



GCU 208
30-045-11589
Bradenhead sample

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

Analysis No: SO180075
Cust No: 15950-10805

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 208; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: GP/DK
Cust. Stn. No.: API 3004511589

Source: BRADENHEAD
Well Flowing: Y
Pressure: 63 PSIA
Flow Temp: DEG. F
Ambient Temp: 75 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/09/2018
Sample Time: 9.57 AM
Sampled By: E. HAMILTON
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NMOC
FEB 13 2013
DISTRICT III

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5659	0.5704	0.0620	0.00	0.0055
CO2	0.0069	0.0070	0.0010	0.00	0.0001
Methane	90.4960	91.2092	15.3780	914.01	0.5013
Ethane	5.4985	5.5418	1.4740	97.31	0.0571
Propane	2.1602	2.1772	0.5970	54.35	0.0329
Iso-Butane	0.4952	0.4991	0.1620	16.10	0.0099
N-Butane	0.4880	0.4918	0.1540	15.92	0.0098
I-Pentane	0.1273	0.1283	0.0470	5.09	0.0032
N-Pentane	0.0735	0.0741	0.0270	2.95	0.0018
Hexane Plus	0.0885	0.0892	0.0400	4.66	0.0029
Total	100.0000	100.7881	17.9420	1110.40	0.6245

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0026
BTU/CU.FT IDEAL: 1113.0
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1115.9
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1096.5
DRY BTU @ 15.025: 1138.2
REAL SPECIFIC GRAVITY: 0.6258

CYLINDER #: 7063
CYLINDER PRESSURE: 63 PSIG
ANALYSIS DATE: 07/17/2018
ANALYSIS TIME: 11:28:01 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: 07/19/2018

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 208; BHD
Stn. No.: API 3004511589
Mtr. No.:

BRADENHEAD
GP/DK

07/19/2018
15950-10805

Smpl Date: 07/09/2018
Test Date: 07/17/2018
Run No: SO180075

Nitrogen: 0.5659
CO2: 0.0069
Methane: 90.4960
Ethane: 5.4985
Propane: 2.1602
I-Butane: 0.4952
N-Butane: 0.4880
I-Pentane: 0.1273
N-Pentane: 0.0735
Hexane+: 0.0885

BTU: 1115.9
GPM: 17.9420
SPG: 0.6258



GCU 208
30-045-11589
Casing Sample

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

Analysis No: SO180076
Cust No: 15950-10810

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 208; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation: GP/DK
Cust. Stn. No.: API 3004511589

Source: CASING
Well Flowing: Y
Pressure: 31 PSIA
Flow Temp: DEG. F
Ambient Temp: 75 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/09/2018
Sample Time: 10.17 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	0.5723	0.5473	0.0630	0.00	0.0055
CO2	0.7027	0.6720	0.1200	0.00	0.0107
Methane	72.7317	69.5497	12.3780	734.59	0.4029
Ethane	14.2345	13.6117	3.8210	251.91	0.1478
Propane	8.1755	7.8178	2.2610	205.70	0.1245
Iso-Butane	0.8108	0.7753	0.2660	26.37	0.0163
N-Butane	2.0725	1.9818	0.6560	67.61	0.0416
I-Pentane	0.3703	0.3541	0.1360	14.82	0.0092
N-Pentane	0.3297	0.3153	0.1200	13.22	0.0082
Hexane Plus	0.0000	0.0000	0.0000	0.00	0.0000
Total	100.0000	95.6250	19.8210	1314.21	0.7666

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0041
BTU/CU.FT IDEAL: 1317.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1322.5
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1299.5
DRY BTU @ 15.025: 1349.0
REAL SPECIFIC GRAVITY: 0.7694

CYLINDER #: 7008
CYLINDER PRESSURE: 32 PSIG
ANALYSIS DATE: 07/17/2018
ANALYSIS TIME: 11:55:10 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 208; CSG
Stn. No.: API 3004511589
Mtr. No.:

CASING
GP/DK

07/19/2018
15950-10810

Smpl Date: 07/09/2018
Test Date: 07/17/2018
Run No: SO180076

Nitrogen: 0.5723
CO2: 0.7027
Methane: 72.7317
Ethane: 14.2345
Propane: 8.1755
I-Butane: 0.8108
N-Butane: 2.0725
I-Pentane: 0.3703
N-Pentane: 0.3297
Hexane+: 0.0000

BTU: 1322.5
GPM: 19.8210
SPG: 0.7694



GCU 208
30-045-11589
Tubing Sample

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

Analysis No: SO180077
Cust No: 15950-10815

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 208; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation: GP/DK
Cust. Stn. No.: API 3004511589

Source: TUBING
Well Flowing: Y
Pressure: 27 PSIA
Flow Temp: DEG. F
Ambient Temp: 75 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/09/2018
Sample Time: 10.05 AM
Sampled By: E. HAMILTON
Sampled by (CO): PESCO

Heat Trace: N
Remarks: PRESSURED WITH HELIUM TO 30LBS.

NMOC
FEB 13 2013
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	11.1827	3.3194	1.2330	0.00	0.1082
CO2	0.0964	0.0286	0.0160	0.00	0.0015
Methane	79.2234	23.5162	13.4600	800.16	0.4388
Ethane	6.0155	1.7856	1.6120	106.46	0.0625
Propane	1.8239	0.5414	0.5040	45.89	0.0278
Iso-Butane	0.2503	0.0743	0.0820	8.14	0.0050
N-Butane	0.4578	0.1359	0.1450	14.93	0.0092
I-Pentane	0.1354	0.0402	0.0500	5.42	0.0034
N-Pentane	0.1263	0.0375	0.0460	5.06	0.0031
Hexane Plus	0.6883	0.2043	0.3080	36.28	0.0228
Total	100.0000	29.6834	17.4560	1022.34	0.6822

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0024
BTU/CU.FT IDEAL: 1024.7
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1027.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1009.3
DRY BTU @ 15.025: 1047.8
REAL SPECIFIC GRAVITY: 0.6835

CYLINDER #: 96846
CYLINDER PRESSURE: 2 PSIG
ANALYSIS DATE: 07/17/2018
ANALYSIS TIME: 11:21:53 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 208; TBG
Stn. No.: API 3004511589
Mtr. No.:

TUBING
GP/DK

07/19/2018
15950-10815

Smpl Date: 07/09/2018
Test Date: 07/17/2018
Run No: SO180077
Nitrogen: 11.1827
CO2: 0.0964
Methane: 79.2234
Ethane: 6.0155
Propane: 1.8239
I-Butane: 0.2503
N-Butane: 0.4578
I-Pentane: 0.1354
N-Pentane: 0.1263
Hexane+: 0.6883
BTU: 1027.2
GPM: 17.4560
SPG: 0.6835