



GCU 138
30-045-07578
Bradenhead
Sample

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

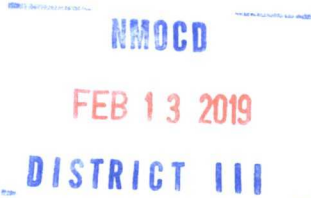
Analysis No: SO180148
Cust No: 15950-11170

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU #138; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004507578

Source: BRADENHEAD
Well Flowing: Y
Pressure: 29 PSIA
Flow Temp: DEG. F
Ambient Temp: 69 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/30/2018
Sample Time: 9.40 AM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:



Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	1.2723	0.9678	0.1400	0.00	0.0123
CO2	0.0129	0.0098	0.0020	0.00	0.0002
Methane	89.2979	67.9242	15.1740	901.91	0.4946
Ethane	5.8591	4.4567	1.5710	103.69	0.0608
Propane	2.1411	1.6286	0.5910	53.87	0.0326
Iso-Butane	0.3889	0.2958	0.1280	12.65	0.0078
N-Butane	0.4492	0.3417	0.1420	14.65	0.0090
I-Pentane	0.1512	0.1150	0.0550	6.05	0.0038
N-Pentane	0.0985	0.0749	0.0360	3.95	0.0025
Hexane Plus	0.3289	0.2502	0.1470	17.34	0.0109
Total	100.0000	76.0647	17.9860	1114.10	0.6345

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0026
BTU/CU.FT IDEAL: 1116.7
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1119.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1100.1
DRY BTU @ 15.025: 1142.0
REAL SPECIFIC GRAVITY: 0.6359

CYLINDER #: 7035
CYLINDER PRESSURE: 28 PSIG
ANALYSIS DATE: 08/06/2018
ANALYSIS TIME: 07:17:01 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

GC Method: C6+ Gas

Last Cal/Verify: 08/09/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU #138; BHD
Stn. No.: API 3004507578
Mtr. No.:

BRADENHEAD
PC

08/09/2018
15950-11170

Smpl Date: 07/30/2018
Test Date: 08/06/2018
Run No: SO180148

Nitrogen: 1.2723
CO2: 0.0129
Methane: 89.2979
Ethane: 5.8591
Propane: 2.1411
I-Butane: 0.3889
N-Butane: 0.4492
I-Pentane: 0.1512
N-Pentane: 0.0985
Hexane+: 0.3289

BTU: 1119.6
GPM: 17.9860
SPG: 0.6359



GCU 138
30-045-07578
Casing Sample

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

Analysis No: SO180149
Cust No: 15950-11175

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU #138; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004507578

Source: CASING
Well Flowing: Y
Pressure: PSIA
Flow Temp: DEG. F
Ambient Temp: 67 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/30/2018
Sample Time: 9.56 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	0.7899	0.7231	0.0870	0.00	0.0076
CO2	1.0141	0.9283	0.1740	0.00	0.0154
Methane	75.6159	69.2194	12.8720	763.72	0.4188
Ethane	10.1131	9.2576	2.7160	178.97	0.1050
Propane	5.5607	5.0903	1.5380	139.91	0.0847
Iso-Butane	1.1169	1.0224	0.3670	36.32	0.0224
N-Butane	2.4950	2.2839	0.7900	81.39	0.0501
I-Pentane	1.2081	1.1059	0.4440	48.33	0.0301
N-Pentane	1.2078	1.1056	0.4400	48.42	0.0301
Hexane Plus	0.8785	0.8042	0.3930	46.31	0.0291
Total	100.0000	91.5407	19.8210	1343.38	0.7933

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0044
BTU/CU.FT IDEAL: 1346.5
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1352.4
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1328.9
DRY BTU @ 15.025: 1379.5
REAL SPECIFIC GRAVITY: 0.7965

CYLINDER #: 7036
CYLINDER PRESSURE: 113 PSIG
ANALYSIS DATE: 08/03/2018
ANALYSIS TIME: 12:18:26 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

Last Cal/Verify: 08/09/2018

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU #138; CSG
Stn. No.: API 3004507578
Mtr. No.:

CASING
PC

08/09/2018
15950-11175

Smpl Date: 07/30/2018
Test Date: 08/03/2018
Run No: SO180149

Nitrogen: 0.7899
CO2: 1.0141
Methane: 75.6159
Ethane: 10.1131
Propane: 5.5607
I-Butane: 1.1169
N-Butane: 2.4950
I-Pentane: 1.2081
N-Pentane: 1.2078
Hexane+: 0.8785

BTU: 1352.4
GPM: 19.8210
SPG: 0.7965



GCU 138
30-045-07578
Tubing Sample

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

Analysis No: SO180150
Cust No: 15950-11180

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU #138; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004507578

Source: TUBING
Well Flowing: Y
Pressure: 90 PSIA
Flow Temp: DEG. F
Ambient Temp: 67 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/30/2018
Sample Time: 9.48 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	0.6131	0.6195	0.0680	0.00	0.0059
CO2	1.2343	1.2472	0.2110	0.00	0.0188
Methane	80.7148	81.5555	13.7270	815.22	0.4471
Ethane	10.0470	10.1516	2.6950	177.80	0.1043
Propane	4.3975	4.4433	1.2150	110.65	0.0670
Iso-Butane	0.6740	0.6810	0.2210	21.92	0.0135
N-Butane	1.1215	1.1332	0.3550	36.59	0.0225
I-Pentane	0.3173	0.3206	0.1160	12.69	0.0079
N-Pentane	0.2778	0.2807	0.1010	11.14	0.0069
Hexane Plus	0.6027	0.6090	0.2700	31.77	0.0199
Total	100.0000	101.0416	18.9790	1217.77	0.7138

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0034
BTU/CU.FT IDEAL: 1220.6
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1224.8
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1203.5
DRY BTU @ 15.025: 1249.3
REAL SPECIFIC GRAVITY: 0.716

CYLINDER #: 7099
CYLINDER PRESSURE: 118 PSIG
ANALYSIS DATE: 08/03/2018
ANALYSIS TIME: 02:06:54 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: 08/09/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU #138; TBG
Stn. No.: API 3004507578
Mtr. No.:

TUBING
PC

08/09/2018
15950-11180

Smpl Date: 07/30/2018
Test Date: 08/03/2018
Run No: SO180150

Nitrogen: 0.6131
CO2: 1.2343
Methane: 80.7148
Ethane: 10.0470
Propane: 4.3975
I-Butane: 0.6740
N-Butane: 1.1215
I-Pentane: 0.3173
N-Pentane: 0.2778
Hexane+: 0.6027

BTU: 1224.8
GPM: 18.9790
SPG: 0.7160