



Well Name: FEDERAL 100; BHD
 API #: 3004525851
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: EP20230157
 Cust No: 77000-11995

Well/Lease Information

Customer Name:	EPIC ENERGY	Source:	BRADENHEAD
Well Name:	FEDERAL 100; BHD	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	121 PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:	SE078897	Ambient Temp:	78 DEG. F
Formation:		Flow Rate:	MCF/D
Cust. Stn. No.:	3004525851	Sample Method:	
		Sample Date:	05/23/2023
		Sample Time:	11.55 AM
		Sampled By:	MIKE WAGONER
		Sampled by (CO):	WALSH

Heat Trace: N

Remarks: PRESSURED WITH HELIUM TO 30 LBS.

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	3.3643	1.2130	0.3720	0.00	0.0325
CO2	0.0233	0.0084	0.0040	0.00	0.0004
Methane	76.0378	27.4151	12.9400	767.98	0.4212
Ethane	9.5042	3.4267	2.5520	168.20	0.0987
Propane	5.5527	2.0020	1.5360	139.71	0.0845
Iso-Butane	1.1377	0.4102	0.3740	37.00	0.0228
N-Butane	1.5263	0.5503	0.4830	49.79	0.0306
I-Pentane	0.6121	0.2207	0.2250	24.49	0.0152
N-Pentane	0.5056	0.1823	0.1840	20.27	0.0126
Hexane Plus	1.7360	0.6259	0.7770	91.51	0.0575
Total	100.0000	36.0546	19.4470	1298.94	0.7760

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0041	CYLINDER #:	4180
BTU/CU.FT IDEAL:	1301.9	CYLINDER PRESSURE:	PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1307.3	ANALYSIS DATE:	05/25/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1284.6	ANALYSIS TIME:	09:56:25 AM
DRY BTU @ 15.025:	1333.5	ANALYSIS RUN BY:	ALEXIS MITCHELL
REAL SPECIFIC GRAVITY:	0.7789		

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: 06/09/2023



EPIC ENERGY
WELL ANALYSIS COMPARISON

Lease: FEDERAL 100; BHD
Stn. No.: 3004525851
Mtr. No.:

BRADENHEAD

06/09/2023
77000-11995

Smpl Date: 05/23/2023
Test Date: 05/25/2023
Run No: EP20230157

Nitrogen: 3.3643
CO2: 0.0233
Methane: 76.0378
Ethane: 9.5042
Propane: 5.5527
I-Butane: 1.1377
N-Butane: 1.5263
I-Pentane: 0.6121
N-Pentane: 0.5056
Hexane+: 1.7360

BTU: 1307.3
GPM: 19.4470
SPG: 0.7789



Well Name: FEDERAL 100; CSG
 API #: 3004525851
 Source: CASING
 Sample Type: GAS
 Analysis No: EP20230158
 Cust No: 77000-12000

Well/Lease Information

Customer Name: EPIC ENERGY
 Well Name: FEDERAL 100; CSG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA: SE078897
 Formation:
 Cust. Stn. No.: 3004525851

Source: CASING
 Well Flowing: Y
 Pressure: 121 PSIG
 Flow Temp: DEG. F
 Ambient Temp: 78 DEG. F
 Flow Rate: MCF/D
 Sample Method:
 Sample Date: 05/23/2023
 Sample Time: 11.55 AM
 Sampled By: MIKE WAGONER
 Sampled by (CO): WALSH

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1852	0.1808	0.0200	0.00	0.0018
CO2	0.6612	0.6455	0.1130	0.00	0.0100
Methane	77.3531	75.5169	13.1640	781.27	0.4285
Ethane	10.6977	10.4438	2.8720	189.32	0.1111
Propane	6.2377	6.0896	1.7250	156.95	0.0950
Iso-Butane	1.2378	1.2084	0.4070	40.25	0.0248
N-Butane	1.6407	1.6018	0.5190	53.52	0.0329
I-Pentane	0.6156	0.6010	0.2260	24.63	0.0153
N-Pentane	0.4988	0.4870	0.1820	20.00	0.0124
Hexane Plus	0.8722	0.8515	0.3900	45.97	0.0289
Total	100.0000	97.6263	19.6180	1311.91	0.7607

