



NMOCD REC'D
10/12/20

Well Name: VAN HOOK LS 1A; BHD
API #: API # 300452308200
Source: BRADENHEAD
Sample Type: GAS
Analysis No: SO200083
Cust No: 15950-11795

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: VAN HOOK LS 1A; BHD
County/State: SAN JUAN NM
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.: API # 300452308200

Source: BRADENHEAD
Well Flowing: Y
Pressure: 39.9 PSIG
Flow Temp: DEG. F
Ambient Temp: 75 DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 07/22/2020
Sample Time: 11.22 AM
Sampled By: JASON M.
Sampled by (CO): ABC

Heat Trace:
Remarks:

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1867	0.1819	0.0210	0.00	0.0018
CO2	1.6038	1.5626	0.2750	0.00	0.0244
Methane	80.1966	78.1380	13.6430	809.99	0.4442
Ethane	9.9628	9.7071	2.6740	176.31	0.1034
Propane	4.3895	4.2768	1.2130	110.44	0.0668
Iso-Butane	0.7520	0.7327	0.2470	24.45	0.0151
N-Butane	1.1819	1.1516	0.3740	38.56	0.0237
I-Pentane	0.3990	0.3888	0.1460	15.96	0.0099
N-Pentane	0.3109	0.3029	0.1130	12.46	0.0077
Hexane Plus	1.0168	0.9907	0.4550	53.60	0.0337
Total	100.0000	97.4331	19.1610	1241.78	0.7308

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0037
BTU/CU.FT IDEAL: 1244.6
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1249.1
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1227.4
DRY BTU @ 15.025: 1274.1
REAL SPECIFIC GRAVITY: 0.7331

CYLINDER #: 020
CYLINDER PRESSURE: 35 PSIG
ANALYSIS DATE: 07/27/2020
ANALYSIS TIME: 09:09:25 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: 07/28/2020

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: VAN HOOK LS 1A; BHD
Stn. No.: API #
Mtr. No.:

BRADENHEAD

07/28/2020
15950-11795

Smpl Date: 07/22/2020
Test Date: 07/27/2020
Run No: SO200083

Nitrogen: 0.1867
CO2: 1.6038
Methane: 80.1966
Ethane: 9.9628
Propane: 4.3895
I-Butane: 0.7520
N-Butane: 1.1819
I-Pentane: 0.3990
N-Pentane: 0.3109
Hexane+: 1.0168

BTU: 1249.1
GPM: 19.1610
SPG: 0.7331



NMOCD REC'D
10/12/20

Well Name: VAN HOOK LS 1A; CSG
API #: API # 300452308200
Source: CASING
Sample Type: GAS
Analysis No: SO200084
Cust No: 15950-11800

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: VAN HOOK LS 1A; CSG
County/State: SAN JUAN NM
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.: API # 300452308200

Source: CASING
Well Flowing: Y
Pressure: 47.2 PSIG
Flow Temp: DEG. F
Ambient Temp: DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 07/22/2020
Sample Time: 11.25 AM
Sampled By: JASON M.
Sampled by (CO): ABC

Heat Trace:
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1807	0.1748	0.0200	0.00	0.0017
CO2	2.1753	2.1044	0.3720	0.00	0.0331
Methane	81.3036	78.6533	13.8300	821.17	0.4503
Ethane	8.9348	8.6436	2.3970	158.12	0.0928
Propane	3.8232	3.6986	1.0570	96.20	0.0582
Iso-Butane	0.7118	0.6886	0.2340	23.15	0.0143
N-Butane	1.0583	1.0238	0.3350	34.52	0.0212
I-Pentane	0.4099	0.3965	0.1500	16.40	0.0102
N-Pentane	0.3139	0.3037	0.1140	12.58	0.0078
Hexane Plus	1.0885	1.0530	0.4870	57.38	0.0360
Total	100.0000	96.7403	18.9960	1219.51	0.7257

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0036
BTU/CU.FT IDEAL: 1222.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1226.7
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1205.4
DRY BTU @ 15.025: 1251.3
REAL SPECIFIC GRAVITY: 0.728

CYLINDER #: 1012
CYLINDER PRESSURE: 24 PSIG
ANALYSIS DATE: 07/24/2020
ANALYSIS TIME: 04:37:12 PM
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: 07/28/2020

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: VAN HOOK LS 1A; CSG
Stn. No.: API #
Mtr. No.:

CASING

07/28/2020
15950-11800

Smpl Date: 07/22/2020
Test Date: 07/24/2020
Run No: SO200084

Nitrogen: 0.1807
CO2: 2.1753
Methane: 81.3036
Ethane: 8.9348
Propane: 3.8232
I-Butane: 0.7118
N-Butane: 1.0583
I-Pentane: 0.4099
N-Pentane: 0.3139
Hexane+: 1.0885

BTU: 1226.7
GPM: 18.9960
SPG: 0.7280



NMOCD REC'D
10/12/20

Well Name: VAN HOOK LS 1A; TBG
API #: API # 300452308200
Source: TUBING
Sample Type: GAS
Analysis No: SO200085
Cust No: 15950-11805

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: VAN HOOK LS 1A; TBG
County/State: SAN JUAN NM
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.: API # 300452308200

Source: TUBING
Well Flowing: Y
Pressure: 47.9 PSIG
Flow Temp: DEG. F
Ambient Temp: 75 DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 07/22/2020
Sample Time: 11.25 AM
Sampled By: JASON M.
Sampled by (CO): ABC

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1773	0.1769	0.0200	0.00	0.0017
CO2	2.0231	2.0188	0.3460	0.00	0.0307
Methane	81.5580	81.3865	13.8730	823.74	0.4517
Ethane	8.7595	8.7411	2.3500	155.02	0.0909
Propane	3.7111	3.7033	1.0260	93.37	0.0565
Iso-Butane	0.7063	0.7048	0.2320	22.97	0.0142
N-Butane	1.0340	1.0318	0.3270	33.73	0.0208
I-Pentane	0.4042	0.4033	0.1480	16.17	0.0101
N-Pentane	0.3112	0.3105	0.1130	12.48	0.0078
Hexane Plus	1.3153	1.3125	0.5890	69.33	0.0435
Total	100.0000	99.7895	19.0240	1226.81	0.7279

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0036
BTU/CU.FT IDEAL: 1229.6
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1234.1
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1212.6
DRY BTU @ 15.025: 1258.8
REAL SPECIFIC GRAVITY: 0.7303

CYLINDER #: 230
CYLINDER PRESSURE: 32 PSIG
ANALYSIS DATE: 07/27/2020
ANALYSIS TIME: 09:35:48 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: 07/28/2020

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: VAN HOOK LS 1A; TBG
Stn. No.: API #
Mtr. No.:

TUBING

07/28/2020
15950-11805

Smpl Date: 07/22/2020
Test Date: 07/27/2020
Run No: SO200085

Nitrogen: 0.1773
CO2: 2.0231
Methane: 81.5580
Ethane: 8.7595
Propane: 3.7111
I-Butane: 0.7063
N-Butane: 1.0340
I-Pentane: 0.4042
N-Pentane: 0.3112
Hexane+: 1.3153

BTU: 1234.1
GPM: 19.0240
SPG: 0.7303