

Schlumberger Drilling and Measurements  
Drilling Group  
Geo Market Area: South West Texas Basin  
7220 W I-H 20  
Midland, Texas 79706  
Phone : (432) 742-5400 (Main)  
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NM OIL CONSERVATION  
ARTESIA DISTRICT

Schlumberger

SEP 25 2018

RECEIVED

30-015-44632

Well Reference:

1, 25S, 29E, Eddy NM  
32.16550 103.94160

I, Mahmood Al Sabti certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of April 05, 2018 through April 14, 2018, conduct or supervise the taking of the SlimPulse surveys from a depth of 600.00 feet to a depth of 20849.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of OXY USA, INC for the Corral Canyon 36-25 Federal Com 22H Well (Original Hole) API No. 30-015-44632 in New Mexico; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

By M. S. [Signature]  
Mahmood Al Sabti  
FE

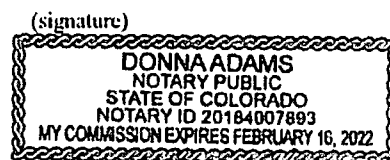
Subscribed and Sworn to before me this 2<sup>nd</sup> day of May (month) 2018 (yr)

My Commission expires:

2-16-2022

D. Adams  
Notary Public

Adams County Colorado  
(County State)



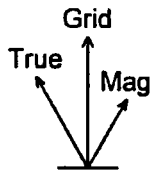
**Schlumberger**

OXY

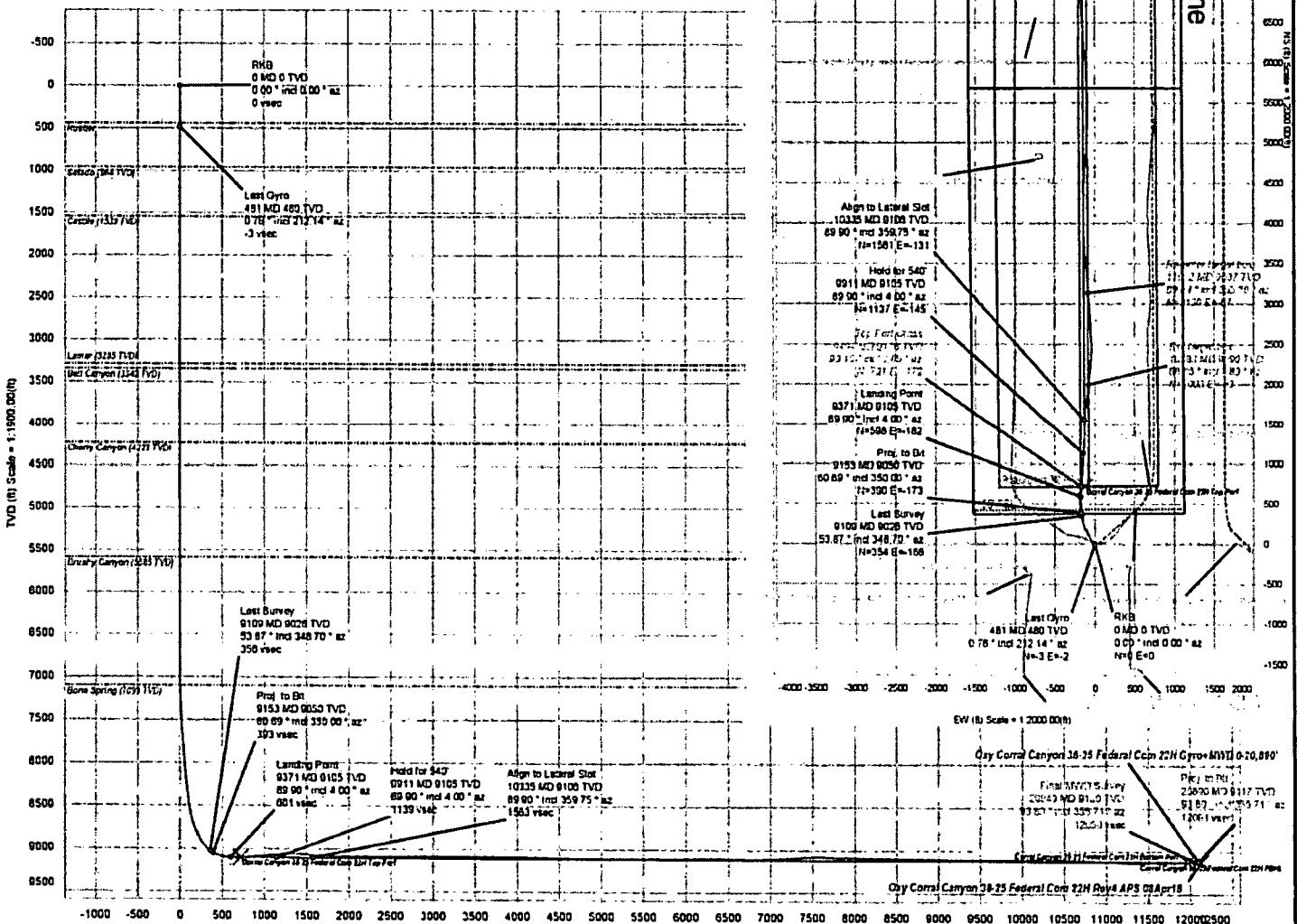
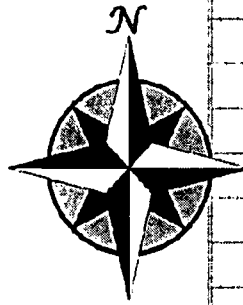


|                   |                                         |                         |                                         |
|-------------------|-----------------------------------------|-------------------------|-----------------------------------------|
| <b>Borehole:</b>  | <b>Well:</b>                            | <b>Field:</b>           | <b>Structure:</b>                       |
| Original Borehole | Oxy Corral Canyon 36-25 Federal Com 22H | NM Eddy County (NAD 83) | Oxy Corral Canyon 36-25 Federal Com 22H |

