



OCD Received
6/18/2020

Well Name: NEWBERRY A4; BHD
API #: API #3004512185
Source: BRADENHEAD
Sample Type: GAS
Analysis No: HS200053
Cust No: 35825-12265

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: NEWBERRY A4; BHD
County/State: SAN JUAN NM
Location:
Lease/PA/CA: NMFS078146
Formation: DK
Cust. Stn. No.: API #3004512185
7538301

Source: BRADENHEAD
Well Flowing: Y
Pressure: 39 PSIG
Flow Temp: DEG. F
Ambient Temp: 70 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 06/09/2020
Sample Time: 1.42 PM
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	0.3353	0.3278	0.0370	0.00	0.0032
CO2	0.0160	0.0156	0.0030	0.00	0.0002
Methane	79.9447	78.1606	13.5970	807.44	0.4428
Ethane	10.2944	10.0647	2.7620	182.18	0.1069
Propane	6.5508	6.4046	1.8110	164.82	0.0997
Iso-Butane	0.9966	0.9744	0.3270	32.41	0.0200
N-Butane	1.2029	1.1761	0.3800	39.24	0.0241
I-Pentane	0.2431	0.2377	0.0890	9.73	0.0061
N-Pentane	0.1797	0.1757	0.0650	7.20	0.0045
Hexane Plus	0.2365	0.2312	0.1060	12.47	0.0078
Total	100.0000	97.7684	19.1770	1255.49	0.7154

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0035
BTU/CU.FT IDEAL: 1258.4
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1262.8
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1240.8
DRY BTU @ 15.025: 1288.1
REAL SPECIFIC GRAVITY: 0.7176

CYLINDER #: 4181
CYLINDER PRESSURE: 20 PSIG
ANALYSIS DATE: 06/16/2020
ANALYSIS TIME: 10:06:59 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: NEWBERRY A4; BHD
Stn. No.: API #3004512185
Mtr. No.: 7538301

BRADENHEAD
DK

06/17/2020
35825-12265

Smpl Date: 06/09/2020
Test Date: 06/16/2020
Run No: HS200053

Nitrogen: 0.3353
CO2: 0.0160
Methane: 79.9447
Ethane: 10.2944
Propane: 6.5508
I-Butane: 0.9966
N-Butane: 1.2029
I-Pentane: 0.2431
N-Pentane: 0.1797
Hexane+: 0.2365

BTU: 1262.8
GPM: 19.1770
SPG: 0.7176



Well Name: NEWBERRY A4; CSG
 API #: API #3004512185
 Source: CASING
 Sample Type: GAS
 Analysis No: HS200054
 Cust No: 35825-12270

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: NEWBERRY A4; CSG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA: NMFS078301
 Formation: DK
 Cust. Stn. No.: API #3004512185
 7538301

Source: CASING
 Well Flowing: Y
 Pressure: 44 PSIG
 Flow Temp: 82 DEG. F
 Ambient Temp: 70 DEG. F
 Flow Rate: 247 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 06/09/2020
 Sample Time: 2.07 PM
 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	0.3052	0.3040	0.0340	0.00	0.0030
CO2	2.2650	2.2559	0.3880	0.00	0.0344
Methane	86.7511	86.4038	14.7470	876.19	0.4805
Ethane	6.2237	6.1988	1.6690	110.14	0.0646
Propane	2.3252	2.3159	0.6420	58.50	0.0354
Iso-Butane	0.4927	0.4907	0.1620	16.02	0.0099
N-Butane	0.4971	0.4951	0.1570	16.22	0.0100
I-Pentane	0.2591	0.2581	0.0950	10.37	0.0065
N-Pentane	0.1715	0.1708	0.0620	6.87	0.0043
Hexane Plus	0.7094	0.7066	0.3170	37.39	0.0235
Total	100.0000	99.5997	18.2730	1131.70	0.6720

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.003
 BTU/CU.FT IDEAL: 1134.3
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1137.6
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1117.8
 DRY BTU @ 15.025: 1160.4
 REAL SPECIFIC GRAVITY: 0.6737

CYLINDER #: 7011
 CYLINDER PRESSURE: 60 PSIG
 ANALYSIS DATE: 06/16/2020
 ANALYSIS TIME: 10:19:59 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: NEWBERRY A4; CSG
Stn. No.: API #3004512185
Mtr. No.: 7538301

CASING
DK

06/17/2020
35825-12270

Smpl Date: 06/09/2020
Test Date: 06/16/2020
Run No: HS200054

Nitrogen: 0.3052
CO2: 2.2650
Methane: 86.7511
Ethane: 6.2237
Propane: 2.3252
I-Butane: 0.4927
N-Butane: 0.4971
I-Pentane: 0.2591
N-Pentane: 0.1715
Hexane+: 0.7094

BTU: 1137.6
GPM: 18.2730
SPG: 0.6737



Well Name: NEWBERRY A4; TBG
 API #: API #3004512185
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS200055
 Cust No: 35825-12275

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: NEWBERRY A4; TBG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA: NMFS078146
 Formation: DK
 Cust. Stn. No.: API #3004512185
 7538301

Source: TUBING
 Well Flowing: Y
 Pressure: 44 PSIG
 Flow Temp: 82 DEG. F
 Ambient Temp: 70 DEG. F
 Flow Rate: 205 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 06/09/2020
 Sample Time: 2.12 PM
 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	0.3151	0.3070	0.0350	0.00	0.0030
CO2	2.2683	2.2098	0.3880	0.00	0.0345
Methane	85.6790	83.4676	14.5670	865.36	0.4746
Ethane	7.1592	6.9744	1.9200	126.70	0.0743
Propane	2.0132	1.9612	0.5560	50.65	0.0307
Iso-Butane	0.5055	0.4925	0.1660	16.44	0.0101
N-Butane	0.6039	0.5883	0.1910	19.70	0.0121
I-Pentane	0.2957	0.2881	0.1080	11.83	0.0074
N-Pentane	0.1983	0.1932	0.0720	7.95	0.0049
Hexane Plus	0.9618	0.9370	0.4300	50.70	0.0318
Total	100.0000	97.4191	18.4330	1149.32	0.6835

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0031
 BTU/CU.FT IDEAL: 1152.0
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1155.6
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1135.5
 DRY BTU @ 15.025: 1178.7
 REAL SPECIFIC GRAVITY: 0.6853

CYLINDER #: 4125
 CYLINDER PRESSURE: 49 PSIG
 ANALYSIS DATE: 06/16/2020
 ANALYSIS TIME: 10:33:35 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: NEWBERRY A4; TBG
Stn. No.: API #3004512185
Mtr. No.: 7538301

TUBING
DK

06/17/2020
35825-12275

Smpl Date: 06/09/2020
Test Date: 06/16/2020
Run No: HS200055

Nitrogen: 0.3151
CO2: 2.2683
Methane: 85.6790
Ethane: 7.1592
Propane: 2.0132
I-Butane: 0.5055
N-Butane: 0.6039
I-Pentane: 0.2957
N-Pentane: 0.1983
Hexane+: 0.9618

BTU: 1155.6
GPM: 18.4330
SPG: 0.6853