

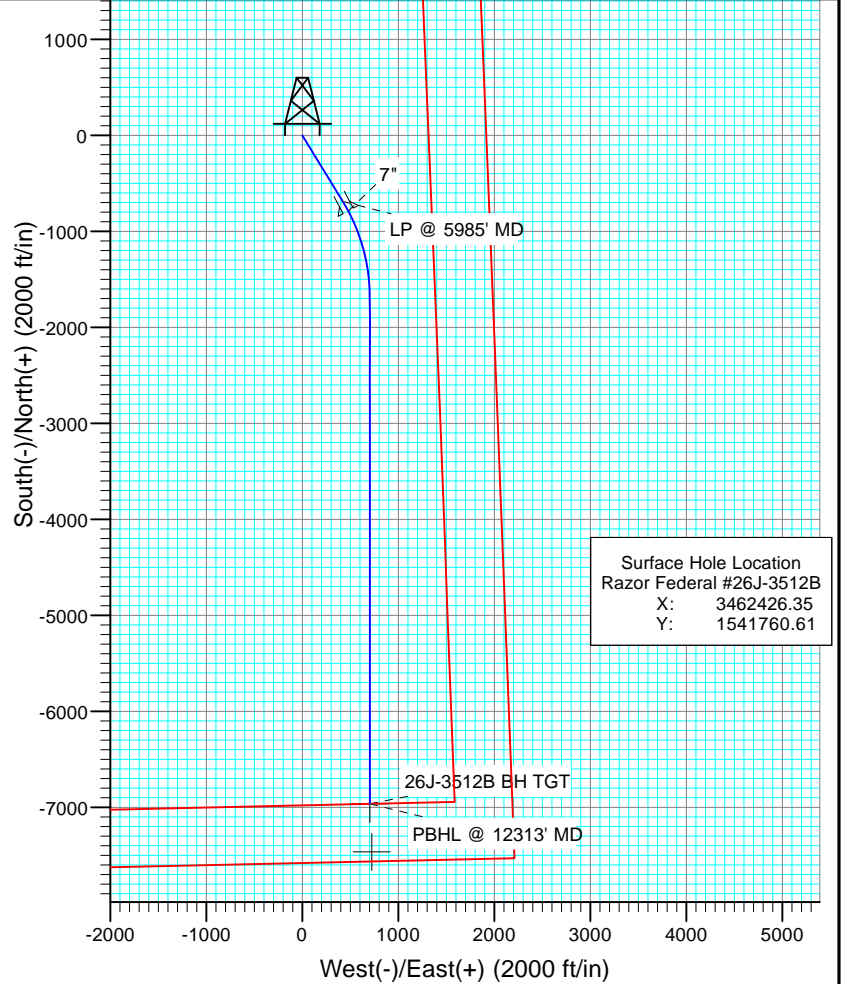
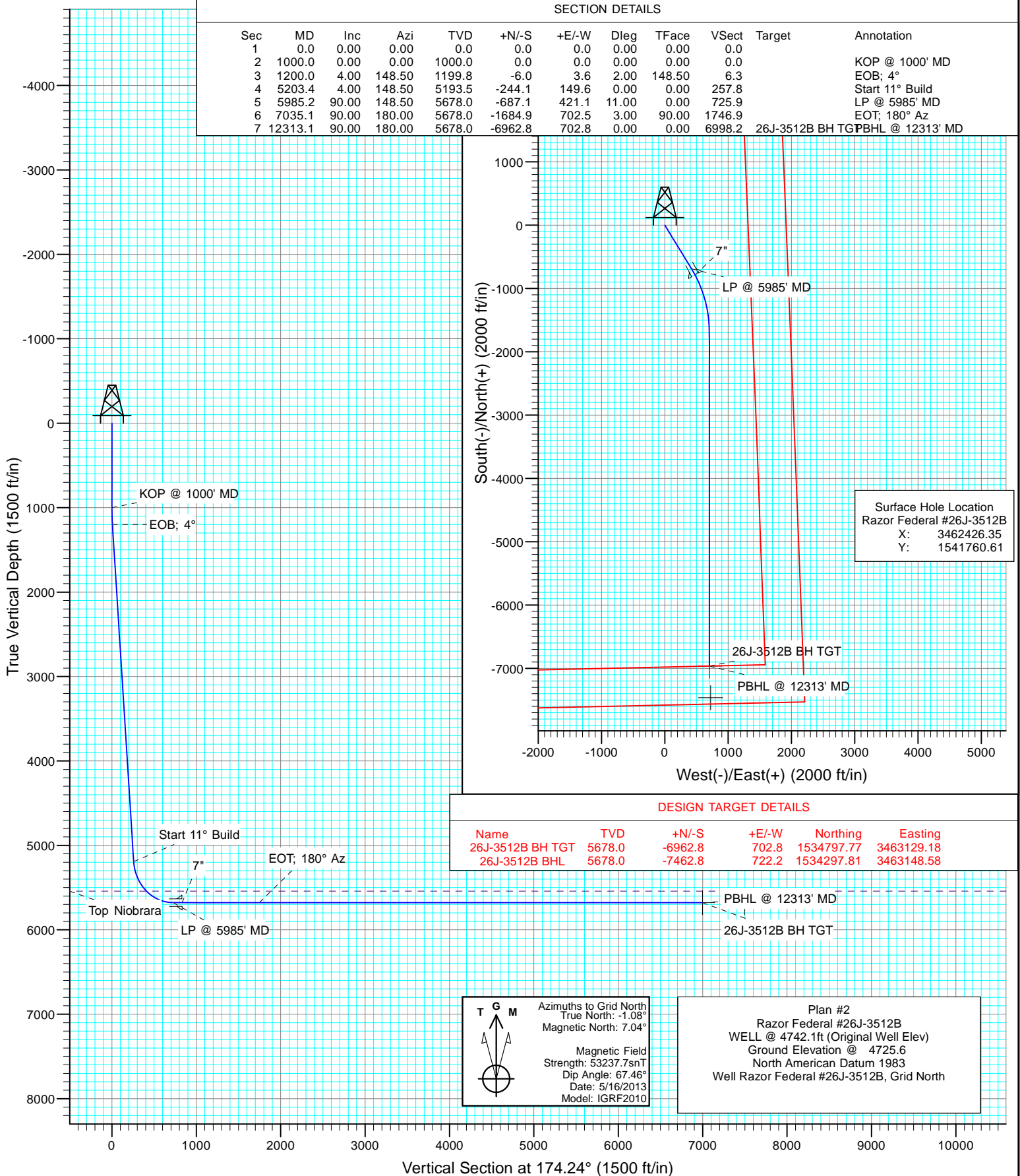


Project: Weld County, CO  
Site: S26-T10N-R58W  
Well: Razor Federal #26J-3512B  
Wellbore: HZ  
Design: Plan #2



#### SECTION DETAILS

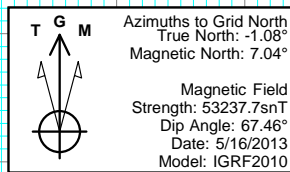
| Sec | MD      | Inc   | Azi    | TVD    | +N/-S   | +E/-W | Dleg  | TFace  | VSec   | Target                          | Annotation      |
|-----|---------|-------|--------|--------|---------|-------|-------|--------|--------|---------------------------------|-----------------|
| 1   | 0.0     | 0.00  | 0.00   | 0.0    | 0.0     | 0.0   | 0.00  | 0.00   | 0.0    |                                 |                 |
| 2   | 1000.0  | 0.00  | 0.00   | 1000.0 | 0.0     | 0.0   | 0.00  | 0.00   | 0.0    |                                 | KOP @ 1000' MD  |
| 3   | 1200.0  | 4.00  | 148.50 | 1199.8 | -6.0    | 3.6   | 2.00  | 148.50 | 6.3    |                                 | EOB; 4°         |
| 4   | 5203.4  | 4.00  | 148.50 | 5193.5 | -244.1  | 149.6 | 0.00  | 0.00   | 257.8  |                                 | Start 11° Build |
| 5   | 5985.2  | 90.00 | 148.50 | 5678.0 | -687.1  | 421.1 | 11.00 | 0.00   | 725.9  |                                 | LP @ 5985' MD   |
| 6   | 7035.1  | 90.00 | 180.00 | 5678.0 | -1684.9 | 702.5 | 3.00  | 90.00  | 1746.9 |                                 | EOT; 180° Az    |
| 7   | 12313.1 | 90.00 | 180.00 | 5678.0 | -6962.8 | 702.8 | 0.00  | 0.00   | 6998.2 | 26J-3512B BH TGPBHL @ 12313' MD |                 |



Surface Hole Location  
Razor Federal #26J-3512B  
X: 3462426.35  
Y: 1541760.61

#### DESIGN TARGET DETAILS

| Name             | TVD    | +N/-S   | +E/-W | Northing   | Easting    |
|------------------|--------|---------|-------|------------|------------|
| 26J-3512B BH TGT | 5678.0 | -6962.8 | 702.8 | 1534797.77 | 3463129.18 |
| 26J-3512B BHL    | 5678.0 | -7462.8 | 722.2 | 1534297.81 | 3463148.58 |



Plan #2  
Razor Federal #26J-3512B  
WELL @ 4742.1ft (Original Well Elev)  
Ground Elevation @ 4725.6  
North American Datum 1983  
Well Razor Federal #26J-3512B, Grid North

|                  |                               |                                     |                                      |
|------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Database:</b> | USA EDM 5000 Multi Users DB   | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Company:</b>  | Whiting Petroleum Corporation | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Project:</b>  | Weld County, CO               | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site:</b>     | S26-T10N-R58W                 | <b>North Reference:</b>             | Grid                                 |
| <b>Well:</b>     | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Wellbore:</b> | HZ                            |                                     |                                      |
| <b>Design:</b>   | Plan #2                       |                                     |                                      |

|                    |                           |                      |                |
|--------------------|---------------------------|----------------------|----------------|
| <b>Project</b>     | Weld County, CO           |                      |                |
| <b>Map System:</b> | US State Plane 1983       | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | North American Datum 1983 |                      |                |
| <b>Map Zone:</b>   | Colorado Northern Zone    |                      |                |

|                       |          |               |                 |                   |                  |
|-----------------------|----------|---------------|-----------------|-------------------|------------------|
| Site                  |          | S26-T10N-R58W |                 |                   |                  |
| Site Position:        |          | Northing:     | 1,541,777.36 ft | Latitude:         | 40° 48' 31.46 N  |
| From:                 | Lat/Long | Easting:      | 3,459,649.47 ft | Longitude:        | 103° 50' 22.31 W |
| Position Uncertainty: | 0.0 ft   | Slot Radius:  | 13.200 in       | Grid Convergence: | 1.07 °           |

|                      |                          |        |                     |                 |               |                  |
|----------------------|--------------------------|--------|---------------------|-----------------|---------------|------------------|
| Well                 | Razor Federal #26J-3512B |        |                     |                 |               |                  |
| Well Position        | +N/-S                    | 0.0 ft | Northing:           | 1,541,760.61 ft | Latitude:     | 40° 48' 30.78 N  |
|                      | +E/-W                    | 0.0 ft | Easting:            | 3,462,426.35 ft | Longitude:    | 103° 49' 46.21 W |
| Position Uncertainty |                          | 0.0 ft | Wellhead Elevation: | ft              | Ground Level: | 4,725.6 ft       |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | HZ                |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2010          | 5/16/2013          | 8.12                   | 67.46                | 53,238                     |

|                          |                              |                   |                   |                      |     |
|--------------------------|------------------------------|-------------------|-------------------|----------------------|-----|
| <b>Design</b>            | Plan #2                      |                   |                   |                      |     |
| <b>Audit Notes:</b>      |                              |                   |                   |                      |     |
| <b>Version:</b>          | <b>Phase:</b>                | PLAN              |                   | <b>Tie On Depth:</b> | 0.0 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b> | <b>Direction (°)</b> |     |
|                          | 0.0                          | 0.0               | 0.0               | 174.24               |     |

| <b>Plan Sections</b> |                 |             |                     |            |            |                       |                      |                     |         |                  |
|----------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|----------------------|---------------------|---------|------------------|
| Measured Depth (ft)  | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target           |
| 0.0                  | 0.00            | 0.00        | 0.0                 | 0.0        | 0.0        | 0.00                  | 0.00                 | 0.00                | 0.00    |                  |
| 1,000.0              | 0.00            | 0.00        | 1,000.0             | 0.0        | 0.0        | 0.00                  | 0.00                 | 0.00                | 0.00    |                  |
| 1,200.0              | 4.00            | 148.50      | 1,199.8             | -6.0       | 3.6        | 2.00                  | 2.00                 | 0.00                | 148.50  |                  |
| 5,203.4              | 4.00            | 148.50      | 5,193.5             | -244.1     | 149.6      | 0.00                  | 0.00                 | 0.00                | 0.00    |                  |
| 5,985.2              | 90.00           | 148.50      | 5,678.0             | -687.1     | 421.1      | 11.00                 | 11.00                | 0.00                | 0.00    |                  |
| 7,035.1              | 90.00           | 180.00      | 5,678.0             | -1,684.9   | 702.5      | 3.00                  | 0.00                 | 3.00                | 90.00   |                  |
| 12,313.1             | 90.00           | 180.00      | 5,678.0             | -6,962.8   | 702.8      | 0.00                  | 0.00                 | 0.00                | 0.00    | 26J-3512B BH TGT |

|                  |                               |                                     |                                      |
|------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Database:</b> | USA EDM 5000 Multi Users DB   | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Company:</b>  | Whiting Petroleum Corporation | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Project:</b>  | Weld County, CO               | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site:</b>     | S26-T10N-R58W                 | <b>North Reference:</b>             | Grid                                 |
| <b>Well:</b>     | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Wellbore:</b> | HZ                            |                                     |                                      |
| <b>Design:</b>   | Plan #2                       |                                     |                                      |

| Planned Survey      |                 |             |                     |            |            |                       |                       |                      |                       |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|-----------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Comments / Formations |
| 0.0                 | 0.00            | 0.00        | 0.0                 | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 |                       |
| 100.0               | 0.00            | 0.00        | 100.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 |                       |
| 200.0               | 0.00            | 0.00        | 200.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 |                       |
| 300.0               | 0.00            | 0.00        | 300.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 |                       |
| 400.0               | 0.00            | 0.00        | 400.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 |                       |
| 500.0               | 0.00            | 0.00        | 500.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 |                       |
| 600.0               | 0.00            | 0.00        | 600.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 |                       |
| 700.0               | 0.00            | 0.00        | 700.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 |                       |
| 800.0               | 0.00            | 0.00        | 800.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 |                       |
| 900.0               | 0.00            | 0.00        | 900.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 |                       |
| 1,000.0             | 0.00            | 0.00        | 1,000.0             | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | KOP @ 1000' MD        |
| 1,100.0             | 2.00            | 148.50      | 1,100.0             | -1.5       | 0.9        | 1.6                   | 2.00                  | 2.00                 |                       |
| 1,200.0             | 4.00            | 148.50      | 1,199.8             | -6.0       | 3.6        | 6.3                   | 2.00                  | 2.00                 | EOB; 4°               |
| 1,300.0             | 4.00            | 148.50      | 1,299.6             | -11.9      | 7.3        | 12.6                  | 0.00                  | 0.00                 |                       |
| 1,400.0             | 4.00            | 148.50      | 1,399.4             | -17.8      | 10.9       | 18.9                  | 0.00                  | 0.00                 |                       |
| 1,500.0             | 4.00            | 148.50      | 1,499.1             | -23.8      | 14.6       | 25.1                  | 0.00                  | 0.00                 |                       |
| 1,600.0             | 4.00            | 148.50      | 1,598.9             | -29.7      | 18.2       | 31.4                  | 0.00                  | 0.00                 |                       |
| 1,700.0             | 4.00            | 148.50      | 1,698.6             | -35.7      | 21.9       | 37.7                  | 0.00                  | 0.00                 |                       |
| 1,800.0             | 4.00            | 148.50      | 1,798.4             | -41.6      | 25.5       | 44.0                  | 0.00                  | 0.00                 |                       |
| 1,900.0             | 4.00            | 148.50      | 1,898.1             | -47.6      | 29.2       | 50.3                  | 0.00                  | 0.00                 |                       |
| 2,000.0             | 4.00            | 148.50      | 1,997.9             | -53.5      | 32.8       | 56.6                  | 0.00                  | 0.00                 |                       |
| 2,100.0             | 4.00            | 148.50      | 2,097.6             | -59.5      | 36.4       | 62.8                  | 0.00                  | 0.00                 |                       |
| 2,200.0             | 4.00            | 148.50      | 2,197.4             | -65.4      | 40.1       | 69.1                  | 0.00                  | 0.00                 |                       |
| 2,300.0             | 4.00            | 148.50      | 2,297.2             | -71.4      | 43.7       | 75.4                  | 0.00                  | 0.00                 |                       |
| 2,400.0             | 4.00            | 148.50      | 2,396.9             | -77.3      | 47.4       | 81.7                  | 0.00                  | 0.00                 |                       |
| 2,500.0             | 4.00            | 148.50      | 2,496.7             | -83.3      | 51.0       | 88.0                  | 0.00                  | 0.00                 |                       |
| 2,600.0             | 4.00            | 148.50      | 2,596.4             | -89.2      | 54.7       | 94.3                  | 0.00                  | 0.00                 |                       |
| 2,700.0             | 4.00            | 148.50      | 2,696.2             | -95.2      | 58.3       | 100.5                 | 0.00                  | 0.00                 |                       |
| 2,800.0             | 4.00            | 148.50      | 2,795.9             | -101.1     | 62.0       | 106.8                 | 0.00                  | 0.00                 |                       |
| 2,900.0             | 4.00            | 148.50      | 2,895.7             | -107.1     | 65.6       | 113.1                 | 0.00                  | 0.00                 |                       |
| 3,000.0             | 4.00            | 148.50      | 2,995.5             | -113.0     | 69.3       | 119.4                 | 0.00                  | 0.00                 |                       |
| 3,100.0             | 4.00            | 148.50      | 3,095.2             | -119.0     | 72.9       | 125.7                 | 0.00                  | 0.00                 |                       |
| 3,200.0             | 4.00            | 148.50      | 3,195.0             | -124.9     | 76.5       | 132.0                 | 0.00                  | 0.00                 |                       |
| 3,300.0             | 4.00            | 148.50      | 3,294.7             | -130.9     | 80.2       | 138.2                 | 0.00                  | 0.00                 |                       |
| 3,400.0             | 4.00            | 148.50      | 3,394.5             | -136.8     | 83.8       | 144.5                 | 0.00                  | 0.00                 |                       |
| 3,500.0             | 4.00            | 148.50      | 3,494.2             | -142.7     | 87.5       | 150.8                 | 0.00                  | 0.00                 |                       |
| 3,600.0             | 4.00            | 148.50      | 3,594.0             | -148.7     | 91.1       | 157.1                 | 0.00                  | 0.00                 |                       |
| 3,700.0             | 4.00            | 148.50      | 3,693.7             | -154.6     | 94.8       | 163.4                 | 0.00                  | 0.00                 |                       |
| 3,800.0             | 4.00            | 148.50      | 3,793.5             | -160.6     | 98.4       | 169.7                 | 0.00                  | 0.00                 |                       |
| 3,900.0             | 4.00            | 148.50      | 3,893.3             | -166.5     | 102.1      | 175.9                 | 0.00                  | 0.00                 |                       |
| 4,000.0             | 4.00            | 148.50      | 3,993.0             | -172.5     | 105.7      | 182.2                 | 0.00                  | 0.00                 |                       |
| 4,100.0             | 4.00            | 148.50      | 4,092.8             | -178.4     | 109.3      | 188.5                 | 0.00                  | 0.00                 |                       |
| 4,200.0             | 4.00            | 148.50      | 4,192.5             | -184.4     | 113.0      | 194.8                 | 0.00                  | 0.00                 |                       |
| 4,300.0             | 4.00            | 148.50      | 4,292.3             | -190.3     | 116.6      | 201.1                 | 0.00                  | 0.00                 |                       |
| 4,400.0             | 4.00            | 148.50      | 4,392.0             | -196.3     | 120.3      | 207.4                 | 0.00                  | 0.00                 |                       |
| 4,500.0             | 4.00            | 148.50      | 4,491.8             | -202.2     | 123.9      | 213.6                 | 0.00                  | 0.00                 |                       |
| 4,600.0             | 4.00            | 148.50      | 4,591.6             | -208.2     | 127.6      | 219.9                 | 0.00                  | 0.00                 |                       |
| 4,700.0             | 4.00            | 148.50      | 4,691.3             | -214.1     | 131.2      | 226.2                 | 0.00                  | 0.00                 |                       |
| 4,800.0             | 4.00            | 148.50      | 4,791.1             | -220.1     | 134.9      | 232.5                 | 0.00                  | 0.00                 |                       |
| 4,900.0             | 4.00            | 148.50      | 4,890.8             | -226.0     | 138.5      | 238.8                 | 0.00                  | 0.00                 |                       |
| 5,000.0             | 4.00            | 148.50      | 4,990.6             | -232.0     | 142.1      | 245.1                 | 0.00                  | 0.00                 |                       |
| 5,100.0             | 4.00            | 148.50      | 5,090.3             | -237.9     | 145.8      | 251.4                 | 0.00                  | 0.00                 |                       |

|                  |                               |                                     |                                      |
|------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Database:</b> | USA EDM 5000 Multi Users DB   | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Company:</b>  | Whiting Petroleum Corporation | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Project:</b>  | Weld County, CO               | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site:</b>     | S26-T10N-R58W                 | <b>North Reference:</b>             | Grid                                 |
| <b>Well:</b>     | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Wellbore:</b> | HZ                            |                                     |                                      |
| <b>Design:</b>   | Plan #2                       |                                     |                                      |

