



Well Name: CULPEPPER MARTIN SRC  
 API #: 3004530474  
 Source: BRADENHEAD  
 Sample Type: GAS  
 Analysis No: HS20230210  
 Cust No: 35825-13010

### Well/Lease Information

|                 |                              |                  |              |
|-----------------|------------------------------|------------------|--------------|
| Customer Name:  | HILCORP (BHD PROJECT)        | Source:          | BRADENHEAD   |
| Well Name:      | CULPEPPER MARTIN SRC 3M; BHD | Well Flowing:    | N            |
| County/State:   | SAN JUAN NM                  | Pressure:        | 75 PSIG      |
| Location:       |                              | Flow Temp:       | DEG. F       |
| Lease/PA/CA:    | FEE                          | Ambient Temp:    | 85 DEG. F    |
| Formation:      | MV / DK                      | Flow Rate:       | MCF/D        |
| Cust. Stn. No.: | 3004530474                   | Sample Method:   | Purge & Fill |
|                 | 3584430                      | Sample Date:     | 08/04/2023   |
|                 | AREA 2, RUN 201              | Sample Time:     | 10.00 AM     |
| Heat Trace:     | N                            | Sampled By:      | JEFF HOWE    |
| Remarks:        |                              | Sampled by (CO): | HILCORP      |

### Analysis

| Component:: | Mole%:   | Unnormalized %: | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|----------|-----------------|---------|---------|--------------|
| Nitrogen    | 0.6368   | 0.6338          | 0.0700  | 0.00    | 0.0062       |
| CO2         | 0.0025   | 0.0025          | 0.0000  | 0.00    | 0.0000       |
| Methane     | 88.5080  | 88.0955         | 15.0430 | 893.93  | 0.4902       |
| Ethane      | 6.0998   | 6.0714          | 1.6350  | 107.95  | 0.0633       |
| Propane     | 2.7898   | 2.7768          | 0.7710  | 70.19   | 0.0425       |
| Iso-Butane  | 0.6232   | 0.6203          | 0.2040  | 20.27   | 0.0125       |
| N-Butane    | 0.6663   | 0.6632          | 0.2110  | 21.74   | 0.0134       |
| I-Pentane   | 0.2343   | 0.2332          | 0.0860  | 9.37    | 0.0058       |
| N-Pentane   | 0.1648   | 0.1640          | 0.0600  | 6.61    | 0.0041       |
| Hexane Plus | 0.2745   | 0.2732          | 0.1230  | 14.47   | 0.0091       |
| Total       | 100.0000 | 99.5339         | 18.2030 | 1144.53 | 0.6472       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

\*\*@ 14.730 PSIA & 60 DEG. F.

|                                      |        |                    |                 |
|--------------------------------------|--------|--------------------|-----------------|
| COMPRESSIBILITY FACTOR (1/Z):        | 1.0028 | CYLINDER #:        | 6193            |
| BTU/CU.FT IDEAL:                     | 1147.2 | CYLINDER PRESSURE: | 72 PSIG         |
| BTU/CU.FT (DRY) CORRECTED FOR (1/Z): | 1150.4 | ANALYSIS DATE:     | 08/08/2023      |
| BTU/CU.FT (WET) CORRECTED FOR (1/Z): | 1130.4 | ANALYSIS TIME:     | 04:12:02 PM     |
| DRY BTU @ 15.025:                    | 1173.4 | ANALYSIS RUN BY:   | ALEXIS MITCHELL |
| REAL SPECIFIC GRAVITY:               | 0.6487 |                    |                 |

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: 08/15/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)  
WELL ANALYSIS COMPARISON

|                  |                              |            |             |
|------------------|------------------------------|------------|-------------|
| <b>Lease:</b>    | CULPEPPER MARTIN SRC 3M; BHD | BRADENHEAD | 08/15/2023  |
| <b>Stn. No.:</b> | 3004530474                   | MV / DK    | 35825-13010 |
| <b>Mtr. No.:</b> | 3584430                      |            |             |

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|                   |            |            |
|-------------------|------------|------------|
| <b>Smpl Date:</b> | 08/04/2023 | 08/21/2020 |
| <b>Test Date:</b> | 08/08/2023 | 08/26/2020 |
| <b>Run No:</b>    | HS20230210 | HS200223   |
| <b>Nitrogen:</b>  | 0.6368     | 0.6091     |
| <b>CO2:</b>       | 0.0025     | 0.0136     |
| <b>Methane:</b>   | 88.5080    | 88.3199    |
| <b>Ethane:</b>    | 6.0998     | 6.1475     |
| <b>Propane:</b>   | 2.7898     | 2.8396     |
| <b>I-Butane:</b>  | 0.6232     | 0.6458     |
| <b>N-Butane:</b>  | 0.6663     | 0.6923     |
| <b>I-Pentane:</b> | 0.2343     | 0.2450     |
| <b>N-Pentane:</b> | 0.1648     | 0.1706     |
| <b>Hexane+:</b>   | 0.2745     | 0.3166     |
| <b>BTU:</b>       | 1150.4     | 1155.1     |
| <b>GPM:</b>       | 18.2030    | 18.2370    |
| <b>SPG:</b>       | 0.6487     | 0.6516     |



Well Name: CULPEPPER MARTIN SRC

API #: 3004530474

Source: CASING

Sample Type: GAS

Analysis No: HS20230211

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.: 3004530474  
 3584430

Source: CASING  
 Well Flowing: N  
 Pressure: 82 PSIG  
 Flow Temp: DEG. F  
 Ambient Temp: 85 DEG. F  
 Flow Rate: MCF/D  
 Sample Method: Purge & Fill  
 Sample Date: 08/04/2023  
 Sample Time: 10.05 AM  
 Sampled By: JEFF HOWE  
 Sampled by (CO): HILCORP

Heat Trace: N  
 AREA 2, RUN 201

Remarks:

### Analysis

| Component:  | Mole%:   | Unnormalized %: | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|----------|-----------------|---------|---------|--------------|
| Nitrogen    | 0.2684   | 0.2639          | 0.0300  | 0.00    | 0.0026       |
| CO2         | 1.3071   | 1.2853          | 0.2240  | 0.00    | 0.0199       |
| Methane     | 78.4023  | 77.0965         | 13.3410 | 791.86  | 0.4343       |
| Ethane      | 10.4161  | 10.2426         | 2.7960  | 184.33  | 0.1081       |
| Propane     | 4.7866   | 4.7069          | 1.3240  | 120.44  | 0.0729       |
| Iso-Butane  | 0.8641   | 0.8497          | 0.2840  | 28.10   | 0.0173       |
| N-Butane    | 1.6042   | 1.5775          | 0.5080  | 52.33   | 0.0322       |
| I-Pentane   | 0.6468   | 0.6360          | 0.2370  | 25.88   | 0.0161       |
| N-Pentane   | 0.5314   | 0.5225          | 0.1930  | 21.30   | 0.0132       |
| Hexane Plus | 1.1730   | 1.1535          | 0.5250  | 61.83   | 0.0388       |
| Total       | 100.0000 | 98.3344         | 19.4620 | 1286.08 | 0.7554       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

\*\*@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.004  
 BTU/CU.FT IDEAL: 1289.1  
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1294.2  
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1271.7  
 DRY BTU @ 15.025: 1320.1  
 REAL SPECIFIC GRAVITY: 0.7582

CYLINDER #: 4201  
 CYLINDER PRESSURE: 84 PSIG  
 ANALYSIS DATE: 08/09/2023  
 ANALYSIS TIME: 11:13:14 AM  
 ANALYSIS RUN BY: SARAH BALLARD

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: 08/15/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)  
WELL ANALYSIS COMPARISON

|                  |                              |         |             |
|------------------|------------------------------|---------|-------------|
| <b>Lease:</b>    | CULPEPPER MARTIN SRC 3M; CSG | CASING  | 08/15/2023  |
| <b>Stn. No.:</b> | 3004530474                   | MV / DK | 35825-13015 |
| <b>Mtr. No.:</b> | 3584430                      |         |             |

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|                   |            |            |
|-------------------|------------|------------|
| <b>Smpl Date:</b> | 08/04/2023 | 08/21/2020 |
| <b>Test Date:</b> | 08/09/2023 | 08/26/2020 |
| <b>Run No:</b>    | HS20230211 | HS200224   |
| <b>Nitrogen:</b>  | 0.2684     | 0.2170     |
| <b>CO2:</b>       | 1.3071     | 1.6666     |
| <b>Methane:</b>   | 78.4023    | 79.2111    |
| <b>Ethane:</b>    | 10.4161    | 9.7956     |
| <b>Propane:</b>   | 4.7866     | 4.1037     |
| <b>I-Butane:</b>  | 0.8641     | 0.8680     |
| <b>N-Butane:</b>  | 1.6042     | 1.2883     |
| <b>I-Pentane:</b> | 0.6468     | 0.6978     |
| <b>N-Pentane:</b> | 0.5314     | 0.5335     |
| <b>Hexane+:</b>   | 1.1730     | 1.6184     |
| <b>BTU:</b>       | 1294.2     | 1289.6     |
| <b>GPM:</b>       | 19.4620    | 19.4200    |
| <b>SPG:</b>       | 0.7582     | 0.7606     |



