



May 14, 2014

Project Number 06039-0031

Mr. Glen Hise
McElvain Oil & Gas
Post Office Box 5610
700 Dekalb Street
Farmington, New Mexico 87499

Phone: 505-330-4276

RE: GAS ANALYSIS CERTIFICATES FROM NINE (9) SAMPLED MCELVAIN SITES

Dear Mr. Hise,

Please find the attached Analysis Certificates regarding gas cylinder samples collected from nine (9) McElvain Oil & Gas sites. Also included are copies of the identification tags from each gas cylinder.

We appreciate the opportunity to be of service. If you have any questions, please contact us at the number below.

Sincerely,



Rene Garcia-Reyes, Chemist
Staff Scientist
rgarcia@envirotech-inc.com

Enclosure(s): Analysis Certificates
Gas Cylinder Tags



Analysis Certificate

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

Client:	McElvain Oil and Gas	Project #:	06039-0031
Site Name:	Brown #2	Report Printed Form Date:	5/13/2014
Meter ID:	Brown #2 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:	110 psi	Date Analyzed:	5/13/2014
Sample Temperature:	N/R	Analysis Time:	Standard

Components	Mol %	MDC %	Wt %	GPM Total	(gal/ideal MCF)
Nitrogen	0.112	0.005	0.186		
Carbon Dioxide	2.813	0.253	7.309		
Methane	96.619	0.006	91.52		
Ethane	0.33	0.004	0.586	GPM C2+	0.1291
Propane	0.086	0.003	0.223	GPM C3+	0.0404
Iso-Butane	0.015	0.002	0.051		
N-Butane	0.002	0.002	0.006		
Iso-Pentane	0.005	0.002	0.021	GPM iC5+	0.0108
N-Pentane	0.002	0.002	0.009		
Hexane Plus	0.016	0.003	0.09		
Totals	100		100		

GPA Standard 2172-09 Calculations

Compressibility Factor:	0.998	Base Pressure:	14.696 psi
Ideal Gas Relative Density:	0.586	Base Temperature:	60 F
Dry Molecular Weight:	16.972	g/mol	
Real Gas Dry BTU per ft3:	987.568	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



Analysis Certificate

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

Client:	McElvain Oil and Gas	Project #:	06039-0031
Site Name:	Kelly Fed #1E	Report Printed Form Date:	5/13/2014
Meter ID:	Kelly Fed #1E bradenhead	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	1.713	0.005	2.62		
Carbon Dioxide	ND	0.253	ND		
Methane	88.766	0.006	77.752		
Ethane	5.528	0.004	9.076	GPM C2+	2.6678
Propane	2.97	0.003	7.152	GPM C3+	1.1807
Iso-Butane	0.375	0.002	1.189		
N-Butane	0.534	0.002	1.694		
Iso-Pentane	0.034	0.002	0.135	GPM iC5+	0.0504
N-Pentane	0.018	0.002	0.072		
Hexane Plus	0.061	0.003	0.31		
Totals	100		100		

GPA Standard 2172-09 Calculations

Compressibility Factor:	0.997	Base Pressure:	14.696 psi
Ideal Gas Relative Density:	0.634	Base Temperature:	60 F
Dry Molecular Weight:	18.362 g/mol		
Real Gas Dry BTU per ft3:	1106.789 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



Analysis Certificate

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

Client:	McElvain Oil and Gas	Project #:	06039-0031
Site Name:	Kelly Fed #1E	Report Printed Form Date:	5/13/2014
Meter ID:	Kelly Fed #1E 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:	5/12/2014
Sample Temperature:	N/R	Analysis Time:	Standard

