



Well Name: HUBBELL 3E; BHD
 API #: 3004523881
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: HS20230161
 Cust No: 35825-12470

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: HUBBELL 3E; BHD
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: 3004523881

Source: BRADENHEAD
 Well Flowing: Y
 Pressure: PSIG
 Flow Temp: DEG. F
 Ambient Temp: DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 07/19/2023
 Sample Time: 11.00 AM
 Sampled By: CURT WILLIAMS
 Sampled by (CO): HILCORP

AREA 7 / RUN 704

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.7328	0.7331	0.0810	0.00	0.0071
CO2	0.0108	0.0108	0.0020	0.00	0.0002
Methane	88.7562	88.7954	15.0850	896.44	0.4916
Ethane	5.5844	5.5869	1.4970	98.83	0.0580
Propane	2.7450	2.7462	0.7580	69.07	0.0418
Iso-Butane	0.6356	0.6359	0.2090	20.67	0.0128
N-Butane	0.7489	0.7492	0.2370	24.43	0.0150
I-Pentane	0.2753	0.2754	0.1010	11.01	0.0069
N-Pentane	0.1862	0.1863	0.0680	7.46	0.0046
Hexane Plus	0.3248	0.3249	0.1450	17.12	0.0107
Total	100.0000	100.0441	18.1830	1145.03	0.6487

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0028
 BTU/CU.FT IDEAL: 1147.7
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1150.9
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1130.9
 DRY BTU @ 15.025: 1173.9
 REAL SPECIFIC GRAVITY: 0.6502

CYLINDER #: 064
 CYLINDER PRESSURE: 50 PSIG
 ANALYSIS DATE: 07/25/2023
 ANALYSIS TIME: 10:40:00 AM
 ANALYSIS RUN BY: ACEDA GOODNOH

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: 08/04/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: HUBBELL 3E; BHD
Stn. No.: 3004523881
Mtr. No.:

BRADENHEAD

08/04/2023
35825-12470

Smpl Date:	07/19/2023	07/24/2020
Test Date:	07/25/2023	07/30/2020
Run No:	HS20230161	HS200101
Nitrogen:	0.7328	1.2523
CO2:	0.0108	0.0237
Methane:	88.7562	88.2995
Ethane:	5.5844	5.4116
Propane:	2.7450	2.7492
I-Butane:	0.6356	0.6688
N-Butane:	0.7489	0.7433
I-Pentane:	0.2753	0.2895
N-Pentane:	0.1862	0.1900
Hexane+:	0.3248	0.3721
BTU:	1150.9	1147.4
GPM:	18.1830	18.1550
SPG:	0.6502	0.6538



Well Name: HUBBELL 3E; CSG

API #: 3004523881

Source: CASING

Sample Type: GAS

Analysis No: HS20230162

Cust No: 35825-12475

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: HUBBELL 3E; CSG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: 3004523881

Source: CASING
 Well Flowing: Y
 Pressure: PSIG
 Flow Temp: DEG. F
 Ambient Temp: DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 07/19/2023
 Sample Time: 11.00 AM
 Sampled By: CURT WILLIAMS
 Sampled by (CO): HILCORP

AREA 7 / RUN 704

Heat Trace:

Remarks:

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3862	0.3801	0.0430	0.00	0.0037
CO2	0.2474	0.2435	0.0420	0.00	0.0038
Methane	78.3406	77.1041	13.3300	791.24	0.4339
Ethane	11.1814	11.0049	3.0010	197.88	0.1161
Propane	5.5849	5.4967	1.5440	140.52	0.0850
Iso-Butane	1.0968	1.0795	0.3600	35.67	0.0220
N-Butane	1.2415	1.2219	0.3930	40.50	0.0249
I-Pentane	0.4715	0.4641	0.1730	18.86	0.0117
N-Pentane	0.3668	0.3610	0.1330	14.70	0.0091
Hexane Plus	1.0829	1.0658	0.4850	57.08	0.0358
Total	100.0000	98.4216	19.5040	1296.46	0.7462

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0039
 BTU/CU.FT IDEAL: 1299.5
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1304.5
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1281.8
 DRY BTU @ 15.025: 1330.6
 REAL SPECIFIC GRAVITY: 0.7488

CYLINDER #: 2143
 CYLINDER PRESSURE: 46 PSIG
 ANALYSIS DATE: 07/25/2023
 ANALYSIS TIME: 10:54:00 AM
 ANALYSIS RUN BY: ACEDA GOODNOH

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: 08/04/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	HUBBELL 3E; CSG	CASING	08/04/2023
Stn. No.:	3004523881		35825-12475
Mtr. No.:			

Smpl Date:	07/19/2023	07/24/2020
Test Date:	07/25/2023	07/30/2020
Run No:	HS20230162	HS200102
Nitrogen:	0.3862	0.3262
CO2:	0.2474	1.0417
Methane:	78.3406	78.8839
Ethane:	11.1814	9.4343
Propane:	5.5849	4.2780
I-Butane:	1.0968	0.9803
N-Butane:	1.2415	1.3602
I-Pentane:	0.4715	0.8229
N-Pentane:	0.3668	0.7145
Hexane+:	1.0829	2.1580
BTU:	1304.5	1331.7
GPM:	19.5040	19.6380
SPG:	0.7488	0.7787

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District III
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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 255470

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 255470
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	production and bradenhead gas does not appear to be the same. - possible fruitland water	9/15/2023