

30-025-42660



**HOBBS OCD**

MAY 05 2016

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## **Chevron**

Lea County, NM (NAD27 NME)

Salado Draw 18 26 33 Fed

2H

OH / Job 1513945

Survey: Phoenix MWD Surveys

## **Standard Survey Report**

29 August, 2015



*CORRECTED*

MAY 06 2016



# Phoenix Technology Services LP

## Survey Report



|                  |                            |                                     |                              |
|------------------|----------------------------|-------------------------------------|------------------------------|
| <b>Company:</b>  | Chevron                    | <b>Local Co-ordinate Reference:</b> | Well 2H                      |
| <b>Project:</b>  | Lea County, NM (NAD27 NME) | <b>TVD Reference:</b>               | RKB @ 3209.00usft (Pace X30) |
| <b>Site:</b>     | Salado Draw 18 26 33 Fed   | <b>MD Reference:</b>                | RKB @ 3209.00usft (Pace X30) |
| <b>Well:</b>     | 2H                         | <b>North Reference:</b>             | Grid                         |
| <b>Wellbore:</b> | OH / Job 1513945           | <b>Survey Calculation Method:</b>   | Minimum Curvature            |
| <b>Design:</b>   | Surveys (Pace X30)         | <b>Database:</b>                    | Compass 5000 GCR             |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Lea County, NM (NAD27 NME)           |                      |                |
| <b>Map System:</b> | US State Plane 1927 (Exact solution) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)              |                      |                |
| <b>Map Zone:</b>   | New Mexico East 3001                 |                      |                |

|                              |                          |                          |                     |
|------------------------------|--------------------------|--------------------------|---------------------|
| <b>Site</b>                  | Salado Draw 18 26 33 Fed |                          |                     |
| <b>Site Position:</b>        |                          | <b>Northing:</b>         | 377,410.00 usft     |
| <b>From:</b>                 | Map                      | <b>Easting:</b>          | 722,122.00 usft     |
| <b>Position Uncertainty:</b> | 0.00 usft                | <b>Slot Radius:</b>      | 13-3/16 "           |
|                              |                          | <b>Latitude:</b>         | 32° 2' 8.11866 N    |
|                              |                          | <b>Longitude:</b>        | 103° 36' 59.50691 W |
|                              |                          | <b>Grid Convergence:</b> | 0.38 °              |

|                             |           |                            |                                  |
|-----------------------------|-----------|----------------------------|----------------------------------|
| <b>Well</b>                 | 2H        |                            |                                  |
| <b>Well Position</b>        | +N/-S     | 0.00 usft                  | <b>Northing:</b> 377,410.00 usft |
|                             | +E/-W     | 0.00 usft                  | <b>Easting:</b> 722,172.00 usft  |
| <b>Position Uncertainty</b> | 0.00 usft | <b>Wellhead Elevation:</b> | 0.00 usft                        |
|                             |           | <b>Latitude:</b>           | 32° 2' 8.11538 N                 |
|                             |           | <b>Longitude:</b>          | 103° 36' 58.92607 W              |
|                             |           | <b>Ground Level:</b>       | 3,176.00 usft                    |

|                  |                   |                    |                            |
|------------------|-------------------|--------------------|----------------------------|
| <b>Wellbore</b>  | OH / Job 1513945  |                    |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b>     |
|                  | HDGM              | 7/19/2015          | 7.05                       |
|                  |                   |                    | <b>Dip Angle (°)</b>       |
|                  |                   |                    | 59.77                      |
|                  |                   |                    | <b>Field Strength (nT)</b> |
|                  |                   |                    | 48,113                     |

