



Well Name: HARRINGTON 6; CSG

API #: 3003923871

Source: CASING

Sample Type: GAS

Analysis No: HS20220150

Cust No: 35825-11690

### Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: HARRINGTON 6; CSG

County/State: RIO ARRIBA NM

Location:

Lease/PA/CA:

Formation: MV

Cust. Stn. No.: 3003923871

95-609-01

AREA 9 / RUN 905

Heat Trace: N

Remarks:

Source: CASING

Well Flowing: Y

Pressure: 89 PSIG

Flow Temp: DEG. F

Ambient Temp: 65 DEG. F

Flow Rate: 0 MCF/D

Sample Method: Purge &amp; Fill

Sample Date: 08/16/2022

Sample Time: 9.10 AM

Sampled By: MIKE WATKINS

Sampled by (CO): HILCORP

### Analysis

| Component:: | Mole%:   | Unnormalized %: | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|----------|-----------------|---------|---------|--------------|
| Nitrogen    | 1.0775   | 1.0634          | 0.1190  | 0.00    | 0.0104       |
| CO2         | 0.2929   | 0.2891          | 0.0500  | 0.00    | 0.0045       |
| Methane     | 83.1529  | 82.0643         | 14.1400 | 839.84  | 0.4606       |
| Ethane      | 7.8078   | 7.7056          | 2.0940  | 138.17  | 0.0811       |
| Propane     | 4.3808   | 4.3235          | 1.2110  | 110.23  | 0.0667       |
| Iso-Butane  | 0.6679   | 0.6592          | 0.2190  | 21.72   | 0.0134       |
| N-Butane    | 1.1969   | 1.1812          | 0.3780  | 39.05   | 0.0240       |
| I-Pentane   | 0.3947   | 0.3895          | 0.1450  | 15.79   | 0.0098       |
| N-Pentane   | 0.3089   | 0.3049          | 0.1120  | 12.38   | 0.0077       |
| Hexane Plus | 0.7197   | 0.7103          | 0.3220  | 37.94   | 0.0238       |
| Total       | 100.0000 | 98.6910         | 18.7900 | 1215.12 | 0.7020       |

\* @ 14.730 PSIA DRY &amp; UNCORRECTED FOR COMPRESSIBILITY

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

COMPRESSIBILITY FACTOR (1/Z): 1.0033  
 BTU/CU.FT IDEAL: 1217.9  
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1222.0  
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1200.7  
 DRY BTU @ 15.025: 1246.5  
 REAL SPECIFIC GRAVITY: 0.704

CYLINDER #: 4013  
 CYLINDER PRESSURE: 83 PSIG  
 ANALYSIS DATE: 08/18/2022  
 ANALYSIS TIME: 11:00:54 AM  
 ANALYSIS RUN BY: ALEXIS MITCHELL

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: 08/18/2022

GC Method: C6+ Gas



HILCORP (BHD PROJECT)  
WELL ANALYSIS COMPARISON

|                  |                   |               |             |
|------------------|-------------------|---------------|-------------|
| <b>Lease:</b>    | HARRINGTON 6; CSG | <b>CASING</b> | 08/18/2022  |
| <b>Stn. No.:</b> | 3003923871        | <b>MV</b>     | 35825-11690 |
| <b>Mtr. No.:</b> | 95-609-01         |               |             |

|                   |            |            |            |
|-------------------|------------|------------|------------|
| <b>Smpl Date:</b> | 08/16/2022 | 08/30/2019 | 07/18/2019 |
| <b>Test Date:</b> | 08/18/2022 | 09/05/2019 | 07/29/2019 |
| <b>Run No:</b>    | HS20220150 | HS190261   | HS190188   |
| <b>Nitrogen:</b>  | 1.0775     | 1.0645     | 0.8206     |
| <b>CO2:</b>       | 0.2929     | 0.2616     | 0.2701     |
| <b>Methane:</b>   | 83.1529    | 82.4484    | 81.1125    |
| <b>Ethane:</b>    | 7.8078     | 8.0201     | 8.7137     |
| <b>Propane:</b>   | 4.3808     | 4.5051     | 4.9129     |
| <b>I-Butane:</b>  | 0.6679     | 0.6968     | 0.7918     |
| <b>N-Butane:</b>  | 1.1969     | 1.2556     | 1.4272     |
| <b>I-Pentane:</b> | 0.3947     | 0.4312     | 0.5074     |
| <b>N-Pentane:</b> | 0.3089     | 0.3484     | 0.4088     |
| <b>Hexane+:</b>   | 0.7197     | 0.9683     | 1.0350     |
| <b>BTU:</b>       | 1222.0     | 1241.1     | 1268.2     |
| <b>GPM:</b>       | 18.7900    | 18.9260    | 19.1400    |
| <b>SPG:</b>       | 0.7040     | 0.7157     | 0.7306     |



Well Name: HARRINGTON 6; TBG

API #: 3003923871

Source: TUBING

Sample Type: GAS

Analysis No: HS20220151

Cust No: 35825-11695

### Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)

Well Name: HARRINGTON 6; TBG

County/State: RIO ARRIBA NM

Location:

Lease/PA/CA:

Formation: MV

Cust. Stn. No.: 3003923871

95-609-01

AREA 9 / RUN 905

Heat Trace: N

Remarks:

Source: TUBING

Well Flowing: Y

Pressure: 87 PSIG

Flow Temp: DEG. F

Ambient Temp: 65 DEG. F

Flow Rate: 0 MCF/D

Sample Method: Purge &amp; Fill

Sample Date: 08/16/2022

Sample Time: 9.15 AM

Sampled By: MIKE WATKINS

Sampled by (CO): HILCORP

### Analysis

| Component:: | Mole%:   | Unnormalized %: | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|----------|-----------------|---------|---------|--------------|
| Nitrogen    | 1.0562   | 1.0600          | 0.1170  | 0.00    | 0.0102       |
| CO2         | 0.2885   | 0.2895          | 0.0490  | 0.00    | 0.0044       |
| Methane     | 83.7188  | 84.0188         | 14.2360 | 845.56  | 0.4637       |
| Ethane      | 7.5753   | 7.6025          | 2.0320  | 134.06  | 0.0786       |
| Propane     | 4.1938   | 4.2088          | 1.1590  | 105.52  | 0.0639       |
| Iso-Butane  | 0.6486   | 0.6509          | 0.2130  | 21.09   | 0.0130       |
| N-Butane    | 1.1655   | 1.1697          | 0.3690  | 38.02   | 0.0234       |
| I-Pentane   | 0.3798   | 0.3812          | 0.1390  | 15.20   | 0.0095       |
| N-Pentane   | 0.2971   | 0.2982          | 0.1080  | 11.91   | 0.0074       |
| Hexane Plus | 0.6764   | 0.6788          | 0.3030  | 35.65   | 0.0224       |
| Total       | 100.0000 | 100.3584        | 18.7250 | 1207.01 | 0.6965       |

\* @ 14.730 PSIA DRY &amp; UNCORRECTED FOR COMPRESSIBILITY

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

COMPRESSIBILITY FACTOR (1/Z): 1.0033  
 BTU/CU.FT IDEAL: 1209.8  
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1213.8  
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1192.7  
 DRY BTU @ 15.025: 1238.1  
 REAL SPECIFIC GRAVITY: 0.6985

CYLINDER #: 4235  
 CYLINDER PRESSURE: 87 PSIG  
 ANALYSIS DATE: 08/18/2022  
 ANALYSIS TIME: 11:24:57 AM  
 ANALYSIS RUN BY: KERRA GONZALEZ

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: 08/18/2022

GC Method: C6+ Gas



HILCORP (BHD PROJECT)  
WELL ANALYSIS COMPARISON

|                  |                   |        |             |
|------------------|-------------------|--------|-------------|
| <b>Lease:</b>    | HARRINGTON 6; TBG | TUBING | 08/18/2022  |
| <b>Stn. No.:</b> | 3003923871        | MV     | 35825-11695 |
| <b>Mtr. No.:</b> | 95-609-01         |        |             |

|                   |            |            |            |
|-------------------|------------|------------|------------|
| <b>Smpl Date:</b> | 08/16/2022 | 08/30/2019 | 07/18/2019 |
| <b>Test Date:</b> | 08/18/2022 | 09/05/2019 | 07/29/2019 |
| <b>Run No:</b>    | HS20220151 | HS190262   | HS190189   |
| <b>Nitrogen:</b>  | 1.0562     | 0.6208     | 0.6403     |
| <b>CO2:</b>       | 0.2885     | 0.4972     | 0.3639     |
| <b>Methane:</b>   | 83.7188    | 73.6144    | 79.3372    |
| <b>Ethane:</b>    | 7.5753     | 12.8003    | 9.7037     |
| <b>Propane:</b>   | 4.1938     | 7.3688     | 5.6256     |
| <b>I-Butane:</b>  | 0.6486     | 1.1573     | 0.9199     |
| <b>N-Butane:</b>  | 1.1655     | 2.0865     | 1.6418     |
| <b>I-Pentane:</b> | 0.3798     | 0.6471     | 0.5494     |
| <b>N-Pentane:</b> | 0.2971     | 0.4938     | 0.4233     |
| <b>Hexane+:</b>   | 0.6764     | 0.7138     | 0.7949     |
| <b>BTU:</b>       | 1213.8     | 1353.4     | 1286.8     |
| <b>GPM:</b>       | 18.7250    | 19.9370    | 19.3230    |
| <b>SPG:</b>       | 0.6985     | 0.7866     | 0.7420     |

**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 145477

CONDITIONS

|                                                                                |                                                     |
|--------------------------------------------------------------------------------|-----------------------------------------------------|
| Operator:<br>HILCORP ENERGY COMPANY<br>1111 Travis Street<br>Houston, TX 77002 | OGRID:<br>372171                                    |
|                                                                                | Action Number:<br>145477                            |
|                                                                                | Action Type:<br>[UF-GA] Gas Analysis (GAS ANALYSIS) |

CONDITIONS

| Created By | Condition                                       | Condition Date |
|------------|-------------------------------------------------|----------------|
| mkuehling  | No gas on bradenhead - only water with 1370 tds | 9/22/2022      |