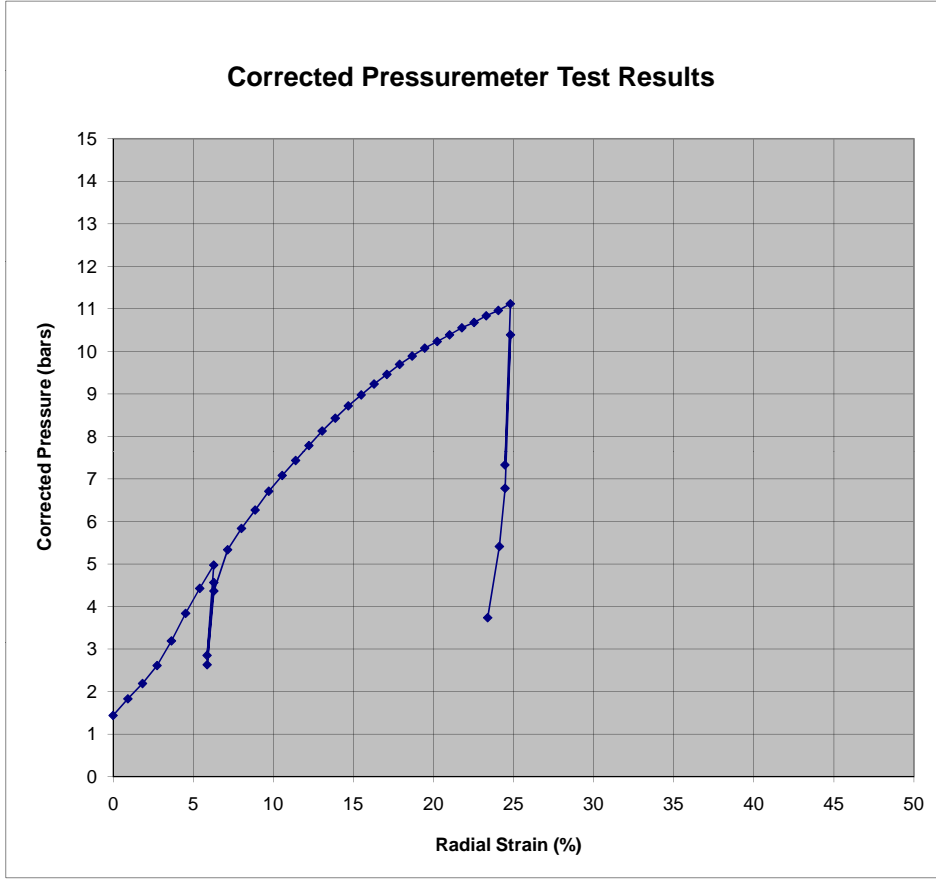


# PRESSUREMETER TEST REPORT

PROJECT: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet	BORING: B-60
LOCATION: Wanchese, NC	TEST #: 1
IN-SITU SOIL TESTING, L.C.	DEPTH: 11.8 ft
ENGINEER: Roger Failmezger, P.E., F. ASCE	TEST DATE: 6/2/2011

Pressure Bar	Volume cm <sup>3</sup>	ΔR/R <sub>0</sub> %	Selected points
1.44	0	0.00	
1.83	40	0.92	
2.19	79	1.84	
2.61	119	2.74	
3.19	159	3.64	<b>Eo1</b>
3.84	198	4.53	
4.43	238	5.41	
4.98	277	6.28	<b>Eo2</b>
2.85	258	5.86	<b>Er1</b>
4.57	277	6.29	<b>Er2</b>
2.63	258	5.87	<b>Er3</b>
4.37	278	6.29	<b>Er4</b>
5.34	317	7.15	
5.84	356	8.01	
6.27	396	8.87	
6.71	436	9.72	
7.08	476	10.56	
7.44	515	11.40	
7.79	555	12.23	
8.13	595	13.05	
8.43	634	13.87	
8.72	674	14.68	
8.98	714	15.49	
9.23	754	16.30	
9.46	794	17.09	
9.70	833	17.89	
9.89	873	18.67	
10.08	913	19.46	
10.23	953	20.23	
10.39	993	21.01	
10.56	1033	21.77	
10.68	1073	22.54	
10.84	1113	23.30	
10.96	1153	24.05	
11.12	1192	24.80	
7.33	1174	24.46	<b>Eu1</b>
10.39	1193	24.81	<b>Eu2</b>
6.78	1175	24.47	<b>Eu3</b>
5.41	1156	24.12	<b>Eu4</b>
3.74	1117	23.39	

Interpreted Pressuremeter Parameters		
P <sub>o</sub>	N/A	bar
P <sub>L</sub>	13.0	bar
P <sub>L</sub> <sup>*</sup>	#VALUE!	bar
E <sub>o</sub>	94	bar
E <sub>r1</sub>	571	bar
E <sub>r2</sub>	579	bar
E <sub>u</sub> /P <sub>L</sub> <sup>*</sup>	#VALUE!	
E <sub>u1</sub>	1853	bar
E <sub>r3</sub>	1451	bar
E <sub>u2</sub>	1756	bar



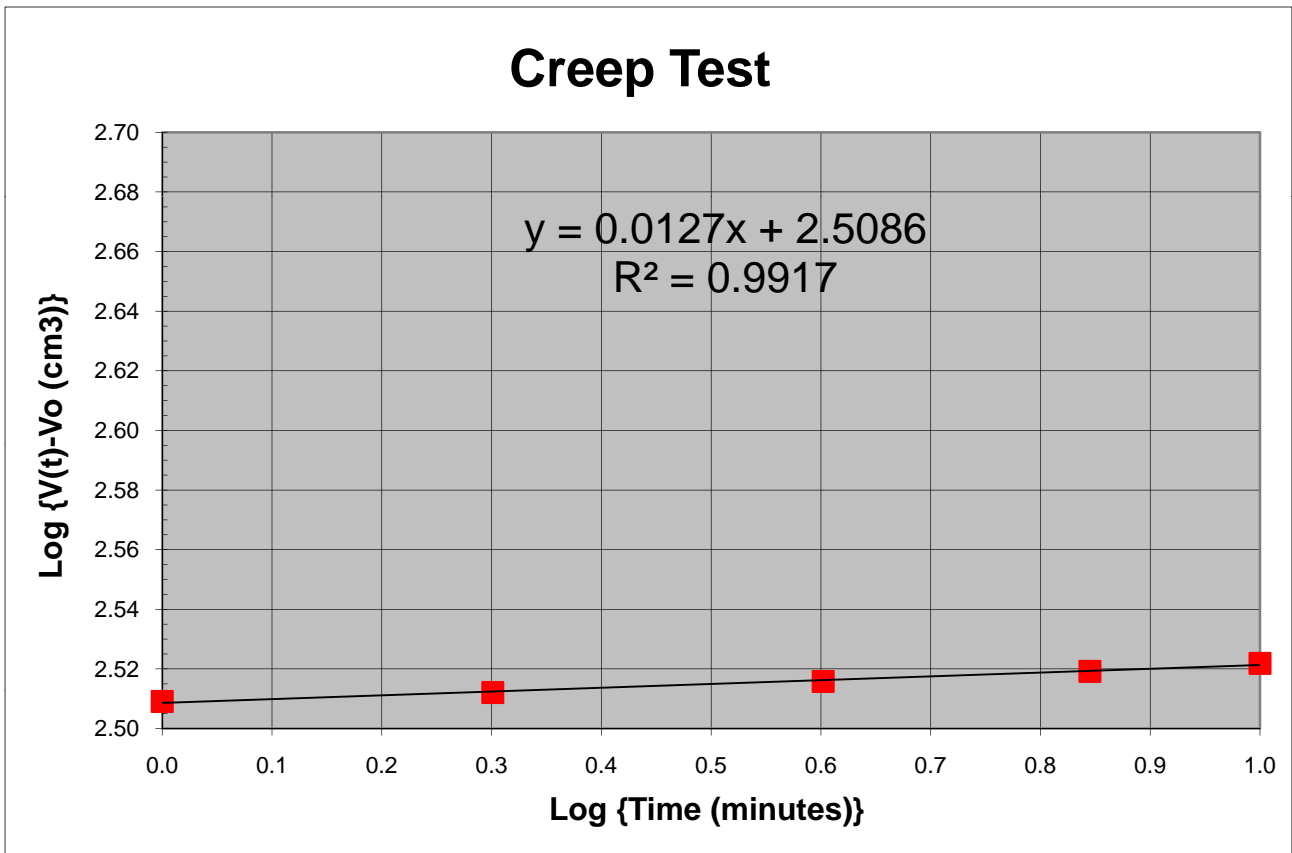
# Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-60  
 Test Depth: 11.8 feet  
 Holding Gauge Pressure = 4.12 bars  
 Corrected Pressure = 5.34 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 50 cm  
 Initial Volume of Probe = 2139 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.69 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2139 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	322.90	2461.71	322.90	2.509
2	0.301	325.13	2463.94	325.13	2.512
4	0.602	327.95	2466.76	327.95	2.516
7	0.845	330.50	2469.31	330.50	2.519
10	1.000	332.56	2471.37	332.56	2.522

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

$$n = 0.0127$$

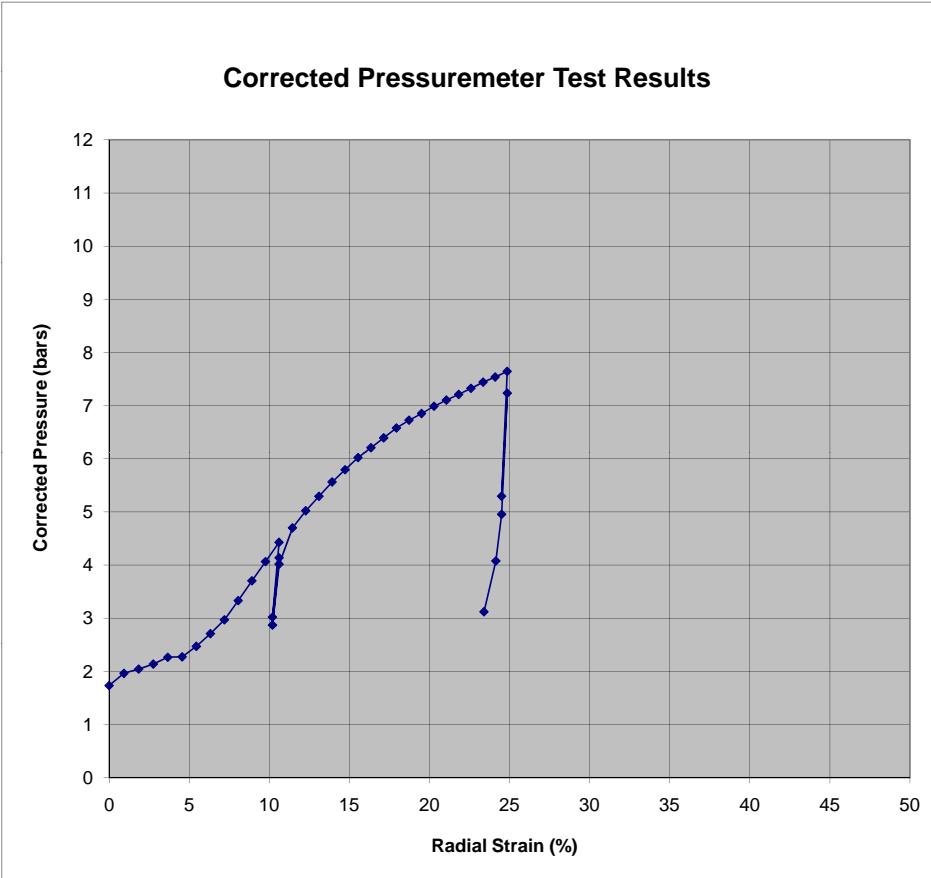


# PRESSUREMETER TEST REPORT

PROJECT: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet	BORING: B-60
LOCATION: Wanchese, NC	TEST #: 2
IN-SITU SOIL TESTING, L.C.	DEPTH: 23.6 ft
ENGINEER: Roger Failmezger, P.E., F. ASCE	TEST DATE: 6/2/2011

Pressure Bar	Volume cm <sup>3</sup>	$\Delta R/R_0$ %	Selected points
1.73	0	0.00	
1.96	40	0.93	
2.04	80	1.85	
2.14	120	2.76	
2.27	160	3.66	
2.27	199	4.56	
2.47	239	5.45	
2.71	279	6.33	
2.97	319	7.20	
3.33	359	8.06	Eo1
3.70	398	8.92	
4.07	438	9.76	
4.43	478	10.61	Eo2
3.02	459	10.20	Er1
4.14	478	10.61	Er2
2.87	459	10.20	Er3
4.02	478	10.61	Er4
4.70	518	11.44	
5.02	557	12.28	
5.29	597	13.10	
5.56	637	13.92	
5.79	677	14.73	
6.02	717	15.54	
6.21	756	16.35	
6.39	796	17.15	
6.58	836	17.94	
6.73	876	18.73	
6.85	916	19.51	
6.99	956	20.29	
7.10	996	21.06	
7.21	1036	21.83	
7.33	1076	22.59	
7.44	1115	23.35	
7.54	1155	24.10	
7.64	1195	24.85	Eu1
5.30	1176	24.50	Eu2
7.23	1196	24.86	Eu3
4.96	1177	24.51	Eu4
4.08	1158	24.15	
3.12	1118	23.41	

