
ATLANTIC GEOSCIENCE CENTRE
BEDFORD INSTITUTE OF OCEANOGRAPHY
CONSOLIDATION TESTING PROGRAM
SABLE ISLAND BOREHOLE
NOVA SCOTIA
PROJECT NO. 5145

OPEN FILE
DOSSIER PUBLIC
2086
GEOLOGICAL SURVEY
COMMISSION GÉOLOGIQUE
OTTAWA



PROJECT NO. 5145

REPORT TO

ATLANTIC GEOSCIENCE CENTRE
BEDFORD INSTITUTE OF OCEANOGRAPHY

ON

CONSOLIDATION TESTING PROGRAM

SABLE ISLAND
NOVA SCOTIA

DSS CONTRACT NO. 23420-8-M785/01-OSC

JACQUES, WHITFORD AND ASSOCIATES LIMITED
MARCH 1989



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1.0 INTRODUCTION

Jacques, Whitford and Associates Limited (JWA) has performed a series of six consolidation tests as outlined in Department of Supply and Services Contract No. 23420-8-M785/01-OSC. The work is part of a geological and geotechnical investigation on cores retrieved from a continuously-sampled borehole on Sable Island, Nova Scotia, in 1985 (exact position: 43° 55' 33.7" N, 59° 56' 31.9" W). Previous work was performed under DSS Contract No. 23420-6-M876/01-SC; the report (JWA 1989) was submitted in February 1989.

This report contains all of the results obtained in the test program.

2.0 TEST PROCEDURE

Laboratory test specimens were obtained by subsampling specimens which had originally been obtained from waxed quart samples. After trimming the samples, initial measurements were taken in all cases of diameter, length, and weight.

Six one-dimensional consolidation tests were performed on prescribed samples obtained from depths ranging from 113 m to 127 m. The tests were carried out on specimens prepared in the normal orientation.

In all tests the stress increment ratio was 1.0 from the initial stress level of 24.5 kPa up to a level of 2872 kPa, after which the stress was increased in steps of approximately 1100 kPa and 1400 kPa up to a maximum of 5354 kPa. Each load step was held only until primary consolidation



was complete; this varied from several hours to at least 24 hours.

3.0 RESULTS

The results of the consolidation tests are reported in Figures 1 to 6, in the form of e -log p' curves, for settlement at 100 percent primary consolidation, and in c_v -log p' curves, using the theoretical time factor curve at 50 percent of primary consolidation. A summary of initial conditions and consolidation parameters is given in Table 1. Laboratory work sheets are provided in the Appendix.

4.0 INTERPRETATION

Each of the e -log p' curves has been analyzed to determine the preconsolidation stress p'_c using Casagrande's method. Interpreted values of p'_c can be found in Table 1.

All test samples appeared to be in their original state despite the length of time between retrieval and testing (over three years), except 190B which had experienced some desiccation. For this sample, the initial water content was five to ten percent lower than the other samples and the initial degree of saturation was 88.4% (see Table 1). The test procedure for this sample was modified slightly in that the sample holder was not filled with water until a consolidation pressure of 785 kPa was reached, in order to prevent swelling during the test.

The test results for all other samples gave overconsolidation ratios (OCR) of 1.6 to 1.9, with no identifiable trend with increasing depth. The overconsolidation pressures (p'_c) are plotted with respect to depth in Figure 7; it can be noted



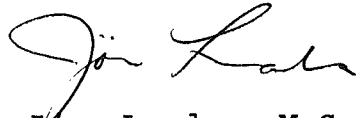
that the data from this test series have been added to Figure 29 from the previous report (JWA 1989). The apparent overconsolidation pressure profile line has been changed to reflect the values obtained from all test series. However, the interpretation of the data remains essentially unchanged, i.e. that the OCR increases abruptly below 97 m depth to 2 or more and then decreases to 1 or less near 142.5 m. The abrupt change at 97 m has been modified by the new test results to be more gradual, but there still appears to be a 45 m-thick layer of overconsolidated clay near the interpreted previous lower stand of sea level (at about -115 m bsl), as described by King (1970).

The geological history of the area is difficult to determine from these data. It is interesting to note that the extreme upper and lower boundaries of the clay layer exhibit normally consolidated behaviour whereas the centre section is overconsolidated.

The laboratory work and data reduction for this project was performed by Mr. Grant Crouse, Senior Technician.

Respectfully submitted,

JACQUES, WHITFORD & ASSOCIATES LTD.



Jørn Landva, M.Sc.A., P.Eng.



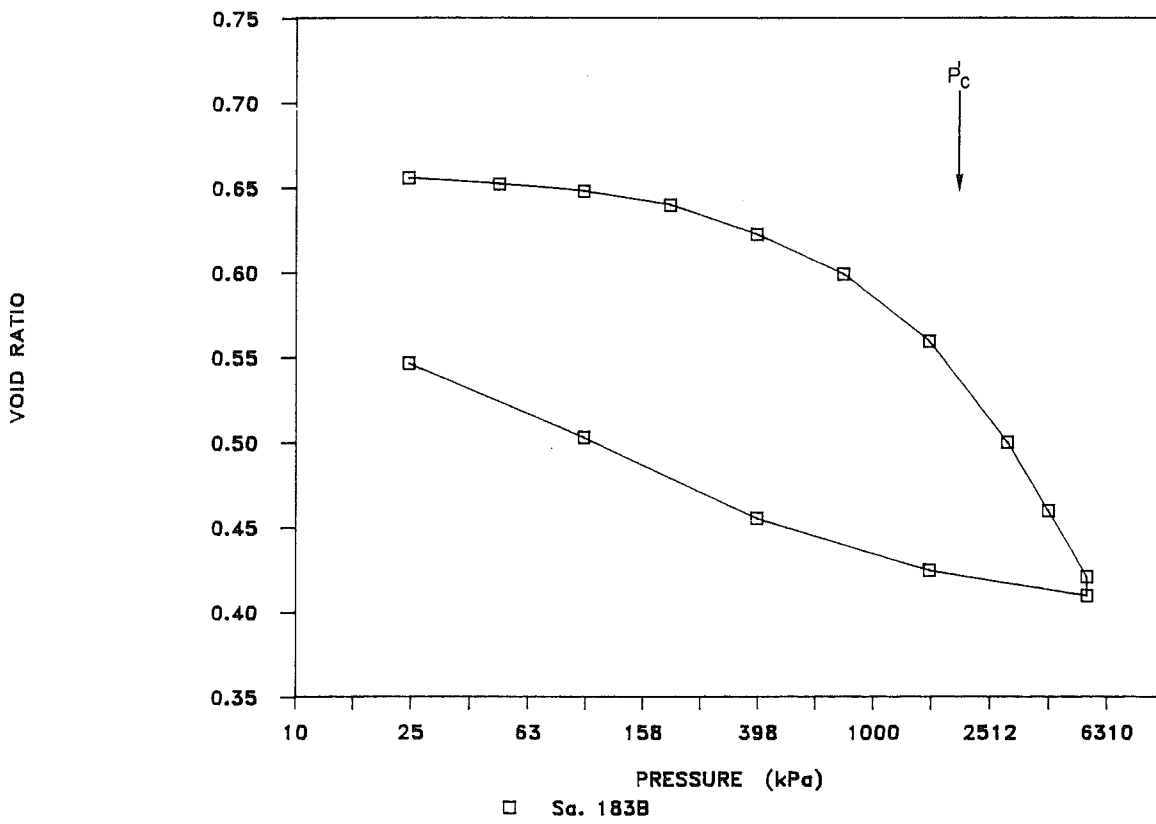
REFERENCES

Jacques, Whitford and Associates Ltd. 1989. Laboratory testing program, Sable Island Borehole. Report to Atlantic Geoscience Centre, Bedford Institute of Oceanography.

King, L.H. 1970. Surficial geology of the Halifax - Sable Island map area. Marine Sciences Branch, Department of Energy, Mines and Resources, Ottawa. Paper 1, 17p.

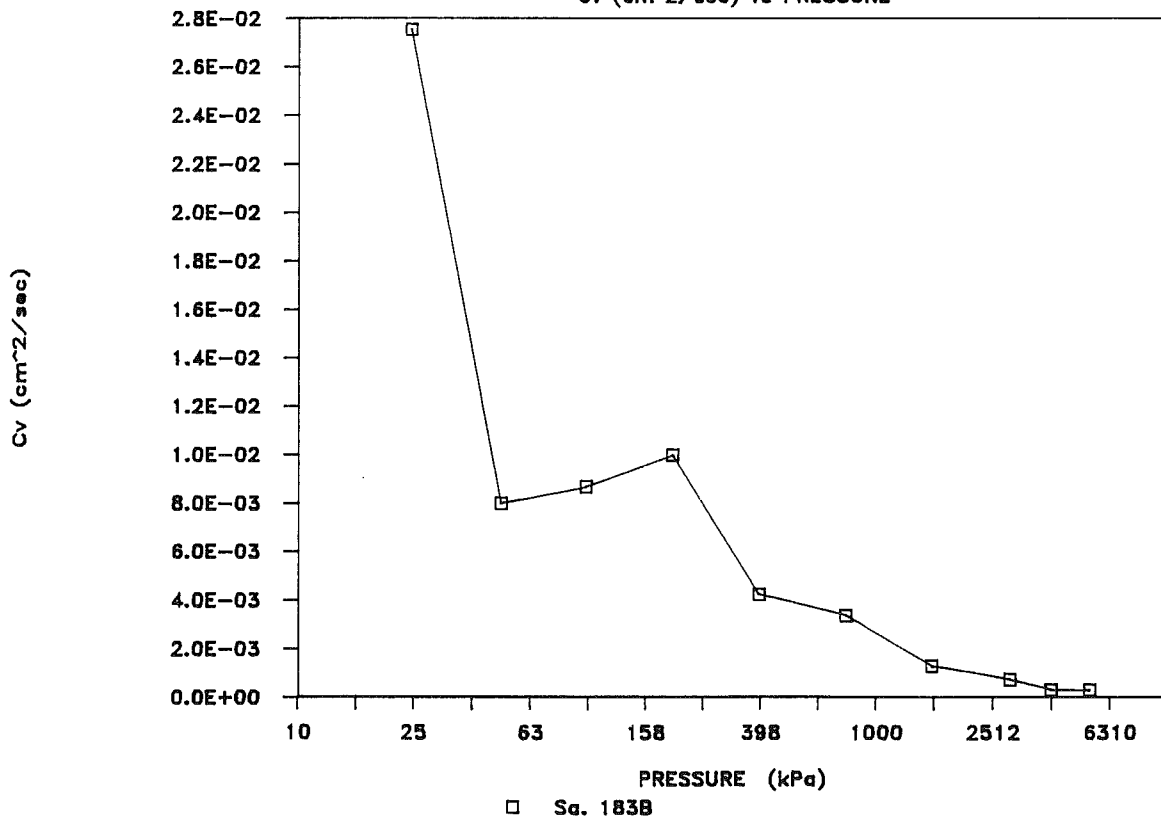


VOID RATIO vs PRESSURE CURVE



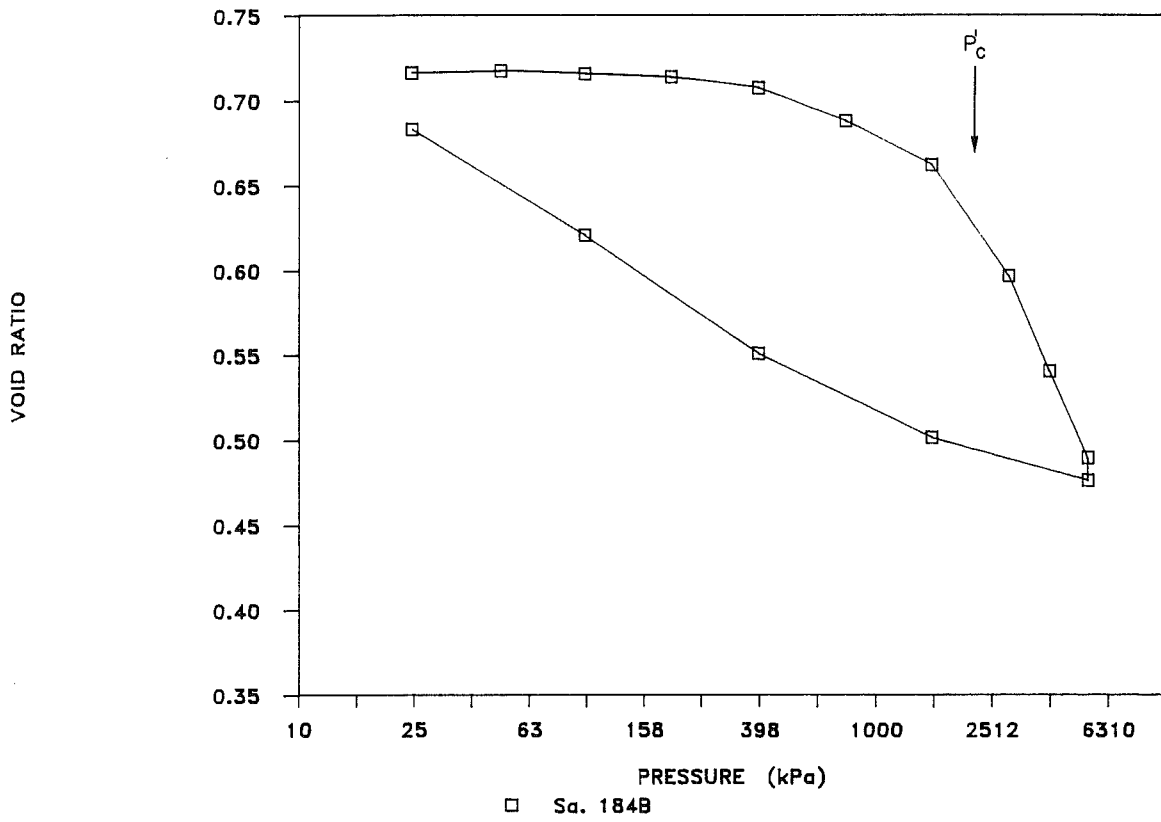
COEFFICIENT OF CONSOLIDATION

C_v (cm²/sec) vs PRESSURE



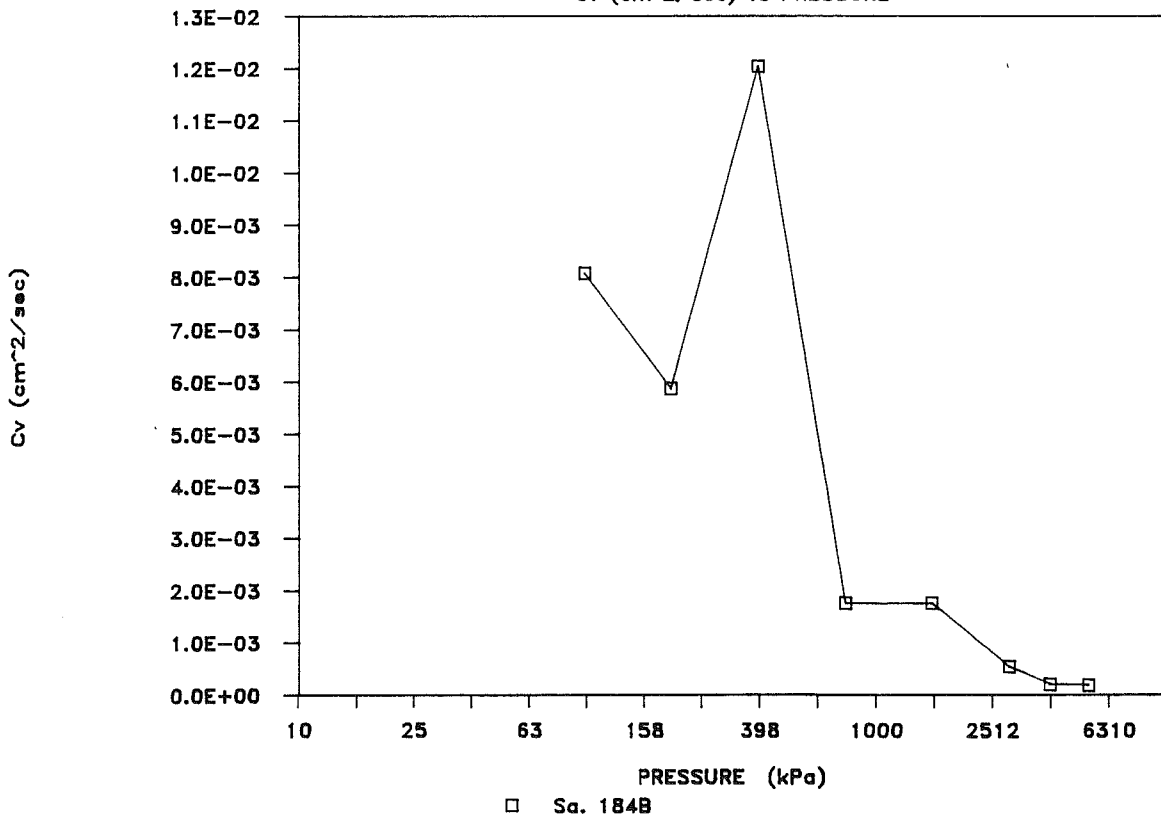
SAMPLE 183B

VOID RATIO vs PRESSURE CURVE



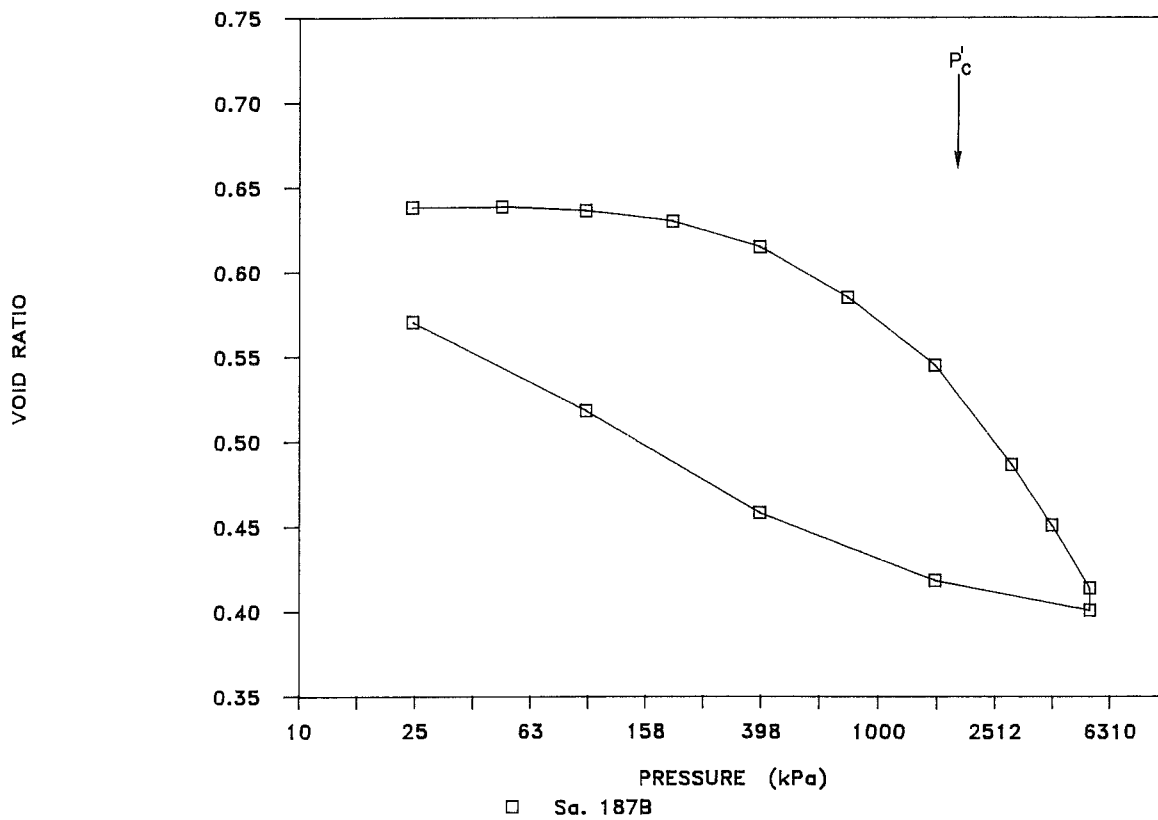
COEFFICIENT OF CONSOLIDATION

C_v (cm²/sec) vs PRESSURE



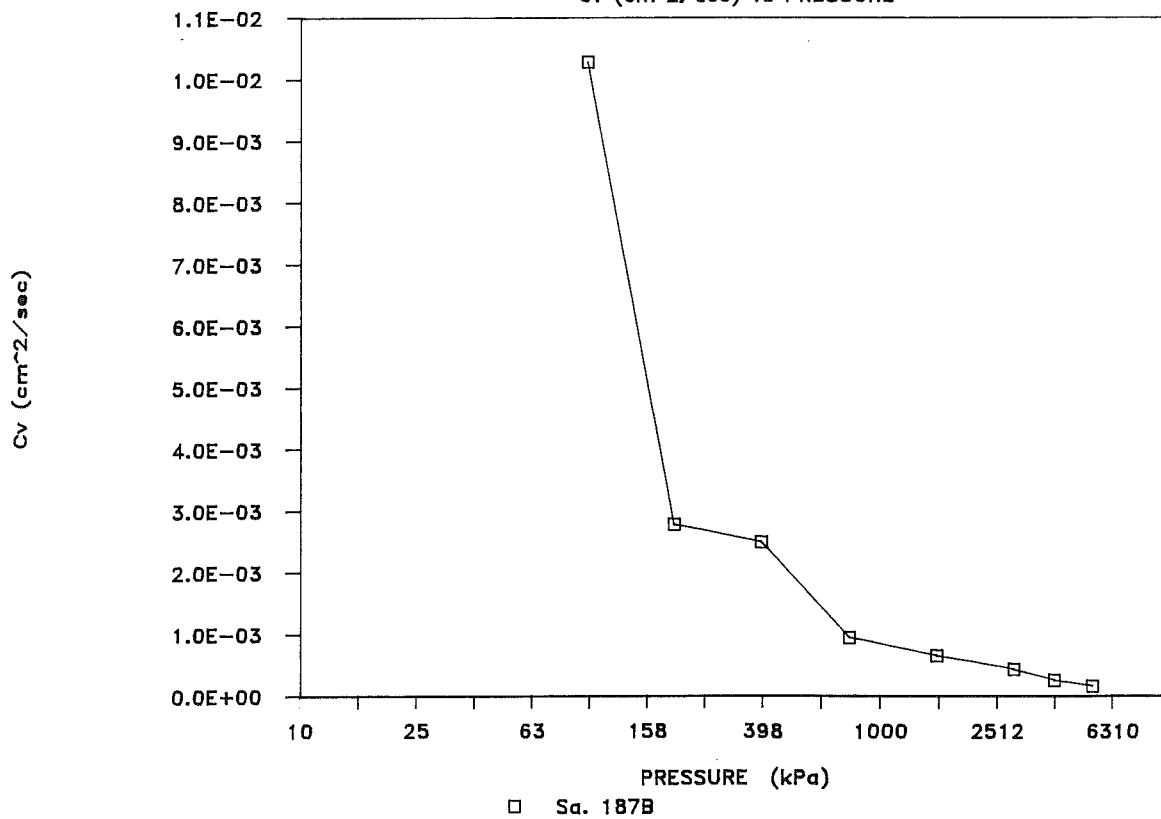
SAMPLE 184B

VOID RATIO vs PRESSURE CURVE



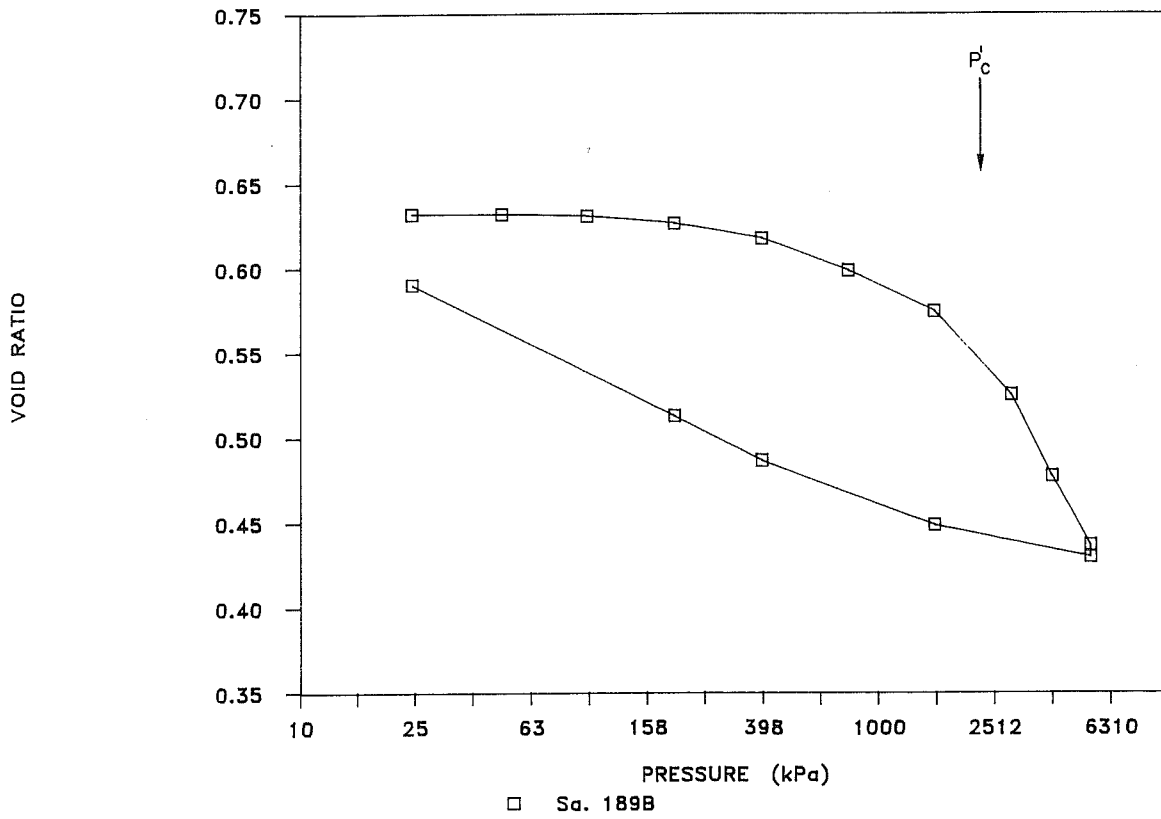
COEFFICIENT OF CONSOLIDATION

Cv (cm²/sec) vs PRESSURE

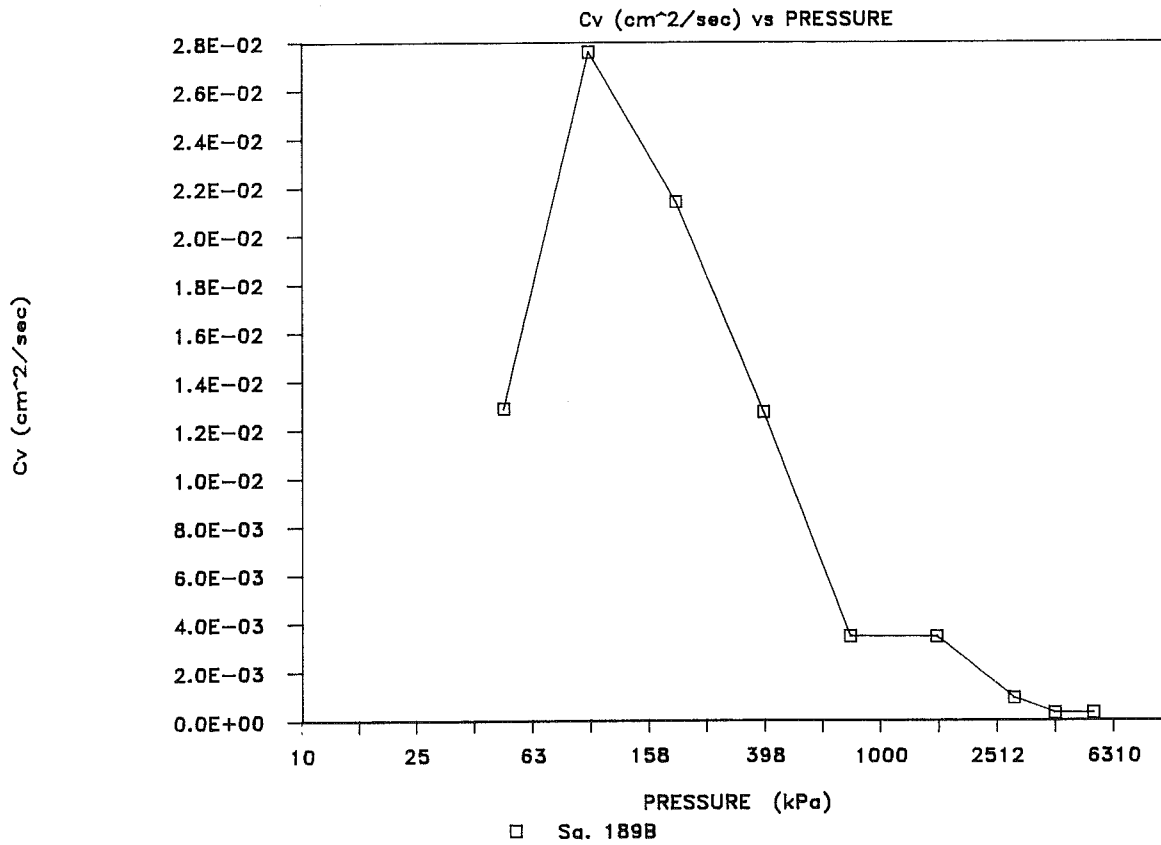


SAMPLE 187B

VOID RATIO vs PRESSURE CURVE

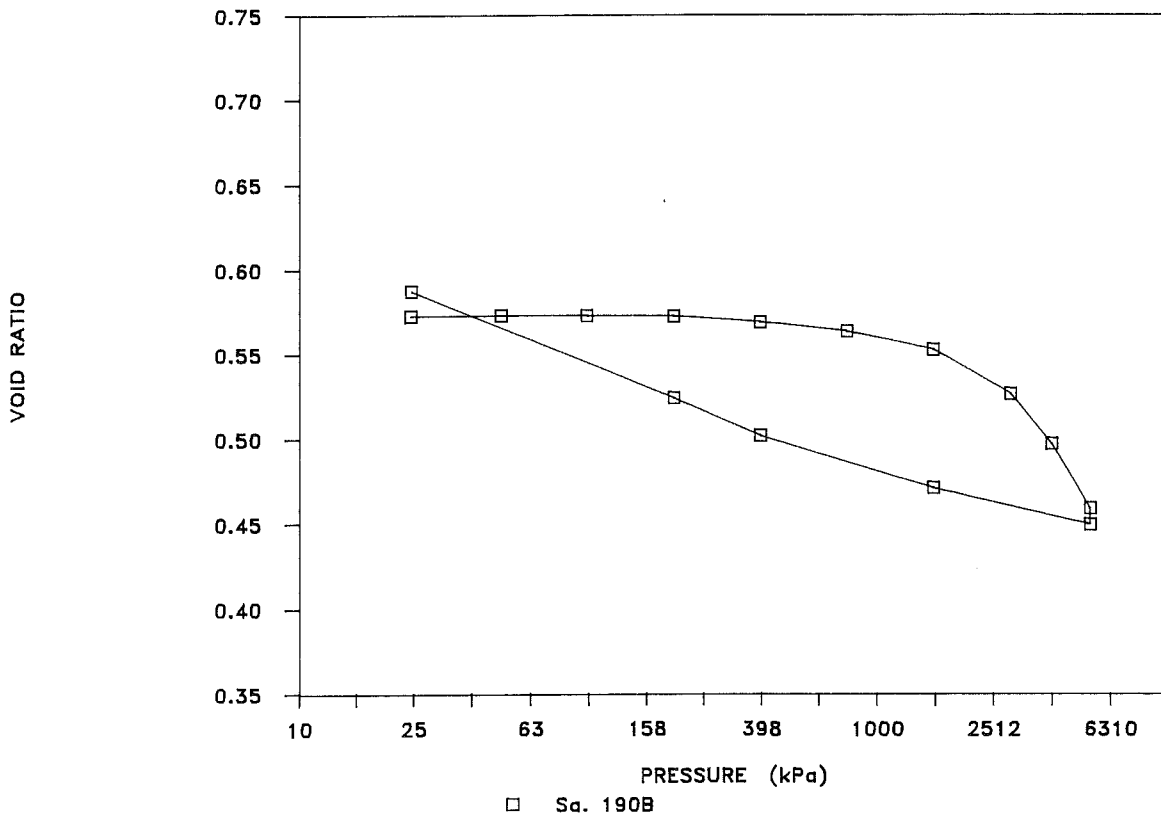


COEFFICIENT OF CONSOLIDATION



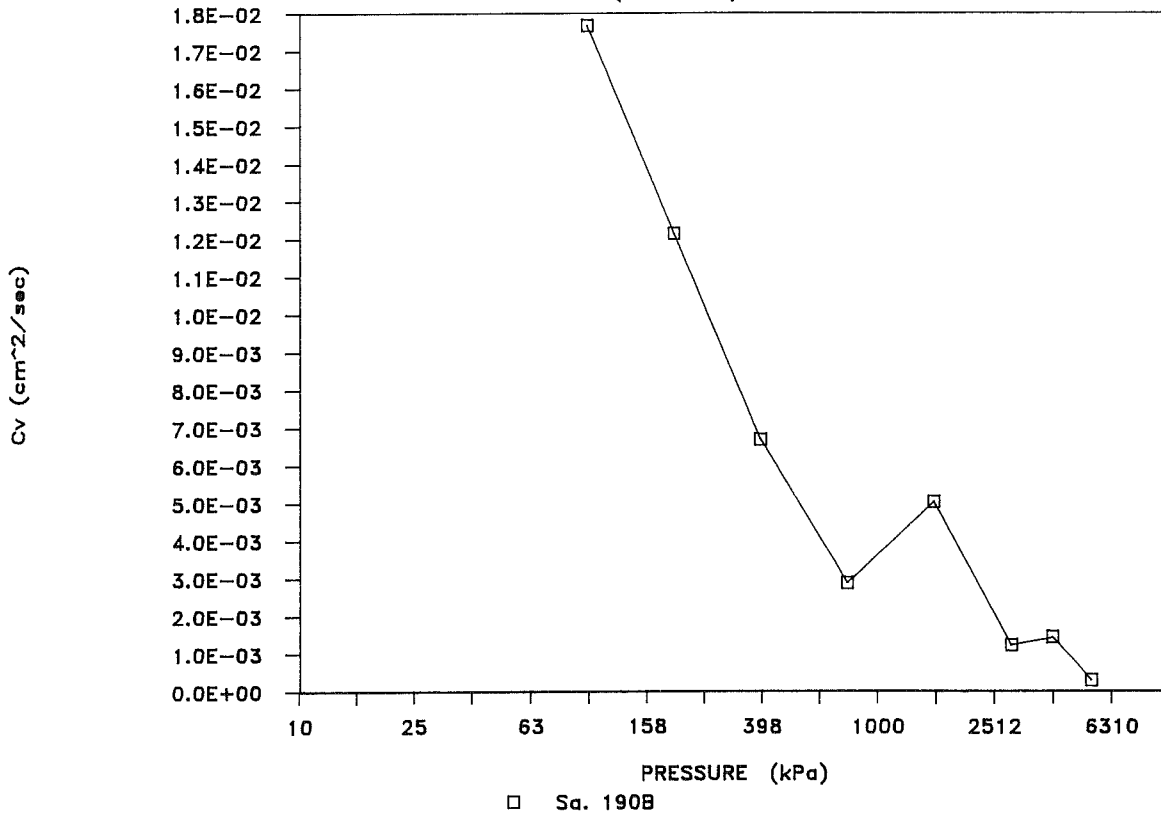
SAMPLE 189B

VOID RATIO vs PRESSURE CURVE



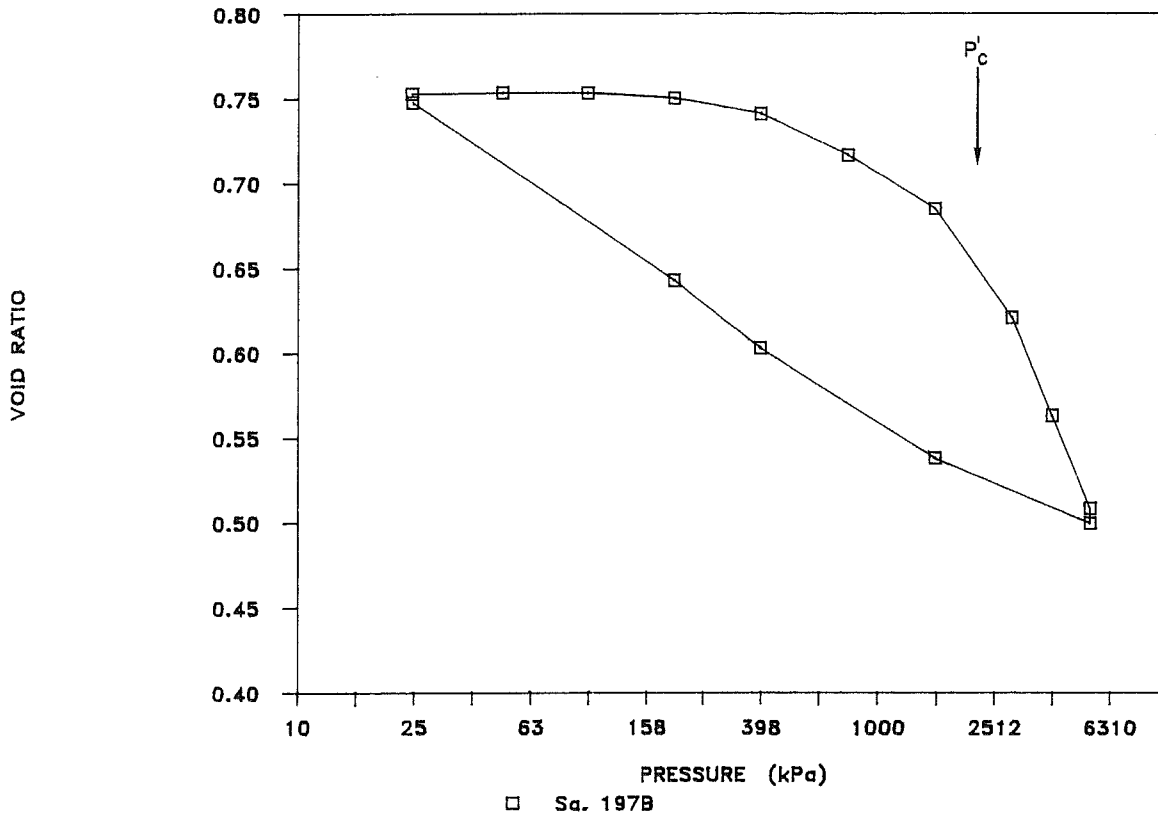
COEFFICIENT OF CONSOLIDATION

Cv (cm²/sec) vs PRESSURE

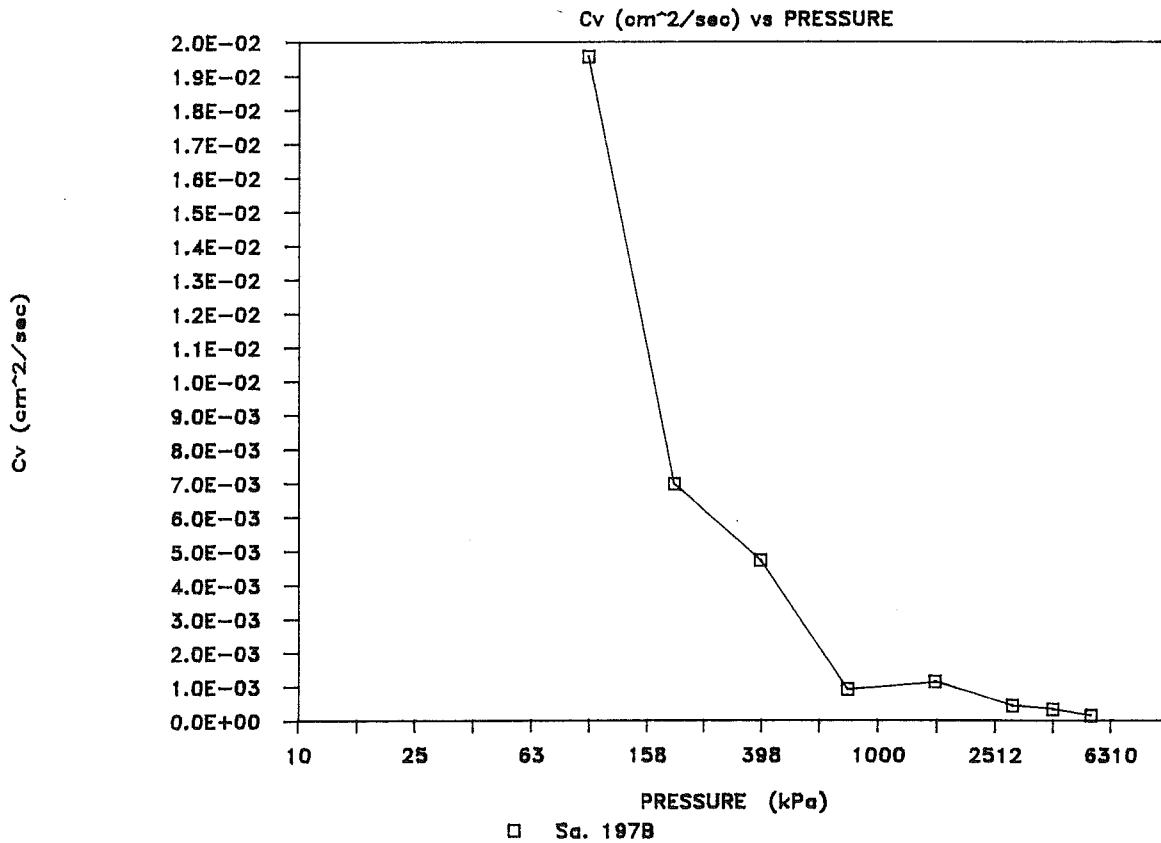


SAMPLE 190B

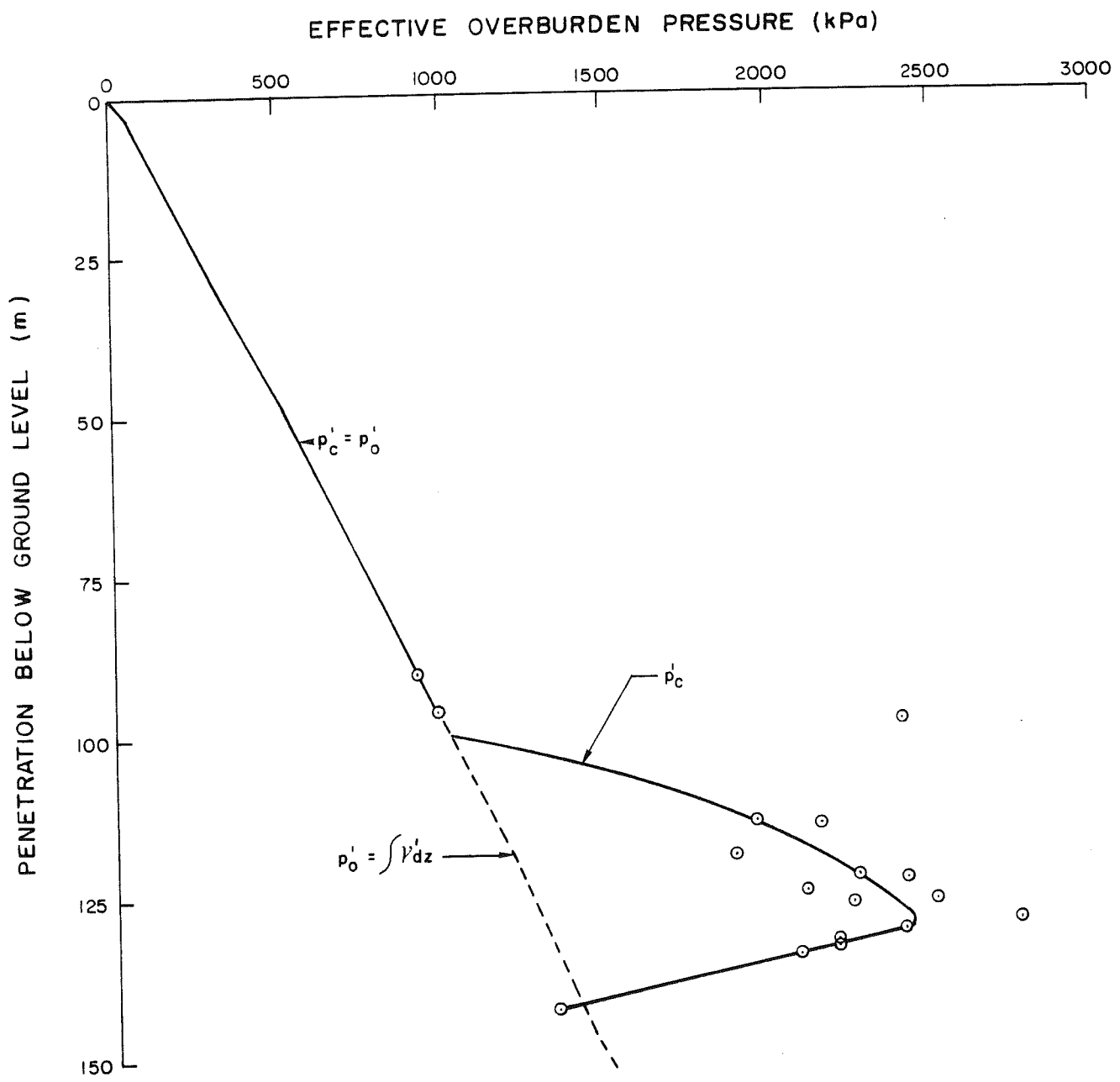
VOID RATIO vs PRESSURE CURVE



COEFFICIENT OF CONSOLIDATION



SAMPLE 197B



APPARENT OVERCONSOLIDATION PRESSURE PROFILE

TABLE 1
SUMMARY OF CONSOLIDATION TESTS

Sample No.	Depth (m)	Initial Conditions					Consolidation Parameters					
		Fluid Content %	Salt Content gm/l	Water Content %	kN/m^3	e	S_r %	P'_{10} kPa	P'_{1c} kPa	C_c	Final Water Content %	OCR
183B	113.1	24.0	(28)	23.4	19.6	0.659	94.7	1130	1950	0.285	21.5	1.7
184B	113.9	27.5	(28)	26.7	19.4	0.718	99.2	1140	2150	0.39	27.2	1.9
187B	118.4	24.7	(28)	24.0	19.9	0.64	100.2	1185	1890	0.26	23.1	1.6
189B	121.8	24.0	(28)	23.3	19.8	0.637	97.6	1220	2260	0.325	24.7	1.9
190B	123.6	19.5	(28)	18.9	19.9	0.572	88.4	1240	--	--	25.6	--
197B	126.1	29.5	(28)	28.7	19.3	0.753	101.6	1260	2240	0.43	32.8	1.8

APPENDIX
CONSOLIDATION TESTS
LABORATORY WORK SHEETS



JACQUES WHITFORD & ASSOCIATES

CONSOLIDATION TEST DATA

PROJECT:5145 BOREHOLE:'85 Sable Is. SAMPLE:183B DEPTH: 113.1 m

GRAPH LEGEND:Sa. 183B

Diameter cm	:	4.999	Initial wet wt. g	:	77.59
Height cm	:	1.980	Final wet wt. g	:	76.39
Area cm ²	:	19.63	Dry sample wt. g	:	62.97
Volume cm ³	:	38.86	(including salt)		
Salinity	:	0.028	Wt. of salt g	:	0.42
Wt. of fluid g	:	15.04	Wt. of dry soil g	:	62.55
Wt. of water g	:	14.62	Vol. of soil solids cm ³	:	23.43
Init. fluid cont. %	:	24.0	Vol. of voids cm ³	:	15.44
Init. water cont. %	:	23.4	Final water cont. %	:	21.5
Wet density g/cm ³	:	1.997	Specific gravity of soil	:	2.670
Dry density g/cm ³	:	1.610	Computed ht. of solids cm	:	1.194
Init. void ratio	:	0.659	Computed ht. of voids cm	:	0.786
Time factor	:	0.197	Initial saturation %	:	94.7

LOAD	CUM DEF	CORR	VOID	AVG HT	TIME	Cv	D	K
kPa	mm	mm	RATIO	cm	s	cm ² /s	kPa	cm/s

25	0.040	0.004	0.656	1.978	7	2.75E-02		
50	0.088	0.010	0.652	1.975	24	8.00E-03	1.20E+04	6.5E-10
98	0.151	0.020	0.648	1.970	22	8.69E-03	1.80E+04	4.7E-10
196	0.258	0.032	0.640	1.963	19	9.99E-03	2.04E+04	4.8E-10
392	0.480	0.046	0.623	1.948	44	4.25E-03	1.87E+04	2.2E-10
785	0.781	0.068	0.599	1.924	54	3.38E-03	2.78E+04	1.2E-10
1553	1.282	0.096	0.560	1.886	136	1.29E-03	3.22E+04	3.9E-11
2871	2.030	0.136	0.500	1.828	223	7.38E-04	3.69E+04	2.0E-11
3957	2.539	0.162	0.460	1.768	513	3.00E-04	4.45E+04	6.6E-12
5357	3.037	0.196	0.421	1.721	488	2.99E-04	5.97E+04	4.9E-12
5357	3.168	0.196	0.410					
1553	2.891	0.096	0.425					
392	2.475	0.046	0.455					
98	1.877	0.020	0.503					
25	1.341	0.004	0.547					

Project A.G.C. Job No. 5145
 Location SABLE IS. BORING Boring No. 85 ^{SABLE} Sample No. 183B
 Description of Soil CLAY w/ f. sa. & si ptgs. Depth of Sample 113.1 m.
 Tested By JEC Date of Testing start Mar. 17/89
 Consolidometer Type machine #1 Ring No. 5-2
 Ring Dimensions: Diam. 4.999 cm. Area, A _____ Ht. 1.980 cm.
 Initial Ht. of Soil, H_i _____ Initial Vol. of Soil, V_i _____

Specific Gravity of Soil, G_s = _____
 Wt. of Ring + Specimen at beginning of test = 146.15
 Wt. of Ring = 68.55
 Wt. of Wet Soil, W_t = _____
 Computed Dry Weight of Soil, W_s' = _____
 Oven Dry Wt. of Soil, W_s^a = _____

Water Content Determination <u>GERT</u>	
Wt. of Can + Wet Soil	= <u>92.91</u>
Wt. of Can + Dry Soil	= <u>83.87</u>
Wt. of Can	= <u>44.94 g</u>
Wt. of Water	= _____
Wt. of Dry Soil	= _____
Initial Water Content, w_i	= <u>23.22</u>

Computed Ht. of Solids, $H_o^b = W_s'/G_s A =$ _____
 Initial Ht. of Voids, $H_v = H_i - H_o =$ _____
 Initial Degree of Saturation, $S_i = (W_t - W_s)/(H_i - H_o) A =$ _____
 Initial Void Ratio $e_o = H_v/H_o =$ _____

FINAL TEST DATA (obtained at end of load testing)

Initial Dial Reading _____
 Final Dial Reading _____
 Change in Sample Ht. _____
 Final Ht. of Voids, H_{vf} _____
 Final Void Ratio, $e_f = H_{vf}/H_o$ _____

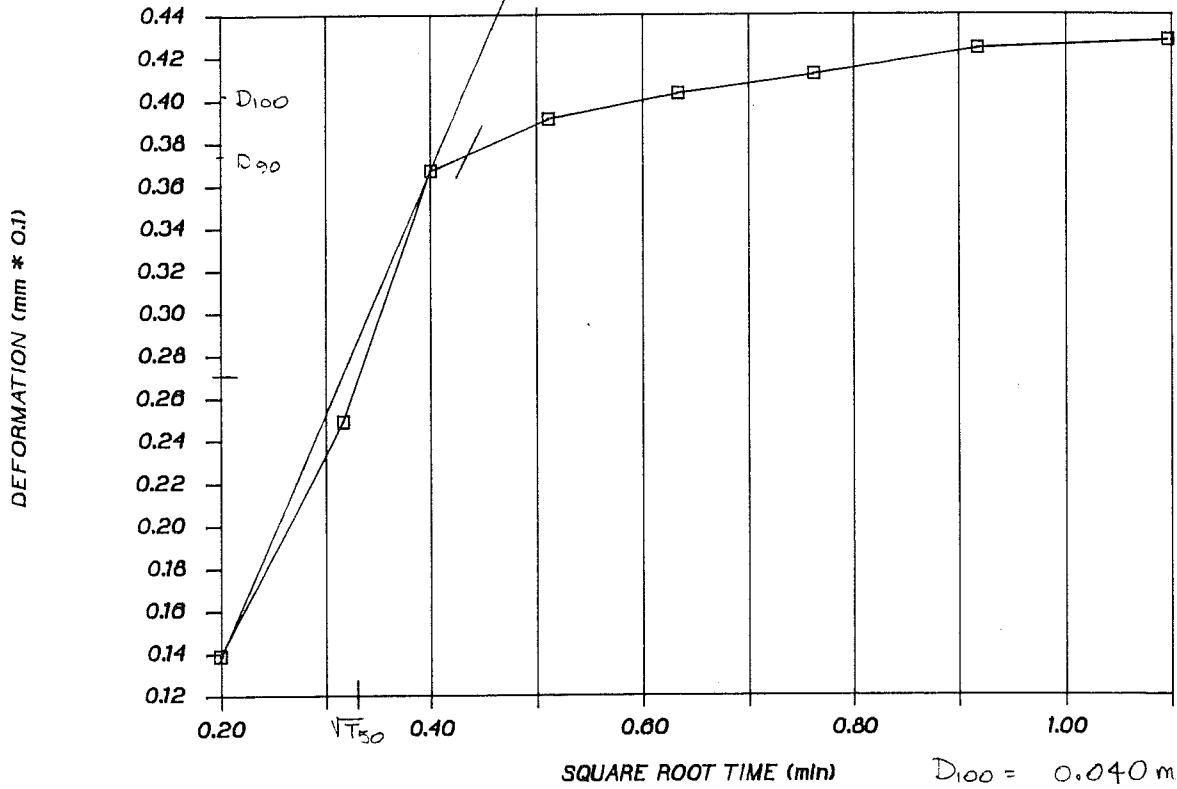
Final Water Content Determination <u>Tare K</u>	
Final Wet Wt. + Ring	= <u>76.39</u>
Final Dry Wt. + Ring	= <u>62.24</u>
Oven Dry Wt. of Soil, W_s	= _____
Final Water Content, w_f	= _____
Final Degree of Sat. S	= _____ %

STRESS RELIEF CRACKS EVIDENT - SPECIMEN

- ^a Obtained from Final Water Content Determination. PREPARED FROM BEST SECTION
^b If it appears that any soil is lost from sample, use W_s'
^c Be sure to include any soil extruded from ring which is in consolidometer.

