



GCU 217
30-045-11420
Bradenhead Sample

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

Analysis No: SO180157
Cust No: 15950-11215

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU #217; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004511620

Source: BRADENHEAD
Well Flowing: Y
Pressure: 51 PSIA
Flow Temp: DEG. F
Ambient Temp: 83 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/31/2018
Sample Time: 12.09 PM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NMCO
FEB 13 2019
DISTRICT III

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5837	0.5371	0.0640	0.00	0.0056
CO2	0.0066	0.0061	0.0010	0.00	0.0001
Methane	89.7461	82.5797	15.2500	906.44	0.4971
Ethane	6.0920	5.6055	1.6330	107.81	0.0632
Propane	2.3503	2.1626	0.6490	59.14	0.0358
Iso-Butane	0.4434	0.4080	0.1450	14.42	0.0089
N-Butane	0.4181	0.3847	0.1320	13.64	0.0084
I-Pentane	0.1806	0.1662	0.0660	7.23	0.0045
N-Pentane	0.0349	0.0321	0.0130	1.40	0.0009
Hexane Plus	0.1443	0.1328	0.0650	7.61	0.0048
Total	100.0000	92.0148	18.0180	1117.67	0.6293

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0026
BTU/CU.FT IDEAL: 1120.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1123.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1103.7
DRY BTU @ 15.025: 1145.7
REAL SPECIFIC GRAVITY: 0.6307

CYLINDER #: 7067
CYLINDER PRESSURE: 46 PSIG
ANALYSIS DATE: 08/06/2018
ANALYSIS TIME: 06:59:07 PM
ANALYSIS RUN BY: PATRICIA KING

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: 08/09/2018

GC Method: C6+ Gas

6



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU #217; BHD
Stn. No.: API 3004511620
Mtr. No.:

BRADENHEAD
PC

08/09/2018
15950-11215

Smpl Date: 07/31/2018
Test Date: 08/06/2018
Run No: SO180157

Nitrogen: 0.5837
CO2: 0.0066
Methane: 89.7461
Ethane: 6.0920
Propane: 2.3503
I-Butane: 0.4434
N-Butane: 0.4181
I-Pentane: 0.1806
N-Pentane: 0.0349
Hexane+: 0.1443

BTU: 1123.2
GPM: 18.0180
SPG: 0.6307



GCU 217
30-045-11420
Casing Sample

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

Analysis No: SO180158
Cust No: 15950-11220

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU #217; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004511620

Source: CASING
Well Flowing: Y
Pressure: 120 PSIA
Flow Temp: DEG. F
Ambient Temp: 83 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/31/2018
Sample Time: 12.17 PM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

MMOC
FEB 13 2019
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.7171	0.7186	0.0790	0.00	0.0069
CO2	0.8367	0.8385	0.1430	0.00	0.0127
Methane	75.3856	75.5439	12.8330	761.39	0.4176
Ethane	10.8280	10.8508	2.9080	191.62	0.1124
Propane	5.5585	5.5702	1.5380	139.86	0.0846
Iso-Butane	0.9898	0.9919	0.3250	32.19	0.0199
N-Butane	2.1804	2.1850	0.6900	71.13	0.0438
I-Pentane	1.1372	1.1396	0.4180	45.50	0.0283
N-Pentane	1.1827	1.1852	0.4300	47.41	0.0295
Hexane Plus	1.1840	1.1865	0.5300	62.41	0.0392
Total	100.0000	100.2102	19.8940	1351.51	0.7949

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0044
BTU/CU.FT IDEAL: 1354.6
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1360.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1336.9
DRY BTU @ 15.025: 1387.8
REAL SPECIFIC GRAVITY: 0.798

CYLINDER #: 7066
CYLINDER PRESSURE: 102 PSIG
ANALYSIS DATE: 08/03/2018
ANALYSIS TIME: 11:58:18 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: 08/09/2018

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU #217; CSG
Stn. No.: API 3004511620
Mtr. No.:

CASING
PC

08/09/2018
15950-11220

Smpl Date: 07/31/2018
Test Date: 08/03/2018
Run No: SO180158

Nitrogen: 0.7171
CO2: 0.8367
Methane: 75.3856
Ethane: 10.8280
Propane: 5.5585
I-Butane: 0.9898
N-Butane: 2.1804
I-Pentane: 1.1372
N-Pentane: 1.1827
Hexane+: 1.1840

BTU: 1360.6
GPM: 19.8940
SPG: 0.7980



GCU 217
30-045-11620
Tubing Sample

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

Analysis No: SO180159
Cust No: 15950-11225

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU #217; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004511620

Source: TUBING
Well Flowing: Y
Pressure: 105 PSIA
Flow Temp: DEG. F
Ambient Temp: 83 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/31/2018
Sample Time: 12.25 PM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

UNOC
FEB 13 2019
DISTRICT III

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.7869	0.7917	0.0870	0.00	0.0076
CO2	1.1606	1.1677	0.1990	0.00	0.0176
Methane	80.3405	80.8350	13.6630	811.44	0.4450
Ethane	10.4177	10.4818	2.7950	184.36	0.1082
Propane	4.4124	4.4395	1.2190	111.02	0.0672
Iso-Butane	0.6975	0.7018	0.2290	22.68	0.0140
N-Butane	1.1226	1.1295	0.3550	36.62	0.0225
I-Pentane	0.3123	0.3142	0.1150	12.49	0.0078
N-Pentane	0.2235	0.2249	0.0810	8.96	0.0056
Hexane Plus	0.5260	0.5292	0.2350	27.73	0.0174
Total	100.0000	100.6153	18.9780	1215.31	0.7129

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0034
BTU/CU.FT IDEAL: 1218.1
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1222.3
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1201.0
DRY BTU @ 15.025: 1246.8
REAL SPECIFIC GRAVITY: 0.715

CYLINDER #: 7077
CYLINDER PRESSURE: 48 PSIG
ANALYSIS DATE: 08/03/2018
ANALYSIS TIME: 01:31:33 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: 08/09/2018

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU #217; TBG
Stn. No.: API 3004511620
Mtr. No.:

TUBING
PC

08/09/2018
15950-11225

Smpl Date: 07/31/2018
Test Date: 08/03/2018
Run No: SO180159

Nitrogen: 0.7869
CO2: 1.1606
Methane: 80.3405
Ethane: 10.4177
Propane: 4.4124
I-Butane: 0.6975
N-Butane: 1.1226
I-Pentane: 0.3123
N-Pentane: 0.2235
Hexane+: 0.5260

BTU: 1222.3
GPM: 18.9780
SPG: 0.7150