|                          |                                |                      |                      |
|--------------------------|--------------------------------|----------------------|----------------------|
| <b>Design</b>            | Surveys (Pace X30)             |                      |                      |
| <b>Audit Notes:</b>      |                                |                      |                      |
| <b>Version:</b>          | 1.0                            | <b>Phase:</b>        | ACTUAL               |
|                          |                                | <b>Tie On Depth:</b> | 0.00                 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b>  | <b>+E/-W (usft)</b>  |
|                          | 0.00                           | 0.00                 | 0.00                 |
|                          |                                |                      | <b>Direction (°)</b> |
|                          |                                |                      | 0.04                 |

|                       |                  |                                        |                    |
|-----------------------|------------------|----------------------------------------|--------------------|
| <b>Survey Program</b> | Date 8/29/2015   |                                        |                    |
| <b>From (usft)</b>    | <b>To (usft)</b> | <b>Survey (Wellbore)</b>               | <b>Tool Name</b>   |
| 152.00                | 14,135.00        | Phoenix MWD Surveys (OH / Job 1513945) | PHX+MWD+HDGM       |
|                       |                  |                                        | <b>Description</b> |
|                       |                  |                                        | PHX+MWD+HDGM       |

|                              |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|--|
| <b>Survey</b>                |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
| <b>Measured Depth (usft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Vertical Section (usft)</b> | <b>Dogleg Rate (°/100usft)</b> | <b>Build Rate (°/100usft)</b> | <b>Turn Rate (°/100usft)</b> |  |
| 0.00                         | 0.00                   | 0.00               | 0.00                         | 0.00                | 0.00                | 0.00                           | 0.00                           | 0.00                          | 0.00                         |  |
| 152.00                       | 0.85                   | 79.03              | 151.99                       | 0.21                | 1.11                | 0.22                           | 0.56                           | 0.56                          | 0.00                         |  |
| <b>First Phoenix Survey</b>  |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
| 312.00                       | 0.96                   | 84.88              | 311.97                       | 0.56                | 3.61                | 0.56                           | 0.09                           | 0.07                          | 3.66                         |  |
| 500.00                       | 0.94                   | 92.45              | 499.95                       | 0.63                | 6.72                | 0.64                           | 0.07                           | -0.01                         | 4.03                         |  |
| 685.00                       | 1.04                   | 89.91              | 684.92                       | 0.57                | 9.91                | 0.58                           | 0.06                           | 0.05                          | -1.37                        |  |
| 808.00                       | 1.25                   | 84.47              | 807.90                       | 0.70                | 12.36               | 0.71                           | 0.19                           | 0.17                          | -4.42                        |  |
| 995.00                       | 1.17                   | 90.71              | 994.85                       | 0.88                | 16.30               | 0.89                           | 0.08                           | -0.04                         | 3.34                         |  |
| 1,129.00                     | 0.74                   | 53.55              | 1,128.84                     | 1.37                | 18.37               | 1.39                           | 0.55                           | -0.32                         | -27.73                       |  |
| 1,306.00                     | 1.21                   | 307.22             | 1,305.82                     | 3.18                | 17.80               | 3.19                           | 0.90                           | 0.27                          | -60.07                       |  |
| 1,484.00                     | 1.37                   | 319.16             | 1,483.78                     | 5.93                | 14.91               | 5.94                           | 0.18                           | 0.09                          | 6.71                         |  |





# Phoenix Technology Services LP

## Survey Report



|                  |                            |                                     |                              |
|------------------|----------------------------|-------------------------------------|------------------------------|
| <b>Company:</b>  | Chevron                    | <b>Local Co-ordinate Reference:</b> | Well 2H                      |
| <b>Project:</b>  | Lea County, NM (NAD27 NME) | <b>TVD Reference:</b>               | RKB @ 3209.00usft (Pace X30) |
| <b>Site:</b>     | Salado Draw 18 26 33 Fed   | <b>MD Reference:</b>                | RKB @ 3209.00usft (Pace X30) |
| <b>Well:</b>     | 2H                         | <b>North Reference:</b>             | Grid                         |
| <b>Wellbore:</b> | OH / Job 1513945           | <b>Survey Calculation Method:</b>   | Minimum Curvature            |
| <b>Design:</b>   | Surveys (Pace X30)         | <b>Database:</b>                    | Compass 5000 GCR             |

