APPENDIX A

SUSPENSION VELOCITY MEASUREMENT QUALITY ASSURANCE SUSPENSION SOURCE TO RECEIVER ANALYSIS RESULTS

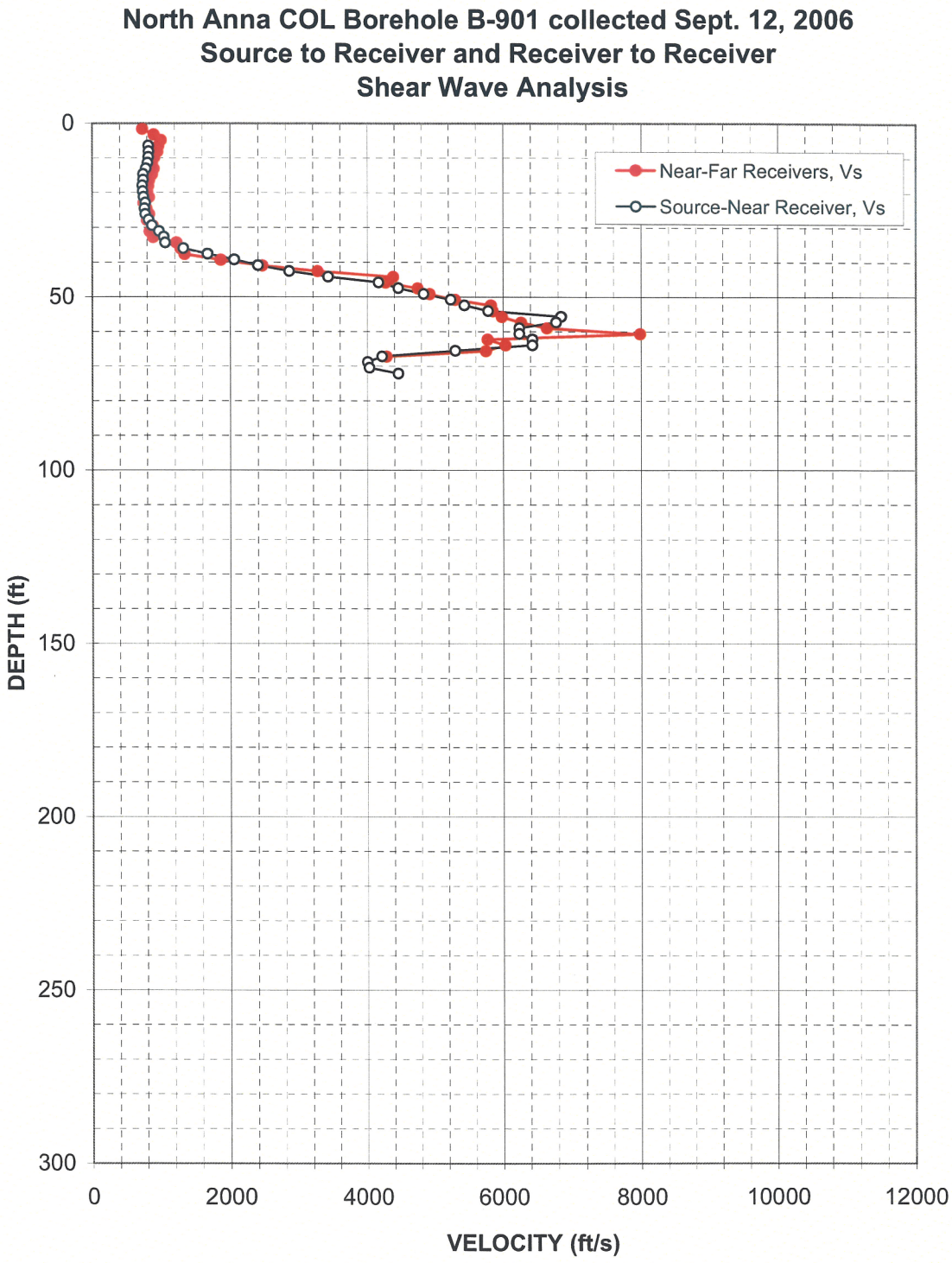

Figure A-1: Boring B-901, Top Section, Suspension S-R1 P- and S_H-wave velocities

