



Well Name: LINDRITH UNIT #17X; TBG
 API #: 3003905405
 Source: TUBING
 Sample Type: GAS
 Analysis No: MS20220076
 Cust No: 53400-11905

Well/Lease Information

Customer Name: MORNINGSTAR
 Well Name: LINDRITH UNIT #17X; TBG
 County/State: RIO ARRIBA NM
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: 3003905405

Source: TUBING
 Well Flowing: Y
 Pressure: 45 PSIG
 Flow Temp: DEG. F
 Ambient Temp: DEG. F
 Flow Rate: 6 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 04/22/2022
 Sample Time: 12.20 PM
 Sampled By: LOREN SCHMITZ
 Sampled by (CO): WALSH

Heat Trace:

Remarks:

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.6222	0.6022	0.0690	0.00	0.0060
CO2	0.4531	0.4386	0.0780	0.00	0.0069
Methane	82.6276	79.9775	14.0550	834.54	0.4577
Ethane	7.4596	7.2203	2.0020	132.01	0.0774
Propane	4.4082	4.2668	1.2190	110.91	0.0671
Iso-Butane	1.0164	0.9838	0.3340	33.05	0.0204
N-Butane	1.2748	1.2339	0.4030	41.59	0.0256
I-Pentane	0.5695	0.5512	0.2090	22.79	0.0142
N-Pentane	0.4053	0.3923	0.1470	16.25	0.0101
Hexane Plus	1.1633	1.1260	0.5210	61.32	0.0385
Total	100.0000	96.7926	19.0370	1252.46	0.7239

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0036
 BTU/CU.FT IDEAL: 1255.4
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1259.9
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1238.0
 DRY BTU @ 15.025: 1285.1
 REAL SPECIFIC GRAVITY: 0.7262

CYLINDER #: 6092
 CYLINDER PRESSURE: 40 PSIG
 ANALYSIS DATE: 05/03/2022
 ANALYSIS TIME: 01:26:14 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: 05/06/2022

GC Method: C6+ Gas



MORNINGSTAR
WELL ANALYSIS COMPARISON

Lease: LINDRITH UNIT #17X; TBG
Stn. No.: 3003905405
Mtr. No.:

TUBING

05/06/2022
53400-11905

Smpl Date: 04/22/2022
Test Date: 05/03/2022
Run No: MS20220076

Nitrogen: 0.6222
CO2: 0.4531
Methane: 82.6276
Ethane: 7.4596
Propane: 4.4082
I-Butane: 1.0164
N-Butane: 1.2748
I-Pentane: 0.5695
N-Pentane: 0.4053
Hexane+: 1.1633

BTU: 1259.9
GPM: 19.0370
SPG: 0.7262



Well Name: LINDRITH UNIT #17X; CSG
 API #: 3003905405
 Source: CASING
 Sample Type: GAS
 Analysis No: MS20220075
 Cust No: 53400-11900

Well/Lease Information

Customer Name: MORNINGSTAR
 Well Name: LINDRITH UNIT #17X; CSG
 County/State: RIO ARRIBA NM
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: 3003905405

Source: CASING
 Well Flowing: Y
 Pressure: 60 PSIG
 Flow Temp: DEG. F
 Ambient Temp: DEG. F
 Flow Rate: 6 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 04/22/2022
 Sample Time: 12.15 PM
 Sampled By: LOREN SCHMITZ
 Sampled by (CO): WALSH

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.6188	0.5999	0.0680	0.00	0.0060
CO2	0.2733	0.2650	0.0470	0.00	0.0042
Methane	82.5936	80.0713	14.0500	834.20	0.4575
Ethane	7.4717	7.2435	2.0050	132.23	0.0776
Propane	4.4279	4.2927	1.2240	111.41	0.0674
Iso-Butane	1.0229	0.9917	0.3360	33.26	0.0205
N-Butane	1.2862	1.2469	0.4070	41.96	0.0258
I-Pentane	0.5790	0.5613	0.2120	23.17	0.0144
N-Pentane	0.4166	0.4039	0.1520	16.70	0.0104
Hexane Plus	1.3100	1.2700	0.5860	69.05	0.0434
Total	100.0000	96.9462	19.0870	1261.97	0.7271

