APPENDIX J

Laboratory Report – Geotechnical – Pilot Study No. 3

PTS Laboratory

October 2004

GEOTECHNICAL DATA

Project: ASCON Landfill Site

Location: Huntington Beach, CA

PTS File No.: 34339 **October 2004**

PTS Laboratories
ENVIRONMENTAL SERVICES

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Phone 562.907.3607 Fax 562.907.3610
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PTS Laboratories
ENVIRONMENTAL SERVICES

October 21, 2004

David Tietje
Project Navigator, Ltd.
One Pointe Drive, Ste. 320
Brea, CA 92821

Re: ASCON Site
PTS File 34339

Dear Mr. Tietje:

Enclosed are final Geotechnical Data for samples submitted from your ASCON Landfill Site, Huntington Beach, CA. Electronic versions of the data have been previously sent to your attention. All analyses were performed by applicable ASTM, EPA or API methodology. The samples are currently in storage and will be held for thirty days before disposal.

We appreciate the opportunity to be of service and trust these data will prove beneficial in the development of this project. Please call me at (562) 907-3607 with any questions or if you require additional information.

Sincerely,
PTS Laboratories, Inc.

Larry Kunkel
District Manager

LAK:vk

Encl.

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HYDRAULIC CONDUCTIVITY DATA

PROJECT NAME ASCON Landfill Site
PROJECT NO: N/A

METHODOLOGY: **ASTM D5084**

SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENT. (1)	5.0 PSI CONFINING STRESS: NATIVE STATE EFFECTIVE PERMEABILITY TO WATER (4,5) (millidarcy)	5.0 PSI CONFINING STRESS: NATIVE STATE EFFECTIVE HYDRAULIC CONDUCTIVITY (4,5) (cm/s)
PNL-23 16.5-19	18.5	V	0.866	8.79E-07
PNL-21 22-24	23.5	V	0.134	1.35E-07
PNL-28 11-13	12.5	V	0.349	3.51E-07
PNL-23-23.5-26	25.7	V	0.426	4.30E-07
PNL-21-24-26	24.9	V	0.528	5.27E-07

(1) Sample Orientation: H = horizontal; V = vertical (4) Native State = As received with pore fluids in place (5) Permeability to water and conductivity measured at saturated conditions Vb = Bulk Volume, cc; Pv = Pore Volume, cc; ND = Not Detected

ATTERBERG LIMITS DATA - FINE FRACTION < No. 40 SIEVE

(METHODOLOGY: ASTM D4318)

PROJECT NAME: ASCON Landfill Site
PROJECT NO: N/A

SAMPLE ID.	DEPTH, ft.	ATTERBERG LIMITS			USCS CLASSIFICATION (Fines: <#40 Sieve)
		LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
PNL-23-16.5-19	N/A	57.0	24.4	32.6	CH
PNL-23-23.5-26	N/A	72.1	30.1	42.0	CH
PNL-21-22-24	N/A	76.1	22.8	53.3	CH
PNL-21-24-26	N/A	66.0	30.1	35.9	CH
PNL-28-11-13	N/A	75.2	22.7	52.5	CH
PNL-28-15-17	N/A	75.8	25.7	50.1	CH

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MOISTURE CONTENT

(METHODOLOGY: ASTM D 2216)

PROJECT NAME: Ascon LandFill Site
PROJECT NO: N/A

SAMPLE ID.	DEPTH, ft.	WEIGHT OF TARE, grams	WET SAMPLE PLUS TARE WEIGHT, grams	DRY SAMPLE PLUS TARE WEIGHT, grams	MOISTURE CONTENT, percent dry weight
PNL-23-16.5-19	N/A	0.98	29.99	17.28	77.98
PNL-21-21-24	N/A	0.97	35.22	25.06	42.18

DRY BULK DENSITY OF IN-PLACE SOIL

(METHODOLOGY: ASTM D2937)

PROJECT NAME: ASCON Landfill Site
PROJECT NO: N/A

	METHODOLOGY:	MEASURED	ASTM D 2216/ASTM D 2937		
SAMPLE ID.	DEPTH, ft.	TOTAL SAMPLE VOLUME cc	MOISTURE CONTENT (% wt)	VOLUMETRIC WATER CONTENT, FRACTION Vb	DRY BULK DENSITY, g/cc
PNL-5A	N/A	33.37	160.8	0.747	0.46
PNL-4B	N/A	33.37	94.8	0.610	0.64
PNL-23-26-27	N/A	33.37	51.6	0.589	1.14
PNL-23-32-33	N/A	33.50	24.7	0.364	1.47
PNL-23-50-51	N/A	33.37	24.3	0.378	1.56
PNL-23-56-57	N/A	34.82	26.8	0.393	1.46
PNL-21-33-34	N/A	33.37	22.1	0.349	1.58
PNL-21-36-37	N/A	25.28	26.2	0.403	1.54
PNL-21-45-46	N/A	24.62	25.8	0.379	1.47
PNL-21-51-52	N/A	25.42	23.5	0.351	1.49
PNL-28-23-24.5	N/A	25.28	25.0	0.356	1.42
PNL-28-38-39.5	N/A	25.53	26.2	0.381	1.45
PNL-28-53-54.5	N/A	21.83	30.5	0.395	1.30
PNL-28-60-60.5	N/A	15.21	26.1	0.391	1.50

Vb = Bulk Volume

PARTICLE SIZE DATA, % PASSING/RETAINED 200 MESH

PROJECT NAME: ASCON Landfill Site
PROJECT NO: N/A

BAG NO.	SOLIDS DRY WEIGHT, grams	SAMPLE WEIGHT RETAINED ON 200 MESH,		SAMPLE WEIGHT PASSING 200 MESH,	
		grams	percent	grams	percent
PNL-23-26-27	232.36	0.90	0.4	231.46	99.6
PNL-23-32-33	239.40	226.10	94.4	13.30	5.6
PNL-23-50-51	263.21	250.60	95.2	12.61	4.8
PNL-23-56-57	249.02	242.50	97.4	6.52	2.6
PNL-21-33-34	83.5	75.30	90.2	8.20	9.8
PNL-21-36-37	139.75	131.60	94.2	8.15	5.8
PNL-21-45-46	189.85	158.80	83.6	31.05	16.4
PNL-21-51-52	224.94	212.30	94.4	12.64	5.6
PNL-28-23-24.5	240.73	230.00	95.5	10.73	4.5
PNL-28-38-39.5	202.95	174.30	85.9	28.65	14.1
PNL-28-53-54.5	229	215.60	94.1	13.40	5.9
PNL-28-60-60.5	220.02	128.50	58.4	91.52	41.6

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Project Navigator
PTS File No: 34339

UNCONFINED COMPRESSIVE STRENGTH SUMMARY
ASTM D 2166

PROJECT NAME: ASCON Landfill Site
PROJECT NO: N/A

Sample ID	Sample Description	Unconfined Compressive Strength, psf	Strain at Failure, %	Strain Rate, in/min.	Moisture Content, %	Dry Density, pcf	Height to Diameter Ratio
PNL-21 22-24 at 23.6'-24'	brown clay	444	5.69	0.115	50.3	63.7	1.55
PNL-23 23.5-26 at 23.8'-24.7'	brown clay	1538	6.44	0.114	58.3	65.4	2.17
PNL-28 15-17 at 15'-15.5'	brown clay	1188	11.22	0.111	39.3	80.0	2.16
PNL 4B	dark grey clay	(1)	(1)	(1)	97.4	41.3	(1)
PNL 5A	dark grey clay	(1)	(1)	(1)	96.5	39.7	(1)

(1) Unable to support own weight under no load conditions

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Project Navigator
PTS File No: 34339

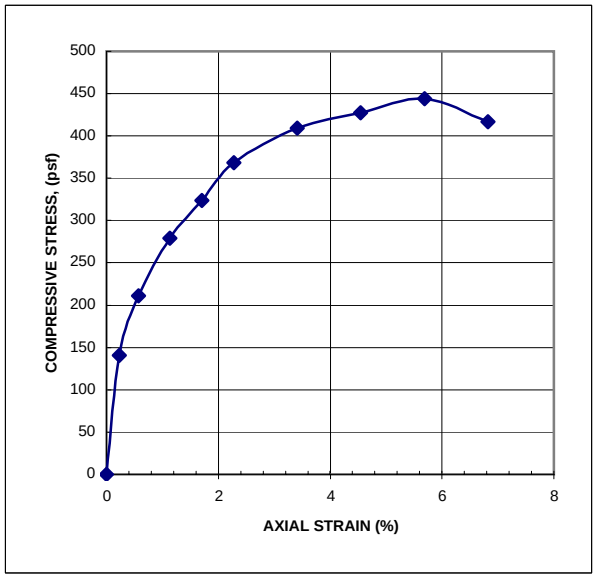
UNCONFINED COMPRESSIVE STRENGTH
ASTM D 2166

Project Name:	ASCON Landfill Site	Tested by:	MMB
Project No.:	N/A	Date:	09/20/04
Sample ID:	PNL-21 22-24 at 23.6'-24'	Sample Description:	brown clay

Sample Properties

Sample diameter, inches	Sample Area, square inches	Sample length, inches	Height:Diameter Ratio	Sample Weight, gm
2.846	6.30	4.390	1.55	696.7
2.811		4.421		
2.839		4.378		
Avg.= 2.832		Avg.= 4.396		

Moisture, Density and Saturation	
Moisture Content, %:	50.3
Grain Density (est.)	2.65
Wet Density, pcf:	95.8
Dry Density, pcf:	63.7
Total Porosity:	0.61
Void Ratio:	1.60
Pore Volume, cc:	278.9
Percent Saturation:	83.6



Unconfined Stress Analysis	
Unconfined Compressive Strength, psf	444
Strain at Failure, %	5.69
Strain Rate, in/min.	0.115
Failure Description:	See Photo

Notes:
Moisture Content on entire sample after shear.
Height to Diameter ratio < 2.

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Project Navigator
PTS File No: 34339

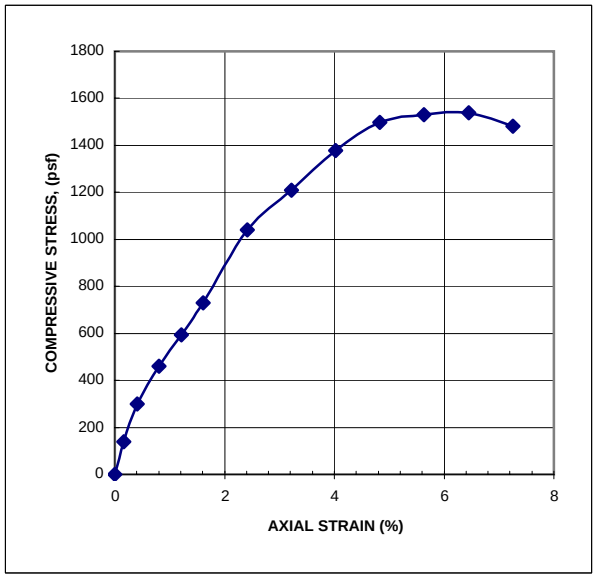
UNCONFINED COMPRESSIVE STRENGTH
ASTM D 2166

Project Name:	ASCON Landfill Site	Tested by:	MMB
Project No.:	N/A	Date:	09/20/04
Sample ID:	PNL-23 23.5-26 at 23.8'-24.7'	Sample Description:	brown clay

Sample Properties

Sample diameter, inches	Sample Area, square inches	Sample length, inches	Height:Diameter Ratio	Sample Weight, gm
2.846	6.40	6.209	2.17	1080.9
2.839		6.236		
2.882		6.177		
Avg.= 2.856		Avg.= 6.207		

Moisture, Density and Saturation	
Moisture Content, %:	58.3
Grain Density (est.)	2.65
Wet Density, pcf:	103.6
Dry Density, pcf:	65.4
Total Porosity:	0.60
Void Ratio:	1.53
Pore Volume, cc:	393.9
Percent Saturation:	101.1



Unconfined Stress Analysis	
Unconfined Compressive Strength, psf	1538
Strain at Failure, %	6.44
Strain Rate, in/min.	0.114
Failure Description:	See Photo

Notes:
Moisture Content on entire sample after shear.

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Project Navigator
PTS File No: 34339

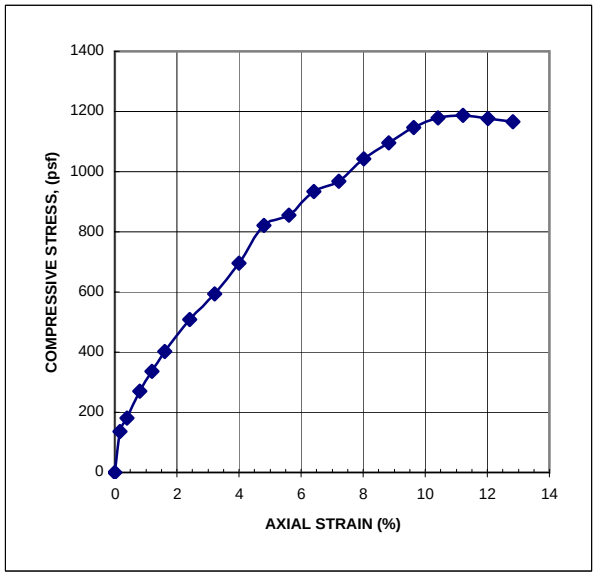
UNCONFINED COMPRESSIVE STRENGTH
ASTM D 2166

Project Name:	ASCON Landfill Site	Tested by:	MMB
Project No.:	N/A	Date:	09/20/04
Sample ID:	PNL-28 15-17 at 15'-15.5'	Sample Description:	brown clay

Sample Properties

Sample diameter, inches	Sample Area, square inches	Sample length, inches	Height:Diameter Ratio	Sample Weight, gm
2.874	6.54	6.244	2.16	1192.5
2.906		6.193		
2.878		6.276		
Avg.= 2.886		Avg.= 6.238		

Moisture, Density and Saturation	
Moisture Content, %:	39.3
Grain Density (est.)	2.65
Wet Density, pcf:	111.4
Dry Density, pcf:	80.0
Total Porosity:	0.52
Void Ratio:	1.07
Pore Volume, cc:	345.4
Percent Saturation:	97.3



Unconfined Stress Analysis	
Unconfined Compressive Strength, psf	1188
Strain at Failure, %	11.22
Strain Rate, in/min.	0.111
Failure Description:	See Photo

Notes:
Moisture Content on entire sample after shear.

Client: Project Navigator

PTS File No: 34339

Unconfined Compressive Strength – Sample PNL 4B

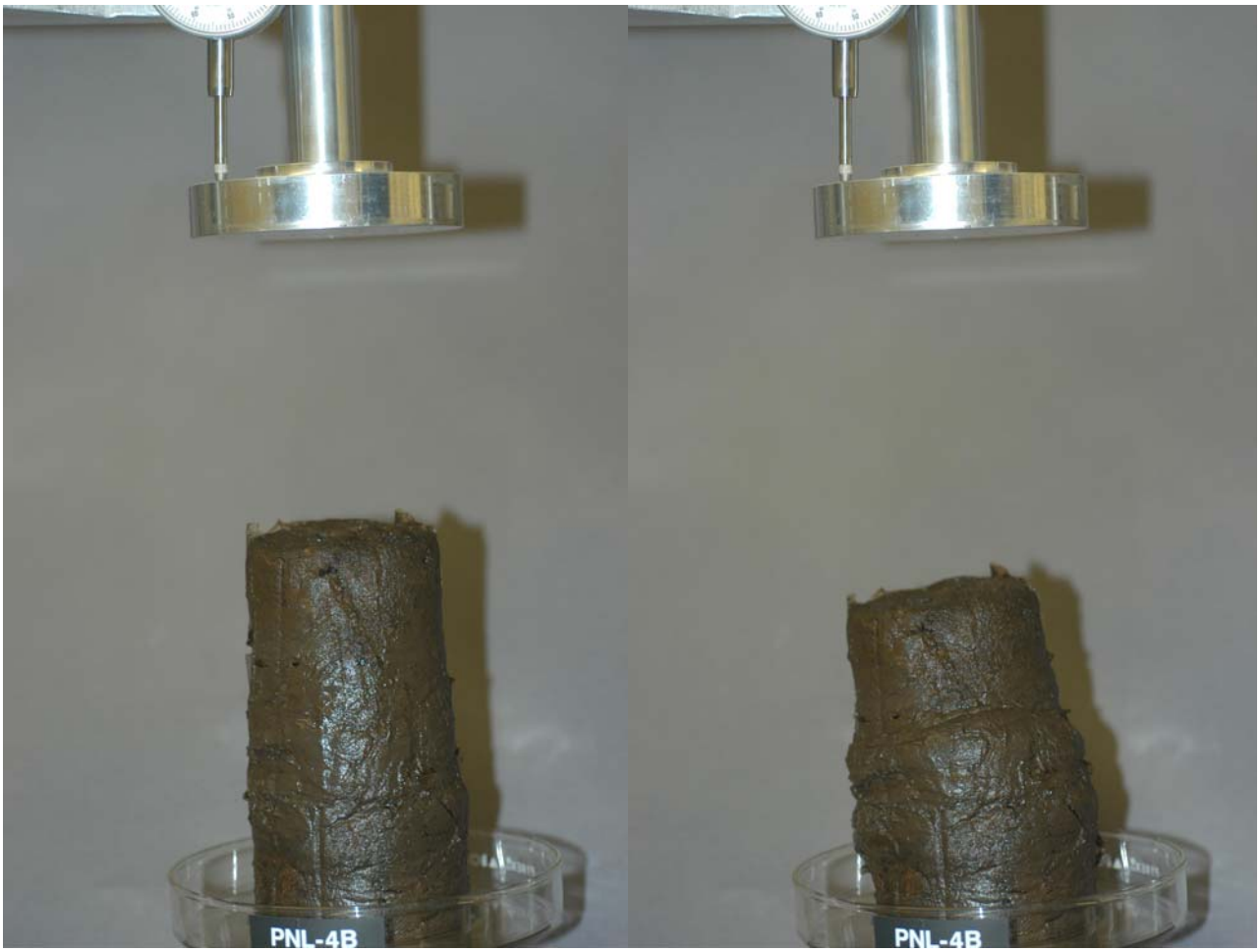


Fig. 1 Sample PNL 4B Collapsing Under No Load Conditions

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Client: Project Navigator

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Unconfined Compressive Strength – Sample PNL 5A

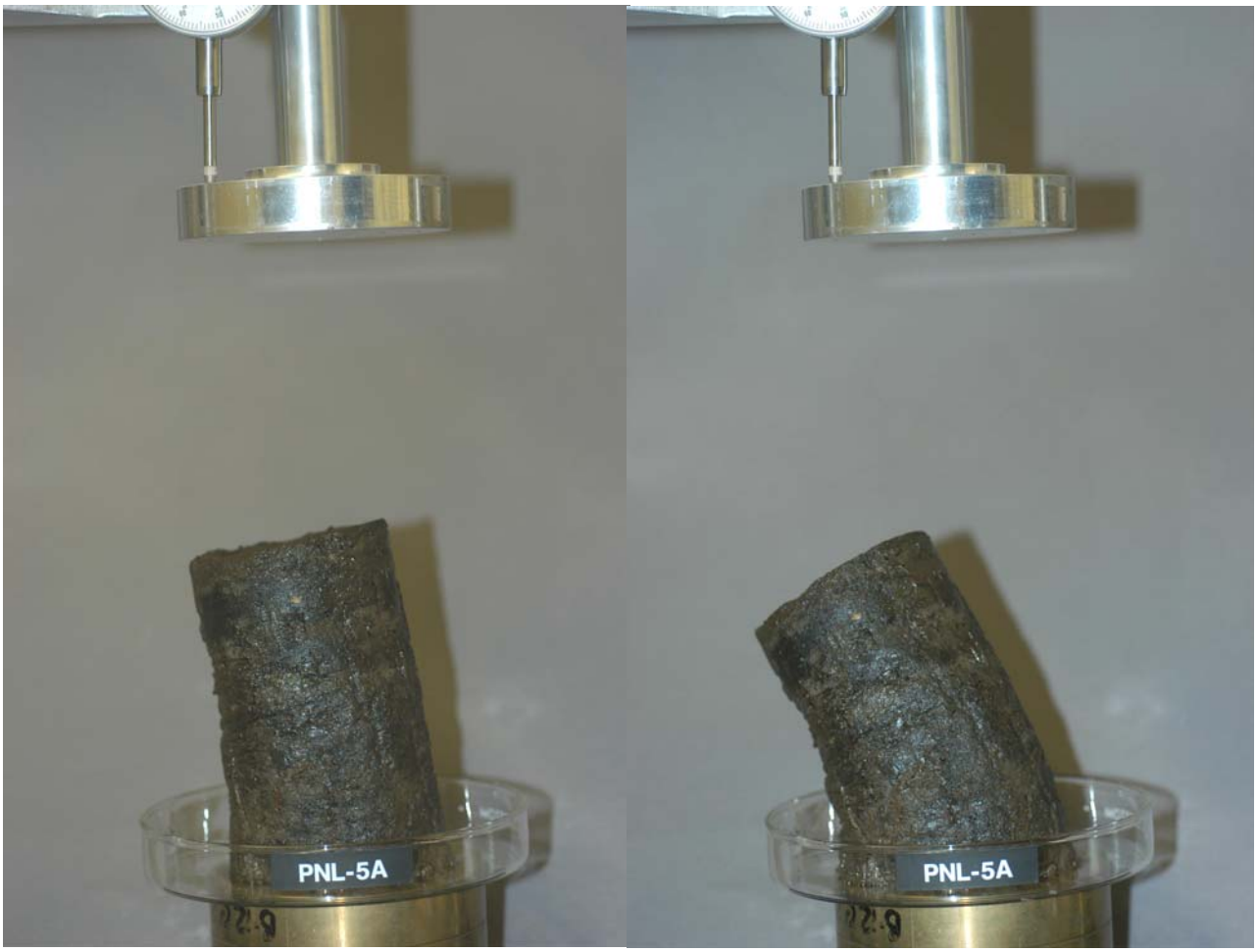

Fig. 1 Sample PNL 5A Collapsing Under No Load Conditions

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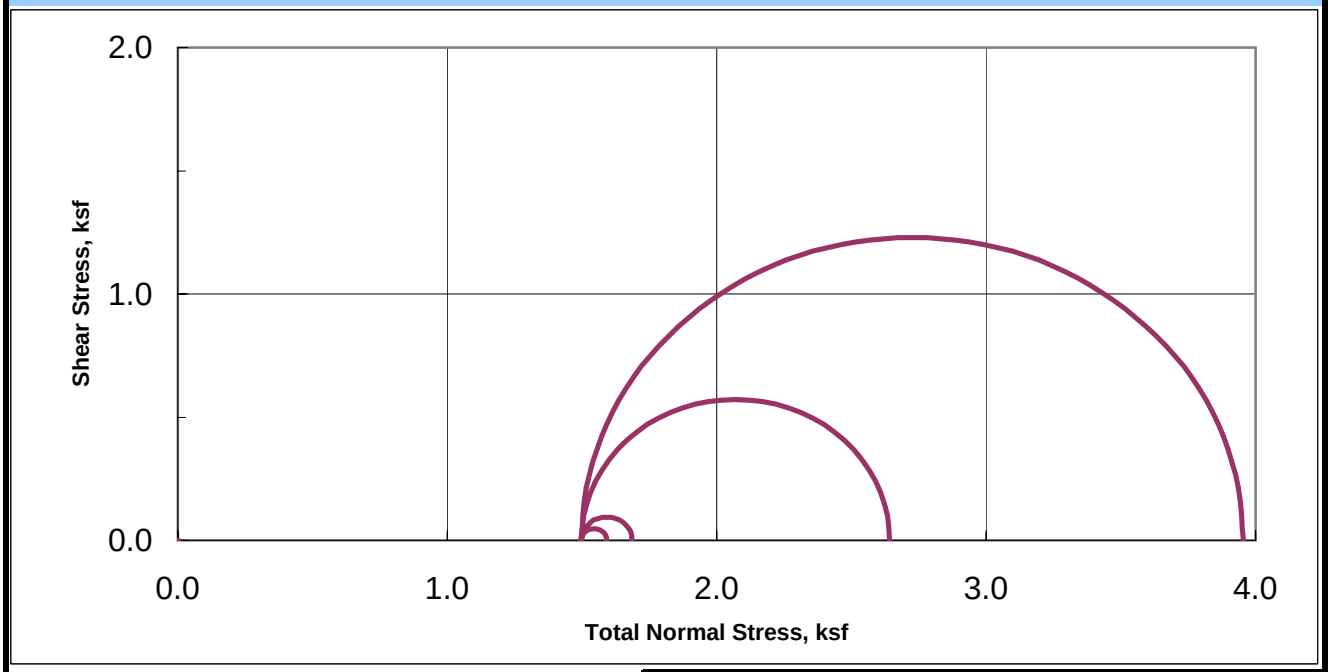
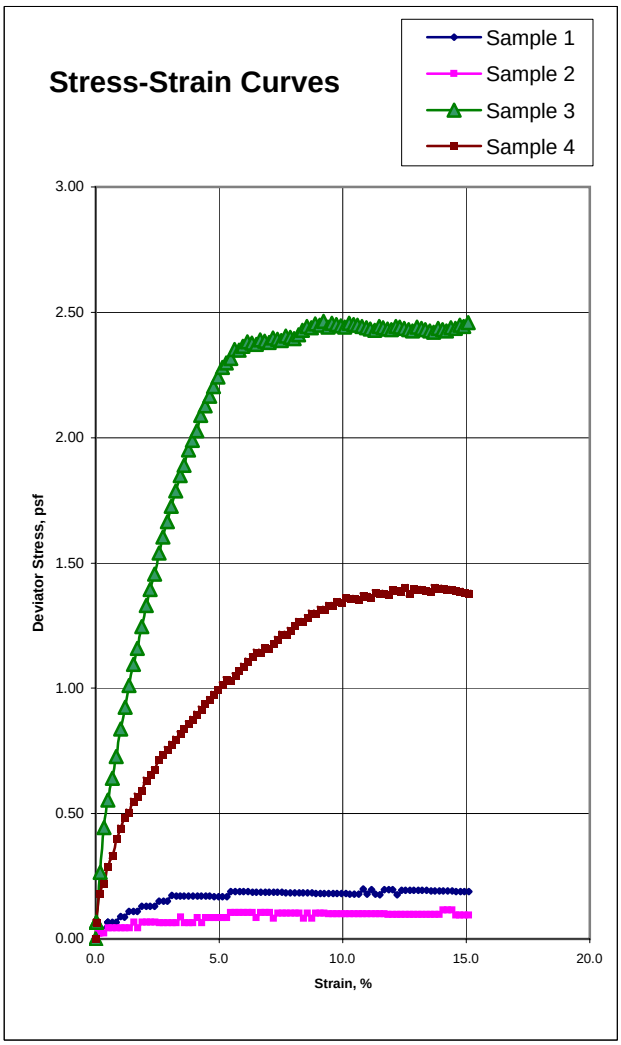
Unconsolidated-Undrained Triaxial Test

ASTM D-2850





Sample Data				
	1	2	3	4
Moisture %	96.5	97.4	32.9	55.3
Density pcf	39.7	41.3	87.4	66.9
Void Ratio	3.249	3.077	0.929	1.520
Saturation %	80.1	85.4	95.5	98.2
Height in	6.00	6.00	6.00	6.00
Diameter in	2.87	2.87	2.87	2.87
Cell psi	10.4	10.4	10.4	10.4
Strain %	10.80	14.10	9.20	6.51
Deviator, ksf	0.199	0.115	2.465	1.402
Rate %/min	1.00	1.00	1.00	1.00
in/min	0.060	0.060	0.060	0.060
Job No.:	417-012			
Client:	PTS			
Project:	34339			
Boring:	PNL5A	PNL4B	PNL23	PNL23
Sample:				
Depth ft:			16.5-19	23.5-26

Visual Soil Description

Sample #	
1	Dark Gray CLAY, Saturated With Oil
2	Dark Gray CLAY, Saturated With Oil
3	Gray CLAY w/Sand Pockets & Oil
4	Gray Sandy CLAY, With Oil

Remarks:

PTS Laboratories

Project Navigator
PTS File No: 34339

Sample Properties - Unconsolidated-Undrained Triaxial Test

			Boring	Sample	Depth, ft	Description
Job No.:	417-012	Sample 1	PNL5A			Dark Gray CLAY, Saturated With Oil
Client:	PTS	Sample 2	PNL4B			Dark Gray CLAY, Saturated With Oil
Project:	34339	Sample 3	PNL23		16.5-19	Gray CLAY w/Sand Pockets & Oil
Date:	9/16/2004	Sample 4	PNL23		23.5-26	Gray Sandy CLAY, With Oil
By:	MD/DC					

	Sample #			
	1	2	3	4
Boring	PNL5A	PNL4B	PNL23	PNL23
Depth, ft			16.5-19	23.5-26
Height	6	6	6	6
Diameter	2.87	2.87	2.87	2.87
Total Wet Weight	794	831.4	1183	1058.2
Wt of Wet Soil & Dish	939.6	956.2	209.6	454
Wt of Dry Soil & Dish	553.6	561.1	161.8	331.3
Wt. Of Dish	153.4	155.3	16.4	109.4
Moisture %	96.5	97.4	32.9	55.3
Wet Density, pcf	77.9	81.6	116.1	103.9
Dry Density, pcf	39.7	41.3	87.4	66.9
Specific Gravity	2.70	2.70	2.70	2.70
Area	6.47	6.47	6.47	6.47
V ft3	0.0225	0.0225	0.0225	0.0225
Vt, cc	636.1	636.1	636.1	636.1
Vs, cc	149.7	156.0	329.7	252.4
Vv, cc	486.4	480.1	306.3	383.7
e	3.25	3.08	0.93	1.52
porosity, %	76.5	75.5	48.2	60.3
S, %	80.1	85.4	95.5	98.2

Remarks:

Analysis performed by Cooper Testing Lab

PTS Laboratories

Project Navigator
PTS File No: 34339

Unconsolidated-Undrained Triaxial Test Readings

Triaxial Unconsolidated-Undrained Template

					Load Factor	1	Deviator	If there is a load at zero strain it will be subtracted from all subsequent readings if entered in the first row.		
Calculated Data					Dial Factor	1	Strain			
Data Entry		White	(dial factor for txt file use 1.0, for hand entry in whole numbers use .001)							
SAMPLE-1			SAMPLE-2			SAMPLE-3			SAMPLE-4		
PNL5A			PNL4B			PNL23 16.5-19ft			PNL23 23.5-26ft		
Sigma 3	10.4	psi	Sigma 3	10.4	psi	Sigma-3:	10.4	psi	Sigma-3:	10.4	psi
Height, in	6	Rate in/min	Height, in	6	Rate in/min	Height, in	6	Rate in/min	Height, in	6	Rate in/min
Dia. In.	2.87	0.06	Dia. In.	2.87	0.06	Dia. In.	2.87	0.06	Dia. In.	2.87	0.06
Area	6.47	0.0449253	Area	6.47	0.0449253	Area	6.47	0.0449253	Area	6.47	0.0449253
Strain, In.	Load, lbf	see note	Strain, In.	Load, lbf	see note	Strain, In.	Load, lbf	see note	Strain, In.	Load, lbf	see note
0.0000	2		0.0000	3		0.0000	4		0.0000	4	
0.0299	5		0.0077	4		0.0011	7		0.0019	7	
0.0299	5		0.0077	4		0.0011	7		0.0019	7	
0.0299	5		0.0102	4		0.0102	16		0.0101	12	
0.0402	5		0.0205	4		0.0202	24		0.0202	14	
0.0504	5		0.0311	5		0.0303	29		0.0302	17	
0.0605	6		0.0411	5		0.0404	33		0.0402	19	
0.0707	6		0.0516	5		0.0504	37		0.0507	22	
0.0807	7		0.0619	5		0.0605	42		0.0607	24	
0.0912	7		0.0722	5		0.0708	46		0.0709	26	
0.1015	7		0.0825	5		0.0811	50		0.0812	27	
0.1118	8		0.0926	6		0.0917	54		0.0915	29	
0.1224	8		0.1029	5		0.1017	57		0.1018	30	
0.1327	8		0.1135	6		0.1123	61		0.1122	31	
0.1432	8		0.1239	6		0.1227	65		0.1225	33	
0.1538	9		0.1342	6		0.1328	68		0.1330	34	
0.1642	9		0.1446	6		0.1431	71		0.1433	35	
0.1742	9		0.1551	6		0.1534	75		0.1535	37	
0.1845	10		0.1651	6		0.1636	78		0.1637	38	
0.1951	10		0.1755	6		0.1738	81		0.1742	39	
0.2051	10		0.1858	6		0.1841	84		0.1845	40	
0.2152	10		0.1962	6		0.1943	87		0.1946	41	
0.2258	10		0.2063	7		0.2046	90		0.2046	42	
0.2363	10		0.2165	6		0.2147	92		0.2148	43	
0.2467	10		0.2268	6		0.2247	95		0.2253	44	
0.2571	10		0.2368	6		0.2350	97		0.2355	45	
0.2673	10		0.2471	7		0.2453	99		0.2456	46	
0.2774	10		0.2575	6		0.2556	102		0.2562	47	
0.2875	10		0.2675	7		0.2659	104		0.2662	48	
0.2979	10		0.2776	7		0.2762	106		0.2766	49	
0.3082	10		0.2879	7		0.2864	108		0.2869	50	
0.3184	10		0.2979	7		0.2967	110		0.2972	51	
0.3285	11		0.3083	7		0.3070	112		0.3075	52	
0.3388	11		0.3183	7		0.3172	113		0.3178	53	
0.3492	11		0.3284	8		0.3274	114		0.3282	53	
0.3597	11		0.3387	8		0.3377	116		0.3385	54	
0.3701	11		0.3489	8		0.3477	116		0.3488	55	
0.3803	11		0.3595	8		0.3581	117		0.3594	56	
0.3905	11		0.3701	8		0.3685	118		0.3699	57	
0.4010	11		0.3807	8		0.3789	118		0.3802	58	
0.4114	11		0.3909	7		0.3894	118		0.3904	59	
0.4217	11		0.4014	8		0.3999	119		0.4007	59	
0.4317	11		0.4119	8		0.4103	119		0.4109	60	
0.4417	11		0.4223	8		0.4206	119		0.4213	60	
0.4522	11		0.4327	7		0.4309	120		0.4316	61	
0.4622	11		0.4430	8		0.4412	120		0.4419	62	
0.4727	11		0.4535	8		0.4514	120		0.4520	63	

Analysis performed by Cooper Testing Lab

PTS Laboratories

Project Navigator
PTS File No: 34339

Unconsolidated-Undrained Triaxial Test Readings

Triaxial Unconsolidated-Undrained Template

						Load Factor	1	Deviator	If there is a load at zero strain it will be subtracted from all subsequent readings if entered in the first row.		
Calculated Data						Dial Factor	1	Strain			
Data Entry		White	(dial factor for txt file use 1.0, for hand entry in whole numbers use .001)								
SAMPLE-1			SAMPLE-2			SAMPLE-3			SAMPLE-4		
PNL5A			PNL4B			PNL23 16.5-19ft			PNL23 23.5-26ft		
Sigma 3	10.4	psi	Sigma 3	10.4	psi	Sigma-3:	10.4	psi	Sigma-3:	10.4	psi
Height, in	6	Rate in/min	Height, in	6	Rate in/min	Height, in	6	Rate in/min	Height, in	6	Rate in/min
Dia. In.	2.87	0.06	Dia. In.	2.87	0.06	Dia. In.	2.87	0.06	Dia. In.	2.87	0.06
Area	6.47	0.0449253	Area	6.47	0.0449253	Area	6.47	0.0449253	Area	6.47	0.0449253
Strain, In.	Load, lbf	see note	Strain, In.	Load, lbf	see note	Strain, In.	Load, lbf	see note	Strain, In.	Load, lbf	see note
0.4833	11		0.4638	8		0.4616	121		0.4626	63	
0.4938	11		0.4740	8		0.4718	121		0.4726	64	
0.5042	11		0.4842	8		0.4821	121		0.4829	65	
0.5146	11		0.4944	8		0.4924	122		0.4931	66	
0.5249	11		0.5046	7		0.5027	123		0.5033	66	
0.5350	11		0.5146	8		0.5129	124		0.5138	67	
0.5451	11		0.5247	7		0.5232	124		0.5243	68	
0.5554	11		0.5351	8		0.5334	125		0.5346	68	
0.5659	11		0.5452	8		0.5437	125		0.5450	69	
0.5761	11		0.5552	8		0.5540	126		0.5553	69	
0.5864	11		0.5655	8		0.5641	125		0.5655	70	
0.5969	11		0.5760	8		0.5743	126		0.5762	70	
0.6072	11		0.5862	8		0.5846	126		0.5862	71	
0.6177	11		0.5964	8		0.5951	126		0.5968	71	
0.6281	11		0.6068	8		0.6051	126		0.6073	72	
0.6387	11		0.6172	8		0.6156	127		0.6179	72	
0.6491	12		0.6277	8		0.6261	127		0.6283	72	
0.6595	11		0.6383	8		0.6364	127		0.6387	72	
0.6698	12		0.6488	8		0.6469	127		0.6490	73	
0.6800	11		0.6594	8		0.6573	127		0.6590	73	
0.6906	11		0.6697	8		0.6676	127		0.6690	73	
0.7011	12		0.6801	8		0.6777	127		0.6794	74	
0.7116	12		0.6904	8		0.6880	128		0.6898	74	
0.7216	12		0.7006	8		0.6982	128		0.7002	74	
0.7321	11		0.7109	8		0.7083	128		0.7107	74	
0.7424	12		0.7212	8		0.7185	128		0.7209	75	
0.7527	12		0.7314	8		0.7287	129		0.7310	75	
0.7630	12		0.7417	8		0.7390	129		0.7411	75	
0.7731	12		0.7519	8		0.7495	129		0.7512	76	
0.7833	12		0.7625	8		0.7598	129		0.7618	75	
0.7934	12		0.7725	8		0.7702	129		0.7718	76	
0.8035	12		0.7831	8		0.7805	130		0.7821	76	
0.8138	12		0.7933	8		0.7907	130		0.7922	76	
0.8240	12		0.8036	8		0.8009	130		0.8024	76	
0.8343	12		0.8137	8		0.8112	130		0.8125	76	
0.8446	12		0.8242	8		0.8215	130		0.8226	77	
0.8550	12		0.8342	8		0.8318	131		0.8327	77	
0.8656	12		0.8443	9		0.8422	131		0.8433	77	
0.8756	12		0.8546	9		0.8522	131		0.8539	77	
0.8857	12		0.8651	9		0.8628	132		0.8641	77	
0.8960	12		0.8751	8		0.8733	132		0.8746	77	
0.9063	12		0.8851	8		0.8837	133		0.8850	77	
			0.8957	8		0.8941	133		0.8953	77	
			0.9062	8		0.9045	134		0.9053	77	

Analysis performed by Cooper Testing Lab

PTS Laboratories

Project Navigator
PTS File No: 34339

Unconsolidated-Undrained Triaxial Test Results

Strain	10.80	P Stress	0.20	Pick Strain	14.10	P. Stress	0.11	Pick Strain	9.20	P. Stress	2.46	Pick Strain	6.51	P.Stress	1.40
Sample 1 PNL5A				Sample 2 PNL4B				Sample 3 PNL23 16.5-19ft				Sample 4 PNL23 23.5-26ft			
Sigma 3	1.50	ksf		Sigma 3	1.50	ksf		Sigma 3	1.50	ksf		Sigma 3	1.50	ksf	
Strain	Deviator	p, ksf	q, ksf	Strain	Deviator	p, ksf	q, ksf	Strain	Deviator	p, ksf	q, ksf	Strain	Deviator	p, ksf	q, ksf
0.0	0.00	1.50	0	0.0	0	1.50	0	0.0	0.00	1.50	0.00	0.0	0.00	1.50	0.00
0.5	0.07	1.53	0.03	0.1	0.02	1.51	0.01	0.0	0.07	1.53	0.03	0.0	0.07	1.53	0.03
0.5	0.07	1.53	0.03	0.1	0.02	1.51	0.01	0.0	0.07	1.53	0.03	0.0	0.07	1.53	0.03
0.5	0.07	1.53	0.03	0.2	0.02	1.51	0.01	0.2	0.27	1.63	0.13	0.2	0.18	1.59	0.09
0.7	0.07	1.53	0.03	0.3	0.02	1.51	0.01	0.3	0.44	1.72	0.22	0.3	0.22	1.61	0.11
0.8	0.07	1.53	0.03	0.5	0.04	1.52	0.02	0.5	0.55	1.77	0.28	0.5	0.29	1.64	0.14
1.0	0.09	1.54	0.04	0.7	0.04	1.52	0.02	0.7	0.64	1.82	0.32	0.7	0.33	1.66	0.17
1.2	0.09	1.54	0.04	0.9	0.04	1.52	0.02	0.8	0.73	1.86	0.36	0.8	0.40	1.70	0.20
1.3	0.11	1.55	0.05	1.0	0.04	1.52	0.02	1.0	0.84	1.92	0.42	1.0	0.44	1.72	0.22
1.5	0.11	1.55	0.05	1.2	0.04	1.52	0.02	1.2	0.92	1.96	0.46	1.2	0.48	1.74	0.24
1.7	0.11	1.55	0.05	1.4	0.04	1.52	0.02	1.4	1.01	2.00	0.51	1.4	0.51	1.75	0.25
1.9	0.13	1.56	0.07	1.5	0.07	1.53	0.03	1.5	1.10	2.05	0.55	1.5	0.55	1.77	0.27
2.0	0.13	1.56	0.07	1.7	0.04	1.52	0.02	1.7	1.16	2.08	0.58	1.7	0.57	1.78	0.28
2.2	0.13	1.56	0.07	1.9	0.07	1.53	0.03	1.9	1.25	2.12	0.62	1.9	0.59	1.79	0.29
2.4	0.13	1.56	0.07	2.1	0.07	1.53	0.03	2.0	1.33	2.16	0.67	2.0	0.63	1.81	0.32
2.6	0.15	1.57	0.08	2.2	0.07	1.53	0.03	2.2	1.39	2.19	0.70	2.2	0.65	1.82	0.33
2.7	0.15	1.57	0.08	2.4	0.07	1.53	0.03	2.4	1.46	2.23	0.73	2.4	0.67	1.83	0.34
2.9	0.15	1.57	0.08	2.6	0.07	1.53	0.03	2.6	1.54	2.27	0.77	2.6	0.72	1.86	0.36
3.1	0.17	1.58	0.09	2.8	0.06	1.53	0.03	2.7	1.60	2.30	0.80	2.7	0.74	1.87	0.37
3.3	0.17	1.58	0.09	2.9	0.06	1.53	0.03	2.9	1.66	2.33	0.83	2.9	0.76	1.88	0.38
3.4	0.17	1.58	0.09	3.1	0.06	1.53	0.03	3.1	1.73	2.36	0.86	3.1	0.78	1.89	0.39
3.6	0.17	1.58	0.09	3.3	0.06	1.53	0.03	3.2	1.79	2.39	0.89	3.2	0.80	1.90	0.40
3.8	0.17	1.58	0.09	3.4	0.09	1.54	0.04	3.4	1.85	2.42	0.92	3.4	0.82	1.91	0.41
3.9	0.17	1.58	0.09	3.6	0.06	1.53	0.03	3.6	1.89	2.44	0.94	3.6	0.84	1.92	0.42
4.1	0.17	1.58	0.09	3.8	0.06	1.53	0.03	3.7	1.95	2.47	0.97	3.8	0.86	1.93	0.43
4.3	0.17	1.58	0.09	3.9	0.06	1.53	0.03	3.9	1.99	2.49	0.99	3.9	0.88	1.94	0.44
4.5	0.17	1.58	0.09	4.1	0.09	1.54	0.04	4.1	2.03	2.51	1.01	4.1	0.90	1.95	0.45
4.6	0.17	1.58	0.08	4.3	0.06	1.53	0.03	4.3	2.09	2.54	1.04	4.3	0.92	1.96	0.46
4.8	0.17	1.58	0.08	4.5	0.09	1.54	0.04	4.4	2.13	2.56	1.06	4.4	0.94	1.97	0.47
5.0	0.17	1.58	0.08	4.6	0.08	1.54	0.04	4.6	2.17	2.58	1.08	4.6	0.96	1.98	0.48
5.1	0.17	1.58	0.08	4.8	0.08	1.54	0.04	4.8	2.20	2.60	1.10	4.8	0.97	1.99	0.49
5.3	0.17	1.58	0.08	5.0	0.08	1.54	0.04	4.9	2.24	2.62	1.12	5.0	0.99	1.99	0.50
5.5	0.19	1.59	0.09	5.1	0.08	1.54	0.04	5.1	2.28	2.64	1.14	5.1	1.01	2.00	0.51
5.6	0.19	1.59	0.09	5.3	0.08	1.54	0.04	5.3	2.30	2.65	1.15	5.3	1.03	2.01	0.52
5.8	0.19	1.59	0.09	5.5	0.11	1.55	0.05	5.5	2.31	2.66	1.16	5.5	1.03	2.01	0.52
6.0	0.19	1.59	0.09	5.6	0.11	1.55	0.05	5.6	2.35	2.67	1.18	5.6	1.05	2.02	0.53
6.2	0.19	1.59	0.09	5.8	0.10	1.55	0.05	5.8	2.35	2.67	1.17	5.8	1.07	2.03	0.53
6.3	0.19	1.59	0.09	6.0	0.10	1.55	0.05	6.0	2.37	2.68	1.18	6.0	1.09	2.04	0.54
6.5	0.19	1.59	0.09	6.2	0.10	1.55	0.05	6.1	2.38	2.69	1.19	6.2	1.11	2.05	0.55
6.7	0.19	1.59	0.09	6.3	0.10	1.55	0.05	6.3	2.38	2.69	1.19	6.3	1.13	2.06	0.56
6.9	0.19	1.59	0.09	6.5	0.08	1.54	0.04	6.5	2.37	2.68	1.19	6.5	1.14	2.07	0.57
7.0	0.19	1.59	0.09	6.7	0.10	1.55	0.05	6.7	2.39	2.69	1.19	6.7	1.14	2.07	0.57
7.2	0.19	1.59	0.09	6.9	0.10	1.55	0.05	6.8	2.38	2.69	1.19	6.8	1.16	2.08	0.58
7.4	0.19	1.59	0.09	7.0	0.10	1.55	0.05	7.0	2.38	2.69	1.19	7.0	1.16	2.08	0.58
7.5	0.19	1.59	0.09	7.2	0.08	1.54	0.04	7.2	2.40	2.70	1.20	7.2	1.18	2.09	0.59
7.7	0.18	1.59	0.09	7.4	0.10	1.55	0.05	7.4	2.39	2.69	1.20	7.4	1.20	2.10	0.60

Analysis performed by Cooper Testing Lab

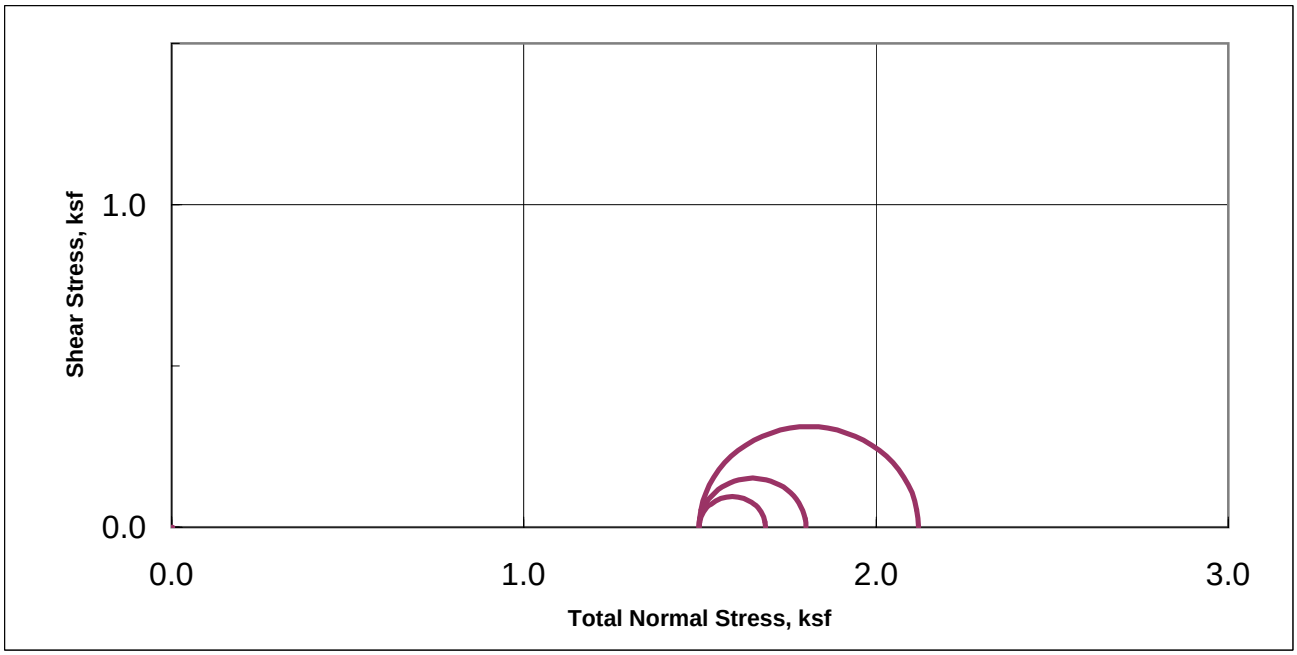
Unconsolidated-Undrained Triaxial Test Results

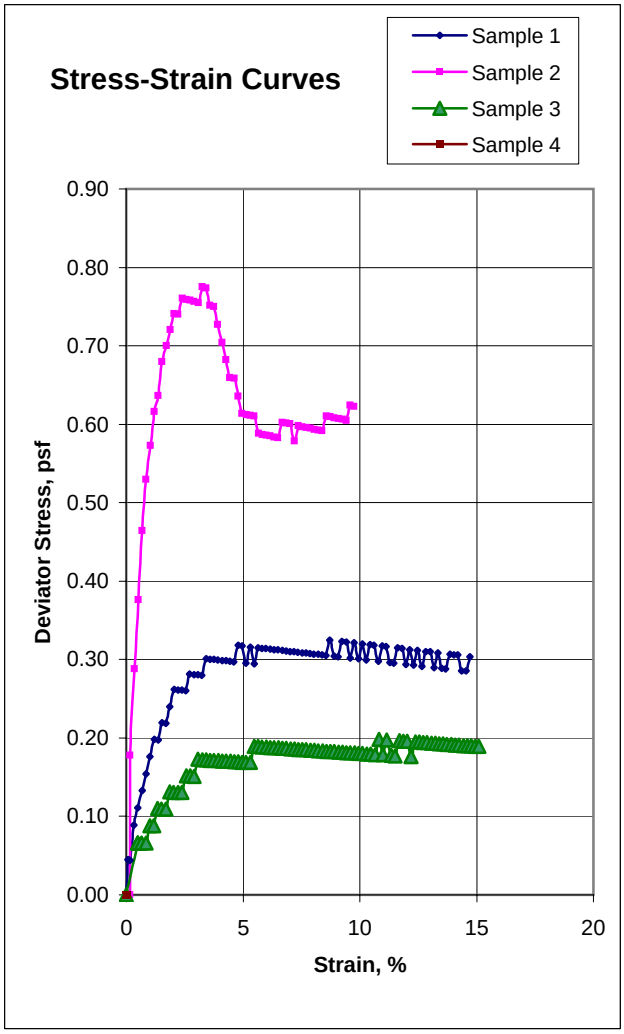
Strain	10.80	P Stress	0.20	Pick Strain	14.10	P. Stress	0.11	Pick Strain	9.20	P. Stress	2.46	Pick Strain	6.51	P.Stress	1.40
Sample 1 PNL5A				Sample 2 PNL4B				Sample 3 PNL23 16.5-19ft				Sample 4 PNL23 23.5-26ft			
Sigma 3	1.50	ksf		Sigma 3	1.50	ksf		Sigma 3	1.50	ksf		Sigma 3	1.50	ksf	
Strain	Deviator	p, ksf	q, ksf	Strain	Deviator	p, ksf	q, ksf	Strain	Deviator	p, ksf	q, ksf	Strain	Deviator	p, ksf	q, ksf
7.9	0.18	1.59	0.09	7.6	0.10	1.55	0.05	7.5	2.39	2.69	1.19	7.5	1.21	2.10	0.61
8.1	0.18	1.59	0.09	7.7	0.10	1.55	0.05	7.7	2.40	2.70	1.20	7.7	1.21	2.10	0.61
8.2	0.18	1.59	0.09	7.9	0.10	1.55	0.05	7.9	2.40	2.70	1.20	7.9	1.23	2.11	0.62
8.4	0.18	1.59	0.09	8.1	0.10	1.55	0.05	8.0	2.40	2.70	1.20	8.0	1.25	2.12	0.62
8.6	0.18	1.59	0.09	8.2	0.10	1.55	0.05	8.2	2.41	2.70	1.21	8.2	1.27	2.13	0.63
8.7	0.18	1.59	0.09	8.4	0.08	1.54	0.04	8.4	2.43	2.71	1.21	8.4	1.26	2.13	0.63
8.9	0.18	1.59	0.09	8.6	0.10	1.55	0.05	8.5	2.44	2.72	1.22	8.6	1.28	2.14	0.64
9.1	0.18	1.59	0.09	8.7	0.08	1.54	0.04	8.7	2.44	2.72	1.22	8.7	1.30	2.15	0.65
9.3	0.18	1.59	0.09	8.9	0.10	1.55	0.05	8.9	2.45	2.72	1.23	8.9	1.30	2.15	0.65
9.4	0.18	1.59	0.09	9.1	0.10	1.55	0.05	9.1	2.45	2.72	1.22	9.1	1.32	2.16	0.66
9.6	0.18	1.59	0.09	9.3	0.10	1.55	0.05	9.2	2.46	2.73	1.23	9.3	1.31	2.15	0.66
9.8	0.18	1.59	0.09	9.4	0.10	1.55	0.05	9.4	2.44	2.72	1.22	9.4	1.33	2.16	0.67
9.9	0.18	1.59	0.09	9.6	0.10	1.55	0.05	9.6	2.46	2.73	1.23	9.6	1.33	2.16	0.66
10.1	0.18	1.59	0.09	9.8	0.10	1.55	0.05	9.7	2.45	2.72	1.23	9.8	1.35	2.17	0.67
10.3	0.18	1.59	0.09	9.9	0.10	1.55	0.05	9.9	2.45	2.72	1.22	9.9	1.34	2.17	0.67
10.5	0.18	1.59	0.09	10.1	0.10	1.55	0.05	10.1	2.44	2.72	1.22	10.1	1.36	2.18	0.68
10.6	0.18	1.59	0.09	10.3	0.10	1.55	0.05	10.3	2.46	2.73	1.23	10.3	1.36	2.18	0.68
10.8	0.20	1.60	0.10	10.5	0.10	1.55	0.05	10.4	2.45	2.72	1.23	10.5	1.36	2.18	0.68
11.0	0.18	1.59	0.09	10.6	0.10	1.55	0.05	10.6	2.45	2.72	1.22	10.6	1.35	2.17	0.68
11.2	0.20	1.60	0.10	10.8	0.10	1.55	0.05	10.8	2.44	2.72	1.22	10.8	1.37	2.18	0.68
11.3	0.18	1.59	0.09	11.0	0.10	1.55	0.05	11.0	2.44	2.72	1.22	11.0	1.37	2.18	0.68
11.5	0.18	1.59	0.09	11.2	0.10	1.55	0.05	11.1	2.43	2.71	1.22	11.2	1.36	2.18	0.68
11.7	0.20	1.60	0.10	11.3	0.10	1.55	0.05	11.3	2.43	2.71	1.21	11.3	1.38	2.19	0.69
11.9	0.20	1.60	0.10	11.5	0.10	1.55	0.05	11.5	2.44	2.72	1.22	11.5	1.38	2.19	0.69
12.0	0.20	1.60	0.10	11.7	0.10	1.55	0.05	11.6	2.44	2.72	1.22	11.7	1.38	2.19	0.69
12.2	0.18	1.59	0.09	11.8	0.10	1.55	0.05	11.8	2.43	2.71	1.22	11.8	1.37	2.18	0.69
12.4	0.20	1.60	0.10	12.0	0.10	1.55	0.05	12.0	2.43	2.71	1.21	12.0	1.39	2.19	0.70
12.5	0.19	1.59	0.10	12.2	0.10	1.55	0.05	12.1	2.44	2.72	1.22	12.2	1.39	2.19	0.69
12.7	0.19	1.59	0.10	12.4	0.10	1.55	0.05	12.3	2.44	2.72	1.22	12.4	1.39	2.19	0.69
12.9	0.19	1.59	0.10	12.5	0.10	1.55	0.05	12.5	2.43	2.72	1.22	12.5	1.40	2.20	0.70
13.1	0.19	1.59	0.10	12.7	0.10	1.55	0.05	12.7	2.43	2.71	1.22	12.7	1.38	2.19	0.69
13.2	0.19	1.59	0.10	12.9	0.10	1.55	0.05	12.8	2.43	2.71	1.21	12.9	1.40	2.20	0.70
13.4	0.19	1.59	0.10	13.1	0.10	1.55	0.05	13.0	2.44	2.72	1.22	13.0	1.39	2.19	0.70
13.6	0.19	1.59	0.10	13.2	0.10	1.55	0.05	13.2	2.44	2.72	1.22	13.2	1.39	2.19	0.70
13.7	0.19	1.59	0.10	13.4	0.10	1.55	0.05	13.3	2.43	2.71	1.22	13.4	1.39	2.19	0.69
13.9	0.19	1.59	0.10	13.6	0.10	1.55	0.05	13.5	2.43	2.71	1.21	13.5	1.39	2.19	0.69
14.1	0.19	1.59	0.10	13.7	0.10	1.55	0.05	13.7	2.42	2.71	1.21	13.7	1.40	2.20	0.70
14.3	0.19	1.59	0.10	13.9	0.10	1.55	0.05	13.9	2.44	2.72	1.22	13.9	1.40	2.20	0.70
14.4	0.19	1.59	0.10	14.1	0.11	1.55	0.06	14.0	2.43	2.71	1.22	14.1	1.40	2.20	0.70
14.6	0.19	1.59	0.10	14.2	0.11	1.55	0.06	14.2	2.43	2.71	1.21	14.2	1.39	2.19	0.70
14.8	0.19	1.59	0.09	14.4	0.11	1.55	0.06	14.4	2.44	2.72	1.22	14.4	1.39	2.19	0.70
14.9	0.19	1.59	0.09	14.6	0.10	1.55	0.05	14.6	2.43	2.71	1.22	14.6	1.39	2.19	0.69
15.1	0.19	1.59	0.09	14.8	0.09	1.55	0.05	14.7	2.45	2.72	1.22	14.8	1.39	2.19	0.69
				14.9	0.09	1.54	0.05	14.9	2.44	2.72	1.22	14.9	1.38	2.19	0.69
				15.1	0.09	1.54	0.05	15.1	2.46	2.73	1.23	15.1	1.38	2.19	0.69

