Analysis Certificate

Analysis Requested: **GPA Standard 2261-13**

API: 30-039-23949

Client:	McElvain	Project #:	06039-0058
Site Name:	Howard Fed 15-43 (BHD)	Laboratory #:	P605096-01
Meter ID:	Howard Fed 15-43 (BHD)	Date Reported:	6/8/2016
Sampled by:	Glenn Hise	Date Sampled:	5/26/2016
Analyzed by:	Alanna Yazzie	Date Received:	5/27/2016
Sample Pressure:	25 psi	Date Analyzed:	6/1/2016
Sample Temperature:	60 F	Analysis Time:	Standard

Components	Mol %	Wt %	GPM Total	(gal/ideal MCF)
Nitrogen	0.387	0.541		
Carbon Dioxide	0.369	0.81		
Methane	84.547	67.68		
Ethane	7.323	10.988	GPM C2+	4.3406
Propane	4.131	9.09	GPM C3+	2.3661
Iso-Butane	1.08	3.132		
N-Butane	0.943	2.735		
Iso-Pentane	0.38	1.368	GPM iC5+	0.5368
N-Pentane	0.238	0.857		
Hexane Plus	0.602	2.799		
Totals	100.000	100.000		

GPA Standard 2172-09 Calculations

Compressibility Factor:	0.997		Base Pressure:	14.73 psi
Ideal Gas Relative Density:	0.694		Base Temperature:	60 F
Dry Molecular Weight:	20.041	g/mol		
Real Gas Dry BTU per ft3:	1215.754	BTU/ft3		

ND = Parameter below the instrument/method detection limit.

N/R = Parameter not recorded

Reviewer

6/8/2016
Date

Comments: P605096-01

Note: The above analyses are performed in compliance with GPA Standard 2261-13 quality assurance procedures.

References: GPA Standard 2261-13 and GPA Standard 2172-09

Analysis Certificate

Analysis Requested: **GPA Standard 2261-13**

API; 30-039-23949

Client:	McElvain	Project #:	06039-0058
Site Name:	Howard Fed 15-43 (CSG)	Laboratory #:	P605096-02
Meter ID:	Howard Fed 15-43 (CSG)	Date Reported:	6/8/2016
Sampled by:	Glenn Hise	Date Sampled:	5/26/2016
Analyzed by:	Alanna Yazzie	Date Received:	5/27/2016
Sample Pressure:	120 psi	Date Analyzed:	6/1/2016
Sample Temperature:	60 F	Analysis Time:	Standard

Components	Mol %	Wt %	GPM Total	(gal/ideal MCF)
Nitrogen	0.364	0.51		
Carbon Dioxide	0.385	0.847		
Methane	84.443	67.708		
Ethane	7.384	11.098	GPM C2+	4.3443
Propane	4.244	9.354	GPM C3+	2.3534
Iso-Butane	1.136	3.3		
N-Butane	0.931	2.705		
Iso-Pentane	0.417	1.504	GPM iC5+	0.4774
N-Pentane	0.255	0.92		
Hexane Plus	0.441	2.054		
Totals	100.000	100.000		

GPA Standard 2172-09 Calculations

Compressibility Factor:	0.997		Base Pressure:	14.73 psi
Ideal Gas Relative Density:	0.693		Base Temperature:	60 F
Dry Molecular Weight:	20.007	g/mol		
Real Gas Dry BTU per ft3:	1213.922	BTU/ft3		

ND = Parameter below the instrument/method detection limit.

N/R = Parameter not recorded

Reviewer

6/8/2016

Date

Comments: P605096-02

Note: The above analyses are performed in compliance with GPA Standard 2261-13 quality assurance procedures.

References: GPA Standard 2261-13 and GPA Standard 2172-09