

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

DEC 19 2019

FORM APPROVED  
OMB NO. 1004-0137  
Expires: January 31, 2018

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an  
abandoned well. Use form 3160-3 (APD) for such proposals.  
DISTRICT ARTESIA O.C.D.5. Lease Serial No.  
NMNM100332

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other8. Well Name and No.  
DAVINCI 7-18 FEDERAL COM 29H

2. Name of Operator

CIMAREX ENERGY COMPANY OF CO

Contact: FATIMA VASQUEZ

E-Mail: fvasquez@cimarex.com

9. API Well No.

30-015-44695-00-X1

3a. Address

600 N MARIENFELD STE 600  
MIDLAND, TX 79701

3b. Phone No. (include area code)

Ph: 432.620.1933

10. Field and Pool or Exploratory Area

WHITE CITY PENN (GAS)  
Purple Sage Halfcamp

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 7 T25S R27E NWNE 390FNL 1410FEL  
32.150780 N Lat, 104.225510 W Lon

11. County or Parish, State

98220  
EDDY COUNTY, NM

## 12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

## TYPE OF SUBMISSION

- ☒
- Notice of Intent
- 
- ☐
- Subsequent Report
- 
- ☐
- Final Abandonment Notice

- ☐
- Acidize
- 
- ☐
- Alter Casing
- 
- ☐
- Casing Repair
- 
- ☐
- Change Plans
- 
- ☐
- Convert to Injection

- ☐
- Deepen
- 
- ☐
- Hydraulic Fracturing
- 
- ☐
- New Construction
- 
- ☐
- Plug and Abandon
- 
- ☐
- Plug Back

- ☐
- Production (Start/Resume)
- 
- ☐
- Reclamation
- 
- ☐
- Recomplete
- 
- ☐
- Temporarily Abandon
- 
- ☐
- Water Disposal

- ☐
- Water Shut-Off
- 
- ☐
- Well Integrity
- 
- ☒
- Other
- 
- Change to Original A
- 
- PD

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Cimarex respectfully requests the following changes:

Change the well name to Davinci 7-18 Federal Com 29H.

Change BHL to:  
330' ESL & 330' FEL of Section 18, 25S, 27E.

Changes to Production liner.

No new surface disturbance.

See attached wellsite layout, updated C102, updated Drilling Plan, and updated Directional Survey.

Carlsbad Field Office  
OCD ArtesiaSEE ATTACHED FOR  
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #494370 verified by the BLM Well Information System  
For CIMAREX ENERGY COMPANY OF CO, sent to the Carlsbad  
Committed to AFMSS for processing by PRISCILLA PEREZ on 12/04/2019 (20PP0566SE)

Name (Printed/Typed) FATIMA VASQUEZ

Title REGULATORY ANALYST

Signature (Electronic Submission)

Date 12/03/2019

## THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By JEROMY PORTER

Title PETROLEUM ENGINEER

Date 12/10/2019

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Carlsbad

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\*

RW 2-10-2020

## Revisions to Operator-Submitted EC Data for Sundry Notice #494370

|                | Operator Submitted                                                                                    | BLM Revised (AFMSS)                                                                                                   |
|----------------|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Sundry Type:   | APDCH<br>NOI                                                                                          | APDCH<br>NOI                                                                                                          |
| Lease:         | NMNM100332                                                                                            | NMNM100332                                                                                                            |
| Agreement:     |                                                                                                       |                                                                                                                       |
| Operator:      | CIMAREX ENERGY COMPANY<br>600 N MARIENFELD ST SUITE 600<br>MIDLAND, TX 79701<br>Ph: 432-571-7800      | CIMAREX ENERGY COMPANY OF CO<br>600 N MARIENFELD STE 600<br>MIDLAND, TX 79701<br>Ph: 432.620.1936<br>Fx: 918.749.8059 |
| Admin Contact: | FATIMA VASQUEZ<br>REGULATORY ANALYST<br>E-Mail: fvasquez@cimarex.com<br><br>Ph: 432.620.1933          | FATIMA VASQUEZ<br>REGULATORY ANALYST<br>E-Mail: fvasquez@cimarex.com<br><br>Ph: 432.620.1933                          |
| Tech Contact:  | FATIMA VASQUEZ<br>REGULATORY ANALYST<br>E-Mail: fvasquez@cimarex.com<br><br>Ph: 432.620.1933          | FATIMA VASQUEZ<br>REGULATORY ANALYST<br>E-Mail: fvasquez@cimarex.com<br><br>Ph: 432.620.1933                          |
| Location:      |                                                                                                       |                                                                                                                       |
| State:         | NM                                                                                                    | NM                                                                                                                    |
| County:        | EDDY                                                                                                  | EDDY                                                                                                                  |
| Field/Pool:    | PURPLE SAGE;WOLFCAMP(GAS)                                                                             | WHITE CITY-PENN (GAS)                                                                                                 |
| Well/Facility: | DAVINCI 7 FEDERAL COM 29H<br>Sec 7 T25S R27E NWNE 390FNL 1410FEL<br>32.150781 N Lat, 104.225511 W Lon | DAVINCI 7-18 FEDERAL COM 29H<br>Sec 7 T25S R27E NWNE 390FNL 1410FEL<br>32.150780 N Lat, 104.225510 W Lon              |

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

|                                       |                                                        |                                                      |
|---------------------------------------|--------------------------------------------------------|------------------------------------------------------|
| <sup>1</sup> API Number<br>3001544695 | <sup>2</sup> Pool Code<br>98220                        | <sup>3</sup> Pool Name<br>Purple Sage Wolfcamp (Gas) |
| <sup>4</sup> Property Code<br>317791  | <sup>5</sup> Property Name<br>DAVINCI 7-18 FEDERAL COM |                                                      |
| <sup>7</sup> GRID No.<br>215099       | <sup>8</sup> Operator Name<br>CIMAREX ENERGY CO.       | <sup>6</sup> Well Number<br>2911                     |
|                                       |                                                        | <sup>9</sup> Elevation<br>3308.9'                    |

<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 |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| B             | 7       | 25S      | 27E   |         | 390           | NORTH            | 1410          | EAST           | EDDY   |

<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 |
|--------------------------------------|---------|-------------------------------|-------|----------------------------------|---------------|-------------------------|---------------|----------------|--------|
| P                                    | 18      | 25S                           | 27E   |                                  | 330           | SOUTH                   | 330           | EAST           | EDDY   |
| <sup>12</sup> Dedicated Acres<br>640 |         | <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.

**NOTE:**

- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearing is a Transverse Mercator Projection with a Central Meridian of W103°53'00"

|                                         |  |
|-----------------------------------------|--|
| <b>NAD 83 (SURFACE HOLE LOCATION)</b>   |  |
| LATITUDE = 32°09'02.81" (32.150781°)    |  |
| LONGITUDE = 104°13'51.84" (104.23111°)  |  |
| <b>NAD 27 (SURFACE HOLE LOCATION)</b>   |  |
| LATITUDE = 32°09'02.37" (32.150658°)    |  |
| LONGITUDE = 104°13'30.05" (104.223014°) |  |
| <b>STATE PLANE NAD 83 (N.M. EAST)</b>   |  |
| N: 418605.69' E: 574706.44'             |  |
| <b>STATE PLANE NAD 27 (N.M. EAST)</b>   |  |
| N: 418348.17' E: 533523.46'             |  |

|                                         |  |
|-----------------------------------------|--|
| <b>NAD 83 (L.P./FTP)</b>                |  |
| LATITUDE = 32°09'02.92" (32.150810°)    |  |
| LONGITUDE = 104°13'19.28" (104.222022°) |  |
| <b>NAD 27 (FIRST TAKE LOCATION)</b>     |  |
| LATITUDE = 32°09'02.48" (32.150690°)    |  |
| LONGITUDE = 104°13'17.49" (104.221525°) |  |
| <b>STATE PLANE NAD 83 (N.M. EAST)</b>   |  |
| N: 418617.95' E: 575786.11'             |  |
| <b>STATE PLANE NAD 27 (N.M. EAST)</b>   |  |
| N: 418360.42' E: 534603.10'             |  |

|                                         |  |
|-----------------------------------------|--|
| <b>NAD 83 (LTP/BHL)</b>                 |  |
| LATITUDE = 32°07'25.13" (32.123646°)    |  |
| LONGITUDE = 104°13'19.10" (104.221971°) |  |
| <b>NAD 27 (LTP/BHL)</b>                 |  |
| LATITUDE = 32°07'24.69" (32.123526°)    |  |
| LONGITUDE = 104°13'17.31" (104.221475°) |  |
| <b>STATE PLANE NAD 83 (N.M. EAST)</b>   |  |
| N: 408736.32' E: 575812.07'             |  |
| <b>STATE PLANE NAD 27 (N.M. EAST)</b>   |  |
| N: 408678.97' E: 534628.91'             |  |

**"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 owner or of such a mineral or working interest, or to a voluntary pooling agreement or a completion pooling order, hereafter filed with the Division.

Signature: Terri Stathem Date: 10/22/19

Printed Name: tslathem@cimarex.com

E-mail Address:

○ = SURFACE HOLE LOCATION  
◇ = LANDING POINT/FIRST TAKE POINT  
● = LAST TAKE POINT/BOTTOM HOLE LOCATION  
△ = SECTION CORNER LOCATED

**LINE TABLE**

| LINE | DIRECTION   | LENGTH   |
|------|-------------|----------|
| L1   | N89°35'10"E | 1080.03' |
| L2   | S89°35'10"W | 2648.27' |

2000' 1000' 0 1000' 2000'

SCALE

DRAWN BY: S.F. 05-29-17

REV: 1 10-08-19 L.C.W. (BHL & NAME CHANGES)

**"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.

May 11, 2017

Date of Survey: May 11, 2017

Signature and Seal of Professional Surveyor:

PAUL BUCHELE

NEW MEXICO

10-08-19

PROFESSIONAL SURVEYOR

Certificate Number:

RWP 2-10-2020

# Cimarex DaVinci 7-18 Federal Com #29H Rev1 RM 11Oct19 Proposal

## Geodetic Report

(Def Plan)



**Report Date:** October 11, 2019 - 11:14 AM  
**Client:** Cimarex  
**Field:** NM Eddy County (NAD 83)  
**Structure / Slot:** Cimarex DaVinci 7-18 Federal Com #29H / Cimarex DaVinci 7-18 Federal Com #29H  
**Well:** Cimarex DaVinci 7-18 Federal Com #29H  
**Borehole:** Original Borehole  
**UWI / API#:** Unknown / Unknown  
**Survey Name:** Cimarex DaVinci 7-18 Federal Com #29H Rev1 RM 11Oct19  
**Survey Date:** October 11, 2019  
**Tort / AHD / DDI / ERD Ratio:** 109.489 ° / 10962.374 ft / 6.382 / 1.142  
**Coordinate Reference System:** NAD83 New Mexico State Plane, Eastern Zone, US Feet  
**Location Lat / Long:** N 32° 9' 2.80649", W 104° 13' 31.83835"  
**Location Grid N/E Y/X:** N 418605.690 ftUS, E 574706.440 ftUS  
**CRS Grid Convergence Angle:** 0.0574 °  
**Grid Scale Factor:** 0.99991037  
**Version / Patch:** 2.10.782.0

**Survey / DLS Computation:** Minimum Curvature / Lubinski  
**Vertical Section Azimuth:** 179.849 ° (Grid North)  
**Vertical Section Origin:** 0.000 ft, 0.000 ft  
**TVD Reference Datum:** RKB  
**TVD Reference Elevation:** 3334.900 ft above MSL  
**Seabed / Ground Elevation:** 3308.900 ft above MSL  
**Magnetic Declination:** 7.228 °  
**Total Gravity Field Strength:** 998.4343mgn (9.80665 Based)  
**Gravity Model:** GARM  
**Total Magnetic Field Strength:** 47774.468 nT  
**Magnetic Dip Angle:** 59.788 °  
**Declination Date:** October 11, 2019  
**Magnetic Declination Model:** HDGM 2019  
**North Reference:** Grid North  
**Grid Convergence Used:** 0.0574 °  
**Total Corr Mag North->Grid North:** 7.1706 °  
**Local Coord Referenced To:** Structure Reference Point

| Comments                     | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|------------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|
| SHL [390' FNL.<br>1410' FEL] | 0.00       | 0.00        | 0.00             | 0.00        | 0.00         | 0.00       | 0.00       | N/A              | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 100.00     | 0.00        | 89.35            | 100.00      | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 200.00     | 0.00        | 89.35            | 200.00      | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 300.00     | 0.00        | 89.35            | 300.00      | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 400.00     | 0.00        | 89.35            | 400.00      | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 500.00     | 0.00        | 89.35            | 500.00      | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 600.00     | 0.00        | 89.35            | 600.00      | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 700.00     | 0.00        | 89.35            | 700.00      | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 800.00     | 0.00        | 89.35            | 800.00      | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 900.00     | 0.00        | 89.35            | 900.00      | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 1000.00    | 0.00        | 89.35            | 1000.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 1100.00    | 0.00        | 89.35            | 1100.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 1200.00    | 0.00        | 89.35            | 1200.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 1300.00    | 0.00        | 89.35            | 1300.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
| Salado (Top<br>Salt)         | 1334.00    | 0.00        | 89.35            | 1334.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 1400.00    | 0.00        | 89.35            | 1400.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 1500.00    | 0.00        | 89.35            | 1500.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 1600.00    | 0.00        | 89.35            | 1600.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 1700.00    | 0.00        | 89.35            | 1700.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 1800.00    | 0.00        | 89.35            | 1800.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
| Castille (Base<br>Salt)      | 1859.00    | 0.00        | 89.35            | 1859.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 1900.00    | 0.00        | 89.35            | 1900.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |
|                              | 2000.00    | 0.00        | 89.35            | 2000.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"          | W 104 13 31.84           |

