

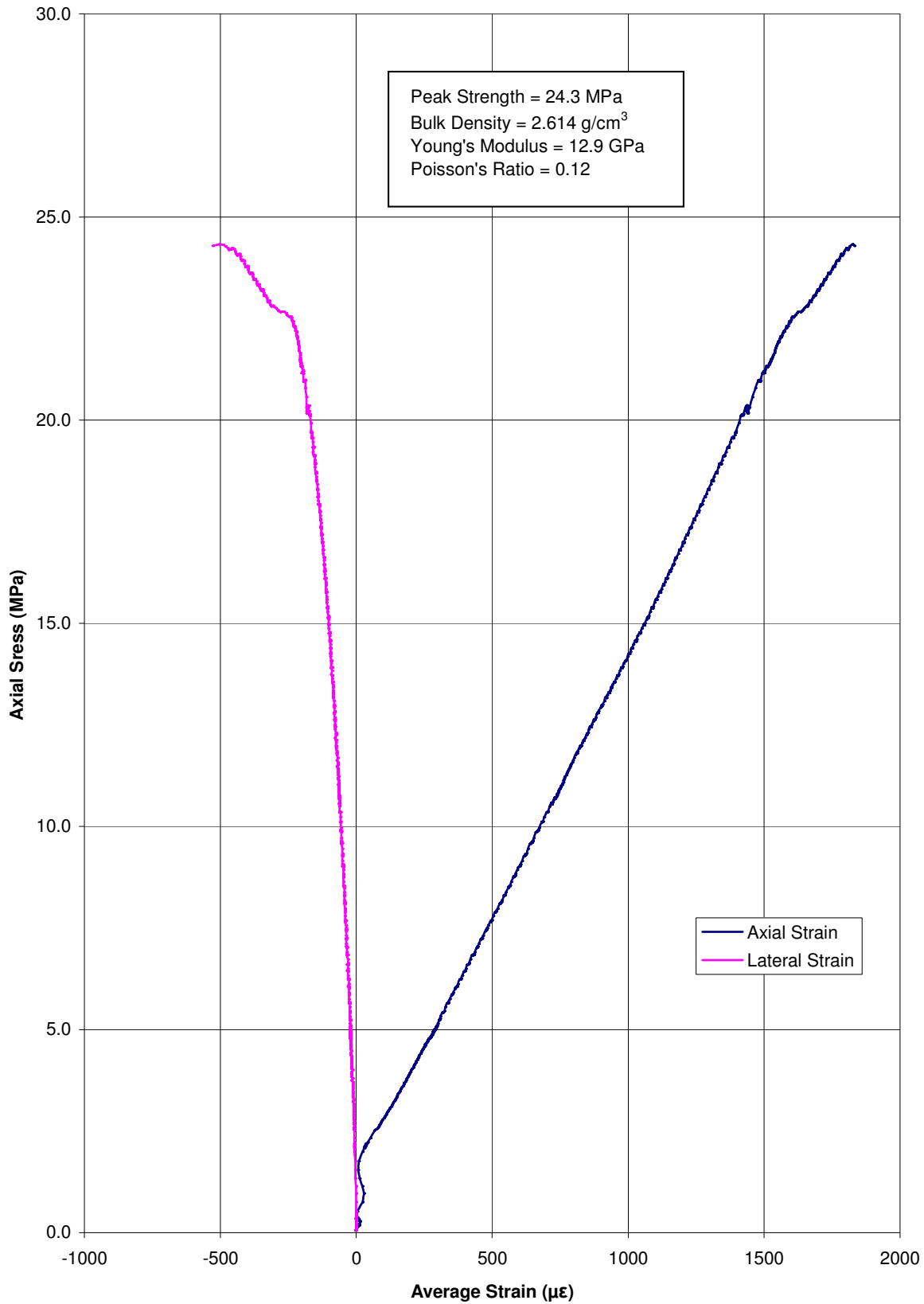
SAMPLE: AND09-03-02



Length: 112.13 mm
Diameter: 45.16 mm
Density: 2.614 g/cm³
Peak Strength: 24.3 MPa
Young's Modulus: 12.9 GPa
Poisson's Ratio: 0.12
Failure Cause: Weakness Plane?



AND09-03-02 Stress vs. Strain



SAMPLE: AND09-03-03



Length: 96.76 mm

Diameter: 45.06 mm

Density: 2.592 g/cm³

Peak Strength: 26.7 MPa

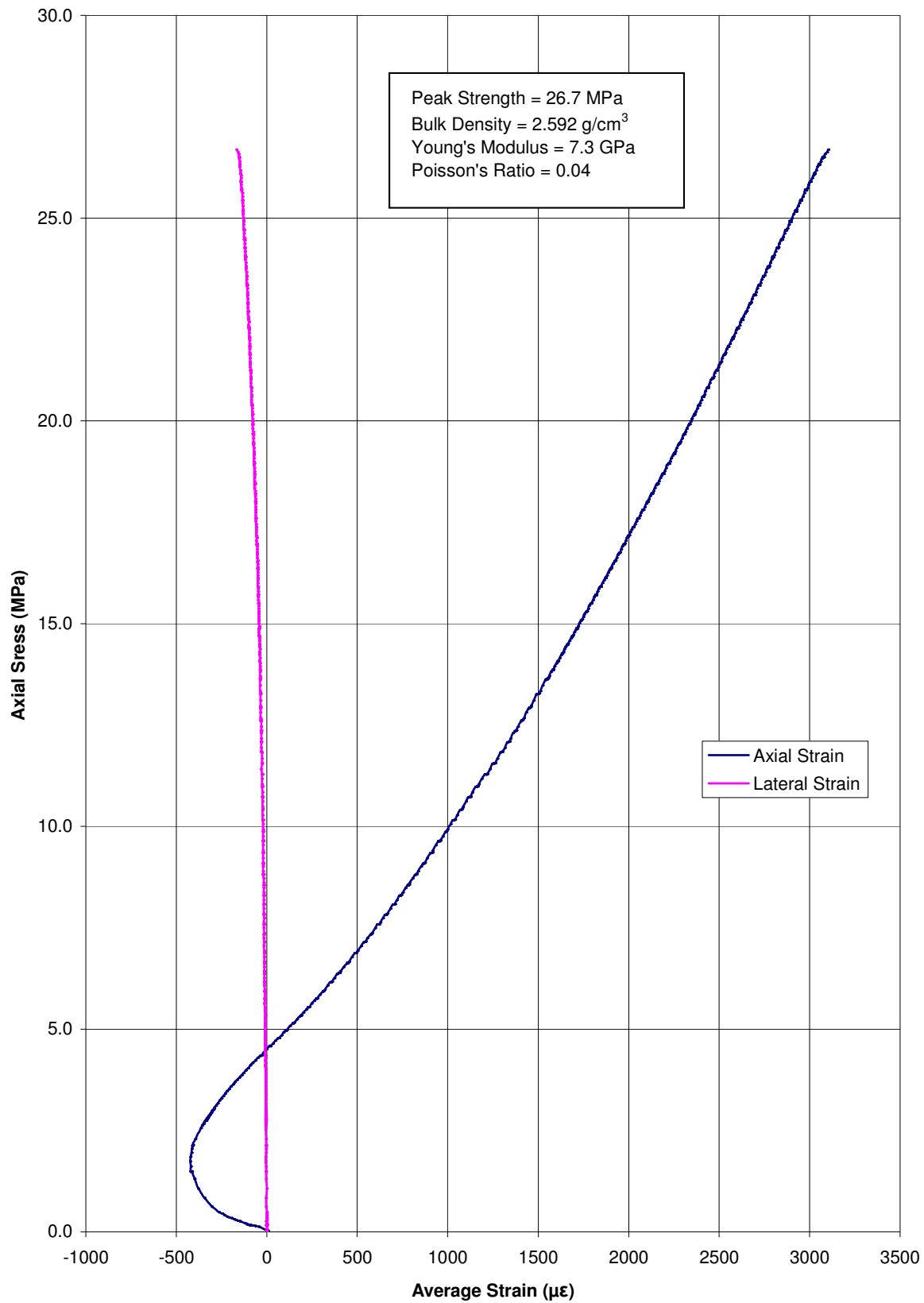
Young's Modulus: 7.3 GPa

Poisson's Ratio: 0.04

Failure Cause: Microfracture



AND09-03-03 Stress vs. Strain



SAMPLE: AND09-03-04



Length: 90.03 mm

Diameter: 45.16 mm

Density: 2.628 g/cm³

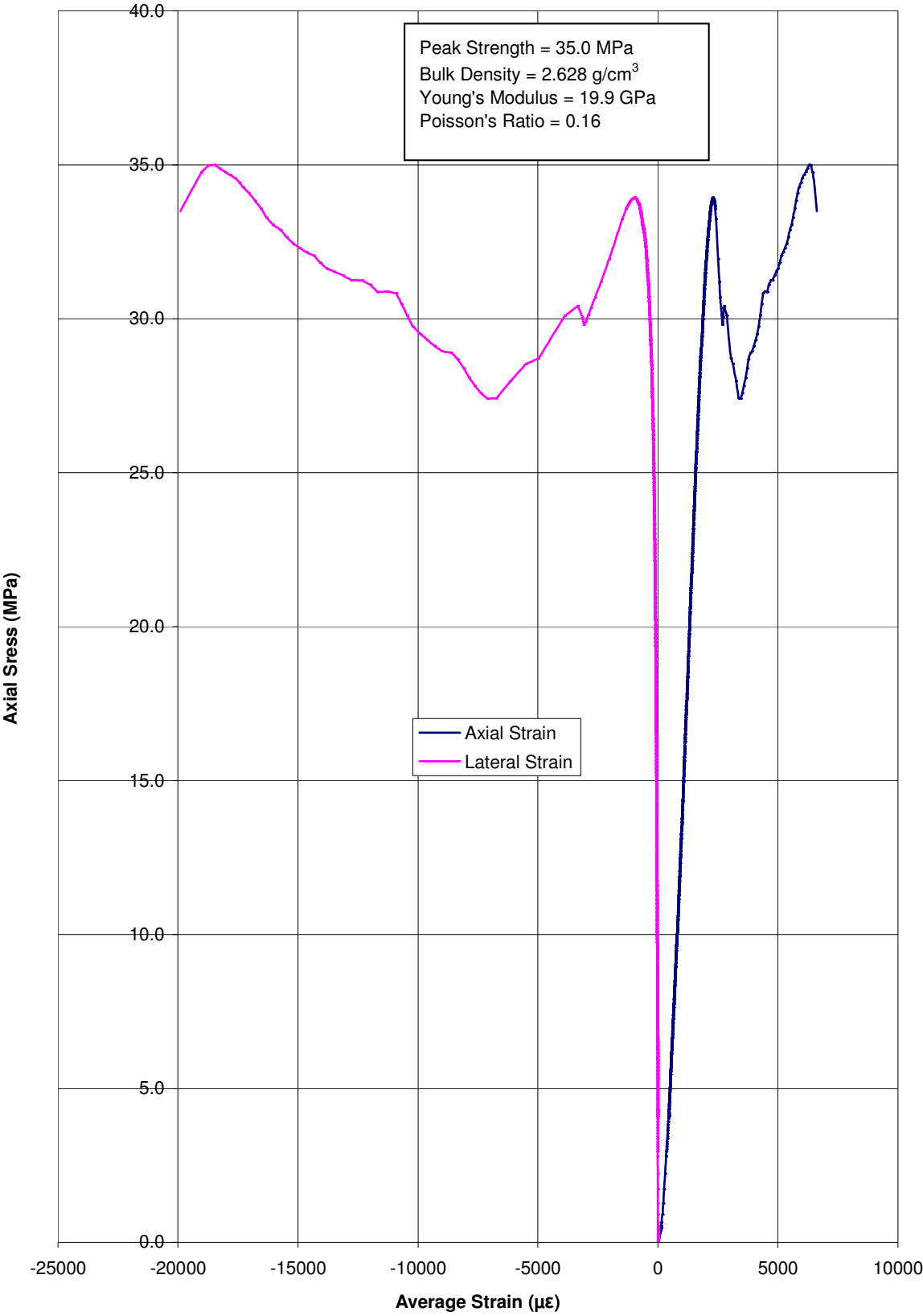
Peak Strength: 35.0 MPa

Young's Modulus: 19.9 GPa

Poisson's Ratio: 0.16

Failure Cause: Intact Rock

AND09-03-04 Stress vs. Strain



SAMPLE: CZ09-01-04



Length: 108.77 mm

Diameter: 45.43 mm

Density: 2.801 g/cm³

Peak Strength: 61.0 MPa

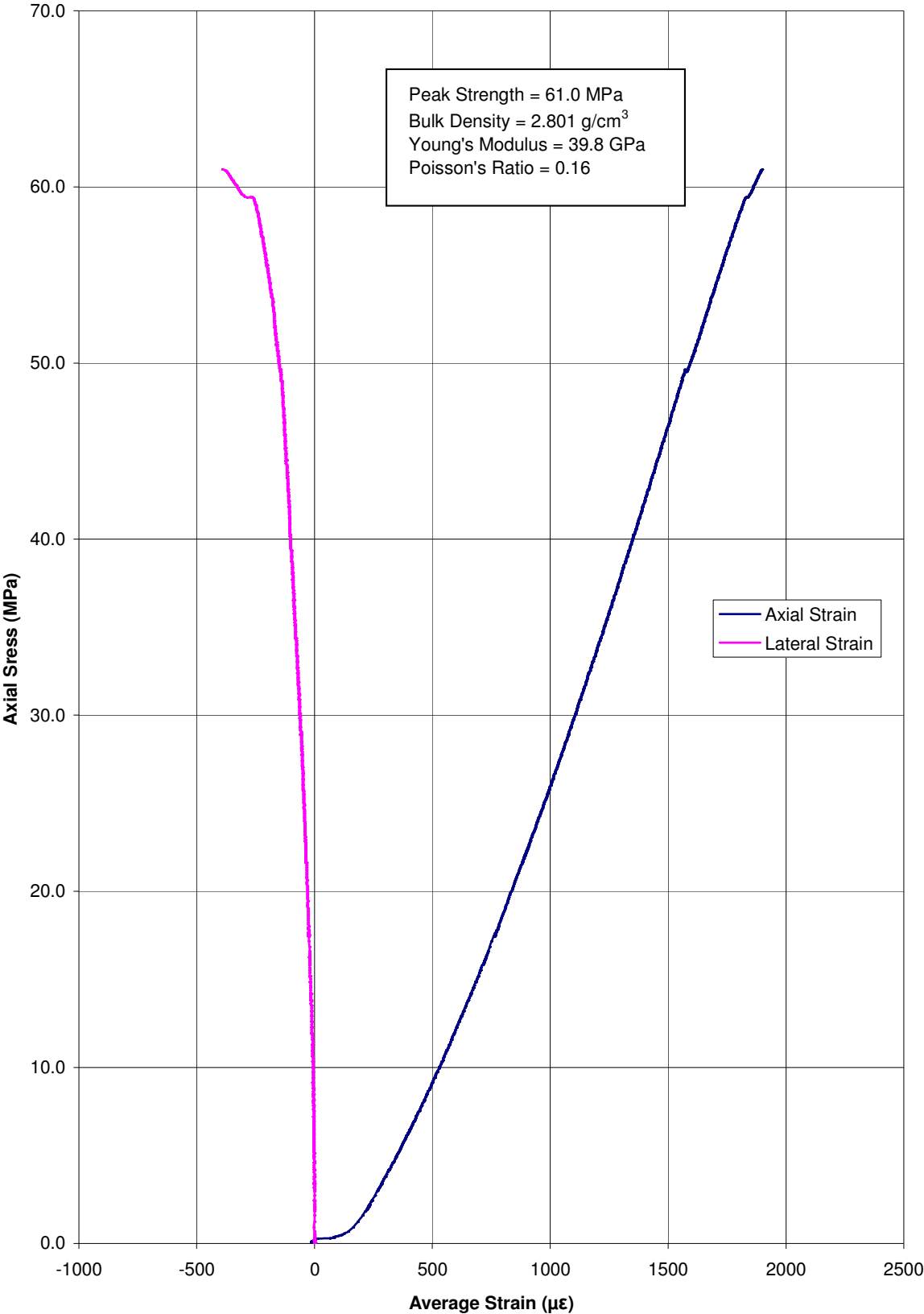
Young's Modulus: 39.8 GPa

Poisson's Ratio: 0.16

Failure Cause: Intact Rock



CZ09-01-04 Stress vs. Strain



SAMPLE: CZ09-01-05



Diameter: 45.4 mm

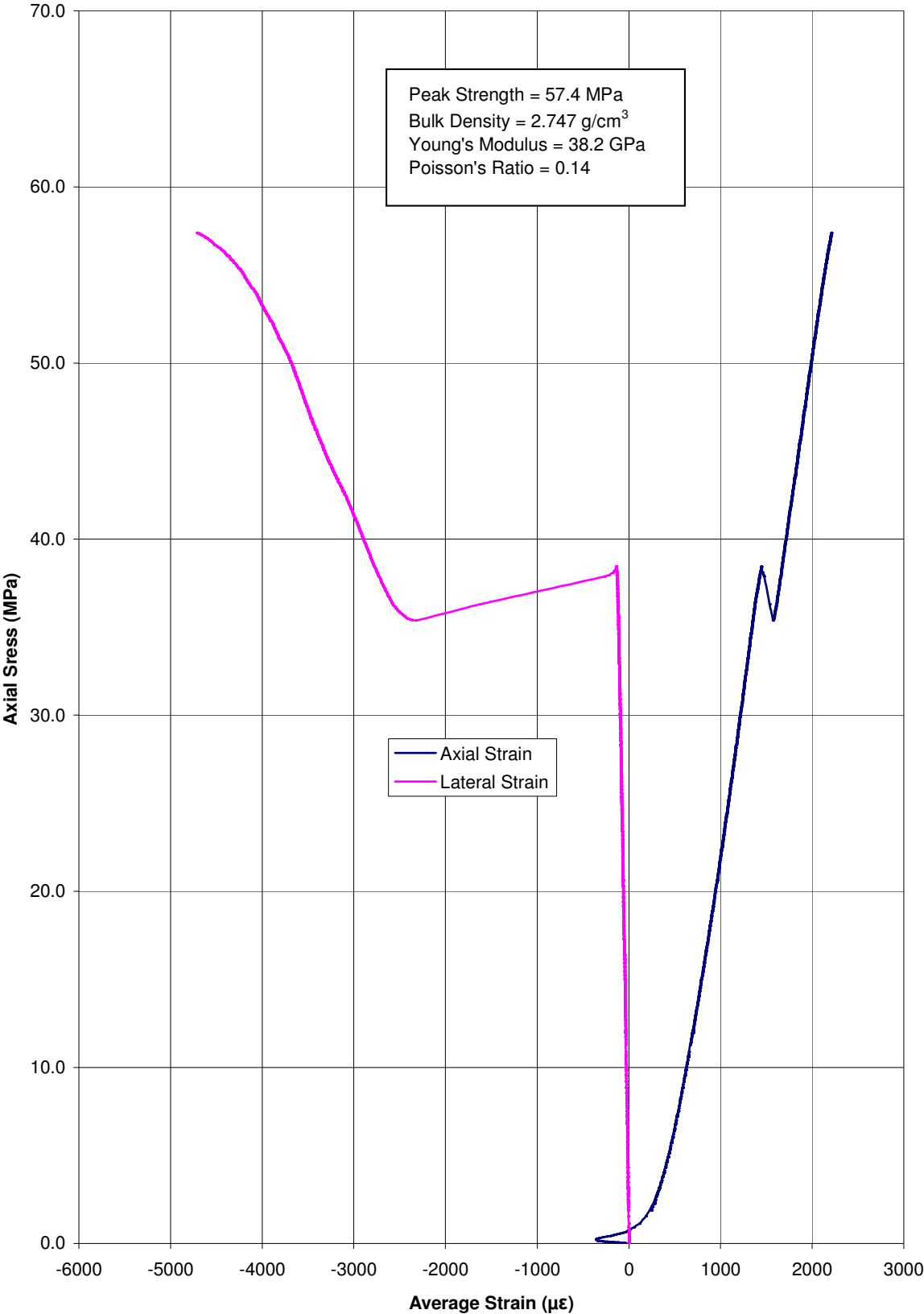
Peak Strength: 57.4 MPa

Young's Modulus: 38.2 GPa

Poisson's Ratio: 0.14

Failure Cause: Intact Rock

CZ09-01-05 Stress vs. Strain



SAMPLE: END09-03-03



Length: 108.99 mm

Diameter: 47.78 mm

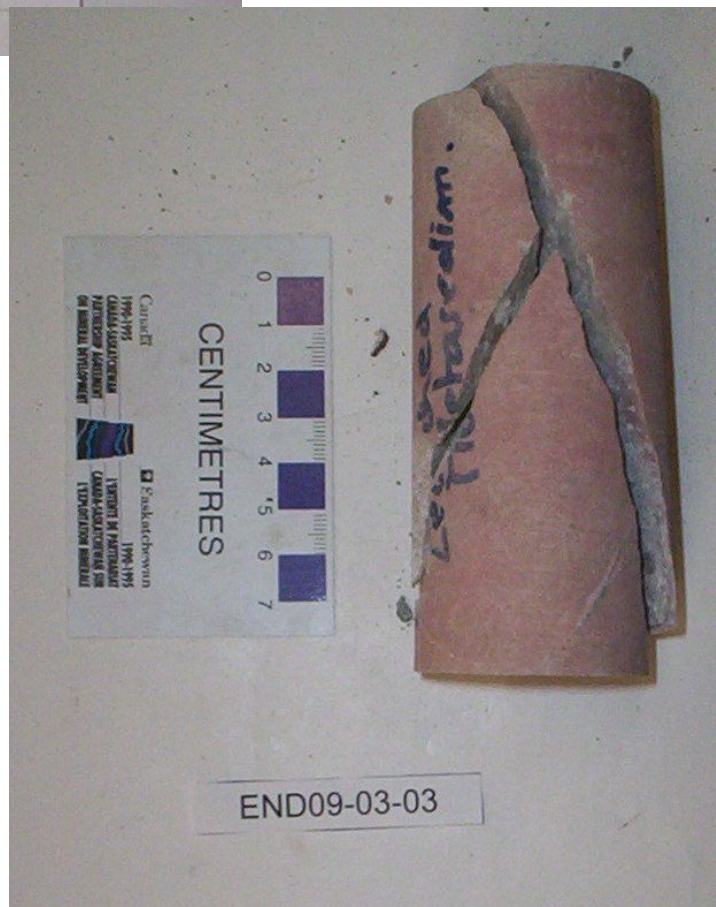
Density: 2.373 g/cm^3

Peak Strength: 7.2 MPa

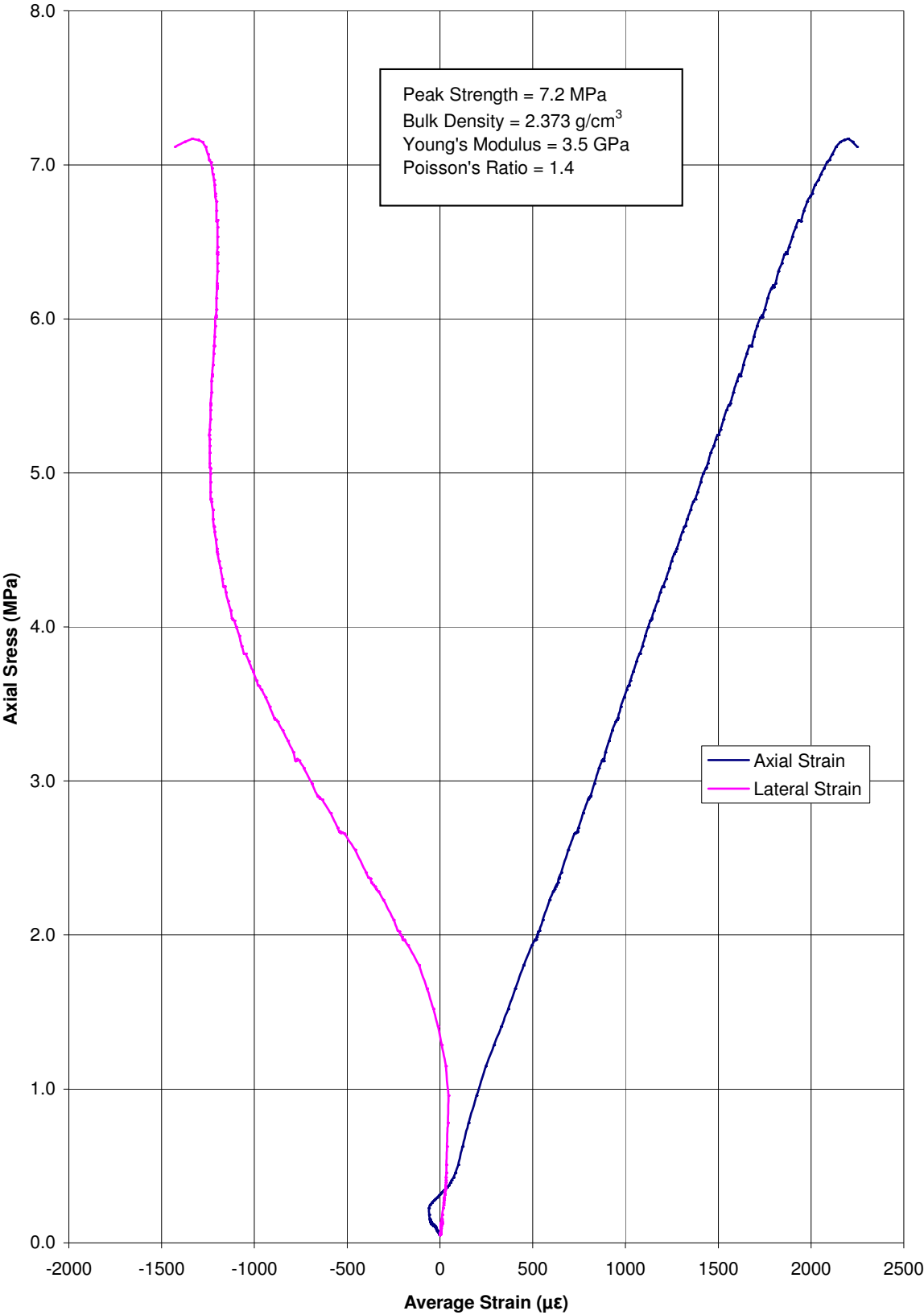
Young's Modulus: 3.5 GPa

Poisson's Ratio: 1.4 ?

