

Well Name: SAN JUAN UNIT 30-4 #62;
 API #: 3003930159
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: MS20230172
 Cust No: 53400-11990

Well/Lease Information

Customer Name: MORNINGSTAR
 Well Name: SAN JUAN UNIT 30-4 #62; BHD
 County/State: RIO ARRIBA NM
 Location:
 Lease/PA/CA: NMSF-079485B
 Formation: EAST BLANCO PICTURE CLIFFS
 Cust. Stn. No.: 3003930159

Source: BRADENHEAD
 Well Flowing: Y
 Pressure: 163 PSIG
 Flow Temp: 80 DEG. F
 Ambient Temp: DEG. F
 Flow Rate: 161 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 06/08/2023
 Sample Time: 9.30 AM
 Sampled By: KYLE HAWKINS
 Sampled by (CO): MORNINGSTAR

Heat Trace: N
 Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5593	0.5577	0.0620	0.00	0.0054
CO2	0.0812	0.0810	0.0140	0.00	0.0012
Methane	94.0150	93.7499	15.9690	949.55	0.5207
Ethane	5.0346	5.0204	1.3490	89.10	0.0523
Propane	0.1868	0.1863	0.0520	4.70	0.0028
Iso-Butane	0.0465	0.0464	0.0150	1.51	0.0009
N-Butane	0.0096	0.0096	0.0030	0.31	0.0002
I-Pentane	0.0105	0.0105	0.0040	0.42	0.0003
N-Pentane	0.0024	0.0024	0.0010	0.10	0.0001
Hexane Plus	0.0541	0.0539	0.0240	2.85	0.0018
Total	100.0000	99.7181	17.4930	1048.54	0.5857

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0022
 BTU/CU.FT IDEAL: 1051.0
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1053.3
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1035.0
 DRY BTU @ 15.025: 1074.4
 REAL SPECIFIC GRAVITY: 0.5868

CYLINDER #: 2151
 CYLINDER PRESSURE: 22 PSIG
 ANALYSIS DATE: 06/12/2023
 ANALYSIS TIME: 08:26:09 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: 06/13/2023

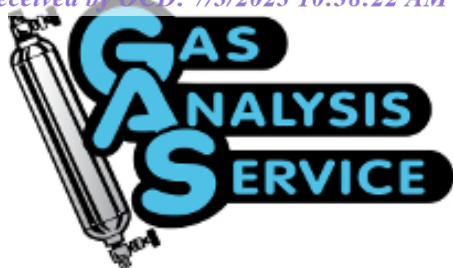
GC Method: C6+ Gas



MORNINGSTAR
WELL ANALYSIS COMPARISON

Lease:	SAN JUAN UNIT 30-4 #62; BHD	BRADENHEAD	06/13/2023
Stn. No.:	3003930159	EAST BLANCO PICTURE	53400-11990
Mtr. No.:			

Smpl Date:	06/08/2023
Test Date:	06/12/2023
Run No:	MS20230172
Nitrogen:	0.5593
CO2:	0.0812
Methane:	94.0150
Ethane:	5.0346
Propane:	0.1868
I-Butane:	0.0465
N-Butane:	0.0096
I-Pentane:	0.0105
N-Pentane:	0.0024
Hexane+:	0.0541
BTU:	1053.3
GPM:	17.4930
SPG:	0.5868



Well Name: SAN JUAN UNIT 30-4 #62;
 API #: 30043930159
 Source: CASING
 Sample Type: GAS
 Analysis No: MS20230179
 Cust No: 53400-11995

Well/Lease Information

Customer Name: MORNINGSTAR
 Well Name: SAN JUAN UNIT 30-4 #62; CSG
 County/State: RIO ARRIBA NM
 Location:
 Lease/PA/CA: NMSF-079485B
 Formation: BFC
 Cust. Stn. No.: 30043930159

Source: CASING
 Well Flowing: Y
 Pressure: 159.8 PSIG
 Flow Temp: 89 DEG. F
 Ambient Temp: DEG. F
 Flow Rate: 234 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 06/22/2023
 Sample Time: 1.18 PM
 Sampled By: KYLE HAWKINS
 Sampled by (CO): MORNING STAR

Heat Trace: N
 Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.0988	0.0991	0.0110	0.00	0.0010
CO2	1.0830	1.0864	0.1850	0.00	0.0165
Methane	94.8010	95.0942	16.1060	957.49	0.5251
Ethane	2.1345	2.1411	0.5720	37.77	0.0222
Propane	0.8039	0.8064	0.2220	20.23	0.0122
Iso-Butane	0.1679	0.1684	0.0550	5.46	0.0034
N-Butane	0.2327	0.2334	0.0740	7.59	0.0047
I-Pentane	0.0810	0.0813	0.0300	3.24	0.0020
N-Pentane	0.0626	0.0628	0.0230	2.51	0.0016
Hexane Plus	0.5346	0.5363	0.2390	28.18	0.0177
Total	100.0000	100.3094	17.5170	1062.47	0.6062

