

Oilfield Services, Central U.S. Land

**Schlumberger**

**Reservoir Development**

Drilling & Measurements (Anadrill)

4301 SW 44th St

Oklahoma City, Oklahoma 73119 USA

Phone: (405) 682-2284

Fax: (405) 682-3937

March 21, 2014

Cimarex

600 N MARIENFELD STREET SUITE 600

MIDLAND, TX 79701

Re:

S6-T25S-R27E 330 FSL 2190 FEL  
N 32.15274 W 104.22806

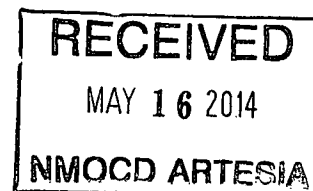
CLIENT: Cimarex Energy Co.  
WELL: Scoter 6 Federal 3H  
FIELD: Cottonwood Draw, B.S.  
RIG: Cactus 116  
COUNTY: Eddy  
API NO: 30-015-41819  
JOB NO: 14MLD0075

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements, a division of Schlumberger Technology Corporation.  
Other information required by your office is as follows.

| <u>Name &amp; Title of<br/>Surveyor</u> | <u>Drainhole Number</u>              | <u>Surveyed Depths</u>       | <u>Dates Performed</u>              | <u>Type of Survey</u> |
|-----------------------------------------|--------------------------------------|------------------------------|-------------------------------------|-----------------------|
| Jesse Ritch<br>MWD                      | Scoter 6 Federal 3H<br>Original Hole | 6664.00 Ft to<br>11870.00 Ft | March 10, 2014 to<br>March 20, 2014 | SlimPulse             |

If any other information is required, please contact the undersigned at the above letterhead and phone number.  
Sincerely,

Joseph Hogan  
Field Service Manager



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MAY 16 2014

**NMOCD ARTESIA**

**Schlumberger**

**Well Reference:**

S6-T25S-R27E 330 FSL 2190 FEL

N 32.15274 W 104.22806

I, Jesse Ritch, certify that; I am employed by Drilling & Measurements (formerly Anadrill), a division of Schlumberger Technology Corporation; that I did on the day(s) of March 10, 2014 through March 20, 2014, conduct or supervise the taking of the SlimPulse surveys from a depth of 6664.00 feet to a depth of 11870.00 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 Cimarex Energy Co. for the Scoter 6 Federal 3H Well (Original Hole) API No. 30-015-41819 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.



On behalf of  
Jesse Ritch  
MWD

Subscribed and Sworn to before me this 21<sup>st</sup> day of March (month) 2014 (yr)

My Commission expires:

September 5, 2016

Michelle Ellwood

Notary Public

Medford, IL

(County/State)



(Signature)



# Cimarex Scoter 6 Federal #3H XEM+MWD Off to 11940ft MD

(Def Survey)



Report Date: March 20, 2014 - 09:01 AM  
Client: Cimarex  
Field: NM Eddy County (NAD 83)  
Structure / Slot: Cactus 116 / Cimarex Scoter 6 Federal #3H  
Well: Cimarex Scoter 6 Federal #3H  
Borehole: Original Borehole  
UWI / API#: Unknown / Unknown  
Survey Name: Cimarex Scoter 6 Federal #3H XEM+MWD Off to 11940ft MD  
Survey Date: March 04, 2014  
Tort / AHD / DDI / ERD Ratio: 211.575' / 4901.254 ft / 6.224 / 0.663  
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet  
Location Lat / Long: N 32° 9' 9.85345", W 104° 13' 40.99822"  
Location Grid N/E Y/X: N 419317.000 ftUS, E 573918.300 ftUS  
CRS Grid Convergence Angle: 0.0560°  
Grid Scale Factor: 0.99991031

Survey / DLS Computation: Minimum Curvature / Lubinski  
Vertical Section Azimuth: 1.374° (Grid North)  
Vertical Section Origin: 0.000 ft, 0.000 ft  
TVD Reference Datum: RKB  
TVD Reference Elevation: 3326.000 ft above  
Seabed / Ground Elevation: 3308.000 ft above  
Magnetic Declination: 7.666°  
Total Gravity Field Strength: 998.4900mgn (9.80665 Based)  
Total Magnetic Field Strength: 48201.492 nT  
Magnetic Dip Angle: 59.921°  
Declination Date: March 04, 2014  
Magnetic Declination Model: BGGM 2013  
North Reference: Grid North  
Grid Convergence Used: 0.0560°  
Total Corr Mag North->Grid North: 7.6102°  
Local Coord Referenced To: Structure Reference Point

