



# 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/>

OIL CONS. DIV DIST. 3

## BRADENHEAD TEST REPORT

(Submit 2 copies to above address)

APR 17 2014

Date of Test 3/18/2014 Operator Energen Resources API # 30-039-25937

Property Name San Juan 30-4 #41 Location: Unit 0 Section 18 Township 30 Range 4  
(Well Name and Number)

Pressure (Shut-in or Producing) Tubing 105 Intermediate 215 Casing 121 Bradenhead 0

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>0</u>       | <u>121</u>        |                         | <u>15</u>                | <u>121</u>        |                      |                        |
| 10 minutes  | <u>0</u>       | <u>121</u>        |                         | <u>1.5</u>               | <u>121</u>        |                      |                        |
| 15 minutes  | <u>0</u>       | <u>121</u>        |                         | <u>.2</u>                | <u>121</u>        |                      |                        |
| 20 minutes  | <u>0</u>       | <u>121</u>        |                         | <u>0</u>                 | <u>121</u>        |                      |                        |
| 25 minutes  | <u>0</u>       | <u>121</u>        |                         | <u>0</u>                 | <u>121</u>        |                      |                        |
| 30 minutes  | <u>0</u>       | <u>121</u>        |                         | <u>0</u>                 | <u>121</u>        |                      |                        |
| 5 minute SI | <u>0</u>       | <u>121</u>        |                         | <u>.2</u>                | <u>121</u>        |                      |                        |

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 0 Intermediate .2

### REMARKS:

Intermediate Blew down to nothing in 18 minutes.

By Danny Putter  
Field Foreman  
(Position)

Witness John Putter



2030 Afton Place  
Farmington, NM 87401  
(505) 325-6622

Analysis No: EN140167  
Cust No: 73500-14410

### Well/Lease Information

Customer Name: ENERGEN RESOURCES CORP.  
Well Name: SAN JUAN 30-4-41; METER  
County/State: RIO ARRIBA NM  
Location: O18-30N-04W  
Field:  
Formation: BLANCO MV  
Cust. Stn. No.: 3198009B

Source: METER  
Pressure: 68 PSIA  
Sample Temp: DEG. F  
Well Flowing:  
Date Sampled: 03/06/2014  
Sampled By: DAN BUTTON  
Foreman/Engr.: JOHN HAMPTON

Remarks: SAMPLE TAKEN UP STREAM OF METER

### Analysis

| Component:: | Mole%:  | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|---------|---------|---------|--------------|
| Nitrogen    | 0.083   | 0.0090  | 0.00    | 0.0008       |
| CO2         | 1.762   | 0.3010  | 0.00    | 0.0268       |
| Methane     | 93.571  | 15.8960 | 945.07  | 0.5183       |
| Ethane      | 3.334   | 0.8930  | 59.00   | 0.0346       |
| Propane     | 0.772   | 0.2130  | 19.42   | 0.0118       |
| Iso-Butane  | 0.132   | 0.0430  | 4.29    | 0.0026       |
| N-Butane    | 0.133   | 0.0420  | 4.34    | 0.0027       |
| I-Pentane   | 0.051   | 0.0190  | 2.04    | 0.0013       |
| N-Pentane   | 0.028   | 0.0100  | 1.12    | 0.0007       |
| Hexane Plus | 0.134   | 0.0600  | 7.06    | 0.0044       |
| Total       | 100.000 | 17.4860 | 1042.35 | 0.6040       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

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

COMPRESSIBILITY FACTOR (1/Z): 1.0023  
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1047.2  
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1029.0  
REAL SPECIFIC GRAVITY: 0.6051

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

DRY BTU @ 14.650: 1041.5  
DRY BTU @ 14.696: 1044.8  
DRY BTU @ 14.730: 1047.2  
DRY BTU @ 15.025: 1068.2

CYLINDER #: 4214  
CYLINDER PRESSURE: 60 PSIG  
DATE RUN: 3/26/14 1:43 PM  
ANALYSIS RUN BY: LOGAN CHENEY



ENERGEN RESOURCES CORP.  
WELL ANALYSIS COMPARISON

Lease: SAN JUAN 30-4-41; METER  
Stn. No.: 3198009B  
Mtr. No.:

METER  
BLANCO MV

03/31/2014  
73500-14410

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Smpl Date: 03/06/2014  
Test Date: 03/26/2014  
Run No: EN140167  
  
Nitrogen: 0.083  
CO2: 1.762  
Methane: 93.571  
Ethane: 3.334  
Propane: 0.772  
I-Butane: 0.132  
N-Butane: 0.133  
I-Pentane: 0.051  
N-Pentane: 0.028  
Hexane+: 0.134  
  
BTU: 1047.2  
GPM: 17.4860  
SPG: 0.6051



2030 Afton Place  
Farmington, NM 87401  
(505) 325-6622

Analysis No: EN140166  
Cust No: 73500-14405

### Well/Lease Information

Customer Name: ENERGEN RESOURCES CORP.  
Well Name: SAN JUAN 30-4-41; CSG  
County/State: RIO ARRIBA NM  
Location: O18-30N-04W  
Field:  
Formation: BLANCO MV  
Cust. Stn. No.: 3198009B

Source: CASING  
Pressure: PSIG  
Sample Temp: DEG. F  
Well Flowing:  
Date Sampled: 03/06/2014  
Sampled By:  
Foreman/Engr.: JOHN HAMPTON

Remarks:

### Analysis

| Component:: | Mole%:  | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|---------|---------|---------|--------------|
| Nitrogen    | 0.133   | 0.0150  | 0.00    | 0.0013       |
| CO2         | 1.756   | 0.3000  | 0.00    | 0.0267       |
| Methane     | 88.245  | 14.9980 | 891.27  | 0.4888       |
| Ethane      | 6.587   | 1.7660  | 116.57  | 0.0684       |
| Propane     | 1.869   | 0.5160  | 47.03   | 0.0285       |
| Iso-Butane  | 0.269   | 0.0880  | 8.75    | 0.0054       |
| N-Butane    | 0.391   | 0.1240  | 12.76   | 0.0078       |
| I-Pentane   | 0.150   | 0.0550  | 6.00    | 0.0037       |
| N-Pentane   | 0.104   | 0.0380  | 4.17    | 0.0026       |
| Hexane Plus | 0.496   | 0.2220  | 26.14   | 0.0164       |
| Total       | 100.000 | 18.1220 | 1112.69 | 0.6496       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

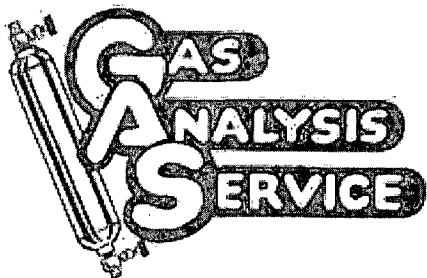
\*\*@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0028  
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1118.4  
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1098.9  
REAL SPECIFIC GRAVITY: 0.6512

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

DRY BTU @ 14.650: 1112.3  
DRY BTU @ 14.696: 1115.8  
DRY BTU @ 14.730: 1118.4  
DRY BTU @ 15.025: 1140.8

CYLINDER #: 7048  
CYLINDER PRESSURE: 105 PSIG  
DATE RUN: 3/27/14 1:42 PM  
ANALYSIS RUN BY: LOGAN CHENEY



ENERGEN RESOURCES CORP.  
WELL ANALYSIS COMPARISON

Lease: SAN JUAN 30-4-41; CSG  
Stn. No.: 3198009B  
Mtr. No.:

CASING  
BLANCO MV

03/31/2014  
73500-14405

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Smpl Date: 03/06/2014  
Test Date: 03/27/2014  
Run No: EN140166  
Nitrogen: 0.133  
CO2: 1.756  
Methane: 88.245  
Ethane: 6.587  
Propane: 1.869  
I-Butane: 0.269  
N-Butane: 0.391  
I-Pentane: 0.150  
N-Pentane: 0.104  
Hexane+: 0.496  
BTU: 1118.4  
GPM: 18.1220  
SPG: 0.6512



2030 Afton Place  
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Analysis No: EN140165  
Cust No: 73500-14400

### Well/Lease Information

Customer Name: ENERGEN RESOURCES CORP.  
Well Name: SAN JUAN 30-4 -41; INTRM  
County/State: RIO ARRIBA NM  
Location: O18-30N-04W  
Field:  
Formation: BLANCO MV  
Cust. Stn. No.: 3198009B

Source: INTERMEDIATE  
Pressure: PSIG  
Sample Temp: DEG. F  
Well Flowing: Y  
Date Sampled: 03/06/2014  
Sampled By: DAN BUTTON  
Foreman/Engr.: JOHN HAMPTON

Remarks:

### Analysis

| Component:: | Mole%:  | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|---------|---------|---------|--------------|
| Nitrogen    | 0.243   | 0.0270  | 0.00    | 0.0024       |
| CO2         | 0.003   | 0.0010  | 0.00    | 0.0000       |
| Methane     | 85.510  | 14.5350 | 863.65  | 0.4736       |
| Ethane      | 9.607   | 2.5760  | 170.02  | 0.0997       |
| Propane     | 3.248   | 0.8970  | 81.72   | 0.0495       |
| Iso-Butane  | 0.343   | 0.1130  | 11.15   | 0.0069       |
| N-Butane    | 0.604   | 0.1910  | 19.70   | 0.0121       |
| I-Pentane   | 0.163   | 0.0600  | 6.52    | 0.0041       |
| N-Pentane   | 0.110   | 0.0400  | 4.41    | 0.0027       |
| Hexane Plus | 0.169   | 0.0760  | 8.91    | 0.0056       |
| Total       | 100.000 | 18.5160 | 1166.09 | 0.6566       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

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

COMPRESSIBILITY FACTOR (1/Z): 1.0029  
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1172.2  
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1151.8  
REAL SPECIFIC GRAVITY: 0.6583

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

DRY BTU @ 14.650: 1165.8  
DRY BTU @ 14.696: 1169.5  
DRY BTU @ 14.730: 1172.2  
DRY BTU @ 15.025: 1195.7

CYLINDER #: 6124  
CYLINDER PRESSURE: 304 PSIG  
DATE RUN: 3/27/14 12:00 AM  
ANALYSIS RUN BY: LOGAN CHENEY



ENERGEN RESOURCES CORP.  
WELL ANALYSIS COMPARISON

Lease: SAN JUAN 30-4 -41; INTRM  
Stn. No.: 3198009B  
Mtr. No.:

INTERMEDIATE  
BLANCO MV

03/31/2014  
73500-14400

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Smpl Date: 03/06/2014  
Test Date: 03/27/2014  
Run No: EN140165  
  
Nitrogen: 0.243  
CO2: 0.003  
Methane: 85.510  
Ethane: 9.607  
Propane: 3.248  
I-Butane: 0.343  
N-Butane: 0.604  
I-Pentane: 0.163  
N-Pentane: 0.110  
Hexane+: 0.169  
  
BTU: 1172.2  
GPM: 18.5160  
SPG: 0.6583