| Comments                      | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") |           | Longitude<br>(E/W ° ' ") |
|-------------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|-----------|--------------------------|
| Bell Canyon<br>(Top Delaware) | 2090.00    | 0.00        | 89.35            | 2090.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N                       | 32 9 2.81 | W 104 13 31.84           |
|                               | 2100.00    | 0.00        | 89.35            | 2100.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N                       | 32 9 2.81 | W 104 13 31.84           |
|                               | 2200.00    | 0.00        | 89.35            | 2200.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N                       | 32 9 2.81 | W 104 13 31.84           |
| Nudge 2"/100'<br>DLS          | 2300.00    | 0.00        | 89.35            | 2300.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N                       | 32 9 2.81 | W 104 13 31.84           |
|                               | 2400.00    | 2.00        | 89.35            | 2399.98     | -0.02        | 0.02       | 1.75       | 2.00             | 418605.71          | 574708.18         | N                       | 32 9 2.81 | W 104 13 31.82           |
|                               | 2500.00    | 4.00        | 89.35            | 2499.84     | -0.06        | 0.08       | 6.98       | 2.00             | 418605.77          | 574713.42         | N                       | 32 9 2.81 | W 104 13 31.76           |
|                               | 2600.00    | 6.00        | 89.35            | 2599.45     | -0.14        | 0.18       | 15.69      | 2.00             | 418605.87          | 574722.13         | N                       | 32 9 2.81 | W 104 13 31.66           |
|                               | 2700.00    | 8.00        | 89.35            | 2698.70     | -0.24        | 0.32       | 27.88      | 2.00             | 418606.01          | 574734.32         | N                       | 32 9 2.81 | W 104 13 31.51           |
| Hold Nudge                    | 2794.25    | 9.89        | 89.35            | 2791.80     | -0.37        | 0.48       | 42.53      | 2.00             | 418606.17          | 574748.96         | N                       | 32 9 2.81 | W 104 13 31.34           |
|                               | 2800.00    | 9.89        | 89.35            | 2797.47     | -0.38        | 0.50       | 43.51      | 0.00             | 418606.19          | 574749.95         | N                       | 32 9 2.81 | W 104 13 31.33           |
|                               | 2900.00    | 9.89        | 89.35            | 2895.98     | -0.53        | 0.69       | 60.68      | 0.00             | 418606.38          | 574767.11         | N                       | 32 9 2.81 | W 104 13 31.13           |
| Cherry Canyon                 | 2948.74    | 9.89        | 89.35            | 2944.00     | -0.60        | 0.79       | 69.05      | 0.00             | 418606.48          | 574775.48         | N                       | 32 9 2.81 | W 104 13 31.04           |
|                               | 3000.00    | 9.89        | 89.35            | 2994.50     | -0.68        | 0.89       | 77.85      | 0.00             | 418606.58          | 574784.28         | N                       | 32 9 2.81 | W 104 13 30.93           |
|                               | 3100.00    | 9.89        | 89.35            | 3093.01     | -0.83        | 1.08       | 95.01      | 0.00             | 418606.77          | 574801.44         | N                       | 32 9 2.82 | W 104 13 30.73           |
|                               | 3200.00    | 9.89        | 89.35            | 3191.53     | -0.98        | 1.28       | 112.18     | 0.00             | 418606.99          | 574818.61         | N                       | 32 9 2.82 | W 104 13 30.53           |
|                               | 3300.00    | 9.89        | 89.35            | 3290.04     | -1.13        | 1.47       | 129.34     | 0.00             | 418607.16          | 574835.77         | N                       | 32 9 2.82 | W 104 13 30.33           |
|                               | 3400.00    | 9.89        | 89.35            | 3388.56     | -1.28        | 1.67       | 146.51     | 0.00             | 418607.36          | 574852.94         | N                       | 32 9 2.82 | W 104 13 30.13           |
|                               | 3500.00    | 9.89        | 89.35            | 3487.07     | -1.43        | 1.87       | 163.68     | 0.00             | 418607.56          | 574870.10         | N                       | 32 9 2.82 | W 104 13 29.93           |
|                               | 3600.00    | 9.89        | 89.35            | 3585.59     | -1.58        | 2.06       | 180.84     | 0.00             | 418607.75          | 574887.27         | N                       | 32 9 2.83 | W 104 13 29.73           |
|                               | 3700.00    | 9.89        | 89.35            | 3684.11     | -1.73        | 2.26       | 198.01     | 0.00             | 418607.95          | 574904.43         | N                       | 32 9 2.83 | W 104 13 29.54           |
|                               | 3800.00    | 9.89        | 89.35            | 3782.62     | -1.89        | 2.45       | 215.17     | 0.00             | 418608.14          | 574921.59         | N                       | 32 9 2.83 | W 104 13 29.34           |
|                               | 3900.00    | 9.89        | 89.35            | 3881.14     | -2.04        | 2.65       | 232.34     | 0.00             | 418608.34          | 574938.76         | N                       | 32 9 2.83 | W 104 13 29.14           |
|                               | 4000.00    | 9.89        | 89.35            | 3979.65     | -2.19        | 2.84       | 249.51     | 0.00             | 418608.53          | 574955.92         | N                       | 32 9 2.83 | W 104 13 28.94           |
|                               | 4026.75    | 9.89        | 89.35            | 4006.00     | -2.23        | 2.90       | 254.10     | 0.00             | 418608.59          | 574960.51         | N                       | 32 9 2.83 | W 104 13 28.88           |
|                               | 4100.00    | 9.89        | 89.35            | 4078.17     | -2.34        | 3.04       | 266.67     | 0.00             | 418608.73          | 574973.09         | N                       | 32 9 2.83 | W 104 13 28.74           |
|                               | 4200.00    | 9.89        | 89.35            | 4176.68     | -2.49        | 3.24       | 283.84     | 0.00             | 418608.92          | 574990.25         | N                       | 32 9 2.84 | W 104 13 28.54           |
| Brushy Canyon                 | 4300.00    | 9.89        | 89.35            | 4275.20     | -2.64        | 3.43       | 301.00     | 0.00             | 418609.12          | 575007.42         | N                       | 32 9 2.84 | W 104 13 28.34           |
|                               | 4400.00    | 9.89        | 89.35            | 4373.71     | -2.79        | 3.63       | 318.17     | 0.00             | 418609.32          | 575024.58         | N                       | 32 9 2.84 | W 104 13 28.14           |
|                               | 4500.00    | 9.89        | 89.35            | 4472.23     | -2.94        | 3.82       | 335.34     | 0.00             | 418609.51          | 575041.75         | N                       | 32 9 2.84 | W 104 13 27.94           |
|                               | 4600.00    | 9.89        | 89.35            | 4570.74     | -3.09        | 4.02       | 352.50     | 0.00             | 418609.71          | 575058.91         | N                       | 32 9 2.84 | W 104 13 27.74           |
|                               | 4700.00    | 9.89        | 89.35            | 4669.26     | -3.24        | 4.21       | 369.67     | 0.00             | 418609.90          | 575076.07         | N                       | 32 9 2.84 | W 104 13 27.54           |
|                               | 4800.00    | 9.89        | 89.35            | 4767.77     | -3.39        | 4.41       | 386.83     | 0.00             | 418610.10          | 575093.24         | N                       | 32 9 2.85 | W 104 13 27.34           |
|                               | 4900.00    | 9.89        | 89.35            | 4866.29     | -3.54        | 4.60       | 404.00     | 0.00             | 418610.29          | 575110.40         | N                       | 32 9 2.85 | W 104 13 27.14           |
|                               | 5000.00    | 9.89        | 89.35            | 4964.81     | -3.69        | 4.80       | 421.17     | 0.00             | 418610.49          | 575127.57         | N                       | 32 9 2.85 | W 104 13 26.94           |
|                               | 5100.00    | 9.89        | 89.35            | 5063.32     | -3.84        | 5.00       | 438.33     | 0.00             | 418610.69          | 575144.73         | N                       | 32 9 2.85 | W 104 13 26.74           |
|                               | 5200.00    | 9.89        | 89.35            | 5161.84     | -3.99        | 5.19       | 455.50     | 0.00             | 418610.88          | 575161.90         | N                       | 32 9 2.85 | W 104 13 26.54           |
|                               | 5300.00    | 9.89        | 89.35            | 5260.35     | -4.14        | 5.39       | 472.66     | 0.00             | 418611.08          | 575179.06         | N                       | 32 9 2.86 | W 104 13 26.34           |
|                               | 5400.00    | 9.89        | 89.35            | 5358.87     | -4.29        | 5.58       | 489.83     | 0.00             | 418611.27          | 575196.23         | N                       | 32 9 2.86 | W 104 13 26.14           |
|                               | 5500.00    | 9.89        | 89.35            | 5457.38     | -4.44        | 5.78       | 507.00     | 0.00             | 418611.47          | 575213.39         | N                       | 32 9 2.86 | W 104 13 25.94           |
|                               | 5600.00    | 9.89        | 89.35            | 5555.90     | -4.59        | 5.97       | 524.16     | 0.00             | 418611.66          | 575230.55         | N                       | 32 9 2.86 | W 104 13 25.74           |
| Top Bone<br>Spring            | 5669.13    | 9.89        | 89.35            | 5624.00     | -4.70        | 6.11       | 536.03     | 0.00             | 418611.80          | 575242.42         | N                       | 32 9 2.86 | W 104 13 25.60           |
|                               | 5700.00    | 9.89        | 89.35            | 5654.41     | -4.74        | 6.17       | 541.33     | 0.00             | 418611.86          | 575247.72         | N                       | 32 9 2.86 | W 104 13 25.54           |
|                               | 5800.00    | 9.89        | 89.35            | 5752.93     | -4.89        | 6.37       | 558.49     | 0.00             | 418612.05          | 575264.88         | N                       | 32 9 2.86 | W 104 13 25.34           |
|                               | 5900.00    | 9.89        | 89.35            | 5851.44     | -5.04        | 6.56       | 575.66     | 0.00             | 418612.25          | 575282.05         | N                       | 32 9 2.87 | W 104 13 25.14           |
|                               | 6000.00    | 9.89        | 89.35            | 5949.96     | -5.19        | 6.76       | 592.83     | 0.00             | 418612.45          | 575299.21         | N                       | 32 9 2.87 | W 104 13 24.94           |
|                               | 6100.00    | 9.89        | 89.35            | 6048.48     | -5.34        | 6.95       | 609.99     | 0.00             | 418612.64          | 575316.38         | N                       | 32 9 2.87 | W 104 13 24.74           |
|                               | 6200.00    | 9.89        | 89.35            | 6146.99     | -5.50        | 7.15       | 627.16     | 0.00             | 418612.84          | 575333.54         | N                       | 32 9 2.87 | W 104 13 24.54           |
|                               | 6300.00    | 9.89        | 89.35            | 6245.51     | -5.65        | 7.34       | 644.32     | 0.00             | 418613.03          | 575350.71         | N                       | 32 9 2.87 | W 104 13 24.34           |
|                               | 6400.00    | 9.89        | 89.35            | 6344.02     | -5.80        | 7.54       | 661.49     | 0.00             | 418613.23          | 575367.87         | N                       | 32 9 2.87 | W 104 13 24.14           |
|                               | 6500.00    | 9.89        | 89.35            | 6442.54     | -5.95        | 7.73       | 678.66     | 0.00             | 418613.42          | 575385.03         | N                       | 32 9 2.88 | W 104 13 23.94           |
| Top 1st BSPG<br>SS            | 6593.86    | 9.89        | 89.35            | 6535.00     | -6.09        | 7.92       | 694.77     | 0.00             | 418613.61          | 575401.14         | N                       | 32 9 2.88 | W 104 13 23.76           |
|                               | 6600.00    | 9.89        | 89.35            | 6541.05     | -6.10        | 7.93       | 695.82     | 0.00             | 418613.62          | 575402.20         | N                       | 32 9 2.88 | W 104 13 23.74           |
|                               | 6700.00    | 9.89        | 89.35            | 6639.57     | -6.25        | 8.13       | 712.99     | 0.00             | 418613.82          | 575419.36         | N                       | 32 9 2.88 | W 104 13 23.55           |
|                               | 6800.00    | 9.89        | 89.35            | 6738.08     | -6.40        | 8.32       | 730.15     | 0.00             | 418614.01          | 575436.53         | N                       | 32 9 2.88 | W 104 13 23.35           |

| Comments                                | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|-----------------------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|
| Top 2nd BSPG<br>SS                      | 6900.00    | 9.89        | 89.35            | 6836.60     | -6.55        | 8.52       | 747.32     | 0.00             | 418614.21          | 575453.69         | N 32 9 2.88             | W 104 13 23.15           |
|                                         | 7000.00    | 9.89        | 89.35            | 6935.11     | -6.70        | 8.71       | 764.49     | 0.00             | 418614.40          | 575470.86         | N 32 9 2.89             | W 104 13 22.95           |
|                                         | 7100.00    | 9.89        | 89.35            | 7033.63     | -6.85        | 8.91       | 781.65     | 0.00             | 418614.60          | 575488.02         | N 32 9 2.89             | W 104 13 22.75           |
|                                         | 7176.51    | 9.89        | 89.35            | 7109.00     | -6.96        | 9.06       | 794.79     | 0.00             | 418614.75          | 575501.15         | N 32 9 2.89             | W 104 13 22.59           |
|                                         | 7200.00    | 9.89        | 89.35            | 7132.15     | -7.00        | 9.10       | 798.82     | 0.00             | 418614.79          | 575505.19         | N 32 9 2.89             | W 104 13 22.55           |
|                                         | 7300.00    | 9.89        | 89.35            | 7230.66     | -7.15        | 9.30       | 815.98     | 0.00             | 418614.99          | 575522.35         | N 32 9 2.89             | W 104 13 22.35           |
|                                         | 7400.00    | 9.89        | 89.35            | 7329.18     | -7.30        | 9.50       | 833.15     | 0.00             | 418615.18          | 575539.51         | N 32 9 2.89             | W 104 13 22.15           |
|                                         | 7500.00    | 9.89        | 89.35            | 7427.69     | -7.45        | 9.69       | 850.32     | 0.00             | 418615.38          | 575556.68         | N 32 9 2.89             | W 104 13 21.95           |
|                                         | 7600.00    | 9.89        | 89.35            | 7526.21     | -7.60        | 9.89       | 867.48     | 0.00             | 418615.58          | 575573.84         | N 32 9 2.90             | W 104 13 21.75           |
|                                         | 7700.00    | 9.89        | 89.35            | 7624.72     | -7.75        | 10.08      | 884.65     | 0.00             | 418615.77          | 575591.01         | N 32 9 2.90             | W 104 13 21.55           |
|                                         | 7800.00    | 9.89        | 89.35            | 7723.24     | -7.90        | 10.28      | 901.81     | 0.00             | 418615.97          | 575608.17         | N 32 9 2.90             | W 104 13 21.35           |
|                                         | 7900.00    | 9.89        | 89.35            | 7821.75     | -8.05        | 10.47      | 918.98     | 0.00             | 418616.16          | 575625.34         | N 32 9 2.90             | W 104 13 21.15           |
|                                         | 8000.00    | 9.89        | 89.35            | 7920.27     | -8.20        | 10.67      | 936.15     | 0.00             | 418616.36          | 575642.50         | N 32 9 2.90             | W 104 13 20.95           |
|                                         | 8100.00    | 9.89        | 89.35            | 8018.78     | -8.35        | 10.87      | 953.31     | 0.00             | 418616.55          | 575659.66         | N 32 9 2.90             | W 104 13 20.75           |
|                                         | 8200.00    | 9.89        | 89.35            | 8117.30     | -8.50        | 11.06      | 970.48     | 0.00             | 418616.75          | 575676.83         | N 32 9 2.91             | W 104 13 20.55           |
| Top 3rd BSPS<br>SS                      | 8300.00    | 9.89        | 89.35            | 8215.82     | -8.65        | 11.26      | 987.64     | 0.00             | 418616.95          | 575693.99         | N 32 9 2.91             | W 104 13 20.35           |
|                                         | 8400.00    | 9.89        | 89.35            | 8314.33     | -8.80        | 11.45      | 1004.81    | 0.00             | 418617.14          | 575711.16         | N 32 9 2.91             | W 104 13 20.15           |
|                                         | 8464.63    | 9.89        | 89.35            | 8378.00     | -8.90        | 11.58      | 1015.90    | 0.00             | 418617.27          | 575722.25         | N 32 9 2.91             | W 104 13 20.02           |
|                                         | 8500.00    | 9.89        | 89.35            | 8412.85     | -8.95        | 11.65      | 1021.98    | 0.00             | 418617.34          | 575728.32         | N 32 9 2.91             | W 104 13 19.95           |
|                                         | 8588.47    | 9.89        | 89.35            | 8500.00     | -9.09        | 11.82      | 1037.16    | 0.00             | 418617.51          | 575743.51         | N 32 9 2.91             | W 104 13 19.77           |
|                                         | 8600.00    | 9.65        | 89.35            | 8511.37     | -9.10        | 11.84      | 1039.12    | 2.00             | 418617.53          | 575745.46         | N 32 9 2.91             | W 104 13 19.75           |
|                                         | 8700.00    | 7.65        | 89.35            | 8610.22     | -9.24        | 12.01      | 1054.17    | 2.00             | 418617.70          | 575760.51         | N 32 9 2.91             | W 104 13 19.58           |
|                                         | 8800.00    | 5.65        | 89.35            | 8709.54     | -9.34        | 12.15      | 1065.75    | 2.00             | 418617.84          | 575772.09         | N 32 9 2.92             | W 104 13 19.44           |
|                                         | 8826.57    | 5.12        | 89.35            | 8736.00     | -9.36        | 12.18      | 1068.25    | 2.00             | 418617.86          | 575774.59         | N 32 9 2.92             | W 104 13 19.41           |
|                                         | 8900.00    | 3.65        | 89.35            | 8809.21     | -9.41        | 12.24      | 1073.87    | 2.00             | 418617.93          | 575780.21         | N 32 9 2.92             | W 104 13 19.35           |
|                                         | 9000.00    | 1.65        | 89.35            | 8909.10     | -9.45        | 12.29      | 1078.50    | 2.00             | 418617.98          | 575784.84         | N 32 9 2.92             | W 104 13 19.29           |
|                                         | 9036.91    | 0.92        | 89.35            | 8946.00     | -9.46        | 12.30      | 1079.32    | 2.00             | 418617.99          | 575785.66         | N 32 9 2.92             | W 104 13 19.28           |
|                                         | 9082.72    | 0.00        | 89.35            | 8991.80     | -9.46        | 12.31      | 1079.69    | 2.00             | 418617.99          | 575786.03         | N 32 9 2.92             | W 104 13 19.28           |
|                                         | 9100.00    | 0.00        | 89.35            | 9009.08     | -9.46        | 12.31      | 1079.69    | 0.00             | 418617.99          | 575786.03         | N 32 9 2.92             | W 104 13 19.28           |
| KOP - Build<br>12"/100' DLS             | 9135.93    | 0.00        | 89.35            | 9045.01     | -9.46        | 12.31      | 1079.69    | 0.00             | 418617.99          | 575786.03         | N 32 9 2.92             | W 104 13 19.28           |
| Wolfcamp A2                             | 9200.00    | 7.69        | 179.85           | 9108.89     | -5.17        | 8.01       | 1079.70    | 12.00            | 418613.70          | 575786.04         | N 32 9 2.87             | W 104 13 19.28           |
|                                         | 9300.00    | 19.69       | 179.85           | 9205.87     | 18.45        | -15.61     | 1079.76    | 12.00            | 418590.08          | 575786.10         | N 32 9 2.64             | W 104 13 19.28           |
|                                         | 9306.52    | 20.47       | 179.85           | 9212.00     | 20.69        | -17.85     | 1079.77    | 12.00            | 418587.85          | 575786.11         | N 32 9 2.62             | W 104 13 19.28           |
|                                         | 9400.00    | 31.69       | 179.85           | 9295.83     | 61.72        | -58.88     | 1079.88    | 12.00            | 418546.82          | 575786.22         | N 32 9 2.21             | W 104 13 19.28           |
|                                         | 9455.18    | 38.31       | 179.85           | 9341.00     | 93.35        | -90.51     | 1079.96    | 12.00            | 418515.19          | 575786.30         | N 32 9 1.90             | W 104 13 19.28           |
|                                         | 9500.00    | 43.69       | 179.85           | 9374.82     | 122.75       | -119.90    | 1080.04    | 12.00            | 418485.80          | 575786.38         | N 32 9 1.61             | W 104 13 19.28           |
|                                         | 9600.00    | 55.69       | 179.85           | 9439.39     | 198.86       | -196.01    | 1080.24    | 12.00            | 418409.69          | 575786.58         | N 32 9 0.86             | W 104 13 19.28           |
|                                         | 9700.00    | 67.69       | 179.85           | 9486.73     | 286.74       | -283.89    | 1080.47    | 12.00            | 418321.82          | 575786.81         | N 32 8 59.99            | W 104 13 19.27           |
|                                         | 9735.57    | 71.96       | 179.85           | 9499.00     | 320.12       | -317.27    | 1080.56    | 12.00            | 418288.44          | 575786.90         | N 32 8 59.66            | W 104 13 19.27           |
|                                         | 9760.93    | 75.00       | 179.85           | 9506.21     | 344.43       | -341.58    | 1080.62    | 12.00            | 418264.14          | 575786.96         | N 32 8 59.42            | W 104 13 19.27           |
|                                         | 9800.00    | 76.56       | 179.85           | 9515.81     | 382.30       | -379.45    | 1080.72    | 4.00             | 418226.27          | 575787.06         | N 32 8 59.04            | W 104 13 19.27           |
|                                         | 9900.00    | 80.56       | 179.85           | 9535.63     | 480.29       | -477.45    | 1080.98    | 4.00             | 418128.29          | 575787.32         | N 32 8 58.07            | W 104 13 19.27           |
|                                         | 10000.00   | 84.56       | 179.85           | 9548.57     | 579.43       | -576.59    | 1081.24    | 4.00             | 418029.16          | 575787.58         | N 32 8 57.09            | W 104 13 19.27           |
|                                         | 10100.00   | 88.56       | 179.85           | 9554.57     | 679.23       | -676.38    | 1081.50    | 4.00             | 417929.37          | 575787.85         | N 32 8 56.10            | W 104 13 19.27           |
| Wolfcamp 'C'<br>Target<br>Landing Point | 10128.90   | 89.72       | 179.85           | 9555.00     | 708.13       | -705.28    | 1081.58    | 4.00             | 417900.48          | 575787.92         | N 32 8 55.82            | W 104 13 19.27           |
|                                         | 10200.00   | 89.72       | 179.85           | 9555.35     | 779.23       | -776.38    | 1081.77    | 0.00             | 417829.38          | 575788.11         | N 32 8 55.11            | W 104 13 19.27           |
|                                         | 10300.00   | 89.72       | 179.85           | 9555.84     | 879.23       | -876.38    | 1082.03    | 0.00             | 417729.39          | 575788.37         | N 32 8 54.12            | W 104 13 19.26           |
|                                         | 10400.00   | 89.72       | 179.85           | 9556.33     | 979.23       | -976.38    | 1082.30    | 0.00             | 417629.40          | 575788.64         | N 32 8 53.13            | W 104 13 19.26           |
|                                         | 10500.00   | 89.72       | 179.85           | 9556.82     | 1079.22      | -1076.38   | 1082.56    | 0.00             | 417529.41          | 575788.90         | N 32 8 52.14            | W 104 13 19.26           |
|                                         | 10600.00   | 89.72       | 179.85           | 9557.31     | 1179.22      | -1176.37   | 1082.82    | 0.00             | 417429.42          | 575789.16         | N 32 8 51.16            | W 104 13 19.26           |
|                                         | 10700.00   | 89.72       | 179.85           | 9557.80     | 1279.22      | -1276.37   | 1083.09    | 0.00             | 417329.43          | 575789.43         | N 32 8 50.17            | W 104 13 19.26           |

