



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

Analysis No: GW180013  
Cust No: 33050-10355

### Well/Lease Information

Customer Name: GREAT WESTERN DRILLING  
Well Name: J.E. DECKER 2; TBG  
County/State: SAN JUAN NM  
Location:  
Field:  
Formation: BMV  
Cust. Stn. No.: API 30-045-11490

Source: TUBING  
Well Flowing: Y  
Pressure: 113 PSIG  
Flow Temp: 44 DEG. F  
Ambient Temp: 48 DEG. F  
Flow Rate: 18 MCF/D  
Sample Method: Purge & Fill  
Sample Date: 11/16/2018  
Sample Time: 11.00 AM  
Sampled By: CULLAN KELLER  
Sampled by (CO): GREAT WESTERN

Heat Trace: N  
Remarks:

DISTRICT III  
DEC 04 2018  
NMCO

### Analysis

| Component:: | Mole%:   | Unnormalized %: | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|----------|-----------------|---------|---------|--------------|
| Nitrogen    | 0.1007   | 0.1000          | 0.0110  | 0.00    | 0.0010       |
| CO2         | 1.4036   | 1.3941          | 0.2400  | 0.00    | 0.0213       |
| Methane     | 86.8354  | 86.2484         | 14.7620 | 877.04  | 0.4810       |
| Ethane      | 6.9606   | 6.9135          | 1.8670  | 123.18  | 0.0723       |
| Propane     | 2.4291   | 2.4127          | 0.6710  | 61.12   | 0.0370       |
| Iso-Butane  | 0.5236   | 0.5201          | 0.1720  | 17.03   | 0.0105       |
| N-Butane    | 0.5940   | 0.5900          | 0.1880  | 19.38   | 0.0119       |
| I-Pentane   | 0.2667   | 0.2649          | 0.0980  | 10.67   | 0.0066       |
| N-Pentane   | 0.1818   | 0.1806          | 0.0660  | 7.29    | 0.0045       |
| Hexane Plus | 0.7045   | 0.6997          | 0.3150  | 37.13   | 0.0233       |
| Total       | 100.0000 | 99.3240         | 18.3900 | 1152.84 | 0.6694       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

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

COMPRESSIBILITY FACTOR (1/Z): 1.003  
BTU/CU.FT IDEAL: 1155.5  
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1159.0  
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1138.8  
DRY BTU @ 15.025: 1182.2  
REAL SPECIFIC GRAVITY: 0.6712

CYLINDER #: 4154  
CYLINDER PRESSURE: 98 PSIG  
ANALYSIS DATE: 11/27/2018  
ANALYSIS TIME: 09:20:29 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

GC Method: C6+ Gas

Last Cal/Verify: 11/28/2018



GREAT WESTERN DRILLING  
WELL ANALYSIS COMPARISON

Lease: J.E. DECKER 2; TBG  
Stn. No.: API 30-045-11490  
Mtr. No.:

TUBING  
BMV

11/28/2018  
33050-10355

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|            |            |            |
|------------|------------|------------|
| Smpl Date: | 11/16/2018 | 10/25/2017 |
| Test Date: | 11/27/2018 | 10/25/2017 |
| Run No:    | GW180013   | GW170046   |
| Nitrogen:  | 0.1007     | 0.1480     |
| CO2:       | 1.4036     | 1.2897     |
| Methane:   | 86.8354    | 84.0729    |
| Ethane:    | 6.9606     | 8.4481     |
| Propane:   | 2.4291     | 3.4303     |
| I-Butane:  | 0.5236     | 0.6261     |
| N-Butane:  | 0.5940     | 0.8854     |
| I-Pentane: | 0.2667     | 0.3077     |
| N-Pentane: | 0.1818     | 0.2316     |
| Hexane+:   | 0.7045     | 0.5602     |
| BTU:       | 1159.0     | 1191.9     |
| GPM:       | 18.3900    | 18.6790    |
| SPG:       | 0.6712     | 0.6909     |