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0024
 BTU/CU.FT IDEAL: 1064.9
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1067.5
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1048.9
 DRY BTU @ 15.025: 1088.9
 REAL SPECIFIC GRAVITY: 0.6074

CYLINDER #: 6143
 CYLINDER PRESSURE: 146 PSIG
 ANALYSIS DATE: 06/28/2023
 ANALYSIS TIME: 10:10:32 AM
 ANALYSIS RUN BY: ALEXIS MITCHELL

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: 06/30/2023

GC Method: C6+ Gas



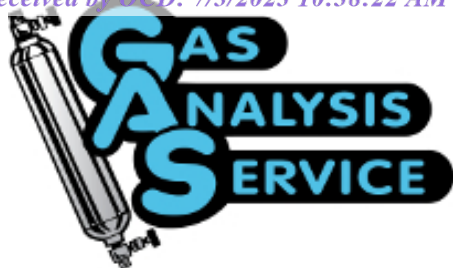
MORNINGSTAR
WELL ANALYSIS COMPARISON

Lease:	SAN JUAN UNIT 30-4 #62; CSG	CASING	06/30/2023
Stn. No.:	30043930159	BFC	53400-11995
Mtr. No.:			

Smpl Date: 06/22/2023
Test Date: 06/28/2023
Run No: MS20230179

Nitrogen: 0.0988
CO2: 1.0830
Methane: 94.8010
Ethane: 2.1345
Propane: 0.8039
I-Butane: 0.1679
N-Butane: 0.2327
I-Pentane: 0.0810
N-Pentane: 0.0626
Hexane+: 0.5346

BTU: 1067.5
GPM: 17.5170
SPG: 0.6074



Well Name: SAN JUAN UNIT 30-4 #62;
 API #: 3003930159
 Source: TUBING
 Sample Type: GAS
 Analysis No: MS20230180
 Cust No: 53400-12000

Well/Lease Information

Customer Name: MORNINGSTAR
 Well Name: SAN JUAN UNIT 30-4 #62; TBG
 County/State: RIO ARRIBA NM
 Location:
 Lease/PA/CA: NMSF-079485B
 Formation: BFC
 Cust. Stn. No.: 3003930159

Source: TUBING
 Well Flowing: Y
 Pressure: 130 PSIG
 Flow Temp: 89 DEG. F
 Ambient Temp: DEG. F
 Flow Rate: 0 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 06/22/2023
 Sample Time: 1.27 PM
 Sampled By: KYLE HAWKINS
 Sampled by (CO): MORNINGSTAR

Heat Trace: N
 Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.0952	0.0958	0.0100	0.00	0.0009
CO2	1.4791	1.4885	0.2530	0.00	0.0225
Methane	94.7641	95.3646	16.0980	957.12	0.5249
Ethane	2.0994	2.1127	0.5630	37.15	0.0218
Propane	0.7862	0.7912	0.2170	19.78	0.0120
Iso-Butane	0.1629	0.1639	0.0530	5.30	0.0033
N-Butane	0.2239	0.2253	0.0710	7.30	0.0045
I-Pentane	0.0757	0.0762	0.0280	3.03	0.0019
N-Pentane	0.0576	0.0580	0.0210	2.31	0.0014
Hexane Plus	0.2559	0.2575	0.1140	13.49	0.0085
Total	100.0000	100.6337	17.4280	1045.48	0.6016

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0023
 BTU/CU.FT IDEAL: 1047.9
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1050.3
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1032.0
 DRY BTU @ 15.025: 1071.3
 REAL SPECIFIC GRAVITY: 0.6028

CYLINDER #: 6028
 CYLINDER PRESSURE: 124 PSIG
 ANALYSIS DATE: 06/28/2023
 ANALYSIS TIME: 10:00:26 AM
 ANALYSIS RUN BY: ALEXIS MITCHELL

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: 06/30/2023

GC Method: C6+ Gas



MORNINGSTAR
WELL ANALYSIS COMPARISON

Lease:	SAN JUAN UNIT 30-4 #62; TBG	TUBING	06/30/2023
Stn. No.:	3003930159	BFC	53400-12000
Mtr. No.:			

Smpl Date: 06/22/2023
Test Date: 06/28/2023
Run No: MS20230180

Nitrogen: 0.0952
CO2: 1.4791
Methane: 94.7641
Ethane: 2.0994
Propane: 0.7862
I-Butane: 0.1629
N-Butane: 0.2239
I-Pentane: 0.0757
N-Pentane: 0.0576
Hexane+: 0.2559

BTU: 1050.3
GPM: 17.4280
SPG: 0.6028

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
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 235473

CONDITIONS

Operator: MorningStar Operating LLC 400 W 7th St Fort Worth, TX 76102	OGRID: 330132
	Action Number: 235473
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	all strings same gas	9/15/2023