

METAROCK LABORATORIES MR-21000850_FORGE_GRANITE THERMAL PROPERTIES UPDATE: 10.29.2021

Prepared for
Dr. John McLennan



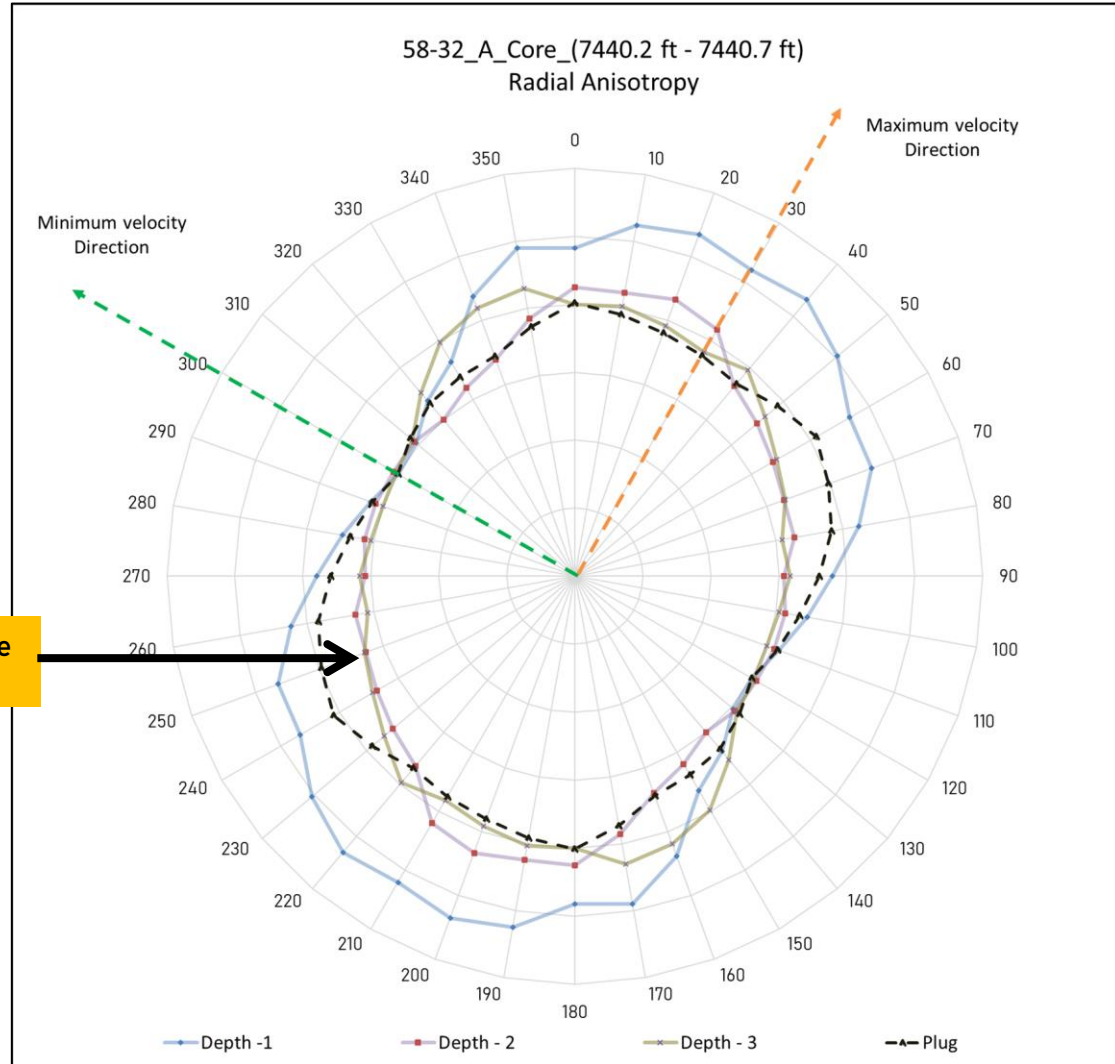
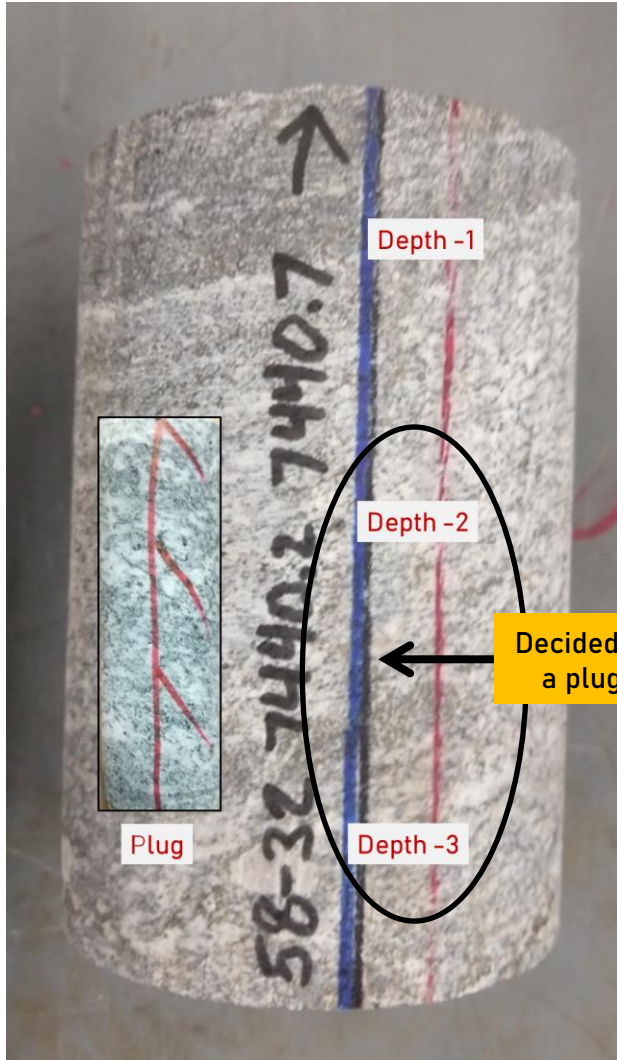
Thermal Expansion Test

