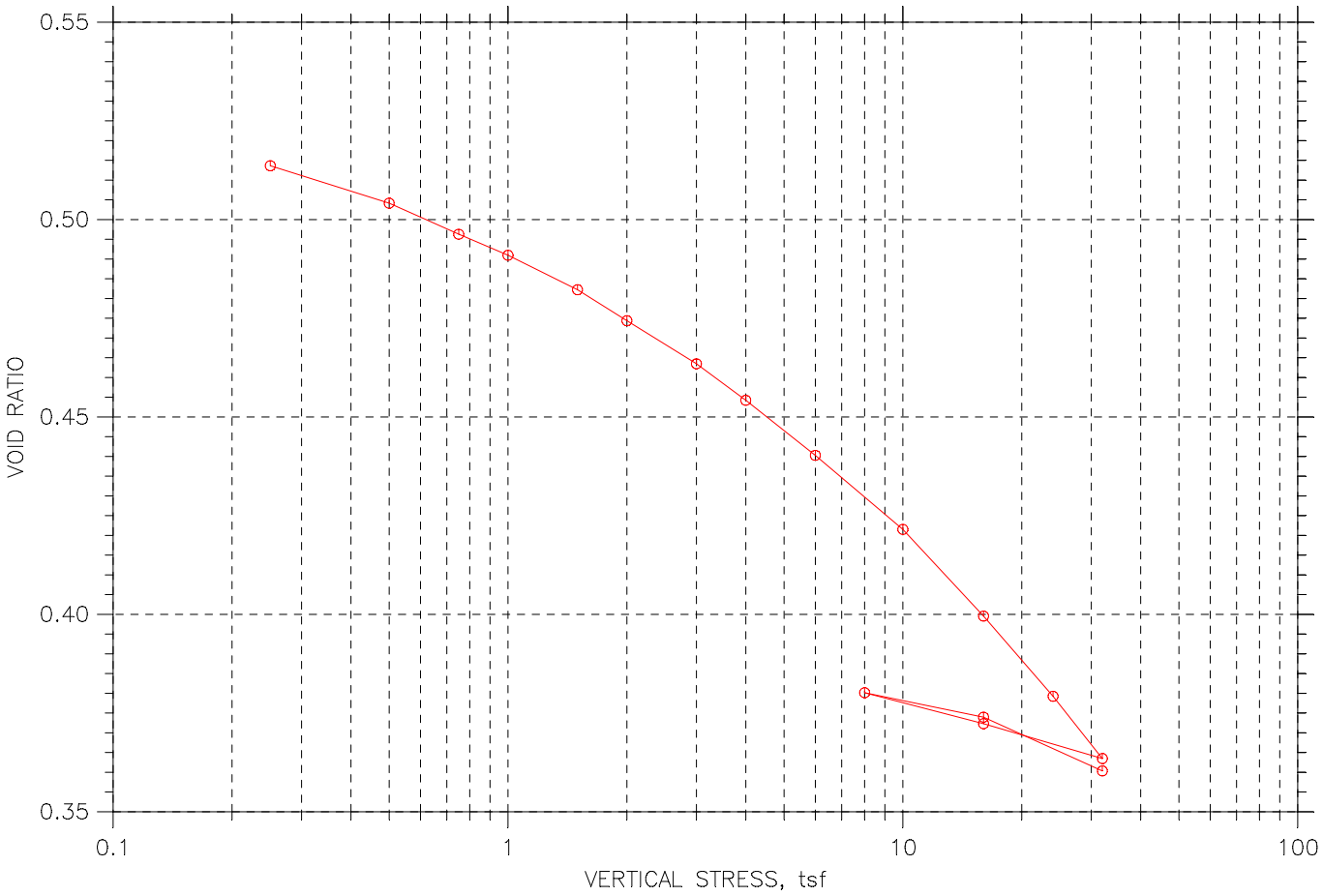
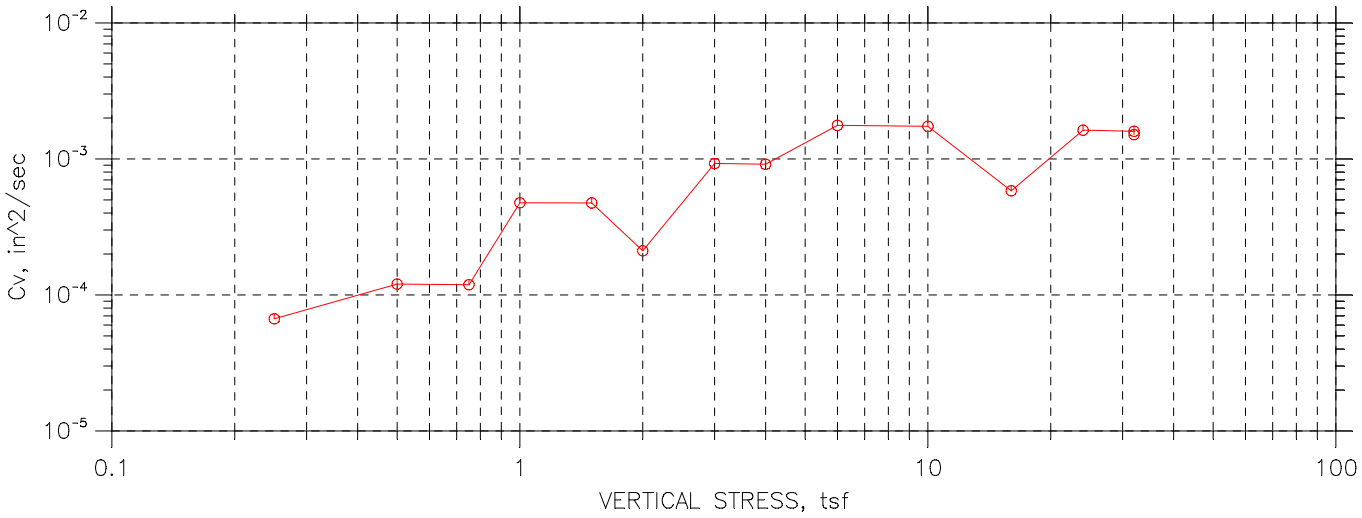
CONSOLIDATION TEST DATA

SUMMARY REPORT





Project: KINGSTON COAL TVA	Location: TN	Project No.: 60095742
Boring No.: 09-402B	Tested By: JDW	Checked By: WPQ
Sample No.: OST-7	Test Date: 3/05/09	Depth: 45.0'-45.5'
Test No.: 5742402BS7C	Sample Type: 3" OST	Elevation: +719.9
Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)		
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435		

Tue, 02-JUN-2009 16:08:22

CONSOLIDATION TEST DATA

Project: KINGSTON COAL TVA
Boring No.: 09-402B
Sample No.: OST-7
Test No.: 5742402BS7C

Location: TN
Tested By: JDW
Test Date: 3/05/09
Sample Type: 3" OST

Project No.: 60095742
Checked By: WPQ
Depth: 45.0'-45.5'
Elevation: +719.9

Soil Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435

Measured Specific Gravity: 2.70
Initial Void Ratio: 0.55
Final Void Ratio: 0.36

Liquid Limit: 18
Plastic Limit: 17
Plasticity Index: 1

Initial Height: 0.77 in
Specimen Diameter: 2.50 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID	T-23	RING	RING	RING
Wt. Container + Wet Soil, gm	386.01	203.78	198.25	198.25
Wt. Container + Dry Soil, gm	332.19	182.51	182.51	182.51
Wt. Container, gm	39.96	74.43	74.43	74.43
Wt. Dry Soil, gm	292.23	108.08	108.08	108.08
Water Content, %	18.42	19.68	14.56	14.56
Void Ratio	---	0.55	0.36	---
Degree of Saturation, %	---	97.64	109.28	---
Dry Unit Weight, pcf	---	109.26	124.09	---

CONSOLIDATION TEST DATA

Project: KINGSTON COAL TVA
Boring No.: 09-402B
Sample No.: OST-7
Test No.: 5742402BS7C

Location: TN
Tested By: JDW
Test Date: 3/05/09
Sample Type: 3" OST

Project No.: 60095742
Checked By: WPQ
Depth: 45.0'-45.5'
Elevation: +719.9

Soil Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435

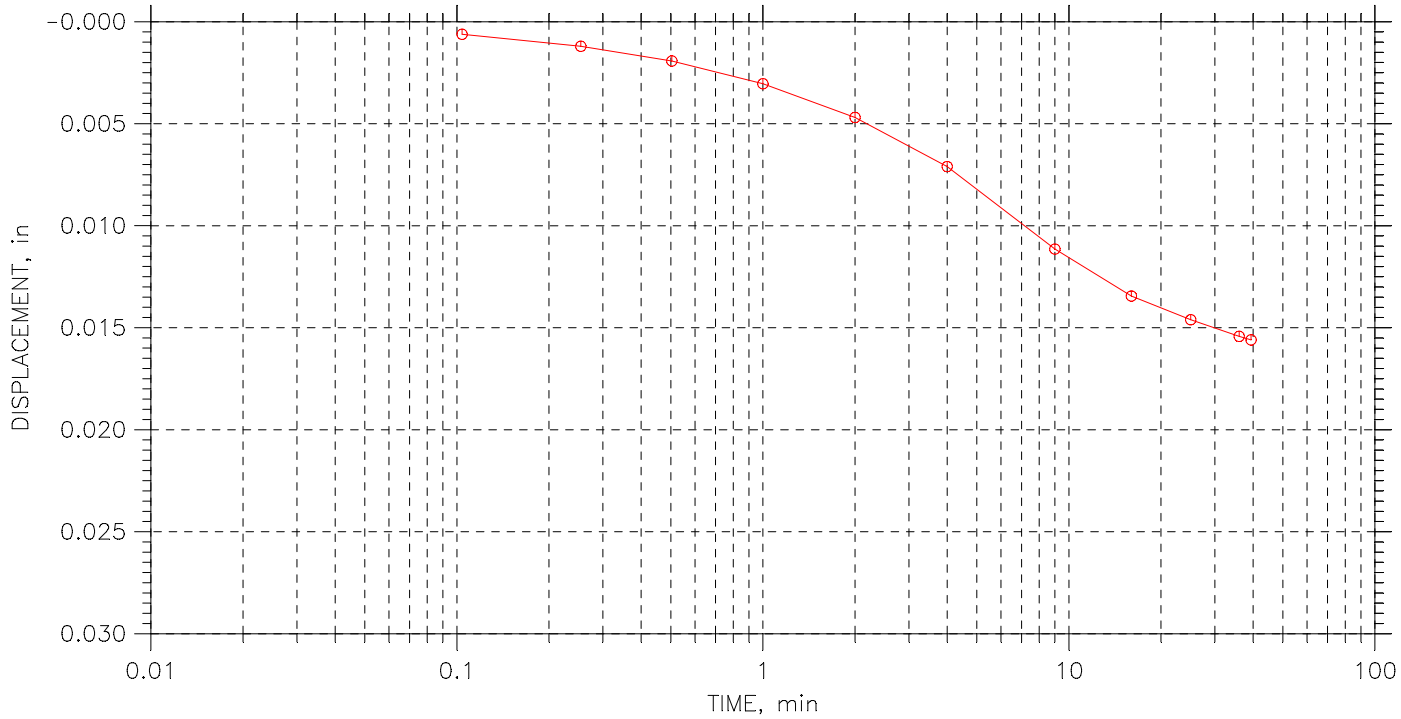
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	T50 Fitting Log min	Coefficient of Consolidation Sq.Rt. in^2/sec	Coefficient of Consolidation Log in^2/sec	Coefficient of Consolidation Ave. in^2/sec
1	0.25	0.0156	0.514	2.03	7.1	4.8	6.67e-005	9.99e-005	8.00e-005
2	0.5	0.0203	0.504	2.64	3.8	1.6	1.20e-004	2.82e-004	1.68e-004
3	0.75	0.02421	0.496	3.15	3.8	1.4	1.19e-004	3.17e-004	1.73e-004
4	1	0.02686	0.491	3.50	1.0	1.0	4.76e-004	4.52e-004	4.64e-004
5	1.5	0.0312	0.482	4.06	0.9	0.6	4.75e-004	6.91e-004	5.63e-004
6	2	0.0351	0.474	4.57	2.1	0.8	2.11e-004	5.28e-004	3.02e-004
7	3	0.04052	0.463	5.28	0.5	0.0	9.25e-004	0.00e+000	9.25e-004
8	4	0.04511	0.454	5.88	0.5	0.0	9.13e-004	0.00e+000	9.13e-004
9	6	0.05204	0.440	6.78	0.2	0.2	1.77e-003	1.92e-003	1.84e-003
10	10	0.06136	0.422	7.99	0.2	0.2	1.74e-003	2.39e-003	2.01e-003
11	16	0.07227	0.400	9.41	0.7	0.0	5.83e-004	0.00e+000	5.83e-004
12	24	0.08237	0.379	10.73	0.2	126.9	1.63e-003	3.09e-006	6.16e-006
13	32	0.0902	0.363	11.75	0.2	0.2	1.60e-003	2.53e-003	1.96e-003
14	16	0.08582	0.372	11.18	0.0	0.0	0.00e+000	0.00e+000	0.00e+000
15	8	0.08193	0.380	10.67	0.0	0.0	0.00e+000	0.00e+000	0.00e+000
16	16	0.085	0.374	11.07	0.0	0.0	0.00e+000	0.00e+000	0.00e+000
17	32	0.09176	0.360	11.95	0.3	0.0	1.51e-003	0.00e+000	1.51e-003

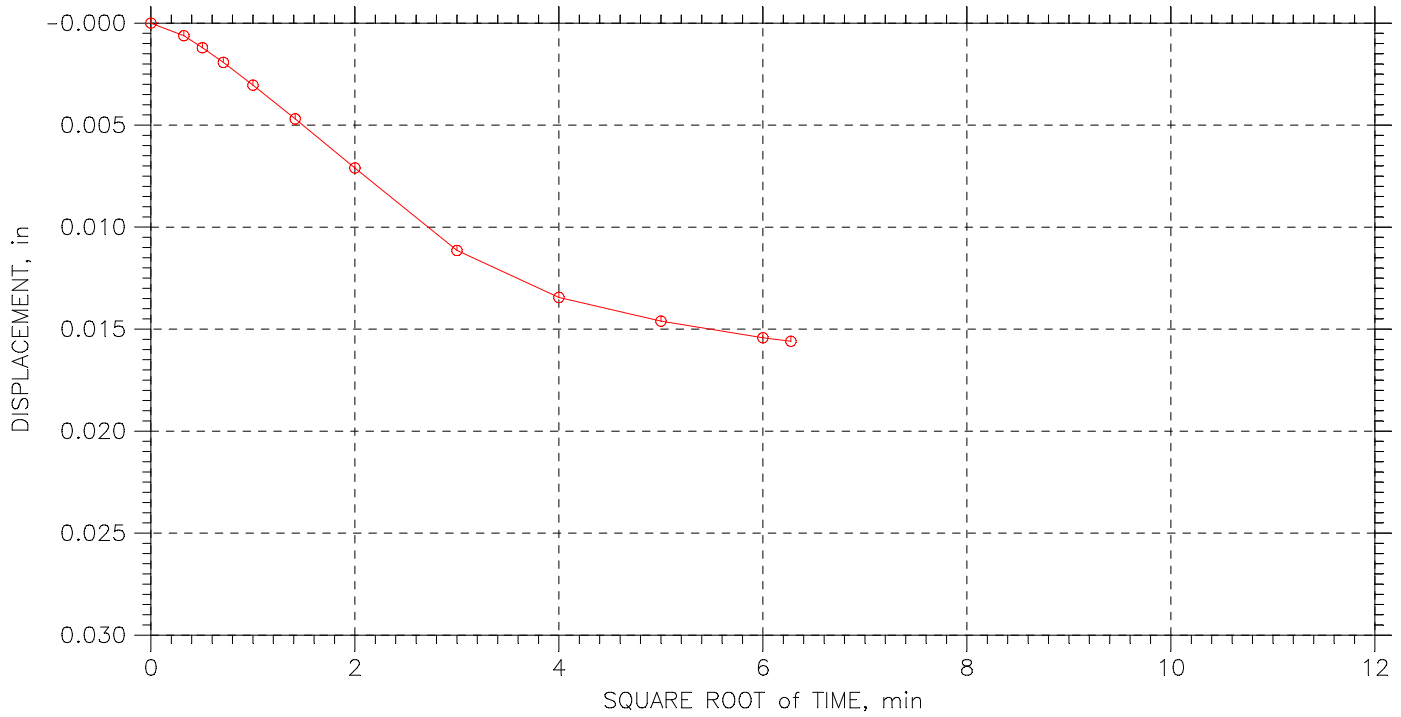
CONSOLIDATION TEST DATA

TIME CURVES

Step: 1 of 17

Stress: 0.25 tsf





Project: KINGSTON COAL TVA	Location: TN	Project No.: 60095742
Boring No.: 09-402B	Tested By: JDW	Checked By: WPQ
Sample No.: OST-7	Test Date: 3/05/09	Depth: 45.0'-45.5'
Test No.: 5742402BS7C	Sample Type: 3" OST	Elevation: +719.9
Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)		
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435		

