



**PHOENIX**  
**TECHNOLOGY SERVICES**

July 23, 2014

Oil Conservation Division  
State of New Mexico  
811 S. First St.  
Artesia, New Mexico 88210

Dear District 2 - Artesia

Attention: Regulatory Department

Re: Nadel & Gussman Permian, L.L.C.  
Kyle 34 Federal 2H  
Eddy County, NM  
API #30-015-42187  
Job No. 1410986

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

**JUL 30 2014**

**RECEIVED**

Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced Well by Phoenix Technology Services, Inc. (P-5 No. 664171). Other information required by your office is as follows:

| Name & Title of Surveyor | Drain Hole Number | Surveyed Depths |        | Dates Performed |          | Type of Survey |
|--------------------------|-------------------|-----------------|--------|-----------------|----------|----------------|
|                          |                   | From            | To     | Start           | End      |                |
| Bernard Caldwell         | 2H                | 558             | 12,811 | 06/15/14        | 07/03/14 | MWD            |

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

*Dana Robinson*

Dana Robinson  
Operations Administrator  
Certified mail receipt number: \_\_\_\_\_

7011 1570 0001 4365 2230

# Phoenix Technology Services SURVEY DATA CERTIFICATION



**PHOENIX**  
TECHNOLOGY SERVICES

PHOENIX JOB NUMBER

1410986

OPERATOR

Nadel & Gussman Permian, LLC

WELL NAME

Kyle 34 Federal 2H

COUNTY & STATE

Eddy County, NM

API WELL NUMBER

30-015-42187

PROPOSED DIRECTION

0.05

| TIE-IN DATA       |                   |        |         |              |              |                |
|-------------------|-------------------|--------|---------|--------------|--------------|----------------|
| MEASURED<br>DEPTH | VERTICAL<br>DEPTH | INCLIN | AZIMUTH | N-S<br>COORD | E-W<br>COORD | DATA<br>SOURCE |
| 525 ft            | 524.79 ft         | 2.87   | 284.86  | 0.12         | 11.98 ft     | VES GYRO       |

| FIRST<br>SURVEY<br>DATE | FIRST<br>SURVEY<br>DEPTH | INCLIN | AZIMUTH |
|-------------------------|--------------------------|--------|---------|
| 15-Jun-14               | 558 ft                   | 2.8    | 293.3   |

SURVEY INSTRUMENT  
TYPE

Phoenix MWD

| LAST<br>SURVEY<br>DATE | LAST<br>SURVEY<br>DEPTH | INCLIN | AZIMUTH |
|------------------------|-------------------------|--------|---------|
| 3-Jul-14               | 12,811 ft               | 88.4   | 358.6   |

TO THE BEST OF MY KNOWLEDGE I  
CERTIFY THIS SURVEY DATA TO BE  
TRUE AND CORRECT.

| PROJECTED<br>TD SURVEY<br>DATE | PROJECTED<br>TD SURVEY<br>DEPTH | INCLIN | AZIMUTH |
|--------------------------------|---------------------------------|--------|---------|
| 3-Jul-14                       | 12,875 ft                       | 88.4   | 358.6   |

Bernard Caldwell

PRINT YOUR NAME ABOVE

B. Caldwell

SIGN YOUR NAME ABOVE

7/4/2014

TODAY'S DATE

MAGNETIC DECLINATION OR TOTAL GRID

| TOTAL CORRECTION USED | DECLINATION OR GRID |
|-----------------------|---------------------|
| 7.32                  | GRID                |

MWD SUPERVISOR 1

Bernard Caldwell

DIRECTIONAL DRILLER 1

George Woodgate

MWD SUPERVISOR 2

Jon Dunlop

DIRECTIONAL DRILLER 2

Zack Johnson

1805 Brittmore Road

Houston, Texas 77043

(713)3370609 (Voice); (713)337-0599 (Fax)

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 **NEW MEXICO OIL CONSERVATION**  
Energy, Minerals & Natural Resources Department  
ARTESIA DISTRICT  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

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

**RECEIVED**

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

|               |                                                        |                           |
|---------------|--------------------------------------------------------|---------------------------|
| API Number    | Pool Code                                              | Pool Name                 |
| Property Code | Property Name<br><b>KYLE 34 FEDERAL</b>                | Well Number<br><b>2H</b>  |
| OGRID No.     | Operator Name<br><b>NADEL AND GUSSMAN PERMIAN LLC.</b> | Elevation<br><b>2998'</b> |

**Surface Location**

| UL or lot No | Section | Township | Range | Lot 1dn | Feet from the | North/South line | Feet from the | East/West line | County |
|--------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| M            | 34      | 24-S     | 28-E  |         | 330           | SOUTH            | 330           | WEST           | EDDY   |

**Bottom Hole Location If Different From Surface**

| UL or lot No. | Section | Township | Range | Lot 1dn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| D             | 34      | 24-S     | 28-E  |         | 330           | NORTH            | 330           | WEST           | EDDY   |

|                 |                 |                    |           |
|-----------------|-----------------|--------------------|-----------|
| Dedicated Acres | Joint or Infill | Consolidation Code | Order No. |
|-----------------|-----------------|--------------------|-----------|

