



GCU 110E
30-045-23905
Bradenhead Sample

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

Analysis No: SO180054
Cust No: 15950-10700

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 110E; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: 3004523905

Source: BRADENHEAD
Well Flowing: Y
Pressure: 108 PSIA
Flow Temp: DEG. F
Ambient Temp: 64 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 06/29/2018
Sample Time: 7.36 AM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

MMMOO
FEB 13 2013
DISTRICT III

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	2.0092	0.6591	0.2220	0.00	0.0194
CO2	0.0116	0.0038	0.0020	0.00	0.0002
Methane	88.5076	29.0342	15.0410	893.93	0.4902
Ethane	5.2798	1.7320	1.4150	93.44	0.0548
Propane	2.3201	0.7611	0.6410	58.38	0.0353
Iso-Butane	0.5033	0.1651	0.1650	16.37	0.0101
N-Butane	0.7075	0.2321	0.2240	23.08	0.0142
I-Pentane	0.2744	0.0900	0.1010	10.98	0.0068
N-Pentane	0.0774	0.0254	0.0280	3.10	0.0019
Hexane Plus	0.3091	0.1014	0.1380	16.29	0.0102
Total	100.0000	32.8042	17.9770	1115.56	0.6433

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0027
BTU/CU.FT IDEAL: 1118.1
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1121.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1101.7
DRY BTU @ 15.025: 1143.7
REAL SPECIFIC GRAVITY: 0.6448

CYLINDER #: 7083
CYLINDER PRESSURE: 101 PSIG
ANALYSIS DATE: 07/10/2018
ANALYSIS TIME: 09:30:22 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 110E; BHD
Stn. No.: 3004523905
Mtr. No.:

BRADENHEAD
PC

07/12/2018
15950-10700

Smpl Date: 06/29/2018
Test Date: 07/10/2018
Run No: SO180054
Nitrogen: 2.0092
CO2: 0.0116
Methane: 88.5076
Ethane: 5.2798
Propane: 2.3201
I-Butane: 0.5033
N-Butane: 0.7075
I-Pentane: 0.2744
N-Pentane: 0.0774
Hexane+: 0.3091
BTU: 1121.2
GPM: 17.9770
SPG: 0.6448



GCU 110E
30-045-23905
Casing sample

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

Analysis No: SO180055
Cust No: 15950-10705

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 110E; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: 3004523905

Source: CASING
Well Flowing: Y
Pressure: 64 PSIG
Flow Temp: DEG. F
Ambient Temp: 64 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 06/29/2018
Sample Time: 7.38 AM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N

Remarks:

WMOCD
FEB 13 2013
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4693	0.4683	0.0520	0.00	0.0045
CO2	0.9821	0.9801	0.1680	0.00	0.0149
Methane	75.6016	75.4472	12.8710	763.58	0.4188
Ethane	10.2525	10.2315	2.7540	181.44	0.1064
Propane	6.3651	6.3521	1.7610	160.15	0.0969
Iso-Butane	1.1538	1.1514	0.3790	37.52	0.0232
N-Butane	2.1922	2.1877	0.6940	71.52	0.0440
I-Pentane	0.7426	0.7411	0.2730	29.71	0.0185
N-Pentane	0.6906	0.6892	0.2510	27.68	0.0172
Hexane Plus	1.5502	1.5470	0.6940	81.71	0.0513
Total	100.0000	99.7956	19.8970	1353.31	0.7957

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0045
BTU/CU.FT IDEAL: 1356.4
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1362.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1338.9
DRY BTU @ 15.025: 1389.9
REAL SPECIFIC GRAVITY: 0.799

CYLINDER #: 7094
CYLINDER PRESSURE: 57 PSIG
ANALYSIS DATE: 07/10/2018
ANALYSIS TIME: 09:15:41 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 110E; CSG
Stn. No.: 3004523905
Mtr. No.:

CASING
PC

07/12/2018
15950-10705

Smpl Date: 06/29/2018
Test Date: 07/10/2018
Run No: SO180055

Nitrogen: 0.4693
CO2: 0.9821
Methane: 75.6016
Ethane: 10.2525
Propane: 6.3651
I-Butane: 1.1538
N-Butane: 2.1922
I-Pentane: 0.7426
N-Pentane: 0.6906
Hexane+: 1.5502

BTU: 1362.6
GPM: 19.8970
SPG: 0.7990



GCU 110 E
30-045-23905
Tubing Sample

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

Analysis No: SO180056
Cust No: 15950-10710

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 110E; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: 3004523905

Source: TUBING
Well Flowing: Y
Pressure: 63 PSIA
Flow Temp: DEG. F
Ambient Temp: 64 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 06/29/2018
Sample Time: 7.49 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	0.4019	0.4073	0.0440	0.00	0.0039
CO2	1.3074	1.3250	0.2240	0.00	0.0199
Methane	78.6887	79.7465	13.3870	794.76	0.4359
Ethane	10.0680	10.2033	2.7020	178.17	0.1045
Propane	5.3400	5.4118	1.4760	134.36	0.0813
Iso-Butane	0.8166	0.8276	0.2680	26.56	0.0164
N-Butane	1.6738	1.6963	0.5300	54.60	0.0336
I-Pentane	0.4601	0.4663	0.1690	18.41	0.0115
N-Pentane	0.3940	0.3993	0.1430	15.79	0.0098
Hexane Plus	0.8495	0.8609	0.3800	44.78	0.0281
Total	100.0000	101.3443	19.3230	1267.43	0.7448

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0038
BTU/CU.FT IDEAL: 1270.4
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1275.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1253.0
DRY BTU @ 15.025: 1300.7
REAL SPECIFIC GRAVITY: 0.7473

CYLINDER #: 80746
CYLINDER PRESSURE: 62 PSIG
ANALYSIS DATE: 07/10/2018
ANALYSIS TIME: 09:12:09 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



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 110E; TBG
Stn. No.: 3004523905
Mtr. No.:

TUBING
PC

07/12/2018
15950-10710

Smpl Date: 06/29/2018
Test Date: 07/10/2018
Run No: SO180056

Nitrogen: 0.4019
CO2: 1.3074
Methane: 78.6887
Ethane: 10.0680
Propane: 5.3400
I-Butane: 0.8166
N-Butane: 1.6738
I-Pentane: 0.4601
N-Pentane: 0.3940
Hexane+: 0.8495

BTU: 1275.2
GPM: 19.3230
SPG: 0.7473