



UPI 30-045-11623
BRADENHEAD

Gas Analysis Certificate

GPA Standard 2261-13

OIL CONS. DIV DIST. 3

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

DEC 18 2015

Client:	BP	Project #:	03143-0880
Site Name:	GCU 214	Meter ID:	3004511623 (BHD)
Sampled by:	Daniel F.	Date Sampled	07-08-15
Analyzed by:	Logan Richter	Date Received:	07-13-15
Sample Pressure:	65 psig	Date Analyzed:	07-15-15
Sample Temperature	N/R	Analysis Time:	Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	0.011	0.002	0.001
Oxygen	0.006	0.011	0.001
Nitrogen	0.507	0.790	0.056
Carbon Dioxide	0.000	0.000	0.000
Methane	90.740	80.956	15.383
Ethane	5.663	9.470	1.514
Propane	1.999	4.901	0.551
i-Butane	0.379	1.224	0.124
n-Butane	0.372	1.203	0.117
i-Pentane	0.117	0.471	0.043
n-Pentane	0.075	0.300	0.027
C6+	0.132	0.673	0.057
	100.000	100.000	17.874

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99746	C2+	2.434
Density (G) (Dry Gas)	0.62090	C3+	0.919
Component MW Total	17.98	C5+	0.127
Heating Value (Dry Ideal) Total BTU	1105.87	Heating Value (Sat Ideal) Total BTU	1086.58
Heating Value (Dry Real) Total BTU	1108.70	Heating Value (Sat Real) Total BTU	1089.25

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API 30-045-11623
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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 214	Meter ID:	3004511623 (CSG)
Sampled by:	Daniel F.	Date Sampled	07-08-15
Analyzed by:	Logan Richter	Date Received:	07-13-15
Sample Pressure:	80 psig	Date Analyzed:	07-15-15
Sample Temperature	N/R	Analysis Time:	Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	0.032	0.006	0.003
Oxygen	0.006	0.009	0.001
Nitrogen	0.374	0.499	0.041
Carbon Dioxide	0.149	0.313	0.025
Methane	79.313	60.726	13.460
Ethane	10.853	15.575	2.905
Propane	5.888	12.392	1.624
i-Butane	0.789	2.188	0.258
n-Butane	1.512	4.194	0.477
i-Pentane	0.383	1.319	0.140
n-Pentane	0.320	1.102	0.116
C6+	0.382	1.676	0.167
	100.000	100.000	19.219

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99639	C2+	5.688
Density (G) (Dry Gas)	0.72360	C3+	2.783
Component MW Total	20.95	C5+	0.423
Heating Value (Dry Ideal) Total BTU	1264.00	Heating Value (Sat Ideal) Total BTU	1241.95
Heating Value (Dry Real) Total BTU	1268.59	Heating Value (Sat Real) Total BTU	1246.29

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10/20/2015