



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

Analysis No: HS190037
Cust No: 35825-11060

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 30-5 UNIT 48M; TBG
County/State: RIO ARRIBA NM
Location: 20-030N-005W
Lease/PA/CA:
Formation: DK/MV
Cust. Stn. No.: API # 3003926367

Source: TUBING
Well Flowing: Y
Pressure: 100 PSIG
Flow Temp: DEG. F
Ambient Temp: 70 DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 05/07/2019
Sample Time: 1.00 PM
Sampled By: GREG CRESSWELL
Sampled by (CO):

Heat Trace: AREA 12 / RUN 1204
Remarks: N

NMOC
MAY 21 2019
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.0766	0.0761	0.0080	0.00	0.0007
CO2	1.6419	1.6306	0.2810	0.00	0.0249
Methane	95.3914	94.7339	16.2030	963.45	0.5284
Ethane	2.2772	2.2615	0.6100	40.30	0.0236
Propane	0.3749	0.3723	0.1030	9.43	0.0057
Iso-Butane	0.0890	0.0884	0.0290	2.89	0.0018
N-Butane	0.0516	0.0512	0.0160	1.68	0.0010
I-Pentane	0.0255	0.0253	0.0090	1.02	0.0006
N-Pentane	0.0112	0.0111	0.0040	0.45	0.0003
Hexane Plus	0.0607	0.0603	0.0270	3.20	0.0020
Total	100.0000	99.3107	17.2900	1022.43	0.5892

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0022
BTU/CU.FT IDEAL: 1024.8
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1027.1
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1009.2
DRY BTU @ 15.025: 1047.7
REAL SPECIFIC GRAVITY: 0.5902

CYLINDER #: 6013
CYLINDER PRESSURE: 128 PSIG
ANALYSIS DATE: 05/13/2019
ANALYSIS TIME: 09:32:59 AM
ANALYSIS RUN BY: RICHARD WILSON

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: 05/17/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: SAN JUAN 30-5 UNIT 48M; TBG
Stn. No.: API # 3003926367
Mtr. No.:

TUBING
DK/MV

05/17/2019
35825-11060

Smpl Date: 05/07/2019
Test Date: 05/13/2019
Run No: HS190037
Nitrogen: 0.0766
CO2: 1.6419
Methane: 95.3914
Ethane: 2.2772
Propane: 0.3749
I-Butane: 0.0890
N-Butane: 0.0516
I-Pentane: 0.0255
N-Pentane: 0.0112
Hexane+: 0.0607
BTU: 1027.1
GPM: 17.2900
SPG: 0.5902



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

Analysis No: HS190036
Cust No: 35825-11055

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 30-5 UNIT 48M; CSG
County/State: RIO ARRIBA NM
Location: 20-030N-005W
Lease/PA/CA:
Formation: DK/MV
Cust. Stn. No.: API # 3003926367

Source: CASING
Well Flowing: Y
Pressure: 100 PSIG
Flow Temp: DEG. F
Ambient Temp: 70 DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 05/07/2019
Sample Time: 1.00 PM
Sampled By: GREG CRESSWELL
Sampled by (CO):

Heat Trace: AREA 12 / RUN 1204
Remarks: N

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MAY 21 2019
DISTRICT III

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	2.5808	2.5694	0.2840	0.00	0.0250
CO2	0.0396	0.0394	0.0070	0.00	0.0006
Methane	94.2363	93.8189	16.0050	951.79	0.5220
Ethane	2.3363	2.3260	0.6260	41.35	0.0243
Propane	0.4983	0.4961	0.1380	12.54	0.0076
Iso-Butane	0.0942	0.0938	0.0310	3.06	0.0019
N-Butane	0.0827	0.0823	0.0260	2.70	0.0017
I-Pentane	0.0334	0.0333	0.0120	1.34	0.0008
N-Pentane	0.0182	0.0181	0.0070	0.73	0.0005
Hexane Plus	0.0802	0.0798	0.0360	4.23	0.0027
Total	100.0000	99.5571	17.1720	1017.72	0.5869

