



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

Analysis No: HS190123
Cust No: 35825-11455

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 30-5 UNIT 12; INT. CSG
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation: MV
Cust. Stn. No.: API # 3003907721
86-068-01

Source: INTERMEDIATE CASING
Well Flowing: Y
Pressure: 85 PSIG
Flow Temp: 67 DEG. F
Ambient Temp: 54 DEG. F
Flow Rate: 68 MCF/D
Sample Method: Purge & Fill
Sample Date: 06/06/2019
Sample Time: 8.00 AM
Sampled By: BRENT HOTTELL
Sampled by (CO):

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1082	0.1085	0.0120	0.00	0.0010
CO2	1.4527	1.4569	0.2490	0.00	0.0221
Methane	89.4607	89.7197	15.2030	903.55	0.4955
Ethane	5.6893	5.7058	1.5250	100.68	0.0591
Propane	1.8360	1.8413	0.5070	46.20	0.0280
Iso-Butane	0.3671	0.3682	0.1200	11.94	0.0074
N-Butane	0.4201	0.4213	0.1330	13.70	0.0084
I-Pentane	0.1689	0.1694	0.0620	6.76	0.0042
N-Pentane	0.1151	0.1154	0.0420	4.61	0.0029
Hexane Plus	0.3819	0.3830	0.1710	20.13	0.0126
Total	100.0000	100.2895	18.0240	1107.58	0.6412

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0027
BTU/CU.FT IDEAL: 1110.1
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1113.1
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1093.7
DRY BTU @ 15.025: 1135.4
REAL SPECIFIC GRAVITY: 0.6427

CYLINDER #: 4110
CYLINDER PRESSURE: 99 PSIG
ANALYSIS DATE: 06/11/2019
ANALYSIS TIME: 09:02:12 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: 07/02/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	SAN JUAN 30-5 UNIT 12; INT. CSG	INTERMEDIATE CASING	07/02/2019
Stn. No.:	API # 3003907721	MV	35825-11455
Mtr. No.:	86-068-01		

Smpl Date: 06/06/2019
Test Date: 06/11/2019
Run No: HS190123

Nitrogen: 0.1082
CO2: 1.4527
Methane: 89.4607
Ethane: 5.6893
Propane: 1.8360
I-Butane: 0.3671
N-Butane: 0.4201
I-Pentane: 0.1689
N-Pentane: 0.1151
Hexane+: 0.3819

BTU: 1113.1
GPM: 18.0240
SPG: 0.6427



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

Analysis No: HS190122
Cust No: 35825-11450

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 30-5 UNIT 12; CSG
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation: MV
Cust. Stn. No.: API # 3003907721
86-068-01
AREA 12 / RUN 1205
Heat Trace: N
Remarks:

Source: CASING
Well Flowing: Y
Pressure: 86 PSIG
Flow Temp: 67 DEG. F
Ambient Temp: 54 DEG. F
Flow Rate: 68 MCF/D
Sample Method: Purge & Fill
Sample Date: 06/06/2019
Sample Time: 8.15 AM
Sampled By: BRENT HOTTELL
Sampled by (CO):

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1061	0.1064	0.0120	0.00	0.0010
CO2	1.4378	1.4412	0.2460	0.00	0.0218
Methane	89.4062	89.6185	15.1940	903.00	0.4952
Ethane	5.6743	5.6878	1.5210	100.42	0.0589
Propane	1.8361	1.8405	0.5070	46.20	0.0280
Iso-Butane	0.3716	0.3725	0.1220	12.08	0.0075
N-Butane	0.4238	0.4248	0.1340	13.83	0.0085
I-Pentane	0.1757	0.1761	0.0640	7.03	0.0044
N-Pentane	0.1197	0.1200	0.0430	4.80	0.0030
Hexane Plus	0.4487	0.4498	0.2010	23.65	0.0149
Total	100.0000	100.2376	18.0440	1111.01	0.6431

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0027
BTU/CU.FT IDEAL: 1113.6
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1116.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1097.2
DRY BTU @ 15.025: 1139.0
REAL SPECIFIC GRAVITY: 0.6446

CYLINDER #: 4019
CYLINDER PRESSURE: 89 PSIG
ANALYSIS DATE: 06/11/2019
ANALYSIS TIME: 08:43:34 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: 07/02/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: SAN JUAN 30-5 UNIT 12; CSG
Stn. No.: API # 3003907721
Mtr. No.: 86-068-01

CASING
MV

07/02/2019
35825-11450

Smpl Date: 06/06/2019
Test Date: 06/11/2019
Run No: HS190122

Nitrogen: 0.1061
CO2: 1.4378
Methane: 89.4062
Ethane: 5.6743
Propane: 1.8361
I-Butane: 0.3716
N-Butane: 0.4238
I-Pentane: 0.1757
N-Pentane: 0.1197
Hexane+: 0.4487

BTU: 1116.6
GPM: 18.0440
SPG: 0.6446



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

Analysis No: HS190124
Cust No: 35825-11460

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: SAN JUAN 30-5 UNIT 12; TBG
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation: MV
Cust. Stn. No.: API # 3003907721
86-068-01

Source: TUBING
Well Flowing: Y
Pressure: 58 PSIG
Flow Temp: 67 DEG. F
Ambient Temp: 54 DEG. F
Flow Rate: 68 MCF/D
Sample Method: Purge & Fill
Sample Date: 06/06/2019
Sample Time: 8.30 AM
Sampled By: BRENT HOTTELL
Sampled by (CO):

Heat Trace: AREA 12 / RUN 1205
N

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1092	0.1095	0.0120	0.00	0.0011
CO2	1.4019	1.4054	0.2400	0.00	0.0213
Methane	89.3877	89.6119	15.1920	902.82	0.4951
Ethane	5.5606	5.5745	1.4910	98.41	0.0577
Propane	1.7072	1.7115	0.4720	42.95	0.0260
Iso-Butane	0.4108	0.4118	0.1350	13.36	0.0082
N-Butane	0.4634	0.4646	0.1460	15.12	0.0093
I-Pentane	0.2186	0.2191	0.0800	8.75	0.0054
N-Pentane	0.1379	0.1382	0.0500	5.53	0.0034
Hexane Plus	0.6027	0.6042	0.2690	31.77	0.0199
Total	100.0000	100.2507	18.0870	1118.70	0.6476

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0028
BTU/CU.FT IDEAL: 1121.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1124.4
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1104.8
DRY BTU @ 15.025: 1146.9
REAL SPECIFIC GRAVITY: 0.6491

CYLINDER #: 5040
CYLINDER PRESSURE: 61 PSIG
ANALYSIS DATE: 06/11/2019
ANALYSIS TIME: 08:37:05 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: 07/02/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: SAN JUAN 30-5 UNIT 12; TBG
Stn. No.: API # 3003907721
Mtr. No.: 86-068-01

TUBING
MV

07/02/2019
35825-11460

Smpl Date: 06/06/2019
Test Date: 06/11/2019
Run No: HS190124

Nitrogen: 0.1092
CO2: 1.4019
Methane: 89.3877
Ethane: 5.5606
Propane: 1.7072
I-Butane: 0.4108
N-Butane: 0.4634
I-Pentane: 0.2186
N-Pentane: 0.1379
Hexane+: 0.6027

BTU: 1124.4
GPM: 18.0870
SPG: 0.6491