



OCD Received
8/6/2020

Well Name: GRENIER 19; BHD
API #: API #3004520500
Source: BRADENHEAD
Sample Type: GAS
Analysis No: HS200117
Cust No: 35825-12555

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: GRENIER 19; BHD
County/State: SAN JUAN NM
Location:
Lease/PA/CA: SF-078115
Formation: PC
Cust. Stn. No.: API #3004520500
3289430

Source: BRADENHEAD
Well Flowing: Y
Pressure: 69 PSIG
Flow Temp: 106 DEG. F
Ambient Temp: 88 DEG. F
Flow Rate: 0 MCF/D
Sample Method: Purge & Fill
Sample Date: 07/28/2020
Sample Time: 3.00 PM
Sampled By:
Sampled by (CO): HILCORP

AREA 1 / RUN 109

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	1.0537	1.0283	0.1160	0.00	0.0102
CO2	0.0149	0.0145	0.0030	0.00	0.0002
Methane	83.1327	81.1289	14.1350	839.64	0.4605
Ethane	9.4846	9.2560	2.5440	167.85	0.0985
Propane	3.8970	3.8031	1.0770	98.05	0.0593
Iso-Butane	0.5952	0.5809	0.1950	19.36	0.0119
N-Butane	0.9853	0.9616	0.3120	32.14	0.0198
I-Pentane	0.3110	0.3035	0.1140	12.44	0.0077
N-Pentane	0.2234	0.2180	0.0810	8.96	0.0056
Hexane Plus	0.3022	0.2949	0.1350	15.93	0.0100
Total	100.0000	97.5897	18.7120	1194.37	0.6837

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0032
BTU/CU.FT IDEAL: 1197.1
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1200.9
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1180.0
DRY BTU @ 15.025: 1225.0
REAL SPECIFIC GRAVITY: 0.6856

CYLINDER #: 6044
CYLINDER PRESSURE: 29 PSIG
ANALYSIS DATE: 08/04/2020
ANALYSIS TIME: 10:22:54 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

Last Cal/Verify: 08/05/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: GRENIER 19; BHD
Stn. No.: API #3004520500
Mtr. No.: 3289430

BRADENHEAD
PC

08/05/2020
35825-12555

Smpl Date: 07/28/2020
Test Date: 08/04/2020
Run No: HS200117

Nitrogen: 1.0537
CO2: 0.0149
Methane: 83.1327
Ethane: 9.4846
Propane: 3.8970
I-Butane: 0.5952
N-Butane: 0.9853
I-Pentane: 0.3110
N-Pentane: 0.2234
Hexane+: 0.3022

BTU: 1200.9
GPM: 18.7120
SPG: 0.6856



Well Name: GRENIER 19; CSG
 API #: API #3004520500
 Source: CASING
 Sample Type: GAS
 Analysis No: HS200118
 Cust No: 35825-12560

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: GRENIER 19; CSG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA: SF-078115
 Formation: PC
 Cust. Stn. No.: API #3004520500
 3289430

Source: CASING
 Well Flowing: Y
 Pressure: 69 PSIG
 Flow Temp: 106 DEG. F
 Ambient Temp: 88 DEG. F
 Flow Rate: 0 MCF/D
 Sample Method:
 Sample Date: 07/28/2020
 Sample Time: 3.00 PM
 Sampled By:
 Sampled by (CO): HILCORP

AREA 1 / RUN 109

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2119	0.2079	0.0230	0.00	0.0020
CO2	0.6445	0.6323	0.1100	0.00	0.0098
Methane	85.3615	83.7489	14.5130	862.15	0.4728
Ethane	8.0615	7.9092	2.1620	142.66	0.0837
Propane	3.2417	3.1805	0.8960	81.56	0.0494
Iso-Butane	0.5419	0.5317	0.1780	17.62	0.0109
N-Butane	0.8452	0.8292	0.2670	27.57	0.0170
I-Pentane	0.3052	0.2994	0.1120	12.21	0.0076
N-Pentane	0.2195	0.2154	0.0800	8.80	0.0055
Hexane Plus	0.5671	0.5564	0.2540	29.89	0.0188
Total	100.0000	98.1109	18.5950	1182.48	0.6774

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0031
 BTU/CU.FT IDEAL: 1185.2
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1188.9
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1168.2
 DRY BTU @ 15.025: 1212.7
 REAL SPECIFIC GRAVITY: 0.6792

CYLINDER #: 4072
 CYLINDER PRESSURE: 86 PSIG
 ANALYSIS DATE: 08/04/2020
 ANALYSIS TIME: 10:39:20 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 Last Cal/Verify: 08/05/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: GRENIER 19; CSG
Stn. No.: API #3004520500
Mtr. No.: 3289430

CASING
PC

08/05/2020
35825-12560

Smpl Date: 07/28/2020
Test Date: 08/04/2020
Run No: HS200118

Nitrogen: 0.2119
CO2: 0.6445
Methane: 85.3615
Ethane: 8.0615
Propane: 3.2417
I-Butane: 0.5419
N-Butane: 0.8452
I-Pentane: 0.3052
N-Pentane: 0.2195
Hexane+: 0.5671

BTU: 1188.9
GPM: 18.5950
SPG: 0.6792



Well Name: GRENIER 19; TBG
 API #: API #3004520500
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS200119
 Cust No: 35825-12565

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: GRENIER 19; TBG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA: SF-078115
 Formation: PC
 Cust. Stn. No.: API #3004520500
 3289430

Source: TUBING
 Well Flowing: Y
 Pressure: 69 PSIG
 Flow Temp: 106 DEG. F
 Ambient Temp: 88 DEG. F
 Flow Rate: 0 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 07/28/2020
 Sample Time: 3.00 PM
 Sampled By:
 Sampled by (CO): HILCORP

AREA 1 / RUN 109

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2067	0.2028	0.0230	0.00	0.0020
CO2	0.6493	0.6370	0.1110	0.00	0.0099
Methane	85.3503	83.7271	14.5110	862.04	0.4728
Ethane	8.0501	7.8970	2.1590	142.46	0.0836
Propane	3.2437	3.1820	0.8960	81.61	0.0494
Iso-Butane	0.5437	0.5334	0.1780	17.68	0.0109
N-Butane	0.8474	0.8313	0.2680	27.64	0.0170
I-Pentane	0.3091	0.3032	0.1130	12.37	0.0077
N-Pentane	0.2247	0.2204	0.0820	9.01	0.0056
Hexane Plus	0.5750	0.5641	0.2570	30.31	0.0190
Total	100.0000	98.0983	18.5980	1183.12	0.6778

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0031
 BTU/CU.FT IDEAL: 1185.9
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1189.5
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1168.8
 DRY BTU @ 15.025: 1213.3
 REAL SPECIFIC GRAVITY: 0.6797

CYLINDER #: 6114
 CYLINDER PRESSURE: 73 PSIG
 ANALYSIS DATE: 08/04/2020
 ANALYSIS TIME: 10:50:49 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 Last Cal/Verify: 08/05/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: GRENIER 19; TBG
Stn. No.: API #3004520500
Mtr. No.: 3289430

TUBING
PC

08/05/2020
35825-12565

Smpl Date: 07/28/2020
Test Date: 08/04/2020
Run No: HS200119

Nitrogen: 0.2067
CO2: 0.6493
Methane: 85.3503
Ethane: 8.0501
Propane: 3.2437
I-Butane: 0.5437
N-Butane: 0.8474
I-Pentane: 0.3091
N-Pentane: 0.2247
Hexane+: 0.5750

BTU: 1189.5
GPM: 18.5980
SPG: 0.6797