



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

Analysis No: GW180006  
Cust No: 33050-10320

### Well/Lease Information

Customer Name: GREAT WESTERN DRILLING  
Well Name: J.E. DECKER #3A; TBG  
County/State: SAN JUAN NM  
Location:  
Field:  
Formation: BLANCO MV  
Cust. Stn. No.: 90540  
API 30-045-23081

Source: TUBING  
Well Flowing: Y  
Pressure: 109 PSIG  
Flow Temp: 72 DEG. F  
Ambient Temp: 46 DEG. F  
Flow Rate: 24 MCF/D  
Sample Method: Purge & Fill  
Sample Date: 11/15/2018  
Sample Time: 12.08 PM  
Sampled By: CULLAN KELLER  
Sampled by (CO): GREAT WESTERN

Heat Trace: N  
Remarks:

NMOC  
DEC 04 2018  
DISTRICT III

### Analysis

| Component:: | Mole%:   | Unnormalized %: | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|----------|-----------------|---------|---------|--------------|
| Nitrogen    | 0.2184   | 0.2231          | 0.0240  | 0.00    | 0.0021       |
| CO2         | 1.7066   | 1.7437          | 0.2920  | 0.00    | 0.0259       |
| Methane     | 82.9559  | 84.7594         | 14.1060 | 837.85  | 0.4595       |
| Ethane      | 8.7521   | 8.9424          | 2.3480  | 154.89  | 0.0909       |
| Propane     | 3.6058   | 3.6842          | 0.9960  | 90.73   | 0.0549       |
| Iso-Butane  | 0.7131   | 0.7286          | 0.2340  | 23.19   | 0.0143       |
| N-Butane    | 1.0105   | 1.0325          | 0.3200  | 32.97   | 0.0203       |
| I-Pentane   | 0.2470   | 0.2524          | 0.0910  | 9.88    | 0.0062       |
| N-Pentane   | 0.1852   | 0.1892          | 0.0670  | 7.42    | 0.0046       |
| Hexane Plus | 0.6054   | 0.6186          | 0.2710  | 31.91   | 0.0200       |
| Total       | 100.0000 | 102.1741        | 18.7490 | 1188.84 | 0.6987       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

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

COMPRESSIBILITY FACTOR (1/Z): 1.0033  
BTU/CU.FT IDEAL: 1191.6  
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1195.5  
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1174.7  
DRY BTU @ 15.025: 1219.4  
REAL SPECIFIC GRAVITY: 0.7007

CYLINDER #: 4208  
CYLINDER PRESSURE: 147 PSIG  
ANALYSIS DATE: 11/26/2018  
ANALYSIS TIME: 10:03:30 AM  
ANALYSIS RUN BY: DAWN BLASSINGAME

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: 11/27/2018

GC Method: C6+ Gas



GREAT WESTERN DRILLING  
WELL ANALYSIS COMPARISON

Lease: J.E. DECKER #3A; TBG  
Stn. No.: 90540  
Mtr. No.: API 30-045-23081

TUBING  
BLANCO MV

11/27/2018  
33050-10320

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|            |            |            |
|------------|------------|------------|
| Smpl Date: | 11/15/2018 | 10/19/2017 |
| Test Date: | 11/26/2018 | 10/19/2017 |
| Run No:    | GW180006   | GW170026   |
| Nitrogen:  | 0.2184     | 0.1175     |
| CO2:       | 1.7066     | 1.6823     |
| Methane:   | 82.9559    | 82.7367    |
| Ethane:    | 8.7521     | 9.0269     |
| Propane:   | 3.6058     | 3.5854     |
| I-Butane:  | 0.7131     | 0.7182     |
| N-Butane:  | 1.0105     | 0.8824     |
| I-Pentane: | 0.2470     | 0.3481     |
| N-Pentane: | 0.1852     | 0.2095     |
| Hexane+:   | 0.6054     | 0.6930     |
| BTU:       | 1195.5     | 1203.3     |
| GPM:       | 18.7490    | 18.8110    |
| SPG:       | 0.7007     | 0.7043     |



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

Analysis No: GW180005  
Cust No: 33050-10325

### Well/Lease Information

Customer Name: GREAT WESTERN DRILLING  
Well Name: J.E. DECKER #3A; CSG  
County/State: SAN JUAN NM  
Location:  
Field:  
Formation: BLANCO MV  
Cust. Stn. No.: 90540  
API 30-045-23081

