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

EMNRD-OCD ARTESIA  
REC'D: 05/05/2020 Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

|                                         |  |                                                        |  |                                                            |                                   |
|-----------------------------------------|--|--------------------------------------------------------|--|------------------------------------------------------------|-----------------------------------|
| <sup>1</sup> API Number<br>30-015-44790 |  | <sup>2</sup> Pool Code<br>97494                        |  | <sup>3</sup> Pool Name<br>Cottonwood Draw; Bone Spring (O) |                                   |
| <sup>4</sup> Property Code<br>317791    |  | <sup>5</sup> Property Name<br>DAVINCI 7-18 FEDERAL COM |  |                                                            | <sup>6</sup> Well Number<br>30H   |
| <sup>7</sup> OGRID No.<br>215099        |  | <sup>8</sup> Operator Name<br>CIMAREX ENERGY CO.       |  |                                                            | <sup>9</sup> Elevation<br>3308.4' |

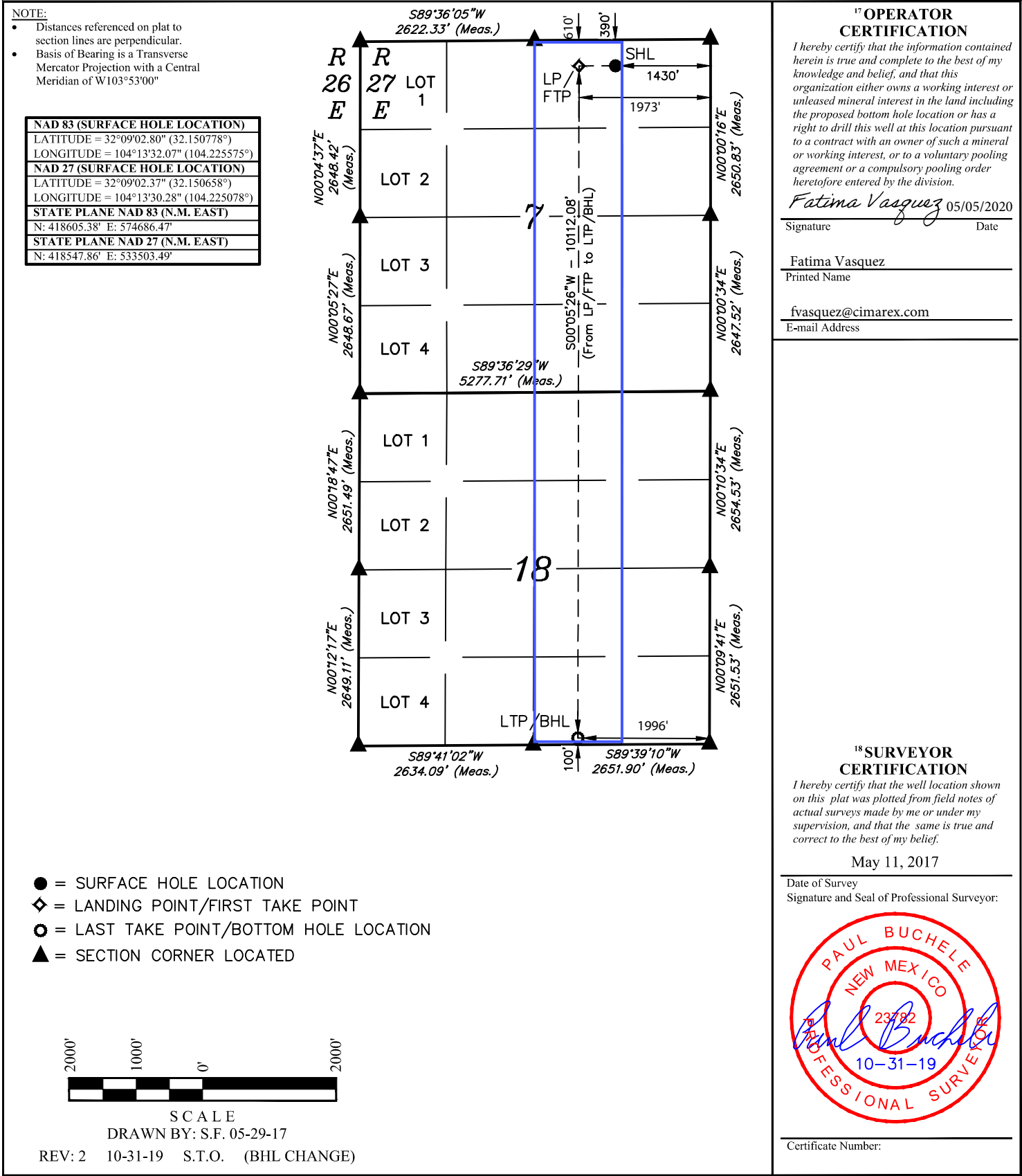
<sup>10</sup> Surface Location

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| B             | 7       | 25S      | 27E   |         | 390           | NORTH            | 1430          | EAST           | EDDY   |

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

| UL or lot no.                        | Section | Township                      | Range | Lot Idn                          | Feet from the | North/South line        | Feet from the | East/West line | County |
|--------------------------------------|---------|-------------------------------|-------|----------------------------------|---------------|-------------------------|---------------|----------------|--------|
| O                                    | 18      | 25S                           | 27E   |                                  | 100           | SOUTH                   | 1996          | EAST           | EDDY   |
| <sup>12</sup> Dedicated Acres<br>320 |         | <sup>13</sup> Joint or Infill |       | <sup>14</sup> Consolidation Code |               | <sup>15</sup> Order No. |               |                |        |

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.





# Final Surveys - Cimarex DaVinci 7-18 Federal Com #30H 0ft to 17841ft (Surcon Corrected) Survey Geodetic Report (Def Survey)



|                                      |                                                                                         |                                             |                              |
|--------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------|------------------------------|
| <b>Report Date:</b>                  | January 28, 2020 - 01:07 PM                                                             | <b>Survey / DLS Computation:</b>            | Minimum Curvature / Lubinski |
| <b>Client:</b>                       | Cimarex                                                                                 | <b>Vertical Section Azimuth:</b>            | 179.849 ° (Grid North)       |
| <b>Field:</b>                        | NM Eddy County (NAD 83)                                                                 | <b>Vertical Section Origin:</b>             | 0.000 ft, 0.000 ft           |
| <b>Structure / Slot:</b>             | Cimarex DaVinci 7-18 Federal Com #30H / Cimarex DaVinci 7-18 Federal Com #30H           | <b>TVD Reference Datum:</b>                 | RKB                          |
| <b>Well:</b>                         | Cimarex DaVinci 7-18 Federal Com #30H                                                   | <b>TVD Reference Elevation:</b>             | 3331.400 ft above MSL        |
| <b>Borehole:</b>                     | Original Borehole                                                                       | <b>Seabed / Ground Elevation:</b>           | 3308.400 ft above MSL        |
| <b>UWI / API#:</b>                   | Unknown / Unknown                                                                       | <b>Magnetic Declination:</b>                | 7.199 °                      |
| <b>Survey Name:</b>                  | Final Surveys - Cimarex DaVinci 7-18 Federal Com #30H 0ft to 17841ft (Surcon Corrected) | <b>Total Gravity Field Strength:</b>        | 998.4347mgn (9.80665 Based)  |
| <b>Survey Date:</b>                  | January 02, 2020                                                                        | <b>Gravity Model:</b>                       | GARM                         |
| <b>Tort / AHD / DDI / ERD Ratio:</b> | 213.206 ° / 10724.593 ft / 6.710 / 1.349                                                | <b>Total Magnetic Field Strength:</b>       | 47743.694 nT                 |
| <b>Coordinate Reference System:</b>  | NAD83 New Mexico State Plane, Eastern Zone, US Feet                                     | <b>Magnetic Dip Angle:</b>                  | 59.777 °                     |
| <b>Location Lat / Long:</b>          | N 32° 9' 2.80362", W 104° 13' 32.07065"                                                 | <b>Declination Date:</b>                    | January 23, 2020             |
| <b>Location Grid N/E Y/X:</b>        | N 418605.380 ftUS, E 574686.470 ftUS                                                    | <b>Magnetic Declination Model:</b>          | HDGM 2019                    |
| <b>CRS Grid Convergence Angle:</b>   | 0.0573 °                                                                                | <b>North Reference:</b>                     | Grid North                   |
| <b>Grid Scale Factor:</b>            | 0.99991036                                                                              | <b>Grid Convergence Used:</b>               | 0.0573 °                     |
| <b>Version / Patch:</b>              | 2.10.787.0                                                                              | <b>Total Corr Mag North-&gt;Grid North:</b> | 7.1415 °                     |
|                                      |                                                                                         | <b>Local Coord Referenced To:</b>           | Well Head                    |

