

NATURAL GAS ANALYSIS REPORT

Sampled by:
 Trilobite Testing, L. L. C.
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Analyzed by:
 Caraway Analytical, Inc
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Lab Number:	995813	Analyzed:	11/02/99
Sample From:	Dikeman #1 4pt	Pressure:	
Producer:	Horseshoe Operating	Temperature:	
Date:	11/01/99	Location:	15-22-40
Time:		County:	Hamilton
Sampler:	Lanny Saloga	State:	Kansas
Source:		Formation:	Winfield

	Mole %	GPM
Helium	He: 0.613	0.000
Hydrogen	H2: 0.000	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 25.716	0.000
Carbon Dioxide	CO2: 0.024	0.000
Methane	C1: 62.388	0.000
Ethane	C2: 5.581	1.493
Propane	C3: 3.440	0.948
Iso Butane	iC4: 0.386	0.126
Normal Butane	nC4: 1.038	0.327
Iso Pentane	iC5: 0.210	0.077
Normal Pentane	nC5: 0.253	0.092
Hexanes Plus	C6+: 0.351	0.153
	TOTAL: 100.000	3.216
	Z Fact: 0.9979	
	SP.GR.: 0.7591	
	BTU (SAT): 886.7 @ 14.73 psia	
	BTU (DRY): 902.3 @ 14.73 psia	
	OCTANE RATING: 91.9	

COMMENTS:

0.000

FieldNotes

Field Measurements

	Date	Clock Time	Comments	Casing Pres	Static1 Pres	Diff1 Pres	Meter1 Temp	Gas1 Rate	Orifice1
	yyyy/mm/dd	hh:mm:ss		psi(g)	psi(g)	in of H2O	°F	MMCF/D	in
1	1999/11/01	12:30:00	shutin	152.00					0.000
2		12:40:00		147.00	57.00	18.00	60.00	0.209	1.000
3		13:00:00	1st pt	144.00	57.00	19.00	60.00	0.215	
4		13:10:00		141.00	57.00	47.00	60.00	0.339	
5		13:20:00		138.00	57.00	48.00	60.00	0.342	
6		13:30:00	2nd pt	137.00	57.00	62.00	60.00	0.389	
7		13:40:00		135.00	57.00	63.00	60.00	0.393	
8		13:50:00		130.00	57.00	63.00	60.00	0.393	
9		14:00:00	3rd pt	128.00	57.00	61.00	60.00	0.386	
10		14:10:00		122.00	58.00	94.00	60.00	0.484	
11		14:20:00		120.00	58.00	92.00	60.00	0.479	
12		14:30:00	4th pt	119.50	58.50	89.00	60.00	0.472	
13	1999/11/02	13:00:00	1 pt	86.00	63.00	35.00	63.00	0.303	
14									

Horseshoe Operating Inc
C NW/4 15 22s 40w Hamilton county Kansas

Dikeman #1

Plot