Failure Cause: Weakness Plane



END09-03-03 Stress vs. Strain



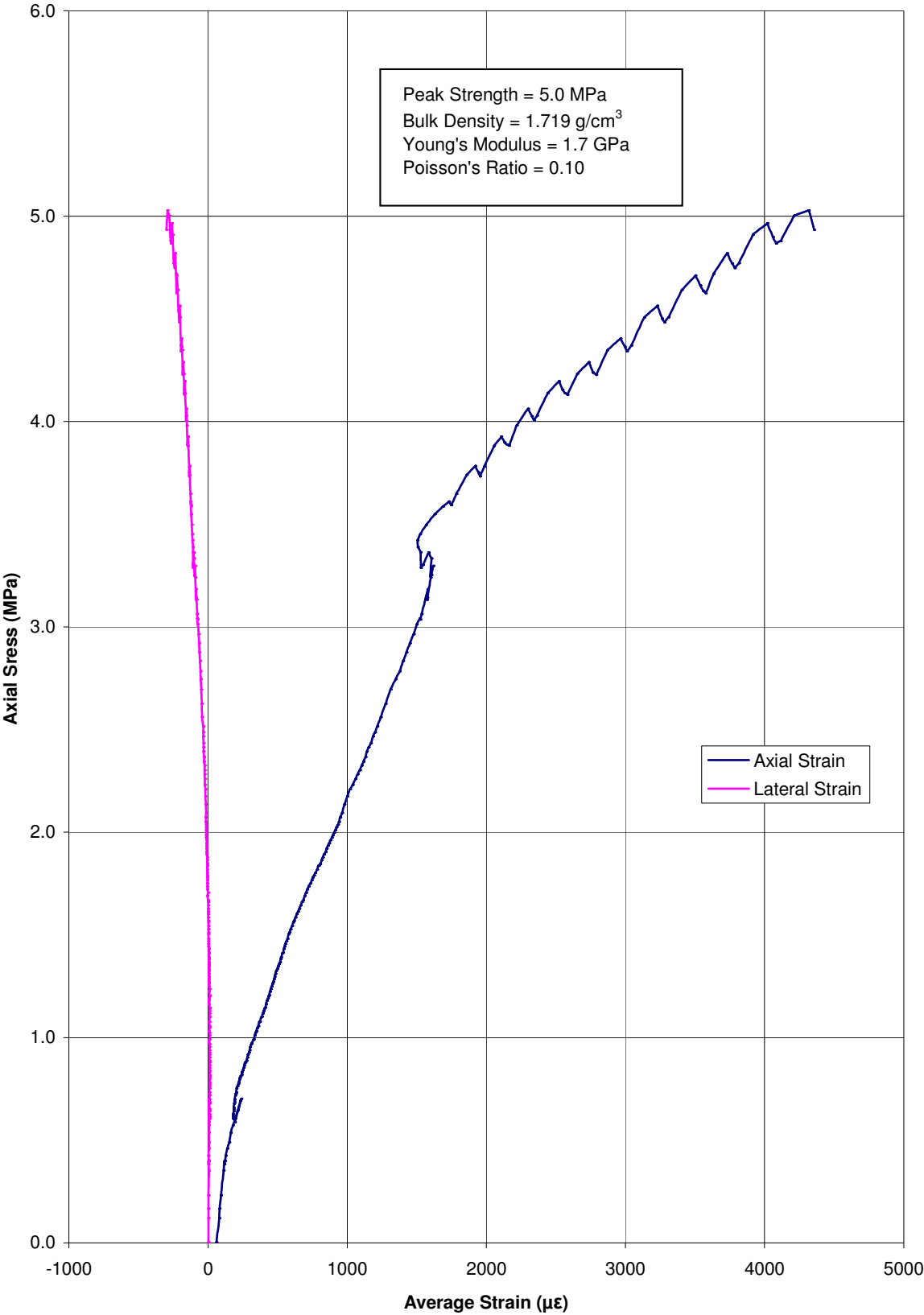
SAMPLE: END09-03-04



Length: 114.07 mm
Diameter: 46.83 mm
Density: 1.719 g/cm³
Peak Strength: 5.0 MPa
Young's Modulus: 1.7 GPa
Poisson's Ratio: 0.10
Failure Cause: Intact Rock



END09-03-04 Stress vs. Strain



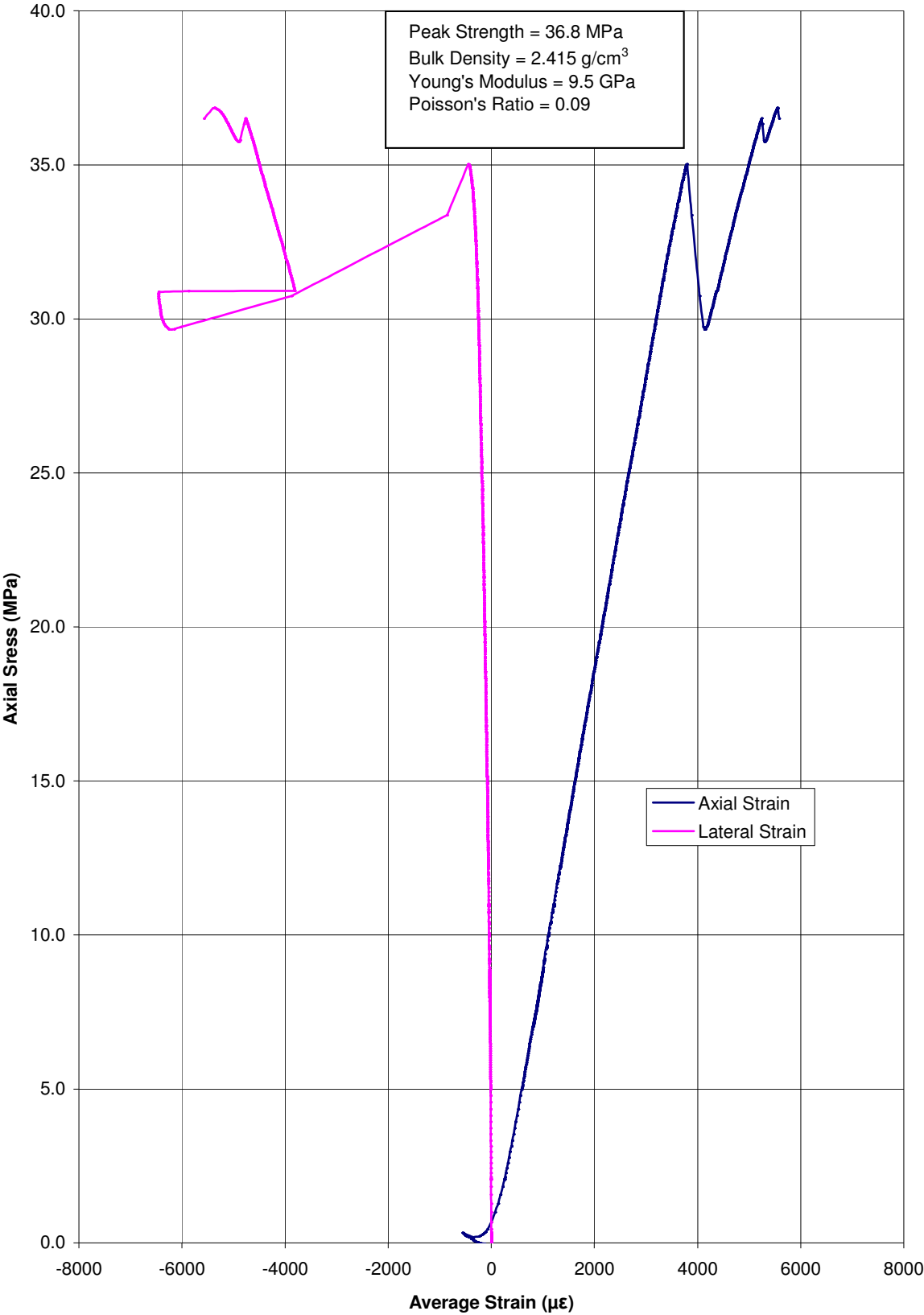
SAMPLE: END09-03-06



Length: 111.12 mm
Diameter: 47.77mm
Density: 2.415 g/cm³
Peak Strength: 36.8 MPa
Young's Modulus: 9.5 GPa
Poisson's Ratio: 0.09
Failure Cause: Weakness Plane



END09-03-06 Stress vs. Strain



SAMPLE: END09-03-07



Length: 112.13 mm

Diameter: 47.59mm

Density: 2.441g/cm³

Peak Strength: 27.5 MPa

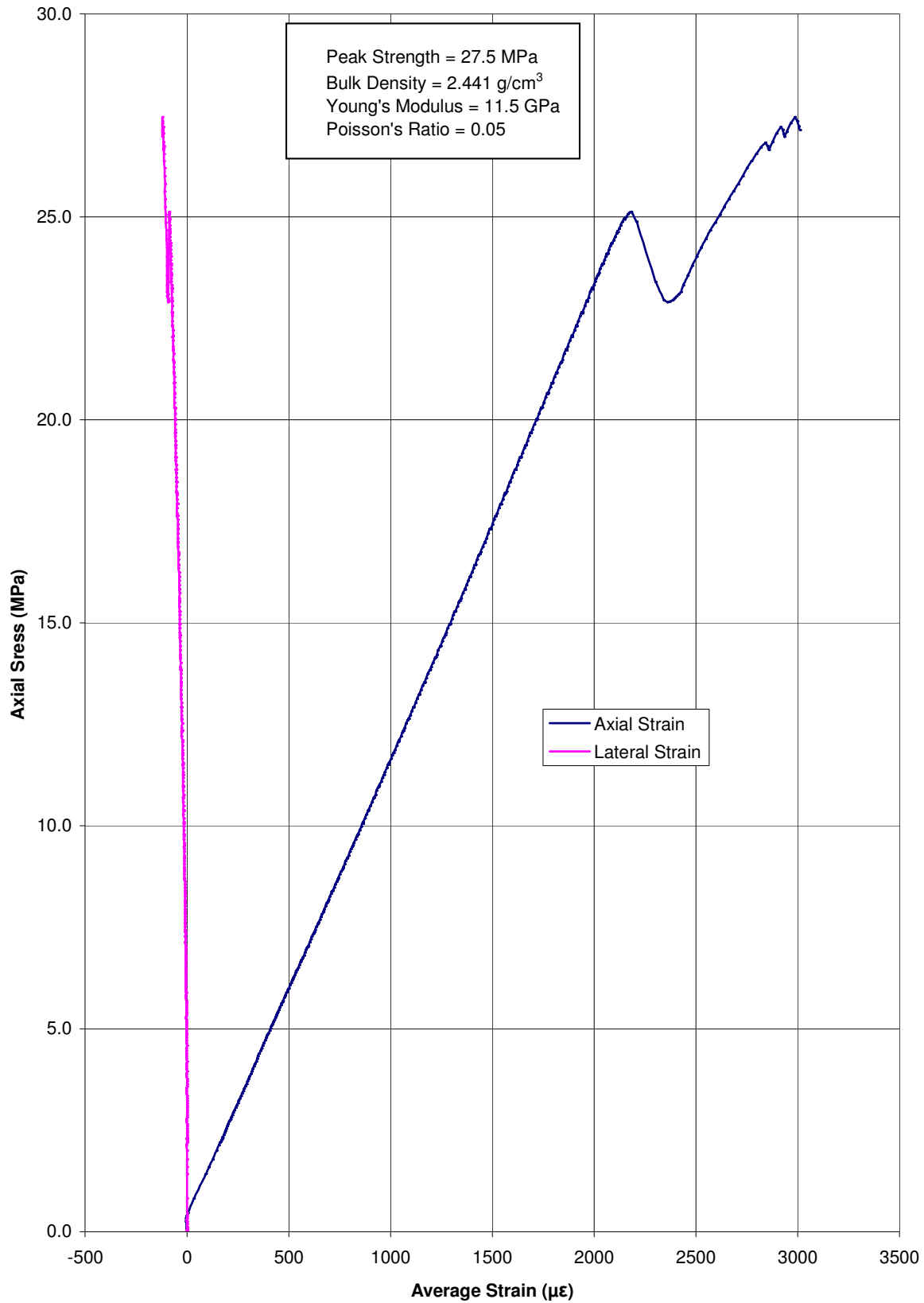
Young's Modulus: 11.5 GPa

Poisson's Ratio: 0.05

Failure Cause: Weakness Plane



END09-03-07 Stress vs. Strain



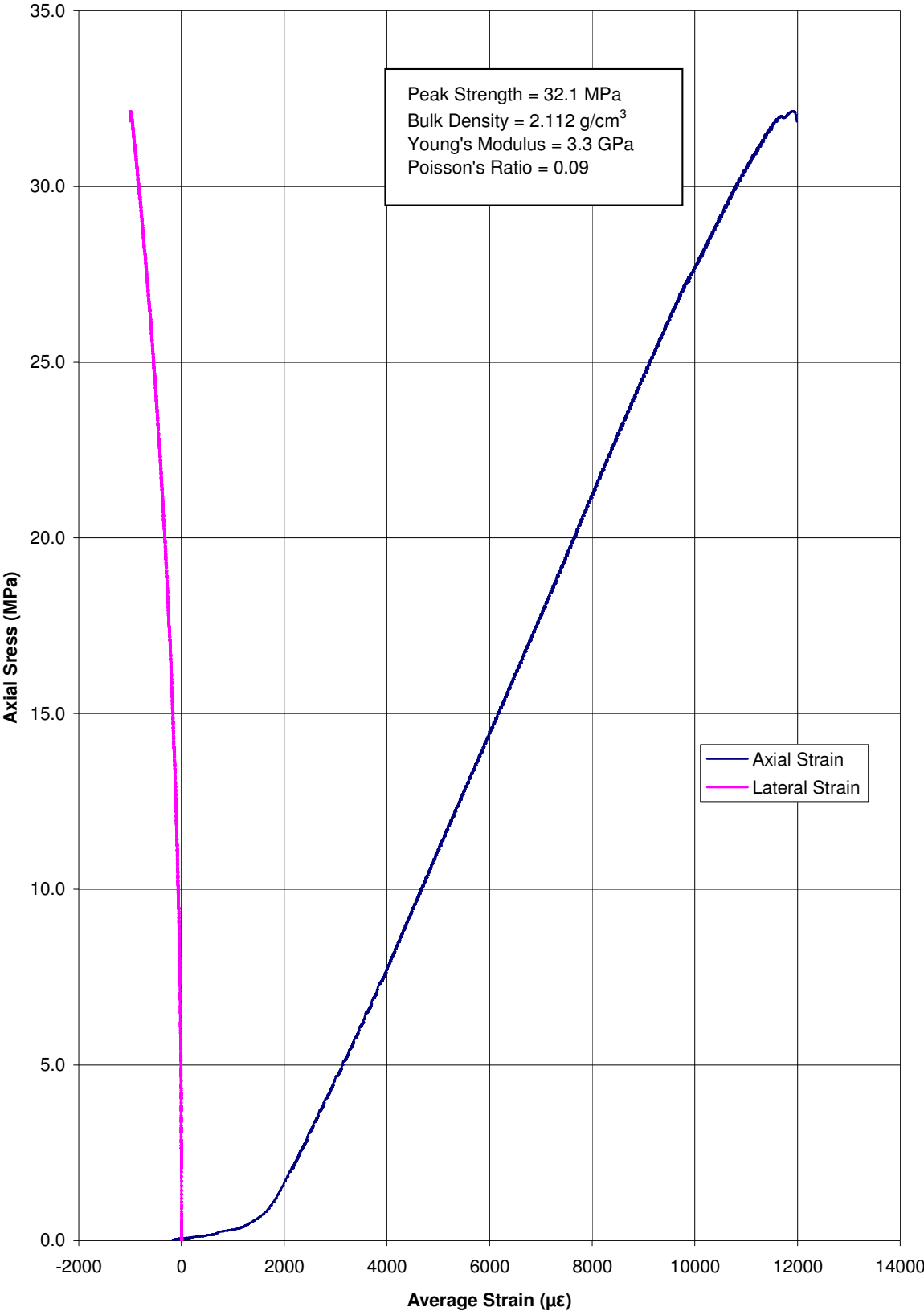
SAMPLE: END09-04-01



Length: 111.75mm
Diameter: 45.25mm
Density: 2.112g/cm^3
Peak Strength: 32.1 MPa
Young's Modulus: 3.3 GPa
Poisson's Ratio: 0.09
Failure Cause: Intact Rock



END09-04-01 Stress vs. Strain



SAMPLE: END09-04-03



Length: 91.27mm

Diameter: 44.83mm

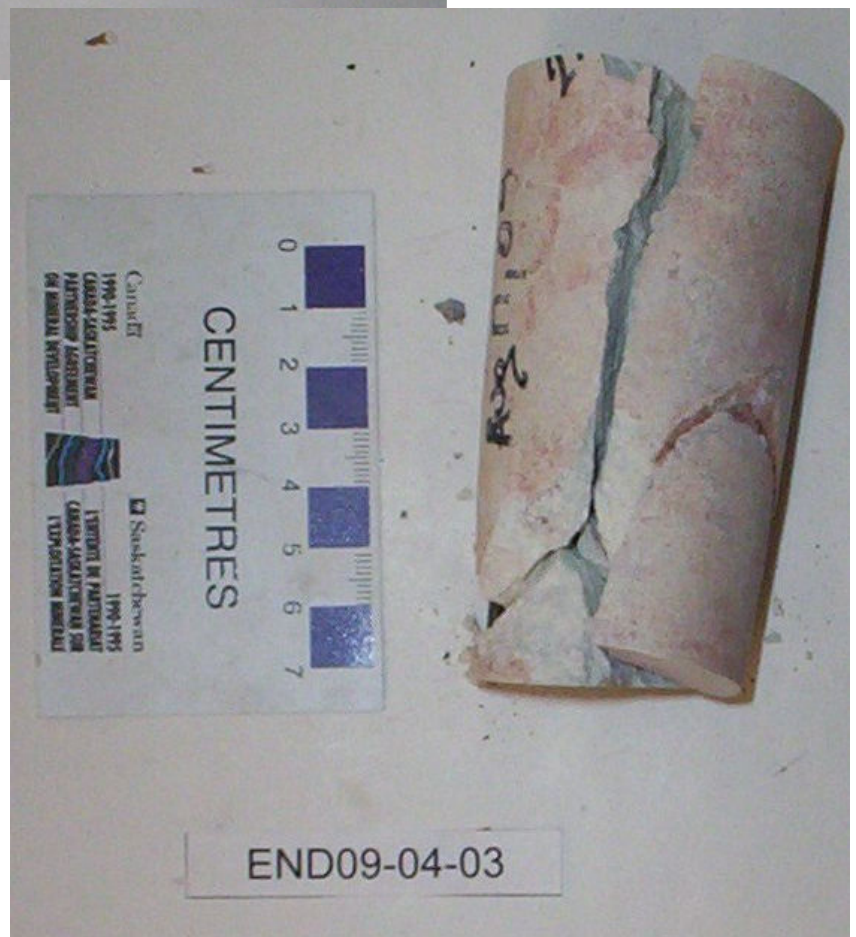
Density: 2.021g/cm³

Peak Strength: 18.9 MPa

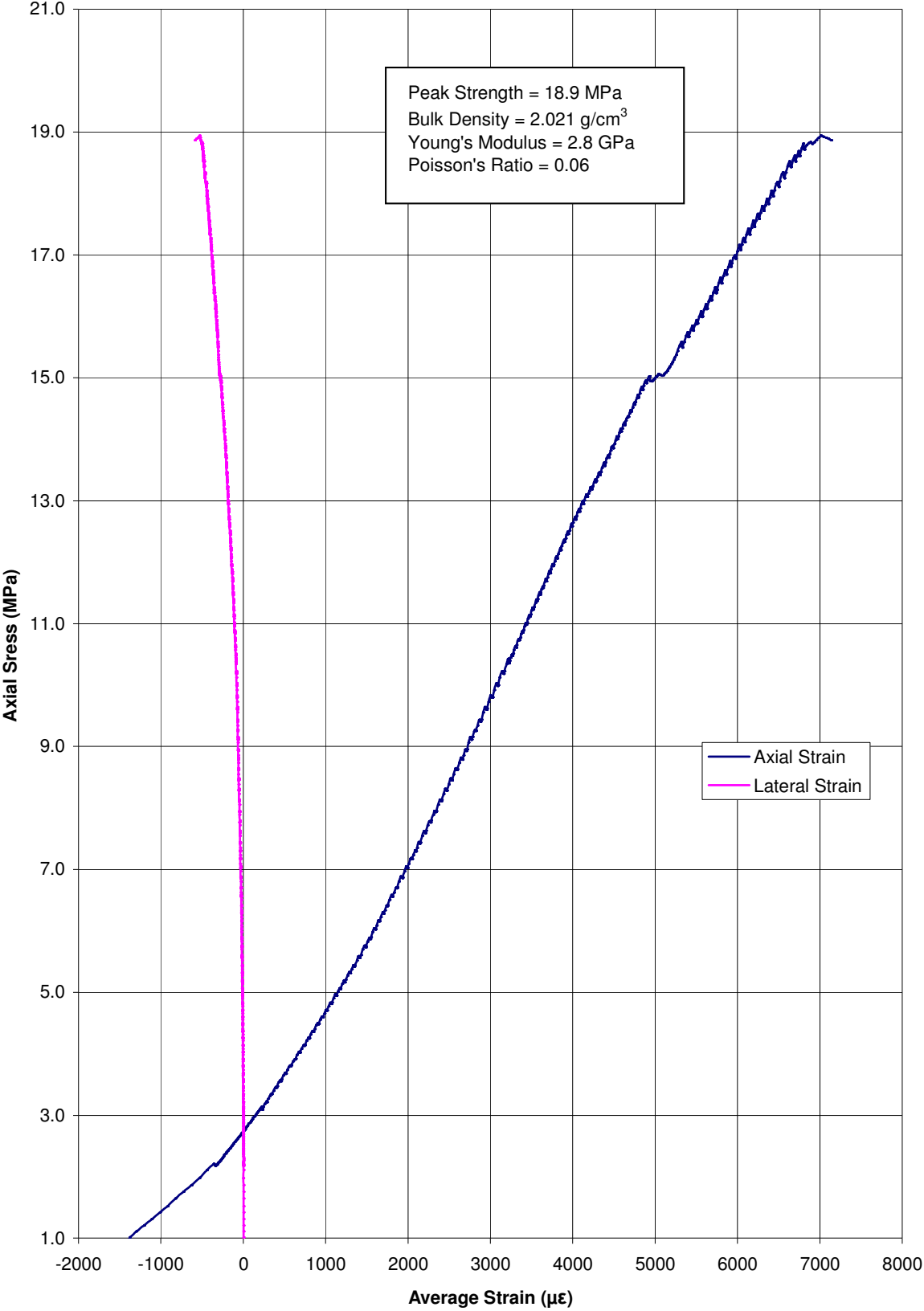
Young's Modulus: 2.8 GPa

Poisson's Ratio: 0.06

Failure Cause: Intact Rock



END09-04-03 Stress vs. Strain



SAMPLE: END09-06-02



Length: 106.33mm

Diameter: 45.13 mm

Density: 1.987 g/cm³

Peak Strength: 11.3 MPa

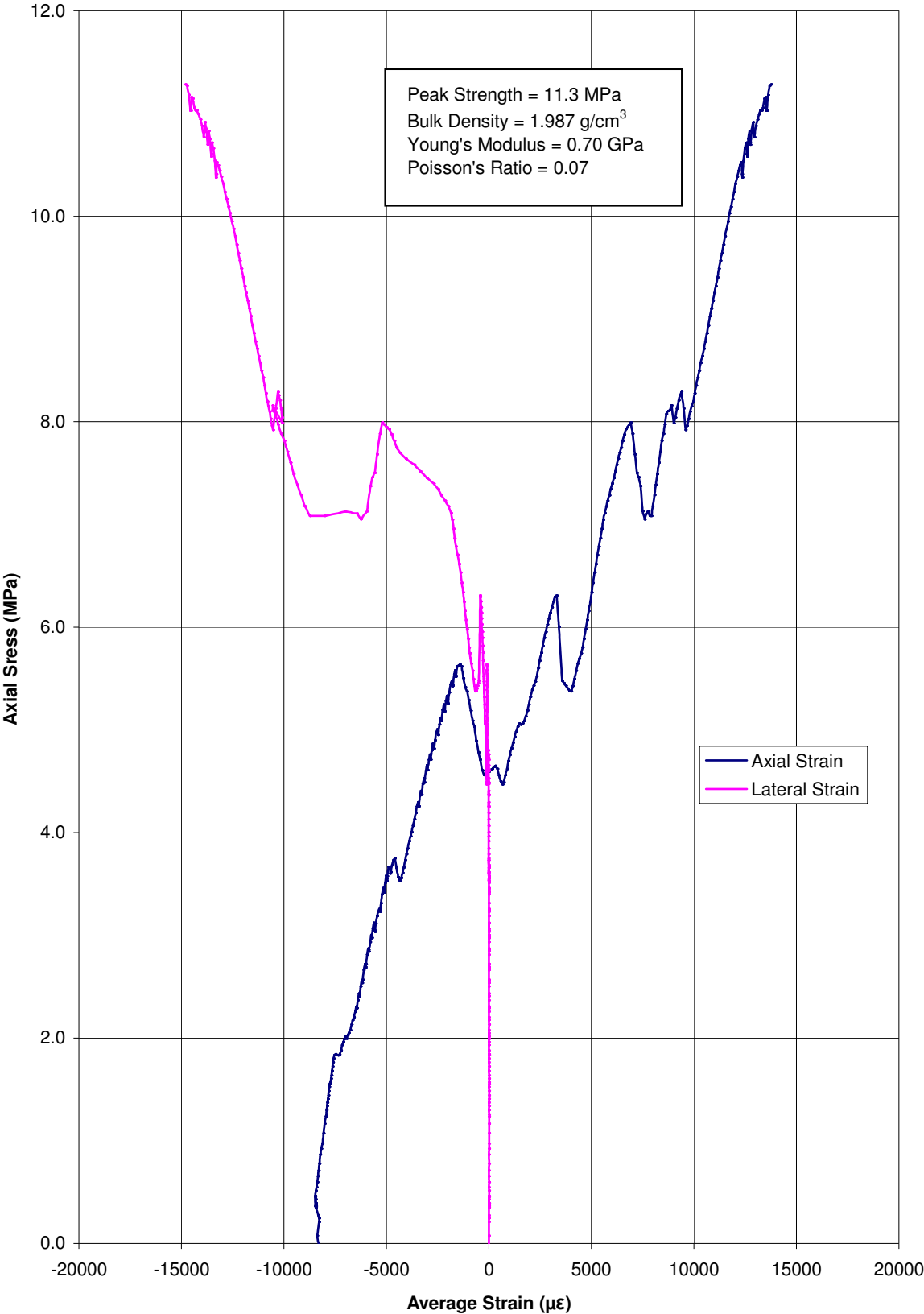
Young's Modulus: 0.7 GPa

Poisson's Ratio: 0.07

Failure Cause: Intact Rock



END09-06-02 Stress vs. Strain



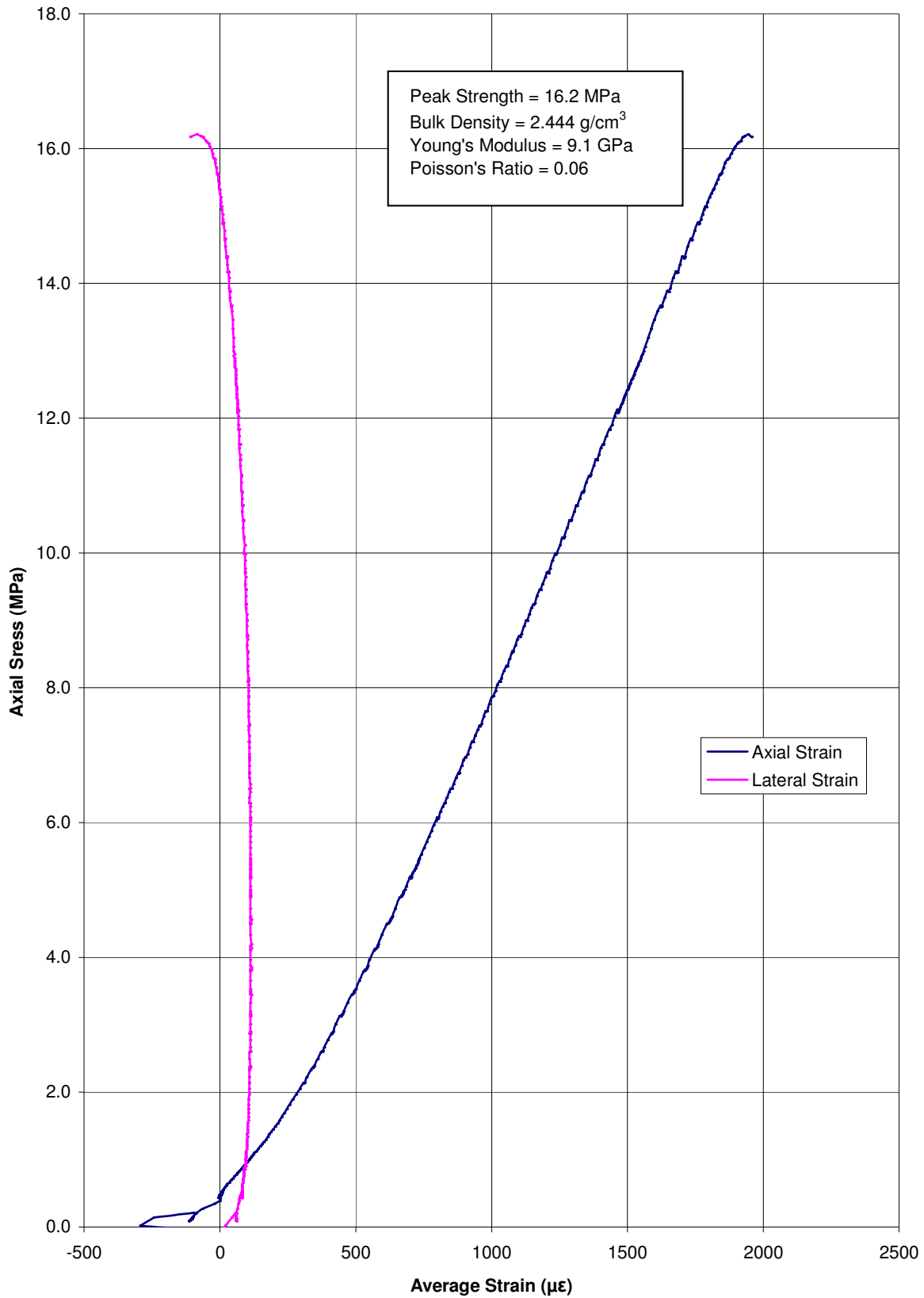
SAMPLE: END09-06-03



Length: 109.25mm
Diameter: 45.12 mm
Density: 2.444 g/cm³
Peak Strength: 16.2 MPa
Young's Modulus: 9.1 GPa
Poisson's Ratio: 0.06
Failure Cause: Weakness Plane



