



# NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

OIL CONS. DIV DIST. 3

DEC 18 2015

## BRADENHEAD TEST REPORT

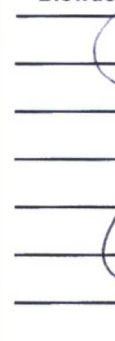
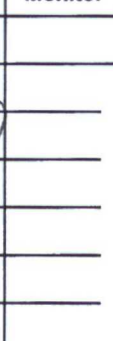
(Submit 2 copies to above address)

Date of Test 5/29/15 Operator BP America Production Company API # 3004526253

Property Name GCU 102E-DK Location: Unit A Section 13 Township 29 Range 13  
(Well Name and Number)

Pressure (Shut-in or Producing) Tubing 47 Intermediate N/A Casing 29 Bradenhead 44

OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH

| Time        | Bradenhead     |                   |                                                                                    | Intermediate                                                                       |                                                                                     | Bradenhead<br>Flowed | Intermediate<br>Flowed                                                               |
|-------------|----------------|-------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------|--------------------------------------------------------------------------------------|
|             | BH<br>Blowdown | Casing<br>Monitor | Intermediate<br>Monitor                                                            | Intermediate<br>Blowdown                                                           | Casing<br>Monitor                                                                   |                      |                                                                                      |
| 5 minutes   | <u>W</u>       | <u>79</u>         |  |  |  | Steady Flow          |  |
| 10 minutes  | <u>W</u>       | <u>78</u>         |                                                                                    |                                                                                    |                                                                                     | Surges               |                                                                                      |
| 15 minutes  | <u>W</u>       | <u>74</u>         |                                                                                    |                                                                                    |                                                                                     | Down to Nothing      |                                                                                      |
| 20 minutes  | <u>W</u>       | <u>70</u>         |                                                                                    |                                                                                    |                                                                                     | No Flow              |                                                                                      |
| 25 minutes  | <u>W</u>       | <u>69</u>         |                                                                                    |                                                                                    |                                                                                     | Gas                  |                                                                                      |
| 30 minutes  | <u>W</u>       | <u>68</u>         |                                                                                    |                                                                                    |                                                                                     | Gas and Water        |                                                                                      |
| 5 minute SI | <u>3</u>       | <u>67</u>         |                                                                                    |                                                                                    |                                                                                     | Water                |                                                                                      |

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

Clear ☐ Fresh ☐ Salty ☐ Sulfur ☐ Black ☐

5 Minute Shut-in Bradenhead 3 Intermediate N/A

### REMARKS:

BH blew to a whisper in 30 sec. Blew from 1" valve

unable to take sample

By [Signature] Witness \_\_\_\_\_

(Position)

30-045-26253

API 30-045-26253

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 102E      | Meter ID:      | 3004526253 (BHD) |
| Sampled by:        | Sawyer M.     | Date Sampled   | 07-14-15         |
| Analyzed by:       | Logan Richter | Date Received: | 07-14-15         |
| Sample Pressure:   | 44 psig       | Date Analyzed: | 07-16-15         |
| Sample Temperature | N/R           | Analysis Time: | Standard         |

## Component Results (14.696)

| Name           | Qty (Norm)<br>[Mol %] | Wt Percent<br>(%) | GPM    |
|----------------|-----------------------|-------------------|--------|
| Helium         | 0.013                 | 0.003             | 0.001  |
| Oxygen         | 0.038                 | 0.068             | 0.003  |
| Nitrogen       | 0.455                 | 0.702             | 0.050  |
| Carbon Dioxide | 1.632                 | 3.958             | 0.279  |
| Methane        | 89.835                | 79.414            | 15.229 |
| Ethane         | 6.077                 | 10.069            | 1.625  |
| Propane        | 1.123                 | 2.729             | 0.309  |
| i-Butane       | 0.312                 | 0.999             | 0.102  |
| n-Butane       | 0.224                 | 0.716             | 0.071  |
| i-Pentane      | 0.091                 | 0.362             | 0.033  |
| n-Pentane      | 0.032                 | 0.127             | 0.012  |
| C6+            | 0.168                 | 0.852             | 0.073  |
|                | 100.000               | 100.000           | 17.788 |

## Calculations at Pressure Base 14.696

|                                     |         |                                     |         |
|-------------------------------------|---------|-------------------------------------|---------|
| Compressibility (Z) (Dry Gas)       | 0.99749 | C2+                                 | 2.225   |
| Density (G) (Dry Gas)               | 0.62666 | C3+                                 | 0.600   |
| Component MW Total                  | 18.15   | C5+                                 | 0.118   |
| Heating Value (Dry Ideal) Total BTU | 1074.13 | Heating Value (Sat Ideal) Total BTU | 1055.39 |
| Heating Value (Dry Real) Total BTU  | 1076.83 | Heating Value (Sat Real) Total BTU  | 1057.95 |

