



API 3004506935
Casing
Gas Analysis Certificate

OIL CONS. DIV DIST. 3 GPA Standard 2261-13

DEC 18 2015

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 194	Meter ID:	3004506935 (CSG)
Sampled by:	Daniel F.	Date Sampled	07-06-15
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	0.055	0.010	0.006
Oxygen	0.009	0.014	0.001
Nitrogen	1.010	1.334	0.111
Carbon Dioxide	0.967	2.006	0.165
Methane	80.640	60.982	13.686
Ethane	8.668	12.286	2.321
Propane	4.352	9.046	1.200
i-Butane	0.616	1.687	0.202
n-Butane	1.500	4.109	0.473
i-Pentane	0.481	1.636	0.176
n-Pentane	0.514	1.748	0.187
C6+	1.187	5.141	0.518
	100.000	100.000	19.046

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99635	C2+	5.077
Density (G) (Dry Gas)	0.73300	C3+	2.756
Component MW Total	21.21	C5+	0.881
Heating Value (Dry Ideal) Total BTU	1247.04	Heating Value (Sat Ideal) Total BTU	1225.28
Heating Value (Dry Real) Total BTU	1251.60	Heating Value (Sat Real) Total BTU	1229.61



API 30045 06935
Bradenhead

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 194	Meter ID:	3004506935 (BHD)
Sampled by:	Daniel F.	Date Sampled	07-06-15
Analyzed by:	Logan Richter	Date Received:	07-13-15
Sample Pressure:	37 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	0.010	0.002	0.001
Oxygen	0.056	0.098	0.005
Nitrogen	0.786	1.198	0.087
Carbon Dioxide	0.000	0.000	0.000
Methane	89.171	77.782	15.119
Ethane	6.143	10.043	1.643
Propane	2.379	5.704	0.655
i-Butane	0.444	1.402	0.145
n-Butane	0.540	1.706	0.170
i-Pentane	0.161	0.631	0.059
n-Pentane	0.108	0.425	0.039
C6+	0.202	1.008	0.088
	100.000	100.000	18.011

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99734	C2+	2.800
Density (G) (Dry Gas)	0.63509	C3+	1.157
Component MW Total	18.39	C5+	0.186
Heating Value (Dry Ideal) Total BTU	1122.36	Heating Value (Sat Ideal) Total BTU	1102.78
Heating Value (Dry Real) Total BTU	1125.35	Heating Value (Sat Real) Total BTU	1105.62

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10/20/2015