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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                            |                            |   |   |                            |   |   |                            |   |   |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------|---|---|----------------------------|---|---|----------------------------|---|---|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>GEODETIC COORDINATES</b><br/>NAD 27 NME</p> <p><b>SURFACE LOCATION</b><br/>Y=424669.9 N<br/>X=577690.2 E</p> <p><b>BOTTOM HOLE LOCATION</b><br/>Y=429381.4 N<br/>X=577674.0 E</p> <p><b>CORNER COORDINATES TABLE</b></p> <table border="1"> <tr> <td>A</td> <td>-</td> <td>Y=429709.7 N, X=577342.8 E</td> </tr> <tr> <td>B</td> <td>-</td> <td>Y=429716.2 N, X=578674.4 E</td> </tr> <tr> <td>C</td> <td>-</td> <td>Y=424338.2 N, X=577361.4 E</td> </tr> <tr> <td>D</td> <td>-</td> <td>Y=424344.9 N, X=578702.2 E</td> </tr> </table> <p><b>DETAIL</b></p> | A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | -                          | Y=429709.7 N, X=577342.8 E | B | - | Y=429716.2 N, X=578674.4 E | C | - | Y=424338.2 N, X=577361.4 E | D | - | Y=424344.9 N, X=578702.2 E | <p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>Signature _____ Date _____</p> <p>Printed Name _____</p> <p>E-mail Address _____</p> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | -                          | Y=429709.7 N, X=577342.8 E |   |   |                            |   |   |                            |   |   |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | -                          | Y=429716.2 N, X=578674.4 E |   |   |                            |   |   |                            |   |   |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | -                          | Y=424338.2 N, X=577361.4 E |   |   |                            |   |   |                            |   |   |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Y=424344.9 N, X=578702.2 E |                            |   |   |                            |   |   |                            |   |   |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p><b>SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p><b>AUGUST 19, 2013</b></p> <p>Date of Survey _____</p> <p>Signature &amp; Seal of Professional Surveyor: _____</p> <p><br/>Ronald J. Eidson 08/26/2013</p> <p>Certificate Number: _____</p> <p>Chryl C. Eidson 12641</p> <p>Ronald J. Eidson 3239</p> <p>DSS _____ JWSC W.O. : 13.11.0908</p> |                            |                            |   |   |                            |   |   |                            |   |   |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                            |                            |   |   |                            |   |   |                            |   |   |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                            |                            |   |   |                            |   |   |                            |   |   |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

JUL 30 2014

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# **Nadel and Gussman Permian, LLC**

Eddy County, New Mexico (NAD27)

Kyle 34 Federal

2H

Wellbore #1 Job #1410986

Survey: Phoenix MWD Surveys

## **Standard Survey Report**

04 July, 2014



# Phoenix Technology Services

## Survey Report



**Company:** Nadel and Gussman Permian, LLC  
**Project:** Eddy County, New Mexico (NAD27)  
**Site:** Kyle 34 Federal  
**Well:** 2H  
**Wellbore:** Wellbore #1 Job #1410986  
**Design:** Surveys (Patriot 5)

**Local Co-ordinate Reference:** Well 2H  
**TVD Reference:** WELL @ 3021.50usft (Patriot 5)  
**MD Reference:** WELL @ 3021.50usft (Patriot 5)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** GCR DB

**Project:** Eddy County, New Mexico (NAD27)  
**Map System:** US State Plane 1927 (Exact solution)  
**Geo Datum:** NAD 1927 (NADCON CONUS)  
**Map Zone:** New Mexico East 3001

**System Datum:** Mean Sea Level

**Site:** Kyle 34 Federal

**Site Position:** Northing: 424,669.90 usft Latitude: 32° 10' 2.22727 N  
**From:** Map Easting: 577,690.20 usft Longitude: 104° 4' 56.13216 W  
**Position Uncertainty:** 0.00 usft Slot Radius: 13-3/16 " Grid Convergence: 0.13 °

**Well:** 2H

**Well Position:** +N/-S 0.00 usft Northing: 424,669.90 usft Latitude: 32° 10' 2.22727 N  
 +E/-W 0.00 usft Easting: 577,690.20 usft Longitude: 104° 4' 56.13216 W  
**Position Uncertainty:** 0.00 usft Wellhead Elevation: 0.00 usft Ground Level: 2,998.00 usft

**Wellbore:** Wellbore #1 Job #1410986

| Magnetics | Model Name  | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|-----------|-------------|-------------|-----------------|---------------|---------------------|
|           | IGRF2010_14 | 06/05/14    | 7.45            | 59.97         | 48,233              |

**Design:** Surveys (Patriot 5)

**Audit Notes:**  
**Version:** 1.0 **Phase:** ACTUAL **Tie On Depth:** 0.00

| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
|-------------------|-------------------------|--------------|--------------|---------------|
|                   | 0.00                    | 0.00         | 0.00         | 0.05          |

**Survey Program:** Date 07/04/14

| From (usft) | To (usft) | Survey (Wellbore)                       | Tool Name    | Description                          |
|-------------|-----------|-----------------------------------------|--------------|--------------------------------------|
| 25.00       | 525.00    | VES Gyro Surveys (Wellbore #1 Job #141) | NS-GYRO-MS   | North sensing gyrocompassing m/s     |
| 558.00      | 12,875.00 | Phoenix MWD Surveys (Wellbore #1 Job #  | PHX+MWD+IGRF | PHX+MWD+IGRF v3:standard declination |