TIME vs DEFORMATION CURVE

SAMPLE 183B

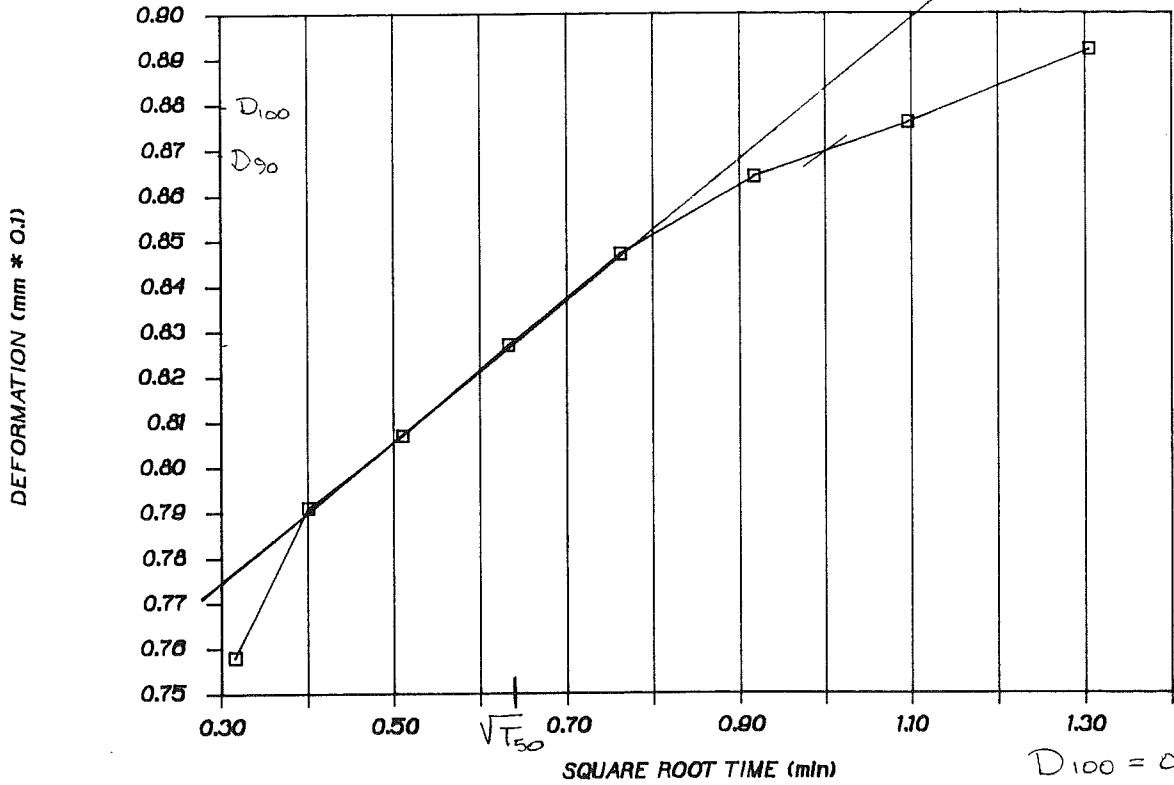


□ 0.25 kg/cm²

$D_{100} = 0.040$ mm
 $T_{50} = 7$ sec.

TIME vs DEFORMATION CURVE

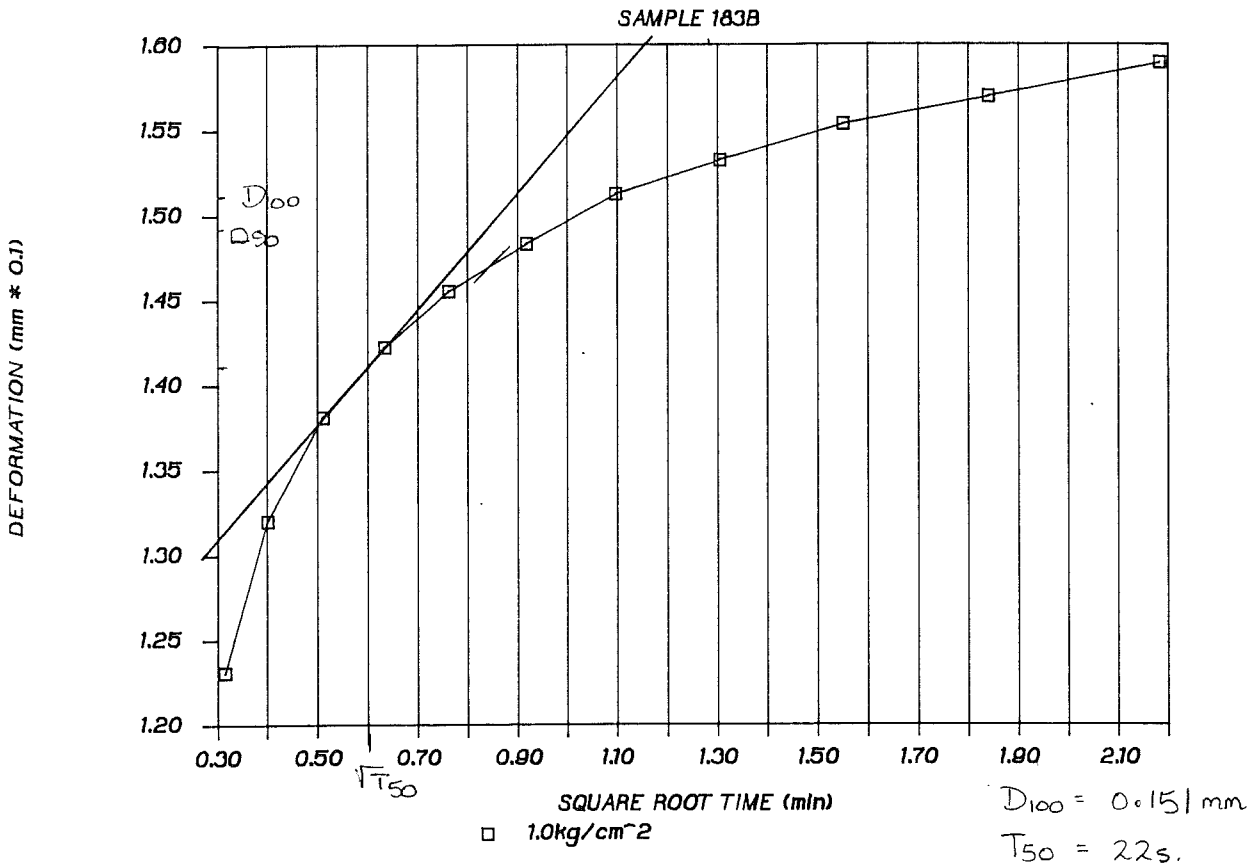
SAMPLE 183B



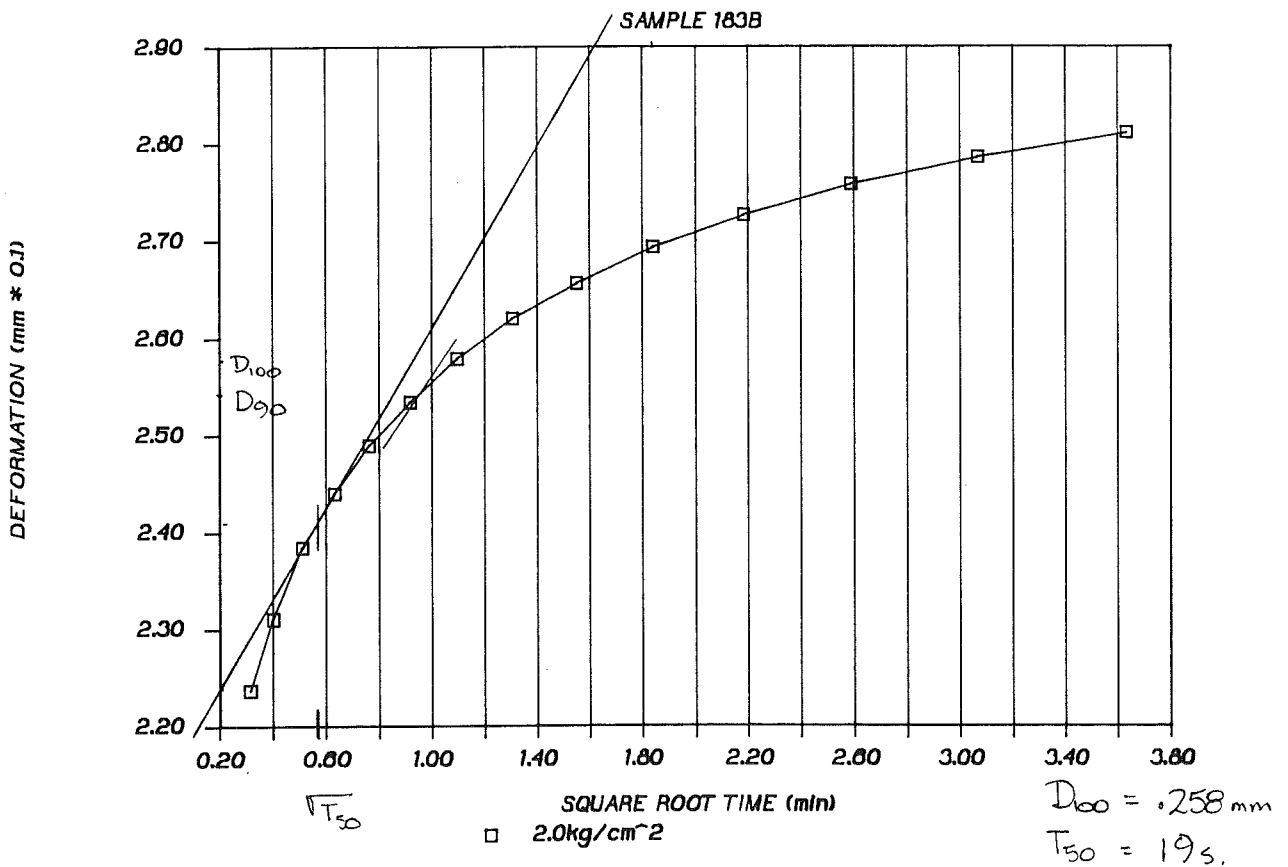
□ 0.5 kg/cm²

$D_{100} = 0.088$ mm
 $T_{50} = 24$ s.

TIME vs DEFORMATION CURVE

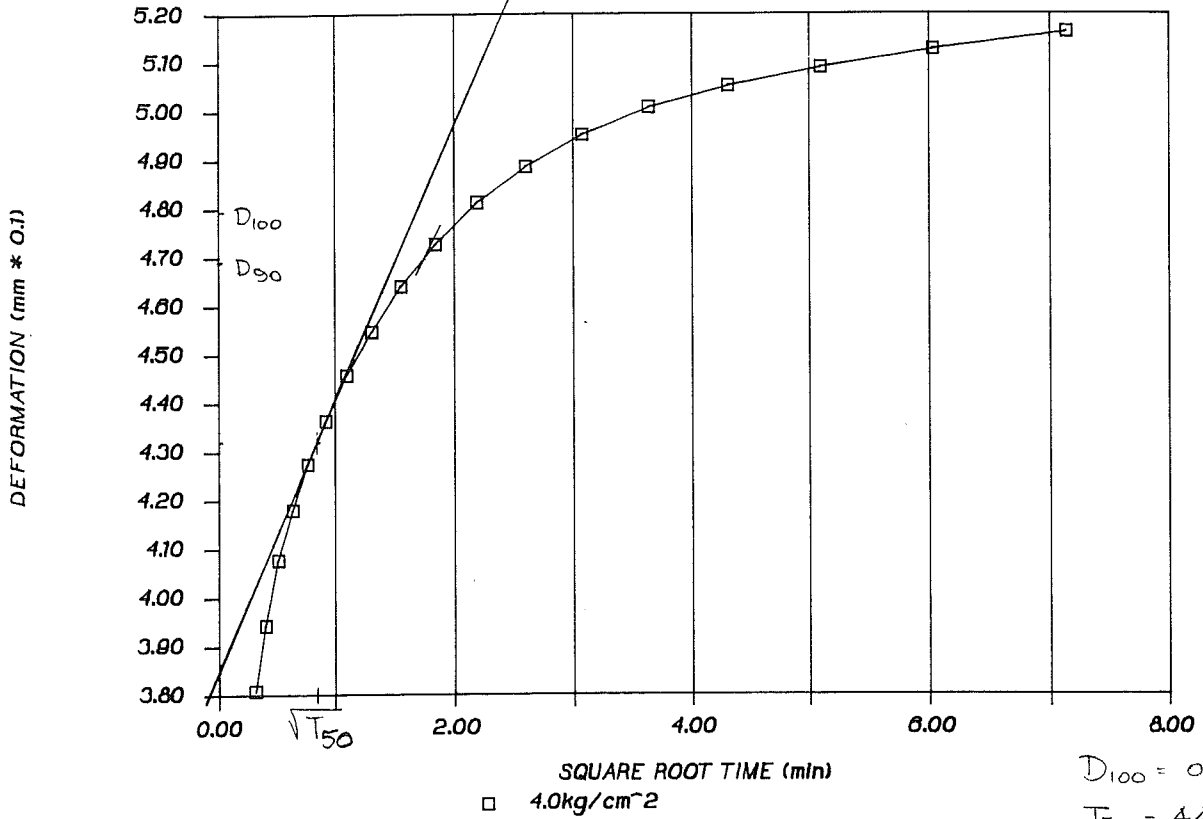


TIME vs DEFORMATION CURVE



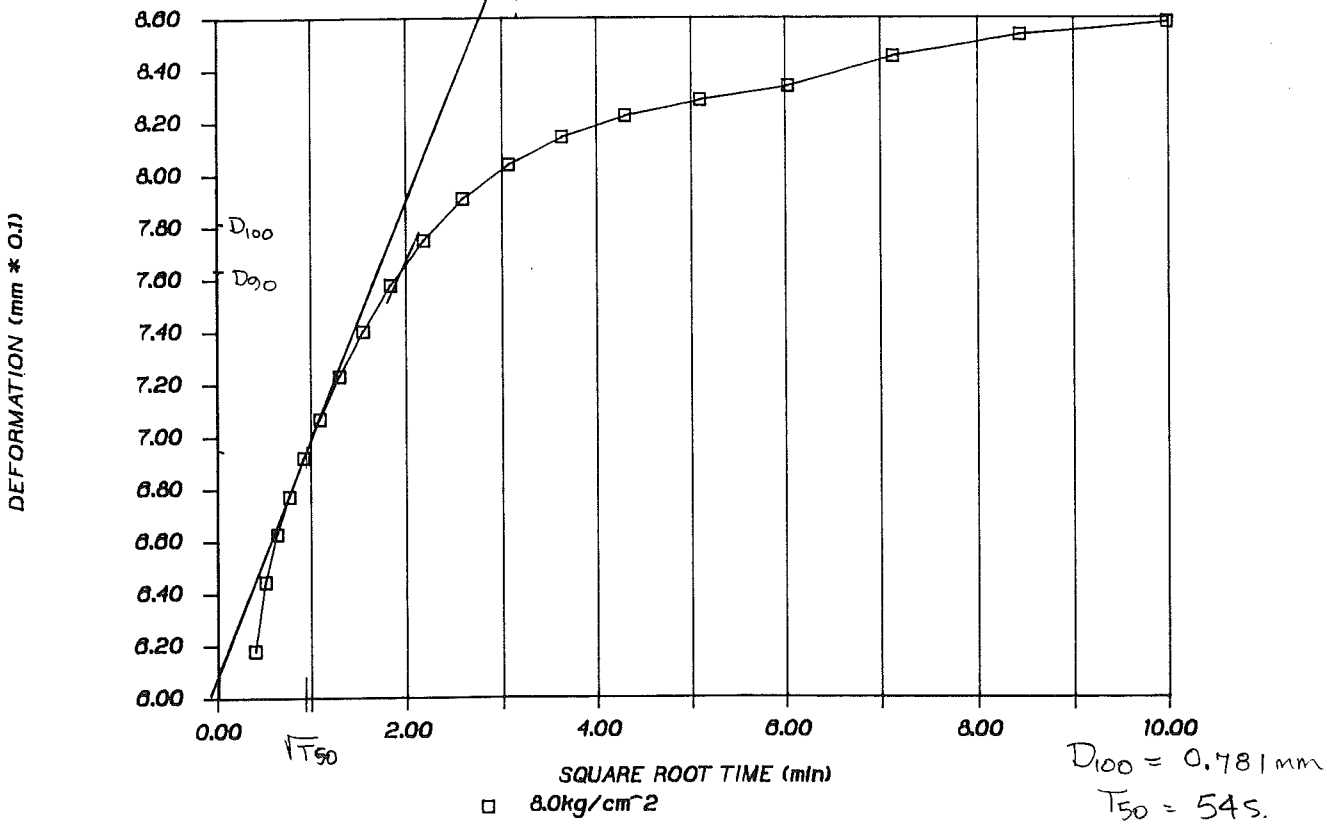
TIME vs DEFORMATION CURVE

SAMPLE 183B



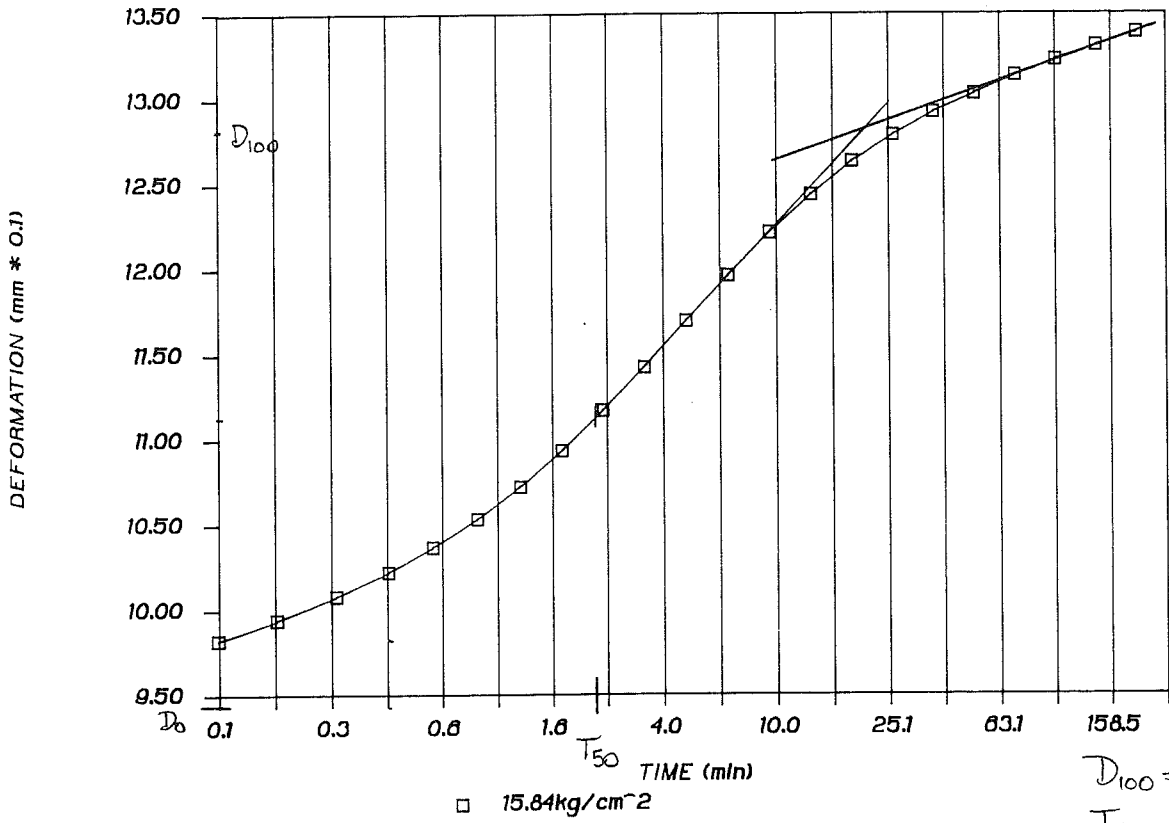
TIME vs DEFORMATION CURVE

SAMPLE 183B



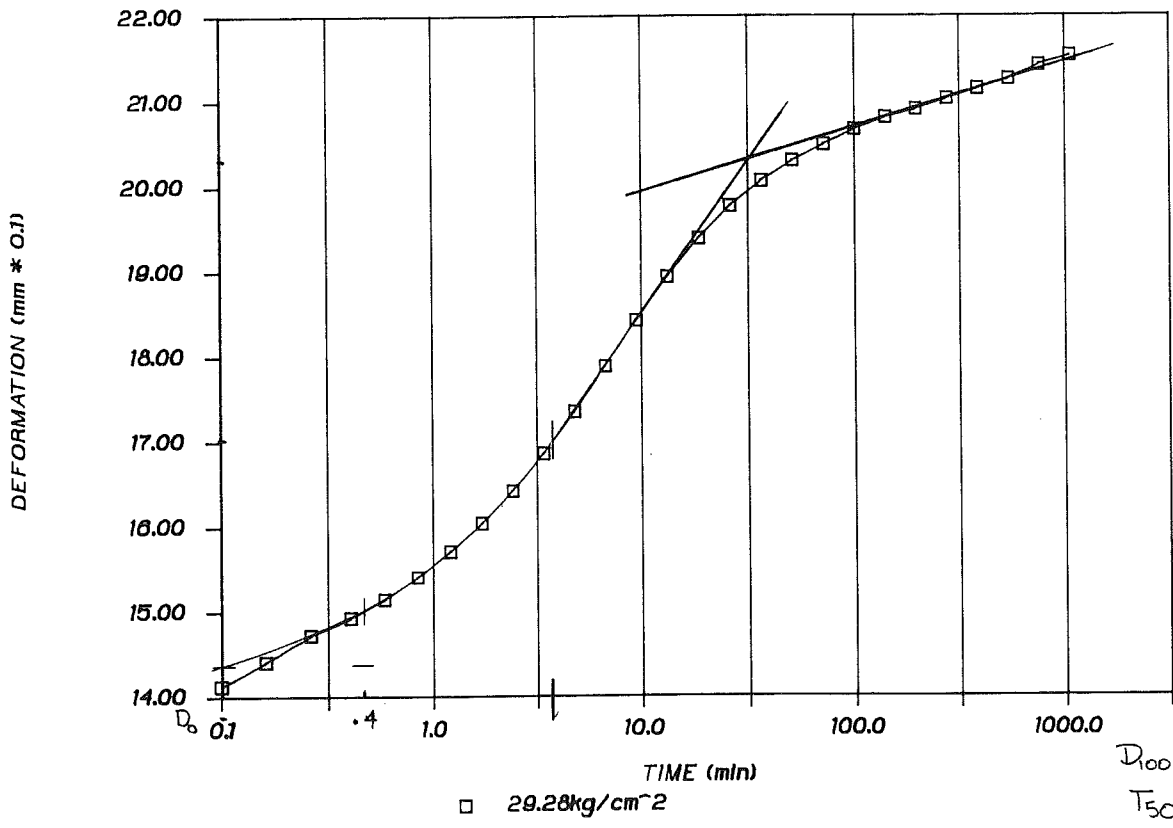
TIME vs DEFORMATION CURVE

SAMPLE 183B

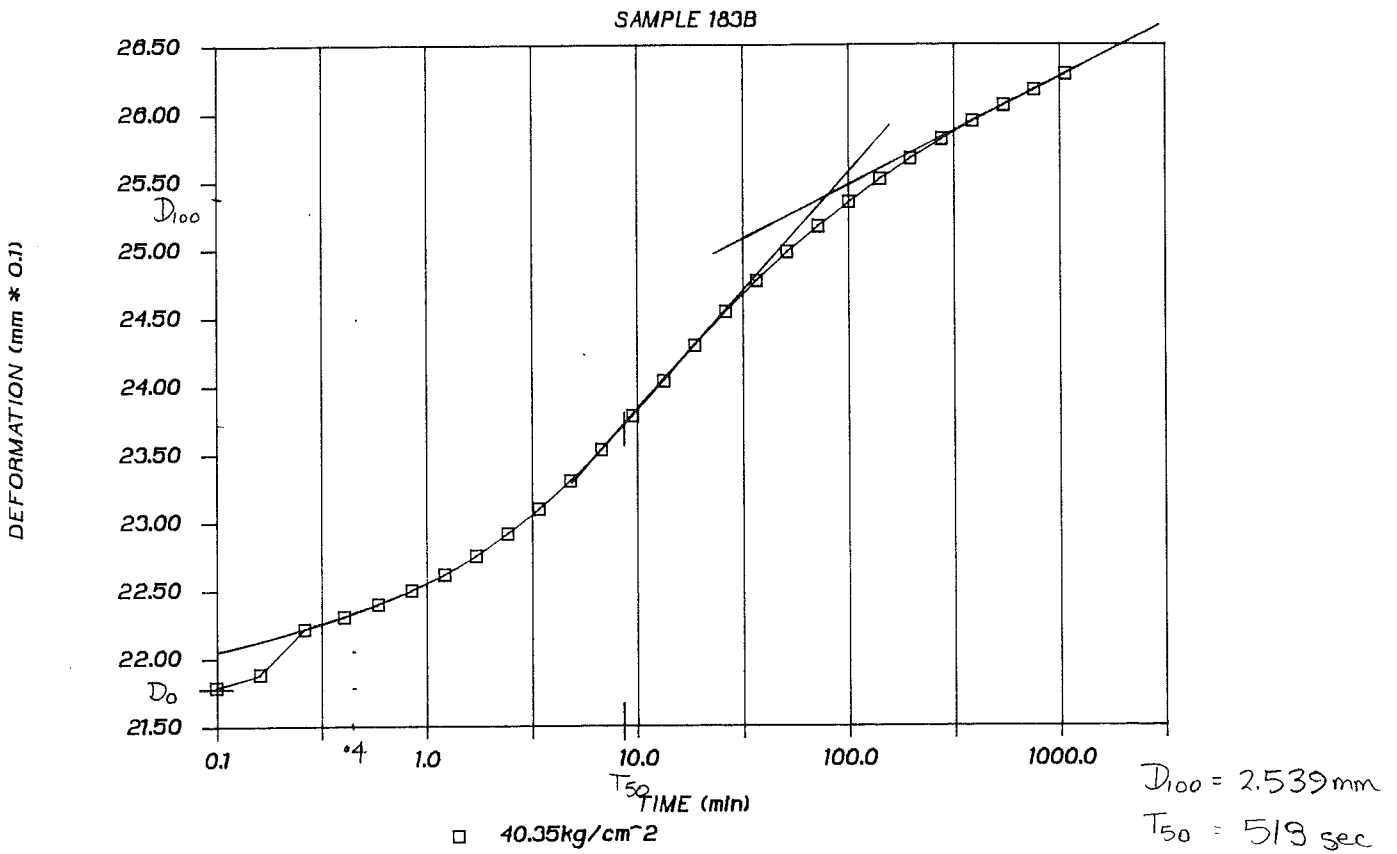


TIME vs DEFORMATION CURVE

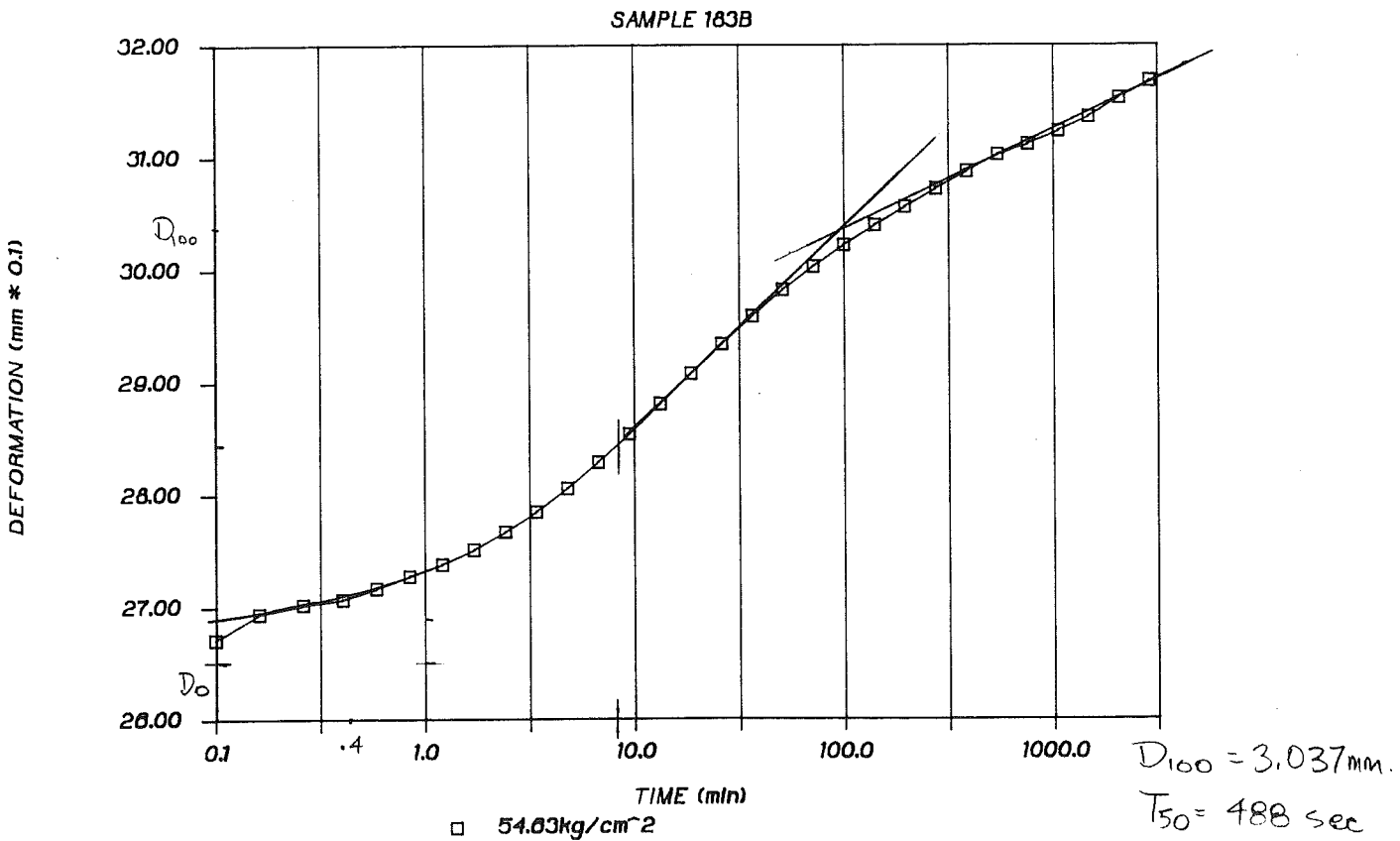
SAMPLE 183B



TIME vs DEFORMATION CURVE

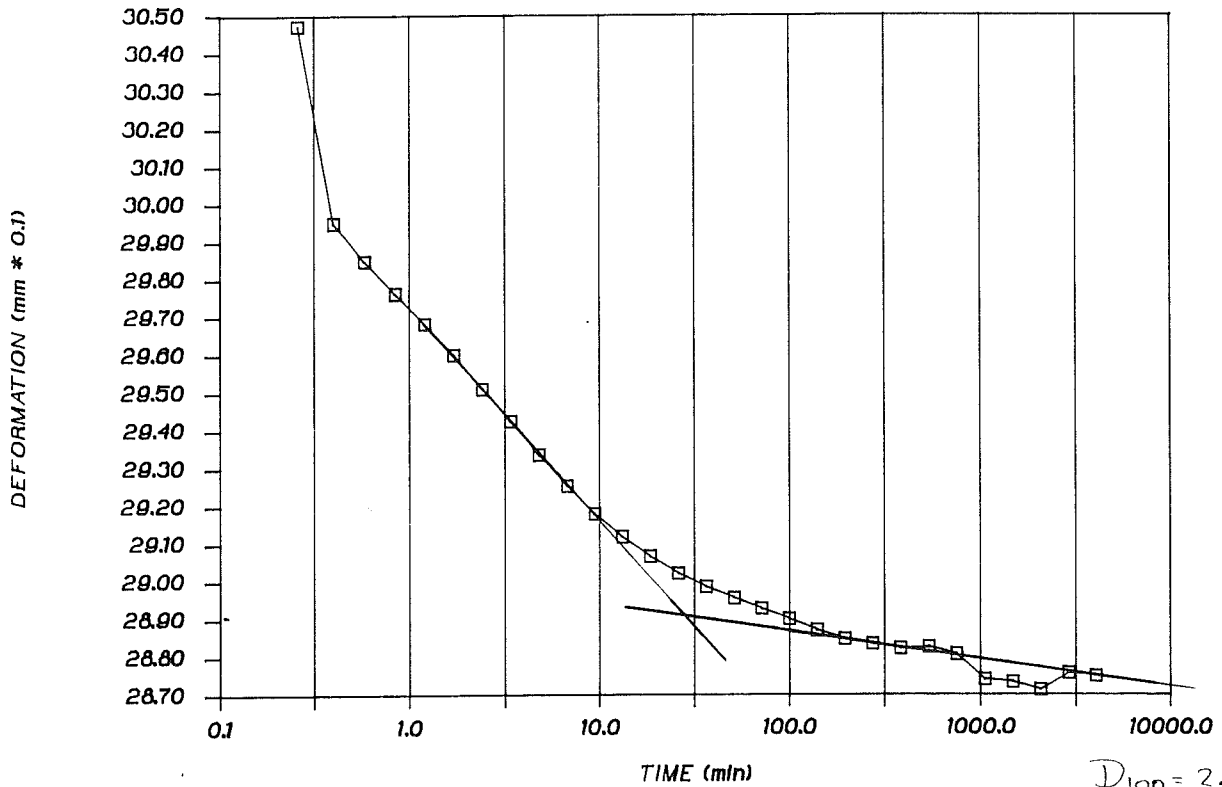


TIME vs DEFORMATION CURVE



TIME vs DEFORMATION CURVE

SAMPLE 183B

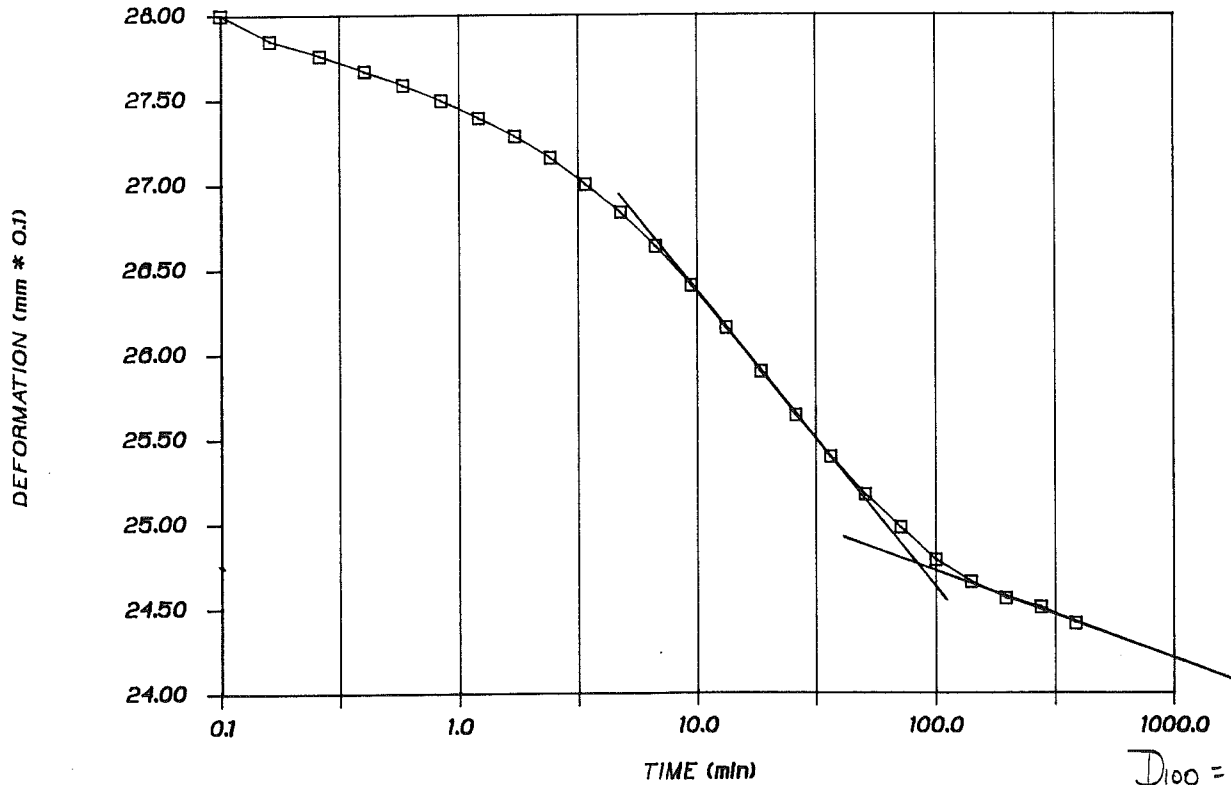


□ 15.84kg/cm² unload

$D_{100} = 2.891 \text{ mm.}$

TIME vs DEFORMATION CURVE

SAMPLE 183B

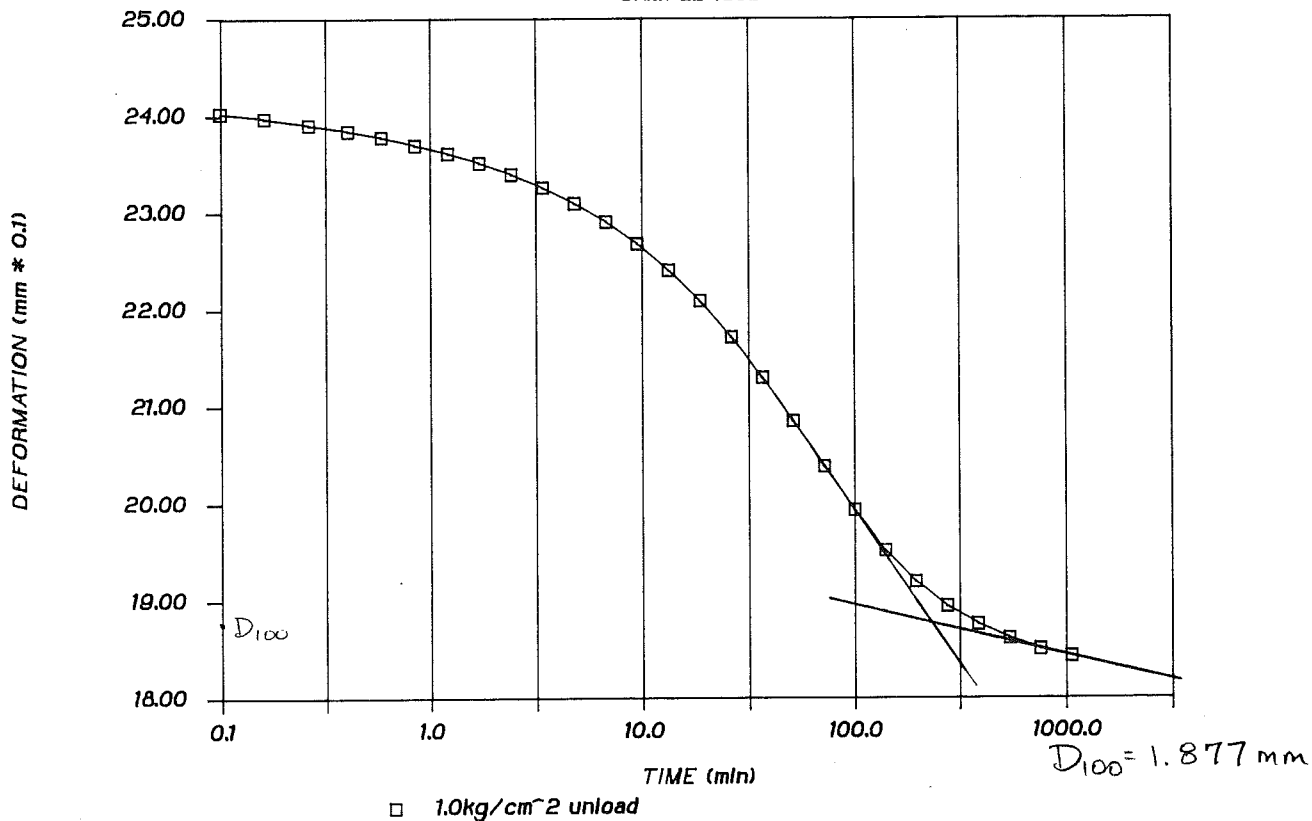


□ 4.0kg/cm² unload

$D_{100} = 2.475$

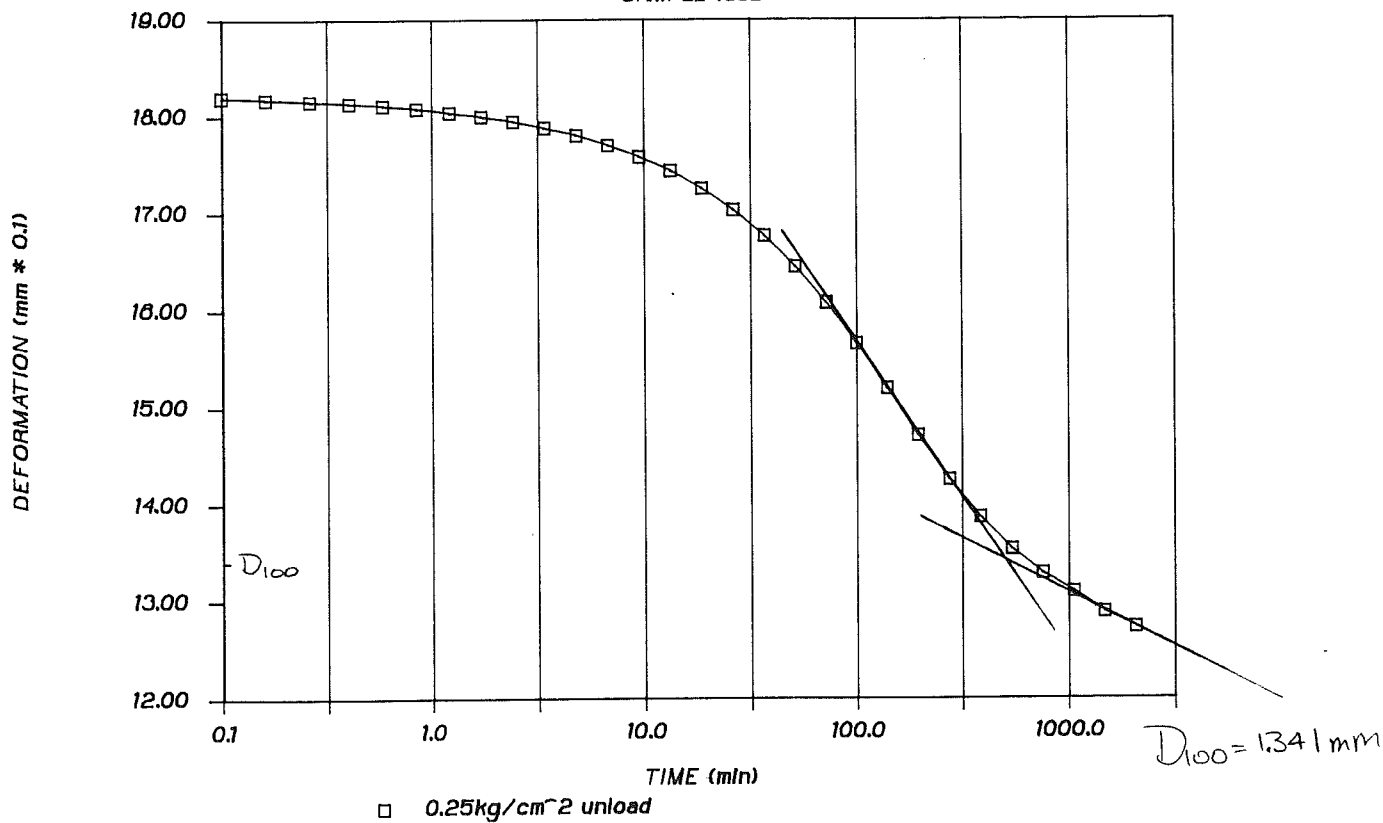
TIME vs DEFORMATION CURVE

SAMPLE 183B



TIME vs DEFORMATION CURVE

SAMPLE 183B



SAMPLE 183B
 START 15:14:02.44 ON 3-17-1989
 0.25 kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.6489	0.139	0.20
0.10	-0.6472	0.249	0.32
0.16	-0.6454	0.367	0.40
0.26	-0.6450	0.391	0.51
0.40	-0.6448	0.403	0.63
0.58	-0.6447	0.412	0.76
0.84	-0.6445	0.424	0.92
1.20	-0.6444	0.428	1.10
1.70	-0.6424	0.563	1.30

SAMPLE 183B
 START 00:01:17.71 ON 3-17-1989
 .5kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.6402	0.705	0.20
0.10	-0.6394	0.758	0.32
0.16	-0.6389	0.791	0.40
0.26	-0.6386	0.807	0.51
0.40	-0.6383	0.827	0.63
0.58	-0.6380	0.847	0.76
0.84	-0.6378	0.864	0.92
1.20	-0.6376	0.876	1.10
1.70	-0.6373	0.892	1.30

SAMPLE 183B
 START 00:05:59.59 ON 3-17-1989
 1.0kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.6368	0.925	0.20
0.10	-0.6321	1.231	0.32
0.16	-0.6308	1.320	0.40
0.26	-0.6298	1.381	0.51
0.40	-0.6292	1.422	0.63
0.58	-0.6287	1.455	0.76
0.84	-0.6283	1.483	0.92
1.20	-0.6278	1.512	1.10
1.70	-0.6275	1.532	1.30
2.40	-0.6272	1.553	1.55
3.38	-0.6269	1.569	1.84
4.76	-0.6266	1.589	2.18

SAMPLE 183B
 START 00:13:30.59 ON 3-17-1989
 2.0kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.6191	2.078	0.20
0.10	-0.6167	2.237	0.32
0.16	-0.6156	2.310	0.40
0.26	-0.6144	2.384	0.51
0.40	-0.6136	2.440	0.63
0.58	-0.6128	2.489	0.76
0.84	-0.6121	2.534	0.92
1.20	-0.6114	2.579	1.10
1.70	-0.6108	2.620	1.30
2.40	-0.6102	2.656	1.55
3.38	-0.6097	2.693	1.84
4.76	-0.6092	2.726	2.18
6.70	-0.6087	2.758	2.59
9.40	-0.6083	2.786	3.07
13.18	-0.6079	2.811	3.63

SAMPLE 183B
 START 00:30:02.16 ON 3-17-1989
 4.0kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.6072	2.856	0.20
0.10	-0.5926	3.809	0.32
0.16	-0.5905	3.943	0.40
0.26	-0.5884	4.078	0.51
0.40	-0.5869	4.180	0.63
0.58	-0.5854	4.274	0.76
0.84	-0.5841	4.363	0.92
1.20	-0.5826	4.457	1.10
1.70	-0.5813	4.546	1.30
2.40	-0.5798	4.640	1.55
3.38	-0.5785	4.726	1.84
4.76	-0.5772	4.812	2.18
6.70	-0.5761	4.885	2.59
9.40	-0.5751	4.950	3.07
13.18	-0.5742	5.007	3.63
18.48	-0.5735	5.051	4.30
25.90	-0.5729	5.089	5.09
36.28	-0.5724	5.125	6.02
50.80	-0.5718	5.162	7.13

SAMPLE 183B
 START 01:27:01.10 ON 3-17-1989
 8.0kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5721	5.141	0.20
0.10	-0.5719	5.158	0.32
0.16	-0.5562	6.180	0.40
0.26	-0.5521	6.445	0.51
0.40	-0.5493	6.628	0.63
0.58	-0.5471	6.771	0.76
0.84	-0.5448	6.921	0.92
1.20	-0.5426	7.068	1.10
1.70	-0.5401	7.231	1.30
2.40	-0.5374	7.402	1.55
3.38	-0.5347	7.577	1.84
4.76	-0.5321	7.749	2.18
6.70	-0.5297	7.908	2.59
9.40	-0.5277	8.038	3.07
13.18	-0.5261	8.144	3.63
18.48	-0.5248	8.225	4.30
25.90	-0.5239	8.286	5.09
36.28	-0.5231	8.339	6.02
50.80	-0.5213	8.453	7.13
71.12	-0.5201	8.535	8.43
99.56	-0.5193	8.584	9.98
139.38	-0.5187	8.625	11.81
195.10	-0.5180	8.669	13.97
273.08	-0.5174	8.710	16.53
382.23	-0.5167	8.750	19.55
534.99	-0.5161	8.791	23.13
748.79	-0.5154	8.840	27.36
1048.04	-0.5148	8.881	32.37
1466.84	-0.5142	8.913	38.30
2053.01	-0.5142	8.918	45.31

SAMPLE 183B
 START 20:23:59.50 ON 3-17-1989
 15.84kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5127	9.016	0.20
0.10	-0.5003	9.822	0.32
0.16	-0.4985	9.940	0.40
0.26	-0.4964	10.079	0.51
0.40	-0.4942	10.222	0.63
0.58	-0.4919	10.368	0.76
0.84	-0.4894	10.535	0.92
1.20	-0.4865	10.722	1.10
1.70	-0.4832	10.934	1.30
2.40	-0.4796	11.171	1.55
3.38	-0.4757	11.423	1.84
4.76	-0.4716	11.696	2.18
6.70	-0.4675	11.961	2.59
9.40	-0.4636	12.213	3.07
13.18	-0.4602	12.433	3.63
18.48	-0.4572	12.629	4.30
25.90	-0.4549	12.784	5.09
36.28	-0.4528	12.918	6.02
50.80	-0.4511	13.028	7.13
71.12	-0.4495	13.134	8.43
99.56	-0.4481	13.224	9.98
139.38	-0.4468	13.309	11.81
195.10	-0.4456	13.387	13.97

SAMPLE 183B
 START 00:22:36.98 ON 3-17-1989
 29.28kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.4446	13.456	0.20
0.10	-0.4343	14.124	0.32
0.16	-0.4299	14.409	0.40
0.26	-0.4251	14.723	0.51
0.40	-0.4220	14.926	0.63
0.58	-0.4186	15.150	0.76
0.84	-0.4146	15.411	0.92
1.20	-0.4100	15.708	1.10
1.70	-0.4049	16.039	1.30
2.40	-0.3990	16.425	1.55
3.38	-0.3923	16.861	1.84
4.76	-0.3849	17.350	2.18
6.70	-0.3767	17.880	2.59
9.40	-0.3684	18.418	3.07
13.18	-0.3606	18.931	3.63
18.48	-0.3536	19.383	4.30
25.90	-0.3478	19.762	5.09
36.28	-0.3432	20.059	6.02
50.80	-0.3396	20.296	7.13
71.12	-0.3367	20.487	8.43
99.56	-0.3340	20.662	9.98
139.38	-0.3318	20.805	11.81
195.10	-0.3304	20.899	13.97
273.08	-0.3284	21.025	16.53
382.23	-0.3266	21.143	19.55
534.99	-0.3249	21.253	23.13
748.79	-0.3224	21.416	27.36
1048.04	-0.3207	21.526	32.37

SAMPLE 183B
 START 00:42:45.62 ON 3-17-1989
 40.35kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.3185	21.672	0.20
0.10	-0.3167	21.791	0.32
0.16	-0.3152	21.884	0.40
0.26	-0.3102	22.215	0.51
0.40	-0.3087	22.308	0.63
0.58	-0.3074	22.398	0.76
0.84	-0.3058	22.499	0.92
1.20	-0.3040	22.617	1.10
1.70	-0.3019	22.752	1.30
2.40	-0.2994	22.915	1.55
3.38	-0.2966	23.098	1.84
4.76	-0.2935	23.302	2.18
6.70	-0.2900	23.530	2.59
9.40	-0.2862	23.779	3.07
13.18	-0.2822	24.035	3.63

SAMPLE 183B
 START 18:30:18.08 ON 3-17-1989
 54.63kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.2456	26.423	0.20

0.10	-0.2412	26.712	0.32
0.16	-0.2377	26.940	0.40
0.26	-0.2364	27.022	0.51
0.40	-0.2357	27.071	0.63
0.58	-0.2342	27.168	0.76
0.84	-0.2325	27.278	0.92
1.20	-0.2309	27.384	1.10
1.70	-0.2289	27.514	1.30
2.40	-0.2265	27.669	1.55
3.38	-0.2237	27.848	1.84
4.76	-0.2206	28.056	2.18
6.70	-0.2170	28.288	2.59
9.40	-0.2132	28.537	3.07
13.18	-0.2091	28.806	3.63
18.48	-0.2049	29.075	4.30
25.90	-0.2009	29.339	5.09
36.28	-0.1971	29.588	6.02
50.80	-0.1935	29.820	7.13
71.12	-0.1903	30.028	8.43
99.56	-0.1874	30.219	9.98
139.38	-0.1846	30.399	11.81
195.10	-0.1821	30.562	13.97
273.08	-0.1797	30.721	16.53
382.23	-0.1773	30.875	19.55
534.99	-0.1751	31.022	23.13
748.79	-0.1736	31.116	27.36
1048.04	-0.1718	31.234	32.37
1466.84	-0.1699	31.360	38.30
2053.01	-0.1673	31.527	45.31
2873.40	-0.1650	31.677	53.60

SAMPLE 183B
 START 15:37:25.18 ON 3-27-1989
 1.0kg/cm² unload
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.2795	24.214	0.20
0.10	-0.2824	24.027	0.32
0.16	-0.2832	23.975	0.40
0.26	-0.2842	23.905	0.51
0.40	-0.2852	23.844	0.63
0.58	-0.2862	23.779	0.76
0.84	-0.2874	23.697	0.92
1.20	-0.2887	23.611	1.10
1.70	-0.2903	23.514	1.30
2.40	-0.2921	23.396	1.55
3.38	-0.2942	23.258	1.84
4.76	-0.2967	23.095	2.18
6.70	-0.2996	22.903	2.59
9.40	-0.3031	22.679	3.07
13.18	-0.3073	22.402	3.63
18.48	-0.3121	22.088	4.30
25.90	-0.3179	21.713	5.09
36.28	-0.3242	21.298	6.02
50.80	-0.3312	20.846	7.13
71.12	-0.3383	20.381	8.43
99.56	-0.3452	19.933	9.98
139.38	-0.3516	19.517	11.81
195.10	-0.3566	19.192	13.97
273.08	-0.3604	18.943	16.53
382.23	-0.3632	18.756	19.55
534.99	-0.3655	18.609	23.13
748.79	-0.3672	18.499	27.36
1048.04	-0.3683	18.426	32.37

SAMPLE 183B
 START 00:18:01.04 ON 3-17-1989
 15.84kg/cm² unload
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.1757	30.977	0.20
0.10	-0.1755	30.993	0.32
0.16	-0.1791	30.757	0.40
0.26	-0.1835	30.472	0.51
0.40	-0.1915	29.950	0.63
0.58	-0.1931	29.849	0.76
0.84	-0.1944	29.763	0.92
1.20	-0.1956	29.682	1.10
1.70	-0.1969	29.600	1.30
2.40	-0.1982	29.510	1.55
3.38	-0.1996	29.425	1.84
4.76	-0.2009	29.336	2.18
6.70	-0.2022	29.254	2.59
9.40	-0.2033	29.180	3.07
13.18	-0.2043	29.119	3.63
18.48	-0.2051	29.066	4.30
25.90	-0.2057	29.021	5.09
36.28	-0.2063	28.985	6.02
50.80	-0.2067	28.956	7.13
71.12	-0.2072	28.928	8.43
99.56	-0.2076	28.900	9.98
139.38	-0.2081	28.871	11.81
195.10	-0.2084	28.847	13.97
273.08	-0.2086	28.834	16.53
382.23	-0.2088	28.822	19.55
534.99	-0.2087	28.826	23.13
748.79	-0.2091	28.806	27.36
1048.04	-0.2101	28.740	32.37
1466.84	-0.2102	28.733	38.30
2053.01	-0.2105	28.712	45.31
2873.40	-0.2098	28.757	53.60
4021.60	-0.2099	28.749	63.42

