

NATURAL GAS ANALYSIS REPORT

Sampled by:
Trilobite Testing, L.L.C.
Hays, Kansas
Scott City, Kansas
Phone: 800-728-5369
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Analyzed by:
Caraway Analytical, L.L.C.
P. O. Box 2137
Liberal, Kansas 67905
Phone: 316-624-5389
Fax: 316-626-7108

| | | | |
|--------------|-----------------------------|--------------|----------|
| Lab Number: | 970014 | Analyzed: | 01/07/97 |
| Sample From: | McDaniels/Johnson B-1 DST 2 | Pressure: | |
| Producer: | Hayes Oil & Gas | Temperature: | |
| Date: | | Location: | 13-32-10 |
| Time: | | County: | Barber |
| Sampler: | | State: | Kansas |
| Source: | | Formation: | Miss |

| | Mole % | GPM |
|----------------|----------------|---------------------|
| Helium | He: | |
| Oxygen | O2: | |
| Nitrogen | N2: | 4.352 0.000 |
| Carbon Dioxide | CO2: | 0.000 0.000 |
| Methane | C1: | 83.003 0.000 |
| Ethane | C2: | 6.606 1.767 |
| Propane | C3: | 2.988 0.823 |
| Iso Butane | iC4: | 0.445 0.146 |
| Normal Butane | nC4: | 1.155 0.364 |
| Iso Pentane | iC5: | 0.305 0.112 |
| Normal Pentane | nC5: | 0.414 0.150 |
| Hexanes Plus | C6+: | 0.732 0.319 |
| | TOTAL: | 100.000 3.681 |
| | Z Fact: | 0.9971 |
| | SP.GR.: | 0.6915 |
| | BTU (SAT): | 1134.8 @ 14.73 psia |
| | BTU (DRY): | 1154.9 @ 14.73 psia |
| | OCTANE RATING: | 119.7 |

COMMENTS: No pressure in bottle

0.000

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| | | | |
|--------------|-----------------------------|--------------|----------|
| Lab Number: | 970015 | Analyzed: | 01/07/97 |
| Sample From: | McDaniels/Johnson B-1 DST 3 | Pressure: | |
| Producer: | Hayes Oil & Gas | Temperature: | |
| Date: | | Location: | 13-32-10 |
| Time: | | County: | Barber |
| Sampler: | | State: | Kansas |
| Source: | | Formation: | Miss |

| | Mole % | GPM |
|----------------|----------------|---------------------|
| Helium | He: | |
| Oxygen | O2: | |
| Nitrogen | N2: | 2.447 0.000 |
| Carbon Dioxide | CO2: | 0.179 0.000 |
| Methane | C1: | 85.827 0.000 |
| Ethane | C2: | 6.448 1.725 |
| Propane | C3: | 2.833 0.781 |
| Iso Butane | iC4: | 0.489 0.160 |
| Normal Butane | nC4: | 0.885 0.279 |
| Iso Pentane | iC5: | 0.000 0.000 |
| Normal Pentane | nC5: | 0.248 0.090 |
| Hexanes Plus | C6+: | 0.644 0.281 |
| | TOTAL: | 100.000 3.315 |
| | Z Fact: | 0.9972 |
| | SP.GR.: | 0.6682 |
| | BTU (SAT): | 1125.8 @ 14.73 psia |
| | BTU (DRY): | 1145.8 @ 14.73 psia |
| | OCTANE RATING: | 122.5 |

COMMENTS: No pressure in bottle

0.000