| Comments                     | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") | Closure Azimuth<br>(°) | Closure<br>(ft) |
|------------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|------------------------|-----------------|
| SHL [390' FNL,<br>1430' FEL] | 0.00       | 0.00        | 0.00             | 0.00        | 0.00         | 0.00       | 0.00       | N/A              | 418605.38          | 574686.47         | N 32 9 2.80             | W 104 13 32.07           | 0.00                   | 0.00            |
|                              | 90.00      | 0.62        | 310.90           | 90.00       | -0.32        | 0.32       | -0.37      | 0.69             | 418605.70          | 574686.10         | N 32 9 2.81             | W 104 13 32.07           | 310.90                 | 0.49            |
|                              | 119.00     | 0.57        | 267.22           | 119.00      | -0.42        | 0.41       | -0.63      | 1.53             | 418605.79          | 574685.84         | N 32 9 2.81             | W 104 13 32.08           | 303.32                 | 0.75            |
|                              | 149.00     | 0.70        | 154.45           | 149.00      | -0.24        | 0.24       | -0.70      | 3.53             | 418605.62          | 574685.77         | N 32 9 2.81             | W 104 13 32.08           | 289.05                 | 0.74            |
|                              | 180.00     | 0.84        | 4.07             | 179.99      | -0.30        | 0.30       | -0.60      | 4.80             | 418605.68          | 574685.87         | N 32 9 2.81             | W 104 13 32.08           | 296.29                 | 0.67            |
|                              | 210.00     | 0.70        | 1.26             | 209.99      | -0.70        | 0.70       | -0.58      | 0.48             | 418606.06          | 574685.89         | N 32 9 2.81             | W 104 13 32.08           | 320.21                 | 0.91            |
|                              | 281.00     | 0.66        | 348.96           | 280.99      | -1.54        | 1.54       | -0.65      | 0.21             | 418606.92          | 574685.82         | N 32 9 2.82             | W 104 13 32.08           | 336.99                 | 1.67            |
|                              | 371.00     | 0.97        | 359.59           | 370.98      | -2.81        | 2.81       | -0.76      | 0.38             | 418608.19          | 574685.71         | N 32 9 2.83             | W 104 13 32.08           | 344.91                 | 2.91            |
|                              | 491.00     | 1.04        | 302.47           | 490.96      | -4.41        | 4.41       | -1.68      | 0.80             | 418609.79          | 574684.79         | N 32 9 2.85             | W 104 13 32.09           | 339.10                 | 4.72            |
|                              | 580.00     | 1.25        | 295.81           | 579.94      | -5.27        | 5.26       | -3.24      | 0.28             | 418610.64          | 574683.23         | N 32 9 2.86             | W 104 13 32.11           | 328.39                 | 6.18            |
|                              | 671.00     | 1.31        | 285.83           | 670.92      | -5.99        | 5.98       | -5.13      | 0.25             | 418611.36          | 574681.34         | N 32 9 2.86             | W 104 13 32.13           | 319.35                 | 7.88            |
|                              | 762.00     | 1.40        | 289.86           | 761.90      | -6.66        | 6.64       | -7.18      | 0.14             | 418612.02          | 574679.29         | N 32 9 2.87             | W 104 13 32.15           | 312.77                 | 9.78            |
|                              | 853.00     | 1.63        | 292.54           | 852.86      | -7.54        | 7.51       | -9.42      | 0.26             | 418612.89          | 574677.05         | N 32 9 2.88             | W 104 13 32.18           | 308.58                 | 12.05           |
|                              | 946.00     | 1.70        | 296.26           | 945.83      | -8.66        | 8.63       | -11.88     | 0.14             | 418614.01          | 574674.59         | N 32 9 2.89             | W 104 13 32.21           | 306.00                 | 14.68           |
|                              | 1134.00    | 1.93        | 296.02           | 1133.73     | -11.30       | 11.25      | -17.22     | 0.12             | 418616.63          | 574669.25         | N 32 9 2.92             | W 104 13 32.27           | 303.16                 | 20.57           |
|                              | 1229.00    | 1.93        | 299.56           | 1228.68     | -12.80       | 12.74      | -20.05     | 0.13             | 418618.12          | 574666.42         | N 32 9 2.93             | W 104 13 32.30           | 302.44                 | 23.76           |
|                              | 1323.00    | 1.75        | 300.57           | 1322.63     | -14.32       | 14.26      | -22.67     | 0.19             | 418619.63          | 574663.81         | N 32 9 2.94             | W 104 13 32.33           | 302.17                 | 26.78           |
|                              | 1417.00    | 1.25        | 336.93           | 1416.60     | -15.99       | 15.93      | -24.30     | 1.12             | 418621.31          | 574662.17         | N 32 9 2.96             | W 104 13 32.35           | 303.24                 | 29.06           |
|                              | 1512.00    | 1.25        | 9.92             | 1511.58     | -17.97       | 17.90      | -24.53     | 0.75             | 418623.28          | 574661.94         | N 32 9 2.98             | W 104 13 32.36           | 306.12                 | 30.37           |
|                              | 1606.00    | 1.27        | 14.56            | 1605.55     | -19.98       | 19.92      | -24.09     | 0.11             | 418625.30          | 574662.38         | N 32 9 3.00             | W 104 13 32.35           | 309.59                 | 31.26           |
|                              | 1701.00    | 2.20        | 56.87            | 1700.51     | -22.00       | 21.94      | -22.30     | 1.60             | 418627.31          | 574664.17         | N 32 9 3.02             | W 104 13 32.33           | 314.53                 | 31.28           |
|                              | 1796.00    | 2.15        | 51.50            | 1795.44     | -24.09       | 24.04      | -19.38     | 0.22             | 418629.42          | 574667.09         | N 32 9 3.04             | W 104 13 32.30           | 321.13                 | 30.88           |
|                              | 1891.00    | 1.99        | 50.78            | 1890.38     | -26.24       | 26.19      | -16.71     | 0.17             | 418631.57          | 574669.76         | N 32 9 3.06             | W 104 13 32.26           | 327.47                 | 31.07           |
|                              | 1985.00    | 1.29        | 348.28           | 1984.35     | -28.30       | 28.26      | -15.66     | 1.92             | 418633.64          | 574670.81         | N 32 9 3.08             | W 104 13 32.25           | 331.01                 | 32.31           |
|                              | 1998.00    | 1.48        | 322.96           | 1997.35     | -28.58       | 28.54      | -15.79     | 4.88             | 418633.92          | 574670.68         | N 32 9 3.09             | W 104 13 32.25           | 331.05                 | 32.62           |
|                              | 2172.00    | 2.96        | 259.57           | 2171.23     | -29.58       | 29.52      | -21.56     | 1.52             | 418634.90          | 574664.91         | N 32 9 3.10             | W 104 13 32.32           | 323.86                 | 36.56           |
|                              | 2267.00    | 5.31        | 231.86           | 2265.99     | -26.43       | 26.36      | -27.43     | 3.18             | 418631.74          | 574659.04         | N 32 9 3.06             | W 104 13 32.39           | 313.86                 | 38.05           |
|                              | 2361.00    | 5.81        | 235.07           | 2359.54     | -21.04       | 20.95      | -34.75     | 0.63             | 418626.33          | 574651.72         | N 32 9 3.01             | W 104 13 32.47           | 301.08                 | 40.58           |
|                              | 2456.00    | 6.58        | 238.58           | 2453.99     | -15.47       | 15.36      | -43.34     | 0.90             | 418620.74          | 574643.13         | N 32 9 2.96             | W 104 13 32.57           | 289.51                 | 45.98           |