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

Analysis No: GW180011  
Cust No: 33050-10350

### Well/Lease Information

Customer Name: GREAT WESTERN DRILLING  
Well Name: J.E. DECKER 2; CSG  
County/State: SAN JUAN NM  
Location:  
Field:  
Formation: BMV  
Cust. Stn. No.: API 30-045-11490

Source: CASING  
Well Flowing: Y  
Pressure: 113 PSIG  
Flow Temp: 44 DEG. F  
Ambient Temp: 48 DEG. F  
Flow Rate: 18 MCF/D  
Sample Method: Purge & Fill  
Sample Date: 11/16/2018  
Sample Time: 11.13 AM  
Sampled By: CULLAN KELLER  
Sampled by (CO): GREAT WESTERN

Heat Trace: N  
Remarks:

### Analysis

| Component:: | Mole%:   | Unnormalized %: | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|----------|-----------------|---------|---------|--------------|
| Nitrogen    | 0.1867   | 0.1864          | 0.0210  | 0.00    | 0.0018       |
| CO2         | 1.1921   | 1.1899          | 0.2040  | 0.00    | 0.0181       |
| Methane     | 81.5000  | 81.3513         | 13.8600 | 823.15  | 0.4514       |
| Ethane      | 9.8899   | 9.8718          | 2.6530  | 175.02  | 0.1027       |
| Propane     | 4.2518   | 4.2440          | 1.1750  | 106.98  | 0.0647       |
| Iso-Butane  | 0.7076   | 0.7063          | 0.2320  | 23.01   | 0.0142       |
| N-Butane    | 1.2282   | 1.2260          | 0.3880  | 40.07   | 0.0246       |
| I-Pentane   | 0.3765   | 0.3758          | 0.1380  | 15.06   | 0.0094       |
| N-Pentane   | 0.3015   | 0.3009          | 0.1100  | 12.09   | 0.0075       |
| Hexane Plus | 0.3657   | 0.3650          | 0.1640  | 19.28   | 0.0121       |
| Total       | 100.0000 | 99.8174         | 18.9450 | 1214.66 | 0.7066       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

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

COMPRESSIBILITY FACTOR (1/Z): 1.0034  
BTU/CU.FT IDEAL: 1217.5  
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1221.6  
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1200.3  
DRY BTU @ 15.025: 1246.1  
REAL SPECIFIC GRAVITY: 0.7087

CYLINDER #: 4118  
CYLINDER PRESSURE: 253 PSIG  
ANALYSIS DATE: 11/27/2018  
ANALYSIS TIME: 09:08:40 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: 11/28/2018

GC Method: C6+ Gas



GREAT WESTERN DRILLING  
WELL ANALYSIS COMPARISON

**Lease:** J.E. DECKER 2; CSG  
**Stn. No.:** API 30-045-11490  
**Mtr. No.:**

**CASING**  
**BMV**

**11/28/2018**  
**33050-10350**

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|                   |            |            |
|-------------------|------------|------------|
| <b>Smpl Date:</b> | 11/16/2018 | 10/25/2017 |
| <b>Test Date:</b> | 11/27/2018 | 10/25/2017 |
| <b>Run No:</b>    | GW180011   | GW170045   |
| <b>Nitrogen:</b>  | 0.1867     | 99.2376    |
| <b>CO2:</b>       | 1.1921     | 0.2733     |
| <b>Methane:</b>   | 81.5000    | 0.4565     |
| <b>Ethane:</b>    | 9.8899     | 0.0326     |
| <b>Propane:</b>   | 4.2518     | 0.0000     |
| <b>I-Butane:</b>  | 0.7076     | 0.0000     |
| <b>N-Butane:</b>  | 1.2282     | 0.0000     |
| <b>I-Pentane:</b> | 0.3765     | 0.0000     |
| <b>N-Pentane:</b> | 0.3015     | 0.0000     |
| <b>Hexane+:</b>   | 0.3657     | 0.0000     |
| <b>BTU:</b>       | 1221.6     | 5.2        |
| <b>GPM:</b>       | 18.9450    | 11.0510    |
| <b>SPG:</b>       | 0.7087     | 0.9667     |