END09-06-03 Stress vs. Strain



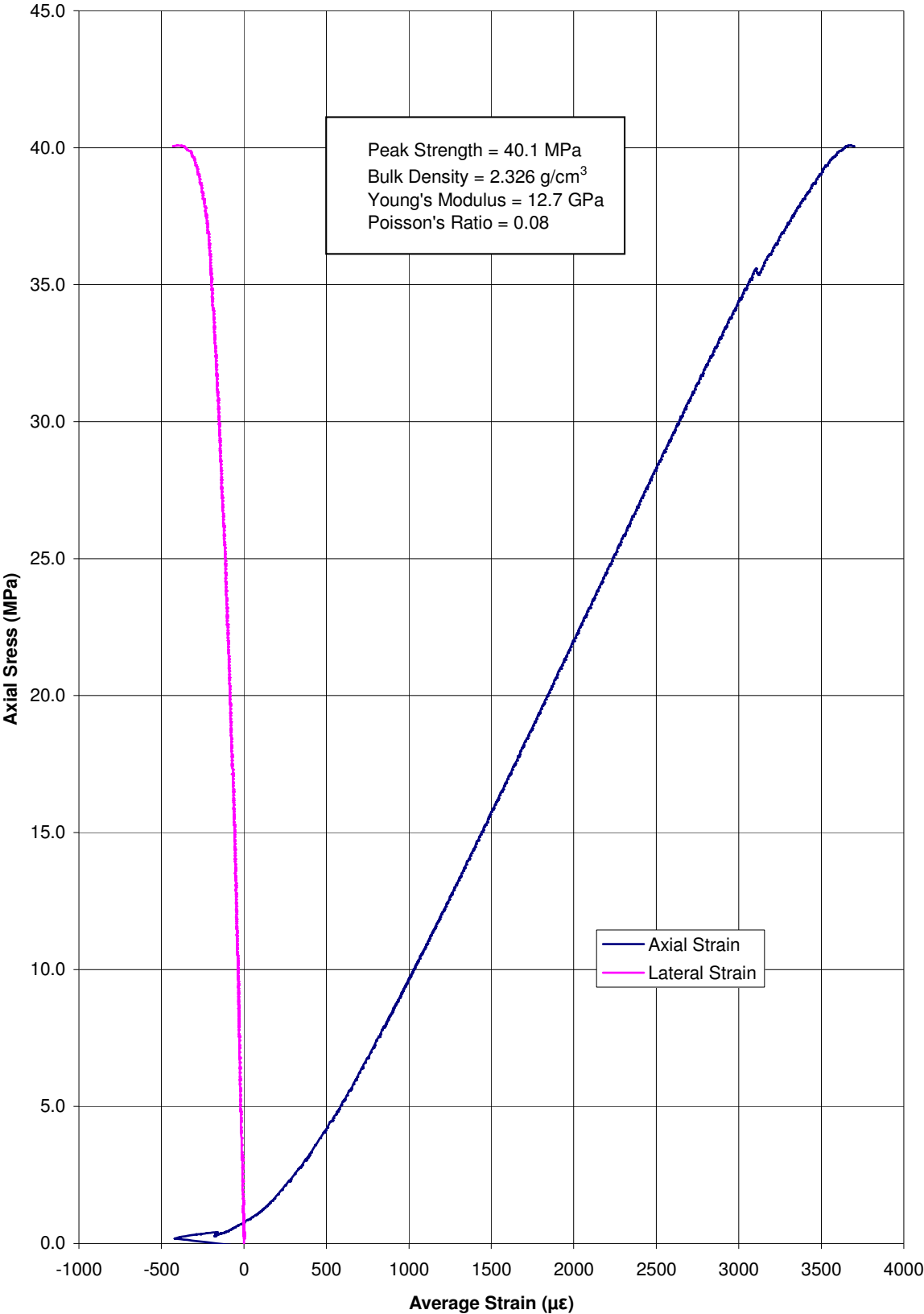
SAMPLE: END09-06-04



Length: 93.83 mm
Diameter: 45.11 mm
Density: 2.326 g/cm³
Peak Strength: 40.1 MPa
Young's Modulus: 12.7 GPa
Poisson's Ratio: 0.08
Failure Cause: Foliation



END09-06-04 Stress vs. Strain



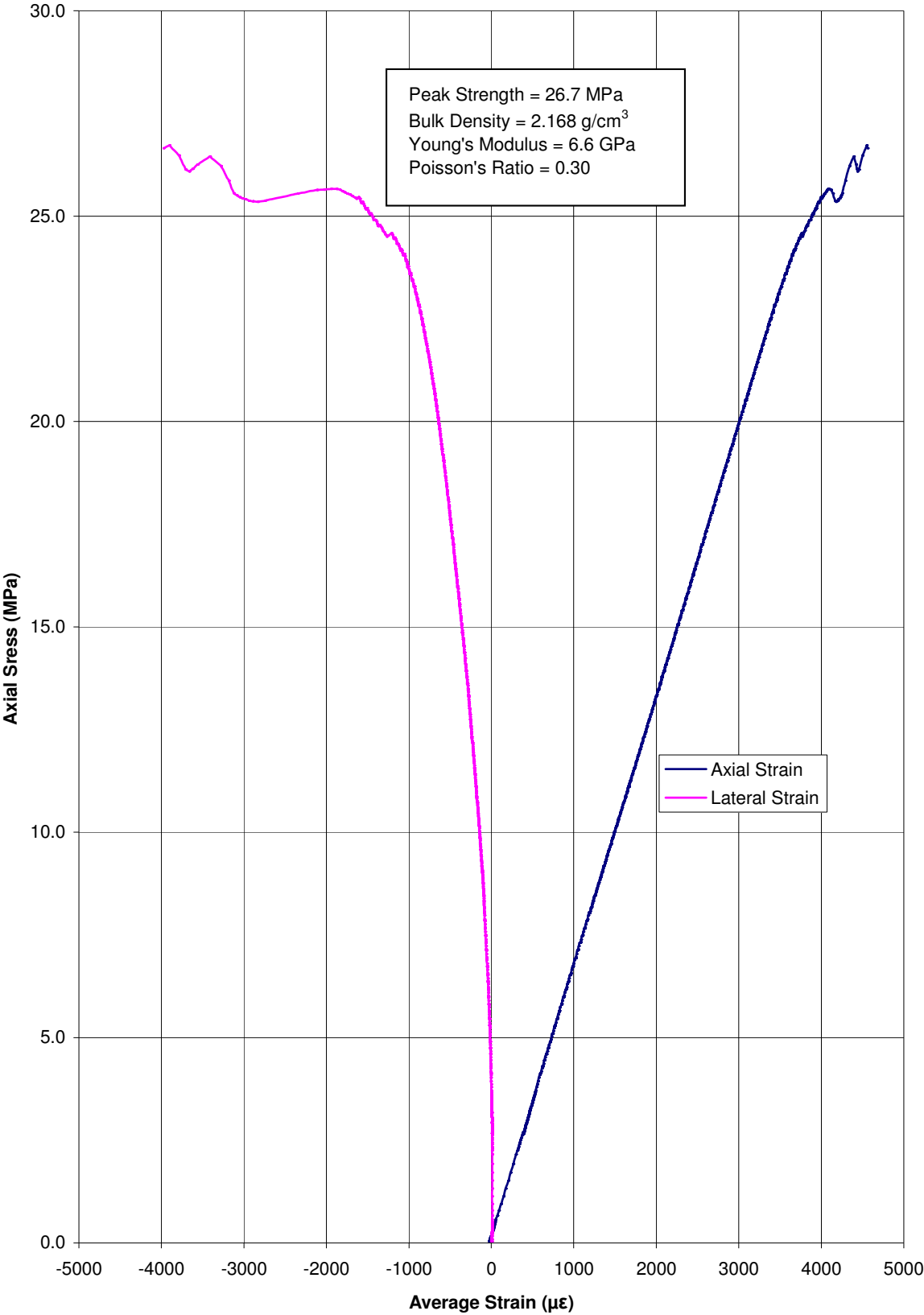
SAMPLE: END09-07-01



Length: 91.01 mm
Diameter: 47.60 mm
Density: 2.168 g/cm³
Peak Strength: 26.7 MPa
Young's Modulus: 6.6 GPa
Poisson's Ratio: 0.30
Failure Cause: Intact Rock



END09-07-01 Stress vs. Strain



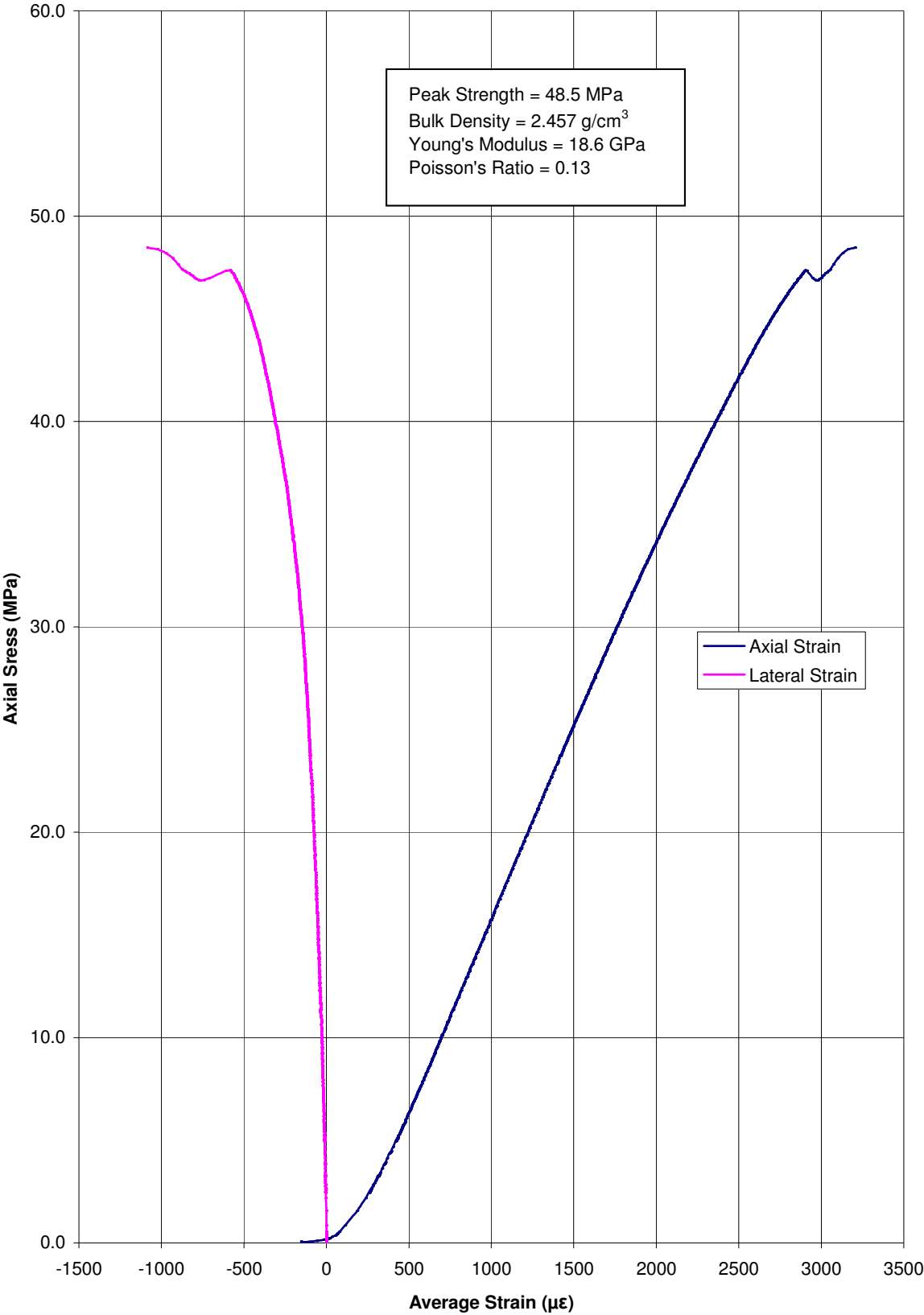
SAMPLE: END09-07-02



Length: 78.89 mm
Diameter: 45.31 mm
Density: 2.457 g/cm³
Peak Strength: 48.5 MPa
Young's Modulus: 18.6 GPa
Poisson's Ratio: 0.13
Failure Cause: Microfracture



END09-07-02 Stress vs. Strain



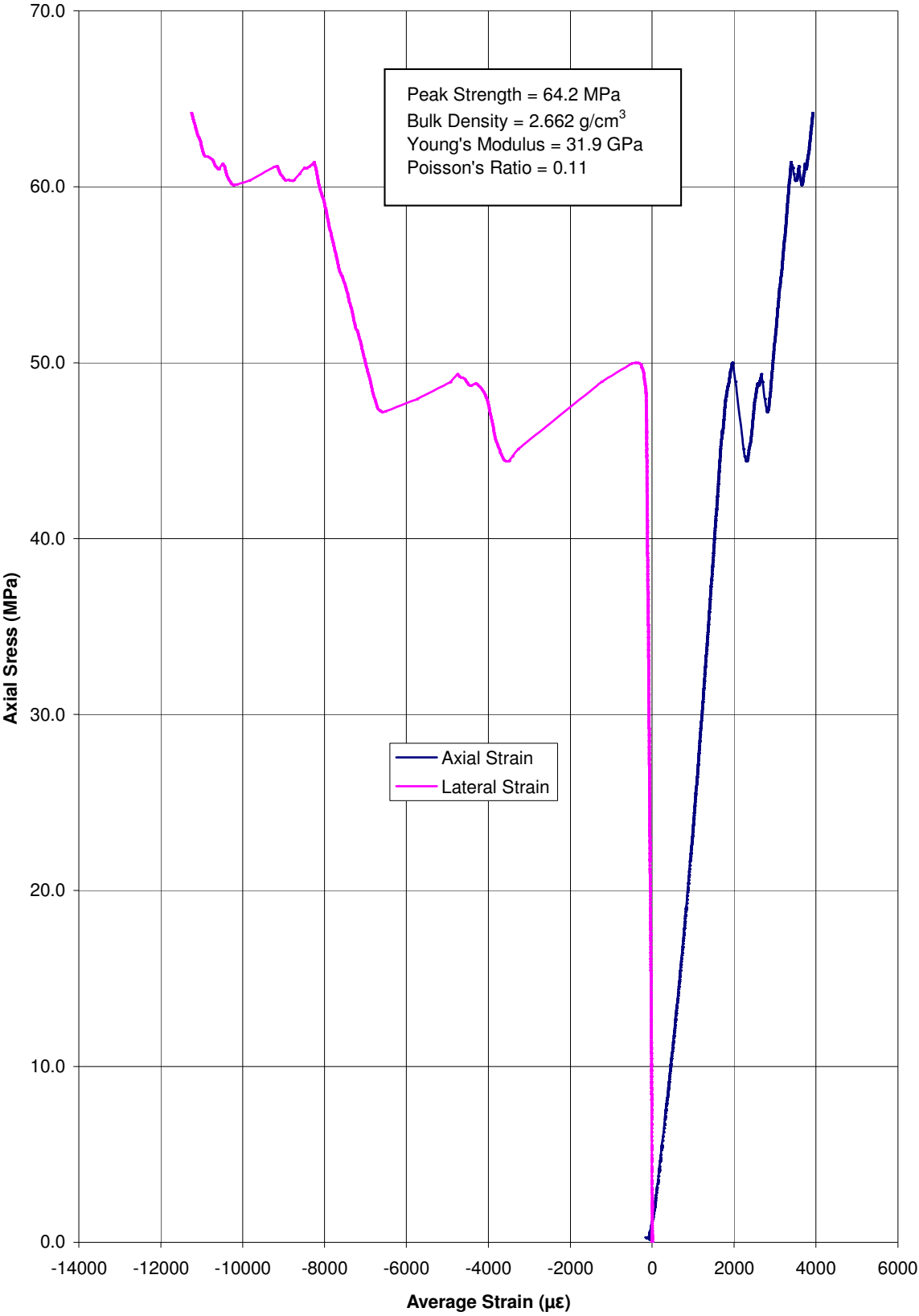
SAMPLE: END09-07-03



Length: 99.18 mm
Diameter: 45.08 mm
Density: 2.662 g/cm³
Peak Strength: 64.2 MPa
Young's Modulus: 31.9 GPa
Poisson's Ratio: 0.11
Failure Cause: Intact Rock



END09-07-03 Stress vs. Strain



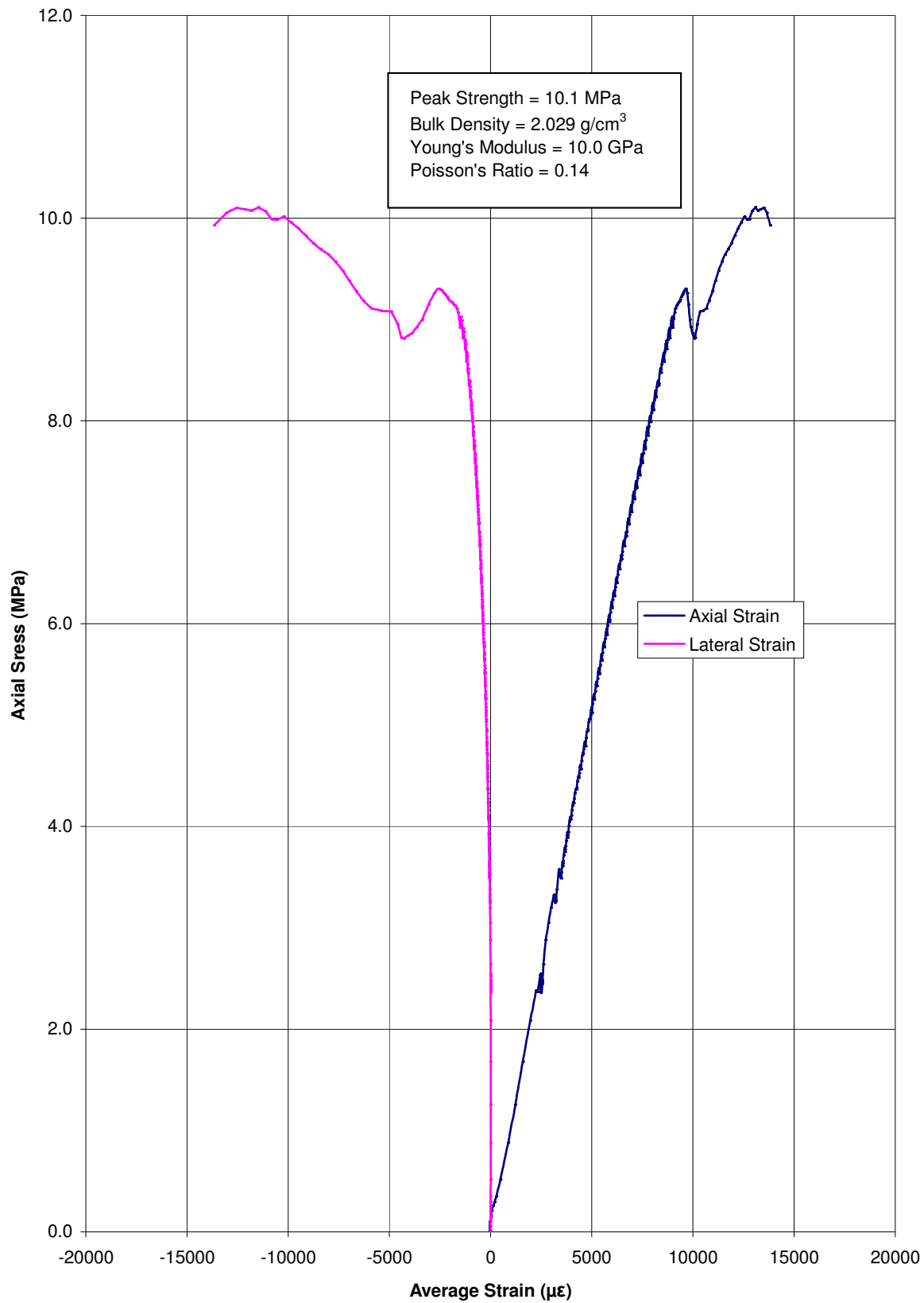
SAMPLE: END09-11-02



Length: 100.51 mm
Diameter: 47.25 mm
Density: 2.029 g/cm³
Peak Strength: 10.1 MPa
Young's Modulus: 10.0 GPa
Poisson's Ratio: 0.14
Failure Cause: Intact Rock



