0	2970	5300	0.27
178.8	10190	17620	0.25	54.5	3110	5370	0.25
180.5	10110	17860	0.26	55.0	3080	5440	0.26
182.1	10110	17860	0.26	55.5	3080	5440	0.26
185.4	10110	17860	0.26	56.5	3080	5440	0.26
187.0	10110	17860	0.26	57.0	3080	5440	0.26
188.7	9950	17390	0.26	57.5	3030	5300	0.26
190.3	9880	17160	0.25	58.0	3010	5230	0.25
191.9	9520	17160	0.28	58.5	2900	5230	0.28
193.6	9520	17390	0.29	59.0	2900	5300	0.29
195.2	9450	17390	0.29	59.5	2880	5300	0.29
196.9	9450	17390	0.29	60.0	2880	5300	0.29
198.5	9380	17160	0.29	60.5	2860	5230	0.29
200.1	9380	17390	0.29	61.0	2860	5300	0.29
201.8	9310	16940	0.28	61.5	2840	5160	0.28
203.4	9310	16720	0.27	62.0	2840	5100	0.27
205.1	9380	16720	0.27	62.5	2860	5100	0.27
206.7	9380	17160	0.29	63.0	2860	5230	0.29
208.3	9520	17160	0.28	63.5	2900	5230	0.28
210.0	9520	16720	0.26	64.0	2900	5100	0.26
211.6	9380	17160	0.29	64.5	2860	5230	0.29
213.3	9450	17160	0.28	65.0	2880	5230	0.28
214.9	9380	16940	0.28	65.5	2860	5160	0.28
216.5	9450	17620	0.30	66.0	2880	5370	0.30
218.2	9450	17620	0.30	66.5	2880	5370	0.30
219.8	9310	17160	0.29	67.0	2840	5230	0.29
221.5	9380	17620	0.30	67.5	2860	5370	0.30
223.1	9250	17390	0.30	68.0	2820	5300	0.30
224.8	9250	17160	0.30	68.5	2820	5230	0.30
226.4	9250	17160	0.30	69.0	2820	5230	0.30
228.0	9180	16720	0.28	69.5	2800	5100	0.28
229.7	8990	16510	0.29	70.0	2740	5030	0.29
231.3	9120	16720	0.29	70.5	2780	5100	0.29

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Source-to-Receiver Travel Time Data - Borehole B-901

American Units			
Depth at Midpoint Between Source and Near Receiver	Velocity		Poisson's Ratio
	V_s	V_p	
(ft)	(ft/s)	(ft/s)	
233.0	9060	16720	0.29
234.6	9450	16720	0.27
236.2	9380	16720	0.27
237.9	9380	16940	0.28
239.5	9520	17160	0.28
241.2	9590	17160	0.27
242.8	9520	17160	0.28
244.4	9310	16720	0.27
246.1	9310	16720	0.27
247.7	9060	16300	0.28
249.4	9120	16300	0.27
251.0	9250	16720	0.28
252.6	9120	16510	0.28
254.3	9310	16940	0.28
255.9	9310	16940	0.28
257.6	9310	16940	0.28
259.2	9520	16940	0.27
260.8	9950	16940	0.24
262.5	10110	17390	0.24
264.1	10030	16940	0.23
265.8	9880	16510	0.22
267.4	9800	16720	0.24
269.0	10110	17620	0.25
270.7	10690	17390	0.20
272.3	10190	17390	0.24
274.0	9520	16940	0.27
275.6	9520	16940	0.27
277.2	9730	16940	0.25
278.9	9800	17390	0.27
280.5	9730	17620	0.28
282.2	9450	16940	0.27
283.8	9380	16940	0.28
285.4	9380	16720	0.27
287.1	9250	16940	0.29
288.7	9380	17160	0.29
290.4	9450	16940	0.27
292.0	9590	16720	0.25

Metric Units			
Depth at Midpoint Between Source and Near Receiver	Velocity		Poisson's Ratio
	V_s	V_p	
(m)	(m/s)	(m/s)	
71.0	2760	5100	0.29
71.5	2880	5100	0.27
72.0	2860	5100	0.27
72.5	2860	5160	0.28
73.0	2900	5230	0.28
73.5	2920	5230	0.27
74.0	2900	5230	0.28
74.5	2840	5100	0.27
75.0	2840	5100	0.27
75.5	2760	4970	0.28
76.0	2780	4970	0.27
76.5	2820	5100	0.28
77.0	2780	5030	0.28
77.5	2840	5160	0.28
78.0	2840	5160	0.28
78.5	2840	5160	0.28
79.0	2900	5160	0.27
79.5	3030	5160	0.24
80.0	3080	5300	0.24
80.5	3060	5160	0.23
81.0	3010	5030	0.22
81.5	2990	5100	0.24
82.0	3080	5370	0.25
82.5	3260	5300	0.20
83.0	3110	5300	0.24
83.5	2900	5160	0.27
84.0	2900	5160	0.27
84.5	2970	5160	0.25
85.0	2990	5300	0.27
85.5	2970	5370	0.28
86.0	2880	5160	0.27
86.5	2860	5160	0.28
87.0	2860	5100	0.27
87.5	2820	5160	0.29
88.0	2860	5230	0.29
88.5	2880	5160	0.27
89.0	2920	5100	0.25

