



Well Name: Riddle C LS 3
 API# 30-045-10258
 Casing Sampled: Bradenhead
 Sample Type: GAD

Analysis No: SO190073
 Cust No: 15950-10370

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
 Well Name: RIDDLE C LS 3;BHD
 County/State: SAN JUAN NM
 Location:
 Lease/PA/CA:
 Formation:
 Cust. Str. No.:
 API 3004510258

Source: BRADENHEAD
 Well Flowing: Y
 Pressure: 36 PSIA
 Flow Temp: DEG. F
 Ambient Temp: 67 DEG. F
 Flow Rate: MCF/D
 Sample Method: Purge & Fill
 Sample Date: 06/17/2019
 Sample Time: 8.50 AM
 Sampled By: EUGENIA HAMILTON
 Sampled by (CO): PESCO

Heat Trace: N
 Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1487	0.1472	0.0160	0.00	0.0014
CO2	2.0272	2.0071	0.3470	0.00	0.0308
Methane	84.2225	83.3881	14.3220	850.65	0.4665
Ethane	7.4810	7.4069	2.0070	132.39	0.0777
Propane	2.9906	2.9610	0.8260	75.25	0.0455
Iso-Butane	0.5988	0.5929	0.1970	19.47	0.0120
N-Butane	0.8114	0.8034	0.2570	26.47	0.0163
I-Pentane	0.3125	0.3094	0.1150	12.50	0.0078
N-Pentane	0.2388	0.2364	0.0870	9.57	0.0059
Hexane Plus	1.1685	1.1569	0.5230	61.59	0.0387
Total	100.0000	99.0093	18.6970	1187.90	0.7027

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0033
 BTU/CU.FT IDEAL: 1190.6
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1194.6
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1173.8
 DRY BTU @ 15.025: 1218.5
 REAL SPECIFIC GRAVITY: 0.7047

CYLINDER #: 1023
 CYLINDER PRESSURE: 36 PSIG
 ANALYSIS DATE: 06/25/2019
 ANALYSIS TIME: 02:12:36 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: 06/28/2019

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: RIDDLE C LS 3;BHD
Stn. No.:
Mtr. No.: API 3004510258

BRADENHEAD

06/28/2019
15950-10370

Smpl Date:	06/17/2019	09/27/2017
Test Date:	06/25/2019	09/27/2017
Run No:	SO190073	SO170074
Nitrogen:	0.1487	9.5670
CO2:	2.0272	0.0186
Methane:	84.2225	84.6044
Ethane:	7.4810	4.2377
Propane:	2.9906	1.0479
I-Butane:	0.5988	0.1052
N-Butane:	0.8114	0.0492
I-Pentane:	0.3125	0.0551
N-Pentane:	0.2388	0.0180
Hexane+:	1.1685	0.2969
BTU:	1194.6	983.8
GPM:	18.6970	17.0600
SPG:	0.7047	0.6372



Well Name: Riddle C LS3
 API# 30-045-10258
 Casing Sampled: Production
 Sample Type Gas

Analysis No: SO190074
 Cust No: 15950-10360

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT	Source: CASING
Well Name: RIDDLE C LS 3;CSG	Well Flowing: Y
County/State: SAN JUAN NM	Pressure: 41 PSIA
Location:	Flow Temp: DEG. F
Lease/PA/CA:	Ambient Temp: 67 DEG. F
Formation:	Flow Rate: MCF/D
Cust. Stn. No.: API 3004510258	Sample Method: Purge & Fill
	Sample Date: 06/17/2019
	Sample Time: 8.54 AM
	Sampled By: EUGENIA HAMILTON
Heat Trace: N	Sampled by (CO): PESCO
Remarks:	

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1807	0.1782	0.0200	0.00	0.0017
CO2	1.4615	1.4415	0.2500	0.00	0.0222
Methane	81.9257	80.8073	13.9350	827.45	0.4538
Ethane	8.6227	8.5050	2.3140	152.60	0.0895
Propane	4.0603	4.0049	1.1220	102.16	0.0618
Iso-Butane	0.6920	0.6826	0.2270	22.50	0.0139
N-Butane	1.1158	1.1006	0.3530	36.40	0.0224
I-Pentane	0.4003	0.3948	0.1470	16.02	0.0100
N-Pentane	0.3131	0.3088	0.1140	12.55	0.0078
Hexane Plus	1.2279	1.2111	0.5490	64.72	0.0406
Total	100.0000	98.6348	19.0310	1234.40	0.7238

