



GCU 229
30-045-11626
Bradenhead
Sample

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

Analysis No: SO180078
Cust No: 15950-10820

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 229; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: DK
Cust. Str. No.: API 3004511626

Source: BRADENHEAD
Well Flowing: Y
Pressure: 49 PSIA
Flow Temp: DEG. F
Ambient Temp: 78 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/09/2018
Sample Time: 11.05 AM
Sampled By: E. HAMILTON
Sampled by (CO): PESCO

Heat Trace: N

Remarks:

NMOCB
FEB 13 2019
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2982	0.2922	0.0330	0.00	0.0029
CO2	0.0053	0.0052	0.0010	0.00	0.0001
Methane	93.2932	91.4044	15.8480	942.26	0.5168
Ethane	5.6969	5.5816	1.5270	100.82	0.0591
Propane	0.3395	0.3326	0.0940	8.54	0.0052
Iso-Butane	0.0902	0.0884	0.0300	2.93	0.0018
N-Butane	0.0804	0.0788	0.0250	2.62	0.0016
I-Pentane	0.0478	0.0468	0.0180	1.91	0.0012
N-Pentane	0.0153	0.0150	0.0060	0.61	0.0004
Hexane Plus	0.1332	0.1305	0.0600	7.02	0.0044
Total	100.0000	97.9755	17.6420	1066.72	0.5934

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0023
BTU/CU.FT IDEAL: 1069.2
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1071.7
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1053.1
DRY BTU @ 15.025: 1093.2
REAL SPECIFIC GRAVITY: 0.5946

CYLINDER #: 7045
CYLINDER PRESSURE: 46 PSIG
ANALYSIS DATE: 07/17/2018
ANALYSIS TIME: 02:00:50 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: 07/19/2018

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BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 229; BHD
Stn. No.: API 3004511626
Mtr. No.:

BRADENHEAD
DK

07/19/2018
15950-10820

Smpl Date: 07/09/2018
Test Date: 07/17/2018
Run No: SO180078

Nitrogen: 0.2982
CO2: 0.0053
Methane: 93.2932
Ethane: 5.6969
Propane: 0.3395
I-Butane: 0.0902
N-Butane: 0.0804
I-Pentane: 0.0478
N-Pentane: 0.0153
Hexane+: 0.1332

BTU: 1071.7
GPM: 17.6420
SPG: 0.5946



GCU 229
30-045-11626
Casing Sample

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

Analysis No: SO180079
Cust No: 15950-10825

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 229; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation: DK
Cust. Str. No.: API 3004511626

Source: CASING
Well Flowing: Y
Pressure: 87 PSIA
Flow Temp: DEG. F
Ambient Temp: 79 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/09/2018
Sample Time: 11.27 AM
Sampled By: E. HAMILTON
Sampled by (CO): PESCO

Heat Trace: N

Remarks:

WMOCD
FEB 13 2019
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5925	0.5988	0.0650	0.00	0.0057
CO2	1.1437	1.1558	0.1960	0.00	0.0174
Methane	78.7983	79.6336	13.4060	795.86	0.4365
Ethane	10.7241	10.8378	2.8780	189.78	0.1113
Propane	4.7109	4.7608	1.3020	118.53	0.0717
Iso-Butane	0.7338	0.7416	0.2410	23.86	0.0147
N-Butane	1.2805	1.2941	0.4050	41.77	0.0257
I-Pentane	0.4620	0.4669	0.1700	18.48	0.0115
N-Pentane	0.3768	0.3808	0.1370	15.10	0.0094
Hexane Plus	1.1774	1.1899	0.5270	62.06	0.0390
Total	100.0000	101.0601	19.3270	1265.46	0.7429

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0038
BTU/CU.FT IDEAL: 1268.4
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1273.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1251.0
DRY BTU @ 15.025: 1298.7
REAL SPECIFIC GRAVITY: 0.7455

CYLINDER #: 7027
CYLINDER PRESSURE: 82 PSIG
ANALYSIS DATE: 07/17/2018
ANALYSIS TIME: 01:59:03 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: 07/19/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 229; CSG
Stn. No.: API 3004511626
Mtr. No.:

CASING
DK

07/19/2018
15950-10825

Smpl Date: 07/09/2018
Test Date: 07/17/2018
Run No: SO180079

Nitrogen: 0.5925
CO2: 1.1437
Methane: 78.7983
Ethane: 10.7241
Propane: 4.7109
I-Butane: 0.7338
N-Butane: 1.2805
I-Pentane: 0.4620
N-Pentane: 0.3768
Hexane+: 1.1774

BTU: 1273.2
GPM: 19.3270
SPG: 0.7455



GCU 229
30-045-11424
Tubing Sample

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

Analysis No: SO180080
Cust No: 15950-10830

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 229; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation: DK
Cust. Stn. No.: API 3004511626

Source: TUBING
Well Flowing: Y
Pressure: 86 PSIA
Flow Temp: DEG. F
Ambient Temp: 78 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/09/2018
Sample Time: 11.16 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	0.6205	0.6248	0.0680	0.00	0.0060
CO2	1.2718	1.2805	0.2180	0.00	0.0193
Methane	81.5674	82.1273	13.8720	823.83	0.4518
Ethane	9.8500	9.9176	2.6430	174.32	0.1023
Propane	3.8322	3.8585	1.0590	96.42	0.0583
Iso-Butane	0.6026	0.6067	0.1980	19.60	0.0121
N-Butane	0.9803	0.9870	0.3100	31.98	0.0197
I-Pentane	0.3572	0.3597	0.1310	14.29	0.0089
N-Pentane	0.2686	0.2704	0.0980	10.77	0.0067
Hexane Plus	0.6494	0.6539	0.2910	34.23	0.0215
Total	100.0000	100.6864	18.8880	1205.43	0.7066

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0034
BTU/CU.FT IDEAL: 1208.2
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1212.3
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1191.2
DRY BTU @ 15.025: 1236.6
REAL SPECIFIC GRAVITY: 0.7087

CYLINDER #: 7004
CYLINDER PRESSURE: 83 PSIG
ANALYSIS DATE: 07/17/2018
ANALYSIS TIME: 01:44:29 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

Last Cal/Verify: 07/19/2018

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 229; TBG
Stn. No.: API 3004511626
Mtr. No.:

TUBING
DK

07/19/2018
15950-10830

Smpl Date: 07/09/2018
Test Date: 07/17/2018
Run No: SO180080

Nitrogen: 0.6205
CO2: 1.2718
Methane: 81.5674
Ethane: 9.8500
Propane: 3.8322
I-Butane: 0.6026
N-Butane: 0.9803
I-Pentane: 0.3572
N-Pentane: 0.2686
Hexane+: 0.6494

BTU: 1212.3
GPM: 18.8880
SPG: 0.7087