



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

Analysis No: HS190111
Cust No: 35825-11405

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 30-5 UNIT 75M; BHD
County/State:
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.: API # 3003925659

Source: BRADENHEAD
Well Flowing: Y
Pressure: 44 PSIG
Flow Temp: DEG. F
Ambient Temp: 72 DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 05/31/2019
Sample Time: 11.10 AM
Sampled By: GREG CRESSWELL
Sampled by (CO): HILCORP

Heat Trace: AREA 12 / RUN 1204
N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	2.1782	2.1540	0.2400	0.00	0.0211
CO2	0.0063	0.0062	0.0010	0.00	0.0001
Methane	87.0081	86.0419	14.7850	878.78	0.4819
Ethane	9.0725	8.9717	2.4320	160.56	0.0942
Propane	0.8773	0.8676	0.2420	22.07	0.0134
Iso-Butane	0.3150	0.3115	0.1030	10.24	0.0063
N-Butane	0.0972	0.0961	0.0310	3.17	0.0020
I-Pentane	0.1056	0.1044	0.0390	4.22	0.0026
N-Pentane	0.0417	0.0412	0.0150	1.67	0.0010
Hexane Plus	0.2981	0.2948	0.1330	15.71	0.0099
Total	100.0000	98.8894	18.0210	1096.44	0.6325

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0026
BTU/CU.FT IDEAL: 1099.0
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1101.8
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1082.6
DRY BTU @ 15.025: 1123.9
REAL SPECIFIC GRAVITY: 0.6339

CYLINDER #: 4121
CYLINDER PRESSURE: 44 PSIG
ANALYSIS DATE: 06/06/2019
ANALYSIS TIME: 01:13:49 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: 06/11/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: SAN JUAN 30-5 UNIT 75M; BHD
Stn. No.: API # 3003925659
Mtr. No.:

BRADENHEAD

06/11/2019
35825-11405

Smpl Date: 05/31/2019
Test Date: 06/06/2019
Run No: HS190111

Nitrogen: 2.1782
CO2: 0.0063
Methane: 87.0081
Ethane: 9.0725
Propane: 0.8773
I-Butane: 0.3150
N-Butane: 0.0972
I-Pentane: 0.1056
N-Pentane: 0.0417
Hexane+: 0.2981

BTU: 1101.8
GPM: 18.0210
SPG: 0.6339



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

Analysis No: HS190113
Cust No: 35825-11415

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 30-5 UNIT 75M; INT
County/State:
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.: API # 3003925659

AREA 12 / RUN 1204
Heat Trace: N
Remarks: PRESSURED WITH HELIUM TO 30LBS.

Source: INTERMEDIATE
Well Flowing: Y
Pressure: 2 PSIG
Flow Temp: DEG. F
Ambient Temp: 72 DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 05/31/2019
Sample Time: 11.10 AM
Sampled By: GREG CRESSWELL
Sampled by (CO): HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2259	0.0816	0.0250	0.00	0.0022
CO2	0.0390	0.0141	0.0070	0.00	0.0006
Methane	89.9049	32.4779	15.2820	908.04	0.4980
Ethane	4.8535	1.7533	1.3010	85.89	0.0504
Propane	2.5254	0.9123	0.6980	63.54	0.0384
Iso-Butane	0.5008	0.1809	0.1640	16.29	0.0101
N-Butane	0.6705	0.2422	0.2120	21.87	0.0135
I-Pentane	0.2148	0.0776	0.0790	8.59	0.0054
N-Pentane	0.1846	0.0667	0.0670	7.40	0.0046
Hexane Plus	0.8806	0.3181	0.3940	46.42	0.0291
Total	100.0000	36.1247	18.2290	1158.04	0.6522

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0029
BTU/CU.FT IDEAL: 1160.7
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1164.1
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1143.8
DRY BTU @ 15.025: 1187.4
REAL SPECIFIC GRAVITY: 0.6538

CYLINDER #: 4060
CYLINDER PRESSURE: PSIG
ANALYSIS DATE: 06/06/2019
ANALYSIS TIME: 02:13:26 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: 06/11/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: SAN JUAN 30-5 UNIT 75M; INT
Stn. No.: API # 3003925659
Mtr. No.:

INTERMEDIATE

06/11/2019
35825-11415

Smpl Date: 05/31/2019
Test Date: 06/06/2019
Run No: HS190113
Nitrogen: 0.2259
CO2: 0.0390
Methane: 89.9049
Ethane: 4.8535
Propane: 2.5254
I-Butane: 0.5008
N-Butane: 0.6705
I-Pentane: 0.2148
N-Pentane: 0.1846
Hexane+: 0.8806
BTU: 1164.1
GPM: 18.2290
SPG: 0.6538