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0041
 BTU/CU.FT IDEAL: 1314.9
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1320.2
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1297.2
 DRY BTU @ 15.025: 1346.6
 REAL SPECIFIC GRAVITY: 0.7635

CYLINDER #: 4209
 CYLINDER PRESSURE: 121 PSIG
 ANALYSIS DATE: 05/25/2023
 ANALYSIS TIME: 10:00:49 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: 06/09/2023



EPIC ENERGY
WELL ANALYSIS COMPARISON

Lease: FEDERAL 100; CSG
Stn. No.: 3004525851
Mtr. No.:

CASING

06/09/2023
77000-12000

Smpl Date: 05/23/2023
Test Date: 05/25/2023
Run No: EP20230158

Nitrogen: 0.1852
CO2: 0.6612
Methane: 77.3531
Ethane: 10.6977
Propane: 6.2377
I-Butane: 1.2378
N-Butane: 1.6407
I-Pentane: 0.6156
N-Pentane: 0.4988
Hexane+: 0.8722

BTU: 1320.2
GPM: 19.6180
SPG: 0.7635



Well Name: FEDERAL 100;TBG
 API #: 3004525851
 Source: TUBING
 Sample Type: GAS
 Analysis No: EP20230169
 Cust No: 77000-12020

Well/Lease Information

Customer Name: EPIC ENERGY
 Well Name: FEDERAL 100;TBG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA: SE-078099
 Formation:
 Cust. Stn. No.: 3004525851
 94896

Source: TUBING
 Well Flowing: Y
 Pressure: 126 PSIG
 Flow Temp: DEG. F
 Ambient Temp: 56 DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 06/16/2023
 Sample Time: 7.30 AM
 Sampled By: MIKE WAGONER
 Sampled by (CO): WALSH

Heat Trace: N

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2378	0.2335	0.0260	0.00	0.0023
CO2	0.8659	0.8502	0.1480	0.00	0.0132
Methane	82.3634	80.8738	14.0070	831.87	0.4562
Ethane	9.3801	9.2104	2.5160	166.00	0.0974
Propane	4.0533	3.9800	1.1200	101.99	0.0617
Iso-Butane	0.6852	0.6728	0.2250	22.28	0.0138
N-Butane	1.0876	1.0679	0.3440	35.48	0.0218
I-Pentane	0.3659	0.3593	0.1340	14.64	0.0091
N-Pentane	0.2761	0.2711	0.1000	11.07	0.0069
Hexane Plus	0.6847	0.6723	0.3060	36.09	0.0227
Total	100.0000	98.1913	18.9260	1219.42	0.7050

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0034
 BTU/CU.FT IDEAL: 1222.2
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1226.4
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1205.1
 DRY BTU @ 15.025: 1251.0
 REAL SPECIFIC GRAVITY: 0.7071

CYLINDER #: 4065
 CYLINDER PRESSURE: 126 PSIG
 ANALYSIS DATE: 06/16/2023
 ANALYSIS TIME: 03:30:12 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: 06/26/2023

GC Method: C6+ Gas



EPIC ENERGY
WELL ANALYSIS COMPARISON

Lease: FEDERAL 100;TBG
Stn. No.: 3004525851
Mtr. No.: 94896

TUBING

06/26/2023
77000-12020

Smpl Date: 06/16/2023
Test Date: 06/16/2023
Run No: EP20230169

Nitrogen: 0.2378
CO2: 0.8659
Methane: 82.3634
Ethane: 9.3801
Propane: 4.0533
I-Butane: 0.6852
N-Butane: 1.0876
I-Pentane: 0.3659
N-Pentane: 0.2761
Hexane+: 0.6847

BTU: 1226.4
GPM: 18.9260
SPG: 0.7071

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District III
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District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 233118

CONDITIONS

Operator: EPIC ENERGY, L.L.C. 332 Road 3100 Aztec, NM 87410	OGRID: 372834
	Action Number: 233118
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	for record only - gas appears to be the same on bradenhead and production casing	7/13/2023