



GCU 214
30-045-11623
bradenhead sample

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

Analysis No: SO180004
Cust No: 15950-10450

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU #214; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: DK
Cust. Stn. No.: API 3004511623

Source: BRADENHEAD
Well Flowing: N
Pressure: 33 PSIA
Flow Temp: DEG. F
Ambient Temp: 87 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 06/12/2018
Sample Time: 12.03 PM
Sampled By: EUGENIA HAMILTON
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NM000
FEB 13 2019
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5562	0.5530	0.0610	0.00	0.0054
CO2	0.0146	0.0145	0.0020	0.00	0.0002
Methane	90.7956	90.2786	15.4290	917.04	0.5029
Ethane	5.5843	5.5525	1.4970	98.83	0.0580
Propane	1.9259	1.9149	0.5320	48.46	0.0293
Iso-Butane	0.3573	0.3553	0.1170	11.62	0.0072
N-Butane	0.3654	0.3633	0.1150	11.92	0.0073
I-Pentane	0.1310	0.1303	0.0480	5.24	0.0033
N-Pentane	0.0875	0.0870	0.0320	3.51	0.0022
Hexane Plus	0.1822	0.1812	0.0810	9.60	0.0060
Total	100.0000	99.4306	17.9140	1106.21	0.6218

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0026
BTU/CU.FT IDEAL: 1108.8
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1111.7
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1092.4
DRY BTU @ 15.025: 1134.0
REAL SPECIFIC GRAVITY: 0.6232

CYLINDER #: 96846
CYLINDER PRESSURE: 26 PSIG
ANALYSIS DATE: 06/19/2018
ANALYSIS TIME: 04:39:24 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: 06/21/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU #214; BHD
Stn. No.: API 3004511623
Mtr. No.:

BRADENHEAD
DK

06/21/2018
15950-10450

Smpl Date: 06/12/2018
Test Date: 06/19/2018
Run No: SO180004

Nitrogen: 0.5562
CO2: 0.0146
Methane: 90.7956
Ethane: 5.5843
Propane: 1.9259
I-Butane: 0.3573
N-Butane: 0.3654
I-Pentane: 0.1310
N-Pentane: 0.0875
Hexane+: 0.1822

BTU: 1111.7
GPM: 17.9140
SPG: 0.6232



GCU 214
30-045-11423
Casing Sample

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

Analysis No: SO180005
Cust No: 15950-10455

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU #214; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation: DK
Cust. Stn. No.: API 3004511623

Source: CASING
Well Flowing: N
Pressure: 61 PSIA
Flow Temp: DEG. F
Ambient Temp: 87 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 06/12/2018
Sample Time: 12.22 PM
Sampled By: EUGENIA HAMILTON
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

HM000
FEB 13 2013
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	1.5708	1.5768	0.1730	0.00	0.0152
CO2	0.0075	0.0075	0.0010	0.00	0.0001
Methane	90.7736	91.1209	15.4230	916.81	0.5028
Ethane	4.1518	4.1677	1.1130	73.47	0.0431
Propane	2.1063	2.1144	0.5820	53.00	0.0321
Iso-Butane	0.2808	0.2819	0.0920	9.13	0.0056
N-Butane	0.5202	0.5222	0.1640	16.97	0.0104
I-Pentane	0.1438	0.1444	0.0530	5.75	0.0036
N-Pentane	0.1315	0.1320	0.0480	5.27	0.0033
Hexane Plus	0.3137	0.3149	0.1400	16.54	0.0104
Total	100.0000	100.3827	17.7890	1096.95	0.6266

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0025
BTU/CU.FT IDEAL: 1099.5
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1102.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1083.0
DRY BTU @ 15.025: 1124.3
REAL SPECIFIC GRAVITY: 0.6279

CYLINDER #: 7027
CYLINDER PRESSURE: 529 PSIG
ANALYSIS DATE: 06/19/2018
ANALYSIS TIME: 04:25:24 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: 06/21/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU #214; CSG
Stn. No.: API 3004511623
Mtr. No.:

CASING
DK

06/21/2018
15950-10455

Smpl Date: 06/12/2018
Test Date: 06/19/2018
Run No: SO180005

Nitrogen: 1.5708
CO2: 0.0075
Methane: 90.7736
Ethane: 4.1518
Propane: 2.1063
I-Butane: 0.2808
N-Butane: 0.5202
I-Pentane: 0.1438
N-Pentane: 0.1315
Hexane+: 0.3137

BTU: 1102.2
GPM: 17.7890
SPG: 0.6279



GCU 214
30-045-11623
Tubing Sample

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

Analysis No: SO180006
Cust No: 15950-10460

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU #214; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation: DK
Cust. Stn. No.: API 3004511623

Source: TUBING
Well Flowing: N
Pressure: 59 PSIA
Flow Temp: DEG. F
Ambient Temp: 87 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 06/12/2018
Sample Time: 12.15 PM
Sampled By: EUGENIA HAMILTON
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NMCOOD
FEB 13 2019
DISTRICT III

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	4.9219	4.8246	0.5430	0.00	0.0476
CO2	0.0602	0.0590	0.0100	0.00	0.0009
Methane	86.4043	84.6969	14.6840	872.68	0.4786
Ethane	4.0605	3.9803	1.0890	71.86	0.0422
Propane	2.2014	2.1579	0.6080	55.39	0.0335
Iso-Butane	0.3183	0.3120	0.1040	10.35	0.0064
N-Butane	0.6708	0.6575	0.2120	21.88	0.0135
I-Pentane	0.2342	0.2296	0.0860	9.37	0.0058
N-Pentane	0.2408	0.2360	0.0880	9.65	0.0060
Hexane Plus	0.8876	0.8701	0.3970	46.79	0.0294
Total	100.0000	98.0239	17.8210	1097.97	0.6638

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0027
BTU/CU.FT IDEAL: 1100.5
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1103.5
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1084.3
DRY BTU @ 15.025: 1125.6
REAL SPECIFIC GRAVITY: 0.6654

CYLINDER #: 8002
CYLINDER PRESSURE: 55 PSIG
ANALYSIS DATE: 06/19/2018
ANALYSIS TIME: 04:31:16 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: 06/21/2018

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU #214; TBG
Stn. No.: API 3004511623
Mtr. No.:

TUBING
DK

06/21/2018
15950-10460

Smpl Date: 06/12/2018
Test Date: 06/19/2018
Run No: SO180006

Nitrogen: 4.9219
CO2: 0.0602
Methane: 86.4043
Ethane: 4.0605
Propane: 2.2014
I-Butane: 0.3183
N-Butane: 0.6708
I-Pentane: 0.2342
N-Pentane: 0.2408
Hexane+: 0.8876

BTU: 1103.5
GPM: 17.8210
SPG: 0.6654