| Comments    | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|-------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|
|             | 10800.00   | 89.72       | 179.85           | 9558.30     | 1379.22      | -1376.37   | 1083.35    | 0.00             | 417229.45          | 575789.69         | N 32 8 49.18            | W 104 13 19.25           |
|             | 10900.00   | 89.72       | 179.85           | 9558.79     | 1479.22      | -1476.37   | 1083.61    | 0.00             | 417129.46          | 575789.95         | N 32 8 48.19            | W 104 13 19.25           |
|             | 11000.00   | 89.72       | 179.85           | 9559.28     | 1579.22      | -1576.37   | 1083.88    | 0.00             | 417029.47          | 575790.22         | N 32 8 47.20            | W 104 13 19.25           |
|             | 11100.00   | 89.72       | 179.85           | 9559.77     | 1679.22      | -1676.37   | 1084.14    | 0.00             | 416929.48          | 575790.48         | N 32 8 46.21            | W 104 13 19.25           |
|             | 11200.00   | 89.72       | 179.85           | 9560.26     | 1779.22      | -1776.36   | 1084.40    | 0.00             | 416829.49          | 575790.74         | N 32 8 45.22            | W 104 13 19.25           |
|             | 11300.00   | 89.72       | 179.85           | 9560.75     | 1879.21      | -1876.36   | 1084.67    | 0.00             | 416729.50          | 575791.01         | N 32 8 44.23            | W 104 13 19.24           |
|             | 11400.00   | 89.72       | 179.85           | 9561.24     | 1979.21      | -1976.36   | 1084.93    | 0.00             | 416629.51          | 575791.27         | N 32 8 43.24            | W 104 13 19.24           |
|             | 11500.00   | 89.72       | 179.85           | 9561.73     | 2079.21      | -2076.36   | 1085.19    | 0.00             | 416529.52          | 575791.53         | N 32 8 42.25            | W 104 13 19.24           |
|             | 11600.00   | 89.72       | 179.85           | 9562.22     | 2179.21      | -2176.36   | 1085.46    | 0.00             | 416429.53          | 575791.80         | N 32 8 41.26            | W 104 13 19.24           |
|             | 11700.00   | 89.72       | 179.85           | 9562.71     | 2279.21      | -2276.36   | 1085.72    | 0.00             | 416329.54          | 575792.06         | N 32 8 40.27            | W 104 13 19.24           |
|             | 11800.00   | 89.72       | 179.85           | 9563.20     | 2379.21      | -2376.35   | 1085.98    | 0.00             | 416229.55          | 575792.32         | N 32 8 39.28            | W 104 13 19.24           |
|             | 11900.00   | 89.72       | 179.85           | 9563.70     | 2479.21      | -2476.35   | 1086.25    | 0.00             | 416129.56          | 575792.59         | N 32 8 38.29            | W 104 13 19.23           |
|             | 12000.00   | 89.72       | 179.85           | 9564.19     | 2579.21      | -2576.35   | 1086.51    | 0.00             | 416029.57          | 575792.85         | N 32 8 37.30            | W 104 13 19.23           |
|             | 12100.00   | 89.72       | 179.85           | 9564.68     | 2679.21      | -2676.35   | 1086.77    | 0.00             | 415929.58          | 575793.12         | N 32 8 36.31            | W 104 13 19.23           |
|             | 12200.00   | 89.72       | 179.85           | 9565.17     | 2779.20      | -2776.35   | 1087.04    | 0.00             | 415829.60          | 575793.38         | N 32 8 35.32            | W 104 13 19.23           |
|             | 12300.00   | 89.72       | 179.85           | 9565.66     | 2879.20      | -2876.35   | 1087.30    | 0.00             | 415729.61          | 575793.64         | N 32 8 34.33            | W 104 13 19.23           |
|             | 12400.00   | 89.72       | 179.85           | 9566.15     | 2979.20      | -2976.35   | 1087.57    | 0.00             | 415629.62          | 575793.91         | N 32 8 33.34            | W 104 13 19.22           |
|             | 12500.00   | 89.72       | 179.85           | 9566.64     | 3079.20      | -3076.34   | 1087.83    | 0.00             | 415529.63          | 575794.17         | N 32 8 32.35            | W 104 13 19.22           |
|             | 12600.00   | 89.72       | 179.85           | 9567.13     | 3179.20      | -3176.34   | 1088.09    | 0.00             | 415429.64          | 575794.43         | N 32 8 31.36            | W 104 13 19.22           |
|             | 12700.00   | 89.72       | 179.85           | 9567.62     | 3279.20      | -3276.34   | 1088.36    | 0.00             | 415329.65          | 575794.70         | N 32 8 30.38            | W 104 13 19.22           |
|             | 12800.00   | 89.72       | 179.85           | 9568.11     | 3379.20      | -3376.34   | 1088.62    | 0.00             | 415229.66          | 575794.96         | N 32 8 29.39            | W 104 13 19.22           |
|             | 12900.00   | 89.72       | 179.85           | 9568.61     | 3479.20      | -3476.34   | 1088.88    | 0.00             | 415129.67          | 575795.22         | N 32 8 28.40            | W 104 13 19.21           |
|             | 13000.00   | 89.72       | 179.85           | 9569.10     | 3579.19      | -3576.34   | 1089.15    | 0.00             | 415029.68          | 575795.49         | N 32 8 27.41            | W 104 13 19.21           |
|             | 13100.00   | 89.72       | 179.85           | 9569.59     | 3679.19      | -3676.33   | 1089.41    | 0.00             | 414929.69          | 575795.75         | N 32 8 26.42            | W 104 13 19.21           |
|             | 13200.00   | 89.72       | 179.85           | 9570.08     | 3779.19      | -3776.33   | 1089.67    | 0.00             | 414829.70          | 575796.01         | N 32 8 25.43            | W 104 13 19.21           |
|             | 13300.00   | 89.72       | 179.85           | 9570.57     | 3879.19      | -3876.33   | 1089.94    | 0.00             | 414729.71          | 575796.28         | N 32 8 24.44            | W 104 13 19.21           |
|             | 13400.00   | 89.72       | 179.85           | 9571.06     | 3979.19      | -3976.33   | 1090.20    | 0.00             | 414629.72          | 575796.54         | N 32 8 23.45            | W 104 13 19.21           |
|             | 13500.00   | 89.72       | 179.85           | 9571.55     | 4079.19      | -4076.33   | 1090.46    | 0.00             | 414529.73          | 575796.80         | N 32 8 22.46            | W 104 13 19.20           |
|             | 13600.00   | 89.72       | 179.85           | 9572.04     | 4179.19      | -4176.33   | 1090.73    | 0.00             | 414429.75          | 575797.07         | N 32 8 21.47            | W 104 13 19.20           |
|             | 13700.00   | 89.72       | 179.85           | 9572.53     | 4279.19      | -4276.33   | 1090.99    | 0.00             | 414329.76          | 575797.33         | N 32 8 20.48            | W 104 13 19.20           |
|             | 13800.00   | 89.72       | 179.85           | 9573.02     | 4379.18      | -4376.32   | 1091.25    | 0.00             | 414229.77          | 575797.59         | N 32 8 19.49            | W 104 13 19.20           |
|             | 13900.00   | 89.72       | 179.85           | 9573.52     | 4479.18      | -4476.32   | 1091.52    | 0.00             | 414129.78          | 575797.86         | N 32 8 18.50            | W 104 13 19.20           |
|             | 14000.00   | 89.72       | 179.85           | 9574.01     | 4579.18      | -4576.32   | 1091.78    | 0.00             | 414029.79          | 575798.12         | N 32 8 17.51            | W 104 13 19.19           |
|             | 14100.00   | 89.72       | 179.85           | 9574.50     | 4679.18      | -4676.32   | 1092.04    | 0.00             | 413929.80          | 575798.38         | N 32 8 16.52            | W 104 13 19.19           |
|             | 14200.00   | 89.72       | 179.85           | 9574.99     | 4779.18      | -4776.32   | 1092.31    | 0.00             | 413829.81          | 575798.65         | N 32 8 15.53            | W 104 13 19.19           |
|             | 14300.00   | 89.72       | 179.85           | 9575.48     | 4879.18      | -4876.32   | 1092.57    | 0.00             | 413729.82          | 575798.91         | N 32 8 14.54            | W 104 13 19.19           |
|             | 14400.00   | 89.72       | 179.85           | 9575.97     | 4979.18      | -4976.31   | 1092.84    | 0.00             | 413629.83          | 575799.18         | N 32 8 13.55            | W 104 13 19.19           |
|             | 14500.00   | 89.72       | 179.85           | 9576.46     | 5079.18      | -5076.31   | 1093.10    | 0.00             | 413529.84          | 575799.44         | N 32 8 12.56            | W 104 13 19.19           |
|             | 14600.00   | 89.72       | 179.85           | 9576.95     | 5179.17      | -5176.31   | 1093.36    | 0.00             | 413429.85          | 575799.70         | N 32 8 11.57            | W 104 13 19.18           |
|             | 14700.00   | 89.72       | 179.85           | 9577.44     | 5279.17      | -5276.31   | 1093.63    | 0.00             | 413329.86          | 575799.97         | N 32 8 10.58            | W 104 13 19.18           |
|             | 14800.00   | 89.72       | 179.85           | 9577.93     | 5379.17      | -5376.31   | 1093.89    | 0.00             | 413229.87          | 575800.23         | N 32 8 9.60             | W 104 13 19.18           |
|             | 14900.00   | 89.72       | 179.85           | 9578.43     | 5479.17      | -5476.31   | 1094.15    | 0.00             | 413129.89          | 575800.49         | N 32 8 8.61             | W 104 13 19.18           |
|             | 15000.00   | 89.72       | 179.85           | 9578.92     | 5579.17      | -5576.31   | 1094.42    | 0.00             | 413029.90          | 575800.76         | N 32 8 7.62             | W 104 13 19.18           |
|             | 15100.00   | 89.72       | 179.85           | 9579.41     | 5679.17      | -5676.30   | 1094.68    | 0.00             | 412929.91          | 575801.02         | N 32 8 6.63             | W 104 13 19.17           |
|             | 15200.00   | 89.72       | 179.85           | 9579.90     | 5779.17      | -5776.30   | 1094.94    | 0.00             | 412829.92          | 575801.28         | N 32 8 5.64             | W 104 13 19.17           |
| Wolfcamp C2 | 15220.64   | 89.72       | 179.85           | 9580.00     | 5799.81      | -5796.94   | 1095.00    | 0.00             | 412809.28          | 575801.34         | N 32 8 5.43             | W 104 13 19.17           |
|             | 15300.00   | 89.72       | 179.85           | 9580.39     | 5879.17      | -5876.30   | 1095.21    | 0.00             | 412729.93          | 575801.55         | N 32 8 4.65             | W 104 13 19.17           |
|             | 15400.00   | 89.72       | 179.85           | 9580.88     | 5979.17      | -5976.30   | 1095.47    | 0.00             | 412629.94          | 575801.81         | N 32 8 3.66             | W 104 13 19.17           |
|             | 15500.00   | 89.72       | 179.85           | 9581.37     | 6079.16      | -6076.30   | 1095.73    | 0.00             | 412529.95          | 575802.07         | N 32 8 2.67             | W 104 13 19.17           |
|             | 15600.00   | 89.72       | 179.85           | 9581.86     | 6179.16      | -6176.30   | 1096.00    | 0.00             | 412429.96          | 575802.34         | N 32 8 1.68             | W 104 13 19.16           |
|             | 15700.00   | 89.72       | 179.85           | 9582.35     | 6279.16      | -6276.29   | 1096.26    | 0.00             | 412329.97          | 575802.60         | N 32 8 0.69             | W 104 13 19.16           |
|             | 15800.00   | 89.72       | 179.85           | 9582.84     | 6379.16      | -6376.29   | 1096.52    | 0.00             | 412229.98          | 575802.86         | N 32 7 59.70            | W 104 13 19.16           |
|             | 15900.00   | 89.72       | 179.85           | 9583.34     | 6479.16      | -6476.29   | 1096.79    | 0.00             | 412129.99          | 575803.13         | N 32 7 58.71            | W 104 13 19.16           |
|             | 16000.00   | 89.72       | 179.85           | 9583.83     | 6579.16      | -6576.29   | 1097.05    | 0.00             | 412030.00          | 575803.39         | N 32 7 57.72            | W 104 13 19.16           |
|             | 16100.00   | 89.72       | 179.85           | 9584.32     | 6679.16      | -6676.29   | 1097.31    | 0.00             | 411930.01          | 575803.65         | N 32 7 56.73            | W 104 13 19.16           |
|             | 16200.00   | 89.72       | 179.85           | 9584.81     | 6779.16      | -6776.29   | 1097.58    | 0.00             | 411830.02          | 575803.92         | N 32 7 55.74            | W 104 13 19.15           |
|             | 16300.00   | 89.72       | 179.85           | 9585.30     | 6879.15      | -6876.29   | 1097.84    | 0.00             | 411730.04          | 575804.18         | N 32 7 54.75            | W 104 13 19.15           |
|             | 16400.00   | 89.72       | 179.85           | 9585.79     | 6979.15      | -6976.28   | 1098.11    | 0.00             | 411630.05          | 575804.44         | N 32 7 53.76            | W 104 13 19.15           |