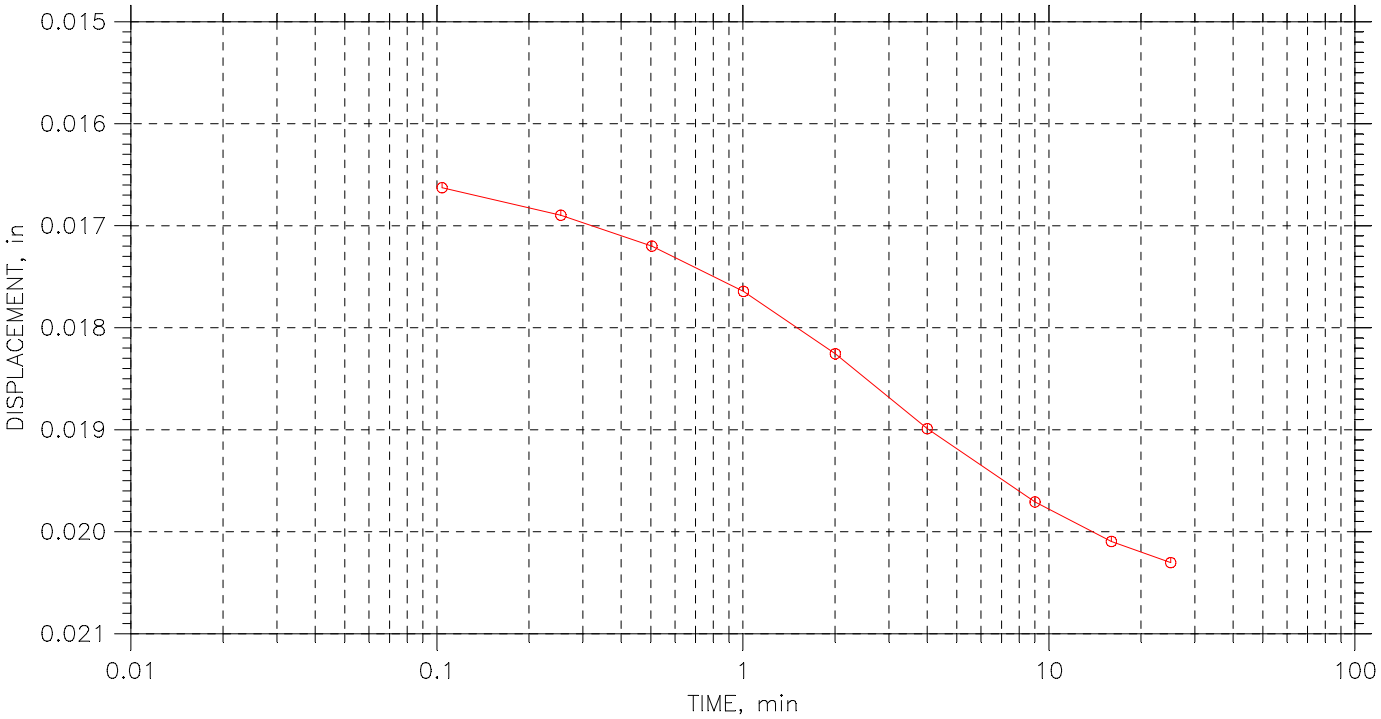
Tue, 02-JUN-2009 16:08:54

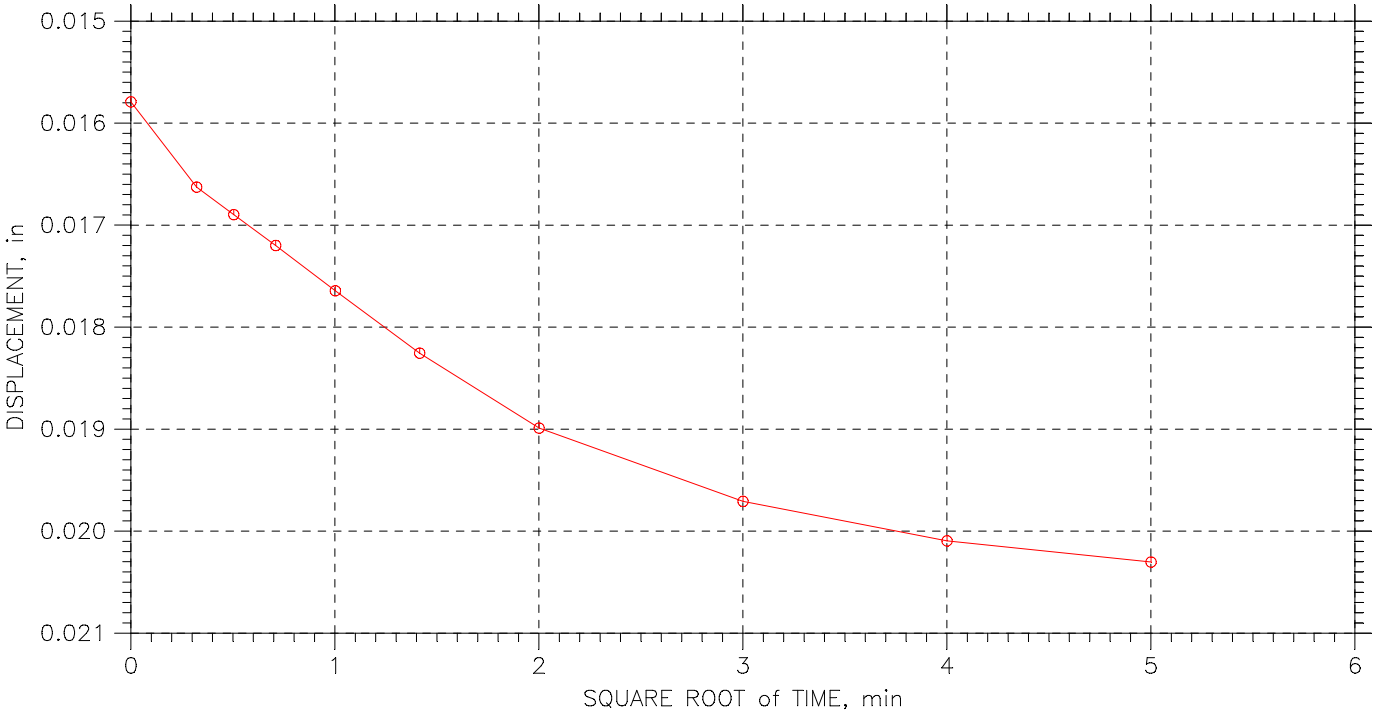
CONSOLIDATION TEST DATA

TIME CURVES

Step: 2 of 17

Stress: 0.5 tsf





Project: KINGSTON COAL TVA	Location: TN	Project No.: 60095742
Boring No.: 09-402B	Tested By: JDW	Checked By: WPQ
Sample No.: OST-7	Test Date: 3/05/09	Depth: 45.0'-45.5'
Test No.: 5742402BS7C	Sample Type: 3" OST	Elevation: +719.9
Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)		
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435		

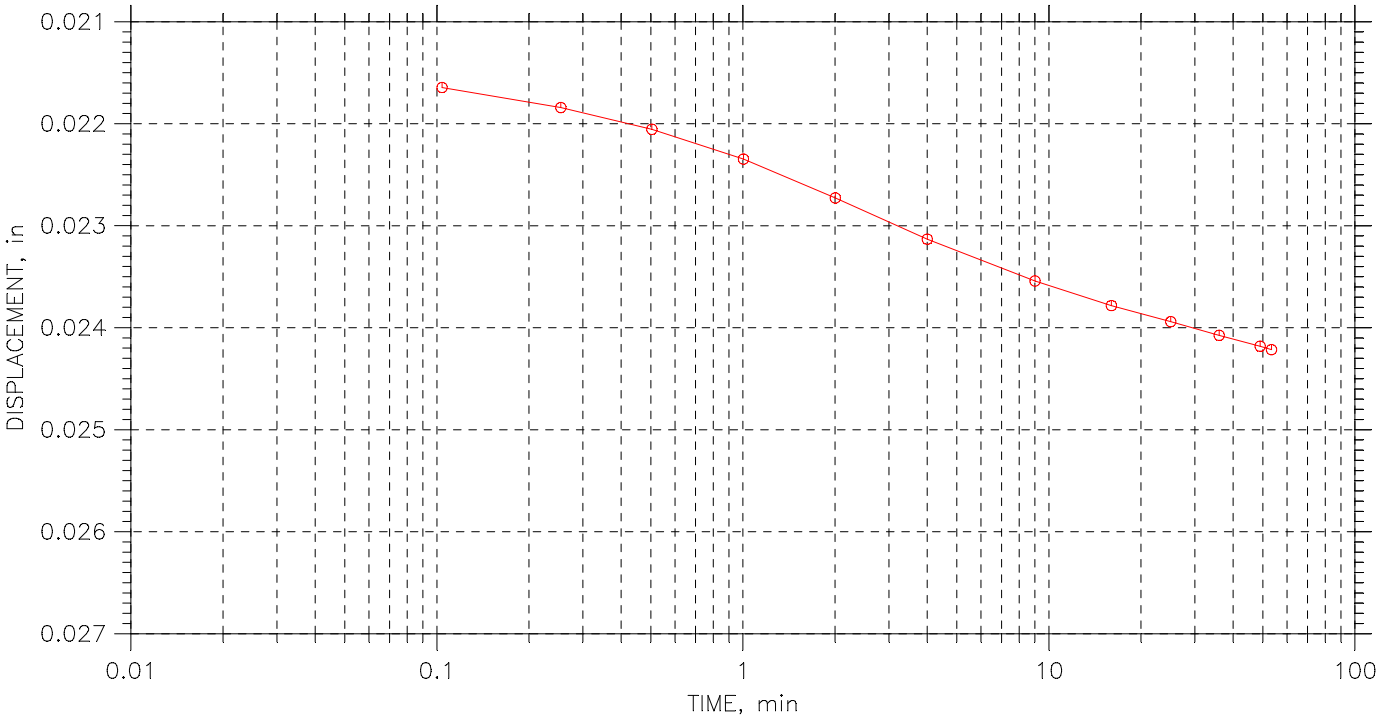
Tue, 02-JUN-2009 16:08:54

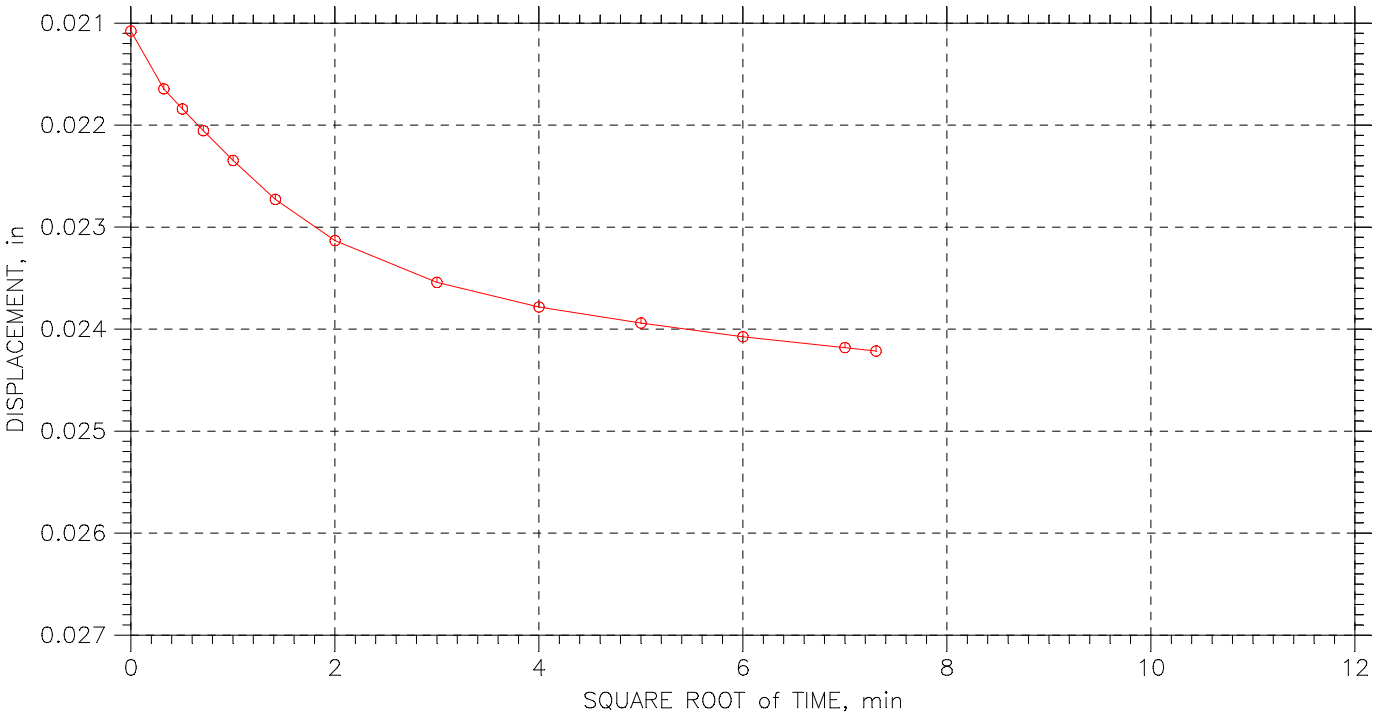
CONSOLIDATION TEST DATA

TIME CURVES

Step: 3 of 17

Stress: 0.75 tsf





Project: KINGSTON COAL TVA	Location: TN	Project No.: 60095742
Boring No.: 09-402B	Tested By: JDW	Checked By: WPQ
Sample No.: OST-7	Test Date: 3/05/09	Depth: 45.0'-45.5'
Test No.: 5742402BS7C	Sample Type: 3" OST	Elevation: +719.9
Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)		
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435		