| Comments         | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' '') | Longitude<br>(E/W ° ' '') | Closure Azimuth<br>(°) | Closure<br>(ft) |
|------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|--------------------------|---------------------------|------------------------|-----------------|
|                  | 2550.00    | 7.05        | 244.34           | 2547.33     | -10.19       | 10.05      | -53.14     | 0.88             | 418615.43          | 574633.34         | N 32 9 2.90              | W 104 13 32.69            | 280.71                 | 54.08           |
|                  | 2645.00    | 7.54        | 252.93           | 2641.56     | -5.87        | 5.70       | -64.35     | 1.26             | 418611.08          | 574622.13         | N 32 9 2.86              | W 104 13 32.82            | 275.06                 | 64.60           |
|                  | 2740.00    | 7.77        | 261.09           | 2735.72     | -3.08        | 2.88       | -76.65     | 1.17             | 418608.26          | 574609.82         | N 32 9 2.83              | W 104 13 32.96            | 272.15                 | 76.71           |
|                  | 2834.00    | 7.87        | 267.32           | 2828.84     | -1.83        | 1.59       | -89.36     | 0.91             | 418606.97          | 574597.12         | N 32 9 2.82              | W 104 13 33.11            | 271.02                 | 89.37           |
|                  | 2928.00    | 7.98        | 269.72           | 2921.95     | -1.53        | 1.26       | -102.31    | 0.37             | 418606.64          | 574584.17         | N 32 9 2.82              | W 104 13 33.26            | 270.70                 | 102.32          |
|                  | 3022.00    | 8.34        | 274.83           | 3015.00     | -2.10        | 1.80       | -115.63    | 0.86             | 418607.18          | 574570.85         | N 32 9 2.82              | W 104 13 33.42            | 270.89                 | 115.65          |
|                  | 3116.00    | 8.26        | 274.26           | 3108.01     | -3.22        | 2.88       | -129.16    | 0.12             | 418608.26          | 574557.32         | N 32 9 2.83              | W 104 13 33.57            | 271.28                 | 129.19          |
|                  | 3211.00    | 8.30        | 273.94           | 3202.02     | -4.23        | 3.85       | -142.80    | 0.06             | 418609.23          | 574543.68         | N 32 9 2.84              | W 104 13 33.73            | 271.55                 | 142.86          |
|                  | 3305.00    | 8.21        | 274.18           | 3295.05     | -5.22        | 4.81       | -156.27    | 0.10             | 418610.19          | 574530.22         | N 32 9 2.85              | W 104 13 33.89            | 271.76                 | 156.34          |
|                  | 3398.00    | 8.21        | 273.86           | 3387.09     | -6.19        | 5.74       | -169.51    | 0.05             | 418611.12          | 574516.97         | N 32 9 2.86              | W 104 13 34.04            | 271.94                 | 169.61          |
|                  | 3492.00    | 7.94        | 273.12           | 3480.16     | -7.03        | 6.55       | -182.69    | 0.31             | 418611.92          | 574503.79         | N 32 9 2.87              | W 104 13 34.20            | 272.05                 | 182.81          |
|                  | 3587.00    | 7.52        | 271.18           | 3574.30     | -7.55        | 7.03       | -195.46    | 0.52             | 418612.41          | 574491.03         | N 32 9 2.88              | W 104 13 34.34            | 272.06                 | 195.59          |
|                  | 3681.00    | 8.64        | 269.76           | 3667.36     | -7.68        | 7.13       | -208.67    | 1.21             | 418612.51          | 574477.82         | N 32 9 2.88              | W 104 13 34.50            | 271.96                 | 208.79          |
|                  | 3775.00    | 8.97        | 269.95           | 3760.26     | -7.68        | 7.09       | -223.06    | 0.35             | 418612.47          | 574463.43         | N 32 9 2.88              | W 104 13 34.67            | 271.82                 | 223.17          |
|                  | 3869.00    | 8.91        | 269.79           | 3853.11     | -7.68        | 7.06       | -237.67    | 0.07             | 418612.44          | 574448.82         | N 32 9 2.88              | W 104 13 34.83            | 271.70                 | 237.77          |
|                  | 3964.00    | 8.53        | 269.46           | 3947.02     | -7.63        | 6.97       | -252.07    | 0.40             | 418612.34          | 574434.42         | N 32 9 2.88              | W 104 13 35.00            | 271.58                 | 252.17          |
|                  | 4059.00    | 8.32        | 268.75           | 4040.99     | -7.45        | 6.75       | -265.99    | 0.25             | 418612.13          | 574420.51         | N 32 9 2.87              | W 104 13 35.16            | 271.45                 | 266.07          |
|                  | 4153.00    | 7.77        | 266.56           | 4134.06     | -6.95        | 6.22       | -279.13    | 0.67             | 418611.60          | 574407.37         | N 32 9 2.87              | W 104 13 35.32            | 271.28                 | 279.20          |
|                  | 4247.00    | 8.23        | 268.06           | 4227.15     | -6.38        | 5.61       | -292.20    | 0.54             | 418610.99          | 574394.30         | N 32 9 2.86              | W 104 13 35.47            | 271.10                 | 292.25          |
|                  | 4342.00    | 8.70        | 269.22           | 4321.11     | -6.09        | 5.28       | -306.18    | 0.53             | 418610.66          | 574380.32         | N 32 9 2.86              | W 104 13 35.63            | 270.99                 | 306.22          |
|                  | 4436.00    | 8.13        | 268.99           | 4414.10     | -5.91        | 5.07       | -319.93    | 0.61             | 418610.45          | 574366.57         | N 32 9 2.86              | W 104 13 35.79            | 270.91                 | 319.97          |
|                  | 4529.00    | 8.76        | 273.98           | 4506.09     | -6.32        | 5.44       | -333.57    | 1.04             | 418610.82          | 574352.93         | N 32 9 2.86              | W 104 13 35.95            | 270.93                 | 333.61          |
|                  | 4624.00    | 9.24        | 276.87           | 4599.93     | -7.78        | 6.86       | -348.36    | 0.69             | 418612.24          | 574338.14         | N 32 9 2.87              | W 104 13 36.12            | 271.13                 | 348.43          |
|                  | 4717.00    | 8.48        | 276.22           | 4691.82     | -9.45        | 8.49       | -362.59    | 0.82             | 418613.87          | 574323.91         | N 32 9 2.89              | W 104 13 36.29            | 271.34                 | 362.69          |
|                  | 4811.00    | 8.12        | 276.03           | 4784.83     | -10.93       | 9.94       | -376.08    | 0.38             | 418615.32          | 574310.42         | N 32 9 2.91              | W 104 13 36.44            | 271.51                 | 376.21          |
|                  | 4906.00    | 7.69        | 274.95           | 4878.93     | -12.22       | 11.20      | -389.09    | 0.48             | 418616.57          | 574297.42         | N 32 9 2.92              | W 104 13 36.60            | 271.65                 | 389.25          |
|                  | 5000.00    | 8.63        | 273.05           | 4971.97     | -13.17       | 12.11      | -402.39    | 1.04             | 418617.49          | 574284.11         | N 32 9 2.93              | W 104 13 36.75            | 271.72                 | 402.58          |
|                  | 5095.00    | 8.67        | 273.04           | 5065.89     | -13.97       | 12.87      | -416.66    | 0.04             | 418618.25          | 574269.85         | N 32 9 2.94              | W 104 13 36.92            | 271.77                 | 416.86          |
|                  | 5189.00    | 8.33        | 271.49           | 5158.86     | -14.56       | 13.43      | -430.54    | 0.44             | 418618.80          | 574255.97         | N 32 9 2.94              | W 104 13 37.08            | 271.79                 | 430.75          |
|                  | 5283.00    | 8.04        | 270.71           | 5251.90     | -14.85       | 13.68      | -443.92    | 0.33             | 418619.06          | 574242.59         | N 32 9 2.94              | W 104 13 37.23            | 271.77                 | 444.13          |