| Comments                    | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' '') | Longitude<br>(E/W ° ' '') |
|-----------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|--------------------------|---------------------------|
| SHL Scoter 6<br>Federal #3H | 0.00       | 0.00        | 1.37             | 0.00        | 0.00         | 0.00       | 0.00       | N/A              | 419317.00          | 573918.30         | N 32° 9' 9.85"           | W 104° 13' 41.00"         |
|                             | 175.00     | 1.19        | 248.92           | 174.99      | -0.69        | -0.65      | -1.70      | 0.68             | 419316.35          | 573916.60         | N 32° 9' 9.85"           | W 104° 13' 41.02"         |
|                             | 236.00     | 1.58        | 210.82           | 235.97      | -1.67        | -1.60      | -2.72      | 1.60             | 419315.40          | 573915.58         | N 32° 9' 9.84"           | W 104° 13' 41.03"         |
|                             | 241.00     | 1.58        | 209.89           | 240.97      | -1.79        | -1.72      | -2.79      | 0.51             | 419315.28          | 573915.51         | N 32° 9' 9.84"           | W 104° 13' 41.03"         |
|                             | 299.00     | 1.49        | 204.71           | 298.95      | -3.18        | -3.10      | -3.50      | 0.29             | 419313.90          | 573914.80         | N 32° 9' 9.82"           | W 104° 13' 41.04"         |
|                             | 361.00     | 1.41        | 208.70           | 360.93      | -4.60        | -4.50      | -4.20      | 0.21             | 419312.50          | 573914.10         | N 32° 9' 9.81"           | W 104° 13' 41.05"         |
|                             | 448.09     | 1.32        | 204.31           | 447.99      | -6.48        | -6.36      | -5.13      | 0.16             | 419310.64          | 573913.17         | N 32° 9' 9.79"           | W 104° 13' 41.06"         |
|                             | 565.91     | 1.41        | 212.40           | 565.78      | -8.97        | -8.82      | -6.47      | 0.18             | 419308.18          | 573911.83         | N 32° 9' 9.77"           | W 104° 13' 41.07"         |
|                             | 621.86     | 2.20        | 5.91             | 621.72      | -8.49        | -8.33      | -6.73      | 6.29             | 419308.67          | 573911.58         | N 32° 9' 9.77"           | W 104° 13' 41.08"         |
|                             | 680.47     | 1.41        | 219.52           | 680.32      | -7.93        | -7.77      | -7.07      | 5.91             | 419309.23          | 573911.23         | N 32° 9' 9.78"           | W 104° 13' 41.08"         |
|                             | 741.37     | 1.58        | 214.02           | 741.20      | -9.23        | -9.04      | -8.02      | 0.36             | 419307.96          | 573910.29         | N 32° 9' 9.76"           | W 104° 13' 41.09"         |
|                             | 831.68     | 1.41        | 219.83           | 831.47      | -11.15       | -10.93     | -9.42      | 0.25             | 419306.07          | 573908.88         | N 32° 9' 9.75"           | W 104° 13' 41.11"         |
|                             | 924.13     | 1.41        | 221.80           | 923.90      | -12.91       | -12.65     | -10.91     | 0.05             | 419304.35          | 573907.39         | N 32° 9' 9.73"           | W 104° 13' 41.13"         |
|                             | 1015.35    | 1.41        | 216.40           | 1015.09     | -14.68       | -14.39     | -12.32     | 0.15             | 419302.61          | 573905.98         | N 32° 9' 9.71"           | W 104° 13' 41.14"         |
|                             | 1106.68    | 1.49        | 229.71           | 1106.39     | -16.39       | -16.06     | -13.90     | 0.38             | 419300.94          | 573904.40         | N 32° 9' 9.69"           | W 104° 13' 41.16"         |
|                             | 1283.00    | 1.41        | 222.73           | 1282.65     | -19.54       | -19.14     | -17.12     | 0.11             | 419297.87          | 573901.18         | N 32° 9' 9.66"           | W 104° 13' 41.20"         |
|                             | 1471.00    | 1.19        | 200.49           | 1470.61     | -23.12       | -22.66     | -19.37     | 0.29             | 419294.34          | 573898.93         | N 32° 9' 9.63"           | W 104° 13' 41.22"         |
|                             | 1661.00    | 1.19        | 159.22           | 1660.57     | -26.81       | -26.36     | -19.36     | 0.44             | 419290.65          | 573898.94         | N 32° 9' 9.59"           | W 104° 13' 41.22"         |
|                             | 1987.00    | 1.80        | 142.39           | 1986.46     | -33.93       | -33.58     | -15.04     | 0.23             | 419283.43          | 573903.27         | N 32° 9' 9.52"           | W 104° 13' 41.17"         |
|                             | 2049.40    | 1.58        | 329.82           | 2048.85     | -33.96       | -33.61     | -14.87     | 5.41             | 419283.39          | 573903.43         | N 32° 9' 9.52"           | W 104° 13' 41.17"         |
|                             | 2143.86    | 1.71        | 138.79           | 2143.30     | -33.88       | -33.54     | -14.60     | 3.47             | 419283.46          | 573903.71         | N 32° 9' 9.52"           | W 104° 13' 41.17"         |