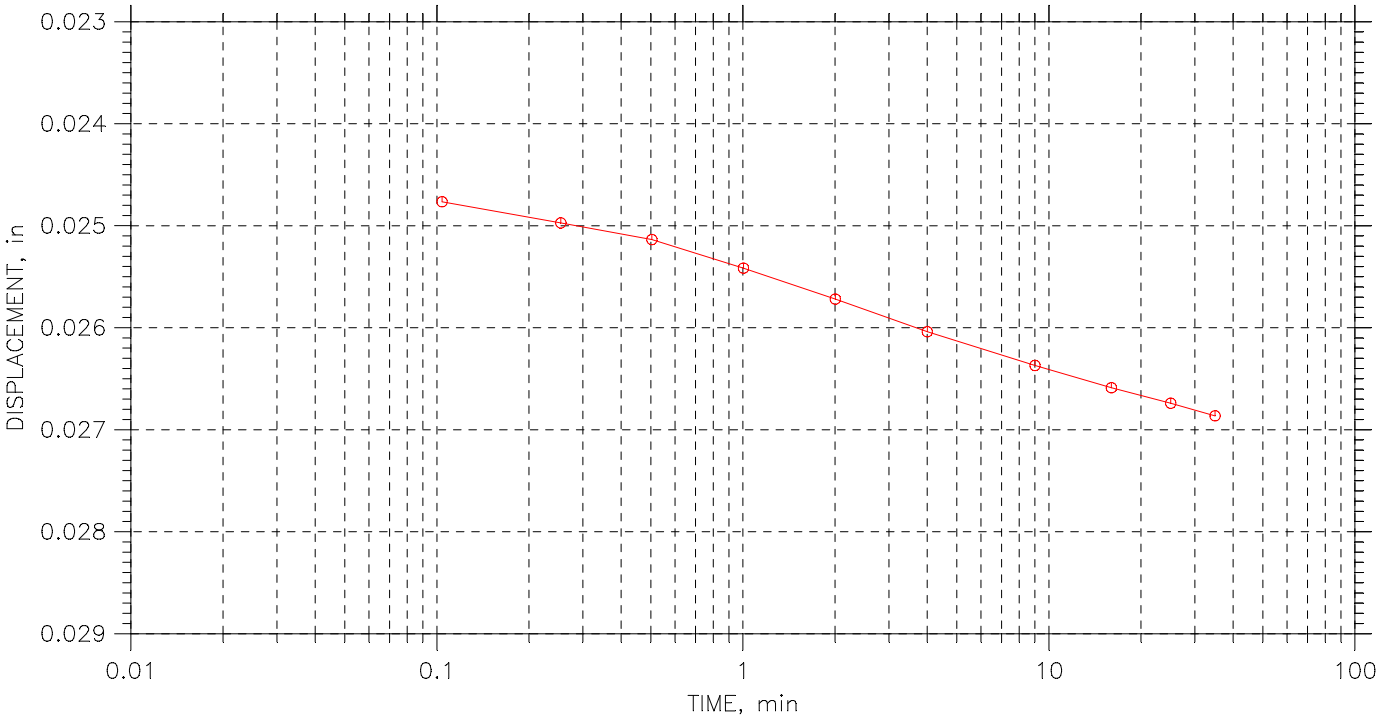
Tue, 02-JUN-2009 16:08:55

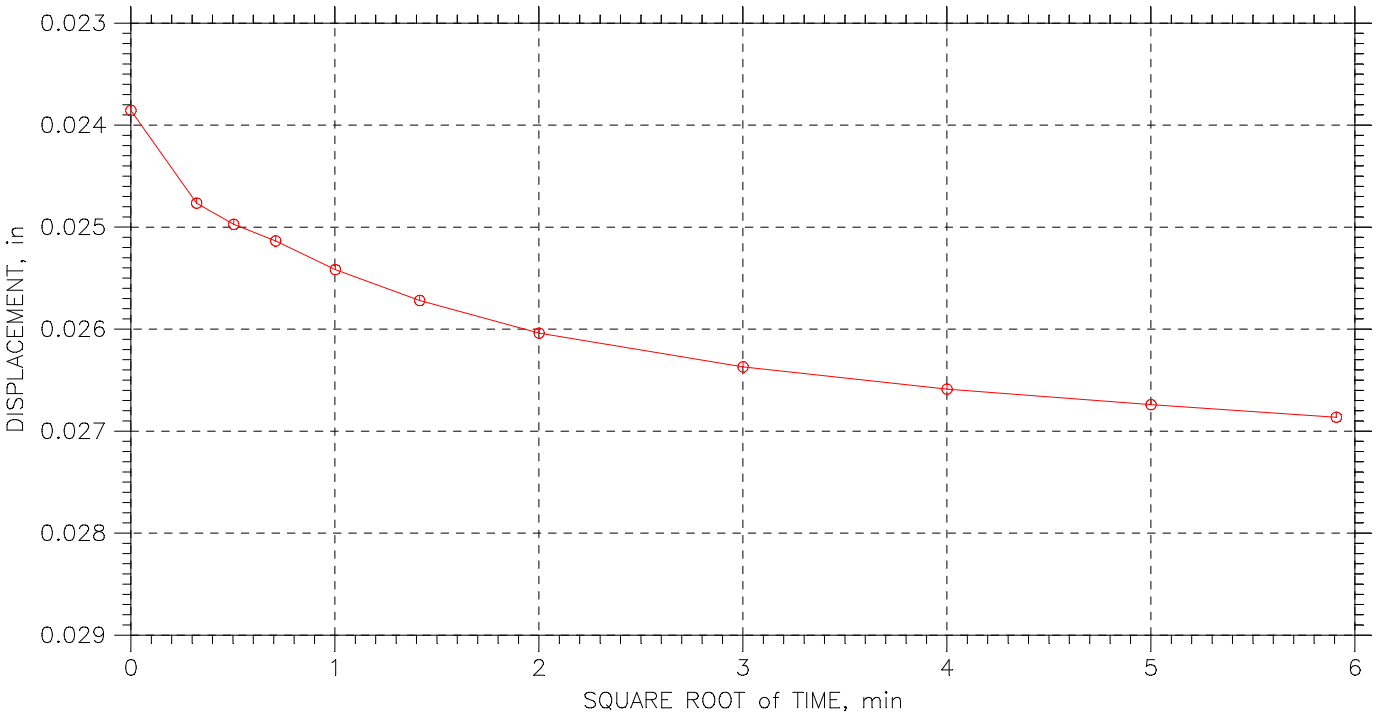
CONSOLIDATION TEST DATA

TIME CURVES

Step: 4 of 17

Stress: 1. tsf





Project: KINGSTON COAL TVA	Location: TN	Project No.: 60095742
Boring No.: 09-402B	Tested By: JDW	Checked By: WPQ
Sample No.: OST-7	Test Date: 3/05/09	Depth: 45.0'-45.5'
Test No.: 5742402BS7C	Sample Type: 3" OST	Elevation: +719.9
Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)		
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435		

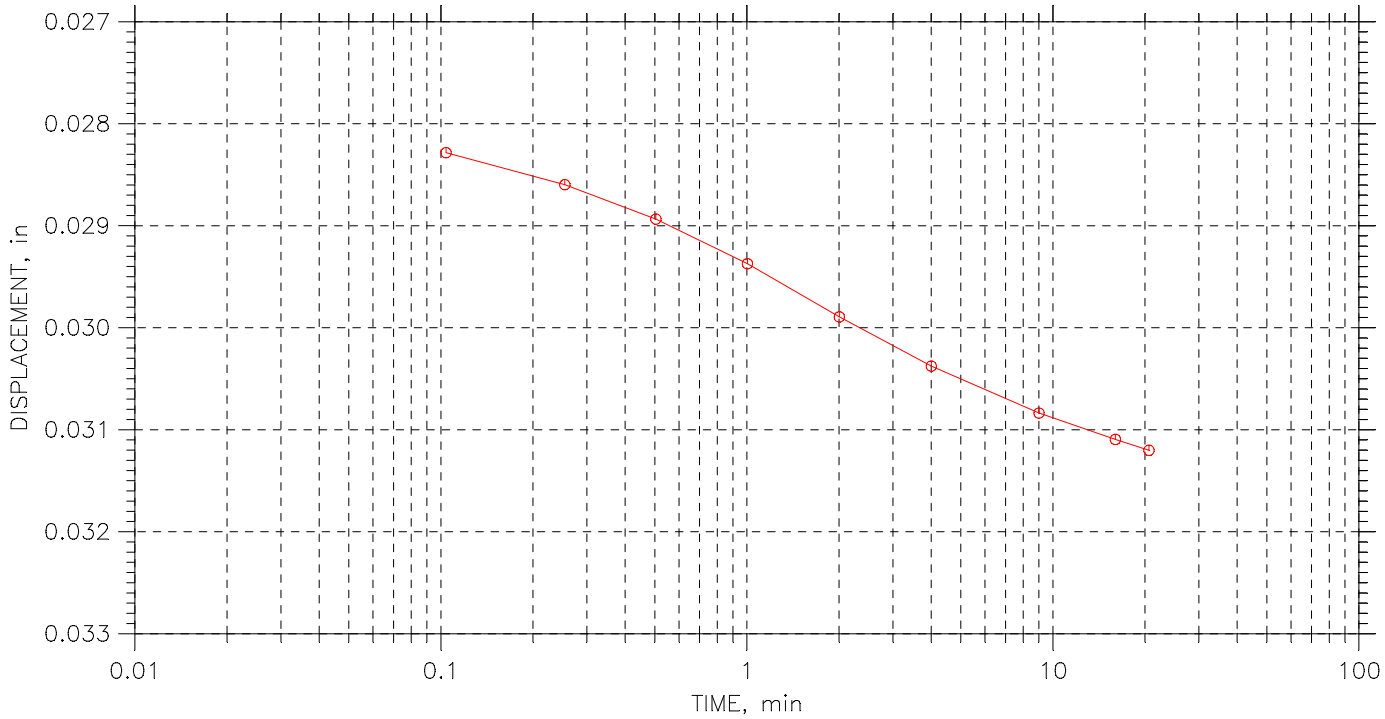
Tue, 02-JUN-2009 16:08:55

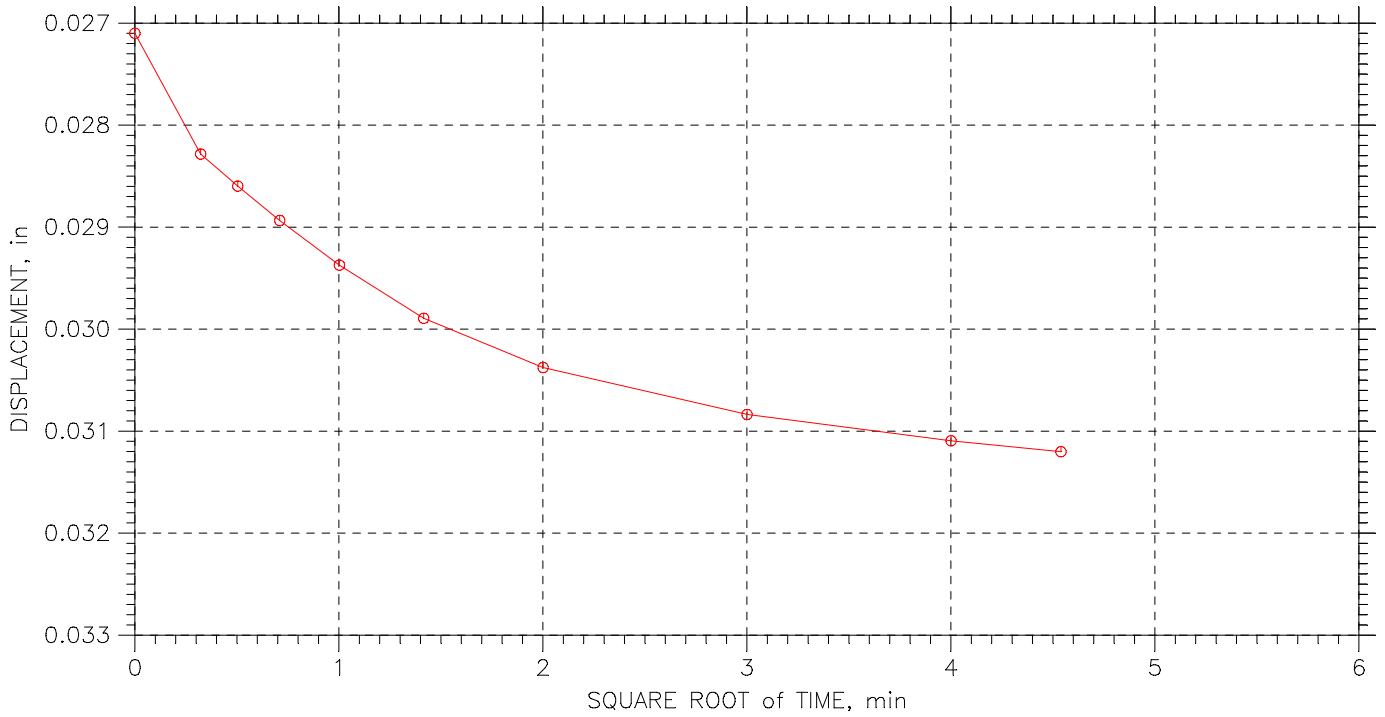
CONSOLIDATION TEST DATA

TIME CURVES

Step: 5 of 17

Stress: 1.5 tsf





Project: KINGSTON COAL TVA	Location: TN	Project No.: 60095742
Boring No.: 09-402B	Tested By: JDW	Checked By: WPQ
Sample No.: OST-7	Test Date: 3/05/09	Depth: 45.0'-45.5'
Test No.: 5742402BS7C	Sample Type: 3" OST	Elevation: +719.9
Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)		
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435		

