



GCU 77
30-045-08235
Bradenhead Sample

2030 Afton Place
Farmington, NM 87401
(505) 325-6622

Analysis No: SO180048
Cust No: 15950-10670

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 77; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: 3004508235

Source: BRADENHEAD
Well Flowing: Y
Pressure: 56 PSIA
Flow Temp: DEG. F
Ambient Temp: 79 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 06/29/2018
Sample Time: 9:50 AM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NMCOO
FEB 13 2019
DISTRICT III

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3581	0.3594	0.0390	0.00	0.0035
CO2	0.0172	0.0173	0.0030	0.00	0.0003
Methane	88.0812	88.3959	14.9700	889.62	0.4879
Ethane	7.3035	7.3296	1.9580	129.25	0.0758
Propane	2.6605	2.6700	0.7350	66.94	0.0405
Iso-Butane	0.4183	0.4198	0.1370	13.60	0.0084
N-Butane	0.6110	0.6132	0.1930	19.93	0.0123
I-Pentane	0.1802	0.1808	0.0660	7.21	0.0045
N-Pentane	0.1210	0.1214	0.0440	4.85	0.0030
Hexane Plus	0.2490	0.2499	0.1110	13.12	0.0082
Total	100.0000	100.3573	18.2560	1144.53	0.6443

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0028
BTU/CU.FT IDEAL: 1147.2
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1150.4
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1130.4
DRY BTU @ 15.025: 1173.4
REAL SPECIFIC GRAVITY: 0.6459

CYLINDER #: 7053
CYLINDER PRESSURE: 53 PSIG
ANALYSIS DATE: 07/10/2018
ANALYSIS TIME: 09:32:05 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: 07/12/2018

GC Method: C6+ Gas

6



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 77; BHD
Stn. No.: 3004508235
Mtr. No.:

BRADENHEAD
PC

07/12/2018
15950-10670

Smpl Date: 06/29/2018
Test Date: 07/10/2018
Run No: SO180048
Nitrogen: 0.3581
CO2: 0.0172
Methane: 88.0812
Ethane: 7.3035
Propane: 2.6605
I-Butane: 0.4183
N-Butane: 0.6110
I-Pentane: 0.1802
N-Pentane: 0.1210
Hexane+: 0.2490
BTU: 1150.4
GPM: 18.2560
SPG: 0.6459



GCU 77
30-045-08235
Casing Sample

2030 Afton Place
Farmington, NM 87401
(505) 325-6622

Analysis No: SO180049
Cust No: 15950-10675

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT

Well Name: GCU 77; CSG

County/State: SAN JUAN NM

Location:

Field:

Formation: PC

Cust. Str. No.: 3004508235

Source: CASING

Well Flowing: Y

Pressure: 9 PSIA

Flow Temp: DEG. F

Ambient Temp: 79 DEG. F

Flow Rate: MCF/D

Sample Method: Purge & Fill

Sample Date: 06/29/2018

Sample Time: 9.58 AM

Sampled By: SCOTT WILLARD

Sampled by (CO): PESCO

Heat Trace: N

Remarks: PRESSURED WITH HELIUM TO 30 LBS.

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.8527	0.2786	0.0940	0.00	0.0082
CO2	0.1126	0.0368	0.0190	0.00	0.0017
Methane	87.5777	28.6142	14.8880	884.53	0.4851
Ethane	6.0224	1.9677	1.6150	106.58	0.0625
Propane	2.6778	0.8749	0.7400	67.38	0.0408
Iso-Butane	0.5078	0.1659	0.1670	16.51	0.0102
N-Butane	0.8325	0.2720	0.2630	27.16	0.0167
I-Pentane	0.3471	0.1134	0.1270	13.89	0.0086
N-Pentane	0.2605	0.0851	0.0950	10.44	0.0065
Hexane Plus	0.8089	0.2643	0.3620	42.64	0.0268
Total	100.0000	32.6729	18.3700	1169.13	0.6671

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.003
BTU/CU.FT IDEAL: 1171.8
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1175.4
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1154.9
DRY BTU @ 15.025: 1198.9
REAL SPECIFIC GRAVITY: 0.6689

CYLINDER #: 7097
CYLINDER PRESSURE: PSIG
ANALYSIS DATE: 07/10/2018
ANALYSIS TIME: 10:09:37 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: 07/12/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 77; CSG
Stn. No.: 3004508235
Mtr. No.:

CASING
PC

07/12/2018
15950-10675

Smpl Date: 06/29/2018
Test Date: 07/10/2018
Run No: SO180049

Nitrogen: 0.8527
CO2: 0.1126
Methane: 87.5777
Ethane: 6.0224
Propane: 2.6778
I-Butane: 0.5078
N-Butane: 0.8325
I-Pentane: 0.3471
N-Pentane: 0.2605
Hexane+: 0.8089

BTU: 1175.4
GPM: 18.3700
SPG: 0.6689



GCU 77
30-045-08235
Tubing Sample

2030 Afton Place
Farmington, NM 87401
(505) 325-6622

Analysis No: SO180050
Cust No: 15950-10680

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT

Well Name: GCU 77; TBG

County/State: SAN JUAN NM

Location:

Field:

Formation: PC

Cust. Stn. No.: 3004508235

Source: TUBING

Well Flowing: Y

Pressure: 9 PSIA

Flow Temp: DEG. F

Ambient Temp: 79 DEG. F

Flow Rate: MCF/D

Sample Method: Purge & Fill

Sample Date: 06/29/2018

Sample Time: 9.54 AM

Sampled By: SCOTT WILLARD

Sampled by (CO): PESCO

Heat Trace: N

Remarks:

NMCOB
FEB 13 2013
DISTRICT III

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5031	0.4877	0.0550	0.00	0.0049
CO2	0.0348	0.0337	0.0060	0.00	0.0005
Methane	88.6161	85.9105	15.0630	895.02	0.4908
Ethane	5.9022	5.7220	1.5830	104.45	0.0613
Propane	2.5055	2.4290	0.6920	63.04	0.0381
Iso-Butane	0.4970	0.4818	0.1630	16.16	0.0100
N-Butane	0.7605	0.7373	0.2400	24.81	0.0153
I-Pentane	0.3212	0.3114	0.1180	12.85	0.0080
N-Pentane	0.2409	0.2335	0.0880	9.66	0.0060
Hexane Plus	0.6187	0.5998	0.2770	32.61	0.0205
Total	100.0000	96.9467	18.2850	1158.61	0.6554

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0029
BTU/CU.FT IDEAL: 1161.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1164.7
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1144.4
DRY BTU @ 15.025: 1188.0
REAL SPECIFIC GRAVITY: 0.657

CYLINDER #: 7077
CYLINDER PRESSURE: 8 PSIG
ANALYSIS DATE: 07/10/2018
ANALYSIS TIME: 09:49:40 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: 07/12/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 77; TBG
Stn. No.: 3004508235
Mtr. No.:

TUBING
PC

07/12/2018
15950-10680

Smpl Date: 06/29/2018
Test Date: 07/10/2018
Run No: SO180050

Nitrogen: 0.5031
CO2: 0.0348
Methane: 88.6161
Ethane: 5.9022
Propane: 2.5055
I-Butane: 0.4970
N-Butane: 0.7605
I-Pentane: 0.3212
N-Pentane: 0.2409
Hexane+: 0.6187

BTU: 1164.7
GPM: 18.2850
SPG: 0.6570