| Planned Survey      |                 |             |                     |            |            |                       |                       |                      |                       |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|-----------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Comments / Formations |
| 5,200.0             | 4.00            | 148.50      | 5,190.1             | -243.9     | 149.4      | 257.6                 | 0.00                  | 0.00                 |                       |
| 5,203.4             | 4.00            | 148.50      | 5,193.5             | -244.1     | 149.6      | 257.8                 | 0.00                  | 0.00                 | Start 11° Build       |
| 5,300.0             | 14.63           | 148.50      | 5,288.7             | -257.4     | 157.7      | 271.9                 | 11.00                 | 11.00                |                       |
| 5,400.0             | 25.63           | 148.50      | 5,382.4             | -286.7     | 175.7      | 302.9                 | 11.00                 | 11.00                |                       |
| 5,500.0             | 36.63           | 148.50      | 5,467.9             | -330.7     | 202.6      | 349.4                 | 11.00                 | 11.00                |                       |
| 5,600.0             | 47.63           | 148.50      | 5,542.0             | -387.8     | 237.6      | 409.7                 | 11.00                 | 11.00                |                       |
| 5,600.1             | 47.63           | 148.50      | 5,542.0             | -387.8     | 237.7      | 409.7                 | 0.00                  | 0.00                 | Top Niobrara          |
| 5,700.0             | 58.63           | 148.50      | 5,601.9             | -455.9     | 279.4      | 481.6                 | 11.01                 | 11.01                |                       |
| 5,800.0             | 69.63           | 148.50      | 5,645.4             | -532.5     | 326.3      | 562.6                 | 11.00                 | 11.00                |                       |
| 5,900.0             | 80.63           | 148.50      | 5,671.1             | -614.8     | 376.7      | 649.5                 | 11.00                 | 11.00                |                       |
| 5,985.2             | 90.00           | 148.50      | 5,678.0             | -687.1     | 421.1      | 725.9                 | 11.00                 | 11.00                | LP @ 5985' MD         |
| 6,000.0             | 90.00           | 148.94      | 5,678.0             | -699.7     | 428.7      | 739.2                 | 3.00                  | 0.00                 |                       |
| 6,100.0             | 90.00           | 151.94      | 5,678.0             | -786.7     | 478.0      | 830.7                 | 3.00                  | 0.00                 | 7"                    |
| 6,200.0             | 90.00           | 154.94      | 5,678.0             | -876.1     | 522.8      | 924.2                 | 3.00                  | 0.00                 |                       |
| 6,300.0             | 90.00           | 157.94      | 5,678.0             | -967.8     | 562.7      | 1,019.4               | 3.00                  | 0.00                 |                       |
| 6,400.0             | 90.00           | 160.94      | 5,678.0             | -1,061.4   | 597.8      | 1,116.1               | 3.00                  | 0.00                 |                       |
| 6,500.0             | 90.00           | 163.94      | 5,678.0             | -1,156.8   | 628.0      | 1,214.0               | 3.00                  | 0.00                 |                       |
| 6,600.0             | 90.00           | 166.94      | 5,678.0             | -1,253.5   | 653.1      | 1,312.8               | 3.00                  | 0.00                 |                       |
| 6,700.0             | 90.00           | 169.94      | 5,678.0             | -1,351.5   | 673.1      | 1,412.3               | 3.00                  | 0.00                 |                       |
| 6,800.0             | 90.00           | 172.94      | 5,678.0             | -1,450.4   | 688.0      | 1,512.1               | 3.00                  | 0.00                 |                       |
| 6,900.0             | 90.00           | 175.94      | 5,678.0             | -1,549.9   | 697.7      | 1,612.1               | 3.00                  | 0.00                 |                       |
| 7,000.0             | 90.00           | 178.94      | 5,678.0             | -1,649.8   | 702.2      | 1,712.0               | 3.00                  | 0.00                 |                       |
| 7,035.1             | 90.00           | 180.00      | 5,678.0             | -1,684.9   | 702.5      | 1,746.9               | 3.00                  | 0.00                 | EOT; 180° Az          |
| 7,100.0             | 90.00           | 180.00      | 5,678.0             | -1,749.8   | 702.5      | 1,811.5               | 0.00                  | 0.00                 |                       |
| 7,200.0             | 90.00           | 180.00      | 5,678.0             | -1,849.8   | 702.5      | 1,911.0               | 0.00                  | 0.00                 |                       |
| 7,300.0             | 90.00           | 180.00      | 5,678.0             | -1,949.8   | 702.5      | 2,010.5               | 0.00                  | 0.00                 |                       |
| 7,400.0             | 90.00           | 180.00      | 5,678.0             | -2,049.8   | 702.5      | 2,110.0               | 0.00                  | 0.00                 |                       |
| 7,500.0             | 90.00           | 180.00      | 5,678.0             | -2,149.8   | 702.5      | 2,209.5               | 0.00                  | 0.00                 |                       |
| 7,600.0             | 90.00           | 180.00      | 5,678.0             | -2,249.8   | 702.5      | 2,309.0               | 0.00                  | 0.00                 |                       |
| 7,700.0             | 90.00           | 180.00      | 5,678.0             | -2,349.8   | 702.5      | 2,408.5               | 0.00                  | 0.00                 |                       |
| 7,800.0             | 90.00           | 180.00      | 5,678.0             | -2,449.8   | 702.5      | 2,507.9               | 0.00                  | 0.00                 |                       |
| 7,900.0             | 90.00           | 180.00      | 5,678.0             | -2,549.8   | 702.5      | 2,607.4               | 0.00                  | 0.00                 |                       |
| 8,000.0             | 90.00           | 180.00      | 5,678.0             | -2,649.8   | 702.6      | 2,706.9               | 0.00                  | 0.00                 |                       |
| 8,100.0             | 90.00           | 180.00      | 5,678.0             | -2,749.8   | 702.6      | 2,806.4               | 0.00                  | 0.00                 |                       |
| 8,200.0             | 90.00           | 180.00      | 5,678.0             | -2,849.8   | 702.6      | 2,905.9               | 0.00                  | 0.00                 |                       |
| 8,300.0             | 90.00           | 180.00      | 5,678.0             | -2,949.8   | 702.6      | 3,005.4               | 0.00                  | 0.00                 |                       |
| 8,400.0             | 90.00           | 180.00      | 5,678.0             | -3,049.8   | 702.6      | 3,104.9               | 0.00                  | 0.00                 |                       |
| 8,500.0             | 90.00           | 180.00      | 5,678.0             | -3,149.8   | 702.6      | 3,204.4               | 0.00                  | 0.00                 |                       |
| 8,600.0             | 90.00           | 180.00      | 5,678.0             | -3,249.8   | 702.6      | 3,303.9               | 0.00                  | 0.00                 |                       |
| 8,700.0             | 90.00           | 180.00      | 5,678.0             | -3,349.8   | 702.6      | 3,403.4               | 0.00                  | 0.00                 |                       |
| 8,800.0             | 90.00           | 180.00      | 5,678.0             | -3,449.8   | 702.6      | 3,502.9               | 0.00                  | 0.00                 |                       |
| 8,900.0             | 90.00           | 180.00      | 5,678.0             | -3,549.8   | 702.6      | 3,602.4               | 0.00                  | 0.00                 |                       |
| 9,000.0             | 90.00           | 180.00      | 5,678.0             | -3,649.8   | 702.6      | 3,701.9               | 0.00                  | 0.00                 |                       |
| 9,100.0             | 90.00           | 180.00      | 5,678.0             | -3,749.8   | 702.6      | 3,801.4               | 0.00                  | 0.00                 |                       |
| 9,200.0             | 90.00           | 180.00      | 5,678.0             | -3,849.8   | 702.6      | 3,900.9               | 0.00                  | 0.00                 |                       |
| 9,300.0             | 90.00           | 180.00      | 5,678.0             | -3,949.8   | 702.6      | 4,000.4               | 0.00                  | 0.00                 |                       |
| 9,400.0             | 90.00           | 180.00      | 5,678.0             | -4,049.8   | 702.6      | 4,099.9               | 0.00                  | 0.00                 |                       |
| 9,500.0             | 90.00           | 180.00      | 5,678.0             | -4,149.8   | 702.6      | 4,199.4               | 0.00                  | 0.00                 |                       |
| 9,600.0             | 90.00           | 180.00      | 5,678.0             | -4,249.8   | 702.7      | 4,298.9               | 0.00                  | 0.00                 |                       |
| 9,700.0             | 90.00           | 180.00      | 5,678.0             | -4,349.8   | 702.7      | 4,398.4               | 0.00                  | 0.00                 |                       |
| 9,800.0             | 90.00           | 180.00      | 5,678.0             | -4,449.8   | 702.7      | 4,497.8               | 0.00                  | 0.00                 |                       |
| 9,900.0             | 90.00           | 180.00      | 5,678.0             | -4,549.8   | 702.7      | 4,597.3               | 0.00                  | 0.00                 |                       |

|                  |                               |                                     |                                      |
|------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Database:</b> | USA EDM 5000 Multi Users DB   | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Company:</b>  | Whiting Petroleum Corporation | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Project:</b>  | Weld County, CO               | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site:</b>     | S26-T10N-R58W                 | <b>North Reference:</b>             | Grid                                 |
| <b>Well:</b>     | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Wellbore:</b> | HZ                            |                                     |                                      |
| <b>Design:</b>   | Plan #2                       |                                     |                                      |

| Planned Survey      |                 |             |                     |            |            |                       |                       |                      |                       |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|-----------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Comments / Formations |
| 10,000.0            | 90.00           | 180.00      | 5,678.0             | -4,649.8   | 702.7      | 4,696.8               | 0.00                  | 0.00                 |                       |
| 10,100.0            | 90.00           | 180.00      | 5,678.0             | -4,749.8   | 702.7      | 4,796.3               | 0.00                  | 0.00                 |                       |
| 10,200.0            | 90.00           | 180.00      | 5,678.0             | -4,849.8   | 702.7      | 4,895.8               | 0.00                  | 0.00                 |                       |
| 10,300.0            | 90.00           | 180.00      | 5,678.0             | -4,949.8   | 702.7      | 4,995.3               | 0.00                  | 0.00                 |                       |
| 10,400.0            | 90.00           | 180.00      | 5,678.0             | -5,049.8   | 702.7      | 5,094.8               | 0.00                  | 0.00                 |                       |
| 10,500.0            | 90.00           | 180.00      | 5,678.0             | -5,149.8   | 702.7      | 5,194.3               | 0.00                  | 0.00                 |                       |
| 10,600.0            | 90.00           | 180.00      | 5,678.0             | -5,249.8   | 702.7      | 5,293.8               | 0.00                  | 0.00                 |                       |
| 10,700.0            | 90.00           | 180.00      | 5,678.0             | -5,349.8   | 702.7      | 5,393.3               | 0.00                  | 0.00                 |                       |
| 10,800.0            | 90.00           | 180.00      | 5,678.0             | -5,449.8   | 702.7      | 5,492.8               | 0.00                  | 0.00                 |                       |
| 10,900.0            | 90.00           | 180.00      | 5,678.0             | -5,549.8   | 702.7      | 5,592.3               | 0.00                  | 0.00                 |                       |
| 11,000.0            | 90.00           | 180.00      | 5,678.0             | -5,649.8   | 702.7      | 5,691.8               | 0.00                  | 0.00                 |                       |
| 11,100.0            | 90.00           | 180.00      | 5,678.0             | -5,749.8   | 702.8      | 5,791.3               | 0.00                  | 0.00                 |                       |
| 11,200.0            | 90.00           | 180.00      | 5,678.0             | -5,849.8   | 702.8      | 5,890.8               | 0.00                  | 0.00                 |                       |
| 11,300.0            | 90.00           | 180.00      | 5,678.0             | -5,949.8   | 702.8      | 5,990.3               | 0.00                  | 0.00                 |                       |
| 11,400.0            | 90.00           | 180.00      | 5,678.0             | -6,049.8   | 702.8      | 6,089.8               | 0.00                  | 0.00                 |                       |
| 11,500.0            | 90.00           | 180.00      | 5,678.0             | -6,149.8   | 702.8      | 6,189.3               | 0.00                  | 0.00                 |                       |
| 11,600.0            | 90.00           | 180.00      | 5,678.0             | -6,249.8   | 702.8      | 6,288.8               | 0.00                  | 0.00                 |                       |
| 11,700.0            | 90.00           | 180.00      | 5,678.0             | -6,349.8   | 702.8      | 6,388.3               | 0.00                  | 0.00                 |                       |
| 11,800.0            | 90.00           | 180.00      | 5,678.0             | -6,449.8   | 702.8      | 6,487.7               | 0.00                  | 0.00                 |                       |
| 11,900.0            | 90.00           | 180.00      | 5,678.0             | -6,549.8   | 702.8      | 6,587.2               | 0.00                  | 0.00                 |                       |
| 12,000.0            | 90.00           | 180.00      | 5,678.0             | -6,649.8   | 702.8      | 6,686.7               | 0.00                  | 0.00                 |                       |
| 12,100.0            | 90.00           | 180.00      | 5,678.0             | -6,749.8   | 702.8      | 6,786.2               | 0.00                  | 0.00                 |                       |
| 12,200.0            | 90.00           | 180.00      | 5,678.0             | -6,849.8   | 702.8      | 6,885.7               | 0.00                  | 0.00                 |                       |
| 12,300.0            | 90.00           | 180.00      | 5,678.0             | -6,949.8   | 702.8      | 6,985.2               | 0.00                  | 0.00                 |                       |
| 12,313.1            | 90.00           | 180.00      | 5,678.0             | -6,962.8   | 702.8      | 6,998.2               | 0.00                  | 0.00                 | PBHL @ 12313' MD      |

| Targets   |               |              |          |            |            |               |              |                 |                  |
|---|---------------|--------------|----------|------------|------------|---------------|--------------|-----------------|------------------|
| Target Name<br>- hit/miss target<br>- Shape   | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude        | Longitude        |
| 26J-3512B BH TGT<br>- plan hits target center<br>- Point  | 0.00          | 0.00         | 5,678.0  | -6,962.8   | 702.8      | 1,534,797.77  | 3,463,129.18 | 40° 47' 21.86 N | 103° 49' 38.78 W |
| 26J-3512B BHL<br>- plan misses target center by 500.3ft at 12313.1ft MD (5678.0 TVD, -6962.8 N, 702.8 E)<br>- Point | 0.00          | 0.00         | 5,678.0  | -7,462.8   | 722.2      | 1,534,297.81  | 3,463,148.58 | 40° 47' 16.92 N | 103° 49' 38.65 W |

| Casing Points       |                     |      |                      |                    |  |
|---------------------|---------------------|------|----------------------|--------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Casing Diameter (in) | Hole Diameter (in) |  |
| 6,100.0             | 5,678.0             | 7"   | 0.000                | 0.000              |  |

|                  |                               |                                     |                                      |
|------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Database:</b> | USA EDM 5000 Multi Users DB   | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Company:</b>  | Whiting Petroleum Corporation | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Project:</b>  | Weld County, CO               | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site:</b>     | S26-T10N-R58W                 | <b>North Reference:</b>             | Grid                                 |
| <b>Well:</b>     | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Wellbore:</b> | HZ                            |                                     |                                      |
| <b>Design:</b>   | Plan #2                       |                                     |                                      |

| Formations          |                     |              |           |         |                   |
|---------------------|---------------------|--------------|-----------|---------|-------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Name         | Lithology | Dip (°) | Dip Direction (°) |
| 5,600.1             | 5,542.0             | Top Niobrara |           | 0.00    |                   |

| Plan Annotations    |                     |                   |            |                  |
|---------------------|---------------------|-------------------|------------|------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates |            | Comment          |
|                     |                     | +N/-S (ft)        | +E/-W (ft) |                  |
| 1,000.0             | 1,000.0             | 0.0               | 0.0        | KOP @ 1000' MD   |
| 1,200.0             | 1,199.8             | -6.0              | 3.6        | EOB; 4°          |
| 5,203.4             | 5,193.5             | -244.1            | 149.6      | Start 11° Build  |
| 5,985.2             | 5,678.0             | -687.1            | 421.1      | LP @ 5985' MD    |
| 7,035.1             | 5,678.0             | -1,684.9          | 702.5      | EOT; 180° Az     |
| 12,313.1            | 5,678.0             | -6,962.8          | 702.8      | PBHL @ 12313' MD |



**WHITING PETROLEUM CORPORATION**

# **Whiting Petroleum Corporation**

**Weld County, CO**

**S26-T10N-R58W**

**Razor Federal #26J-3512B**

**HZ**

**Plan #2**

## **Anticollision Report**

**18 June, 2013**



**CATHEDRAL**

|                           |                               |                                     |                                      |
|---------------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Company:</b>           | Whiting Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Project:</b>           | Weld County, CO               | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Reference Site:</b>    | S26-T10N-R58W                 | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                         | <b>North Reference:</b>             | Grid                                 |
| <b>Reference Well:</b>    | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Well Error:</b>        | 0.0ft                         | <b>Output errors are at</b>         | 2.00 sigma                           |
| <b>Reference Wellbore</b> | HZ                            | <b>Database:</b>                    | USA EDM 5000 Multi Users DB          |
| <b>Reference Design:</b>  | Plan #2                       | <b>Offset TVD Reference:</b>        | Offset Datum                         |

| Reference                    | Plan #2   |                |                     |
|------------------------------|---|----------------|---------------------|
| Filter type:                 | NO GLOBAL FILTER: Using user defined selection & filtering criteria |                |                     |
| Interpolation Method:        | Stations  | Error Model:   | Systematic Ellipse  |
| Depth Range:                 | Unlimited   | Scan Method:   | Closest Approach 3D |
| Results Limited by:          | Maximum center-center distance of 500.0ft                           | Error Surface: | Elliptical Conic    |
| Warning Levels Evaluated at: | 2.00 Sigma  |                |                     |

| Survey Tool Program |            | Date              | 6/18/2013  |              |  |
|---------------------|------------|-------------------|------------|--------------|--|
| From<br>(ft)        | To<br>(ft) | Survey (Wellbore) | Tool Name  | Description  |  |
| 0.0                 | 12,313.1   | Plan #2 (HZ)      | ISCWSA MWD | MWD - ISCWSA |  |

| Summary                                 |                               |                            |                               |                                |                   |                     |
|---|-------------------------------|----------------------------|-------------------------------|--------------------------------|-------------------|---------------------|
| Site Name                               | Reference Measured Depth (ft) | Offset Measured Depth (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Separation Factor | Warning             |
| Offset Well - Wellbore - Design         |                               |                            |                               |                                |                   |                     |
| S26-T10N-R58W                           |                               |                            |                               |                                |                   |                     |
| Razor #26J-2633L - HZ - Plan #1         | 855.1                         | 855.9                      | 127.7                         | 124.1                          | 35.597            | CC                  |
| Razor #26J-2633L - HZ - Plan #1         | 1,000.0                       | 1,000.6                    | 127.9                         | 123.6                          | 29.969            | ES                  |
| Razor #26J-2633L - HZ - Plan #1         | 5,203.4                       | 5,202.8                    | 212.7                         | 187.7                          | 8.525             | SF                  |
| Razor #26K-3507A - HZ - Plan #2         |                               |                            |                               |                                |                   | Out of range        |
| Razor #26K-3508B - HZ - Plan #2         |                               |                            |                               |                                |                   | Out of range        |
| Razor Federal #26I-2313A - HZ - Plan #1 |                               |                            |                               |                                |                   | Out of range        |
| Razor Federal #26I-2314B - HZ - Plan #1 |                               |                            |                               |                                |                   | Out of range        |
| Razor Federal #26I-2316B - HZ - Plan #1 |                               |                            |                               |                                |                   | Out of range        |
| Razor Federal #26I-3513A - HZ - Plan #1 | 12,313.1                      | 12,066.9                   | 360.8                         | 101.7                          | 1.393             | Level 3, CC, ES, SF |
| Razor Federal #26I-3514B - HZ - Plan #1 |                               |                            |                               |                                |                   | Out of range        |
| Razor Federal #26I-3515A - HZ - Plan #2 |                               |                            |                               |                                |                   | Out of range        |
| Razor Federal #26I-3516B - HZ - Plan #2 |                               |                            |                               |                                |                   | Out of range        |
| Razor Federal #26J-2309A - HZ - Plan #1 | 500.0                         | 500.0                      | 100.1                         | 98.1                           | 50.394            | CC, ES              |
| Razor Federal #26J-2309A - HZ - Plan #1 | 1,100.0                       | 1,091.7                    | 136.1                         | 131.4                          | 29.303            | SF                  |
| Razor Federal #26J-2310B - HZ - Plan #1 | 700.0                         | 700.0                      | 99.1                          | 96.2                           | 34.354            | CC, ES              |
| Razor Federal #26J-2310B - HZ - Plan #1 | 1,300.0                       | 1,295.1                    | 125.7                         | 120.2                          | 22.905            | SF                  |
| Razor Federal #26J-2311A - HZ - Plan #1 | 900.0                         | 900.0                      | 75.1                          | 71.3                           | 19.835            | CC, ES              |
| Razor Federal #26J-2311A - HZ - Plan #1 | 1,100.0                       | 1,094.5                    | 83.3                          | 78.6                           | 17.908            | SF                  |
| Razor Federal #26J-2312B - HZ - Plan #1 | 1,000.0                       | 1,000.0                    | 32.9                          | 28.7                           | 7.782             | CC, ES              |
| Razor Federal #26J-2312B - HZ - Plan #1 | 1,100.0                       | 1,100.0                    | 33.9                          | 29.2                           | 7.273             | SF                  |
| Razor Federal #26J-3509A - HZ - Plan #2 | 1,000.0                       | 1,000.0                    | 123.7                         | 119.4                          | 29.215            | CC, ES              |
| Razor Federal #26J-3509A - HZ - Plan #2 | 5,203.4                       | 5,197.5                    | 306.6                         | 282.0                          | 12.478            | SF                  |
| Razor Federal #26J-3510B - HZ - Plan #2 | 792.1                         | 792.2                      | 65.8                          | 62.6                           | 20.366            | CC                  |
| Razor Federal #26J-3510B - HZ - Plan #2 | 800.0                         | 800.1                      | 65.9                          | 62.6                           | 20.165            | ES                  |
| Razor Federal #26J-3510B - HZ - Plan #2 | 5,203.4                       | 5,201.0                    | 192.2                         | 167.0                          | 7.615             | SF                  |
| Razor Federal #26J-3511A - HZ - Plan #2 | 1,199.5                       | 1,204.7                    | 67.9                          | 63.0                           | 13.777            | CC                  |
| Razor Federal #26J-3511A - HZ - Plan #2 | 5,356.2                       | 5,380.1                    | 69.7                          | 43.4                           | 2.652             | ES                  |
| Razor Federal #26J-3511A - HZ - Plan #2 | 12,313.1                      | 12,186.5                   | 341.8                         | 82.7                           | 1.319             | Level 3, SF         |



|                           |                               |                                     |                                      |
|---------------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Company:</b>           | Whiting Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Project:</b>           | Weld County, CO               | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Reference Site:</b>    | S26-T10N-R58W                 | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                         | <b>North Reference:</b>             | Grid                                 |
| <b>Reference Well:</b>    | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Well Error:</b>        | 0.0ft                         | <b>Output errors are at</b>         | 2.00 sigma                           |
| <b>Reference Wellbore</b> | HZ                            | <b>Database:</b>                    | USA EDM 5000 Multi Users DB          |
| <b>Reference Design:</b>  | Plan #2                       | <b>Offset TVD Reference:</b>        | Offset Datum                         |