SAMPLE 183B
 START 13:04:17.41 ON 3-27-1989
 0.25kg/cm² unload
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.3716	18.214	0.20
0.10	-0.3718	18.198	0.32
0.16	-0.3721	18.177	0.40
0.26	-0.3724	18.157	0.51
0.40	-0.3727	18.136	0.63
0.58	-0.3731	18.112	0.76
0.84	-0.3736	18.080	0.92
1.20	-0.3742	18.043	1.10
1.70	-0.3749	17.998	1.30
2.40	-0.3757	17.945	1.55
3.38	-0.3767	17.880	1.84
4.76	-0.3779	17.803	2.18
6.70	-0.3794	17.701	2.59
9.40	-0.3812	17.582	3.07
13.18	-0.3835	17.436	3.63
18.48	-0.3863	17.252	4.30
25.90	-0.3897	17.033	5.09
36.28	-0.3938	16.768	6.02
50.80	-0.3986	16.450	7.13
71.12	-0.4043	16.079	8.43
99.56	-0.4108	15.659	9.98
139.38	-0.4179	15.192	11.81
195.10	-0.4254	14.707	13.97
273.08	-0.4323	14.254	16.53
382.23	-0.4382	13.867	19.55
534.99	-0.4433	13.537	23.13
748.79	-0.4472	13.285	27.36
1048.04	-0.4501	13.093	32.37
1466.84	-0.4533	12.885	38.30
2053.01	-0.4557	12.726	45.31

18.48	-0.2783	24.292	4.30
25.90	-0.2745	24.540	5.09
36.28	-0.2710	24.768	6.02
50.80	-0.2678	24.976	7.13
71.12	-0.2649	25.168	8.43
99.56	-0.2622	25.343	9.98
139.38	-0.2596	25.510	11.81
195.10	-0.2573	25.661	13.97
273.08	-0.2551	25.803	16.53
382.23	-0.2531	25.934	19.55
534.99	-0.2513	26.052	23.13
748.79	-0.2496	26.166	27.36
1048.04	-0.2478	26.280	32.37

SAMPLE 183B
 START 17:07:25.40 ON 3-17-1989
 4.0kg/cm² unload
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.2162	28.342	0.20
0.10	-0.2214	27.999	0.32
0.16	-0.2237	27.848	0.40
0.26	-0.2251	27.759	0.51
0.40	-0.2265	27.669	0.63
0.58	-0.2278	27.584	0.76
0.84	-0.2292	27.494	0.92
1.20	-0.2308	27.388	1.10
1.70	-0.2324	27.282	1.30
2.40	-0.2344	27.156	1.55
3.38	-0.2367	27.001	1.84
4.76	-0.2393	26.834	2.18
6.70	-0.2424	26.635	2.59
9.40	-0.2459	26.402	3.07
13.18	-0.2497	26.153	3.63
18.48	-0.2537	25.893	4.30
25.90	-0.2577	25.637	5.09
36.28	-0.2614	25.392	6.02
50.80	-0.2649	25.168	7.13
71.12	-0.2678	24.976	8.43
99.56	-0.2707	24.785	9.98
139.38	-0.2727	24.654	11.81
195.10	-0.2742	24.557	13.97
273.08	-0.2751	24.504	16.53
382.23	-0.2765	24.410	19.55

JACQUES WHITFORD & ASSOCIATES

CONSOLIDATION TEST DATA

PROJECT:5145 BOREHOLE:'85 Sable Is. SAMPLE:184B DEPTH: 113.9 m

GRAPH LEGEND:Sa. 184B

Diameter cm	:	4.998	Initial wet wt. g	:	77.13
Height cm	:	1.985	Final wet wt. g	:	77.41
Area cm ²	:	19.62	Dry sample wt. g	:	60.98
Volume cm ³	:	38.94	(including salt)		
Salinity	:	0.028	Wt. of salt g	:	0.47
Wt. of fluid g	:	16.62	Wt. of dry soil g	:	60.51
Wt. of water g	:	16.15	Vol. of soil solids cm ³	:	22.66
Init. fluid cont. %	:	27.5	Vol. of voids cm ³	:	16.28
Init. water cont. %	:	26.7	Final water cont. %	:	27.2
Wet density g/cm ³	:	1.981	Specific gravity of soil	:	2.670
Dry density g/cm ³	:	1.554	Computed ht. of solids cm	:	1.155
Init. void ratio	:	0.718	Computed ht. of voids cm	:	0.830
Time factor	:	0.197	Initial saturation %	:	99.2

LOAD	CUM DEF	CORR	VOID	AVG HT	TIME	Cv	D	K
kPa	mm	mm	RATIO	cm	s	cm ² /s	kPa	cm/s

25	0.024	0.004	0.717	1.984				
50	0.017	0.010	0.718	1.984				
98	0.047	0.020	0.716	1.984	24	8.08E-03		
196	0.082	0.032	0.714	1.982	33	5.86E-03	8.46E+04	6.8E-11
392	0.170	0.046	0.708	1.977	16	1.20E-02	5.26E+04	2.2E-10
785	0.417	0.068	0.688	1.962	108	1.76E-03	3.46E+04	5.0E-11
1553	0.746	0.096	0.662	1.936	105	1.76E-03	5.07E+04	3.4E-11
2871	1.541	0.136	0.597	1.884	320	5.46E-04	3.47E+04	1.5E-11
3957	2.217	0.162	0.540	1.813	796	2.03E-04	3.32E+04	6.0E-12
5357	2.838	0.196	0.490	1.752	776	1.95E-04	4.73E+04	4.0E-12
5357	2.990	0.196	0.476					
1553	2.600	0.096	0.502					
392	1.977	0.046	0.551					
98	1.144	0.020	0.621					
25	0.408	0.004	0.683					

Project A.G.C. Job No. 5145
 Location SABLE IS. BORING Boring No. 85 Sample No. 184B
 Description of Soil CLAY Depth of Sample 113.9m.
 Tested By LJC Date of Testing start Mar. 17/89
 Consolidometer Type machine #2 Ring No. 5-3
 Ring Dimensions: Diam. 4.998 cm. Area, A _____ Ht. 1.985 cm.
 Initial Ht. of Soil, H_i _____ Initial Vol. of Soil, V_i _____

Specific Gravity of Soil, G_s = _____
 Wt. of Ring + Specimen at beginning of test = 146.75
 Wt. of Ring = ~~69.62~~ 69.62
 Wt. of Wet Soil, W_t = _____
 Computed Dry Weight of Soil, W'_s = 60.98
 Oven Dry Wt. of Soil, W_s = _____

Water Content Determination		A-10
Wt. of Can + Wet Soil	=	<u>84.42</u>
Wt. of Can + Dry Soil	=	<u>76.13</u>
Wt. of Can	=	<u>44.84</u>
Wt. of Water	=	<u>44</u>
Wt. of Dry Soil	=	_____
Initial Water Content, w_i	=	<u>26.49%</u>

Computed Ht. of Solids, $H_o^b = W'_s / G_s A$ = _____
 Initial Ht. of Voids, $H_v = H_i - H_o$ = _____
 Initial Degree of Saturation, $S_i = (W_t - W_s) / (H_i - H_o) A$ = _____
 Initial Void Ratio $e_o = H_v / H_o$ = _____

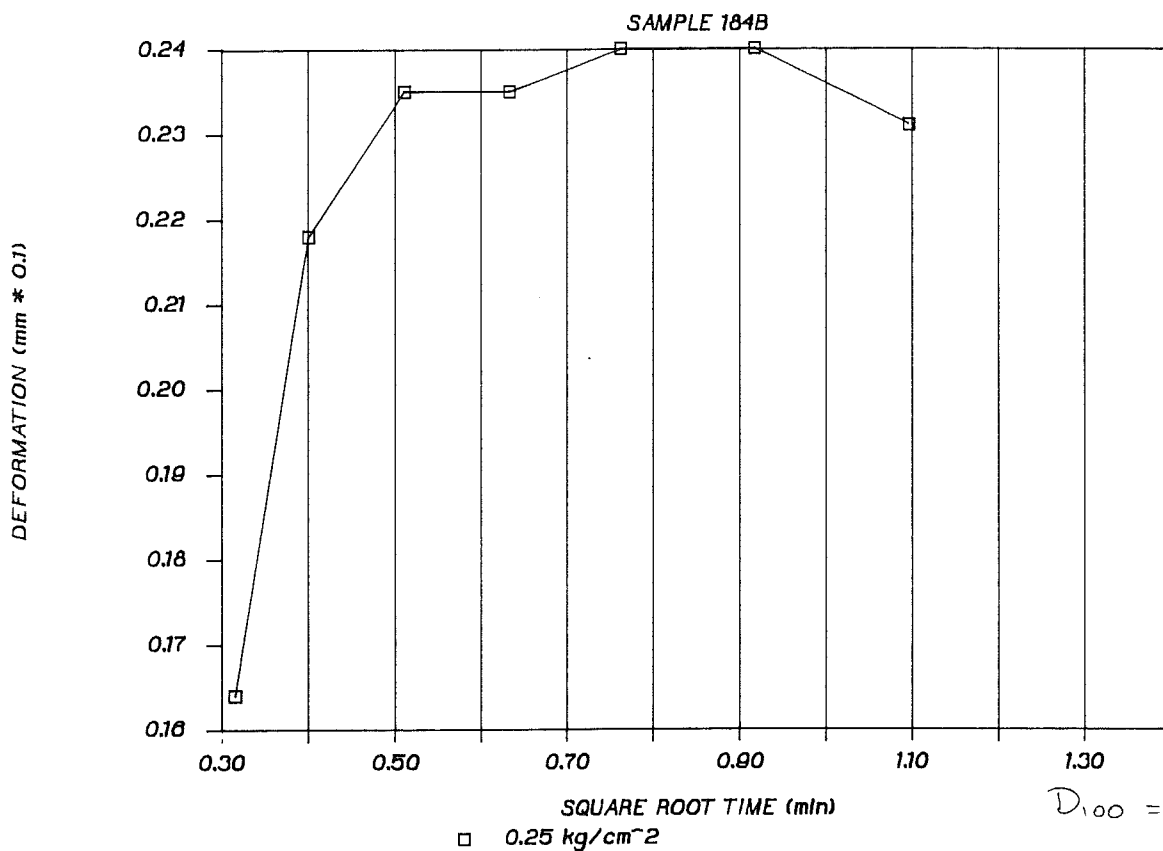
FINAL TEST DATA (obtained at end of load testing)

Initial Dial Reading _____
 Final Dial Reading _____
 Change in Sample Ht. _____
 Final Ht. of Voids, H_{vf} _____
 Final Void Ratio, $e_f = H_{vf} / H_o$ _____

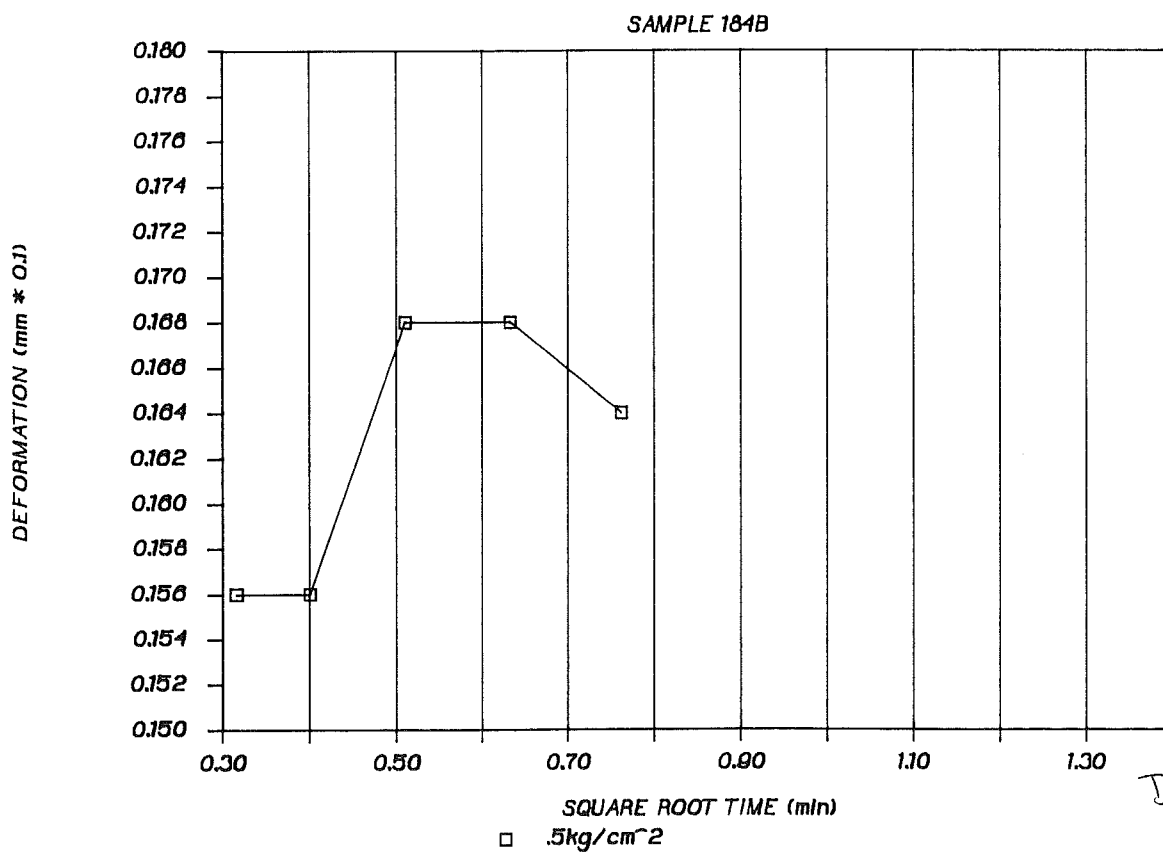
Final Water Content Determination		Tare GERT = 44.92
Final Wet Wt. + Ring	=	<u>122.35</u>
Final Dry Wt. + Ring	=	<u>105.45</u>
Oven Dry Wt. of Soil, W_s	=	<u>60.51</u>
Final Water Content, w_f	=	_____
Final Degree of Sat. S	=	_____ %

^a Obtained from Final Water Content Determination.
^b If it appears that any soil is lost from sample, use W'_s
^c Be sure to include any soil extruded from ring which is in consolidometer.

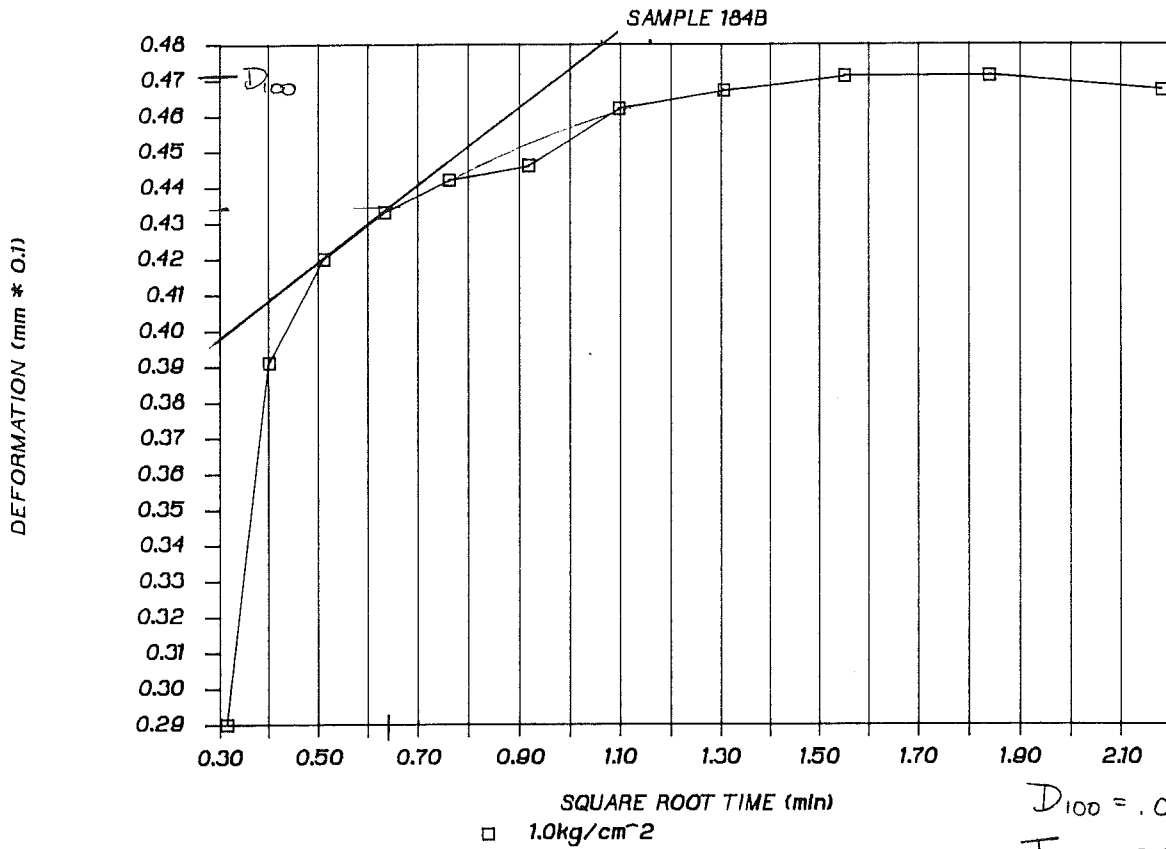
TIME vs DEFORMATION CURVE



TIME vs DEFORMATION CURVE

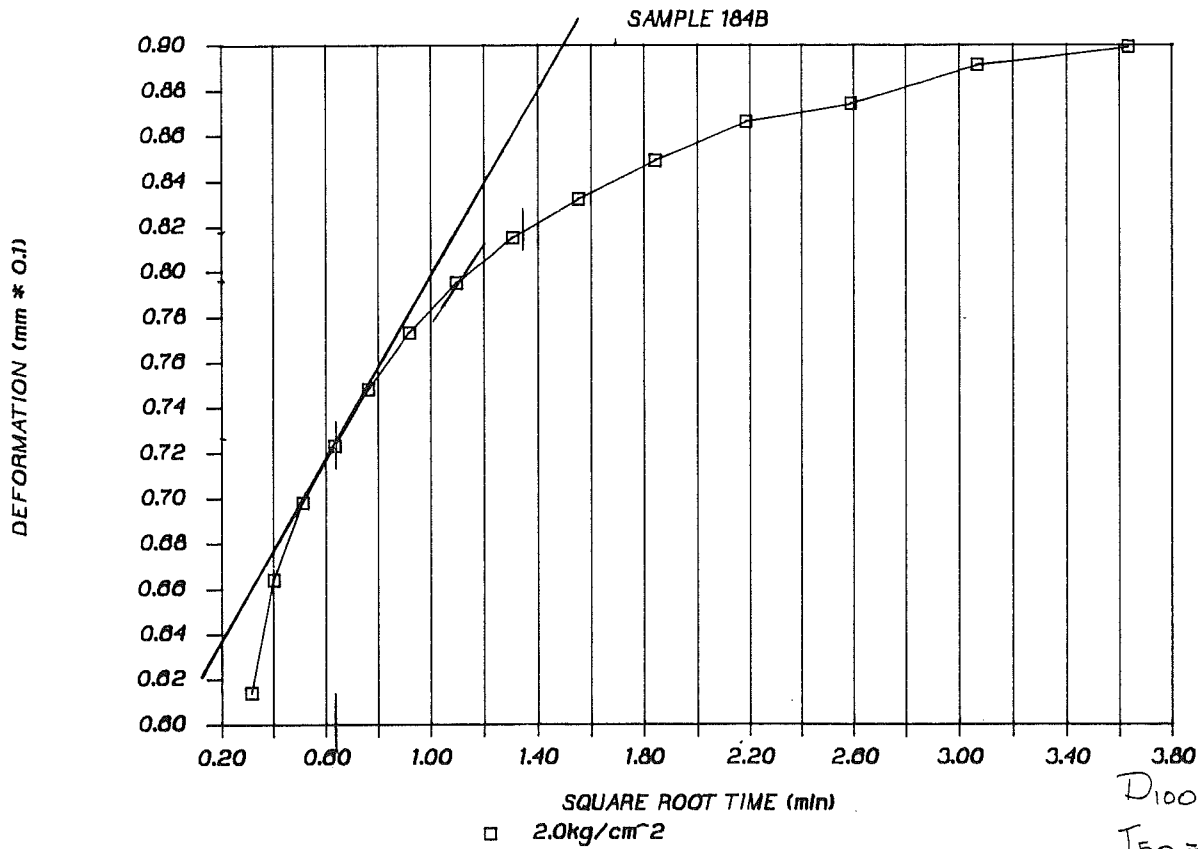


TIME vs DEFORMATION CURVE



$D_{100} = .047 \text{ mm}$
 $T_{50} = 24 \text{ s}$

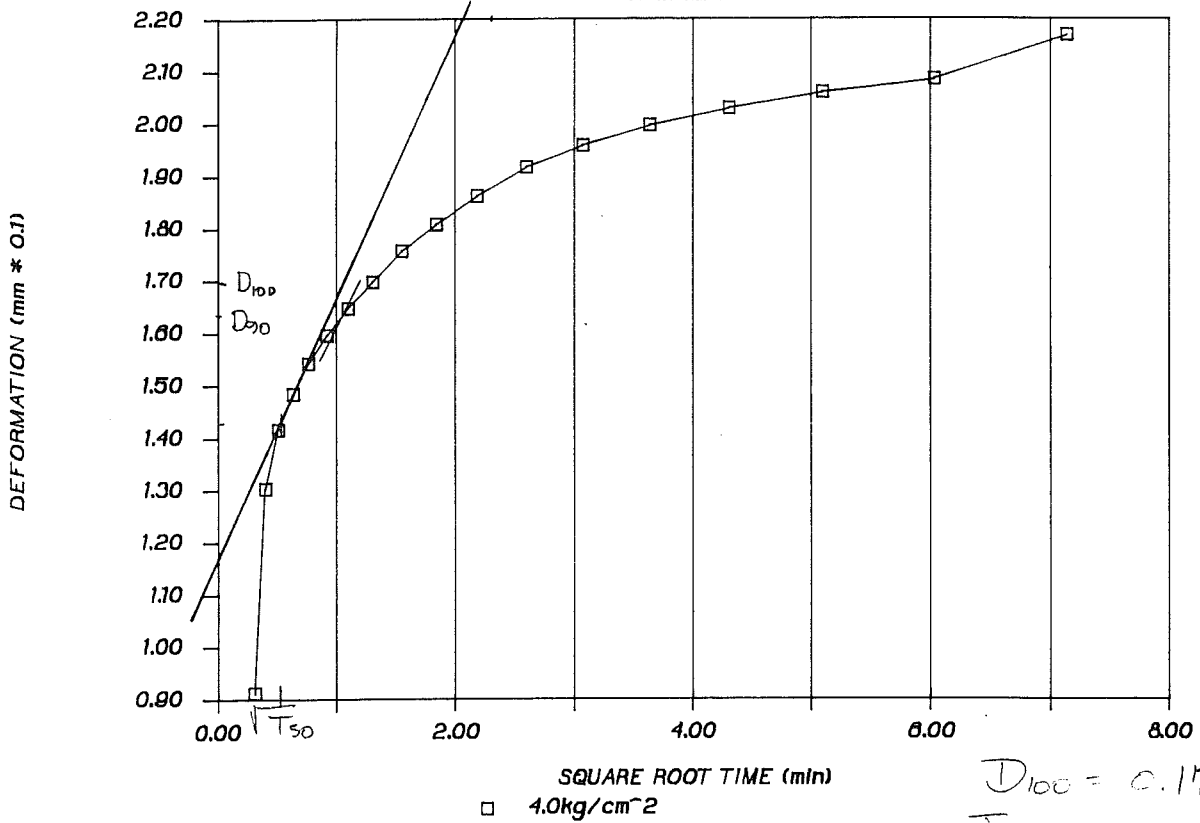
TIME vs DEFORMATION CURVE



$D_{100} = 0.082 \text{ mm}$
 $T_{50} = 33 \text{ s}$

TIME vs DEFORMATION CURVE

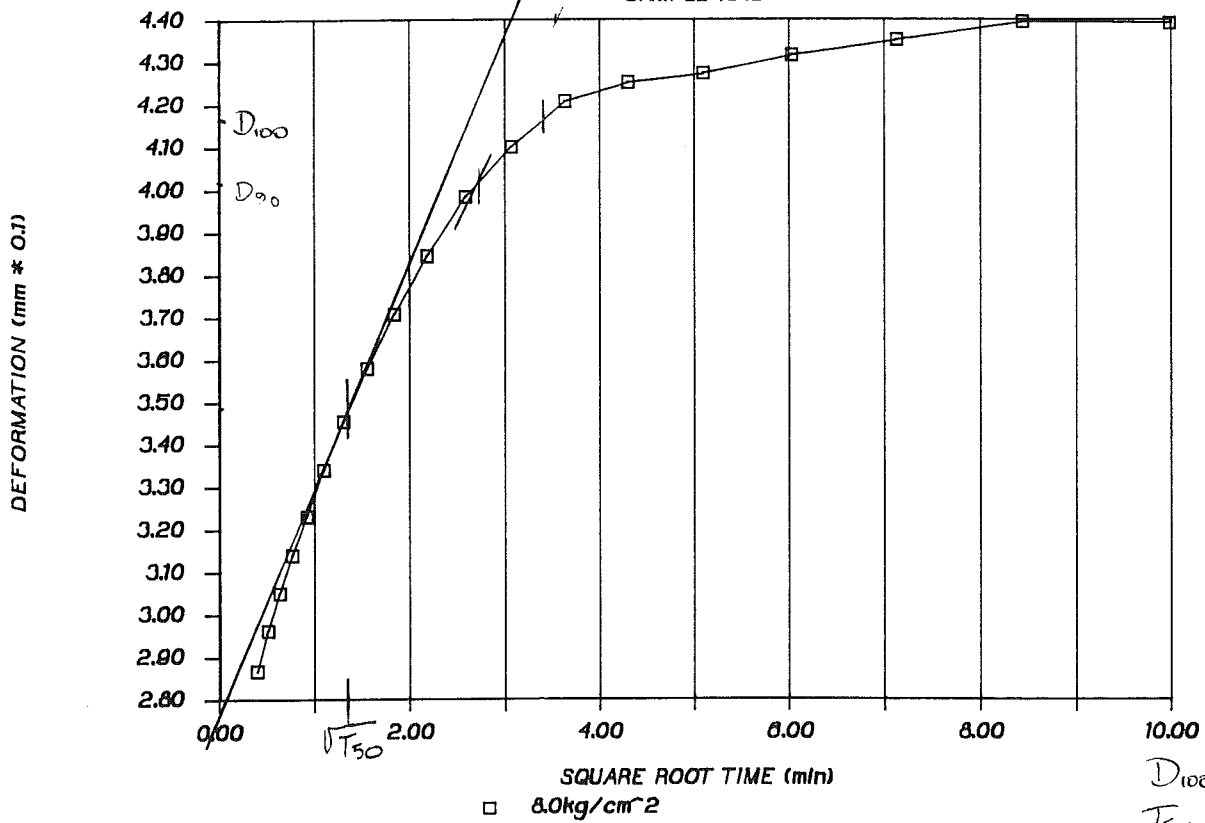
SAMPLE 184B



$D_{100} = 0.170 \text{ mm}$
 $T_{50} = 16 \text{ s.}$

TIME vs DEFORMATION CURVE

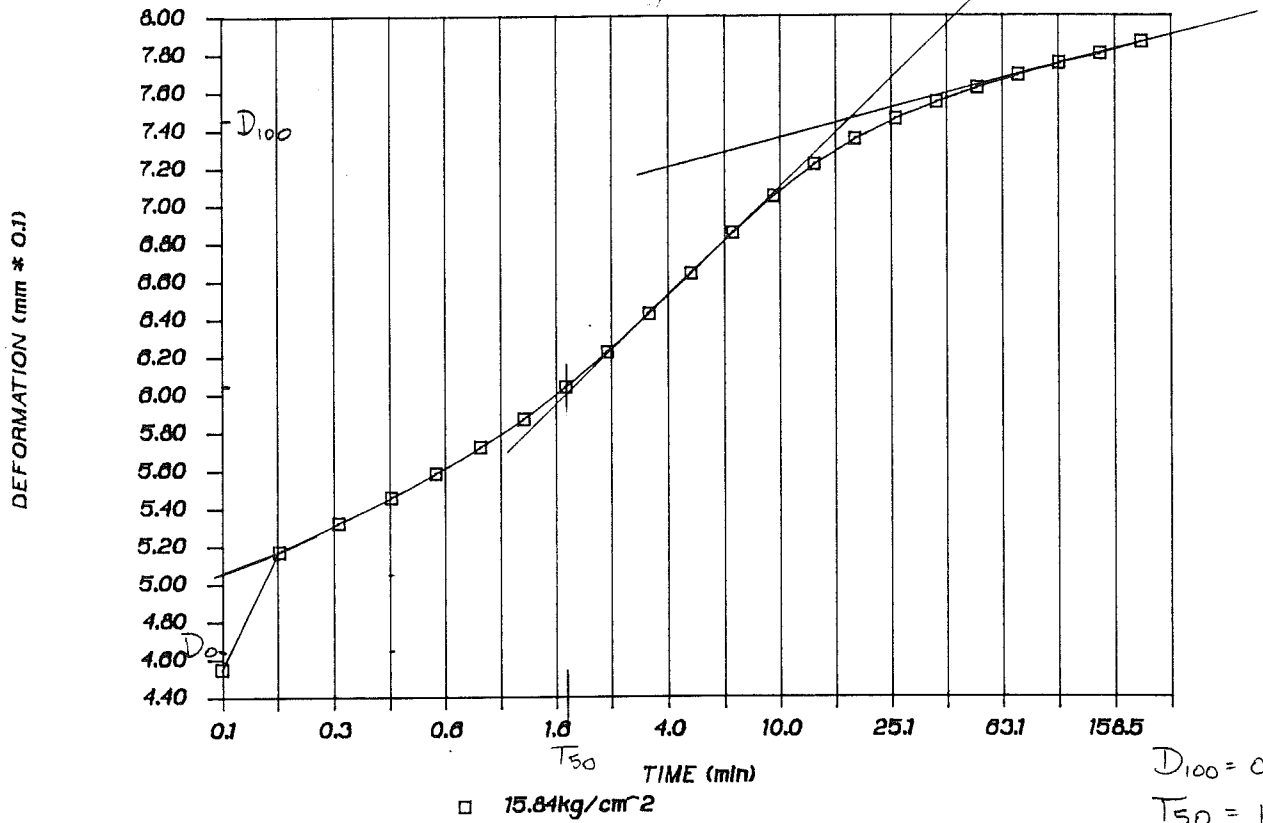
SAMPLE 184B



$D_{100} = 0.417 \text{ mm}$
 $T_{50} = 108 \text{ s.}$

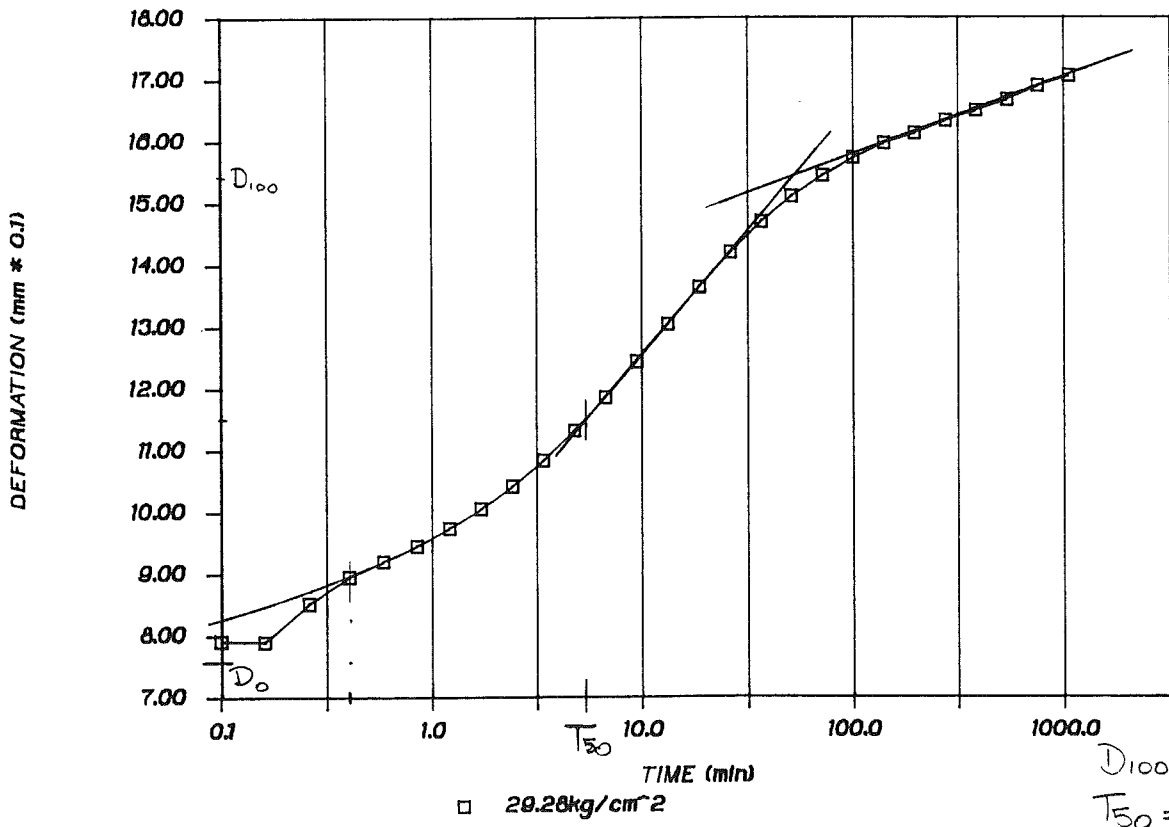
TIME vs DEFORMATION CURVE

SAMPLE 184B



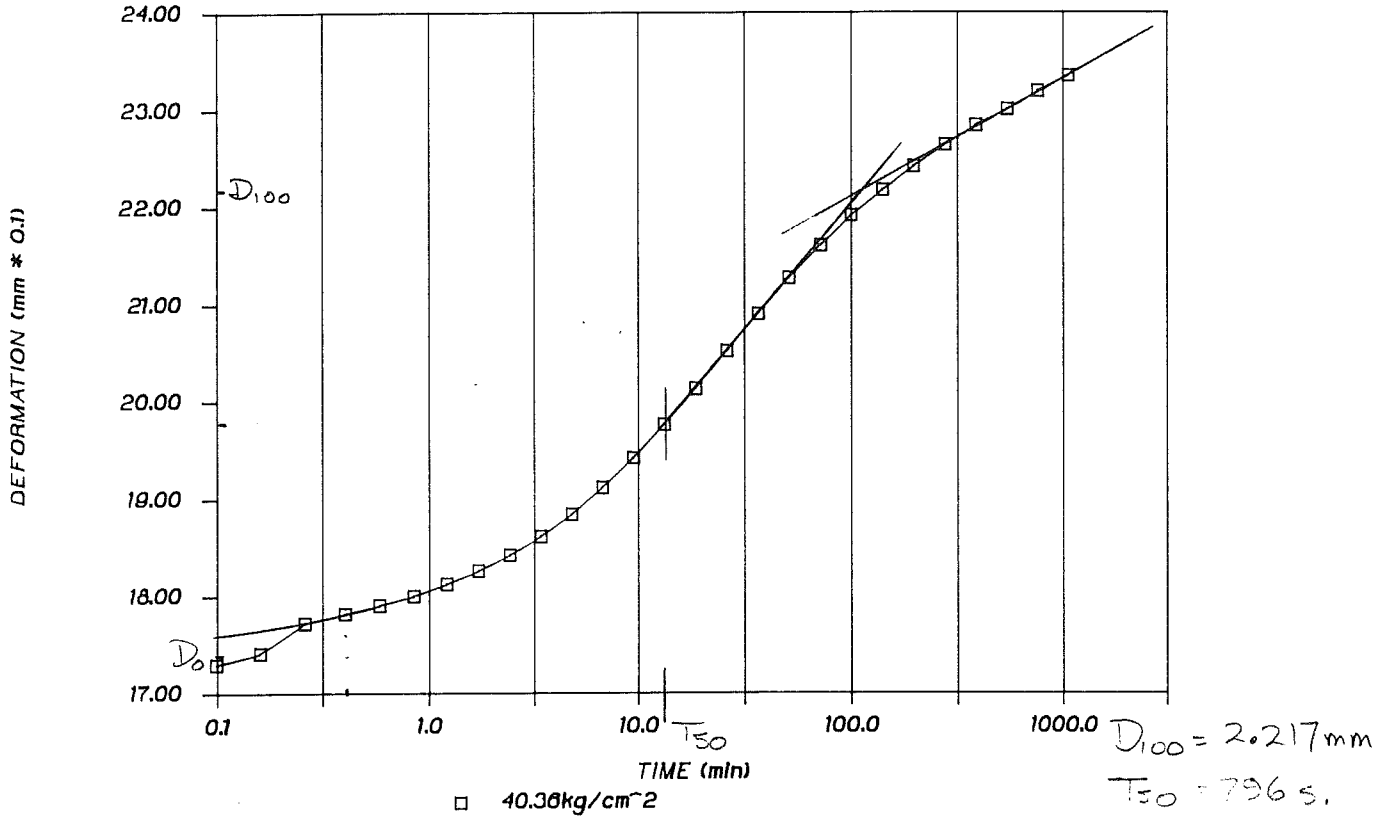
TIME vs DEFORMATION CURVE

SAMPLE 184B



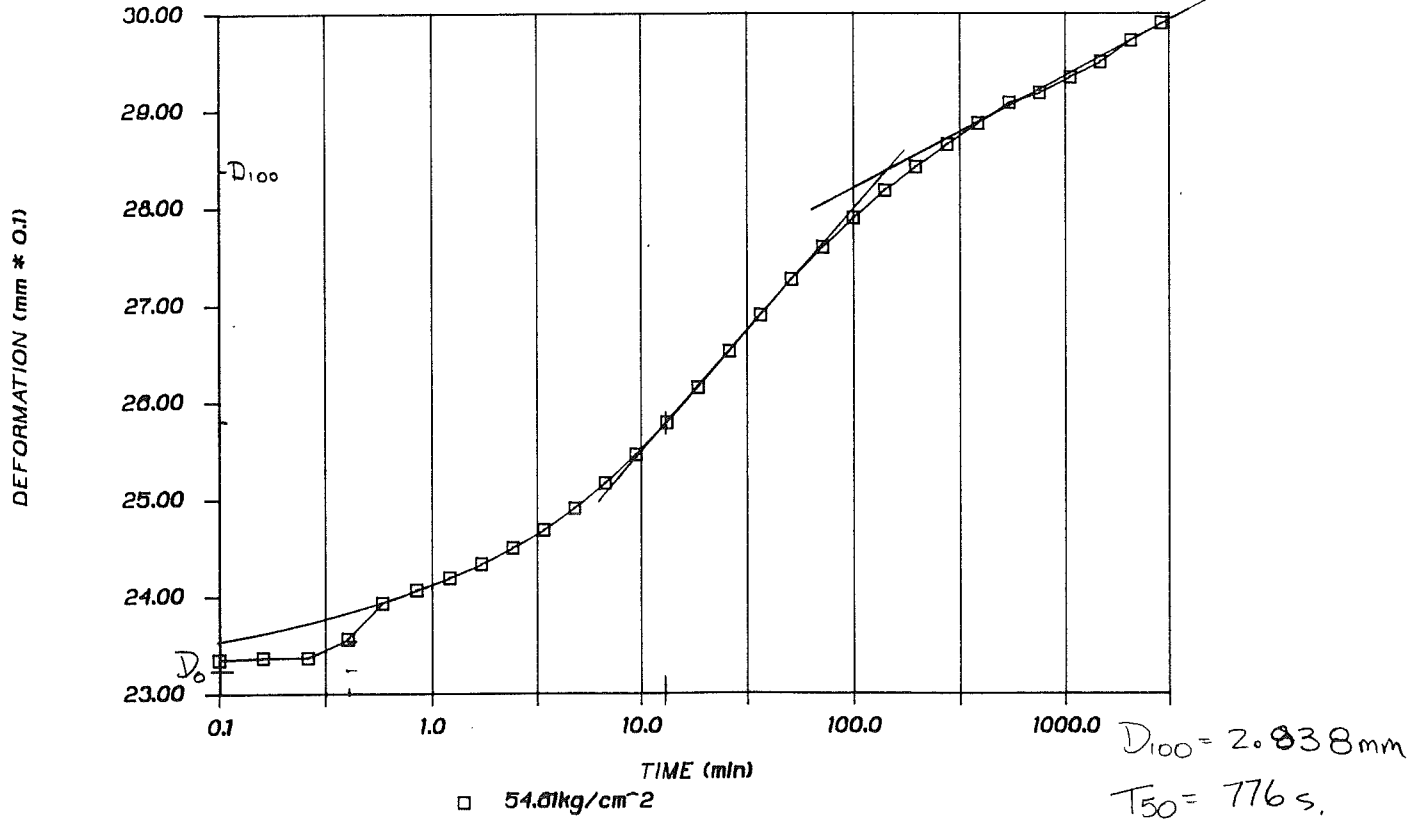
TIME vs DEFORMATION CURVE

SAMPLE 184B



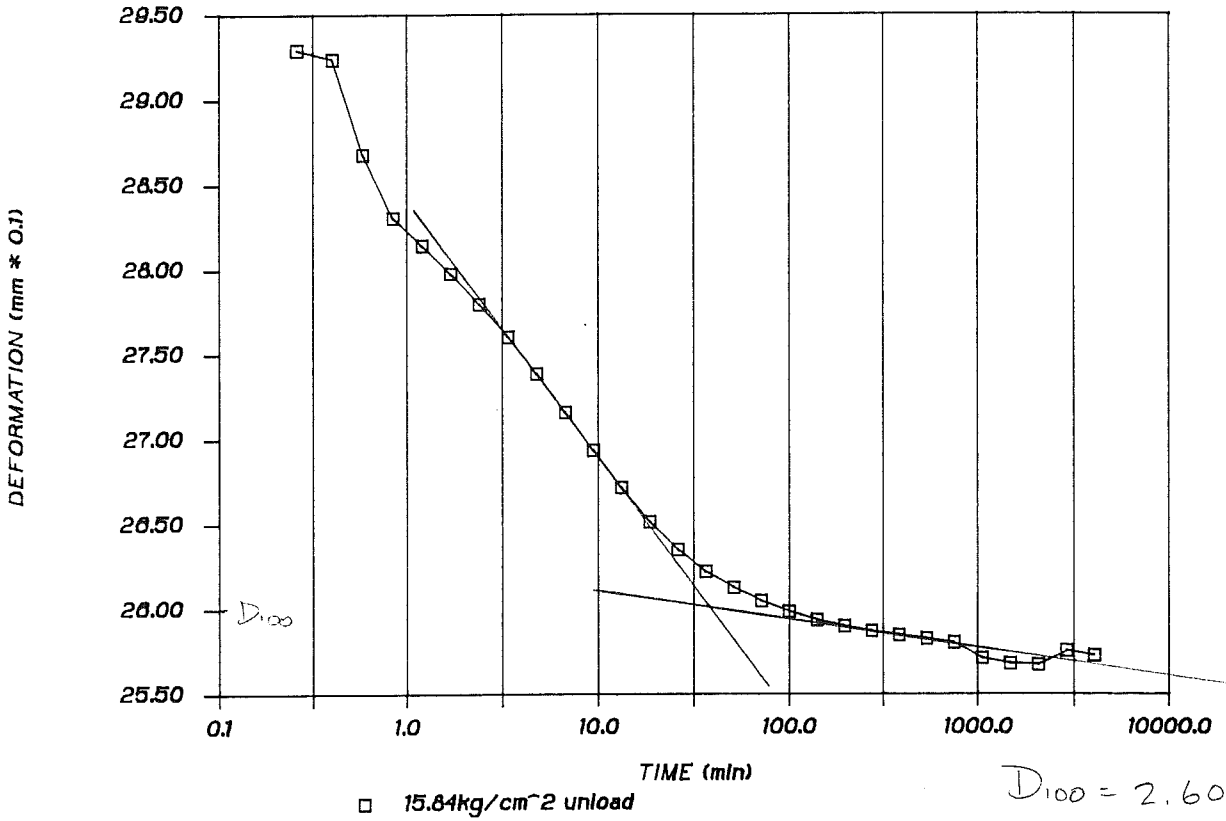
TIME vs DEFORMATION CURVE

SAMPLE 184B



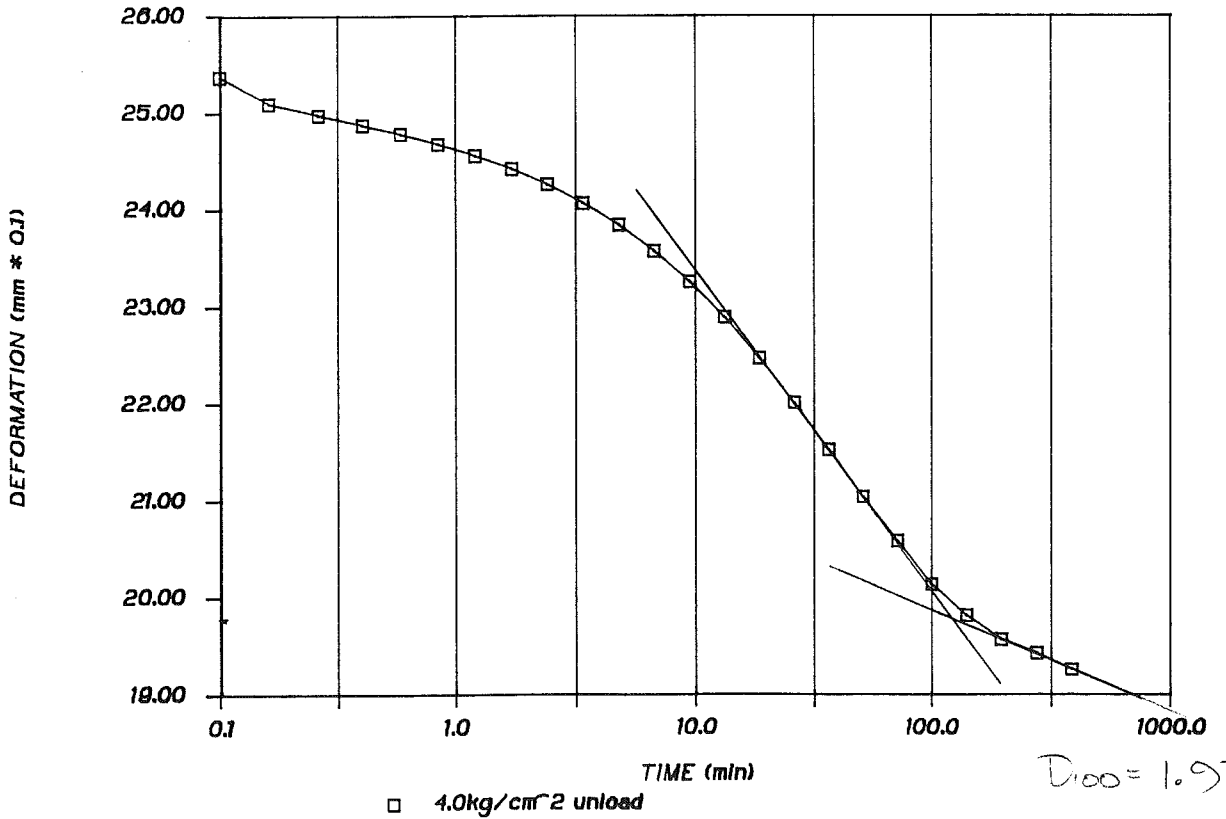
TIME vs DEFORMATION CURVE

SAMPLE 184B



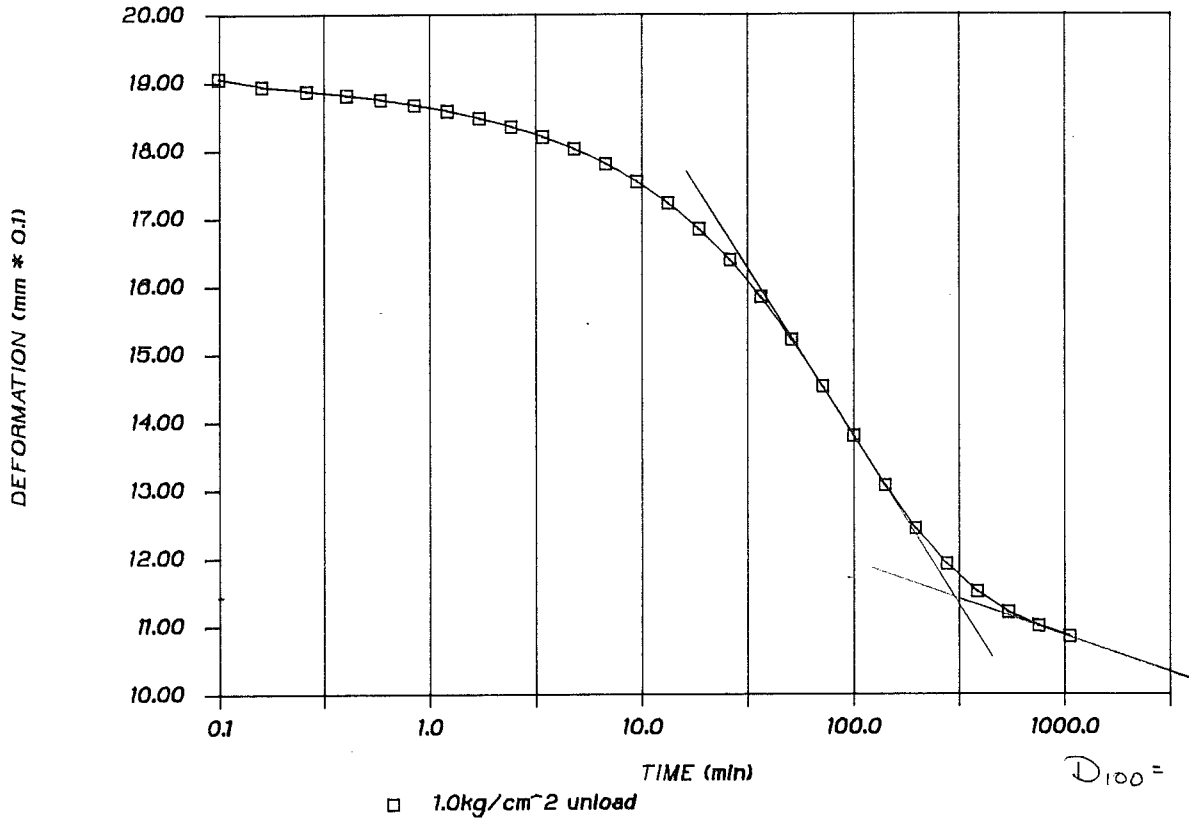
TIME vs DEFORMATION CURVE

SAMPLE 184B



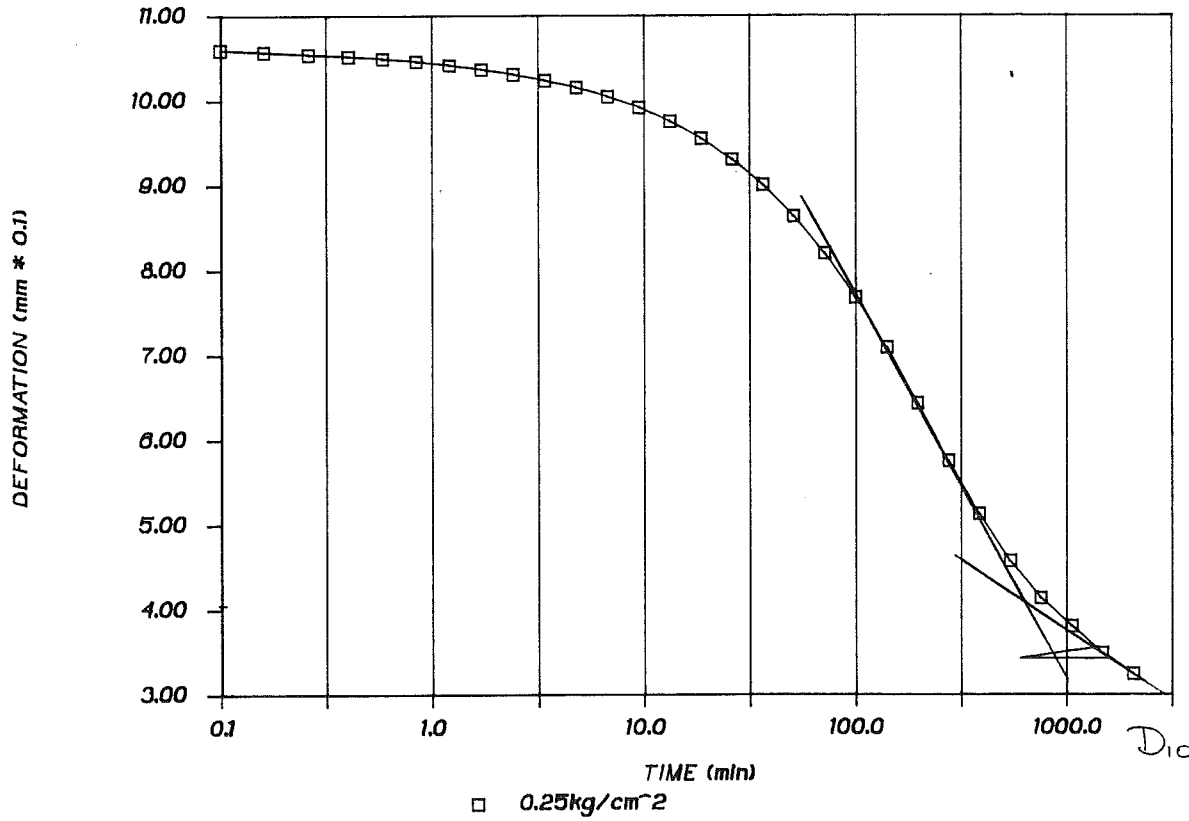
TIME vs DEFORMATION CURVE

SAMPLE 184B



TIME vs DEFORMATION CURVE

SAMPLE 184B



SAMPLE 184B
 START 15:14:03.21 ON 3-17-1989
 0.25 kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5305	0.168	0.20
0.10	-0.5306	0.164	0.32
0.16	-0.5297	0.218	0.40
0.26	-0.5295	0.235	0.51
0.40	-0.5295	0.235	0.63
0.58	-0.5294	0.240	0.76
0.84	-0.5294	0.240	0.92
1.20	-0.5296	0.231	1.10
1.70	-0.5297	0.218	1.30

SAMPLE 184B
 START 00:01:18.48 ON 3-17-1989
 .5kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5317	0.084	0.20
0.10	-0.5307	0.156	0.32
0.16	-0.5307	0.156	0.40
0.26	-0.5305	0.168	0.51
0.40	-0.5305	0.168	0.63
0.58	-0.5306	0.164	0.76
0.84	-0.5279	0.345	0.92
1.20	-0.5279	0.345	1.10
1.70	-0.5280	0.336	1.30

