API 30-045-11620
Bradenhead

envirotech

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	9/28/2015 10:07:06 AM

Client:	BP	Project #:	03143-0880
Site Name:	GCU 217	Meter ID:	3004511620 (BHD)
Sampled by:	Brandon K.	Date Sampled	10-16-15
Analyzed by:	Logan Richter	Date Received:	10-19-15
Sample Pressure:	55 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	0.011	0.017	0.001
Nitrogen	0.517	0.746	0.057
Carbon Dioxide	0.000	0.000	0.000
Methane	88.210	72.825	14.963
Ethane	6.076	9.402	1.626
Propane	2.347	5.327	0.647
i-Butane	0.450	1.346	0.147
n-Butane	0.434	1.297	0.137
i-Pentane	0.173	0.642	0.063
n-Pentane	0.032	0.119	0.012
C6+	1.750	8.279	0.764
	100.000	100.000	18.417

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99689	C2+	3.396
Density (G) (Dry Gas)	0.67170	C3+	1.770
Component MW Total	19.43	C5+	0.839
Heating Value (Dry Ideal) Total BTU	1184.28	Heating Value (Sat Ideal) Total BTU	1163.61
Heating Value (Dry Real) Total BTU	1187.97	Heating Value (Sat Real) Total BTU	1167.12

11/3/2015

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3

API 30-045-11620
Casing

envirotech

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:	GCU 217	Meter ID:	3004511620 (CSG)
Sampled by:	Brandon K.	Date Sampled	10-16-15
Analyzed by:	Logan Richter	Date Received:	10-19-15
Sample Pressure:	284 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	0.015	0.022	0.001
Nitrogen	0.763	1.021	0.084
Carbon Dioxide	1.075	2.261	0.184
Methane	78.417	60.125	13.307
Ethane	11.715	16.835	3.136
Propane	5.172	10.901	1.426
i-Butane	0.684	1.899	0.224
n-Butane	1.176	3.266	0.371
i-Pentane	0.369	1.273	0.135
n-Pentane	0.323	1.112	0.117
C6+	0.292	1.284	0.128
	100.000	100.000	19.113

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99650	C2+	5.537
Density (G) (Dry Gas)	0.72255	C3+	2.401
Component MW Total	20.92	C5+	0.380
Heating Value (Dry Ideal) Total BTU	1232.75	Heating Value (Sat Ideal) Total BTU	1211.24
Heating Value (Dry Real) Total BTU	1237.08	Heating Value (Sat Real) Total BTU	1215.35

11/5/2015

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NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC, NM 87410
(505 334-6178 FAX: (505) 334-6170
http://www.emnrd.state.nm.us/ocd/

BRADENHEAD TEST REPORT
(Submit 2 copies to above address)

Date of Test 6/12/15 **Operator** BP America Production Company **API #** 3004511620

Property Name GCU 217-DK **Location:** Unit K Section 13 Township 28 Range 12
(Well Name and Number)

Pressure (Shut-in or Producing) Tubing 208 Intermediate N/A Casing 208 Bradenhead 53

OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH

Time	Bradenhead: BH Blowdown	Bradenhead: Casing Monitor	Bradenhead: Intermediate Monitor	Intermediate: Intermediate Blowdown	Intermediate: Casing Monitor
5 minutes	0	208			
10 minutes	0	208			
15 minutes	0	208			
20 minutes					
25 minutes					
30 minutes					
5 minute SI	0	208			

	Bradenhead Flowed	Intermediate Flowed
Steady Flow		
Surges		
Down to Nothing	✓	
No Flow		
Gas		
Gas and Water		
Water		

If bradenhead flowed water, check all of the descriptions that apply below:

Clear _____ Fresh _____ Salty _____ Sulfur _____ Black _____

5 Minute Shut-in Bradenhead _____ Intermediate _____

REMARKS:
BH blew to a whisper in 10 sec. Blew from 1" valve

By _____ **Witness** _____

_____
(Position)

NMOCD Test Area: B 247