

## NATURAL GAS ANALYSIS REPORT

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

Analyzed by:  
 Caraway Analytical, L.L.C.  
 728 North Roosevelt  
 Liberal, Kansas 67901  
 Phone: 316-624-5389  
 Fax: 316-626-7108

Lab Number:	940599	Analyzed:	11/27/94
Sample From:	Mary Nation #3 DST 1	Pressure:	
Producer:	Quinque Operating	Temperature:	
Date:		Location:	34-30-33
Time:		County:	Haskell
Sampler:		State:	Kansas
Source:		Formation:	Morrow

	Mole %	GPM
Helium	He: 0.334	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 8.826	0.000
Carbon Dioxide	CO2: 0.000	0.000
Methane	C1: 76.683	0.000
Ethane	C2: 6.225	1.665
Propane	C3: 4.297	1.184
Iso Butane	iC4: 0.717	0.235
Normal Butane	nC4: 1.336	0.421
Iso Pentane	iC5: 0.352	0.129
Normal Pentane	nC5: 0.417	0.151
Hexanes Plus	C6+: 0.813	0.355

TOTAL: 100.000 4.139  
 Z Fact: 0.9971  
 SP.GR.: 0.7293  
 BTU SATD: 1118.3 @ 14.73 psia  
 BTU DRY: 1138.1 @ 14.73 psia  
 OCTANE RATING: 112.9

COMMENTS: Helium calculated based on Nitrogen

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Lab Number:	940607	Analyzed:	11/29/94
Sample From:	Mary Nation #3 DST 2	Pressure:	
Producer:	Quinque Operating	Temperature:	
Date:		Location:	34-30-33
Time:		County:	Haskell
Sampler:		State:	Kansas
Source:		Formation:	L. Chester

		Mole %	GPM
Helium	He:	0.881	0.000
Oxygen	O2:		0.000
Nitrogen	N2:	23.243	0.000
Carbon Dioxide	CO2:	0.968	0.010
Methane	C1:	64.653	0.010
Ethane	C2:	5.323	1.424
Propane	C3:	2.415	0.665
Iso Butane	iC4:	0.553	0.181
Normal Butane	nC4:	0.871	0.275
Iso Pentane	iC5:	0.308	0.113
Normal Pentane	nC5:	0.524	0.190
Hexanes Plus	C6+:	0.261	0.114
TOTAL:		100.000	2.981
Z Factor:		0.9979	
SP.GR.:		0.7502	
BTU SATD:		889.0 @ 14.73 psia	
BTU DRY:		905.0 @ 14.73 psia	
OCTANE RATING:		93.8	

COMMENTS: Helium calculated based on Nitrogen