### 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 1,661.00              | 1.28            | 316.67      | 1,660.73              | 8.97         | 12.17        | 8.98                    | 0.06                    | -0.05                  | -1.41                 |
| 1,839.00              | 1.67            | 312.96      | 1,838.67              | 12.18        | 8.91         | 12.19                   | 0.23                    | 0.22                   | -2.08                 |
| 2,016.00              | 0.92            | 356.35      | 2,015.63              | 15.36        | 6.93         | 15.36                   | 0.67                    | -0.42                  | 24.51                 |
| 2,193.00              | 0.93            | 15.99       | 2,192.60              | 18.16        | 7.23         | 18.16                   | 0.18                    | 0.01                   | 11.10                 |
| 2,371.00              | 0.90            | 3.39        | 2,370.58              | 20.94        | 7.71         | 20.95                   | 0.11                    | -0.02                  | -7.08                 |
| 2,549.00              | 1.08            | 6.96        | 2,548.56              | 24.00        | 8.00         | 24.01                   | 0.11                    | 0.10                   | 2.01                  |
| 2,726.00              | 1.25            | 0.39        | 2,725.52              | 27.59        | 8.22         | 27.59                   | 0.12                    | 0.10                   | -3.71                 |
| 2,904.00              | 0.73            | 126.37      | 2,903.50              | 28.86        | 9.14         | 28.86                   | 1.00                    | -0.29                  | 70.78                 |
| 3,081.00              | 0.76            | 121.22      | 3,080.49              | 27.58        | 11.05        | 27.59                   | 0.04                    | 0.02                   | -2.91                 |
| 3,259.00              | 1.16            | 137.34      | 3,258.46              | 25.64        | 13.28        | 25.65                   | 0.27                    | 0.22                   | 9.06                  |
| 3,436.00              | 0.90            | 113.86      | 3,435.44              | 23.76        | 15.77        | 23.77                   | 0.28                    | -0.15                  | -13.27                |
| 3,614.00              | 1.00            | 71.67       | 3,613.41              | 23.69        | 18.52        | 23.70                   | 0.39                    | 0.06                   | -23.70                |
| 3,791.00              | 1.23            | 76.87       | 3,790.38              | 24.60        | 21.84        | 24.62                   | 0.14                    | 0.13                   | 2.94                  |
| 3,968.00              | 0.58            | 256.98      | 3,967.37              | 24.83        | 22.82        | 24.85                   | 1.02                    | -0.37                  | -101.63               |
| 4,146.00              | 0.48            | 197.34      | 4,145.36              | 23.92        | 21.72        | 23.93                   | 0.30                    | -0.06                  | -33.51                |
| 4,323.00              | 0.70            | 155.65      | 4,322.36              | 22.23        | 21.94        | 22.24                   | 0.26                    | 0.12                   | -23.55                |
| 4,501.00              | 1.53            | 151.08      | 4,500.32              | 19.16        | 23.54        | 19.17                   | 0.47                    | 0.47                   | -2.57                 |
| 4,611.00              | 1.38            | 151.12      | 4,610.28              | 16.71        | 24.89        | 16.73                   | 0.14                    | -0.14                  | 0.04                  |
| 4,772.00              | 1.52            | 149.64      | 4,771.23              | 13.17        | 26.90        | 13.19                   | 0.09                    | 0.09                   | -0.92                 |
| 4,950.00              | 0.69            | 319.16      | 4,949.22              | 11.94        | 27.40        | 11.96                   | 1.24                    | -0.47                  | 95.24                 |
| 5,127.00              | 0.55            | 320.26      | 5,126.21              | 13.40        | 26.16        | 13.42                   | 0.08                    | -0.08                  | 0.62                  |