|                             | 2239.23    | 1.58        | 141.82           | 2238.63     | -35.95       | -35.65     | -12.85     | 0.16             | 419281.35          | 573905.46         | N 32° 9' 9.50"           | W 104° 13' 41.15"         |
|                             | 2332.67    | 1.71        | 139.71           | 2332.03     | -37.98       | -37.72     | -11.15     | 0.15             | 419279.28          | 573907.15         | N 32° 9' 9.48"           | W 104° 13' 41.13"         |
|                             | 2522.91    | 1.49        | 141.60           | 2522.19     | -42.00       | -41.83     | -7.78      | 0.12             | 419275.18          | 573910.53         | N 32° 9' 9.44"           | W 104° 13' 41.09"         |
|                             | 2616.18    | 1.32        | 144.90           | 2615.44     | -43.80       | -43.66     | -6.40      | 0.20             | 419273.35          | 573911.90         | N 32° 9' 9.42"           | W 104° 13' 41.07"         |
|                             | 2709.71    | 1.41        | 148.72           | 2708.94     | -45.63       | -45.52     | -5.19      | 0.14             | 419271.48          | 573913.11         | N 32° 9' 9.40"           | W 104° 13' 41.06"         |
|                             | 2808.39    | 1.49        | 147.71           | 2807.59     | -47.72       | -47.84     | -3.87      | 0.09             | 419269.36          | 573914.43         | N 32° 9' 9.38"           | W 104° 13' 41.04"         |
|                             | 2901.89    | 1.49        | 149.03           | 2901.06     | -49.76       | -49.71     | -2.60      | 0.04             | 419267.29          | 573915.70         | N 32° 9' 9.36"           | W 104° 13' 41.03"         |
|                             | 2996.82    | 1.49        | 149.42           | 2995.95     | -51.85       | -51.84     | -1.33      | 0.01             | 419265.17          | 573916.97         | N 32° 9' 9.34"           | W 104° 13' 41.01"         |
|                             | 3092.25    | 1.41        | 149.82           | 3091.35     | -53.91       | -53.92     | -0.11      | 0.08             | 419263.09          | 573918.19         | N 32° 9' 9.32"           | W 104° 13' 41.00"         |
|                             | 3186.54    | 1.41        | 150.52           | 3185.61     | -55.89       | -55.93     | 1.04       | 0.02             | 419261.07          | 573919.34         | N 32° 9' 9.30"           | W 104° 13' 40.99"         |
|                             | 3281.75    | 1.41        | 146.52           | 3280.80     | -57.86       | -57.93     | 2.26       | 0.10             | 419259.08          | 573920.56         | N 32° 9' 9.28"           | W 104° 13' 40.97"         |
|                             | 3376.18    | 1.32        | 152.81           | 3375.20     | -59.77       | -59.86     | 3.40       | 0.18             | 419257.14          | 573921.70         | N 32° 9' 9.26"           | W 104° 13' 40.96"         |
|                             | 3470.50    | 1.10        | 162.39           | 3469.50     | -61.58       | -61.69     | 4.17       | 0.32             | 419255.31          | 573922.47         | N 32° 9' 9.24"           | W 104° 13' 40.95"         |
|                             | 3566.42    | 0.88        | 159.80           | 3565.40     | -63.13       | -63.26     | 4.71       | 0.23             | 419253.74          | 573923.00         | N 32° 9' 9.23"           | W 104° 13' 40.94"         |
|                             | 3660.21    | 1.01        | 158.70           | 3659.18     | -64.56       | -64.71     | 5.25       | 0.14             | 419252.30          | 573923.55         | N 32° 9' 9.21"           | W 104° 13' 40.94"         |
|                             | 3755.61    | 0.88        | 146.13           | 3754.57     | -65.94       | -66.10     | 5.97       | 0.26             | 419250.91          | 573924.27         | N 32° 9' 9.20"           | W 104° 13' 40.93"         |
|                             | 3849.82    | 1.19        | 148.19           | 3848.76     | -67.35       | -67.53     | 6.89       | 0.33             | 419249.47          | 573925.19         | N 32° 9' 9.19"           | W 104° 13' 40.92"         |
|                             | 3945.54    | 0.88        | 151.93           | 3944.47     | -68.82       | -69.03     | 7.76       | 0.33             | 419247.98          | 573926.06         | N 32° 9' 9.17"           | W 104° 13' 40.91"         |
|                             | 4039.37    | 1.19        | 163.93           | 4038.28     | -70.38       | -70.60     | 8.37       | 0.40             | 419246.41          | 573926.66         | N 32° 9' 9.15"           | W 104° 13' 40.90"         |
|                             | 4133.78    | 1.19        | 171.62           | 4132.67     | -72.28       | -72.51     | 8.78       | 0.17             | 419244.50          | 573927.08         | N 32° 9' 9.14"           | W 104° 13' 40.90"         |
|                             | 4228.84    | 1.01        | 174.52           | 4227.71     | -74.08       | -74.32     | 9.00       | 0.20             | 419242.69          | 573927.30         | N 32° 9' 9.12"           | W 104° 13' 40.89"         |
|                             | 4323.31    | 0.70        | 168.50           | 4322.17     | -75.47       | -75.71     | 9.20       | 0.34             | 419241.29          | 573927.50         | N 32° 9' 9.10"           | W 104° 13' 40.89"         |
