



GCU 102E
30-045-26253
Bradenhead Sample

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

Analysis No: SO180091
Cust No: 15950-10885

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 102E; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.:
API 3004526253

Source: BRADENHEAD
Well Flowing: Y
Pressure: 49 PSIA
Flow Temp: DEG. F
Ambient Temp: 68 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/13/2018
Sample Time: 7.43 AM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

MMOCD
FEB 13 2019
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2239	0.2217	0.0250	0.00	0.0022
CO2	1.5359	1.5210	0.2630	0.00	0.0233
Methane	88.5763	87.7153	15.0530	894.62	0.4906
Ethane	6.5191	6.4557	1.7480	115.37	0.0677
Propane	1.9240	1.9053	0.5310	48.41	0.0293
Iso-Butane	0.3877	0.3839	0.1270	12.61	0.0078
N-Butane	0.4376	0.4333	0.1380	14.28	0.0088
I-Pentane	0.1654	0.1638	0.0610	6.62	0.0041
N-Pentane	0.0478	0.0473	0.0170	1.92	0.0012
Hexane Plus	0.1823	0.1805	0.0810	9.61	0.0060
Total	100.0000	99.0278	18.0440	1103.43	0.6410

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0027
BTU/CU.FT IDEAL: 1106.0
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1109.0
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1089.7
DRY BTU @ 15.025: 1131.2
REAL SPECIFIC GRAVITY: 0.6425

CYLINDER #: 1120
CYLINDER PRESSURE: 49 PSIG
ANALYSIS DATE: 07/24/2018
ANALYSIS TIME: 09:14:16 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: 07/26/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 102E; BHD
Stn. No.:
Mtr. No.: API 3004526253

BRADENHEAD
PC

07/26/2018
15950-10885

Smpl Date: 07/13/2018
Test Date: 07/24/2018
Run No: SO180091

Nitrogen: 0.2239
CO2: 1.5359
Methane: 88.5763
Ethane: 6.5191
Propane: 1.9240
I-Butane: 0.3877
N-Butane: 0.4376
I-Pentane: 0.1654
N-Pentane: 0.0478
Hexane+: 0.1823

BTU: 1109.0
GPM: 18.0440
SPG: 0.6425



GCU 102 E
30-045-26253
Casing Sample

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

Analysis No: SO180092
Cust No: 15950-10890

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 102E; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.:
API 3004526253

Source: CASING
Well Flowing: Y
Pressure: 16 PSIA
Flow Temp: DEG. F
Ambient Temp: 68 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/13/2018
Sample Time: 8.00 AM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NMOC
FEB 13 2019
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3899	0.3895	0.0430	0.00	0.0038
CO2	1.3478	1.3466	0.2310	0.00	0.0205
Methane	85.5265	85.4492	14.5420	863.82	0.4737
Ethane	7.3668	7.3601	1.9760	130.37	0.0765
Propane	2.5884	2.5861	0.7150	65.13	0.0394
Iso-Butane	0.4524	0.4520	0.1480	14.71	0.0091
N-Butane	0.7305	0.7298	0.2310	23.83	0.0147
I-Pentane	0.2937	0.2934	0.1080	11.75	0.0073
N-Pentane	0.2387	0.2385	0.0870	9.57	0.0059
Hexane Plus	1.0653	1.0643	0.4760	56.15	0.0353
Total	100.0000	99.9095	18.5570	1175.33	0.6861

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0032
BTU/CU.FT IDEAL: 1178.0
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1181.8
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1161.2
DRY BTU @ 15.025: 1205.5
REAL SPECIFIC GRAVITY: 0.6881

CYLINDER #: 7066
CYLINDER PRESSURE: 15 PSIG
ANALYSIS DATE: 07/23/2018
ANALYSIS TIME: 04:03:02 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: 07/26/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 102E; CSG
Stn. No.:
Mtr. No.: API 3004526253

CASING
PC

07/26/2018
15950-10890

Smpl Date: 07/13/2018
Test Date: 07/23/2018
Run No: SO180092
Nitrogen: 0.3899
CO2: 1.3478
Methane: 85.5265
Ethane: 7.3668
Propane: 2.5884
I-Butane: 0.4524
N-Butane: 0.7305
I-Pentane: 0.2937
N-Pentane: 0.2387
Hexane+: 1.0653
BTU: 1181.8
GPM: 18.5570
SPG: 0.6881



GCU 102 E
30-045-26253
Tubing Sample

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

Analysis No: SO180093
Cust No: 15950-10895

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 102E; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.:
API 3004526253

Source: TUBING
Well Flowing: Y
Pressure: 15 PSIA
Flow Temp: DEG. F
Ambient Temp: 68 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/13/2018
Sample Time: 7.50 AM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NMOC
FEB 13 2019
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4516	0.4387	0.0500	0.00	0.0044
CO2	1.3091	1.2717	0.2240	0.00	0.0199
Methane	85.3895	82.9469	14.5200	862.43	0.4730
Ethane	7.2374	7.0304	1.9410	128.08	0.0751
Propane	2.5850	2.5111	0.7140	65.04	0.0394
Iso-Butane	0.4568	0.4437	0.1500	14.85	0.0092
N-Butane	0.7267	0.7059	0.2300	23.71	0.0146
I-Pentane	0.2912	0.2829	0.1070	11.65	0.0073
N-Pentane	0.2355	0.2288	0.0860	9.44	0.0059
Hexane Plus	1.3172	1.2795	0.5890	69.43	0.0436
Total	100.0000	97.1396	18.6110	1184.64	0.6922

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0033
BTU/CU.FT IDEAL: 1187.4
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1191.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1170.5
DRY BTU @ 15.025: 1215.1
REAL SPECIFIC GRAVITY: 0.6941

CYLINDER #: 8002
CYLINDER PRESSURE: 15 PSIG
ANALYSIS DATE: 07/23/2018
ANALYSIS TIME: 03:23:42 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

GC Method: C6+ Gas

Last Cal/Verify: 07/26/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 102E; TBG
Stn. No.:
Mtr. No.: API 3004526253

TUBING
PC

07/26/2018
15950-10895

Smpl Date: 07/13/2018
Test Date: 07/23/2018
Run No: SO180093

Nitrogen: 0.4516
CO2: 1.3091
Methane: 85.3895
Ethane: 7.2374
Propane: 2.5850
I-Butane: 0.4568
N-Butane: 0.7267
I-Pentane: 0.2912
N-Pentane: 0.2355
Hexane+: 1.3172

BTU: 1191.2
GPM: 18.6110
SPG: 0.6941