**Survey**

| Measured Depth (usft)       | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 525.00                      | 2.87            | 284.86      | 524.79                | -0.12        | -11.99       | -0.13                   | 0.00                    | 0.00                   | 0.00                  |
| <b>Tie-in to VES Gyro</b>   |                 |             |                       |              |              |                         |                         |                        |                       |
| 558.00                      | 2.80            | 293.30      | 557.75                | 0.41         | -13.53       | 0.40                    | 1.28                    | -0.21                  | 25.58                 |
| <b>First Phoenix Survey</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 587.00                      | 2.30            | 306.00      | 586.72                | 1.03         | -14.65       | 1.02                    | 2.59                    | -1.72                  | 43.79                 |
| 616.00                      | 2.30            | 302.40      | 615.70                | 1.68         | -15.61       | 1.67                    | 0.50                    | 0.00                   | -12.41                |
| 646.00                      | 2.10            | 309.00      | 645.68                | 2.35         | -16.55       | 2.34                    | 1.07                    | -0.67                  | 22.00                 |
| 676.00                      | 1.80            | 310.90      | 675.66                | 3.01         | -17.33       | 2.99                    | 1.02                    | -1.00                  | 6.33                  |
| 709.00                      | 1.00            | 300.50      | 708.65                | 3.49         | -17.97       | 3.48                    | 2.53                    | -2.42                  | -31.52                |

## Phoenix Technology Services

## Survey Report



**Company:** Nadel and Gussman Permian, LLC  
**Project:** Eddy County, New Mexico (NAD27)  
**Site:** Kyle 34 Federal  
**Well:** 2H  
**Wellbore:** Wellbore #1 Job #1410986  
**Design:** Surveys (Patriot 5)

**Local Co-ordinate Reference:** Well 2H  
**TVD Reference:** WELL @ 3021.50usft (Patriot 5)  
**MD Reference:** WELL @ 3021.50usft (Patriot 5)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** GCR DB

## Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 741.00                | 0.70            | 298.70      | 740.64                | 3.73         | -18.38       | 3.71                    | 0.94                    | -0.94                  | -5.63                 |
| 836.00                | 1.00            | 164.50      | 835.64                | 3.21         | -18.67       | 3.19                    | 1.65                    | 0.32                   | -141.26               |
| 931.00                | 1.00            | 155.50      | 930.63                | 1.65         | -18.10       | 1.64                    | 0.17                    | 0.00                   | -9.47                 |
| 1,027.00              | 1.80            | 155.80      | 1,026.60              | -0.48        | -17.14       | -0.50                   | 0.83                    | 0.83                   | 0.31                  |
| 1,122.00              | 2.10            | 159.00      | 1,121.54              | -3.47        | -15.90       | -3.48                   | 0.34                    | 0.32                   | 3.37                  |
| 1,218.00              | 2.10            | 161.80      | 1,217.48              | -6.78        | -14.72       | -6.79                   | 0.11                    | 0.00                   | 2.92                  |
| 1,313.00              | 2.50            | 169.90      | 1,312.40              | -10.48       | -13.82       | -10.49                  | 0.54                    | 0.42                   | 8.53                  |
| 1,408.00              | 2.70            | 167.30      | 1,407.30              | -14.70       | -12.96       | -14.71                  | 0.24                    | 0.21                   | -2.74                 |
| 1,503.00              | 1.90            | 144.10      | 1,502.23              | -18.16       | -11.55       | -18.17                  | 1.28                    | -0.84                  | -24.42                |
| 1,598.00              | 1.40            | 136.10      | 1,597.19              | -20.27       | -9.82        | -20.28                  | 0.58                    | -0.53                  | -8.42                 |
| 1,693.00              | 1.50            | 145.30      | 1,692.16              | -22.13       | -8.31        | -22.13                  | 0.27                    | 0.11                   | 9.68                  |
| 1,788.00              | 1.30            | 145.80      | 1,787.13              | -24.04       | -6.99        | -24.05                  | 0.21                    | -0.21                  | 0.53                  |
| 1,883.00              | 1.90            | 130.20      | 1,882.09              | -25.95       | -5.18        | -25.95                  | 0.77                    | 0.63                   | -16.42                |
| 1,979.00              | 2.50            | 121.10      | 1,978.02              | -28.06       | -2.17        | -28.06                  | 0.72                    | 0.63                   | -9.48                 |
| 2,074.00              | 3.10            | 110.10      | 2,072.91              | -30.01       | 2.01         | -30.01                  | 0.85                    | 0.63                   | -11.58                |
| 2,169.00              | 3.70            | 104.50      | 2,167.74              | -31.66       | 7.39         | -31.66                  | 0.72                    | 0.63                   | -5.89                 |
| 2,264.00              | 3.50            | 104.50      | 2,262.55              | -33.15       | 13.17        | -33.14                  | 0.21                    | -0.21                  | 0.00                  |
| 2,359.00              | 3.80            | 109.20      | 2,357.36              | -34.92       | 18.95        | -34.90                  | 0.45                    | 0.32                   | 4.95                  |
| 2,455.00              | 2.00            | 107.50      | 2,453.23              | -36.47       | 23.55        | -36.45                  | 1.88                    | -1.88                  | -1.77                 |
| 2,477.00              | 1.90            | 105.90      | 2,475.22              | -36.68       | 24.27        | -36.66                  | 0.52                    | -0.45                  | -7.27                 |
| 2,542.00              | 1.60            | 98.80       | 2,540.19              | -37.12       | 26.20        | -37.09                  | 0.57                    | -0.46                  | -10.92                |
| 2,620.00              | 1.60            | 121.60      | 2,618.16              | -37.85       | 28.20        | -37.83                  | 0.81                    | 0.00                   | 29.23                 |
| 2,715.00              | 2.70            | 148.20      | 2,713.09              | -40.45       | 30.51        | -40.42                  | 1.53                    | 1.16                   | 28.00                 |
| 2,810.00              | 2.90            | 172.30      | 2,807.98              | -44.73       | 32.01        | -44.71                  | 1.25                    | 0.21                   | 25.37                 |
| 2,905.00              | 1.80            | 195.90      | 2,902.91              | -48.55       | 31.93        | -48.52                  | 1.52                    | -1.16                  | 24.84                 |
| 3,000.00              | 1.60            | 195.10      | 2,997.86              | -51.26       | 31.17        | -51.24                  | 0.21                    | -0.21                  | -0.84                 |
| 3,095.00              | 1.50            | 174.60      | 3,092.83              | -53.78       | 30.94        | -53.76                  | 0.59                    | -0.11                  | -21.58                |
| 3,191.00              | 1.60            | 170.90      | 3,188.79              | -56.36       | 31.27        | -56.33                  | 0.15                    | 0.10                   | -3.85                 |
| 3,286.00              | 1.60            | 174.60      | 3,283.76              | -58.99       | 31.61        | -58.96                  | 0.11                    | 0.00                   | 3.89                  |
| 3,381.00              | 1.50            | 179.70      | 3,378.72              | -61.55       | 31.74        | -61.53                  | 0.18                    | -0.11                  | 5.37                  |
| 3,477.00              | 1.40            | 185.90      | 3,474.69              | -63.97       | 31.63        | -63.95                  | 0.19                    | -0.10                  | 6.46                  |
| 3,572.00              | 1.20            | 186.10      | 3,569.67              | -66.12       | 31.40        | -66.09                  | 0.21                    | -0.21                  | 0.21                  |
| 3,667.00              | 1.50            | 184.50      | 3,664.64              | -68.35       | 31.20        | -68.32                  | 0.32                    | 0.32                   | -1.68                 |
| 3,762.00              | 2.10            | 171.10      | 3,759.59              | -71.31       | 31.37        | -71.28                  | 0.77                    | 0.63                   | -14.11                |
| 3,857.00              | 2.20            | 170.30      | 3,854.53              | -74.82       | 31.95        | -74.80                  | 0.11                    | 0.11                   | -0.84                 |
| 3,952.00              | 2.10            | 170.40      | 3,949.46              | -78.34       | 32.54        | -78.31                  | 0.11                    | -0.11                  | 0.11                  |
| 4,048.00              | 2.10            | 174.70      | 4,045.40              | -81.82       | 33.00        | -81.80                  | 0.16                    | 0.00                   | 4.48                  |
| 4,143.00              | 2.10            | 177.60      | 4,140.33              | -85.29       | 33.23        | -85.27                  | 0.11                    | 0.00                   | 3.05                  |
| 4,238.00              | 2.50            | 169.90      | 4,235.26              | -89.07       | 33.67        | -89.05                  | 0.53                    | 0.42                   | -8.11                 |
| 4,333.00              | 2.60            | 168.30      | 4,330.16              | -93.22       | 34.47        | -93.19                  | 0.13                    | 0.11                   | -1.68                 |
| 4,429.00              | 3.00            | 184.50      | 4,426.05              | -97.86       | 34.71        | -97.83                  | 0.92                    | 0.42                   | 16.88                 |
| 4,524.00              | 3.00            | 185.60      | 4,520.92              | -102.81      | 34.28        | -102.78                 | 0.06                    | 0.00                   | 1.16                  |
| 4,619.00              | 3.00            | 186.50      | 4,615.79              | -107.76      | 33.75        | -107.73                 | 0.05                    | 0.00                   | 0.95                  |

# Phoenix Technology Services

## Survey Report



Company: Nadel and Gussman Permian, LLC  
 Project: Eddy County, New Mexico (NAD27)  
 Site: Kyle 34 Federal  
 Well: 2H  
 Wellbore: Wellbore #1 Job #1410986  
 Design: Surveys (Patriot 5)

Local Co-ordinate Reference: Well 2H  
 TVD Reference: WELL @ 3021.50usft (Patriot 5)  
 MD Reference: WELL @ 3021.50usft (Patriot 5)  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 Database: GCR DB

### Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 4,714.00              | 2.80            | 192.50      | 4,710.67              | -112.49      | 32.97        | -112.46                 | 0.38                    | -0.21                  | 6.32                  |
| 4,809.00              | 2.70            | 199.30      | 4,805.56              | -116.87      | 31.73        | -116.84                 | 0.36                    | -0.11                  | 7.16                  |
| 4,904.00              | 2.50            | 198.70      | 4,900.46              | -120.94      | 30.32        | -120.92                 | 0.21                    | -0.21                  | -0.63                 |
| 4,999.00              | 2.60            | 203.10      | 4,995.37              | -124.89      | 28.81        | -124.86                 | 0.23                    | 0.11                   | 4.63                  |
| 5,094.00              | 2.40            | 203.00      | 5,090.27              | -128.70      | 27.19        | -128.68                 | 0.21                    | -0.21                  | -0.11                 |
| 5,190.00              | 1.80            | 219.50      | 5,186.21              | -131.71      | 25.45        | -131.69                 | 0.88                    | -0.63                  | 17.19                 |
| 5,285.00              | 1.60            | 230.40      | 5,281.17              | -133.71      | 23.48        | -133.69                 | 0.40                    | -0.21                  | 11.47                 |
| 5,380.00              | 1.50            | 242.90      | 5,376.13              | -135.12      | 21.35        | -135.11                 | 0.37                    | -0.11                  | 13.16                 |
| 5,476.00              | 0.50            | 258.90      | 5,472.12              | -135.78      | 19.82        | -135.76                 | 1.07                    | -1.04                  | 16.67                 |
| 5,569.00              | 0.00            | 316.60      | 5,565.12              | -135.85      | 19.42        | -135.84                 | 0.54                    | -0.54                  | 0.00                  |
| 5,663.00              | 0.20            | 221.90      | 5,659.12              | -135.98      | 19.31        | -135.96                 | 0.21                    | 0.21                   | 0.00                  |
| 5,758.00              | 0.20            | 225.10      | 5,754.12              | -136.22      | 19.08        | -136.20                 | 0.01                    | 0.00                   | 3.37                  |
| 5,853.00              | 0.20            | 219.10      | 5,849.12              | -136.46      | 18.86        | -136.45                 | 0.02                    | 0.00                   | -6.32                 |
| 5,949.00              | 0.20            | 177.40      | 5,945.12              | -136.76      | 18.76        | -136.74                 | 0.15                    | 0.00                   | -43.44                |
| 6,044.00              | 0.50            | 199.20      | 6,040.11              | -137.32      | 18.63        | -137.30                 | 0.34                    | 0.32                   | 22.95                 |
| 6,139.00              | 0.50            | 205.00      | 6,135.11              | -138.08      | 18.32        | -138.07                 | 0.05                    | 0.00                   | 6.11                  |
| 6,234.00              | 0.70            | 244.70      | 6,230.11              | -138.71      | 17.62        | -138.69                 | 0.47                    | 0.21                   | 41.79                 |
| 6,330.00              | 1.30            | 154.10      | 6,326.09              | -139.94      | 17.57        | -139.92                 | 1.54                    | 0.63                   | -94.38                |
| 6,425.00              | 2.50            | 146.70      | 6,421.04              | -142.64      | 19.17        | -142.62                 | 1.29                    | 1.26                   | -7.79                 |
| 6,520.00              | 1.60            | 160.90      | 6,515.98              | -145.62      | 20.75        | -145.61                 | 1.08                    | -0.95                  | 14.95                 |
| 6,615.00              | 1.40            | 160.90      | 6,610.95              | -147.97      | 21.56        | -147.96                 | 0.21                    | -0.21                  | 0.00                  |
| 6,710.00              | 1.60            | 175.20      | 6,705.92              | -150.39      | 22.05        | -150.37                 | 0.45                    | 0.21                   | 15.05                 |
| 6,805.00              | 1.40            | 193.70      | 6,800.88              | -152.84      | 21.89        | -152.82                 | 0.55                    | -0.21                  | 19.47                 |
| 6,900.00              | 1.20            | 220.10      | 6,895.86              | -154.73      | 20.97        | -154.71                 | 0.66                    | -0.21                  | 27.79                 |
| 6,995.00              | 1.60            | 241.60      | 6,990.83              | -156.12      | 19.16        | -156.11                 | 0.69                    | 0.42                   | 22.63                 |
| 7,090.00              | 1.50            | 265.20      | 7,085.80              | -156.86      | 16.76        | -156.84                 | 0.68                    | -0.11                  | 24.84                 |
| 7,185.00              | 0.40            | 259.30      | 7,180.78              | -157.02      | 15.19        | -157.01                 | 1.16                    | -1.16                  | -6.21                 |
| 7,280.00              | 0.30            | 170.60      | 7,275.78              | -157.33      | 14.91        | -157.32                 | 0.52                    | -0.11                  | -93.37                |
| 7,355.00              | 0.80            | 160.80      | 7,350.78              | -158.02      | 15.11        | -158.00                 | 0.68                    | 0.67                   | -13.07                |
| 7,450.00              | 1.00            | 157.90      | 7,445.77              | -159.41      | 15.64        | -159.40                 | 0.22                    | 0.21                   | -3.05                 |
| 7,545.00              | 1.20            | 144.30      | 7,540.75              | -160.99      | 16.53        | -160.97                 | 0.34                    | 0.21                   | -14.32                |
| 7,641.00              | 2.10            | 136.60      | 7,636.71              | -163.08      | 18.33        | -163.07                 | 0.96                    | 0.94                   | -8.02                 |
| 7,672.00              | 1.80            | 70.40       | 7,667.69              | -163.33      | 19.18        | -163.32                 | 6.92                    | -0.97                  | -213.55               |
| 7,704.00              | 4.70            | 22.40       | 7,699.64              | -161.95      | 20.15        | -161.93                 | 11.69                   | 9.06                   | -150.00               |
| 7,735.00              | 8.20            | 12.40       | 7,730.44              | -158.62      | 21.11        | -158.60                 | 11.82                   | 11.29                  | -32.26                |
| 7,766.00              | 12.70           | 8.30        | 7,760.92              | -153.08      | 22.08        | -153.06                 | 14.70                   | 14.52                  | -13.23                |
| 7,796.00              | 13.80           | 8.40        | 7,790.12              | -146.28      | 23.08        | -146.26                 | 3.67                    | 3.67                   | 0.33                  |
| 7,828.00              | 16.50           | 13.50       | 7,821.01              | -138.08      | 24.70        | -138.06                 | 9.40                    | 8.44                   | 15.94                 |
| 7,860.00              | 19.40           | 14.50       | 7,851.45              | -128.52      | 27.09        | -128.49                 | 9.11                    | 9.06                   | 3.13                  |
| 7,892.00              | 22.40           | 13.40       | 7,881.34              | -117.44      | 29.83        | -117.41                 | 9.45                    | 9.38                   | -3.44                 |
| 7,923.00              | 25.10           | 13.70       | 7,909.71              | -105.30      | 32.76        | -105.27                 | 8.72                    | 8.71                   | 0.97                  |
| 7,955.00              | 26.30           | 12.10       | 7,938.55              | -91.77       | 35.85        | -91.75                  | 4.33                    | 3.75                   | -5.00                 |
| 7,987.00              | 26.40           | 8.70        | 7,967.22              | -77.81       | 38.41        | -77.78                  | 4.73                    | 0.31                   | -10.63                |
| 8,019.00              | 28.50           | 4.40        | 7,995.62              | -63.16       | 40.08        | -63.13                  | 9.02                    | 6.56                   | -13.44                |

