



GCU Com C 144
30-045-08263
Bradenhead sample

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

Analysis No: SO180039

Cust No: 15950-10625

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU COM C #144; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004508263

Source: BRADENHEAD
Well Flowing: Y
Pressure: 109 PSIA
Flow Temp: DEG. F
Ambient Temp: 63 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 06/27/2018
Sample Time: 7.38 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	0.4800	0.4837	0.0530	0.00	0.0046
CO2	0.0135	0.0136	0.0020	0.00	0.0002
Methane	87.8633	88.5372	14.9350	887.42	0.4867
Ethane	7.2417	7.2972	1.9420	128.16	0.0752
Propane	2.5604	2.5800	0.7070	64.42	0.0390
Iso-Butane	0.3742	0.3771	0.1230	12.17	0.0075
N-Butane	0.6365	0.6414	0.2010	20.76	0.0128
I-Pentane	0.2041	0.2057	0.0750	8.17	0.0051
N-Pentane	0.1717	0.1730	0.0620	6.88	0.0043
Hexane Plus	0.4546	0.4581	0.2030	23.96	0.0150
Total	100.0000	100.7670	18.3030	1151.94	0.6504

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0029
BTU/CU.FT IDEAL: 1154.6
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1158.0
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1137.9
DRY BTU @ 15.025: 1181.2
REAL SPECIFIC GRAVITY: 0.652

CYLINDER #: 7013
CYLINDER PRESSURE: 14 PSIG
ANALYSIS DATE: 07/05/2018
ANALYSIS TIME: 10:36:58 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

GC Method: C6+ Gas

Last Cal/Verify: 07/09/2018

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BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU COM C #144; BHD
Stn. No.: API 3004508263
Mtr. No.:

BRADENHEAD
PC

07/09/2018
15950-10625

Smpl Date: 06/27/2018
Test Date: 07/05/2018
Run No: SO180039
Nitrogen: 0.4800
CO2: 0.0135
Methane: 87.8633
Ethane: 7.2417
Propane: 2.5604
I-Butane: 0.3742
N-Butane: 0.6365
I-Pentane: 0.2041
N-Pentane: 0.1717
Hexane+: 0.4546
BTU: 1158.0
GPM: 18.3030
SPG: 0.6520



GCU Com C 144
30-045-08263
Casing Sample

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

Analysis No: SO180040
Cust No: 15950-10630

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU COM C #144; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004508263

Source: CASING
Well Flowing: Y
Pressure: 69 PSIA
Flow Temp: DEG. F
Ambient Temp: 63 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 06/27/2018
Sample Time: 7.48 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	0.4569	0.4561	0.0500	0.00	0.0044
CO2	1.4761	1.4736	0.2530	0.00	0.0224
Methane	74.4114	74.2859	12.6670	751.56	0.4122
Ethane	12.0004	11.9801	3.2230	212.37	0.1246
Propane	6.2691	6.2585	1.7340	157.74	0.0954
Iso-Butane	0.9233	0.9217	0.3030	30.02	0.0185
N-Butane	1.9431	1.9398	0.6150	63.39	0.0390
I-Pentane	0.6309	0.6298	0.2320	25.24	0.0157
N-Pentane	0.6157	0.6147	0.2240	24.68	0.0153
Hexane Plus	1.2731	1.2710	0.5700	67.11	0.0421
Total	100.0000	99.8312	19.8710	1332.11	0.7898

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0044
BTU/CU.FT IDEAL: 1335.2
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1341.0
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1317.7
DRY BTU @ 15.025: 1367.9
REAL SPECIFIC GRAVITY: 0.7929

CYLINDER #: 7067
CYLINDER PRESSURE: 25 PSIG
ANALYSIS DATE: 07/05/2018
ANALYSIS TIME: 08:37:42 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: 07/09/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU COM C #144; CSG
Stn. No.: API 3004508263
Mtr. No.:

CASING
PC

07/09/2018
15950-10630

Smpl Date: 06/27/2018
Test Date: 07/05/2018
Run No: SO180040

Nitrogen: 0.4569
CO2: 1.4761
Methane: 74.4114
Ethane: 12.0004
Propane: 6.2691
I-Butane: 0.9233
N-Butane: 1.9431
I-Pentane: 0.6309
N-Pentane: 0.6157
Hexane+: 1.2731

BTU: 1341.0
GPM: 19.8710
SPG: 0.7929



GCU Com C 144
30-045-08263
Tubing Sample

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

Analysis No: SO180041
Cust No: 15950-10635

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU COM C #144; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004508263

Source: TUBING
Well Flowing: Y
Pressure: 21 PSIA
Flow Temp: DEG. F
Ambient Temp: 63 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 06/27/2018
Sample Time: 8.00 AM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:



Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4306	0.4223	0.0480	0.00	0.0042
CO2	1.4408	1.4129	0.2470	0.00	0.0219
Methane	74.0840	72.6517	12.6150	748.25	0.4104
Ethane	11.8192	11.5907	3.1750	209.16	0.1227
Propane	6.0883	5.9706	1.6850	153.19	0.0927
Iso-Butane	0.8871	0.8699	0.2920	28.85	0.0178
N-Butane	1.9359	1.8985	0.6130	63.15	0.0388
I-Pentane	0.5533	0.5426	0.2030	22.14	0.0138
N-Pentane	0.4994	0.4897	0.1820	20.02	0.0124
Hexane Plus	2.2614	2.2177	1.0130	119.20	0.0748
Total	100.0000	98.0666	20.0730	1363.96	0.8095

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0047
BTU/CU.FT IDEAL: 1367.1
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1373.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1349.7
DRY BTU @ 15.025: 1401.1
REAL SPECIFIC GRAVITY: 0.813

CYLINDER #: 7008
CYLINDER PRESSURE: 17 PSIG
ANALYSIS DATE: 07/03/2018
ANALYSIS TIME: 02:32:00 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: 07/09/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU COM C #144; TBG
Stn. No.: API 3004508263
Mtr. No.:

TUBING
PC

07/09/2018
15950-10635

Smpl Date: 06/27/2018
Test Date: 07/03/2018
Run No: SO180041
Nitrogen: 0.4306
CO2: 1.4408
Methane: 74.0840
Ethane: 11.8192
Propane: 6.0883
I-Butane: 0.8871
N-Butane: 1.9359
I-Pentane: 0.5533
N-Pentane: 0.4994
Hexane+: 2.2614
BTU: 1373.6
GPM: 20.0730
SPG: 0.8130