



OCD Received
6/18/2020

Well Name: HUBBARD 1; BHD
API #: API #3004512203
Source: BRADENHEAD
Sample Type: GAS
Analysis No: HS200050
Cust No: 35825-12250

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: HUBBARD 1; BHD
County/State: SAN JUAN NM
Location:
Lease/PA/CA: SF078312
Formation: MV
Cust. Stn. No.: API #3004512203
3412630

Source: BRADENHEAD
Well Flowing: N
Pressure: PSIG
Flow Temp: DEG. F
Ambient Temp: 62 DEG. F
Flow Rate: 60 MCF/D
Sample Method: Purge & Fill
Sample Date: 06/09/2020
Sample Time: 11.35 AM
Sampled By: BRIAN HARVEY
Sampled by (CO): HILCORP

Heat Trace: AREA 1 / RUN 106

Remarks: N

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.9850	0.9810	0.1090	0.00	0.0095
CO2	0.4252	0.4235	0.0730	0.00	0.0065
Methane	86.5613	86.2087	14.7150	874.27	0.4795
Ethane	5.1926	5.1715	1.3930	91.89	0.0539
Propane	4.4390	4.4209	1.2260	111.69	0.0676
Iso-Butane	1.0131	1.0090	0.3320	32.94	0.0203
N-Butane	0.8223	0.8190	0.2600	26.83	0.0165
I-Pentane	0.2569	0.2559	0.0940	10.28	0.0064
N-Pentane	0.1418	0.1412	0.0520	5.68	0.0035
Hexane Plus	0.1628	0.1621	0.0730	8.58	0.0054
Total	100.0000	99.5928	18.3270	1162.17	0.6691

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.003
BTU/CU.FT IDEAL: 1164.9
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1168.4
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1148.1
DRY BTU @ 15.025: 1191.8
REAL SPECIFIC GRAVITY: 0.6708

CYLINDER #: 7037
CYLINDER PRESSURE: 64 PSIG
ANALYSIS DATE: 06/16/2020
ANALYSIS TIME: 09:25:09 AM
ANALYSIS RUN BY: SHYANN ELLEDGE

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: 06/17/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: HUBBARD 1; BHD
Stn. No.: API #3004512203
Mtr. No.: 3412630

BRADENHEAD
MV

06/17/2020
35825-12250

Smpl Date: 06/09/2020
Test Date: 06/16/2020
Run No: HS200050

Nitrogen: 0.9850
CO2: 0.4252
Methane: 86.5613
Ethane: 5.1926
Propane: 4.4390
I-Butane: 1.0131
N-Butane: 0.8223
I-Pentane: 0.2569
N-Pentane: 0.1418
Hexane+: 0.1628

BTU: 1168.4
GPM: 18.3270
SPG: 0.6708



Well Name: HUBBARD 1; CSG
 API #: API #3004512203
 Source: CASING
 Sample Type: GAS
 Analysis No: HS200051
 Cust No: 35825-12255

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: HUBBARD 1; CSG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA: SF078312
 Formation: MV
 Cust. Stn. No.: API #3004512203
 3412630

Source: CASING
 Well Flowing: Y
 Pressure: 72 PSIG
 Flow Temp: 65 DEG. F
 Ambient Temp: 62 DEG. F
 Flow Rate: 60 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 06/09/2020
 Sample Time: 12.20 PM
 Sampled By: BRIAN HARVEY
 Sampled by (CO): HILCORP

Heat Trace: AREA 1 / RUN 106
 N
 Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2803	0.2759	0.0310	0.00	0.0027
CO2	1.1056	1.0881	0.1890	0.00	0.0168
Methane	80.5400	79.2660	13.7000	813.45	0.4461
Ethane	10.3469	10.1832	2.7760	183.11	0.1074
Propane	4.4034	4.3337	1.2170	110.79	0.0670
Iso-Butane	0.6672	0.6566	0.2190	21.70	0.0134
N-Butane	1.1791	1.1604	0.3730	38.47	0.0237
I-Pentane	0.3905	0.3843	0.1430	15.62	0.0097
N-Pentane	0.2909	0.2863	0.1060	11.66	0.0072
Hexane Plus	0.7961	0.7835	0.3560	41.96	0.0263
Total	100.0000	98.4180	19.1100	1236.77	0.7205