|                                          |           |      |            |                         |                         |      |                |                      |               |             |            |       |                                                          |        |        |        |
|------------------------------------------|-----------|------|------------|-------------------------|-------------------------|------|----------------|----------------------|---------------|-------------|------------|-------|----------------------------------------------------------|--------|--------|--------|
| <b>Gravity &amp; Magnetic Parameters</b> |           |      |            | <b>Surface Location</b> |                         |      |                | <b>Miscellaneous</b> |               |             |            |       |                                                          |        |        |        |
| Model:                                   | MDGM 5010 | Obs: | 10 820"    | Date:                   | 17 Apr-2019             | Lat: | N 22 8 53.94   | RefMag:              | 434164 77045  | Grid Conv:  | 0.2095     | Site: | 36-25 Federal Com 22H Rev4                               | APR 18 | APR 18 | APR 18 |
| MagDec:                                  | 6.991°    | FB:  | 40510.25mT | GridMag FB:             | 998.47mT (0.0011 Gauss) | Lon: | W 103 30 23.90 | Easting:             | 652532.640623 | Scale Fact: | 0.99997591 | Plan: | Oxy Corral Canyon 36-25 Federal Com 22H Rev4 APS 08Apr18 |        |        |        |



Grid North  
Tot Corr (M->G 6.782°)  
Mag Dec (6.991°)  
Grid Conv (0.209°)



# Oxy Corral Canyon 36-25 Federal Com 22H Gyro+MWD 0-20,890' Survey

## Geodetic Report

(Def Survey)



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Report Date:</b> April 13, 2018 - 02:33 PM<br><b>Client:</b> CXY<br><b>Field:</b> NM Eddy County (NAD 83)<br><b>Structure / Slot:</b> Oxy Corral Canyon 36-25 Federal Com 22H / Oxy Corral Canyon 36-25 Federal Com 22H<br><b>Well:</b> Oxy Corral Canyon 36-25 Federal Com 22H<br><b>Borehole:</b> Original Borehole<br><b>UWI / API#:</b> Unknown / 30-015-44632<br><b>Survey Name:</b> Oxy Corral Canyon 36-25 Federal Com 22H Gyro+MWD 0-20,890'<br><b>Survey Date:</b> March 27, 2018<br><b>Tort / AHD / ODI / ERD Ratio:</b> 270.968' / 12183.778 ft / 6.878 / 1.335<br><b>Coordinate Reference System:</b> NAD83 New Mexico State Plane, Eastern Zone, US Feet<br><b>Location Lat / Long:</b> N 32° 0' 55.80253" W 103° 56' 29.98455"<br><b>Location Grid N/E Y/X:</b> N 424184 720 NUS, E 662532 640 NUS<br><b>CRS Grid Convergence Angle:</b> 0.2085°<br><b>Grid Scale Factor:</b> 0.99992591<br><b>Version / Patch:</b> 2.10.715.0 | <b>Survey / DLS Computation:</b> Minimum Curvature / Lubinski<br><b>Vertical Section Azimuth:</b> 359.168° (Grid North)<br><b>Vertical Section Origin:</b> 0.000 ft, 0.000 ft<br><b>TVD Reference Datum:</b> RKB=26.5<br><b>TVD Reference Elevation:</b> 3138.800 ft above MSL<br><b>Seabed / Ground Elevation:</b> 3112.300 ft above MSL<br><b>Magnetic Declination:</b> 6.931°<br><b>Total Gravity Field Strength:</b> 998.4504mgm (9.80665 Based)<br><b>Gravity Model:</b> GARM<br><b>Total Magnetic Field Strength:</b> 48010.264 nT<br><b>Magnetic Dip Angle:</b> 59.928°<br><b>Declination Date:</b> March 27, 2018<br><b>Magnetic Declination Model:</b> HDGM 2018<br><b>North Reference:</b> Grid North<br><b>Grid Convergence Used:</b> 0.2085°<br><b>Total Corr Mag North-&gt;Grid North:</b> 6.7825°<br><b>Local Coord Referenced To:</b> Well Head |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

