

Sante Fe Main Office  
Phone: (505) 476-3441

General Information  
Phone: (505) 629-6116

Online Phone Directory  
<https://www.emnrd.nm.gov/ocd/contact-us>

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

Form C-101  
August 1, 2011

Permit 382469

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

|                                                                                                   |  |                               |
|---------------------------------------------------------------------------------------------------|--|-------------------------------|
| 1. Operator Name and Address<br>HILCORP ENERGY COMPANY<br>1111 Travis Street<br>Houston, TX 77002 |  | 2. OGRID Number<br>372171     |
| 4. Property Code<br>318838                                                                        |  | 3. API Number<br>30-039-31483 |
| 5. Property Name<br>SAN JUAN 29 6 UNIT                                                            |  | 6. Well No.<br>118M           |

**7. Surface Location**

|          |         |          |       |         |           |          |           |          |            |
|----------|---------|----------|-------|---------|-----------|----------|-----------|----------|------------|
| UL - Lot | Section | Township | Range | Lot Idn | Feet From | N/S Line | Feet From | E/W Line | County     |
| O        | 32      | 29N      | 06W   |         | 1179      | S        | 1422      | E        | Rio Arriba |

**8. Proposed Bottom Hole Location**

|          |         |          |       |         |           |          |           |          |            |
|----------|---------|----------|-------|---------|-----------|----------|-----------|----------|------------|
| UL - Lot | Section | Township | Range | Lot Idn | Feet From | N/S Line | Feet From | E/W Line | County     |
| J        | 32      | 29N      | 06W   | J       | 2161      | S        | 2187      | E        | Rio Arriba |

**9. Pool Information**

|                                 |       |
|---------------------------------|-------|
| BLANCO-MESAVERDE (PRORATED GAS) | 72319 |
| BASIN DAKOTA (PRORATED GAS)     | 71599 |

**Additional Well Information**

|                           |                            |                                        |                         |                                    |
|---------------------------|----------------------------|----------------------------------------|-------------------------|------------------------------------|
| 11. Work Type<br>New Well | 12. Well Type<br>GAS       | 13. Cable/Rotary                       | 14. Lease Type<br>State | 15. Ground Level Elevation<br>6746 |
| 16. Multiple<br>Y         | 17. Proposed Depth<br>8156 | 18. Formation<br>Dakota Formation      | 19. Contractor          | 20. Spud Date<br>3/1/2025          |
| Depth to Ground water     |                            | Distance from nearest fresh water well |                         | Distance to nearest surface water  |

☒ We will be using a closed-loop system in lieu of lined pits

**21. Proposed Casing and Cement Program**

| Type | Hole Size | Casing Size | Casing Weight/ft | Setting Depth | Sacks of Cement | Estimated TOC |
|------|-----------|-------------|------------------|---------------|-----------------|---------------|
| Surf | 12.25     | 9.625       | 32.3             | 250           | 114             | 0             |
| Int1 | 8.75      | 7           | 23               | 4156          | 463             | 0             |
| Prod | 6.25      | 4.5         | 11.6             | 8156          | 308             | 3656          |

**Casing/Cement Program: Additional Comments**

|  |
|--|
|  |
|--|

**22. Proposed Blowout Prevention Program**

|         |                  |               |              |
|---------|------------------|---------------|--------------|
| Type    | Working Pressure | Test Pressure | Manufacturer |
| Annular | 3000             | 250           | 3M           |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.<br>I further certify I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable.<br><br>Signature:<br>Printed Name: Electronically filed by Jamie L Olivarez<br>Title: L48W Regulatory Advisor<br>Email Address: jolivarez@hilcorp.com<br>Date: 1/29/2025 | <p style="text-align: center;"><b>OIL CONSERVATION DIVISION</b></p> Approved By: Matthew Gomez<br>Title:<br>Approved Date: 2/3/2025      Expiration Date: 2/3/2027<br>Conditions of Approval Attached |
| Phone: 713-289-2838                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                       |

|                                                          |                                                                                                         |                                     |                                                       |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------------------|
| C-102<br><br>Submit Electronically<br>Via OCD Permitting | State of New Mexico<br>Energy, Minerals & Natural Resources Department<br><br>OIL CONSERVATION DIVISION | Revised July 9, 2024                |                                                       |
|                                                          |                                                                                                         | Submittal<br>Type                   | <input checked="" type="checkbox"/> Initial Submittal |
|                                                          |                                                                                                         |                                     | <input type="checkbox"/> Amended Report               |
|                                                          |                                                                                                         | <input type="checkbox"/> As Drilled |                                                       |

WELL LOCATION INFORMATION

|                                                                                                                                                        |                                         |                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| API Number<br>30-039-31483                                                                                                                             | Pool Code<br>72319                      | Pool Name<br>BLANCO MESAVERDE                                                                                                                          |
| Property Code<br>318838                                                                                                                                | Property Name<br>SAN JUAN 29-6 UNIT     | Well Number<br>118M                                                                                                                                    |
| OGRID No.<br>372171                                                                                                                                    | Operator Name<br>HILCORP ENERGY COMPANY | Ground Level Elevation<br>6746'                                                                                                                        |
| Surface Owner: <input checked="" type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal |                                         | Mineral Owner: <input checked="" type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal |

Surface Location

|         |               |                 |             |     |                                   |                                  |                          |                             |                      |
|---------|---------------|-----------------|-------------|-----|-----------------------------------|----------------------------------|--------------------------|-----------------------------|----------------------|
| UL<br>O | Section<br>32 | Township<br>29N | Range<br>6W | Lot | Feet from N/S Line<br>1179' SOUTH | Feet from E/W Line<br>1422' EAST | Latitude<br>36.678196 °N | Longitude<br>-107.482210 °W | County<br>RIO ARRIBA |
|---------|---------------|-----------------|-------------|-----|-----------------------------------|----------------------------------|--------------------------|-----------------------------|----------------------|

Bottom Hole Location

|         |               |                 |             |     |                                   |                                  |                          |                             |                      |
|---------|---------------|-----------------|-------------|-----|-----------------------------------|----------------------------------|--------------------------|-----------------------------|----------------------|
| UL<br>J | Section<br>32 | Township<br>29N | Range<br>6W | Lot | Feet from N/S Line<br>2161' SOUTH | Feet from E/W Line<br>2187' EAST | Latitude<br>36.680892 °N | Longitude<br>-107.484822 °W | County<br>RIO ARRIBA |
|---------|---------------|-----------------|-------------|-----|-----------------------------------|----------------------------------|--------------------------|-----------------------------|----------------------|

|                           |                                                       |                                   |                                                                                                    |                                                                                                 |                         |
|---------------------------|-------------------------------------------------------|-----------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------|
| Dedicated Acres<br>320.00 | Penetrated Spacing Unit:<br>E/2 SECTION 32, T29N, R6W | Infill or Defining Well<br>Infill | Defining Well API<br>30-039-07500                                                                  | Overlapping Spacing Unit<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Consolidation Code<br>U |
| Order Numbers<br>R-23334  |                                                       |                                   | Well setbacks are under Common Ownership: <input type="checkbox"/> Yes <input type="checkbox"/> No |                                                                                                 |                         |

Kick Off Point (KOP)

|    |         |          |       |     |                    |                    |          |           |        |
|----|---------|----------|-------|-----|--------------------|--------------------|----------|-----------|--------|
| UL | Section | Township | Range | Lot | Feet from N/S Line | Feet from E/W Line | Latitude | Longitude | County |
|----|---------|----------|-------|-----|--------------------|--------------------|----------|-----------|--------|

First Take Point (FTP)

|    |         |          |       |     |                    |                    |          |           |        |
|----|---------|----------|-------|-----|--------------------|--------------------|----------|-----------|--------|
| UL | Section | Township | Range | Lot | Feet from N/S Line | Feet from E/W Line | Latitude | Longitude | County |
|----|---------|----------|-------|-----|--------------------|--------------------|----------|-----------|--------|

Last Take Point (LTP)

|    |         |          |       |     |                    |                    |          |           |        |
|----|---------|----------|-------|-----|--------------------|--------------------|----------|-----------|--------|
| UL | Section | Township | Range | Lot | Feet from N/S Line | Feet from E/W Line | Latitude | Longitude | County |
|----|---------|----------|-------|-----|--------------------|--------------------|----------|-----------|--------|

|                                                                 |                                                                                                                                            |                                 |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Unitized Area or Area of Uniform Interest<br>SAN JUAN 29-6 UNIT | Spacing Unit Type<br><input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical <input checked="" type="checkbox"/> Directional | Ground Floor Elevation<br>6746' |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|

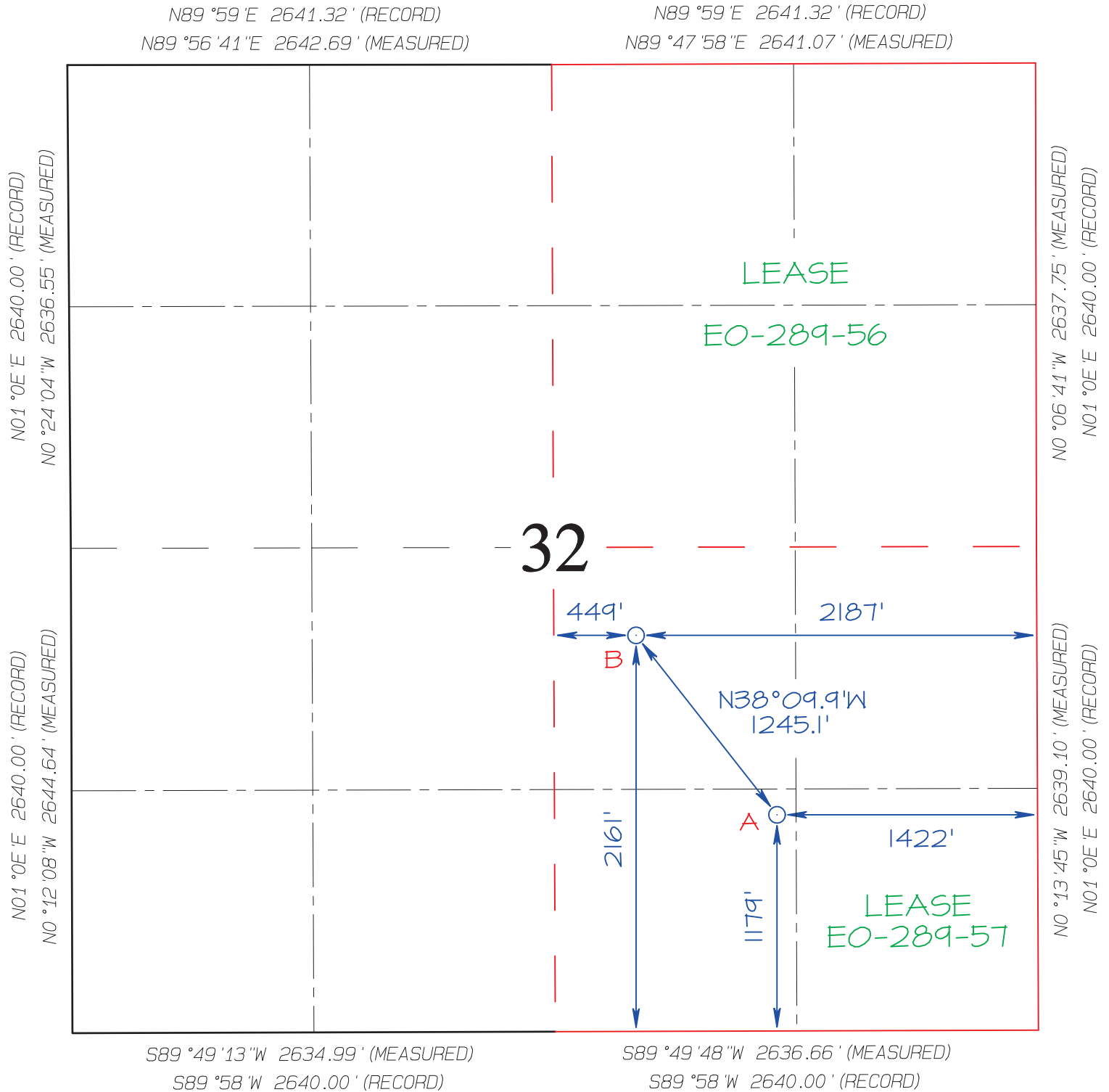
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                             |                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------------|
| <p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</p> <p><u>Cherylene Weston</u><br/>Signature</p> <p><u>1/29/2025</u><br/>Date</p> <p>Cherylene Weston, Operations/Regulatory Tech-Sr.<br/>Printed Name</p> <p><u>cweston@hilcorp.com</u><br/>E-mail Address</p> | <p>SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <div></div> <p>JASON C. EDWARDS</p> <p>Signature and Seal of Professional Surveyor</p> <table><tr><td>Certificate Number<br/>15269</td><td>Date of Survey<br/>JUNE 6, 2024</td></tr></table> | Certificate Number<br>15269 | Date of Survey<br>JUNE 6, 2024 |
| Certificate Number<br>15269                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Date of Survey<br>JUNE 6, 2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                             |                                |