SAMPLE 184B
 START 00:06:00.36 ON 3-17-1989
 1.0kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5287	0.290	0.20
0.10	-0.5287	0.290	0.32
0.16	-0.5272	0.391	0.40
0.26	-0.5267	0.420	0.51
0.40	-0.5266	0.433	0.63
0.58	-0.5264	0.442	0.76
0.84	-0.5264	0.446	0.92
1.20	-0.5261	0.462	1.10
1.70	-0.5261	0.467	1.30
2.40	-0.5260	0.471	1.55
3.38	-0.5260	0.471	1.84
4.76	-0.5261	0.467	2.18

SAMPLE 184B
 START 00:13:31.35 ON 3-17-1989
 2.0kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5262	0.458	0.20
0.10	-0.5239	0.614	0.32
0.16	-0.5231	0.664	0.40
0.26	-0.5226	0.698	0.51
0.40	-0.5222	0.723	0.63
0.58	-0.5219	0.748	0.76
0.84	-0.5215	0.773	0.92
1.20	-0.5212	0.795	1.10
1.70	-0.5209	0.815	1.30
2.40	-0.5206	0.832	1.55
3.38	-0.5204	0.849	1.84
4.76	-0.5201	0.866	2.18
6.70	-0.5200	0.874	2.59
9.40	-0.5197	0.891	3.07
13.18	-0.5196	0.899	3.63

SAMPLE 184B
 START 00:30:02.92 ON 3-17-1989
 4.0kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5195	0.907	0.20
0.10	-0.5194	0.912	0.32
0.16	-0.5136	1.303	0.40
0.26	-0.5119	1.416	0.51
0.40	-0.5109	1.484	0.63
0.58	-0.5101	1.542	0.76
0.84	-0.5092	1.596	0.92
1.20	-0.5085	1.647	1.10
1.70	-0.5077	1.697	1.30
2.40	-0.5069	1.756	1.55
3.38	-0.5061	1.807	1.84
4.76	-0.5053	1.861	2.18
6.70	-0.5045	1.916	2.59
9.40	-0.5039	1.958	3.07
13.18	-0.5033	1.996	3.63
18.48	-0.5028	2.029	4.30
25.90	-0.5024	2.059	5.09
36.28	-0.5020	2.084	6.02
50.80	-0.5007	2.168	7.13

SAMPLE 184B
 START 01:27:01.93 ON 3-17-1989
 8.0kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5006	2.177	0.20
0.10	-0.4918	2.769	0.32
0.16	-0.4904	2.866	0.40
0.26	-0.4889	2.962	0.51
0.40	-0.4876	3.050	0.63
0.58	-0.4863	3.139	0.76
0.84	-0.4849	3.231	0.92
1.20	-0.4833	3.340	1.10
1.70	-0.4816	3.454	1.30
2.40	-0.4797	3.579	1.55
3.38	-0.4779	3.706	1.84
4.76	-0.4758	3.844	2.18
6.70	-0.4737	3.983	2.59
9.40	-0.4720	4.100	3.07
13.18	-0.4704	4.206	3.63
18.48	-0.4697	4.252	4.30
25.90	-0.4694	4.273	5.09
36.28	-0.4688	4.315	6.02
50.80	-0.4682	4.352	7.13
71.12	-0.4676	4.395	8.43
99.56	-0.4677	4.391	9.98
139.38	-0.4678	4.382	11.81
195.10	-0.4674	4.412	13.97
273.08	-0.4669	4.445	16.53
382.23	-0.4663	4.483	19.55
534.99	-0.4657	4.521	23.13
748.79	-0.4647	4.592	27.36

SAMPLE 184B
 START 20:24:00.32 ON 3-17-1989
 15.84kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.4652	4.554	0.20
0.10	-0.4653	4.550	0.32
0.16	-0.4561	5.172	0.40
0.26	-0.4538	5.323	0.51
0.40	-0.4518	5.458	0.63
0.58	-0.4499	5.584	0.76

SAMPLE 184B
 START 00:22:37.75 ON 3-17-1989
 29.28kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.4152	7.915	0.20
0.10	-0.4154	7.907	0.32
0.16	-0.4156	7.894	0.40

0.84	-0.4479	5.722	0.92
1.20	-0.4457	5.870	1.10
1.70	-0.4432	6.038	1.30
2.40	-0.4404	6.223	1.55
3.38	-0.4374	6.424	1.84
4.76	-0.4342	6.638	2.18
6.70	-0.4311	6.852	2.59
9.40	-0.4282	7.046	3.07
13.18	-0.4257	7.214	3.63
18.48	-0.4237	7.348	4.30
25.90	-0.4221	7.453	5.09
36.28	-0.4208	7.541	6.02
50.80	-0.4197	7.617	7.13
71.12	-0.4187	7.685	8.43
99.56	-0.4177	7.747	9.98
139.38	-0.4170	7.798	11.81
195.10	-0.4161	7.861	13.97

0.26	-0.4064	8.512	0.51
0.40	-0.3998	8.953	0.63
0.58	-0.3962	9.197	0.76
0.84	-0.3924	9.453	0.92
1.20	-0.3882	9.735	1.10
1.70	-0.3835	10.049	1.30
2.40	-0.3781	10.415	1.55
3.38	-0.3719	10.831	1.84
4.76	-0.3647	11.310	2.18
6.70	-0.3567	11.848	2.59
9.40	-0.3481	12.428	3.07
13.18	-0.3391	13.033	3.63
18.48	-0.3302	13.629	4.30
25.90	-0.3219	14.192	5.09
36.28	-0.3145	14.688	6.02
50.80	-0.3084	15.100	7.13
71.12	-0.3034	15.432	8.43
99.56	-0.2992	15.717	9.98
139.38	-0.2956	15.957	11.81
195.10	-0.2932	16.121	13.97
273.08	-0.2903	16.318	16.53
382.23	-0.2877	16.490	19.55
534.99	-0.2851	16.633	23.13

1048.04	-0.4656	4.529	32.37
1466.84	-0.4655	4.537	38.30
2053.01	-0.4659	4.508	45.31

SAMPLE 184B
 START 00:42:46.39 ON 3-17-1989
 40.36kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.2759	17.280	0.20
0.10	-0.2757	17.297	0.32
0.16	-0.2739	17.415	0.40
0.26	-0.2694	17.721	0.51
0.40	-0.2679	17.818	0.63
0.58	-0.2666	17.906	0.76
0.84	-0.2652	18.003	0.92
1.20	-0.2634	18.125	1.10
1.70	-0.2614	18.259	1.30
2.40	-0.2589	18.423	1.55
3.38	-0.2561	18.616	1.84
4.76	-0.2527	18.843	2.18
6.70	-0.2496	19.116	2.59

SAMPLE 184B
 START 18:30:18.91 ON 3-17-1989
 54.61kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.2551	19.563	0.20

0.04	-0.1851	23.384	0.20
0.10	-0.1856	23.351	0.32
0.16	-0.1854	23.368	0.40
0.26	-0.1854	23.368	0.51
0.40	-0.1825	23.561	0.63
0.58	-0.1770	23.930	0.76
0.84	-0.1750	24.065	0.92
1.20	-0.1731	24.191	1.10
1.70	-0.1710	24.334	1.30
2.40	-0.1686	24.498	1.55
3.38	-0.1658	24.683	1.84
4.76	-0.1625	24.905	2.18
6.70	-0.1587	25.162	2.59
9.40	-0.1543	25.456	3.07
13.18	-0.1494	25.784	3.63
18.48	-0.1441	26.145	4.30
25.90	-0.1385	26.518	5.09
36.28	-0.1329	26.893	6.02
50.80	-0.1275	27.258	7.13
71.12	-0.1226	27.590	8.43
99.56	-0.1181	27.892	9.98
139.38	-0.1139	28.174	11.81
195.10	-0.1102	28.417	13.97
273.08	-0.1068	28.648	16.53
382.23	-0.1036	28.867	19.55
534.99	-0.1004	29.077	23.13
748.79	-0.0989	29.182	27.36
1048.04	-0.0965	29.342	32.37
1466.84	-0.0942	29.497	38.30
2053.01	-0.0909	29.720	45.31
2873.40	-0.0882	29.901	53.60

SAMPLE 184B
START 15:37:25.68 ON 3-27-1989

1.0kg/cm² unload
Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.2492	19.078	0.20
0.10	-0.2495	19.057	0.32
0.16	-0.2513	18.935	0.40
0.26	-0.2523	18.868	0.51
0.40	-0.2532	18.809	0.63
0.58	-0.2542	18.742	0.76
0.84	-0.2553	18.666	0.92
1.20	-0.2566	18.578	1.10
1.70	-0.2582	18.473	1.30
2.40	-0.2601	18.347	1.55
3.38	-0.2623	18.200	1.84
4.76	-0.2649	18.020	2.18
6.70	-0.2682	17.801	2.59
9.40	-0.2721	17.540	3.07
13.18	-0.2768	17.221	3.63
18.48	-0.2824	16.843	4.30
25.90	-0.2892	16.385	5.09
36.28	-0.2974	15.839	6.02
50.80	-0.3067	15.213	7.13
71.12	-0.3170	14.520	8.43

99.56	-0.3278	13.793	9.98
139.38	-0.3386	13.070	11.81
195.10	-0.3480	12.436	13.97
273.08	-0.3557	11.915	16.53
382.23	-0.3619	11.503	19.55
534.99	-0.3664	11.201	23.13
748.79	-0.3694	10.999	27.36
1048.04	-0.3717	10.844	32.37

1048.04	-0.2794	17.049	32.37
SAMPLE 184B			
START 00:18:01.92 ON 3-17-1989			
15.84kg/cm ² unload			
Machine #2			
TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.0895	29.812	0.20
0.10	-0.0904	29.750	0.32
0.16	-0.0964	29.350	0.40
0.26	-0.0972	29.291	0.51
0.40	-0.0981	29.237	0.63
0.58	-0.1064	28.678	0.76
0.84	-0.1119	28.304	0.92
1.20	-0.1144	28.140	1.10
1.70	-0.1168	27.976	1.30
2.40	-0.1195	27.795	1.55
3.38	-0.1224	27.603	1.84
4.76	-0.1256	27.384	2.18
6.70	-0.1290	27.157	2.59
9.40	-0.1323	26.934	3.07
13.18	-0.1356	26.716	3.63
18.48	-0.1386	26.514	4.30
25.90	-0.1410	26.350	5.09
36.28	-0.1429	26.221	6.02
50.80	-0.1444	26.124	7.13
71.12	-0.1455	26.048	8.43
99.56	-0.1464	25.985	9.98
139.38	-0.1472	25.935	11.81
195.10	-0.1477	25.897	13.97
273.08	-0.1482	25.868	16.53
382.23	-0.1485	25.846	19.55
534.99	-0.1488	25.825	23.13
748.79	-0.1492	25.800	27.36
1048.04	-0.1506	25.708	32.37
1466.84	-0.1510	25.678	38.30
2053.01	-0.1511	25.670	45.31
2873.40	-0.1499	25.754	53.60
4021.60	-0.1503	25.724	63.42

SAMPLE 184B
START 13:04:19.17 ON 3-27-1989

0.25kg/cm²
Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.3745	10.654	0.20
0.10	-0.3754	10.596	0.32
0.16	-0.3758	10.570	0.40
0.26	-0.3762	10.541	0.51
0.40	-0.3766	10.516	0.63
0.58	-0.3769	10.491	0.76
0.84	-0.3774	10.457	0.92
1.20	-0.3781	10.415	1.10
1.70	-0.3788	10.365	1.30
2.40	-0.3797	10.306	1.55
3.38	-0.3808	10.234	1.84

4.76	-0.3820	10.150	2.18
6.70	-0.3836	10.041	2.59
9.40	-0.3855	9.915	3.07
13.18	-0.3879	9.752	3.63
18.48	-0.3909	9.550	4.30
25.90	-0.3946	9.302	5.09
36.28	-0.3991	9.003	6.02
50.80	-0.4046	8.630	7.13
71.12	-0.4111	8.197	8.43
99.56	-0.4188	7.676	9.98
139.38	-0.4276	7.088	11.81
195.10	-0.4374	6.428	13.97
273.08	-0.4474	5.752	16.53
382.23	-0.4568	5.126	19.55
534.99	-0.4651	4.567	23.13
748.79	-0.4716	4.130	27.36
1048.04	-0.4765	3.798	32.37
1466.84	-0.4811	3.487	38.30
2053.01	-0.4846	3.239	45.31

13.18	-0.2391	19.759	3.63
18.48	-0.2336	20.128	4.30
25.90	-0.2278	20.515	5.09
36.28	-0.2221	20.897	6.02
50.80	-0.2166	21.267	7.13
71.12	-0.2116	21.603	8.43
99.56	-0.2071	21.910	9.98
139.38	-0.2032	22.170	11.81
195.10	-0.1995	22.418	13.97
273.08	-0.1962	22.636	16.53
382.23	-0.1933	22.838	19.55
534.99	-0.1908	23.002	23.13
748.79	-0.1881	23.187	27.36
1048.04	-0.1857	23.347	32.37

SAMPLE 184B
START 17:07:26.23 ON 3-17-1989

4.0kg/cm² unload
Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.1504	25.716	0.20
0.10	-0.1556	25.367	0.32
0.16	-0.1597	25.095	0.40
0.26	-0.1615	24.972	0.51
0.40	-0.1630	24.871	0.63
0.58	-0.1644	24.779	0.76
0.84	-0.1660	24.670	0.92
1.20	-0.1678	24.552	1.10
1.70	-0.1698	24.418	1.30
2.40	-0.1721	24.258	1.55
3.38	-0.1750	24.065	1.84
4.76	-0.1783	23.842	2.18
6.70	-0.1824	23.569	2.59
9.40	-0.1871	23.254	3.07
13.18	-0.1925	22.888	3.63
18.48	-0.1987	22.468	4.30
25.90	-0.2056	22.006	5.09
36.28	-0.2128	21.523	6.02
50.80	-0.2201	21.036	7.13
71.12	-0.2268	20.582	8.43
99.56	-0.2335	20.132	9.98
139.38	-0.2382	19.812	11.81
195.10	-0.2419	19.566	13.97
273.08	-0.2441	19.423	16.53
382.23	-0.2466	19.254	19.55

JACQUES WHITFORD & ASSOCIATES

CONSOLIDATION TEST DATA

PROJECT:5145 BOREHOLE:'85 Sable Is. SAMPLE:187B DEPTH: 118.4 m

GRAPH LEGEND:Sa. 187B

Diameter cm	:	4.998	Initial wet wt. g	:	79.40
Height cm	:	1.993	Final wet wt. g	:	78.82
Area cm ²	:	19.62	Dry sample wt. g	:	64.11
Volume cm ³	:	39.10	(including salt)		
Salinity	:	0.028	Wt. of salt g	:	0.44
Wt. of fluid g	:	15.73	Wt. of dry soil g	:	63.67
Wt. of water g	:	15.29	Vol. of soil solids cm ³	:	23.85
Init. fluid cont. %	:	24.7	Vol. of voids cm ³	:	15.25
Init. water cont. %	:	24.0	Final water cont. %	:	23.1
Wet density g/cm ³	:	2.031	Specific gravity of soil	:	2.670
Dry density g/cm ³	:	1.628	Computed ht. of solids cm	:	1.215
Init. void ratio	:	0.640	Computed ht. of voids cm	:	0.778
Time factor	:	0.197	Initial saturation %	:	100.2

LOAD	CUM DEF	CORR	VOID	AVG HT	TIME	Cv	D	K
kPa	mm	mm	RATIO	cm	s	cm ² /s	kPa	cm/s
25	0.026	0.004	0.638	1.992				
50	0.025	0.010	0.638	1.991				
98	0.067	0.020	0.636	1.990	19	1.03E-02		
196	0.156	0.032	0.630	1.985	70	2.77E-03	2.54E+04	1.1E-10
392	0.352	0.046	0.615	1.972	77	2.49E-03	2.15E+04	1.1E-10
785	0.737	0.068	0.585	1.945	197	9.46E-04	2.15E+04	4.3E-11
1553	1.250	0.096	0.545	1.903	274	6.51E-04	3.16E+04	2.0E-11
2871	2.000	0.136	0.486	1.844	390	4.29E-04	3.70E+04	1.1E-11
3957	2.457	0.162	0.451	1.786	615	2.56E-04	5.02E+04	5.0E-12
5357	2.940	0.196	0.414	1.743	924	1.62E-04	6.21E+04	2.6E-12
5357	3.102	0.196	0.401					
1553	2.787	0.096	0.418					
392	2.250	0.046	0.458					
98	1.494	0.020	0.518					
25	0.843	0.004	0.571					

Project A.G.C. Job No. 5145
 Location SABLE IS. BORING Boring No. 85 SABLE Sample No. 187B
 Description of Soil CLAY Depth of Sample 118.4m.
 Tested By MEC Date of Testing start Mar. 17/89
 Consolidometer Type machine #3 Ring No. 5-5
 Ring Dimensions: Diam. 4.998 Area, A _____ Ht. 1.993
 Initial Ht. of Soil, H_i _____ Initial Vol. of Soil, V_i _____

Specific Gravity of Soil, G_s = _____
 Wt. of Ring + Specimen at beginning of test = 149.57
 Wt. of Ring = ~~70.17~~
 Wt. of Wet Soil, W_t = _____
 Computed Dry Weight of Soil, W_s' = _____
 Oven Dry Wt. of Soil, W_s = _____

Water Content Determination <u>KEN</u>	
Wt. of Can + Wet Soil	= <u>89.53</u>
Wt. of Can + Dry Soil	= <u>81.12</u>
Wt. of Can	= <u>45.85</u>
Wt. of Water	= _____
Wt. of Dry Soil	= _____
Initial Water Content, w_i	= <u>23.84</u>

Computed Ht. of Solids^b, $H_o = W_s'/G_s A$ = _____
 Initial Ht. of Voids, $H_v = H_i - H_o$ = _____
 Initial Degree of Saturation, $S_i = (W_t - W_s)/(H_i - H_o) A$ = _____
 Initial Void Ratio $e_o = H_v/H_o$ = _____

FINAL TEST DATA (obtained at end of load testing)

Initial Dial Reading _____
 Final Dial Reading _____
 Change in Sample Ht. _____
 Final Ht. of Voids, H_{vf} _____
 Final Void Ratio, $e_f = H_{vf}/H_o$ _____

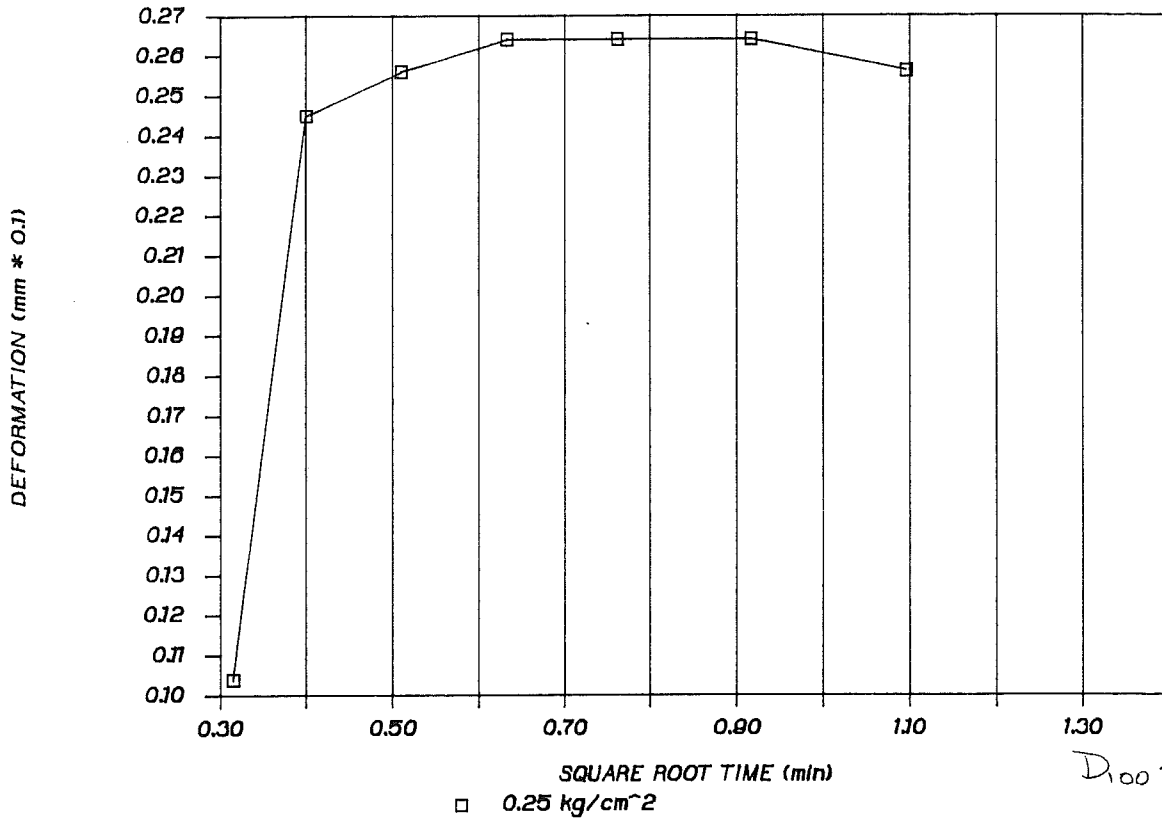
Final Water Content Determination <u>Tare A-10</u>	
Final Wet Wt. + ^{Tare} Ring	= <u>123.66</u>
Final Dry Wt. + ^{Tare} Ring	= <u>108.65</u>
Oven Dry Wt. of Soil, W_s	= _____
Final Water Content, w_f	= _____
Final Degree of Sat. S	= _____ %

44.84

^a Obtained from Final Water Content Determination.
^b If it appears that any soil is lost from sample, use W_s'
^c Be sure to include any soil extruded from ring which is in consolidometer.

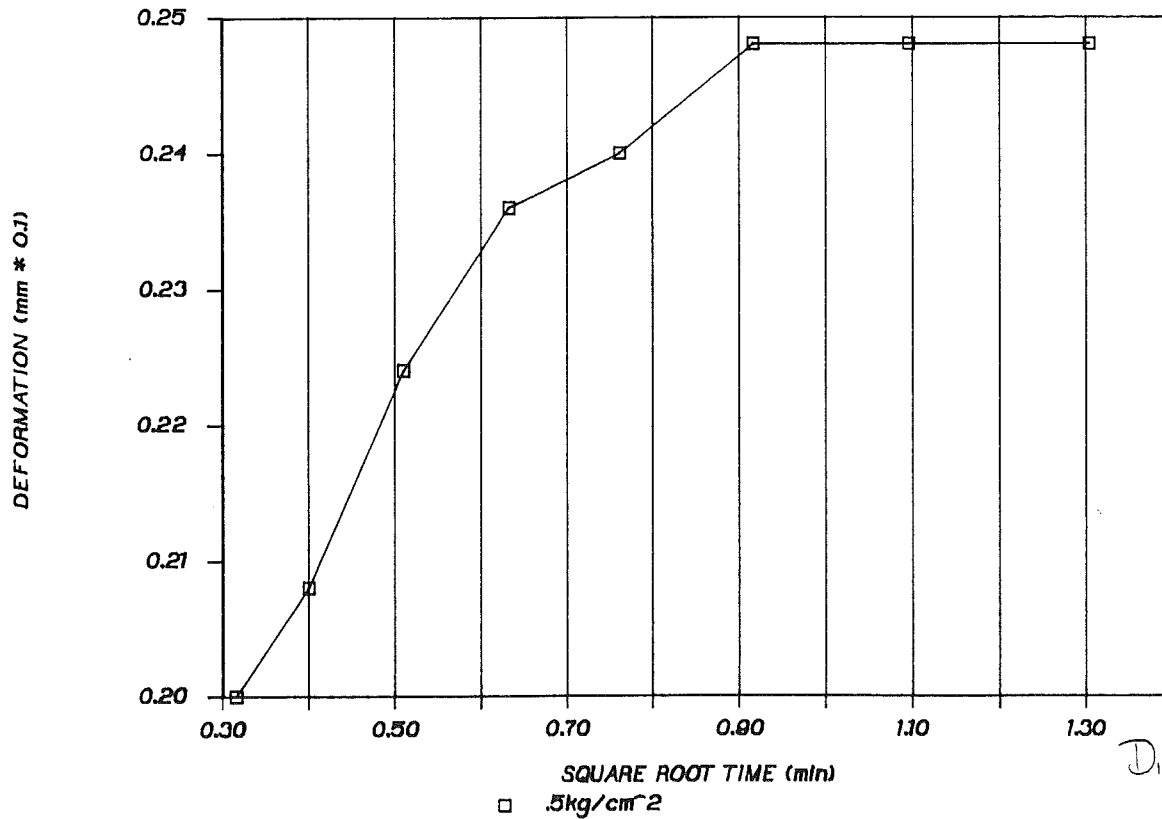
TIME vs DEFORMATION CURVE

SAMPLE 187B

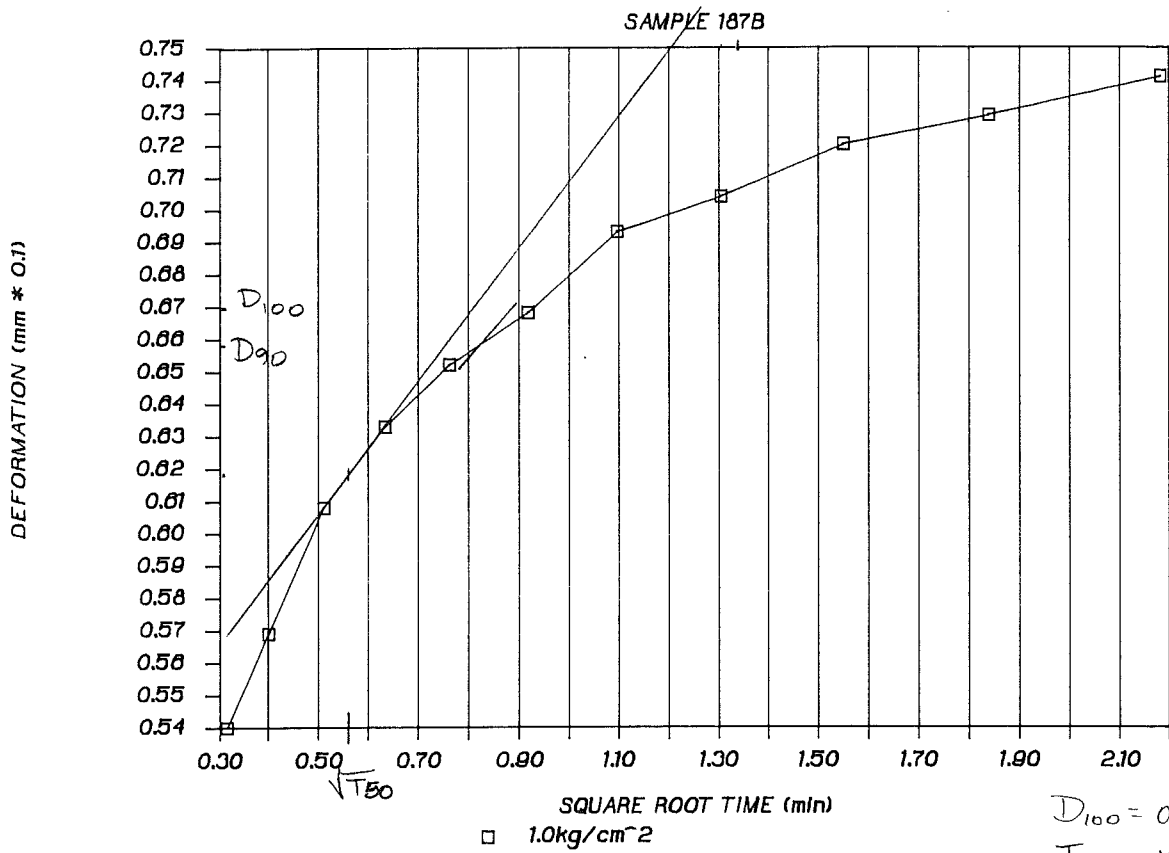


TIME vs DEFORMATION CURVE

SAMPLE 187B

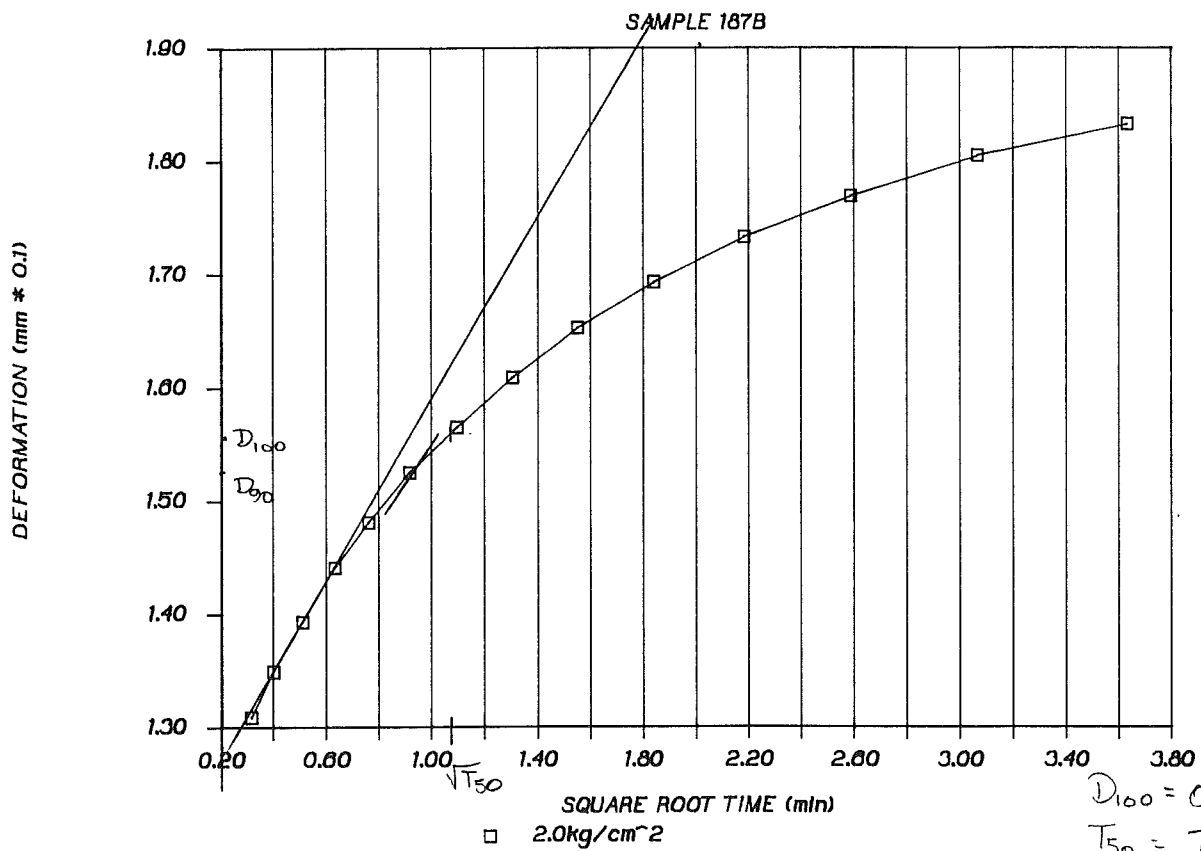


TIME vs DEFORMATION CURVE



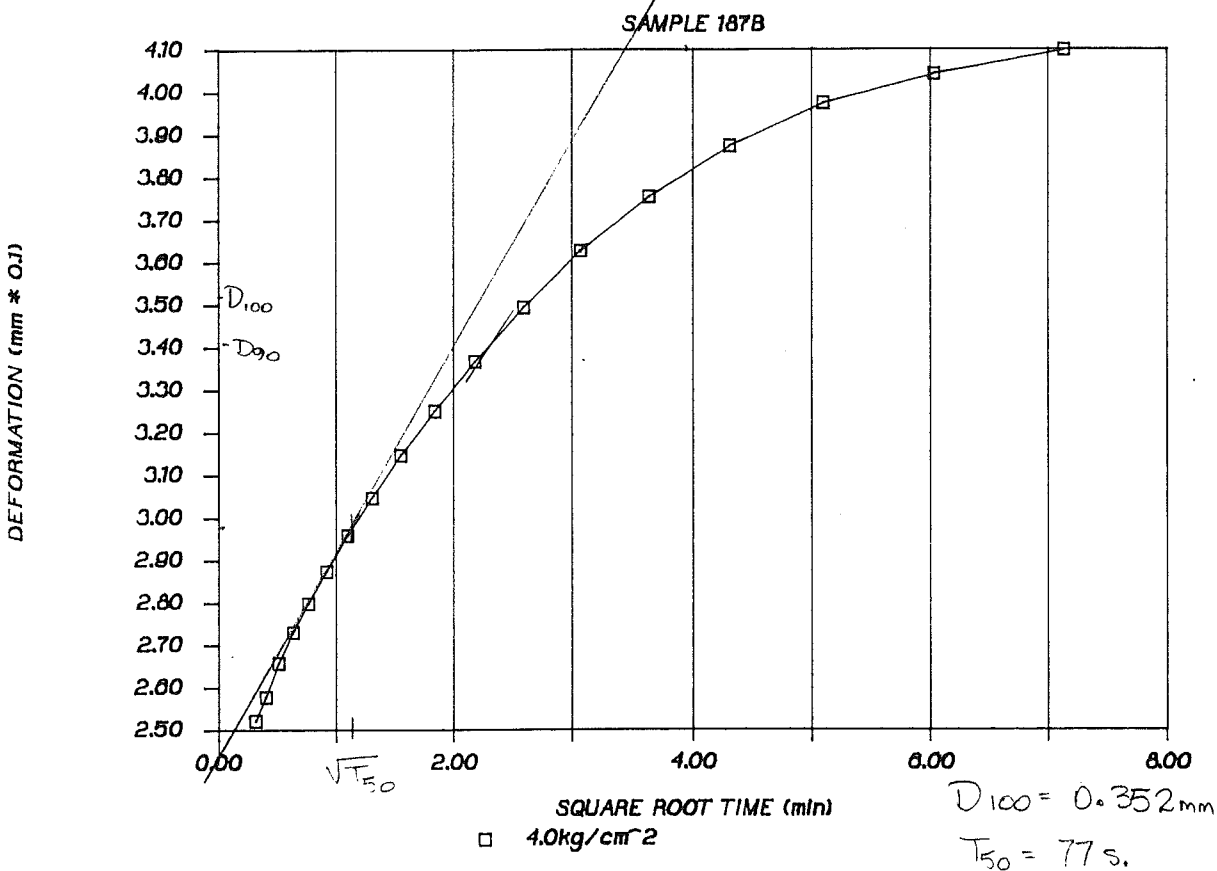
$D_{100} = 0.067 \text{ mm}$
 $T_{50} = 19 \text{ s.}$