2030 Afton Place  
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(505) 325-6622

Analysis No: GW180012  
Cust No: 33050-10345

### Well/Lease Information

Customer Name: GREAT WESTERN DRILLING  
Well Name: J.E. DECKER 2; INT  
County/State: SAN JUAN NM  
Location:  
Field:  
Formation: BMV  
Cust. Stn. No.: API 30-045-11490

Source: INTERMEDIATE  
Well Flowing: Y  
Pressure: 113 PSIG  
Flow Temp: 44 DEG. F  
Ambient Temp: 48 DEG. F  
Flow Rate: 18 MCF/D  
Sample Method: Purge & Fill  
Sample Date: 11/16/2018  
Sample Time: 11.23 AM  
Sampled By: CULLEN KELLER  
Sampled by (CO): GREAT WESTERN

Heat Trace: N  
Remarks:

### Analysis

| Component:: | Mole%:   | Unnormalized %: | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|----------|-----------------|---------|---------|--------------|
| Nitrogen    | 0.2155   | 0.2198          | 0.0240  | 0.00    | 0.0021       |
| CO2         | 1.1716   | 1.1952          | 0.2010  | 0.00    | 0.0178       |
| Methane     | 82.0948  | 83.7480         | 13.9600 | 829.16  | 0.4547       |
| Ethane      | 10.1092  | 10.3128         | 2.7120  | 178.90  | 0.1050       |
| Propane     | 3.7807   | 3.8568          | 1.0450  | 95.13   | 0.0576       |
| Iso-Butane  | 0.5817   | 0.5934          | 0.1910  | 18.92   | 0.0117       |
| N-Butane    | 1.1095   | 1.1318          | 0.3510  | 36.20   | 0.0223       |
| I-Pentane   | 0.3229   | 0.3294          | 0.1180  | 12.92   | 0.0080       |
| N-Pentane   | 0.2496   | 0.2546          | 0.0910  | 10.01   | 0.0062       |
| Hexane Plus | 0.3645   | 0.3718          | 0.1630  | 19.21   | 0.0121       |
| Total       | 100.0000 | 102.0136        | 18.8560 | 1200.44 | 0.6974       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

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

COMPRESSIBILITY FACTOR (1/Z): 1.0033  
BTU/CU.FT IDEAL: 1203.2  
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1207.2  
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1186.2  
DRY BTU @ 15.025: 1231.4  
REAL SPECIFIC GRAVITY: 0.6994

CYLINDER #: 5036  
CYLINDER PRESSURE: 264 PSIG  
ANALYSIS DATE: 11/27/2018  
ANALYSIS TIME: 09:28:04 AM  
ANALYSIS RUN BY: RICHARD WILSON

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: 11/28/2018

GC Method: C6+ Gas



GREAT WESTERN DRILLING  
WELL ANALYSIS COMPARISON

Lease: J.E. DECKER 2; INT  
Stn. No.: API 30-045-11490  
Mtr. No.:

INTERMEDIATE  
BMV

11/28/2018  
33050-10345

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|            |            |            |
|------------|------------|------------|
| Smpl Date: | 11/16/2018 | 10/23/2017 |
| Test Date: | 11/27/2018 | 10/23/2017 |
| Run No:    | GW180012   | GW170035   |
| Nitrogen:  | 0.2155     | 0.2166     |
| CO2:       | 1.1716     | 1.1817     |
| Methane:   | 82.0948    | 79.5872    |
| Ethane:    | 10.1092    | 10.4006    |
| Propane:   | 3.7807     | 4.6289     |
| I-Butane:  | 0.5817     | 0.7929     |
| N-Butane:  | 1.1095     | 1.3615     |
| I-Pentane: | 0.3229     | 0.4928     |
| N-Pentane: | 0.2496     | 0.4084     |
| Hexane+:   | 0.3645     | 0.9294     |
| BTU:       | 1207.2     | 1267.2     |
| GPM:       | 18.8560    | 19.2730    |
| SPG:       | 0.6994     | 0.7382     |



