



Well Name: CASE B 3
 API# 30 - 045-10694
 Casing Sampled: Bradenhead
 Sample Type Gas

Analysis No: SO190044
 Cust No: 15950-10000

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
 Well Name: CASE B 3; BHD
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation: MV
 Cust. Str. No.: API # 3004510694

Source: BRADENHEAD
 Well Flowing: Y
 Pressure: 27.1 PSIA
 Flow Temp: DEG. F
 Ambient Temp: 75 DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 06/13/2019
 Sample Time: 9.48 AM
 Sampled By: EUGENIA HAMILTON
 Sampled by (CO): PESCO

Heat Trace: N
 Remarks:

NMOC

DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	5.4655	5.3383	0.6030	0.00	0.0529
CO2	0.0353	0.0345	0.0060	0.00	0.0005
Methane	81.0087	79.1235	13.7680	818.19	0.4487
Ethane	8.2703	8.0778	2.2170	146.36	0.0859
Propane	3.1685	3.0948	0.8750	79.72	0.0482
Iso-Butane	0.5040	0.4923	0.1650	16.39	0.0101
N-Butane	0.7717	0.7537	0.2440	25.18	0.0155
I-Pentane	0.2634	0.2573	0.0970	10.54	0.0066
N-Pentane	0.1707	0.1667	0.0620	6.84	0.0043
Hexane Plus	0.3419	0.3339	0.1530	18.02	0.0113
Total	100.0000	97.6728	18.1900	1121.24	0.6839

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0028
 BTU/CU.FT IDEAL: 1123.8
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1127.0
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1107.4
 DRY BTU @ 15.025: 1149.6
 REAL SPECIFIC GRAVITY: 0.6856

CYLINDER #: 7098
 CYLINDER PRESSURE: 30 PSIG
 ANALYSIS DATE: 06/20/2019
 ANALYSIS TIME: 11:10:11 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: 06/25/2019

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: CASE B 3; BHD
Stn. No.: API # 3004510694
Mtr. No.:

BRADENHEAD
MV

06/25/2019
15950-10000

Smpl Date:	06/13/2019	05/25/2017
Test Date:	06/20/2019	05/25/2017
Run No:	SO190044	SO170001
Nitrogen:	5.4655	19.6268
CO2:	0.0353	0.0360
Methane:	81.0087	69.0833
Ethane:	8.2703	6.9429
Propane:	3.1685	2.6070
I-Butane:	0.5040	0.4310
N-Butane:	0.7717	0.6480
I-Pentane:	0.2634	0.2220
N-Pentane:	0.1707	0.1370
Hexane+:	0.3419	0.2660
BTU:	1127.0	954.1
GPM:	18.1900	17.0830
SPG:	0.6856	0.7256



Well Name: CASE B 3
 API# 30 - 045-10694
 Casing Sampled: Production
 Sample Type Gas
 (505) 525-0022

Analysis No: SO190045
 Cust No: 15950-10005

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
 Well Name: CASE B 3; CSG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation: MV
 Cust. Stn. No.: API # 3004510694

Source: CASING
 Well Flowing: Y
 Pressure: 92 PSIA
 Flow Temp: DEG. F
 Ambient Temp: 75 DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 06/13/2019
 Sample Time: 9.55 AM
 Sampled By: EUGENIA HAMILTON
 Sampled by (CO): PESCO

Heat Trace: N
 Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1644	0.1550	0.0180	0.00	0.0016
CO2	0.0050	0.0047	0.0010	0.00	0.0001
Methane	76.4602	72.0727	13.0150	772.25	0.4235
Ethane	10.7332	10.1173	2.8820	189.95	0.1114
Propane	7.0898	6.6830	1.9610	178.39	0.1079
Iso-Butane	1.3984	1.3182	0.4590	45.47	0.0281
N-Butane	1.8895	1.7811	0.5980	61.64	0.0379
I-Pentane	0.6540	0.6165	0.2400	26.17	0.0163
N-Pentane	0.5336	0.5030	0.1940	21.39	0.0133
Hexane Plus	1.0719	1.0104	0.4800	56.50	0.0355
Total	100.0000	94.2619	19.8480	1351.75	0.7756

