



Well Name: HOUCK COM 1; BHD
 API #: API #3004525797
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: HS20230011
 Cust No: 35825-12740

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	BRADENHEAD
Well Name:	HOUCK COM 1; BHD	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:		Ambient Temp:	DEG. F
Formation:	MV / DK	Flow Rate:	MCF/D
Cust. Stn. No.:	API #3004525797	Sample Method:	Purge & Fill
	95-917-01	Sample Date:	04/18/2023
	AREA 3 / RUN 306	Sample Time:	12.35 PM
Heat Trace:	N	Sampled By:	CHRSTOPHER V.
Remarks:	PRESSURED WITH HELIUM TO 30 LBS.	Sampled by (CO):	HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.7217	0.2825	0.0800	0.00	0.0070
CO2	0.0181	0.0071	0.0030	0.00	0.0003
Methane	89.2050	34.9193	15.1600	900.97	0.4941
Ethane	6.5835	2.5771	1.7650	116.51	0.0683
Propane	2.1198	0.8298	0.5850	53.34	0.0323
Iso-Butane	0.3983	0.1559	0.1310	12.95	0.0080
N-Butane	0.4138	0.1620	0.1310	13.50	0.0083
I-Pentane	0.1934	0.0757	0.0710	7.74	0.0048
N-Pentane	0.0802	0.0314	0.0290	3.21	0.0020
Hexane Plus	0.2662	0.1042	0.1190	14.03	0.0088
Total	100.0000	39.1450	18.0740	1122.25	0.6339

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0027	CYLINDER #:	110
BTU/CU.FT IDEAL:	1124.8	CYLINDER PRESSURE:	PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1127.9	ANALYSIS DATE:	04/20/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1108.3	ANALYSIS TIME:	08:46:52 AM
DRY BTU @ 15.025:	1150.5	ANALYSIS RUN BY:	ALEXIS MITCHELL
REAL SPECIFIC GRAVITY:	0.6354		

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: 04/21/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	HOUCK COM 1; BHD	BRADENHEAD	04/21/2023
Stn. No.:	API #3004525797	MV / DK	35825-12740
Mtr. No.:	95-917-01		

Smpl Date:	04/18/2023	07/31/2020
Test Date:	04/20/2023	08/06/2020
Run No:	HS20230011	HS200155
Nitrogen:	0.7217	0.6718
CO2:	0.0181	0.0103
Methane:	89.2050	88.1580
Ethane:	6.5835	6.9518
Propane:	2.1198	2.6359
I-Butane:	0.3983	0.4689
N-Butane:	0.4138	0.5584
I-Pentane:	0.1934	0.2144
N-Pentane:	0.0802	0.0975
Hexane+:	0.2662	0.2330
BTU:	1127.9	1143.8
GPM:	18.0740	18.1990
SPG:	0.6354	0.6449



Well Name: HOUCK COM 1; CSG

API #: API #3004525797

Source: CASING

Sample Type: GAS

Analysis No: HS20230010

Cust No: 35825-12745

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: HOUCK COM 1; CSG

County/State: SAN JUAN NM

Location:

Lease/PA/CA:

Formation: MV / DK

Cust. Stn. No.: API #3004525797
95-917-01

AREA 3 / RUN 306

Heat Trace: N

Remarks:

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: 04/18/2023

Sample Time: 12.35 PM

Sampled By: CHRISTOPHER V.

Sampled by (CO): HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2979	0.2995	0.0330	0.00	0.0029
CO2	0.0346	0.0348	0.0060	0.00	0.0005
Methane	84.4552	84.9087	14.3640	853.00	0.4678
Ethane	6.9575	6.9949	1.8670	123.13	0.0722
Propane	4.1641	4.1865	1.1510	104.77	0.0634
Iso-Butane	0.7754	0.7796	0.2550	25.22	0.0156
N-Butane	1.2754	1.2822	0.4030	41.61	0.0256
I-Pentane	0.4958	0.4985	0.1820	19.84	0.0124
N-Pentane	0.4272	0.4295	0.1550	17.13	0.0106
Hexane Plus	1.1169	1.1229	0.5000	58.87	0.0370
Total	100.0000	100.5371	18.9160	1243.55	0.7079

