



Well Name: SAN JUAN 31-6 #16N;  
 API #: 3003930668  
 Source: BRADENHEAD  
 Sample Type: GAS  
 Analysis No: HS20230084  
 Cust No: 35825-14985

### Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)  
 Well Name: SAN JUAN 31-6 #16N; BHD  
 County/State: RIO ARRIBA NM  
 Location:  
 Lease/PA/CA:  
 Formation: MV/DK  
 Cust. Stn. No.: 3003930668

Source: BRADENHEAD  
 Well Flowing: Y  
 Pressure: 98 PSIG  
 Flow Temp: 68 DEG. F  
 Ambient Temp: 62 DEG. F  
 Flow Rate: 88 MCF/D  
 Sample Method: Purge & Fill  
 Sample Date: 06/23/2023  
 Sample Time: 8.23 AM  
 Sampled By: BLAKE B.  
 Sampled by (CO): HILCORP

Heat Trace: N  
 Remarks: AREA 11 / RUN 1105

### Analysis

| Component:: | Mole%:   | Unnormalized %: | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|----------|-----------------|---------|---------|--------------|
| Nitrogen    | 0.0733   | 0.0736          | 0.0080  | 0.00    | 0.0007       |
| CO2         | 2.3440   | 2.3531          | 0.4010  | 0.00    | 0.0356       |
| Methane     | 94.6422  | 95.0094         | 16.0760 | 955.89  | 0.5242       |
| Ethane      | 2.2825   | 2.2914          | 0.6120  | 40.39   | 0.0237       |
| Propane     | 0.4218   | 0.4234          | 0.1160  | 10.61   | 0.0064       |
| Iso-Butane  | 0.0897   | 0.0900          | 0.0290  | 2.92    | 0.0018       |
| N-Butane    | 0.0613   | 0.0615          | 0.0190  | 2.00    | 0.0012       |
| I-Pentane   | 0.0247   | 0.0248          | 0.0090  | 0.99    | 0.0006       |
| N-Pentane   | 0.0096   | 0.0096          | 0.0030  | 0.38    | 0.0002       |
| Hexane Plus | 0.0509   | 0.0511          | 0.0230  | 2.68    | 0.0017       |
| Total       | 100.0000 | 100.3879        | 17.2960 | 1015.87 | 0.5962       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

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

COMPRESSIBILITY FACTOR (1/Z): 1.0022  
 BTU/CU.FT IDEAL: 1018.2  
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1020.5  
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1002.7  
 DRY BTU @ 15.025: 1040.9  
 REAL SPECIFIC GRAVITY: 0.5973

CYLINDER #: 1824  
 CYLINDER PRESSURE: 112 PSIG  
 ANALYSIS DATE: 06/28/2023  
 ANALYSIS TIME: 03:13:15 PM  
 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: 07/06/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)  
WELL ANALYSIS COMPARISON

Lease: SAN JUAN 31-6 #16N; BHD  
Stn. No.: 3003930668  
Mtr. No.:

BRADENHEAD  
MV/DK

07/06/2023  
35825-14985

Smpl Date: 06/23/2023  
Test Date: 06/28/2023  
Run No: HS20230084

Nitrogen: 0.0733  
CO2: 2.3440  
Methane: 94.6422  
Ethane: 2.2825  
Propane: 0.4218  
I-Butane: 0.0897  
N-Butane: 0.0613  
I-Pentane: 0.0247  
N-Pentane: 0.0096  
Hexane+: 0.0509

BTU: 1020.5  
GPM: 17.2960  
SPG: 0.5973



Well Name: SAN JUAN 31-6 #16N;  
 API #: 3003930668  
 Source: CASING  
 Sample Type: GAS  
 Analysis No: HS20230085  
 Cust No: 35825-14990

### Well/Lease Information

Customer Name: HILCORP (BHD PROJECT)  
 Well Name: SAN JUAN 31-6 #16N; CSG  
 County/State: RIO ARRIBA NM  
 Location:  
 Lease/PA/CA:  
 Formation:  
 Cust. Stn. No.: 3003930668

Source: CASING  
 Well Flowing: Y  
 Pressure: 96 PSIG  
 Flow Temp: 68 DEG. F  
 Ambient Temp: 62 DEG. F  
 Flow Rate: 88 MCF/D  
 Sample Method: Purge & Fill  
 Sample Date: 06/23/2023  
 Sample Time: 8.25 AM  
 Sampled By: BLAKE B.  
 Sampled by (CO): HILCORP

Heat Trace: AREA 11 / RUN 1106  
 N  
 Remarks:

### Analysis

| Component:: | Mole%:   | Unnormalized %: | **GPM:  | *BTU:   | *SP Gravity: |
|-------------|----------|-----------------|---------|---------|--------------|
| Nitrogen    | 0.0817   | 0.0813          | 0.0090  | 0.00    | 0.0008       |
| CO2         | 2.3455   | 2.3345          | 0.4010  | 0.00    | 0.0356       |
| Methane     | 94.6405  | 94.1959         | 16.0760 | 955.87  | 0.5242       |
| Ethane      | 2.2742   | 2.2635          | 0.6090  | 40.25   | 0.0236       |
| Propane     | 0.4238   | 0.4218          | 0.1170  | 10.66   | 0.0065       |
| Iso-Butane  | 0.0832   | 0.0828          | 0.0270  | 2.71    | 0.0017       |
| N-Butane    | 0.0547   | 0.0544          | 0.0170  | 1.78    | 0.0011       |
| I-Pentane   | 0.0271   | 0.0270          | 0.0100  | 1.08    | 0.0007       |
| N-Pentane   | 0.0117   | 0.0116          | 0.0040  | 0.47    | 0.0003       |
| Hexane Plus | 0.0576   | 0.0573          | 0.0260  | 3.04    | 0.0019       |
| Total       | 100.0000 | 99.5301         | 17.2960 | 1015.86 | 0.5963       |

\* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

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

COMPRESSIBILITY FACTOR (1/Z): 1.0022  
 BTU/CU.FT IDEAL: 1018.2  
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1020.5  
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1002.7  
 DRY BTU @ 15.025: 1040.9  
 REAL SPECIFIC GRAVITY: 0.5974

CYLINDER #: 1416  
 CYLINDER PRESSURE: 92 PSIG  
 ANALYSIS DATE: 06/28/2023  
 ANALYSIS TIME: 03:10:39 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: 07/06/2023

GC Method: C6+ Gas



HILCORP (BHD PROJECT)  
WELL ANALYSIS COMPARISON

Lease: SAN JUAN 31-6 #16N; CSG  
Stn. No.: 3003930668  
Mtr. No.:

CASING

07/06/2023  
35825-14990

Smpl Date: 06/23/2023  
Test Date: 06/28/2023  
Run No: HS20230085

Nitrogen: 0.0817  
CO2: 2.3455  
Methane: 94.6405  
Ethane: 2.2742  
Propane: 0.4238  
I-Butane: 0.0832  
N-Butane: 0.0547  
I-Pentane: 0.0271  
N-Pentane: 0.0117  
Hexane+: 0.0576

BTU: 1020.5  
GPM: 17.2960  
SPG: 0.5974

**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 243205

CONDITIONS

|                                                                                |                                                     |
|--------------------------------------------------------------------------------|-----------------------------------------------------|
| Operator:<br>HILCORP ENERGY COMPANY<br>1111 Travis Street<br>Houston, TX 77002 | OGRID:<br>372171                                    |
|                                                                                | Action Number:<br>243205                            |
|                                                                                | Action Type:<br>[UF-GA] Gas Analysis (GAS ANALYSIS) |

CONDITIONS

| Created By | Condition            | Condition Date |
|------------|----------------------|----------------|
| mkuehling  | same gas all strings | 9/20/2023      |