



OIL CONS. DIV DIST. 3

Gas Analysis Certificate

GPA Standard 2261-13

Acquisition Method Name au_report_150_C6+
Last calibration date 9/28/2015 11:07:06 AM

DEC 18 2015

Client: BP Project #: 03143-0880
Site Name: GCU 263 Meter ID: 3004520277 (CSG)
Sampled by: Daniel F. Date Sampled: 09-28-15
Analyzed by: Logan Richter Date Received: 10-15-15
Sample Pressure: 27 psig Date Analyzed: 10-16-15
Sample Temperature: N/R Analysis Time: Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	0.000	0.000	0.000
Oxygen	0.853	1.148	0.076
Nitrogen	3.443	4.057	0.380
Carbon Dioxide	1.421	2.630	0.243
Methane	73.456	49.561	12.477
Ethane	8.807	11.138	2.360
Propane	4.658	8.638	1.286
i-Butane	0.880	2.152	0.289
n-Butane	1.918	4.688	0.606
i-Pentane	0.962	2.921	0.353
n-Pentane	1.026	3.112	0.373
C6+	2.576	9.956	1.126
	100.000	100.000	19.566

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99554	C2+	6.391
Density (G) (Dry Gas)	0.82210	C3+	4.031
Component MW Total	23.78	C5+	1.851
Heating Value (Dry Ideal) Total BTU	1317.89	Heating Value (Sat Ideal) Total BTU	1294.89
Heating Value (Dry Real) Total BTU	1323.79	Heating Value (Sat Real) Total BTU	1300.49

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API 30-045-20277

Bradenhead

Gas Analysis Certificate

GPA Standard 2261-13

Acquisition Method Name au_report_150_C6+
Last calibration date 9/28/2015 11:07:06 AM

Client:	BP	Project #:	03143-0880
Site Name:	GCU 263	Meter ID:	3004520277 (BHD)
Sampled by:	Daniel F.	Date Sampled	09-28-15
Analyzed by:	Logan Richter	Date Received:	10-15-15
Sample Pressure:	25 psig	Date Analyzed:	10-19-15
Sample Temperature	N/R	Analysis Time:	Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	0.000	0.000	0.000
Oxygen	9.512	11.754	0.844
Nitrogen	37.805	40.897	4.157
Carbon Dioxide	2.640	4.487	0.450
Methane	39.903	24.720	6.760
Ethane	5.074	5.892	1.356
Propane	3.010	5.125	0.829
i-Butane	0.000	0.000	0.000
n-Butane	0.119	0.268	0.038
i-Pentane	0.000	0.000	0.000
n-Pentane	0.023	0.063	0.008
C6+	1.914	6.794	0.835
	100.000	100.000	15.277

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99807	C2+	3.065
Density (G) (Dry Gas)	0.89494	C3+	1.709
Component MW Total	25.90	C5+	0.843
Heating Value (Dry Ideal) Total BTU	671.53	Heating Value (Sat Ideal) Total BTU	659.81
Heating Value (Dry Real) Total BTU	672.83	Heating Value (Sat Real) Total BTU	661.04

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11/01/2015

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