

Submit 1 Copy To Appropriate District Office  
District I – (575) 393-6161  
1625 N. French Dr., Hobbs, NM 88240  
District II – (575) 748-1283  
811 S. First St., Artesia, NM 88210  
District III – (505) 334-6178  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV – (505) 476-3460  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
Revised July 18, 2013

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

|                                                                                                     |
|-----------------------------------------------------------------------------------------------------|
| WELL API NO.<br>30-045-35899                                                                        |
| 5. Indicate Type of Lease<br>STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/> |
| 6. State Oil & Gas Lease No.                                                                        |
| 7. Lease Name or Unit Agreement Name<br>State Strat Test 600                                        |
| 8. Well Number<br>1                                                                                 |
| 9. OGRID Number<br>372171                                                                           |
| 10. Pool name or Wildcat<br>Entrada                                                                 |

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other ☒

2. Name of Operator  
HILCORP ENERGY COMPANY

3. Address of Operator  
382 Road 3100, Aztec, NM 87410

4. Well Location

Unit Letter G 1610' feet from the North line and 2205' feet from the East line  
Section 36 Township 32N Range 13W NMPM County San Juan

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
5819' GL

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
TEMPORARILY ABANDON ☐ CHANGE PLANS ☒  
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐  
DOWNHOLE COMMINGLE ☐  
CLOSED-LOOP SYSTEM ☐  
OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☐ P AND A ☐  
CASING/CEMENT JOB ☐  
OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Hilcorp Energy Company requests to change the surface hole based off the attached updated plat, additionally we intend to drill the well directional as described in the attached plans.

**ADHERE TO PREVIOUS NMOCD  
CONDITIONS OF APPROVAL**

**NMOCD  
NOV 10 2018  
DISTRICT III**

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE

*Amanda Walker*

TITLE Operations / Regulatory Technician DATE 11.08.2018

Type or print name Amanda Walker

E-mail address: mwalker@hilcorp.com PHONE: 505-324-5122

**For State Use Only**

APPROVED BY:

*Brandon Parrell*

TITLE

DATE 11/13/18

Conditions of Approval (if any):

*AV*

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1625 N. French Drive, Hobbs, NM 88240  
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Phone: (505) 334-6178 Fax: (505) 334-6170

District IV  
1220 S. St. Francis Drive, Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised August 1, 2011

Submit one copy to  
Appropriate District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Drive  
Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

|                                         |  |                                                      |  |                        |                                 |
|-----------------------------------------|--|------------------------------------------------------|--|------------------------|---------------------------------|
| <sup>1</sup> API Number<br>30-045-35899 |  | <sup>2</sup> Pool Code                               |  | <sup>3</sup> Pool Name |                                 |
| <sup>4</sup> Property Code<br>322773    |  | <sup>5</sup> Property Name<br>STATE STRAT TEST 600   |  |                        | <sup>6</sup> Well Number<br>1   |
| <sup>7</sup> GRID No.<br>372171         |  | <sup>8</sup> Operator Name<br>HILCORP ENERGY COMPANY |  |                        | <sup>9</sup> Elevation<br>5819' |

<sup>10</sup> Surface Location

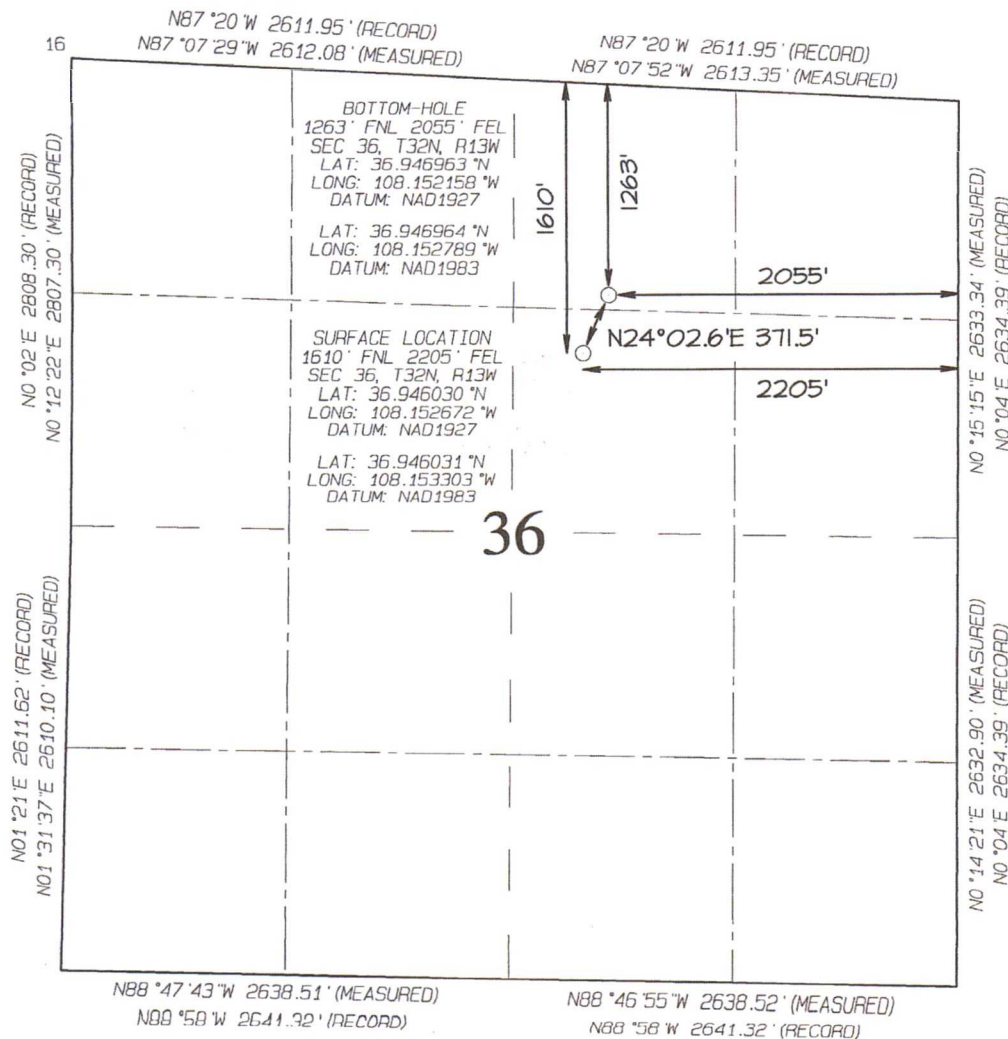
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County   |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| G             | 36      | 32N      | 13W   |         | 1610          | NORTH            | 2205          | EAST           | SAN JUAN |