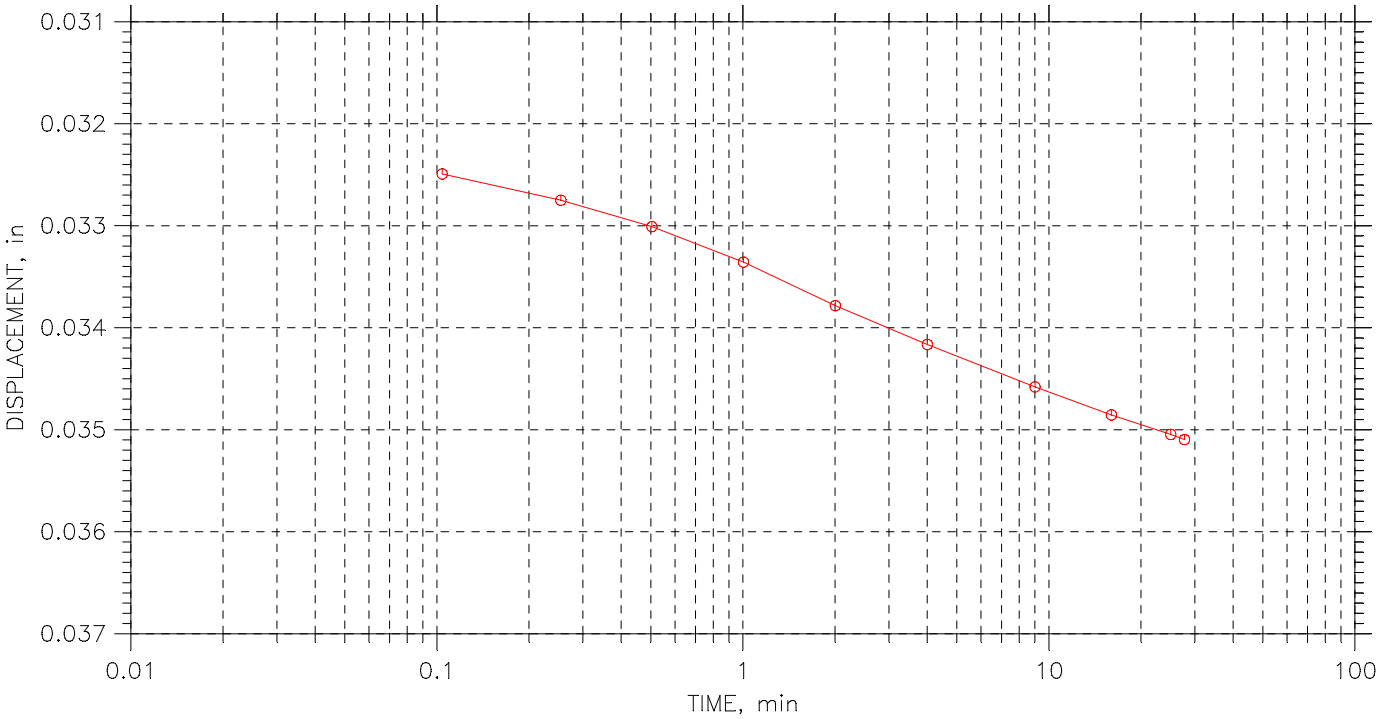
Tue, 02-JUN-2009 16:08:56

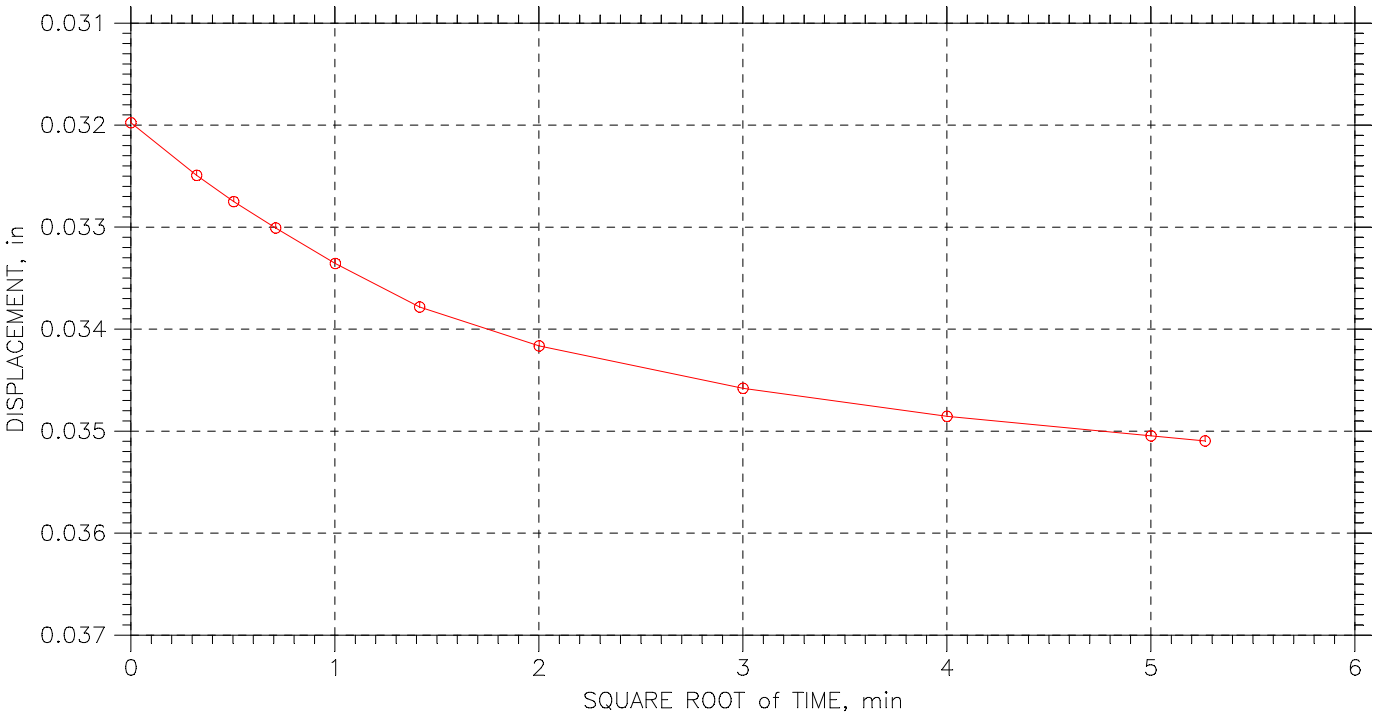
CONSOLIDATION TEST DATA

TIME CURVES

Step: 6 of 17

Stress: 2. tsf





Project: KINGSTON COAL TVA	Location: TN	Project No.: 60095742
Boring No.: 09-402B	Tested By: JDW	Checked By: WPQ
Sample No.: OST-7	Test Date: 3/05/09	Depth: 45.0'-45.5'
Test No.: 5742402BS7C	Sample Type: 3" OST	Elevation: +719.9
Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)		
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435		

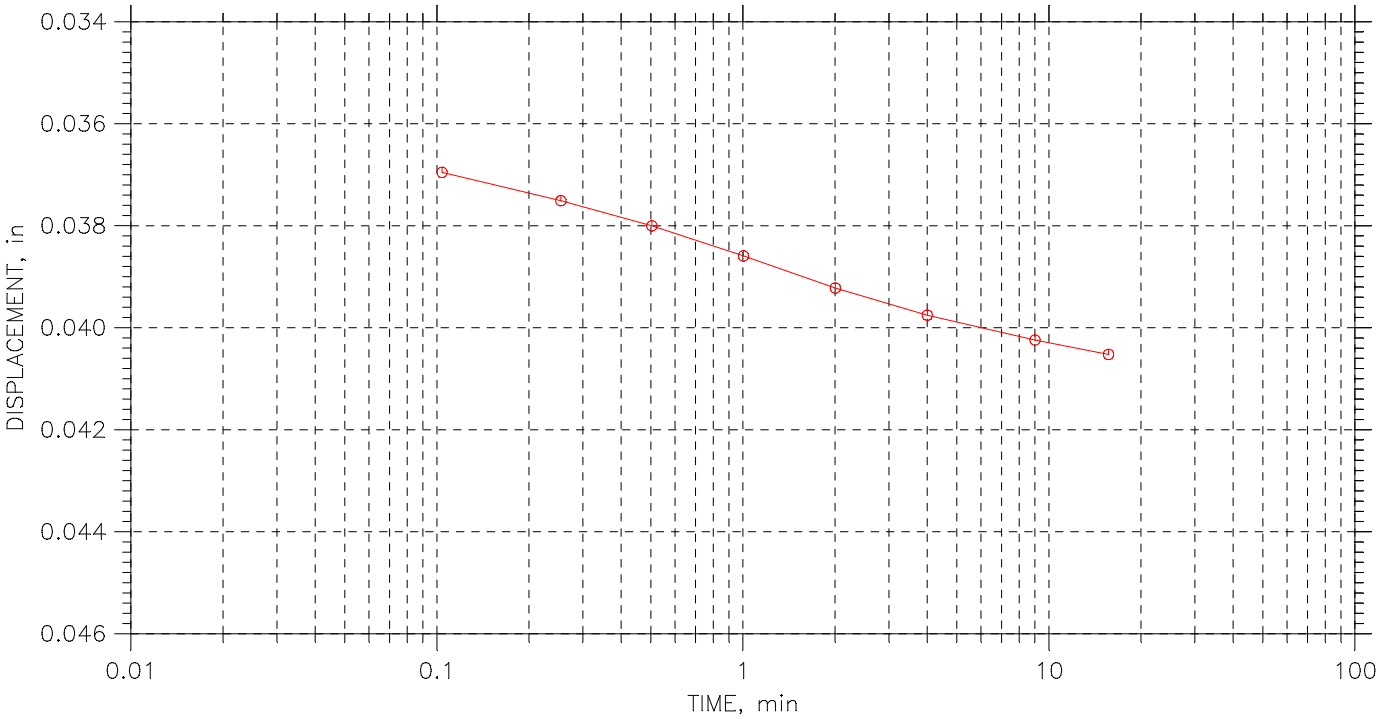
Tue, 02-JUN-2009 16:08:57

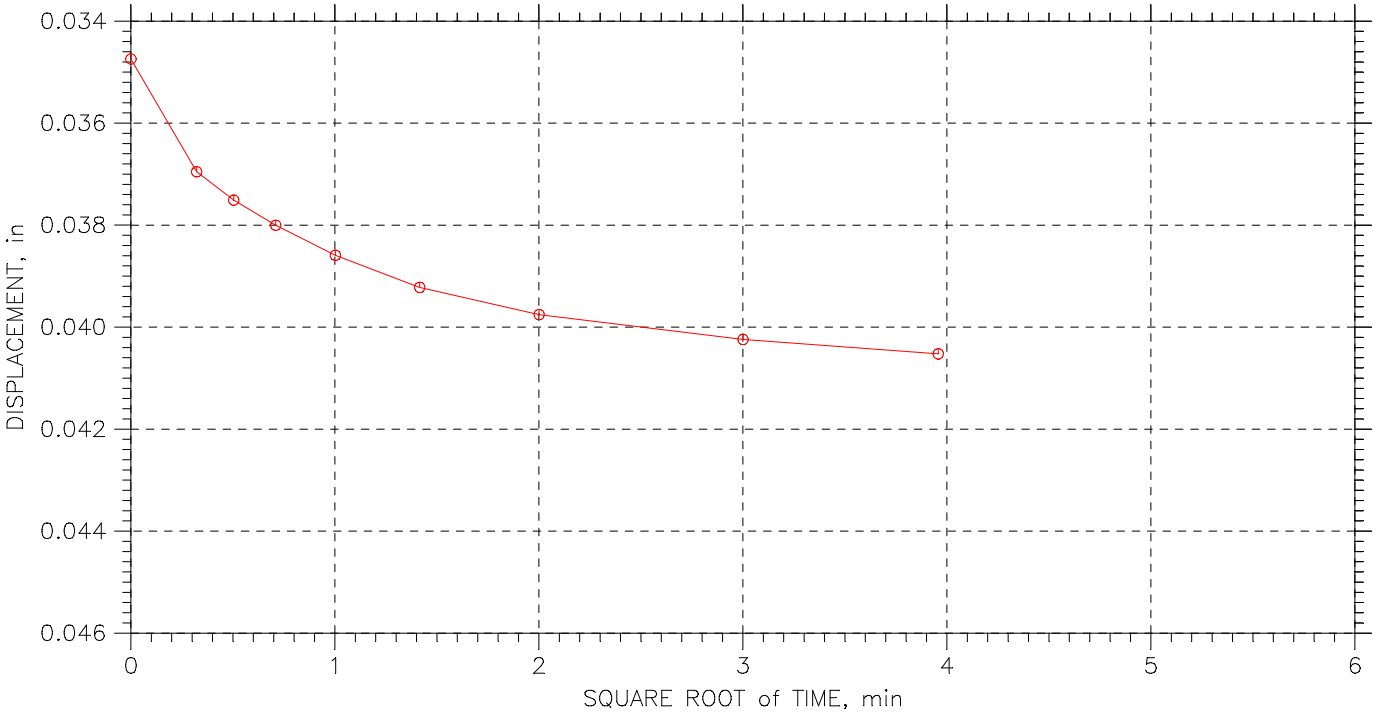
CONSOLIDATION TEST DATA

TIME CURVES

Step: 7 of 17

Stress: 3. tsf





Project: KINGSTON COAL TVA	Location: TN	Project No.: 60095742
Boring No.: 09-402B	Tested By: JDW	Checked By: WPQ
Sample No.: OST-7	Test Date: 3/05/09	Depth: 45.0'-45.5'
Test No.: 5742402BS7C	Sample Type: 3" OST	Elevation: +719.9
Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)		
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435		

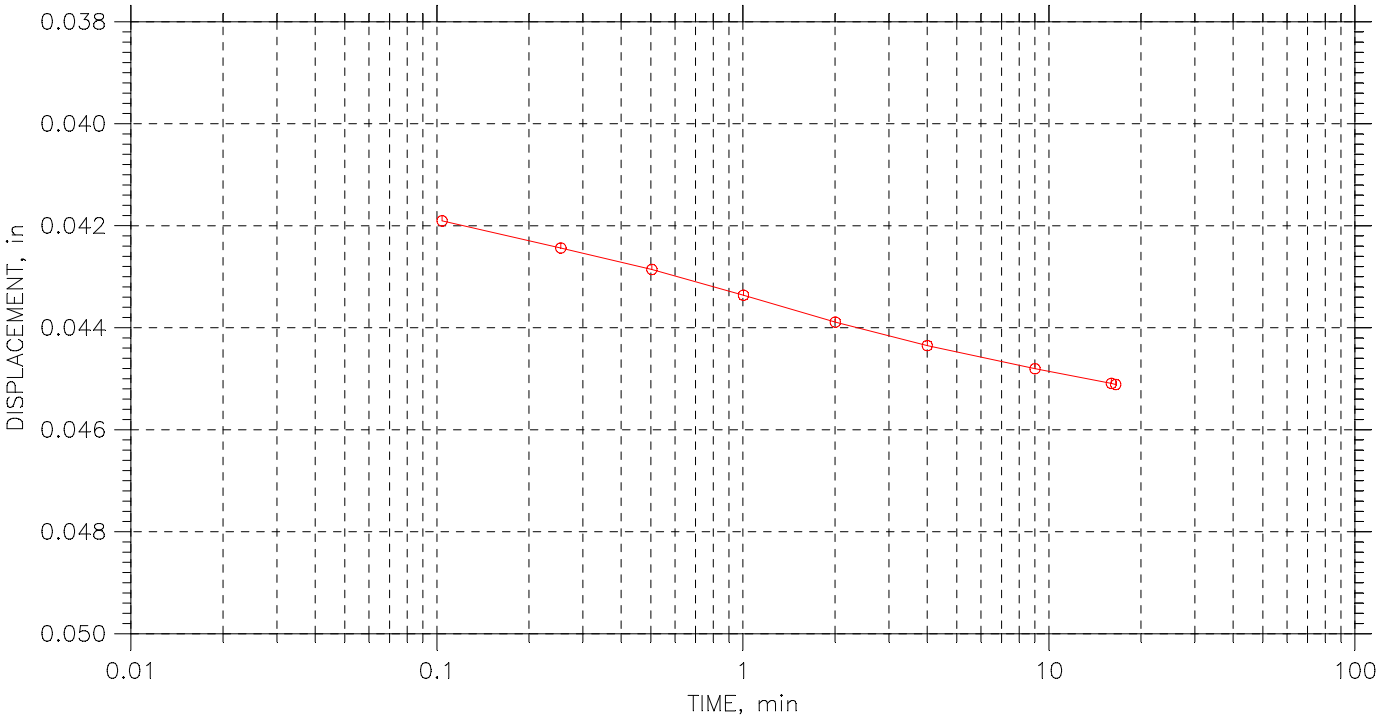
Tue, 02-JUN-2009 16:08:57

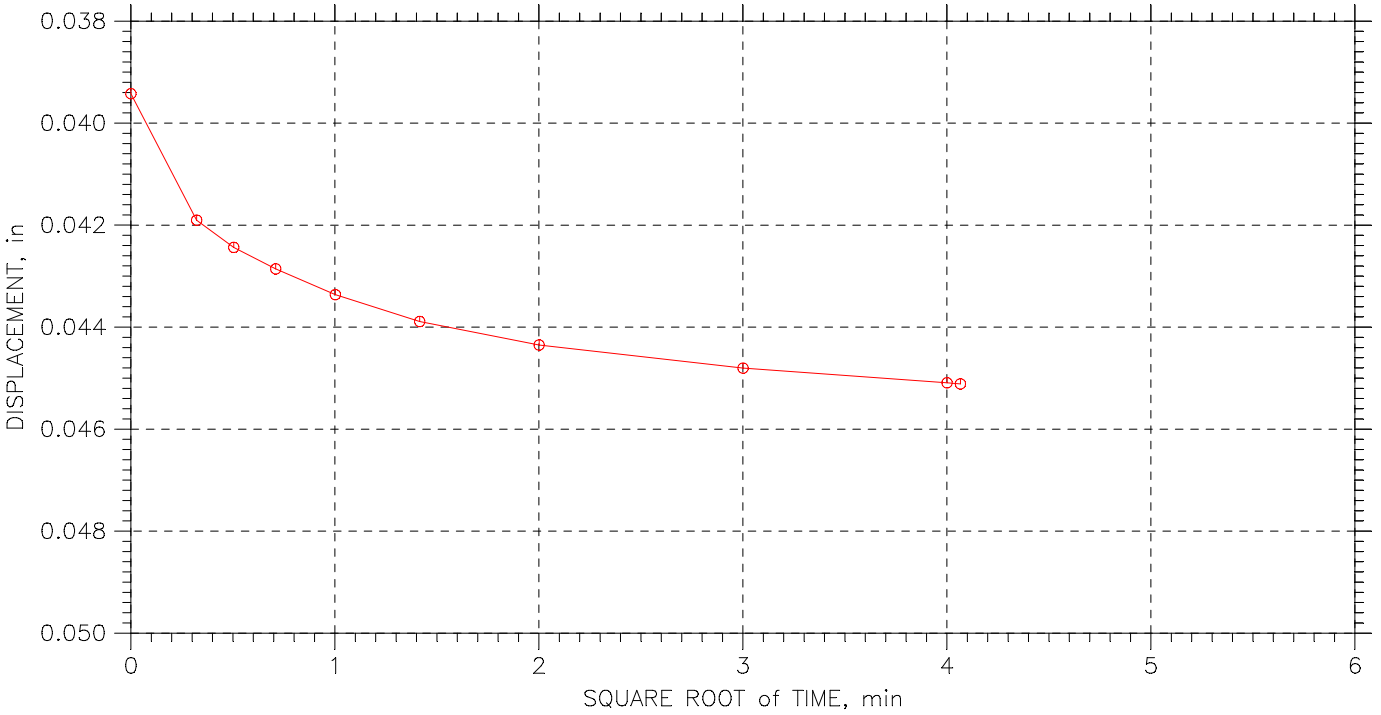
CONSOLIDATION TEST DATA

TIME CURVES

Step: 8 of 17

Stress: 4. tsf





Project: KINGSTON COAL TVA	Location: TN	Project No.: 60095742
Boring No.: 09-402B	Tested By: JDW	Checked By: WPQ
Sample No.: OST-7	Test Date: 3/05/09	Depth: 45.0'-45.5'
Test No.: 5742402BS7C	Sample Type: 3" OST	Elevation: +719.9
Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)		
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435		

