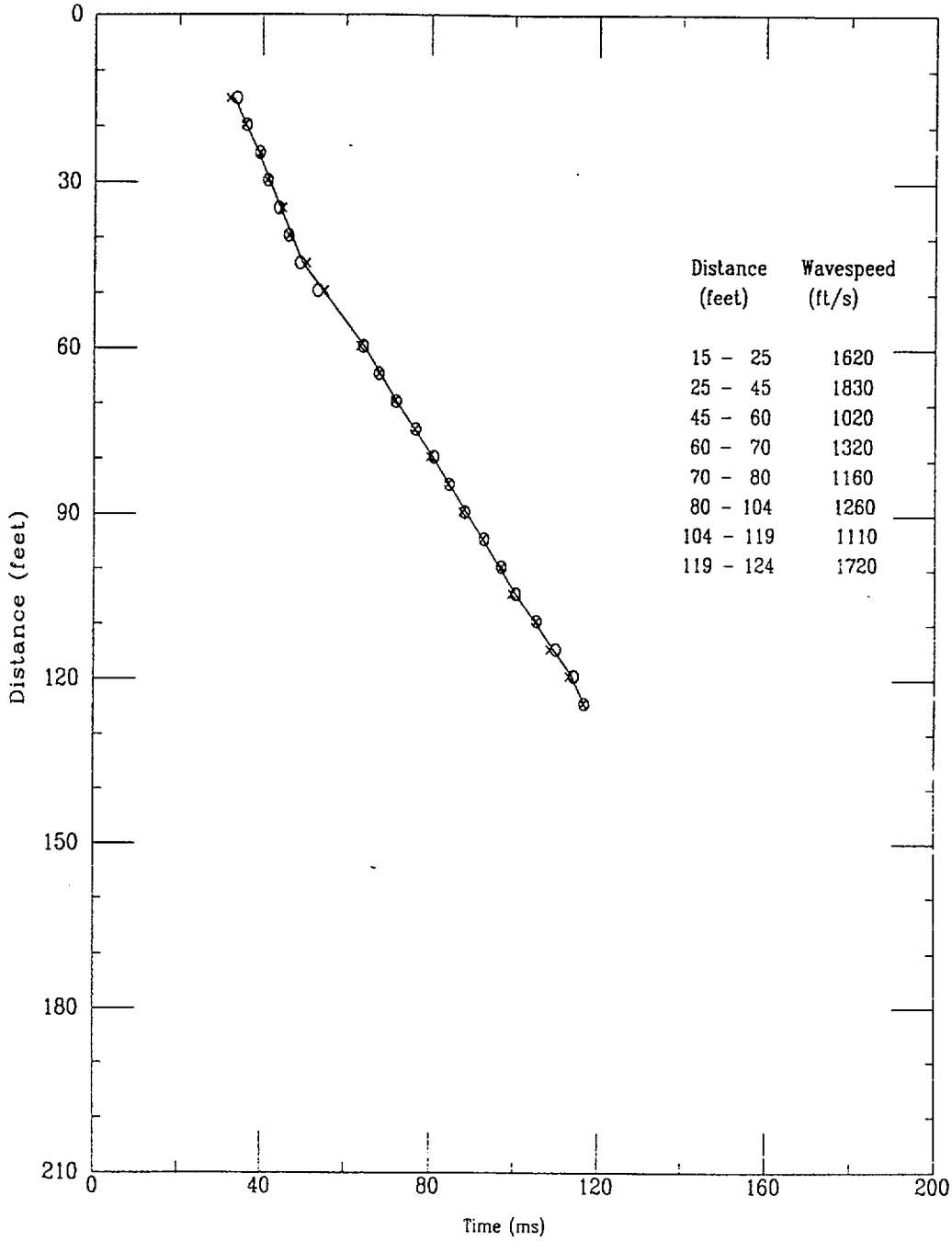
CPT-31S APPLIED RESEARCH ASSOCIATES, INC. 06/01/00

Shear Wave Time of Peak

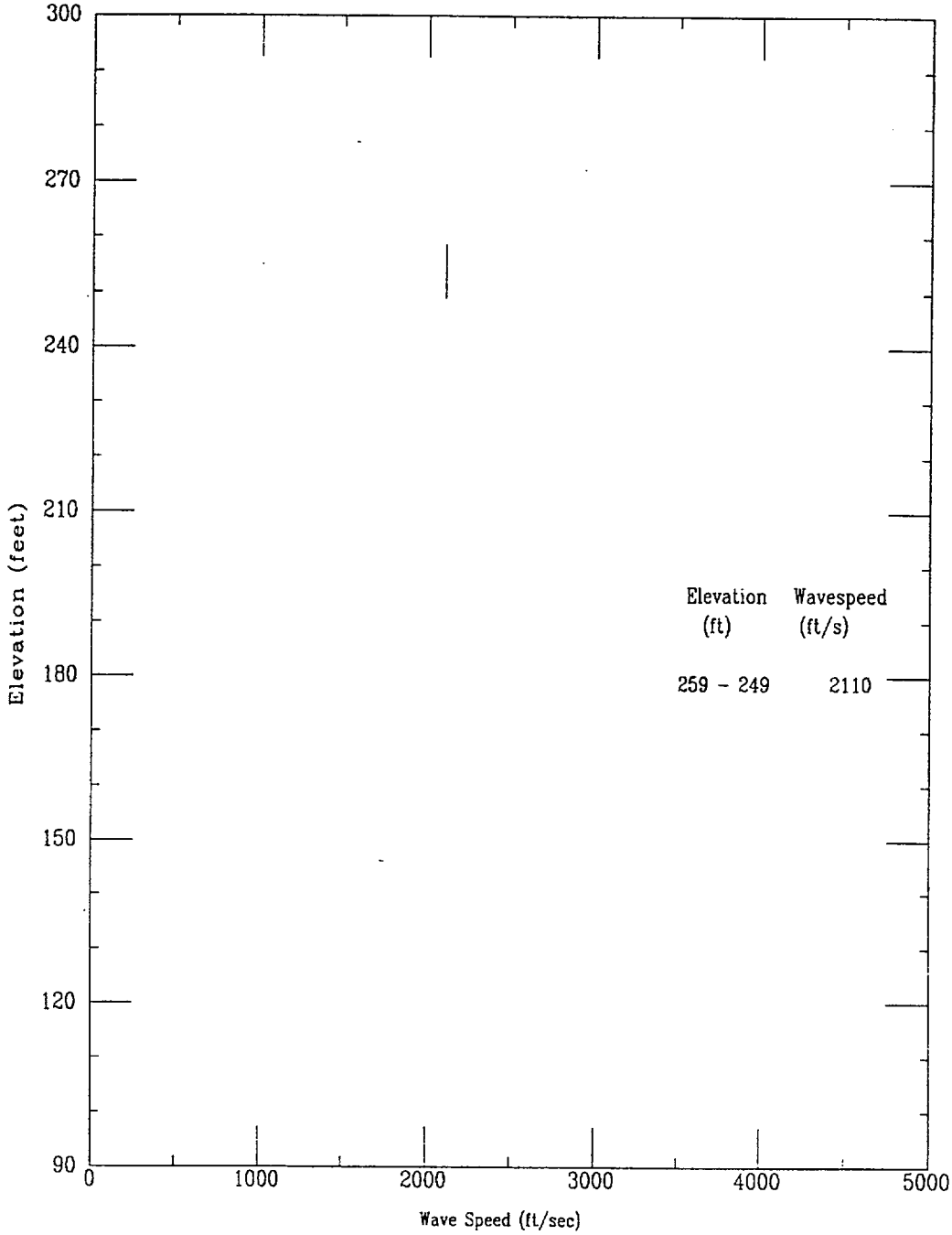


Distance (feet)	Wavespeed (ft/s)
15 - 25	1620
25 - 45	1830
45 - 60	1020
60 - 70	1320
70 - 80	1160
80 - 104	1260
104 - 119	1110
119 - 124	1720

File 401u002S

SCPT-28S APPLIED RESEARCH ASSOCIATES, INC. 05/31/00

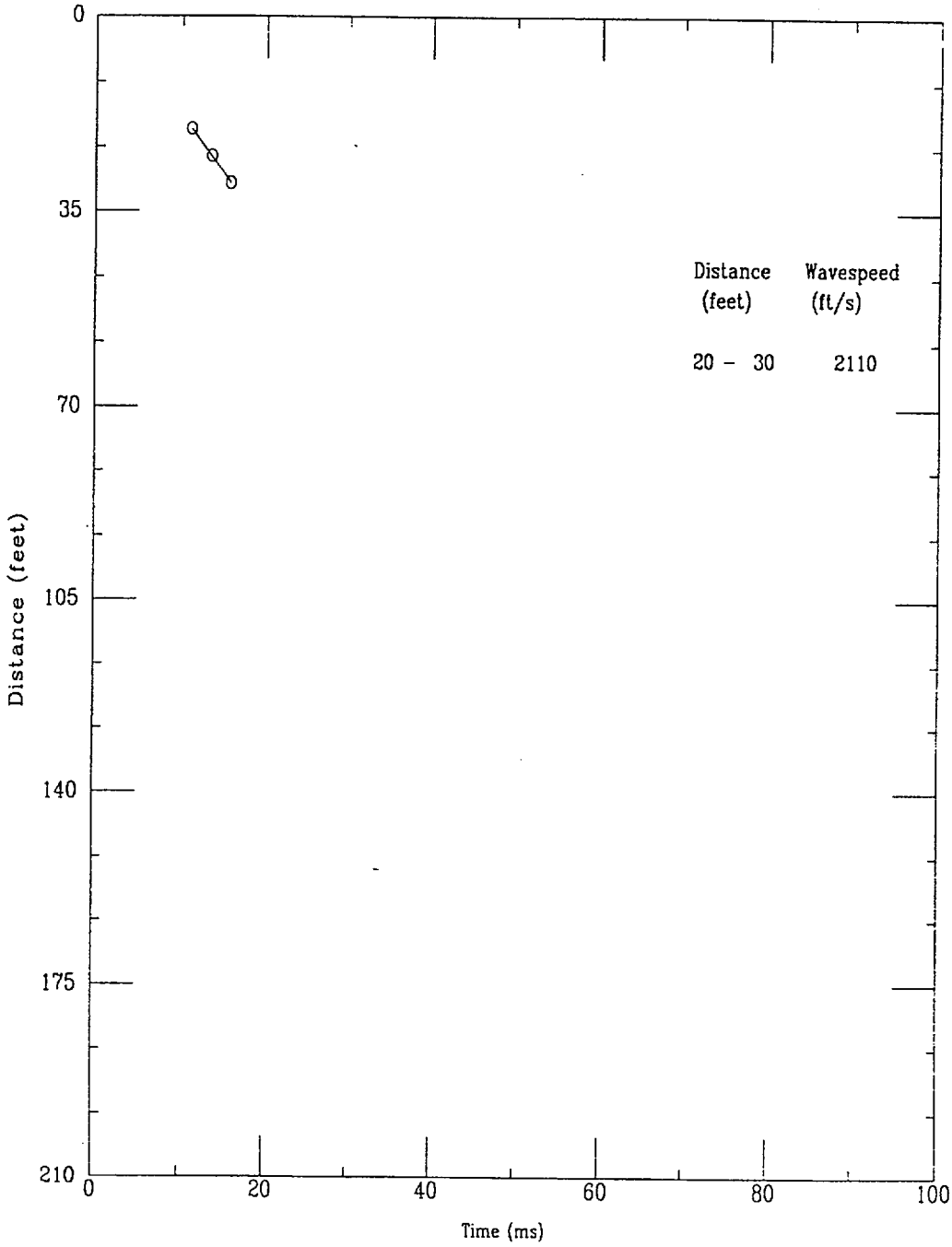
Compression Wave Speeds



File 431y006S

SCPT-28S APPLIED RESEARCH ASSOCIATES, INC. 05/31/00

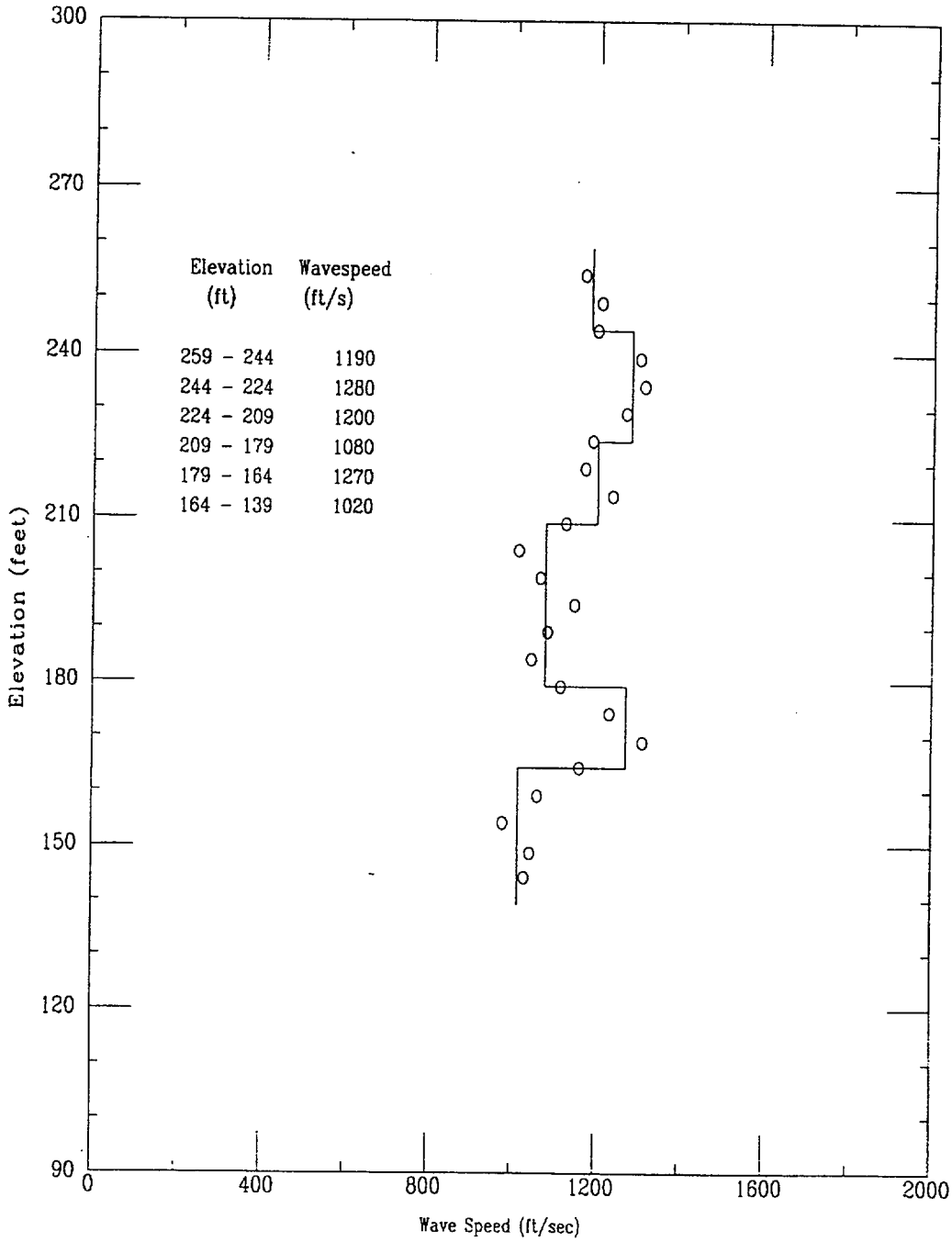
Compression Wave Time of Peak



File 431y006S

SCPT-28S APPLIED RESEARCH ASSOCIATES, INC. 05/31/00

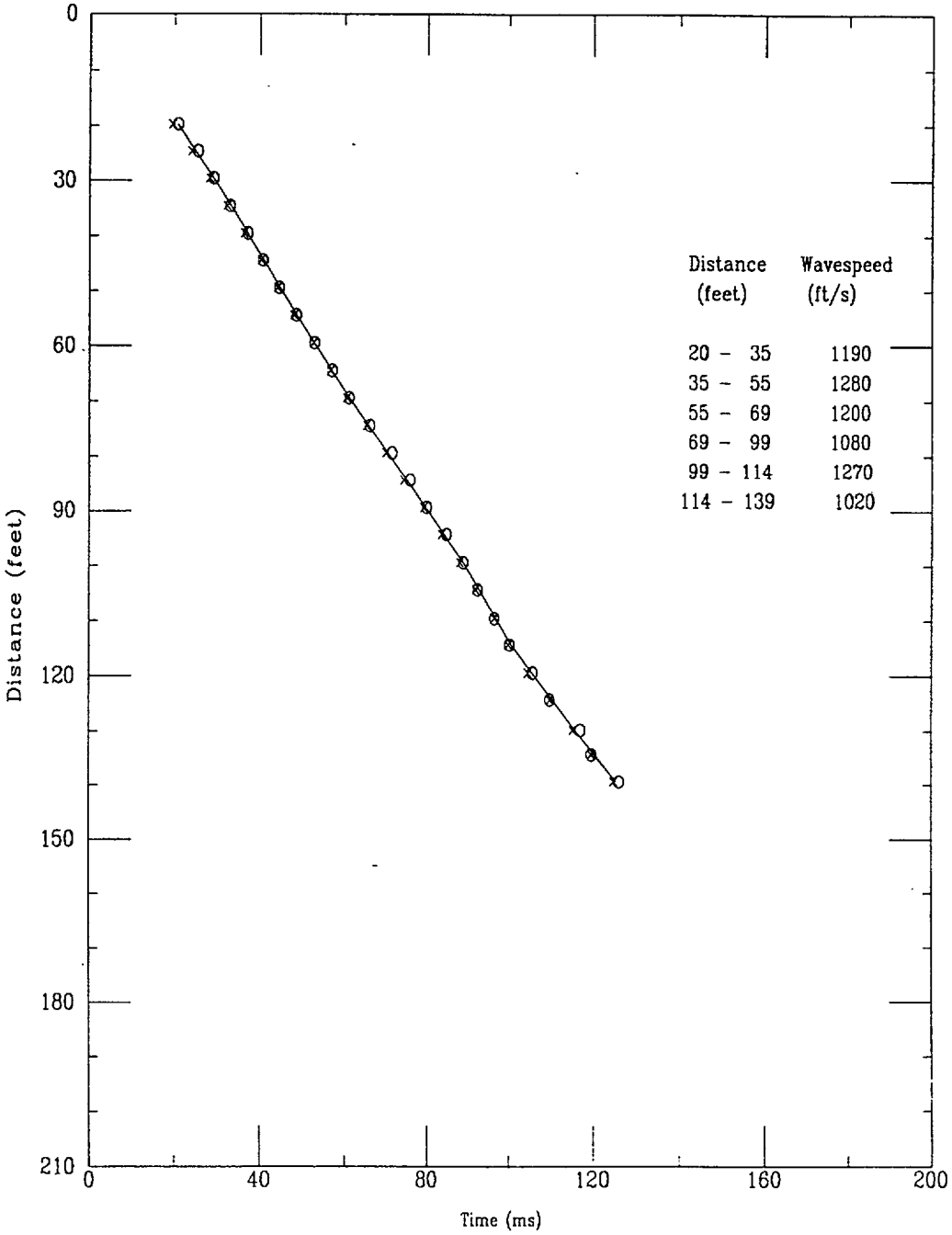
Shear Wave Speeds



File 431y006S

SCPT-28S APPLIED RESEARCH ASSOCIATES, INC. 05/31/00

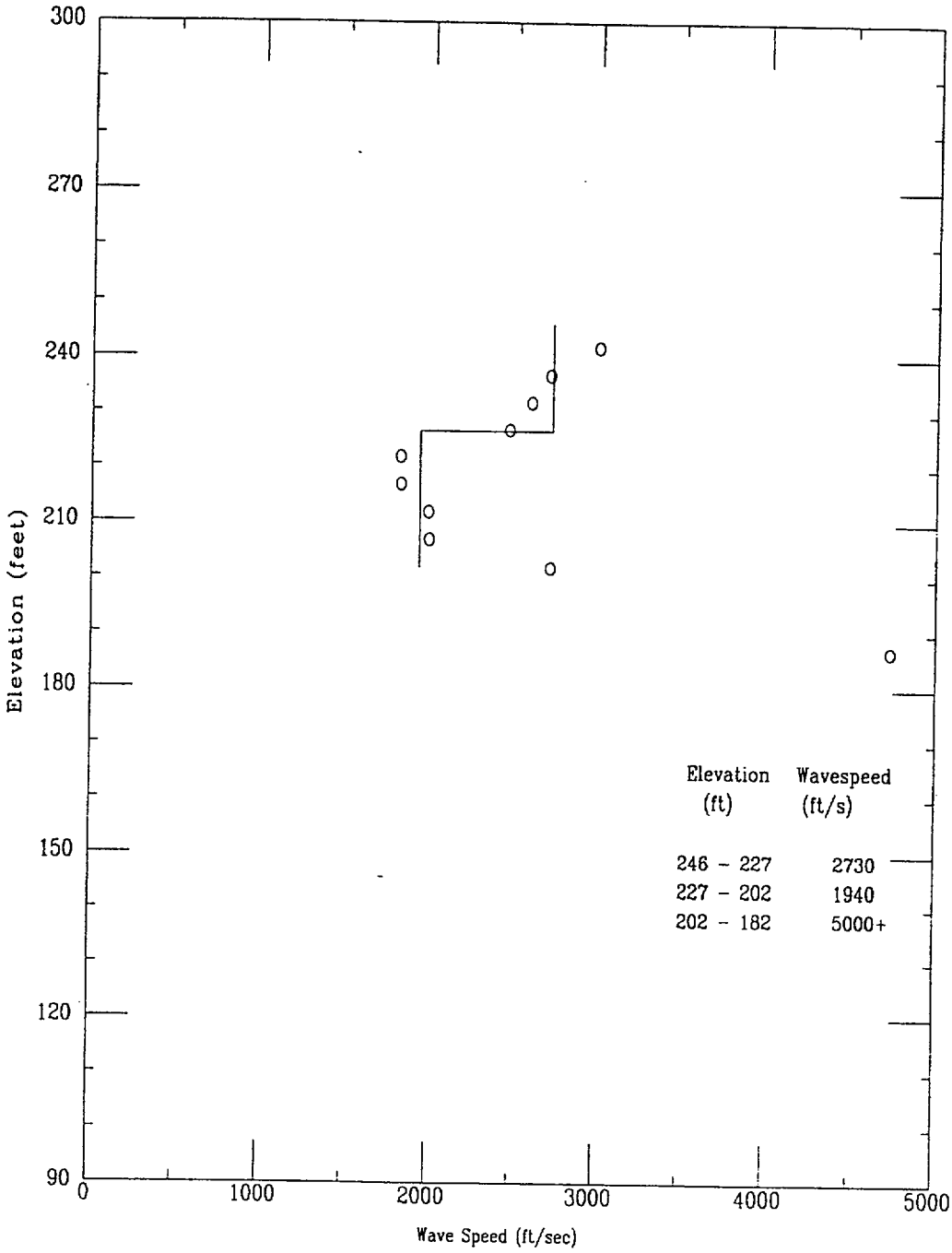
Shear Wave Time of Peak



File 431y006S

CPT-26S APPLIED RESEARCH ASSOCIATES, INC. 06/06/00

Compression Wave Speeds

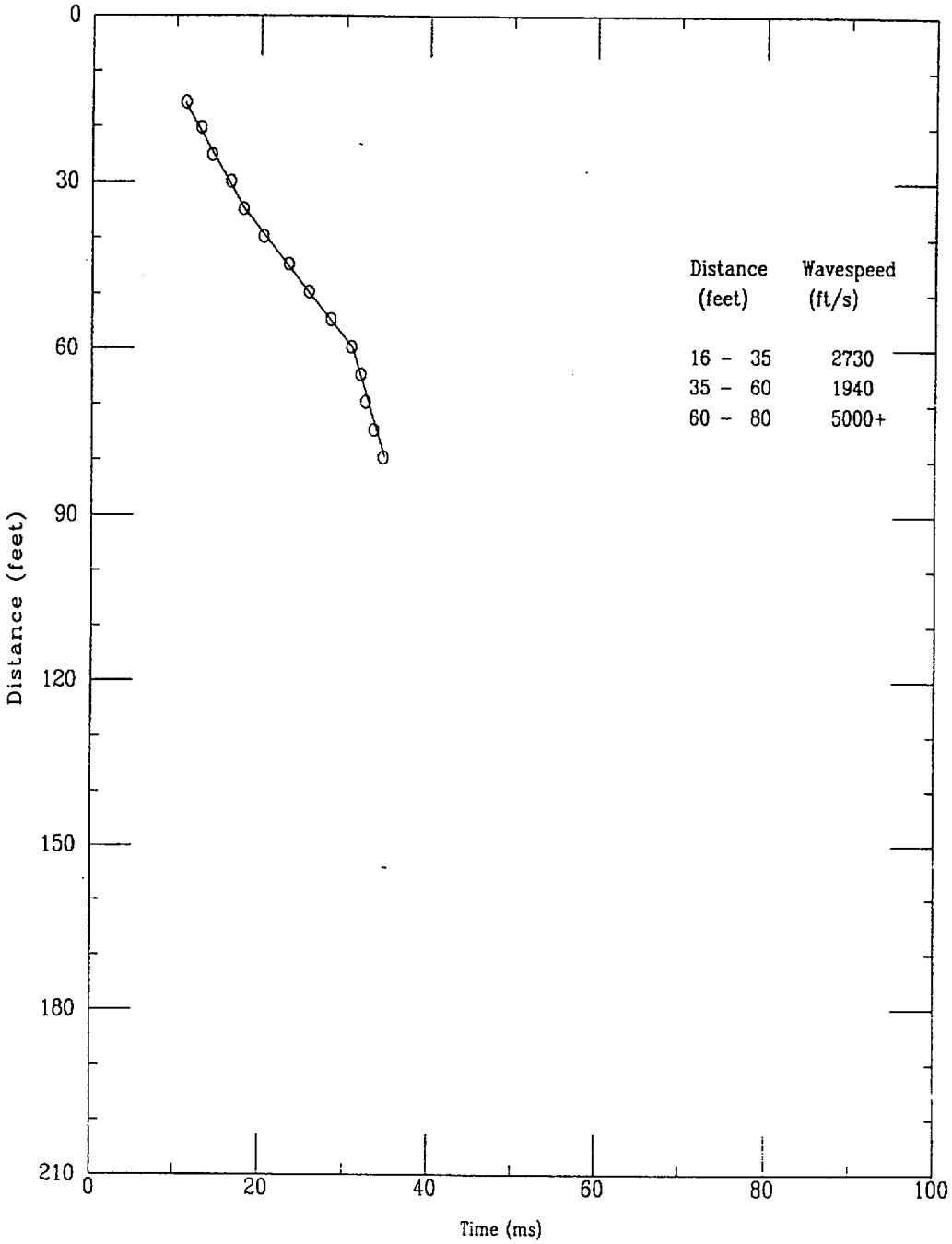


File 406u001S

256

CPT-26S APPLIED RESEARCH ASSOCIATES, INC. 06/06/00

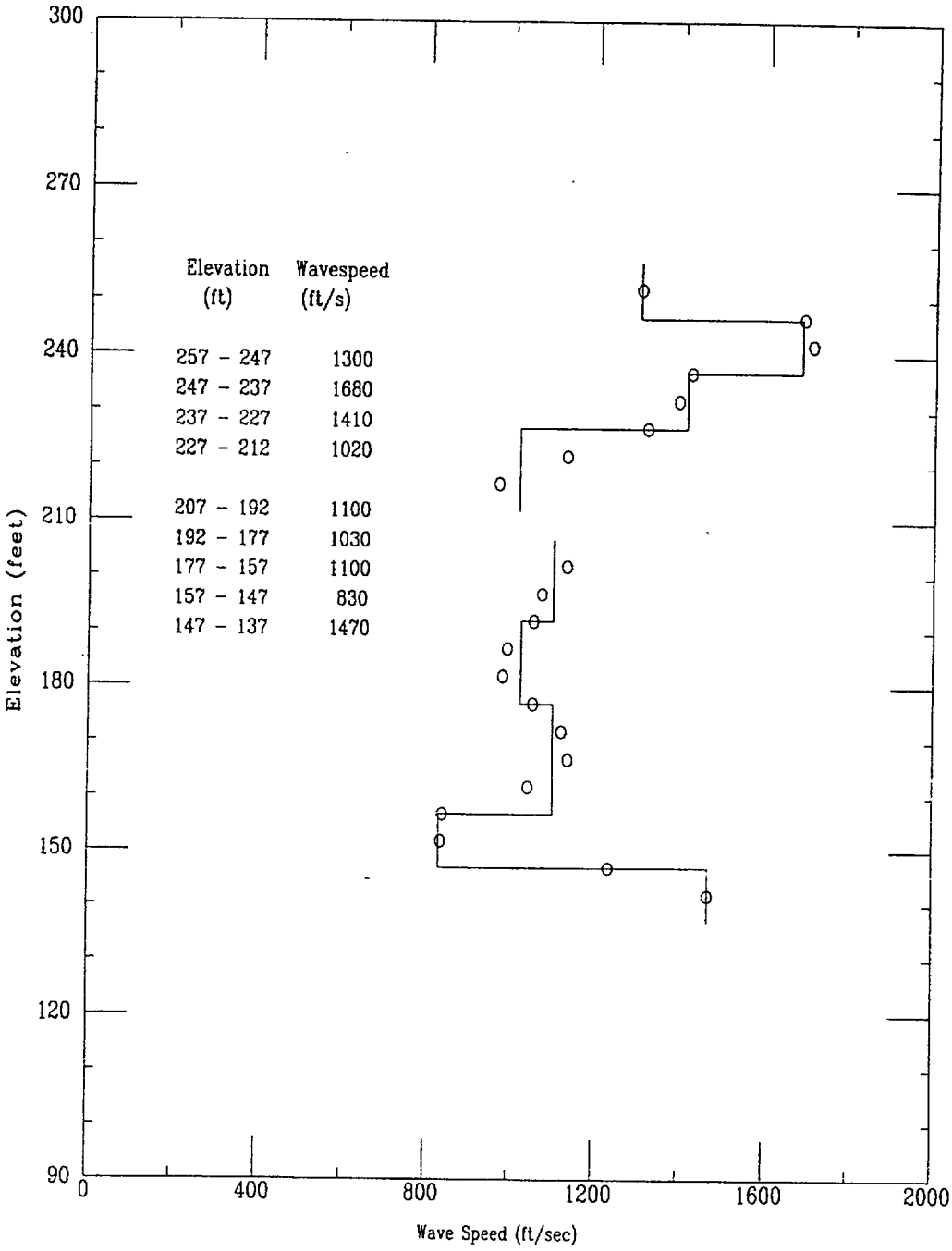
Compression Wave Time of Peak



File 406u001S

CPT-26S APPLIED RESEARCH ASSOCIATES, INC. 06/06/00

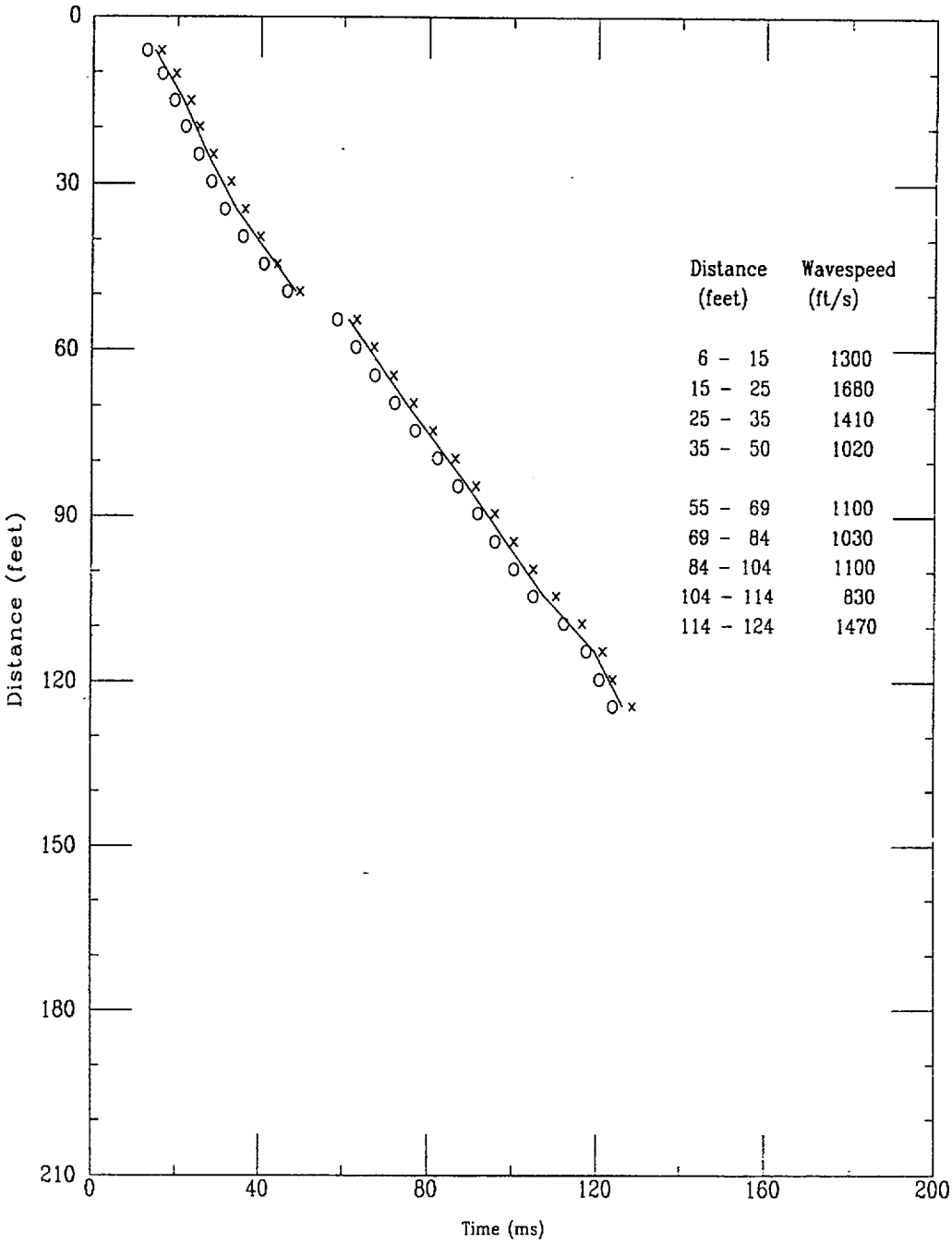
Shear Wave Speeds



File 406u001S

CPT-26S APPLIED RESEARCH ASSOCIATES, INC. 06/06/00

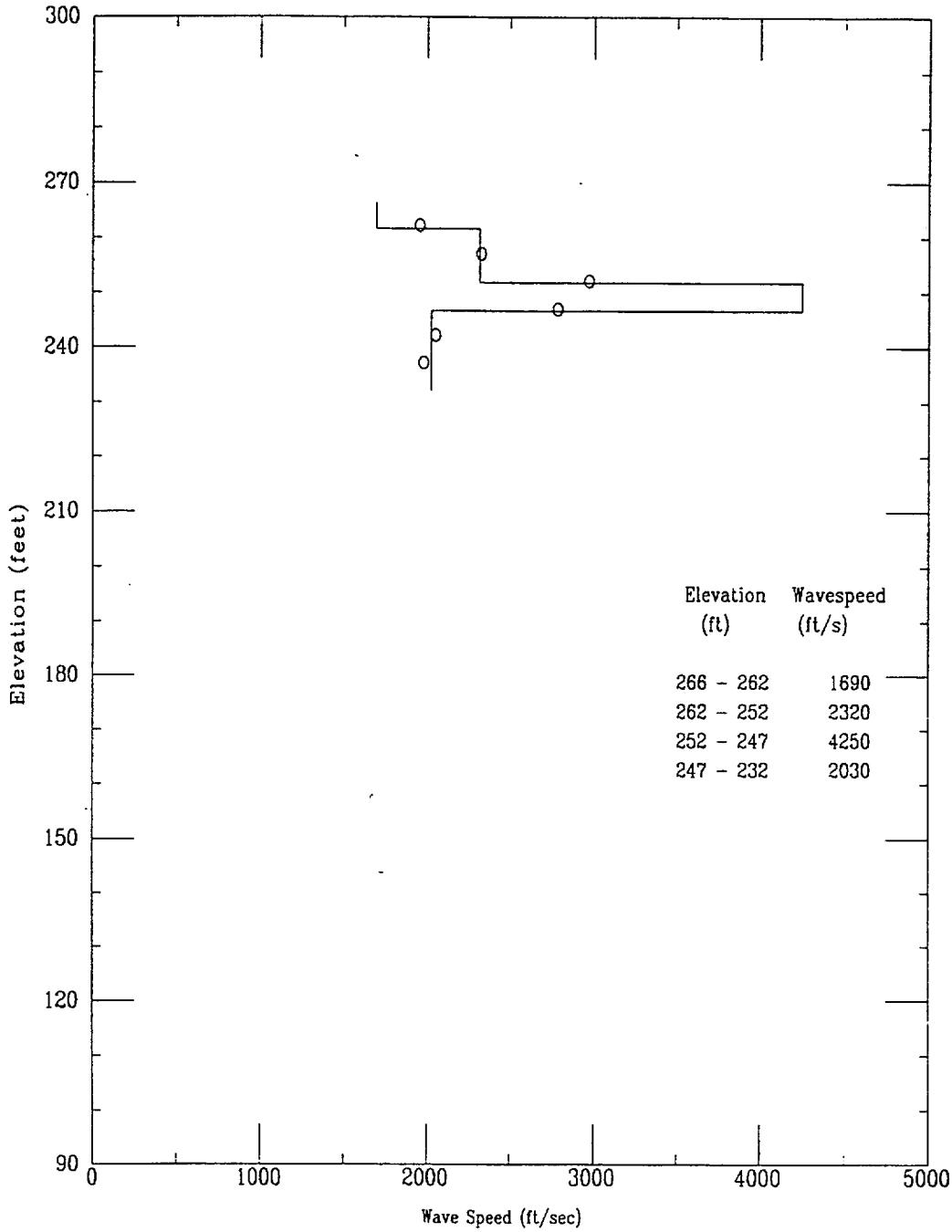
Shear Wave Time of Peak



FILE 406u001S

CPT-23S APPLIED RESEARCH ASSOCIATES, INC. 06/06/00

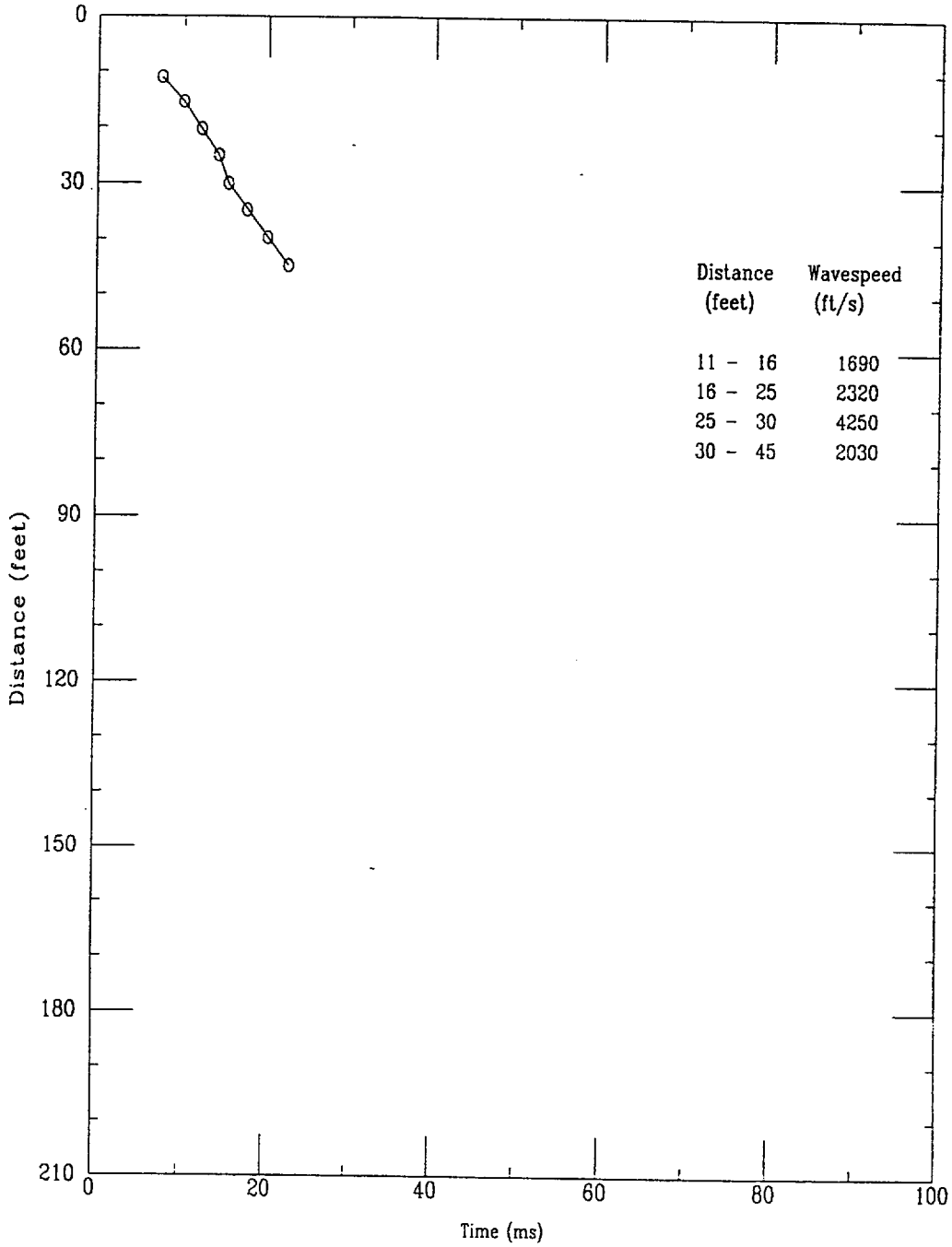
Compression Wave Speeds



File 406u003S

CPT-23S APPLIED RESEARCH ASSOCIATES, INC. 06/06/00

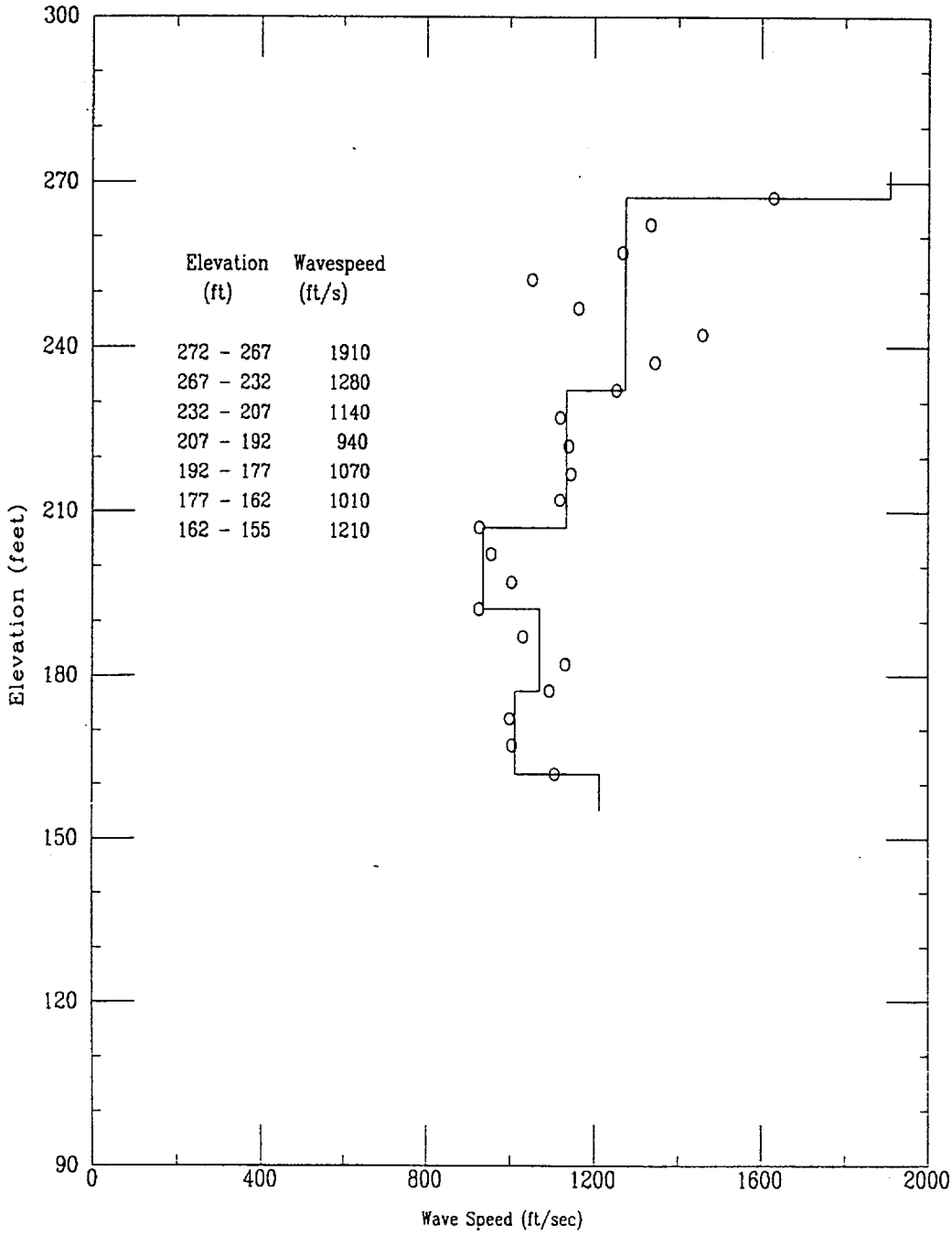
Compression Wave Time of Peak



File 406u003S

CPT-23S APPLIED RESEARCH ASSOCIATES, INC. 06/06/00

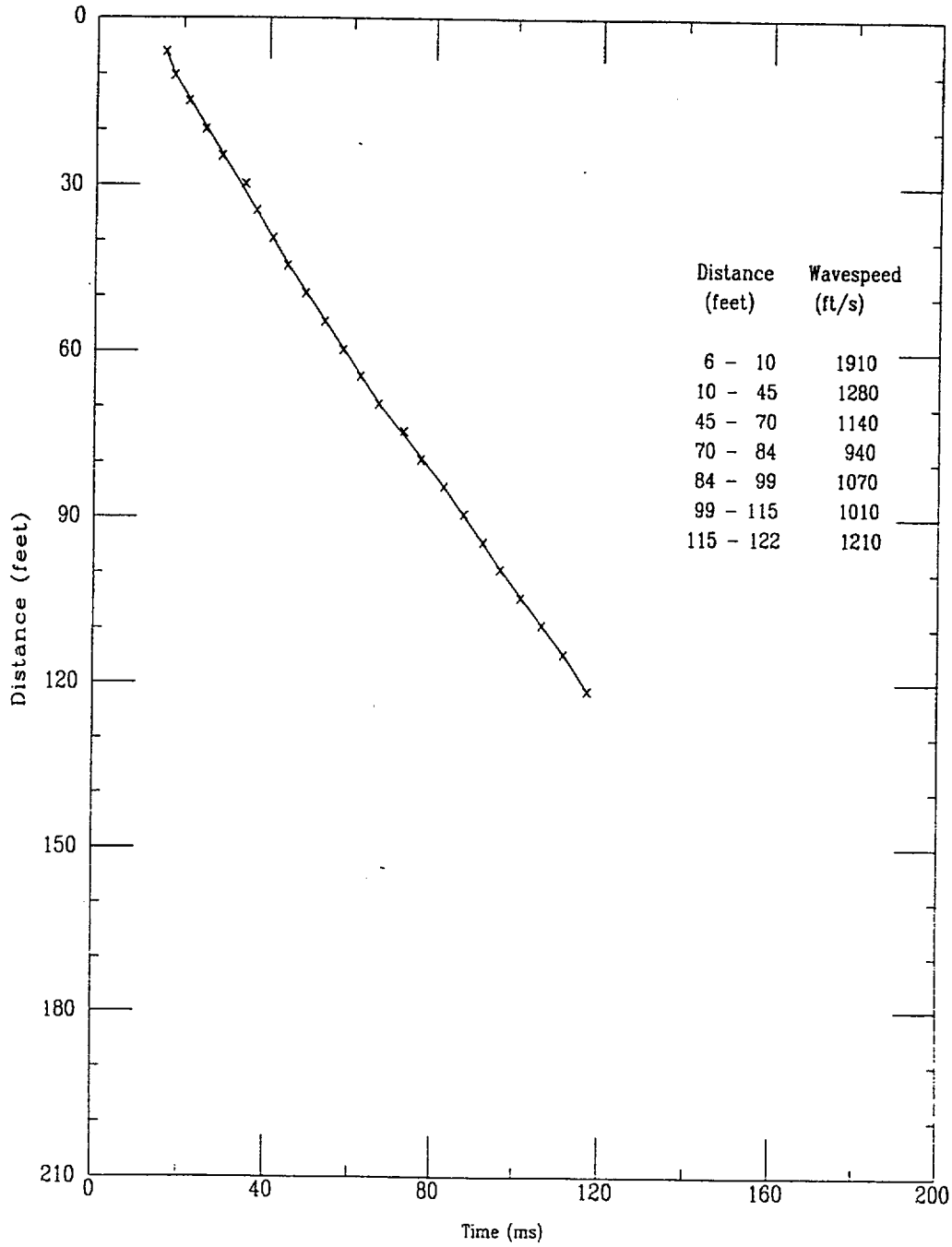
Shear Wave Speeds



File 406u003S

CPT-23S APPLIED RESEARCH ASSOCIATES, INC. 06/06/00

Shear Wave Time of Peak

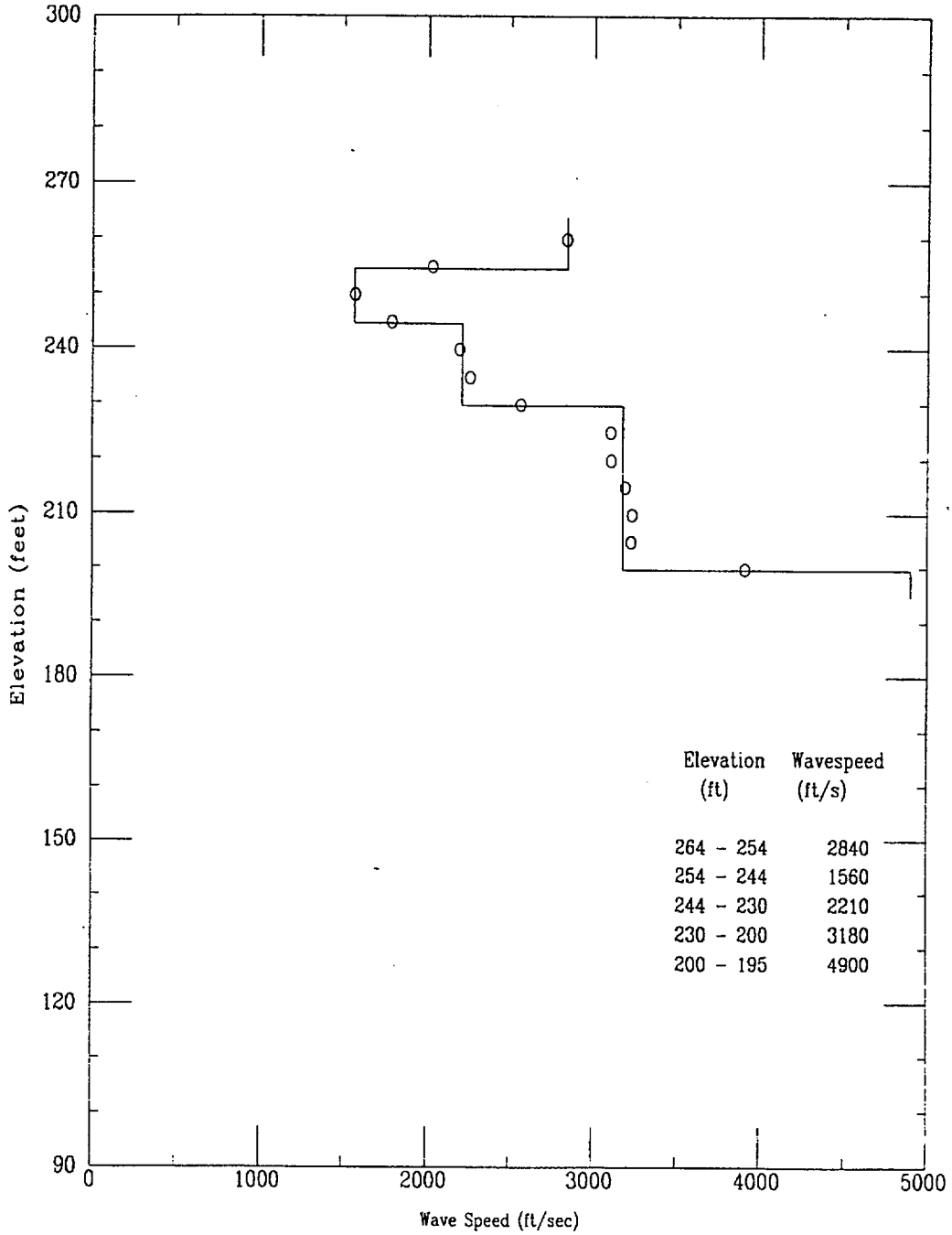


Distance (feet)	Wavespeed (ft/s)
6 - 10	1910
10 - 45	1280
45 - 70	1140
70 - 84	940
84 - 99	1070
99 - 115	1010
115 - 122	1210