<sup>11</sup> Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County   |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| B             | 36      | 32N      | 13W   |         | 1263          | NORTH            | 2055          | EAST           | SAN JUAN |

|                               |  |  |  |  |                               |                                  |                         |  |  |
|-------------------------------|--|--|--|--|-------------------------------|----------------------------------|-------------------------|--|--|
| <sup>12</sup> Dedicated Acres |  |  |  |  | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code | <sup>15</sup> 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



<sup>17</sup> OPERATOR CERTIFICATION

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 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.

Amanda Walker 11/08/2018  
Signature Date

Amanda Walker  
Printed Name

mwalker@hilcorp.com  
E-mail Address

<sup>18</sup> SURVEYOR CERTIFICATION

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.

Date Revised: NOVEMBER 7, 2018  
Date of Survey: JULY 19, 2018

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number 15269



## Hilcorp Energy Company

### Technical Plan

#### 1. Location

STATE STRAT TEST 600 #1

SHL: 1610' FNL, 2205' FEL -- T 32N, R 13W, Sec 36

BHL: 1263' FNL, 2055' FEL -- T 32N, R 13W, Sec 36

GL: 5819'

#### 2. Geological Markers

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

| <b>Formation</b>   | <b>Depth<br/>(MD/TVD)</b> | <b>Remarks</b>     |
|--------------------|---------------------------|--------------------|
| San Jose           | Surface                   | Wet                |
| Ojo Alamo          | 725'                      | Wet                |
| Kirtland           | 860'                      | Wet                |
| Fruitland          | 1298'                     | Possible Gas/Water |
| Pictured Cliffs    | 2055'                     | Wet                |
| Lewis Shale        | 2088'                     |                    |
| Massive Cliffhouse | 3669'                     | Possible Gas/Water |
| Menefee            | 3931'                     | Possible Gas/Water |
| Point Lookout      | 4509'                     | Possible Gas/Water |
| Mancos             | 4973'                     | Oil/Gas            |
| Greenhorn          | 6578'                     | Possible Gas/Water |
| Dakota             | 6748'                     | Possible Gas/Water |
| Morrison           | 7050'                     | Possible Gas/Water |
| Entrada            | 7850'                     | Possible Gas/Water |
| TD                 | 8000'                     |                    |

#### 3. Pressure Control Equipment

See Attached BOPE & Choke Manifold Schematic for a diagram of pressure control equipment.

- BOPE will be nipped up on top of wellhead after surface casing is set and cemented.
- Pressure control configuration will be designed to meet and exceed 3M standards.
- All equipment will have 3M pressure ratings.
- A rotating head will be rigged up on top of annular as seen in attached diagram.

**4. Casing & Cement Program**

A) The proposed casing program is outlined below:

| <b>Proposed Casing</b> |                  |                    |                            |                 |
|------------------------|------------------|--------------------|----------------------------|-----------------|
| <b>Casing</b>          | <b>Hole Size</b> | <b>Casing Size</b> | <b>Weight/Grade</b>        | <b>Depth</b>    |
| Surface                | 17-1/2"          | 13-3/8"            | 54.5#, J-55, BTC, New      | 0' - 340' (MD)  |
| Intermediate           | 12-1/4"          | 9-5/8"             | 40.0#, P-110 IC, LTC, New  | 0' - 5000' (MD) |
| Production             | 8-3/4"           | 7"                 | 26.0#, P-110, Hyd 513, New | 0' - TD (MD)    |

The production casing will be run from total MD to surface. If the 8-3/4" hole is not drilled to total MD, the production casing setting depth and length will be adjusted accordingly.

