

**NMOC****DEC 20 2019****DISTRICT III**2030 Afton Place
Farmington, NM 87401
(505) 325-6622Analysis No: DR190037
Cust No: 21300-10470**Well/Lease Information**Customer Name: D.J.R.
Well Name: JICARILLA APACHE F 4; TBG
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.: API # 30-039-06009Source: TUBING
Well Flowing: Y
Pressure: 75 PSIG
Flow Temp: DEG. F
Ambient Temp: 40 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 12/11/2019
Sample Time: 1.10 PM
Sampled By: J. HARTER
Sampled by (CO): COTTONWOODHeat Trace: N
Remarks:**Analysis**

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.9430	0.9387	0.1040	0.00	0.0091
CO2	0.1132	0.1127	0.0190	0.00	0.0017
Methane	84.2449	83.8575	14.3240	850.87	0.4666
Ethane	7.3844	7.3505	1.9810	130.68	0.0767
Propane	4.1445	4.1255	1.1450	104.28	0.0631
Iso-Butane	0.9197	0.9155	0.3020	29.91	0.0185
N-Butane	1.1321	1.1269	0.3580	36.93	0.0227
I-Pentane	0.4215	0.4196	0.1550	16.86	0.0105
N-Pentane	0.2610	0.2598	0.0950	10.46	0.0065
Hexane Plus	0.4357	0.4337	0.1950	22.97	0.0144
Total	100.0000	99.5404	18.6780	1202.97	0.6898

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0032
BTU/CU.FT IDEAL: 1205.8
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1209.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1188.6
DRY BTU @ 15.025: 1233.8
REAL SPECIFIC GRAVITY: 0.6918CYLINDER #: 4110
CYLINDER PRESSURE: 53 PSIG
ANALYSIS DATE: 12/17/2019
ANALYSIS TIME: 02:36:35 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: 12/18/2019

GC Method: C6+ Gas



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

Analysis No: DR190036
Cust No: 21300-10465

Well/Lease Information

Customer Name: D.J.R.
Well Name: JICARILLA APACHE F 4; CSG
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation:
Cust. Strn. No.: API # 30-039-06009

Source: CASING
Well Flowing: Y
Pressure: 201 PSIG
Flow Temp: DEG. F
Ambient Temp: 40 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 12/11/2019
Sample Time: 1.15 PM
Sampled By: J. HARTER
Sampled by (CO): COTTONWOOD

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.8891	0.8988	0.0980	0.00	0.0086
CO2	0.1009	0.1020	0.0170	0.00	0.0015
Methane	83.6141	84.5228	14.2180	844.50	0.4631
Ethane	7.6110	7.6937	2.0420	134.69	0.0790
Propane	4.5567	4.6062	1.2590	114.65	0.0694
Iso-Butane	1.0070	1.0179	0.3310	32.75	0.0202
N-Butane	1.2010	1.2141	0.3800	39.18	0.0241
I-Pentane	0.4205	0.4251	0.1540	16.82	0.0105
N-Pentane	0.2624	0.2653	0.0950	10.52	0.0065
Hexane Plus	0.3373	0.3410	0.1510	17.78	0.0112
Total	100.0000	101.0869	18.7450	1210.89	0.6941

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0033
BTU/CU.FT IDEAL: 1213.7
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1217.7
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1196.5
DRY BTU @ 15.025: 1242.1
REAL SPECIFIC GRAVITY: 0.6962

CYLINDER #: 6094
CYLINDER PRESSURE: 142 PSIG
ANALYSIS DATE: 12/17/2019
ANALYSIS TIME: 02:14:59 PM
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: 12/18/2019

GC Method: C6+ Gas



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

Analysis No: DR190035
Cust No: 21300-10460

Well/Lease Information

Customer Name: D.J.R.
Well Name: JICARILLA APACHE F 4; BHD
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.: API # 30-039-06009

Source: BRADENHEAD
Well Flowing: Y
Pressure: 211 PSIG
Flow Temp: DEG. F
Ambient Temp: 40 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 12/11/2019
Sample Time: 1.20 PM
Sampled By: J. HARTER
Sampled by (CO): COTTONWOOD

Heat Trace: N

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.9251	0.9326	0.1020	0.00	0.0089
CO2	0.0953	0.0961	0.0160	0.00	0.0014
Methane	85.3610	86.0565	14.5120	862.15	0.4728
Ethane	7.2735	7.3327	1.9510	128.72	0.0755
Propane	3.7948	3.8257	1.0480	95.48	0.0578
Iso-Butane	0.7558	0.7620	0.2480	24.58	0.0152
N-Butane	0.8996	0.9069	0.2840	29.35	0.0181
I-Pentane	0.3250	0.3276	0.1190	13.00	0.0081
N-Pentane	0.2086	0.2103	0.0760	8.36	0.0052
Hexane Plus	0.3613	0.3642	0.1620	19.04	0.0120
Total	100.0000	100.8146	18.5180	1180.68	0.6750

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0031
BTU/CU.FT IDEAL: 1183.4
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1187.1
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1166.4
DRY BTU @ 15.025: 1210.9
REAL SPECIFIC GRAVITY: 0.6768

CYLINDER #: 4207
CYLINDER PRESSURE: 86 PSIG
ANALYSIS DATE: 12/17/2019
ANALYSIS TIME: 02:31:20 PM
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: 12/18/2019

GC Method: C6+ Gas