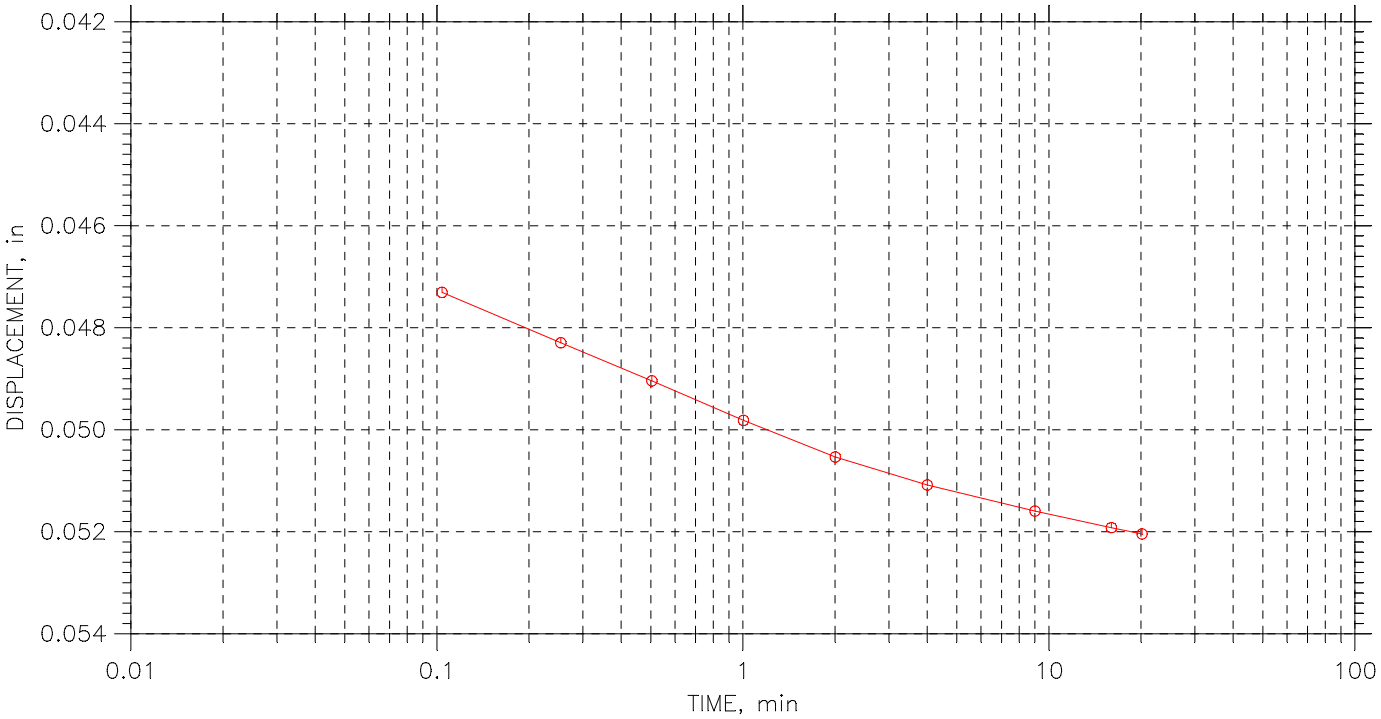
Tue, 02-JUN-2009 16:08:58

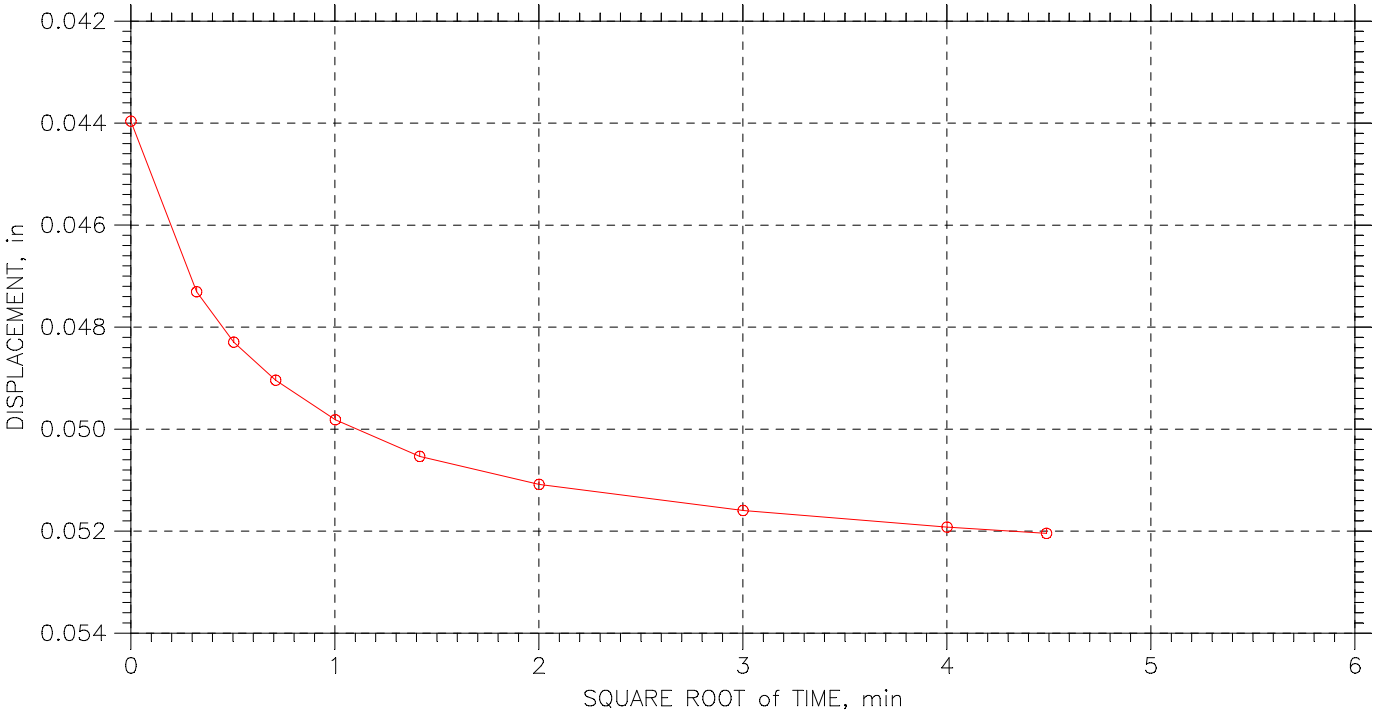
CONSOLIDATION TEST DATA

TIME CURVES

Step: 9 of 17

Stress: 6. tsf





Project: KINGSTON COAL TVA	Location: TN	Project No.: 60095742
Boring No.: 09-402B	Tested By: JDW	Checked By: WPQ
Sample No.: OST-7	Test Date: 3/05/09	Depth: 45.0'-45.5'
Test No.: 5742402BS7C	Sample Type: 3" OST	Elevation: +719.9
Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)		
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435		

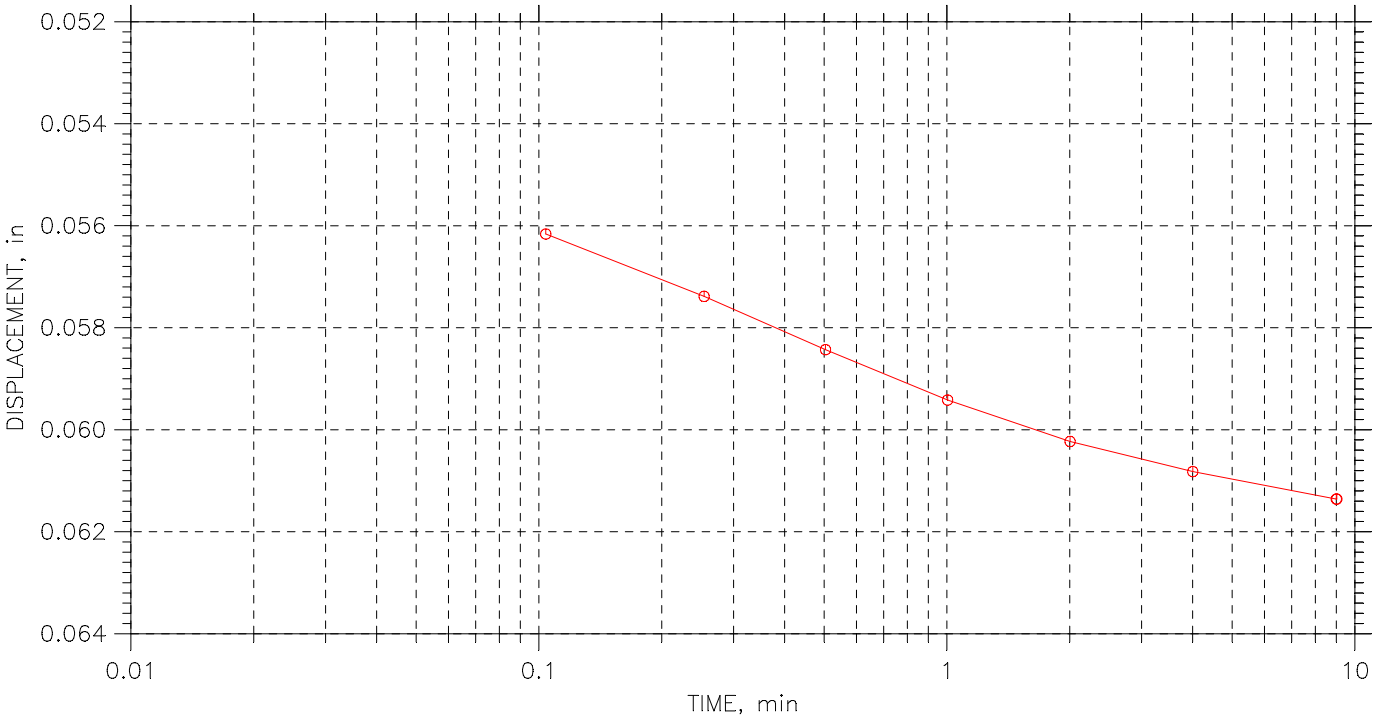
Tue, 02-JUN-2009 16:08:59

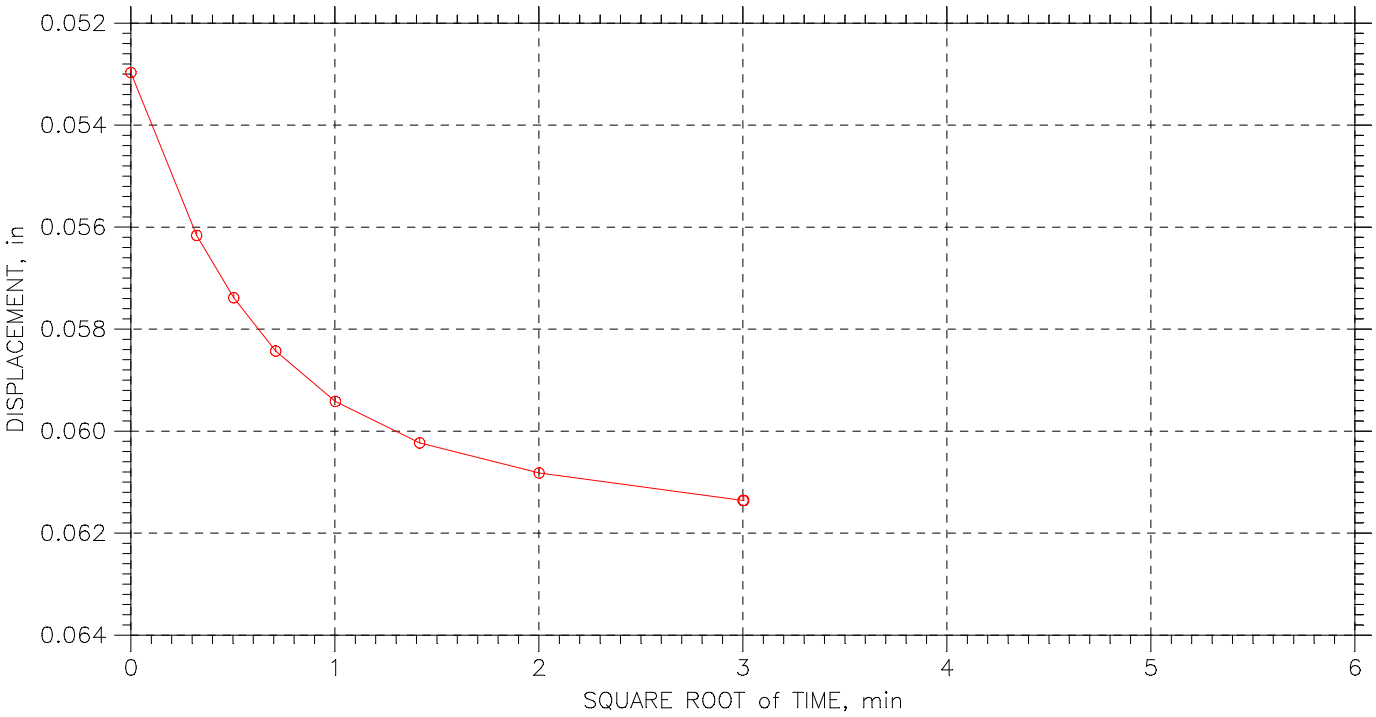
CONSOLIDATION TEST DATA

TIME CURVES

Step: 10 of 17

Stress: 10. tsf





Project: KINGSTON COAL TVA	Location: TN	Project No.: 60095742
Boring No.: 09-402B	Tested By: JDW	Checked By: WPQ
Sample No.: OST-7	Test Date: 3/05/09	Depth: 45.0'-45.5'
Test No.: 5742402BS7C	Sample Type: 3" OST	Elevation: +719.9
Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)		
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435		