END09-11-02 Stress vs. Strain



SAMPLE: END09-11-03



Length: 112.01 mm

Diameter: 47.7 mm

Density: 2.463 g/cm³

Peak Strength: 30.7 MPa

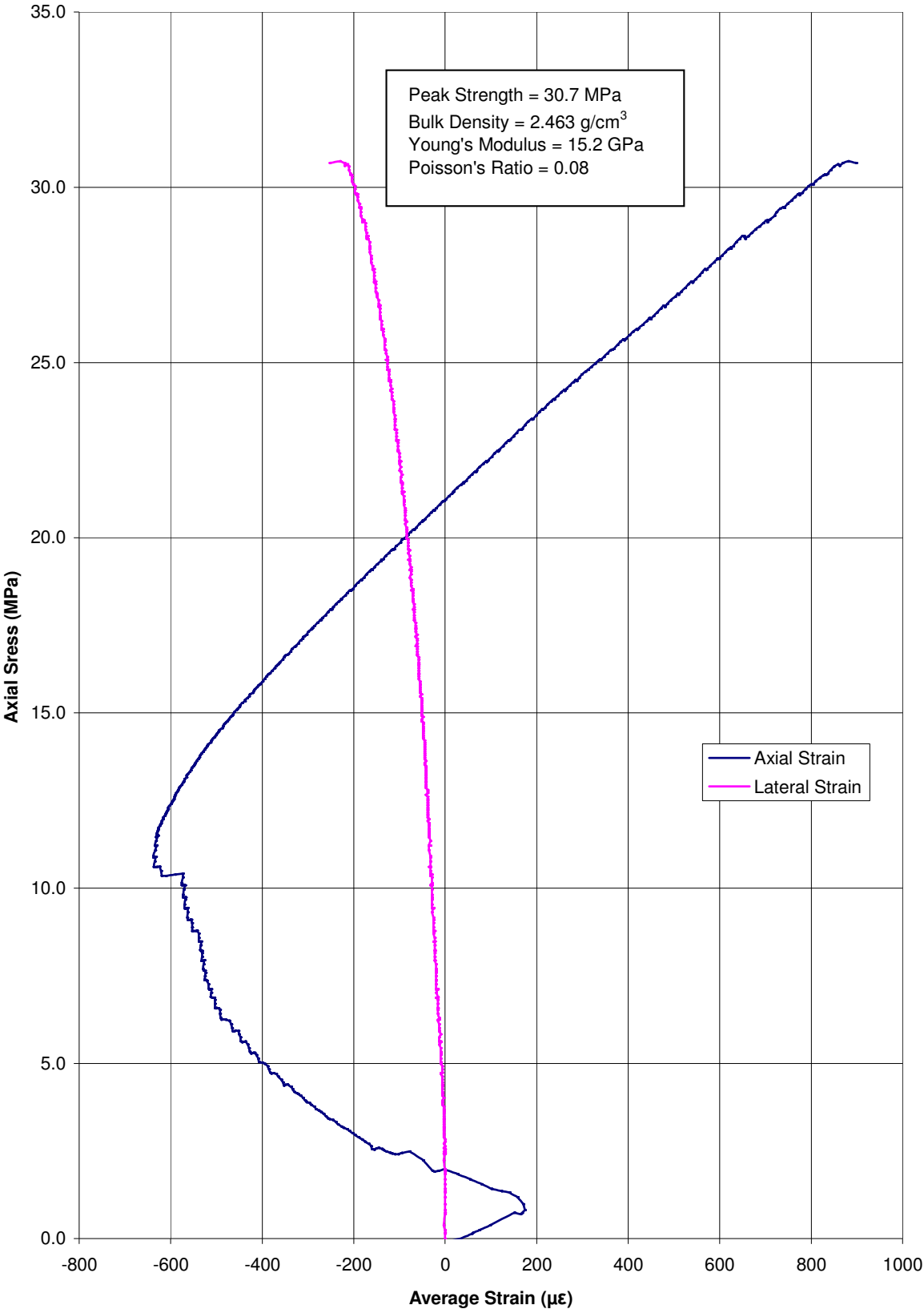
Young's Modulus: 15.2 GPa

Poisson's Ratio: 0.08

Failure Cause: Intact Rock



END09-11-03 Stress vs. Strain



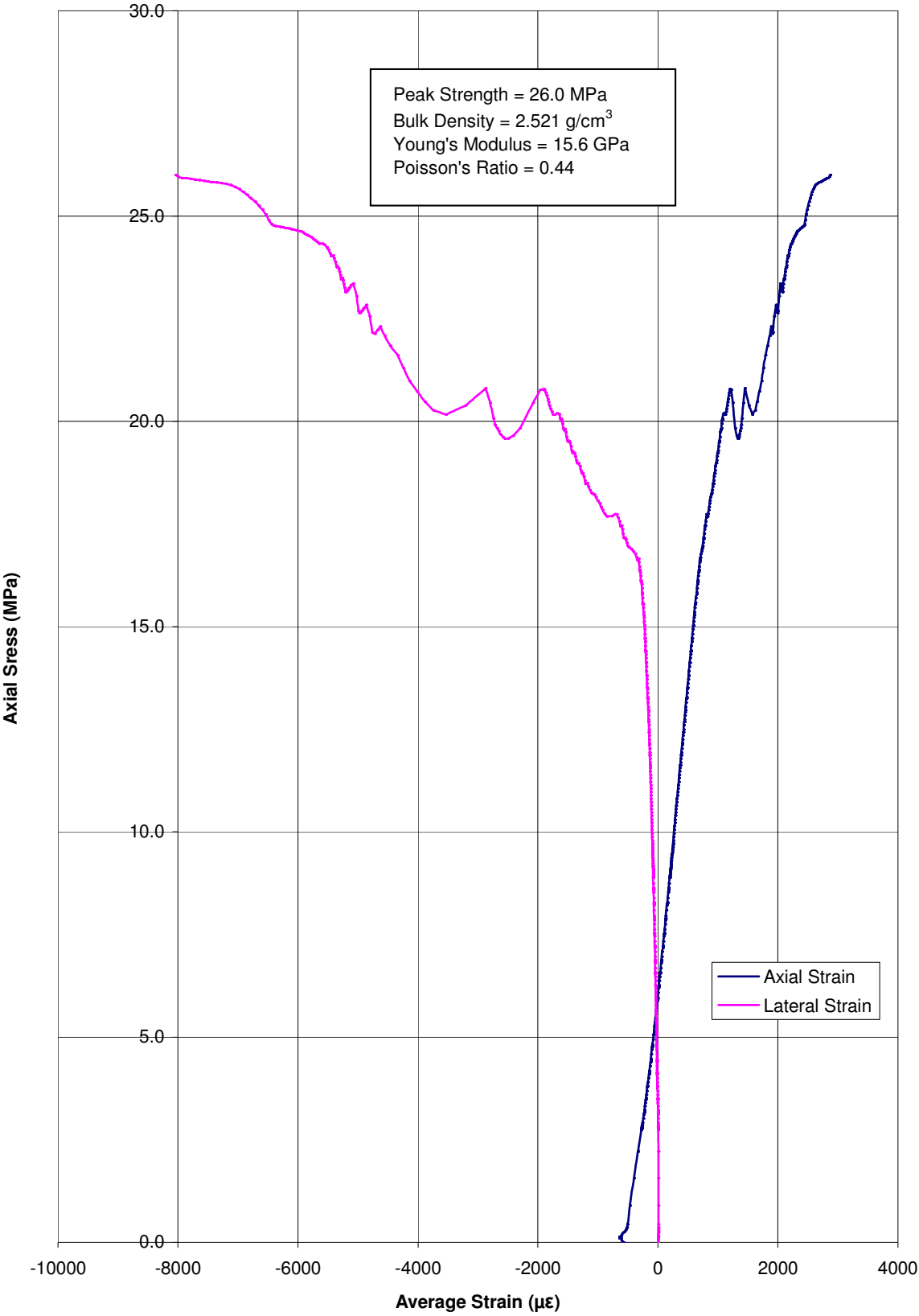
SAMPLE: END09-11-04



Length: 113.6 mm
Diameter: 47.47 mm
Density: 2.521 g/cm³
Peak Strength: 26.0 MPa
Young's Modulus: 15.6 GPa
Poisson's Ratio: 0.44
Failure Cause: Intact Rock



END09-11-04 Stress vs. Strain



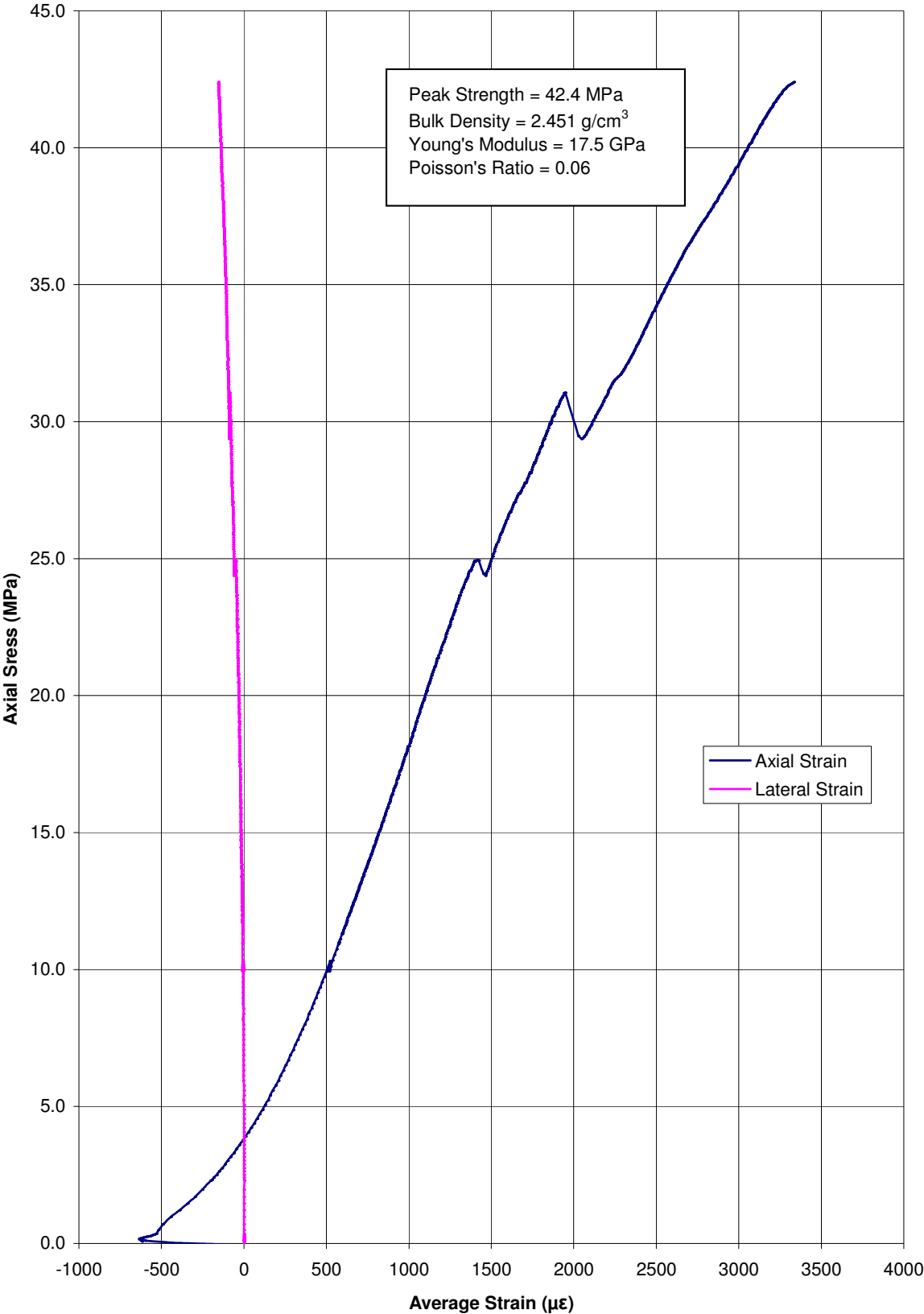
SAMPLE: END09-11-06



Length: 112.26 mm
Diameter: 47.51 mm
Density: 2.451 g/cm³
Peak Strength: 42.4 MPa
Young's Modulus: 17.5 GPa
Poisson's Ratio: 0.06
Failure Cause: Microfracture



END09-11-06 Stress vs. Strain



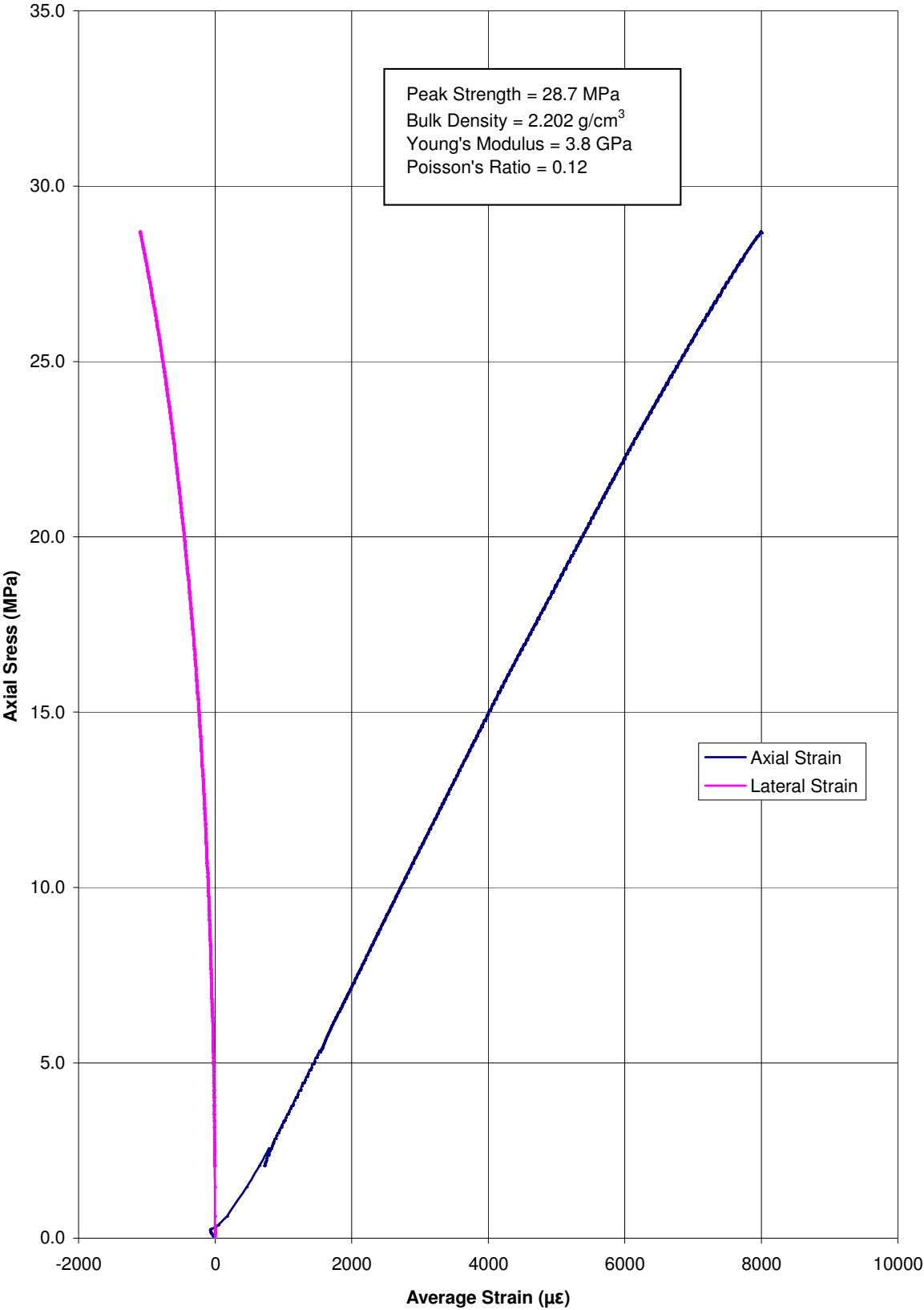
SAMPLE: END09-11-09



Length: 103.02 mm
Diameter: 47.06 mm
Density: 2.202 g/cm³
Peak Strength: 28.7 MPa
Young's Modulus: 3.8 GPa
Poisson's Ratio: 0.12
Failure Cause: Intact Rock



END09-11-09 Stress vs. Strain



SAMPLE: END09-12-04



Length: 94.16 mm

Diameter: 47.78 mm

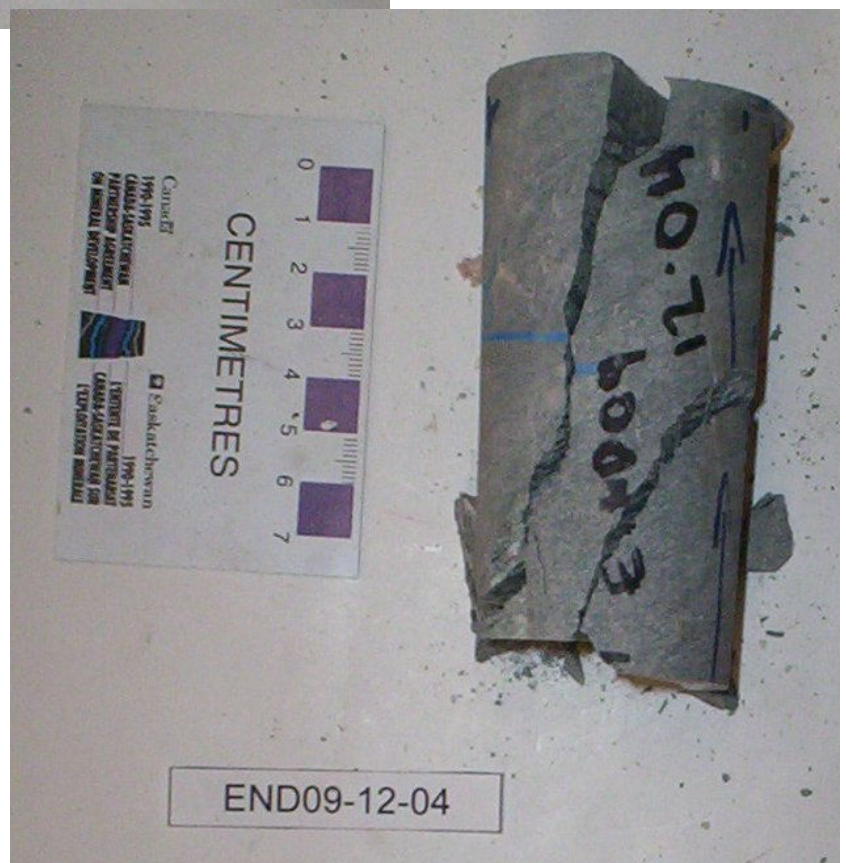
Density: 2.491 g/cm³

Peak Strength: 38.5 MPa

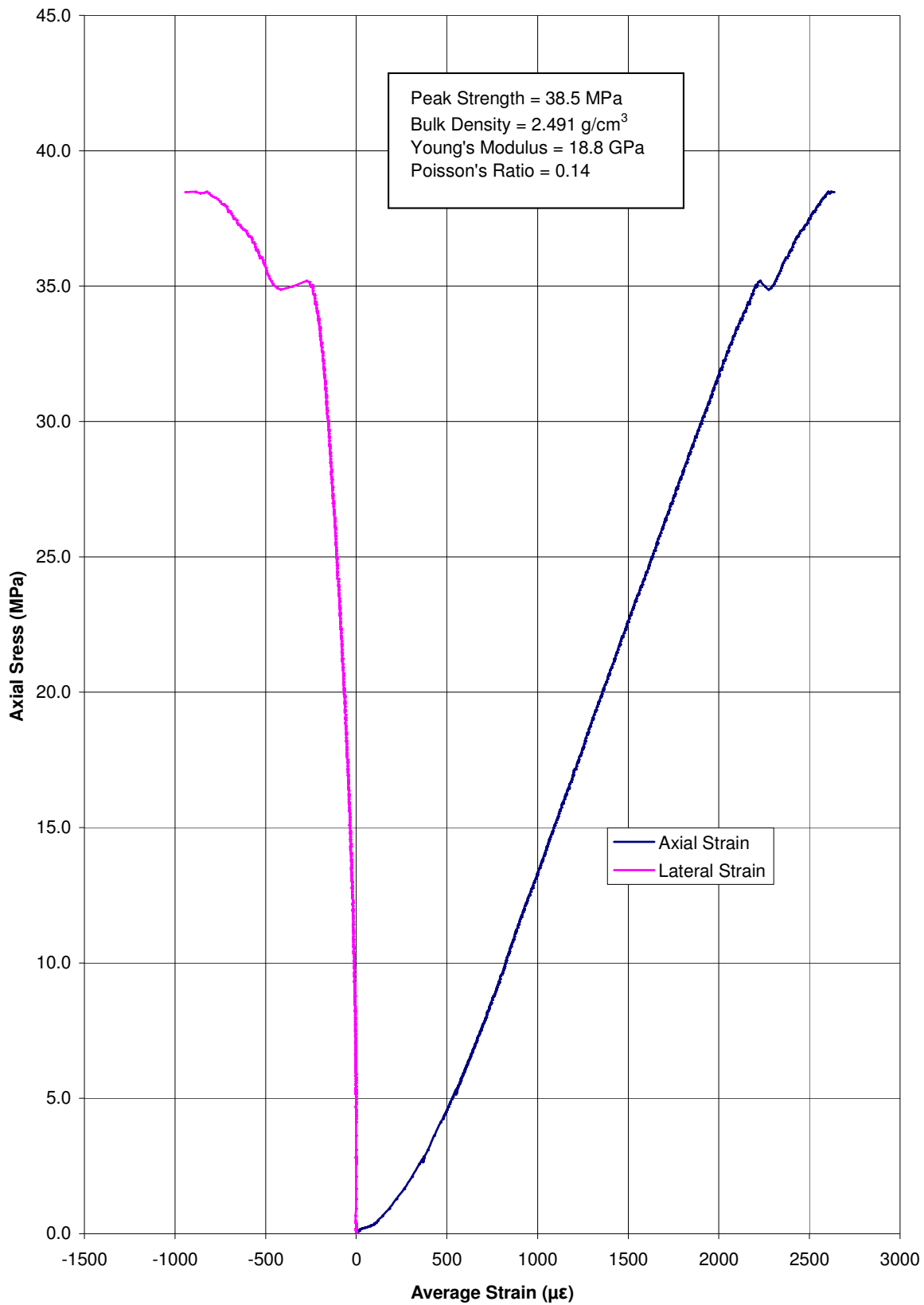
Young's Modulus: 18.8 GPa

Poisson's Ratio: 0.14

Failure Cause: Intact Rock



END09-12-04 Stress vs. Strain



SAMPLE: END09-12-06



Length: 97.82 mm

Diameter: 47.75 mm

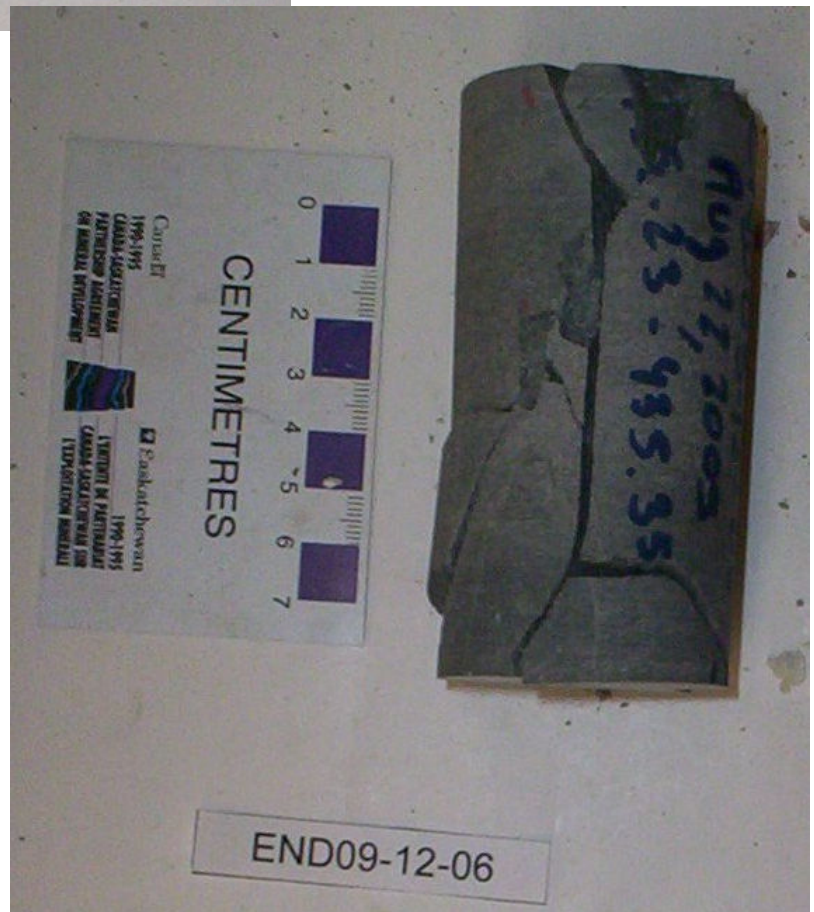
Density: 2.601 g/cm³

Peak Strength: 119.6 MPa

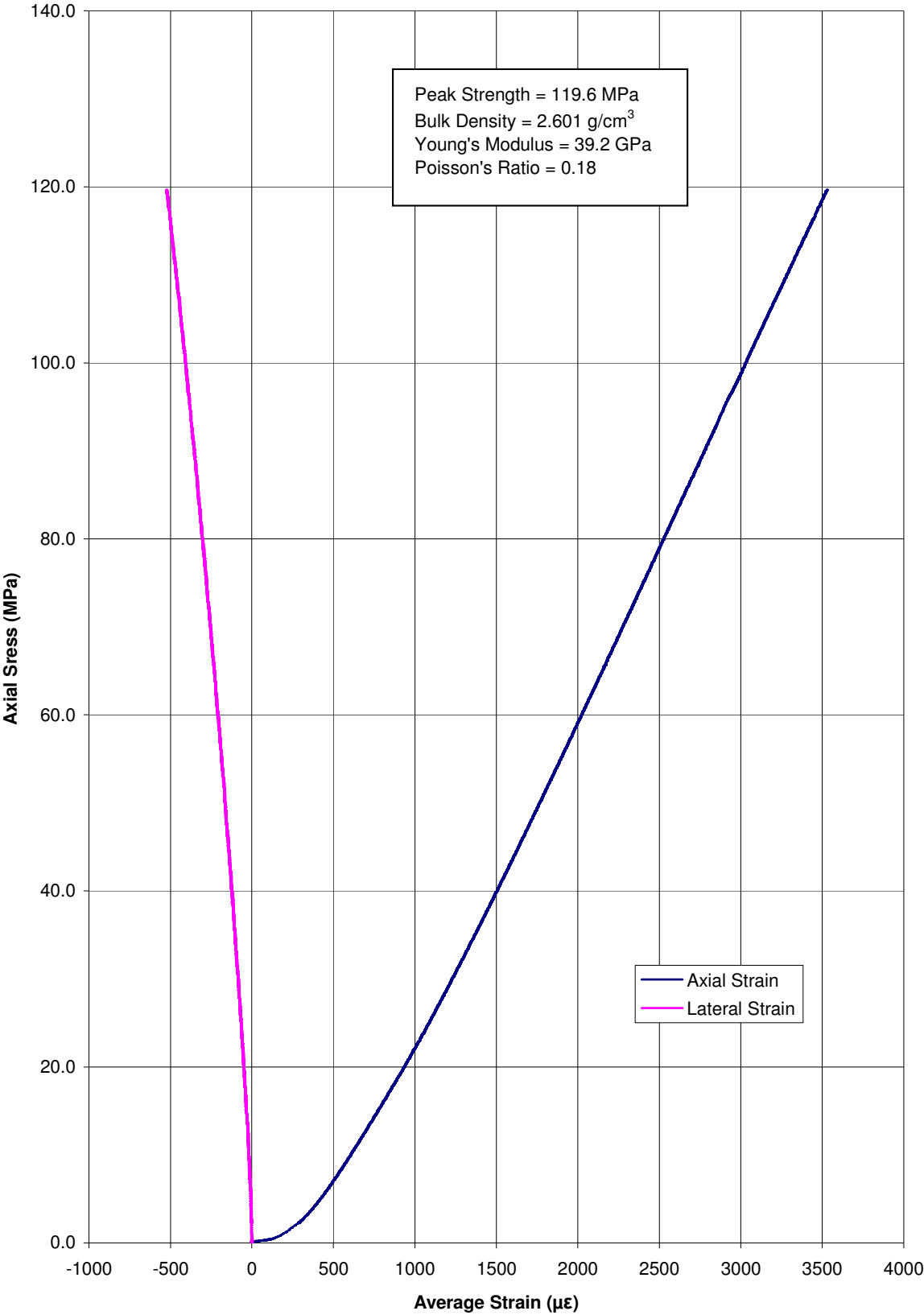
Young's Modulus: 39.2 GPa

Poisson's Ratio: 0.18

Failure Cause: Intact Rock



END09-12-06 Stress vs. Strain



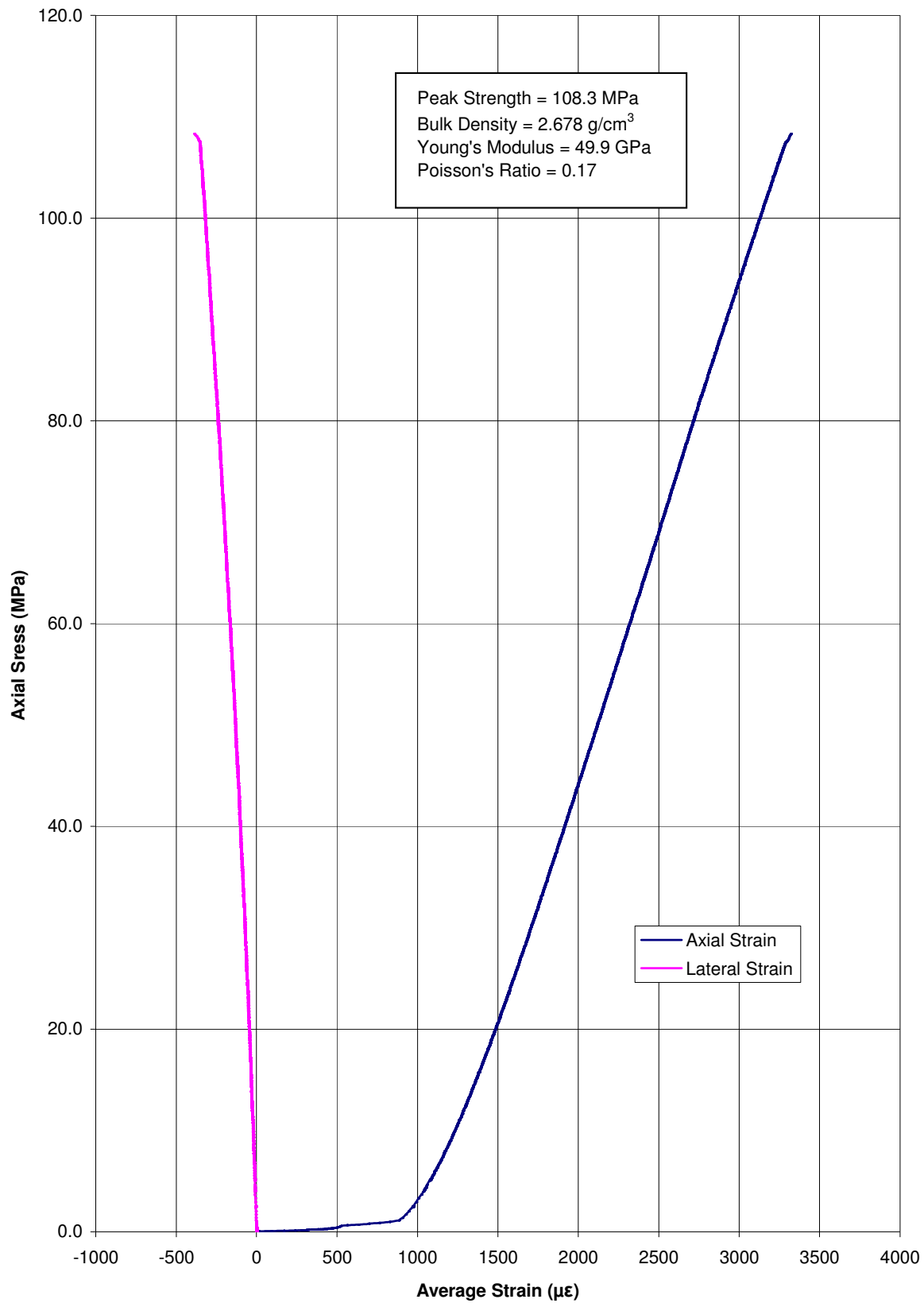
SAMPLE: MZ09-01A-02



Length: 107.28 mm
Diameter: 44.86 mm
Density: 2.678 g/cm³
Peak Strength: 108.3 MPa
Young's Modulus: 49.9 GPa
Poisson's Ratio: 0.17
Failure Cause: Intact Rock