| Comments | MD<br>(ft) | Incl<br>(°) | Azim<br>Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(ft/100ft) | Northing<br>(ft) | Easting<br>(ft) | Latitude<br>(N/S ° ' '') | Longitude<br>(E/W ° ' '') |
|----------|------------|-------------|---------------------|-------------|--------------|------------|------------|-------------------|------------------|-----------------|--------------------------|---------------------------|
| RKB      | 0.00       | 0.00        | 0.00                | 0.00        | 0.00         | 0.00       | 0.00       | N/A               | 424184.72        | 662532.64       | N 32° 55' 58" W          | 103° 56' 29" 98           |
| SHL      | 26.50      | 0.00        | 0.00                | 26.50       | 0.00         | 0.00       | 0.00       | 0.00              | 424184.72        | 662532.64       | N 32° 55' 58" W          | 103° 56' 29" 98           |
|          | 70.50      | 0.06        | 104.12              | 70.50       | -0.02        | -0.02      | -0.01      | 0.14              | 424184.70        | 662532.63       | N 32° 55' 58" W          | 103° 56' 29" 98           |
|          | 120.50     | 0.07        | 281.27              | 120.50      | -0.04        | -0.04      | -0.04      | 0.18              | 424184.68        | 662532.60       | N 32° 55' 58" W          | 103° 56' 29" 99           |
|          | 220.50     | 0.25        | 244.68              | 220.50      | -0.12        | -0.12      | -0.30      | 0.20              | 424184.60        | 662532.34       | N 32° 55' 58" W          | 103° 56' 29" 99           |
|          | 320.50     | 0.54        | 195.86              | 320.50      | -0.66        | -0.67      | -0.63      | 0.42              | 424184.05        | 662532.02       | N 32° 55' 58" W          | 103° 56' 29" 99           |
|          | 420.50     | 0.90        | 213.81              | 420.49      | -1.80        | -1.82      | -1.22      | 0.48              | 424182.90        | 662531.42       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 480.50     | 0.76        | 212.14              | 480.48      | -2.55        | -2.58      | -1.71      | 0.34              | 424182.14        | 662530.93       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 600.00     | 0.68        | 166.04              | 599.97      | -3.91        | -3.94      | -1.90      | 0.48              | 424180.78        | 662530.68       | N 32° 55' 58" W          | 103° 56' 30" 01           |
|          | 789.00     | 0.18        | 38.10               | 788.97      | -4.77        | -4.70      | -1.50      | 0.43              | 424159.93        | 662531.14       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 988.00     | 0.29        | 359.80              | 985.97      | -4.03        | -4.05      | -1.32      | 0.09              | 424160.67        | 662531.32       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 1157.00    | 0.25        | 332.41              | 1156.97     | -3.26        | -3.28      | -1.49      | 0.08              | 424161.44        | 662531.15       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 1252.00    | 0.08        | 119.94              | 1251.97     | -3.11        | -3.13      | -1.53      | 0.34              | 424161.59        | 662531.11       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 1441.00    | 0.24        | 237.39              | 1440.97     | -3.39        | -3.41      | -1.75      | 0.15              | 424161.31        | 662530.89       | N 32° 55' 58" W          | 103° 56' 30" 01           |
|          | 1615.00    | 0.58        | 84.20               | 1614.98     | -3.50        | -3.52      | -1.18      | 0.48              | 424161.01        | 662531.46       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 1804.00    | 0.22        | 133.42              | 1803.96     | -3.07        | -3.87      | 0.04       | 0.25              | 424161.05        | 662532.08       | N 32° 55' 58" W          | 103° 56' 29" 98           |
|          | 1998.00    | 1.33        | 217.40              | 1897.95     | -4.60        | -4.66      | -0.50      | 1.41              | 424180.06        | 662532.14       | N 32° 55' 58" W          | 103° 56' 29" 99           |
|          | 1993.00    | 1.44        | 273.90              | 1992.93     | -5.42        | -5.46      | -2.36      | 1.38              | 424159.26        | 662530.28       | N 32° 55' 58" W          | 103° 56' 30" 01           |
|          | 2087.00    | 1.19        | 355.14              | 2086.91     | -4.35        | -4.41      | -3.82      | 1.83              | 424160.31        | 662529.02       | N 32° 55' 58" W          | 103° 56' 30" 03           |
|          | 2181.00    | 0.60        | 73.16               | 2180.90     | -3.24        | -3.29      | -3.23      | 1.29              | 424161.43        | 662529.41       | N 32° 55' 58" W          | 103° 56' 30" 02           |
|          | 2270.00    | 0.46        | 244.12              | 2269.99     | -3.29        | -3.34      | -2.97      | 0.56              | 424161.38        | 662529.68       | N 32° 55' 58" W          | 103° 56' 30" 02           |
|          | 2559.00    | 0.53        | 185.58              | 2558.89     | -4.48        | -4.54      | -3.73      | 0.26              | 424160.18        | 662528.81       | N 32° 55' 58" W          | 103° 56' 30" 03           |
|          | 2749.00    | 0.93        | 75.14               | 2748.88     | -4.98        | -5.02      | -2.33      | 0.64              | 424159.70        | 662530.31       | N 32° 55' 58" W          | 103° 56' 30" 01           |
|          | 2843.00    | 0.28        | 172.06              | 2842.88     | -5.02        | -5.05      | -1.56      | 1.07              | 424159.67        | 662531.08       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 2937.00    | 0.29        | 186.39              | 2936.88     | -5.49        | -5.51      | -1.55      | 0.08              | 424159.21        | 662531.09       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 3031.00    | 0.11        | 174.20              | 3030.87     | -5.81        | -5.84      | -1.57      | 0.20              | 424158.88        | 662531.07       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 3126.00    | 0.41        | 252.38              | 3125.87     | -6.00        | -6.03      | -1.89      | 0.42              | 424158.69        | 662530.75       | N 32° 55' 58" W          | 103° 56' 30" 01           |
|          | 3220.00    | 0.18        | 289.44              | 3219.87     | -6.05        | -6.08      | -2.35      | 0.31              | 424158.64        | 662530.29       | N 32° 55' 58" W          | 103° 56' 30" 01           |
|          | 3408.00    | 0.17        | 22.39               | 3407.87     | -5.69        | -5.73      | -2.52      | 0.14              | 424158.99        | 662530.12       | N 32° 55' 58" W          | 103° 56' 30" 01           |
|          | 3502.00    | 0.18        | 348.81              | 3501.87     | -5.42        | -5.45      | -2.49      | 0.11              | 424159.27        | 662530.15       | N 32° 55' 58" W          | 103° 56' 30" 01           |
|          | 3597.00    | 0.18        | 127.77              | 3596.87     | -5.35        | -5.39      | -2.42      | 0.34              | 424159.33        | 662530.22       | N 32° 55' 58" W          | 103° 56' 30" 01           |
|          | 3785.00    | 0.11        | 200.95              | 3784.87     | -5.68        | -5.72      | -2.27      | 0.09              | 424159.00        | 662530.37       | N 32° 55' 58" W          | 103° 56' 30" 01           |
|          | 3880.00    | 0.20        | 91.06               | 3879.87     | -5.77        | -5.81      | -2.14      | 0.27              | 424158.91        | 662530.60       | N 32° 55' 58" W          | 103° 56' 30" 01           |
