



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

Analysis No: HS190219
Cust No: 35825-11845

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: UTE INDIANS A 8; BHD
County/State: SAN JUAN NM
Location:
Lease/PA/CA: 14-20-604-62
Formation:
Cust. Stn. No.: API # 3004520750

NMOC
AUG 20 2019
DISTRICT III

Source: BRADENHEAD
Well Flowing: Y
Pressure: 210 PSIG
Flow Temp: 67 DEG. F
Ambient Temp: 72 DEG. F
Flow Rate: 0 MCF/D
Sample Method: Purge & Fill
Sample Date: 08/02/2019
Sample Time: 10.00 AM
Sampled By: CASEY NICHOLS
Sampled by (CO): HILCORP

AREA 2 / RUN 200

Heat Trace:

Remarks: H₂S = 15,000 ppm

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	3.6517	3.5832	0.4030	0.00	0.0353
CO ₂	0.0129	0.0127	0.0020	0.00	0.0002
Methane	80.7073	79.1944	13.7210	815.14	0.4470
Ethane	8.1117	7.9596	2.1760	143.55	0.0842
Propane	5.0322	4.9379	1.3900	126.62	0.0766
Iso-Butane	0.5228	0.5130	0.1720	17.00	0.0105
N-Butane	1.2721	1.2483	0.4020	41.50	0.0255
I-Pentane	0.2442	0.2396	0.0900	9.77	0.0061
N-Pentane	0.2023	0.1985	0.0740	8.11	0.0050
Hexane Plus	0.2428	0.2382	0.1090	12.80	0.0080
Total	100.0000	98.1254	18.5390	1174.49	0.6986

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0031
BTU/CU.FT IDEAL: 1177.2
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1180.9
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1160.4
DRY BTU @ 15.025: 1204.6
REAL SPECIFIC GRAVITY: 0.7005

CYLINDER #: 13
CYLINDER PRESSURE: 18 PSIG
ANALYSIS DATE: 08/14/2019
ANALYSIS TIME: 08:57:06 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

GC Method: C6+ Gas

Last Cal/Verify: 08/14/2019



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: UTE INDIANS A 8; BHD
Stn. No.: API # 3004520750
Mtr. No.:

BRADENHEAD

08/14/2019
35825-11845

Smpl Date: 08/02/2019
Test Date: 08/14/2019
Run No: HS190219
Nitrogen: 3.6517
CO2: 0.0129
Methane: 80.7073
Ethane: 8.1117
Propane: 5.0322
I-Butane: 0.5228
N-Butane: 1.2721
I-Pentane: 0.2442
N-Pentane: 0.2023
Hexane+: 0.2428
BTU: 1180.9
GPM: 18.5390
SPG: 0.7005



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

Analysis No: HS190221
Cust No: 35825-11855

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: UTE INDIANS A 8; TBG
County/State: SAN JUAN NM
Location:
Lease/PA/CA: 14-20-604-62
Formation:
Cust. Stn. No.: API # 3004520750

Source: TUBING
Well Flowing: Y
Pressure: 210 PSIG
Flow Temp: 67 DEG. F
Ambient Temp: 72 DEG. F
Flow Rate: 0 MCF/D
Sample Method: Purge & Fill
Sample Date: 08/02/2019
Sample Time: 10.00 AM
Sampled By: CASEY NICHOLS
Sampled by (CO): HILCORP

AREA 2 / RUN 200

Heat Trace:

Remarks: H2S = 15,000 ppm

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.9417	0.9391	0.1040	0.00	0.0091
CO2	2.9903	2.9819	0.5110	0.00	0.0454
Methane	90.7582	90.5037	15.4210	916.66	0.5027
Ethane	2.7624	2.7547	0.7400	48.89	0.0287
Propane	1.0254	1.0225	0.2830	25.80	0.0156
Iso-Butane	0.3961	0.3950	0.1300	12.88	0.0079
N-Butane	0.4741	0.4728	0.1500	15.47	0.0095
I-Pentane	0.2249	0.2243	0.0820	9.00	0.0056
N-Pentane	0.1108	0.1105	0.0400	4.44	0.0028
Hexane Plus	0.3161	0.3152	0.1410	16.66	0.0105
Total	100.0000	99.7197	17.6020	1049.79	0.6378

