



Elastic Moduli of Intact Rock Core Specimens in Uniaxial Compression
ASTM D7012-10

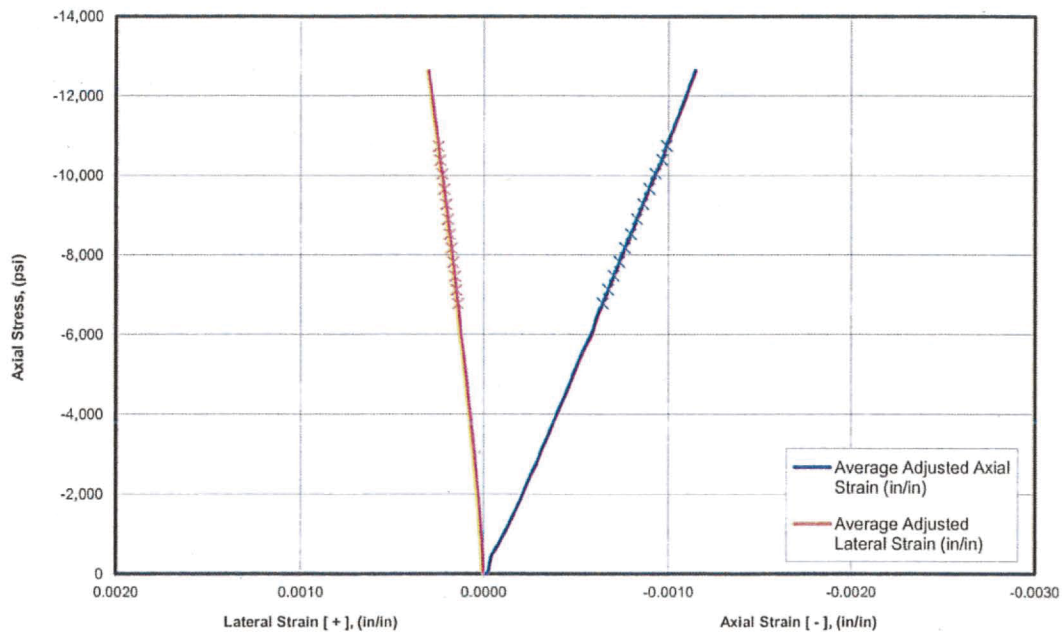
Project Name: Clinch River SMR
Project Number: 6468-13-1072

Sample No.: L7-27 H
Boring No.: MP-421
Run. No.: N/A
Sample Depth (ft): 225.6-226.2

Tested By: Mike Hamilton *mt*
Test Date: 1/21/2014 *1/31/14*
Reviewed By: Allen Cottingham *MAC*
Review Date: 1/29/2014 *1-31-14*

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Rock Type	(See boring log)
Moisture Condition	Laboratory Air-Dry
Specimen Diameter, (in)	2.39
Specimen Length, (in)	5.14
Length/Diameter Ratio	2.2
Specimen Conforms with Dimensional Requirements?	No ⁽¹⁾
As-Tested Unit Weight, (pcf)	175.1 175 <i>3/6/14</i>
Loading Rate (lb/sec)	160
Test Duration to Failure, (min)	10.7
Uniaxial Compressive Strength, (psi)	21,790
Type of Break	Columnar
Young's Modulus, (psi)	11,290,000
Poisson's Ratio	0.30



Comments:

Young's Modulus and Poisson's Ratio determined using linear least-squares of stress-strain data from 30% to 50% of the uniaxial compressive strength (data points used are indicated on the figure above).

Axial Strain is negative; Lateral Strain is positive. Load direction with respect to lithology: Vertical

⁽¹⁾ Specimen did not meet end flatness requirements of ASTM D4543-08. Authorization to proceed with test received from John Damm.