Analysis performed by Cooper Testing Lab

Unconsolidated-Undrained Triaxial Test

ASTM D-2850





Sample Data	1	2	3	4
Moisture %	84.7	71.8	44.6	
Density pcf	44.7	55.2	74.2	
Void Ratio	2.769	2.056	1.272	
Saturation %	82.6	94.3	94.7	
Height in	6.00	6.00	6.00	
Diameter in	2.87	2.87	2.87	
Cell psi	10.4	10.4	10.4	
Strain %	8.70	3.30	10.80	
Deviator, ksf	0.325	0.775	0.199	
Rate %/min	1.00	1.00	1.00	
in/min	0.060	0.060	0.060	
Job No.:	417-012a			
Client:	PTS			
Project:	34339			
Boring:	PNL21	PNL21	PNL28	
Sample:				
Depth ft:	22-24	24-26	15-17	

Visual Soil Description	
Sample #	
1	Brown Mottled Dark Gray CLAY w/Sand Poc
2	Gray CLAY, Saturated With Oil
3	Gray CLAY, Saturated With Oil
4	

Remarks:

PTS Laboratories

Project Navigator
PTS File No: 34339

Sample Properties - Unconsolidated-Undrained Triaxial Test

			Boring	Sample	Depth, ft	Description
Job No.:	417-012a	Sample 1	PNL21		22-24	Brown Mottled Dark Gray CLAY w/Sand Pockets & Oil
Client:	PTS	Sample 2	PNL21		24-26	Gray CLAY, Saturated With Oil
Project:	34339	Sample 3	PNL28		15-17	Gray CLAY, Saturated With Oil
Date:	9/16/2004					
By:	MD/DC					

	Sample #			
	1	2	3	
Boring	PNL21	PNL21	PNL28	
Depth, ft	22-24	24-26	15-17	
Height	6	6	6	
Diameter	2.87	2.87	2.87	
Total Wet Weight	841.5	965.7	1092.9	
Wt of Wet Soil & Dish	466.5	1158.5	441.7	
Wt of Dry Soil & Dish	322.8	756.1	340.5	
Wt. Of Dish	153.1	195.8	113.6	
Moisture %	84.7	71.8	44.6	
Wet Density, pcf	82.6	94.8	107.3	
Dry Density, pcf	44.7	55.2	74.2	
Specific Gravity	2.70	2.70	2.70	
Area	6.47	6.47	6.47	
V ft3	0.0225	0.0225	0.0225	
Vt, cc	636.1	636.1	636.1	
Vs, cc	168.8	208.2	279.9	
Vv, cc	467.3	427.9	356.1	
e	2.77	2.06	1.27	
porosity, %	73.5	67.3	56.0	
S, %	82.6	94.3	94.7	

Remarks:

Analysis performed by Cooper Testing Lab

PTS Laboratories

Project Navigator
PTS File No: 34339

Unconsolidated-Undrained Triaxial Test Readings

		Triaxial Unconsolidated-Undrained Template									
					Load Factor	1	Deviator	If there is a load at zero strain it will be subtracted from all subsequent readings if entered in the first row.			
Calculated Data					Dial Factor	1	Strain				
Data Entry		White	(dial factor for txt file use 1.0, for hand entry in whole numbers use .001)								
SAMPLE-1			SAMPLE-2			SAMPLE-3					
PNL21 22-24ft			PNL21 24-26ft			PNL28 15-17ft					
Sigma 3	10.4	psi	Sigma 3	10.4	psi	Sigma-3:	10.4	psi	Sigma-3:		psi
Height, in	6	Rate in/min	Height, in	6	Rate in/min	Height, in	6	Rate in/min	Height, in	0	Rate in/min
Dia. In.	2.87	0.06	Dia. In.	2.87	0.06	Dia. In.	2.87	0.06	Dia. In.	0	
Area	6.47	0.044925	Area	6.47	0.044925	Area	6.47	0.044925	Area	0.00	0
Strain, In.	Load, lbf	see note	Strain, In.	Load, lbf	see note	Strain, In.	Load, lbf	see note	Strain, In.	Load, lbf	see note
0.0000	2		0.0000	4		0.0000	2				
0.0053	4		0.0050	4		0.0299	5				
0.0053	4		0.0100	4		0.0299	5				
0.0100	4		0.0105	12		0.0299	5				
0.0201	6		0.0208	17		0.0402	5				
0.0301	7		0.0311	21		0.0504	5				
0.0407	8		0.0413	25		0.0605	6				
0.0507	9		0.0516	28		0.0707	6				
0.0614	10		0.0619	30		0.0807	7				
0.0718	11		0.0723	32		0.0912	7				
0.0818	11		0.0826	33		0.1015	7				
0.0921	12		0.0926	35		0.1118	8				
0.1021	12		0.1029	36		0.1224	8				
0.1126	13		0.1133	37		0.1327	8				
0.1226	14		0.1236	38		0.1432	8				
0.1326	14		0.1339	38		0.1538	9				
0.1429	14		0.1439	39		0.1642	9				
0.1531	14		0.1544	39		0.1742	9				
0.1632	15		0.1644	39		0.1845	10				
0.1736	15		0.1749	39		0.1951	10				
0.1838	15		0.1855	39		0.2051	10				
0.1943	15		0.1955	40		0.2152	10				
0.2047	16		0.2055	40		0.2258	10				
0.2151	16		0.2155	39		0.2363	10				
0.2255	16		0.2258	39		0.2467	10				
0.2358	16		0.2358	38		0.2571	10				
0.2461	16		0.2463	37		0.2673	10				
0.2561	16		0.2568	36		0.2774	10				
0.2663	16		0.2671	35		0.2875	10				
0.2767	16		0.2772	35		0.2979	10				
0.2872	17		0.2877	34		0.3082	10				
0.2976	17		0.2979	33		0.3184	10				
0.3079	16		0.3084	33		0.3285	11				
0.3182	17		0.3186	33		0.3388	11				
0.3282	16		0.3291	33		0.3492	11				
0.3382	17		0.3396	32		0.3597	11				
0.3483	17		0.3499	32		0.3701	11				
0.3589	17		0.3600	32		0.3803	11				
0.3695	17		0.3700	32		0.3905	11				
0.3796	17		0.3801	32		0.4010	11				
0.3902	17		0.3902	32		0.4114	11				
0.4007	17		0.4005	33		0.4217	11				
0.4108	17		0.4109	33		0.4317	11				
0.4210	17		0.4215	33		0.4417	11				
0.4311	17		0.4319	32		0.4522	11				
0.4412	17		0.4423	33		0.4622	11				
0.4518	17		0.4527	33		0.4727	11				

Analysis performed by Cooper Testing Lab

PTS Laboratories

Project Navigator
PTS File No: 34339

Unconsolidated-Undrained Triaxial Test Readings

		Triaxial Unconsolidated-Undrained Template									
					Load Factor	1	Deviator	If there is a load at zero strain it will be subtracted from all subsequent readings if entered in the first row.			
Calculated Data					Dial Factor	1	Strain				
Data Entry		White	(dial factor for txt file use 1.0, for hand entry in whole numbers use .001)								
SAMPLE-1			SAMPLE-2			SAMPLE-3					
PNL21 22-24ft			PNL21 24-26ft			PNL28 15-17ft					
Sigma 3	10.4	psi	Sigma 3	10.4	psi	Sigma-3:	10.4	psi	Sigma-3:		psi
Height, in	6	Rate in/min	Height, in	6	Rate in/min	Height, in	6	Rate in/min	Height, in	0	Rate in/min
Dia. In.	2.87	0.06	Dia. In.	2.87	0.06	Dia. In.	2.87	0.06	Dia. In.	0	
Area	6.47	0.044925	Area	6.47	0.044925	Area	6.47	0.044925	Area	0.00	0
Strain, In.	Load, lbf	see note	Strain, In.	Load, lbf	see note	Strain, In.	Load, lbf	see note	Strain, In.	Load, lbf	see note
0.0000	2		0.0000	4		0.0000	2				
0.0053	4		0.0050	4		0.0299	5				
0.0053	4		0.0100	4		0.0299	5				
0.0100	4		0.0105	12		0.0299	5				
0.0201	6		0.0208	17		0.0402	5				
0.0301	7		0.0311	21		0.0504	5				
0.0407	8		0.0413	25		0.0605	6				
0.0507	9		0.0516	28		0.0707	6				
0.0614	10		0.0619	30		0.0807	7				
0.0718	11		0.0723	32		0.0912	7				
0.0818	11		0.0826	33		0.1015	7				
0.0921	12		0.0926	35		0.1118	8				
0.1021	12		0.1029	36		0.1224	8				
0.1126	13		0.1133	37		0.1327	8				
0.1226	14		0.1236	38		0.1432	8				
0.1326	14		0.1339	38		0.1538	9				
0.1429	14		0.1439	39		0.1642	9				
0.1531	14		0.1544	39		0.1742	9				
0.1632	15		0.1644	39		0.1845	10				
0.1736	15		0.1749	39		0.1951	10				
0.1838	15		0.1855	39		0.2051	10				
0.1943	15		0.1955	40		0.2152	10				
0.2047	16		0.2055	40		0.2258	10				
0.2151	16		0.2155	39		0.2363	10				
0.2255	16		0.2258	39		0.2467	10				
0.2358	16		0.2358	38		0.2571	10				
0.2461	16		0.2463	37		0.2673	10				
0.2561	16		0.2568	36		0.2774	10				
0.2663	16		0.2671	35		0.2875	10				
0.2767	16		0.2772	35		0.2979	10				
0.2872	17		0.2877	34		0.3082	10				
0.2976	17		0.2979	33		0.3184	10				
0.3079	16		0.3084	33		0.3285	11				
0.3182	17		0.3186	33		0.3388	11				
0.3282	16		0.3291	33		0.3492	11				
0.3382	17		0.3396	32		0.3597	11				
0.3483	17		0.3499	32		0.3701	11				
0.3589	17		0.3600	32		0.3803	11				
0.3695	17		0.3700	32		0.3905	11				
0.3796	17		0.3801	32		0.4010	11				
0.3902	17		0.3902	32		0.4114	11				
0.4007	17		0.4005	33		0.4217	11				
0.4108	17		0.4109	33		0.4317	11				
0.4210	17		0.4215	33		0.4417	11				
0.4311	17		0.4319	32		0.4522	11				
0.4412	17		0.4423	33		0.4622	11				
0.4518	17		0.4527	33		0.4727	11				

Analysis performed by Cooper Testing Lab

PTS Laboratories

Project Navigator
PTS File No: 34339

Unconsolidated-Undrained Triaxial Test Results

Strain	8.70	P Stress	0.33	Pick Strain	3.30	P. Stress	0.78	Pick Strain	10.80	P. Stress	0.20
Sample 1 PNL21 22-24ft				Sample 2 PNL21 24-26ft				Sample 3 PNL28 15-17ft			
Sigma 3	1.50	ksf		Sigma 3	1.50	ksf		Sigma 3	1.50	ksf	
Strain	Deviator	p, ksf	q, ksf	Strain	Deviator	p, ksf	q, ksf	Strain	Deviator	p, ksf	q, ksf
0.0	0.00	1.50	0	0.0	0	1.50	0	0.0	0.00	1.50	0.00
0.1	0.04	1.52	0.02	0.1	0.00	1.50	0.00	0.5	0.07	1.53	0.03
0.1	0.04	1.52	0.02	0.2	0.00	1.50	0.00	0.5	0.07	1.53	0.03
0.2	0.04	1.52	0.02	0.2	0.18	1.59	0.09	0.5	0.07	1.53	0.03
0.3	0.09	1.54	0.04	0.3	0.29	1.64	0.14	0.7	0.07	1.53	0.03
0.5	0.11	1.55	0.06	0.5	0.38	1.69	0.19	0.8	0.07	1.53	0.03
0.7	0.13	1.56	0.07	0.7	0.46	1.73	0.23	1.0	0.09	1.54	0.04
0.8	0.15	1.57	0.08	0.9	0.53	1.76	0.26	1.2	0.09	1.54	0.04
1.0	0.18	1.59	0.09	1.0	0.57	1.78	0.29	1.3	0.11	1.55	0.05
1.2	0.20	1.60	0.10	1.2	0.62	1.81	0.31	1.5	0.11	1.55	0.05
1.4	0.20	1.60	0.10	1.4	0.64	1.82	0.32	1.7	0.11	1.55	0.05
1.5	0.22	1.61	0.11	1.5	0.68	1.84	0.34	1.9	0.13	1.56	0.07
1.7	0.22	1.61	0.11	1.7	0.70	1.85	0.35	2.0	0.13	1.56	0.07
1.9	0.24	1.62	0.12	1.9	0.72	1.86	0.36	2.2	0.13	1.56	0.07
2.0	0.26	1.63	0.13	2.1	0.74	1.87	0.37	2.4	0.13	1.56	0.07
2.2	0.26	1.63	0.13	2.2	0.74	1.87	0.37	2.6	0.15	1.57	0.08
2.4	0.26	1.63	0.13	2.4	0.76	1.88	0.38	2.7	0.15	1.57	0.08
2.6	0.26	1.63	0.13	2.6	0.76	1.88	0.38	2.9	0.15	1.57	0.08
2.7	0.28	1.64	0.14	2.7	0.76	1.88	0.38	3.1	0.17	1.58	0.09
2.9	0.28	1.64	0.14	2.9	0.76	1.88	0.38	3.3	0.17	1.58	0.09
3.1	0.28	1.64	0.14	3.1	0.75	1.88	0.38	3.4	0.17	1.58	0.09
3.2	0.28	1.64	0.14	3.3	0.78	1.89	0.39	3.6	0.17	1.58	0.09
3.4	0.30	1.65	0.15	3.4	0.77	1.88	0.39	3.8	0.17	1.58	0.09
3.6	0.30	1.65	0.15	3.6	0.75	1.87	0.38	3.9	0.17	1.58	0.09
3.8	0.30	1.65	0.15	3.8	0.75	1.87	0.37	4.1	0.17	1.58	0.09
3.9	0.30	1.65	0.15	3.9	0.73	1.86	0.36	4.3	0.17	1.58	0.09
4.1	0.30	1.65	0.15	4.1	0.70	1.85	0.35	4.5	0.17	1.58	0.09
4.3	0.30	1.65	0.15	4.3	0.68	1.84	0.34	4.6	0.17	1.58	0.08
4.4	0.30	1.65	0.15	4.5	0.66	1.83	0.33	4.8	0.17	1.58	0.08
4.6	0.30	1.65	0.15	4.6	0.66	1.83	0.33	5.0	0.17	1.58	0.08
4.8	0.32	1.66	0.16	4.8	0.64	1.82	0.32	5.1	0.17	1.58	0.08
5.0	0.32	1.66	0.16	5.0	0.61	1.80	0.31	5.3	0.17	1.58	0.08
5.1	0.30	1.65	0.15	5.1	0.61	1.80	0.31	5.5	0.19	1.59	0.09
5.3	0.32	1.66	0.16	5.3	0.61	1.80	0.31	5.6	0.19	1.59	0.09
5.5	0.29	1.64	0.15	5.5	0.61	1.80	0.31	5.8	0.19	1.59	0.09
5.6	0.32	1.66	0.16	5.7	0.59	1.79	0.29	6.0	0.19	1.59	0.09
5.8	0.31	1.65	0.16	5.8	0.59	1.79	0.29	6.2	0.19	1.59	0.09
6.0	0.31	1.65	0.16	6.0	0.59	1.79	0.29	6.3	0.19	1.59	0.09
6.2	0.31	1.65	0.16	6.2	0.58	1.79	0.29	6.5	0.19	1.59	0.09
6.3	0.31	1.65	0.16	6.3	0.58	1.79	0.29	6.7	0.19	1.59	0.09

Analysis performed by Cooper Testing Lab

PTS Laboratories

Project Navigator
PTS File No: 34339

Unconsolidated-Undrained Triaxial Test Results

Strain	8.70	P Stress	0.33	Pick Strain	3.30	P. Stress	0.78	Pick Strain	10.80	P. Stress	0.20
Sample 1 PNL21 22-24ft				Sample 2 PNL21 24-26ft				Sample 3 PNL28 15-17ft			
Sigma 3	1.50	ksf		Sigma 3	1.50	ksf		Sigma 3	1.50	ksf	
Strain	Deviator	p, ksf	q, ksf	Strain	Deviator	p, ksf	q, ksf	Strain	Deviator	p, ksf	q, ksf
6.5	0.31	1.65	0.16	6.5	0.58	1.79	0.29	6.9	0.19	1.59	0.09
6.7	0.31	1.65	0.16	6.7	0.60	1.80	0.30	7.0	0.19	1.59	0.09
6.8	0.31	1.65	0.16	6.8	0.60	1.80	0.30	7.2	0.19	1.59	0.09
7.0	0.31	1.65	0.16	7.0	0.60	1.80	0.30	7.4	0.19	1.59	0.09
7.2	0.31	1.65	0.15	7.2	0.58	1.79	0.29	7.5	0.19	1.59	0.09
7.4	0.31	1.65	0.15	7.4	0.60	1.80	0.30	7.7	0.18	1.59	0.09
7.5	0.31	1.65	0.15	7.5	0.60	1.80	0.30	7.9	0.18	1.59	0.09
7.7	0.31	1.65	0.15	7.7	0.60	1.80	0.30	8.1	0.18	1.59	0.09
7.9	0.31	1.65	0.15	7.9	0.59	1.79	0.30	8.2	0.18	1.59	0.09
8.0	0.31	1.65	0.15	8.1	0.59	1.79	0.30	8.4	0.18	1.59	0.09
8.2	0.31	1.65	0.15	8.2	0.59	1.79	0.30	8.6	0.18	1.59	0.09
8.4	0.31	1.65	0.15	8.4	0.59	1.79	0.30	8.7	0.18	1.59	0.09
8.6	0.31	1.65	0.15	8.6	0.61	1.80	0.31	8.9	0.18	1.59	0.09
8.7	0.33	1.66	0.16	8.7	0.61	1.80	0.30	9.1	0.18	1.59	0.09
8.9	0.30	1.65	0.15	8.9	0.61	1.80	0.30	9.3	0.18	1.59	0.09
9.1	0.30	1.65	0.15	9.1	0.61	1.80	0.30	9.4	0.18	1.59	0.09
9.2	0.32	1.66	0.16	9.3	0.61	1.80	0.30	9.6	0.18	1.59	0.09
9.4	0.32	1.66	0.16	9.4	0.60	1.80	0.30	9.8	0.18	1.59	0.09
9.6	0.30	1.65	0.15	9.6	0.62	1.81	0.31	9.9	0.18	1.59	0.09
9.8	0.32	1.66	0.16	9.8	0.62	1.81	0.31	10.1	0.18	1.59	0.09
9.9	0.30	1.65	0.15					10.3	0.18	1.59	0.09
10.1	0.32	1.66	0.16					10.5	0.18	1.59	0.09
10.3	0.30	1.65	0.15					10.6	0.18	1.59	0.09
10.4	0.32	1.66	0.16					10.8	0.20	1.60	0.10
10.6	0.32	1.66	0.16					11.0	0.18	1.59	0.09
10.8	0.30	1.65	0.15					11.2	0.20	1.60	0.10
11.0	0.32	1.66	0.16					11.3	0.18	1.59	0.09
11.1	0.32	1.66	0.16					11.5	0.18	1.59	0.09
11.3	0.30	1.65	0.15					11.7	0.20	1.60	0.10
11.5	0.30	1.65	0.15					11.9	0.20	1.60	0.10
11.6	0.31	1.65	0.16					12.0	0.20	1.60	0.10
11.8	0.31	1.65	0.16					12.2	0.18	1.59	0.09
12.0	0.29	1.64	0.15					12.4	0.20	1.60	0.10
12.1	0.31	1.65	0.16					12.5	0.19	1.59	0.10
12.3	0.29	1.64	0.15					12.7	0.19	1.59	0.10
12.5	0.31	1.65	0.16					12.9	0.19	1.59	0.10
12.7	0.29	1.64	0.15					13.1	0.19	1.59	0.10
12.8	0.31	1.65	0.16					13.2	0.19	1.59	0.10
13.0	0.31	1.65	0.15					13.4	0.19	1.59	0.10
13.2	0.29	1.64	0.14					13.6	0.19	1.59	0.10

Analysis performed by Cooper Testing Lab

PTS Laboratories

Project Navigator
PTS File No: 34339

Unconsolidated-Undrained Triaxial Test Results

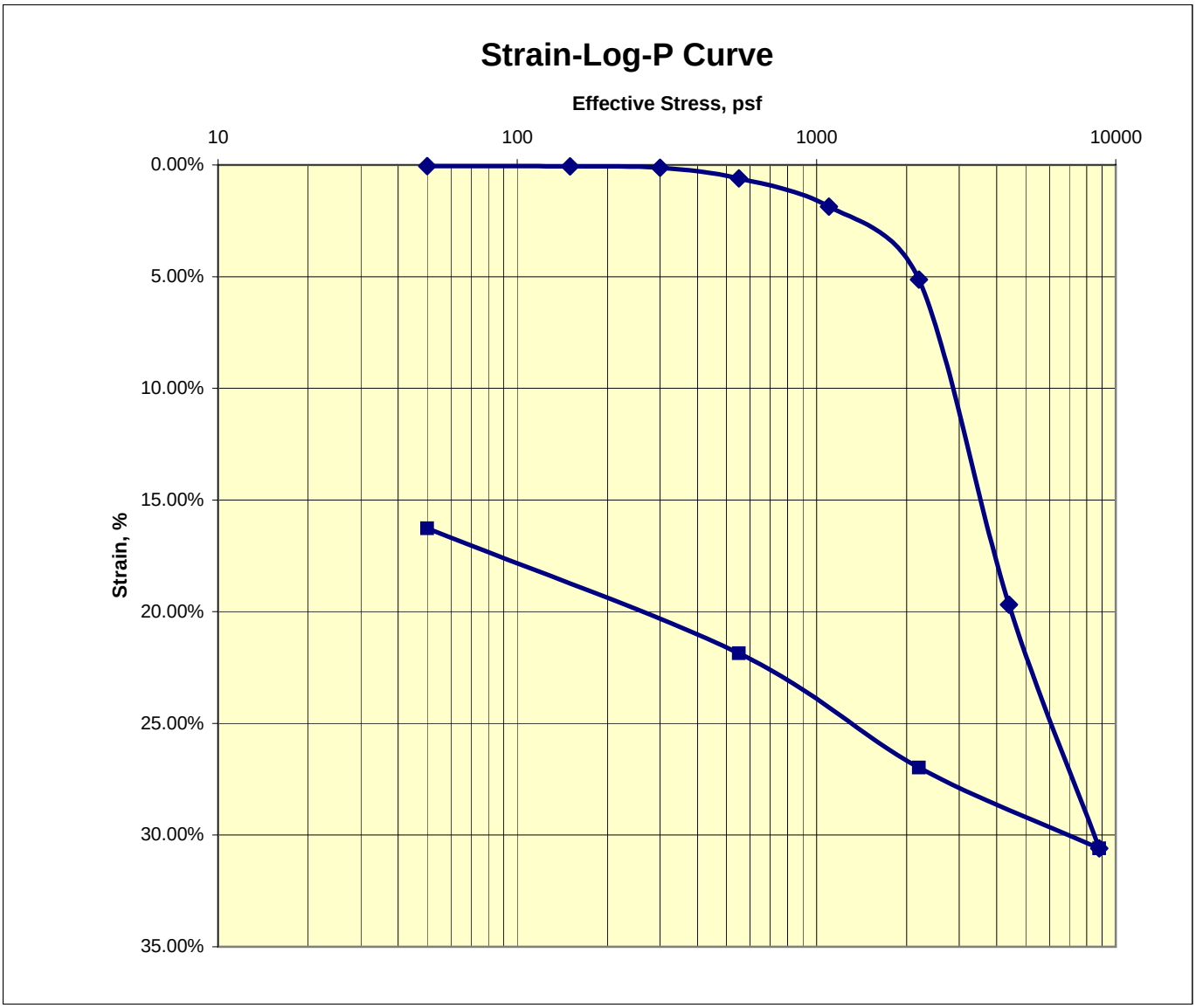
Strain	8.70	P Stress	0.33	Pick Strain	3.30	P. Stress	0.78	Pick Strain	10.80	P. Stress	0.20
Sample 1 PNL21 22-24ft				Sample 2 PNL21 24-26ft				Sample 3 PNL28 15-17ft			
Sigma 3	1.50	ksf		Sigma 3	1.50	ksf		Sigma 3	1.50	ksf	
Strain	Deviator	p, ksf	q, ksf	Strain	Deviator	p, ksf	q, ksf	Strain	Deviator	p, ksf	q, ksf
13.3	0.31	1.65	0.15					13.7	0.19	1.59	0.10
13.5	0.29	1.64	0.14					13.9	0.19	1.59	0.10
13.7	0.29	1.64	0.14					14.1	0.19	1.59	0.10
13.9	0.31	1.65	0.15					14.3	0.19	1.59	0.10
14.0	0.31	1.65	0.15					14.4	0.19	1.59	0.10
14.2	0.31	1.65	0.15					14.6	0.19	1.59	0.10
14.4	0.29	1.64	0.14					14.8	0.19	1.59	0.09
14.5	0.29	1.64	0.14					14.9	0.19	1.59	0.09
14.7	0.30	1.65	0.15					15.1	0.19	1.59	0.09

Analysis performed by Cooper Testing Lab

Consolidation Test

ASTM D2435

Job No.:	417-012f	**Boring:**		**Run By:**	MD
Client:	PTS	**Sample:**	PNL-21-24-26	**Reduced:**	DC
Project:	Ascon Landfill Site - 34339	**Depth, ft.:**		**Checked:**	DC
Soil Type:	Gray CLAY with oil			**Date:**	9/2/2004



Ass. Gs = 2.7	Initial	Final
Moisture %:	92.2	75.4
Density, pcf:	46.9	55.5
Void Ratio:	2.596	2.035
% Saturation:	95.9	100

Remarks:

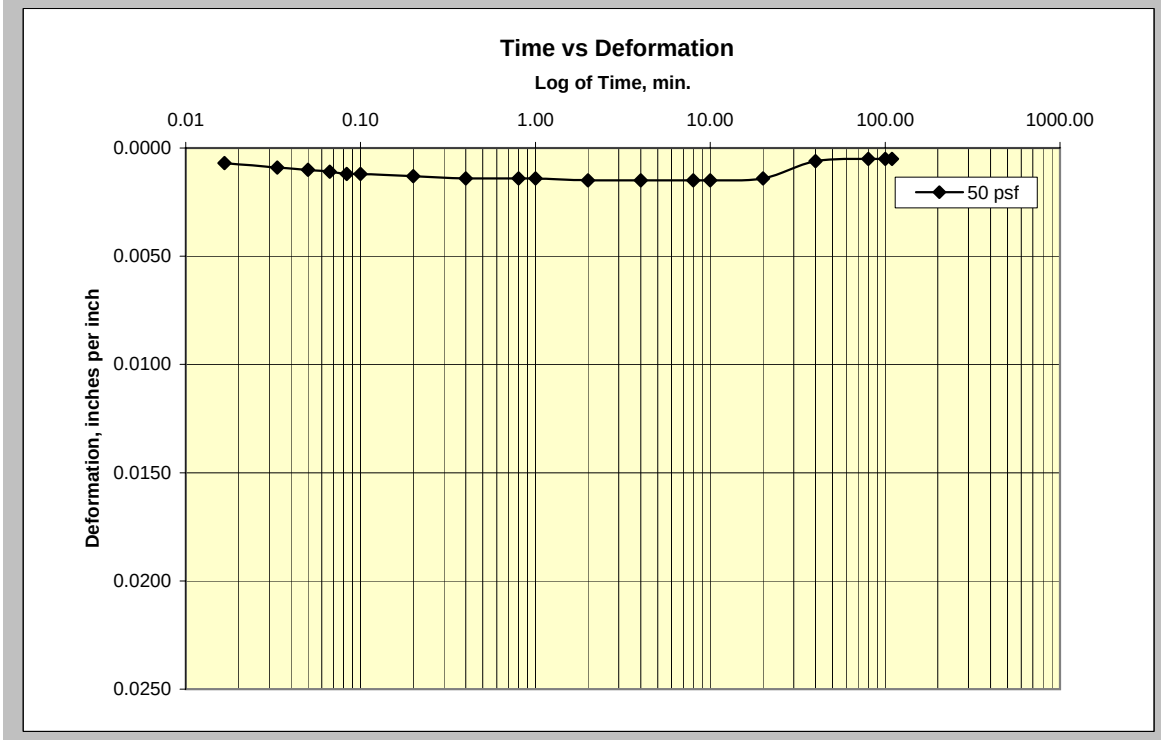
PTS Laboratories

Project Navigator
PTS File No: 34339

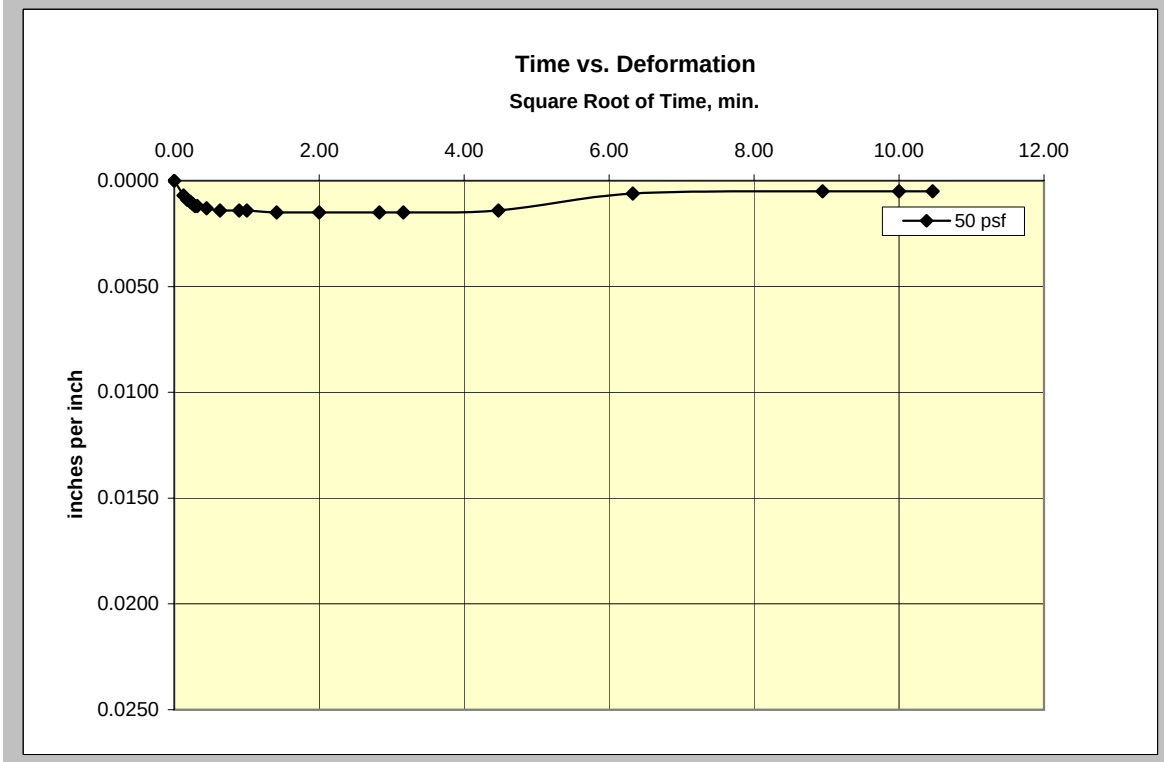
Sample ID: PNL-21-24-26

Load 1

50 PSF



50 PSF



Analysis performed by CTL

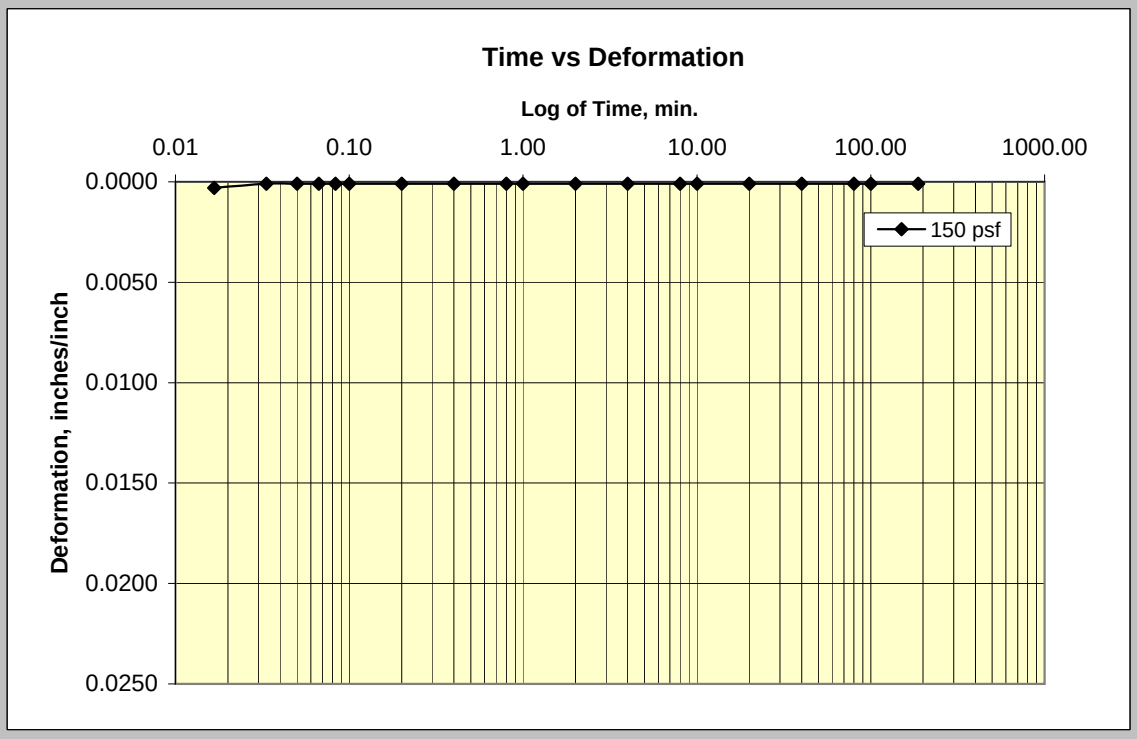
PTS Laboratories

Project Navigator
PTS File No: 34339

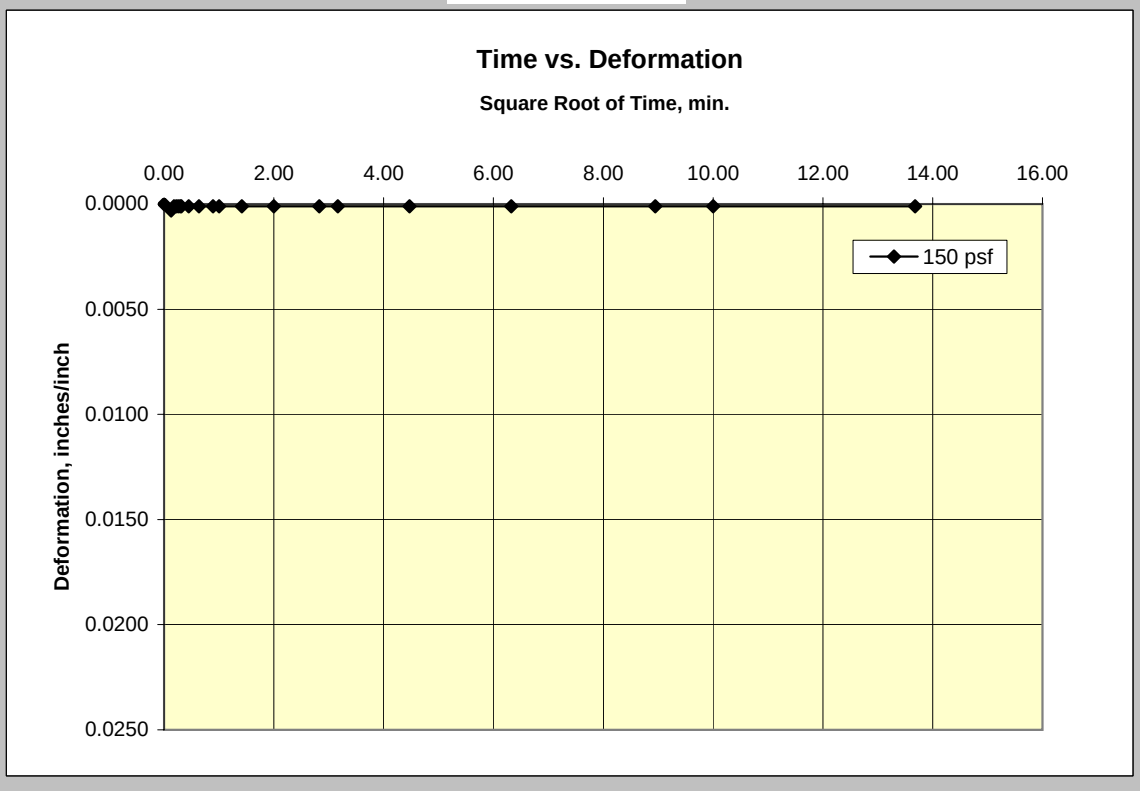
Sample ID: PNL-21-24-26

Load 2

150 PSF



150 PSF



Analysis performed by CTL

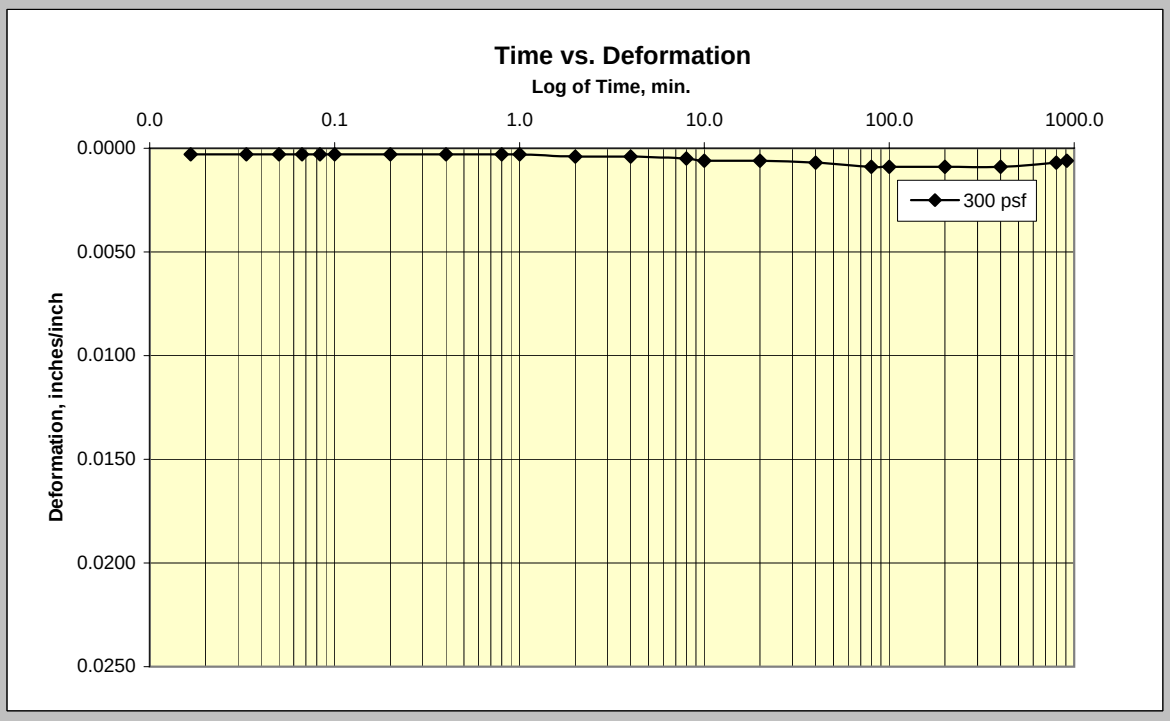
PTS Laboratories

Project Navigator
PTS File No: 34339

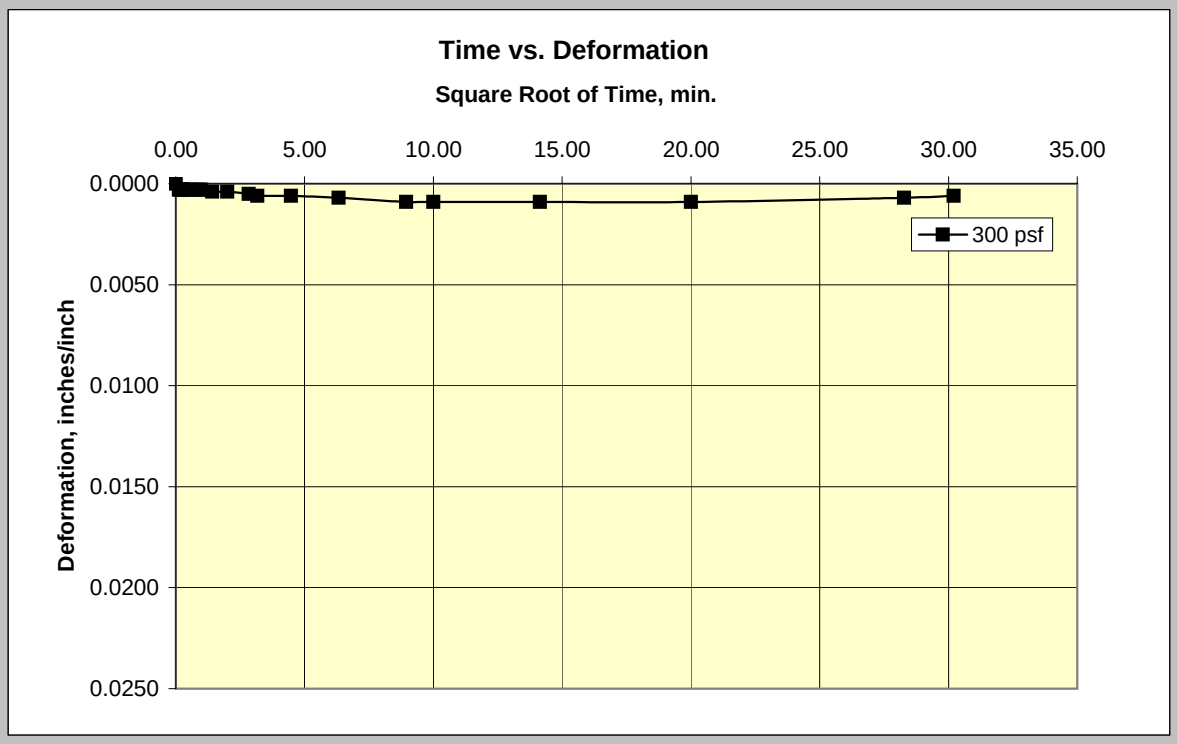
Sample ID: PNL-21-24-26

Load 3

300 PSF



300 PSF



Analysis performed by CTL

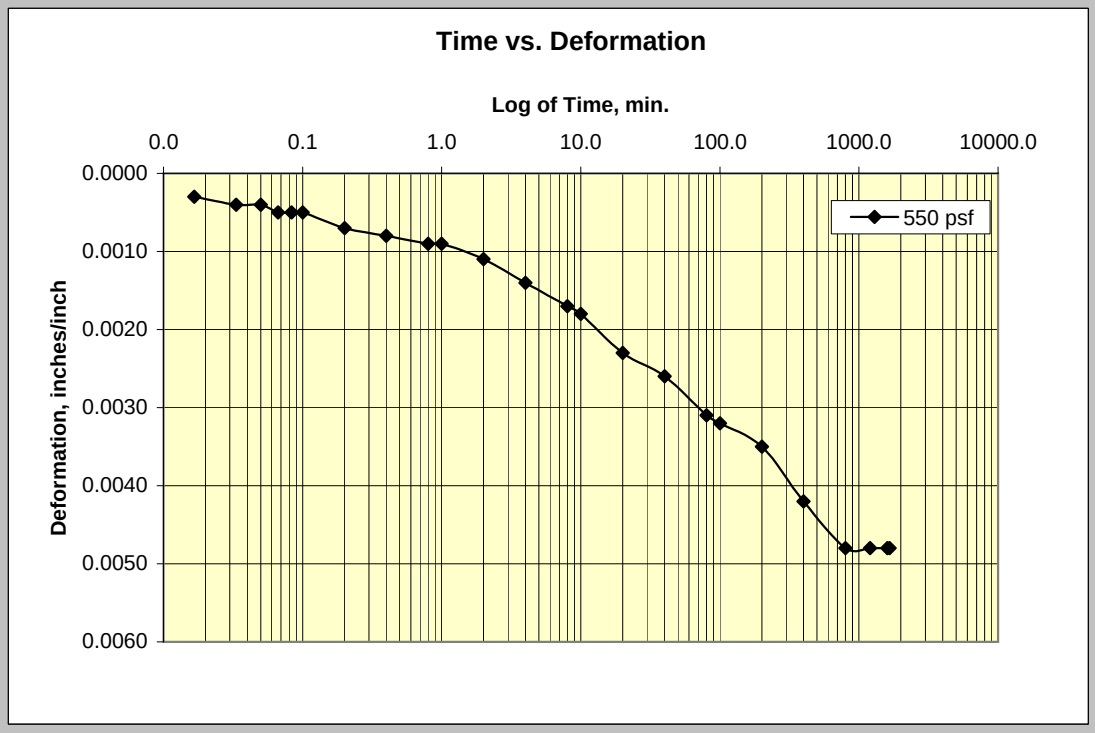
PTS Laboratories

Project Navigator
PTS File No: 34339

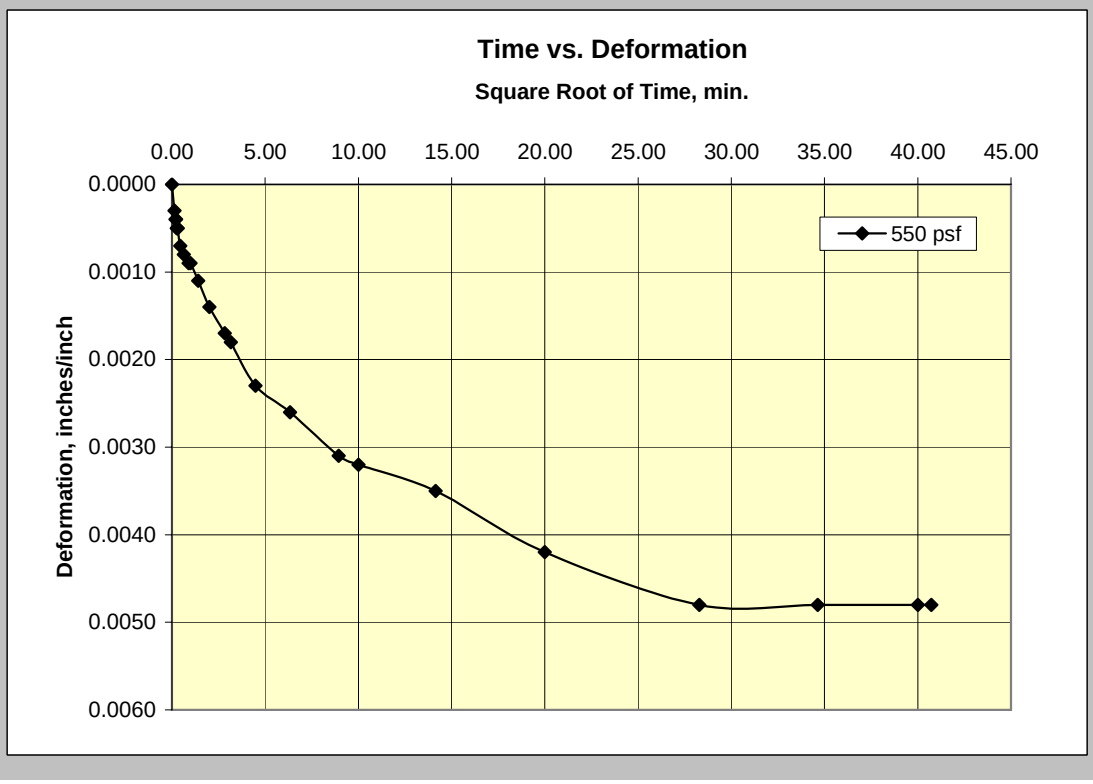
Sample ID: PNL-21-24-26

Load 4

550 PSF



550 PSF



Analysis performed by CTL

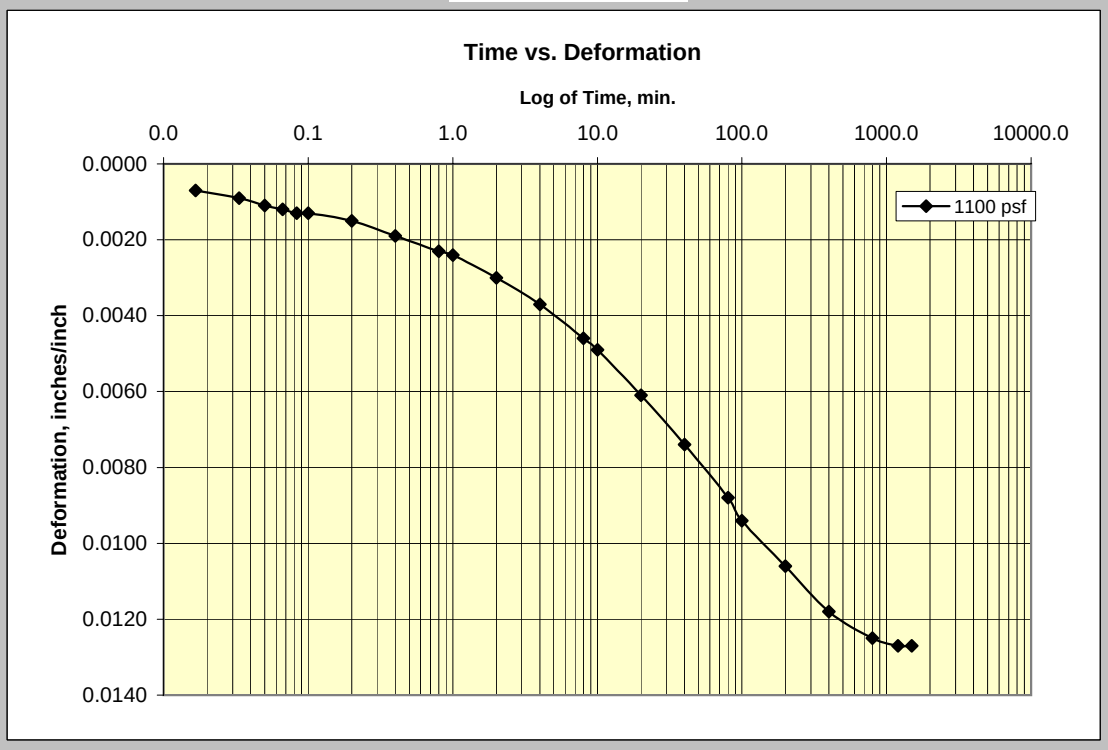
PTS Laboratories

Project Navigator
PTS File No: 34339

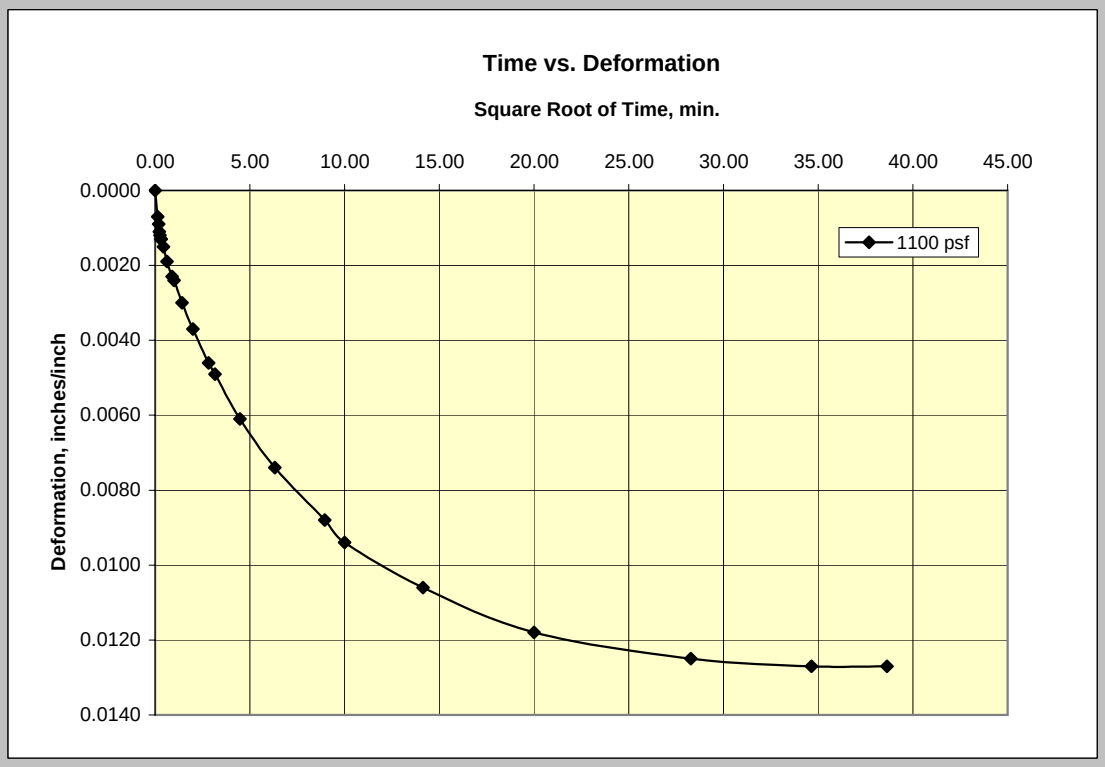
Sample ID: PNL-21-24-26

Load 5

1100 PSF



1100 PSF



Analysis performed by CTL

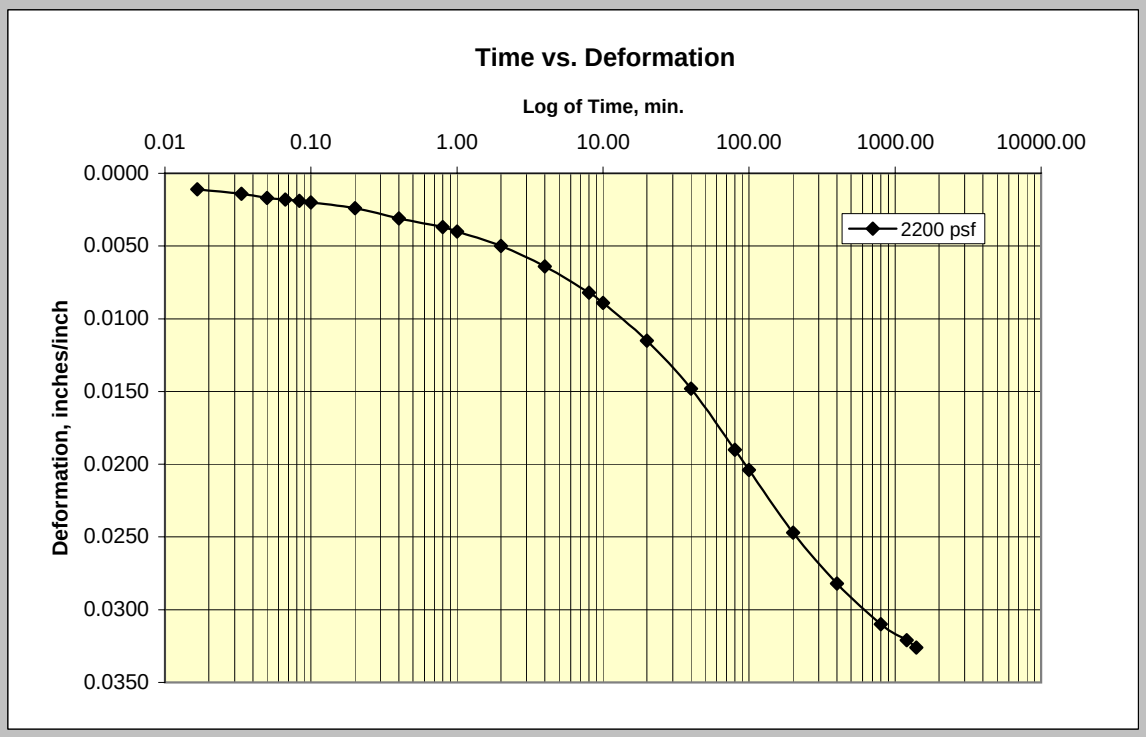
PTS Laboratories

Project Navigator
PTS File No: 34339

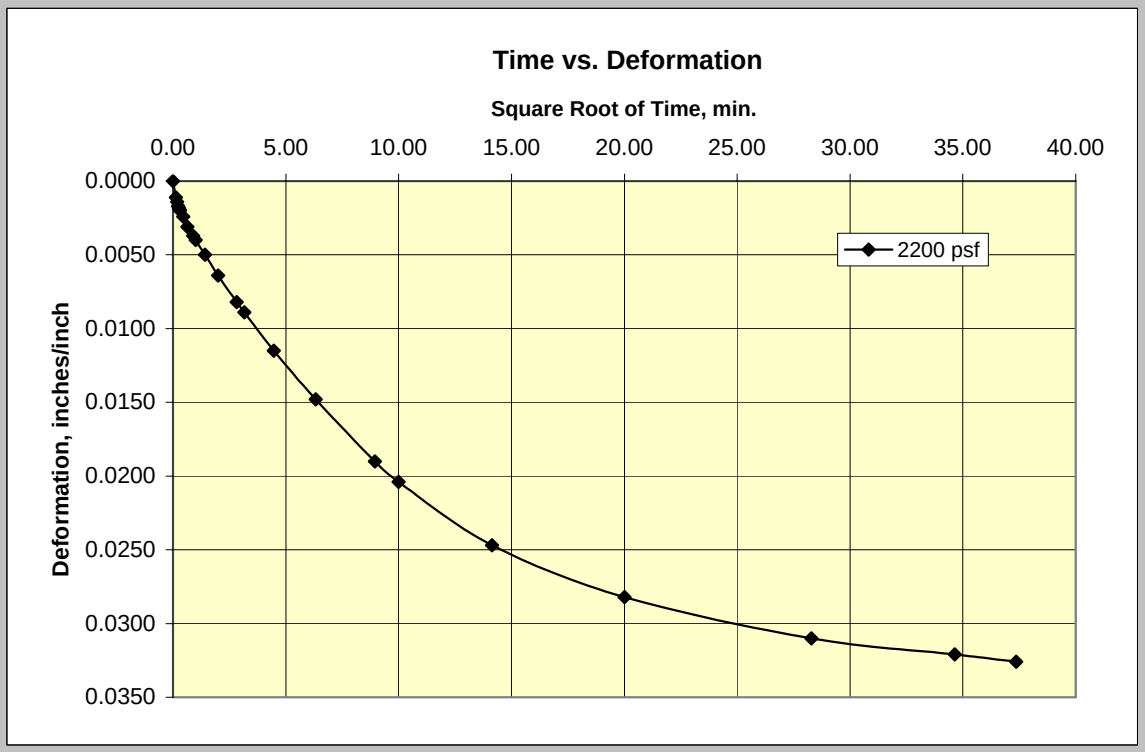
Sample ID: PNL-21-24-26

Load 6

2200 PSF



2200 PSF



Analysis performed by CTL

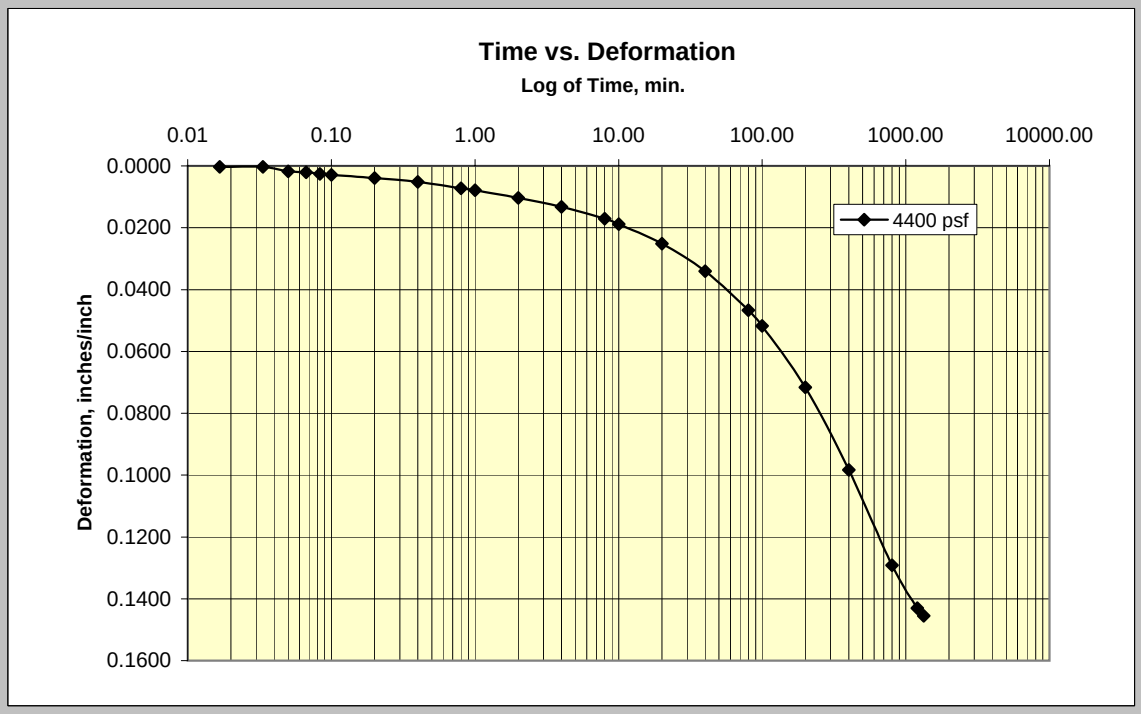
PTS Laboratories

Project Navigator
PTS File No: 34339

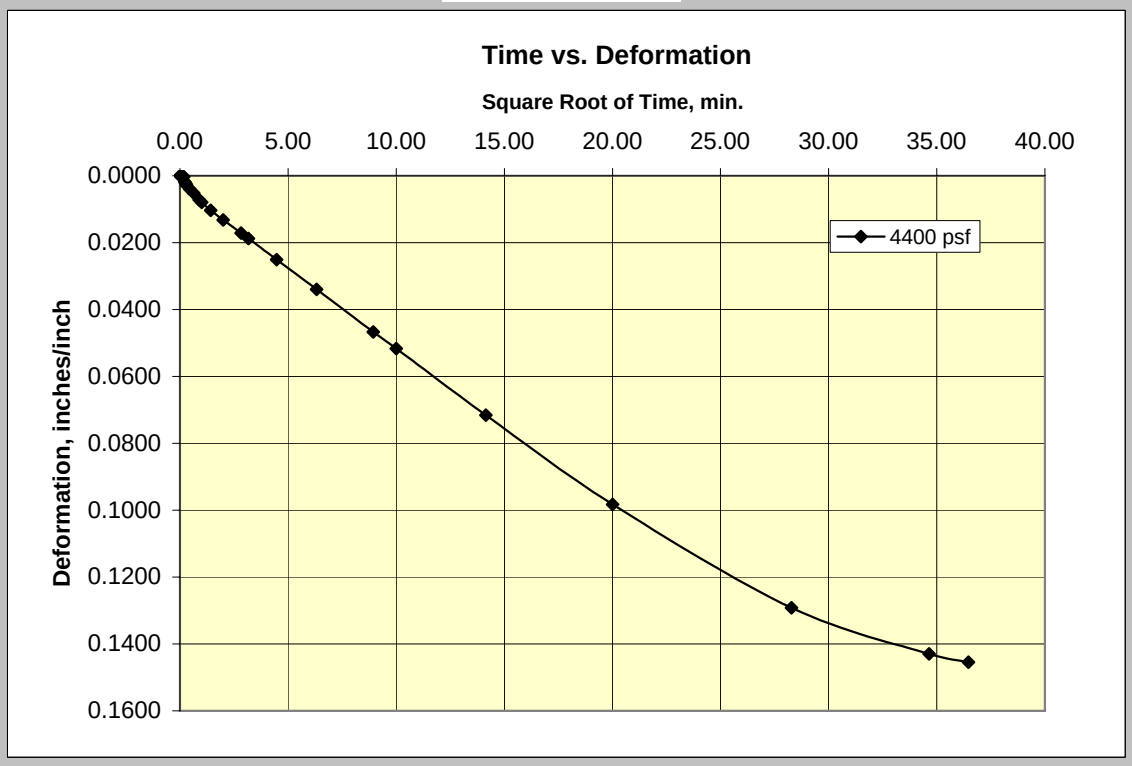
Sample ID: PNL-21-24-26

Load 7

4400 PSF



4400 PSF



Analysis performed by CTL

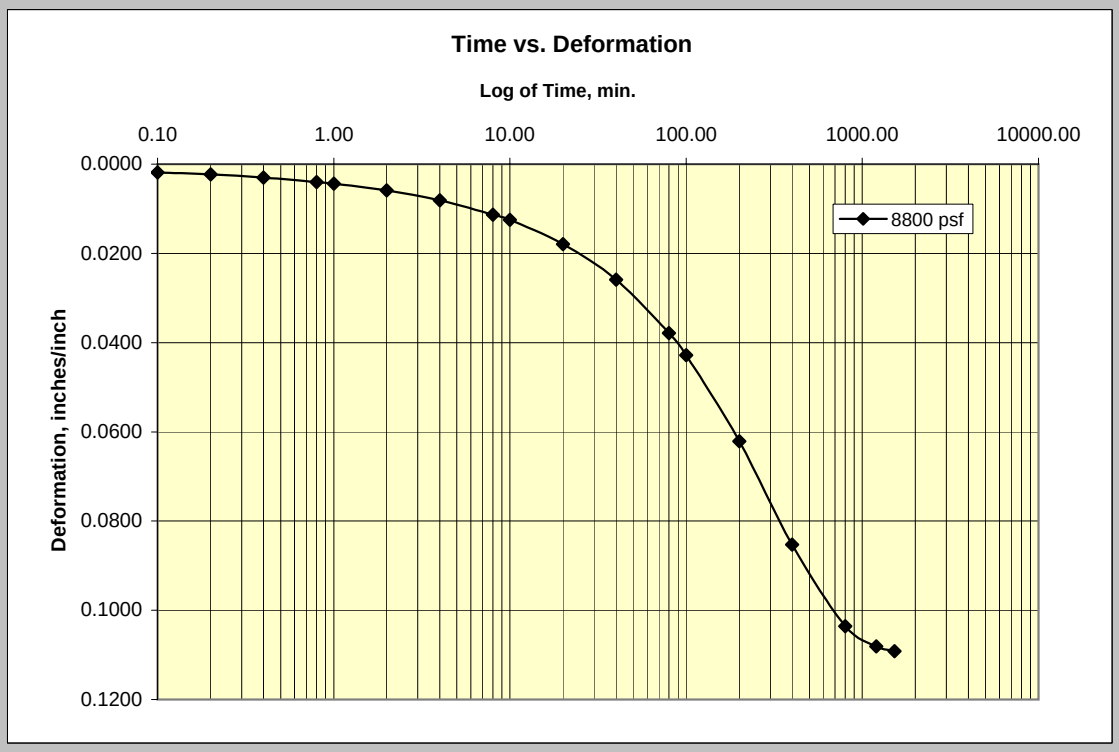
PTS Laboratories

Project Navigator
PTS File No: 34339

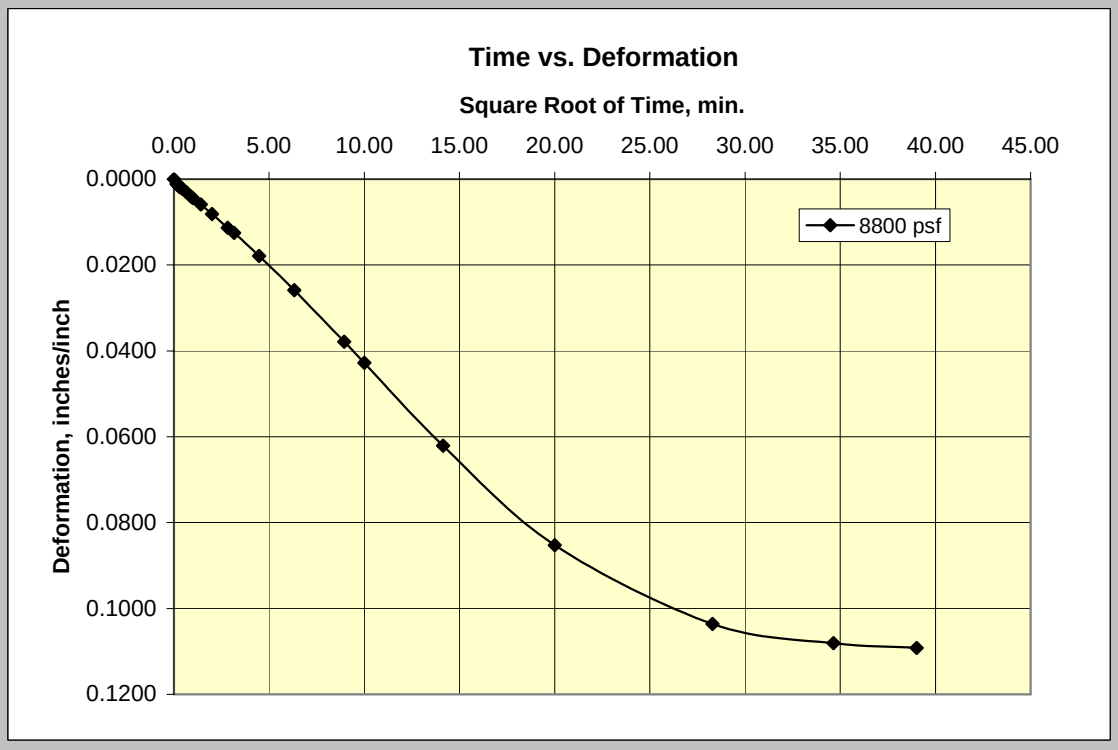
Sample ID: PNL-21-24-26

Load 8

8800 PSF



8800 PSF

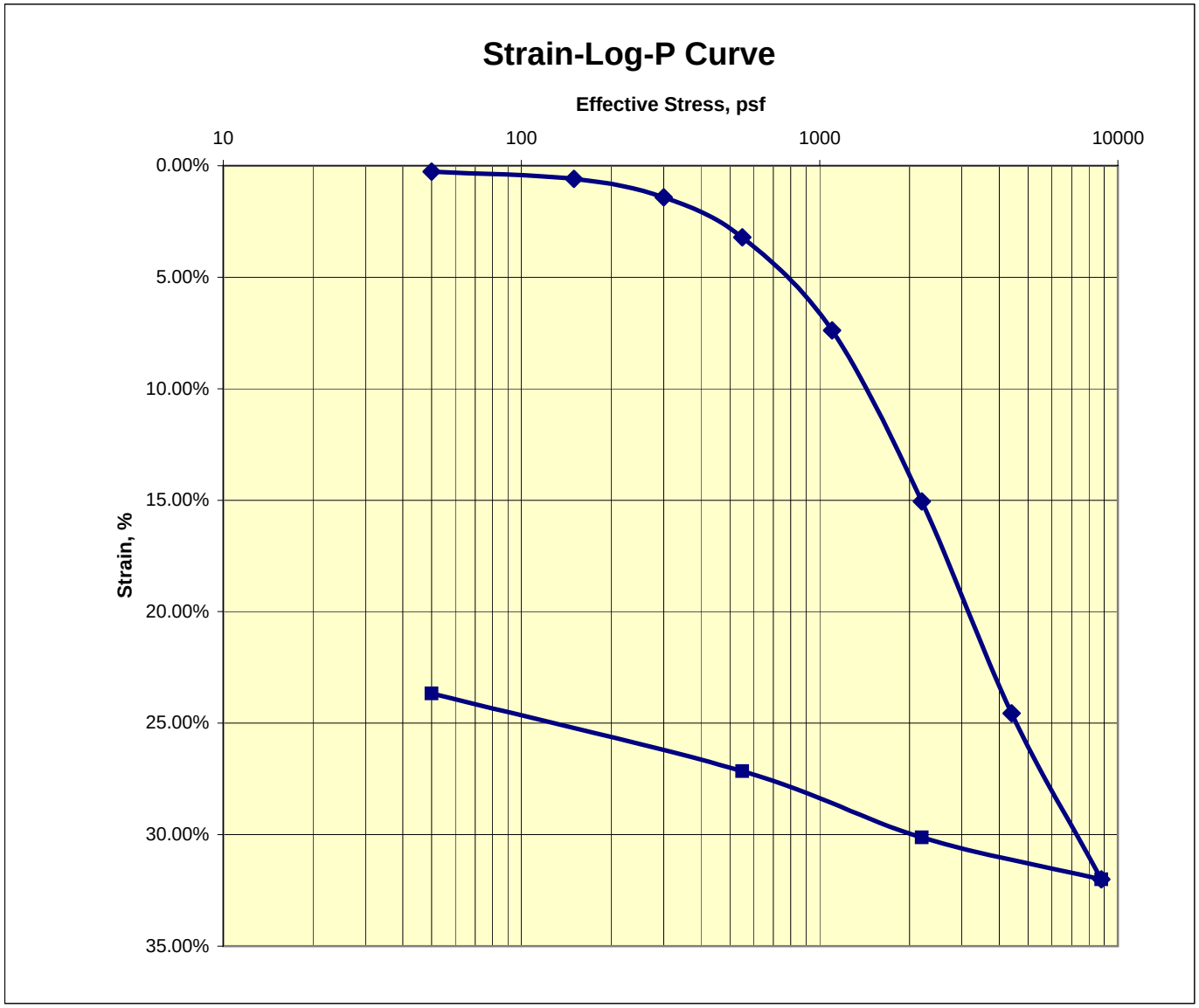


Analysis performed by CTL

Consolidation Test

ASTM D2435

Job No.:	417-012e	**Boring:**		**Run By:**	MD
Client:	PTS Laboratories	**Sample:**	PNL-21-22-24	**Reduced:**	DC
Project:	Ascon Landfill Site - 34339	**Depth, ft.:**		**Checked:**	DC
Soil Type:	Brown Mottled Dark Gray CLAY, trace Sandy pockets and oil			**Date:**	8/29/2004



Ass. Gs = 2.7	Initial	Final
Moisture %:	75.0	51.9
Density, pcf:	51.3	70.3
Void Ratio:	2.288	1.398
% Saturation:	88.5	100

Remarks:

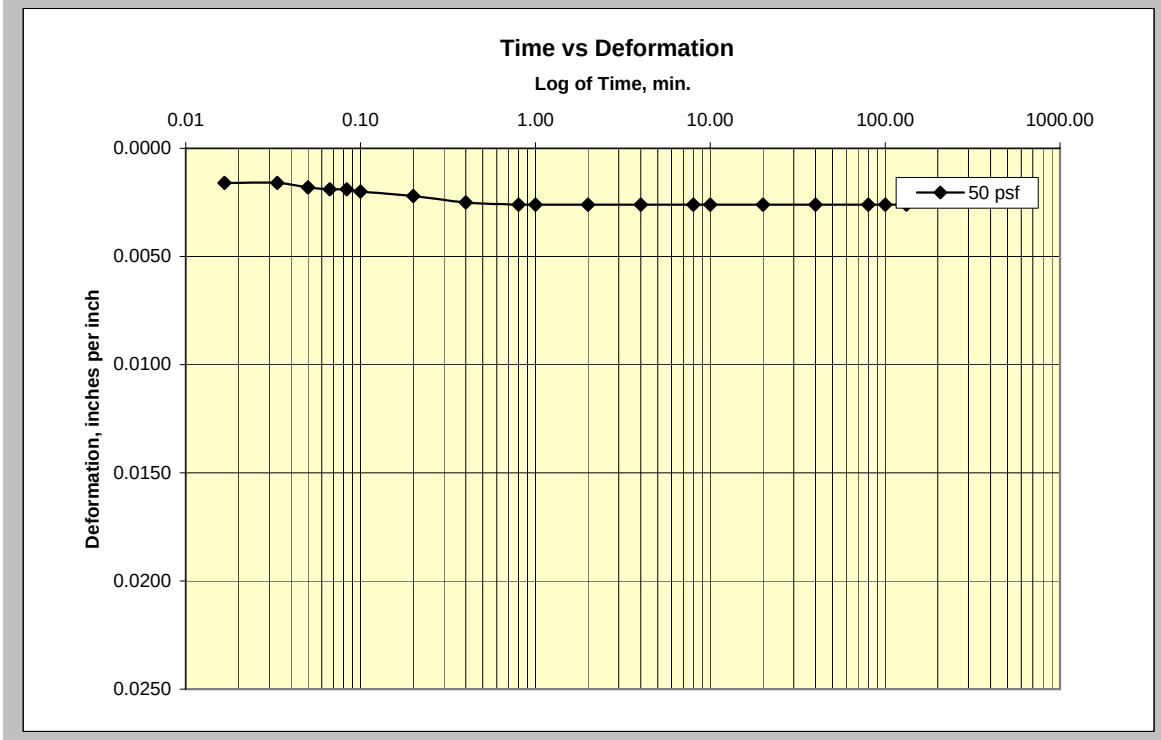
PTS Laboratories

Project Navigator
PTS File No: 34339

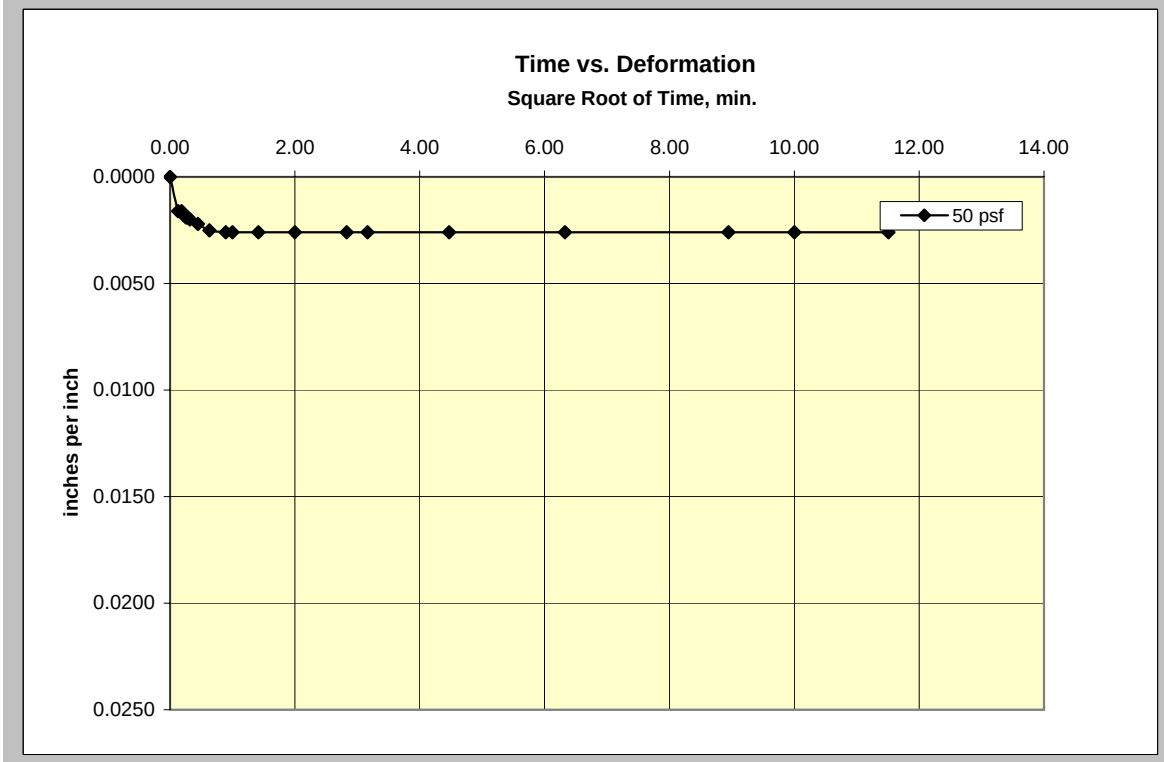
Sample ID: PNL-21-22-24

Load 1

50 PSF



50 PSF



Analysis performed by CTL

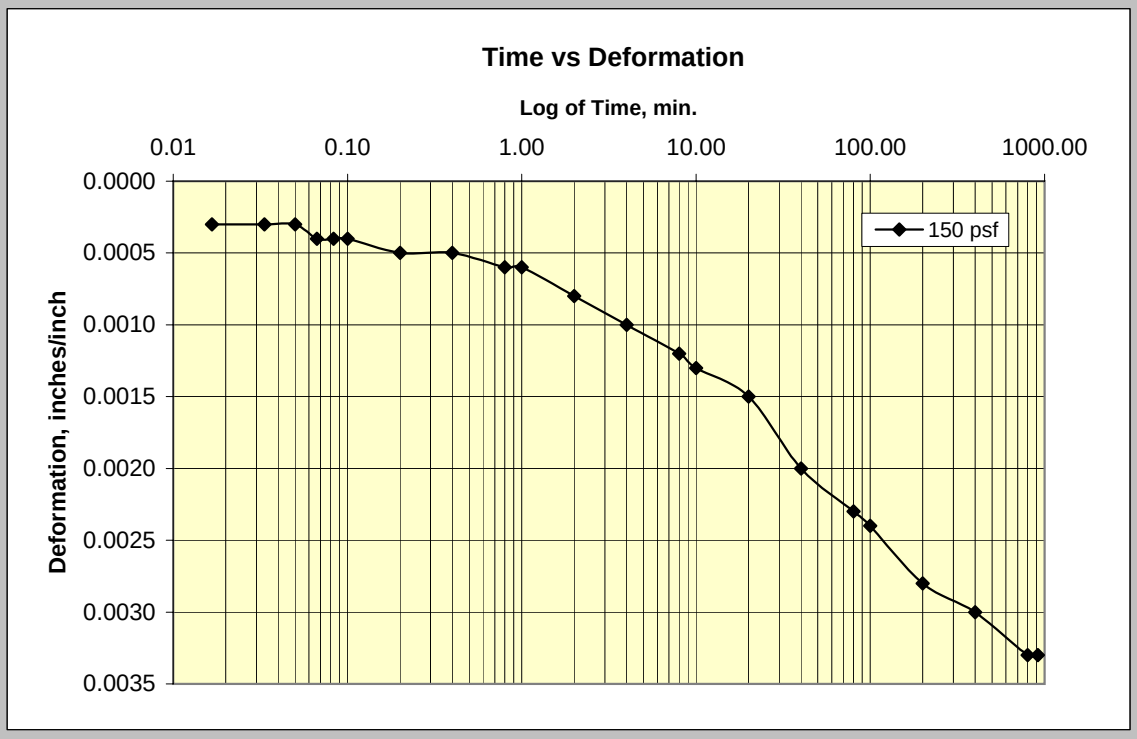
PTS Laboratories

Project Navigator
PTS File No: 34339

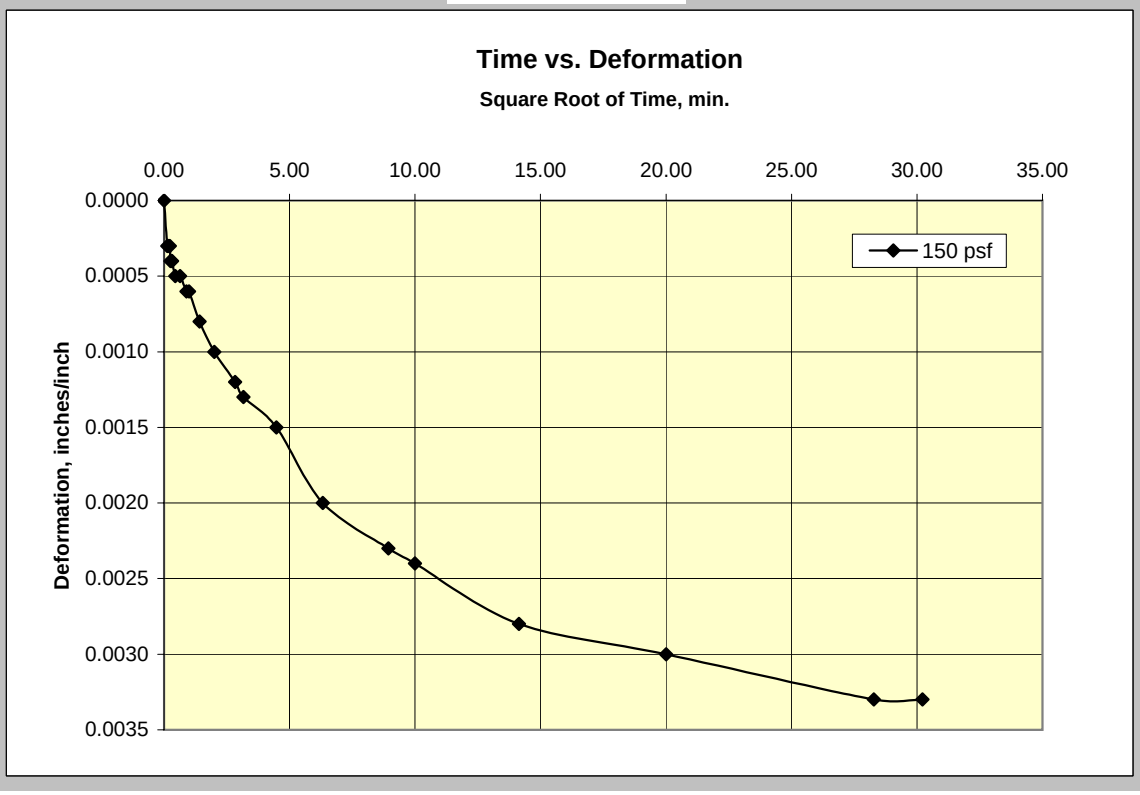
Sample ID: PNL-21-22-24

Load 2

150 PSF



150 PSF



Analysis performed by CTL

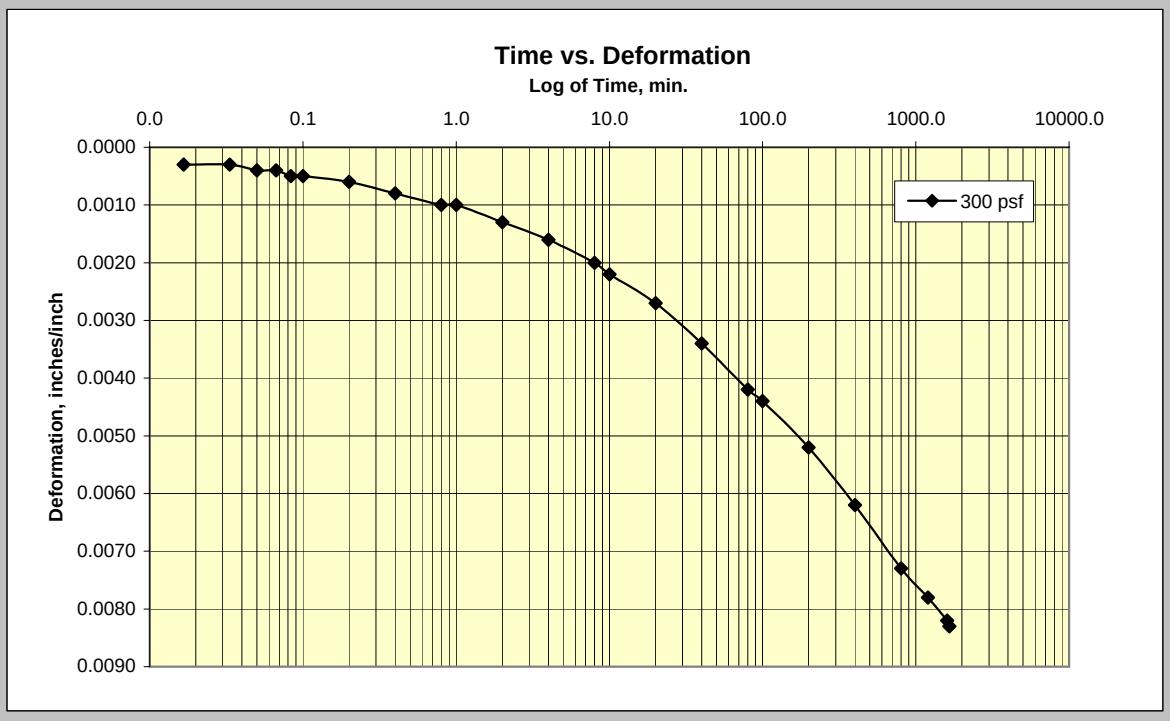
PTS Laboratories

Project Navigator
PTS File No: 34339

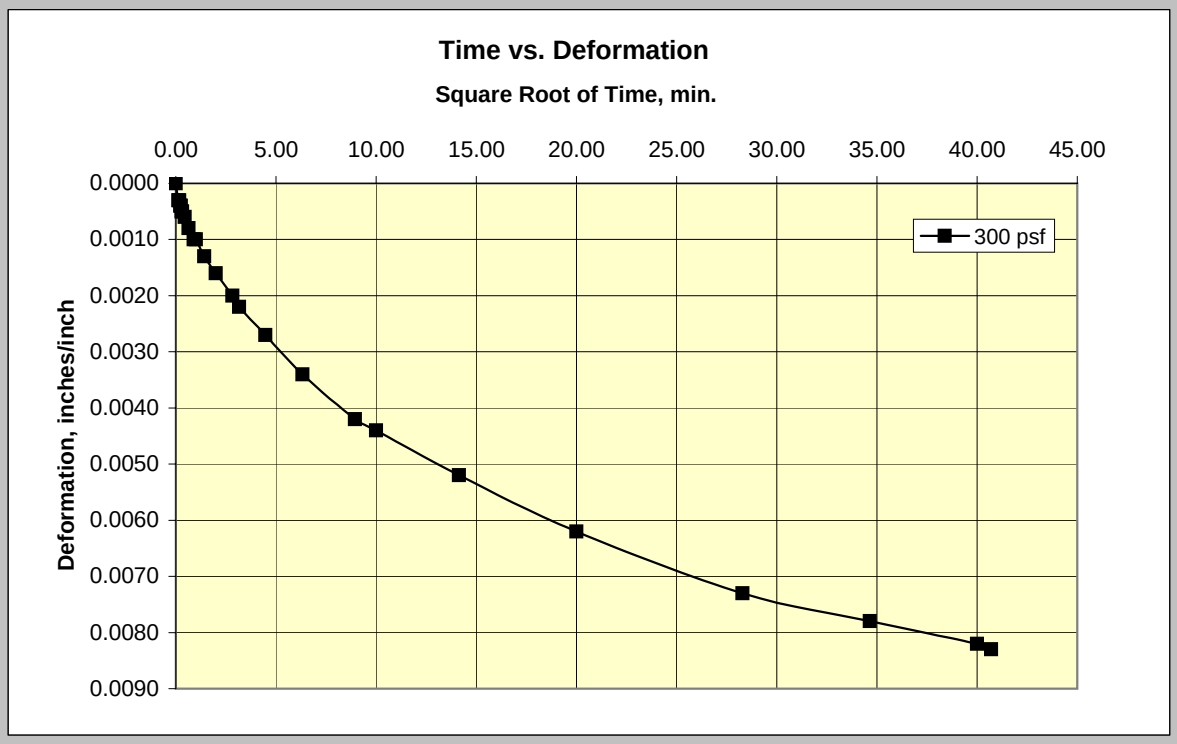
Sample ID: PNL-21-22-24

Load 3

300 PSF



300 PSF



Analysis performed by CTL

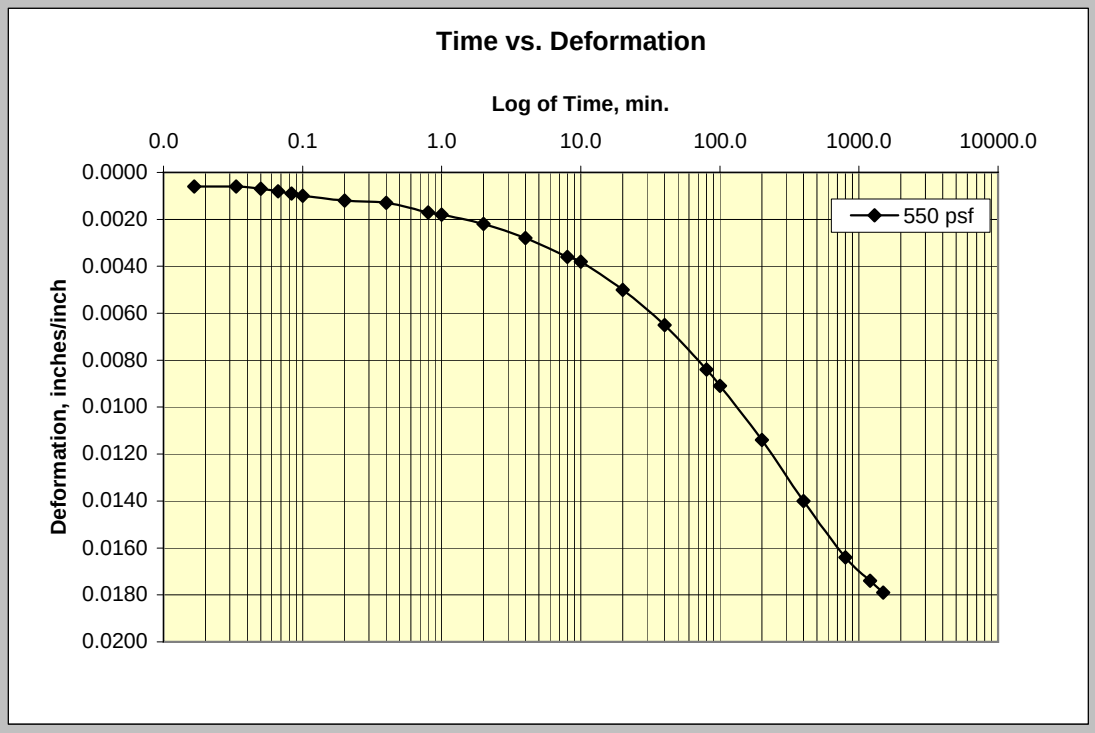
PTS Laboratories

Project Navigator
PTS File No: 34339

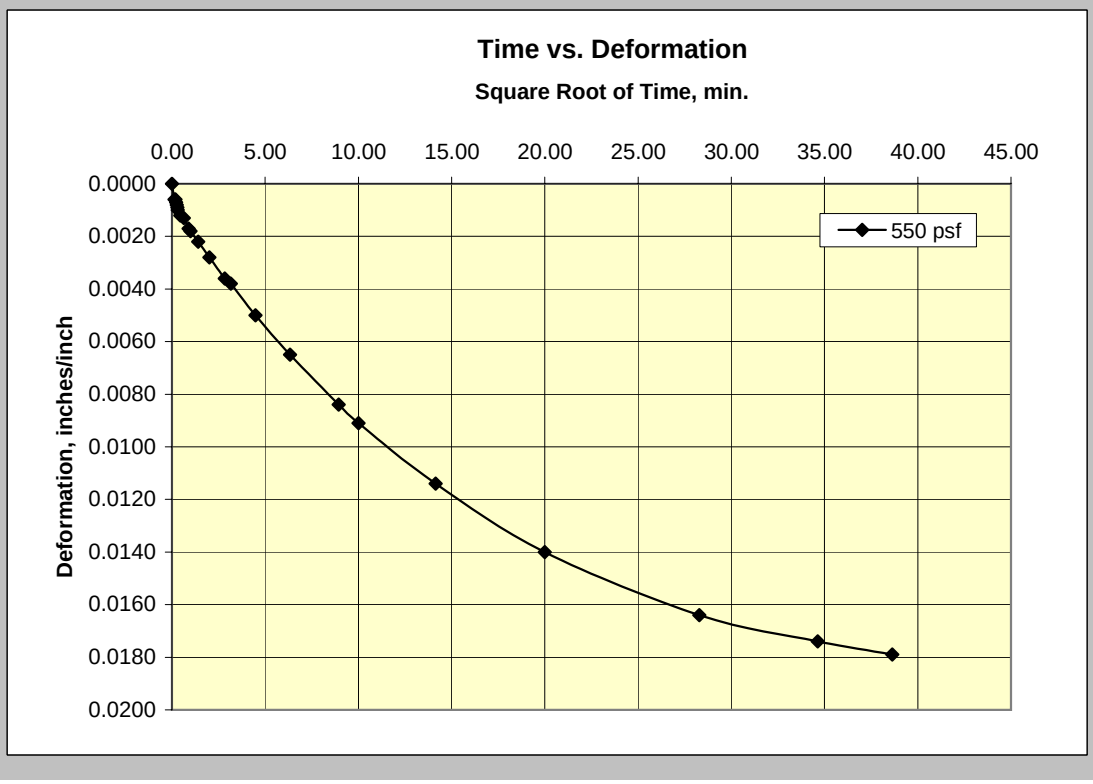
Sample ID: PNL-21-22-24

Load 4

550 PSF



550 PSF



Analysis performed by CTL

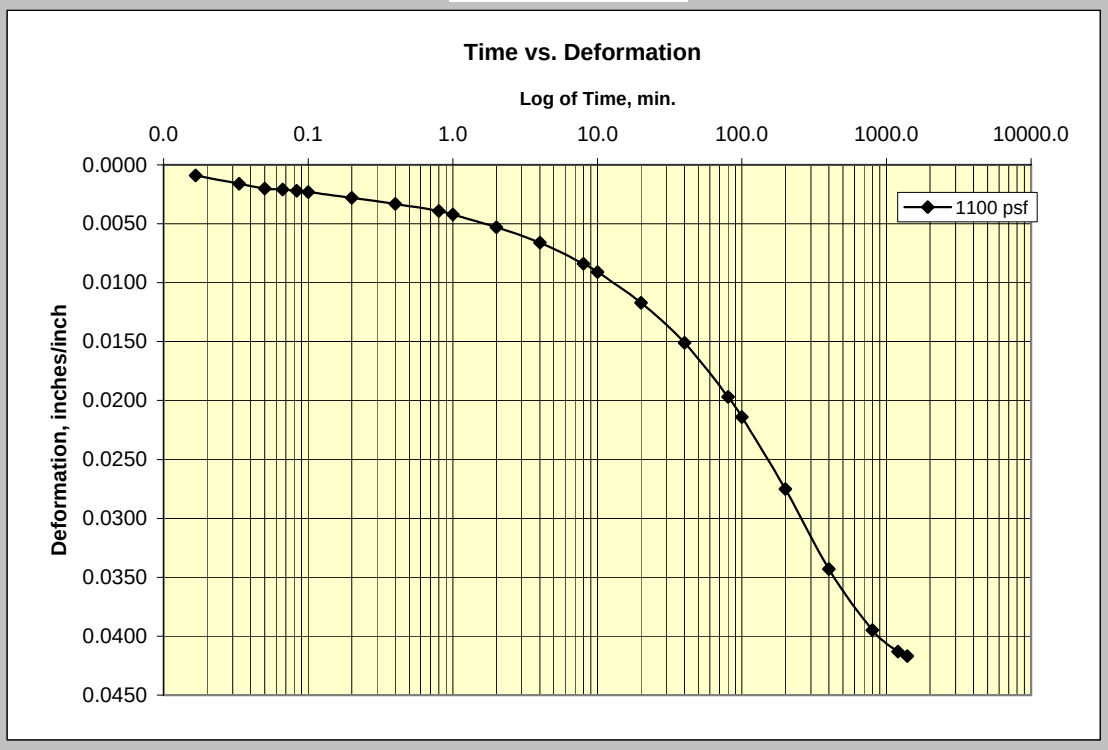
PTS Laboratories

Project Navigator
PTS File No: 34339

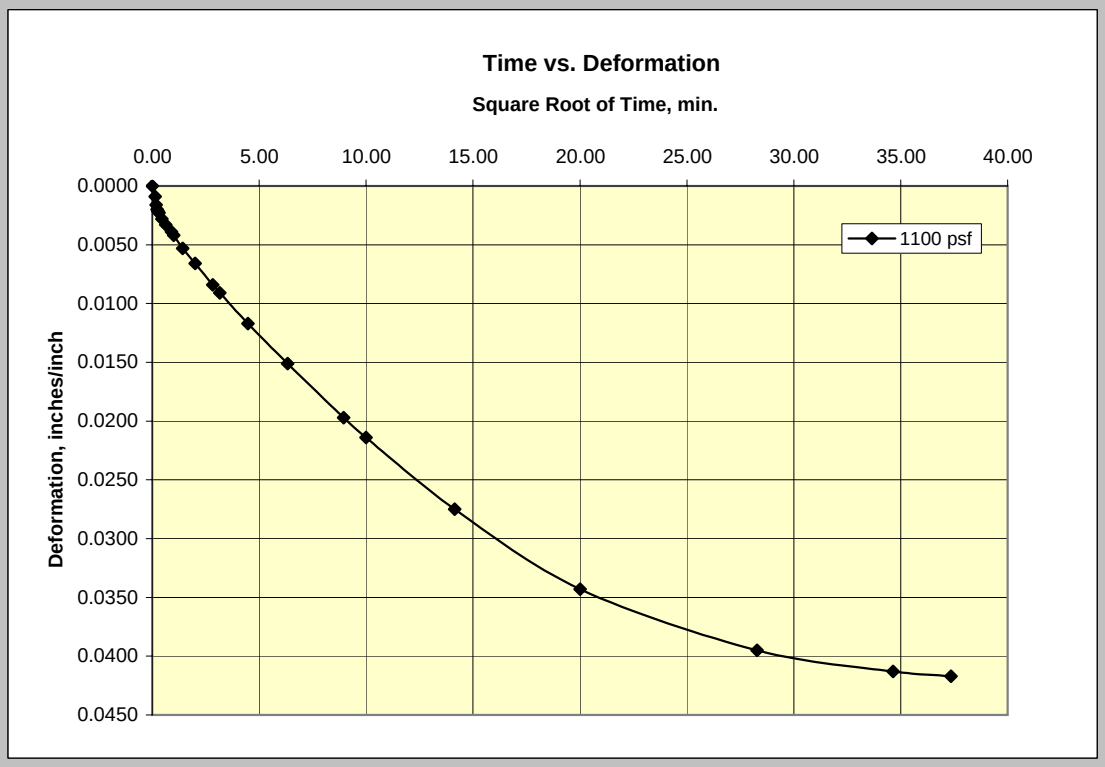
Sample ID: PNL-21-22-24

Load 5

1100 PSF



1100 PSF



Analysis performed by CTL

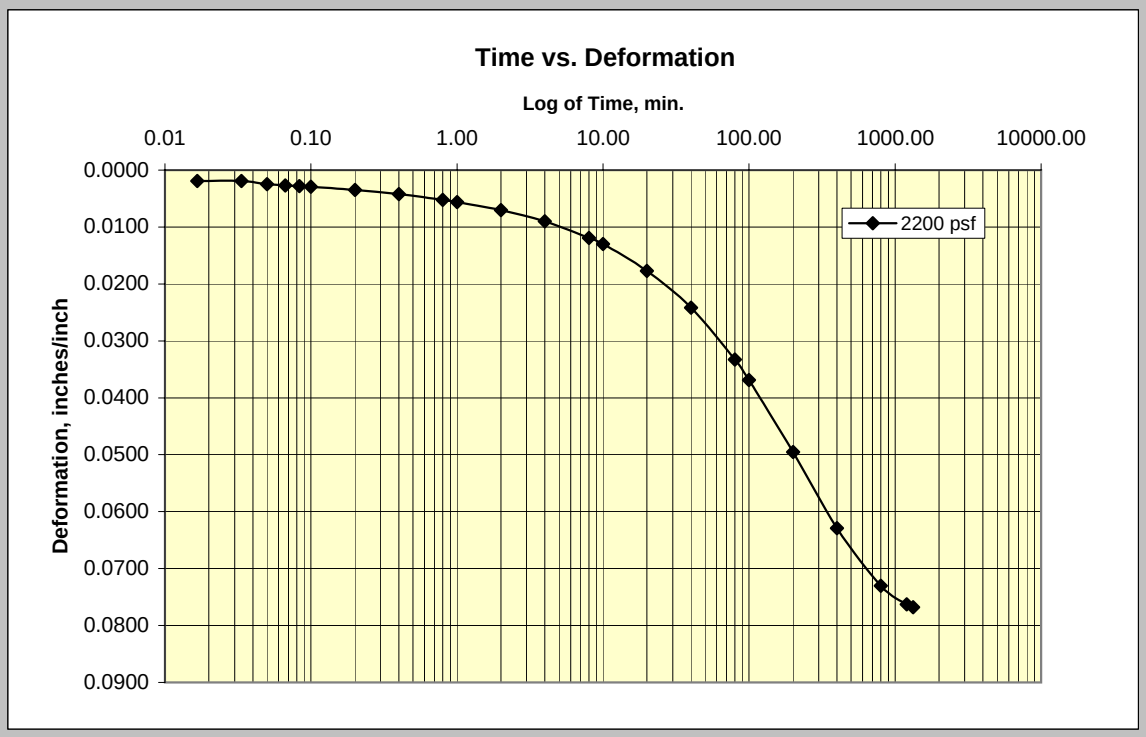
PTS Laboratories

Project Navigator
PTS File No: 34339

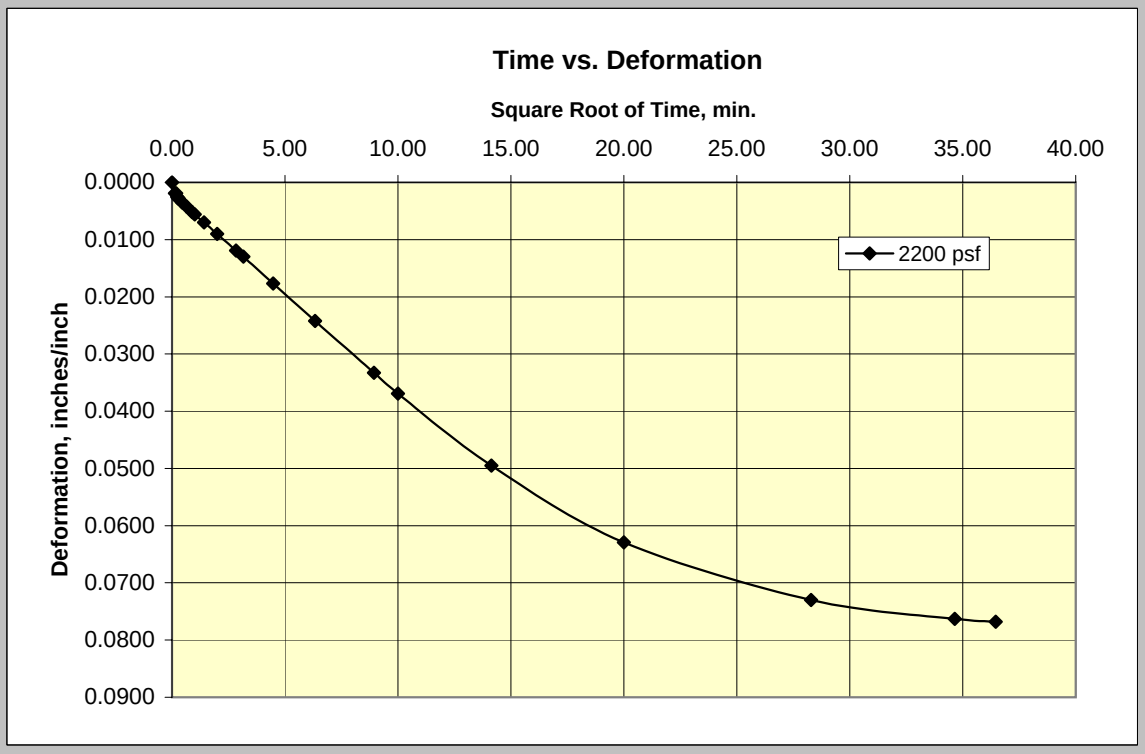
Sample ID: PNL-21-22-24

Load 6

2200 PSF



2200 PSF



Analysis performed by CTL

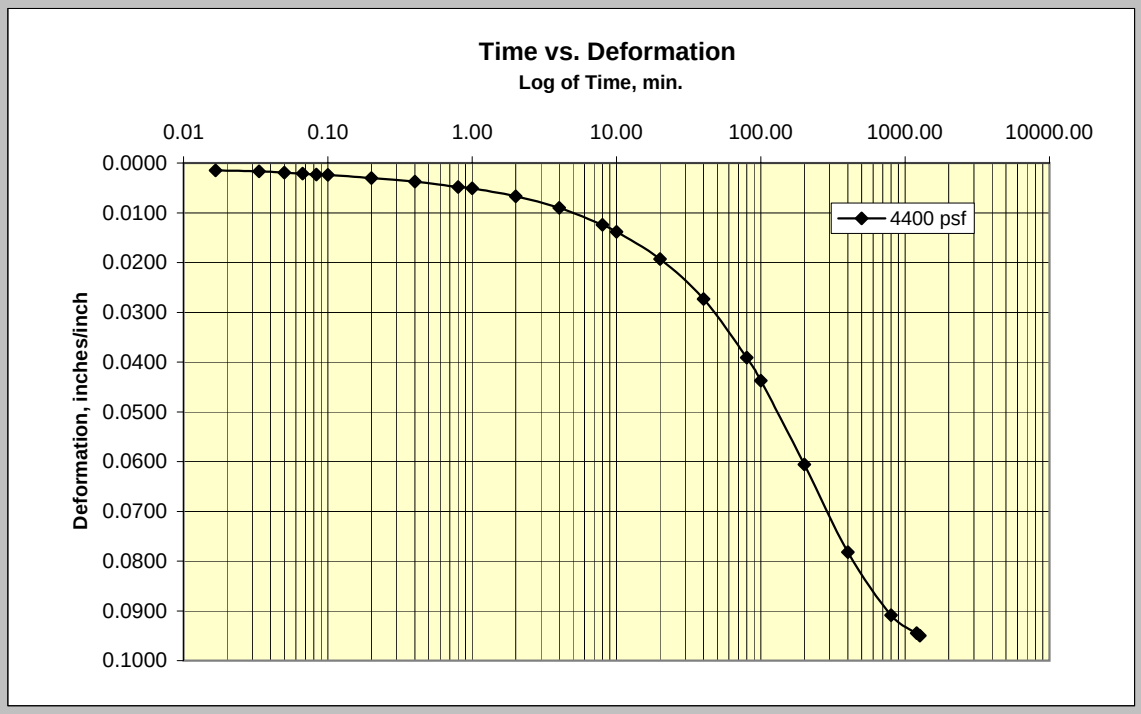
PTS Laboratories

Project Navigator
PTS File No: 34339

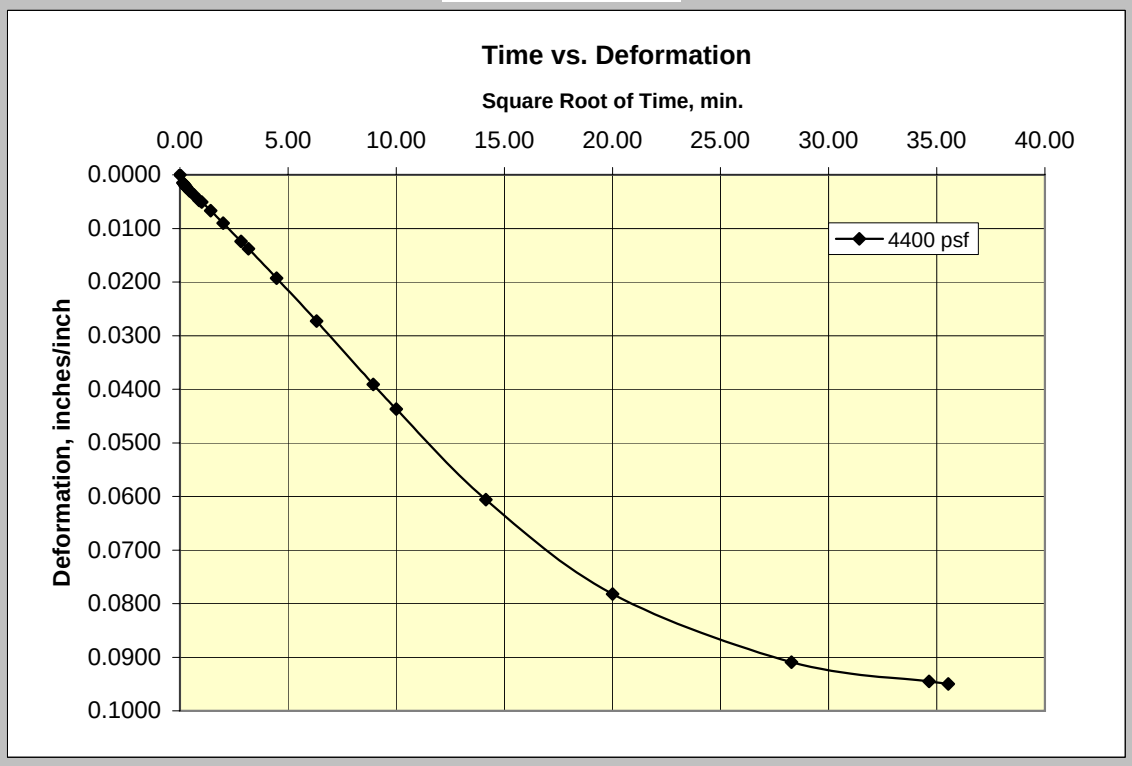
Sample ID: PNL-21-22-24

Load 7

4400 PSF



4400 PSF



Analysis performed by CTL

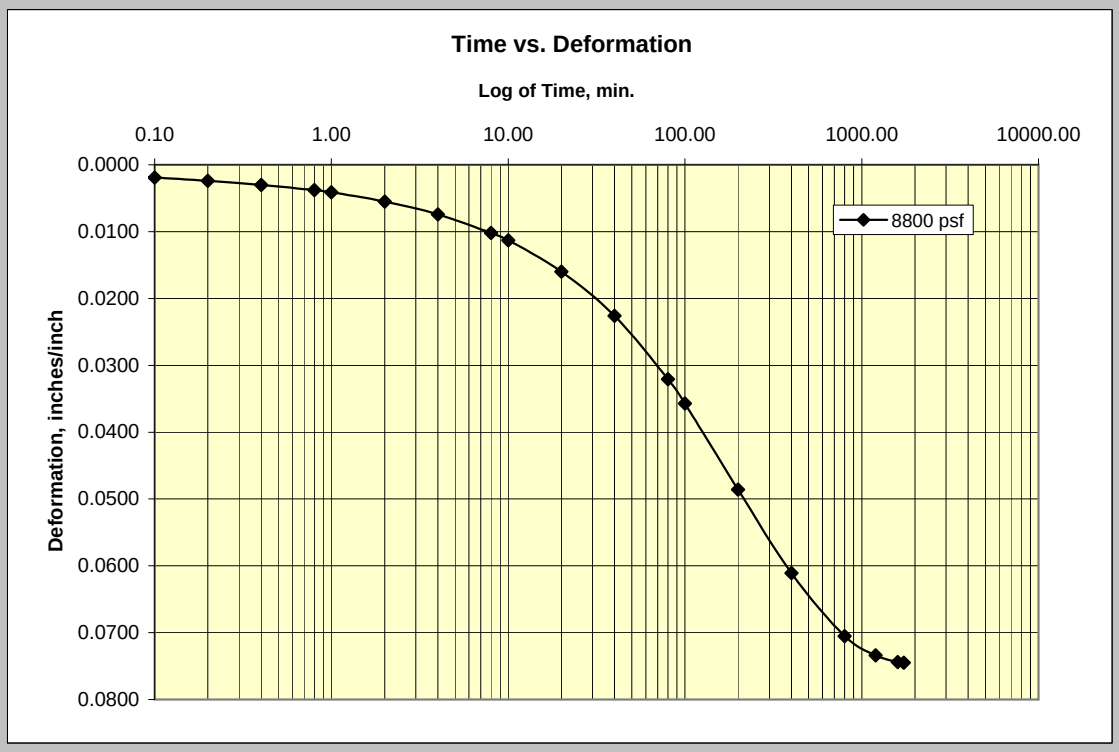
PTS Laboratories

Project Navigator
PTS File No: 34339

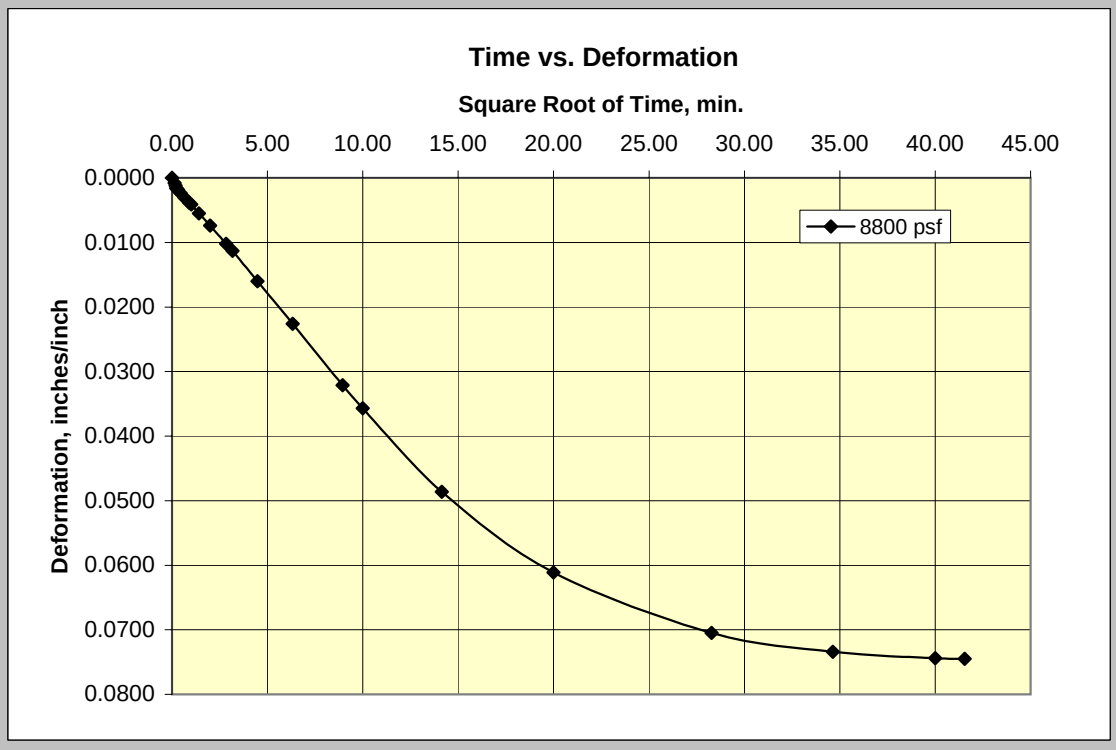
Sample ID: PNL-21-22-24

Load 8

8800 PSF



8800 PSF

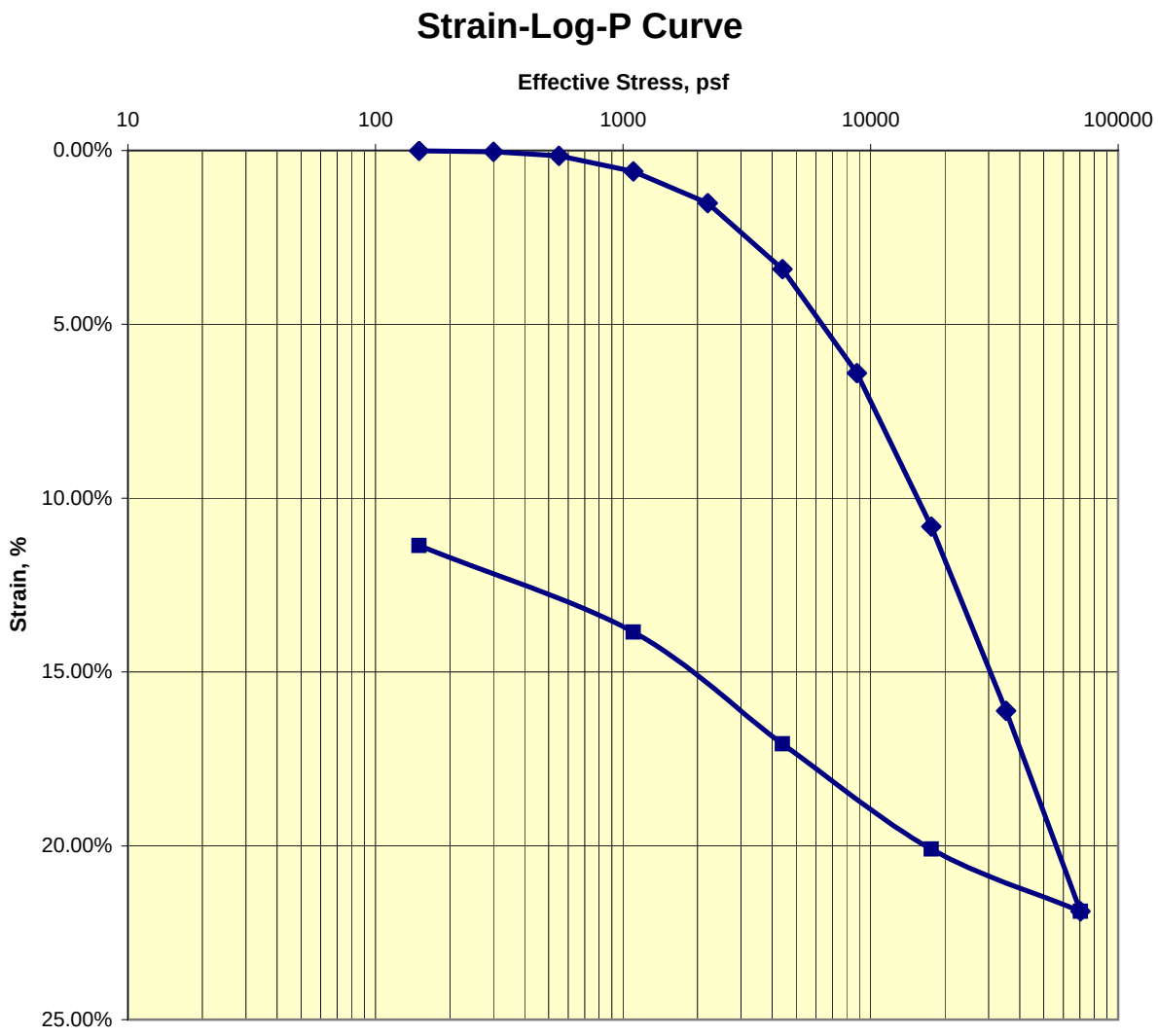


Analysis performed by CTL

Consolidation Test

ASTM D2435

Job No.:	417-012g	**Boring:**		**Run By:**	MD
Client:	PTS Laboratories	**Sample:**	PNL-28-15-17	**Reduced:**	DC
Project:	Ascon Landfill Site - 34339	**Depth, ft.:**		**Checked:**	DC
Soil Type:	Gray CLAY			**Date:**	9/2/2004



Ass. Gs = 2.7	Initial	Final
Moisture %:	41.6	34.3
Density, pcf:	79.3	87.6
Void Ratio:	1.124	0.925
% Saturation:	99.9	100

Remarks:

Cooper Testing Labs, Inc.