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

Analysis No: GW180010  
Cust No: 33050-10175

### Well/Lease Information

Customer Name: GREAT WESTERN DRILLING  
Well Name: J. E. DECKER #2; BHD  
County/State: SAN JUAN NM  
Location:  
Field:  
Formation: BLANCO MV  
Cust. Stn. No.: 70797

Source: BRADENHEAD  
Well Flowing: Y  
Pressure: 113 PSIG  
Flow Temp: 44 DEG. F  
Ambient Temp: 48 DEG. F  
Flow Rate: 18 MCF/D  
Sample Method: Purge & Fill  
Sample Date: 11/16/2018  
Sample Time: 11.35 AM  
Sampled By: CULLAN KELLER  
Sampled by (CO): GREAT WESTERN

Heat Trace: N  
Remarks:

### Analysis

| Component:: | Mole%:   | Unnormalized %: | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|----------|-----------------|---------|---------|--------------|
| Nitrogen    | 0.7903   | 0.8046          | 0.0870  | 0.00    | 0.0076       |
| CO2         | 0.0103   | 0.0105          | 0.0020  | 0.00    | 0.0002       |
| Methane     | 90.4150  | 92.0516         | 15.3640 | 913.19  | 0.5008       |
| Ethane      | 4.8786   | 4.9669          | 1.3080  | 86.34   | 0.0506       |
| Propane     | 2.3022   | 2.3439          | 0.6360  | 57.93   | 0.0351       |
| Iso-Butane  | 0.4967   | 0.5057          | 0.1630  | 16.15   | 0.0100       |
| N-Butane    | 0.5432   | 0.5530          | 0.1720  | 17.72   | 0.0109       |
| I-Pentane   | 0.2039   | 0.2076          | 0.0750  | 8.16    | 0.0051       |
| N-Pentane   | 0.1297   | 0.1320          | 0.0470  | 5.20    | 0.0032       |
| Hexane Plus | 0.2301   | 0.2343          | 0.1030  | 12.13   | 0.0076       |
| Total       | 100.0000 | 101.8101        | 17.9570 | 1116.81 | 0.6311       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

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

COMPRESSIBILITY FACTOR (1/Z): 1.0026  
BTU/CU.FT IDEAL: 1119.4  
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1122.3  
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1102.8  
DRY BTU @ 15.025: 1144.8  
REAL SPECIFIC GRAVITY: 0.6325

CYLINDER #: 6081  
CYLINDER PRESSURE: 46 PSIG  
ANALYSIS DATE: 11/27/2018  
ANALYSIS TIME: 09:14:20 AM  
ANALYSIS RUN BY: RICHARD WILSON

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: 11/28/2018

GC Method: C6+ Gas



GREAT WESTERN DRILLING  
WELL ANALYSIS COMPARISON

Lease: J. E. DECKER #2; BHD  
Stn. No.: 70797  
Mtr. No.:

BRADENHEAD  
BLANCO MV

11/28/2018  
33050-10175

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|            |            |            |            |
|------------|------------|------------|------------|
| Smpl Date: | 11/16/2018 | 10/23/2017 | 09/05/2014 |
| Test Date: | 11/27/2018 | 10/23/2017 | 09/05/2014 |
| Run No:    | GW180010   | GW170034   | GW140021   |
| Nitrogen:  | 0.7903     | 0.6755     | 0.1910     |
| CO2:       | 0.0103     | 0.0079     | 1.0910     |
| Methane:   | 90.4150    | 91.2076    | 80.7040    |
| Ethane:    | 4.8786     | 4.0744     | 10.2380    |
| Propane:   | 2.3022     | 2.2953     | 4.2780     |
| I-Butane:  | 0.4967     | 0.5140     | 0.6850     |
| N-Butane:  | 0.5432     | 0.5527     | 1.1940     |
| I-Pentane: | 0.2039     | 0.2189     | 0.4430     |
| N-Pentane: | 0.1297     | 0.1436     | 0.3660     |
| Hexane+:   | 0.2301     | 0.3101     | 0.8100     |
| BTU:       | 1122.3     | 1122.2     | 1247.6     |
| GPM:       | 17.9570    | 17.9150    | 19.1270    |
| SPG:       | 0.6325     | 0.6312     | 0.7239     |