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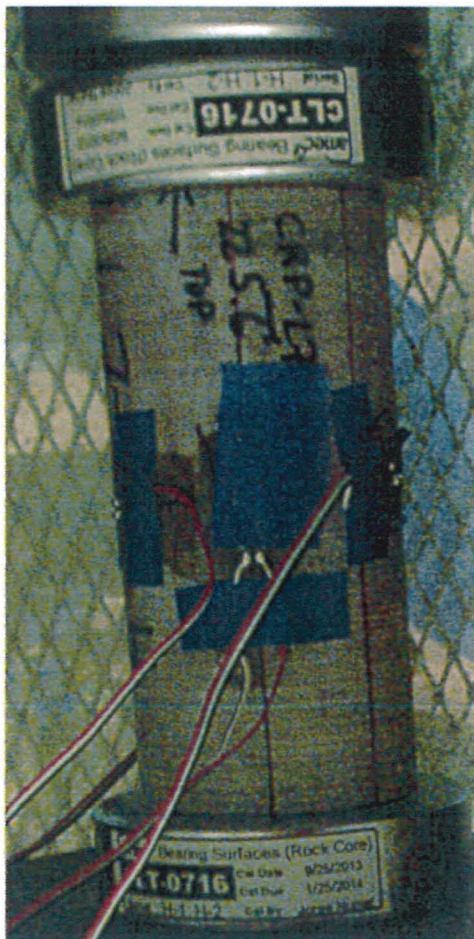
Project Name: Clinch River SMR
Project Number: 6468-13-1072

Sample No.: L7-27 H
Boring No.: MP-421
Run. No.: N/A
Sample Depth (ft): 225.6-226.2

Tested By: Mike Hamilton *mh*
Test Date: 1/21/2014 *1/31/14*
Reviewed By: Allen Cottingham *MAC*
Review Date: 1/29/2014 *1-29-14*

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Specimen Prior to Testing
("MP-421 L7-27 H before test.jpg"):



Specimen After Testing
("MP-421 L7-27 H after test.jpg"):



Comments:



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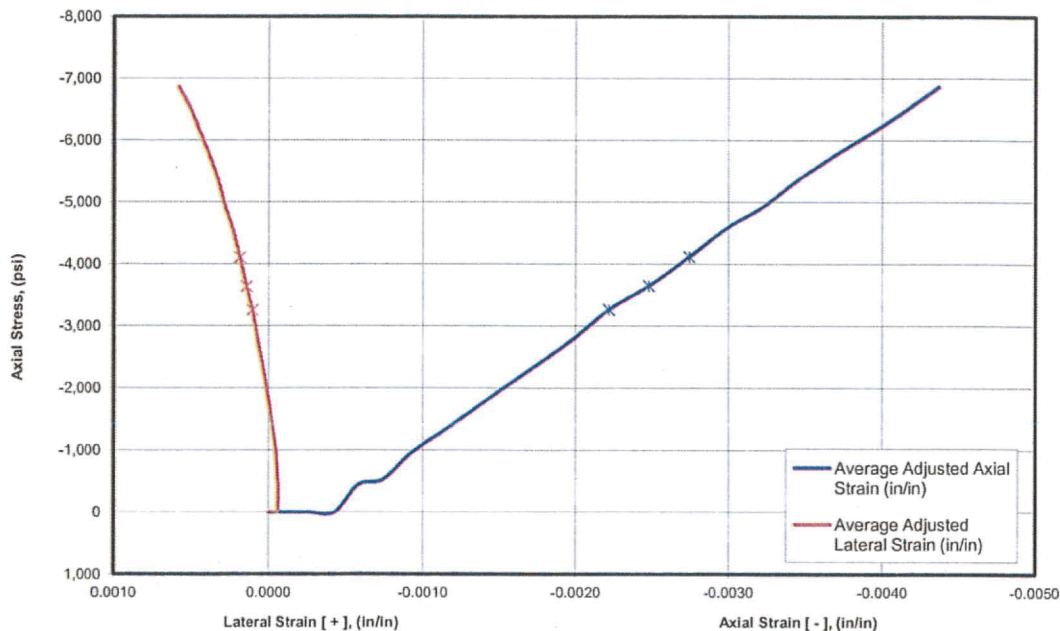
Project Name: Clinch River SMR
Project Number: 6468-13-1072

Sample No.: L7-31 BH
Boring No.: MP-423
Run. No.: N/A
Sample Depth (ft): 81.5-82.5

Tested By: Mike Hamilton *mh*
Test Date: 1/21/2014 *1/31/14*
Reviewed By: Allen Cottingham *ABC*
Review Date: 1/29/2014 *1-31-14*

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Rock Type	(See boring log)
Moisture Condition	Laboratory Air-Dry
Specimen Diameter, (in)	2.37
Specimen Length, (in)	4.98
Length/Diameter Ratio	2.1
Specimen Conforms with Dimensional Requirements?	No ⁽¹⁾
As-Tested Unit Weight, (pcf)	165.5 166 <i>Jan 31/14</i>
Loading Rate (lb/sec)	160
Test Duration to Failure, (min)	4.7
Uniaxial Compressive Strength, (psi)	6,960
Type of Break	Columnar
Young's Modulus, (psi)	1,620,000
Poisson's Ratio	0.16



Comments:

Young's Modulus and Poisson's Ratio determined using linear least-squares of stress-strain data from 40% to 60% of the uniaxial compressive strength (data points used are indicated on the figure above).

