



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

Analysis No: DR190040
Cust No: 21300-10485

Well/Lease Information

Customer Name: D.J.R.
Well Name: DUFF FEDERAL COM 2; TBG
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.: API # 30-039-05278

Source: TUBING
Well Flowing: Y
Pressure: 22 PSIG
Flow Temp: DEG. F
Ambient Temp: 25 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 12/17/2019
Sample Time: 10.40 AM
Sampled By: J. HARTER
Sampled by (CO): COTTONWOOD

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.7227	0.7221	0.0800	0.00	0.0070
CO2	0.0988	0.0987	0.0170	0.00	0.0015
Methane	78.9002	78.8326	13.4250	796.89	0.4370
Ethane	9.5447	9.5365	2.5620	168.91	0.0991
Propane	5.7702	5.7653	1.5950	145.18	0.0879
Iso-Butane	1.1840	1.1830	0.3890	38.50	0.0238
N-Butane	1.8316	1.8300	0.5800	59.75	0.0368
I-Pentane	0.6378	0.6373	0.2340	25.52	0.0159
N-Pentane	0.4855	0.4851	0.1770	19.46	0.0121
Hexane Plus	0.8245	0.8238	0.3690	43.46	0.0273
Total	100.0000	99.9144	19.4280	1297.68	0.7483

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0039
BTU/CU.FT IDEAL: 1300.7
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1305.8
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1283.1
DRY BTU @ 15.025: 1332.0
REAL SPECIFIC GRAVITY: 0.7509

CYLINDER #: 4156
CYLINDER PRESSURE: 27 PSIG
ANALYSIS DATE: 12/20/2019
ANALYSIS TIME: 08:04:13 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

GC Method: C6+ Gas

Last Cal/Verify: 12/26/2019

NMOC

JAN 08 2020

DISTRICT III



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

Analysis No: DR190039
Cust No: 21300-10480

Well/Lease Information

Customer Name: D.J.R.
Well Name: DUFF FEDERAL COM 2; CSG
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation:
Cust. Strn. No.: API # 30-039-05278

Source: CASING
Well Flowing: Y
Pressure: 71 PSIG
Flow Temp: DEG. F
Ambient Temp: 25 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 12/17/2019
Sample Time: 10.45 AM
Sampled By: J. HARTER
Sampled by (CO): COTTONWOOD

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5423	0.5409	0.0600	0.00	0.0052
CO2	0.1393	0.1389	0.0240	0.00	0.0021
Methane	79.6266	79.4209	13.5460	804.23	0.4411
Ethane	9.4608	9.4364	2.5390	167.43	0.0982
Propane	5.9840	5.9685	1.6540	150.56	0.0911
Iso-Butane	1.2236	1.2204	0.4020	39.79	0.0246
N-Butane	1.6497	1.6454	0.5220	53.82	0.0331
I-Pentane	0.5396	0.5382	0.1980	21.59	0.0134
N-Pentane	0.3606	0.3597	0.1310	14.46	0.0090
Hexane Plus	0.4735	0.4723	0.2120	24.96	0.0157
Total	100.0000	99.7416	19.2880	1276.83	0.7335

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0037
BTU/CU.FT IDEAL: 1279.8
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1284.5
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1262.1
DRY BTU @ 15.025: 1310.2
REAL SPECIFIC GRAVITY: 0.7359

CYLINDER #: 7023
CYLINDER PRESSURE: 64 PSIG
ANALYSIS DATE: 12/20/2019
ANALYSIS TIME: 08:17:59 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: 12/26/2019

GC Method: C6+ Gas



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

Analysis No: DR190038
Cust No: 21300-10475

Well/Lease Information

Customer Name: D.J.R.
Well Name: DUFF FEDERAL COM 2; BHD
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.: API # 30-039-05278

Source: BRADENHEAD
Well Flowing: Y
Pressure: 51 PSIG
Flow Temp: DEG. F
Ambient Temp: 25 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 12/17/2019
Sample Time: 10.50 AM
Sampled By: J. HARTER
Sampled by (CO): COTTONWOOD

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5361	0.5313	0.0590	0.00	0.0052
CO2	0.1690	0.1675	0.0290	0.00	0.0026
Methane	79.1082	78.3928	13.4600	798.99	0.4382
Ethane	9.3826	9.2978	2.5180	166.04	0.0974
Propane	5.9896	5.9354	1.6560	150.70	0.0912
Iso-Butane	1.2491	1.2378	0.4100	40.62	0.0251
N-Butane	1.7236	1.7080	0.5450	56.23	0.0346
I-Pentane	0.6155	0.6099	0.2260	24.63	0.0153
N-Pentane	0.4329	0.4290	0.1570	17.35	0.0108
Hexane Plus	0.7934	0.7862	0.3550	41.82	0.0263
Total	100.0000	99.0957	19.4150	1296.39	0.7466

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0039
BTU/CU.FT IDEAL: 1299.4
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1304.5
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1281.8
DRY BTU @ 15.025: 1330.6
REAL SPECIFIC GRAVITY: 0.7492

CYLINDER #: 7044
CYLINDER PRESSURE: 41 PSIG
ANALYSIS DATE: 12/19/2019
ANALYSIS TIME: 04:41:40 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: 12/26/2019

GC Method: C6+ Gas