FILE 406u003S

CPT-19S APPLIED RESEARCH ASSOCIATES, INC. 06/03/00

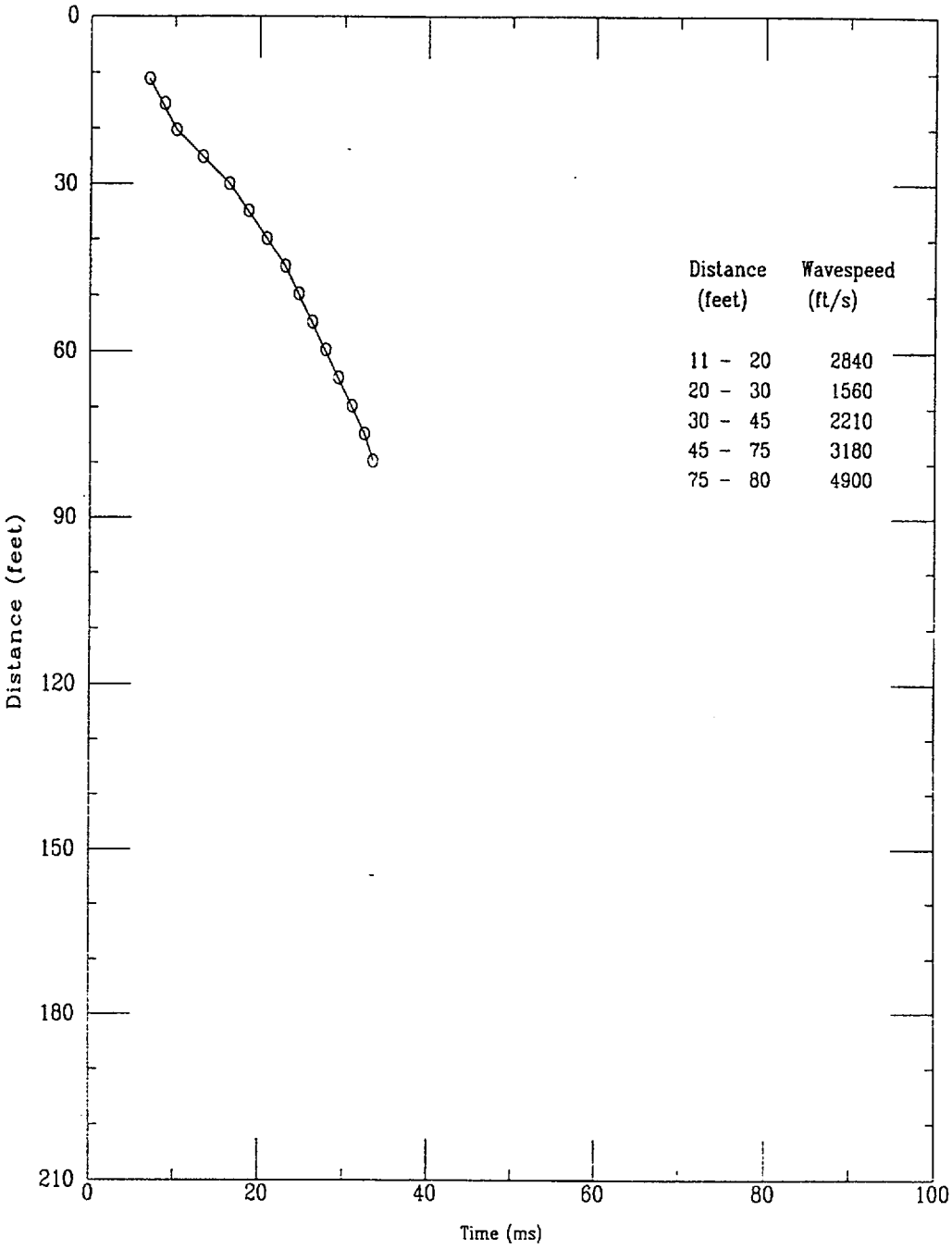
Compression Wave Speeds



File 403u002S

CPT-19S APPLIED RESEARCH ASSOCIATES, INC. 06/03/00

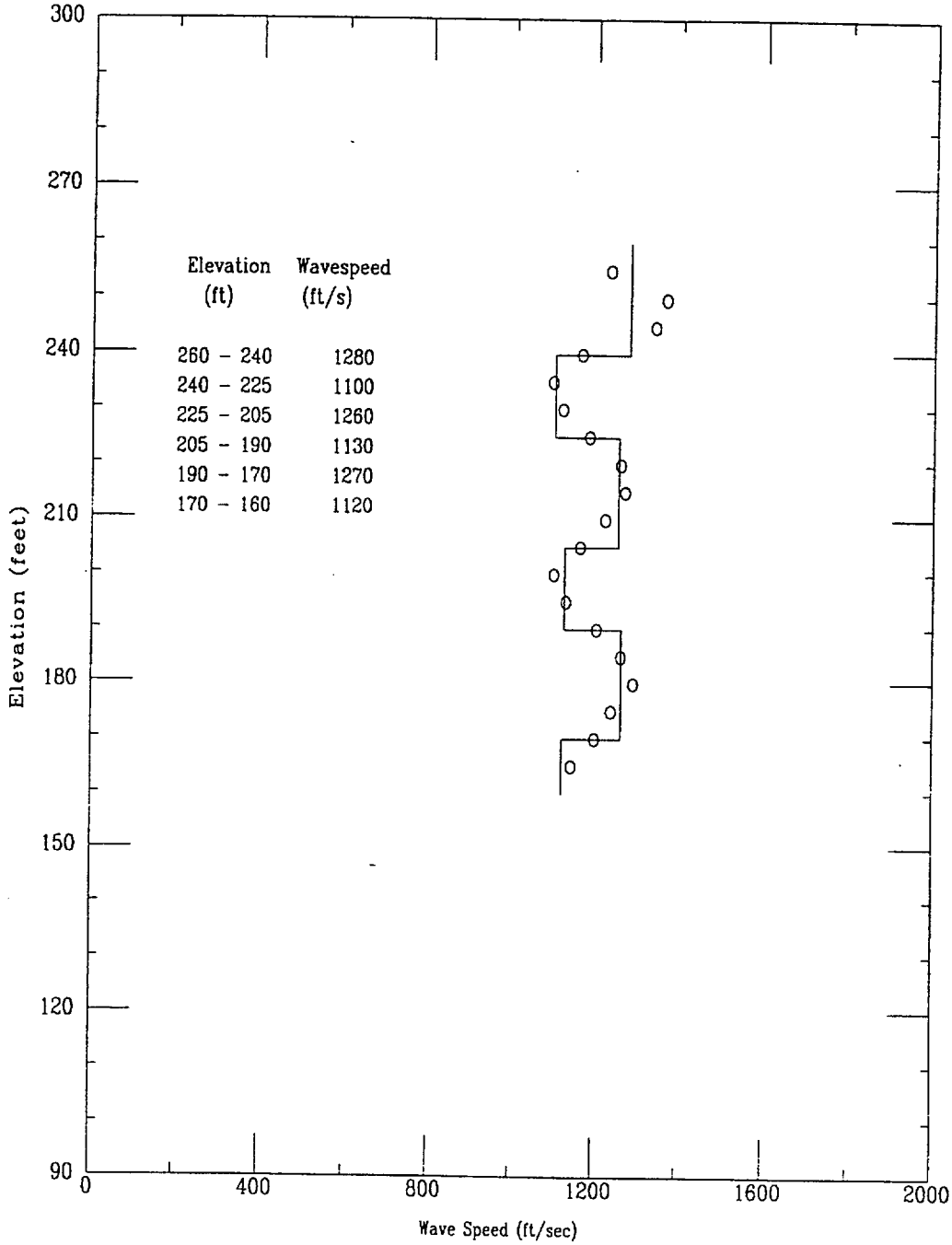
Compression Wave Time of Peak



File 403u002S

CPT-19S APPLIED RESEARCH ASSOCIATES, INC. 06/03/00

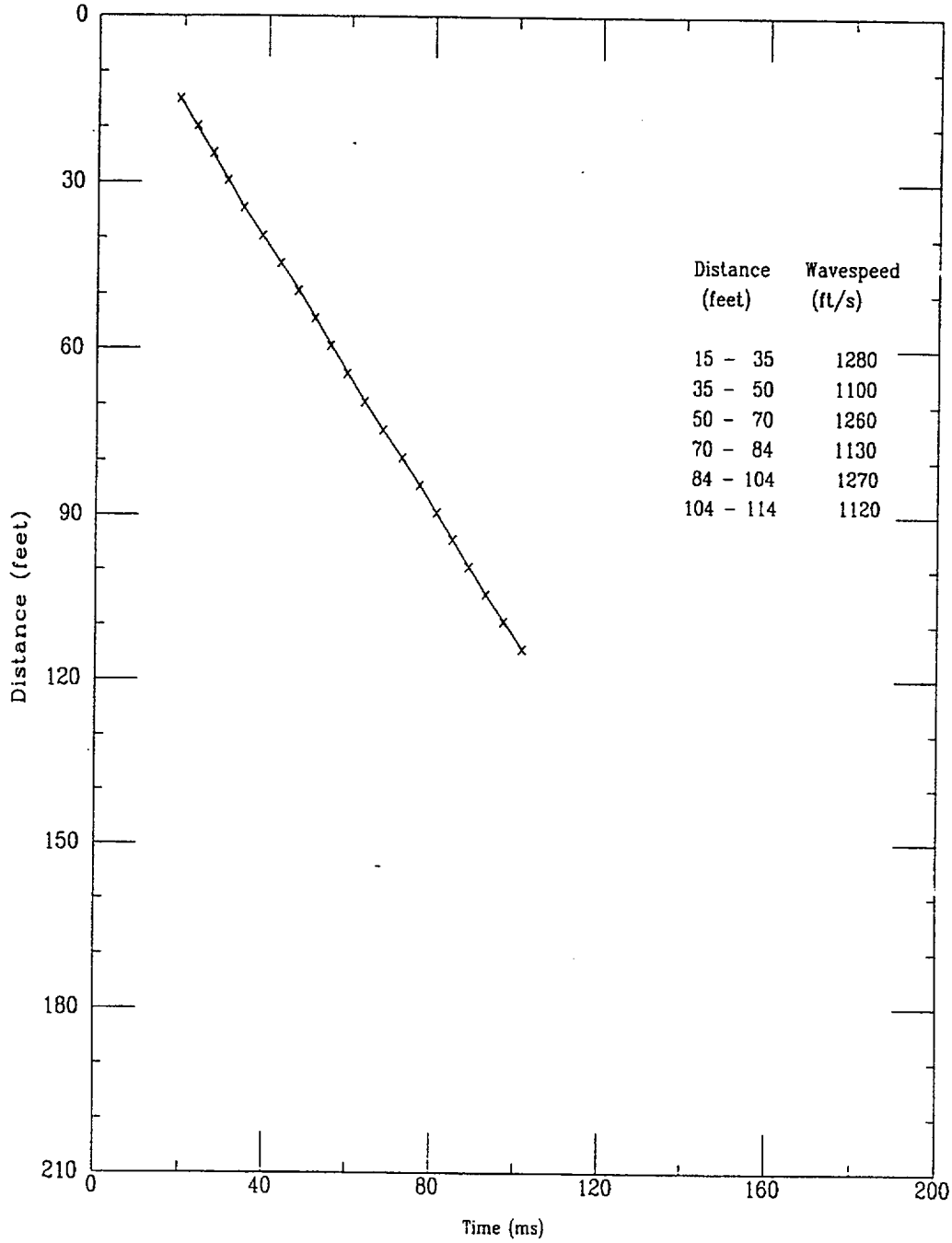
Shear Wave Speeds



File 403u002S

CPT-19S APPLIED RESEARCH ASSOCIATES, INC. 06/03/00

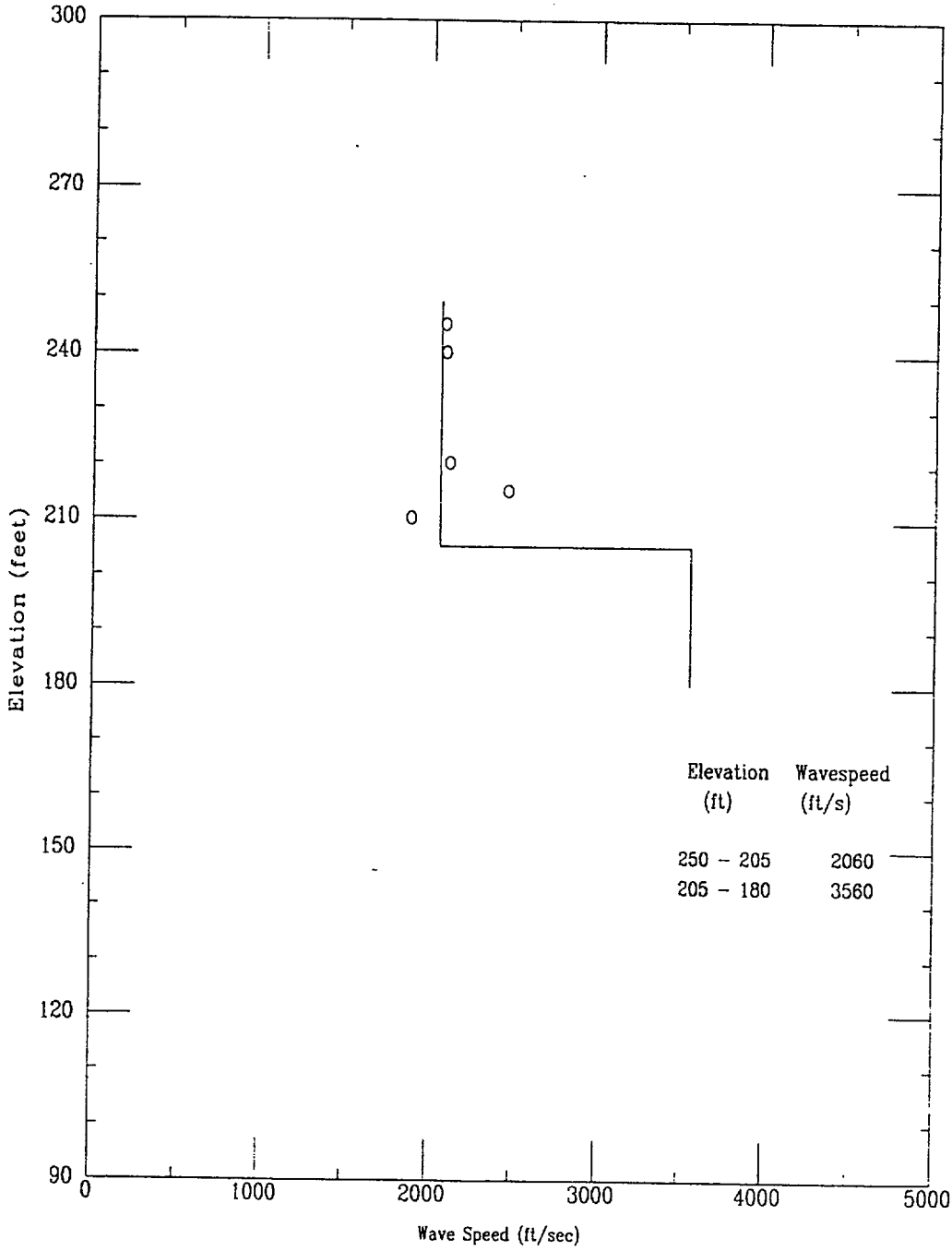
Shear Wave Time of Peak



FILE 403u002S

CPT-16S APPLIED RESEARCH ASSOCIATES, INC. 06/08/00

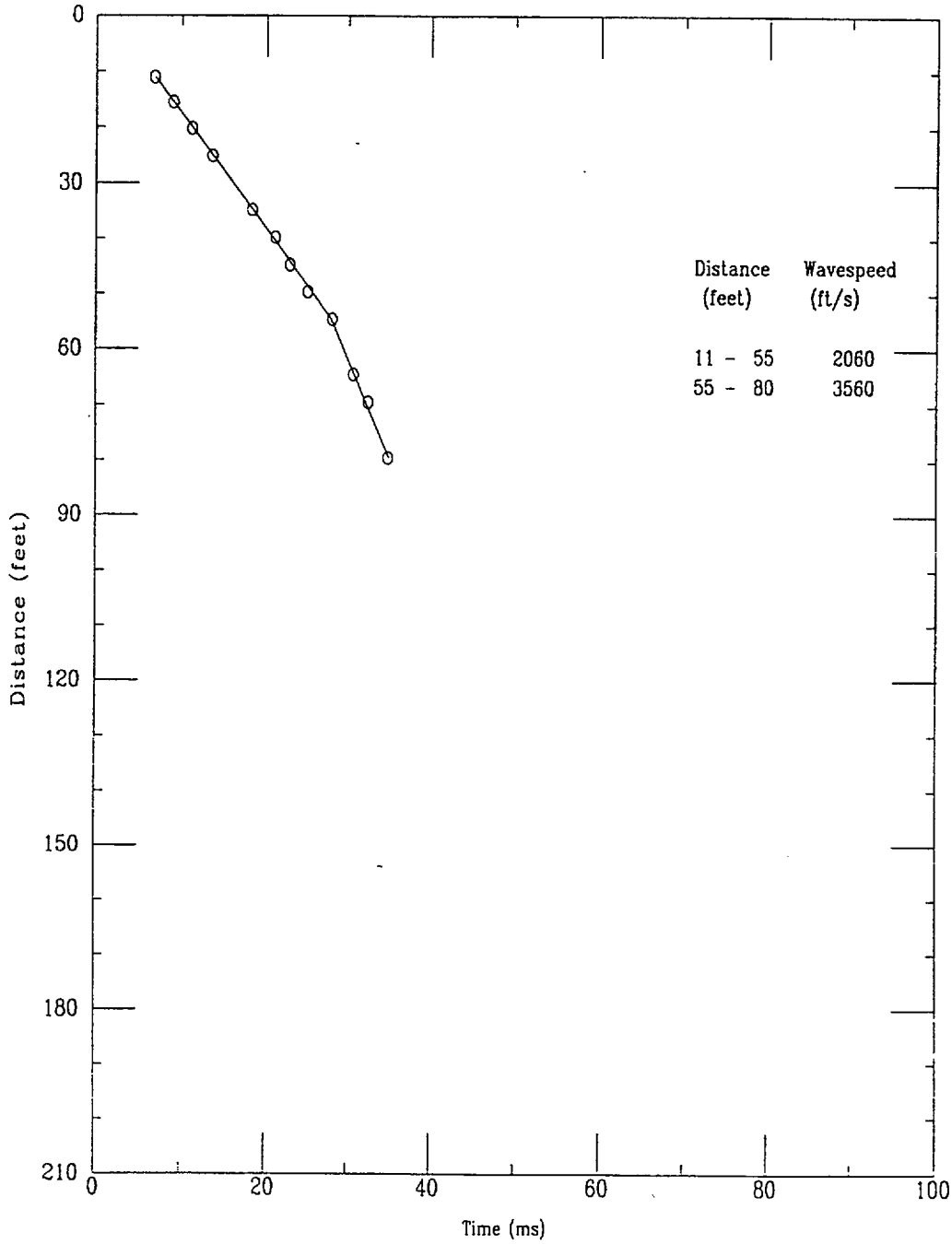
Compression Wave Speeds



File 408u001S

CPT-16S APPLIED RESEARCH ASSOCIATES, INC. 06/08/00

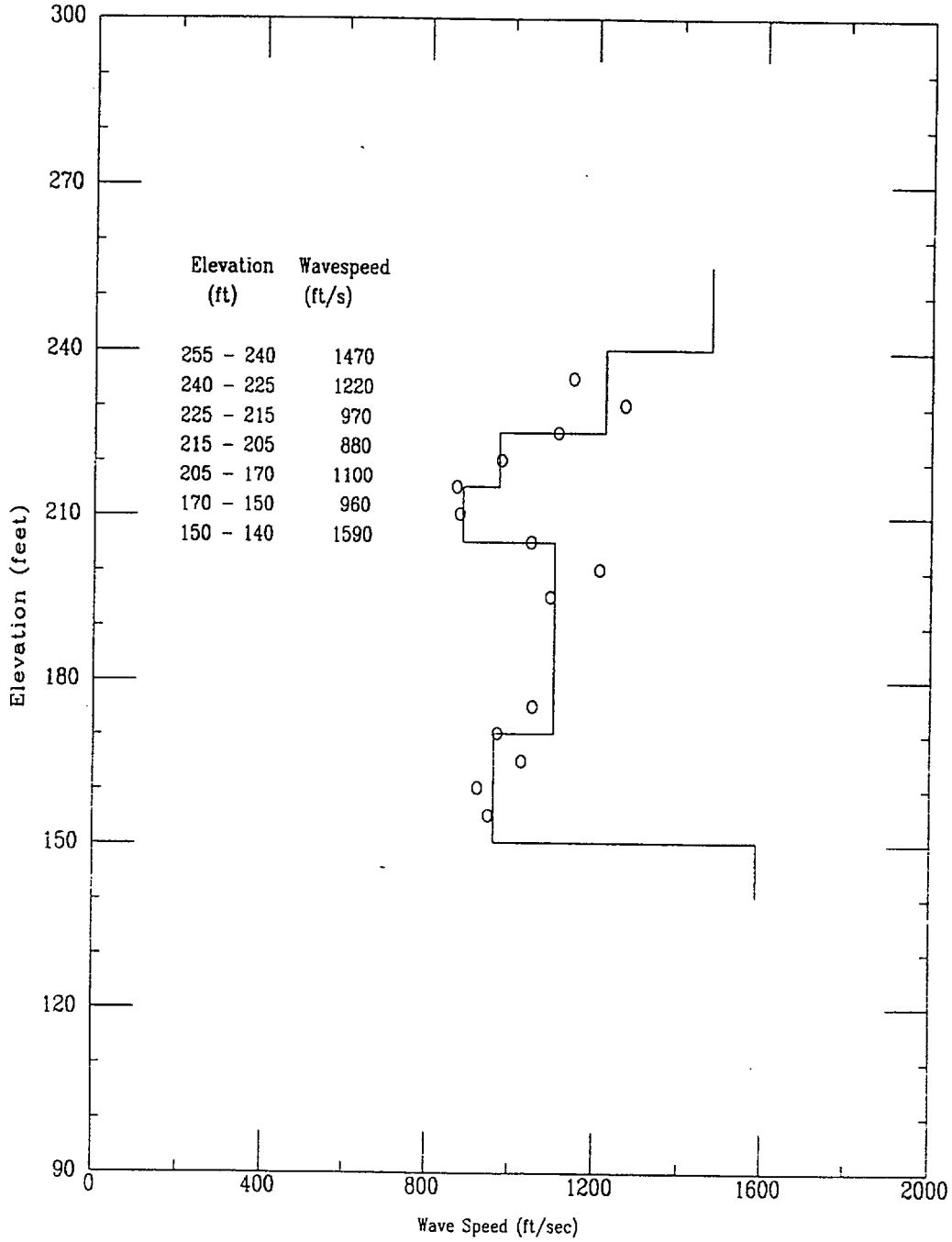
Compression Wave Time of Peak



File 408u001S

CPT-16S APPLIED RESEARCH ASSOCIATES, INC. 06/08/00

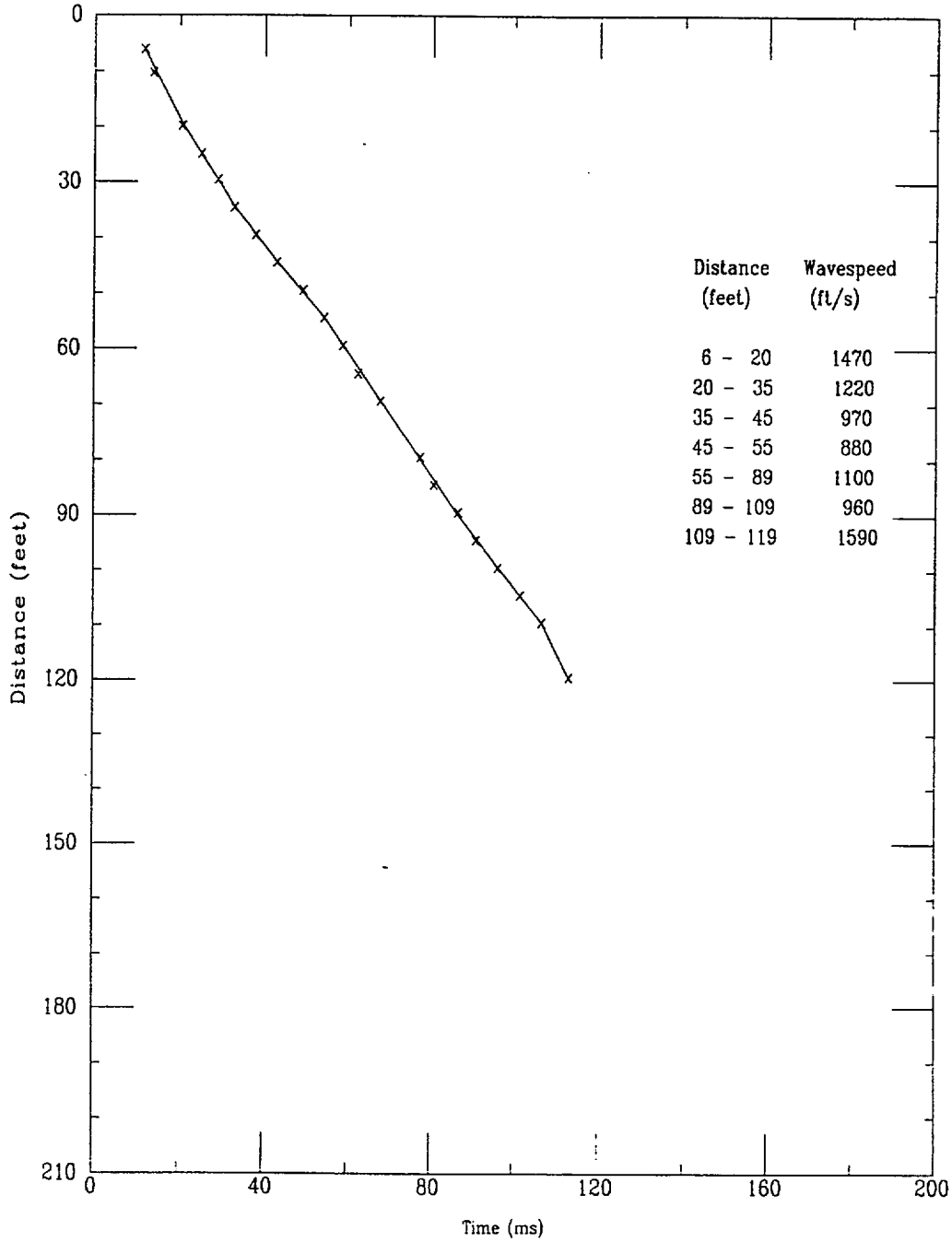
Shear Wave Speeds



File 408u001S

CPT-16S APPLIED RESEARCH ASSOCIATES, INC. 06/08/00

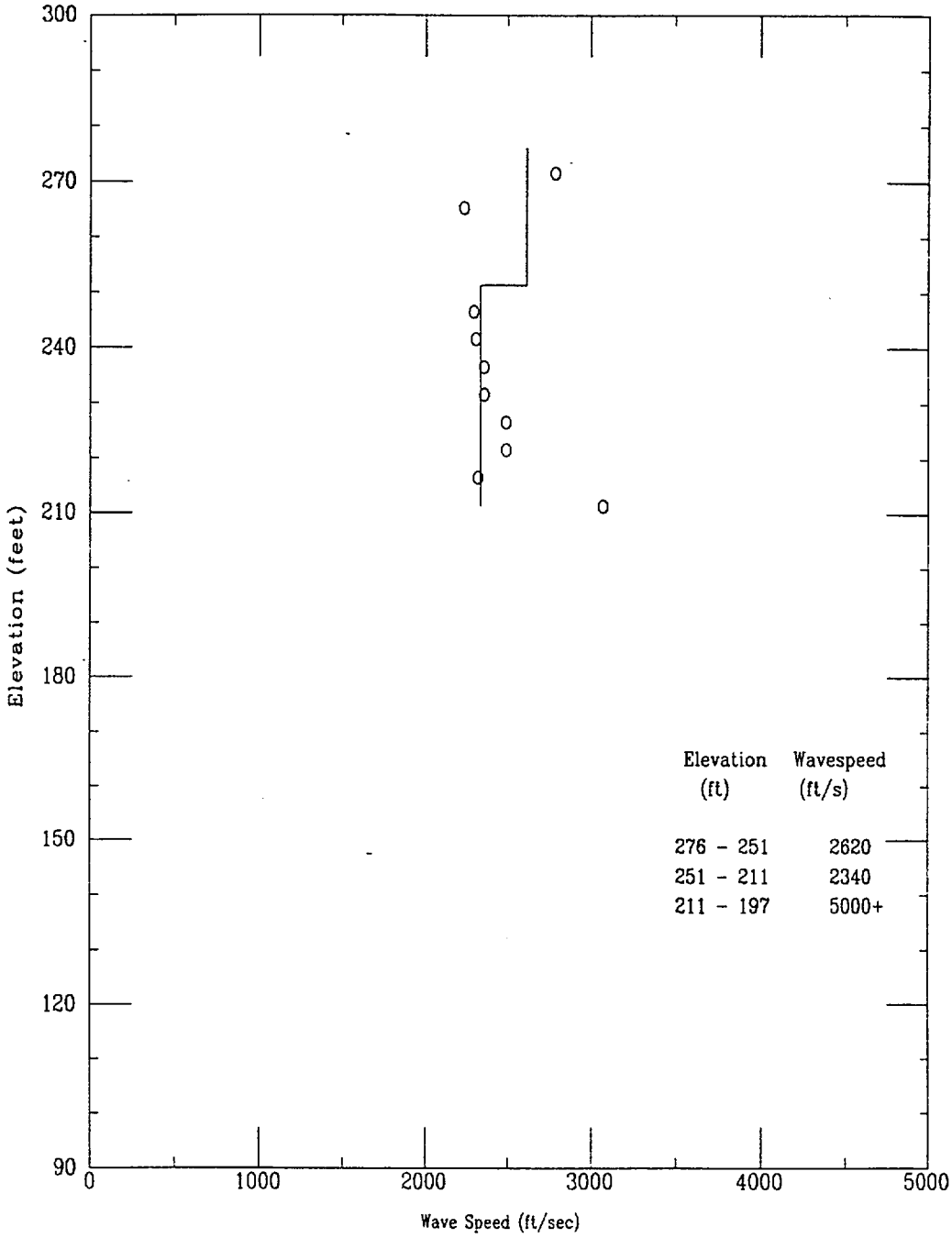
Shear Wave Time of Peak



FILE 408u001S

CPT-13S APPLIED RESEARCH ASSOCIATES, INC. 06/05/00

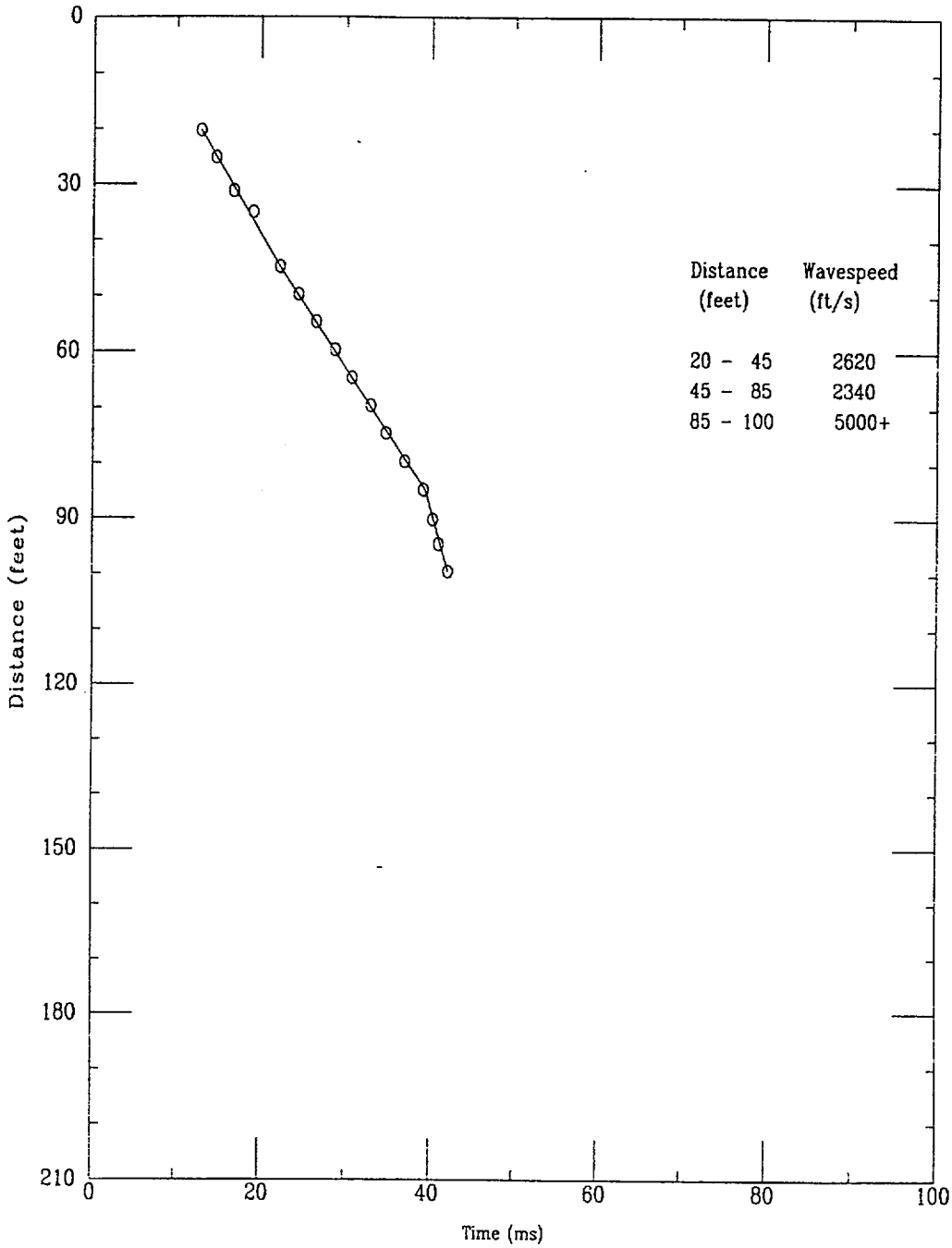
Compression Wave Speeds



File 405u005S

CPT-13S APPLIED RESEARCH ASSOCIATES, INC. 06/05/00

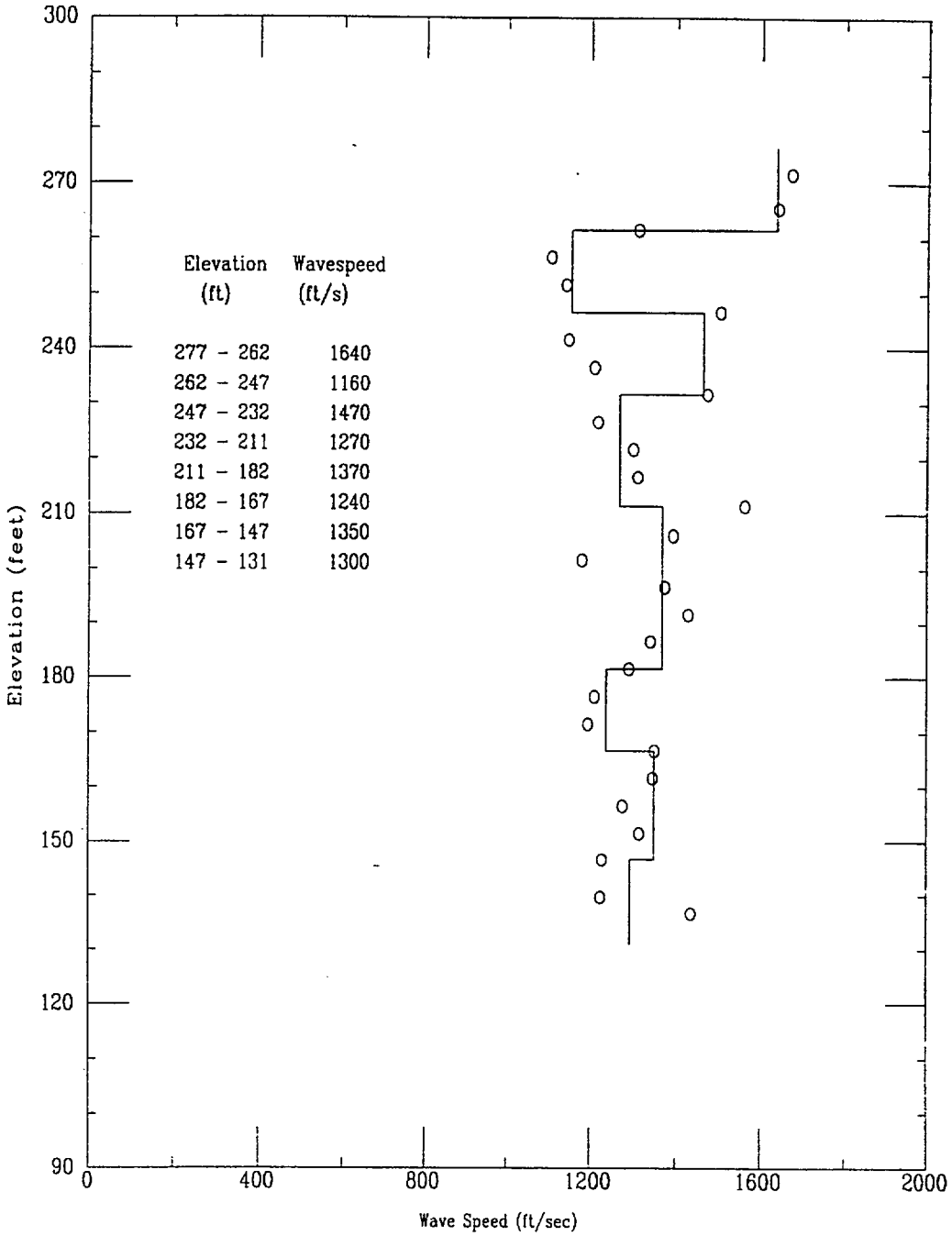
Compression Wave Time of Peak



File 405u005S

CPT-13S APPLIED RESEARCH ASSOCIATES, INC. 06/05/00

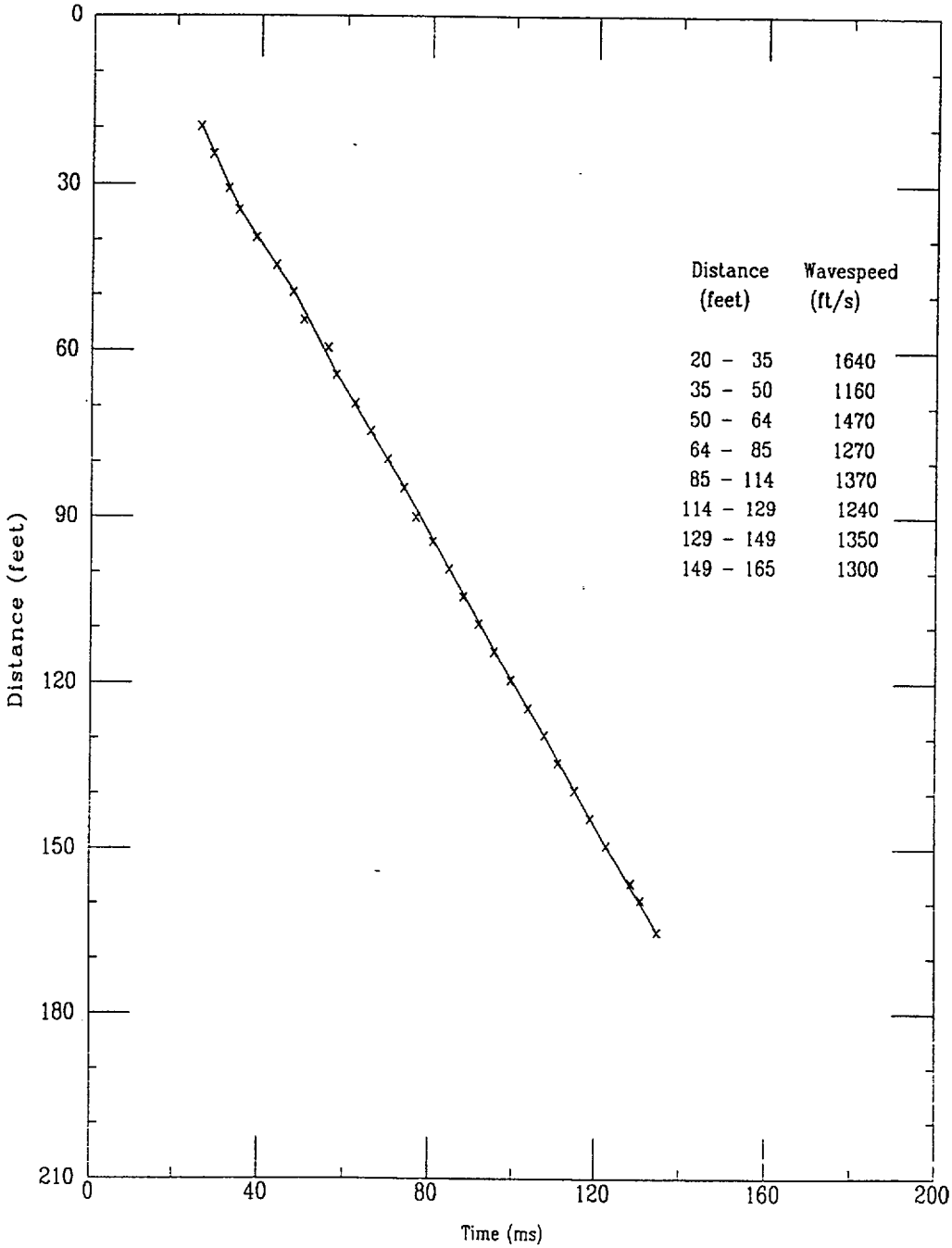
Shear Wave Speeds



File 405u005S

CPT-13S APPLIED RESEARCH ASSOCIATES, INC. 06/05/00

Shear Wave Time of Peak

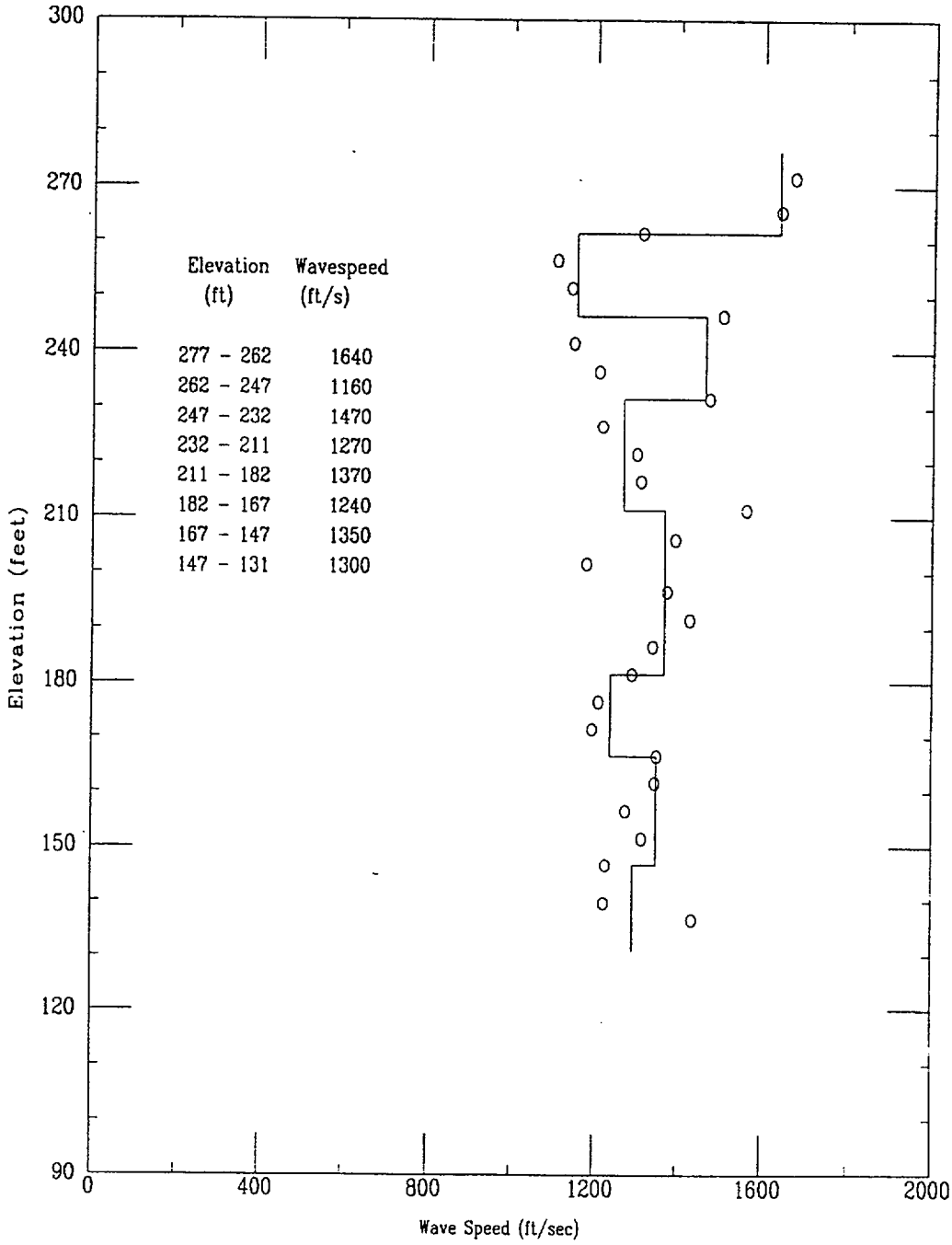


Distance (feet)	Wavespeed (ft/s)
20 - 35	1640
35 - 50	1160
50 - 64	1470
64 - 85	1270
85 - 114	1370
114 - 129	1240
129 - 149	1350
149 - 165	1300

FILE 405u005S

CPT-13S APPLIED RESEARCH ASSOCIATES, INC. 06/05/00

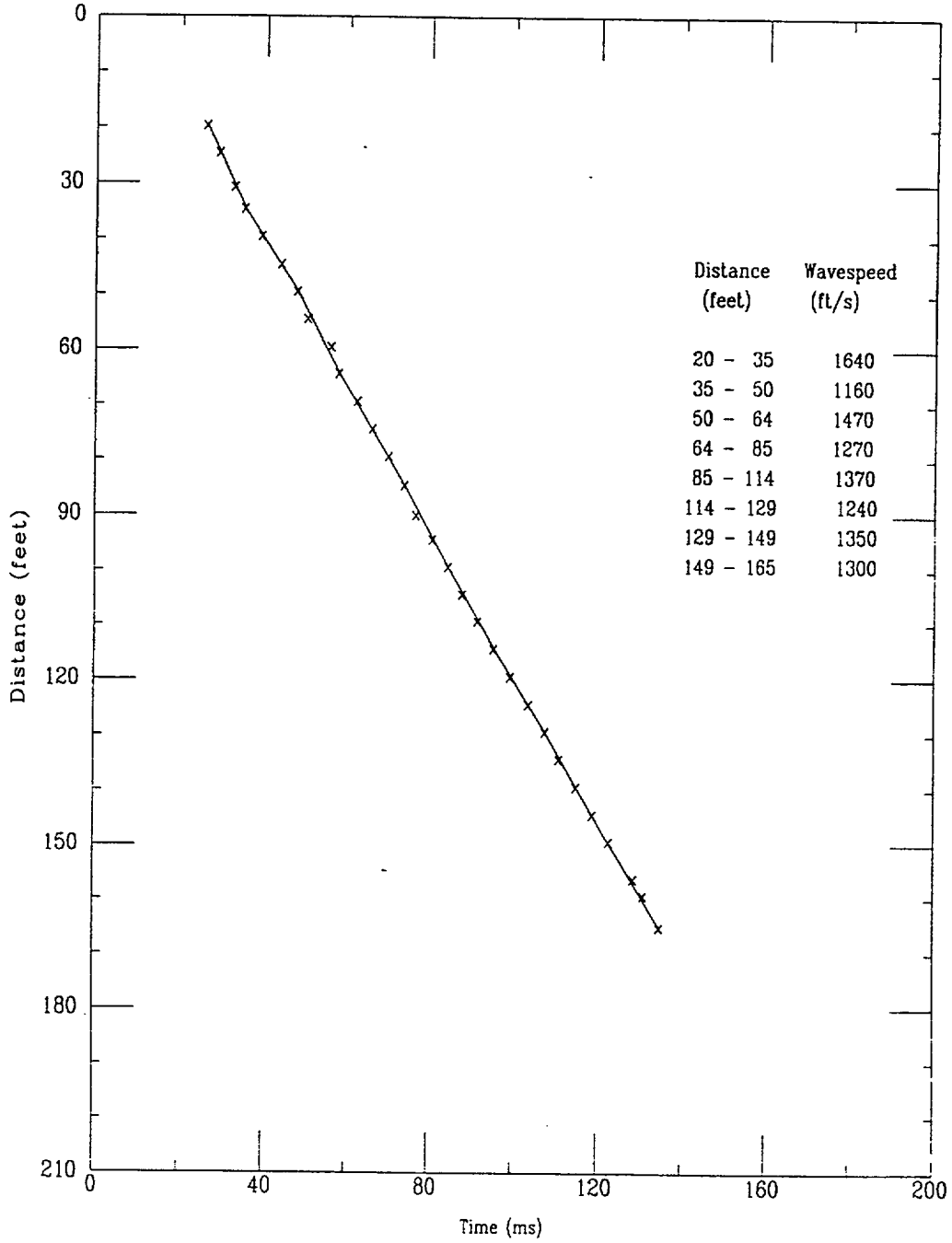
Shear Wave Speeds



File 405u005S

CPT-13S APPLIED RESEARCH ASSOCIATES, INC. 06/05/00

Shear Wave Time of Peak

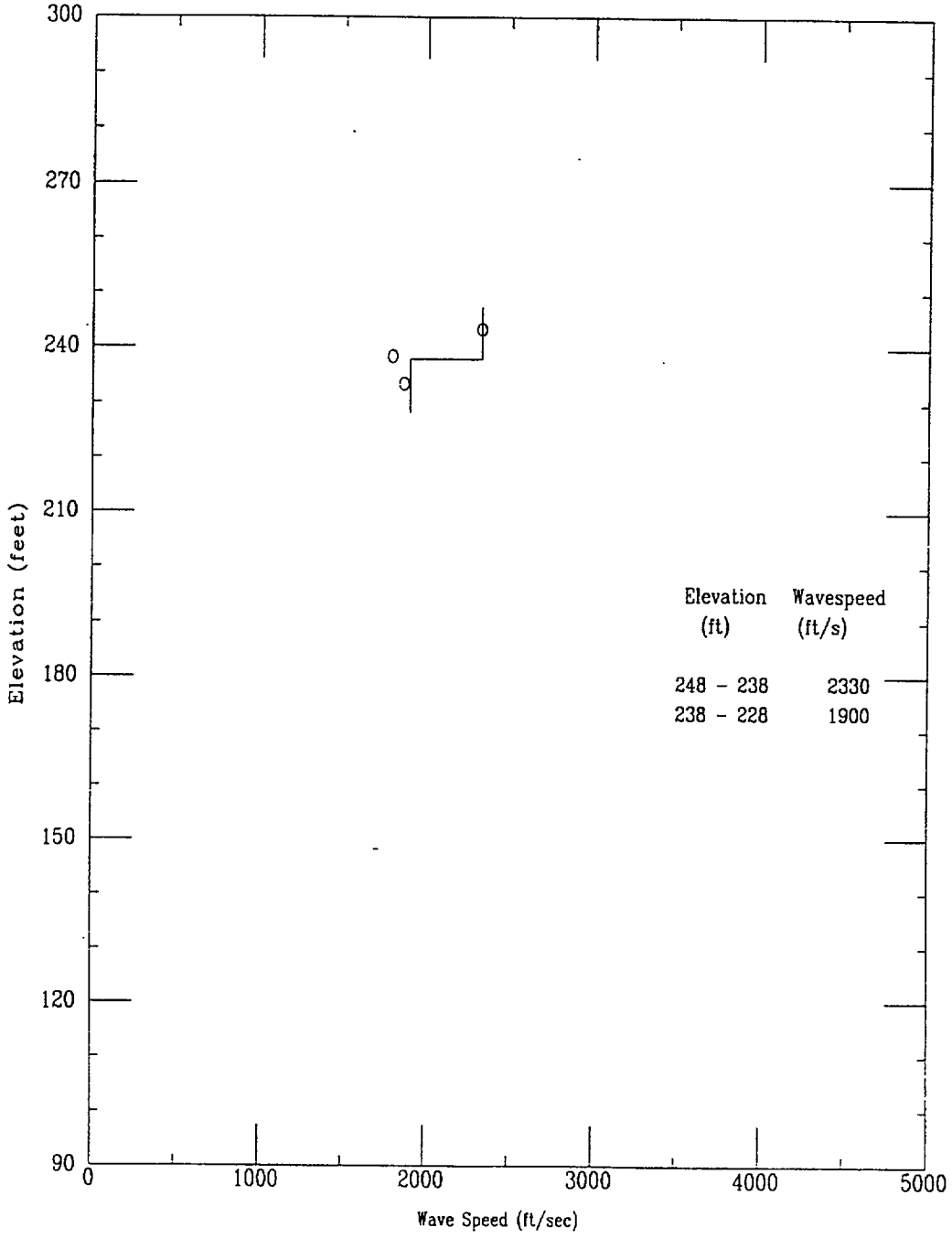


Distance (feet)	Wavespeed (ft/s)
20 - 35	1640
35 - 50	1160
50 - 64	1470
64 - 85	1270
85 - 114	1370
114 - 129	1240
129 - 149	1350
149 - 165	1300