Interpreted Pressuremeter Parameters		
$P_o$	2.3	bar
$P_L$	10.0	bar
$P_1^*$	7.7	bar
$E_o$	63	bar
$E_{r1}$	397	bar
$E_{r2}$	409	bar
$E_o/P_1^*$	8.1	
$E_{u1}$	1104	bar
$E_{r3}$	897	bar
$E_{u2}$	1070	bar



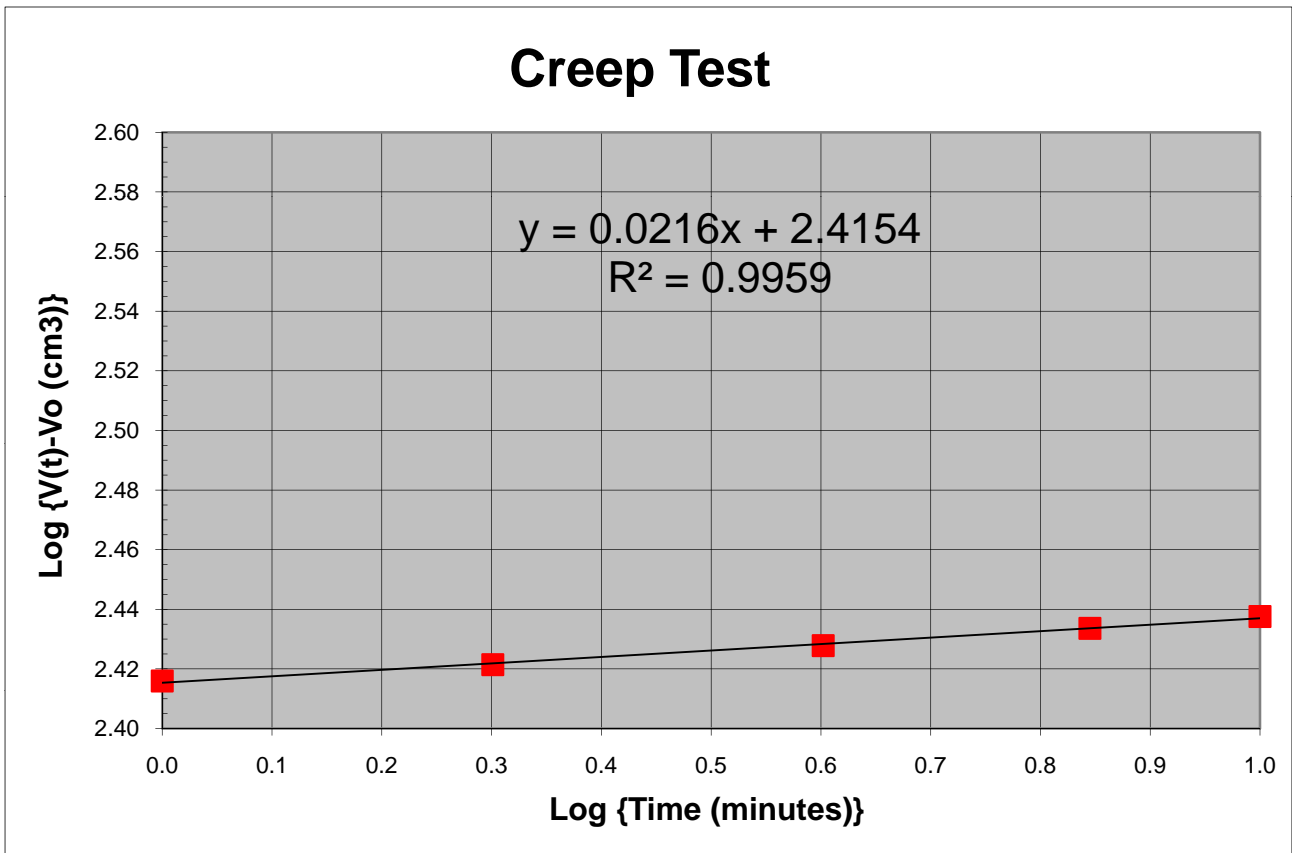
# Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-60  
 Test Depth: 23.6 feet  
 Holding Gauge Pressure = 3.17 bars  
 Corrected Pressure = 4.70 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 50 cm  
 Initial Volume of Probe = 2139 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.91 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2403 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	524.95	2663.76	260.59	2.416
2	0.301	528.23	2667.04	263.87	2.421
4	0.602	532.15	2670.96	267.79	2.428
7	0.845	535.75	2674.56	271.39	2.434
10	1.000	538.24	2677.05	273.88	2.438

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

$$n = 0.0216$$

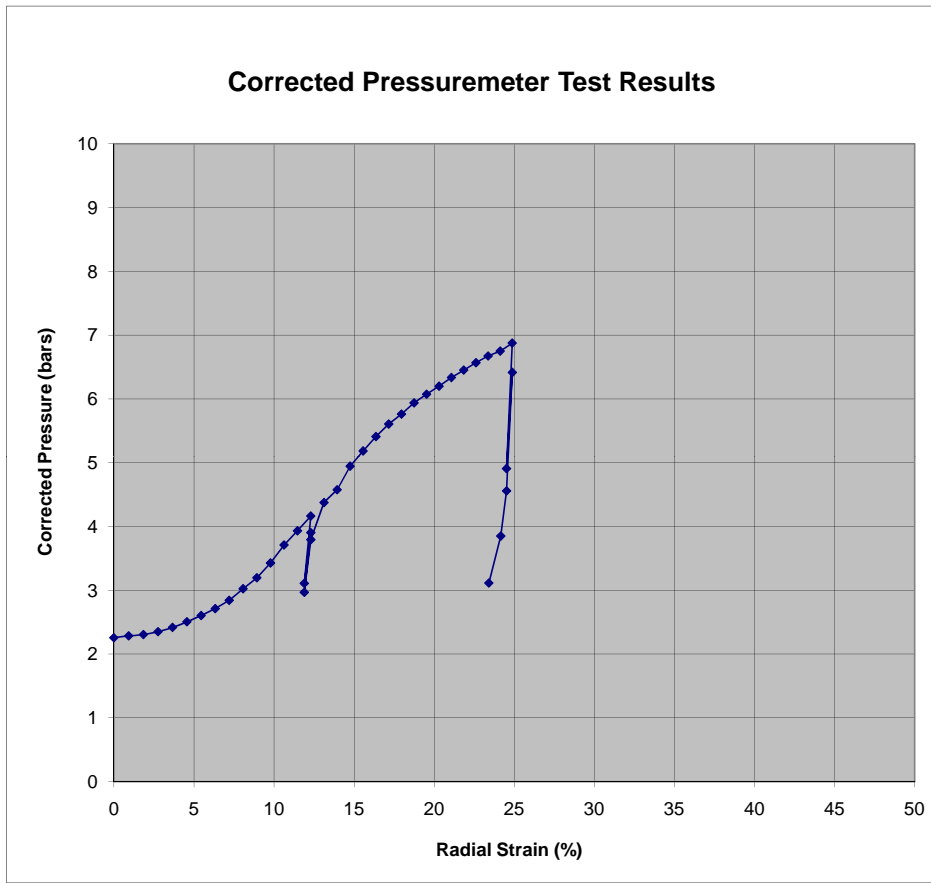


## PRESSUREMETER TEST REPORT

PROJECT: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet	BORING: B-60
LOCATION: Wanchese, NC	TEST #: 3
IN-SITU SOIL TESTING, L.C.	DEPTH: 32.4 ft
ENGINEER: Roger Failmezger, P.E., F. ASCE	TEST DATE: 6/2/2011

Pressure Bar	Volume cm³	$\Delta R/R_0$ %	Selected points
2.26	0	0.00	
2.29	40	0.92	
2.31	80	1.85	
2.35	120	2.76	
2.42	160	3.66	
2.51	200	4.56	
2.60	239	5.45	
2.71	279	6.33	
2.84	319	7.20	
3.02	359	8.07	
3.20	399	8.93	
3.43	439	9.78	<b>Eo1</b>
3.71	479	10.62	
3.93	518	11.46	
4.16	558	12.29	<b>Eo2</b>
3.11	539	11.89	<b>Er1</b>
3.90	558	12.30	<b>Er2</b>
2.97	539	11.89	<b>Er3</b>
3.79	558	12.30	<b>Er4</b>
4.38	598	13.12	
4.58	638	13.94	
4.95	678	14.75	
5.18	717	15.56	
5.41	757	16.36	
5.61	797	17.16	
5.76	837	17.95	
5.94	877	18.74	
6.07	917	19.52	
6.20	957	20.30	
6.34	997	21.08	
6.45	1036	21.84	
6.57	1076	22.61	
6.67	1116	23.37	
6.75	1156	24.12	
6.88	1196	24.87	<b>Eu1</b>
4.91	1177	24.51	<b>Eu2</b>
6.42	1196	24.88	<b>Eu3</b>
4.56	1177	24.52	<b>Eu4</b>
3.85	1158	24.16	
3.11	1119	23.41	

Interpreted Pressuremeter Parameters		
$P_o$	2.4	bar
$P_L$	9.0	bar
$P_1^*$	6.6	bar
$E_o$	43	bar
$E_{r1}$	289	bar
$E_{r2}$	301	bar
$E_o/P_L^*$	6.6	
$E_{u1}$	916	bar
$E_{r3}$	690	bar
$E_{u2}$	863	bar



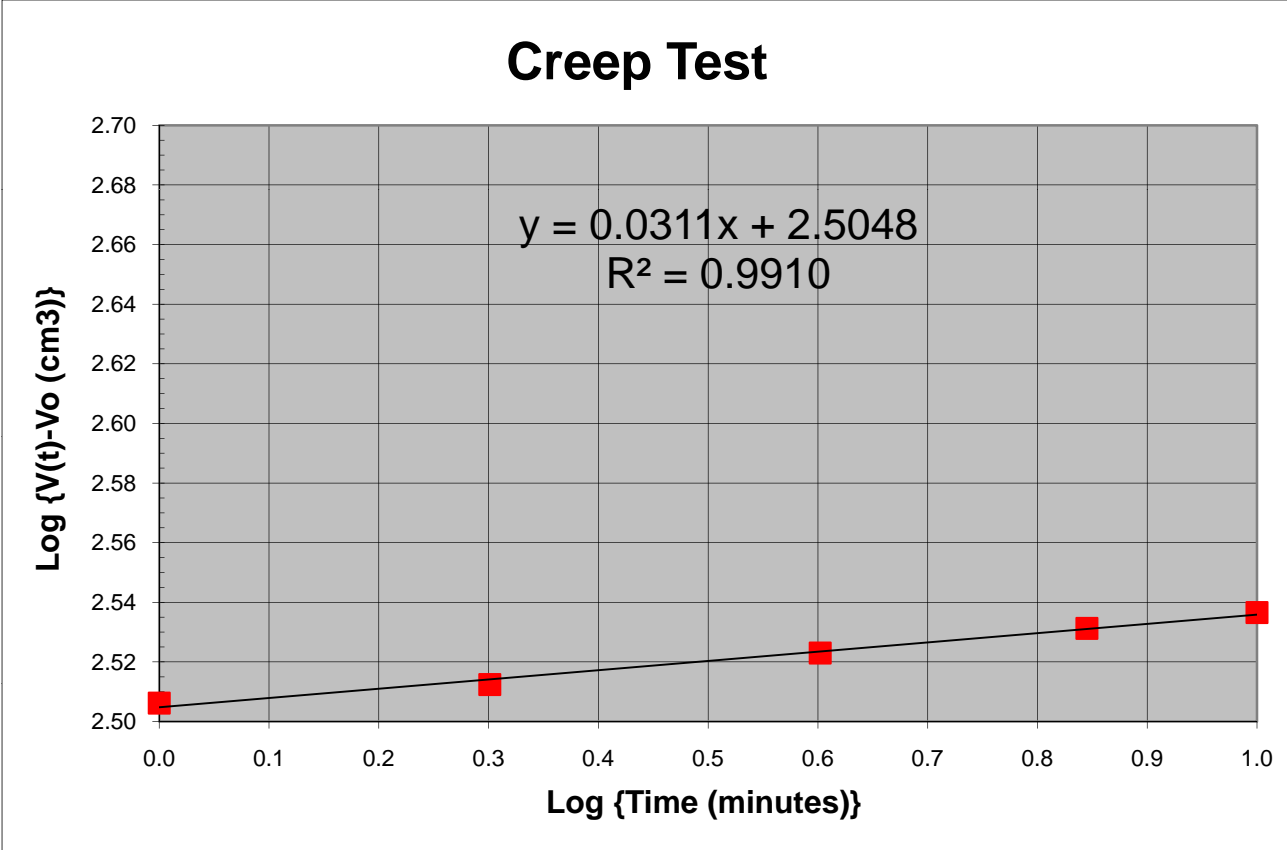
# Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-60  
 Test Depth: 32.4 feet  
 Holding Gauge Pressure = 2.60 bars  
 Corrected Pressure = 4.38 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 50 cm  
 Initial Volume of Probe = 2139 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.93 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2426 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	607.85	2746.66	320.77	2.506
2	0.301	612.48	2751.29	325.40	2.512
4	0.602	620.50	2759.31	333.42	2.523
7	0.845	626.90	2765.71	339.82	2.531
10	1.000	631.09	2769.90	344.01	2.537