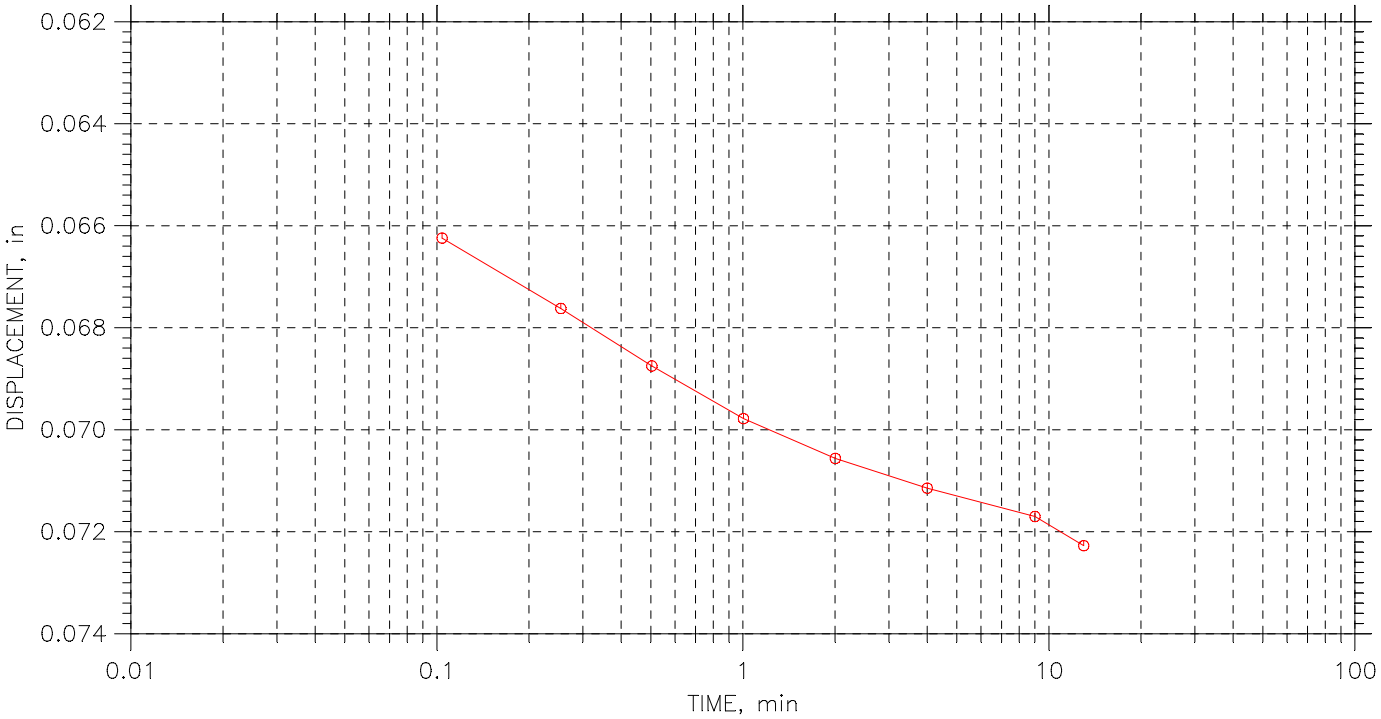
Tue, 02-JUN-2009 16:08:59

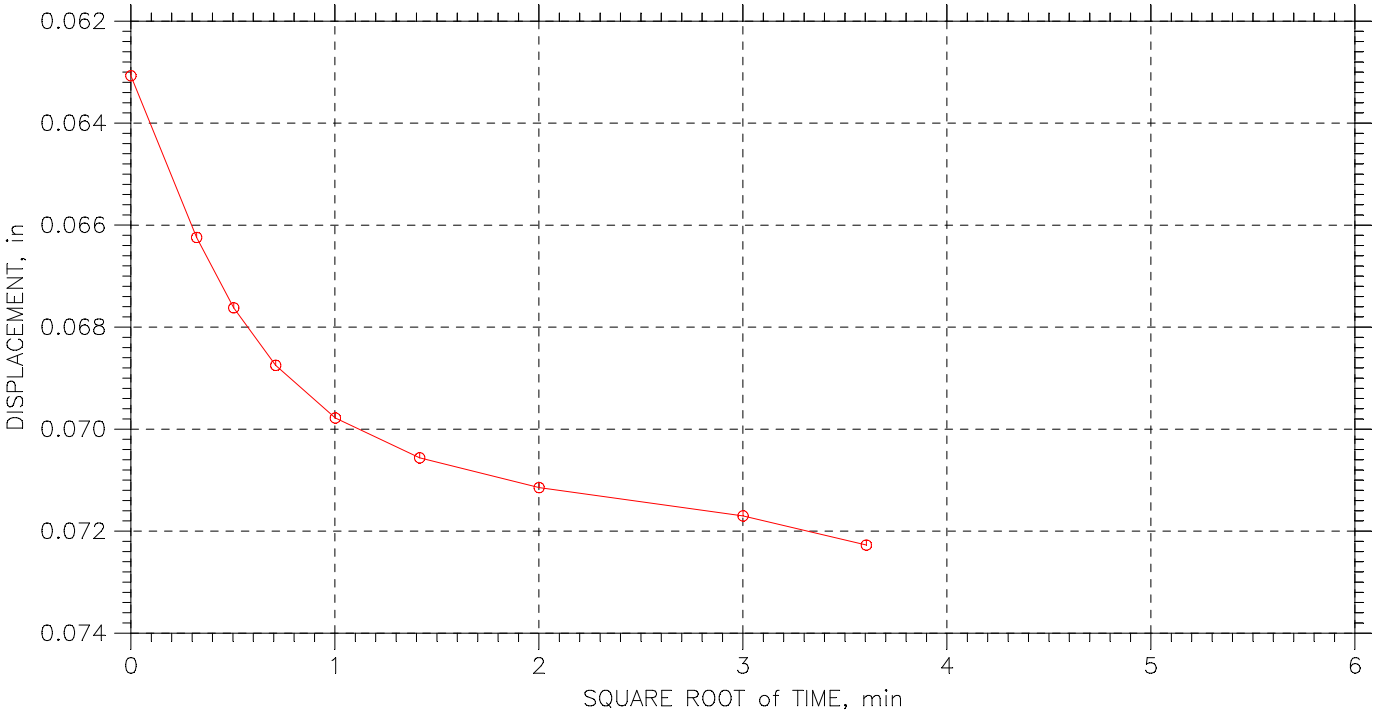
CONSOLIDATION TEST DATA

TIME CURVES

Step: 11 of 17

Stress: 16. tsf





Project: KINGSTON COAL TVA	Location: TN	Project No.: 60095742
Boring No.: 09-402B	Tested By: JDW	Checked By: WPQ
Sample No.: OST-7	Test Date: 3/05/09	Depth: 45.0'-45.5'
Test No.: 5742402BS7C	Sample Type: 3" OST	Elevation: +719.9
Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)		
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435		

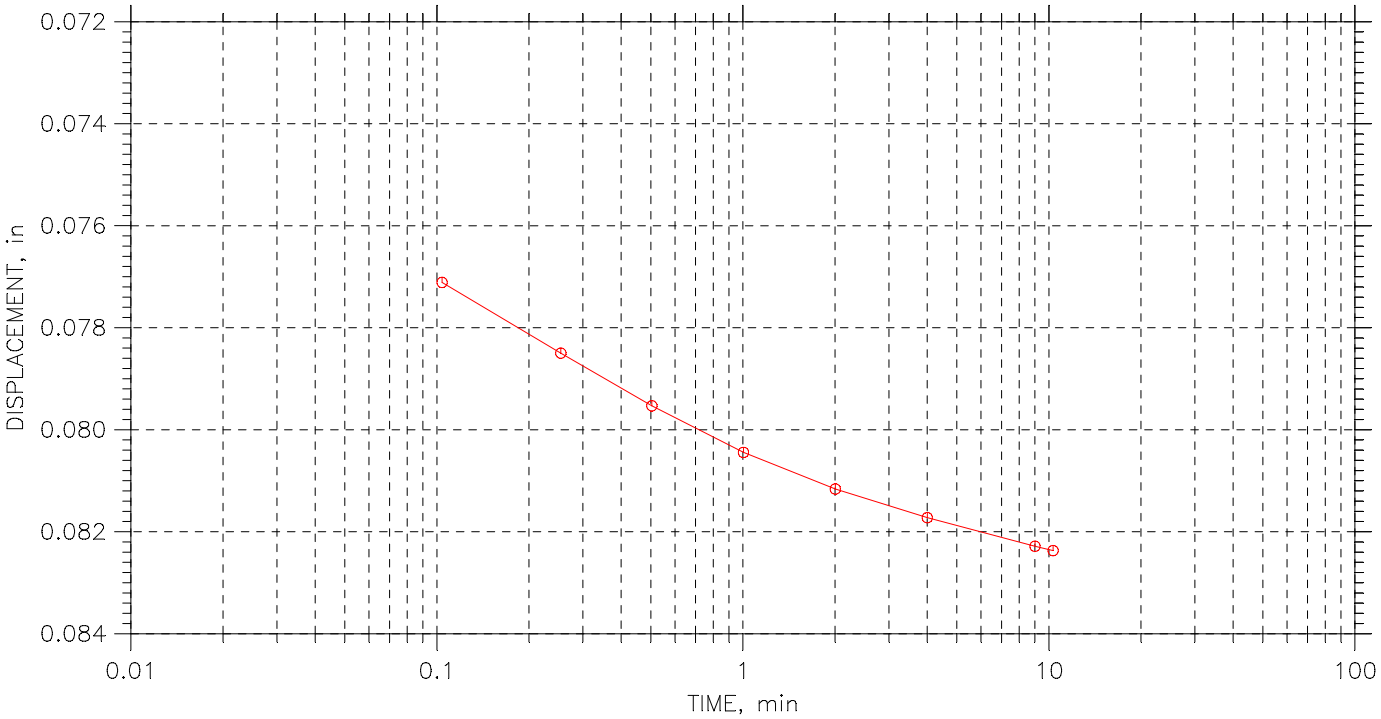
Tue, 02-JUN-2009 16:09:00

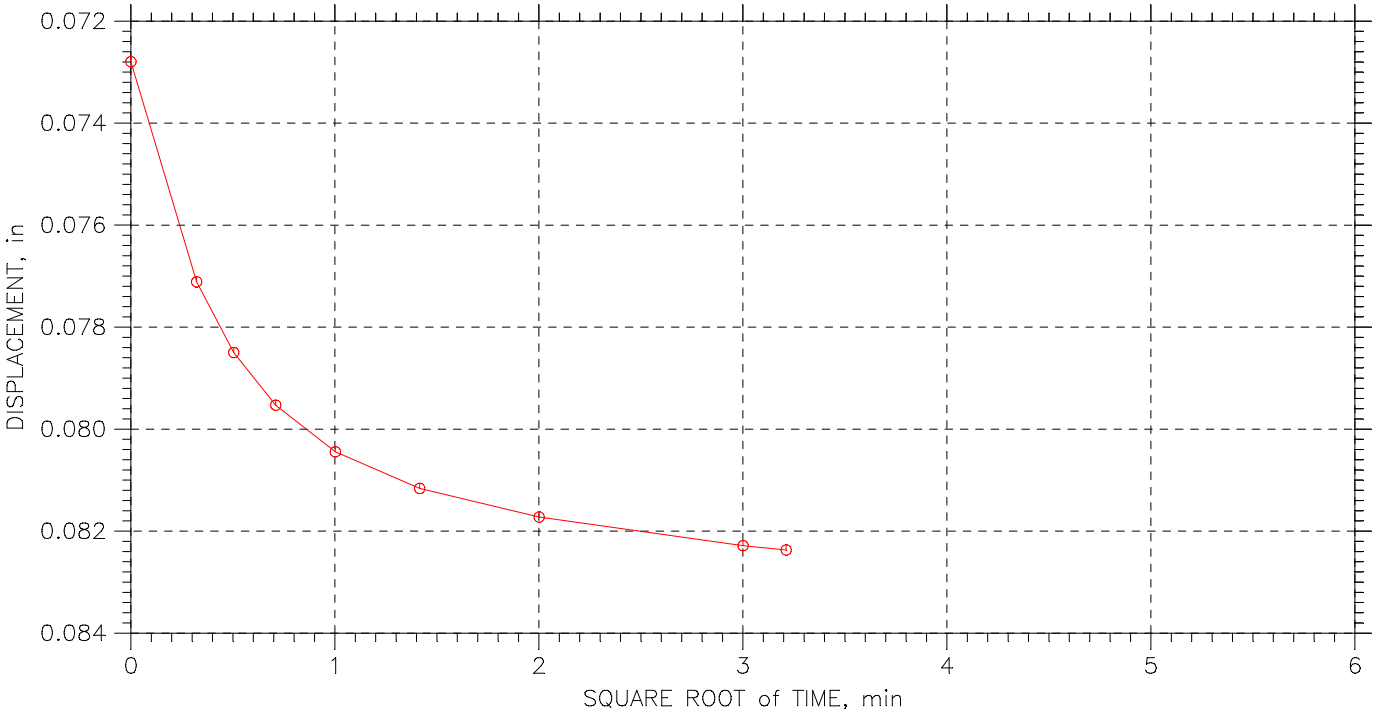
CONSOLIDATION TEST DATA

TIME CURVES

Step: 12 of 17

Stress: 24. tsf





Project: KINGSTON COAL TVA	Location: TN	Project No.: 60095742
Boring No.: 09-402B	Tested By: JDW	Checked By: WPQ
Sample No.: OST-7	Test Date: 3/05/09	Depth: 45.0'-45.5'
Test No.: 5742402BS7C	Sample Type: 3" OST	Elevation: +719.9
Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)		
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435		