Well Name: CULPEPPER MARTIN SRC

API #: 3004530474

Source: TUBING

Sample Type: GAS

Analysis No: HS20230212

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.: 3004530474  
 3584430

Source: TUBING  
 Well Flowing: N  
 Pressure: 82 PSIG  
 Flow Temp: DEG. F  
 Ambient Temp: 95 DEG. F  
 Flow Rate: MCF/D  
 Sample Method: Purge & Fill  
 Sample Date: 08/04/2023  
 Sample Time: 10.02 AM  
 Sampled By: JEFF HOWE  
 Sampled by (CO): HILCORP

Heat Trace: N  
 AREA 2 , RUN 201

Remarks:

### Analysis

| Component:: | Mole%:   | Unnormalized %: | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|----------|-----------------|---------|---------|--------------|
| Nitrogen    | 0.2630   | 0.2587          | 0.0290  | 0.00    | 0.0025       |
| CO2         | 1.1749   | 1.1558          | 0.2010  | 0.00    | 0.0179       |
| Methane     | 79.4062  | 78.1150         | 13.5080 | 802.00  | 0.4398       |
| Ethane      | 10.5597  | 10.3880         | 2.8340  | 186.88  | 0.1096       |
| Propane     | 4.6813   | 4.6052          | 1.2940  | 117.79  | 0.0713       |
| Iso-Butane  | 0.7979   | 0.7849          | 0.2620  | 25.95   | 0.0160       |
| N-Butane    | 1.4003   | 1.3775          | 0.4430  | 45.68   | 0.0281       |
| I-Pentane   | 0.5125   | 0.5042          | 0.1880  | 20.50   | 0.0128       |
| N-Pentane   | 0.3931   | 0.3867          | 0.1430  | 15.76   | 0.0098       |
| Hexane Plus | 0.8111   | 0.7979          | 0.3630  | 42.75   | 0.0268       |
| Total       | 100.0000 | 98.3739         | 19.2650 | 1257.31 | 0.7346       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

\*\*@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0037  
 BTU/CU.FT IDEAL: 1260.2  
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1264.9  
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1242.9  
 DRY BTU @ 15.025: 1290.2  
 REAL SPECIFIC GRAVITY: 0.7371

CYLINDER #: 066  
 CYLINDER PRESSURE: 91 PSIG  
 ANALYSIS DATE: 08/09/2023  
 ANALYSIS TIME: 10:49:30 AM  
 ANALYSIS RUN BY: SARAH BALLARD

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: 08/15/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)  
WELL ANALYSIS COMPARISON

|                  |                              |         |             |
|------------------|------------------------------|---------|-------------|
| <b>Lease:</b>    | CULPEPPER MARTIN SRC 3M; TBG | TUBING  | 08/15/2023  |
| <b>Stn. No.:</b> | 3004530474                   | MV / DK | 35825-13025 |
| <b>Mtr. No.:</b> | 3584430                      |         |             |

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|                   |            |            |
|-------------------|------------|------------|
| <b>Smpl Date:</b> | 08/04/2023 | 08/21/2020 |
| <b>Test Date:</b> | 08/09/2023 | 08/26/2020 |
| <b>Run No:</b>    | HS20230212 | HS200226   |
| <b>Nitrogen:</b>  | 0.2630     | 0.2518     |
| <b>CO2:</b>       | 1.1749     | 1.1752     |
| <b>Methane:</b>   | 79.4062    | 78.9826    |
| <b>Ethane:</b>    | 10.5597    | 10.5264    |
| <b>Propane:</b>   | 4.6813     | 4.7875     |
| <b>I-Butane:</b>  | 0.7979     | 0.8487     |
| <b>N-Butane:</b>  | 1.4003     | 1.4675     |
| <b>I-Pentane:</b> | 0.5125     | 0.5448     |
| <b>N-Pentane:</b> | 0.3931     | 0.4198     |
| <b>Hexane+:</b>   | 0.8111     | 0.9957     |
| <b>BTU:</b>       | 1264.9     | 1278.9     |
| <b>GPM:</b>       | 19.2650    | 19.3570    |
| <b>SPG:</b>       | 0.7371     | 0.7460     |

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS

Action 252545

CONDITIONS

|                                                                                |                                                     |
|--------------------------------------------------------------------------------|-----------------------------------------------------|
| Operator:<br>HILCORP ENERGY COMPANY<br>1111 Travis Street<br>Houston, TX 77002 | OGRID:<br>372171                                    |
|                                                                                | Action Number:<br>252545                            |
|                                                                                | Action Type:<br>[UF-GA] Gas Analysis (GAS ANALYSIS) |

CONDITIONS

| Created By | Condition                      | Condition Date |
|------------|--------------------------------|----------------|
| mkuehling  | does not appear to be same gas | 9/18/2023      |