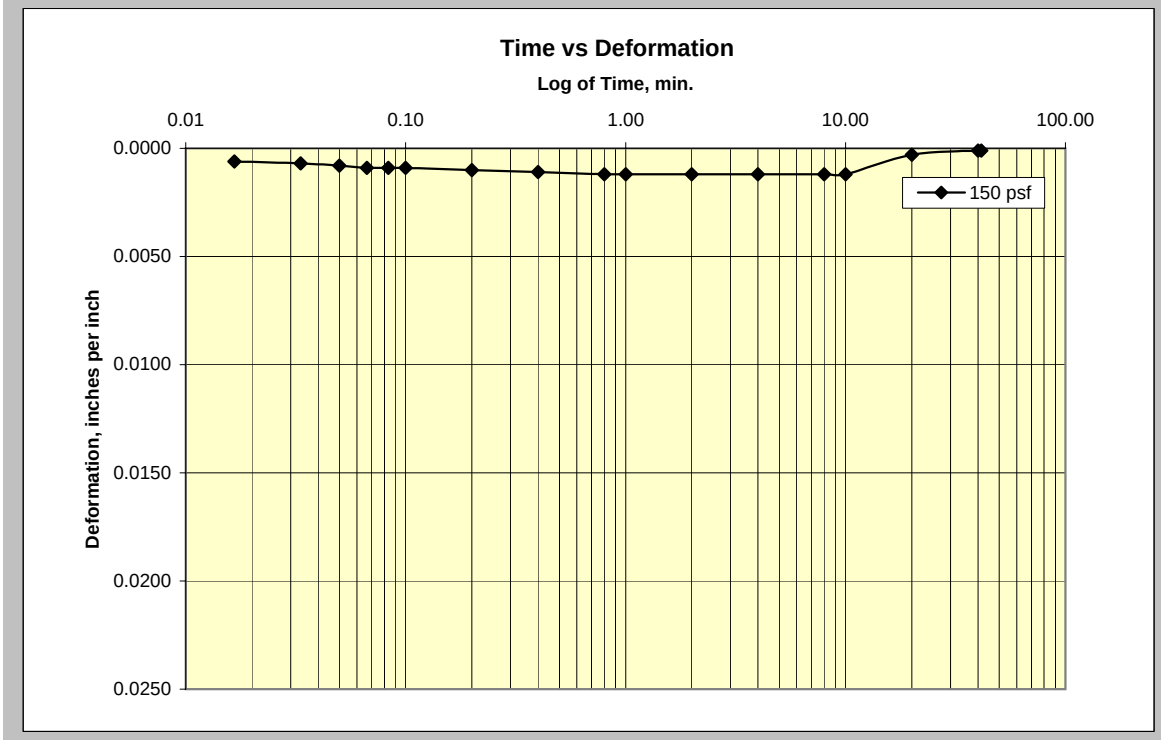
PTS Laboratories

Project Navigator
PTS File No: 34339

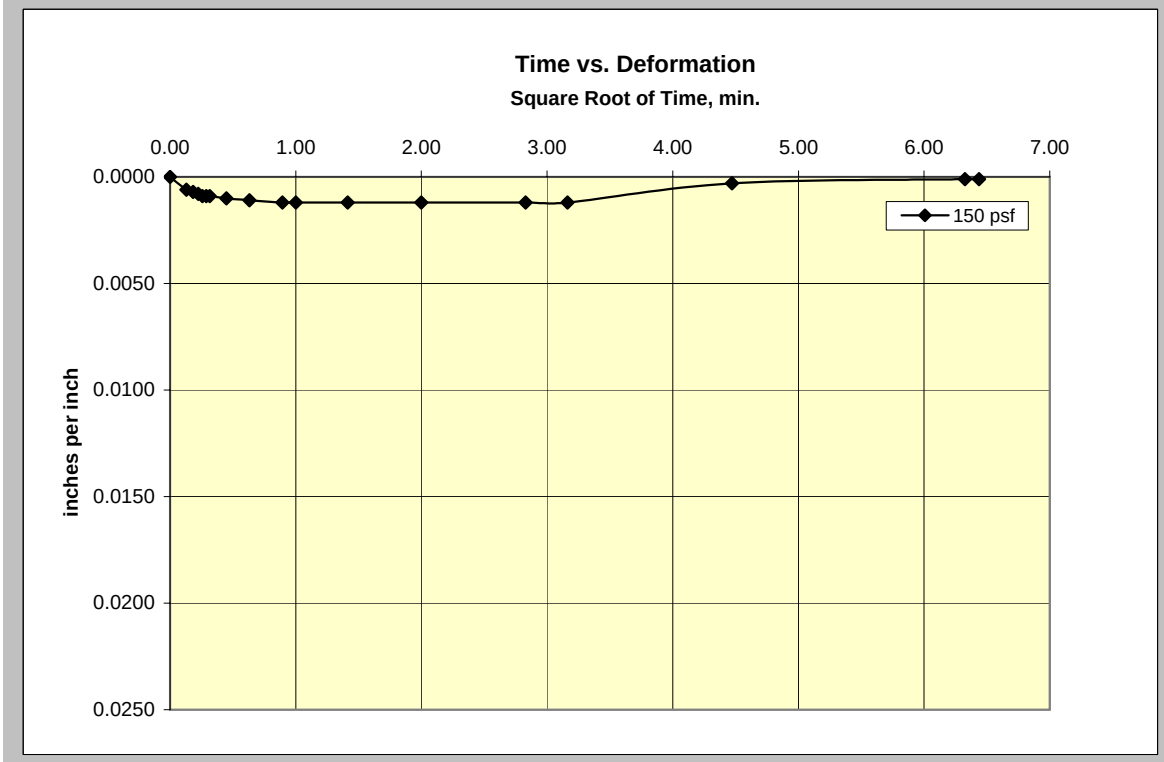
Sample ID: PNL-28-15-17

Load 1

150 PSF



150 PSF



Analysis performed by CTL

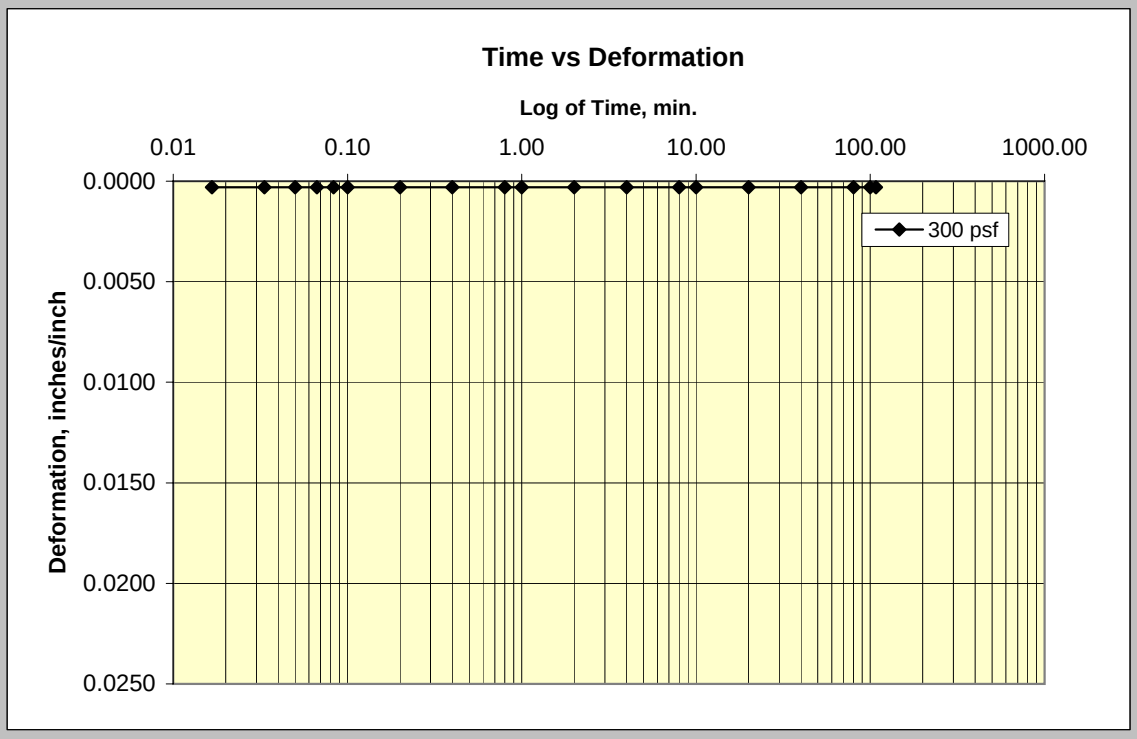
PTS Laboratories

Project Navigator
PTS File No: 34339

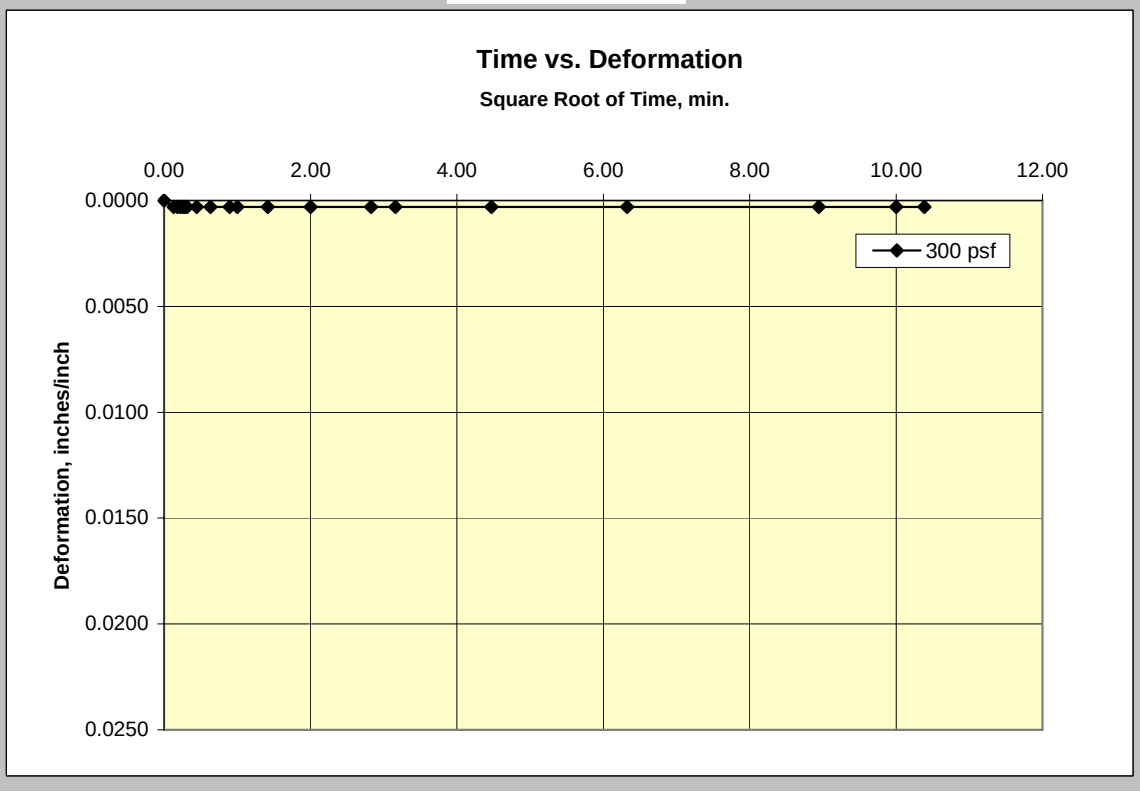
Sample ID: PNL-28-15-17

Load 2

300 PSF



300 PSF



Analysis performed by CTL

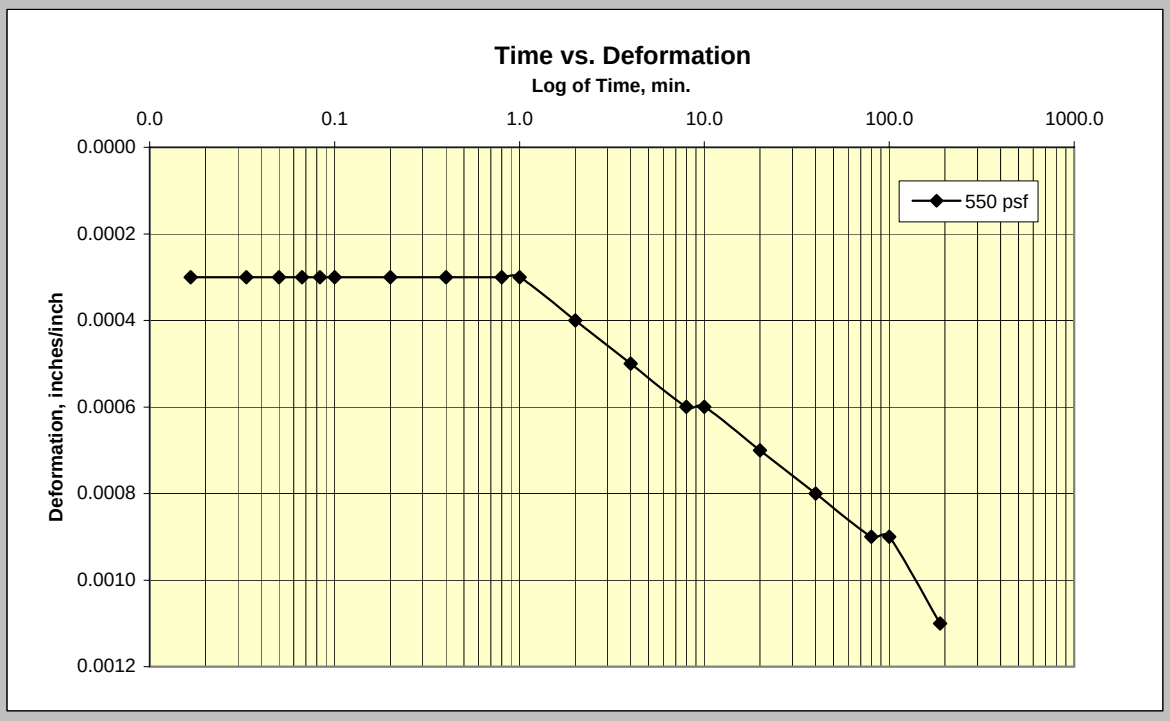
PTS Laboratories

Project Navigator
PTS File No: 34339

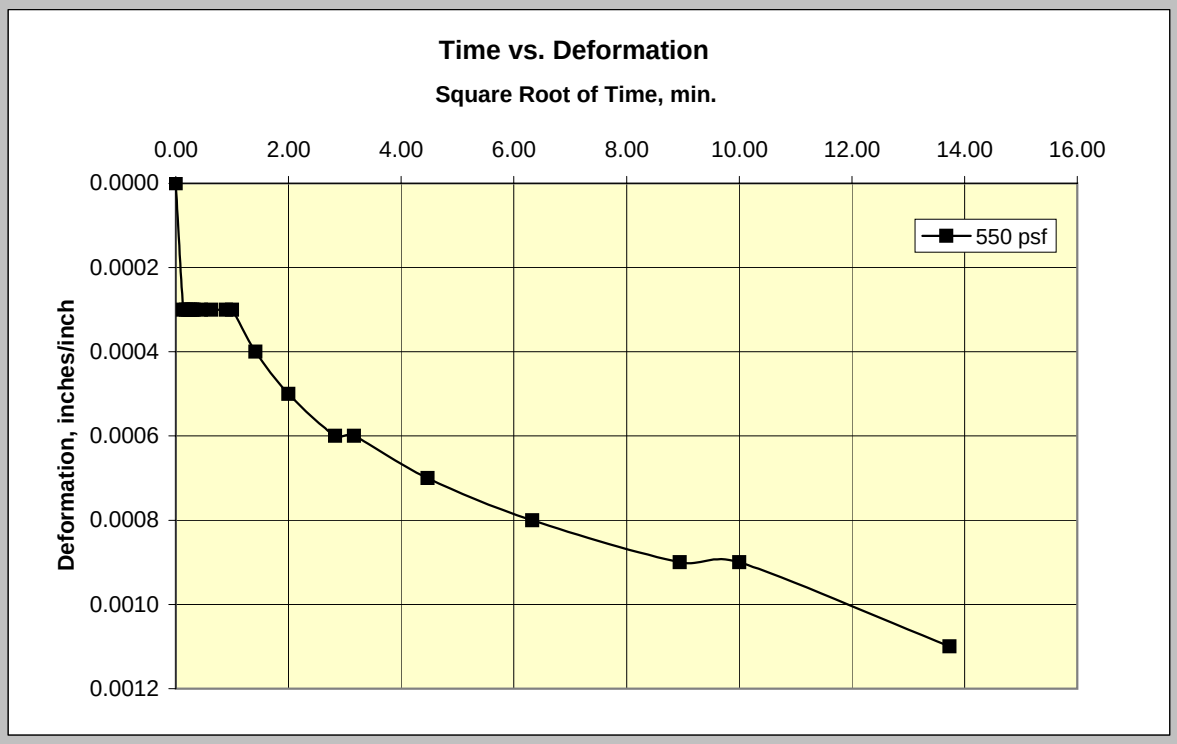
Sample ID: PNL-28-15-17

Load 3

550 PSF



550 PSF



Analysis performed by CTL

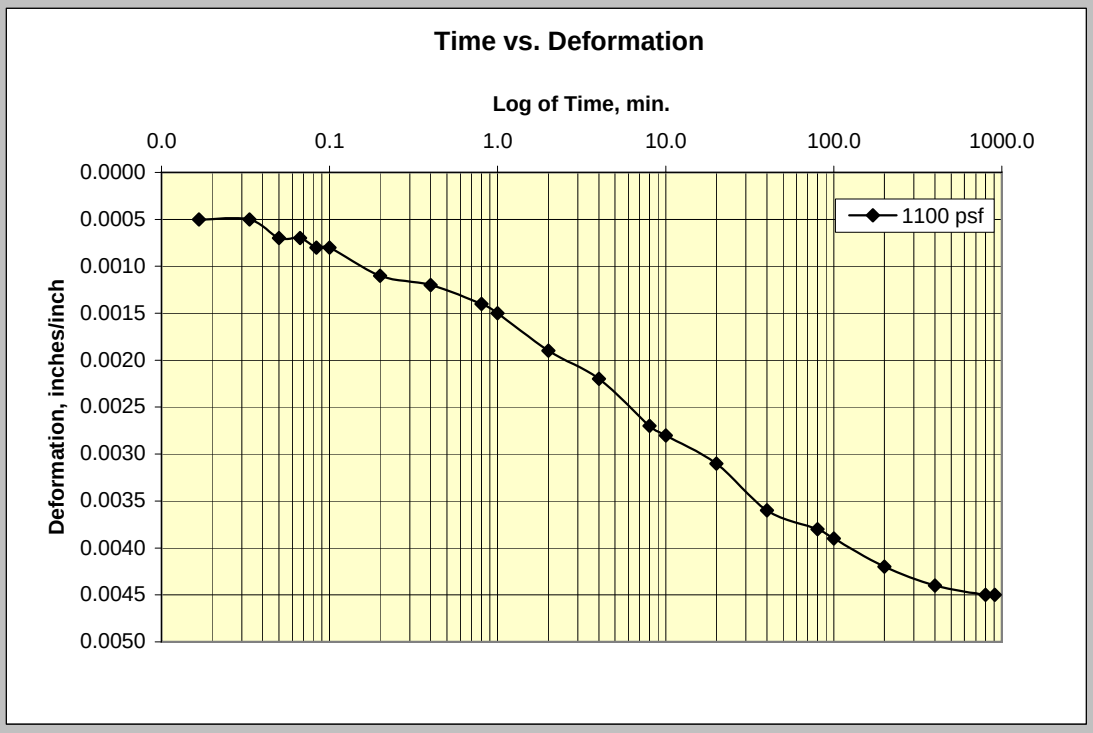
PTS Laboratories

Project Navigator
PTS File No: 34339

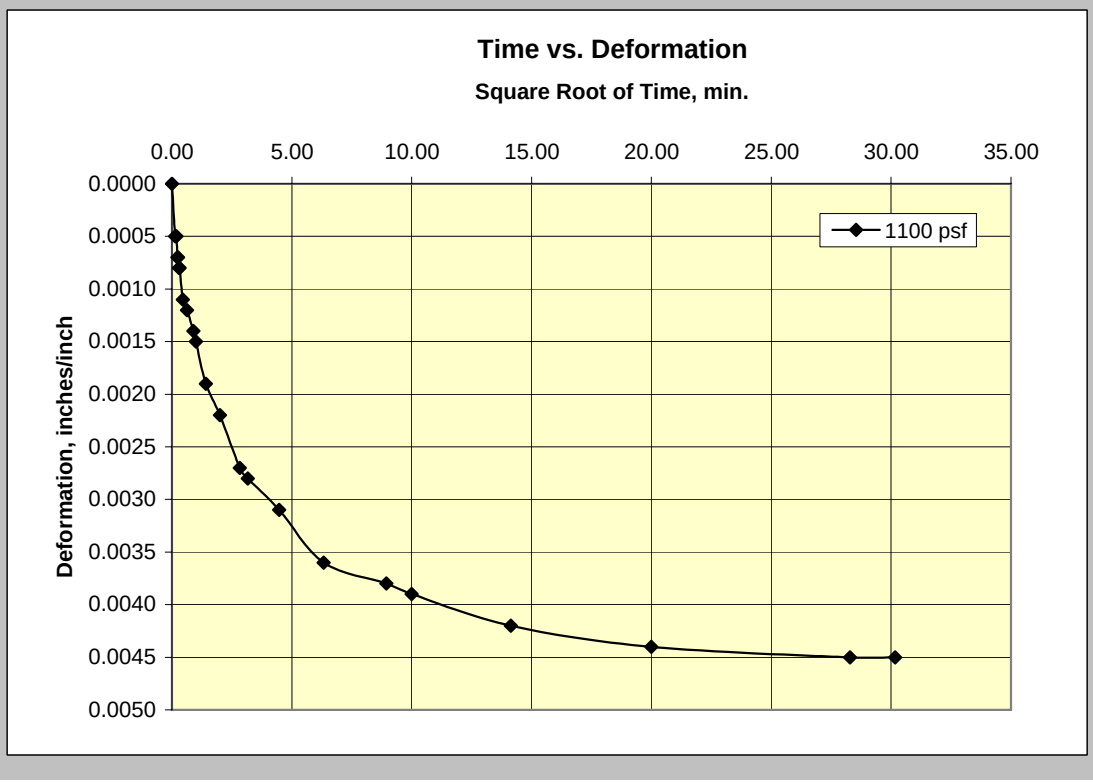
Sample ID: PNL-28-15-17

Load 4

1100 PSF



1100 PSF



Analysis performed by CTL

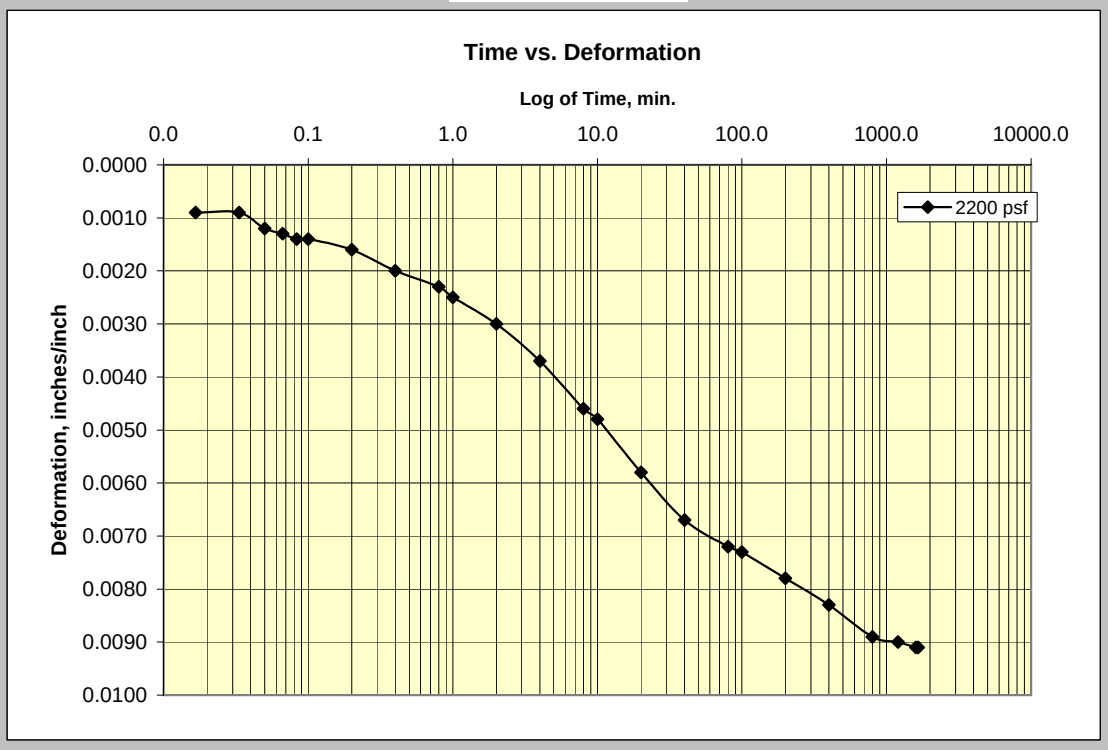
PTS Laboratories

Project Navigator
PTS File No: 34339

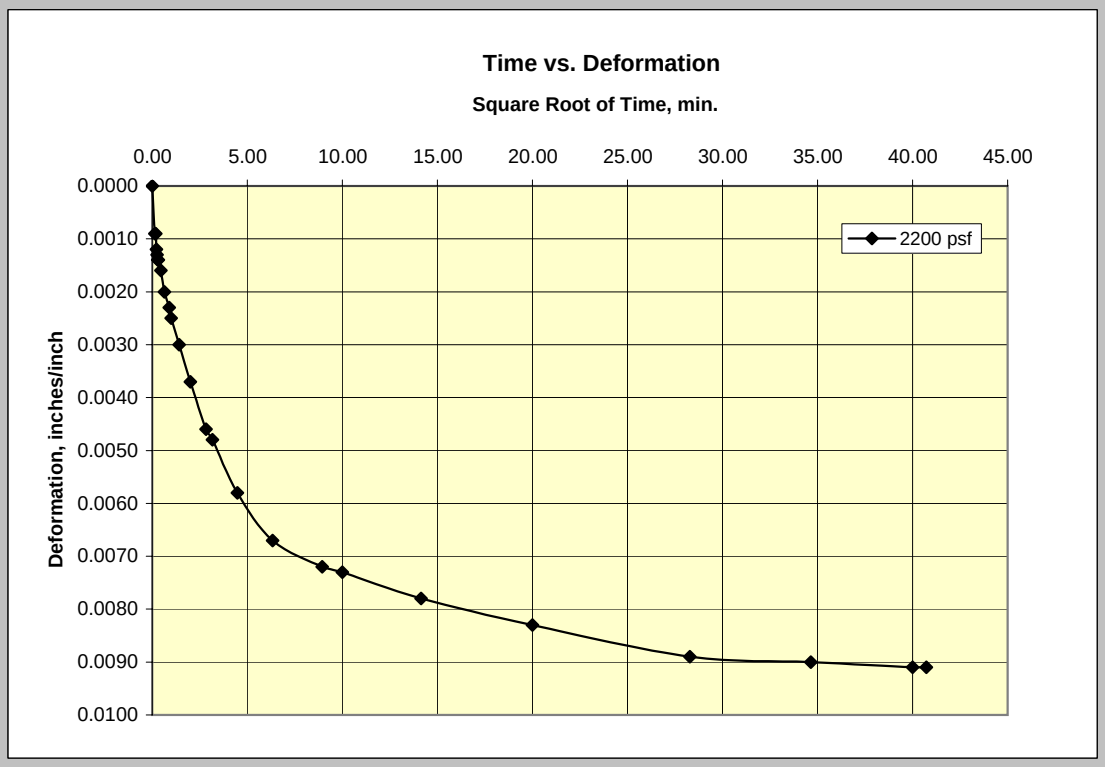
Sample ID: PNL-28-15-17

Load 5

2200 PSF



2200 PSF



Analysis performed by CTL

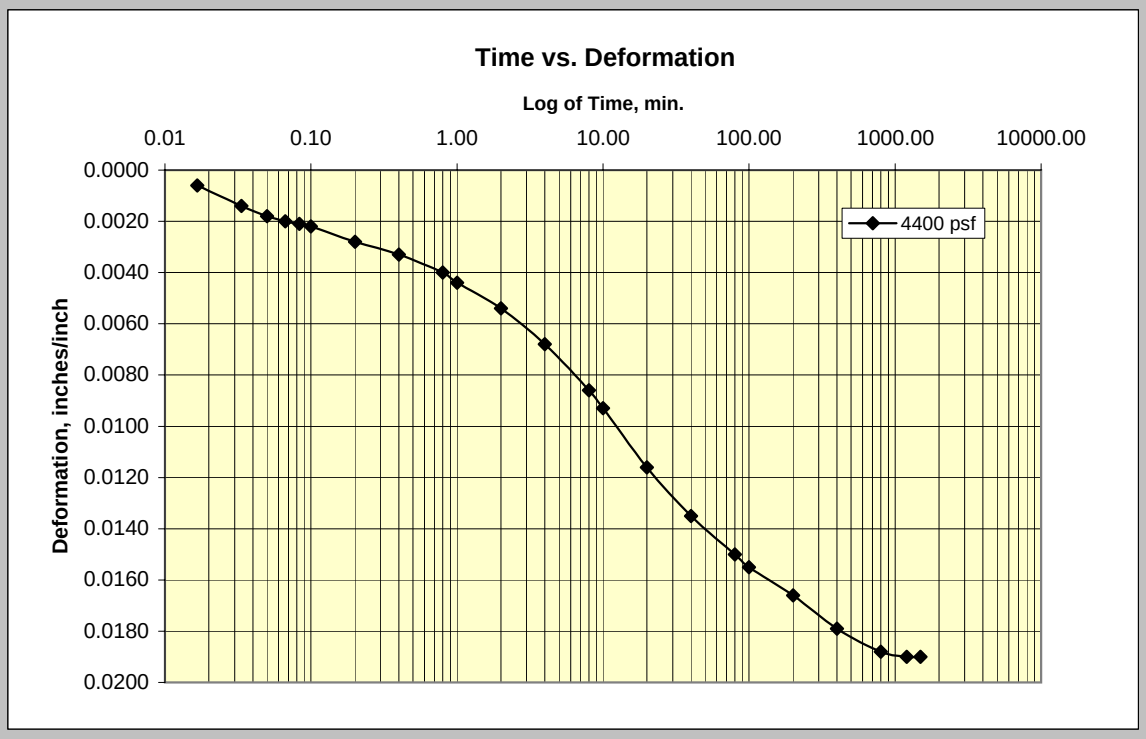
PTS Laboratories

Project Navigator
PTS File No: 34339

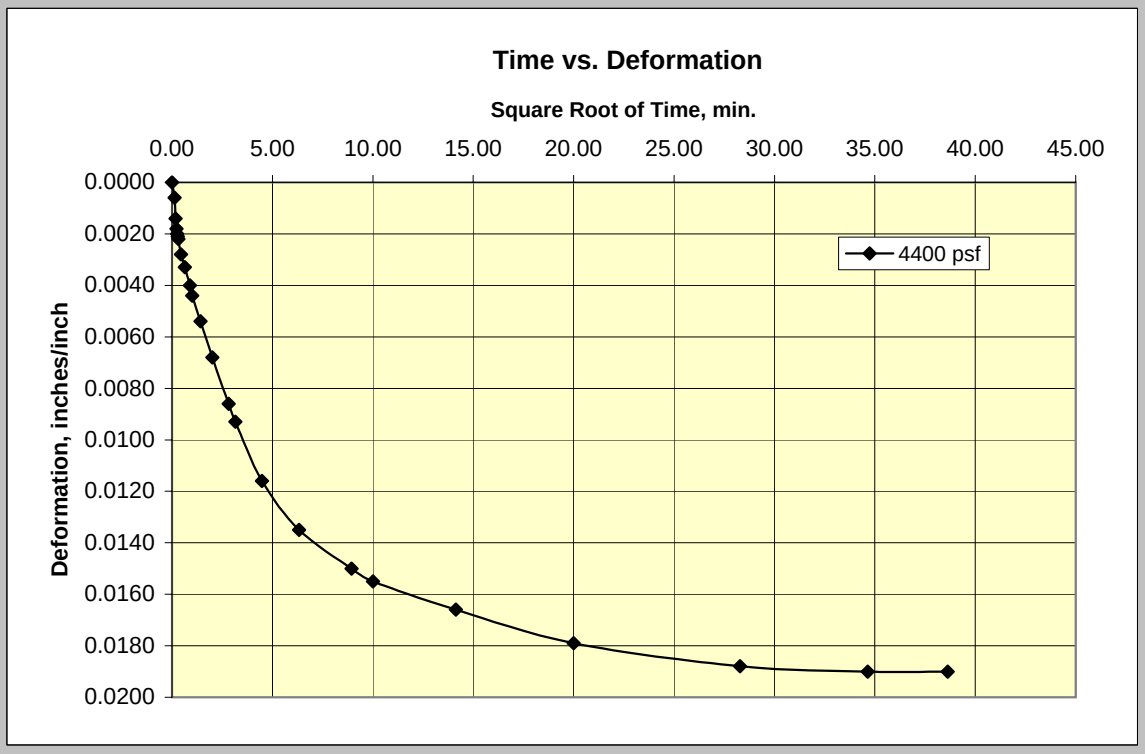
Sample ID: PNL-28-15-17

Load 6

4400 PSF



4400 PSF



Analysis performed by CTL

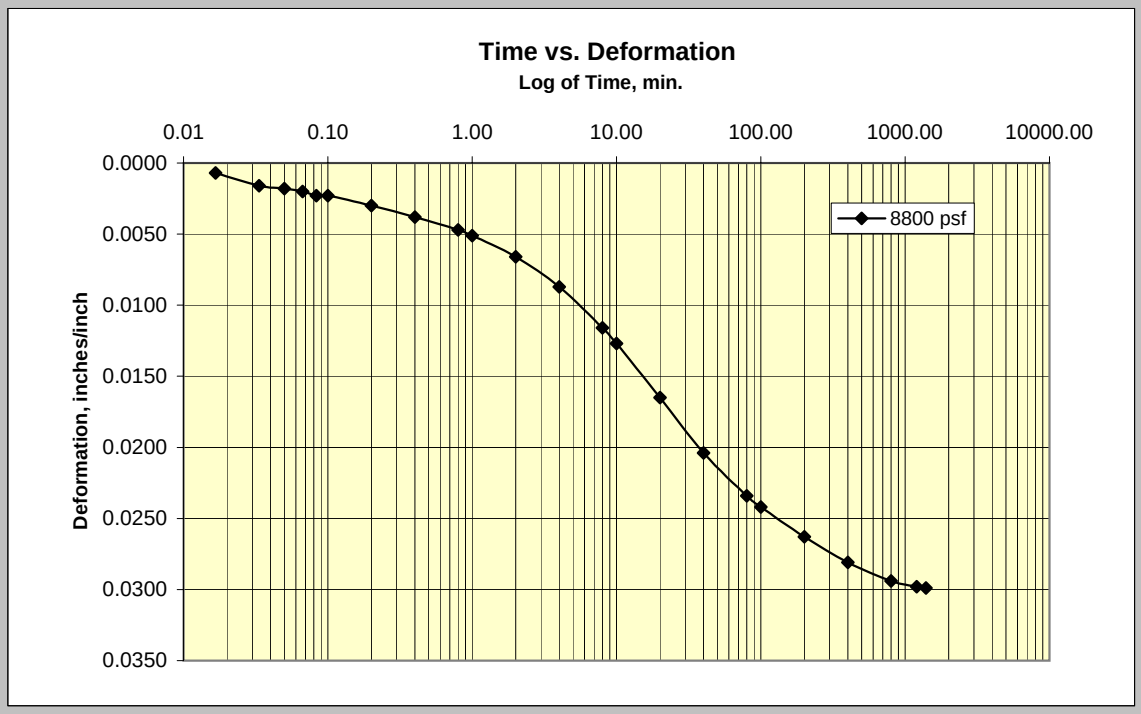
PTS Laboratories

Project Navigator
PTS File No: 34339

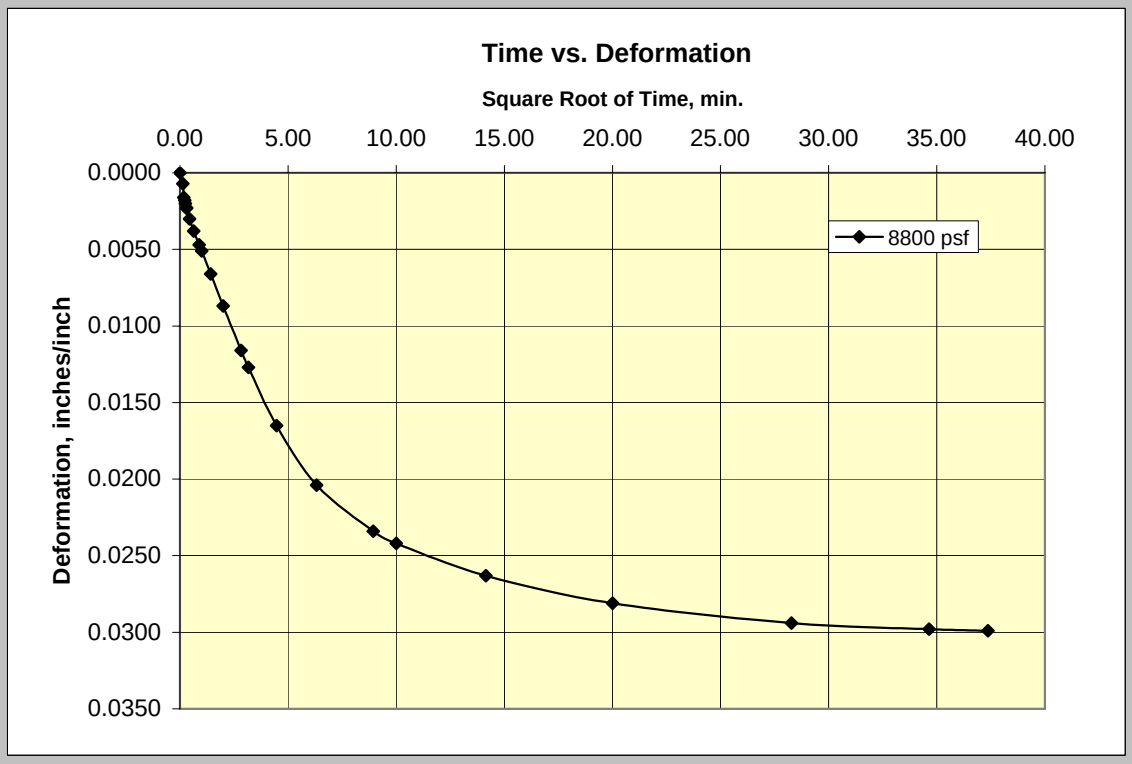
Sample ID: PNL-28-15-17

Load 7

8800 PSF



8800 PSF



Analysis performed by CTL

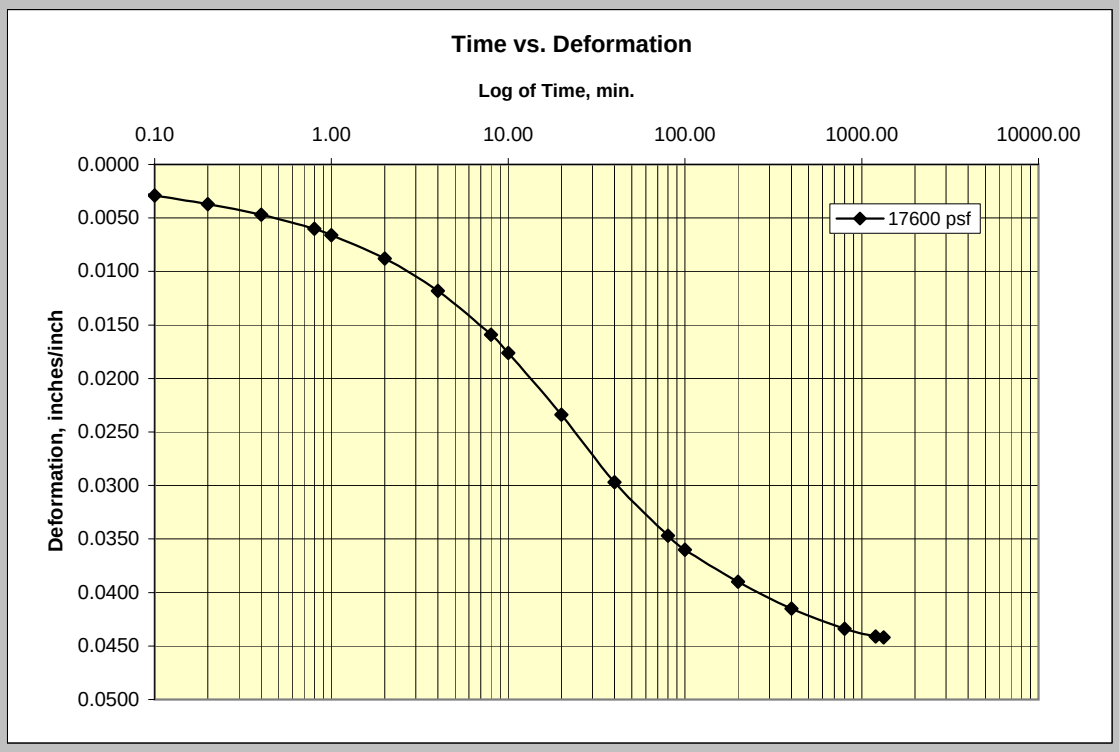
PTS Laboratories

Project Navigator
PTS File No: 34339

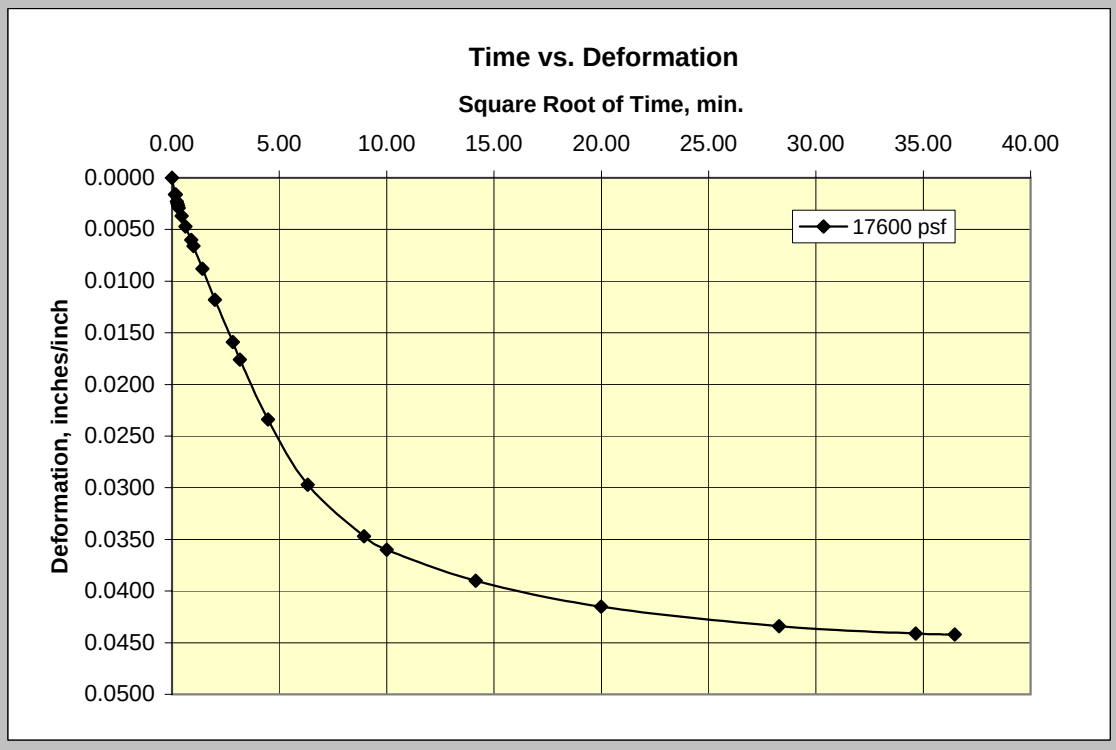
Sample ID: PNL-28-15-17

Load 8

17600 PSF



17600 PSF



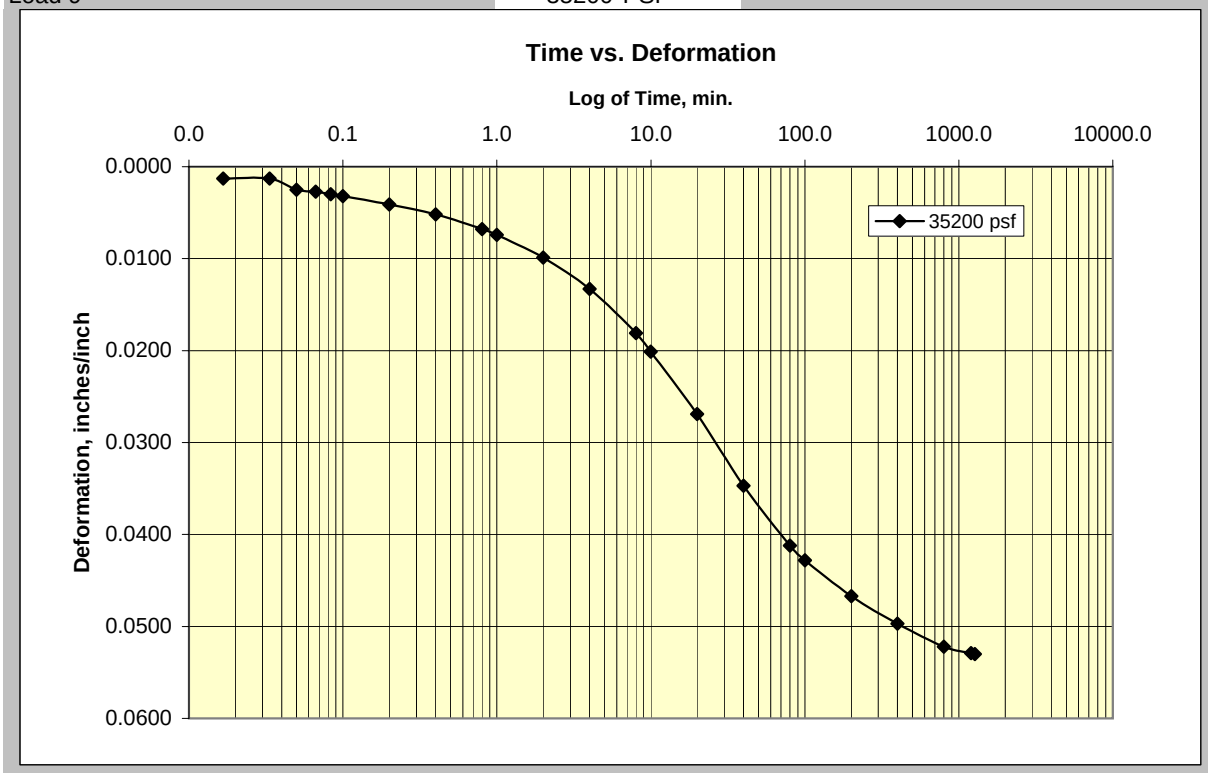
Analysis performed by CTL

PTS Laboratories

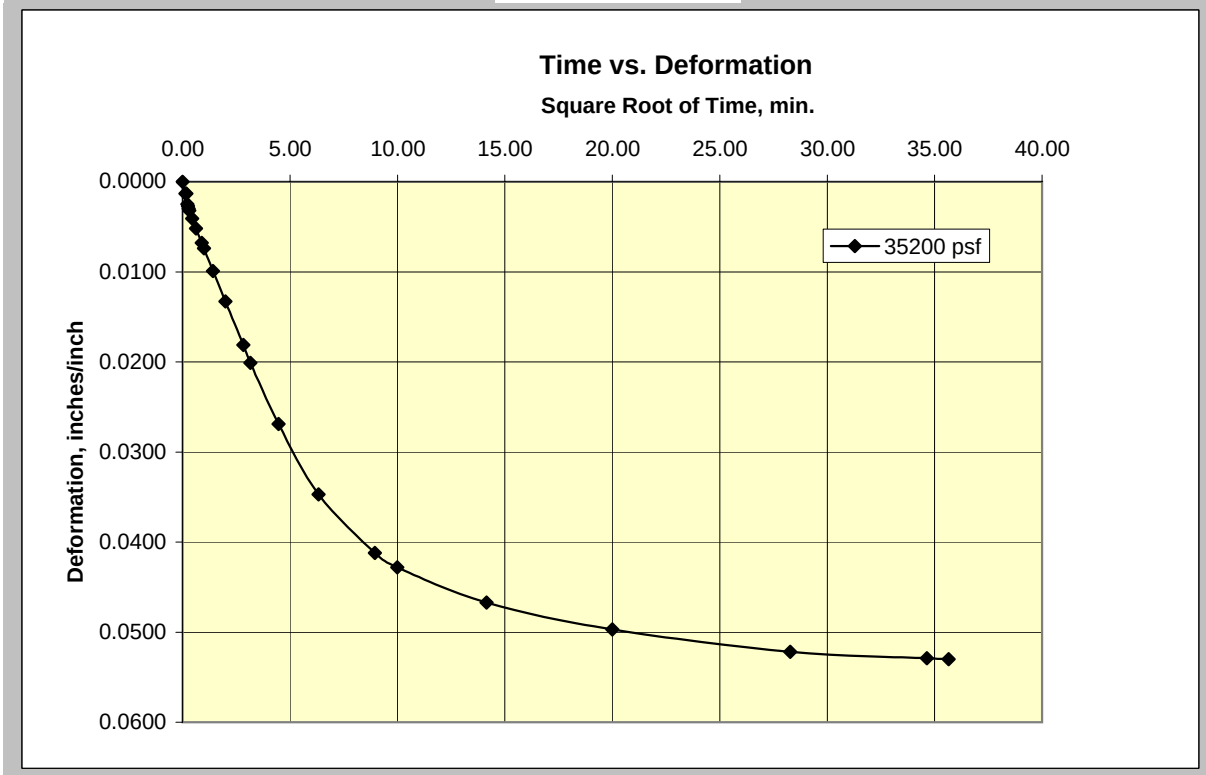
Project Navigator
PTS File No: 34339

Sample ID: PNL-28-15-17

Load 9 35200 PSF



35200 PSF



Analysis performed by CTL

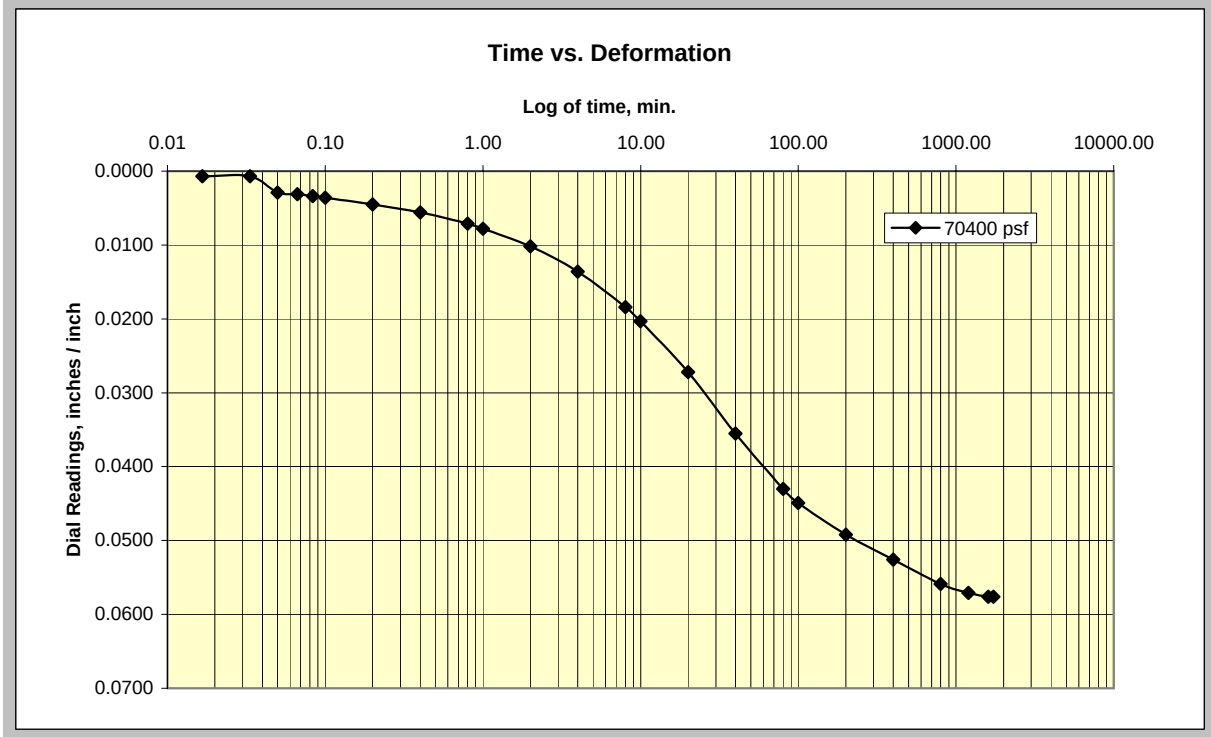
PTS Laboratories

Project Navigator
PTS File No: 34339

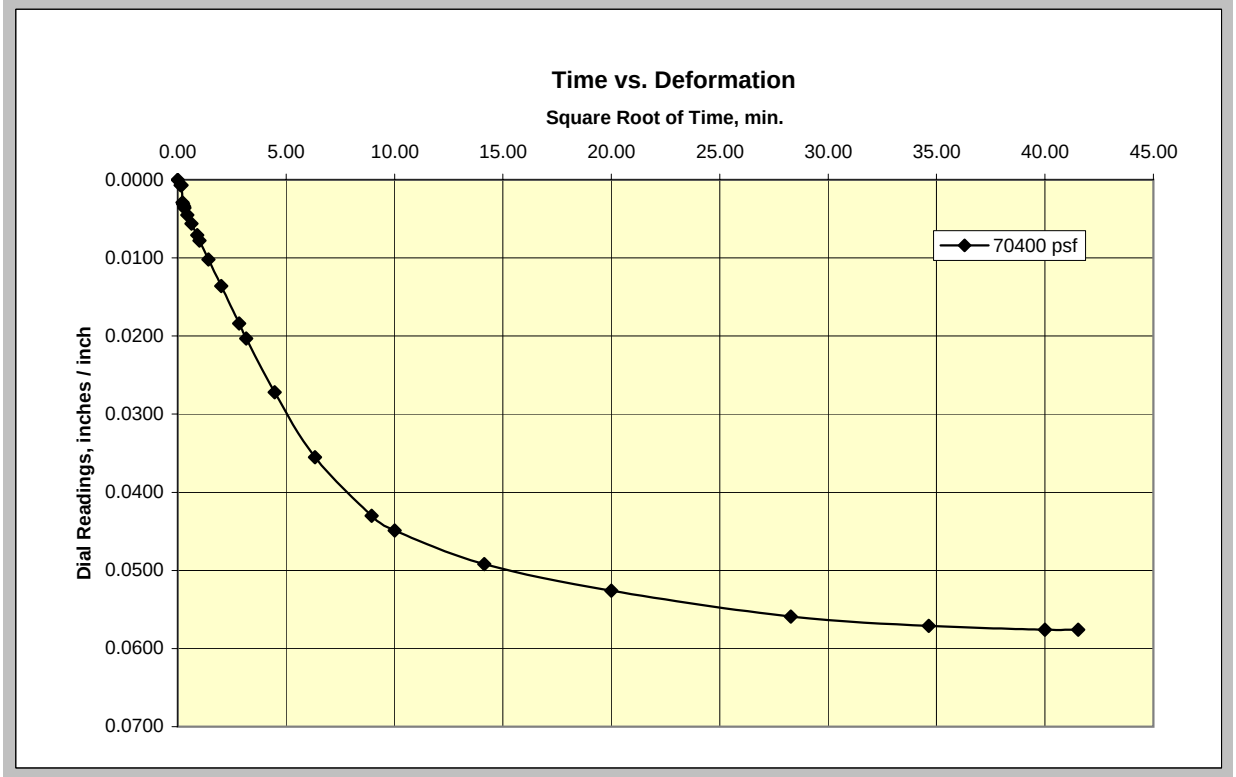
Sample ID: PNL-28-15-17

Load 10

70400 PSF



70400 PSF

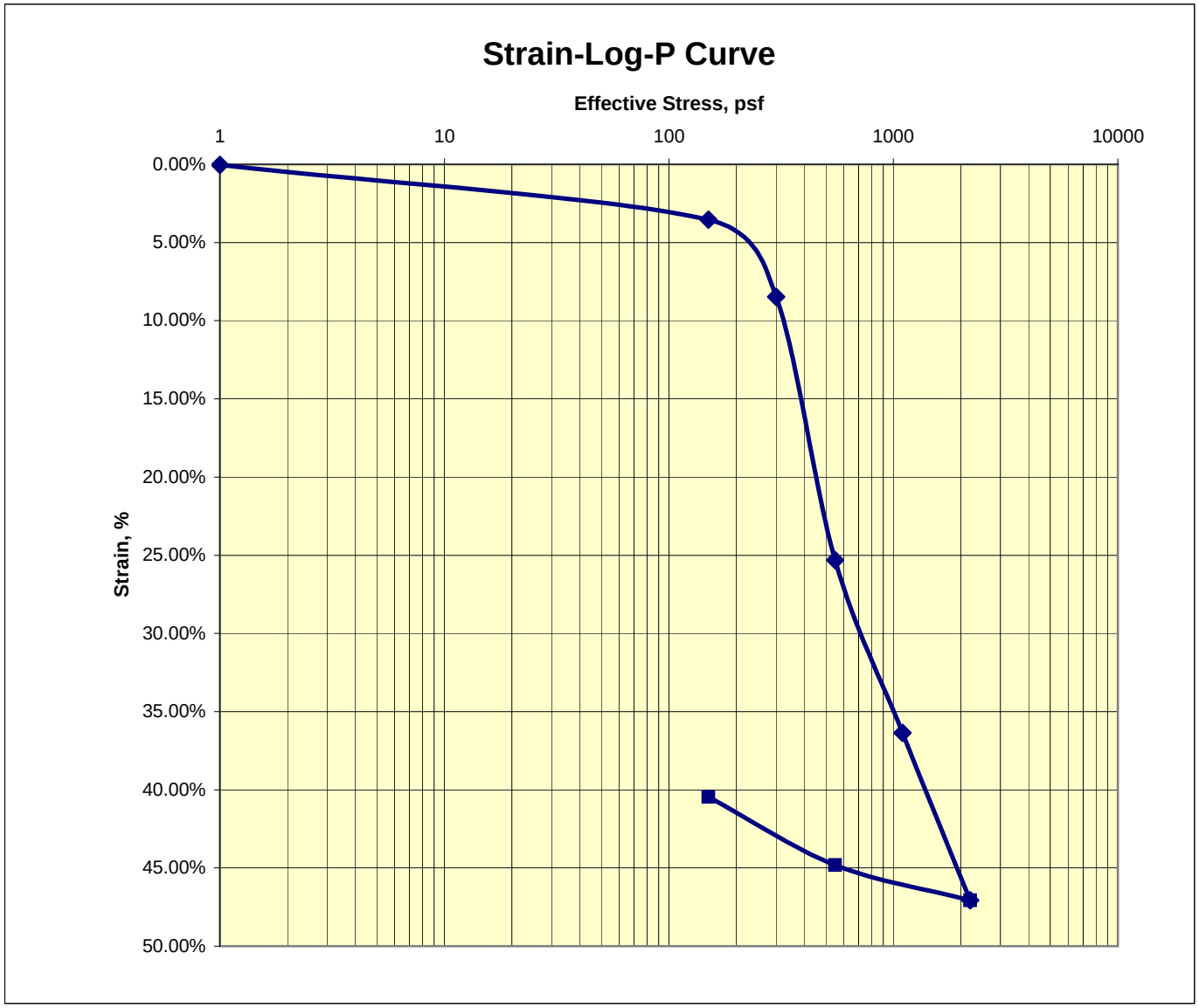


Analysis performed by CTL

Consolidation Test

ASTM D2435

Job No.:	417-012b	**Boring:**		**Run By:**	MD
Client:	PTS Laboratories	**Sample:**	PNL-4B	**Reduced:**	DC
Project:	Ascon Landfill Site - 34339	**Depth, ft.:**		**Checked:**	DC
Soil Type:	Brown Mottled Dark Gray CLAY with oil			**Date:**	8/25/2004



Ass. Gs = 2.7	**Initial**	**Final**
Moisture %:	140.8	68.0
Density, pcf:	33.1	59.5
Void Ratio:	4.088	1.834
% Saturation:	93.0	100

Remarks: The minimum load of 150 psf was too heavy for this material so the curve was started at 1 psf to help define the preconsolidation curve. Consolidation reached maximum travel during 2200 psf load. The machine was reset and allowed to complete the 2200 psf load increment (see 2200 psf time rate curve).

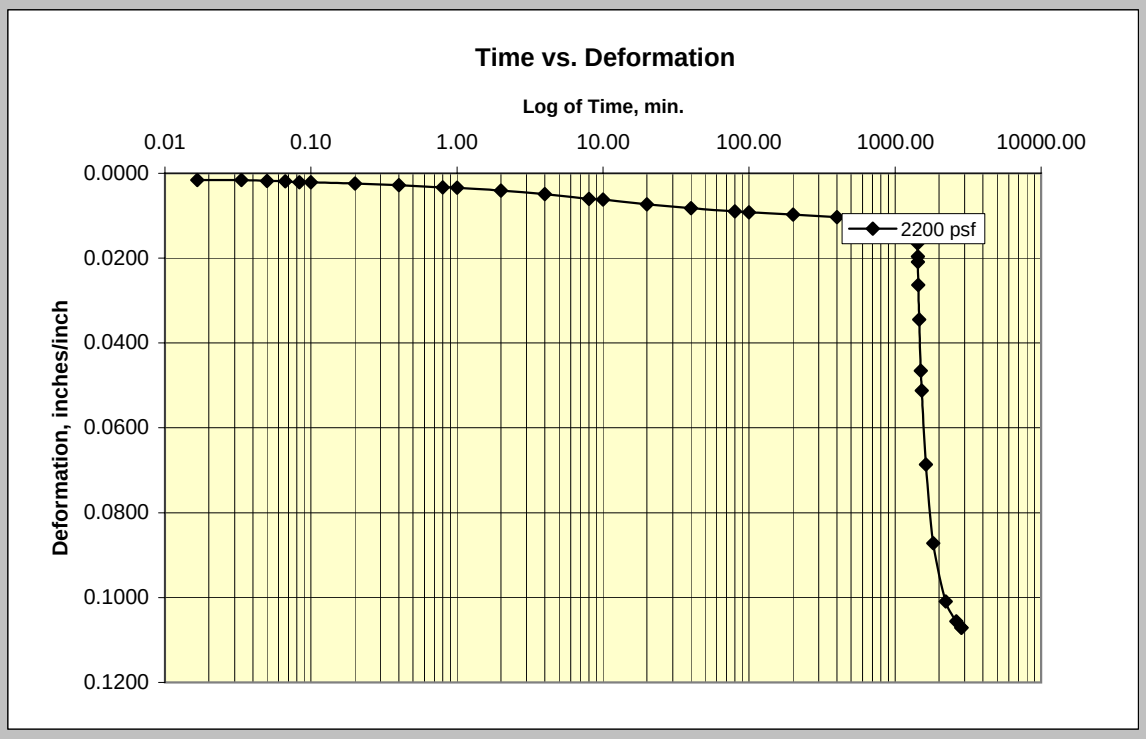
PTS Laboratories

Project Navigator
PTS File No: 34339

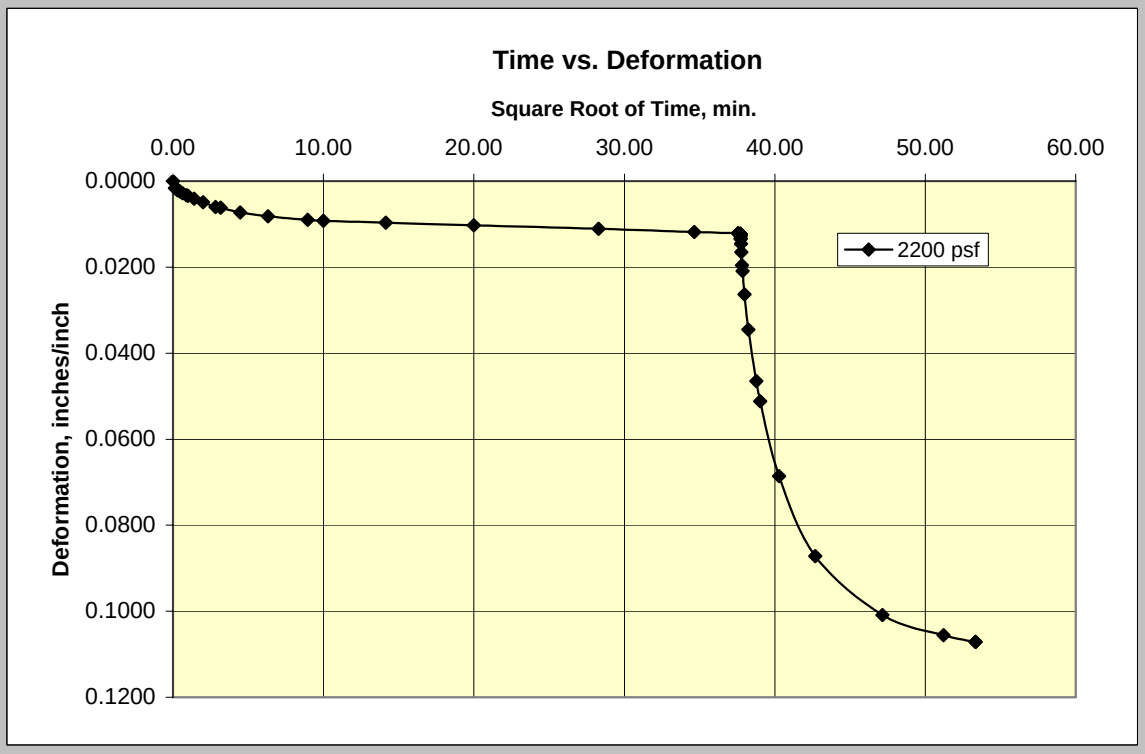
Sample ID: PNL-4B

Load 6

2200 PSF



2200 PSF



Analysis performed by CTL

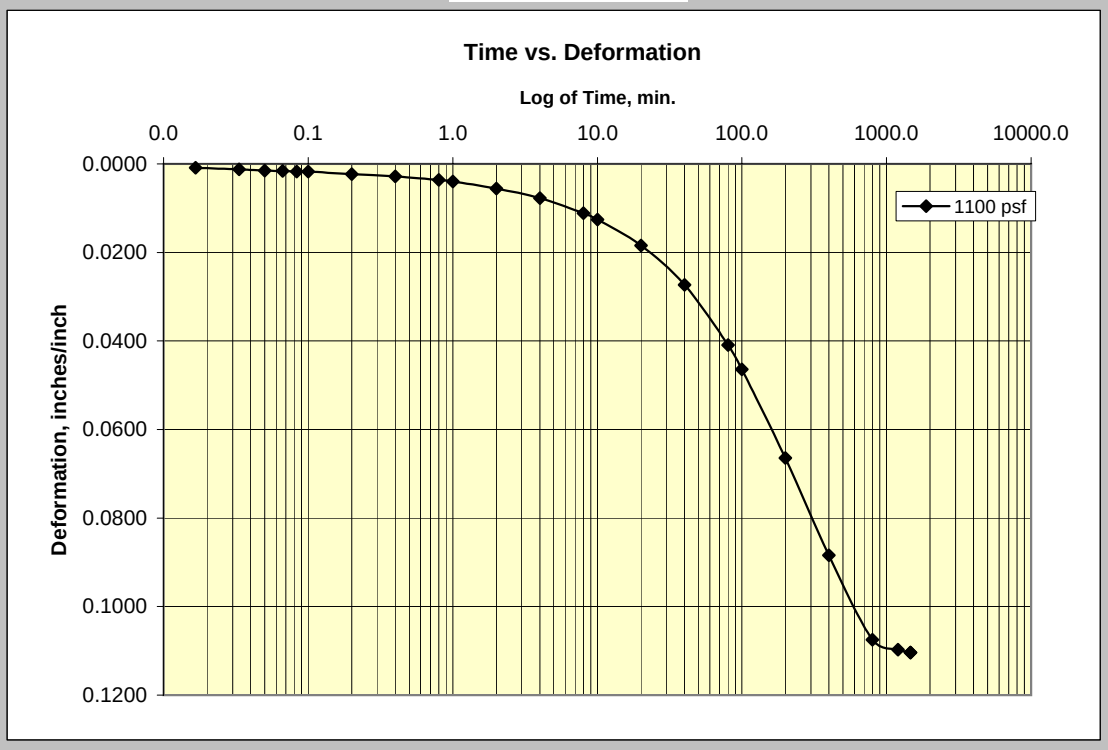
PTS Laboratories

Project Navigator
PTS File No: 34339

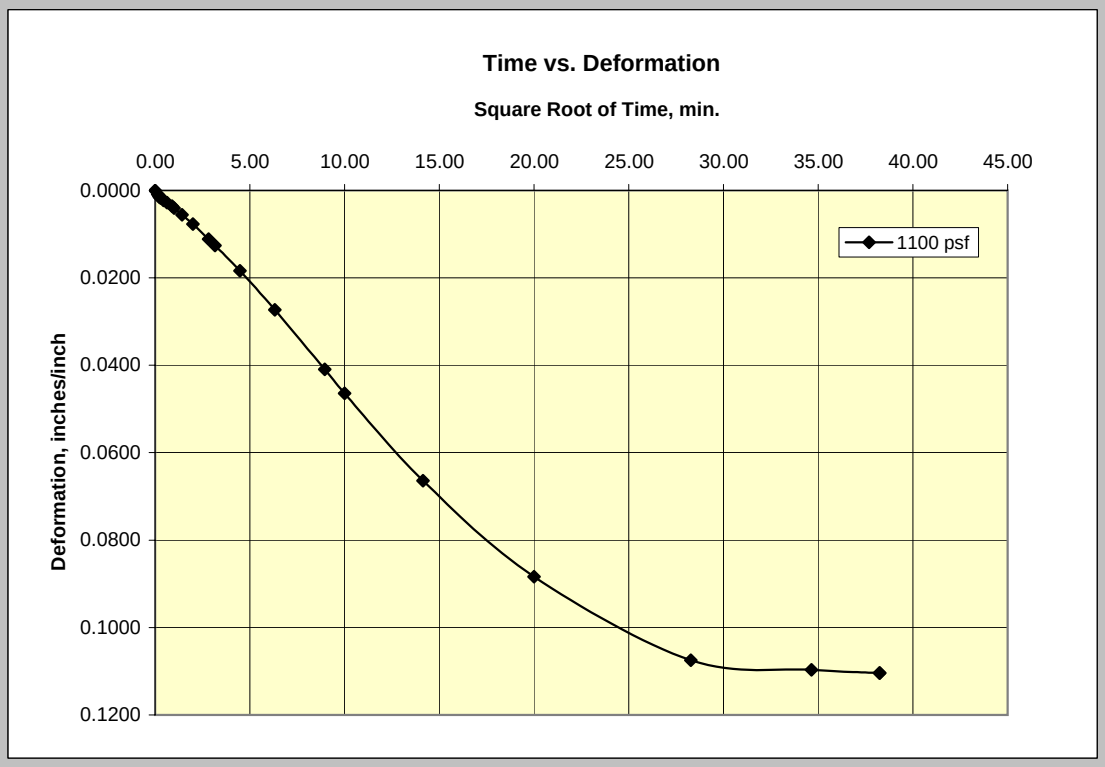
Sample ID: PNL-4B

Load 5

1100 PSF



1100 PSF



Analysis performed by CTL

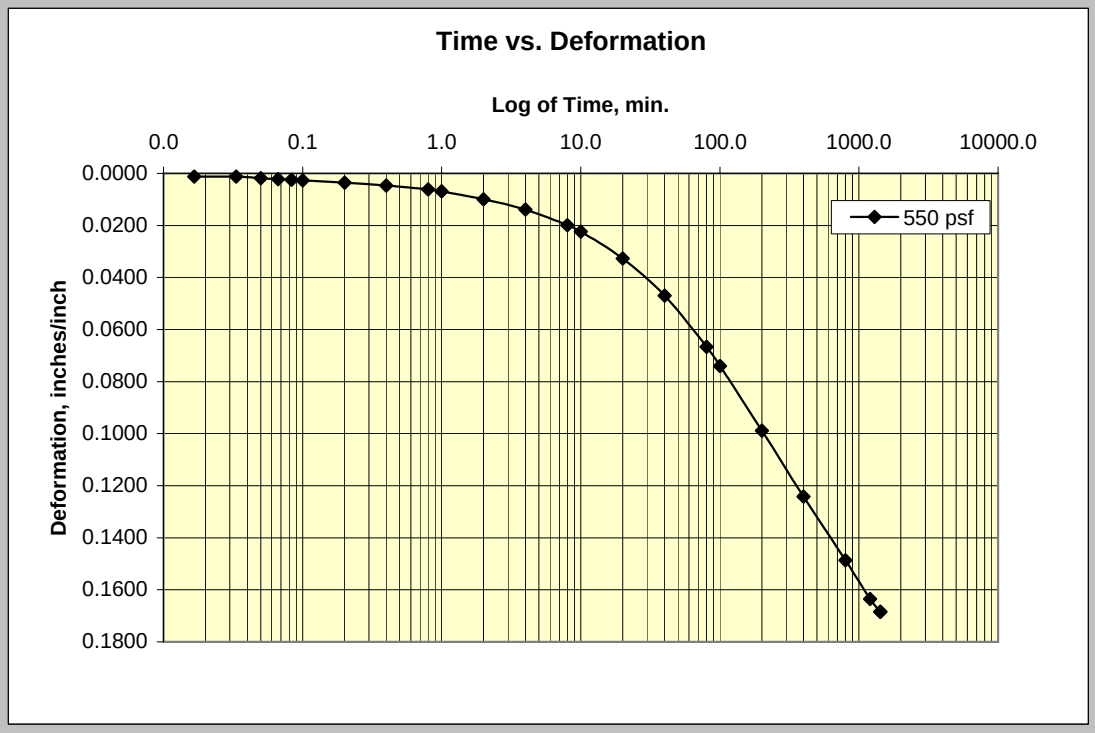
PTS Laboratories

Project Navigator
PTS File No: 34339

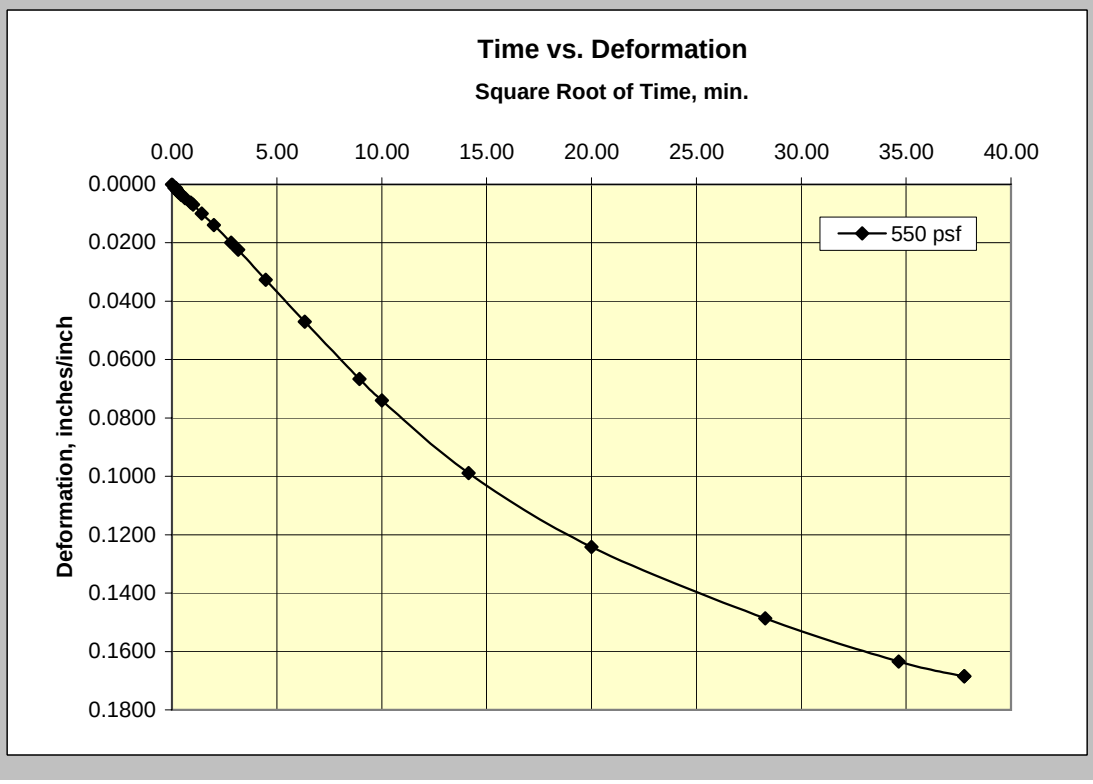
Sample ID: PNL-4B

Load 4

550 PSF



550 PSF



Analysis performed by CTL

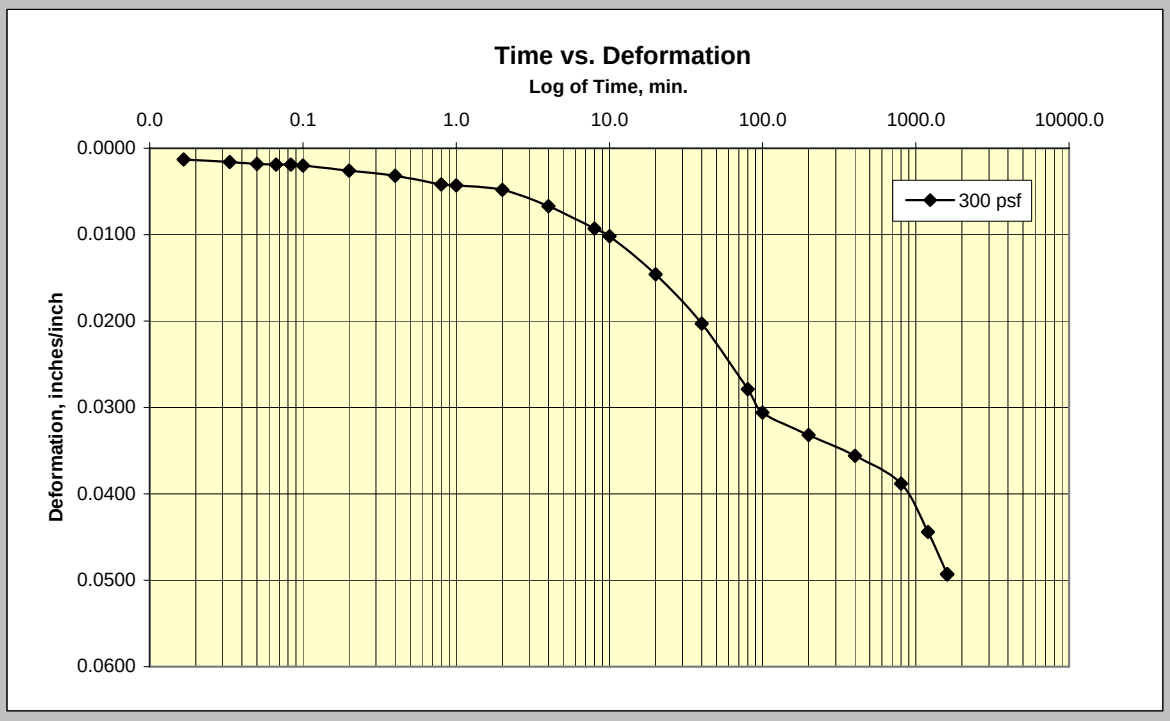
PTS Laboratories

Project Navigator
PTS File No: 34339

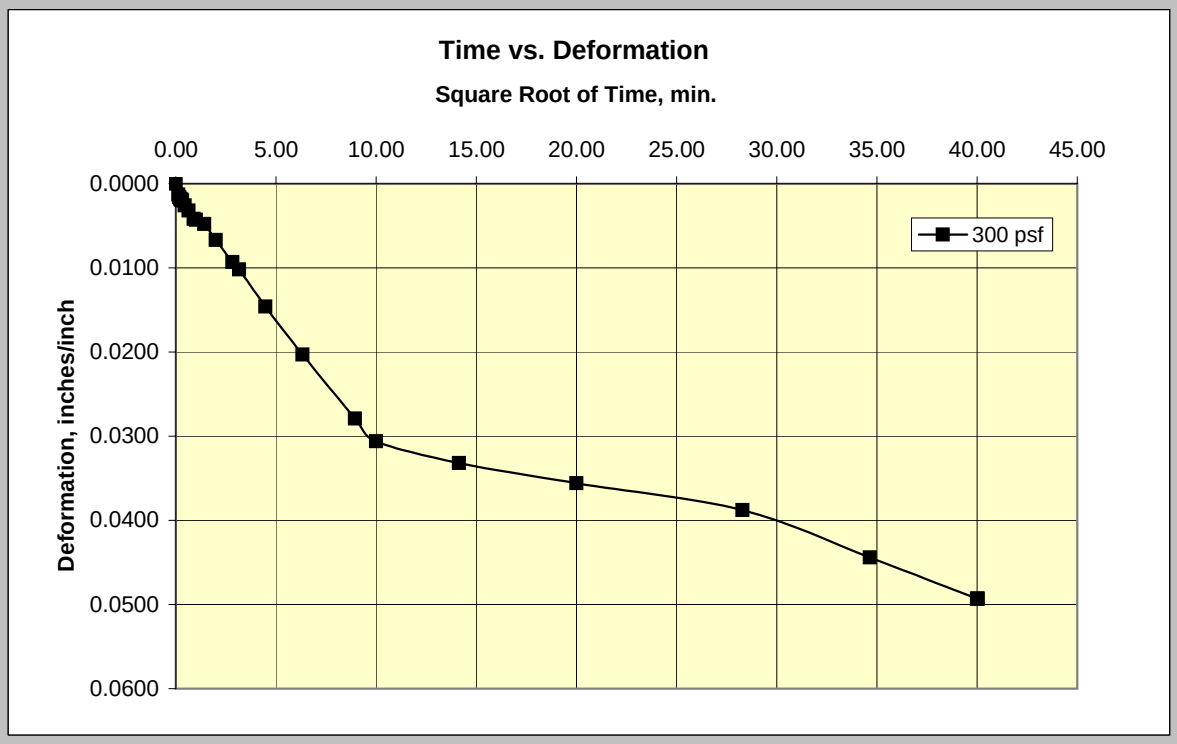
Sample ID: PNL-4B

Load 3

300 PSF



300 PSF



Analysis performed by CTL

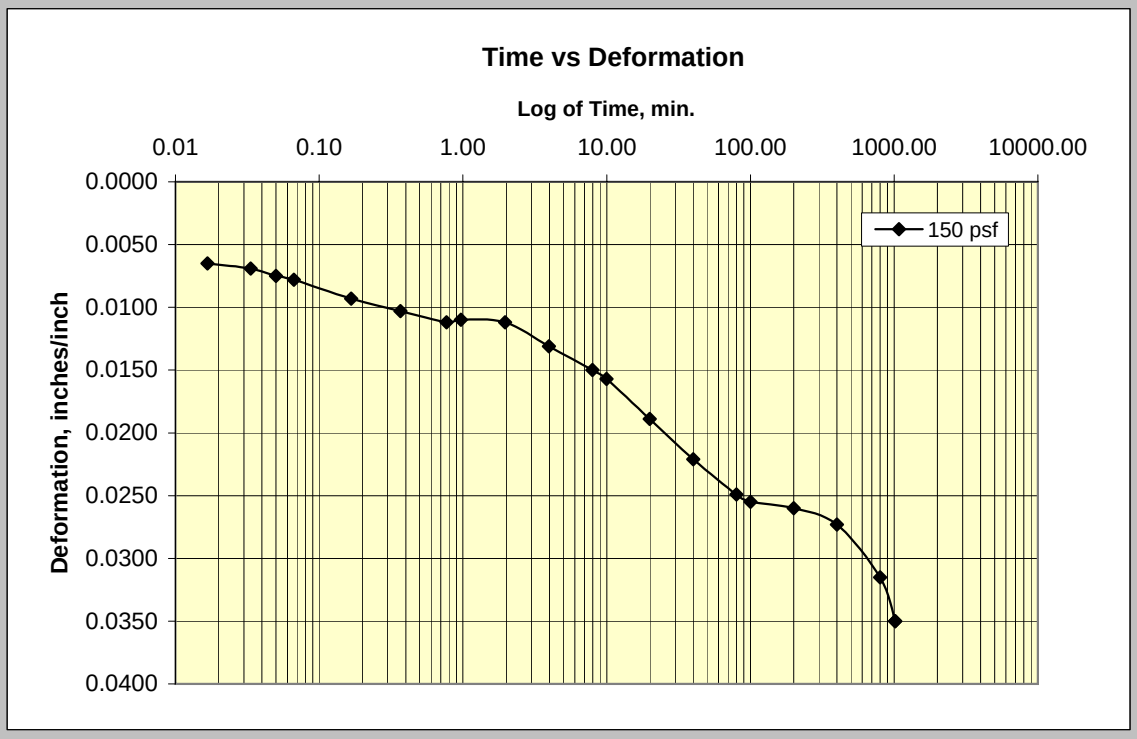
PTS Laboratories

Project Navigator
PTS File No: 34339

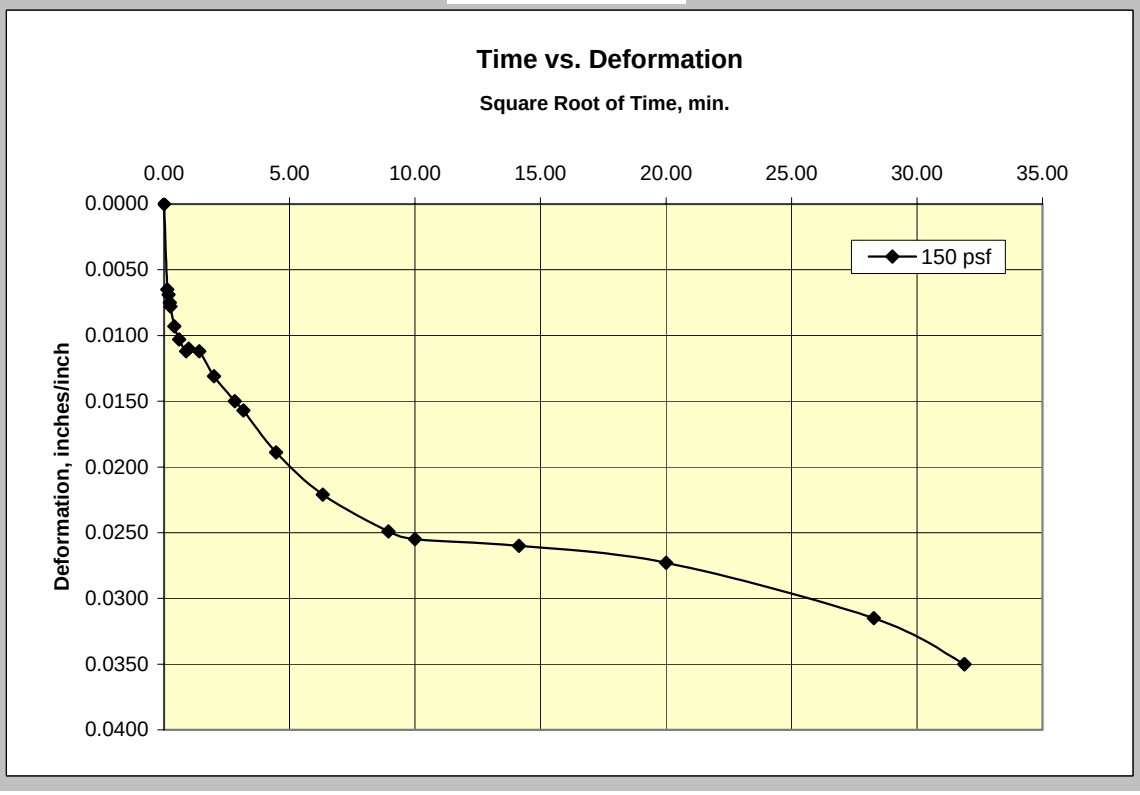
Sample ID: PNL-4B

Load 2

150 PSF



150 PSF



Analysis performed by CTL

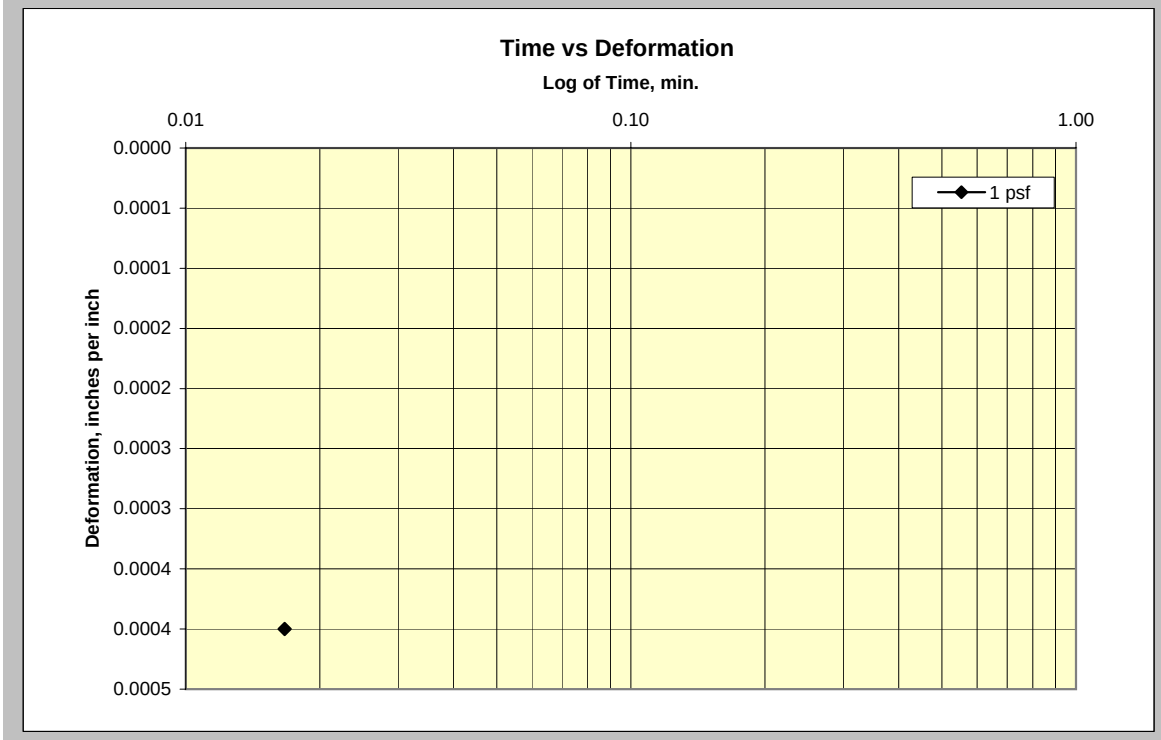
PTS Laboratories

Project Navigator
PTS File No: 34339

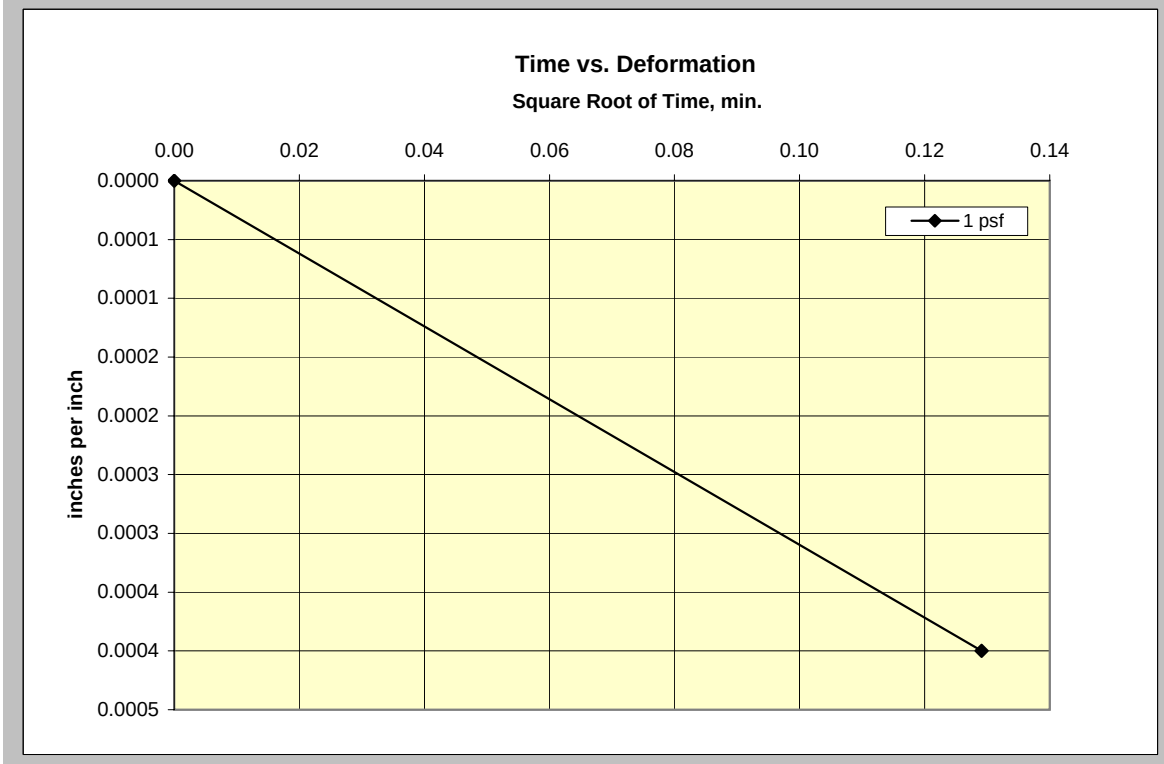
Sample ID: PNL-4B

Load 1

1 PSF



1 PSF

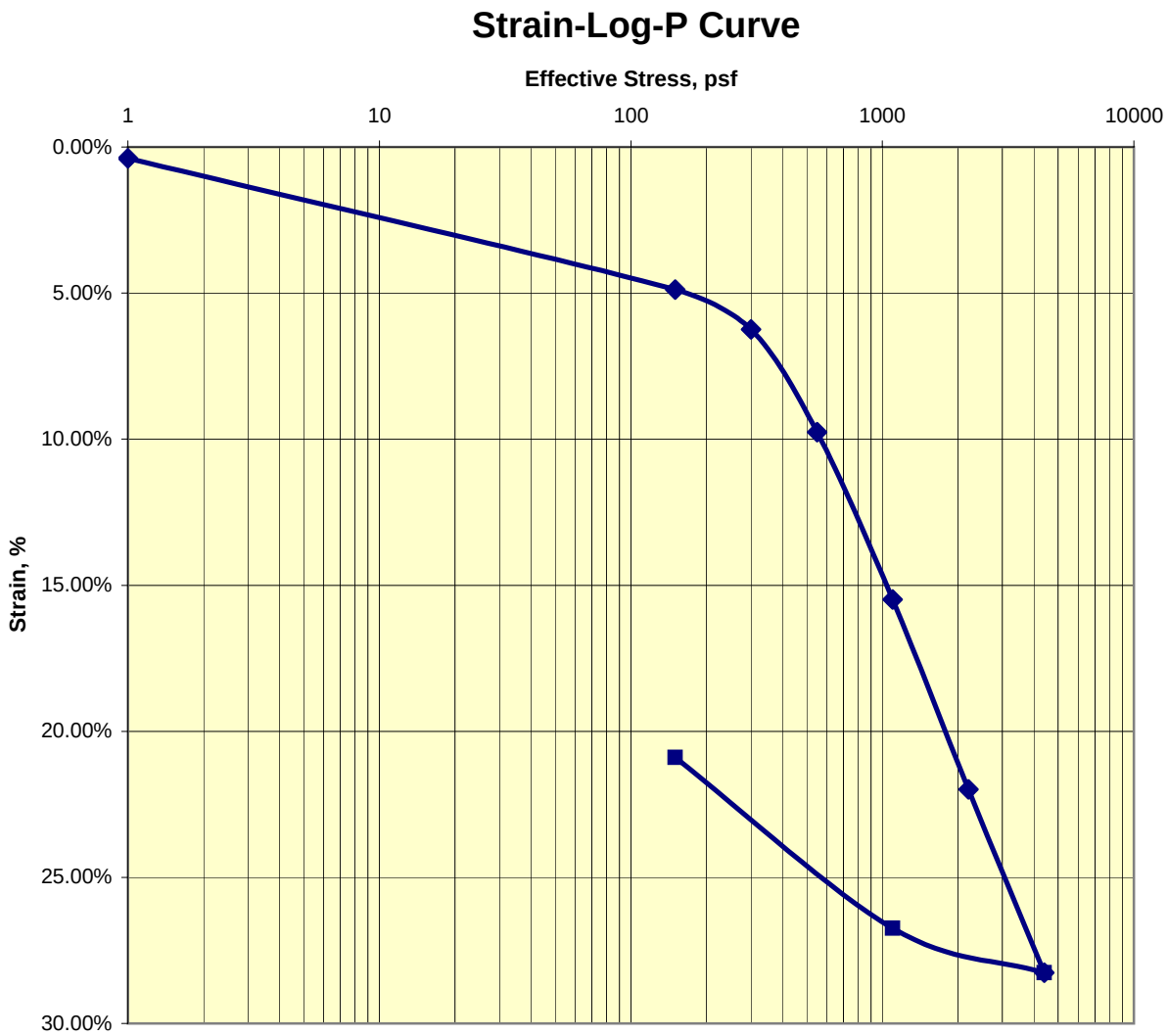


Analysis performed by CTL

Consolidation Test

ASTM D2435

Job No.:	417-012a	**Boring:**		**Run By:**	MD
Client:	PTS Laboratories	**Sample:**	PNL-5A	**Reduced:**	DC
Project:	Ascon Landfill Site - 34339	**Depth, ft.:**		**Checked:**	DC
Soil Type:	Dark Gray Mottled Gray CLAY with oil			**Date:**	8/25/2004



Ass. Gs = 2.7	**Initial**	**Final**
Moisture %:	67.1	46.4
Density, pcf:	47.1	74.9
Void Ratio:	2.577	1.251
% Saturation:	70.3	100

Remarks: The standard first load of 150 psf was too heavy for this material. The curve was forced to start at 1 psf to help define the preconsolidation curve.

