



Gas Analysis Certificate

GPA Standard 2261-13

Acquisition Method Name au_report_150_C6+
Last calibration date 7/10/2015 10:21:38 AM

Client:	BP	Project #:	03143-0880
Site Name:	GCU 210	Meter ID:	3004511648 (CSG)
Sampled by:	Daniel F.	Date Sampled	07-21-15
Analyzed by:	Logan Richter	Date Received:	08-27-15
Sample Pressure:	209 psig	Date Analyzed:	09-01-15
Sample Temperature	N/R	Analysis Time:	Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	0.010	0.002	0.001
Oxygen	0.010	0.019	0.001
Nitrogen	0.781	1.245	0.086
Carbon Dioxide	0.000	0.000	0.000
Methane	93.328	85.201	15.819
Ethane	3.494	5.978	0.934
Propane	1.203	3.018	0.331
i-Butane	0.374	1.236	0.122
n-Butane	0.309	1.021	0.097
i-Pentane	0.162	0.665	0.059
n-Pentane	0.101	0.416	0.037
C6+	0.229	1.199	0.100
	100.000	100.000	17.588

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99760	C2+	1.681
Density (G) (Dry Gas)	0.60684	C3+	0.747
Component MW Total	17.57	C5+	0.196
Heating Value (Dry Ideal) Total BTU	1079.22	Heating Value (Sat Ideal) Total BTU	1060.39
Heating Value (Dry Real) Total BTU	1081.81	Heating Value (Sat Real) Total BTU	1062.85



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Last calibration date 7/10/2015 10:21:38 AM

Client:	BP	Project #:	03143-0880
Site Name:	GCU 210	Meter ID:	3004511648 (BHD)
Sampled by:	Daniel F.	Date Sampled	08-21-15
Analyzed by:	Logan Richter	Date Received:	08-27-15
Sample Pressure:	119 psig	Date Analyzed:	09-01-15
Sample Temperature	N/R	Analysis Time:	Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	0.027	0.005	0.003
Oxygen	0.009	0.012	0.001
Nitrogen	0.708	0.840	0.078
Carbon Dioxide	0.818	1.525	0.140
Methane	67.909	46.155	11.536
Ethane	15.713	20.017	4.211
Propane	9.823	18.351	2.712
i-Butane	1.230	3.028	0.403
n-Butane	2.515	6.194	0.795
i-Pentane	0.614	1.876	0.225
n-Pentane	0.563	1.720	0.204
C6+	0.071	0.277	0.031
	100.000	100.000	20.339

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99540	C2+	8.581
Density (G) (Dry Gas)	0.81500	C3+	4.370
Component MW Total	23.60	C5+	0.460
Heating Value (Dry Ideal) Total BTU	1383.92	Heating Value (Sat Ideal) Total BTU	1359.77
Heating Value (Dry Real) Total BTU	1390.32	Heating Value (Sat Real) Total BTU	1365.84