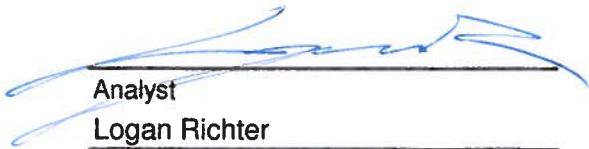
Components	Mol %	MDC %	Wt %	GPM Total	(gal/ideal MCF)
Nitrogen	0.127	0.005	0.204		
Carbon Dioxide	1.118	0.253	2.816		
Methane	93.291	0.006	85.622		
Ethane	3.969	0.004	6.827	GPM C2+	1.5364
Propane	0.88	0.003	2.22	GPM C3+	0.4688
Iso-Butane	0.183	0.002	0.608		
N-Butane	0.179	0.002	0.597		
Iso-Pentane	0.13	0.002	0.536	GPM iC5+	0.1028
N-Pentane	0.068	0.002	0.279		
Hexane Plus	0.055	0.003	0.292		
Totals	100		100		

GPA Standard 2172-09 Calculations

Compressibility Factor:	0.998	Base Pressure:	14.696 psi
Ideal Gas Relative Density:	0.605	Base Temperature:	60 F
Dry Molecular Weight:	17.522	g/mol	
Real Gas Dry BTU per ft3:	1059.624	BTU/ft3	

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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



Analysis Certificate

Analysis Requested: GPA Standard 2261-00

Client:	McElvain Oil and Gas	Project #:	06039-0031
Site Name:	Brown #2	Report Printed Form Date:	5/13/2014
Meter ID:	Brown #2 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:	145 psi	Date Analyzed:	5/12/2014
Sample Temperature:	N/R	Analysis Time:	Standard

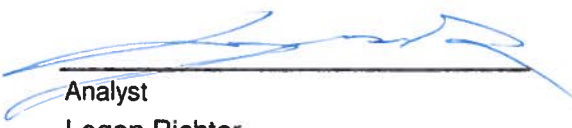
Components	Mol %	MDC %	Wt %	GPM Total	(gal/ideal MCF)
Nitrogen	0.136	0.005	0.226		
Carbon Dioxide	2.628	0.253	6.854		
Methane	96.854	0.006	92.085		
Ethane	0.269	0.004	0.478	GPM C2+	0.1079
Propane	0.075	0.003	0.197	GPM C3+	0.0356
Iso-Butane	ND	0.002	ND		
N-Butane	0.016	0.002	0.054		
Iso-Pentane	0.011	0.002	0.045	GPM iC5+	0.0094
N-Pentane	0.004	0.002	0.016		
Hexane Plus	0.008	0.003	0.044		
Totals	100		100		

GPA Standard 2172-09 Calculations

Compressibility Factor:	0.998	Base Pressure:	14.696 psi
Ideal Gas Relative Density:	0.584	Base Temperature:	60 F
Dry Molecular Weight:	16.914	g/mol	
Real Gas Dry BTU per ft3:	988.415	BTU/ft3	

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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



Analysis Certificate

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

Client:	McElvain Oil and Gas	Project #:	06039-0031
Site Name:	Kelly Fed #1E	Report Printed Form Date:	5/13/2014
Meter ID:	Kelly Fed #1E 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:	131 psi	Date Analyzed:	5/12/2014
Sample Temperature:	N/R	Analysis Time:	Standard

Components	Mol %	MDC %	Wt %	GPM Total	(gal/ideal MCF)
Nitrogen	0.705	0.005	1.082		
Carbon Dioxide	ND	0.253	ND		
Methane	89.413	0.006	78.557		
Ethane	6.074	0.004	10.002	GPM C2+	2.776
Propane	2.631	0.003	6.353	GPM C3+	1.1421
Iso-Butane	0.346	0.002	1.1		
N-Butane	0.512	0.002	1.628		
Iso-Pentane	0.204	0.002	0.805	GPM iC5+	0.1238
N-Pentane	0.106	0.002	0.42		
Hexane Plus	0.01	0.003	0.052		
Totals	100		100		

GPA Standard 2172-09 Calculations

Compressibility Factor:	0.997	Base Pressure:	14.696 psi
Ideal Gas Relative Density:	0.632	Base Temperature:	60 F
Dry Molecular Weight:	18.304	g/mol	
Real Gas Dry BTU per ft3:	1120.554	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