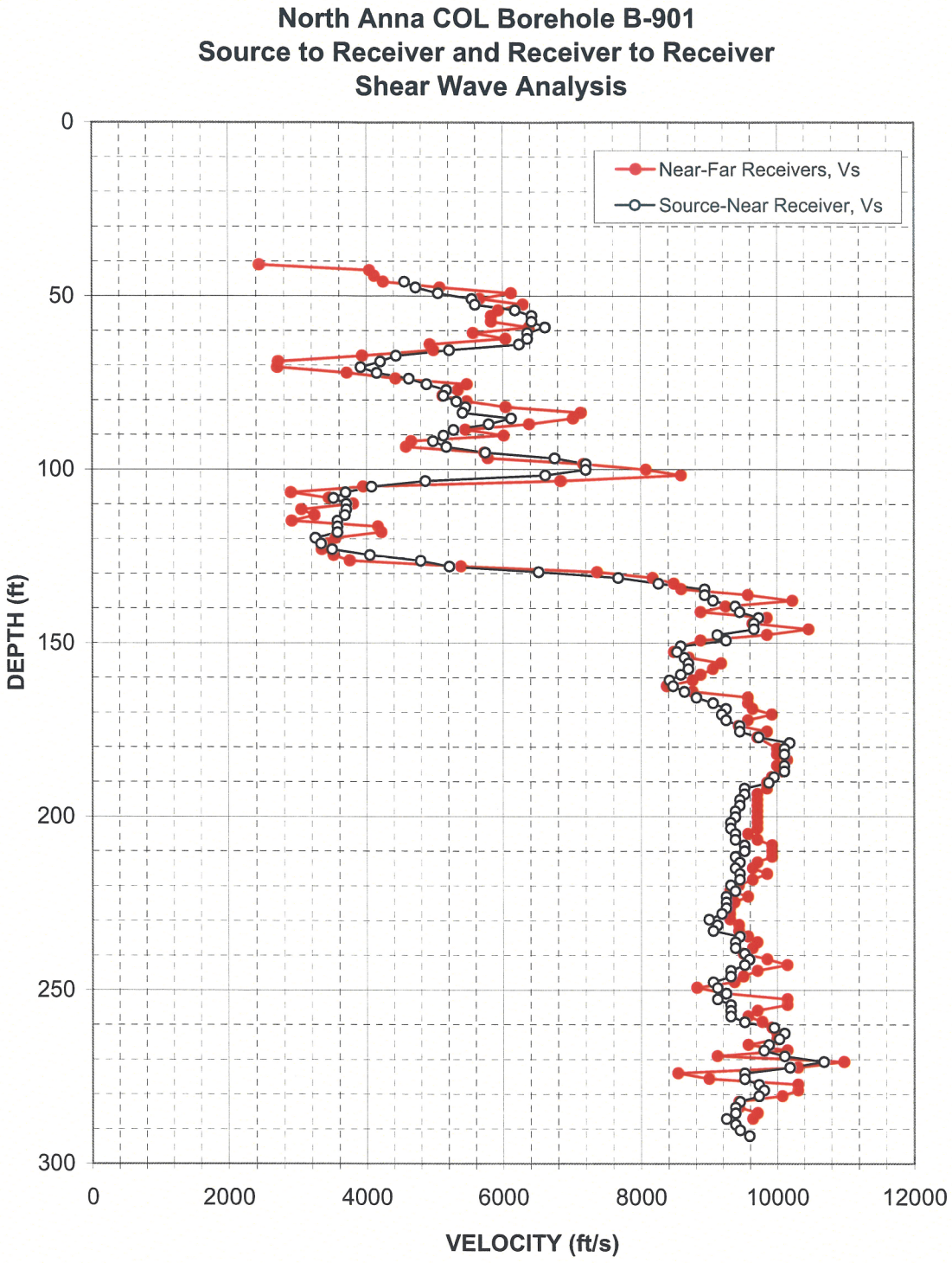

Figure A-2: Boring B-901, Bottom Section, Suspension S-R1 P- and S_H-wave velocities

