



OCD Received
8/18/2020

Well Name: HUBBELL 3P; BHD
API #: API #3004534196
Source: BRADENHEAD
Sample Type: GAS
Analysis No: HS200095
Cust No: 35825-12445

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: HUBBELL 3P; BHD
County/State: SAN JUAN NM
Location:
Lease/PA/CA: NMSF-078716-A
Formation: MV / DK
Cust. Stn. No.: API #3004534196

Source: BRADENHEAD
Well Flowing: Y
Pressure: PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 07/22/2020
Sample Time: 1.00 PM
Sampled By: BRIAN VANCATER
Sampled by (CO): HILCORP

AREA 7 / RUN 704

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3540	0.3515	0.0390	0.00	0.0034
CO2	0.0306	0.0304	0.0050	0.00	0.0005
Methane	77.2655	76.7240	13.1480	780.38	0.4280
Ethane	9.2129	9.1483	2.4730	163.04	0.0956
Propane	7.7180	7.6639	2.1340	194.19	0.1175
Iso-Butane	2.5025	2.4850	0.8220	81.38	0.0502
N-Butane	2.3869	2.3702	0.7550	77.87	0.0479
I-Pentane	0.3673	0.3647	0.1350	14.70	0.0091
N-Pentane	0.1506	0.1495	0.0550	6.04	0.0038
Hexane Plus	0.0117	0.0116	0.0050	0.62	0.0004
Total	100.0000	99.2991	19.5710	1318.21	0.7564

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.004
BTU/CU.FT IDEAL: 1321.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1326.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1303.5
DRY BTU @ 15.025: 1353.2
REAL SPECIFIC GRAVITY: 0.7592

CYLINDER #: 4111
CYLINDER PRESSURE: 236 PSIG
ANALYSIS DATE: 07/28/2020
ANALYSIS TIME: 09:27:36 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: 07/29/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: HUBBELL 3P; BHD
Stn. No.: API #3004534196
Mtr. No.:

BRADENHEAD
MV / DK

07/29/2020
35825-12445

Smpl Date: 07/22/2020
Test Date: 07/28/2020
Run No: HS200095

Nitrogen: 0.3540
CO2: 0.0306
Methane: 77.2655
Ethane: 9.2129
Propane: 7.7180
I-Butane: 2.5025
N-Butane: 2.3869
I-Pentane: 0.3673
N-Pentane: 0.1506
Hexane+: 0.0117

BTU: 1326.6
GPM: 19.5710
SPG: 0.7592



OCD Received
8/18/2020

Well Name: HUBBELL 3P; CSG
API #: API #3004534196
Source: CASING
Sample Type: GAS
Analysis No: HS200097
Cust No: 35825-12450

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: HUBBELL 3P; CSG
County/State: SAN JUAN NM
Location:
Lease/PA/CA: NMSF-078716-A
Formation: MV / DK
Cust. Stn. No.: API #3004534196

Source: CASING
Well Flowing: Y
Pressure: PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/22/2020
Sample Time: 12.59 PM
Sampled By: BRIAN VANCATER
Sampled by (CO): HILCORP

AREA 7 / RUN 704

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4792	0.4721	0.0530	0.00	0.0046
CO2	1.1878	1.1702	0.2030	0.00	0.0180
Methane	78.8773	77.7074	13.4190	796.66	0.4369
Ethane	10.6177	10.4602	2.8500	187.90	0.1102
Propane	4.6969	4.6272	1.2990	118.18	0.0715
Iso-Butane	0.8595	0.8468	0.2820	27.95	0.0172
N-Butane	1.3026	1.2833	0.4120	42.49	0.0261
I-Pentane	0.4763	0.4692	0.1750	19.06	0.0119
N-Pentane	0.3593	0.3540	0.1310	14.40	0.0090
Hexane Plus	1.1434	1.1264	0.5120	60.27	0.0378
Total	100.0000	98.5168	19.3360	1266.91	0.7434

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0038
BTU/CU.FT IDEAL: 1269.8
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1274.7
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1252.5
DRY BTU @ 15.025: 1300.2
REAL SPECIFIC GRAVITY: 0.7459

CYLINDER #: 4189
CYLINDER PRESSURE: 41 PSIG
ANALYSIS DATE: 07/28/2020
ANALYSIS TIME: 09:56:52 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: 07/29/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: HUBBELL 3P; CSG
Stn. No.: API #3004534196
Mtr. No.:

CASING
MV / DK

07/29/2020
35825-12450

Smpl Date:	07/22/2020	07/22/2020
Test Date:	07/28/2020	07/28/2020
Run No:	HS200097	HS200096
Nitrogen:	0.4792	2.6718
CO2:	1.1878	0.6648
Methane:	78.8773	75.6795
Ethane:	10.6177	9.4828
Propane:	4.6969	4.7378
I-Butane:	0.8595	1.0479
N-Butane:	1.3026	1.7857
I-Pentane:	0.4763	0.9452
N-Pentane:	0.3593	0.7898
Hexane+:	1.1434	2.1947
BTU:	1274.7	1337.8
GPM:	19.3360	19.6760
SPG:	0.7459	0.8016