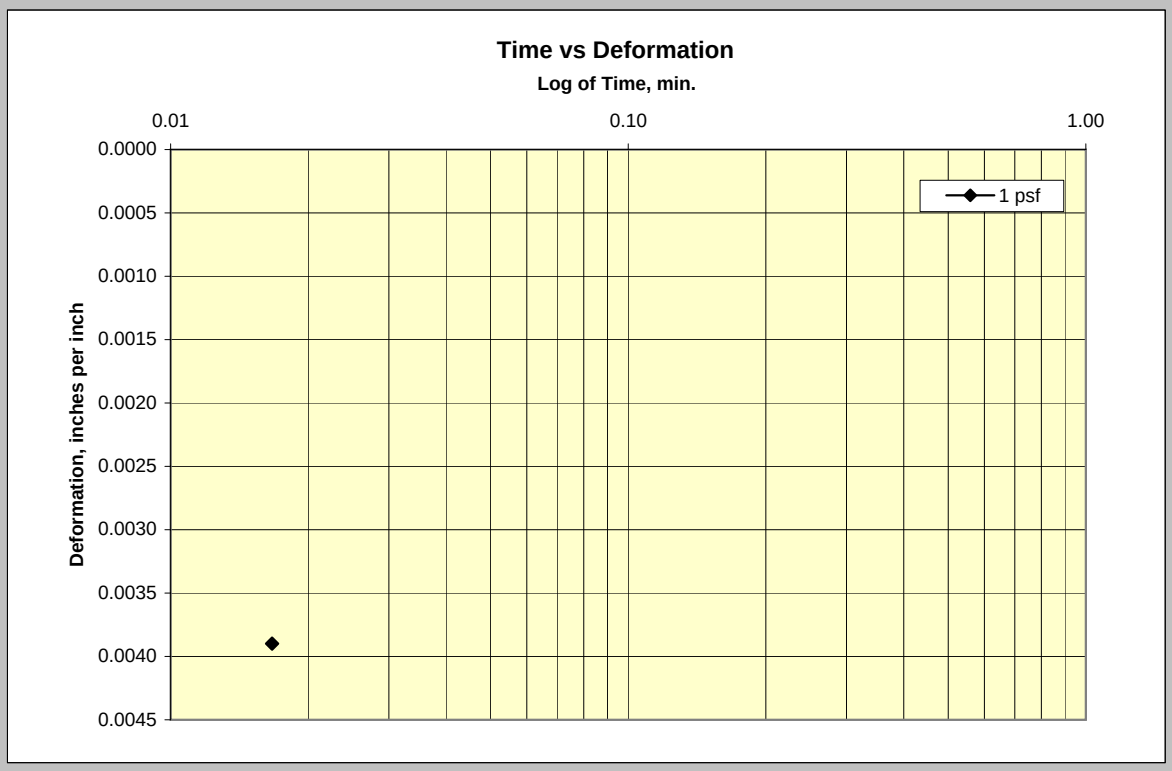
PTS Laboratories

Project Navigator
PTS File No: 34339

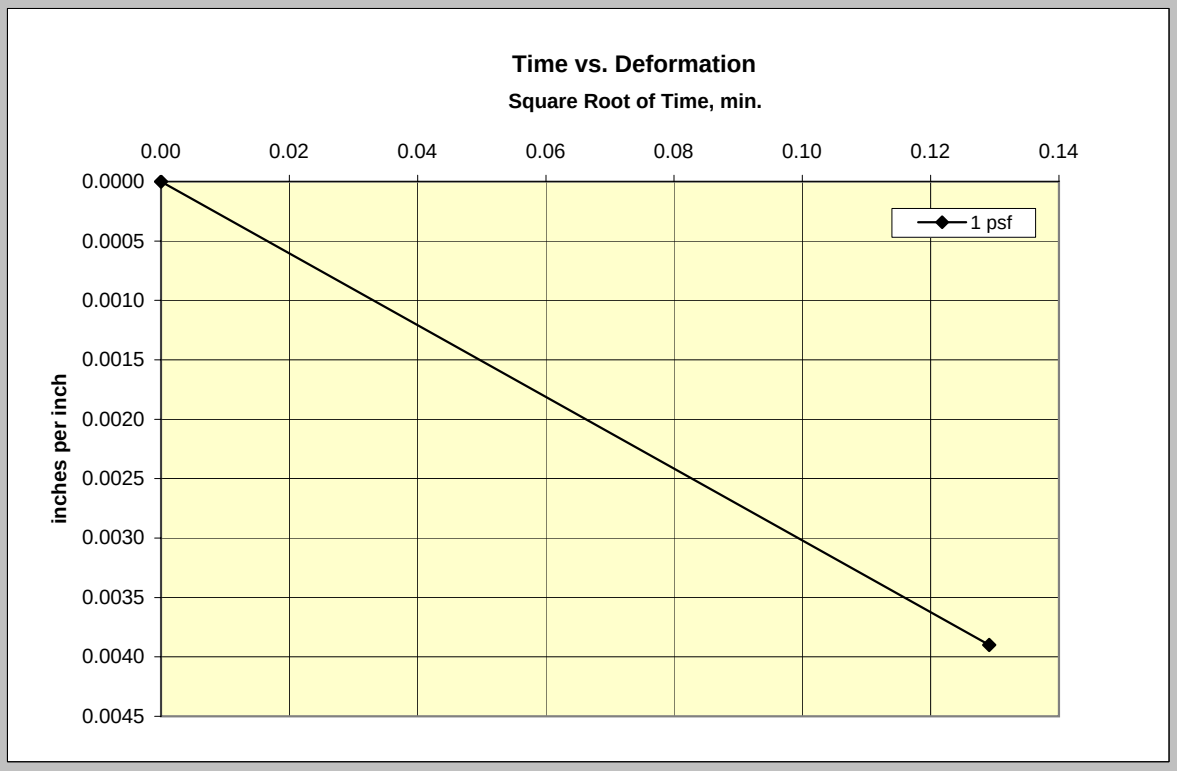
Sample ID: PNL-5A

Load 1

1 PSF



1 PSF



Analysis performed by CTL

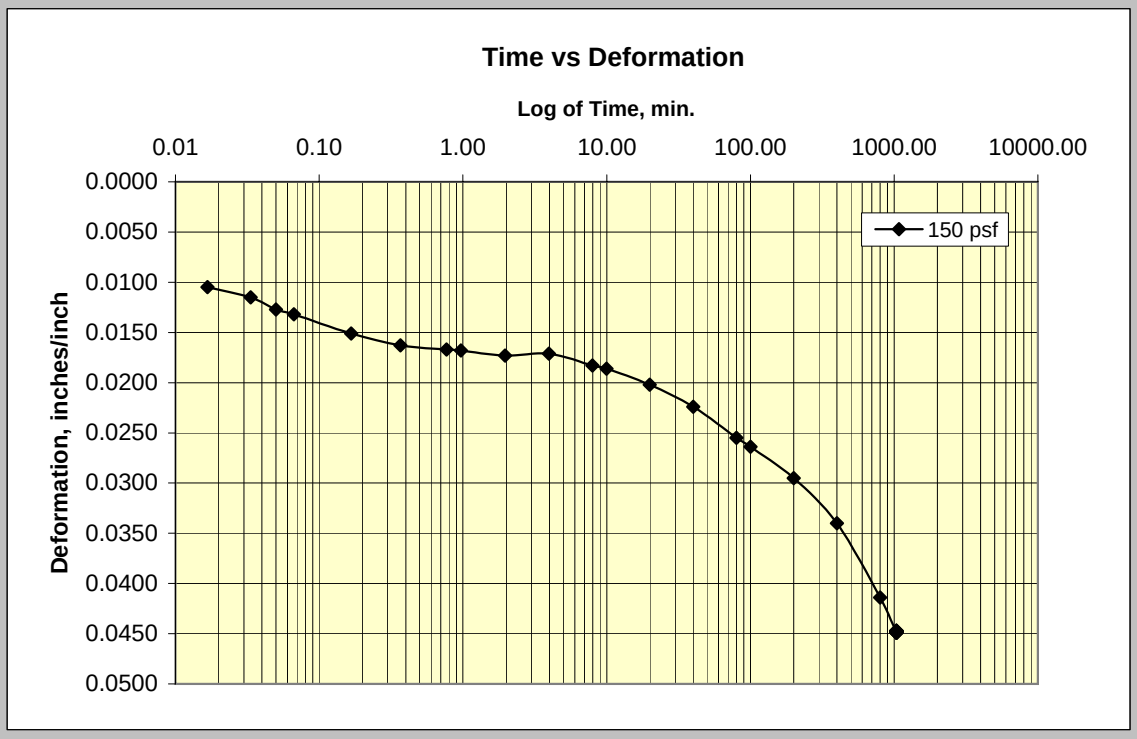
PTS Laboratories

Project Navigator
PTS File No: 34339

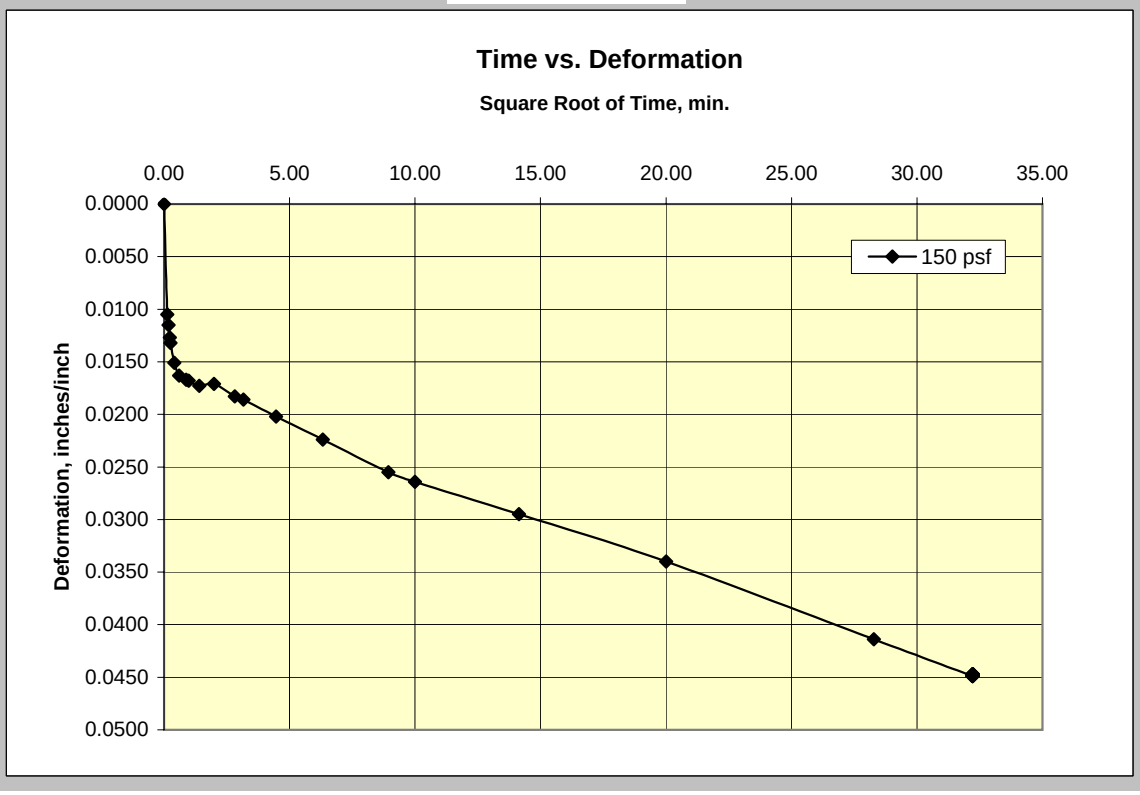
Sample ID: PNL-5A

Load 2

150 PSF



150 PSF



Analysis performed by CTL

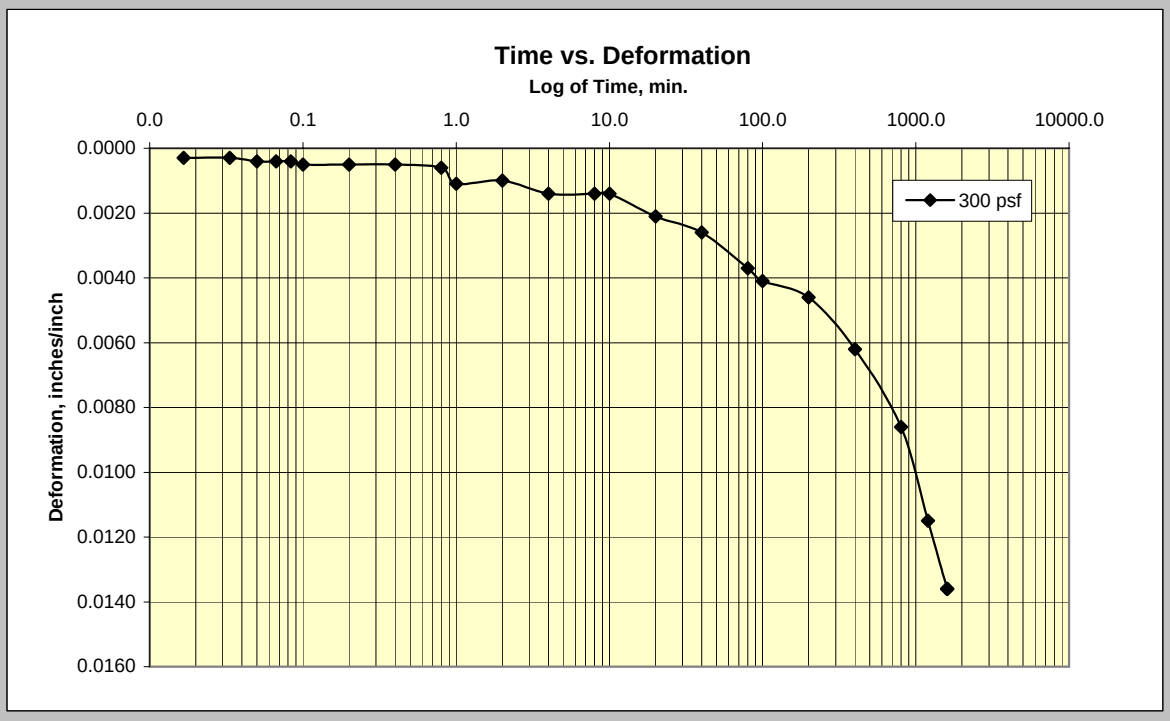
PTS Laboratories

Project Navigator
PTS File No: 34339

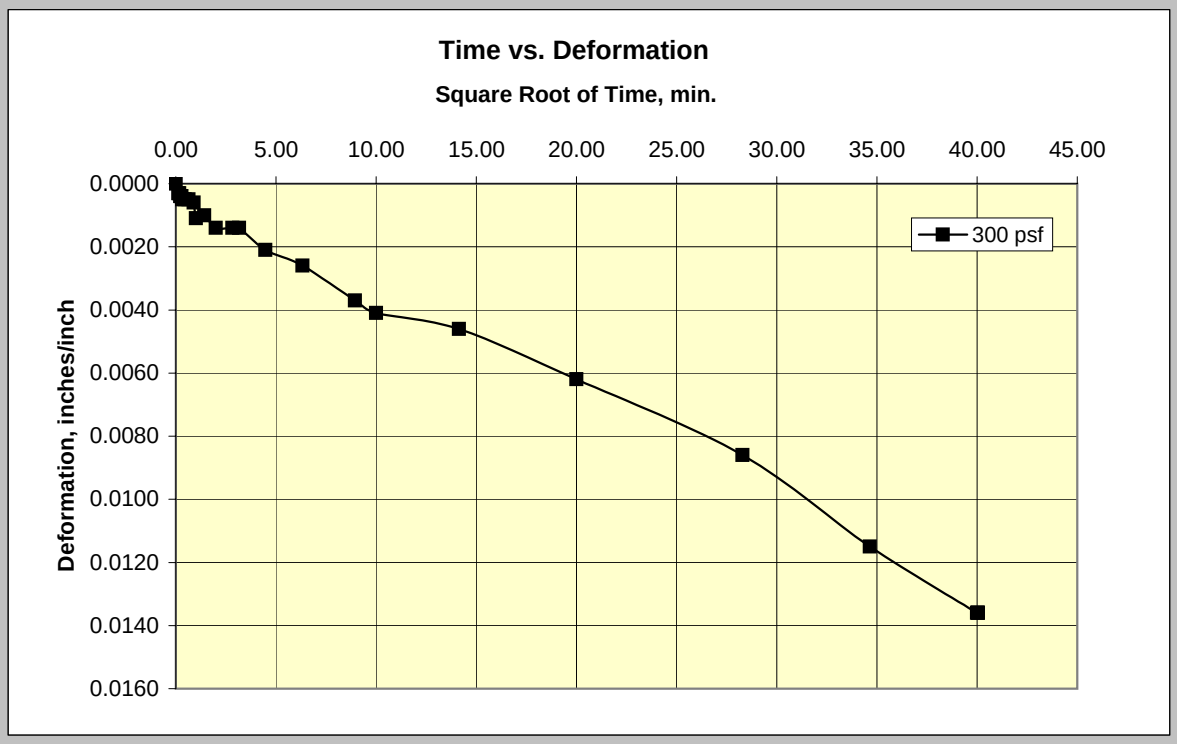
Sample ID: PNL-5A

Load 3

300 PSF



300 PSF



Analysis performed by CTL

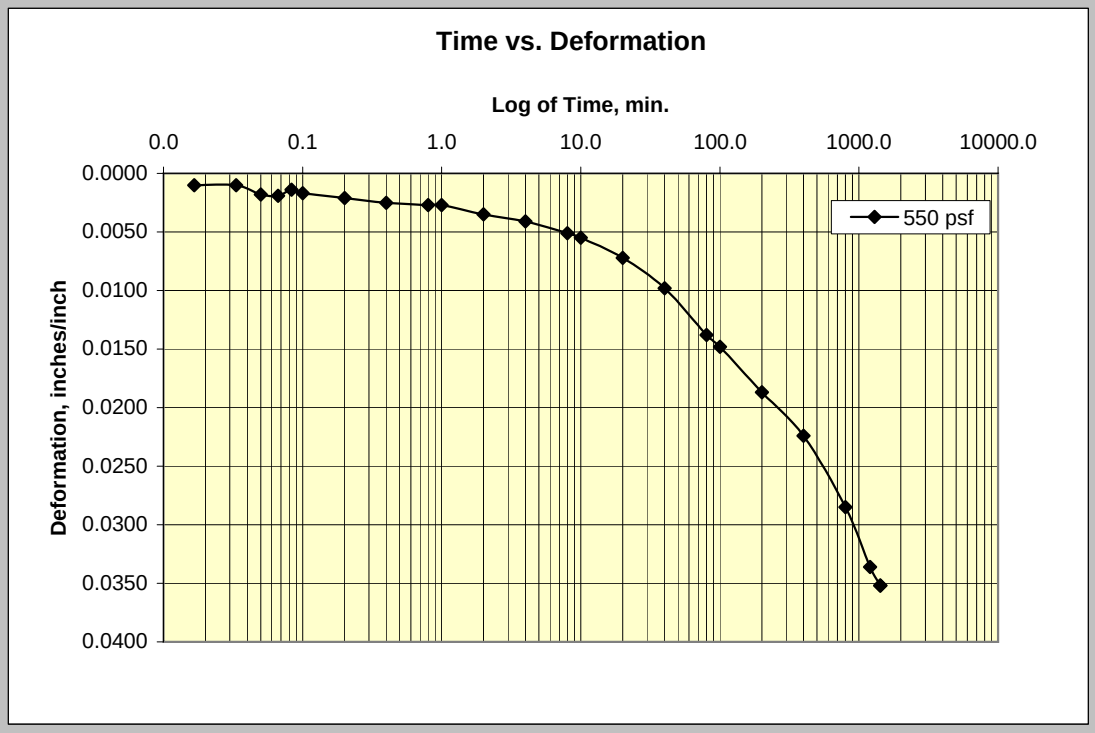
PTS Laboratories

Project Navigator
PTS File No: 34339

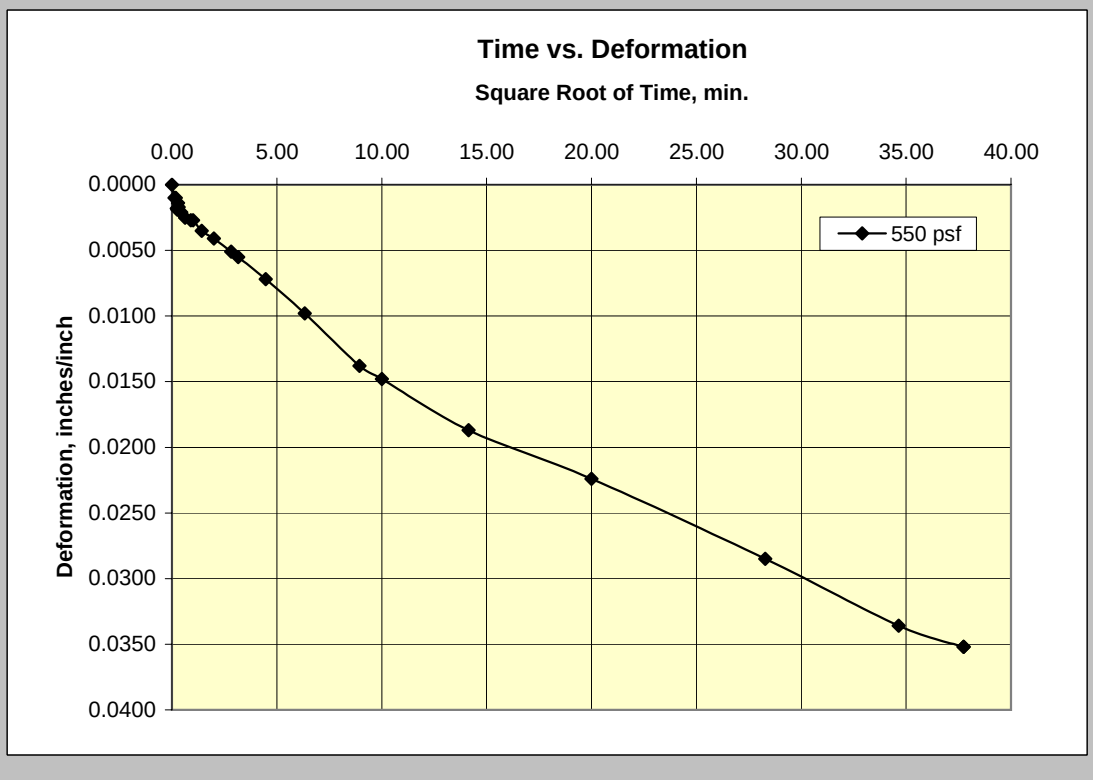
Sample ID: PNL-5A

Load 4

550 PSF



550 PSF



Analysis performed by CTL

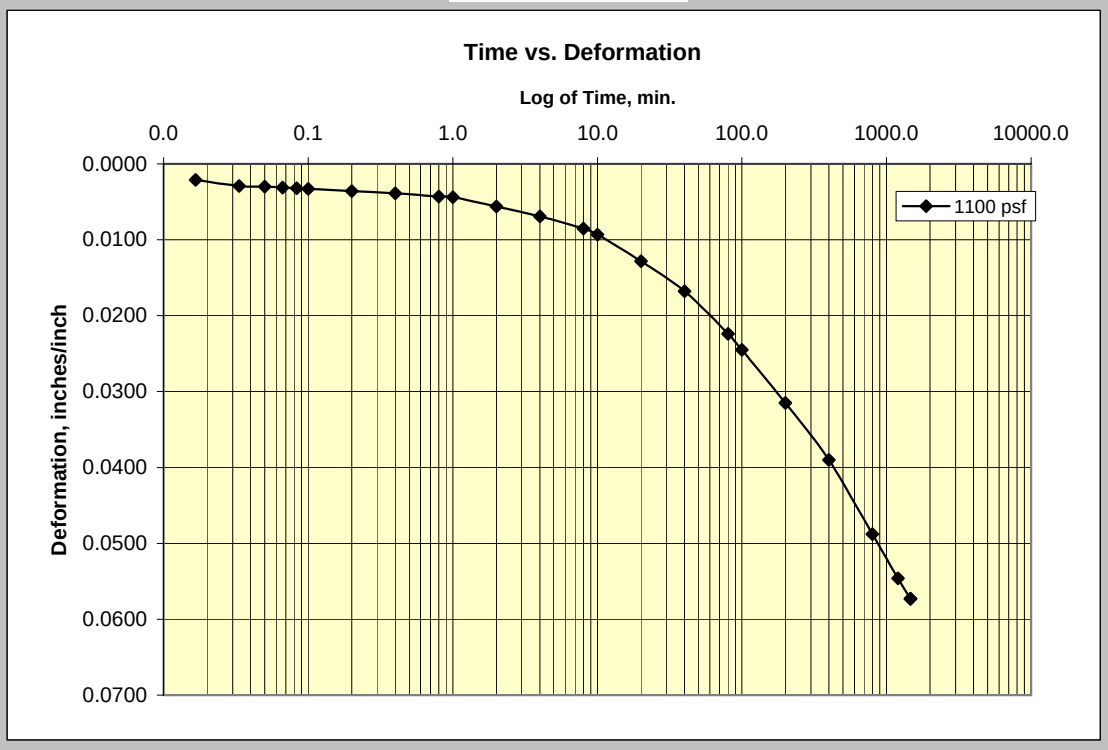
PTS Laboratories

Project Navigator
PTS File No: 34339

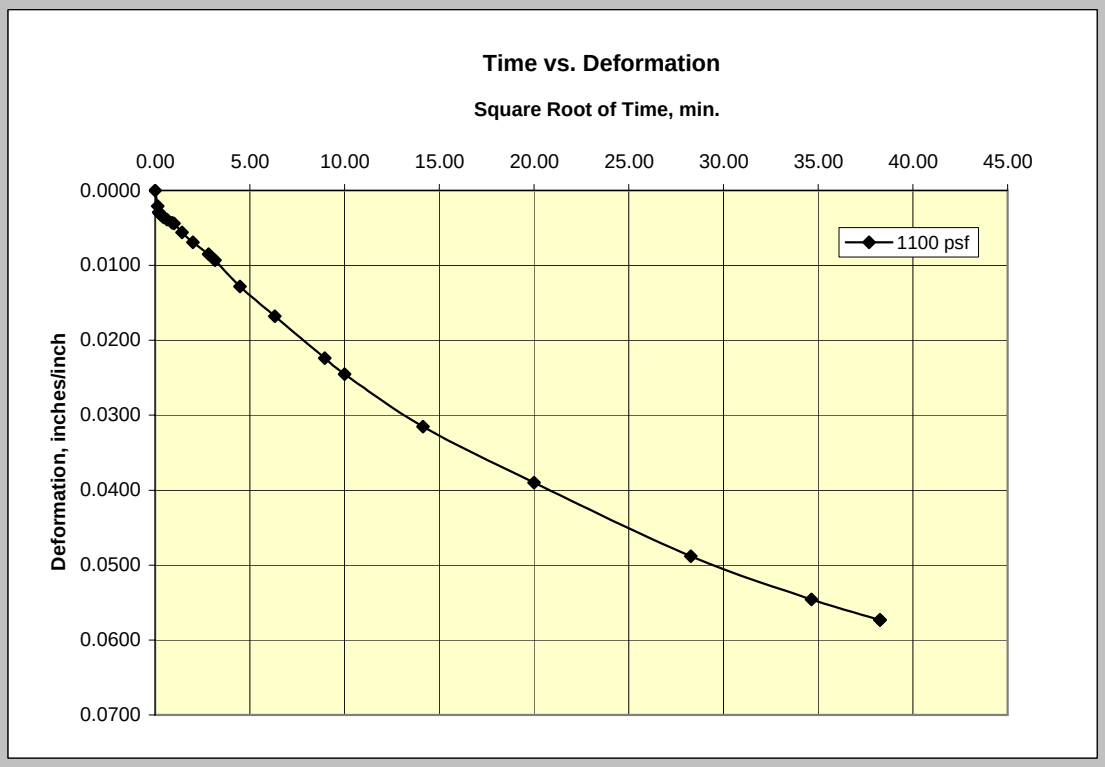
Sample ID: PNL-5A

Load 5

1100 PSF



1100 PSF



Analysis performed by CTL

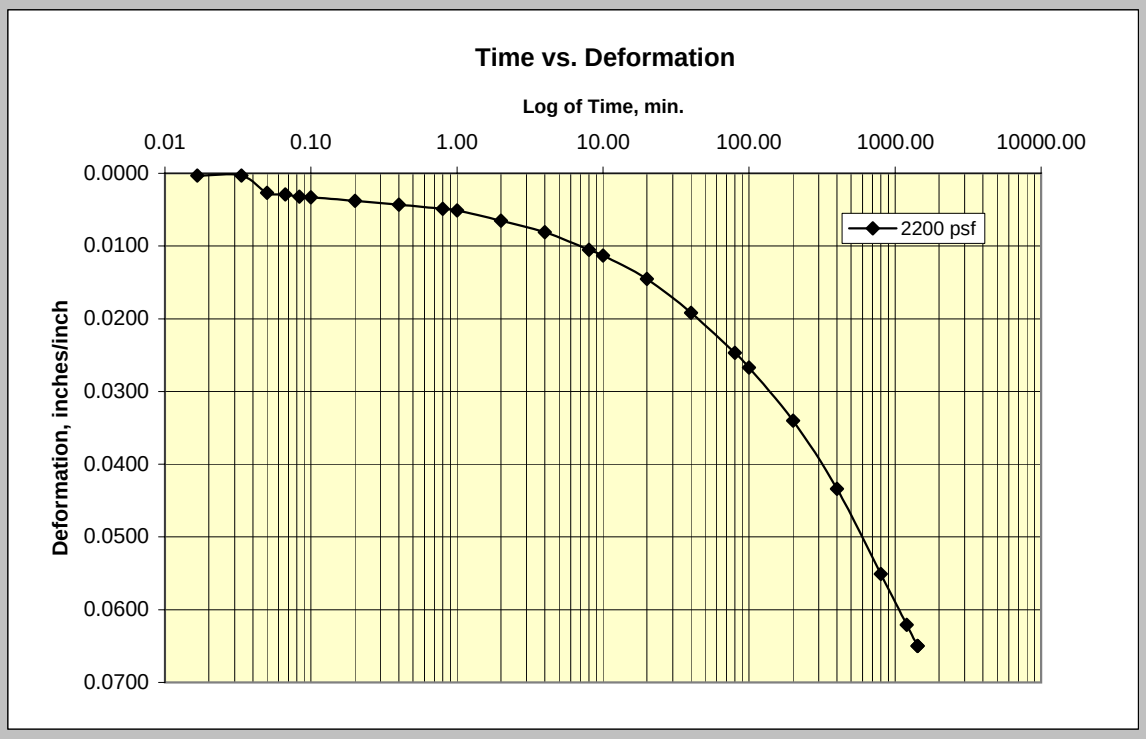
PTS Laboratories

Project Navigator
PTS File No: 34339

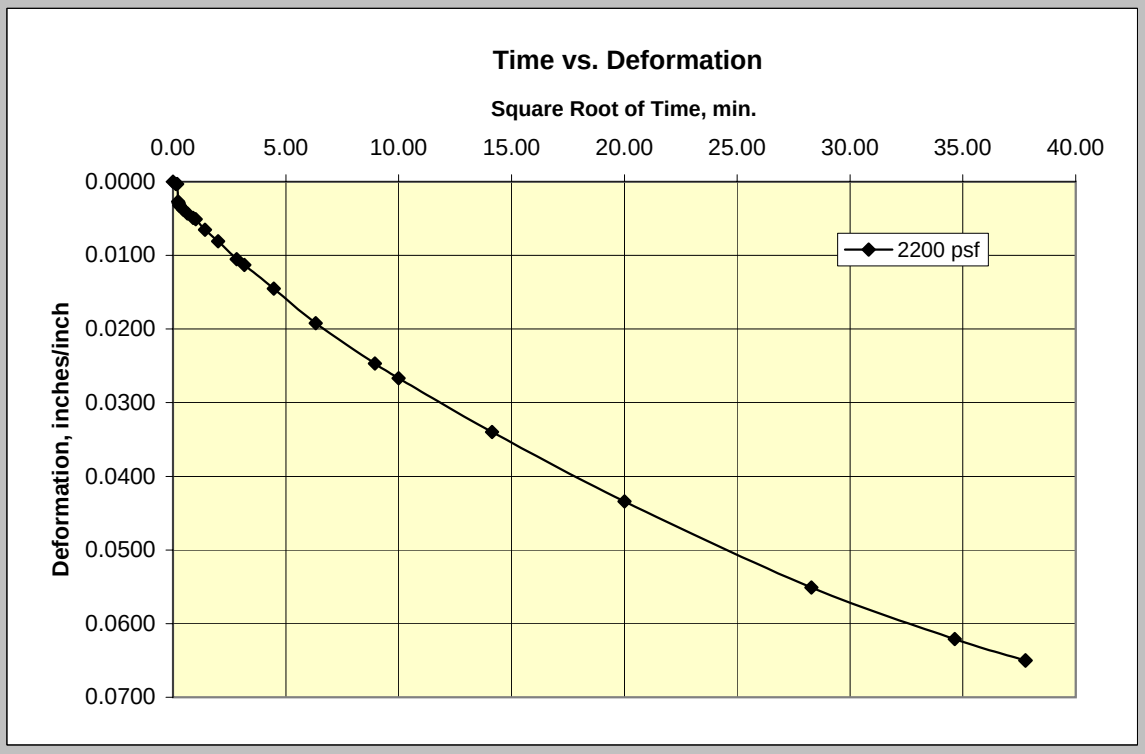
Sample ID: PNL-5A

Load 6

2200 PSF



2200 PSF



Analysis performed by CTL

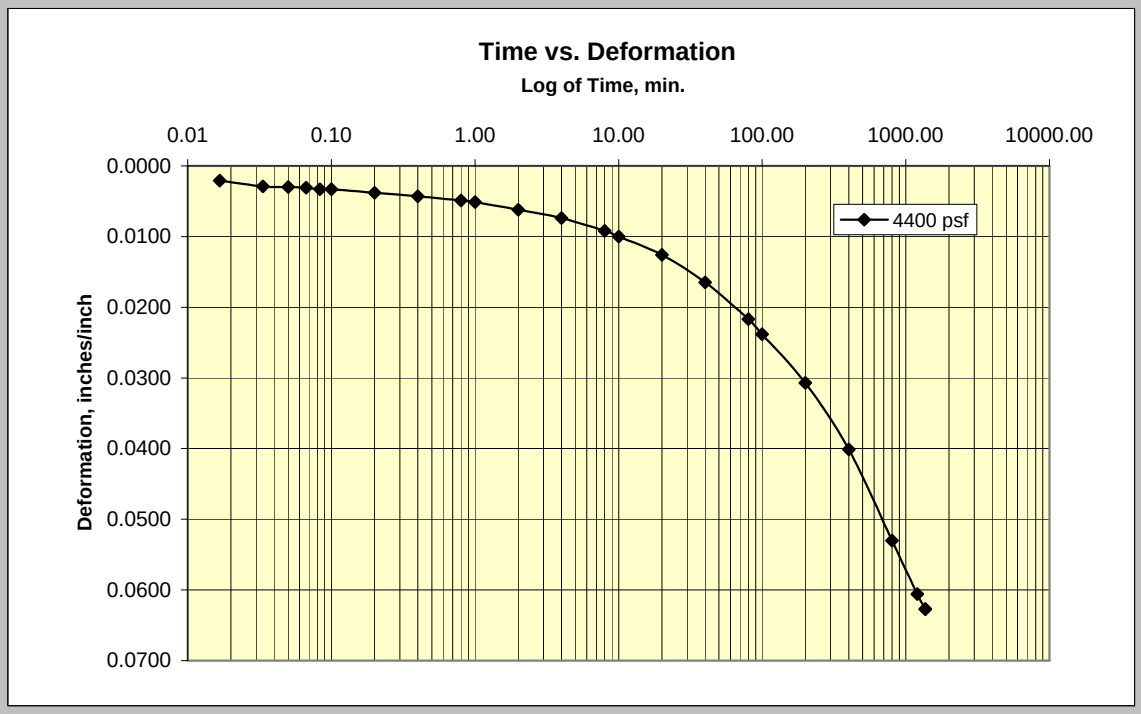
PTS Laboratories

Project Navigator
PTS File No: 34339

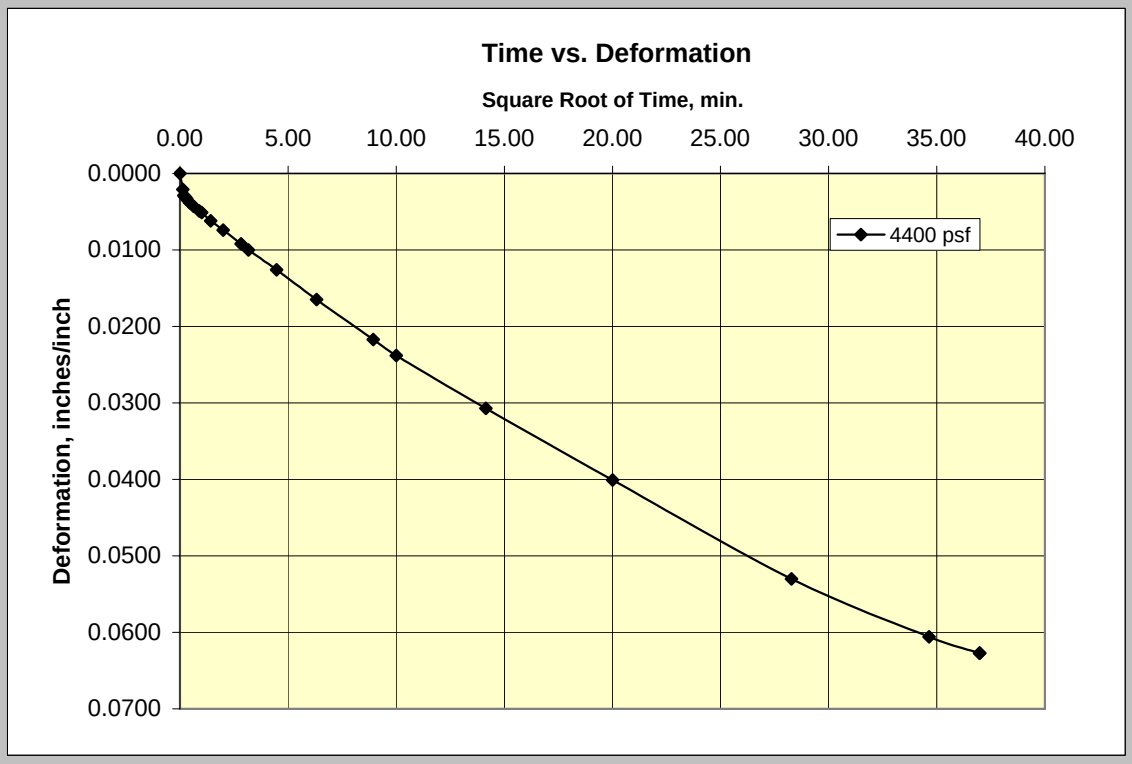
Sample ID: PNL-5A

Load 7

4400 PSF



4400 PSF

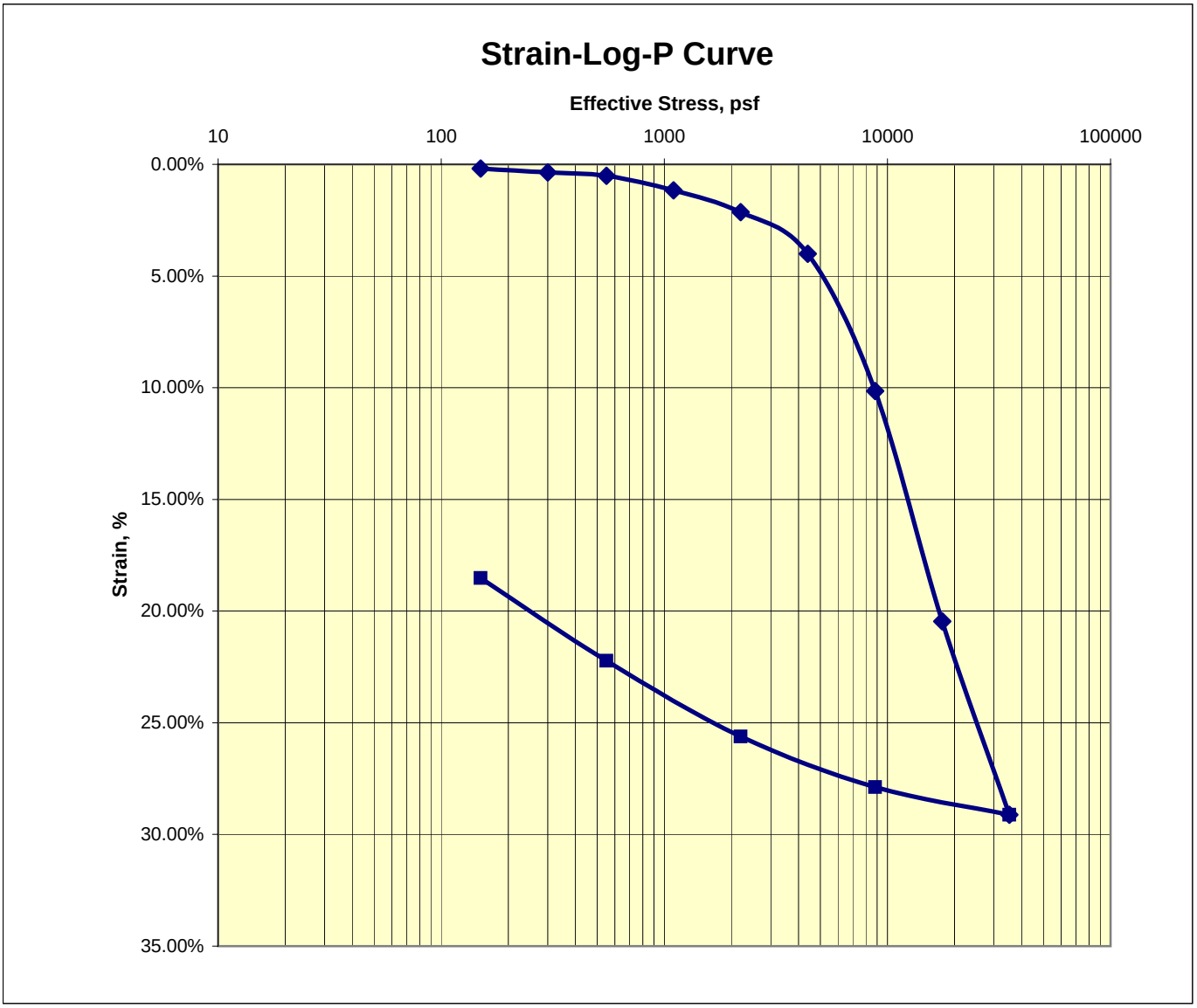


Analysis performed by CTL

Consolidation Test

ASTM D2435

Job No.:	417-012d	**Boring:**		**Run By:**	MD
Client:	PTS	**Sample:**	PNL-23-23.5-26	**Reduced:**	DC
Project:	34339	**Depth, ft.:**		**Checked:**	DC
Soil Type:	Brown Mottled Dark Gray SILT			**Date:**	8/28/2004



Ass. Gs = 2.7	Initial	Final
Moisture %:	79.7	59.0
Density, pcf:	52.8	65.0
Void Ratio:	2.195	1.592
% Saturation:	98.1	100

Remarks:

