



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

Analysis No: GW190004
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:
Lease/PA/CA:
Formation: BLANCO MV
Cust. Stn. No.: 70797
API # 30-045-11490

Source: BRADENHEAD
Well Flowing: Y
Pressure: 52 PSIG
Flow Temp: 78 DEG. F
Ambient Temp: 79 DEG. F
Flow Rate: 20 MCF/D
Sample Method: Purge & Fill
Sample Date: 06/12/2019
Sample Time: 11.10 AM
Sampled By: CULLAN KELLER
Sampled by (CO): GREAT WESTERN

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.7652	0.7544	0.0840	0.00	0.0074
CO2	0.0140	0.0138	0.0020	0.00	0.0002
Methane	90.0400	88.7730	15.3020	909.40	0.4987
Ethane	4.9604	4.8906	1.3300	87.78	0.0515
Propane	2.4545	2.4200	0.6780	61.76	0.0374
Iso-Butane	0.5305	0.5230	0.1740	17.25	0.0106
N-Butane	0.5539	0.5461	0.1750	18.07	0.0111
I-Pentane	0.2136	0.2106	0.0780	8.55	0.0053
N-Pentane	0.1366	0.1347	0.0500	5.48	0.0034
Hexane Plus	0.3313	0.3266	0.1480	17.46	0.0110
Total	100.0000	98.5928	18.0210	1125.75	0.6367

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0027
BTU/CU.FT IDEAL: 1128.4
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1131.4
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1111.7
DRY BTU @ 15.025: 1154.1
REAL SPECIFIC GRAVITY: 0.6381

CYLINDER #: 6192
CYLINDER PRESSURE: 58 PSIG
ANALYSIS DATE: 06/17/2019
ANALYSIS TIME: 03:37:15 PM
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

GC Method: C6+ Gas

Last Cal/Verify: 06/24/2019

NMOC

AUG 28 2019

DISTRICT III



GREAT WESTERN DRILLING
WELL ANALYSIS COMPARISON

Lease: J. E. DECKER #2; BHD
Stn. No.: 70797
Mtr. No.: API # 30-045-

BRADENHEAD
BLANCO MV

06/24/2019
33050-10175

Smpl Date:	06/12/2019	11/16/2018	10/23/2017	09/05/2014
Test Date:	06/17/2019	11/27/2018	10/23/2017	09/05/2014
Run No:	GW190004	GW180010	GW170034	GW140021
Nitrogen:	0.7652	0.7903	0.6755	0.1910
CO2:	0.0140	0.0103	0.0079	1.0910
Methane:	90.0400	90.4150	91.2076	80.7040
Ethane:	4.9604	4.8786	4.0744	10.2380
Propane:	2.4545	2.3022	2.2953	4.2780
I-Butane:	0.5305	0.4967	0.5140	0.6850
N-Butane:	0.5539	0.5432	0.5527	1.1940
I-Pentane:	0.2136	0.2039	0.2189	0.4430
N-Pentane:	0.1366	0.1297	0.1436	0.3660
Hexane+:	0.3313	0.2301	0.3101	0.8100
BTU:	1131.4	1122.3	1122.2	1247.6
GPM:	18.0210	17.9570	17.9150	19.1270
SPG:	0.6381	0.6325	0.6312	0.7239



2030 Afton Place
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Analysis No: GW190005
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:
Lease/PA/CA:
Formation: BLANCO MV
Cust. Stn. No.: 70797
API # 30-045-11490

Source: CASING
Well Flowing: Y
Pressure: 260 PSIG
Flow Temp: 78 DEG. F
Ambient Temp: 79 DEG. F
Flow Rate: 20 MCF/D
Sample Method: Purge & Fill
Sample Date: 06/12/2019
Sample Time: 11.15 AM
Sampled By: CULLAN KELLER
Sampled by (CO): GREAT WESTERN