FILE 405u005S

CPT-11S APPLIED RESEARCH ASSOCIATES, INC. 06/02/00

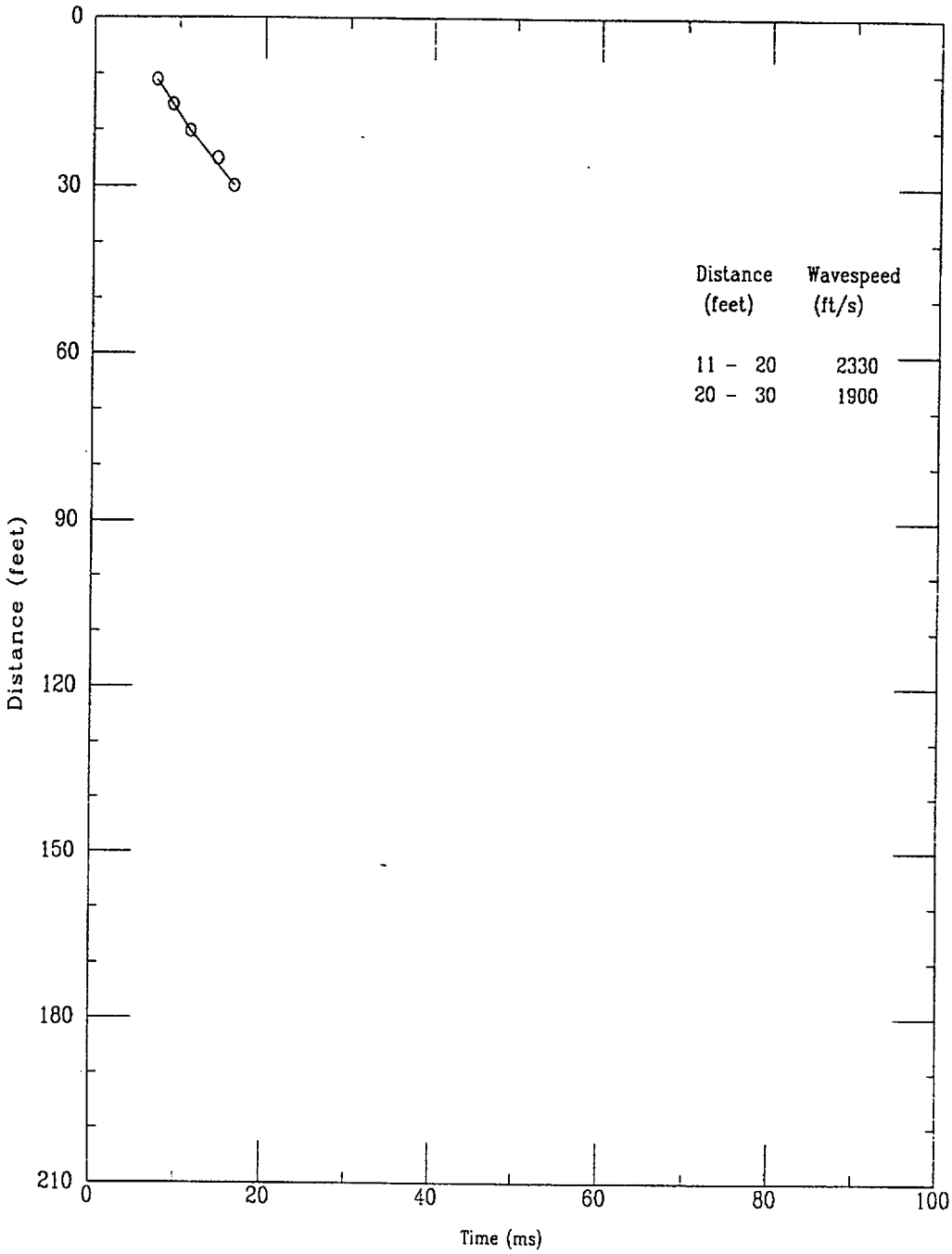
Compression Wave Speeds



File 402u001S

CPT-11S APPLIED RESEARCH ASSOCIATES, INC. 06/02/00

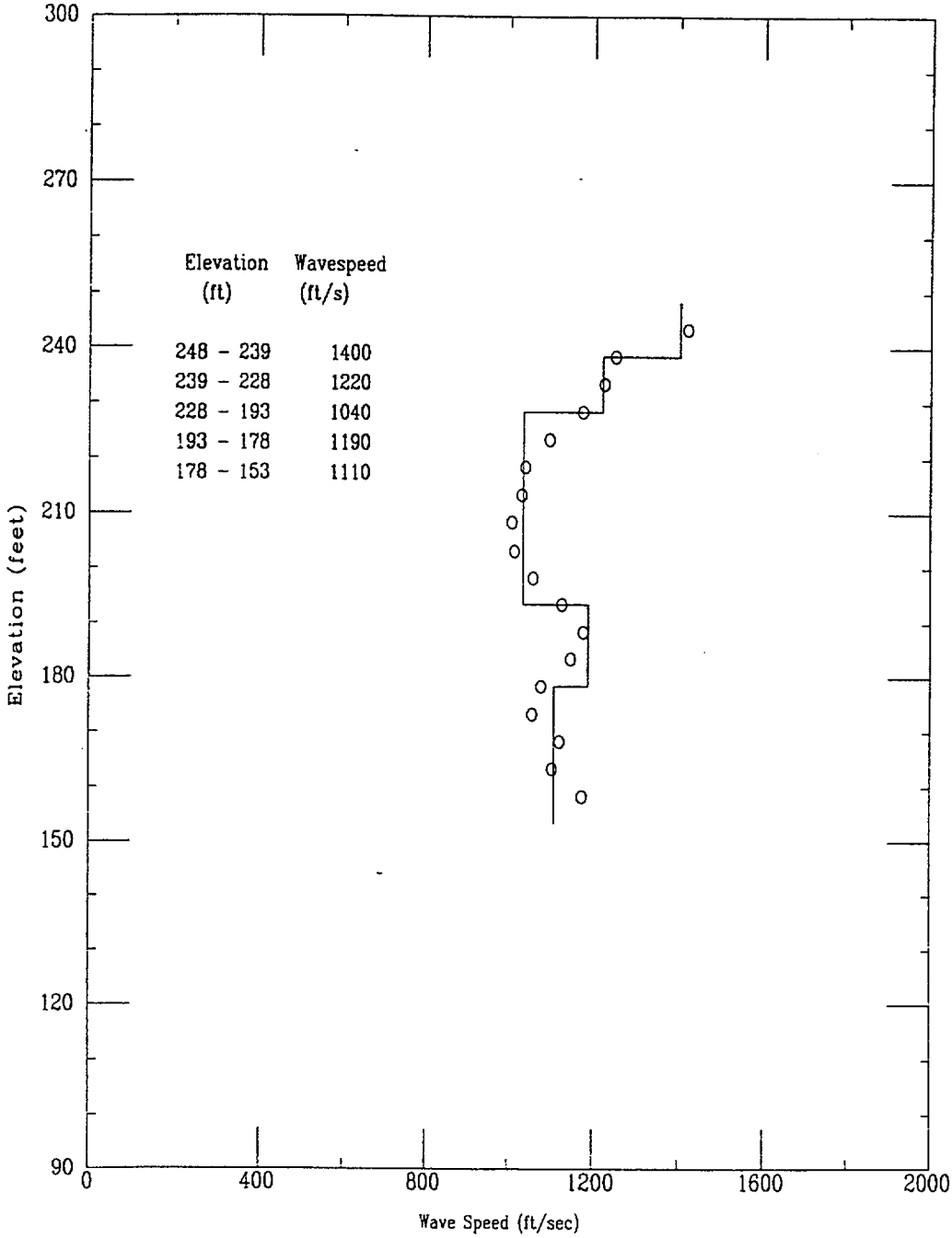
Compression Wave Time of Peak



File 402u001S

CPT-11S APPLIED RESEARCH ASSOCIATES, INC. 06/02/00

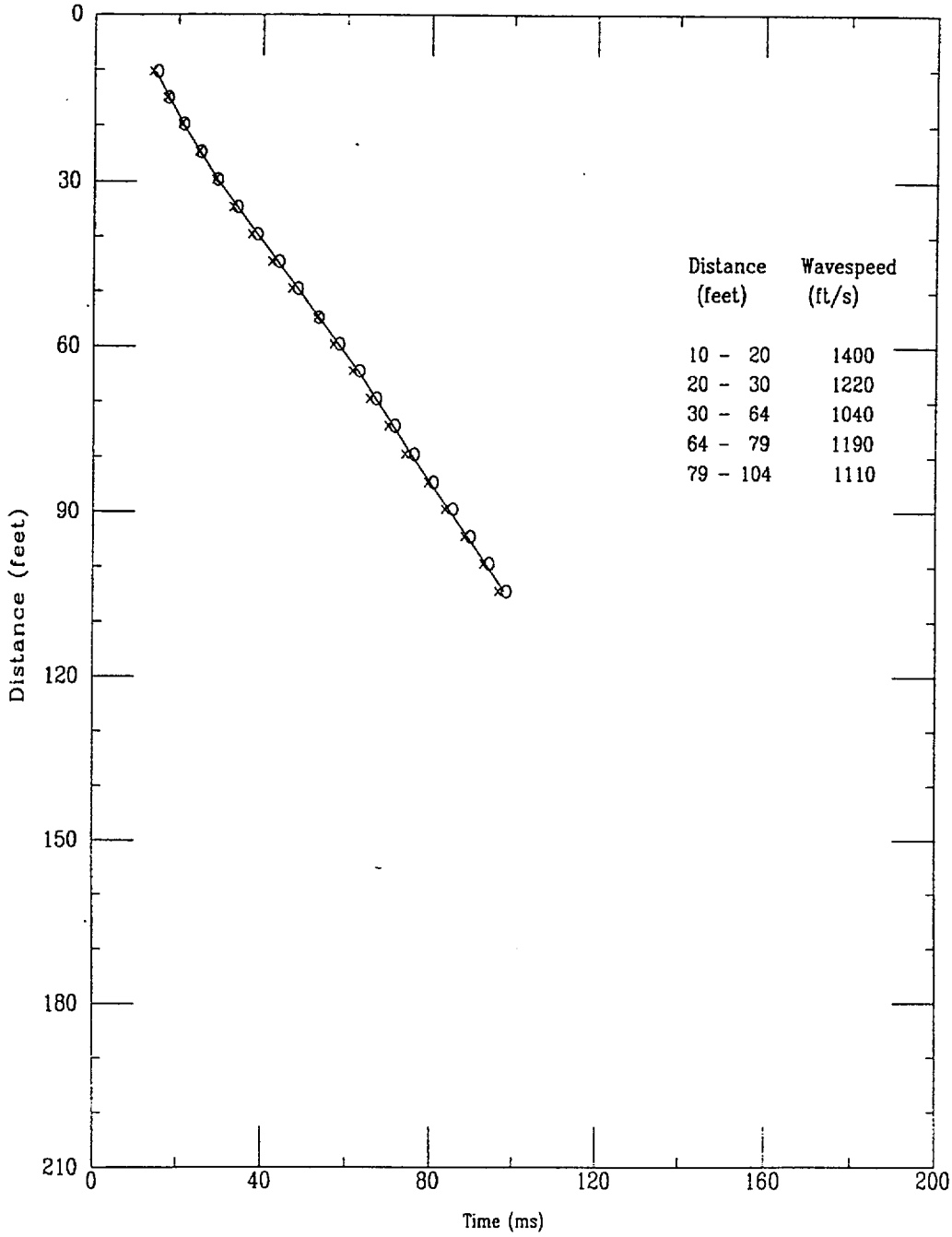
Shear Wave Speeds



File 402u001S

CPT-11S APPLIED RESEARCH ASSOCIATES, INC. 06/02/00

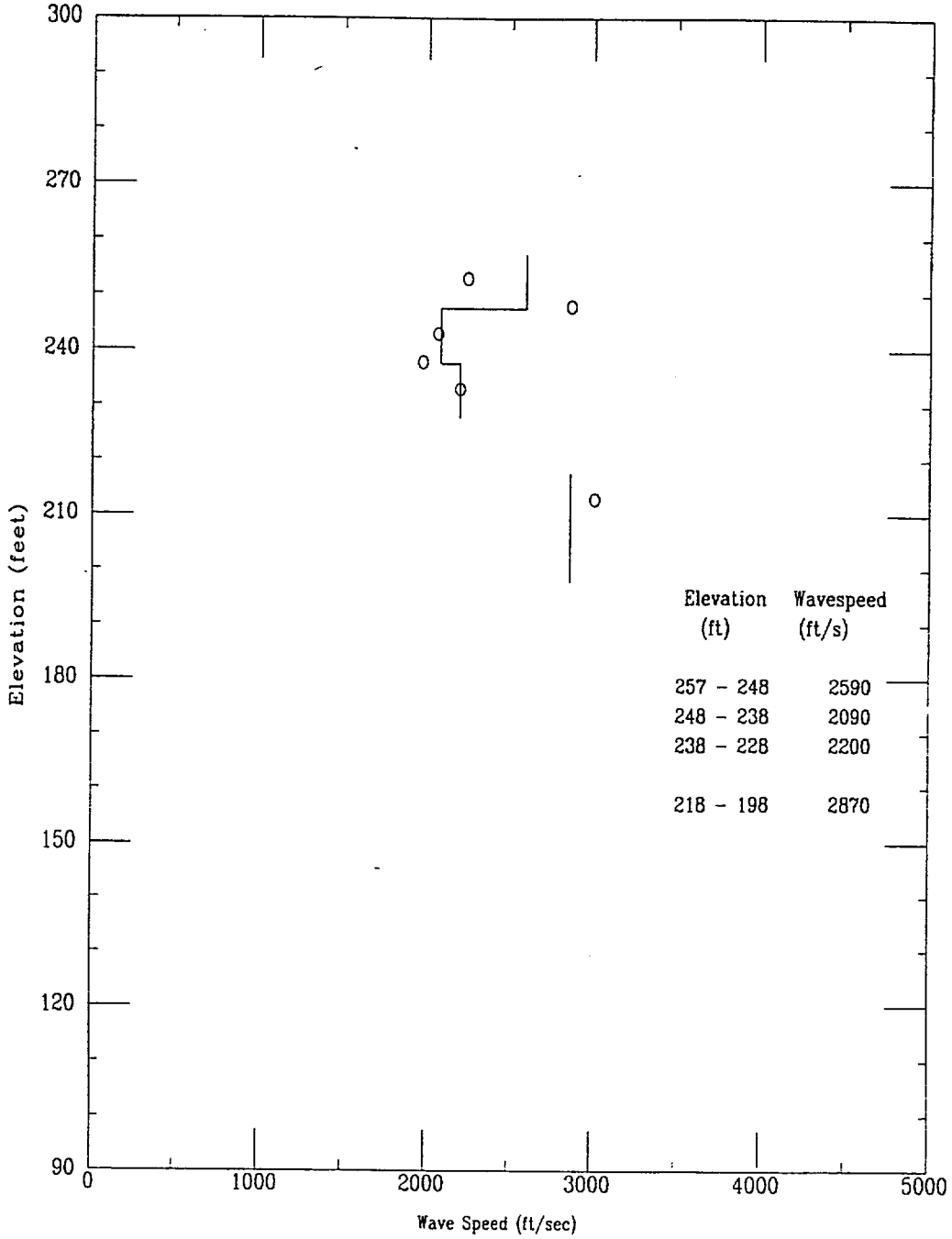
Shear Wave Time of Peak



File 402u001S

CPT-08S APPLIED RESEARCH ASSOCIATES, INC. 06/02/00

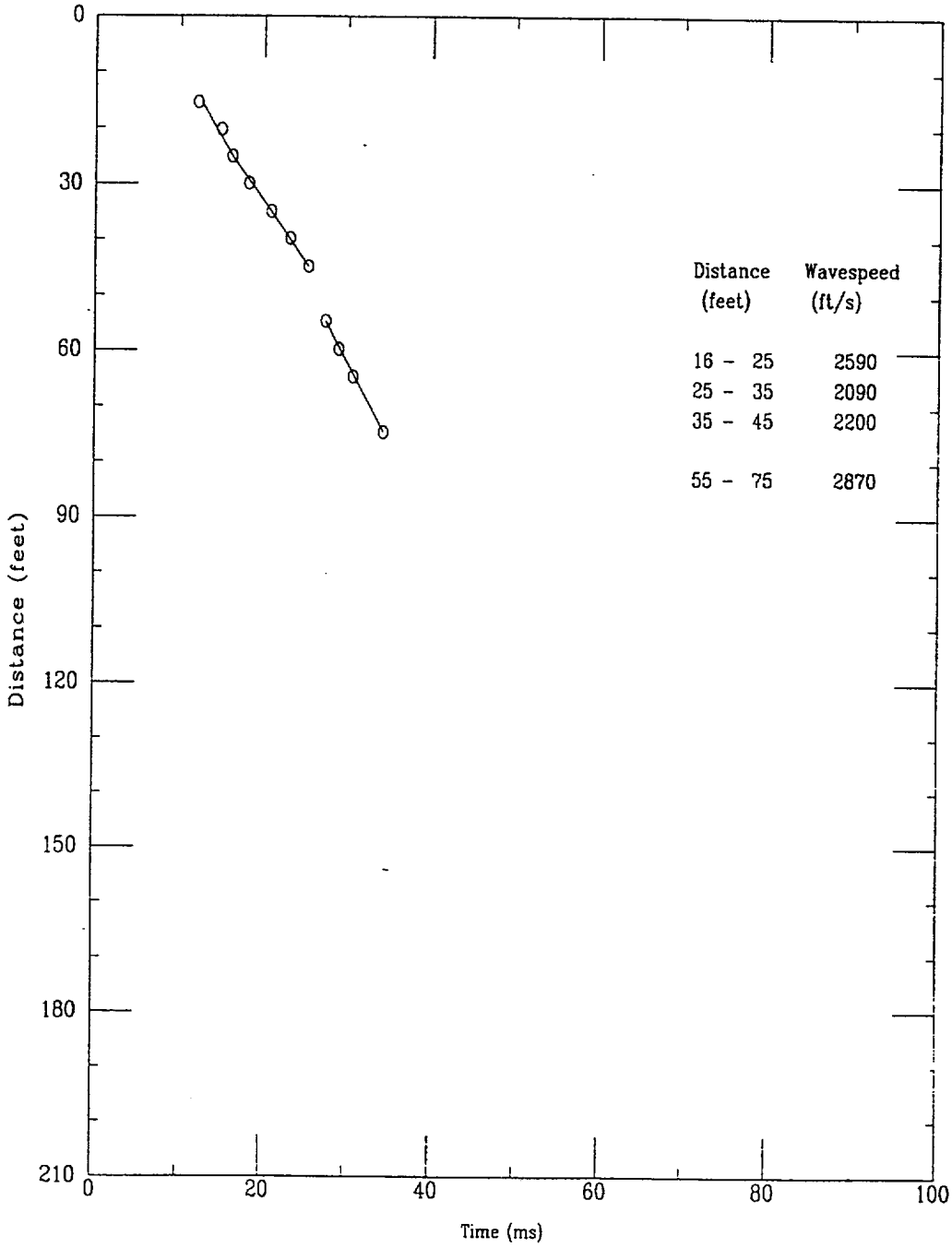
Compression Wave Speeds



File 402u004S

CPT-08S APPLIED RESEARCH ASSOCIATES, INC. 06/02/00

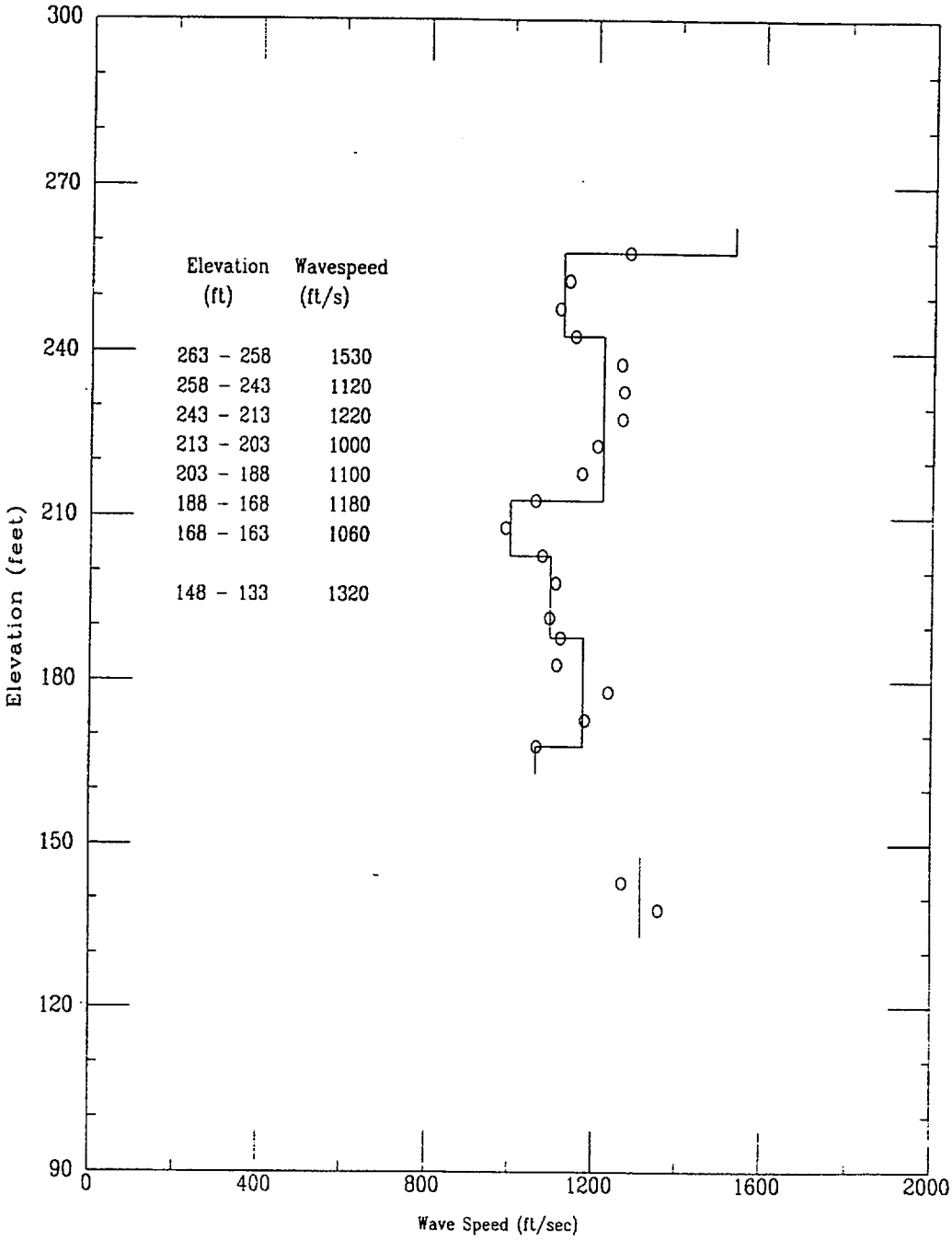
Compression Wave Time of Peak



File 402u004S

CPT-08S APPLIED RESEARCH ASSOCIATES, INC. 06/02/00

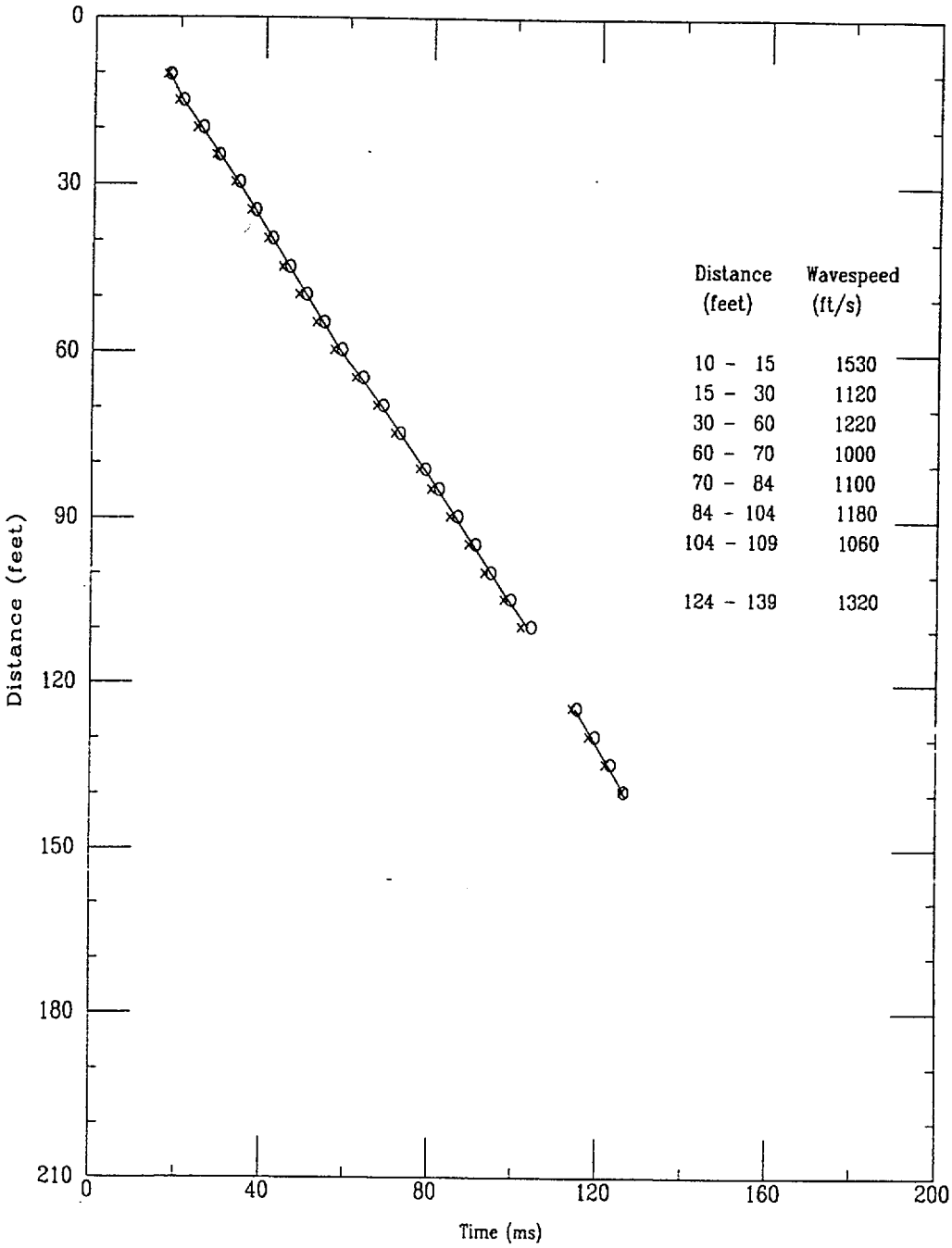
Shear Wave Speeds



File 402u004S

CPT-08S APPLIED RESEARCH ASSOCIATES, INC. 06/02/00

Shear Wave Time of Peak

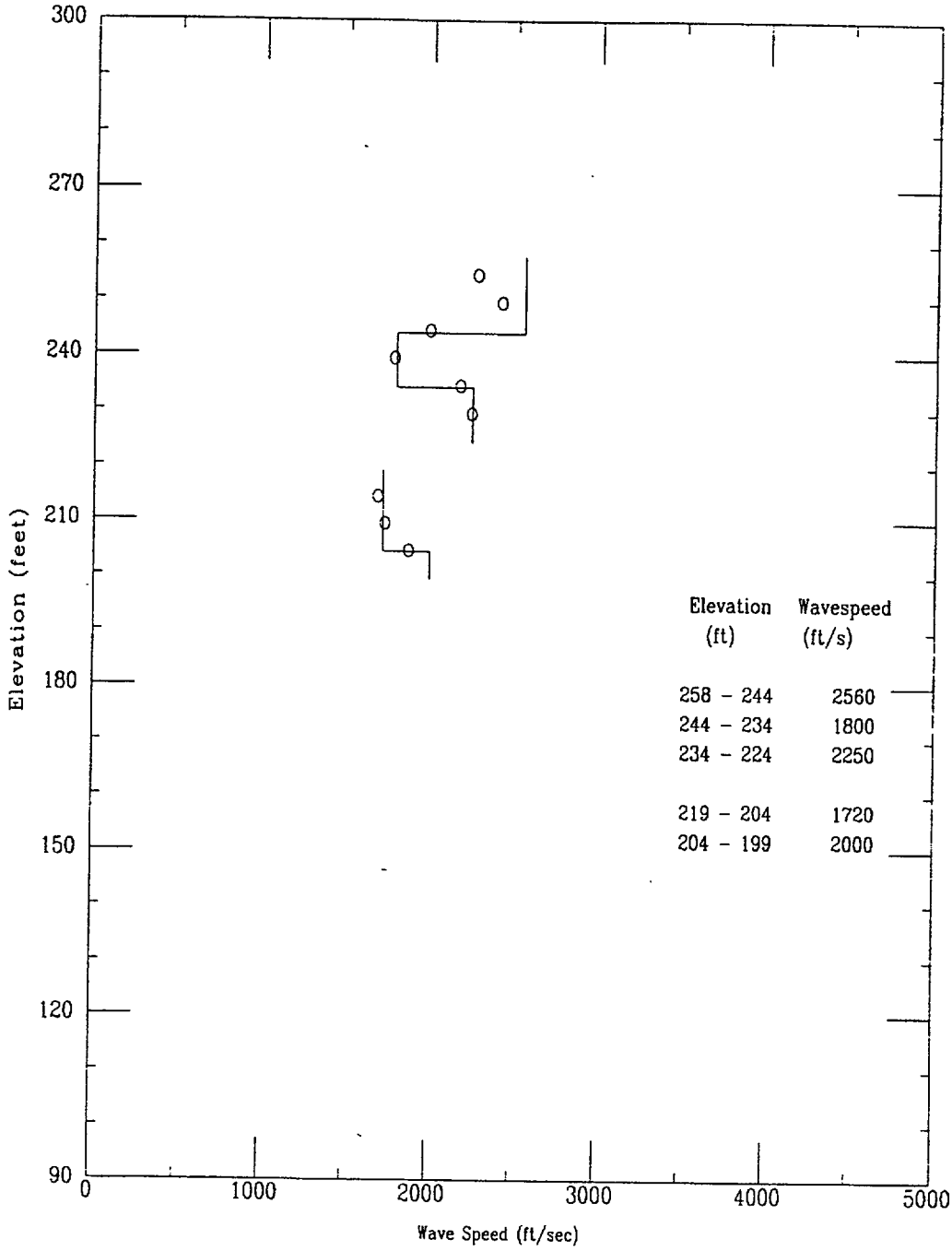


Distance (feet)	Wavespeed (ft/s)
10 - 15	1530
15 - 30	1120
30 - 60	1220
60 - 70	1000
70 - 84	1100
84 - 104	1180
104 - 109	1060
124 - 139	1320

FILE 402u004S

CPT-05S APPLIED RESEARCH ASSOCIATES, INC. 06/08/00

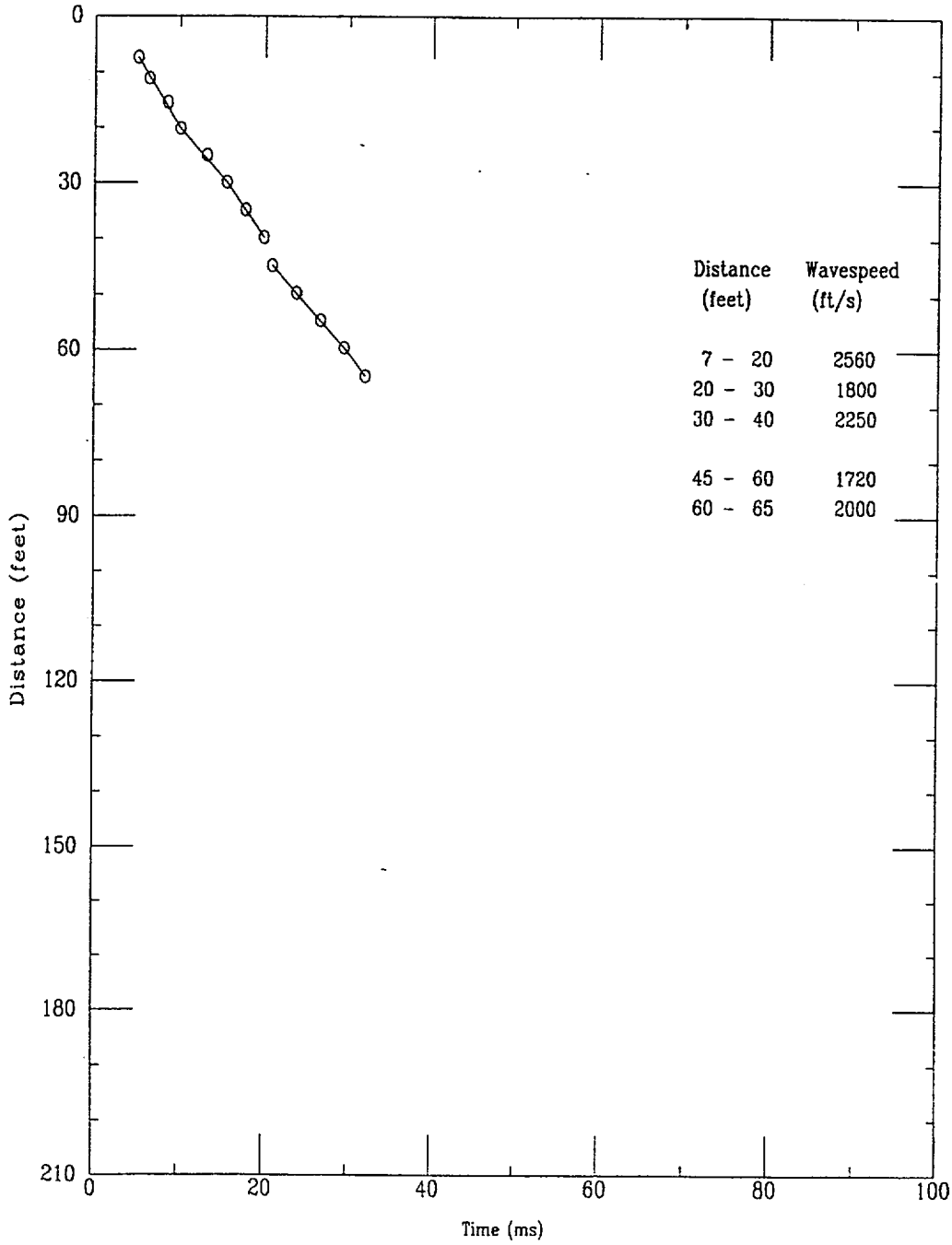
Compression Wave Speeds



File 408u004S

CPT-05S APPLIED RESEARCH ASSOCIATES, INC. 06/08/00

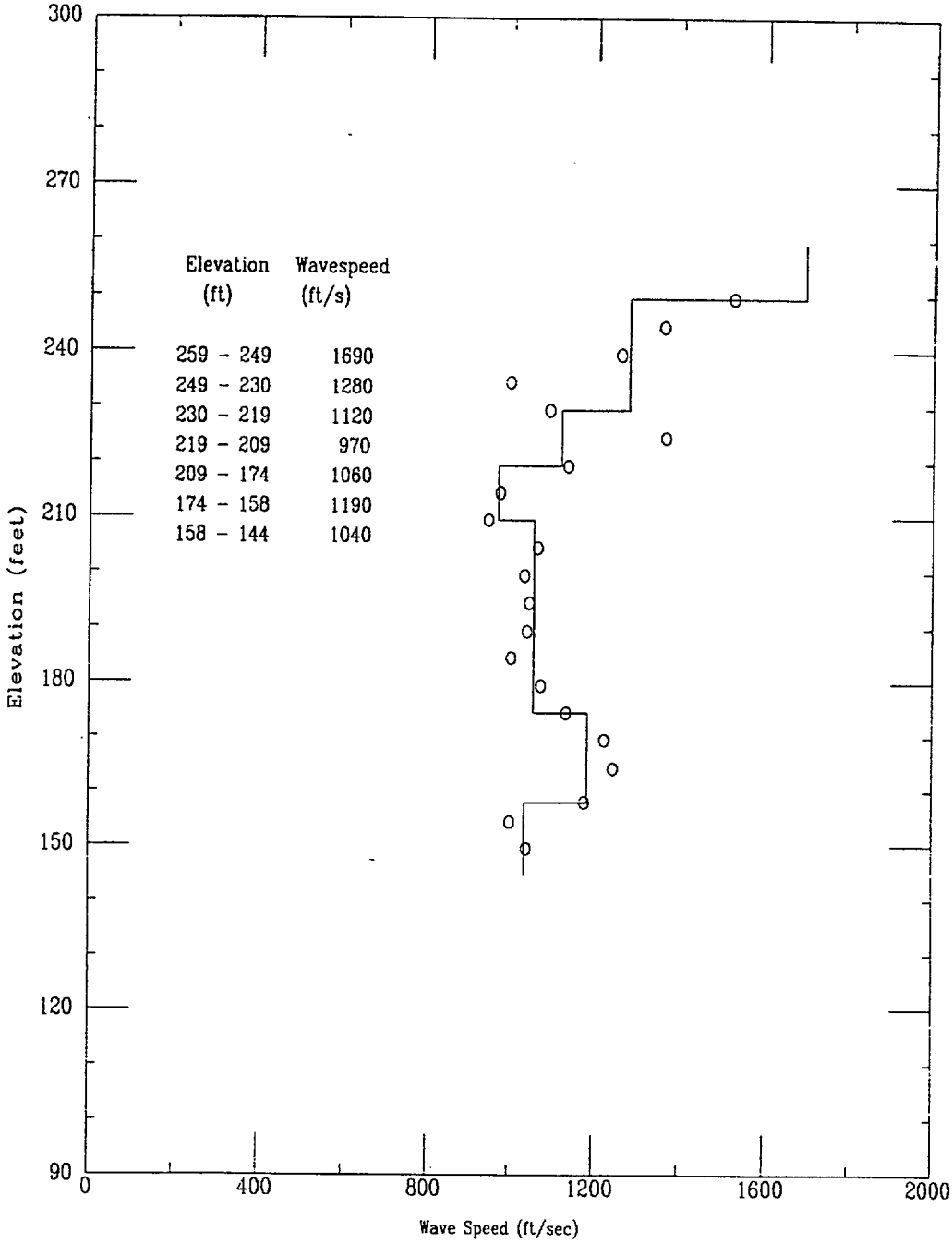
Compression Wave Time of Peak



File 408u004S

CPT-05S APPLIED RESEARCH ASSOCIATES, INC. 06/08/00

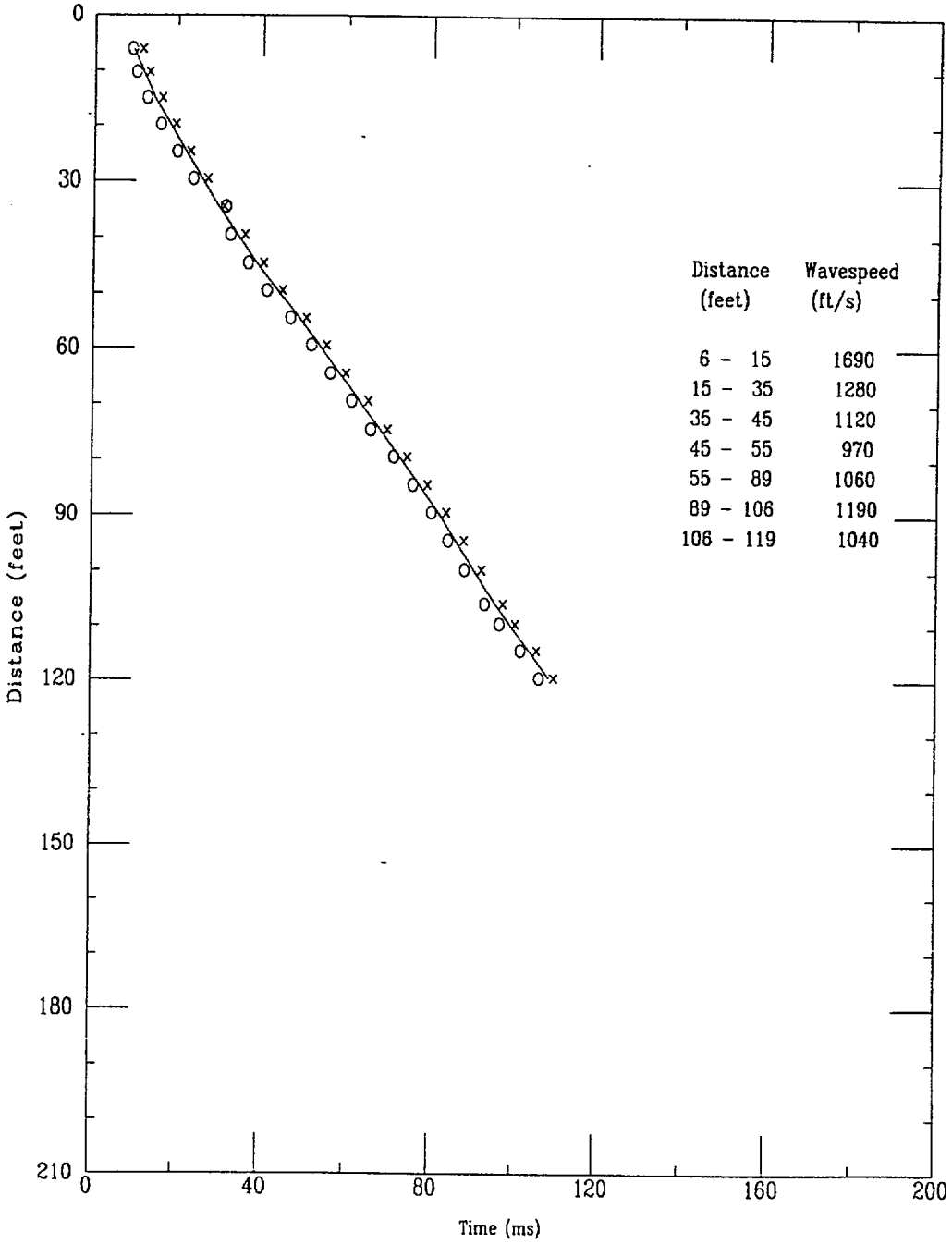
Shear Wave Speeds



File 408u004S

CPT-05S APPLIED RESEARCH ASSOCIATES, INC. 06/08/00

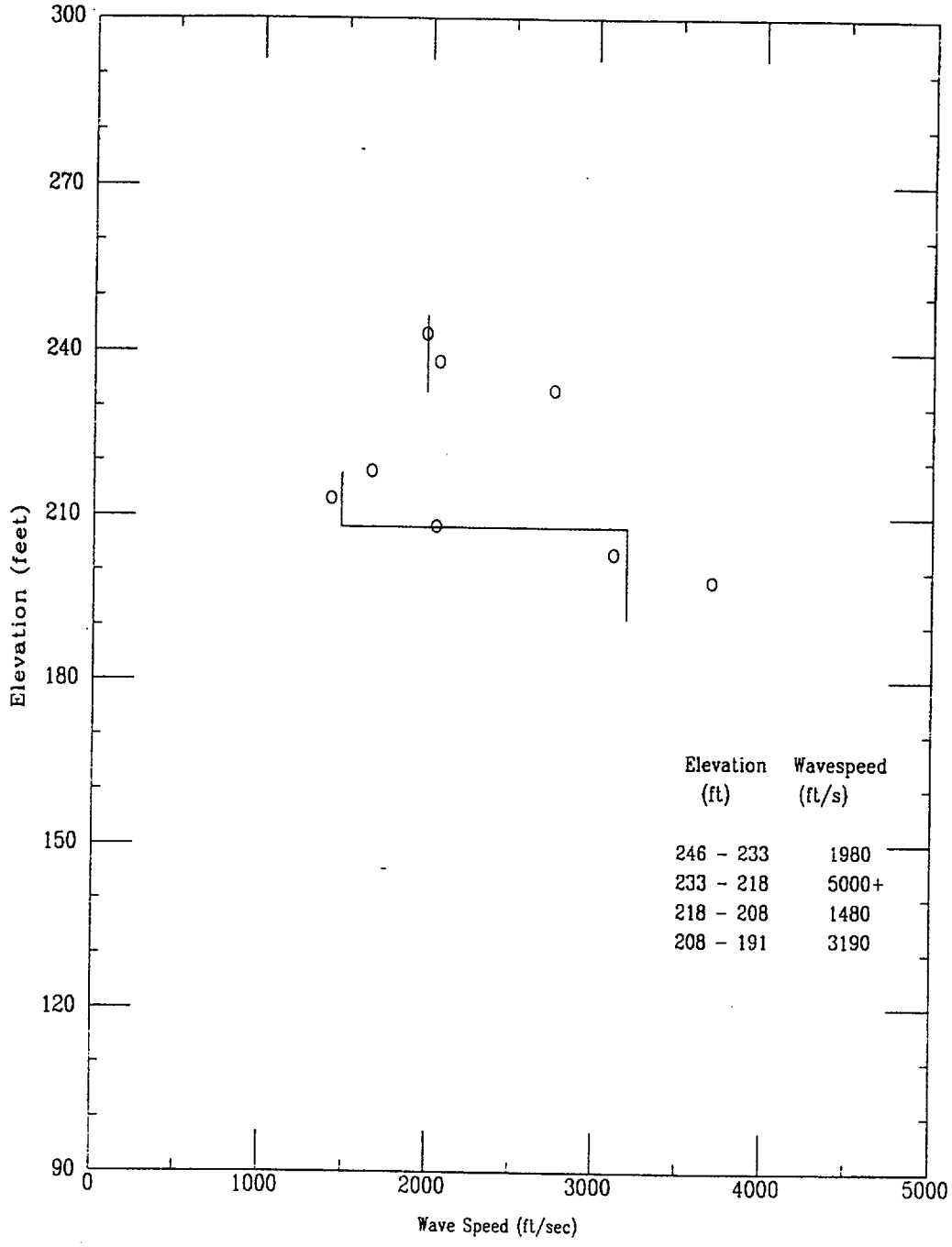
Shear Wave Time of Peak



FILE 408u004S

CPT-03S APPLIED RESEARCH ASSOCIATES, INC. 06/08/00

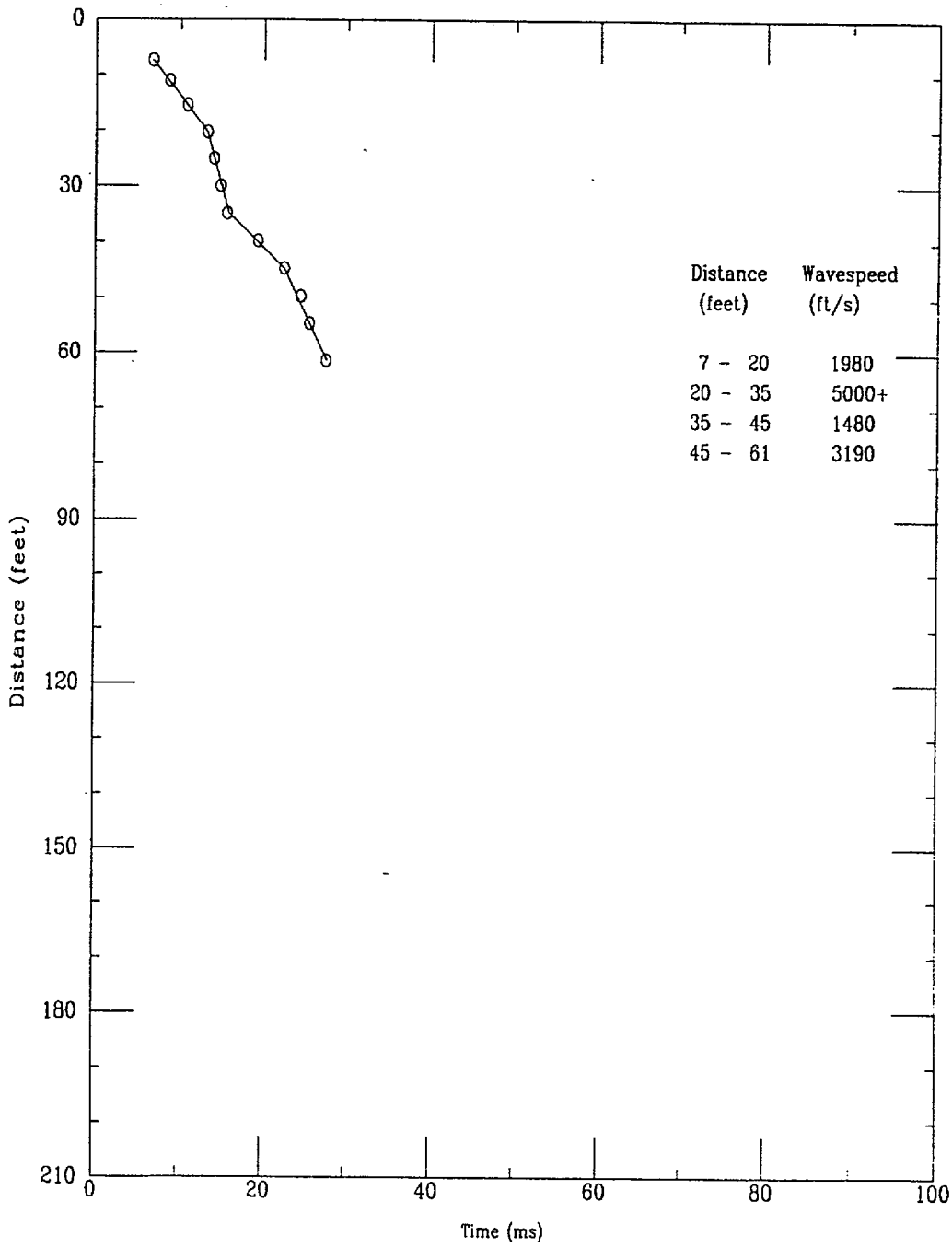
Compression Wave Speeds



File 408u007S

CPT-03S APPLIED RESEARCH ASSOCIATES, INC. 06/08/00

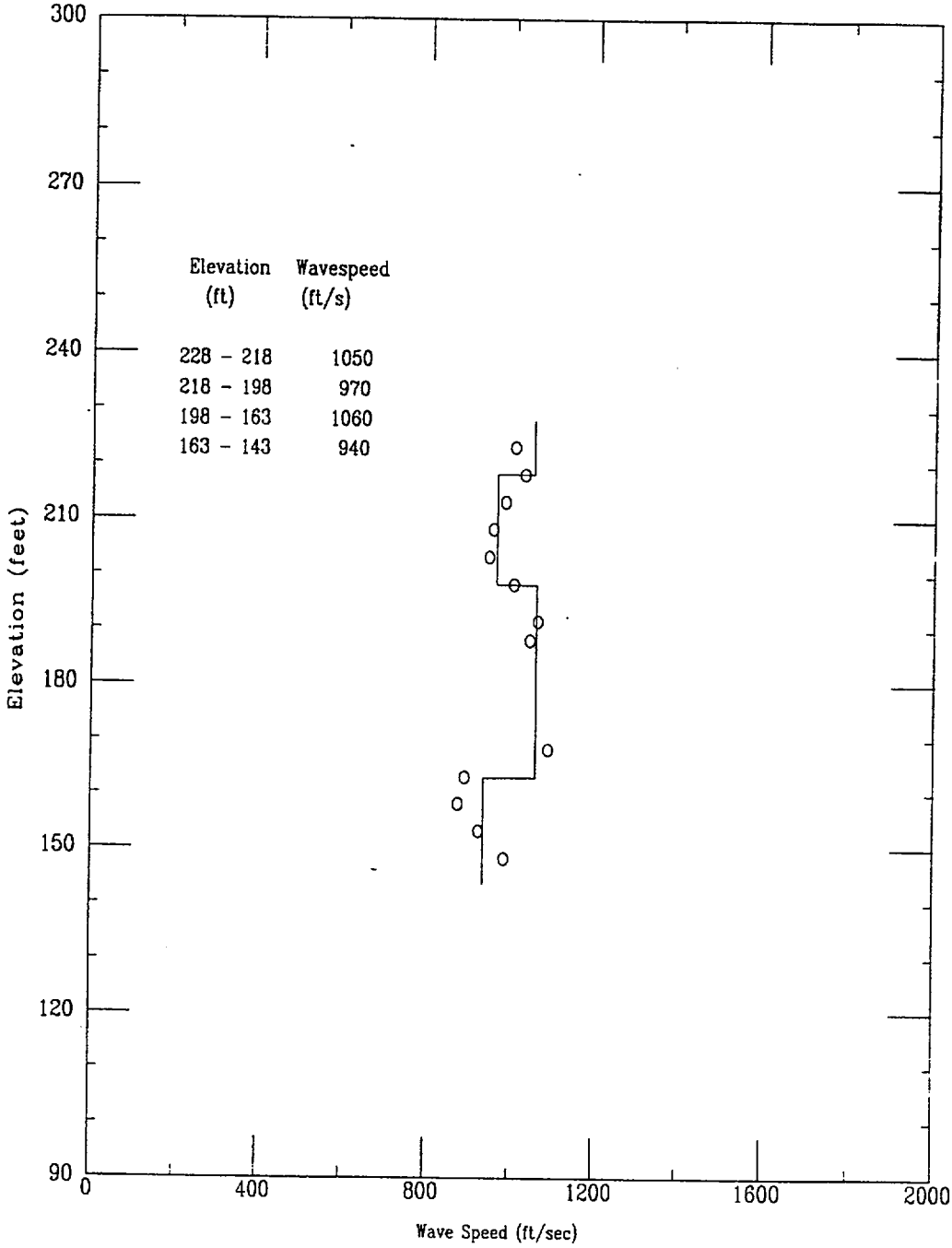
Compression Wave Time of Peak



File 408u007S

CPT-03S APPLIED RESEARCH ASSOCIATES, INC. 06/08/00

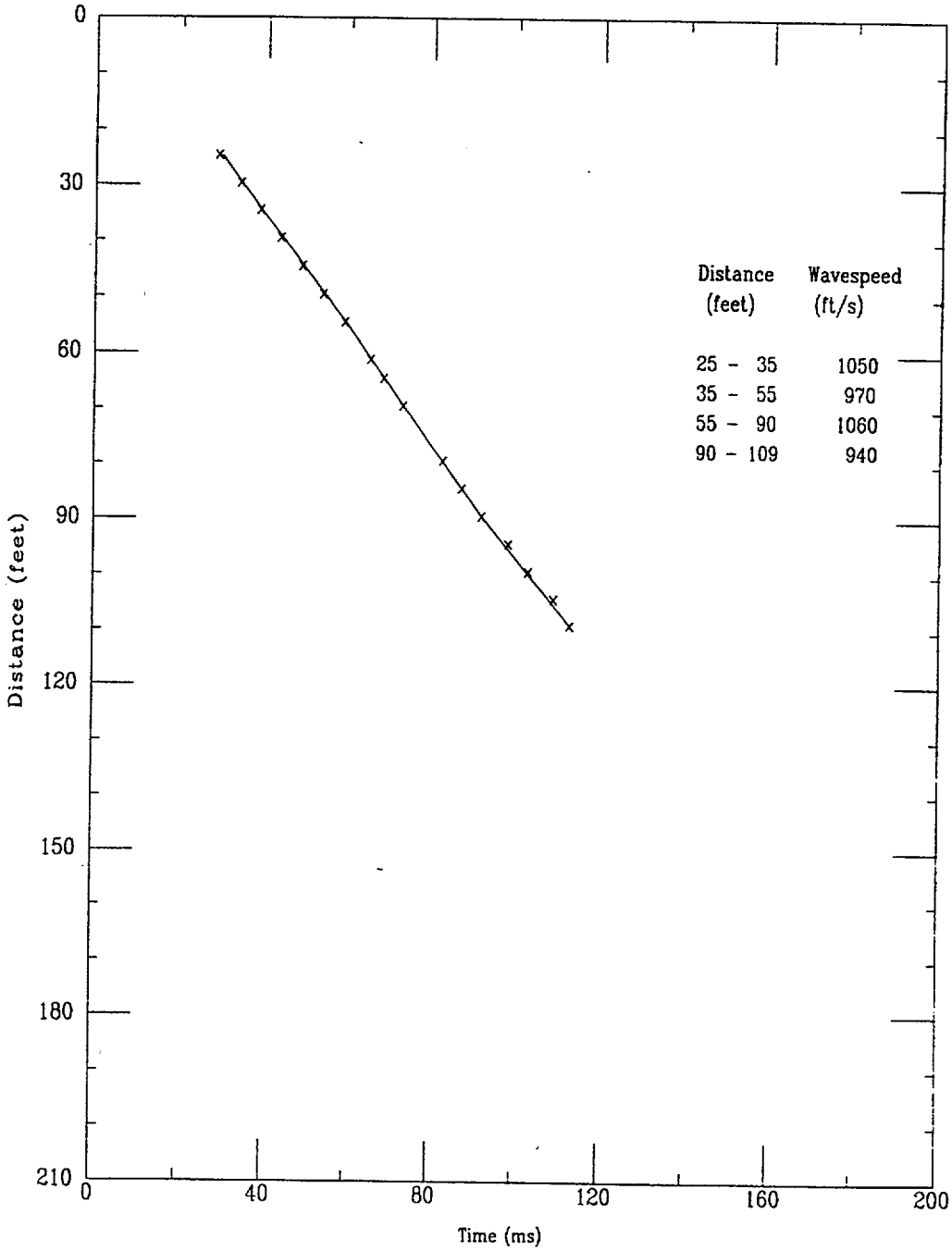
Shear Wave Speeds



File 408u007S

CPT-03S APPLIED RESEARCH ASSOCIATES, INC. 06/08/00

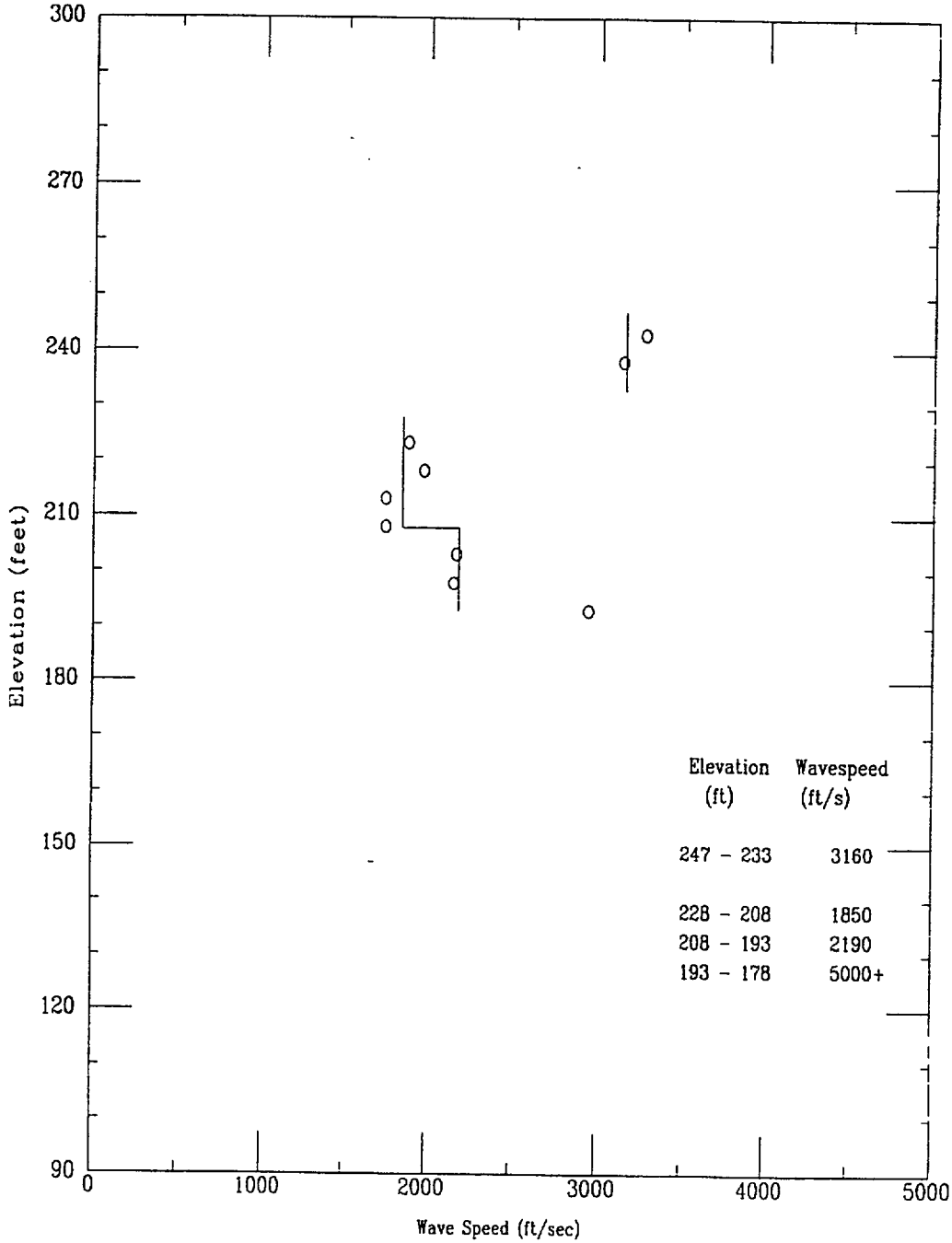
Shear Wave Time of Peak



FILE 408u007S

CPT-01S APPLIED RESEARCH ASSOCIATES, INC. 06/09/00

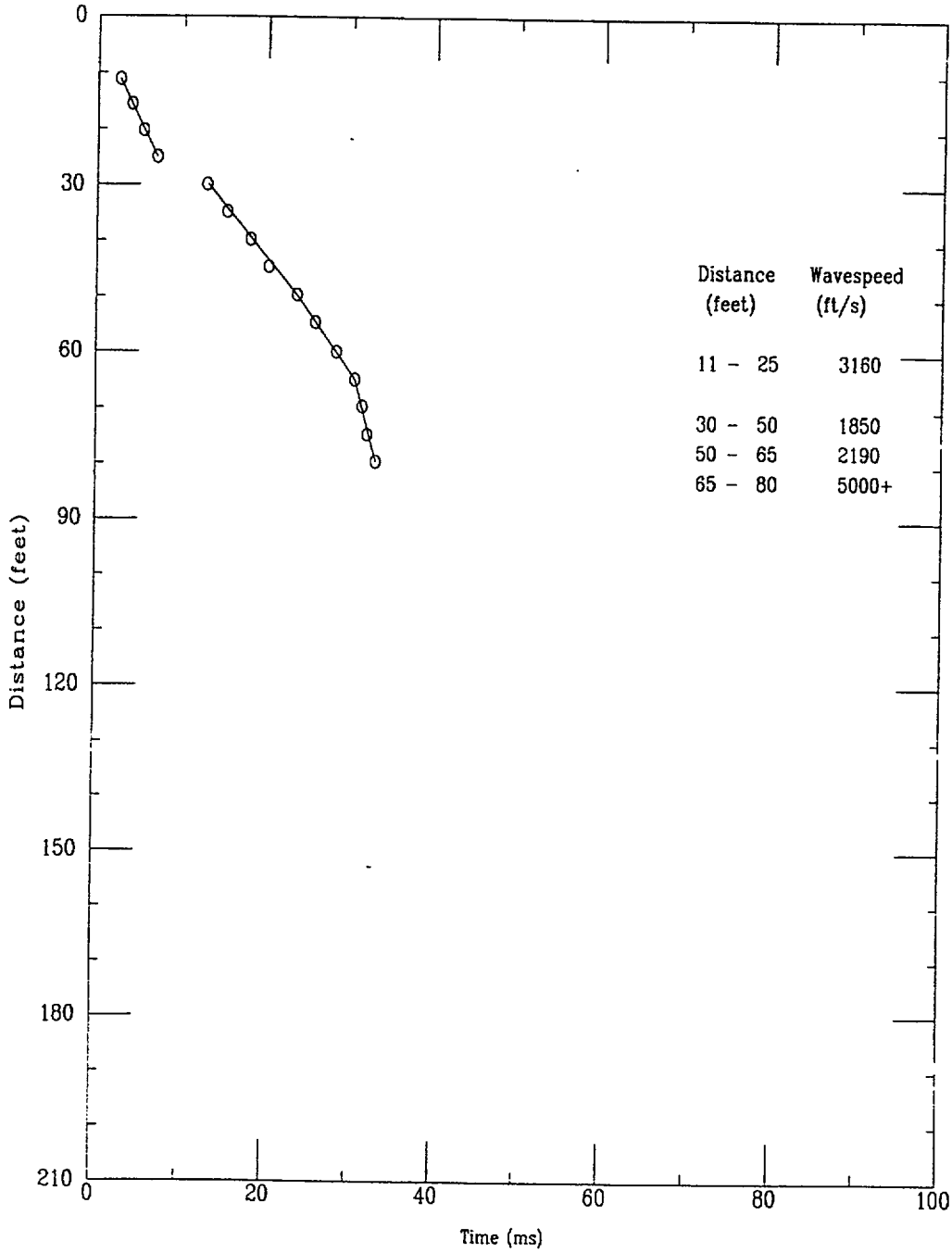
Compression Wave Speeds



File 409u001S

CPT-01S APPLIED RESEARCH ASSOCIATES, INC. 06/09/00

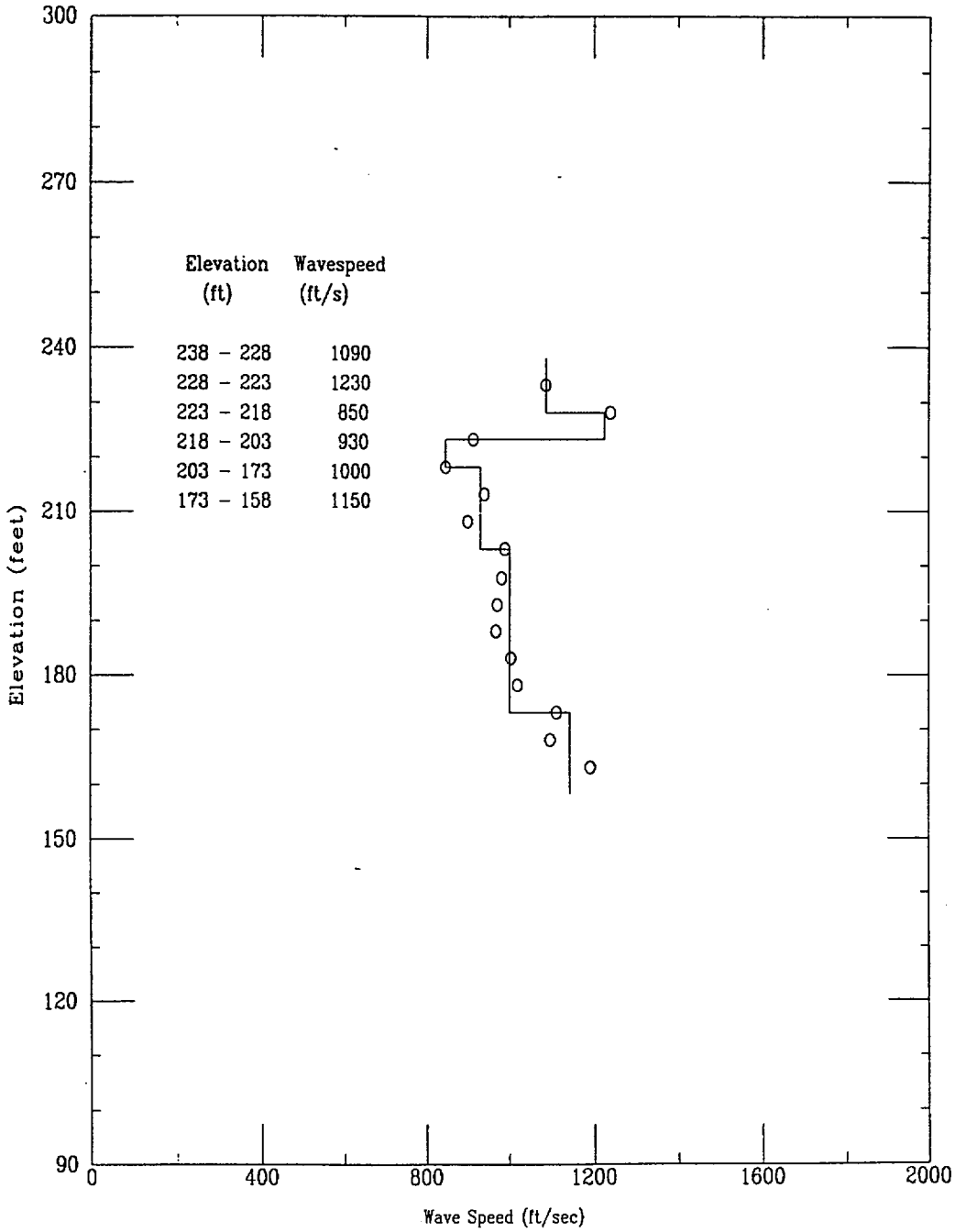
Compression Wave Time of Peak



File 409u001S

CPT-01S APPLIED RESEARCH ASSOCIATES, INC. 06/09/00

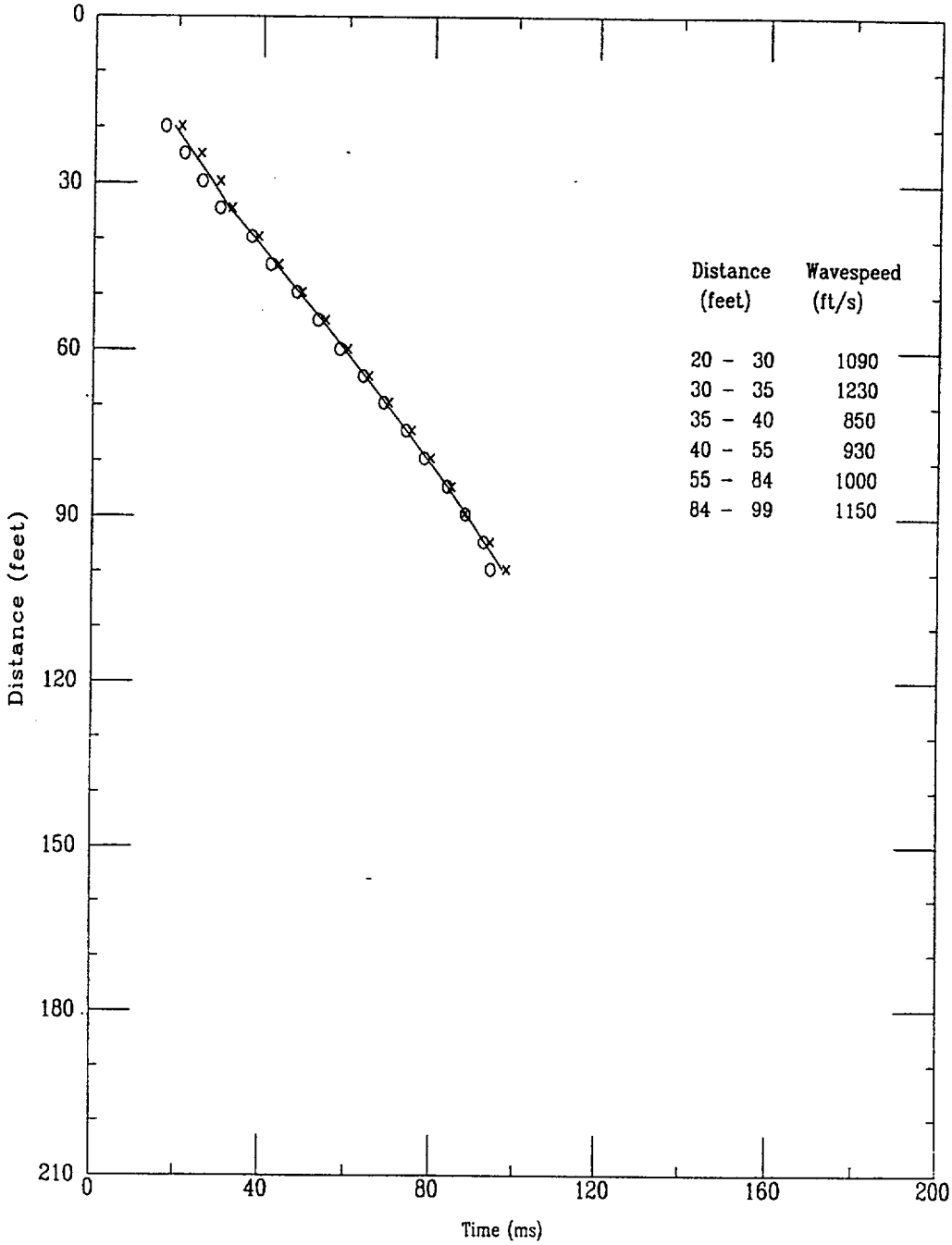
Shear Wave Speeds



File 409U001S

CPT-01S APPLIED RESEARCH ASSOCIATES, INC. 06/09/00

Shear Wave Time of Peak



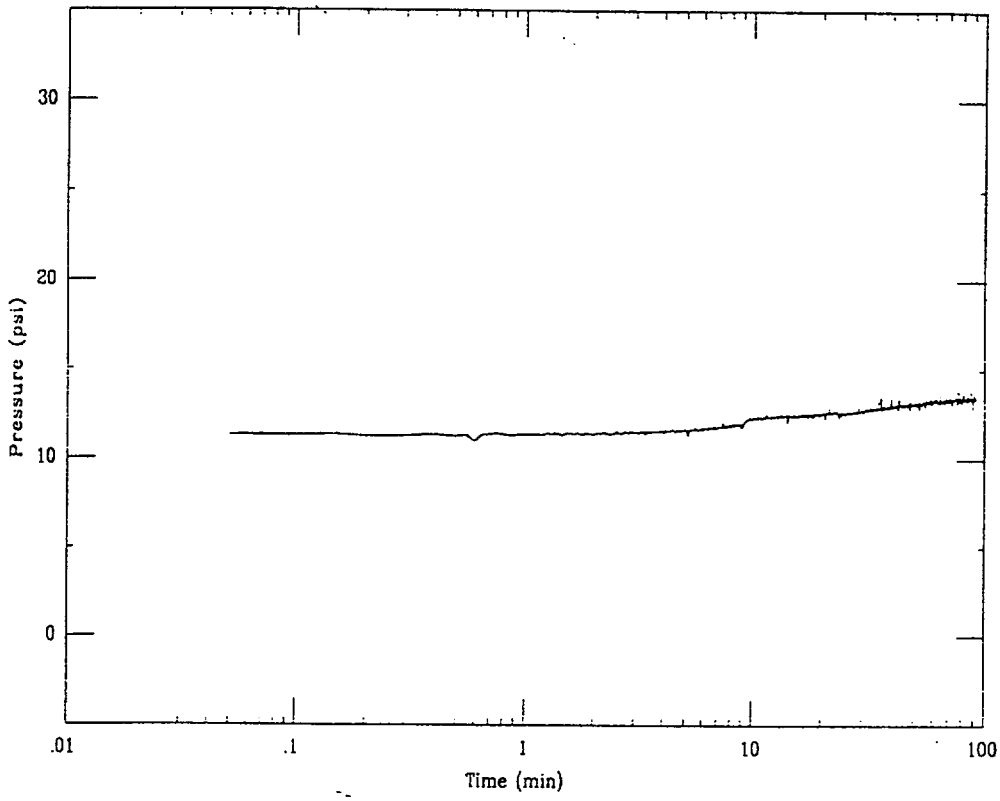
FILE 409U001S

APPENDIX D

DISSIPATION DATA

CPT-01S Applied Research Associates 06/09/00

Depth = 104.4 ft Max Pressure = 13.86 psi Pn = 13.47 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-01S
Test Date : 6/9/00

