



Well Name: ANGEL PEAK 3E; BHD

API #:

Source: BRADENHEAD

Sample Type: GAS

Analysis No: MS2021074

Cust No: 53400-11640

Well/Lease Information

Customer Name: MORNINGSTAR
 Well Name: ANGEL PEAK 3E; BHD
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA: 36
 Formation: DK
 Cust. Stn. No.: 95391

Source: BRADENHEAD
 Well Flowing: Y
 Pressure: 79 PSIG
 Flow Temp: 39 DEG. F
 Ambient Temp: 32 DEG. F
 Flow Rate: 16 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 04/19/2021
 Sample Time: 7.28 AM
 Sampled By: JASON M.
 Sampled by (CO): MORNINGSTAR

Heat Trace: N

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	3.9739	3.8692	0.4390	0.00	0.0384
CO2	0.2754	0.2681	0.0470	0.00	0.0042
Methane	76.8230	74.7985	13.0660	775.91	0.4255
Ethane	9.0164	8.7788	2.4190	159.56	0.0936
Propane	6.1080	5.9470	1.6880	153.68	0.0930
Iso-Butane	0.7093	0.6906	0.2330	23.07	0.0142
N-Butane	1.9062	1.8560	0.6030	62.19	0.0383
I-Pentane	0.4707	0.4583	0.1730	18.83	0.0117
N-Pentane	0.4219	0.4108	0.1530	16.91	0.0105
Hexane Plus	0.2952	0.2874	0.1320	15.56	0.0098
Total	100.0000	97.3647	18.9530	1225.72	0.7392

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0035
 BTU/CU.FT IDEAL: 1228.6
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1232.9
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1211.4
 DRY BTU @ 15.025: 1257.6
 REAL SPECIFIC GRAVITY: 0.7415

CYLINDER #: 4205
 CYLINDER PRESSURE: 84 PSIG
 ANALYSIS DATE: 04/21/2021
 ANALYSIS TIME: 03:05:05 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: 04/22/2021

GC Method: C6+ Gas



MORNINGSTAR
WELL ANALYSIS COMPARISON

Lease: ANGEL PEAK 3E; BHD
Stn. No.:
Mtr. No.: 95391

BRADENHEAD
DK

04/22/2021
53400-11640

Smpl Date: 04/19/2021
Test Date: 04/21/2021
Run No: MS2021074

Nitrogen: 3.9739
CO2: 0.2754
Methane: 76.8230
Ethane: 9.0164
Propane: 6.1080
I-Butane: 0.7093
N-Butane: 1.9062
I-Pentane: 0.4707
N-Pentane: 0.4219
Hexane+: 0.2952

BTU: 1232.9
GPM: 18.9530
SPG: 0.7415



Well Name: ANGEL PEAK 3E; CSG

API #:

Source: CASING

Sample Type: GAS

Analysis No: MS2021075

Cust No: 53400-11645

Well/Lease Information

Customer Name: MORNINGSTAR
 Well Name: ANGEL PEAK 3E; CSG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA: 36
 Formation: DK
 Cust. Stn. No.: 95391

Source: CASING
 Well Flowing: Y
 Pressure: 161 PSIG
 Flow Temp: 35 DEG. F
 Ambient Temp: 32 DEG. F
 Flow Rate: 16 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 04/19/2021
 Sample Time: 7.25 AM
 Sampled By: JASON M.
 Sampled by (CO): MORNINGSTAR

Heat Trace: N

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	1.8501	1.7982	0.2040	0.00	0.0179
CO2	0.2860	0.2780	0.0490	0.00	0.0043
Methane	78.1180	75.9258	13.2890	788.99	0.4327
Ethane	9.1751	8.9176	2.4620	162.37	0.0953
Propane	6.3790	6.2000	1.7630	160.50	0.0971
Iso-Butane	0.7450	0.7241	0.2450	24.23	0.0150
N-Butane	2.0725	2.0143	0.6560	67.61	0.0416
I-Pentane	0.5161	0.5016	0.1890	20.65	0.0129
N-Pentane	0.4743	0.4610	0.1730	19.01	0.0118
Hexane Plus	0.3839	0.3731	0.1720	20.24	0.0127
Total	100.0000	97.1937	19.2020	1263.60	0.7412