Source: CASING  
Well Flowing: Y  
Pressure: 109 PSIG  
Flow Temp: 72 DEG. F  
Ambient Temp: 46 DEG. F  
Flow Rate: 24 MCF/D  
Sample Method: Purge & Fill  
Sample Date: 11/15/2018  
Sample Time: 12.18 PM  
Sampled By: CULLAN KELLER  
Sampled by (CO): GREAT WESTERN

Heat Trace: N

Remarks:

### Analysis

| Component:: | Mole%:   | Unnormalized %: | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|----------|-----------------|---------|---------|--------------|
| Nitrogen    | 0.1203   | 0.1197          | 0.0130  | 0.00    | 0.0012       |
| CO2         | 1.2224   | 1.2165          | 0.2090  | 0.00    | 0.0186       |
| Methane     | 84.1767  | 83.7695         | 14.3110 | 850.18  | 0.4663       |
| Ethane      | 8.5869   | 8.5454          | 2.3030  | 151.96  | 0.0891       |
| Propane     | 3.4704   | 3.4536          | 0.9590  | 87.32   | 0.0528       |
| Iso-Butane  | 0.7307   | 0.7272          | 0.2400  | 23.76   | 0.0147       |
| N-Butane    | 0.8443   | 0.8402          | 0.2670  | 27.54   | 0.0169       |
| I-Pentane   | 0.3050   | 0.3035          | 0.1120  | 12.20   | 0.0076       |
| N-Pentane   | 0.2157   | 0.2147          | 0.0780  | 8.65    | 0.0054       |
| Hexane Plus | 0.3276   | 0.3260          | 0.1470  | 17.27   | 0.0108       |
| Total       | 100.0000 | 99.5163         | 18.6390 | 1178.89 | 0.6834       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

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

COMPRESSIBILITY FACTOR (1/Z): 1.0031  
BTU/CU.FT IDEAL: 1181.6  
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1185.3  
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1164.7  
DRY BTU @ 15.025: 1209.0  
REAL SPECIFIC GRAVITY: 0.6853

CYLINDER #: 6117  
CYLINDER PRESSURE: 263 PSIG  
ANALYSIS DATE: 11/26/2018  
ANALYSIS TIME: 10:24:25 AM  
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: 11/27/2018

GC Method: C6+ Gas



GREAT WESTERN DRILLING  
WELL ANALYSIS COMPARISON

**Lease:** J.E. DECKER #3A; CSG  
**Stn. No.:** 90540  
**Mtr. No.:** API 30-045-23081

**CASING**  
**BLANCO MV**

**11/27/2018**  
**33050-10325**

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|                   |            |            |
|-------------------|------------|------------|
| <b>Smpl Date:</b> | 11/15/2018 | 10/19/2017 |
| <b>Test Date:</b> | 11/26/2018 | 10/19/2017 |
| <b>Run No:</b>    | GW180005   | GW170027   |
| <b>Nitrogen:</b>  | 0.1203     | 0.1826     |
| <b>CO2:</b>       | 1.2224     | 1.1886     |
| <b>Methane:</b>   | 84.1767    | 75.0664    |
| <b>Ethane:</b>    | 8.5869     | 12.3500    |
| <b>Propane:</b>   | 3.4704     | 6.7710     |
| <b>I-Butane:</b>  | 0.7307     | 1.1417     |
| <b>N-Butane:</b>  | 0.8443     | 1.8472     |
| <b>I-Pentane:</b> | 0.3050     | 0.5820     |
| <b>N-Pentane:</b> | 0.2157     | 0.4691     |
| <b>Hexane+:</b>   | 0.3276     | 0.4014     |
| <b>BTU:</b>       | 1185.3     | 1316.2     |
| <b>GPM:</b>       | 18.6390    | 19.7130    |
| <b>SPG:</b>       | 0.6853     | 0.7692     |



2030 Afton Place  
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Analysis No: GW180004  
Cust No: 33050-10195

### Well/Lease Information

Customer Name: GREAT WESTERN DRILLING  
Well Name: J.E. DECKER #3A; BHD  
County/State: SAN JUAN NM  
Location:  
Field:  
Formation: BLANCO MV  
Cust. Stn. No.: 90540  
API 30-045-23081

