

Lab #: 836195 Job #: 51728 IS-107464 Co. Job#:
 Sample Name: Bryce (OWP) #1-X wellbore fluid Co. Lab#:
 Company: Cottonwood Consulting, LLC
 API/Well:
 Container: IsoFlask
 Field/Site Name: Bryce (OWP) #1-X
 Location:
 Formation:
 Sampling Point:
 Date Sampled: 7/15/2022 14:00 Date Received: 7/29/2022 Date Reported: 9/06/2022

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0076			
Hydrogen -----	nd			
Argon -----	0.662			
Oxygen -----	13.57			
Nitrogen -----	56.67			
Carbon Dioxide -----	21.75	16.45		
Methane -----	6.98	-42.08	-203.8	
Ethane -----	0.273	-28.5		
Ethylene -----	nd			
Propane -----	0.0564	-25.5		
Propylene -----	nd			
Iso-butane -----	0.0042			
N-butane -----	0.0064			
Iso-pentane -----	0.0016			
N-pentane -----	0.0005			
Hexanes + -----	0.0200			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 78

Specific gravity, calculated: 1.081

Remarks: Carbon of ethane and propane analyzed online via GC-C-IRMS
 Insufficient concentration for C3, i/nC4, i/nC5 carbon isotopes.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.