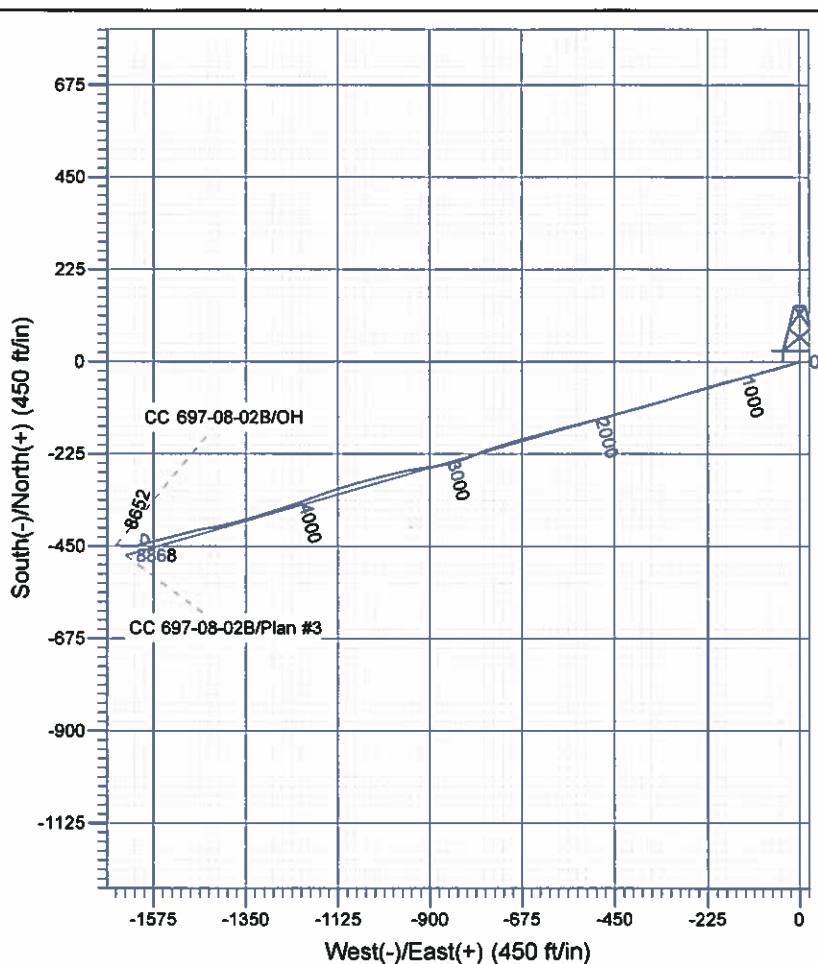
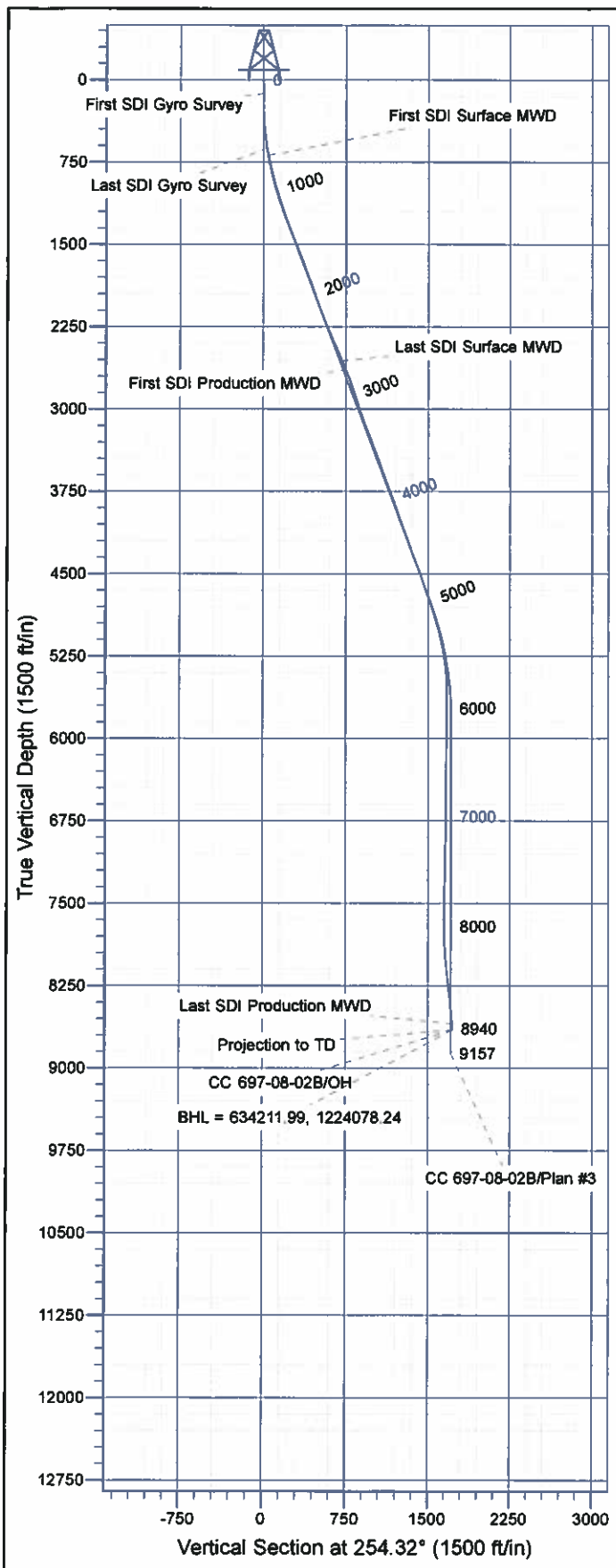




