



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

Analysis No: HS190149
Cust No: 35825-11530

30-045-24321

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: CAIN 1E; TBG
County/State: SAN JUAN NM
Location:
Lease/PA/CA: SF-078464
Formation: MV/GL
Cust. Stn. No.: 34852308

Source: TUBING
Well Flowing: Y
Pressure: 72 PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 06/18/2019
Sample Time: 9.00 AM
Sampled By: PETE JIM
Sampled by (CO): HILCORP

NMOC

AUG 30 2019

DISTRICT III

Heat Trace: AREA 2 / RUN 203
Remarks: N

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2628	0.2613	0.0290	0.00	0.0025
CO2	0.9052	0.9001	0.1550	0.00	0.0138
Methane	72.2069	71.7965	12.2900	729.29	0.4000
Ethane	15.7317	15.6423	4.2240	278.40	0.1633
Propane	6.9032	6.8640	1.9090	173.69	0.1051
Iso-Butane	0.7426	0.7384	0.2440	24.15	0.0149
N-Butane	1.7708	1.7607	0.5600	57.77	0.0355
I-Pentane	0.4367	0.4342	0.1600	17.47	0.0109
N-Pentane	0.4046	0.4023	0.1470	16.22	0.0101
Hexane Plus	0.6355	0.6319	0.2850	33.50	0.0210
Total	100.0000	99.4317	20.0030	1330.49	0.7771

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0042
BTU/CU.FT IDEAL: 1333.6
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1339.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1315.9
DRY BTU @ 15.025: 1366.0
REAL SPECIFIC GRAVITY: 0.7801

CYLINDER #: 4222
CYLINDER PRESSURE: 90 PSIG
ANALYSIS DATE: 06/26/2019
ANALYSIS TIME: 10:48:33 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: 07/03/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: CAIN 1E; TBG
Stn. No.: 34852308
Mtr. No.:

TUBING
MV/GL

07/03/2019
35825-11530

Smpl Date: 06/18/2019
Test Date: 06/26/2019
Run No: HS190149

Nitrogen: 0.2628
CO2: 0.9052
Methane: 72.2069
Ethane: 15.7317
Propane: 6.9032
I-Butane: 0.7426
N-Butane: 1.7708
I-Pentane: 0.4367
N-Pentane: 0.4046
Hexane+: 0.6355

BTU: 1339.2
GPM: 20.0030
SPG: 0.7801



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

Analysis No: HS190147
Cust No: 35825-11520

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: CAIN 1E; BHD
County/State: SAN JUAN NM
Location:
Lease/PA/CA: SF-078464
Formation: MV/GL
Cust. Stn. No.: 34852308

Source: BRADENHEAD
Well Flowing: Y
Pressure: 75 PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 06/18/2019
Sample Time: 9.00 AM
Sampled By: PETE JIM
Sampled by (CO): HILCORP

Heat Trace: AREA 2 / RUN 203
N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2963	0.2946	0.0330	0.00	0.0029
CO2	0.6075	0.6040	0.1040	0.00	0.0092
Methane	72.6814	72.2661	12.3730	734.08	0.4026
Ethane	15.4265	15.3383	4.1430	273.00	0.1602
Propane	6.4302	6.3934	1.7790	161.79	0.0979
Iso-Butane	0.7015	0.6975	0.2310	22.81	0.0141
N-Butane	1.7160	1.7062	0.5430	55.98	0.0344
I-Pentane	0.5378	0.5347	0.1970	21.52	0.0134
N-Pentane	0.5596	0.5564	0.2040	22.43	0.0139
Hexane Plus	1.0432	1.0372	0.4670	54.99	0.0345
Total	100.0000	99.4284	20.0740	1346.61	0.7831

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0044
BTU/CU.FT IDEAL: 1349.7
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1355.5
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1331.9
DRY BTU @ 15.025: 1382.6
REAL SPECIFIC GRAVITY: 0.7862

CYLINDER #: 6218
CYLINDER PRESSURE: 98 PSIG
ANALYSIS DATE: 06/26/2019
ANALYSIS TIME: 11:46:10 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: 07/03/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: CAIN 1E; BHD
Stn. No.: 34852308
Mtr. No.:

BRADENHEAD
MV/GL

07/03/2019
35825-11520

Smpl Date: 06/18/2019
Test Date: 06/26/2019
Run No: HS190147

Nitrogen: 0.2963
CO2: 0.6075
Methane: 72.6814
Ethane: 15.4265
Propane: 6.4302
I-Butane: 0.7015
N-Butane: 1.7160
I-Pentane: 0.5378
N-Pentane: 0.5596
Hexane+: 1.0432

BTU: 1355.5
GPM: 20.0740
SPG: 0.7862



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

Analysis No: HS190148
Cust No: 35825-11525

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: CAIN 1E; CSG
County/State: SAN JUAN NM
Location:
Lease/PA/CA: SF-078464
Formation: MV/GL
Cust. Stn. No.: 34852308

Source: CASING
Well Flowing: Y
Pressure: 75 PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 06/18/2019
Sample Time: 9.00 AM
Sampled By: PETE JIM
Sampled by (CO): HILCORP

AREA 2 / RUN 203

Heat Trace: N
Remarks:

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2976	0.2961	0.0330	0.00	0.0029
CO2	0.6116	0.6086	0.1050	0.00	0.0093
Methane	72.6995	72.3429	12.3760	734.26	0.4027
Ethane	15.4228	15.3472	4.1420	272.94	0.1601
Propane	6.4219	6.3904	1.7770	161.58	0.0978
Iso-Butane	0.7002	0.6968	0.2300	22.77	0.0141
N-Butane	1.7127	1.7043	0.5420	55.87	0.0344
I-Pentane	0.5366	0.5340	0.1970	21.47	0.0134
N-Pentane	0.5576	0.5549	0.2030	22.35	0.0139
Hexane Plus	1.0395	1.0344	0.4650	54.79	0.0344
Total	100.0000	99.5096	20.0700	1346.04	0.7828

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0044
BTU/CU.FT IDEAL: 1349.2
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1355.0
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1331.4
DRY BTU @ 15.025: 1382.1
REAL SPECIFIC GRAVITY: 0.7859

CYLINDER #: 6176
CYLINDER PRESSURE: 96 PSIG
ANALYSIS DATE: 06/26/2019
ANALYSIS TIME: 11:06:06 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: 07/03/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: CAIN 1E; CSG
Stn. No.: 34852308
Mtr. No.:

CASING
MV/GL

07/03/2019
35825-11525

Smpl Date: 06/18/2019
Test Date: 06/26/2019
Run No: HS190148

Nitrogen: 0.2976
CO2: 0.6116
Methane: 72.6995
Ethane: 15.4228
Propane: 6.4219
I-Butane: 0.7002
N-Butane: 1.7127
I-Pentane: 0.5366
N-Pentane: 0.5576
Hexane+: 1.0395

BTU: 1355.0
GPM: 20.0700
SPG: 0.7859