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0025
BTU/CU.FT IDEAL: 1052.2
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1054.9
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1036.5
DRY BTU @ 15.025: 1076.0
REAL SPECIFIC GRAVITY: 0.6392

CYLINDER #: 17
CYLINDER PRESSURE: 191 PSIG
ANALYSIS DATE: 08/14/2019
ANALYSIS TIME: 09:15:02 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

GC Method: C6+ Gas

Last Cal/Verify: 08/14/2019



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: UTE INDIANS A 8; TBG
Stn. No.: API # 3004520750
Mtr. No.:

TUBING

08/14/2019
35825-11855

Smpl Date: 08/02/2019
Test Date: 08/14/2019
Run No: HS190221
Nitrogen: 0.9417
CO2: 2.9903
Methane: 90.7582
Ethane: 2.7624
Propane: 1.0254
I-Butane: 0.3961
N-Butane: 0.4741
I-Pentane: 0.2249
N-Pentane: 0.1108
Hexane+: 0.3161
BTU: 1054.9
GPM: 17.6020
SPG: 0.6392



2030 Afton Place
Farmington, NM 87401
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Analysis No: HS190220
Cust No: 35825-11850

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: UTE INDIANS A 8; CSG
County/State: SAN JUAN NM
Location:
Lease/PA/CA: 14-20-604-62
Formation:
Cust. Stn. No.: API # 3004520750

Source: CASING
Well Flowing: Y
Pressure: 210 PSIG
Flow Temp: 67 DEG. F
Ambient Temp: 72 DEG. F
Flow Rate: 0 MCF/D
Sample Method: Purge & Fill
Sample Date: 08/02/2019
Sample Time: 10.00 AM
Sampled By: CASEY NICHOLS
Sampled by (CO): HILCORP

AREA 2 / RUN 200

Heat Trace:

Remarks: PRESSURED WITH HELIUM TO 30LBS. H2S =15,000 ppm

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	1.1358	0.7601	0.1250	0.00	0.0110
CO2	4.0964	2.7414	0.7010	0.00	0.0622
Methane	90.7609	60.7397	15.4200	916.69	0.5027
Ethane	2.1870	1.4636	0.5860	38.70	0.0227
Propane	0.7029	0.4704	0.1940	17.69	0.0107
Iso-Butane	0.2328	0.1558	0.0760	7.57	0.0047
N-Butane	0.2587	0.1731	0.0820	8.44	0.0052
I-Pentane	0.1349	0.0903	0.0490	5.40	0.0034
N-Pentane	0.1010	0.0676	0.0370	4.05	0.0025
Hexane Plus	0.3896	0.2607	0.1740	20.54	0.0129
Total	100.0000	66.9227	17.4440	1019.07	0.6380

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0024
BTU/CU.FT IDEAL: 1021.4
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1023.9
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1006.1
DRY BTU @ 15.025: 1044.4
REAL SPECIFIC GRAVITY: 0.6393

CYLINDER #: 20
CYLINDER PRESSURE: PSIG
ANALYSIS DATE: 08/14/2019
ANALYSIS TIME: 09:06:14 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: 08/14/2019

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: UTE INDIANS A 8; CSG
Stn. No.: API # 3004520750
Mtr. No.:

CASING

08/14/2019
35825-11850

Smpl Date: 08/02/2019
Test Date: 08/14/2019
Run No: HS190220
Nitrogen: 1.1358
CO2: 4.0964
Methane: 90.7609
Ethane: 2.1870
Propane: 0.7029
I-Butane: 0.2328
N-Butane: 0.2587
I-Pentane: 0.1349
N-Pentane: 0.1010
Hexane+: 0.3896
BTU: 1023.9
GPM: 17.4440
SPG: 0.6393