



# ISOTECH®

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received 04/11/2008  
Complaint 1841034  
Document 2144699

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Lab #: 132962 Job #: 9496  
Sample Name/Number: Churan Water Well  
Company: Colorado Oil & Gas Conservation  
Date Sampled: 3/11/2008  
Container: Dissolved Gas Bottle  
Field/Site Name: Complaint 1841034  
Location: Las Animas County  
Formation/Depth:  
Sampling Point:  
Date Received: 3/13/2008 Date Reported: 4/11/2008

| Component              | Chemical           |                    |                      |                    |                      |
|------------------------|--------------------|--------------------|----------------------|--------------------|----------------------|
|                        | Chemical<br>mol. % | Air Free<br>vol. % | Delta 13C<br>per mil | Delta D<br>per mil | Delta 15N<br>per mil |
| Carbon Monoxide -----  | nd                 | nd                 |                      |                    |                      |
| Hydrogen Sulfide ----- | nd                 | nd                 |                      |                    |                      |
| Helium -----           | nd                 | nd                 |                      |                    |                      |
| Hydrogen -----         | nd                 | nd                 |                      |                    |                      |
| Argon -----            | 0.14               | nd                 |                      |                    |                      |
| Oxygen -----           | 3.28               |                    |                      |                    |                      |
| Nitrogen -----         | 8.58               | nd                 |                      |                    |                      |
| Carbon Dioxide -----   | 1.53               | 1.74               |                      |                    |                      |
| Methane -----          | 86.44              | 98.23              | -44.76               | -215.6             |                      |
| Ethane -----           | 0.030              | 0.034              |                      |                    |                      |
| Ethylene -----         | nd                 | nd                 |                      |                    |                      |
| Propane -----          | nd                 | nd                 |                      |                    |                      |
| Iso-butane -----       | nd                 | nd                 |                      |                    |                      |
| N-butane -----         | nd                 | nd                 |                      |                    |                      |
| Iso-pentane -----      | nd                 | nd                 |                      |                    |                      |
| N-pentane -----        | nd                 | nd                 |                      |                    |                      |
| Hexanes + -----        | nd                 | nd                 |                      |                    |                      |

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 877

Specific gravity, calculated: 0.624

#### Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.69

Delta C-13 of DIC: +22.99

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 percent. Mol. % is approximately equal to vol. %