B) The proposed cement program is shown below:

| <b>Cement Program</b> |                   |              |                                                                                                                                    |               |                      |                           |
|-----------------------|-------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------|---------------------------|
| <b>Interval</b>       | <b>Depth (MD)</b> | <b>Sacks</b> | <b>Slurry</b>                                                                                                                      | <b>Excess</b> | <b>Volume</b>        | <b>Planned Cement Top</b> |
| Surface               | 340'              | 503          | Lead Cmt: Premium Cement<br>2% CaCl <sub>2</sub> , 0.125 lb/sk Poley E flake<br>1.175 ft <sup>3</sup> /sk -- 5.14 gal/sk, 15.8 ppg | 100%          | 590 ft <sup>3</sup>  | Surface                   |
| Intermediate          | 4000'             | 838          | Lead Cmt: Halcem Sytem<br>0.3% HR-5, 0.125 lb/sk Poly E flake,<br>1.974 ft <sup>3</sup> /sk -- 10.28 gal/sk, 12.3 ppg              | 30%           | 1654 ft <sup>3</sup> | Surface                   |
|                       | 5000'             | 328          | Tail Cmt: Varicem Cement<br>0.1% HR-5, 0.125 lb/sk Poly E flake,<br>1.295 ft <sup>3</sup> /sk -- 5.69 gal/sk, 13.5 ppg             | 30%           | 424 ft <sup>3</sup>  | 4000'                     |
| Production            | 8031'             | 529          | Tail Cmt: Bondcem<br>0.3% Super CBL, 0.1% HR -601, 6.08 gal/sk FW. 13.3 ppg, 1.356 ft <sup>3</sup> /sk                             | 15%           | 722 ft <sup>3</sup>  | 4000'                     |

Actual cement volumes will be determined and may be adjusted onsite based on well conditions. For the intermediate hole, a 2-stage cement job may be performed if hole conditions indicate during operations. Stage tool will be placed appropriately as conditions indicate.



## State Strat Test 600 #1

C) The proposed centralizer program is shown below:

| Centralizer Program |                                                                                               |
|---------------------|-----------------------------------------------------------------------------------------------|
| Interval            | Centralizers                                                                                  |
| Surface             | 1 per joint on bottom 3 joints                                                                |
| Intermediate        | 1 above intermediate shoe joint with collar clamp<br>1 every 2 <sup>nd</sup> joint to surface |
| Production          | 1 every joint to intermediate casing<br>1 every 3 <sup>rd</sup> joint to surface              |

To allow adequate time for cement to achieve a minimum of 500 psi compressive strength, a minimum of 8 hours wait on cement time for each hole section will be observed. The wellhead will not be installed, casing will not be tested, and the prior casing shoe will not be drilled out until adequate wait on cement time is achieved.

## 5. Drilling Fluids

A) The proposed drilling fluid program is outlined below:

| Mud Program  |                    |              |                 |                             |              |
|--------------|--------------------|--------------|-----------------|-----------------------------|--------------|
| Interval     | Mud Type           | Weight (ppg) | Fluid Loss (cc) | Invert Ratio (Diesel/Brine) | Depth (MD)   |
| Surface      | Water / Gel System | 8.3 - 9.2    | NC              |                             | 0-340'       |
| Intermediate | LSND / Gel system  | 8.4 - 9      | <6              |                             | 340 – 5000'  |
| Production   | LSND / Gel system  | 10 - 12      | 6-8             |                             | 5000 – 8031' |

LCM may be added to the mud system if hole conditions indicate.

B) Closed loop equipment will be utilized for solids control. Cuttings from surface, intermediate, and production hole will be hauled to an approved disposal site.

#### **6. Abnormal Pressures & Hazards**

- No over-pressured intervals expected.
- There is some offset Fruitland Coal, Mesa Verde, and Picture Cliffs production within the area which could result in these respective formations being under pressured.
- No hydrogen sulfide gas is expected based on nearby well production.

#### **7. Testing, Logging, Coring**

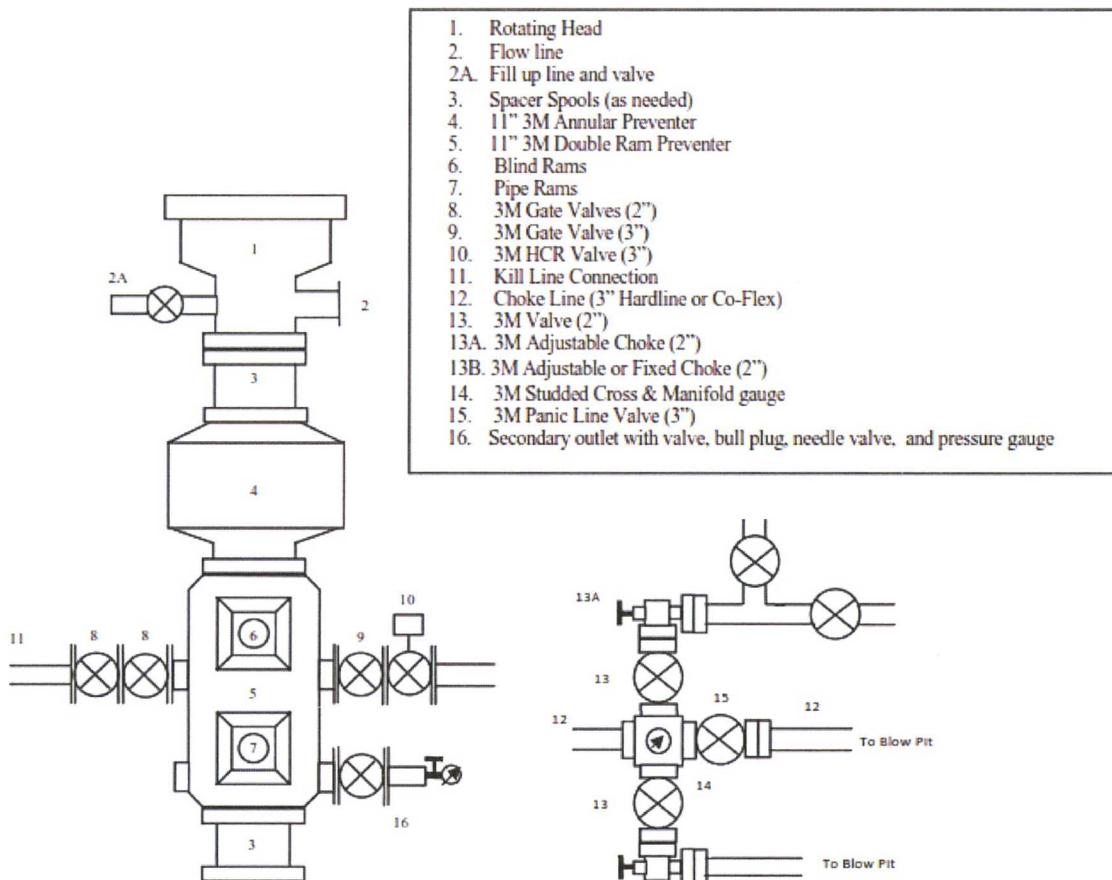
- Mud Logs: Mud loggers will be rigged up from intermediate casing shoe to production hole TD.
- Surveys: Surveys will be completed as needed to ensure hole direction. This well is not planned as a directional well
- Core: Whole Core and Sidewall Cores planned in Mancos Formation
- Logs: Triple Combo, Dipole Sonic, and image log planned in the Production hole below 5000' intermediate casing shoe
- Cased Hole Logs: A Temp Survey or CBL will be ran on the intermediate hole if cement is not circulated to surface during intermediate cement job.