SURFACE LOCATION (A)  
1179' FSL 1422' FEL  
LAT 36.678188 °N  
LONG -107.481605 °W  
DATUM: NAD1927

LAT 36.678196 °N  
LONG -107.482210 °W  
DATUM: NAD1983

BOTTOM-HOLE LOCATION (B)  
2161' FSL 2187' FEL  
LAT 36.680885 °N  
LONG -107.484217 °W  
DATUM: NAD1927

LAT 36.680892 °N  
LONG -107.484822 °W  
DATUM: NAD1983



|                                                          |                                                                                                         |                                     |                                                       |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------------------|
| C-102<br><br>Submit Electronically<br>Via OCD Permitting | State of New Mexico<br>Energy, Minerals & Natural Resources Department<br><br>OIL CONSERVATION DIVISION | Revised July 9, 2024                |                                                       |
|                                                          |                                                                                                         | Submittal Type                      | <input checked="" type="checkbox"/> Initial Submittal |
|                                                          |                                                                                                         |                                     | <input type="checkbox"/> Amended Report               |
|                                                          |                                                                                                         | <input type="checkbox"/> As Drilled |                                                       |

WELL LOCATION INFORMATION

|                                                                                                                                                        |                                         |                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| API Number<br><b>30-039-31483</b>                                                                                                                      | Pool Code<br>71599                      | Pool Name<br>BASIN DAKOTA                                                                                                                              |
| Property Code<br><b>318838</b>                                                                                                                         | Property Name<br>SAN JUAN 29-6 UNIT     | Well Number<br>118M                                                                                                                                    |
| OGRID No.<br>372171                                                                                                                                    | Operator Name<br>HILCORP ENERGY COMPANY | Ground Level Elevation<br>6746'                                                                                                                        |
| Surface Owner: <input checked="" type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal |                                         | Mineral Owner: <input checked="" type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal |

Surface Location

|         |               |                 |             |     |                                   |                                  |                          |                             |                      |
|---------|---------------|-----------------|-------------|-----|-----------------------------------|----------------------------------|--------------------------|-----------------------------|----------------------|
| UL<br>O | Section<br>32 | Township<br>29N | Range<br>6W | Lot | Feet from N/S Line<br>1179' SOUTH | Feet from E/W Line<br>1422' EAST | Latitude<br>36.678196 °N | Longitude<br>-107.482210 °W | County<br>RIO ARRIBA |
|---------|---------------|-----------------|-------------|-----|-----------------------------------|----------------------------------|--------------------------|-----------------------------|----------------------|

Bottom Hole Location

|         |               |                 |             |     |                                   |                                  |                          |                             |                      |
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| UL<br>J | Section<br>32 | Township<br>29N | Range<br>6W | Lot | Feet from N/S Line<br>2161' SOUTH | Feet from E/W Line<br>2187' EAST | Latitude<br>36.680892 °N | Longitude<br>-107.484822 °W | County<br>RIO ARRIBA |
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|                           |                                                       |                                                                                                    |                   |                                                                                                 |                         |
|---------------------------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------|-------------------------|
| Dedicated Acres<br>320.00 | Penetrated Spacing Unit:<br>E/2 SECTION 32, T29N, R6W | Infill or Defining Well<br>Defining                                                                | Defining Well API | Overlapping Spacing Unit<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Consolidation Code<br>U |
| Order Numbers             |                                                       | Well setbacks are under Common Ownership: <input type="checkbox"/> Yes <input type="checkbox"/> No |                   |                                                                                                 |                         |

Kick Off Point (KOP)

|    |         |          |       |     |                    |                    |          |           |        |
|----|---------|----------|-------|-----|--------------------|--------------------|----------|-----------|--------|
| UL | Section | Township | Range | Lot | Feet from N/S Line | Feet from E/W Line | Latitude | Longitude | County |
|----|---------|----------|-------|-----|--------------------|--------------------|----------|-----------|--------|

First Take Point (FTP)

|    |         |          |       |     |                    |                    |          |           |        |
|----|---------|----------|-------|-----|--------------------|--------------------|----------|-----------|--------|
| UL | Section | Township | Range | Lot | Feet from N/S Line | Feet from E/W Line | Latitude | Longitude | County |
|----|---------|----------|-------|-----|--------------------|--------------------|----------|-----------|--------|

Last Take Point (LTP)

|    |         |          |       |     |                    |                    |          |           |        |
|----|---------|----------|-------|-----|--------------------|--------------------|----------|-----------|--------|
| UL | Section | Township | Range | Lot | Feet from N/S Line | Feet from E/W Line | Latitude | Longitude | County |
|----|---------|----------|-------|-----|--------------------|--------------------|----------|-----------|--------|

|                                                                 |                                                                                                                                            |                                 |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Unitized Area or Area of Uniform Interest<br>SAN JUAN 29-6 UNIT | Spacing Unit Type<br><input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical <input checked="" type="checkbox"/> Directional | Ground Floor Elevation<br>6746' |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|

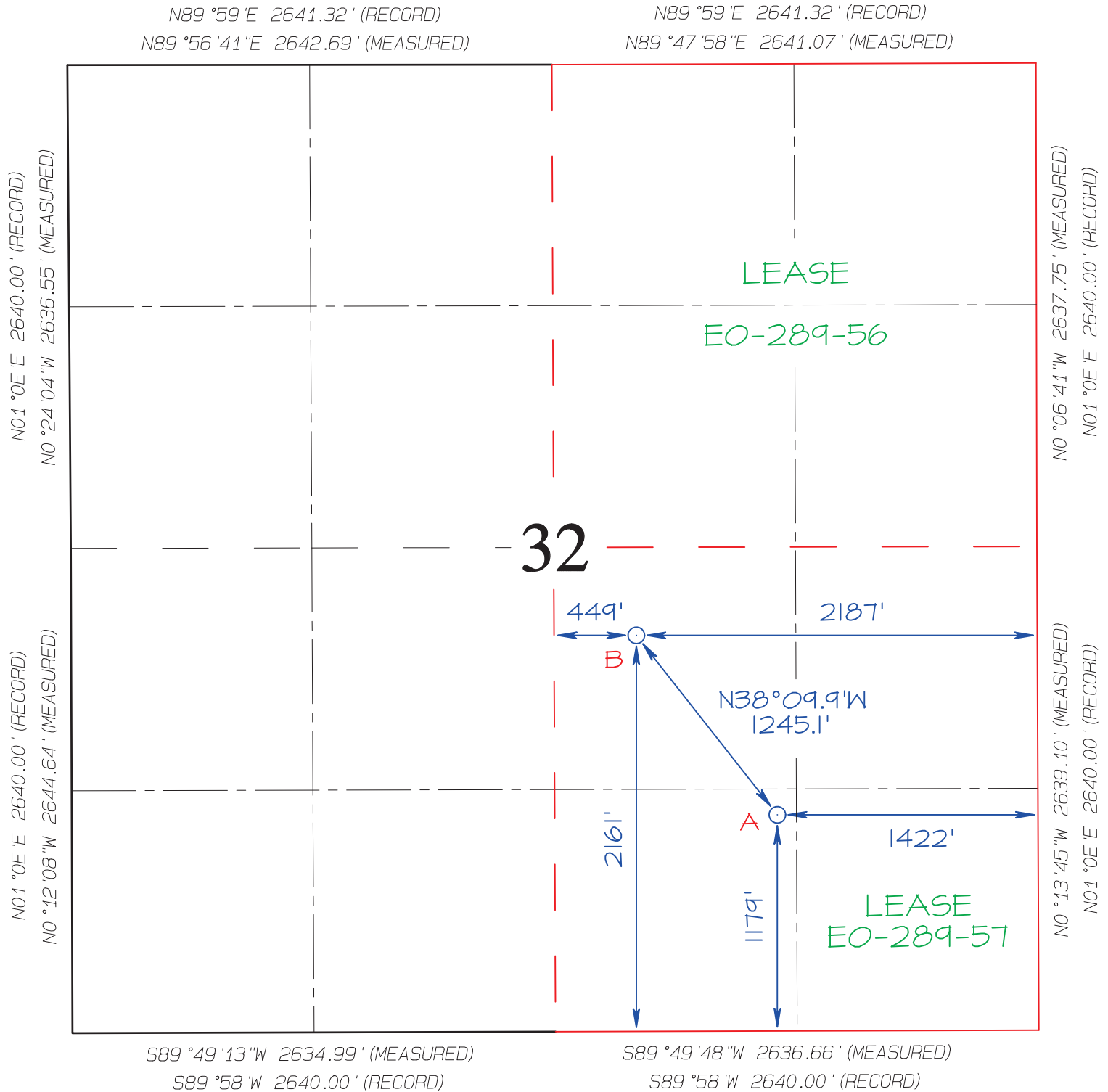
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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------------|
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| Certificate Number<br>15269                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Date of Survey<br>JUNE 6, 2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                             |                                |

SURFACE LOCATION (A)  
1179' FSL 1422' FEL  
LAT 36.678188 °N  
LONG -107.481605 °W  
DATUM: NAD1927

LAT 36.678196 °N  
LONG -107.482210 °W  
DATUM: NAD1983

BOTTOM-HOLE LOCATION (B)  
2161' FSL 2187' FEL  
LAT 36.680885 °N  
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DATUM: NAD1927

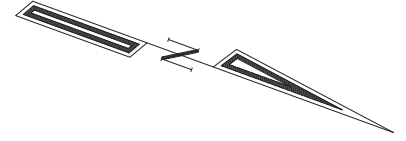
LAT 36.680892 °N  
LONG -107.484822 °W  
DATUM: NAD1983



