



Well Name: ANGEL PEAK #1; BHD

API #: 3004506792

Source: BRADENHEAD

Sample Type: GAS

Analysis No: HS2021141

Cust No: 35825-13820

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: ANGEL PEAK #1; BHD

County/State: SAN JUAN NM

Location:

Lease/PA/CA:

Formation: DK

Cust. Stn. No.: 3004506792

Source: BRADENHEAD

Well Flowing: N

Pressure: 43 PSIG

Flow Temp: 69 DEG. F

Ambient Temp: 69 DEG. F

Flow Rate: MCF/D

Sample Method:

Sample Date: 07/16/2021

Sample Time: 7.40 AM

Sampled By: JR S.

Sampled by (CO): HILCORP

Heat Trace: AREA 6 / RUN 0602

Remarks: N

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4553	0.4565	0.0500	0.00	0.0044
CO2	1.3552	1.3587	0.2320	0.00	0.0206
Methane	78.2818	78.4820	13.3200	790.65	0.4336
Ethane	11.1024	11.1308	2.9800	196.48	0.1153
Propane	4.4966	4.5081	1.2430	113.14	0.0685
Iso-Butane	0.8501	0.8523	0.2790	27.64	0.0171
N-Butane	1.2902	1.2935	0.4080	42.09	0.0259
I-Pentane	0.5974	0.5989	0.2190	23.90	0.0149
N-Pentane	0.5094	0.5107	0.1850	20.42	0.0127
Hexane Plus	1.0616	1.0643	0.4750	55.96	0.0351
Total	100.0000	100.2558	19.3910	1270.28	0.7480

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0039
 BTU/CU.FT IDEAL: 1273.2
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1278.1
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1255.9
 DRY BTU @ 15.025: 1303.7
 REAL SPECIFIC GRAVITY: 0.7505

CYLINDER #: 4121
 CYLINDER PRESSURE: 41 PSIG
 ANALYSIS DATE: 07/26/2021
 ANALYSIS TIME: 08:04:26 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: 08/02/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: ANGEL PEAK #1; BHD
Stn. No.: 3004506792
Mtr. No.:

BRADENHEAD
DK

08/02/2021
35825-13820

Smpl Date: 07/16/2021
Test Date: 07/26/2021
Run No: HS2021141

Nitrogen: 0.4553
CO2: 1.3552
Methane: 78.2818
Ethane: 11.1024
Propane: 4.4966
I-Butane: 0.8501
N-Butane: 1.2902
I-Pentane: 0.5974
N-Pentane: 0.5094
Hexane+: 1.0616

BTU: 1278.1
GPM: 19.3910
SPG: 0.7505



Well Name: ANGEL PEAK #1; CSG

API #: 3004506792

Source: CASING

Sample Type: GAS

Analysis No: HS2021142

Cust No: 35825-13825

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: ANGEL PEAK #1; CSG

County/State: SAN JUAN NM

Location:

Lease/PA/CA:

Formation: DK

Cust. Stn. No.: 3004506792

Source: CASING

Well Flowing: N

Pressure: 92 PSIG

Flow Temp: 69 DEG. F

Ambient Temp: 69 DEG. F

Flow Rate: MCF/D

Sample Method:

Sample Date: 07/16/2021

Sample Time: 7.30 AM

Sampled By: JR S.

Sampled by (CO): HILCORP

Heat Trace: AREA 6 / RUN 0602

Remarks: N

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4548	0.4566	0.0500	0.00	0.0044
CO2	1.3543	1.3595	0.2320	0.00	0.0206
Methane	78.1109	78.4127	13.2900	788.92	0.4327
Ethane	11.0868	11.1296	2.9760	196.20	0.1151
Propane	4.4962	4.5136	1.2430	113.13	0.0685
Iso-Butane	0.8529	0.8562	0.2800	27.74	0.0171
N-Butane	1.2971	1.3021	0.4100	42.32	0.0260
I-Pentane	0.6049	0.6072	0.2220	24.20	0.0151
N-Pentane	0.5197	0.5217	0.1890	20.83	0.0129
Hexane Plus	1.2224	1.2271	0.5470	64.43	0.0405
Total	100.0000	100.3863	19.4390	1277.77	0.7528