Hilcorp Energy Company

State Strat Test 600 #1

## BOPE & Choke Manifold Schematic





Company: Hilcorp Energy Corp.  
Project: San Juan, NM NAD27  
Site: State Com 601 Pad  
Well: State Strat Test 600 #1  
Wellbore: OH  
Design: Plan #2



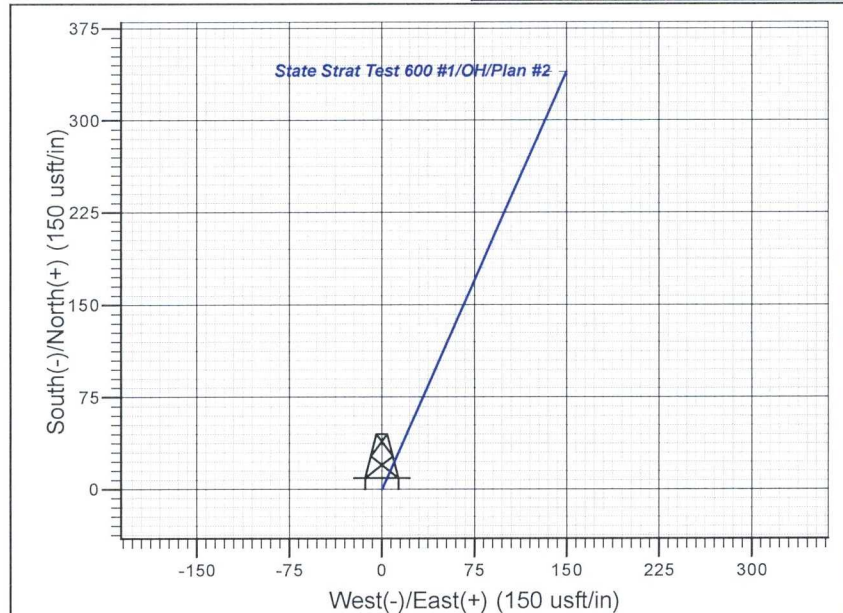
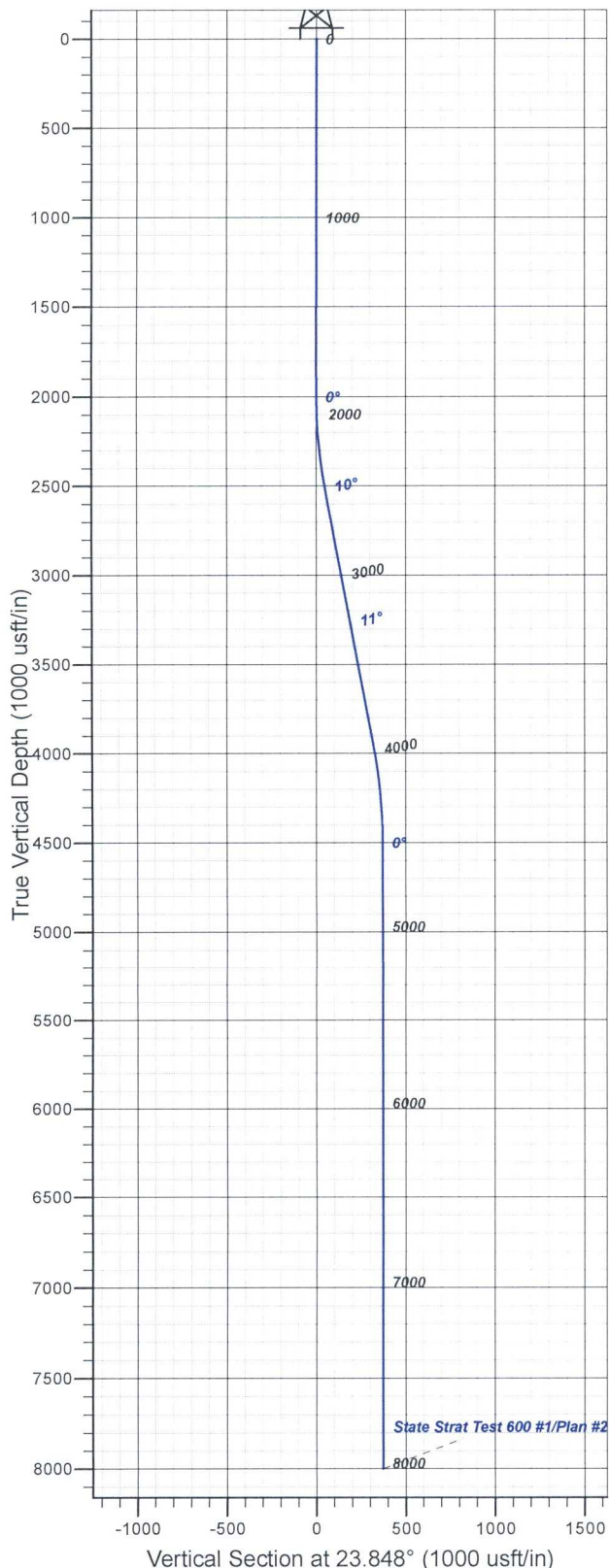
### Well Details: State Strat Test 600 #1

