



GCU 145
30-045-07909
Bradenhead Sample

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

Analysis No: SO180130
Cust No: 15950-11080

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU #145; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Str. No.: API 3004507909

Source: BRADENHEAD
Well Flowing: Y
Pressure: 25 PSIA
Flow Temp: DEG. F
Ambient Temp: 83 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/20/2018
Sample Time: 10.19 AM
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	0.5643	0.5473	0.0620	0.00	0.0055
CO2	0.0015	0.0015	0.0000	0.00	0.0000
Methane	90.2311	87.5126	15.3340	911.33	0.4998
Ethane	5.5481	5.3809	1.4870	98.18	0.0576
Propane	2.1409	2.0764	0.5910	53.87	0.0326
Iso-Butane	0.3993	0.3873	0.1310	12.98	0.0080
N-Butane	0.4903	0.4755	0.1550	16.00	0.0098
I-Pentane	0.1727	0.1675	0.0630	6.91	0.0043
N-Pentane	0.1125	0.1091	0.0410	4.51	0.0028
Hexane Plus	0.3393	0.3291	0.1520	17.88	0.0112
Total	100.0000	96.9872	18.0160	1121.67	0.6317

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0027
BTU/CU.FT IDEAL: 1124.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1127.3
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1107.7
DRY BTU @ 15.025: 1149.9
REAL SPECIFIC GRAVITY: 0.6331

CYLINDER #: 003
CYLINDER PRESSURE: 25 PSIG
ANALYSIS DATE: 07/31/2018
ANALYSIS TIME: 09:49:55 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

6



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU #145; BHD
Stn. No.: API 3004507909
Mtr. No.:

BRADENHEAD
PC

08/02/2018
15950-11080

Smpl Date: 07/20/2018
Test Date: 07/31/2018
Run No: SO180130

Nitrogen: 0.5643
CO2: 0.0015
Methane: 90.2311
Ethane: 5.5481
Propane: 2.1409
I-Butane: 0.3993
N-Butane: 0.4903
I-Pentane: 0.1727
N-Pentane: 0.1125
Hexane+: 0.3393

BTU: 1127.3
GPM: 18.0160
SPG: 0.6331



GCU 145
30-045-07909
Casing Sample

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

Analysis No: SO180131
Cust No: 15950-11085

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU #145; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004507909

Source: CASING
Well Flowing: Y
Pressure: 107 PSIA
Flow Temp: DEG. F
Ambient Temp: 83 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/20/2018
Sample Time: 10.39 AM
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	0.3093	0.3115	0.0340	0.00	0.0030
CO2	1.6887	1.7007	0.2890	0.00	0.0257
Methane	80.9643	81.5415	13.7700	817.74	0.4485
Ethane	9.4328	9.5000	2.5310	166.93	0.0979
Propane	4.0426	4.0714	1.1170	101.72	0.0615
Iso-Butane	0.7413	0.7466	0.2430	24.11	0.0149
N-Butane	1.2522	1.2611	0.3960	40.85	0.0251
I-Pentane	0.4794	0.4828	0.1760	19.18	0.0119
N-Pentane	0.3608	0.3634	0.1310	14.46	0.0090
Hexane Plus	0.7286	0.7338	0.3260	38.41	0.0241
Total	100.0000	100.7128	19.0130	1223.39	0.7216

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0035
BTU/CU.FT IDEAL: 1226.2
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1230.5
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1209.1
DRY BTU @ 15.025: 1255.1
REAL SPECIFIC GRAVITY: 0.7239

CYLINDER #: 233
CYLINDER PRESSURE: 93 PSIG
ANALYSIS DATE: 07/30/2018
ANALYSIS TIME: 03:43:01 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: 08/02/2018

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU #145; CSG
Stn. No.: API 3004507909
Mtr. No.:

CASING
PC

08/02/2018
15950-11085

Smpl Date: 07/20/2018
Test Date: 07/30/2018
Run No: SO180131

Nitrogen: 0.3093
CO2: 1.6887
Methane: 80.9643
Ethane: 9.4328
Propane: 4.0426
I-Butane: 0.7413
N-Butane: 1.2522
I-Pentane: 0.4794
N-Pentane: 0.3608
Hexane+: 0.7286

BTU: 1230.5
GPM: 19.0130
SPG: 0.7239



GCU 145
30-045-07909
Tubing Sample

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

Analysis No: SO180132
Cust No: 15950-11090

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU #145; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004507909

Source: TUBING
Well Flowing: Y
Pressure: 107 PSIA
Flow Temp: DEG. F
Ambient Temp: 83 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/20/2018
Sample Time: 10.29 AM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NMCOO
FEB 13 2018
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3158	0.3194	0.0350	0.00	0.0031
CO2	1.6919	1.7114	0.2900	0.00	0.0257
Methane	80.9877	81.9197	13.7740	817.98	0.4486
Ethane	9.4416	9.5503	2.5330	167.09	0.0980
Propane	4.0559	4.1026	1.1210	102.05	0.0618
Iso-Butane	0.7386	0.7471	0.2420	24.02	0.0148
N-Butane	1.2454	1.2597	0.3940	40.63	0.0250
I-Pentane	0.4731	0.4785	0.1740	18.93	0.0118
N-Pentane	0.3519	0.3560	0.1280	14.11	0.0088
Hexane Plus	0.6981	0.7061	0.3120	36.80	0.0231
Total	100.0000	101.1508	19.0030	1221.59	0.7206

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0035
BTU/CU.FT IDEAL: 1224.4
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1228.7
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1207.3
DRY BTU @ 15.025: 1253.3
REAL SPECIFIC GRAVITY: 0.7228

CYLINDER #: 1026
CYLINDER PRESSURE: 95 PSIG
ANALYSIS DATE: 07/31/2018
ANALYSIS TIME: 11:38:58 AM
ANALYSIS RUN BY: CAMERON MANGAN

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 #145; TBG
Stn. No.: API 3004507909
Mtr. No.:

TUBING
PC

08/02/2018
15950-11090

Smpl Date: 07/20/2018
Test Date: 07/31/2018
Run No: SO180132

Nitrogen: 0.3158
CO2: 1.6919
Methane: 80.9877
Ethane: 9.4416
Propane: 4.0559
I-Butane: 0.7386
N-Butane: 1.2454
I-Pentane: 0.4731
N-Pentane: 0.3519
Hexane+: 0.6981

BTU: 1228.7
GPM: 19.0030
SPG: 0.7228