| Offset Design S26-T10N-R58W - Razor #26J-2633L - HZ - Plan #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        | Offset Site Error: 0.0 ft |         |  |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|---------------------------|---------|--|
| Survey Program: 0-ISCSWA MWD                                  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        | Offset Well Error: 0.0 ft |         |  |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        |                           | Warning |  |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor         |         |  |
| 0.0   | 0.0                 | 0.0                 | 0.0                 | 0.0             | 0.0         | -91.08                | -2.5                              | -131.5     | 131.5                |                       |                        |                           |         |  |
| 100.0   | 100.0               | 100.0               | 100.0               | 0.1             | 0.1         | -91.08                | -2.5                              | -131.5     | 131.5                | 131.3                 | 0.19                   | 700.637                   |         |  |
| 200.0   | 200.0               | 200.0               | 200.0               | 0.3             | 0.3         | -91.08                | -2.5                              | -131.5     | 131.5                | 130.9                 | 0.64                   | 206.361                   |         |  |
| 300.0   | 300.0               | 301.1               | 301.0               | 0.5             | 0.5         | -91.84                | -4.2                              | -131.0     | 131.1                | 130.0                 | 1.07                   | 122.870                   |         |  |
| 400.0   | 400.0               | 401.5               | 401.3               | 0.8             | 0.7         | -93.96                | -9.0                              | -129.7     | 130.1                | 128.6                 | 1.50                   | 86.611                    |         |  |
| 500.0   | 500.0               | 501.3               | 501.1               | 1.0             | 1.0         | -96.33                | -14.2                             | -128.3     | 129.1                | 127.2                 | 1.95                   | 66.328                    |         |  |
| 600.0   | 600.0               | 601.2               | 600.8               | 1.2             | 1.2         | -98.73                | -19.5                             | -126.9     | 128.4                | 126.0                 | 2.40                   | 53.466                    |         |  |
| 700.0   | 700.0               | 701.0               | 700.5               | 1.4             | 1.4         | -101.15               | -24.7                             | -125.5     | 128.0                | 125.1                 | 2.86                   | 44.688                    |         |  |
| 800.0   | 800.0               | 800.9               | 800.2               | 1.7             | 1.7         | -103.59               | -30.0                             | -124.1     | 127.7                | 124.4                 | 3.33                   | 38.366                    |         |  |
| 855.1   | 855.1               | 855.9               | 855.1               | 1.8             | 1.8         | -104.93               | -32.9                             | -123.4     | 127.7                | 124.1                 | 3.59                   | 35.597 CC                 |         |  |
| 900.0   | 900.0               | 900.8               | 899.9               | 1.9             | 1.9         | -106.03               | -35.3                             | -122.7     | 127.7                | 123.9                 | 3.80                   | 33.629                    |         |  |
| 1,000.0   | 1,000.0             | 1,000.6             | 999.6               | 2.1             | 2.2         | -108.46               | -40.5                             | -121.3     | 127.9                | 123.6                 | 4.27                   | 29.969 ES                 |         |  |
| 1,100.0   | 1,100.0             | 1,100.5             | 1,099.3             | 2.3             | 2.4         | 101.36                | -45.8                             | -119.9     | 128.7                | 124.0                 | 4.74                   | 27.171                    |         |  |
| 1,200.0   | 1,199.8             | 1,200.5             | 1,199.2             | 2.5             | 2.7         | 101.20                | -51.0                             | -118.5     | 130.2                | 125.1                 | 5.16                   | 25.213                    |         |  |
| 1,300.0   | 1,299.6             | 1,300.5             | 1,299.0             | 2.7             | 2.9         | 101.82                | -56.3                             | -117.1     | 132.1                | 126.5                 | 5.61                   | 23.558                    |         |  |
| 1,400.0   | 1,399.4             | 1,400.5             | 1,398.8             | 2.9             | 3.2         | 102.41                | -61.6                             | -115.7     | 134.0                | 127.9                 | 6.06                   | 22.106                    |         |  |
| 1,500.0   | 1,499.1             | 1,500.4             | 1,498.7             | 3.1             | 3.4         | 103.00                | -66.8                             | -114.3     | 135.9                | 129.4                 | 6.52                   | 20.829                    |         |  |
| 1,600.0   | 1,598.9             | 1,600.4             | 1,598.5             | 3.3             | 3.7         | 103.56                | -72.1                             | -112.9     | 137.8                | 130.8                 | 6.99                   | 19.703                    |         |  |
| 1,700.0   | 1,698.6             | 1,700.4             | 1,698.3             | 3.6             | 3.9         | 104.12                | -77.3                             | -111.5     | 139.7                | 132.3                 | 7.47                   | 18.707                    |         |  |
| 1,800.0   | 1,798.4             | 1,800.3             | 1,798.1             | 3.8             | 4.2         | 104.65                | -82.6                             | -110.1     | 141.7                | 133.7                 | 7.95                   | 17.820                    |         |  |
| 1,900.0   | 1,898.1             | 1,900.3             | 1,897.9             | 4.0             | 4.4         | 105.17                | -87.9                             | -108.7     | 143.6                | 135.2                 | 8.43                   | 17.029                    |         |  |
| 2,000.0   | 1,997.9             | 2,000.3             | 1,997.8             | 4.3             | 4.7         | 105.68                | -93.1                             | -107.3     | 145.6                | 136.7                 | 8.92                   | 16.318                    |         |  |
| 2,100.0   | 2,097.6             | 2,100.3             | 2,097.6             | 4.5             | 4.9         | 106.18                | -98.4                             | -105.9     | 147.6                | 138.2                 | 9.41                   | 15.679                    |         |  |
| 2,200.0   | 2,197.4             | 2,200.2             | 2,197.4             | 4.8             | 5.2         | 106.66                | -103.6                            | -104.5     | 149.6                | 139.6                 | 9.90                   | 15.100                    |         |  |
| 2,300.0   | 2,297.2             | 2,300.2             | 2,297.2             | 5.0             | 5.4         | 107.12                | -108.9                            | -103.1     | 151.6                | 141.2                 | 10.40                  | 14.575                    |         |  |
| 2,400.0   | 2,396.9             | 2,400.2             | 2,397.1             | 5.3             | 5.7         | 107.58                | -114.2                            | -101.7     | 153.6                | 142.7                 | 10.89                  | 14.096                    |         |  |
| 2,500.0   | 2,496.7             | 2,500.2             | 2,496.9             | 5.5             | 5.9         | 108.02                | -119.4                            | -100.3     | 155.6                | 144.2                 | 11.39                  | 13.659                    |         |  |
| 2,600.0   | 2,596.4             | 2,600.1             | 2,596.7             | 5.8             | 6.2         | 108.46                | -124.7                            | -98.9      | 157.6                | 145.7                 | 11.89                  | 13.257                    |         |  |
| 2,700.0   | 2,696.2             | 2,700.1             | 2,696.5             | 6.0             | 6.4         | 108.88                | -130.0                            | -97.5      | 159.6                | 147.2                 | 12.39                  | 12.888                    |         |  |
| 2,800.0   | 2,795.9             | 2,800.1             | 2,796.4             | 6.3             | 6.7         | 109.29                | -135.2                            | -96.1      | 161.7                | 148.8                 | 12.89                  | 12.547                    |         |  |
| 2,900.0   | 2,895.7             | 2,900.0             | 2,896.2             | 6.5             | 6.9         | 109.69                | -140.5                            | -94.7      | 163.7                | 150.3                 | 13.39                  | 12.231                    |         |  |
| 3,000.0   | 2,995.5             | 3,000.0             | 2,996.0             | 6.8             | 7.2         | 110.08                | -145.7                            | -93.3      | 165.8                | 151.9                 | 13.89                  | 11.939                    |         |  |
| 3,100.0   | 3,095.2             | 3,100.0             | 3,095.8             | 7.0             | 7.4         | 110.46                | -151.0                            | -91.9      | 167.9                | 153.5                 | 14.39                  | 11.667                    |         |  |
| 3,200.0   | 3,195.0             | 3,200.0             | 3,195.7             | 7.3             | 7.7         | 110.84                | -156.3                            | -90.5      | 169.9                | 155.0                 | 14.89                  | 11.413                    |         |  |
| 3,300.0   | 3,294.7             | 3,299.9             | 3,295.5             | 7.5             | 7.9         | 111.20                | -161.5                            | -89.1      | 172.0                | 156.6                 | 15.39                  | 11.177                    |         |  |
| 3,400.0   | 3,394.5             | 3,399.9             | 3,395.3             | 7.8             | 8.2         | 111.55                | -166.8                            | -87.7      | 174.1                | 158.2                 | 15.89                  | 10.955                    |         |  |
| 3,500.0   | 3,494.2             | 3,499.9             | 3,495.1             | 8.1             | 8.4         | 111.90                | -172.0                            | -86.3      | 176.2                | 159.8                 | 16.39                  | 10.747                    |         |  |
| 3,600.0   | 3,594.0             | 3,599.8             | 3,595.0             | 8.3             | 8.7         | 112.24                | -177.3                            | -84.9      | 178.3                | 161.4                 | 16.90                  | 10.552                    |         |  |
| 3,700.0   | 3,693.7             | 3,699.8             | 3,694.8             | 8.6             | 8.9         | 112.57                | -182.6                            | -83.4      | 180.4                | 163.0                 | 17.40                  | 10.369                    |         |  |
| 3,800.0   | 3,793.5             | 3,799.8             | 3,794.6             | 8.8             | 9.2         | 112.89                | -187.8                            | -82.0      | 182.5                | 164.6                 | 17.90                  | 10.196                    |         |  |
| 3,900.0   | 3,893.3             | 3,899.8             | 3,894.4             | 9.1             | 9.4         | 113.21                | -193.1                            | -80.6      | 184.6                | 166.2                 | 18.40                  | 10.033                    |         |  |
| 4,000.0   | 3,993.0             | 3,999.7             | 3,994.3             | 9.3             | 9.7         | 113.51                | -198.3                            | -79.2      | 186.7                | 167.8                 | 18.90                  | 9.878                     |         |  |
| 4,100.0   | 4,092.8             | 4,099.7             | 4,094.1             | 9.6             | 9.9         | 113.81                | -203.6                            | -77.8      | 188.9                | 169.5                 | 19.41                  | 9.732                     |         |  |
| 4,200.0   | 4,192.5             | 4,199.7             | 4,193.9             | 9.9             | 10.2        | 114.11                | -208.9                            | -76.4      | 191.0                | 171.1                 | 19.91                  | 9.594                     |         |  |
| 4,300.0   | 4,292.3             | 4,299.7             | 4,293.7             | 10.1            | 10.4        | 114.40                | -214.1                            | -75.0      | 193.1                | 172.7                 | 20.41                  | 9.463                     |         |  |
| 4,400.0   | 4,392.0             | 4,399.6             | 4,393.5             | 10.4            | 10.7        | 114.68                | -219.4                            | -73.6      | 195.3                | 174.4                 | 20.91                  | 9.338                     |         |  |
| 4,500.0   | 4,491.8             | 4,499.6             | 4,493.4             | 10.7            | 10.9        | 114.95                | -224.7                            | -72.2      | 197.4                | 176.0                 | 21.42                  | 9.219                     |         |  |
| 4,600.0   | 4,591.6             | 4,599.6             | 4,593.2             | 10.9            | 11.2        | 115.22                | -229.9                            | -70.8      | 199.6                | 177.7                 | 21.92                  | 9.106                     |         |  |
| 4,700.0   | 4,691.3             | 4,699.5             | 4,693.0             | 11.2            | 11.4        | 115.49                | -235.2                            | -69.4      | 201.7                | 179.3                 | 22.42                  | 8.998                     |         |  |
| 4,800.0   | 4,791.1             | 4,799.5             | 4,792.8             | 11.4            | 11.7        | 115.74                | -240.4                            | -68.0      | 203.9                | 181.0                 | 22.92                  | 8.896                     |         |  |
| 4,900.0   | 4,890.8             | 4,899.5             | 4,892.7             | 11.7            | 11.9        | 116.00                | -245.7                            | -66.6      | 206.1                | 182.6                 | 23.42                  | 8.797                     |         |  |
| 5,000.0   | 4,990.6             | 4,999.5             | 4,992.5             | 12.0            | 12.2        | 116.24                | -251.0                            | -65.2      | 208.2                | 184.3                 | 23.93                  | 8.703                     |         |  |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                               |                                     |                                      |
|---------------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Company:</b>           | Whiting Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Project:</b>           | Weld County, CO               | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Reference Site:</b>    | S26-T10N-R58W                 | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                         | <b>North Reference:</b>             | Grid                                 |
| <b>Reference Well:</b>    | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Well Error:</b>        | 0.0ft                         | <b>Output errors are at</b>         | 2.00 sigma                           |
| <b>Reference Wellbore</b> | HZ                            | <b>Database:</b>                    | USA EDM 5000 Multi Users DB          |
| <b>Reference Design:</b>  | Plan #2                       | <b>Offset TVD Reference:</b>        | Offset Datum                         |

| Offset Design S26-T10N-R58W - Razor #26J-2633L - HZ - Plan #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Site Error: | 0.0 ft  |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|-------------------|--------------------|---------|
| Survey Program: 0-ISCSWA MWD                                  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Well Error: | 0.0 ft  |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        |                   |                    | Warning |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor |                    |         |
| 5,100.0   | 5,090.3             | 5,099.4             | 5,092.3             | 12.2            | 12.4        | 116.49                | -256.2                            | -63.8      | 210.4                | 186.0                 | 24.43                  | 8.614             |                    |         |
| 5,203.4   | 5,193.5             | 5,202.8             | 5,195.5             | 12.5            | 12.7        | 116.73                | -261.7                            | -62.4      | 212.7                | 187.7                 | 24.95                  | 8.525 SF          |                    |         |
| 5,250.0   | 5,239.8             | 5,249.3             | 5,242.0             | 12.6            | 12.8        | 117.14                | -264.1                            | -61.7      | 214.6                | 189.5                 | 25.16                  | 8.531             |                    |         |
| 5,300.0   | 5,288.7             | 5,298.7             | 5,291.3             | 12.8            | 12.9        | 118.41                | -266.7                            | -61.0      | 218.9                | 193.6                 | 25.35                  | 8.636             |                    |         |
| 5,350.0   | 5,336.4             | 5,347.1             | 5,339.6             | 13.1            | 13.0        | 120.37                | -269.2                            | -60.3      | 225.9                | 200.4                 | 25.49                  | 8.863             |                    |         |
| 5,400.0   | 5,382.4             | 5,393.0             | 5,385.4             | 13.3            | 13.1        | 122.75                | -271.4                            | -59.8      | 235.9                | 210.4                 | 25.52                  | 9.246             |                    |         |
| 5,450.0   | 5,426.4             | 5,436.4             | 5,428.8             | 13.7            | 13.2        | 125.33                | -272.7                            | -59.4      | 249.8                | 224.4                 | 25.43                  | 9.823             |                    |         |
| 5,500.0   | 5,467.9             | 5,476.8             | 5,469.2             | 14.0            | 13.3        | 127.76                | -273.4                            | -59.2      | 268.0                | 242.8                 | 25.25                  | 10.615            |                    |         |
| 5,550.0   | 5,506.5             | 5,514.1             | 5,506.5             | 14.5            | 13.4        | 129.79                | -273.6                            | -59.2      | 290.8                | 265.8                 | 25.03                  | 11.619            |                    |         |
| 5,600.0   | 5,542.0             | 5,549.5             | 5,542.0             | 14.9            | 13.4        | 131.34                | -273.6                            | -59.2      | 318.0                | 293.2                 | 24.79                  | 12.829            |                    |         |
| 5,650.0   | 5,573.8             | 5,581.4             | 5,573.8             | 15.5            | 13.5        | 132.07                | -273.6                            | -59.2      | 349.4                | 324.7                 | 24.65                  | 14.173            |                    |         |
| 5,700.0   | 5,601.9             | 5,609.4             | 5,601.9             | 16.1            | 13.5        | 131.81                | -273.6                            | -59.2      | 384.5                | 359.7                 | 24.75                  | 15.537            |                    |         |
| 5,750.0   | 5,625.8             | 5,633.4             | 5,625.8             | 16.7            | 13.6        | 130.33                | -273.6                            | -59.2      | 423.0                | 397.7                 | 25.25                  | 16.752            |                    |         |
| 5,800.0   | 5,645.4             | 5,653.0             | 5,645.4             | 17.4            | 13.6        | 127.23                | -273.6                            | -59.2      | 464.3                | 438.0                 | 26.37                  | 17.611            |                    |         |

|                           |                               |                                     |                                      |
|---------------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Company:</b>           | Whiting Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Project:</b>           | Weld County, CO               | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Reference Site:</b>    | S26-T10N-R58W                 | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                         | <b>North Reference:</b>             | Grid                                 |
| <b>Reference Well:</b>    | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Well Error:</b>        | 0.0ft                         | <b>Output errors are at</b>         | 2.00 sigma                           |
| <b>Reference Wellbore</b> | HZ                            | <b>Database:</b>                    | USA EDM 5000 Multi Users DB          |
| <b>Reference Design:</b>  | Plan #2                       | <b>Offset TVD Reference:</b>        | Offset Datum                         |

| Offset Design S26-T10N-R58W - Razor Federal #26J-3513A - HZ - Plan #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Site Error: | 0.0 ft |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|-------------------|--------------------|--------|
| Survey Program: 0-ISCSWA MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Well Error: | 0.0 ft |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        | Separation Factor | Warning            |        |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis |                   |                    |        |
| 6,300.0   | 5,678.0             | 6,089.8             | 5,574.0             | 25.3            | 22.4        | -78.62                | -985.7                            | 1,053.2    | 499.0                | 454.4                 | 44.55                  | 11.200            |                    |        |
| 6,400.0   | 5,678.0             | 6,165.5             | 5,574.0             | 26.9            | 23.5        | -78.14                | -1,061.4                          | 1,051.9    | 462.9                | 415.6                 | 47.32                  | 9.783             |                    |        |
| 6,500.0   | 5,678.0             | 6,260.8             | 5,574.0             | 28.6            | 25.0        | -77.52                | -1,156.7                          | 1,051.9    | 433.4                | 382.9                 | 50.46                  | 8.589             |                    |        |
| 6,600.0   | 5,678.0             | 6,357.6             | 5,574.0             | 30.3            | 26.7        | -76.94                | -1,253.5                          | 1,051.9    | 408.9                | 355.2                 | 53.63                  | 7.623             |                    |        |
| 6,700.0   | 5,678.0             | 6,455.6             | 5,574.0             | 31.9            | 28.3        | -76.41                | -1,351.5                          | 1,051.9    | 389.3                | 332.6                 | 56.79                  | 6.856             |                    |        |
| 6,800.0   | 5,678.0             | 6,554.5             | 5,574.0             | 33.5            | 30.0        | -75.99                | -1,450.4                          | 1,051.9    | 374.9                | 315.0                 | 59.90                  | 6.258             |                    |        |
| 6,900.0   | 5,678.0             | 6,654.0             | 5,574.0             | 35.1            | 31.8        | -75.69                | -1,549.9                          | 1,051.9    | 365.5                | 302.6                 | 62.96                  | 5.806             |                    |        |
| 7,000.0   | 5,678.0             | 6,753.9             | 5,574.0             | 36.7            | 33.6        | -75.55                | -1,649.8                          | 1,051.9    | 361.2                | 295.3                 | 65.93                  | 5.478             |                    |        |
| 7,035.1   | 5,678.0             | 6,789.0             | 5,574.0             | 37.3            | 34.2        | -75.54                | -1,684.9                          | 1,051.9    | 360.9                | 293.9                 | 66.95                  | 5.390             |                    |        |
| 7,100.0   | 5,678.0             | 6,853.9             | 5,574.0             | 38.3            | 35.3        | -75.54                | -1,749.8                          | 1,051.9    | 360.9                | 291.7                 | 69.15                  | 5.219             |                    |        |
| 7,200.0   | 5,678.0             | 6,953.9             | 5,574.0             | 39.9            | 37.1        | -75.54                | -1,849.8                          | 1,051.9    | 360.9                | 288.3                 | 72.56                  | 4.973             |                    |        |
| 7,300.0   | 5,678.0             | 7,053.9             | 5,574.0             | 41.5            | 38.9        | -75.54                | -1,949.8                          | 1,051.9    | 360.9                | 284.9                 | 76.00                  | 4.748             |                    |        |
| 7,400.0   | 5,678.0             | 7,153.9             | 5,574.0             | 43.2            | 40.8        | -75.54                | -2,049.8                          | 1,051.9    | 360.9                | 281.4                 | 79.48                  | 4.541             |                    |        |
| 7,500.0   | 5,678.0             | 7,253.9             | 5,574.0             | 44.8            | 42.6        | -75.54                | -2,149.8                          | 1,052.0    | 360.9                | 277.9                 | 82.97                  | 4.350             |                    |        |
| 7,600.0   | 5,678.0             | 7,353.9             | 5,574.0             | 46.5            | 44.4        | -75.54                | -2,249.8                          | 1,052.0    | 360.9                | 274.4                 | 86.48                  | 4.173             |                    |        |
| 7,700.0   | 5,678.0             | 7,453.9             | 5,574.0             | 48.2            | 46.3        | -75.54                | -2,349.8                          | 1,052.0    | 360.9                | 270.9                 | 90.01                  | 4.009             |                    |        |
| 7,800.0   | 5,678.0             | 7,553.9             | 5,574.0             | 49.9            | 48.1        | -75.54                | -2,449.8                          | 1,052.0    | 360.9                | 267.3                 | 93.56                  | 3.857             |                    |        |
| 7,900.0   | 5,678.0             | 7,653.9             | 5,574.0             | 51.7            | 50.0        | -75.54                | -2,549.8                          | 1,052.0    | 360.9                | 263.7                 | 97.12                  | 3.716             |                    |        |
| 8,000.0   | 5,678.0             | 7,753.9             | 5,574.0             | 53.4            | 51.8        | -75.54                | -2,649.8                          | 1,052.0    | 360.9                | 260.2                 | 100.69                 | 3.584             |                    |        |
| 8,100.0   | 5,678.0             | 7,853.9             | 5,574.0             | 55.2            | 53.7        | -75.54                | -2,749.8                          | 1,052.0    | 360.9                | 256.6                 | 104.27                 | 3.461             |                    |        |
| 8,200.0   | 5,678.0             | 7,953.9             | 5,574.0             | 56.9            | 55.5        | -75.54                | -2,849.8                          | 1,052.0    | 360.9                | 253.0                 | 107.86                 | 3.346             |                    |        |
| 8,300.0   | 5,678.0             | 8,053.9             | 5,574.0             | 58.7            | 57.4        | -75.54                | -2,949.8                          | 1,052.0    | 360.9                | 249.4                 | 111.47                 | 3.237             |                    |        |
| 8,400.0   | 5,678.0             | 8,153.9             | 5,574.0             | 60.5            | 59.3        | -75.54                | -3,049.8                          | 1,052.0    | 360.9                | 245.8                 | 115.08                 | 3.136             |                    |        |
| 8,500.0   | 5,678.0             | 8,253.9             | 5,574.0             | 62.3            | 61.2        | -75.54                | -3,149.8                          | 1,052.0    | 360.9                | 242.2                 | 118.69                 | 3.040             |                    |        |
| 8,600.0   | 5,678.0             | 8,353.9             | 5,574.0             | 64.1            | 63.0        | -75.54                | -3,249.8                          | 1,052.0    | 360.9                | 238.5                 | 122.32                 | 2.950             |                    |        |
| 8,700.0   | 5,678.0             | 8,453.9             | 5,574.0             | 65.9            | 64.9        | -75.54                | -3,349.8                          | 1,052.0    | 360.9                | 234.9                 | 125.95                 | 2.865             |                    |        |
| 8,800.0   | 5,678.0             | 8,553.9             | 5,574.0             | 67.7            | 66.8        | -75.54                | -3,449.8                          | 1,052.0    | 360.8                | 231.3                 | 129.58                 | 2.785             |                    |        |
| 8,900.0   | 5,678.0             | 8,653.9             | 5,574.0             | 69.5            | 68.7        | -75.54                | -3,549.8                          | 1,052.0    | 360.8                | 227.6                 | 133.23                 | 2.709             |                    |        |
| 9,000.0   | 5,678.0             | 8,753.9             | 5,574.0             | 71.4            | 70.6        | -75.54                | -3,649.8                          | 1,052.0    | 360.8                | 224.0                 | 136.87                 | 2.636             |                    |        |
| 9,100.0   | 5,678.0             | 8,853.9             | 5,574.0             | 73.2            | 72.5        | -75.54                | -3,749.8                          | 1,052.0    | 360.8                | 220.3                 | 140.52                 | 2.568             |                    |        |
| 9,200.0   | 5,678.0             | 8,953.9             | 5,574.0             | 75.0            | 74.3        | -75.54                | -3,849.8                          | 1,052.0    | 360.8                | 216.7                 | 144.18                 | 2.503             |                    |        |
| 9,300.0   | 5,678.0             | 9,053.9             | 5,574.0             | 76.9            | 76.2        | -75.54                | -3,949.8                          | 1,052.0    | 360.8                | 213.0                 | 147.84                 | 2.441             |                    |        |
| 9,400.0   | 5,678.0             | 9,153.9             | 5,574.0             | 78.7            | 78.1        | -75.54                | -4,049.8                          | 1,052.0    | 360.8                | 209.3                 | 151.50                 | 2.382             |                    |        |
| 9,500.0   | 5,678.0             | 9,253.9             | 5,574.0             | 80.6            | 80.0        | -75.54                | -4,149.8                          | 1,052.0    | 360.8                | 205.7                 | 155.16                 | 2.325             |                    |        |
| 9,600.0   | 5,678.0             | 9,353.9             | 5,574.0             | 82.4            | 81.9        | -75.54                | -4,249.8                          | 1,052.1    | 360.8                | 202.0                 | 158.83                 | 2.272             |                    |        |
| 9,700.0   | 5,678.0             | 9,453.9             | 5,574.0             | 84.2            | 83.8        | -75.54                | -4,349.8                          | 1,052.1    | 360.8                | 198.3                 | 162.50                 | 2.220             |                    |        |
| 9,800.0   | 5,678.0             | 9,553.9             | 5,574.0             | 86.1            | 85.7        | -75.54                | -4,449.8                          | 1,052.1    | 360.8                | 194.7                 | 166.18                 | 2.171             |                    |        |
| 9,900.0   | 5,678.0             | 9,653.9             | 5,574.0             | 88.0            | 87.6        | -75.54                | -4,549.8                          | 1,052.1    | 360.8                | 191.0                 | 169.86                 | 2.124             |                    |        |
| 10,000.0  | 5,678.0             | 9,753.9             | 5,574.0             | 89.8            | 89.5        | -75.54                | -4,649.8                          | 1,052.1    | 360.8                | 187.3                 | 173.53                 | 2.079             |                    |        |
| 10,100.0  | 5,678.0             | 9,853.9             | 5,574.0             | 91.7            | 91.4        | -75.54                | -4,749.8                          | 1,052.1    | 360.8                | 183.6                 | 177.22                 | 2.036             |                    |        |
| 10,200.0  | 5,678.0             | 9,953.9             | 5,574.0             | 93.5            | 93.3        | -75.54                | -4,849.8                          | 1,052.1    | 360.8                | 179.9                 | 180.90                 | 1.995             |                    |        |
| 10,300.0  | 5,678.0             | 10,053.9            | 5,574.0             | 95.4            | 95.2        | -75.54                | -4,949.8                          | 1,052.1    | 360.8                | 176.2                 | 184.58                 | 1.955             |                    |        |
| 10,400.0  | 5,678.0             | 10,153.9            | 5,574.0             | 97.3            | 97.1        | -75.54                | -5,049.8                          | 1,052.1    | 360.8                | 172.5                 | 188.27                 | 1.917             |                    |        |
| 10,500.0  | 5,678.0             | 10,253.9            | 5,574.0             | 99.1            | 99.0        | -75.54                | -5,149.8                          | 1,052.1    | 360.8                | 168.9                 | 191.96                 | 1.880             |                    |        |
| 10,600.0  | 5,678.0             | 10,353.9            | 5,574.0             | 101.0           | 100.9       | -75.54                | -5,249.8                          | 1,052.1    | 360.8                | 165.2                 | 195.65                 | 1.844             |                    |        |
| 10,700.0  | 5,678.0             | 10,453.9            | 5,574.0             | 102.9           | 102.8       | -75.54                | -5,349.8                          | 1,052.1    | 360.8                | 161.5                 | 199.34                 | 1.810             |                    |        |
| 10,800.0  | 5,678.0             | 10,553.9            | 5,574.0             | 104.8           | 104.7       | -75.54                | -5,449.8                          | 1,052.1    | 360.8                | 157.8                 | 203.03                 | 1.777             |                    |        |
| 10,900.0  | 5,678.0             | 10,653.9            | 5,574.0             | 106.6           | 106.6       | -75.54                | -5,549.8                          | 1,052.1    | 360.8                | 154.1                 | 206.73                 | 1.745             |                    |        |
| 11,000.0  | 5,678.0             | 10,753.9            | 5,574.0             | 108.5           | 108.5       | -75.54                | -5,649.8                          | 1,052.1    | 360.8                | 150.4                 | 210.42                 | 1.715             |                    |        |
| 11,100.0  | 5,678.0             | 10,853.9            | 5,574.0             | 110.4           | 110.4       | -75.54                | -5,749.8                          | 1,052.1    | 360.8                | 146.7                 | 214.12                 | 1.685             |                    |        |
| 11,200.0  | 5,678.0             | 10,953.9            | 5,574.0             | 112.3           | 112.3       | -75.54                | -5,849.8                          | 1,052.1    | 360.8                | 143.0                 | 217.82                 | 1.656             |                    |        |
| 11,300.0  | 5,678.0             | 11,053.9            | 5,574.0             | 114.2           | 114.2       | -75.54                | -5,949.8                          | 1,052.1    | 360.8                | 139.3                 | 221.52                 | 1.629             |                    |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                               |                                     |                                      |
|---------------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Company:</b>           | Whiting Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Project:</b>           | Weld County, CO               | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Reference Site:</b>    | S26-T10N-R58W                 | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                         | <b>North Reference:</b>             | Grid                                 |
| <b>Reference Well:</b>    | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Well Error:</b>        | 0.0ft                         | <b>Output errors are at</b>         | 2.00 sigma                           |
| <b>Reference Wellbore</b> | HZ                            | <b>Database:</b>                    | USA EDM 5000 Multi Users DB          |
| <b>Reference Design:</b>  | Plan #2                       | <b>Offset TVD Reference:</b>        | Offset Datum                         |