GL 5819' & RKB 16.5' @ 5835.50usft  
+N/-S 0.00 +E/-W 0.00 Northing 2163777.74 Easting 406682.24 Latitude 36.9460300 Longitude -108.1526720 Slot B01



Azimuths to True North  
Magnetic North: 8.98°

Magnetic Field  
Strength: 49875.7snT  
Dip Angle: 63.40°  
Date: 10/17/2018  
Model: HDGM



#### FORMATION TOP DETAILS

No formation data is available

#### CASING DETAILS

No casing data is available

Plan: Plan #2

13:47, November 02 2018  
Created By: Janie Collins

PROJECT DETAILS: San Juan, NM NAD27

Geodetic System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: New Mexico West 3003  
System Datum: Mean Sea Level

#### SECTION DETAILS

| Sec | MD      | Inc   | Azi    | TVD     | +N/-S  | +E/-W  | Dleg | TFace  | VSec   | Target                           |
|-----|---------|-------|--------|---------|--------|--------|------|--------|--------|----------------------------------|
| 1   | 0.00    | 0.00  | 0.000  | 0.00    | 0.00   | 0.00   | 0.00 | 0.00   | 0.00   |                                  |
| 2   | 2000.00 | 0.00  | 0.000  | 2000.00 | 0.00   | 0.00   | 0.00 | 0.00   | 0.00   |                                  |
| 3   | 2535.73 | 10.71 | 23.848 | 2532.61 | 45.68  | 20.19  | 2.00 | 23.85  | 49.95  |                                  |
| 4   | 3995.96 | 10.71 | 23.848 | 3967.39 | 293.99 | 129.96 | 0.00 | 0.00   | 321.43 |                                  |
| 5   | 4531.69 | 0.00  | 0.000  | 4500.00 | 339.67 | 150.15 | 2.00 | 180.00 | 371.37 | State Strat Test 600 #1H BHL Rev |
| 6   | 8031.70 | 0.00  | 0.000  | 8000.00 | 339.67 | 150.15 | 0.00 | 0.00   | 371.37 |                                  |

#### DESIGN TARGET DETAILS

| Name                                     | TVD    | +N/-S  | +E/-W      | Northing  | Easting    | Latitude     | Longitude | Shape |
|------------------------------------------|--------|--------|------------|-----------|------------|--------------|-----------|-------|
| State Strat Test 600 #1H BHL Rev#4500.00 | 339.67 | 150.15 | 2164116.90 | 406833.53 | 36.9469630 | -108.1521582 | Point     |       |
| - plan hits target center                |        |        |            |           |            |              |           |       |



## Hilcorp Energy Corp.

San Juan, NM NAD27

State Com 601 Pad

State Strat Test 600 #1 - Slot B01

OH

Plan: Plan #2

## Standard Planning Report

02 November, 2018



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



Scientific Drilling, Intl  
Planning Report



|           |                         |                              |                                         |
|-----------|-------------------------|------------------------------|-----------------------------------------|
| Database: | Grand Junction District | Local Co-ordinate Reference: | Well State Strat Test 600 #1 - Slot B01 |
| Company:  | Hilcorp Energy Corp.    | TVD Reference:               | GL 5819' & RKB 16.5' @ 5835.50usft      |
| Project:  | San Juan, NM NAD27      | MD Reference:                | GL 5819' & RKB 16.5' @ 5835.50usft      |
| Site:     | State Com 601 Pad       | North Reference:             | True                                    |
| Well:     | State Strat Test 600 #1 | Survey Calculation Method:   | Minimum Curvature                       |
| Wellbore: | OH                      |                              |                                         |
| Design:   | Plan #2                 |                              |                                         |