MZ09-01A-02 Stress vs. Strain



SAMPLE: MZ09-01A-03



Length: 108.29 mm

Diameter: 45.01 mm

Density: 2.713 g/cm³

Peak Strength: 131.4 MPa

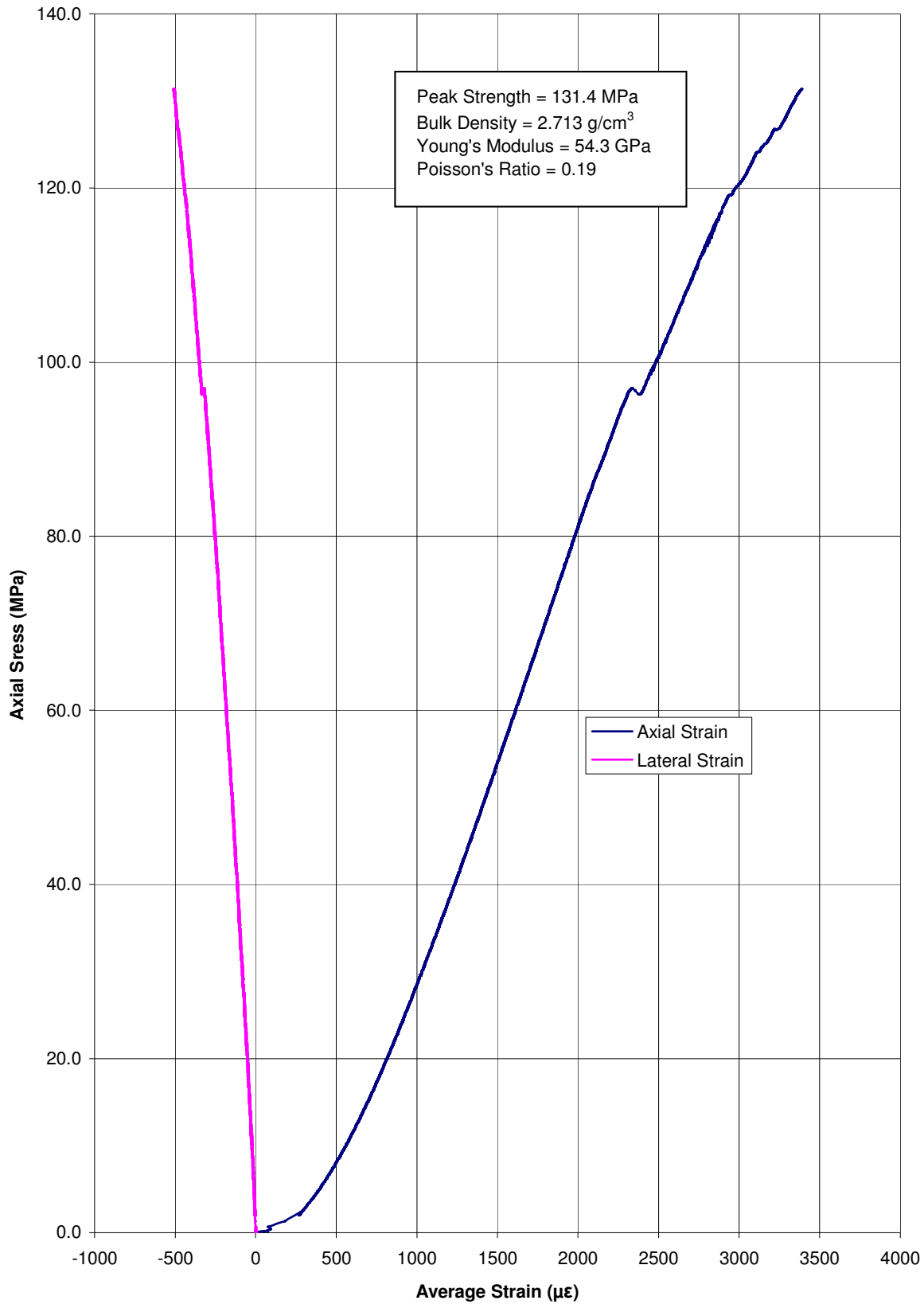
Young's Modulus: 54.3 GPa

Poisson's Ratio: 0.19

Failure Cause: Intact Rock



MZ09-01A-03 Stress vs. Strain



SAMPLE: MZ09-01A-05



Length: 106.62 mm

Diameter: 44.61 mm

Density: 2.619 g/cm³

Peak Strength: 86.3 MPa

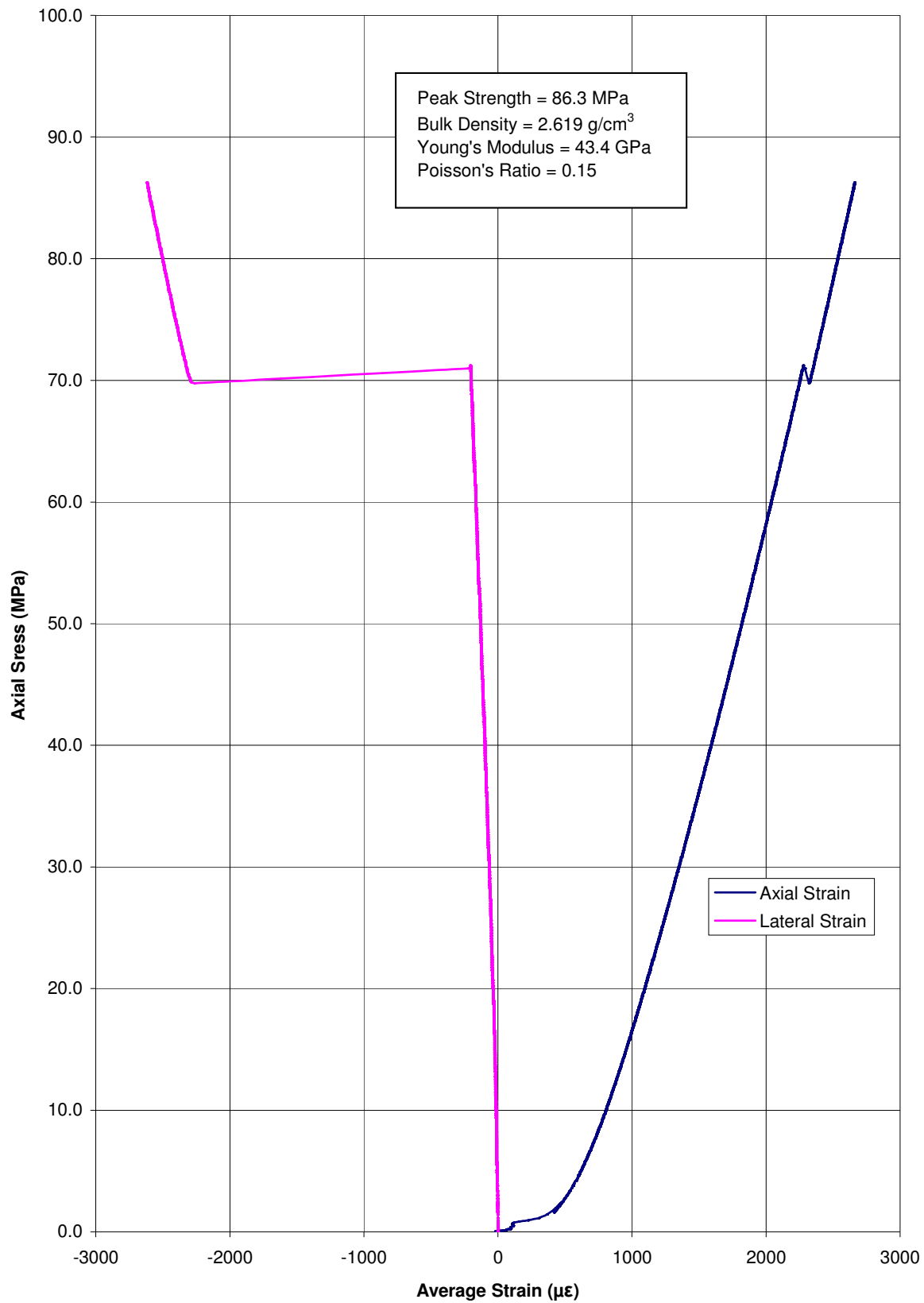
Young's Modulus: 43.4 GPa

Poisson's Ratio: 0.15

Failure Cause: Intact Rock



MZ09-01A-05 Stress vs. Strain



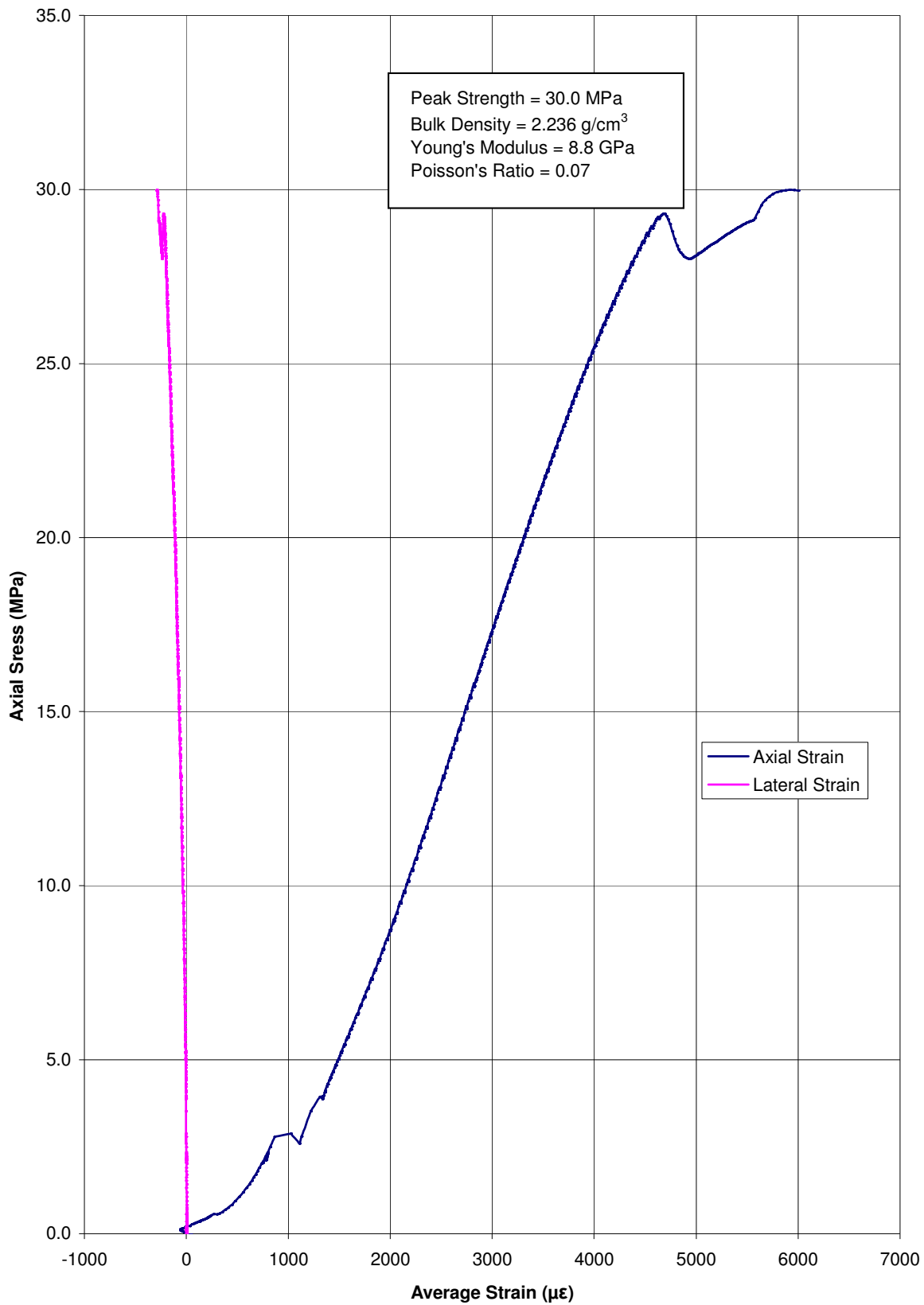
SAMPLE: MZ09-01A-06



Length: 109.53 mm
Diameter: 44.69 mm
Density: 2.236 g/cm³
Peak Strength: 30.0 MPa
Young's Modulus: 8.8 GPa
Poisson's Ratio: 0.07
Failure Cause: Intact Rock



MZ09-01A-06 Stress vs. Strain



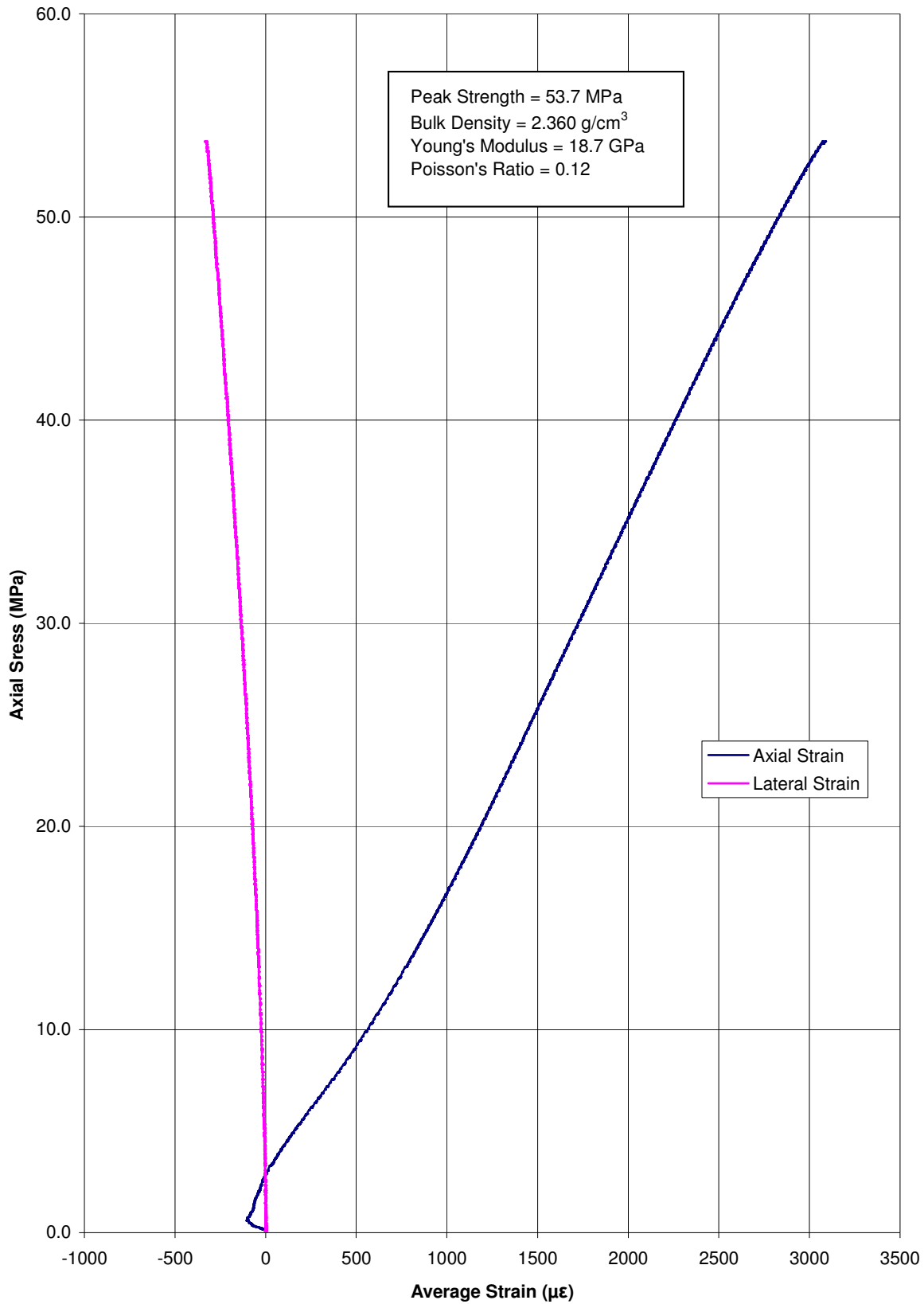
SAMPLE: MZ09-01A-07



Length: 108.02 mm
Diameter: 44.48 mm
Density: 2.360 g/cm³
Peak Strength: 53.7 MPa
Young's Modulus: 18.7 GPa
Poisson's Ratio: 0.12
Failure Cause: Intact Rock



MZ09-01A-07 Stress vs. Strain



SAMPLE: MZ09-02-01



Length: 89.15 mm

Diameter: 44.95 mm

Density: 2.367 g/cm³

Peak Strength: 21.8 MPa

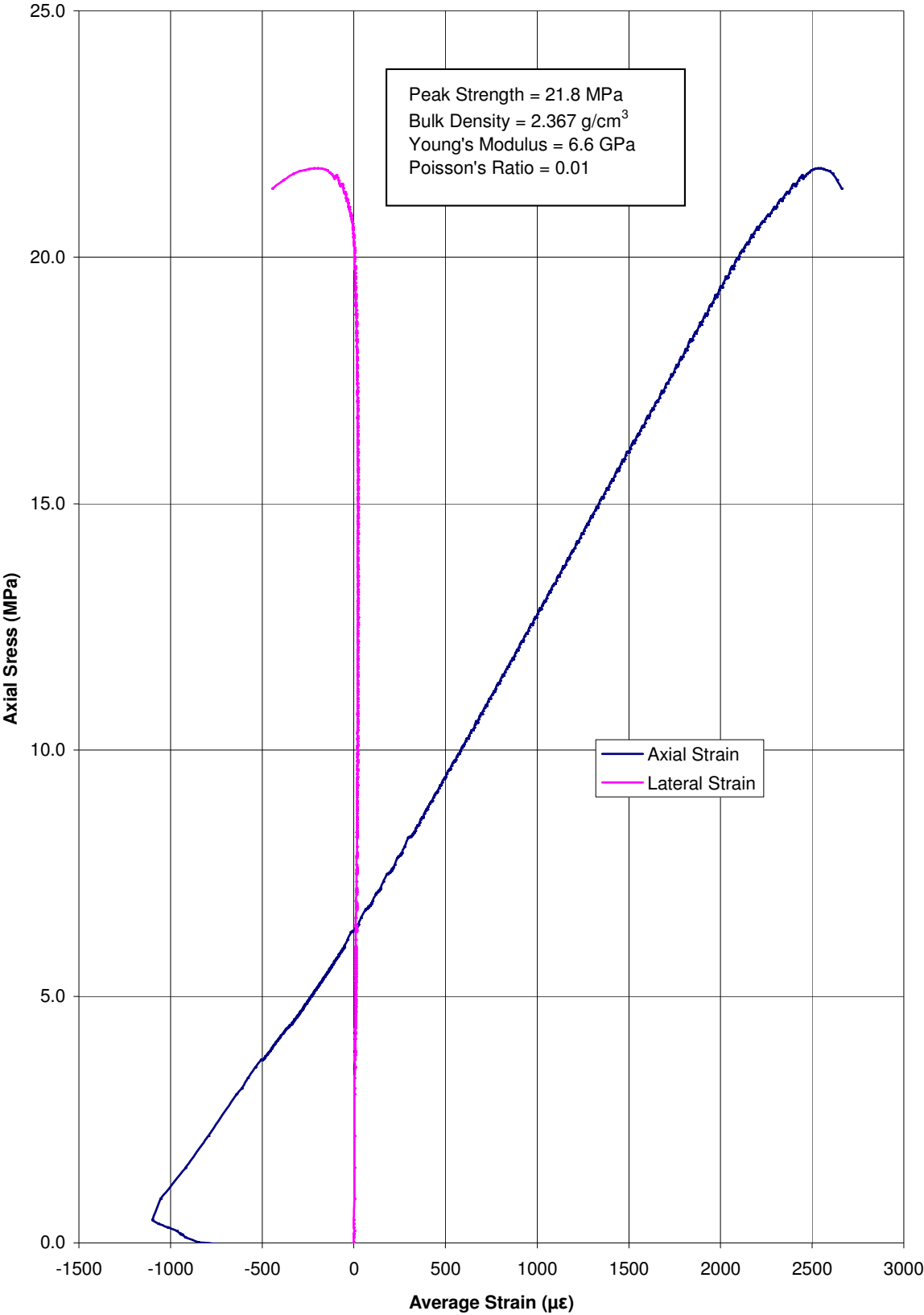
Young's Modulus: 6.6 GPa

Poisson's Ratio: 0.01

Failure Cause: Intact Rock



MZ09-02-01 Stress vs. Strain



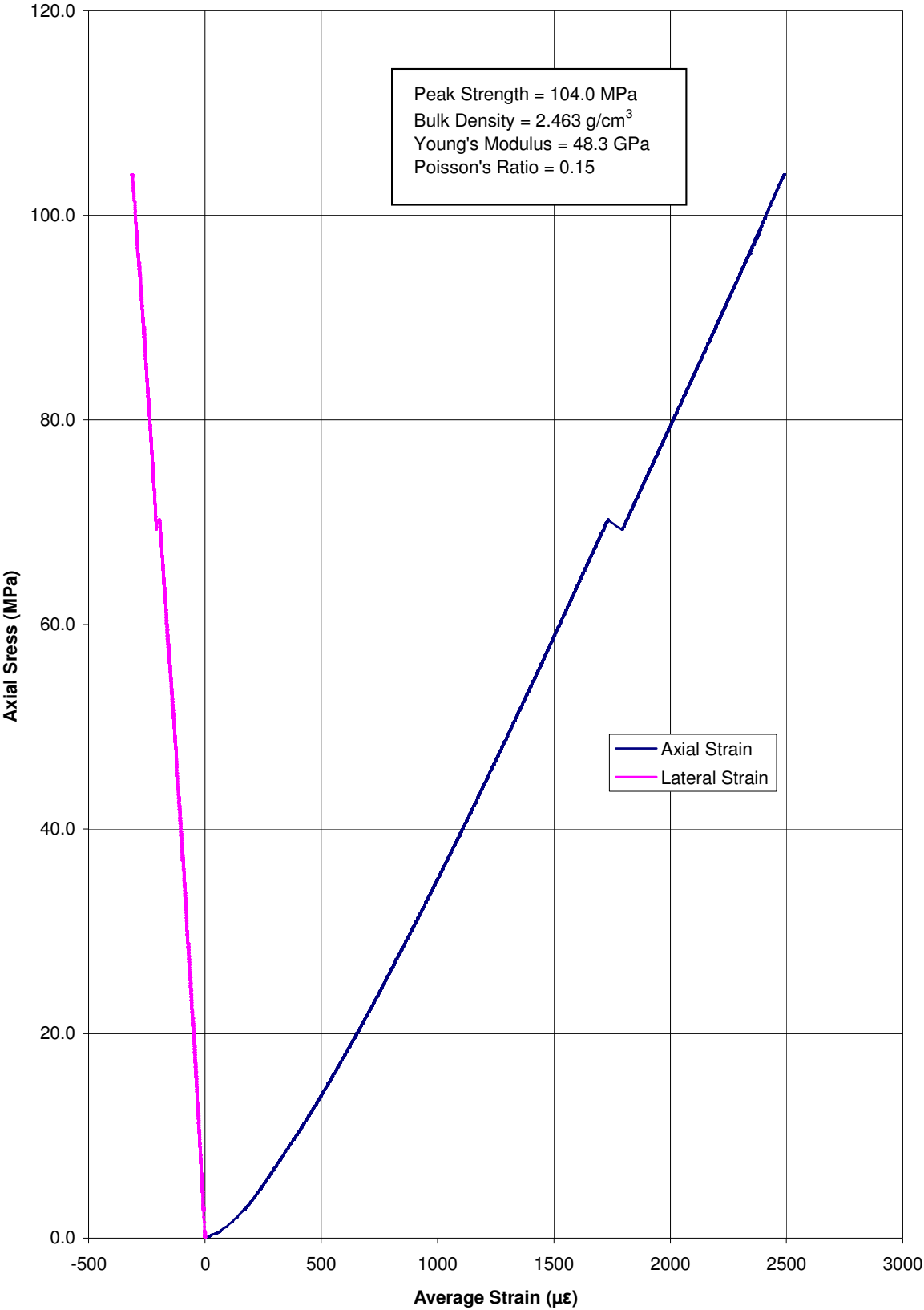
SAMPLE: MZ09-02-02



Length: 108.45 mm
Diameter: 44.78 mm
Density: 2.463 g/cm³
Peak Strength: 104.0 MPa
Young's Modulus: 48.3 GPa
Poisson's Ratio: 0.15
Failure Cause: Intact Rock