58-32_A_01_IV1.A_HT

7440.43 ft

Radial Velocity Measurement

58-32_A
(7440.2 - 7440.7 ft)



Set01: 58-32_A_01 7440.43ft.

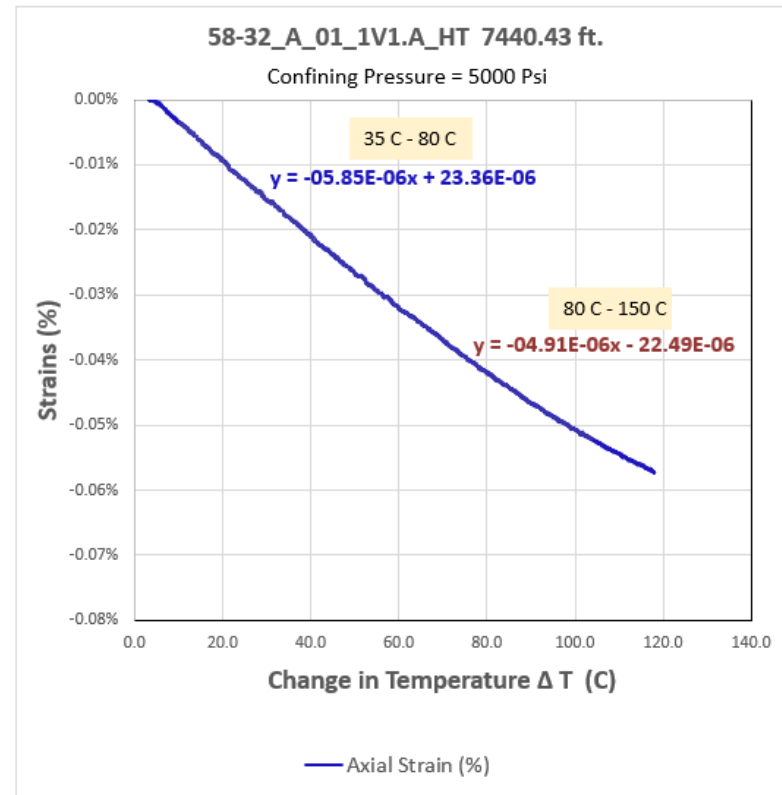
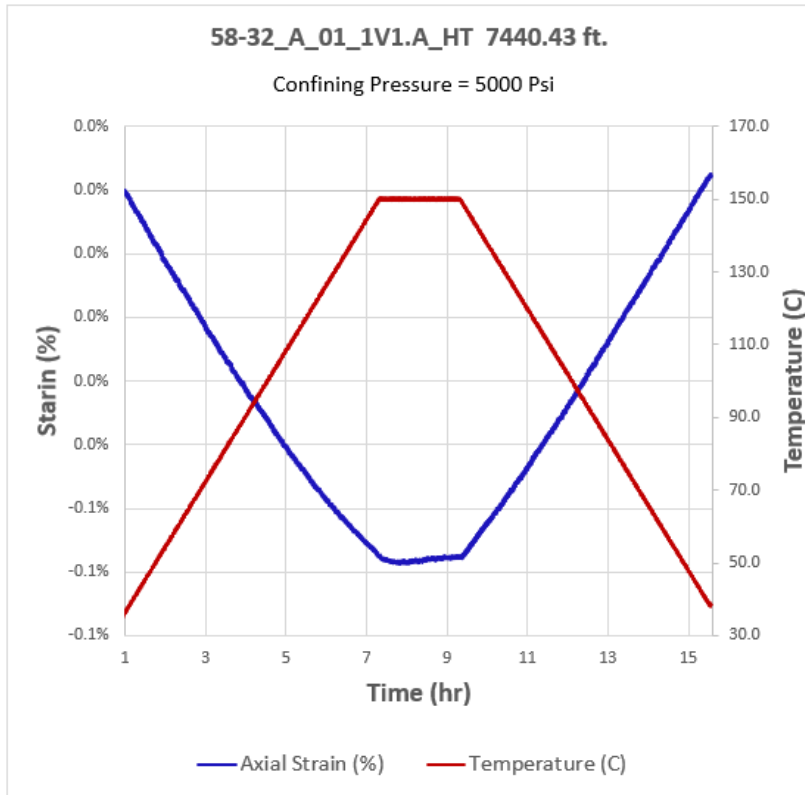
58-32_A_01_1V1
7440.43 ft.



