



GCU 184E
30-045-24427
Bradenhead Sample

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

Analysis No: SO180100
Cust No: 15950-10930

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 184E; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: DK
Cust. Stn. No.:
API 3004524427

NMOC
FEB 13 2019
DISTRICT III

Source: BRADENHEAD
Well Flowing: Y
Pressure: 56 PSIA
Flow Temp: DEG. F
Ambient Temp: 76 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/13/2018
Sample Time: 10.12 AM
Sampled By: E. HAMILTON
Sampled by (CO): PESCO

Heat Trace: N
Remarks: PRESSURED WITH HELIUM TO 30LBS.

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4639	0.1369	0.0510	0.00	0.0045
CO2	0.0176	0.0052	0.0030	0.00	0.0003
Methane	89.6796	26.4633	15.2440	905.76	0.4967
Ethane	5.4286	1.6019	1.4560	96.07	0.0564
Propane	2.0984	0.6192	0.5800	52.80	0.0319
Iso-Butane	0.3758	0.1109	0.1230	12.22	0.0075
N-Butane	0.5185	0.1530	0.1640	16.92	0.0104
I-Pentane	0.2081	0.0614	0.0760	8.33	0.0052
N-Pentane	0.1566	0.0462	0.0570	6.28	0.0039
Hexane Plus	1.0529	0.3107	0.4710	55.50	0.0348
Total	100.0000	29.5087	18.2250	1153.87	0.6517

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0029
BTU/CU.FT IDEAL: 1156.5
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1159.9
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1139.7
DRY BTU @ 15.025: 1183.1
REAL SPECIFIC GRAVITY: 0.6533

CYLINDER #: 7087
CYLINDER PRESSURE: PSIG
ANALYSIS DATE: 07/24/2018
ANALYSIS TIME: 09:27:37 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

GC Method: C6+ Gas

Last Cal/Verify: 07/26/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 184E; BHD
Stn. No.:
Mtr. No.: API 3004524427

BRADENHEAD
DK

07/26/2018
15950-10930

Smpl Date: 07/13/2018
Test Date: 07/24/2018
Run No: SO180100

Nitrogen: 0.4639
CO2: 0.0176
Methane: 89.6796
Ethane: 5.4286
Propane: 2.0984
I-Butane: 0.3758
N-Butane: 0.5185
I-Pentane: 0.2081
N-Pentane: 0.1566
Hexane+: 1.0529

BTU: 1159.9
GPM: 18.2250
SPG: 0.6533



GCU 184 E
30-045-24427
Casing Sampled

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

Analysis No: SO180101
Cust No: 15950-10935

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 184E; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation: DK
Cust. Stn. No.:
API 3004524427

Source: CASING
Well Flowing: Y
Pressure: 162 PSIA
Flow Temp: DEG. F
Ambient Temp: 76 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/13/2018
Sample Time: 10.25 AM
Sampled By: E. HAMILTON
Sampled by (CO): PESCO

NMOC
FEB 13 2019
DISTRICT III

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.7518	0.7481	0.0830	0.00	0.0073
CO2	0.9912	0.9863	0.1700	0.00	0.0151
Methane	84.5813	84.1658	14.3800	854.27	0.4685
Ethane	8.4898	8.4481	2.2770	150.24	0.0881
Propane	2.8523	2.8383	0.7880	71.77	0.0434
Iso-Butane	0.4469	0.4447	0.1470	14.53	0.0090
N-Butane	0.7174	0.7139	0.2270	23.40	0.0144
I-Pentane	0.2744	0.2731	0.1010	10.98	0.0068
N-Pentane	0.2171	0.2160	0.0790	8.70	0.0054
Hexane Plus	0.6778	0.6745	0.3030	35.73	0.0224
Total	100.0000	99.5088	18.5550	1169.63	0.6804

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0031
BTU/CU.FT IDEAL: 1172.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1176.0
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1155.5
DRY BTU @ 15.025: 1199.6
REAL SPECIFIC GRAVITY: 0.6823

CYLINDER #: 7050
CYLINDER PRESSURE: 150 PSIG
ANALYSIS DATE: 07/24/2018
ANALYSIS TIME: 08:58:54 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: 07/26/2018

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 184E; CSG
Stn. No.:
Mtr. No.: API 3004524427

CASING
DK

07/26/2018
15950-10935

Smpl Date: 07/13/2018
Test Date: 07/24/2018
Run No: SO180101

Nitrogen: 0.7518
CO2: 0.9912
Methane: 84.5813
Ethane: 8.4898
Propane: 2.8523
I-Butane: 0.4469
N-Butane: 0.7174
I-Pentane: 0.2744
N-Pentane: 0.2171
Hexane+: 0.6778

BTU: 1176.0
GPM: 18.5550
SPG: 0.6823



GCU 184 E
30-045-24427
Tubing Sample

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

Analysis No: SO180102
Cust No: 15950-10940

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: GCU 184E; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation: DK
Cust. Stn. No.:
API 3004524427

Source: TUBING
Well Flowing: Y
Pressure: PSIA
Flow Temp: DEG. F
Ambient Temp: 76 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/13/2018
Sample Time: 10.17 AM
Sampled By: E. HAMILTON
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NMOC
FEB 13 2019
DISTRICT III

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.6797	0.6827	0.0750	0.00	0.0066
CO2	0.9768	0.9811	0.1670	0.00	0.0148
Methane	86.0743	86.4518	14.6310	869.35	0.4768
Ethane	8.2781	8.3144	2.2200	146.50	0.0859
Propane	2.4373	2.4480	0.6730	61.32	0.0371
Iso-Butane	0.3580	0.3596	0.1170	11.64	0.0072
N-Butane	0.5088	0.5110	0.1610	16.60	0.0102
I-Pentane	0.1661	0.1668	0.0610	6.65	0.0041
N-Pentane	0.1107	0.1112	0.0400	4.44	0.0028
Hexane Plus	0.4102	0.4120	0.1830	21.62	0.0136
Total	100.0000	100.4386	18.3280	1138.12	0.6591

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0029
BTU/CU.FT IDEAL: 1140.8
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1144.1
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1124.2
DRY BTU @ 15.025: 1167.0
REAL SPECIFIC GRAVITY: 0.6608

CYLINDER #: 8001
CYLINDER PRESSURE: 141 PSIG
ANALYSIS DATE: 07/23/2018
ANALYSIS TIME: 02:42:17 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: 07/26/2018

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: GCU 184E; TBG
Stn. No.:
Mtr. No.: API 3004524427

TUBING
DK

07/26/2018
15950-10940

Smpl Date: 07/13/2018
Test Date: 07/23/2018
Run No: SO180102

Nitrogen: 0.6797
CO2: 0.9768
Methane: 86.0743
Ethane: 8.2781
Propane: 2.4373
I-Butane: 0.3580
N-Butane: 0.5088
I-Pentane: 0.1661
N-Pentane: 0.1107
Hexane+: 0.4102

BTU: 1144.1
GPM: 18.3280
SPG: 0.6608