



Well Name: Heaton LS 004
API# 30-045-10349
Casing Sampled: Bradenhead
Sample Type: Gas

Analysis No: SO190050
Cust No: 15950-10015

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: HEATON LS 004; BHD
County/State: SAN JUAN NM
Location:
Lease/PA/CA:
Formation: MV
Cust. Stn. No.: API 3004510349

Source: BRADENHEAD
Well Flowing: Y
Pressure: 19.8 PSIA
Flow Temp: DEG. F
Ambient Temp: 68 DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 06/13/2019
Sample Time: 8.36 AM
Sampled By:
Sampled by (CO):

Heat Trace: N
Remarks: PRESSURED WITH HELIUM TO 30LBS.

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	16.1260	11.3430	1.7770	0.00	0.1560
CO2	0.0220	0.0155	0.0040	0.00	0.0003
Methane	81.4484	57.2907	13.8290	822.63	0.4511
Ethane	1.5381	1.0819	0.4120	27.22	0.0160
Propane	0.4379	0.3080	0.1210	11.02	0.0067
Iso-Butane	0.0699	0.0492	0.0230	2.27	0.0014
N-Butane	0.1079	0.0759	0.0340	3.52	0.0022
I-Pentane	0.0368	0.0259	0.0130	1.47	0.0009
N-Pentane	0.0297	0.0209	0.0110	1.19	0.0007
Hexane Plus	0.1833	0.1289	0.0820	9.66	0.0061
Total	100.0000	70.3399	16.3060	878.98	0.6414

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0018
BTU/CU.FT IDEAL: 881.0
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 882.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 867.2
DRY BTU @ 15.025: 900.3
REAL SPECIFIC GRAVITY: 0.6423

CYLINDER #: 7061
CYLINDER PRESSURE: PSIG
ANALYSIS DATE: 06/20/2019
ANALYSIS TIME: 10:41:35 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

GC Method: C6+ Gas

Last Cal/Verify: 06/25/2019



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: HEATON LS 004; BHD
Stn. No.: API 3004510349
Mtr. No.:

BRADENHEAD
MV

06/25/2019
15950-10015

Smpl Date:	06/13/2019	05/11/2017
Test Date:	06/20/2019	05/11/2017
Run No:	SO190050	SO170004
Nitrogen:	16.1260	16.7748
CO2:	0.0220	0.0170
Methane:	81.4484	81.0622
Ethane:	1.5381	1.4280
Propane:	0.4379	0.3700
I-Butane:	0.0699	0.0640
N-Butane:	0.1079	0.0950
I-Pentane:	0.0368	0.0380
N-Pentane:	0.0297	0.0400
Hexane+:	0.1833	0.1110
BTU:	882.6	871.0
GPM:	16.3060	16.2270
SPG:	0.6423	0.6416



Well Name: Heaton LS 004
API# 30-045-10349
Casing Sampled: Production
Sample Type: GAS

Analysis No: SO190054
Cust No: 15950-10020

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: HEATON LS 004; CSG
County/State: SAN JUAN NM
Location:
Lease/PA/CA:
Formation: MV
Cust. Stn. No.: API 3004510349

Source: CASING
Well Flowing: Y
Pressure: 239.3 PSIA
Flow Temp: DEG. F
Ambient Temp: 68 DEG. F
Flow Rate: MCF/D
Sample Method:
Sample Date: 06/13/2019
Sample Time: 8.41 AM
Sampled By: EUGENIA HAMILTON
Sampled by (CO): PESCO

Heat Trace: N

Remarks:

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3033	0.2968	0.0330	0.00	0.0029
CO2	0.2865	0.2804	0.0490	0.00	0.0044
Methane	77.9504	76.2900	13.2630	787.30	0.4318
Ethane	10.6271	10.4007	2.8520	188.07	0.1103
Propane	6.5795	6.4393	1.8190	165.55	0.1002
Iso-Butane	1.2150	1.1891	0.3990	39.51	0.0244
N-Butane	1.6934	1.6573	0.5360	55.24	0.0340
I-Pentane	0.5180	0.5070	0.1900	20.72	0.0129
N-Pentane	0.3987	0.3902	0.1450	15.98	0.0099
Hexane Plus	0.4281	0.4190	0.1920	22.57	0.0142
Total	100.0000	97.8698	19.4780	1294.94	0.7449