|                             | 4417.20    | 0.62        | 157.12           | 4416.06     | -76.49       | -76.74     | 9.51       | 0.16             | 419240.26          | 573927.81         | N 32° 9' 9.09"           | W 104° 13' 40.89"         |
|                             | 4514.28    | 0.88        | 158.52           | 4513.13     | -77.66       | -77.92     | 9.99       | 0.27             | 419239.09          | 573928.29         | N 32° 9' 9.08"           | W 104° 13' 40.88"         |
|                             | 4607.69    | 1.01        | 153.42           | 4606.53     | -79.05       | -79.33     | 10.62      | 0.17             | 419237.68          | 573928.92         | N 32° 9' 9.07"           | W 104° 13' 40.88"         |
|                             | 4703.41    | 0.88        | 171.22           | 4702.23     | -80.52       | -80.81     | 11.11      | 0.33             | 419236.20          | 573929.41         | N 32° 9' 9.05"           | W 104° 13' 40.87"         |
|                             | 4797.65    | 0.88        | 165.03           | 4796.46     | -81.92       | -82.22     | 11.41      | 0.10             | 419234.79          | 573929.70         | N 32° 9' 9.04"           | W 104° 13' 40.87"         |
|                             | 4890.89    | 1.19        | 167.00           | 4889.69     | -83.55       | -83.86     | 11.81      | 0.33             | 419233.15          | 573930.11         | N 32° 9' 9.02"           | W 104° 13' 40.86"         |
|                             | 4984.75    | 1.10        | 165.51           | 4983.53     | -85.36       | -85.68     | 12.25      | 0.10             | 419231.33          | 573930.55         | N 32° 9' 9.01"           | W 104° 13' 40.86"         |
|                             | 5081.88    | 1.19        | 177.93           | 5080.64     | -87.26       | -87.59     | 12.52      | 0.27             | 419229.42          | 573930.82         | N 32° 9' 8.99"           | W 104° 13' 40.85"         |
|                             | 5177.63    | 1.10        | 178.43           | 5176.37     | -89.17       | -89.50     | 12.58      | 0.09             | 419227.51          | 573930.88         | N 32° 9' 8.97"           | W 104° 13' 40.85"         |
|                             | 5272.47    | 1.32        | 179.70           | 5271.19     | -91.17       | -91.50     | 12.61      | 0.23             | 419225.51          | 573930.91         | N 32° 9' 8.95"           | W 104° 13' 40.85"         |
|                             | 5366.50    | 1.32        | 175.62           | 5365.19     | -93.33       | -93.67     | 12.70      | 0.10             | 419223.34          | 573931.00         | N 32° 9' 8.93"           | W 104° 13' 40.85"         |
|                             | 5461.37    | 1.19        | 173.20           | 5460.04     | -95.40       | -95.73     | 12.90      | 0.15             | 419221.28          | 573931.20         | N 32° 9' 8.91"           | W 104° 13' 40.85"         |
|                             | 5555.63    | 1.41        | 168.50           | 5554.28     | -97.50       | -97.84     | 13.25      | 0.26             | 419219.17          | 573931.55         | N 32° 9' 8.89"           | W 104° 13' 40.85"         |
|                             | 5650.98    | 1.41        | 180.71           | 5649.60     | -99.81       | -100.16    | 13.47      | 0.31             | 419216.84          | 573931.77         | N 32° 9' 8.86"           | W 104° 13' 40.84"         |
|                             | 5747.53    | 1.58        | 188.71           | 5746.11     | -102.32      | -102.67    | 13.25      | 0.28             | 419214.34          | 573931.55         | N 32° 9' 8.84"           | W 104° 13' 40.85"         |
|                             | 5840.21    | 1.32        | 198.60           | 5838.76     | -104.61      | -104.94    | 12.72      | 0.39             | 419212.07          | 573931.02         | N 32° 9' 8.81"           | W 104° 13' 40.85"         |
|                             | 5934.98    | 0.79        | 184.10           | 5933.52     | -106.27      | -106.61    | 12.55      | 0.85             | 419210.40          | 573930.85         | N 32° 9' 8.80"           | W 104° 13' 40.85"         |
|                             | 6029.39    | 0.79        | 262.63           | 6027.92     | -106.99      | -107.32    | 12.08      | 1.27             | 419209.69          | 573930.38         | N 32° 9' 8.79"           | W 104° 13' 40.86"         |
|                             | 6123.85    | 0.62        | 175.00           | 6122.38     | -107.60      | -107.91    | 11.48      | 1.04             | 419209.10          | 573929.78         | N 32° 9' 8.79"           | W 104° 13' 40.87"         |
|                             | 6220.78    | 1.01        | 134.00           | 6219.30     | -108.70      | -109.02    | 12.14      | 0.70             | 419207.99          | 573930.44         | N 32° 9' 8.77"           | W 104° 13' 40.86"         |
|                             | 6313.80    | 1.49        | 147.32           | 6312.30     | -110.26      | -110.61    | 13.38      | 0.60             | 419206.40          | 573931.68         | N 32° 9' 8.76"           | W 104° 13' 40.84"         |
|                             | 6408.01    | 1.49        | 151.23           | 6406.48     | -112.33      | -112.72    | 14.63      | 0.11             | 419204.29          | 573932.93         | N 32° 9' 8.74"           | W 104° 13' 40.83"         |