Analysis Certificate

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

Client:	McElvain Oil and Gas	Project #:	06039-0031
Site Name:	Kelly Fed #1	Report Printed Form Date:	5/13/2014
Meter ID:	Kelly Fed #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:	106 psi	Date Analyzed:	5/13/2014
Sample Temperature:	N/R	Analysis Time:	Standard

Components	Mol %	MDC %	Wt %	GPM Total	(gal/ideal MCF)
Nitrogen	0.416	0.005	0.637		
Carbon Dioxide	0.282	0.253	0.679		
Methane	89.813	0.006	78.802		
Ethane	5.495	0.004	9.036	GPM C2+	2.6763
Propane	2.789	0.003	6.726	GPM C3+	1.1983
Iso-Butane	0.346	0.002	1.101		
N-Butane	0.519	0.002	1.65		
Iso-Pentane	0.201	0.002	0.791	GPM iC5+	0.133
N-Pentane	0.114	0.002	0.45		
Hexane Plus	0.025	0.003	0.128		
Totals	100		100		

GPA Standard 2172-09 Calculations

Compressibility Factor:	0.997	Base Pressure:	14.696 psi
Ideal Gas Relative Density:	0.633	Base Temperature:	60 F
Dry Molecular Weight:	18.333	g/mol	
Real Gas Dry BTU per ft3:	1119.562	BTU/ft3	

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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



Analysis Certificate

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

Client:	McElvain Oil and Gas	Project #:	06039-0031
Site Name:	Kelly Fed #1	Report Printed Form Date:	5/13/2014
Meter ID:	Kelly Fed #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:	400 psi	Date Analyzed:	5/13/2014
Sample Temperature:	N/R	Analysis Time:	Standard

Components	Mol %	MDC %	Wt %	GPM Total	(gal/ideal MCF)
Nitrogen	0.09	0.005	0.141		
Carbon Dioxide	1.158	0.253	2.84		
Methane	91.763	0.006	82.023		
Ethane	4.503	0.004	7.544	GPM C2+	1.9962
Propane	1.355	0.003	3.33	GPM C3+	0.7849
Iso-Butane	0.27	0.002	0.873		
N-Butane	0.34	0.002	1.101		
Iso-Pentane	0.318	0.002	1.278	GPM iC5+	0.2046
N-Pentane	0.155	0.002	0.622		
Hexane Plus	0.047	0.003	0.246		
Totals	100		100		

GPA Standard 2172-09 Calculations

Compressibility Factor:	0.998	Base Pressure:	14.696 psi
Ideal Gas Relative Density:	0.621	Base Temperature:	60 F
Dry Molecular Weight:	17.986 g/mol		
Real Gas Dry BTU per ft3:	1084.523 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



Analysis Certificate

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



Analysis Certificate

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

McElvain Energy ~~Ellen R H~~
Federal 28 #1
Casing Gas

235#

224 PSI 4-17-14 09:30

McElvain Energy ~~Ellen R H~~

Brown #2

Casing Gas

110#

125 PSI. 55° 4-17-14 12:45

McElvain Energy ~~Ellen R H~~

Kelly Fed #1

Casing Gas

400#

375 PSI 45° 4-17-14 10:15

McElvain Energy ~~Ellen R H~~

Federal 28 #1

Intermediate casing Gas He 20#

5 PSI 4-17-14 09:40

McElvain Energy, Glen R Hts
Brown #2
Intermediate Casing Gas
275 psi 55° 4-17-14 12:50

145*

McElvain Energy, Glen R Hts
Kelly Fed #1E
Intermediate Casing Gas
135 psi 50° 4-17-14 1:10

131*

McElvain Energy, Glen R Hts
Kelly Fed #1E
Casing Gas
230 psi 50° 4-17-14 11:00

135*

Total

\$320.00

\$320.00

\$640.00

McElvain Energy, Glen R Hts
Kelly Fed #1
Intermediate Casing Gas
100 psi 45° 4-17-14 10:45

106*

McElvain Energy, Glen R Hts
Kelly Fed #1E
Casing Gas
5 psi 50° 4-17-14 11:20

110*