



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

30-045-22485

Analysis No: MG180004
Cust No: 50000-10075

Well/Lease Information

Customer Name: M & G DRILLING CO., INC.
Well Name: GRAHAM #3; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation:
Cust. Stn. No.:

Source: CASING
Well Flowing: Y
Pressure: 92 PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: 133 MCF/D
Sample Method: Purge & Fill
Sample Date: 08/24/2018
Sample Time: 12.44 PM
Sampled By: DANIEL T.
Sampled by (CO): M&G DRILLING

NMOC

OCT 12 2018

DISTRICT III

Heat Trace:
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2095	0.2076	0.0230	0.00	0.0020
CO2	0.4134	0.4097	0.0710	0.00	0.0063
Methane	87.5443	86.7666	14.8820	884.20	0.4849
Ethane	6.4630	6.4056	1.7330	114.38	0.0671
Propane	3.0285	3.0016	0.8370	76.20	0.0461
Iso-Butane	0.5478	0.5429	0.1800	17.81	0.0110
N-Butane	0.7888	0.7818	0.2490	25.73	0.0158
I-Pentane	0.2680	0.2656	0.0980	10.72	0.0067
N-Pentane	0.1930	0.1913	0.0700	7.74	0.0048
Hexane Plus	0.5437	0.5389	0.2430	28.66	0.0180
Total	100.0000	99.1116	18.3860	1165.44	0.6627

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.003
BTU/CU.FT IDEAL: 1168.1
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1171.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1151.2
DRY BTU @ 15.025: 1195.1
REAL SPECIFIC GRAVITY: 0.6645

CYLINDER #: 4100
CYLINDER PRESSURE: 63 PSIG
ANALYSIS DATE: 09/05/2018
ANALYSIS TIME: 10:14:44 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: 09/07/2018



M & G DRILLING CO., INC.
WELL ANALYSIS COMPARISON

Lease: GRAHAM #3; CSG
Stn. No.:
Mtr. No.:

CASING

09/07/2018
50000-10075

Smpl Date: 08/24/2018
Test Date: 09/05/2018
Run No: MG180004

Nitrogen: 0.2095
CO2: 0.4134
Methane: 87.5443
Ethane: 6.4630
Propane: 3.0285
I-Butane: 0.5478
N-Butane: 0.7888
I-Pentane: 0.2680
N-Pentane: 0.1930
Hexane+: 0.5437

BTU: 1171.6
GPM: 18.3860
SPG: 0.6645



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

Analysis No: MG180005
Cust No: 50000-10080

Well/Lease Information

Customer Name: M & G DRILLING CO., INC.
Well Name: GRAHAM #3; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation:
Cust. Stn. No.:

Source: TUBING
Well Flowing: Y
Pressure: 92 PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: 133 MCF/D
Sample Method: Purge & Fill
Sample Date: 08/24/2018
Sample Time: 12.41 PM
Sampled By: DANIEL T.
Sampled by (CO): M & G DRILLING

NMOC

OCT 12 2018

DISTRICT III

Heat Trace:

Remarks: PRESSURED WITH HELIUM TO 30LBS.

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3144	0.1596	0.0350	0.00	0.0030
CO2	0.6350	0.3223	0.1090	0.00	0.0096
Methane	74.5765	37.8528	12.6950	753.22	0.4131
Ethane	12.0462	6.1143	3.2350	213.18	0.1251
Propane	6.8483	3.4760	1.8950	172.31	0.1043
Iso-Butane	1.1195	0.5682	0.3680	36.41	0.0225
N-Butane	2.0027	1.0165	0.6340	65.33	0.0402
I-Pentane	0.6393	0.3245	0.2350	25.58	0.0159
N-Pentane	0.5036	0.2556	0.1830	20.19	0.0125
Hexane Plus	1.3145	0.6672	0.5890	69.29	0.0435
Total	100.0000	50.7570	19.9780	1355.51	0.7897

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0044
BTU/CU.FT IDEAL: 1358.6
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1364.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1340.9
DRY BTU @ 15.025: 1391.9
REAL SPECIFIC GRAVITY: 0.7929

CYLINDER #: 6039
CYLINDER PRESSURE: 6 PSIG
ANALYSIS DATE: 09/05/2018
ANALYSIS TIME: 10:33:48 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: 09/07/2018

GC Method: C6+ Gas



M & G DRILLING CO., INC.
WELL ANALYSIS COMPARISON

Lease: GRAHAM #3; TBG
Stn. No.:
Mtr. No.:

TUBING

09/07/2018
50000-10080

Smpl Date: 08/24/2018
Test Date: 09/05/2018
Run No: MG180005

Nitrogen: 0.3144
CO2: 0.6350
Methane: 74.5765
Ethane: 12.0462
Propane: 6.8483
I-Butane: 1.1195
N-Butane: 2.0027
I-Pentane: 0.6393
N-Pentane: 0.5036
Hexane+: 1.3145

BTU: 1364.6
GPM: 19.9780
SPG: 0.7929



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC NM 87410
(505) 334-6178 FAX: (505) 334-6170
[http://emnr.state.nm.us/ocd/District III/district.htm](http://emnr.state.nm.us/ocd/District%20III/district.htm)

BRADENHEAD TEST REPORT

(submit 1 copy to above address)

Date of Test 10-3-18 Operator ENDURING RESOURCES API #30-0 45-35550

Property Name CUAD 2308-24H Well No. 153 H Location: Unit ___ Section 24 Township 23N Range 8W

Well Status (Shut-In or Producing) Initial PSI: Tubing 105 Intermediate NA Casing 525 Bradenhead 0

OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH

Testing	PRESSURE					FLOW CHARACTERISTICS	
	Bradenhead		INTERM			BRADENHEAD	INTERMEDIATE
	BH	Int	Csg	Int	Csg		
TIME							
5 min	105		525			Steady Flow	
10 min	105		525			Surges	
15 min	105		525			Down to Nothing	
20 min						Nothing ☒	
25 min						Gas	
30 min						Gas & Water	
						Water	

If bradenhead flowed water, check all of the descriptions that apply below:

CLEAR ___ FRESH ___ SALTY ___ SULFUR ___ BLACK ___

5 MINUTE SHUT-IN PRESSURE

BRADENHEAD 0

INTERMEDIATE N/A

REMARKS:

By SAM BARRETT

Witness

Emissions Tech
(Position)

E-mail address sbarrette@enduringresources.com

AMOCO
OCT 10 2018
DISTRICT III

denied
Requested
Detest
2418
10/8/18
MK