



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

Analysis No: HS190055
Cust No: 35825-11145

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 28-5 UNIT 64; BHD
County/State: RIO ARRIBA NM
Location: 28-028N-005W
Lease/PA/CA:
Formation: DK
Cust. Stn. No.: 7352701
API # 3003907321

Source: BRADENHEAD
Well Flowing: N
Pressure: 26 PSIA
Flow Temp: DEG. F
Ambient Temp: 72 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 05/13/2019
Sample Time: 12.30 PM
Sampled By: STEPHEN MCANULTY
Sampled by (CO): HILCORP

AREA 13 / RUN 1309

Heat Trace: N

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3554	0.3498	0.0390	0.00	0.0034
CO2	0.0226	0.0222	0.0040	0.00	0.0003
Methane	88.2765	86.8907	15.0050	891.59	0.4890
Ethane	6.2828	6.1842	1.6850	111.19	0.0652
Propane	2.6433	2.6018	0.7300	66.51	0.0402
Iso-Butane	0.5767	0.5676	0.1890	18.75	0.0116
N-Butane	0.7932	0.7807	0.2510	25.88	0.0159
I-Pentane	0.3097	0.3048	0.1140	12.39	0.0077
N-Pentane	0.2213	0.2178	0.0800	8.87	0.0055
Hexane Plus	0.5185	0.5104	0.2320	27.33	0.0172
Total	100.0000	98.4300	18.3290	1162.51	0.6561

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0029
BTU/CU.FT IDEAL: 1165.2
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1168.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1148.3
DRY BTU @ 15.025: 1192.0
REAL SPECIFIC GRAVITY: 0.6577

CYLINDER #: 6129
CYLINDER PRESSURE: 25 PSIG
ANALYSIS DATE: 05/17/2019
ANALYSIS TIME: 11:17:28 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: 07/02/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: SAN JUAN 28-5 UNIT 64; BHD
Stn. No.: 7352701
Mtr. No.: API # 3003907321

BRADENHEAD
DK

07/02/2019
35825-11145

Smpl Date: 05/13/2019
Test Date: 05/17/2019
Run No: HS190055

Nitrogen: 0.3554
CO2: 0.0226
Methane: 88.2765
Ethane: 6.2828
Propane: 2.6433
I-Butane: 0.5767
N-Butane: 0.7932
I-Pentane: 0.3097
N-Pentane: 0.2213
Hexane+: 0.5185

BTU: 1168.6
GPM: 18.3290
SPG: 0.6577



2030 Afton Place
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Analysis No: HS190057
Cust No: 35825-11155

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 28-5 UNIT 64; INT
County/State: RIO ARRIBA NM
Location: 28-028N-005W
Lease/PA/CA:
Formation: DK
Cust. Stn. No.: 7352701
API # 3003907321

Source: INTERMEDIATE
Well Flowing: N
Pressure: 113 PSIA
Flow Temp: DEG. F
Ambient Temp: 72 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 05/13/2019
Sample Time: 12.40 PM
Sampled By: STEPHEN MCANULTY
Sampled by (CO): HILCORP

Heat Trace: AREA 13 / RUN 1309

Remarks: N

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2559	0.2559	0.0280	0.00	0.0025
CO2	0.0034	0.0034	0.0010	0.00	0.0001
Methane	88.1842	88.2006	14.9910	890.66	0.4885
Ethane	6.2561	6.2573	1.6780	110.71	0.0650
Propane	2.6593	2.6598	0.7350	66.91	0.0405
Iso-Butane	0.5939	0.5940	0.1950	19.31	0.0119
N-Butane	0.8328	0.8330	0.2630	27.17	0.0167
I-Pentane	0.3454	0.3455	0.1270	13.82	0.0086
N-Pentane	0.2532	0.2532	0.0920	10.15	0.0063
Hexane Plus	0.6158	0.6159	0.2750	32.46	0.0204
Total	100.0000	100.0186	18.3850	1171.20	0.6603

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.003
BTU/CU.FT IDEAL: 1173.9
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1177.4
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1156.9
DRY BTU @ 15.025: 1201.0
REAL SPECIFIC GRAVITY: 0.6621

CYLINDER #: 6153
CYLINDER PRESSURE: 108 PSIG
ANALYSIS DATE: 05/17/2019
ANALYSIS TIME: 11:54:21 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

GC Method: C6+ Gas

Last Cal/Verify: 07/02/2019



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: SAN JUAN 28-5 UNIT 64; INT
Stn. No.: 7352701
Mtr. No.: API # 3003907321

INTERMEDIATE
DK

07/02/2019
35825-11155

Smpl Date: 05/13/2019
Test Date: 05/17/2019
Run No: HS190057

Nitrogen: 0.2559
CO2: 0.0034
Methane: 88.1842
Ethane: 6.2561
Propane: 2.6593
I-Butane: 0.5939
N-Butane: 0.8328
I-Pentane: 0.3454
N-Pentane: 0.2532
Hexane+: 0.6158