TIME vs DEFORMATION CURVE

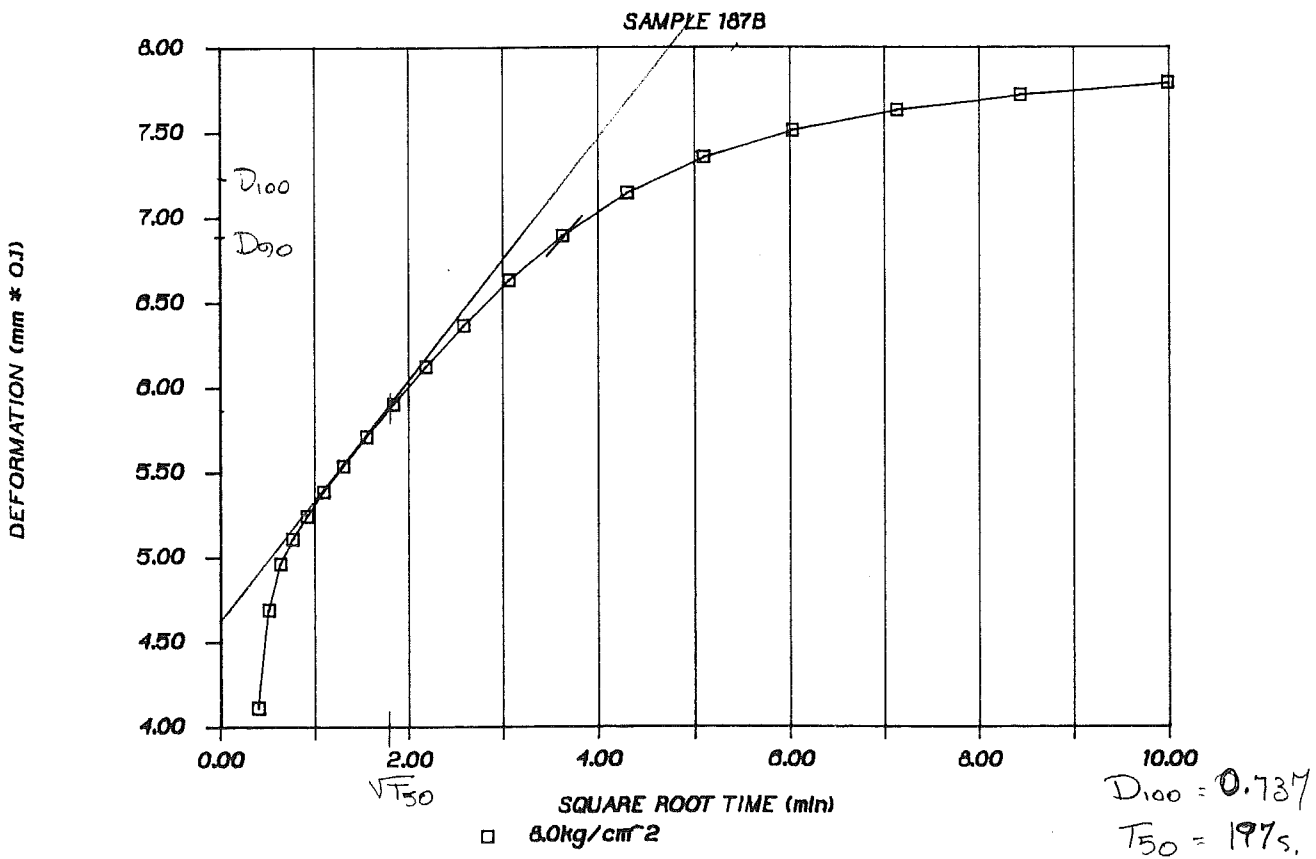


$D_{100} = 0.156 \text{ mm}$
 $T_{50} = 70 \text{ s.}$

TIME vs DEFORMATION CURVE

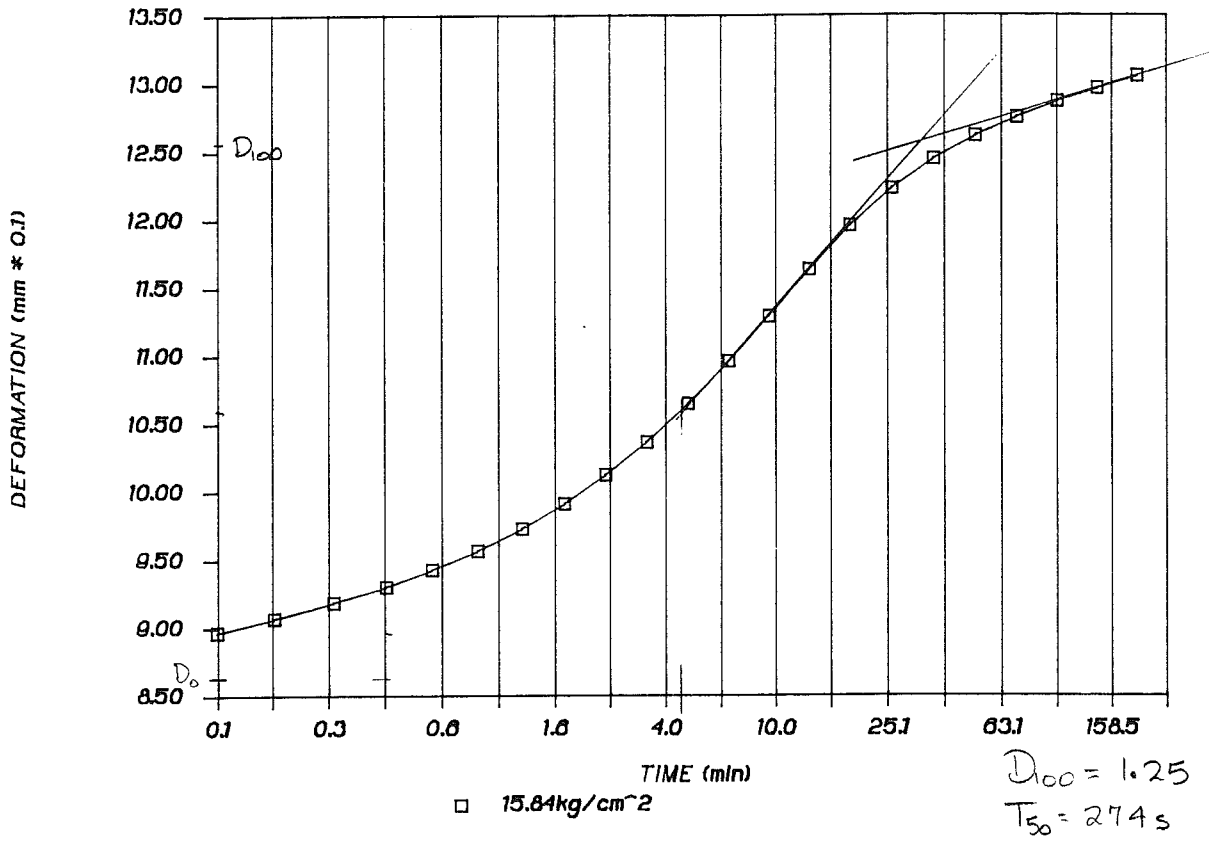


TIME vs DEFORMATION CURVE



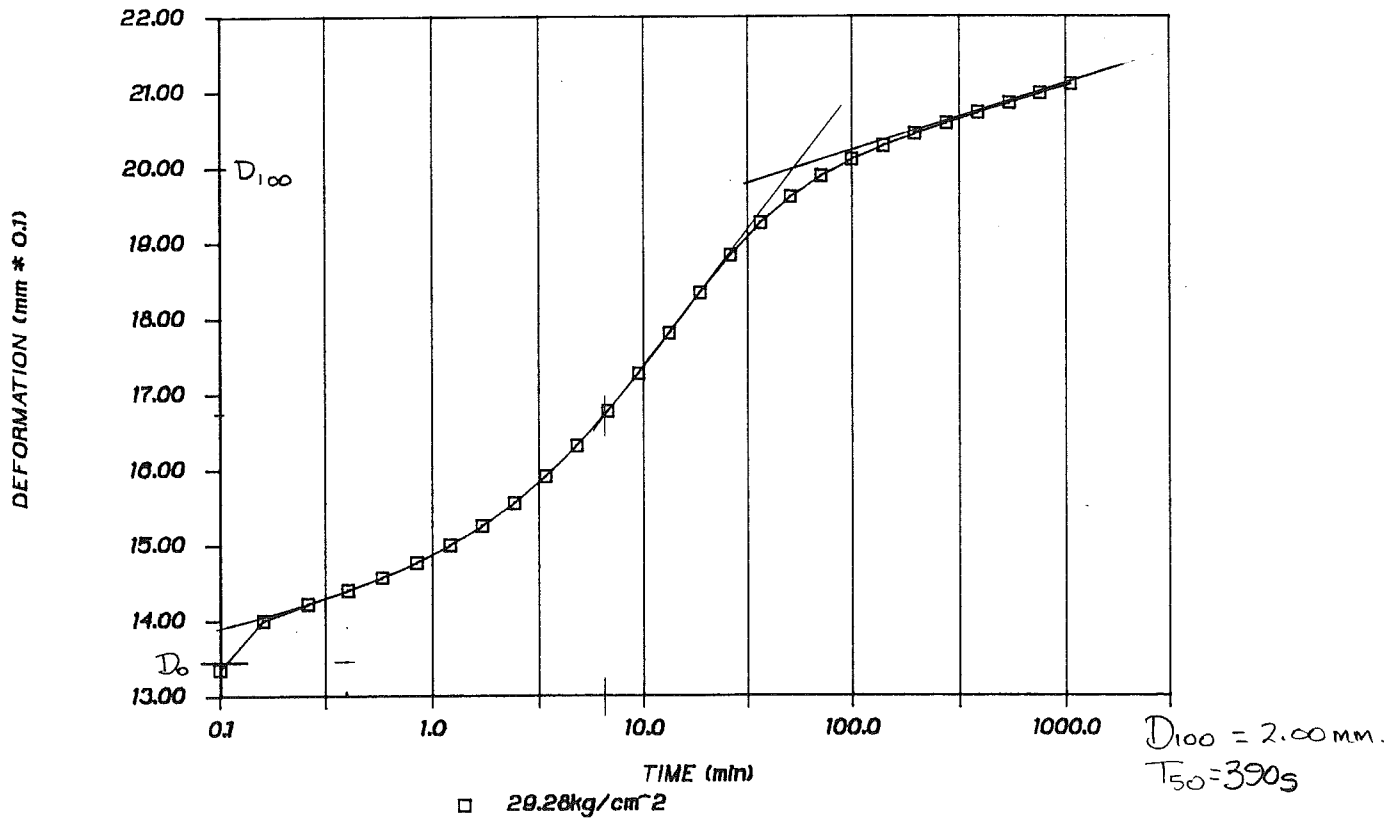
TIME vs DEFORMATION CURVE

SAMPLE 187B



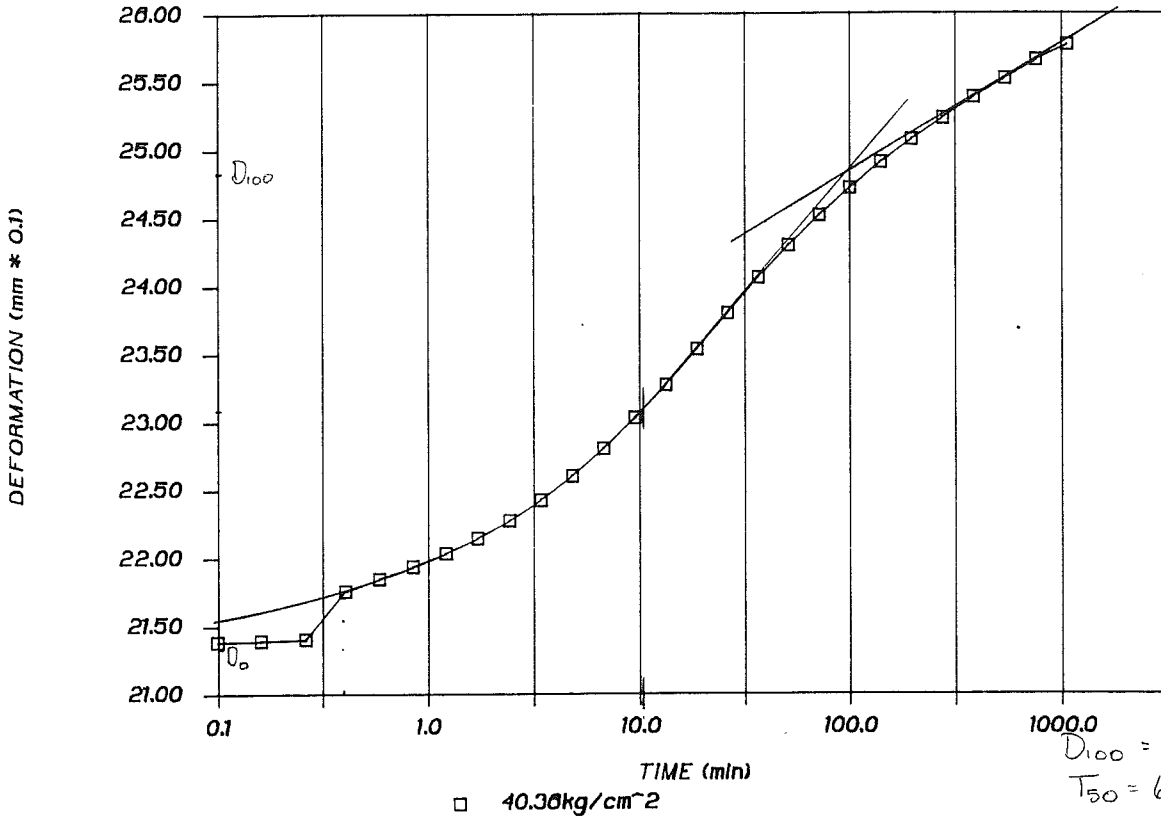
TIME vs DEFORMATION CURVE

SAMPLE 187B



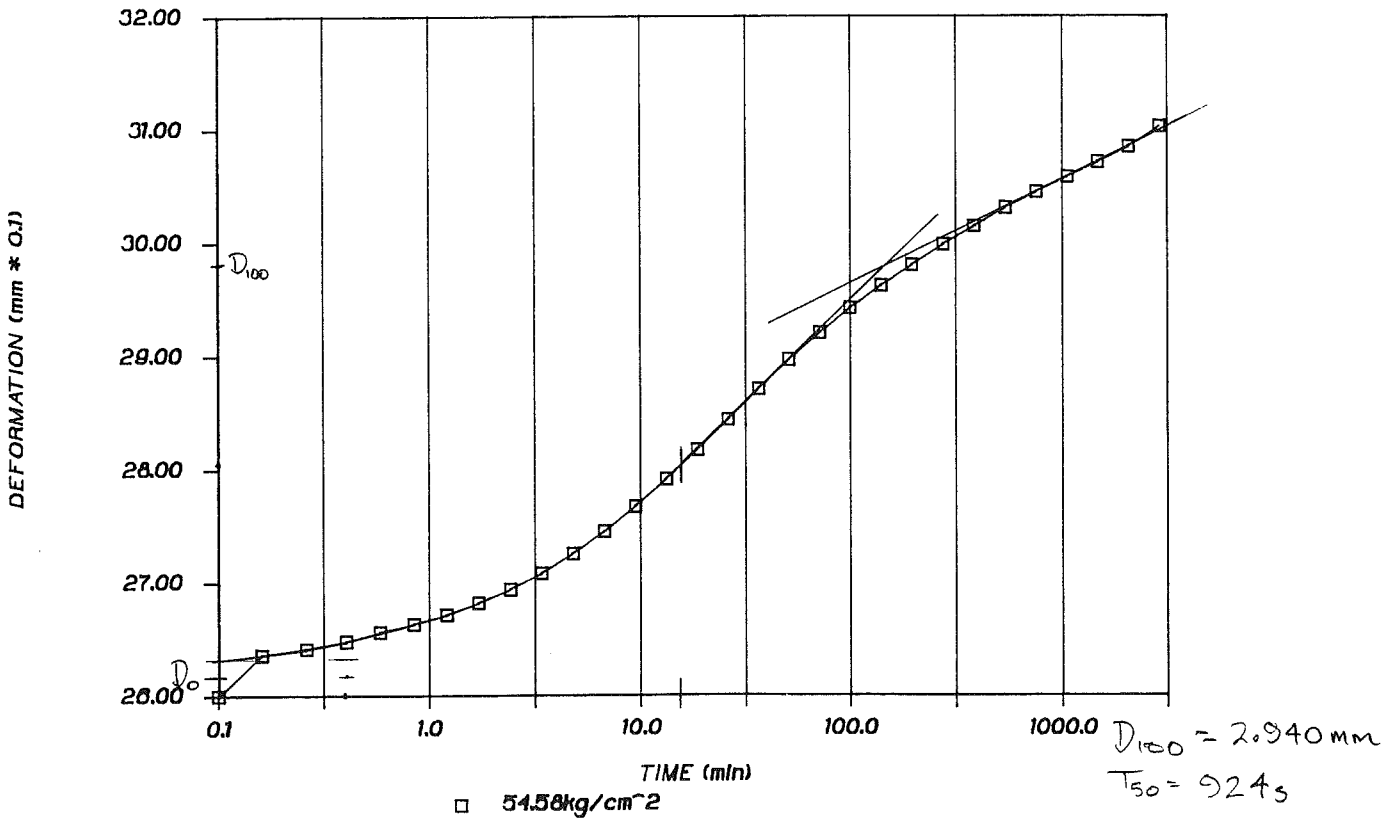
TIME vs DEFORMATION CURVE

SAMPLE 187B



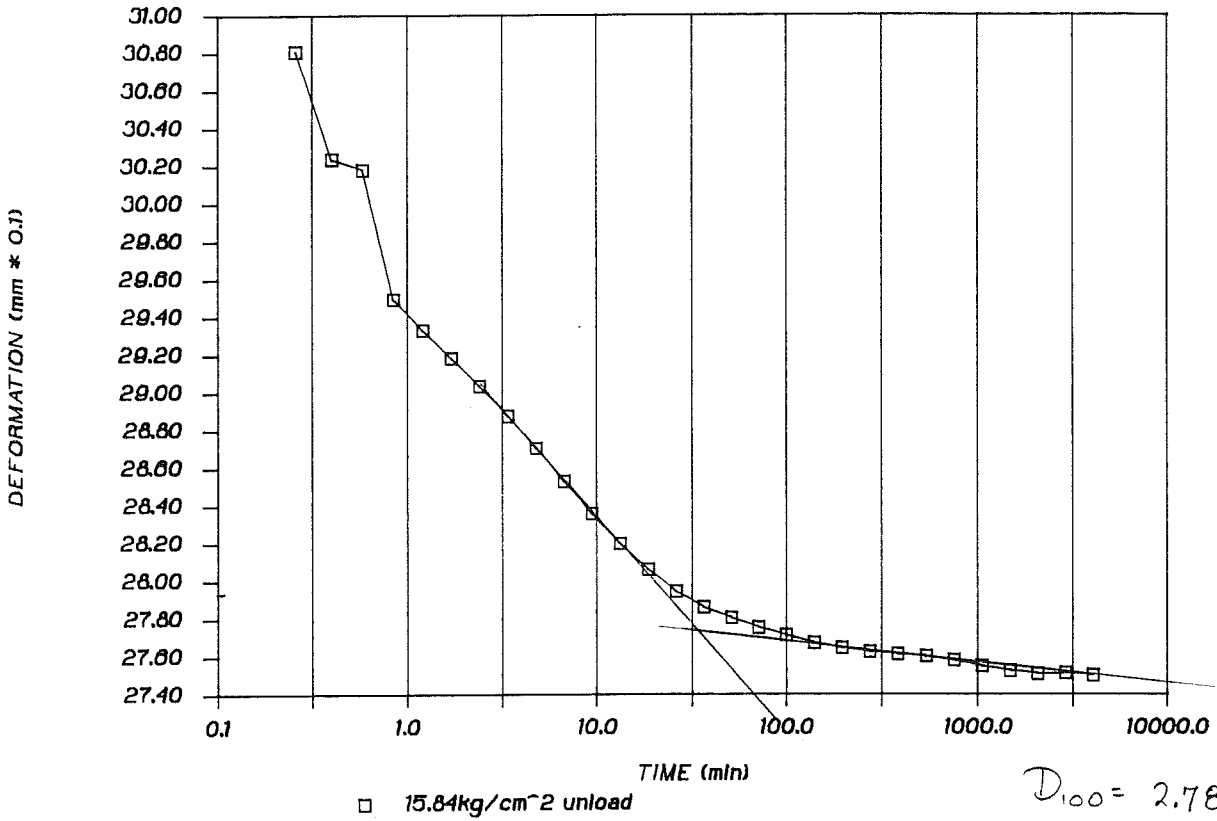
TIME vs DEFORMATION CURVE

SAMPLE 187B



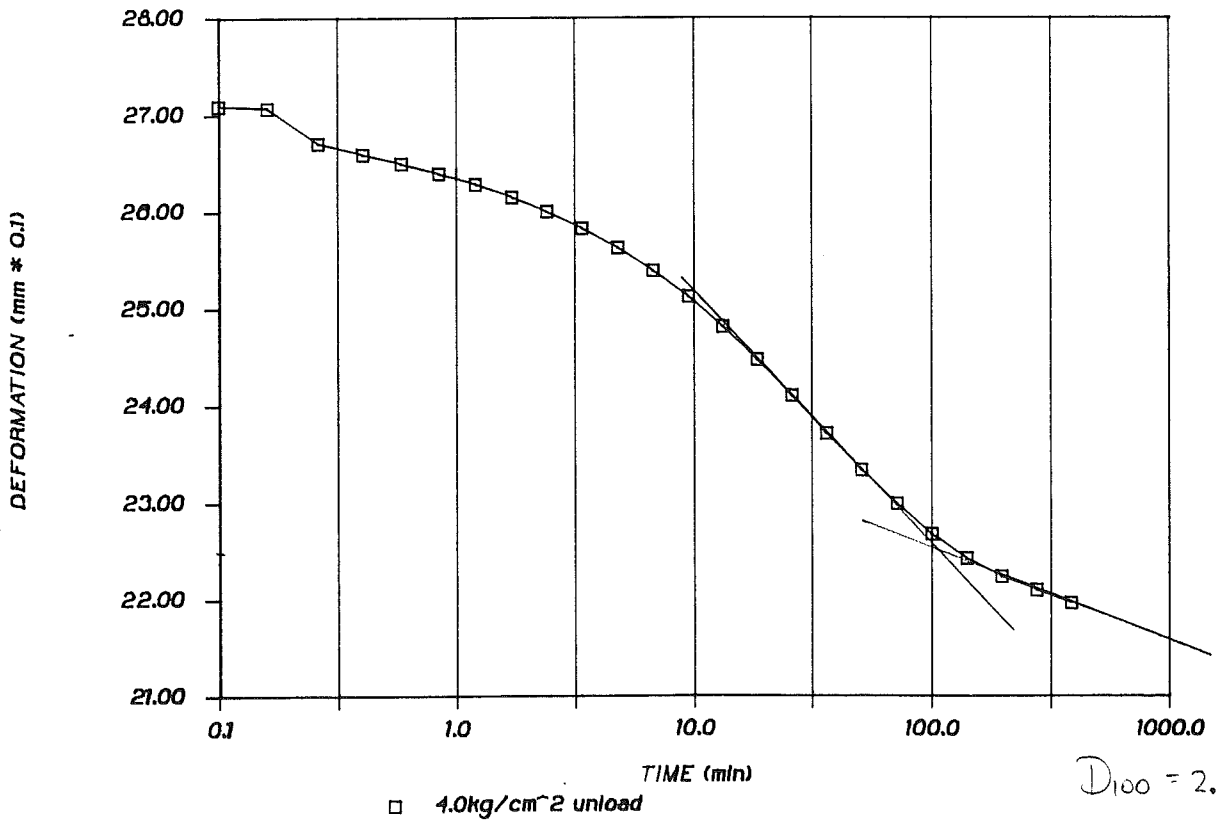
TIME vs DEFORMATION CURVE

SAMPLE 187B



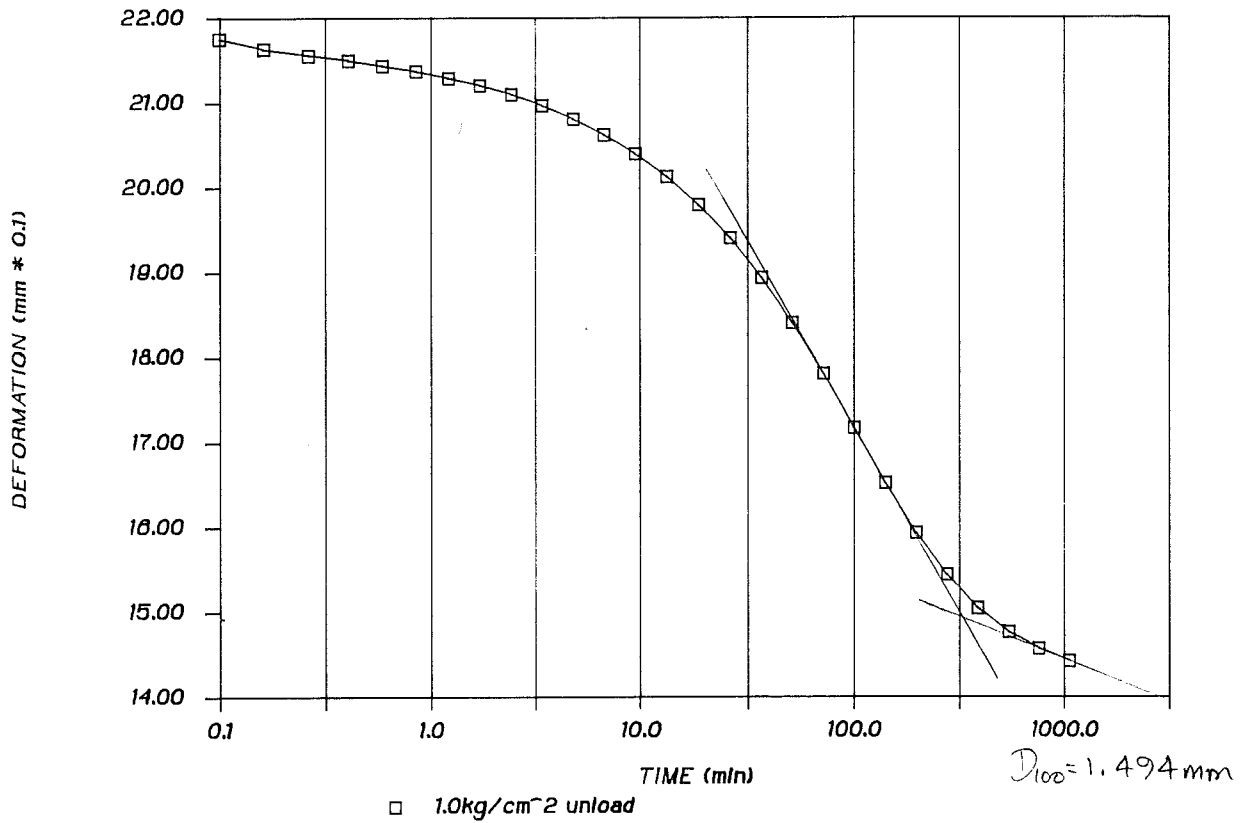
TIME vs DEFORMATION CURVE

SAMPLE 187B



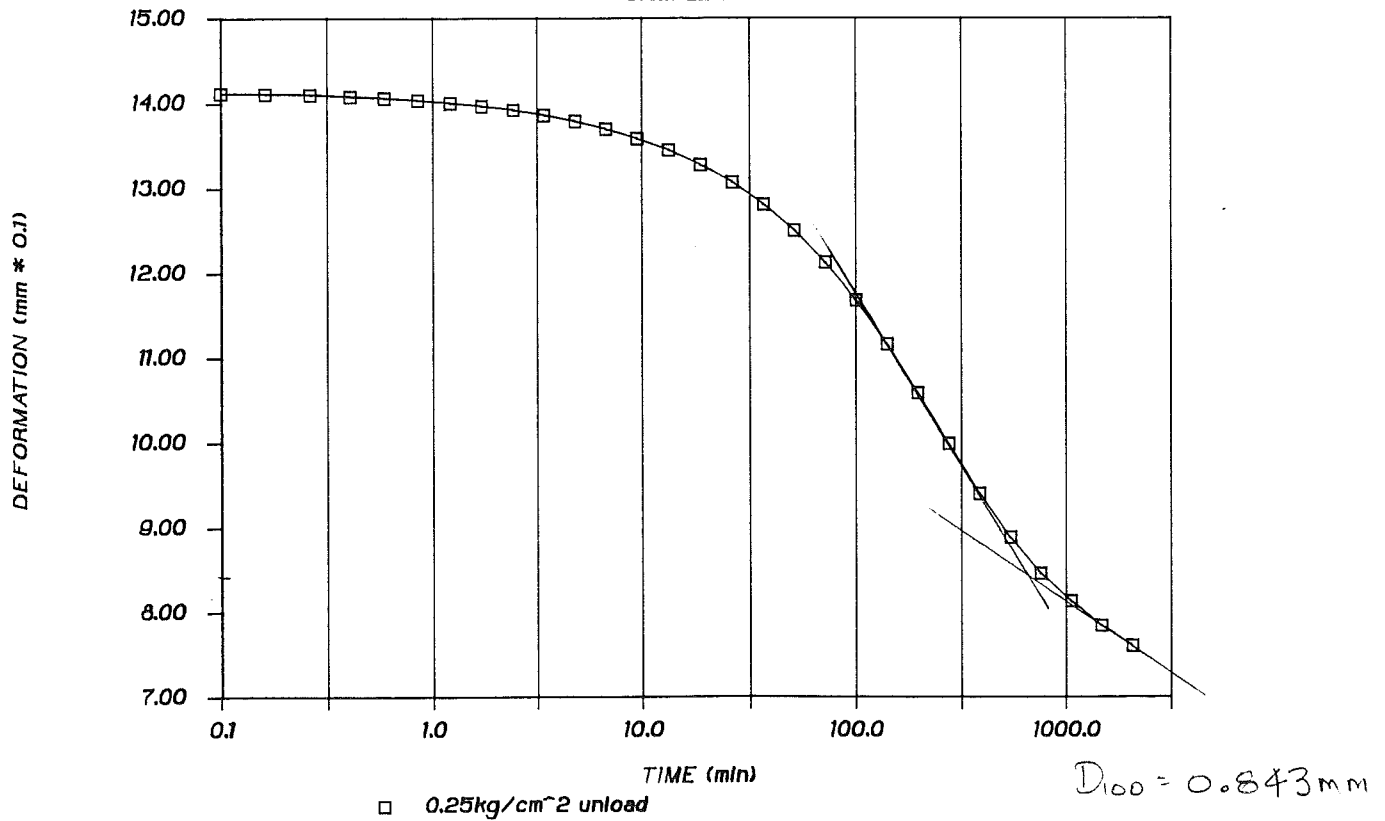
TIME vs DEFORMATION CURVE

SAMPLE 187B



TIME vs DEFORMATION CURVE

SAMPLE 187B



JACQUES WHITFORD and ASSOCIATES LTD.
 CUMULATIVE CONSOLIDATION DEFORMATION DATA

PROJECT No.: 5145
 CLIENT : ATLANTIC GEOSCIENCE CENTER

SAMPLE 187B
 START 15:14:03.98 ON 3-17-1989
 0.25 kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5593	0.108	0.20
0.10	-0.5594	0.104	0.32
0.16	-0.5572	0.245	0.40
0.26	-0.5570	0.256	0.51
0.40	-0.5569	0.264	0.63
0.58	-0.5569	0.264	0.76
0.84	-0.5569	0.264	0.92
1.20	-0.5570	0.256	1.10
1.70	-0.5572	0.240	1.30

SAMPLE 187B
 START 00:01:19.25 ON 3-17-1989
 .5kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5582	0.181	0.20
0.10	-0.5579	0.200	0.32
0.16	-0.5577	0.208	0.40
0.26	-0.5575	0.224	0.51
0.40	-0.5573	0.236	0.63
0.58	-0.5572	0.240	0.76
0.84	-0.5571	0.248	0.92
1.20	-0.5571	0.248	1.10
1.70	-0.5571	0.248	1.30

SAMPLE 187B
 START 00:06:01.13 ON 3-17-1989
 1.0kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5535	0.480	0.20
0.10	-0.5526	0.540	0.32
0.16	-0.5521	0.569	0.40
0.26	-0.5515	0.608	0.51
0.40	-0.5511	0.633	0.63
0.58	-0.5508	0.652	0.76
0.84	-0.5506	0.668	0.92
1.20	-0.5502	0.693	1.10
1.70	-0.5500	0.704	1.30
2.40	-0.5497	0.720	1.55
3.38	-0.5496	0.729	1.84
4.76	-0.5494	0.741	2.18

SAMPLE 187B
 START 00:13:32.12 ON 3-17-1989
 2.0kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5418	1.233	0.20
0.10	-0.5406	1.309	0.32
0.16	-0.5399	1.349	0.40
0.26	-0.5393	1.393	0.51
0.40	-0.5385	1.441	0.63
0.58	-0.5379	1.481	0.76
0.84	-0.5372	1.525	0.92
1.20	-0.5366	1.565	1.10
1.70	-0.5359	1.609	1.30
2.40	-0.5352	1.653	1.55
3.38	-0.5346	1.693	1.84
4.76	-0.5339	1.733	2.18
6.70	-0.5334	1.769	2.59
9.40	-0.5328	1.805	3.07
13.18	-0.5324	1.833	3.63

SAMPLE 187B
 START 00:30:03.69 ON 3-17-1989
 4.0kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5234	2.409	0.20
0.10	-0.5216	2.522	0.32
0.16	-0.5207	2.577	0.40
0.26	-0.5195	2.657	0.51
0.40	-0.5184	2.730	0.63
0.58	-0.5173	2.797	0.76
0.84	-0.5161	2.874	0.92
1.20	-0.5148	2.958	1.10
1.70	-0.5134	3.046	1.30
2.40	-0.5119	3.146	1.55
3.38	-0.5102	3.250	1.84
4.76	-0.5084	3.366	2.18
6.70	-0.5064	3.494	2.59
9.40	-0.5044	3.626	3.07
13.18	-0.5024	3.754	3.63
18.48	-0.5005	3.874	4.30
25.90	-0.4989	3.974	5.09
36.28	-0.4979	4.042	6.02
50.80	-0.4970	4.098	7.13

SAMPLE 187B
 START 01:27:02.70 ON 3-17-1989
 8.0kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.4967	4.114	0.20
0.10	-0.4967	4.114	0.32
0.16	-0.4967	4.114	0.40
0.26	-0.4877	4.690	0.51
0.40	-0.4835	4.962	0.63
0.58	-0.4812	5.106	0.76
0.84	-0.4791	5.243	0.92
1.20	-0.4769	5.387	1.10
1.70	-0.4745	5.539	1.30
2.40	-0.4718	5.711	1.55
3.38	-0.4688	5.903	1.84
4.76	-0.4654	6.123	2.18
6.70	-0.4616	6.367	2.59
9.40	-0.4574	6.632	3.07
13.18	-0.4534	6.892	3.63
18.48	-0.4494	7.144	4.30
25.90	-0.4462	7.352	5.09
36.28	-0.4437	7.512	6.02
50.80	-0.4418	7.632	7.13
71.12	-0.4404	7.720	8.43
99.56	-0.4393	7.792	9.98
139.38	-0.4382	7.860	11.81
195.10	-0.4373	7.920	13.97
273.08	-0.4364	7.980	16.53
382.23	-0.4356	8.032	19.55
534.99	-0.4347	8.088	23.13
748.79	-0.4339	8.140	27.36
1048.04	-0.4331	8.188	32.37
1466.84	-0.4326	8.224	38.30
2053.01	-0.4321	8.252	45.31

SAMPLE 187B
 START 20:24:01.09 ON 3-17-1989
 15.84kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.4314	8.295	0.20
0.10	-0.4209	8.969	0.32
0.16	-0.4193	9.072	0.40
0.26	-0.4175	9.188	0.51
0.40	-0.4157	9.305	0.63
0.58	-0.4137	9.428	0.76
0.84	-0.4116	9.569	0.92
1.20	-0.4091	9.729	1.10
1.70	-0.4062	9.913	1.30
2.40	-0.4029	10.125	1.55
3.38	-0.3991	10.365	1.84
4.76	-0.3947	10.645	2.18
6.70	-0.3899	10.957	2.59
9.40	-0.3847	11.290	3.07
13.18	-0.3794	11.630	3.63
18.48	-0.3743	11.954	4.30
25.90	-0.3701	12.226	5.09
36.28	-0.3667	12.442	6.02
50.80	-0.3640	12.614	7.13
71.12	-0.3619	12.750	8.43
99.56	-0.3601	12.866	9.98
139.38	-0.3586	12.962	11.81
195.10	-0.3571	13.054	13.97

SAMPLE 187B
 START 00:22:38.58 ON 3-17-1989
 29.28kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.3564	13.102	0.20
0.10	-0.3524	13.355	0.32
0.16	-0.3424	13.995	0.40
0.26	-0.3389	14.223	0.51
0.40	-0.3361	14.399	0.63
0.58	-0.3334	14.571	0.76
0.84	-0.3303	14.771	0.92
1.20	-0.3267	14.999	1.10
1.70	-0.3228	15.255	1.30
2.40	-0.3180	15.559	1.55
3.38	-0.3125	15.911	1.84
4.76	-0.3063	16.312	2.18
6.70	-0.2991	16.772	2.59
9.40	-0.2912	17.272	3.07
13.18	-0.2829	17.805	3.63
18.48	-0.2746	18.341	4.30
25.90	-0.2668	18.837	5.09
36.28	-0.2601	19.265	6.02
50.80	-0.2547	19.609	7.13
71.12	-0.2505	19.881	8.43
99.56	-0.2471	20.102	9.98
139.38	-0.2442	20.282	11.81
195.10	-0.2418	20.442	13.97
273.08	-0.2396	20.582	16.53
382.23	-0.2374	20.722	19.55
534.99	-0.2354	20.854	23.13
748.79	-0.2334	20.978	27.36
1048.04	-0.2314	21.102	32.37

SAMPLE 187B
 START 00:42:47.16 ON 3-17-1989
 40.36kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.2274	21.358	0.20
0.10	-0.2270	21.386	0.32
0.16	-0.2269	21.394	0.40
0.26	-0.2267	21.407	0.51
0.40	-0.2212	21.759	0.63
0.58	-0.2198	21.850	0.76
0.84	-0.2184	21.939	0.92
1.20	-0.2168	22.038	1.10
1.70	-0.2151	22.147	1.30
2.40	-0.2131	22.275	1.55
3.38	-0.2107	22.427	1.84
4.76	-0.2080	22.603	2.18
6.70	-0.2049	22.803	2.59
9.40	-0.2014	23.027	3.07
13.18	-0.1976	23.271	3.63

SAMPLE 187B
 START 18:30:19.67 ON 3-17-1989
 54.58kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.1580	25.804	0.20

0.10	-0.1549	26.001	0.32
0.16	-0.1494	26.357	0.40
0.26	-0.1485	26.412	0.51
0.40	-0.1474	26.481	0.63
0.58	-0.1462	26.561	0.76
0.84	-0.1451	26.633	0.92
1.20	-0.1437	26.717	1.10
1.70	-0.1421	26.821	1.30
2.40	-0.1402	26.941	1.55
3.38	-0.1380	27.085	1.84
4.76	-0.1354	27.253	2.18
6.70	-0.1323	27.449	2.59
9.40	-0.1289	27.669	3.07
13.18	-0.1251	27.913	3.63
18.48	-0.1210	28.173	4.30
25.90	-0.1169	28.438	5.09
36.28	-0.1127	28.706	6.02
50.80	-0.1087	28.962	7.13
71.12	-0.1049	29.202	8.43
99.56	-0.1016	29.418	9.98
139.38	-0.0984	29.618	11.81
195.10	-0.0956	29.802	13.97
273.08	-0.0927	29.982	16.53
382.23	-0.0903	30.142	19.55
534.99	-0.0877	30.307	23.13
748.79	-0.0855	30.446	27.36
1048.04	-0.0834	30.579	32.37
1466.84	-0.0814	30.707	38.30
2053.01	-0.0793	30.843	45.31
2873.40	-0.0765	31.023	53.60

SAMPLE 187B
 START 15:37:26.17 ON 3-27-1989
 1.0kg/cm² unload
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.2188	21.914	0.20
0.10	-0.2212	21.754	0.32
0.16	-0.2232	21.631	0.40
0.26	-0.2244	21.554	0.51
0.40	-0.2253	21.494	0.63
0.58	-0.2263	21.434	0.76
0.84	-0.2273	21.366	0.92
1.20	-0.2286	21.286	1.10
1.70	-0.2299	21.198	1.30
2.40	-0.2316	21.094	1.55
3.38	-0.2336	20.962	1.84
4.76	-0.2361	20.806	2.18
6.70	-0.2390	20.618	2.59
9.40	-0.2425	20.394	3.07
13.18	-0.2467	20.121	3.63
18.48	-0.2519	19.790	4.30
25.90	-0.2580	19.401	5.09
36.28	-0.2652	18.937	6.02
50.80	-0.2736	18.401	7.13
71.12	-0.2829	17.805	8.43
99.56	-0.2929	17.165	9.98
139.38	-0.3031	16.516	11.81
195.10	-0.3122	15.932	13.97
273.08	-0.3199	15.436	16.53
382.23	-0.3260	15.047	19.55
534.99	-0.3304	14.763	23.13
748.79	-0.3335	14.567	27.36
1048.04	-0.3357	14.423	32.37

SAMPLE 187B
 START 00:18:02.74 ON 3-17-1989
 15.84kg/cm² unload

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.0761	31.047	0.20
0.10	-0.0761	31.051	0.32
0.16	-0.0761	31.051	0.40
0.26	-0.0799	30.807	0.51
0.40	-0.0887	30.238	0.63
0.58	-0.0897	30.179	0.76
0.84	-0.1004	29.494	0.92
1.20	-0.1029	29.330	1.10
1.70	-0.1053	29.182	1.30
2.40	-0.1076	29.034	1.55
3.38	-0.1101	28.874	1.84
4.76	-0.1127	28.706	2.18
6.70	-0.1154	28.530	2.59
9.40	-0.1181	28.358	3.07
13.18	-0.1206	28.198	3.63
18.48	-0.1227	28.061	4.30
25.90	-0.1246	27.945	5.09
36.28	-0.1259	27.861	6.02
50.80	-0.1267	27.805	7.13
71.12	-0.1276	27.753	8.43
99.56	-0.1282	27.713	9.98
139.38	-0.1288	27.673	11.81
195.10	-0.1293	27.645	13.97
273.08	-0.1296	27.625	16.53
382.23	-0.1297	27.613	19.55
534.99	-0.1299	27.601	23.13
748.79	-0.1303	27.581	27.36
1048.04	-0.1308	27.549	32.37
1466.84	-0.1311	27.525	38.30
2053.01	-0.1314	27.509	45.31
2873.40	-0.1313	27.513	53.60
4021.60	-0.1315	27.501	63.42

SAMPLE 187B
 START 13:04:19.88 ON 3-27-1989
 0.25kg/cm² unload

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.3398	14.163	0.20
0.10	-0.3405	14.119	0.32
0.16	-0.3406	14.111	0.40
0.26	-0.3408	14.099	0.51
0.40	-0.3411	14.079	0.63
0.58	-0.3414	14.059	0.76
0.84	-0.3419	14.031	0.92
1.20	-0.3424	13.999	1.10
1.70	-0.3429	13.963	1.30
2.40	-0.3436	13.919	1.55
3.38	-0.3446	13.859	1.84
4.76	-0.3457	13.787	2.18
6.70	-0.3471	13.695	2.59
9.40	-0.3489	13.583	3.07
13.18	-0.3510	13.446	3.63
18.48	-0.3537	13.275	4.30
25.90	-0.3569	13.067	5.09
36.28	-0.3609	12.810	6.02
50.80	-0.3658	12.498	7.13
71.12	-0.3717	12.122	8.43
99.56	-0.3787	11.674	9.98
139.38	-0.3868	11.153	11.81
195.10	-0.3957	10.581	13.97
273.08	-0.4051	9.985	16.53
382.23	-0.4142	9.401	19.55
534.99	-0.4223	8.880	23.13
748.79	-0.4289	8.456	27.36
1048.04	-0.4341	8.128	32.37
1466.84	-0.4386	7.836	38.30
2053.01	-0.4423	7.600	45.31

18.48	-0.1935	23.531	4.30
25.90	-0.1893	23.799	5.09
36.28	-0.1852	24.059	6.02
50.80	-0.1816	24.296	7.13
71.12	-0.1781	24.516	8.43
99.56	-0.1750	24.716	9.98
139.38	-0.1721	24.904	11.81
195.10	-0.1694	25.072	13.97
273.08	-0.1670	25.228	16.53
382.23	-0.1646	25.380	19.55
534.99	-0.1625	25.516	23.13
748.79	-0.1604	25.652	27.36
1048.04	-0.1586	25.768	32.37

SAMPLE 187B
 START 17:07:27.05 ON 3-17-1989
 4.0kg/cm² unload

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.1374	27.125	0.20
0.10	-0.1379	27.093	0.32
0.16	-0.1382	27.069	0.40
0.26	-0.1439	26.709	0.51
0.40	-0.1457	26.593	0.63
0.58	-0.1472	26.497	0.76
0.84	-0.1488	26.393	0.92
1.20	-0.1506	26.280	1.10
1.70	-0.1526	26.152	1.30
2.40	-0.1549	26.001	1.55
3.38	-0.1577	25.825	1.84
4.76	-0.1608	25.624	2.18
6.70	-0.1645	25.388	2.59
9.40	-0.1687	25.120	3.07
13.18	-0.1735	24.812	3.63
18.48	-0.1789	24.468	4.30
25.90	-0.1846	24.100	5.09
36.28	-0.1907	23.707	6.02
50.80	-0.1966	23.331	7.13
71.12	-0.2021	22.983	8.43
99.56	-0.2069	22.671	9.98
139.38	-0.2109	22.419	11.81
195.10	-0.2138	22.231	13.97
273.08	-0.2159	22.095	16.53
382.23	-0.2181	21.958	19.55

JACQUES WHITFORD & ASSOCIATES

CONSOLIDATION TEST DATA

PROJECT:5145 BOREHOLE:'85 Sable Is. SAMPLE:189B DEPTH: 121.8 m

GRAPH LEGEND:Sa. 189B

Diameter cm	:	5.003	Initial wet wt. g	:	78.95
Height cm	:	1.986	Final wet wt. g	:	79.88
Area cm ²	:	19.66	Dry sample wt. g	:	64.12
Volume cm ³	:	39.04	(including salt)		
Salinity	:	0.028	Wt. of salt g	:	0.43
Wt. of fluid g	:	15.26	Wt. of dry soil g	:	63.69
Wt. of water g	:	14.83	Vol. of soil solids cm ³	:	23.85
Init. fluid cont. %	:	24.0	Vol. of voids cm ³	:	15.19
Init. water cont. %	:	23.3	Final water cont. %	:	24.7
Wet density g/cm ³	:	2.022	Specific gravity of soil	:	2.670
Dry density g/cm ³	:	1.631	Computed ht. of solids cm	:	1.213
Init. void ratio	:	0.637	Computed ht. of voids cm	:	0.773
Time factor	:	0.197	Initial saturation %	:	97.6

LOAD	CUM DEF	CORR	VOID	AVG HT	TIME	Cv	D	K
kPa	mm	mm	RATIO	cm	s	cm ² /s	kPa	cm/s
25	0.062	0.004	0.632	1.983				
50	0.068	0.010	0.632	1.981	15	1.29E-02		
98	0.096	0.020	0.630	1.980	7	2.76E-02	5.31E+04	5.1E-10
196	0.159	0.032	0.626	1.976	9	2.14E-02	3.82E+04	5.5E-10
392	0.281	0.046	0.617	1.969	15	1.27E-02	3.61E+04	3.5E-10
785	0.533	0.068	0.598	1.952	54	3.48E-03	3.39E+04	1.0E-10
1553	0.851	0.096	0.574	1.926	53	3.45E-03	5.26E+04	6.4E-11
2871	1.491	0.136	0.525	1.883	190	9.19E-04	4.36E+04	2.1E-11
3957	2.095	0.162	0.477	1.823	553	2.96E-04	3.73E+04	7.8E-12
5357	2.620	0.196	0.437	1.770	482	3.20E-04	5.66E+04	5.5E-12
5357	2.707	0.196	0.430					
1553	2.376	0.096	0.449					
392	1.867	0.046	0.487					
196	1.532	0.032	0.513					
25	0.564	0.004	0.590					



CONSOLIDATION TEST

Project AGC Job No. 5145
 Location SABLE IS. BORING Boring No. 85 SABLE Sample No. 189B
 Description of Soil _____ Depth of Sample _____
 Tested By _____ Date of Testing start Mar. 31/89
 Consolidometer Type Machine #1 Ring No. 5-1
 Ring Dimensions: Diam. 5.003cm. Area, A _____ Ht. 1.986 cm.
 Initial Ht. of Soil, H_i _____ Initial Vol. of Soil, V_i _____

Specific Gravity of Soil, G_s = _____
 Wt. of Ring + Specimen at beginning of test = 147.98
 Wt. of Ring = 69.03
 Wt. of Wet Soil, W_t = _____
 Computed Dry Weight of Soil, W_s' = _____
 Oven Dry Wt. of Soil, W_s = _____

Water Content Determination <u>KEN</u>	
Wt. of Can + Wet Soil	= <u>83.77</u>
Wt. of Can + Dry Soil	= <u>76.65</u>
Wt. of Can	= <u>45.85</u>
Wt. of Water	= _____
Wt. of Dry Soil	= _____
Initial Water Content, w_i	= <u>23.12</u>

Computed Ht. of Solids, $H_0 = W_s' / G_s A$ = _____
 Initial Ht. of Voids, $H_v = H_i - H_0$ = _____
 Initial Degree of Saturation, $S_i = (W_t - W_s) / (H_i - H_0) A$ = _____
 Initial Void Ratio $e_0 = H_v / H_0$ = _____

FINAL TEST DATA (obtained at end of load testing)

Initial Dial Reading _____
 Final Dial Reading _____
 Change in Sample Ht. _____
 Final Ht. of Voids, H_{vf} _____
 Final Void Ratio, $e_f = H_{vf} / H_0$ _____

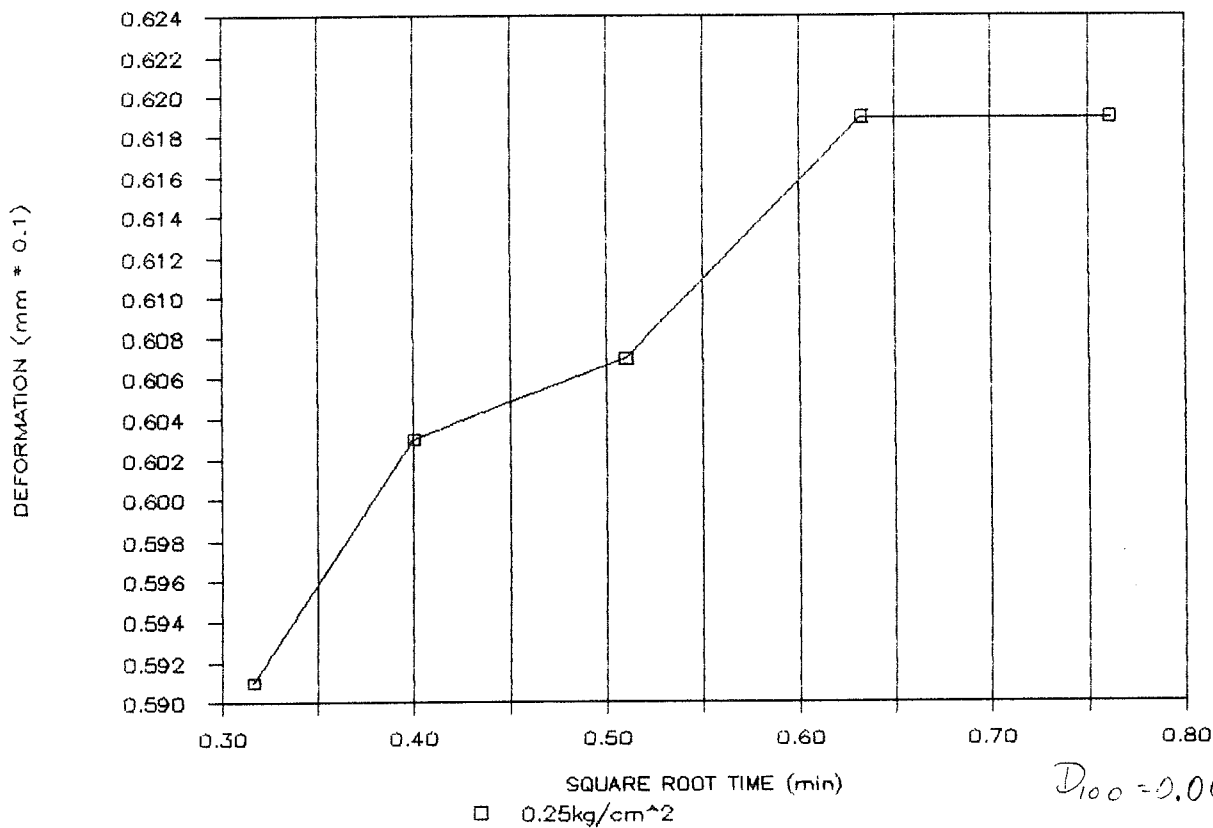
Final Water Content Determination <u>XYZ = 20.13g</u>	
Final Wet Wt. + Ring ^c	= <u>100.41</u> (ring stuck to top p (stem))
Final Dry Wt. + Ring	= <u>84.0</u>
Oven Dry Wt. of Soil, W_s	= _____
Final Water Content, w_f	= _____
Final Degree of Sat. S	= _____ %

(incl 1 large filter paper)
 * avg wt of 1 dry filter = 0.2

^a Obtained from Final Water Content Determination.
^b If it appears that any soil is lost from sample, use W_s'
^c Be sure to include any soil extruded from ring which is in consolidometer.