# Scientific Drilling

Company: OXY USA RMAT  
 Project: Garfield County, CO NAD27  
 Site: Cascade Creek 697-08A Pad  
 Well: CC 697-08-02B  
 Wellbore: OH  
 Design: OH



## Well Details: CC 697-08-02B

| +N/-S | +E/-W | North     | East       | Latitude         | Longitude         | Slot |
|-------|-------|-----------|------------|------------------|-------------------|------|
| 0.00  | 0.00  | 634607.65 | 1225754.98 | 39° 32' 37.295 N | 106° 14' 44.903 W | N    |

## REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well CC 697-08-02B - Slot N, True North  
 Vertical (TVD) Reference: GL 8401' & RKB 30' @ 8431.00ft (H&P Rig)  
 Section (VS) Reference: Slot - N(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

11:04, May 21 2012  
 Created By: Janie Cooke

# **OXY USA RMAT**

**Garfield County, CO NAD27  
Cascade Creek 697-08A Pad  
CC 697-08-02B - Slot N**

**OH**

**Design: OH**

## **Standard Survey Report**

**21 May, 2012**

# Scientific Drilling International

## Survey Report

|                  |                           |                                     |  |
|------------------|---------------------------|-------------------------------------|--|
| <b>Company:</b>  | OXY USA RMAT              | <b>Local Co-ordinate Reference:</b> | Well CC 697-08-02B - Slot N              |
| <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 697-08-02B             | <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 697-08-02B - Slot N, 358' FNL & 1801' FWL |         |                     |                   |               |                   |
| Well Position        | +N/-S  | 0.00 ft | Northing:           | 634,607.65 usft   | Latitude:     | 39° 32' 37.295 N  |
|                      | +E/-W  | 0.00 ft | Easting:            | 1,225,754.98 usft | Longitude:    | 108° 14' 44.903 W |
| Position Uncertainty |  | 0.00 ft | Wellhead Elevation: | ft                | Ground Level: | 8,401.00 ft       |

|                 |    |
|-----------------|----|
| <b>Wellbore</b> | OH |
|-----------------|----|