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0043
 BTU/CU.FT IDEAL: 1354.9
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1360.7
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1337.0
 DRY BTU @ 15.025: 1388.0
 REAL SPECIFIC GRAVITY: 0.7786

CYLINDER #: 7004
 CYLINDER PRESSURE: 90 PSIG
 ANALYSIS DATE: 06/21/2019
 ANALYSIS TIME: 11:40:06 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: 06/25/2019

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: CASE B 3; CSG
Stn. No.: API # 3004510694
Mtr. No.:

CASING
MV

06/25/2019
15950-10005

Smpl Date:	06/13/2019	05/25/2017
Test Date:	06/21/2019	05/25/2017
Run No:	SO190045	SO170002
Nitrogen:	0.1644	0.2490
CO2:	0.0050	0.0100
Methane:	76.4602	74.8347
Ethane:	10.7332	10.4601
Propane:	7.0898	6.9801
I-Butane:	1.3984	1.4920
N-Butane:	1.8895	2.0720
I-Pentane:	0.6540	0.8830
N-Pentane:	0.5336	0.7950
Hexane+:	1.0719	2.2240
BTU:	1360.7	1427.4
GPM:	19.8480	20.2750
SPG:	0.7786	0.8226



Well Name: Casing B 3
 API# 30-045-10694
 Casing Sampled: Tubing
 Sample Type Gas
 (505) 325-6622

Analysis No: SO190046
 Cust No: 15950-10010

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
 Well Name: CASE B 3; TBG
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation: MV
 Cust. Str. No.: API 3004510694

Source: TUBING
 Well Flowing: Y
 Pressure: 60.7 PSIA
 Flow Temp: DEG. F
 Ambient Temp: 75 DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 06/13/2019
 Sample Time: 9.48 AM
 Sampled By: EUGENIA HAMILTON
 Sampled by (CO): PESCO

Heat Trace: N
 Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5844	0.5742	0.0650	0.00	0.0057
CO2	0.8005	0.7866	0.1370	0.00	0.0122
Methane	80.4904	79.0888	13.6910	812.95	0.4458
Ethane	9.7986	9.6280	2.6290	173.41	0.1017
Propane	4.6753	4.5939	1.2920	117.64	0.0712
Iso-Butane	0.8198	0.8055	0.2690	26.66	0.0165
N-Butane	1.2135	1.1924	0.3840	39.59	0.0244
I-Pentane	0.3930	0.3862	0.1440	15.72	0.0098
N-Pentane	0.2918	0.2867	0.1060	11.70	0.0073
Hexane Plus	0.9327	0.9165	0.4170	49.16	0.0309
Total	100.0000	98.2588	19.1340	1246.83	0.7253

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0036
 BTU/CU.FT IDEAL: 1249.7
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1254.2
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1232.4
 DRY BTU @ 15.025: 1279.3
 REAL SPECIFIC GRAVITY: 0.7276

CYLINDER #: 7014
 CYLINDER PRESSURE: 57 PSIG
 ANALYSIS DATE: 06/20/2019
 ANALYSIS TIME: 02:39:06 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

GC Method: C6+ Gas

Last Cal/Verify: 06/25/2019



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: CASE B 3; TBG
Stn. No.: API 3004510694
Mtr. No.:

TUBING
MV

06/25/2019
15950-10010

Smpl Date:	06/13/2019	05/25/2017
Test Date:	06/20/2019	05/25/2017
Run No:	SO190046	SO170003
Nitrogen:	0.5844	0.2420
CO2:	0.8005	0.9980
Methane:	80.4904	81.9168
Ethane:	9.7986	9.2621
Propane:	4.6753	3.9580
I-Butane:	0.8198	0.7080
N-Butane:	1.2135	1.1170
I-Pentane:	0.3930	0.4180
N-Pentane:	0.2918	0.3170
Hexane+:	0.9327	1.0630
BTU:	1254.2	1243.0
GPM:	19.1340	19.0400
SPG:	0.7276	0.7200