



Gallegos Canyon Unit #1E
API 30-045-26335
Bradenhead

Analysis Certificate

Analysis Requested: GPA Standard 2261-13

Client:	BP	Project #:	03143-0880
Site Name:	GCU 247E (BHD)	Lab #	P704012-02
Meter ID:	3004526335(BHD)	Date Reported:	5/2/2017
Sampled by:	Jerry McKenzie	Date Sampled:	4/11/2017
Analyzed by:	Irene Yazzie	Date Received:	4/12/2017
Sample Pressure:	22 psi	Date Analyzed:	4/28/2017
Sample Temperature:	N/R	Analysis Time:	Standard

Components	Mol %	Wt %	GPM Total	(gal/ideal MCF)
Nitrogen	6.365	9.488		
Carbon Dioxide	0.022	0.052		
Methane	84.705	72.311		
Ethane	5.549	8.879	GPM C2+	2.5374
Propane	2.055	4.822	GPM C3+	1.0413
Iso-Butane	0.443	1.37		
N-Butane	0.476	1.472		
Iso-Pentane	0.17	0.653	GPM iC5+	0.1608
N-Pentane	0.101	0.388		
Hexane Plus	0.114	0.565		
Totals	100.000	100.000		

GPA Standard 2172-09 Calculations

Compressibility Factor:	0.998	Base Pressure:	14.73 psi
Ideal Gas Relative Density:	0.65	Base Temperature:	60 F
Dry Molecular Weight:	18.792 g/mol		
Real Gas Dry BTU per ft3:	1057.063 BTU/ft3		

ND = Parameter below the method/instrument detection limit.

N/R = Parameter not recorded

Irene Yazzie

Reviewer

5/2/2017

Date

PO#: N/R

Comments: No comments

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



Gallegos Canyon Unit #212
API 30-045-26335
Casing

Analysis Certificate

Analysis Requested: GPA Standard 2261-13

Client:	BP	Project #:	03143-0880
Site Name:	GCU 247E (CSG)	Lab #	P704012-03
Meter ID:	3004526335(CSG)	Date Reported:	5/2/2017
Sampled by:	Jerry Mckenzie	Date Sampled:	4/11/2017
Analyzed by:	Irene Yazzie	Date Received:	4/12/2017
Sample Pressure:	N/R	Date Analyzed:	4/28/2017
Sample Temperature:	N/R	Analysis Time:	Standard

Components	Mol %	Wt %	GPM Total	(gal/ideal MCF)
Nitrogen	32.258	43.657		
Carbon Dioxide	0.057	0.121		
Methane	65.722	50.937		
Ethane	0.528	0.767	GPM C2+	0.6689
Propane	0.452	0.963	GPM C3+	0.5265
Iso-Butane	0.121	0.34		
N-Butane	0.254	0.713		
Iso-Pentane	0.128	0.446	GPM iC5+	0.2763
N-Pentane	0.103	0.359		
Hexane Plus	0.377	1.697		
Totals	100.000	100.000		

GPA Standard 2172-09 Calculations

Compressibility Factor:	0.999	Base Pressure:	14.73 psi
Ideal Gas Relative Density:	0.715	Base Temperature:	60 F
Dry Molecular Weight:	20.699	g/mol	
Real Gas Dry BTU per ft3:	728.072	BTU/ft3	

ND = Parameter below the method/instrument detection limit.

N/R = Parameter not recorded

Irene Yazzie

Reviewer

5/2/2017

Date

PO#: N/R

Comments: Low Pressure

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



Gallegos Canyon Unit 41
api 30-045-36335
Tubing

Analysis Certificate

Analysis Requested: GPA Standard 2261-13

Client:	BP	Project #:	03143-0880
Site Name:	GCU 247E (TUB)	Lab #	P704012-01
Meter ID:	3004526335(TUB)	Date Reported:	5/2/2017
Sampled by:	Jerry McKenzie	Date Sampled:	4/11/2017
Analyzed by:	Irene Yazzie	Date Received:	4/12/2017
Sample Pressure:	N/R	Date Analyzed:	4/28/2017
Sample Temperature:	N/R	Analysis Time:	Standard

Components	Mol %	Wt %	GPM Total	(gal/ideal MCF)
Nitrogen	32.373	43.544		
Carbon Dioxide	0.028	0.059		
Methane	65.438	50.407		
Ethane	0.505	0.729	GPM C2+	0.7499
Propane	0.469	0.993	GPM C3+	0.6138
Iso-Butane	0.13	0.363		
N-Butane	0.294	0.82		
Iso-Pentane	0.171	0.592	GPM iC5+	0.3427
N-Pentane	0.154	0.533		
Hexane Plus	0.438	1.96		
Totals	100.000	100.000		

GPA Standard 2172-09 Calculations

Compressibility Factor:	0.998	Base Pressure:	14.73 psi
Ideal Gas Relative Density:	0.72	Base Temperature:	60 F
Dry Molecular Weight:	20.827 g/mol		
Real Gas Dry BTU per ft3:	733.76 BTU/ft3		

ND = Parameter below the method/instrument detection limit.

N/R = Parameter not recorded

Irene Yazzie

Reviewer

5/2/2017

Date

PO#: N/R

Comments: Low Pressure. Pressurized Cylinder with Helium.

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