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|-----------|------------|-------------|-----------------|---------------|---------------------|
|           | IGRF2010   | 12/22/08    | 10.78           | 65.80         | 52,475              |

|               |    |
|---------------|----|
| <b>Design</b> | OH |
|---------------|----|

|              |     |        |        |                    |
|--------------|-----|--------|--------|--------------------|
| Audit Notes: |     |        |        |                    |
| Version:     | 1.0 | Phase: | ACTUAL | Tie On Depth: 0.00 |

| Vertical Section: | Depth From (TVD)<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Direction<br>(°) |
|-------------------|--------------------------|---------------|---------------|------------------|
|                   | 0.00                     | 0.00          | 0.00          | 254.32           |

| Survey Program |            | Date                            | 05/21/12                |  |
|----------------|------------|---------------------------------|-------------------------|--|
| From<br>(ft)   | To<br>(ft) | Survey (Wellbore)               | Tool Name               | Description                            |
| 123.00         | 621.00     | Survey #1 - Gyro Survey (OH)    | SDI Standard Keeper 103 | SDI Standard Wireline Keeper ver 1.0.3 |
| 691.00         | 2,683.00   | Survey #2 - Surface MWD (OH)    | MWD-SDI                 | MWD - Standard ISCWSA                  |
| 2,773.00       | 8,940.00   | Survey #3 - Production MWD (OH) | MWD-SDI                 | MWD - Standard ISCWSA                  |

| 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) |
| 0.00                         | 0.00            | 0.00        | 0.00                | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |
| 123.00                       | 0.18            | 42.36       | 123.00              | 0.14       | 0.13       | -0.16                 | 0.15                  | 0.15                 | 0.00                |
| <b>First SDI Gyro Survey</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 165.00                       | 0.09            | 139.75      | 165.00              | 0.17       | 0.20       | -0.23                 | 0.50                  | -0.21                | 231.88              |
| 255.00                       | 0.88            | 246.80      | 255.00              | -0.16      | -0.39      | 0.42                  | 1.01                  | 0.88                 | 118.94              |
| 347.00                       | 2.73            | 249.26      | 346.95              | -1.21      | -3.09      | 3.31                  | 2.01                  | 2.01                 | 2.67                |
| 439.00                       | 5.19            | 248.12      | 438.72              | -3.54      | -9.00      | 9.63                  | 2.68                  | 2.67                 | -1.24               |
| 531.00                       | 8.53            | 256.64      | 530.05              | -6.67      | -19.51     | 20.58                 | 3.79                  | 3.63                 | 9.26                |
| 621.00                       | 9.50            | 254.88      | 618.94              | -10.15     | -33.17     | 34.68                 | 1.12                  | 1.08                 | -1.96               |

