



OCD Received
8/6/2020

Well Name: HUBBARD LS 2A; BHD
API #: API #3004523052
Source: BRADENHEAD
Sample Type: GAS
Analysis No: HS200120
Cust No: 35825-12570

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: HUBBARD LS 2A; BHD
County/State: SAN JUAN NM
Location:
Lease/PA/CA: 14080012073
Formation: MV
Cust. Stn. No.: API #3004523052
90-152-01

Source: BRADENHEAD
Well Flowing: Y
Pressure: 19 PSIG
Flow Temp: 86 DEG. F
Ambient Temp: 88 DEG. F
Flow Rate: 160 MCF/D
Sample Method: Purge & Fill
Sample Date: 07/28/2020
Sample Time: 2.15 PM
Sampled By:
Sampled by (CO): HILCORP

Heat Trace: AREA 1 / RUN 108
N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	1.9264	1.8733	0.2120	0.00	0.0186
CO2	0.0605	0.0588	0.0100	0.00	0.0009
Methane	87.0441	84.6433	14.7930	879.15	0.4821
Ethane	6.7094	6.5243	1.7990	118.74	0.0697
Propane	2.6675	2.5939	0.7370	67.12	0.0406
Iso-Butane	0.4609	0.4482	0.1510	14.99	0.0092
N-Butane	0.6030	0.5864	0.1910	19.67	0.0121
I-Pentane	0.2007	0.1952	0.0740	8.03	0.0050
N-Pentane	0.1248	0.1214	0.0450	5.00	0.0031
Hexane Plus	0.2027	0.1971	0.0910	10.68	0.0067
Total	100.0000	97.2419	18.1030	1123.38	0.6481

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0027
BTU/CU.FT IDEAL: 1126.0
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1129.0
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1109.4
DRY BTU @ 15.025: 1151.6
REAL SPECIFIC GRAVITY: 0.6496

CYLINDER #: 6249
CYLINDER PRESSURE: 38 PSIG
ANALYSIS DATE: 08/04/2020
ANALYSIS TIME: 09:56:55 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: HUBBARD LS 2A; BHD
Stn. No.: API #3004523052
Mtr. No.: 90-152-01

BRADENHEAD
MV

08/05/2020
35825-12570

Smpl Date: 07/28/2020
Test Date: 08/04/2020
Run No: HS200120

Nitrogen: 1.9264
CO2: 0.0605
Methane: 87.0441
Ethane: 6.7094
Propane: 2.6675
I-Butane: 0.4609
N-Butane: 0.6030
I-Pentane: 0.2007
N-Pentane: 0.1248
Hexane+: 0.2027

BTU: 1129.0
GPM: 18.1030
SPG: 0.6496



Well Name: HUBBARD LS 2A; CSG
API #: API #3004523052
Source: CASING
Sample Type: GAS
Analysis No: HS200121
Cust No: 35825-12575

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: HUBBARD LS 2A; CSG
County/State: SAN JUAN NM
Location:
Lease/PA/CA: 14080012073
Formation: MV
Cust. Stn. No.: API #3004523052
90-152-01

Source: CASING
Well Flowing: Y
Pressure: 19 PSIG
Flow Temp: 86 DEG. F
Ambient Temp: 88 DEG. F
Flow Rate: 160 MCF/D
Sample Method: Purge & Fill
Sample Date: 07/28/2020
Sample Time: 2.15 PM
Sampled By:
Sampled by (CO): HILCORP

Heat Trace: AREA 1 / RUN 108
N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1143	0.1119	0.0130	0.00	0.0011
CO2	1.2933	1.2659	0.2210	0.00	0.0197
Methane	86.0065	84.1872	14.6240	868.67	0.4764
Ethane	6.8985	6.7526	1.8500	122.08	0.0716
Propane	2.8796	2.8187	0.7960	72.45	0.0438
Iso-Butane	0.4685	0.4586	0.1540	15.24	0.0094
N-Butane	0.7845	0.7679	0.2480	25.59	0.0157
I-Pentane	0.2553	0.2499	0.0940	10.21	0.0064
N-Pentane	0.2183	0.2137	0.0790	8.75	0.0054
Hexane Plus	1.0812	1.0583	0.4840	56.99	0.0358
Total	100.0000	97.8847	18.5630	1179.99	0.6853

