

Lab #: 468351 Job #: 27095 IS-74444 Co. Job#:

Sample Name: Ackerman #1 Co. Lab#:

Company: Colorado Oil & Gas Conservation

API/Well:

Received 12/22/14

Container: Dissolved Gas Bottle

Location ID 386083

Field/Site Name: Ackerman #1

Document 2313459

Location:

Formation:

Sampling Point:

Date Sampled: 10/23/2014 Date Received: 10/31/2014 Date Reported: 12/01/2014

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0227			
Hydrogen -----	nd			
Argon -----	0.507			
Oxygen -----	0.14			
Nitrogen -----	35.47			
Carbon Dioxide -----	0.15			
Methane -----	63.48	-64.91	-248.9	
Ethane -----	0.213			
Ethylene -----	0.0001			
Propane -----	0.0171			
Propylene -----	0.0021			
Iso-butane -----	0.0014			
N-butane -----	0.0005			
Iso-pentane -----	0.0001			
N-pentane -----	nd			
Hexanes + -----	0.0004			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 648

Specific gravity, calculated: 0.708

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.