Thermal Expansion Test

58-32_A_01_1V1.A_HT 7440.43ft.

Test Overview



Thermal Expansion Test

58-32_A_01_1V1.A_HT 7440.43ft.

Summary

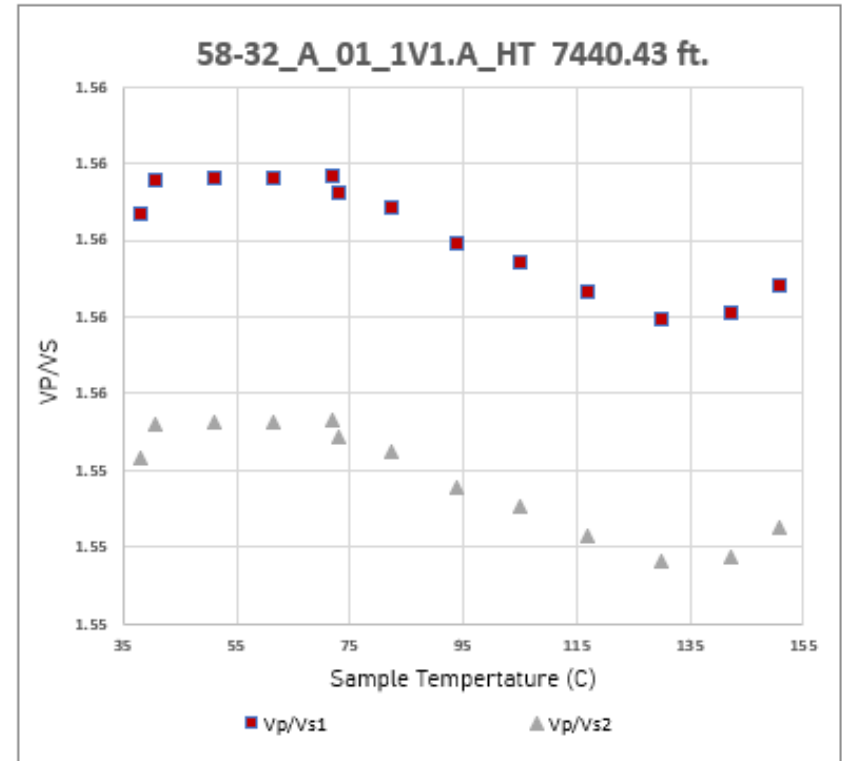
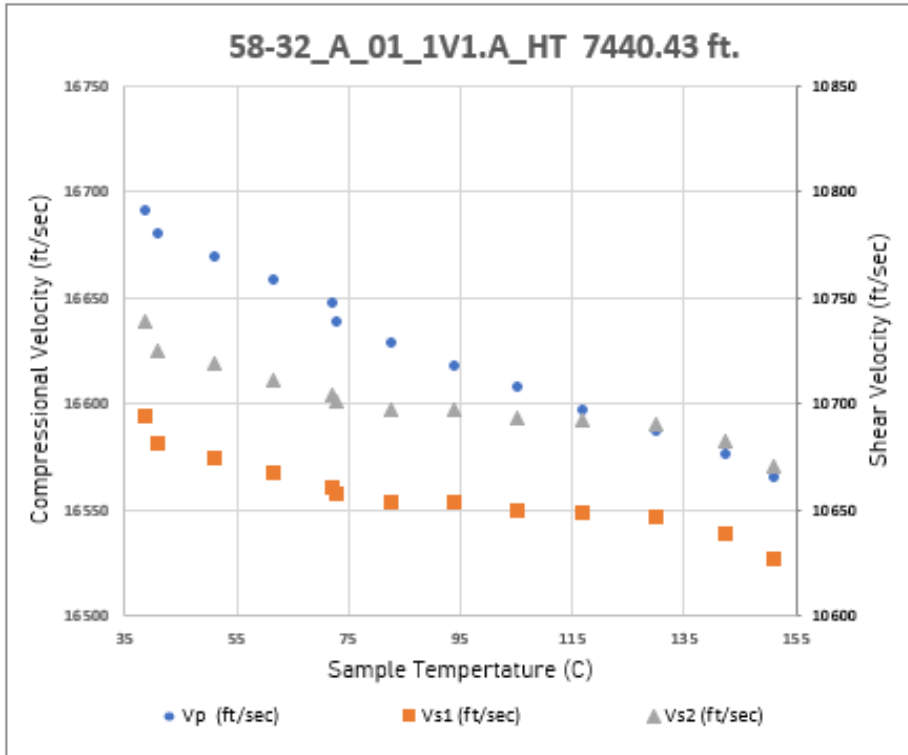
Confining Pressure (Psi)	Thermal Expansion Coefficient ($\times 10^{-6}$)		Compressional Velocity	Shear Velocity (S1) (ft/sec)	Shear Velocity (S2) (ft/sec)	Vp/VS(avg)
	Axial					
	35 - 80 C	80 - 150 C	(ft/sec)	(ft/sec)	(ft/sec)	
5000	-5.85	-4.95	16194	10753	10743	1.51

***Geoengineering convention has been used where compression is deemed positive and expansion is deemed negative.**

Thermal Expansion Test

58-32_A_01_1V1.A_HT 7440.43ft.