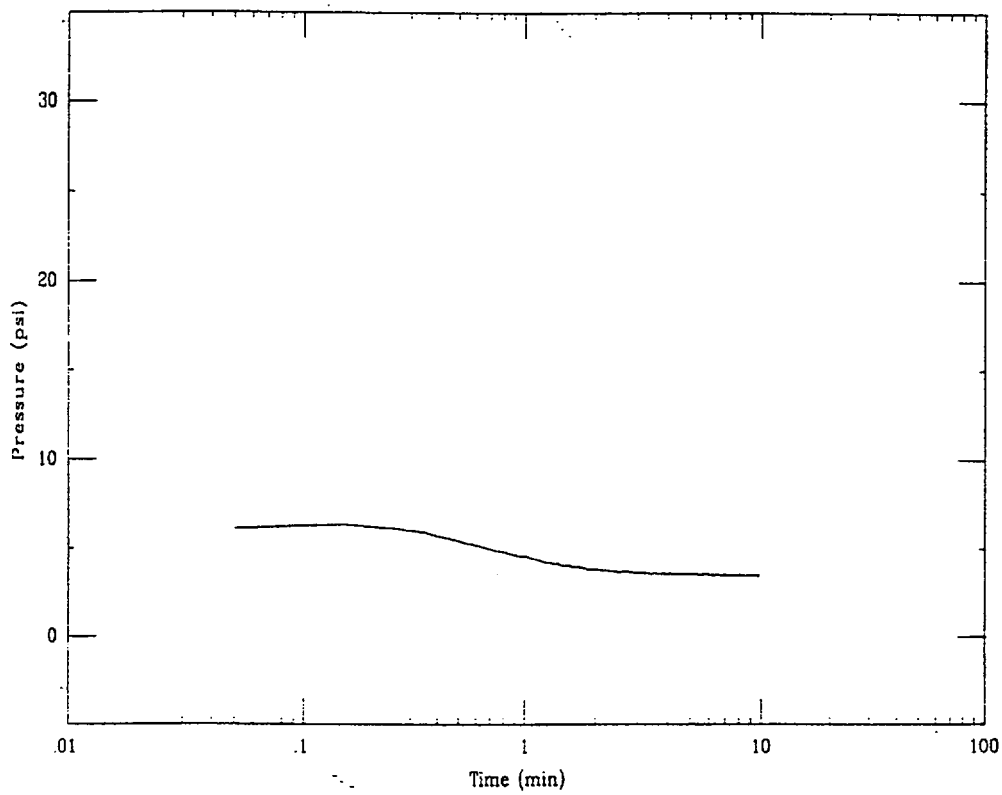
Northing : 80784.9 (ft)
Easting : 55554.0 (ft)
Surface Elevation : 258.2 (ft)
Water Table Elevation : 184.8 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev. (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	104.4	153.8	13.4	13.86								

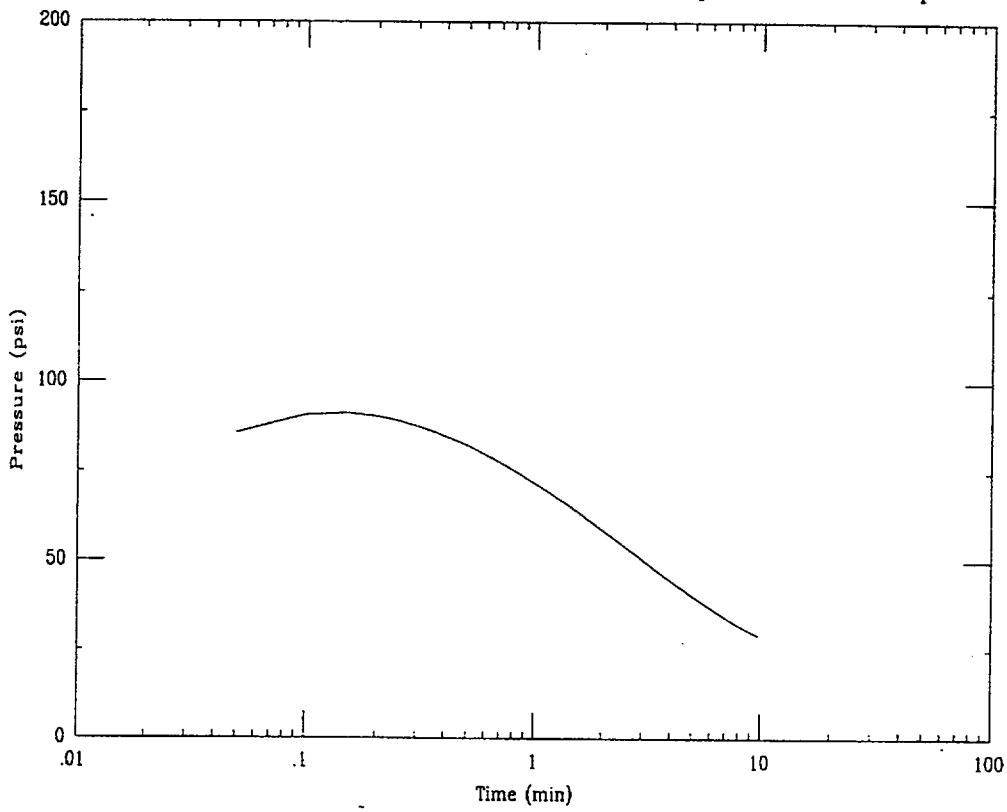
CPT-02R Applied Research Associates 06/14/00

Depth = 65.3 ft Max Pressure = 6.33 psi Pn = 3.46 psi



CPT-02R Applied Research Associates 06/14/00

Depth = 101.6 ft Max Pressure = 91.15 psi Pn = 29.54 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-02R
Test Date : 6/14/00

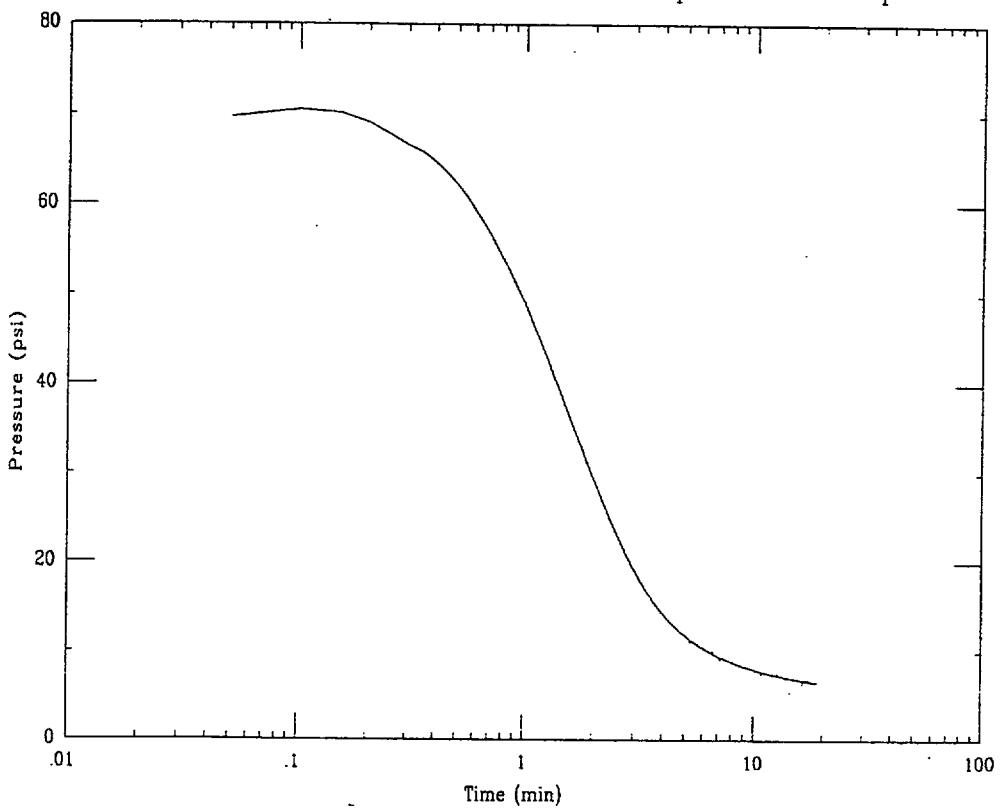
Northing : 80635.0 (ft)
Easting : 55616.4 (ft)
Surface Elevation : 257.8 (ft)
Water Table Elevation : 200.5 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (ln2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
	65.3	192.5	3.5	6.33	4.90	287.5	3.0	862.50	0.70	1.00E-01	6.47E-01	1.07E-05
	101.6	156.2	19.2	91.15	55.17	270.8	3.0	812.50	2.35	2.99E-02	1.93E-01	3.37E-06

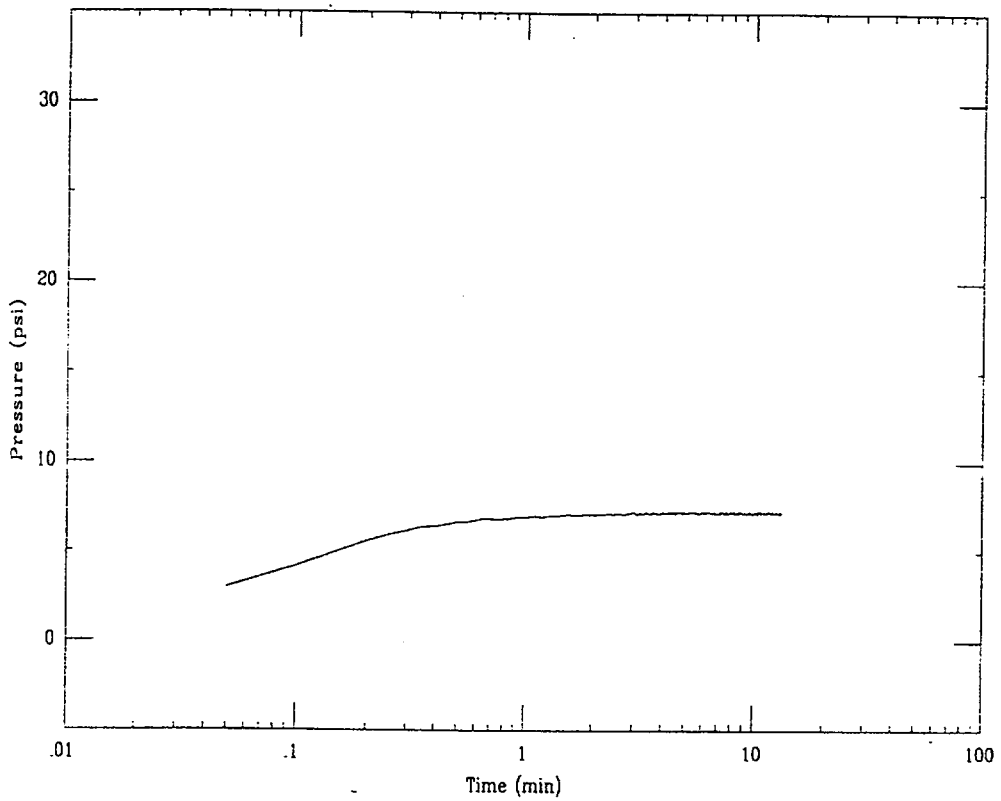
CPT-03S Applied Research Associates 06/08/00

Depth = 64.1 ft Max Pressure = 70.55 psi Pn = 6.61 psi



CPT-03S Applied Research Associates 06/08/00

Depth = 74.1 ft Max Pressure = 7.27 psi Pn = 7.20 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-03S
Test Date : 6/8/00

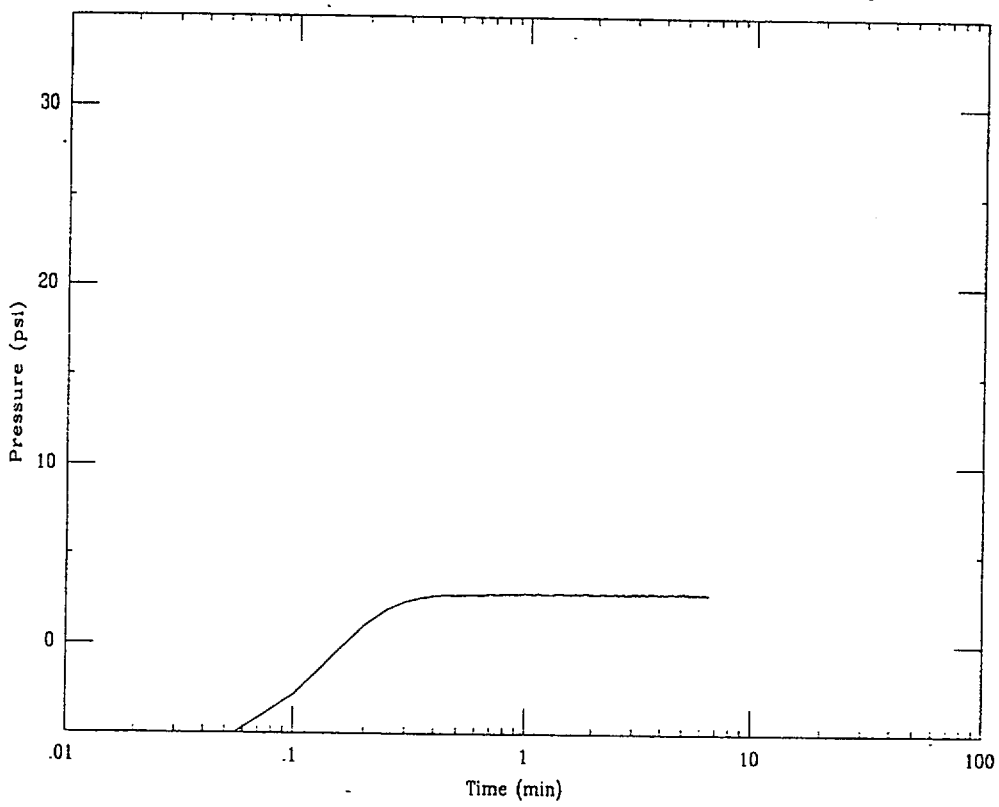
Northing : 80551.4 (ft)
Easting : 55700.8 (ft)
Surface Elevation : 253.2 (ft)
Water Table Elevation : 195.4 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
	64.1	189.1	2.7	70.55	36.64	308.3	2.5	770.83	1.60	4.39E-02	2.83E-01	5.22E-06
Soil Dilation	74.1	179.1	7.1	7.27								

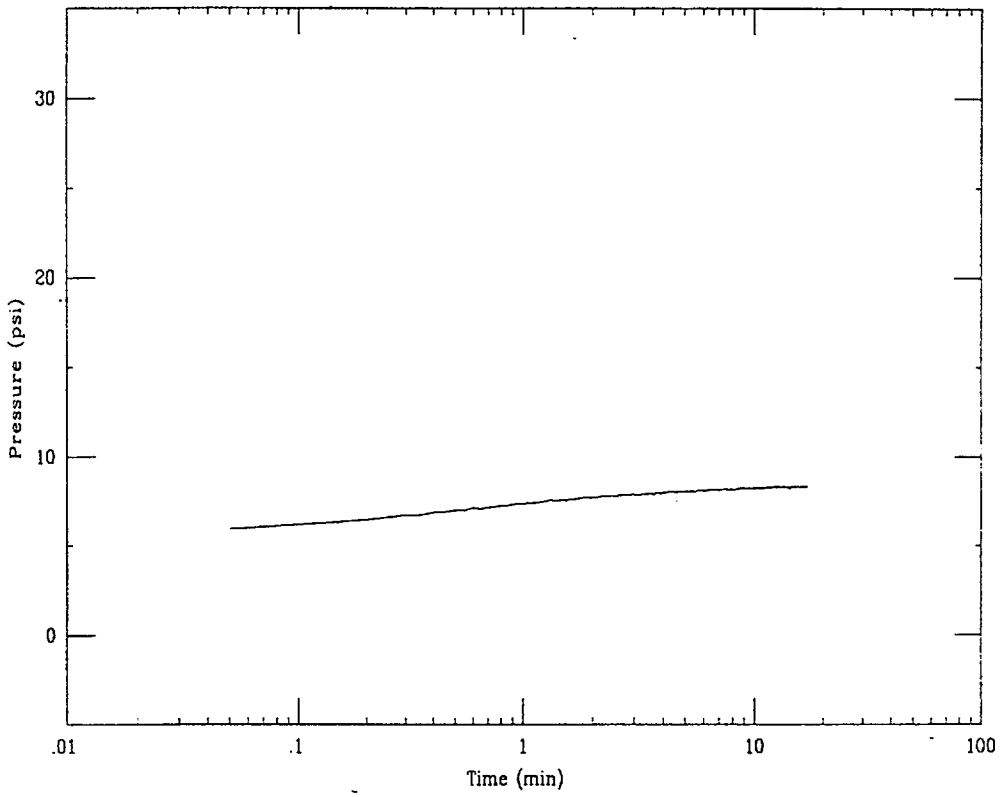
CPT-04R Applied Research Associates 06/17/00

Depth = 80.0 ft Max Pressure = 2.88 psi Pn = 2.76 psi



CPT-04R Applied Research Associates 06/17/00

Depth = 135.5 ft Max Pressure = 8.38 psi Pn = 8.34 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-04R
Test Date : 6/17/00

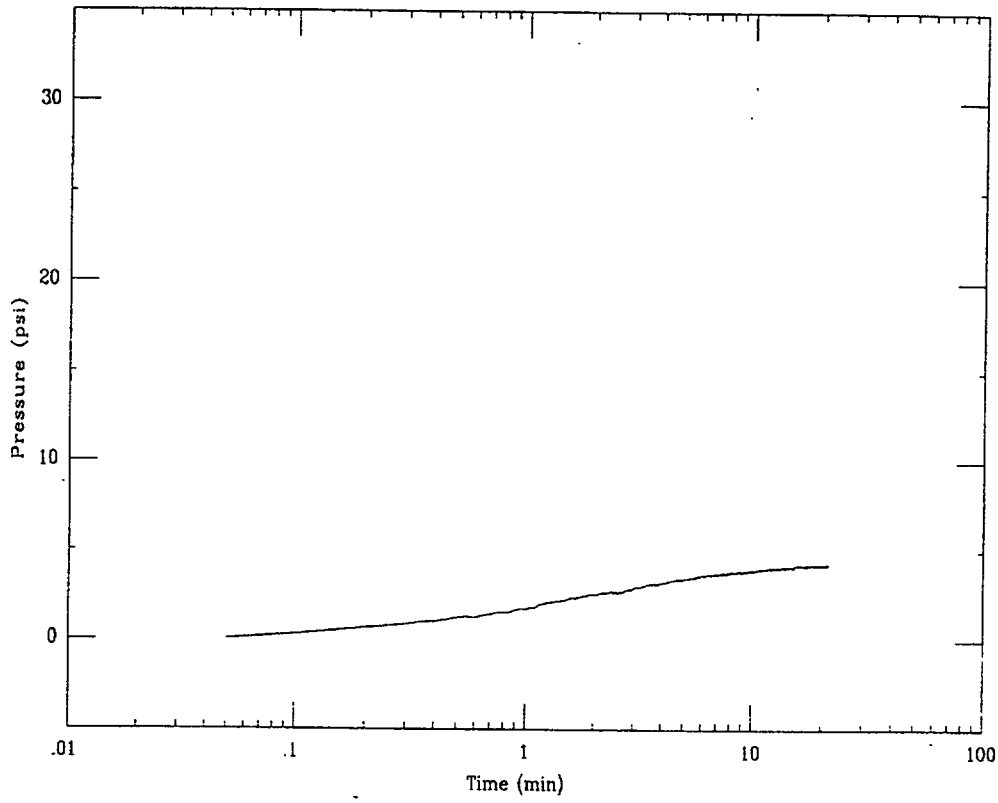
Northing : 80465.4 (ft)
Easting : 55320.8 (ft)
Surface Elevation : 272.6 (ft)
Water Table Elevation : 199.0 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	80.0	192.6	2.8	2.88								
Soil Dilation	135.5	137.1	26.8	8.38								

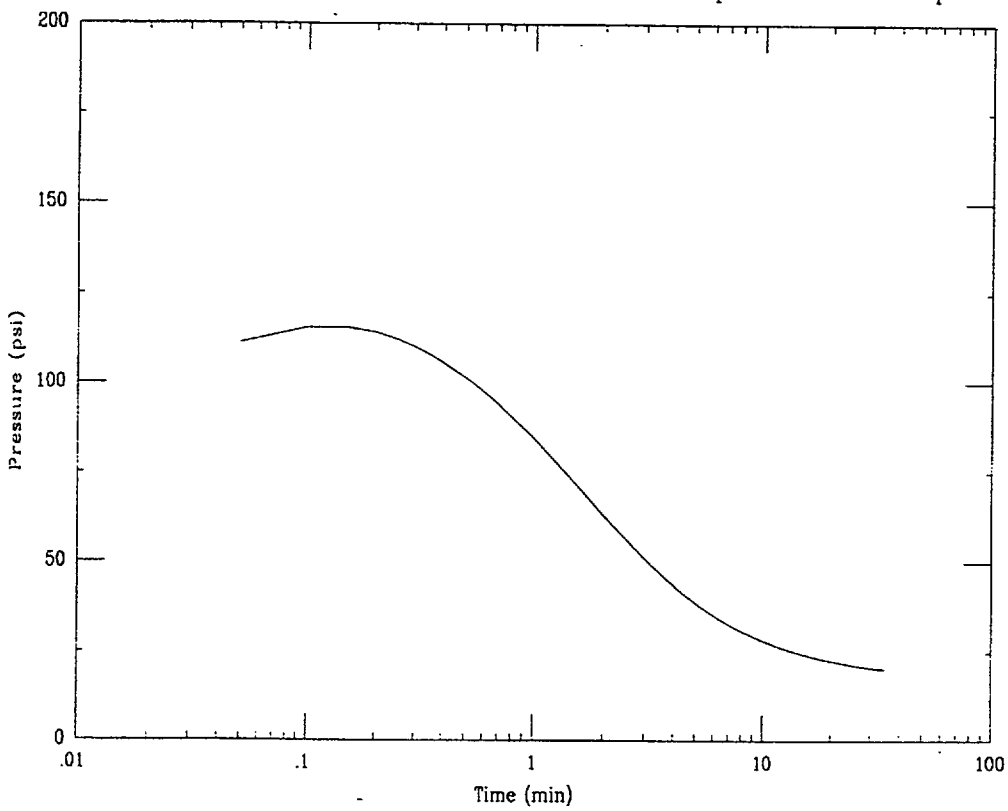
CPT-05S Applied Research Associates 06/08/00

Depth = 71.7 ft Max Pressure = 4.29 psi Pn = 4.29 psi



CPT-05S Applied Research Associates 06/08/00

Depth = 108.5 ft Max Pressure = 115.46 psi Pn = 20.25 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-05S
Test Date : 6/8/00

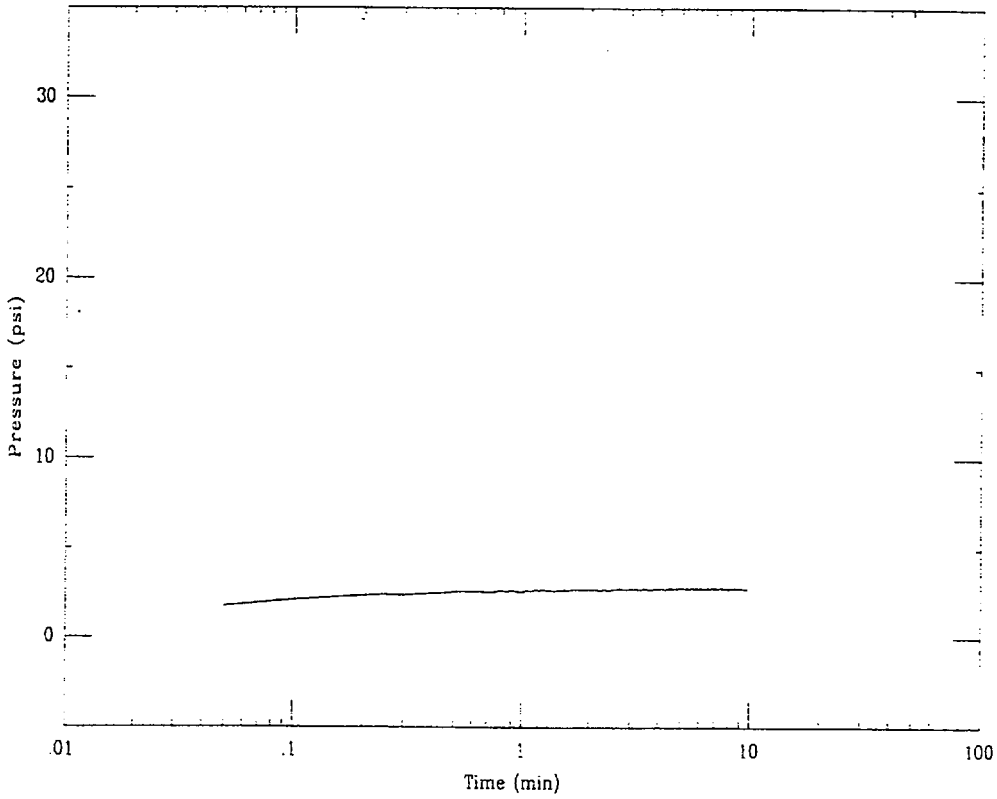
Northing : 80499.7 (ft)
Easting : 55478.5 (ft)
Surface Elevation : 264.5 (ft)
Water Table Elevation : 202.6 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	71.7	192.8	4.2	4.29								
	108.5	156.0	20.2	115.46	67.83	462.5	2.0	925.00	1.70	4.13E-02	2.66E-01	4.09E-06

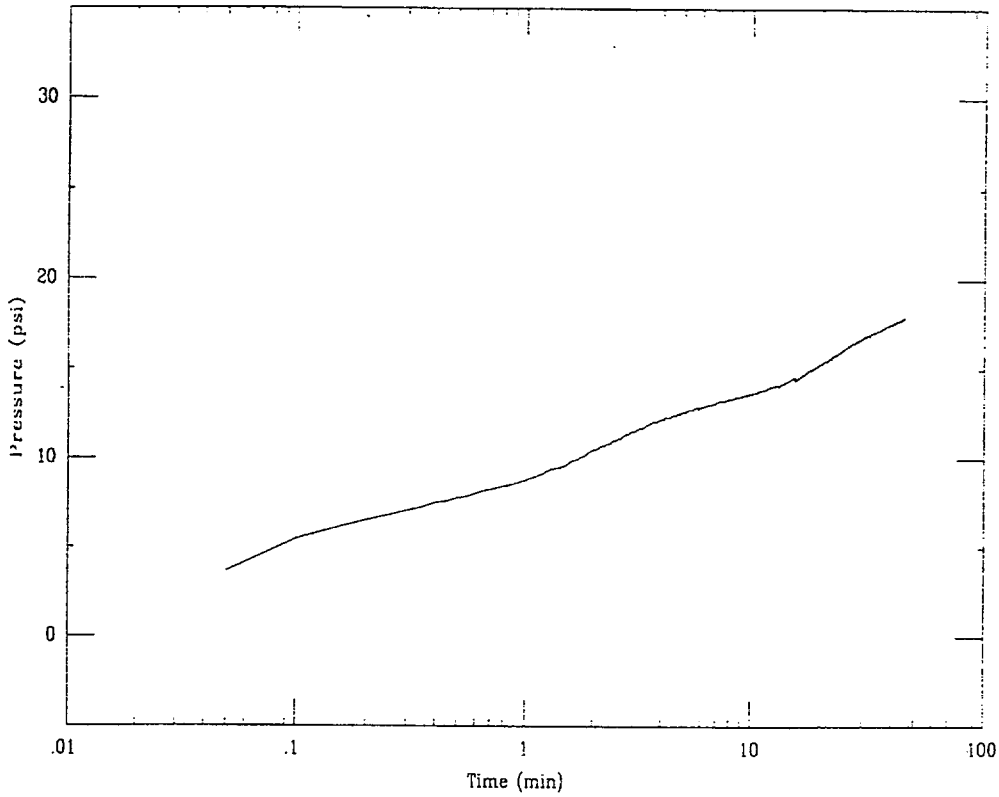
CPT-06R Applied Research Associates 06/15/00

Depth = 64.8 ft Max Pressure = 2.82 psi Pn = 2.75 psi



CPT-06R Applied Research Associates 06/14/00

Depth = 78.6 ft Max Pressure = 17.97 psi Pn = 17.91 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-06R
Test Date : 6/15/00

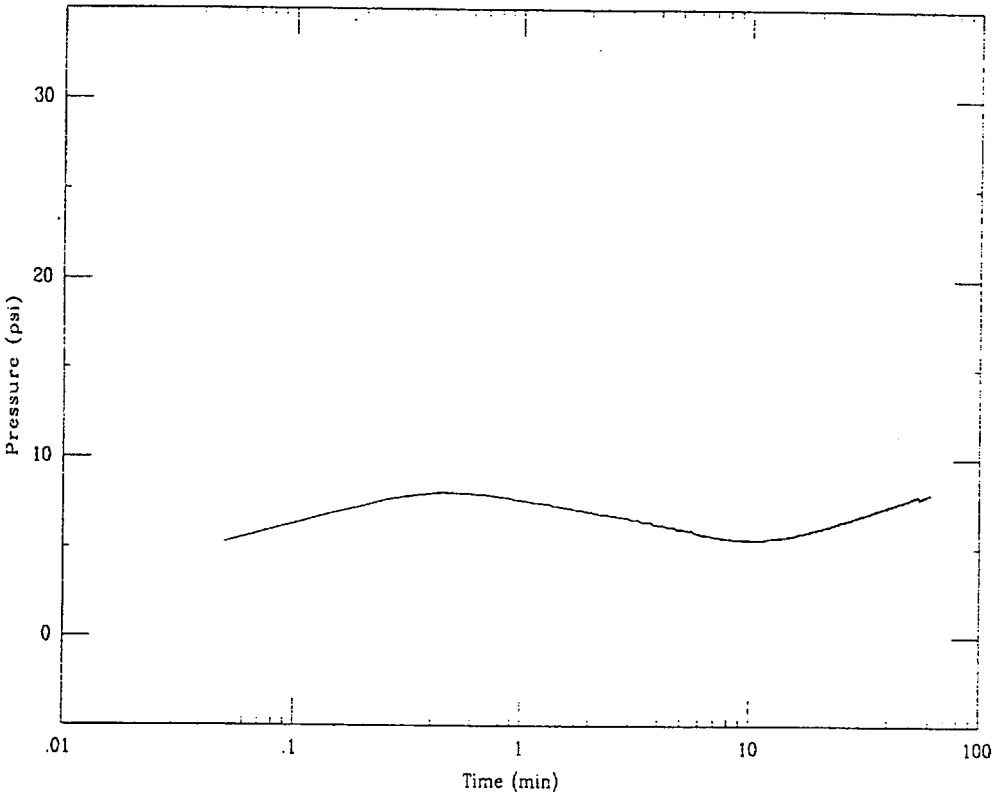
Northing : 80470.7 (ft)
Easting : 55633.2 (ft)
Surface Elevation : 256.9 (ft)
Water Table Elevation : 198.9 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	64.8	192.1	2.9	2.82								
Soil Dilation	78.6	178.3	8.9	17.97								

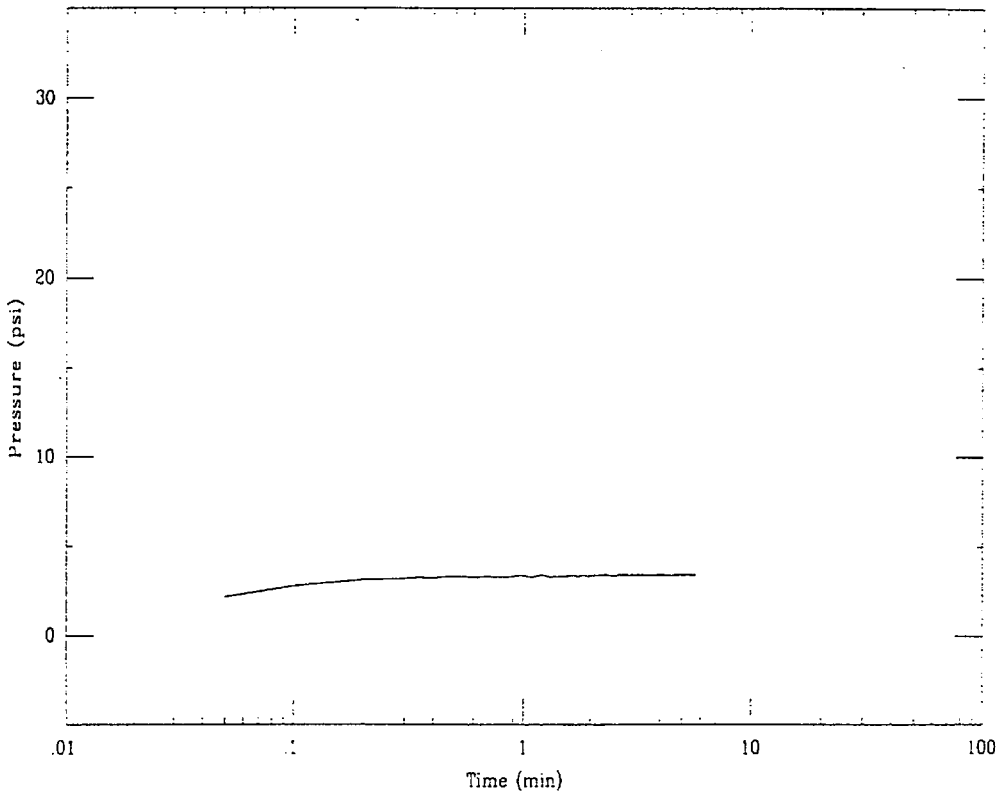
CPT-07R Applied Research Associates 06/19/00

Depth = 78.7 ft Max Pressure = 8.04 psi Pn = 8.01 psi



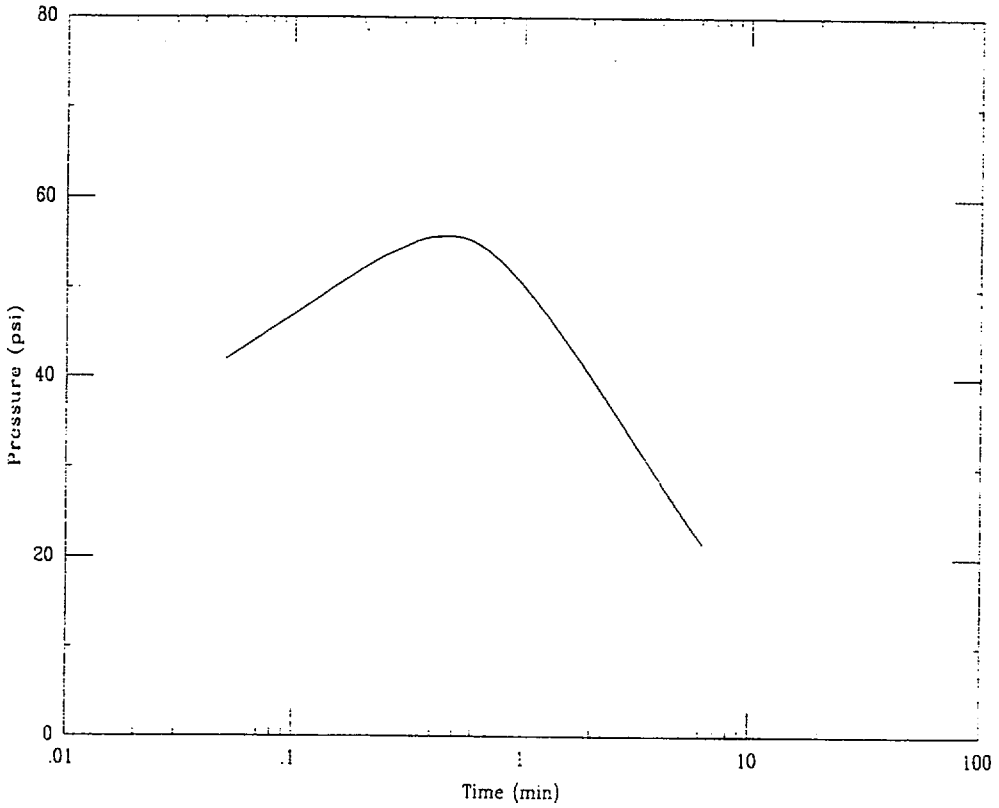
CPT-07R Applied Research Associates 06/19/00

Depth = 87.5 ft Max Pressure = 3.45 psi Pn = 3.42 psi



CPT-07R Applied Research Associates 06/19/00

Depth = 98.1 ft Max Pressure = 55.77 psi Pn = 22.05 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-07R
Test Date : 6/19/00

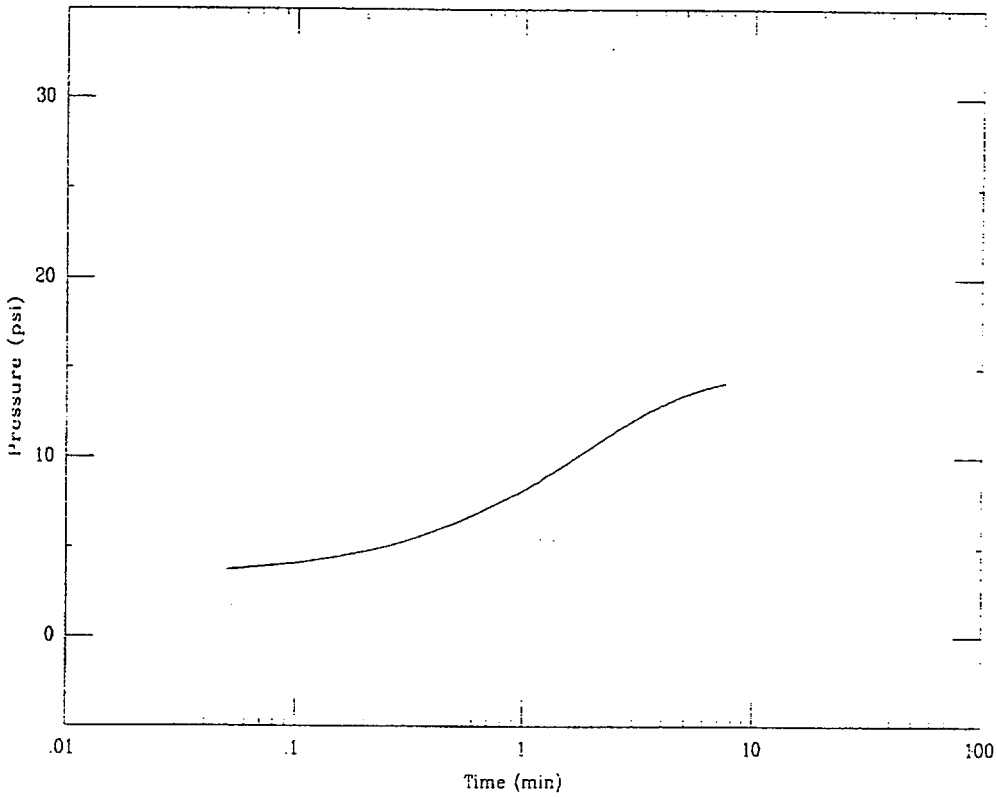
Northing : 80438.0 (ft)
Easting : 55228.2 (ft)
Surface Elevation : 280.2 (ft)
Water Table Elevation : 200.6 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Above GWT	78.7	201.5	-0.4									
Soil Dilation	87.5	192.7	3.4	3.45								
	98.1	182.1	8.0	55.77	31.89	227.8	3.0	683.33	3.25	2.16E-02	1.39E-01	2.90E-06

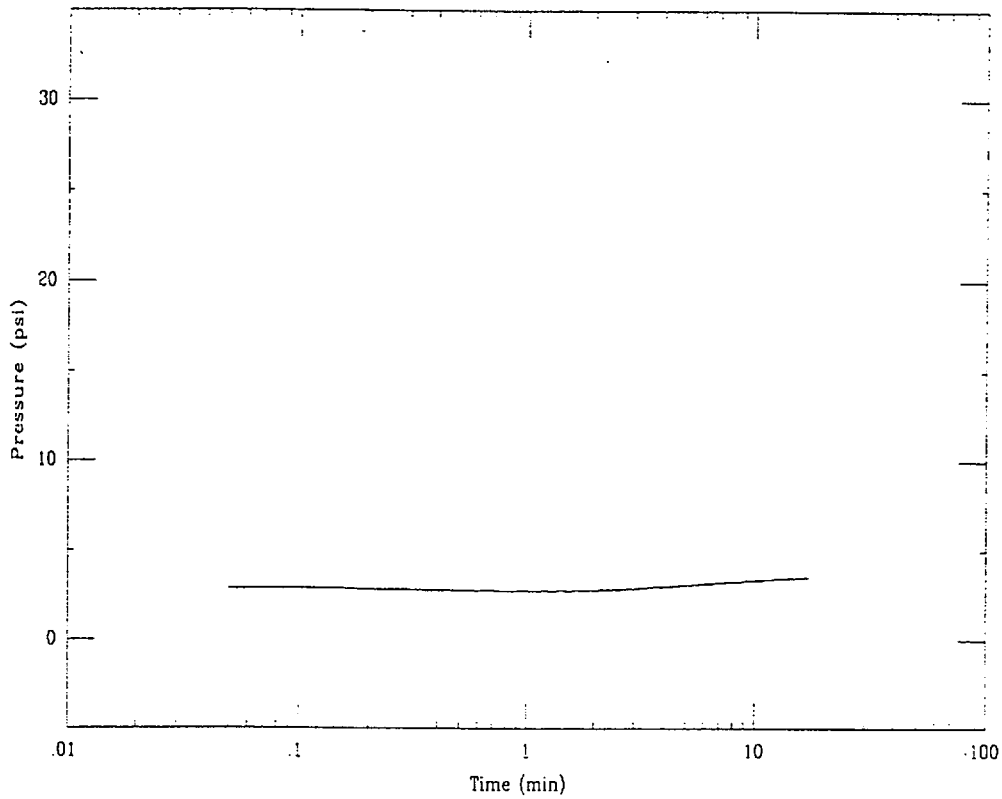
CPT-08S Applied Research Associates 06/02/00

Depth = 111.4 ft Max Pressure = 14.18 psi Pn = 14.13 psi



CPT-08S Applied Research Associates 06/02/00

Depth = 140.1 ft Max Pressure = 3.51 psi Pn = 3.51 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-08S
Test Date : 6/2/00

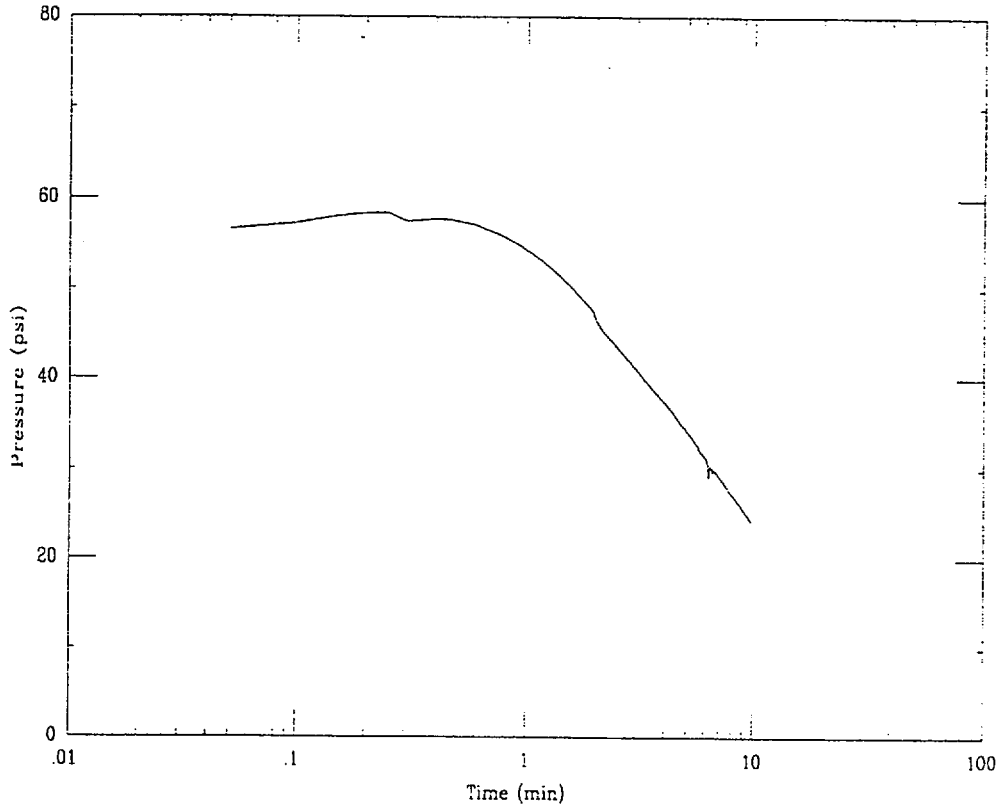
Northing : 80393.7 (ft)
Easting : 55329.1 (ft)
Surface Elevation : 273.0 (ft)
Water Table Elevation : 198.4 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	111.4	161.6	15.9	14.18								
Soil Dilation	140.1	132.9	28.4	3.51								

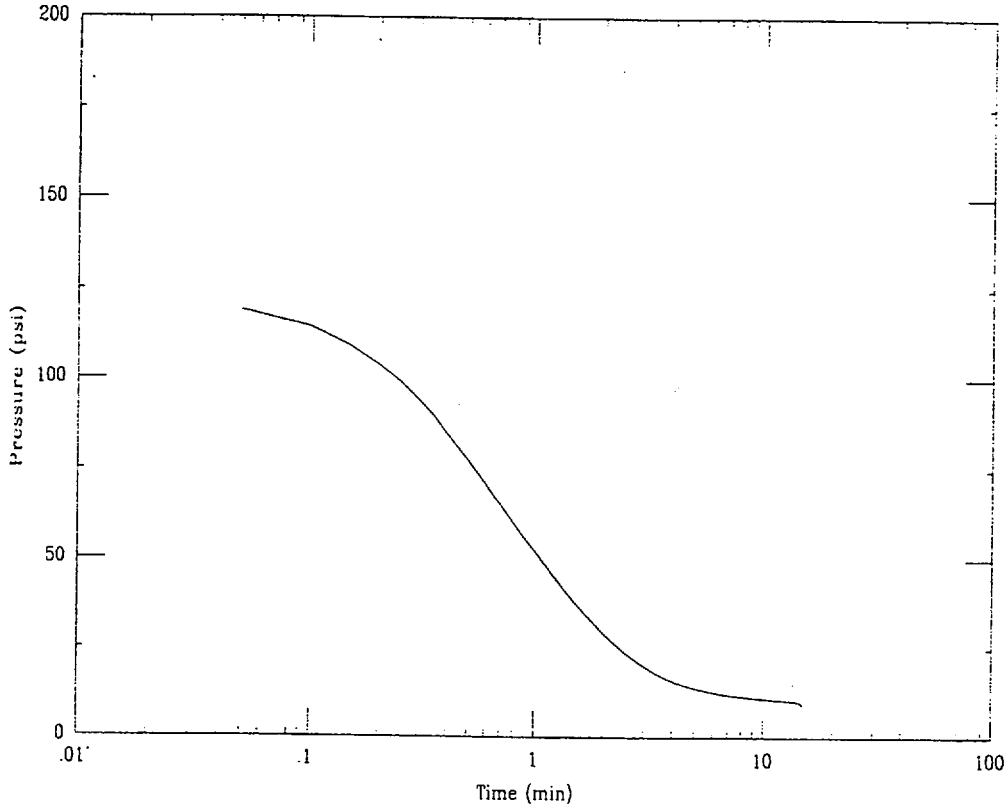
CPT-09R Applied Research Associates 06/20/00

Depth = 50.6 ft Max Pressure = 58.39 psi Pn = 24.66 psi



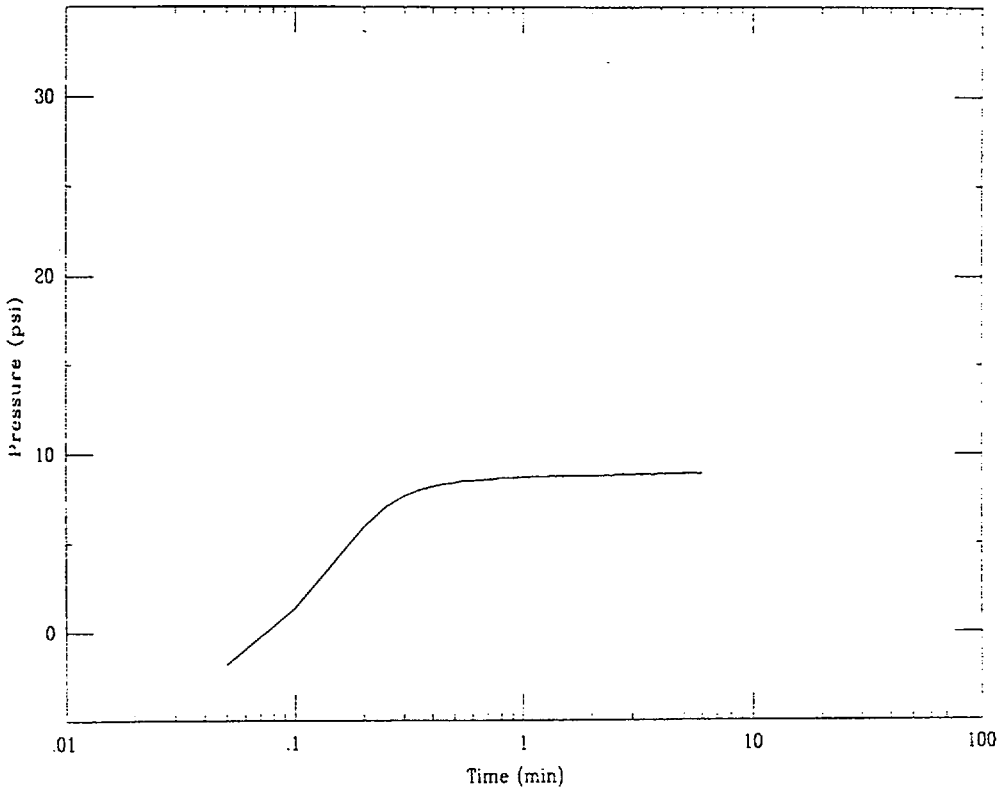
CPT-09R Applied Research Associates 06/20/00

