



GCU 151E
30-045-24290
Bradenhead sample

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

Analysis No: SO180133
Cust No: 15950-11095

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU #151E; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004524290

Source: BRADENHEAD
Well Flowing: Y
Pressure: 26 PSIA
Flow Temp: DEG. F
Ambient Temp: 70 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/25/2018
Sample Time: 8.06 AM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NMOC
FED 13 2013
DISTRICT III

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3880	0.3779	0.0430	0.00	0.0038
CO2	0.0107	0.0104	0.0020	0.00	0.0002
Methane	89.9395	87.6089	15.2860	908.39	0.4982
Ethane	5.6360	5.4900	1.5110	99.74	0.0585
Propane	2.0829	2.0289	0.5750	52.41	0.0317
Iso-Butane	0.5074	0.4943	0.1660	16.50	0.0102
N-Butane	0.5882	0.5730	0.1860	19.19	0.0118
I-Pentane	0.2527	0.2462	0.0930	10.11	0.0063
N-Pentane	0.1730	0.1685	0.0630	6.94	0.0043
Hexane Plus	0.4216	0.4107	0.1880	22.22	0.0140
Total	100.0000	97.4088	18.1130	1135.49	0.6389

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0028
BTU/CU.FT IDEAL: 1138.1
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1141.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1121.3
DRY BTU @ 15.025: 1164.1
REAL SPECIFIC GRAVITY: 0.6403

CYLINDER #: 7005
CYLINDER PRESSURE: 25 PSIG
ANALYSIS DATE: 07/31/2018
ANALYSIS TIME: 08:34:32 AM
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: 08/02/2018

GC Method: C6+ Gas

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BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU #151E; BHD
Stn. No.: API 3004524290
Mtr. No.:

BRADENHEAD
PC

08/02/2018
15950-11095

Smpl Date: 07/25/2018
Test Date: 07/31/2018
Run No: SO180133
Nitrogen: 0.3880
CO2: 0.0107
Methane: 89.9395
Ethane: 5.6360
Propane: 2.0829
I-Butane: 0.5074
N-Butane: 0.5882
I-Pentane: 0.2527
N-Pentane: 0.1730
Hexane+: 0.4216
BTU: 1141.2
GPM: 18.1130
SPG: 0.6403



GCU 151E
30-045-24790
Casing Sample

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

Analysis No: SO180134
Cust No: 15950-11100

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU #151E; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004524290

Source: CASING
Well Flowing: Y
Pressure: 74 PSIA
Flow Temp: DEG. F
Ambient Temp: 70 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/25/2018
Sample Time: 8.21 AM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3979	0.4011	0.0440	0.00	0.0038
CO2	1.1320	1.1412	0.1940	0.00	0.0172
Methane	79.8065	80.4521	13.5790	806.05	0.4420
Ethane	9.1726	9.2468	2.4620	162.33	0.0952
Propane	4.7282	4.7664	1.3070	118.97	0.0720
Iso-Butane	0.8754	0.8825	0.2880	28.47	0.0176
N-Butane	1.4851	1.4971	0.4700	48.45	0.0298
I-Pentane	0.5521	0.5566	0.2030	22.09	0.0138
N-Pentane	0.4744	0.4782	0.1730	19.02	0.0118
Hexane Plus	1.3758	1.3869	0.6160	72.52	0.0455
Total	100.0000	100.8089	19.3360	1277.88	0.7488

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0039
BTU/CU.FT IDEAL: 1280.8
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1285.9
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1263.5
DRY BTU @ 15.025: 1311.7
REAL SPECIFIC GRAVITY: 0.7514

CYLINDER #: 7098
CYLINDER PRESSURE: 69 PSIG
ANALYSIS DATE: 07/30/2018
ANALYSIS TIME: 04:21:39 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: 08/02/2018

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU #151E; CSG
Stn. No.: API 3004524290
Mtr. No.:

CASING
PC

08/02/2018
15950-11100

Smpl Date: 07/25/2018
Test Date: 07/30/2018
Run No: SO180134

Nitrogen: 0.3979
CO2: 1.1320
Methane: 79.8065
Ethane: 9.1726
Propane: 4.7282
I-Butane: 0.8754
N-Butane: 1.4851
I-Pentane: 0.5521
N-Pentane: 0.4744
Hexane+: 1.3758

BTU: 1285.9
GPM: 19.3360
SPG: 0.7514



GCU 151 E
30-045-24290
Tubing Sample

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

Analysis No: SO180135
Cust No: 15950-11105

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU #151E; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004524290

Source: TUBING
Well Flowing: Y
Pressure: 35 PSIA
Flow Temp: DEG. F
Ambient Temp: 70 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/25/2018
Sample Time: 8.14 AM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NMOCB
FEB 13 2013
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.6006	0.6024	0.0660	0.00	0.0058
CO2	1.4233	1.4276	0.2440	0.00	0.0216
Methane	81.9078	82.1545	13.9300	827.27	0.4537
Ethane	8.9900	9.0171	2.4120	159.10	0.0933
Propane	3.6612	3.6722	1.0120	92.12	0.0557
Iso-Butane	0.6041	0.6059	0.1980	19.64	0.0121
N-Butane	1.1711	1.1746	0.3700	38.20	0.0235
I-Pentane	0.4328	0.4341	0.1590	17.32	0.0108
N-Pentane	0.3663	0.3674	0.1330	14.68	0.0091
Hexane Plus	0.8428	0.8453	0.3770	44.42	0.0279
Total	100.0000	100.3011	18.9010	1212.76	0.7136

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0034
BTU/CU.FT IDEAL: 1215.6
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1219.7
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1198.5
DRY BTU @ 15.025: 1244.1
REAL SPECIFIC GRAVITY: 0.7158

CYLINDER #: 7051
CYLINDER PRESSURE: 31 PSIG
ANALYSIS DATE: 07/31/2018
ANALYSIS TIME: 10:57:26 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: 08/02/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU #151E; TBG
Stn. No.: API 3004524290
Mtr. No.:

TUBING
PC

08/02/2018
15950-11105

Smpl Date: 07/25/2018
Test Date: 07/31/2018
Run No: SO180135

Nitrogen: 0.6006
CO2: 1.4233
Methane: 81.9078
Ethane: 8.9900
Propane: 3.6612
I-Butane: 0.6041
N-Butane: 1.1711
I-Pentane: 0.4328
N-Pentane: 0.3663
Hexane+: 0.8428

BTU: 1219.7
GPM: 18.9010
SPG: 0.7158