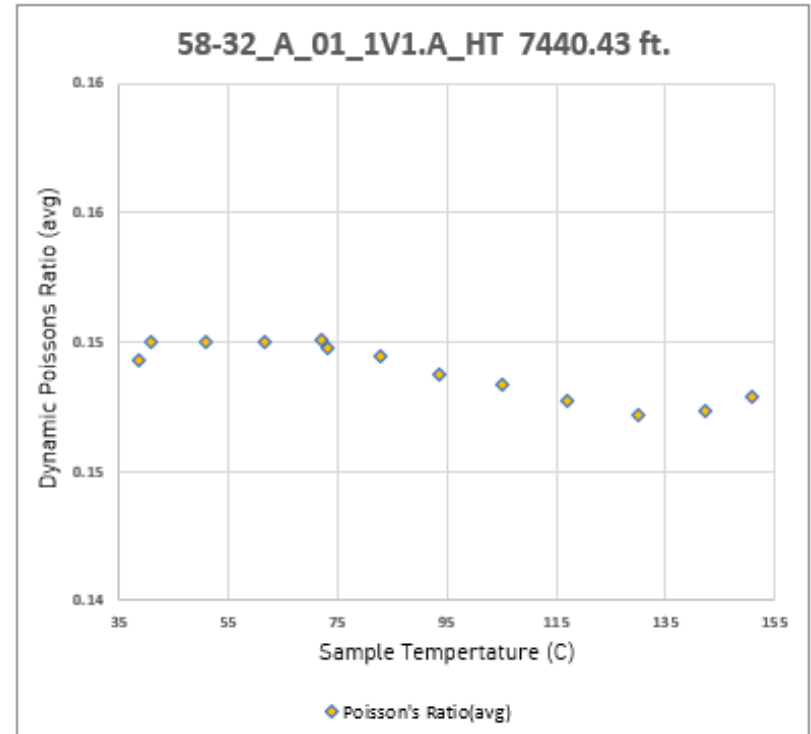
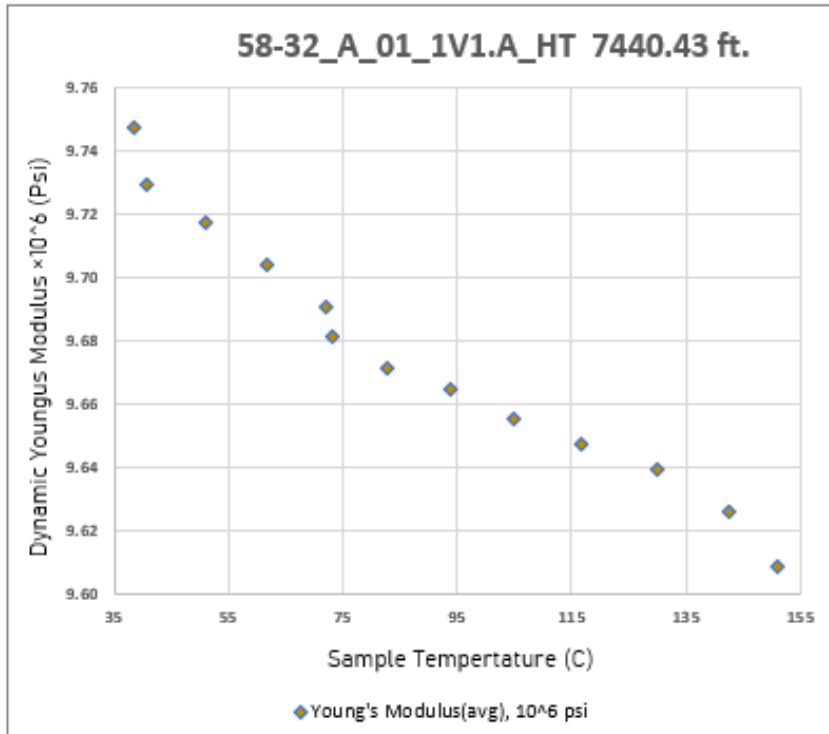
Dynamic Data at $P_c = 5000$ psi



Thermal Expansion Test

58-32_A_01_1V1.A_HT 7440.43ft.

