



OIL CONS. DIV DIST. 3

DEC 18 2015

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:	Johnson GC C 1E	Meter ID:	3004524004 (CSG)
Sampled by:	Daniel F.	Date Sampled:	06-09-15
Analyzed by:	Logan Richter	Date Received:	06-19-15
Sample Pressure:	130 psig	Date Analyzed:	06-24-15
Sample Temperature		Analysis Time:	Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	0.040	0.008	0.004
Oxygen	0.006	0.009	0.001
Nitrogen	0.400	0.534	0.044
Carbon Dioxide	1.364	2.863	0.233
Methane	81.529	62.385	13.836
Ethane	8.812	12.638	2.359
Propane	4.020	8.456	1.109
i-Butane	0.659	1.828	0.216
n-Butane	1.184	3.282	0.374
i-Pentane	0.394	1.356	0.144
n-Pentane	0.358	1.230	0.130
C6+	1.234	5.409	0.539
	100.000	100.000	18.988

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99643	C2+	4.870
Density (G) (Dry Gas)	0.72443	C3+	2.511
Component MW Total	20.97	C5+	0.813
Heating Value (Dry Ideal) Total BTU	1234.00	Heating Value (Sat Ideal) Total BTU	1212.47
Heating Value (Dry Real) Total BTU	1238.43	Heating Value (Sat Real) Total BTU	1216.67

10/20/2015



API 30-045-24004

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:	Johnson GC C 1E	Meter ID:	3004524004 (BHD)
Sampled by:	Daniel F.	Date Sampled:	06-09-15
Analyzed by:	Logan Richter	Date Received:	06-19-15
Sample Pressure:	78 psig	Date Analyzed:	06-24-15
Sample Temperature:		Analysis Time:	Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	0.021	0.004	0.002
Oxygen	0.003	0.006	0.000
Nitrogen	0.220	0.323	0.024
Carbon Dioxide	0.000	0.000	0.000
Methane	87.465	73.564	14.834
Ethane	7.120	11.224	1.905
Propane	2.883	6.665	0.795
i-Butane	0.521	1.589	0.171
n-Butane	0.780	2.377	0.246
i-Pentane	0.277	1.049	0.101
n-Pentane	0.212	0.801	0.077
C6+	0.498	2.399	0.217
	100.000	100.000	18.372

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99705	C2+	3.512
Density (G) (Dry Gas)	0.65879	C3+	1.607
Component MW Total	19.07	C5+	0.396
Heating Value (Dry Ideal) Total BTU	1169.45	Heating Value (Sat Ideal) Total BTU	1149.05
Heating Value (Dry Real) Total BTU	1172.91	Heating Value (Sat Real) Total BTU	1152.33

29/3/20

10/20/2015