# Scientific Drilling International

## Survey Report

|                  |                           |                                     |  |
|------------------|---------------------------|-------------------------------------|--|
| <b>Company:</b>  | OXY USA RMAT              | <b>Local Co-ordinate Reference:</b> | Well CC 697-08-02B - Slot N              |
| <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 697-08-02B             | <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) |
|---------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| <b>Last SDI Gyro Survey</b>     |                 |             |                     |            |            |                       |                       |                      |                     |
| 691.00                          | 10.64           | 250.83      | 687.86              | -13.78     | -44.85     | 46.91                 | 1.92                  | 1.63                 | -5.79               |
| <b>First SDI Surface MWD</b>    |                 |             |                     |            |            |                       |                       |                      |                     |
| 783.00                          | 12.57           | 256.98      | 777.98              | -18.82     | -62.63     | 65.39                 | 2.49                  | 2.10                 | 6.68                |
| 873.00                          | 13.62           | 253.41      | 865.64              | -24.06     | -82.33     | 85.77                 | 1.47                  | 1.17                 | -3.97               |
| 964.00                          | 15.04           | 254.17      | 953.80              | -30.34     | -103.96    | 108.29                | 1.57                  | 1.56                 | 0.84                |
| 1,058.00                        | 18.38           | 256.02      | 1,043.82            | -37.24     | -130.08    | 135.30                | 3.60                  | 3.55                 | 1.97                |
| 1,153.00                        | 19.17           | 256.81      | 1,133.77            | -44.42     | -159.80    | 165.86                | 0.87                  | 0.83                 | 0.83                |
| 1,247.00                        | 18.29           | 254.70      | 1,222.79            | -51.84     | -189.05    | 196.03                | 1.18                  | -0.94                | -2.24               |
| 1,342.00                        | 20.58           | 253.03      | 1,312.37            | -60.64     | -219.41    | 227.63                | 2.48                  | 2.41                 | -1.76               |
| 1,437.00                        | 22.34           | 253.20      | 1,400.78            | -70.74     | -252.66    | 262.38                | 1.85                  | 1.85                 | 0.18                |
| 1,531.00                        | 20.49           | 250.39      | 1,488.29            | -81.42     | -285.27    | 296.66                | 2.25                  | -1.97                | -2.99               |
| 1,626.00                        | 22.07           | 253.03      | 1,576.81            | -92.21     | -318.00    | 331.09                | 1.94                  | 1.66                 | 2.78                |
| 1,720.00                        | 19.61           | 252.85      | 1,664.66            | -102.02    | -349.97    | 364.52                | 2.62                  | -2.62                | -0.19               |
| 1,815.00                        | 19.70           | 254.26      | 1,754.12            | -111.07    | -380.62    | 396.47                | 0.51                  | 0.09                 | 1.48                |
| 1,909.00                        | 21.10           | 254.87      | 1,842.22            | -119.78    | -412.20    | 429.23                | 1.51                  | 1.49                 | 0.65                |
| 2,004.00                        | 18.73           | 254.87      | 1,931.54            | -128.23    | -443.44    | 461.59                | 2.49                  | -2.49                | 0.00                |
| 2,099.00                        | 19.17           | 255.49      | 2,021.39            | -136.11    | -473.26    | 492.44                | 0.51                  | 0.46                 | 0.65                |
| 2,193.00                        | 20.49           | 255.84      | 2,109.81            | -144.01    | -504.16    | 524.31                | 1.41                  | 1.40                 | 0.37                |
| 2,287.00                        | 21.81           | 255.40      | 2,197.48            | -152.43    | -537.01    | 558.22                | 1.41                  | 1.40                 | -0.47               |
| 2,382.00                        | 23.39           | 254.87      | 2,285.18            | -161.80    | -572.29    | 594.72                | 1.68                  | 1.66                 | -0.56               |
| 2,477.00                        | 24.36           | 254.61      | 2,372.05            | -171.93    | -609.38    | 633.17                | 1.03                  | 1.02                 | -0.27               |
| 2,571.00                        | 22.51           | 255.66      | 2,458.29            | -181.53    | -645.51    | 670.55                | 2.02                  | -1.97                | 1.12                |
| 2,665.00                        | 23.30           | 253.99      | 2,544.88            | -191.11    | -680.82    | 707.13                | 1.09                  | 0.84                 | -1.78               |
| 2,683.00                        | 23.04           | 253.73      | 2,561.43            | -193.08    | -687.62    | 714.21                | 1.55                  | -1.44                | -1.44               |
| <b>Last SDI Surface MWD</b>     |                 |             |                     |            |            |                       |                       |                      |                     |
| 2,773.00                        | 22.63           | 253.60      | 2,644.38            | -202.90    | -721.14    | 749.14                | 0.46                  | -0.46                | -0.14               |
| <b>First SDI Production MWD</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 2,867.00                        | 21.18           | 250.96      | 2,731.59            | -213.55    | -754.54    | 784.18                | 1.86                  | -1.54                | -2.81               |
| 2,962.00                        | 17.76           | 247.05      | 2,821.15            | -224.80    | -784.11    | 815.69                | 3.85                  | -3.60                | -4.12               |
| 3,056.00                        | 16.44           | 248.72      | 2,910.99            | -235.22    | -809.71    | 843.15                | 1.50                  | -1.40                | 1.78                |
| 3,151.00                        | 18.82           | 252.15      | 3,001.52            | -244.80    | -836.83    | 871.85                | 2.73                  | 2.51                 | 3.61                |
| 3,245.00                        | 19.96           | 260.06      | 3,090.21            | -252.22    | -867.07    | 902.97                | 3.04                  | 1.21                 | 8.41                |
| 3,340.00                        | 22.51           | 262.87      | 3,178.75            | -257.27    | -901.09    | 937.09                | 2.89                  | 2.68                 | 2.96                |
| 3,434.00                        | 21.37           | 261.11      | 3,265.94            | -262.15    | -935.87    | 971.89                | 1.40                  | -1.21                | -1.87               |
| 3,529.00                        | 20.66           | 257.77      | 3,354.63            | -268.38    | -969.35    | 1,005.81              | 1.47                  | -0.75                | -3.52               |
| 3,624.00                        | 19.43           | 256.81      | 3,443.87            | -275.54    | -1,001.11  | 1,038.33              | 1.34                  | -1.29                | -1.01               |
| 3,718.00                        | 19.96           | 254.96      | 3,532.37            | -283.27    | -1,031.83  | 1,069.99              | 0.87                  | 0.56                 | -1.97               |
| 3,812.00                        | 19.96           | 254.08      | 3,620.73            | -291.83    | -1,062.76  | 1,102.08              | 0.32                  | 0.00                 | -0.94               |
| 3,906.00                        | 20.75           | 253.82      | 3,708.86            | -300.87    | -1,094.18  | 1,134.77              | 0.85                  | 0.84                 | -0.28               |
| 4,001.00                        | 20.40           | 253.47      | 3,797.80            | -310.27    | -1,126.21  | 1,168.16              | 0.39                  | -0.37                | -0.37               |
| 4,096.00                        | 20.40           | 249.95      | 3,886.84            | -320.66    | -1,157.64  | 1,201.22              | 1.29                  | 0.00                 | -3.71               |
| 4,190.00                        | 18.82           | 249.07      | 3,975.39            | -331.69    | -1,187.19  | 1,232.66              | 1.71                  | -1.68                | -0.94               |
| 4,284.00                        | 19.87           | 250.74      | 4,064.08            | -342.38    | -1,216.44  | 1,263.70              | 1.26                  | 1.12                 | 1.78                |

