

30-045-11745



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:	Waren LS 8	Meter ID:	3004511745 (BHD)
Sampled by:	Daniel F.	Date Sampled	07-21-15
Analyzed by:	Logan Richter	Date Received:	08-27-15
Sample Pressure:	34 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	0.000	0.000	0.000
Oxygen	6.935	6.829	0.617
Nitrogen	38.097	32.841	4.199
Carbon Dioxide	10.097	13.674	1.726
Methane	30.903	15.256	5.248
Ethane	4.258	3.940	1.141
Propane	0.000	0.000	0.000
i-Butane	0.000	0.000	0.000
n-Butane	0.000	0.000	0.000
i-Pentane	0.000	0.000	0.000
n-Pentane	0.000	0.000	0.000
C6+	9.710	27.459	4.245
	100.000	100.000	17.175

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99569	C2+	5.385
Density (G) (Dry Gas)	1.12634	C3+	4.245
Component MW Total	32.50	C5+	4.245
Heating Value (Dry Ideal) Total BTU	885.51	Heating Value (Sat Ideal) Total BTU	870.06
Heating Value (Dry Real) Total BTU	889.34	Heating Value (Sat Real) Total BTU	873.69

9/10/2015

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Air contamination

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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:	Warren LS 8	Meter ID:	3004511745 (CSG)
Sampled by:	Daniel F.	Date Sampled	07-21-15
Analyzed by:	Logan Richter	Date Received:	08-27-15
Sample Pressure:	12 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	0.012	0.002	0.001
Oxygen	15.256	18.654	1.352
Nitrogen	57.611	61.668	6.327
Carbon Dioxide	0.321	0.540	0.055
Methane	23.564	14.445	3.988
Ethane	2.081	2.391	0.556
Propane	0.747	1.259	0.206
i-Butane	0.155	0.344	0.051
n-Butane	0.106	0.236	0.033
i-Pentane	0.041	0.113	0.015
n-Pentane	0.026	0.072	0.009
C6+	0.079	0.277	0.034
	100.000	100.000	12.627

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99919	C2+	0.904
Density (G) (Dry Gas)	0.90361	C3+	0.348
Component MW Total	26.17	C5+	0.059
Heating Value (Dry Ideal) Total BTU	308.86	Heating Value (Sat Ideal) Total BTU	303.47
Heating Value (Dry Real) Total BTU	309.11	Heating Value (Sat Real) Total BTU	303.71

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Comment: Air contamination