| Offset Design   |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        | Offset Site Error: | 0.0 ft              |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|--------------------|---------------------|
| S26-T10N-R58W - Razor Federal #26I-3513A - HZ - Plan #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        | Offset Well Error: | 0.0 ft              |
| Survey Program: 0-ISCSWA MWD                            |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                    |                     |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        |                    |                     |
| Measured Depth (ft)                                     | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor  | Warning             |
| 11,400.0  | 5,678.0             | 11,153.9            | 5,574.0             | 116.0           | 116.1       | -75.54                | -6,049.8                          | 1,052.1    | 360.8                | 135.6                 | 225.22                 | 1.602              |                     |
| 11,500.0  | 5,678.0             | 11,253.9            | 5,574.0             | 117.9           | 118.0       | -75.54                | -6,149.8                          | 1,052.1    | 360.8                | 131.9                 | 228.92                 | 1.576              |                     |
| 11,600.0  | 5,678.0             | 11,353.9            | 5,574.0             | 119.8           | 119.9       | -75.54                | -6,249.8                          | 1,052.1    | 360.8                | 128.2                 | 232.62                 | 1.551              |                     |
| 11,700.0  | 5,678.0             | 11,453.9            | 5,574.0             | 121.7           | 121.8       | -75.54                | -6,349.8                          | 1,052.2    | 360.8                | 124.5                 | 236.32                 | 1.527              |                     |
| 11,800.0  | 5,678.0             | 11,553.9            | 5,574.0             | 123.6           | 123.7       | -75.54                | -6,449.8                          | 1,052.2    | 360.8                | 120.8                 | 240.03                 | 1.503              |                     |
| 11,900.0  | 5,678.0             | 11,653.9            | 5,574.0             | 125.5           | 125.7       | -75.54                | -6,549.8                          | 1,052.2    | 360.8                | 117.1                 | 243.73                 | 1.480              | Level 3             |
| 12,000.0  | 5,678.0             | 11,753.9            | 5,574.0             | 127.4           | 127.6       | -75.54                | -6,649.8                          | 1,052.2    | 360.8                | 113.4                 | 247.44                 | 1.458              | Level 3             |
| 12,100.0  | 5,678.0             | 11,853.9            | 5,574.0             | 129.3           | 129.5       | -75.54                | -6,749.8                          | 1,052.2    | 360.8                | 109.6                 | 251.14                 | 1.437              | Level 3             |
| 12,200.0  | 5,678.0             | 11,953.9            | 5,574.0             | 131.1           | 131.4       | -75.54                | -6,849.8                          | 1,052.2    | 360.8                | 105.9                 | 254.85                 | 1.416              | Level 3             |
| 12,300.0  | 5,678.0             | 12,053.9            | 5,574.0             | 133.0           | 133.3       | -75.54                | -6,949.8                          | 1,052.2    | 360.8                | 102.2                 | 258.56                 | 1.395              | Level 3             |
| 12,313.1  | 5,678.0             | 12,066.9            | 5,574.0             | 133.3           | 133.5       | -75.54                | -6,962.8                          | 1,052.2    | 360.8                | 101.7                 | 259.04                 | 1.393              | Level 3, CC, ES, SF |

|                           |                               |                                     |                                      |
|---------------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Company:</b>           | Whiting Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Project:</b>           | Weld County, CO               | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Reference Site:</b>    | S26-T10N-R58W                 | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                         | <b>North Reference:</b>             | Grid                                 |
| <b>Reference Well:</b>    | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Well Error:</b>        | 0.0ft                         | <b>Output errors are at</b>         | 2.00 sigma                           |
| <b>Reference Wellbore</b> | HZ                            | <b>Database:</b>                    | USA EDM 5000 Multi Users DB          |
| <b>Reference Design:</b>  | Plan #2                       | <b>Offset TVD Reference:</b>        | Offset Datum                         |

| Offset Design S26-T10N-R58W - Razor Federal #26J-2309A - HZ - Plan #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                  |               | Offset Site Error: | 0.0 ft |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------|---------------|--------------------|--------|
| Survey Program: 0-ISCSWA MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                  |               | Offset Well Error: | 0.0 ft |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       | Total            | Separation    | Warning            |        |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Uncertainty Axis | Factor        |                    |        |
| 0.0   | 0.0                 | 0.0                 | 0.0                 | 0.0             | 0.0         | -42.47                | 73.8                              | -67.6      | 100.1                |                       |                  |               |                    |        |
| 100.0   | 100.0               | 100.0               | 100.0               | 0.1             | 0.1         | -42.47                | 73.8                              | -67.6      | 100.1                | 99.9                  | 0.19             | 533.215       |                    |        |
| 200.0   | 200.0               | 200.0               | 200.0               | 0.3             | 0.3         | -42.47                | 73.8                              | -67.6      | 100.1                | 99.4                  | 0.64             | 157.049       |                    |        |
| 300.0   | 300.0               | 300.0               | 300.0               | 0.5             | 0.5         | -42.47                | 73.8                              | -67.6      | 100.1                | 99.0                  | 1.09             | 92.086        |                    |        |
| 400.0   | 400.0               | 400.0               | 400.0               | 0.8             | 0.8         | -42.47                | 73.8                              | -67.6      | 100.1                | 98.5                  | 1.54             | 65.141        |                    |        |
| 500.0   | 500.0               | 500.0               | 500.0               | 1.0             | 1.0         | -42.47                | 73.8                              | -67.6      | 100.1                | 98.1                  | 1.99             | 50.394 CC, ES |                    |        |
| 600.0   | 600.0               | 596.6               | 596.6               | 1.2             | 1.2         | -42.31                | 75.2                              | -68.4      | 101.7                | 99.3                  | 2.43             | 41.914        |                    |        |
| 700.0   | 700.0               | 693.0               | 692.9               | 1.4             | 1.4         | -41.88                | 79.3                              | -71.1      | 106.7                | 103.9                 | 2.87             | 37.148        |                    |        |
| 800.0   | 800.0               | 792.6               | 792.2               | 1.7             | 1.7         | -41.32                | 85.1                              | -74.8      | 113.6                | 110.3                 | 3.33             | 34.155        |                    |        |
| 900.0   | 900.0               | 892.3               | 891.7               | 1.9             | 1.9         | -40.83                | 91.0                              | -78.6      | 120.5                | 116.7                 | 3.78             | 31.889        |                    |        |
| 1,000.0   | 1,000.0             | 992.1               | 991.2               | 2.1             | 2.1         | -40.39                | 96.8                              | -82.4      | 127.4                | 123.2                 | 4.23             | 30.096        |                    |        |
| 1,100.0   | 1,100.0             | 1,091.7             | 1,090.6             | 2.3             | 2.4         | 171.59                | 102.7                             | -86.1      | 136.1                | 131.4                 | 4.64             | 29.303 SF     |                    |        |
| 1,200.0   | 1,199.8             | 1,190.9             | 1,189.6             | 2.5             | 2.6         | 172.18                | 108.5                             | -89.9      | 148.1                | 143.1                 | 5.04             | 29.372        |                    |        |
| 1,300.0   | 1,299.6             | 1,290.0             | 1,288.4             | 2.7             | 2.9         | 172.80                | 114.3                             | -93.6      | 162.0                | 156.5                 | 5.45             | 29.707        |                    |        |
| 1,400.0   | 1,399.4             | 1,389.0             | 1,387.1             | 2.9             | 3.1         | 173.32                | 120.1                             | -97.4      | 175.8                | 169.9                 | 5.87             | 29.962        |                    |        |
| 1,500.0   | 1,499.1             | 1,488.0             | 1,485.9             | 3.1             | 3.4         | 173.76                | 125.9                             | -101.1     | 189.6                | 183.4                 | 6.29             | 30.157        |                    |        |
| 1,600.0   | 1,598.9             | 1,587.0             | 1,584.7             | 3.3             | 3.6         | 174.14                | 131.7                             | -104.8     | 203.5                | 196.8                 | 6.71             | 30.309        |                    |        |
| 1,700.0   | 1,698.6             | 1,686.1             | 1,683.5             | 3.6             | 3.9         | 174.47                | 137.5                             | -108.6     | 217.4                | 210.2                 | 7.14             | 30.428        |                    |        |
| 1,800.0   | 1,798.4             | 1,785.1             | 1,782.3             | 3.8             | 4.1         | 174.77                | 143.3                             | -112.3     | 231.2                | 223.7                 | 7.58             | 30.521        |                    |        |
| 1,900.0   | 1,898.1             | 1,884.1             | 1,881.1             | 4.0             | 4.4         | 175.03                | 149.1                             | -116.1     | 245.1                | 237.1                 | 8.01             | 30.594        |                    |        |
| 2,000.0   | 1,997.9             | 1,983.1             | 1,979.9             | 4.3             | 4.6         | 175.26                | 154.9                             | -119.8     | 259.0                | 250.5                 | 8.45             | 30.653        |                    |        |
| 2,100.0   | 2,097.6             | 2,082.2             | 2,078.6             | 4.5             | 4.9         | 175.47                | 160.8                             | -123.5     | 272.9                | 264.0                 | 8.89             | 30.699        |                    |        |
| 2,200.0   | 2,197.4             | 2,181.2             | 2,177.4             | 4.8             | 5.1         | 175.66                | 166.6                             | -127.3     | 286.8                | 277.4                 | 9.33             | 30.736        |                    |        |
| 2,300.0   | 2,297.2             | 2,280.2             | 2,276.2             | 5.0             | 5.4         | 175.83                | 172.4                             | -131.0     | 300.7                | 290.9                 | 9.77             | 30.766        |                    |        |
| 2,400.0   | 2,396.9             | 2,379.3             | 2,375.0             | 5.3             | 5.7         | 175.99                | 178.2                             | -134.8     | 314.5                | 304.3                 | 10.22            | 30.789        |                    |        |
| 2,500.0   | 2,496.7             | 2,478.3             | 2,473.8             | 5.5             | 5.9         | 176.13                | 184.0                             | -138.5     | 328.4                | 317.8                 | 10.66            | 30.808        |                    |        |
| 2,600.0   | 2,596.4             | 2,577.3             | 2,572.6             | 5.8             | 6.2         | 176.26                | 189.8                             | -142.2     | 342.3                | 331.2                 | 11.11            | 30.823        |                    |        |
| 2,700.0   | 2,696.2             | 2,676.3             | 2,671.4             | 6.0             | 6.4         | 176.38                | 195.6                             | -146.0     | 356.2                | 344.7                 | 11.55            | 30.834        |                    |        |
| 2,800.0   | 2,795.9             | 2,775.4             | 2,770.1             | 6.3             | 6.7         | 176.49                | 201.4                             | -149.7     | 370.1                | 358.1                 | 12.00            | 30.843        |                    |        |
| 2,900.0   | 2,895.7             | 2,874.4             | 2,868.9             | 6.5             | 6.9         | 176.60                | 207.2                             | -153.5     | 384.0                | 371.6                 | 12.45            | 30.850        |                    |        |
| 3,000.0   | 2,995.5             | 2,973.4             | 2,967.7             | 6.8             | 7.2         | 176.69                | 213.0                             | -157.2     | 397.9                | 385.0                 | 12.90            | 30.855        |                    |        |
| 3,100.0   | 3,095.2             | 3,072.4             | 3,066.5             | 7.0             | 7.4         | 176.78                | 218.8                             | -160.9     | 411.8                | 398.5                 | 13.35            | 30.858        |                    |        |
| 3,200.0   | 3,195.0             | 3,171.5             | 3,165.3             | 7.3             | 7.7         | 176.87                | 224.6                             | -164.7     | 425.7                | 411.9                 | 13.80            | 30.861        |                    |        |
| 3,300.0   | 3,294.7             | 3,270.5             | 3,264.1             | 7.5             | 7.9         | 176.95                | 230.4                             | -168.4     | 439.6                | 425.4                 | 14.25            | 30.862        |                    |        |
| 3,400.0   | 3,394.5             | 3,369.5             | 3,362.9             | 7.8             | 8.2         | 177.02                | 236.3                             | -172.2     | 453.5                | 438.8                 | 14.70            | 30.862        |                    |        |
| 3,500.0   | 3,494.2             | 3,468.5             | 3,461.6             | 8.1             | 8.5         | 177.09                | 242.1                             | -175.9     | 467.4                | 452.3                 | 15.15            | 30.862        |                    |        |
| 3,600.0   | 3,594.0             | 3,567.6             | 3,560.4             | 8.3             | 8.7         | 177.15                | 247.9                             | -179.6     | 481.4                | 465.8                 | 15.60            | 30.861        |                    |        |
| 3,700.0   | 3,693.7             | 3,666.6             | 3,659.2             | 8.6             | 9.0         | 177.22                | 253.7                             | -183.4     | 495.3                | 479.2                 | 16.05            | 30.860        |                    |        |

|                           |                               |                                     |                                      |
|---------------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Company:</b>           | Whiting Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Project:</b>           | Weld County, CO               | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Reference Site:</b>    | S26-T10N-R58W                 | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                         | <b>North Reference:</b>             | Grid                                 |
| <b>Reference Well:</b>    | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Well Error:</b>        | 0.0ft                         | <b>Output errors are at</b>         | 2.00 sigma                           |
| <b>Reference Wellbore</b> | HZ                            | <b>Database:</b>                    | USA EDM 5000 Multi Users DB          |
| <b>Reference Design:</b>  | Plan #2                       | <b>Offset TVD Reference:</b>        | Offset Datum                         |

| Offset Design S26-T10N-R58W - Razor Federal #26J-2310B - HZ - Plan #1 |                           |                           |                           |                   |                |                             |   |               |                            |                             |                              |                      | Offset Site Error: | 0.0 ft |
|---|---------------------------|---------------------------|---------------------------|-------------------|----------------|-----------------------------|---|---------------|----------------------------|-----------------------------|------------------------------|----------------------|--------------------|--------|
| Survey Program: 0-ISCSWA MWD  |                           |                           |                           |                   |                |                             |   |               |                            |                             |                              |                      | Offset Well Error: | 0.0 ft |
| Reference   |                           | Offset                    |                           | Semi Major Axis   |                |                             | Distance                                |               |                            |                             | Total<br>Uncertainty<br>Axis | Separation<br>Factor | Warning            |        |
| Measured<br>Depth<br>(ft)   | Vertical<br>Depth<br>(ft) | Measured<br>Depth<br>(ft) | Vertical<br>Depth<br>(ft) | Reference<br>(ft) | Offset<br>(ft) | Highside<br>Toolface<br>(°) | Offset Wellbore Centre<br>+N/-S<br>(ft) | +E/-W<br>(ft) | Between<br>Centres<br>(ft) | Between<br>Ellipses<br>(ft) |                              |                      |                    |        |
| 0.0   | 0.0                       | 0.0                       | 0.0                       | 0.0               | 0.0            | -91.06                      | -1.8                                    | -99.1         | 99.1                       |                             |                              |                      |                    |        |
| 100.0   | 100.0                     | 100.0                     | 100.0                     | 0.1               | 0.1            | -91.06                      | -1.8                                    | -99.1         | 99.1                       | 98.9                        | 0.19                         | 528.059              |                    |        |
| 200.0   | 200.0                     | 200.0                     | 200.0                     | 0.3               | 0.3            | -91.06                      | -1.8                                    | -99.1         | 99.1                       | 98.5                        | 0.64                         | 155.531              |                    |        |
| 300.0   | 300.0                     | 300.0                     | 300.0                     | 0.5               | 0.5            | -91.06                      | -1.8                                    | -99.1         | 99.1                       | 98.0                        | 1.09                         | 91.195               |                    |        |
| 400.0   | 400.0                     | 400.0                     | 400.0                     | 0.8               | 0.8            | -91.06                      | -1.8                                    | -99.1         | 99.1                       | 97.6                        | 1.54                         | 64.511               |                    |        |
| 500.0   | 500.0                     | 500.0                     | 500.0                     | 1.0               | 1.0            | -91.06                      | -1.8                                    | -99.1         | 99.1                       | 97.1                        | 1.99                         | 49.907               |                    |        |
| 600.0   | 600.0                     | 600.0                     | 600.0                     | 1.2               | 1.2            | -91.06                      | -1.8                                    | -99.1         | 99.1                       | 96.7                        | 2.44                         | 40.695               |                    |        |
| 700.0   | 700.0                     | 700.0                     | 700.0                     | 1.4               | 1.4            | -91.06                      | -1.8                                    | -99.1         | 99.1                       | 96.2                        | 2.88                         | 34.354 CC, ES        |                    |        |
| 800.0   | 800.0                     | 798.9                     | 798.8                     | 1.7               | 1.7            | -90.13                      | -0.2                                    | -99.7         | 99.7                       | 96.3                        | 3.33                         | 29.921               |                    |        |
| 900.0   | 900.0                     | 897.5                     | 897.3                     | 1.9               | 1.9            | -87.42                      | 4.6                                     | -101.4        | 101.5                      | 97.8                        | 3.78                         | 26.860               |                    |        |
| 1,000.0   | 1,000.0                   | 997.2                     | 996.8                     | 2.1               | 2.1            | -83.89                      | 11.1                                    | -103.8        | 104.4                      | 100.2                       | 4.23                         | 24.660               |                    |        |
| 1,100.0   | 1,100.0                   | 1,096.8                   | 1,096.2                   | 2.3               | 2.4            | 131.56                      | 17.6                                    | -106.1        | 108.8                      | 104.1                       | 4.66                         | 23.347               |                    |        |
| 1,200.0   | 1,199.8                   | 1,196.1                   | 1,195.2                   | 2.5               | 2.6            | 136.35                      | 24.2                                    | -108.5        | 116.2                      | 111.1                       | 5.07                         | 22.921               |                    |        |
| 1,300.0   | 1,299.6                   | 1,295.1                   | 1,294.0                   | 2.7               | 2.8            | 141.13                      | 30.6                                    | -110.8        | 125.7                      | 120.2                       | 5.49                         | 22.905 SF            |                    |        |
| 1,400.0   | 1,399.4                   | 1,394.2                   | 1,392.8                   | 2.9               | 3.1            | 145.22                      | 37.1                                    | -113.2        | 135.9                      | 130.0                       | 5.91                         | 22.994               |                    |        |
| 1,500.0   | 1,499.1                   | 1,493.2                   | 1,491.6                   | 3.1               | 3.3            | 148.73                      | 43.6                                    | -115.5        | 146.7                      | 140.4                       | 6.34                         | 23.149               |                    |        |
| 1,600.0   | 1,598.9                   | 1,592.2                   | 1,590.4                   | 3.3               | 3.6            | 151.75                      | 50.1                                    | -117.9        | 158.0                      | 151.3                       | 6.77                         | 23.342               |                    |        |
| 1,700.0   | 1,698.6                   | 1,691.3                   | 1,689.2                   | 3.6               | 3.8            | 154.36                      | 56.6                                    | -120.2        | 169.7                      | 162.5                       | 7.20                         | 23.557               |                    |        |
| 1,800.0   | 1,798.4                   | 1,790.3                   | 1,788.0                   | 3.8               | 4.1            | 156.64                      | 63.1                                    | -122.6        | 181.7                      | 174.1                       | 7.64                         | 23.781               |                    |        |
| 1,900.0   | 1,898.1                   | 1,889.3                   | 1,886.8                   | 4.0               | 4.3            | 158.63                      | 69.6                                    | -124.9        | 193.9                      | 185.9                       | 8.08                         | 24.007               |                    |        |
| 2,000.0   | 1,997.9                   | 1,988.4                   | 1,985.6                   | 4.3               | 4.6            | 160.38                      | 76.1                                    | -127.3        | 206.4                      | 197.8                       | 8.52                         | 24.229               |                    |        |
| 2,100.0   | 2,097.6                   | 2,087.4                   | 2,084.4                   | 4.5               | 4.8            | 161.94                      | 82.6                                    | -129.6        | 219.0                      | 210.0                       | 8.96                         | 24.445               |                    |        |
| 2,200.0   | 2,197.4                   | 2,186.4                   | 2,183.1                   | 4.8               | 5.1            | 163.32                      | 89.1                                    | -132.0        | 231.7                      | 222.3                       | 9.40                         | 24.653               |                    |        |
| 2,300.0   | 2,297.2                   | 2,285.5                   | 2,281.9                   | 5.0               | 5.3            | 164.56                      | 95.6                                    | -134.3        | 244.6                      | 234.7                       | 9.84                         | 24.852               |                    |        |
| 2,400.0   | 2,396.9                   | 2,384.5                   | 2,380.7                   | 5.3               | 5.6            | 165.68                      | 102.1                                   | -136.7        | 257.5                      | 247.3                       | 10.29                        | 25.041               |                    |        |
| 2,500.0   | 2,496.7                   | 2,483.6                   | 2,479.5                   | 5.5               | 5.8            | 166.69                      | 108.6                                   | -139.0        | 270.6                      | 259.9                       | 10.73                        | 25.221               |                    |        |
| 2,600.0   | 2,596.4                   | 2,582.6                   | 2,578.3                   | 5.8               | 6.1            | 167.60                      | 115.1                                   | -141.4        | 283.7                      | 272.6                       | 11.17                        | 25.391               |                    |        |
| 2,700.0   | 2,696.2                   | 2,681.6                   | 2,677.1                   | 6.0               | 6.3            | 168.44                      | 121.6                                   | -143.7        | 296.9                      | 285.3                       | 11.62                        | 25.552               |                    |        |
| 2,800.0   | 2,795.9                   | 2,780.7                   | 2,775.9                   | 6.3               | 6.6            | 169.20                      | 128.1                                   | -146.1        | 310.2                      | 298.1                       | 12.07                        | 25.705               |                    |        |
| 2,900.0   | 2,895.7                   | 2,879.7                   | 2,874.7                   | 6.5               | 6.8            | 169.90                      | 134.6                                   | -148.4        | 323.5                      | 311.0                       | 12.51                        | 25.850               |                    |        |
| 3,000.0   | 2,995.5                   | 2,978.7                   | 2,973.5                   | 6.8               | 7.1            | 170.55                      | 141.1                                   | -150.7        | 336.8                      | 323.9                       | 12.96                        | 25.987               |                    |        |
| 3,100.0   | 3,095.2                   | 3,077.8                   | 3,072.3                   | 7.0               | 7.3            | 171.15                      | 147.6                                   | -153.1        | 350.2                      | 336.8                       | 13.41                        | 26.117               |                    |        |
| 3,200.0   | 3,195.0                   | 3,176.8                   | 3,171.1                   | 7.3               | 7.6            | 171.70                      | 154.1                                   | -155.4        | 363.6                      | 349.8                       | 13.86                        | 26.239               |                    |        |
| 3,300.0   | 3,294.7                   | 3,275.8                   | 3,269.9                   | 7.5               | 7.8            | 172.21                      | 160.6                                   | -157.8        | 377.1                      | 362.8                       | 14.31                        | 26.356               |                    |        |
| 3,400.0   | 3,394.5                   | 3,374.9                   | 3,368.7                   | 7.8               | 8.1            | 172.69                      | 167.1                                   | -160.1        | 390.6                      | 375.8                       | 14.76                        | 26.467               |                    |        |
| 3,500.0   | 3,494.2                   | 3,473.9                   | 3,467.5                   | 8.1               | 8.3            | 173.14                      | 173.6                                   | -162.5        | 404.1                      | 388.9                       | 15.21                        | 26.572               |                    |        |
| 3,600.0   | 3,594.0                   | 3,573.0                   | 3,566.3                   | 8.3               | 8.6            | 173.55                      | 180.1                                   | -164.8        | 417.6                      | 401.9                       | 15.66                        | 26.672               |                    |        |
| 3,700.0   | 3,693.7                   | 3,672.0                   | 3,665.1                   | 8.6               | 8.8            | 173.94                      | 186.6                                   | -167.2        | 431.1                      | 415.0                       | 16.11                        | 26.767               |                    |        |
| 3,800.0   | 3,793.5                   | 3,771.0                   | 3,763.9                   | 8.8               | 9.1            | 174.31                      | 193.1                                   | -169.5        | 444.7                      | 428.1                       | 16.56                        | 26.858               |                    |        |
| 3,900.0   | 3,893.3                   | 3,870.1                   | 3,862.7                   | 9.1               | 9.4            | 174.66                      | 199.6                                   | -171.9        | 458.3                      | 441.3                       | 17.01                        | 26.944               |                    |        |
| 4,000.0   | 3,993.0                   | 3,969.1                   | 3,961.5                   | 9.3               | 9.6            | 174.98                      | 206.1                                   | -174.2        | 471.9                      | 454.4                       | 17.46                        | 27.027               |                    |        |
| 4,100.0   | 4,092.8                   | 4,068.1                   | 4,060.3                   | 9.6               | 9.9            | 175.29                      | 212.6                                   | -176.6        | 485.5                      | 467.6                       | 17.91                        | 27.106               |                    |        |
| 4,200.0   | 4,192.5                   | 4,167.2                   | 4,159.1                   | 9.9               | 10.1           | 175.58                      | 219.1                                   | -178.9        | 499.1                      | 480.7                       | 18.36                        | 27.181               |                    |        |

