



#### Well Details: CC 697-08-10B

| +N/-S | +E/-W | North     | East       | Latitude         | Longitude         | Slot |
|-------|-------|-----------|------------|------------------|-------------------|------|
| 0.00  | 0.00  | 634593.55 | 1225760.12 | 39° 32' 37.157 N | 108° 14' 44.832 W | R    |

#### REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well CC 697-08-10B - Slot R, True North  
Vertical (TVD) Reference: GL 8401' & RKB 30' @ 8431.00ft (H&P Rig)  
Section (VS) Reference: Slot - R(0.00N, 0.00E)  
Measured Depth Reference: GL 8401' & RKB 30' @ 8431.00ft (H&P Rig)  
Calculation Method: Minimum Curvature

#### PROJECT DETAILS: Garfield County, CO NAD27

Geodetic System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: Colorado Central 502

System Datum: Mean Sea Level

Plan: OH

10:01, April 16 2012  
Created By: Janie Cooke

# **OXY USA RMAT**

**Garfield County, CO NAD27  
Cascade Creek 697-08A Pad  
CC 697-08-10B - Slot R**

**OH**

**Design: OH**

## **Standard Survey Report**

**16 April, 2012**



## Scientific Drilling International, Inc.

## Survey Report



|                  |                           |                                     |  |
|------------------|---------------------------|-------------------------------------|--|
| <b>Company:</b>  | OXY USA RMAI              | <b>Local Co-ordinate Reference:</b> | Well CC 697-08-10B - Slot R              |
| <b>Project:</b>  | Garfield County, CO NAD27 | <b>TVD Reference:</b>               | GL 8401' & RKB 30' @ 8431.00ft (H&P Rig) |
| <b>Site:</b>     | Cascade Creek 697-08A Pad | <b>MD Reference:</b>                | GL 8401' & RKB 30' @ 8431.00ft (H&P Rig) |
| <b>Well:</b>     | CC 697-08-10B             | <b>North Reference:</b>             | True                                     |
| <b>Wellbore:</b> | OH                        | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | OH                        | <b>Database:</b>                    | Rockies Compass Server                   |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Garfield County, CO NAD27            |                      |                |
| <b>Map System:</b> | US State Plane 1927 (Exact solution) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)              |                      |                |
| <b>Map Zone:</b>   | Colorado Central 502                 |                      |                |

|                       |          |   |                   |                   |                   |
|-----------------------|----------|---|-------------------|-------------------|-------------------|
| Site                  |          | Cascade Creek 697-08A Pad, Sec 8 T6S R97W |                   |                   |                   |
| Site Position:        |          | Northing:                                 | 635,765.16 usft   | Latitude:         | 39° 32' 48.728 N  |
| From:                 | Lat/Long | Easting:                                  | 1,225,748.33 usft | Longitude:        | 108° 14' 45.434 W |
| Position Uncertainty: | 0.00 ft  | Slot Radius:                              | 13.200 in         | Grid Convergence: | -1.73 °           |

|                      |  |         |                     |                   |               |                   |
|----------------------|--|---------|---------------------|-------------------|---------------|-------------------|
| Well                 | CC 697-08-10B - Slot R, 372' FNL & 1808' FWL |         |                     |                   |               |                   |
| Well Position        | +N/-S  | 0.00 ft | Northing:           | 634,593.56 usft   | Latitude:     | 39° 32' 37.157 N  |
|                      | +E/-W  | 0.00 ft | Easting:            | 1,225,760.12 usft | Longitude:    | 108° 14' 44.832 W |
| Position Uncertainty |  | 0.00 ft | Wellhead Elevation: | ft                | Ground Level: | 8,401.00 ft       |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | OH                |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2010          | 12/23/2008         | 10.78                  | 65.80                | 52,475                     |

