



GCU 201
30-045-11566
Braden head Sample

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

Analysis No: SO180184
Cust No: 15950-11350

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 201; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API # 3004511566

Source: BRADENHEAD
Well Flowing: Y
Pressure: 74 PSIA
Flow Temp: DEG. F
Ambient Temp: 87 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/27/2018
Sample Time: 1.12 PM
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	0.5131	0.4376	0.0570	0.00	0.0050
CO2	0.0210	0.0179	0.0040	0.00	0.0003
Methane	90.0148	76.7715	15.2960	909.15	0.4986
Ethane	5.9640	5.0866	1.5990	105.54	0.0619
Propane	2.1806	1.8598	0.6020	54.87	0.0332
Iso-Butane	0.4135	0.3527	0.1360	13.45	0.0083
N-Butane	0.4471	0.3813	0.1410	14.59	0.0090
I-Pentane	0.1532	0.1307	0.0560	6.13	0.0038
N-Pentane	0.0930	0.0793	0.0340	3.73	0.0023
Hexane Plus	0.1997	0.1703	0.0890	10.53	0.0066
Total	100.0000	85.2877	18.0140	1117.98	0.6290

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0026
BTU/CU.FT IDEAL: 1120.6
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1123.5
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1104.0
DRY BTU @ 15.025: 1146.0
REAL SPECIFIC GRAVITY: 0.6304

CYLINDER #: 8005
CYLINDER PRESSURE: 12 PSIG
ANALYSIS DATE: 09/07/2018
ANALYSIS TIME: 11:03:18 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: 09/12/2018

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BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 201; BHD
Stn. No.: API # 3004511566
Mtr. No.:

BRADENHEAD
PC

09/12/2018
15950-11350

Smpl Date: 07/27/2018
Test Date: 09/07/2018
Run No: SO180184

Nitrogen: 0.5131
CO2: 0.0210
Methane: 90.0148
Ethane: 5.9640
Propane: 2.1806
I-Butane: 0.4135
N-Butane: 0.4471
I-Pentane: 0.1532
N-Pentane: 0.0930
Hexane+: 0.1997

BTU: 1123.5
GPM: 18.0140
SPG: 0.6304



GCU 201
30-045-11566
Casing Sample

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

Analysis No: SO180185
Cust No: 15950-11355

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 201; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API # 3004511566

Source: CASING
Well Flowing: Y
Pressure: 80 PSIA
Flow Temp: DEG. F
Ambient Temp: 87 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/27/2018
Sample Time: 1.25 PM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5399	0.5298	0.0600	0.00	0.0052
CO2	0.5087	0.4992	0.0870	0.00	0.0077
Methane	76.7693	75.3373	13.0690	775.37	0.4252
Ethane	10.7760	10.5750	2.8940	190.70	0.1119
Propane	5.7728	5.6651	1.5970	145.25	0.0879
Iso-Butane	0.8202	0.8049	0.2700	26.67	0.0165
N-Butane	1.8182	1.7843	0.5760	59.32	0.0365
I-Pentane	0.5428	0.5327	0.1990	21.72	0.0135
N-Pentane	0.5618	0.5513	0.2040	22.52	0.0140
Hexane Plus	1.8903	1.8550	0.8460	99.64	0.0626
Total	100.0000	98.1346	19.8020	1341.19	0.7810

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0044
BTU/CU.FT IDEAL: 1344.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1350.1
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1326.6
DRY BTU @ 15.025: 1377.1
REAL SPECIFIC GRAVITY: 0.784

CYLINDER #: 77064
CYLINDER PRESSURE: PSIG
ANALYSIS DATE: 09/07/2018
ANALYSIS TIME: 08:40:30 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: 09/12/2018

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 201; CSG
Stn. No.: API # 3004511566
Mtr. No.:

CASING
PC

09/12/2018
15950-11355

Smpl Date: 07/27/2018
Test Date: 09/07/2018
Run No: SO180185

Nitrogen: 0.5399
CO2: 0.5087
Methane: 76.7693
Ethane: 10.7760
Propane: 5.7728
I-Butane: 0.8202
N-Butane: 1.8182
I-Pentane: 0.5428
N-Pentane: 0.5618
Hexane+: 1.8903

BTU: 1350.1
GPM: 19.8020
SPG: 0.7840



GCU 201
API 30-045-11566
Tubing Sample

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

Analysis No: SO190010
Cust No: 15950-11465

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 201; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: 3004511566

NMOC
FEB 13 2019
DISTRICT III

Source: TUBING
Well Flowing: Y
Pressure: 73 PSIA
Flow Temp: DEG. F
Ambient Temp: 87 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/27/2018
Sample Time: 1.18 PM
Sampled By: SCOTT WILLARD
Sampled by (CO): BP

Heat Trace: N
Remarks: SPOT

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4399	0.4349	0.0490	0.00	0.0043
CO2	1.3093	1.2944	0.2240	0.00	0.0199
Methane	77.3772	76.4942	13.1670	781.51	0.4286
Ethane	11.4797	11.3487	3.0820	203.16	0.1192
Propane	5.1611	5.1022	1.4270	129.86	0.0786
Iso-Butane	0.8308	0.8213	0.2730	27.02	0.0167
N-Butane	1.3299	1.3147	0.4210	43.39	0.0267
I-Pentane	0.4309	0.4260	0.1580	17.24	0.0107
N-Pentane	0.3265	0.3228	0.1190	13.09	0.0081
Hexane Plus	1.3147	1.2997	0.5890	69.30	0.0435
Total	100.0000	98.8589	19.5090	1284.55	0.7562

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.004
BTU/CU.FT IDEAL: 1287.5
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1292.7
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1270.2
DRY BTU @ 15.025: 1318.6
REAL SPECIFIC GRAVITY: 0.759

CYLINDER #: 7050
CYLINDER PRESSURE: 68 PSIG
ANALYSIS DATE: 01/03/2019
ANALYSIS TIME: 04:33:37 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: 02/05/2019

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 201; TBG
Stn. No.: 3004511566
Mtr. No.:

TUBING
PC

02/05/2019
15950-11465

Smpl Date: 07/27/2018
Test Date: 01/03/2019
Run No: SO190010

Nitrogen: 0.4399
CO2: 1.3093
Methane: 77.3772
Ethane: 11.4797
Propane: 5.1611
I-Butane: 0.8308
N-Butane: 1.3299
I-Pentane: 0.4309
N-Pentane: 0.3265
Hexane+: 1.3147

BTU: 1292.7
GPM: 19.5090
SPG: 0.7590