MZ09-02-02 Stress vs. Strain



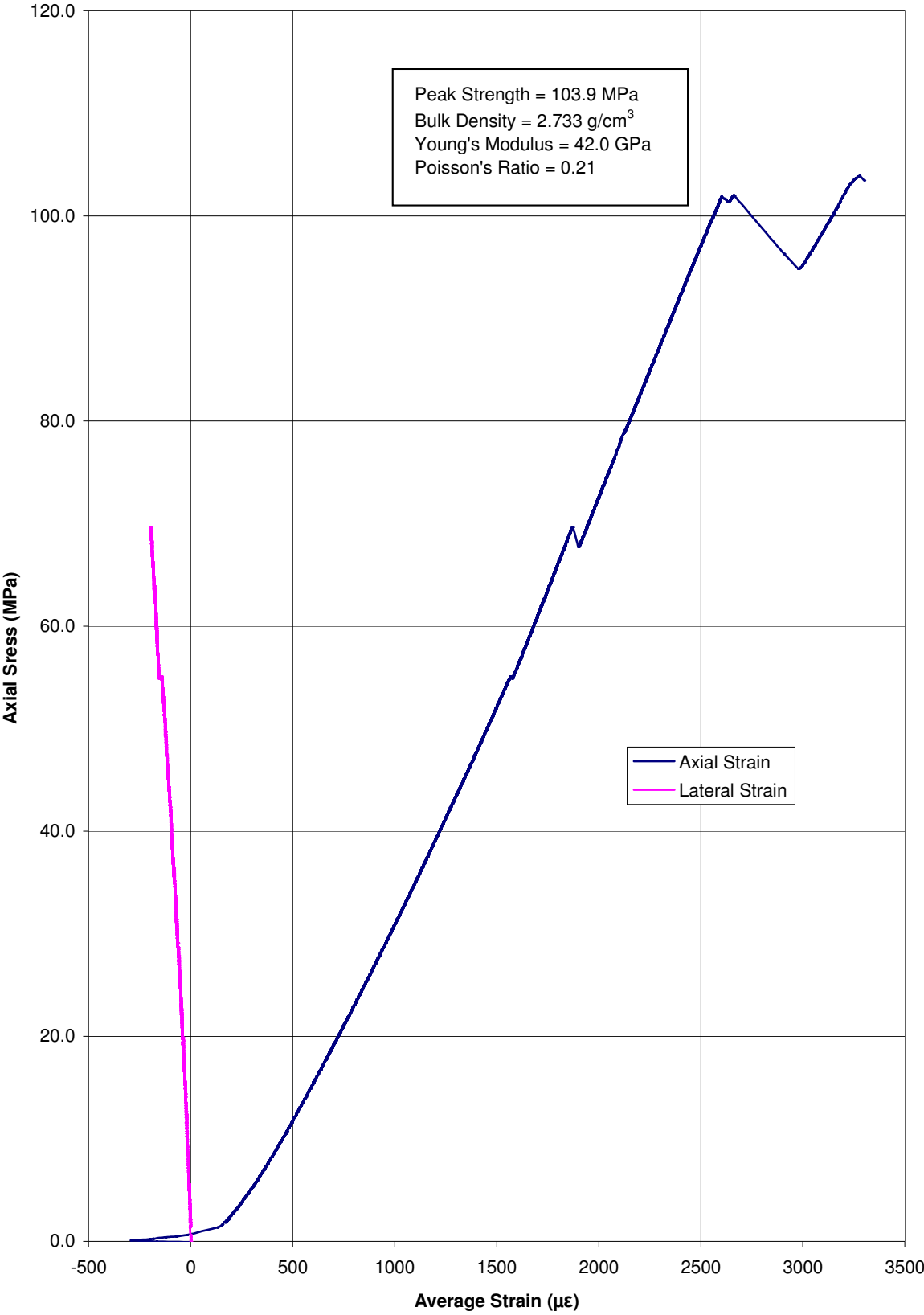
SAMPLE: MZ09-02-03



Length: 109.64 mm
Diameter: 44.85 mm
Density: 2.733 g/cm³
Peak Strength: 103.9 MPa
Young's Modulus: 42.0 GPa
Poisson's Ratio: 0.21
Failure Cause: Intact Rock



MZ09-02-03 Stress vs. Strain



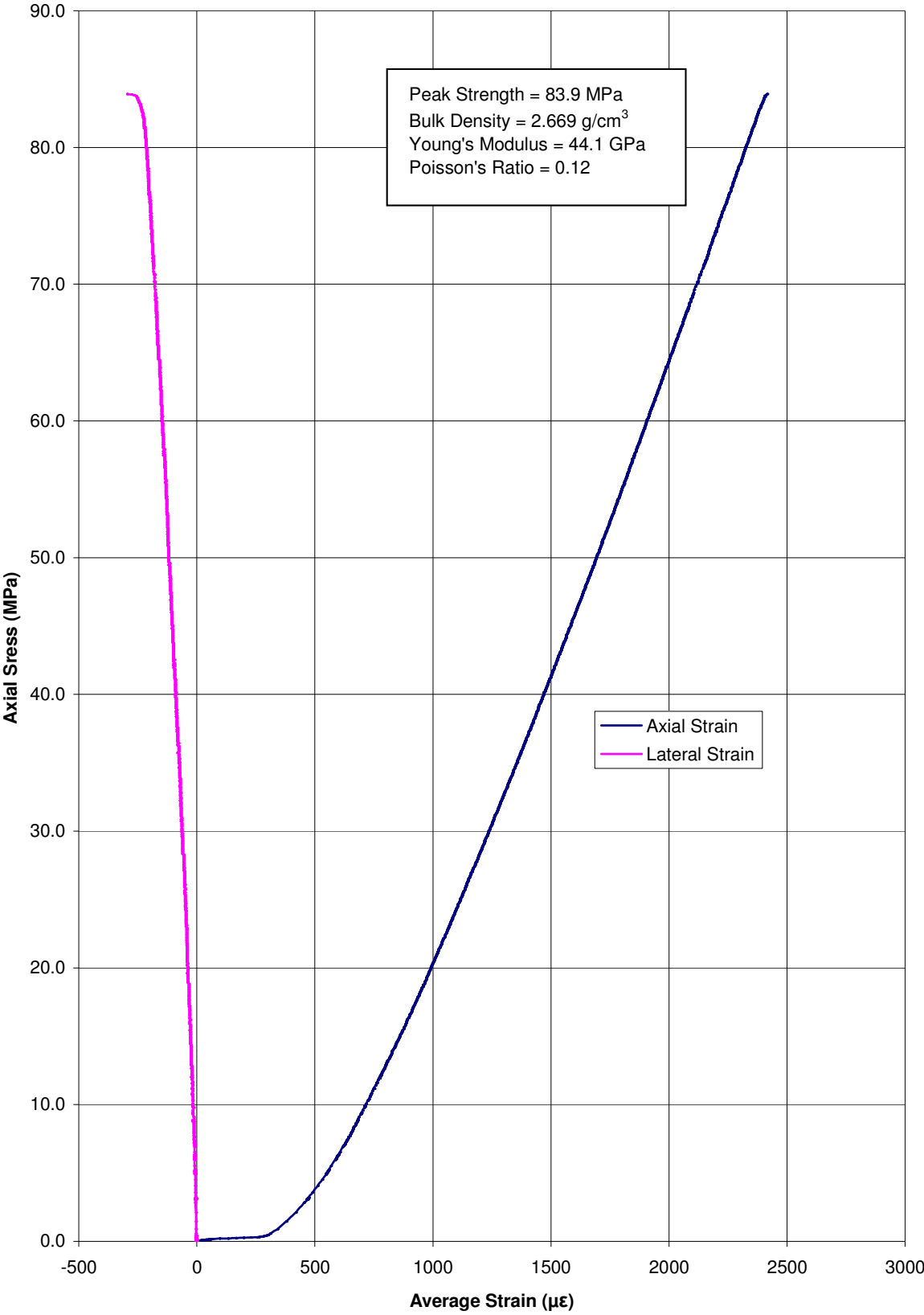
SAMPLE: MZ09-02-04



Length: 106.41 mm
Diameter: 44.98 mm
Density: 2.669 g/cm³
Peak Strength: 83.9 MPa
Young's Modulus: 44.1 GPa
Poisson's Ratio: 0.12
Failure Cause: Weakness Plane



MZ09-02-04 Stress vs. Strain



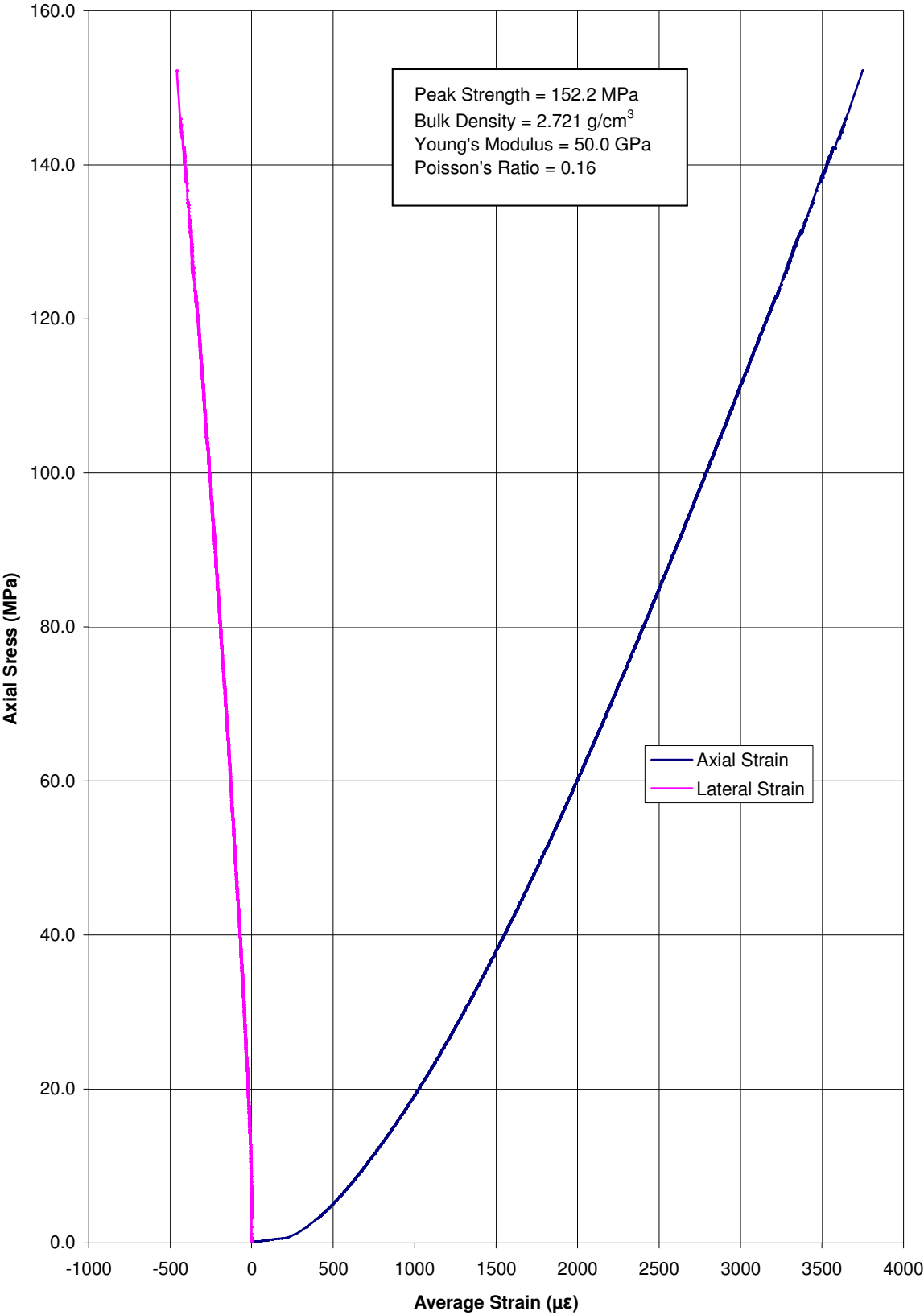
SAMPLE: MZ09-02-05



Length: 106.91 mm
Diameter: 44.91 mm
Density: 2.721 g/cm³
Peak Strength: 152.2 MPa
Young's Modulus: 50.0 GPa
Poisson's Ratio: 0.16
Failure Cause: Intact Rock