|                          |                              |                   |                   |                      |      |
|--------------------------|------------------------------|-------------------|-------------------|----------------------|------|
| <b>Design</b>            | OH                           |                   |                   |                      |      |
| <b>Audit Notes:</b>      |                              |                   |                   |                      |      |
| <b>Version:</b>          | 1.0                          | <b>Phase:</b>     | ACTUAL            | <b>Tie On Depth:</b> | 0.00 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b> | <b>Direction (°)</b> |      |
|                          | 0.00                         | 0.00              | 0.00              | 231.59               |      |

|                       |                |                                 |                  |                        |  |
|-----------------------|----------------|---------------------------------|------------------|------------------------|--|
| <b>Survey Program</b> | <b>Date</b>    | 04/16/2012                      |                  |                        |  |
| <b>From (ft)</b>      | <b>To (ft)</b> | <b>Survey (Wellbore)</b>        | <b>Tool Name</b> | <b>Description</b>     |  |
| 144.00                | 2,654.00       | Survey #1 - Surface MWD (OH)    | MWD-SDI          | MWD - Standard   SCWSA |  |
| 2,771.00              | 9,175.00       | Survey #2 - Production MWD (OH) | MWD-SDI          | MWD - Standard   SCWSA |  |

|                              |                        |                    |                            |                   |                   |                              |                              |                             |                            |
|------------------------------|------------------------|--------------------|----------------------------|-------------------|-------------------|------------------------------|------------------------------|-----------------------------|----------------------------|
| <b>Survey</b>                |                        |                    |                            |                   |                   |                              |                              |                             |                            |
| <b>Measured Depth (ft)</b>   | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b> | <b>Vertical Section (ft)</b> | <b>Dogleg Rate (°/100ft)</b> | <b>Build Rate (°/100ft)</b> | <b>Turn Rate (°/100ft)</b> |
| 0.00                         | 0.00                   | 0.00               | 0.00                       | 0.00              | 0.00              | 0.00                         | 0.00                         | 0.00                        | 0.00                       |
| 144.00                       | 0.61                   | 129.98             | 144.00                     | -0.49             | 0.59              | -0.15                        | 0.42                         | 0.42                        | 0.00                       |
| <b>First SDI Surface MWD</b> |                        |                    |                            |                   |                   |                              |                              |                             |                            |
| 235.00                       | 0.57                   | 251.29             | 234.99                     | -0.95             | 0.53              | 0.17                         | 1.13                         | -0.04                       | 133.33                     |
| 327.00                       | 2.55                   | 235.08             | 326.96                     | -2.27             | -1.58             | 2.65                         | 2.18                         | 2.15                        | -17.62                     |
| 419.00                       | 5.36                   | 236.13             | 418.73                     | -5.83             | -6.83             | 8.98                         | 3.06                         | 3.05                        | 1.14                       |
| 510.00                       | 7.39                   | 237.10             | 509.16                     | -11.38            | -15.27            | 19.04                        | 2.23                         | 2.23                        | 1.07                       |
| 600.00                       | 8.44                   | 233.49             | 598.30                     | -18.46            | -25.44            | 31.40                        | 1.29                         | 1.17                        | -4.01                      |
| 690.00                       | 9.41                   | 227.96             | 687.21                     | -27.31            | -36.21            | 45.35                        | 1.44                         | 1.08                        | -6.14                      |
| 782.00                       | 10.73                  | 226.02             | 777.79                     | -38.30            | -47.96            | 61.38                        | 1.48                         | 1.43                        | -2.11                      |

# Scientific Drilling International, Inc.

## Survey Report



|                  |                           |                                     |  |
|------------------|---------------------------|-------------------------------------|--|
| <b>Company:</b>  | OXY USA RMAT              | <b>Local Co-ordinate Reference:</b> | Well CC 697-08-10B - Slot R              |
| <b>Project:</b>  | Garfield County, CO NAD27 | <b>TVD Reference:</b>               | GL 8401' & RKB 30' @ 8431.00ft (H&P Rig) |
| <b>Site:</b>     | Cascade Creek 697-08A Pad | <b>MD Reference:</b>                | GL 8401' & RKB 30' @ 8431.00ft (H&P Rig) |
| <b>Well:</b>     | CC 697-08-10B             | <b>North Reference:</b>             | True                                     |
| <b>Wellbore:</b> | OH                        | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | OH                        | <b>Database:</b>                    | Rockies Compass Server                   |