Depth = 80.7 ft Max Pressure = 119.00 psi Pn = 9.70 psi



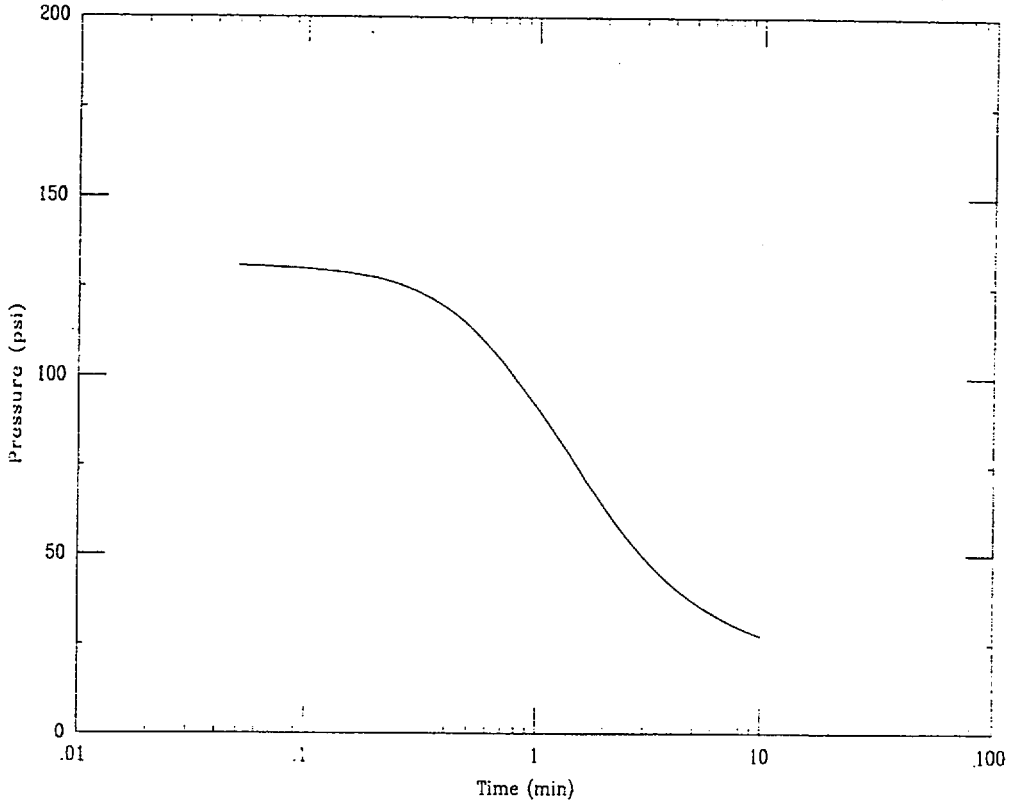
CPT-09R Applied Research Associates 06/21/00

Depth = 88.0 ft Max Pressure = 8.94 psi Pn = 8.91 psi



CPT-09R Applied Research Associates 06/21/00

Depth = 112.3 ft Max Pressure = 130.69 psi Pn = 27.56 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-09R
Test Date : 6/20/00

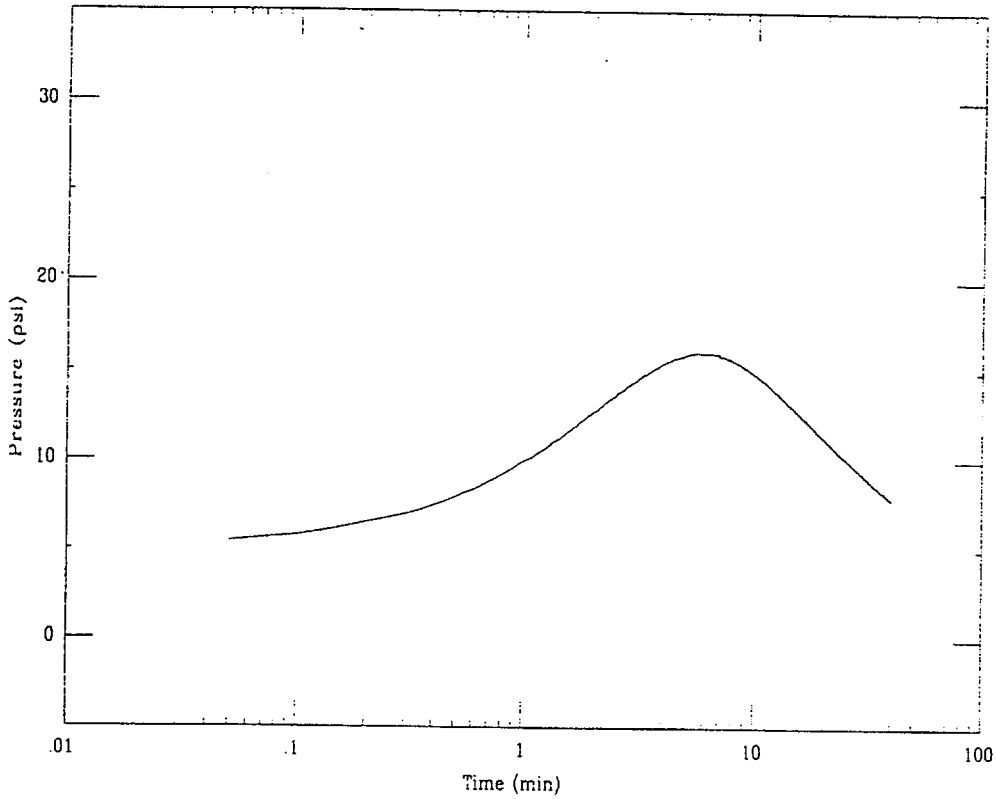
Northing : 80394.0 (ft)
Easting : 55445.7 (ft)
Surface Elevation : 266.2 (ft)
Water Table Elevation : 199.2 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Above GWT	50.6	215.6	-7.1									
	80.7	185.5	5.9	119.00	62.47	395.8	2.5	989.58	0.78	9.00E-02	5.80E-01	8.34E-06
Soil Dilation	88.1	178.1	9.1	8.94								
	112.3	153.9	19.6	130.69	75.16	336.1	2.5	840.28	1.50	4.68E-02	3.02E-01	5.11E-06

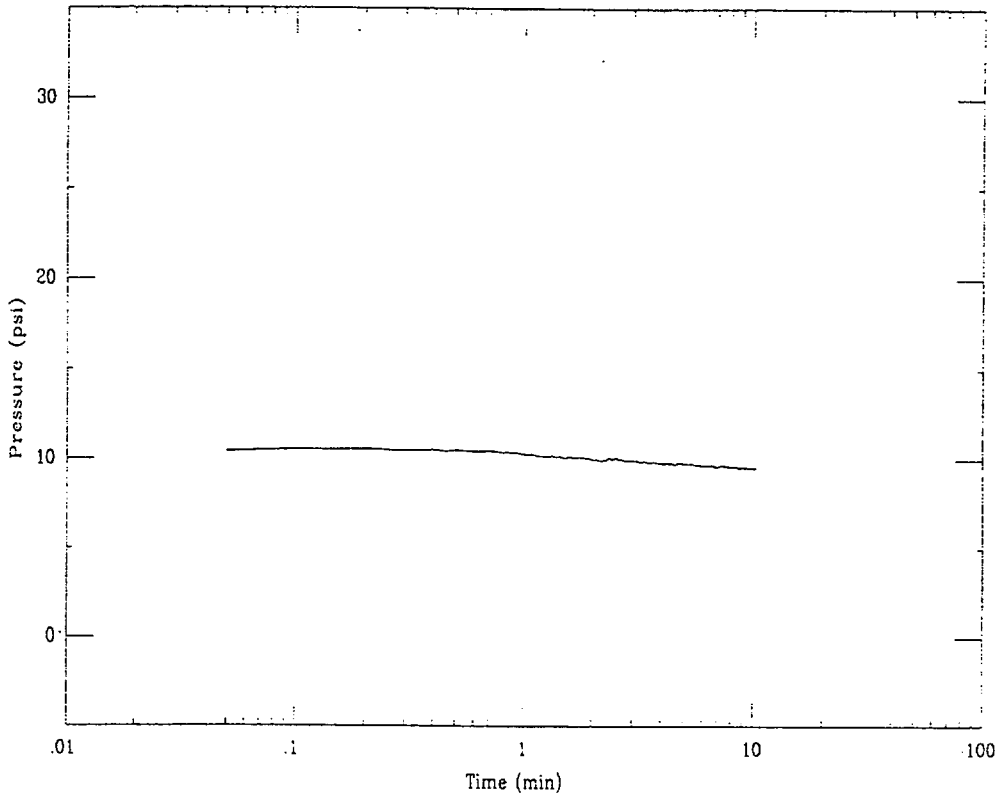
CPT-10R Applied Research Associates 06/20/00

Depth = 45.6 ft Max Pressure = 16.13 psi Pn = 7.91 psi



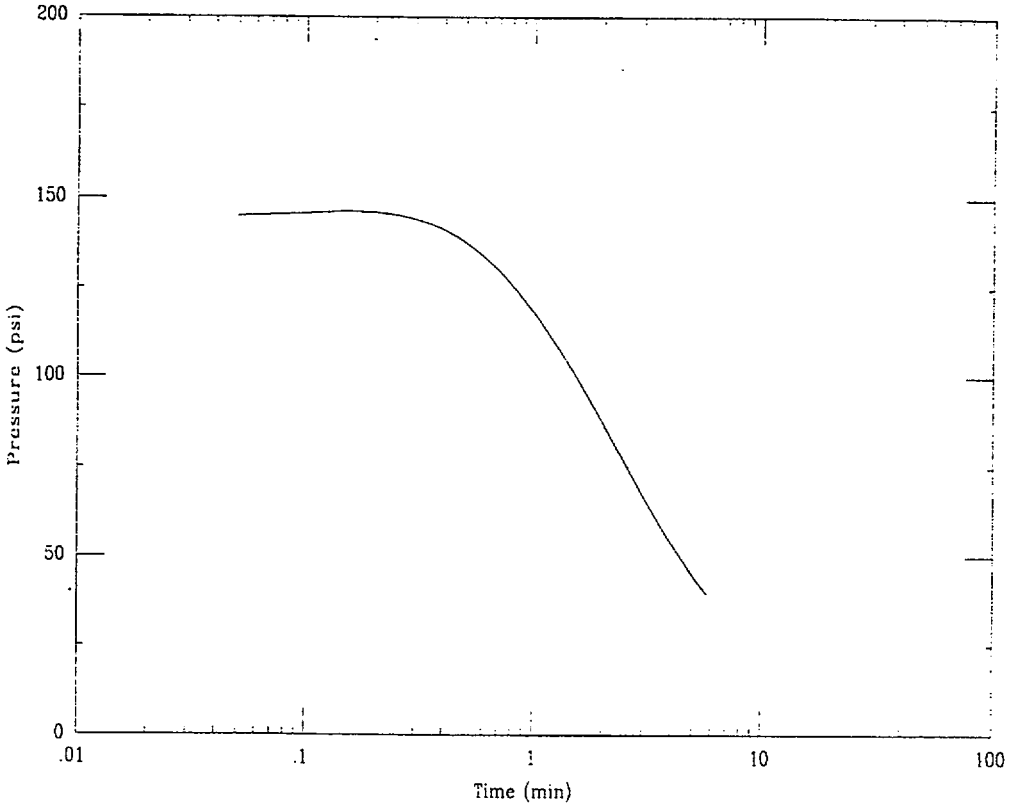
CPT-10R Applied Research Associates 06/20/00

Depth = 85.3 ft Max Pressure = 10.57 psi Pn = 9.55 psi



CPT-10R Applied Research Associates 06/20/00

Depth = 104.9 ft Max Pressure = 146.39 psi Pn = 41.03 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-10R
Test Date : 6/20/00

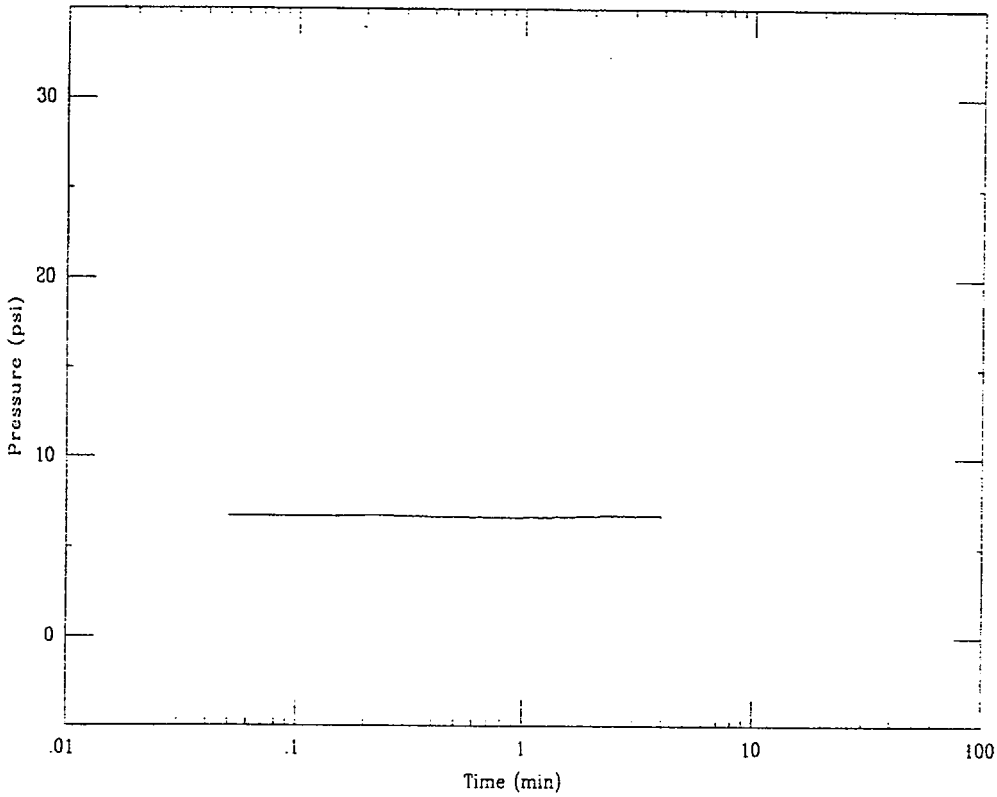
Northing : 80406.7 (ft)
Easting : 55527.1 (ft)
Surface Elevation : 261.9 (ft)
Water Table Elevation : 194.9 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Above GWT	45.6	216.3	-9.3									
t 50% not reached	85.3	176.6	7.9	10.57	9.25							
	104.9	157.0	16.4	146.39	81.41	359.7	2.5	899.31	2.25	3.12E-02	2.01E-01	3.18E-06

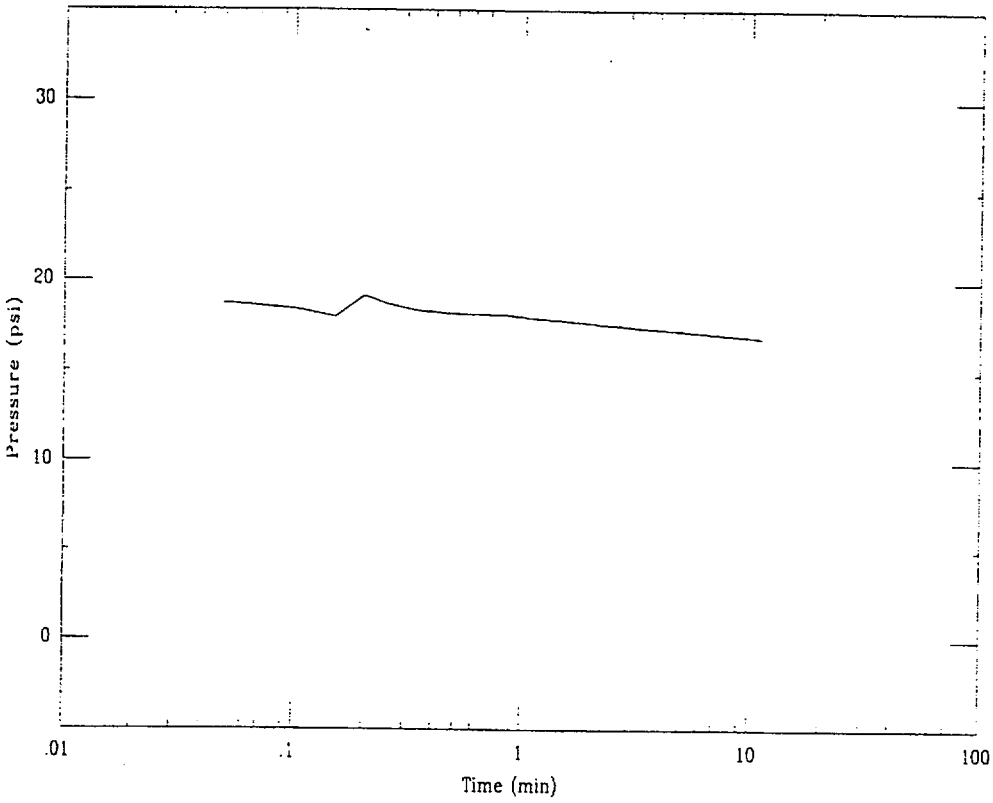
CPT-11S Applied Research Associates 06/02/00

Depth = 78.0 ft Max Pressure = 6.80 psi Pn = 6.78 psi



CPT-11S Applied Research Associates 06/02/00

Depth = 106.4 ft Max Pressure = 19.14 psi Pn = 16.87 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-11S
Test Date : 6/2/00

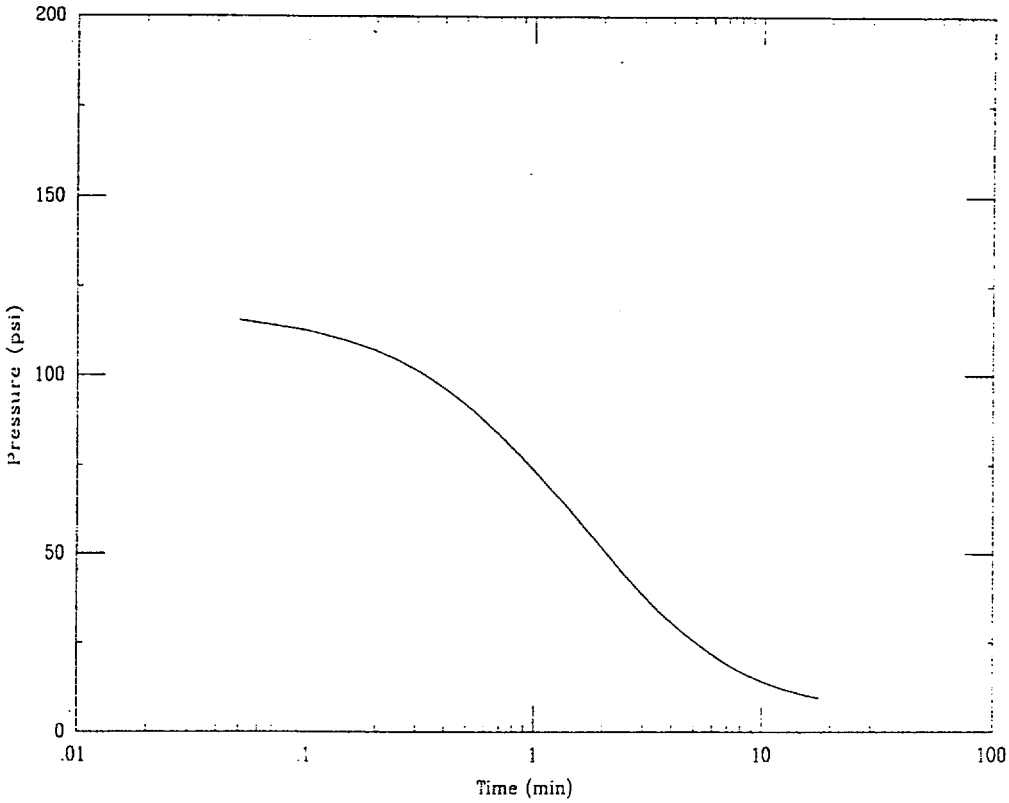
Northing : 80394.0 (ft)
Easting : 55624.1 (ft)
Surface Elevation : 258.5 (ft)
Water Table Elevation : 196.1 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Immediate dissip.	78.0	180.5	6.8	6.80								
	106.4	152.1	19.1	19.14	19.10	2455.6	1.0	2455.56	0.20	3.51E-01	2.26E100	1.31E-05

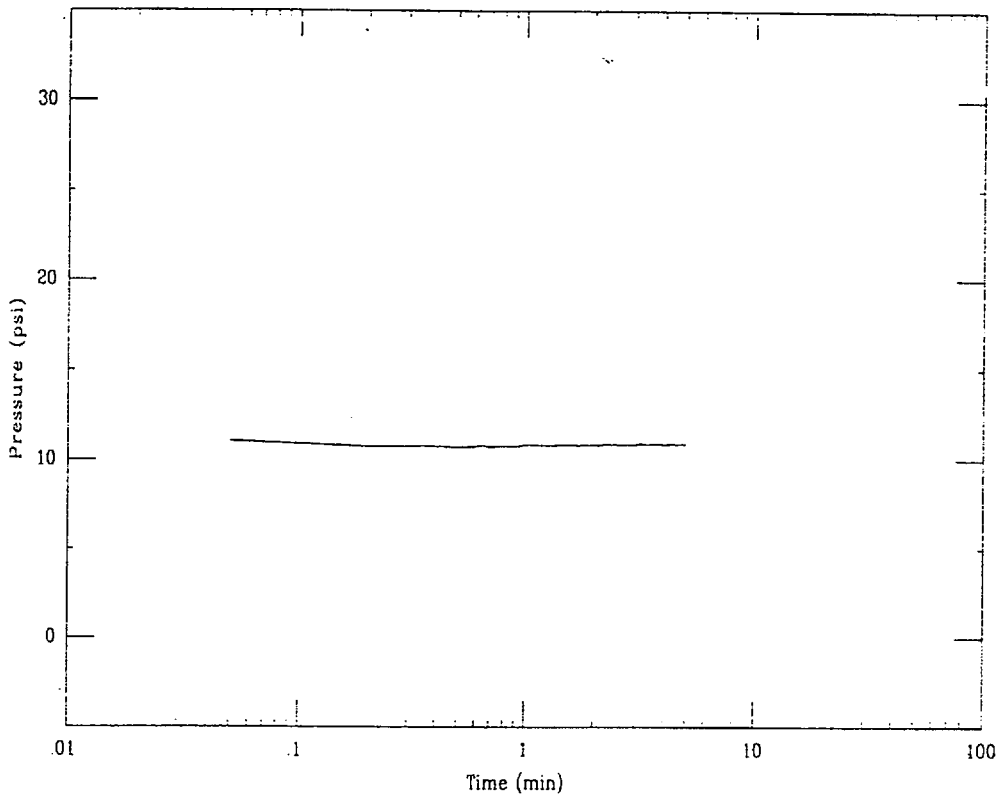
Applied Research Associates 06/23/00

Depth = 67.4 ft Max Pressure = 115.44 psi Pn = 9.53 psi



CPT-12R Applied Research Associates 06/23/00

Depth = 86.0 ft Max Pressure = 11.03 psi Pn = 10.88 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-12R
Test Date : 6/23/00

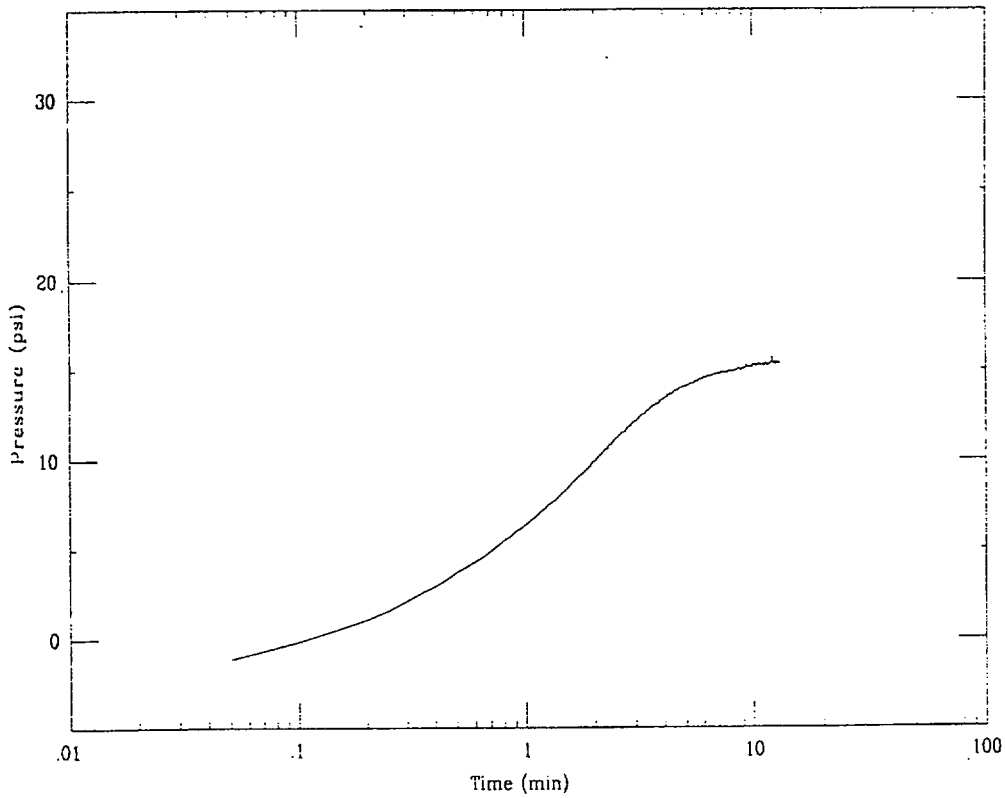
Northing : 80373.1 (ft)
Easting : 55747.5 (ft)
Surface Elevation : 254.5 (ft)
Water Table Elevation : 193.5 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
	67.4	187.1	2.8	115.44	59.11	238.9	3.0	716.67	1.60	4.39E-02	2.83E-01	5.61E-06
Immediate dissip.	86.0	168.5	10.8	11.03								

CPT-13S Applied Research Associates 06/05/00

Depth = 135.5 ft Max Pressure = 15.74 psi Pn = 15.74 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-13S
Test Date : 6/5/00

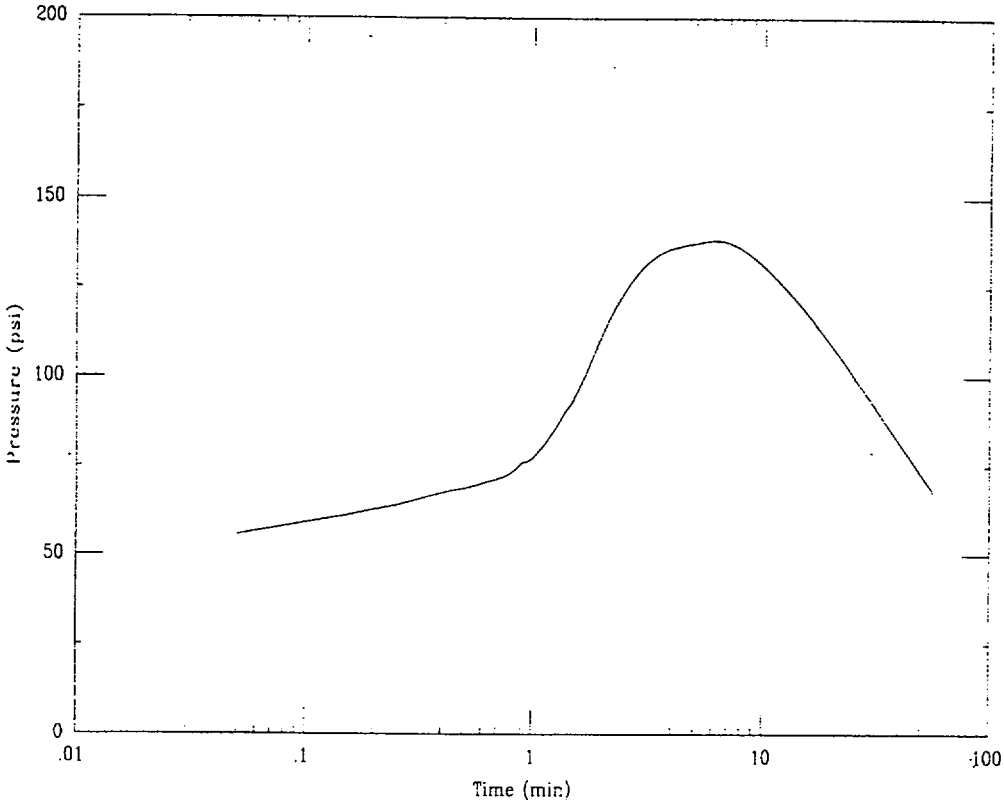
Northing : 80262.2 (ft)
Easting : 55233.6 (ft)
Surface Elevation : 296.7 (ft)
Water Table Elevation : 196.7 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	135.5	161.2	15.4	15.74								

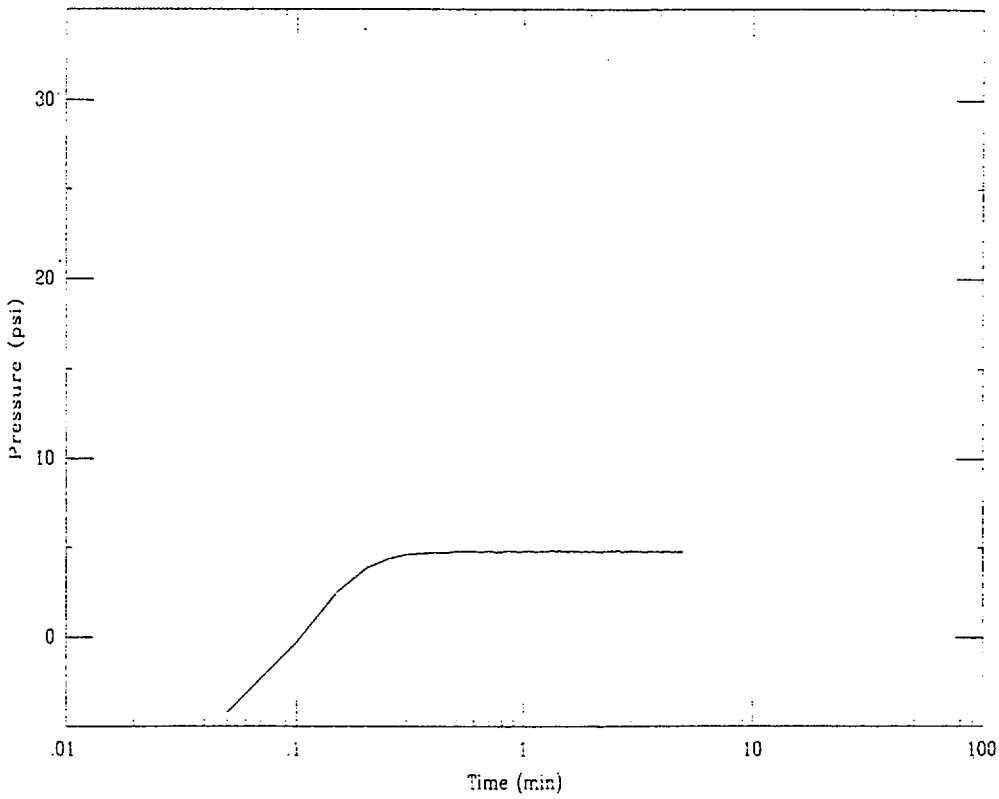
CPT-14R Applied Research Associates 06/19/00

Depth = 68.9 ft Max Pressure = 138.25 psi Pn = 67.91 psi



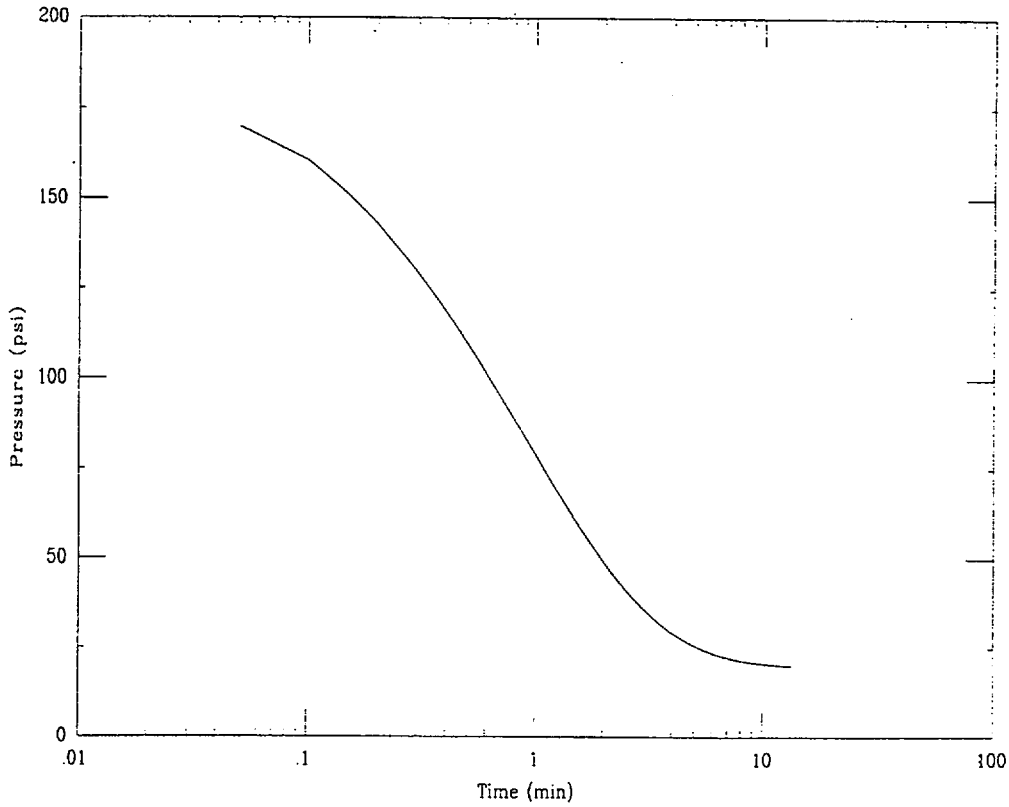
CPT-14R Applied Research Associates 06/19/00

Depth = 85.9 ft Max Pressure = 4.85 psi Pn = 4.76 psi



CPT-14R Applied Research Associates 06/19/00

Depth = 123.7 ft Max Pressure = 169.92 psi Pn = 20.14 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-14R
Test Date : 6/19/00

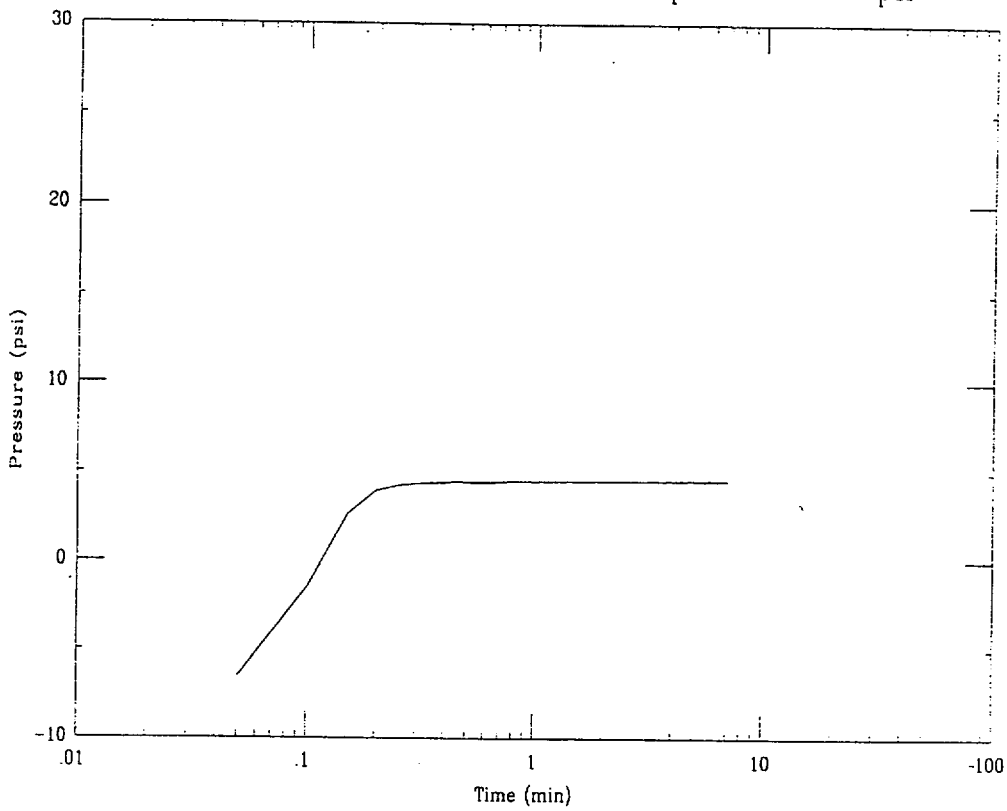
Northing : 80292.7 (ft)
Easting : 55330.8 (ft)
Surface Elevation : 276.0 (ft)
Water Table Elevation : 201.0 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Above GWT	68.9	207.1	-2.6									
Soil Dilation	85.9	190.1	4.7	4.85								
	123.7	152.3	21.1	169.92	95.51	331.9	2.5	829.86	0.70	1.00E-01	6.47E-01	1.11E-05

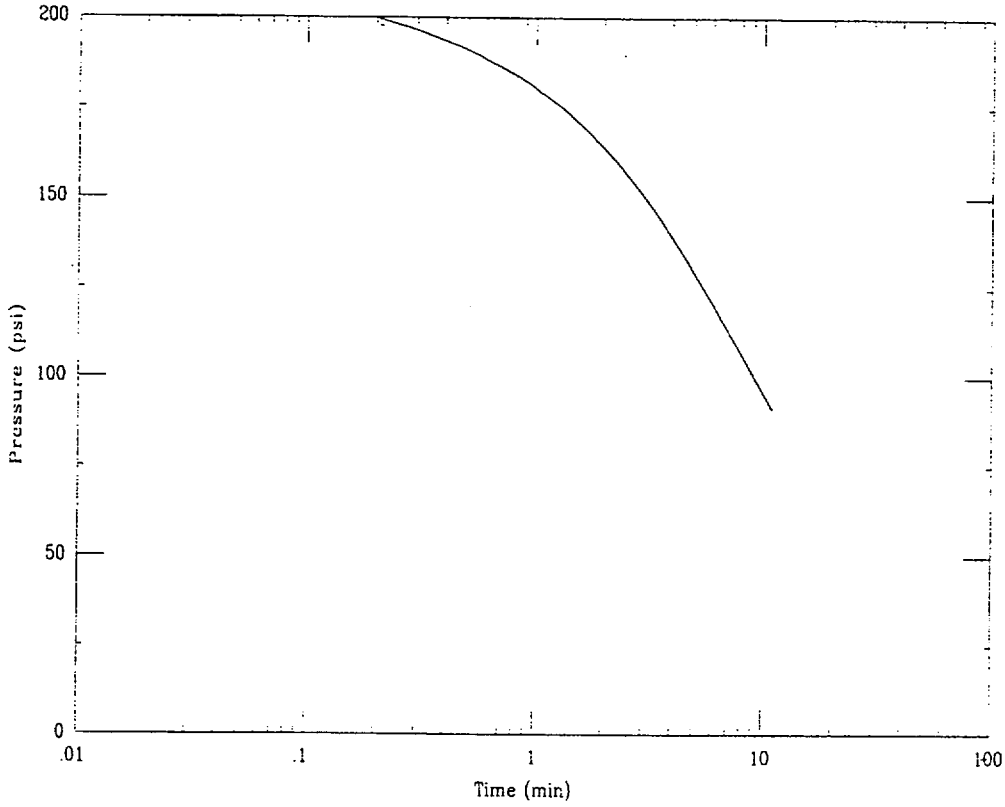
CPT-15R Applied Research Associates 06/22/00

Depth = 79.0 ft Max Pressure = 4.60 psi Pn = 4.55 psi



CPT-15R Applied Research Associates 06/22/00

Depth = 114.9 ft Max Pressure = 205.75 psi Pn = 92.09 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-15R
Test Date : 6/22/00

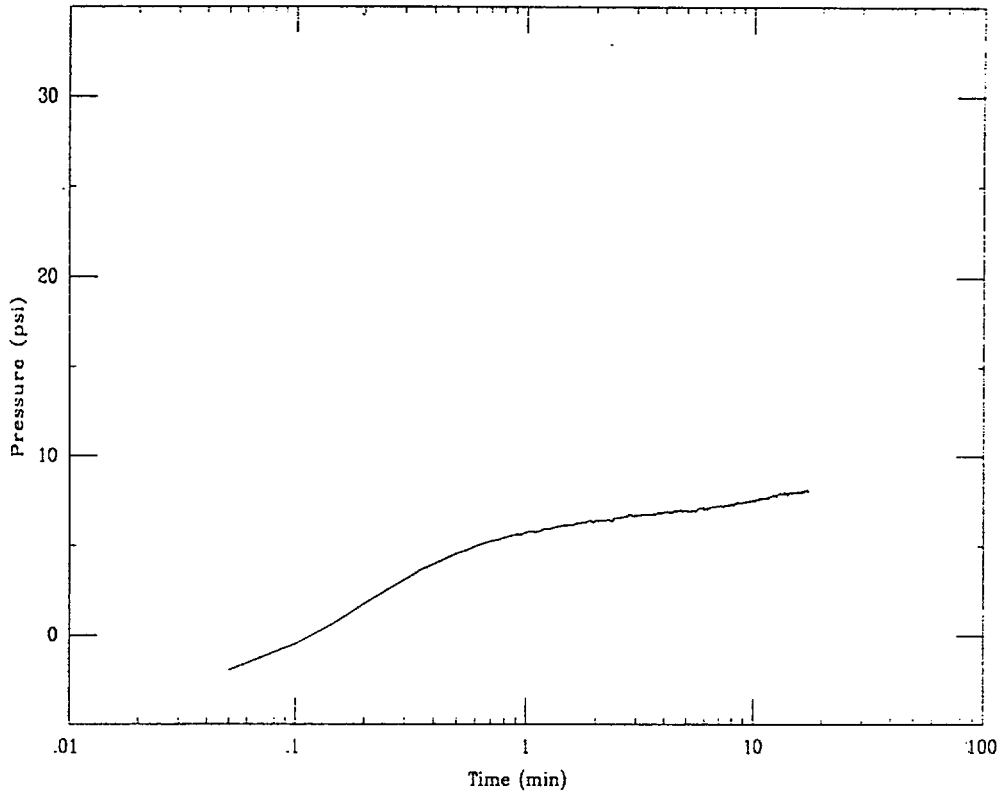
Northing : 80295.0 (ft)
Easting : 55462.7 (ft)
Surface Elevation : 269.1 (ft)
Water Table Elevation : 200.6 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	79.0	190.1	4.6	4.60								
	114.9	154.2	20.1	205.75	112.93	361.1	2.5	902.78	7.11	9.87E-03	6.37E-02	1.00E-06

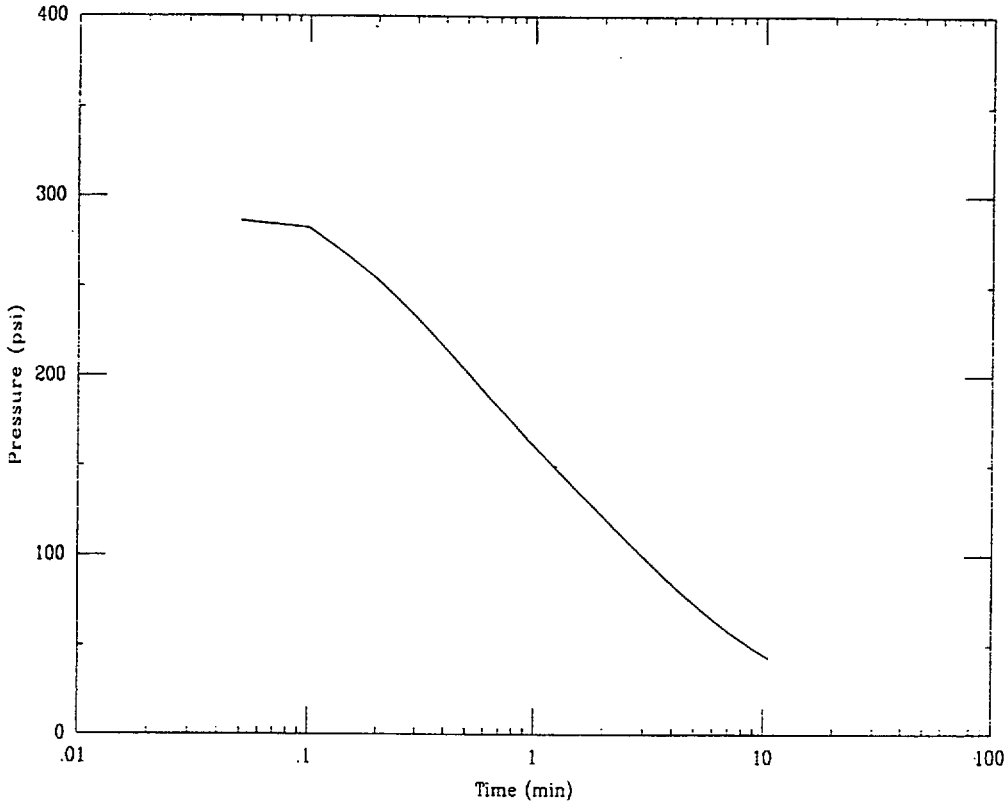
CPT-16S Applied Research Associates 06/08/00

Depth = 84.7 ft Max Pressure = 8.13 psi Pn = 8.13 psi



CPT-16S Applied Research Associates 06/08/00

Depth = 116.1 ft Max Pressure = 286.03 psi Pn = 42.00 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-16S
Test Date : 6/8/00

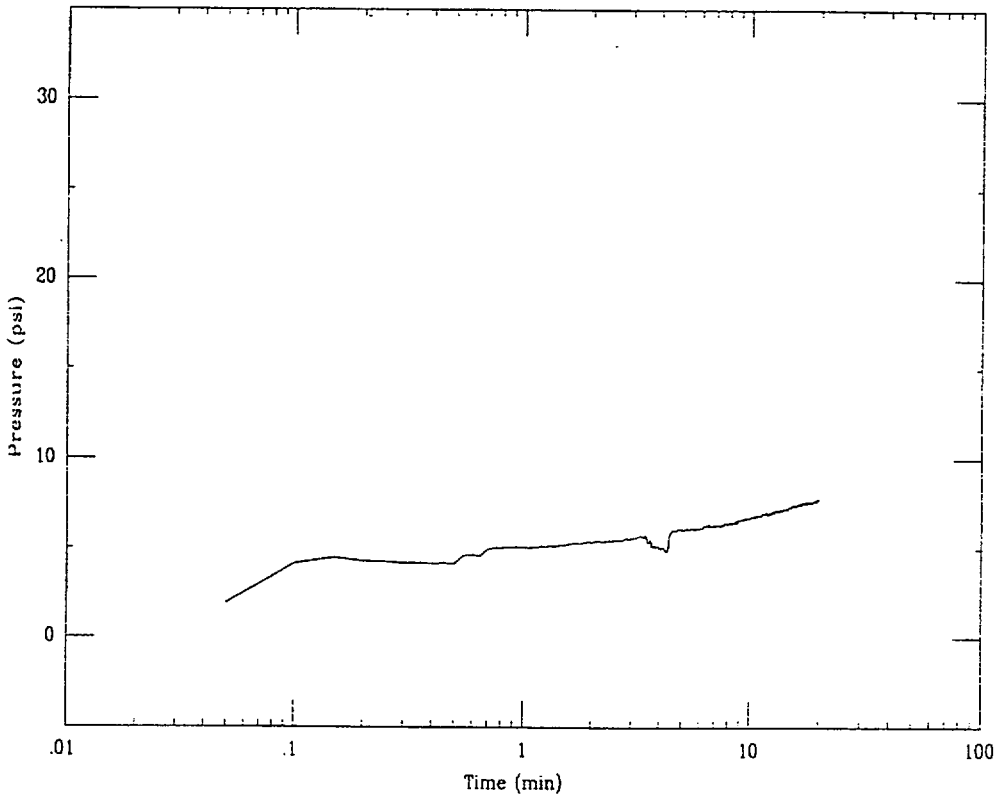
Northing : 80281.0 (ft)
Easting : 55628.6 (ft)
Surface Elevation : 260.5 (ft)
Water Table Elevation : 181.5 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	84.7	175.8	2.5	8.13								
	116.1	144.4	16.1	286.03	151.05	1286.1	1.0	1286.11	1.10	6.38E-02	4.12E-01	4.55E-06

CPT-17 Applied Research Associates 06/10/00

Depth = 80.1 ft Max Pressure = 7.81 psi Pn = 7.81 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-17
Test Date : 6/10/00

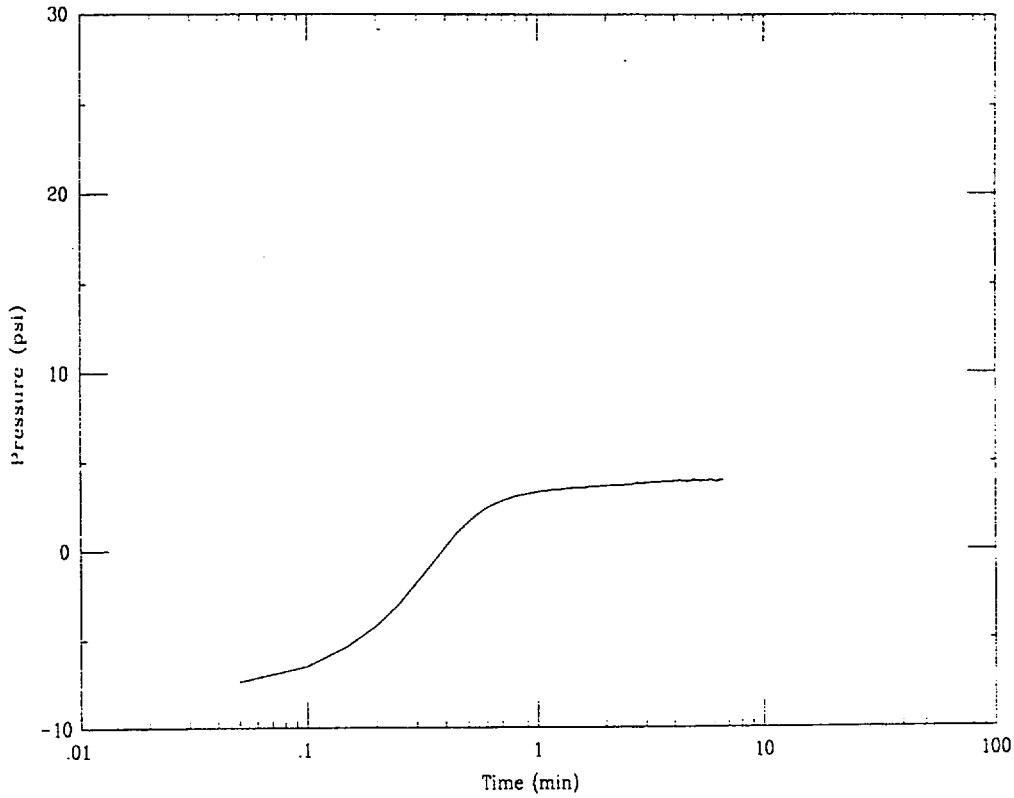
Northing : 80259.4 (ft)
Easting : 55747.7 (ft)
Surface Elevation : 255.9 (ft)
Water Table Elevation : 193.9 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	80.1	175.8	7.8	7.81								

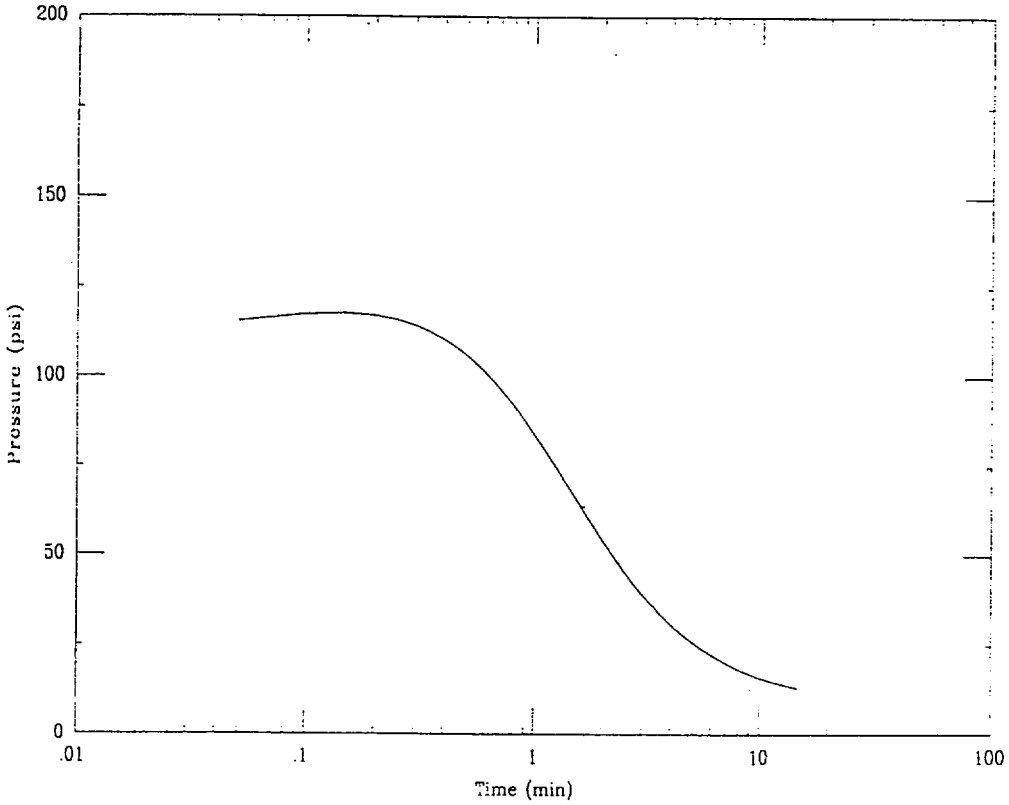
CPT-18R Applied Research Associates 06/22/00

Depth = 82.9 ft Max Pressure = 3.96 psi Pn = 3.95 psi



CPT-18R Applied Research Associates 06/22/00

Depth = 97.2 ft Max Pressure = 117.63 psi Pn = 11.24 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-18R
Test Date : 6/22/00

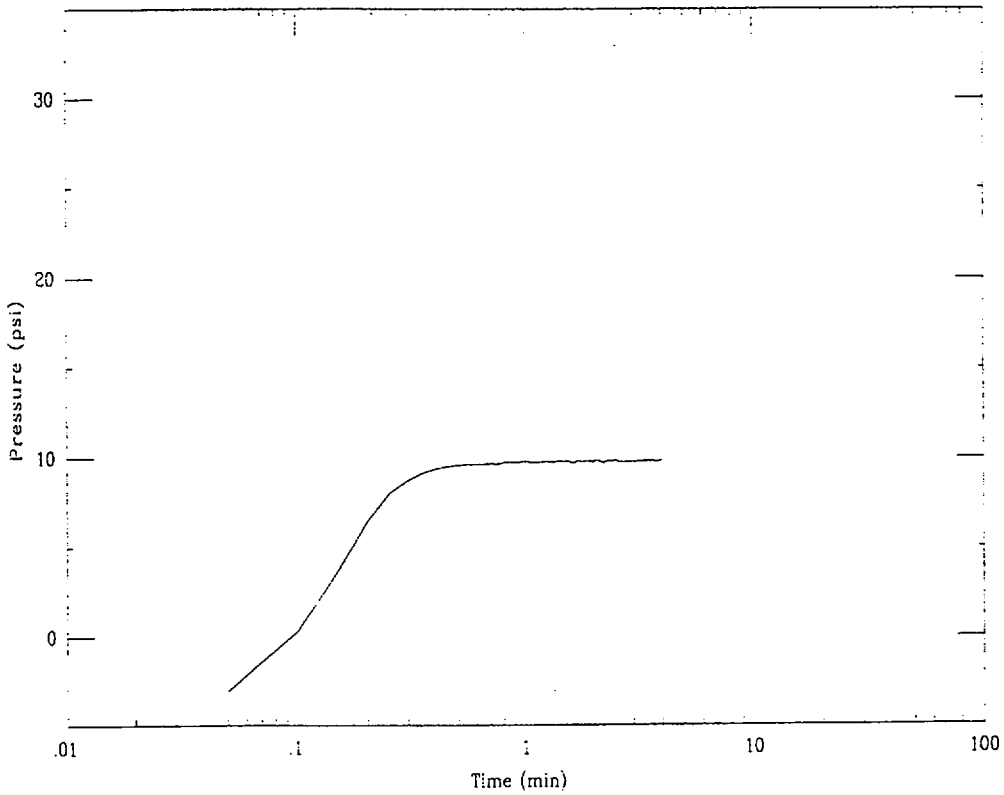
Northing : 80192.1 (ft)
Easting : 55405.9 (ft)
Surface Elevation : 277.0 (ft)
Water Table Elevation : 203.2 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	82.9	194.1	3.9	3.96								
	97.2	179.8	10.1	117.63	63.89	205.6	3.0	616.67	1.48	4.74E-02	3.06E-01	7.05E-06

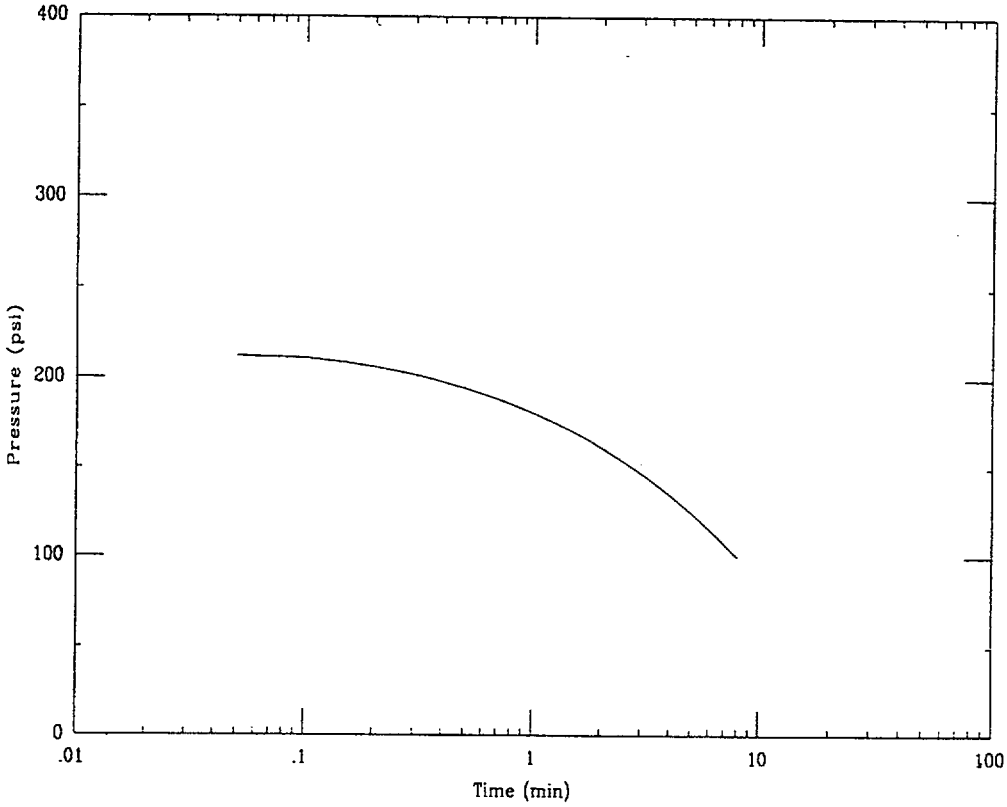
CPT-19S Applied Research Associates 06/03/00

