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Analysis Certificate

30-045-25739 Analysis Requested: **GPA Standard 2261-00**

Client:	McElvain Oil and Gas	Project #:	06039-0031
Site Name:	Federal 28 #1	Report Printed Form Date:	5/13/2014
Meter ID:	Federal 28 #1 casing	Date Reported:	N/R
Sampled by:	Glen Hise	Date Sampled:	4/17/2014
Analyzed by:	Logan Richter	Date Received:	4/18/2014
Sample Pressure:	235 psi	Date Analyzed:	5/13/2014
Sample Temperature:	N/R	Analysis Time:	Standard

Components	Mol %	MDC %	Wt %	GPM Total	(gal/ideal MCF)
Nitrogen	0.093	0.005	0.149		
Carbon Dioxide	1.38	0.253	3.499		
Methane	94.312	0.006	87.188		
Ethane	2.91	0.004	5.043	GPM C2+	1.2003
Propane	0.652	0.003	1.658	GPM C3+	0.4174
Iso-Butane	0.211	0.002	0.706		
N-Butane	0.127	0.002	0.426		
Iso-Pentane	0.255	0.002	1.061	GPM iC5+	0.1228
N-Pentane	0.042	0.002	0.173		
Hexane Plus	0.018	0.003	0.098		
Totals	100		100		

GPA Standard 2172-09 Calculations

Compressibility Factor:	0.998		Base Pressure:	14.696 psi
Ideal Gas Relative Density:	0.6		Base Temperature:	60 F
Dry Molecular Weight:	17.378	g/mol		
Real Gas Dry BTU per ft3:	1046.679	BTU/ft3		

ND = Parameter not detected at the stated detection limit. **N/R = Parameter not recorded**

Analyst
Logan Richter
Printed

Review
Rene Garcia Reyes
Printed

Comments: No comments

Note: The above analyses are performed in compliance with GPA Standard 2261-00 quality assurance procedures.

References: GPA Standard 2261-00 and GPA Standard 2172-09

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Analysis Certificate

30-045-25139

Analysis Requested: **GPA Standard 2261-00**

Client:	McElvain Oil and Gas	Project #:	06039-0031
Site Name:	Federal 28 #1	Report Printed Form Date:	5/13/2014
Meter ID:	Federal 28 #1 int casing	Date Reported:	N/R
Sampled by:	Glen Hise	Date Sampled:	4/17/2014
Analyzed by:	Logan Richter	Date Received:	4/18/2014
Sample Pressure:	5 psi	Date Analyzed:	5/13/2014
Sample Temperature:	N/R	Analysis Time:	Standard

Components	Mol %	MDC %	Wt %	GPM Total	(gal/ideal MCF)
Nitrogen	0.949	0.005	1.427		
Carbon Dioxide	ND	0.253	ND		
Methane	88.608	0.006	76.349		
Ethane	5.872	0.004	9.484	GPM C2+	2.9902
Propane	2.768	0.003	6.555	GPM C3+	1.4106
Iso-Butane	0.528	0.002	1.649		
N-Butane	0.636	0.002	1.985		
Iso-Pentane	0.378	0.002	1.466	GPM iC5+	0.2522
N-Pentane	0.199	0.002	0.77		
Hexane Plus	0.063	0.003	0.315		
Totals	100		100		

GPA Standard 2172-09 Calculations

Compressibility Factor:	0.997		Base Pressure:	14.696 psi
Ideal Gas Relative Density:	0.644		Base Temperature:	60 F
Dry Molecular Weight:	18.652	g/mol		
Real Gas Dry BTU per ft3:	1135.839	BTU/ft3		

ND = Parameter not detected at the stated detection limit.

N/R = Parameter not recorded

Analyst

Logan Richter

Printed

Review

Rene Garcia Reyes

Printed

Comments: Sample had to be pressurized with He due to low pressure

Note: The above analyses are performed in compliance with GPA Standard 2261-00 quality assurance procedures.

References: GPA Standard 2261-00 and GPA Standard 2172-09

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