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0039
 BTU/CU.FT IDEAL: 1280.7
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1285.7
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1263.3
 DRY BTU @ 15.025: 1311.4
 REAL SPECIFIC GRAVITY: 0.7555

CYLINDER #: 6092
 CYLINDER PRESSURE: 85 PSIG
 ANALYSIS DATE: 07/26/2021
 ANALYSIS TIME: 07:53:30 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: 08/02/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: ANGEL PEAK #1; CSG
Stn. No.: 3004506792
Mtr. No.:

CASING
DK

08/02/2021
35825-13825

Smpl Date: 07/16/2021
Test Date: 07/26/2021
Run No: HS2021142

Nitrogen: 0.4548
CO2: 1.3543
Methane: 78.1109
Ethane: 11.0868
Propane: 4.4962
I-Butane: 0.8529
N-Butane: 1.2971
I-Pentane: 0.6049
N-Pentane: 0.5197
Hexane+: 1.2224

BTU: 1285.7
GPM: 19.4390
SPG: 0.7555



Well Name: ANGEL PEAK #1; TBG

API #: 3004506792

Source: TUBING

Sample Type: GAS

Analysis No: HS2021143

Cust No: 35825-13830

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: ANGEL PEAK #1; TBG

County/State: SAN JUAN NM

Location:

Lease/PA/CA:

Formation: DK

Cust. Stn. No.: 3004506792

Source: TUBING

Well Flowing: N

Pressure: 75 PSIG

Flow Temp: 69 DEG. F

Ambient Temp: 69 DEG. F

Flow Rate: MCF/D

Sample Method: Purge & Fill

Sample Date: 07/16/2021

Sample Time: 7.00 AM

Sampled By: JR S.

Sampled by (CO): HILCORP

Heat Trace: AREA 6 / RUN 0602

Remarks: N

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4760	0.4728	0.0530	0.00	0.0046
CO2	1.3588	1.3498	0.2330	0.00	0.0206
Methane	78.2579	77.7384	13.3140	790.40	0.4335
Ethane	11.3382	11.2629	3.0430	200.65	0.1177
Propane	4.5534	4.5232	1.2590	114.57	0.0693
Iso-Butane	0.8138	0.8084	0.2670	26.46	0.0163
N-Butane	1.2469	1.2386	0.3940	40.68	0.0250
I-Pentane	0.4865	0.4833	0.1790	19.46	0.0121
N-Pentane	0.3501	0.3478	0.1270	14.03	0.0087
Hexane Plus	1.1184	1.1110	0.5010	58.95	0.0370
Total	100.0000	99.3362	19.3700	1265.22	0.7450

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0038
 BTU/CU.FT IDEAL: 1268.1
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1273.0
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1250.8
 DRY BTU @ 15.025: 1298.5
 REAL SPECIFIC GRAVITY: 0.7475

CYLINDER #: 6218
 CYLINDER PRESSURE: 72 PSIG
 ANALYSIS DATE: 07/23/2021
 ANALYSIS TIME: 04:25:45 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: 08/02/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: ANGEL PEAK #1; TBG
Stn. No.: 3004506792
Mtr. No.:

TUBING
DK

08/02/2021
35825-13830

Smpl Date: 07/16/2021
Test Date: 07/23/2021
Run No: HS2021143

Nitrogen: 0.4760
CO2: 1.3588
Methane: 78.2579
Ethane: 11.3382
Propane: 4.5534
I-Butane: 0.8138
N-Butane: 1.2469
I-Pentane: 0.4865
N-Pentane: 0.3501
Hexane+: 1.1184

BTU: 1273.0
GPM: 19.3700
SPG: 0.7475

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 40081

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 40081
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	gas appears to be the same on production casing and bradenhead	8/6/2021