



Well Name: FEDERAL GAS COM H 3;
 API #: 30-045-31769
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: HS20240141
 Cust No: 35825-15940

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: FEDERAL GAS COM H 3; BHD
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: 30-045-31769
 85833

Source: BRADENHEAD
 Well Flowing: N
 Pressure: PSIG
 Flow Temp: DEG. F
 Ambient Temp: 81 DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 06/25/2024
 Sample Time: 10.15 AM
 Sampled By: WAYNE JOHNSON
 Sampled by (CO): HILCORP

AREA 2 / RUN 0209

Heat Trace:
 Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	3.1495	3.1109	0.3470	0.00	0.0305
CO2	0.0164	0.0162	0.0030	0.00	0.0002
Methane	92.4505	91.3171	15.7040	933.75	0.5121
Ethane	3.0370	2.9998	0.8140	53.75	0.0315
Propane	0.6948	0.6863	0.1920	17.48	0.0106
Iso-Butane	0.2885	0.2850	0.0950	9.38	0.0058
N-Butane	0.1480	0.1462	0.0470	4.83	0.0030
I-Pentane	0.0663	0.0655	0.0240	2.65	0.0017
N-Pentane	0.0335	0.0331	0.0120	1.34	0.0008
Hexane Plus	0.1155	0.1141	0.0520	6.09	0.0038
Total	100.0000	98.7742	17.2900	1029.27	0.6000

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0022
 BTU/CU.FT IDEAL: 1031.7
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1033.9
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1015.9
 DRY BTU @ 15.025: 1054.6
 REAL SPECIFIC GRAVITY: 0.6011

CYLINDER #: 8005
 CYLINDER PRESSURE: 21 PSIG
 ANALYSIS DATE: 06/26/2024
 ANALYSIS TIME: 03:54:38 PM
 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: 06/28/2024

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	FEDERAL GAS COM H 3; BHD	BRADENHEAD	06/28/2024
Stn. No.:	30-045-31769		35825-15940
Mtr. No.:	85833		

Smpl Date: 06/25/2024
Test Date: 06/26/2024
Run No: HS20240141

Nitrogen: 3.1495
CO2: 0.0164
Methane: 92.4505
Ethane: 3.0370
Propane: 0.6948
I-Butane: 0.2885
N-Butane: 0.1480
I-Pentane: 0.0663
N-Pentane: 0.0335
Hexane+: 0.1155

BTU: 1033.9
GPM: 17.2900
SPG: 0.6011



Well Name: FEDERAL GAS COM H 3;
 API #: 30-045-31769
 Source: CASING
 Sample Type: GAS
 Analysis No: HS20240142
 Cust No: 35825-15935

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: FEDERAL GAS COM H 3; CSG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: 30-045-31769
 85833
 AREA 2 / RUN 0209
 Heat Trace:
 Remarks: PRESSURED WITH HELIUM TO 30 LBS.

Source: CASING
 Well Flowing: N
 Pressure: PSIG
 Flow Temp: DEG. F
 Ambient Temp: 81 DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 06/25/2024
 Sample Time: 10.15 AM
 Sampled By: WAYNE JOHNSON
 Sampled by (CO): HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.6579	0.3287	0.0730	0.00	0.0064
CO2	0.7087	0.3541	0.1210	0.00	0.0108
Methane	98.3200	49.1247	16.6970	993.03	0.5446
Ethane	0.2776	0.1387	0.0740	4.91	0.0029
Propane	0.0200	0.0100	0.0060	0.50	0.0003
Iso-Butane	0.0104	0.0052	0.0030	0.34	0.0002
N-Butane	0.0034	0.0017	0.0010	0.11	0.0001
I-Pentane	0.0020	0.0010	0.0010	0.08	0.0000
N-Pentane	0.0000	0.0000	0.0000	0.00	0.0000
Hexane Plus	0.0000	0.0000	0.0000	0.00	0.0000
Total	100.0000	49.9641	16.9760	998.98	0.5652