|                           |                               |                                     |                                      |
|---------------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Company:</b>           | Whiting Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Project:</b>           | Weld County, CO               | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Reference Site:</b>    | S26-T10N-R58W                 | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                         | <b>North Reference:</b>             | Grid                                 |
| <b>Reference Well:</b>    | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Well Error:</b>        | 0.0ft                         | <b>Output errors are at</b>         | 2.00 sigma                           |
| <b>Reference Wellbore</b> | HZ                            | <b>Database:</b>                    | USA EDM 5000 Multi Users DB          |
| <b>Reference Design:</b>  | Plan #2                       | <b>Offset TVD Reference:</b>        | Offset Datum                         |

| Offset Design S26-T10N-R58W - Razor Federal #26J-2311A - HZ - Plan #1 |                           |                           |                           |                   |                |                             |   |               |                            |                             |                              |                      | Offset Site Error: | 0.0 ft |
|---|---------------------------|---------------------------|---------------------------|-------------------|----------------|-----------------------------|---|---------------|----------------------------|-----------------------------|------------------------------|----------------------|--------------------|--------|
| Survey Program: 0-ISCSWA MWD  |                           |                           |                           |                   |                |                             |   |               |                            |                             |                              |                      | Offset Well Error: | 0.0 ft |
| Reference   |                           | Offset                    |                           | Semi Major Axis   |                |                             | Distance                                |               |                            |                             | Total<br>Uncertainty<br>Axis | Separation<br>Factor | Warning            |        |
| Measured<br>Depth<br>(ft)   | Vertical<br>Depth<br>(ft) | Measured<br>Depth<br>(ft) | Vertical<br>Depth<br>(ft) | Reference<br>(ft) | Offset<br>(ft) | Highside<br>Toolface<br>(°) | Offset Wellbore Centre<br>+N/-S<br>(ft) | +E/-W<br>(ft) | Between<br>Centres<br>(ft) | Between<br>Ellipses<br>(ft) |                              |                      |                    |        |
| 0.0   | 0.0                       | 0.0                       | 0.0                       | 0.0               | 0.0            | -1.08                       | 75.0                                    | -1.4          | 75.1                       |                             |                              |                      |                    |        |
| 100.0   | 100.0                     | 100.0                     | 100.0                     | 0.1               | 0.1            | -1.08                       | 75.0                                    | -1.4          | 75.1                       | 74.9                        | 0.19                         | 399.904              |                    |        |
| 200.0   | 200.0                     | 200.0                     | 200.0                     | 0.3               | 0.3            | -1.08                       | 75.0                                    | -1.4          | 75.1                       | 74.4                        | 0.64                         | 117.785              |                    |        |
| 300.0   | 300.0                     | 300.0                     | 300.0                     | 0.5               | 0.5            | -1.08                       | 75.0                                    | -1.4          | 75.1                       | 74.0                        | 1.09                         | 69.063               |                    |        |
| 400.0   | 400.0                     | 400.0                     | 400.0                     | 0.8               | 0.8            | -1.08                       | 75.0                                    | -1.4          | 75.1                       | 73.5                        | 1.54                         | 48.854               |                    |        |
| 500.0   | 500.0                     | 500.0                     | 500.0                     | 1.0               | 1.0            | -1.08                       | 75.0                                    | -1.4          | 75.1                       | 73.1                        | 1.99                         | 37.795               |                    |        |
| 600.0   | 600.0                     | 600.0                     | 600.0                     | 1.2               | 1.2            | -1.08                       | 75.0                                    | -1.4          | 75.1                       | 72.6                        | 2.44                         | 30.819               |                    |        |
| 700.0   | 700.0                     | 700.0                     | 700.0                     | 1.4               | 1.4            | -1.08                       | 75.0                                    | -1.4          | 75.1                       | 72.2                        | 2.88                         | 26.016               |                    |        |
| 800.0   | 800.0                     | 800.0                     | 800.0                     | 1.7               | 1.7            | -1.08                       | 75.0                                    | -1.4          | 75.1                       | 71.7                        | 3.33                         | 22.509               |                    |        |
| 900.0   | 900.0                     | 900.0                     | 900.0                     | 1.9               | 1.9            | -1.08                       | 75.0                                    | -1.4          | 75.1                       | 71.3                        | 3.78                         | 19.835 CC, ES        |                    |        |
| 1,000.0   | 1,000.0                   | 997.4                     | 997.4                     | 2.1               | 2.1            | -1.26                       | 76.7                                    | -1.7          | 76.7                       | 72.5                        | 4.23                         | 18.149               |                    |        |
| 1,100.0   | 1,100.0                   | 1,094.5                   | 1,094.4                   | 2.3               | 2.3            | -150.79                     | 81.5                                    | -2.5          | 83.3                       | 78.6                        | 4.65                         | 17.908 SF            |                    |        |
| 1,200.0   | 1,199.8                   | 1,193.6                   | 1,193.3                   | 2.5               | 2.6            | -152.76                     | 88.4                                    | -3.7          | 94.8                       | 89.8                        | 5.06                         | 18.747               |                    |        |
| 1,300.0   | 1,299.6                   | 1,292.7                   | 1,292.1                   | 2.7               | 2.8            | -154.80                     | 95.2                                    | -4.9          | 108.0                      | 102.5                       | 5.47                         | 19.756               |                    |        |
| 1,400.0   | 1,399.4                   | 1,391.8                   | 1,390.9                   | 2.9               | 3.0            | -156.39                     | 102.0                                   | -6.0          | 121.3                      | 115.4                       | 5.88                         | 20.618               |                    |        |
| 1,500.0   | 1,499.1                   | 1,490.8                   | 1,489.7                   | 3.1               | 3.3            | -157.67                     | 108.8                                   | -7.2          | 134.7                      | 128.4                       | 6.31                         | 21.359               |                    |        |
| 1,600.0   | 1,598.9                   | 1,589.9                   | 1,588.5                   | 3.3               | 3.5            | -158.71                     | 115.6                                   | -8.3          | 148.1                      | 141.4                       | 6.73                         | 22.000               |                    |        |
| 1,700.0   | 1,698.6                   | 1,688.9                   | 1,687.4                   | 3.6               | 3.7            | -159.58                     | 122.4                                   | -9.5          | 161.6                      | 154.4                       | 7.16                         | 22.558               |                    |        |
| 1,800.0   | 1,798.4                   | 1,788.0                   | 1,786.2                   | 3.8               | 4.0            | -160.32                     | 129.2                                   | -10.7         | 175.1                      | 167.5                       | 7.60                         | 23.048               |                    |        |
| 1,900.0   | 1,898.1                   | 1,887.1                   | 1,885.0                   | 4.0               | 4.2            | -160.95                     | 136.0                                   | -11.8         | 188.6                      | 180.6                       | 8.03                         | 23.480               |                    |        |
| 2,000.0   | 1,997.9                   | 1,986.1                   | 1,983.8                   | 4.3               | 4.5            | -161.50                     | 142.8                                   | -13.0         | 202.1                      | 193.7                       | 8.47                         | 23.864               |                    |        |
| 2,100.0   | 2,097.6                   | 2,085.2                   | 2,082.6                   | 4.5               | 4.7            | -161.98                     | 149.7                                   | -14.2         | 215.7                      | 206.8                       | 8.91                         | 24.206               |                    |        |
| 2,200.0   | 2,197.4                   | 2,184.3                   | 2,181.5                   | 4.8               | 5.0            | -162.40                     | 156.5                                   | -15.3         | 229.3                      | 219.9                       | 9.35                         | 24.513               |                    |        |
| 2,300.0   | 2,297.2                   | 2,283.3                   | 2,280.3                   | 5.0               | 5.2            | -162.77                     | 163.3                                   | -16.5         | 242.9                      | 233.1                       | 9.80                         | 24.790               |                    |        |
| 2,400.0   | 2,396.9                   | 2,382.4                   | 2,379.1                   | 5.3               | 5.5            | -163.11                     | 170.1                                   | -17.7         | 256.4                      | 246.2                       | 10.24                        | 25.041               |                    |        |
| 2,500.0   | 2,496.7                   | 2,481.4                   | 2,477.9                   | 5.5               | 5.7            | -163.41                     | 176.9                                   | -18.8         | 270.0                      | 259.4                       | 10.69                        | 25.270               |                    |        |
| 2,600.0   | 2,596.4                   | 2,580.5                   | 2,576.7                   | 5.8               | 6.0            | -163.68                     | 183.7                                   | -20.0         | 283.6                      | 272.5                       | 11.13                        | 25.478               |                    |        |
| 2,700.0   | 2,696.2                   | 2,679.6                   | 2,675.6                   | 6.0               | 6.2            | -163.93                     | 190.5                                   | -21.2         | 297.3                      | 285.7                       | 11.58                        | 25.669               |                    |        |
| 2,800.0   | 2,795.9                   | 2,778.6                   | 2,774.4                   | 6.3               | 6.5            | -164.16                     | 197.3                                   | -22.3         | 310.9                      | 298.8                       | 12.03                        | 25.844               |                    |        |
| 2,900.0   | 2,895.7                   | 2,877.7                   | 2,873.2                   | 6.5               | 6.7            | -164.36                     | 204.2                                   | -23.5         | 324.5                      | 312.0                       | 12.48                        | 26.006               |                    |        |
| 3,000.0   | 2,995.5                   | 2,976.8                   | 2,972.0                   | 6.8               | 7.0            | -164.55                     | 211.0                                   | -24.6         | 338.1                      | 325.2                       | 12.93                        | 26.155               |                    |        |
| 3,100.0   | 3,095.2                   | 3,075.8                   | 3,070.8                   | 7.0               | 7.2            | -164.73                     | 217.8                                   | -25.8         | 351.7                      | 338.4                       | 13.38                        | 26.294               |                    |        |
| 3,200.0   | 3,195.0                   | 3,174.9                   | 3,169.7                   | 7.3               | 7.5            | -164.89                     | 224.6                                   | -27.0         | 365.4                      | 351.5                       | 13.83                        | 26.423               |                    |        |
| 3,300.0   | 3,294.7                   | 3,273.9                   | 3,268.5                   | 7.5               | 7.7            | -165.04                     | 231.4                                   | -28.1         | 379.0                      | 364.7                       | 14.28                        | 26.543               |                    |        |
| 3,400.0   | 3,394.5                   | 3,373.0                   | 3,367.3                   | 7.8               | 8.0            | -165.18                     | 238.2                                   | -29.3         | 392.6                      | 377.9                       | 14.73                        | 26.655               |                    |        |
| 3,500.0   | 3,494.2                   | 3,472.1                   | 3,466.1                   | 8.1               | 8.2            | -165.31                     | 245.0                                   | -30.5         | 406.3                      | 391.1                       | 15.18                        | 26.760               |                    |        |
| 3,600.0   | 3,594.0                   | 3,571.1                   | 3,564.9                   | 8.3               | 8.5            | -165.44                     | 251.8                                   | -31.6         | 419.9                      | 404.3                       | 15.63                        | 26.859               |                    |        |
| 3,700.0   | 3,693.7                   | 3,670.2                   | 3,663.8                   | 8.6               | 8.7            | -165.55                     | 258.6                                   | -32.8         | 433.6                      | 417.5                       | 16.09                        | 26.951               |                    |        |
| 3,800.0   | 3,793.5                   | 3,769.2                   | 3,762.6                   | 8.8               | 9.0            | -165.66                     | 265.5                                   | -34.0         | 447.2                      | 430.7                       | 16.54                        | 27.038               |                    |        |
| 3,900.0   | 3,893.3                   | 3,868.3                   | 3,861.4                   | 9.1               | 9.2            | -165.76                     | 272.3                                   | -35.1         | 460.9                      | 443.9                       | 16.99                        | 27.120               |                    |        |
| 4,000.0   | 3,993.0                   | 3,967.4                   | 3,960.2                   | 9.3               | 9.5            | -165.85                     | 279.1                                   | -36.3         | 474.5                      | 457.0                       | 17.45                        | 27.198               |                    |        |
| 4,100.0   | 4,092.8                   | 4,066.4                   | 4,059.0                   | 9.6               | 9.7            | -165.94                     | 285.9                                   | -37.5         | 488.1                      | 470.2                       | 17.90                        | 27.271               |                    |        |



|                           |                               |                                     |                                      |
|---------------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Company:</b>           | Whiting Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Project:</b>           | Weld County, CO               | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Reference Site:</b>    | S26-T10N-R58W                 | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                         | <b>North Reference:</b>             | Grid                                 |
| <b>Reference Well:</b>    | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Well Error:</b>        | 0.0ft                         | <b>Output errors are at</b>         | 2.00 sigma                           |
| <b>Reference Wellbore</b> | HZ                            | <b>Database:</b>                    | USA EDM 5000 Multi Users DB          |
| <b>Reference Design:</b>  | Plan #2                       | <b>Offset TVD Reference:</b>        | Offset Datum                         |

| Offset Design S26-T10N-R58W - Razor Federal #26J-2312B - HZ - Plan #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                  |                   | Offset Site Error: | 0.0 ft |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------|-------------------|--------------------|--------|
| Survey Program: 0-ISCSWA MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                  |                   | Offset Well Error: | 0.0 ft |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       | Total            |                   | Warning            |        |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Uncertainty Axis | Separation Factor |                    |        |
| 0.0   | 0.0                 | 0.0                 | 0.0                 | 0.0             | 0.0         | -91.06                | -0.6                              | -32.9      | 32.9                 |                       |                  |                   |                    |        |
| 100.0   | 100.0               | 100.0               | 100.0               | 0.1             | 0.1         | -91.06                | -0.6                              | -32.9      | 32.9                 | 32.8                  | 0.19             | 175.528           |                    |        |
| 200.0   | 200.0               | 200.0               | 200.0               | 0.3             | 0.3         | -91.06                | -0.6                              | -32.9      | 32.9                 | 32.3                  | 0.64             | 51.699            |                    |        |
| 300.0   | 300.0               | 300.0               | 300.0               | 0.5             | 0.5         | -91.06                | -0.6                              | -32.9      | 32.9                 | 31.9                  | 1.09             | 30.314            |                    |        |
| 400.0   | 400.0               | 400.0               | 400.0               | 0.8             | 0.8         | -91.06                | -0.6                              | -32.9      | 32.9                 | 31.4                  | 1.54             | 21.443            |                    |        |
| 500.0   | 500.0               | 500.0               | 500.0               | 1.0             | 1.0         | -91.06                | -0.6                              | -32.9      | 32.9                 | 31.0                  | 1.99             | 16.589            |                    |        |
| 600.0   | 600.0               | 600.0               | 600.0               | 1.2             | 1.2         | -91.06                | -0.6                              | -32.9      | 32.9                 | 30.5                  | 2.44             | 13.527            |                    |        |
| 700.0   | 700.0               | 700.0               | 700.0               | 1.4             | 1.4         | -91.06                | -0.6                              | -32.9      | 32.9                 | 30.1                  | 2.88             | 11.419            |                    |        |
| 800.0   | 800.0               | 800.0               | 800.0               | 1.7             | 1.7         | -91.06                | -0.6                              | -32.9      | 32.9                 | 29.6                  | 3.33             | 9.880             |                    |        |
| 900.0   | 900.0               | 900.0               | 900.0               | 1.9             | 1.9         | -91.06                | -0.6                              | -32.9      | 32.9                 | 29.2                  | 3.78             | 8.706             |                    |        |
| 1,000.0   | 1,000.0             | 1,000.0             | 1,000.0             | 2.1             | 2.1         | -91.06                | -0.6                              | -32.9      | 32.9                 | 28.7                  | 4.23             | 7.782 CC, ES      |                    |        |
| 1,100.0   | 1,100.0             | 1,100.0             | 1,100.0             | 2.3             | 2.3         | 122.97                | -0.6                              | -32.9      | 33.9                 | 29.2                  | 4.66             | 7.273 SF          |                    |        |
| 1,200.0   | 1,199.8             | 1,199.9             | 1,199.8             | 2.5             | 2.6         | 132.44                | 1.1                               | -32.6      | 36.9                 | 31.9                  | 5.06             | 7.301             |                    |        |
| 1,300.0   | 1,299.6             | 1,299.1             | 1,298.9             | 2.7             | 2.8         | 146.34                | 6.2                               | -31.6      | 42.8                 | 37.4                  | 5.46             | 7.841             |                    |        |
| 1,400.0   | 1,399.4             | 1,398.2             | 1,397.8             | 2.9             | 3.0         | 158.24                | 12.9                              | -30.2      | 51.4                 | 45.5                  | 5.88             | 8.733             |                    |        |
| 1,500.0   | 1,499.1             | 1,497.4             | 1,496.7             | 3.1             | 3.2         | 166.52                | 19.7                              | -28.8      | 61.5                 | 55.2                  | 6.31             | 9.745             |                    |        |
| 1,600.0   | 1,598.9             | 1,596.5             | 1,595.6             | 3.3             | 3.5         | 172.40                | 26.5                              | -27.4      | 72.5                 | 65.8                  | 6.74             | 10.757            |                    |        |
| 1,700.0   | 1,698.6             | 1,695.7             | 1,694.6             | 3.6             | 3.7         | 176.70                | 33.3                              | -26.0      | 84.1                 | 76.9                  | 7.17             | 11.720            |                    |        |
| 1,800.0   | 1,798.4             | 1,794.8             | 1,793.5             | 3.8             | 3.9         | 179.95                | 40.1                              | -24.7      | 96.0                 | 88.4                  | 7.61             | 12.613            |                    |        |
| 1,900.0   | 1,898.1             | 1,894.0             | 1,892.4             | 4.0             | 4.2         | -177.53               | 46.8                              | -23.3      | 108.1                | 100.1                 | 8.05             | 13.434            |                    |        |
| 2,000.0   | 1,997.9             | 1,993.2             | 1,991.3             | 4.3             | 4.4         | -175.52               | 53.6                              | -21.9      | 120.5                | 112.0                 | 8.49             | 14.186            |                    |        |
| 2,100.0   | 2,097.6             | 2,092.3             | 2,090.2             | 4.5             | 4.7         | -173.88               | 60.4                              | -20.5      | 132.9                | 124.0                 | 8.94             | 14.873            |                    |        |
| 2,200.0   | 2,197.4             | 2,191.5             | 2,189.1             | 4.8             | 4.9         | -172.52               | 67.2                              | -19.1      | 145.4                | 136.1                 | 9.38             | 15.501            |                    |        |
| 2,300.0   | 2,297.2             | 2,290.6             | 2,288.1             | 5.0             | 5.2         | -171.38               | 73.9                              | -17.7      | 158.0                | 148.2                 | 9.83             | 16.076            |                    |        |
| 2,400.0   | 2,396.9             | 2,389.8             | 2,387.0             | 5.3             | 5.4         | -170.40               | 80.7                              | -16.4      | 170.7                | 160.4                 | 10.28            | 16.604            |                    |        |
| 2,500.0   | 2,496.7             | 2,489.0             | 2,485.9             | 5.5             | 5.7         | -169.57               | 87.5                              | -15.0      | 183.4                | 172.7                 | 10.73            | 17.090            |                    |        |
| 2,600.0   | 2,596.4             | 2,588.1             | 2,584.8             | 5.8             | 5.9         | -168.84               | 94.3                              | -13.6      | 196.1                | 184.9                 | 11.18            | 17.538            |                    |        |
| 2,700.0   | 2,696.2             | 2,687.3             | 2,683.7             | 6.0             | 6.2         | -168.20               | 101.1                             | -12.2      | 208.9                | 197.2                 | 11.64            | 17.951            |                    |        |
| 2,800.0   | 2,795.9             | 2,786.4             | 2,782.6             | 6.3             | 6.4         | -167.63               | 107.8                             | -10.8      | 221.7                | 209.6                 | 12.09            | 18.335            |                    |        |
| 2,900.0   | 2,895.7             | 2,885.6             | 2,881.6             | 6.5             | 6.6         | -167.12               | 114.6                             | -9.5       | 234.5                | 221.9                 | 12.54            | 18.691            |                    |        |
| 3,000.0   | 2,995.5             | 2,984.7             | 2,980.5             | 6.8             | 6.9         | -166.67               | 121.4                             | -8.1       | 247.3                | 234.3                 | 13.00            | 19.022            |                    |        |
| 3,100.0   | 3,095.2             | 3,083.9             | 3,079.4             | 7.0             | 7.1         | -166.26               | 128.2                             | -6.7       | 260.1                | 246.6                 | 13.45            | 19.331            |                    |        |
| 3,200.0   | 3,195.0             | 3,183.1             | 3,178.3             | 7.3             | 7.4         | -165.89               | 134.9                             | -5.3       | 272.9                | 259.0                 | 13.91            | 19.620            |                    |        |
| 3,300.0   | 3,294.7             | 3,282.2             | 3,277.2             | 7.5             | 7.6         | -165.56               | 141.7                             | -3.9       | 285.8                | 271.4                 | 14.37            | 19.891            |                    |        |
| 3,400.0   | 3,394.5             | 3,381.4             | 3,376.1             | 7.8             | 7.9         | -165.25               | 148.5                             | -2.5       | 298.6                | 283.8                 | 14.83            | 20.144            |                    |        |
| 3,500.0   | 3,494.2             | 3,480.5             | 3,475.1             | 8.1             | 8.1         | -164.97               | 155.3                             | -1.2       | 311.5                | 296.2                 | 15.28            | 20.383            |                    |        |
| 3,600.0   | 3,594.0             | 3,579.7             | 3,574.0             | 8.3             | 8.4         | -164.71               | 162.0                             | 0.2        | 324.4                | 308.6                 | 15.74            | 20.608            |                    |        |
| 3,700.0   | 3,693.7             | 3,678.8             | 3,672.9             | 8.6             | 8.6         | -164.47               | 168.8                             | 1.6        | 337.3                | 321.1                 | 16.20            | 20.819            |                    |        |
| 3,800.0   | 3,793.5             | 3,778.0             | 3,771.8             | 8.8             | 8.9         | -164.24               | 175.6                             | 3.0        | 350.1                | 333.5                 | 16.66            | 21.019            |                    |        |
| 3,900.0   | 3,893.3             | 3,877.2             | 3,870.7             | 9.1             | 9.2         | -164.04               | 182.4                             | 4.4        | 363.0                | 345.9                 | 17.12            | 21.209            |                    |        |
| 4,000.0   | 3,993.0             | 3,976.3             | 3,969.6             | 9.3             | 9.4         | -163.84               | 189.2                             | 5.7        | 375.9                | 358.4                 | 17.58            | 21.388            |                    |        |
| 4,100.0   | 4,092.8             | 4,075.5             | 4,068.5             | 9.6             | 9.7         | -163.66               | 195.9                             | 7.1        | 388.8                | 370.8                 | 18.04            | 21.558            |                    |        |
| 4,200.0   | 4,192.5             | 4,174.6             | 4,167.5             | 9.9             | 9.9         | -163.50               | 202.7                             | 8.5        | 401.7                | 383.2                 | 18.50            | 21.720            |                    |        |
| 4,300.0   | 4,292.3             | 4,273.8             | 4,266.4             | 10.1            | 10.2        | -163.34               | 209.5                             | 9.9        | 414.6                | 395.7                 | 18.96            | 21.873            |                    |        |
| 4,400.0   | 4,392.0             | 4,372.9             | 4,365.3             | 10.4            | 10.4        | -163.19               | 216.3                             | 11.3       | 427.5                | 408.1                 | 19.42            | 22.019            |                    |        |
| 4,500.0   | 4,491.8             | 4,472.1             | 4,464.2             | 10.7            | 10.7        | -163.05               | 223.0                             | 12.6       | 440.5                | 420.6                 | 19.88            | 22.159            |                    |        |
| 4,600.0   | 4,591.6             | 4,571.3             | 4,563.1             | 10.9            | 10.9        | -162.92               | 229.8                             | 14.0       | 453.4                | 433.0                 | 20.34            | 22.292            |                    |        |
| 4,700.0   | 4,691.3             | 4,670.4             | 4,662.0             | 11.2            | 11.2        | -162.80               | 236.6                             | 15.4       | 466.3                | 445.5                 | 20.80            | 22.419            |                    |        |
| 4,800.0   | 4,791.1             | 4,769.6             | 4,761.0             | 11.4            | 11.4        | -162.68               | 243.4                             | 16.8       | 479.2                | 457.9                 | 21.26            | 22.540            |                    |        |
| 4,900.0   | 4,890.8             | 4,868.7             | 4,859.9             | 11.7            | 11.7        | -162.57               | 250.2                             | 18.2       | 492.1                | 470.4                 | 21.72            | 22.657            |                    |        |