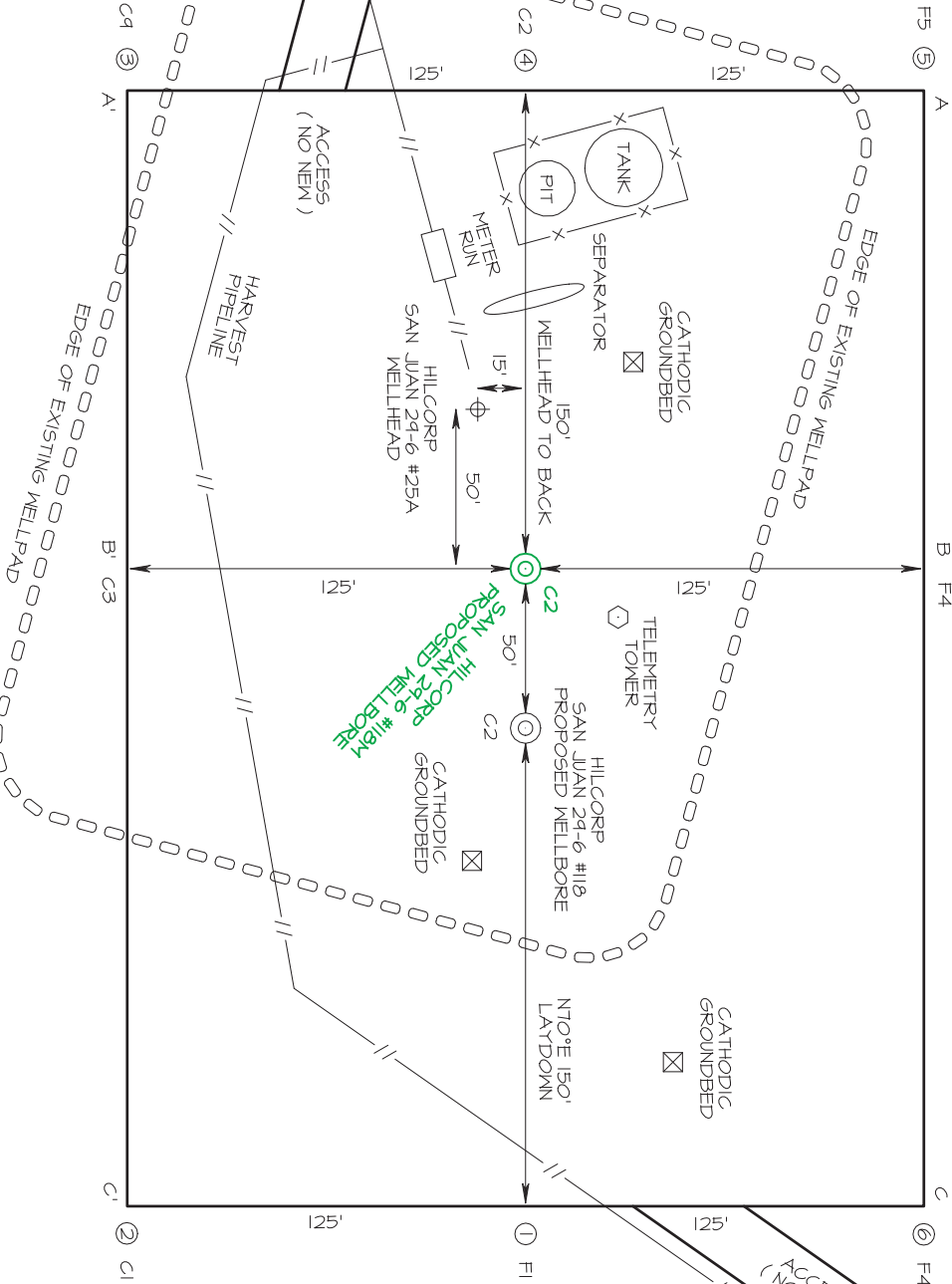
HILCORP ENERGY COMPANY SAN JUAN 29-6 UNIT #118M  
 1179' FSL & 1422' FEL, SECTION 32, T29N, R6W, NMPM  
 RIO ARRIIBA COUNTY, NEW MEXICO ELEVATION: 6746'  
 LAT: 36.6781969N LONG: -107.482210°W DATUM NAD1983

~ SURFACE OWNER ~

State of New Mexico Land



EDGE OF TOTAL DISTURBANCE (MARKED WITH STEEL T-POSTS)



EDGE OF TOTAL DISTURBANCE (MARKED WITH STEEL T-POSTS)

Steel T-Posts have been set to define Edge of Disturbance limits which are 50' offset from edge of wellpad.

Area of Total Disturbance  
 450' X 350' = 3.62 Acres

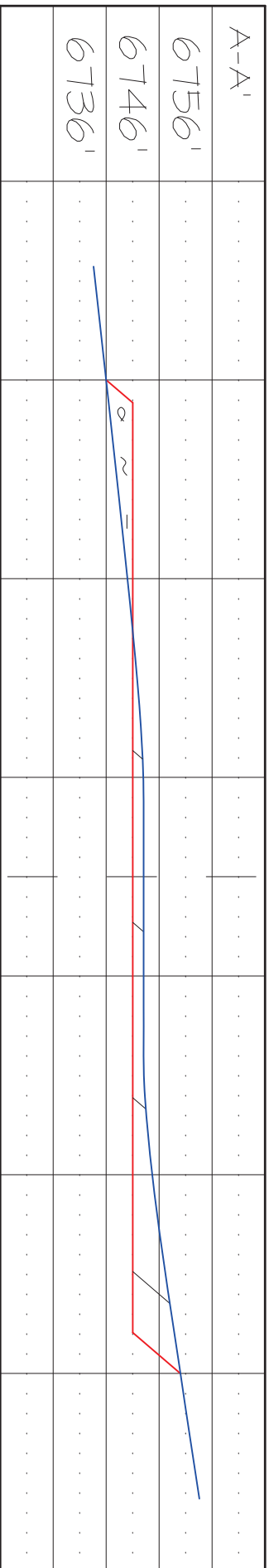


HILCORP ENERGY COMPANY SAN JUAN 29-6 UNIT #118M  
1179' FSL & 1422' FEL, SECTION 32, T29N, R6W, NMPM  
RIO ARRIBA COUNTY, NEW MEXICO ELEVATION: 6746'

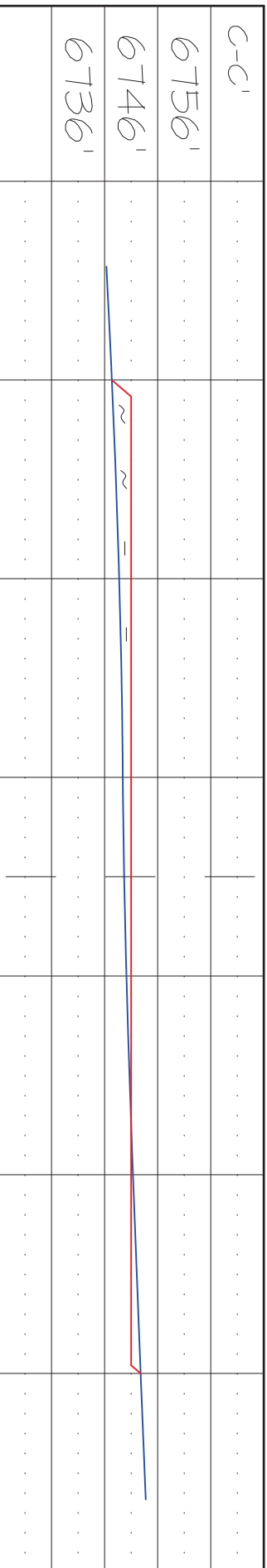
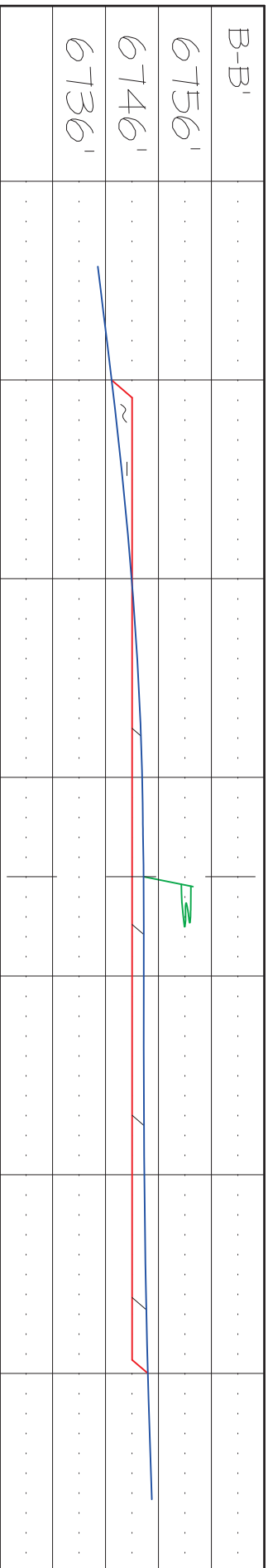
HORIZONTAL SCALE 1"=40'

C/L

VERTICAL SCALE 1"=30'



C/L

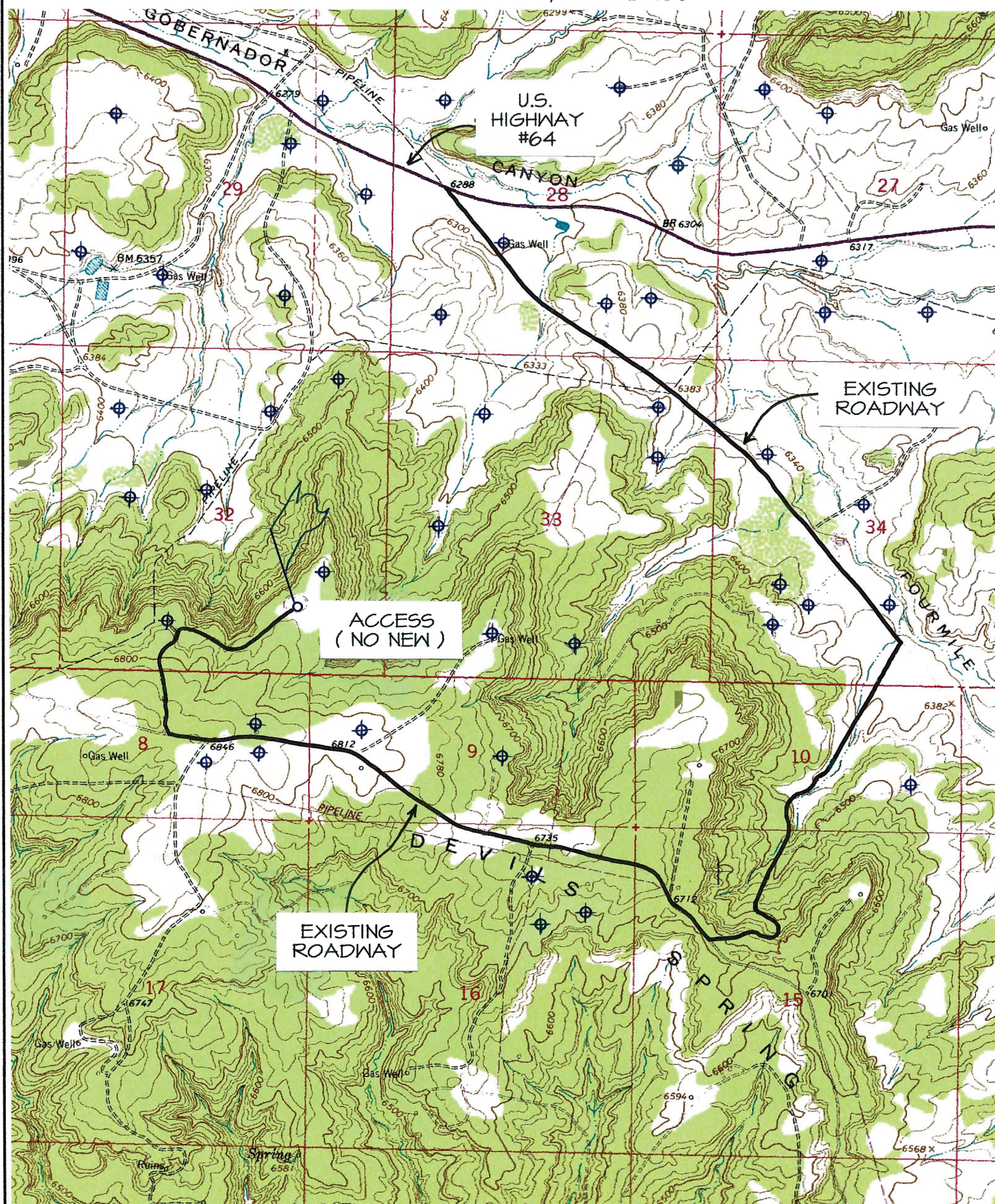


EDWARDS SURVEYING, INC. IS NOT LIABLE FOR LOCATION OF UNDERGROUND UTILITIES OR PIPELINES.

CONTRACTOR SHOULD CONTACT ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED UNDERGROUND UTILITIES OR PIPELINES ON WELLPAD AND/OR ACCESS ROAD AT LEAST TWO WORKING DAYS PRIOR TO CONSTRUCTION.

## HILCORP ENERGY COMPANY SAN JUAN 29-6 UNIT #118M

1179' FSL & 1422' FEL, SECTION 32, T29N, R6W, N.M.P.M.  
RIO ARriba COUNTY, NEW MEXICO



TOPO NAME : FOURMILE CANYON

⊕ PRODUCING WELL

⊗ PLUGGED &amp; ABANDONED WELL

**Directions from the Intersection of US Hwy 550 & US Hwy 64**  
**in Bloomfield, NM to Hilcorp Energy Company San Juan 29-6 Unit #118M**  
**1179' FSL & 1422' FEL, Section 32, T29N, R6W, N.M.P.M., Rio Arriba County, NM**

**Latitude: 36.678196°N   Longitude: 107.482210°W   Datum: NAD1983**

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Easterly on US Hwy 64 for 32.0 miles to Mile Marker 96.3;

Go Right (South-easterly) @ San Juan 29-6 Unit Waterhole for 2.0 miles to fork in roadway;

Go Right (South-westerly) for 1.3 miles to fork in roadway;

Go Right (North-westerly) for 1.9 miles to fork in roadway;

Go Right (Northerly) for 0.7 miles to Hilcorp Energy Company San Juan 29-6 Unit #118M staked location which overlaps an existing wellpad.

Sante Fe Main Office  
Phone: (505) 476-3441

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Phone: (505) 629-6116

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

Form C-102  
August 1, 2011  
Permit 382469

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

|                               |                                            |                                             |
|-------------------------------|--------------------------------------------|---------------------------------------------|
| 1. API Number<br>30-039-31483 | 2. Pool Code<br>71599                      | 3. Pool Name<br>BASIN DAKOTA (PRORATED GAS) |
| 4. Property Code<br>318838    | 5. Property Name<br>SAN JUAN 29 6 UNIT     | 6. Well No.<br>118M                         |
| 7. OGRID No.<br>372171        | 8. Operator Name<br>HILCORP ENERGY COMPANY | 9. Elevation<br>6746                        |

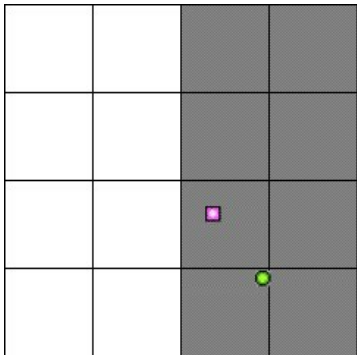
**10. Surface Location**

|               |               |                 |              |         |                   |               |                   |               |                      |
|---------------|---------------|-----------------|--------------|---------|-------------------|---------------|-------------------|---------------|----------------------|
| UL - Lot<br>O | Section<br>32 | Township<br>29N | Range<br>06W | Lot Idn | Feet From<br>1179 | N/S Line<br>S | Feet From<br>1422 | E/W Line<br>E | County<br>Rio Arriba |
|---------------|---------------|-----------------|--------------|---------|-------------------|---------------|-------------------|---------------|----------------------|

**11. Bottom Hole Location If Different From Surface**

| UL - Lot                      | Section | Township | Range               | Lot Idn | Feet From                             | N/S Line | Feet From | E/W Line      | County     |
|-------------------------------|---------|----------|---------------------|---------|---------------------------------------|----------|-----------|---------------|------------|
| J                             | 32      | 29N      | 06W                 |         | 2161                                  | S        | 2187      | E             | Rio Arriba |
| 12. Dedicated Acres<br>320.00 |         |          | 13. Joint or Infill |         | 14. Consolidation Code<br>Unitization |          |           | 15. Order No. |            |

**NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION**

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p style="text-align: center;"><b>OPERATOR CERTIFICATION</b></p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location(s) or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i></p> <p>E-Signed By:            Jamie L. Olivarez<br/>Title:                      L48W Regulatory Advisor<br/>Date:                       1/29/2025</p> <hr/> <p style="text-align: center;"><b>SURVEYOR CERTIFICATION</b></p> <p><i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i></p> <p>Surveyed By:            Jason C. Edwards<br/>Date of Survey:        6/6/2024<br/>Certificate Number:    15269</p> |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Sante Fe Main Office  
Phone: (505) 476-3441

General Information  
Phone: (505) 629-6116

Online Phone Directory  
<https://www.emnrd.nm.gov/ocd/contact-us>

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

Form APD Conditions

Permit 382469

## PERMIT CONDITIONS OF APPROVAL

|                                                                                                          |                                   |
|----------------------------------------------------------------------------------------------------------|-----------------------------------|
| Operator Name and Address:<br>HILCORP ENERGY COMPANY [372171]<br>1111 Travis Street<br>Houston, TX 77002 | API Number:<br>30-039-31483       |
|                                                                                                          | Well:<br>SAN JUAN 29 6 UNIT #118M |

| OCD Reviewer  | Condition                                                                                                                                                                                                                                                             |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| matthew.gomez | A [C-103] Sub. Drilling (C-103N) is required within (10) days of spud.                                                                                                                                                                                                |
| matthew.gomez | Notify the OCD 24 hours prior to casing & cement.                                                                                                                                                                                                                     |
| matthew.gomez | Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string. |
| matthew.gomez | Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.                  |
| matthew.gomez | Cement is required to circulate on both surface and intermediate1 strings of casing.                                                                                                                                                                                  |
| matthew.gomez | If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.                                                                                                                                                            |
| matthew.gomez | File As Drilled C-102 and a directional Survey with C-104 completion packet.                                                                                                                                                                                          |
| matthew.gomez | DHC must be approved prior to producing the well.                                                                                                                                                                                                                     |
| matthew.gomez | Administrative order required for NSL/NSP prior to production.                                                                                                                                                                                                        |

Rio Arriba County, NM

San Juan 29-6 Unit 118M

Hilcorp Energy Company

## Technical Drilling Plan (Rev. 1)

Hilcorp Energy Company proposes to drill and complete the referenced well targeting the Mesa Verde & Dakota formations.

*Note: This technical drilling plan will be adjusted based upon actual conditions.*

## 1. Location

|                        |                             |                             |                        |
|------------------------|-----------------------------|-----------------------------|------------------------|
| Date:                  | January 27, 2025            | Pool:                       | Mesa Verde / Dakota    |
| Well Name:             | San Juan 29-6 Unit #118M    | Ground Elevation (ft. MSL): | 6,746'                 |
| Surface Hole Location: | 36.678188° N, 107.481605° W | Total Depth (ft. TMD/TVD):  | 8,156' MD / 8,000' TVD |
| Bottom Hole Location:  | 36.680391° N, 107.483497° W | County, State:              | Rio Arriba, NM         |

*Note: All geographic coordinates on the drilling tech plan and the directional drilling plan refer to NAD 27 geodetic coordinate system. All depths on the drilling tech plan and the directional drilling plan are referenced from an estimated RKB datum of 17' above ground level.*

## 2. Geological Markers

Anticipated formation tops with comments of any possible water, gas or oil shows are indicated below:

| Formation            | Depth (ft. TVD) | Remarks               |
|----------------------|-----------------|-----------------------|
| Ojo Alamo            | 2367'           | Water (fresh/useable) |
| Kirtland             | 2545'           | None                  |
| Fruitland            | 2852'           | Gas, Water            |
| Pictured Cliffs      | 3241'           | Gas                   |
| Lewis                | 3365'           | None                  |
| Huerfanito Bentonite | 3868'           | None                  |
| Chacra               | 4224'           | None                  |
| Cliff House          | 4977'           | Gas                   |
| Menefee              | 5105'           | None                  |
| Pt. Lookout          | 5423'           | Gas                   |
| Mancos               | 6120'           | Gas                   |
| Gallup               | 6705'           | Gas                   |
| El Vado              | 6716'           | Gas                   |
| Basal Niobrara       | 6956'           | None                  |
| Juana Lopez          | 7093'           | None                  |
| Greenhorn            | 7403'           | None                  |
| Graneros             | 7464'           | Gas                   |
| Dakota               | 7620'           | Gas                   |

Rio Arriba County, NM

San Juan 29-6 Unit 118M



### 3. Pressure Control Equipment

#### A. BOP Equipment

See Appendix A for BOP equipment and choke manifold diagram.

- BOP equipment will be nipped up on top of the wellhead after surface casing is set and cemented.
- Pressure control configurations will be designed to meet the minimum 3M standards.
- All equipment will have 3M pressure rating at a minimum.
- A rotating head will be installed on top of the annular as seen in the attached diagram.

#### B. BOP Pressure Testing

- For all BOP pressure testing, a test unit with a chart recorder and a BOP test plug will be utilized.
- All tests and inspections will be recorded and logged with time and results.
- A full BOP pressure test will be conducted when initially installed for the first well on the pad or if a seal subject to test pressure is broken, following related repairs, and at a minimum in 30-day intervals.
- A BOPE shell pressure test only will be conducted for subsequent wells on the pad when seals subject to pressure have not been broken, repaired, and fall within the 30-day interval of the first full test.
- The New Mexico Oil & Gas Conservation Division and the BLM will be notified 24 hours in advance of pressure testing BOPE.
- The BOPE will be tested to 250 psi (Low) for 5 minutes and 3,000 psi (High) for 10 minutes.

#### C. BOP Function Testing

- Annular preventors will be functionally tested at least once per week.
- Pipe and blind rams will be function tested each trip.

#### D. Casing Pressure Testing

- For all casing pressure testing, a test unit with a chart recorder will be utilized.
- Surface casing will be pressure tested to 600 psi for 30 minutes.
- Intermediate casing will be pressure tested to 1,500 psi for 30 minutes.

Rio Arriba County, NM

San Juan 29-6 Unit 118M



## 4. Casing Program

## A. Proposed Casing Program:

| Proposed Casing Design |           |                                      |                    |                     |           |           |          |
|------------------------|-----------|--------------------------------------|--------------------|---------------------|-----------|-----------|----------|
| Casing String          | Hole Size | Casing (size/weight/grade)           | Top Depth (MD/TVD) | Shoe Depth (MD/TVD) | Collapse  | Burst     | Tensile  |
| Surface                | 12-1/4"   | 9-5/8"-32.3#-H40 (or equiv.)-LTC/BTC | 0'                 | 250'/250'           | 1,370 psi | 2,270 psi | 254 klbs |
| Intermediate           | 8-3/4"    | 7"-23#-J55 (or equiv.)-LTC/BTC       | 0'                 | 4,156'/4,000'       | 3,270 psi | 4,360 psi | 366 klbs |
| Production             | 6-1/4"    | 4-1/2"-11.6#-J55 (or equiv.)-LTC/BTC | 0'                 | 8,156'/8,000'       | 4,960 psi | 5,350 psi | 184 klbs |

| Proposed Casing Design Safety Factors |                 |                    |                         |                              |
|---------------------------------------|-----------------|--------------------|-------------------------|------------------------------|
| Casing String                         | Burst Design SF | Collapse Design SF | Joint Tensile Design SF | Connection Tensile Design SF |
| Surface                               | 19.4            | 14.9               | 52.4                    | 36.5                         |
| Intermediate                          | 2.2             | 2.1                | 4.5                     | 5.3                          |
| Production                            | 1.3             | 1.5                | 2.3                     | 2.8                          |

## B. Casing Design Parameters &amp; Calculations:

- Designed for full wellbore evacuation.
- Mud Weights used for calculations:
  - Surface = 9.0 ppg
  - Intermediate = 9.5 ppg
  - Production = 10.0 ppg
- Minimum Acceptable Safety Factors:
  - Burst: 1.15
  - Collapse: 1.15
  - Tensile: 1.50
- Casing Safety Factor Calculations:

$$\text{Casing Burst Safety Factor} = \frac{\text{Casing Burst Rating (psi)}}{\text{Maximum Mud Weight (ppg)} \times \text{TVD (ft)} \times 0.052}$$

$$\text{Casing Collapse Safety Factor} = \frac{\text{Hydrostatic of Mud Weight in Annulus (psi)}}{\left[ \text{TVD of Casing Shoe (ft)} \times 0.10 \frac{\text{psi}}{\text{ft}} \right]}$$

$$\text{Tensile Safety Factor} = \frac{\text{Tensile Rating of Casing String (lbs)}}{\text{Measured Depth of Casing (ft)} \times \text{Casing Weight } \frac{\text{lb}}{\text{ft}} \times \text{Drilling Fluid Bouyancy Factor}}$$

## Production Casing Notes:

- Production casing will be run from surface to TD.
- The 6-1/4" hole will be drilled to the top of the Encinal formation and TD will be determined onsite by the mud logger.

Rio Arriba County, NM

San Juan 29-6 Unit 118M



## 5. Proposed Centralizer Program:

| Proposed Centralizer Program |                                                                                                                                                                                                                                                                                           |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Casing String                | Centralizers & Placement                                                                                                                                                                                                                                                                  |
| Surface Casing               | 1 centralizer per joint on bottom 3 joints.                                                                                                                                                                                                                                               |
| Intermediate Casing          | 1 centralizer per joint in shoe track.<br>1 centralizer every 3 <sup>rd</sup> joint from float collar to base of Ojo Alamo.<br>1 centralizer per joint from base of Ojo Alamo to the top of the Ojo Alamo.<br>1 centralizer every 3 <sup>rd</sup> joint from top of Ojo Alamo to surface. |
| Production Casing            | 1 centralizer per joint in shoe track.<br>1 centralizer every other joint for bottom 1,000' of casing.                                                                                                                                                                                    |

## 6. Proposed Cement Program:

| Proposed Cement Design                                                                    |                |                                                                                                                                    |                           |       |            |                                                   |               |             |
|-------------------------------------------------------------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|------------|---------------------------------------------------|---------------|-------------|
| Interval                                                                                  | Depth (ft. MD) | Lead/Tail                                                                                                                          | Volume (ft <sup>3</sup> ) | Sacks | Excess (%) | Slurry                                            | Density (ppg) | Planned TOC |
| Surface                                                                                   | 250'           | Lead                                                                                                                               | 157 ft <sup>3</sup>       | 114   | 100%       | Class G Cement<br>Yield: 1.38 ft <sup>3</sup> /sk | 14.6          | Surface     |
| Slurry Additives: CaCl <sub>2</sub> (1%), Cello Flake (0.25 lb/sk), CD-2 (0.2%)           |                |                                                                                                                                    |                           |       |            |                                                   |               |             |
| Intermediate                                                                              | 4,156'         | Lead                                                                                                                               | 812 ft <sup>3</sup>       | 381   | 50%        | ASTM Type IL<br>Yield: 2.13 ft <sup>3</sup> /sk   | 12.0          | Surface     |
|                                                                                           |                | Slurry Additives: CaCl <sub>2</sub> (3.0%), Celloflake (0.25 lb/sk), LCM-1 (5.0 lb/sk), FL-52 (0.4%), bentonite (8.0%), SMS (0.4%) |                           |       |            |                                                   |               |             |
|                                                                                           |                | Tail                                                                                                                               | 113 ft <sup>3</sup>       | 82    | 50%        | ASTM Type IL<br>Yield: 1.38 ft <sup>3</sup> /sk   | 14.5          | 3,656'      |
|                                                                                           |                | Slurry Additives: CaCl <sub>2</sub> (1.0%), Celloflake (0.25 lb/sk), LCM-1 (5.0 lb/sk), FL-52 (0.2%)                               |                           |       |            |                                                   |               |             |
| Production                                                                                | 8,156'         | Lead                                                                                                                               | 609 ft <sup>3</sup>       | 308   | 35%        | ASTM Type IL<br>Yield: 1.98 ft <sup>3</sup> /sk   | 12.5          | 3,656'      |
| Slurry Additives: Celloflake (0.25 lb/sk), LCM-1 (6.25 lb/sk), CD-32 (0.3%), FL-52 (1.0%) |                |                                                                                                                                    |                           |       |            |                                                   |               |             |

## Cement Program Notes:

- The cement slurry additives may be adjusted to accommodate required pump and compressive test times.
- Actual cement volumes will be determined and may be adjusted onsite based on well conditions.
- For the intermediate hole section, a 2-stage or 3-stage cement job may be performed if hole conditions dictate. If needed, the stage tool(s) will be placed appropriately.
- Cement will be circulated to surface on surface and intermediate casing sections to protect water bearing zones.
- A minimum of 8 hours of wait on cement time will be observed on each hole section to allow adequate time for cement to achieve a minimum of 500 psi of compressive strength. The BOP will not be nipped down, the wellhead will not be installed, the casing will not be tested and the prior casing shoe will not be drilled out until adequate wait on cement time has been observed (8 hours or time to reach 500 psi compressive strength).

Rio Arriba County, NM

San Juan 29-6 Unit 118M

Hilcorp Energy Company

## 7. Drilling Fluids Program

## A. Proposed Drilling Fluids Program:

| Proposed Drilling Fluids Program |                  |                  |                           |                            |                   |
|----------------------------------|------------------|------------------|---------------------------|----------------------------|-------------------|
| Interval                         | Fluid Type       | Density<br>(ppg) | Fluid Loss<br>(mL/30 min) | Maximum Chlorides<br>(ppm) | Depth<br>(ft. MD) |
| Surface                          | Water/Gel        | 8.4 – 9.2        | NC                        | 1,000                      | 0' – 250'         |
| Intermediate                     | LSND / Gel       | 8.4 – 9.2        | 6-16                      | 5,000                      | 250' – 4,156'     |
| Production                       | Air / LSND / Gel | 8.4 – 9.2        | 6-16                      | 5,000                      | 4,156' – 8,156'   |

*Drilling Fluids Notes:*

- Primary drilling fluid for production section will be air/N<sub>2</sub>. If well begins making water, will mud up with LSND.
- The following equipment will be operational when drilling with air/N<sub>2</sub>/mist:
  - o Anchored bloopie line to discharge cuttings & fluid to blow pit at least 100' away from well center.
  - o The bloopie line will be equipped with an automatic igniter or pilot light.
  - o Deduster equipment.
  - o Properly lubricated and maintained rotating head.
  - o Float valve in the drill string above the bit.
  - o Sufficient mud and circulating equipment to kill the well if necessary.
- Lost circulation material may be added to the mud systems to manage fluid losses as hole conditions dictate.
- Depending on the area and water production, the production section may be drilled with mud instead of air.
- The well will be drilled utilizing a closed-loop circulating system. Drill cuttings for all hole sections will be transported to an approved disposal site.
- Estimated total volume of drill cuttings for disposal: 479 bbls (2,688 ft<sup>3</sup>).

Rio Arriba County, NM

San Juan 29-6 Unit 118M



## 8. Estimated Pressures & Drilling Hazards

### A. Estimated Pressures

- The Mesa Verde and/or Dakota formations will be completed and commingled if both formations are completed.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:
  - o Fruitland Coal: 400 psi
  - o Pictured Cliffs: 850 psi
  - o Mesa Verde: 650 psi
  - o Dakota: 2,200 psi

### B. Water Flows

- Water flows are possible in the intermediate section. Water flows will be mitigated with increased mud weight.

### C. Lost Circulation

- Lost circulation is possible in the coal section. Losses will be mitigated by adding LCM to the mud system.
- Sufficient LCM will be added to the mud system to maintain well control if lost circulation is encountered.

### D. Hydrogen Sulfide

- No hydrogen sulfide is expected to be encountered based on nearby well production.

## 9. Pilot Hole

- No pilot hole is planned for this wellbore.

Rio Arriba County, NM

San Juan 29-6 Unit 118M



## 10. Testing, Logging, Coring

### A. Mud Logging

- Will collect formation samples every 60' from the intermediate casing shoe to the TD of production hole section.

### B. MWD

- Will use measurement while drilling tool from the surface casing point to intermediate casing point to record inclination. A wireline survey will be run after cementing the production casing to verify bottom hole position.

### C. LWD

- No logging while drilling tools will be utilized.

### D. Open Hole Logging

- There are no planned open hole logs post drilling.

### E. Coring

- There is no coring or formation testing planned.

### F. Cased Hole Logging

- The 7" intermediate casing will be cemented to surface to protect water bearing zones. If cement is not circulated to surface on the intermediate cement job, a temperature survey or a cement bod log will be run to verify top of cement.

## 11. Directional Drilling Plan

- The directional drilling plans and plots are attached.
- The directional plan is built from geologic targets from offset wells and lease boundaries. On-site adjustments to the directional plans will be made as formation and wellbore dictate.

## 12. Completion

### A. Pressure Testing

- A pressure test of the 4-1/2" production casing will be conducted to the maximum anticipated frac pressure for 30 minutes.

### B. Stimulation

- The well will be stimulated with sand and water. The number of stages and amount of proppant used will be adjusted based on actual reservoir thickness and real-time pumping conditions during the stimulation.

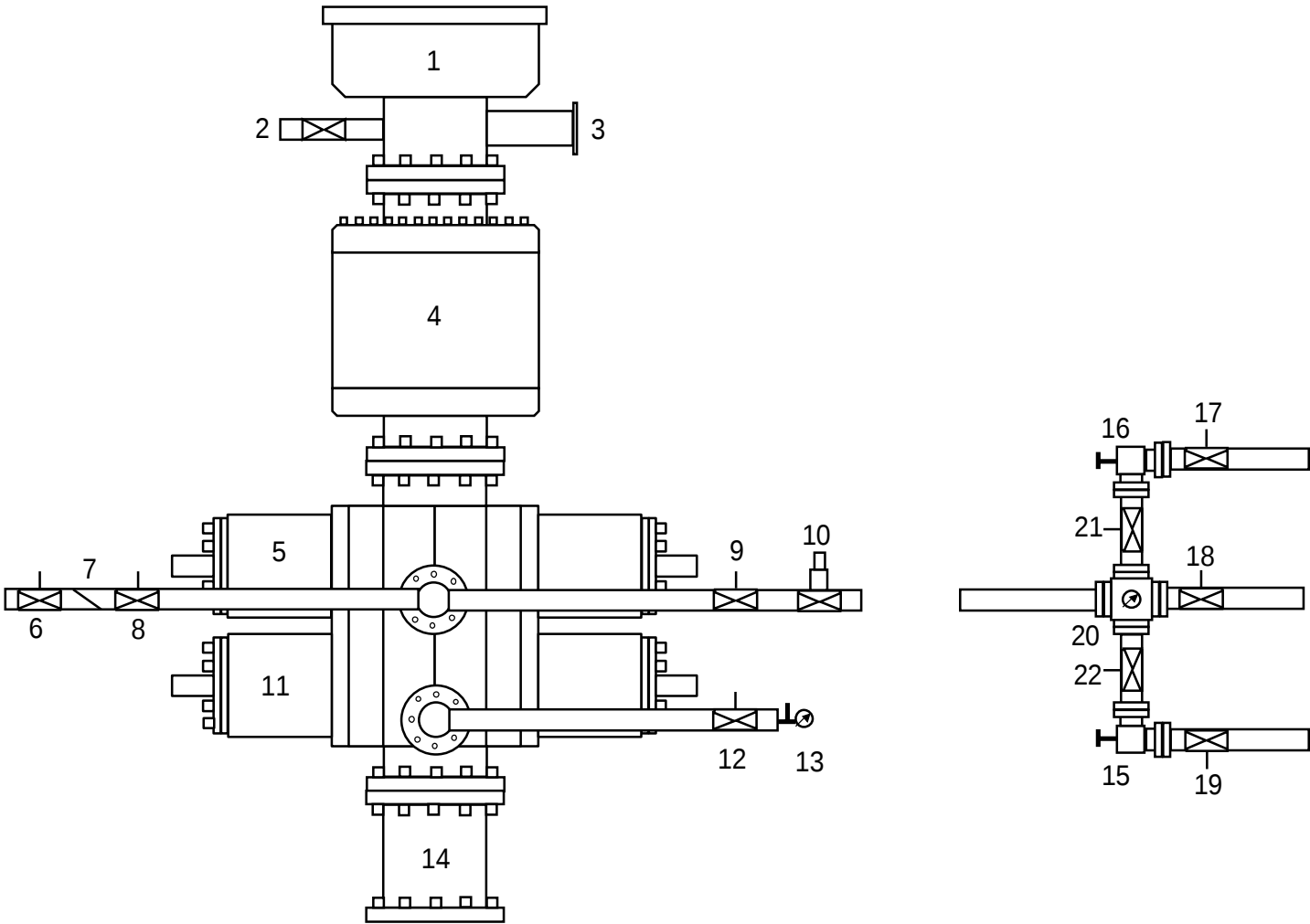
Rio Arriba County, NM

San Juan 29-6 Unit 118M



Appendix A

Pressure Control Equipment Configuration



|    |                          |    |                               |
|----|--------------------------|----|-------------------------------|
| 1  | Rotating Head            | 12 | Manual Isolation Valve        |
| 2  | Fill Up Line             | 13 | Needle Valve & Pressure Gauge |
| 3  | Flow Line                | 14 | Spacer Spool (if needed)      |
| 4  | 3M Annular Preventer     | 15 | Manual Choke                  |
| 5  | 3M Pipe Rams             | 16 | Manual Choke                  |
| 6  | Manual Isolation Valve   | 17 | Manual Isolation Valve        |
| 7  | Check Valve              | 18 | Manual Isolation Valve        |
| 8  | Manual Isolation Valve   | 19 | Manual Isolation Valve        |
| 9  | Manual Isolation Valve   | 20 | Valve Block & Pressure Gauge  |
| 10 | High Closing Ratio Valve | 21 | Manual Isolation Valve        |
| 11 | 3M Blind Rams            | 22 | Manual Isolation Valve        |