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1883	0.1862	0.0210	0.00	0.0018
CO2	1.2132	1.1999	0.2080	0.00	0.0184
Methane	80.6795	79.7920	13.7220	814.86	0.4469
Ethane	10.1136	10.0024	2.7140	178.98	0.1050
Propane	4.5132	4.4636	1.2470	113.56	0.0687
Iso-Butane	0.7556	0.7473	0.2480	24.57	0.0152
N-Butane	1.2824	1.2683	0.4060	41.84	0.0257
I-Pentane	0.4033	0.3989	0.1480	16.14	0.0100
N-Pentane	0.3425	0.3387	0.1250	13.73	0.0085
Hexane Plus	0.5084	0.5028	0.2270	26.80	0.0168
Total	100.0000	98.9001	19.0660	1230.47	0.7172

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0035
BTU/CU.FT IDEAL: 1233.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1237.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1216.1
DRY BTU @ 15.025: 1262.4
REAL SPECIFIC GRAVITY: 0.7194

CYLINDER #: 7048
CYLINDER PRESSURE: 268 PSIG
ANALYSIS DATE: 06/18/2019
ANALYSIS TIME: 09:26:42 AM
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: 06/24/2019

GC Method: C6+ Gas



GREAT WESTERN DRILLING
WELL ANALYSIS COMPARISON

Lease: J.E. DECKER 2; CSG
Stn. No.: 70797
Mtr. No.: API # 30-045-

CASING
BLANCO MV

06/24/2019
33050-10350

Smpl Date:	06/12/2019	11/16/2018	10/25/2017
Test Date:	06/18/2019	11/27/2018	10/25/2017
Run No:	GW190005	GW180011	GW170045
Nitrogen:	0.1883	0.1867	99.2376
CO2:	1.2132	1.1921	0.2733
Methane:	80.6795	81.5000	0.4565
Ethane:	10.1136	9.8899	0.0326
Propane:	4.5132	4.2518	0.0000
I-Butane:	0.7556	0.7076	0.0000
N-Butane:	1.2824	1.2282	0.0000
I-Pentane:	0.4033	0.3765	0.0000
N-Pentane:	0.3425	0.3015	0.0000
Hexane+:	0.5084	0.3657	0.0000
BTU:	1237.6	1221.6	5.2
GPM:	19.0660	18.9450	11.0510
SPG:	0.7194	0.7087	0.9667



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Analysis No: GW190006
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:
Lease/PA/CA:
Formation: BLANCO MV
Cust. Stn. No.: 70797
API # 30-045-11490

Source: INTERMEDIATE
Well Flowing: Y
Pressure: 235 PSIG
Flow Temp: 78 DEG. F
Ambient Temp: 79 DEG. F
Flow Rate: 20 MCF/D
Sample Method: Purge & Fill
Sample Date: 06/12/2019
Sample Time: 11.26 AM
Sampled By: CULLEN KELLER
Sampled by (CO): GREAT WESTERN

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1689	0.1659	0.0190	0.00	0.0016
CO2	1.4864	1.4600	0.2560	0.00	0.0226
Methane	58.8260	57.7794	10.0510	594.14	0.3258
Ethane	11.9466	11.7341	3.2200	211.42	0.1240
Propane	10.2549	10.0725	2.8470	258.02	0.1561
Iso-Butane	2.9184	2.8665	0.9630	94.90	0.0586
N-Butane	6.0967	5.9882	1.9370	198.89	0.1223
I-Pentane	3.1277	3.0721	1.1530	125.14	0.0779
N-Pentane	2.7689	2.7196	1.0120	111.00	0.0690
Hexane Plus	2.4055	2.3627	1.0810	126.80	0.0796
Total	100.0000	98.2210	22.5390	1720.31	1.0376

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0081
BTU/CU.FT IDEAL: 1724.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1738.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1708.0
DRY BTU @ 15.025: 1773.0
REAL SPECIFIC GRAVITY: 1.0456

CYLINDER #: 6223
CYLINDER PRESSURE: 46 PSIG
ANALYSIS DATE: 06/17/2019
ANALYSIS TIME: 04:27:51 PM
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: 06/24/2019