Depth = 98.0 ft Max Pressure = 9.86 psi Pn = 9.81 psi



CPT-19S Applied Research Associates 06/03/00

Depth = 106.1 ft Max Pressure = 212.09 psi Pn = 101.88 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-19S
Test Date : 6/3/00

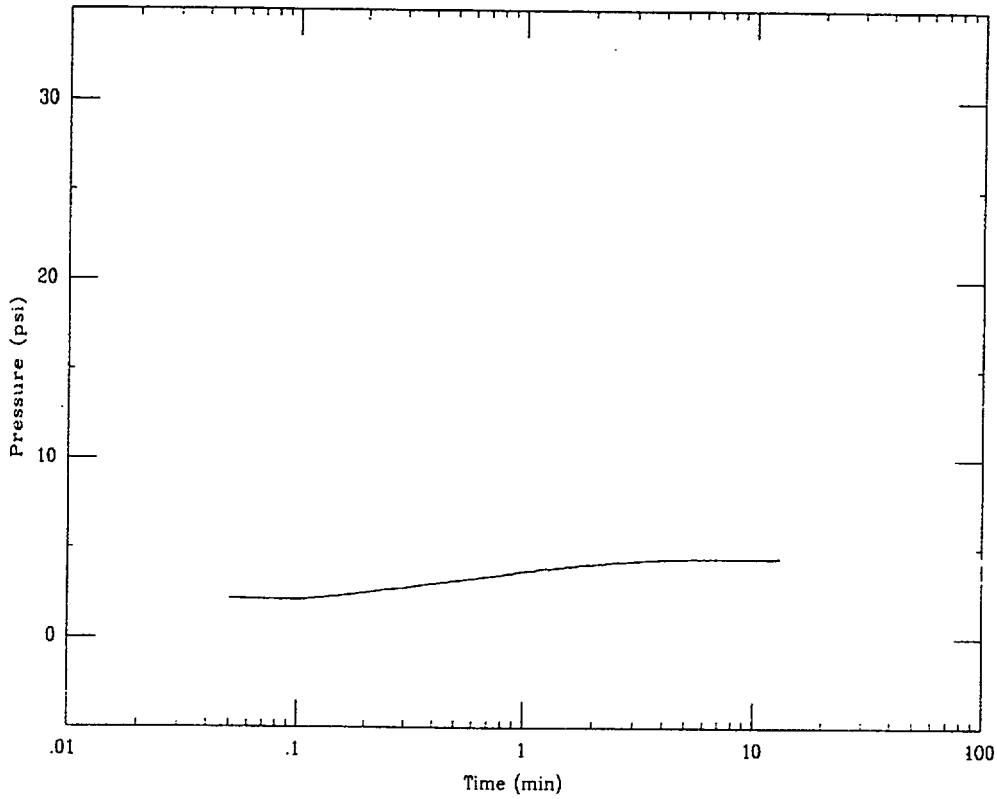
Northing : 80177.3 (ft)
Easting : 55467.5 (ft)
Surface Elevation : 274.8 (ft)
Water Table Elevation : 199.4 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	98.0	176.8	9.8	9.86								
	106.1	168.7	13.3	212.09	112.70	572.2	2.0	1144.44	6.35	1.11E-02	7.13E-02	8.86E-07

CPT-20R Applied Research Associates 06/22/00

Depth = 76.0 ft Max Pressure = 4.48 psi Pn = 4.45 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-20R
Test Date : 6/22/00

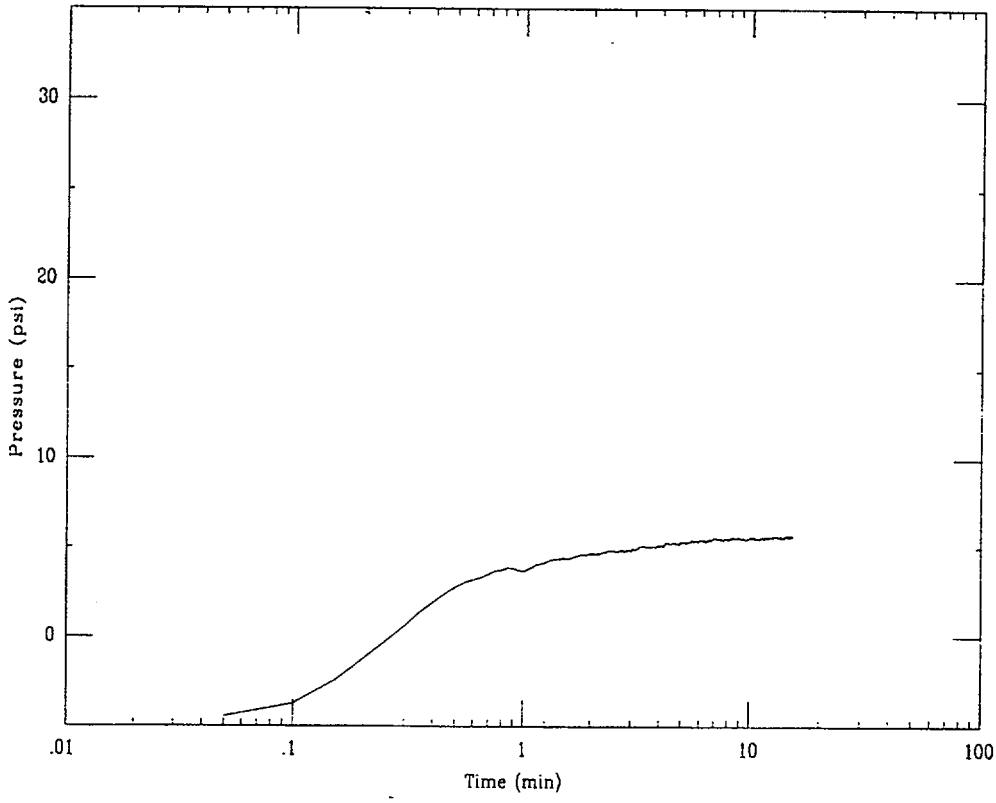
Northing : 80211.3 (ft)
Easting : 55570.4 (ft)
Surface Elevation : 266.9 (ft)
Water Table Elevation : 201.1 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	76.0	190.9	4.4	4.48								

CPT-21 Applied Research Associates 06/12/00

Depth = 110.1 ft Max Pressure = 5.71 psi Pn = 5.63 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-21
Test Date : 6/12/00

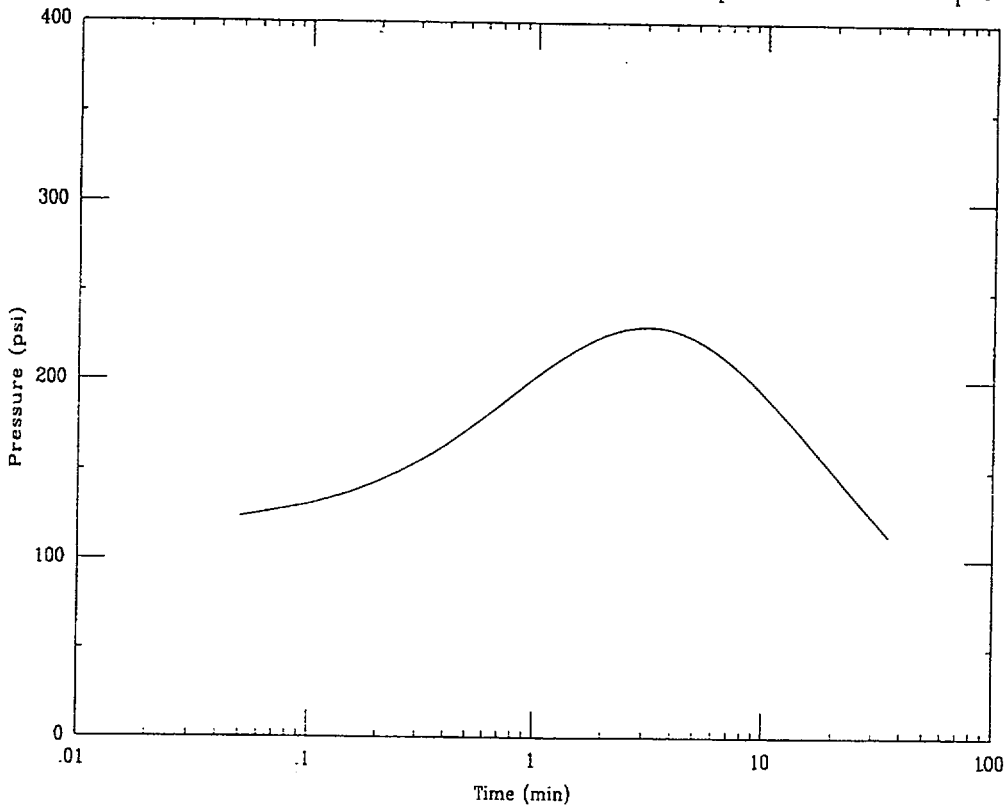
Northing : 80148.4 (ft)
Easting : 55060.1 (ft)
Surface Elevation : 295.4 (ft)
Water Table Elevation : 198.4 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	110.1	185.3	5.7	5.71								

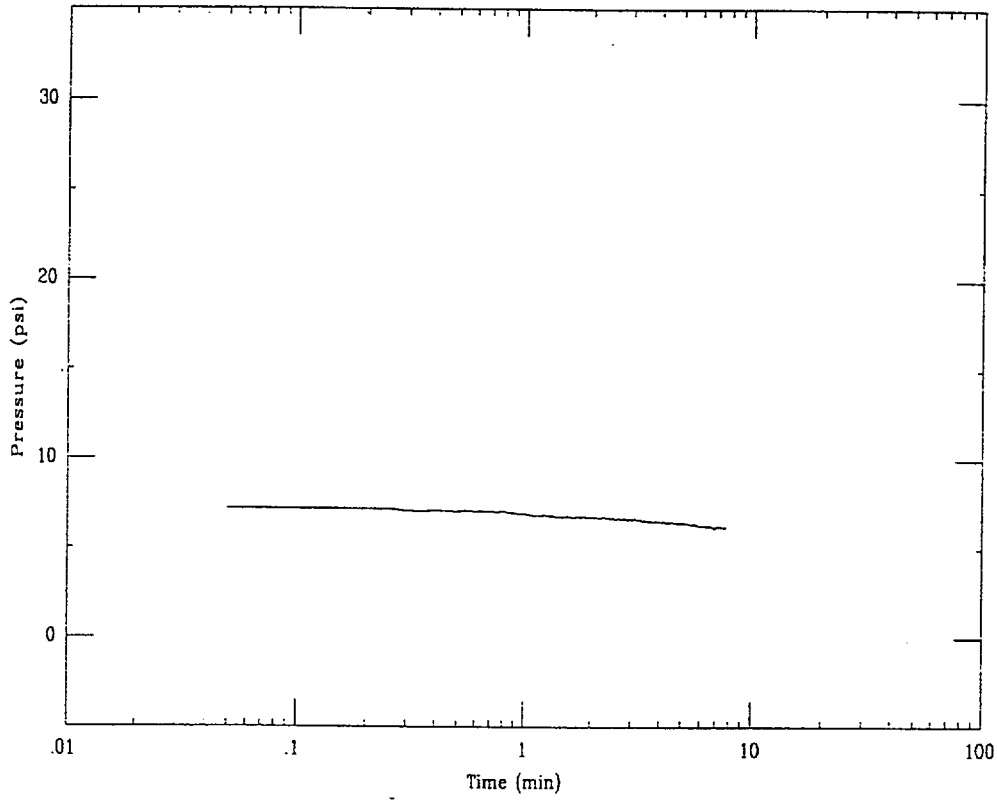
CPT-22 Applied Research Associates 06/12/00

Depth = 104.4 ft Max Pressure = 230.32 psi Pn = 114.27 psi



CPT-22 Applied Research Associates 06/12/00

Depth = 114.6 ft Max Pressure = 7.16 psi Pn = 6.20 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-22
Test Date : 6/12/00

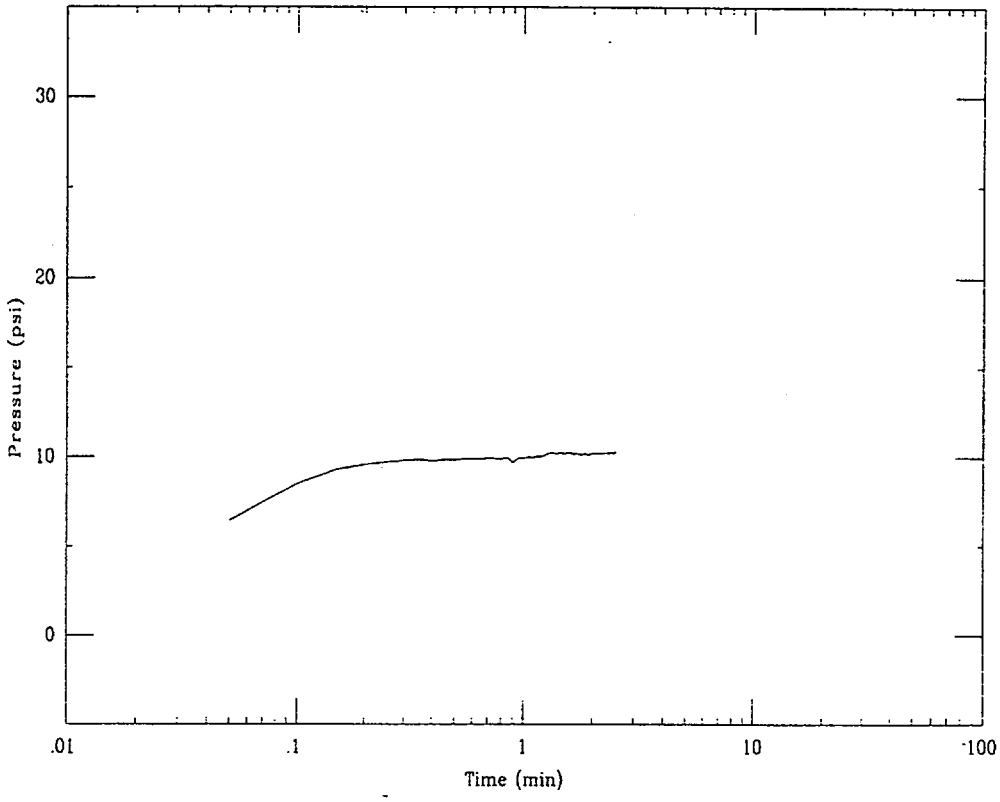
Northing : 80143.8 (ft)
Easting : 55221.9 (ft)
Surface Elevation : 297.3 (ft)
Water Table Elevation : 197.3 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
	104.4	192.9	1.9	230.32	116.11	748.6	1.5	1122.92	33.78	2.08E-03	1.34E-02	1.70E-07
	114.6	182.7	6.3	7.16	6.74	1266.7	1.0	1266.67	2.20	3.19E-02	2.06E-01	2.31E-06

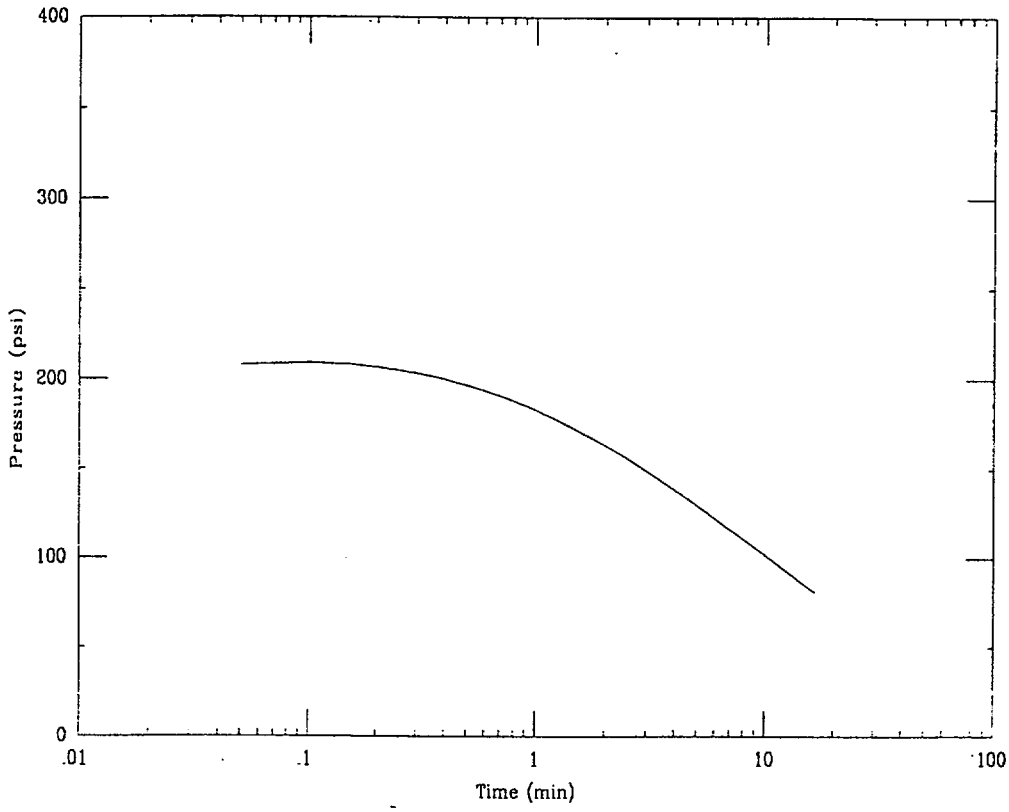
CPT-23S Applied Research Associates 06/06/00

Depth = 92.9 ft Max Pressure = 10.29 psi Pn = 10.23 psi



CPT-23S Applied Research Associates 06/06/00

Depth = 104.6 ft Max Pressure = 209.11 psi Pn = 81.63 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-23S
Test Date : 6/6/00

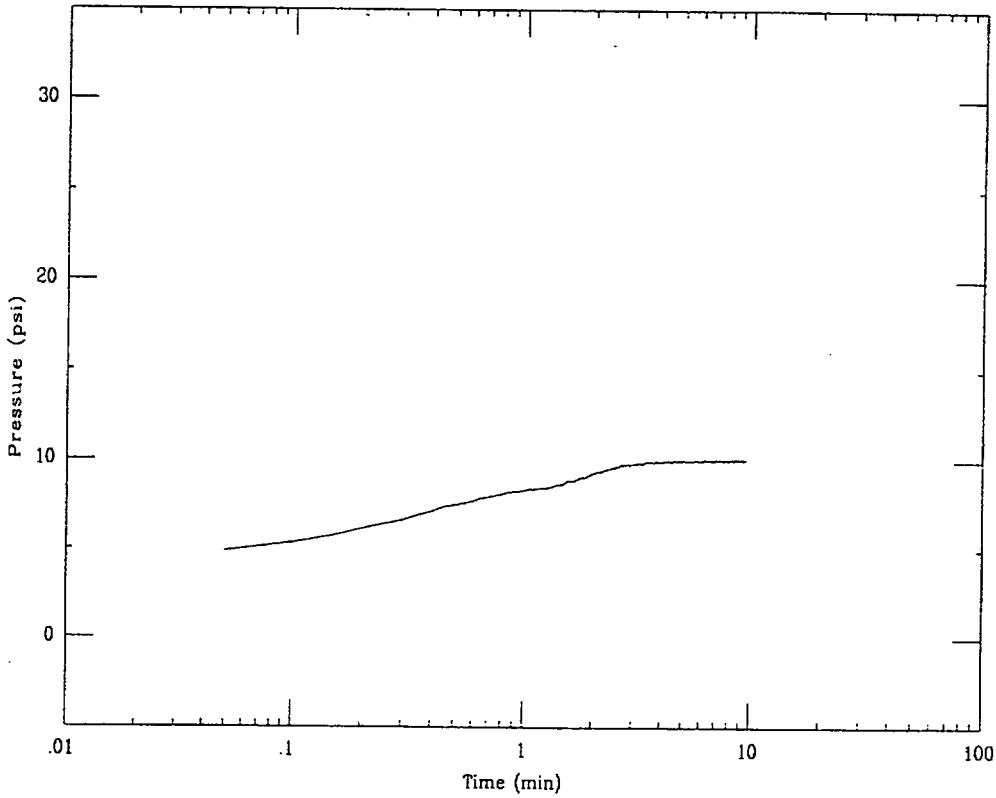
Northing : 80088.9 (ft)
Easting : 55379.4 (ft)
Surface Elevation : 277.3 (ft)
Water Table Elevation : 207.9 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	92.9	184.4	10.2	10.29								
	104.6	172.7	15.3	209.11	112.18	431.9	2.0	863.89	7.75	9.06E-03	5.84E-02	9.61E-07

CPT-24A Applied Research Associates 06/10/00

Depth = 102.0 ft Max Pressure = 10.11 psi Pn = 10.07 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-24A
Test Date : 6/10/00

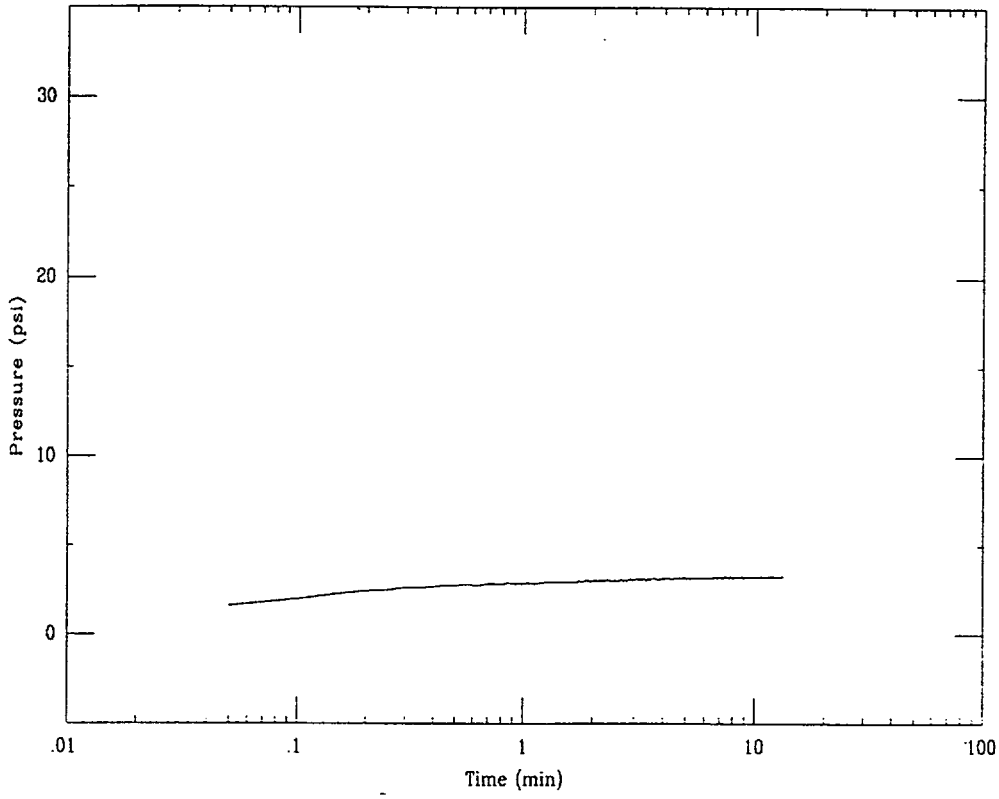
Northing : 80115.0 (ft)
Easting : 55548.5 (ft)
Surface Elevation : 272.6 (ft)
Water Table Elevation : 193.8 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	102.0	170.6	10.1	10.11								

CPT-25 Applied Research Associates 06/12/00

Depth = 76.4 ft Max Pressure = 3.33 psi Pn = 3.28 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-25
Test Date : 6/12/00

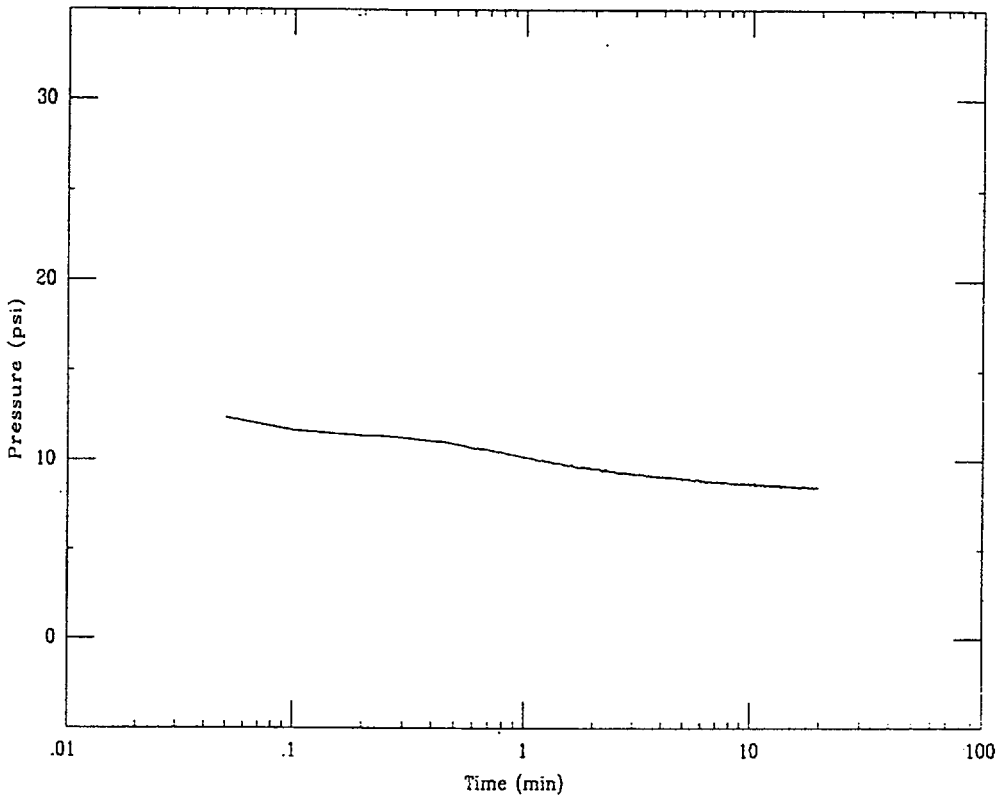
Northing : 80104.7 (ft)
Easting : 55621.7 (ft)
Surface Elevation : 268.9 (ft)
Water Table Elevation : 200.1 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	76.4	192.5	3.3	3.33								

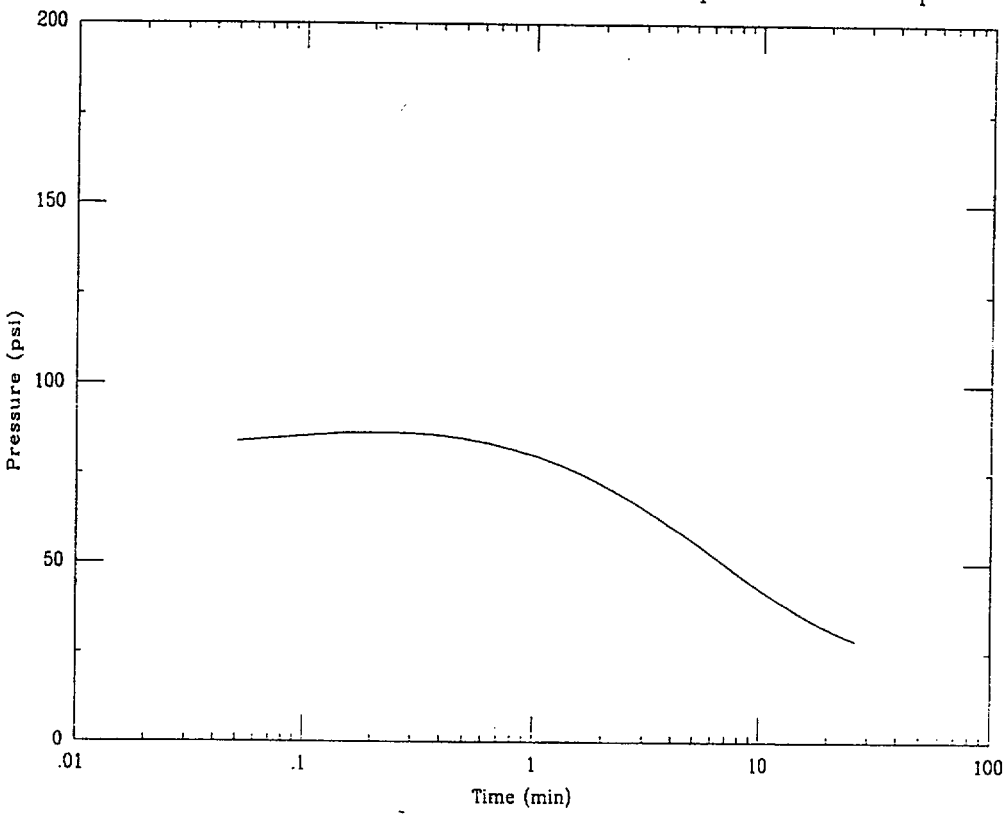
CPT-26S Applied Research Associates 06/06/00

Depth = 85.1 ft Max Pressure = 12.33 psi Pn = 8.50 psi



CPT-26S Applied Research Associates 06/06/00

Depth = 112.7 ft Max Pressure = 86.37 psi Pn = 28.62 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-26S
Test Date : 6/6/00

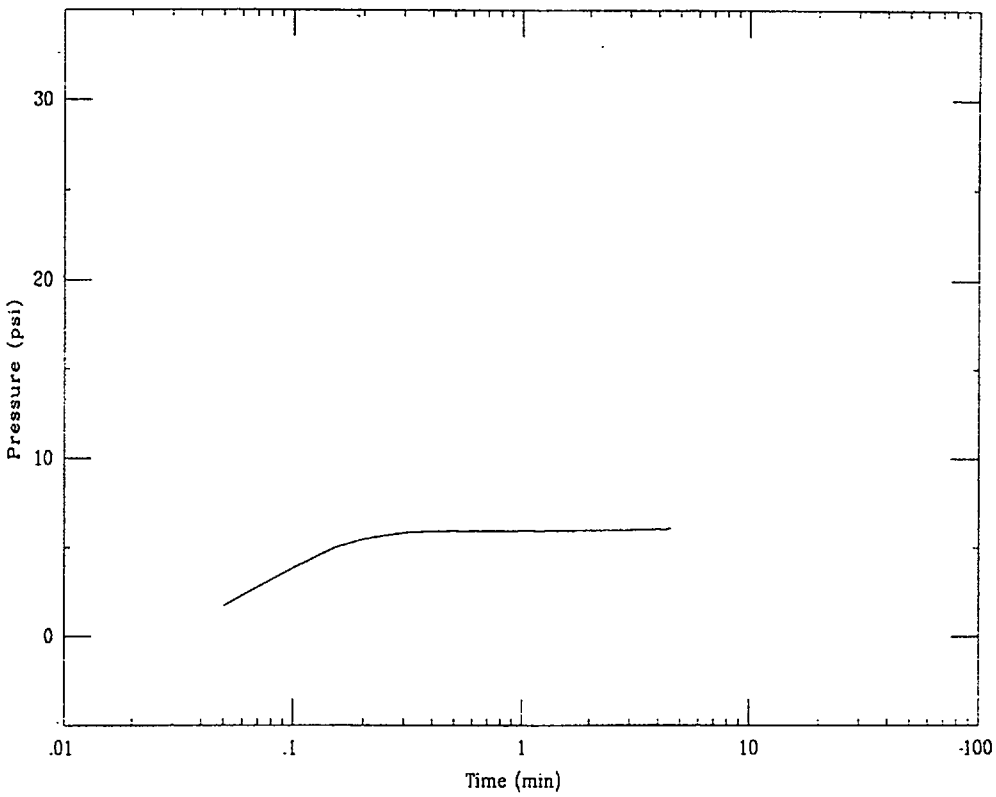
Northing : 80116.2 (ft)
Easting : 55726.7 (ft)
Surface Elevation : 261.9 (ft)
Water Table Elevation : 196.4 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
	85.1	176.8	8.5	12.33	10.41	3234.7	1.0	3234.72	0.80	8.77E-02	5.66E-01	2.49E-06
	112.7	149.2	20.5	86.37	53.41	244.4	3.0	733.33	5.76	1.22E-02	7.86E-02	1.52E-06

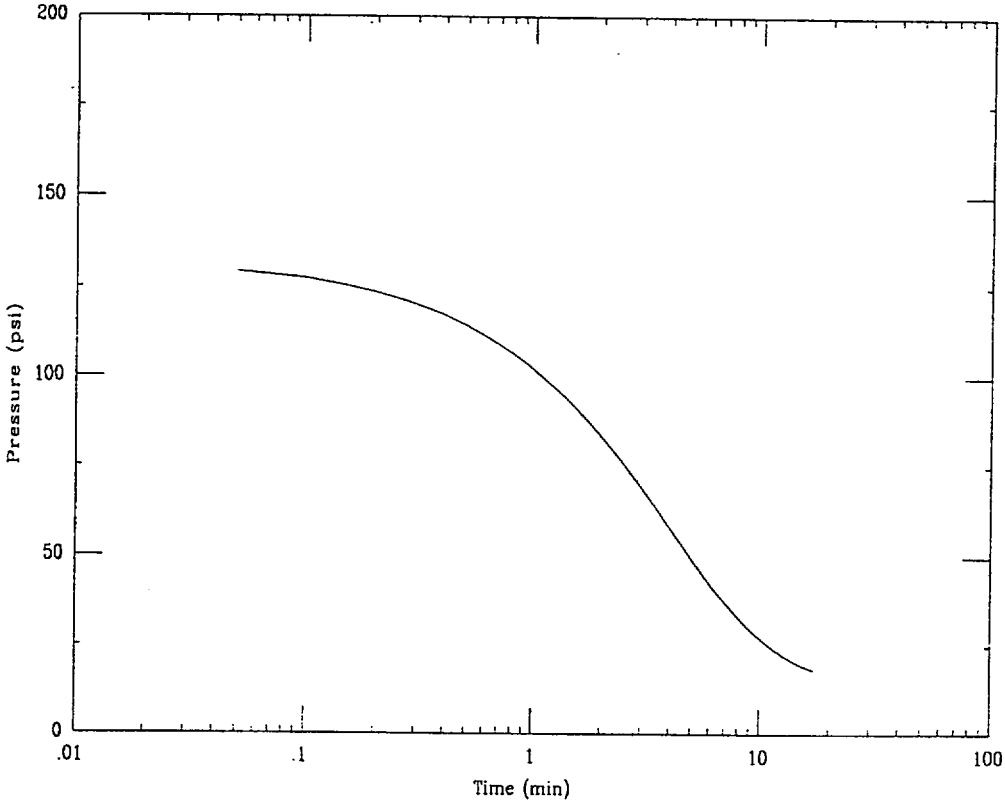
CPT-27R Applied Research Associates 06/22/00

Depth = 86.0 ft Max Pressure = 6.11 psi Pn = 6.11 psi



CPT-27R Applied Research Associates 06/22/00

Depth = 104.5 ft Max Pressure = 129.09 psi Pn = 18.30 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-27R
Test Date : 6/22/00

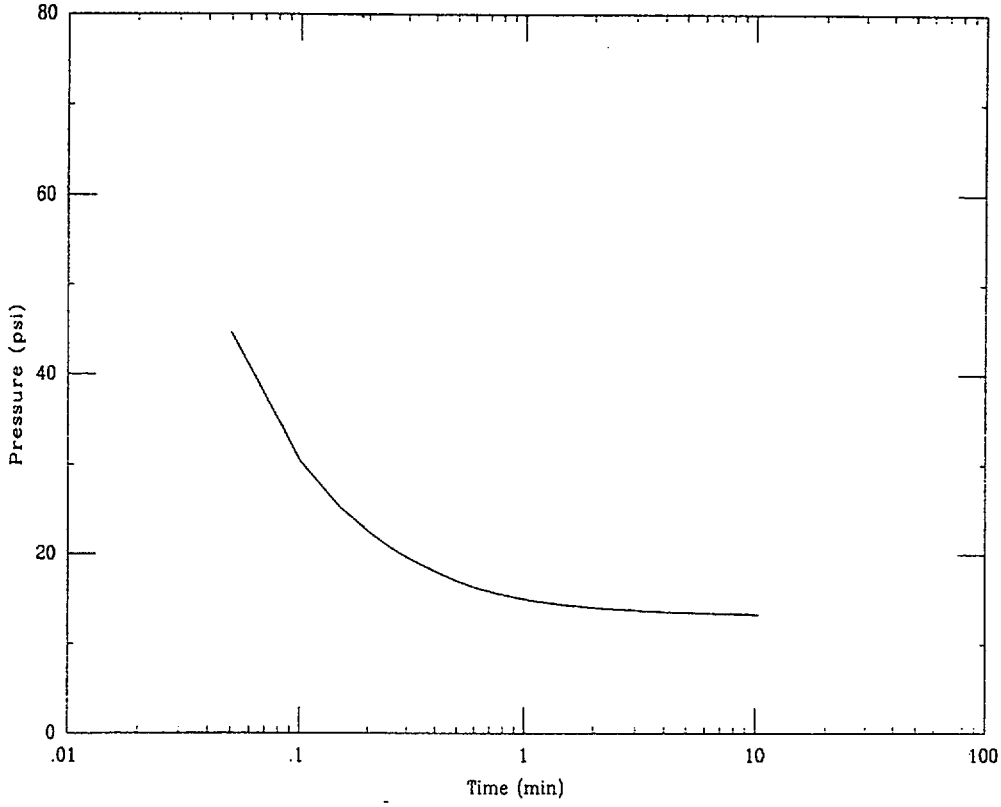
Northing : 80001.4 (ft)
Easting : 55254.2 (ft)
Surface Elevation : 277.5 (ft)
Water Table Elevation : 205.5 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	86.0	191.5	6.1	6.11								
	104.5	173.0	14.1	129.09	71.59	197.2	3.0	591.67	2.80	2.51E-02	1.62E-01	3.89E-06

CPT-28S Applied Research Associates 05/31/00

Depth = 107.0 ft Max Pressure = 44.70 psi Pn = 13.26 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-28S
Test Date : 5/31/00

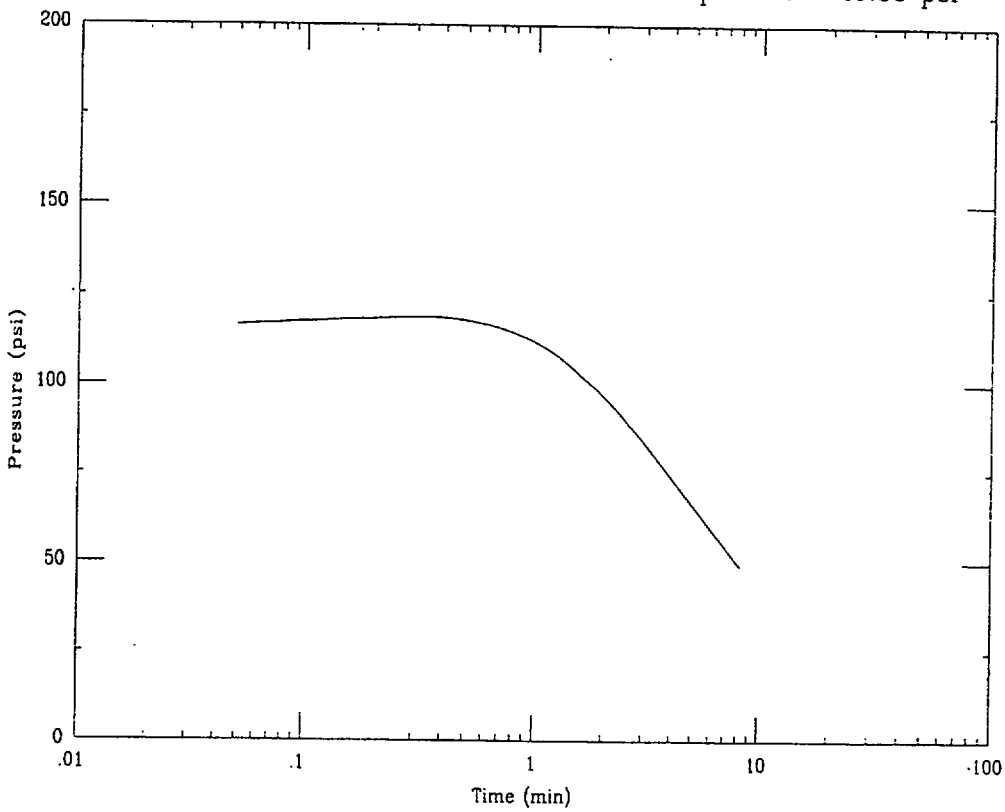
Northing : 80001.8 (ft)
Easting : 55332.0 (ft)
Surface Elevation : 279.2 (ft)
Water Table Elevation : 202.7 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
	107.0	172.2	13.2	44.70	28.96	1073.6	1.0	1073.61	0.10	7.02E-01	4.53E+00	6.00E-05

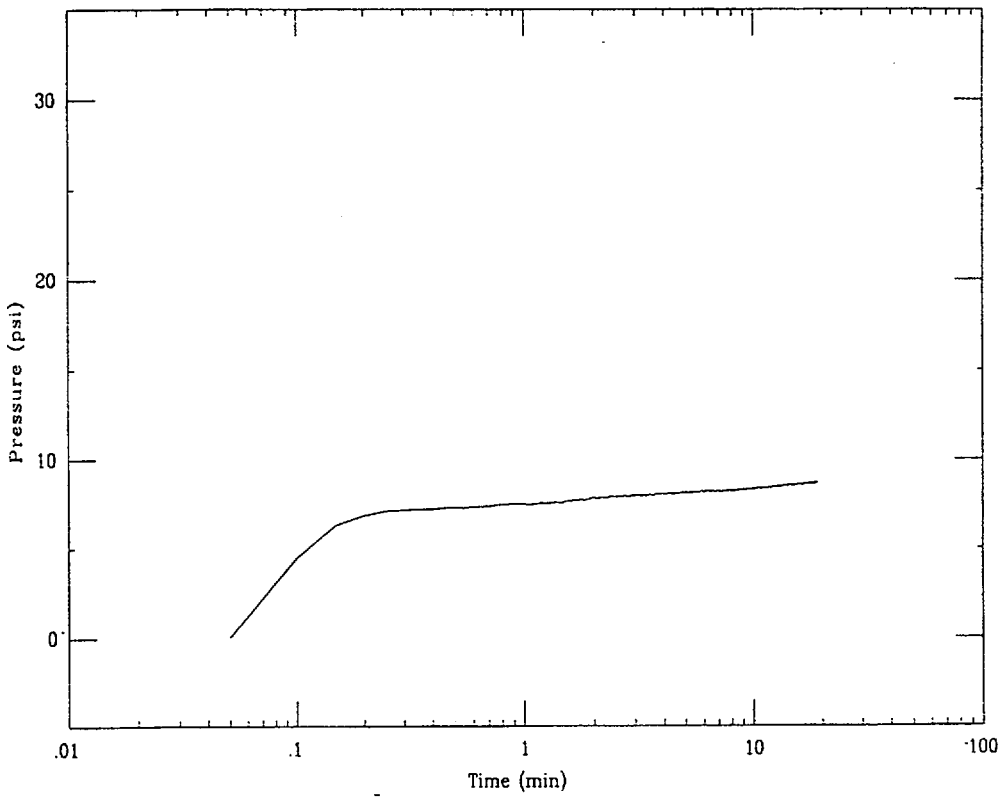
CPT-29R Applied Research Associates 06/13/00

Depth = 66.8 ft Max Pressure = 118.62 psi Pn = 49.85 psi



CPT-29R Applied Research Associates 06/13/00

Depth = 89.1 ft Max Pressure = 8.74 psi Pn = 8.68 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-29R
Test Date : 6/13/00

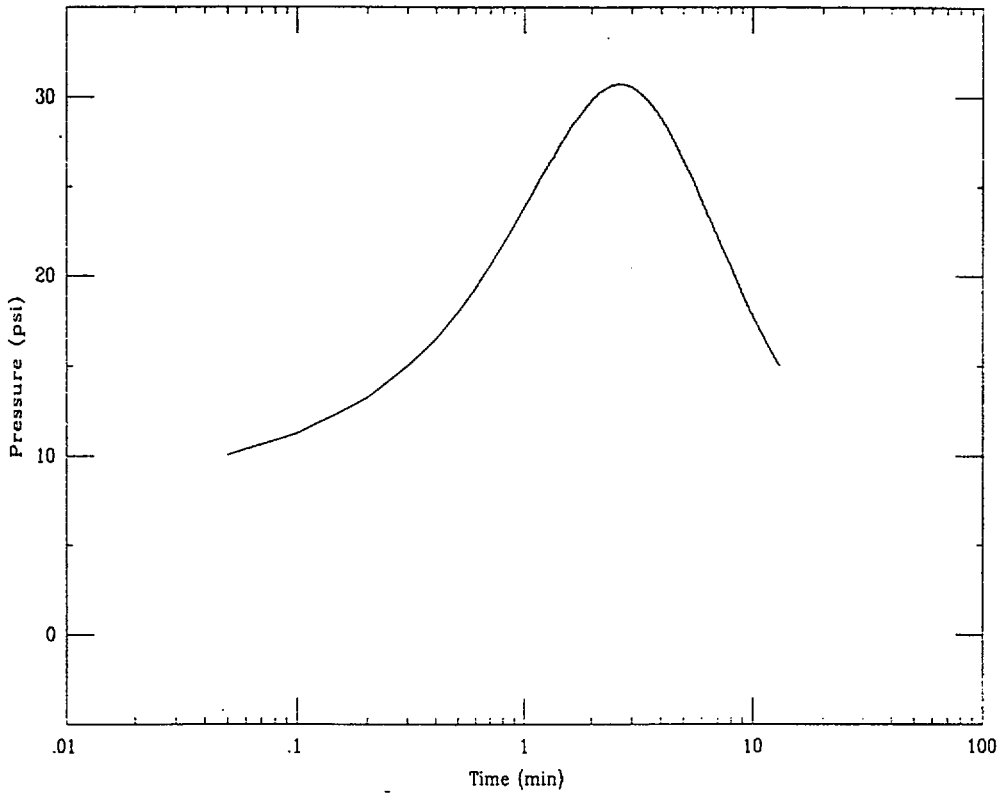
Northing : 79985.8 (ft)
Easting : 55422.4 (ft)
Surface Elevation : 276.4 (ft)
Water Table Elevation : 207.9 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Above GWT	66.8	209.6	-0.7									
Soil Dilation	89.1	187.3	8.9	8.74								

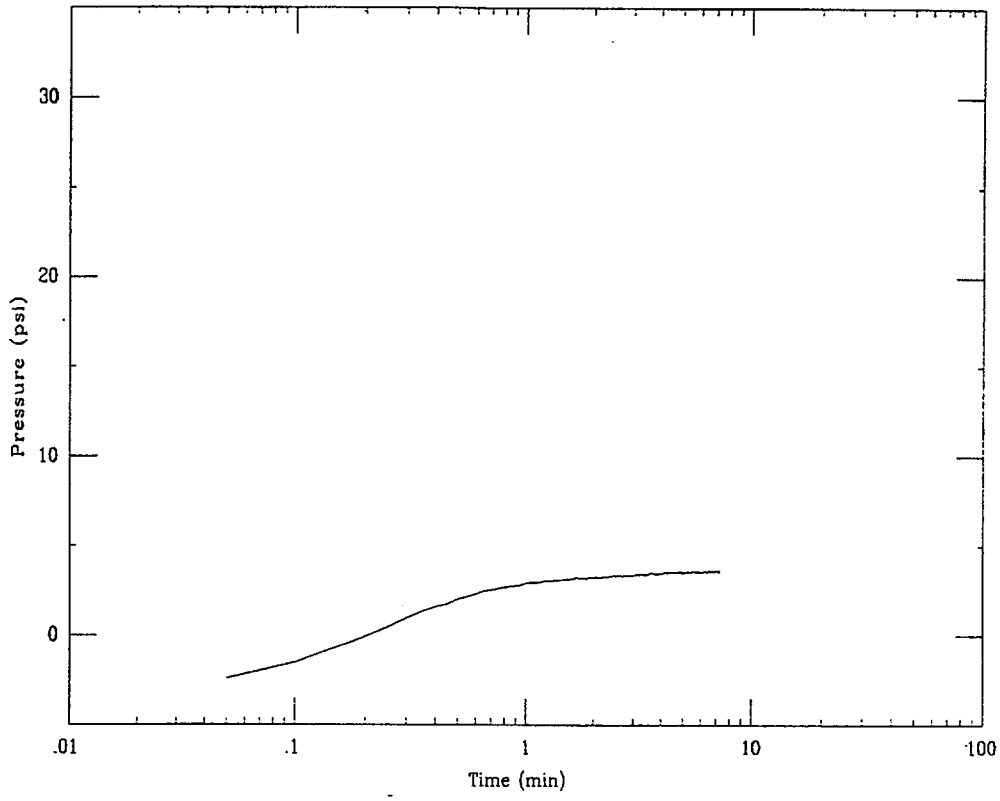
CPT-30R Applied Research Associates 06/14/00

Depth = 60.8 ft Max Pressure = 30.74 psi Pn = 15.17 psi



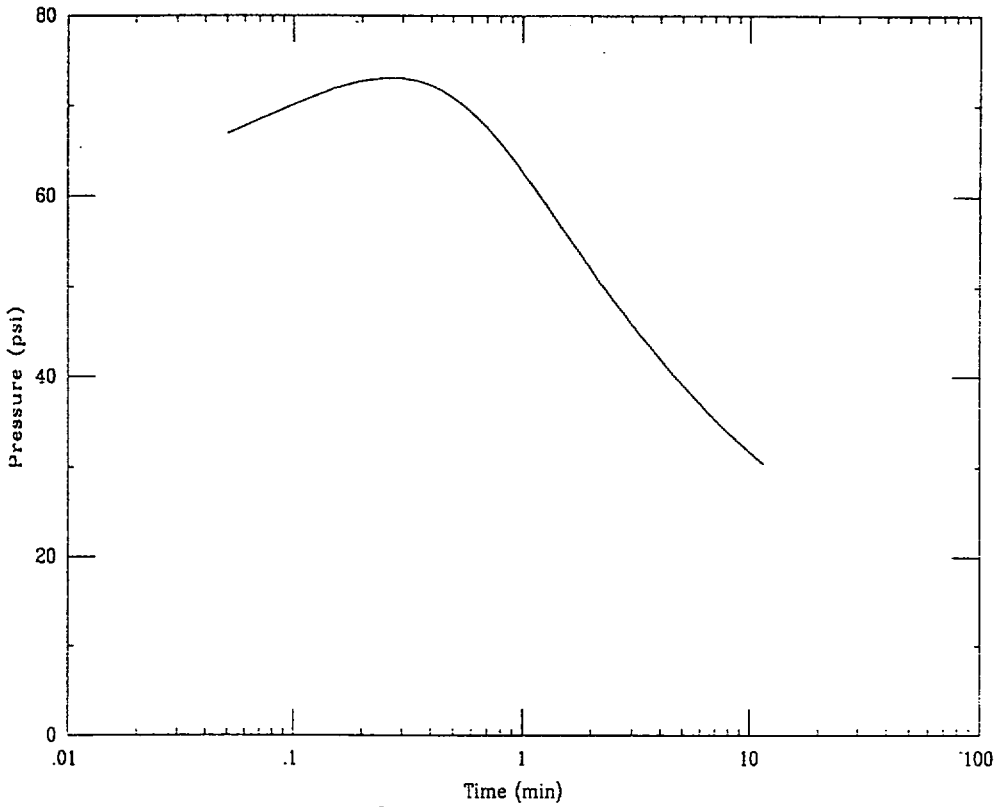
CPT-30R Applied Research Associates 06/14/00

Depth = 79.3 ft Max Pressure = 3.63 psi Pn = 3.59 psi



CPT-30R Applied Research Associates 06/14/00

Depth = 125.3 ft Max Pressure = 73.07 psi Pn = 30.56 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-30R
Test Date : 6/14/00

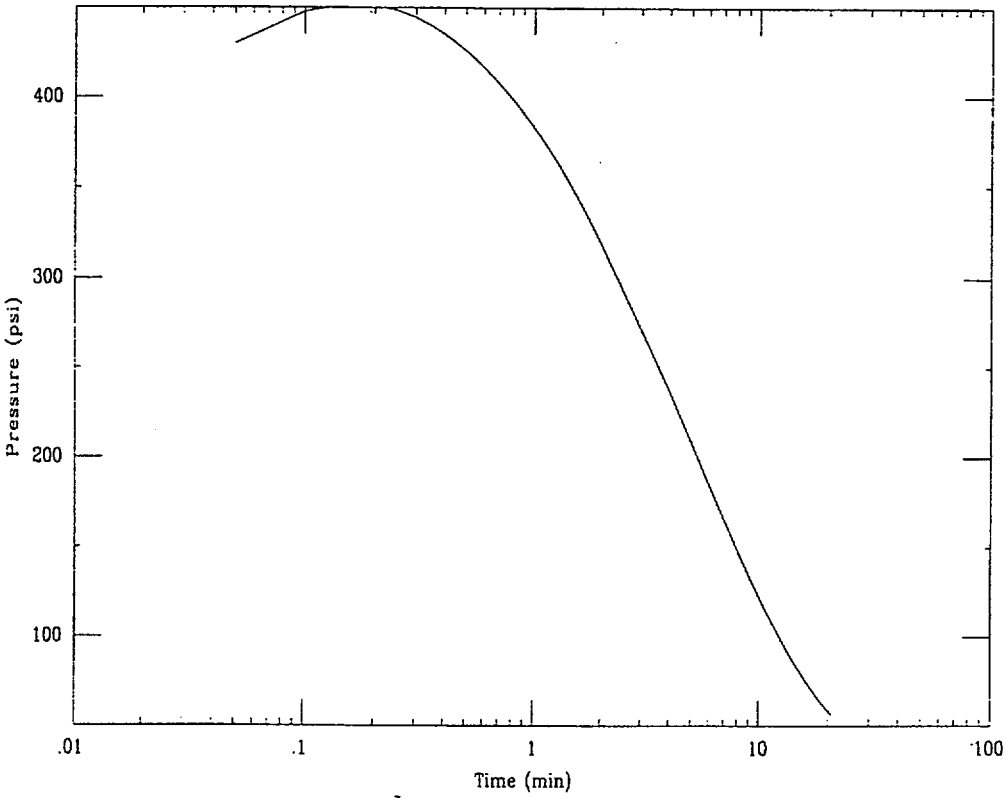
Northing : 79973.4 (ft)
Easting : 55538.3 (ft)
Surface Elevation : 274.2 (ft)
Water Table Elevation : 203.2 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Above GWT	60.8	213.4	-4.4									
Soil Dilation	79.3	194.9	3.6	3.63								
	125.3	148.9	23.5	73.07	48.30	183.3	3.0	550.00	2.55	2.75E-02	1.78E-01	4.59E-06

CPT-31S Applied Research Associates 06/01/00

Depth = 126.1 ft Max Pressure = 451.84 psi Pn = 56.98 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-31S
Test Date : 6/1/00

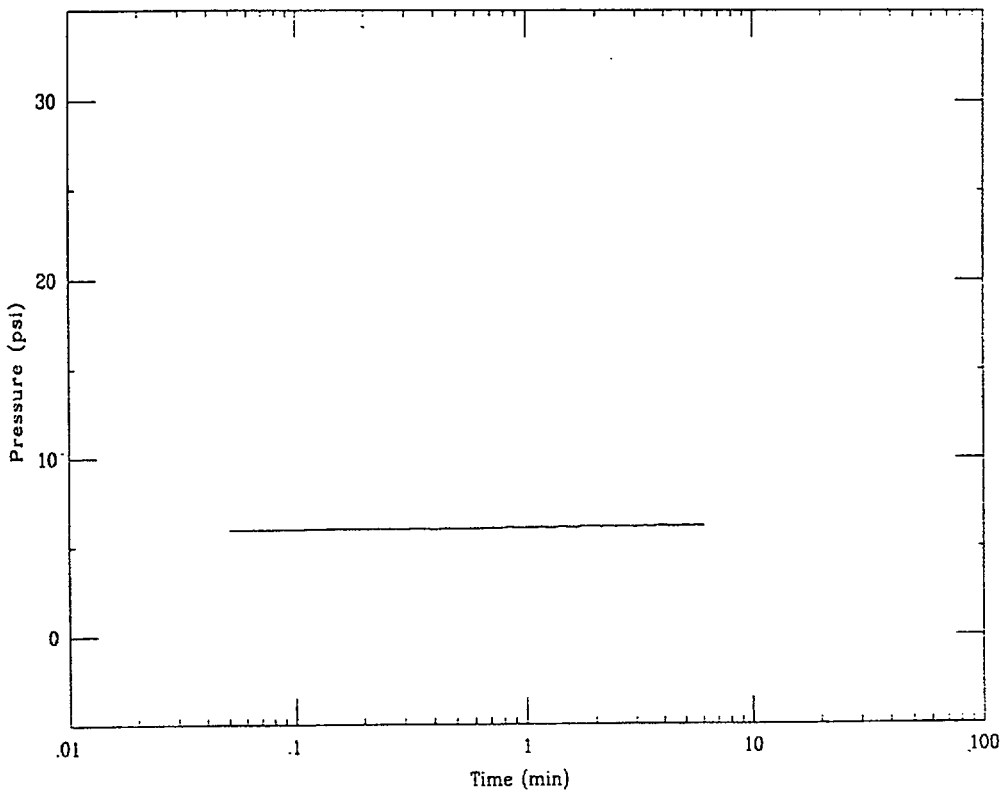
Northing : 79977.3 (ft)
Easting : 55610.3 (ft)
Surface Elevation : 271.7 (ft)
Water Table Elevation : 204.7 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
	126.1	145.6	25.6	451.84	238.73	1800.0	1.0	1800.00	3.95	1.78E-02	1.15E-01	9.05E-07

