



GCU 170 E
30-045-24175
Bradenhead Sample

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

Analysis No: SO180136
Cust No: 15950-11110

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU #170E; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004524175

Source: BRADENHEAD
Well Flowing: Y
Pressure: 37 PSIA
Flow Temp: DEG. F
Ambient Temp: 90 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/25/2018
Sample Time: 12.34 PM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NMOC
FEB 13 2013
DISTRICT III

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4659	0.4564	0.0510	0.00	0.0045
CO2	0.0158	0.0155	0.0030	0.00	0.0002
Methane	89.0921	87.2783	15.1410	899.83	0.4935
Ethane	6.4654	6.3338	1.7330	114.42	0.0671
Propane	2.4214	2.3721	0.6690	60.92	0.0369
Iso-Butane	0.4259	0.4172	0.1400	13.85	0.0085
N-Butane	0.5267	0.5160	0.1660	17.18	0.0106
I-Pentane	0.1816	0.1779	0.0670	7.27	0.0045
N-Pentane	0.1150	0.1127	0.0420	4.61	0.0029
Hexane Plus	0.2902	0.2843	0.1300	15.30	0.0096
Total	100.0000	97.9642	18.1420	1133.38	0.6383

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0027
BTU/CU.FT IDEAL: 1136.0
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1139.1
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1119.3
DRY BTU @ 15.025: 1161.9
REAL SPECIFIC GRAVITY: 0.6398

CYLINDER #: 7055
CYLINDER PRESSURE: 34 PSIG
ANALYSIS DATE: 07/31/2018
ANALYSIS TIME: 08:49:08 AM
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: 08/02/2018

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU #170E; BHD
Stn. No.: API 3004524175
Mtr. No.:

BRADENHEAD
PC

08/02/2018
15950-11110

Smpl Date: 07/25/2018
Test Date: 07/31/2018
Run No: SO180136

Nitrogen: 0.4659
CO2: 0.0158
Methane: 89.0921
Ethane: 6.4654
Propane: 2.4214
I-Butane: 0.4259
N-Butane: 0.5267
I-Pentane: 0.1816
N-Pentane: 0.1150
Hexane+: 0.2902

BTU: 1139.1
GPM: 18.1420
SPG: 0.6398



GCU 170E
30-045-24175
Casing Sample

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

Analysis No: SO180137
Cust No: 15950-11115

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU #170E; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004524175

Source: CASING
Well Flowing: Y
Pressure: 19 PSIA
Flow Temp: DEG. F
Ambient Temp: 90 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/25/2018
Sample Time: 12.53 PM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NM000
FEB 13 2013
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5399	0.5302	0.0600	0.00	0.0052
CO2	1.3383	1.3142	0.2290	0.00	0.0203
Methane	79.9642	78.5269	13.6060	807.64	0.4429
Ethane	9.3401	9.1722	2.5070	165.29	0.0970
Propane	4.1985	4.1230	1.1610	105.64	0.0639
Iso-Butane	0.7739	0.7600	0.2540	25.17	0.0155
N-Butane	1.2886	1.2654	0.4080	42.04	0.0259
I-Pentane	0.4866	0.4779	0.1790	19.47	0.0121
N-Pentane	0.4248	0.4172	0.1550	17.03	0.0106
Hexane Plus	1.6451	1.6155	0.7360	86.71	0.0544
Total	100.0000	98.2025	19.2950	1268.98	0.7479

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0039
BTU/CU.FT IDEAL: 1271.9
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1276.9
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1254.7
DRY BTU @ 15.025: 1302.5
REAL SPECIFIC GRAVITY: 0.7505

CYLINDER #: 1024
CYLINDER PRESSURE: 23 PSIG
ANALYSIS DATE: 07/30/2018
ANALYSIS TIME: 03:09:32 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

GC Method: C6+ Gas

Last Cal/Verify: 08/02/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU #170E; CSG
Stn. No.: API 3004524175
Mtr. No.:

CASING
PC

08/02/2018
15950-11115

Smpl Date: 07/25/2018
Test Date: 07/30/2018
Run No: SO180137
Nitrogen: 0.5399
CO2: 1.3383
Methane: 79.9642
Ethane: 9.3401
Propane: 4.1985
I-Butane: 0.7739
N-Butane: 1.2886
I-Pentane: 0.4866
N-Pentane: 0.4248
Hexane+: 1.6451
BTU: 1276.9
GPM: 19.2950
SPG: 0.7505



GCU 170 E
30-045-24175
Tubing Sample

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

Analysis No: SO180138
Cust No: 15950-11120

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU #170E; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004524175

Source: TUBING
Well Flowing: Y
Pressure: 18 PSIA
Flow Temp: DEG. F
Ambient Temp: 90 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/25/2018
Sample Time: 12.41 PM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

HM000
FEB 13 2013
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5046	0.4948	0.0560	0.00	0.0049
CO2	1.0953	1.0740	0.1880	0.00	0.0166
Methane	81.8266	80.2347	13.9160	826.45	0.4532
Ethane	9.9582	9.7645	2.6720	176.23	0.1034
Propane	3.7884	3.7147	1.0470	95.32	0.0577
Iso-Butane	0.6154	0.6034	0.2020	20.01	0.0123
N-Butane	0.9076	0.8899	0.2870	29.61	0.0182
I-Pentane	0.2559	0.2509	0.0940	10.24	0.0064
N-Pentane	0.2226	0.2183	0.0810	8.92	0.0055
Hexane Plus	0.8254	0.8093	0.3690	43.51	0.0273
Total	100.0000	98.0545	18.9120	1210.29	0.7056

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0034
BTU/CU.FT IDEAL: 1213.1
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1217.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1196.0
DRY BTU @ 15.025: 1241.6
REAL SPECIFIC GRAVITY: 0.7078

CYLINDER #: 96846
CYLINDER PRESSURE: 15 PSIG
ANALYSIS DATE: 07/31/2018
ANALYSIS TIME: 11:15:38 AM
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: 08/02/2018

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU #170E; TBG
Stn. No.: API 3004524175
Mtr. No.:

TUBING
PC

08/02/2018
15950-11120

Smpl Date: 07/25/2018
Test Date: 07/31/2018
Run No: SO180138

Nitrogen: 0.5046
CO2: 1.0953
Methane: 81.8266
Ethane: 9.9582
Propane: 3.7884
I-Butane: 0.6154
N-Butane: 0.9076
I-Pentane: 0.2559
N-Pentane: 0.2226
Hexane+: 0.8254

BTU: 1217.2
GPM: 18.9120
SPG: 0.7078