



Well Name: SANDIA FEDERAL #1; BHD
 API #: 3004509126
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: HS20230078
 Cust No: 35825-14955

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: SANDIA FEDERAL #1; BHD
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: 3004509126

Source: BRADENHEAD
 Well Flowing: Y
 Pressure: 24 PSIG
 Flow Temp: DEG. F
 Ambient Temp: 83 DEG. F
 Flow Rate: 9 MCF/D
 Sample Method:
 Sample Date: 06/22/2023
 Sample Time: 11.45 AM
 Sampled By: JAI RASCON
 Sampled by (CO): HILCORP

AREA 7 / RUN 701

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3815	0.3728	0.0420	0.00	0.0037
CO2	1.6475	1.6099	0.2820	0.00	0.0250
Methane	82.4430	80.5616	14.0220	832.67	0.4567
Ethane	8.0241	7.8410	2.1530	142.00	0.0833
Propane	3.8735	3.7851	1.0710	97.46	0.0590
Iso-Butane	0.7314	0.7147	0.2400	23.78	0.0147
N-Butane	1.2060	1.1785	0.3810	39.34	0.0242
I-Pentane	0.3931	0.3841	0.1440	15.73	0.0098
N-Pentane	0.3723	0.3638	0.1350	14.92	0.0093
Hexane Plus	0.9276	0.9064	0.4150	48.89	0.0307
Total	100.0000	97.7179	18.8850	1214.81	0.7163

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0035
 BTU/CU.FT IDEAL: 1217.6
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1221.9
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1200.6
 DRY BTU @ 15.025: 1246.4
 REAL SPECIFIC GRAVITY: 0.7185

CYLINDER #: 031
 CYLINDER PRESSURE: 21 PSIG
 ANALYSIS DATE: 06/28/2023
 ANALYSIS TIME: 09:05:07 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: 07/07/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: SANDIA FEDERAL #1; BHD
Stn. No.: 3004509126
Mtr. No.:

BRADENHEAD

07/07/2023
35825-14955

Smpl Date: 06/22/2023
Test Date: 06/28/2023
Run No: HS20230078

Nitrogen: 0.3815

CO2: 1.6475

Methane: 82.4430

Ethane: 8.0241

Propane: 3.8735

I-Butane: 0.7314

N-Butane: 1.2060

I-Pentane: 0.3931

N-Pentane: 0.3723

Hexane+: 0.9276

BTU: 1221.9

GPM: 18.8850

SPG: 0.7185



Well Name: SANDIA FEDERAL #1; CSG
 API #: 3004509126
 Source: CASING
 Sample Type: GAS
 Analysis No: HS20230079
 Cust No: 35825-14960

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: SANDIA FEDERAL #1; CSG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: 3004509126

Source: CASING
 Well Flowing: Y
 Pressure: 80 PSIG
 Flow Temp: DEG. F
 Ambient Temp: 83 DEG. F
 Flow Rate: 9 MCF/D
 Sample Method:
 Sample Date: 06/22/2023
 Sample Time: 11.50 AM
 Sampled By: JAI RASCON
 Sampled by (CO): HILCORP

AREA 7 / RUN 701

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3636	0.3695	0.0400	0.00	0.0035
CO2	1.6204	1.6465	0.2770	0.00	0.0246
Methane	82.8359	84.1695	14.0890	836.64	0.4588
Ethane	7.7951	7.9206	2.0910	137.95	0.0809
Propane	3.6784	3.7376	1.0170	92.55	0.0560
Iso-Butane	0.7272	0.7389	0.2390	23.65	0.0146
N-Butane	1.2361	1.2560	0.3910	40.33	0.0248
I-Pentane	0.3843	0.3905	0.1410	15.38	0.0096
N-Pentane	0.3687	0.3746	0.1340	14.78	0.0092
Hexane Plus	0.9903	1.0062	0.4430	52.20	0.0328
Total	100.0000	101.6099	18.8620	1213.47	0.7148

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0035
 BTU/CU.FT IDEAL: 1216.3
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1220.6
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1199.4
 DRY BTU @ 15.025: 1245.0
 REAL SPECIFIC GRAVITY: 0.7171

CYLINDER #: 1371
 CYLINDER PRESSURE: 77 PSIG
 ANALYSIS DATE: 06/28/2023
 ANALYSIS TIME: 08:56:43 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: 07/07/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: SANDIA FEDERAL #1; CSG
Stn. No.: 3004509126
Mtr. No.:

CASING

07/07/2023
35825-14960

Smpl Date: 06/22/2023
Test Date: 06/28/2023
Run No: HS20230079

Nitrogen: 0.3636
CO2: 1.6204
Methane: 82.8359
Ethane: 7.7951
Propane: 3.6784
I-Butane: 0.7272
N-Butane: 1.2361
I-Pentane: 0.3843
N-Pentane: 0.3687
Hexane+: 0.9903

BTU: 1220.6
GPM: 18.8620
SPG: 0.7171



Well Name: SANDIA FEDERAL #1; TBG
 API #: 3004509126
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS20230080
 Cust No: 35825-14965

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: SANDIA FEDERAL #1; TBG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: 3004509126

Source: TUBING
 Well Flowing: Y
 Pressure: 80 PSIG
 Flow Temp: DEG. F
 Ambient Temp: 83 DEG. F
 Flow Rate: 9 MCF/D
 Sample Method:
 Sample Date: 06/22/2023
 Sample Time: 12.00 PM
 Sampled By: JAI RASCON
 Sampled by (CO): HILCORP

AREA 7 / RUN 701

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3648	0.3706	0.0400	0.00	0.0035
CO2	1.8036	1.8322	0.3090	0.00	0.0274
Methane	82.6653	83.9756	14.0600	834.92	0.4579
Ethane	7.3189	7.4349	1.9640	129.52	0.0760
Propane	4.3046	4.3728	1.1900	108.31	0.0655
Iso-Butane	0.8112	0.8241	0.2660	26.38	0.0163
N-Butane	0.9743	0.9897	0.3080	31.78	0.0196
I-Pentane	0.3899	0.3961	0.1430	15.60	0.0097
N-Pentane	0.3968	0.4031	0.1440	15.91	0.0099
Hexane Plus	0.9706	0.9860	0.4340	51.16	0.0321
Total	100.0000	101.5851	18.8580	1213.58	0.7179

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0035
 BTU/CU.FT IDEAL: 1216.4
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1220.7
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1199.5
 DRY BTU @ 15.025: 1245.1
 REAL SPECIFIC GRAVITY: 0.7201

CYLINDER #: 113
 CYLINDER PRESSURE: 77 PSIG
 ANALYSIS DATE: 06/28/2023
 ANALYSIS TIME: 09:16:13 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: 07/07/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: SANDIA FEDERAL #1; TBG
Stn. No.: 3004509126
Mtr. No.:

TUBING

07/07/2023
35825-14965

Smpl Date: 06/22/2023
Test Date: 06/28/2023
Run No: HS20230080

Nitrogen: 0.3648
CO2: 1.8036
Methane: 82.6653
Ethane: 7.3189
Propane: 4.3046
I-Butane: 0.8112
N-Butane: 0.9743
I-Pentane: 0.3899
N-Pentane: 0.3968
Hexane+: 0.9706

BTU: 1220.7
GPM: 18.8580
SPG: 0.7201

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1625 N. French Dr., Hobbs, NM 88240
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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 237115

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 237115
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	same gas all strings	9/22/2023