Dynamic Mechanical Properties



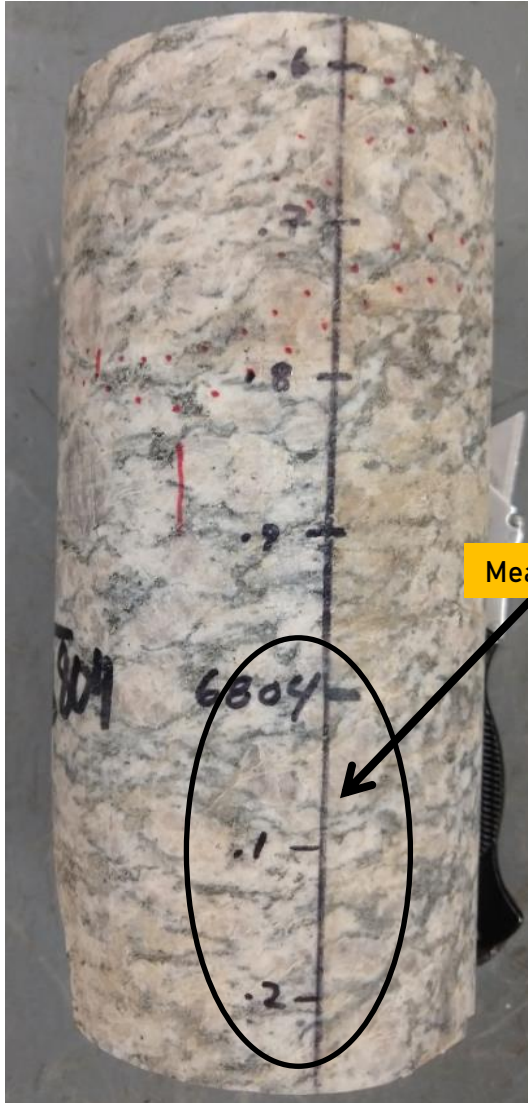
Thermal Expansion Test

58-32_B_03_3V1.A

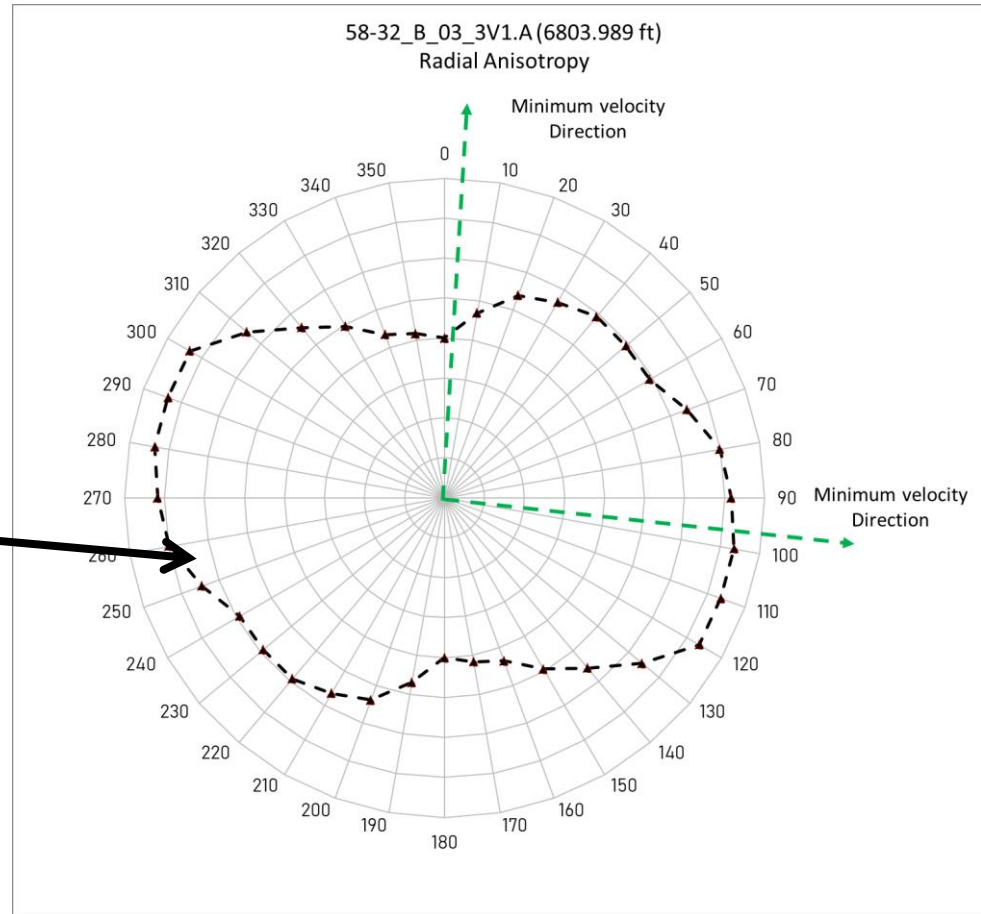
6803.989 ft

Radial Velocity Measurement

58-32_B_03_3V1.A
(6803.58 ft - 6804.28 ft)