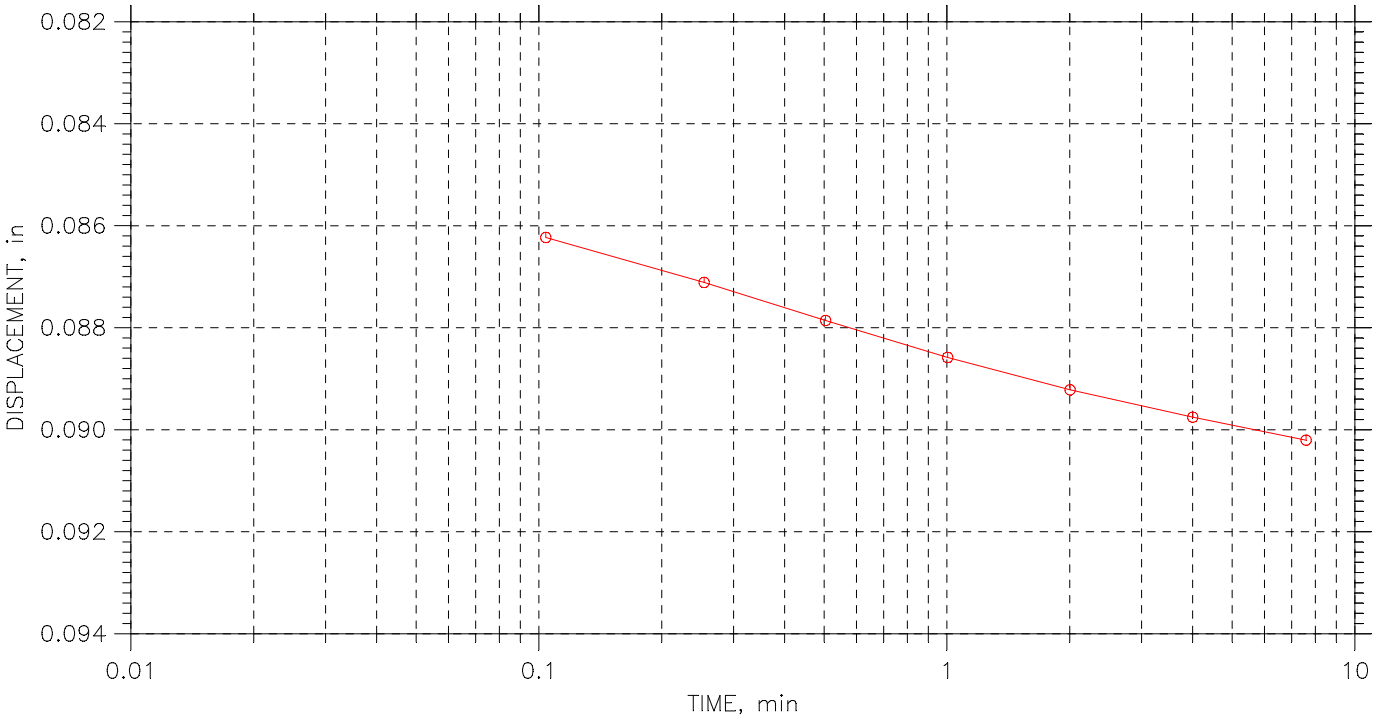
Tue, 02-JUN-2009 16:09:00

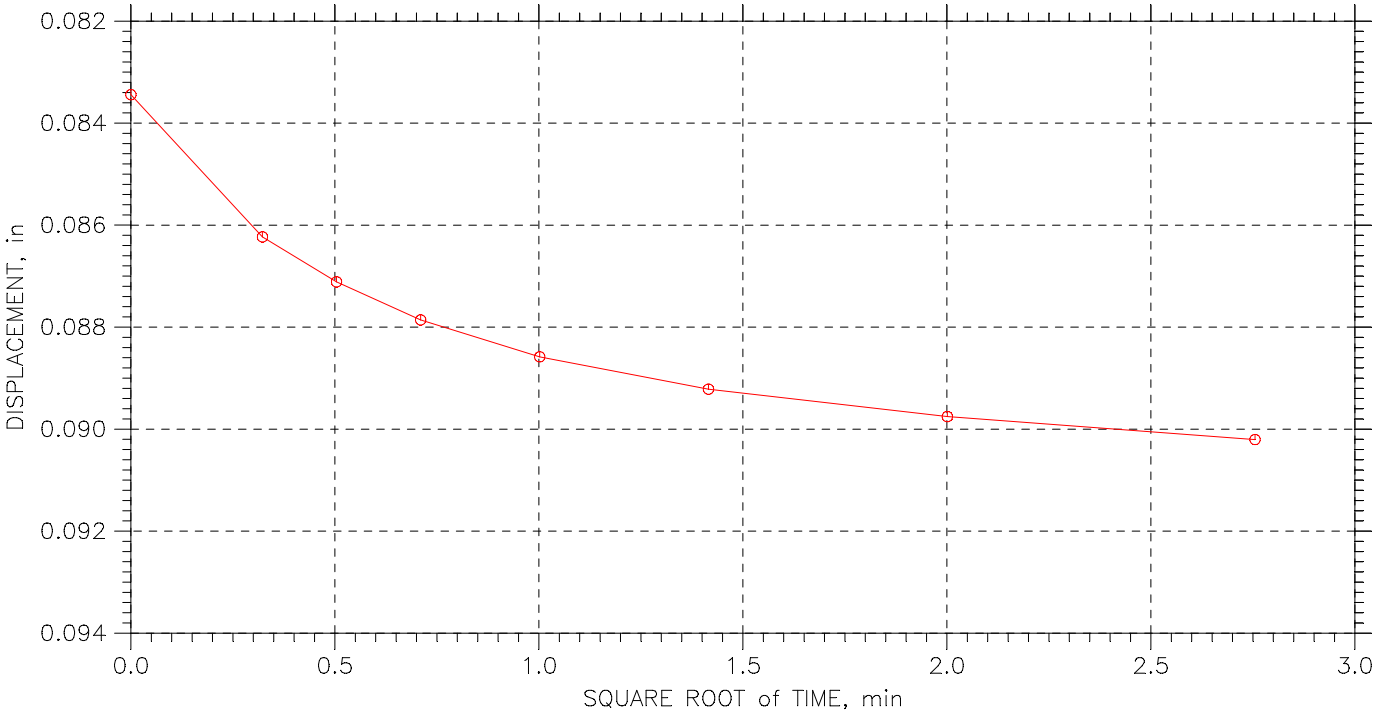
CONSOLIDATION TEST DATA

TIME CURVES

Step: 13 of 17

Stress: 32. tsf





Project: KINGSTON COAL TVA	Location: TN	Project No.: 60095742
Boring No.: 09-402B	Tested By: JDW	Checked By: WPQ
Sample No.: OST-7	Test Date: 3/05/09	Depth: 45.0'-45.5'
Test No.: 5742402BS7C	Sample Type: 3" OST	Elevation: +719.9
Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)		
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435		

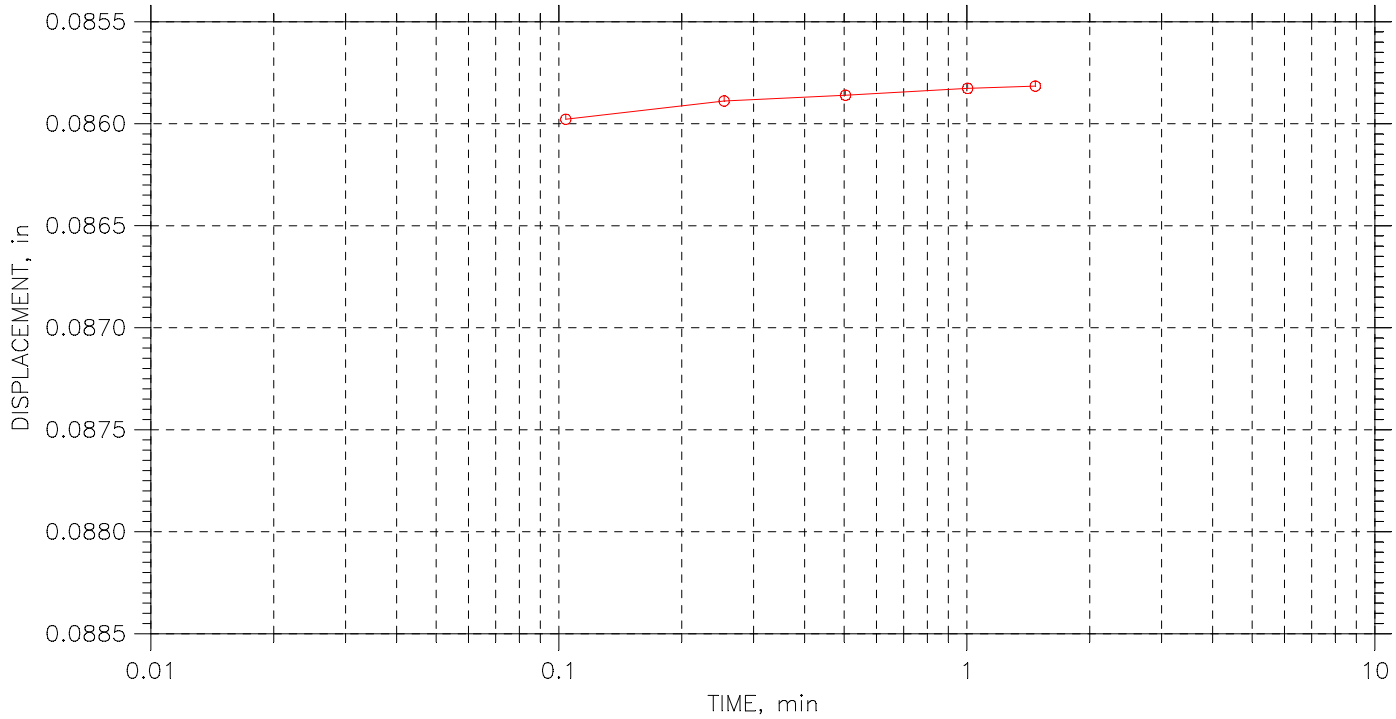
Tue, 02-JUN-2009 16:09:01

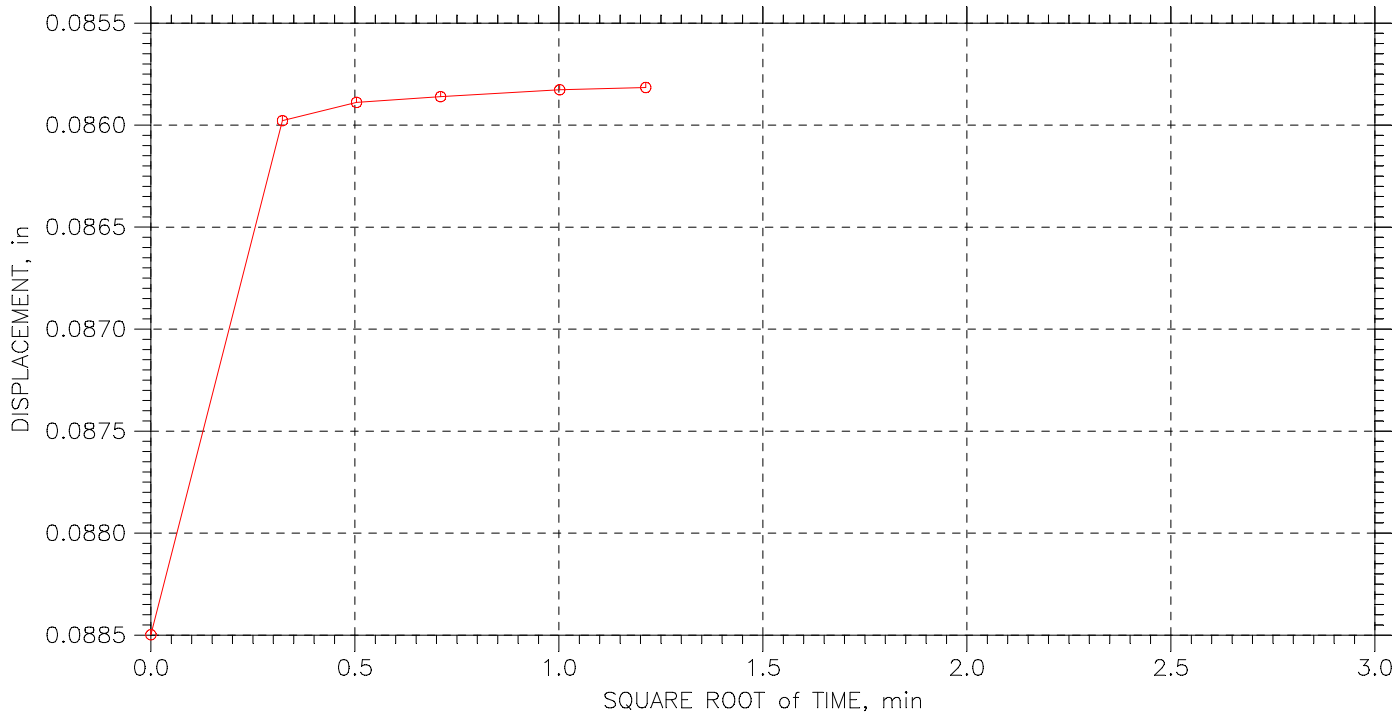
CONSOLIDATION TEST DATA

TIME CURVES

Step: 14 of 17

Stress: 16. tsf





Project: KINGSTON COAL TVA	Location: TN	Project No.: 60095742
Boring No.: 09-402B	Tested By: JDW	Checked By: WPQ
Sample No.: OST-7	Test Date: 3/05/09	Depth: 45.0'-45.5'
Test No.: 5742402BS7C	Sample Type: 3" OST	Elevation: +719.9
Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)		
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435		

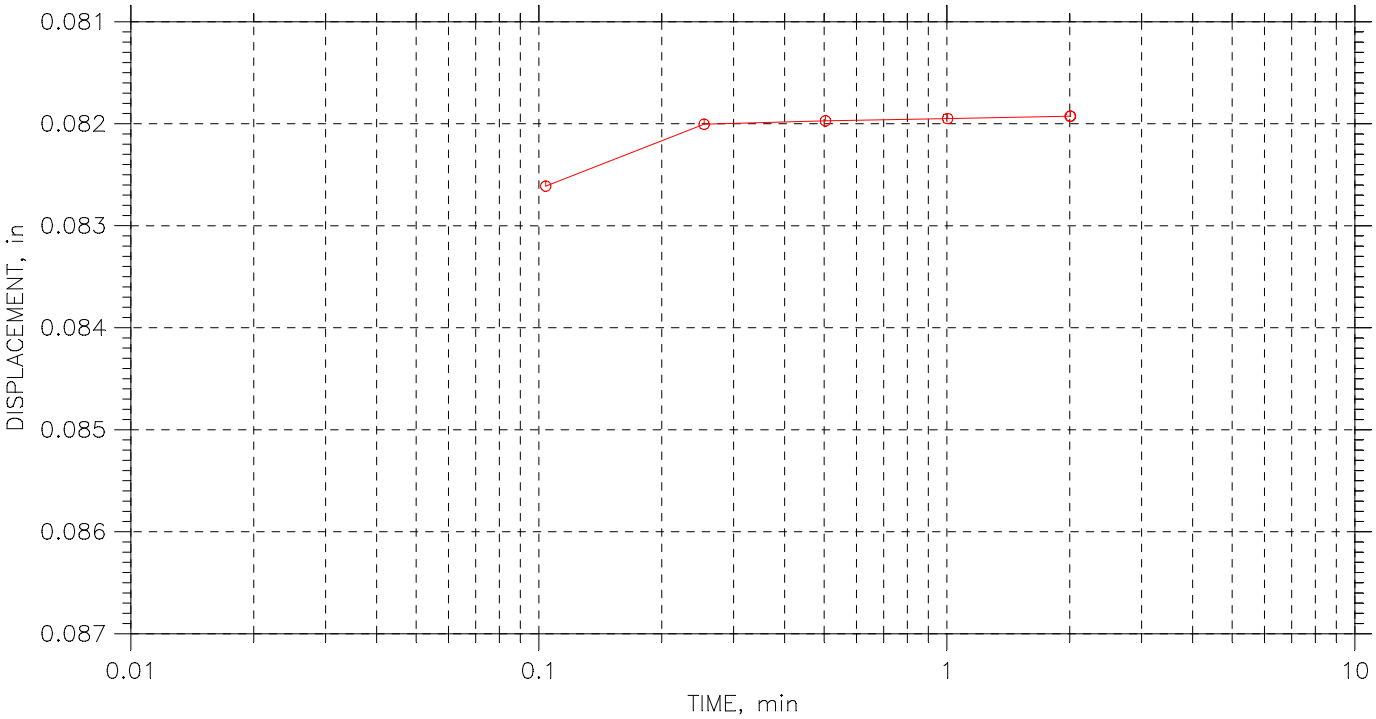
Tue, 02-JUN-2009 16:09:02

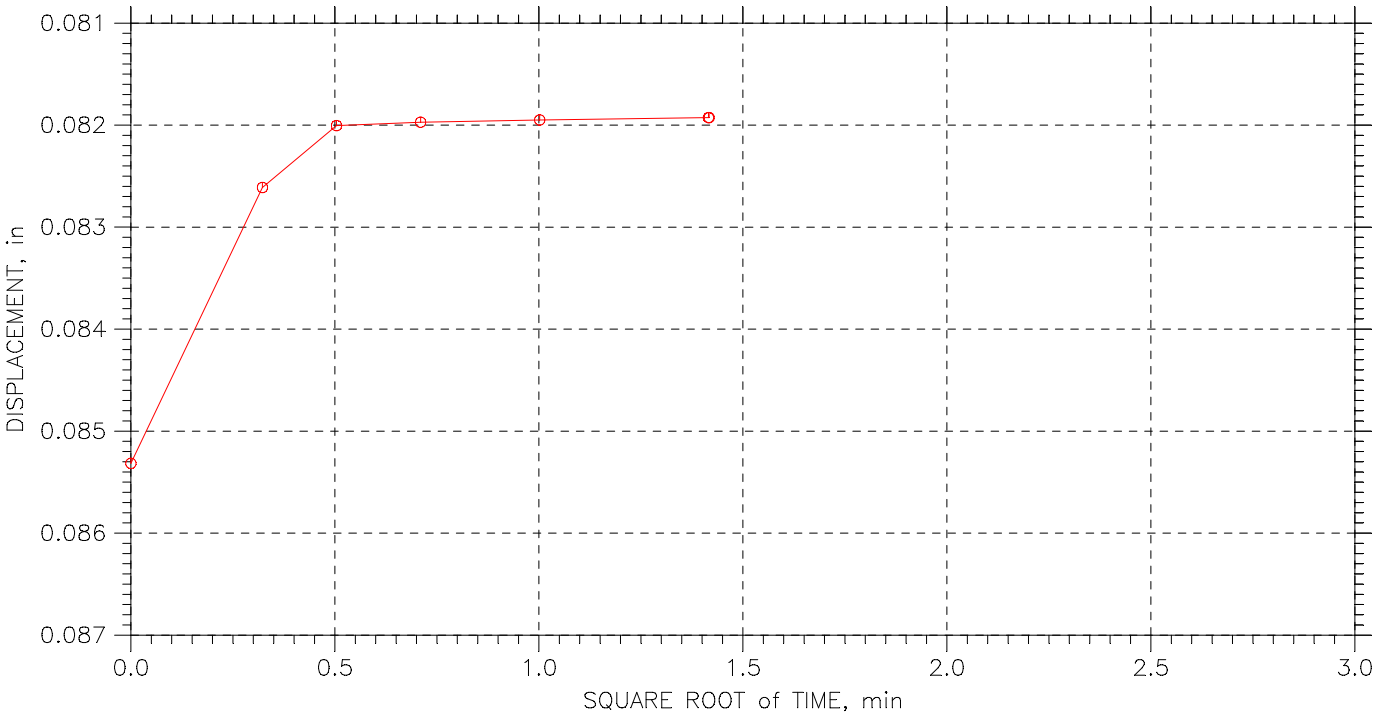
CONSOLIDATION TEST DATA

TIME CURVES

Step: 15 of 17

Stress: 8. tsf





Project: KINGSTON COAL TVA	Location: TN	Project No.: 60095742
Boring No.: 09-402B	Tested By: JDW	Checked By: WPQ
Sample No.: OST-7	Test Date: 3/05/09	Depth: 45.0'-45.5'
Test No.: 5742402BS7C	Sample Type: 3" OST	Elevation: +719.9
Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)		
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435		

