



NMOCD REC'D  
10/12/20

Well Name: EPNG COM B LS 3; CSG  
API #: API # 300451007100  
Source: CASING  
Sample Type: GAS  
Analysis No: SO200046  
Cust No: 15950-11695

### Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT  
Well Name: EPNG COM B LS 3; CSG  
County/State: SAN JUAN NM  
Location:  
Lease/PA/CA:  
Formation:  
Cust. Stn. No.: API # 300451007100

Source: CASING  
Well Flowing: Y  
Pressure: 75 PSIG  
Flow Temp: 72.3 DEG. F  
Ambient Temp: 81 DEG. F  
Flow Rate: MCF/D  
Sample Method: Purge & Fill  
Sample Date: 06/30/2020  
Sample Time: 10.35 AM  
Sampled By: CELIA L.  
Sampled by (CO): ABC

Heat Trace: N  
Remarks:

### Analysis

| Component:: | Mole%:   | Unnormalized %: | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|----------|-----------------|---------|---------|--------------|
| Nitrogen    | 0.3026   | 0.2830          | 0.0330  | 0.00    | 0.0029       |
| CO2         | 0.0117   | 0.0109          | 0.0020  | 0.00    | 0.0002       |
| Methane     | 86.7433  | 81.1352         | 14.7470 | 876.11  | 0.4805       |
| Ethane      | 7.0662   | 6.6094          | 1.8950  | 125.05  | 0.0734       |
| Propane     | 3.2694   | 3.0580          | 0.9030  | 82.26   | 0.0498       |
| Iso-Butane  | 0.4525   | 0.4232          | 0.1480  | 14.71   | 0.0091       |
| N-Butane    | 0.8344   | 0.7805          | 0.2640  | 27.22   | 0.0167       |
| I-Pentane   | 0.2507   | 0.2345          | 0.0920  | 10.03   | 0.0062       |
| N-Pentane   | 0.2045   | 0.1913          | 0.0740  | 8.20    | 0.0051       |
| Hexane Plus | 0.8647   | 0.8088          | 0.3870  | 45.58   | 0.0286       |
| Total       | 100.0000 | 93.5348         | 18.5450 | 1189.16 | 0.6725       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

\*\*@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0031  
BTU/CU.FT IDEAL: 1191.9  
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1195.6  
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1174.8  
DRY BTU @ 15.025: 1219.5  
REAL SPECIFIC GRAVITY: 0.6743

CYLINDER #: 1094  
CYLINDER PRESSURE: 72 PSIG  
ANALYSIS DATE: 07/06/2020  
ANALYSIS TIME: 02:20:53 PM  
ANALYSIS RUN BY: PATRICIA KING

GPM, BTU, and SPG calculations as shown above are based on current GPA constants.

GPA Standard: GPA-2261

GC: Danalyzer Model 500 Last Cal/Verify: 07/08/2020

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT  
WELL ANALYSIS COMPARISON

Lease: EPNG COM B LS 3; CSG  
Stn. No.: API #  
Mtr. No.:

CASING

07/08/2020  
15950-11695

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Smpl Date: 06/30/2020  
Test Date: 07/06/2020  
Run No: SO200046  
  
Nitrogen: 0.3026  
CO2: 0.0117  
Methane: 86.7433  
Ethane: 7.0662  
Propane: 3.2694  
I-Butane: 0.4525  
N-Butane: 0.8344  
I-Pentane: 0.2507  
N-Pentane: 0.2045  
Hexane+: 0.8647  
  
BTU: 1195.6  
GPM: 18.5450  
SPG: 0.6743



NMOCD REC'D  
10/12/20

Well Name: EPNG COM B LS 3; TBG  
API #: API # 300451007100  
Source: BRADENHEAD  
Sample Type: GAS  
Analysis No: SO200047  
Cust No: 15950-11700

### Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT  
Well Name: EPNG COM B LS 3; TBG  
County/State: SAN JUAN NM  
Location:  
Lease/PA/CA:  
Formation:  
Cust. Stn. No.: API # 300451007100

Source: BRADENHEAD  
Well Flowing: Y  
Pressure: 75 PSIG  
Flow Temp: 71.4 DEG. F  
Ambient Temp: 81 DEG. F  
Flow Rate: MCF/D  
Sample Method: Purge & Fill  
Sample Date: 06/30/2020  
Sample Time: 10.30 AM  
Sampled By: CELIA L.  
Sampled by (CO): ABC

Heat Trace: N  
Remarks:

### Analysis

| Component:: | Mole%:   | Unnormalized %: | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|----------|-----------------|---------|---------|--------------|
| Nitrogen    | 0.1456   | 0.1410          | 0.0160  | 0.00    | 0.0014       |
| CO2         | 1.4118   | 1.3668          | 0.2420  | 0.00    | 0.0215       |
| Methane     | 83.0722  | 80.4233         | 14.1290 | 839.03  | 0.4601       |
| Ethane      | 8.2114   | 7.9496          | 2.2030  | 145.32  | 0.0853       |
| Propane     | 3.5157   | 3.4036          | 0.9720  | 88.46   | 0.0535       |
| Iso-Butane  | 0.7188   | 0.6959          | 0.2360  | 23.37   | 0.0144       |
| N-Butane    | 1.0336   | 1.0006          | 0.3270  | 33.72   | 0.0207       |
| I-Pentane   | 0.4407   | 0.4266          | 0.1620  | 17.63   | 0.0110       |
| N-Pentane   | 0.3198   | 0.3096          | 0.1160  | 12.82   | 0.0080       |
| Hexane Plus | 1.1304   | 1.0944          | 0.5060  | 59.58   | 0.0374       |
| Total       | 100.0000 | 96.8114         | 18.9090 | 1219.93 | 0.7133       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

\*\*@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0035  
BTU/CU.FT IDEAL: 1222.8  
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1227.1  
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1205.7  
DRY BTU @ 15.025: 1251.7  
REAL SPECIFIC GRAVITY: 0.7155

CYLINDER #: 028  
CYLINDER PRESSURE: 62 PSIG  
ANALYSIS DATE: 07/06/2020  
ANALYSIS TIME: 03:01:17 PM  
ANALYSIS RUN BY: SHYANN ELLEDGE

GPM, BTU, and SPG calculations as shown above are based on current GPA constants.

GPA Standard: GPA-2261

GC: Danalyzer Model 500

Last Cal/Verify: 07/08/2020

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT  
WELL ANALYSIS COMPARISON

Lease: EPNG COM B LS 3; TBG  
Stn. No.: API #  
Mtr. No.:

BRADENHEAD

07/08/2020  
15950-11700

Smpl Date: 06/30/2020  
Test Date: 07/06/2020  
Run No: SO200047

Nitrogen: 0.1456  
CO2: 1.4118  
Methane: 83.0722  
Ethane: 8.2114  
Propane: 3.5157  
I-Butane: 0.7188  
N-Butane: 1.0336  
I-Pentane: 0.4407  
N-Pentane: 0.3198  
Hexane+: 1.1304

BTU: 1227.1  
GPM: 18.9090  
SPG: 0.7155



NMOCD REC'D  
10/12/20

Well Name: EPNG COM J LS 11; BHD  
API #: API #300452137500  
Source: BRADENHEAD  
Sample Type: GAS  
Analysis No: SO200112  
Cust No: 15950-11940

### Well/Lease Information

|                 |                                  |                  |              |
|-----------------|----------------------------------|------------------|--------------|
| Customer Name:  | BP - SOUTH BHD PROJECT           | Source:          | BRADENHEAD   |
| Well Name:      | EPNG COM J LS 11; BHD            | Well Flowing:    | Y            |
| County/State:   | SAN JUAN NM                      | Pressure:        | 24 PSIG      |
| Location:       |                                  | Flow Temp:       | DEG. F       |
| Lease/PA/CA:    |                                  | Ambient Temp:    | 55 DEG. F    |
| Formation:      |                                  | Flow Rate:       | MCF/D        |
| Cust. Stn. No.: | API #300452137500<br>87989       | Sample Method:   | Purge & Fill |
|                 |                                  | Sample Date:     | 09/10/2020   |
|                 |                                  | Sample Time:     | 1.17 PM      |
|                 |                                  | Sampled By:      | ERIC S.      |
|                 |                                  | Sampled by (CO): | ABC          |
| Heat Trace:     | N                                |                  |              |
| Remarks:        | PRESSURED WITH HELIUM TO 30 LBS. |                  |              |

### Analysis

| Component:: | Mole%:   | Unnormalized %: | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|----------|-----------------|---------|---------|--------------|
| Nitrogen    | 3.1046   | 1.3360          | 0.3420  | 0.00    | 0.0300       |
| CO2         | 0.0067   | 0.0029          | 0.0010  | 0.00    | 0.0001       |
| Methane     | 85.4523  | 36.7725         | 14.5220 | 863.07  | 0.4733       |
| Ethane      | 7.1023   | 3.0563          | 1.9040  | 125.69  | 0.0737       |
| Propane     | 2.6275   | 1.1307          | 0.7260  | 66.11   | 0.0400       |
| Iso-Butane  | 0.5036   | 0.2167          | 0.1650  | 16.38   | 0.0101       |
| N-Butane    | 0.5909   | 0.2543          | 0.1870  | 19.28   | 0.0119       |
| I-Pentane   | 0.2496   | 0.1074          | 0.0920  | 9.99    | 0.0062       |
| N-Pentane   | 0.0806   | 0.0347          | 0.0290  | 3.23    | 0.0020       |
| Hexane Plus | 0.2819   | 0.1213          | 0.1260  | 14.86   | 0.0093       |
| Total       | 100.0000 | 43.0328         | 18.0940 | 1118.60 | 0.6567       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

\*\*@ 14.730 PSIA & 60 DEG. F.

|                                      |        |
|--------------------------------------|--------|
| COMPRESSIBILITY FACTOR (1/Z):        | 1.0027 |
| BTU/CU.FT IDEAL:                     | 1121.2 |
| BTU/CU.FT (DRY) CORRECTED FOR (1/Z): | 1124.2 |
| BTU/CU.FT (WET) CORRECTED FOR (1/Z): | 1104.6 |
| DRY BTU @ 15.025:                    | 1146.7 |
| REAL SPECIFIC GRAVITY:               | 0.6582 |

|                    |               |
|--------------------|---------------|
| CYLINDER #:        | 1102          |
| CYLINDER PRESSURE: | 9 PSIG        |
| ANALYSIS DATE:     | 09/14/2020    |
| ANALYSIS TIME:     | 04:44:48 PM   |
| ANALYSIS RUN BY:   | PATRICIA KING |

GPM, BTU, and SPG calculations as shown above are based on current GPA constants.