|                           |                               |                                     |                                      |
|---------------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Company:</b>           | Whiting Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Project:</b>           | Weld County, CO               | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Reference Site:</b>    | S26-T10N-R58W                 | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                         | <b>North Reference:</b>             | Grid                                 |
| <b>Reference Well:</b>    | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Well Error:</b>        | 0.0ft                         | <b>Output errors are at</b>         | 2.00 sigma                           |
| <b>Reference Wellbore</b> | HZ                            | <b>Database:</b>                    | USA EDM 5000 Multi Users DB          |
| <b>Reference Design:</b>  | Plan #2                       | <b>Offset TVD Reference:</b>        | Offset Datum                         |

| Offset Design S26-T10N-R58W - Razor Federal #26J-3509A - HZ - Plan #2 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Site Error: | 0.0 ft |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|-------------------|--------------------|--------|
| Survey Program: 0-ISCSWA MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Well Error: | 0.0 ft |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        | Separation Factor | Warning            |        |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis |                   |                    |        |
| 0.0   | 0.0                 | 0.0                 | 0.0                 | 0.0             | 0.0         | -53.70                | 73.2                              | -99.7      | 123.7                |                       |                        |                   |                    |        |
| 100.0   | 100.0               | 100.0               | 100.0               | 0.1             | 0.1         | -53.70                | 73.2                              | -99.7      | 123.7                | 123.5                 | 0.19                   | 659.002           |                    |        |
| 200.0   | 200.0               | 200.0               | 200.0               | 0.3             | 0.3         | -53.70                | 73.2                              | -99.7      | 123.7                | 123.0                 | 0.64                   | 194.098           |                    |        |
| 300.0   | 300.0               | 300.0               | 300.0               | 0.5             | 0.5         | -53.70                | 73.2                              | -99.7      | 123.7                | 122.6                 | 1.09                   | 113.809           |                    |        |
| 400.0   | 400.0               | 400.0               | 400.0               | 0.8             | 0.8         | -53.70                | 73.2                              | -99.7      | 123.7                | 122.1                 | 1.54                   | 80.507            |                    |        |
| 500.0   | 500.0               | 500.0               | 500.0               | 1.0             | 1.0         | -53.70                | 73.2                              | -99.7      | 123.7                | 121.7                 | 1.99                   | 62.283            |                    |        |
| 600.0   | 600.0               | 600.0               | 600.0               | 1.2             | 1.2         | -53.70                | 73.2                              | -99.7      | 123.7                | 121.2                 | 2.44                   | 50.786            |                    |        |
| 700.0   | 700.0               | 700.0               | 700.0               | 1.4             | 1.4         | -53.70                | 73.2                              | -99.7      | 123.7                | 120.8                 | 2.88                   | 42.872            |                    |        |
| 800.0   | 800.0               | 800.0               | 800.0               | 1.7             | 1.7         | -53.70                | 73.2                              | -99.7      | 123.7                | 120.3                 | 3.33                   | 37.092            |                    |        |
| 900.0   | 900.0               | 900.0               | 900.0               | 1.9             | 1.9         | -53.70                | 73.2                              | -99.7      | 123.7                | 119.9                 | 3.78                   | 32.686            |                    |        |
| 1,000.0   | 1,000.0             | 1,000.0             | 1,000.0             | 2.1             | 2.1         | -53.70                | 73.2                              | -99.7      | 123.7                | 119.4                 | 4.23                   | 29.215 CC, ES     |                    |        |
| 1,100.0   | 1,100.0             | 1,101.9             | 1,101.8             | 2.3             | 2.3         | 157.35                | 71.5                              | -100.0     | 124.5                | 119.9                 | 4.63                   | 26.899            |                    |        |
| 1,200.0   | 1,199.8             | 1,203.6             | 1,203.4             | 2.5             | 2.5         | 156.04                | 66.1                              | -101.1     | 127.2                | 122.2                 | 4.98                   | 25.518            |                    |        |
| 1,300.0   | 1,299.6             | 1,303.4             | 1,303.0             | 2.7             | 2.7         | 154.48                | 59.3                              | -102.4     | 130.8                | 125.4                 | 5.36                   | 24.409            |                    |        |
| 1,400.0   | 1,399.4             | 1,403.3             | 1,402.6             | 2.9             | 2.9         | 153.01                | 52.5                              | -103.7     | 134.5                | 128.8                 | 5.75                   | 23.380            |                    |        |
| 1,500.0   | 1,499.1             | 1,503.2             | 1,502.3             | 3.1             | 3.1         | 151.61                | 45.6                              | -105.0     | 138.3                | 132.2                 | 6.17                   | 22.438            |                    |        |
| 1,600.0   | 1,598.9             | 1,603.0             | 1,601.9             | 3.3             | 3.3         | 150.29                | 38.8                              | -106.4     | 142.2                | 135.6                 | 6.59                   | 21.581            |                    |        |
| 1,700.0   | 1,698.6             | 1,702.9             | 1,701.5             | 3.6             | 3.6         | 149.04                | 31.9                              | -107.7     | 146.2                | 139.2                 | 7.03                   | 20.805            |                    |        |
| 1,800.0   | 1,798.4             | 1,802.8             | 1,801.2             | 3.8             | 3.8         | 147.86                | 25.1                              | -109.0     | 150.2                | 142.7                 | 7.47                   | 20.101            |                    |        |
| 1,900.0   | 1,898.1             | 1,902.7             | 1,900.8             | 4.0             | 4.0         | 146.74                | 18.3                              | -110.4     | 154.3                | 146.4                 | 7.93                   | 19.464            |                    |        |
| 2,000.0   | 1,997.9             | 2,002.5             | 2,000.4             | 4.3             | 4.2         | 145.68                | 11.4                              | -111.7     | 158.4                | 150.1                 | 8.39                   | 18.887            |                    |        |
| 2,100.0   | 2,097.6             | 2,102.4             | 2,100.0             | 4.5             | 4.5         | 144.67                | 4.6                               | -113.0     | 162.6                | 153.8                 | 8.86                   | 18.362            |                    |        |
| 2,200.0   | 2,197.4             | 2,202.3             | 2,199.7             | 4.8             | 4.7         | 143.71                | -2.3                              | -114.3     | 166.9                | 157.5                 | 9.33                   | 17.885            |                    |        |
| 2,300.0   | 2,297.2             | 2,302.2             | 2,299.3             | 5.0             | 5.0         | 142.80                | -9.1                              | -115.7     | 171.2                | 161.4                 | 9.81                   | 17.450            |                    |        |
| 2,400.0   | 2,396.9             | 2,402.0             | 2,398.9             | 5.3             | 5.2         | 141.94                | -15.9                             | -117.0     | 175.5                | 165.2                 | 10.29                  | 17.053            |                    |        |
| 2,500.0   | 2,496.7             | 2,501.9             | 2,498.6             | 5.5             | 5.5         | 141.12                | -22.8                             | -118.3     | 179.9                | 169.1                 | 10.78                  | 16.689            |                    |        |
| 2,600.0   | 2,596.4             | 2,601.8             | 2,598.2             | 5.8             | 5.7         | 140.33                | -29.6                             | -119.7     | 184.3                | 173.0                 | 11.27                  | 16.355            |                    |        |
| 2,700.0   | 2,696.2             | 2,701.6             | 2,697.8             | 6.0             | 6.0         | 139.59                | -36.4                             | -121.0     | 188.7                | 176.9                 | 11.76                  | 16.048            |                    |        |
| 2,800.0   | 2,795.9             | 2,801.5             | 2,797.5             | 6.3             | 6.2         | 138.87                | -43.3                             | -122.3     | 193.1                | 180.9                 | 12.25                  | 15.764            |                    |        |
| 2,900.0   | 2,895.7             | 2,901.4             | 2,897.1             | 6.5             | 6.5         | 138.19                | -50.1                             | -123.6     | 197.6                | 184.9                 | 12.75                  | 15.502            |                    |        |
| 3,000.0   | 2,995.5             | 3,001.3             | 2,996.7             | 6.8             | 6.7         | 137.54                | -57.0                             | -125.0     | 202.2                | 188.9                 | 13.25                  | 15.259            |                    |        |
| 3,100.0   | 3,095.2             | 3,101.1             | 3,096.3             | 7.0             | 7.0         | 136.92                | -63.8                             | -126.3     | 206.7                | 193.0                 | 13.75                  | 15.034            |                    |        |
| 3,200.0   | 3,195.0             | 3,201.0             | 3,196.0             | 7.3             | 7.2         | 136.33                | -70.6                             | -127.6     | 211.3                | 197.0                 | 14.25                  | 14.824            |                    |        |
| 3,300.0   | 3,294.7             | 3,300.9             | 3,295.6             | 7.5             | 7.5         | 135.76                | -77.5                             | -129.0     | 215.9                | 201.1                 | 14.76                  | 14.629            |                    |        |
| 3,400.0   | 3,394.5             | 3,400.7             | 3,395.2             | 7.8             | 7.8         | 135.21                | -84.3                             | -130.3     | 220.5                | 205.2                 | 15.26                  | 14.447            |                    |        |
| 3,500.0   | 3,494.2             | 3,500.6             | 3,494.9             | 8.1             | 8.0         | 134.69                | -91.2                             | -131.6     | 225.1                | 209.3                 | 15.77                  | 14.276            |                    |        |
| 3,600.0   | 3,594.0             | 3,600.5             | 3,594.5             | 8.3             | 8.3         | 134.19                | -98.0                             | -133.0     | 229.7                | 213.5                 | 16.27                  | 14.117            |                    |        |
| 3,700.0   | 3,693.7             | 3,700.4             | 3,694.1             | 8.6             | 8.5         | 133.70                | -104.8                            | -134.3     | 234.4                | 217.6                 | 16.78                  | 13.967            |                    |        |
| 3,800.0   | 3,793.5             | 3,800.2             | 3,793.7             | 8.8             | 8.8         | 133.24                | -111.7                            | -135.6     | 239.1                | 221.8                 | 17.29                  | 13.826            |                    |        |
| 3,900.0   | 3,893.3             | 3,900.1             | 3,893.4             | 9.1             | 9.0         | 132.79                | -118.5                            | -136.9     | 243.8                | 226.0                 | 17.80                  | 13.693            |                    |        |
| 4,000.0   | 3,993.0             | 4,000.0             | 3,993.0             | 9.3             | 9.3         | 132.37                | -125.3                            | -138.3     | 248.5                | 230.2                 | 18.31                  | 13.568            |                    |        |
| 4,100.0   | 4,092.8             | 4,099.9             | 4,092.6             | 9.6             | 9.6         | 131.95                | -132.2                            | -139.6     | 253.2                | 234.4                 | 18.83                  | 13.450            |                    |        |
| 4,200.0   | 4,192.5             | 4,199.7             | 4,192.3             | 9.9             | 9.8         | 131.55                | -139.0                            | -140.9     | 257.9                | 238.6                 | 19.34                  | 13.339            |                    |        |
| 4,300.0   | 4,292.3             | 4,299.6             | 4,291.9             | 10.1            | 10.1        | 131.17                | -145.9                            | -142.3     | 262.7                | 242.8                 | 19.85                  | 13.233            |                    |        |
| 4,400.0   | 4,392.0             | 4,399.5             | 4,391.5             | 10.4            | 10.3        | 130.80                | -152.7                            | -143.6     | 267.4                | 247.1                 | 20.36                  | 13.133            |                    |        |
| 4,500.0   | 4,491.8             | 4,499.3             | 4,491.1             | 10.7            | 10.6        | 130.44                | -159.5                            | -144.9     | 272.2                | 251.3                 | 20.88                  | 13.038            |                    |        |
| 4,600.0   | 4,591.6             | 4,599.2             | 4,590.8             | 10.9            | 10.9        | 130.10                | -166.4                            | -146.2     | 277.0                | 255.6                 | 21.39                  | 12.948            |                    |        |
| 4,700.0   | 4,691.3             | 4,699.1             | 4,690.4             | 11.2            | 11.1        | 129.77                | -173.2                            | -147.6     | 281.8                | 259.9                 | 21.91                  | 12.862            |                    |        |
| 4,800.0   | 4,791.1             | 4,799.0             | 4,790.0             | 11.4            | 11.4        | 129.45                | -180.1                            | -148.9     | 286.6                | 264.1                 | 22.42                  | 12.780            |                    |        |
| 4,900.0   | 4,890.8             | 4,898.8             | 4,889.7             | 11.7            | 11.7        | 129.13                | -186.9                            | -150.2     | 291.4                | 268.4                 | 22.94                  | 12.703            |                    |        |
| 5,000.0   | 4,990.6             | 4,998.7             | 4,989.3             | 12.0            | 11.9        | 128.83                | -193.7                            | -151.6     | 296.2                | 272.7                 | 23.45                  | 12.628            |                    |        |
| 5,100.0   | 5,090.3             | 5,098.6             | 5,088.9             | 12.2            | 12.2        | 128.54                | -200.6                            | -152.9     | 301.0                | 277.0                 | 23.97                  | 12.558            |                    |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                               |                                     |                                      |
|---------------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Company:</b>           | Whiting Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Project:</b>           | Weld County, CO               | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Reference Site:</b>    | S26-T10N-R58W                 | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                         | <b>North Reference:</b>             | Grid                                 |
| <b>Reference Well:</b>    | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Well Error:</b>        | 0.0ft                         | <b>Output errors are at</b>         | 2.00 sigma                           |
| <b>Reference Wellbore</b> | HZ                            | <b>Database:</b>                    | USA EDM 5000 Multi Users DB          |
| <b>Reference Design:</b>  | Plan #2                       | <b>Offset TVD Reference:</b>        | Offset Datum                         |

| Offset Design S26-T10N-R58W - Razor Federal #26J-3509A - HZ - Plan #2 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Site Error: 0.0 ft |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|-------------------|---------------------------|
| Survey Program: 0-ISCSWA MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Well Error: 0.0 ft |
| Reference   |                     | Offset              |                     | Semi Major Axis |             | Distance              |                                   |            |                      |                       |                        |                   |                           |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning                   |
| 5,203.4   | 5,193.5             | 5,197.5             | 5,186.8             | 12.5            | 12.5        | 127.02                | -213.8                            | -155.5     | 306.6                | 282.0                 | 24.57                  | 12.478 SF         |                           |
| 5,250.0   | 5,239.8             | 5,240.4             | 5,228.1             | 12.6            | 12.7        | 125.21                | -225.1                            | -157.7     | 311.1                | 286.3                 | 24.85                  | 12.517            |                           |
| 5,300.0   | 5,288.7             | 5,285.2             | 5,270.1             | 12.8            | 12.9        | 122.96                | -240.4                            | -160.6     | 319.3                | 294.2                 | 25.17                  | 12.689            |                           |
| 5,350.0   | 5,336.4             | 5,328.7             | 5,309.4             | 13.1            | 13.2        | 120.45                | -258.5                            | -164.2     | 331.0                | 305.5                 | 25.51                  | 12.975            |                           |
| 5,400.0   | 5,382.4             | 5,370.6             | 5,345.8             | 13.3            | 13.4        | 117.72                | -279.1                            | -168.2     | 345.9                | 319.9                 | 25.90                  | 13.351            |                           |
| 5,450.0   | 5,426.4             | 5,411.1             | 5,379.1             | 13.7            | 13.7        | 114.81                | -301.5                            | -172.5     | 363.7                | 337.3                 | 26.37                  | 13.791            |                           |
| 5,500.0   | 5,467.9             | 5,450.0             | 5,409.5             | 14.0            | 14.1        | 111.73                | -325.4                            | -177.2     | 384.3                | 357.4                 | 26.93                  | 14.269            |                           |
| 5,550.0   | 5,506.5             | 5,487.5             | 5,436.9             | 14.5            | 14.4        | 108.51                | -350.5                            | -182.0     | 407.3                | 379.7                 | 27.63                  | 14.741            |                           |
| 5,600.0   | 5,542.0             | 5,523.5             | 5,461.4             | 14.9            | 14.7        | 105.17                | -376.4                            | -187.1     | 432.4                | 404.0                 | 28.47                  | 15.190            |                           |
| 5,650.0   | 5,573.8             | 5,558.3             | 5,483.4             | 15.5            | 15.1        | 101.73                | -402.9                            | -192.2     | 459.3                | 429.9                 | 29.40                  | 15.621            |                           |
| 5,700.0   | 5,601.9             | 5,591.9             | 5,502.8             | 16.1            | 15.5        | 98.20                 | -429.9                            | -197.5     | 487.7                | 457.3                 | 30.42                  | 16.030            |                           |

|                           |                               |                                     |                                      |
|---------------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Company:</b>           | Whiting Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Project:</b>           | Weld County, CO               | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Reference Site:</b>    | S26-T10N-R58W                 | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                         | <b>North Reference:</b>             | Grid                                 |
| <b>Reference Well:</b>    | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Well Error:</b>        | 0.0ft                         | <b>Output errors are at</b>         | 2.00 sigma                           |
| <b>Reference Wellbore</b> | HZ                            | <b>Database:</b>                    | USA EDM 5000 Multi Users DB          |
| <b>Reference Design:</b>  | Plan #2                       | <b>Offset TVD Reference:</b>        | Offset Datum                         |

| Offset Design S26-T10N-R58W - Razor Federal #26J-3510B - HZ - Plan #2 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Site Error: | 0.0 ft  |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|-------------------|--------------------|---------|
| Survey Program: 0-ISCSWA MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Well Error: | 0.0 ft  |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        |                   |                    | Warning |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor |                    |         |
| 0.0   | 0.0                 | 0.0                 | 0.0                 | 0.0             | 0.0         | -91.06                | -1.2                              | -66.2      | 66.2                 |                       |                        |                   |                    |         |
| 100.0   | 100.0               | 100.0               | 100.0               | 0.1             | 0.1         | -91.06                | -1.2                              | -66.2      | 66.2                 | 66.0                  | 0.19                   | 352.531           |                    |         |
| 200.0   | 200.0               | 200.0               | 200.0               | 0.3             | 0.3         | -91.06                | -1.2                              | -66.2      | 66.2                 | 65.5                  | 0.64                   | 103.832           |                    |         |
| 300.0   | 300.0               | 300.0               | 300.0               | 0.5             | 0.5         | -91.06                | -1.2                              | -66.2      | 66.2                 | 65.1                  | 1.09                   | 60.882            |                    |         |
| 400.0   | 400.0               | 400.0               | 400.0               | 0.8             | 0.8         | -91.06                | -1.2                              | -66.2      | 66.2                 | 64.6                  | 1.54                   | 43.067            |                    |         |
| 500.0   | 500.0               | 500.0               | 500.0               | 1.0             | 1.0         | -91.06                | -1.2                              | -66.2      | 66.2                 | 64.2                  | 1.99                   | 33.318            |                    |         |
| 600.0   | 600.0               | 600.0               | 600.0               | 1.2             | 1.2         | -91.06                | -1.2                              | -66.2      | 66.2                 | 63.7                  | 2.44                   | 27.168            |                    |         |
| 700.0   | 700.0               | 700.2               | 700.2               | 1.4             | 1.4         | -92.57                | -3.0                              | -65.9      | 66.0                 | 63.2                  | 2.86                   | 23.103            |                    |         |
| 792.1   | 792.1               | 792.2               | 792.1               | 1.6             | 1.6         | -96.65                | -7.6                              | -65.4      | 65.8                 | 62.6                  | 3.23                   | 20.366 CC         |                    |         |
| 800.0   | 800.0               | 800.1               | 800.0               | 1.7             | 1.6         | -97.12                | -8.2                              | -65.3      | 65.9                 | 62.6                  | 3.27                   | 20.165 ES         |                    |         |
| 900.0   | 900.0               | 899.9               | 899.5               | 1.9             | 1.8         | -103.15               | -15.1                             | -64.5      | 66.3                 | 62.6                  | 3.69                   | 17.958            |                    |         |
| 1,000.0   | 1,000.0             | 999.6               | 999.0               | 2.1             | 2.0         | -109.03               | -22.0                             | -63.7      | 67.4                 | 63.3                  | 4.13                   | 16.323            |                    |         |
| 1,100.0   | 1,100.0             | 1,099.5             | 1,098.6             | 2.3             | 2.2         | 98.21                 | -28.9                             | -62.9      | 69.5                 | 64.9                  | 4.56                   | 15.252            |                    |         |
| 1,200.0   | 1,199.8             | 1,199.4             | 1,198.3             | 2.5             | 2.5         | 96.96                 | -35.8                             | -62.1      | 72.2                 | 67.3                  | 4.97                   | 14.542            |                    |         |
| 1,300.0   | 1,299.6             | 1,299.4             | 1,298.0             | 2.7             | 2.7         | 97.18                 | -42.8                             | -61.3      | 75.2                 | 69.8                  | 5.40                   | 13.932            |                    |         |
| 1,400.0   | 1,399.4             | 1,399.3             | 1,397.7             | 2.9             | 3.0         | 97.38                 | -49.7                             | -60.5      | 78.2                 | 72.4                  | 5.85                   | 13.378            |                    |         |
| 1,500.0   | 1,499.1             | 1,499.3             | 1,497.4             | 3.1             | 3.2         | 97.56                 | -56.6                             | -59.7      | 81.2                 | 74.9                  | 6.31                   | 12.878            |                    |         |
| 1,600.0   | 1,598.9             | 1,599.3             | 1,597.1             | 3.3             | 3.5         | 97.74                 | -63.5                             | -58.9      | 84.2                 | 77.4                  | 6.78                   | 12.428            |                    |         |
| 1,700.0   | 1,698.6             | 1,699.2             | 1,696.9             | 3.6             | 3.7         | 97.90                 | -70.5                             | -58.1      | 87.2                 | 79.9                  | 7.25                   | 12.024            |                    |         |
| 1,800.0   | 1,798.4             | 1,799.2             | 1,796.6             | 3.8             | 4.0         | 98.05                 | -77.4                             | -57.3      | 90.2                 | 82.5                  | 7.74                   | 11.659            |                    |         |
| 1,900.0   | 1,898.1             | 1,899.1             | 1,896.3             | 4.0             | 4.2         | 98.19                 | -84.3                             | -56.5      | 93.2                 | 85.0                  | 8.22                   | 11.331            |                    |         |
| 2,000.0   | 1,997.9             | 1,999.1             | 1,996.0             | 4.3             | 4.5         | 98.32                 | -91.2                             | -55.7      | 96.2                 | 87.5                  | 8.72                   | 11.033            |                    |         |
| 2,100.0   | 2,097.6             | 2,099.0             | 2,095.7             | 4.5             | 4.7         | 98.44                 | -98.2                             | -54.8      | 99.2                 | 90.0                  | 9.21                   | 10.764            |                    |         |
| 2,200.0   | 2,197.4             | 2,199.0             | 2,195.4             | 4.8             | 5.0         | 98.56                 | -105.1                            | -54.0      | 102.2                | 92.5                  | 9.71                   | 10.518            |                    |         |
| 2,300.0   | 2,297.2             | 2,298.9             | 2,295.1             | 5.0             | 5.3         | 98.67                 | -112.0                            | -53.2      | 105.2                | 94.9                  | 10.22                  | 10.294            |                    |         |
| 2,400.0   | 2,396.9             | 2,398.9             | 2,394.8             | 5.3             | 5.5         | 98.77                 | -118.9                            | -52.4      | 108.2                | 97.4                  | 10.72                  | 10.088            |                    |         |
| 2,500.0   | 2,496.7             | 2,498.8             | 2,494.5             | 5.5             | 5.8         | 98.87                 | -125.9                            | -51.6      | 111.2                | 99.9                  | 11.23                  | 9.900             |                    |         |
| 2,600.0   | 2,596.4             | 2,598.8             | 2,594.3             | 5.8             | 6.0         | 98.96                 | -132.8                            | -50.8      | 114.2                | 102.4                 | 11.74                  | 9.726             |                    |         |
| 2,700.0   | 2,696.2             | 2,698.8             | 2,694.0             | 6.0             | 6.3         | 99.05                 | -139.7                            | -50.0      | 117.1                | 104.9                 | 12.25                  | 9.565             |                    |         |
| 2,800.0   | 2,795.9             | 2,798.7             | 2,793.7             | 6.3             | 6.6         | 99.13                 | -146.6                            | -49.2      | 120.1                | 107.4                 | 12.76                  | 9.417             |                    |         |
| 2,900.0   | 2,895.7             | 2,898.7             | 2,893.4             | 6.5             | 6.8         | 99.21                 | -153.6                            | -48.4      | 123.1                | 109.9                 | 13.27                  | 9.279             |                    |         |
| 3,000.0   | 2,995.5             | 2,998.6             | 2,993.1             | 6.8             | 7.1         | 99.29                 | -160.5                            | -47.6      | 126.1                | 112.4                 | 13.78                  | 9.150             |                    |         |
| 3,100.0   | 3,095.2             | 3,098.6             | 3,092.8             | 7.0             | 7.3         | 99.36                 | -167.4                            | -46.8      | 129.1                | 114.8                 | 14.30                  | 9.031             |                    |         |
| 3,200.0   | 3,195.0             | 3,198.5             | 3,192.5             | 7.3             | 7.6         | 99.43                 | -174.3                            | -46.0      | 132.1                | 117.3                 | 14.82                  | 8.919             |                    |         |
| 3,300.0   | 3,294.7             | 3,298.5             | 3,292.2             | 7.5             | 7.9         | 99.49                 | -181.3                            | -45.2      | 135.1                | 119.8                 | 15.33                  | 8.814             |                    |         |
| 3,400.0   | 3,394.5             | 3,398.4             | 3,391.9             | 7.8             | 8.1         | 99.56                 | -188.2                            | -44.4      | 138.1                | 122.3                 | 15.85                  | 8.716             |                    |         |
| 3,500.0   | 3,494.2             | 3,498.4             | 3,491.7             | 8.1             | 8.4         | 99.62                 | -195.1                            | -43.5      | 141.1                | 124.8                 | 16.37                  | 8.623             |                    |         |
| 3,600.0   | 3,594.0             | 3,598.3             | 3,591.4             | 8.3             | 8.6         | 99.68                 | -202.0                            | -42.7      | 144.1                | 127.2                 | 16.88                  | 8.536             |                    |         |
| 3,700.0   | 3,693.7             | 3,698.3             | 3,691.1             | 8.6             | 8.9         | 99.73                 | -209.0                            | -41.9      | 147.1                | 129.7                 | 17.40                  | 8.454             |                    |         |
| 3,800.0   | 3,793.5             | 3,798.3             | 3,790.8             | 8.8             | 9.2         | 99.78                 | -215.9                            | -41.1      | 150.1                | 132.2                 | 17.92                  | 8.376             |                    |         |
| 3,900.0   | 3,893.3             | 3,898.2             | 3,890.5             | 9.1             | 9.4         | 99.84                 | -222.8                            | -40.3      | 153.1                | 134.7                 | 18.44                  | 8.303             |                    |         |
| 4,000.0   | 3,993.0             | 3,998.2             | 3,990.2             | 9.3             | 9.7         | 99.88                 | -229.7                            | -39.5      | 156.1                | 137.2                 | 18.96                  | 8.233             |                    |         |
| 4,100.0   | 4,092.8             | 4,098.1             | 4,089.9             | 9.6             | 10.0        | 99.93                 | -236.7                            | -38.7      | 159.1                | 139.6                 | 19.48                  | 8.167             |                    |         |
| 4,200.0   | 4,192.5             | 4,198.1             | 4,189.6             | 9.9             | 10.2        | 99.98                 | -243.6                            | -37.9      | 162.1                | 142.1                 | 20.00                  | 8.105             |                    |         |
| 4,300.0   | 4,292.3             | 4,298.0             | 4,289.4             | 10.1            | 10.5        | 100.02                | -250.5                            | -37.1      | 165.1                | 144.6                 | 20.52                  | 8.045             |                    |         |
| 4,400.0   | 4,392.0             | 4,398.0             | 4,389.1             | 10.4            | 10.8        | 100.06                | -257.4                            | -36.3      | 168.1                | 147.1                 | 21.04                  | 7.988             |                    |         |
| 4,500.0   | 4,491.8             | 4,497.9             | 4,488.8             | 10.7            | 11.0        | 100.10                | -264.4                            | -35.5      | 171.1                | 149.5                 | 21.57                  | 7.934             |                    |         |
| 4,600.0   | 4,591.6             | 4,597.9             | 4,588.5             | 10.9            | 11.3        | 100.14                | -271.3                            | -34.7      | 174.1                | 152.0                 | 22.09                  | 7.883             |                    |         |
| 4,700.0   | 4,691.3             | 4,697.9             | 4,688.2             | 11.2            | 11.5        | 100.18                | -278.2                            | -33.9      | 177.1                | 154.5                 | 22.61                  | 7.833             |                    |         |
| 4,800.0   | 4,791.1             | 4,797.8             | 4,787.9             | 11.4            | 11.8        | 100.22                | -285.2                            | -33.0      | 180.1                | 157.0                 | 23.13                  | 7.786             |                    |         |
| 4,900.0   | 4,890.8             | 4,897.8             | 4,887.6             | 11.7            | 12.1        | 100.26                | -292.1                            | -32.2      | 183.1                | 159.5                 | 23.65                  | 7.741             |                    |         |
| 5,000.0   | 4,990.6             | 4,997.7             | 4,987.3             | 12.0            | 12.3        | 100.29                | -299.0                            | -31.4      | 186.1                | 161.9                 | 24.18                  | 7.698             |                    |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                               |                                     |                                      |
|---------------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Company:</b>           | Whiting Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Project:</b>           | Weld County, CO               | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Reference Site:</b>    | S26-T10N-R58W                 | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                         | <b>North Reference:</b>             | Grid                                 |
| <b>Reference Well:</b>    | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Well Error:</b>        | 0.0ft                         | <b>Output errors are at</b>         | 2.00 sigma                           |
| <b>Reference Wellbore</b> | HZ                            | <b>Database:</b>                    | USA EDM 5000 Multi Users DB          |
| <b>Reference Design:</b>  | Plan #2                       | <b>Offset TVD Reference:</b>        | Offset Datum                         |