Axial Strain is negative; Lateral Strain is positive. Load direction with respect to lithology: Vertical

⁽¹⁾ Specimen did not meet End Flatness requirements of ASTM D4543-08. Authorization to proceed with test received from John Damm.



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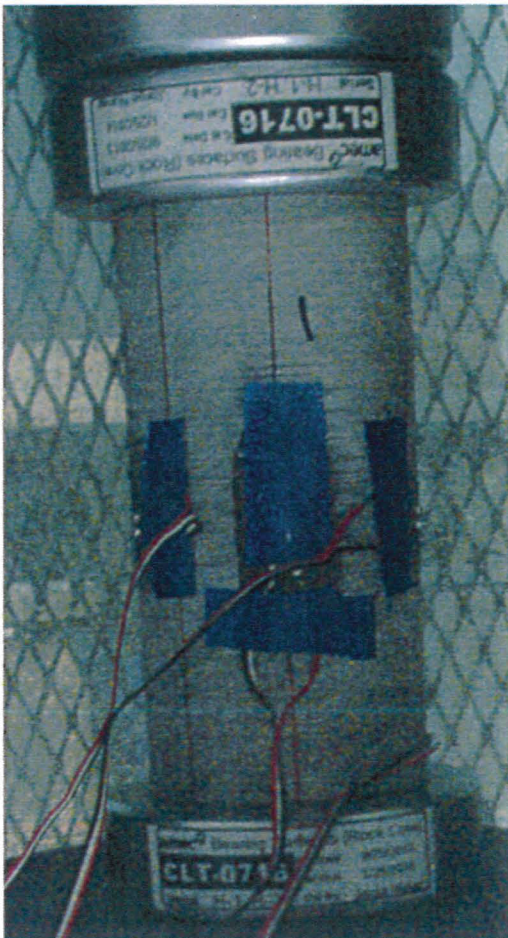
Project Name: Clinch River SMR
Project Number: 6468-13-1072

Sample No.: L7-31 BH
Boring No.: MP-423
Run. No.: N/A
Sample Depth (ft): 81.5-82.5

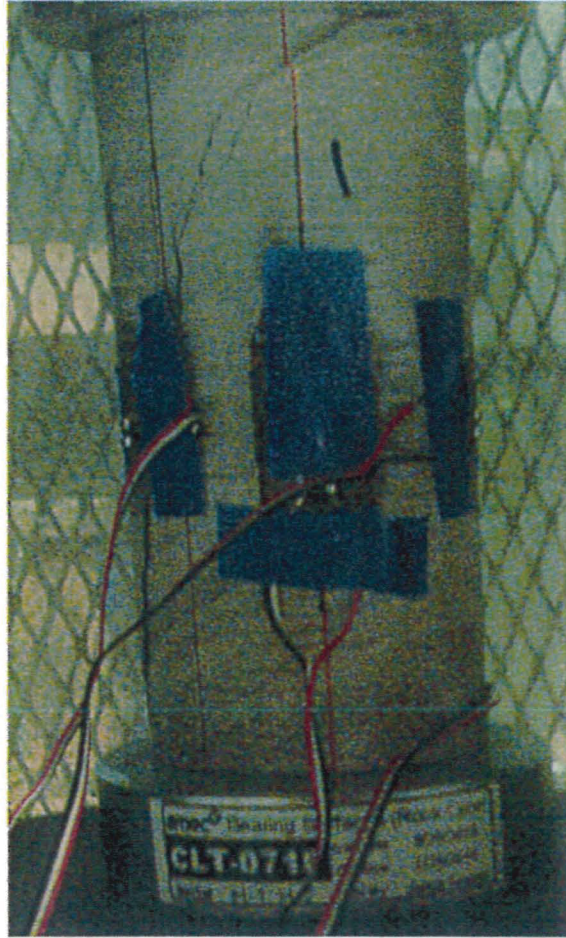
Tested By: Mike Hamilton *MH*
Test Date: 1/21/2014 *1/31/14*
Reviewed By: Allen Cottingham *MAC*
Review Date: 1/29/2014 *1-31-14*

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Specimen Prior to Testing
("MP-423 L7-31 BH before test.jpg"):



Specimen After Testing
("MP-423 L7-31 BH after test (2).jpg"):



Comments: