



NMOCD REC'D
10/12/20

Well Name: CHILDERS 5R; BHD
API #: API # 3004525351
Source: BRADENHEAD
Sample Type: GAS
Analysis No: SO200057
Cust No: 15950-10135

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: CHILDERS 5R; BHD
County/State: SAN JUAN NM
Location:
Lease/PA/CA: NMSF078040
Formation:
Cust. Stn. No.: API # 3004525351

Source: BRADENHEAD
Well Flowing:
Pressure: 63 PSIG
Flow Temp: DEG. F
Ambient Temp: 98 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/15/2020
Sample Time: 10.50 AM
Sampled By: SEAN C.
Sampled by (CO): ABC

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	4.7992	4.7844	0.5290	0.00	0.0464
CO2	0.0139	0.0139	0.0020	0.00	0.0002
Methane	88.1796	87.9085	14.9800	890.61	0.4884
Ethane	4.7343	4.7197	1.2690	83.78	0.0492
Propane	1.3892	1.3849	0.3840	34.95	0.0212
Iso-Butane	0.3023	0.3014	0.0990	9.83	0.0061
N-Butane	0.2837	0.2828	0.0900	9.26	0.0057
I-Pentane	0.1008	0.1005	0.0370	4.03	0.0025
N-Pentane	0.0458	0.0457	0.0170	1.84	0.0011
Hexane Plus	0.1512	0.1507	0.0680	7.97	0.0050
Total	100.0000	99.6925	17.4750	1042.27	0.6258

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0023
BTU/CU.FT IDEAL: 1044.7
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1047.1
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1028.9
DRY BTU @ 15.025: 1068.1
REAL SPECIFIC GRAVITY: 0.627

CYLINDER #: 1088
CYLINDER PRESSURE: 52 PSIG
ANALYSIS DATE: 07/17/2020
ANALYSIS TIME: 08:41:14 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: 07/22/2020

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: CHILDERS 5R; BHD
Stn. No.: API # 3004525351
Mtr. No.:

BRADENHEAD

07/22/2020
15950-10135

Smpl Date:	07/15/2020	02/06/2020	06/13/2019	06/22/2017
Test Date:	07/17/2020	02/10/2020	06/20/2019	06/22/2017
Run No:	SO200057	SO200005	SO190047	SO170023
Nitrogen:	4.7992	5.3149	5.4770	6.4541
CO2:	0.0139	0.0022	0.0063	0.0281
Methane:	88.1796	87.8566	87.4848	86.7883
Ethane:	4.7343	4.6153	4.6101	4.5087
Propane:	1.3892	1.3365	1.3368	1.2962
I-Butane:	0.3023	0.2947	0.3115	0.2894
N-Butane:	0.2837	0.2852	0.2858	0.2713
I-Pentane:	0.1008	0.0986	0.1045	0.1025
N-Pentane:	0.0458	0.0446	0.0482	0.0613
Hexane+:	0.1512	0.1514	0.3350	0.2000
BTU:	1047.1	1040.0	1046.9	1029.1
GPM:	17.4750	17.4240	17.4690	17.3560
SPG:	0.6270	0.6277	0.6339	0.6333



NMOCD REC'D
10/12/20

Well Name: CHILDERS 5R; CSG
API #: API # 3004525351
Source: CASING
Sample Type: GAS
Analysis No: SO200058
Cust No: 15950-10170

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: CHILDERS 5R; CSG
County/State: SAN JUAN NM
Location:
Lease/PA/CA: NMSF078040
Formation: MV
Cust. Stn. No.: API # 3004525351

Source: CASING
Well Flowing: Y
Pressure: 53 PSIG
Flow Temp: DEG. F
Ambient Temp: 98 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/15/2020
Sample Time: 10.55 AM
Sampled By: SEAN C.
Sampled by (CO): ABC

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.8333	0.8200	0.0920	0.00	0.0081
CO2	0.0089	0.0088	0.0020	0.00	0.0001
Methane	88.7594	87.3397	15.0860	896.47	0.4916
Ethane	5.9029	5.8085	1.5830	104.46	0.0613
Propane	2.6656	2.6230	0.7360	67.07	0.0406
Iso-Butane	0.5280	0.5196	0.1730	17.17	0.0106
N-Butane	0.6238	0.6138	0.1970	20.35	0.0125
I-Pentane	0.2196	0.2161	0.0810	8.79	0.0055
N-Pentane	0.1428	0.1405	0.0520	5.72	0.0036
Hexane Plus	0.3157	0.3107	0.1410	16.64	0.0104
Total	100.0000	98.4007	18.1430	1136.67	0.6443

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0028
BTU/CU.FT IDEAL: 1139.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1142.5
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1122.6
DRY BTU @ 15.025: 1165.4
REAL SPECIFIC GRAVITY: 0.6458

