

Lab #: 170180 Job #: 11927  
 Sample Name: Calvin Co. Lab#:  
 Company: Colorado Oil & Gas Conservation  
 Date Sampled: 9/02/2009  
 Container: Dissolved Gas Bottle  
 Field/Site Name:  
 Location:  
 Formation/Depth:  
 Sampling Point:  
 Date Received: 9/03/2009 Date Reported: 9/28/2009

| Component              | Chemical<br>mol. % | Delta 13C<br>per mil | Delta D<br>per mil | Delta 15N<br>per mil |
|------------------------|--------------------|----------------------|--------------------|----------------------|
| Carbon Monoxide -----  | nd                 |                      |                    |                      |
| Hydrogen Sulfide ----- | nd                 |                      |                    |                      |
| Helium -----           | nd                 |                      |                    |                      |
| Hydrogen -----         | nd                 |                      |                    |                      |
| Argon -----            | na                 |                      |                    |                      |
| Oxygen + Argon -----   | 3.28               |                      |                    |                      |
| Nitrogen -----         | 38.97              |                      |                    |                      |
| Carbon Dioxide -----   | 0.52               |                      |                    |                      |
| Methane -----          | 57.14              | -71.16               | -262.5             |                      |
| Ethane -----           | 0.0938             | -45.39               |                    |                      |
| Ethylene -----         | nd                 |                      |                    |                      |
| Propane -----          | nd                 |                      |                    |                      |
| Iso-butane -----       | nd                 |                      |                    |                      |
| N-butane -----         | nd                 |                      |                    |                      |
| Iso-pentane -----      | nd                 |                      |                    |                      |
| N-pentane -----        | nd                 |                      |                    |                      |
| Hexanes + -----        | nd                 |                      |                    |                      |

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 581  
 Specific gravity, calculated: 0.739

Remarks: Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.68  
 \*Addition of helium negates the ability to detect native helium or hydrogen.  
 Ethane isotope obtained online via GC-C-IRMS.

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %. Chemical analysis based on standards accurate to within 2%