|          | 4069.00    | 0.13        | 153.50              | 4068.87     | -5.98        | -6.00      | -1.72      | 0.10              | 424158.72        | 662530.83       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 4163.00    | 0.20        | 58.12               | 4162.87     | -5.99        | -6.01      | -1.53      | 0.27              | 424158.71        | 662531.11       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 4352.00    | 0.08        | 226.73              | 4351.87     | -5.89        | -5.91      | -1.35      | 0.15              | 424158.81        | 662531.29       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 4446.00    | 0.18        | 129.09              | 4445.87     | -6.03        | -6.05      | -1.29      | 0.22              | 424158.87        | 662531.35       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 4540.00    | 0.13        | 289.54              | 4539.87     | -6.09        | -6.11      | -1.27      | 0.33              | 424158.81        | 662531.37       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 4635.00    | 0.28        | 79.11               | 4634.87     | -6.01        | -6.03      | -1.15      | 0.42              | 424158.69        | 662531.49       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 4729.00    | 0.13        | 20.03               | 4728.87     | -5.87        | -5.89      | -0.88      | 0.26              | 424158.83        | 662531.76       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 4823.00    | 0.25        | 52.43               | 4822.87     | -5.65        | -5.66      | -0.69      | 0.17              | 424159.06        | 662531.96       | N 32° 55' 58" W          | 103° 56' 29" 99           |
|          | 4918.00    | 0.40        | 338.78              | 4917.87     | -5.22        | -5.23      | -0.64      | 0.43              | 424159.49        | 662532.00       | N 32° 55' 58" W          | 103° 56' 29" 99           |
|          | 5107.00    | 0.00        | 150.21              | 5106.88     | -4.60        | -4.61      | -0.88      | 0.21              | 424160.11        | 662531.70       | N 32° 55' 58" W          | 103° 56' 29" 99           |
|          | 5295.00    | 0.11        | 180.59              | 5294.86     | -4.78        | -4.79      | -0.88      | 0.06              | 424159.93        | 662531.70       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 5484.00    | 0.48        | 354.65              | 5483.86     | -4.17        | -4.18      | -0.96      | 0.31              | 424160.54        | 662531.68       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 5673.00    | 0.13        | 34.25               | 5672.86     | -3.21        | -3.22      | -0.91      | 0.21              | 424161.00        | 662531.73       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 5861.00    | 0.20        | 262.10              | 5860.86     | -3.07        | -3.09      | -1.12      | 0.16              | 424161.83        | 662531.52       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 6050.00    | 0.18        | 185.08              | 6049.88     | -3.41        | -3.43      | -1.47      | 0.13              | 424161.29        | 662531.17       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 6239.00    | 0.13        | 239.85              | 6238.86     | -3.81        | -3.83      | -1.68      | 0.08              | 424160.89        | 662530.96       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 6428.00    | 0.13        | 126.53              | 6427.86     | -4.04        | -4.07      | -1.69      | 0.11              | 424160.65        | 662530.85       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 6523.00    | 0.11        | 11.91               | 6522.86     | -4.02        | -4.04      | -1.59      | 0.21              | 424160.68        | 662531.05       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 6617.00    | 0.20        | 231.09              | 6616.88     | -4.03        | -4.06      | -1.70      | 0.31              | 424160.66        | 662530.84       | N 32° 55' 58" W          | 103° 56' 30" 00           |
|          | 6806.00    | 0.08        | 214.38              | 6805.86     | -4.32        | -4.35      | -2.01      | 0.08              | 424160.37        | 662530.63       | N 32° 55' 58" W          | 103° 56' 30" 01           |
|          | 6901.00    | 0.08        | 197.15              | 6900.86     | -4.42        | -4.45      | -2.06      | 0.03              | 424160.27        | 662530.58       | N 32° 55' 58" W          | 103° 56' 30" 01           |
|          | 6995.00    | 0.43        | 308.20              | 6994.88     | -4.26        | -4.30      | -2.35      | 0.49              | 424160.42        | 662530.29       | N 32° 55' 58" W          | 103° 56' 30" 01           |
|          | 7089.00    | 2.23        | 329.10              | 7088.83     | -2.46        | -2.51      | -3.57      | 1.95              | 424162.21        | 662529.07       | N 32° 55' 58" W          | 103° 56' 30" 03           |
|          | 7184.00    | 2.26        | 1.96                | 7183.76     | 1.01         | 0.95       | -4.46      | 1.34              | 424165.07        | 662528.19       | N 32° 55' 58" W          | 103° 56' 30" 04           |
|          | 7278.00    | 2.63        | 6.97                | 7277.67     | 5.00         | 4.94       | -4.12      | 0.45              | 424169.60        | 662528.51       | N 32° 55' 58" W          | 103° 56' 30" 03           |
|          | 7372.00    | 3.38        | 355.04              | 7371.54     | 9.90         | 9.84       | -4.11      | 1.03              | 424174.58        | 662528.53       | N 32° 55' 58" W          | 103° 56' 30" 03           |
|          | 7465.00    | 4.43        | 317.90              | 7464.34     | 15.34        | 15.24      | -6.75      | 2.88              | 424179.98        | 662525.89       | N 32° 55' 58" W          | 103° 56' 30" 06           |
|          | 7560.00    | 4.73        | 300.12              | 7559.04     | 20.11        | 19.93      | -12.60     | 1.52              | 424184.65        | 662520.04       | N 32° 56' 00" W          | 103° 56' 30" 13           |
|          | 7656.00    | 5.92        | 311.48              | 7654.83     | 25.48        | 25.19      | -19.74     | 1.65              | 424189.91        | 662512.91       | N 32° 56' 05" W          | 103° 56' 30" 21           |
|          | 7750.00    | 5.73        | 319.41              | 7748.14     | 32.35        | 31.97      | -26.42     | 0.88              | 424196.69        | 662506.22       | N 32° 56' 12" W          | 103° 56' 30" 29           |
|          | 7845.00    | 5.92        | 315.96              | 7842.65     | 39.56        | 39.09      | -32.91     | 0.42              | 424203.81        | 662499.73       | N 32° 56' 19" W          | 103° 56' 30" 37           |
|          | 7939.00    | 6.04        | 312.85              | 7936.14     | 46.51        | 45.94      | -39.91     | 0.37              | 424210.60        | 662492.73       | N 32° 56' 26" W          | 103° 56' 30" 45           |
|          | 8034.00    | 6.08        | 315.74              | 8030.61     | 53.62        | 52.94      | -47.08     | 0.32              | 424217.60        | 662485.56       | N 32° 56' 33" W          | 103° 56' 30" 53           |
|          | 8128.00    | 6.81        | 326.54              | 8124.02     | 61.93        | 61.18      | -53.63     | 1.50              | 424225.87        | 662479.01       | N 32° 56' 41" W          | 103° 56' 30" 61           |
|          | 8223.00    | 6.84        | 341.09              | 8218.36     | 72.05        | 71.21      | -58.57     | 1.82              | 424235.92        | 662474.07       | N 32° 56' 51" W          | 103° 56' 30" 68           |
|          | 8317.00    | 7.30        | 341.64              | 8311.84     | 83.07        | 82.17      | -62.27     | 0.49              | 424248.88        | 662470.38       | N 32° 56' 62" W          | 103° 56' 30" 71           |
|          | 8412.00    | 8.34        | 327.48              | 8405.78     | 94.68        | 93.71      | -67.87     | 2.30              | 424258.42        | 662464.77       | N 32° 56' 73" W          | 103° 56' 30" 77           |
|          | 8488.00    | 10.58       | 323.75              | 8480.73     | 105.06       | 103.89     | -74.97     | 3.05              | 424268.70        | 662457.68       | N 32° 56' 83" W          | 103° 56' 30" 85           |
|          | 8635.00    | 13.68       | 338.48              | 8624.48     | 132.33       | 131.05     | -89.33     | 2.96              | 424295.76        | 662443.31       | N 32° 57' 10" W          | 103° 56' 31" 02           |
|          | 8730.00    | 22.36       | 328.53              | 8714.74     | 158.44       | 156.87     | -102.92    | 9.66              | 424321.67        | 662429.73       | N 32° 57' 38" W          | 103° 56' 31" 18           |
|          | 8826.00    | 28.37       | 333.14              | 8800.55     | 194.31       | 192.55     | -122.57    | 6.65              | 424357.25        | 662410.08       | N 32° 57' 51" W          | 103° 56' 31" 40           |
|          | 8920.00    | 28.74       | 342.10              | 8884.03     | 236.44       | 234.44     | -139.80    | 4.52              | 42               |                 |                          |                           |

