



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

Analysis No: HS190052
Cust No: 35825-11130

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 30-5 UNIT 110M; BHD
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation: MV/DK
Cust. Stn. No.: API # 3003925658
82154019

Source: BRADENHEAD
Well Flowing:
Pressure: 35 PSIG
Flow Temp: DEG. F
Ambient Temp: 43 DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 05/10/2019
Sample Time: 12.10 PM
Sampled By: GREG CRESSWELL
Sampled by (CO): HILCORP

AREA 12 / RUN 1201

Heat Trace:
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	2.9426	2.8747	0.3240	0.00	0.0285
CO2	0.0106	0.0104	0.0020	0.00	0.0002
Methane	96.5447	94.3181	16.3940	975.10	0.5348
Ethane	0.4573	0.4468	0.1230	8.09	0.0047
Propane	0.0144	0.0141	0.0040	0.36	0.0002
Iso-Butane	0.0095	0.0093	0.0030	0.31	0.0002
N-Butane	0.0029	0.0028	0.0010	0.09	0.0001
I-Pentane	0.0051	0.0050	0.0020	0.20	0.0001
N-Pentane	0.0000	0.0000	0.0000	0.00	0.0000
Hexane Plus	0.0129	0.0126	0.0060	0.68	0.0004
Total	100.0000	97.6938	16.8590	984.84	0.5692

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0019
BTU/CU.FT IDEAL: 987.1
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 989.0
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 971.8
DRY BTU @ 15.025: 1008.8
REAL SPECIFIC GRAVITY: 0.57

CYLINDER #: 4078
CYLINDER PRESSURE: 24 PSIG
ANALYSIS DATE: 05/15/2019
ANALYSIS TIME: 03:44:56 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: 07/02/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: SAN JUAN 30-5 UNIT 110M; BHD
Stn. No.: API # 3003925658
Mtr. No.: 82154019

BRADENHEAD
MV/DK

07/02/2019
35825-11130

Smpl Date: 05/10/2019
Test Date: 05/15/2019
Run No: HS190052

Nitrogen: 2.9426
CO2: 0.0106
Methane: 96.5447
Ethane: 0.4573
Propane: 0.0144
I-Butane: 0.0095
N-Butane: 0.0029
I-Pentane: 0.0051
N-Pentane: 0.0000
Hexane+: 0.0129

BTU: 989.0
GPM: 16.8590
SPG: 0.5700



2030 Afton Place
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Analysis No: HS190053
Cust No: 35825-11135

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 30-5 UNIT 110M; CSG
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation: MV/DK
Cust. Stn. No.: API # 3003925658
82154019

Source: CASING
Well Flowing:
Pressure: 105 PSIG
Flow Temp: 43 DEG. F
Ambient Temp: 44 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 05/10/2019
Sample Time: 12.15 PM
Sampled By: GREG CRESSWELL
Sampled by (CO): HILCORP

AREA 12 / RUN 1201

Heat Trace:
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2569	0.2510	0.0280	0.00	0.0025
CO2	2.3793	2.3243	0.4070	0.00	0.0362
Methane	96.7248	94.4908	16.4280	976.92	0.5358
Ethane	0.3839	0.3750	0.1030	6.79	0.0040
Propane	0.0422	0.0412	0.0120	1.06	0.0006
Iso-Butane	0.0177	0.0173	0.0060	0.58	0.0004
N-Butane	0.0114	0.0111	0.0040	0.37	0.0002
I-Pentane	0.0067	0.0065	0.0020	0.27	0.0002
N-Pentane	0.0041	0.0040	0.0010	0.16	0.0001
Hexane Plus	0.1730	0.1690	0.0770	9.12	0.0057
Total	100.0000	97.6902	17.0680	995.28	0.5856

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0021
BTU/CU.FT IDEAL: 997.6
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 999.7
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 982.3
DRY BTU @ 15.025: 1019.7
REAL SPECIFIC GRAVITY: 0.5866

CYLINDER #: 4062
CYLINDER PRESSURE: 104 PSIG
ANALYSIS DATE: 05/15/2019
ANALYSIS TIME: 03:28:25 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: 07/02/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 30-5 UNIT 110M; CSG	CASING	07/02/2019
Stn. No.:	API # 3003925658	MV/DK	35825-11135
Mtr. No.:	82154019		

Smpl Date:	05/10/2019
Test Date:	05/15/2019
Run No:	HS190053
Nitrogen:	0.2569
CO2:	2.3793
Methane:	96.7248
Ethane:	0.3839
Propane:	0.0422
I-Butane:	0.0177
N-Butane:	0.0114
I-Pentane:	0.0067
N-Pentane:	0.0041
Hexane+:	0.1730
BTU:	999.7
GPM:	17.0680
SPG:	0.5866



2030 Afton Place
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Analysis No: HS190054
Cust No: 35825-11140

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 30-5 UNIT 110M; TBG
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation: MV/DK
Cust. Stn. No.: API # 3003925658
82154019

AREA 12 / RUN 1201
Heat Trace: N
Remarks:

Source: TUBING
Well Flowing: Y
Pressure: 102 PSIG
Flow Temp: 44 DEG. F
Ambient Temp: DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 05/10/2019
Sample Time: 12.05 PM
Sampled By: GREG CRESSWELL
Sampled by (CO): HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1138	0.1126	0.0130	0.00	0.0011
CO2	1.9907	1.9695	0.3400	0.00	0.0302
Methane	94.0388	93.0386	15.9750	949.79	0.5209
Ethane	2.8443	2.8140	0.7620	50.34	0.0295
Propane	0.6389	0.6321	0.1760	16.08	0.0097
Iso-Butane	0.1113	0.1101	0.0360	3.62	0.0022
N-Butane	0.1069	0.1058	0.0340	3.49	0.0021
I-Pentane	0.0442	0.0437	0.0160	1.77	0.0011
N-Pentane	0.0240	0.0237	0.0090	0.96	0.0006
Hexane Plus	0.0871	0.0862	0.0390	4.59	0.0029
Total	100.0000	98.9363	17.4000	1030.63	0.6004

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0023
BTU/CU.FT IDEAL: 1033.0
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1035.4
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1017.4
DRY BTU @ 15.025: 1056.1
REAL SPECIFIC GRAVITY: 0.6016

CYLINDER #: 6187
CYLINDER PRESSURE: 110 PSIG
ANALYSIS DATE: 05/15/2019
ANALYSIS TIME: 04:06:45 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: 07/02/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 30-5 UNIT 110M; TBG	TUBING	07/02/2019
Stn. No.:	API # 3003925658	MV/DK	35825-11140
Mtr. No.:	82154019		

Smpl Date: 05/10/2019
Test Date: 05/15/2019
Run No: HS190054

Nitrogen: 0.1138
CO2: 1.9907
Methane: 94.0388
Ethane: 2.8443
Propane: 0.6389
I-Butane: 0.1113
N-Butane: 0.1069
I-Pentane: 0.0442
N-Pentane: 0.0240
Hexane+: 0.0871

BTU: 1035.4
GPM: 17.4000
SPG: 0.6016