Company: Hilcorp Energy - San Juan Basin  
Project: San Juan, NM NAD27  
Site: San Juan 29-6 Pad  
Well: San Juan 29-6 Unit 118M  
Wellbore: OH  
Design: Plan #4



| Well Details: San Juan 29-6 Unit 118M    |       |            |           |           |             |      |
|------------------------------------------|-------|------------|-----------|-----------|-------------|------|
| GL 6746' & RKB 17' @ 6763.00ft (Drake 3) |       |            |           |           |             |      |
| +N/-S                                    | +E/-W | Northing   | Easting   | Latitude  | Longitude   | Slot |
| 0.00                                     | 0.00  | 2066303.02 | 603141.43 | 36.678188 | -107.481605 |      |

T

M

Azimuths to True North

Magnetic North: 8.40°

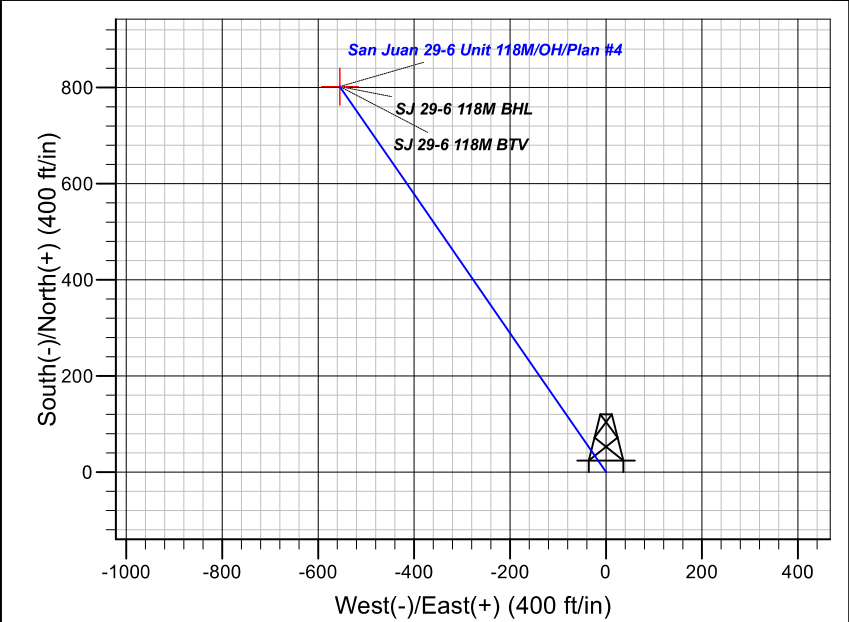
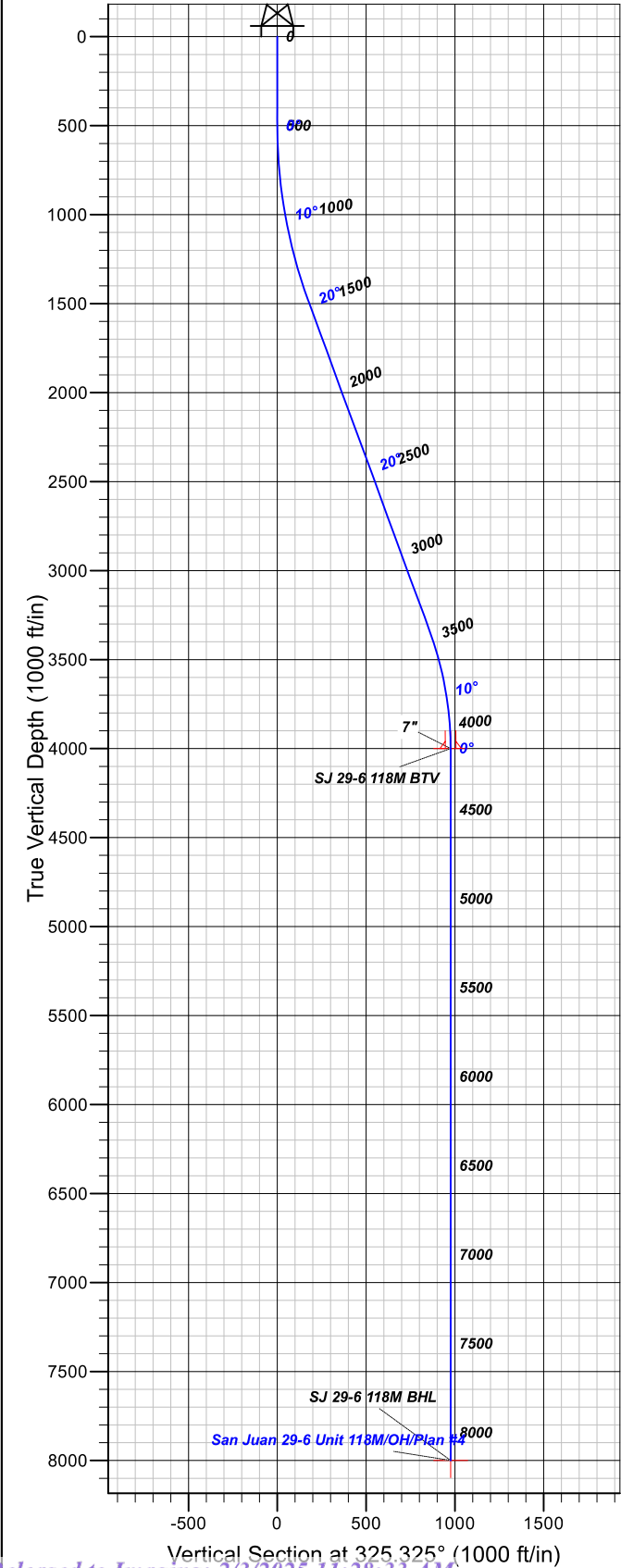
Magnetic Field

Strength: 49186.2nT

Dip Angle: 63.05°

Date: 6/19/2024

Model: HDGM2024



| FORMATION TOP DETAILS          |
|--------------------------------|
| No formation data is available |

| Plan: Plan #4                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 8:58, January 28 2025<br>Created By: Janie Collins                                                                                              |
| PROJECT DETAILS: San Juan, NM NAD27                                                                                                             |
| Geodetic System: US State Plane 1927 (Exact solution)<br>Datum: NAD 1927 (NADCON CONUS)<br>Ellipsoid: Clarke 1866<br>Zone: New Mexico West 3003 |
| System Datum: Mean Sea Level                                                                                                                    |
| CASING DETAILS                                                                                                                                  |
| TVD MD Name Size<br>4000.00 4156.12 7" 7.00                                                                                                     |

| SECTION DETAILS |       |         |         |        |         |      |        |        |
|-----------------|-------|---------|---------|--------|---------|------|--------|--------|
| MD              | Inc   | Azi     | TVD     | +N/-S  | +E/-W   | Dleg | TFace  | VSEct  |
| 0.00            | 0.00  | 0.000   | 0.00    | 0.00   | 0.00    | 0.00 | 0.00   | 0.00   |
| 500.00          | 0.00  | 0.000   | 500.00  | 0.00   | 0.00    | 0.00 | 0.00   | 0.00   |
| 1510.50         | 20.21 | 325.325 | 1489.68 | 145.05 | -100.34 | 2.00 | 325.33 | 176.38 |
| 3482.45         | 20.21 | 325.325 | 3340.21 | 705.30 | -487.91 | 0.00 | 0.00   | 857.61 |
| 4156.12         | 0.00  | 0.000   | 4000.00 | 802.00 | -554.80 | 3.00 | 180.00 | 975.20 |
| 8156.12         | 0.00  | 0.000   | 8000.00 | 802.00 | -554.80 | 0.00 | 0.00   | 975.20 |

| DESIGN TARGET DETAILS |         |        |         |            |           |           |             |
|-----------------------|---------|--------|---------|------------|-----------|-----------|-------------|
| Name                  | TVD     | +N/-S  | +E/-W   | Northing   | Easting   | Latitude  | Longitude   |
| SJ 29-6 118M BTM      | 4000.00 | 802.00 | -554.80 | 2067102.98 | 602583.69 | 36.680391 | -107.483497 |
| SJ 29-6 118M BHL      | 8000.00 | 802.00 | -554.80 | 2067102.98 | 602583.69 | 36.680391 | -107.483497 |



# Hilcorp Energy - San Juan Basin

San Juan, NM NAD27

San Juan 29-6 Pad

San Juan 29-6 Unit 118M

OH

Plan: Plan #4

## Standard Planning Report

28 January, 2025



[www.scientificdrilling.com](http://www.scientificdrilling.com)





# Scientific Drilling Planning Report



|                  |                                 |                                     |                                          |
|------------------|---------------------------------|-------------------------------------|------------------------------------------|
| <b>Database:</b> | Grand Junction                  | <b>Local Co-ordinate Reference:</b> | Well San Juan 29-6 Unit 118M             |
| <b>Company:</b>  | Hilcorp Energy - San Juan Basin | <b>TVD Reference:</b>               | GL 6746' & RKB 17' @ 6763.00ft (Drake 3) |
| <b>Project:</b>  | San Juan, NM NAD27              | <b>MD Reference:</b>                | GL 6746' & RKB 17' @ 6763.00ft (Drake 3) |
| <b>Site:</b>     | San Juan 29-6 Pad               | <b>North Reference:</b>             | True                                     |
| <b>Well:</b>     | San Juan 29-6 Unit 118M         | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Wellbore:</b> | OH                              |                                     |                                          |
| <b>Design:</b>   | Plan #4                         |                                     |                                          |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | San Juan, NM NAD27                   |                      |                |
| <b>Map System:</b> | US State Plane 1927 (Exact solution) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)              |                      |                |
| <b>Map Zone:</b>   | New Mexico West 3003                 |                      |                |

|                       |                   |              |                   |                   |             |
|-----------------------|-------------------|--------------|-------------------|-------------------|-------------|
| Site                  | San Juan 29-6 Pad |              |                   |                   |             |
| Site Position:        |                   | Northing:    | 2,066,320.67 usft | Latitude:         | 36.678236   |
| From:                 | Lat/Long          | Easting:     | 603,188.29 usft   | Longitude:        | -107.481445 |
| Position Uncertainty: | 0.00 ft           | Slot Radius: | 13.20 in          | Grid Convergence: | 0.21 °      |

| Well                 | San Juan 29-6 Unit 118M |           |                     |                   |               |             |
|----------------------|-------------------------|-----------|---------------------|-------------------|---------------|-------------|
| Well Position        | +N/-S                   | -17.47 ft | Northing:           | 2,066,303.02 usft | Latitude:     | 36.678188   |
|                      | +E/-W                   | -46.92 ft | Easting:            | 603,141.43 usft   | Longitude:    | -107.481605 |
| Position Uncertainty |                         | 0.00 ft   | Wellhead Elevation: |                   | Ground Level: | 6,763.00 ft |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | OH                |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | HDGM2024          | 6/19/2024          | 8.40                   | 63.05                | 49,186.20000000            |

|                          |                              |                   |                      |                      |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| <b>Design</b>            | Plan #4                      |                   |                      |                      |
| <b>Audit Notes:</b>      |                              |                   |                      |                      |
| <b>Version:</b>          | <b>Phase:</b>                | PLAN              | <b>Tie On Depth:</b> | 0.00                 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b>    | <b>Direction (°)</b> |
|                          | 0.00                         | 0.00              | 0.00                 | 325.325              |

| <b>Plan Sections</b> |                 |             |                     |            |            |                         |                        |                       |         |                  |
|----------------------|-----------------|-------------|---------------------|------------|------------|-------------------------|------------------------|-----------------------|---------|------------------|
| Measured Depth (ft)  | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target           |
| 0.00                 | 0.00            | 0.000       | 0.00                | 0.00       | 0.00       | 0.00                    | 0.00                   | 0.00                  | 0.00    |                  |
| 500.00               | 0.00            | 0.000       | 500.00              | 0.00       | 0.00       | 0.00                    | 0.00                   | 0.00                  | 0.00    |                  |
| 1,510.50             | 20.21           | 325.325     | 1,489.68            | 145.05     | -100.34    | 2.00                    | 2.00                   | 0.00                  | 325.33  |                  |
| 3,482.45             | 20.21           | 325.325     | 3,340.21            | 705.30     | -487.91    | 0.00                    | 0.00                   | 0.00                  | 0.00    |                  |
| 4,156.12             | 0.00            | 0.000       | 4,000.00            | 802.00     | -554.80    | 3.00                    | -3.00                  | 0.00                  | 180.00  | SJ 29-6 118M BTV |
| 8,156.12             | 0.00            | 0.000       | 8,000.00            | 802.00     | -554.80    | 0.00                    | 0.00                   | 0.00                  | 0.00    | SJ 29-6 118M BHL |