| Comments | MD<br>(ft) | Incl<br>(°) | Azim<br>(°) | Grid<br>(ft) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(ft/100ft) | Northing<br>(ft) | Eastings<br>(ft)             | Latitude<br>(N/S ° ' '') | Longitude<br>(E/W ° ' '') |
|----------|------------|-------------|-------------|--------------|-------------|--------------|------------|------------|-------------------|------------------|------------------------------|--------------------------|---------------------------|
|          | 9298.00    | 78.55       | 0.02        | 9100.04      | 528.07      | 525.51       | -180.35    | 12.78      | 424690.19         | 662352.30        | N 32 10 1.01 W 103 56 32.00  |                          |                           |
|          | 9393.00    | 90.48       | 2.33        | 9109.11      | 622.40      | 619.88       | -178.40    | 12.79      | 424784.55         | 662354.25        | N 32 10 1.94 W 103 56 32.03  |                          |                           |
|          | 9458.00    | 92.65       | 4.11        | 9107.33      | 687.21      | 684.74       | -174.75    | 4.32       | 424849.41         | 662357.90        | N 32 10 2.58 W 103 56 31.89  |                          |                           |
|          | 9561.00    | 94.10       | 3.36        | 9101.27      | 789.70      | 787.34       | -168.05    | 1.58       | 424952.00         | 662364.60        | N 32 10 3.60 W 103 56 31.81  |                          |                           |
|          | 9656.00    | 94.75       | 3.38        | 9093.94      | 864.10      | 881.90       | -162.49    | 0.88       | 425040.55         | 662370.17        | N 32 10 4.63 W 103 56 31.84  |                          |                           |
|          | 9751.00    | 95.27       | 3.49        | 9085.64      | 978.54      | 978.36       | -156.82    | 0.56       | 425141.01         | 662375.84        | N 32 10 5.47 W 103 56 31.77  |                          |                           |
|          | 9853.00    | 95.54       | 3.03        | 9070.03      | 1079.82     | 1077.75      | -151.04    | 0.52       | 425242.38         | 662381.01        | N 32 10 6.47 W 103 56 31.70  |                          |                           |
|          | 9948.00    | 95.54       | 2.81        | 9060.80      | 1174.18     | 1172.18      | -140.22    | 0.23       | 425336.81         | 662386.43        | N 32 10 7.41 W 103 56 31.64  |                          |                           |
|          | 10043.00   | 91.10       | 2.57        | 9061.36      | 1266.82     | 1266.89      | -141.77    | 4.68       | 425431.51         | 662390.88        | N 32 10 8.34 W 103 56 31.58  |                          |                           |
|          | 10137.00   | 88.31       | 2.82        | 9061.85      | 1362.63     | 1360.78      | -137.35    | 2.98       | 425525.39         | 662395.30        | N 32 10 9.27 W 103 56 31.52  |                          |                           |
|          | 10232.00   | 85.05       | 3.20        | 9067.35      | 1457.24     | 1455.47      | -132.38    | 3.45       | 425620.08         | 662400.27        | N 32 10 10.21 W 103 56 31.48 |                          |                           |
|          | 10327.00   | 85.98       | 3.56        | 9074.78      | 1551.69     | 1550.02      | -126.79    | 1.05       | 425714.62         | 662405.80        | N 32 10 11.14 W 103 56 31.39 |                          |                           |
|          | 10422.00   | 87.76       | 3.91        | 9079.98      | 1646.25     | 1644.67      | -120.81    | 1.91       | 425809.26         | 662412.04        | N 32 10 12.08 W 103 56 31.32 |                          |                           |
|          | 10517.00   | 88.52       | 5.30        | 9083.05      | 1740.77     | 1739.31      | -112.99    | 1.67       | 425903.60         | 662419.88        | N 32 10 13.02 W 103 56 31.23 |                          |                           |
|          | 10611.00   | 88.28       | 5.88        | 9085.67      | 1834.14     | 1832.83      | -103.84    | 0.87       | 425997.41         | 662428.81        | N 32 10 13.94 W 103 56 31.11 |                          |                           |
|          | 10706.00   | 88.76       | 7.45        | 9088.12      | 1928.29     | 1927.15      | -92.81     | 1.73       | 426091.72         | 662439.83        | N 32 10 14.88 W 103 56 30.88 |                          |                           |
|          | 10801.00   | 88.03       | 7.92        | 9090.29      | 2022.22     | 2021.27      | -80.11     | 0.51       | 426185.84         | 662452.53        | N 32 10 15.81 W 103 56 30.83 |                          |                           |
|          | 10895.00   | 89.14       | 7.22        | 9092.12      | 2115.19     | 2114.43      | -67.73     | 0.92       | 426278.99         | 662464.91        | N 32 10 16.73 W 103 56 30.68 |                          |                           |
|          | 10990.00   | 89.82       | 5.75        | 9093.14      | 2209.41     | 2208.82      | -57.00     | 1.63       | 426373.37         | 662475.64        | N 32 10 17.66 W 103 56 30.55 |                          |                           |
|          | 11085.00   | 90.03       | 2.89        | 9093.44      | 2304.02     | 2303.54      | -49.85     | 3.04       | 426468.08         | 662487.79        | N 32 10 18.60 W 103 56 30.47 |                          |                           |
|          | 11180.00   | 90.21       | 1.83        | 9093.24      | 2398.88     | 2398.46      | -46.10     | 1.34       | 426563.00         | 662496.54        | N 32 10 19.54 W 103 56 30.42 |                          |                           |
|          | 11275.00   | 90.96       | 358.93      | 9092.27      | 2493.84     | 2493.44      | -45.64     | 2.95       | 426657.97         | 662497.00        | N 32 10 20.48 W 103 56 30.41 |                          |                           |
|          | 11369.00   | 91.27       | 357.07      | 9090.44      | 2587.81     | 2587.38      | -48.43     | 1.38       | 426751.91         | 662494.22        | N 32 10 21.41 W 103 56 30.44 |                          |                           |
|          | 11465.00   | 91.20       | 357.14      | 9088.37      | 2683.75     | 2683.26      | -52.77     | 0.56       | 426847.78         | 662479.87        | N 32 10 22.36 W 103 56 30.48 |                          |                           |
|          | 11559.00   | 90.98       | 358.51      | 9086.60      | 2777.65     | 2777.10      | -57.98     | 0.72       | 426941.61         | 662474.67        | N 32 10 23.28 W 103 56 30.54 |                          |                           |
|          | 11654.00   | 90.07       | 355.73      | 9085.74      | 2872.51     | 2871.88      | -64.41     | 1.25       | 427036.38         | 662468.24        | N 32 10 24.22 W 103 56 30.61 |                          |                           |
|          | 11749.00   | 90.07       | 355.13      | 9085.63      | 2967.31     | 2966.58      | -71.97     | 0.63       | 427131.07         | 662460.67        | N 32 10 25.16 W 103 56 30.70 |                          |                           |
|          | 11844.00   | 88.07       | 354.50      | 9086.42      | 3062.03     | 3061.18      | -80.56     | 1.33       | 427225.87         | 662452.99        | N 32 10 26.10 W 103 56 30.79 |                          |                           |
|          | 11938.00   | 89.68       | 355.54      | 9087.55      | 3155.77     | 3154.82      | -88.72     | 1.33       | 427318.30         | 662443.93        | N 32 10 27.02 W 103 56 30.88 |                          |                           |
|          | 12033.00   | 88.69       | 354.89      | 9088.91      | 3250.54     | 3249.48      | -90.64     | 1.23       | 427413.95         | 662436.01        | N 32 10 27.98 W 103 56 30.97 |                          |                           |
|          | 12128.00   | 90.45       | 355.36      | 9089.63      | 3345.29     | 3344.12      | -104.72    | 1.92       | 427508.59         | 662427.93        | N 32 10 28.90 W 103 56 31.06 |                          |                           |
|          | 12223.00   | 89.45       | 355.04      | 9089.71      | 3440.06     | 3438.79      | -112.86    | 1.11       | 427603.25         | 662419.88        | N 32 10 29.83 W 103 56 31.15 |                          |                           |
|          | 12318.00   | 90.48       | 356.07      | 9088.07      | 3534.90     | 3533.54      | -119.53    | 2.03       | 427697.99         | 662413.12        | N 32 10 30.77 W 103 56 31.23 |                          |                           |
|          | 12413.00   | 90.48       | 356.05      | 9088.07      | 3629.82     | 3628.39      | -124.82    | 0.29       | 427792.83         | 662407.83        | N 32 10 31.71 W 103 56 31.28 |                          |                           |
|          | 12508.00   | 88.45       | 355.08      | 9089.86      | 3724.70     | 3723.19      | -130.69    | 2.38       | 427887.63         | 662401.96        | N 32 10 32.65 W 103 56 31.35 |                          |                           |
|          | 12602.00   | 89.79       | 358.11      | 9091.30      | 3818.62     | 3817.05      | -135.55    | 2.69       | 427981.48         | 662397.17        | N 32 10 33.58 W 103 56 31.42 |                          |                           |
|          | 12697.00   | 90.07       | 359.15      | 9091.42      | 3913.61     | 3912.02      | -137.42    | 1.13       | 428076.44         | 662394.63        | N 32 10 34.52 W 103 56 31.49 |                          |                           |
|          | 12791.00   | 89.45       | 359.14      | 9091.81      | 4007.61     | 4006.01      | -139.23    | 0.88       | 428170.42         | 662393.43        | N 32 10 35.45 W 103 56 31.43 |                          |                           |
