



2030 Afton Place
Farmington, NM 87401
(505) 325-6622

Analysis No: HS190157
Cust No: 35825-11570

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: CREEK 1; BHD
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation: CHACRA
Cust. Stn. No.: 86-764
API # 3003920339
AREA 12 / RUN 1208
Heat Trace: N
Remarks:

Source: BRADENHEAD
Well Flowing: Y
Pressure: 60 PSIG
Flow Temp: 80 DEG. F
Ambient Temp: 88 DEG. F
Flow Rate: 31.2 MCF/D
Sample Method: Purge & Fill
Sample Date: 07/08/2019
Sample Time: 1.30 PM
Sampled By: BRENT HOTTELL
Sampled by (CO): HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	2.7745	2.7271	0.3060	0.00	0.0268
CO2	0.0092	0.0090	0.0020	0.00	0.0001
Methane	90.0126	88.4743	15.2990	909.13	0.4986
Ethane	3.7780	3.7134	1.0130	66.86	0.0392
Propane	0.3215	0.3160	0.0890	8.09	0.0049
Iso-Butane	0.2672	0.2626	0.0880	8.69	0.0054
N-Butane	0.3453	0.3394	0.1090	11.26	0.0069
I-Pentane	0.8970	0.8817	0.3290	35.89	0.0223
N-Pentane	0.5016	0.4930	0.1820	20.11	0.0125
Hexane Plus	1.0931	1.0744	0.4890	57.62	0.0362
Total	100.0000	98.2909	17.9060	1117.64	0.6530

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0028
BTU/CU.FT IDEAL: 1120.2
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1123.3
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1103.8
DRY BTU @ 15.025: 1145.8
REAL SPECIFIC GRAVITY: 0.6545

CYLINDER #: 6229
CYLINDER PRESSURE: 60 PSIG
ANALYSIS DATE: 07/15/2019
ANALYSIS TIME: 02:16:00 PM
ANALYSIS RUN BY: PATRICIA KING

GPM, BTU, and SPG calculations as shown above are based on current GPA constants.

GPA Standard: GPA-2261

GC: Danalyzer Model 500

GC Method: C6+ Gas

Last Cal/Verify: 07/18/2019



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: CREEK 1; BHD
Stn. No.: 86-764
Mtr. No.: API # 3003920339

BRADENHEAD
CHACRA

07/18/2019
35825-11570

Smpl Date: 07/08/2019
Test Date: 07/15/2019
Run No: HS190157
Nitrogen: 2.7745
CO2: 0.0092
Methane: 90.0126
Ethane: 3.7780
Propane: 0.3215
I-Butane: 0.2672
N-Butane: 0.3453
I-Pentane: 0.8970
N-Pentane: 0.5016
Hexane+: 1.0931
BTU: 1123.3
GPM: 17.9060
SPG: 0.6545



2030 Afton Place
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Analysis No: HS190159
Cust No: 35825-11580

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: CREEK 1; TBG
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation: CHACRA
Cust. Stn. No.: 86-764
API # 3003920339

Source: TUBING
Well Flowing: Y
Pressure: 84 PSIG
Flow Temp: 83 DEG. F
Ambient Temp: 88 DEG. F
Flow Rate: 31.2 MCF/D
Sample Method: Purge & Fill
Sample Date: 07/08/2019
Sample Time: 1.15 PM
Sampled By: BRENT HOTTELL
Sampled by (CO): HILCORP

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1970	0.1942	0.0220	0.00	0.0019
CO2	2.3126	2.2796	0.3960	0.00	0.0351
Methane	88.4060	87.1436	15.0230	892.90	0.4897
Ethane	6.3773	6.2862	1.7100	112.86	0.0662
Propane	1.7749	1.7496	0.4900	44.66	0.0270
Iso-Butane	0.2054	0.2025	0.0670	6.68	0.0041
N-Butane	0.3488	0.3438	0.1100	11.38	0.0070
I-Pentane	0.0977	0.0963	0.0360	3.91	0.0024
N-Pentane	0.0709	0.0699	0.0260	2.84	0.0018
Hexane Plus	0.2094	0.2064	0.0940	11.04	0.0069
Total	100.0000	98.5721	17.9740	1086.26	0.6422