| 5,304.00              | 0.62            | 303.88      | 5,303.20              | 14.59        | 24.82        | 14.61                   | 0.10                    | 0.04                   | -9.25                 |
| 5,481.00              | 0.76            | 326.19      | 5,480.19              | 16.10        | 23.37        | 16.12                   | 0.17                    | 0.08                   | 12.60                 |
| 5,659.00              | 0.72            | 315.35      | 5,658.17              | 17.88        | 21.93        | 17.89                   | 0.08                    | -0.02                  | -6.09                 |
| 5,836.00              | 0.83            | 305.97      | 5,835.15              | 19.42        | 20.11        | 19.43                   | 0.09                    | 0.06                   | -5.30                 |
| 6,013.00              | 0.84            | 298.17      | 6,012.14              | 20.79        | 17.93        | 20.80                   | 0.06                    | 0.01                   | -4.41                 |
| 6,190.00              | 0.86            | 292.99      | 6,189.12              | 21.92        | 15.56        | 21.93                   | 0.04                    | 0.01                   | -2.93                 |
| 6,368.00              | 0.71            | 300.99      | 6,367.10              | 23.01        | 13.38        | 23.02                   | 0.10                    | -0.08                  | 4.49                  |
| 6,545.00              | 1.22            | 325.69      | 6,544.07              | 25.13        | 11.38        | 25.14                   | 0.37                    | 0.29                   | 13.95                 |
| 6,722.00              | 1.17            | 318.79      | 6,721.04              | 28.04        | 9.13         | 28.05                   | 0.09                    | -0.03                  | -3.90                 |
| 6,900.00              | 1.62            | 337.62      | 6,898.98              | 31.74        | 6.97         | 31.74                   | 0.36                    | 0.25                   | 10.58                 |
| 7,077.00              | 1.45            | 332.88      | 7,075.92              | 36.04        | 5.00         | 36.05                   | 0.12                    | -0.10                  | -2.68                 |
| 7,255.00              | 1.14            | 325.94      | 7,253.87              | 39.52        | 2.98         | 39.52                   | 0.19                    | -0.17                  | -3.90                 |
| 7,432.00              | 1.08            | 308.18      | 7,430.84              | 42.01        | 0.69         | 42.01                   | 0.20                    | -0.03                  | -10.03                |
| 7,609.00              | 0.32            | 341.06      | 7,607.83              | 43.50        | -0.79        | 43.50                   | 0.47                    | -0.43                  | 18.58                 |
| 7,787.00              | 0.46            | 245.21      | 7,785.83              | 43.67        | -1.60        | 43.67                   | 0.33                    | 0.08                   | -53.85                |
| 7,964.00              | 0.72            | 21.84       | 7,962.82              | 44.41        | -1.83        | 44.41                   | 0.62                    | 0.15                   | 77.19                 |
| 8,141.00              | 0.59            | 63.38       | 8,139.81              | 45.85        | -0.60        | 45.85                   | 0.27                    | -0.07                  | 23.47                 |
| 8,318.00              | 0.59            | 100.74      | 8,316.80              | 46.09        | 1.11         | 46.09                   | 0.21                    | 0.00                   | 21.11                 |
| 8,495.00              | 0.85            | 130.20      | 8,493.79              | 45.07        | 3.01         | 45.07                   | 0.25                    | 0.15                   | 16.64                 |
| 8,538.00              | 0.77            | 141.91      | 8,536.78              | 44.64        | 3.43         | 44.64                   | 0.43                    | -0.19                  | 27.23                 |
| 8,566.00              | 0.49            | 141.53      | 8,564.78              | 44.40        | 3.62         | 44.40                   | 1.00                    | -1.00                  | -1.36                 |
| 8,610.00              | 1.19            | 6.60        | 8,608.78              | 44.70        | 3.79         | 44.71                   | 3.58                    | 1.59                   | -306.66               |