| Comments | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") |         | Longitude<br>(E/W ° ' ") |  |
|----------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|---------|--------------------------|--|
|          | 16500.00   | 89.72       | 179.85           | 9586.28     | 7079.15      | -7076.28   | 1098.37    | 0.00             | 411530.06          | 575804.71         | N 32                    | 7 52.77 | W 104 13 19.15           |  |
|          | 16600.00   | 89.72       | 179.85           | 9586.77     | 7179.15      | -7176.28   | 1098.63    | 0.00             | 411430.07          | 575804.97         | N 32                    | 7 51.78 | W 104 13 19.15           |  |
|          | 16700.00   | 89.72       | 179.85           | 9587.26     | 7279.15      | -7276.28   | 1098.90    | 0.00             | 411330.08          | 575805.24         | N 32                    | 7 50.79 | W 104 13 19.14           |  |
|          | 16800.00   | 89.72       | 179.85           | 9587.75     | 7379.15      | -7376.28   | 1099.16    | 0.00             | 411230.09          | 575805.50         | N 32                    | 7 49.81 | W 104 13 19.14           |  |
|          | 16900.00   | 89.72       | 179.85           | 9588.25     | 7479.15      | -7476.28   | 1099.42    | 0.00             | 411130.10          | 575805.76         | N 32                    | 7 48.82 | W 104 13 19.14           |  |
|          | 17000.00   | 89.72       | 179.85           | 9588.74     | 7579.15      | -7576.27   | 1099.69    | 0.00             | 411030.11          | 575806.03         | N 32                    | 7 47.83 | W 104 13 19.14           |  |
|          | 17100.00   | 89.72       | 179.85           | 9589.23     | 7679.14      | -7676.27   | 1099.95    | 0.00             | 410930.12          | 575806.29         | N 32                    | 7 46.84 | W 104 13 19.14           |  |
|          | 17200.00   | 89.72       | 179.85           | 9589.72     | 7779.14      | -7776.27   | 1100.21    | 0.00             | 410830.13          | 575806.55         | N 32                    | 7 45.85 | W 104 13 19.13           |  |
|          | 17300.00   | 89.72       | 179.85           | 9590.21     | 7879.14      | -7876.27   | 1100.48    | 0.00             | 410730.14          | 575806.82         | N 32                    | 7 44.86 | W 104 13 19.13           |  |
|          | 17400.00   | 89.72       | 179.85           | 9590.70     | 7979.14      | -7976.27   | 1100.74    | 0.00             | 410630.15          | 575807.08         | N 32                    | 7 43.87 | W 104 13 19.13           |  |
|          | 17500.00   | 89.72       | 179.85           | 9591.19     | 8079.14      | -8076.27   | 1101.00    | 0.00             | 410530.16          | 575807.34         | N 32                    | 7 42.88 | W 104 13 19.13           |  |
|          | 17600.00   | 89.72       | 179.85           | 9591.68     | 8179.14      | -8176.26   | 1101.27    | 0.00             | 410430.17          | 575807.61         | N 32                    | 7 41.89 | W 104 13 19.13           |  |
|          | 17700.00   | 89.72       | 179.85           | 9592.17     | 8279.14      | -8276.26   | 1101.53    | 0.00             | 410330.19          | 575807.87         | N 32                    | 7 40.90 | W 104 13 19.13           |  |
|          | 17800.00   | 89.72       | 179.85           | 9592.66     | 8379.14      | -8376.26   | 1101.79    | 0.00             | 410230.20          | 575808.13         | N 32                    | 7 39.91 | W 104 13 19.12           |  |
|          | 17900.00   | 89.72       | 179.85           | 9593.16     | 8479.14      | -8476.26   | 1102.06    | 0.00             | 410130.21          | 575808.40         | N 32                    | 7 38.92 | W 104 13 19.12           |  |
|          | 18000.00   | 89.72       | 179.85           | 9593.65     | 8579.13      | -8576.26   | 1102.32    | 0.00             | 410030.22          | 575808.66         | N 32                    | 7 37.93 | W 104 13 19.12           |  |
|          | 18100.00   | 89.72       | 179.85           | 9594.14     | 8679.13      | -8676.26   | 1102.58    | 0.00             | 409930.23          | 575808.92         | N 32                    | 7 36.94 | W 104 13 19.12           |  |
|          | 18200.00   | 89.72       | 179.85           | 9594.63     | 8779.13      | -8776.26   | 1102.85    | 0.00             | 409830.24          | 575809.19         | N 32                    | 7 35.95 | W 104 13 19.12           |  |
|          | 18300.00   | 89.72       | 179.85           | 9595.12     | 8879.13      | -8876.25   | 1103.11    | 0.00             | 409730.25          | 575809.45         | N 32                    | 7 34.96 | W 104 13 19.11           |  |
|          | 18400.00   | 89.72       | 179.85           | 9595.61     | 8979.13      | -8976.25   | 1103.38    | 0.00             | 409630.26          | 575809.71         | N 32                    | 7 33.97 | W 104 13 19.11           |  |
|          | 18500.00   | 89.72       | 179.85           | 9596.10     | 9079.13      | -9076.25   | 1103.64    | 0.00             | 409530.27          | 575809.98         | N 32                    | 7 32.98 | W 104 13 19.11           |  |
|          | 18600.00   | 89.72       | 179.85           | 9596.59     | 9179.13      | -9176.25   | 1103.90    | 0.00             | 409430.28          | 575810.24         | N 32                    | 7 31.99 | W 104 13 19.11           |  |
|          | 18700.00   | 89.72       | 179.85           | 9597.08     | 9279.13      | -9276.25   | 1104.17    | 0.00             | 409330.29          | 575810.50         | N 32                    | 7 31.00 | W 104 13 19.11           |  |
|          | 18800.00   | 89.72       | 179.85           | 9597.57     | 9379.12      | -9376.25   | 1104.43    | 0.00             | 409230.30          | 575810.77         | N 32                    | 7 30.01 | W 104 13 19.11           |  |
|          | 18900.00   | 89.72       | 179.85           | 9598.07     | 9479.12      | -9476.24   | 1104.69    | 0.00             | 409130.31          | 575811.03         | N 32                    | 7 29.03 | W 104 13 19.10           |  |
|          | 19000.00   | 89.72       | 179.85           | 9598.56     | 9579.12      | -9576.24   | 1104.96    | 0.00             | 409030.32          | 575811.30         | N 32                    | 7 28.04 | W 104 13 19.10           |  |
|          | 19100.00   | 89.72       | 179.85           | 9599.05     | 9679.12      | -9676.24   | 1105.22    | 0.00             | 408930.34          | 575811.56         | N 32                    | 7 27.05 | W 104 13 19.10           |  |
|          | 19200.00   | 89.72       | 179.85           | 9599.54     | 9779.12      | -9776.24   | 1105.48    | 0.00             | 408830.35          | 575811.82         | N 32                    | 7 26.06 | W 104 13 19.10           |  |

Cimarex DaVinci  
7-18 Federal  
Com #29H -  
PBHL [330' FSL,  
330' FEL]

19294.04 89.72 179.85 9600.00 9873.15 -9870.27 1105.73 0.00 408736.32 575812.07 N 32 7 25.13 W 104 13 19.10

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 \*\*\* 3-D 95.000% Confidence 2.7955 sigma  
Survey Program:

| Description | Part | MD From<br>(ft) | MD To<br>(ft) | EOU Freq<br>(ft) | Hole Size<br>(in) | Casing Diameter<br>(in) | Expected Max<br>Inclination<br>(deg) | Survey Tool Type           | Borehole / Survey                                                               |
|-------------|------|-----------------|---------------|------------------|-------------------|-------------------------|--------------------------------------|----------------------------|---------------------------------------------------------------------------------|
|             | 1    | 0.000           | 26.000        | 1/100.000        | 17.500            | 13.375                  |                                      | NAL_MWD_IFR1+MS-Depth Only | Original Borehole / Cimarex<br>DaVinci 7-18 Federal Com #29H<br>Rev1 RM 11Oct19 |
|             | 1    | 26.000          | 19294.036     | 1/100.000        | 17.500            | 13.375                  |                                      | NAL_MWD_IFR1+MS            | Original Borehole / Cimarex<br>DaVinci 7-18 Federal Com #29H                    |

# Cimarex DaVinci 7-18 Federal Com #29H Rev1 RM 11Oct19 Proposal

## Geodetic Report

(Def Plan)



**Report Date:** October 11, 2019 - 11:14 AM  
**Client:** Cimarex  
**Field:** NM Eddy County (NAD 83)  
**Structure / Slot:** Cimarex DaVinci 7-18 Federal Com #29H / Cimarex DaVinci 7-18 Federal Com #29H  
**Well:** Cimarex DaVinci 7-18 Federal Com #29H  
**Borehole:** Original Borehole  
**UWI / API#:** Unknown / Unknown  
**Survey Name:** Cimarex DaVinci 7-18 Federal Com #29H Rev1 RM 11Oct19  
**Survey Date:** October 11, 2019  
**Tort / AHD / DDI / ERD Ratio:** 109.489 ° / 10962.374 ft / 6.382 / 1.142  
**Coordinate Reference System:** NAD83 New Mexico State Plane, Eastern Zone, US Feet  
**Location Lat / Long:** N 32° 9' 2.80649", W 104° 13' 31.83835"  
**Location Grid N/E Y/X:** N 418605.690 ftUS, E 574706.440 ftUS  
**CRS Grid Convergence Angle:** 0.0574 °  
**Grid Scale Factor:** 0.99991037  
**Version / Patch:** 2.10.782.0

**Survey / DLS Computation:** Minimum Curvature / Lubinski  
**Vertical Section Azimuth:** 179.849 ° (Grid North)  
**Vertical Section Origin:** 0.000 ft, 0.000 ft  
**TVD Reference Datum:** RKB  
**TVD Reference Elevation:** 3334.900 ft above MSL  
**Seabed / Ground Elevation:** 3308.900 ft above MSL  
**Magnetic Declination:** 7.228 °  
**Total Gravity Field Strength:** 998.4343mgn (9.80665 Based)  
**Gravity Model:** GARM  
**Total Magnetic Field Strength:** 47774.468 nT  
**Magnetic Dip Angle:** 59.788 °  
**Declination Date:** October 11, 2019  
**Magnetic Declination Model:** HDGM 2019  
**North Reference:** Grid North  
**Grid Convergence Used:** 0.0574 °  
**Total Corr Mag North->Grid North:** 7.1706 °  
**Local Coord Referenced To:** Structure Reference Point

| Comments                                                                      | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' '') | Longitude<br>(E/W ° ' '') |
|-------------------------------------------------------------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|--------------------------|---------------------------|
| SHL [390' FNL,<br>1410' FEL]                                                  | 0.00       | 0.00        | 0.00             | 0.00        | 0.00         | 0.00       | 0.00       | N/A              | 418605.69          | 574706.44         | N 32° 9' 2.81"           | W 104° 13' 31.84"         |
| Nudge 2"/100'                                                                 | 2300.00    | 0.00        | 89.35            | 2300.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32° 9' 2.81"           | W 104° 13' 31.84"         |
| DLS                                                                           | 2794.25    | 9.89        | 89.35            | 2791.80     | -0.37        | 0.48       | 42.53      | 2.00             | 418606.17          | 574748.96         | N 32° 9' 2.81"           | W 104° 13' 31.34"         |
| Hold Nudge                                                                    | 8588.47    | 9.89        | 89.35            | 8500.00     | -9.09        | 11.82      | 1037.16    | 0.00             | 418617.51          | 575743.51         | N 32° 9' 2.91"           | W 104° 13' 19.77"         |
| Drop to Vertical                                                              | 9082.72    | 0.00        | 89.35            | 8991.80     | -9.46        | 12.31      | 1079.69    | 2.00             | 418617.99          | 575786.03         | N 32° 9' 2.92"           | W 104° 13' 19.28"         |
| 2"/100' DLS                                                                   | 9135.93    | 0.00        | 89.35            | 9045.01     | -9.46        | 12.31      | 1079.69    | 0.00             | 418617.99          | 575786.03         | N 32° 9' 2.92"           | W 104° 13' 19.28"         |
| Hold Vertical                                                                 | 9760.93    | 75.00       | 179.85           | 9506.21     | 344.43       | -341.58    | 1080.62    | 12.00            | 418264.14          | 575786.96         | N 32° 8' 59.42"          | W 104° 13' 19.27"         |
| KOP - Build                                                                   | 10128.90   | 89.72       | 179.85           | 9555.00     | 708.13       | -705.28    | 1081.58    | 4.00             | 417900.48          | 575787.92         | N 32° 8' 55.82"          | W 104° 13' 19.27"         |
| 12"/100' DLS                                                                  |            |             |                  |             |              |            |            |                  |                    |                   |                          |                           |
| Build 4"/100'                                                                 |            |             |                  |             |              |            |            |                  |                    |                   |                          |                           |
| DLS                                                                           |            |             |                  |             |              |            |            |                  |                    |                   |                          |                           |
| Landing Point                                                                 |            |             |                  |             |              |            |            |                  |                    |                   |                          |                           |
| Cimarex DaVinci<br>7-18 Federal<br>Com #29H -<br>PBHL [330' FSL,<br>330' FEL] | 19294.04   | 89.72       | 179.85           | 9600.00     | 9873.15      | -9870.27   | 1105.73    | 0.00             | 408736.32          | 575812.07         | N 32° 7' 25.13"          | W 104° 13' 19.10"         |