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

$$n = 0.0311$$

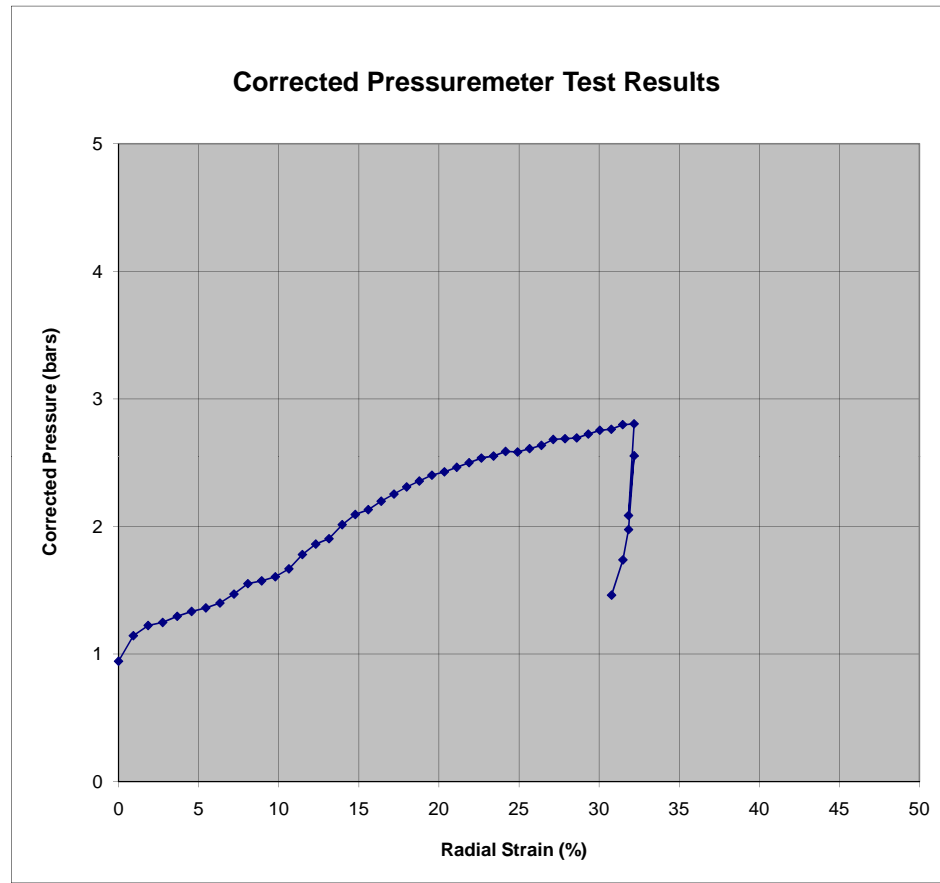


## PRESSUREMETER TEST REPORT

PROJECT: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet	BORING: B-64
LOCATION: Wanchese, NC	TEST #: 1
IN-SITU SOIL TESTING, L.C.	DEPTH: 13.8 ft
ENGINEER: Roger Failmezger, P.E., F. ASCE	TEST DATE: 5/31/2011

Pressure Bar	Volume cm <sup>3</sup>	$\Delta R/R_0$ %	Selected points
0.94	0	0.00	
1.14	40	0.92	
1.22	80	1.84	
1.25	120	2.76	
1.30	159	3.66	
1.33	199	4.56	
1.36	239	5.45	
1.40	279	6.33	
1.47	319	7.21	
1.55	359	8.07	
1.57	399	8.93	
1.61	439	9.79	
1.67	479	10.64	Eo1
1.78	519	11.48	
1.86	559	12.31	
1.90	599	13.14	
2.01	639	13.96	Eo2
2.09	679	14.78	
2.13	719	15.59	
2.20	759	16.39	
2.25	799	17.19	
2.31	839	17.99	
2.36	879	18.78	
2.40	919	19.56	
2.43	959	20.34	
2.46	999	21.11	
2.50	1038	21.88	
2.54	1078	22.65	
2.55	1118	23.41	
2.59	1158	24.16	
2.58	1198	24.91	
2.61	1238	25.66	
2.64	1278	26.40	
2.68	1318	27.14	
2.69	1358	27.87	
2.69	1398	28.60	
2.72	1438	29.32	
2.75	1478	30.04	
2.76	1518	30.76	
2.80	1558	31.47	
2.80	1598	32.18	Eu1
2.09	1579	31.84	Eu2
2.55	1598	32.19	Eu3
1.98	1579	31.84	Eu4
1.74	1559	31.49	
1.46	1519	30.78	

Interpreted Pressuremeter Parameters		
$P_o$	1.5	bar
$P_L$	3.2	bar
$P_L^*$	1.7	bar
$E_o$	16	bar
$E_{r1}$	#DIV/0!	bar
$E_{r2}$	#DIV/0!	bar
$E_o/P_L^*$	9.1	
$E_{u1}$	363	bar
$E_{r3}$	234	bar
$E_{u2}$	291	bar

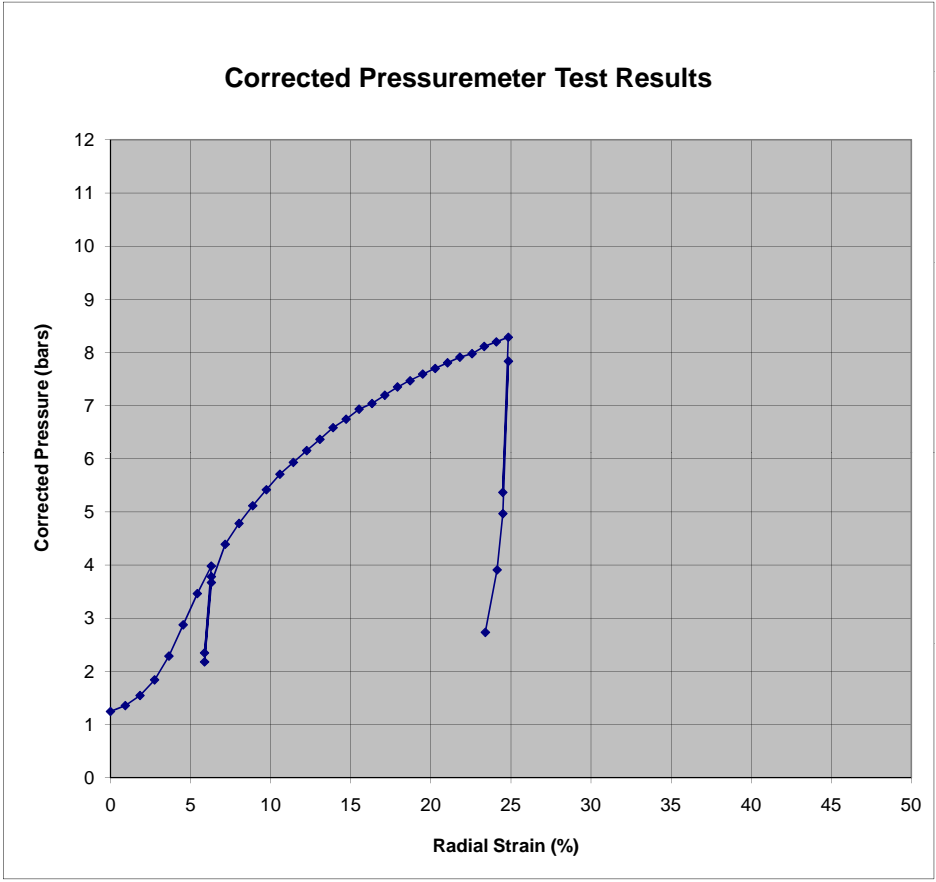


# PRESSUREMETER TEST REPORT

PROJECT: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet	BORING: B-64
LOCATION: Wanchese, NC	TEST #: 2
IN-SITU SOIL TESTING, L.C.	DEPTH: 23.2 ft
ENGINEER: Roger Failmezger, P.E., F. ASCE	TEST DATE: 5/31/2011

Pressure Bar	Volume cm <sup>3</sup>	$\Delta R/R_0$ %	Selected points
1.25	0	0.00	
1.36	40	0.92	
1.55	80	1.84	
1.84	119	2.75	
2.29	159	3.65	Eo1
2.88	199	4.54	
3.46	238	5.42	
3.98	278	6.29	Eo2
2.35	258	5.87	Er1
3.78	278	6.30	Er2
2.18	259	5.87	Er3
3.67	278	6.30	Er4
4.39	317	7.16	
4.78	357	8.02	
5.12	397	8.88	
5.42	437	9.73	
5.71	476	10.58	
5.93	516	11.41	
6.15	556	12.25	
6.37	596	13.07	
6.59	636	13.89	
6.75	675	14.71	
6.93	715	15.52	
7.04	755	16.32	
7.20	795	17.12	
7.35	835	17.92	
7.47	875	18.70	
7.59	915	19.49	
7.70	955	20.27	
7.81	995	21.04	
7.91	1035	21.81	
7.98	1075	22.57	
8.11	1114	23.33	
8.20	1154	24.09	
8.29	1194	24.84	Eu1
5.37	1176	24.49	Eu2
7.84	1195	24.84	Eu3
4.97	1176	24.49	Eu4
3.91	1157	24.14	
2.73	1118	23.40	

Interpreted Pressuremeter Parameters		
$P_o$	1.6	bar
$P_L$	10.0	bar
$P_L^*$	8.4	bar
$E_o$	89	bar
$E_{r1}$	475	bar
$E_{r2}$	497	bar
$E_o/P_L^*$	10.7	
$E_{u1}$	1394	bar
$E_{r3}$	1157	bar
$E_{u2}$	1368	bar





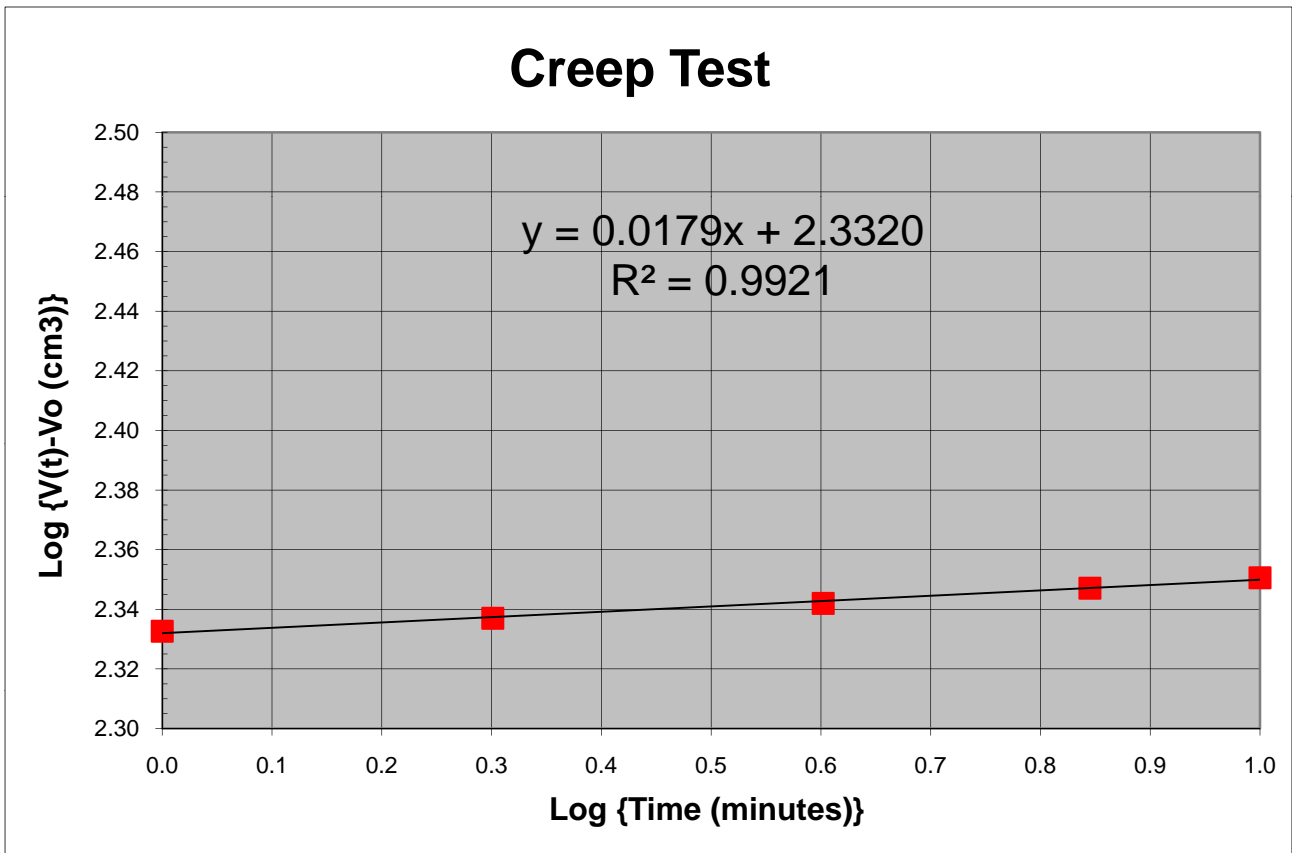
# Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-64  
 Test Depth: 23.2 feet  
 Holding Gauge Pressure = 3.52 bars  
 Corrected Pressure = 14.39 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 50 cm  
 Initial Volume of Probe = 2139 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.78 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2247 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	323.37	2462.18	215.09	2.333
2	0.301	325.53	2464.34	217.25	2.337
4	0.602	328.05	2466.86	219.77	2.342
7	0.845	330.66	2469.47	222.38	2.347
10	1.000	332.45	2471.26	224.17	2.351