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0037
 BTU/CU.FT IDEAL: 1264.9
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1269.6
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1247.5
 DRY BTU @ 15.025: 1295.0
 REAL SPECIFIC GRAVITY: 0.7295

CYLINDER #: 6029
 CYLINDER PRESSURE: 56 PSIG
 ANALYSIS DATE: 05/03/2022
 ANALYSIS TIME: 01:35:11 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: 05/06/2022

GC Method: C6+ Gas



MORNINGSTAR
WELL ANALYSIS COMPARISON

Lease: LINDRITH UNIT #17X; CSG
Stn. No.: 3003905405
Mtr. No.:

CASING

05/06/2022
53400-11900

Smpl Date: 04/22/2022
Test Date: 05/03/2022
Run No: MS20220075

Nitrogen: 0.6188
CO2: 0.2733
Methane: 82.5936
Ethane: 7.4717
Propane: 4.4279
I-Butane: 1.0229
N-Butane: 1.2862
I-Pentane: 0.5790
N-Pentane: 0.4166
Hexane+: 1.3100

BTU: 1269.6
GPM: 19.0870
SPG: 0.7295



Well Name: LINDRITH UNIT #17X; BHD
 API #: 3003905405
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: MS20220074
 Cust No: 53400-11895

Well/Lease Information

Customer Name: MORNINGSTAR
 Well Name: LINDRITH UNIT #17X; BHD
 County/State: RIO ARRIBA NM
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: 3003905405

Source: BRADENHEAD
 Well Flowing: Y
 Pressure: 25 PSIG
 Flow Temp: DEG. F
 Ambient Temp: DEG. F
 Flow Rate: 6 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 04/22/2022
 Sample Time: 12.10 PM
 Sampled By: LOREN SCHMITZ
 Sampled by (CO): WALSH

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.6330	0.6132	0.0700	0.00	0.0061
CO2	0.3552	0.3441	0.0610	0.00	0.0054
Methane	82.8467	80.2602	14.0920	836.75	0.4589
Ethane	7.4984	7.2643	2.0120	132.70	0.0778
Propane	4.4345	4.2961	1.2260	111.58	0.0675
Iso-Butane	1.0225	0.9906	0.3360	33.25	0.0205
N-Butane	1.2805	1.2405	0.4050	41.77	0.0257
I-Pentane	0.5618	0.5443	0.2060	22.48	0.0140
N-Pentane	0.3943	0.3820	0.1430	15.81	0.0098
Hexane Plus	0.9731	0.9427	0.4350	51.29	0.0322
Total	100.0000	96.8780	18.9860	1245.63	0.7180

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0036
 BTU/CU.FT IDEAL: 1248.5
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1252.9
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1231.1
 DRY BTU @ 15.025: 1278.0
 REAL SPECIFIC GRAVITY: 0.7202

CYLINDER #: 7041
 CYLINDER PRESSURE: 24 PSIG
 ANALYSIS DATE: 05/03/2022
 ANALYSIS TIME: 01:47:35 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: 05/06/2022

GC Method: C6+ Gas



MORNINGSTAR
WELL ANALYSIS COMPARISON

Lease: LINDRITH UNIT #17X; BHD
Stn. No.: 3003905405
Mtr. No.:

BRADENHEAD

05/06/2022
53400-11895

Smpl Date: 04/22/2022
Test Date: 05/03/2022
Run No: MS20220074

Nitrogen: 0.6330
CO2: 0.3552
Methane: 82.8467
Ethane: 7.4984
Propane: 4.4345
I-Butane: 1.0225
N-Butane: 1.2805
I-Pentane: 0.5618
N-Pentane: 0.3943
Hexane+: 0.9731

BTU: 1252.9
GPM: 18.9860
SPG: 0.7202

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

COMMENTS

Action 105301

COMMENTS

Operator: MorningStar Operating LLC 400 W 7th St Fort Worth, TX 76102	OGRID: 330132
	Action Number: 105301
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

COMMENTS

Created By	Comment	Comment Date
mkuehling	For record only	6/13/2022

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 105301

CONDITIONS

Operator: MorningStar Operating LLC 400 W 7th St Fort Worth, TX 76102	OGRID: 330132
	Action Number: 105301
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	same gas all strings	6/13/2022