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

|                       |                   |                   |                   |
|-----------------------|-------------------|-------------------|-------------------|
| Site                  | State Com 601 Pad |                   |                   |
| Site Position:        |                   | Northing:         | 2,163,499.73 usft |
| From:                 | Lat/Long          | Easting:          | 406,641.28 usft   |
| Position Uncertainty: | 0.00 usft         | Slot Radius:      | 13.20 in          |
|                       |                   | Grid Convergence: | -0.19 °           |

|                      |                                    |                     |               |
|----------------------|------------------------------------|---------------------|---------------|
| Well                 | State Strat Test 600 #1 - Slot B01 |                     |               |
| Well Position        | +N/-S                              | 278.14 usft         | Northing:     |
|                      | +E/-W                              | 40.04 usft          | Easting:      |
| Position Uncertainty | 0.00 usft                          | Wellhead Elevation: | 0.00 usft     |
|                      |                                    | Ground Level:       | 5,819.00 usft |

|           |            |             |                     |
|-----------|------------|-------------|---------------------|
| Wellbore  | OH         |             |                     |
| Magnetics | Model Name | Sample Date | Declination (°)     |
|           | HDGM       | 10/17/2018  | 8.98                |
|           |            |             | Dip Angle (°)       |
|           |            |             | 63.40               |
|           |            |             | Field Strength (nT) |
|           |            |             | 49,876              |

|                   |                  |        |               |
|-------------------|------------------|--------|---------------|
| Design            | Plan #2          |        |               |
| Audit Notes:      |                  |        |               |
| Version:          | Phase:           | PLAN   | Tie On Depth: |
|                   |                  |        | 0.00          |
| Vertical Section: | Depth From (TVD) | +N/-S  | +E/-W         |
|                   | (usft)           | (usft) | (usft)        |
|                   | 0.00             | 0.00   | 0.00          |
|                   |                  |        | Direction (°) |
|                   |                  |        | 23.848        |

|               |             |         |              |        |        |                  |                  |                  |        |                        |
|---------------|-------------|---------|--------------|--------|--------|------------------|------------------|------------------|--------|------------------------|
| Plan Sections |             |         |              |        |        |                  |                  |                  |        |                        |
| Measured      | Inclination | Azimuth | Vertical     | +N/-S  | +E/-W  | Dogleg           | Build            | Turn             | TFO    | Target                 |
| Depth (usft)  | (°)         | (°)     | Depth (usft) | (usft) | (usft) | Rate (°/100usft) | Rate (°/100usft) | Rate (°/100usft) | (°)    |                        |
| 0.00          | 0.00        | 0.000   | 0.00         | 0.00   | 0.00   | 0.00             | 0.00             | 0.00             | 0.00   |                        |
| 2,000.00      | 0.00        | 0.000   | 2,000.00     | 0.00   | 0.00   | 0.00             | 0.00             | 0.00             | 0.00   |                        |
| 2,535.73      | 10.71       | 23.848  | 2,532.61     | 45.68  | 20.19  | 2.00             | 2.00             | 0.00             | 23.85  |                        |
| 3,995.96      | 10.71       | 23.848  | 3,967.39     | 293.99 | 129.96 | 0.00             | 0.00             | 0.00             | 0.00   |                        |
| 4,531.69      | 0.00        | 0.000   | 4,500.00     | 339.67 | 150.15 | 2.00             | -2.00            | 0.00             | 180.00 | State Strat Test 600 # |
| 8,031.70      | 0.00        | 0.000   | 8,000.00     | 339.67 | 150.15 | 0.00             | 0.00             | 0.00             | 0.00   |                        |



Scientific Drilling, Intl  
Planning Report



|           |                         |                              |                                         |
|-----------|-------------------------|------------------------------|-----------------------------------------|
| Database: | Grand Junction District | Local Co-ordinate Reference: | Well State Strat Test 600 #1 - Slot B01 |
| Company:  | Hilcorp Energy Corp.    | TVD Reference:               | GL 5819' & RKB 16.5' @ 5835.50usft      |
| Project:  | San Juan, NM NAD27      | MD Reference:                | GL 5819' & RKB 16.5' @ 5835.50usft      |
| Site:     | State Com 601 Pad       | North Reference:             | True                                    |
| Well:     | State Strat Test 600 #1 | Survey Calculation Method:   | Minimum Curvature                       |
| Wellbore: | OH                      |                              |                                         |
| Design:   | Plan #2                 |                              |                                         |