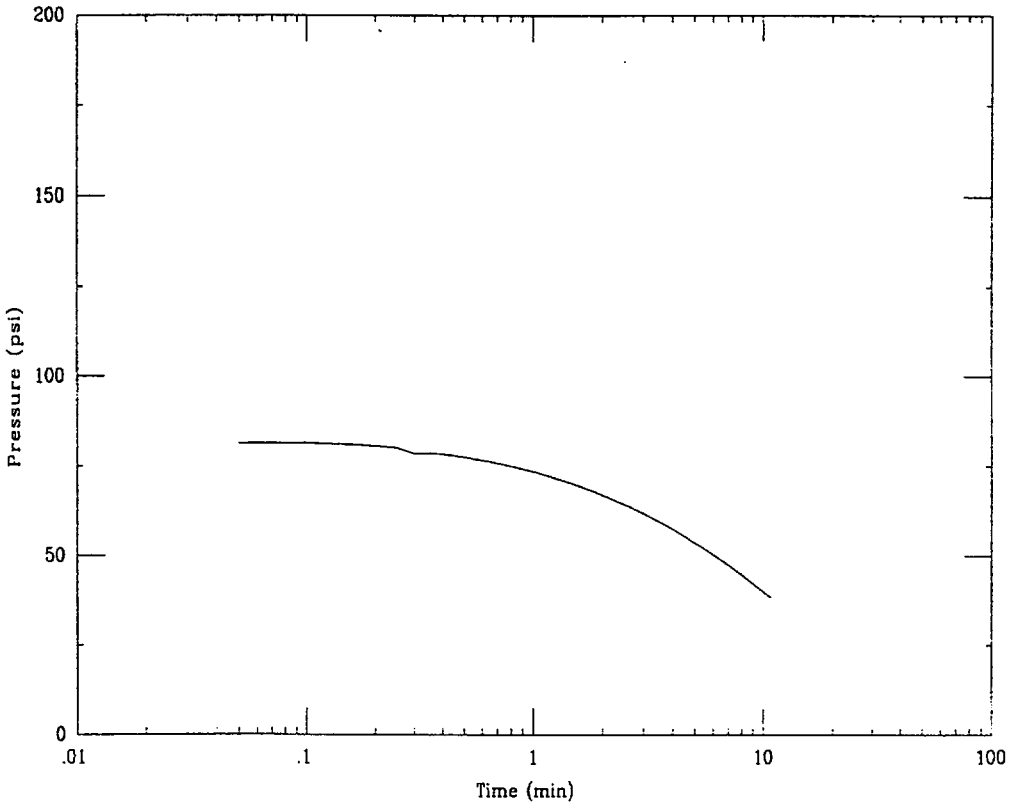
CPT-32R Applied Research Associates 06/24/00

Depth = 78.0 ft Max Pressure = 6.21 psi Pn = 6.17 psi



CPT-32R Applied Research Associates 06/24/00

Depth = 82.6 ft Max Pressure = 81.44 psi Pn = 38.96 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-32R
Test Date : 6/24/00

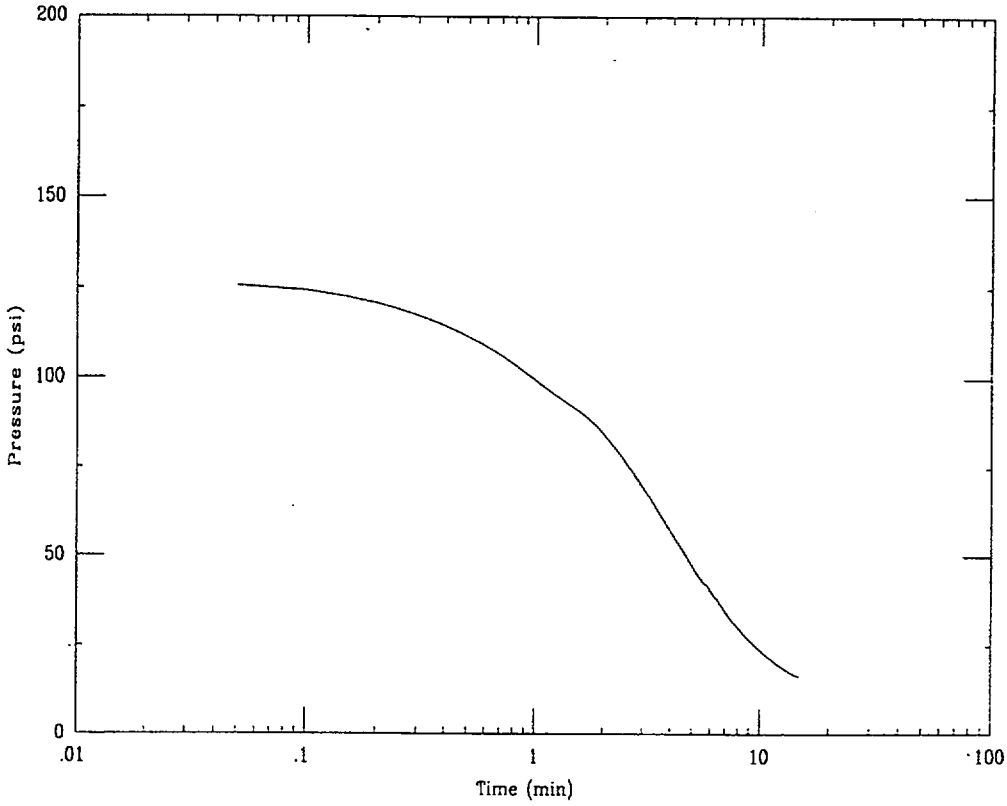
Northing : 80005.4 (ft)
Easting : 55755.6 (ft)
Surface Elevation : 264.7 (ft)
Water Table Elevation : 200.9 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Immediate dissip.	78.0	186.7	6.2	6.21								
	82.6	182.1	8.1	81.44	44.79	161.1	3.0	483.33	7.95	8.83E-03	5.70E-02	1.68E-06

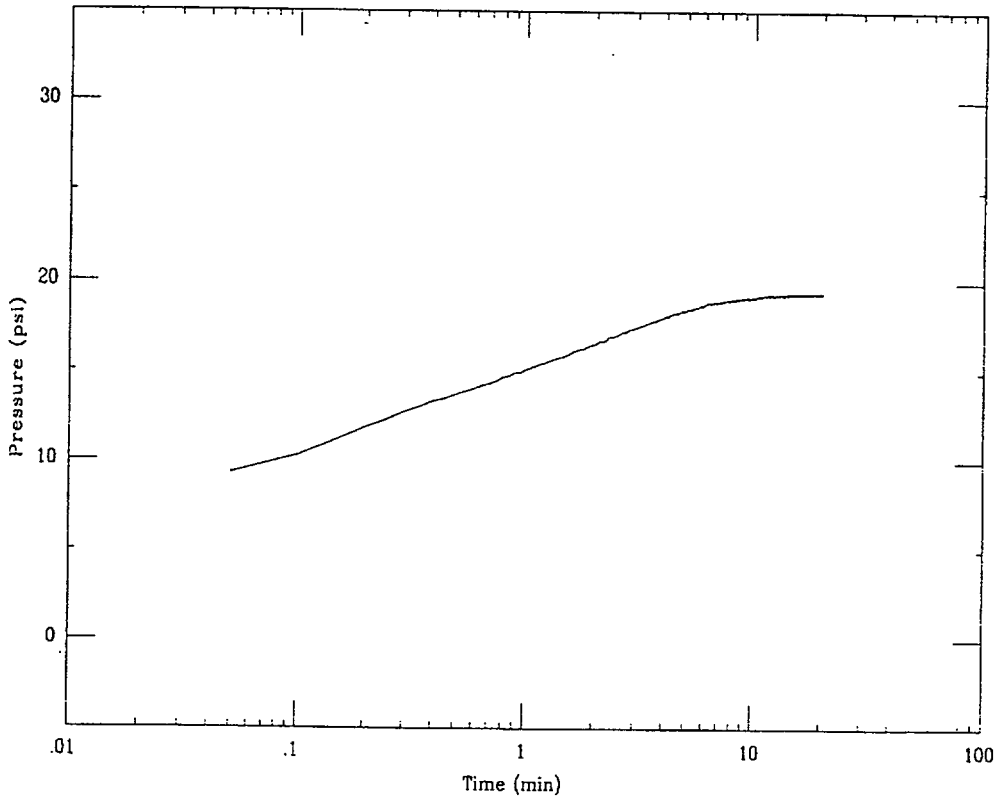
CPT-33R Applied Research Associates 06/13/00

Depth = 81.0 ft Max Pressure = 125.53 psi Pn = 16.63 psi



CPT-33R Applied Research Associates 06/13/00

Depth = 116.2 ft Max Pressure = 19.46 psi Pn = 19.39 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-33R
Test Date : 6/13/00

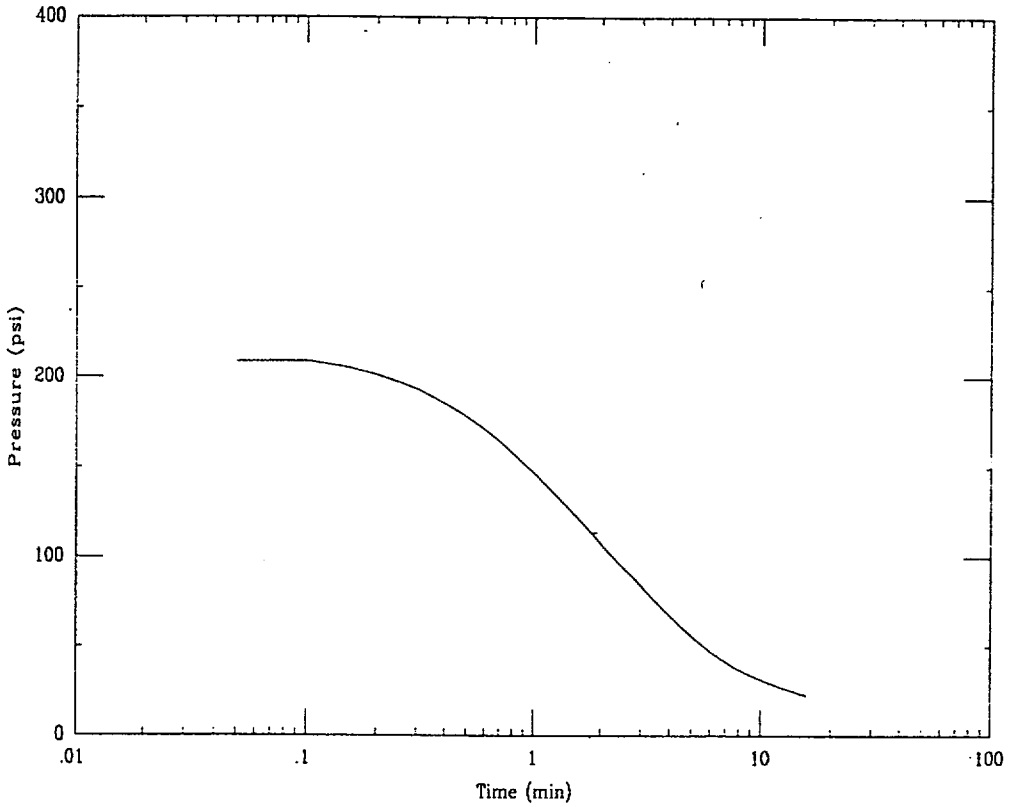
Northing : 79842.0 (ft)
Easting : 54922.7 (ft)
Surface Elevation : 274.6 (ft)
Water Table Elevation : 203.0 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
	81.0	193.6	4.1	125.30	64.69	262.5	3.0	787.50	3.35	2.09E-02	1.35E-01	2.44E-06
Soil Dilation	116.2	158.4	19.3	19.46								

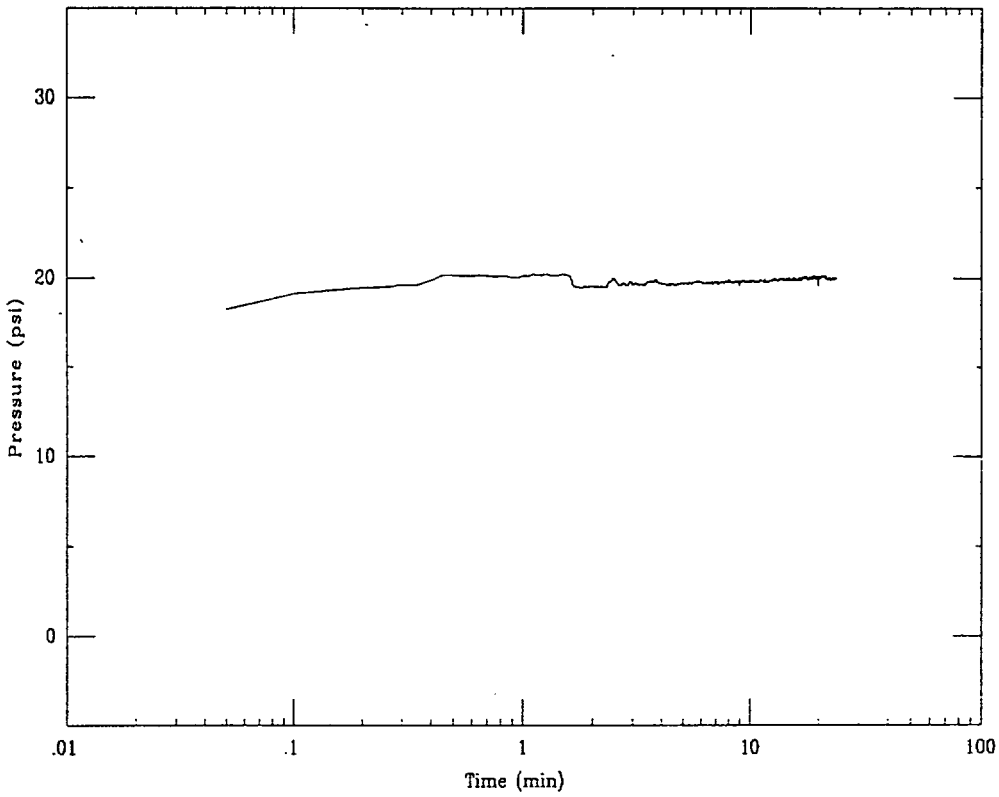
CPT-34S Applied Research Associates 06/07/00

Depth = 111.8 ft Max Pressure = 209.14 psi Pn = 20.2 psi



CPT-34S Applied Research Associates 06/07/00

Depth = 118.2 ft Max Pressure = 20.21 psi Pn = 20.21 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-34S
Test Date : 6/7/00

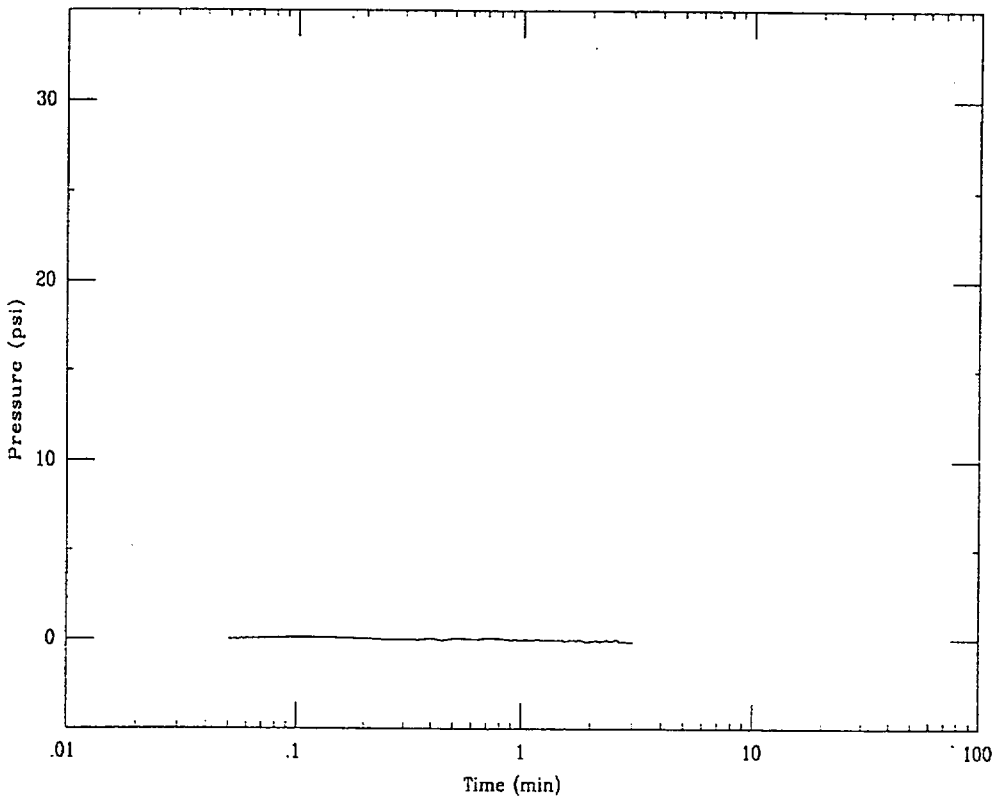
Northing : 79826.9 (ft)
Easting : 55323.2 (ft)
Surface Elevation : 270.8 (ft)
Water Table Elevation : 198.8 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (ln2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
	111.8	159.0	17.2	209.14	113.19	718.1	1.5	1077.08	1.75	4.01E-02	2.59E-01	3.42E-06
Soil Dilation	118.2	152.6	20.0	20.21								

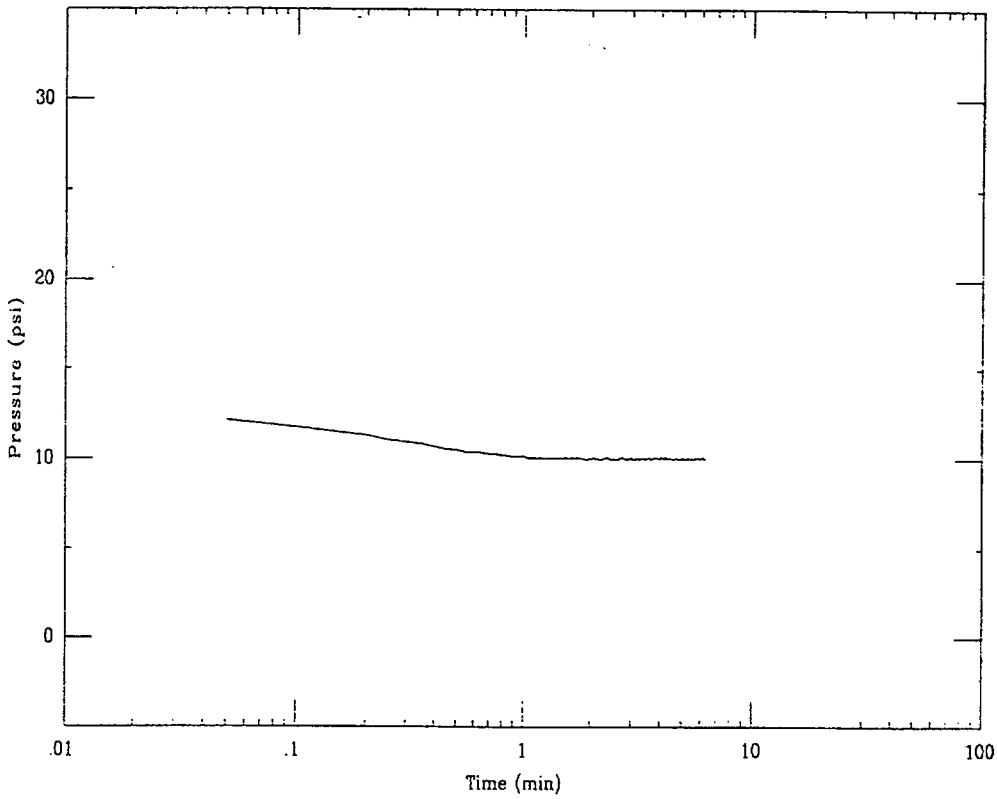
CPT-35S Applied Research Associates 06/03/00

Depth = 24.8 ft Max Pressure = 0.10 psi Pn = -0.12 psi



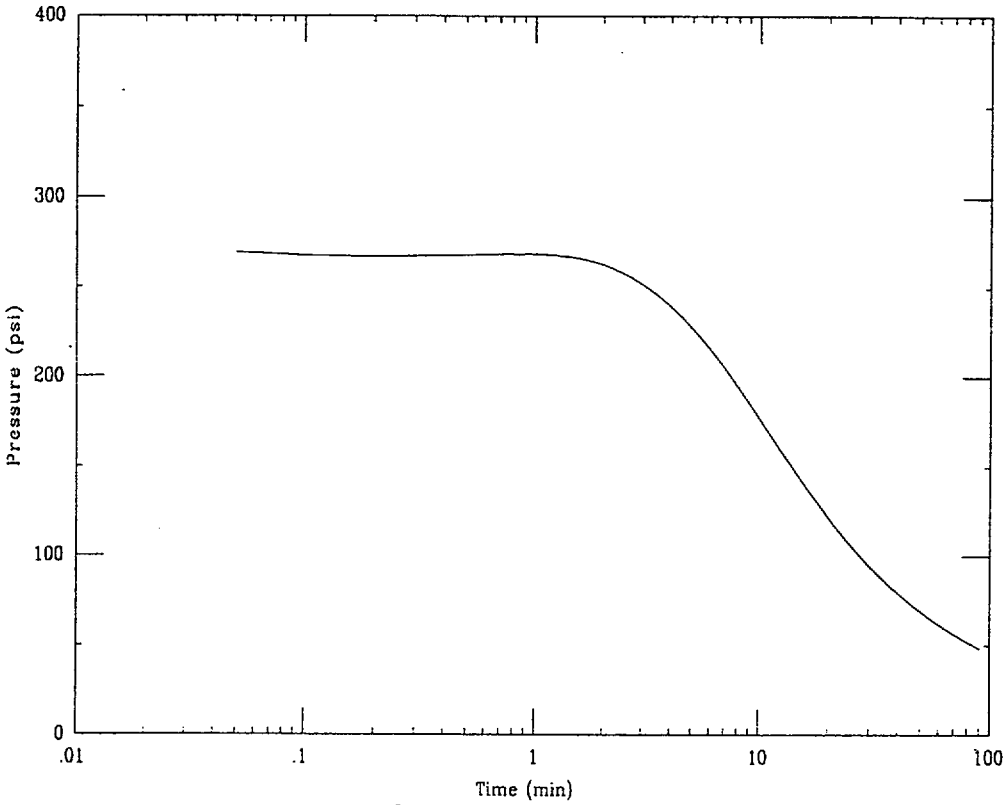
CPT-35S Applied Research Associates 06/03/00

Depth = 94.9 ft Max Pressure = 12.15 psi Pn = 10.05 psi



CPT-35S Applied Research Associates 06/03/00

Depth = 141.0 ft Max Pressure = 268.92 psi Pn = 48.28 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-35S
Test Date : 6/3/00

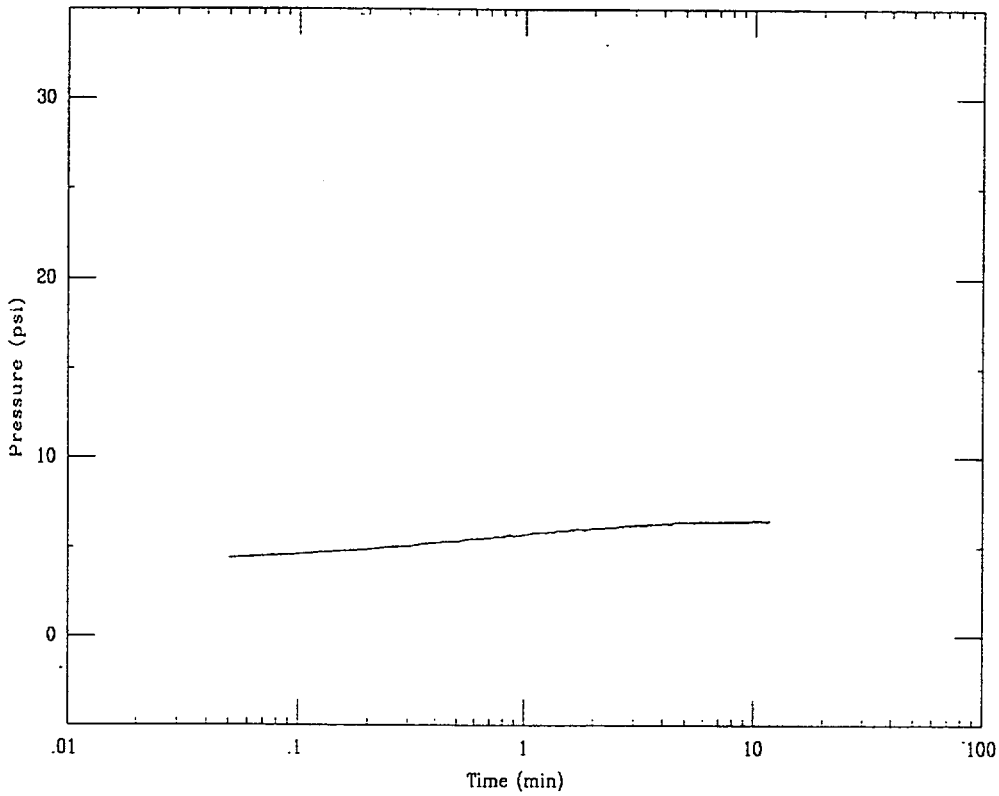
Northing : 79888.6 (ft)
Easting : 55389.0 (ft)
Surface Elevation : 272.6 (ft)
Water Table Elevation : 200.8 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Above GWT	24.8	247.8	-20.4									
	94.9	177.7	10.0	12.15	11.08	1901.4	1.0	1901.39	0.10	7.02E-01	4.53E+00	3.39E-05
	141.0	131.6	30.0	268.92	149.45	980.6	1.0	980.56	14.11	4.97E-03	3.21E-02	4.65E-07

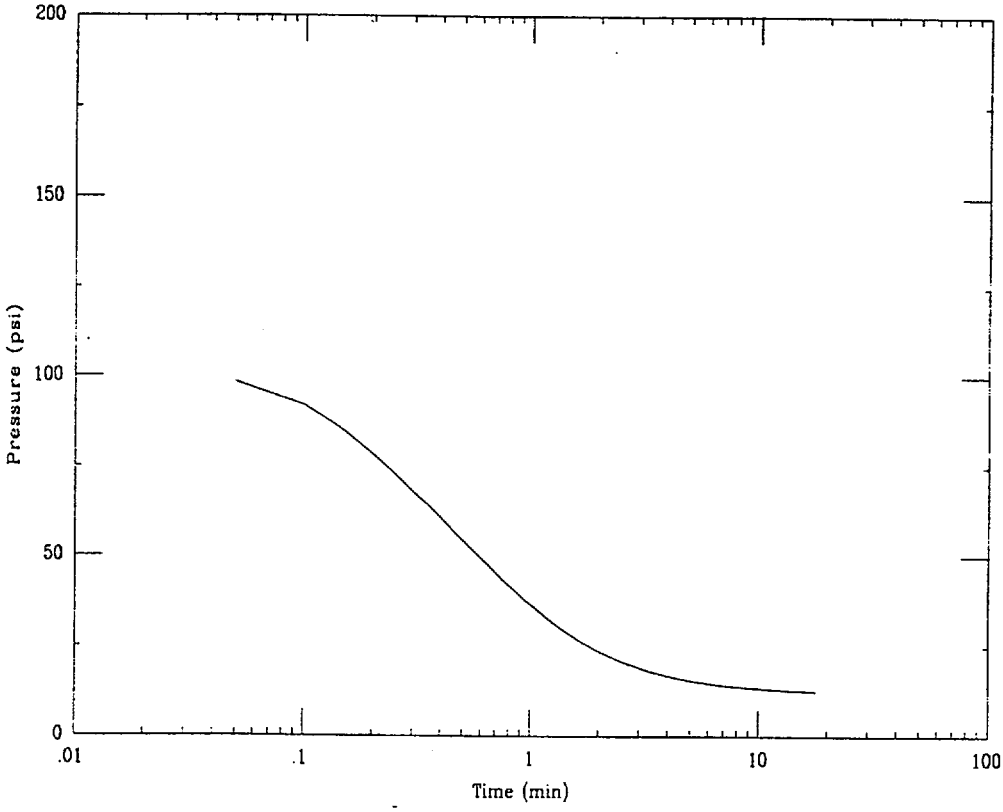
CPT-36R Applied Research Associates 06/13/00

Depth = 84.5 ft Max Pressure = 6.53 psi Pn = 6.47 psi



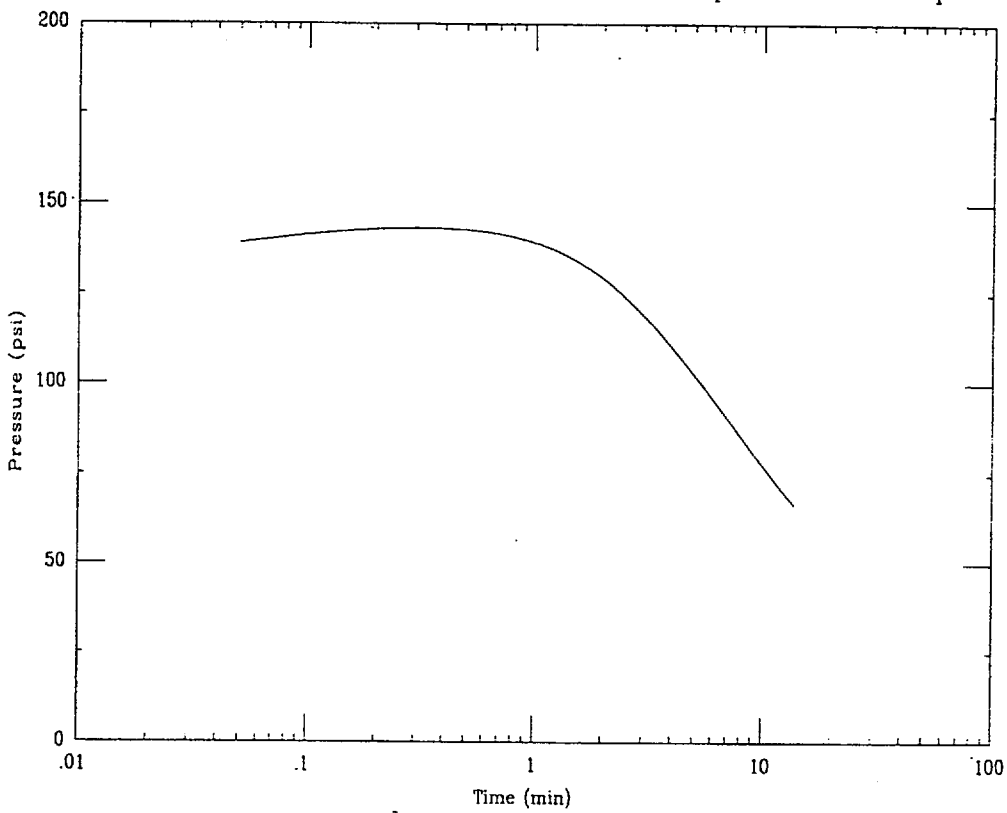
CPT-36R Applied Research Associates 06/13/00

Depth = 97.9 ft Max Pressure = 98.32 psi Pn = 12.49 psi



CPT-36R Applied Research Associates 06/13/00

Depth = 119.9 ft Max Pressure = 143.15 psi Pn = 67.09 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-36R
Test Date : 6/13/00

Northing : 79898.9 (ft)
Easting : 55478.3 (ft)
Surface Elevation : 273.4 (ft)
Water Table Elevation : 203.9 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	84.5	188.9	6.5	6.53								
	97.9	175.5	12.3	98.32	55.31	213.9	3.0	641.67	0.50	1.40E-01	9.06E-01	2.01E-05
	119.9	153.5	21.8	143.15	82.50	262.5	3.0	787.50	8.76	8.01E-03	5.17E-02	9.33E-07

Project : Duke Cogema Stone & Webster

Test Id : CPT-37S
Test Date : 6/5/00

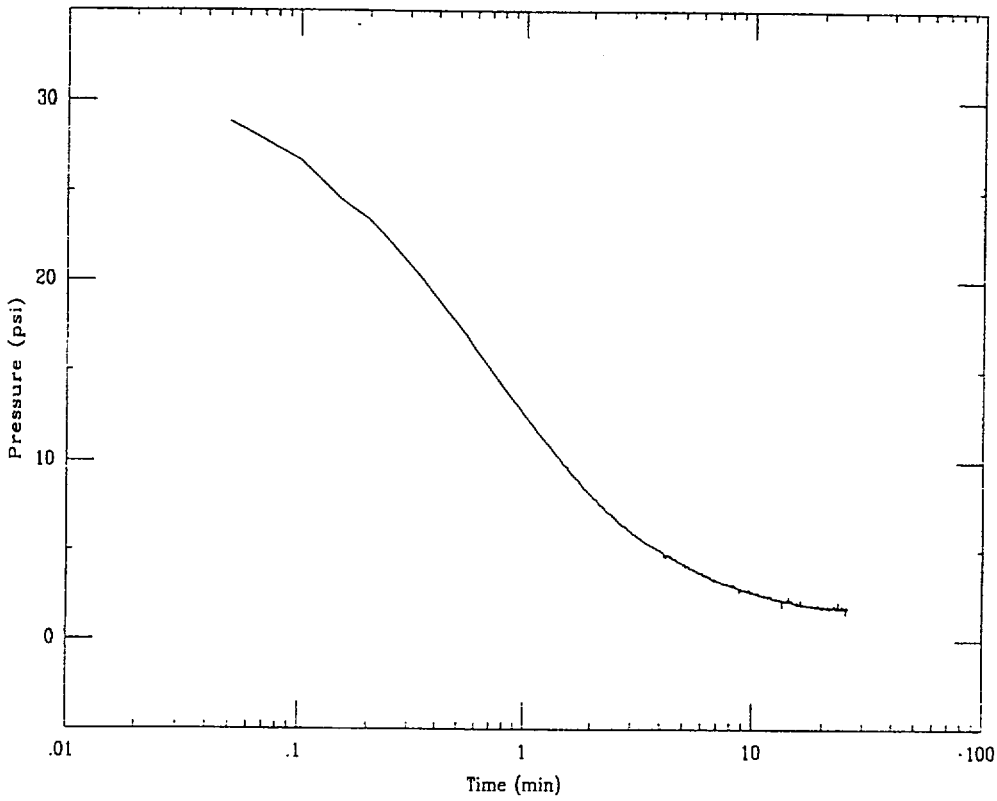
Northing : 79886.1 (ft)
Easting : 55629.4 (ft)
Surface Elevation : 268.4 (ft)
Water Table Elevation : 201.4 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Above GWT	66.6	201.8	-0.2									
t 50% not reached	124.0	144.4	24.7	89.38	57.04							

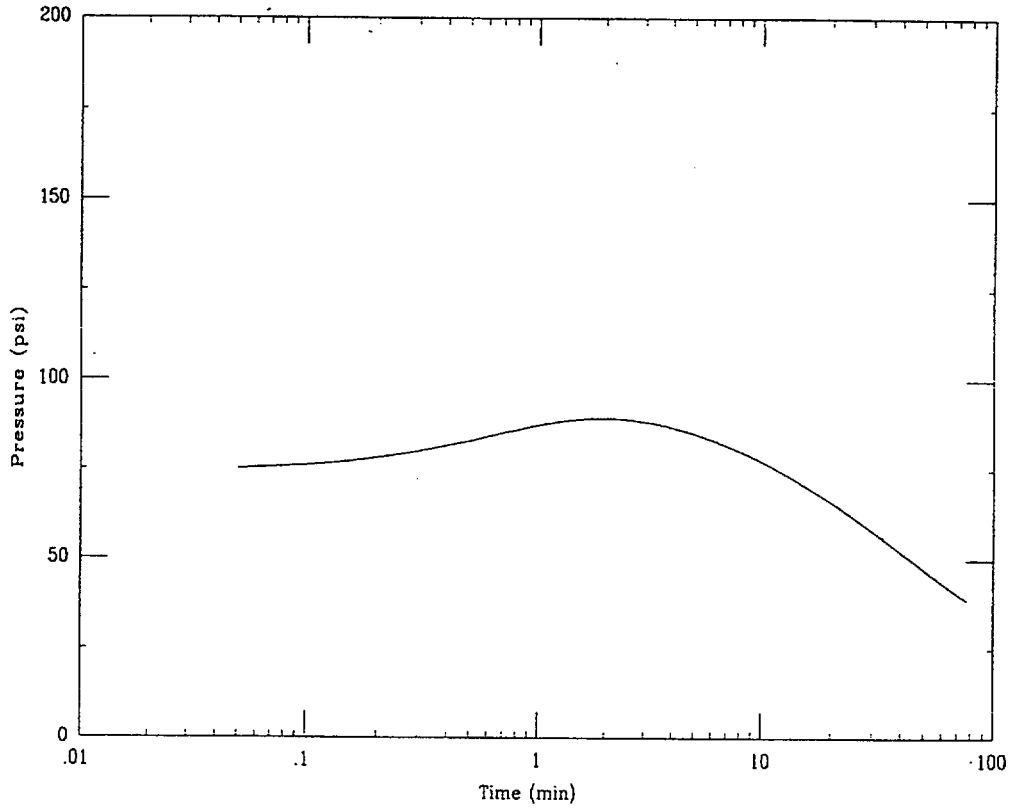
CPT-37S Applied Research Associates 06/05/00

Depth = 66.6 ft Max Pressure = 28.82 psi Pn = 1.78 psi



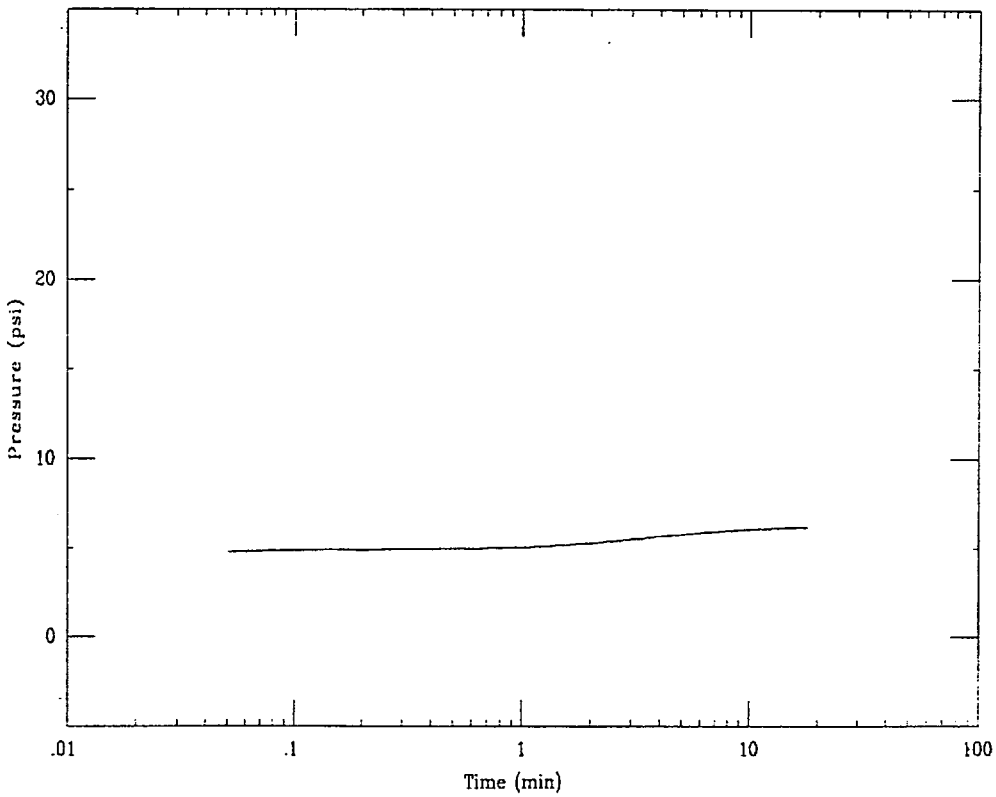
CPT-37S Applied Research Associates 06/05/00

Depth = 124.0 ft Max Pressure = 89.38 psi Pn = 38.76 psi



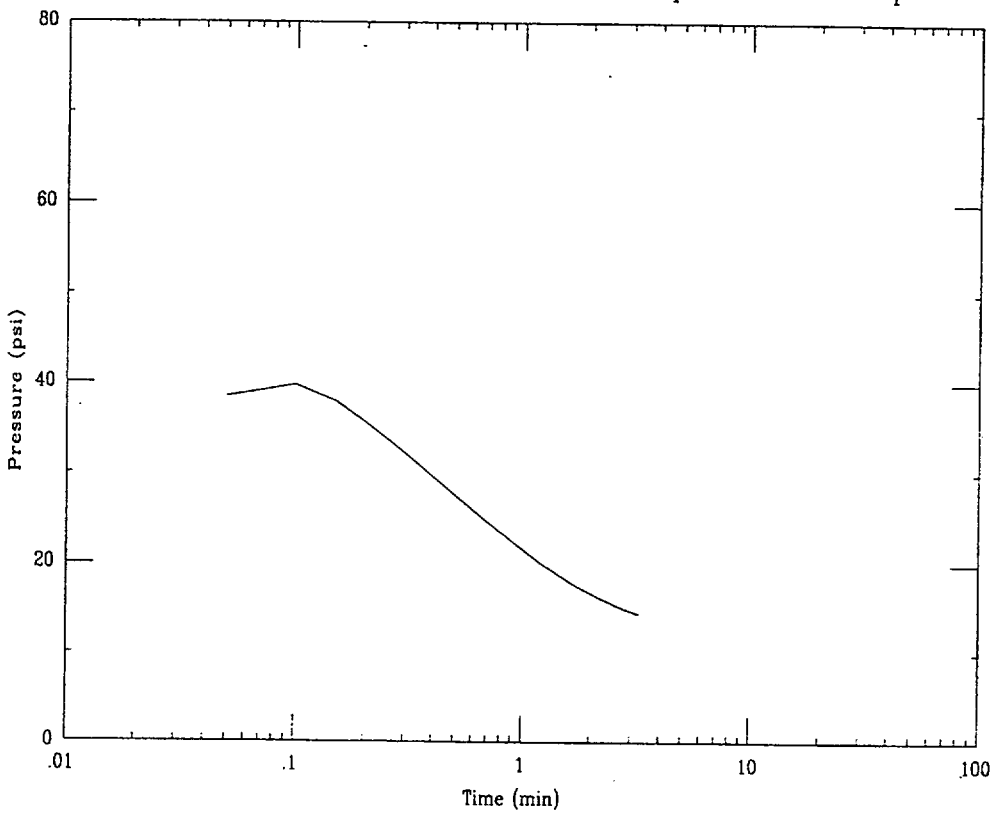
CPT-38R Applied Research Associates 06/23/00

Depth = 81.7 ft Max Pressure = 6.23 psi Pn = 6.20 psi



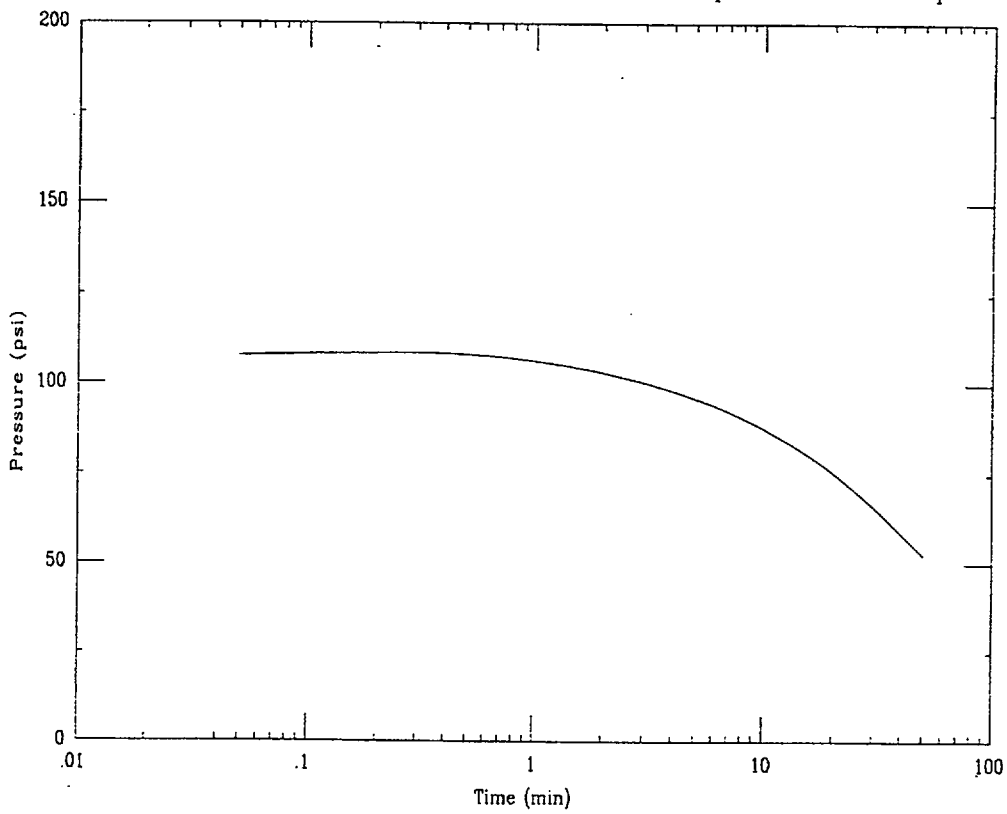
CPT-38R Applied Research Associates 06/23/00

Depth = 93.5 ft Max Pressure = 39.74 psi Pn = 14.73 psi



CPT-38R Applied Research Associates 06/23/00

Depth = 121.8 ft Max Pressure = 108.65 psi Pn = 52.54 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-38R
Test Date : 6/23/00

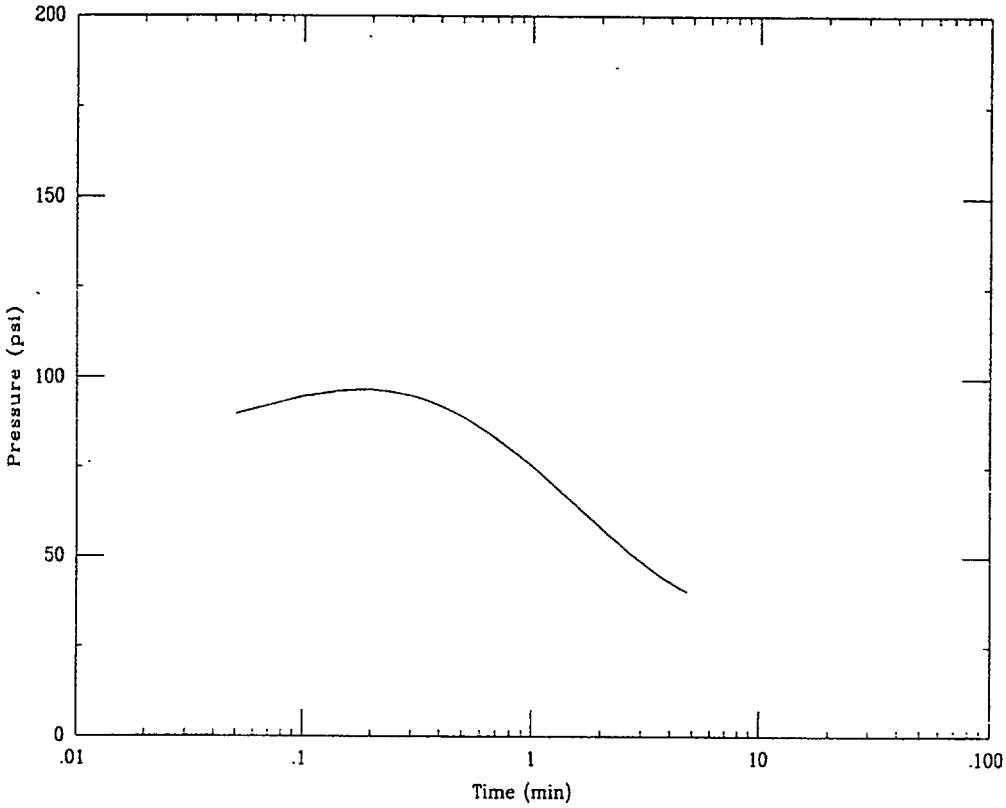
Northing : 79899.9 (ft)
Easting : 55568.6 (ft)
Surface Elevation : 271.3 (ft)
Water Table Elevation : 203.9 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	81.7	189.6	6.2	6.23								
	93.5	177.8	11.3	39.74	25.53	115.3	3.0	345.83	0.65	1.08E-01	6.97E-01	2.86E-05
	121.8	149.5	23.6	108.65	66.11	243.1	3.0	729.17	30.38	2.31E-03	1.49E-02	2.91E-07

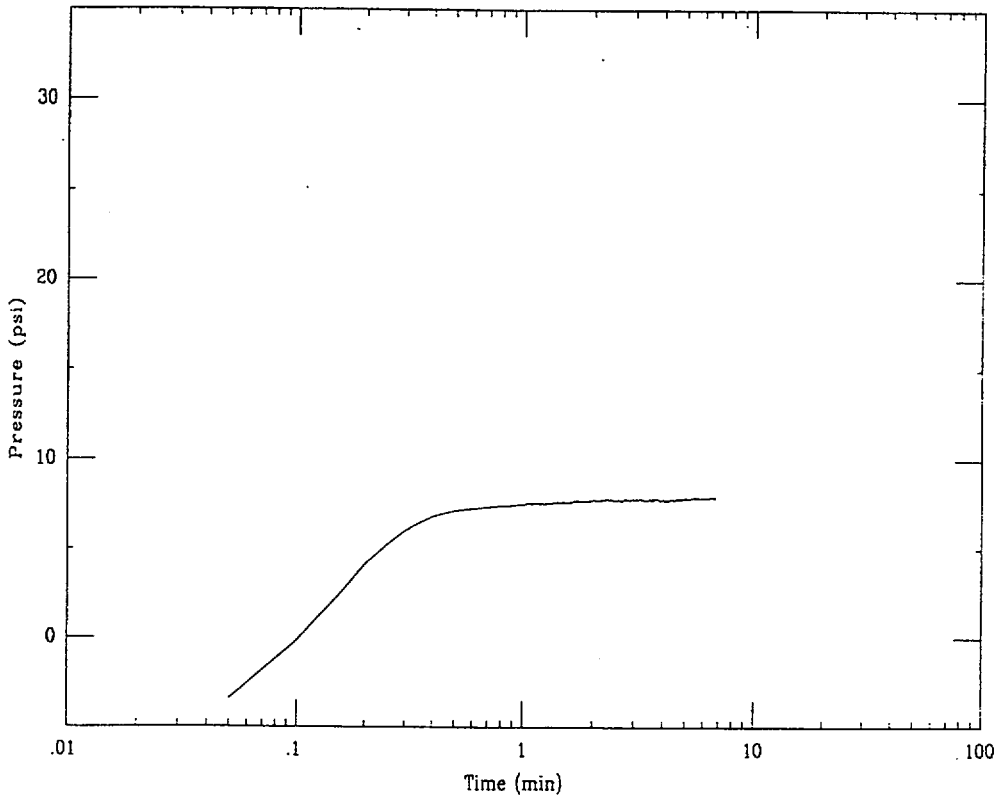
CPT-39R Applied Research Associates 06/24/00

Depth = 56.2 ft Max Pressure = 96.80 psi Pn = 41.05 psi



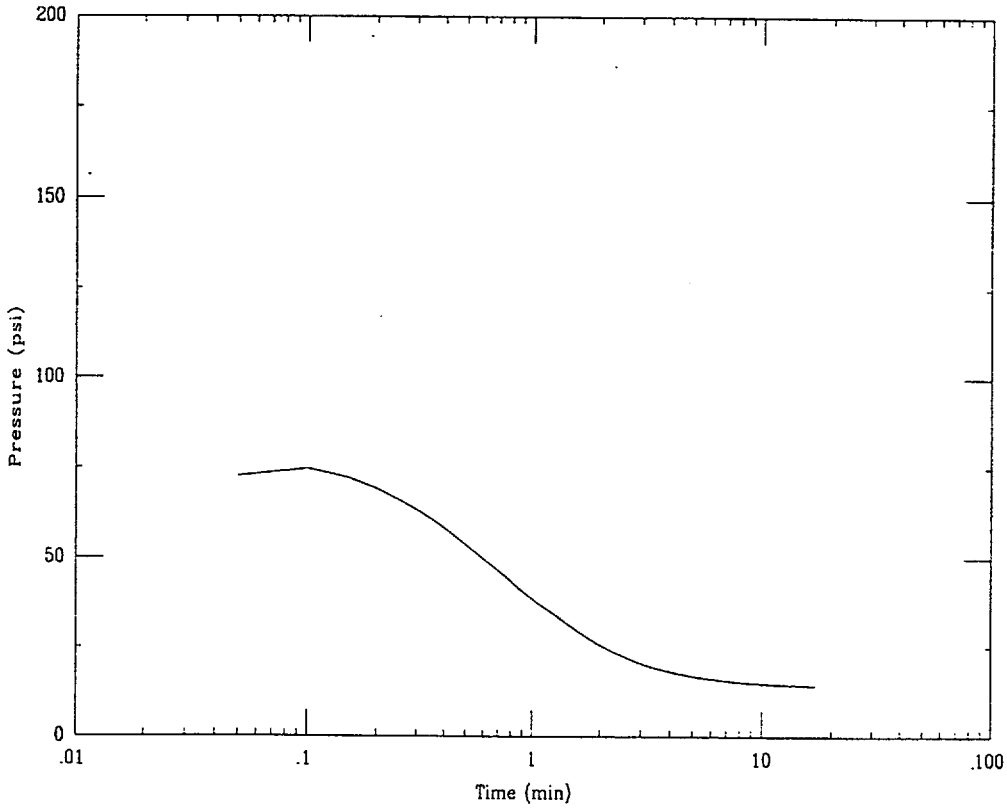
CPT-39R Applied Research Associates 06/24/00

Depth = 82.1 ft Max Pressure = 7.95 psi Pn = 7.93 psi



CPT-39R Applied Research Associates 06/24/00

Depth = 99.1 ft Max Pressure = 74.62 psi Pn = 14.24 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-39R
Test Date : 6/24/00

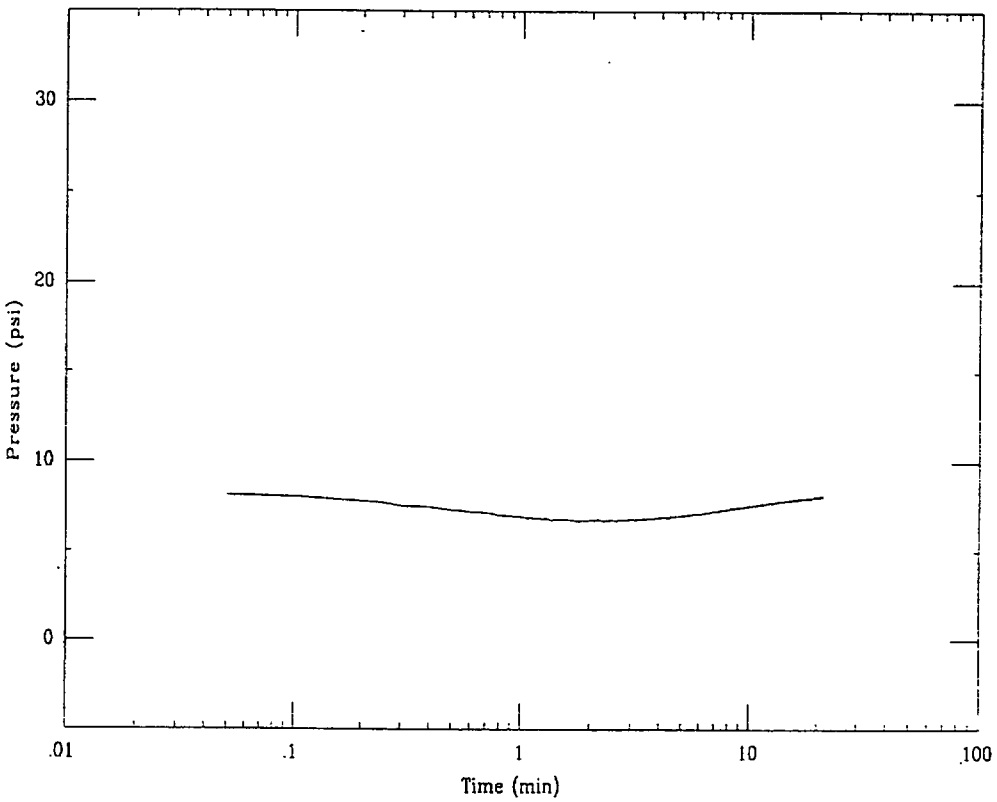
Northing : 80206.6 (ft)
Easting : 55646.9 (ft)
Surface Elevation : 262.1 (ft)
Water Table Elevation : 198.1 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Above GWT	56.2	205.9	-3.4									
Soil Dilation	82.1	180.0	7.8	7.95								
	99.1	163.0	15.2	74.62	44.92	169.4	3.0	508.33	0.75	9.36E-02	6.04E-01	1.69E-05

CPT-40R Applied Research Associates 06/24/00

Depth = 91.0 ft Max Pressure = 8.13 psi Pn = 8.11 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-40R
Test Date : 6/24/00

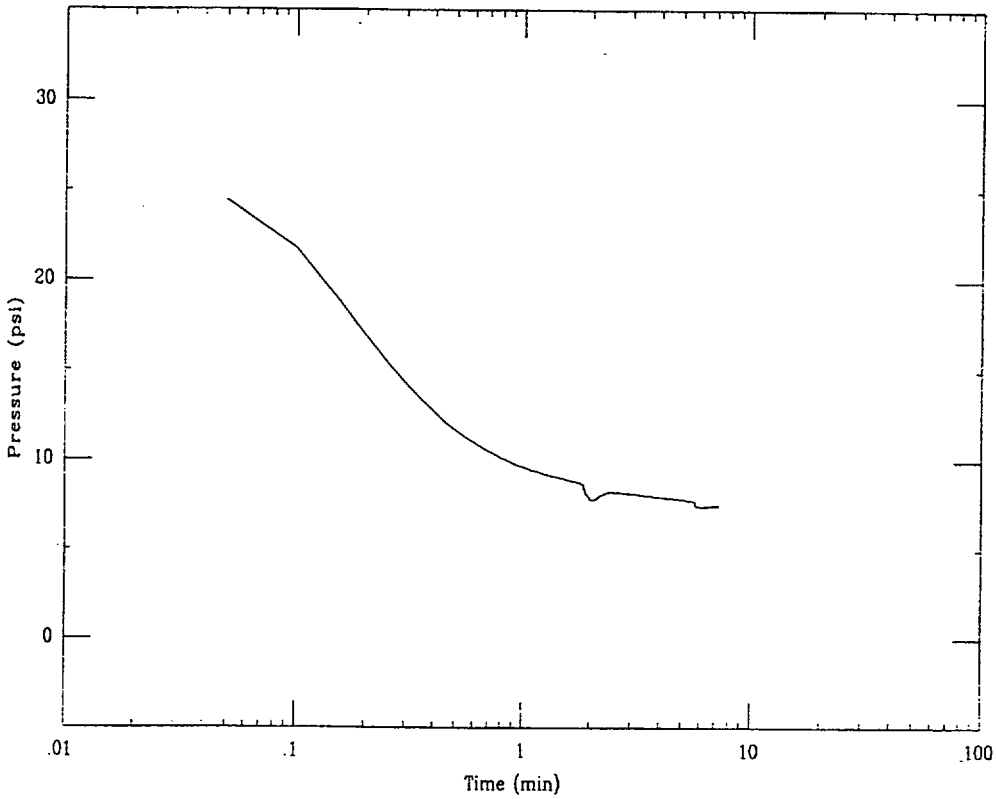
Northing : 79941.1 (ft)
Easting : 55448.0 (ft)
Surface Elevation : 275.0 (ft)
Water Table Elevation : 202.7 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	91.0	184.0	8.1	8.13								