**Survey Type:** Def Plan

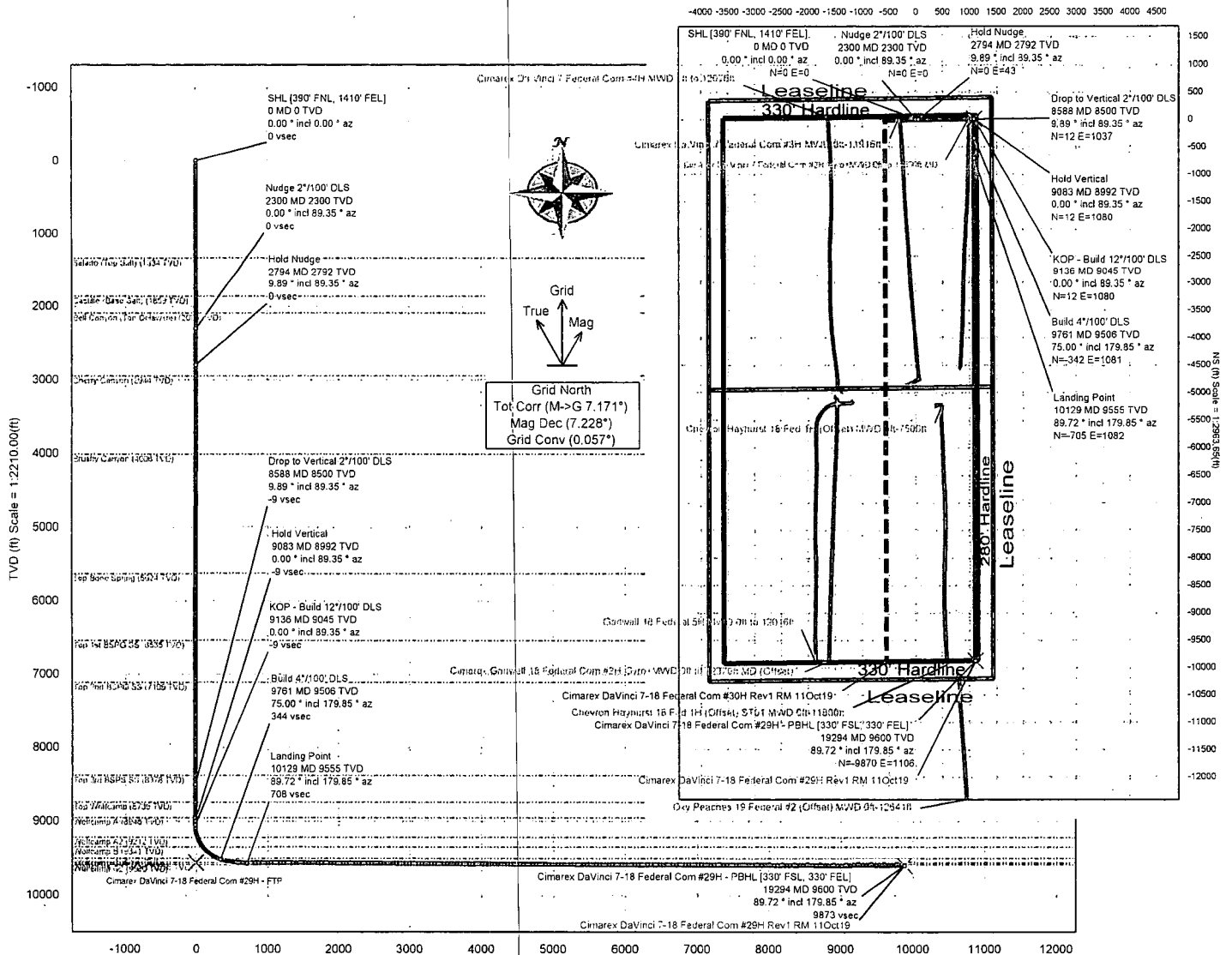
**Survey Error Model:** ISCWSA Rev 0 \*\*\* 3-D 95.000% Confidence 2.7955 sigma

| Comments        | MD<br>(ft) | Incl<br>(°)     | Azim Grid<br>(°) | TVD<br>(ft)      | VSEC<br>(ft)      | NS<br>(ft)              | EW<br>(ft)                           | DLS<br>(°/100ft)           | Northing<br>(ftUS)                                                              | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|-----------------|------------|-----------------|------------------|------------------|-------------------|-------------------------|--------------------------------------|----------------------------|---------------------------------------------------------------------------------|-------------------|-------------------------|--------------------------|
| Survey Program: |            |                 |                  |                  |                   |                         |                                      |                            |                                                                                 |                   |                         |                          |
| Description     | Part       | MD From<br>(ft) | MD To<br>(ft)    | EOU Freq<br>(ft) | Hole Size<br>(in) | Casing Diameter<br>(in) | Expected Max<br>Inclination<br>(deg) | Survey Tool Type           | Borehole / Survey                                                               |                   |                         |                          |
|                 | 1          | 0.000           | 26.000           | 1/100.000        | 17.500            | 13.375                  |                                      | NAL_MWD_IFR1+MS-Depth Only | Original Borehole / Cimarex<br>DaVinci 7-18 Federal Com #29H<br>Rev1 RM 11Oct19 |                   |                         |                          |
|                 | 1          | 26.000          | 19294.036        | 1/100.000        | 17.500            | 13.375                  |                                      | NAL_MWD_IFR1+MS            | Original Borehole / Cimarex<br>DaVinci 7-18 Federal Com #29H                    |                   |                         |                          |

|                   |                                       |                         |                                       |
|-------------------|---------------------------------------|-------------------------|---------------------------------------|
| Borehole:         | Well:                                 | Field:                  | Structure:                            |
| Original Borehole | Cimarex DaVinci 7-18 Federal Com #29H | NM Eddy County (NAD 83) | Cimarex DaVinci 7-18 Federal Com #29H |

|                                                                      |                                                                  |                                                             |
|----------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------|
| Gravity & Magnetic Parameters                                        | Surface Location                                                 | Miscellaneous                                               |
| Model: HDGM 2019 Dip: 59.788° Date: 11-Oct-2019                      | NAD83 New Mexico State Plane, Eastern Zone, US Feet              | Cimarex DaVinci                                             |
| MagDec: 7.228° FS: 47774.469nT Gravity FS: 998.434mg (9.80665 Based) | Lat: N 32 9 2.81 Northing: 418605.691US Grid Conv: 0.0574°       | Slot: 7-18 Federal TVD Ref: RKB(3334.9ft above MSL)         |
|                                                                      | Lon: W 104 13 31.84 Easting: 574706.441US Scale Fact: 0.99991037 | Plan: Cimarex DaVinci 7-18 Federal Com #29H Rev1 RM 11Oct19 |

EW (ft) Scale = 1:2863.65(ft)



Vertical Section (ft) Azim = 179.85° Scale = 1:2210.00(ft) Origin = 0N/-S, 0E/-W

| Critical Points                                                   |          |       |        |         |         |           |           |
|-------------------------------------------------------------------|----------|-------|--------|---------|---------|-----------|-----------|
| Critical Point                                                    | MD       | INCL  | AZIM   | TVD     | VSEC    | N(+)/S(-) | E(+)/W(-) |
| SHL [390° FNL, 1410° FEL]                                         | 0.00     | 0.00  | 0.00   | 0.00    | 0.00    | 0.00      | 0.00      |
| Salado (Top Salt)                                                 | 1334.00  | 0.00  | 89.35  | 1334.00 | 0.00    | 0.00      | 0.00      |
| Castile (Base Salt)                                               | 1859.00  | 0.00  | 89.35  | 1859.00 | 0.00    | 0.00      | 0.00      |
| Bell Canyon (Top Delaware)                                        | 2090.00  | 0.00  | 89.35  | 2090.00 | 0.00    | 0.00      | 0.00      |
| Nudge 2°/100° DLS                                                 | 2300.00  | 0.00  | 89.35  | 2300.00 | 0.00    | 0.00      | 0.00      |
| Hold Nudge                                                        | 2794.25  | 9.89  | 89.35  | 2791.80 | -0.37   | 0.48      | 42.53     |
| Cherry Canyon                                                     | 2949.74  | 9.89  | 89.35  | 2944.00 | -0.60   | 0.79      | 59.05     |
| Brushy Canyon                                                     | 4026.75  | 9.89  | 89.35  | 4006.00 | -2.23   | 2.90      | 254.10    |
| Top Bone Spring                                                   | 5689.13  | 9.89  | 89.35  | 5624.00 | -4.70   | 6.11      | 536.03    |
| Top 1st BSPG SS                                                   | 6593.86  | 9.89  | 89.35  | 6535.00 | -6.09   | 7.92      | 694.77    |
| Top 2nd BSPG SS                                                   | 7176.51  | 9.89  | 89.35  | 7109.00 | -6.96   | 9.06      | 794.79    |
| Top 3rd BSPG SS                                                   | 8464.63  | 9.89  | 89.35  | 8378.00 | -8.90   | 11.58     | 1015.90   |
| Drop to Vertical 2°/100° DLS                                      | 8588.47  | 9.89  | 89.35  | 8500.00 | -9.09   | 11.82     | 1037.16   |
| Top Wolfcamp                                                      | 8826.57  | 5.12  | 89.35  | 8736.00 | -9.36   | 12.18     | 1068.25   |
| Wolfcamp A                                                        | 9036.91  | 0.92  | 89.35  | 8946.00 | -9.46   | 12.30     | 1079.32   |
| Hold Vertical                                                     | 9082.72  | 0.00  | 89.35  | 8991.80 | -9.46   | 12.31     | 1079.69   |
| KOP - Build 12°/100° DLS                                          | 9135.93  | 0.00  | 89.35  | 9045.01 | -9.46   | 12.31     | 1079.69   |
| Wolfcamp A2                                                       | 9306.52  | 20.47 | 179.85 | 9212.00 | 20.69   | -17.85    | 1079.77   |
| Wolfcamp B                                                        | 9455.16  | 38.31 | 179.85 | 9341.00 | 93.35   | -90.51    | 1079.96   |
| Wolfcamp C                                                        | 9735.57  | 71.96 | 179.85 | 9499.00 | 320.12  | -317.27   | 1080.56   |
| Build 4°/100° DLS                                                 | 9760.93  | 75.00 | 179.85 | 9506.21 | 344.43  | -341.58   | 1080.62   |
| Wolfcamp C Target                                                 | 10128.90 | 89.72 | 179.85 | 9555.00 | 708.13  | -705.28   | 1081.58   |
| Landing Point                                                     | 10128.90 | 89.72 | 179.85 | 9555.00 | 708.13  | -705.28   | 1081.58   |
| Wolfcamp C2                                                       | 15220.64 | 89.72 | 179.85 | 9580.00 | 5799.81 | -5796.94  | 1095.00   |
| Cimarex DaVinci 7-18 Federal Com #29H - PBHL [330° FSL, 330° FEL] | 19294.04 | 89.72 | 179.85 | 9600.00 | 9873.15 | -9870.27  | 1105.73   |

# Cimarex DaVinci 7-18 Federal Com #29H Rev1 RM 11Oct19 Proposal

## Geodetic Report

(Def Plan)



**Report Date:** October 11, 2019 - 11:14 AM  
**Client:** Cimarex  
**Field:** NM Eddy County (NAD 83)  
**Structure / Slot:** Cimarex DaVinci 7-18 Federal Com #29H / Cimarex DaVinci 7-18 Federal Com #29H  
**Well:** Cimarex DaVinci 7-18 Federal Com #29H  
**Borehole:** Original Borehole  
**UWI / API#:** Unknown / Unknown  
**Survey Name:** Cimarex DaVinci 7-18 Federal Com #29H Rev1 RM 11Oct19  
**Survey Date:** October 11, 2019  
**Tort / AHD / DDI / ERD Ratio:** 109.489 ° / 10962.374 ft / 6.382 / 1.142  
**Coordinate Reference System:** NAD83 New Mexico State Plane, Eastern Zone, US Feet  
**Location Lat / Long:** N 32° 9' 2.80649", W 104° 13' 31.83835"  
**Location Grid N/E Y/X:** N 418605.690 ftUS, E 574706.440 ftUS  
**CRS Grid Convergence Angle:** 0.0574 °  
**Grid Scale Factor:** 0.99991037  
**Version / Patch:** 2.10.782.0

**Survey / DLS Computation:** Minimum Curvature / Lubinski  
**Vertical Section Azimuth:** 179.849 ° (Grid North)  
**Vertical Section Origin:** 0.000 ft, 0.000 ft  
**TVD Reference Datum:** RKB  
**TVD Reference Elevation:** 3334.900 ft above MSL  
**Seabed / Ground Elevation:** 3308.900 ft above MSL  
**Magnetic Declination:** 7.228 °  
**Total Gravity Field Strength:** 998.4343mgn (9.80665 Based)  
**Gravity Model:** GARM  
**Total Magnetic Field Strength:** 47774.468 nT  
**Magnetic Dip Angle:** 59.788 °  
**Declination Date:** October 11, 2019  
**Magnetic Declination Model:** HDGM 2019  
**North Reference:** Grid North  
**Grid Convergence Used:** 0.0574 °  
**Total Corr Mag North->Grid North:** 7.1706 °  
**Local Coord Referenced To:** Structure Reference Point

| Comments                                                                      | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|-------------------------------------------------------------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|
| SHL [390' FNL,<br>1410' FEL]                                                  | 0.00       | 0.00        | 0.00             | 0.00        | 0.00         | 0.00       | 0.00       | N/A              | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
| Nudge 2°/100'                                                                 |            |             |                  |             |              |            |            |                  |                    |                   |                         |                          |
| DLS                                                                           | 2300.00    | 0.00        | 89.35            | 2300.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
| Hold Nudge                                                                    | 2794.25    | 9.89        | 89.35            | 2791.80     | -0.37        | 0.48       | 42.53      | 2.00             | 418606.17          | 574748.96         | N 32 9 2.81             | W 104 13 31.34           |
| Drop to Vertical                                                              |            |             |                  |             |              |            |            |                  |                    |                   |                         |                          |
| 2°/100' DLS                                                                   | 8588.47    | 9.89        | 89.35            | 8500.00     | -9.09        | 11.82      | 1037.16    | 0.00             | 418617.51          | 575743.51         | N 32 9 2.91             | W 104 13 19.77           |
| Hold Vertical                                                                 | 9082.72    | 0.00        | 89.35            | 8991.80     | -9.46        | 12.31      | 1079.69    | 2.00             | 418617.99          | 575786.03         | N 32 9 2.92             | W 104 13 19.28           |
| KOP - Build                                                                   |            |             |                  |             |              |            |            |                  |                    |                   |                         |                          |
| 12°/100' DLS                                                                  | 9135.93    | 0.00        | 89.35            | 9045.01     | -9.46        | 12.31      | 1079.69    | 0.00             | 418617.99          | 575786.03         | N 32 9 2.92             | W 104 13 19.28           |
| Build 4°/100'                                                                 |            |             |                  |             |              |            |            |                  |                    |                   |                         |                          |
| DLS                                                                           | 9760.93    | 75.00       | 179.85           | 9506.21     | 344.43       | -341.58    | 1080.62    | 12.00            | 418264.14          | 575786.96         | N 32 8 59.42            | W 104 13 19.27           |
| Landing Point                                                                 | 10128.90   | 89.72       | 179.85           | 9555.00     | 708.13       | -705.28    | 1081.58    | 4.00             | 417900.48          | 575787.92         | N 32 8 55.82            | W 104 13 19.27           |
| Cimarex DaVinci<br>7-18 Federal<br>Com #29H -<br>PBHL [330' FSL,<br>330' FEL] | 19294.04   | 89.72       | 179.85           | 9600.00     | 9873.15      | -9870.27   | 1105.73    | 0.00             | 408736.32          | 575812.07         | N 32 7 25.13            | W 104 13 19.10           |

**Survey Type:** Def Plan

**Survey Error Model:** ISCWSA Rev 0 \*\*\* 3-D 95.000% Confidence 2.7955 sigma

| Comments        | MD<br>(ft) | Incl<br>(°)     | Azim Grid<br>(°) | TVD<br>(ft)      | VSEC<br>(ft)      | NS<br>(ft)              | EW<br>(ft)                           | DLS<br>(°/100ft)           | Northing<br>(ftUS)                                                              | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|-----------------|------------|-----------------|------------------|------------------|-------------------|-------------------------|--------------------------------------|----------------------------|---------------------------------------------------------------------------------|-------------------|-------------------------|--------------------------|
| Survey Program: |            |                 |                  |                  |                   |                         |                                      |                            |                                                                                 |                   |                         |                          |
| Description     | Part       | MD From<br>(ft) | MD To<br>(ft)    | EOU Freq<br>(ft) | Hole Size<br>(in) | Casing Diameter<br>(in) | Expected Max<br>Inclination<br>(deg) | Survey Tool Type           | Borehole / Survey                                                               |                   |                         |                          |
|                 | 1          | 0.000           | 26.000           | 1/100.000        | 17.500            | 13.375                  |                                      | NAL_MWD_IFR1+MS-Depth Only | Original Borehole / Cimarex<br>DaVinci 7-18 Federal Com #29H<br>Rev1 RM 11Oct19 |                   |                         |                          |
|                 | 1          | 26.000          | 19294.036        | 1/100.000        | 17.500            | 13.375                  |                                      | NAL_MWD_IFR1+MS            | Original Borehole / Cimarex<br>DaVinci 7-18 Federal Com #29H                    |                   |                         |                          |

# Cimarex DaVinci 7-18 Federal Com #29H Rev1 RM 11Oct19 Proposal

## Geodetic Report

(Def Plan)