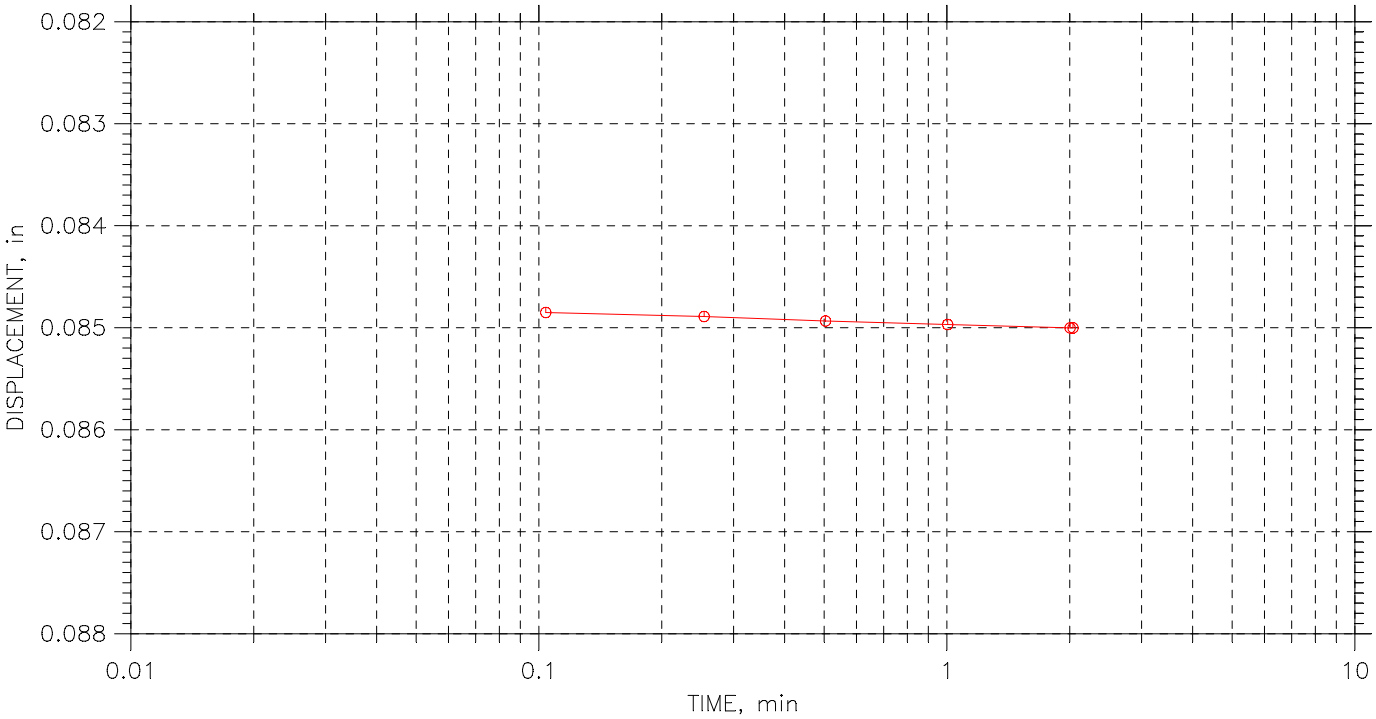
Tue, 02-JUN-2009 16:09:02

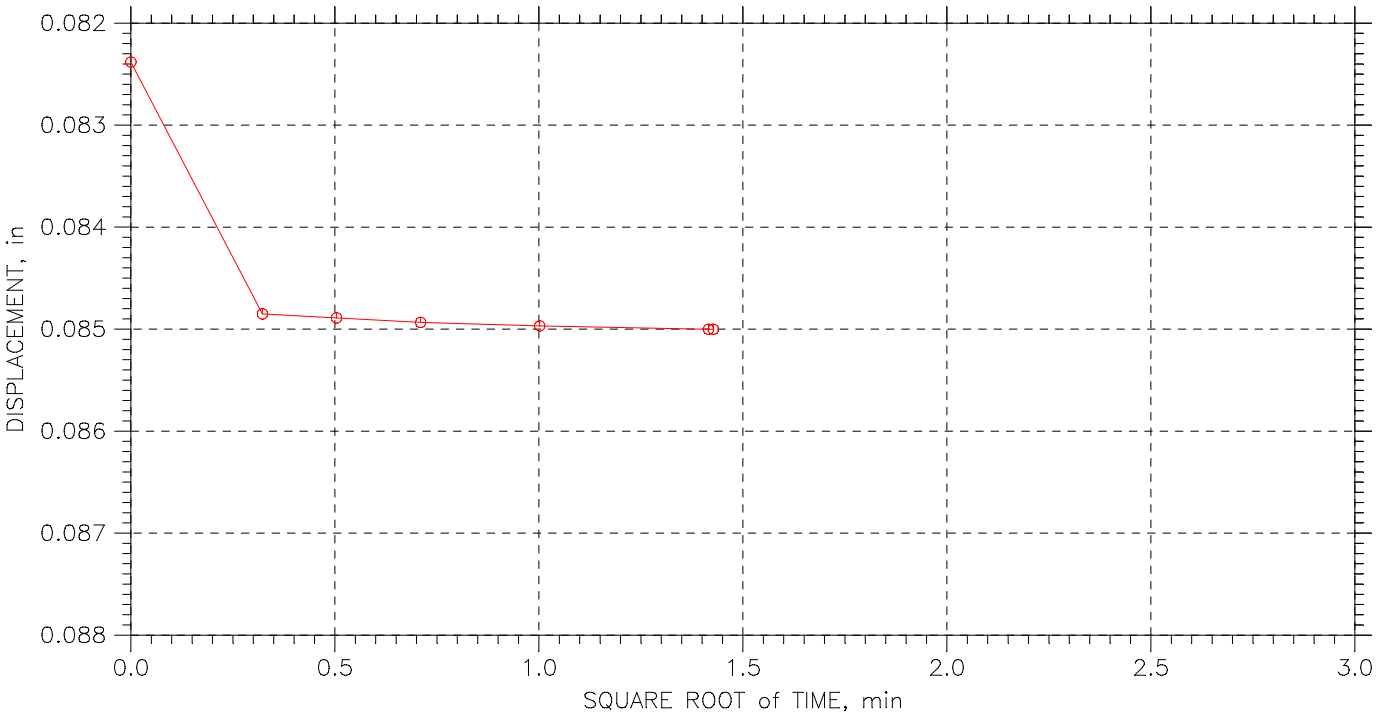
CONSOLIDATION TEST DATA

TIME CURVES

Step: 16 of 17

Stress: 16. tsf





Project: KINGSTON COAL TVA	Location: TN	Project No.: 60095742
Boring No.: 09-402B	Tested By: JDW	Checked By: WPQ
Sample No.: OST-7	Test Date: 3/05/09	Depth: 45.0'-45.5'
Test No.: 5742402BS7C	Sample Type: 3" OST	Elevation: +719.9
Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)		
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435		

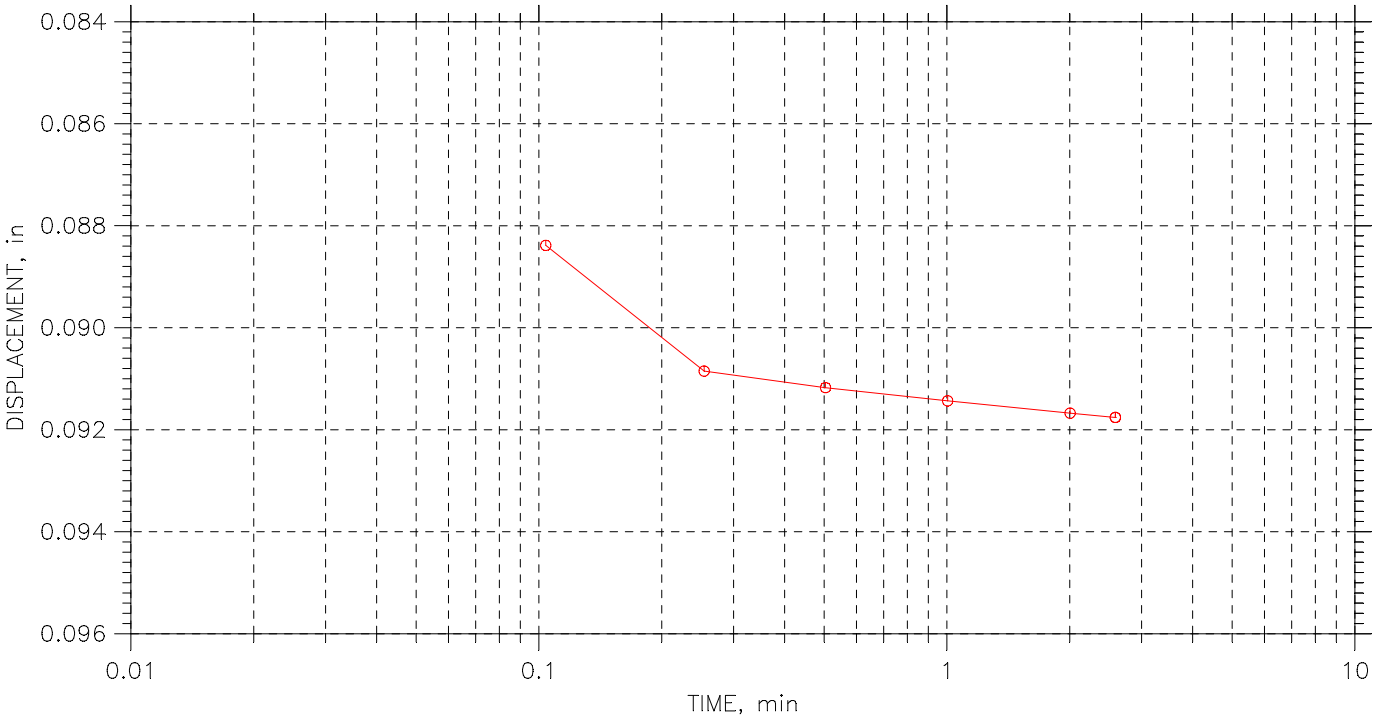
Tue, 02-JUN-2009 16:09:03

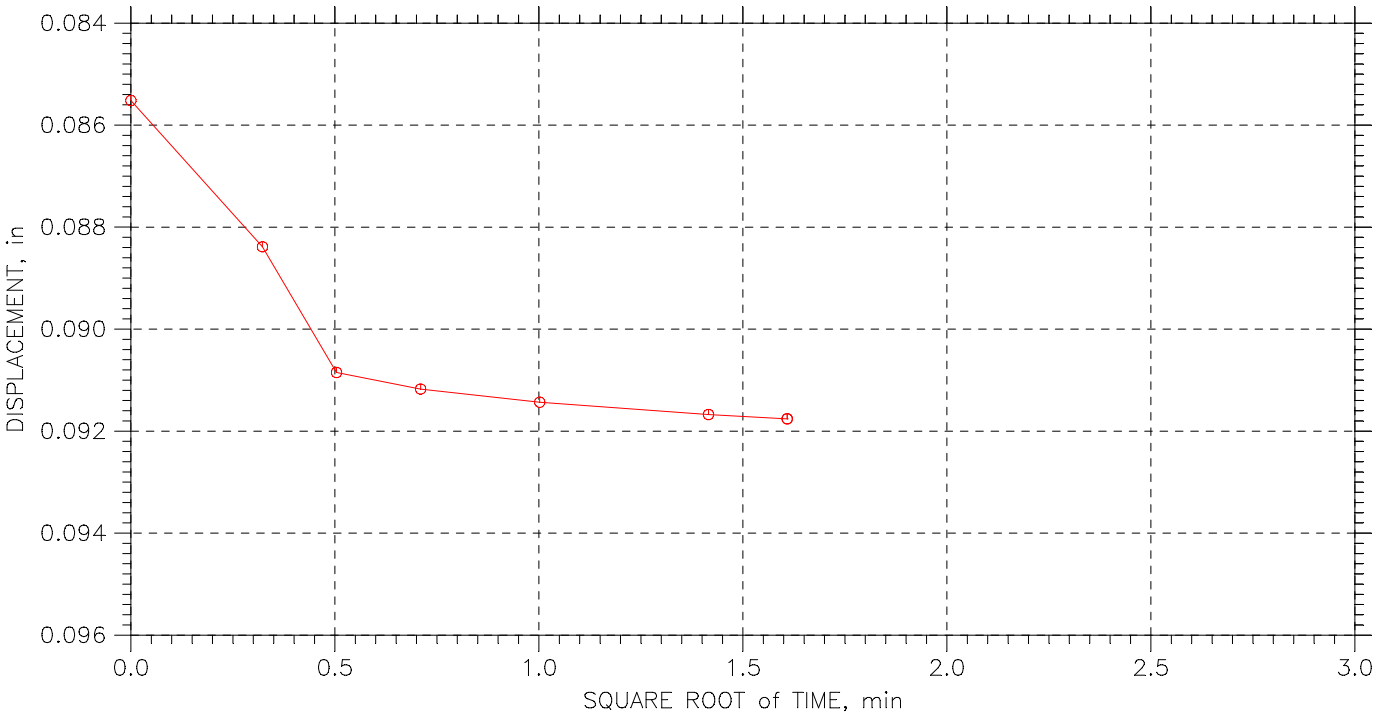
CONSOLIDATION TEST DATA

TIME CURVES

Step: 17 of 17

Stress: 32. tsf





Project: KINGSTON COAL TVA	Location: TN	Project No.: 60095742
Boring No.: 09-402B	Tested By: JDW	Checked By: WPQ
Sample No.: OST-7	Test Date: 3/05/09	Depth: 45.0'-45.5'
Test No.: 5742402BS7C	Sample Type: 3" OST	Elevation: +719.9
Description: SILTY F-M SAND, TRACE CLAY - GRAY (SM)		
Remarks: Pc = 3.30 tsf Cc = 0.120 Ccr = 0.020 TEST PERFORMED AS PER ASTM D 2435		

Tue, 02-JUN-2009 16:09:04