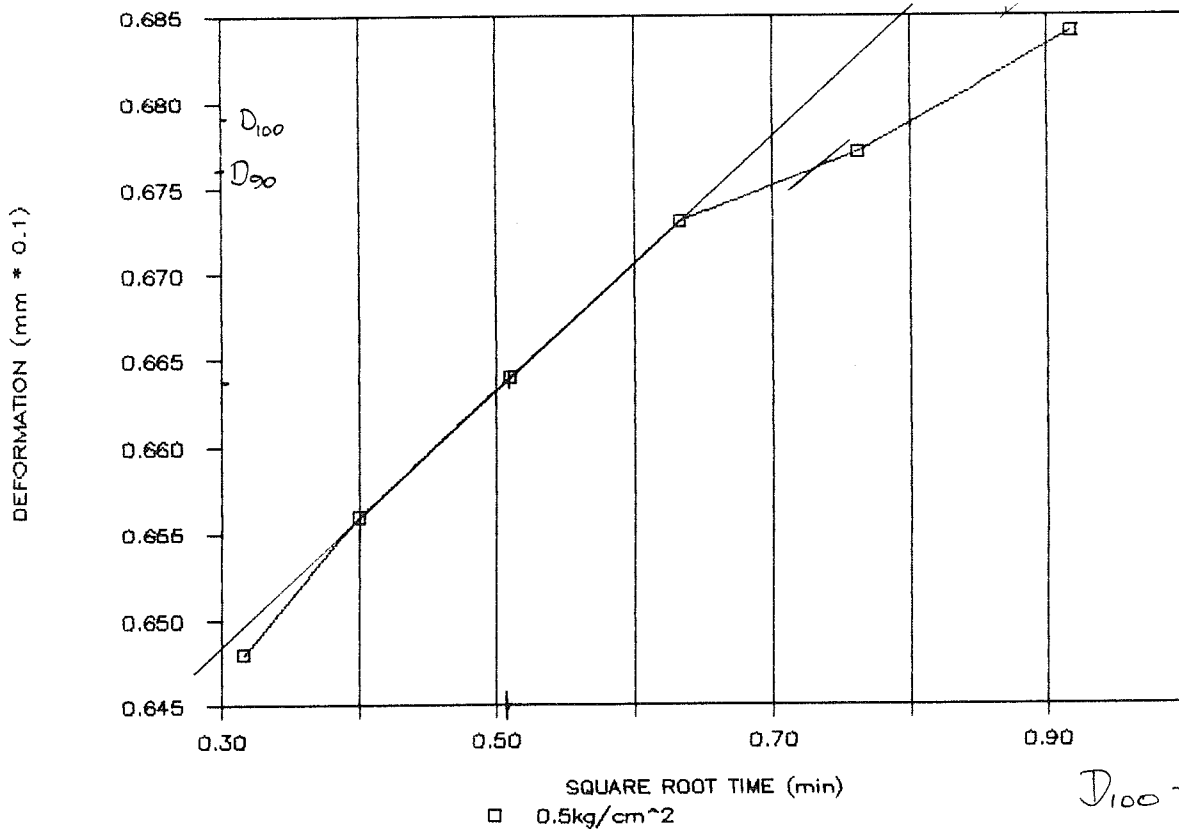
TIME vs DEFORMATION CURVE

SAMPLE 189B

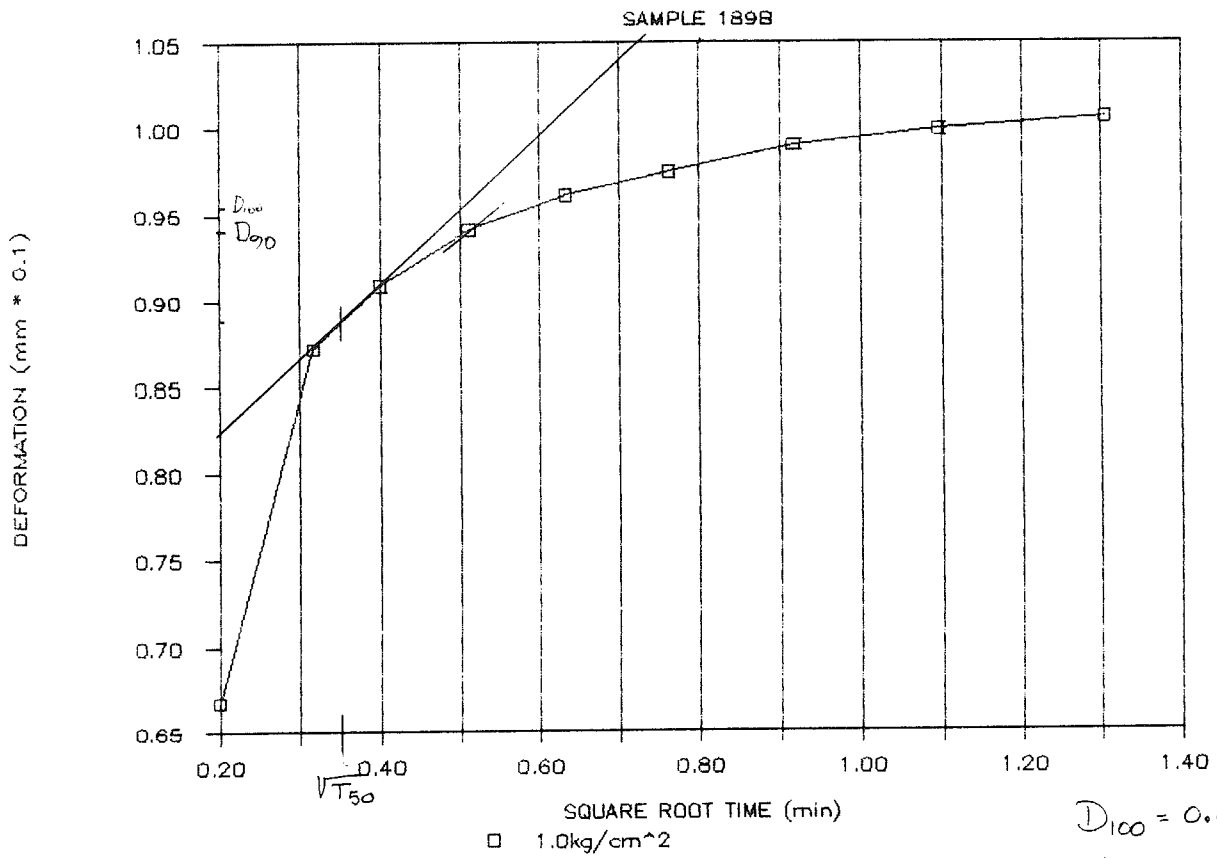


TIME vs DEFORMATION CURVE

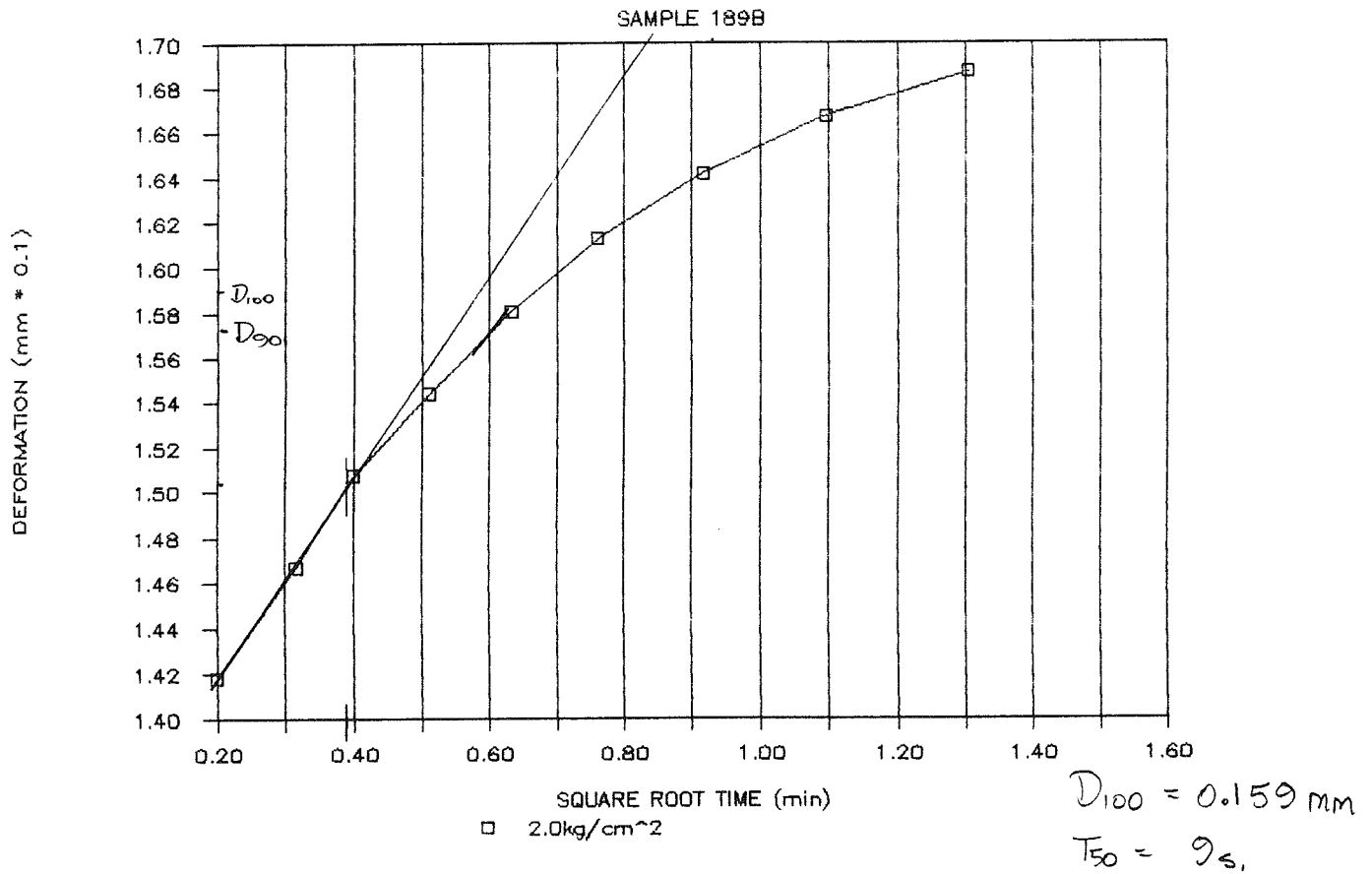
SAMPLE 189B



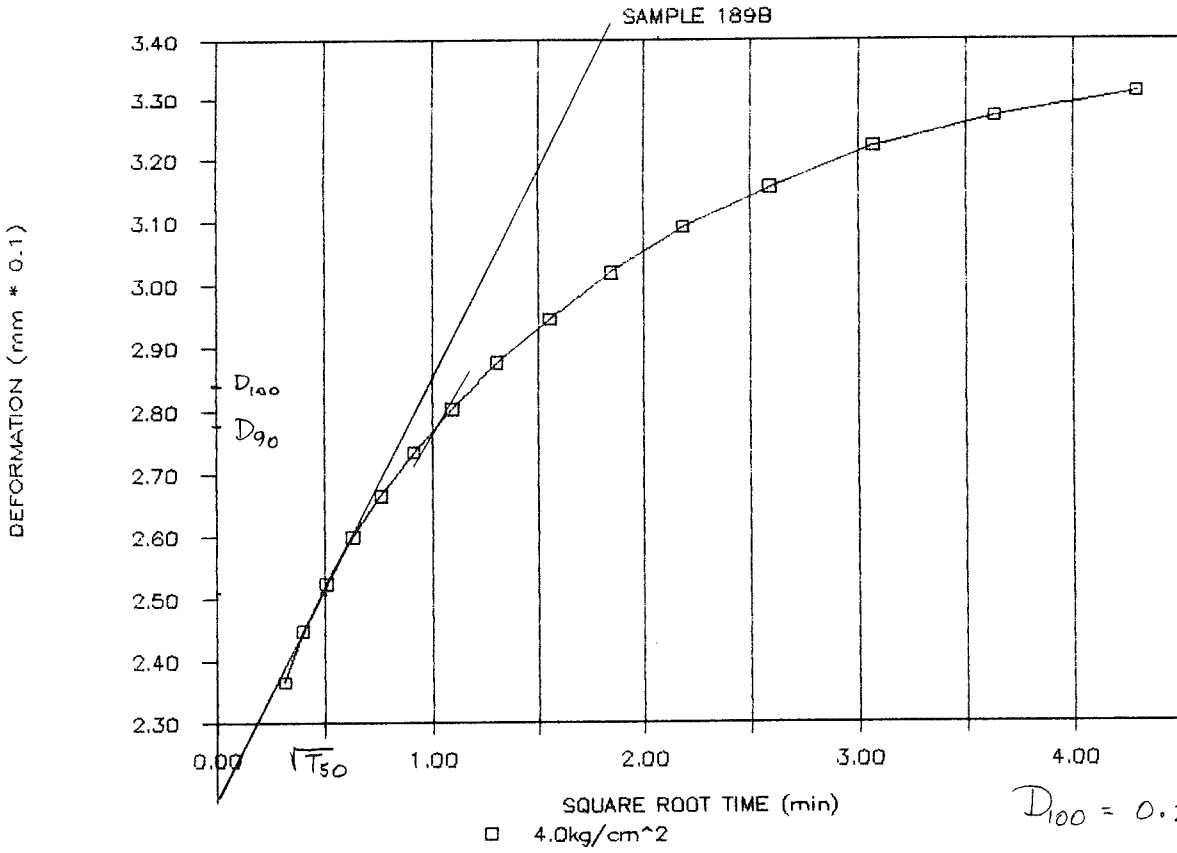
TIME vs DEFORMATION CURVE



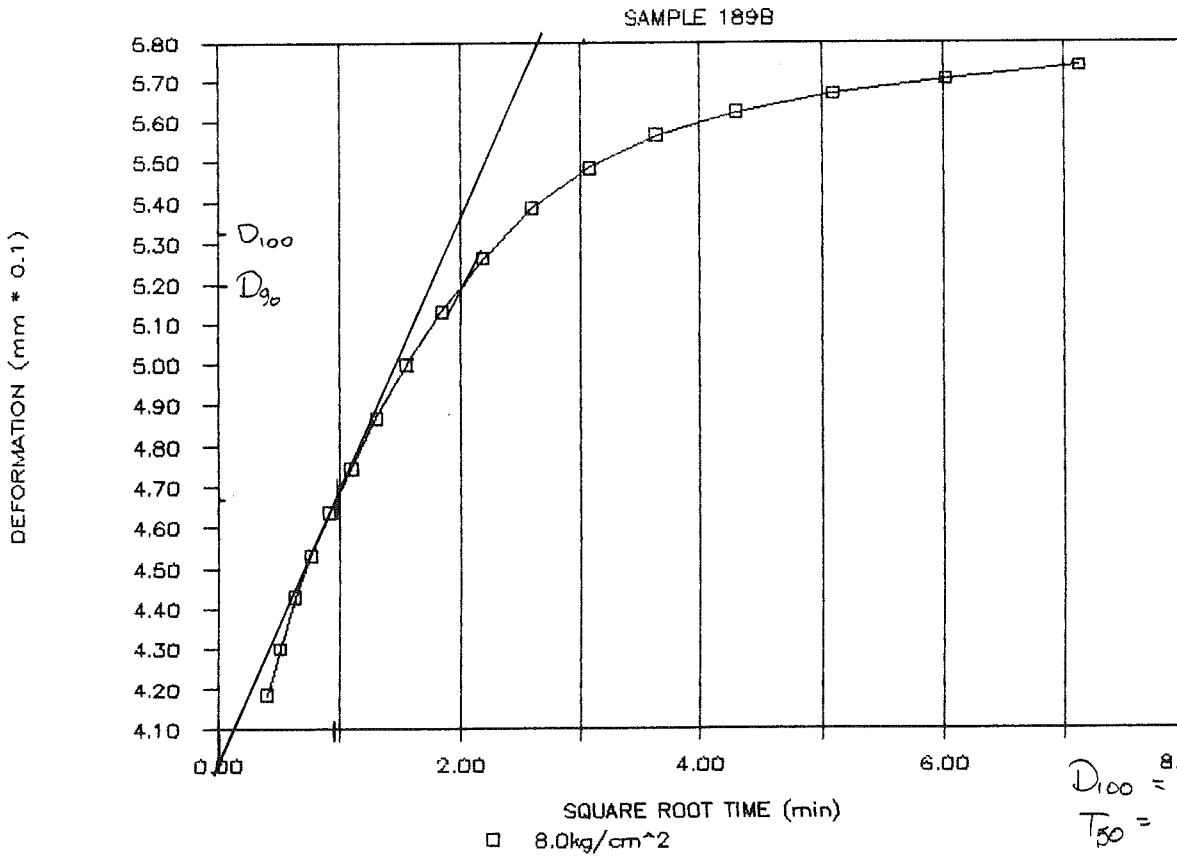
TIME vs DEFORMATION CURVE



TIME vs DEFORMATION CURVE

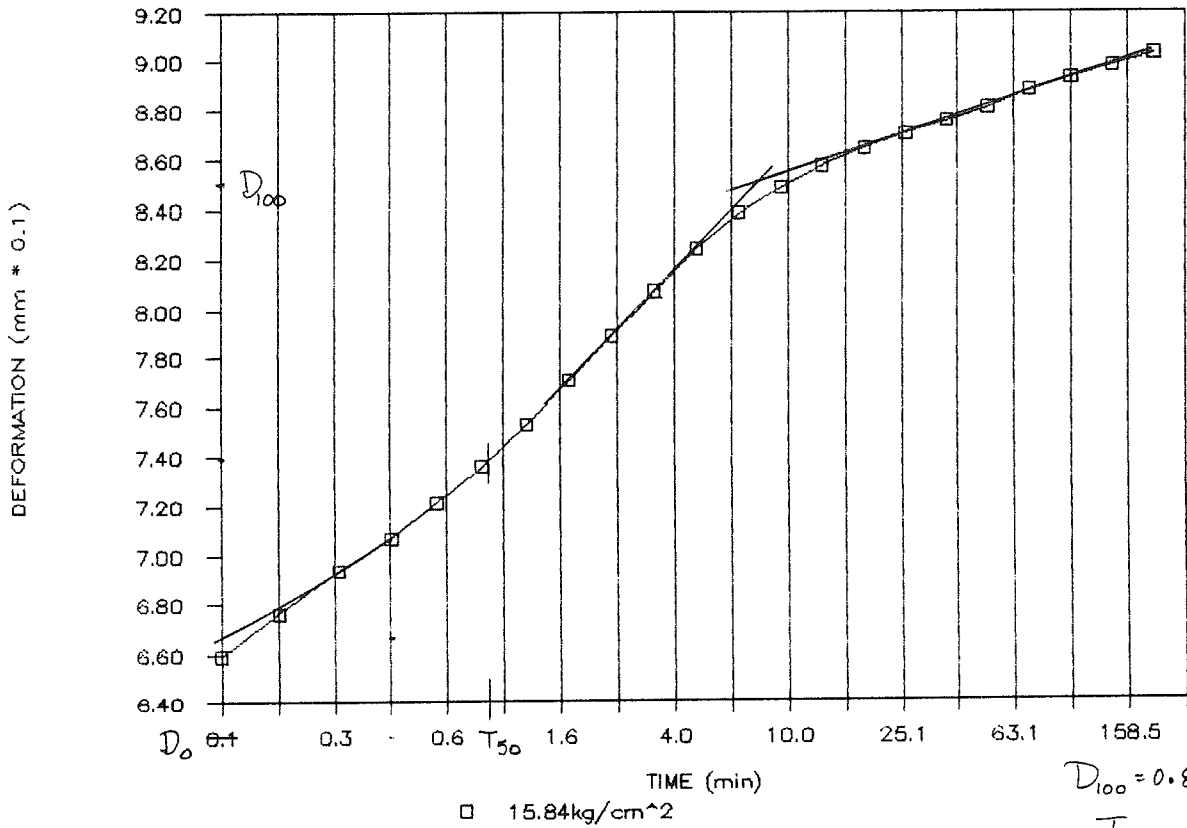


TIME vs DEFORMATION CURVE



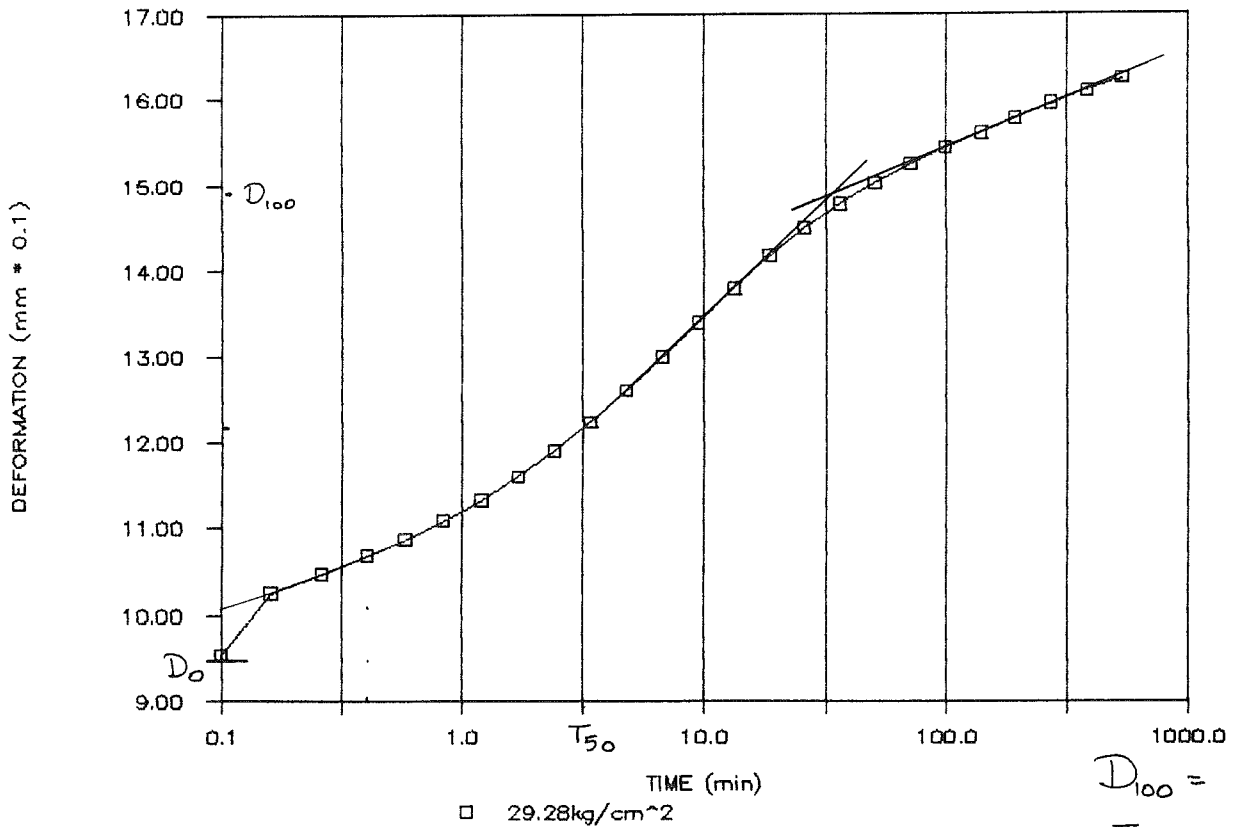
TIME vs DEFORMATION CURVE

SAMPLE 189B



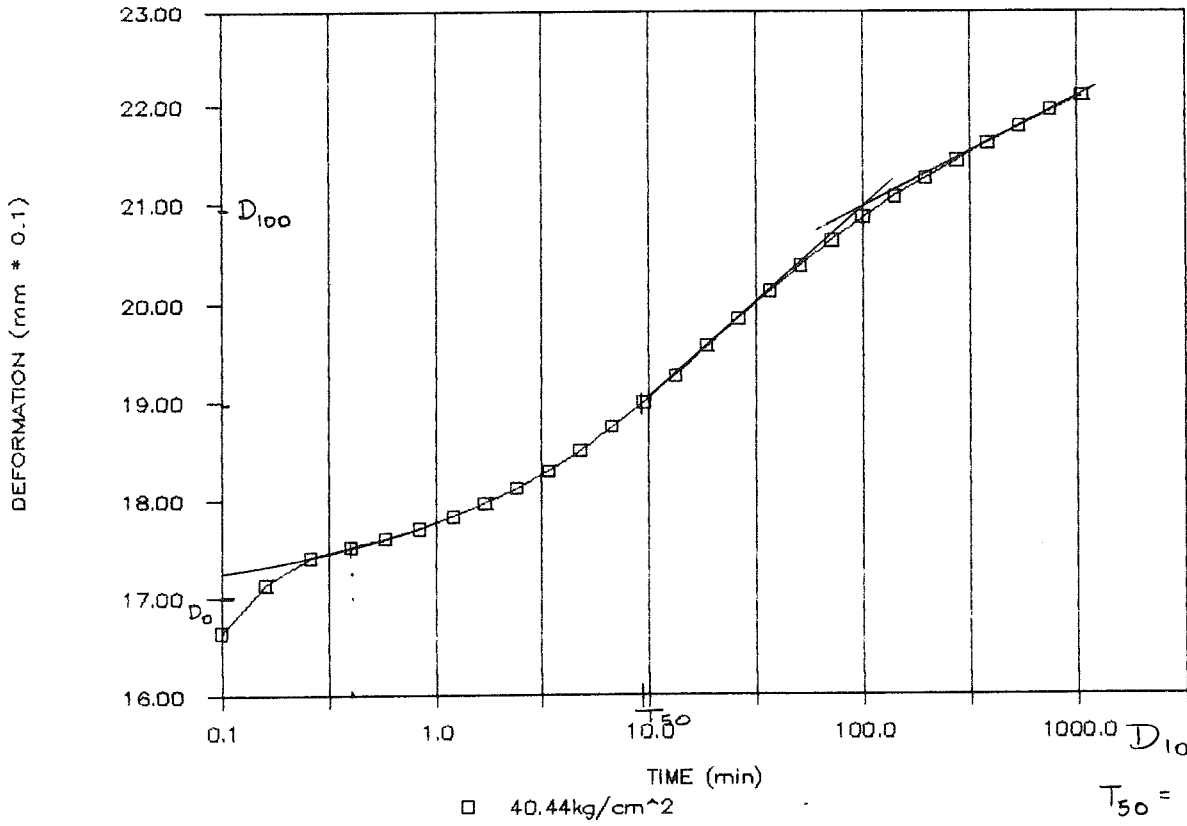
TIME vs DEFORMATION CURVE

SAMPLE 189B



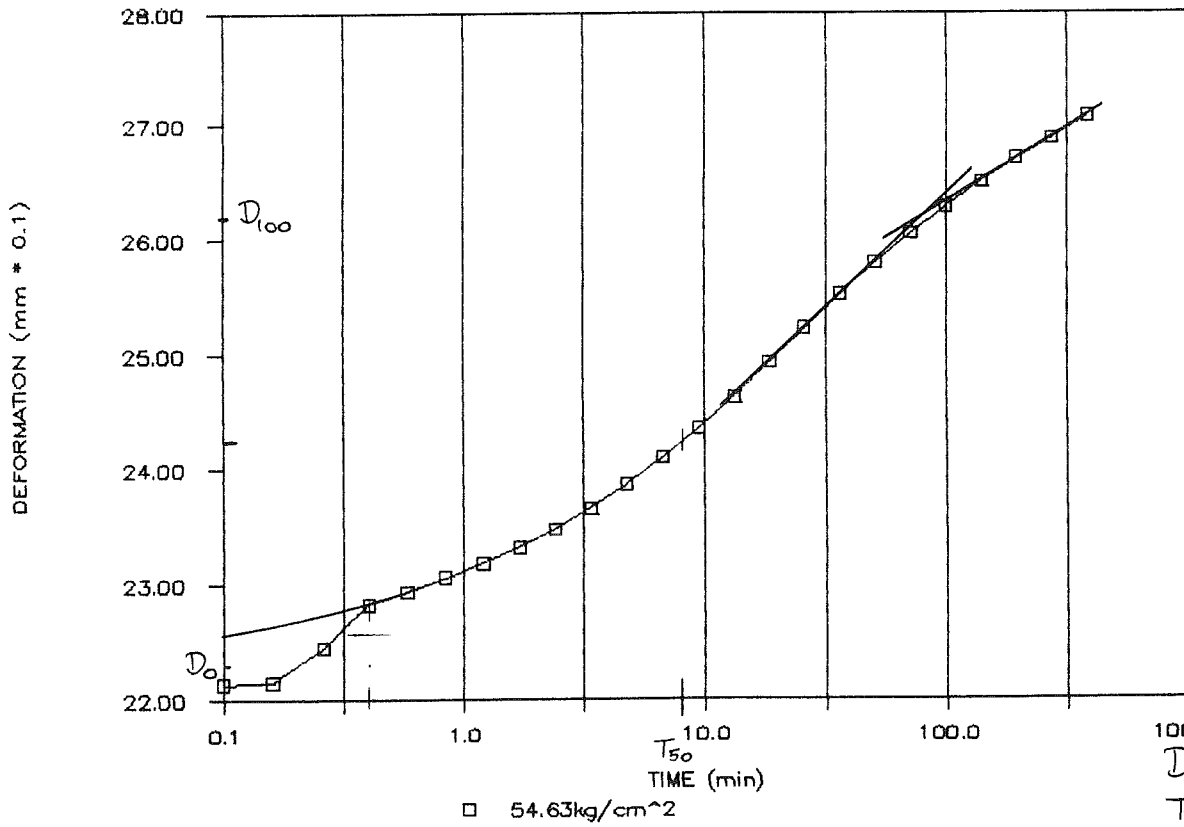
TIME vs DEFORMATION CURVE

SAMPLE 1898



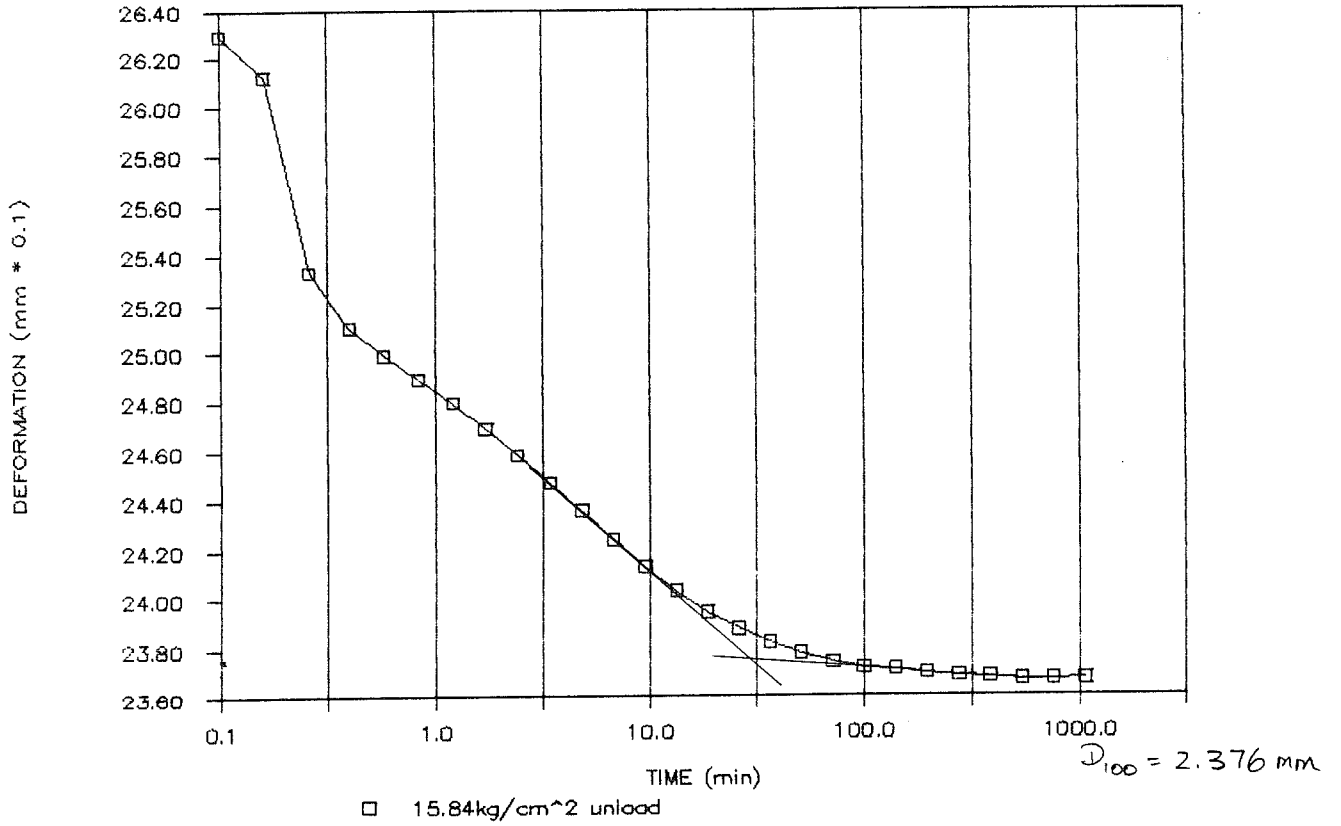
TIME vs DEFORMATION CURVE

SAMPLE 1898



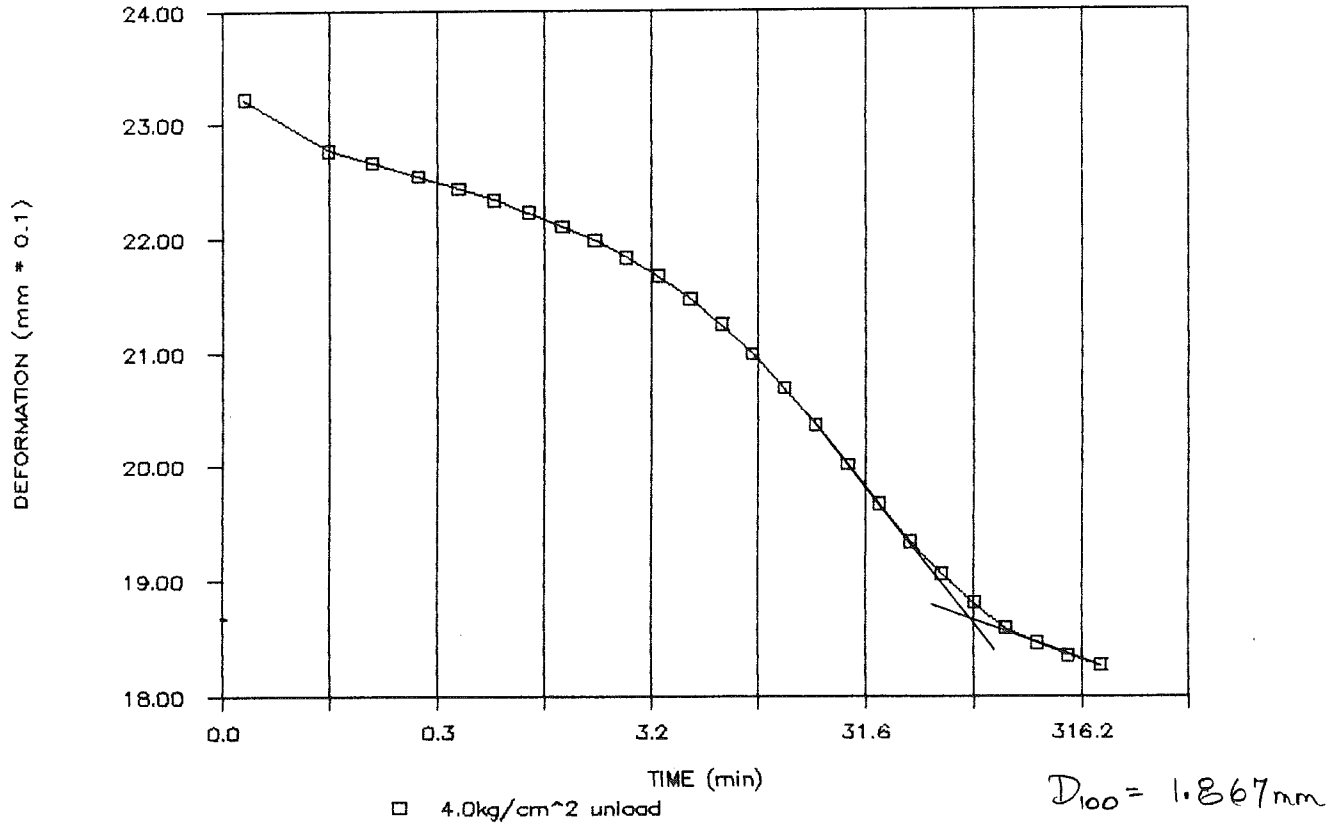
TIME vs DEFORMATION CURVE

SAMPLE 1898



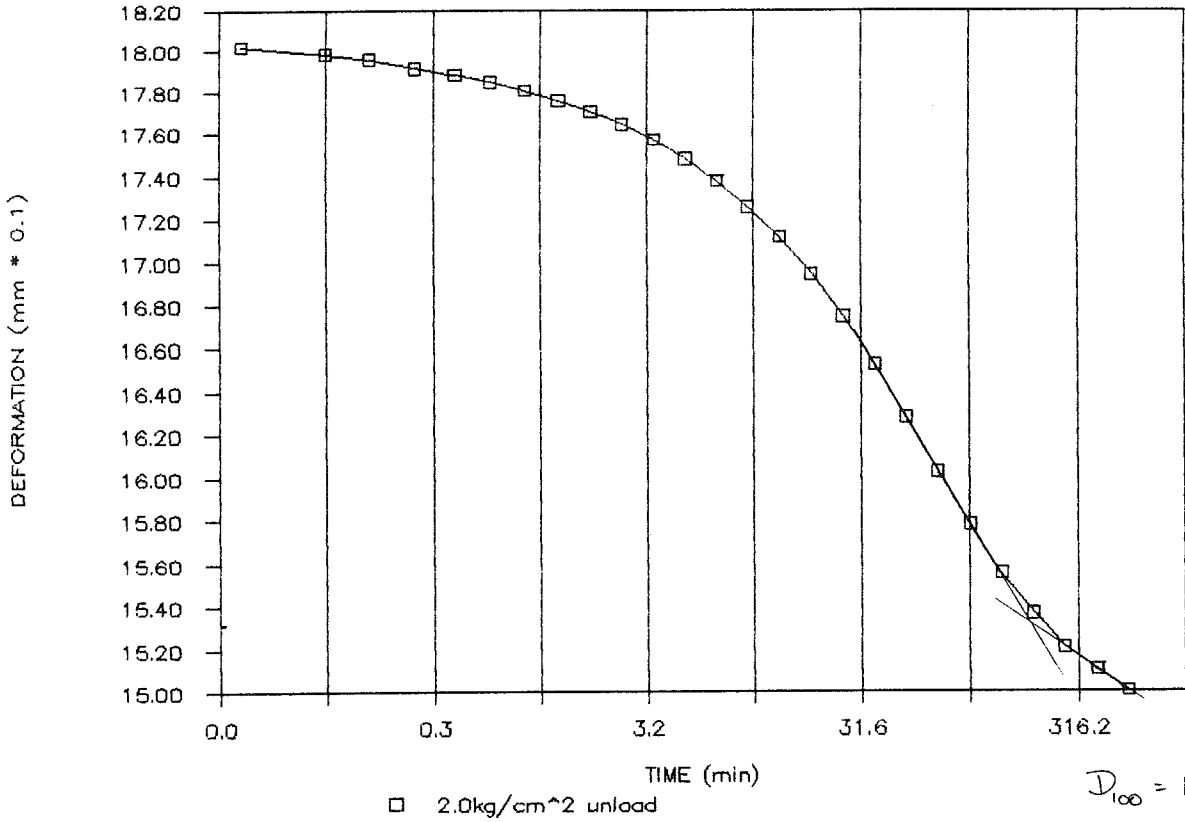
TIME vs DEFORMATION CURVE

SAMPLE 1898



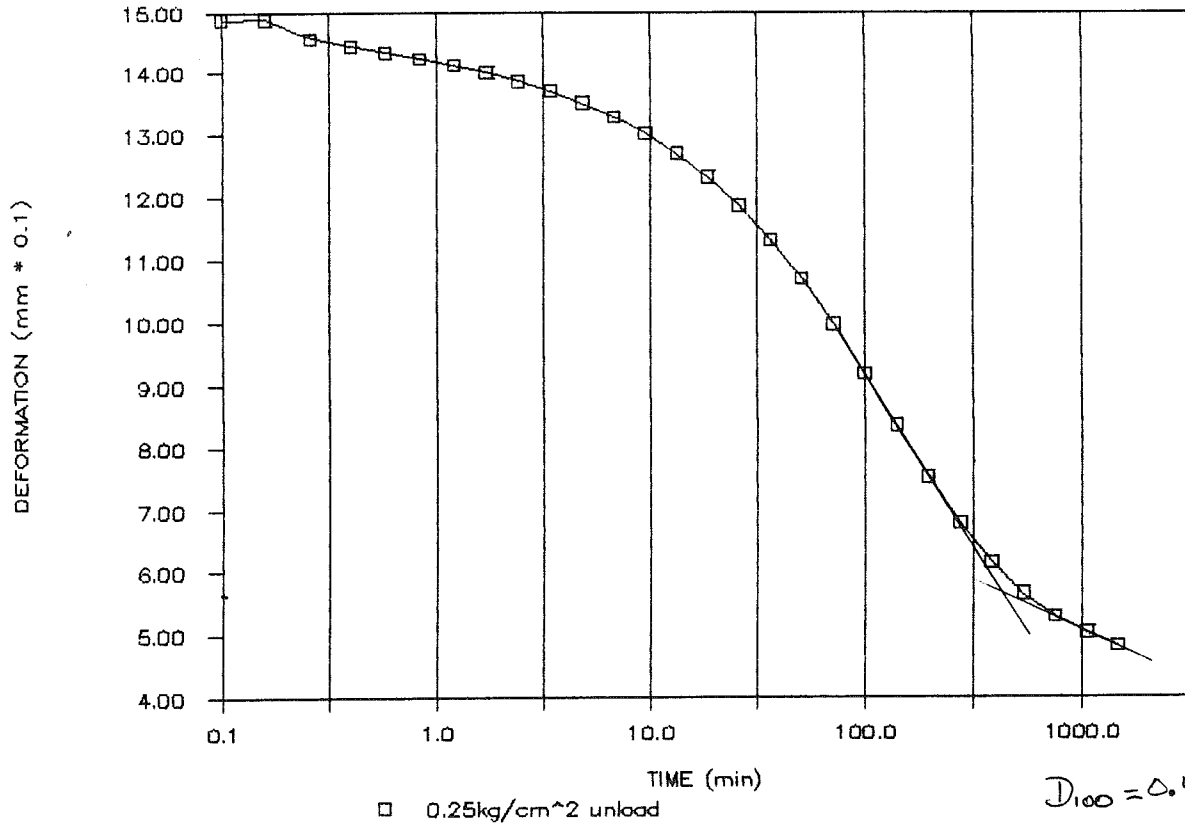
TIME vs DEFORMATION CURVE

SAMPLE 1898



TIME vs DEFORMATION CURVE

SAMPLE 1898



JACQUES WHITFORD and ASSOCIATES LTD.
 CUMULATIVE CONSOLIDATION DEFORMATION DATA

PROJECT No.: 5145
 CLIENT : ATLANTIC GEOSCIENCE CENTER

SAMPLE 189B
 START 04:04:31.53 ON 3-31-1989
 0.25kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.6609	0.591	0.20
0.10	-0.6607	0.603	0.32
0.16	-0.6607	0.607	0.40
0.26	-0.6605	0.619	0.51
0.40	-0.6605	0.619	0.63
0.58	-0.6604	0.624	0.76

SAMPLE 189B
 START 04:07:55.74 ON 3-31-1989
 0.5kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.6604	0.628	0.20
0.10	-0.6601	0.648	0.32
0.16	-0.6599	0.656	0.40
0.26	-0.6598	0.664	0.51
0.40	-0.6597	0.673	0.63
0.58	-0.6596	0.677	0.76
0.84	-0.6595	0.684	0.92

SAMPLE 189B
 START 04:10:52.27 ON 3-31-1989
 1.0kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.6597	0.668	0.20
0.10	-0.6566	0.872	0.32
0.16	-0.6561	0.909	0.40
0.26	-0.6556	0.941	0.51
0.40	-0.6552	0.961	0.63
0.58	-0.6551	0.974	0.76
0.84	-0.6548	0.990	0.92
1.20	-0.6547	0.999	1.10
1.70	-0.6546	1.006	1.30

SAMPLE 189B
 START 04:14:52.24 ON 3-31-1989
 2.0kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.6498	1.316	0.20
0.10	-0.6482	1.418	0.32
0.16	-0.6475	1.467	0.40
0.26	-0.6469	1.508	0.51
0.40	-0.6463	1.544	0.63
0.58	-0.6457	1.581	0.76
0.84	-0.6452	1.613	0.92
1.20	-0.6448	1.642	1.10
1.70	-0.6444	1.667	1.30
2.40	-0.6441	1.687	1.55

SAMPLE 189B
 START 04:20:32.89 ON 3-31-1989
 4.0kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.6372	2.139	0.20
0.10	-0.6337	2.367	0.32
0.16	-0.6324	2.449	0.40
0.26	-0.6313	2.526	0.51
0.40	-0.6301	2.599	0.63
0.58	-0.6291	2.665	0.76
0.84	-0.6281	2.734	0.92
1.20	-0.6270	2.803	1.10
1.70	-0.6259	2.876	1.30
2.40	-0.6248	2.945	1.55
3.38	-0.6237	3.019	1.84
4.76	-0.6226	3.092	2.18
6.70	-0.6216	3.157	2.59
9.40	-0.6206	3.223	3.07
13.18	-0.6198	3.271	3.63
18.48	-0.6192	3.312	4.30

SAMPLE 189B
 START 04:43:25.42 ON 3-31-1989
 8.0kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.6188	3.337	0.20
0.10	-0.6078	4.054	0.32
0.16	-0.6058	4.184	0.40
0.26	-0.6040	4.302	0.51
0.40	-0.6021	4.428	0.63
0.58	-0.6005	4.530	0.76
0.84	-0.5989	4.636	0.92
1.20	-0.5972	4.746	1.10
1.70	-0.5953	4.868	1.30
2.40	-0.5933	4.999	1.55
3.38	-0.5913	5.129	1.84
4.76	-0.5892	5.263	2.18
6.70	-0.5874	5.386	2.59
9.40	-0.5859	5.484	3.07
13.18	-0.5846	5.565	3.63
18.48	-0.5837	5.622	4.30
25.90	-0.5831	5.667	5.09
36.28	-0.5825	5.703	6.02
50.80	-0.5820	5.736	7.13

SAMPLE 189B
 START 05:44:12.09 ON 3-31-1989
 15.84kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5821	5.732	0.20
0.10	-0.5688	6.596	0.32
0.16	-0.5662	6.762	0.40
0.26	-0.5636	6.934	0.51
0.40	-0.5616	7.068	0.63
0.58	-0.5593	7.215	0.76
0.84	-0.5571	7.358	0.92
1.20	-0.5545	7.528	1.10
1.70	-0.5518	7.708	1.30
2.40	-0.5490	7.887	1.55
3.38	-0.5462	8.071	1.84
4.76	-0.5436	8.241	2.18
6.70	-0.5414	8.384	2.59
9.40	-0.5399	8.482	3.07
13.18	-0.5385	8.571	3.63
18.48	-0.5374	8.641	4.30
25.90	-0.5365	8.702	5.09
36.28	-0.5357	8.755	6.02
50.80	-0.5349	8.808	7.13
71.12	-0.5337	8.881	8.43
99.56	-0.5330	8.930	9.98
139.38	-0.5322	8.979	11.81
195.10	-0.5315	9.027	13.97
273.08	-0.5307	9.076	16.53
382.23	-0.5299	9.134	19.55
534.99	-0.5291	9.186	23.13
748.79	-0.5284	9.228	27.36
1048.04	-0.5279	9.264	32.37

SAMPLE 189B
 START 01:19:52.74 ON 3-31-1989
 29.28kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5274	9.293	0.20
0.10	-0.5236	9.545	0.32
0.16	-0.5128	10.250	0.40
0.26	-0.5094	10.466	0.51
0.40	-0.5061	10.686	0.63
0.58	-0.5033	10.869	0.76
0.84	-0.4999	11.085	0.92
1.20	-0.4963	11.325	1.10
1.70	-0.4921	11.594	1.30
2.40	-0.4875	11.895	1.55
3.38	-0.4823	12.234	1.84
4.76	-0.4766	12.605	2.18
6.70	-0.4705	13.003	2.59
9.40	-0.4644	13.403	3.07
13.18	-0.4584	13.794	3.63
18.48	-0.4527	14.160	4.30
25.90	-0.4477	14.491	5.09
36.28	-0.4434	14.772	6.02
50.80	-0.4396	15.020	7.13
71.12	-0.4362	15.240	8.43
99.56	-0.4333	15.431	9.98
139.38	-0.4305	15.611	11.81
195.10	-0.4279	15.761	13.97
273.08	-0.4254	15.941	16.53
382.23	-0.4231	16.092	19.55
534.99	-0.4209	16.238	23.13

SAMPLE 189B
 START 01:45:06.60 ON 3-31-1989
 40.44kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.4146	16.650	0.20
0.10	-0.4146	16.646	0.32
0.16	-0.4071	17.138	0.40
0.26	-0.4027	17.424	0.51
0.40	-0.4012	17.522	0.63
0.58	-0.3999	17.607	0.76
0.84	-0.3983	17.709	0.92
1.20	-0.3964	17.835	1.10
1.70	-0.3943	17.969	1.30
2.40	-0.3920	18.120	1.55
3.38	-0.3892	18.299	1.84
4.76	-0.3861	18.507	2.18
6.70	-0.3824	18.744	2.59
9.40	-0.3785	19.000	3.07
13.18	-0.3743	19.273	3.63
18.48	-0.3699	19.562	4.30
25.90	-0.3656	19.843	5.09
36.28	-0.3613	20.120	6.02
50.80	-0.3573	20.381	7.13
71.12	-0.3535	20.629	8.43
99.56	-0.3501	20.854	9.98
139.38	-0.3469	21.062	11.81
195.10	-0.3439	21.253	13.97
273.08	-0.3413	21.428	16.53
382.23	-0.3385	21.607	19.55
534.99	-0.3359	21.779	23.13
748.79	-0.3332	21.954	27.36
1048.04	-0.3309	22.101	32.37

SAMPLE 189B
 START 20:40:02.45 ON 3-31-1989
 54.63kg/cm²
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.3300	22.161	0.20
0.10	-0.3304	22.133	0.32
0.16	-0.3302	22.149	0.40
0.26	-0.3258	22.451	0.51
0.40	-0.3197	22.834	0.63

SAMPLE 189B
 START 03:11:07.56 ON 3-31-1989
 15.84kg/cm² unload
 Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.3197	22.834	0.63

0.58	-0.3180	22.943	0.76
0.84	-0.3161	23.066	0.92
1.20	-0.3142	23.188	1.10
1.70	-0.3121	23.327	1.30
2.40	-0.3097	23.481	1.55
3.38	-0.3069	23.665	1.84
4.76	-0.3037	23.872	2.18
6.70	-0.3002	24.105	2.59
9.40	-0.2962	24.361	3.07
13.18	-0.2920	24.638	3.63
18.48	-0.2874	24.936	4.30
25.90	-0.2829	25.233	5.09
36.28	-0.2784	25.526	6.02
50.80	-0.2742	25.800	7.13
71.12	-0.2703	26.052	8.43
99.56	-0.2667	26.288	9.98
139.38	-0.2633	26.508	11.81
195.10	-0.2603	26.708	13.97
273.08	-0.2576	26.879	16.53
382.23	-0.2547	27.071	19.55

SAMPLE 189B
START 05:27:15.25 ON 3-31-1989
2.0kg/cm² unload
Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.3936	18.018	0.20
0.10	-0.3941	17.982	0.32
0.16	-0.3945	17.957	0.40
0.26	-0.3951	17.917	0.51
0.40	-0.3956	17.884	0.63
0.58	-0.3962	17.848	0.76
0.84	-0.3968	17.807	0.92
1.20	-0.3976	17.758	1.10
1.70	-0.3984	17.705	1.30
2.40	-0.3993	17.644	1.55
3.38	-0.4004	17.571	1.84
4.76	-0.4018	17.481	2.18
6.70	-0.4034	17.379	2.59
9.40	-0.4052	17.256	3.07
13.18	-0.4074	17.118	3.63
18.48	-0.4100	16.947	4.30
25.90	-0.4130	16.751	5.09
36.28	-0.4164	16.532	6.02
50.80	-0.4202	16.282	7.13
71.12	-0.4240	16.034	8.43
99.56	-0.4278	15.786	9.98
139.38	-0.4313	15.562	11.81
195.10	-0.4342	15.371	13.97
273.08	-0.4366	15.216	16.53
382.23	-0.4382	15.110	19.55
534.99	-0.4398	15.008	23.13

MIN	VOLTS	0.1 MM	TIME MIN
0.04	-0.2657	26.354	0.20
0.10	-0.2666	26.292	0.32
0.16	-0.2692	26.125	0.40
0.26	-0.2814	25.327	0.51
0.40	-0.2849	25.103	0.63
0.58	-0.2866	24.989	0.76
0.84	-0.2881	24.891	0.92
1.20	-0.2896	24.797	1.10
1.70	-0.2912	24.691	1.30
2.40	-0.2928	24.585	1.55
3.38	-0.2946	24.471	1.84
4.76	-0.2963	24.357	2.18
6.70	-0.2981	24.239	2.59
9.40	-0.2998	24.129	3.07
13.18	-0.3013	24.031	3.63
18.48	-0.3026	23.946	4.30
25.90	-0.3036	23.881	5.09
36.28	-0.3044	23.828	6.02
50.80	-0.3051	23.783	7.13
71.12	-0.3057	23.746	8.43
99.56	-0.3061	23.722	9.98
139.38	-0.3061	23.718	11.81
195.10	-0.3064	23.701	13.97
273.08	-0.3066	23.689	16.53
382.23	-0.3066	23.685	19.55
534.99	-0.3068	23.673	23.13
748.79	-0.3068	23.673	27.36
1048.04	-0.3067	23.677	32.37

SAMPLE 189B
START 20:41:26.32 ON 3-31-1989
0.25kg/cm² unload
Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.4418	14.873	0.20
0.10	-0.4419	14.870	0.32
0.16	-0.4418	14.873	0.40
0.26	-0.4467	14.556	0.51
0.40	-0.4486	14.430	0.63
0.58	-0.4502	14.328	0.76
0.84	-0.4517	14.226	0.92
1.20	-0.4534	14.120	1.10
1.70	-0.4552	13.997	1.30
2.40	-0.4574	13.859	1.55
3.38	-0.4599	13.696	1.84
4.76	-0.4628	13.509	2.18
6.70	-0.4662	13.285	2.59
9.40	-0.4703	13.016	3.07
13.18	-0.4753	12.694	3.63
18.48	-0.4811	12.315	4.30
25.90	-0.4879	11.867	5.09
36.28	-0.4963	11.321	6.02
50.80	-0.5061	10.682	7.13
71.12	-0.5170	9.973	8.43
99.56	-0.5291	9.186	9.98
139.38	-0.5420	8.343	11.81
195.10	-0.5547	7.517	13.97
273.08	-0.5660	6.779	16.53
382.23	-0.5756	6.152	19.55
534.99	-0.5832	5.654	23.13
748.79	-0.5889	5.288	27.36
1048.04	-0.5927	5.035	32.37
1466.84	-0.5958	4.836	38.30
2053.01	-0.4423	7.600	45.31

SAMPLE 189B
START 21:26:12.89 ON 3-31-1989
4.0kg/cm² unload
Machine #1

TIME MIN	M #1 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.3137	23.220	0.20
0.10	-0.3207	22.769	0.32
0.16	-0.3224	22.659	0.40
0.26	-0.3242	22.541	0.51
0.40	-0.3258	22.434	0.63
0.58	-0.3272	22.340	0.76
0.84	-0.3289	22.231	0.92
1.20	-0.3307	22.112	1.10
1.70	-0.3327	21.987	1.30
2.40	-0.3349	21.840	1.55
3.38	-0.3375	21.672	1.84
4.76	-0.3404	21.481	2.18
6.70	-0.3439	21.253	2.59
9.40	-0.3479	20.993	3.07
13.18	-0.3526	20.691	3.63
18.48	-0.3576	20.361	4.30
25.90	-0.3629	20.015	5.09
36.28	-0.3682	19.673	6.02
50.80	-0.3731	19.351	7.13
71.12	-0.3775	19.065	8.43
99.56	-0.3812	18.821	9.98
139.38	-0.3844	18.613	11.81
195.10	-0.3864	18.487	13.97
273.08	-0.3881	18.373	16.53
382.23	-0.3894	18.288	19.55

JACQUES WHITFORD & ASSOCIATES

CONSOLIDATION TEST DATA

PROJECT:5145 BOREHOLE:'85 Sable Is. SAMPLE:190B DEPTH: 123.6 m

GRAPH LEGEND:Sa. 190B

Diameter cm	:	4.998	Initial wet wt. g	:	79.02
Height cm	:	1.985	Final wet wt. g	:	83.45
Area cm ²	:	19.62	Dry sample wt. g	:	66.49
Volume cm ³	:	38.94	(including salt)		
Salinity	:	0.028	Wt. of salt g	:	0.36
Wt. of fluid g	:	12.89	Wt. of dry soil g	:	66.13
Wt. of water g	:	12.53	Vol. of soil solids cm ³	:	24.77
Init. fluid cont. %	:	19.5	Vol. of voids cm ³	:	14.18
Init. water cont. %	:	18.9	Final water cont. %	:	25.6
Wet density g/cm ³	:	2.029	Specific gravity of soil	:	2.670
Dry density g/cm ³	:	1.698	Computed ht. of solids cm	:	1.262
Init. void ratio	:	0.572	Computed ht. of voids cm	:	0.723
Time factor	:	0.197	Initial saturation %	:	88.4

LOAD	CUM DEF	CORR	VOID	AVG HT	TIME	Cv	D	K
kPa	mm	mm	RATIO	cm	s	cm ² /s	kPa	cm/s

25	0.003	0.004	0.572	1.985				
50	0.003	0.010	0.573	1.986				
98	0.015	0.020	0.573	1.986	11	1.77E-02		
196	0.033	0.032	0.572	1.986	16	1.21E-02	3.24E+05	3.7E-11
392	0.094	0.046	0.569	1.983	29	6.68E-03	8.29E+04	7.9E-11
785	0.183	0.068	0.563	1.978	67	2.88E-03	1.16E+05	2.4E-11
1553	0.348	0.096	0.552	1.968	38	5.02E-03	1.11E+05	4.4E-11
2871	0.716	0.136	0.526	1.945	152	1.23E-03	7.98E+04	1.5E-11
3957	1.113	0.162	0.497	1.910	125	1.44E-03	5.81E+04	2.4E-11
5357	1.625	0.196	0.459	1.868	570	3.01E-04	5.81E+04	5.1E-12
5357	1.746	0.196	0.450					
1553	1.375	0.096	0.471					
392	0.933	0.046	0.502					
196	0.640	0.032	0.524					
25	-0.186	0.004	0.587					



JACQUES, WHITFORD & ASSOCIATES

CONSOLIDATION TEST

sample appears v. dry.

Project AGC Job No. 5145
 Location SABLE IS. BORING Boring No. 85 ^{SABLE} Sample No. 190B
 Description of Soil CLAY Depth of Sample _____
 Tested By _____ Date of Testing start Mar. 31/89
 Consolidometer Type mech #2 Ring No. 5-3
 Ring Dimensions: Diam. 4.998 Area, A _____ Ht. 1.985
 Initial Ht. of Soil, H_i _____ Initial Vol. of Soil, V_i _____

Specific Gravity of Soil, G_s = _____
 Wt. of Ring + Specimen at beginning of test = 148.62
 Wt. of Ring = 69.60
 Wt. of Wet Soil, W_t = _____
 Computed Dry Weight of Soil, W'_s = _____
 Oven Dry Wt. of Soil, W_s = _____

Water Content Determination		<u>A12</u>
Wt. of Can + Wet Soil	=	<u>114.90</u>
Wt. of Can + Dry Soil	=	<u>103.97</u>
Wt. of Can	=	<u>45.95</u>
Wt. of Water	=	_____
Wt. of Dry Soil	=	_____
Initial Water Content, w_i	=	<u>18.84</u>

Computed Ht. of Solids^b, $H_o = W'_s / G_s A$ = _____
 Initial Ht. of Voids, $H_v = H_i - H_o$ = _____
 Initial Degree of Saturation, $S_i = (W_t - W_s) / (H_i - H_o) A$ = _____
 Initial Void Ratio $e_o = H_v / H_o$ = _____

FINAL TEST DATA (obtained at end of load testing)

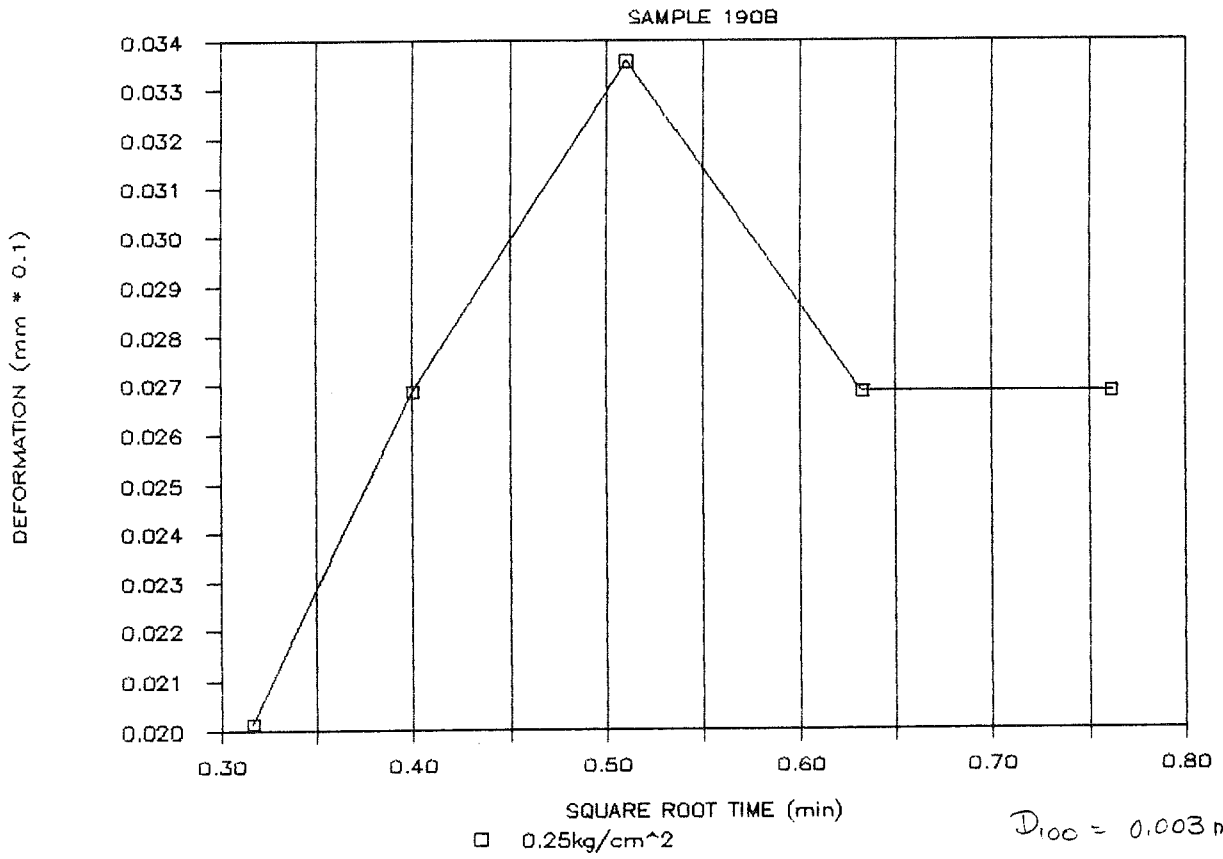
Initial Dial Reading _____
 Final Dial Reading _____
 Change in Sample Ht. _____
 Final Ht. of Voids, H_{vf} _____
 Final Void Ratio, $e_f = H_{vf} / H_o$ _____

Final Water Content Determination		<u>Tare A22 = 20.96g</u>
Final Wet Wt. + Ring ^c	<u>± 2 ^{small} filter p. *</u>	<u>174.01</u>
Final Dry Wt. + Ring		<u>156.6</u>
Oven Dry Wt. of Soil, W_s		_____
Final Water Content, w_f		_____
Final Degree of Sat. S		_____ %

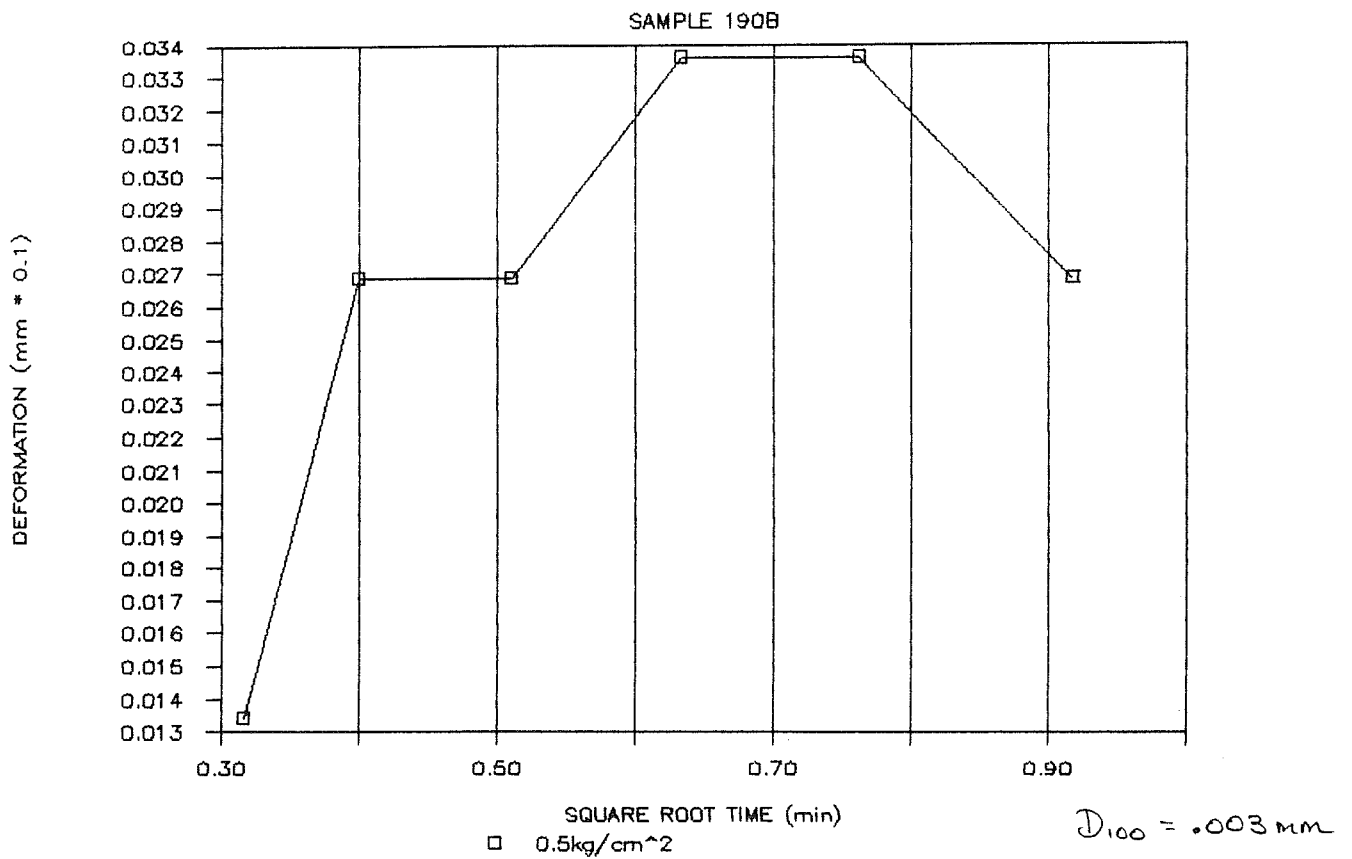
{incl 1 large filter
* avg wt of 1 filter = 0.20g

^a Obtained from Final Water Content Determination.
^b If it appears that any soil is lost from sample, use W'_s
^c Be sure to include any soil extruded from ring which is in consolidometer.