|                  | 5377.00    | 7.81        | 270.17           | 5345.01     | -14.99       | 13.78      | -456.88    | 0.26             | 418619.16          | 574229.63         | N 32 9 2.94              | W 104 13 37.38            | 271.73                 | 457.09          |
|                  | 5471.00    | 7.50        | 269.43           | 5438.17     | -14.98       | 13.74      | -469.40    | 0.35             | 418619.12          | 574217.11         | N 32 9 2.94              | W 104 13 37.53            | 271.68                 | 469.61          |
|                  | 5568.00    | 6.49        | 270.03           | 5623.77     | -14.92       | 13.63      | -492.18    | 0.54             | 418619.01          | 574194.34         | N 32 9 2.94              | W 104 13 37.80            | 271.59                 | 492.37          |
|                  | 5752.00    | 6.08        | 277.59           | 5717.21     | -15.61       | 14.29      | -502.42    | 0.98             | 418619.67          | 574184.09         | N 32 9 2.95              | W 104 13 37.91            | 271.63                 | 502.63          |
|                  | 5847.00    | 5.50        | 278.41           | 5811.73     | -16.97       | 15.62      | -511.91    | 0.62             | 418621.00          | 574174.60         | N 32 9 2.96              | W 104 13 38.02            | 271.75                 | 512.15          |
|                  | 5941.00    | 2.95        | 260.94           | 5905.47     | -17.26       | 15.90      | -518.76    | 3.01             | 418621.27          | 574167.76         | N 32 9 2.97              | W 104 13 38.10            | 271.76                 | 519.00          |
|                  | 6035.00    | 2.23        | 255.06           | 5999.37     | -16.42       | 15.04      | -522.92    | 0.82             | 418620.42          | 574163.60         | N 32 9 2.96              | W 104 13 38.15            | 271.65                 | 523.13          |
|                  | 6130.00    | 2.08        | 238.82           | 6094.30     | -15.06       | 13.67      | -526.18    | 0.66             | 418619.05          | 574160.34         | N 32 9 2.94              | W 104 13 38.19            | 271.49                 | 526.36          |
|                  | 6225.00    | 1.76        | 248.72           | 6189.25     | -13.65       | 12.25      | -529.01    | 0.48             | 418617.63          | 574157.51         | N 32 9 2.93              | W 104 13 38.22            | 271.33                 | 529.15          |
|                  | 6319.00    | 1.67        | 247.45           | 6283.21     | -12.60       | 11.20      | -531.62    | 0.10             | 418616.58          | 574154.90         | N 32 9 2.92              | W 104 13 38.25            | 271.21                 | 531.74          |
|                  | 6414.00    | 2.10        | 236.01           | 6378.16     | -11.11       | 9.70       | -534.34    | 0.60             | 418615.08          | 574152.18         | N 32 9 2.90              | W 104 13 38.29            | 271.04                 | 534.43          |
|                  | 6508.00    | 2.74        | 235.49           | 6472.07     | -8.88        | 7.46       | -537.62    | 0.68             | 418612.84          | 574148.90         | N 32 9 2.88              | W 104 13 38.32            | 270.80                 | 537.68          |
|                  | 6603.00    | 2.91        | 232.25           | 6566.96     | -6.13        | 4.70       | -541.40    | 0.25             | 418610.08          | 574145.12         | N 32 9 2.86              | W 104 13 38.37            | 270.50                 | 541.42          |
|                  | 6697.00    | 1.83        | 239.81           | 6660.88     | -3.92        | 2.48       | -544.59    | 1.19             | 418607.86          | 574141.93         | N 32 9 2.83              | W 104 13 38.40            | 270.26                 | 544.59          |
|                  | 6791.00    | 0.48        | 352.56           | 6754.86     | -3.56        | 2.12       | -545.93    | 2.20             | 418607.50          | 574140.59         | N 32 9 2.83              | W 104 13 38.42            | 270.22                 | 545.94          |
|                  | 6886.00    | 1.10        | 25.68            | 6849.85     | -4.77        | 3.34       | -545.59    | 0.78             | 418608.72          | 574140.93         | N 32 9 2.84              | W 104 13 38.42            | 270.35                 | 545.60          |
|                  | 6980.00    | 0.89        | 357.54           | 6943.84     | -6.32        | 4.88       | -545.23    | 0.56             | 418610.26          | 574141.29         | N 32 9 2.86              | W 104 13 38.41            | 270.51                 | 545.25          |
|                  | 7074.00    | 0.78        | 331.03           | 7037.83     | -7.61        | 6.17       | -545.57    | 0.42             | 418611.55          | 574140.95         | N 32 9 2.87              | W 104 13 38.42            | 270.65                 | 545.61          |
|                  | 7168.00    | 0.93        | 284.93           | 7131.82     | -8.36        | 6.92       | -546.62    | 0.73             | 418612.30          | 574139.90         | N 32 9 2.88              | W 104 13 38.43            | 270.73                 | 546.66          |
|                  | 7263.00    | 0.84        | 277.91           | 7226.81     | -8.66        | 7.22       | -548.05    | 0.15             | 418612.60          | 574138.47         | N 32 9 2.88              | W 104 13 38.45            | 270.75                 | 548.10          |
|                  | 7357.00    | 0.29        | 239.60           | 7320.80     | -8.64        | 7.19       | -548.94    | 0.68             | 418612.57          | 574137.58         | N 32 9 2.88              | W 104 13 38.46            | 270.75                 | 548.99          |
| First SLB Survey | 7391.00    | 0.42        | 237.62           | 7354.80     | -8.53        | 7.08       | -549.12    | 0.38             | 418612.46          | 574137.40         | N 32 9 2.88              | W 104 13 38.46            | 270.74                 | 549.17          |
|                  | 7423.00    | 0.42        | 252.69           | 7386.80     | -8.43        | 6.99       | -549.33    | 0.34             | 418612.36          | 574137.19         | N 32 9 2.88              | W 104 13 38.46            | 270.73                 | 549.38          |
| KOP              | 7455.00    | 1.85        | 191.64           | 7418.79     | -7.89        | 6.44       | -549.55    | 5.27             | 418611.82          | 574136.97         | N 32 9 2.87              | W 104 13 38.46            | 270.67                 | 549.59          |
|                  | 7486.00    | 6.17        | 178.31           | 7449.71     | -5.74        | 4.29       | -549.60    | 14.16            | 418609.67          | 574136.92         | N 32 9 2.85              | W 104 13 38.46            | 270.45                 | 549.62          |
|                  | 7518.00    | 11.12       | 176.43           | 7481.34     | -0.93        | -0.51      | -549.36    | 15.49            | 418604.87          | 574137.16         | N 32 9 2.80              | W 104 13 38.46            | 269.95                 | 549.36          |
|                  | 7549.00    | 15.72       | 175.96           | 7511.48     | 6.24         | -7.69      | -548.87    | 14.84            | 418597.69          | 574137.65         | N 32 9 2.73              | W 104 13 38.45            | 269.20                 | 548.93          |
|                  | 7581.00    | 19.70       | 175.07           | 7541.96     | 15.95        | -17.39     | -548.10    | 12.47            | 418587.99          | 574138.42         | N 32 9 2.64              | W 104 13 38.45            | 268.18                 | 548.38          |
|                  | 7629.00    | 24.02       | 176.58           | 7586.50     | 33.77        | -35.21     | -546.83    | 9.08             | 418570.17          | 574139.69         | N 32 9 2.46              | W 104 13 38.43            | 266.32                 | 547.96          |
|                  | 7676.00    | 27.96       | 181.04           | 7628.74     | 54.35        | -55.79     | -546.46    | 9.35             | 418549.60          | 574140.06         | N 32 9 2.26              | W 104 13 38.43            | 264.17                 | 549.30          |
|                  | 7723.00    | 32.71       | 179.11           | 7669.30     | 78.08        | -79.52     | -546.46    | 10.32            | 418525.87          | 574140.06         | N 32 9 2.02              | W 104 13 38.43            | 261.72                 | 552.21          |