# Scientific Drilling Planning Report



|                  |                                 |                                     |                                          |
|------------------|---------------------------------|-------------------------------------|------------------------------------------|
| <b>Database:</b> | Grand Junction                  | <b>Local Co-ordinate Reference:</b> | Well San Juan 29-6 Unit 118M             |
| <b>Company:</b>  | Hilcorp Energy - San Juan Basin | <b>TVD Reference:</b>               | GL 6746' & RKB 17' @ 6763.00ft (Drake 3) |
| <b>Project:</b>  | San Juan, NM NAD27              | <b>MD Reference:</b>                | GL 6746' & RKB 17' @ 6763.00ft (Drake 3) |
| <b>Site:</b>     | San Juan 29-6 Pad               | <b>North Reference:</b>             | True                                     |
| <b>Well:</b>     | San Juan 29-6 Unit 118M         | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Wellbore:</b> | OH                              |                                     |                                          |
| <b>Design:</b>   | Plan #4                         |                                     |                                          |

| Planned Survey      |                 |             |                     |            |            |                       |                         |                        |                       |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 0.00                | 0.00            | 0.000       | 0.00                | 0.00       | 0.00       | 0.00                  | 0.00                    | 0.00                   | 0.00                  |
| 100.00              | 0.00            | 0.000       | 100.00              | 0.00       | 0.00       | 0.00                  | 0.00                    | 0.00                   | 0.00                  |
| 200.00              | 0.00            | 0.000       | 200.00              | 0.00       | 0.00       | 0.00                  | 0.00                    | 0.00                   | 0.00                  |
| 300.00              | 0.00            | 0.000       | 300.00              | 0.00       | 0.00       | 0.00                  | 0.00                    | 0.00                   | 0.00                  |
| 400.00              | 0.00            | 0.000       | 400.00              | 0.00       | 0.00       | 0.00                  | 0.00                    | 0.00                   | 0.00                  |
| 500.00              | 0.00            | 0.000       | 500.00              | 0.00       | 0.00       | 0.00                  | 0.00                    | 0.00                   | 0.00                  |
| 600.00              | 2.00            | 325.325     | 599.98              | 1.44       | -0.99      | 1.75                  | 2.00                    | 2.00                   | 0.00                  |
| 700.00              | 4.00            | 325.325     | 699.84              | 5.74       | -3.97      | 6.98                  | 2.00                    | 2.00                   | 0.00                  |
| 800.00              | 6.00            | 325.325     | 799.45              | 12.91      | -8.93      | 15.69                 | 2.00                    | 2.00                   | 0.00                  |
| 900.00              | 8.00            | 325.325     | 898.70              | 22.93      | -15.86     | 27.88                 | 2.00                    | 2.00                   | 0.00                  |
| 1,000.00            | 10.00           | 325.325     | 997.47              | 35.79      | -24.76     | 43.52                 | 2.00                    | 2.00                   | 0.00                  |
| 1,100.00            | 12.00           | 325.325     | 1,095.62            | 51.48      | -35.62     | 62.60                 | 2.00                    | 2.00                   | 0.00                  |
| 1,200.00            | 14.00           | 325.325     | 1,193.06            | 69.98      | -48.41     | 85.10                 | 2.00                    | 2.00                   | 0.00                  |
| 1,300.00            | 16.00           | 325.325     | 1,289.64            | 91.27      | -63.14     | 110.98                | 2.00                    | 2.00                   | 0.00                  |
| 1,400.00            | 18.00           | 325.325     | 1,385.27            | 115.31     | -79.77     | 140.21                | 2.00                    | 2.00                   | 0.00                  |
| 1,500.00            | 20.00           | 325.325     | 1,479.82            | 142.08     | -98.29     | 172.77                | 2.00                    | 2.00                   | 0.00                  |
| 1,510.50            | 20.21           | 325.325     | 1,489.68            | 145.05     | -100.34    | 176.38                | 2.00                    | 2.00                   | 0.00                  |
| 1,600.00            | 20.21           | 325.325     | 1,573.67            | 170.48     | -117.93    | 207.30                | 0.00                    | 0.00                   | 0.00                  |
| 1,700.00            | 20.21           | 325.325     | 1,667.51            | 198.89     | -137.59    | 241.84                | 0.00                    | 0.00                   | 0.00                  |
| 1,800.00            | 20.21           | 325.325     | 1,761.35            | 227.30     | -157.24    | 276.39                | 0.00                    | 0.00                   | 0.00                  |
| 1,900.00            | 20.21           | 325.325     | 1,855.20            | 255.71     | -176.90    | 310.93                | 0.00                    | 0.00                   | 0.00                  |
| 2,000.00            | 20.21           | 325.325     | 1,949.04            | 284.12     | -196.55    | 345.48                | 0.00                    | 0.00                   | 0.00                  |
| 2,100.00            | 20.21           | 325.325     | 2,042.88            | 312.53     | -216.20    | 380.03                | 0.00                    | 0.00                   | 0.00                  |
| 2,200.00            | 20.21           | 325.325     | 2,136.72            | 340.94     | -235.86    | 414.57                | 0.00                    | 0.00                   | 0.00                  |
| 2,300.00            | 20.21           | 325.325     | 2,230.57            | 369.35     | -255.51    | 449.12                | 0.00                    | 0.00                   | 0.00                  |
| 2,400.00            | 20.21           | 325.325     | 2,324.41            | 397.77     | -275.17    | 483.67                | 0.00                    | 0.00                   | 0.00                  |
| 2,500.00            | 20.21           | 325.325     | 2,418.25            | 426.18     | -294.82    | 518.21                | 0.00                    | 0.00                   | 0.00                  |
| 2,600.00            | 20.21           | 325.325     | 2,512.10            | 454.59     | -314.47    | 552.76                | 0.00                    | 0.00                   | 0.00                  |
| 2,700.00            | 20.21           | 325.325     | 2,605.94            | 483.00     | -334.13    | 587.31                | 0.00                    | 0.00                   | 0.00                  |
| 2,800.00            | 20.21           | 325.325     | 2,699.78            | 511.41     | -353.78    | 621.85                | 0.00                    | 0.00                   | 0.00                  |
| 2,900.00            | 20.21           | 325.325     | 2,793.63            | 539.82     | -373.43    | 656.40                | 0.00                    | 0.00                   | 0.00                  |
| 3,000.00            | 20.21           | 325.325     | 2,887.47            | 568.23     | -393.09    | 690.94                | 0.00                    | 0.00                   | 0.00                  |
| 3,100.00            | 20.21           | 325.325     | 2,981.31            | 596.64     | -412.74    | 725.49                | 0.00                    | 0.00                   | 0.00                  |
| 3,200.00            | 20.21           | 325.325     | 3,075.16            | 625.05     | -432.40    | 760.04                | 0.00                    | 0.00                   | 0.00                  |
| 3,300.00            | 20.21           | 325.325     | 3,169.00            | 653.46     | -452.05    | 794.58                | 0.00                    | 0.00                   | 0.00                  |
| 3,400.00            | 20.21           | 325.325     | 3,262.84            | 681.87     | -471.70    | 829.13                | 0.00                    | 0.00                   | 0.00                  |
| 3,482.45            | 20.21           | 325.325     | 3,340.21            | 705.30     | -487.91    | 857.61                | 0.00                    | 0.00                   | 0.00                  |
| 3,500.00            | 19.68           | 325.325     | 3,356.71            | 710.22     | -491.32    | 863.60                | 3.00                    | -3.00                  | 0.00                  |
| 3,600.00            | 16.68           | 325.325     | 3,451.71            | 735.88     | -509.07    | 894.80                | 3.00                    | -3.00                  | 0.00                  |
| 3,700.00            | 13.68           | 325.325     | 3,548.21            | 757.42     | -523.97    | 920.99                | 3.00                    | -3.00                  | 0.00                  |
| 3,800.00            | 10.68           | 325.325     | 3,645.94            | 774.77     | -535.97    | 942.09                | 3.00                    | -3.00                  | 0.00                  |
| 3,900.00            | 7.68            | 325.325     | 3,744.65            | 787.90     | -545.05    | 958.05                | 3.00                    | -3.00                  | 0.00                  |
| 4,000.00            | 4.68            | 325.325     | 3,844.06            | 796.75     | -551.18    | 968.82                | 3.00                    | -3.00                  | 0.00                  |
| 4,100.00            | 1.68            | 325.325     | 3,943.89            | 801.32     | -554.34    | 974.37                | 3.00                    | -3.00                  | 0.00                  |
| 4,156.12            | 0.00            | 0.000       | 4,000.00            | 802.00     | -554.80    | 975.20                | 3.00                    | -3.00                  | 0.00                  |
| 4,200.00            | 0.00            | 0.000       | 4,043.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |
| 4,300.00            | 0.00            | 0.000       | 4,143.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |
| 4,400.00            | 0.00            | 0.000       | 4,243.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |
| 4,500.00            | 0.00            | 0.000       | 4,343.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |
| 4,600.00            | 0.00            | 0.000       | 4,443.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |
| 4,700.00            | 0.00            | 0.000       | 4,543.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |
| 4,800.00            | 0.00            | 0.000       | 4,643.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |
| 4,900.00            | 0.00            | 0.000       | 4,743.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |
| 5,000.00            | 0.00            | 0.000       | 4,843.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |



# Scientific Drilling Planning Report



|                  |                                 |                                     |                                          |
|------------------|---------------------------------|-------------------------------------|------------------------------------------|
| <b>Database:</b> | Grand Junction                  | <b>Local Co-ordinate Reference:</b> | Well San Juan 29-6 Unit 118M             |
| <b>Company:</b>  | Hilcorp Energy - San Juan Basin | <b>TVD Reference:</b>               | GL 6746' & RKB 17' @ 6763.00ft (Drake 3) |
| <b>Project:</b>  | San Juan, NM NAD27              | <b>MD Reference:</b>                | GL 6746' & RKB 17' @ 6763.00ft (Drake 3) |
| <b>Site:</b>     | San Juan 29-6 Pad               | <b>North Reference:</b>             | True                                     |
| <b>Well:</b>     | San Juan 29-6 Unit 118M         | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Wellbore:</b> | OH                              |                                     |                                          |
| <b>Design:</b>   | Plan #4                         |                                     |                                          |

| Planned Survey      |                 |             |                     |            |            |                       |                         |                        |                       |  |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|--|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |  |
| 5,100.00            | 0.00            | 0.000       | 4,943.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 5,200.00            | 0.00            | 0.000       | 5,043.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 5,300.00            | 0.00            | 0.000       | 5,143.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 5,400.00            | 0.00            | 0.000       | 5,243.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 5,500.00            | 0.00            | 0.000       | 5,343.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 5,600.00            | 0.00            | 0.000       | 5,443.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 5,700.00            | 0.00            | 0.000       | 5,543.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 5,800.00            | 0.00            | 0.000       | 5,643.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 5,900.00            | 0.00            | 0.000       | 5,743.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 6,000.00            | 0.00            | 0.000       | 5,843.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 6,100.00            | 0.00            | 0.000       | 5,943.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 6,200.00            | 0.00            | 0.000       | 6,043.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 6,300.00            | 0.00            | 0.000       | 6,143.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 6,400.00            | 0.00            | 0.000       | 6,243.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 6,500.00            | 0.00            | 0.000       | 6,343.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 6,600.00            | 0.00            | 0.000       | 6,443.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 6,700.00            | 0.00            | 0.000       | 6,543.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 6,800.00            | 0.00            | 0.000       | 6,643.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 6,900.00            | 0.00            | 0.000       | 6,743.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 7,000.00            | 0.00            | 0.000       | 6,843.88            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 7,100.00            | 0.00            | 0.000       | 6,943.89            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 7,200.00            | 0.00            | 0.000       | 7,043.89            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 7,300.00            | 0.00            | 0.000       | 7,143.89            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 7,400.00            | 0.00            | 0.000       | 7,243.89            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 7,500.00            | 0.00            | 0.000       | 7,343.89            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 7,600.00            | 0.00            | 0.000       | 7,443.89            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 7,700.00            | 0.00            | 0.000       | 7,543.89            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 7,800.00            | 0.00            | 0.000       | 7,643.89            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 7,900.00            | 0.00            | 0.000       | 7,743.89            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 8,000.00            | 0.00            | 0.000       | 7,843.89            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 8,100.00            | 0.00            | 0.000       | 7,943.89            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 8,156.12            | 0.00            | 0.000       | 8,000.00            | 802.00     | -554.80    | 975.20                | 0.00                    | 0.00                   | 0.00                  |  |