|          | 12886.00   | 89.24       | 0.45        | 9092.90      | 4102.59     | 4101.00      | -139.57    | 1.40       | 428265.41         | 662393.09        | N 32 10 36.30 W 103 56 31.43 |                          |                           |
|          | 12981.00   | 88.59       | 0.70        | 9094.70      | 4197.55     | 4195.98      | -138.61    | 0.73       | 428360.38         | 662384.04        | N 32 10 37.33 W 103 56 31.42 |                          |                           |
|          | 13076.00   | 88.25       | 0.92        | 9097.32      | 4292.47     | 4290.93      | -137.27    | 0.43       | 428455.33         | 662385.38        | N 32 10 38.27 W 103 56 31.40 |                          |                           |
|          | 13171.00   | 87.97       | 1.11        | 9100.45      | 4387.37     | 4385.87      | -135.59    | 0.36       | 428550.25         | 662387.06        | N 32 10 39.21 W 103 56 31.38 |                          |                           |
|          | 13266.00   | 88.31       | 1.64        | 9103.53      | 4482.25     | 4480.79      | -133.31    | 0.88       | 428645.17         | 662389.34        | N 32 10 40.15 W 103 56 31.35 |                          |                           |
|          | 13360.00   | 88.14       | 2.15        | 9106.44      | 4578.10     | 4574.69      | -130.20    | 0.57       | 428739.06         | 662402.45        | N 32 10 41.07 W 103 56 31.31 |                          |                           |
|          | 13455.00   | 88.50       | 2.20        | 9109.18      | 4670.93     | 4669.58      | -128.60    | 0.45       | 428833.95         | 662406.05        | N 32 10 42.01 W 103 56 31.26 |                          |                           |
|          | 13550.00   | 88.35       | 2.53        | 9111.74      | 4765.75     | 4764.47      | -122.68    | 0.41       | 428928.83         | 662409.97        | N 32 10 42.95 W 103 56 31.21 |                          |                           |
|          | 13645.00   | 88.97       | 3.23        | 9113.96      | 4860.52     | 4859.32      | -117.91    | 0.98       | 429023.67         | 662414.74        | N 32 10 43.89 W 103 56 31.15 |                          |                           |
|          | 13739.00   | 89.83       | 2.88        | 9114.95      | 4954.30     | 4953.18      | -112.90    | 0.99       | 429117.52         | 662419.76        | N 32 10 44.82 W 103 56 31.09 |                          |                           |
|          | 13834.00   | 89.66       | 1.02        | 9115.37      | 5049.14     | 5048.10      | -108.92    | 1.03       | 429212.43         | 662423.73        | N 32 10 45.76 W 103 56 31.04 |                          |                           |
|          | 13929.00   | 90.62       | 2.05        | 9115.14      | 5144.03     | 5143.04      | -105.63    | 1.02       | 429307.37         | 662427.02        | N 32 10 46.70 W 103 56 31.00 |                          |                           |
|          | 14024.00   | 91.65       | 1.67        | 9113.26      | 5238.90     | 5237.97      | -102.55    | 1.16       | 429402.29         | 662430.10        | N 32 10 47.64 W 103 56 30.98 |                          |                           |
|          | 14119.00   | 90.41       | 0.33        | 9111.55      | 5333.84     | 5332.93      | -100.89    | 1.92       | 429497.25         | 662431.76        | N 32 10 48.58 W 103 56 30.93 |                          |                           |
|          | 14214.00   | 91.20       | 359.90      | 9110.21      | 5428.81     | 5427.92      | -100.70    | 0.95       | 429592.23         | 662431.95        | N 32 10 49.52 W 103 56 30.93 |                          |                           |
|          | 14308.00   | 91.58       | 359.34      | 9107.93      | 5522.78     | 5521.89      | -101.32    | 0.72       | 429688.19         | 662431.33        | N 32 10 50.45 W 103 56 30.93 |                          |                           |
|          | 14403.00   | 90.24       | 357.89      | 9106.43      | 5617.76     | 5616.85      | -103.62    | 2.08       | 429781.14         | 662429.03        | N 32 10 51.39 W 103 56 30.95 |                          |                           |
|          | 14498.00   | 89.90       | 357.48      | 9106.31      | 5712.73     | 5711.77      | -107.47    | 0.58       | 429876.05         | 662425.18        | N 32 10 52.33 W 103 56 30.99 |                          |                           |
|          | 14593.00   | 89.28       | 358.69      | 9106.99      | 5807.66     | 5806.64      | -112.32    | 1.04       | 429970.92         | 662420.33        | N 32 10 53.26 W 103 56 31.05 |                          |                           |
|          | 14688.00   | 90.48       | 358.02      | 9107.19      | 5902.61     | 5901.54      | -116.70    | 1.89       | 430065.81         | 662415.95        | N 32 10 54.20 W 103 56 31.09 |                          |                           |
|          | 14783.00   | 91.48       | 357.95      | 9105.56      | 5997.57     | 5996.48      | -120.04    | 1.06       | 430160.73         | 662412.61        | N 32 10 55.14 W 103 56 31.13 |                          |                           |
|          | 14877.00   | 91.38       | 358.92      | 9103.22      | 6091.50     | 6090.34      | -124.25    | 1.10       | 430254.59         | 662408.40        | N 32 10 56.07 W 103 56 31.17 |                          |                           |
|          | 14972.00   | 90.55       | 354.75      | 9101.82      | 6186.32     | 6185.07      | -131.15    | 2.45       | 430349.32         | 662401.50        | N 32 10 57.01 W 103 56 31.25 |                          |                           |
|          | 15067.00   | 90.41       | 354.77      | 9100.82      | 6281.03     | 6279.67      | -139.82    | 0.15       | 430443.91         | 662392.83        | N 32 10 57.95 W 103 56 31.35 |                          |                           |
|          | 15162.00   | 88.52       | 354.31      | 9101.71      | 6375.72     | 6374.23      | -148.86    | 2.05       | 430538.46         | 662383.78        | N 32 10 58.88 W 103 56 31.45 |                          |                           |
|          | 15257.00   | 88.76       | 355.06      | 9103.96      | 6470.40     | 6468.79      | -157.68    | 0.83       | 430633.02         | 662374.99        | N 32 10 59.82 W 103 56 31.54 |                          |                           |
|          | 15351.00   | 88.35       | 355.87      | 9106.33      | 6564.16     | 6562.45      | -165.25    | 0.78       | 430728.67         | 662367.40        | N 32 11 0.74 W 103 56 31.63  |                          |                           |
|          | 15446.00   | 88.49       | 358.11      | 9108.95      | 6657.17     | 6655.17      | -172.06    | 0.49       | 430821.39         | 662360.59        | N 32 11 1.68 W 103 56 31.70  |                          |                           |
|          | 15543.00   | 90.62       | 357.88      | 9110.42      | 6747.81     | 6746.89      | -181.96    | 1.47       | 430910.09         | 662350.69        | N 32 11 3.55 W 103 56 31.81  |                          |                           |
|          | 15730.00   | 90.00       | 358.90      | 9108.25      | 6842.77     | 6840.82      | -184.63    | 1.81       | 431005.01         | 662348.02        | N 32 11 4.49 W 103 56 31.84  |                          |                           |
|          | 15824.00   | 92.98       | 359.59      | 9104.18      | 6938.68     | 6937.73      | -185.87    | 1.26       | 431198.91         | 662346.78        | N 32 11 5.42 W 103 56 31.85  |                          |                           |
|          | 15919.00   | 92.75       | 359.99      | 9099.45      | 7034.56     | 7033.56      | -186.22    | 0.48       | 431293.78         | 662346.44        | N 32 11 6.38 W 103 56 31.85  |                          |                           |
|          | 16015.00   | 93.54       | 0.42        | 9094.18      | 7127.40     | 7126.45      | -185.88    | 0.94       | 431389.63         | 662346.78        | N 32 11 7.31 W 103 56 31.84  |                          |                           |
|          | 16109.00   | 93.48       | 0.81        | 9088.43      | 7221.19     | 7219.28      | -185.03    | 0.21       | 431483.44         | 662347.62        | N 32 11 8.23 W 103 56 31.83  |                          |                           |
|          | 16203.00   | 92.58       | 0.46        | 9083.46      | 7315.04     | 7313.14      | -184.16    | 0.97       | 431577.30         | 662348.50        | N 32 11 9.16 W 103 56 31.81  |                          |                           |
|          | 16298.00   | 91.41       | 0.38        | 9080.15      | 7409.95     | 7408.08      | -183.48    | 1.23       | 431672.23         | 662349.19        | N 32 11 10.10 W 103 56 31.80 |                          |                           |
|          | 16393.00   | 89.21       | 359.85      | 9079.84      | 7504.93     | 7503.07      | -183.27    | 2.38       | 431767.22         | 662349.38        | N 32 11 11.04 W 103 56 31.79 |                          |                           |
|          | 16488.00   | 87.49       | 359.99      | 9082.37      | 7599.88     | 7598.03      | -183.40    | 1.82       | 431862.17         | 662349.25        | N 32 11 11.98 W 103 56 31.79 |                          |                           |
|          | 16582.00</ |             |             |              |             |              |            |            |                   |                  |                              |                          |                           |

