



OCD Received
8/10/2020

Well Name: GRENIER B10; CSG
API #: API #3004524659
Source: CASING
Sample Type: GAS
Analysis No: HS200154
Cust No: 35825-12735

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: GRENIER B10; CSG
County/State: SAN JUAN NM
Location:
Lease/PA/CA:
Formation: FC
Cust. Stn. No.: API #3004524659
3921830
AREA 3 / RUN 306
Heat Trace: N
Remarks:

Source: CASING
Well Flowing: Y
Pressure: 34 PSIG
Flow Temp: 93 DEG. F
Ambient Temp: 95 DEG. F
Flow Rate: 34 MCF/D
Sample Method:
Sample Date: 07/29/2020
Sample Time: 1.48 PM
Sampled By: LIONEL GLEASON
Sampled by (CO): HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1831	0.1824	0.0200	0.00	0.0018
CO2	0.7248	0.7222	0.1240	0.00	0.0110
Methane	90.2567	89.9353	15.3390	911.59	0.4999
Ethane	5.1235	5.1052	1.3740	90.67	0.0532
Propane	2.0441	2.0368	0.5650	51.43	0.0311
Iso-Butane	0.4123	0.4108	0.1350	13.41	0.0083
N-Butane	0.4831	0.4814	0.1530	15.76	0.0097
I-Pentane	0.1827	0.1820	0.0670	7.31	0.0046
N-Pentane	0.1272	0.1267	0.0460	5.10	0.0032
Hexane Plus	0.4625	0.4609	0.2070	24.38	0.0153
Total	100.0000	99.6437	18.0300	1119.65	0.6380

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0027
BTU/CU.FT IDEAL: 1122.2
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1125.3
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1105.7
DRY BTU @ 15.025: 1147.8
REAL SPECIFIC GRAVITY: 0.6395

CYLINDER #: 1097
CYLINDER PRESSURE: 10 PSIG
ANALYSIS DATE: 08/06/2020
ANALYSIS TIME: 01:56:16 PM
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: 08/07/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: GRENIER B10; CSG
Stn. No.: API #3004524659
Mtr. No.: 3921830

CASING
FC

08/07/2020
35825-12735

Smpl Date: 07/29/2020
Test Date: 08/06/2020
Run No: HS200154

Nitrogen: 0.1831
CO2: 0.7248
Methane: 90.2567
Ethane: 5.1235
Propane: 2.0441
I-Butane: 0.4123
N-Butane: 0.4831
I-Pentane: 0.1827
N-Pentane: 0.1272
Hexane+: 0.4625

BTU: 1125.3
GPM: 18.0300
SPG: 0.6395



Well Name: GRENIER B10; BHD
 API #: API #3004524659
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: HS200153
 Cust No: 35825-12730

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: GRENIER B10; BHD
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation: FC
 Cust. Stn. No.: API #3004524659
 3921830
 AREA 3 / RUN 306
 Heat Trace: N
 Remarks:

Source: BRADENHEAD
 Well Flowing: Y
 Pressure: 34 PSIA
 Flow Temp: 93 DEG. F
 Ambient Temp: 95 DEG. F
 Flow Rate: 34 MCF/D
 Sample Method:
 Sample Date: 07/29/2020
 Sample Time: 1.55 PM
 Sampled By: LIONEL GLEASON
 Sampled by (CO): HILCORP

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4783	0.4663	0.0530	0.00	0.0046
CO2	0.0029	0.0028	0.0000	0.00	0.0000
Methane	87.1056	84.9231	14.8060	879.77	0.4825
Ethane	7.4692	7.2821	2.0030	132.18	0.0775
Propane	2.9923	2.9173	0.8270	75.29	0.0456
Iso-Butane	0.4832	0.4711	0.1590	15.71	0.0097
N-Butane	0.7303	0.7120	0.2310	23.82	0.0147
I-Pentane	0.2453	0.2392	0.0900	9.81	0.0061
N-Pentane	0.1708	0.1665	0.0620	6.85	0.0043
Hexane Plus	0.3221	0.3140	0.1440	16.98	0.0107
Total	100.0000	97.4944	18.3750	1160.42	0.6556

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0029
 BTU/CU.FT IDEAL: 1163.1
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1166.5
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1146.2
 DRY BTU @ 15.025: 1189.9
 REAL SPECIFIC GRAVITY: 0.6573

CYLINDER #: 234
 CYLINDER PRESSURE: 78 PSIG
 ANALYSIS DATE: 08/06/2020
 ANALYSIS TIME: 02:58:07 PM
 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: 08/07/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: GRENIER B10; BHD
Stn. No.: API #3004524659
Mtr. No.: 3921830

BRADENHEAD
FC

08/07/2020
35825-12730

Smpl Date: 07/29/2020
Test Date: 08/06/2020
Run No: HS200153
Nitrogen: 0.4783
CO2: 0.0029
Methane: 87.1056
Ethane: 7.4692
Propane: 2.9923
I-Butane: 0.4832
N-Butane: 0.7303
I-Pentane: 0.2453
N-Pentane: 0.1708
Hexane+: 0.3221
BTU: 1166.5
GPM: 18.3750
SPG: 0.6573