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0026
BTU/CU.FT IDEAL: 1088.8
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1091.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1072.6
DRY BTU @ 15.025: 1113.5
REAL SPECIFIC GRAVITY: 0.6436

CYLINDER #: 4058
CYLINDER PRESSURE: 75 PSIG
ANALYSIS DATE: 07/15/2019
ANALYSIS TIME: 02:08:00 PM
ANALYSIS RUN BY: PATRICIA KING

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: 07/18/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: CREEK 1; TBG
Stn. No.: 86-764
Mtr. No.: API # 3003920339

TUBING
CHACRA

07/18/2019
35825-11580

Smpl Date: 07/08/2019
Test Date: 07/15/2019
Run No: HS190159
Nitrogen: 0.1970
CO2: 2.3126
Methane: 88.4060
Ethane: 6.3773
Propane: 1.7749
I-Butane: 0.2054
N-Butane: 0.3488
I-Pentane: 0.0977
N-Pentane: 0.0709
Hexane+: 0.2094
BTU: 1091.6
GPM: 17.9740
SPG: 0.6436



2030 Afton Place
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Analysis No: HS190158
Cust No: 35825-11575

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: CREEK 1; CSG
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation: CHACRA
Cust. Stn. No.: 86-764
API # 3003920339
AREA 12 / RUN 1208
Heat Trace: N
Remarks:

Source: CASING
Well Flowing: Y
Pressure: 86 PSIG
Flow Temp: 83 DEG. F
Ambient Temp: 88 DEG. F
Flow Rate: 31.2 MCF/D
Sample Method: Purge & Fill
Sample Date: 07/08/2019
Sample Time: 1.30 PM
Sampled By: BRENT HOTTELL
Sampled by (CO): HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1409	0.1379	0.0160	0.00	0.0014
CO2	2.0899	2.0448	0.3580	0.00	0.0318
Methane	87.6373	85.7473	14.8950	885.14	0.4854
Ethane	6.8870	6.7385	1.8470	121.88	0.0715
Propane	1.9989	1.9558	0.5520	50.29	0.0304
Iso-Butane	0.1965	0.1923	0.0640	6.39	0.0039
N-Butane	0.4059	0.3971	0.1280	13.24	0.0081
I-Pentane	0.1054	0.1031	0.0390	4.22	0.0026
N-Pentane	0.0930	0.0910	0.0340	3.73	0.0023
Hexane Plus	0.4452	0.4356	0.1990	23.47	0.0147
Total	100.0000	97.8434	18.1320	1108.35	0.6522

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0028
BTU/CU.FT IDEAL: 1110.9
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1114.0
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1094.6
DRY BTU @ 15.025: 1136.3
REAL SPECIFIC GRAVITY: 0.6538

CYLINDER #: 6081
CYLINDER PRESSURE: 75 PSIG
ANALYSIS DATE: 07/15/2019
ANALYSIS TIME: 02:22:23 PM
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: 07/18/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: CREEK 1; CSG
Stn. No.: 86-764
Mtr. No.: API # 3003920339

CASING
CHACRA

07/18/2019
35825-11575

Smpl Date: 07/08/2019
Test Date: 07/15/2019
Run No: HS190158
Nitrogen: 0.1409
CO2: 2.0899
Methane: 87.6373
Ethane: 6.8870
Propane: 1.9989
I-Butane: 0.1965
N-Butane: 0.4059
I-Pentane: 0.1054
N-Pentane: 0.0930
Hexane+: 0.4452
BTU: 1114.0
GPM: 18.1320
SPG: 0.6538