# Phoenix Technology Services LP

## Survey Report



|                  |                            |                                     |                              |
|------------------|----------------------------|-------------------------------------|------------------------------|
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| <b>Project:</b>  | Lea County, NM (NAD27 NME) | <b>TVD Reference:</b>               | RKB @ 3209.00usft (Pace X30) |
| <b>Site:</b>     | Salado Draw 18 26 33 Fed   | <b>MD Reference:</b>                | RKB @ 3209.00usft (Pace X30) |
| <b>Well:</b>     | 2H                         | <b>North Reference:</b>             | Grid                         |
| <b>Wellbore:</b> | OH / Job 1513945           | <b>Survey Calculation Method:</b>   | Minimum Curvature            |
| <b>Design:</b>   | Surveys (Pace X30)         | <b>Database:</b>                    | Compass 5000 GCR             |

| 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) |
| 8,655.00              | 5.91            | 355.17      | 8,653.68              | 47.48        | 3.65         | 47.48                   | 10.55                   | 10.49                  | -25.40                |
| 8,699.00              | 13.32           | 354.81      | 8,697.03              | 54.79        | 3.00         | 54.79                   | 16.84                   | 16.84                  | -0.82                 |
| 8,743.00              | 20.30           | 356.13      | 8,739.13              | 67.47        | 2.02         | 67.47                   | 15.89                   | 15.86                  | 3.00                  |
| 8,787.00              | 27.10           | 356.98      | 8,779.39              | 85.11        | 0.98         | 85.12                   | 15.47                   | 15.45                  | 1.93                  |
| 8,832.00              | 32.16           | 357.25      | 8,818.49              | 107.33       | -0.14        | 107.33                  | 11.25                   | 11.24                  | 0.60                  |
| 8,876.00              | 38.87           | 356.81      | 8,854.29              | 132.84       | -1.47        | 132.84                  | 15.26                   | 15.25                  | -1.00                 |
| 8,920.00              | 44.80           | 356.71      | 8,887.06              | 162.13       | -3.13        | 162.12                  | 13.48                   | 13.48                  | -0.23                 |
| 8,964.00              | 49.18           | 358.03      | 8,917.06              | 194.26       | -4.59        | 194.25                  | 10.19                   | 9.95                   | 3.00                  |
| 9,009.00              | 52.52           | 0.11        | 8,945.47              | 229.14       | -5.14        | 229.14                  | 8.24                    | 7.42                   | 4.62                  |
| 9,053.00              | 55.30           | 1.71        | 8,971.39              | 264.69       | -4.57        | 264.68                  | 6.97                    | 6.32                   | 3.64                  |
| 9,097.00              | 57.21           | 1.52        | 8,995.83              | 301.26       | -3.54        | 301.26                  | 4.36                    | 4.34                   | -0.43                 |
| 9,142.00              | 58.41           | 0.72        | 9,019.80              | 339.33       | -2.79        | 339.33                  | 3.06                    | 2.67                   | -1.78                 |
| 9,186.00              | 61.02           | 0.42        | 9,041.99              | 377.32       | -2.42        | 377.32                  | 5.96                    | 5.93                   | -0.68                 |
| 9,231.00              | 63.08           | 0.56        | 9,063.08              | 417.07       | -2.08        | 417.07                  | 4.59                    | 4.58                   | 0.31                  |
| 9,275.00              | 66.39           | 0.19        | 9,081.86              | 456.86       | -1.82        | 456.85                  | 7.56                    | 7.52                   | -0.84                 |
| 9,319.00              | 70.41           | 0.04        | 9,098.05              | 497.76       | -1.74        | 497.76                  | 9.14                    | 9.14                   | -0.34                 |
| 9,364.00              | 73.94           | 0.38        | 9,111.82              | 540.59       | -1.58        | 540.59                  | 7.88                    | 7.84                   | 0.76                  |
| 9,408.00              | 76.70           | 0.63        | 9,122.97              | 583.15       | -1.20        | 583.15                  | 6.30                    | 6.27                   | 0.57                  |
| 9,452.00              | 80.91           | 0.15        | 9,131.52              | 626.30       | -0.91        | 626.30                  | 9.63                    | 9.57                   | -1.09                 |