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.002
 BTU/CU.FT IDEAL: 1001.3
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1003.3
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 985.8
 DRY BTU @ 15.025: 1023.4
 REAL SPECIFIC GRAVITY: 0.5661

CYLINDER #: 2163
 CYLINDER PRESSURE: 14 PSIG
 ANALYSIS DATE: 06/26/2024
 ANALYSIS TIME: 04:05:30 PM
 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: 06/28/2024

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	FEDERAL GAS COM H 3; CSG	CASING	06/28/2024
Stn. No.:	30-045-31769		35825-15935
Mtr. No.:	85833		

Smpl Date: 06/25/2024
Test Date: 06/26/2024
Run No: HS20240142

Nitrogen: 0.6579
CO2: 0.7087
Methane: 98.3200
Ethane: 0.2776
Propane: 0.0200
I-Butane: 0.0104
N-Butane: 0.0034
I-Pentane: 0.0020
N-Pentane: 0.0000
Hexane+: 0.0000

BTU: 1003.3
GPM: 16.9760
SPG: 0.5661



Well Name: FEDERAL GAS COM H 3;
 API #: 30-045-31769
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS20240143
 Cust No: 35825-15945

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	TUBING
Well Name:	FEDERAL GAS COM H 3; TBG	Well Flowing:	N
County/State:	SAN JUAN NM	Pressure:	PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:		Ambient Temp:	81 DEG. F
Formation:		Flow Rate:	MCF/D
Cust. Stn. No.:	30-045-31769	Sample Method:	Purge & Fill
	85833	Sample Date:	06/25/2024
	AREA 2 / RUN 0209	Sample Time:	10.15 AM
Heat Trace:		Sampled By:	WAYNE JOHNSON
Remarks:	PRESSURED WITH HELIUM TO 30 LBS.	Sampled by (CO):	HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	59.6799	15.0406	6.5700	0.00	0.5772
CO2	0.1480	0.0373	0.0250	0.00	0.0022
Methane	39.3824	9.9252	6.6810	397.76	0.2181
Ethane	0.1258	0.0317	0.0340	2.23	0.0013
Propane	0.0361	0.0091	0.0100	0.91	0.0005
Iso-Butane	0.0048	0.0012	0.0020	0.16	0.0001
N-Butane	0.0147	0.0037	0.0050	0.48	0.0003
I-Pentane	0.0063	0.0016	0.0020	0.25	0.0002
N-Pentane	0.0048	0.0012	0.0020	0.19	0.0001
Hexane Plus	0.5972	0.1505	0.2670	31.48	0.0198
Total	100.0000	25.2021	13.5980	433.46	0.8199

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0009	CYLINDER #:	2143
BTU/CU.FT IDEAL:	434.5	CYLINDER PRESSURE:	PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	434.8	ANALYSIS DATE:	06/26/2024
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	427.2	ANALYSIS TIME:	03:46:15 PM
DRY BTU @ 15.025:	443.5	ANALYSIS RUN BY:	ALEXIS MITCHELL
REAL SPECIFIC GRAVITY:	0.8203		

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: 06/28/2024

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	FEDERAL GAS COM H 3; TBG	TUBING	06/28/2024
Stn. No.:	30-045-31769		35825-15945
Mtr. No.:	85833		

Smpl Date:	06/25/2024
Test Date:	06/26/2024
Run No:	HS20240143
Nitrogen:	59.6799
CO2:	0.1480
Methane:	39.3824
Ethane:	0.1258
Propane:	0.0361
I-Butane:	0.0048
N-Butane:	0.0147
I-Pentane:	0.0063
N-Pentane:	0.0048
Hexane+:	0.5972
BTU:	434.8
GPM:	13.5980
SPG:	0.8203

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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 362055

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 362055
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	similar gas	8/27/2024