

Lab #: 752766 Job #: 44089 IS-94649 Co. Job#:
 Sample Name: Melbon 4D-17H / Surface Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location: C82282
 Formation:
 Sampling Point: 457075
 Date Sampled: 1/08/2020 10:40 Date Received: 1/28/2020 Date Reported: 2/19/2020

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0241			
Hydrogen -----	0.0916			
Argon -----	0.146			
Oxygen -----	3.48			
Nitrogen -----	13.28			
Carbon Dioxide -----	0.016			
Methane -----	74.75	-50.0	-253	
Ethane -----	6.61	-34.0		
Ethylene -----	0.0012			
Propane -----	1.35	-28.9		
Propylene -----	nd			
Iso-butane -----	0.0937	-30.7		
N-butane -----	0.140	-27.2		
Iso-pentane -----	0.0127	-27.4		
N-pentane -----	0.0072			
Hexanes + -----	0.0007			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 918

Specific gravity, calculated: 0.678

Remarks: C82282

Isotopes obtained online via GC-C-IRMS/GC-P-IRMS. Insufficient CO₂ & nC₅ concentrations for isotopic analysis.

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. %.