



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

Analysis No: HS180218
Cust No: 35825-10395

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: HUERFANO 180E; BHD
County/State: SAN JUAN NM
Location: N18-26N-09W
Field: AREA 6 / RUN 605
Formation: DK
Cust. Str. No.:

Source: BRADENHEAD
Well Flowing: Y
Pressure: 83 PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: 20 MCF/D
Sample Method: Purge & Fill
Sample Date: 09/27/2018
Sample Time: 10.10 AM
Sampled By: ERIC GUNNELL
Sampled by (CO): HILCORP

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4503	0.4577	0.0500	0.00	0.0044
CO2	1.2832	1.3042	0.2200	0.00	0.0195
Methane	64.8962	65.9589	11.0540	655.45	0.3595
Ethane	17.7750	18.0660	4.7760	314.56	0.1845
Propane	9.9894	10.1530	2.7650	251.34	0.1521
Iso-Butane	1.2149	1.2348	0.3990	39.51	0.0244
N-Butane	2.8180	2.8641	0.8930	91.93	0.0566
I-Pentane	0.5798	0.5893	0.2130	23.20	0.0144
N-Pentane	0.4968	0.5049	0.1810	19.92	0.0124
Hexane Plus	0.4964	0.5045	0.2220	26.17	0.0164
Total	100.0000	101.6374	20.7730	1422.08	0.8441

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.005
BTU/CU.FT IDEAL: 1425.4
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1432.5
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1407.6
DRY BTU @ 15.025: 1461.2
REAL SPECIFIC GRAVITY: 0.848

CYLINDER #: 6092
CYLINDER PRESSURE: 69 PSIG
ANALYSIS DATE: 10/02/2018
ANALYSIS TIME: 10:28:34 AM
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

GC Method: C6+ Gas

Last Cal/Verify: 10/03/2018

NMOC

OCT 25 2018

DISTRICT III



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: HUERFANO 180E; BHD
Stn. No.:
Mtr. No.:

BRADENHEAD
DK

10/03/2018
35825-10395

Smpl Date:	09/27/2018	08/10/2018
Test Date:	10/02/2018	08/20/2018
Run No:	HS180218	HS180103
Nitrogen:	0.4503	0.4421
CO2:	1.2832	1.3100
Methane:	64.8962	63.9804
Ethane:	17.7750	17.9352
Propane:	9.9894	10.7059
I-Butane:	1.2149	1.2242
N-Butane:	2.8180	2.6357
I-Pentane:	0.5798	0.5891
N-Pentane:	0.4968	0.5176
Hexane+:	0.4964	0.6598
BTU:	1432.5	1448.7
GPM:	20.7730	20.8980
SPG:	0.8480	0.8588



2030 Afton Place
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Analysis No: HS180219
Cust No: 35825-10400

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: HUERFANO 180E; CSG
County/State: SAN JUAN NM
Location: N18-26N-09W
Field: AREA 6 / RUN 605
Formation: DK
Cust. Str. No.:

Source: CASING
Well Flowing: Y
Pressure: 83 PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: 20 MCF/D
Sample Method: Purge & Fill
Sample Date: 09/27/2018
Sample Time: 10.20 AM
Sampled By: ERIC GUNNELL
Sampled by (CO): HILCORP

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4519	0.4508	0.0500	0.00	0.0044
CO2	1.2268	1.2239	0.2100	0.00	0.0186
Methane	63.8725	63.7218	10.8840	645.11	0.3538
Ethane	16.8168	16.7771	4.5210	297.61	0.1746
Propane	10.4952	10.4704	2.9060	264.07	0.1598
Iso-Butane	1.4116	1.4083	0.4640	45.90	0.0283
N-Butane	3.2966	3.2888	1.0450	107.54	0.0662
I-Pentane	0.8294	0.8274	0.3050	33.18	0.0207
N-Pentane	0.7675	0.7657	0.2800	30.77	0.0191
Hexane Plus	0.8317	0.8297	0.3730	43.84	0.0275
Total	100.0000	99.7639	21.0380	1468.03	0.8730