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0032
BTU/CU.FT IDEAL: 1182.7
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1186.5
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1165.9
DRY BTU @ 15.025: 1210.3
REAL SPECIFIC GRAVITY: 0.6873

CYLINDER #: 6015
CYLINDER PRESSURE: 40 PSIG
ANALYSIS DATE: 08/04/2020
ANALYSIS TIME: 09:43:54 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: HUBBARD LS 2A; CSG
Stn. No.: API #3004523052
Mtr. No.: 90-152-01

CASING
MV

08/05/2020
35825-12575

Smpl Date: 07/28/2020
Test Date: 08/04/2020
Run No: HS200121

Nitrogen: 0.1143
CO2: 1.2933
Methane: 86.0065
Ethane: 6.8985
Propane: 2.8796
I-Butane: 0.4685
N-Butane: 0.7845
I-Pentane: 0.2553
N-Pentane: 0.2183
Hexane+: 1.0812

BTU: 1186.5
GPM: 18.5630
SPG: 0.6873



Well Name: HUBBARD LS 2A; TBG
 API #: API #3004523052
 Source: TUBING
 Sample Type: GAS
 Analysis No: HS200122
 Cust No: 35825-12580

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
 Well Name: HUBBARD LS 2A; TBG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA: 14080012073
 Formation: MV
 Cust. Stn. No.: API #3004523052
 90-152-01

Source: TUBING
 Well Flowing: Y
 Pressure: 19 PSIG
 Flow Temp: 86 DEG. F
 Ambient Temp: 88 DEG. F
 Flow Rate: 160 MCF/D
 Sample Method: Purge & Fill
 Sample Date: 07/28/2020
 Sample Time: 2.15 PM
 Sampled By:
 Sampled by (CO): HILCORP

AREA 1 / RUN 108

Heat Trace:

Remarks:

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2453	0.2400	0.0270	0.00	0.0024
CO2	1.5671	1.5331	0.2680	0.00	0.0238
Methane	80.5973	78.8472	13.7110	814.03	0.4464
Ethane	9.4718	9.2661	2.5420	167.62	0.0983
Propane	4.0479	3.9600	1.1190	101.85	0.0616
Iso-Butane	0.7063	0.6910	0.2320	22.97	0.0142
N-Butane	1.1653	1.1400	0.3690	38.02	0.0234
I-Pentane	0.4361	0.4266	0.1600	17.45	0.0109
N-Pentane	0.3319	0.3247	0.1210	13.30	0.0083
Hexane Plus	1.4310	1.3999	0.6400	75.43	0.0474
Total	100.0000	97.8286	19.1890	1250.67	0.7366

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0037
 BTU/CU.FT IDEAL: 1253.6
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1258.2
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1236.3
 DRY BTU @ 15.025: 1283.4
 REAL SPECIFIC GRAVITY: 0.7391

CYLINDER #: 7003
 CYLINDER PRESSURE: 21 PSIG
 ANALYSIS DATE: 08/04/2020
 ANALYSIS TIME: 10:11:08 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: HUBBARD LS 2A; TBG
Stn. No.: API #3004523052
Mtr. No.: 90-152-01

TUBING
MV

08/05/2020
35825-12580

Smpl Date: 07/28/2020
Test Date: 08/04/2020
Run No: HS200122

Nitrogen: 0.2453
CO2: 1.5671
Methane: 80.5973
Ethane: 9.4718
Propane: 4.0479
I-Butane: 0.7063
N-Butane: 1.1653
I-Pentane: 0.4361
N-Pentane: 0.3319
Hexane+: 1.4310

BTU: 1258.2
GPM: 19.1890
SPG: 0.7391