### Survey

| Measured Depth (ft)             | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 872.00                          | 11.61           | 229.98      | 866.09              | -49.94     | -60.93     | 78.77                 | 1.30                  | 0.98                 | 4.40                |
| 967.00                          | 11.43           | 229.28      | 959.18              | -62.23     | -75.38     | 97.73                 | 0.24                  | -0.19                | -0.74               |
| 1,061.00                        | 12.75           | 233.14      | 1,051.09            | -74.53     | -90.74     | 117.41                | 1.65                  | 1.40                 | 4.11                |
| 1,156.00                        | 15.30           | 231.91      | 1,143.25            | -88.55     | -109.00    | 140.42                | 2.70                  | 2.68                 | -1.29               |
| 1,251.00                        | 17.76           | 232.97      | 1,234.32            | -105.01    | -130.43    | 167.45                | 2.61                  | 2.59                 | 1.12                |
| 1,345.00                        | 20.31           | 234.99      | 1,323.17            | -123.01    | -155.24    | 198.07                | 2.80                  | 2.71                 | 2.15                |
| 1,440.00                        | 22.34           | 233.14      | 1,411.66            | -143.30    | -183.20    | 232.58                | 2.25                  | 2.14                 | -1.95               |
| 1,534.00                        | 24.18           | 235.25      | 1,498.02            | -164.99    | -213.31    | 269.65                | 2.15                  | 1.96                 | 2.24                |
| 1,629.00                        | 24.36           | 237.10      | 1,584.63            | -186.72    | -245.75    | 308.57                | 0.82                  | 0.19                 | 1.95                |
| 1,724.00                        | 23.92           | 237.36      | 1,671.32            | -207.75    | -278.42    | 347.24                | 0.48                  | -0.46                | 0.27                |
| 1,818.00                        | 25.50           | 231.47      | 1,758.72            | -230.64    | -310.30    | 386.44                | 3.11                  | 1.68                 | -6.27               |
| 1,913.00                        | 27.44           | 229.89      | 1,841.76            | -257.48    | -343.04    | 428.77                | 2.17                  | 2.04                 | -1.66               |
| 2,007.00                        | 28.31           | 226.55      | 1,924.86            | -286.77    | -375.79    | 472.63                | 1.90                  | 0.93                 | -3.55               |
| 2,102.00                        | 27.79           | 226.11      | 2,008.70            | -317.61    | -408.10    | 517.11                | 0.59                  | -0.55                | -0.46               |
| 2,196.00                        | 26.29           | 225.06      | 2,092.42            | -347.51    | -438.63    | 559.61                | 1.67                  | -1.60                | -1.12               |
| 2,291.00                        | 27.61           | 228.13      | 2,177.11            | -377.07    | -469.92    | 602.49                | 2.02                  | 1.39                 | 3.23                |
| 2,385.00                        | 28.93           | 232.79      | 2,259.90            | -405.36    | -504.25    | 646.97                | 2.73                  | 1.40                 | 4.96                |
| 2,480.00                        | 27.00           | 233.76      | 2,343.81            | -432.01    | -539.95    | 691.50                | 2.09                  | -2.03                | 1.02                |
| 2,574.00                        | 27.08           | 233.41      | 2,427.53            | -457.37    | -574.34    | 734.20                | 0.19                  | 0.09                 | -0.37               |
| 2,654.00                        | 25.68           | 234.90      | 2,499.20            | -478.20    | -603.14    | 769.71                | 1.94                  | -1.75                | 1.86                |
| <b>Last SDI Surface MWD</b>     |                 |             |                     |            |            |                       |                       |                      |                     |
| 2,771.00                        | 24.17           | 236.93      | 2,605.30            | -505.85    | -643.96    | 818.87                | 1.48                  | -1.29                | 1.74                |
| <b>First SDI Production MWD</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 2,866.00                        | 26.87           | 233.53      | 2,691.03            | -529.22    | -677.53    | 859.70                | 3.23                  | 2.84                 | -3.58               |
| 2,961.00                        | 27.44           | 229.90      | 2,775.56            | -556.09    | -711.54    | 903.04                | 1.84                  | 0.60                 | -3.82               |
| 3,055.00                        | 27.61           | 225.22      | 2,858.93            | -585.38    | -743.57    | 946.34                | 2.31                  | 0.18                 | -4.98               |
| 3,150.00                        | 27.96           | 225.32      | 2,942.98            | -616.55    | -775.03    | 990.36                | 0.37                  | 0.37                 | 0.11                |
| 3,244.00                        | 29.28           | 226.82      | 3,025.49            | -647.78    | -807.47    | 1,035.17              | 1.60                  | 1.40                 | 1.60                |
| 3,339.00                        | 28.05           | 226.29      | 3,108.85            | -679.11    | -840.55    | 1,080.57              | 1.32                  | -1.29                | -0.56               |
| 3,433.00                        | 27.54           | 228.27      | 3,192.01            | -708.85    | -872.75    | 1,124.27              | 1.12                  | -0.54                | 2.11                |
| 3,528.00                        | 28.84           | 229.28      | 3,275.74            | -738.41    | -906.51    | 1,169.09              | 1.46                  | 1.37                 | 1.06                |
| 3,622.00                        | 29.63           | 234.37      | 3,357.78            | -766.75    | -942.58    | 1,214.96              | 2.77                  | 0.84                 | 5.41                |
| 3,717.00                        | 28.23           | 233.23      | 3,440.92            | -793.88    | -979.67    | 1,260.88              | 1.58                  | -1.47                | -1.20               |
| 3,811.00                        | 26.29           | 233.76      | 3,524.48            | -819.49    | -1,014.27  | 1,303.91              | 2.08                  | -2.06                | 0.56                |
| 3,905.00                        | 26.73           | 232.53      | 3,608.59            | -844.66    | -1,047.84  | 1,345.85              | 0.75                  | 0.47                 | -1.31               |
| 4,000.00                        | 27.44           | 231.56      | 3,693.17            | -871.27    | -1,081.94  | 1,389.10              | 0.88                  | 0.75                 | -1.02               |
| 4,094.00                        | 27.96           | 230.07      | 3,776.40            | -898.88    | -1,115.80  | 1,432.79              | 0.92                  | 0.55                 | -1.59               |
| 4,189.00                        | 26.20           | 228.66      | 3,860.98            | -927.03    | -1,148.63  | 1,476.00              | 1.97                  | -1.85                | -1.48               |
| 4,283.00                        | 27.00           | 230.59      | 3,945.04            | -954.28    | -1,180.70  | 1,518.06              | 1.25                  | 0.85                 | 2.05                |
| 4,378.00                        | 27.00           | 230.15      | 4,029.68            | -981.79    | -1,213.91  | 1,561.17              | 0.21                  | 0.00                 | -0.46               |
| 4,472.00                        | 27.70           | 230.15      | 4,113.17            | -1,009.46  | -1,247.07  | 1,604.35              | 0.74                  | 0.74                 | 0.00                |
| 4,567.00                        | 26.20           | 232.35      | 4,197.86            | -1,036.42  | -1,280.63  | 1,647.39              | 1.90                  | -1.58                | 2.32                |
| 4,661.00                        | 24.18           | 234.29      | 4,282.91            | -1,060.34  | -1,312.69  | 1,687.38              | 2.32                  | -2.15                | 2.06                |

