



GCU 359
30-045-24430
Bradenhead Sample

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

Analysis No: SO180081
Cust No: 15950-10835

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 359; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: FS
Cust. Stn. No.: API 3004526430

Source: BRADENHEAD
Well Flowing: N
Pressure: 53 PSIA
Flow Temp: DEG. F
Ambient Temp: 65 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/09/2018
Sample Time: 8.51 AM
Sampled By: E. HAMILTON
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NMOC
FEB 13 2019
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2335	0.2301	0.0260	0.00	0.0023
CO2	0.0872	0.0859	0.0150	0.00	0.0013
Methane	87.1491	85.8871	14.8160	880.21	0.4827
Ethane	6.9045	6.8045	1.8520	122.19	0.0717
Propane	2.9866	2.9434	0.8250	75.15	0.0455
Iso-Butane	0.5735	0.5652	0.1880	18.65	0.0115
N-Butane	0.8578	0.8454	0.2710	27.98	0.0172
I-Pentane	0.3304	0.3256	0.1210	13.22	0.0082
N-Pentane	0.2439	0.2404	0.0890	9.78	0.0061
Hexane Plus	0.6335	0.6243	0.2830	33.39	0.0210
Total	100.0000	98.5519	18.4860	1180.56	0.6675

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0031
BTU/CU.FT IDEAL: 1183.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1186.9
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1166.2
DRY BTU @ 15.025: 1210.7
REAL SPECIFIC GRAVITY: 0.6692

CYLINDER #: 7051
CYLINDER PRESSURE: 48 PSIG
ANALYSIS DATE: 07/17/2018
ANALYSIS TIME: 01:17:44 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: 07/19/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 359; BHD
Stn. No.: API 3004526430
Mtr. No.:

BRADENHEAD
FS

07/19/2018
15950-10835

Smpl Date: 07/09/2018
Test Date: 07/17/2018
Run No: SO180081

Nitrogen: 0.2335
CO2: 0.0872
Methane: 87.1491
Ethane: 6.9045
Propane: 2.9866
I-Butane: 0.5735
N-Butane: 0.8578
I-Pentane: 0.3304
N-Pentane: 0.2439
Hexane+: 0.6335

BTU: 1186.9
GPM: 18.4860
SPG: 0.6692



GCU 359
30-045-26430
Casing Sample

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

Analysis No: SO180082
Cust No: 15950-10840

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 359; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation: FS
Cust. Str. No.: API 3004526430

Source: CASING
Well Flowing:
Pressure: 63 PSIA
Flow Temp: DEG. F
Ambient Temp: 65 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/09/2018
Sample Time: 9.11 AM
Sampled By: E. HAMILTON
Sampled by (CO): PESCO

Heat Trace:
Remarks:

NMOCB
FEB 13 2019
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2205	0.2205	0.0240	0.00	0.0021
CO2	0.0910	0.0910	0.0160	0.00	0.0014
Methane	87.0989	87.0989	14.8080	879.70	0.4824
Ethane	7.0092	7.0092	1.8800	124.04	0.0728
Propane	2.9750	2.9750	0.8220	74.85	0.0453
Iso-Butane	0.5644	0.5644	0.1850	18.35	0.0113
N-Butane	0.8552	0.8552	0.2700	27.90	0.0172
I-Pentane	0.3299	0.3299	0.1210	13.20	0.0082
N-Pentane	0.2381	0.2381	0.0870	9.54	0.0059
Hexane Plus	0.6178	0.6178	0.2760	32.56	0.0204
Total	100.0000	100.0000	18.4890	1180.16	0.6671

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0031
BTU/CU.FT IDEAL: 1182.9
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1186.4
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1165.8
DRY BTU @ 15.025: 1210.2
REAL SPECIFIC GRAVITY: 0.6688

CYLINDER #: 7048
CYLINDER PRESSURE: 63 PSIG
ANALYSIS DATE: 07/17/2018
ANALYSIS TIME: 12:07:00 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

GC Method: C6+ Gas

Last Cal/Verify: 07/19/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 359; CSG
Stn. No.: API 3004526430
Mtr. No.:

CASING
FS

07/19/2018
15950-10840

Smpl Date: 07/09/2018
Test Date: 07/17/2018
Run No: SO180082

Nitrogen: 0.2205
CO2: 0.0910
Methane: 87.0989
Ethane: 7.0092
Propane: 2.9750
I-Butane: 0.5644
N-Butane: 0.8552
I-Pentane: 0.3299
N-Pentane: 0.2381
Hexane+: 0.6178

BTU: 1186.4
GPM: 18.4890
SPG: 0.6688



GCU 359
30-045-26430
Tubing Sample

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

Analysis No: SO180083
Cust No: 15950-10845

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 359; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation: FS
Cust. Str. No.: API 3004526430

Source: TUBING
Well Flowing: N
Pressure: 63 PSIA
Flow Temp: DEG. F
Ambient Temp: 65 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/09/2018
Sample Time: 9.03 AM
Sampled By: E. HAMILTON
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NMOC
FEB 13 2019
DISTRICT III

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3449	0.3398	0.0380	0.00	0.0033
CO2	0.0380	0.0374	0.0070	0.00	0.0006
Methane	86.6645	85.3902	14.7340	875.31	0.4800
Ethane	7.0793	6.9752	1.8990	125.28	0.0735
Propane	3.0566	3.0117	0.8440	76.91	0.0465
Iso-Butane	0.5838	0.5752	0.1920	18.98	0.0117
N-Butane	0.8731	0.8603	0.2760	28.48	0.0175
I-Pentane	0.3375	0.3325	0.1240	13.50	0.0084
N-Pentane	0.2494	0.2457	0.0910	10.00	0.0062
Hexane Plus	0.7729	0.7615	0.3460	40.74	0.0256
Total	100.0000	98.5295	18.5510	1189.21	0.6734

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0031
BTU/CU.FT IDEAL: 1192.0
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1195.7
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1174.9
DRY BTU @ 15.025: 1219.6
REAL SPECIFIC GRAVITY: 0.6752

CYLINDER #: 7091
CYLINDER PRESSURE: 66 PSIG
ANALYSIS DATE: 07/17/2018
ANALYSIS TIME: 12:30:11 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: 07/19/2018

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 359; TBG
Stn. No.: API 3004526430
Mtr. No.:

TUBING
FS

07/19/2018
15950-10845

Smpl Date: 07/09/2018
Test Date: 07/17/2018
Run No: SO180083

Nitrogen: 0.3449
CO2: 0.0380
Methane: 86.6645
Ethane: 7.0793
Propane: 3.0566
I-Butane: 0.5838
N-Butane: 0.8731
I-Pentane: 0.3375
N-Pentane: 0.2494
Hexane+: 0.7729

BTU: 1195.7
GPM: 18.5510
SPG: 0.6752