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

$$n = 0.0179$$





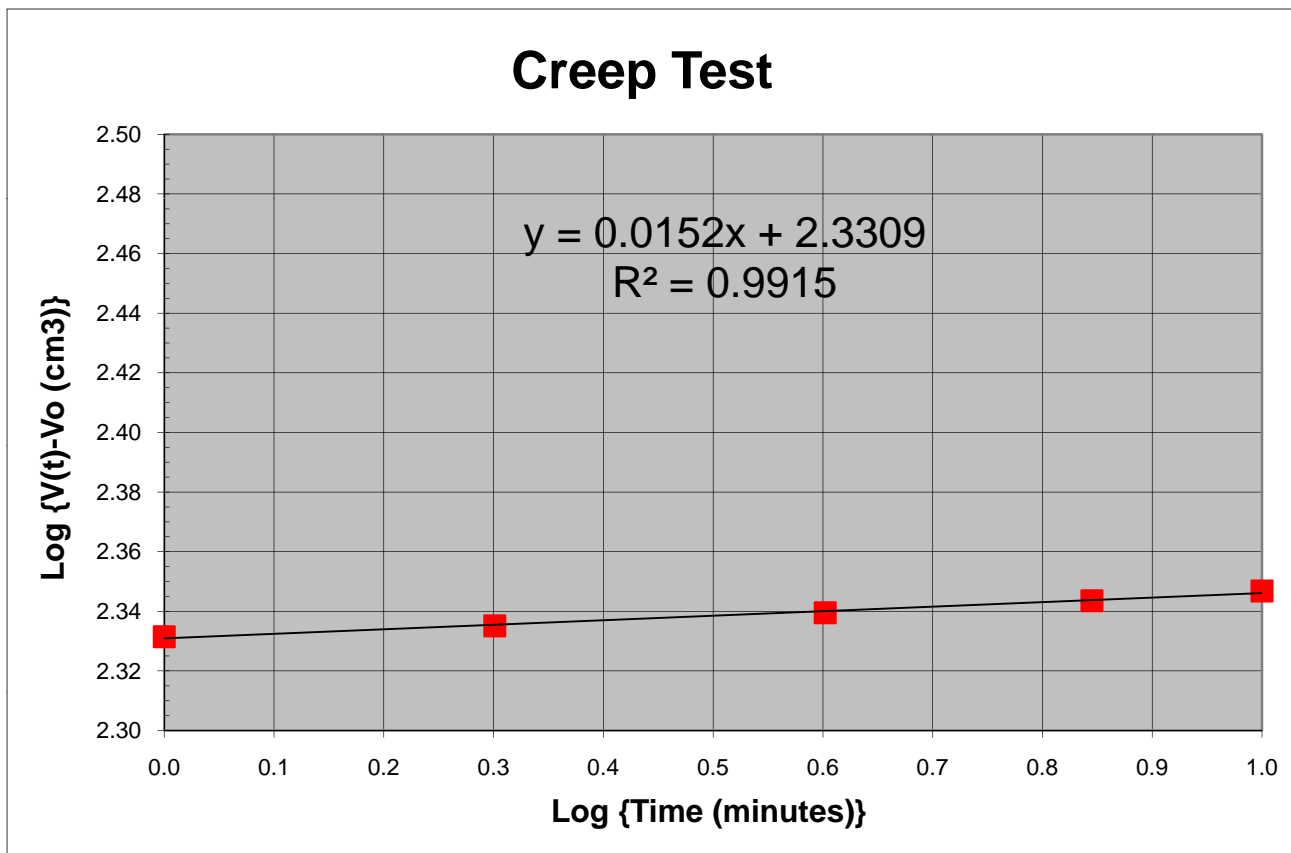
# Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-64  
 Test Depth: 32.9 feet  
 Holding Gauge Pressure = 5.19 bars  
 Corrected Pressure = 6.35 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 50 cm  
 Initial Volume of Probe = 2139 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.78 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2247 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	322.80	2461.61	214.52	2.331
2	0.301	324.59	2463.40	216.31	2.335
4	0.602	326.80	2465.61	218.52	2.339
7	0.845	328.85	2467.66	220.57	2.344
10	1.000	330.50	2469.31	222.22	2.347

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

$$n = 0.0152$$





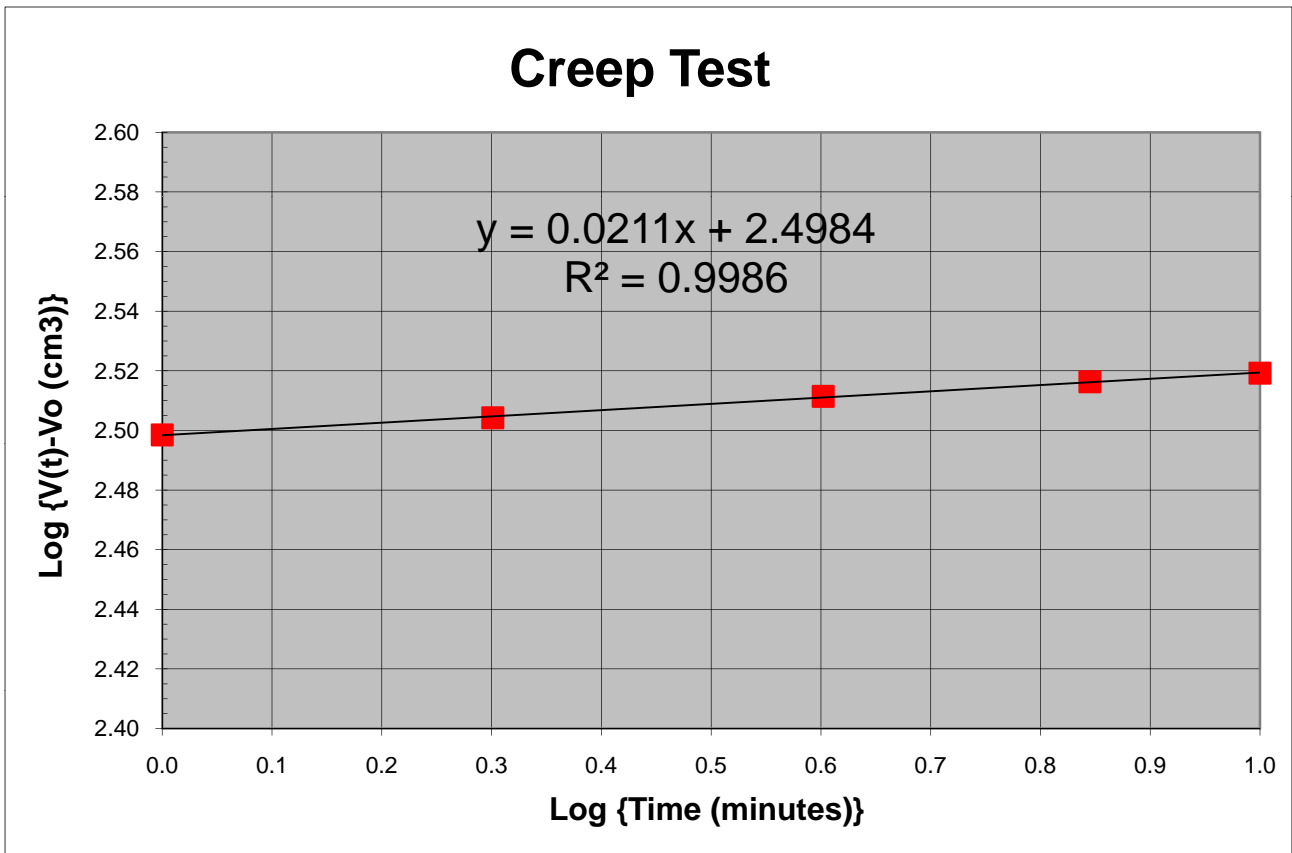
# Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-64  
 Test Depth: 41.9 feet  
 Holding Gauge Pressure = 4.46 bars  
 Corrected Pressure = 5.87 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 50 cm  
 Initial Volume of Probe = 2139 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.80 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2269 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	445.40	2584.21	315.15	2.499
2	0.301	449.60	2588.41	319.35	2.504
4	0.602	454.90	2593.71	324.65	2.511
7	0.845	458.60	2597.41	328.35	2.516
10	1.000	460.80	2599.61	330.55	2.519

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

$$n = 0.0211$$





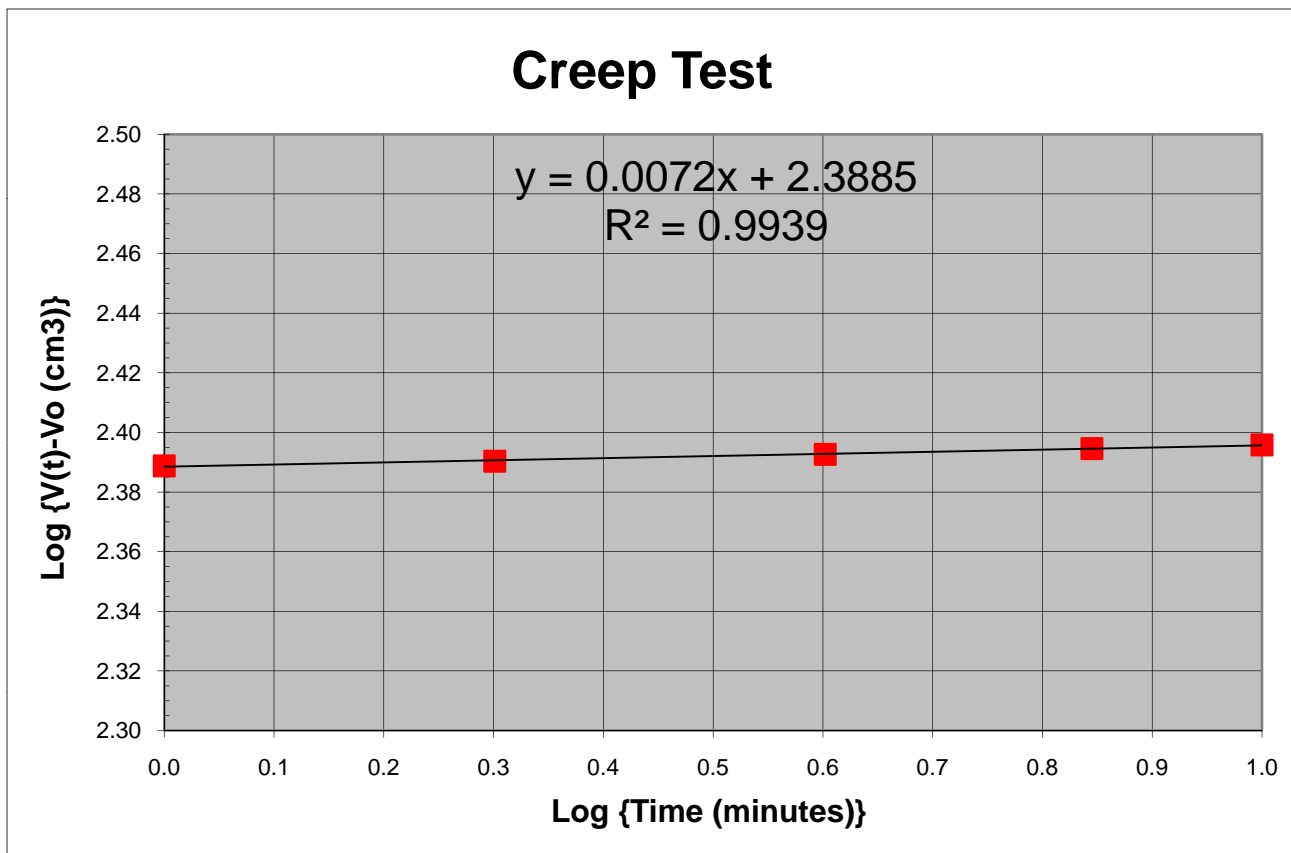
# Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-64  
 Test Depth: 53.7 feet  
 Holding Gauge Pressure = 9.40 bars  
 Corrected Pressure = 11.16 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 50 cm  
 Initial Volume of Probe = 2139 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.86 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2336 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	441.60	2580.41	244.78	2.389
2	0.301	442.50	2581.31	245.68	2.390
4	0.602	443.80	2582.61	246.98	2.393
7	0.845	444.90	2583.71	248.08	2.395
10	1.000	445.60	2584.41	248.78	2.396

