



Well Name: HARE 19; BHD
 API #: API # 3004508121
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: HS2021084
 Cust No: 35825-13640

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	BRADENHEAD
Well Name:	HARE 19; BHD	Well Flowing:	N
County/State:	SAN JUAN NM	Pressure:	0 PSIG
Location:		Flow Temp:	50 DEG. F
Lease/PA/CA:		Ambient Temp:	44 DEG. F
Formation:		Flow Rate:	0 MCF/D
Cust. Stn. No.:	API # 3004508121	Sample Method:	Purge & Fill
		Sample Date:	04/29/2021
		Sample Time:	8.10 AM
	AREA 8 / RUN 0802	Sampled By:	TOMMY RICHARDSON
Heat Trace:	N	Sampled by (CO):	HILCORP
Remarks:	PRESSURED WITH HELIUM TO 30LBS.		

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.6981	0.6948	0.0770	0.00	0.0068
CO2	0.0099	0.0099	0.0020	0.00	0.0002
Methane	89.2881	88.8699	15.1740	901.81	0.4946
Ethane	6.0227	5.9945	1.6150	106.58	0.0625
Propane	2.5601	2.5481	0.7070	64.41	0.0390
Iso-Butane	0.5157	0.5133	0.1690	16.77	0.0103
N-Butane	0.5288	0.5263	0.1670	17.25	0.0106
I-Pentane	0.1358	0.1352	0.0500	5.43	0.0034
N-Pentane	0.0822	0.0818	0.0300	3.30	0.0020
Hexane Plus	0.1586	0.1579	0.0710	8.36	0.0052
Total	100.0000	99.5317	18.0620	1123.92	0.6346

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0027	CYLINDER #:	4132
BTU/CU.FT IDEAL:	1126.5	CYLINDER PRESSURE:	PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1129.6	ANALYSIS DATE:	05/06/2021
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1109.9	ANALYSIS TIME:	12:35:02 AM
DRY BTU @ 15.025:	1152.2	ANALYSIS RUN BY:	SHYANN GALLEGOS
REAL SPECIFIC GRAVITY:	0.6361		

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: 05/10/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	HARE 19; BHD	BRADENHEAD	05/10/2021
Stn. No.:	API # 3004508121		35825-13640
Mtr. No.:			

Smpl Date: 04/29/2021
Test Date: 05/06/2021
Run No: HS2021084

Nitrogen: 0.6981
CO2: 0.0099
Methane: 89.2881
Ethane: 6.0227
Propane: 2.5601
I-Butane: 0.5157
N-Butane: 0.5288
I-Pentane: 0.1358
N-Pentane: 0.0822
Hexane+: 0.1586

BTU: 1129.6
GPM: 18.0620
SPG: 0.6361



Well Name: HARE 19; TBG
 API #: API # 3004508121
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS2021086
 Cust No: 35825-13650

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	TUBING
Well Name:	HARE 19; TBG	Well Flowing:	N
County/State:	SAN JUAN NM	Pressure:	0 PSIG
Location:		Flow Temp:	50 DEG. F
Lease/PA/CA:		Ambient Temp:	44 DEG. F
Formation:		Flow Rate:	0 MCF/D
Cust. Stn. No.:	API # 3004508121	Sample Method:	Purge & Fill
		Sample Date:	04/29/2021
		Sample Time:	7.45 AM
	AREA 8 / RUN 0802	Sampled By:	TOMMY RICHARDSON
Heat Trace:	N	Sampled by (CO):	HILCORP
Remarks:	PRESSURED WITH HELIUM TO 30LBS.		

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5341	0.1742	0.0590	0.00	0.0052
CO2	1.6628	0.5423	0.2850	0.00	0.0253
Methane	81.0538	26.4341	13.7880	818.64	0.4490
Ethane	9.0776	2.9605	2.4360	160.65	0.0942
Propane	3.9027	1.2728	1.0790	98.20	0.0594
Iso-Butane	0.6415	0.2092	0.2110	20.86	0.0129
N-Butane	0.9830	0.3206	0.3110	32.07	0.0197
I-Pentane	0.3428	0.1118	0.1260	13.72	0.0085
N-Pentane	0.3100	0.1011	0.1130	12.43	0.0077
Hexane Plus	1.4917	0.4865	0.6680	78.63	0.0494
Total	100.0000	32.6131	19.0760	1235.19	0.7313