| 9,507.00              | 88.15           | 359.34      | 9,136.75              | 681.01       | -1.16        | 681.01                  | 13.24                   | 13.16                  | -1.47                 |
| 9,551.00              | 88.60           | 359.15      | 9,138.00              | 724.99       | -1.74        | 724.99                  | 1.11                    | 1.02                   | -0.43                 |
| 9,640.00              | 90.80           | 0.07        | 9,138.47              | 813.98       | -2.34        | 813.98                  | 2.68                    | 2.47                   | 1.03                  |
| 9,728.00              | 88.21           | 356.68      | 9,139.23              | 901.92       | -4.84        | 901.92                  | 4.85                    | -2.94                  | -3.85                 |
| 9,817.00              | 88.51           | 356.96      | 9,141.78              | 990.75       | -9.77        | 990.74                  | 0.46                    | 0.34                   | 0.31                  |
| 9,906.00              | 88.57           | 357.36      | 9,144.04              | 1,079.61     | -14.18       | 1,079.60                | 0.45                    | 0.07                   | 0.45                  |
| 9,994.00              | 89.64           | 359.74      | 9,145.42              | 1,167.56     | -16.41       | 1,167.55                | 2.96                    | 1.22                   | 2.70                  |
| 10,083.00             | 90.59           | 0.99        | 9,145.24              | 1,256.56     | -15.84       | 1,256.55                | 1.76                    | 1.07                   | 1.40                  |
| 10,171.00             | 90.79           | 0.96        | 9,144.18              | 1,344.54     | -14.34       | 1,344.53                | 0.23                    | 0.23                   | -0.03                 |
| 10,260.00             | 91.82           | 1.52        | 9,142.15              | 1,433.49     | -12.42       | 1,433.48                | 1.32                    | 1.16                   | 0.63                  |
| 10,348.00             | 89.27           | 0.42        | 9,141.32              | 1,521.47     | -10.93       | 1,521.46                | 3.16                    | -2.90                  | -1.25                 |
| 10,437.00             | 87.53           | 359.62      | 9,143.80              | 1,610.43     | -10.89       | 1,610.42                | 2.15                    | -1.96                  | -0.90                 |
| 10,526.00             | 89.44           | 0.37        | 9,146.15              | 1,699.39     | -10.90       | 1,699.39                | 2.31                    | 2.15                   | 0.84                  |
| 10,614.00             | 89.96           | 0.88        | 9,146.61              | 1,787.39     | -9.94        | 1,787.38                | 0.83                    | 0.59                   | 0.58                  |
| 10,703.00             | 90.28           | 1.62        | 9,146.43              | 1,876.36     | -8.00        | 1,876.36                | 0.91                    | 0.36                   | 0.83                  |
| 10,791.00             | 91.62           | 1.63        | 9,144.97              | 1,964.31     | -5.51        | 1,964.31                | 1.52                    | 1.52                   | 0.01                  |
| 10,880.00             | 92.47           | 1.81        | 9,141.79              | 2,053.22     | -2.84        | 2,053.21                | 0.98                    | 0.96                   | 0.20                  |
| 10,968.00             | 91.79           | 0.09        | 9,138.52              | 2,141.14     | -1.38        | 2,141.14                | 2.10                    | -0.77                  | -1.95                 |
| 11,057.00             | 91.96           | 0.09        | 9,135.61              | 2,230.09     | -1.24        | 2,230.09                | 0.19                    | 0.19                   | 0.00                  |
| 11,146.00             | 91.04           | 357.50      | 9,133.28              | 2,319.03     | -3.11        | 2,319.03                | 3.09                    | -1.03                  | -2.91                 |
| 11,234.00             | 91.51           | 358.59      | 9,131.32              | 2,406.96     | -6.11        | 2,406.95                | 1.35                    | 0.53                   | 1.24                  |
| 11,323.00             | 91.04           | 359.50      | 9,129.34              | 2,495.92     | -7.59        | 2,495.92                | 1.15                    | -0.53                  | 1.02                  |
| 11,411.00             | 91.51           | 0.74        | 9,127.38              | 2,583.90     | -7.41        | 2,583.89                | 1.51                    | 0.53                   | 1.41                  |
| 11,500.00             | 90.45           | 1.27        | 9,125.86              | 2,672.87     | -5.85        | 2,672.87                | 1.33                    | -1.19                  | 0.60                  |