**Report Date:** October 11, 2019 - 11:14 AM  
**Client:** Cimarex  
**Field:** NM Eddy County (NAD 83)  
**Structure / Slot:** Cimarex DaVinci 7-18 Federal Com #29H / Cimarex DaVinci 7-18 Federal Com #29H  
**Well:** Cimarex DaVinci 7-18 Federal Com #29H  
**Borehole:** Original Borehole  
**UWI / API#:** Unknown / Unknown  
**Survey Name:** Cimarex DaVinci 7-18 Federal Com #29H Rev1 RM 11Oct19  
**Survey Date:** October 11, 2019  
**Tort / AHD / DDI / ERD Ratio:** 109.489 ° / 10962.374 ft / 6.382 / 1.142  
**Coordinate Reference System:** NAD83 New Mexico State Plane, Eastern Zone, US Feet  
**Location Lat / Long:** N 32° 9' 2.80649", W 104° 13' 31.83835"  
**Location Grid N/E Y/X:** N 418605.690 ftUS, E 574706.440 ftUS  
**CRS Grid Convergence Angle:** 0.0574 °  
**Grid Scale Factor:** 0.99991037  
**Version / Patch:** 2.10.782.0

**Survey / DLS Computation:** Minimum Curvature / Lubinski  
**Vertical Section Azimuth:** 179.849 ° (Grid North)  
**Vertical Section Origin:** 0.000 ft, 0.000 ft  
**TVD Reference Datum:** RKB  
**TVD Reference Elevation:** 3334.900 ft above MSL  
**Seabed / Ground Elevation:** 3308.900 ft above MSL  
**Magnetic Declination:** 7.228 °  
**Total Gravity Field Strength:** 998.4343mgn (9.80665 Based)  
**Gravity Model:** GARM  
**Total Magnetic Field Strength:** 47774.468 nT  
**Magnetic Dip Angle:** 59.788 °  
**Declination Date:** October 11, 2019  
**Magnetic Declination Model:** HDGM 2019  
**North Reference:** Grid North  
**Grid Convergence Used:** 0.0574 °  
**Total Corr Mag North->Grid North:** 7.1706 °  
**Local Coord Referenced To:** Structure Reference Point

| Comments                     | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|------------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|
| SHL [390' FNL,<br>1410' FEL] | 0.00       | 0.00        | 0.00             | 0.00        | 0.00         | 0.00       | 0.00       | N/A              | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 100.00     | 0.00        | 89.35            | 100.00      | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 200.00     | 0.00        | 89.35            | 200.00      | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 300.00     | 0.00        | 89.35            | 300.00      | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 400.00     | 0.00        | 89.35            | 400.00      | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 500.00     | 0.00        | 89.35            | 500.00      | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 600.00     | 0.00        | 89.35            | 600.00      | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 700.00     | 0.00        | 89.35            | 700.00      | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 800.00     | 0.00        | 89.35            | 800.00      | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 900.00     | 0.00        | 89.35            | 900.00      | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 1000.00    | 0.00        | 89.35            | 1000.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 1100.00    | 0.00        | 89.35            | 1100.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 1200.00    | 0.00        | 89.35            | 1200.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 1300.00    | 0.00        | 89.35            | 1300.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
| Salado (Top<br>Salt)         | 1334.00    | 0.00        | 89.35            | 1334.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 1400.00    | 0.00        | 89.35            | 1400.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 1500.00    | 0.00        | 89.35            | 1500.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 1600.00    | 0.00        | 89.35            | 1600.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 1700.00    | 0.00        | 89.35            | 1700.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 1800.00    | 0.00        | 89.35            | 1800.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
| Castille (Base<br>Salt)      | 1859.00    | 0.00        | 89.35            | 1859.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 1900.00    | 0.00        | 89.35            | 1900.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |
|                              | 2000.00    | 0.00        | 89.35            | 2000.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N 32 9 2.81             | W 104 13 31.84           |

| Comments                      | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") |           | Longitude<br>(E/W ° ' ") |
|-------------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|-----------|--------------------------|
| Bell Canyon<br>(Top Delaware) | 2090.00    | 0.00        | 89.35            | 2090.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N                       | 32 9 2.81 | W 104 13 31.84           |
|                               | 2100.00    | 0.00        | 89.35            | 2100.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N                       | 32 9 2.81 | W 104 13 31.84           |
|                               | 2200.00    | 0.00        | 89.35            | 2200.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N                       | 32 9 2.81 | W 104 13 31.84           |
| Nudge 2"/100'<br>DLS          | 2300.00    | 0.00        | 89.35            | 2300.00     | 0.00         | 0.00       | 0.00       | 0.00             | 418605.69          | 574706.44         | N                       | 32 9 2.81 | W 104 13 31.84           |
|                               | 2400.00    | 2.00        | 89.35            | 2399.98     | -0.02        | 0.02       | 1.75       | 2.00             | 418605.71          | 574708.18         | N                       | 32 9 2.81 | W 104 13 31.82           |
|                               | 2500.00    | 4.00        | 89.35            | 2499.84     | -0.06        | 0.08       | 6.98       | 2.00             | 418605.77          | 574713.42         | N                       | 32 9 2.81 | W 104 13 31.76           |
|                               | 2600.00    | 6.00        | 89.35            | 2599.45     | -0.14        | 0.18       | 15.69      | 2.00             | 418605.87          | 574722.13         | N                       | 32 9 2.81 | W 104 13 31.66           |
|                               | 2700.00    | 8.00        | 89.35            | 2698.70     | -0.24        | 0.32       | 27.88      | 2.00             | 418606.01          | 574734.32         | N                       | 32 9 2.81 | W 104 13 31.51           |
| Hold Nudge                    | 2794.25    | 9.89        | 89.35            | 2791.80     | -0.37        | 0.48       | 42.53      | 2.00             | 418606.17          | 574748.96         | N                       | 32 9 2.81 | W 104 13 31.34           |
|                               | 2800.00    | 9.89        | 89.35            | 2797.47     | -0.38        | 0.50       | 43.51      | 0.00             | 418606.19          | 574749.95         | N                       | 32 9 2.81 | W 104 13 31.33           |
|                               | 2900.00    | 9.89        | 89.35            | 2895.98     | -0.53        | 0.69       | 60.68      | 0.00             | 418606.38          | 574767.11         | N                       | 32 9 2.81 | W 104 13 31.13           |
| Cherry Canyon                 | 2948.74    | 9.89        | 89.35            | 2944.00     | -0.60        | 0.79       | 69.05      | 0.00             | 418606.48          | 574775.48         | N                       | 32 9 2.81 | W 104 13 31.04           |
|                               | 3000.00    | 9.89        | 89.35            | 2994.50     | -0.68        | 0.89       | 77.85      | 0.00             | 418606.58          | 574784.28         | N                       | 32 9 2.81 | W 104 13 30.93           |
|                               | 3100.00    | 9.89        | 89.35            | 3093.01     | -0.83        | 1.08       | 95.01      | 0.00             | 418606.77          | 574801.44         | N                       | 32 9 2.82 | W 104 13 30.73           |
|                               | 3200.00    | 9.89        | 89.35            | 3191.53     | -0.98        | 1.28       | 112.18     | 0.00             | 418606.97          | 574818.61         | N                       | 32 9 2.82 | W 104 13 30.53           |
|                               | 3300.00    | 9.89        | 89.35            | 3290.04     | -1.13        | 1.47       | 129.34     | 0.00             | 418607.16          | 574835.77         | N                       | 32 9 2.82 | W 104 13 30.33           |
|                               | 3400.00    | 9.89        | 89.35            | 3388.56     | -1.28        | 1.67       | 146.51     | 0.00             | 418607.36          | 574852.94         | N                       | 32 9 2.82 | W 104 13 30.13           |
|                               | 3500.00    | 9.89        | 89.35            | 3487.07     | -1.43        | 1.87       | 163.68     | 0.00             | 418607.56          | 574870.10         | N                       | 32 9 2.82 | W 104 13 29.93           |
|                               | 3600.00    | 9.89        | 89.35            | 3585.59     | -1.58        | 2.06       | 180.84     | 0.00             | 418607.75          | 574887.27         | N                       | 32 9 2.83 | W 104 13 29.73           |
|                               | 3700.00    | 9.89        | 89.35            | 3684.11     | -1.73        | 2.26       | 198.01     | 0.00             | 418607.95          | 574904.43         | N                       | 32 9 2.83 | W 104 13 29.54           |
|                               | 3800.00    | 9.89        | 89.35            | 3782.62     | -1.89        | 2.45       | 215.17     | 0.00             | 418608.14          | 574921.59         | N                       | 32 9 2.83 | W 104 13 29.34           |
|                               | 3900.00    | 9.89        | 89.35            | 3881.14     | -2.04        | 2.65       | 232.34     | 0.00             | 418608.34          | 574938.76         | N                       | 32 9 2.83 | W 104 13 29.14           |
|                               | 4000.00    | 9.89        | 89.35            | 3979.65     | -2.19        | 2.84       | 249.51     | 0.00             | 418608.53          | 574955.92         | N                       | 32 9 2.83 | W 104 13 28.94           |
|                               | 4026.75    | 9.89        | 89.35            | 4006.00     | -2.23        | 2.90       | 254.10     | 0.00             | 418608.59          | 574960.51         | N                       | 32 9 2.83 | W 104 13 28.88           |
|                               | 4100.00    | 9.89        | 89.35            | 4078.17     | -2.34        | 3.04       | 266.67     | 0.00             | 418608.73          | 574973.09         | N                       | 32 9 2.83 | W 104 13 28.74           |
|                               | 4200.00    | 9.89        | 89.35            | 4176.68     | -2.49        | 3.24       | 283.84     | 0.00             | 418608.92          | 574990.25         | N                       | 32 9 2.84 | W 104 13 28.54           |
| Brushy Canyon                 | 4300.00    | 9.89        | 89.35            | 4275.20     | -2.64        | 3.43       | 301.00     | 0.00             | 418609.12          | 575007.42         | N                       | 32 9 2.84 | W 104 13 28.34           |
|                               | 4400.00    | 9.89        | 89.35            | 4373.71     | -2.79        | 3.63       | 318.17     | 0.00             | 418609.32          | 575024.58         | N                       | 32 9 2.84 | W 104 13 28.14           |
|                               | 4500.00    | 9.89        | 89.35            | 4472.23     | -2.94        | 3.82       | 335.34     | 0.00             | 418609.51          | 575041.75         | N                       | 32 9 2.84 | W 104 13 27.94           |
|                               | 4600.00    | 9.89        | 89.35            | 4570.74     | -3.09        | 4.02       | 352.50     | 0.00             | 418609.71          | 575058.91         | N                       | 32 9 2.84 | W 104 13 27.74           |
|                               | 4700.00    | 9.89        | 89.35            | 4669.26     | -3.24        | 4.21       | 369.67     | 0.00             | 418609.90          | 575076.07         | N                       | 32 9 2.84 | W 104 13 27.54           |
|                               | 4800.00    | 9.89        | 89.35            | 4767.77     | -3.39        | 4.41       | 386.83     | 0.00             | 418610.10          | 575093.24         | N                       | 32 9 2.85 | W 104 13 27.34           |
|                               | 4900.00    | 9.89        | 89.35            | 4866.29     | -3.54        | 4.60       | 404.00     | 0.00             | 418610.29          | 575110.40         | N                       | 32 9 2.85 | W 104 13 27.14           |
|                               | 5000.00    | 9.89        | 89.35            | 4964.81     | -3.69        | 4.80       | 421.17     | 0.00             | 418610.49          | 575127.57         | N                       | 32 9 2.85 | W 104 13 26.94           |
|                               | 5100.00    | 9.89        | 89.35            | 5063.32     | -3.84        | 5.00       | 438.33     | 0.00             | 418610.69          | 575144.73         | N                       | 32 9 2.85 | W 104 13 26.74           |
|                               | 5200.00    | 9.89        | 89.35            | 5161.84     | -3.99        | 5.19       | 455.50     | 0.00             | 418610.88          | 575161.90         | N                       | 32 9 2.85 | W 104 13 26.54           |
|                               | 5300.00    | 9.89        | 89.35            | 5260.35     | -4.14        | 5.39       | 472.66     | 0.00             | 418611.08          | 575179.06         | N                       | 32 9 2.86 | W 104 13 26.34           |
|                               | 5400.00    | 9.89        | 89.35            | 5358.87     | -4.29        | 5.58       | 489.83     | 0.00             | 418611.27          | 575196.23         | N                       | 32 9 2.86 | W 104 13 26.14           |
|                               | 5500.00    | 9.89        | 89.35            | 5457.38     | -4.44        | 5.78       | 507.00     | 0.00             | 418611.47          | 575213.39         | N                       | 32 9 2.86 | W 104 13 25.94           |
|                               | 5600.00    | 9.89        | 89.35            | 5555.90     | -4.59        | 5.97       | 524.16     | 0.00             | 418611.66          | 575230.55         | N                       | 32 9 2.86 | W 104 13 25.74           |
| Top Bone<br>Spring            | 5669.13    | 9.89        | 89.35            | 5624.00     | -4.70        | 6.11       | 536.03     | 0.00             | 418611.80          | 575242.42         | N                       | 32 9 2.86 | W 104 13 25.60           |
|                               | 5700.00    | 9.89        | 89.35            | 5654.41     | -4.74        | 6.17       | 541.33     | 0.00             | 418611.86          | 575247.72         | N                       | 32 9 2.86 | W 104 13 25.54           |
|                               | 5800.00    | 9.89        | 89.35            | 5752.93     | -4.89        | 6.37       | 558.49     | 0.00             | 418612.05          | 575264.88         | N                       | 32 9 2.86 | W 104 13 25.34           |
|                               | 5900.00    | 9.89        | 89.35            | 5851.44     | -5.04        | 6.56       | 575.66     | 0.00             | 418612.25          | 575282.05         | N                       | 32 9 2.87 | W 104 13 25.14           |
|                               | 6000.00    | 9.89        | 89.35            | 5949.96     | -5.19        | 6.76       | 592.83     | 0.00             | 418612.45          | 575299.21         | N                       | 32 9 2.87 | W 104 13 24.94           |
|                               | 6100.00    | 9.89        | 89.35            | 6048.48     | -5.34        | 6.95       | 609.99     | 0.00             | 418612.64          | 575316.38         | N                       | 32 9 2.87 | W 104 13 24.74           |
|                               | 6200.00    | 9.89        | 89.35            | 6146.99     | -5.50        | 7.15       | 627.16     | 0.00             | 418612.84          | 575333.54         | N                       | 32 9 2.87 | W 104 13 24.54           |
|                               | 6300.00    | 9.89        | 89.35            | 6245.51     | -5.65        | 7.34       | 644.32     | 0.00             | 418613.03          | 575350.71         | N                       | 32 9 2.87 | W 104 13 24.34           |
|                               | 6400.00    | 9.89        | 89.35            | 6344.02     | -5.80        | 7.54       | 661.49     | 0.00             | 418613.23          | 575367.87         | N                       | 32 9 2.87 | W 104 13 24.14           |
|                               | 6500.00    | 9.89        | 89.35            | 6442.54     | -5.95        | 7.73       | 678.66     | 0.00             | 418613.42          | 575385.03         | N                       | 32 9 2.88 | W 104 13 23.94           |
| Top 1st BSPG<br>SS            | 6593.86    | 9.89        | 89.35            | 6535.00     | -6.09        | 7.92       | 694.77     | 0.00             | 418613.61          | 575401.14         | N                       | 32 9 2.88 | W 104 13 23.76           |
|                               | 6600.00    | 9.89        | 89.35            | 6541.05     | -6.10        | 7.93       | 695.82     | 0.00             | 418613.62          | 575402.20         | N                       | 32 9 2.88 | W 104 13 23.74           |
|                               | 6700.00    | 9.89        | 89.35            | 6639.57     | -6.25        | 8.13       | 712.99     | 0.00             | 418613.82          | 575419.36         | N                       | 32 9 2.88 | W 104 13 23.55           |
|                               | 6800.00    | 9.89        | 89.35            | 6738.08     | -6.40        | 8.32       | 730.15     | 0.00             | 418614.01          | 575436.53         | N                       | 32 9 2.88 | W 104 13 23.35           |