| Comments | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(ft/100ft) | Northing<br>(NUS) | Easting<br>(EUS) | Latitude<br>(N/S) | Longitude<br>(E/W)     |
|----------|------------|-------------|------------------|-------------|--------------|------------|------------|-------------------|-------------------|------------------|-------------------|------------------------|
|          | 6503.72    | 1.32        | 158.61           | 6502.16     | -114.43      | -114.83    | 15.63      | 0.26              | 419202.18         | 573933.93        | N 32              | 9 8.72 W 104 13 40.82  |
|          | 6664.00    | 0.83        | 133.23           | 6662.41     | -116.90      | -117.35    | 17.15      | 0.42              | 419189.66         | 573935.45        | N 32              | 9 8.69 W 104 13 40.80  |
|          | 6698.00    | 0.88        | 130.42           | 6696.40     | -117.23      | -117.69    | 17.53      | 0.19              | 419189.33         | 573935.83        | N 32              | 9 8.69 W 104 13 40.80  |
|          | 6729.00    | 2.95        | 136.73           | 6727.39     | -117.95      | -118.42    | 18.26      | 6.70              | 419188.59         | 573936.56        | N 32              | 9 8.68 W 104 13 40.79  |
|          | 6759.00    | 6.29        | 140.78           | 6757.28     | -119.75      | -120.26    | 19.83      | 11.18             | 419196.75         | 573938.13        | N 32              | 9 8.66 W 104 13 40.77  |
|          | 6792.00    | 8.65        | 144.66           | 6790.00     | -123.11      | -123.68    | 22.41      | 7.31              | 419193.33         | 573940.70        | N 32              | 9 8.63 W 104 13 40.74  |
|          | 6825.00    | 6.82        | 136.09           | 6822.70     | -126.48      | -127.12    | 25.20      | 6.54              | 419189.89         | 573943.50        | N 32              | 9 8.60 W 104 13 40.71  |
|          | 6856.00    | 2.22        | 101.20           | 6853.60     | -127.88      | -128.56    | 27.07      | 16.64             | 419188.45         | 573945.37        | N 32              | 9 8.58 W 104 13 40.68  |
|          | 6889.00    | 3.79        | 351.69           | 6886.57     | -126.91      | -127.61    | 27.54      | 15.12             | 419189.41         | 573945.84        | N 32              | 9 8.59 W 104 13 40.68  |
|          | 6920.00    | 7.38        | 346.86           | 6917.42     | -123.97      | -124.65    | 28.94      | 11.67             | 419192.36         | 573945.23        | N 32              | 9 8.62 W 104 13 40.69  |
|          | 6951.00    | 8.39        | 359.10           | 6948.13     | -119.78      | -120.45    | 26.45      | 6.30              | 419196.56         | 573944.75        | N 32              | 9 8.66 W 104 13 40.69  |
|          | 6985.00    | 9.46        | 14.07            | 6981.72     | -114.58      | -115.26    | 27.09      | 7.49              | 419201.75         | 573945.39        | N 32              | 9 8.71 W 104 13 40.68  |
|          | 7014.00    | 11.04       | 19.01            | 7010.26     | -109.61      | -110.32    | 28.57      | 6.23              | 419206.69         | 573946.87        | N 32              | 9 8.76 W 104 13 40.67  |
|          | 7045.00    | 13.79       | 19.10            | 7040.53     | -103.26      | -104.02    | 30.75      | 8.87              | 419212.99         | 573949.05        | N 32              | 9 8.82 W 104 13 40.64  |
|          | 7077.00    | 18.24       | 15.69            | 7071.28     | -94.77       | -95.59     | 33.35      | 14.21             | 419221.41         | 573951.65        | N 32              | 9 8.91 W 104 13 40.61  |
|          | 7108.00    | 21.98       | 10.56            | 7100.39     | -84.34       | -85.22     | 35.73      | 13.33             | 419231.79         | 573954.03        | N 32              | 9 9.01 W 104 13 40.58  |
|          | 7138.00    | 24.61       | 2.66             | 7127.95     | -72.54       | -73.45     | 37.05      | 13.60             | 419243.55         | 573955.35        | N 32              | 9 9.13 W 104 13 40.57  |
|          | 7169.00    | 27.33       | 356.36           | 7155.82     | -59.00       | -59.90     | 36.90      | 12.49             | 419257.11         | 573955.19        | N 32              | 9 9.26 W 104 13 40.57  |
|          | 7201.00    | 30.63       | 351.64           | 7183.81     | -43.64       | -44.49     | 35.24      | 12.54             | 419272.51         | 573953.54        | N 32              | 9 9.41 W 104 13 40.59  |
|          | 7230.00    | 34.54       | 352.75           | 7208.24     | -28.22       | -29.02     | 33.13      | 13.64             | 419287.98         | 573951.43        | N 32              | 9 9.57 W 104 13 40.61  |
|          | 7264.00    | 38.78       | 353.81           | 7235.51     | -8.13        | -8.87      | 30.77      | 12.61             | 419308.13         | 573949.06        | N 32              | 9 9.77 W 104 13 40.64  |
|          | 7312.00    | 45.46       | 355.47           | 7271.10     | 23.83        | 23.17      | 27.79      | 14.11             | 419340.16         | 573946.09        | N 32              | 9 10.08 W 104 13 40.67 |
|          | 7349.00    | 51.75       | 355.73           | 7295.55     | 51.43        | 50.83      | 25.67      | 17.01             | 419367.82         | 573943.96        | N 32              | 9 10.36 W 104 13 40.70 |
|          | 7380.00    | 55.30       | 358.95           | 7313.98     | 76.29        | 75.72      | 24.52      | 14.17             | 419392.71         | 573942.82        | N 32              | 9 10.60 W 104 13 40.71 |
|          | 7407.00    | 56.55       | 0.99             | 7329.11     | 98.64        | 98.08      | 24.52      | 7.78              | 419415.07         | 573942.81        | N 32              | 9 10.82 W 104 13 40.71 |