# Phoenix Technology Services LP

## Survey Report



|                  |                            |                                     |                              |
|------------------|----------------------------|-------------------------------------|------------------------------|
| <b>Company:</b>  | Chevron                    | <b>Local Co-ordinate Reference:</b> | Well 2H                      |
| <b>Project:</b>  | Lea County, NM (NAD27 NME) | <b>TVD Reference:</b>               | RKB @ 3209.00usft (Pace X30) |
| <b>Site:</b>     | Salado Draw 18 26 33 Fed   | <b>MD Reference:</b>                | RKB @ 3209.00usft (Pace X30) |
| <b>Well:</b>     | 2H                         | <b>North Reference:</b>             | Grid                         |
| <b>Wellbore:</b> | OH / Job 1513945           | <b>Survey Calculation Method:</b>   | Minimum Curvature            |
| <b>Design:</b>   | Surveys (Pace X30)         | <b>Database:</b>                    | Compass 5000 GCR             |

| 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) |
| 11,589.00             | 90.90           | 0.97        | 9,124.81              | 2,761.85     | -4.11        | 2,761.84                | 0.61                    | 0.51                   | -0.34                 |
| 11,677.00             | 91.74           | 0.86        | 9,122.79              | 2,849.81     | -2.70        | 2,849.81                | 0.96                    | 0.95                   | -0.13                 |
| 11,766.00             | 90.70           | 1.96        | 9,120.89              | 2,938.76     | -0.52        | 2,938.76                | 1.70                    | -1.17                  | 1.24                  |
| 11,854.00             | 90.67           | 1.16        | 9,119.84              | 3,026.72     | 1.88         | 3,026.72                | 0.91                    | -0.03                  | -0.91                 |
| 11,943.00             | 89.97           | 359.66      | 9,119.34              | 3,115.72     | 2.52         | 3,115.72                | 1.86                    | -0.79                  | -1.69                 |
| 12,031.00             | 89.55           | 359.52      | 9,119.71              | 3,203.71     | 1.89         | 3,203.71                | 0.50                    | -0.48                  | -0.16                 |
| 12,120.00             | 90.56           | 359.01      | 9,119.62              | 3,292.70     | 0.75         | 3,292.70                | 1.27                    | 1.13                   | -0.57                 |
| 12,209.00             | 89.21           | 359.63      | 9,119.80              | 3,381.70     | -0.31        | 3,381.69                | 1.67                    | -1.52                  | 0.70                  |
| 12,298.00             | 89.13           | 0.11        | 9,121.09              | 3,470.69     | -0.51        | 3,470.68                | 0.55                    | -0.09                  | 0.54                  |
| 12,387.00             | 88.12           | 359.34      | 9,123.23              | 3,559.66     | -0.94        | 3,559.66                | 1.43                    | -1.13                  | -0.87                 |
| 12,475.00             | 89.19           | 0.25        | 9,125.29              | 3,647.63     | -1.25        | 3,647.63                | 1.60                    | 1.22                   | 1.03                  |
| 12,564.00             | 88.23           | 359.77      | 9,127.30              | 3,736.61     | -1.24        | 3,736.60                | 1.21                    | -1.08                  | -0.54                 |
| 12,653.00             | 87.87           | 358.99      | 9,130.33              | 3,825.55     | -2.20        | 3,825.55                | 0.96                    | -0.40                  | -0.88                 |
| 12,742.00             | 90.36           | 1.14        | 9,131.70              | 3,914.53     | -2.10        | 3,914.52                | 3.70                    | 2.80                   | 2.42                  |
