



NMOCD REC'D
9/24/20

Well Name: CULPEPPER MARTIN SRC
API #: API #3004512205
Source: BRADENHEAD
Sample Type: GAS
Analysis No: HS200223
Cust No: 35825-13010

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: CULPEPPER MARTIN SRC 3M; BHD
County/State: SAN JUAN NM
Location:
Lease/PA/CA: FEE
Formation: MV / DK
Cust. Stn. No.: API #3004530474
3584430

Source: BRADENHEAD
Well Flowing: Y
Pressure: 55 PSIG
Flow Temp: DEG. F
Ambient Temp: 96 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 08/21/2020
Sample Time: 12.15 PM
Sampled By: DANIEL RIOS
Sampled by (CO): HILCORP

AREA 2 / RUN 201

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.6091	0.6057	0.0670	0.00	0.0059
CO2	0.0136	0.0135	0.0020	0.00	0.0002
Methane	88.3199	87.8230	15.0110	892.03	0.4892
Ethane	6.1475	6.1129	1.6480	108.79	0.0638
Propane	2.8396	2.8236	0.7840	71.45	0.0432
Iso-Butane	0.6458	0.6422	0.2120	21.00	0.0130
N-Butane	0.6923	0.6884	0.2190	22.58	0.0139
I-Pentane	0.2450	0.2436	0.0900	9.80	0.0061
N-Pentane	0.1706	0.1696	0.0620	6.84	0.0042
Hexane Plus	0.3166	0.3148	0.1420	16.69	0.0105
Total	100.0000	99.4373	18.2370	1149.19	0.6500

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0028
BTU/CU.FT IDEAL: 1151.8
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1155.1
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1135.0
DRY BTU @ 15.025: 1178.2
REAL SPECIFIC GRAVITY: 0.6516

CYLINDER #: 7019
CYLINDER PRESSURE: 46 PSIG
ANALYSIS DATE: 08/26/2020
ANALYSIS TIME: 09:59:33 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: 09/17/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	CULPEPPER MARTIN SRC 3M; BHD	BRADENHEAD	09/17/2020
Stn. No.:	API #3004530474	MV / DK	35825-13010
Mtr. No.:	3584430		

Smpl Date:	08/21/2020
Test Date:	08/26/2020
Run No:	HS200223
Nitrogen:	0.6091
CO2:	0.0136
Methane:	88.3199
Ethane:	6.1475
Propane:	2.8396
I-Butane:	0.6458
N-Butane:	0.6923
I-Pentane:	0.2450
N-Pentane:	0.1706
Hexane+:	0.3166
BTU:	1155.1
GPM:	18.2370
SPG:	0.6516



Well Name: CULPEPPER MARTIN SRC
API #: API #3004512205
Source: CASING
Sample Type: GAS
Analysis No: HS200224
Cust No: 35825-13015

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: CULPEPPER MARTIN SRC 3M; CSG
County/State: SAN JUAN NM
Location:
Lease/PA/CA: FEE
Formation: MV / DK
Cust. Stn. No.: API #3004530474
3584430

Source: CASING
Well Flowing: Y
Pressure: 74 PSIG
Flow Temp: DEG. F
Ambient Temp: 96 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 08/21/2020
Sample Time: 12.05 PM
Sampled By: DANIEL RIOS
Sampled by (CO): HILCORP

AREA 2 / RUN 201

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2170	0.2128	0.0240	0.00	0.0021
CO2	1.6666	1.6345	0.2850	0.00	0.0253
Methane	79.2111	77.6873	13.4790	800.03	0.4388
Ethane	9.7956	9.6072	2.6300	173.35	0.1017
Propane	4.1037	4.0248	1.1350	103.25	0.0625
Iso-Butane	0.8680	0.8513	0.2850	28.23	0.0174
N-Butane	1.2883	1.2635	0.4080	42.03	0.0259
I-Pentane	0.6978	0.6844	0.2560	27.92	0.0174
N-Pentane	0.5335	0.5232	0.1940	21.39	0.0133
Hexane Plus	1.6184	1.5873	0.7240	85.31	0.0536
Total	100.0000	98.0763	19.4200	1281.50	0.7579

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.004
BTU/CU.FT IDEAL: 1284.5
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1289.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1267.2
DRY BTU @ 15.025: 1315.4
REAL SPECIFIC GRAVITY: 0.7606

CYLINDER #: 4241
CYLINDER PRESSURE: 69 PSIG
ANALYSIS DATE: 08/26/2020
ANALYSIS TIME: 10:39:56 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: 09/17/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	CULPEPPER MARTIN SRC 3M; CSG	CASING	09/17/2020
Stn. No.:	API #3004530474	MV / DK	35825-13015
Mtr. No.:	3584430		

Smpl Date:	08/21/2020
Test Date:	08/26/2020
Run No:	HS200224
Nitrogen:	0.2170
CO2:	1.6666
Methane:	79.2111
Ethane:	9.7956
Propane:	4.1037
I-Butane:	0.8680
N-Butane:	1.2883
I-Pentane:	0.6978
N-Pentane:	0.5335
Hexane+:	1.6184
BTU:	1289.6
GPM:	19.4200
SPG:	0.7606



Well Name: CULPEPPER MARTIN SRC
API #: API #3004512205
Source: INTERMEDIATE CASING
Sample Type: GAS
Analysis No: HS200225
Cust No: 35825-13020

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	INTERMEDIATE CASING
Well Name:	CULPEPPER MARTIN SRC 3M; INTRM	Well Flowing:	Y
County/State:	SAN JUAN NM	Pressure:	55 PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:	FEE	Ambient Temp:	96 DEG. F
Formation:	MV / DK	Flow Rate:	MCF/D
Cust. Stn. No.:	API #3004530474 3584430	Sample Method:	Purge & Fill
		Sample Date:	08/21/2020
		Sample Time:	12.12 PM
	AREA 2 / RUN 201	Sampled By:	DANIEL RIOS
Heat Trace:		Sampled by (CO):	HILCORP
Remarks:			

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5923	0.5842	0.0650	0.00	0.0057
CO2	0.0148	0.0146	0.0030	0.00	0.0002
Methane	88.3275	87.1130	15.0120	892.11	0.4892
Ethane	6.1494	6.0648	1.6490	108.83	0.0638
Propane	2.8447	2.8056	0.7860	71.58	0.0433
Iso-Butane	0.6457	0.6368	0.2120	21.00	0.0130
N-Butane	0.6915	0.6820	0.2190	22.56	0.0139
I-Pentane	0.2449	0.2415	0.0900	9.80	0.0061
N-Pentane	0.1703	0.1680	0.0620	6.83	0.0042
Hexane Plus	0.3189	0.3145	0.1430	16.81	0.0106
Total	100.0000	98.6250	18.2410	1149.50	0.6501

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0028
BTU/CU.FT IDEAL:	1152.2
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1155.4
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1135.3
DRY BTU @ 15.025:	1178.5
REAL SPECIFIC GRAVITY:	0.6517

CYLINDER #:	4229
CYLINDER PRESSURE:	47 PSIG
ANALYSIS DATE:	08/25/2020
ANALYSIS TIME:	04:35:35 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: 09/17/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	CULPEPPER MARTIN SRC 3M; INTRM	INTERMEDIATE CASING	09/17/2020
Stn. No.:	API #3004530474	MV / DK	35825-13020
Mtr. No.:	3584430		

Smpl Date: 08/21/2020
Test Date: 08/25/2020
Run No: HS200225

Nitrogen: 0.5923
CO2: 0.0148
Methane: 88.3275
Ethane: 6.1494
Propane: 2.8447
I-Butane: 0.6457
N-Butane: 0.6915
I-Pentane: 0.2449
N-Pentane: 0.1703
Hexane+: 0.3189

BTU: 1155.4
GPM: 18.2410
SPG: 0.6517



Well Name: CULPEPPER MARTIN SRC
API #: API #3004512205
Source: TUBING
Sample Type: GAS
Analysis No: HS200226
Cust No: 35825-13025

Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)
Well Name: CULPEPPER MARTIN SRC 3M; TBG
County/State: SAN JUAN NM
Location:
Lease/PA/CA: FEE
Formation: MV / DK
Cust. Stn. No.: API #3004530474
3584430

Source: TUBING
Well Flowing: Y
Pressure: 72 PSIG
Flow Temp: DEG. F
Ambient Temp: 96 DEG. F
Flow Rate: MCF/D
Sample Method: Purge & Fill
Sample Date: 08/21/2020
Sample Time: 12.10 PM
Sampled By: DANIEL RIOS
Sampled by (CO): HILCORP

AREA 2 / RUN 201

Heat Trace:

Remarks:

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2518	0.2479	0.0280	0.00	0.0024
CO2	1.1752	1.1568	0.2010	0.00	0.0179
Methane	78.9826	77.7480	13.4370	797.72	0.4375
Ethane	10.5264	10.3619	2.8250	186.29	0.1093
Propane	4.7875	4.7127	1.3240	120.46	0.0729
Iso-Butane	0.8487	0.8354	0.2790	27.60	0.0170
N-Butane	1.4675	1.4446	0.4640	47.87	0.0294
I-Pentane	0.5448	0.5363	0.2000	21.80	0.0136
N-Pentane	0.4198	0.4132	0.1530	16.83	0.0105
Hexane Plus	0.9957	0.9801	0.4460	52.48	0.0330
Total	100.0000	98.4369	19.3570	1271.05	0.7434

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0038
BTU/CU.FT IDEAL: 1274.0
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1278.9
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1256.6
DRY BTU @ 15.025: 1304.5
REAL SPECIFIC GRAVITY: 0.746

CYLINDER #: 6167
CYLINDER PRESSURE: 68 PSIG
ANALYSIS DATE: 08/26/2020
ANALYSIS TIME: 10:10:00 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: 09/17/2020

GC Method: C6+ Gas



HILCORP (BHD PROJECT)
WELL ANALYSIS COMPARISON

Lease:	CULPEPPER MARTIN SRC 3M; TBG	TUBING	09/17/2020
Stn. No.:	API #3004530474	MV / DK	35825-13025
Mtr. No.:	3584430		

Smpl Date:	08/21/2020
Test Date:	08/26/2020
Run No:	HS200226
Nitrogen:	0.2518
CO2:	1.1752
Methane:	78.9826
Ethane:	10.5264
Propane:	4.7875
I-Butane:	0.8487
N-Butane:	1.4675
I-Pentane:	0.5448
N-Pentane:	0.4198
Hexane+:	0.9957
BTU:	1278.9
GPM:	19.3570
SPG:	0.7460