



GCU Com H 180 E
30-045-24869
Bradenhead Sample

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

Analysis No: SO180042
Cust No: 15950-10640

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU COM H #180E; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004524869

Source: BRADENHEAD
Well Flowing: Y
Pressure: 240 PSIA
Flow Temp: DEG. F
Ambient Temp: 66 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 06/22/2018
Sample Time: 8.21 AM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

NMOC

FEB 13 2019

DISTRICT III

Heat Trace: N
Remarks:

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4263	0.4331	0.0470	0.00	0.0041
CO2	0.0018	0.0018	0.0000	0.00	0.0000
Methane	90.1109	91.5508	15.3140	910.12	0.4991
Ethane	5.7369	5.8286	1.5380	101.53	0.0596
Propane	2.2186	2.2541	0.6130	55.82	0.0338
Iso-Butane	0.4258	0.4326	0.1400	13.85	0.0085
N-Butane	0.5569	0.5658	0.1760	18.17	0.0112
I-Pentane	0.1988	0.2020	0.0730	7.95	0.0050
N-Pentane	0.1357	0.1379	0.0490	5.44	0.0034
Hexane Plus	0.1883	0.1913	0.0840	9.93	0.0062
Total	100.0000	101.5980	18.0340	1122.80	0.6309

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0027
BTU/CU.FT IDEAL: 1125.4
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1128.4
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1108.8
DRY BTU @ 15.025: 1151.0
REAL SPECIFIC GRAVITY: 0.6324

CYLINDER #: 7061
CYLINDER PRESSURE: 227 PSIG
ANALYSIS DATE: 07/05/2018
ANALYSIS TIME: 11:10:11 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: 07/09/2018

GC Method: C6+ Gas

6



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU COM H #180E; BHD
Stn. No.: API 3004524869
Mtr. No.:

BRADENHEAD
PC

07/09/2018
15950-10640

Smpl Date: 06/22/2018
Test Date: 07/05/2018
Run No: SO180042
Nitrogen: 0.4263
CO2: 0.0018
Methane: 90.1109
Ethane: 5.7369
Propane: 2.2186
I-Butane: 0.4258
N-Butane: 0.5569
I-Pentane: 0.1988
N-Pentane: 0.1357
Hexane+: 0.1883
BTU: 1128.4
GPM: 18.0340
SPG: 0.6324



GCU Com H 180 E
30-045-24869
Casing Sample

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

Analysis No: SO180043
Cust No: 15950-10645

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU COM H #180E; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004524869

Source: CASING
Well Flowing: Y
Pressure: 116 PSIA
Flow Temp: DEG. F
Ambient Temp: 66 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 06/22/2018
Sample Time: 8.26 AM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

NMOC

FEB 13 2019

DISTRICT III

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	1.0528	1.0671	0.1160	0.00	0.0102
CO2	0.0849	0.0861	0.0150	0.00	0.0013
Methane	86.6052	87.7776	14.7250	874.71	0.4797
Ethane	5.6667	5.7434	1.5200	100.28	0.0588
Propane	3.3340	3.3791	0.9210	83.89	0.0508
Iso-Butane	0.6262	0.6347	0.2060	20.36	0.0126
N-Butane	0.9448	0.9576	0.2990	30.82	0.0190
I-Pentane	0.3422	0.3468	0.1260	13.69	0.0085
N-Pentane	0.2807	0.2845	0.1020	11.25	0.0070
Hexane Plus	1.0625	1.0769	0.4750	56.01	0.0352
Total	100.0000	101.3538	18.5050	1191.02	0.6830

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0032
BTU/CU.FT IDEAL: 1193.8
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1197.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1176.8
DRY BTU @ 15.025: 1221.6
REAL SPECIFIC GRAVITY: 0.6849

CYLINDER #: 7091
CYLINDER PRESSURE: 118 PSIG
ANALYSIS DATE: 07/05/2018
ANALYSIS TIME: 09:27:22 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: 07/09/2018

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU COM H #180E; CSG
Stn. No.: API 3004524869
Mtr. No.:

CASING
PC

07/09/2018
15950-10645

Smpl Date: 06/22/2018
Test Date: 07/05/2018
Run No: SO180043

Nitrogen: 1.0528
CO2: 0.0849
Methane: 86.6052
Ethane: 5.6667
Propane: 3.3340
I-Butane: 0.6262
N-Butane: 0.9448
I-Pentane: 0.3422
N-Pentane: 0.2807
Hexane+: 1.0625

BTU: 1197.6
GPM: 18.5050
SPG: 0.6849



GCU Com H 180 E
30-045-24869
Tubing Sample

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

Analysis No: SO180044
Cust No: 15950-10650

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU COM H #180E; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004524869

Source: TUBING
Well Flowing: Y
Pressure: 102 PSIA
Flow Temp: DEG. F
Ambient Temp: 66 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 06/22/2018
Sample Time: 8.35 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	0.9140	0.9142	0.1010	0.00	0.0088
CO2	0.8984	0.8986	0.1540	0.00	0.0137
Methane	78.0726	78.0857	13.2810	788.53	0.4324
Ethane	10.8494	10.8512	2.9120	192.00	0.1126
Propane	5.6937	5.6947	1.5740	143.26	0.0867
Iso-Butane	0.5749	0.5750	0.1890	18.70	0.0115
N-Butane	1.4886	1.4889	0.4710	48.56	0.0299
I-Pentane	0.3388	0.3389	0.1240	13.56	0.0084
N-Pentane	0.3529	0.3530	0.1280	14.15	0.0088
Hexane Plus	0.8167	0.8168	0.3650	43.05	0.0270
Total	100.0000	100.0170	19.2990	1261.80	0.7399

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0037
BTU/CU.FT IDEAL: 1264.7
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1269.4
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1247.3
DRY BTU @ 15.025: 1294.8
REAL SPECIFIC GRAVITY: 0.7424

CYLINDER #: 7007
CYLINDER PRESSURE: 102 PSIG
ANALYSIS DATE: 07/05/2018
ANALYSIS TIME: 07:57:59 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

Last Cal/Verify: 07/09/2018

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU COM H #180E; TBG
Stn. No.: API 3004524869
Mtr. No.:

TUBING
PC

07/09/2018
15950-10650

Smpl Date: 06/22/2018
Test Date: 07/05/2018
Run No: SO180044

Nitrogen: 0.9140
CO2: 0.8984
Methane: 78.0726
Ethane: 10.8494
Propane: 5.6937
I-Butane: 0.5749
N-Butane: 1.4886
I-Pentane: 0.3388
N-Pentane: 0.3529
Hexane+: 0.8167

BTU: 1269.4
GPM: 19.2990
SPG: 0.7424