| Comments                               | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") | Closure Azimuth<br>(°) | Closure<br>(ft) |
|----------------------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|------------------------|-----------------|
|                                        | 7771.00    | 38.26       | 177.51           | 7708.37     | 105.92       | -107.35    | -545.61    | 11.72            | 418498.04          | 574140.91         | N 32 9 1.75             | W 104 13 38.42           | 258.87                 | 556.07          |
|                                        | 7818.00    | 44.37       | 176.85           | 7743.65     | 136.90       | -138.33    | -544.07    | 13.03            | 418467.06          | 574142.45         | N 32 9 1.44             | W 104 13 38.40           | 255.73                 | 561.38          |
|                                        | 7865.00    | 50.33       | 179.19           | 7775.48     | 171.43       | -172.86    | -542.91    | 13.20            | 418432.54          | 574143.61         | N 32 9 1.10             | W 104 13 38.39           | 252.34                 | 569.77          |
|                                        | 7912.00    | 57.34       | 180.94           | 7803.20     | 209.34       | -210.78    | -542.98    | 15.21            | 418394.62          | 574143.54         | N 32 9 0.72             | W 104 13 38.39           | 248.78                 | 582.46          |
|                                        | 7959.00    | 63.08       | 181.86           | 7826.54     | 250.10       | -251.54    | -543.99    | 12.33            | 418353.87          | 574142.53         | N 32 9 0.32             | W 104 13 38.40           | 245.18                 | 599.33          |
|                                        | 8006.00    | 68.35       | 183.03           | 7845.87     | 292.88       | -294.32    | -545.82    | 11.44            | 418311.09          | 574140.70         | N 32 8 59.90            | W 104 13 38.42           | 241.67                 | 620.12          |
|                                        | 8053.00    | 72.98       | 182.24           | 7861.42     | 337.17       | -338.61    | -547.86    | 9.98             | 418266.80          | 574138.66         | N 32 8 59.46            | W 104 13 38.45           | 238.28                 | 644.05          |
|                                        | 8100.00    | 75.58       | 179.81           | 7874.16     | 382.39       | -383.84    | -548.66    | 7.44             | 418221.58          | 574137.86         | N 32 8 59.01            | W 104 13 38.46           | 235.02                 | 669.60          |
|                                        | 8148.00    | 75.19       | 179.19           | 7886.27     | 428.84       | -430.28    | -548.26    | 1.49             | 418175.14          | 574138.26         | N 32 8 58.55            | W 104 13 38.45           | 231.87                 | 696.94          |
|                                        | 8195.00    | 75.33       | 178.95           | 7898.23     | 474.29       | -475.73    | -547.52    | 0.58             | 418129.69          | 574139.00         | N 32 8 58.10            | W 104 13 38.44           | 229.01                 | 725.32          |
|                                        | 8242.00    | 80.33       | 179.22           | 7908.13     | 520.21       | -521.65    | -546.79    | 10.65            | 418083.77          | 574139.73         | N 32 8 57.65            | W 104 13 38.44           | 226.35                 | 755.71          |
|                                        | 8289.00    | 86.03       | 180.01           | 7913.71     | 566.86       | -568.30    | -546.47    | 12.24            | 418037.13          | 574140.05         | N 32 8 57.19            | W 104 13 38.43           | 223.88                 | 788.42          |
|                                        | 8337.00    | 90.64       | 180.17           | 7915.11     | 614.82       | -616.27    | -546.55    | 9.61             | 417989.17          | 574139.97         | N 32 8 56.71            | W 104 13 38.43           | 221.57                 | 823.71          |
|                                        | 8408.00    | 91.14       | 180.15           | 7914.00     | 685.81       | -687.26    | -546.75    | 0.70             | 417918.19          | 574139.77         | N 32 8 56.01            | W 104 13 38.44           | 218.50                 | 878.21          |
|                                        | 8502.00    | 90.69       | 180.29           | 7912.50     | 779.80       | -781.24    | -547.11    | 0.50             | 417824.21          | 574139.41         | N 32 8 55.08            | W 104 13 38.44           | 215.00                 | 953.77          |
|                                        | 8597.00    | 90.39       | 180.87           | 7911.61     | 874.79       | -876.24    | -548.07    | 0.69             | 417729.22          | 574138.45         | N 32 8 54.14            | W 104 13 38.46           | 212.03                 | 1033.52         |
|                                        | 8691.00    | 89.51       | 181.72           | 7911.69     | 968.76       | -970.21    | -550.20    | 1.30             | 417635.26          | 574136.33         | N 32 8 53.21            | W 104 13 38.48           | 209.56                 | 1115.36         |
|                                        | 8786.00    | 89.13       | 182.07           | 7912.82     | 1063.69      | -1065.15   | -553.34    | 0.54             | 417540.33          | 574133.18         | N 32 8 52.27            | W 104 13 38.52           | 207.45                 | 1200.30         |
|                                        | 8880.00    | 88.44       | 182.27           | 7914.81     | 1157.59      | -1159.06   | -556.89    | 0.76             | 417446.42          | 574129.63         | N 32 8 51.34            | W 104 13 38.56           | 205.66                 | 1285.91         |
|                                        | 8975.00    | 88.12       | 183.21           | 7917.66     | 1252.42      | -1253.91   | -561.43    | 1.04             | 417351.59          | 574125.09         | N 32 8 50.40            | W 104 13 38.62           | 204.12                 | 1373.86         |
|                                        | 9071.00    | 88.45       | 182.43           | 7920.54     | 1348.25      | -1349.75   | -566.15    | 0.88             | 417255.75          | 574120.37         | N 32 8 49.45            | W 104 13 38.67           | 202.76                 | 1463.68         |
|                                        | 9165.00    | 88.51       | 180.82           | 7923.03     | 1442.17      | -1443.67   | -568.82    | 1.71             | 417161.84          | 574117.70         | N 32 8 48.52            | W 104 13 38.70           | 201.50                 | 1551.69         |
|                                        | 9259.00    | 88.64       | 179.83           | 7925.37     | 1536.14      | -1537.64   | -569.35    | 1.06             | 417067.88          | 574117.17         | N 32 8 47.59            | W 104 13 38.71           | 200.32                 | 1639.67         |
|                                        | 9353.00    | 88.46       | 179.64           | 7927.75     | 1630.11      | -1631.61   | -568.92    | 0.28             | 416973.92          | 574117.60         | N 32 8 46.66            | W 104 13 38.71           | 199.22                 | 1727.95         |
|                                        | 9447.00    | 88.40       | 179.65           | 7930.32     | 1724.07      | -1725.57   | -568.34    | 0.06             | 416879.96          | 574118.19         | N 32 8 45.73            | W 104 13 38.70           | 198.23                 | 1816.76         |
|                                        | 9542.00    | 88.40       | 178.45           | 7932.97     | 1819.02      | -1820.52   | -566.76    | 1.26             | 416785.02          | 574119.76         | N 32 8 44.79            | W 104 13 38.68           | 197.29                 | 1906.70         |
|                                        | 9636.00    | 88.44       | 178.24           | 7935.57     | 1912.95      | -1914.45   | -564.05    | 0.23             | 416691.11          | 574122.47         | N 32 8 43.87            | W 104 13 38.65           | 196.42                 | 1995.81         |
|                                        | 9730.00    | 88.47       | 179.45           | 7938.10     | 2006.90      | -2008.39   | -562.15    | 1.29             | 416597.17          | 574124.37         | N 32 8 42.94            | W 104 13 38.63           | 195.64                 | 2085.58         |
|                                        | 9824.00    | 88.80       | 179.51           | 7940.34     | 2100.88      | -2102.36   | -561.30    | 0.36             | 416503.21          | 574125.22         | N 32 8 42.01            | W 104 13 38.62           | 194.95                 | 2176.00         |
|                                        | 9919.00    | 88.49       | 179.14           | 7942.59     | 2195.84      | -2197.33   | -560.18    | 0.51             | 416408.25          | 574126.34         | N 32 8 41.07            | W 104 13 38.61           | 194.30                 | 2267.61         |
