



Johnson GC C 1E
30-045-24004
Bradenhead Sample

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

BH 81
MK

Analysis No: SO180063
Cust No: 15950-10745

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: JOHNSON GC C 1E; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: 3004524004

NMOCB
FEB 13 2019
DISTRICT III

Source: BRADENHEAD
Well Flowing: Y
Pressure: 82 PSIA
Flow Temp: DEG. F
Ambient Temp: 78 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/05/2018
Sample Time: 8.39 AM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2279	0.2250	0.0250	0.00	0.0022
CO2	0.0058	0.0057	0.0010	0.00	0.0001
Methane	87.3643	86.2431	14.8520	882.38	0.4839
Ethane	7.1267	7.0352	1.9110	126.12	0.0740
Propane	2.8706	2.8338	0.7930	72.23	0.0437
Iso-Butane	0.5128	0.5062	0.1680	16.68	0.0103
N-Butane	0.7912	0.7810	0.2500	25.81	0.0159
I-Pentane	0.2870	0.2833	0.1050	11.48	0.0071
N-Pentane	0.2177	0.2149	0.0790	8.73	0.0054
Hexane Plus	0.5960	0.5884	0.2670	31.42	0.0197
Total	100.0000	98.7166	18.4510	1174.84	0.6624

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.003
BTU/CU.FT IDEAL: 1177.6
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1181.1
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1160.5
DRY BTU @ 15.025: 1204.8
REAL SPECIFIC GRAVITY: 0.6641

CYLINDER #: 77064
CYLINDER PRESSURE: 70 PSIG
ANALYSIS DATE: 07/10/2018
ANALYSIS TIME: 04:10:13 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: 07/12/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: JOHNSON GC C 1E; BHD
Stn. No.: 3004524004
Mtr. No.:

BRADENHEAD
PC

07/12/2018
15950-10745

Smpl Date: 07/05/2018
Test Date: 07/10/2018
Run No: SO180063

Nitrogen: 0.2279
CO2: 0.0058
Methane: 87.3643
Ethane: 7.1267
Propane: 2.8706
I-Butane: 0.5128
N-Butane: 0.7912
I-Pentane: 0.2870
N-Pentane: 0.2177
Hexane+: 0.5960

BTU: 1181.1
GPM: 18.4510
SPG: 0.6641



Johnson GC C 1E
30-045-24004
Casing sample

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

Analysis No: SO180064
Cust No: 15950-10750

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: JOHNSON GC C 1E; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: 3004524004

Source: CASING
Well Flowing: Y
Pressure: 99 PSIA
Flow Temp: DEG. F
Ambient Temp: 78 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/05/2018
Sample Time: 8.45 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	0.3506	0.3479	0.0390	0.00	0.0034
CO2	1.1281	1.1195	0.1930	0.00	0.0171
Methane	81.9517	81.3281	13.9380	827.71	0.4539
Ethane	8.8427	8.7754	2.3730	156.49	0.0918
Propane	4.2266	4.1944	1.1680	106.35	0.0643
Iso-Butane	0.6025	0.5979	0.1980	19.59	0.0121
N-Butane	1.2798	1.2701	0.4050	41.75	0.0257
I-Pentane	0.3859	0.3830	0.1420	15.44	0.0096
N-Pentane	0.3555	0.3528	0.1290	14.25	0.0089
Hexane Plus	0.8766	0.8699	0.3920	46.21	0.0290
Total	100.0000	99.2390	18.9770	1227.79	0.7159

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0035
BTU/CU.FT IDEAL: 1230.6
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1235.0
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1213.5
DRY BTU @ 15.025: 1259.7
REAL SPECIFIC GRAVITY: 0.7181

CYLINDER #: 7099
CYLINDER PRESSURE: 83 PSIG
ANALYSIS DATE: 07/10/2018
ANALYSIS TIME: 03:45:03 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

Last Cal/Verify: 07/12/2018

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: JOHNSON GC C 1E; CSG
Stn. No.: 3004524004
Mtr. No.:

CASING
PC

07/12/2018
15950-10750

Smpl Date: 07/05/2018
Test Date: 07/10/2018
Run No: SO180064

Nitrogen: 0.3506
CO2: 1.1281
Methane: 81.9517
Ethane: 8.8427
Propane: 4.2266
I-Butane: 0.6025
N-Butane: 1.2798
I-Pentane: 0.3859
N-Pentane: 0.3555
Hexane+: 0.8766

BTU: 1235.0
GPM: 18.9770
SPG: 0.7181



Johnson GC C1E
30-045-24004
Tubing Sample

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

Analysis No: SO180065
Cust No: 15950-10755

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: JOHNSON GC C 1E; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation: PC
Cust. Stn. No.: 3004524004

Source: TUBING
Well Flowing: Y
Pressure: 99 PSIG
Flow Temp: DEG. F
Ambient Temp: 78 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/05/2018
Sample Time: 8.53 AM
Sampled By: SCOTT WILLARD
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NMOCB
FEB 13 2019
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.3508	0.3534	0.0390	0.00	0.0034
CO2	1.1310	1.1394	0.1940	0.00	0.0172
Methane	81.8993	82.5079	13.9290	827.18	0.4536
Ethane	8.9727	9.0394	2.4070	158.79	0.0932
Propane	4.2035	4.2347	1.1620	105.76	0.0640
Iso-Butane	0.5912	0.5956	0.1940	19.23	0.0119
N-Butane	1.2660	1.2754	0.4000	41.30	0.0254
I-Pentane	0.3799	0.3827	0.1390	15.20	0.0095
N-Pentane	0.3487	0.3513	0.1270	13.98	0.0087
Hexane Plus	0.8569	0.8633	0.3830	45.17	0.0284
Total	100.0000	100.7431	18.9740	1226.61	0.7152

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0035
BTU/CU.FT IDEAL: 1229.4
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1233.8
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1212.3
DRY BTU @ 15.025: 1258.5
REAL SPECIFIC GRAVITY: 0.7174

CYLINDER #: 7985
CYLINDER PRESSURE: 91 PSIG
ANALYSIS DATE: 07/10/2018
ANALYSIS TIME: 02:31:51 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

GC Method: C6+ Gas

Last Cal/Verify: 07/12/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: JOHNSON GC C 1E; TBG
Stn. No.: 3004524004
Mtr. No.:

TUBING
PC

07/12/2018
15950-10755

Smpl Date: 07/05/2018
Test Date: 07/10/2018
Run No: SO180065

Nitrogen: 0.3508
CO2: 1.1310
Methane: 81.8993
Ethane: 8.9727
Propane: 4.2035
I-Butane: 0.5912
N-Butane: 1.2660
I-Pentane: 0.3799
N-Pentane: 0.3487
Hexane+: 0.8569

BTU: 1233.8
GPM: 18.9740
SPG: 0.7174