CPT-42 Applied Research Associates 07/08/00

Depth = 87.1 ft Max Pressure = 24.42 psi Pn = 7.47 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-42
Test Date : 7/8/00

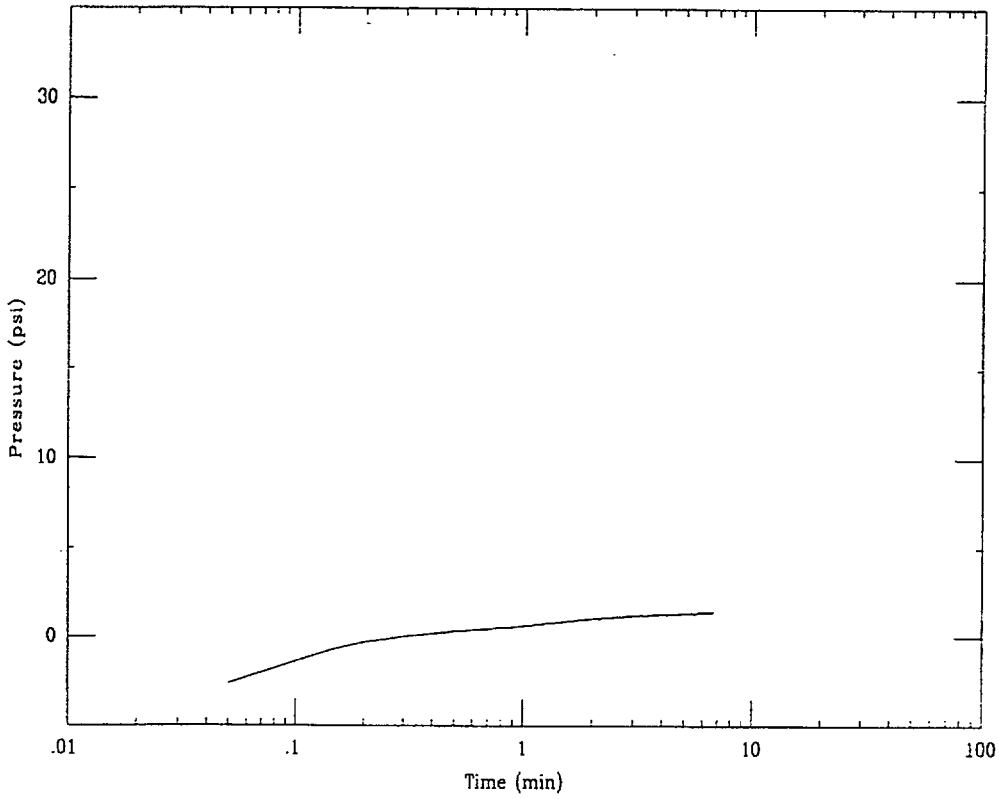
Northing : 80169.8 (ft)
Easting : 55591.7 (ft)
Surface Elevation : 267.5 (ft)
Water Table Elevation : 197.6 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
	87.1	180.4	7.5	24.42	15.94	638.9	1.5	958.33	0.25	2.81E-01	1.81E+00	2.69E-05

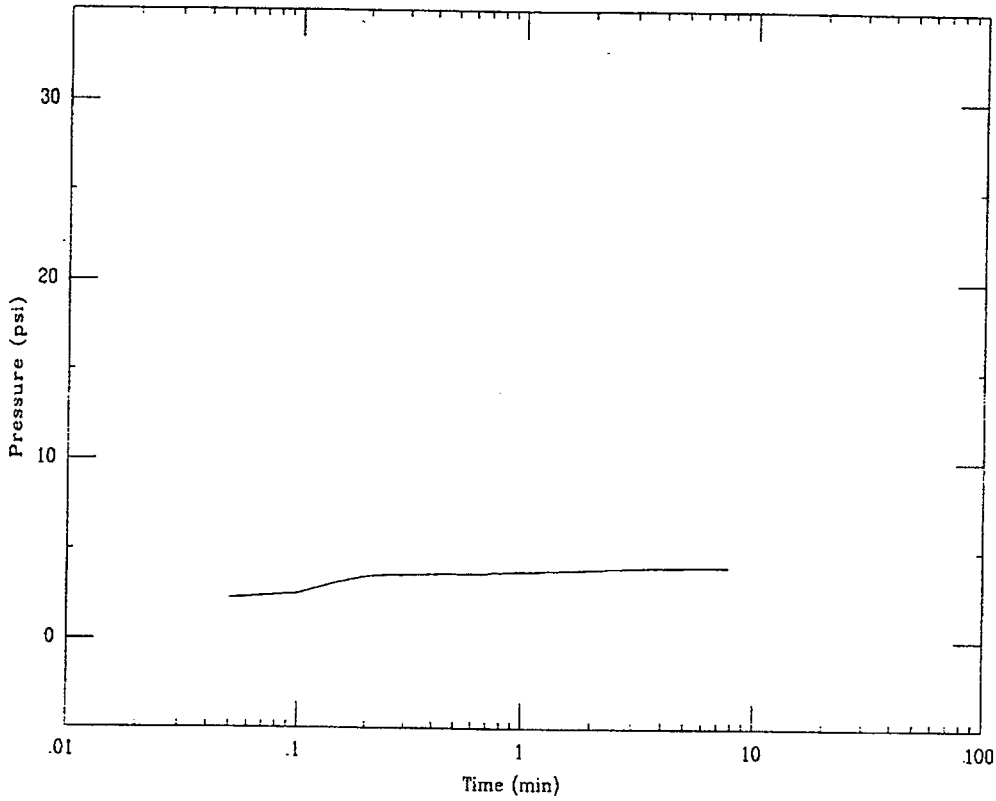
CPT-44 Applied Research Associates 07/20/00

Depth = 85.2 ft Max Pressure = 1.44 psi Pn = 1.42 psi



CPT-44 Applied Research Associates 07/20/00

Depth = 95.3 ft Max Pressure = 4.12 psi Pn = 4.11 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-44
Test Date : 7/20/00

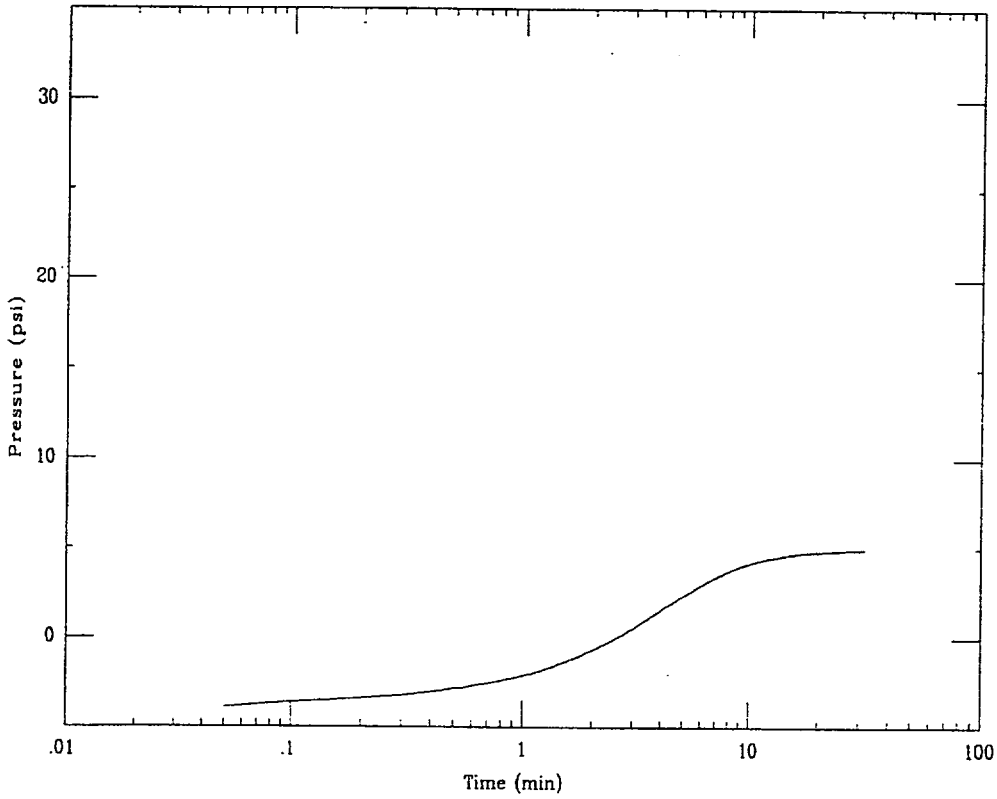
Northing : 80530.3 (ft)
Easting : 55109.3 (ft)
Surface Elevation : 284.7 (ft)
Water Table Elevation : 198.9 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Above GWT	85.2	199.5	-0.3									
Soil Dilation	95.3	189.4	4.1	4.12								

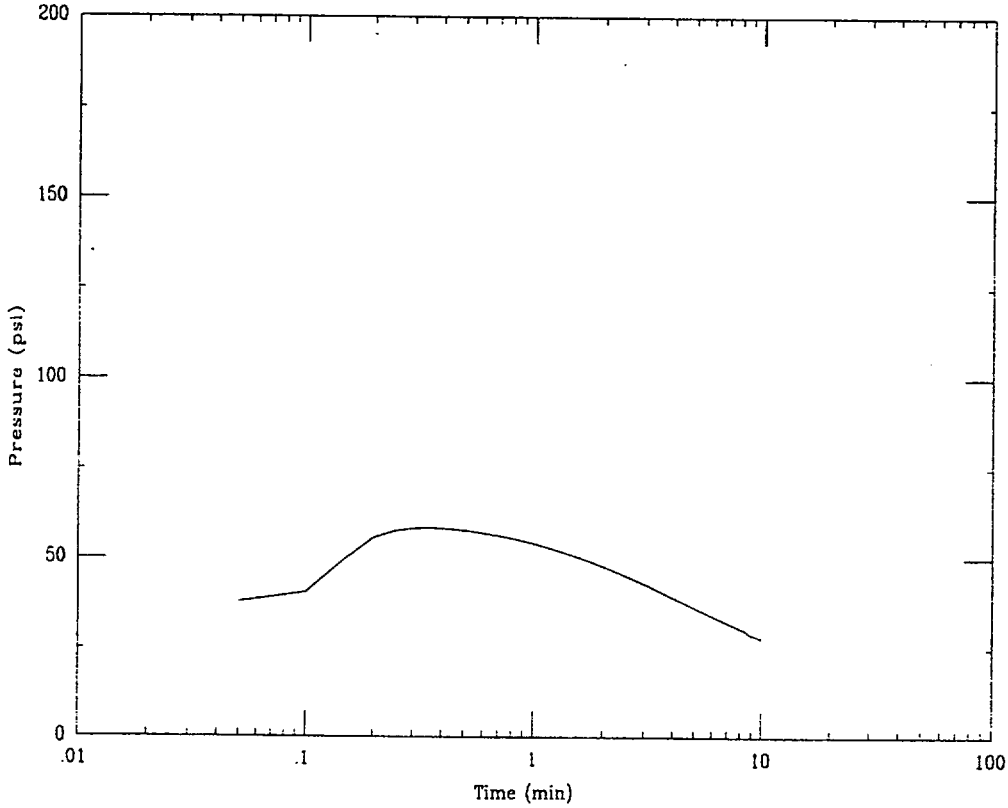
CPT-45 Applied Research Associates 07/21/00

Depth = 94.0 ft Max Pressure = 4.98 psi Pn = 4.97 psi



CPT-45 Applied Research Associates 07/21/00

Depth = 130.0 ft Max Pressure = 58.34 psi Pn = 28.15 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-45
Test Date : 7/21/00

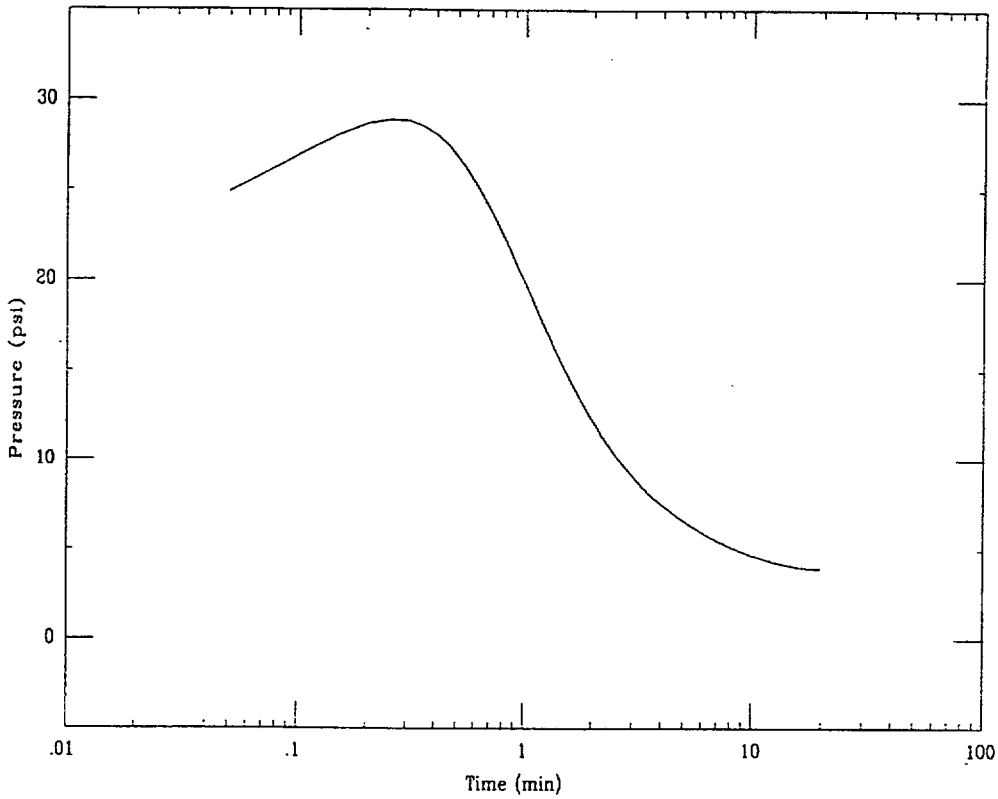
Northing : 80531.1 (ft)
Easting : 55194.0 (ft)
Surface Elevation : 280.5 (ft)
Water Table Elevation : 198.0 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	94.0	186.5	5.0	4.98								
	130.0	150.5	20.6	58.34	39.46	155.6	3.0	466.67	3.95	1.78E-02	1.15E-01	3.49E-06

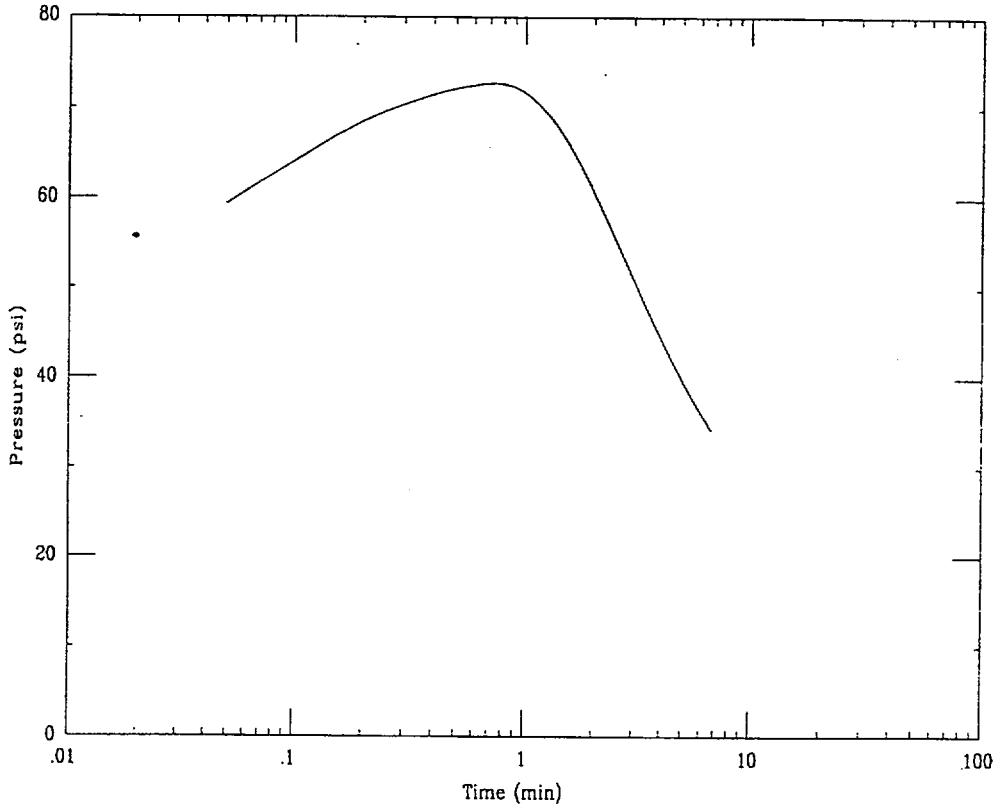
CPT-46 Applied Research Associates 07/20/00

Depth = 83.1 ft Max Pressure = 28.91 psi Pn = 3.94 psi



CPT-46 Applied Research Associates 07/20/00

Depth = 129.1 ft Max Pressure = 72.70 psi Pn = 34.84 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-46
Test Date : 7/20/00

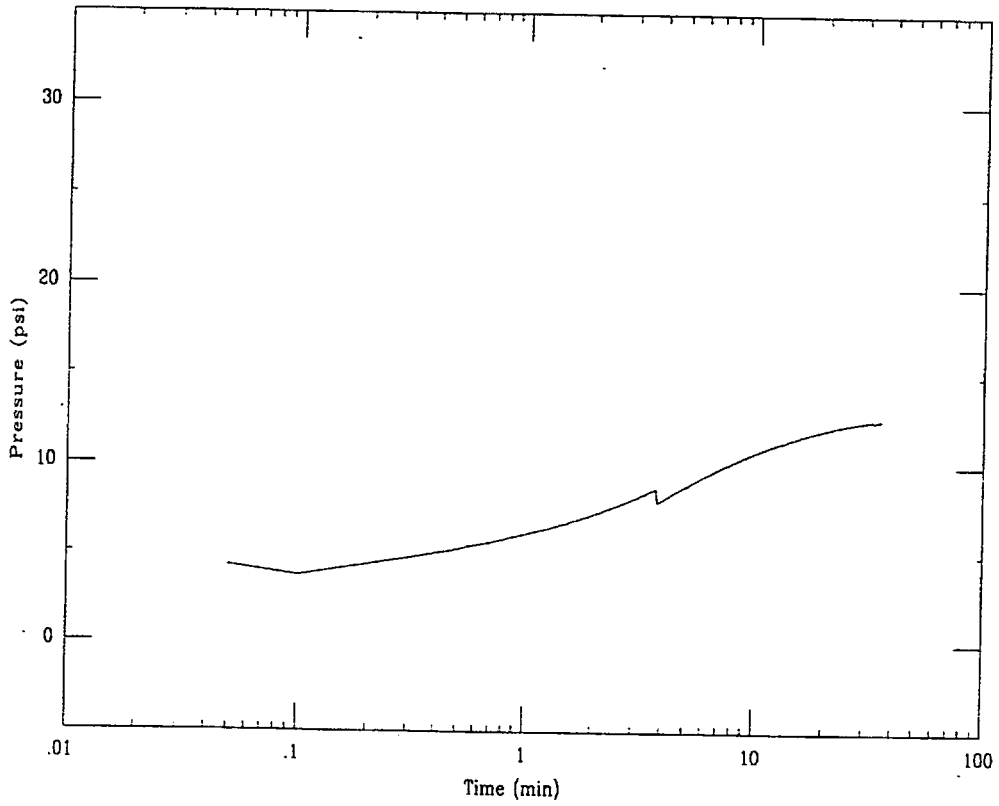
Northing : 80482.0 (ft)
Easting : 55032.8 (ft)
Surface Elevation : 284.5 (ft)
Water Table Elevation : 210.5 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
	83.1	201.4	3.9	28.91	16.43	131.9	3.0	395.83	1.35	5.20E-02	3.35E-01	1.20E-05
	129.1	155.4	23.9	72.70	48.29	202.8	3.0	608.33	3.40	2.06E-02	1.33E-01	3.11E-06

CPT-47 Applied Research Associates 07/20/00

Depth = 116.0 ft Max Pressure = 12.69 psi Pn = 12.64 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-47
Test Date : 7/20/00

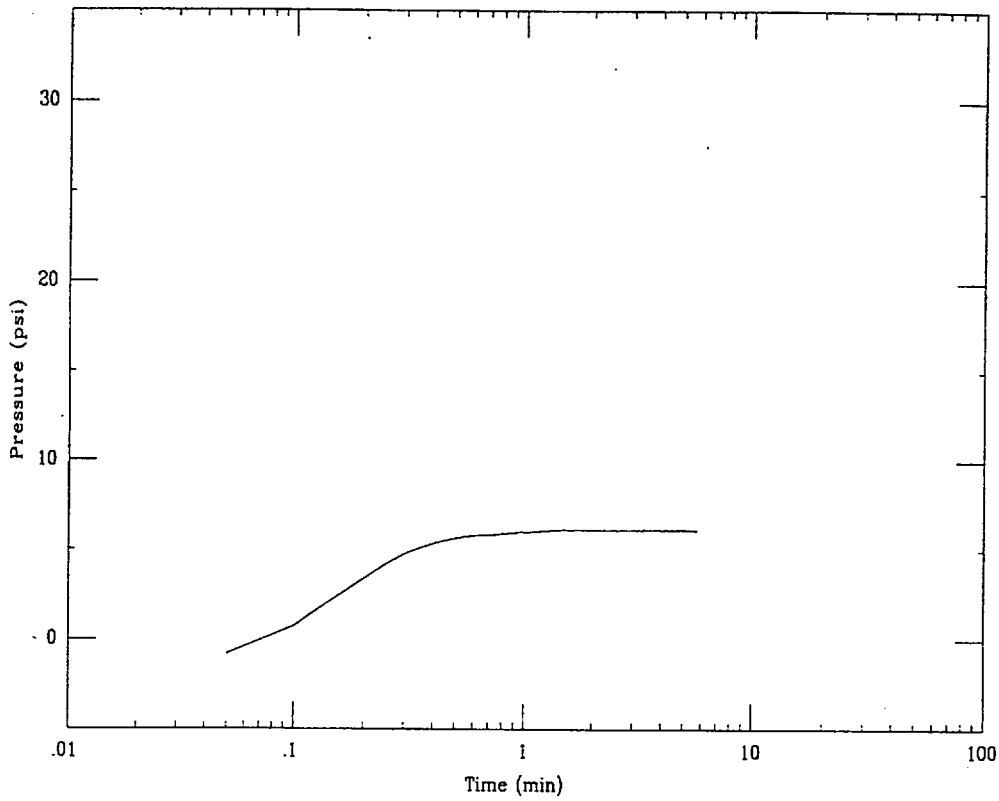
Northing : 80456.7 (ft)
Easting : 55146.5 (ft)
Surface Elevation : 284.1 (ft)
Water Table Elevation : 198.0 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	116.0	168.1	13.0	12.69								

CPT-48 Applied Research Associates 07/22/00

Depth = 96.5 ft Max Pressure = 6.16 psi Pn = 6.12 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-48
Test Date : 7/22/00

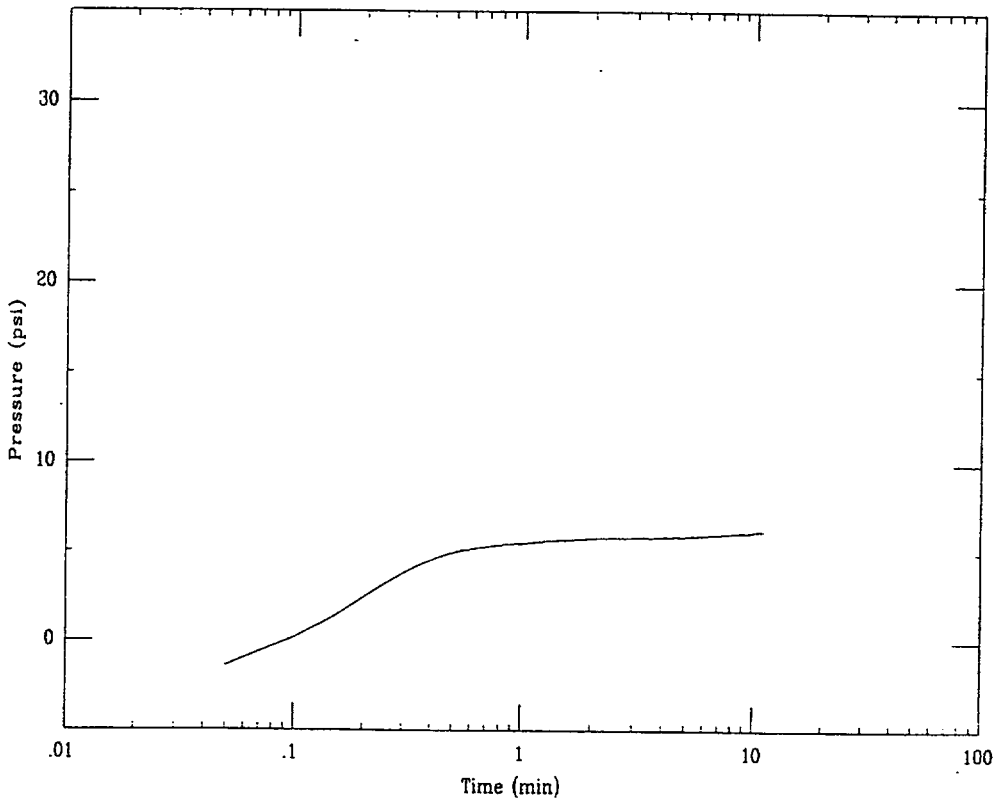
Northing : 80463.6 (ft)
Easting : 54964.1 (ft)
Surface Elevation : 281.2 (ft)
Water Table Elevation : 198.8 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	96.5	184.7	6.1	6.16								

CPT-49 Applied Research Associates 07/19/00

Depth = 105.8 ft Max Pressure = 6.23 psi Pn = 6.20 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-49
Test Date : 7/19/00

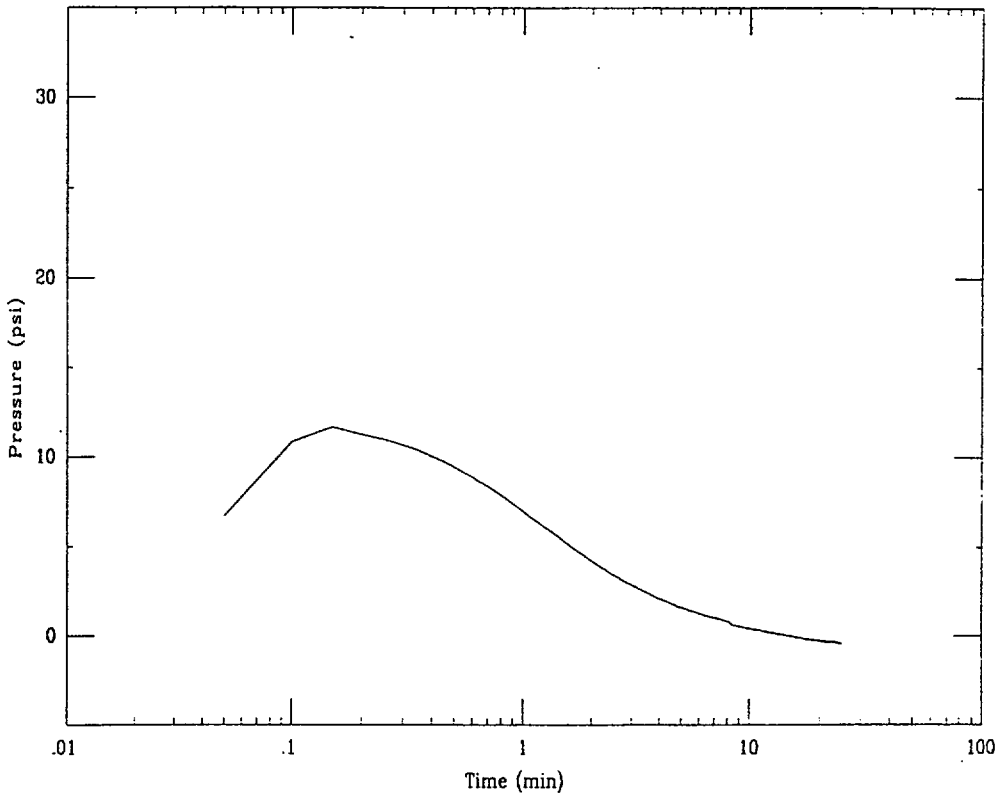
Northing : 80332.7 (ft)
Easting : 54931.1 (ft)
Surface Elevation : 292.4 (ft)
Water Table Elevation : 200.9 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Soil Dilation	105.8	186.6	6.2	6.23								

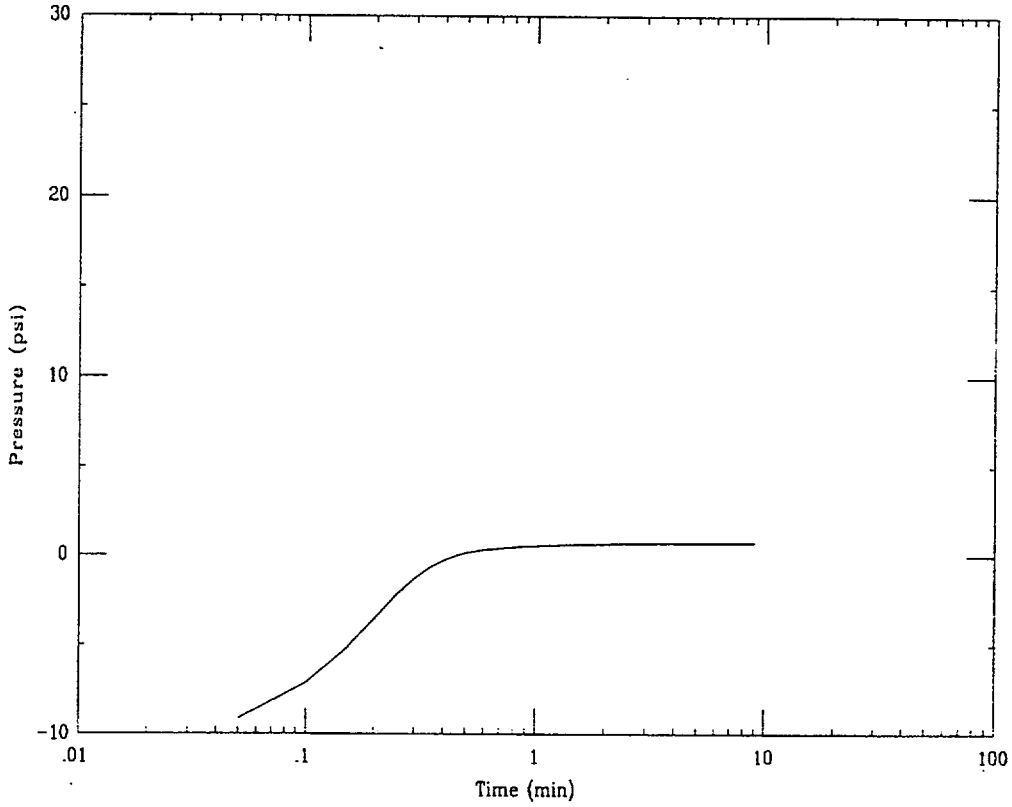
CPT-50 Applied Research Associates 07/19/00

Depth = 102.5 ft Max Pressure = 11.65 psi Pn = -0.41 psi



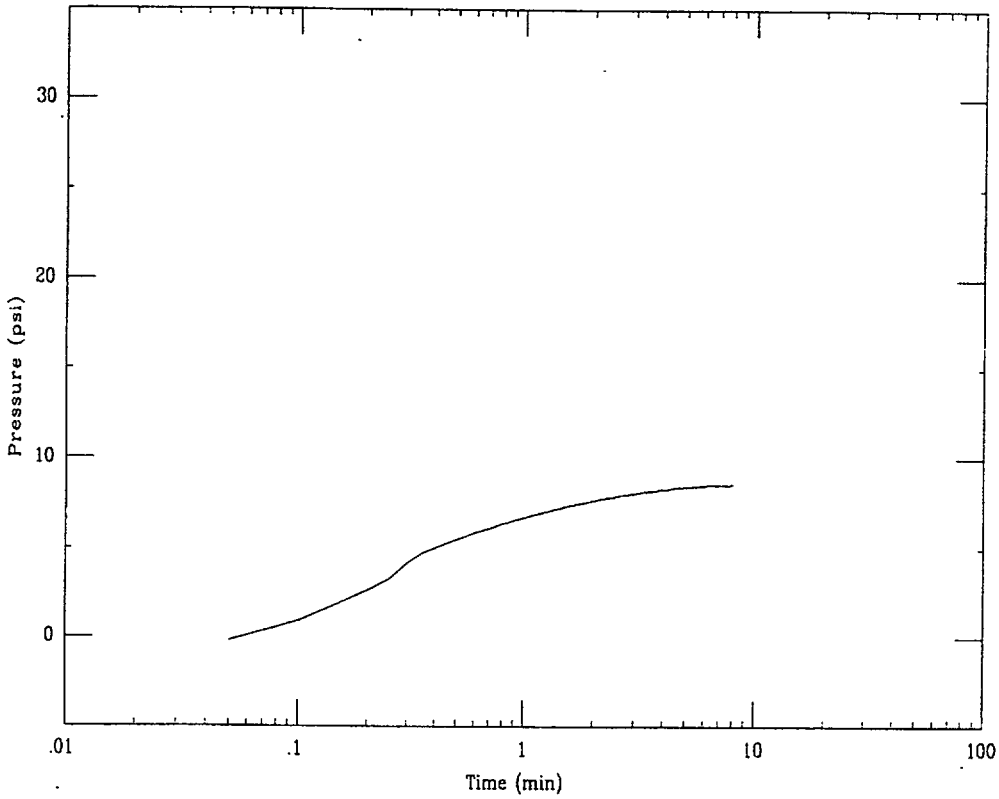
CPT-50 Applied Research Associates 07/19/00

Depth = 108.6 ft Max Pressure = 0.76 psi Pn = 0.73 psi



CPT-50 Applied Research Associates 07/19/00

Depth = 127.6 ft Max Pressure = 8.63 psi Pn = 8.59 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-50
Test Date : 7/19/00

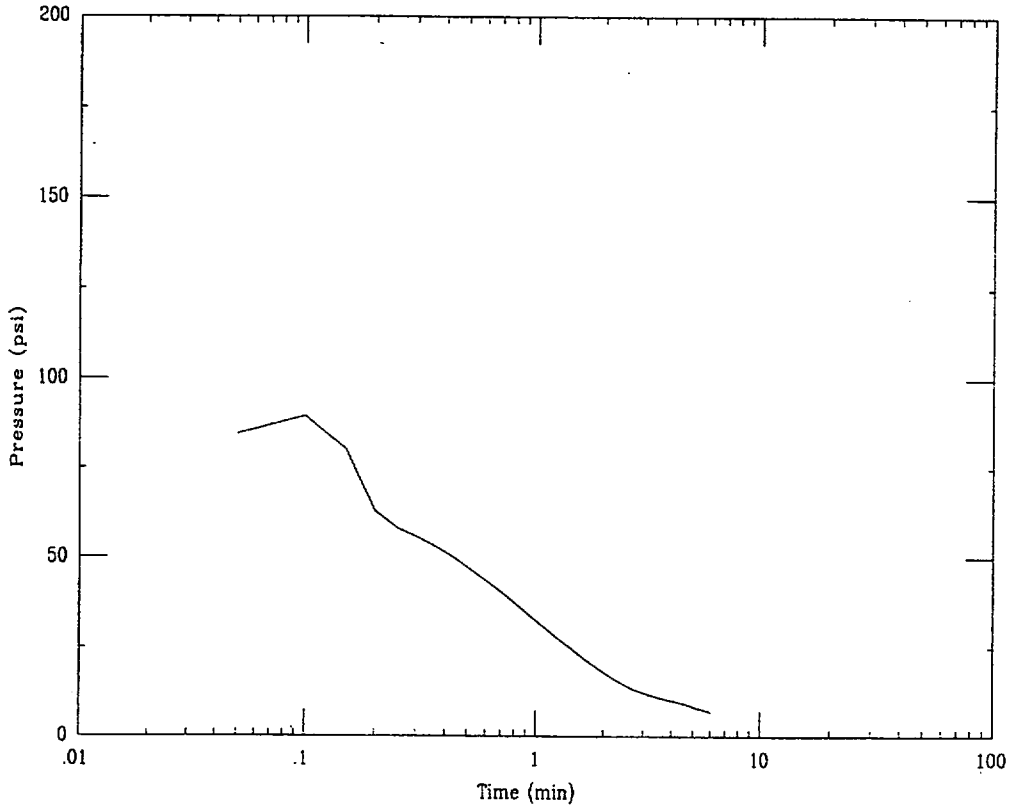
Northing : 80370.9 (ft)
Easting : 55140.0 (ft)
Surface Elevation : 294.4 (ft)
Water Table Elevation : 186.6 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Above GWT	102.5	191.9	-2.3									
Soil Dilation	108.6	185.8	0.3	0.76								
Soil Dilation	127.6	166.8	8.6	8.63								

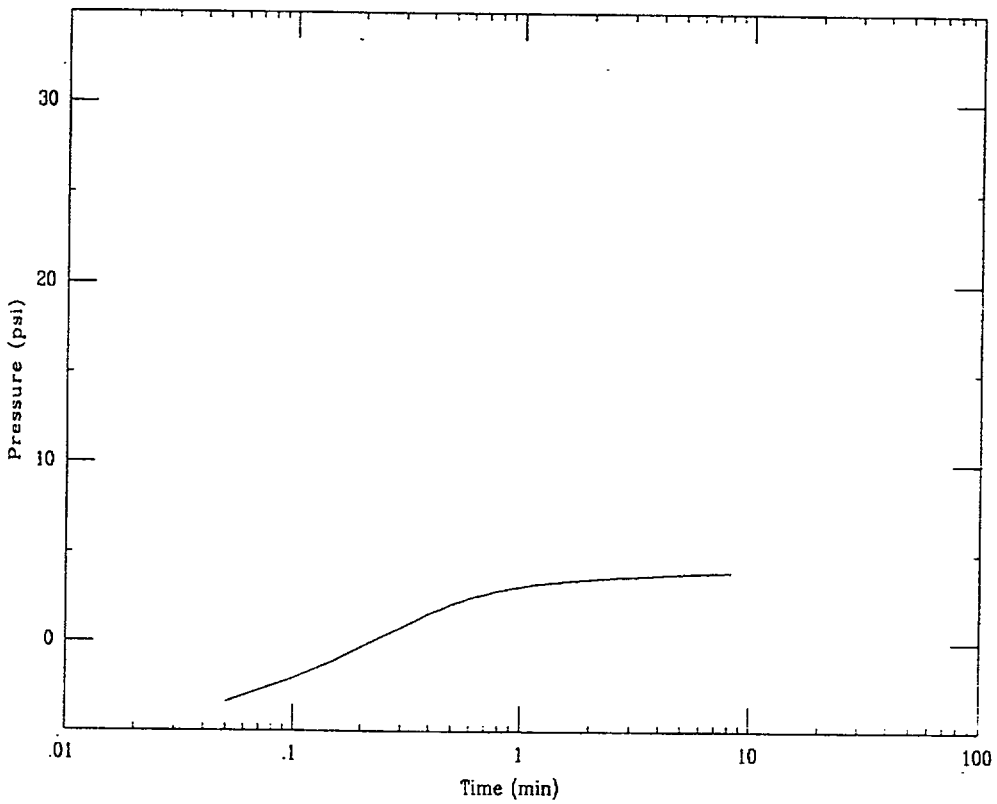
CPT-51 Applied Research Associates 07/18/00

Depth = 95.3 ft Max Pressure = 89.40 psi Pn = 7.36 psi



CPT-51 Applied Research Associates 07/18/00

Depth = 104.1 ft Max Pressure = 4.03 psi Pn = 3.99 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-51
Test Date : 7/18/00

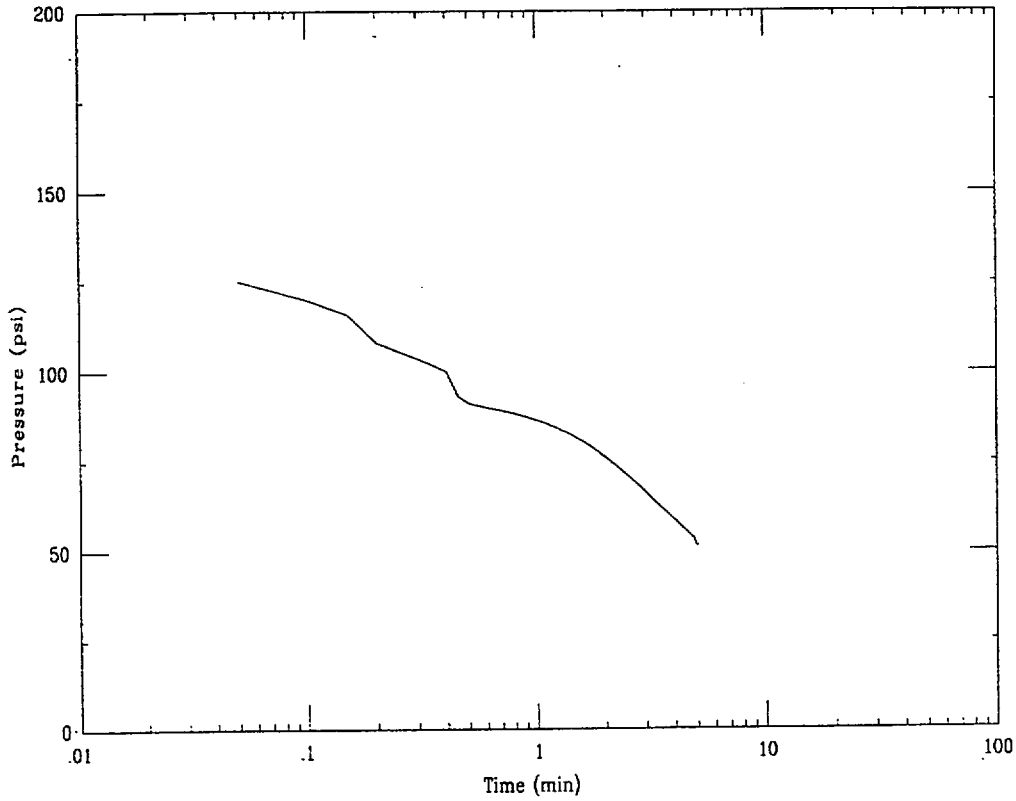
Northing : 80318.7 (ft)
Easting : 55198.3 (ft)
Surface Elevation : 295.5 (ft)
Water Table Elevation : 200.5 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
At GWT	95.3	200.2	0.1									
Soil Dilation	104.1	191.4	3.9	4.03								

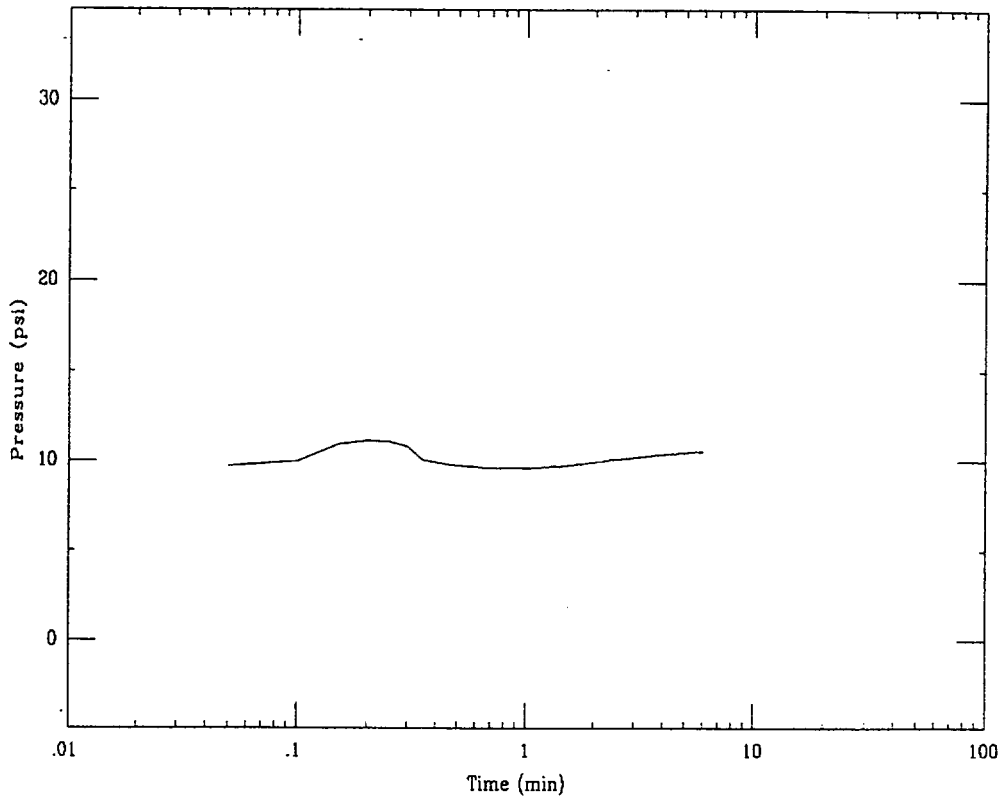
CPT-52 Applied Research Associates 07/19/00

Depth = 114.2 ft Max Pressure = 125.16 psi Pn = 53.38 psi



CPT-52 Applied Research Associates 07/19/00

Depth = 119.1 ft Max Pressure = 11.11 psi Pn = 10.54 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-52
Test Date : 7/19/00

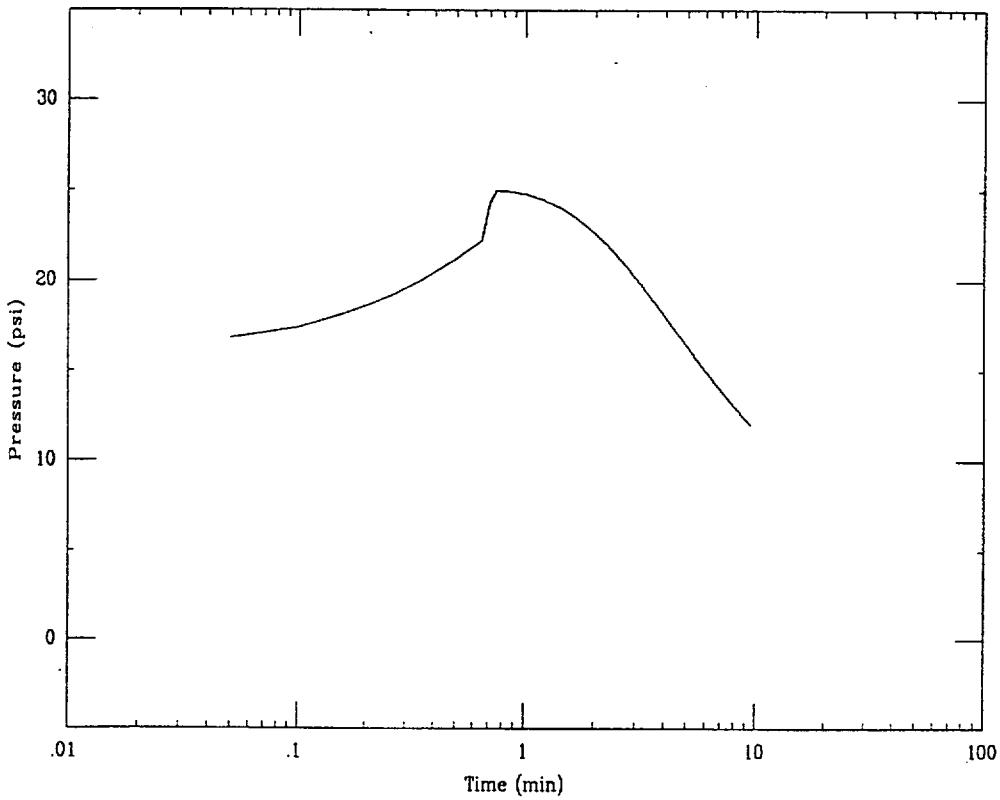
Northing : 80277.0 (ft)
Easting : 54867.3 (ft)
Surface Elevation : 293.4 (ft)
Water Table Elevation : 198.7 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
	114.2	179.2	8.5	125.16	66.81	225.0	3.0	675.00	2.95	2.38E-02	1.53E-01	3.23E-06
Soil Dilation	119.1	174.3	10.6	11.11								

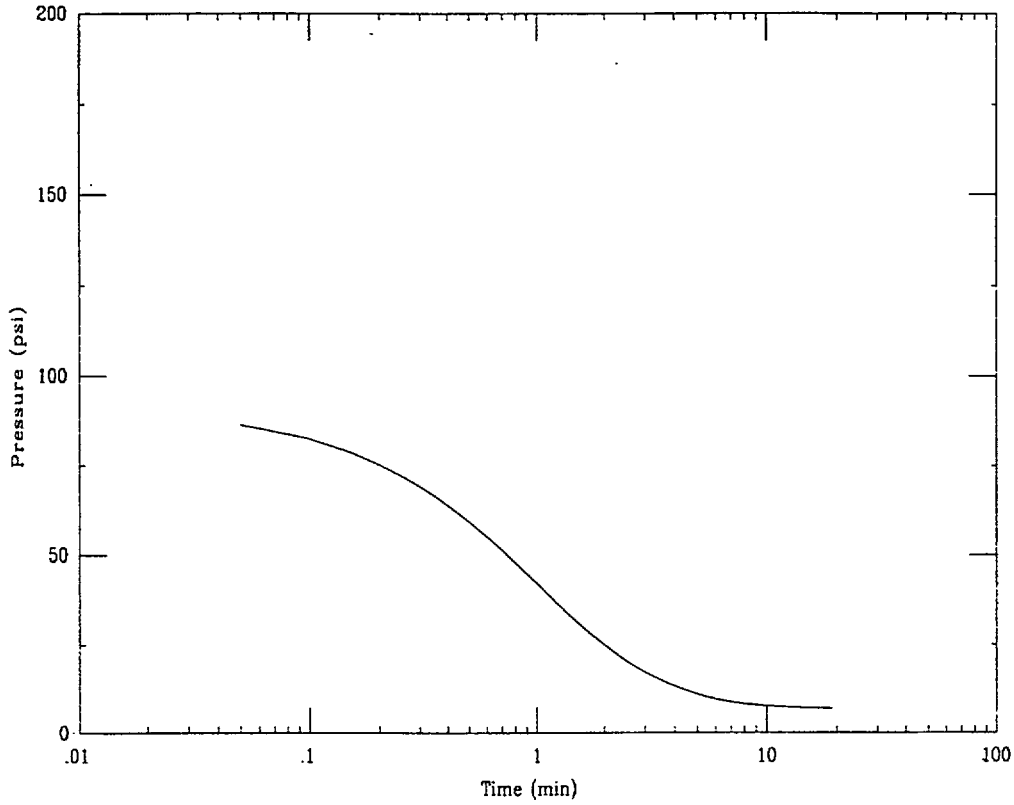
CPT-53 Applied Research Associates 07/15/00

Depth = 89.0 ft Max Pressure = 24.99 psi Pn = 12.12 psi



CPT-53 Applied Research Associates 07/15/00

Depth = 106.4 ft Max Pressure = 86.38 psi Pn = 7.06 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-53
Test Date : 7/15/00

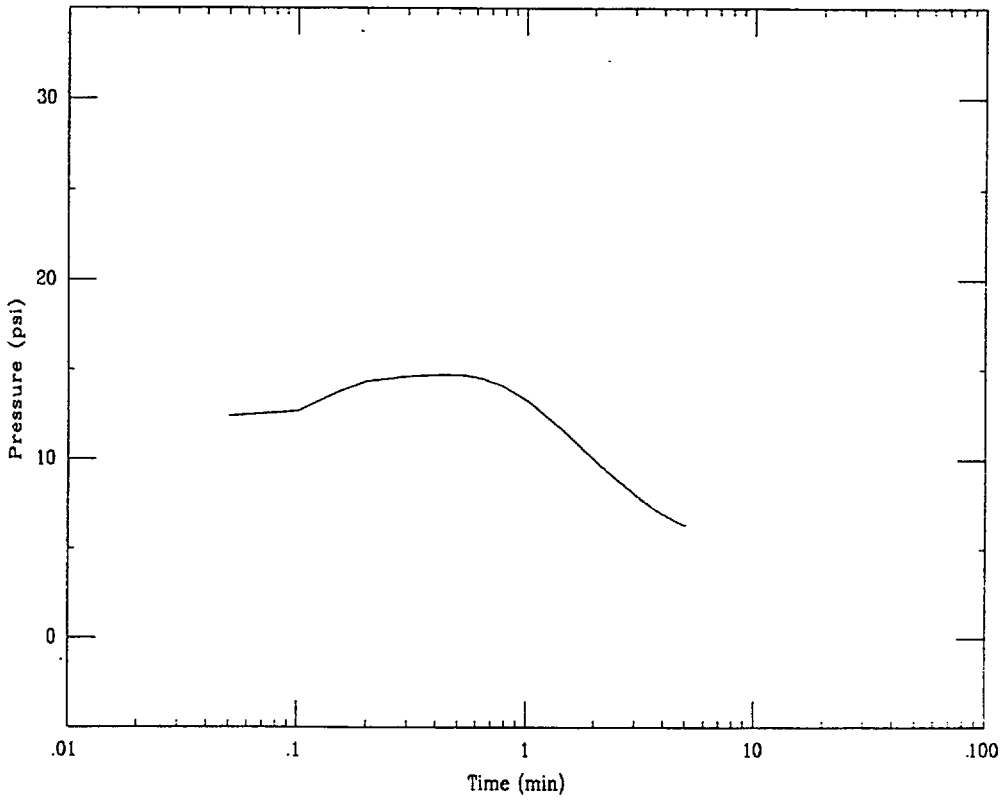
Northing : 80309.5 (ft)
Easting : 55059.9 (ft)
Surface Elevation : 292.8 (ft)
Water Table Elevation : 202.6 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
Above GWT	89.0	203.8	-0.5									
	106.4	186.4	7.0	86.38	46.70	152.8	3.0	458.33	0.85	8.26E-02	5.33E-01	1.65E-05

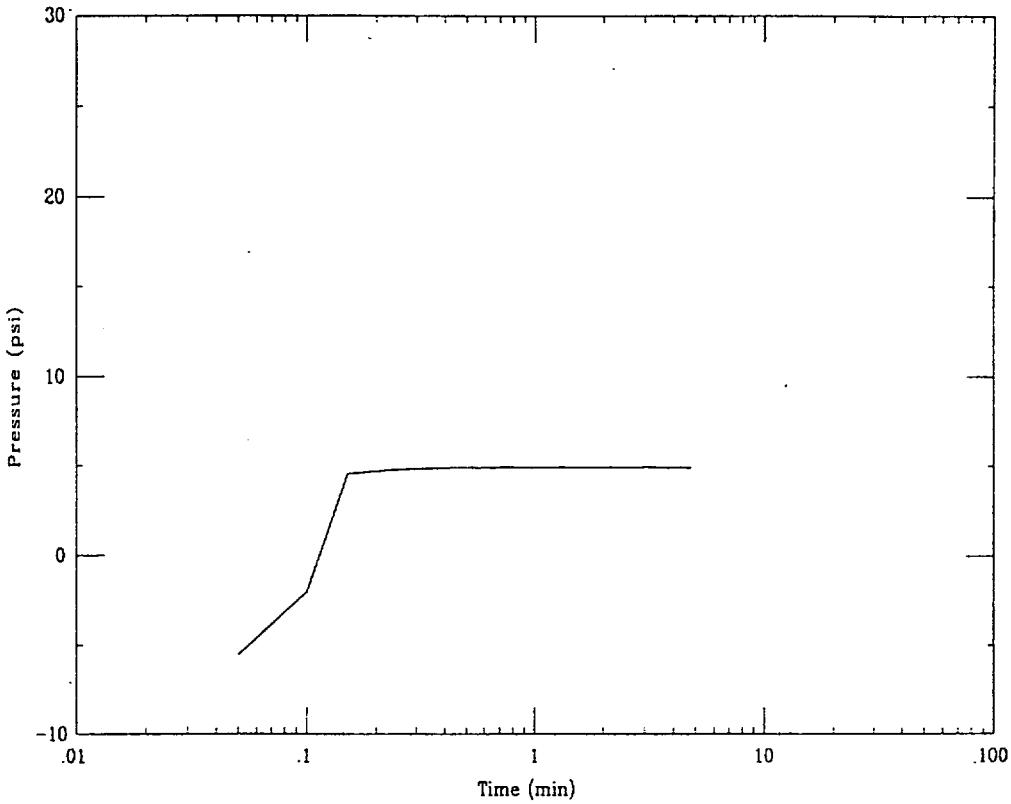
CPT-54 Applied Research Associates 07/20/00

Depth = 96.4 ft Max Pressure = 14.72 psi Pn = 6.43 psi



CPT-54 Applied Research Associates 07/20/00

Depth = 104.2 ft Max Pressure = 4.95 psi Pn = 4.91 psi



Project : Duke Cogema Stone & Webster

Test Id : CPT-54
Test Date : 7/20/00

Northing : 80243.1 (ft)
Easting : 54940.0 (ft)
Surface Elevation : 293.7 (ft)
Water Table Elevation : 200.8 (ft)

Probe Diameter : 1.75 (in)

Notes	Test Depth (ft)	Test Elev (ft)	Static Pressure (psi)	Maximum Pressure (psi)	50 % Pressure (psi)	Tip Stress (psi)	Alpha	Constrained Modulus (psi)	Time 50 % (min)	Coefficient Lateral Consolidation (in2/s)	Coefficient Lateral Consolidation (cm2/sec)	Coefficient Lateral Permeability (cm/s)
	96.4	197.3	1.5	14.72	8.12	147.2	3.0	441.67	2.95	2.38E-02	1.53E-01	4.94E-06
Soil Dilation	104.2	189.5	4.9	4.95								