| Design Targets            |               |              |          |            |            |                 |                |           |  |             |
|---------------------------|---------------|--------------|----------|------------|------------|-----------------|----------------|-----------|--|-------------|
| Target Name               | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (usft) | Easting (usft) | Latitude  |  | Longitude   |
| - hit/miss target         |               |              |          |            |            |                 |                |           |  |             |
| - Shape                   |               |              |          |            |            |                 |                |           |  |             |
| SJ 29-6 118M BTV          | 0.00          | 0.000        | 4,000.00 | 802.00     | -554.80    | 2,067,102.98    | 602,583.69     | 36.680391 |  | -107.483497 |
| - plan hits target center |               |              |          |            |            |                 |                |           |  |             |
| - Point                   |               |              |          |            |            |                 |                |           |  |             |
| SJ 29-6 118M BHL          | 0.00          | 0.000        | 8,000.00 | 802.00     | -554.80    | 2,067,102.98    | 602,583.69     | 36.680391 |  | -107.483497 |
| - plan hits target center |               |              |          |            |            |                 |                |           |  |             |
| - Point                   |               |              |          |            |            |                 |                |           |  |             |

| Casing Points       |                     |      |  |                      |                    |
|---------------------|---------------------|------|--|----------------------|--------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Name |  | Casing Diameter (in) | Hole Diameter (in) |
| 4,156.12            | 4,000.00            | 7"   |  | 7.00                 | 8.75               |



Scientific Drilling  
Planning Report



|           |                                 |                              |                                          |
|-----------|---------------------------------|------------------------------|------------------------------------------|
| Database: | Grand Junction                  | Local Co-ordinate Reference: | Well San Juan 29-6 Unit 118M             |
| Company:  | Hilcorp Energy - San Juan Basin | TVD Reference:               | GL 6746' & RKB 17' @ 6763.00ft (Drake 3) |
| Project:  | San Juan, NM NAD27              | MD Reference:                | GL 6746' & RKB 17' @ 6763.00ft (Drake 3) |
| Site:     | San Juan 29-6 Pad               | North Reference:             | True                                     |
| Well:     | San Juan 29-6 Unit 118M         | Survey Calculation Method:   | Minimum Curvature                        |
| Wellbore: | OH                              |                              |                                          |
| Design:   | Plan #4                         |                              |                                          |

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

Submit Electronically  
Via E-permitting

## NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

### Section 1 – Plan Description Effective May 25, 2021

**I. Operator:** Hilcorp Energy Company **OGRID:** 372171 **Date:** 1/29/2025

**II. Type:** ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: \_\_\_\_\_

**III. Well(s):** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

| Well Name               | API | ULSTR        | Footages              | Anticipated Oil BBL/D | Anticipated Gas MCF/D | Anticipated Produced Water BBL/D |
|-------------------------|-----|--------------|-----------------------|-----------------------|-----------------------|----------------------------------|
| San Juan 29-6 Unit 118M |     | O-32-29N-06W | 1179' FSL & 1422' FEL | 2.75                  | 918                   | 1.5                              |
|                         |     |              |                       |                       |                       |                                  |

**IV. Central Delivery Point Name:** Ignacio Processing Plant [See 19.15.27.9(D)(1) NMAC]

**V. Anticipated Schedule:** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

| Well Name                      | API | Spud Date   | TD Reached Date | Completion Commencement Date | Initial Flow Back Date | First Production Date |
|--------------------------------|-----|-------------|-----------------|------------------------------|------------------------|-----------------------|
| <u>San Juan 29-6 Unit 118M</u> |     | <u>2025</u> |                 |                              |                        | <u>2025</u>           |
|                                |     |             |                 |                              |                        |                       |

**VI. Separation Equipment:** ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

**VII. Operational Practices:** ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

**VIII. Best Management Practices:** ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

## **Section 2 – Enhanced Plan**

### **EFFECTIVE APRIL 1, 2022**

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

#### **IX. Anticipated Natural Gas Production:**

| Well | API | Anticipated Average Natural Gas Rate MCF/D | Anticipated Volume of Natural Gas for the First Year MCF |
|------|-----|--------------------------------------------|----------------------------------------------------------|
|      |     |                                            |                                                          |
|      |     |                                            |                                                          |

#### **X. Natural Gas Gathering System (NGGS):**

| Operator | System | ULSTR of Tie-in | Anticipated Gathering Start Date | Available Maximum Daily Capacity of System Segment Tie-in |
|----------|--------|-----------------|----------------------------------|-----------------------------------------------------------|
|          |        |                 |                                  |                                                           |
|          |        |                 |                                  |                                                           |

**XI. Map.** ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

**XII. Line Capacity.** The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

**XIII. Line Pressure.** Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

**XIV. Confidentiality:** ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

### **Section 3 - Certifications**

**Effective May 25, 2021**

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

***If Operator checks this box, Operator will select one of the following:***

**Well Shut-In.** ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

**Venting and Flaring Plan.** ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

### **Section 4 - Notices**

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

**I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.**

|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
| Signature:                                                                                       |
| Printed Name: Cherylene Weston                                                                   |
| Title: Operations Regulatory Tech Sr.                                                            |
| E-mail Address: <a href="mailto:cweston@hilcorp.com">cweston@hilcorp.com</a>                     |
| Date: 1/29/2025                                                                                  |
| Phone: 713-289-2615                                                                              |
| <b>OIL CONSERVATION DIVISION</b><br><b>(Only applicable when submitted as a standalone form)</b> |
| Approved By:                                                                                     |
| Title:                                                                                           |
| Approval Date:                                                                                   |
| Conditions of Approval:                                                                          |

## Hilcorp Energy Natural Gas Management Plan Attachments

### VI. Separation Equipment

The operator will select separation equipment for the maximum anticipated throughput and pressure to optimize gas capture. Separation equipment is sized according to manufacturer's design specifications. Separation vessels are built following the A.S.M.E. section VII division 1 codes for pressure vessel design, fabrication, inspection, testing and certification. Anticipated well pressures and production rates are evaluated to select separation equipment according to the equipment's designed operating pressure and throughput.

After completion, the operator utilizes flowback equipment, including separators, to manage wellbore fluids and solids during the initial separation period. After the initial flowback period is complete the operator utilizes iterative facility separation equipment to ensure that optimal separation is achieved.

### VII. Operational Practices 19.15.27.8 NMAC A through F

- A. The operator will maximize the recovery of natural gas and minimize the amount of gas vented or flared when technically and safely feasible as further described and detailed within the following subsections (B-F of 19.15.27.8). In all cases where natural gas venting and flaring requires regulatory reporting, reporting will be submitted accurately and within the required time frames.
- B. Venting and flaring during drilling operations:
  - a. New Drill HZ Gas Wells: The operator drills wells in the area by utilizing a balanced mud to safely drill the wellbore. This technique prevents gas from coming to surface during the drilling process. If there is an emergency or malfunction and natural gas does come to surface the natural gas will be captured and routed to sales if technically and safely feasible.
- C. Venting and flaring during completion or recompletion operations:
  - a. New Drill HZ Gas Wells: The operator's facilities are designed to handle the maximum throughput and pressures from the newly drilled and completed wellbores. The amount of gas vented and flared will be minimized when technically and safely feasible. During initial flowback and initial separation flowback the operator will utilize contracted flowback equipment, including separators, to manage wellbore fluids and solids. The initial flowback period will be minimized and flow will be sent to separation equipment as soon as possible to reduce the amount of gas that is vented to atmosphere. The natural gas will be utilized on site as needed for fuel gas and natural gas will be sold.
- D. Venting and flaring during production operations:
  - a. New Drill HZ Gas Wells: The operator's facilities are designed to handle the maximum throughput and pressures from producing wellbores. The amount of gas vented and flared will be minimized when technically and safely feasible.

Operations will effectively manage the following scenarios to minimize the quantity of natural gas that is vented or flared:

- (a) If there is an emergency or malfunction vented or flared natural gas will be reported, if required, and the emergency or malfunction will be resolved as soon as technically and safely feasible.
- (b) If the wellbore needs to be unloaded to atmosphere the operator will not vent the well after the well has achieved a stabilized rate and pressure. The operator will remain on site during unloading. Plunger lift systems will be optimized to reduce the amount of natural gas venting. Downhole maintenance, such as workovers, swabbing, etc. will only be conducted as needed and best management practices will be utilized to reduce venting of natural gas.

- (c) The operator will minimize the amount of time that natural gas is vented to atmosphere from gauging and sampling a storage tank or low pressure vessel. The formation is only anticipated to produce water and therefore tank emissions are anticipated to be negligible.
- (d) The operator will reduce the amount of time needed for loading out liquids from a storage tanks or other low-pressure vessels whenever feasible. Operations will always utilize the water transfer systems when available. Water loading emissions are anticipated to be negligible.
- (e) Equipment will be repaired and maintained routinely to minimize the venting or flaring of natural gas. Repairs and maintenance will be conducted in a manner that minimizes the amount of natural gas vented to atmosphere through the isolation of the equipment that is being repaired or maintained.
- (f) Electric controllers and pumps will be installed to replace pneumatic controllers whenever feasible. Pneumatic controllers and pumps will be inspected frequently to ensure that no excess gas is vented to atmosphere.
- (g) No dehydration or amine units are anticipated to be set on location.
- (h) Compressors, compressor engines, turbines, flanges, connectors, valves, storage tanks, and other low-pressure vessels and flanges will be routinely inspected to ensure that no excess venting occurs outside of normal operations.
- (i) Regulatory required testing, such as bradenhead and packer testing will be performed in a manner that minimizes the amount of natural gas vented to atmosphere.
- (j) If natural gas does not meet gathering pipeline specifications gas samples will be collected twice per week to determine when pipeline specification gas content has been achieved. During this time frame gas will be flared and not vented to atmosphere. Natural gas that meets pipeline specifications will be sold via pipeline and natural gas that can be utilized for fuel gas will be used during this time.
- (k) If pipeline, equipment, or facilities need purged of impurities gas losses will be minimized as much as technically and safely feasible.

E. Performance standards:

- a. The production facilities are designed to handle the maximum throughput and pressures from producing wellbores and will be designed to minimize waste. The amount of gas vented and flared will be minimized when technically and safely feasible.
- b. All tanks that are routed to a control device that is installed after 5/25/2021 will have an automatic gauging system to minimize the amount of vented natural gas.
- c. If a flare stack is installed or replaced after 5/25/2021 it will be equipped with an automatic ignitor or continuous pilot. The flare stack will be properly sized and designed to ensure proper combustion efficiency. The flare stack will be located 100 feet away from the nearest wellhead or storage tank.
- d. AVO inspections will be conducted weekly for the year after completion and for all wells producing greater than 60,000 cubic feet of natural gas daily. The AVO inspection will include all components, including flare stacks, thief hatches, closed vent systems, pumps, compressors, pressure relief devices, valves, lines, flanges, connectors, and associated pipeline to identify any leaks and releases by comprehensive auditory, visual, and olfactory inspection. The AVO inspection records will be maintained for 5 years which will be available at the department's request. Identified leaks will be repaired as soon as feasible to

minimize the amount of vented natural gas. F. Measurement or estimation of vented and flared natural gas.

- a. The volume of natural gas that is vented, flared or consumed for beneficial use will be measured when possible, or estimated, during drilling, completions, or production operations.
- b. Equipment will be installed to measure the volume of natural gas flared for all APD's issued after 5/25/2021 on facilities that will have an average daily gas rate greater than 60,000 cubic feet of natural gas. Measurement equipment will conform to API MPMS Chapter 14.10 regulations. The measurement equipment will not have a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment. If metering is not practical then the volume of gas will be estimated.