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0035
 BTU/CU.FT IDEAL: 1246.4
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1250.8
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1229.0
 DRY BTU @ 15.025: 1275.9
 REAL SPECIFIC GRAVITY: 0.7102

CYLINDER #: 2147
 CYLINDER PRESSURE: 62 PSIG
 ANALYSIS DATE: 04/20/2023
 ANALYSIS TIME: 08:53:58 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: 04/21/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	HOUCK COM 1; CSG	CASING	04/21/2023
Stn. No.:	API #3004525797	MV / DK	35825-12745
Mtr. No.:	95-917-01		

Smpl Date:	04/18/2023	07/31/2020
Test Date:	04/20/2023	08/06/2020
Run No:	HS20230010	HS200156
Nitrogen:	0.2979	0.3148
CO2:	0.0346	0.8339
Methane:	84.4552	82.9892
Ethane:	6.9575	7.1192
Propane:	4.1641	4.2810
I-Butane:	0.7754	0.7834
N-Butane:	1.2754	1.2807
I-Pentane:	0.4958	0.4900
N-Pentane:	0.4272	0.4200
Hexane+:	1.1169	1.4878
BTU:	1250.8	1261.6
GPM:	18.9160	19.0500
SPG:	0.7102	0.7302



Well Name: HOUCK COM 1; TBG
 API #: API #3004525797
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS20230009
 Cust No: 35825-12750

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: HOUCK COM 1; TBG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation: MV
 Cust. Stn. No.: API #3004525797
 95-917-01

Source: TUBING
 Well Flowing: Y
 Pressure: PSIG
 Flow Temp: DEG. F
 Ambient Temp: DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 04/18/2023
 Sample Time: 12.35 PM
 Sampled By: CHRISTOPHER V.
 Sampled by (CO): HILCORP

Heat Trace: AREA 3 / RUN 306

Remarks: N

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2273	0.2297	0.0250	0.00	0.0022
CO2	1.5073	1.5231	0.2580	0.00	0.0229
Methane	79.1178	79.9465	13.4590	799.09	0.4382
Ethane	9.9399	10.0440	2.6670	175.91	0.1032
Propane	4.9872	5.0394	1.3790	125.48	0.0759
Iso-Butane	1.0471	1.0581	0.3440	34.05	0.0210
N-Butane	1.5496	1.5658	0.4900	50.55	0.0311
I-Pentane	0.5675	0.5734	0.2080	22.71	0.0141
N-Pentane	0.4051	0.4093	0.1470	16.24	0.0101
Hexane Plus	0.6512	0.6580	0.2910	34.33	0.0216
Total	100.0000	101.0473	19.2680	1258.35	0.7404

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0037
 BTU/CU.FT IDEAL: 1261.3
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1265.9
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1243.9
 DRY BTU @ 15.025: 1291.3
 REAL SPECIFIC GRAVITY: 0.7428

CYLINDER #: 2128
 CYLINDER PRESSURE: 72 PSIG
 ANALYSIS DATE: 04/20/2023
 ANALYSIS TIME: 09:02:26 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: 04/21/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	HOUCK COM 1; TBG	TUBING	04/21/2023
Stn. No.:	API #3004525797	MV	35825-12750
Mtr. No.:	95-917-01		

Smpl Date:	04/18/2023	07/31/2020
Test Date:	04/20/2023	08/06/2020
Run No:	HS20230009	HS200157
Nitrogen:	0.2273	0.2375
CO2:	1.5073	1.4443
Methane:	79.1178	78.4691
Ethane:	9.9399	10.0985
Propane:	4.9872	5.2321
I-Butane:	1.0471	1.0598
N-Butane:	1.5496	1.5898
I-Pentane:	0.5675	0.5816
N-Pentane:	0.4051	0.4143
Hexane+:	0.6512	0.8730
BTU:	1265.9	1283.1
GPM:	19.2680	19.3880
SPG:	0.7428	0.7529

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
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 214022

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 214022
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	production casing and bradenhead similar	10/6/2023