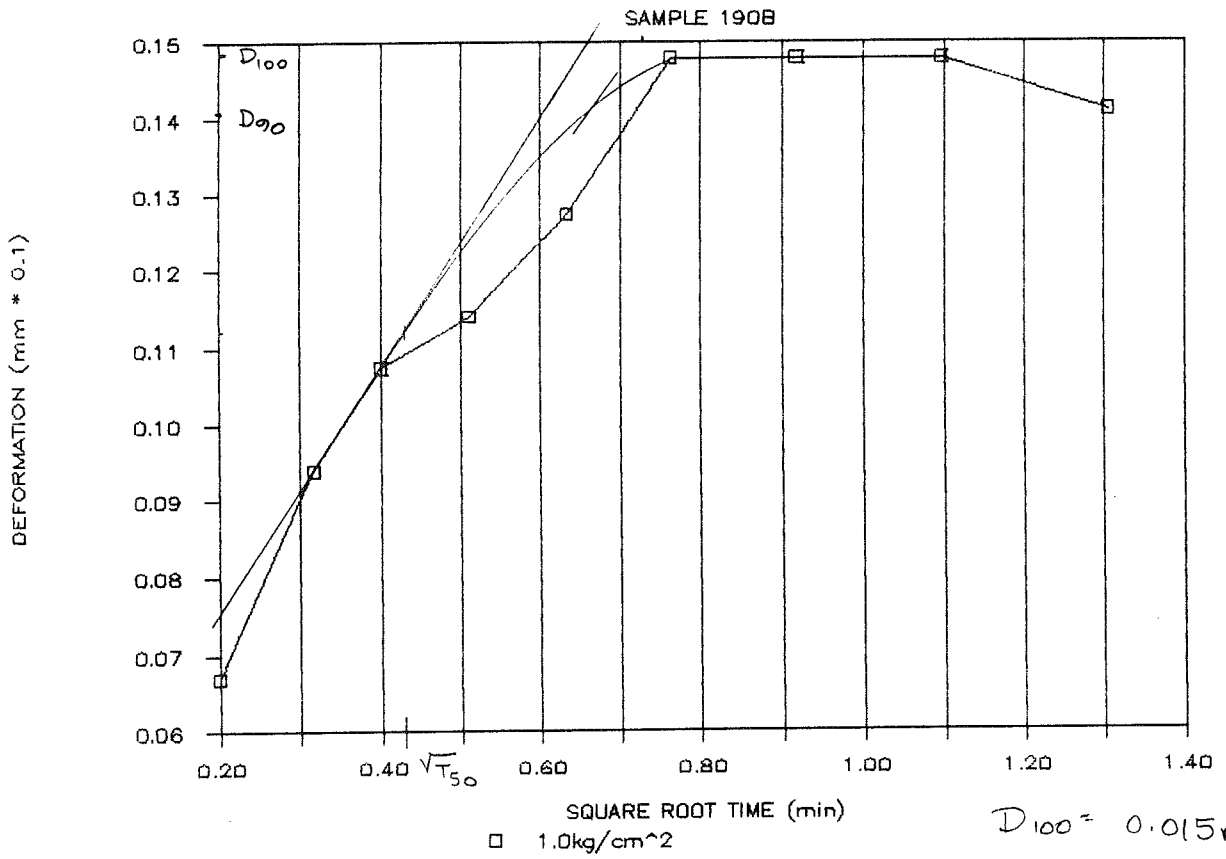
TIME vs DEFORMATION CURVE



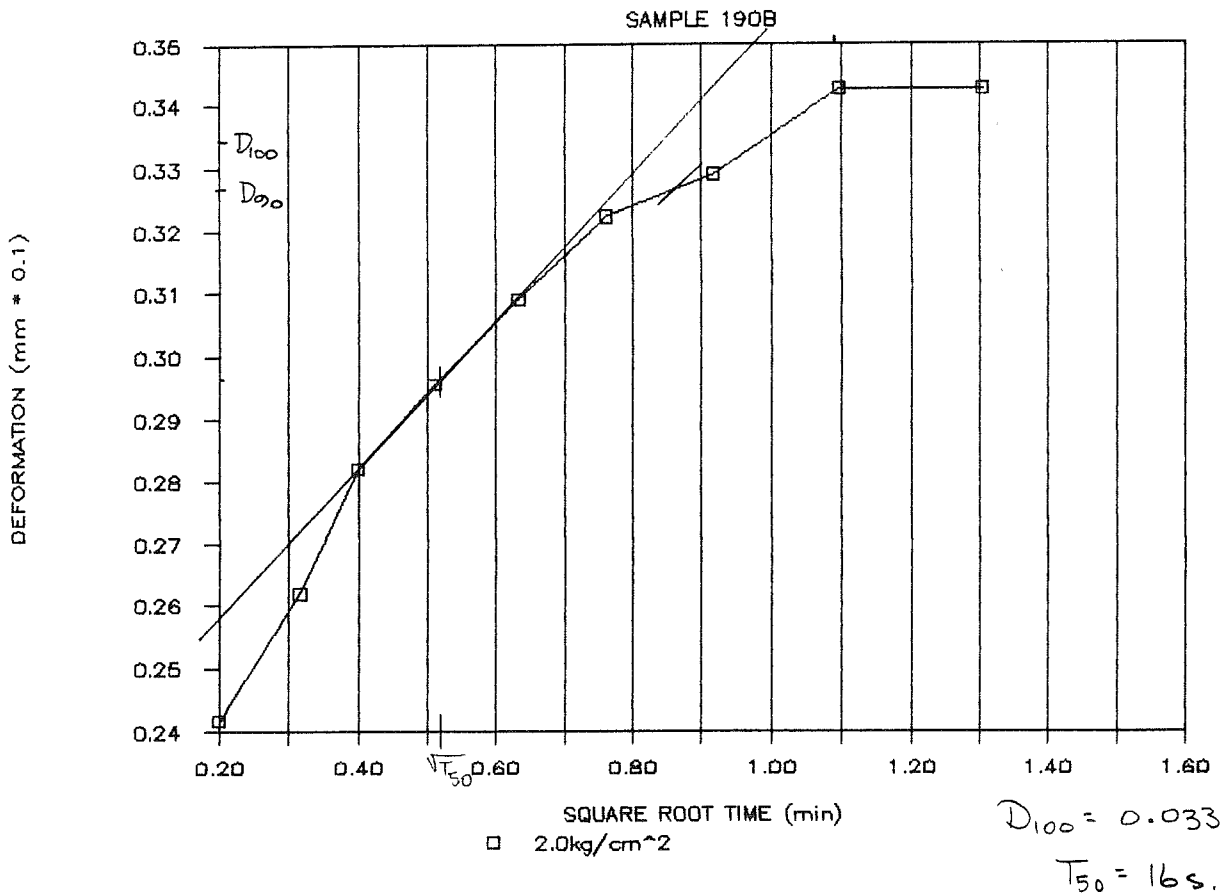
TIME vs DEFORMATION CURVE



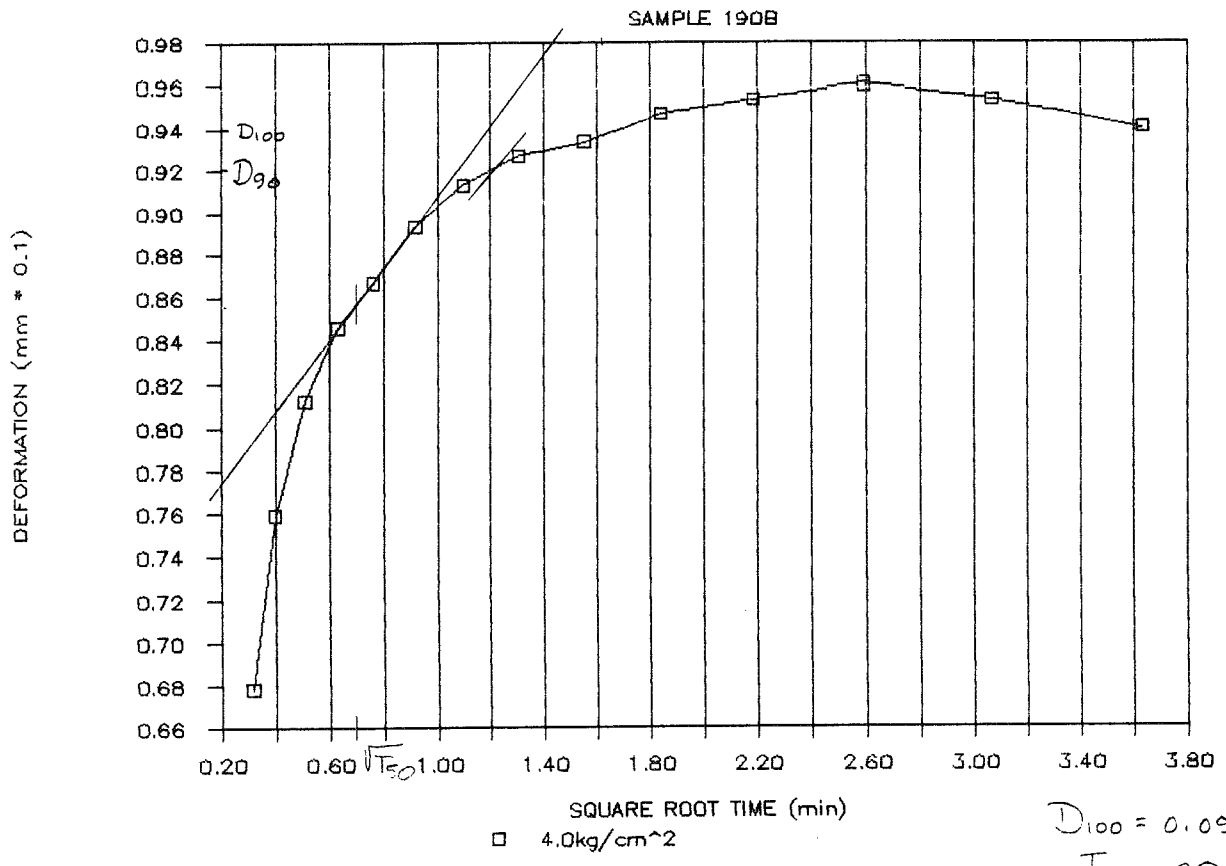
TIME vs DEFORMATION CURVE



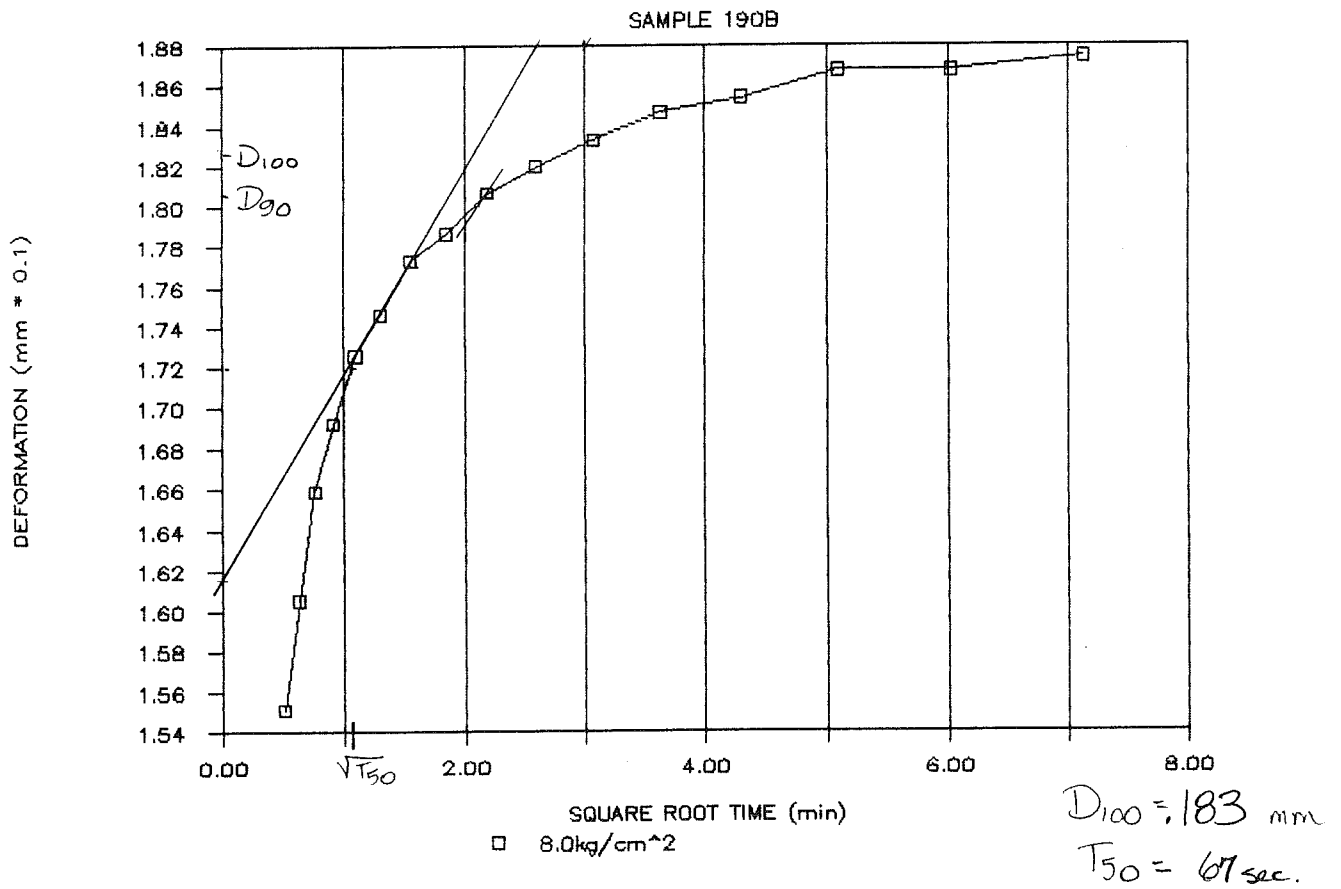
TIME vs DEFORMATION CURVE



TIME vs DEFORMATION CURVE

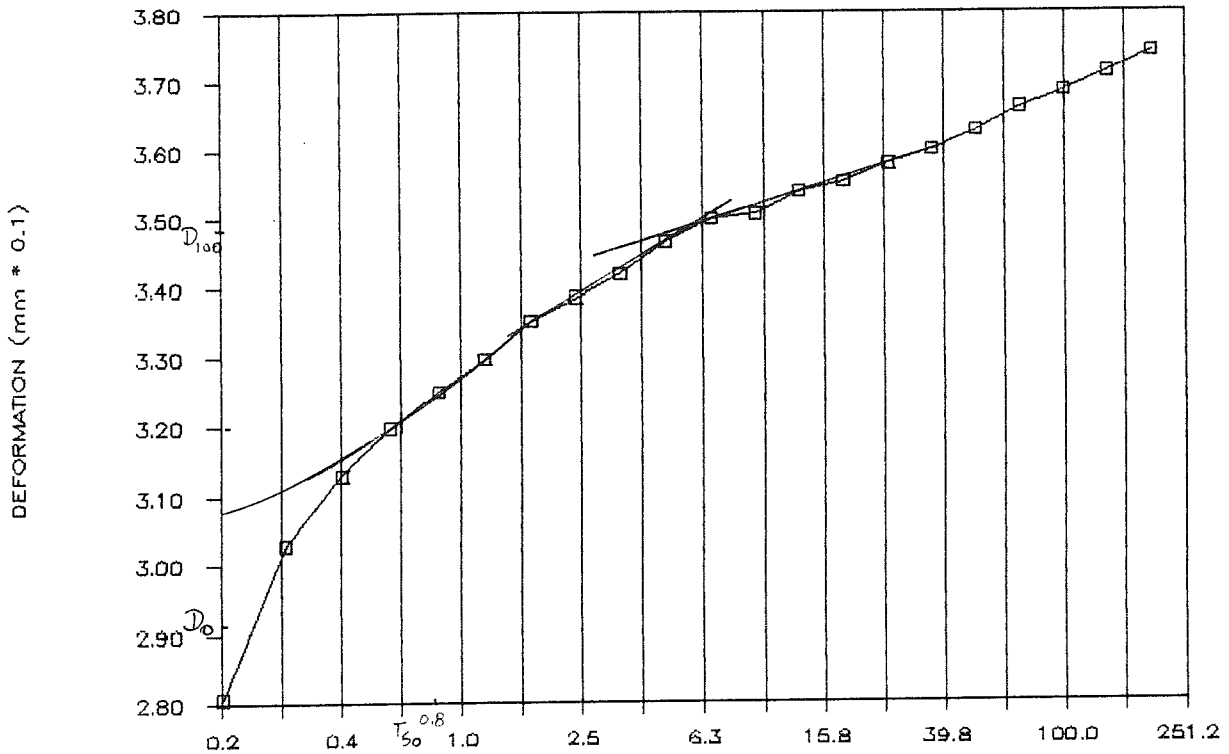


TIME vs DEFORMATION CURVE



TIME vs DEFORMATION CURVE

SAMPLE 190B

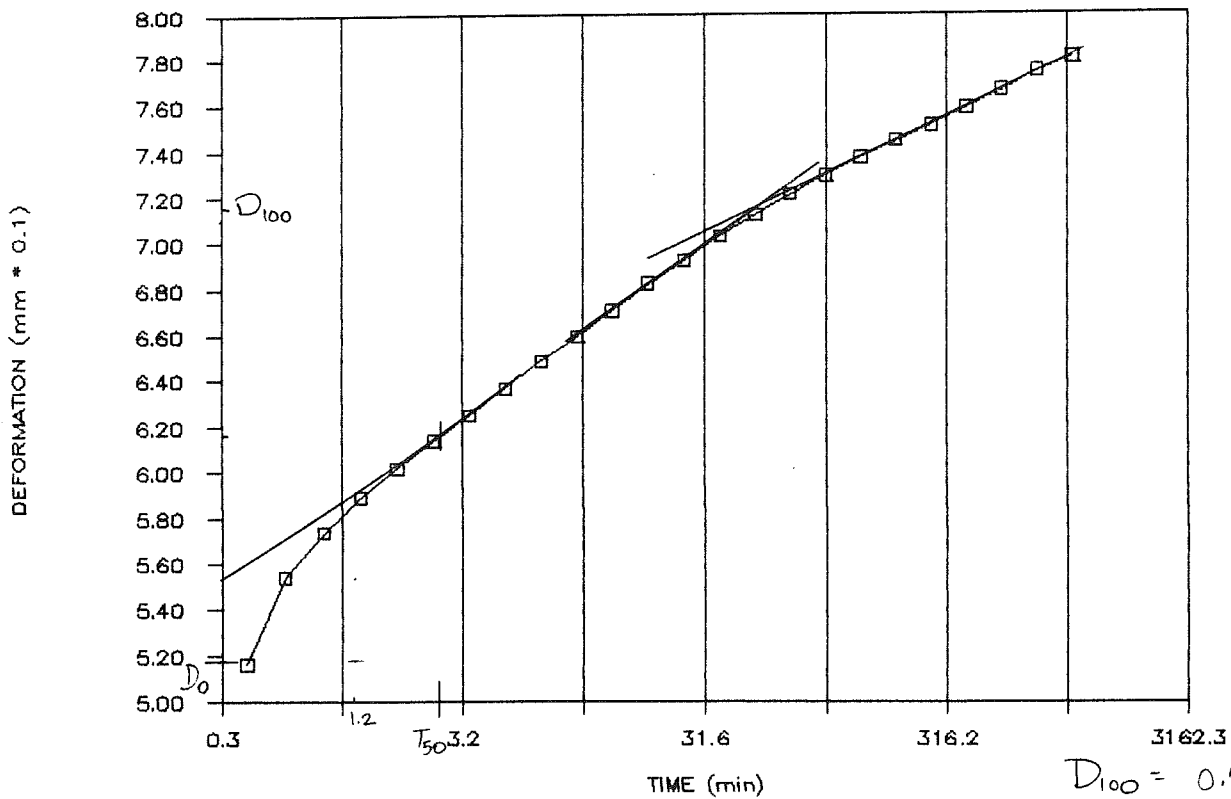


□ 15.84kg/cm²

$D_{100} = 0.348 \text{ mm}$
 $T_{50} = 38 \text{ s.}$

TIME vs DEFORMATION CURVE

SAMPLE 190B

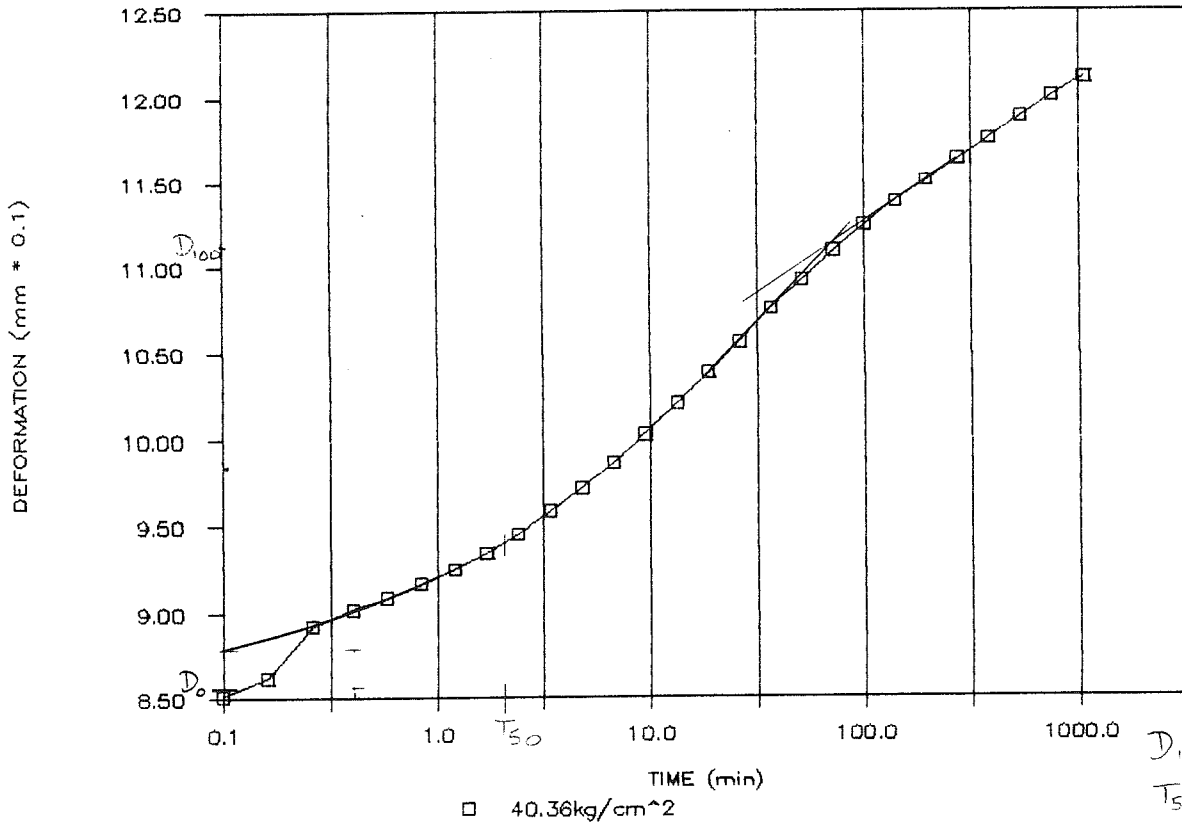


□ 29.28kg/cm²

$D_{100} = 0.716 \text{ mm}$
 $T_{50} = 152 \text{ s.}$

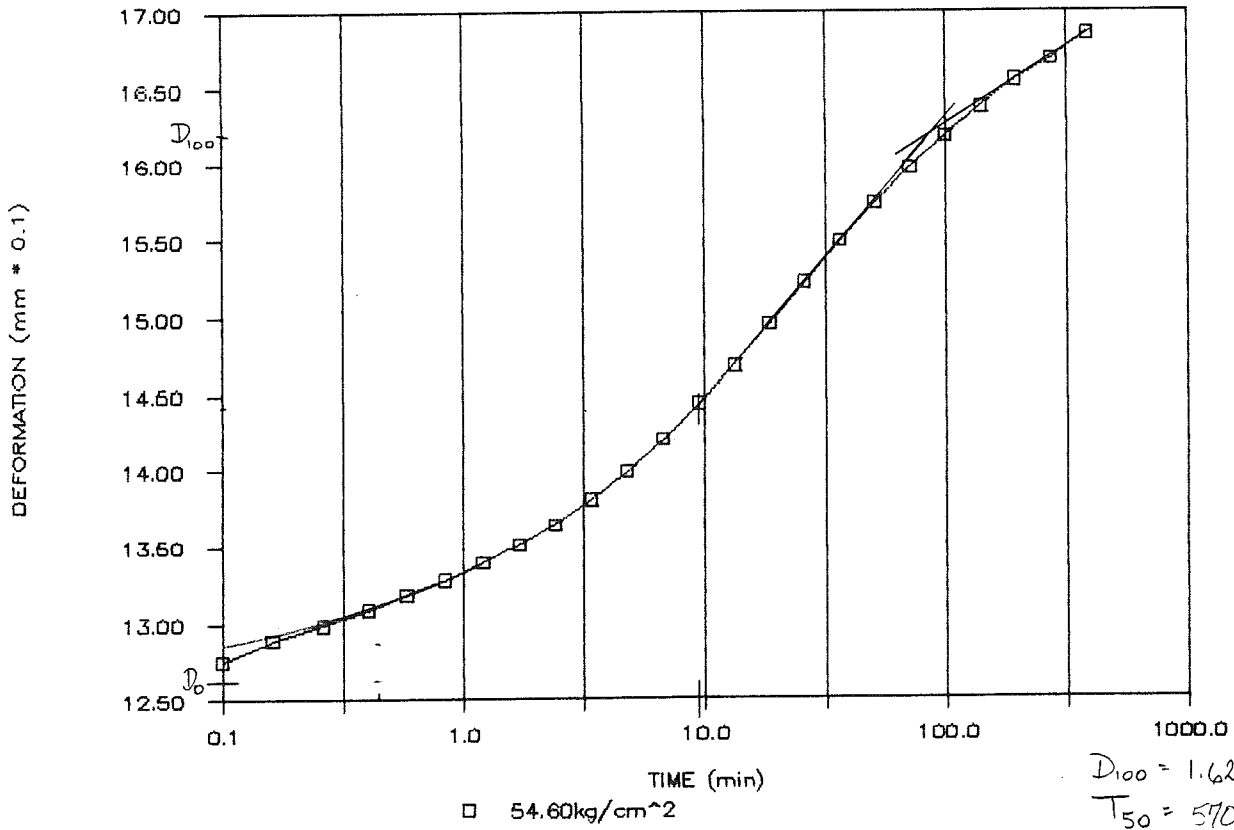
TIME vs DEFORMATION CURVE

SAMPLE 1908



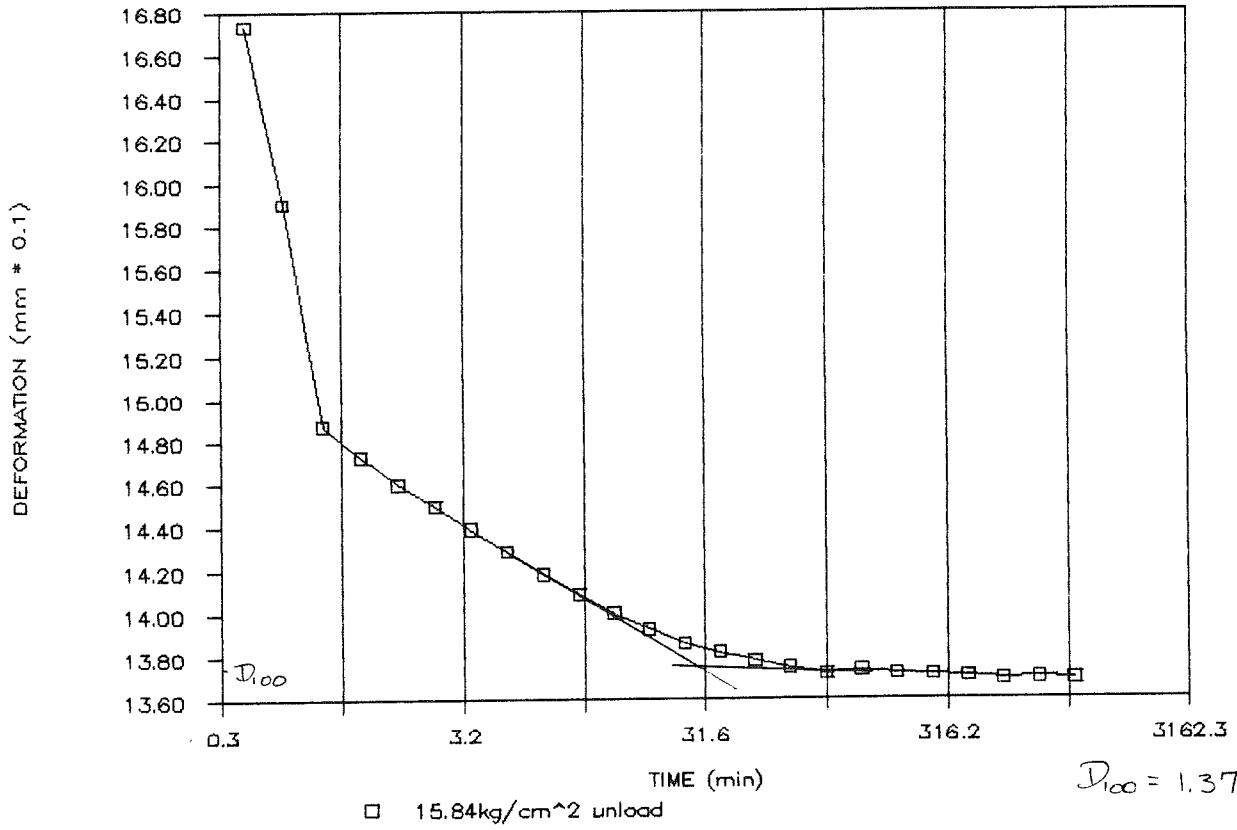
TIME vs DEFORMATION CURVE

SAMPLE 1908



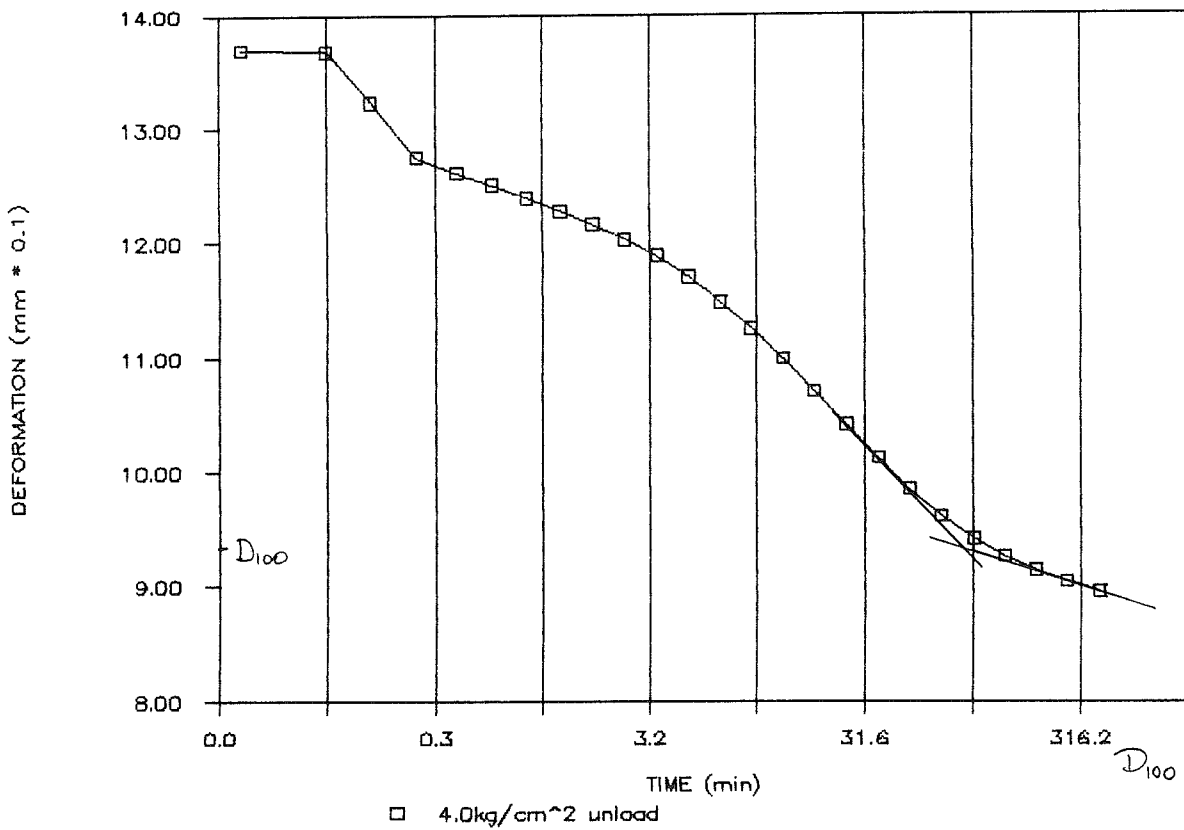
TIME vs DEFORMATION CURVE

SAMPLE 190B



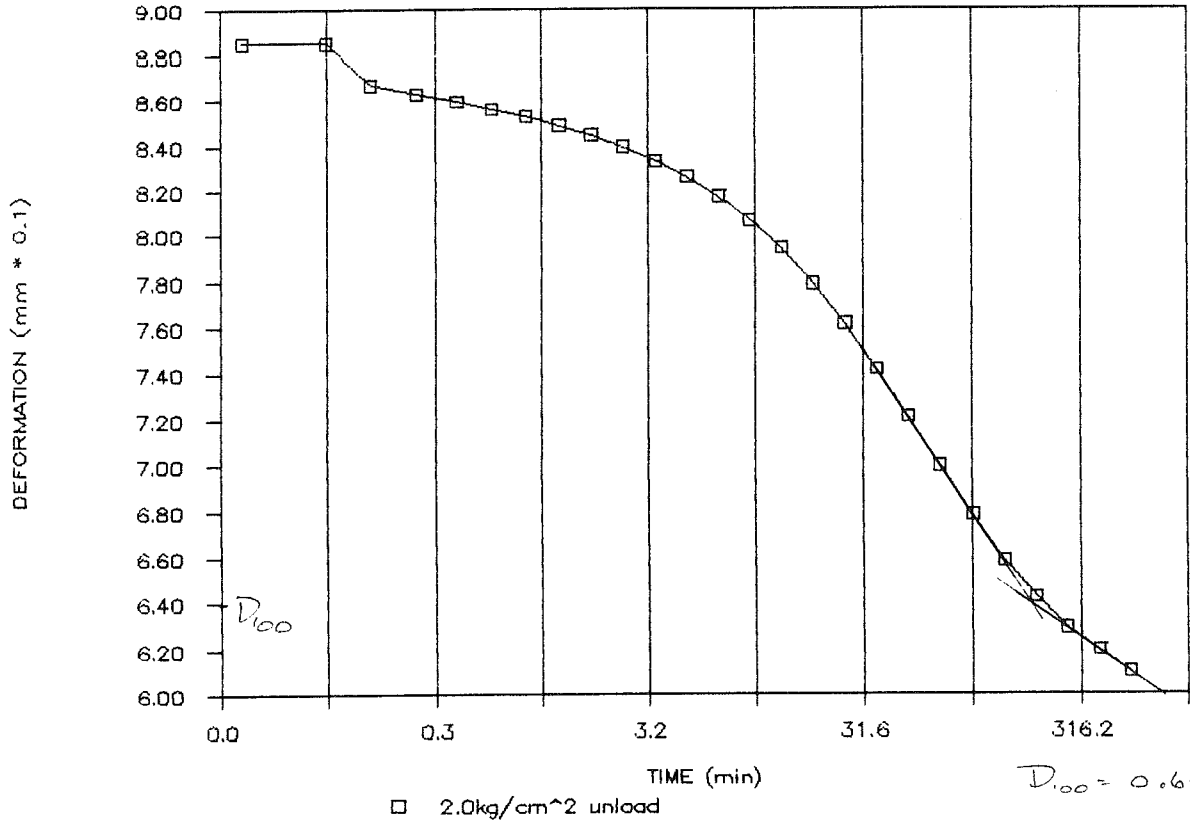
TIME vs DEFORMATION CURVE

SAMPLE 190B



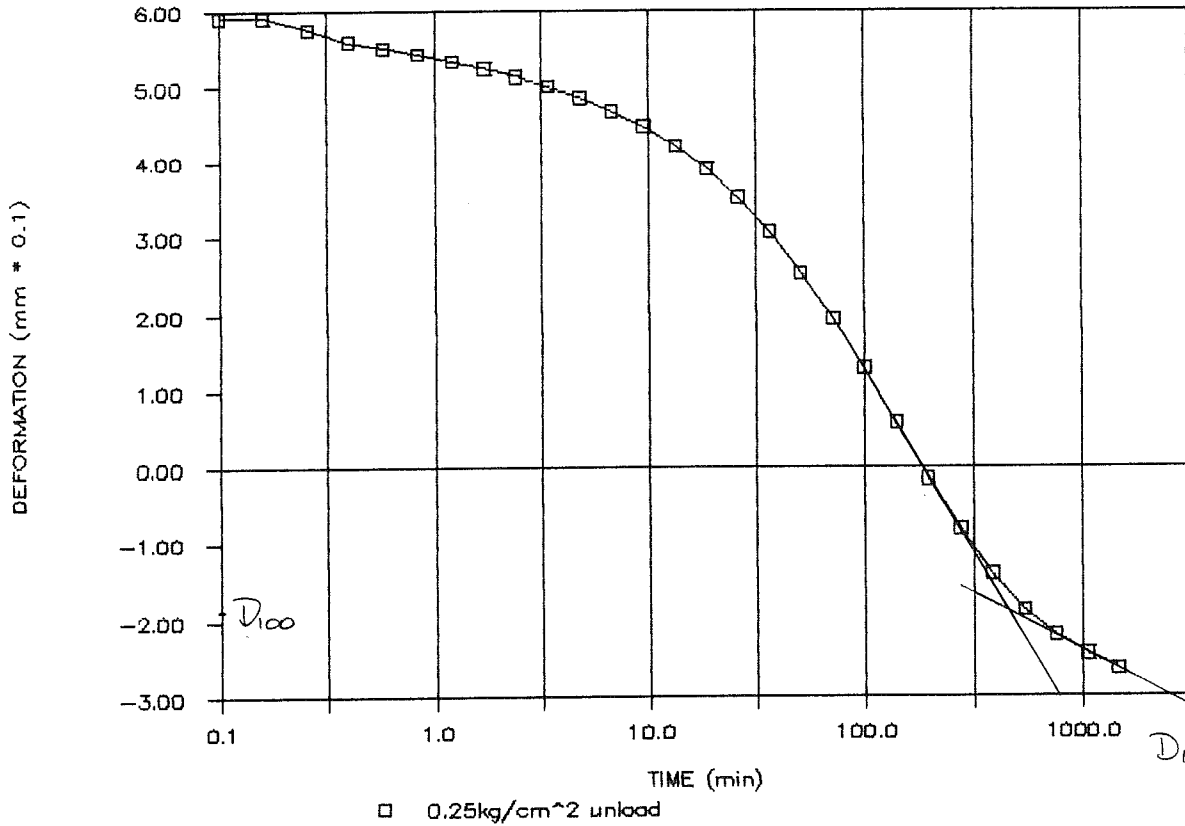
TIME vs DEFORMATION CURVE

SAMPLE 190B



TIME vs DEFORMATION CURVE

SAMPLE 190B



JACQUES WHITFORD and ASSOCIATES LTD.
 CUMULATIVE CONSOLIDATION DEFORMATION DATA

PROJECT No.: 5145
 CLIENT : ATLANTIC GEOSCIENCE CENTER

SAMPLE 190B
 START 04:04:32.46 ON 3-31-1989
 0.25kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5457	0.020	0.20
0.10	-0.5456	0.027	0.32
0.16	-0.5455	0.034	0.40
0.26	-0.5456	0.027	0.51
0.40	-0.5456	0.027	0.63
0.58	-0.5457	0.020	0.76

SAMPLE 190B
 START 04:07:56.51 ON 3-31-1989
 0.5kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5459	0.007	0.20
0.10	-0.5458	0.013	0.32
0.16	-0.5456	0.027	0.40
0.26	-0.5456	0.027	0.51
0.40	-0.5455	0.034	0.63
0.58	-0.5455	0.034	0.76
0.84	-0.5456	0.027	0.92

SAMPLE 190B
 START 04:10:52.93 ON 3-31-1989
 1.0kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5450	0.067	0.20
0.10	-0.5446	0.094	0.32
0.16	-0.5444	0.107	0.40
0.26	-0.5443	0.114	0.51
0.40	-0.5441	0.128	0.63
0.58	-0.5438	0.148	0.76
0.84	-0.5438	0.148	0.92
1.20	-0.5438	0.148	1.10
1.70	-0.5439	0.141	1.30

SAMPLE 190B
 START 04:14:52.90 ON 3-31-1989
 2.0kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5433	0.181	0.20
0.10	-0.5424	0.242	0.32
0.16	-0.5421	0.262	0.40
0.26	-0.5418	0.282	0.51
0.40	-0.5416	0.295	0.63
0.58	-0.5414	0.309	0.76
0.84	-0.5412	0.322	0.92
1.20	-0.5411	0.329	1.10
1.70	-0.5409	0.343	1.30
2.40	-0.5409	0.343	1.55

SAMPLE 190B
 START 04:20:33.60 ON 3-31-1989
 4.0kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5413	0.316	0.20
0.10	-0.5359	0.678	0.32
0.16	-0.5347	0.759	0.40
0.26	-0.5339	0.813	0.51
0.40	-0.5334	0.846	0.63
0.58	-0.5331	0.866	0.76
0.84	-0.5327	0.893	0.92
1.20	-0.5324	0.913	1.10
1.70	-0.5322	0.927	1.30
2.40	-0.5321	0.933	1.55
3.38	-0.5319	0.947	1.84
4.76	-0.5318	0.954	2.18
6.70	-0.5317	0.960	2.59
9.40	-0.5318	0.954	3.07
13.18	-0.5320	0.940	3.63
18.48	-0.5324	0.913	4.30

SAMPLE 190B
 START 04:43:26.08 ON 3-31-1989
 8.0kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5327	0.893	0.20
0.10	-0.5326	0.900	0.32
0.16	-0.5306	1.034	0.40
0.26	-0.5229	1.551	0.51
0.40	-0.5221	1.605	0.63
0.58	-0.5213	1.659	0.76
0.84	-0.5208	1.692	0.92
1.20	-0.5203	1.726	1.10
1.70	-0.5200	1.746	1.30
2.40	-0.5196	1.773	1.55
3.38	-0.5194	1.786	1.84
4.76	-0.5191	1.807	2.18
6.70	-0.5189	1.820	2.59
9.40	-0.5187	1.833	3.07
13.18	-0.5185	1.847	3.63
18.48	-0.5184	1.854	4.30
25.90	-0.5182	1.867	5.09
36.28	-0.5182	1.867	6.02
50.80	-0.5181	1.874	7.13

SAMPLE 190B
 START 05:44:12.80 ON 3-31-1989
 15.84kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5181	1.874	0.20
0.10	-0.5181	1.874	0.32
0.16	-0.5042	2.807	0.40
0.26	-0.5009	3.029	0.51
0.40	-0.4994	3.130	0.63
0.58	-0.4994	3.197	0.76
0.84	-0.4976	3.250	0.92
1.20	-0.4969	3.297	1.10
1.70	-0.4961	3.351	1.30
2.40	-0.4956	3.385	1.55
3.38	-0.4951	3.418	1.84
4.76	-0.4944	3.465	2.18
6.70	-0.4939	3.499	2.59
9.40	-0.4938	3.506	3.07
13.18	-0.4933	3.539	3.63
18.48	-0.4931	3.553	4.30
25.90	-0.4927	3.579	5.09
36.28	-0.4924	3.600	6.02
50.80	-0.4920	3.626	7.13
71.12	-0.4915	3.660	8.43
99.56	-0.4911	3.687	9.98
139.38	-0.4907	3.714	11.81
195.10	-0.4903	3.741	13.97
273.08	-0.4899	3.768	16.53
382.23	-0.4895	3.794	19.55
534.99	-0.4891	3.821	23.13
748.79	-0.4888	3.841	27.36
1048.04	-0.4886	3.855	32.37

SAMPLE 190B
 START 01:19:53.45 ON 3-31-1989
 29.28kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.4884	3.868	0.20
0.10	-0.4881	3.888	0.32
0.16	-0.4884	3.868	0.40
0.26	-0.4884	3.868	0.51
0.40	-0.4691	5.164	0.63
0.58	-0.4635	5.540	0.76
0.84	-0.4606	5.735	0.92
1.20	-0.4583	5.890	1.10
1.70	-0.4564	6.017	1.30
2.40	-0.4546	6.138	1.55
3.38	-0.4529	6.252	1.84
4.76	-0.4512	6.366	2.18
6.70	-0.4494	6.487	2.59
9.40	-0.4478	6.595	3.07
13.18	-0.4461	6.709	3.63
18.48	-0.4444	6.823	4.30
25.90	-0.4429	6.924	5.09
36.28	-0.4413	7.031	6.02
50.80	-0.4399	7.125	7.13
71.12	-0.4386	7.213	8.43
99.56	-0.4374	7.293	9.98
139.38	-0.4362	7.374	11.81
195.10	-0.4351	7.448	13.97
273.08	-0.4341	7.515	16.53
382.23	-0.4330	7.589	19.55
534.99	-0.4319	7.663	23.13

SAMPLE 190B
 START 01:45:07.31 ON 3-31-1989
 40.36kg/cm²
 Machine #2

TIME MIN	M #2 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.4285	7.891	0.20
0.10	-0.4192	8.516	0.32
0.16	-0.4176	8.623	0.40
0.26	-0.4131	8.925	0.51
0.40	-0.4117	9.019	0.63
0.58	-0.4107	9.086	0.76
0.84	-0.4094	9.174	0.92
1.20	-0.4082	9.254	1.10
1.70	-0.4068	9.348	1.30
2.40	-0.4052	9.456	1.55
3.38	-0.4033	9.583	1.84
4.76	-0.4013	9.718	2.18
6.70	-0.3991	9.865	2.59
9.40	-0.3967	10.027	3.07
13.18	-0.3941	10.201	3.63
18.48	-0.3914	10.382	4.30
25.90	-0.3887	10.564	5.09
36.28	-0.3859	10.752	6.02
50.80	-0.3834	10.920	7.13
71.12	-0.3809	11.088	8.43
99.56	-0.3787	11.235	9.98

SAMPLE 190B
 START 20:40:03.17 ON 3-31-1989
 54.60kg/cm²

Machine #2	M #2	DEFORM	SQ.ROOT
TIME	VOLTS	0.1 MM	TIME MIN
0.04	-0.3636	12.249	0.20
0.10	-0.3561	12.753	0.32
0.16	-0.3541	12.887	0.40
0.26	-0.3526	12.988	0.51
0.40	-0.3511	13.089	0.63
0.58	-0.3496	13.190	0.76
0.84	-0.3482	13.284	0.92
1.20	-0.3466	13.391	1.10
1.70	-0.3448	13.512	1.30
2.40	-0.3428	13.646	1.55
3.38	-0.3404	13.807	1.84
4.76	-0.3377	13.989	2.18
6.70	-0.3346	14.197	2.59
9.40	-0.3311	14.432	3.07
13.18	-0.3274	14.681	3.63
18.48	-0.3234	14.949	4.30
25.90	-0.3194	15.218	5.09
36.28	-0.3154	15.486	6.02
50.80	-0.3117	15.735	7.13
71.12	-0.3083	15.963	8.43
99.56	-0.3052	16.171	9.98
139.38	-0.3022	16.373	11.81
195.10	-0.2996	16.547	13.97
273.08	-0.2976	16.682	16.53
382.23	-0.2952	16.843	19.55

SAMPLE 190B
START 05:27:16.02 ON 3-31-1989
2.0kg/cm² unload

Machine #2	M #2	DEFORM	SQ.ROOT
TIME	VOLTS	0.1 MM	TIME MIN
0.04	-0.4142	8.851	0.20
0.10	-0.4142	8.851	0.32
0.16	-0.4169	8.670	0.40
0.26	-0.4175	8.630	0.51
0.40	-0.4180	8.596	0.63
0.58	-0.4185	8.563	0.76
0.84	-0.4190	8.529	0.92
1.20	-0.4196	8.489	1.10
1.70	-0.4202	8.448	1.30
2.40	-0.4210	8.395	1.55
3.38	-0.4219	8.334	1.84
4.76	-0.4230	8.260	2.18
6.70	-0.4243	8.173	2.59
9.40	-0.4259	8.066	3.07
13.18	-0.4277	7.945	3.63
18.48	-0.4300	7.790	4.30
25.90	-0.4326	7.616	5.09
36.28	-0.4355	7.421	6.02
50.80	-0.4386	7.213	7.13
71.12	-0.4418	6.998	8.43
99.56	-0.4450	6.783	9.98
139.38	-0.4479	6.588	11.81
195.10	-0.4503	6.427	13.97
273.08	-0.4523	6.293	16.53
382.23	-0.4537	6.199	19.55
534.99	-0.4551	6.105	23.13
748.79	-0.4563	6.024	27.36

748.79 -0.4307 7.743
1048.04 -0.4298 7.804
SAMPLE 190B
START 03:11:08.22 ON 3-31-1989
15.84kg/cm² unload

Machine #2	M #2	DEFORM	SQ.ROOT
TIME	VOLTS	0.1 MM	TIME MIN
0.04	-0.2950	16.856	0.20
0.10	-0.2951	16.850	0.32
0.16	-0.2950	16.856	0.40
0.26	-0.2948	16.870	0.51
0.40	-0.2969	16.729	0.63
0.58	-0.3092	15.903	0.76
0.84	-0.3246	14.869	0.92
1.20	-0.3267	14.728	1.10
1.70	-0.3286	14.600	1.30
2.40	-0.3301	14.499	1.55
3.38	-0.3317	14.392	1.84
4.76	-0.3332	14.291	2.18
6.70	-0.3348	14.184	2.59
9.40	-0.3362	14.090	3.07
13.18	-0.3375	14.002	3.63
18.48	-0.3386	13.928	4.30
25.90	-0.3396	13.861	5.09
36.28	-0.3402	13.821	6.02
50.80	-0.3408	13.781	7.13
71.12	-0.3413	13.747	8.43
99.56	-0.3417	13.720	9.98
139.38	-0.3415	13.734	11.81
195.10	-0.3417	13.720	13.97
273.08	-0.3418	13.713	16.53
382.23	-0.3419	13.707	19.55
534.99	-0.3421	13.693	23.13
748.79	-0.3420	13.700	27.36
1048.04	-0.3421	13.693	32.37

SAMPLE 190B
START 20:41:27.04 ON 3-31-1989
0.25kg/cm² unload

Machine #2	M #2	DEFORM	SQ.ROOT
TIME	VOLTS	0.1 MM	TIME MIN
0.04	-0.4581	5.903	0.20
0.10	-0.4581	5.903	0.32
0.16	-0.4581	5.903	0.40
0.26	-0.4605	5.742	0.51
0.40	-0.4629	5.581	0.63
0.58	-0.4641	5.500	0.76
0.84	-0.4653	5.420	0.92
1.20	-0.4666	5.332	1.10
1.70	-0.4680	5.238	1.30
2.40	-0.4696	5.131	1.55
3.38	-0.4715	5.003	1.84
4.76	-0.4737	4.855	2.18
6.70	-0.4764	4.674	2.59
9.40	-0.4796	4.459	3.07
13.18	-0.4834	4.204	3.63
18.48	-0.4880	3.895	4.30
25.90	-0.4936	3.519	5.09
36.28	-0.5002	3.076	6.02
50.80	-0.5082	2.539	7.13
71.12	-0.5171	1.941	8.43
99.56	-0.5269	1.283	9.98
139.38	-0.5373	0.584	11.81
195.10	-0.5481	-0.141	13.97
273.08	-0.5580	-0.806	16.53
382.23	-0.5669	-1.404	19.55
534.99	-0.5738	-1.867	23.13
748.79	-0.5789	-2.209	27.36
1048.04	-0.5824	-2.445	32.37
1466.84	-0.5852	-2.633	38.30

139.38 -0.3766 11.376 11.81
195.10 -0.3747 11.504 13.97
273.08 -0.3728 11.632 16.53
382.23 -0.3710 11.752 19.55
534.99 -0.3691 11.880 23.13
748.79 -0.3672 12.008 27.36
1048.04 -0.3656 12.115 32.37

SAMPLE 190B
START 21:26:13.61 ON 3-31-1989
4.0kg/cm² unload

Machine #2	M #2	DEFORM	SQ.ROOT
TIME	VOLTS	0.1 MM	TIME MIN
0.04	-0.3421	13.693	0.20
0.10	-0.3423	13.680	0.32
0.16	-0.3489	13.237	0.40
0.26	-0.3561	12.753	0.51
0.40	-0.3582	12.612	0.63
0.58	-0.3597	12.511	0.76
0.84	-0.3614	12.397	0.92
1.20	-0.3631	12.283	1.10
1.70	-0.3649	12.162	1.30
2.40	-0.3669	12.028	1.55
3.38	-0.3691	11.880	1.84
4.76	-0.3718	11.699	2.18
6.70	-0.3749	11.491	2.59
9.40	-0.3784	11.256	3.07
13.18	-0.3823	10.994	3.63
18.48	-0.3866	10.705	4.30
25.90	-0.3909	10.416	5.09
36.28	-0.3953	10.121	6.02
50.80	-0.3994	9.845	7.13
71.12	-0.4029	9.610	8.43
99.56	-0.4059	9.409	9.98
139.38	-0.4083	9.248	11.81
195.10	-0.4101	9.127	13.97
273.08	-0.4116	9.026	16.53
382.23	-0.4128	8.945	19.55

JACQUES WHITFORD & ASSOCIATES

CONSOLIDATION TEST DATA

PROJECT:5145 BOREHOLE:'85 Sable Is. SAMPLE:197B DEPTH: 126.1 m

GRAPH LEGEND:Sa. 197B

Diameter cm	:	4.988	Initial wet wt. g	:	76.79
Height cm	:	1.993	Final wet wt. g	:	79.24
Area cm ²	:	19.54	Dry sample wt. g	:	59.79
Volume cm ³	:	38.94	(including salt)		
Salinity	:	0.028	Wt. of salt g	:	0.49
Wt. of fluid g	:	17.49	Wt. of dry soil g	:	59.30
Wt. of water g	:	17.00	Vol. of soil solids cm ³	:	22.21
Init. fluid cont. %	:	29.5	Vol. of voids cm ³	:	16.74
Init. water cont. %	:	28.7	Final water cont. %	:	32.8
Wet density g/cm ³	:	1.972	Specific gravity of soil	:	2.670
Dry density g/cm ³	:	1.523	Computed ht. of solids cm	:	1.137
Init. void ratio	:	0.753	Computed ht. of voids cm	:	0.856
Time factor	:	0.197	Initial saturation %	:	101.6

LOAD	CUM DEF	CORR	VOID	AVG HT	TIME	Cv	D	K
kPa	mm	mm	RATIO	cm	s	cm ² /s	kPa	cm/s
25	0.014	0.004	0.753	1.993				
50	0.011	0.010	0.753	1.993				
98	0.024	0.020	0.753	1.993	10	1.96E-02		
196	0.073	0.032	0.750	1.991	28	6.97E-03	5.28E+04	1.3E-10
392	0.190	0.046	0.741	1.984	41	4.73E-03	3.80E+04	1.2E-10
785	0.491	0.068	0.716	1.966	208	9.15E-04	2.80E+04	3.2E-11
1553	0.878	0.096	0.685	1.934	160	1.15E-03	4.27E+04	2.6E-11
2871	1.644	0.136	0.621	1.881	398	4.38E-04	3.62E+04	1.2E-11
3957	2.325	0.162	0.563	1.811	478	3.38E-04	3.30E+04	1.0E-11
5357	2.978	0.196	0.509	1.747	1023	1.47E-04	4.51E+04	3.2E-12
5357	3.079	0.196	0.500					
1553	2.542	0.096	0.538					
392	1.754	0.046	0.603					
196	1.288	0.032	0.643					
25	0.067	0.004	0.748					



CONSOLIDATION TEST

Project AGC Job No. 5145
 Location SABLE IS. BORING Boring No. 85 Sample No. 197B
 Description of Soil CLAY Depth of Sample _____
 Tested By JEC Date of Testing start Mar. 31/89
 Consolidometer Type _____ Ring No. 5-5
 Ring Dimensions: Diam. 4.998 Area, A _____ Ht. 1.993
 Initial Ht. of Soil, H_i _____ Initial Vol. of Soil, V_i _____

Specific Gravity of Soil, G_s = _____
 Wt. of Ring + Specimen at beginning of test = 146.96
 Wt. of Ring = 70.17
 Wt. of Wet Soil, W_t = _____
 Computed Dry Weight of Soil, W'_s = _____
 Oven Dry Wt. of Soil, W_s = _____

Water Content Determination		<u>308</u>
Wt. of Can + Wet Soil	=	<u>84.83</u>
Wt. of Can + Dry Soil	=	<u>70.67</u>
Wt. of Can	=	<u>20.86</u>
Wt. of Water	=	_____
Wt. of Dry Soil	=	_____
Initial Water Content, w_i	=	<u>28.43%</u>

Computed Ht. of Solids^b, $H_o = W'_s / G_s A$ = _____
 Initial Ht. of Voids, $H_v = H_i - H_o$ = _____
 Initial Degree of Saturation, $S_i = (W_t - W_s) / (H_i - H_o) A$ = _____
 Initial Void Ratio $e_o = H_v / H_o$ = _____

FINAL TEST DATA (obtained at end of load testing)

Initial Dial Reading _____
 Final Dial Reading _____
 Change in Sample Ht. _____
 Final Ht. of Voids, H_{vf} _____
 Final Void Ratio, $e_f = H_{vf} / H_o$ _____

Final Water Content Determination		<u>KNS = 18.95g</u>
Final Wet Wt. + Ring ^c	+ 2 filters ^{small} *	<u>168.76g</u>
Final Dry Wt. + Ring		<u>148.7</u>
Oven Dry Wt. of Soil, W_s		_____
Final Water Content, w_f		_____
Final Degree of Sat. S		_____ %

incl 1 large filter paper
 * avg wt of 1 filter = 0.20g

^a Obtained from Final Water Content Determination.
^b If it appears that any soil is lost from sample, use W'_s
^c Be sure to include any soil extruded from ring which is in consolidometer.

