



Well Name: HUBBLE #003P; BHD
 API #: 3004534196
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: HS20230150
 Cust No: 35825-15225

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: HUBBLE #003P; BHD
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: 3004534196

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: 07/17/2023
 Sample Time: 9.00 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	0.4356	0.4229	0.0480	0.00	0.0042
CO2	0.0100	0.0097	0.0020	0.00	0.0002
Methane	80.1058	77.7760	13.6240	809.07	0.4437
Ethane	10.2466	9.9486	2.7490	181.33	0.1064
Propane	6.1510	5.9721	1.7000	154.77	0.0936
Iso-Butane	1.1586	1.1249	0.3800	37.68	0.0233
N-Butane	1.1594	1.1257	0.3670	37.82	0.0233
I-Pentane	0.2917	0.2832	0.1070	11.67	0.0073
N-Pentane	0.1850	0.1796	0.0670	7.42	0.0046
Hexane Plus	0.2563	0.2488	0.1150	13.51	0.0085
Total	100.0000	97.0915	19.1590	1253.26	0.7150

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0035
 BTU/CU.FT IDEAL: 1256.2
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1260.6
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1238.7
 DRY BTU @ 15.025: 1285.8
 REAL SPECIFIC GRAVITY: 0.7172

CYLINDER #: 1091
 CYLINDER PRESSURE: 260 PSIG
 ANALYSIS DATE: 07/19/2023
 ANALYSIS TIME: 10:21:25 AM
 ANALYSIS RUN BY: SARAH BALLARD

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: 07/25/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: HUBBLE #003P; BHD
Stn. No.: 3004534196
Mtr. No.:

BRADENHEAD

07/25/2023
35825-15225

Smpl Date: 07/17/2023
Test Date: 07/19/2023
Run No: HS20230150

Nitrogen: 0.4356
CO2: 0.0100
Methane: 80.1058
Ethane: 10.2466
Propane: 6.1510
I-Butane: 1.1586
N-Butane: 1.1594
I-Pentane: 0.2917
N-Pentane: 0.1850
Hexane+: 0.2563

BTU: 1260.6
GPM: 19.1590
SPG: 0.7172



Well Name: HUBBLE 3P; INT
 API #: 3004534196
 Source: INTERMEDIATE CASING
 Sample Type: GAS
 Analysis No: HS20230152
 Cust No: 35825-15235

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	INTERMEDIATE CASING
Well Name:	HUBBLE 3P; INT	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:		Ambient Temp:	DEG. F
Formation:		Flow Rate:	MCF/D
Cust. Stn. No.:	3004534196	Sample Method:	Purge & Fill
		Sample Date:	07/17/2023
		Sample Time:	9.00 AM
		Sampled By:	CURT WILLIAMS
		Sampled by (CO):	HILCORP

Heat Trace: AREA 7 / RUN 704

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4231	0.4248	0.0470	0.00	0.0041
CO2	0.0050	0.0050	0.0010	0.00	0.0001
Methane	80.6960	81.0173	13.7250	815.03	0.4470
Ethane	10.0049	10.0447	2.6840	177.06	0.1039
Propane	5.9250	5.9486	1.6380	149.08	0.0902
Iso-Butane	1.1389	1.1434	0.3740	37.04	0.0229
N-Butane	1.1241	1.1286	0.3560	36.67	0.0226
I-Pentane	0.2888	0.2899	0.1060	11.55	0.0072
N-Pentane	0.1873	0.1880	0.0680	7.51	0.0047
Hexane Plus	0.2069	0.2077	0.0930	10.91	0.0068
Total	100.0000	100.3980	19.0920	1244.84	0.7093

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0035
 BTU/CU.FT IDEAL: 1247.7
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1252.1
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1230.3
 DRY BTU @ 15.025: 1277.2
 REAL SPECIFIC GRAVITY: 0.7116

CYLINDER #: 2004
 CYLINDER PRESSURE: 350 PSIG
 ANALYSIS DATE: 07/19/2023
 ANALYSIS TIME: 10:02:16 AM
 ANALYSIS RUN BY: SARAH BALLARD

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: 07/25/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	HUBBLE 3P; INT	INTERMEDIATE CASING	07/25/2023
Stn. No.:	3004534196		35825-15235
Mtr. No.:			

Smpl Date: 07/17/2023
Test Date: 07/19/2023
Run No: HS20230152

Nitrogen: 0.4231
CO2: 0.0050
Methane: 80.6960
Ethane: 10.0049
Propane: 5.9250
I-Butane: 1.1389
N-Butane: 1.1241
I-Pentane: 0.2888
N-Pentane: 0.1873
Hexane+: 0.2069

