

Whiting Oil & Gas

Well Name: **Horsetail #33M-2804**

Surface Location: Horsetail 33M Pad Sec.33-T10N-R57W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

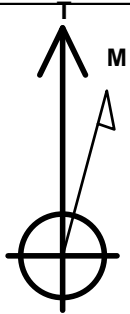
Ground Elevation: 4634.0

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Slot |
|-------|-------|------------|------------|-----------|-------------|------|
| 0.0 | 0.0 | 1535004.33 | 3481296.93 | 40.789022 | -103.761803 | |

RKB - 17.3' WELL @ 4651.3ft (RKB - 17.3')

WELLBORE TARGET DETAILS

| Name | TVD | +N/-S | +E/-W | Shape |
|--------------------------------|--------|--------|-------|-------|
| SHL 380'FSL & 750'FWL, Sec.33 | 1.0 | 0.0 | 0.0 | Point |
| BHL 600'FNL & 1155'FWL, Sec.28 | 5502.0 | 9653.2 | 163.9 | Point |



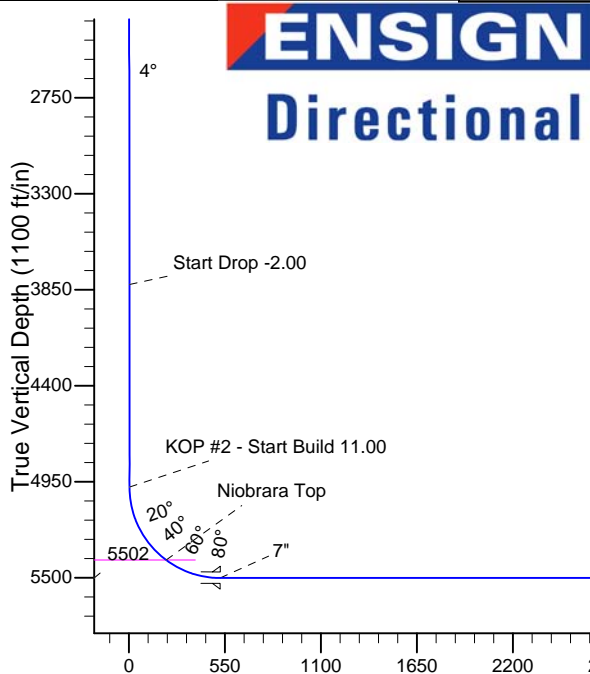
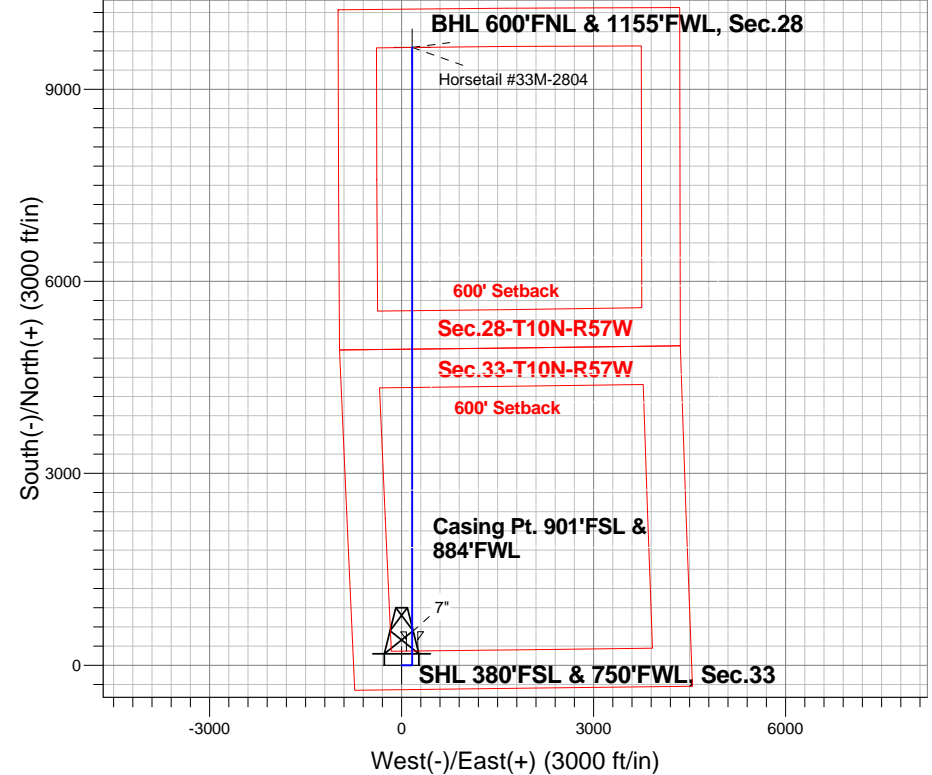
Azimuths to True North
Magnetic North: 8.02°