|          | 7443.00    | 59.24       | 1.10             | 7348.24     | 129.13       | 128.57     | 25.07      | 7.48              | 419445.56         | 573943.37        | N 32              | 9 11.13 W 104 13 40.71 |
|          | 7475.00    | 63.46       | 1.91             | 7363.58     | 157.21       | 156.63     | 25.81      | 13.37             | 419473.62         | 573944.11        | N 32              | 9 11.40 W 104 13 40.70 |
|          | 7503.00    | 68.16       | 2.33             | 7375.05     | 182.74       | 182.15     | 26.76      | 16.84             | 419499.13         | 573945.06        | N 32              | 9 11.66 W 104 13 40.68 |
|          | 7538.00    | 75.77       | 3.14             | 7385.88     | 215.99       | 215.37     | 28.35      | 21.85             | 419532.35         | 573946.65        | N 32              | 9 11.98 W 104 13 40.67 |
|          | 7567.00    | 82.16       | 4.09             | 7391.43     | 244.41       | 243.76     | 30.15      | 22.27             | 419560.74         | 573948.45        | N 32              | 9 12.27 W 104 13 40.64 |
|          | 7600.00    | 88.80       | 4.56             | 7394.03     | 277.25       | 276.55     | 32.63      | 20.17             | 419593.52         | 573950.93        | N 32              | 9 12.59 W 104 13 40.62 |
|          | 7631.00    | 93.79       | 4.55             | 7393.32     | 308.18       | 307.43     | 35.09      | 16.10             | 419624.40         | 573953.39        | N 32              | 9 12.90 W 104 13 40.59 |
|          | 7694.00    | 95.96       | 5.15             | 7387.97     | 370.84       | 369.97     | 40.40      | 3.57              | 419686.94         | 573958.69        | N 32              | 9 13.51 W 104 13 40.52 |
|          | 7789.00    | 91.99       | 5.42             | 7381.39     | 465.37       | 464.32     | 49.12      | 4.19              | 419781.28         | 573967.42        | N 32              | 9 14.45 W 104 13 40.42 |
|          | 7862.00    | 91.38       | 4.27             | 7378.65     | 558.15       | 556.95     | 56.97      | 1.40              | 419873.90         | 573975.27        | N 32              | 9 15.36 W 104 13 40.33 |
|          | 7977.00    | 91.37       | 1.89             | 7376.37     | 653.08       | 651.78     | 62.08      | 2.50              | 419968.72         | 573980.37        | N 32              | 9 16.30 W 104 13 40.27 |
|          | 8072.00    | 91.31       | 0.06             | 7374.15     | 748.05       | 746.73     | 63.69      | 1.93              | 420063.66         | 573981.99        | N 32              | 9 17.24 W 104 13 40.25 |
|          | 8165.00    | 93.24       | 0.36             | 7370.46     | 840.95       | 839.65     | 64.03      | 2.10              | 420156.58         | 573982.33        | N 32              | 9 18.16 W 104 13 40.24 |
|          | 8260.00    | 93.51       | 1.60             | 7364.87     | 935.78       | 934.47     | 65.66      | 1.33              | 420251.39         | 573983.95        | N 32              | 9 19.10 W 104 13 40.22 |
|          | 8355.00    | 91.10       | 3.22             | 7361.05     | 1030.68      | 1029.30    | 69.65      | 3.06              | 420346.21         | 573987.94        | N 32              | 9 20.04 W 104 13 40.18 |
|          | 8450.00    | 92.30       | 4.65             | 7358.23     | 1125.54      | 1124.03    | 76.16      | 1.96              | 420440.93         | 573994.46        | N 32              | 9 20.98 W 104 13 40.10 |
|          | 8545.00    | 93.10       | 3.74             | 7353.75     | 1220.31      | 1218.67    | 83.11      | 1.27              | 420535.56         | 574001.40        | N 32              | 9 21.91 W 104 13 40.02 |
|          | 8644.00    | 92.93       | 3.31             | 7348.54     | 1319.11      | 1317.35    | 89.18      | 0.47              | 420634.23         | 574007.48        | N 32              | 9 22.89 W 104 13 39.95 |
|          | 8740.00    | 93.10       | 2.13             | 7343.50     | 1414.95      | 1413.10    | 93.73      | 1.24              | 420729.97         | 574012.02        | N 32              | 9 23.84 W 104 13 39.89 |
|          | 8835.00    | 93.75       | 2.06             | 7337.82     | 1509.77      | 1507.87    | 97.20      | 0.69              | 420824.73         | 574015.49        | N 32              | 9 24.77 W 104 13 39.85 |
|          | 8931.00    | 94.06       | 0.11             | 7331.28     | 1605.54      | 1603.63    | 99.01      | 2.05              | 420920.48         | 574017.30        | N 32              | 9 25.72 W 104 13 39.83 |
|          | 9022.00    | 92.41       | 359.55           | 7326.15     | 1696.36      | 1694.48    | 98.74      | 1.91              | 421011.32         | 574017.03        | N 32              | 9 26.62 W 104 13 39.83 |
|          | 9117.00    | 88.14       | 359.14           | 7325.69     | 1791.28      | 1789.49    | 97.66      | 4.52              | 421106.28         | 574015.95        | N 32              | 9 27.56 W 104 13 39.84 |
|          | 9212.00    | 88.25       | 358.86           | 7328.68     | 1886.15      | 1884.39    | 96.00      | 0.32              | 421201.21         | 574014.29        | N 32              | 9 28.50 W 104 13 39.86 |
|          | 9306.00    | 88.32       | 358.33           | 7331.50     | 1979.99      | 1978.32    | 93.70      | 0.57              | 421295.13         | 574011.99        | N 32              | 9 29.43 W 104 13 39.89 |
|          | 9401.00    | 88.28       | 357.04           | 7334.31     | 2074.75      | 2073.19    | 89.86      | 1.36              | 421390.00         | 574008.15        | N 32              | 9 30.37 W 104 13 39.93 |