## Phoenix Technology Services

## Survey Report



Company: Nadel and Gussman Permian, LLC  
 Project: Eddy County, New Mexico (NAD27)  
 Site: Kyle 34 Federal  
 Well: 2H  
 Wellbore: Wellbore #1 Job #1410986  
 Design: Surveys (Patriot 5)

Local Co-ordinate Reference: Well 2H  
 TVD Reference: WELL @ 3021.50usft (Patriot 5)  
 MD Reference: WELL @ 3021.50usft (Patriot 5)  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 Database: GCR DB

## Survey

| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| 8,050.00                    | 32.00              | 5.80           | 8,022.40                    | -47.61          | 41.47           | -47.58                        | 11.52                         | 11.29                        | 4.52                        |
| 8,082.00                    | 34.80              | 5.90           | 8,049.11                    | -30.09          | 43.27           | -30.05                        | 8.75                          | 8.75                         | 0.31                        |
| 8,114.00                    | 37.20              | 4.90           | 8,075.00                    | -11.37          | 45.04           | -11.33                        | 7.72                          | 7.50                         | -3.13                       |
| 8,145.00                    | 40.80              | 1.70           | 8,099.09                    | 8.10            | 46.14           | 8.14                          | 13.30                         | 11.61                        | -10.32                      |
| 8,177.00                    | 44.60              | 358.60         | 8,122.60                    | 29.80           | 46.17           | 29.83                         | 13.57                         | 11.88                        | -9.69                       |
| 8,209.00                    | 48.80              | 356.90         | 8,144.54                    | 53.06           | 45.25           | 53.10                         | 13.68                         | 13.13                        | -5.31                       |
| 8,241.00                    | 53.90              | 356.00         | 8,164.52                    | 77.99           | 43.69           | 78.03                         | 16.09                         | 15.94                        | -2.81                       |
| 8,273.00                    | 58.40              | 356.60         | 8,182.34                    | 104.51          | 41.98           | 104.54                        | 14.15                         | 14.06                        | 1.88                        |
| 8,304.00                    | 63.30              | 356.70         | 8,197.44                    | 131.53          | 40.40           | 131.56                        | 15.81                         | 15.81                        | 0.32                        |
| 8,336.00                    | 68.90              | 356.20         | 8,210.40                    | 160.71          | 38.59           | 160.75                        | 17.56                         | 17.50                        | -1.56                       |
| 8,368.00                    | 73.90              | 355.90         | 8,220.60                    | 190.96          | 36.50           | 190.99                        | 15.65                         | 15.63                        | -0.94                       |
| 8,399.00                    | 77.70              | 356.20         | 8,228.20                    | 220.94          | 34.43           | 220.96                        | 12.29                         | 12.26                        | 0.97                        |
| 8,431.00                    | 80.50              | 357.00         | 8,234.26                    | 252.30          | 32.57           | 252.33                        | 9.09                          | 8.75                         | 2.50                        |
| 8,463.00                    | 81.30              | 357.20         | 8,239.32                    | 283.86          | 30.97           | 283.88                        | 2.58                          | 2.50                         | 0.63                        |
| 8,495.00                    | 82.30              | 357.70         | 8,243.88                    | 315.50          | 29.56           | 315.52                        | 3.49                          | 3.13                         | 1.56                        |
| 8,527.00                    | 85.20              | 358.30         | 8,247.36                    | 347.28          | 28.45           | 347.31                        | 9.25                          | 9.06                         | 1.88                        |
| 8,562.00                    | 88.10              | 357.80         | 8,249.41                    | 382.20          | 27.26           | 382.22                        | 8.41                          | 8.29                         | -1.43                       |
| 8,593.00                    | 89.70              | 357.50         | 8,250.00                    | 413.17          | 25.99           | 413.19                        | 5.25                          | 5.16                         | -0.97                       |
| 8,625.00                    | 90.00              | 357.80         | 8,250.09                    | 445.14          | 24.68           | 445.16                        | 1.33                          | 0.94                         | 0.94                        |
| 8,657.00                    | 89.80              | 358.90         | 8,250.14                    | 477.13          | 23.76           | 477.15                        | 3.49                          | -0.63                        | 3.44                        |
| 8,752.00                    | 89.10              | 359.80         | 8,251.06                    | 572.12          | 22.68           | 572.13                        | 1.20                          | -0.74                        | 0.95                        |
