



Well Name: MCDANIEL B1; BHD

API #: 3004508232

Source: BRADENHEAD

Sample Type: GAS

Analysis No: HS20230110

Cust No: 35825-15090

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: MCDANIEL B1; BHD

County/State: NM

Location:

Lease/PA/CA:

Formation:

Cust. Stn. No.: 3004508232

WIH32640

AREA 7 / RUN 703

Heat Trace:

Remarks:

Source: BRADENHEAD

Well Flowing:

Pressure: 35 PSIG

Flow Temp: DEG. F

Ambient Temp: DEG. F

Flow Rate: MCF/D

Sample Method:

Sample Date: 07/11/2023

Sample Time: 11.38 AM

Sampled By: AUSTIN HAWS

Sampled by (CO): HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3174	0.3155	0.0350	0.00	0.0031
CO2	0.0160	0.0159	0.0030	0.00	0.0002
Methane	87.7206	87.1991	14.9120	885.98	0.4859
Ethane	6.3114	6.2739	1.6930	111.69	0.0655
Propane	2.9801	2.9624	0.8230	74.98	0.0454
Iso-Butane	0.6142	0.6105	0.2020	19.97	0.0123
N-Butane	0.8726	0.8674	0.2760	28.47	0.0175
I-Pentane	0.3520	0.3499	0.1290	14.08	0.0088
N-Pentane	0.2618	0.2602	0.0950	10.49	0.0065
Hexane Plus	0.5539	0.5506	0.2480	29.20	0.0183
Total	100.0000	99.4054	18.4160	1174.87	0.6636

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.003
 BTU/CU.FT IDEAL: 1177.6
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1181.1
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1160.5
 DRY BTU @ 15.025: 1204.8
 REAL SPECIFIC GRAVITY: 0.6653

CYLINDER #: 1830
 CYLINDER PRESSURE: 23 PSIG
 ANALYSIS DATE: 07/06/2023
 ANALYSIS TIME: 04:28:46 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: 07/11/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	MCDANIEL B1; BHD	BRADENHEAD	07/11/2023
Stn. No.:	3004508232		35825-15090
Mtr. No.:	WIH32640		

Smpl Date: 07/11/2023
Test Date: 07/06/2023
Run No: HS20230110

Nitrogen: 0.3174
CO2: 0.0160
Methane: 87.7206
Ethane: 6.3114
Propane: 2.9801
I-Butane: 0.6142
N-Butane: 0.8726
I-Pentane: 0.3520
N-Pentane: 0.2618
Hexane+: 0.5539

BTU: 1181.1
GPM: 18.4160
SPG: 0.6653



Well Name: MCDANIEL B1; CSG

API #: 3004508232

Source: CASING

Sample Type: GAS

Analysis No: HS20230111

Cust No: 35825-15095

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: MCDANIEL B1; CSG

County/State:

Location:

Lease/PA/CA:

Formation:

Cust. Stn. No.: 3004508232

WIH32640

AREA 7 / RUN 703

Heat Trace:

Remarks:

Source: CASING

Well Flowing:

Pressure: 136 PSIG

Flow Temp: DEG. F

Ambient Temp: DEG. F

Flow Rate: MCF/D

Sample Method:

Sample Date: 07/11/2023

Sample Time: 11.40 AM

Sampled By: AUSTIN HAWS

Sampled by (CO): HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4100	0.4104	0.0450	0.00	0.0040
CO2	1.3100	1.3114	0.2240	0.00	0.0199
Methane	75.9960	76.0766	12.9340	767.56	0.4209
Ethane	10.9475	10.9591	2.9390	193.74	0.1137
Propane	5.5614	5.5673	1.5380	139.93	0.0847
Iso-Butane	1.0132	1.0143	0.3330	32.95	0.0203
N-Butane	2.1588	2.1611	0.6830	70.43	0.0433
I-Pentane	0.9706	0.9716	0.3560	38.83	0.0242
N-Pentane	0.8995	0.9005	0.3270	36.06	0.0224
Hexane Plus	0.7330	0.7338	0.3280	38.64	0.0243
Total	100.0000	100.1061	19.7070	1318.13	0.7776

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0042
 BTU/CU.FT IDEAL: 1321.2
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1326.8
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1303.7
 DRY BTU @ 15.025: 1353.4
 REAL SPECIFIC GRAVITY: 0.7806

CYLINDER #: 1861
 CYLINDER PRESSURE: 133 PSIG
 ANALYSIS DATE: 07/06/2023
 ANALYSIS TIME: 04:20:49 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: 07/11/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	MCDANIEL B1; CSG	CASING	07/11/2023
Stn. No.:	3004508232		35825-15095
Mtr. No.:	WIH32640		

Smpl Date: 07/11/2023
Test Date: 07/06/2023
Run No: HS20230111

Nitrogen: 0.4100
CO2: 1.3100
Methane: 75.9960
Ethane: 10.9475
Propane: 5.5614
I-Butane: 1.0132
N-Butane: 2.1588
I-Pentane: 0.9706
N-Pentane: 0.8995
Hexane+: 0.7330

BTU: 1326.8
GPM: 19.7070
SPG: 0.7806



Well Name: MCDANIEL B1; TBG
 API #: 3004508232
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS20230112
 Cust No: 35825-15100

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: MCDANIEL B1; TBG
 County/State: NM
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: 3004508232
 WIH32640

Source: TUBING
 Well Flowing: Y
 Pressure: 120 PSIG
 Flow Temp: DEG. F
 Ambient Temp: DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 06/30/2023
 Sample Time: 11.42 AM
 Sampled By: AUSTIN HAWS
 Sampled by (CO): HILCORP

AREA 7 / RUN 703

Heat Trace:
 Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4313	0.4334	0.0480	0.00	0.0042
CO2	1.4100	1.4169	0.2410	0.00	0.0214
Methane	78.3054	78.6908	13.3210	790.88	0.4337
Ethane	11.0984	11.1530	2.9780	196.41	0.1152
Propane	5.0031	5.0277	1.3830	125.88	0.0762
Iso-Butane	0.7933	0.7972	0.2600	25.80	0.0159
N-Butane	1.4420	1.4491	0.4560	47.04	0.0289
I-Pentane	0.4915	0.4939	0.1800	19.66	0.0122
N-Pentane	0.4021	0.4041	0.1460	16.12	0.0100
Hexane Plus	0.6229	0.6260	0.2790	32.83	0.0206
Total	100.0000	100.4921	19.2920	1254.63	0.7385

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0037
 BTU/CU.FT IDEAL: 1257.5
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1262.2
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1240.2
 DRY BTU @ 15.025: 1287.5
 REAL SPECIFIC GRAVITY: 0.7409

CYLINDER #: 1402
 CYLINDER PRESSURE: 116 PSIG
 ANALYSIS DATE: 07/06/2023
 ANALYSIS TIME: 04:36:40 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: 07/11/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	MCDANIEL B1; TBG	TUBING	07/11/2023
Stn. No.:	3004508232		35825-15100
Mtr. No.:	WIH32640		

Smpl Date: 06/30/2023
Test Date: 07/06/2023
Run No: HS20230112

Nitrogen: 0.4313
CO2: 1.4100
Methane: 78.3054
Ethane: 11.0984
Propane: 5.0031
I-Butane: 0.7933
N-Butane: 1.4420
I-Pentane: 0.4915
N-Pentane: 0.4021
Hexane+: 0.6229

BTU: 1262.2
GPM: 19.2920
SPG: 0.7409

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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 238880

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 238880
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	not similar gas	9/22/2023