MZ09-02-05 Stress vs. Strain



SAMPLE: MZ09-02-06



Length: 109.13 mm

Diameter: 45.14 mm

Density: 2.613 g/cm³

Peak Strength: 111.1 MPa

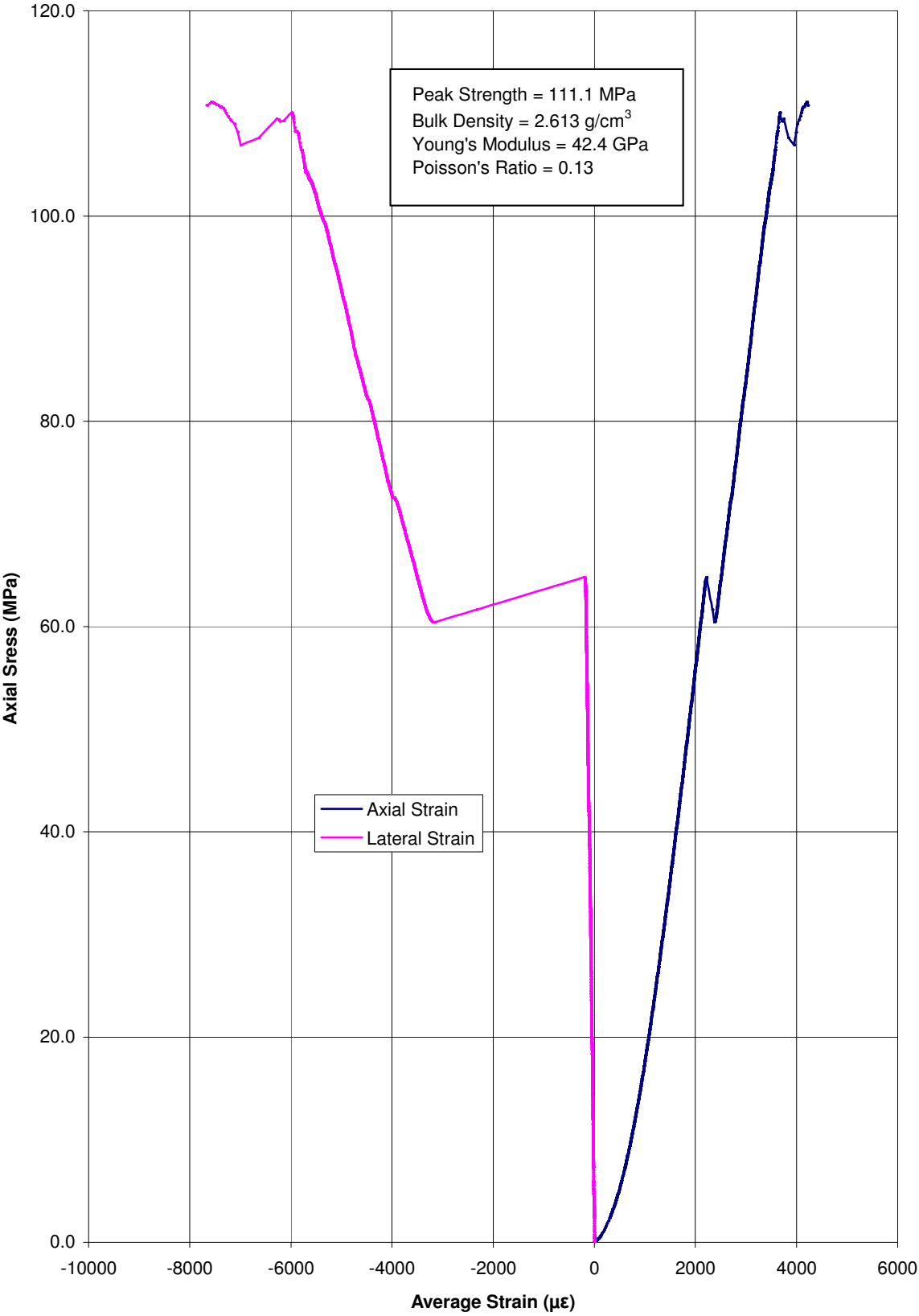
Young's Modulus: 42.4 GPa

Poisson's Ratio: 0.13

Failure Cause: Intact Rock



MZ09-02-06 Stress vs. Strain



SAMPLE: MZ09-03-03



Length: 108.46 mm

Diameter: 45.09 mm

Density: 2.697 g/cm³

Peak Strength: 101.7 MPa

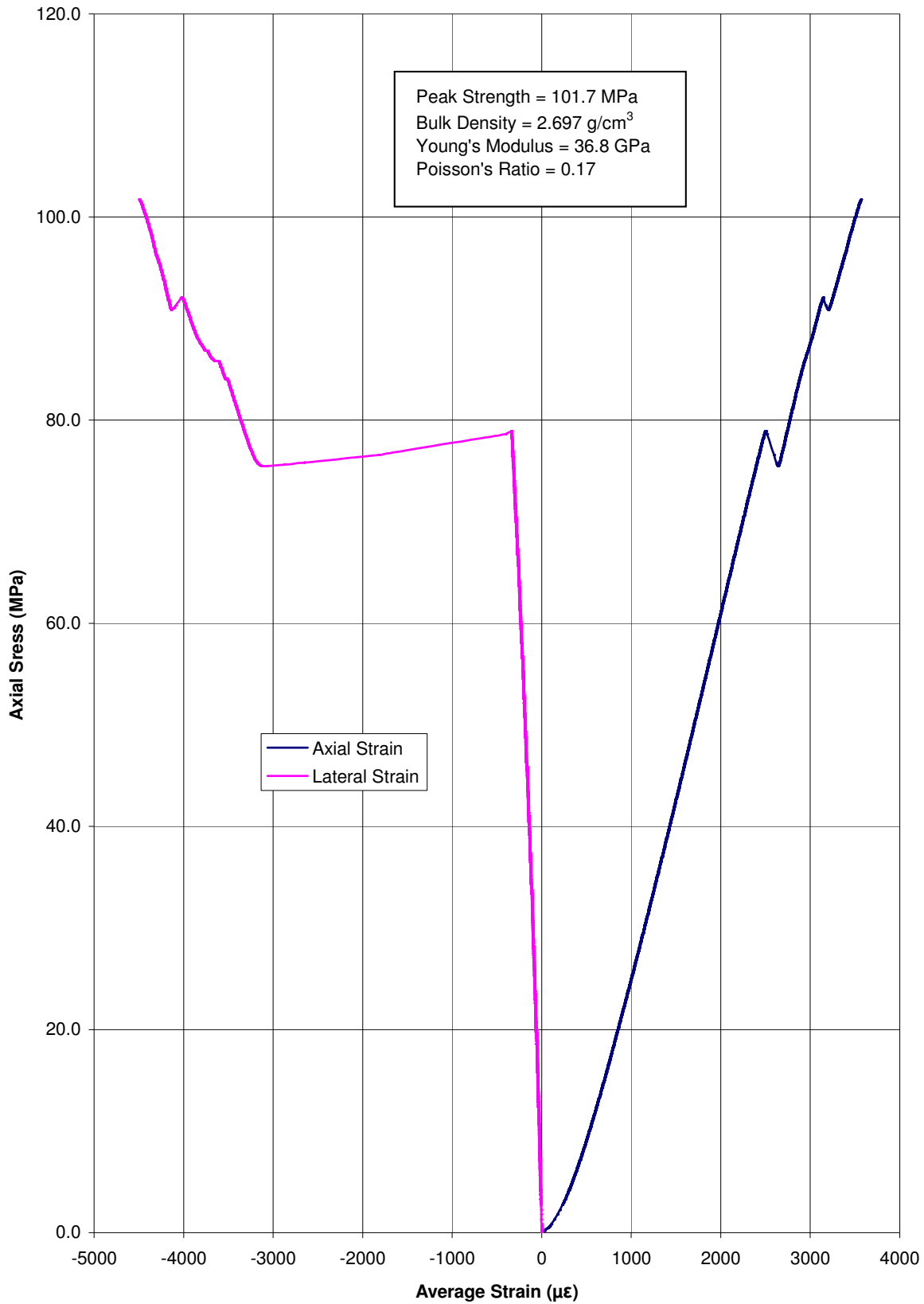
Young's Modulus: 36.8 GPa

Poisson's Ratio: 0.17

Failure Cause: Intact Rock



MZ09-03-03 Stress vs. Strain



SAMPLE: MZ09-03-04



Length: 109.51 mm

Diameter: 45.03mm

Density: 2.614 g/cm³

Peak Strength: 99.5 MPa

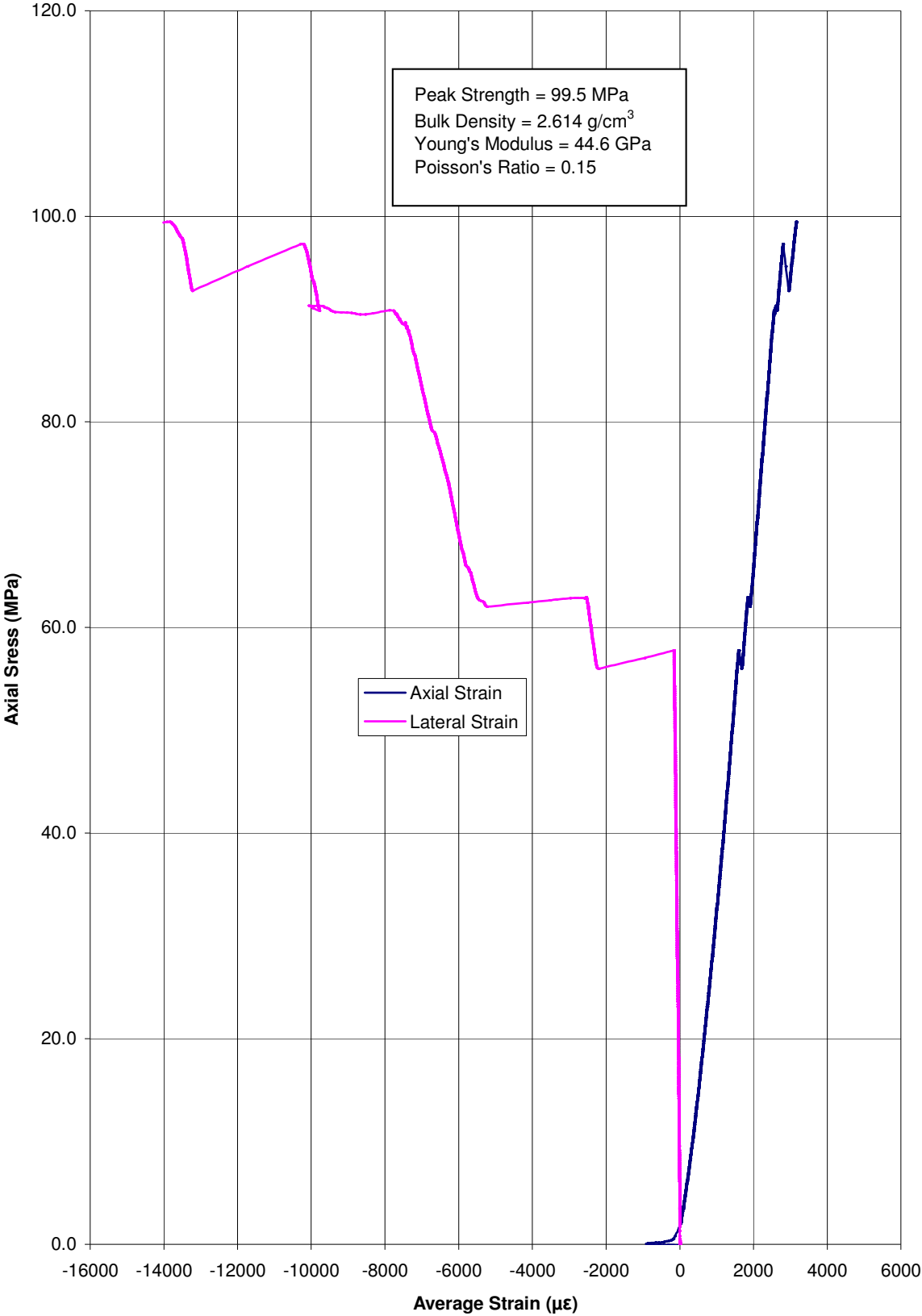
Young's Modulus: 44.6GPa

Poisson's Ratio: 0.15

Failure Cause: Intact Rock



MZ09-03-04 Stress vs. Strain



SAMPLE: MZ09-03-05



Length: 108.63 mm

Diameter: 45.03 mm

Density: 2.691 g/cm³

Peak Strength: 119.5 MPa

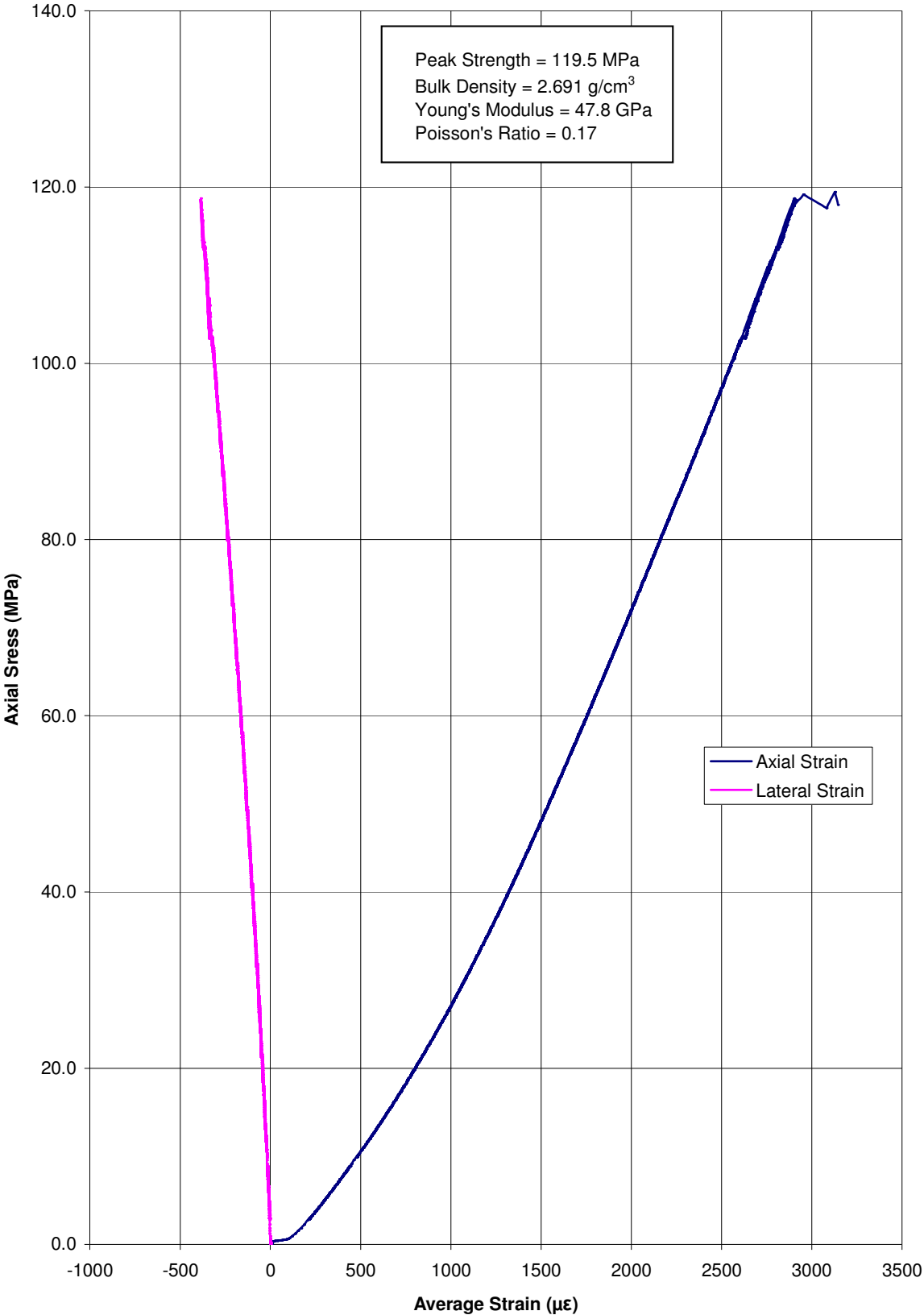
Young's Modulus: 47.8 GPa

Poisson's Ratio: 0.17

Failure Cause: Intact Rock



MZ09-03-05 Stress vs. Strain



SAMPLE: CZ09-01-02



Length: N/A

Diameter: N/A

Density: N/A

Peak Strength: N/A

Young's Modulus: N/A

Poisson's Ratio: N/A

Failure Cause N/A



SAMPLE: END09-05-02



Length: N/A

Diameter: N/A

Density: N/A

Peak Strength: N/A

Young's Modulus: N/A

Poisson's Ratio: N/A

Failure Cause N/A



APPENDIX B
RADIOACTIVE SAMPLES

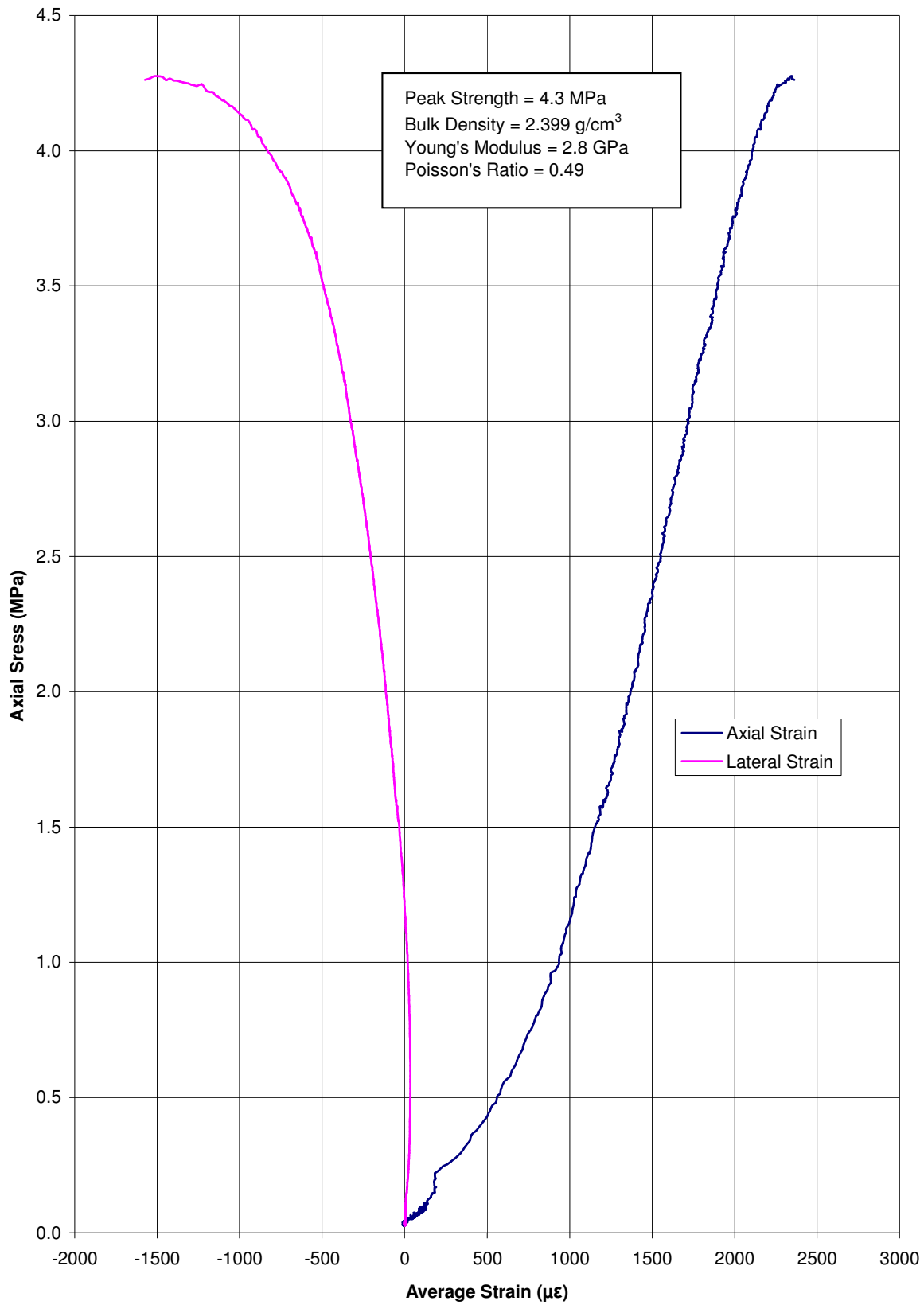
SAMPLE: END09-02_210.24-210.42



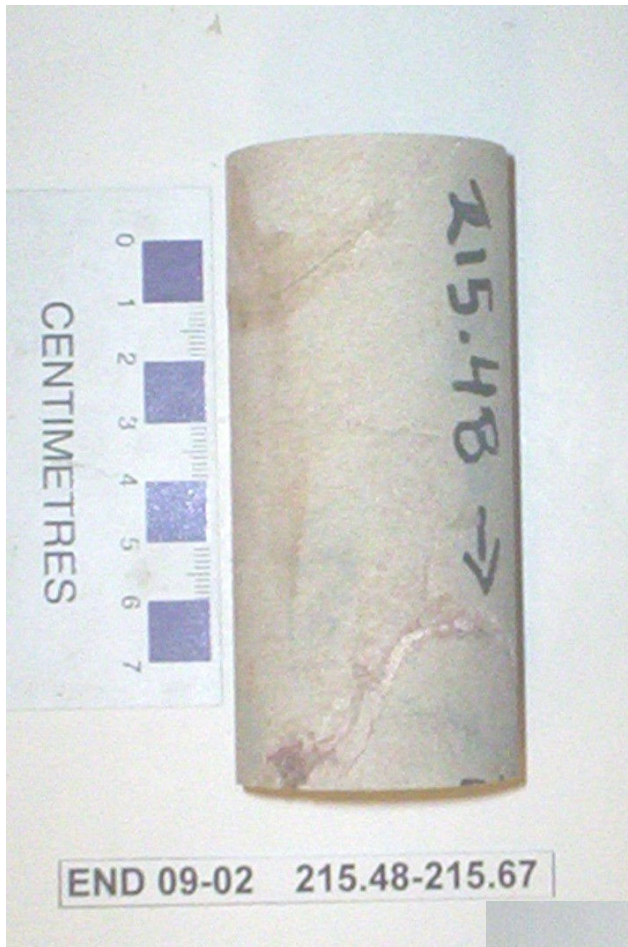
Length: 94.451 mm
Diameter: 45.02 mm
Density: 2.399 g/cm³
Peak Strength: 4.3 MPa
Young's Modulus: 2.8 GPa
Poisson's Ratio: 0.49



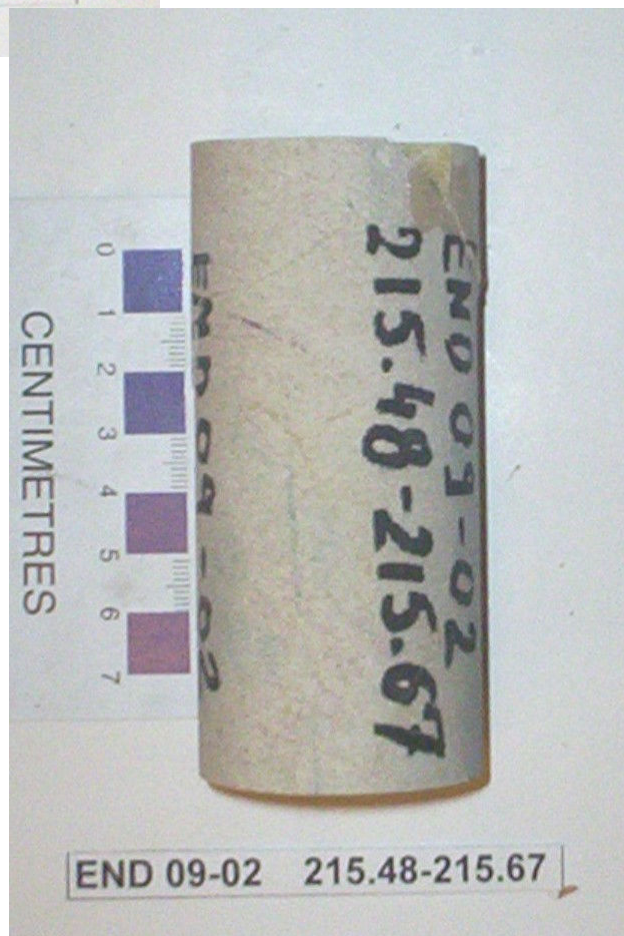
END 09-02 210.24-210.42 Stress vs. Strain



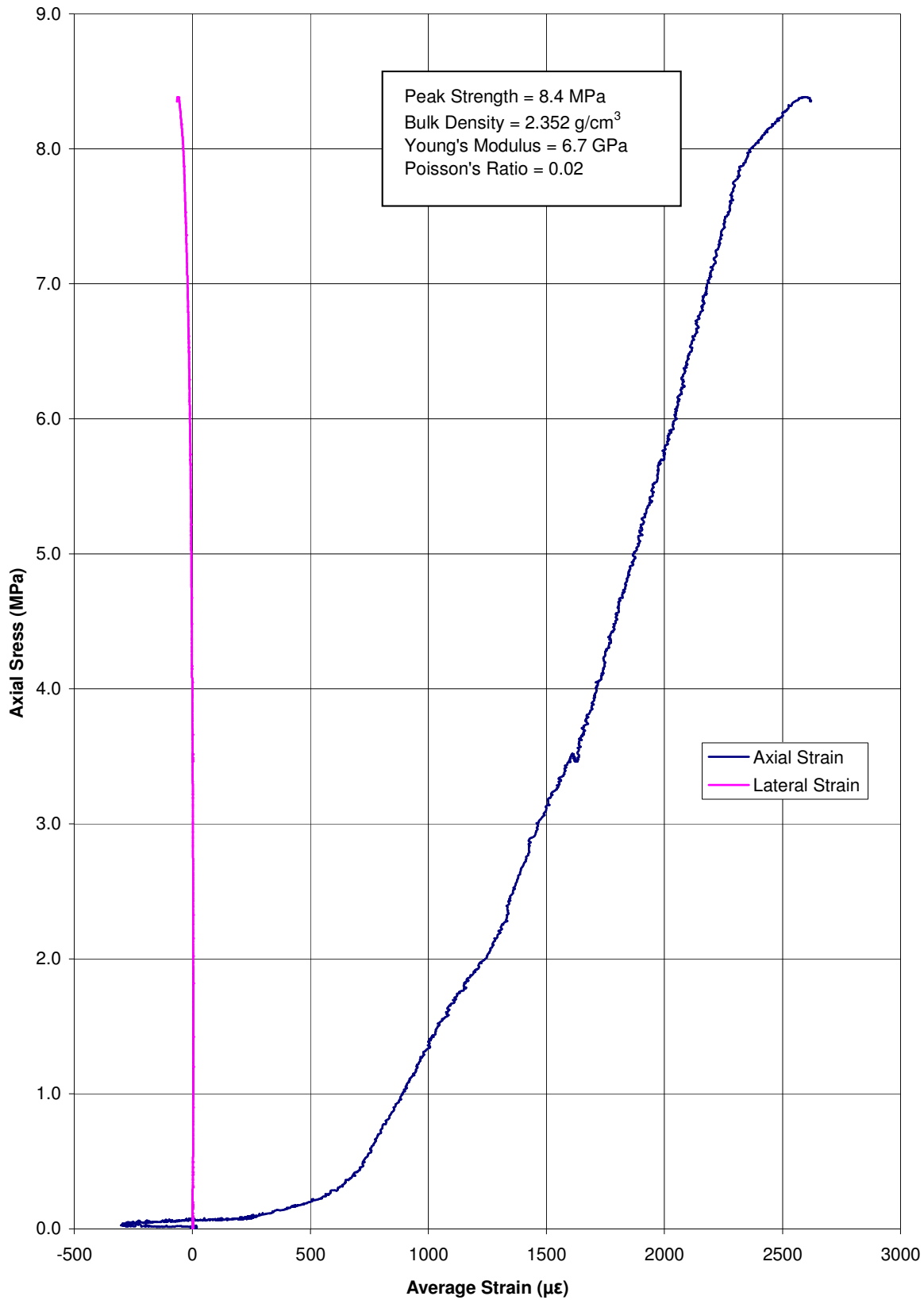
SAMPLE: END09-02_215.48-215.67



Length: 99.48 mm
Diameter: 45.05 mm
Density: 2.352 g/cm³
Peak Strength: 8.4 MPa
Young's Modulus: 6.7 GPa
Poisson's Ratio: 0.02



END 09-02 215.48-215.67 Stress vs. Strain



SAMPLE: END09-02_234.67-234.89



Length: 98.07 mm

Diameter: 45.12 mm

Density: 2.440 g/cm³

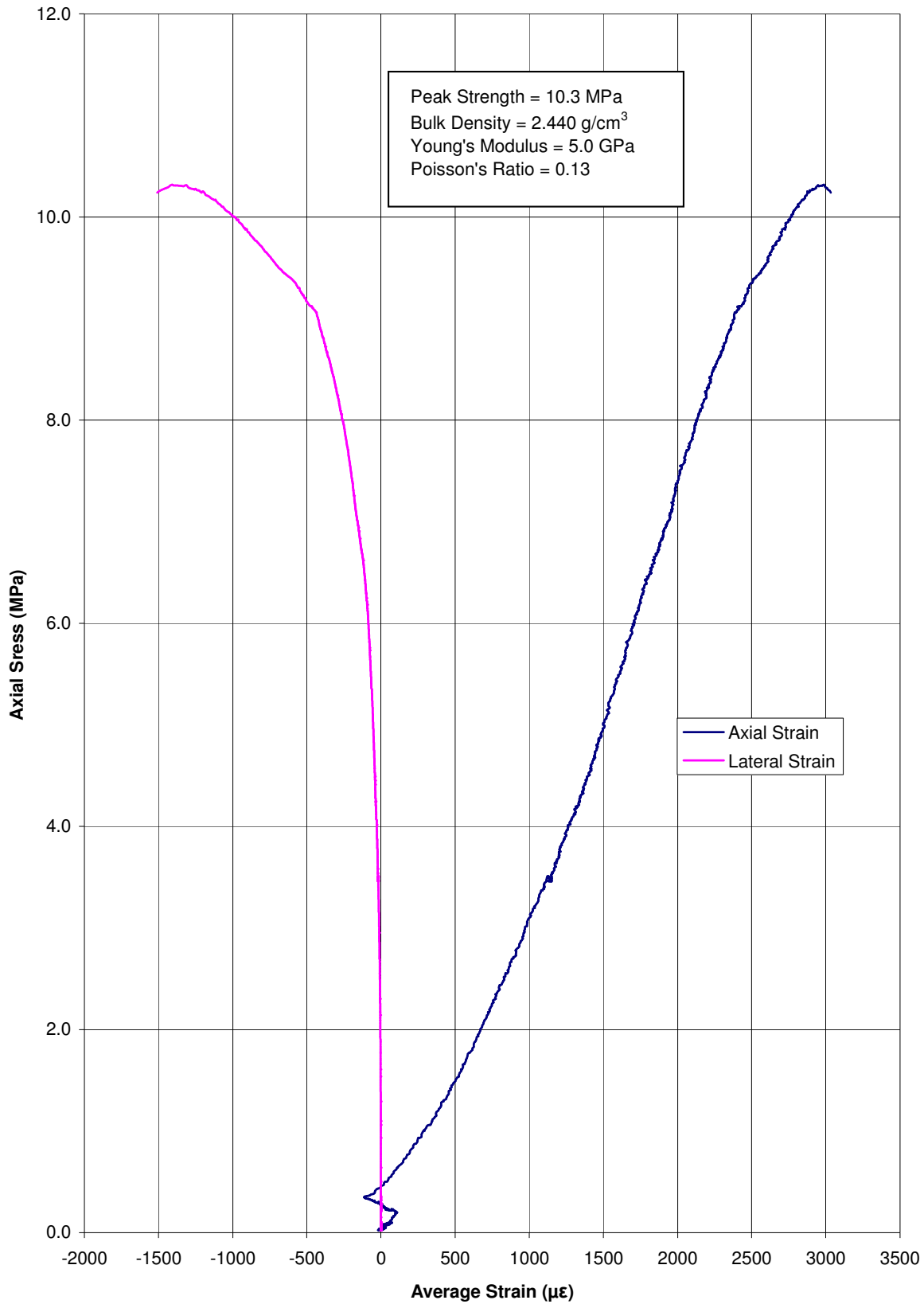
Peak Strength: 10.3 MPa

Young's Modulus: 5.0 GPa

Poisson's Ratio: 0.13



END 09-02 234.67-234.89 Stress vs. Strain



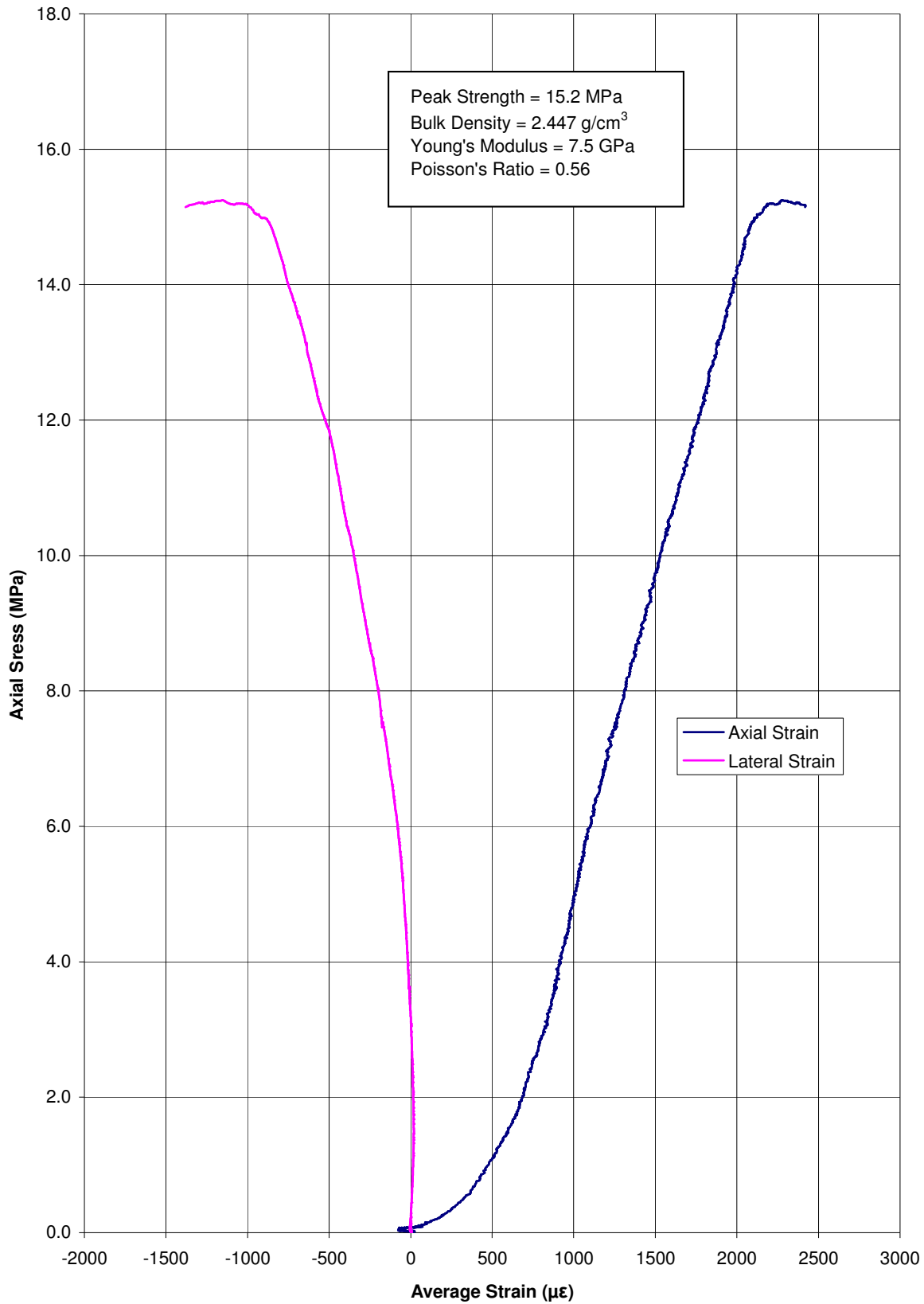
SAMPLE: END09-02_246.92-247.04



Length: 102.86 mm
Diameter: 45.05 mm
Density: 2.447 g/cm³
Peak Strength: 15.2 MPa
Young's Modulus: 7.5 GPa
Poisson's Ratio: 0.56



END 09-02 246.92-247.04 Stress vs. Strain



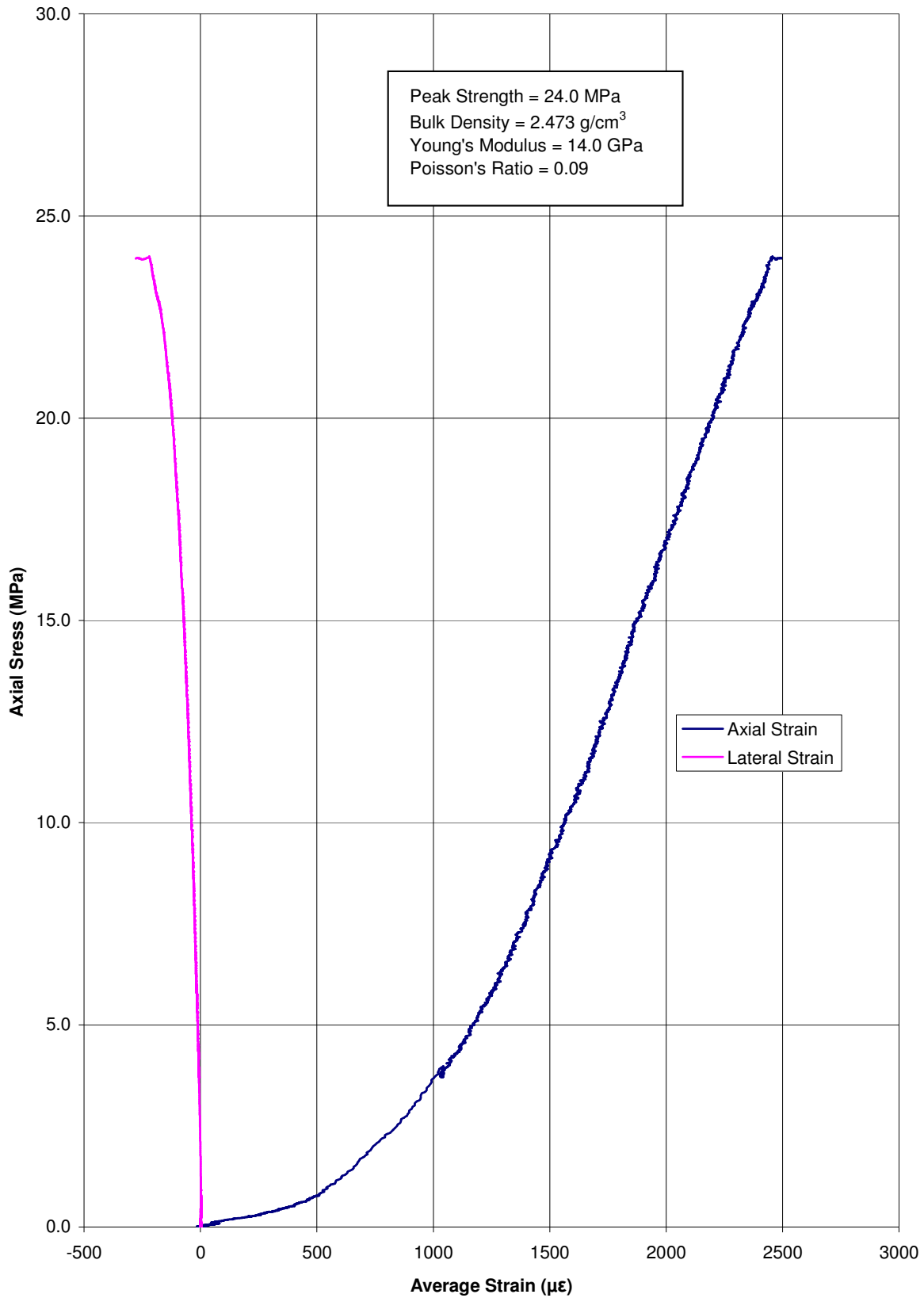
SAMPLE: END09-02_272.81-272.95



Length: 100.68 mm
Diameter: 45.03 mm
Density: 2.473 g/cm³
Peak Strength: 24.0 MPa
Young's Modulus: 14.0 GPa
Poisson's Ratio: 0.09