Summary of Compressional Wave Velocity, Shear Wave Velocity, and Poisson's Ratio Based on Source-to-Receiver Travel Time Data - Borehole B-901

American Units			
Depth at Midpoint Between Source and Near Receiver	Velocity		Poisson's Ratio
	V_s	V_p	
(ft)	(ft/s)	(ft/s)	

Metric Units			
Depth at Midpoint Between Source and Near Receiver	Velocity		Poisson's Ratio
	V_s	V_p	
(m)	(m/s)	(m/s)	

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

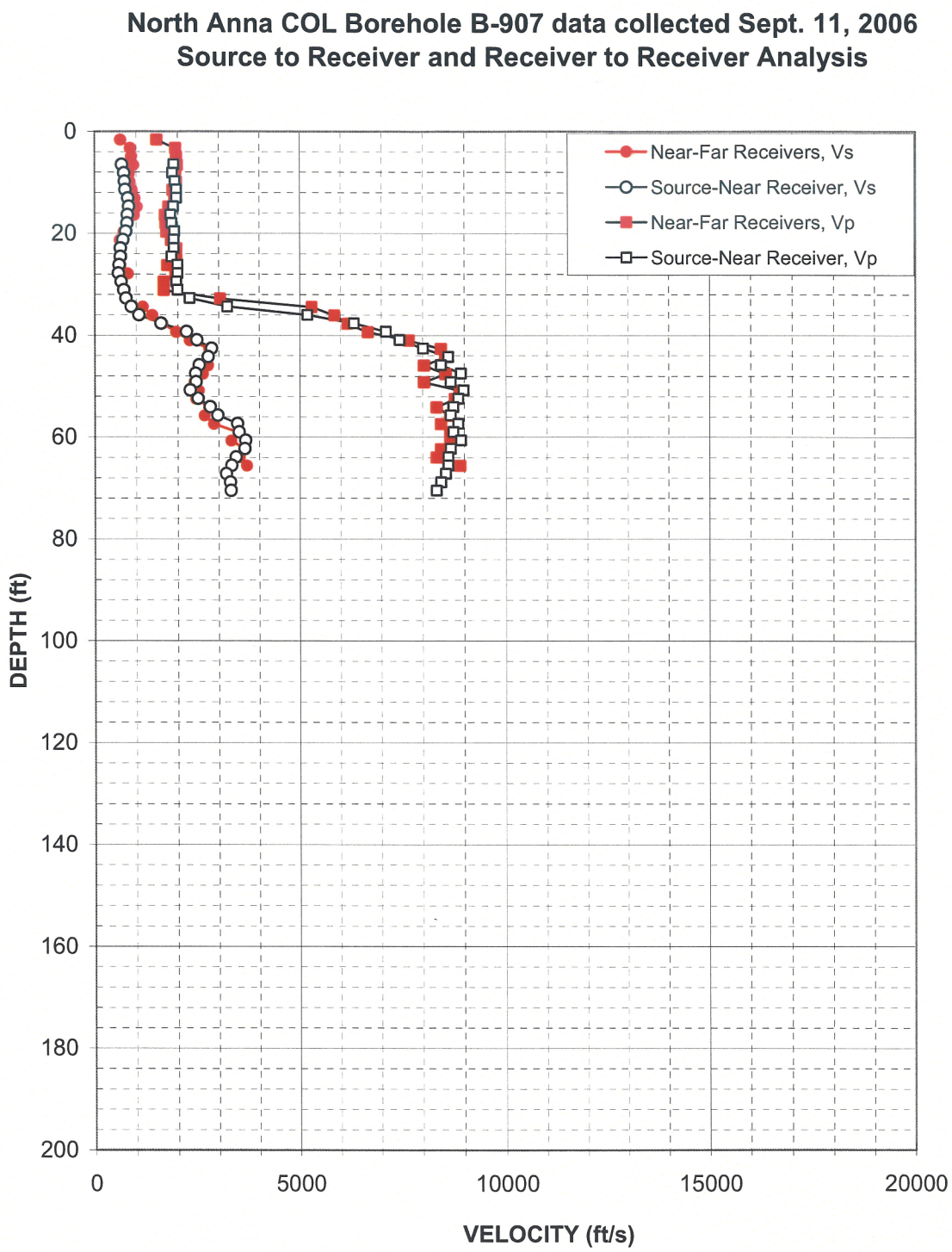

Figure A-3: Boring B-907, Top Section, Suspension S-R1 P- and S_H-wave velocities

