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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:	Callow A 1E	Meter ID:	3004524287 (BHD)
Sampled by:	Daniel F.	Date Sampled	08-18-15
Analyzed by:	Logan Richter	Date Received:	08-27-15
Sample Pressure:	63 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	0.024	0.006	0.002
Oxygen	0.017	0.031	0.001
Nitrogen	2.017	3.283	0.222
Carbon Dioxide	0.000	0.000	0.000
Methane	92.750	86.456	15.718
Ethane	4.311	7.532	1.153
Propane	0.520	1.333	0.143
i-Butane	0.171	0.577	0.056
n-Butane	0.099	0.334	0.031
i-Pentane	0.027	0.113	0.010
n-Pentane	0.007	0.029	0.003
C6+	0.057	0.306	0.025
	100.000	100.000	17.364

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99780	C2+	1.420
Density (G) (Dry Gas)	0.59425	C3+	0.268
Component MW Total	17.21	C5+	0.037
Heating Value (Dry Ideal) Total BTU	1039.24	Heating Value (Sat Ideal) Total BTU	1021.10
Heating Value (Dry Real) Total BTU	1041.53	Heating Value (Sat Real) Total BTU	1023.28

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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:	Callow A 1E	Meter ID:	3004524287 (CSG)
Sampled by:	Daniel F.	Date Sampled	08-18-15
Analyzed by:	Logan Richter	Date Received:	08-27-15
Sample Pressure:	126 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	0.010	0.005
Oxygen	0.008	0.013	0.001
Nitrogen	0.567	0.776	0.062
Carbon Dioxide	1.154	2.483	0.197
Methane	81.681	64.056	13.858
Ethane	9.457	13.900	2.531
Propane	4.163	8.975	1.148
i-Butane	0.589	1.673	0.193
n-Butane	1.091	3.100	0.344
i-Pentane	0.303	1.068	0.111
n-Pentane	0.256	0.903	0.093
C6+	0.677	3.043	0.296
	100.000	100.000	18.840

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99665	C2+	4.716
Density (G) (Dry Gas)	0.70662	C3+	2.184
Component MW Total	20.46	C5+	0.499
Heating Value (Dry Ideal) Total BTU	1208.95	Heating Value (Sat Ideal) Total BTU	1187.85
Heating Value (Dry Real) Total BTU	1213.01	Heating Value (Sat Real) Total BTU	1191.71

9/10/2015

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