| Comments         | MD<br>(ft) | Incl<br>(°) | Azlm Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(ft/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' '') | Longitude<br>(E/W ° ' '') |
|------------------|------------|-------------|------------------|-------------|--------------|------------|------------|-------------------|--------------------|-------------------|--------------------------|---------------------------|
|                  | 19797.00   | 87.25       | 0 65             | 9120.00     | 10999.62     | 10999.69   | -75.04     | 0.57              | 435163.57          | 662467.60         | N 32 11 44.65 W          | 103 56 30.39              |
|                  | 19892.00   | 87.29       | 0 05             | 9124.53     | 11094.49     | 11094.50   | -74.47     | 0.63              | 435258.46          | 662458.18         | N 32 11 45.59 W          | 103 56 30.38              |
|                  | 19986.00   | 87.73       | 359.48           | 9128.62     | 11188.40     | 11188.49   | -74.85     | 0.77              | 435352.36          | 662457.80         | N 32 11 46.52 W          | 103 56 30.38              |
|                  | 20080.00   | 87.77       | 358.87           | 9132.31     | 11282.32     | 11282.41   | -76.20     | 0.65              | 435446.27          | 662456.44         | N 32 11 47.45 W          | 103 56 30.39              |
|                  | 20175.00   | 89.24       | 358.68           | 9134.70     | 11377.29     | 11377.35   | -78.25     | 1.58              | 435541.20          | 662454.40         | N 32 11 48.39 W          | 103 56 30.41              |
|                  | 20270.00   | 89.86       | 357.71           | 9135.54     | 11472.27     | 11472.30   | -81.26     | 1.19              | 435636.15          | 662451.39         | N 32 11 49.33 W          | 103 56 30.44              |
|                  | 20364.00   | 89.45       | 357.04           | 9136.10     | 11566.22     | 11566.20   | -85.56     | 0.84              | 435730.04          | 662447.08         | N 32 11 50.25 W          | 103 56 30.49              |
|                  | 20459.00   | 90.58       | 357.57           | 9136.08     | 11661.17     | 11661.09   | -90.03     | 1.31              | 435824.92          | 662442.62         | N 32 11 51.19 W          | 103 56 30.54              |
|                  | 20553.00   | 91.55       | 357.49           | 9134.33     | 11755.11     | 11754.09   | -94.08     | 1.04              | 435918.81          | 662438.57         | N 32 11 52.12 W          | 103 56 30.58              |
|                  | 20648.00   | 92.27       | 357.13           | 9131.16     | 11850.01     | 11849.83   | -98.54     | 0.85              | 436013.65          | 662434.11         | N 32 11 53.06 W          | 103 56 30.63              |
|                  | 20742.00   | 93.17       | 356.75           | 9126.70     | 11943.83     | 11943.59   | -103.55    | 1.04              | 436107.40          | 662429.10         | N 32 11 53.99 W          | 103 56 30.68              |
|                  | 20837.00   | 93.68       | 355.82           | 9121.03     | 12038.54     | 12038.22   | -109.69    | 1.11              | 436202.02          | 662422.06         | N 32 11 54.93 W          | 103 56 30.75              |
| Final MWD Survey | 20849.00   | 93.89       | 355.71           | 9120.24     | 12050.49     | 12050.16   | -110.58    | 1.97              | 436213.96          | 662422.07         | N 32 11 55.04 W          | 103 56 30.76              |
| Proj. to Bit     | 20890.00   | 93.89       | 355.71           | 9117.45     | 12091.32     | 12090.95   | -113.64    | 0.00              | 436254.75          | 662419.01         | N 32 11 55.45 W          | 103 56 30.79              |

