

NATURAL GAS ANALYSIS REPORT

Sampled by:  
Trilobite Testing, L. L. C.  
Hays, Kansas  
Scott City, Kansas  
Phone: 800-728-5369  
Fax: 913-625-5620

Analyzed by:  
Caraway Analytical, Inc  
P. O. Box 2137  
Liberal, Kansas 67905  
Phone: 316-624-5389  
Fax: 316-626-7108

Lab Number: 984084  
Sample From: Herd 34-14 Wireline  
Producer: Samuel Gary Jr, & Assoc.  
Date:  
Time:  
Sampler:  
Source:

Analyzed: 10/19/98  
Pressure:  
Temperature:  
Location:  
County: Comanche  
State: Kansas  
Formation:

	Mole %	GPM
Helium	He: 0.125	0.000
Hydrogen	H2: 0.007	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 3.256	0.000
Carbon Dioxide	CO2: 0.130	0.000
Methane	C1: 89.155	0.000
Ethane	C2: 3.754	1.004
Propane	C3: 1.965	0.541
Iso Butane	iC4: 0.259	0.085
Normal Butane	nC4: 0.744	0.235
Iso Pentane	iC5: 0.174	0.064
Normal Pentane	nC5: 0.190	0.069
Hexanes Plus	C6+: 0.241	0.105
TOTAL:	100.000	2.102
Z Fact:	0.9976	
SP. GR.:	0.6351	
BTU (SAT):	1062.2 @	14.73 psia
BTU (DRY):	1081.0 @	14.73 psia
OCTANE RATING:	122.9	

COMMENTS: Bottle contained liquids

0.000

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<b>Lab Number:</b> 20013229	<b>Analyzed:</b> 07/26/01
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Sample From: Herd 34-14 4pt	Pressure:
Producer: Sam Gary Jr.	Temperature:

<b>Date: Location:</b> 34-32-19
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Time:	County:	Comanche
Sampler:	State:	Kansas
Source:	Formation:	Marmaton

	Mole %	GPM
Helium	He: 0.127	0.000
Hydrogen	H2: 0.007	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 4.957	0.000
Carbon Dioxide	CO2: 0.078	0.000
Methane	C1: 82.621	0.000
Ethane	C2: 4.741	1.268
Propane	C3: 4.664	1.285
Iso Butane	iC4: 0.550	0.180
Normal Butane	nC4: 1.402	0.442
Iso Pentane	iC5: 0.267	0.098
Normal Pentane	nC5: 0.280	0.101
Hexanes Plus	C6+: 0.306	0.134

TOTAL: 100.000    3.508

Z Fact: 0.9972

SP.GR.: 0.6921

BTU (SAT): 1122.9 @ 14.73 psia

BTU (DRY): 1142.8 @ 14.73 psia

**OCTANE RATING: 119.1**

COMMENTS:

0.000