# Scientific Drilling International, Inc.

## Survey Report



|                  |                           |                                     |  |
|------------------|---------------------------|-------------------------------------|--|
| <b>Company:</b>  | OXY USA RMAT              | <b>Local Co-ordinate Reference:</b> | Well CC 697-08-10B - Slot R              |
| <b>Project:</b>  | Garfield County, CO NAD27 | <b>TVD Reference:</b>               | GL 8401' & RKB 30' @ 8431.00ft (H&P Rig) |
| <b>Site:</b>     | Cascade Creek 697-08A Pad | <b>MD Reference:</b>                | GL 8401' & RKB 30' @ 8431.00ft (H&P Rig) |
| <b>Well:</b>     | CC 697-08-10B             | <b>North Reference:</b>             | True                                     |
| <b>Wellbore:</b> | OH                        | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | OH                        | <b>Database:</b>                    | Rockies Compass Server                   |

### Survey

| Measured Depth (ft)             | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 4,756.00                        | 24.36           | 230.68      | 4,369.52            | -1,084.11  | -1,343.65  | 1,726.40              | 1.57                  | 0.19                 | -3.80               |
| 4,850.00                        | 22.60           | 229.89      | 4,455.74            | -1,108.03  | -1,372.46  | 1,763.84              | 1.90                  | -1.87                | -0.84               |
| 4,945.00                        | 23.39           | 228.92      | 4,543.19            | -1,132.18  | -1,400.64  | 1,800.93              | 0.92                  | 0.83                 | -1.02               |
| 5,039.00                        | 22.60           | 232.35      | 4,629.72            | -1,155.48  | -1,429.01  | 1,837.63              | 1.65                  | -0.84                | 3.65                |
| 5,134.00                        | 19.70           | 234.02      | 4,718.31            | -1,176.04  | -1,456.42  | 1,871.89              | 3.12                  | -3.05                | 1.76                |
| 5,228.00                        | 18.73           | 232.88      | 4,807.08            | -1,194.46  | -1,481.28  | 1,902.80              | 1.11                  | -1.03                | -1.21               |
| 5,323.00                        | 18.62           | 234.20      | 4,897.59            | -1,211.61  | -1,504.46  | 1,931.63              | 2.26                  | -2.22                | 1.39                |
| 5,417.00                        | 17.15           | 235.78      | 4,987.53            | -1,227.27  | -1,526.82  | 1,958.88              | 0.75                  | 0.58                 | 1.68                |
| 5,512.00                        | 15.65           | 237.80      | 5,078.67            | -1,241.97  | -1,549.25  | 1,985.59              | 1.69                  | -1.58                | 2.13                |
| 5,606.00                        | 14.51           | 234.99      | 5,169.43            | -1,255.49  | -1,569.62  | 2,009.95              | 1.44                  | -1.21                | -2.99               |
| 5,701.00                        | 12.13           | 229.54      | 5,261.87            | -1,268.79  | -1,586.97  | 2,031.81              | 2.83                  | -2.51                | -5.74               |
| 5,796.00                        | 9.85            | 241.67      | 5,355.13            | -1,279.13  | -1,601.72  | 2,049.79              | 3.41                  | -2.40                | 12.77               |
| 5,890.00                        | 7.12            | 253.18      | 5,448.10            | -1,284.63  | -1,614.38  | 2,063.12              | 3.41                  | -2.90                | 12.24               |
| 5,985.00                        | 4.04            | 255.82      | 5,542.64            | -1,287.16  | -1,623.26  | 2,071.65              | 3.25                  | -3.24                | 2.78                |
| 6,079.00                        | 1.14            | 214.16      | 5,636.54            | -1,288.74  | -1,627.00  | 2,075.57              | 3.49                  | -3.09                | -44.32              |
| 6,174.00                        | 1.14            | 258.02      | 5,731.52            | -1,289.72  | -1,628.45  | 2,077.31              | 0.90                  | 0.00                 | 46.17               |
| 6,268.00                        | 1.67            | 294.75      | 5,825.50            | -1,289.34  | -1,630.61  | 2,078.77              | 1.08                  | 0.56                 | 39.07               |
| 6,363.00                        | 0.35            | 49.01       | 5,920.49            | -1,288.57  | -1,631.65  | 2,079.10              | 1.94                  | -1.39                | 120.27              |
| 6,457.00                        | 1.32            | 77.93       | 6,014.47            | -1,288.16  | -1,630.37  | 2,077.85              | 1.09                  | 1.03                 | 30.77               |
