



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 9/28/2015 10:07:06 AM

Client: BP Project #: 03143-0880
Site Name: White GC 1 Meter ID: 3004507982 (BHD)
Sampled by: Daniel F. Date Sampled: 09-15-15
Analyzed by: Logan Richter Date Received: 10-19-15
Sample Pressure: 35 psig Date Analyzed: 10-27-15
Sample Temperature: NA Analysis Time: Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	0.000	0.000	0.000
Oxygen	0.023	0.043	0.002
Nitrogen	1.408	2.301	0.155
Carbon Dioxide	0.138	0.355	0.024
Methane	95.862	89.719	16.246
Ethane	1.471	2.580	0.393
Propane	0.243	0.624	0.067
i-Butane	0.081	0.275	0.026
n-Butane	0.018	0.062	0.006
i-Pentane	0.000	0.000	0.000
n-Pentane	0.012	0.049	0.004
C6+	0.744	3.991	0.325
	100.000	100.000	17.248

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99776	C2+	0.821
Density (G) (Dry Gas)	0.59216	C3+	0.428
Component MW Total	17.14	C5+	0.329
Heating Value (Dry Ideal) Total BTU	1042.22	Heating Value (Sat Ideal) Total BTU	1024.03
Heating Value (Dry Real) Total BTU	1044.55	Heating Value (Sat Real) Total BTU	1026.25

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API 30-045-0400
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Gas Analysis Certificate

GPA Standard 2261-13

Acquisition Method Name au_report_150_C6+
Last calibration date 9/28/2015 10:07:06 AM

Client:	BP	Project #:	03143-0880
Site Name:	White GC 1	Meter ID:	3004507982 (CSG)
Sampled by:	Daniel F.	Date Sampled	09-15-15
Analyzed by:	Logan Richter	Date Received:	10-19-15
Sample Pressure:	86 psig	Date Analyzed:	10-26-15
Sample Temperature	NA	Analysis Time:	Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	0.000	0.000	0.000
Oxygen	0.010	0.014	0.001
Nitrogen	0.472	0.553	0.052
Carbon Dioxide	1.052	1.936	0.180
Methane	71.728	48.122	12.187
Ethane	12.246	15.399	3.282
Propane	7.164	13.211	1.978
i-Butane	1.168	2.839	0.383
n-Butane	2.857	6.945	0.903
i-Pentane	1.012	3.053	0.371
n-Pentane	1.059	3.194	0.385
C6+	1.231	4.733	0.539
	100.000	100.000	20.261

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99519	C2+	7.841
Density (G) (Dry Gas)	0.82617	C3+	4.558
Component MW Total	23.91	C5+	1.294
Heating Value (Dry Ideal) Total BTU	1398.71	Heating Value (Sat Ideal) Total BTU	1374.31
Heating Value (Dry Real) Total BTU	1405.48	Heating Value (Sat Real) Total BTU	1380.72