CYLINDER #: 1093
CYLINDER PRESSURE: 43 PSIG
ANALYSIS DATE: 07/17/2020
ANALYSIS TIME: 08:44:47 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: 07/22/2020

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: CHILDERS 5R; CSG
Stn. No.: API # 3004525351
Mtr. No.:

CASING
MV

07/22/2020
15950-10170

Smpl Date:	07/15/2020	02/06/2020	06/13/2019	06/22/2017
Test Date:	07/17/2020	02/10/2020	06/20/2019	06/22/2017
Run No:	SO200058	SO200006	SO190048	SO170024
Nitrogen:	0.8333	0.5163	0.5431	30.4707
CO2:	0.0089	0.0061	0.0983	0.7365
Methane:	88.7594	88.9555	88.1760	59.0863
Ethane:	5.9029	5.9488	6.2846	5.8329
Propane:	2.6656	2.6871	2.7244	2.0219
I-Butane:	0.5280	0.5286	0.5389	0.2953
N-Butane:	0.6238	0.6371	0.6488	0.5350
I-Pentane:	0.2196	0.2229	0.2280	0.2119
N-Pentane:	0.1428	0.1452	0.1583	0.1668
Hexane+:	0.3157	0.3524	0.5996	0.6427
BTU:	1142.5	1148.5	1162.2	830.5
GPM:	18.1430	18.1810	18.2950	16.3310
SPG:	0.6458	0.6463	0.6568	0.7731



NMOCD REC'D
10/12/20

Well Name: CHILDERS 5R; TBG
API #: API # 3004525351
Source: TUBING
Sample Type: GAS
Analysis No: SO200059
Cust No: 15950-10150

Well/Lease Information

Customer Name: BP - SOUTH BHD PROJECT
Well Name: CHILDERS 5R; TBG
County/State: SAN JUAN NM
Location:
Lease/PA/CA: NMSF078040
Formation: MV
Cust. Stn. No.: API # 3004525351

Source: TUBING
Well Flowing: Y
Pressure: 27 PSIG
Flow Temp: DEG. F
Ambient Temp: 98 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 07/15/2020
Sample Time: 11.00 AM
Sampled By: SEAN C.
Sampled by (CO): ABC

Heat Trace: N
Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.1793	0.1768	0.0200	0.00	0.0017
CO2	1.6157	1.5927	0.2770	0.00	0.0246
Methane	81.4432	80.2863	13.8530	822.58	0.4511
Ethane	8.8826	8.7564	2.3830	157.20	0.0922
Propane	3.9227	3.8670	1.0840	98.70	0.0597
Iso-Butane	0.6936	0.6837	0.2280	22.56	0.0139
N-Butane	1.2181	1.2008	0.3850	39.74	0.0244
I-Pentane	0.4443	0.4380	0.1630	17.78	0.0111
N-Pentane	0.3597	0.3546	0.1310	14.42	0.0090
Hexane Plus	1.2408	1.2232	0.5550	65.40	0.0411
Total	100.0000	98.5795	19.0790	1238.36	0.7288

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0036
BTU/CU.FT IDEAL: 1241.2
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1245.7
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1224.0
DRY BTU @ 15.025: 1270.6
REAL SPECIFIC GRAVITY: 0.7311

CYLINDER #: 42
CYLINDER PRESSURE: 25 PSIG
ANALYSIS DATE: 07/17/2020
ANALYSIS TIME: 09:28:23 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 Last Cal/Verify: 07/22/2020

GC Method: C6+ Gas



BP - SOUTH BHD PROJECT
WELL ANALYSIS COMPARISON

Lease: CHILDERS 5R; TBG
Stn. No.: API # 3004525351
Mtr. No.:

TUBING
MV

07/22/2020
15950-10150

Smpl Date:	07/15/2020	02/06/2020	06/13/2019	06/22/2017
Test Date:	07/17/2020	02/10/2020	06/20/2019	06/22/2017
Run No:	SO200059	SO200007	SO190049	SO170025
Nitrogen:	0.1793	0.2935	0.2484	0.2370
CO2:	1.6157	1.6454	1.6567	1.7282
Methane:	81.4432	79.1167	80.6873	80.0739
Ethane:	8.8826	8.9994	9.0259	9.1180
Propane:	3.9227	4.1470	4.0987	4.2557
I-Butane:	0.6936	0.7570	0.7191	0.7803
N-Butane:	1.2181	1.3677	1.2954	1.4028
I-Pentane:	0.4443	0.5329	0.4829	0.5603
N-Pentane:	0.3597	0.4502	0.3929	0.4479
Hexane+:	1.2408	2.6902	1.3927	1.3958
BTU:	1245.7	1321.8	1259.6	1270.0
GPM:	19.0790	19.5920	19.1820	19.2630
SPG:	0.7311	0.7819	0.7415	0.7492