|                                        | 10013.00   | 88.72       | 179.01           | 7944.87     | 2289.81      | -2291.29   | -558.66    | 0.28             | 416314.30          | 574127.86         | N 32 8 40.14            | W 104 13 38.59           | 193.70                 | 2358.41         |
|                                        | 10107.00   | 88.54       | 179.15           | 7947.12     | 2383.77      | -2385.25   | -557.16    | 0.24             | 416220.35          | 574129.37         | N 32 8 39.21            | W 104 13 38.58           | 193.15                 | 2449.46         |
|                                        | 10202.00   | 88.07       | 178.82           | 7949.93     | 2478.72      | -2480.19   | -555.47    | 0.60             | 416125.41          | 574131.05         | N 32 8 38.27            | W 104 13 38.56           | 192.62                 | 2541.63         |
|                                        | 10297.00   | 89.30       | 176.91           | 7952.11     | 2573.63      | -2575.10   | -551.94    | 2.39             | 416030.52          | 574134.59         | N 32 8 37.33            | W 104 13 38.52           | 192.10                 | 2633.58         |
|                                        | 10392.00   | 90.32       | 175.87           | 7952.43     | 2668.46      | -2669.90   | -545.95    | 1.53             | 415935.72          | 574140.57         | N 32 8 36.39            | W 104 13 38.45           | 191.56                 | 2725.15         |
|                                        | 10486.00   | 90.17       | 176.84           | 7952.02     | 2762.28      | -2763.71   | -539.98    | 1.04             | 415841.92          | 574146.54         | N 32 8 35.46            | W 104 13 38.38           | 191.06                 | 2815.97         |
|                                        | 10580.00   | 90.94       | 178.32           | 7951.11     | 2856.20      | -2857.62   | -536.01    | 1.77             | 415748.02          | 574150.51         | N 32 8 34.53            | W 104 13 38.34           | 190.62                 | 2907.46         |
|                                        | 10674.00   | 91.09       | 180.29           | 7949.45     | 2950.17      | -2951.59   | -534.87    | 2.10             | 415654.06          | 574151.65         | N 32 8 33.60            | W 104 13 38.33           | 190.27                 | 2999.67         |
|                                        | 10768.00   | 90.11       | 180.91           | 7948.46     | 3044.16      | -3045.58   | -535.85    | 1.23             | 415560.08          | 574150.67         | N 32 8 32.67            | W 104 13 38.34           | 189.98                 | 3092.36         |
|                                        | 10863.00   | 92.62       | 181.31           | 7946.20     | 3139.10      | -3140.53   | -537.69    | 2.68             | 415465.14          | 574148.83         | N 32 8 31.73            | W 104 13 38.36           | 189.72                 | 3186.23         |
|                                        | 10957.00   | 91.31       | 182.02           | 7942.98     | 3233.00      | -3234.43   | -540.42    | 1.58             | 415371.24          | 574146.10         | N 32 8 30.80            | W 104 13 38.39           | 189.49                 | 3279.27         |
|                                        | 11051.00   | 91.60       | 182.26           | 7940.59     | 3326.89      | -3328.34   | -543.93    | 0.40             | 415277.35          | 574142.59         | N 32 8 29.87            | W 104 13 38.44           | 189.28                 | 3372.49         |
|                                        | 11146.00   | 91.25       | 180.84           | 7938.23     | 3421.82      | -3423.27   | -546.50    | 1.54             | 415182.42          | 574140.02         | N 32 8 28.93            | W 104 13 38.47           | 189.07                 | 3466.62         |
|                                        | 11240.00   | 91.09       | 180.25           | 7936.31     | 3515.79      | -3517.24   | -547.39    | 0.65             | 415088.46          | 574139.13         | N 32 8 28.00            | W 104 13 38.48           | 188.85                 | 3559.59         |
|                                        | 11334.00   | 90.78       | 180.08           | 7934.78     | 3609.78      | -3611.23   | -547.66    | 0.38             | 414994.48          | 574138.86         | N 32 8 27.07            | W 104 13 38.48           | 188.62                 | 3652.52         |
|                                        | 11427.00   | 90.95       | 179.92           | 7933.37     | 3702.76      | -3704.22   | -547.66    | 0.25             | 414901.50          | 574138.86         | N 32 8 26.15            | W 104 13 38.48           | 188.41                 | 3744.49         |
|                                        | 11521.00   | 90.96       | 180.06           | 7931.81     | 3796.75      | -3798.21   | -547.65    | 0.15             | 414807.52          | 574138.87         | N 32 8 25.22            | W 104 13 38.48           | 188.20                 | 3837.49         |
|                                        | 11615.00   | 90.21       | 180.07           | 7930.85     | 3890.75      | -3892.20   | -547.75    | 0.80             | 414713.53          | 574138.77         | N 32 8 24.29            | W 104 13 38.49           | 188.01                 | 3930.56         |
|                                        | 11709.00   | 90.22       | 180.13           | 7930.49     | 3984.74      | -3986.20   | -547.92    | 0.06             | 414619.54          | 574138.60         | N 32 8 23.36            | W 104 13 38.49           | 187.83                 | 4023.68         |
|                                        | 11803.00   | 90.29       | 179.90           | 7930.07     | 4078.74      | -4080.20   | -547.94    | 0.26             | 414525.55          | 574138.58         | N 32 8 22.43            | W 104 13 38.49           | 187.65                 | 4116.83         |
|                                        | 11897.00   | 90.20       | 179.52           | 7929.67     | 4172.74      | -4174.20   | -547.47    | 0.42             | 414431.56          | 574139.05         | N 32 8 21.50            | W 104 13 38.49           | 187.47                 | 4209.95         |
|                                        | 11991.00   | 90.27       | 179.72           | 7929.29     | 4266.74      | -4268.20   | -546.84    | 0.23             | 414337.58          | 574139.68         | N 32 8 20.57            | W 104 13 38.48           | 187.30                 | 4303.08         |
|                                        | 12085.00   | 90.29       | 180.02           | 7928.83     | 4360.74      | -4362.19   | -546.63    | 0.32             | 414243.59          | 574139.89         | N 32 8 19.64            | W 104 13 38.48           | 187.14                 | 4396.31         |
|                                        | 12179.00   | 90.40       | 179.96           | 7928.26     | 4454.74      | -4456.19   | -546.61    | 0.13             | 414149.60          | 574139.91         | N 32 8 18.71            | W 104 13 38.48           | 186.99                 | 4489.59         |
|                                        | 12273.00   | 90.42       | 179.82           | 7927.59     | 4548.73      | -4550.19   | -546.43    | 0.15             | 414055.61          | 574140.09         | N 32 8 17.78            | W 104 13 38.48           | 186.85                 | 4582.88         |
|                                        | 12367.00   | 90.20       | 180.02           | 7927.08     | 4642.73      | -4644.19   | -546.30    | 0.32             | 413961.62          | 574140.22         | N 32 8 16.85            | W 104 13 38.48           | 186.71                 | 4676.21         |
|                                        | 12461.00   | 89.78       | 180.35           | 7927.10     | 4736.73      | -4738.19   | -546.61    | 0.57             | 413867.63          | 574139.91         | N 32 8 15.92            | W 104 13 38.48           | 186.58                 | 4769.61         |
|                                        | 12555.00   | 89.92       | 180.06           | 7927.34     | 4830.73      | -4832.19   | -546.94    | 0.34             | 413773.64          | 574139.58         | N 32 8 14.99            | W 104 13 38.49           | 186.46                 | 4863.04         |
| Section Line<br>Crossing [1997<br>FEL] | 12636.10   | 89.92       | 179.97           | 7927.46     | 4911.83      | -4913.29   | -546.96    | 0.12             | 413692.54          | 574139.56         | N 32 8 14.19            | W 104 13 38.49           | 186.35                 | 4943.64         |
|                                        | 12650.00   | 89.92       | 179.95           | 7927.48     | 4925.73      | -4927.19   | -546.95    | 0.12             | 413678.65          | 574139.57         | N 32 8 14.05            | W 104 13 38.49           | 186.33                 | 4957.45         |