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0039
BTU/CU.FT IDEAL: 1297.9
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1303.0
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1280.3
DRY BTU @ 15.025: 1329.1
REAL SPECIFIC GRAVITY: 0.7475

CYLINDER #: 7089
CYLINDER PRESSURE: 77 PSIG
ANALYSIS DATE: 06/21/2019
ANALYSIS TIME: 09:49:08 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

GC Method: C6+ Gas

Last Cal/Verify: 06/25/2019



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: HEATON LS 004; CSG
Stn. No.: API 3004510349
Mtr. No.:

CASING
MV

06/25/2019
15950-10020

Smpl Date:	06/13/2019	05/11/2017
Test Date:	06/21/2019	05/11/2017
Run No:	SO190054	SO170005
Nitrogen:	0.3033	0.2890
CO2:	0.2865	0.5370
Methane:	77.9504	78.6824
Ethane:	10.6271	10.0288
Propane:	6.5795	5.6299
I-Butane:	1.2150	1.0860
N-Butane:	1.6934	1.6840
I-Pentane:	0.5180	0.6490
N-Pentane:	0.3987	0.5370
Hexane+:	0.4281	0.8770
BTU:	1303.0	1305.9
GPM:	19.4780	19.4770
SPG:	0.7475	0.7534



Well Name: Heaton LS 004
 API# 30 - 045 - 10349
 Casing Sampled: Tubing
 Sample Type Gas

Analysis No: SO190055
 Cust No: 15950-10025

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
 Well Name: HEATON LS 004; TBG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation: MV
 Cust. Stn. No.: API # 3004510349

Source: TUBING
 Well Flowing: Y
 Pressure: 155.7 PSIA
 Flow Temp: DEG. F
 Ambient Temp: 68 DEG. F
 Flow Rate: MCF/D
 Sample Method:
 Sample Date: 06/13/2019
 Sample Time: 8.36 AM
 Sampled By: EUGENIA HAMILTON
 Sampled by (CO): PESCO

Heat Trace: N
 Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2740	0.2690	0.0300	0.00	0.0027
CO2	0.7765	0.7622	0.1330	0.00	0.0118
Methane	82.1553	80.6427	13.9720	829.77	0.4551
Ethane	10.0636	9.8783	2.7000	178.10	0.1045
Propane	4.0429	3.9685	1.1170	101.72	0.0616
Iso-Butane	0.5630	0.5526	0.1850	18.31	0.0113
N-Butane	0.9254	0.9084	0.2930	30.19	0.0186
I-Pentane	0.2948	0.2894	0.1080	11.79	0.0073
N-Pentane	0.2432	0.2387	0.0880	9.75	0.0061
Hexane Plus	0.6613	0.6491	0.2960	34.86	0.0219
Total	100.0000	98.1589	18.9220	1214.49	0.7007

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0034
 BTU/CU.FT IDEAL: 1217.3
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1221.4
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1200.1
 DRY BTU @ 15.025: 1245.9
 REAL SPECIFIC GRAVITY: 0.7028

CYLINDER #: 7010
 CYLINDER PRESSURE: 161 PSIG
 ANALYSIS DATE: 06/20/2019
 ANALYSIS TIME: 02:11:38 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: 06/25/2019

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: HEATON LS 004; TBG
Stn. No.: API # 3004510349
Mtr. No.:

TUBING
MV

06/25/2019
15950-10025

Smpl Date:	06/13/2019	05/11/2017
Test Date:	06/20/2019	05/11/2017
Run No:	SO190055	SO170006
Nitrogen:	0.2740	0.3210
CO2:	0.7765	0.8230
Methane:	82.1553	82.7513
Ethane:	10.0636	9.1038
Propane:	4.0429	3.8509
I-Butane:	0.5630	0.6200
N-Butane:	0.9254	1.1550
I-Pentane:	0.2948	0.4580
N-Pentane:	0.2432	0.3460
Hexane+:	0.6613	0.5710
BTU:	1221.4	1220.8
GPM:	18.9220	18.8730
SPG:	0.7028	0.7037