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

**n = 0.0072**







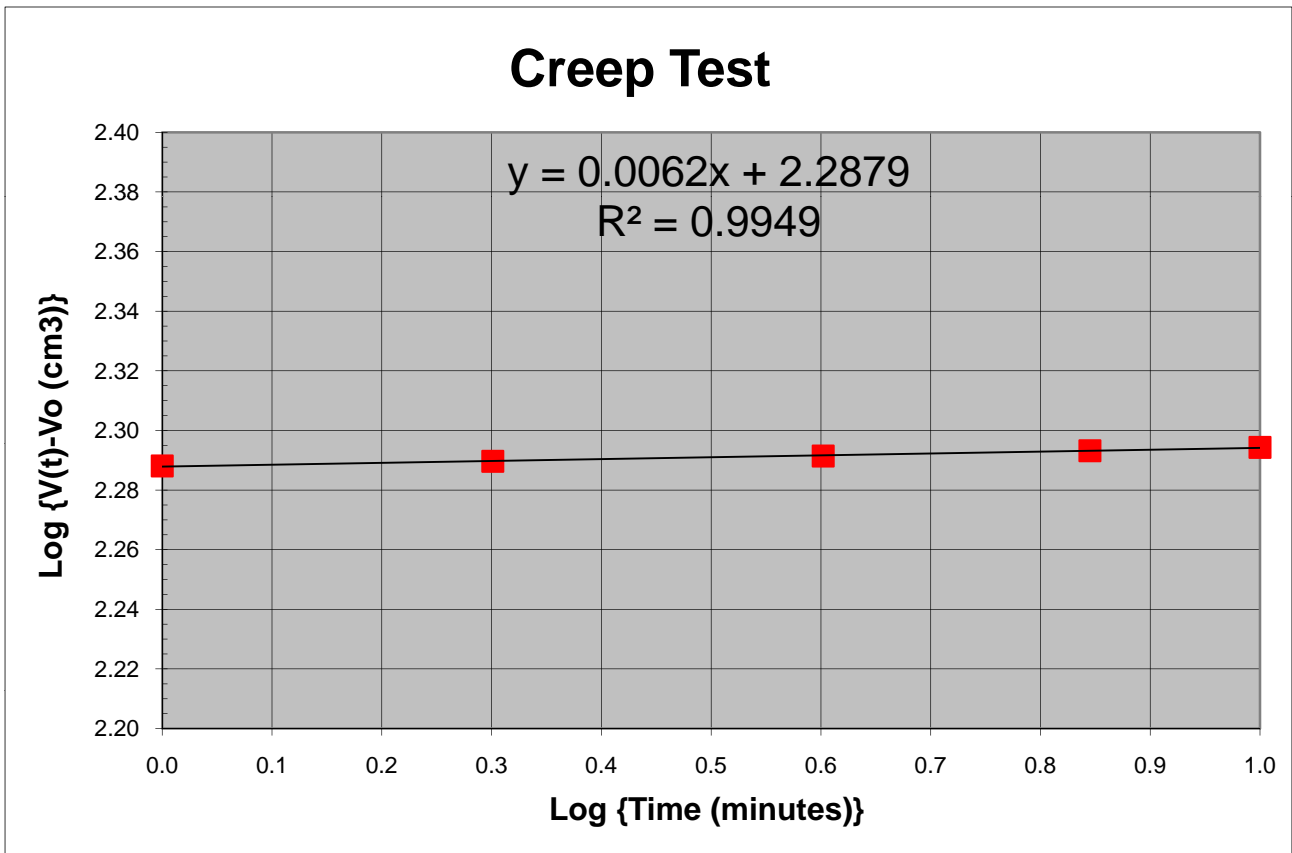
# Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-64  
 Test Depth: 65 feet  
 Holding Gauge Pressure = 5.88 bars  
 Corrected Pressure = 7.97 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 50 cm  
 Initial Volume of Probe = 2139 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.93 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2426 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	481.20	2620.01	194.12	2.288
2	0.301	481.90	2620.71	194.82	2.290
4	0.602	482.70	2621.51	195.62	2.291
7	0.845	483.50	2622.31	196.42	2.293
10	1.000	484.00	2622.81	196.92	2.294

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

$$n = 0.0062$$





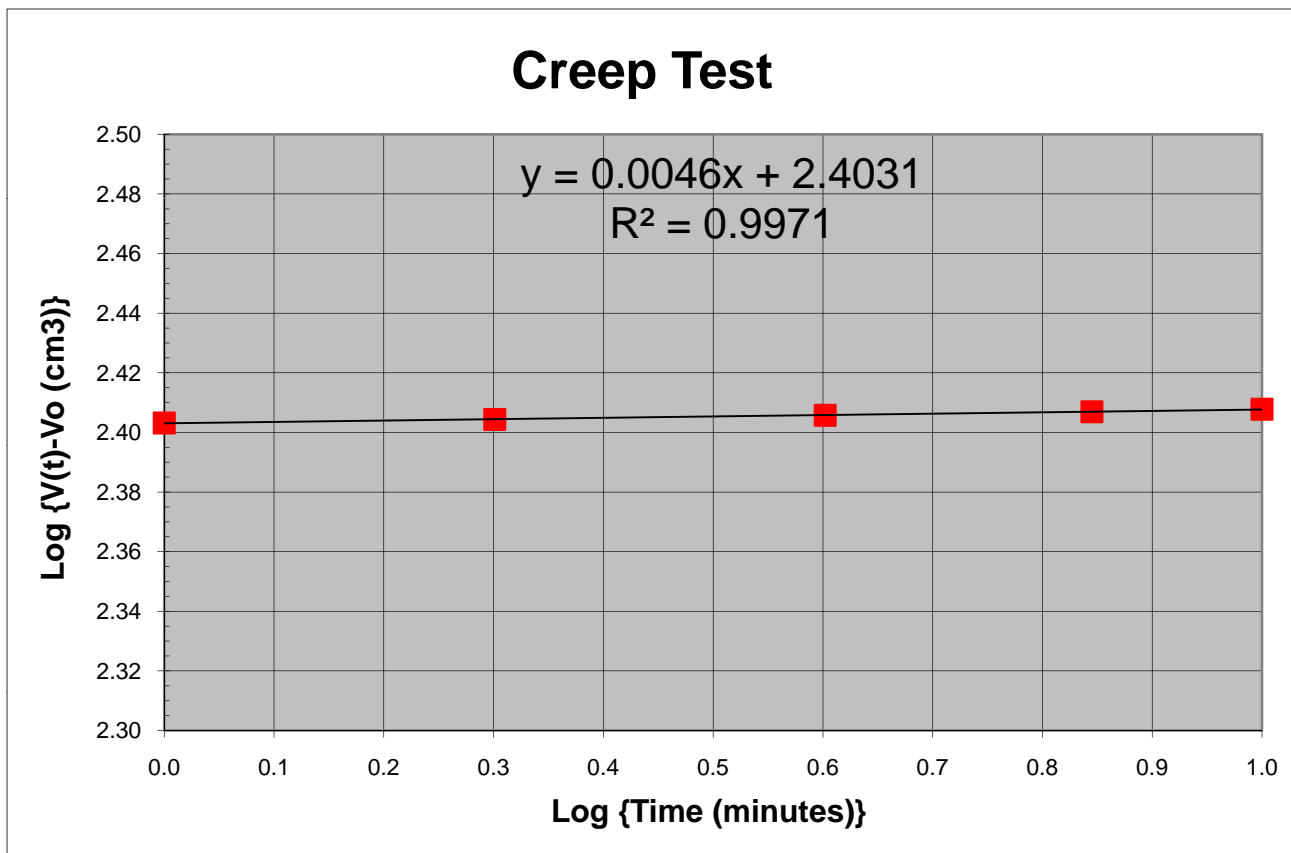
# Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-64  
 Test Depth: 74.4 feet  
 Holding Gauge Pressure = 9.88 bars  
 Corrected Pressure = 12.27 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 50 cm  
 Initial Volume of Probe = 2139 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.78 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2247 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	361.30	2500.11	253.02	2.403
2	0.301	362.00	2500.81	253.72	2.404
4	0.602	362.80	2501.61	254.52	2.406
7	0.845	363.50	2502.31	255.22	2.407
10	1.000	364.00	2502.81	255.72	2.408

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

**n = 0.0046**





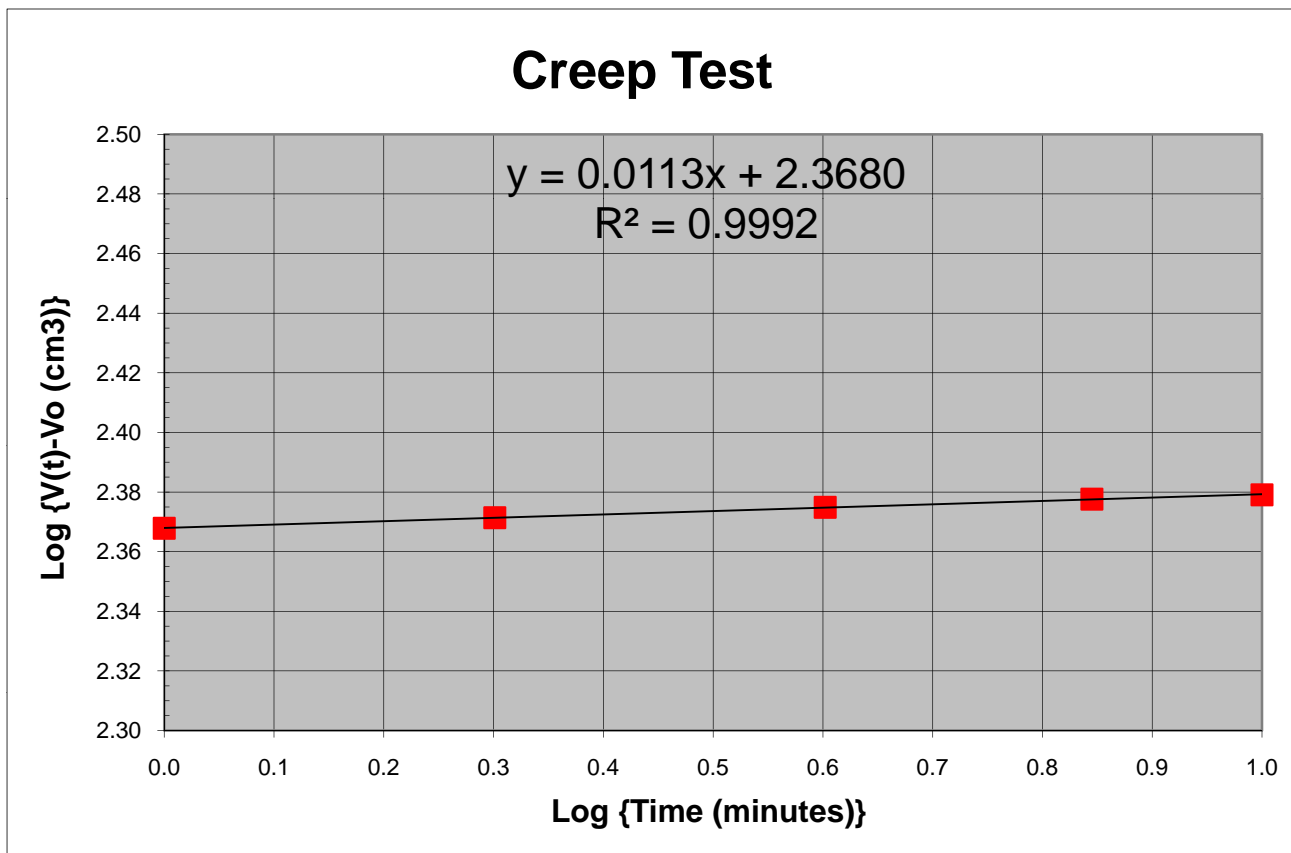
## Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-64  
 Test Depth: 82.2 feet  
 Holding Gauge Pressure = 6.62 bars  
 Corrected Pressure = 9.18 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 46 cm  
 Initial Volume of Probe = 1968 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 4.02 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2338 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	603.40	2571.11	233.27	2.368
2	0.301	605.30	2573.01	235.17	2.371
4	0.602	607.20	2574.91	237.07	2.375
7	0.845	608.70	2576.41	238.57	2.378
10	1.000	609.50	2577.21	239.37	2.379