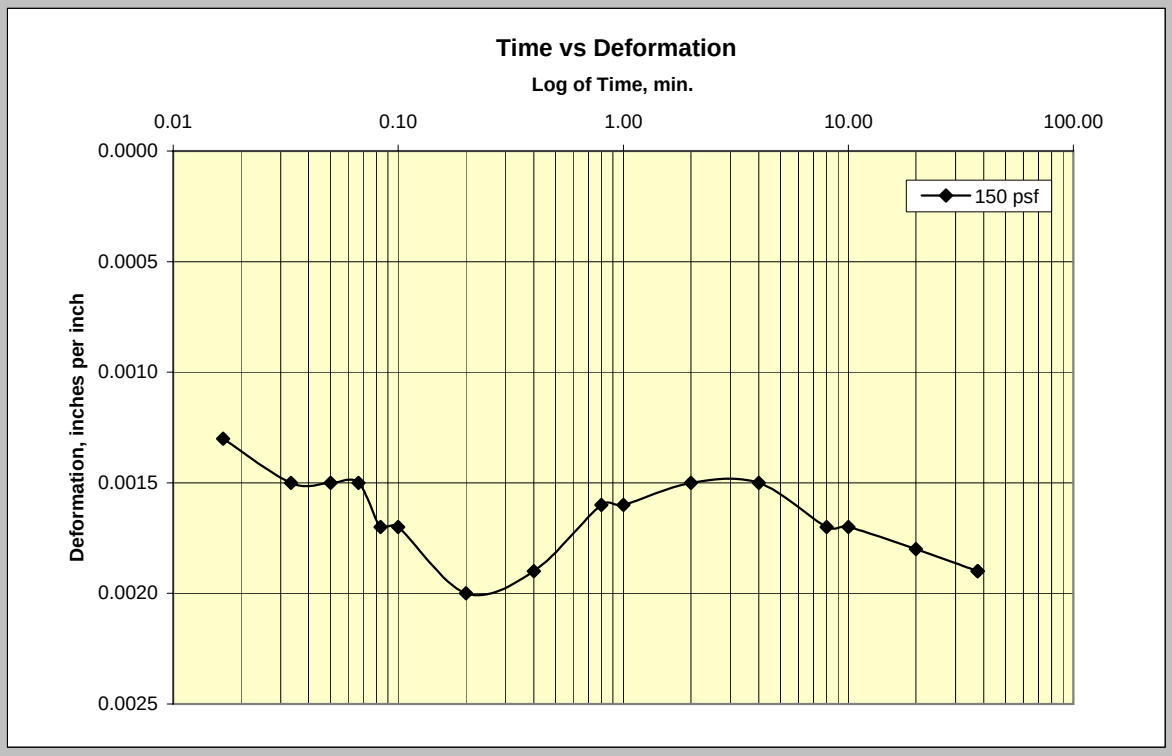
PTS Laboratories

Project Navigator
PTS File No: 34339

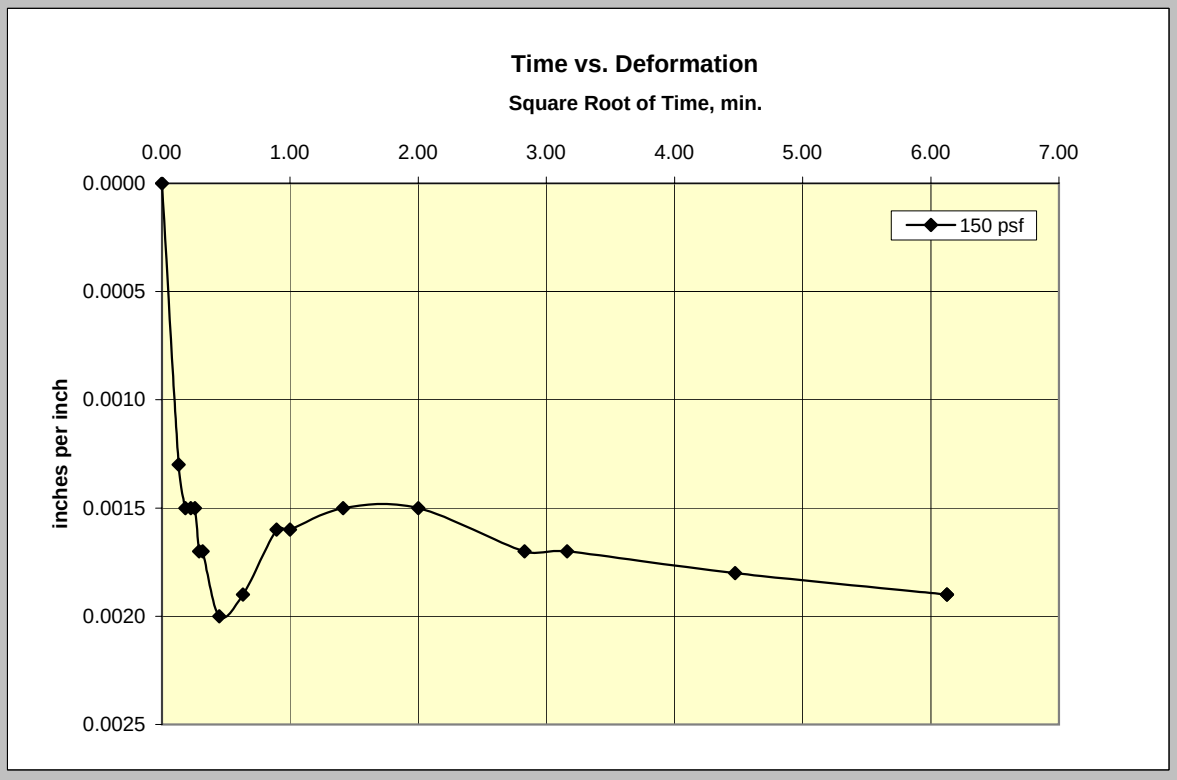
Sample ID: PNL-23-23.5-26

Load 1

150 PSF



150 PSF



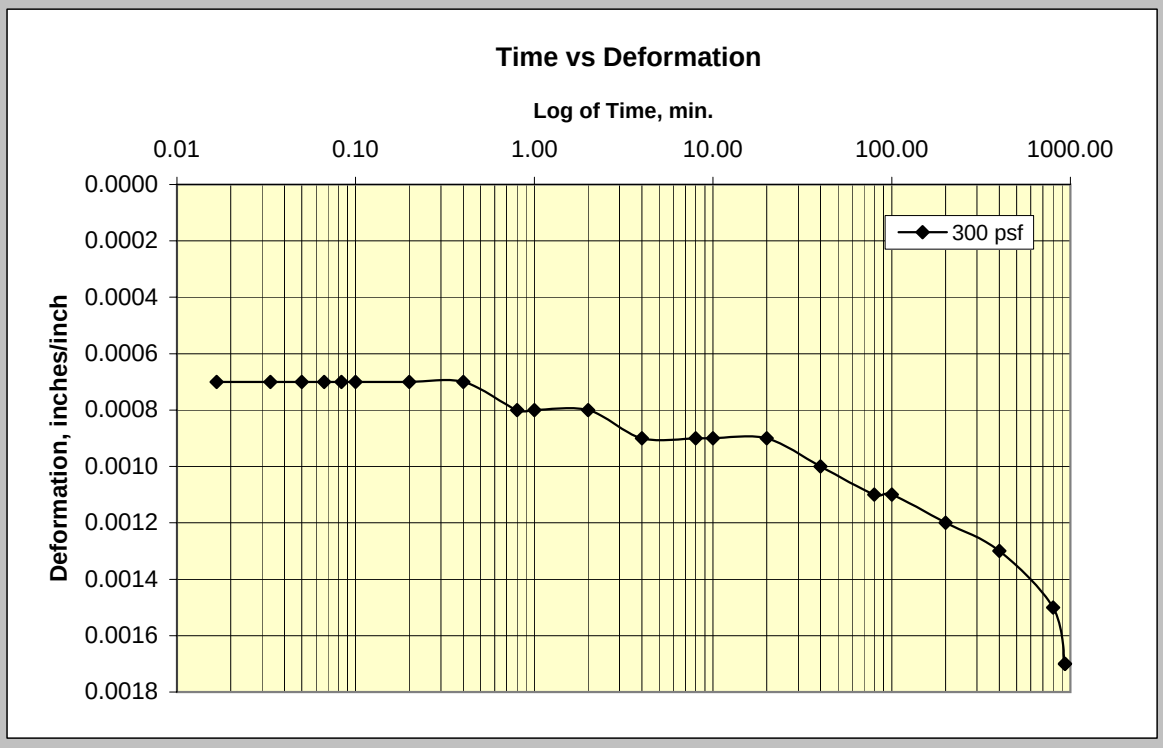
Analysis performed by CTL

PTS Laboratories

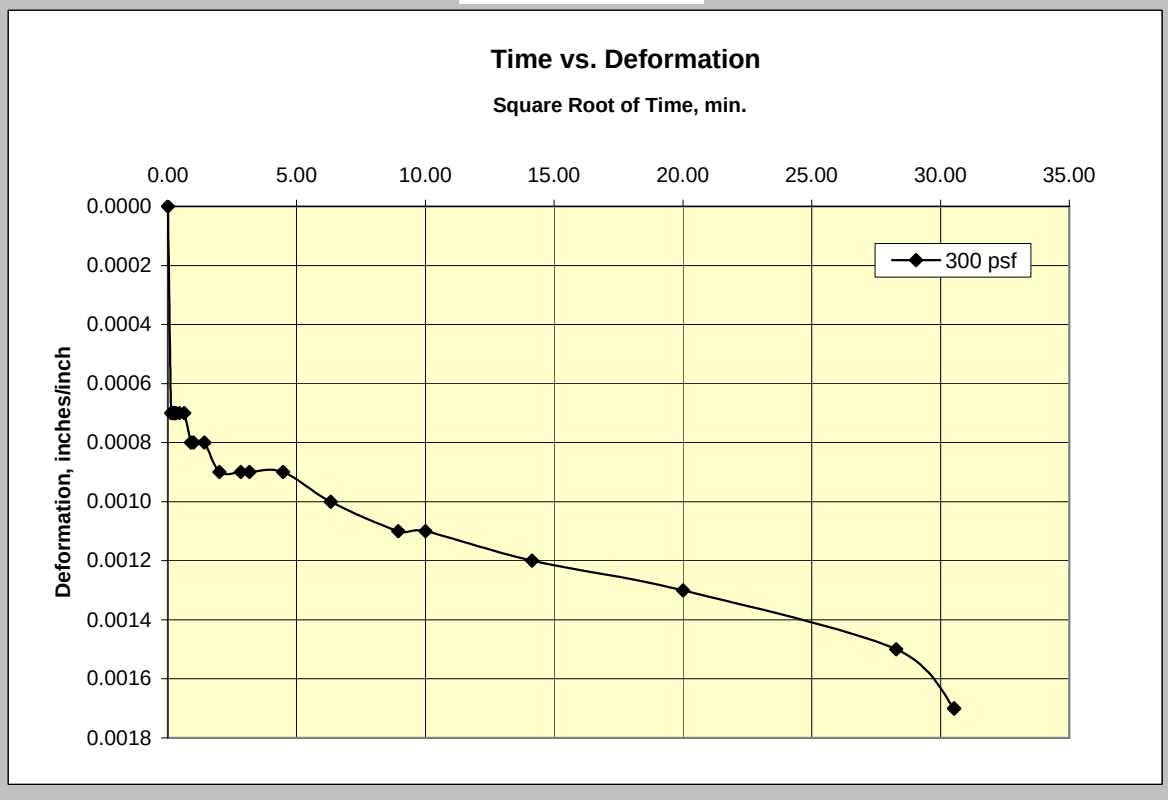
Project Navigator
PTS File No: 34339

Sample ID: PNL-23-23.5-26
Load 2

300 PSF



300 PSF



Analysis performed by CTL

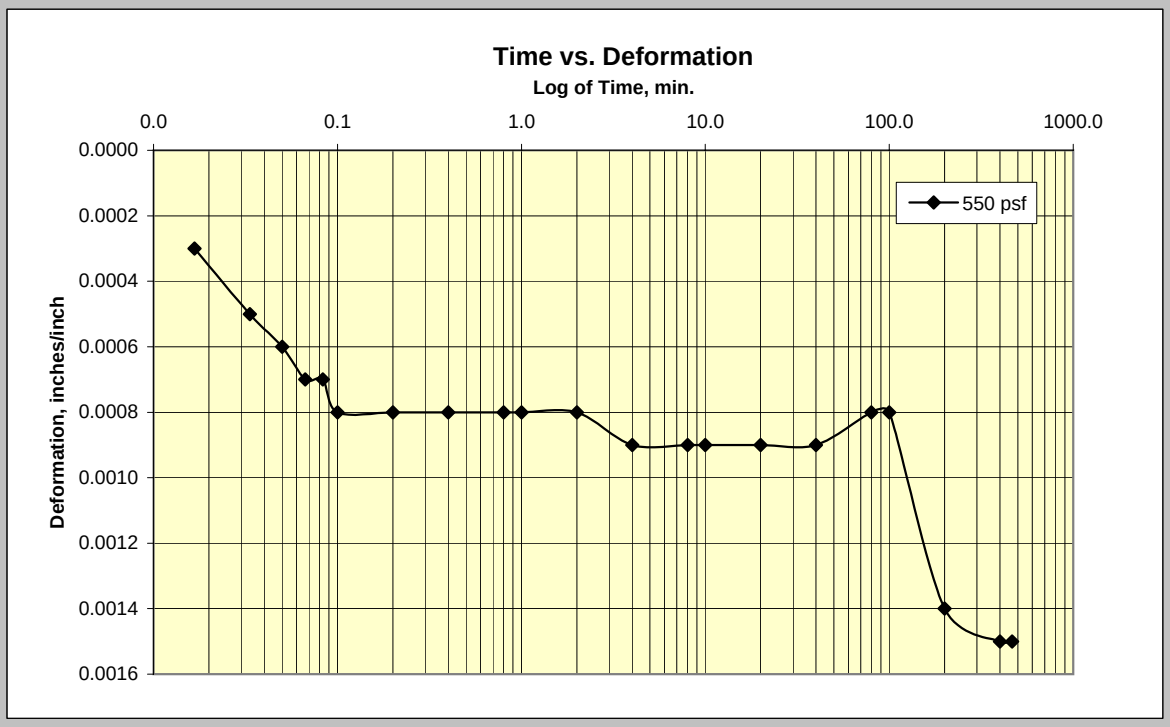
PTS Laboratories

Project Navigator
PTS File No: 34339

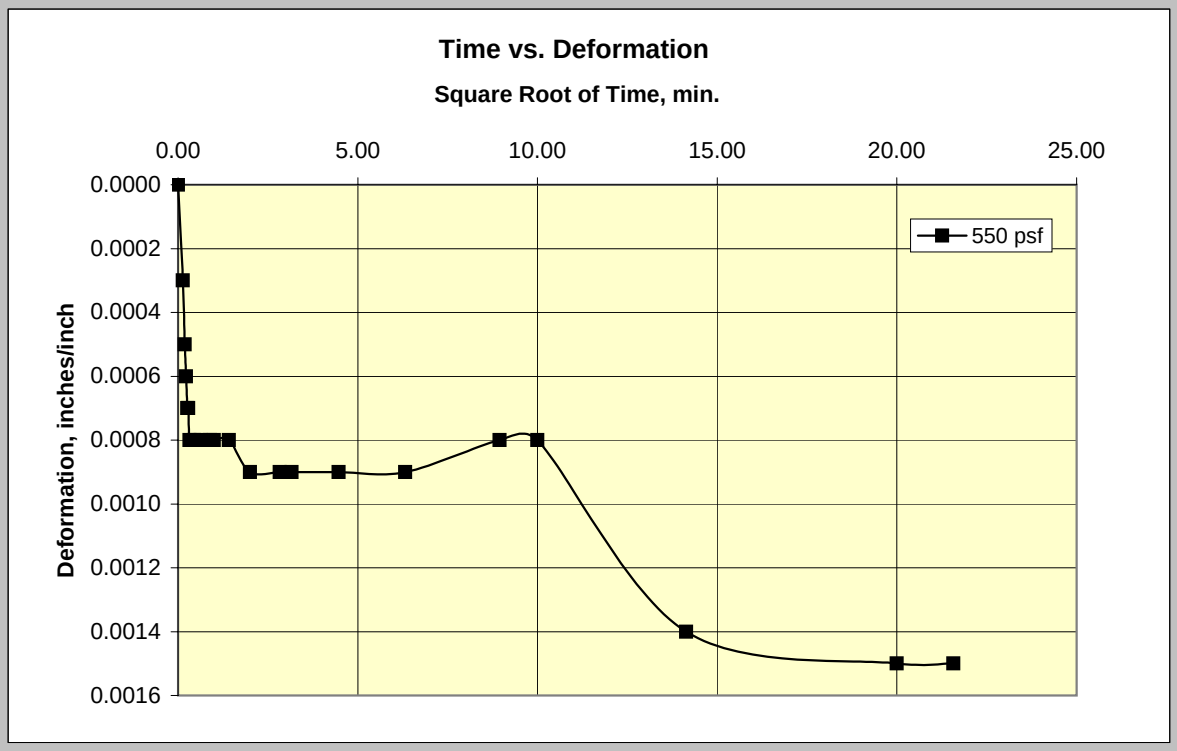
Sample ID: PNL-23-23.5-26

Load 3

550 PSF



550 PSF



Analysis performed by CTL

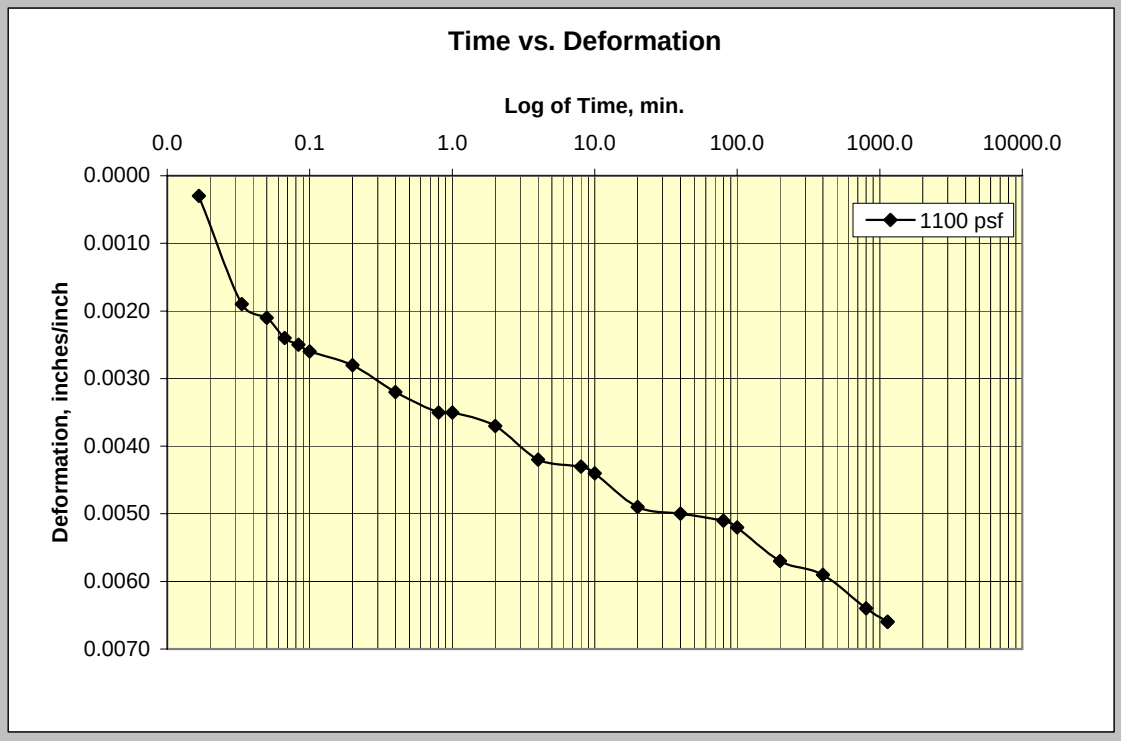
PTS Laboratories

Project Navigator
PTS File No: 34339

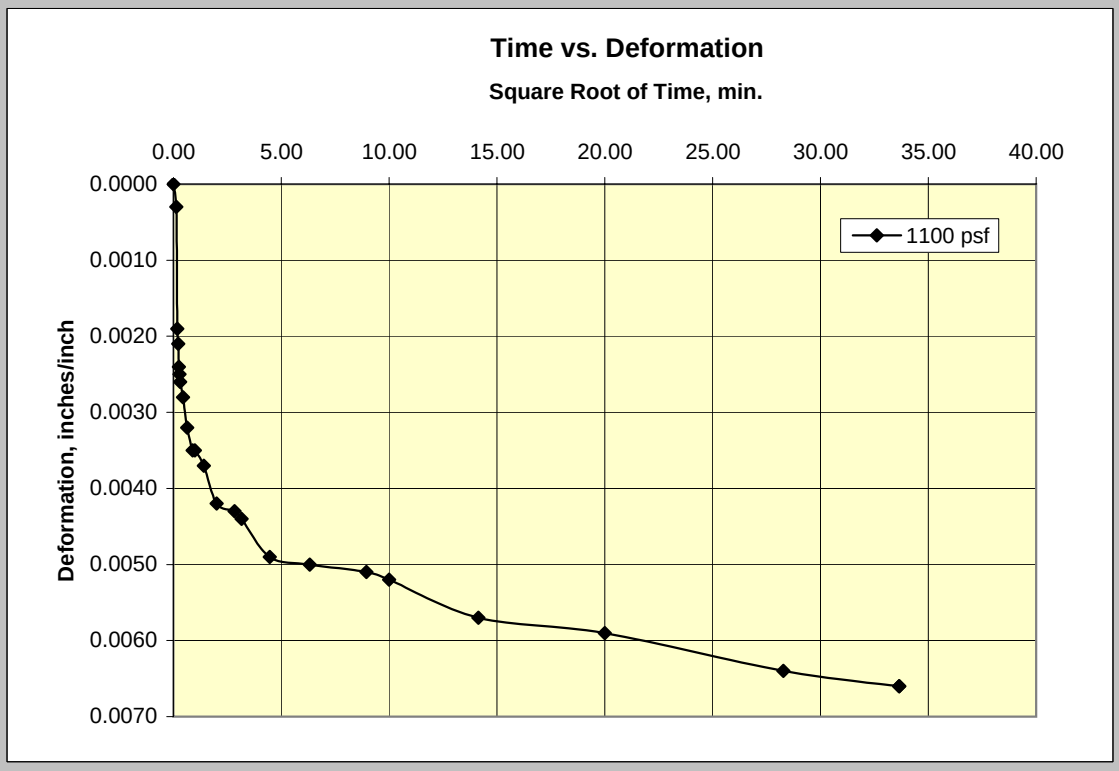
Sample ID: PNL-23-23.5-26

Load 4

1100 PSF



1100 PSF



Analysis performed by CTL

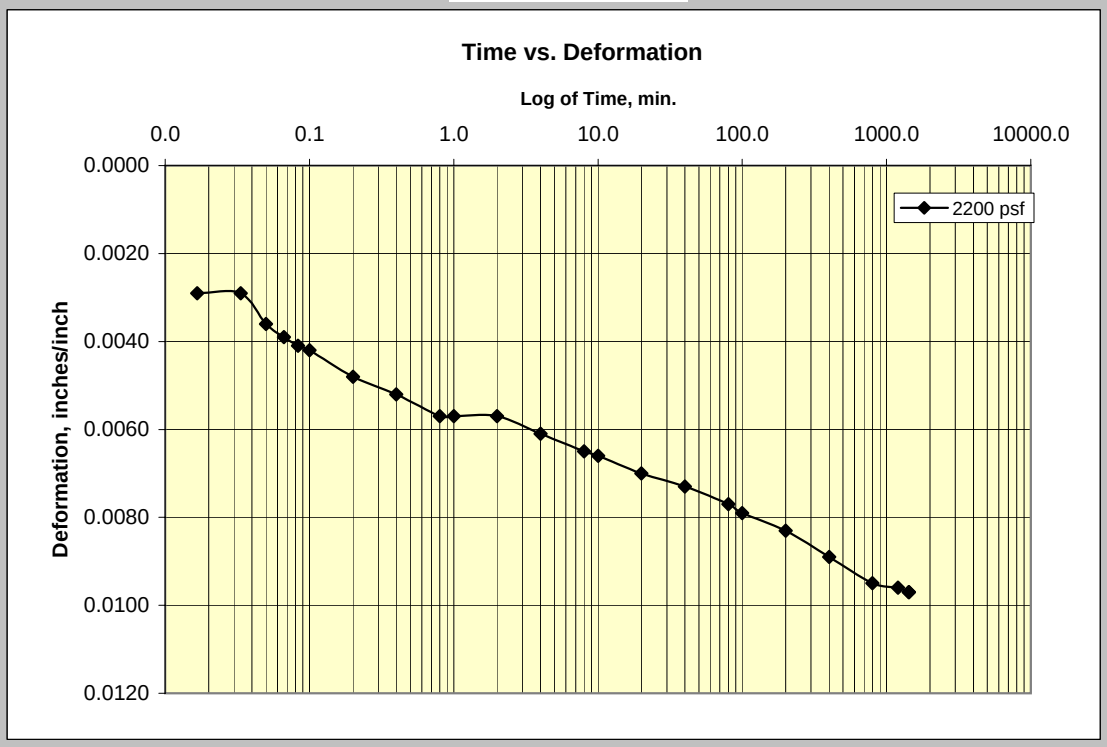
PTS Laboratories

Project Navigator
PTS File No: 34339

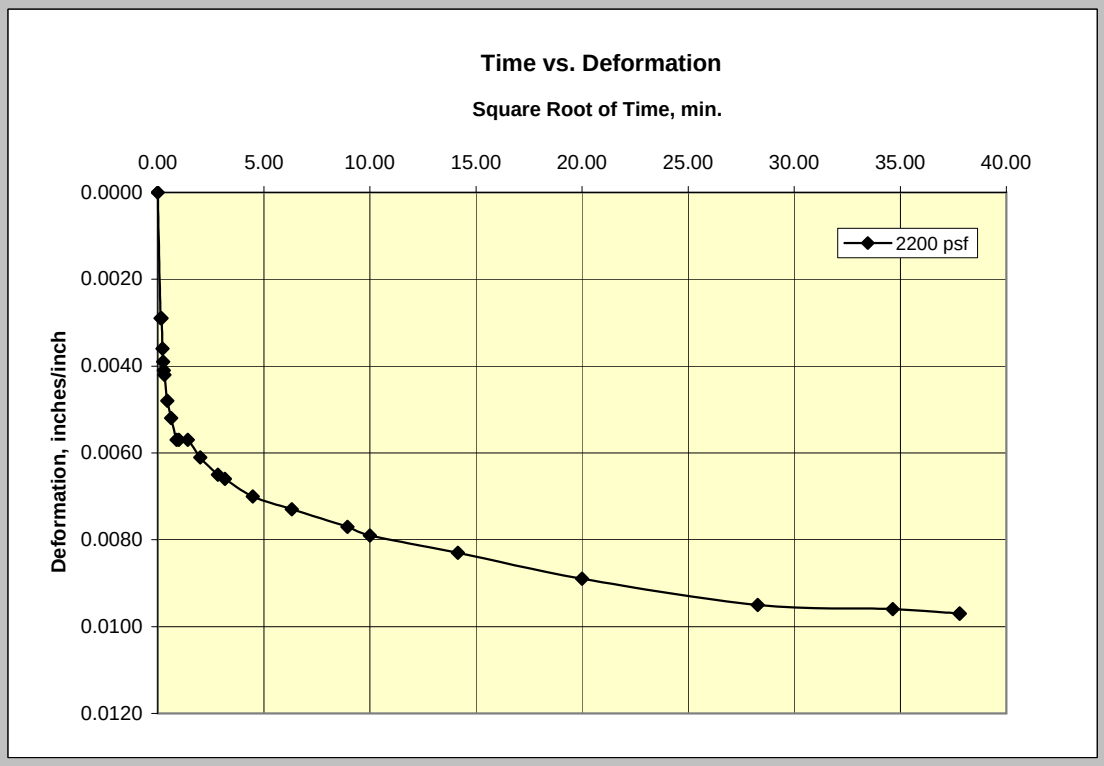
Sample ID: PNL-23-23.5-26

Load 5

2200 PSF



2200 PSF



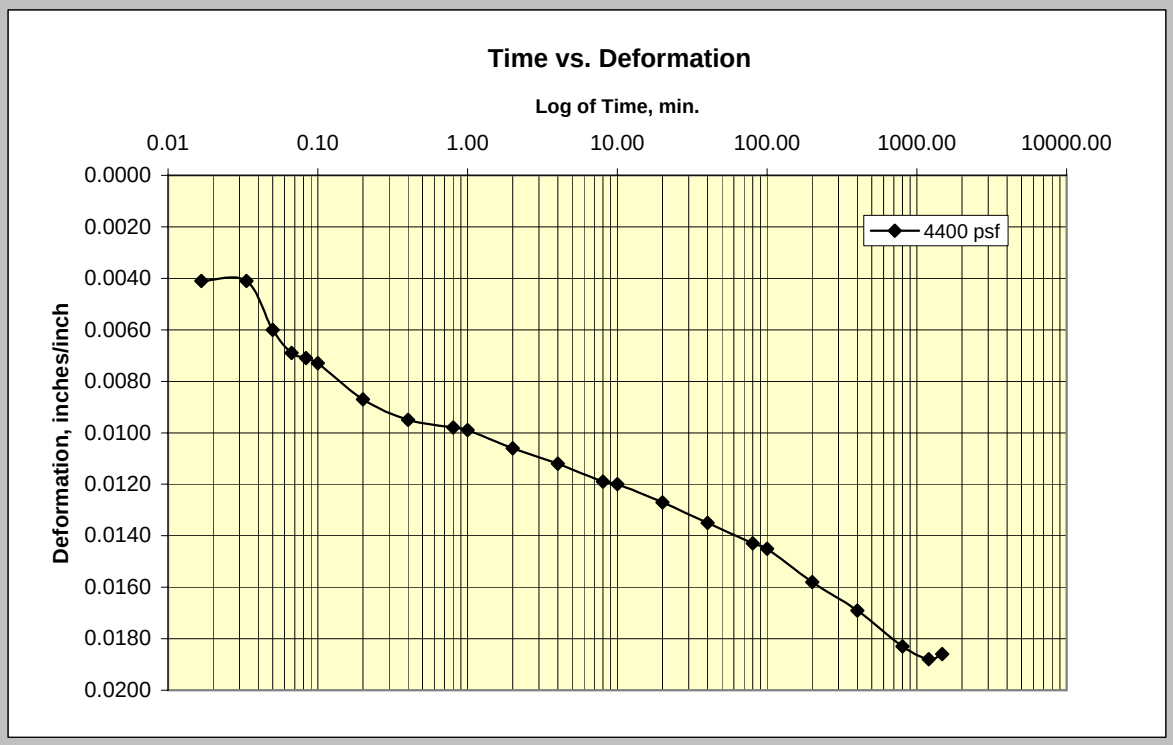
Analysis performed by CTL

PTS Laboratories

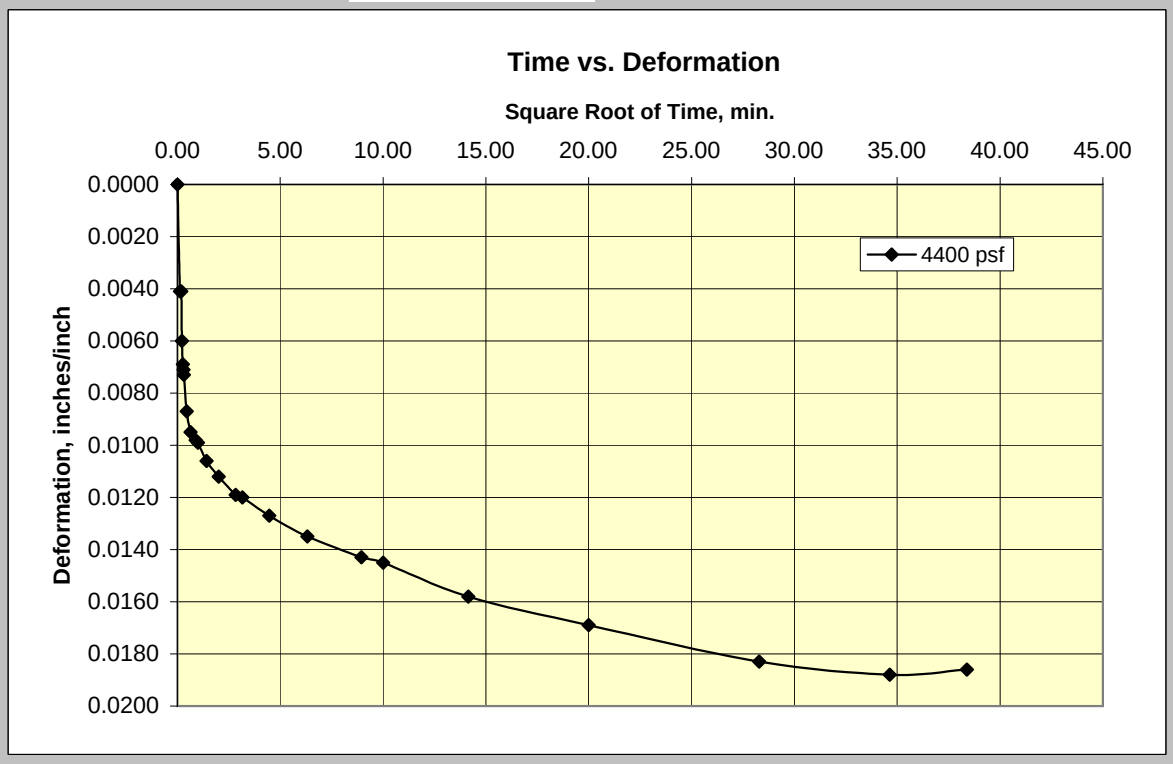
Project Navigator
PTS File No: 34339

Sample ID: PNL-23-23.5-26
Load 6

4400 PSF



4400 PSF



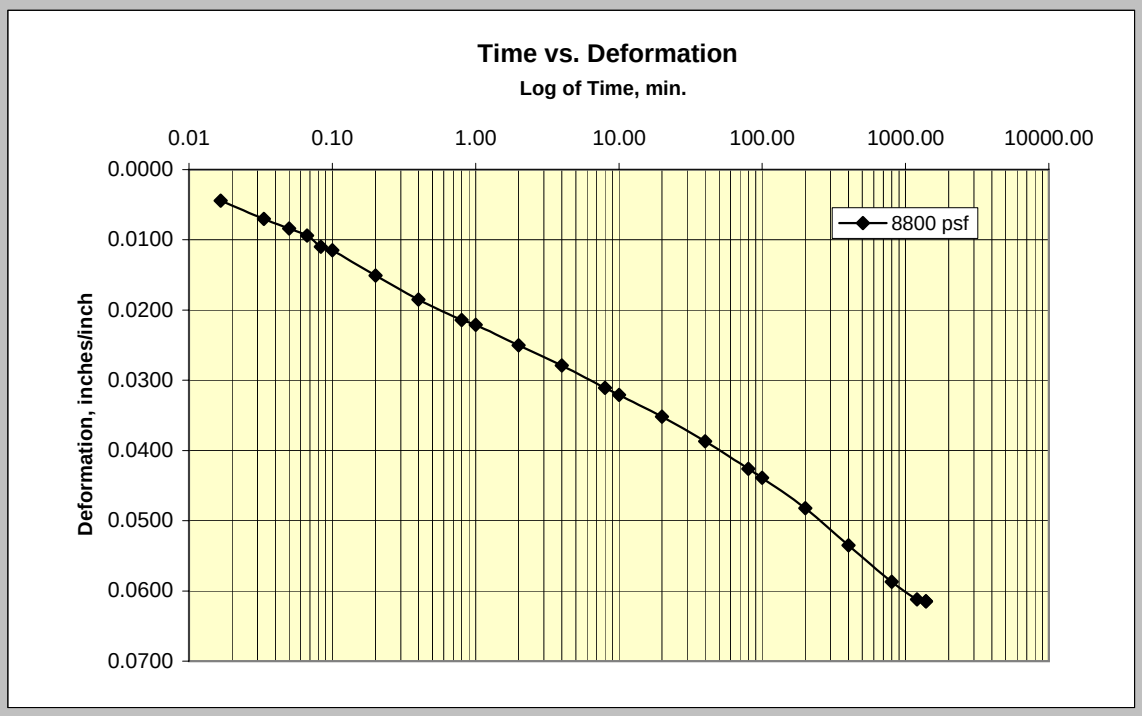
Analysis performed by CTL

PTS Laboratories

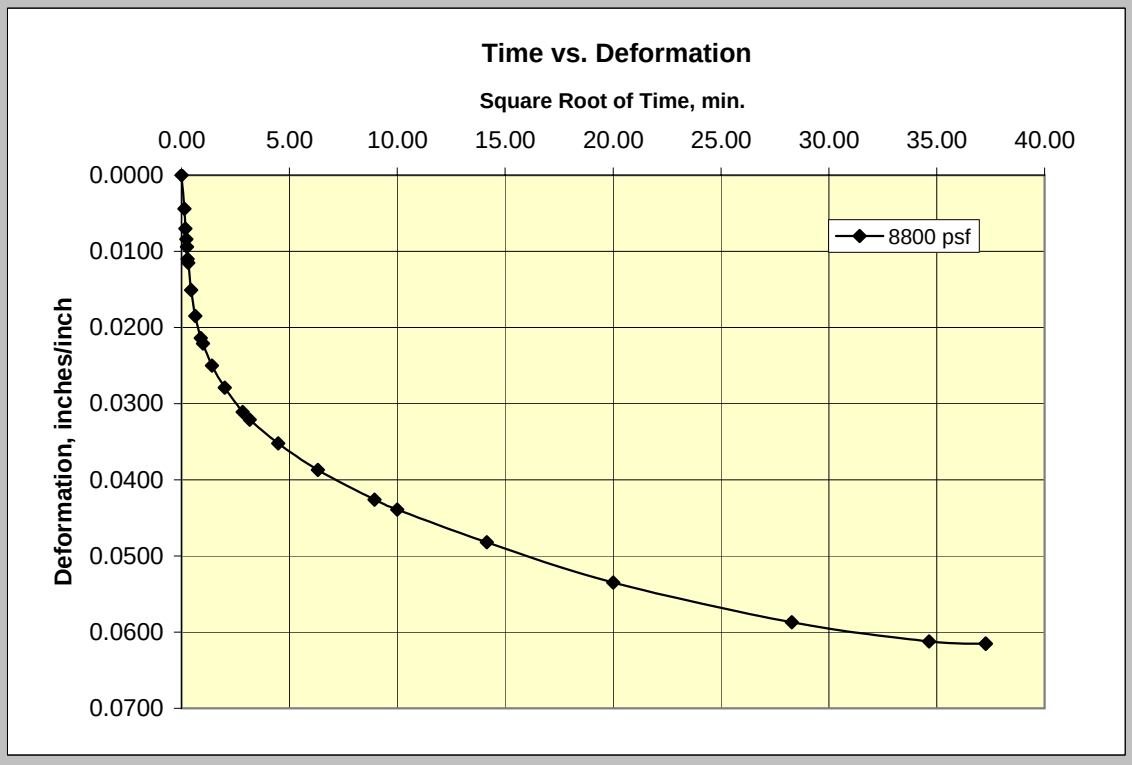
Project Navigator
PTS File No: 34339

Sample ID: PNL-23-23.5-26
Load 7

8800 PSF



8800 PSF



Analysis performed by CTL

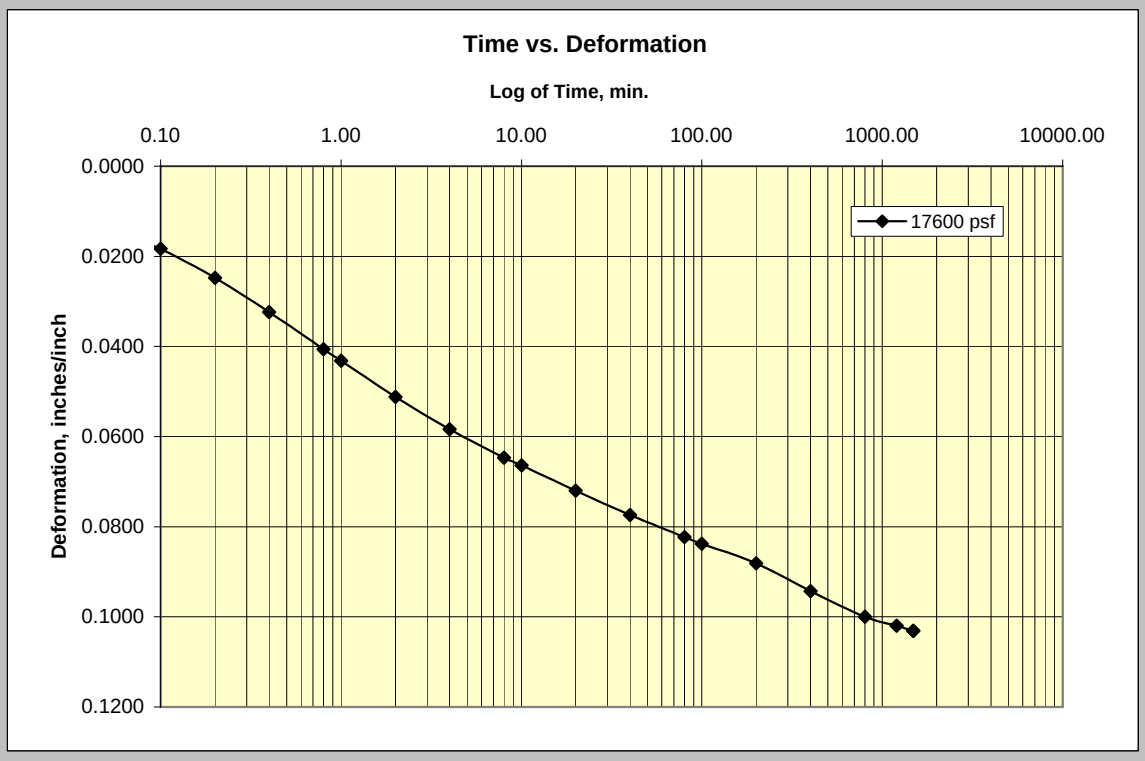
PTS Laboratories

Project Navigator
PTS File No: 34339

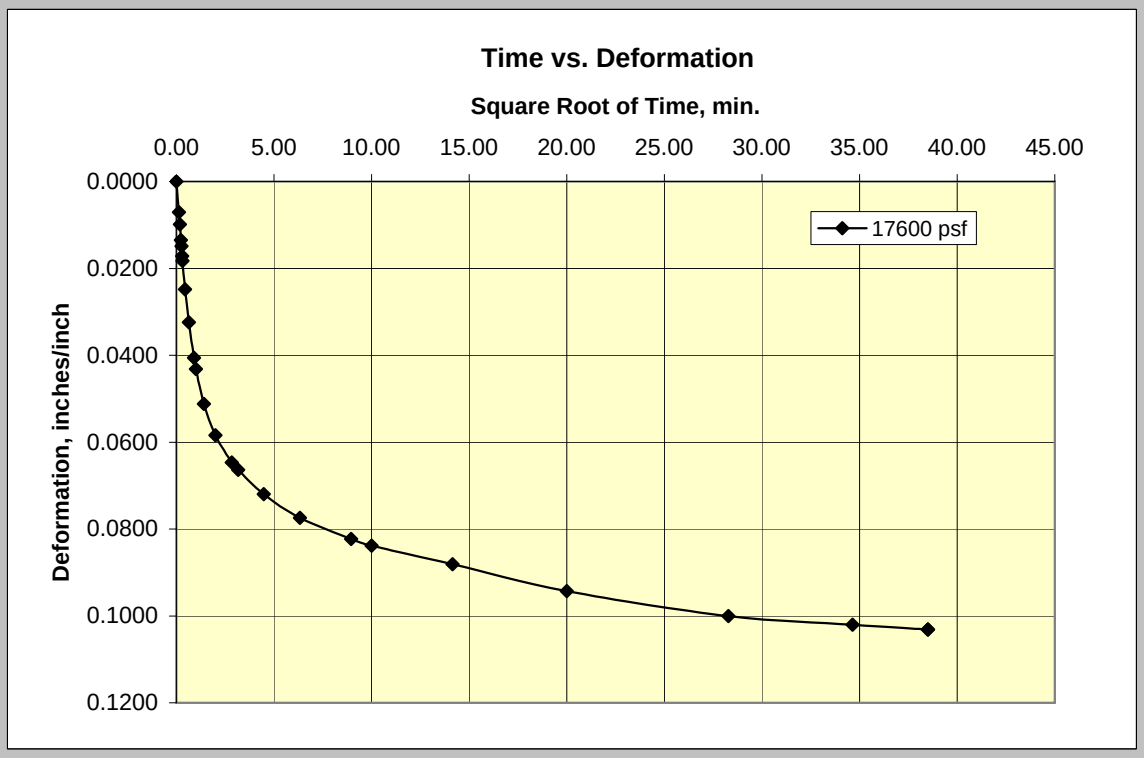
Sample ID: PNL-23-23.5-26

Load 8

17600 PSF



17600 PSF



Analysis performed by CTL

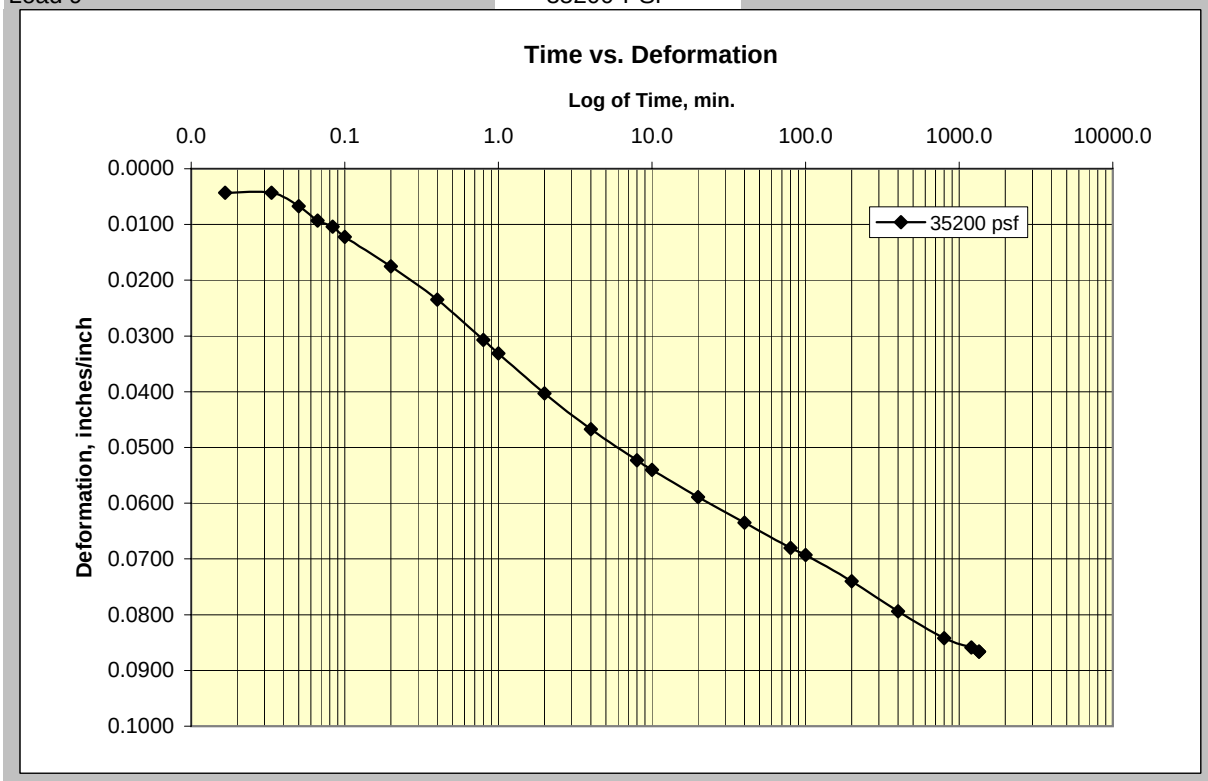
PTS Laboratories

Project Navigator
PTS File No: 34339

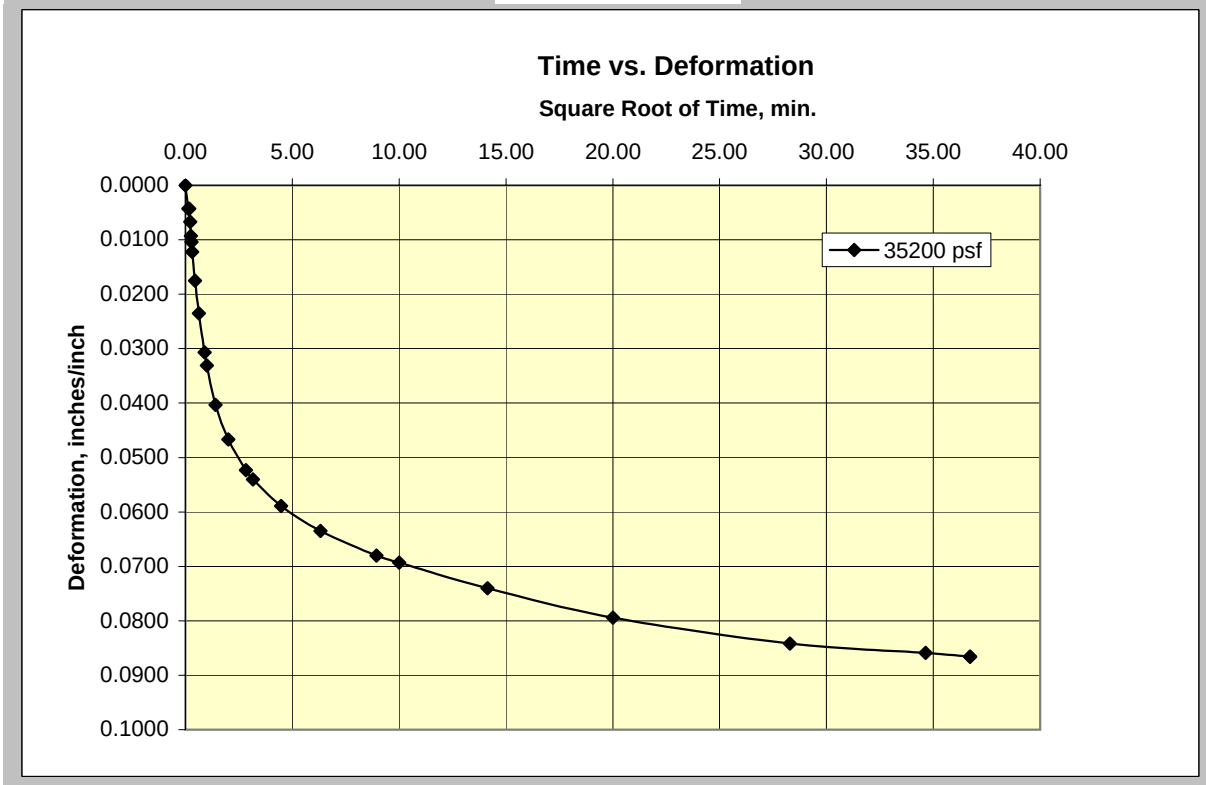
Sample ID: PNL-23-23.5-26

Load 9

35200 PSF



35200 PSF

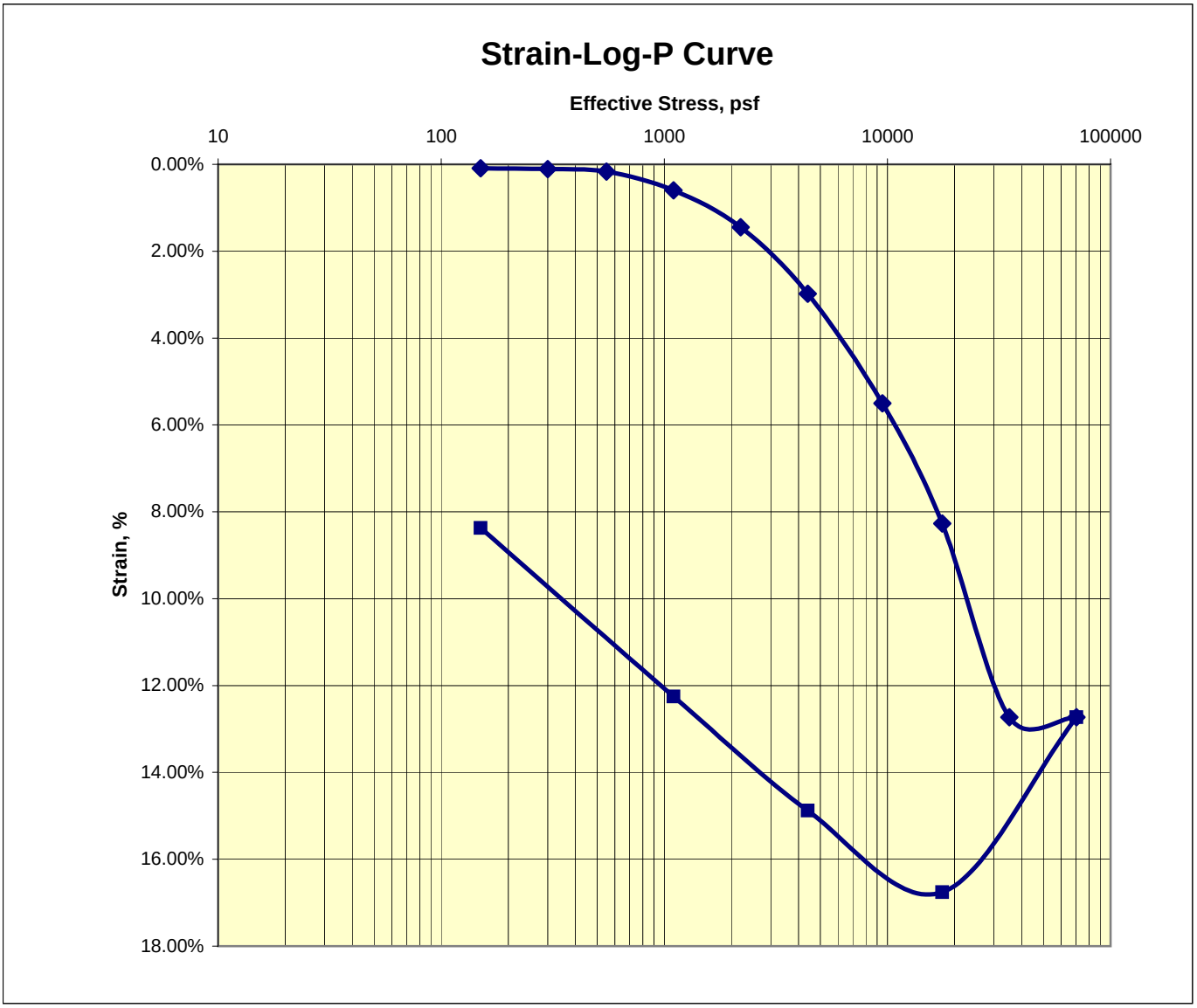


Analysis performed by CTL

Consolidation Test

ASTM D2435

Job No.:	417-012	**Boring:**		**Run By:**	MD
Client:	PTS	**Sample:**	PNL-23-16.5-19	**Reduced:**	DC
Project:	34339	**Depth, ft.:**		**Checked:**	DC
Soil Type:	Gray Mottled Dark Gray CLAY			**Date:**	8/28/2004



Ass. Gs = 2.7	**Initial**	**Final**
Moisture %:	34.3	29.5
Density, pcf:	86.2	93.9
Void Ratio:	0.955	0.795
% Saturation:	97.0	100

Remarks: The 8800 psf point was increased to 9500 to smooth the curve. This may have been due to regulator drift.