Magnetic Field
Strength: 53187.9nT
Dip Angle: 67.44°
Date: 10/24/2013
Model: IGRF2010

Horsetail 33M Pad Sec.33-T10N-R57W
Horsetail #33M-2804
Plan #1 (10-24-13)
16:17, October 29 2013

ANNOTATIONS

| TVD | MD | Annotation |
|--------|---------|----------------------------|
| 1200.0 | 1200.0 | KOP - Start Build 2.00 |
| 3821.2 | 3826.1 | Start Drop -2.00 |
| 4981.1 | 4986.1 | KOP #2 - Start Build 11.00 |
| 5502.0 | 14936.6 | TD at 14936.6 |



SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | DLeg | TFace | VSec | Target |
|-----|---------|-------|--------|--------|--------|-------|-------|--------|--------|--------------------------------|
| 1 | 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 2 | 1200.0 | 0.00 | 0.00 | 1200.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 3 | 1378.9 | 3.58 | 90.00 | 1378.8 | 0.0 | 5.6 | 2.00 | 90.00 | 0.1 | |
| 4 | 3826.1 | 3.58 | 90.00 | 3821.2 | 0.0 | 158.3 | 0.00 | 0.00 | 2.7 | |
| 5 | 4005.0 | 0.00 | 0.00 | 4000.0 | 0.0 | 163.9 | 2.00 | 180.00 | 2.8 | |
| 6 | 4986.1 | 0.00 | 0.00 | 4981.1 | 0.0 | 163.9 | 0.00 | 0.00 | 2.8 | |
| 7 | 5804.3 | 90.00 | 360.00 | 5502.0 | 520.9 | 163.9 | 11.00 | 360.00 | 523.6 | |
| 8 | 14936.6 | 90.00 | 360.00 | 5502.0 | 9653.2 | 163.9 | 0.00 | 0.00 | 9654.5 | BHL 600'FNL & 1155'FWL, Sec.28 |

BHL 600'FNL & 1155'FWL, Sec.28

TD at 14936.6

Vertical Section at 0.97° (1100 ft/in)



Whiting Oil & Gas

Sec.33-T10N-R57W

Horsetail 33M Pad Sec.33-T10N-R57W

Horsetail #33M-2804

Wellbore #1

Plan: Plan #1 (10-24-13)

Standard Planning Report

29 October, 2013

| Plan Sections | | | | | | | | | | |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|----------------------|---------------------|---------|--------------------|
| 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 | |
| 1,200.0 | 0.00 | 0.00 | 1,200.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,378.9 | 3.58 | 90.00 | 1,378.8 | 0.0 | 5.6 | 2.00 | 2.00 | 0.00 | 90.00 | |
| 3,826.1 | 3.58 | 90.00 | 3,821.2 | 0.0 | 158.3 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4,005.0 | 0.00 | 0.00 | 4,000.0 | 0.0 | 163.9 | 2.00 | -2.00 | 0.00 | 180.00 | |
| 4,986.1 | 0.00 | 0.00 | 4,981.1 | 0.0 | 163.9 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,804.3 | 90.00 | 360.00 | 5,502.0 | 520.9 | 163.9 | 11.00 | 11.00 | 0.00 | 360.00 | |
| 14,936.6 | 90.00 | 360.00 | 5,502.0 | 9,653.2 | 163.9 | 0.00 | 0.00 | 0.00 | 0.00 | BHL 600'FNL & 115° |

| | | | |
|------------------|------------------------------------|-------------------------------------|-------------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Horsetail #33M-2804 |
| Company: | Whiting Oil & Gas | TVD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Project: | Sec.33-T10N-R57W | MD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Site: | Horsetail 33M Pad Sec.33-T10N-R57W | North Reference: | True |
| Well: | Horsetail #33M-2804 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #1 (10-24-13) | | |