| Planned Survey        |                 |             |                       |              |              |                         |                         |                        |                       |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | 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                | 0.00            | 0.000       | 600.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 700.00                | 0.00            | 0.000       | 700.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 800.00                | 0.00            | 0.000       | 800.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 900.00                | 0.00            | 0.000       | 900.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,000.00              | 0.00            | 0.000       | 1,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,100.00              | 0.00            | 0.000       | 1,100.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,200.00              | 0.00            | 0.000       | 1,200.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,300.00              | 0.00            | 0.000       | 1,300.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,400.00              | 0.00            | 0.000       | 1,400.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,500.00              | 0.00            | 0.000       | 1,500.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,600.00              | 0.00            | 0.000       | 1,600.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,700.00              | 0.00            | 0.000       | 1,700.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,800.00              | 0.00            | 0.000       | 1,800.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,900.00              | 0.00            | 0.000       | 1,900.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,000.00              | 0.00            | 0.000       | 2,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,100.00              | 2.00            | 23.848      | 2,099.98              | 1.60         | 0.71         | 1.75                    | 2.00                    | 2.00                   | 0.00                  |
| 2,200.00              | 4.00            | 23.848      | 2,199.84              | 6.38         | 2.82         | 6.98                    | 2.00                    | 2.00                   | 0.00                  |
| 2,300.00              | 6.00            | 23.848      | 2,299.45              | 14.35        | 6.35         | 15.69                   | 2.00                    | 2.00                   | 0.00                  |
| 2,400.00              | 8.00            | 23.848      | 2,398.70              | 25.50        | 11.27        | 27.88                   | 2.00                    | 2.00                   | 0.00                  |
| 2,500.00              | 10.00           | 23.848      | 2,497.47              | 39.81        | 17.60        | 43.52                   | 2.00                    | 2.00                   | 0.00                  |
| 2,535.73              | 10.71           | 23.848      | 2,532.61              | 45.68        | 20.19        | 49.95                   | 2.00                    | 2.00                   | 0.00                  |
| 2,600.00              | 10.71           | 23.848      | 2,595.76              | 56.61        | 25.02        | 61.90                   | 0.00                    | 0.00                   | 0.00                  |
| 2,700.00              | 10.71           | 23.848      | 2,694.02              | 73.62        | 32.54        | 80.49                   | 0.00                    | 0.00                   | 0.00                  |
| 2,800.00              | 10.71           | 23.848      | 2,792.28              | 90.62        | 40.06        | 99.08                   | 0.00                    | 0.00                   | 0.00                  |
| 2,900.00              | 10.71           | 23.848      | 2,890.53              | 107.62       | 47.58        | 117.67                  | 0.00                    | 0.00                   | 0.00                  |
| 3,000.00              | 10.71           | 23.848      | 2,988.79              | 124.63       | 55.09        | 136.26                  | 0.00                    | 0.00                   | 0.00                  |
| 3,100.00              | 10.71           | 23.848      | 3,087.05              | 141.63       | 62.61        | 154.85                  | 0.00                    | 0.00                   | 0.00                  |
| 3,200.00              | 10.71           | 23.848      | 3,185.30              | 158.64       | 70.13        | 173.45                  | 0.00                    | 0.00                   | 0.00                  |
| 3,300.00              | 10.71           | 23.848      | 3,283.56              | 175.64       | 77.64        | 192.04                  | 0.00                    | 0.00                   | 0.00                  |
| 3,400.00              | 10.71           | 23.848      | 3,381.81              | 192.65       | 85.16        | 210.63                  | 0.00                    | 0.00                   | 0.00                  |
| 3,500.00              | 10.71           | 23.848      | 3,480.07              | 209.65       | 92.68        | 229.22                  | 0.00                    | 0.00                   | 0.00                  |
| 3,600.00              | 10.71           | 23.848      | 3,578.33              | 226.65       | 100.19       | 247.81                  | 0.00                    | 0.00                   | 0.00                  |
| 3,700.00              | 10.71           | 23.848      | 3,676.58              | 243.66       | 107.71       | 266.40                  | 0.00                    | 0.00                   | 0.00                  |
| 3,800.00              | 10.71           | 23.848      | 3,774.84              | 260.66       | 115.23       | 285.00                  | 0.00                    | 0.00                   | 0.00                  |
| 3,900.00              | 10.71           | 23.848      | 3,873.10              | 277.67       | 122.74       | 303.59                  | 0.00                    | 0.00                   | 0.00                  |
| 3,995.96              | 10.71           | 23.848      | 3,967.39              | 293.99       | 129.96       | 321.43                  | 0.00                    | 0.00                   | 0.00                  |
| 4,000.00              | 10.63           | 23.848      | 3,971.35              | 294.67       | 130.26       | 322.18                  | 2.00                    | -2.00                  | 0.00                  |
| 4,100.00              | 8.63            | 23.848      | 4,069.94              | 309.97       | 137.02       | 338.91                  | 2.00                    | -2.00                  | 0.00                  |
| 4,200.00              | 6.63            | 23.848      | 4,169.05              | 322.12       | 142.40       | 352.19                  | 2.00                    | -2.00                  | 0.00                  |
| 4,300.00              | 4.63            | 23.848      | 4,268.56              | 331.10       | 146.36       | 362.01                  | 2.00                    | -2.00                  | 0.00                  |
| 4,400.00              | 2.63            | 23.848      | 4,368.35              | 336.90       | 148.93       | 368.35                  | 2.00                    | -2.00                  | 0.00                  |
| 4,500.00              | 0.63            | 23.848      | 4,468.31              | 339.51       | 150.08       | 371.20                  | 2.00                    | -2.00                  | 0.00                  |
| 4,531.69              | 0.00            | 0.000       | 4,500.00              | 339.67       | 150.15       | 371.37                  | 2.00                    | -2.00                  | 0.00                  |
| 4,600.00              | 0.00            | 0.000       | 4,568.31              | 339.67       | 150.15       | 371.37                  | 0.00                    | 0.00                   | 0.00                  |
| 4,700.00              | 0.00            | 0.000       | 4,668.31              | 339.67       | 150.15       | 371.37                  | 0.00                    | 0.00                   | 0.00                  |
| 4,800.00              | 0.00            | 0.000       | 4,768.31              | 339.67       | 150.15       | 371.37                  | 0.00                    | 0.00                   | 0.00                  |
| 4,900.00              | 0.00            | 0.000       | 4,868.31              | 339.67       | 150.15       | 371.37                  | 0.00                    | 0.00                   | 0.00                  |
| 5,000.00              | 0.00            | 0.000       | 4,968.31              | 339.67       | 150.15       | 371.37                  | 0.00                    | 0.00                   | 0.00                  |