| 12,830.00             | 89.19           | 0.50        | 9,132.05              | 4,002.51     | -0.84        | 4,002.51                | 1.52                    | -1.33                  | -0.73                 |
| 12,919.00             | 89.33           | 359.91      | 9,133.20              | 4,091.51     | -0.52        | 4,091.50                | 0.68                    | 0.16                   | -0.66                 |
| 13,007.00             | 90.59           | 1.17        | 9,133.26              | 4,179.50     | 0.31         | 4,179.50                | 2.02                    | 1.43                   | 1.43                  |
| 13,096.00             | 91.62           | 0.74        | 9,131.54              | 4,268.47     | 1.79         | 4,268.47                | 1.25                    | 1.16                   | -0.48                 |
| 13,184.00             | 89.89           | 359.66      | 9,130.38              | 4,356.46     | 2.10         | 4,356.46                | 2.32                    | -1.97                  | -1.23                 |
| 13,273.00             | 90.31           | 359.39      | 9,130.23              | 4,445.45     | 1.36         | 4,445.45                | 0.56                    | 0.47                   | -0.30                 |
| 13,362.00             | 90.45           | 358.90      | 9,129.64              | 4,534.44     | 0.03         | 4,534.44                | 0.57                    | 0.16                   | -0.55                 |
| 13,450.00             | 90.82           | 358.94      | 9,128.66              | 4,622.42     | -1.63        | 4,622.42                | 0.42                    | 0.42                   | 0.05                  |
| 13,539.00             | 92.44           | 359.60      | 9,126.13              | 4,711.37     | -2.76        | 4,711.37                | 1.97                    | 1.82                   | 0.74                  |
| 13,628.00             | 93.67           | 358.65      | 9,121.39              | 4,800.23     | -4.12        | 4,800.23                | 1.75                    | 1.38                   | -1.07                 |
| 13,716.00             | 93.50           | 0.06        | 9,115.88              | 4,888.05     | -5.11        | 4,888.05                | 1.61                    | -0.19                  | 1.60                  |
| 13,805.00             | 90.70           | 1.06        | 9,112.62              | 4,976.98     | -4.24        | 4,976.97                | 3.34                    | -3.15                  | 1.12                  |
| 13,894.00             | 90.09           | 1.63        | 9,112.01              | 5,065.95     | -2.15        | 5,065.95                | 0.94                    | -0.69                  | 0.64                  |
| 13,983.00             | 90.76           | 1.26        | 9,111.35              | 5,154.92     | 0.10         | 5,154.92                | 0.86                    | 0.75                   | -0.42                 |
| 14,072.00             | 90.87           | 0.43        | 9,110.08              | 5,243.90     | 1.41         | 5,243.90                | 0.94                    | 0.12                   | -0.93                 |
| 14,076.00             | 91.01           | 0.45        | 9,110.02              | 5,247.90     | 1.44         | 5,247.90                | 3.54                    | 3.50                   | 0.50                  |
| Final Phoenix Survey  |                 |             |                       |              |              |                         |                         |                        |                       |
| 14,135.00             | 91.01           | 0.45        | 9,108.98              | 5,306.89     | 1.90         | 5,306.89                | 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) |                      |
| 152.00                | 151.99                | 0.21              | 1.11         | First Phoenix Survey |
| 14,076.00             | 9,110.02              | 5,247.90          | 1.44         | Final Phoenix Survey |
| 14,135.00             | 9,108.98              | 5,306.89          | 1.90         | Projection to TD     |

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