RJR

10/20/2015



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:         | GCU 102E      | Meter ID:      | 3004526253 (CSG) |
| Sampled by:        | Sawyer M.     | Date Sampled   | 07-14-15         |
| Analyzed by:       | Logan Richter | Date Received: | 07-14-15         |
| Sample Pressure:   | 4 psig        | Date Analyzed: | 07-16-15         |
| Sample Temperature | N/R           | Analysis Time: | Standard         |

## Component Results (14.696)

| Name           | Qty (Norm)<br>[Mol %] | Wt Percent<br>(%) | GPM    |
|----------------|-----------------------|-------------------|--------|
| Helium         | 0.042                 | 0.006             | 0.004  |
| Oxygen         | 0.160                 | 0.184             | 0.014  |
| Nitrogen       | 1.041                 | 1.046             | 0.115  |
| Carbon Dioxide | 1.470                 | 2.320             | 0.252  |
| Methane        | 69.525                | 39.985            | 11.840 |
| Ethane         | 8.375                 | 9.028             | 2.250  |
| Propane        | 5.565                 | 8.797             | 1.540  |
| i-Butane       | 1.299                 | 2.707             | 0.427  |
| n-Butane       | 2.828                 | 5.892             | 0.895  |
| i-Pentane      | 1.377                 | 3.563             | 0.506  |
| n-Pentane      | 1.304                 | 3.374             | 0.475  |
| C6+            | 7.012                 | 23.100            | 3.073  |
|                | 100.000               | 100.000           | 21.392 |

## Calculations at Pressure Base 14.696

|                                     |         |                                     |         |
|-------------------------------------|---------|-------------------------------------|---------|
| Compressibility (Z) (Dry Gas)       | 0.99297 | C2+                                 | 9.167   |
| Density (G) (Dry Gas)               | 0.96627 | C3+                                 | 6.917   |
| Component MW Total                  | 27.89   | C5+                                 | 4.054   |
| Heating Value (Dry Ideal) Total BTU | 1591.97 | Heating Value (Sat Ideal) Total BTU | 1564.19 |
| Heating Value (Dry Real) Total BTU  | 1603.24 | Heating Value (Sat Real) Total BTU  | 1574.88 |

*Logan Richter*

10/20/2015





DEC 18 2015

K.B. 5520'  
G.R. 5505'**Gallegos Canyon Unit 102E**

Dakota

API # 30-045-26253

T-29N, R-13-W, Sec. 13

San Juan County, New Mexico

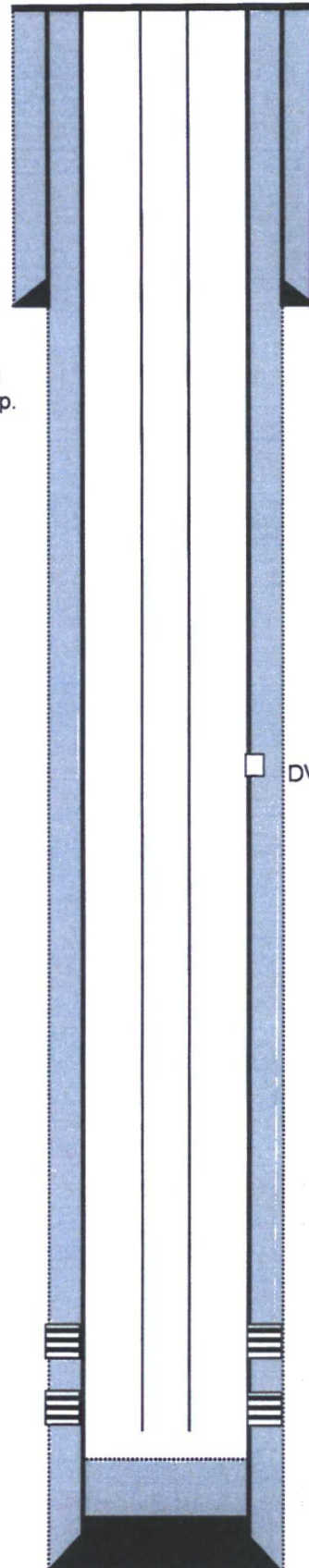
**History**

11/12/85: Spud date

12/31/85: Completed Dakota

12/14/10: Wirelined: Tagged fluid at 5680'.

Retrieved worn brush plunger at 6040'. Retrieved fishing neck off plunger stop. Retrieved piece of spring from stop. Did not fish any further. Still pieces of spring remaining in hole.



12-1/4" Hole  
8-5/8", 24#, K-55 @ 326'  
Cmt w/ 248 cu ft Class B  
circulated to surface

DV Tool @ 3095'

2 3/8" tubing at 6063' (1985)  
Sawtooth on bottom

7-7/8" Hole  
4 1/2", 11.6#, K-55 @ 6175"  
Cmt w/ 1425  
Stage 1: 1231 cu ft Class B  
Stage 2: 1556 cu ft Class B  
Circulated to surface both stages.

**Formation Tops**

PC

Mesaverde

Gallup 5,085

Dakota 5,946

**Dakota Perforations**

5946-5974'

6016-6065'

Fraced w/ 71,780 gal 70Q foam,  
78,000# 20/40 brady snd

PBTD: 6125'

TD: 6175'