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			
Depth at Midpoint Between Source and Near Receiver	Velocity		Poisson's Ratio
	V_s	V_p	
(ft)	(ft/s)	(ft/s)	
6.5	820	1710	0.35
8.1	820	1850	0.38
9.8	820	1990	0.40
11.4	810	2000	0.40
13.0	780	2120	0.42
14.7	740	2000	0.42
16.3	740	1880	0.41
18.0	730	1930	0.42
19.6	740	1800	0.40
21.2	750	1880	0.41
22.9	770	1770	0.38
24.5	760	1940	0.41
26.2	770	1970	0.41
27.8	820	1980	0.40
29.4	870	1880	0.36
31.1	970	2120	0.37
32.7	1040	2350	0.38
34.4	1060	3330	0.44
36.0	1320	5190	0.47
37.6	1670	5230	0.44
39.3	2060	5550	0.42
40.9	2400	6030	0.41
42.6	2850	6810	0.39
44.2	3420	7490	0.37
45.8	4160	9810	0.39
47.5	4460	9740	0.37
49.1	4830	10130	0.35
50.8	5230	10640	0.34
52.4	5430	11010	0.34
54.0	5780	10640	0.29
55.7	6840	10820	0.17
57.3	6770	11830	0.26
59.0	6240	11610	0.30
60.6	6240	11300	0.28
62.2	6430	11510	0.27

Metric Units			
Depth at Midpoint Between Source and Near Receiver	Velocity		Poisson's Ratio
	V_s	V_p	
(m)	(m/s)	(m/s)	
2.0	250	520	0.35
2.5	250	560	0.38
3.0	250	610	0.40
3.5	250	610	0.40
4.0	240	650	0.42
4.5	230	610	0.42
5.0	230	570	0.41
5.5	220	590	0.42
6.0	220	550	0.40
6.5	230	570	0.41
7.0	240	540	0.38
7.5	230	590	0.41
8.0	240	600	0.41
8.5	250	600	0.40
9.0	270	570	0.36
9.5	300	650	0.37
10.0	320	720	0.38
10.5	320	1020	0.44
11.0	400	1580	0.47
11.5	510	1590	0.44
12.0	630	1690	0.42
12.5	730	1840	0.41
13.0	870	2070	0.39
13.5	1040	2280	0.37
14.0	1270	2990	0.39
14.5	1360	2970	0.37
15.0	1470	3090	0.35
15.5	1590	3240	0.34
16.0	1660	3360	0.34
16.5	1760	3240	0.29
17.0	2090	3300	0.17
17.5	2060	3610	0.26
18.0	1900	3540	0.30
18.5	1900	3450	0.28
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			
Depth at Midpoint Between Source and Near Receiver	Velocity		Poisson's Ratio
	V_s	V_p	
(ft)	(ft/s)	(ft/s)	
103.4	4870	11750	0.40
105.0	4080	11340	0.43
106.6	3690	10270	0.43
108.3	3510	9730	0.42
109.9	3700	9800	0.42
111.6	3700	10030	0.42
113.2	3680	10030	0.42
114.8	3570	10870	0.44
116.5	3570	10780	0.44
118.1	3570	10690	0.44
119.8	3250	9520	0.43
121.4	3340	9120	0.42
123.0	3500	8750	0.41
124.7	4050	9250	0.38
126.3	4790	10030	0.35
128.0	5220	12070	0.39
129.6	6520	13870	0.36
131.2	7670	14490	0.31
132.9	8250	15900	0.32
134.5	8930	16100	0.28
136.2	8930	15520	0.25
137.8	9060	15900	0.26
139.4	9380	16720	0.27
141.1	9450	16300	0.25
142.7	9730	16510	0.23
144.4	9660	16720	0.25
146.0	9660	16510	0.24
147.7	9120	15710	0.25
149.3	9250	15340	0.21
150.9	8580	15160	0.26
152.6	8520	15340	0.28
154.2	8640	15710	0.28
155.9	8690	15520	0.27
157.5	8690	15160	0.26
159.1	8580	15520	0.28
160.8	8410	15520	0.29
162.4	8470	15710	0.30
164.1	8640	16300	0.30
165.7	8810	16510	0.30