BTU: 1177.4
GPM: 18.3850
SPG: 0.6621



2030 Afton Place
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Analysis No: HS190056
Cust No: 35825-11150

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 28-5 UNIT 64; CSG
County/State: RIO ARRIBA NM
Location: 28-028N-005W
Lease/PA/CA:
Formation: DK
Cust. Stn. No.: 7352701
API # 3003907321

Source: CASING
Well Flowing: N
Pressure: 125 PSIA
Flow Temp: DEG. F
Ambient Temp: 72 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 05/13/2019
Sample Time: 12.48 PM
Sampled By: STEPHEN MCANULTY
Sampled by (CO): HILCORP

Heat Trace: N
Remarks: AREA 13 / RUN 1309

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1548	0.1517	0.0170	0.00	0.0015
CO2	1.0550	1.0340	0.1810	0.00	0.0160
Methane	79.9445	78.3520	13.6010	807.44	0.4428
Ethane	9.1802	8.9973	2.4640	162.46	0.0953
Propane	4.4185	4.3305	1.2220	111.17	0.0673
Iso-Butane	1.0407	1.0200	0.3420	33.84	0.0209
N-Butane	1.7568	1.7218	0.5560	57.31	0.0353
I-Pentane	1.4788	1.4493	0.5430	59.17	0.0368
N-Pentane	0.5321	0.5215	0.1940	21.33	0.0133
Hexane Plus	0.4386	0.4299	0.1960	23.12	0.0145
Total	100.0000	98.0080	19.3160	1275.84	0.7437

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0038
BTU/CU.FT IDEAL: 1278.8
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1283.7
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1261.4
DRY BTU @ 15.025: 1309.4
REAL SPECIFIC GRAVITY: 0.7462

CYLINDER #: 4247
CYLINDER PRESSURE: 116 PSIG
ANALYSIS DATE: 05/17/2019
ANALYSIS TIME: 11:36:31 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

GC Method: C6+ Gas

Last Cal/Verify: 07/02/2019



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: SAN JUAN 28-5 UNIT 64; CSG
Stn. No.: 7352701
Mtr. No.: API # 3003907321

CASING
DK

07/02/2019
35825-11150

Smpl Date: 05/13/2019
Test Date: 05/17/2019
Run No: HS190056

Nitrogen: 0.1548
CO2: 1.0550
Methane: 79.9445
Ethane: 9.1802
Propane: 4.4185
I-Butane: 1.0407
N-Butane: 1.7568
I-Pentane: 1.4788
N-Pentane: 0.5321
Hexane+: 0.4386

BTU: 1283.7
GPM: 19.3160
SPG: 0.7462



2030 Afton Place
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Analysis No: HS190058
Cust No: 35825-11160

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 28-5 UNIT 64; TBG
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation: DK
Cust. Stn. No.: 7352701
API #3003907321

Source: TUBING
Well Flowing: N
Pressure: 129 PSIA
Flow Temp: DEG. F
Ambient Temp: 72 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 05/13/2019
Sample Time: 1.00 PM
Sampled By: STEPHEN MCANULTY
Sampled by (CO): HILCORP

AREA 13 / RUN 1309

Heat Trace: N

Remarks:

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1635	0.1622	0.0180	0.00	0.0016
CO2	1.5074	1.4954	0.2580	0.00	0.0229
Methane	87.9062	87.2090	14.9420	887.85	0.4869
Ethane	6.2783	6.2285	1.6830	111.11	0.0652
Propane	2.1395	2.1225	0.5910	53.83	0.0326
Iso-Butane	0.5027	0.4987	0.1650	16.35	0.0101
N-Butane	0.5746	0.5700	0.1820	18.75	0.0115
I-Pentane	0.2530	0.2510	0.0930	10.12	0.0063
N-Pentane	0.1689	0.1676	0.0610	6.77	0.0042
Hexane Plus	0.5059	0.5019	0.2260	26.67	0.0167
Total	100.0000	99.2068	18.2190	1131.44	0.6580

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0029
BTU/CU.FT IDEAL: 1134.1
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1137.4
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1117.6
DRY BTU @ 15.025: 1160.2
REAL SPECIFIC GRAVITY: 0.6597

CYLINDER #: 6131
CYLINDER PRESSURE: 123 PSIG
ANALYSIS DATE: 05/17/2019
ANALYSIS TIME: 01:38:14 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: 07/02/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: SAN JUAN 28-5 UNIT 64; TBG
Stn. No.: 7352701
Mtr. No.: API #3003907321

TUBING
DK

07/02/2019
35825-11160

Smpl Date: 05/13/2019
Test Date: 05/17/2019
Run No: HS190058
Nitrogen: 0.1635
CO2: 1.5074
Methane: 87.9062
Ethane: 6.2783
Propane: 2.1395
I-Butane: 0.5027
N-Butane: 0.5746
I-Pentane: 0.2530
N-Pentane: 0.1689
Hexane+: 0.5059
BTU: 1137.4
GPM: 18.2190
SPG: 0.6597