BTU: 1252.1
GPM: 19.0920
SPG: 0.7116



Well Name: HUBBLE 3P; CSG

API #: 3004534196

Source: CASING

Sample Type: GAS

Analysis No: HS20230151

Cust No: 35825-15230

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: HUBBLE 3P; CSG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: 3004534196

Source: CASING
 Well Flowing:
 Pressure: PSIG
 Flow Temp: DEG. F
 Ambient Temp: DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 07/17/2023
 Sample Time: 9.00 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	1.2549	1.2364	0.1390	0.00	0.0121
CO2	0.7462	0.7352	0.1280	0.00	0.0113
Methane	77.0347	75.8999	13.1110	778.05	0.4267
Ethane	9.8701	9.7247	2.6500	174.67	0.1025
Propane	4.9802	4.9068	1.3770	125.31	0.0758
Iso-Butane	1.1336	1.1169	0.3720	36.86	0.0227
N-Butane	1.8611	1.8337	0.5890	60.71	0.0373
I-Pentane	0.8964	0.8832	0.3290	35.86	0.0223
N-Pentane	0.7242	0.7135	0.2640	29.03	0.0180
Hexane Plus	1.4986	1.4765	0.6710	78.99	0.0496
Total	100.0000	98.5268	19.6300	1319.49	0.7785

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0042
 BTU/CU.FT IDEAL: 1322.5
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1328.1
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1305.0
 DRY BTU @ 15.025: 1354.7
 REAL SPECIFIC GRAVITY: 0.7815

CYLINDER #: 59
 CYLINDER PRESSURE: 40 PSIG
 ANALYSIS DATE: 07/19/2023
 ANALYSIS TIME: 09:54:45 AM
 ANALYSIS RUN BY: SARAH BALLARD

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: 07/25/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: HUBBLE 3P; CSG
Stn. No.: 3004534196
Mtr. No.:

CASING

07/25/2023
35825-15230

Smpl Date: 07/17/2023
Test Date: 07/19/2023
Run No: HS20230151

Nitrogen: 1.2549
CO2: 0.7462
Methane: 77.0347
Ethane: 9.8701
Propane: 4.9802
I-Butane: 1.1336
N-Butane: 1.8611
I-Pentane: 0.8964
N-Pentane: 0.7242
Hexane+: 1.4986

BTU: 1328.1
GPM: 19.6300
SPG: 0.7815



Well Name: HUBBLE 3P; TBG
 API #: 3004534196
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS20230153
 Cust No: 35825-15240

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: HUBBLE 3P; TBG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: 3004534196

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: 07/17/2023
 Sample Time: 9.00 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	0.2737	0.2721	0.0300	0.00	0.0026
CO2	1.2134	1.2062	0.2080	0.00	0.0184
Methane	79.4390	78.9668	13.5150	802.33	0.4400
Ethane	10.3043	10.2431	2.7660	182.36	0.1070
Propane	4.5239	4.4970	1.2510	113.83	0.0689
Iso-Butane	0.8386	0.8336	0.2750	27.27	0.0168
N-Butane	1.3070	1.2992	0.4140	42.64	0.0262
I-Pentane	0.5100	0.5070	0.1870	20.40	0.0127
N-Pentane	0.4020	0.3996	0.1460	16.11	0.0100
Hexane Plus	1.1881	1.1810	0.5320	62.63	0.0393
Total	100.0000	99.4056	19.3240	1267.57	0.7421

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0038
 BTU/CU.FT IDEAL: 1270.5
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1275.3
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1253.1
 DRY BTU @ 15.025: 1300.8
 REAL SPECIFIC GRAVITY: 0.7446

CYLINDER #: 147
 CYLINDER PRESSURE: 33 PSIG
 ANALYSIS DATE: 07/19/2023
 ANALYSIS TIME: 09:46:16 AM
 ANALYSIS RUN BY: SARAH BALLARD

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: 07/25/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	HUBBLE 3P; TBG	TUBING	07/25/2023
Stn. No.:	3004534196		35825-15240
Mtr. No.:			

Smpl Date: 07/17/2023
Test Date: 07/19/2023
Run No: HS20230153

Nitrogen: 0.2737
CO2: 1.2134
Methane: 79.4390
Ethane: 10.3043
Propane: 4.5239
I-Butane: 0.8386
N-Butane: 1.3070
I-Pentane: 0.5100
N-Pentane: 0.4020
Hexane+: 1.1881

BTU: 1275.3
GPM: 19.3240
SPG: 0.7446

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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 246041

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 246041
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	same gas bradenhead and intermediate	9/18/2023