Survey Type: Dof Survey

Survey Error Model: ISCWSA Rev 0 \*\*\* 3-D 95.000% Confidence 2.7055 sigma  
Survey Program:

| Description | Part | MD From<br>(ft) | MD To<br>(ft) | EOU Freq<br>(ft) | Hole Size Casing Diameter<br>(in) | Survey Tool Type         | Borehole / Survey                                                              |
|-------------|------|-----------------|---------------|------------------|-----------------------------------|--------------------------|--------------------------------------------------------------------------------|
|             | 1    | 0.000           | 26.500        | 1/98.425         | 30.000                            | NAL_NSG+MSHOT-Depth Only | Original Borehole / Oxy Corral Canyon 36-25 Federal Com 22H Gyro-MWD 0-20.890' |
|             | 1    | 26.500          | 26.500        | Act Sins         | 30.000                            | NAL_NSG+MSHOT-Depth Only | Original Borehole / Oxy Corral Canyon 36-25 Federal Com 22H Gyro-MWD 0-20.890' |
|             | 1    | 26.500          | 420.500       | Act Sins         | 30.000                            | NAL_NSG+MSHOT            | Original Borehole / Oxy Corral Canyon 36-25 Federal Com 22H                    |
|             | 1    | 420.500         | 20890.000     | Act Sins         | 30.000                            | NAL_MWD_PLUS_0.5_DEG     | Original Borehole / Oxy Corral Canyon 36-25 Federal Com 22H                    |