



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

Analysis No: GW190010
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:
Lease/PA/CA:
Formation: BLANCO MV
Cust. Stn. No.: 90540
API 30-045-23031

Source: TUBING
Well Flowing: Y
Pressure: 145 PSIG
Flow Temp: 86 DEG. F
Ambient Temp: 73 DEG. F
Flow Rate: 28 MCF/D
Sample Method: Purge & Fill
Sample Date: 06/12/2019
Sample Time: 10.10 AM
Sampled By: CULLAN KELLER
Sampled by (CO): GREAT WESTERN

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1193	0.1189	0.0130	0.00	0.0012
CO2	1.7343	1.7284	0.2970	0.00	0.0264
Methane	82.5147	82.2334	14.0310	833.40	0.4570
Ethane	8.9087	8.8783	2.3900	157.66	0.0925
Propane	3.7869	3.7740	1.0460	95.28	0.0577
Iso-Butane	0.7522	0.7496	0.2470	24.46	0.0151
N-Butane	0.9970	0.9936	0.3150	32.53	0.0200
I-Pentane	0.3347	0.3336	0.1230	13.39	0.0083
N-Pentane	0.2128	0.2121	0.0770	8.53	0.0053
Hexane Plus	0.6394	0.6372	0.2860	33.70	0.0212
Total	100.0000	99.6591	18.8250	1198.95	0.7046

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0033
BTU/CU.FT IDEAL: 1201.7
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1205.7
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1184.7
DRY BTU @ 15.025: 1229.8
REAL SPECIFIC GRAVITY: 0.7067

CYLINDER #: 6153
CYLINDER PRESSURE: 144 PSIG
ANALYSIS DATE: 06/17/2019
ANALYSIS TIME: 03:58:54 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: 06/25/2019

GC Method: C6+ Gas

WMCO

AUG 28 2019

DISTRICT III



GREAT WESTERN DRILLING
WELL ANALYSIS COMPARISON

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

TUBING
BLANCO MV

06/24/2019
33050-10320

Smpl Date:	06/12/2019	11/15/2018	10/19/2017
Test Date:	06/17/2019	11/26/2018	10/19/2017
Run No:	GW190010	GW180006	GW170026
Nitrogen:	0.1193	0.2184	0.1175
CO2:	1.7343	1.7066	1.6823
Methane:	82.5147	82.9559	82.7367
Ethane:	8.9087	8.7521	9.0269
Propane:	3.7869	3.6058	3.5854
I-Butane:	0.7522	0.7131	0.7182
N-Butane:	0.9970	1.0105	0.8824
I-Pentane:	0.3347	0.2470	0.3481
N-Pentane:	0.2128	0.1852	0.2095
Hexane+:	0.6394	0.6054	0.6930
BTU:	1205.7	1195.5	1203.3
GPM:	18.8250	18.7490	18.8110
SPG:	0.7067	0.7007	0.7043



2030 Afton Place
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Analysis No: GW190009
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:
Lease/PA/CA:
Formation: BLANCO MV
Cust. Stn. No.: 90540
API 30-045-23031

Source: CASING
Well Flowing: Y
Pressure: 256 PSIG
Flow Temp: 86 DEG. F
Ambient Temp: 73 DEG. F
Flow Rate: 28 MCF/D
Sample Method: Purge & Fill
Sample Date: 06/12/2019
Sample Time: 9.45 AM
Sampled By: CULLAN KELLER
Sampled by (CO): GREAT WESTERN

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1823	0.1775	0.0200	0.00	0.0018
CO2	0.2991	0.2912	0.0510	0.00	0.0045
Methane	82.4053	80.2336	14.0140	832.29	0.4564
Ethane	9.8101	9.5516	2.6320	173.61	0.1018
Propane	4.3272	4.2132	1.1960	108.88	0.0659
Iso-Butane	0.8740	0.8510	0.2870	28.42	0.0175
N-Butane	1.0649	1.0368	0.3370	34.74	0.0214
I-Pentane	0.3761	0.3662	0.1380	15.05	0.0094
N-Pentane	0.2726	0.2654	0.0990	10.93	0.0068
Hexane Plus	0.3884	0.3782	0.1740	20.47	0.0129
Total	100.0000	97.3647	18.9480	1224.39	0.6984