2030 Afton Place
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Analysis No: HS190112
Cust No: 35825-11410

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 30-5 UNIT 75M; CSG
County/State:
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.: API # 3003925659

Source: CASING
Well Flowing: Y
Pressure: 112 PSIG
Flow Temp: DEG. F
Ambient Temp: 72 DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 05/31/2019
Sample Time: 11.10 AM
Sampled By: GREG CRESSWELL
Sampled by (CO): HILCORP

AREA 12 / RUN 1204

Heat Trace: N

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4165	0.4114	0.0460	0.00	0.0040
CO2	1.8411	1.8185	0.3150	0.00	0.0280
Methane	96.6730	95.4848	16.4190	976.40	0.5355
Ethane	0.9206	0.9093	0.2470	16.29	0.0096
Propane	0.1138	0.1124	0.0310	2.86	0.0017
Iso-Butane	0.0251	0.0248	0.0080	0.82	0.0005
N-Butane	0.0089	0.0088	0.0030	0.29	0.0002
I-Pentane	0.0010	0.0010	0.0000	0.04	0.0000
N-Pentane	0.0000	0.0000	0.0000	0.00	0.0000
Hexane Plus	0.0000	0.0000	0.0000	0.00	0.0000
Total	100.0000	98.7710	17.0690	996.70	0.5795

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0021
BTU/CU.FT IDEAL: 999.0
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1001.1
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 983.7
DRY BTU @ 15.025: 1021.1
REAL SPECIFIC GRAVITY: 0.5805

CYLINDER #: 7056
CYLINDER PRESSURE: 121 PSIG
ANALYSIS DATE: 06/06/2019
ANALYSIS TIME: 01:56:07 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: 06/11/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: SAN JUAN 30-5 UNIT 75M; CSG
Stn. No.: API # 3003925659
Mtr. No.:

CASING

06/11/2019
35825-11410

Smpl Date: 05/31/2019
Test Date: 06/06/2019
Run No: HS190112
Nitrogen: 0.4165
CO2: 1.8411
Methane: 96.6730
Ethane: 0.9206
Propane: 0.1138
I-Butane: 0.0251
N-Butane: 0.0089
I-Pentane: 0.0010
N-Pentane: 0.0000
Hexane+: 0.0000
BTU: 1001.1
GPM: 17.0690
SPG: 0.5805



2030 Afton Place
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Analysis No: HS190114
Cust No: 35825-11420

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 30-5 UNIT 75M; TBG
County/State:
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.: API # 3003925659

Source: TUBING
Well Flowing: Y
Pressure: 107 PSIG
Flow Temp: DEG. F
Ambient Temp: 72 DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 05/31/2019
Sample Time: 11.10 AM
Sampled By: GREG CRESSWELL
Sampled by (CO): HILCORP

Heat Trace: AREA 12 / RUN 1204

Remarks: N

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.0976	0.0980	0.0110	0.00	0.0009
CO2	1.9513	1.9592	0.3340	0.00	0.0297
Methane	94.9821	95.3688	16.1340	959.32	0.5261
Ethane	2.2808	2.2901	0.6110	40.36	0.0237
Propane	0.4242	0.4259	0.1170	10.67	0.0065
Iso-Butane	0.0875	0.0879	0.0290	2.85	0.0018
N-Butane	0.0631	0.0634	0.0200	2.06	0.0013
I-Pentane	0.0304	0.0305	0.0110	1.22	0.0008
N-Pentane	0.0150	0.0151	0.0050	0.60	0.0004
Hexane Plus	0.0680	0.0683	0.0300	3.58	0.0023
Total	100.0000	100.4072	17.3020	1020.66	0.5932

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0022
BTU/CU.FT IDEAL: 1023.0
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1025.3
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1007.5
DRY BTU @ 15.025: 1045.8
REAL SPECIFIC GRAVITY: 0.5943

CYLINDER #: 6247
CYLINDER PRESSURE: 107 PSIG
ANALYSIS DATE: 06/06/2019
ANALYSIS TIME: 12:58:14 AM
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: 06/11/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: SAN JUAN 30-5 UNIT 75M; TBG
Stn. No.: API # 3003925659
Mtr. No.:

TUBING

06/11/2019
35825-11420

Smpl Date: 05/31/2019
Test Date: 06/06/2019
Run No: HS190114
Nitrogen: 0.0976
CO2: 1.9513
Methane: 94.9821
Ethane: 2.2808
Propane: 0.4242
I-Butane: 0.0875
N-Butane: 0.0631
I-Pentane: 0.0304
N-Pentane: 0.0150
Hexane+: 0.0680
BTU: 1025.3
GPM: 17.3020
SPG: 0.5943