



Well Name: BARNES 1; TBG
 API #: API# 300451127200
 Source: TUBING
 Sample Type: GAS
 Analysis No: SO200195
 Cust No: 15950-12335

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
 Well Name: BARNES 1; TBG
 County/State: NM
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Stn. No.: API# 300451127200
 75181

Source: TUBING
 Well Flowing: Y
 Pressure: 70 PSIG
 Flow Temp: DEG. F
 Ambient Temp: 87 DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 09/25/2020
 Sample Time: 2.20 PM
 Sampled By: SEAN CASAUS
 Sampled by (CO): ABC

Heat Trace: N
 Remarks:

Analysis

Component:	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1331	0.1331	0.0150	0.00	0.0013
CO2	2.8972	2.8982	0.4960	0.00	0.0440
Methane	92.2322	92.2637	15.6700	931.55	0.5109
Ethane	3.2607	3.2618	0.8740	57.70	0.0339
Propane	0.7150	0.7152	0.1970	17.99	0.0109
Iso-Butane	0.2394	0.2395	0.0790	7.79	0.0048
N-Butane	0.1505	0.1506	0.0480	4.91	0.0030
I-Pentane	0.1002	0.1002	0.0370	4.01	0.0025
N-Pentane	0.0430	0.0430	0.0160	1.72	0.0011
Hexane Plus	0.2287	0.2288	0.1020	12.05	0.0076
Total	100.0000	100.0341	17.5340	1037.72	0.6199

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0024
 BTU/CU.FT IDEAL: 1040.1
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1042.6
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1024.5
 DRY BTU @ 15.025: 1063.5
 REAL SPECIFIC GRAVITY: 0.6211

CYLINDER #: 16
 CYLINDER PRESSURE: 68 PSIG
 ANALYSIS DATE: 10/01/2020
 ANALYSIS TIME: 10:09:43 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

Last Cal/Verify: 10/08/2020

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: BARNES 1; TBG
Stn. No.: API#
Mtr. No.: 75181

TUBING

10/08/2020
15950-12335

Smpl Date: 09/25/2020
Test Date: 10/01/2020
Run No: SO200195

Nitrogen: 0.1331
CO2: 2.8972
Methane: 92.2322
Ethane: 3.2607
Propane: 0.7150
I-Butane: 0.2394
N-Butane: 0.1505
I-Pentane: 0.1002
N-Pentane: 0.0430
Hexane+: 0.2287

BTU: 1042.6
GPM: 17.5340
SPG: 0.6211



OCD Received 10/28/2020

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

Analysis No: SO200196
Cust No: 15950-12340

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: BARNES 1; INT
County/State: NM
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.: API # 300451127200
75181

Source: INTERMEDIATE
Well Flowing: N
Pressure: 130 PSIG
Flow Temp: DEG. F
Ambient Temp: 87 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 09/25/2020
Sample Time: 2.10 PM
Sampled By: SEAN CASAUS
Sampled by (CO): ABC

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1133	0.1112	0.0120	0.00	0.0011
CO2	1.8686	1.8342	0.3200	0.00	0.0284
Methane	86.6647	85.0675	14.7310	875.31	0.4800
Ethane	7.6351	7.4944	2.0470	135.12	0.0793
Propane	2.1296	2.0904	0.5880	53.58	0.0324
Iso-Butane	0.2914	0.2860	0.0960	9.48	0.0058
N-Butane	0.3725	0.3656	0.1180	12.15	0.0075
I-Pentane	0.1723	0.1691	0.0630	6.89	0.0043
N-Pentane	0.1505	0.1477	0.0550	6.03	0.0037
Hexane Plus	0.6020	0.5909	0.2690	31.73	0.0199
Total	100.0000	98.1570	18.2990	1130.30	0.6625

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0029
BTU/CU.FT IDEAL: 1132.9
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1136.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1116.4
DRY BTU @ 15.025: 1159.0
REAL SPECIFIC GRAVITY: 0.6642

CYLINDER #: 058
CYLINDER PRESSURE: 131 PSIG
ANALYSIS DATE: 10/01/2020
ANALYSIS TIME: 03:47:30 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: 10/08/2020

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: BARNES 1; INT
Stn. No.: API #
Mtr. No.: 75181

INTERMEDIATE

10/08/2020
15950-12340

Smpl Date: 09/25/2020
Test Date: 10/01/2020
Run No: SO200196

Nitrogen: 0.1133
CO2: 1.8686
Methane: 86.6647
Ethane: 7.6351
Propane: 2.1296
I-Butane: 0.2914
N-Butane: 0.3725
I-Pentane: 0.1723
N-Pentane: 0.1505
Hexane+: 0.6020

BTU: 1136.2
GPM: 18.2990
SPG: 0.6642



OCD Received 10/28/2020

Well Name: BARNES 1; CSG
API #: API # 300451127200
Source: CASING
Sample Type: GAS
Analysis No: SO200197
Cust No: 15950-12345

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: BARNES 1; CSG
County/State: NM
Location:
Lease/PA/CA:
Formation:
Cust. Stn. No.: API # 300451127200
75181

Source: CASING
Well Flowing:
Pressure: 69 PSIG
Flow Temp: DEG. F
Ambient Temp: 87 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 09/25/2020
Sample Time: 2.15 PM
Sampled By: SEAN CASAUS
Sampled by (CO): ABC

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1348	0.1340	0.0150	0.00	0.0013
CO2	2.8969	2.8797	0.4950	0.00	0.0440
Methane	92.1910	91.6434	15.6630	931.13	0.5106
Ethane	3.2570	3.2377	0.8730	57.64	0.0338
Propane	0.7237	0.7194	0.2000	18.21	0.0110
Iso-Butane	0.2388	0.2374	0.0780	7.77	0.0048
N-Butane	0.1511	0.1502	0.0480	4.93	0.0030
I-Pentane	0.1006	0.1000	0.0370	4.02	0.0025
N-Pentane	0.0438	0.0435	0.0160	1.76	0.0011
Hexane Plus	0.2623	0.2607	0.1170	13.83	0.0087
Total	100.0000	99.4060	17.5420	1039.28	0.6209

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0024
BTU/CU.FT IDEAL: 1041.7
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1044.2
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1026.0
DRY BTU @ 15.025: 1065.1
REAL SPECIFIC GRAVITY: 0.6221

CYLINDER #: 094
CYLINDER PRESSURE: 69 PSIG
ANALYSIS DATE: 10/01/2020
ANALYSIS TIME: 04:01:46 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: 10/08/2020

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: BARNES 1; CSG
Stn. No.: API #
Mtr. No.: 75181

CASING

10/08/2020
15950-12345

Smpl Date: 09/25/2020
Test Date: 10/01/2020
Run No: SO200197

Nitrogen: 0.1348
CO2: 2.8969
Methane: 92.1910
Ethane: 3.2570
Propane: 0.7237
I-Butane: 0.2388
N-Butane: 0.1511
I-Pentane: 0.1006
N-Pentane: 0.0438
Hexane+: 0.2623

BTU: 1044.2
GPM: 17.5420
SPG: 0.6221