



api 30-045-09720
Bradenhead

Gas Analysis Certificate

OIL CONS. DIV DIST. 3

GPA Standard 2261-13

Method Name C6+ Excel Recalc2
Last calibration date 6/19/2015 8:47:52 AM

DEC 18 2015

Client	BP	Project #	03143-0880
Site Name	Storey BLS 006	Meter ID	3004509720 (BHD)
Sampled by	Brandon K.	Date Sampled	06-23-15
Analyzed by	Logan Richter	Date Received	06-23-15
Sample Pressure	2 psig	Date Analyzed	06-25-15
Sample Temperature		Analysis Time	Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	9.522	2.052	0.966
Oxygen	0.233	0.401	0.021
Nitrogen	15.963	24.074	1.755
Carbon Dioxide	0.118	0.280	0.020
Methane	66.853	57.737	11.324
Ethane	4.191	6.784	1.120
Propane	1.836	4.358	0.505
i-Butane	0.367	1.147	0.120
n-Butane	0.520	1.628	0.164
i-Pentane	0.218	0.848	0.080
n-Pentane	0.178	0.691	0.064
C6+	0.000	0.000	0.000
	100.000	100.000	16.139

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99829	C2+	2.053
Density (G) (Dry Gas)	0.64136	C3+	0.933
Component MW Total	18.58	C5+	0.144
Heating Value (Dry Ideal) Total BTU	840.34	Heating Value (Sat Ideal) Total BTU	825.67
Heating Value (Dry Real) Total BTU	841.77	Heating Value (Sat Real) Total BTU	827.04

BRB
Reviewed by

07/01/2015
mm dd/yyyy

API 30-045-04720
Casing Sample



Gas Analysis Certificate

GPA Standard 2261-13

Method Name	C6+ Excel Recalc2		
Last calibration date	6/19/2015 8:47:52 AM		
Client	BP	Project #:	03143-0880
Site Name:	Storey BLS 006	Meter ID:	3004509720 (CSG)
Sampled by:	Brandon K.	Date Sampled	06-23-15
Analyzed by:	Logan Richter	Date Received:	06-23-14
Sample Pressure:	153 psig	Date Analyzed:	06-25-15
Sample Temperature		Analysis Time:	Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	0.359	0.079	0.037
Oxygen	0.004	0.006	0.000
Nitrogen	0.281	0.432	0.031
Carbon Dioxide	0.319	0.771	0.054
Methane	89.845	79.204	15.232
Ethane	5.381	8.892	1.439
Propane	2.394	5.800	0.659
i-Butane	0.444	1.419	0.145
n-Butane	0.599	1.913	0.189
i-Pentane	0.217	0.860	0.079
n-Pentane	0.157	0.624	0.057
C6+	0.000	0.001	0.000
	100.000	100.000	17.924

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99740	C2+	2.569
Density (G) (Dry Gas)	0.62832	C3+	1.130
Component MW Total	18.20	C5+	0.136
Heating Value (Dry Ideal) Total BTU	1111.88	Heating Value (Sat Ideal) Total BTU	1092.47
Heating Value (Dry Real) Total BTU	1114.78	Heating Value (Sat Real) Total BTU	1095.22

Logan Richter
Reviewed by

07/01/2015
mm dd yyyy