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

$$n = 0.0113$$





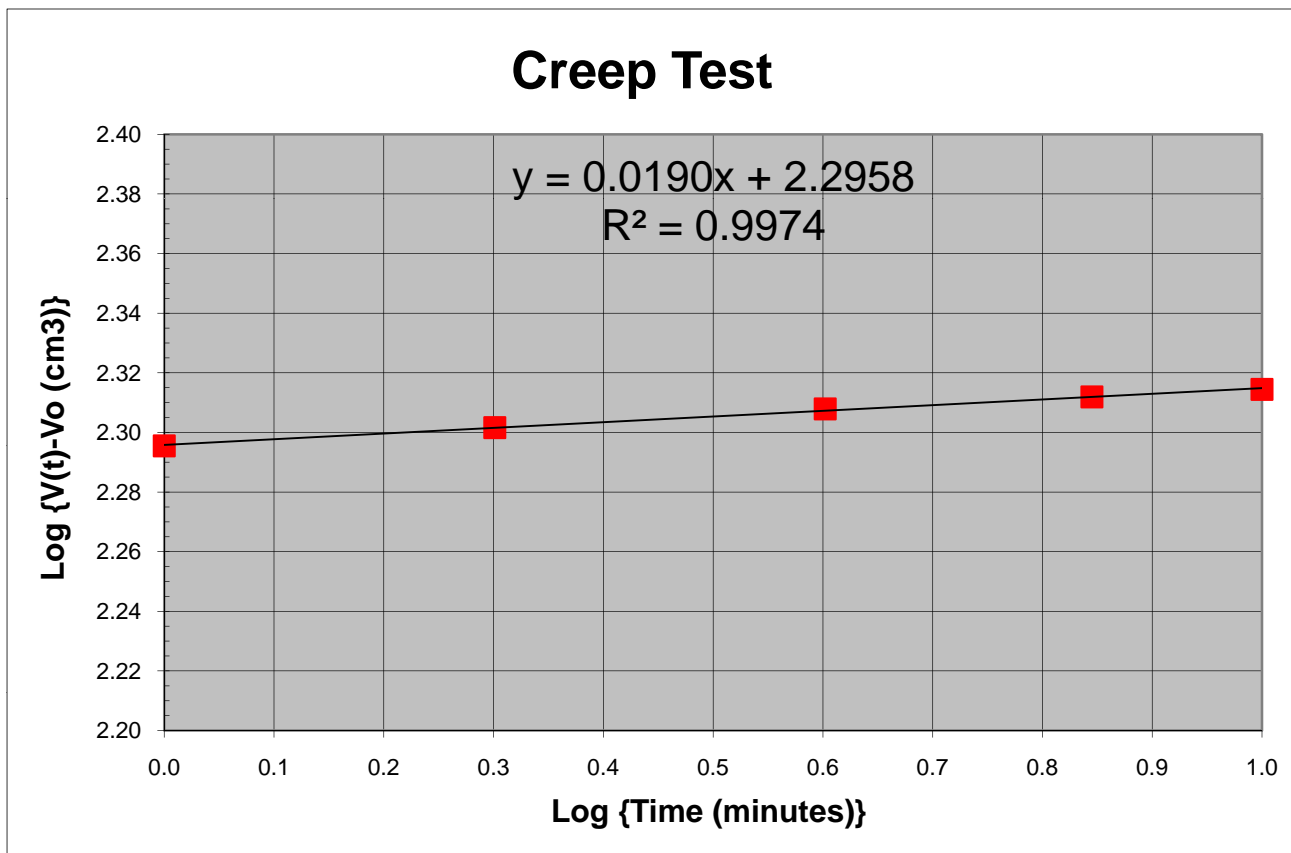
# Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-64  
 Test Depth: 95.5 feet  
 Holding Gauge Pressure = 5.35 bars  
 Corrected Pressure = 8.34 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 46 cm  
 Initial Volume of Probe = 1968 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.99 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2295 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	524.90	2492.61	197.47	2.296
2	0.301	527.70	2495.41	200.27	2.302
4	0.602	530.60	2498.31	203.17	2.308
7	0.845	532.50	2500.21	205.07	2.312
10	1.000	533.70	2501.41	206.27	2.314

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

$$n = 0.0190$$







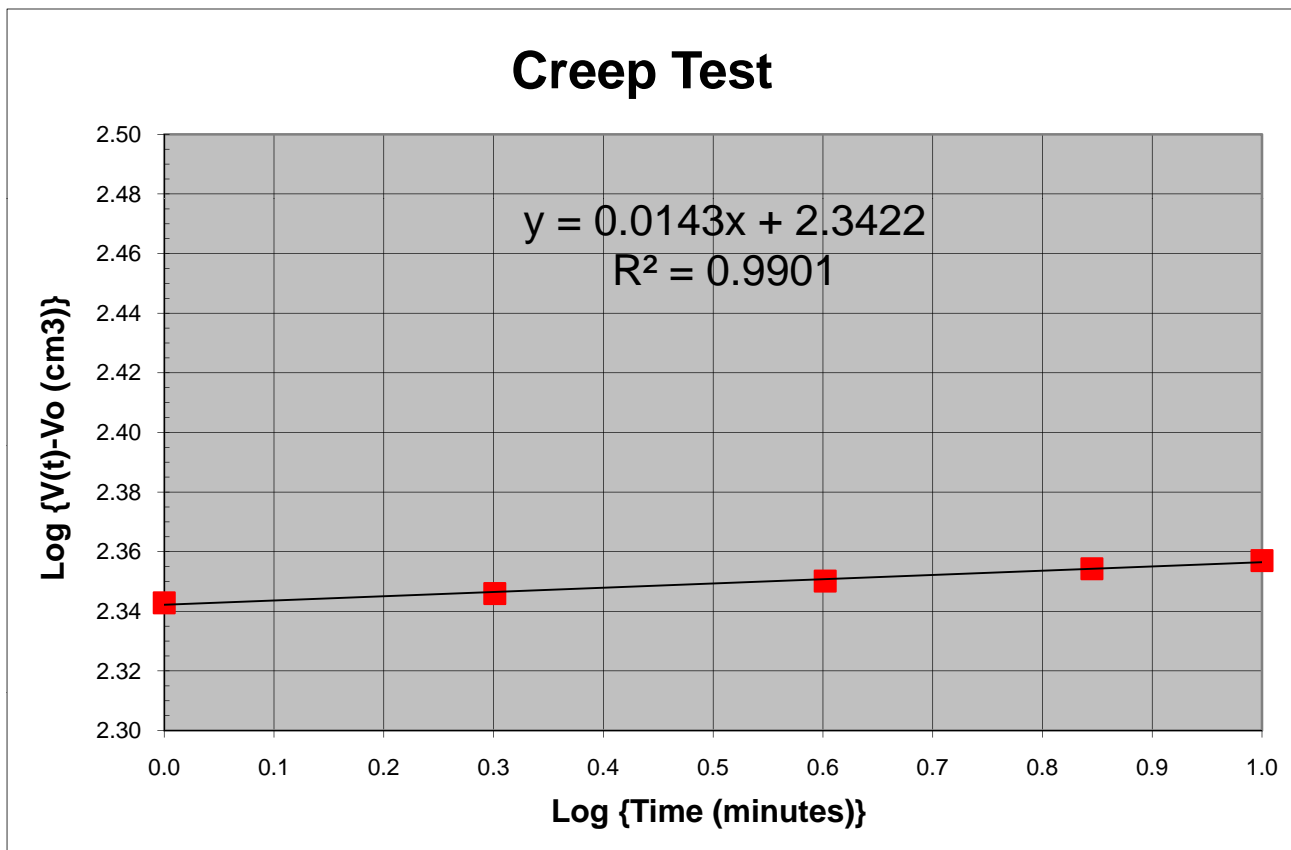
## Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-64  
 Test Depth: 100.6 feet  
 Holding Gauge Pressure = 10.12 bars  
 Corrected Pressure = 13.34 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 46 cm  
 Initial Volume of Probe = 1968 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.89 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2190 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	442.60	2410.31	220.20	2.343
2	0.301	444.20	2411.91	221.80	2.346
4	0.602	446.35	2414.06	223.95	2.350
7	0.845	448.48	2416.19	226.08	2.354
10	1.000	449.90	2417.61	227.50	2.357

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

$$n = 0.0143$$





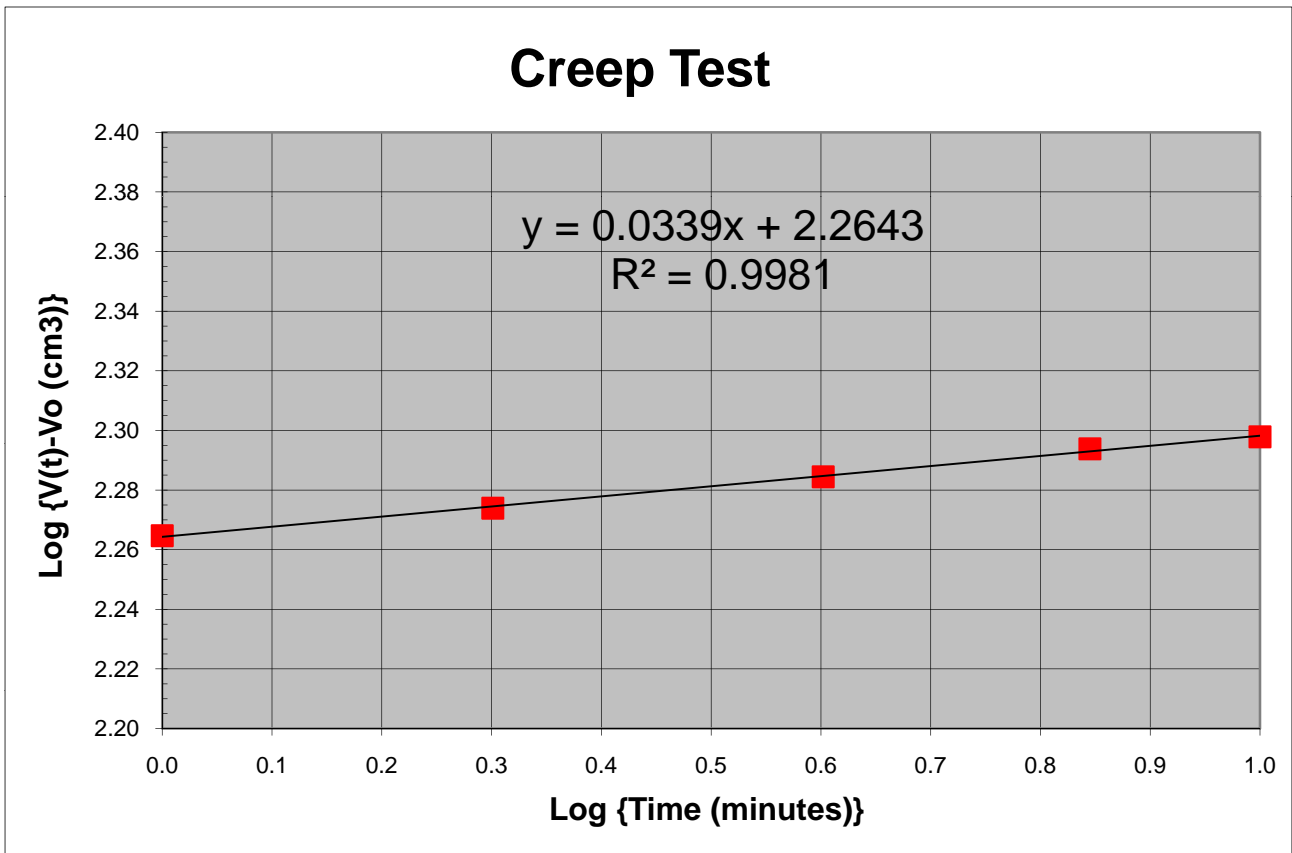
# Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-64  
 Test Depth: 112.4 feet  
 Holding Gauge Pressure = 9.81 bars  
 Corrected Pressure = 13.23 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 46 cm  
 Initial Volume of Probe = 1968 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.89 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2190 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	406.35	2374.06	183.95	2.265
2	0.301	410.30	2378.01	187.90	2.274
4	0.602	414.90	2382.61	192.50	2.284
7	0.845	419.10	2386.81	196.70	2.294
10	1.000	420.94	2388.65	198.54	2.298