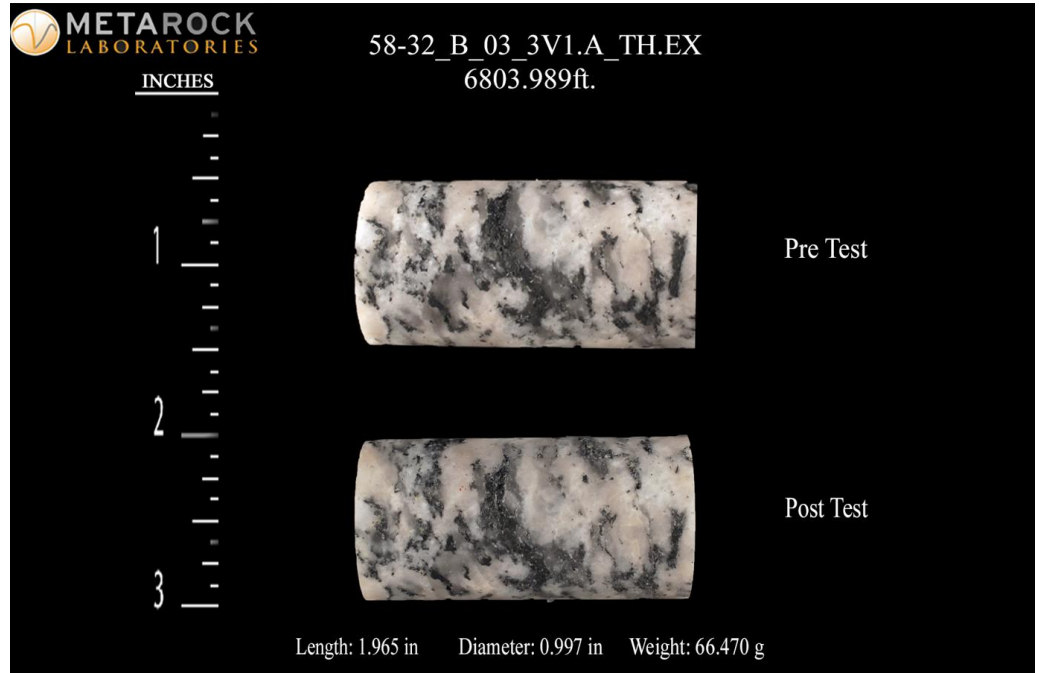


Measurement on plug



Set: 58-32_B_03

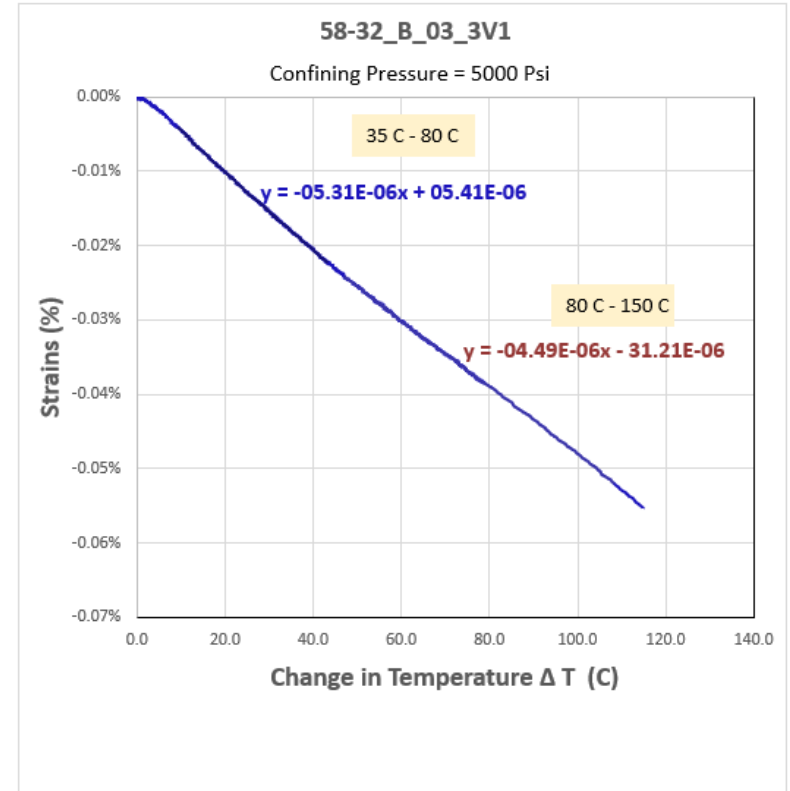
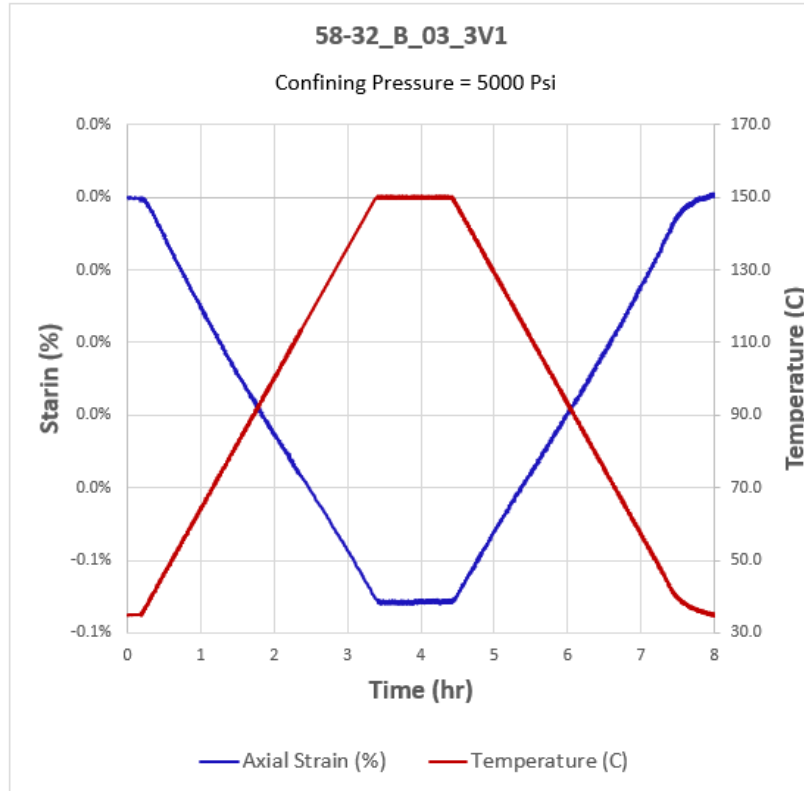
58-32_B_03_3V1
6803.989 ft.