| 6,552.00                        | 1.41            | 55.25       | 6,109.45            | -1,287.26  | -1,628.34  | 2,075.70              | 0.57                  | 0.09                 | -23.87              |
| 6,647.00                        | 0.70            | 202.73      | 6,204.44            | -1,287.13  | -1,627.61  | 2,075.04              | 2.14                  | -0.75                | 155.24              |
| 6,741.00                        | 0.88            | 173.55      | 6,298.43            | -1,288.38  | -1,627.75  | 2,075.93              | 0.46                  | 0.19                 | -31.04              |
| 6,836.00                        | 0.53            | 101.40      | 6,393.43            | -1,289.19  | -1,627.23  | 2,076.03              | 0.92                  | -0.37                | -75.95              |
| 6,931.00                        | 0.09            | 199.22      | 6,488.42            | -1,289.35  | -1,626.83  | 2,075.81              | 0.58                  | -0.46                | 102.97              |
| 7,025.00                        | 0.79            | 305.21      | 6,582.42            | -1,289.04  | -1,627.38  | 2,076.05              | 0.87                  | 0.74                 | 112.76              |
| 7,119.00                        | 1.41            | 277.35      | 6,676.40            | -1,288.52  | -1,629.06  | 2,077.04              | 0.85                  | 0.66                 | -29.64              |
| 7,214.00                        | 0.62            | 242.20      | 6,771.39            | -1,288.61  | -1,630.67  | 2,078.36              | 1.02                  | -0.83                | -37.00              |
| 7,308.00                        | 1.06            | 173.99      | 6,865.38            | -1,289.71  | -1,631.03  | 2,079.33              | 1.07                  | 0.47                 | -72.56              |
| 7,403.00                        | 0.97            | 210.91      | 6,960.37            | -1,291.28  | -1,631.35  | 2,080.55              | 0.68                  | -0.09                | 38.86               |
| 7,498.00                        | 2.11            | 226.11      | 7,055.33            | -1,293.18  | -1,633.03  | 2,083.05              | 1.26                  | 1.20                 | 16.00               |
| 7,592.00                        | 2.37            | 252.66      | 7,149.26            | -1,294.96  | -1,636.13  | 2,086.58              | 1.13                  | 0.28                 | 28.24               |
| 7,687.00                        | 1.93            | 262.94      | 7,244.20            | -1,295.74  | -1,639.59  | 2,089.78              | 0.61                  | -0.46                | 10.82               |
| 7,781.00                        | 2.55            | 272.69      | 7,338.12            | -1,295.84  | -1,643.25  | 2,092.71              | 0.77                  | 0.66                 | 10.37               |
| 7,876.00                        | 2.20            | 272.52      | 7,433.04            | -1,295.66  | -1,647.18  | 2,095.68              | 0.37                  | -0.37                | -0.18               |
| 7,970.00                        | 0.44            | 147.10      | 7,527.02            | -1,295.88  | -1,648.79  | 2,097.08              | 2.64                  | -1.87                | -133.43             |
| 8,065.00                        | 0.97            | 135.58      | 7,622.01            | -1,296.76  | -1,648.03  | 2,097.03              | 0.57                  | 0.56                 | -12.13              |
| 8,160.00                        | 0.44            | 218.11      | 7,717.01            | -1,297.62  | -1,647.69  | 2,097.30              | 1.06                  | -0.56                | 86.87               |
| 8,254.00                        | 0.97            | 266.63      | 7,811.00            | -1,297.95  | -1,648.71  | 2,098.30              | 0.80                  | 0.58                 | 51.62               |
| 8,274.21                        | 1.22            | 261.80      | 7,831.21            | -1,297.99  | -1,649.09  | 2,098.63              | 1.34                  | 1.26                 | -23.92              |
| <b>CC 697-08-10B Rev Target</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 8,349.00                        | 2.20            | 253.89      | 7,905.96            | -1,298.51  | -1,651.26  | 2,100.65              | 1.34                  | 1.30                 | -10.57              |
| 8,443.00                        | 2.20            | 269.44      | 7,999.89            | -1,299.03  | -1,654.80  | 2,103.74              | 0.63                  | 0.00                 | 16.54               |
| 8,538.00                        | 2.20            | 272.34      | 8,094.82            | -1,298.97  | -1,658.45  | 2,106.58              | 0.12                  | 0.00                 | 3.05                |
| 8,632.00                        | 2.20            | 268.56      | 8,188.75            | -1,298.94  | -1,662.05  | 2,109.37              | 0.15                  | 0.00                 | -4.02               |