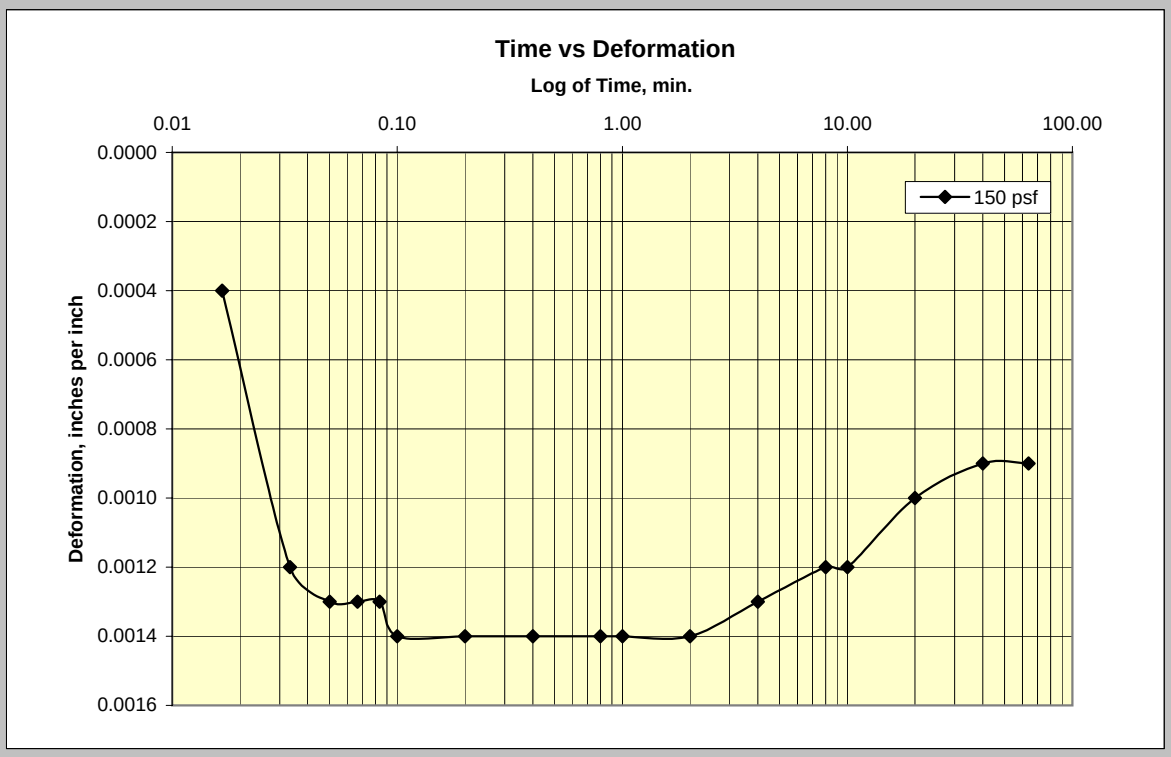
PTS Laboratories

Project Navigator
PTS File No: 34339

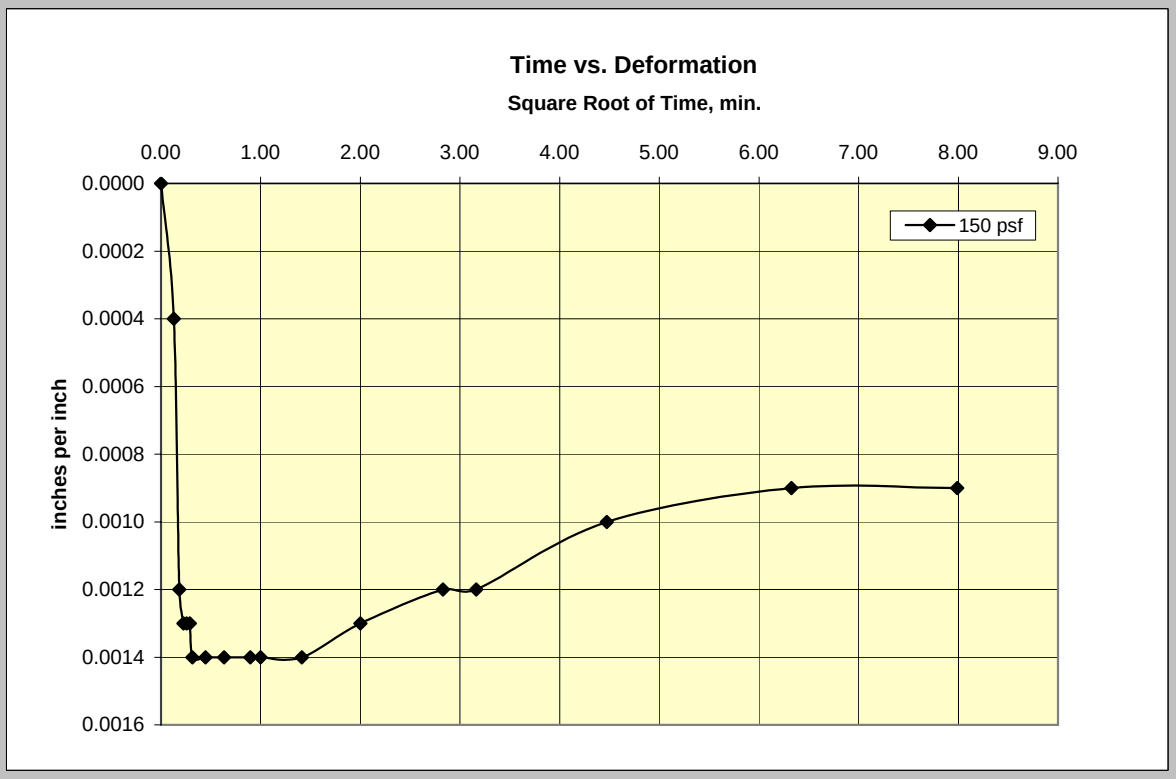
Sample ID: PNL-23-16.5-19

Load 1

150 PSF



150 PSF



Analysis performed by CTL

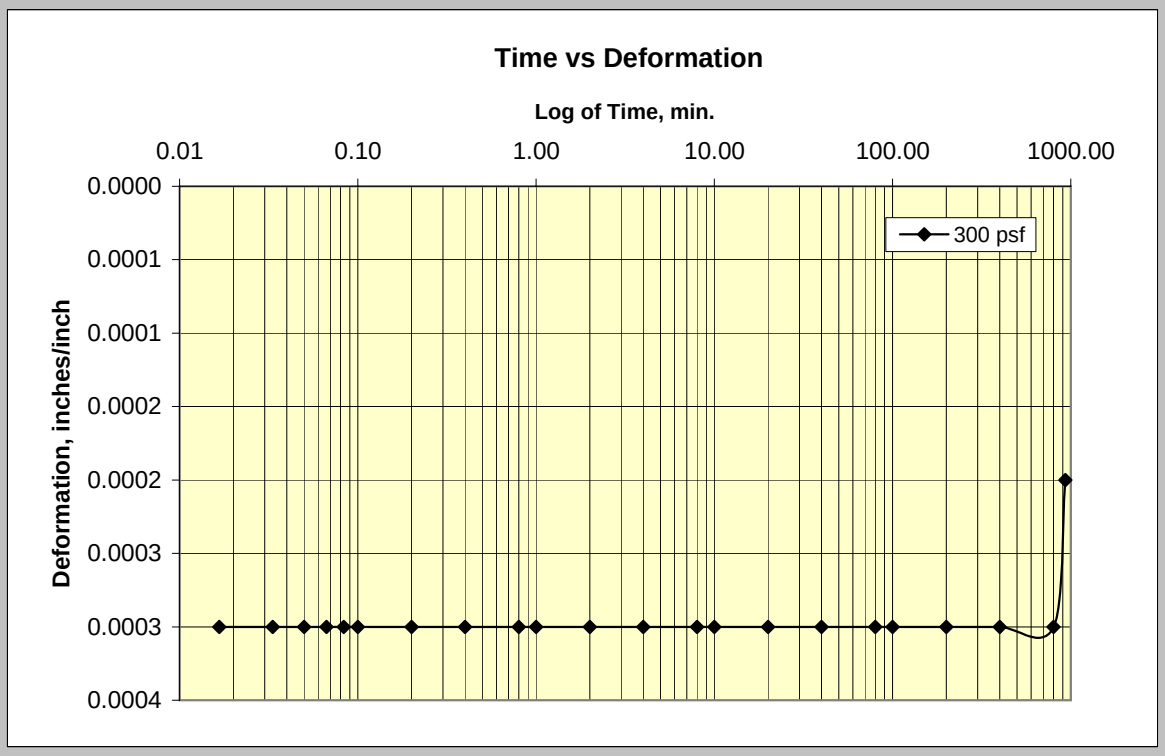
PTS Laboratories

Project Navigator
PTS File No: 34339

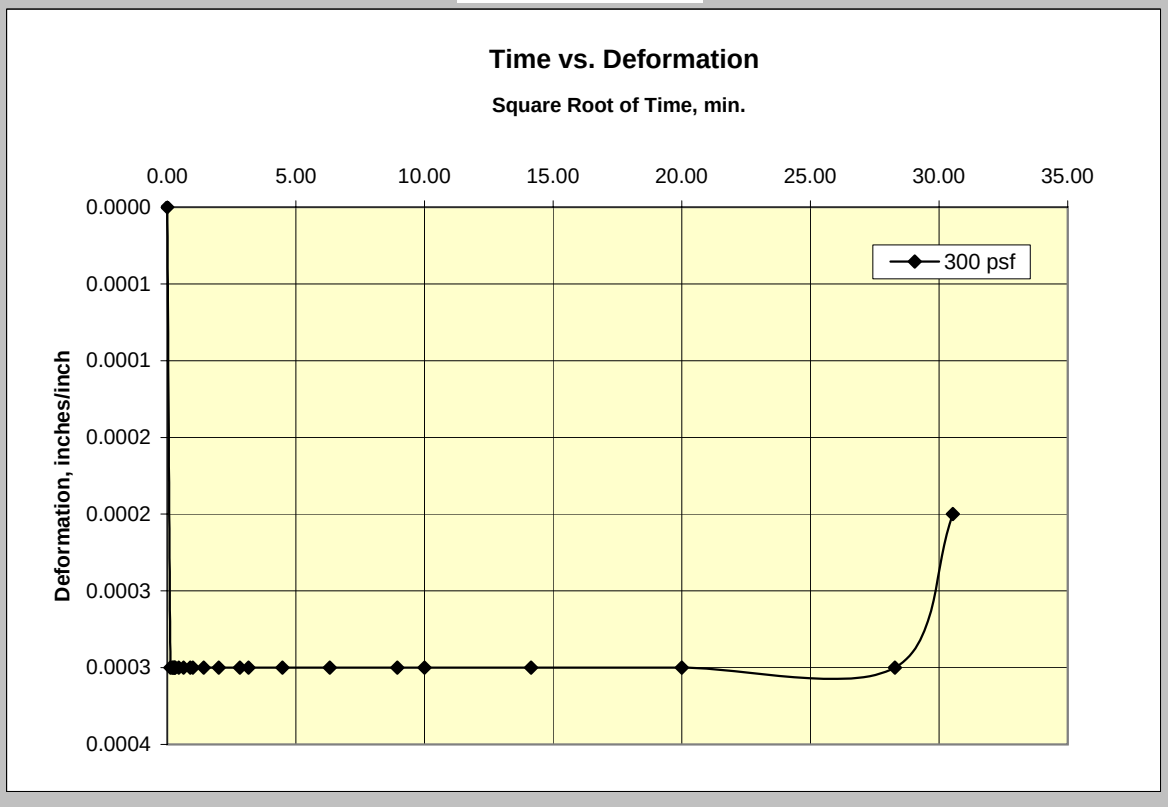
Sample ID: PNL-23-16.5-19

Load 2

300 PSF



300 PSF



Analysis performed by CTL

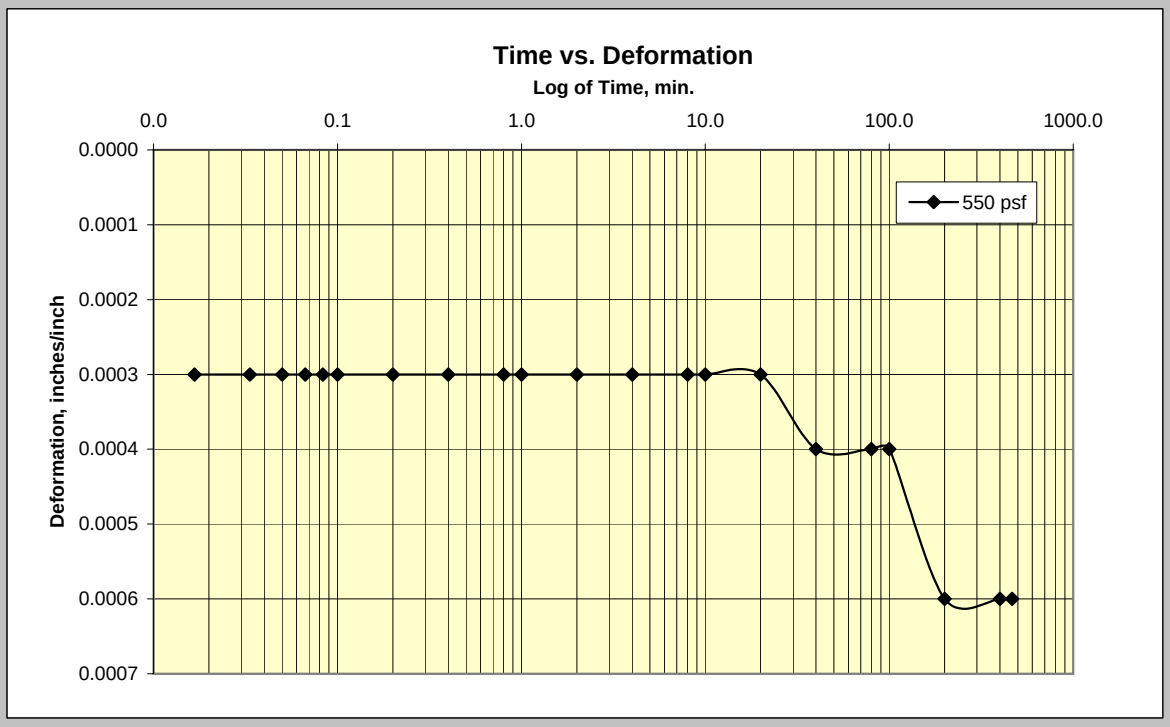
PTS Laboratories

Project Navigator
PTS File No: 34339

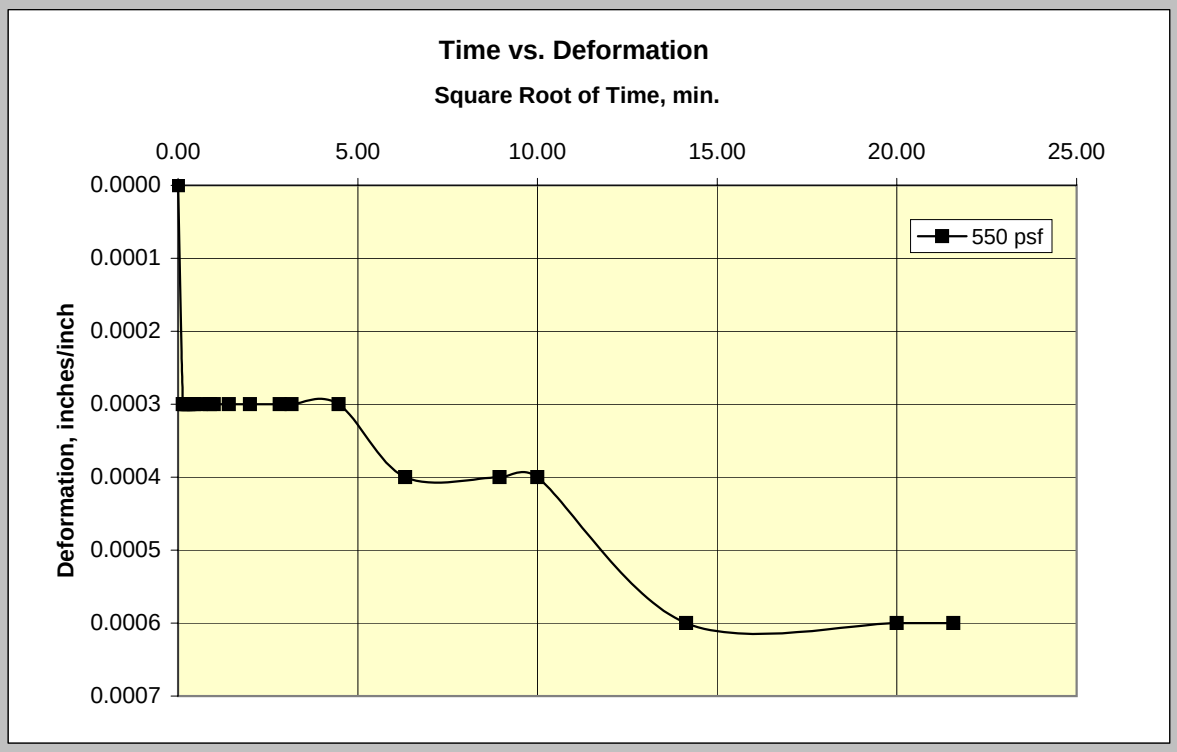
Sample ID: PNL-23-16.5-19

Load 3

550 PSF



550 PSF



Analysis performed by CTL

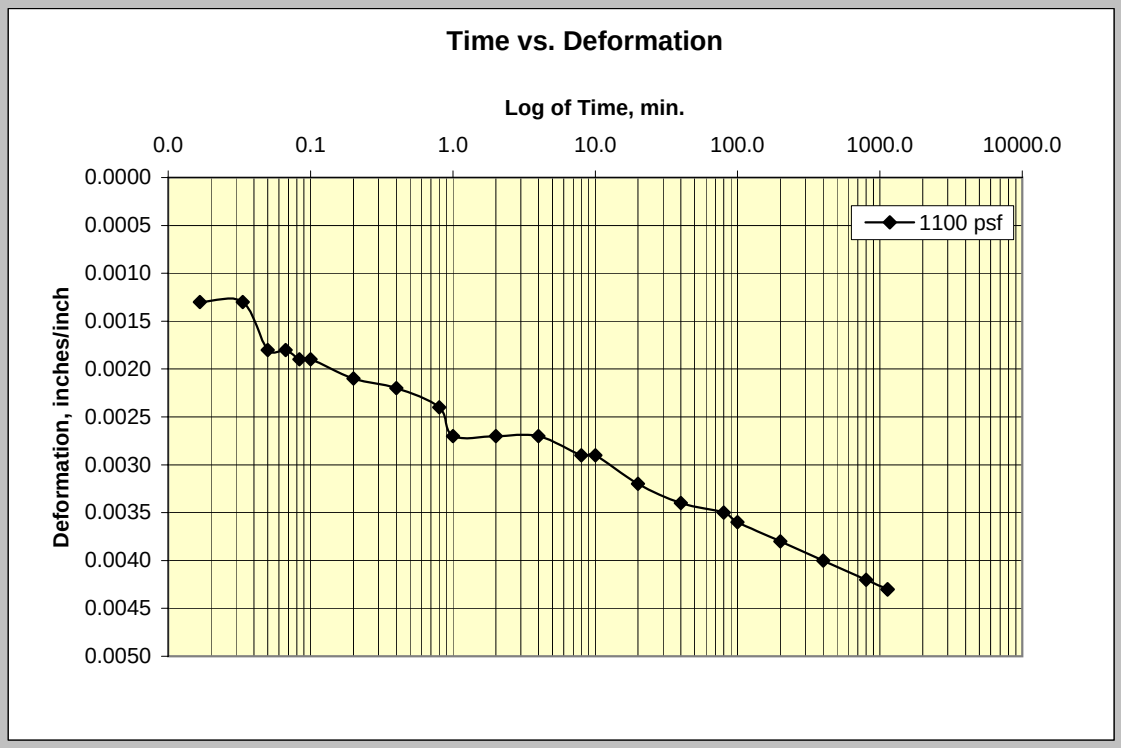
PTS Laboratories

Project Navigator
PTS File No: 34339

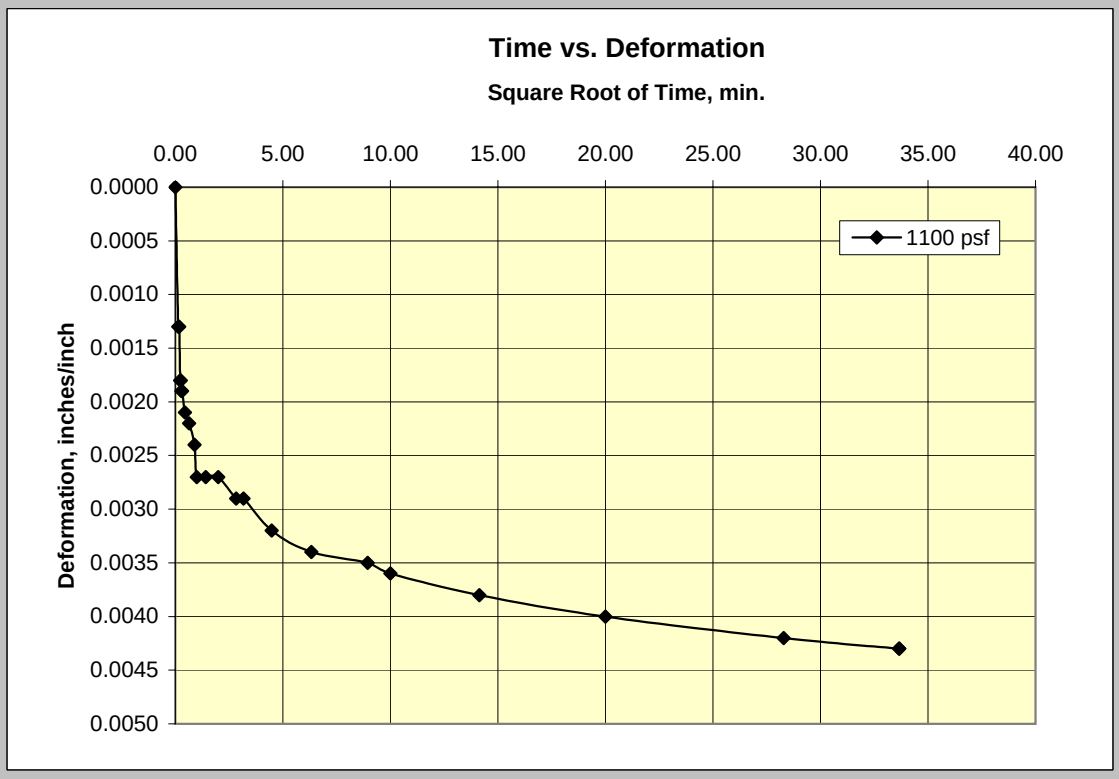
Sample ID: PNL-23-16.5-19

Load 4

1100 PSF



1100 PSF



Analysis performed by CTL

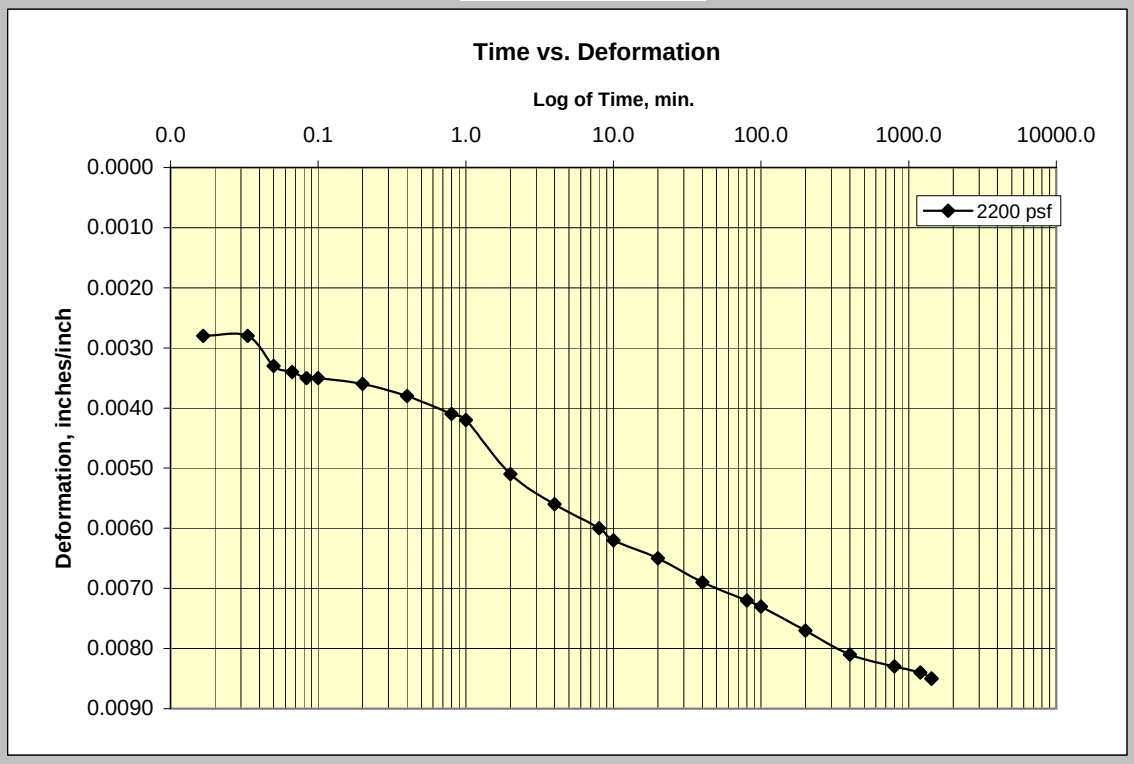
PTS Laboratories

Project Navigator
PTS File No: 34339

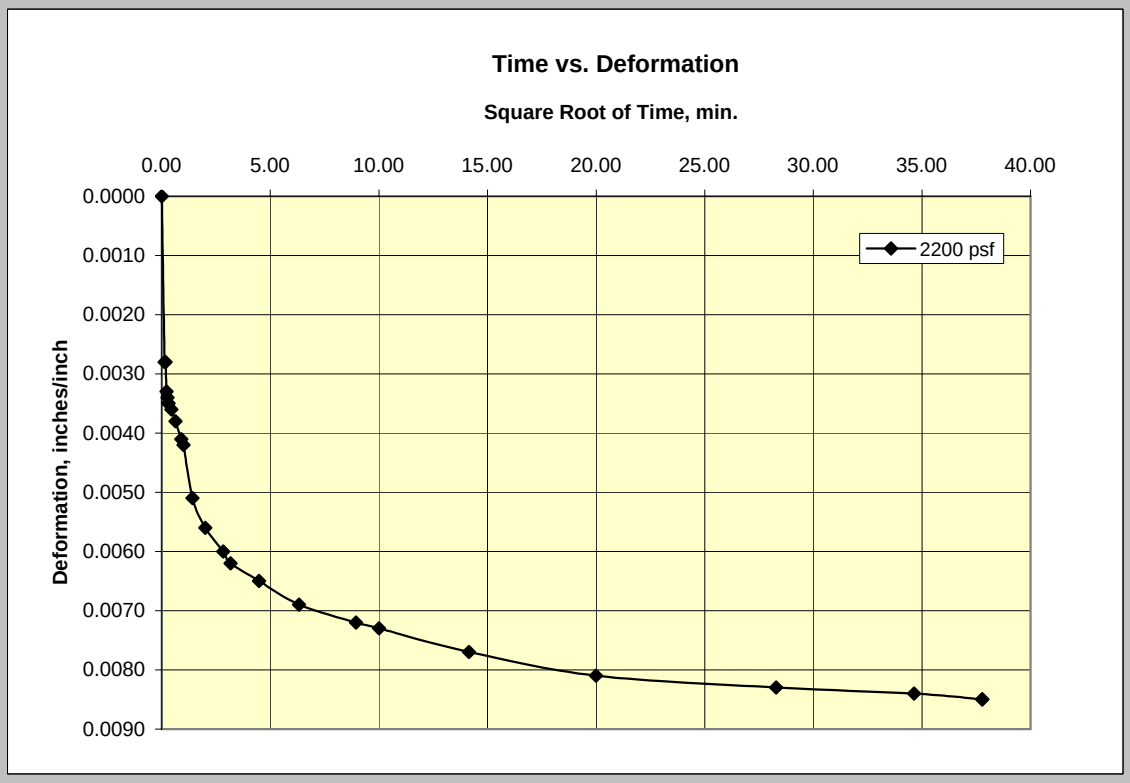
Sample ID: PNL-23-16.5-19

Load 5

2200 PSF



2200 PSF



Analysis performed by CTL

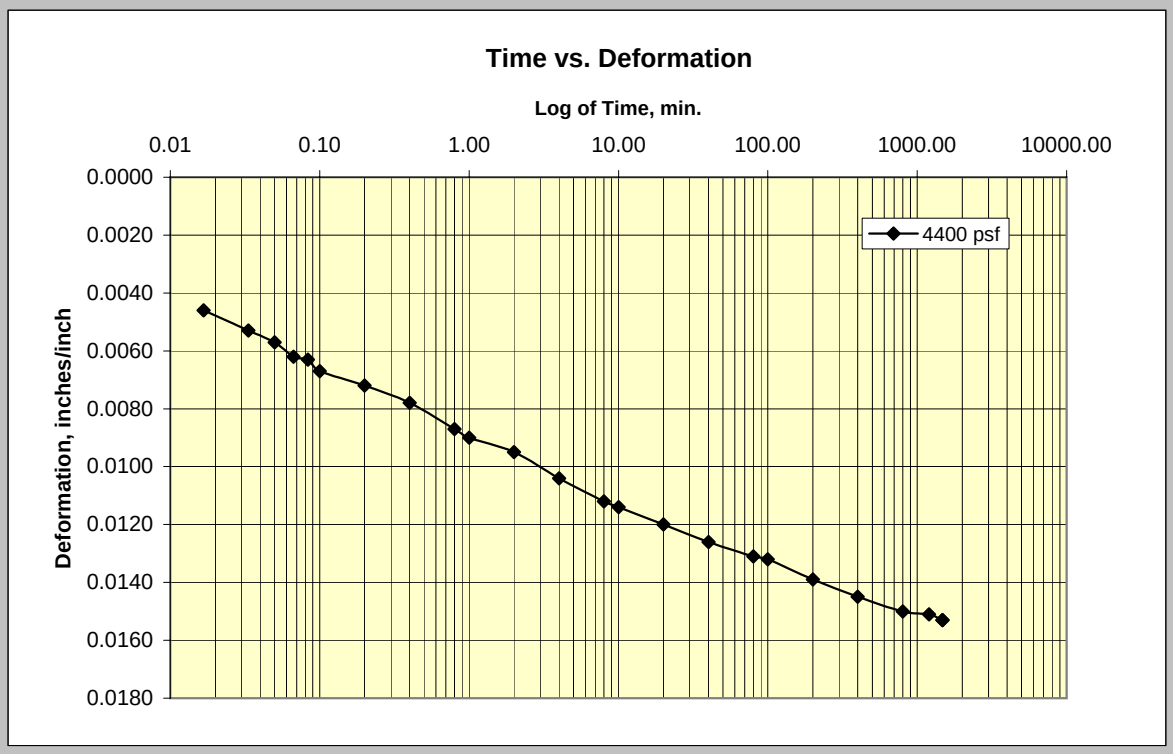
PTS Laboratories

Project Navigator
PTS File No: 34339

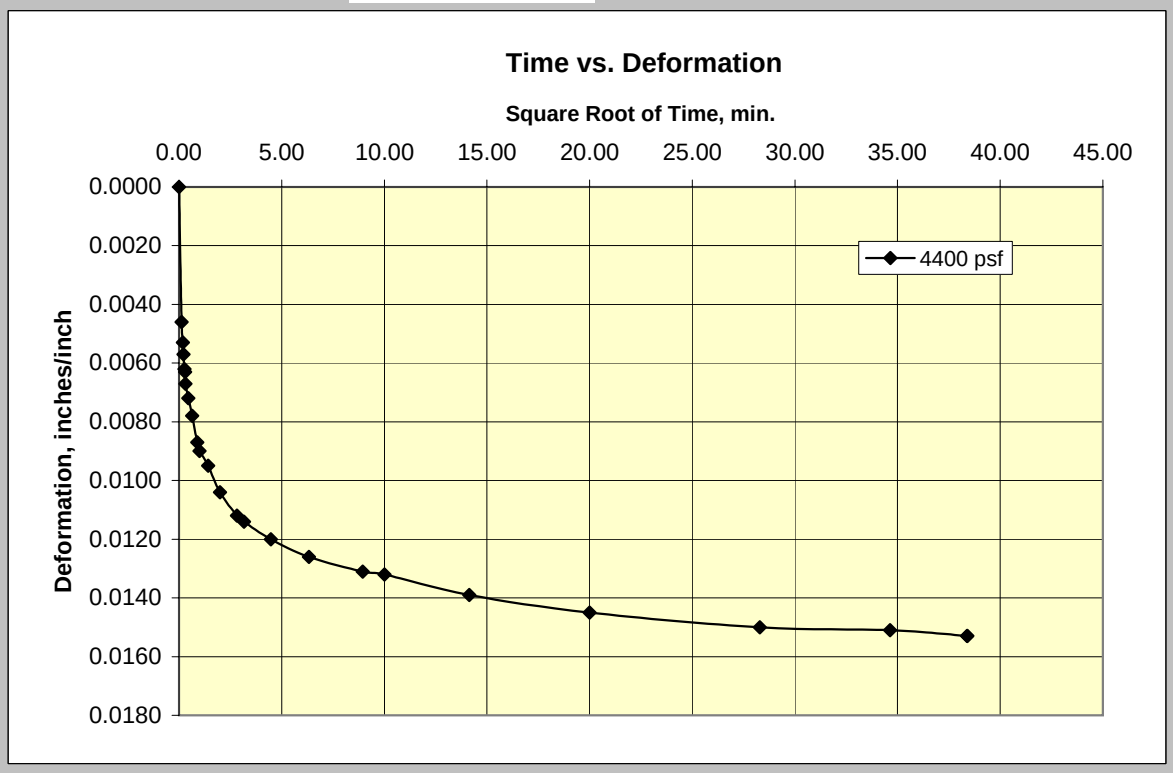
Sample ID: PNL-23-16.5-19

Load 6

4400 PSF



4400 PSF



Analysis performed by CTL

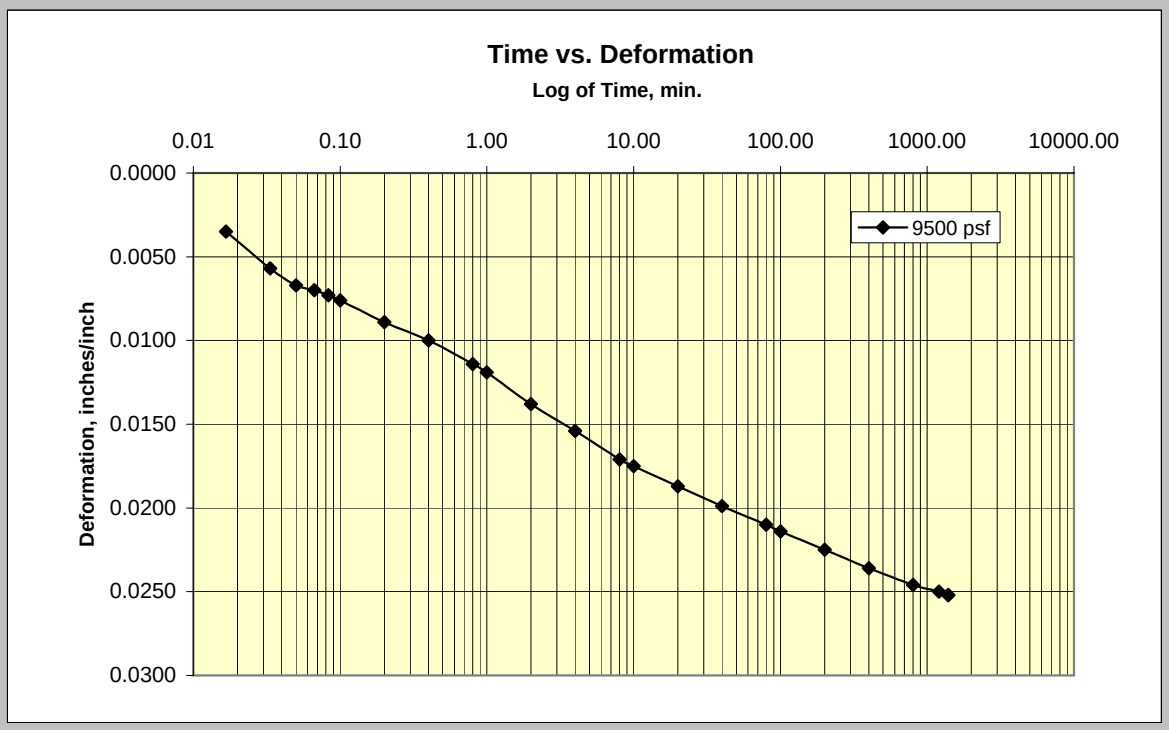
PTS Laboratories

Project Navigator
PTS File No: 34339

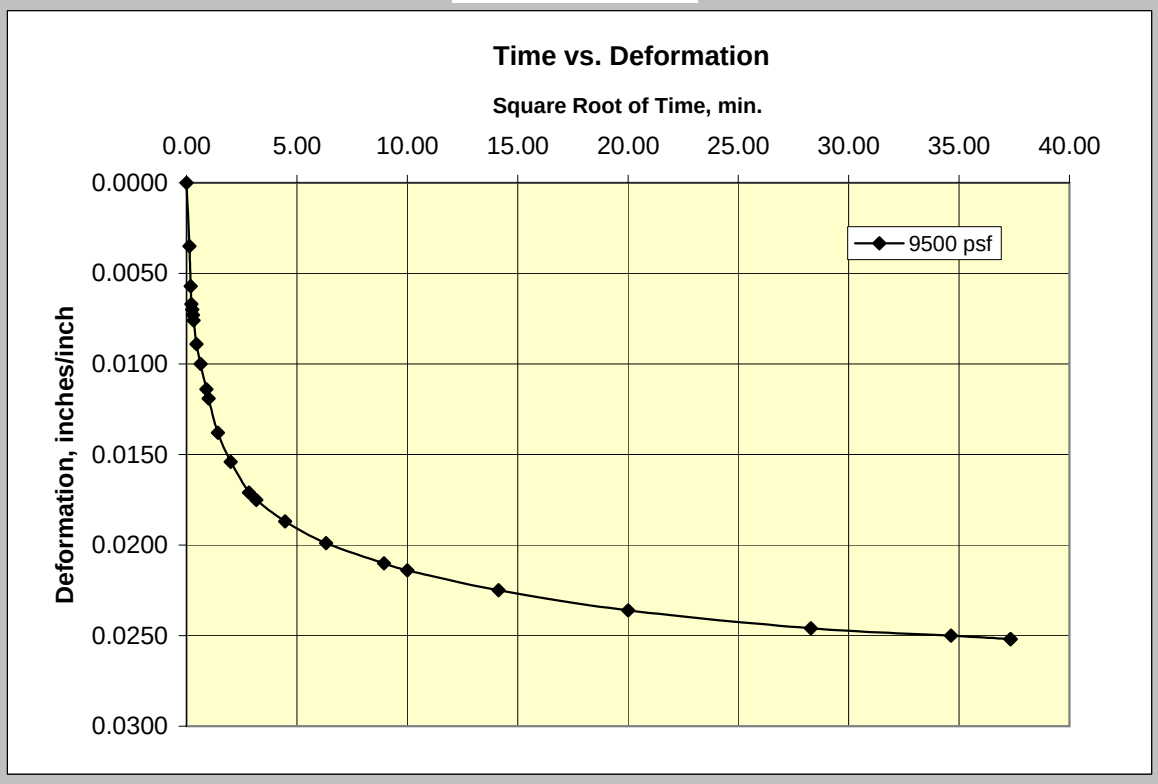
Sample ID: PNL-23-16.5-19

Load 7

9500 PSF



9500 PSF



Analysis performed by CTL

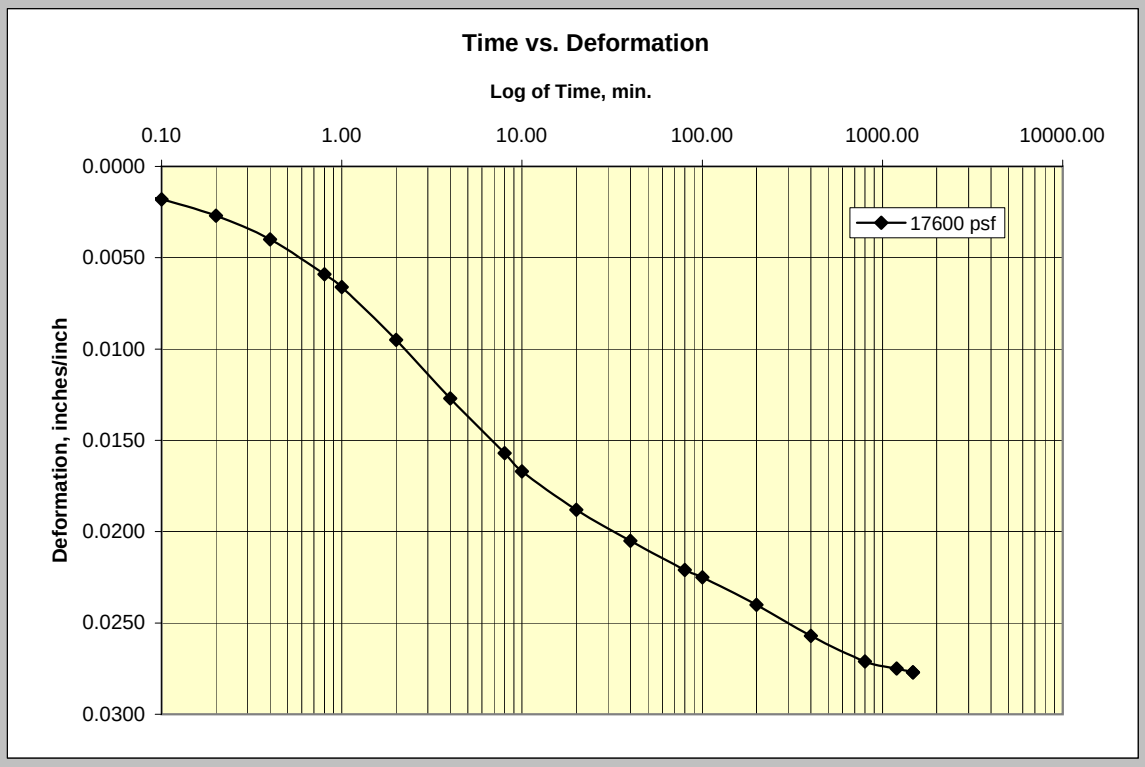
PTS Laboratories

Project Navigator
PTS File No: 34339

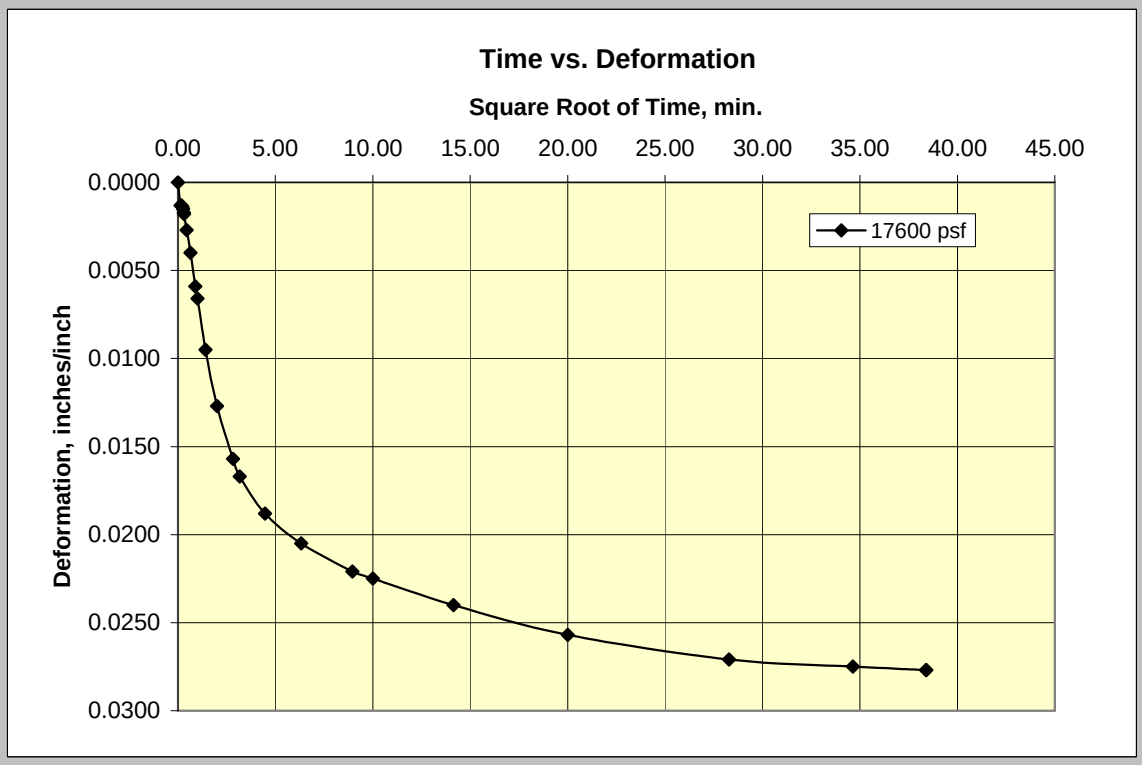
Sample ID: PNL-23-16.5-19

Load 8

17600 PSF



17600 PSF



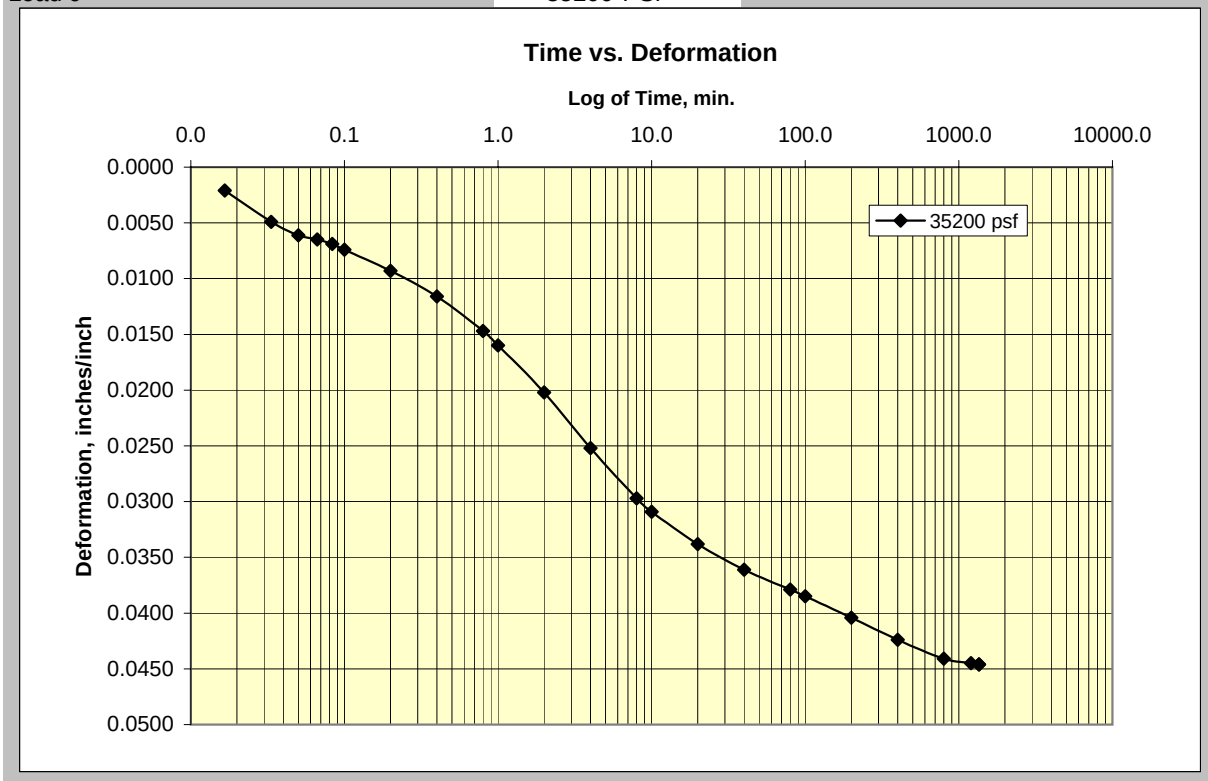
Analysis performed by CTL

PTS Laboratories

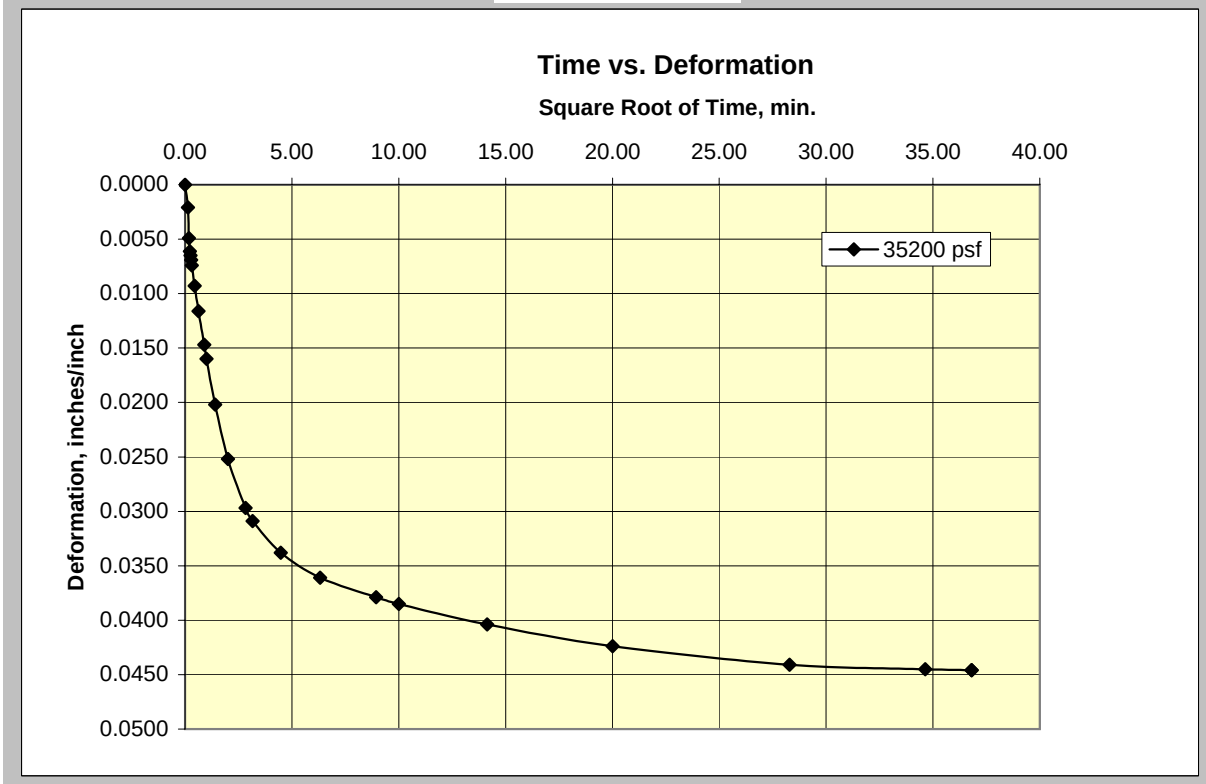
Project Navigator
PTS File No: 34339

Sample ID: PNL-23-16.5-19

Load 9 | 35200 PSF



35200 PSF



Analysis performed by CTL

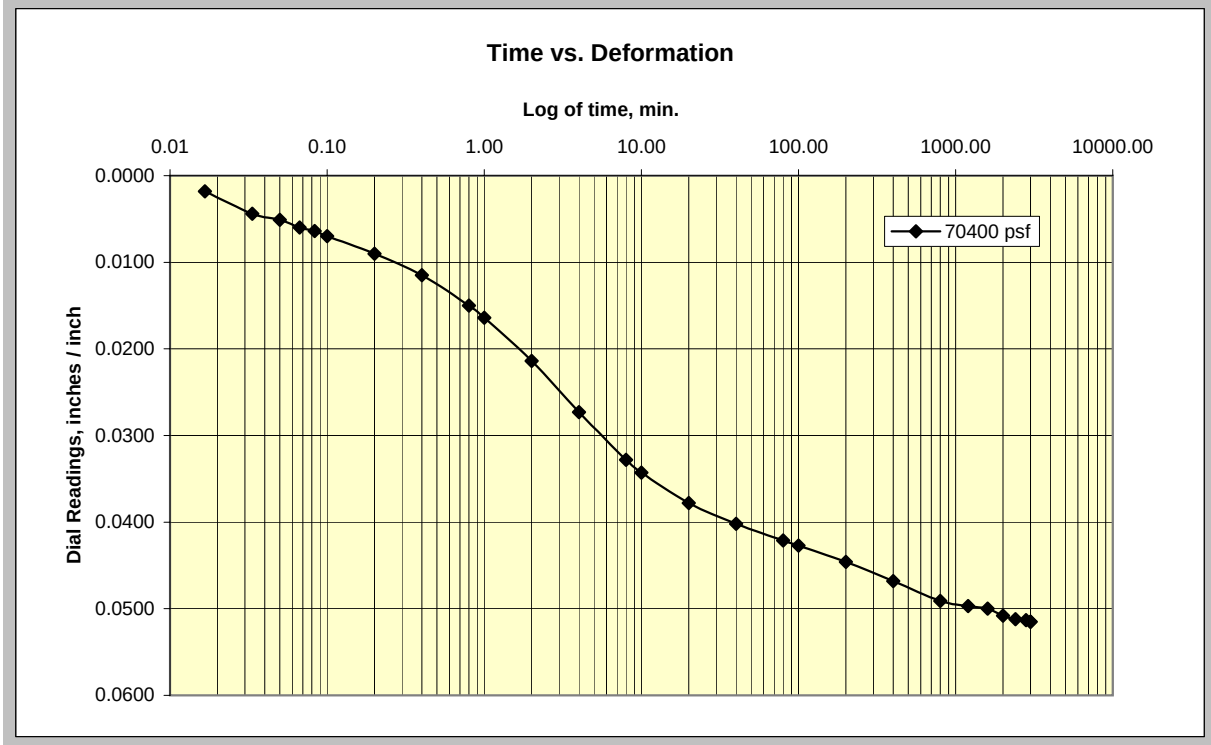
PTS Laboratories

Project Navigator
PTS File No: 34339

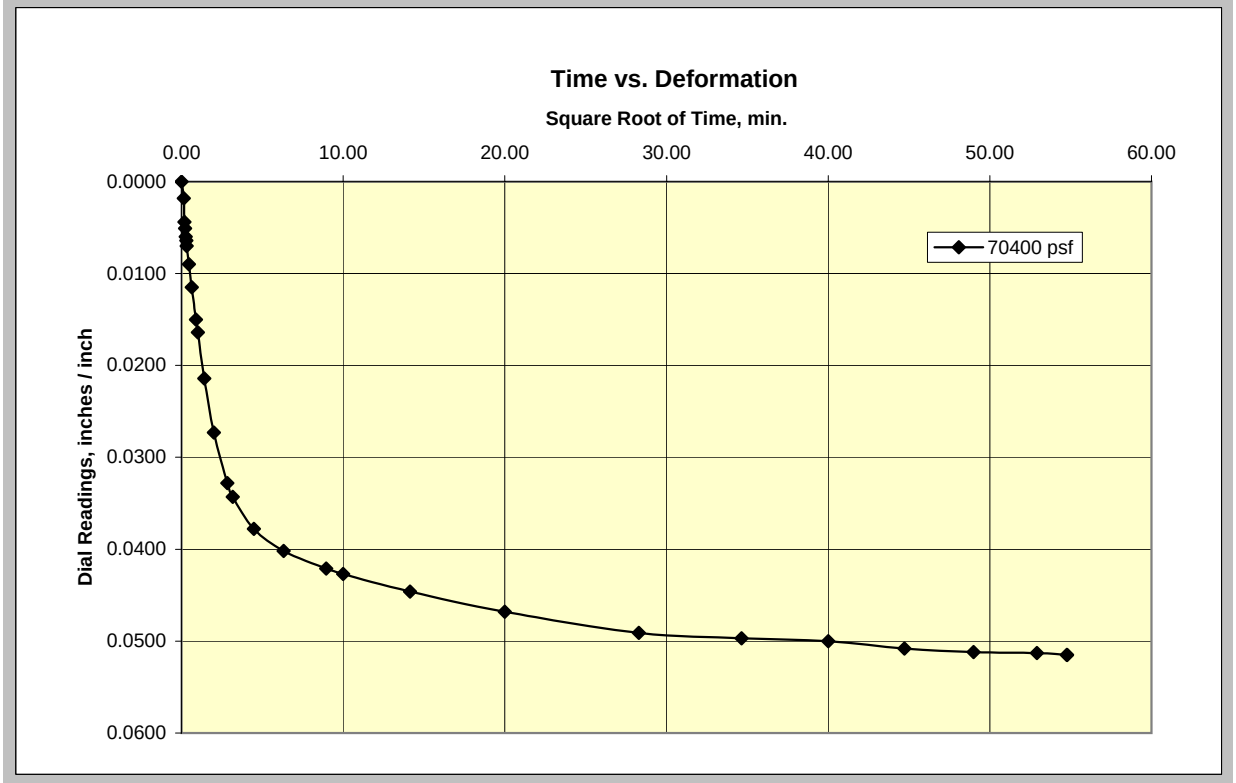
Sample ID: PNL-23-16.5-19

Load 10

70400 PSF



70400 PSF



Analysis performed by CTL

Del Mar Analytical

34339

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

CHAIN OF CUSTODY FORM

Client Name/Address:
Project Navigator, Ltd.
1 Pointe Dr. Suite 320
Brea, CA 92821

P.O. #: 0114-340

Project:
Ascon Land Fill Site

Project Manager/Phone Number:
Tamara Zeier / 714-388-1804

Phone Number:

Sampler:
Mark Landress

Fax Number:
714-388-1839

ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	UCS, Moisture Content Dent Weight									Special Instructions
PNL-5A	Solid	Shelby	1	5/24/04	None										
PNL-4-B	Solid	Shelby	1	5/24/04	None										

Relinquished By	Date/Time:	Received By	Date/Time:
Mark Landress	5-27-04 0900	[illegible]	5-28-04 0900
[illegible]	5-28-04 1520	[illegible] PTS LABS	5/28/04 1520

Turnaround Time: (check)
Same Day _____ 72 Hours _____
24 Hours _____ 5 days _____
48 hours _____ normal _____
Sample Integrity: (Check)
Intact _____ On Ice: _____

Del Mar Analytical
34339
2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
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2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

CHAIN OF CUSTODY FORM

Client Name/Address:
Project Navigator Ltd
One Pointe Dr Suite 320
Brea CA 92821

P.O. #:

Project: ASCON

Project Manager/Phone Number:
Tamara Zeier
714 388 1804

Phone Number:

Sampler:
P Tinnes

Fax Number:

ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	D-4318, CAL-204 (HG)	D-4767 (Specific)	D-2435	D-2216, D-2937	D-4643	C-117, D-1140				Special Instructions
PNL-23-16.5-19		Shelby	1	6/15/1505		X	X	X							
PNL-23-23.5-26		Shelby	1	6/16/0845		X	X	X							
PNL-21-22-24		Shelby	1	6/16/1637		X	X	X							
PNL-21-24-26		Shelby	1	6/17/0750		X	X	X							
PNL-28-11-13		Shelby	1	6/17/1640		X	X	X							
PNL-28-15-17		Shelby	1	6/17/1640		X	X	X							
PNL-23-26-27		Bag	1	6/16/913					X	X	X				
PNL-23-32-33		Bag	1	6/16/931					X	X	X				
PNL-23-50-51		Bag	1	6/16/1026					X	X	X				
PNL-23-56-57		Bag	1	6/16/1046					X	X	X				
PNL-21-33-34		Bag	1	6/17/1010					X	X	X				
PNL-21-36-37		Bag	1	6/17/1028					X	X	X				
PNL-21-45-46		Bag	1	6/17/1051					X	X	X				
PNL-21-51-52		Bag	1	6/17/1111					X	X	X				
~~PNL-28-28-29.5~~		~~Bag~~	~~1~~						X	X	X				PT

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	6/18/04 1640	[signature]	18JUN04 1640
Relinquished By	Date/Time:	Received By	Date/Time:
Relinquished By	Date/Time:	Received By	Date/Time:

Turnaround Time: (check)
Same Day _____ 72 Hours _____
24 Hours _____ 5 days _____
48 hours _____ normal _____
Sample Integrity: (Check)
Intact _____ On Ice: _____

Del Mar Analytical

34339

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

CHAIN OF CUSTODY FORM

Client Name/Address:
Project Navigator Ltd
one Pointe Dr Suite 320
Brea CA 92821

P.O. #:

Project: ASGON

Project Manager/Phone Number:
Tamara Zeier
714 388 1804

Phone Number:

Sampler:
P. Tinnes

Fax Number:

ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	D-2216, D-2937	D-4643	C-117, D-1140							Special Instructions
PNL-28-23-24.5		Bag	1	6/18/846		X	X	X							
PNL-28-38-39.5		Bag	1	6/18/926		X	X	X							
PNL-28-53-54.5		Bag	1	6/18/1000		X	X	X							
PNL-28-60-60.5		Bag	1	6/18/1018		X	X	X							

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	6/18/04 1640	[signature]	18JUN04 1640
Relinquished By	Date/Time:	Received By	Date/Time:
Relinquished By	Date/Time:	Received By	Date/Time:

Turnaround Time: (check)
Same Day _____ 72 Hours _____
24 Hours _____ 5 days _____
48 hours _____ normal _____
Sample Integrity: (Check)
Intact _____ On Ice: _____