GC Method: C6+ Gas



GREAT WESTERN DRILLING
WELL ANALYSIS COMPARISON

Lease: J.E. DECKER 2; INT
Strn. No.: 70797
Mtr. No.: API # 30-045-

INTERMEDIATE
BLANCO MV

06/24/2019
33050-10345

Smpl Date:	06/12/2019	11/16/2018	10/23/2017
Test Date:	06/17/2019	11/27/2018	10/23/2017
Run No:	GW190006	GW180012	GW170035
Nitrogen:	0.1689	0.2155	0.2166
CO2:	1.4864	1.1716	1.1817
Methane:	58.8260	82.0948	79.5872
Ethane:	11.9466	10.1092	10.4006
Propane:	10.2549	3.7807	4.6289
I-Butane:	2.9184	0.5817	0.7929
N-Butane:	6.0967	1.1095	1.3615
I-Pentane:	3.1277	0.3229	0.4928
N-Pentane:	2.7689	0.2496	0.4084
Hexane+:	2.4055	0.3645	0.9294
BTU:	1738.2	1207.2	1267.2
GPM:	22.5390	18.8560	19.2730
SPG:	1.0456	0.6994	0.7382



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Analysis No: GW190007
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:
Lease/PA/CA:
Formation: BLANCO MV
Cust. Str. No.: 70797
API # 30-045-11490

Source: TUBING
Well Flowing: Y
Pressure: 170 PSIG
Flow Temp: 78 DEG. F
Ambient Temp: 79 DEG. F
Flow Rate: 20 MCF/D
Sample Method: Purge & Fill
Sample Date: 06/12/2019
Sample Time: 10.50 AM
Sampled By: CULLAN KELLER
Sampled by (CO): GREAT WESTERN

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1538	0.1517	0.0170	0.00	0.0015
CO2	1.2500	1.2328	0.2140	0.00	0.0190
Methane	81.8875	80.7608	13.9260	827.06	0.4536
Ethane	9.6705	9.5374	2.5940	171.14	0.1004
Propane	4.2330	4.1748	1.1700	106.51	0.0644
Iso-Butane	0.6969	0.6873	0.2290	22.66	0.0140
N-Butane	1.0861	1.0712	0.3430	35.43	0.0218
I-Pentane	0.3336	0.3290	0.1220	13.35	0.0083
N-Pentane	0.2479	0.2445	0.0900	9.94	0.0062
Hexane Plus	0.4407	0.4346	0.1970	23.23	0.0146
Total	100.0000	98.6241	18.9020	1209.32	0.7038

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0034
BTU/CU.FT IDEAL: 1212.1
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1216.1
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1194.9
DRY BTU @ 15.025: 1240.5
REAL SPECIFIC GRAVITY: 0.7058

CYLINDER #: 4080
CYLINDER PRESSURE: 182 PSIG
ANALYSIS DATE: 06/17/2019
ANALYSIS TIME: 03:55:07 PM
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: 06/24/2019

GC Method: C6+ Gas



GREAT WESTERN DRILLING
WELL ANALYSIS COMPARISON

Lease: J.E. DECKER 2; TBG
Stn. No.: 70797
Mtr. No.: API # 30-045-

TUBING
BLANCO MV

06/24/2019
33050-10355

Smpl Date:	06/12/2019	11/16/2018	10/25/2017
Test Date:	06/17/2019	11/27/2018	10/25/2017
Run No:	GW190007	GW180013	GW170046
Nitrogen:	0.1538	0.1007	0.1480
CO2:	1.2500	1.4036	1.2897
Methane:	81.8875	86.8354	84.0729
Ethane:	9.6705	6.9606	8.4481
Propane:	4.2330	2.4291	3.4303
I-Butane:	0.6969	0.5236	0.6261
N-Butane:	1.0861	0.5940	0.8854
I-Pentane:	0.3336	0.2667	0.3077
N-Pentane:	0.2479	0.1818	0.2316
Hexane+:	0.4407	0.7045	0.5602
BTU:	1216.1	1159.0	1191.9
GPM:	18.9020	18.3900	18.6790
SPG:	0.7058	0.6712	0.6909