



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

Analysis No: HS190160
Cust No: 35825-11585

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 29-5 UNIT 49; BHD
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation: MV
Cust. Stn. No.: 86-417-01
API # 3003907647

Source: BRADENHEAD
Well Flowing: Y
Pressure: 940 PSIG
Flow Temp: 80 DEG. F
Ambient Temp: 82 DEG. F
Flow Rate: 13.1 MCF/D
Sample Method: Purge & Fill
Sample Date: 07/08/2019
Sample Time: 12.30 PM
Sampled By: BRENT HOTTELL
Sampled by (CO): HILCORP

Heat Trace: AREA 12 / RUN 1208
Remarks: N

NMOC
JUL 25 2019
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5240	0.5168	0.0580	0.00	0.0051
CO2	0.0777	0.0766	0.0130	0.00	0.0012
Methane	84.7415	83.5817	14.4070	855.89	0.4694
Ethane	8.0050	7.8955	2.1470	141.66	0.0831
Propane	4.2429	4.1848	1.1720	106.76	0.0646
Iso-Butane	0.6822	0.6729	0.2240	22.18	0.0137
N-Butane	0.9530	0.9400	0.3010	31.09	0.0191
I-Pentane	0.2717	0.2680	0.1000	10.87	0.0068
N-Pentane	0.1927	0.1901	0.0700	7.72	0.0048
Hexane Plus	0.3093	0.3051	0.1380	16.30	0.0102
Total	100.0000	98.6315	18.6300	1192.48	0.6780

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0031
BTU/CU.FT IDEAL: 1195.2
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1199.0
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1178.1
DRY BTU @ 15.025: 1223.0
REAL SPECIFIC GRAVITY: 0.6798

CYLINDER #: 4174
CYLINDER PRESSURE: 886 PSIG
ANALYSIS DATE: 07/15/2019
ANALYSIS TIME: 02:46:00 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: SAN JUAN 29-5 UNIT 49; BHD
Stn. No.: 86-417-01
Mtr. No.: API # 3003907647

BRADENHEAD
MV

07/18/2019
35825-11585

Smpl Date: 07/08/2019
Test Date: 07/15/2019
Run No: HS190160

Nitrogen: 0.5240
CO2: 0.0777
Methane: 84.7415
Ethane: 8.0050
Propane: 4.2429
I-Butane: 0.6822
N-Butane: 0.9530
I-Pentane: 0.2717
N-Pentane: 0.1927
Hexane+: 0.3093

BTU: 1199.0
GPM: 18.6300
SPG: 0.6798



2030 Afton Place
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Analysis No: HS190161
Cust No: 35825-11590

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 29-5 UNIT 49; CSG
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation: MV
Cust. Stn. No.: 86-417-01
API # 3003907647

Source: CASING
Well Flowing: Y
Pressure: 60 PSIG
Flow Temp: 80 DEG. F
Ambient Temp: 82 DEG. F
Flow Rate: 13.1 MCF/D
Sample Method: Purge & Fill
Sample Date: 07/08/2019
Sample Time: 12.00 PM
Sampled By: BRENT HOTTELL
Sampled by (CO): HILCORP

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.0872	0.0869	0.0100	0.00	0.0008
CO2	1.9260	1.9191	0.3290	0.00	0.0293
Methane	91.4069	91.0804	15.5330	923.21	0.5063
Ethane	4.2166	4.2015	1.1300	74.62	0.0438
Propane	1.1656	1.1614	0.3220	29.33	0.0177
Iso-Butane	0.2665	0.2655	0.0870	8.67	0.0053
N-Butane	0.2658	0.2649	0.0840	8.67	0.0053
I-Pentane	0.1351	0.1346	0.0500	5.41	0.0034
N-Pentane	0.0814	0.0811	0.0300	3.26	0.0020
Hexane Plus	0.4489	0.4473	0.2010	23.66	0.0149
Total	100.0000	99.6427	17.7760	1076.83	0.6289

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0026
BTU/CU.FT IDEAL: 1079.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1082.1
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1063.3
DRY BTU @ 15.025: 1103.8
REAL SPECIFIC GRAVITY: 0.6303

CYLINDER #: 5012
CYLINDER PRESSURE: 54 PSIG
ANALYSIS DATE: 07/15/2019
ANALYSIS TIME: 02:43:50 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: SAN JUAN 29-5 UNIT 49; CSG
Stn. No.: 86-417-01
Mtr. No.: API # 3003907647

CASING
MV

07/18/2019
35825-11590

Smpl Date: 07/08/2019
Test Date: 07/15/2019
Run No: HS190161

Nitrogen: 0.0872
CO2: 1.9260
Methane: 91.4069
Ethane: 4.2166
Propane: 1.1656
I-Butane: 0.2665
N-Butane: 0.2658
I-Pentane: 0.1351
N-Pentane: 0.0814
Hexane+: 0.4489

BTU: 1082.1
GPM: 17.7760
SPG: 0.6303



2030 Afton Place
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Analysis No: HS190162
Cust No: 35825-11595

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 29-5 UNIT 49; TBG
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation: MV
Cust. Stn. No.: 86-417-01
API # 3003907647

Source: TUBING
Well Flowing: Y
Pressure: 60 PSIG
Flow Temp: 80 DEG. F
Ambient Temp: 82 DEG. F
Flow Rate: 13.1 MCF/D
Sample Method: Purge & Fill
Sample Date: 07/08/2019
Sample Time: 12.15 PM
Sampled By: BRENT HOTTELL
Sampled by (CO): HILCORP

AREA 12 / RUN 1208

Heat Trace: N

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1310	0.1289	0.0140	0.00	0.0013
CO2	1.8888	1.8579	0.3230	0.00	0.0287
Methane	91.2982	89.8062	15.5130	922.11	0.5057
Ethane	4.3440	4.2730	1.1640	76.88	0.0451
Propane	1.2226	1.2026	0.3380	30.76	0.0186
Iso-Butane	0.2644	0.2601	0.0870	8.60	0.0053
N-Butane	0.2764	0.2719	0.0870	9.02	0.0055
I-Pentane	0.1368	0.1346	0.0500	5.47	0.0034
N-Pentane	0.0825	0.0812	0.0300	3.31	0.0021
Hexane Plus	0.3553	0.3495	0.1590	18.73	0.0118
Total	100.0000	98.3659	17.7650	1074.87	0.6275

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0025
BTU/CU.FT IDEAL: 1077.4
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1080.1
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1061.3
DRY BTU @ 15.025: 1101.7
REAL SPECIFIC GRAVITY: 0.6288

CYLINDER #: 6216
CYLINDER PRESSURE: 54 PSIG
ANALYSIS DATE: 07/15/2019
ANALYSIS TIME: 02:54:00 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:	SAN JUAN 29-5 UNIT 49; TBG	TUBING	07/18/2019
Stn. No.:	86-417-01	MV	35825-11595
Mtr. No.:	API # 3003907647		

Smpl Date:	07/08/2019
Test Date:	07/15/2019
Run No:	HS190162
Nitrogen:	0.1310
CO2:	1.8888
Methane:	91.2982
Ethane:	4.3440
Propane:	1.2226
I-Butane:	0.2644
N-Butane:	0.2764
I-Pentane:	0.1368
N-Pentane:	0.0825
Hexane+:	0.3553
BTU:	1080.1
GPM:	17.7650
SPG:	0.6288