



NMOCD REC'D
10/12/20

Well Name: W D HEATH A 11; BHD
API #: API #300452096500
Source: BRADENHEAD
Sample Type: GAS
Analysis No: SO200188
Cust No: 15950-12300

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: W D HEATH A 11; BHD
County/State: NM
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.: API #300452096500
87476

Source: BRADENHEAD
Well Flowing:
Pressure: 15 PSIG
Flow Temp: DEG. F
Ambient Temp: 51 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 09/23/2020
Sample Time: 7.40 AM
Sampled By: SEAN C.
Sampled by (CO): ABC

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	68.7150	1.5577	7.5670	0.00	0.6646
CO2	0.4103	0.0093	0.0700	0.00	0.0062
Methane	26.2692	0.5955	4.4580	265.32	0.1455
Ethane	0.7102	0.0161	0.1900	12.57	0.0074
Propane	0.6661	0.0151	0.1840	16.76	0.0101
Iso-Butane	0.0662	0.0015	0.0220	2.15	0.0013
N-Butane	0.2647	0.0060	0.0840	8.64	0.0053
I-Pentane	0.1412	0.0032	0.0520	5.65	0.0035
N-Pentane	0.3088	0.0070	0.1120	12.38	0.0077
Hexane Plus	2.4483	0.0555	1.0930	129.05	0.0810
Total	100.0000	2.2669	13.8320	452.51	0.9327

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0012
BTU/CU.FT IDEAL: 453.6
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 454.1
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 446.2
DRY BTU @ 15.025: 463.2
REAL SPECIFIC GRAVITY: 0.9335

CYLINDER #: 1105
CYLINDER PRESSURE: 15 PSIG
ANALYSIS DATE: 09/30/2020
ANALYSIS TIME: 10:59:16 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: 10/06/2020

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: W D HEATH A 11; BHD
Stn. No.: API
Mtr. No.: 87476

BRADENHEAD

10/06/2020
15950-12300

Smpl Date: 09/23/2020
Test Date: 09/30/2020
Run No: SO200188

Nitrogen: 68.7150
CO2: 0.4103
Methane: 26.2692
Ethane: 0.7102
Propane: 0.6661
I-Butane: 0.0662
N-Butane: 0.2647
I-Pentane: 0.1412
N-Pentane: 0.3088
Hexane+: 2.4483

BTU: 454.1
GPM: 13.8320
SPG: 0.9335



NMOCD REC'D
10/12/20

Well Name: W D HEATH A 11 ;CSG
API #: API #300452096500
Source: CASING
Sample Type: GAS
Analysis No: SO200189
Cust No: 15950-12305

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: W D HEATH A 11 ;CSG
County/State: NM
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.: API #300452096500
87476

Source: CASING
Well Flowing: Y
Pressure: 60 PSIG
Flow Temp: DEG. F
Ambient Temp: 51 DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 09/23/2020
Sample Time: 7.45 AM
Sampled By: SEAN C.
Sampled by (CO): ABC

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1878	0.1849	0.0210	0.00	0.0018
CO2	0.8006	0.7882	0.1370	0.00	0.0122
Methane	84.6436	83.3326	14.3920	854.90	0.4688
Ethane	7.7096	7.5902	2.0680	136.44	0.0800
Propane	3.6887	3.6316	1.0190	92.81	0.0562
Iso-Butane	0.7117	0.7007	0.2340	23.14	0.0143
N-Butane	1.0519	1.0356	0.3330	34.32	0.0211
I-Pentane	0.3782	0.3723	0.1390	15.13	0.0094
N-Pentane	0.2678	0.2637	0.0970	10.74	0.0067
Hexane Plus	0.5601	0.5514	0.2510	29.52	0.0185
Total	100.0000	98.4512	18.6910	1197.00	0.6890

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0032
BTU/CU.FT IDEAL: 1199.8
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1203.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1182.7
DRY BTU @ 15.025: 1227.7
REAL SPECIFIC GRAVITY: 0.691

CYLINDER #: 015
CYLINDER PRESSURE: 60 PSIG
ANALYSIS DATE: 09/30/2020
ANALYSIS TIME: 10:23:38 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: 10/06/2020

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: W D HEATH A 11 ;CSG
Stn. No.: API
Mtr. No.: 87476

CASING

10/06/2020
15950-12305

Smpl Date: 09/23/2020
Test Date: 09/30/2020
Run No: SO200189

Nitrogen: 0.1878
CO2: 0.8006
Methane: 84.6436
Ethane: 7.7096
Propane: 3.6887
I-Butane: 0.7117
N-Butane: 1.0519
I-Pentane: 0.3782
N-Pentane: 0.2678
Hexane+: 0.5601

BTU: 1203.6
GPM: 18.6910
SPG: 0.6910



NMOCD REC'D
10/12/20

Well Name: W D HEATH A 11; TBG
API #: API #300452096500
Source: TUBING
Sample Type: GAS
Analysis No: SO200190
Cust No: 15950-12310

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: W D HEATH A 11; TBG
County/State: NM
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.: API #300452096500
87476

Source: TUBING
Well Flowing: Y
Pressure: 60 PSIG
Flow Temp: DEG. F
Ambient Temp: 51 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 09/23/2020
Sample Time: 7.50 AM
Sampled By: SEAN C.
Sampled by (CO): ABC

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1812	0.1783	0.0200	0.00	0.0018
CO2	0.7547	0.7425	0.1290	0.00	0.0115
Methane	84.7591	83.3836	14.4130	856.07	0.4695
Ethane	7.6428	7.5188	2.0500	135.25	0.0793
Propane	3.6282	3.5693	1.0030	91.29	0.0552
Iso-Butane	0.6952	0.6839	0.2280	22.61	0.0140
N-Butane	1.0098	0.9934	0.3190	32.94	0.0203
I-Pentane	0.3679	0.3619	0.1350	14.72	0.0092
N-Pentane	0.2649	0.2606	0.0960	10.62	0.0066
Hexane Plus	0.6962	0.6849	0.3110	36.70	0.0230
Total	100.0000	98.3772	18.7040	1200.20	0.6903

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0033
BTU/CU.FT IDEAL: 1203.0
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1206.8
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1185.8
DRY BTU @ 15.025: 1231.0
REAL SPECIFIC GRAVITY: 0.6922

CYLINDER #: 003
CYLINDER PRESSURE: 60 PSIG
ANALYSIS DATE: 09/30/2020
ANALYSIS TIME: 10:37:36 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: 10/06/2020

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: W D HEATH A 11; TBG
Stn. No.: API
Mtr. No.: 87476

TUBING

10/06/2020
15950-12310

Smpl Date: 09/23/2020
Test Date: 09/30/2020
Run No: SO200190
Nitrogen: 0.1812
CO2: 0.7547
Methane: 84.7591
Ethane: 7.6428
Propane: 3.6282
I-Butane: 0.6952
N-Butane: 1.0098
I-Pentane: 0.3679
N-Pentane: 0.2649
Hexane+: 0.6962
BTU: 1206.8
GPM: 18.7040
SPG: 0.6922