# Scientific Drilling International

## Survey Report

|                  |                           |                                     |  |
|------------------|---------------------------|-------------------------------------|--|
| <b>Company:</b>  | OXY USA RMAT              | <b>Local Co-ordinate Reference:</b> | Well CC 697-08-02B - Slot N              |
| <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 697-08-02B             | <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) |
|---------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 4,379.00                        | 21.02           | 251.88      | 4,153.09            | -353.00    | -1,247.87  | 1,296.84              | 1.28                  | 1.21                 | 1.20                |
| 4,473.00                        | 18.64           | 252.50      | 4,241.51            | -362.77    | -1,278.23  | 1,328.70              | 2.54                  | -2.53                | 0.66                |
| 4,568.00                        | 20.05           | 253.91      | 4,331.15            | -371.84    | -1,308.35  | 1,360.16              | 1.56                  | 1.48                 | 1.48                |
| 4,662.00                        | 21.19           | 253.55      | 4,419.12            | -381.12    | -1,340.13  | 1,393.26              | 1.22                  | 1.21                 | -0.38               |
| 4,757.00                        | 19.35           | 253.11      | 4,508.24            | -390.56    | -1,371.66  | 1,426.17              | 1.94                  | -1.94                | -0.46               |
| 4,851.00                        | 18.99           | 257.51      | 4,597.03            | -398.39    | -1,401.49  | 1,457.01              | 1.58                  | -0.38                | 4.68                |
| 4,946.00                        | 19.87           | 261.73      | 4,686.62            | -404.06    | -1,432.56  | 1,488.45              | 1.74                  | 0.93                 | 4.44                |
| 5,040.00                        | 19.43           | 257.51      | 4,775.15            | -409.73    | -1,463.64  | 1,519.91              | 1.58                  | -0.47                | -4.49               |
| 5,135.00                        | 18.11           | 254.61      | 4,865.10            | -417.07    | -1,493.30  | 1,550.45              | 1.70                  | -1.39                | -3.05               |
| 5,229.00                        | 18.00           | 255.05      | 4,954.96            | -424.29    | -1,519.91  | 1,578.02              | 2.25                  | -2.24                | 0.47                |
| 5,324.00                        | 14.33           | 256.54      | 5,046.65            | -430.41    | -1,543.99  | 1,602.86              | 1.81                  | -1.76                | 1.57                |
| 5,418.00                        | 10.64           | 255.66      | 5,138.41            | -435.26    | -1,563.72  | 1,623.17              | 3.93                  | -3.93                | -0.94               |
| 5,513.00                        | 9.06            | 255.66      | 5,232.01            | -439.29    | -1,579.47  | 1,639.41              | 1.66                  | -1.66                | 0.00                |
| 5,608.00                        | 8.62            | 257.42      | 5,325.88            | -442.69    | -1,593.66  | 1,654.00              | 0.54                  | -0.46                | 1.85                |
| 5,702.00                        | 5.10            | 253.91      | 5,419.19            | -445.39    | -1,604.55  | 1,665.21              | 3.77                  | -3.74                | -3.73               |
| 5,797.00                        | 1.93            | 238.61      | 5,514.00            | -447.39    | -1,609.98  | 1,670.98              | 3.45                  | -3.34                | -16.11              |
| 5,891.00                        | 0.26            | 137.54      | 5,607.99            | -448.37    | -1,611.19  | 1,672.41              | 2.12                  | -1.78                | -107.52             |
| 5,986.00                        | 0.53            | 79.62       | 5,702.98            | -448.45    | -1,610.61  | 1,671.87              | 0.47                  | 0.28                 | -60.97              |
| 6,081.00                        | 0.62            | 62.66       | 5,797.98            | -448.14    | -1,609.72  | 1,670.93              | 0.20                  | 0.09                 | -17.85              |
| 6,175.00                        | 0.79            | 43.94       | 5,891.97            | -447.44    | -1,608.82  | 1,669.87              | 0.30                  | 0.18                 | -19.91              |