| Comments                                         | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' '') | Longitude<br>(E/W ° ' '') | Closure Azimuth<br>(°) | Closure<br>(ft) |
|--------------------------------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|--------------------------|---------------------------|------------------------|-----------------|
|                                                  | 12744.00   | 89.25       | 180.65           | 7928.16     | 5019.72      | -5021.18   | -547.44    | 1.03             | 413584.66          | 574139.08         | N 32 8 13.12             | W 104 13 38.50            | 186.22                 | 5050.94         |
|                                                  | 12837.00   | 89.63       | 180.17           | 7929.07     | 5112.71      | -5114.17   | -548.11    | 0.66             | 413491.67          | 574138.41         | N 32 8 12.20             | W 104 13 38.50            | 186.12                 | 5143.46         |
|                                                  | 12931.00   | 89.44       | 179.00           | 7929.83     | 5206.71      | -5208.17   | -547.43    | 1.26             | 413397.69          | 574139.09         | N 32 8 11.27             | W 104 13 38.50            | 186.00                 | 5236.86         |
|                                                  | 13025.00   | 89.76       | 178.90           | 7930.48     | 5300.69      | -5302.15   | -545.71    | 0.36             | 413303.72          | 574140.81         | N 32 8 10.34             | W 104 13 38.48            | 185.88                 | 5330.16         |
|                                                  | 13120.00   | 89.43       | 178.63           | 7931.16     | 5395.67      | -5397.12   | -543.66    | 0.45             | 413208.75          | 574142.86         | N 32 8 9.40              | W 104 13 38.46            | 185.75                 | 5424.44         |
|                                                  | 13214.00   | 89.67       | 179.10           | 7931.89     | 5489.66      | -5491.10   | -541.80    | 0.56             | 413114.78          | 574144.72         | N 32 8 8.47              | W 104 13 38.44            | 185.64                 | 5517.77         |
|                                                  | 13308.00   | 89.50       | 178.37           | 7932.58     | 5583.63      | -5585.08   | -539.72    | 0.80             | 413020.82          | 574146.80         | N 32 8 7.54              | W 104 13 38.41            | 185.52                 | 5611.09         |
|                                                  | 13402.00   | 89.44       | 178.15           | 7933.44     | 5677.59      | -5679.03   | -536.87    | 0.24             | 412926.87          | 574149.65         | N 32 8 6.61              | W 104 13 38.38            | 185.40                 | 5704.35         |
|                                                  | 13497.00   | 89.06       | 178.43           | 7934.69     | 5772.55      | -5773.98   | -534.03    | 0.50             | 412831.93          | 574152.49         | N 32 8 5.67              | W 104 13 38.35            | 185.28                 | 5798.62         |
|                                                  | 13591.00   | 90.13       | 178.53           | 7935.35     | 5866.52      | -5867.94   | -531.54    | 1.14             | 412737.98          | 574154.98         | N 32 8 4.74              | W 104 13 38.32            | 185.18                 | 5891.97         |
|                                                  | 13685.00   | 92.22       | 178.88           | 7933.43     | 5960.48      | -5961.89   | -529.41    | 2.25             | 412644.03          | 574157.10         | N 32 8 3.81              | W 104 13 38.30            | 185.07                 | 5985.35         |
|                                                  | 13780.00   | 91.81       | 178.37           | 7930.08     | 6055.40      | -6056.81   | -527.14    | 0.69             | 412549.13          | 574159.38         | N 32 8 2.88              | W 104 13 38.27            | 184.97                 | 6079.70         |
|                                                  | 13875.00   | 92.35       | 178.84           | 7926.64     | 6150.31      | -6151.71   | -524.83    | 0.75             | 412454.23          | 574161.69         | N 32 8 1.94              | W 104 13 38.25            | 184.88                 | 6174.06         |
|                                                  | 13969.00   | 91.60       | 179.00           | 7923.40     | 6244.24      | -6245.64   | -523.05    | 0.82             | 412360.31          | 574163.46         | N 32 8 1.01              | W 104 13 38.23            | 184.79                 | 6267.50         |
|                                                  | 14063.00   | 90.66       | 178.92           | 7921.54     | 6338.21      | -6339.61   | -521.35    | 1.00             | 412266.35          | 574165.17         | N 32 8 0.08              | W 104 13 38.21            | 184.70                 | 6361.01         |
|                                                  | 14157.00   | 89.81       | 180.13           | 7921.16     | 6432.21      | -6433.60   | -520.57    | 1.57             | 412172.37          | 574165.95         | N 32 7 59.15             | W 104 13 38.20            | 184.63                 | 6454.63         |
|                                                  | 14251.00   | 89.86       | 181.28           | 7921.43     | 6526.19      | -6527.59   | -521.73    | 1.22             | 412078.39          | 574164.79         | N 32 7 58.22             | W 104 13 38.21            | 184.57                 | 6548.41         |
|                                                  | 14346.00   | 89.86       | 181.55           | 7921.66     | 6621.16      | -6622.56   | -524.07    | 0.28             | 411983.43          | 574162.45         | N 32 7 57.28             | W 104 13 38.24            | 184.52                 | 6643.26         |
|                                                  | 14440.00   | 89.64       | 181.35           | 7922.07     | 6715.12      | -6716.53   | -526.45    | 0.32             | 411889.47          | 574160.07         | N 32 7 56.35             | W 104 13 38.27            | 184.48                 | 6737.13         |
|                                                  | 14534.00   | 90.71       | 181.06           | 7921.78     | 6809.09      | -6810.51   | -528.43    | 1.18             | 411795.50          | 574158.09         | N 32 7 55.42             | W 104 13 38.29            | 184.44                 | 6830.98         |
|                                                  | 14628.00   | 91.95       | 181.17           | 7919.60     | 6903.04      | -6904.46   | -530.26    | 1.32             | 411701.55          | 574156.26         | N 32 7 54.49             | W 104 13 38.32            | 184.39                 | 6924.79         |
|                                                  | 14722.00   | 91.75       | 181.44           | 7916.57     | 6996.96      | -6998.39   | -532.40    | 0.36             | 411607.63          | 574154.12         | N 32 7 53.56             | W 104 13 38.34            | 184.35                 | 7018.61         |
|                                                  | 14816.00   | 91.74       | 180.89           | 7913.71     | 7090.89      | -7092.33   | -534.31    | 0.58             | 411513.70          | 574152.21         | N 32 7 52.63             | W 104 13 38.37            | 184.31                 | 7112.42         |
|                                                  | 14910.00   | 91.19       | 181.05           | 7911.30     | 7184.84      | -7186.28   | -535.90    | 0.61             | 411419.76          | 574150.62         | N 32 7 51.70             | W 104 13 38.39            | 184.26                 | 7206.23         |
|                                                  | 15004.00   | 90.89       | 181.06           | 7909.60     | 7278.81      | -7280.25   | -537.63    | 0.32             | 411325.80          | 574148.89         | N 32 7 50.77             | W 104 13 38.41            | 184.22                 | 7300.07         |
|                                                  | 15098.00   | 90.23       | 181.34           | 7908.68     | 7372.78      | -7374.22   | -539.60    | 0.76             | 411231.83          | 574146.92         | N 32 7 49.84             | W 104 13 38.43            | 184.19                 | 7393.94         |
|                                                  | 15193.00   | 90.10       | 181.11           | 7908.40     | 7467.75      | -7469.20   | -541.63    | 0.28             | 411136.86          | 574144.89         | N 32 7 48.90             | W 104 13 38.46            | 184.15                 | 7488.81         |
|                                                  | 15288.00   | 90.39       | 179.74           | 7908.00     | 7562.74      | -7564.20   | -542.33    | 1.47             | 411041.88          | 574144.19         | N 32 7 47.96             | W 104 13 38.47            | 184.10                 | 7583.61         |
|                                                  | 15382.00   | 89.79       | 179.24           | 7907.85     | 7656.74      | -7658.19   | -541.49    | 0.83             | 410947.89          | 574145.02         | N 32 7 47.03             | W 104 13 38.46            | 184.04                 | 7677.31         |
|                                                  | 15477.00   | 90.07       | 179.10           | 7907.97     | 7751.73      | -7753.18   | -540.12    | 0.33             | 410852.91          | 574146.40         | N 32 7 46.09             | W 104 13 38.44            | 183.99                 | 7771.97         |
|                                                  | 15571.00   | 90.19       | 178.83           | 7907.75     | 7845.72      | -7847.17   | -538.42    | 0.31             | 410758.93          | 574148.10         | N 32 7 45.16             | W 104 13 38.42            | 183.93                 | 7865.61         |
|                                                  | 15665.00   | 90.56       | 178.54           | 7907.14     | 7939.70      | -7941.14   | -536.26    | 0.50             | 410664.97          | 574150.26         | N 32 7 44.23             | W 104 13 38.40            | 183.86                 | 7959.22         |
|                                                  | 15760.00   | 90.23       | 178.49           | 7906.48     | 8034.67      | -8036.10   | -533.80    | 0.35             | 410570.01          | 574152.72         | N 32 7 43.29             | W 104 13 38.37            | 183.80                 | 8053.81         |
|                                                  | 15854.00   | 90.30       | 178.50           | 7906.05     | 8128.64      | -8130.07   | -531.33    | 0.08             | 410476.05          | 574155.19         | N 32 7 42.36             | W 104 13 38.34            | 183.74                 | 8147.41         |
|                                                  | 15948.00   | 90.34       | 178.59           | 7905.52     | 8222.62      | -8224.04   | -528.95    | 0.10             | 410382.10          | 574157.57         | N 32 7 41.43             | W 104 13 38.32            | 183.68                 | 8241.03         |
|                                                  | 16042.00   | 90.07       | 178.79           | 7905.19     | 8316.60      | -8318.01   | -526.80    | 0.36             | 410288.13          | 574159.72         | N 32 7 40.50             | W 104 13 38.29            | 183.62                 | 8334.68         |
|                                                  | 16136.00   | 90.02       | 178.74           | 7905.11     | 8410.58      | -8411.99   | -524.77    | 0.08             | 410194.16          | 574161.75         | N 32 7 39.57             | W 104 13 38.27            | 183.57                 | 8428.34         |
|                                                  | 16231.00   | 90.07       | 178.92           | 7905.04     | 8505.56      | -8506.97   | -522.83    | 0.20             | 410099.19          | 574163.69         | N 32 7 38.63             | W 104 13 38.25            | 183.52                 | 8523.02         |
|                                                  | 16326.00   | 90.53       | 178.65           | 7904.54     | 8600.55      | -8601.95   | -520.82    | 0.56             | 410004.22          | 574165.70         | N 32 7 37.69             | W 104 13 38.23            | 183.46                 | 8617.70         |
|                                                  | 16420.00   | 90.11       | 178.55           | 7904.02     | 8694.52      | -8695.92   | -518.52    | 0.46             | 409910.26          | 574168.00         | N 32 7 36.76             | W 104 13 38.20            | 183.41                 | 8711.36         |
|                                                  | 16514.00   | 89.77       | 179.42           | 7904.11     | 8788.51      | -8789.90   | -516.86    | 0.99             | 409816.28          | 574169.66         | N 32 7 35.83             | W 104 13 38.18            | 183.37                 | 8805.09         |
|                                                  | 16608.00   | 90.24       | 180.45           | 7904.11     | 8882.51      | -8883.90   | -516.75    | 1.20             | 409722.29          | 574169.77         | N 32 7 34.90             | W 104 13 38.18            | 183.33                 | 8898.92         |
|                                                  | 16702.00   | 90.78       | 180.86           | 7903.27     | 8976.50      | -8977.89   | -517.82    | 0.72             | 409628.31          | 574168.69         | N 32 7 33.97             | W 104 13 38.20            | 183.30                 | 8992.81         |
|                                                  | 16797.00   | 90.12       | 180.95           | 7902.52     | 9071.48      | -9072.88   | -519.32    | 0.70             | 409533.34          | 574167.19         | N 32 7 33.03             | W 104 13 38.21            | 183.28                 | 9087.73         |
|                                                  | 16891.00   | 89.81       | 181.20           | 7902.58     | 9165.45      | -9166.86   | -521.09    | 0.42             | 409439.36          | 574165.43         | N 32 7 32.10             | W 104 13 38.24            | 183.25                 | 9181.66         |
|                                                  | 16985.00   | 89.81       | 180.84           | 7902.89     | 9259.43      | -9260.84   | -522.76    | 0.38             | 409345.39          | 574163.76         | N 32 7 31.17             | W 104 13 38.26            | 183.23                 | 9275.59         |
|                                                  | 17080.00   | 89.60       | 181.29           | 7903.38     | 9354.41      | -9355.83   | -524.53    | 0.52             | 409250.41          | 574161.99         | N 32 7 30.23             | W 104 13 38.28            | 183.21                 | 9370.52         |
|                                                  | 17175.00   | 89.44       | 180.81           | 7904.18     | 9449.39      | -9450.81   | -526.27    | 0.53             | 409155.44          | 574160.25         | N 32 7 29.29             | W 104 13 38.30            | 183.19                 | 9465.45         |
|                                                  | 17269.00   | 89.60       | 180.75           | 7904.96     | 9543.37      | -9544.79   | -527.55    | 0.18             | 409061.46          | 574158.97         | N 32 7 28.36             | W 104 13 38.32            | 183.16                 | 9559.36         |
|                                                  | 17363.00   | 89.72       | 181.47           | 7905.52     | 9637.35      | -9638.77   | -529.37    | 0.78             | 408967.49          | 574157.15         | N 32 7 27.43             | W 104 13 38.34            | 183.14                 | 9653.30         |
|                                                  | 17457.00   | 90.01       | 181.44           | 7905.74     | 9731.31      | -9732.74   | -531.75    | 0.31             | 408873.53          | 574154.76         | N 32 7 26.50             | W 104 13 38.37            | 183.13                 | 9747.26         |
|                                                  | 17551.00   | 89.56       | 181.04           | 7906.10     | 9825.28      | -9826.72   | -533.79    | 0.64             | 408779.56          | 574152.73         | N 32 7 25.57             | W 104 13 38.39            | 183.11                 | 9841.21         |
|                                                  | 17645.00   | 90.03       | 181.17           | 7906.43     | 9919.26      | -9920.70   | -535.60    | 0.52             | 408685.59          | 574150.92         | N 32 7 24.64             | W 104 13 38.41            | 183.09                 | 9935.15         |
|                                                  | 17740.00   | 90.07       | 181.65           | 7906.35     | 10014.22     | -10015.67  | -537.94    | 0.51             | 408590.63          | 574148.58         | N 32 7 23.70             | W 104 13 38.44            | 183.07                 | 10030.11        |
|                                                  | 17807.00   | 89.66       | 181.41           | 7906.51     | 10081.19     | -10082.65  | -539.73    | 0.71             | 408523.66          | 574146.79         | N 32 7 23.04             | W 104 13 38.46            | 183.06                 | 10097.08        |
| Final Survey<br>TD, PTB [100'<br>FSL, 1996' FEL] | 17841.00   | 89.99       | 181.41           | 7906.61     | 10115.18     | -10116.64  | -540.56    | 0.97             | 408489.67          | 574145.96         | N 32 7 22.70             | W 104 13 38.47            | 183.06                 | 10131.07        |