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0021
BTU/CU.FT IDEAL: 1020.1
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1022.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1004.4
DRY BTU @ 15.025: 1042.7
REAL SPECIFIC GRAVITY: 0.5879

CYLINDER #: 6088
CYLINDER PRESSURE: 135 PSIG
ANALYSIS DATE: 05/13/2019
ANALYSIS TIME: 09:13:27 AM
ANALYSIS RUN BY: RICHARD WILSON

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: 05/17/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 30-5 UNIT 48M; CSG	CASING	05/17/2019
Stn. No.:	API # 3003926367	DK/MV	35825-11055
Mtr. No.:			

Smpl Date:	05/07/2019
Test Date:	05/13/2019
Run No:	HS190036
Nitrogen:	2.5808
CO2:	0.0396
Methane:	94.2363
Ethane:	2.3363
Propane:	0.4983
I-Butane:	0.0942
N-Butane:	0.0827
I-Pentane:	0.0334
N-Pentane:	0.0182
Hexane+:	0.0802
BTU:	1022.2
GPM:	17.1720
SPG:	0.5879



2030 Afton Place
Farmington, NM 87401
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Analysis No: HS190035
Cust No: 35825-11050

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 30-5 UNIT 48M; BHD
County/State: RIO ARRIBA NM
Location: 20-030N-005W
Lease/PA/CA:
Formation: DK/MV
Cust. Stn. No.: API # 3003926367

Source: BRADENHEAD
Well Flowing: Y
Pressure: 100 PSIG
Flow Temp: DEG. F
Ambient Temp: 70 DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 05/07/2019
Sample Time: 1.00 PM
Sampled By: GREG CRESSWELL
Sampled by (CO):

Heat Trace: AREA 12 / RUN 1204
Remarks: N

NMOC

MAY 21 2019

DISTRICT III

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	1.3616	1.3552	0.1500	0.00	0.0132
CO2	0.0161	0.0160	0.0030	0.00	0.0002
Methane	93.4468	93.0071	15.8730	943.81	0.5176
Ethane	4.7524	4.7300	1.2730	84.10	0.0493
Propane	0.1771	0.1763	0.0490	4.46	0.0027
Iso-Butane	0.0684	0.0681	0.0220	2.22	0.0014
N-Butane	0.0257	0.0256	0.0080	0.84	0.0005
I-Pentane	0.0200	0.0199	0.0070	0.80	0.0005
N-Pentane	0.0074	0.0074	0.0030	0.30	0.0002
Hexane Plus	0.1245	0.1239	0.0560	6.56	0.0041
Total	100.0000	99.5295	17.4440	1043.09	0.5897

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0022
BTU/CU.FT IDEAL: 1045.5
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1047.8
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1029.6
DRY BTU @ 15.025: 1068.8
REAL SPECIFIC GRAVITY: 0.5908

CYLINDER #: 4025
CYLINDER PRESSURE: 47 PSIG
ANALYSIS DATE: 05/13/2019
ANALYSIS TIME: 09:00:09 AM
ANALYSIS RUN BY: RICHARD WILSON

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: 05/17/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: SAN JUAN 30-5 UNIT 48M; BHD
Stn. No.: API # 3003926367
Mtr. No.:

BRADENHEAD
DK/MV

05/17/2019
35825-11050

Smpl Date: 05/07/2019
Test Date: 05/13/2019
Run No: HS190035

Nitrogen: 1.3616
CO2: 0.0161
Methane: 93.4468
Ethane: 4.7524
Propane: 0.1771
I-Butane: 0.0684
N-Butane: 0.0257
I-Pentane: 0.0200
N-Pentane: 0.0074
Hexane+: 0.1245

BTU: 1047.8
GPM: 17.4440
SPG: 0.5908