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0036	CYLINDER #:	1025
BTU/CU.FT IDEAL:	1237.3	CYLINDER PRESSURE:	48 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1241.7	ANALYSIS DATE:	06/26/2019
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1220.1	ANALYSIS TIME:	09:10:52 AM
DRY BTU @ 15.025:	1266.6	ANALYSIS RUN BY:	RICHARD WILSON
REAL SPECIFIC GRAVITY:	0.7261		

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: 06/28/2019

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: RIDDLE C LS 3;CSG
Stn. No.:
Mtr. No.: API 3004510258

CASING

06/28/2019
15950-10360

Smpl Date:	06/17/2019	09/27/2017
Test Date:	06/26/2019	09/27/2017
Run No:	SO190074	SO170075
Nitrogen:	0.1807	0.1481
CO2:	1.4615	1.3129
Methane:	81.9257	82.1609
Ethane:	8.6227	8.7622
Propane:	4.0603	4.2041
I-Butane:	0.6920	0.7226
N-Butane:	1.1158	1.1454
I-Pentane:	0.4003	0.3973
N-Pentane:	0.3131	0.3132
Hexane+:	1.2279	0.8333
BTU:	1241.7	1231.0
GPM:	19.0310	18.9600
SPG:	0.7261	0.7164



Well Name: Riddle C LS 3
 API# 30 - 045 - 10258
 Casing Sampled: Tubing
 Sample Type: Gas

Analysis No: SO190075
 Cust No: 15950-10365

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT	Source: TUBING
Well Name: RIDDLE C LS 3;TBG	Well Flowing: Y
County/State: SAN JAUN NM	Pressure: 35 PSIA
Location:	Flow Temp: DEG. F
Lease/PA/CA:	Ambient Temp: 67 DEG. F
Formation:	Flow Rate: MCF/D
Cust. Stn. No.: API 3004510258	Sample Method: Purge & Fill
	Sample Date: 06/17/2019
	Sample Time: 8.52 AM
	Sampled By: EUGENIA HAMILTON
Heat Trace: N	Sampled by (CO): PESCO
Remarks:	

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	4.7600	4.6077	0.5250	0.00	0.0460
CO2	0.0650	0.0629	0.0110	0.00	0.0010
Methane	87.6941	84.8875	14.8970	885.71	0.4857
Ethane	5.3155	5.1454	1.4240	94.07	0.0552
Propane	1.5644	1.5143	0.4320	39.36	0.0238
Iso-Butane	0.0878	0.0850	0.0290	2.86	0.0018
N-Butane	0.1827	0.1769	0.0580	5.96	0.0037
I-Pentane	0.0312	0.0302	0.0110	1.25	0.0008
N-Pentane	0.0117	0.0113	0.0040	0.47	0.0003
Hexane Plus	0.2876	0.2784	0.1290	15.16	0.0095
Total	100.0000	96.7996	17.5200	1044.83	0.6278

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0023	CYLINDER #:	1022
BTU/CU.FT IDEAL:	1047.3	CYLINDER PRESSURE:	44 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1049.7	ANALYSIS DATE:	06/25/2019
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1031.4	ANALYSIS TIME:	04:26:06 PM
DRY BTU @ 15.025:	1070.7	ANALYSIS RUN BY:	SHYANN ELLEDGE
REAL SPECIFIC GRAVITY:	0.629		

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: 06/28/2019

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: RIDDLE C LS 3;TBG
Stn. No.:
Mtr. No.: API 3004510258

TUBING

06/28/2019
15950-10365

Smpl Date:	06/17/2019	09/27/2017
Test Date:	06/25/2019	09/27/2017
Run No:	SO190075	SO170076
Nitrogen:	4.7600	0.1167
CO2:	0.0650	1.5801
Methane:	87.6941	84.7960
Ethane:	5.3155	7.7133
Propane:	1.5644	3.0763
I-Butane:	0.0878	0.5906
N-Butane:	0.1827	0.8110
I-Pentane:	0.0312	0.3047
N-Pentane:	0.0117	0.2214
Hexane+:	0.2876	0.7899
BTU:	1049.7	1185.2
GPM:	17.5200	18.6150
SPG:	0.6290	0.6911