| Offset Design S26-T10N-R58W - Razor Federal #26J-3510B - HZ - Plan #2 |                |                |                |                 |        |                   |                        |            |                 |                  |                        | Offset Site Error: 0.0 ft |         |
|---|----------------|----------------|----------------|-----------------|--------|-------------------|------------------------|------------|-----------------|------------------|------------------------|---------------------------|---------|
| Survey Program: 0-ISCWSA MWD  |                |                |                |                 |        |                   |                        |            |                 |                  |                        | Offset Well Error: 0.0 ft |         |
| Reference   |                | Offset         |                | Semi Major Axis |        |                   | Distance               |            |                 |                  |                        |                           | Warning |
| Measured Depth  | Vertical Depth | Measured Depth | Vertical Depth | Reference       | Offset | Highside Toolface | Offset Wellbore Centre |            | Between Centres | Between Ellipses | Total Uncertainty Axis | Separation Factor         |         |
| (ft)  | (ft)           | (ft)           | (ft)           | (ft)            | (ft)   | (°)               | +N/-S (ft)             | +E/-W (ft) | (ft)            | (ft)             |                        |                           |         |
| 5,100.0   | 5,090.3        | 5,097.7        | 5,087.0        | 12.2            | 12.6   | 100.32            | -305.9                 | -30.6      | 189.1           | 164.4            | 24.70                  | 7.656                     | SF      |
| 5,203.4   | 5,193.5        | 5,201.0        | 5,190.1        | 12.5            | 12.9   | 100.36            | -313.1                 | -29.8      | 192.2           | 167.0            | 25.24                  | 7.615                     |         |
| 5,250.0   | 5,239.8        | 5,243.9        | 5,232.8        | 12.6            | 13.0   | 100.26            | -317.5                 | -29.3      | 194.4           | 168.9            | 25.50                  | 7.624                     |         |
| 5,300.0   | 5,288.7        | 5,289.5        | 5,277.6        | 12.8            | 13.2   | 100.07            | -326.1                 | -28.3      | 198.6           | 172.8            | 25.84                  | 7.686                     |         |
| 5,350.0   | 5,336.4        | 5,335.0        | 5,321.3        | 13.1            | 13.4   | 99.80             | -338.4                 | -26.8      | 204.7           | 178.4            | 26.25                  | 7.799                     |         |
| 5,400.0   | 5,382.4        | 5,380.1        | 5,363.4        | 13.3            | 13.6   | 99.43             | -354.4                 | -25.0      | 212.6           | 185.9            | 26.73                  | 7.955                     |         |
| 5,450.0   | 5,426.4        | 5,425.0        | 5,403.8        | 13.7            | 13.9   | 98.96             | -373.8                 | -22.7      | 222.3           | 195.0            | 27.28                  | 8.148                     |         |
| 5,500.0   | 5,467.9        | 5,469.5        | 5,442.1        | 14.0            | 14.2   | 98.39             | -396.3                 | -20.1      | 233.6           | 205.7            | 27.92                  | 8.368                     |         |
| 5,550.0   | 5,506.5        | 5,513.8        | 5,478.1        | 14.5            | 14.6   | 97.73             | -421.9                 | -17.1      | 246.5           | 217.8            | 28.68                  | 8.597                     |         |
| 5,600.0   | 5,542.0        | 5,557.6        | 5,511.5        | 14.9            | 14.9   | 96.96             | -450.2                 | -13.8      | 260.9           | 231.3            | 29.54                  | 8.831                     |         |
| 5,650.0   | 5,573.8        | 5,600.0        | 5,541.3        | 15.5            | 15.3   | 96.08             | -480.0                 | -10.3      | 276.5           | 246.0            | 30.49                  | 9.068                     |         |
| 5,700.0   | 5,601.9        | 5,644.6        | 5,570.0        | 16.1            | 15.8   | 95.16             | -513.9                 | -6.4       | 293.3           | 261.7            | 31.57                  | 9.291                     |         |
| 5,750.0   | 5,625.8        | 5,687.7        | 5,594.8        | 16.7            | 16.3   | 94.14             | -548.9                 | -2.3       | 311.2           | 278.4            | 32.74                  | 9.505                     |         |
| 5,800.0   | 5,645.4        | 5,730.8        | 5,616.7        | 17.4            | 16.8   | 93.05             | -585.8                 | 2.0        | 329.9           | 295.9            | 33.99                  | 9.705                     |         |
| 5,850.0   | 5,660.6        | 5,773.8        | 5,635.3        | 18.2            | 17.4   | 91.90             | -624.3                 | 6.5        | 349.4           | 314.1            | 35.33                  | 9.890                     |         |
| 5,900.0   | 5,671.1        | 5,817.0        | 5,650.8        | 19.0            | 18.0   | 90.72             | -664.3                 | 11.2       | 369.5           | 332.7            | 36.73                  | 10.058                    |         |
| 5,950.0   | 5,676.8        | 5,860.4        | 5,662.9        | 19.8            | 18.6   | 89.51             | -705.6                 | 16.0       | 390.0           | 351.8            | 38.19                  | 10.211                    |         |
| 5,985.2   | 5,678.0        | 5,891.1        | 5,669.4        | 20.4            | 19.0   | 88.66             | -735.5                 | 19.5       | 404.6           | 365.3            | 39.25                  | 10.309                    |         |
| 6,000.0   | 5,678.0        | 5,904.2        | 5,671.6        | 20.6            | 19.2   | 89.02             | -748.3                 | 20.9       | 410.7           | 371.0            | 39.71                  | 10.342                    |         |
| 6,100.0   | 5,678.0        | 5,993.8        | 5,678.0        | 22.1            | 20.6   | 90.00             | -837.0                 | 31.3       | 449.6           | 406.8            | 42.80                  | 10.504                    |         |
| 6,200.0   | 5,678.0        | 6,068.7        | 5,678.0        | 23.7            | 21.6   | 90.00             | -911.5                 | 38.2       | 485.9           | 440.2            | 45.65                  | 10.643                    |         |

|                           |                               |                                     |                                      |
|---------------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Company:</b>           | Whiting Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Project:</b>           | Weld County, CO               | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Reference Site:</b>    | S26-T10N-R58W                 | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                         | <b>North Reference:</b>             | Grid                                 |
| <b>Reference Well:</b>    | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Well Error:</b>        | 0.0ft                         | <b>Output errors are at</b>         | 2.00 sigma                           |
| <b>Reference Wellbore</b> | HZ                            | <b>Database:</b>                    | USA EDM 5000 Multi Users DB          |
| <b>Reference Design:</b>  | Plan #2                       | <b>Offset TVD Reference:</b>        | Offset Datum                         |

| Offset Design S26-T10N-R58W - Razor Federal #26J-3511A - HZ - Plan #2 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Site Error: | 0.0 ft |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|-------------------|--------------------|--------|
| Survey Program: 0-ISCWSA MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Well Error: | 0.0 ft |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        | Separation Factor | Warning            |        |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis |                   |                    |        |
| 0.0   | 0.0                 | 0.0                 | 0.0                 | 0.0             | 0.0         | -24.77                | 74.4                              | -34.4      | 82.0                 |                       |                        |                   |                    |        |
| 100.0   | 100.0               | 100.0               | 100.0               | 0.1             | 0.1         | -24.77                | 74.4                              | -34.4      | 82.0                 | 81.8                  | 0.19                   | 436.807           |                    |        |
| 200.0   | 200.0               | 200.0               | 200.0               | 0.3             | 0.3         | -24.77                | 74.4                              | -34.4      | 82.0                 | 81.3                  | 0.64                   | 128.654           |                    |        |
| 300.0   | 300.0               | 300.0               | 300.0               | 0.5             | 0.5         | -24.77                | 74.4                              | -34.4      | 82.0                 | 80.9                  | 1.09                   | 75.436            |                    |        |
| 400.0   | 400.0               | 400.0               | 400.0               | 0.8             | 0.8         | -24.77                | 74.4                              | -34.4      | 82.0                 | 80.4                  | 1.54                   | 53.363            |                    |        |
| 500.0   | 500.0               | 500.0               | 500.0               | 1.0             | 1.0         | -24.77                | 74.4                              | -34.4      | 82.0                 | 80.0                  | 1.99                   | 41.283            |                    |        |
| 600.0   | 600.0               | 600.0               | 600.0               | 1.2             | 1.2         | -24.77                | 74.4                              | -34.4      | 82.0                 | 79.5                  | 2.44                   | 33.663            |                    |        |
| 700.0   | 700.0               | 700.0               | 700.0               | 1.4             | 1.4         | -24.77                | 74.4                              | -34.4      | 82.0                 | 79.1                  | 2.88                   | 28.417            |                    |        |
| 800.0   | 800.0               | 800.0               | 800.0               | 1.7             | 1.7         | -24.77                | 74.4                              | -34.4      | 82.0                 | 78.6                  | 3.33                   | 24.586            |                    |        |
| 900.0   | 900.0               | 902.9               | 902.9               | 1.9             | 1.9         | -24.87                | 72.7                              | -33.7      | 80.2                 | 76.4                  | 3.76                   | 21.310            |                    |        |
| 1,000.0   | 1,000.0             | 1,005.4             | 1,005.2             | 2.1             | 2.1         | -25.19                | 67.6                              | -31.8      | 74.8                 | 70.7                  | 4.18                   | 17.918            |                    |        |
| 1,100.0   | 1,100.0             | 1,105.2             | 1,104.8             | 2.3             | 2.3         | -174.32               | 61.0                              | -29.3      | 69.6                 | 65.1                  | 4.56                   | 15.261            |                    |        |
| 1,199.5   | 1,199.3             | 1,204.7             | 1,204.0             | 2.5             | 2.5         | -175.30               | 54.5                              | -26.9      | 67.9                 | 63.0                  | 4.93                   | 13.777 CC         |                    |        |
| 1,200.0   | 1,199.8             | 1,205.2             | 1,204.5             | 2.5             | 2.5         | -175.30               | 54.5                              | -26.9      | 67.9                 | 63.0                  | 4.93                   | 13.771            |                    |        |
| 1,300.0   | 1,299.6             | 1,305.2             | 1,304.3             | 2.7             | 2.7         | -176.43               | 48.0                              | -24.4      | 67.9                 | 62.6                  | 5.32                   | 12.774            |                    |        |
| 1,400.0   | 1,399.4             | 1,405.2             | 1,404.0             | 2.9             | 2.9         | -177.55               | 41.4                              | -22.0      | 68.0                 | 62.3                  | 5.71                   | 11.893            |                    |        |
| 1,500.0   | 1,499.1             | 1,505.2             | 1,503.8             | 3.1             | 3.1         | -178.67               | 34.9                              | -19.5      | 68.1                 | 61.9                  | 6.12                   | 11.115            |                    |        |
| 1,600.0   | 1,598.9             | 1,605.2             | 1,603.5             | 3.3             | 3.4         | -179.78               | 28.4                              | -17.1      | 68.2                 | 61.6                  | 6.54                   | 10.426            |                    |        |
| 1,700.0   | 1,698.6             | 1,705.2             | 1,703.3             | 3.6             | 3.6         | 179.11                | 21.8                              | -14.6      | 68.3                 | 61.3                  | 6.96                   | 9.814             |                    |        |
| 1,800.0   | 1,798.4             | 1,805.2             | 1,803.0             | 3.8             | 3.9         | 178.00                | 15.3                              | -12.2      | 68.5                 | 61.1                  | 7.39                   | 9.268             |                    |        |
| 1,900.0   | 1,898.1             | 1,905.1             | 1,902.8             | 4.0             | 4.1         | 176.90                | 8.8                               | -9.7       | 68.6                 | 60.8                  | 7.82                   | 8.780             |                    |        |
| 2,000.0   | 1,997.9             | 2,005.1             | 2,002.5             | 4.3             | 4.4         | 175.80                | 2.2                               | -7.3       | 68.9                 | 60.6                  | 8.25                   | 8.341             |                    |        |
| 2,100.0   | 2,097.6             | 2,105.1             | 2,102.3             | 4.5             | 4.6         | 174.71                | -4.3                              | -4.8       | 69.1                 | 60.4                  | 8.69                   | 7.946             |                    |        |
| 2,200.0   | 2,197.4             | 2,205.1             | 2,202.0             | 4.8             | 4.9         | 173.63                | -10.8                             | -2.4       | 69.3                 | 60.2                  | 9.14                   | 7.588             |                    |        |
| 2,300.0   | 2,297.2             | 2,305.1             | 2,301.8             | 5.0             | 5.1         | 172.56                | -17.3                             | 0.1        | 69.6                 | 60.0                  | 9.59                   | 7.262             |                    |        |
| 2,400.0   | 2,396.9             | 2,405.1             | 2,401.5             | 5.3             | 5.4         | 171.50                | -23.9                             | 2.5        | 69.9                 | 59.9                  | 10.04                  | 6.966             |                    |        |
| 2,500.0   | 2,496.7             | 2,505.1             | 2,501.3             | 5.5             | 5.6         | 170.44                | -30.4                             | 5.0        | 70.3                 | 59.8                  | 10.49                  | 6.696             |                    |        |
| 2,600.0   | 2,596.4             | 2,605.1             | 2,601.0             | 5.8             | 5.9         | 169.40                | -36.9                             | 7.4        | 70.6                 | 59.7                  | 10.95                  | 6.449             |                    |        |
| 2,700.0   | 2,696.2             | 2,705.1             | 2,700.8             | 6.0             | 6.1         | 168.37                | -43.5                             | 9.8        | 71.0                 | 59.6                  | 11.41                  | 6.221             |                    |        |
| 2,800.0   | 2,795.9             | 2,805.1             | 2,800.5             | 6.3             | 6.4         | 167.35                | -50.0                             | 12.3       | 71.4                 | 59.5                  | 11.88                  | 6.012             |                    |        |
| 2,900.0   | 2,895.7             | 2,905.1             | 2,900.3             | 6.5             | 6.7         | 166.34                | -56.5                             | 14.7       | 71.8                 | 59.5                  | 12.35                  | 5.819             |                    |        |
| 3,000.0   | 2,995.5             | 3,005.0             | 3,000.0             | 6.8             | 6.9         | 165.34                | -63.1                             | 17.2       | 72.3                 | 59.5                  | 12.82                  | 5.641             |                    |        |
| 3,100.0   | 3,095.2             | 3,105.0             | 3,099.7             | 7.0             | 7.2         | 164.36                | -69.6                             | 19.6       | 72.8                 | 59.5                  | 13.29                  | 5.475             |                    |        |
| 3,200.0   | 3,195.0             | 3,205.0             | 3,199.5             | 7.3             | 7.4         | 163.39                | -76.1                             | 22.1       | 73.2                 | 59.5                  | 13.76                  | 5.322             |                    |        |
| 3,300.0   | 3,294.7             | 3,305.0             | 3,299.2             | 7.5             | 7.7         | 162.43                | -82.7                             | 24.5       | 73.8                 | 59.5                  | 14.24                  | 5.179             |                    |        |
| 3,400.0   | 3,394.5             | 3,405.0             | 3,399.0             | 7.8             | 8.0         | 161.48                | -89.2                             | 27.0       | 74.3                 | 59.6                  | 14.72                  | 5.046             |                    |        |
| 3,500.0   | 3,494.2             | 3,505.0             | 3,498.7             | 8.1             | 8.2         | 160.55                | -95.7                             | 29.4       | 74.8                 | 59.6                  | 15.20                  | 4.922             |                    |        |
| 3,600.0   | 3,594.0             | 3,605.0             | 3,598.5             | 8.3             | 8.5         | 159.64                | -102.3                            | 31.9       | 75.4                 | 59.7                  | 15.69                  | 4.806             |                    |        |
| 3,700.0   | 3,693.7             | 3,705.0             | 3,698.2             | 8.6             | 8.7         | 158.73                | -108.8                            | 34.3       | 76.0                 | 59.8                  | 16.18                  | 4.697             |                    |        |
| 3,800.0   | 3,793.5             | 3,805.0             | 3,798.0             | 8.8             | 9.0         | 157.84                | -115.3                            | 36.8       | 76.6                 | 59.9                  | 16.67                  | 4.596             |                    |        |
| 3,900.0   | 3,893.3             | 3,905.0             | 3,897.7             | 9.1             | 9.3         | 156.97                | -121.8                            | 39.2       | 77.2                 | 60.1                  | 17.16                  | 4.500             |                    |        |
| 4,000.0   | 3,993.0             | 4,005.0             | 3,997.5             | 9.3             | 9.5         | 156.11                | -128.4                            | 41.7       | 77.9                 | 60.2                  | 17.66                  | 4.411             |                    |        |
| 4,100.0   | 4,092.8             | 4,105.0             | 4,097.2             | 9.6             | 9.8         | 155.26                | -134.9                            | 44.1       | 78.5                 | 60.4                  | 18.15                  | 4.326             |                    |        |
| 4,200.0   | 4,192.5             | 4,204.9             | 4,197.0             | 9.9             | 10.1        | 154.43                | -141.4                            | 46.6       | 79.2                 | 60.6                  | 18.65                  | 4.247             |                    |        |
| 4,300.0   | 4,292.3             | 4,304.9             | 4,296.7             | 10.1            | 10.3        | 153.61                | -148.0                            | 49.0       | 79.9                 | 60.8                  | 19.15                  | 4.172             |                    |        |
| 4,400.0   | 4,392.0             | 4,404.9             | 4,396.5             | 10.4            | 10.6        | 152.81                | -154.5                            | 51.5       | 80.6                 | 61.0                  | 19.65                  | 4.102             |                    |        |
| 4,500.0   | 4,491.8             | 4,504.9             | 4,496.2             | 10.7            | 10.8        | 152.02                | -161.0                            | 53.9       | 81.3                 | 61.2                  | 20.16                  | 4.035             |                    |        |
| 4,600.0   | 4,591.6             | 4,604.9             | 4,596.0             | 10.9            | 11.1        | 151.24                | -167.6                            | 56.4       | 82.1                 | 61.4                  | 20.67                  | 3.972             |                    |        |
| 4,700.0   | 4,691.3             | 4,704.9             | 4,695.7             | 11.2            | 11.4        | 150.48                | -174.1                            | 58.8       | 82.8                 | 61.7                  | 21.17                  | 3.912             |                    |        |
| 4,800.0   | 4,791.1             | 4,804.9             | 4,795.5             | 11.4            | 11.6        | 149.74                | -180.6                            | 61.3       | 83.6                 | 61.9                  | 21.68                  | 3.856             |                    |        |
| 4,900.0   | 4,890.8             | 4,904.9             | 4,895.2             | 11.7            | 11.9        | 149.00                | -187.2                            | 63.7       | 84.4                 | 62.2                  | 22.19                  | 3.803             |                    |        |
| 5,000.0   | 4,990.6             | 5,004.9             | 4,995.0             | 12.0            | 12.2        | 148.28                | -193.7                            | 66.2       | 85.2                 | 62.5                  | 22.71                  | 3.752             |                    |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                               |                                     |                                      |
|---------------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Company:</b>           | Whiting Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Project:</b>           | Weld County, CO               | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Reference Site:</b>    | S26-T10N-R58W                 | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                         | <b>North Reference:</b>             | Grid                                 |
| <b>Reference Well:</b>    | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Well Error:</b>        | 0.0ft                         | <b>Output errors are at</b>         | 2.00 sigma                           |
| <b>Reference Wellbore</b> | HZ                            | <b>Database:</b>                    | USA EDM 5000 Multi Users DB          |
| <b>Reference Design:</b>  | Plan #2                       | <b>Offset TVD Reference:</b>        | Offset Datum                         |