Thermal Expansion Test

58-32_B_03_3V1.A_HT_6803.989ft.

Test Overview



Thermal Expansion Test

58-32_B_03_3V1.A_HT 6803.989ft.

Summary

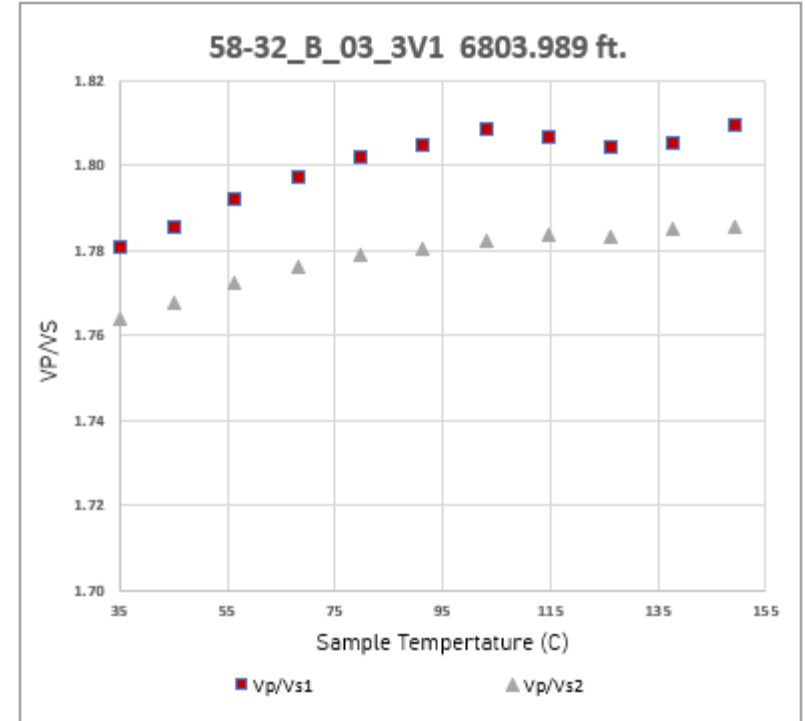
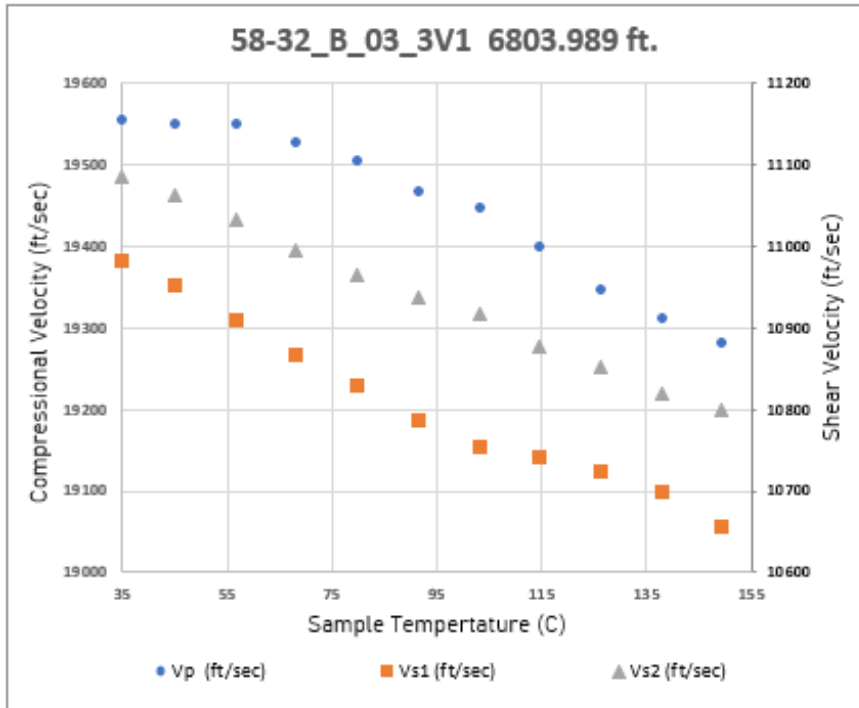
Confining Pressure (Psi)	Thermal Expansion Coefficient ($\times 10^{-6}$)		Compressional Velocity	Shear Velocity (S1) (ft/sec)	Shear Velocity (S2) (ft/sec)	Vp/VS(avg)
	Axial					
	35 - 80 C	80 - 150 C	(ft/sec)	(ft/sec)	(ft/sec)	
5000	-5.31	-4.49	19554	10982	11033	1.77