| Comments                                | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|-----------------------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|
|                                         | 6900.00    | 9.89        | 89.35            | 6836.60     | -6.55        | 8.52       | 747.32     | 0.00             | 418614.21          | 575453.69         | N 32 9 2.88             | W 104 13 23.15           |
|                                         | 7000.00    | 9.89        | 89.35            | 6935.11     | -6.70        | 8.71       | 764.49     | 0.00             | 418614.40          | 575470.86         | N 32 9 2.89             | W 104 13 22.95           |
|                                         | 7100.00    | 9.89        | 89.35            | 7033.63     | -6.85        | 8.91       | 781.65     | 0.00             | 418614.60          | 575488.02         | N 32 9 2.89             | W 104 13 22.75           |
| Top 2nd BSPG<br>SS                      | 7176.51    | 9.89        | 89.35            | 7109.00     | -6.96        | 9.06       | 794.79     | 0.00             | 418614.75          | 575501.15         | N 32 9 2.89             | W 104 13 22.59           |
|                                         | 7200.00    | 9.89        | 89.35            | 7132.15     | -7.00        | 9.10       | 798.82     | 0.00             | 418614.79          | 575505.19         | N 32 9 2.89             | W 104 13 22.55           |
|                                         | 7300.00    | 9.89        | 89.35            | 7230.66     | -7.15        | 9.30       | 815.98     | 0.00             | 418614.99          | 575522.35         | N 32 9 2.89             | W 104 13 22.35           |
|                                         | 7400.00    | 9.89        | 89.35            | 7329.18     | -7.30        | 9.50       | 833.15     | 0.00             | 418615.18          | 575539.51         | N 32 9 2.89             | W 104 13 22.15           |
|                                         | 7500.00    | 9.89        | 89.35            | 7427.69     | -7.45        | 9.69       | 850.32     | 0.00             | 418615.38          | 575556.68         | N 32 9 2.89             | W 104 13 21.95           |
|                                         | 7600.00    | 9.89        | 89.35            | 7526.21     | -7.60        | 9.89       | 867.48     | 0.00             | 418615.58          | 575573.84         | N 32 9 2.90             | W 104 13 21.75           |
|                                         | 7700.00    | 9.89        | 89.35            | 7624.72     | -7.75        | 10.08      | 884.65     | 0.00             | 418615.77          | 575591.01         | N 32 9 2.90             | W 104 13 21.55           |
|                                         | 7800.00    | 9.89        | 89.35            | 7723.24     | -7.90        | 10.28      | 901.81     | 0.00             | 418615.97          | 575608.17         | N 32 9 2.90             | W 104 13 21.35           |
|                                         | 7900.00    | 9.89        | 89.35            | 7821.75     | -8.05        | 10.47      | 918.98     | 0.00             | 418616.16          | 575625.34         | N 32 9 2.90             | W 104 13 21.15           |
|                                         | 8000.00    | 9.89        | 89.35            | 7920.27     | -8.20        | 10.67      | 936.15     | 0.00             | 418616.36          | 575642.50         | N 32 9 2.90             | W 104 13 20.95           |
|                                         | 8100.00    | 9.89        | 89.35            | 8018.78     | -8.35        | 10.87      | 953.31     | 0.00             | 418616.55          | 575659.66         | N 32 9 2.90             | W 104 13 20.75           |
|                                         | 8200.00    | 9.89        | 89.35            | 8117.30     | -8.50        | 11.06      | 970.48     | 0.00             | 418616.75          | 575676.83         | N 32 9 2.91             | W 104 13 20.55           |
|                                         | 8300.00    | 9.89        | 89.35            | 8215.82     | -8.65        | 11.26      | 987.64     | 0.00             | 418616.95          | 575693.99         | N 32 9 2.91             | W 104 13 20.35           |
|                                         | 8400.00    | 9.89        | 89.35            | 8314.33     | -8.80        | 11.45      | 1004.81    | 0.00             | 418617.14          | 575711.16         | N 32 9 2.91             | W 104 13 20.15           |
| Top 3rd BSPS<br>SS                      | 8464.63    | 9.89        | 89.35            | 8378.00     | -8.90        | 11.58      | 1015.90    | 0.00             | 418617.27          | 575722.25         | N 32 9 2.91             | W 104 13 20.02           |
|                                         | 8500.00    | 9.89        | 89.35            | 8412.85     | -8.95        | 11.65      | 1021.98    | 0.00             | 418617.34          | 575728.32         | N 32 9 2.91             | W 104 13 19.95           |
| Drop to Vertical<br>2°/100' DLS         | 8588.47    | 9.89        | 89.35            | 8500.00     | -9.09        | 11.82      | 1037.16    | 0.00             | 418617.51          | 575743.51         | N 32 9 2.91             | W 104 13 19.77           |
|                                         | 8600.00    | 9.65        | 89.35            | 8511.37     | -9.10        | 11.84      | 1039.12    | 2.00             | 418617.53          | 575745.46         | N 32 9 2.91             | W 104 13 19.75           |
|                                         | 8700.00    | 7.65        | 89.35            | 8610.22     | -9.24        | 12.01      | 1054.17    | 2.00             | 418617.70          | 575760.51         | N 32 9 2.91             | W 104 13 19.58           |
|                                         | 8800.00    | 5.65        | 89.35            | 8709.54     | -9.34        | 12.15      | 1065.75    | 2.00             | 418617.84          | 575772.09         | N 32 9 2.92             | W 104 13 19.44           |
| Top Wolfcamp                            | 8826.57    | 5.12        | 89.35            | 8736.00     | -9.36        | 12.18      | 1068.25    | 2.00             | 418617.86          | 575774.59         | N 32 9 2.92             | W 104 13 19.41           |
|                                         | 8900.00    | 3.65        | 89.35            | 8809.21     | -9.41        | 12.24      | 1073.87    | 2.00             | 418617.93          | 575780.21         | N 32 9 2.92             | W 104 13 19.35           |
|                                         | 9000.00    | 1.65        | 89.35            | 8909.09     | -9.45        | 12.29      | 1078.50    | 2.00             | 418617.98          | 575784.84         | N 32 9 2.92             | W 104 13 19.29           |
| Wolfcamp A<br>Hold Vertical             | 9036.91    | 0.92        | 89.35            | 8946.00     | -9.46        | 12.30      | 1079.32    | 2.00             | 418617.99          | 575785.66         | N 32 9 2.92             | W 104 13 19.28           |
|                                         | 9082.72    | 0.00        | 89.35            | 8991.80     | -9.46        | 12.31      | 1079.69    | 2.00             | 418617.99          | 575786.03         | N 32 9 2.92             | W 104 13 19.28           |
|                                         | 9100.00    | 0.00        | 89.35            | 9009.08     | -9.46        | 12.31      | 1079.69    | 0.00             | 418617.99          | 575786.03         | N 32 9 2.92             | W 104 13 19.28           |
| KOP - Build<br>12°/100' DLS             | 9135.93    | 0.00        | 89.35            | 9045.01     | -9.46        | 12.31      | 1079.69    | 0.00             | 418617.99          | 575786.03         | N 32 9 2.92             | W 104 13 19.28           |
|                                         | 9200.00    | 7.69        | 179.85           | 9108.89     | -5.17        | 8.01       | 1079.70    | 12.00            | 418613.70          | 575786.04         | N 32 9 2.87             | W 104 13 19.28           |
|                                         | 9300.00    | 19.69       | 179.85           | 9205.87     | 18.45        | -15.61     | 1079.76    | 12.00            | 418590.08          | 575786.10         | N 32 9 2.64             | W 104 13 19.28           |
| Wolfcamp A2                             | 9306.52    | 20.47       | 179.85           | 9212.00     | 20.69        | -17.85     | 1079.77    | 12.00            | 418587.85          | 575786.11         | N 32 9 2.62             | W 104 13 19.28           |
|                                         | 9400.00    | 31.69       | 179.85           | 9295.83     | 61.72        | -58.88     | 1079.88    | 12.00            | 418546.82          | 575786.22         | N 32 9 2.21             | W 104 13 19.28           |
| Wolfcamp B                              | 9455.18    | 38.31       | 179.85           | 9341.00     | 93.35        | -90.51     | 1079.96    | 12.00            | 418515.19          | 575786.30         | N 32 9 1.90             | W 104 13 19.28           |
|                                         | 9500.00    | 43.69       | 179.85           | 9374.82     | 122.75       | -119.90    | 1080.04    | 12.00            | 418485.80          | 575786.38         | N 32 9 1.61             | W 104 13 19.28           |
|                                         | 9600.00    | 55.69       | 179.85           | 9439.39     | 198.86       | -196.01    | 1080.24    | 12.00            | 418409.69          | 575786.58         | N 32 9 0.86             | W 104 13 19.28           |
|                                         | 9700.00    | 67.69       | 179.85           | 9486.73     | 286.74       | -283.89    | 1080.47    | 12.00            | 418321.82          | 575786.81         | N 32 8 59.99            | W 104 13 19.27           |
| Wolfcamp C<br>Build 4°/100'<br>DLS      | 9735.57    | 71.96       | 179.85           | 9499.00     | 320.12       | -317.27    | 1080.56    | 12.00            | 418288.44          | 575786.90         | N 32 8 59.66            | W 104 13 19.27           |
|                                         | 9760.93    | 75.00       | 179.85           | 9506.21     | 344.43       | -341.58    | 1080.62    | 12.00            | 418264.14          | 575786.96         | N 32 8 59.42            | W 104 13 19.27           |
|                                         | 9800.00    | 76.56       | 179.85           | 9515.81     | 382.30       | -379.45    | 1080.72    | 4.00             | 418226.27          | 575787.06         | N 32 8 59.04            | W 104 13 19.27           |
|                                         | 9900.00    | 80.56       | 179.85           | 9535.63     | 480.29       | -477.45    | 1080.98    | 4.00             | 418128.29          | 575787.32         | N 32 8 58.07            | W 104 13 19.27           |
|                                         | 10000.00   | 84.56       | 179.85           | 9548.57     | 579.43       | -576.59    | 1081.24    | 4.00             | 418029.16          | 575787.58         | N 32 8 57.09            | W 104 13 19.27           |
|                                         | 10100.00   | 88.56       | 179.85           | 9554.57     | 679.23       | -676.38    | 1081.50    | 4.00             | 417929.37          | 575787.85         | N 32 8 56.10            | W 104 13 19.27           |
| Wolfcamp 'C'<br>Target<br>Landing Point | 10128.90   | 89.72       | 179.85           | 9555.00     | 708.13       | -705.28    | 1081.58    | 4.00             | 417900.48          | 575787.92         | N 32 8 55.82            | W 104 13 19.27           |
|                                         | 10200.00   | 89.72       | 179.85           | 9555.35     | 779.23       | -776.38    | 1081.77    | 0.00             | 417829.38          | 575788.11         | N 32 8 55.11            | W 104 13 19.27           |
|                                         | 10300.00   | 89.72       | 179.85           | 9555.84     | 879.23       | -876.38    | 1082.03    | 0.00             | 417729.39          | 575788.37         | N 32 8 54.12            | W 104 13 19.26           |
|                                         | 10400.00   | 89.72       | 179.85           | 9556.33     | 979.23       | -976.38    | 1082.30    | 0.00             | 417629.40          | 575788.64         | N 32 8 53.13            | W 104 13 19.26           |
|                                         | 10500.00   | 89.72       | 179.85           | 9556.82     | 1079.22      | -1076.38   | 1082.56    | 0.00             | 417529.41          | 575788.90         | N 32 8 52.14            | W 104 13 19.26           |
|                                         | 10600.00   | 89.72       | 179.85           | 9557.31     | 1179.22      | -1176.37   | 1082.82    | 0.00             | 417429.42          | 575789.16         | N 32 8 51.16            | W 104 13 19.26           |
|                                         | 10700.00   | 89.72       | 179.85           | 9557.80     | 1279.22      | -1276.37   | 1083.09    | 0.00             | 417329.43          | 575789.43         | N 32 8 50.17            | W 104 13 19.26           |