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0054
BTU/CU.FT IDEAL: 1471.4
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1479.4
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1453.7
DRY BTU @ 15.025: 1509.0
REAL SPECIFIC GRAVITY: 0.8774

CYLINDER #: 6198
CYLINDER PRESSURE: 89 PSIG
ANALYSIS DATE: 10/02/2018
ANALYSIS TIME: 10:39:21 AM
ANALYSIS RUN BY: CAMERON MANGAN

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: 10/03/2018



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: HUERFANO 180E; CSG
Stn. No.:
Mtr. No.:

CASING
DK

10/03/2018
35825-10400

Smpl Date:	09/27/2018	08/10/2018
Test Date:	10/02/2018	08/20/2018
Run No:	HS180219	HS180104
Nitrogen:	0.4519	0.4444
CO2:	1.2268	1.2181
Methane:	63.8725	63.4788
Ethane:	16.8168	16.7734
Propane:	10.4952	10.5553
I-Butane:	1.4116	1.4290
N-Butane:	3.2966	3.3810
I-Pentane:	0.8294	0.8899
N-Pentane:	0.7675	0.8410
Hexane+:	0.8317	0.9891
BTU:	1479.4	1493.4
GPM:	21.0380	21.1290
SPG:	0.8774	0.8862



Huerfano Unit 180E - API# 30-045-26239

2030 Afton Place
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Analysis No: HS180220
Cust No: 35825-10405

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: HUERFANO 180E; TBG
County/State: SAN JUAN NM
Location: N18-26N-09W
Field: AREA 6 / RUN 605
Formation: DK
Cust. Stn. No.:

Source: TUBING
Well Flowing: Y
Pressure: 73 PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: 20 MCF/D
Sample Method: Purge & Fill
Sample Date: 09/23/2018
Sample Time: 10.10 AM
Sampled By: ERIC GUNNELL
Sampled by (CO): HILCORP

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5004	0.4989	0.0550	0.00	0.0048
CO2	1.2610	1.2573	0.2160	0.00	0.0192
Methane	65.9942	65.7985	11.2400	666.54	0.3655
Ethane	17.3515	17.3001	4.6620	307.07	0.1801
Propane	9.9362	9.9067	2.7500	250.00	0.1513
Iso-Butane	1.1128	1.1095	0.3660	36.19	0.0223
N-Butane	2.3312	2.3243	0.7380	76.05	0.0468
I-Pentane	0.4674	0.4660	0.1720	18.70	0.0116
N-Pentane	0.3556	0.3545	0.1290	14.25	0.0089
Hexane Plus	0.6897	0.6877	0.3090	36.35	0.0228
Total	100.0000	99.7035	20.6370	1405.16	0.8334

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0049
BTU/CU.FT IDEAL: 1408.4
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1415.3
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1390.7
DRY BTU @ 15.025: 1443.6
REAL SPECIFIC GRAVITY: 0.8372

CYLINDER #: 6082
CYLINDER PRESSURE: 86 PSIG
ANALYSIS DATE: 10/02/2018
ANALYSIS TIME: 10:16:48 AM
ANALYSIS RUN BY: CAMERON MANGAN

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: 10/03/2018



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: HUERFANO 180E; TBG
Stn. No.:
Mtr. No.:

TUBING
DK

10/03/2018
35825-10405

Smpl Date:	09/23/2018	08/10/2018
Test Date:	10/02/2018	08/20/2018
Run No:	HS180220	HS180105
Nitrogen:	0.5004	0.4622
CO2:	1.2610	1.2431
Methane:	65.9942	66.0684
Ethane:	17.3515	17.0191
Propane:	9.9362	9.9757
I-Butane:	1.1128	1.2162
N-Butane:	2.3312	2.5695
I-Pentane:	0.4674	0.5515
N-Pentane:	0.3556	0.3782
Hexane+:	0.6897	0.5161
BTU:	1415.3	1417.5
GPM:	20.6370	20.6370
SPG:	0.8372	0.8379