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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 222E	Meter ID:	3004526192 (BHD)
Sampled by:	Daniel F.	Date Sampled	08-19-15
Analyzed by:	Logan Richter	Date Received:	08-27-15
Sample Pressure:	58 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	0.016	0.004	0.002
Oxygen	0.010	0.018	0.001
Nitrogen	1.404	2.176	0.154
Carbon Dioxide	0.000	0.000	0.000
Methane	90.708	80.523	15.377
Ethane	4.782	7.957	1.279
Propane	1.776	4.332	0.489
i-Butane	0.350	1.126	0.115
n-Butane	0.401	1.289	0.126
i-Pentane	0.133	0.532	0.049
n-Pentane	0.083	0.333	0.030
C6+	0.336	1.711	0.147
	100.000	100.000	17.769

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99748	C2+	2.235
Density (G) (Dry Gas)	0.62412	C3+	0.956
Component MW Total	18.07	C5+	0.226
Heating Value (Dry Ideal) Total BTU	1095.85	Heating Value (Sat Ideal) Total BTU	1076.73
Heating Value (Dry Real) Total BTU	1098.62	Heating Value (Sat Real) Total BTU	1079.36

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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 222E	Meter ID:	3004526192 (CSG)
Sampled by:	Daniel F.	Date Sampled	08-19-15
Analyzed by:	Logan Richter	Date Received:	08-27-15
Sample Pressure:	52 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	0.053	0.009	0.005
Oxygen	0.008	0.011	0.001
Nitrogen	0.857	1.006	0.095
Carbon Dioxide	0.887	1.635	0.152
Methane	76.601	51.466	13.018
Ethane	9.250	11.649	2.480
Propane	5.049	9.324	1.394
i-Butane	0.594	1.445	0.195
n-Butane	1.362	3.316	0.431
i-Pentane	0.262	0.792	0.096
n-Pentane	0.230	0.695	0.084
C6+	4.846	18.653	2.120
	100.000	100.000	20.069

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99501	C2+	6.799
Density (G) (Dry Gas)	0.82659	C3+	4.319
Component MW Total	23.88	C5+	2.300
Heating Value (Dry Ideal) Total BTU	1396.44	Heating Value (Sat Ideal) Total BTU	1372.07
Heating Value (Dry Real) Total BTU	1403.44	Heating Value (Sat Real) Total BTU	1378.72

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