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0036
 BTU/CU.FT IDEAL: 1239.6
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1244.1
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1222.5
 DRY BTU @ 15.025: 1269.0
 REAL SPECIFIC GRAVITY: 0.7228

CYLINDER #: 4077
 CYLINDER PRESSURE: 100 PSIG
 ANALYSIS DATE: 06/16/2020
 ANALYSIS TIME: 09:40:36 AM
 ANALYSIS RUN BY: SHYANN ELLEDGE

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: 06/17/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: HUBBARD 1; CSG
Stn. No.: API #3004512203
Mtr. No.: 3412630

CASING
MV

06/17/2020
35825-12255

Smpl Date: 06/09/2020
Test Date: 06/16/2020
Run No: HS200051

Nitrogen: 0.2803
CO2: 1.1056
Methane: 80.5400
Ethane: 10.3469
Propane: 4.4034
I-Butane: 0.6672
N-Butane: 1.1791
I-Pentane: 0.3905
N-Pentane: 0.2909
Hexane+: 0.7961

BTU: 1244.1
GPM: 19.1100
SPG: 0.7228



Well Name: HUBBARD 1; TBG
 API #: API #3004512203
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS200052
 Cust No: 35825-12260

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: HUBBARD 1; TBG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA: SF078312
 Formation: MV
 Cust. Stn. No.: API #3004512203
 3412630

Source: TUBING
 Well Flowing: Y
 Pressure: 72 PSIG
 Flow Temp: 65 DEG. F
 Ambient Temp: 62 DEG. F
 Flow Rate: 60 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 06/09/2020
 Sample Time: 12.42 PM
 Sampled By: BRIAN HARVEY
 Sampled by (CO): HILCORP

Heat Trace: AREA 1 / RUN 106
 N
 Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2741	0.2697	0.0300	0.00	0.0027
CO2	1.0957	1.0781	0.1880	0.00	0.0166
Methane	79.9260	78.6447	13.5970	807.25	0.4427
Ethane	10.3686	10.2024	2.7830	183.49	0.1076
Propane	4.5431	4.4703	1.2560	114.31	0.0692
Iso-Butane	0.7123	0.7009	0.2340	23.16	0.0143
N-Butane	1.3044	1.2835	0.4130	42.55	0.0262
I-Pentane	0.4119	0.4053	0.1510	16.48	0.0103
N-Pentane	0.3237	0.3185	0.1180	12.98	0.0081
Hexane Plus	1.0402	1.0235	0.4650	54.83	0.0344
Total	100.0000	98.3969	19.2350	1255.06	0.7320

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0037
 BTU/CU.FT IDEAL: 1258.0
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1262.6
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1240.6
 DRY BTU @ 15.025: 1287.9
 REAL SPECIFIC GRAVITY: 0.7345

CYLINDER #: 4011
 CYLINDER PRESSURE: 60 PSIG
 ANALYSIS DATE: 06/16/2020
 ANALYSIS TIME: 09:52:08 AM
 ANALYSIS RUN BY: SHYANN ELLEDGE

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: 06/17/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	HUBBARD 1; TBG	TUBING	06/17/2020
Stn. No.:	API #3004512203	MV	35825-12260
Mtr. No.:	3412630		

Smpl Date:	06/09/2020
Test Date:	06/16/2020
Run No:	HS200052
Nitrogen:	0.2741
CO2:	1.0957
Methane:	79.9260
Ethane:	10.3686
Propane:	4.5431
I-Butane:	0.7123
N-Butane:	1.3044
I-Pentane:	0.4119
N-Pentane:	0.3237
Hexane+:	1.0402
BTU:	1262.6
GPM:	19.2350
SPG:	0.7345