|          | 9496.00    | 88.32       | 356.27           | 7337.13     | 2169.39      | 2167.99    | 84.32      | 0.81              | 421484.79         | 574002.61        | N 32              | 9 31.31 W 104 13 39.99 |
|          | 9591.00    | 88.28       | 356.82           | 7339.95     | 2264.01      | 2262.77    | 78.60      | 0.58              | 421579.57         | 573996.89        | N 32              | 9 32.24 W 104 13 40.06 |
|          | 9686.00    | 88.25       | 358.64           | 7342.83     | 2358.77      | 2357.65    | 74.84      | 1.92              | 421674.44         | 573993.13        | N 32              | 9 33.18 W 104 13 40.10 |
|          | 9780.00    | 88.42       | 0.25             | 7345.56     | 2452.67      | 2451.61    | 73.93      | 1.72              | 421768.38         | 573992.22        | N 32              | 9 34.11 W 104 13 40.11 |
|          | 9875.00    | 88.42       | 0.81             | 7348.18     | 2547.63      | 2546.57    | 74.81      | 0.59              | 421863.33         | 573993.10        | N 32              | 9 35.05 W 104 13 40.10 |
|          | 9970.00    | 88.49       | 1.59             | 7350.74     | 2642.59      | 2641.51    | 76.79      | 0.82              | 421958.27         | 573995.09        | N 32              | 9 35.99 W 104 13 40.07 |
|          | 10064.00   | 89.21       | 2.01             | 7352.63     | 2736.57      | 2735.44    | 79.75      | 0.89              | 422052.19         | 573998.04        | N 32              | 9 36.92 W 104 13 40.04 |
|          | 10155.00   | 89.07       | 2.10             | 7353.99     | 2827.55      | 2826.37    | 83.01      | 0.18              | 422143.11         | 574001.30        | N 32              | 9 37.82 W 104 13 40.00 |
|          | 10250.00   | 89.14       | 2.76             | 7355.48     | 2922.52      | 2921.28    | 87.04      | 0.70              | 422238.01         | 574005.33        | N 32              | 9 38.76 W 104 13 39.95 |
|          | 10349.00   | 90.62       | 3.72             | 7355.68     | 3021.47      | 3020.11    | 92.63      | 1.78              | 422336.84         | 574010.92        | N 32              | 9 39.74 W 104 13 39.89 |
|          | 10443.00   | 91.96       | 3.08             | 7353.57     | 3115.38      | 3113.92    | 98.21      | 1.58              | 422430.64         | 574016.50        | N 32              | 9 40.67 W 104 13 39.82 |
|          | 10537.00   | 91.69       | 1.73             | 7350.57     | 3209.32      | 3207.79    | 102.15     | 1.46              | 422524.50         | 574020.44        | N 32              | 9 41.59 W 104 13 39.77 |
|          | 10632.00   | 90.86       | 1.14             | 7348.46     | 3304.29      | 3302.74    | 104.53     | 1.07              | 422619.43         | 574022.82        | N 32              | 9 42.53 W 104 13 39.74 |
|          | 10727.00   | 90.72       | 0.59             | 7347.15     | 3399.28      | 3397.71    | 105.96     | 0.60              | 422714.40         | 574024.25        | N 32              | 9 43.47 W 104 13 39.73 |
|          | 10821.00   | 91.55       | 359.86           | 7345.29     | 3493.24      | 3491.69    | 106.33     | 1.18              | 422808.37         | 574024.62        | N 32              | 9 44.40 W 104 13 39.72 |
|          | 10916.00   | 91.38       | 359.98           | 7342.86     | 3588.18      | 3586.66    | 106.20     | 0.22              | 422903.33         | 574024.49        | N 32              | 9 45.34 W 104 13 39.72 |
|          | 11010.00   | 91.48       | 359.54           | 7340.51     | 3682.11      | 3680.63    | 105.80     | 0.48              | 422997.30         | 574024.09        | N 32              | 9 46.27 W 104 13 39.73 |
|          | 11105.00   | 91.20       | 358.82           | 7338.29     | 3777.02      | 3775.60    | 104.44     | 0.81              | 423092.25         | 574022.73        | N 32              | 9 47.21 W 104 13 39.74 |
|          | 11199.00   | 91.14       | 356.25           | 7336.37     | 3870.78      | 3869.48    | 100.40     | 2.73              | 423186.13         | 574018.69        | N 32              | 9 48.14 W 104 13 39.79 |
|          | 11293.00   | 91.44       | 355.96           | 7334.26     | 3964.36      | 3963.24    | 94.02      | 0.44              | 423279.88         | 574012.31        | N 32              | 9 49.07 W 104 13 39.86 |
|          | 11385.00   | 91.37       | 355.92           | 7332.00     | 4055.91      | 4054.98    | 87.51      | 0.09              | 423371.61         | 574005.80        | N 32              | 9 49.98 W 104 13 39.93 |
|          | 11479.00   | 91.58       | 356.72           | 7329.58     | 4149.52      | 4148.76    | 81.48      | 0.88              | 423465.38         | 573999.77        | N 32              | 9 50.91 W 104 13 40.00 |
|          | 11575.00   | 91.58       | 357.59           | 7326.93     | 4245.22      | 4244.60    | 76.71      | 0.91              | 423561.21         | 573995.01        | N 32              | 9 51.85 W 104 13 40.06 |
|          | 11671.00   | 91.44       | 359.67           | 7324.40     | 4341.07      | 4340.53    | 74.42      | 2.17              | 423657.14         | 573992.71        | N 32              | 9 52.80 W 104 13 40.08 |
|          | 11763.00   | 91.10       | 1.36             | 7322.36     | 4433.03      | 4432.50    | 75.24      | 1.87              | 423749.10         | 573993.54        | N 32              | 9 53.71 W 104 13 40.07 |
|          | 11858.00   | 91.38       | 3.26             | 7320.31     | 4528.00      | 4527.40    | 79.07      | 2.02              | 423843.99         | 573997.37        | N 32              | 9 54.65 W 104 13 40.03 |
|          | 11870.00   | 91.27       | 3.32             | 7320.03     | 4539         |            |            |                   |                   |                  |                   |                        |