***Geoengineering convention has been used where compression is deemed positive and expansion is deemed negative.**

Thermal Expansion Test

58-32_B_03_3V1.A_HT 6803.989ft.

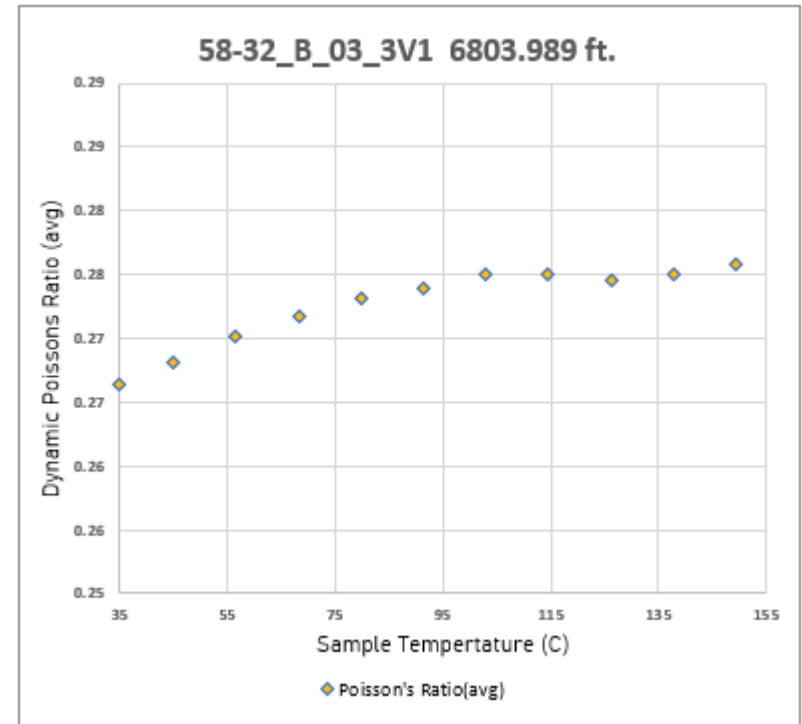
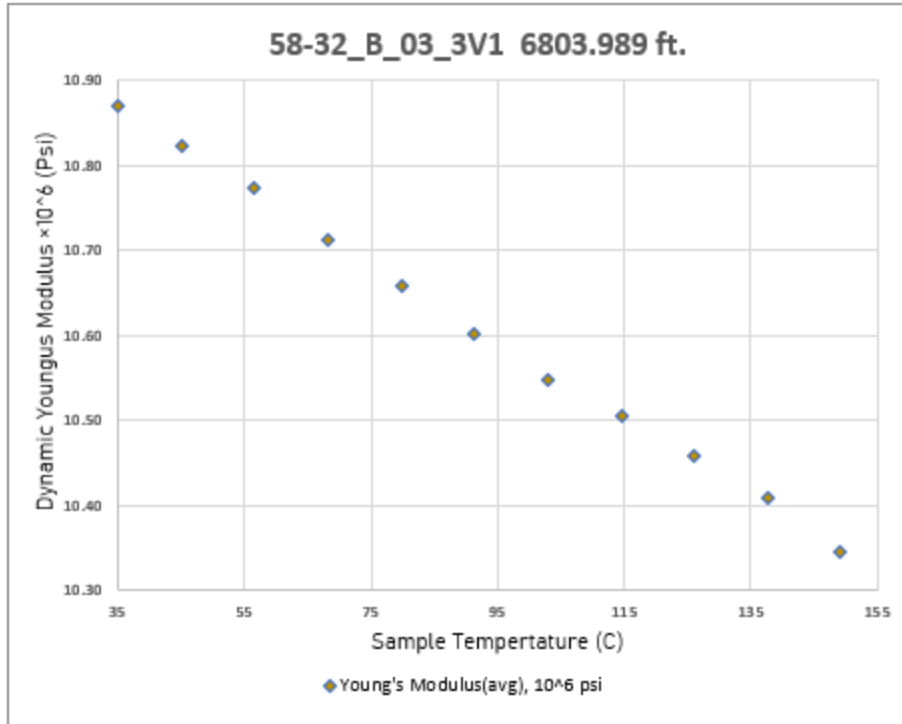
Dynamic Data at $P_c = 5000$ psi



Thermal Expansion Test

58-32_B_03_3V1.A_HT 6803.989ft.

Dynamic Mechanical Properties





THANK YOU



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