



Well Name: FOGELSON 8 #1; BHD

API #: 3004508533

Source: BRADENHEAD

Sample Type: GAS

Analysis No: HS20230121

Cust No: 35825-15105

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: FOGELSON 8 #1; BHD

County/State: NM

Location:

Lease/PA/CA:

Formation:

Cust. Stn. No.: 3004508533

Source: BRADENHEAD

Well Flowing:

Pressure: 80 PSIG

Flow Temp: DEG. F

Ambient Temp: DEG. F

Flow Rate: MCF/D

Sample Method: Purge & Fill

Sample Date: 07/14/2023

Sample Time: 8.31 AM

Sampled By: AUSTIN HAWS

Sampled by (CO): HILCORP

AREA 7 / RUN 0703

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.6509	0.6489	0.0720	0.00	0.0063
CO2	0.0052	0.0052	0.0010	0.00	0.0001
Methane	89.1741	88.9033	15.1550	900.66	0.4939
Ethane	6.2646	6.2456	1.6790	110.86	0.0650
Propane	2.4705	2.4630	0.6820	62.16	0.0376
Iso-Butane	0.4512	0.4498	0.1480	14.67	0.0091
N-Butane	0.5221	0.5205	0.1650	17.03	0.0105
I-Pentane	0.1874	0.1868	0.0690	7.50	0.0047
N-Pentane	0.0988	0.0985	0.0360	3.96	0.0025
Hexane Plus	0.1752	0.1747	0.0780	9.23	0.0058
Total	100.0000	99.6963	18.0850	1126.08	0.6354

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0027
 BTU/CU.FT IDEAL: 1128.7
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1131.7
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1112.0
 DRY BTU @ 15.025: 1154.4
 REAL SPECIFIC GRAVITY: 0.6369

CYLINDER #: 1440
 CYLINDER PRESSURE: 31 PSIG
 ANALYSIS DATE: 07/12/2023
 ANALYSIS TIME: 01:33:31 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: 07/17/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: FOGELSON 8 #1; BHD
Stn. No.: 3004508533
Mtr. No.:

BRADENHEAD

07/17/2023
35825-15105

Smpl Date: 07/14/2023
Test Date: 07/12/2023
Run No: HS20230121

Nitrogen: 0.6509
CO2: 0.0052
Methane: 89.1741
Ethane: 6.2646
Propane: 2.4705
I-Butane: 0.4512
N-Butane: 0.5221
I-Pentane: 0.1874
N-Pentane: 0.0988
Hexane+: 0.1752

BTU: 1131.7
GPM: 18.0850
SPG: 0.6369



Well Name: FOGELSON 8 #1; CSG

API #: 3004508533

Source: CASING

Sample Type: GAS

Analysis No: HS20230122

Cust No: 35825-15110

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: FOGELSON 8 #1; CSG

County/State:

Location:

Lease/PA/CA:

Formation:

Cust. Stn. No.: 3004508533

Source: CASING

Well Flowing: Y

Pressure: 65 PSIG

Flow Temp: DEG. F

Ambient Temp: DEG. F

Flow Rate: MCF/D

Sample Method: Purge & Fill

Sample Date: 07/06/2023

Sample Time: 8.32 AM

Sampled By: AUSTIN HAWS

Sampled by (CO): HILCORP

AREA 7 / RUN 0703

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.7975	0.7960	0.0880	0.00	0.0077
CO2	1.5508	1.5479	0.2660	0.00	0.0236
Methane	82.5634	82.4071	14.0420	833.89	0.4573
Ethane	7.8378	7.8230	2.1030	138.71	0.0814
Propane	3.4382	3.4317	0.9500	86.51	0.0523
Iso-Butane	0.6321	0.6309	0.2080	20.56	0.0127
N-Butane	1.1181	1.1160	0.3540	36.48	0.0224
I-Pentane	0.4474	0.4466	0.1640	17.90	0.0111
N-Pentane	0.4094	0.4086	0.1490	16.41	0.0102
Hexane Plus	1.2053	1.2030	0.5390	63.53	0.0399
Total	100.0000	99.8108	18.8630	1213.98	0.7187

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0035
 BTU/CU.FT IDEAL: 1216.8
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1221.1
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1199.9
 DRY BTU @ 15.025: 1245.6
 REAL SPECIFIC GRAVITY: 0.7209

CYLINDER #: 1434
 CYLINDER PRESSURE: 38 PSIG
 ANALYSIS DATE: 07/12/2023
 ANALYSIS TIME: 01:44:46 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: 07/17/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	FOGELSON 8 #1; CSG	CASING	07/17/2023
Stn. No.:	3004508533		35825-15110
Mtr. No.:			

Smpl Date: 07/06/2023
Test Date: 07/12/2023
Run No: HS20230122

Nitrogen: 0.7975
CO2: 1.5508
Methane: 82.5634
Ethane: 7.8378
Propane: 3.4382
I-Butane: 0.6321
N-Butane: 1.1181
I-Pentane: 0.4474
N-Pentane: 0.4094
Hexane+: 1.2053

BTU: 1221.1
GPM: 18.8630
SPG: 0.7209



Well Name: FOGELSON 8 #1; TBG

API #: 3004508533

Source: TUBING

Sample Type: GAS

Analysis No: HS20230123

Cust No: 35825-15115

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: FOGELSON 8 #1; TBG
 County/State: NM
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: 3004508533

Source: TUBING
 Well Flowing:
 Pressure: 60 PSIG
 Flow Temp: DEG. F
 Ambient Temp: DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 07/14/2023
 Sample Time: 8.37 AM
 Sampled By: AUSTIN HAWS
 Sampled by (CO): HILCORP

AREA 7 / RUN 0703

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2801	0.2808	0.0310	0.00	0.0027
CO2	1.6072	1.6115	0.2750	0.00	0.0244
Methane	83.7980	84.0210	14.2510	846.36	0.4642
Ethane	7.8088	7.8296	2.0950	138.19	0.0811
Propane	3.1552	3.1636	0.8720	79.39	0.0480
Iso-Butane	0.5738	0.5753	0.1880	18.66	0.0115
N-Butane	1.0561	1.0589	0.3340	34.45	0.0212
I-Pentane	0.4043	0.4054	0.1480	16.18	0.0101
N-Pentane	0.3587	0.3597	0.1300	14.38	0.0089
Hexane Plus	0.9578	0.9603	0.4280	50.49	0.0317
Total	100.0000	100.2661	18.7520	1198.09	0.7038

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0034
 BTU/CU.FT IDEAL: 1200.9
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1204.8
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1183.8
 DRY BTU @ 15.025: 1228.9
 REAL SPECIFIC GRAVITY: 0.7059

CYLINDER #: 2090
 CYLINDER PRESSURE: 48 PSIG
 ANALYSIS DATE: 07/12/2023
 ANALYSIS TIME: 01:53:06 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: 07/17/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: FOGELSON 8 #1; TBG
Stn. No.: 3004508533
Mtr. No.:

TUBING

07/17/2023
35825-15115

Smpl Date: 07/14/2023
Test Date: 07/12/2023
Run No: HS20230123

Nitrogen: 0.2801
CO2: 1.6072
Methane: 83.7980
Ethane: 7.8088
Propane: 3.1552
I-Butane: 0.5738
N-Butane: 1.0561
I-Pentane: 0.4043
N-Pentane: 0.3587
Hexane+: 0.9578

BTU: 1204.8
GPM: 18.7520
SPG: 0.7059

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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 243992

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 243992
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	bradenhead and production gas are similar	9/20/2023