GPA Standard: GPA-2261

GC: Danalyzer Model 500

Last Cal/Verify: 09/18/2020

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT  
WELL ANALYSIS COMPARISON

Lease: EPNG COM J LS 11; BHD  
Stn. No.: API  
Mtr. No.: 87989

BRADENHEAD

09/18/2020  
15950-11940

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Smpl Date: 09/10/2020  
Test Date: 09/14/2020  
Run No: SO200112  
  
Nitrogen: 3.1046  
CO2: 0.0067  
Methane: 85.4523  
Ethane: 7.1023  
Propane: 2.6275  
I-Butane: 0.5036  
N-Butane: 0.5909  
I-Pentane: 0.2496  
N-Pentane: 0.0806  
Hexane+: 0.2819  
  
BTU: 1124.2  
GPM: 18.0940  
SPG: 0.6582



NMOCD REC'D  
10/12/20

Well Name: EPNG COM J LS 11; CSG  
API #: API #300452137500  
Source: CASING  
Sample Type: GAS  
Analysis No: SO200113  
Cust No: 15950-11945

### Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT  
Well Name: EPNG COM J LS 11; CSG  
County/State: SAN JUAN NM  
Location:  
Lease/PA/CA:  
Formation:  
Cust. Stn. No.: API #300452137500  
87989

Source: CASING  
Well Flowing: Y  
Pressure: 123 PSIG  
Flow Temp: DEG. F  
Ambient Temp: 55 DEG. F  
Flow Rate: MCF/D  
Sample Method: Purge & Fill  
Sample Date: 09/10/2020  
Sample Time: 1.23 PM  
Sampled By: ERIC S.  
Sampled by (CO): ABC

Heat Trace: N  
Remarks:

### Analysis

| Component:: | Mole%:   | Unnormalized %: | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|----------|-----------------|---------|---------|--------------|
| Nitrogen    | 0.1624   | 0.1628          | 0.0180  | 0.00    | 0.0016       |
| CO2         | 0.7256   | 0.7273          | 0.1240  | 0.00    | 0.0110       |
| Methane     | 87.7847  | 87.9872         | 14.9230 | 886.63  | 0.4862       |
| Ethane      | 6.3728   | 6.3875          | 1.7090  | 112.78  | 0.0662       |
| Propane     | 2.6890   | 2.6952          | 0.7430  | 67.66   | 0.0409       |
| Iso-Butane  | 0.4645   | 0.4656          | 0.1520  | 15.11   | 0.0093       |
| N-Butane    | 0.7589   | 0.7607          | 0.2400  | 24.76   | 0.0152       |
| I-Pentane   | 0.2668   | 0.2674          | 0.0980  | 10.67   | 0.0066       |
| N-Pentane   | 0.2072   | 0.2077          | 0.0750  | 8.31    | 0.0052       |
| Hexane Plus | 0.5681   | 0.5694          | 0.2540  | 29.94   | 0.0188       |
| Total       | 100.0000 | 100.2308        | 18.3360 | 1155.85 | 0.6611       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

\*\*@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.003  
BTU/CU.FT IDEAL: 1158.5  
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1161.9  
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1141.7  
DRY BTU @ 15.025: 1185.2  
REAL SPECIFIC GRAVITY: 0.6628

CYLINDER #: 1072  
CYLINDER PRESSURE: 120 PSIG  
ANALYSIS DATE: 09/14/2020  
ANALYSIS TIME: 04:04:26 PM  
ANALYSIS RUN BY: PATRICIA KING

GPM, BTU, and SPG calculations as shown above are based on current GPA constants.

GPA Standard: GPA-2261

GC: Danalyzer Model 500 Last Cal/Verify: 09/18/2020

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT  
WELL ANALYSIS COMPARISON

Lease: EPNG COM J LS 11; CSG  
Stn. No.: API  
Mtr. No.: 87989

CASING

09/18/2020  
15950-11945

Smpl Date: 09/10/2020  
Test Date: 09/14/2020  
Run No: SO200113

Nitrogen: 0.1624  
CO2: 0.7256  
Methane: 87.7847  
Ethane: 6.3728  
Propane: 2.6890  
I-Butane: 0.4645  
N-Butane: 0.7589  
I-Pentane: 0.2668  
N-Pentane: 0.2072  
Hexane+: 0.5681

BTU: 1161.9  
GPM: 18.3360  
SPG: 0.6628