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0037
 BTU/CU.FT IDEAL: 1266.5
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1271.2
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1249.1
 DRY BTU @ 15.025: 1296.7
 REAL SPECIFIC GRAVITY: 0.7437

CYLINDER #: 7057
 CYLINDER PRESSURE: 161 PSIG
 ANALYSIS DATE: 04/21/2021
 ANALYSIS TIME: 03:27:25 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: 04/22/2021

GC Method: C6+ Gas



MORNINGSTAR
WELL ANALYSIS COMPARISON

Lease: ANGEL PEAK 3E; CSG
Stn. No.:
Mtr. No.: 95391

CASING
DK

04/22/2021
53400-11645

Smpl Date: 04/19/2021
Test Date: 04/21/2021
Run No: MS2021075

Nitrogen: 1.8501
CO2: 0.2860
Methane: 78.1180
Ethane: 9.1751
Propane: 6.3790
I-Butane: 0.7450
N-Butane: 2.0725
I-Pentane: 0.5161
N-Pentane: 0.4743
Hexane+: 0.3839

BTU: 1271.2
GPM: 19.2020
SPG: 0.7437



Well Name: ANGEL PEAK 3E; TBG

API #:

Source: TUBING

Sample Type: GAS

Analysis No: MS2021076

Cust No: 53400-11650

Well/Lease Information

Customer Name: MORNINGSTAR
 Well Name: ANGEL PEAK 3E; TBG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA: 36
 Formation: DK
 Cust. Stn. No.: 95391

Source: TUBING
 Well Flowing: Y
 Pressure: 160 PSIG
 Flow Temp: 35 DEG. F
 Ambient Temp: 32 DEG. F
 Flow Rate: 16 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 04/19/2021
 Sample Time: 7.30 AM
 Sampled By: JASON M.
 Sampled by (CO): MORNINGSTAR

Heat Trace: N

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.6866	0.6685	0.0760	0.00	0.0066
CO2	1.0132	0.9865	0.1730	0.00	0.0154
Methane	79.6816	77.5787	13.5520	804.78	0.4414
Ethane	10.8886	10.6012	2.9210	192.70	0.1130
Propane	4.4161	4.2996	1.2210	111.11	0.0672
Iso-Butane	0.7783	0.7578	0.2560	25.31	0.0156
N-Butane	1.2639	1.2305	0.4000	41.23	0.0254
I-Pentane	0.5063	0.4929	0.1860	20.26	0.0126
N-Pentane	0.4041	0.3934	0.1470	16.20	0.0101
Hexane Plus	0.3613	0.3518	0.1620	19.04	0.0120
Total	100.0000	97.3609	19.0940	1230.64	0.7193

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0035
 BTU/CU.FT IDEAL: 1233.5
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1237.8
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1216.3
 DRY BTU @ 15.025: 1262.6
 REAL SPECIFIC GRAVITY: 0.7215

CYLINDER #: 6175
 CYLINDER PRESSURE: 160 PSIG
 ANALYSIS DATE: 04/21/2021
 ANALYSIS TIME: 03:16:13 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: 04/22/2021

GC Method: C6+ Gas



MORNINGSTAR
WELL ANALYSIS COMPARISON

Lease: ANGEL PEAK 3E; TBG
Stn. No.:
Mtr. No.: 95391

TUBING
DK

04/22/2021
53400-11650

Smpl Date: 04/19/2021
Test Date: 04/21/2021
Run No: MS2021076

Nitrogen: 0.6866
CO2: 1.0132
Methane: 79.6816
Ethane: 10.8886
Propane: 4.4161
I-Butane: 0.7783
N-Butane: 1.2639
I-Pentane: 0.5063
N-Pentane: 0.4041
Hexane+: 0.3613

BTU: 1237.8
GPM: 19.0940
SPG: 0.7215

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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 25391

CONDITIONS OF APPROVAL

Operator:	MORNINGSTAR OPERATING LLC	400 W 7th St	Fort Worth, TX76102	OGRID:	330132	Action Number:	25391	Action Type:	GAS ANALYSIS
OCD Reviewer	Condition								
mkuehling	None								