| 8,847.00                    | 88.50              | 1.00           | 8,253.05                    | 667.09          | 23.34           | 667.11                        | 1.41                          | -0.63                        | 1.26                        |
| 8,942.00                    | 88.90              | 0.90           | 8,255.20                    | 762.05          | 24.92           | 762.07                        | 0.43                          | 0.42                         | -0.11                       |
| 9,037.00                    | 88.30              | 1.70           | 8,257.52                    | 857.00          | 27.07           | 857.02                        | 1.05                          | -0.63                        | 0.84                        |
| 9,133.00                    | 89.00              | 1.00           | 8,259.78                    | 952.94          | 29.33           | 952.97                        | 1.03                          | 0.73                         | -0.73                       |
| 9,228.00                    | 88.50              | 0.40           | 8,261.86                    | 1,047.91        | 30.49           | 1,047.94                      | 0.82                          | -0.53                        | -0.63                       |
| 9,323.00                    | 89.10              | 0.20           | 8,263.85                    | 1,142.89        | 30.99           | 1,142.92                      | 0.67                          | 0.63                         | -0.21                       |
| 9,418.00                    | 89.30              | 359.80         | 8,265.17                    | 1,237.88        | 30.99           | 1,237.91                      | 0.47                          | 0.21                         | -0.42                       |
| 9,514.00                    | 90.00              | 359.20         | 8,265.76                    | 1,333.87        | 30.15           | 1,333.90                      | 0.96                          | 0.73                         | -0.63                       |
| 9,609.00                    | 91.60              | 358.70         | 8,264.43                    | 1,428.85        | 28.41           | 1,428.87                      | 1.76                          | 1.68                         | -0.53                       |
| 9,704.00                    | 92.80              | 358.60         | 8,260.78                    | 1,523.75        | 26.17           | 1,523.77                      | 1.27                          | 1.26                         | -0.11                       |
| 9,799.00                    | 91.70              | 0.10           | 8,257.06                    | 1,618.66        | 25.10           | 1,618.68                      | 1.96                          | -1.16                        | 1.58                        |
| 9,895.00                    | 91.80              | 359.50         | 8,254.12                    | 1,714.62        | 24.76           | 1,714.64                      | 0.63                          | 0.10                         | -0.63                       |
| 9,990.00                    | 92.40              | 359.30         | 8,250.64                    | 1,809.55        | 23.77           | 1,809.57                      | 0.67                          | 0.63                         | -0.21                       |
| 10,085.00                   | 90.20              | 0.10           | 8,248.49                    | 1,904.52        | 23.27           | 1,904.54                      | 2.46                          | -2.32                        | 0.84                        |
| 10,180.00                   | 90.00              | 359.40         | 8,248.32                    | 1,999.52        | 22.86           | 1,999.53                      | 0.77                          | -0.21                        | -0.74                       |
| 10,275.00                   | 91.00              | 359.60         | 8,247.49                    | 2,094.51        | 22.03           | 2,094.52                      | 1.07                          | 1.05                         | 0.21                        |
| 10,370.00                   | 91.30              | 358.50         | 8,245.59                    | 2,189.47        | 20.45           | 2,189.49                      | 1.20                          | 0.32                         | -1.16                       |
| 10,466.00                   | 91.90              | 358.00         | 8,242.91                    | 2,285.39        | 17.52           | 2,285.40                      | 0.81                          | 0.63                         | -0.52                       |
| 10,561.00                   | 90.80              | 359.10         | 8,240.67                    | 2,380.33        | 15.12           | 2,380.34                      | 1.64                          | -1.16                        | 1.16                        |
| 10,656.00                   | 90.20              | 358.40         | 8,239.84                    | 2,475.30        | 13.05           | 2,475.31                      | 0.97                          | -0.63                        | -0.74                       |
| 10,751.00                   | 91.40              | 359.00         | 8,238.51                    | 2,570.27        | 10.89           | 2,570.28                      | 1.41                          | 1.26                         | 0.63                        |
| 10,846.00                   | 90.80              | 359.10         | 8,236.69                    | 2,665.24        | 9.32            | 2,665.24                      | 0.64                          | -0.63                        | 0.11                        |