Metric Units			
Depth at Midpoint Between Source and Near Receiver	Velocity		Poisson's Ratio
	V_s	V_p	
(m)	(m/s)	(m/s)	
31.5	1480	3580	0.40
32.0	1240	3460	0.43
32.5	1130	3130	0.43
33.0	1070	2970	0.42
33.5	1130	2990	0.42
34.0	1130	3060	0.42
34.5	1120	3060	0.42
35.0	1090	3310	0.44
35.5	1090	3280	0.44
36.0	1090	3260	0.44
36.5	990	2900	0.43
37.0	1020	2780	0.42
37.5	1070	2670	0.41
38.0	1230	2820	0.38
38.5	1460	3060	0.35
39.0	1590	3680	0.39
39.5	1990	4230	0.36
40.0	2340	4420	0.31
40.5	2520	4850	0.32
41.0	2720	4910	0.28
41.5	2720	4730	0.25
42.0	2760	4850	0.26
42.5	2860	5100	0.27
43.0	2880	4970	0.25
43.5	2970	5030	0.23
44.0	2940	5100	0.25
44.5	2940	5030	0.24
45.0	2780	4790	0.25
45.5	2820	4680	0.21
46.0	2610	4620	0.26
46.5	2600	4680	0.28
47.0	2630	4790	0.28
47.5	2650	4730	0.27
48.0	2650	4620	0.26
48.5	2610	4730	0.28
49.0	2560	4730	0.29
49.5	2580	4790	0.30
50.0	2630	4970	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.

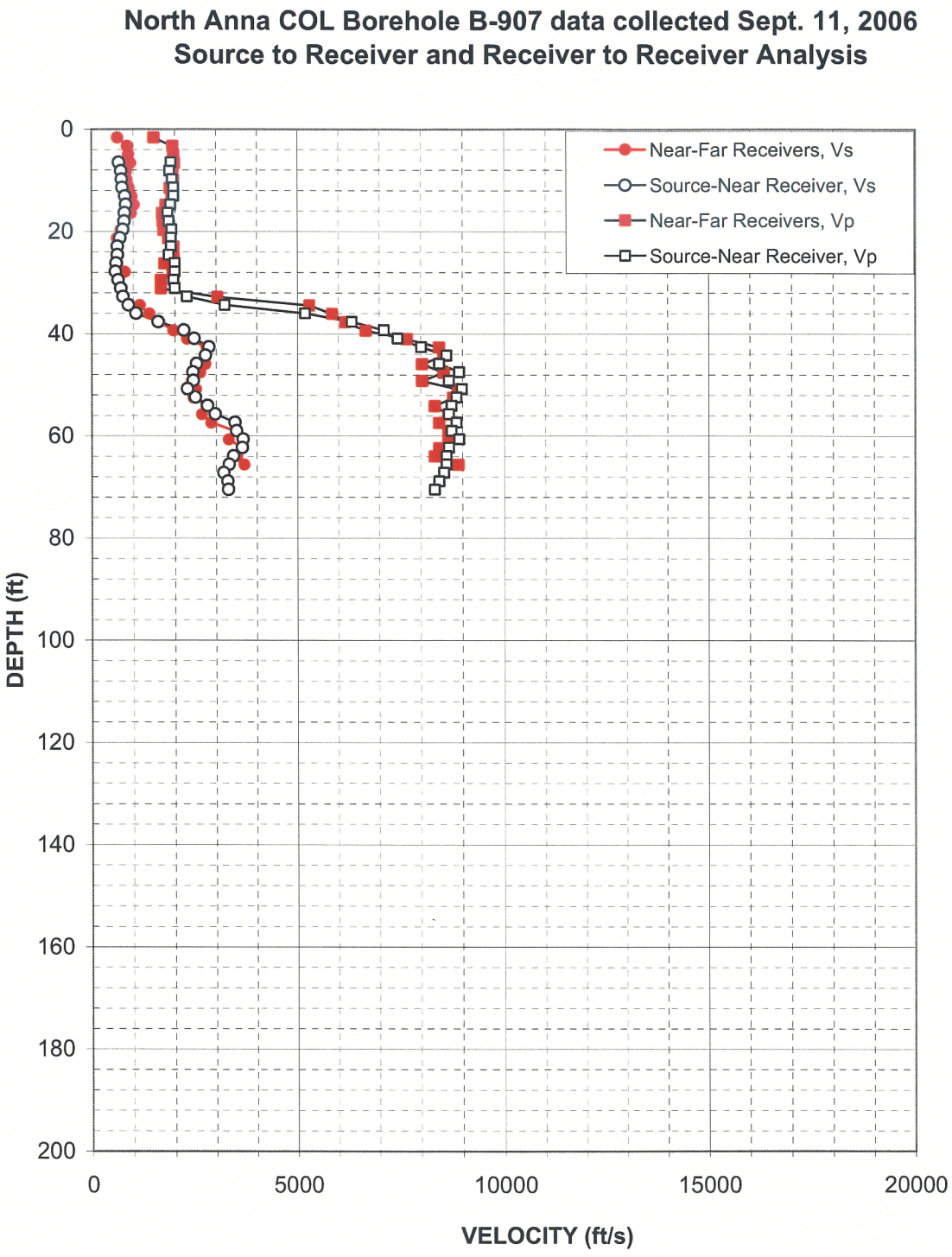

Figure A-3: Boring B-907, Top Section, Suspension S-R1 P- and S_H-wave velocities