| 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>(NS °. ' ")                             | Longitude<br>(EW °. ' ") |
|----------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-----------------------------------------------------|--------------------------|
|          | 18.000     |             | 1661.000         |             | Act Stns     | 30.000     | 30.000     | SLB_MWD-POOR     |                    |                   | Original Borehole / Cimarex<br>Scoter 6 Federal #3H |                          |
|          | 1661.000   |             | 1987.000         |             | 1/98.425     | 30.000     | 30.000     | SLB_MWD-POOR     |                    |                   | Original Borehole / Cimarex<br>Scoter 6 Federal #3H |                          |
|          | 1987.000   |             | 6503.720         |             | Act Stns     | 30.000     | 30.000     | SLB_MWD-POOR     |                    |                   | Original Borehole / Cimarex<br>Scoter 6 Federal #3H |                          |
|          | 6503.720   |             | 11870.000        |             | Act Stns     | 30.000     | 30.000     | SLB_MWD-STD      |                    |                   | Original Borehole / Cimarex<br>Scoter 6 Federal #3H |                          |
|          | 11870.000  |             | 11940.000        |             | Act Stns     | 30.000     | 30.000     | SLB_BLIND+TREND  |                    |                   | Original Borehole / Cimarex<br>Scoter 6 Federal #3H |                          |