| 6,269.00                        | 0.97            | 52.90       | 5,985.96            | -446.49    | -1,607.73  | 1,668.57              | 0.24                  | 0.19                 | 9.53                |
| 6,364.00                        | 1.41            | 52.64       | 6,080.94            | -445.30    | -1,606.16  | 1,666.74              | 0.46                  | 0.46                 | -0.27               |
| 6,459.00                        | 0.44            | 52.72       | 6,175.93            | -444.36    | -1,604.94  | 1,665.31              | 1.02                  | -1.02                | 0.08                |
| 6,553.00                        | 0.44            | 26.88       | 6,269.92            | -443.82    | -1,604.49  | 1,664.73              | 0.21                  | 0.00                 | -27.49              |
| 6,648.00                        | 0.88            | 52.55       | 6,364.92            | -443.06    | -1,603.75  | 1,663.81              | 0.55                  | 0.46                 | 27.02               |
| 6,743.00                        | 0.62            | 310.51      | 6,459.91            | -442.28    | -1,603.56  | 1,663.42              | 1.24                  | -0.27                | -107.41             |
| 6,837.00                        | 1.14            | 329.23      | 6,553.90            | -441.14    | -1,604.43  | 1,663.94              | 0.63                  | 0.55                 | 19.91               |
| 6,932.00                        | 2.64            | 3.94        | 6,648.85            | -438.15    | -1,604.76  | 1,663.46              | 1.92                  | 1.58                 | 36.54               |
| 7,026.00                        | 3.08            | 3.68        | 6,742.73            | -433.47    | -1,604.45  | 1,661.89              | 0.47                  | 0.47                 | -0.28               |
| 7,120.00                        | 2.73            | 354.63      | 6,836.61            | -428.72    | -1,604.50  | 1,660.65              | 0.61                  | -0.37                | -9.63               |
| 7,215.00                        | 1.85            | 14.84       | 6,931.54            | -424.99    | -1,604.32  | 1,659.47              | 1.24                  | -0.93                | 21.27               |
| 7,310.00                        | 1.32            | 21.44       | 7,026.50            | -422.48    | -1,603.52  | 1,658.03              | 0.59                  | -0.56                | 6.95                |
| 7,404.00                        | 1.32            | 64.41       | 7,120.48            | -421.01    | -1,602.15  | 1,656.31              | 1.03                  | 0.00                 | 45.71               |
| 7,499.00                        | 1.58            | 107.04      | 7,215.45            | -420.92    | -1,599.91  | 1,654.13              | 1.14                  | 0.27                 | 44.87               |
| 7,593.00                        | 1.93            | 115.39      | 7,309.40            | -421.98    | -1,597.24  | 1,651.85              | 0.46                  | 0.37                 | 8.88                |
| 7,688.00                        | 2.64            | 119.78      | 7,404.33            | -423.75    | -1,593.90  | 1,649.11              | 0.77                  | 0.75                 | 4.62                |
| 7,782.00                        | 2.73            | 137.45      | 7,498.23            | -426.48    | -1,590.50  | 1,646.58              | 0.88                  | 0.10                 | 18.80               |
| 7,877.00                        | 2.55            | 150.99      | 7,593.13            | -429.99    | -1,587.95  | 1,645.07              | 0.68                  | -0.19                | 14.25               |
| 7,972.00                        | 2.11            | 168.39      | 7,688.05            | -433.55    | -1,586.57  | 1,644.70              | 0.87                  | -0.46                | 18.32               |
| 8,066.00                        | 2.46            | 205.57      | 7,781.98            | -437.07    | -1,587.10  | 1,646.16              | 1.59                  | 0.37                 | 39.55               |
| 8,121.02                        | 2.83            | 225.05      | 7,836.94            | -439.09    | -1,588.57  | 1,648.12              | 1.75                  | 0.67                 | 35.40               |
| <b>CC 697-08-02B Rev Target</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 8,161.00                        | 3.25            | 235.62      | 7,876.87            | -440.43    | -1,590.20  | 1,650.05              | 1.75                  | 1.06                 | 26.44               |



