

# NATURAL GAS ANALYSIS REPORT

Sampled by:  
 Trilobite Testing, L. L. C.  
 Hays, Kansas  
 Scott City, Kansas  
 Phone: 800-728-5369  
 Fax: 785-625-5620

Analyzed by:  
 Caraway Analytical, Inc  
 P. O. Box 2137  
 Liberal, Kansas 67905  
 Phone: 620-624-5389  
 Fax: 620-626-7108

|                               |                    |
|-------------------------------|--------------------|
| Lab Number: 20010566          | Analyzed: 02/06/01 |
| Sample From: Harding #3 4pt   | Pressure:          |
| Producer: Horseshoe Operating | Temperature:       |
| Date:                         | Location:          |
| Time:                         | County: Greeley    |
| Sampler:                      | State: Kansas      |
| Source:                       | Formation:         |

|                | Mole %     | GPM   |
|----------------|------------|-------|
| Helium         | He: 0.689  | 0.000 |
| Hydrogen       | H2: 0.078  | 0.000 |
| Oxygen         | O2: 0.000  | 0.000 |
| Nitrogen       | N2: 28.584 | 0.000 |
| Carbon Dioxide | CO2: 0.022 | 0.000 |
| Methane        | C1: 59.861 | 0.000 |
| Ethane         | C2: 5.403  | 1.445 |
| Propane        | C3: 3.281  | 0.904 |
| Iso Butane     | iC4: 0.360 | 0.118 |
| Normal Butane  | nC4: 0.989 | 0.312 |
| Iso Pentane    | iC5: 0.201 | 0.074 |
| Normal Pentane | nC5: 0.247 | 0.089 |
| Hexanes Plus   | C6+: 0.285 | 0.124 |

TOTAL: 100.000 3.066  
 Z Fact: 0.9980  
 SP.GR.: 0.7647  
 BTU (SAT): 848.2 @ 14.73 psia  
 BTU (DRY): 863.2 @ 14.73 psia  
 OCTANE RATING: 88.2

COMMENTS: 0.000