



Schwerdtfeger A LS 25
30-045-33226
Bradenhead Sample

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

Analysis No: SO180192
Cust No: 15950-11405

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: SCHWERTDFEGER A LS 25; BHD
County/State: SAN JUAN NM
Location:
Field:
Formation: FT
Cust. Stn. No.: 3004533226

Source: BRADENHEAD
Well Flowing: Y
Pressure: 11 PSIG
Flow Temp: DEG. F
Ambient Temp: 78 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 08/13/2018
Sample Time: 10.45 AM
Sampled By: FARRELL C.
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

KMOOD
FEB 13 2019
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	3.8414	3.8114	0.4240	0.00	0.0372
CO2	0.0020	0.0020	0.0000	0.00	0.0000
Methane	83.5837	82.9309	14.2090	844.20	0.4630
Ethane	5.3768	5.3348	1.4420	95.15	0.0558
Propane	4.0196	3.9882	1.1100	101.14	0.0612
Iso-Butane	1.1203	1.1116	0.3680	36.43	0.0225
N-Butane	1.0928	1.0843	0.3450	35.65	0.0219
I-Pentane	0.3749	0.3720	0.1370	15.00	0.0093
N-Pentane	0.2566	0.2546	0.0930	10.29	0.0064
Hexane Plus	0.3319	0.3293	0.1480	17.49	0.0110
Total	100.0000	99.2191	18.2760	1155.35	0.6883

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.003
BTU/CU.FT IDEAL: 1158.0
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1161.5
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1141.3
DRY BTU @ 15.025: 1184.8
REAL SPECIFIC GRAVITY: 0.6901

CYLINDER #: 016
CYLINDER PRESSURE: 80 PSIG
ANALYSIS DATE: 09/11/2018
ANALYSIS TIME: 09:01:37 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

GC Method: C6+ Gas

Last Cal/Verify: 09/17/2018

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BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: SCHWERTDFEGER A LS 25; BHD
Stn. No.: 3004533226
Mtr. No.:

BRADENHEAD
FT

09/17/2018
15950-11405

Smpl Date: 08/13/2018
Test Date: 09/11/2018
Run No: SO180192

Nitrogen: 3.8414
CO2: 0.0020
Methane: 83.5837
Ethane: 5.3768
Propane: 4.0196
I-Butane: 1.1203
N-Butane: 1.0928
I-Pentane: 0.3749
N-Pentane: 0.2566
Hexane+: 0.3319

BTU: 1161.5
GPM: 18.2760
SPG: 0.6901



Schwerdtfeger A LS 25
30-045-33226
Casing Sample

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

Analysis No: SO180193
Cust No: 15950-11410

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: SCHWERTDFEGER A LS 25; CSG
County/State: SAN JUAN NM
Location:
Field:
Formation: FT
Cust. Stn. No.: 3004533226

Source: CASING
Well Flowing: Y
Pressure: 15 PSIG
Flow Temp: DEG. F
Ambient Temp: 78 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 08/13/2018
Sample Time: 10.40 AM
Sampled By: FARRELL C.
Sampled by (CO): PESCO

Heat Trace: N
Remarks:

NMOOD
FEB 13 2013
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1165	0.1143	0.0130	0.00	0.0011
CO2	0.7277	0.7138	0.1250	0.00	0.0111
Methane	89.0157	87.3163	15.1290	899.06	0.4931
Ethane	6.4033	6.2811	1.7170	113.32	0.0665
Propane	2.1947	2.1528	0.6060	55.22	0.0334
Iso-Butane	0.3812	0.3739	0.1250	12.40	0.0076
N-Butane	0.3922	0.3847	0.1240	12.79	0.0079
I-Pentane	0.1450	0.1422	0.0530	5.80	0.0036
N-Pentane	0.0947	0.0929	0.0340	3.80	0.0024
Hexane Plus	0.5290	0.5189	0.2370	27.88	0.0175
Total	100.0000	98.0909	18.1630	1130.27	0.6441

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0028
BTU/CU.FT IDEAL: 1132.9
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1136.1
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1116.3
DRY BTU @ 15.025: 1158.9
REAL SPECIFIC GRAVITY: 0.6457

CYLINDER #: 044
CYLINDER PRESSURE: 16 PSIG
ANALYSIS DATE: 09/11/2018
ANALYSIS TIME: 09:44:12 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: 09/17/2018

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: SCHWERDTFEGER A LS 25; CSG
Stn. No.: 3004533226
Mtr. No.:

CASING
FT

09/17/2018
15950-11410

Smpl Date: 08/13/2018
Test Date: 09/11/2018
Run No: SO180193
Nitrogen: 0.1165
CO2: 0.7277
Methane: 89.0157
Ethane: 6.4033
Propane: 2.1947
I-Butane: 0.3812
N-Butane: 0.3922
I-Pentane: 0.1450
N-Pentane: 0.0947
Hexane+: 0.5290
BTU: 1136.1
GPM: 18.1630
SPG: 0.6457



Schwerdtfeger A LS 25
30-045-33226
Tubing Sample

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

Analysis No: SO180194
Cust No: 15950-11415

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: SCHWERTFEGER A LS 25; TBG
County/State: SAN JUAN NM
Location:
Field:
Formation: FT
Cust. Stn. No.: 3004533226

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

Source: TUBING
Well Flowing: Y
Pressure: 11 PSIG
Flow Temp: DEG. F
Ambient Temp: 78 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 08/13/2018
Sample Time: 10.50 AM
Sampled By: FARRELL C.
Sampled by (CO): PESCO

NM000
FEB 13 2013
DISTRICT III

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	3.0175	1.2100	0.3330	0.00	0.0292
CO2	0.9638	0.3865	0.1650	0.00	0.0146
Methane	84.8925	34.0417	14.4310	857.41	0.4702
Ethane	5.8360	2.3402	1.5650	103.28	0.0606
Propane	2.5978	1.0417	0.7180	65.36	0.0396
Iso-Butane	0.4791	0.1921	0.1570	15.58	0.0096
N-Butane	0.7190	0.2883	0.2270	23.46	0.0144
I-Pentane	0.2838	0.1138	0.1040	11.35	0.0071
N-Pentane	0.2167	0.0869	0.0790	8.69	0.0054
Hexane Plus	0.9938	0.3985	0.4440	52.38	0.0329
Total	100.0000	40.0997	18.2230	1137.52	0.6836

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.003
BTU/CU.FT IDEAL: 1140.1
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1143.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1123.7
DRY BTU @ 15.025: 1166.5
REAL SPECIFIC GRAVITY: 0.6854

CYLINDER #: 203
CYLINDER PRESSURE: 5 PSIG
ANALYSIS DATE: 09/11/2018
ANALYSIS TIME: 09:15:23 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

GC Method: C6+ Gas

Last Cal/Verify: 09/17/2018



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease:	SCHWERDTFEGER A LS 25; TBG	TUBING	09/17/2018
Stn. No.:	3004533226	FT	15950-11415
Mtr. No.:			

Smpl Date:	08/13/2018
Test Date:	09/11/2018
Run No:	SO180194
Nitrogen:	3.0175
CO2:	0.9638
Methane:	84.8925
Ethane:	5.8360
Propane:	2.5978
I-Butane:	0.4791
N-Butane:	0.7190
I-Pentane:	0.2838
N-Pentane:	0.2167
Hexane+:	0.9938
BTU:	1143.6
GPM:	18.2230
SPG:	0.6854