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

$$n = 0.0339$$





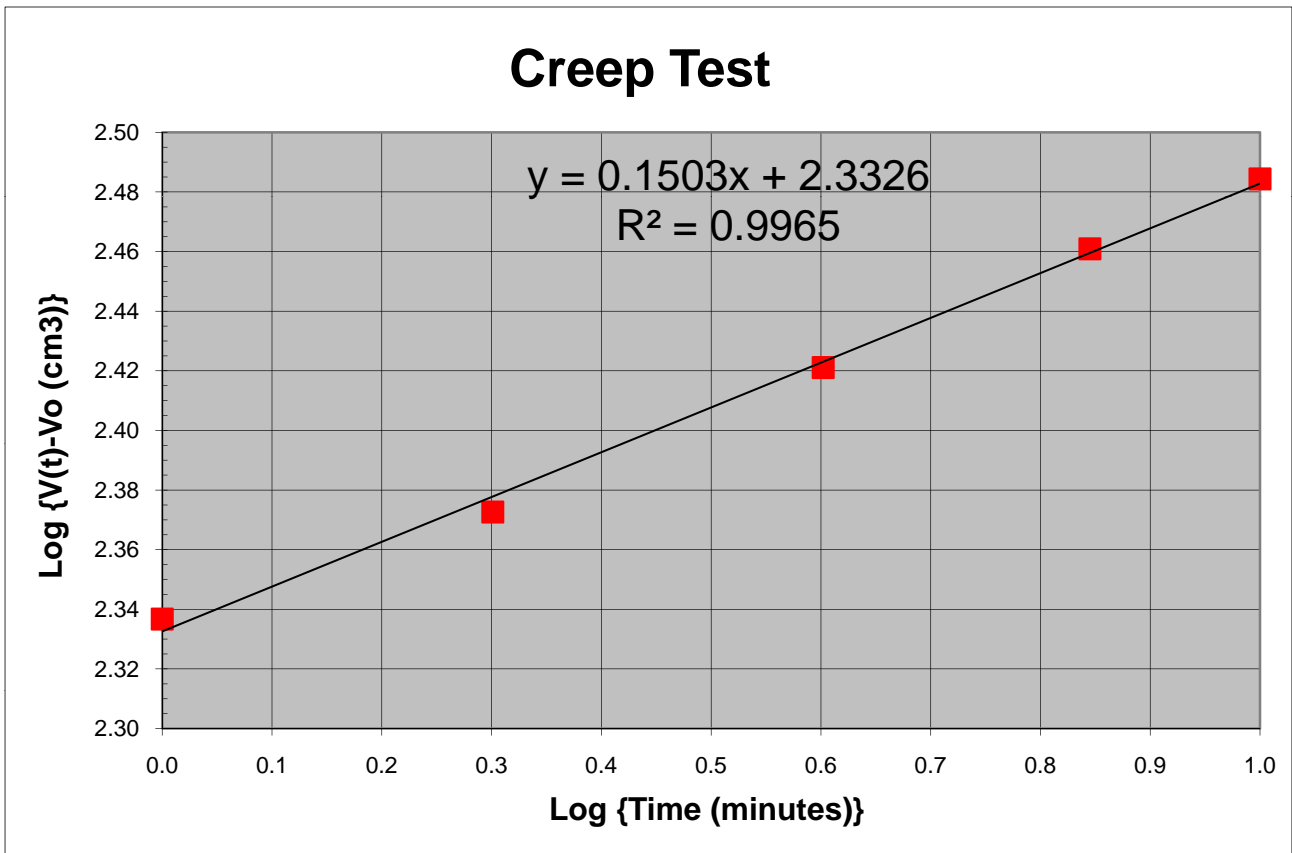
# Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-64  
 Test Depth: 122.9 feet  
 Holding Gauge Pressure = 4.40 bars  
 Corrected Pressure = 8.18 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 46 cm  
 Initial Volume of Probe = 1968 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.69 cm  
 Initial Borehole Volume, V<sub>0</sub> = 1968 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	217.13	2184.84	217.13	2.337
2	0.301	235.85	2203.56	235.85	2.373
4	0.602	263.70	2231.41	263.70	2.421
7	0.845	289.00	2256.71	289.00	2.461
10	1.000	305.05	2272.76	305.05	2.484

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

$$n = 0.1503$$





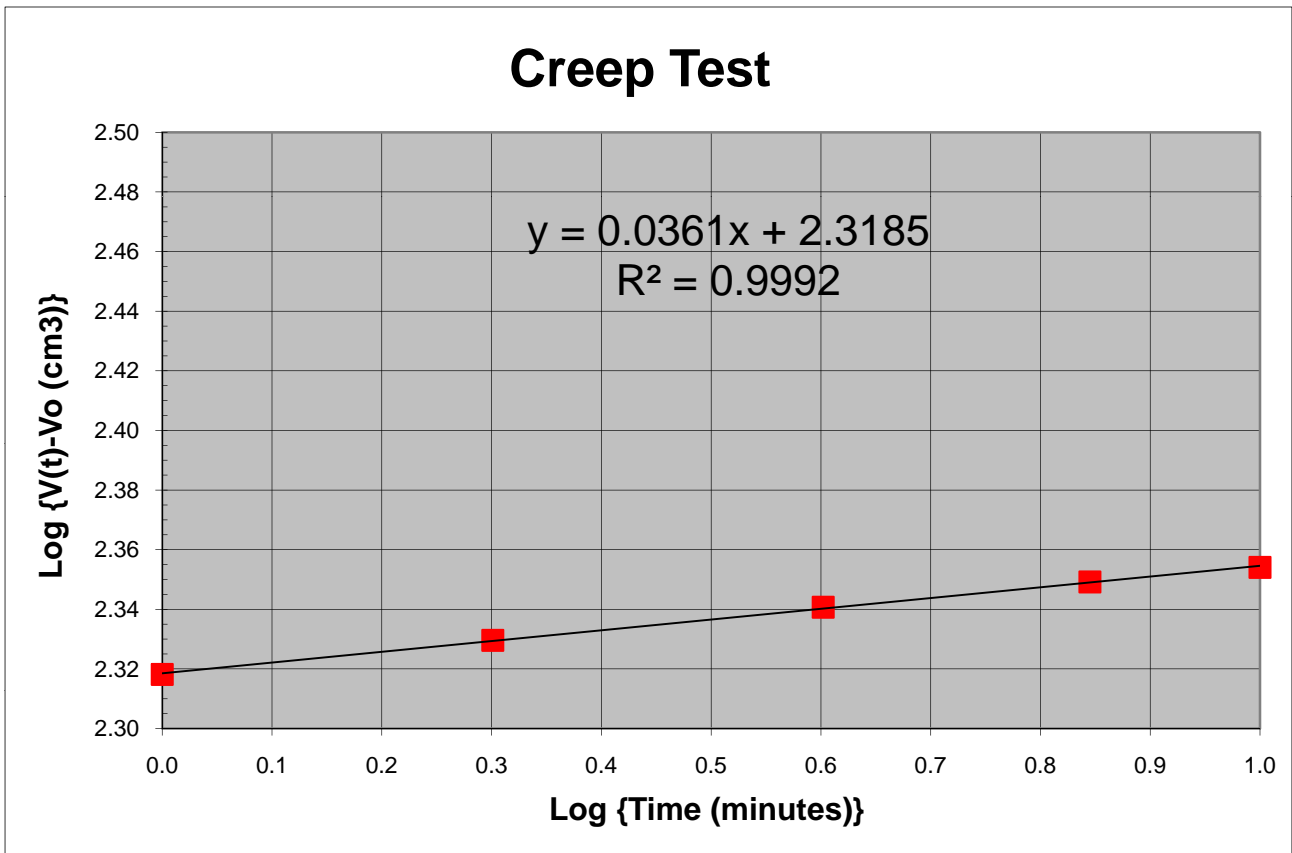
# Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-64  
 Test Depth: 132.9 feet  
 Holding Gauge Pressure = 15.84 bars  
 Corrected Pressure = 19.92 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 46 cm  
 Initial Volume of Probe = 1968 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.84 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2128 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	368.60	2336.31	208.04	2.318
2	0.301	374.15	2341.86	213.59	2.330
4	0.602	379.70	2347.41	219.14	2.341
7	0.845	384.00	2351.71	223.44	2.349
10	1.000	386.54	2354.25	225.98	2.354

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

$$n = 0.0361$$







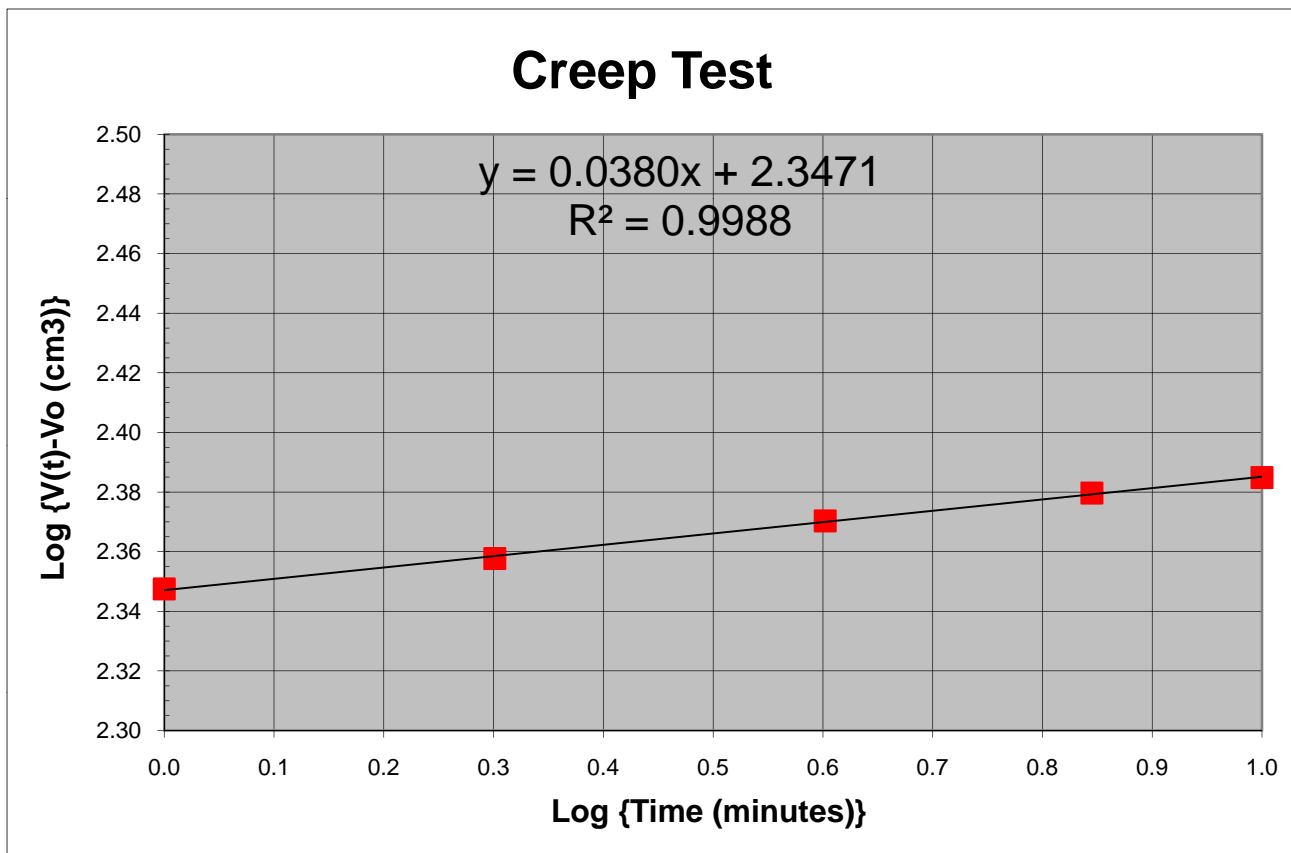
# Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-64  
 Test Depth: 142.5 feet  
 Holding Gauge Pressure = 8.16 bars  
 Corrected Pressure = 12.55 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 46 cm  
 Initial Volume of Probe = 1968 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.93 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2232 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	486.70	2454.41	222.58	2.347
2	0.301	492.00	2459.71	227.88	2.358
4	0.602	498.70	2466.41	234.58	2.370
7	0.845	503.80	2471.51	239.68	2.380
10	1.000	506.70	2474.41	242.58	2.385

