

NATURAL GAS ANALYSIS REPORT

Sampled by:
Trilobite Testing, L. L. C.
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Analyzed by:
Caraway Analytical, Inc
P. O. Box 2137
Liberal, Kansas 67905
Phone: 316-624-5389
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Lab Number: 20012051 Analyzed: 04/25/01

Sample From: Murdock-Oxy 1-27 DST 3 Pressure:
Producer: Murfin Drilling Temperature:

Date: Location: 27-34-16

Time: County: Comanche
Sampler: State: Kansas
Source: Formation: Swope

	Mole %	GPM
Helium	He: 0.135	0.000
Hydrogen	H2: 0.020	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 4.838	0.000
Carbon Dioxide	CO2: 0.013	0.000
Methane	C1: 85.351	0.000
Ethane	C2: 4.571	1.223
Propane	C3: 2.594	0.715
Iso Butane	iC4: 0.339	0.111
Normal Butane	nC4: 0.915	0.288
Iso Pentane	iC5: 0.210	0.077
Normal Pentane	nC5: 0.248	0.090
Hexanes Plus	C6+: 0.766	0.334

TOTAL: 100.000 2.838

Z Fact: 0.9974

SP.GR.: 0.6702

BTU (SAT): 1092.9 @ 14.73 psia

BTU (DRY): 1112.2 @ 14.73 psia

OCTANE RATING: 119.8

COMMENTS:

0.000

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Lab Number: 20012052 Analyzed: 04/25/01

Sample From: Murdock-Oxy 1-27 DST 6 Pressure:
Producer: Murfin Drilling Temperature:

Date: Location: 27-34-16

Time: County: Comanche
Sampler: State: Kansas
Source: Formation: Viola

	Mole %	GPM
Helium	He: 0.073	0.000
Hydrogen	H2: 0.003	0.000
Oxygen	O2: 0.533	0.000
Nitrogen	N2: 6.772	0.000
Carbon Dioxide	CO2: 0.074	0.000
Methane	C1: 62.222	0.000
Ethane	C2: 12.437	3.326
Propane	C3: 9.064	2.498
Iso Butane	iC4: 1.055	0.345
Normal Butane	nC4: 3.613	1.139
Iso Pentane	iC5: 0.765	0.280
Normal Pentane	nC5: 1.306	0.473
Hexanes Plus	C6+: 2.083	0.909

TOTAL: 100.000 8.970

Z Fact: 0.9949

SP.GR.: 0.9016

BTU (SAT): 1404.2 @ 14.73 psia

BTU (DRY): 1429.1 @ 14.73 psia

OCTANE RATING: 108.5

COMMENTS:

0.533