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0034
BTU/CU.FT IDEAL: 1227.2
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1231.3
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1209.9
DRY BTU @ 15.025: 1256.0
REAL SPECIFIC GRAVITY: 0.7004

CYLINDER #: 4184
CYLINDER PRESSURE: 240 PSIG
ANALYSIS DATE: 06/17/2019
ANALYSIS TIME: 04:08:51 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: 06/25/2019

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

06/24/2019
33050-10325

Smpl Date:	06/12/2019	11/15/2018	10/19/2017
Test Date:	06/17/2019	11/26/2018	10/19/2017
Run No:	GW190009	GW180005	GW170027
Nitrogen:	0.1823	0.1203	0.1826
CO2:	0.2991	1.2224	1.1886
Methane:	82.4053	84.1767	75.0664
Ethane:	9.8101	8.5869	12.3500
Propane:	4.3272	3.4704	6.7710
I-Butane:	0.8740	0.7307	1.1417
N-Butane:	1.0649	0.8443	1.8472
I-Pentane:	0.3761	0.3050	0.5820
N-Pentane:	0.2726	0.2157	0.4691
Hexane+:	0.3884	0.3276	0.4014
BTU:	1231.3	1185.3	1316.2
GPM:	18.9480	18.6390	19.7130
SPG:	0.7004	0.6853	0.7692



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Analysis No: GW190008
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:
Lease/PA/CA:
Formation: BLANCO MV
Cust. Stn. No.: 90540
API 30-045-23031

Source: BRADENHEAD
Well Flowing: Y
Pressure: 54 PSIG
Flow Temp: 86 DEG. F
Ambient Temp: 73 DEG. F
Flow Rate: 28 MCF/D
Sample Method: Purge & Fill
Sample Date: 06/12/2019
Sample Time: 10.00 AM
Sampled By: CULLAN KELLER
Sampled by (CO): GREAT WESTERN

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2742	0.2720	0.0300	0.00	0.0027
CO2	0.1064	0.1055	0.0180	0.00	0.0016
Methane	75.7056	75.0951	12.8820	764.63	0.4193
Ethane	12.7309	12.6282	3.4170	225.30	0.1322
Propane	6.9616	6.9055	1.9250	175.16	0.1060
Iso-Butane	1.1217	1.1127	0.3680	36.48	0.0225
N-Butane	1.8320	1.8172	0.5800	59.77	0.0368
I-Pentane	0.5286	0.5243	0.1940	21.15	0.0132
N-Pentane	0.4064	0.4031	0.1480	16.29	0.0101
Hexane Plus	0.3326	0.3299	0.1490	17.53	0.0110
Total	100.0000	99.1935	19.7110	1316.30	0.7553

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.004
BTU/CU.FT IDEAL: 1319.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1324.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1301.6
DRY BTU @ 15.025: 1351.1
REAL SPECIFIC GRAVITY: 0.7581

CYLINDER #: 6129
CYLINDER PRESSURE: 56 PSIG
ANALYSIS DATE: 06/18/2019
ANALYSIS TIME: 10:14:25 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: 06/25/2019

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

06/24/2019
33050-10195

Smpl Date:	06/12/2019	11/15/2018	10/19/2017	01/25/2015
Test Date:	06/18/2019	11/26/2018	10/19/2017	01/25/2015
Run No:	GW190008	GW180004	GW170031	GW150001
Nitrogen:	0.2742	0.2417	0.2183	0.2820
CO2:	0.1064	0.0633	1.1904	0.9050
Methane:	75.7056	76.3115	75.1099	76.8690
Ethane:	12.7309	12.4509	12.3654	12.2380
Propane:	6.9616	6.7804	6.7753	5.9480
I-Butane:	1.1217	1.1309	1.1359	0.9120
N-Butane:	1.8320	1.8084	1.8303	1.6190
I-Pentane:	0.5286	0.5184	0.5629	0.4660
N-Pentane:	0.4064	0.3979	0.4481	0.3640
Hexane+:	0.3326	0.2966	0.3635	0.3970
BTU:	1324.6	1318.0	1312.5	1287.1
GPM:	19.7110	19.6520	19.6870	19.4850
SPG:	0.7581	0.7527	0.7673	0.7470