Scientific Drilling, Intl  
Planning Report



|           |                         |                              |                                         |
|-----------|-------------------------|------------------------------|-----------------------------------------|
| Database: | Grand Junction District | Local Co-ordinate Reference: | Well State Strat Test 600 #1 - Slot B01 |
| Company:  | Hilcorp Energy Corp.    | TVD Reference:               | GL 5819' & RKB 16.5' @ 5835.50usft      |
| Project:  | San Juan, NM NAD27      | MD Reference:                | GL 5819' & RKB 16.5' @ 5835.50usft      |
| Site:     | State Corn 601 Pad      | North Reference:             | True                                    |
| Well:     | State Strat Test 600 #1 | Survey Calculation Method:   | Minimum Curvature                       |
| Wellbore: | OH                      |                              |                                         |
| Design:   | Plan #2                 |                              |                                         |

Planned Survey

| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| 5,100.00                    | 0.00               | 0.000          | 5,068.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 5,200.00                    | 0.00               | 0.000          | 5,168.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 5,300.00                    | 0.00               | 0.000          | 5,268.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 5,400.00                    | 0.00               | 0.000          | 5,368.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 5,500.00                    | 0.00               | 0.000          | 5,468.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 5,600.00                    | 0.00               | 0.000          | 5,568.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 5,700.00                    | 0.00               | 0.000          | 5,668.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 5,800.00                    | 0.00               | 0.000          | 5,768.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 5,900.00                    | 0.00               | 0.000          | 5,868.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 6,000.00                    | 0.00               | 0.000          | 5,968.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 6,100.00                    | 0.00               | 0.000          | 6,068.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 6,200.00                    | 0.00               | 0.000          | 6,168.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 6,300.00                    | 0.00               | 0.000          | 6,268.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 6,400.00                    | 0.00               | 0.000          | 6,368.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 6,500.00                    | 0.00               | 0.000          | 6,468.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 6,600.00                    | 0.00               | 0.000          | 6,568.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 6,700.00                    | 0.00               | 0.000          | 6,668.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 6,800.00                    | 0.00               | 0.000          | 6,768.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 6,900.00                    | 0.00               | 0.000          | 6,868.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 7,000.00                    | 0.00               | 0.000          | 6,968.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 7,100.00                    | 0.00               | 0.000          | 7,068.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 7,200.00                    | 0.00               | 0.000          | 7,168.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 7,300.00                    | 0.00               | 0.000          | 7,268.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 7,400.00                    | 0.00               | 0.000          | 7,368.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 7,500.00                    | 0.00               | 0.000          | 7,468.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 7,600.00                    | 0.00               | 0.000          | 7,568.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 7,700.00                    | 0.00               | 0.000          | 7,668.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 7,800.00                    | 0.00               | 0.000          | 7,768.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 7,900.00                    | 0.00               | 0.000          | 7,868.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 8,000.00                    | 0.00               | 0.000          | 7,968.31                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |
| 8,031.70                    | 0.00               | 0.000          | 8,000.00                    | 339.67          | 150.15          | 371.37                        | 0.00                          | 0.00                         | 0.00                        |

Design Targets

| Target Name               | Dip Angle<br>(°) | Dip Dir.<br>(°) | TVD<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Northing<br>(usft) | Easting<br>(usft) | Latitude   | Longitude    |
|---------------------------|------------------|-----------------|---------------|-----------------|-----------------|--------------------|-------------------|------------|--------------|
| - hit/miss target         |                  |                 |               |                 |                 |                    |                   |            |              |
| - Shape                   |                  |                 |               |                 |                 |                    |                   |            |              |
| State Strat Test 600 #1H  | 0.00             | 0.000           | 4,500.00      | 339.67          | 150.15          | 2,164,116.90       | 406,833.53        | 36.9469630 | -108.1521582 |
| - plan hits target center |                  |                 |               |                 |                 |                    |                   |            |              |
| - Point                   |                  |                 |               |                 |                 |                    |                   |            |              |

**Directions from the Intersection of State Hwy 516 & State Hwy 574**  
**in Aztec, NM to Hilcorp Energy Company State Strat Test 600 #1 Wellpad & Frac Pad**  
**1610' FNL & 2205' FEL, Section 36, T32N, R13W, N.M.P.M., San Juan County, NM**

**Latitude: 36.946031°N Longitude: 108.153303°W Datum: NAD1983**

From the intersection of State Hwy 516 & State Hwy 574 in Aztec, NM, travel northerly on State Hwy 574 for 11.6 miles to Mile Marker 2.4;

Go Right (Northerly) exiting State Hwy 574 onto existing roadway for 0.3 mile to fork in roadway;

Go Right (Northerly) which is straight on existing roadway for 0.2 mile to fork in roadway;

Go Left (Northerly) which is straight on existing roadway for 0.7 mile to fork in roadway;

Go Left (Westerly) on existing roadway for 255' to fork in roadway;

Go Right (Northerly) on existing roadway for 0.2 mile to gate on fence-line proceed through gate for an additional 50' to staked Hilcorp State Strat Test 600 #1 Wellpad & Frac Pad.