Survey Type: Def Survey

| Comments | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") | Closure Azimuth<br>(°) | Closure<br>(ft) |
|----------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|------------------------|-----------------|
|----------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|------------------------|-----------------|

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

| Description | Part | MD From<br>(ft) | MD To<br>(ft) | EOU Freq<br>(ft) | Hole Size<br>(in) | Casing Diameter<br>(in) | Survey Tool Type           | Borehole / Survey                                                                                      |
|-------------|------|-----------------|---------------|------------------|-------------------|-------------------------|----------------------------|--------------------------------------------------------------------------------------------------------|
|             | 1    | 0.000           | 23.000        | 1/98.425         | 17.500            | 13.375                  | NAL_MWD_IFR1+MS-Depth Only | Original Borehole / Final Surveys -<br>Cimarex DaVinci 7-18 Federal Com<br>#30H 0ft to 17841ft (Surcon |
|             | 1    | 23.000          | 23.000        | Act Stns         | 17.500            | 13.375                  | NAL_MWD_IFR1+MS-Depth Only | Original Borehole / Final Surveys -<br>Cimarex DaVinci 7-18 Federal Com<br>#30H 0ft to 17841ft (Surcon |
|             | 1    | 23.000          | 449.000       | Act Stns         | 17.500            | 13.375                  | NAL_MWD_IFR1+MS            | Original Borehole / Final Surveys -<br>Cimarex DaVinci 7-18 Federal Com                                |
|             | 1    | 449.000         | 2060.000      | Act Stns         | 12.250            | 9.625                   | NAL_MWD_IFR1+MS            | Original Borehole / Final Surveys -<br>Cimarex DaVinci 7-18 Federal Com                                |
|             | 1    | 2060.000        | 8398.000      | Act Stns         | 8.750             | 7.000                   | NAL_MWD_IFR1+MS            | Original Borehole / Final Surveys -<br>Cimarex DaVinci 7-18 Federal Com                                |
|             | 1    | 8398.000        | 17841.000     | Act Stns         | 8.500             | 7.000                   | NAL_MWD_IFR1+MS            | Original Borehole / Final Surveys -<br>Cimarex DaVinci 7-18 Federal Com                                |





|                               |  |           |  |                                       |  |             |  |                         |  |                            |  |                                                     |  |                |  |                                                                                         |  |
|-------------------------------|--|-----------|--|---------------------------------------|--|-------------|--|-------------------------|--|----------------------------|--|-----------------------------------------------------|--|----------------|--|-----------------------------------------------------------------------------------------|--|
| Borehole:                     |  |           |  | Well:                                 |  |             |  | Field:                  |  |                            |  | Structure:                                          |  |                |  |                                                                                         |  |
| Original Borehole             |  |           |  | Cimarex DaVinci 7-18 Federal Com #30H |  |             |  | NM Eddy County (NAD 83) |  |                            |  | Cimarex DaVinci 7-18 Federal Com #30H               |  |                |  |                                                                                         |  |
| Gravity & Magnetic Parameters |  |           |  |                                       |  |             |  | Surface Location        |  |                            |  | Miscellaneous                                       |  |                |  |                                                                                         |  |
| Model:                        |  | HDGM 2019 |  | Dip:                                  |  | 59.777°     |  | Date:                   |  | 23-Jan-2020                |  | NAD83 New Mexico State Plane, Eastern Zone, US Feet |  | Slot:          |  | Cimarex DaVinci 7-18                                                                    |  |
| MagDec:                       |  | 7.199°    |  | FS:                                   |  | 47743.694nT |  | Gravity FS:             |  | 998.435mgn (9.80665 Based) |  | Lat:                                                |  | N 32 9 2.80    |  | Northing:                                                                               |  |
|                               |  |           |  |                                       |  |             |  |                         |  |                            |  | Lon:                                                |  | W 104 13 32.07 |  | Easting:                                                                                |  |
|                               |  |           |  |                                       |  |             |  |                         |  |                            |  | Grid Conv:                                          |  | 0.0573°        |  | TVD Ref:                                                                                |  |
|                               |  |           |  |                                       |  |             |  |                         |  |                            |  | Scale Fact:                                         |  | 0.99991036     |  | RKB(3331.4ft above MSL)                                                                 |  |
|                               |  |           |  |                                       |  |             |  |                         |  |                            |  |                                                     |  |                |  | Plan:                                                                                   |  |
|                               |  |           |  |                                       |  |             |  |                         |  |                            |  |                                                     |  |                |  | Final Surveys - Cimarex DaVinci 7-18 Federal Com #30H 0ft to 17841ft (Surcon Corrected) |  |

| Critical Points                   |          |       |        |         |          |           |           |      |
|-----------------------------------|----------|-------|--------|---------|----------|-----------|-----------|------|
| Critical Point                    | MD       | INCL  | AZIM   | TVD     | VSEC     | N(+)/S(-) | E(+)/W(-) | DLS  |
| SHL [390' FNL, 1430' FEL]         | 0.00     | 0.00  | 0.00   | 0.00    | 0.00     | 0.00      | 0.00      |      |
| First SLB Survey                  | 7391.00  | 0.42  | 237.62 | 7354.80 | -8.53    | 7.08      | -549.12   | 0.38 |
| KOP                               | 7455.00  | 1.85  | 191.64 | 7418.79 | -7.89    | 6.44      | -549.55   | 5.27 |
| Section Line Crossing [1997' FEL] | 12636.10 | 89.92 | 179.97 | 7927.46 | 4911.83  | -4913.29  | -546.96   | 0.12 |
| Final Survey                      | 17807.00 | 89.66 | 181.41 | 7906.51 | 10081.19 | -10082.65 | -539.73   | 0.71 |
| TD, PTB [100' FSL, 1996' FEL]     | 17841.00 | 89.99 | 181.41 | 7906.61 | 10115.18 | -10116.64 | -540.56   | 0.97 |