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0037	CYLINDER #:	6061
BTU/CU.FT IDEAL:	1238.0	CYLINDER PRESSURE:	PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1242.5	ANALYSIS DATE:	05/06/2021
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1220.9	ANALYSIS TIME:	12:05:46 AM
DRY BTU @ 15.025:	1267.4	ANALYSIS RUN BY:	SHYANN GALLEGOS
REAL SPECIFIC GRAVITY:	0.7336		

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: 05/10/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	HARE 19; TBG	TUBING	05/10/2021
Stn. No.:	API # 3004508121		35825-13650
Mtr. No.:			

Smpl Date: 04/29/2021
Test Date: 05/06/2021
Run No: HS2021086

Nitrogen: 0.5341
CO2: 1.6628
Methane: 81.0538
Ethane: 9.0776
Propane: 3.9027
I-Butane: 0.6415
N-Butane: 0.9830
I-Pentane: 0.3428
N-Pentane: 0.3100
Hexane+: 1.4917

BTU: 1242.5
GPM: 19.0760
SPG: 0.7336



Well Name: HARE 19; CSG
 API #: API # 3004508121
 Source: CASING
 Sample Type: GAS
 Analysis No: HS2021085
 Cust No: 35825-13645

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	CASING
Well Name:	HARE 19; CSG	Well Flowing:	N
County/State:	SAN JUAN NM	Pressure:	0 PSIG
Location:		Flow Temp:	50 DEG. F
Lease/PA/CA:		Ambient Temp:	45 DEG. F
Formation:		Flow Rate:	0 MCF/D
Cust. Stn. No.:	API # 3004508121	Sample Method:	Purge & Fill
		Sample Date:	04/29/2021
		Sample Time:	8.05 AM
	AREA 8 / RUN 0802	Sampled By:	TOMMY RICHARDSON
Heat Trace:	N	Sampled by (CO):	HILCORP
Remarks:	PRESSURED WITH HELIUM TO 30LBS.		

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	1.0256	0.3213	0.1130	0.00	0.0099
CO2	1.6283	0.5101	0.2790	0.00	0.0247
Methane	80.7868	25.3085	13.7420	815.95	0.4475
Ethane	9.0550	2.8367	2.4300	160.25	0.0940
Propane	3.8873	1.2178	1.0750	97.81	0.0592
Iso-Butane	0.6407	0.2007	0.2100	20.83	0.0129
N-Butane	0.9918	0.3107	0.3140	32.36	0.0199
I-Pentane	0.3473	0.1088	0.1270	13.90	0.0087
N-Pentane	0.3157	0.0989	0.1150	12.66	0.0079
Hexane Plus	1.3215	0.4140	0.5910	69.66	0.0437
Total	100.0000	31.3275	18.9960	1223.40	0.7283

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0036	CYLINDER #:	6029
BTU/CU.FT IDEAL:	1226.2	CYLINDER PRESSURE:	PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1230.7	ANALYSIS DATE:	05/06/2021
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1209.3	ANALYSIS TIME:	12:19:56 AM
DRY BTU @ 15.025:	1255.3	ANALYSIS RUN BY:	SHYANN GALLEGOS
REAL SPECIFIC GRAVITY:	0.7307		

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: 05/10/2021

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	HARE 19; CSG	CASING	05/10/2021
Stn. No.:	API # 3004508121		35825-13645
Mtr. No.:			

Smpl Date: 04/29/2021
Test Date: 05/06/2021
Run No: HS2021085

Nitrogen: 1.0256
CO2: 1.6283
Methane: 80.7868
Ethane: 9.0550
Propane: 3.8873
I-Butane: 0.6407
N-Butane: 0.9918
I-Pentane: 0.3473
N-Pentane: 0.3157
Hexane+: 1.3215

BTU: 1230.7
GPM: 18.9960
SPG: 0.7307

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 28288

CONDITIONS OF APPROVAL

Operator:	HILCORP ENERGY COMPANY	1111 Travis Street	Houston, TX77002	OGRID:	372171	Action Number:	28288	Action Type:	GAS ANALYSIS
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OCD Reviewer	Condition
mkuehling	None