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

$$n = 0.0380$$





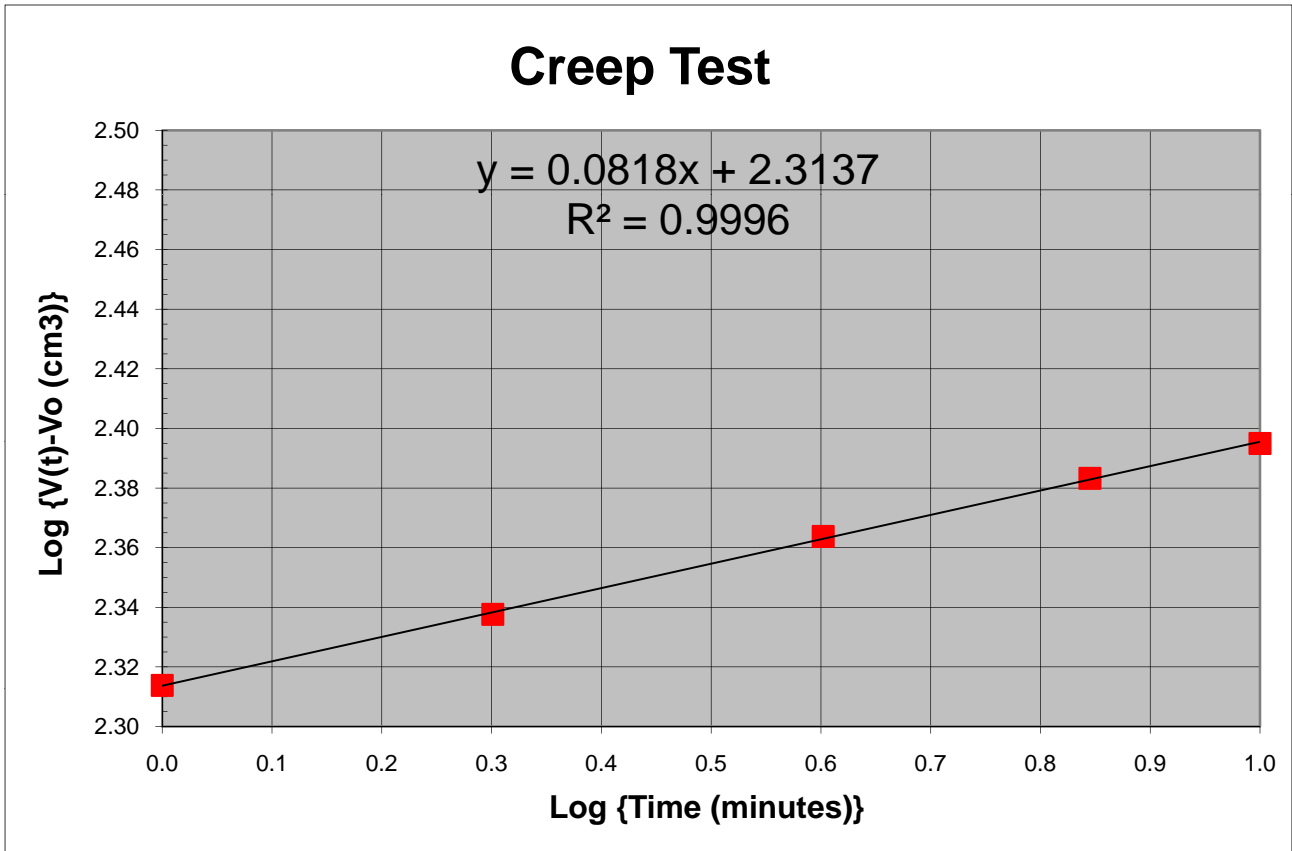
# Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-64  
 Test Depth: 152.8 feet  
 Holding Gauge Pressure = 11.70 bars  
 Corrected Pressure = 16.38 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 46 cm  
 Initial Volume of Probe = 1968 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.95 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2253 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	491.10	2458.81	205.98	2.314
2	0.301	502.70	2470.41	217.58	2.338
4	0.602	516.20	2483.91	231.08	2.364
7	0.845	526.80	2494.51	241.68	2.383
10	1.000	533.40	2501.11	248.28	2.395

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

$$n = 0.0818$$





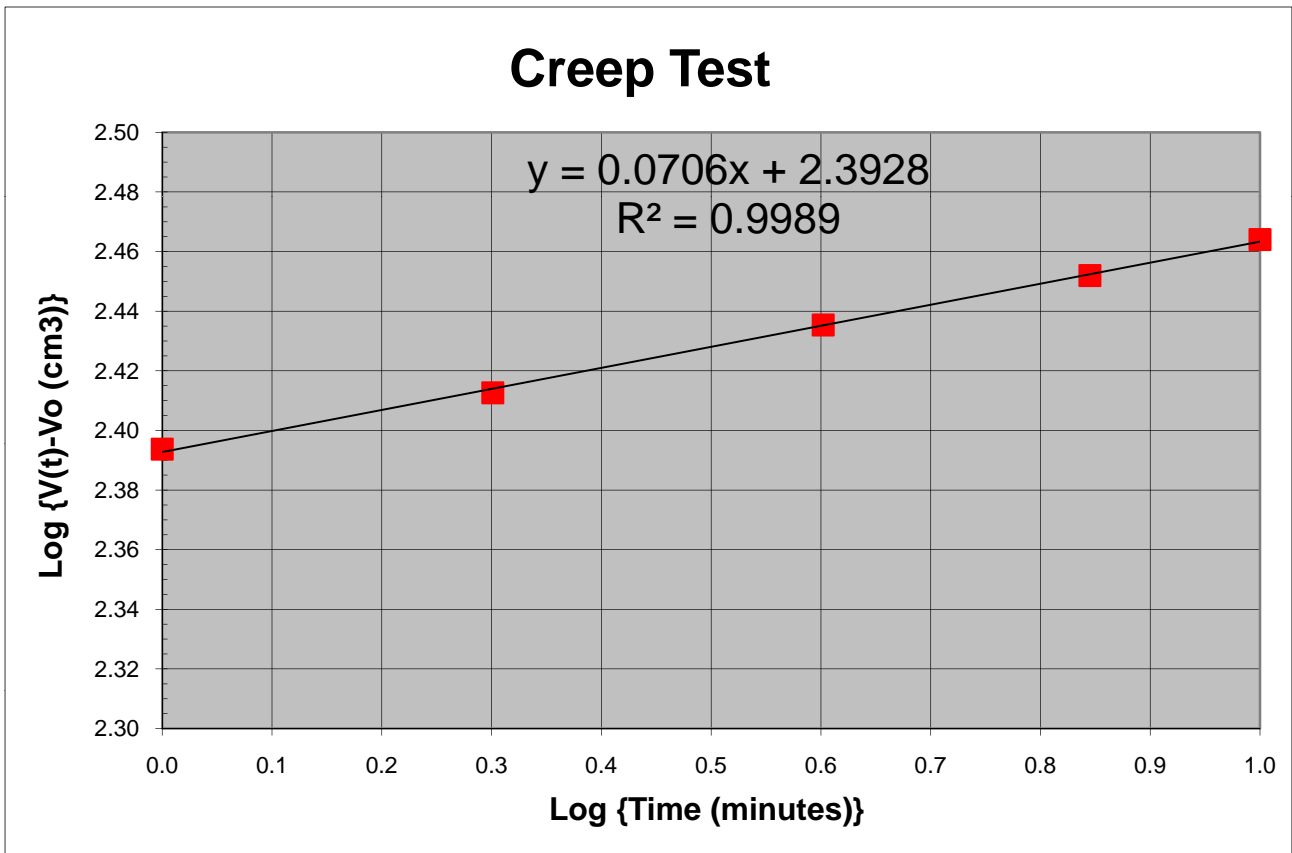
# Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-64  
 Test Depth: 163.1 feet  
 Holding Gauge Pressure = 12.93 bars  
 Corrected Pressure = 17.90 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 46 cm  
 Initial Volume of Probe = 1968 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.91 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2211 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	490.80	2458.51	247.59	2.394
2	0.301	501.80	2469.51	258.59	2.413
4	0.602	515.70	2483.41	272.49	2.435
7	0.845	526.30	2494.01	283.09	2.452
10	1.000	534.30	2502.01	291.09	2.464

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

$$n = 0.0706$$





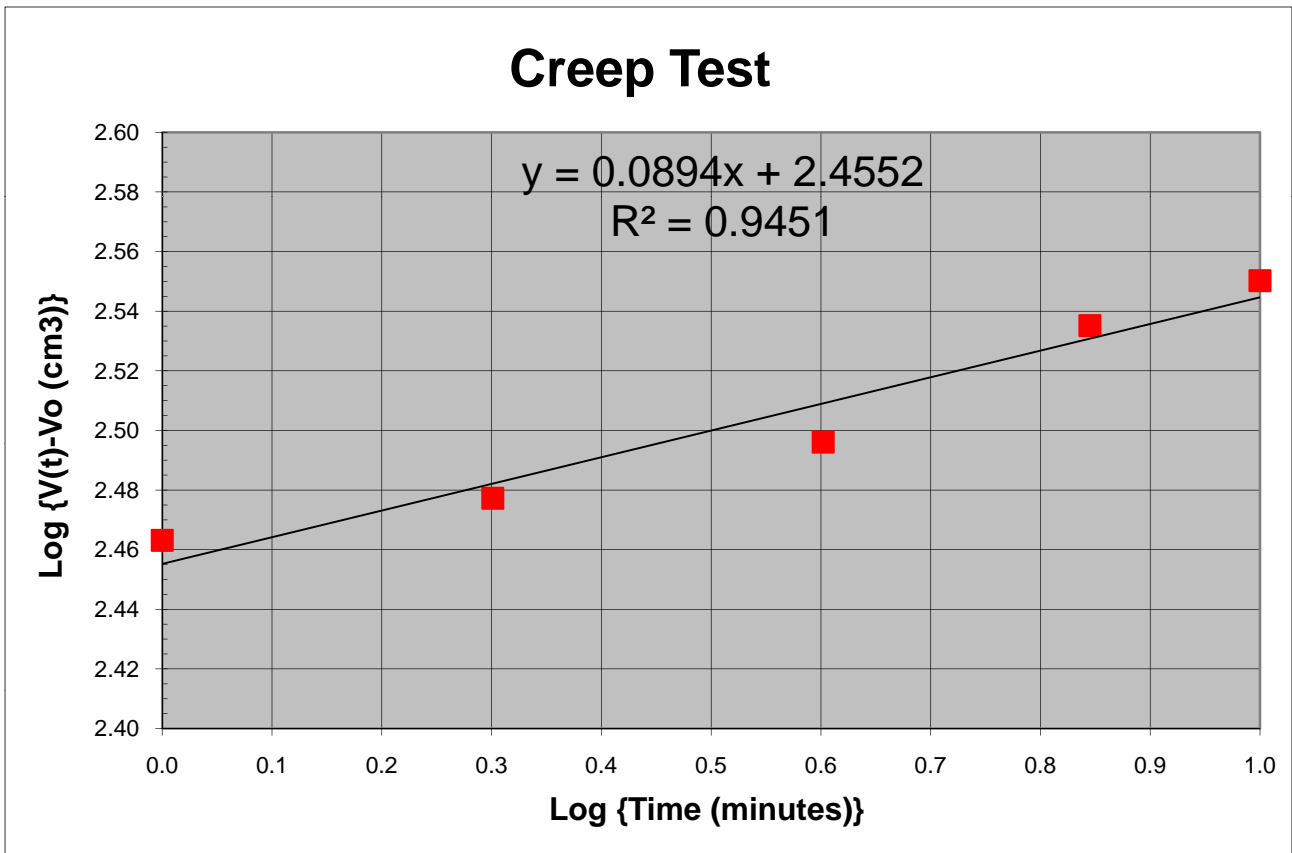
# Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-64  
 Test Depth: 173.7 feet  
 Holding Gauge Pressure = 6.83 bars  
 Corrected Pressure = 12.11 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 46 cm  
 Initial Volume of Probe = 1968 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.91 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2211 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	533.70	2501.41	290.49	2.463
2	0.301	543.30	2511.01	300.09	2.477
4	0.602	556.60	2524.31	313.39	2.496
7	0.845	586.10	2553.81	342.89	2.535
10	1.000	598.20	2565.91	354.99	2.550

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

$$n = 0.0894$$







# Pressuremeter Creep Test

Project: Bridge No. 11 (Bonner Bridge) on NC 12 over Oregon Inlet  
 Sounding No.: B-64  
 Test Depth: 183.8 feet  
 Holding Gauge Pressure = 17.90 bars  
 Corrected Pressure = 23.51 bars  
 Initial Probe Radius = 3.69 cm  
 Initial Probe Length = 46 cm  
 Initial Volume of Probe = 1968 cm<sup>3</sup>  
 Probe Radius Contacting Borehole = 3.80 cm  
 Initial Borehole Volume, V<sub>0</sub> = 2088 cm<sup>3</sup>

Time (minutes)	Log (Time) (minutes)	Volume Increase (cm <sup>3</sup> )	Total Probe Volume (cm <sup>3</sup> )	V(t)-V <sub>0</sub> (cm <sup>3</sup> )	Log [V(t)-V <sub>0</sub> ] (cm <sup>3</sup> )
1	0.000	326.10	2293.81	206.27	2.314
2	0.301	331.80	2299.51	211.97	2.326
4	0.602	339.00	2306.71	219.17	2.341
7	0.845	345.60	2313.31	225.77	2.354
10	1.000	349.50	2317.21	229.67	2.361

$$E_0(t)/E_0(t=1 \text{ min}) = \{t/1\}^{-n}$$

**n = 0.0473**