# Phoenix Technology Services

## Survey Report



Company: Nadel and Gussman Permian, LLC  
 Project: Eddy County, New Mexico (NAD27)  
 Site: Kyle 34 Federal  
 Well: 2H  
 Wellbore: Wellbore #1 Job #1410986  
 Design: Surveys (Patriot 5)

Local Co-ordinate Reference: Well 2H  
 TVD Reference: WELL @ 3021.50usft (Patriot 5)  
 MD Reference: WELL @ 3021.50usft (Patriot 5)  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 Database: GCR DB

### Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 10,941.00             | 91.10           | 358.90      | 8,235.11              | 2,760.21     | 7.66         | 2,760.21                | 0.38                    | 0.32                   | -0.21                 |
| 11,037.00             | 91.20           | 0.60        | 8,233.19              | 2,856.18     | 7.24         | 2,856.19                | 1.77                    | 0.10                   | 1.77                  |
| 11,132.00             | 91.80           | 2.50        | 8,230.70              | 2,951.11     | 9.81         | 2,951.12                | 2.10                    | 0.63                   | 2.00                  |
| 11,227.00             | 91.30           | 3.80        | 8,228.13              | 3,045.93     | 15.03        | 3,045.94                | 1.47                    | -0.53                  | 1.37                  |
| 11,322.00             | 90.50           | 4.40        | 8,226.64              | 3,140.68     | 21.82        | 3,140.69                | 1.05                    | -0.84                  | 0.63                  |
| 11,418.00             | 90.60           | 3.70        | 8,225.72              | 3,236.43     | 28.60        | 3,236.45                | 0.74                    | 0.10                   | -0.73                 |
| 11,513.00             | 90.30           | 3.70        | 8,224.97              | 3,331.23     | 34.73        | 3,331.26                | 0.32                    | -0.32                  | 0.00                  |
| 11,608.00             | 90.50           | 3.40        | 8,224.31              | 3,426.05     | 40.61        | 3,426.08                | 0.38                    | 0.21                   | -0.32                 |
| 11,703.00             | 90.90           | 3.30        | 8,223.15              | 3,520.88     | 46.16        | 3,520.91                | 0.43                    | 0.42                   | -0.11                 |
| 11,798.00             | 89.50           | 2.20        | 8,222.81              | 3,615.76     | 50.72        | 3,615.80                | 1.87                    | -1.47                  | -1.16                 |
| 11,893.00             | 89.10           | 1.80        | 8,223.97              | 3,710.70     | 54.04        | 3,710.74                | 0.60                    | -0.42                  | -0.42                 |
| 11,988.00             | 89.20           | 1.60        | 8,225.38              | 3,805.64     | 56.85        | 3,805.69                | 0.24                    | 0.11                   | -0.21                 |
| 12,084.00             | 89.30           | 1.30        | 8,226.64              | 3,901.61     | 59.28        | 3,901.65                | 0.33                    | 0.10                   | -0.31                 |
| 12,179.00             | 89.10           | 1.20        | 8,227.97              | 3,996.57     | 61.35        | 3,996.62                | 0.24                    | -0.21                  | -0.11                 |
| 12,273.00             | 89.40           | 1.20        | 8,229.20              | 4,090.54     | 63.32        | 4,090.59                | 0.32                    | 0.32                   | 0.00                  |
| 12,367.00             | 89.90           | 0.90        | 8,229.77              | 4,184.53     | 65.05        | 4,184.58                | 0.62                    | 0.53                   | -0.32                 |
| 12,462.00             | 89.10           | 359.90      | 8,230.60              | 4,279.52     | 65.71        | 4,279.57                | 1.35                    | -0.84                  | -1.05                 |
| 12,557.00             | 88.40           | 359.60      | 8,232.67              | 4,374.49     | 65.29        | 4,374.55                | 0.80                    | -0.74                  | -0.32                 |
| 12,652.00             | 88.30           | 359.60      | 8,235.41              | 4,469.45     | 64.63        | 4,469.50                | 0.11                    | -0.11                  | 0.00                  |
| 12,747.00             | 88.20           | 358.60      | 8,238.31              | 4,564.40     | 63.14        | 4,564.45                | 1.06                    | -0.11                  | -1.05                 |
| 12,811.00             | 88.40           | 358.60      | 8,240.21              | 4,628.35     | 61.58        | 4,628.40                | 0.31                    | 0.31                   | 0.00                  |
| Last Phoenix Survey   |                 |             |                       |              |              |                         |                         |                        |                       |
| 12,875.00             | 88.40           | 358.60      | 8,241.99              | 4,692.30     | 60.01        | 4,692.35                | 0.00                    | 0.00                   | 0.00                  |
| Projection to TD      |                 |             |                       |              |              |                         |                         |                        |                       |

### Survey Annotations

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              | Comment              |
|-----------------------|-----------------------|-------------------|--------------|----------------------|
|                       |                       | +N/-S (usft)      | +E/-W (usft) |                      |
| 525.00                | 524.79                | -0.12             | -11.99       | Tie-in to VES Gyro   |
| 558.00                | 557.75                | 0.41              | -13.53       | First Phoenix Survey |
| 12,811.00             | 8,240.21              | 4,628.35          | 61.58        | Last Phoenix Survey  |
| 12,875.00             | 8,241.99              | 4,692.30          | 60.01        | Projection to TD     |

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_