



Cornell E 1E
30-045-24283
Bradenhead Sample

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

Analysis No: SO180122
Cust No: 15950-11040

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: CORNELL E #1E; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004524283

Source: BRADENHEAD
Well Flowing: Y
Pressure: 48 PSIA
Flow Temp: DEG. F
Ambient Temp: 78 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/20/2018
Sample Time: 9.04 AM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NM000
FEB 13 2019
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2935	0.2944	0.0320	0.00	0.0028
CO2	0.0126	0.0126	0.0020	0.00	0.0002
Methane	87.5254	87.7910	14.8770	884.01	0.4848
Ethane	7.2225	7.2444	1.9370	127.82	0.0750
Propane	2.9366	2.9455	0.8110	73.89	0.0447
Iso-Butane	0.5050	0.5065	0.1660	16.42	0.0101
N-Butane	0.7513	0.7536	0.2370	24.51	0.0151
I-Pentane	0.2495	0.2503	0.0910	9.98	0.0062
N-Pentane	0.1809	0.1814	0.0660	7.25	0.0045
Hexane Plus	0.3227	0.3237	0.1440	17.01	0.0107
Total	100.0000	100.3034	18.3630	1160.89	0.6541

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0029
BTU/CU.FT IDEAL: 1163.6
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1167.0
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1146.7
DRY BTU @ 15.025: 1190.4
REAL SPECIFIC GRAVITY: 0.6558

CYLINDER #: 015
CYLINDER PRESSURE: 49 PSIG
ANALYSIS DATE: 07/31/2018
ANALYSIS TIME: 08:08:21 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

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BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: CORNELL E #1E; BHD
Stn. No.: API 3004524283
Mtr. No.:

BRADENHEAD
PC

08/02/2018
15950-11040

Smpl Date: 07/20/2018
Test Date: 07/31/2018
Run No: SO180122
Nitrogen: 0.2935
CO2: 0.0126
Methane: 87.5254
Ethane: 7.2225
Propane: 2.9366
I-Butane: 0.5050
N-Butane: 0.7513
I-Pentane: 0.2495
N-Pentane: 0.1809
Hexane+: 0.3227
BTU: 1167.0
GPM: 18.3630
SPG: 0.6558



Cornelle E1E
30-045-24283
Casing Sample

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

Analysis No: SO180123
Cust No: 15950-11045

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: CORNELL E #1E; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004524283

Source: CASING
Well Flowing: Y
Pressure: 202 PSIA
Flow Temp: DEG. F
Ambient Temp: 78 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/20/2018
Sample Time: 9.11 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	0.4703	0.4557	0.0520	0.00	0.0045
CO2	1.6400	1.5891	0.2810	0.00	0.0249
Methane	80.6916	78.1866	13.7250	814.99	0.4470
Ethane	9.1178	8.8347	2.4470	161.36	0.0947
Propane	4.0159	3.8912	1.1100	101.04	0.0611
Iso-Butane	0.7022	0.6804	0.2310	22.83	0.0141
N-Butane	1.4970	1.4505	0.4740	48.84	0.0300
I-Pentane	0.6369	0.6171	0.2340	25.48	0.0159
N-Pentane	0.6119	0.5929	0.2230	24.53	0.0152
Hexane Plus	0.6164	0.5973	0.2760	32.49	0.0204
Total	100.0000	96.8955	19.0530	1231.56	0.7279

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0036
BTU/CU.FT IDEAL: 1234.4
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1238.9
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1217.3
DRY BTU @ 15.025: 1263.7
REAL SPECIFIC GRAVITY: 0.7302

CYLINDER #: 0114
CYLINDER PRESSURE: 184 PSIG
ANALYSIS DATE: 07/30/2018
ANALYSIS TIME: 02:40:11 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: 08/02/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: CORNELL E #1E; CSG
Stn. No.: API 3004524283
Mtr. No.:

CASING
PC

08/02/2018
15950-11045

Smpl Date: 07/20/2018
Test Date: 07/30/2018
Run No: SO180123

Nitrogen: 0.4703
CO2: 1.6400
Methane: 80.6916
Ethane: 9.1178
Propane: 4.0159
I-Butane: 0.7022
N-Butane: 1.4970
I-Pentane: 0.6369
N-Pentane: 0.6119
Hexane+: 0.6164

BTU: 1238.9
GPM: 19.0530
SPG: 0.7302



Cornell E1E
30-045-24283
Tubing Sample

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

Analysis No: SO180124
Cust No: 15950-11050

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: CORNELL E #1E; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: API 3004524283

Source: TUBING
Well Flowing: Y
Pressure: 111 PSIG
Flow Temp: DEG. F
Ambient Temp: 78 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/20/2018
Sample Time: 9.19 AM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NMOOD

FEB 13 2013

DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.4427	0.4484	0.0490	0.00	0.0043
CO2	1.6372	1.6582	0.2800	0.00	0.0249
Methane	80.5837	81.6164	13.7060	813.90	0.4464
Ethane	10.1169	10.2466	2.7140	179.04	0.1050
Propane	4.0286	4.0802	1.1130	101.36	0.0613
Iso-Butane	0.5494	0.5564	0.1800	17.87	0.0110
N-Butane	1.0938	1.1078	0.3460	35.68	0.0220
I-Pentane	0.3049	0.3088	0.1120	12.20	0.0076
N-Pentane	0.2773	0.2809	0.1010	11.12	0.0069
Hexane Plus	0.9655	0.9779	0.4320	50.89	0.0320
Total	100.0000	101.2816	19.0330	1222.05	0.7213

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0035
BTU/CU.FT IDEAL: 1224.9
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1229.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1207.8
DRY BTU @ 15.025: 1253.8
REAL SPECIFIC GRAVITY: 0.7236

CYLINDER #: 232
CYLINDER PRESSURE: 90 PSIG
ANALYSIS DATE: 07/31/2018
ANALYSIS TIME: 10:15:45 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: CORNELL E #1E; TBG
Stn. No.: API 3004524283
Mtr. No.:

TUBING
PC

08/02/2018
15950-11050

Smpl Date: 07/20/2018
Test Date: 07/31/2018
Run No: SO180124

Nitrogen: 0.4427
CO2: 1.6372
Methane: 80.5837
Ethane: 10.1169
Propane: 4.0286
I-Butane: 0.5494
N-Butane: 1.0938
I-Pentane: 0.3049
N-Pentane: 0.2773
Hexane+: 0.9655

BTU: 1229.2
GPM: 19.0330
SPG: 0.7236