Source: BRADENHEAD  
Well Flowing: Y  
Pressure: 109 PSIG  
Flow Temp: 72 DEG. F  
Ambient Temp: 46 DEG. F  
Flow Rate: 24 MCF/D  
Sample Method: Purge & Fill  
Sample Date: 11/15/2018  
Sample Time: 12.29 PM  
Sampled By: CULLAN KELLER  
Sampled by (CO): GREAT WESTERN

Heat Trace: N  
Remarks:

### Analysis

| Component:: | Mole%:   | Unnormalized %: | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|----------|-----------------|---------|---------|--------------|
| Nitrogen    | 0.2417   | 0.2417          | 0.0270  | 0.00    | 0.0023       |
| CO2         | 0.0633   | 0.0633          | 0.0110  | 0.00    | 0.0010       |
| Methane     | 76.3115  | 76.3097         | 12.9860 | 770.75  | 0.4227       |
| Ethane      | 12.4509  | 12.4506         | 3.3420  | 220.34  | 0.1293       |
| Propane     | 6.7804   | 6.7802          | 1.8750  | 170.60  | 0.1032       |
| Iso-Butane  | 1.1309   | 1.1309          | 0.3710  | 36.78   | 0.0227       |
| N-Butane    | 1.8084   | 1.8084          | 0.5720  | 59.00   | 0.0363       |
| I-Pentane   | 0.5184   | 0.5184          | 0.1900  | 20.74   | 0.0129       |
| N-Pentane   | 0.3979   | 0.3979          | 0.1450  | 15.95   | 0.0099       |
| Hexane Plus | 0.2966   | 0.2966          | 0.1330  | 15.63   | 0.0098       |
| Total       | 100.0000 | 99.9977         | 19.6520 | 1309.79 | 0.7501       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

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

COMPRESSIBILITY FACTOR (1/Z): 1.004  
BTU/CU.FT IDEAL: 1312.8  
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1318.0  
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1295.1  
DRY BTU @ 15.025: 1344.4  
REAL SPECIFIC GRAVITY: 0.7527

CYLINDER #: 6221  
CYLINDER PRESSURE: 57 PSIG  
ANALYSIS DATE: 11/26/2018  
ANALYSIS TIME: 10:06:41 AM  
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: 11/27/2018

GC Method: C6+ Gas



GREAT WESTERN DRILLING  
WELL ANALYSIS COMPARISON

Lease: J.E. DECKER #3A; BHD  
Stn. No.: 90540  
Mtr. No.: API 30-045-23081

BRADENHEAD  
BLANCO MV

11/27/2018  
33050-10195

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|                   |            |            |            |
|-------------------|------------|------------|------------|
| <b>Smpl Date:</b> | 11/15/2018 | 10/19/2017 | 01/25/2015 |
| <b>Test Date:</b> | 11/26/2018 | 10/19/2017 | 01/25/2015 |
| <b>Run No:</b>    | GW180004   | GW170031   | GW150001   |
| <b>Nitrogen:</b>  | 0.2417     | 0.2183     | 0.2820     |
| <b>CO2:</b>       | 0.0633     | 1.1904     | 0.9050     |
| <b>Methane:</b>   | 76.3115    | 75.1099    | 76.8690    |
| <b>Ethane:</b>    | 12.4509    | 12.3654    | 12.2380    |
| <b>Propane:</b>   | 6.7804     | 6.7753     | 5.9480     |
| <b>I-Butane:</b>  | 1.1309     | 1.1359     | 0.9120     |
| <b>N-Butane:</b>  | 1.8084     | 1.8303     | 1.6190     |
| <b>I-Pentane:</b> | 0.5184     | 0.5629     | 0.4660     |
| <b>N-Pentane:</b> | 0.3979     | 0.4481     | 0.3640     |
| <b>Hexane+:</b>   | 0.2966     | 0.3635     | 0.3970     |
| <b>BTU:</b>       | 1318.0     | 1312.5     | 1287.1     |
| <b>GPM:</b>       | 19.6520    | 19.6870    | 19.4850    |
| <b>SPG:</b>       | 0.7527     | 0.7673     | 0.7470     |