# Scientific Drilling International, Inc.

## Survey Report



|                  |                           |                                     |  |
|------------------|---------------------------|-------------------------------------|--|
| <b>Company:</b>  | OXY USA RMAT              | <b>Local Co-ordinate Reference:</b> | Well CC 697-08-10B - Slot R              |
| <b>Project:</b>  | Garfield County, CO NAD27 | <b>TVD Reference:</b>               | GL 8401' & RKB 30' @ 8431.00ft (H&P Rig) |
| <b>Site:</b>     | Cascade Creek 697-08A Pad | <b>MD Reference:</b>                | GL 8401' & RKB 30' @ 8431.00ft (H&P Rig) |
| <b>Well:</b>     | CC 697-08-10B             | <b>North Reference:</b>             | True                                     |
| <b>Wellbore:</b> | OH                        | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | OH                        | <b>Database:</b>                    | Rockies Compass Server                   |

### Survey

| Measured Depth (ft)                                   | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 8,727.00  | 2.90            | 263.47      | 8,283.66            | -1,299.26  | -1,666.26  | 2,112.87              | 0.77                  | 0.74                 | -5.36               |
| 8,821.00  | 3.08            | 266.10      | 8,377.53            | -1,299.70  | -1,671.14  | 2,116.97              | 0.24                  | 0.19                 | 2.80                |
| 8,916.00  | 3.87            | 269.44      | 8,472.36            | -1,299.91  | -1,676.90  | 2,121.60              | 0.86                  | 0.83                 | 3.52                |
| 9,010.00  | 1.76            | 273.57      | 8,566.24            | -1,299.85  | -1,681.51  | 2,125.18              | 2.25                  | -2.24                | 4.39                |
| 9,105.00  | 1.49            | 256.96      | 8,661.20            | -1,300.04  | -1,684.17  | 2,127.38              | 0.57                  | -0.28                | -17.48              |
| 9,120.00  | 1.41            | 252.13      | 8,676.20            | -1,300.14  | -1,684.53  | 2,127.73              | 0.97                  | -0.53                | -32.20              |
| <b>Last SDI Production MWD</b>                        |                 |             |                     |            |            |                       |                       |                      |                     |
| 9,175.00  | 1.41            | 252.13      | 8,731.18            | -1,300.55  | -1,685.82  | 2,129.00              | 0.00                  | 0.00                 | 0.00                |
| <b>Projection to TD - BHL = 633344.54, 1224035.77</b> |                 |             |                     |            |            |                       |                       |                      |                     |

### Design Annotations

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates |            | Comment                     |
|---------------------|---------------------|-------------------|------------|-----------------------------|
|                     |                     | +N/-S (ft)        | +E/-W (ft) |                             |
| 144.00              | 144.00              | -0.49             | 0.59       | First SDI Surface MWD       |
| 2,654.00            | 2,499.20            | -478.20           | -603.14    | Last SDI Surface MWD        |
| 2,771.00            | 2,605.30            | -505.85           | -643.96    | First SDI Production MWD    |
| 9,120.00            | 8,676.20            | -1,300.14         | -1,684.53  | Last SDI Production MWD     |
| 9,175.00            | 8,731.18            | -1,300.55         | -1,685.82  | Projection to TD            |
| 9,175.00            | 8,731.18            | -1,300.55         | -1,685.82  | BHL = 633344.54, 1224035.77 |

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