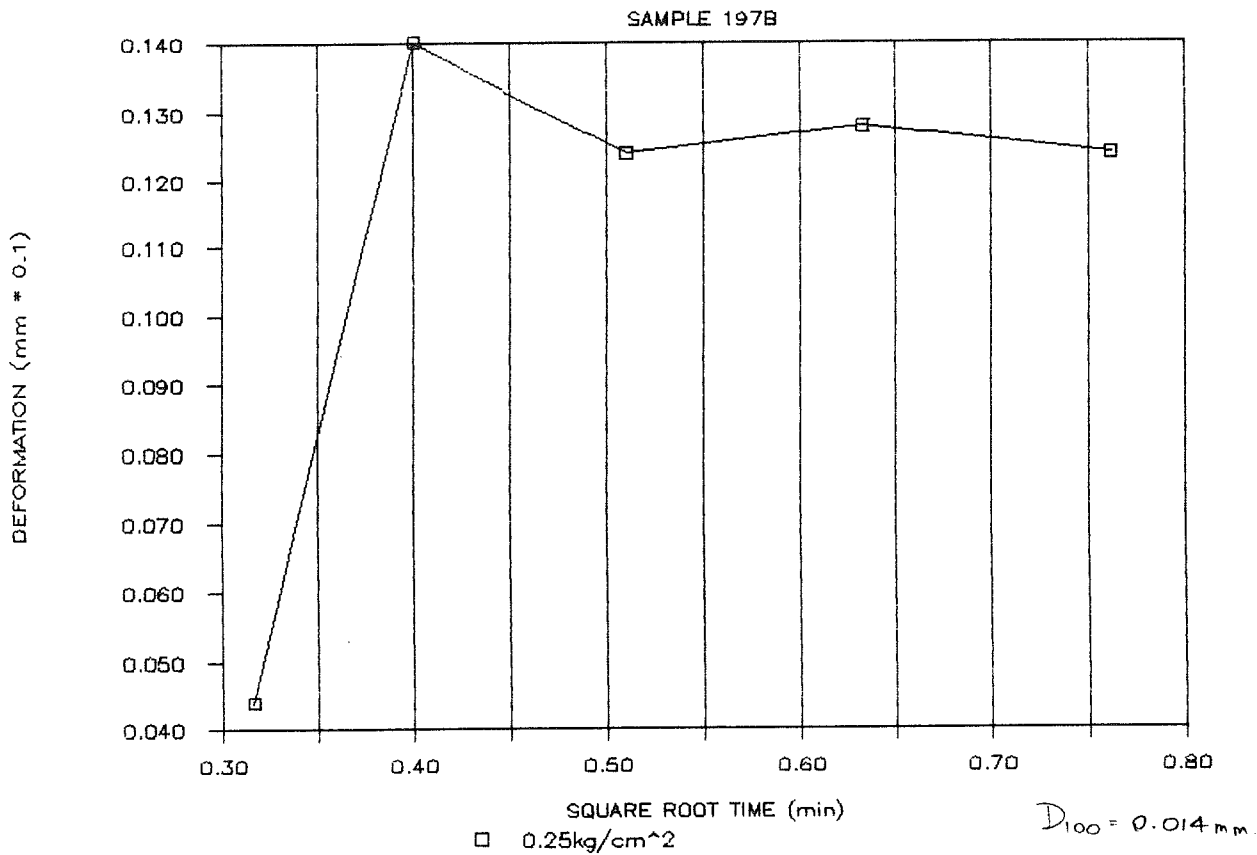


CONSOLIDATION TEST

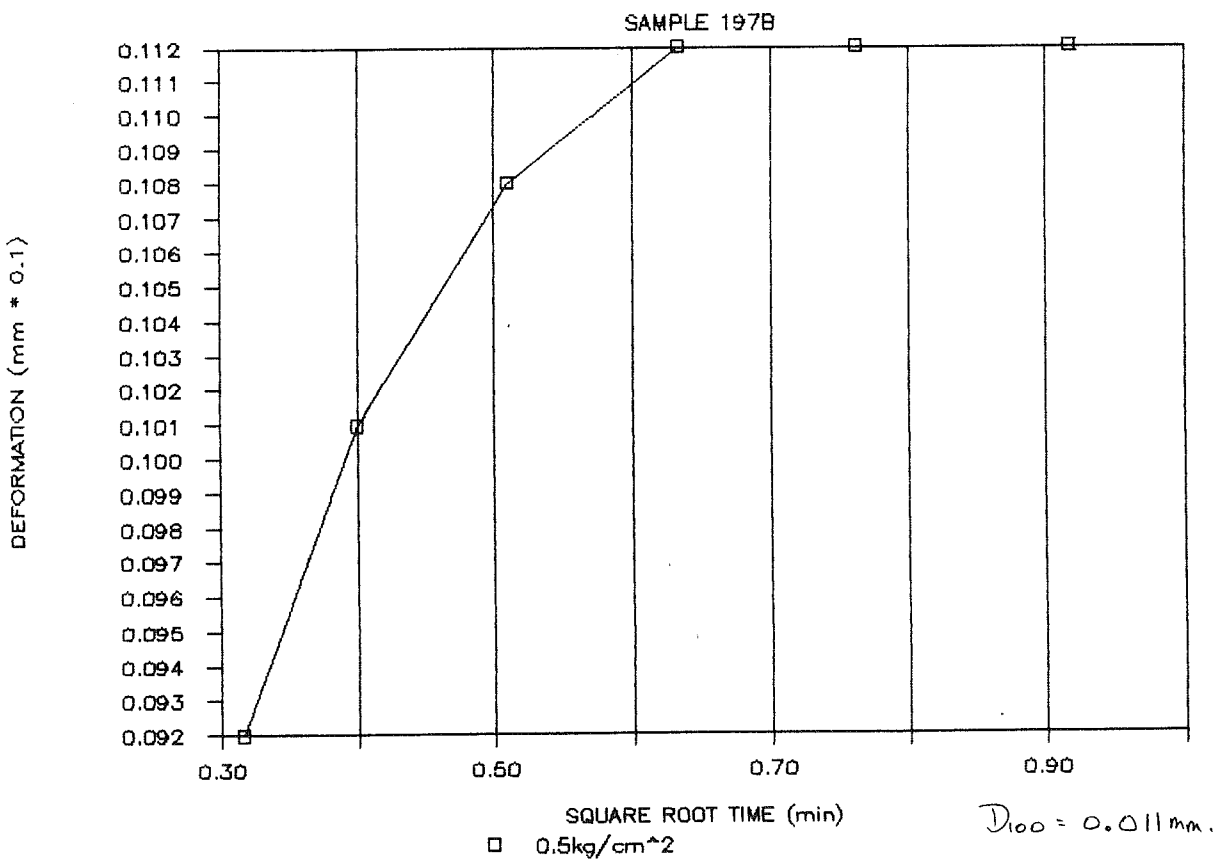
PAGE No. _____
 JOB No. _____
 BOREHOLE No. _____
 SAMPLE No. _____
 MACHINE No. 3

LOAD	DATE	TIME	Δt	\sqrt{t}	DIAL	LVDT	LOAD	DATE	TIME	Δt	\sqrt{t}	DIAL
0.25	1989 03-31	14:52			0.0	-0.5808	2.0	04-04	16:17			781
0.50	"	14:56			"	"						
1.0	"	14:59			"	"						
2.0	"	15:02			"	"						
4.0	"	15:08			12							
8.0	"	15:31			-							
15.84 16.0	"	16:32			234							
	04-01	11:56			442.4							
29.28	04-01	12:08			442.4							
	04-02	12:21			875							
40.45	04-02	12:35*			875	* Note: During loading of weights, several fell off hanger, so data to 1 min shows rebound.						
	04-03	07:20			1181							
54.58	04-03	07:29			1181							
	04-03	13:55			1470							
15.1	04-03	14:00 08:13			1470							
	04-04	08:13			1192							
4.0	04-04	08:15			1192							
	"	16:10			781							

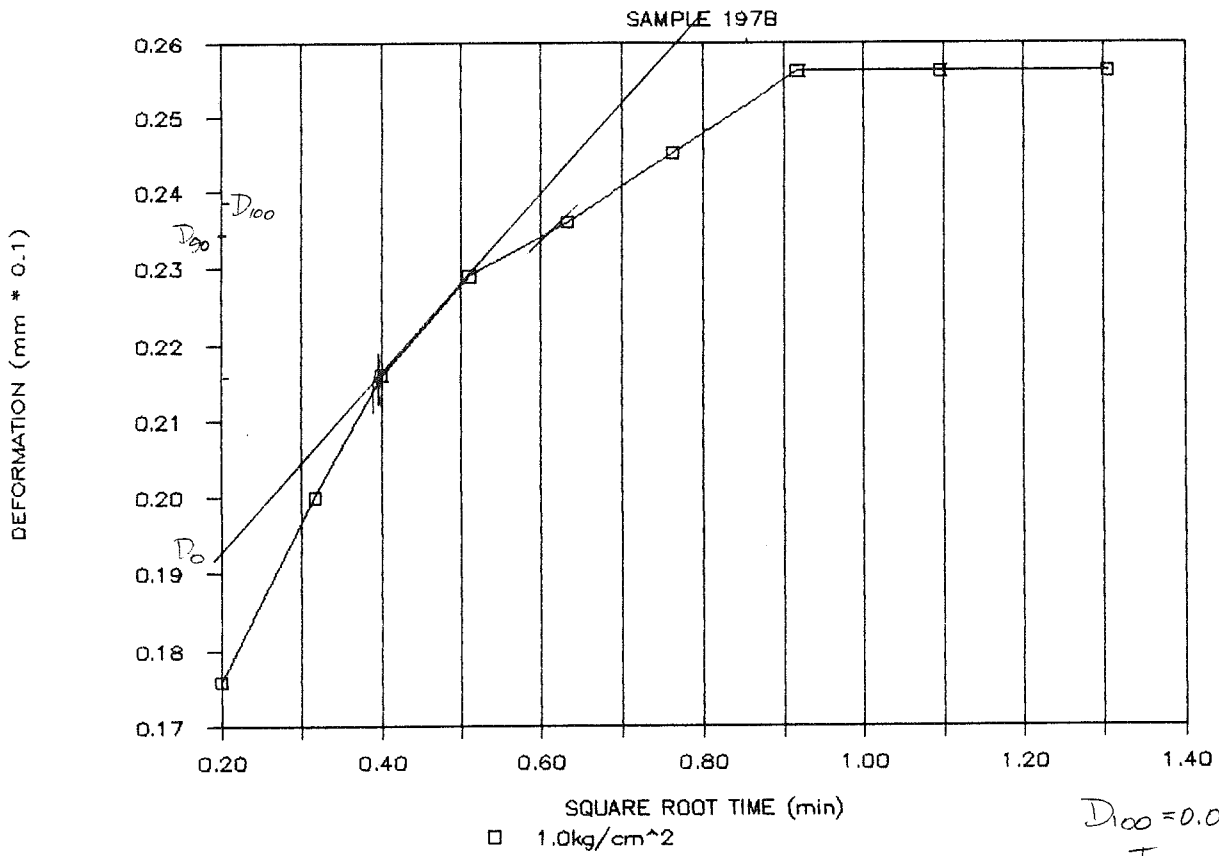
TIME vs DEFORMATION CURVE



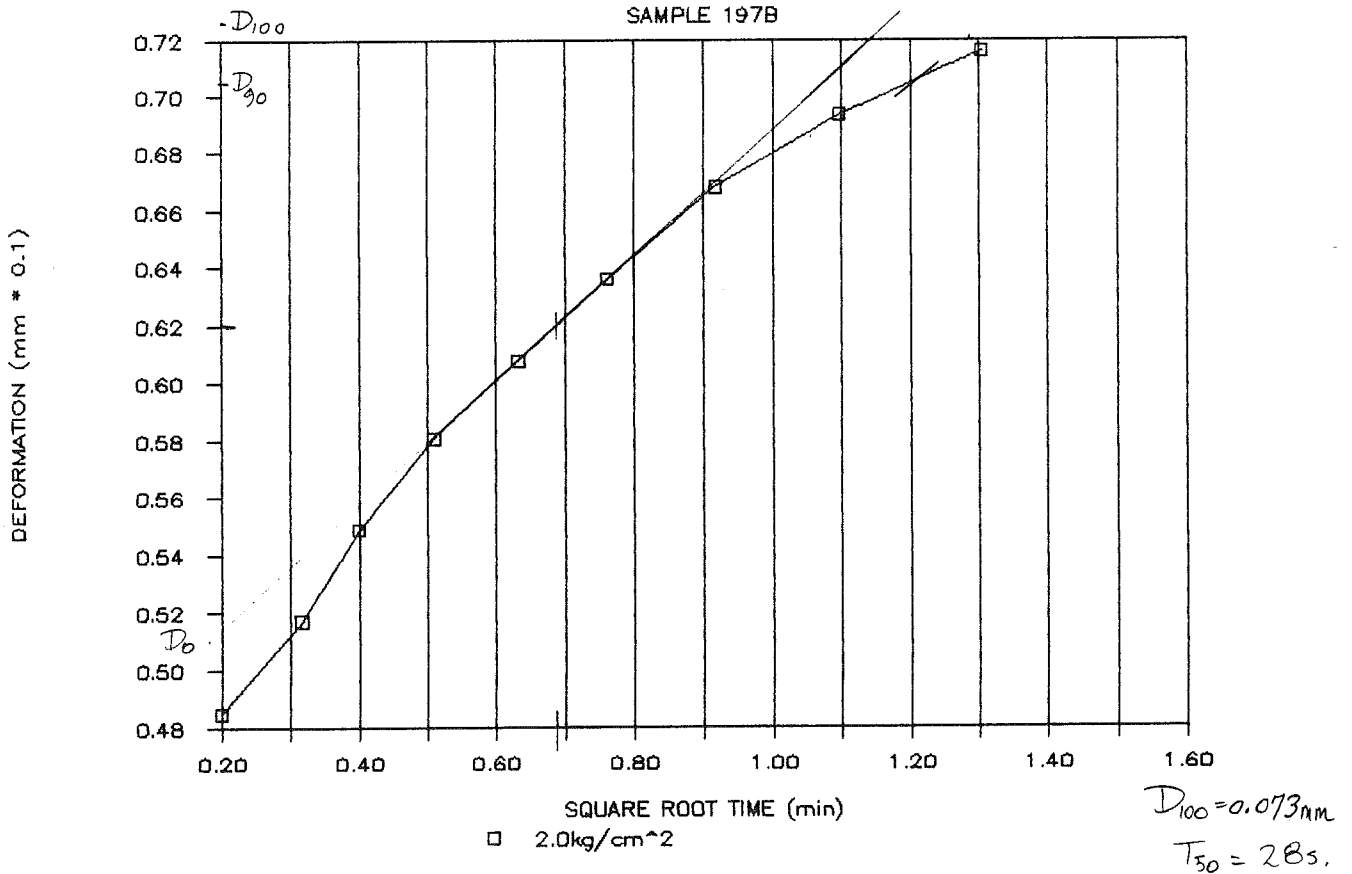
TIME vs DEFORMATION CURVE



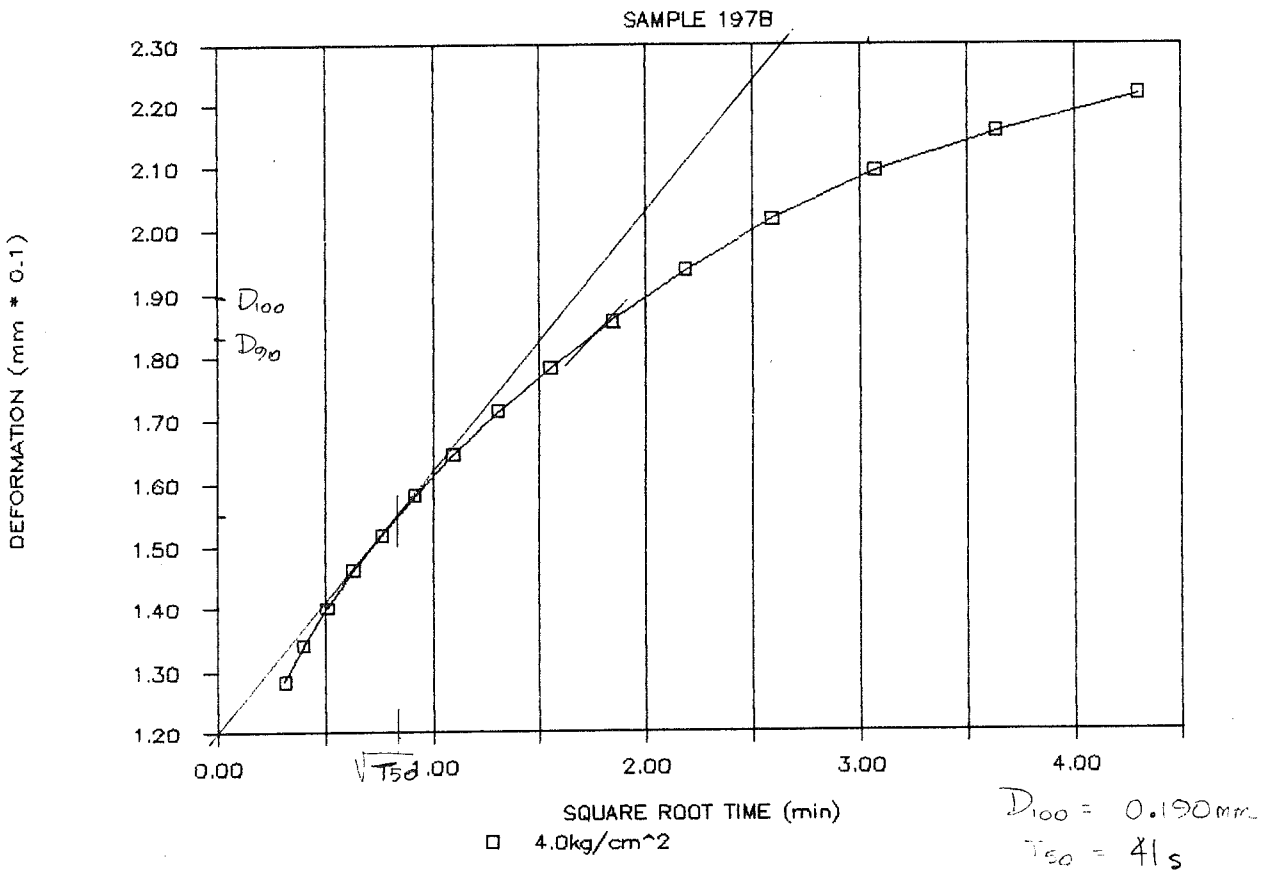
TIME vs DEFORMATION CURVE



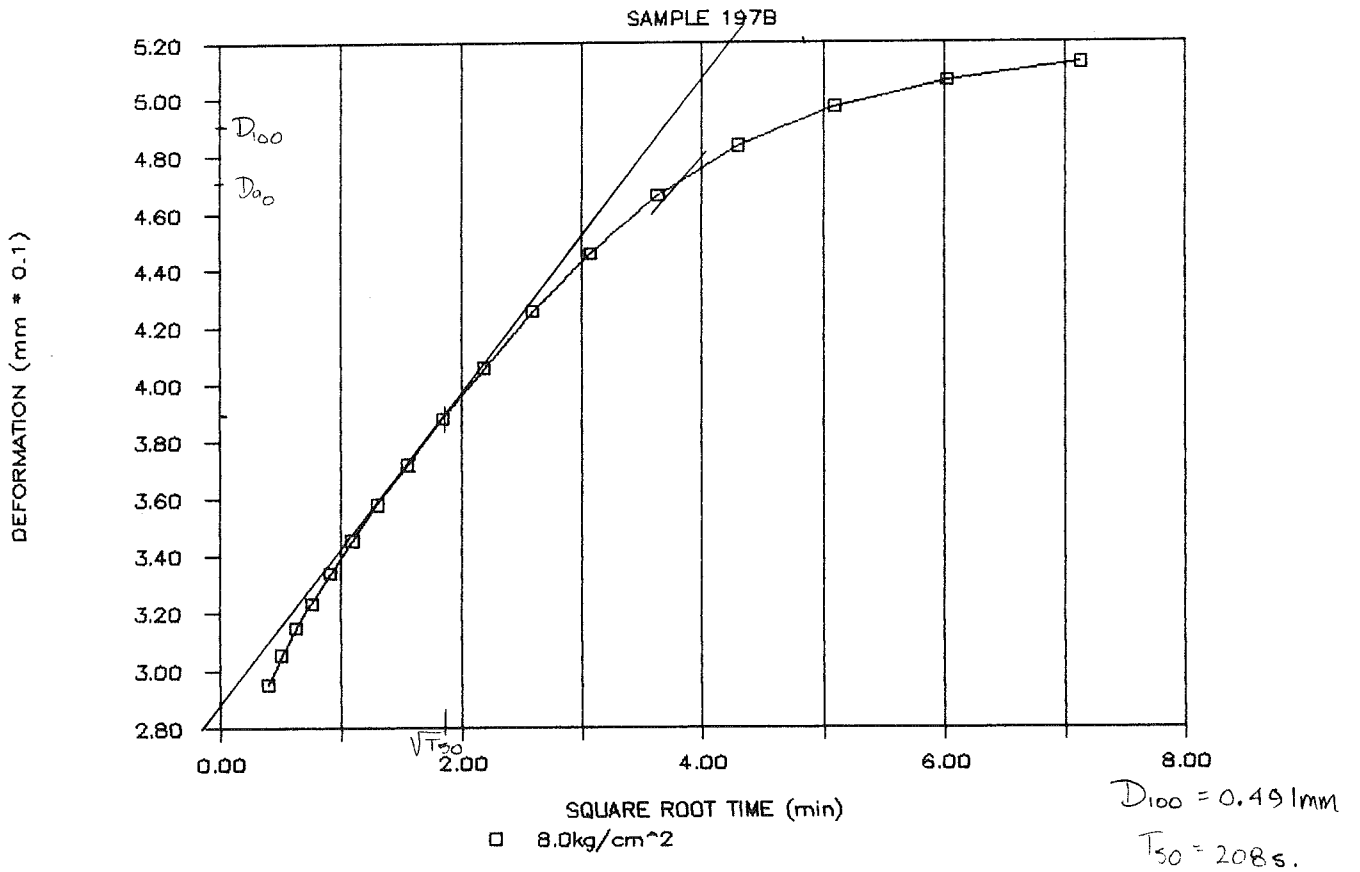
TIME vs DEFORMATION CURVE



TIME vs DEFORMATION CURVE

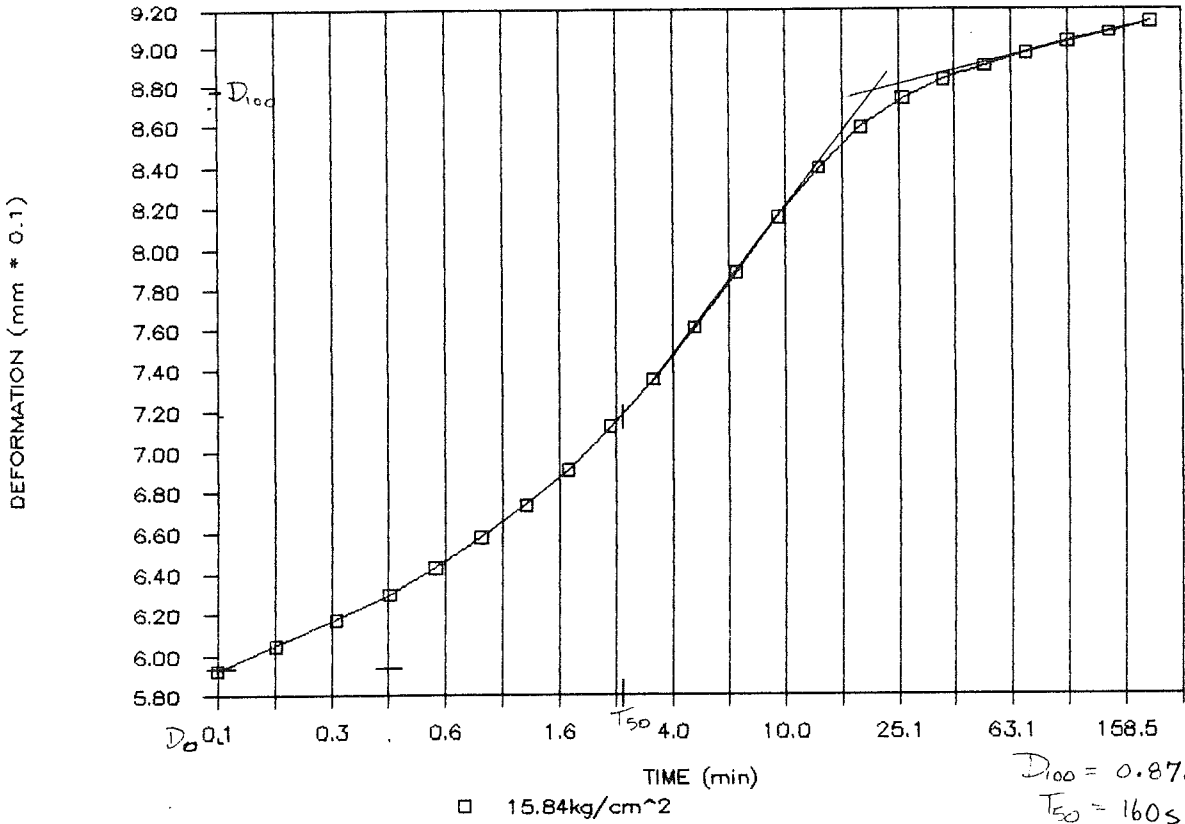


TIME vs DEFORMATION CURVE



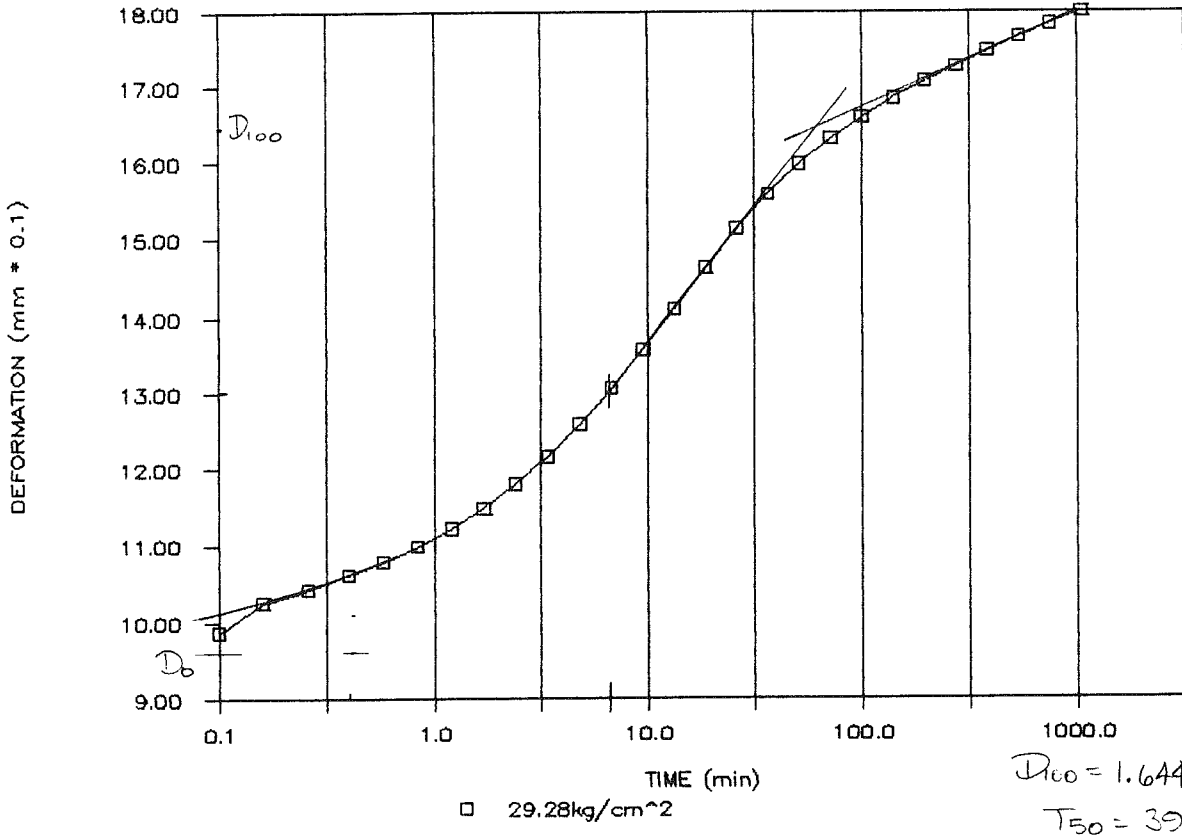
TIME vs DEFORMATION CURVE

SAMPLE 197B



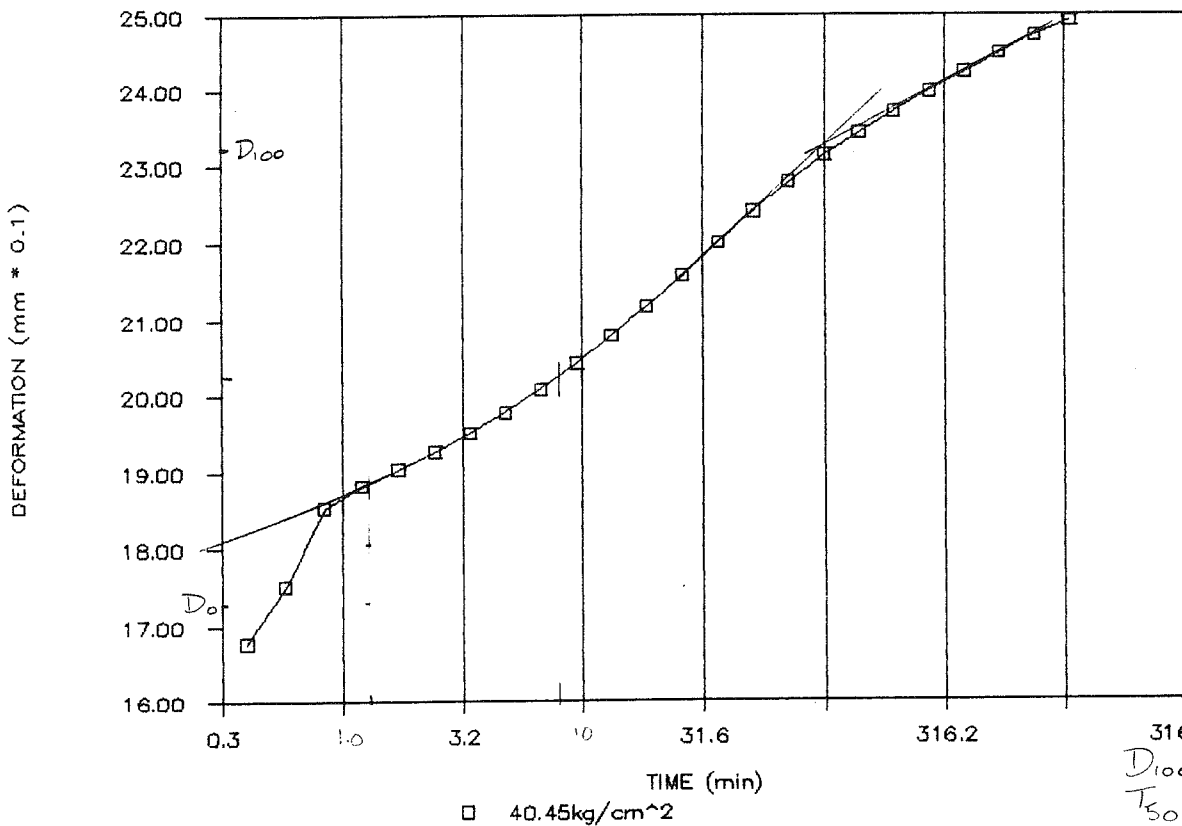
TIME vs DEFORMATION CURVE

SAMPLE 197B



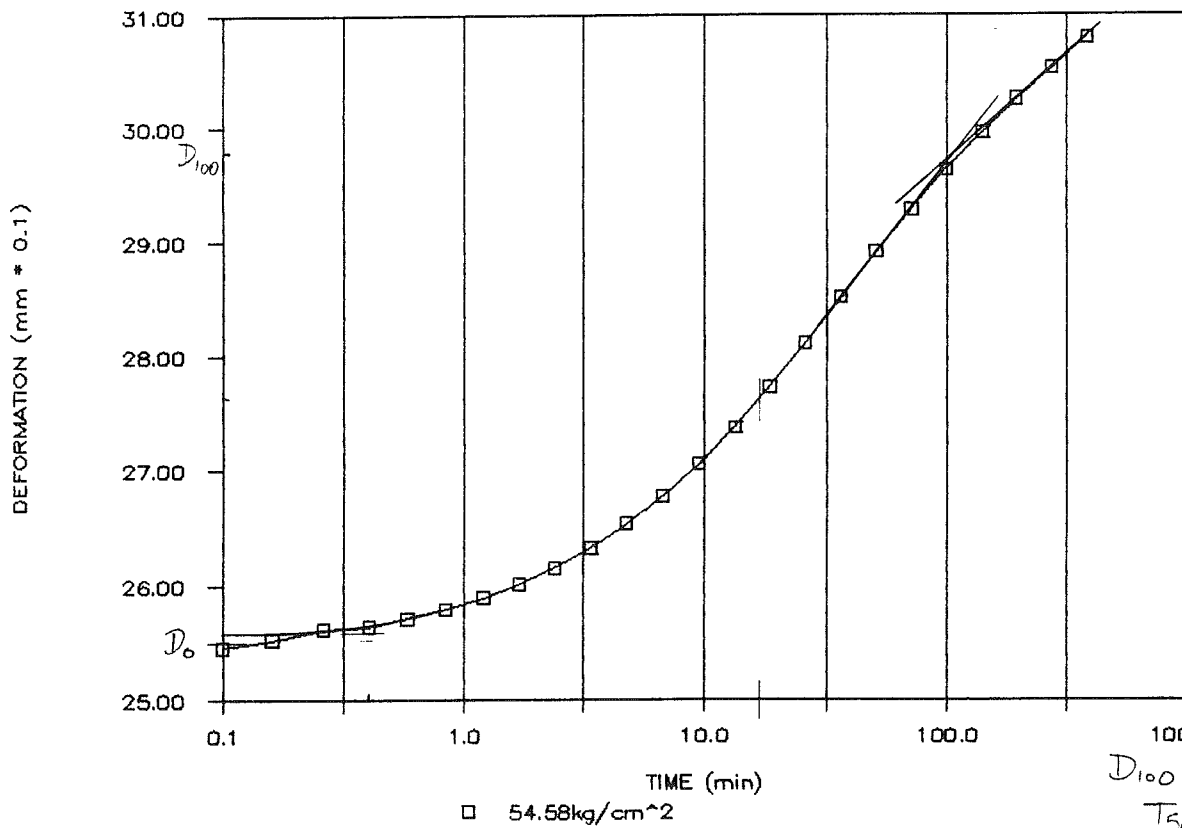
TIME vs DEFORMATION CURVE

SAMPLE 197B



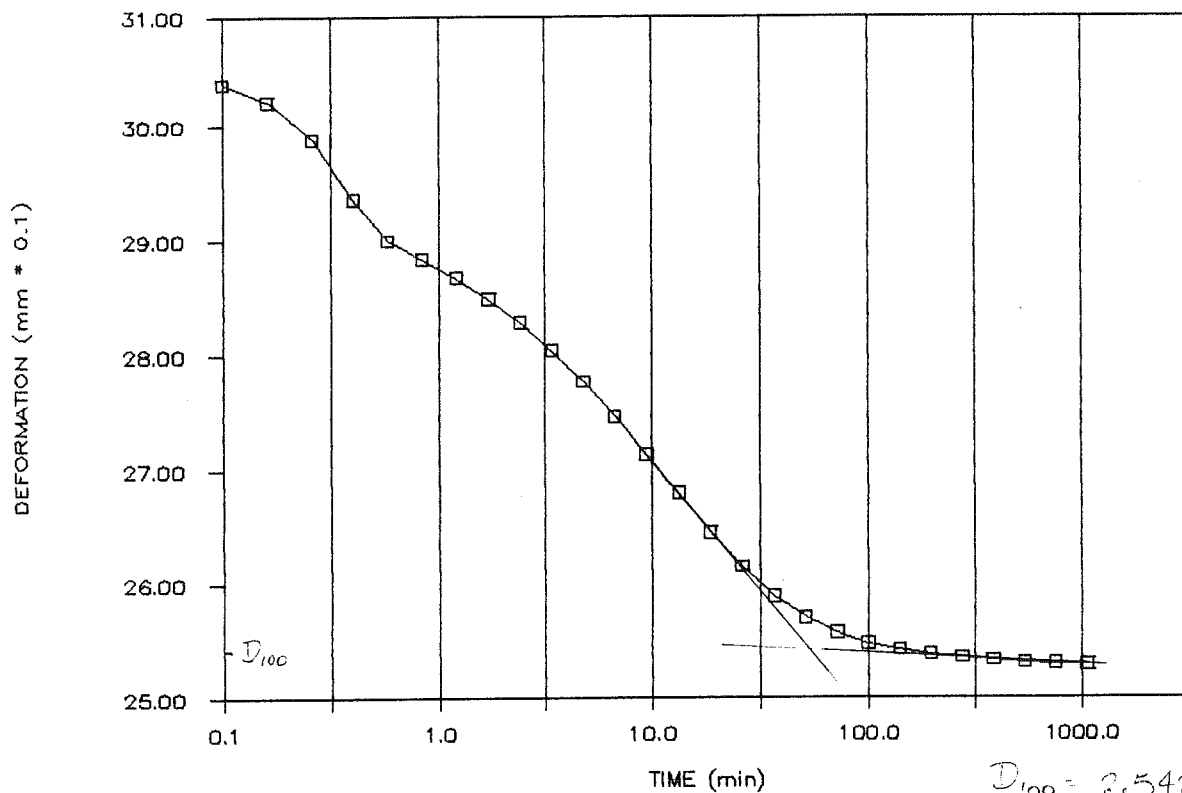
TIME vs DEFORMATION CURVE

SAMPLE 197B



TIME vs DEFORMATION CURVE

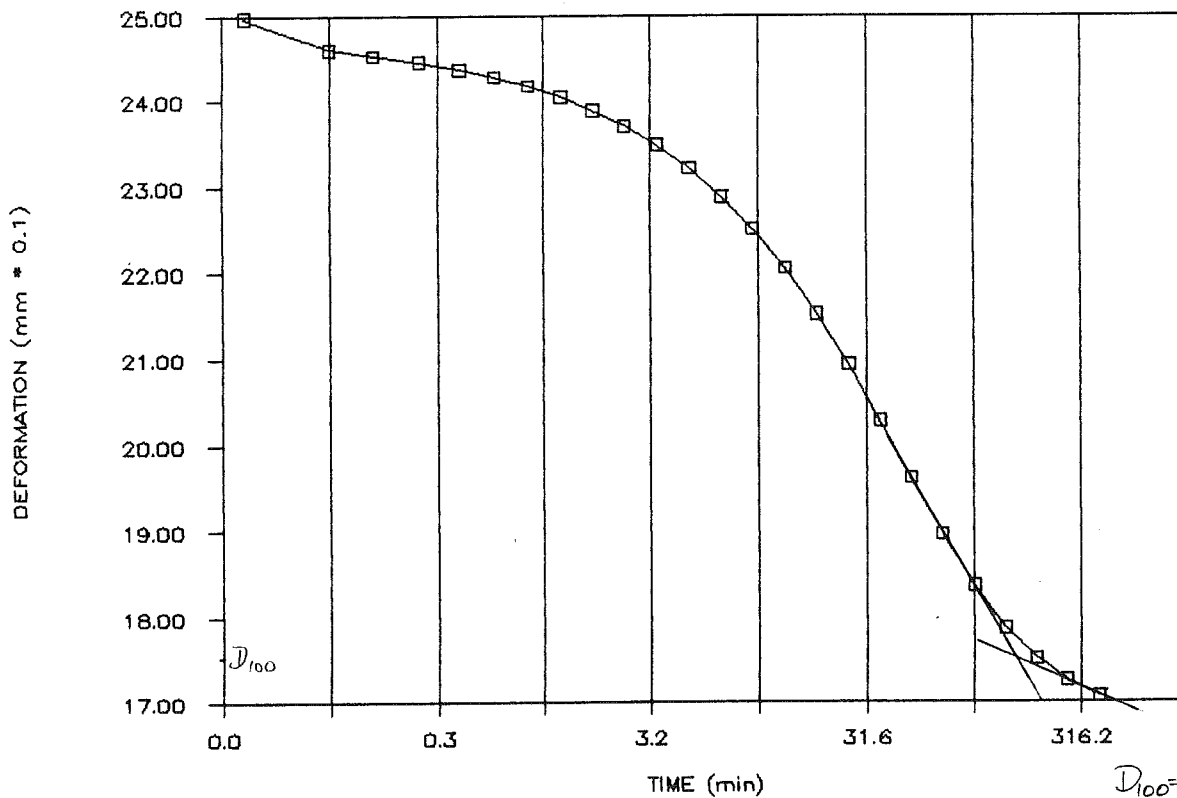
SAMPLE 197B



□ 15.1kg/cm² unload

TIME vs DEFORMATION CURVE

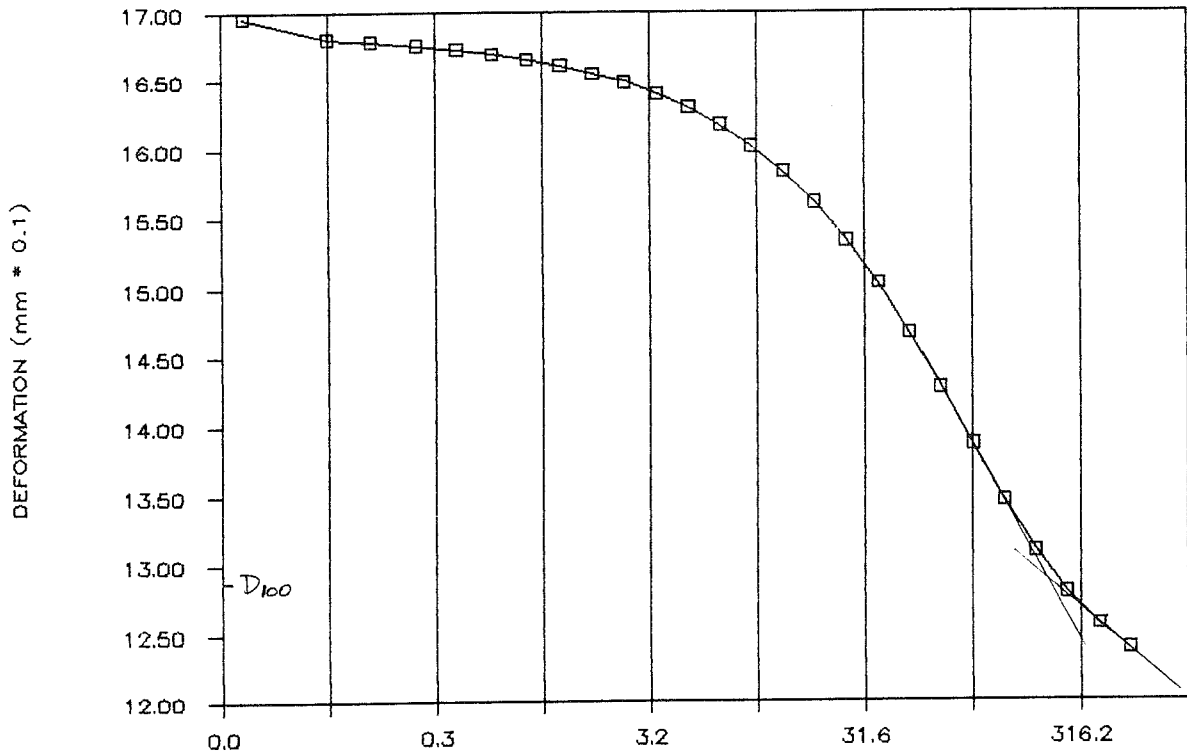
SAMPLE 197B



□ 4.0kg/cm² unload

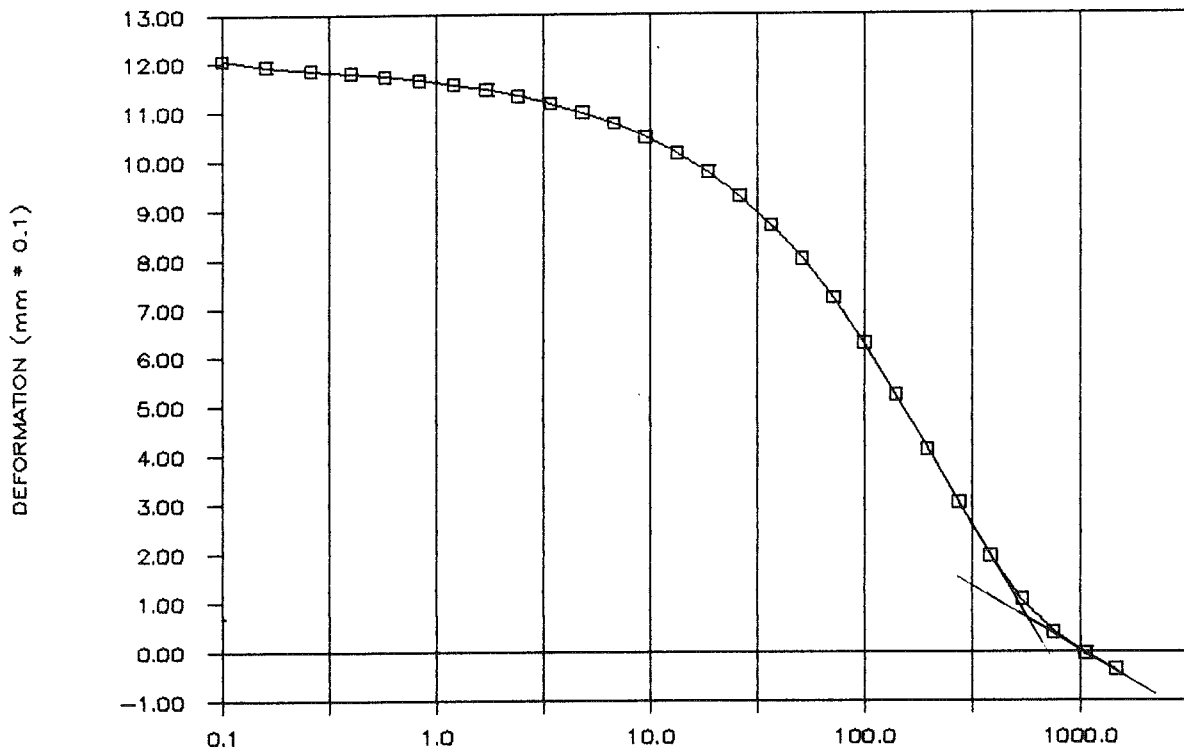
TIME vs DEFORMATION CURVE

SAMPLE 197B



TIME vs DEFORMATION CURVE

SAMPLE 197B



SAMPLE 197B
 START 04:04:33.18 ON 3-31-1989
 0.25kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5763	0.044	0.20
0.10	-0.5748	0.140	0.32
0.16	-0.5751	0.124	0.40
0.26	-0.5750	0.128	0.51
0.40	-0.5751	0.124	0.63
0.58	-0.5751	0.124	0.76

SAMPLE 197B
 START 04:07:57.72 ON 3-31-1989
 0.5kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5757	0.085	0.20
0.10	-0.5756	0.092	0.32
0.16	-0.5754	0.101	0.40
0.26	-0.5753	0.108	0.51
0.40	-0.5753	0.112	0.63
0.58	-0.5753	0.112	0.76
0.84	-0.5753	0.112	0.92

SAMPLE 197B
 START 04:10:53.64 ON 3-31-1989
 1.0kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5742	0.176	0.20
0.10	-0.5739	0.200	0.32
0.16	-0.5736	0.216	0.40
0.26	-0.5734	0.229	0.51
0.40	-0.5733	0.236	0.63
0.58	-0.5732	0.245	0.76
0.84	-0.5730	0.256	0.92
1.20	-0.5730	0.256	1.10
1.70	-0.5730	0.256	1.30

SAMPLE 197B
 START 04:14:53.61 ON 3-31-1989
 2.0kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5702	0.437	0.20
0.10	-0.5694	0.485	0.32
0.16	-0.5689	0.517	0.40
0.26	-0.5684	0.549	0.51
0.40	-0.5679	0.581	0.63
0.58	-0.5675	0.608	0.76
0.84	-0.5671	0.636	0.92
1.20	-0.5666	0.668	1.10
1.70	-0.5662	0.693	1.30
2.40	-0.5658	0.716	1.55

SAMPLE 197B
 START 04:20:34.26 ON 3-31-1989
 4.0kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5584	1.189	0.20
0.10	-0.5569	1.285	0.32
0.16	-0.5561	1.341	0.40
0.26	-0.5551	1.401	0.51
0.40	-0.5542	1.461	0.63
0.58	-0.5533	1.517	0.76
0.84	-0.5523	1.581	0.92
1.20	-0.5513	1.645	1.10
1.70	-0.5502	1.713	1.30
2.40	-0.5492	1.781	1.55
3.38	-0.5480	1.857	1.84
4.76	-0.5467	1.937	2.18
6.70	-0.5455	2.017	2.59
9.40	-0.5443	2.093	3.07
13.18	-0.5433	2.157	3.63
18.48	-0.5424	2.217	4.30

SAMPLE 197B
 START 04:43:26.80 ON 3-31-1989
 8.0kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.5369	2.570	0.20
0.10	-0.5322	2.870	0.32
0.16	-0.5309	2.954	0.40
0.26	-0.5293	3.054	0.51
0.40	-0.5278	3.150	0.63
0.58	-0.5265	3.234	0.76
0.84	-0.5248	3.342	0.92
1.20	-0.5231	3.454	1.10
1.70	-0.5211	3.582	1.30
2.40	-0.5189	3.722	1.55
3.38	-0.5164	3.882	1.84
4.76	-0.5136	4.058	2.18
6.70	-0.5105	4.258	2.59
9.40	-0.5074	4.458	3.07
13.18	-0.5042	4.663	3.63
18.48	-0.5014	4.839	4.30
25.90	-0.4994	4.971	5.09
36.28	-0.4979	5.063	6.02
50.80	-0.4969	5.127	7.13

SAMPLE 197B
 START 05:44:13.52 ON 3-31-1989
 15.84kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.4966	5.147	0.20
0.10	-0.4844	5.927	0.32
0.16	-0.4825	6.051	0.40
0.26	-0.4806	6.175	0.51
0.40	-0.4786	6.303	0.63
0.58	-0.4766	6.431	0.76
0.84	-0.4742	6.579	0.92
1.20	-0.4718	6.735	1.10
1.70	-0.4690	6.915	1.30
2.40	-0.4657	7.123	1.55
3.38	-0.4622	7.352	1.84
4.76	-0.4582	7.608	2.18
6.70	-0.4539	7.884	2.59
9.40	-0.4497	8.152	3.07
13.18	-0.4459	8.392	3.63
18.48	-0.4429	8.588	4.30
25.90	-0.4406	8.732	5.09
36.28	-0.4391	8.828	6.02
50.80	-0.4380	8.900	7.13
71.12	-0.4370	8.964	8.43
99.56	-0.4361	9.024	9.98
139.38	-0.4353	9.072	11.81
195.10	-0.4344	9.129	13.97
273.08	-0.4337	9.177	16.53
382.23	-0.4329	9.229	19.55
534.99	-0.4321	9.277	23.13
748.79	-0.4315	9.316	27.36
1048.04	-0.4309	9.357	32.37

SAMPLE 197B
 START 01:19:54.17 ON 3-31-1989
 29.28kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.4306	9.373	0.20
0.10	-0.4229	9.865	0.32
0.16	-0.4168	10.251	0.40
0.26	-0.4140	10.437	0.51
0.40	-0.4111	10.625	0.63
0.58	-0.4085	10.789	0.76
0.84	-0.4053	10.993	0.92
1.20	-0.4016	11.230	1.10
1.70	-0.3975	11.493	1.30
2.40	-0.3926	11.810	1.55
3.38	-0.3869	12.170	1.84
4.76	-0.3804	12.590	2.18
6.70	-0.3730	13.062	2.59
9.40	-0.3651	13.571	3.07
13.18	-0.3567	14.103	3.63
18.48	-0.3485	14.631	4.30
25.90	-0.3406	15.135	5.09
36.28	-0.3336	15.587	6.02
50.80	-0.3274	15.980	7.13
71.12	-0.3224	16.304	8.43
99.56	-0.3180	16.584	9.98
139.38	-0.3141	16.832	11.81
195.10	-0.3106	17.056	13.97
273.08	-0.3074	17.261	16.53
382.23	-0.3043	17.460	19.55
534.99	-0.3014	17.649	23.13
748.79	-0.2985	17.832	27.36
1048.04	-0.2959	17.997	32.37

SAMPLE 197B
 START 01:45:08.02 ON 3-31-1989
 40.45kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.2911	18.305	0.20
0.10	-0.2880	18.505	0.32
0.16	-0.2884	18.481	0.40
0.26	-0.3069	17.296	0.51
0.40	-0.3149	16.784	0.63
0.58	-0.3036	17.508	0.76
0.84	-0.2874	18.541	0.92
1.20	-0.2829	18.833	1.10
1.70	-0.2795	19.049	1.30
2.40	-0.2760	19.273	1.55
3.38	-0.2722	19.513	1.84
4.76	-0.2680	19.785	2.18
6.70	-0.2633	20.086	2.59
9.40	-0.2581	20.422	3.07
13.18	-0.2524	20.786	3.63
18.48	-0.2462	21.182	4.30
25.90	-0.2398	21.590	5.09
36.28	-0.2333	22.006	6.02
50.80	-0.2271	22.403	7.13
71.12	-0.2212	22.783	8.43
99.56	-0.2158	23.127	9.98
139.38	-0.2111	23.431	11.81
195.10	-0.2066	23.715	13.97
273.08	-0.2026	23.975	16.53
382.23	-0.1986	24.228	19.55
534.99	-0.1949	24.468	23.13
748.79	-0.1911	24.708	27.36
1048.04	-0.1880	24.908	32.37

SAMPLE 197B
 START 20:40:03.88 ON 3-31-1989
 54.58kg/cm²
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.1867	24.988	0.20
0.10	-0.1793	25.464	0.32
0.16	-0.1782	25.532	0.40
0.26	-0.1768	25.624	0.51
0.40	-0.1764	25.648	0.63

SAMPLE 197B
 START 03:11:08.93 ON 3-31-1989
 15.1kg/cm² unload
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.1867	24.988	0.20
0.10	-0.1793	25.464	0.32
0.16	-0.1782	25.532	0.40
0.26	-0.1768	25.624	0.51
0.40	-0.1764	25.648	0.63

0.58	-0.1753	25.720	0.76
0.84	-0.1740	25.804	0.92
1.20	-0.1724	25.905	1.10
1.70	-0.1706	26.021	1.30
2.40	-0.1684	26.161	1.55
3.38	-0.1657	26.332	1.84
4.76	-0.1625	26.540	2.18
6.70	-0.1587	26.781	2.59
9.40	-0.1544	27.057	3.07
13.18	-0.1494	27.377	3.63
18.48	-0.1439	27.733	4.30
25.90	-0.1378	28.121	5.09
36.28	-0.1316	28.518	6.02
50.80	-0.1254	28.918	7.13
71.12	-0.1195	29.294	8.43
99.56	-0.1141	29.642	9.98
139.38	-0.1091	29.962	11.81
195.10	-0.1045	30.254	13.97
273.08	-0.1003	30.522	16.53
382.23	-0.0961	30.791	19.55

SAMPLE 197B
 START 05:27:16.74 ON 3-31-1989
 2.0kg/cm² unload
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.3122	16.956	0.20
0.10	-0.3145	16.808	0.32
0.16	-0.3149	16.784	0.40
0.26	-0.3153	16.756	0.51
0.40	-0.3158	16.728	0.63
0.58	-0.3162	16.696	0.76
0.84	-0.3169	16.656	0.92
1.20	-0.3176	16.612	1.10
1.70	-0.3185	16.552	1.30
2.40	-0.3195	16.488	1.55
3.38	-0.3209	16.400	1.84
4.76	-0.3224	16.300	2.18
6.70	-0.3244	16.172	2.59
9.40	-0.3268	16.020	3.07
13.18	-0.3297	15.836	3.63
18.48	-0.3332	15.612	4.30
25.90	-0.3373	15.347	5.09
36.28	-0.3422	15.036	6.02
50.80	-0.3478	14.675	7.13
71.12	-0.3540	14.279	8.43
99.56	-0.3604	13.867	9.98
139.38	-0.3668	13.462	11.81
195.10	-0.3725	13.094	13.97
273.08	-0.3772	12.794	16.53
382.23	-0.3808	12.566	19.55
534.99	-0.3834	12.394	23.13
748.79	-0.3856	12.258	

MIN	VOLTS	0.1 MM	TIME MIN
0.04	-0.1023	30.394	0.20
0.10	-0.1025	30.382	0.32
0.16	-0.1049	30.227	0.40
0.26	-0.1102	29.886	0.51
0.40	-0.1184	29.362	0.63
0.58	-0.1240	29.006	0.76
0.84	-0.1265	28.846	0.92
1.20	-0.1290	28.685	1.10
1.70	-0.1319	28.498	1.30
2.40	-0.1353	28.285	1.55
3.38	-0.1390	28.045	1.84
4.76	-0.1433	27.773	2.18
6.70	-0.1481	27.465	2.59
9.40	-0.1532	27.137	3.07
13.18	-0.1585	26.797	3.63
18.48	-0.1638	26.457	4.30
25.90	-0.1685	26.156	5.09
36.28	-0.1726	25.896	6.02
50.80	-0.1755	25.708	7.13
71.12	-0.1776	25.576	8.43
99.56	-0.1790	25.484	9.98
139.38	-0.1798	25.432	11.81
195.10	-0.1804	25.392	13.97
273.08	-0.1809	25.364	16.53
382.23	-0.1813	25.340	19.55
534.99	-0.1816	25.316	23.13
748.79	-0.1817	25.308	27.36
1048.04	-0.1818	25.304	32.37

SAMPLE 197B
 START 20:41:27.75 ON 3-31-1989
 0.25kg/cm² unload
 Machine #3

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.3868	12.178	0.20
0.10	-0.3886	12.066	0.32
0.16	-0.3906	11.934	0.40
0.26	-0.3918	11.862	0.51
0.40	-0.3927	11.798	0.63
0.58	-0.3938	11.733	0.76
0.84	-0.3951	11.650	0.92
1.20	-0.3964	11.562	1.10
1.70	-0.3981	11.458	1.30
2.40	-0.4001	11.329	1.55
3.38	-0.4025	11.173	1.84
4.76	-0.4054	10.989	2.18
6.70	-0.4089	10.765	2.59
9.40	-0.4132	10.489	3.07
13.18	-0.4183	10.161	3.63
18.48	-0.4245	9.765	4.30
25.90	-0.4321	9.281	5.09
36.28	-0.4411	8.700	6.02
50.80	-0.4519	8.012	7.13
71.12	-0.4644	7.208	8.43
99.56	-0.4789	6.283	9.98
139.38	-0.4951	5.243	11.81
195.10	-0.5124	4.134	13.97
273.08	-0.5296	3.034	16.53
382.23	-0.5464	1.961	19.55
534.99	-0.5602	1.077	23.13
748.79	-0.5707	0.405	27.36
1048.04	-0.5776	-0.040	32.37
1466.84	-0.5825	-0.352	38.30
2053.01	-0.4423	7.600	45.31

SAMPLE 197B
 START 21:26:14.32 ON 3-31-1989

TIME MIN	M #3 VOLTS	DEFORM 0.1 MM	SQ.ROOT TIME MIN
0.04	-0.1871	24.968	0.20
0.10	-0.1928	24.600	0.32
0.16	-0.1939	24.528	0.40
0.26	-0.1951	24.456	0.51
0.40	-0.1964	24.368	0.63
0.58	-0.1978	24.280	0.76
0.84	-0.1995	24.171	0.92
1.20	-0.2016	24.039	1.10
1.70	-0.2040	23.883	1.30
2.40	-0.2069	23.699	1.55
3.38	-0.2104	23.475	1.84
4.76	-0.2146	23.207	2.18
6.70	-0.2197	22.879	2.59
9.40	-0.2256	22.499	3.07
13.18	-0.2327	22.047	3.63
18.48	-0.2409	21.522	4.30
25.90	-0.2501	20.930	5.09
36.28	-0.2603	20.282	6.02
50.80	-0.2707	19.609	7.13
71.12	-0.2809	18.957	8.43
99.56	-0.2903	18.361	9.98
139.38	-0.2979	17.869	11.81
195.10	-0.3035	17.512	13.97
273.08	-0.3075	17.256	16.53
382.23	-0.3103	17.076	19.55