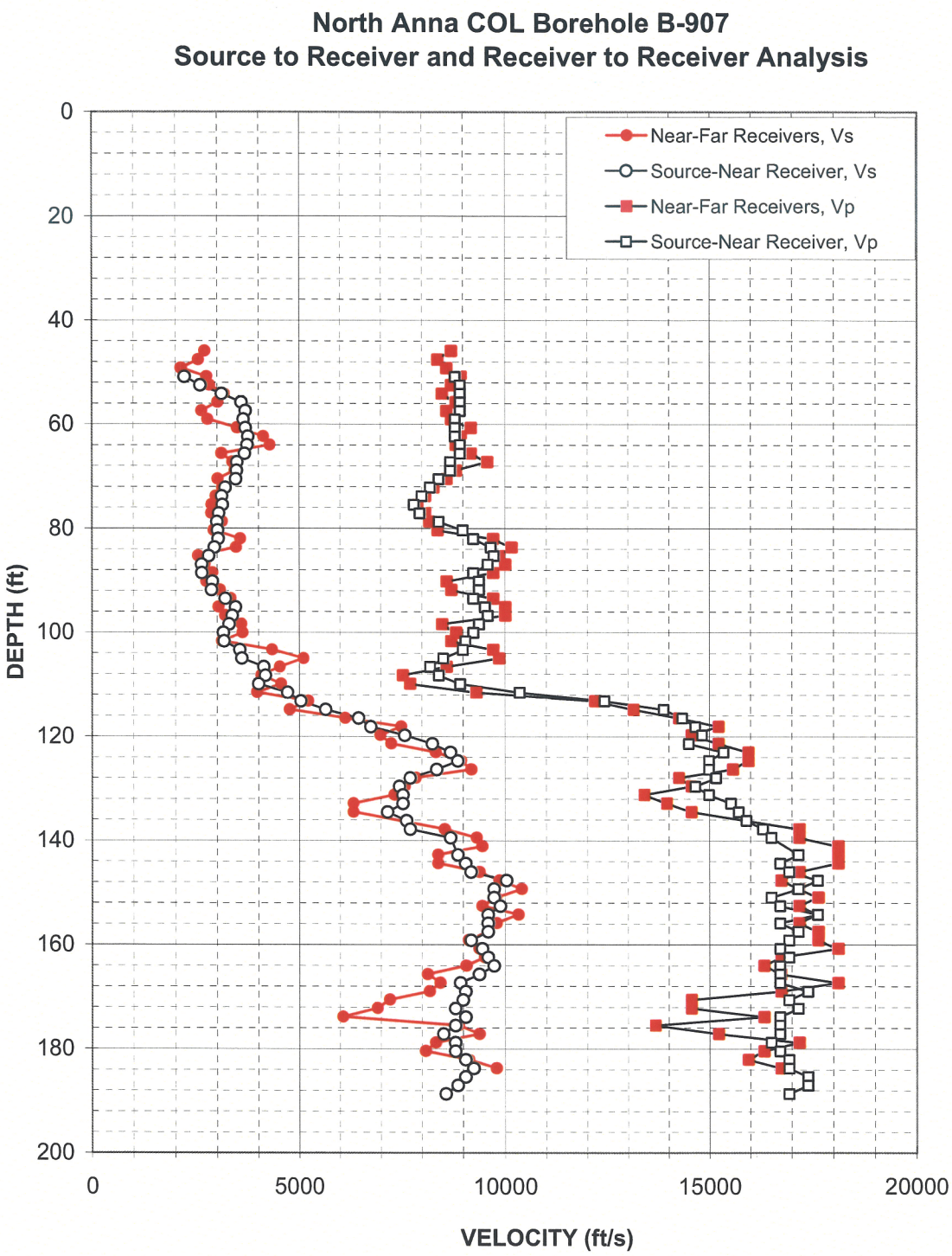

Figure A-4: Boring B-907, Bottom Section, Suspension S-R1 P- and S_H-wave velocities