END 09-02 272.81-272.95 Stress vs. Strain



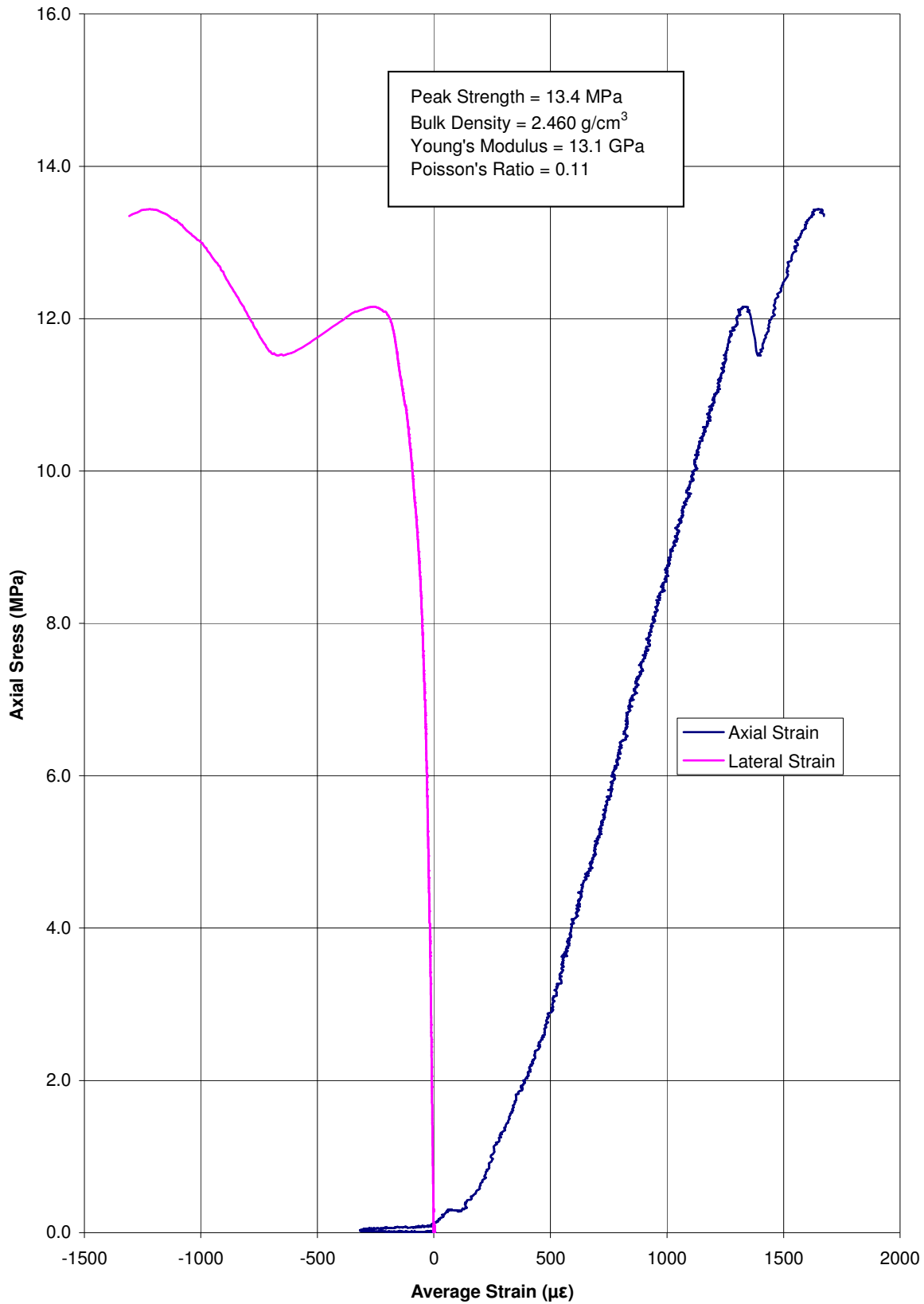
SAMPLE: END09-02_284.00-284.30



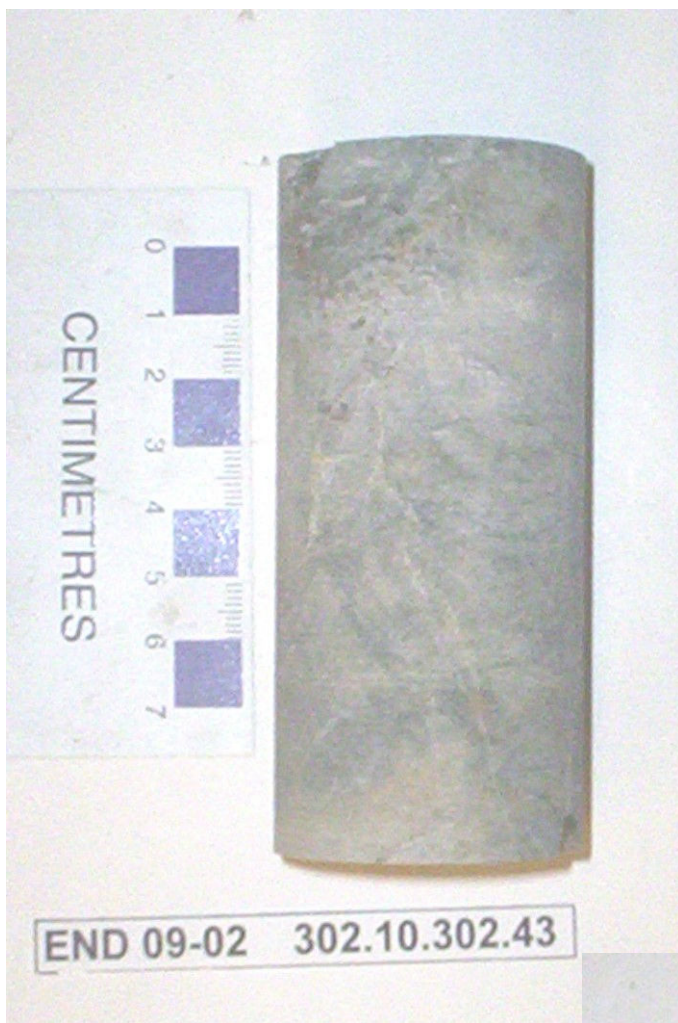
Length: 98.16 mm
Diameter: 44.96 mm
Density: 2.460 g/cm³
Peak Strength: 13.4 MPa
Young's Modulus: 13.1 GPa
Poisson's Ratio: 0.11



END 09-02 284.00-284.30 Stress vs. Strain



SAMPLE: END09-02_302.10-302.43



Length: 101.08 mm

Diameter: 45.08 mm

Density: 2.604 g/cm³

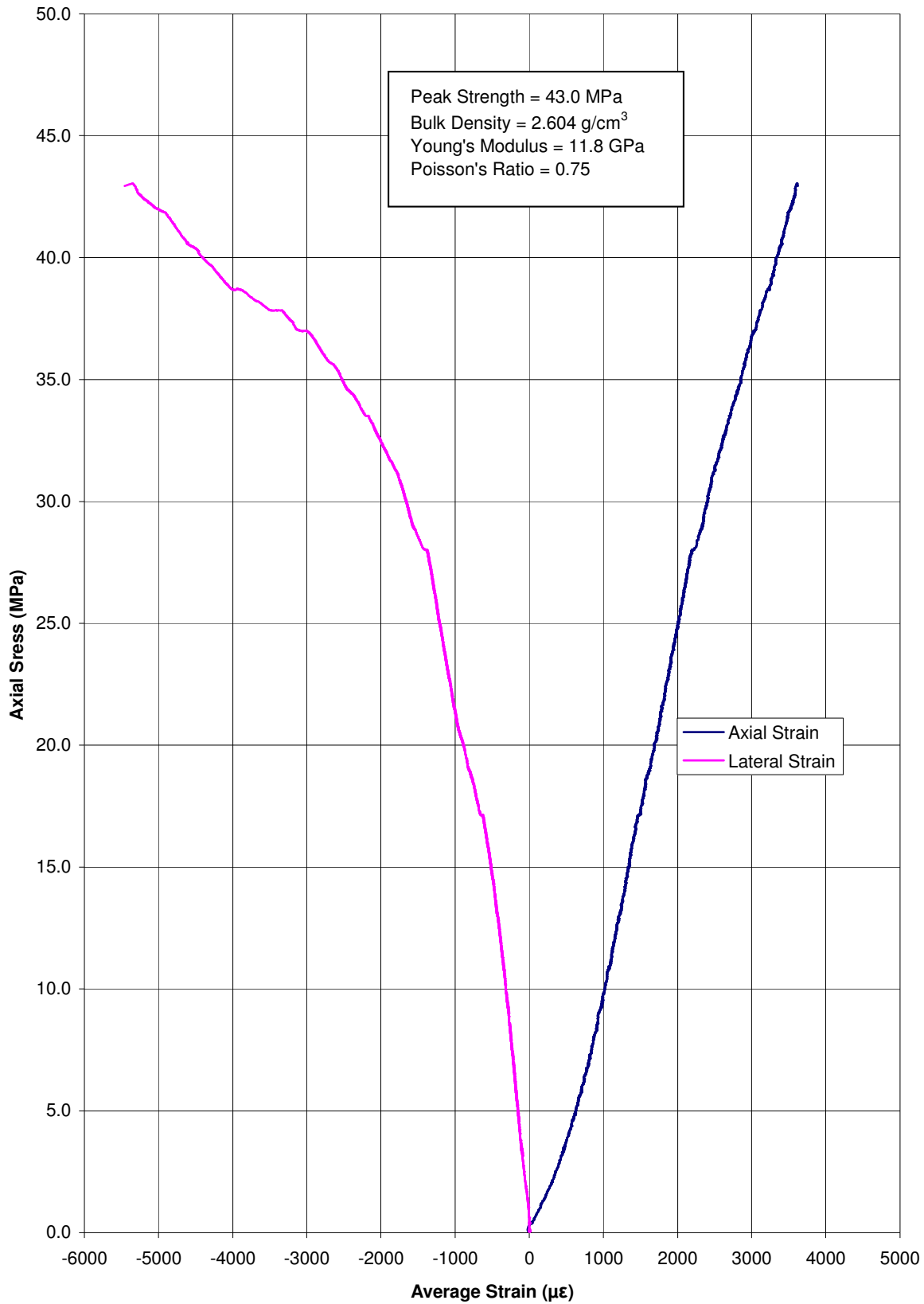
Peak Strength: 43.0 MPa

Young's Modulus: 11.8 GPa

Poisson's Ratio: 0.75



END 09-02 302.10-302.43 Stress vs. Strain



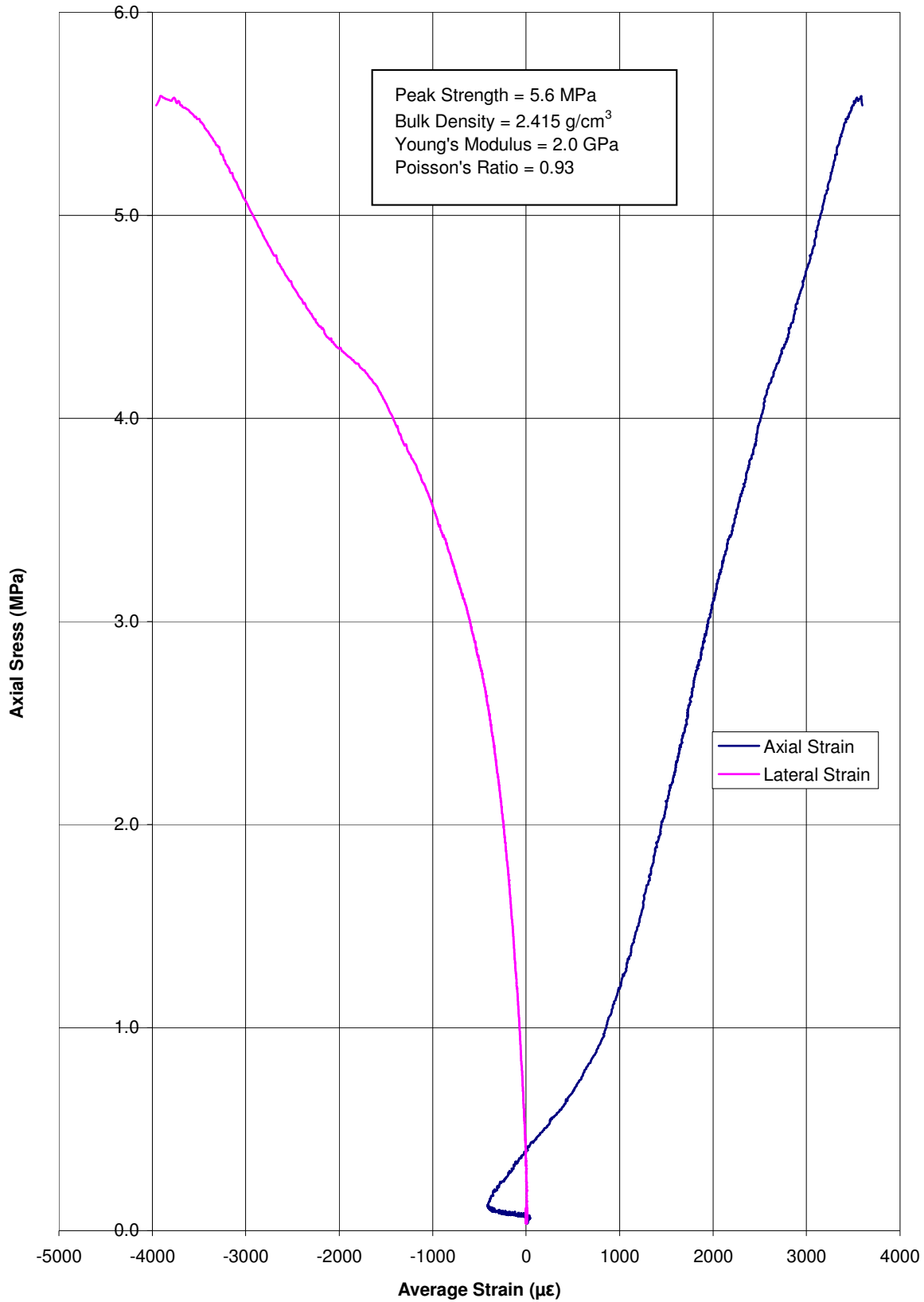
SAMPLE: END09-02_312.35-312.55



Length: 102.08 mm
Diameter: 44.95 mm
Density: 2.415 g/cm³
Peak Strength: 5.6 MPa
Young's Modulus: 2.0 GPa
Poisson's Ratio: 0.93



END 09-02 312.35-312.55 Stress vs. Strain



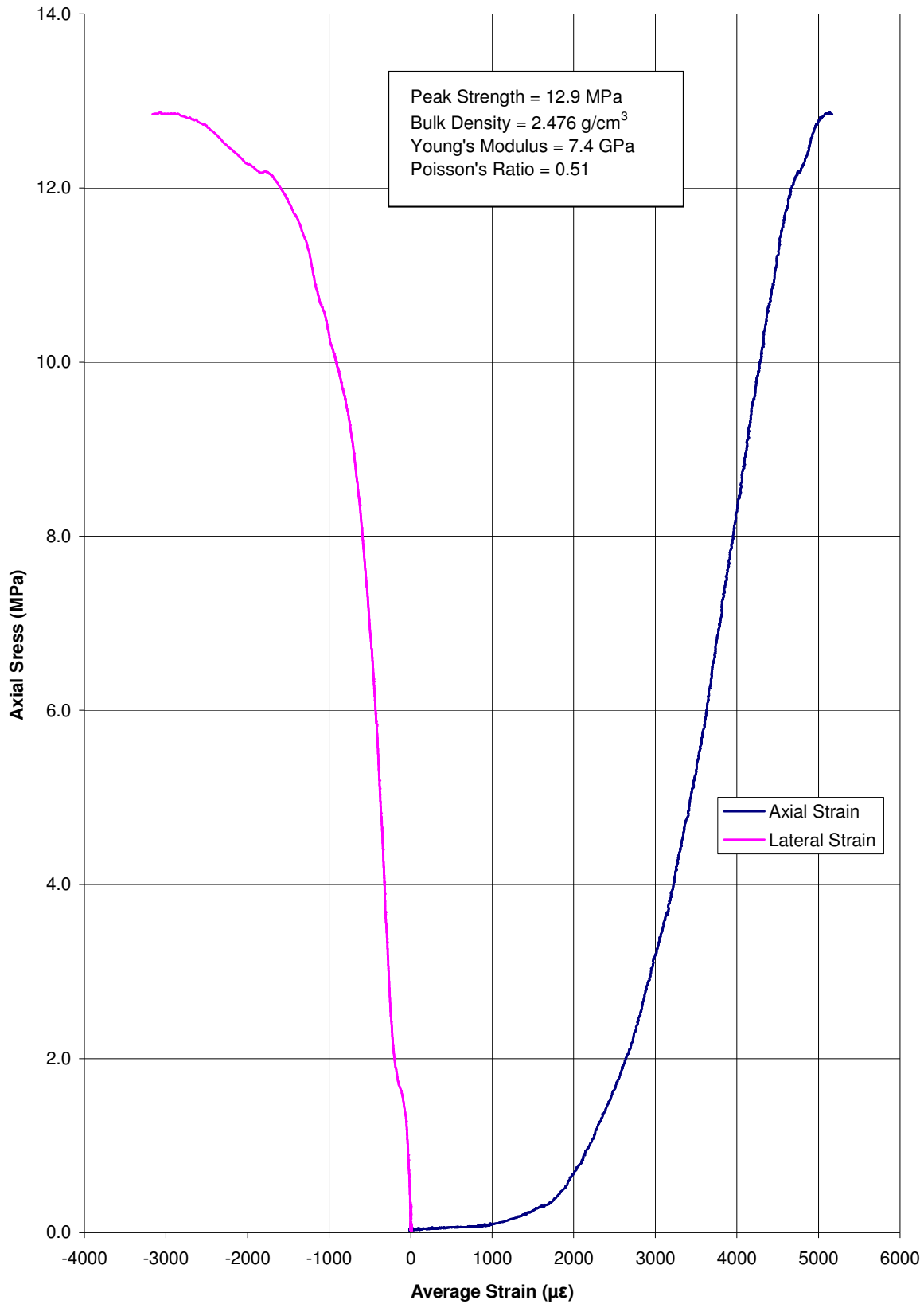
SAMPLE: END09-02_313.95-314.12



Length: 101.57 mm
Diameter: 44.97 mm
Density: 2.476 g/cm³
Peak Strength: 12.9 MPa
Young's Modulus: 7.4 GPa
Poisson's Ratio: 0.51



END 09-02 313.95-314.12 Stress vs. Strain



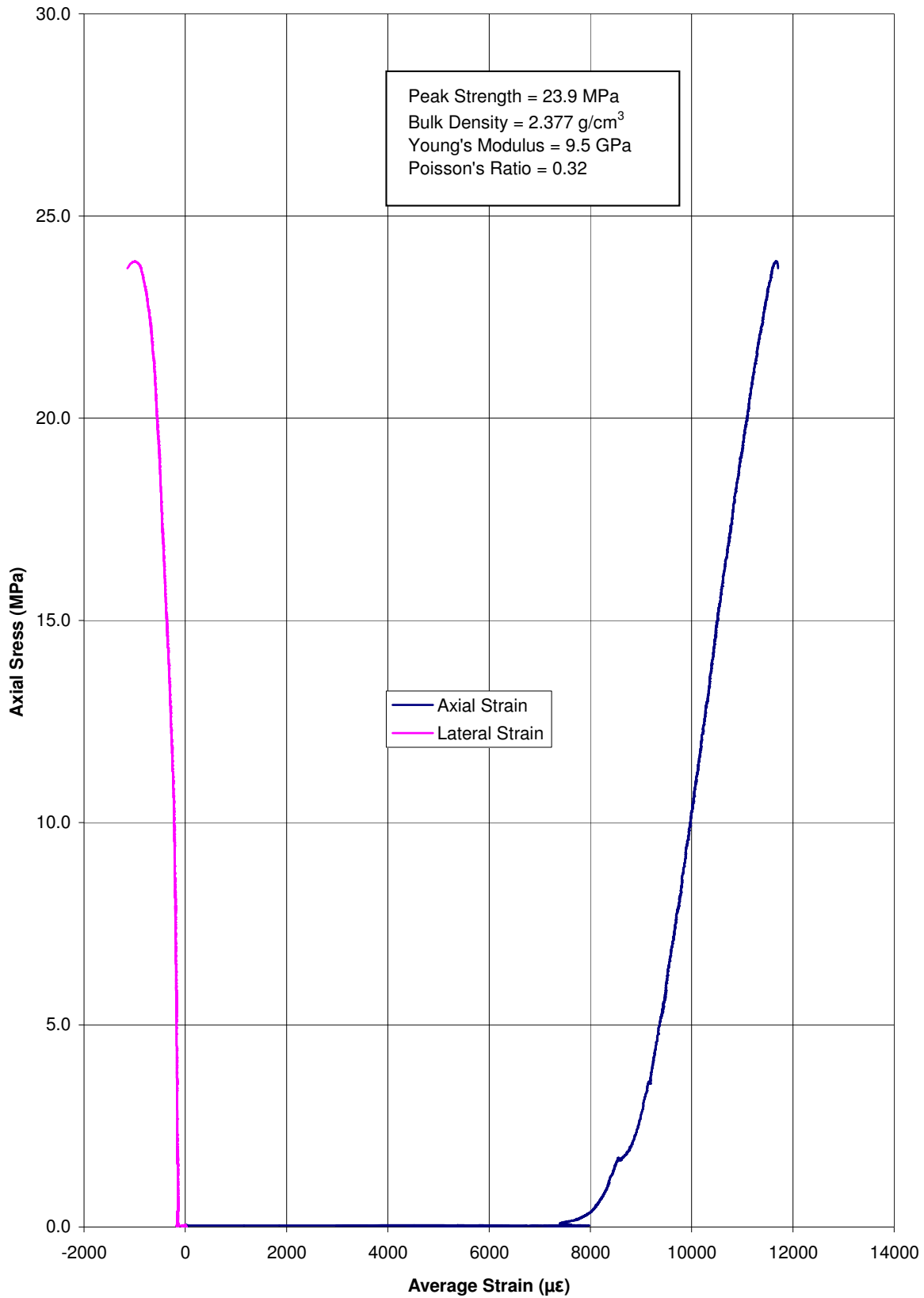
SAMPLE: END09-02_329.30-329.50



Length: 103.53 mm
Diameter: 44.97 mm
Density: 2.377 g/cm³
Peak Strength: 23.9 MPa
Young's Modulus: 9.5 GPa
Poisson's Ratio: 0.32



END 09-02 329.30-329.50 Stress vs. Strain



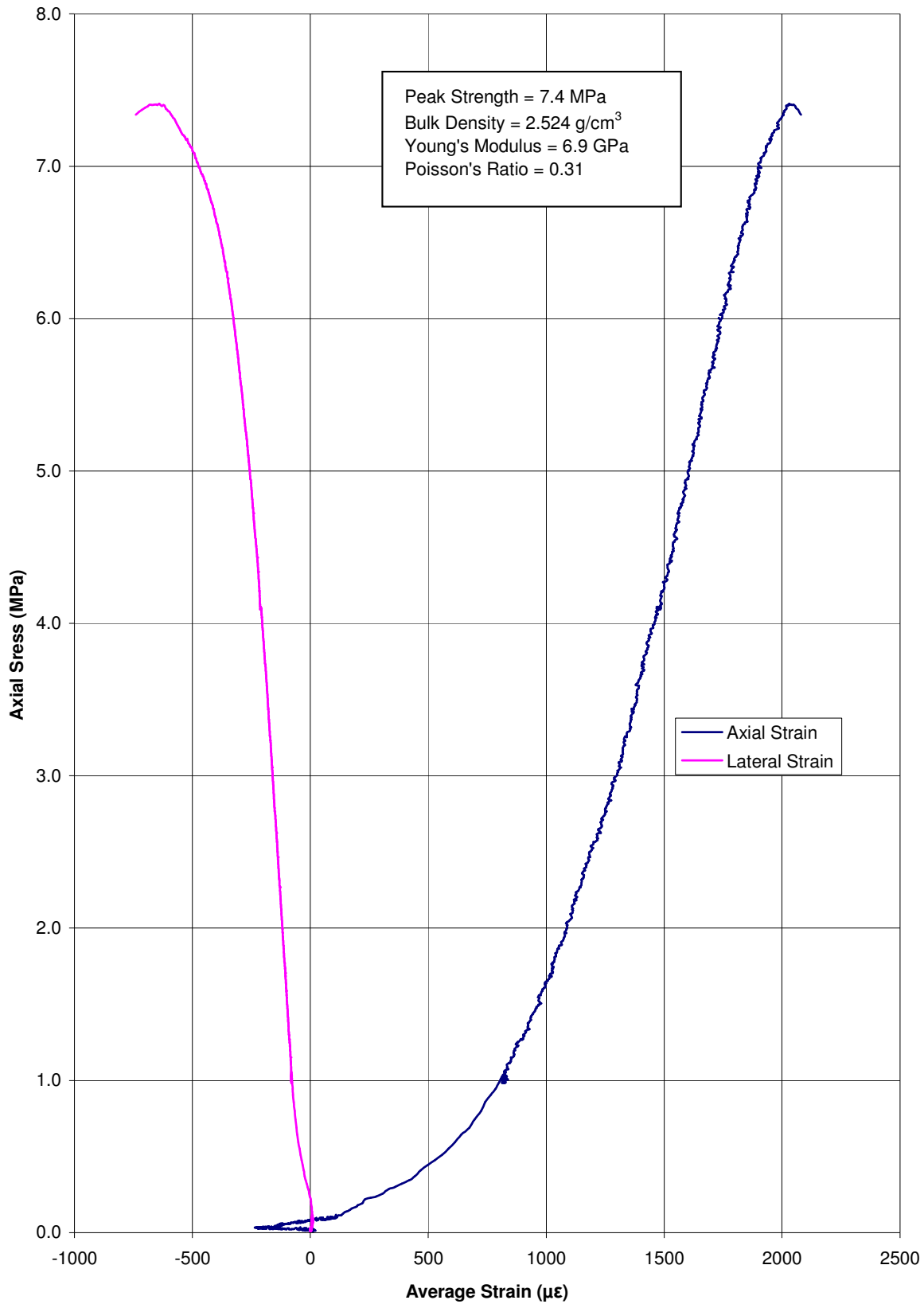
SAMPLE: END09-02_333.25-333.42



Length: 101.03 mm
Diameter: 45.13 mm
Density: 2.524 g/cm³
Peak Strength: 7.4 MPa
Young's Modulus: 6.9 GPa
Poisson's Ratio: 0.31



END 09-02 333.25-333.42 Stress vs. Strain



SAMPLE: END09-02_341.20-341.40



Length: 100.13 mm
Diameter: 45.05 mm
Density: 2.440 g/cm³
Peak Strength: 9.4 MPa
Young's Modulus: 5.1 GPa
Poisson's Ratio: 0.04



END 09-02 341.20-341.40 Stress vs. Strain