OCD Received
8/18/2020

Well Name: HUBBELL 3P; INTER
API #: API #3004534196
Source: INTERMEDIATE CASING
Sample Type: GAS
Analysis No: HS200098
Cust No: 35825-12455

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: HUBBELL 3P; INTER
County/State: SAN JUAN NM
Location:
Lease/PA/CA: NMSF-078716-A
Formation: MV / DK
Cust. Stn. No.: API #3004534196

Source: INTERMEDIATE CASING
Well Flowing: Y
Pressure: PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 07/22/2020
Sample Time: 1.15 PM
Sampled By: BRIAN VANCASTER
Sampled by (CO): HILCORP

AREA 7 / RUN 704

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3509	0.3486	0.0390	0.00	0.0034
CO2	0.0319	0.0317	0.0050	0.00	0.0005
Methane	76.8916	76.3807	13.0840	776.61	0.4259
Ethane	9.2106	9.1494	2.4720	163.00	0.0956
Propane	8.0294	7.9760	2.2200	202.03	0.1222
Iso-Butane	2.5997	2.5824	0.8540	84.54	0.0522
N-Butane	2.4286	2.4125	0.7690	79.23	0.0487
I-Pentane	0.3249	0.3227	0.1190	13.00	0.0081
N-Pentane	0.1227	0.1219	0.0450	4.92	0.0031
Hexane Plus	0.0097	0.0096	0.0040	0.51	0.0003
Total	100.0000	99.3355	19.6110	1323.83	0.7600

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.004
BTU/CU.FT IDEAL: 1326.9
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1332.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1309.0
DRY BTU @ 15.025: 1358.9
REAL SPECIFIC GRAVITY: 0.7628

CYLINDER #: 7005
CYLINDER PRESSURE: 192 PSIG
ANALYSIS DATE: 07/28/2020
ANALYSIS TIME: 09:13:05 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: 07/29/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: HUBBELL 3P; INTER
Stn. No.: API #3004534196
Mtr. No.:

INTERMEDIATE CASING
MV / DK

07/29/2020
35825-12455

Smpl Date: 07/22/2020
Test Date: 07/28/2020
Run No: HS200098
Nitrogen: 0.3509
CO2: 0.0319
Methane: 76.8916
Ethane: 9.2106
Propane: 8.0294
I-Butane: 2.5997
N-Butane: 2.4286
I-Pentane: 0.3249
N-Pentane: 0.1227
Hexane+: 0.0097
BTU: 1332.2
GPM: 19.6110
SPG: 0.7628



OCD Received
8/18/2020

Well Name: HUBBELL 3P; CSG
API #: API #3004534196
Source: CASING
Sample Type: GAS
Analysis No: HS200096
Cust No: 35825-12450

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: HUBBELL 3P; CSG
County/State: SAN JUAN NM
Location:
Lease/PA/CA: NMSF-078716-A
Formation: MV / DK
Cust. Stn. No.: API #3004534196

Source: CASING
Well Flowing: Y
Pressure: PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/22/2020
Sample Time: 12.40 PM
Sampled By: BRIAN VANCATER
Sampled by (CO): HILCORP

AREA 7 / RUN 704

Heat Trace:

Remarks: PRESSURED WITH HELIUM TO 30 LBS.

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	2.6718	0.7101	0.2950	0.00	0.0258
CO2	0.6648	0.1767	0.1140	0.00	0.0101
Methane	75.6795	20.1138	12.8830	764.36	0.4192
Ethane	9.4828	2.5203	2.5470	167.82	0.0985
Propane	4.7378	1.2592	1.3110	119.21	0.0721
Iso-Butane	1.0479	0.2785	0.3440	34.08	0.0210
N-Butane	1.7857	0.4746	0.5650	58.25	0.0358
I-Pentane	0.9452	0.2512	0.3470	37.82	0.0235
N-Pentane	0.7898	0.2099	0.2870	31.66	0.0197
Hexane Plus	2.1947	0.5833	0.9830	115.68	0.0726
Total	100.0000	26.5776	19.6760	1328.88	0.7984

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0044
BTU/CU.FT IDEAL: 1332.0
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1337.8
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1314.5
DRY BTU @ 15.025: 1364.6
REAL SPECIFIC GRAVITY: 0.8016

CYLINDER #: 6239
CYLINDER PRESSURE: 2 PSIG
ANALYSIS DATE: 07/28/2020
ANALYSIS TIME: 10:12:45 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: 07/29/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease: HUBBELL 3P; CSG
Stn. No.: API #3004534196
Mtr. No.:

CASING
MV / DK

07/29/2020
35825-12450

Smpl Date:	07/22/2020	07/22/2020
Test Date:	07/28/2020	07/28/2020
Run No:	HS200097	HS200096
Nitrogen:	0.4792	2.6718
CO2:	1.1878	0.6648
Methane:	78.8773	75.6795
Ethane:	10.6177	9.4828
Propane:	4.6969	4.7378
I-Butane:	0.8595	1.0479
N-Butane:	1.3026	1.7857
I-Pentane:	0.4763	0.9452
N-Pentane:	0.3593	0.7898
Hexane+:	1.1434	2.1947
BTU:	1274.7	1337.8
GPM:	19.3360	19.6760
SPG:	0.7459	0.8016