| Comments    | MD<br>(ft) | Incl<br>(°) | Azlm Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|-------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|
|             | 10800.00   | 89.72       | 179.85           | 9558.30     | 1379.22      | -1376.37   | 1083.35    | 0.00             | 417229.45          | 575789.69         | N 32 8 49.18            | W 104 13 19.25           |
|             | 10900.00   | 89.72       | 179.85           | 9558.79     | 1479.22      | -1476.37   | 1083.61    | 0.00             | 417129.46          | 575789.95         | N 32 8 48.19            | W 104 13 19.25           |
|             | 11000.00   | 89.72       | 179.85           | 9559.28     | 1579.22      | -1576.37   | 1083.88    | 0.00             | 417029.47          | 575790.22         | N 32 8 47.20            | W 104 13 19.25           |
|             | 11100.00   | 89.72       | 179.85           | 9559.77     | 1679.22      | -1676.37   | 1084.14    | 0.00             | 416929.48          | 575790.48         | N 32 8 46.21            | W 104 13 19.25           |
|             | 11200.00   | 89.72       | 179.85           | 9560.26     | 1779.22      | -1776.36   | 1084.40    | 0.00             | 416829.49          | 575790.74         | N 32 8 45.22            | W 104 13 19.25           |
|             | 11300.00   | 89.72       | 179.85           | 9560.75     | 1879.21      | -1876.36   | 1084.67    | 0.00             | 416729.50          | 575791.01         | N 32 8 44.23            | W 104 13 19.24           |
|             | 11400.00   | 89.72       | 179.85           | 9561.24     | 1979.21      | -1976.36   | 1084.93    | 0.00             | 416629.51          | 575791.27         | N 32 8 43.24            | W 104 13 19.24           |
|             | 11500.00   | 89.72       | 179.85           | 9561.73     | 2079.21      | -2076.36   | 1085.19    | 0.00             | 416529.52          | 575791.53         | N 32 8 42.25            | W 104 13 19.24           |
|             | 11600.00   | 89.72       | 179.85           | 9562.22     | 2179.21      | -2176.36   | 1085.46    | 0.00             | 416429.53          | 575791.80         | N 32 8 41.26            | W 104 13 19.24           |
|             | 11700.00   | 89.72       | 179.85           | 9562.71     | 2279.21      | -2276.36   | 1085.72    | 0.00             | 416329.54          | 575792.06         | N 32 8 40.27            | W 104 13 19.24           |
|             | 11800.00   | 89.72       | 179.85           | 9563.20     | 2379.21      | -2376.35   | 1085.98    | 0.00             | 416229.55          | 575792.32         | N 32 8 39.28            | W 104 13 19.24           |
|             | 11900.00   | 89.72       | 179.85           | 9563.70     | 2479.21      | -2476.35   | 1086.25    | 0.00             | 416129.56          | 575792.59         | N 32 8 38.29            | W 104 13 19.23           |
|             | 12000.00   | 89.72       | 179.85           | 9564.19     | 2579.21      | -2576.35   | 1086.51    | 0.00             | 416029.57          | 575792.85         | N 32 8 37.30            | W 104 13 19.23           |
|             | 12100.00   | 89.72       | 179.85           | 9564.68     | 2679.21      | -2676.35   | 1086.77    | 0.00             | 415929.58          | 575793.12         | N 32 8 36.31            | W 104 13 19.23           |
|             | 12200.00   | 89.72       | 179.85           | 9565.17     | 2779.20      | -2776.35   | 1087.04    | 0.00             | 415829.60          | 575793.38         | N 32 8 35.32            | W 104 13 19.23           |
|             | 12300.00   | 89.72       | 179.85           | 9565.66     | 2879.20      | -2876.35   | 1087.30    | 0.00             | 415729.61          | 575793.64         | N 32 8 34.33            | W 104 13 19.23           |
|             | 12400.00   | 89.72       | 179.85           | 9566.15     | 2979.20      | -2976.35   | 1087.57    | 0.00             | 415629.62          | 575793.91         | N 32 8 33.34            | W 104 13 19.22           |
|             | 12500.00   | 89.72       | 179.85           | 9566.64     | 3079.20      | -3076.34   | 1087.83    | 0.00             | 415529.63          | 575794.17         | N 32 8 32.35            | W 104 13 19.22           |
|             | 12600.00   | 89.72       | 179.85           | 9567.13     | 3179.20      | -3176.34   | 1088.09    | 0.00             | 415429.64          | 575794.43         | N 32 8 31.36            | W 104 13 19.22           |
|             | 12700.00   | 89.72       | 179.85           | 9567.62     | 3279.20      | -3276.34   | 1088.36    | 0.00             | 415329.65          | 575794.70         | N 32 8 30.38            | W 104 13 19.22           |
|             | 12800.00   | 89.72       | 179.85           | 9568.11     | 3379.20      | -3376.34   | 1088.62    | 0.00             | 415229.66          | 575794.96         | N 32 8 29.39            | W 104 13 19.22           |
|             | 12900.00   | 89.72       | 179.85           | 9568.61     | 3479.20      | -3476.34   | 1088.88    | 0.00             | 415129.67          | 575795.22         | N 32 8 28.40            | W 104 13 19.21           |
|             | 13000.00   | 89.72       | 179.85           | 9569.10     | 3579.19      | -3576.34   | 1089.15    | 0.00             | 415029.68          | 575795.49         | N 32 8 27.41            | W 104 13 19.21           |
|             | 13100.00   | 89.72       | 179.85           | 9569.59     | 3679.19      | -3676.33   | 1089.41    | 0.00             | 414929.69          | 575795.75         | N 32 8 26.42            | W 104 13 19.21           |
|             | 13200.00   | 89.72       | 179.85           | 9570.08     | 3779.19      | -3776.33   | 1089.67    | 0.00             | 414829.70          | 575796.01         | N 32 8 25.43            | W 104 13 19.21           |
|             | 13300.00   | 89.72       | 179.85           | 9570.57     | 3879.19      | -3876.33   | 1089.94    | 0.00             | 414729.71          | 575796.28         | N 32 8 24.44            | W 104 13 19.21           |
|             | 13400.00   | 89.72       | 179.85           | 9571.06     | 3979.19      | -3976.33   | 1090.20    | 0.00             | 414629.72          | 575796.54         | N 32 8 23.45            | W 104 13 19.21           |
|             | 13500.00   | 89.72       | 179.85           | 9571.55     | 4079.19      | -4076.33   | 1090.46    | 0.00             | 414529.73          | 575796.80         | N 32 8 22.46            | W 104 13 19.20           |
|             | 13600.00   | 89.72       | 179.85           | 9572.04     | 4179.19      | -4176.33   | 1090.73    | 0.00             | 414429.75          | 575797.07         | N 32 8 21.47            | W 104 13 19.20           |
|             | 13700.00   | 89.72       | 179.85           | 9572.53     | 4279.19      | -4276.33   | 1090.99    | 0.00             | 414329.76          | 575797.33         | N 32 8 20.48            | W 104 13 19.20           |
|             | 13800.00   | 89.72       | 179.85           | 9573.02     | 4379.18      | -4376.32   | 1091.25    | 0.00             | 414229.77          | 575797.59         | N 32 8 19.49            | W 104 13 19.20           |
|             | 13900.00   | 89.72       | 179.85           | 9573.52     | 4479.18      | -4476.32   | 1091.52    | 0.00             | 414129.78          | 575797.86         | N 32 8 18.50            | W 104 13 19.20           |
|             | 14000.00   | 89.72       | 179.85           | 9574.01     | 4579.18      | -4576.32   | 1091.78    | 0.00             | 414029.79          | 575798.12         | N 32 8 17.51            | W 104 13 19.19           |
|             | 14100.00   | 89.72       | 179.85           | 9574.50     | 4679.18      | -4676.32   | 1092.04    | 0.00             | 413929.80          | 575798.38         | N 32 8 16.52            | W 104 13 19.19           |
|             | 14200.00   | 89.72       | 179.85           | 9574.99     | 4779.18      | -4776.32   | 1092.31    | 0.00             | 413829.81          | 575798.65         | N 32 8 15.53            | W 104 13 19.19           |
|             | 14300.00   | 89.72       | 179.85           | 9575.48     | 4879.18      | -4876.32   | 1092.57    | 0.00             | 413729.82          | 575798.91         | N 32 8 14.54            | W 104 13 19.19           |
|             | 14400.00   | 89.72       | 179.85           | 9575.97     | 4979.18      | -4976.31   | 1092.84    | 0.00             | 413629.83          | 575799.18         | N 32 8 13.55            | W 104 13 19.19           |
|             | 14500.00   | 89.72       | 179.85           | 9576.46     | 5079.18      | -5076.31   | 1093.10    | 0.00             | 413529.84          | 575799.44         | N 32 8 12.56            | W 104 13 19.19           |
|             | 14600.00   | 89.72       | 179.85           | 9576.95     | 5179.17      | -5176.31   | 1093.36    | 0.00             | 413429.85          | 575799.70         | N 32 8 11.57            | W 104 13 19.18           |
|             | 14700.00   | 89.72       | 179.85           | 9577.44     | 5279.17      | -5276.31   | 1093.63    | 0.00             | 413329.86          | 575799.97         | N 32 8 10.58            | W 104 13 19.18           |
|             | 14800.00   | 89.72       | 179.85           | 9577.93     | 5379.17      | -5376.31   | 1093.89    | 0.00             | 413229.87          | 575800.23         | N 32 8 9.60             | W 104 13 19.18           |
|             | 14900.00   | 89.72       | 179.85           | 9578.43     | 5479.17      | -5476.31   | 1094.15    | 0.00             | 413129.89          | 575800.49         | N 32 8 8.61             | W 104 13 19.18           |
|             | 15000.00   | 89.72       | 179.85           | 9578.92     | 5579.17      | -5576.31   | 1094.42    | 0.00             | 413029.90          | 575800.76         | N 32 8 7.62             | W 104 13 19.18           |
|             | 15100.00   | 89.72       | 179.85           | 9579.41     | 5679.17      | -5676.30   | 1094.68    | 0.00             | 412929.91          | 575801.02         | N 32 8 6.63             | W 104 13 19.17           |
|             | 15200.00   | 89.72       | 179.85           | 9579.90     | 5779.17      | -5776.30   | 1094.94    | 0.00             | 412829.92          | 575801.28         | N 32 8 5.64             | W 104 13 19.17           |
| Wolfcamp C2 | 15220.64   | 89.72       | 179.85           | 9580.00     | 5799.81      | -5796.94   | 1095.00    | 0.00             | 412809.28          | 575801.34         | N 32 8 5.43             | W 104 13 19.17           |
|             | 15300.00   | 89.72       | 179.85           | 9580.39     | 5879.17      | -5876.30   | 1095.21    | 0.00             | 412729.93          | 575801.55         | N 32 8 4.65             | W 104 13 19.17           |
|             | 15400.00   | 89.72       | 179.85           | 9580.88     | 5979.17      | -5976.30   | 1095.47    | 0.00             | 412629.94          | 575801.81         | N 32 8 3.66             | W 104 13 19.17           |
|             | 15500.00   | 89.72       | 179.85           | 9581.37     | 6079.16      | -6076.30   | 1095.73    | 0.00             | 412529.95          | 575802.07         | N 32 8 2.67             | W 104 13 19.17           |
|             | 15600.00   | 89.72       | 179.85           | 9581.86     | 6179.16      | -6176.30   | 1096.00    | 0.00             | 412429.96          | 575802.34         | N 32 8 1.68             | W 104 13 19.16           |
|             | 15700.00   | 89.72       | 179.85           | 9582.35     | 6279.16      | -6276.29   | 1096.26    | 0.00             | 412329.97          | 575802.60         | N 32 8 0.69             | W 104 13 19.16           |
|             | 15800.00   | 89.72       | 179.85           | 9582.84     | 6379.16      | -6376.29   | 1096.52    | 0.00             | 412229.98          | 575802.86         | N 32 7 59.70            | W 104 13 19.16           |
|             | 15900.00   | 89.72       | 179.85           | 9583.34     | 6479.16      | -6476.29   | 1096.79    | 0.00             | 412129.99          | 575803.13         | N 32 7 58.71            | W 104 13 19.16           |
|             | 16000.00   | 89.72       | 179.85           | 9583.83     | 6579.16      | -6576.29   | 1097.05    | 0.00             | 412030.00          | 575803.39         | N 32 7 57.72            | W 104 13 19.16           |
|             | 16100.00   | 89.72       | 179.85           | 9584.32     | 6679.16      | -6676.29   | 1097.31    | 0.00             | 411930.01          | 575803.65         | N 32 7 56.73            | W 104 13 19.16           |
|             | 16200.00   | 89.72       | 179.85           | 9584.81     | 6779.16      | -6776.29   | 1097.58    | 0.00             | 411830.02          | 575803.92         | N 32 7 55.74            | W 104 13 19.15           |
|             | 16300.00   | 89.72       | 179.85           | 9585.30     | 6879.15      | -6876.29   | 1097.84    | 0.00             | 411730.04          | 575804.18         | N 32 7 54.75            | W 104 13 19.15           |
|             | 16400.00   | 89.72       | 179.85           | 9585.79     | 6979.15      | -6976.28   | 1098.11    | 0.00             | 411630.05          | 575804.44         | N 32 7 53.76            | W 104 13 19.15           |

| Comments                                                                      | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|-------------------------------------------------------------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|
|                                                                               | 16500.00   | 89.72       | 179.85           | 9586.28     | 7079.15      | -7076.28   | 1098.37    | 0.00             | 411530.06          | 575804.71         | N 32 7 52.77            | W 104 13 19.15           |
|                                                                               | 16600.00   | 89.72       | 179.85           | 9586.77     | 7179.15      | -7176.28   | 1098.63    | 0.00             | 411430.07          | 575804.97         | N 32 7 51.78            | W 104 13 19.15           |
|                                                                               | 16700.00   | 89.72       | 179.85           | 9587.26     | 7279.15      | -7276.28   | 1098.90    | 0.00             | 411330.08          | 575805.24         | N 32 7 50.79            | W 104 13 19.14           |
|                                                                               | 16800.00   | 89.72       | 179.85           | 9587.75     | 7379.15      | -7376.28   | 1099.16    | 0.00             | 411230.09          | 575805.50         | N 32 7 49.81            | W 104 13 19.14           |
|                                                                               | 16900.00   | 89.72       | 179.85           | 9588.25     | 7479.15      | -7476.28   | 1099.42    | 0.00             | 411130.10          | 575805.76         | N 32 7 48.82            | W 104 13 19.14           |
|                                                                               | 17000.00   | 89.72       | 179.85           | 9588.74     | 7579.15      | -7576.27   | 1099.69    | 0.00             | 411030.11          | 575806.03         | N 32 7 47.83            | W 104 13 19.14           |
|                                                                               | 17100.00   | 89.72       | 179.85           | 9589.23     | 7679.14      | -7676.27   | 1099.95    | 0.00             | 410930.12          | 575806.29         | N 32 7 46.84            | W 104 13 19.14           |
|                                                                               | 17200.00   | 89.72       | 179.85           | 9589.72     | 7779.14      | -7776.27   | 1100.21    | 0.00             | 410830.13          | 575806.55         | N 32 7 45.85            | W 104 13 19.13           |
|                                                                               | 17300.00   | 89.72       | 179.85           | 9590.21     | 7879.14      | -7876.27   | 1100.48    | 0.00             | 410730.14          | 575806.82         | N 32 7 44.86            | W 104 13 19.13           |
|                                                                               | 17400.00   | 89.72       | 179.85           | 9590.70     | 7979.14      | -7976.27   | 1100.74    | 0.00             | 410630.15          | 575807.08         | N 32 7 43.87            | W 104 13 19.13           |
|                                                                               | 17500.00   | 89.72       | 179.85           | 9591.19     | 8079.14      | -8076.27   | 1101.00    | 0.00             | 410530.16          | 575807.34         | N 32 7 42.88            | W 104 13 19.13           |
|                                                                               | 17600.00   | 89.72       | 179.85           | 9591.68     | 8179.14      | -8176.26   | 1101.27    | 0.00             | 410430.17          | 575807.61         | N 32 7 41.89            | W 104 13 19.13           |
|                                                                               | 17700.00   | 89.72       | 179.85           | 9592.17     | 8279.14      | -8276.26   | 1101.53    | 0.00             | 410330.19          | 575807.87         | N 32 7 40.90            | W 104 13 19.13           |
|                                                                               | 17800.00   | 89.72       | 179.85           | 9592.66     | 8379.14      | -8376.26   | 1101.79    | 0.00             | 410230.20          | 575808.13         | N 32 7 39.91            | W 104 13 19.12           |
|                                                                               | 17900.00   | 89.72       | 179.85           | 9593.16     | 8479.14      | -8476.26   | 1102.06    | 0.00             | 410130.21          | 575808.40         | N 32 7 38.92            | W 104 13 19.12           |
|                                                                               | 18000.00   | 89.72       | 179.85           | 9593.65     | 8579.13      | -8576.26   | 1102.32    | 0.00             | 410030.22          | 575808.66         | N 32 7 37.93            | W 104 13 19.12           |
|                                                                               | 18100.00   | 89.72       | 179.85           | 9594.14     | 8679.13      | -8676.26   | 1102.58    | 0.00             | 409930.23          | 575808.92         | N 32 7 36.94            | W 104 13 19.12           |
|                                                                               | 18200.00   | 89.72       | 179.85           | 9594.63     | 8779.13      | -8776.26   | 1102.85    | 0.00             | 409830.24          | 575809.19         | N 32 7 35.95            | W 104 13 19.12           |
|                                                                               | 18300.00   | 89.72       | 179.85           | 9595.12     | 8879.13      | -8876.25   | 1103.11    | 0.00             | 409730.25          | 575809.45         | N 32 7 34.96            | W 104 13 19.11           |
|                                                                               | 18400.00   | 89.72       | 179.85           | 9595.61     | 8979.13      | -8976.25   | 1103.38    | 0.00             | 409630.26          | 575809.71         | N 32 7 33.97            | W 104 13 19.11           |
|                                                                               | 18500.00   | 89.72       | 179.85           | 9596.10     | 9079.13      | -9076.25   | 1103.64    | 0.00             | 409530.27          | 575809.98         | N 32 7 32.98            | W 104 13 19.11           |
|                                                                               | 18600.00   | 89.72       | 179.85           | 9596.59     | 9179.13      | -9176.25   | 1103.90    | 0.00             | 409430.28          | 575810.24         | N 32 7 31.99            | W 104 13 19.11           |
|                                                                               | 18700.00   | 89.72       | 179.85           | 9597.08     | 9279.13      | -9276.25   | 1104.17    | 0.00             | 409330.29          | 575810.50         | N 32 7 31.00            | W 104 13 19.11           |
|                                                                               | 18800.00   | 89.72       | 179.85           | 9597.57     | 9379.12      | -9376.25   | 1104.43    | 0.00             | 409230.30          | 575810.77         | N 32 7 30.01            | W 104 13 19.11           |
|                                                                               | 18900.00   | 89.72       | 179.85           | 9598.07     | 9479.12      | -9476.24   | 1104.69    | 0.00             | 409130.31          | 575811.03         | N 32 7 29.03            | W 104 13 19.10           |
|                                                                               | 19000.00   | 89.72       | 179.85           | 9598.56     | 9579.12      | -9576.24   | 1104.96    | 0.00             | 409030.32          | 575811.30         | N 32 7 28.04            | W 104 13 19.10           |
|                                                                               | 19100.00   | 89.72       | 179.85           | 9599.05     | 9679.12      | -9676.24   | 1105.22    | 0.00             | 408930.34          | 575811.56         | N 32 7 27.05            | W 104 13 19.10           |
|                                                                               | 19200.00   | 89.72       | 179.85           | 9599.54     | 9779.12      | -9776.24   | 1105.48    | 0.00             | 408830.35          | 575811.82         | N 32 7 26.06            | W 104 13 19.10           |
| Cimarex DaVinci<br>7-18 Federal<br>Com #29H -<br>PBHL [330' FSL,<br>330' FEL] | 19294.04   | 89.72       | 179.85           | 9600.00     | 9873.15      | -9870.27   | 1105.73    | 0.00             | 408736.32          | 575812.07         | N 32 7 25.13            | W 104 13 19.10           |

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 \*\*\* 3-D 95.000% Confidence 2.7955 sigma  
Survey Program:

| Description | Part | MD From<br>(ft) | MD To<br>(ft) | EOU Freq<br>(ft) | Hole Size<br>(in) | Casing Diameter<br>(in) | Expected Max<br>Inclination<br>(deg) | Survey Tool Type           | Borehole / Survey                                                               |
|-------------|------|-----------------|---------------|------------------|-------------------|-------------------------|--------------------------------------|----------------------------|---------------------------------------------------------------------------------|
|             | 1    | 0.000           | 26.000        | 1/100.000        | 17.500            | 13.375                  |                                      | NAL_MWD_IFR1+MS-Depth Only | Original Borehole / Cimarex<br>DaVinci 7-18 Federal Com #29H<br>Rev1 RM 11Oct19 |
|             | 1    | 26.000          | 19294.036     | 1/100.000        | 17.500            | 13.375                  |                                      | NAL_MWD_IFR1+MS            | Original Borehole / Cimarex<br>DaVinci 7-18 Federal Com #29H                    |