# Scientific Drilling International

## Survey Report

|                  |                           |                                     |  |
|------------------|---------------------------|-------------------------------------|--|
| <b>Company:</b>  | OXY USA RMAT              | <b>Local Co-ordinate Reference:</b> | Well CC 697-08-02B - Slot N              |
| <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 697-08-02B             | <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) |
|---|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 8,255.00  | 4.48            | 241.95      | 7,970.65            | -443.68    | -1,595.64  | 1,656.16              | 1.38                  | 1.31                 | 6.73                |
| 8,350.00  | 5.80            | 250.92      | 8,065.27            | -446.97    | -1,603.45  | 1,664.58              | 1.62                  | 1.39                 | 9.44                |
| 8,444.00  | 6.33            | 260.59      | 8,158.74            | -449.37    | -1,613.05  | 1,674.47              | 1.22                  | 0.56                 | 10.29               |
| 8,539.00  | 6.68            | 268.41      | 8,253.13            | -450.38    | -1,623.74  | 1,685.04              | 1.00                  | 0.37                 | 8.23                |
| 8,634.00  | 7.12            | 270.52      | 8,347.45            | -450.48    | -1,635.15  | 1,696.05              | 0.53                  | 0.46                 | 2.22                |
| 8,728.00  | 5.19            | 271.13      | 8,440.90            | -450.34    | -1,645.23  | 1,705.71              | 2.05                  | -2.05                | 0.65                |
| 8,822.00  | 5.36            | 281.42      | 8,534.50            | -449.39    | -1,653.78  | 1,713.69              | 1.02                  | 0.18                 | 10.95               |
| 8,885.00  | 5.19            | 289.85      | 8,597.24            | -447.84    | -1,659.35  | 1,718.63              | 1.26                  | -0.27                | 13.38               |
| <b>Last SDI Production MWD</b>                        |                 |             |                     |            |            |                       |                       |                      |                     |
| 8,940.00  | 5.19            | 289.85      | 8,652.01            | -446.15    | -1,664.03  | 1,722.68              | 0.00                  | 0.00                 | 0.00                |
| <b>Projection to TD - BHL = 634211.99, 1224078.24</b> |                 |             |                     |            |            |                       |                       |                      |                     |

### Design Annotations

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates |            | Comment                     |
|---------------------|---------------------|-------------------|------------|-----------------------------|
|                     |                     | +N/-S (ft)        | +E/-W (ft) |                             |
| 123.00              | 123.00              | 0.14              | 0.13       | First SDI Gyro Survey       |
| 621.00              | 618.94              | -10.15            | -33.17     | Last SDI Gyro Survey        |
| 691.00              | 687.86              | -13.78            | -44.85     | First SDI Surface MWD       |
| 2,683.00            | 2,561.43            | -193.08           | -687.62    | Last SDI Surface MWD        |
| 2,773.00            | 2,644.38            | -202.90           | -721.14    | First SDI Production MWD    |
| 8,885.00            | 8,597.24            | -447.84           | -1,659.35  | Last SDI Production MWD     |
| 8,940.00            | 8,652.01            | -446.15           | -1,664.03  | Projection to TD            |
| 8,940.00            | 8,652.01            | -446.15           | -1,664.03  | BHL = 634211.99, 1224078.24 |

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