| Offset Design S26-T10N-R58W - Razor Federal #26J-3511A - HZ - Plan #2 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Site Error: 0.0 ft |  |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|------------------------|-------------------|---------------------------|--|
| Survey Program: 0-ISWCSA MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                        |                   | Offset Well Error: 0.0 ft |  |
| Reference   |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                        |                   |                           |  |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning                   |  |
| 5,100.0   | 5,090.3             | 5,104.9             | 5,094.7             | 12.2            | 12.4        | 147.58                | -200.2                            | 68.6       | 86.0                 | 62.8                  | 23.22                  | 3.704             |                           |  |
| 5,203.4   | 5,193.5             | 5,219.6             | 5,207.7             | 12.5            | 12.8        | 141.50                | -217.5                            | 75.1       | 80.3                 | 56.2                  | 24.08                  | 3.336             |                           |  |
| 5,250.0   | 5,239.8             | 5,269.8             | 5,255.4             | 12.6            | 13.1        | 135.32                | -232.3                            | 80.6       | 75.2                 | 50.6                  | 24.63                  | 3.053             |                           |  |
| 5,300.0   | 5,288.7             | 5,322.5             | 5,303.5             | 12.8            | 13.4        | 127.24                | -252.3                            | 88.1       | 71.3                 | 46.0                  | 25.32                  | 2.817             |                           |  |
| 5,350.0   | 5,336.4             | 5,373.9             | 5,348.1             | 13.1            | 13.7        | 118.05                | -276.1                            | 97.1       | 69.7                 | 43.5                  | 26.16                  | 2.664             |                           |  |
| 5,356.2   | 5,342.2             | 5,380.1             | 5,353.4             | 13.1            | 13.8        | 116.87                | -279.3                            | 98.3       | 69.7                 | 43.4                  | 26.28                  | 2.652 ES          |                           |  |
| 5,400.0   | 5,382.4             | 5,424.1             | 5,389.1             | 13.3            | 14.1        | 108.43                | -303.3                            | 107.2      | 70.7                 | 43.6                  | 27.12                  | 2.608             |                           |  |
| 5,450.0   | 5,426.4             | 5,473.1             | 5,426.2             | 13.7            | 14.5        | 99.19                 | -333.2                            | 118.5      | 74.4                 | 46.3                  | 28.08                  | 2.650             |                           |  |
| 5,500.0   | 5,467.9             | 5,521.1             | 5,459.5             | 14.0            | 15.0        | 90.93                 | -365.6                            | 130.6      | 80.5                 | 51.5                  | 28.95                  | 2.780             |                           |  |
| 5,550.0   | 5,506.5             | 5,568.1             | 5,488.8             | 14.5            | 15.5        | 83.94                 | -399.9                            | 143.5      | 88.5                 | 58.8                  | 29.68                  | 2.981             |                           |  |
| 5,600.0   | 5,542.0             | 5,614.1             | 5,514.3             | 14.9            | 16.1        | 78.21                 | -435.8                            | 156.9      | 97.9                 | 67.6                  | 30.30                  | 3.231             |                           |  |
| 5,650.0   | 5,573.8             | 5,659.3             | 5,535.9             | 15.5            | 16.6        | 73.59                 | -473.0                            | 170.9      | 108.3                | 77.5                  | 30.85                  | 3.511             |                           |  |
| 5,700.0   | 5,601.9             | 5,703.8             | 5,553.7             | 16.1            | 17.2        | 69.89                 | -511.1                            | 185.2      | 119.3                | 88.0                  | 31.38                  | 3.803             |                           |  |
| 5,750.0   | 5,625.8             | 5,750.0             | 5,568.5             | 16.7            | 17.9        | 66.85                 | -552.1                            | 200.5      | 130.8                | 98.8                  | 31.96                  | 4.092             |                           |  |
| 5,800.0   | 5,645.4             | 5,790.8             | 5,578.3             | 17.4            | 18.5        | 64.57                 | -589.2                            | 214.4      | 142.3                | 109.7                 | 32.57                  | 4.368             |                           |  |
| 5,850.0   | 5,660.6             | 5,833.5             | 5,585.2             | 18.2            | 19.2        | 62.69                 | -628.6                            | 229.2      | 153.8                | 120.5                 | 33.28                  | 4.621             |                           |  |
| 5,900.0   | 5,671.1             | 5,875.7             | 5,588.5             | 19.0            | 19.8        | 61.20                 | -668.0                            | 244.0      | 165.1                | 131.0                 | 34.10                  | 4.842             |                           |  |
| 5,950.0   | 5,676.8             | 5,919.4             | 5,589.0             | 19.8            | 20.5        | 60.19                 | -708.9                            | 259.2      | 176.1                | 141.0                 | 35.08                  | 5.019             |                           |  |
| 5,985.2   | 5,678.0             | 5,951.2             | 5,589.0             | 20.4            | 20.9        | 60.29                 | -738.9                            | 269.7      | 183.1                | 147.0                 | 36.07                  | 5.076             |                           |  |
| 6,000.0   | 5,678.0             | 5,964.5             | 5,589.0             | 20.6            | 21.1        | 60.79                 | -751.5                            | 274.0      | 185.9                | 149.3                 | 36.62                  | 5.076             |                           |  |
| 6,100.0   | 5,678.0             | 6,054.0             | 5,589.0             | 22.1            | 22.4        | 63.73                 | -837.0                            | 300.4      | 205.0                | 164.8                 | 40.21                  | 5.099             |                           |  |
| 6,200.0   | 5,678.0             | 6,142.7             | 5,589.0             | 23.7            | 23.8        | 66.11                 | -922.9                            | 322.6      | 224.0                | 180.3                 | 43.69                  | 5.127             |                           |  |
| 6,300.0   | 5,678.0             | 6,230.7             | 5,589.0             | 25.3            | 25.1        | 68.07                 | -1,009.0                          | 340.7      | 242.8                | 195.7                 | 47.06                  | 5.159             |                           |  |
| 6,400.0   | 5,678.0             | 6,318.0             | 5,589.0             | 26.9            | 26.5        | 69.71                 | -1,095.2                          | 354.6      | 261.2                | 210.9                 | 50.32                  | 5.191             |                           |  |
| 6,500.0   | 5,678.0             | 6,400.0             | 5,589.0             | 28.6            | 27.8        | 71.02                 | -1,176.7                          | 364.2      | 279.2                | 225.8                 | 53.36                  | 5.232             |                           |  |
| 6,600.0   | 5,678.0             | 6,490.6             | 5,589.0             | 30.3            | 29.2        | 72.25                 | -1,267.0                          | 370.6      | 296.5                | 240.1                 | 56.41                  | 5.256             |                           |  |
| 6,700.0   | 5,678.0             | 6,581.4             | 5,589.0             | 31.9            | 30.6        | 73.30                 | -1,357.8                          | 372.8      | 313.4                | 254.0                 | 59.32                  | 5.283             |                           |  |
| 6,800.0   | 5,678.0             | 6,674.0             | 5,589.0             | 33.5            | 32.1        | 74.11                 | -1,450.4                          | 372.8      | 327.6                | 265.5                 | 62.13                  | 5.273             |                           |  |
| 6,900.0   | 5,678.0             | 6,773.5             | 5,589.0             | 35.1            | 33.8        | 74.63                 | -1,549.9                          | 372.8      | 336.9                | 272.1                 | 64.83                  | 5.197             |                           |  |
| 7,000.0   | 5,678.0             | 6,873.4             | 5,589.0             | 36.7            | 35.5        | 74.87                 | -1,649.8                          | 372.8      | 341.2                | 273.9                 | 67.29                  | 5.070             |                           |  |
| 7,035.1   | 5,678.0             | 6,908.5             | 5,589.0             | 37.3            | 36.1        | 74.88                 | -1,684.9                          | 372.8      | 341.5                | 273.4                 | 68.10                  | 5.015             |                           |  |
| 7,100.0   | 5,678.0             | 6,973.4             | 5,589.0             | 38.3            | 37.2        | 74.88                 | -1,749.8                          | 372.8      | 341.5                | 271.3                 | 70.27                  | 4.860             |                           |  |
| 7,200.0   | 5,678.0             | 7,073.4             | 5,589.0             | 39.9            | 39.0        | 74.88                 | -1,849.8                          | 372.8      | 341.5                | 267.9                 | 73.66                  | 4.637             |                           |  |
| 7,300.0   | 5,678.0             | 7,173.4             | 5,589.0             | 41.5            | 40.8        | 74.88                 | -1,949.8                          | 372.8      | 341.5                | 264.5                 | 77.08                  | 4.431             |                           |  |
| 7,400.0   | 5,678.0             | 7,273.4             | 5,589.0             | 43.2            | 42.5        | 74.89                 | -2,049.8                          | 372.8      | 341.5                | 261.0                 | 80.52                  | 4.242             |                           |  |
| 7,500.0   | 5,678.0             | 7,373.4             | 5,589.0             | 44.8            | 44.3        | 74.89                 | -2,149.8                          | 372.8      | 341.6                | 257.6                 | 83.99                  | 4.067             |                           |  |
| 7,600.0   | 5,678.0             | 7,473.4             | 5,589.0             | 46.5            | 46.1        | 74.89                 | -2,249.8                          | 372.8      | 341.6                | 254.1                 | 87.48                  | 3.904             |                           |  |
| 7,700.0   | 5,678.0             | 7,573.4             | 5,589.0             | 48.2            | 47.9        | 74.89                 | -2,349.8                          | 372.8      | 341.6                | 250.6                 | 90.99                  | 3.754             |                           |  |
| 7,800.0   | 5,678.0             | 7,673.4             | 5,589.0             | 49.9            | 49.7        | 74.89                 | -2,449.8                          | 372.8      | 341.6                | 247.1                 | 94.51                  | 3.614             |                           |  |
| 7,900.0   | 5,678.0             | 7,773.4             | 5,589.0             | 51.7            | 51.6        | 74.89                 | -2,549.8                          | 372.8      | 341.6                | 243.5                 | 98.05                  | 3.484             |                           |  |
| 8,000.0   | 5,678.0             | 7,873.4             | 5,589.0             | 53.4            | 53.4        | 74.89                 | -2,649.8                          | 372.8      | 341.6                | 240.0                 | 101.60                 | 3.362             |                           |  |
| 8,100.0   | 5,678.0             | 7,973.4             | 5,589.0             | 55.2            | 55.2        | 74.89                 | -2,749.8                          | 372.8      | 341.6                | 236.4                 | 105.16                 | 3.248             |                           |  |
| 8,200.0   | 5,678.0             | 8,073.4             | 5,589.0             | 56.9            | 57.1        | 74.89                 | -2,849.8                          | 372.8      | 341.6                | 232.8                 | 108.74                 | 3.141             |                           |  |
| 8,300.0   | 5,678.0             | 8,173.4             | 5,589.0             | 58.7            | 58.9        | 74.89                 | -2,949.8                          | 372.8      | 341.6                | 229.3                 | 112.32                 | 3.041             |                           |  |
| 8,400.0   | 5,678.0             | 8,273.4             | 5,589.0             | 60.5            | 60.7        | 74.89                 | -3,049.8                          | 372.8      | 341.6                | 225.7                 | 115.91                 | 2.947             |                           |  |
| 8,500.0   | 5,678.0             | 8,373.4             | 5,589.0             | 62.3            | 62.6        | 74.89                 | -3,149.8                          | 372.8      | 341.6                | 222.1                 | 119.51                 | 2.858             |                           |  |
| 8,600.0   | 5,678.0             | 8,473.4             | 5,589.0             | 64.1            | 64.5        | 74.89                 | -3,249.8                          | 372.8      | 341.6                | 218.5                 | 123.12                 | 2.775             |                           |  |
| 8,700.0   | 5,678.0             | 8,573.4             | 5,589.0             | 65.9            | 66.3        | 74.89                 | -3,349.8                          | 372.8      | 341.6                | 214.9                 | 126.74                 | 2.695             |                           |  |
| 8,800.0   | 5,678.0             | 8,673.4             | 5,589.0             | 67.7            | 68.2        | 74.89                 | -3,449.8                          | 372.8      | 341.6                | 211.3                 | 130.36                 | 2.621             |                           |  |
| 8,900.0   | 5,678.0             | 8,773.4             | 5,589.0             | 69.5            | 70.0        | 74.89                 | -3,549.8                          | 372.8      | 341.6                | 207.6                 | 133.98                 | 2.550             |                           |  |
| 9,000.0   | 5,678.0             | 8,873.4             | 5,589.0             | 71.4            | 71.9        | 74.89                 | -3,649.8                          | 372.8      | 341.6                | 204.0                 | 137.61                 | 2.483             |                           |  |
| 9,100.0   | 5,678.0             | 8,973.4             | 5,589.0             | 73.2            | 73.8        | 74.89                 | -3,749.8                          | 372.8      | 341.6                | 200.4                 | 141.25                 | 2.419             |                           |  |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                               |                                     |                                      |
|---------------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Company:</b>           | Whiting Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Project:</b>           | Weld County, CO               | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Reference Site:</b>    | S26-T10N-R58W                 | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                         | <b>North Reference:</b>             | Grid                                 |
| <b>Reference Well:</b>    | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Well Error:</b>        | 0.0ft                         | <b>Output errors are at</b>         | 2.00 sigma                           |
| <b>Reference Wellbore</b> | HZ                            | <b>Database:</b>                    | USA EDM 5000 Multi Users DB          |
| <b>Reference Design:</b>  | Plan #2                       | <b>Offset TVD Reference:</b>        | Offset Datum                         |

| Offset Design S26-T10N-R58W - Razor Federal #26J-3511A - HZ - Plan #2 |                           |                           |                           |                   |                |                             |   |               |                            |                             |                              | Offset Site Error:   | 0.0 ft  |
|---|---------------------------|---------------------------|---------------------------|-------------------|----------------|-----------------------------|---|---------------|----------------------------|-----------------------------|------------------------------|----------------------|---------|
| Survey Program: 0-ISCSA MWD   |                           |                           |                           |                   |                |                             |   |               |                            |                             |                              | Offset Well Error:   | 0.0 ft  |
| Reference   |                           | Offset                    |                           | Semi Major Axis   |                | Highside<br>Toolface<br>(°) | Distance                                |               |                            |                             | Total<br>Uncertainty<br>Axis | Separation<br>Factor | Warning |
| Measured<br>Depth<br>(ft)   | Vertical<br>Depth<br>(ft) | Measured<br>Depth<br>(ft) | Vertical<br>Depth<br>(ft) | Reference<br>(ft) | Offset<br>(ft) |                             | Offset Wellbore Centre<br>+N/-S<br>(ft) | +E/-W<br>(ft) | Between<br>Centres<br>(ft) | Between<br>Ellipses<br>(ft) |                              |                      |         |
| 9,200.0   | 5,678.0                   | 9,073.4                   | 5,589.0                   | 75.0              | 75.7           | 74.89                       | -3,849.8                                | 372.8         | 341.6                      | 196.7                       | 144.89                       | 2.358                |         |
| 9,300.0   | 5,678.0                   | 9,173.4                   | 5,589.0                   | 76.9              | 77.5           | 74.89                       | -3,949.8                                | 372.8         | 341.6                      | 193.1                       | 148.53                       | 2.300                |         |
| 9,400.0   | 5,678.0                   | 9,273.4                   | 5,589.0                   | 78.7              | 79.4           | 74.89                       | -4,049.8                                | 372.8         | 341.6                      | 189.5                       | 152.18                       | 2.245                |         |
| 9,500.0   | 5,678.0                   | 9,373.4                   | 5,589.0                   | 80.6              | 81.3           | 74.89                       | -4,149.8                                | 372.8         | 341.7                      | 185.8                       | 155.83                       | 2.192                |         |
| 9,600.0   | 5,678.0                   | 9,473.4                   | 5,589.0                   | 82.4              | 83.2           | 74.89                       | -4,249.8                                | 372.8         | 341.7                      | 182.2                       | 159.49                       | 2.142                |         |
| 9,700.0   | 5,678.0                   | 9,573.4                   | 5,589.0                   | 84.2              | 85.1           | 74.90                       | -4,349.8                                | 372.8         | 341.7                      | 178.5                       | 163.14                       | 2.094                |         |
| 9,800.0   | 5,678.0                   | 9,673.4                   | 5,589.0                   | 86.1              | 86.9           | 74.90                       | -4,449.8                                | 372.8         | 341.7                      | 174.9                       | 166.80                       | 2.048                |         |
| 9,900.0   | 5,678.0                   | 9,773.4                   | 5,589.0                   | 88.0              | 88.8           | 74.90                       | -4,549.8                                | 372.8         | 341.7                      | 171.2                       | 170.47                       | 2.004                |         |
| 10,000.0  | 5,678.0                   | 9,873.4                   | 5,589.0                   | 89.8              | 90.7           | 74.90                       | -4,649.8                                | 372.8         | 341.7                      | 167.5                       | 174.13                       | 1.962                |         |
| 10,100.0  | 5,678.0                   | 9,973.4                   | 5,589.0                   | 91.7              | 92.6           | 74.90                       | -4,749.8                                | 372.8         | 341.7                      | 163.9                       | 177.80                       | 1.922                |         |
| 10,200.0  | 5,678.0                   | 10,073.4                  | 5,589.0                   | 93.5              | 94.5           | 74.90                       | -4,849.8                                | 372.8         | 341.7                      | 160.2                       | 181.47                       | 1.883                |         |
| 10,300.0  | 5,678.0                   | 10,173.4                  | 5,589.0                   | 95.4              | 96.4           | 74.90                       | -4,949.8                                | 372.8         | 341.7                      | 156.5                       | 185.14                       | 1.846                |         |
| 10,400.0  | 5,678.0                   | 10,273.4                  | 5,589.0                   | 97.3              | 98.3           | 74.90                       | -5,049.8                                | 372.8         | 341.7                      | 152.9                       | 188.82                       | 1.810                |         |
| 10,500.0  | 5,678.0                   | 10,373.4                  | 5,589.0                   | 99.1              | 100.2          | 74.90                       | -5,149.8                                | 372.8         | 341.7                      | 149.2                       | 192.49                       | 1.775                |         |
| 10,600.0  | 5,678.0                   | 10,473.4                  | 5,589.0                   | 101.0             | 102.1          | 74.90                       | -5,249.8                                | 372.8         | 341.7                      | 145.5                       | 196.17                       | 1.742                |         |
| 10,700.0  | 5,678.0                   | 10,573.4                  | 5,589.0                   | 102.9             | 104.0          | 74.90                       | -5,349.8                                | 372.8         | 341.7                      | 141.9                       | 199.85                       | 1.710                |         |
| 10,800.0  | 5,678.0                   | 10,673.4                  | 5,589.0                   | 104.8             | 105.9          | 74.90                       | -5,449.8                                | 372.8         | 341.7                      | 138.2                       | 203.53                       | 1.679                |         |
| 10,900.0  | 5,678.0                   | 10,773.4                  | 5,589.0                   | 106.6             | 107.7          | 74.90                       | -5,549.8                                | 372.8         | 341.7                      | 134.5                       | 207.21                       | 1.649                |         |
| 11,000.0  | 5,678.0                   | 10,873.4                  | 5,589.0                   | 108.5             | 109.6          | 74.90                       | -5,649.8                                | 372.8         | 341.7                      | 130.8                       | 210.90                       | 1.620                |         |
| 11,100.0  | 5,678.0                   | 10,973.4                  | 5,589.0                   | 110.4             | 111.5          | 74.90                       | -5,749.8                                | 372.8         | 341.7                      | 127.1                       | 214.58                       | 1.593                |         |
| 11,200.0  | 5,678.0                   | 11,073.4                  | 5,589.0                   | 112.3             | 113.4          | 74.90                       | -5,849.8                                | 372.8         | 341.7                      | 123.5                       | 218.27                       | 1.566                |         |
| 11,300.0  | 5,678.0                   | 11,173.4                  | 5,589.0                   | 114.2             | 115.3          | 74.90                       | -5,949.8                                | 372.8         | 341.7                      | 119.8                       | 221.95                       | 1.540                |         |
| 11,400.0  | 5,678.0                   | 11,273.4                  | 5,589.0                   | 116.0             | 117.2          | 74.90                       | -6,049.8                                | 372.8         | 341.7                      | 116.1                       | 225.64                       | 1.515                |         |
| 11,500.0  | 5,678.0                   | 11,373.4                  | 5,589.0                   | 117.9             | 119.1          | 74.90                       | -6,149.8                                | 372.8         | 341.7                      | 112.4                       | 229.33                       | 1.490 Level 3        |         |
| 11,600.0  | 5,678.0                   | 11,473.4                  | 5,589.0                   | 119.8             | 121.0          | 74.90                       | -6,249.8                                | 372.8         | 341.8                      | 108.7                       | 233.02                       | 1.467 Level 3        |         |
| 11,700.0  | 5,678.0                   | 11,573.4                  | 5,589.0                   | 121.7             | 122.9          | 74.90                       | -6,349.8                                | 372.8         | 341.8                      | 105.0                       | 236.71                       | 1.444 Level 3        |         |
| 11,800.0  | 5,678.0                   | 11,673.4                  | 5,589.0                   | 123.6             | 124.8          | 74.90                       | -6,449.8                                | 372.8         | 341.8                      | 101.4                       | 240.41                       | 1.422 Level 3        |         |
| 11,900.0  | 5,678.0                   | 11,773.4                  | 5,589.0                   | 125.5             | 126.7          | 74.90                       | -6,549.8                                | 372.8         | 341.8                      | 97.7                        | 244.10                       | 1.400 Level 3        |         |
| 12,000.0  | 5,678.0                   | 11,873.4                  | 5,589.0                   | 127.4             | 128.6          | 74.91                       | -6,649.8                                | 372.8         | 341.8                      | 94.0                        | 247.79                       | 1.379 Level 3        |         |
| 12,100.0  | 5,678.0                   | 11,973.4                  | 5,589.0                   | 129.3             | 130.5          | 74.91                       | -6,749.8                                | 372.8         | 341.8                      | 90.3                        | 251.49                       | 1.359 Level 3        |         |
| 12,200.0  | 5,678.0                   | 12,073.4                  | 5,589.0                   | 131.1             | 132.4          | 74.91                       | -6,849.8                                | 372.8         | 341.8                      | 86.6                        | 255.18                       | 1.339 Level 3        |         |
| 12,300.0  | 5,678.0                   | 12,173.4                  | 5,589.0                   | 133.0             | 134.1          | 74.91                       | -6,949.8                                | 372.8         | 341.8                      | 83.2                        | 258.63                       | 1.322 Level 3        |         |
| 12,313.1  | 5,678.0                   | 12,186.5                  | 5,589.0                   | 133.3             | 134.3          | 74.91                       | -6,962.8                                | 372.8         | 341.8                      | 82.7                        | 259.07                       | 1.319 Level 3, SF    |         |



|                           |                               |                                     |                                      |
|---------------------------|-------------------------------|-------------------------------------|--------------------------------------|
| <b>Company:</b>           | Whiting Petroleum Corporation | <b>Local Co-ordinate Reference:</b> | Well Razor Federal #26J-3512B        |
| <b>Project:</b>           | Weld County, CO               | <b>TVD Reference:</b>               | WELL @ 4742.1ft (Original Well Elev) |
| <b>Reference Site:</b>    | S26-T10N-R58W                 | <b>MD Reference:</b>                | WELL @ 4742.1ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0ft                         | <b>North Reference:</b>             | Grid                                 |
| <b>Reference Well:</b>    | Razor Federal #26J-3512B      | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Well Error:</b>        | 0.0ft                         | <b>Output errors are at</b>         | 2.00 sigma                           |
| <b>Reference Wellbore</b> | HZ                            | <b>Database:</b>                    | USA EDM 5000 Multi Users DB          |
| <b>Reference Design:</b>  | Plan #2                       | <b>Offset TVD Reference:</b>        | Offset Datum                         |

Reference Depths are relative to WELL @ 4742.1ft (Original Well Elev)  
 Offset Depths are relative to Offset Datum  
 Central Meridian is 105° 30' 0.00 W °

Coordinates are relative to: Razor Federal #26J-3512B  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 1.08°