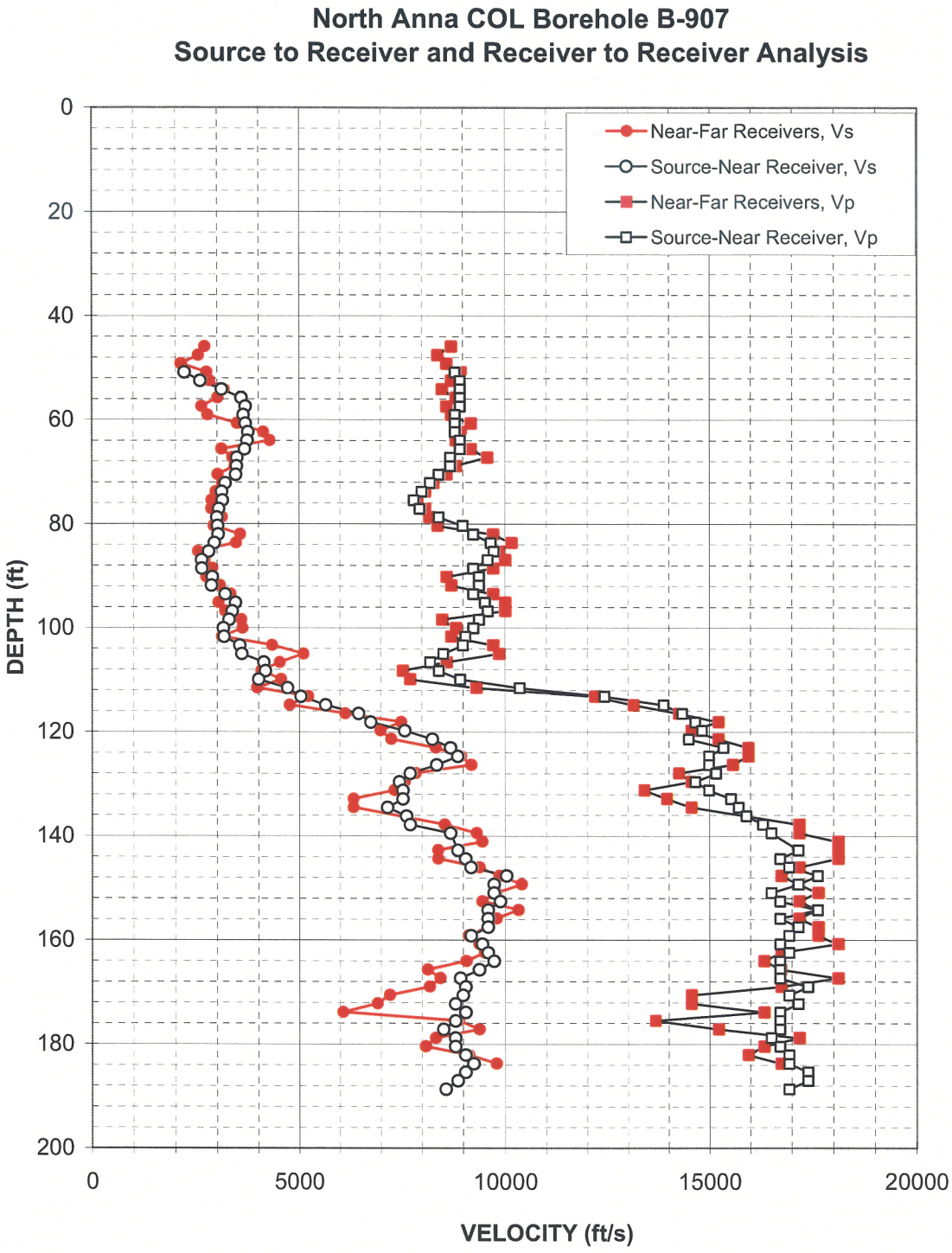

Figure A-4: Boring B-907, Bottom Section, Suspension S-R1 P- and S_H-wave velocities