

API 30-045-11542

Bradenthead

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 195	Meter ID:	3004511592 (BHD)
Sampled by:	Daniel F.	Date Sampled	06-25-15
Analyzed by:	Logan Richter	Date Received:	07-13-15
Sample Pressure:	73 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	0.015	0.003	0.002
Oxygen	0.004	0.007	0.000
Nitrogen	0.327	0.493	0.036
Carbon Dioxide	0.000	0.000	0.000
Methane	89.340	77.121	15.149
Ethane	6.125	9.911	1.638
Propane	2.348	5.571	0.647
i-Butane	0.408	1.276	0.134
n-Butane	0.564	1.765	0.178
i-Pentane	0.220	0.856	0.081
n-Pentane	0.194	0.754	0.070
C6+	0.454	2.243	0.198
	100.000	100.000	18.133

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99723	C2+	2.946
Density (G) (Dry Gas)	0.64186	C3+	1.308
Component MW Total	18.58	C5+	0.349
Heating Value (Dry Ideal) Total BTU	1141.36	Heating Value (Sat Ideal) Total BTU	1121.44
Heating Value (Dry Real) Total BTU	1144.53	Heating Value (Sat Real) Total BTU	1124.45

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UPI 30-045-11592

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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 195	Meter ID:	3004511592 (CSG)
Sampled by:	Daniel F.	Date Sampled	06-25-15
Analyzed by:	Logan Richter	Date Received:	07-13-15
Sample Pressure:	85 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	0.044	0.008	0.005
Oxygen	0.007	0.010	0.001
Nitrogen	0.425	0.567	0.047
Carbon Dioxide	1.440	3.018	0.246
Methane	80.199	61.279	13.610
Ethane	9.973	14.283	2.670
Propane	4.417	9.276	1.218
i-Butane	0.715	1.980	0.234
n-Butane	1.193	3.301	0.376
i-Pentane	0.395	1.356	0.144
n-Pentane	0.317	1.090	0.115
C6+	0.875	3.830	0.382
	100.000	100.000	19.048

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99644	C2+	5.140
Density (G) (Dry Gas)	0.72531	C3+	2.471
Component MW Total	21.00	C5+	0.642
Heating Value (Dry Ideal) Total BTU	1233.20	Heating Value (Sat Ideal) Total BTU	1211.68
Heating Value (Dry Real) Total BTU	1237.60	Heating Value (Sat Real) Total BTU	1215.85