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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 226E	Meter ID:	3004524948 (CSG)
Sampled by:	Daniel F.	Date Sampled	08-20-15
Analyzed by:	Logan Richter	Date Received:	08-27-15
Sample Pressure:	48 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	0.042	0.007	0.004
Oxygen	0.006	0.009	0.001
Nitrogen	0.497	0.590	0.055
Carbon Dioxide	1.168	2.179	0.200
Methane	74.692	50.811	12.689
Ethane	9.618	12.264	2.578
Propane	6.453	12.067	1.782
i-Butane	1.220	3.006	0.400
n-Butane	2.645	6.518	0.836
i-Pentane	1.049	3.210	0.385
n-Pentane	0.991	3.031	0.360
C6+	1.618	6.307	0.708
	100.000	100.000	19.996

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99533	C2+	7.047
Density (G) (Dry Gas)	0.81496	C3+	4.469
Component MW Total	23.58	C5+	1.452
Heating Value (Dry Ideal) Total BTU	1377.63	Heating Value (Sat Ideal) Total BTU	1353.59
Heating Value (Dry Real) Total BTU	1384.09	Heating Value (Sat Real) Total BTU	1359.72

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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 226E	Meter ID:	3004524948 (BHD)
Sampled by:	Daniel F.	Date Sampled	08-20-15
Analyzed by:	Logan Richter	Date Received:	08-27-15
Sample Pressure:	123 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	0.011	0.003	0.001
Oxygen	0.017	0.032	0.001
Nitrogen	1.047	1.763	0.115
Carbon Dioxide	0.078	0.207	0.013
Methane	96.417	92.958	16.338
Ethane	2.095	3.786	0.560
Propane	0.161	0.427	0.044
i-Butane	0.032	0.111	0.010
n-Butane	0.026	0.092	0.008
i-Pentane	0.007	0.031	0.003
n-Pentane	0.007	0.028	0.002
C6+	0.102	0.563	0.044
	100.000	100.000	17.141

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99791	C2+	0.672
Density (G) (Dry Gas)	0.57456	C3+	0.112
Component MW Total	16.64	C5+	0.049
Heating Value (Dry Ideal) Total BTU	1022.61	Heating Value (Sat Ideal) Total BTU	1004.76
Heating Value (Dry Real) Total BTU	1024.75	Heating Value (Sat Real) Total BTU	1006.79

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