| 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) | Turn Rate (°/100ft) |
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1.0 | 0.00 | 0.00 | 1.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| SHL 380'FSL & 750'FWL, Sec.33 | | | | | | | | | |
| 100.0 | 0.00 | 0.00 | 100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 300.0 | 0.00 | 0.00 | 300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 400.0 | 0.00 | 0.00 | 400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 500.0 | 0.00 | 0.00 | 500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 600.0 | 0.00 | 0.00 | 600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 700.0 | 0.00 | 0.00 | 700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 800.0 | 0.00 | 0.00 | 800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 900.0 | 0.00 | 0.00 | 900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,000.0 | 0.00 | 0.00 | 1,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,100.0 | 0.00 | 0.00 | 1,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,200.0 | 0.00 | 0.00 | 1,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| KOP - Start Build 2.00 | | | | | | | | | |
| 1,300.0 | 2.00 | 90.00 | 1,300.0 | 0.0 | 1.7 | 0.0 | 2.00 | 2.00 | 0.00 |
| 1,378.9 | 3.58 | 90.00 | 1,378.8 | 0.0 | 5.6 | 0.1 | 2.00 | 2.00 | 0.00 |
| 1,400.0 | 3.58 | 90.00 | 1,399.8 | 0.0 | 6.9 | 0.1 | 0.00 | 0.00 | 0.00 |
| 1,500.0 | 3.58 | 90.00 | 1,499.6 | 0.0 | 13.1 | 0.2 | 0.00 | 0.00 | 0.00 |
| 1,600.0 | 3.58 | 90.00 | 1,599.5 | 0.0 | 19.4 | 0.3 | 0.00 | 0.00 | 0.00 |
| 1,700.0 | 3.58 | 90.00 | 1,699.3 | 0.0 | 25.6 | 0.4 | 0.00 | 0.00 | 0.00 |
| 1,800.0 | 3.58 | 90.00 | 1,799.1 | 0.0 | 31.9 | 0.5 | 0.00 | 0.00 | 0.00 |
| 1,900.0 | 3.58 | 90.00 | 1,898.9 | 0.0 | 38.1 | 0.6 | 0.00 | 0.00 | 0.00 |
| 2,000.0 | 3.58 | 90.00 | 1,998.7 | 0.0 | 44.3 | 0.8 | 0.00 | 0.00 | 0.00 |
| 2,100.0 | 3.58 | 90.00 | 2,098.5 | 0.0 | 50.6 | 0.9 | 0.00 | 0.00 | 0.00 |
| 2,200.0 | 3.58 | 90.00 | 2,198.3 | 0.0 | 56.8 | 1.0 | 0.00 | 0.00 | 0.00 |
| 2,300.0 | 3.58 | 90.00 | 2,298.1 | 0.0 | 63.1 | 1.1 | 0.00 | 0.00 | 0.00 |
| 2,400.0 | 3.58 | 90.00 | 2,397.9 | 0.0 | 69.3 | 1.2 | 0.00 | 0.00 | 0.00 |
| 2,500.0 | 3.58 | 90.00 | 2,497.7 | 0.0 | 75.6 | 1.3 | 0.00 | 0.00 | 0.00 |
| 2,600.0 | 3.58 | 90.00 | 2,597.5 | 0.0 | 81.8 | 1.4 | 0.00 | 0.00 | 0.00 |
| 2,700.0 | 3.58 | 90.00 | 2,697.3 | 0.0 | 88.0 | 1.5 | 0.00 | 0.00 | 0.00 |
| 2,800.0 | 3.58 | 90.00 | 2,797.1 | 0.0 | 94.3 | 1.6 | 0.00 | 0.00 | 0.00 |
| 2,900.0 | 3.58 | 90.00 | 2,896.9 | 0.0 | 100.5 | 1.7 | 0.00 | 0.00 | 0.00 |
| 3,000.0 | 3.58 | 90.00 | 2,996.7 | 0.0 | 106.8 | 1.8 | 0.00 | 0.00 | 0.00 |
| 3,100.0 | 3.58 | 90.00 | 3,096.5 | 0.0 | 113.0 | 1.9 | 0.00 | 0.00 | 0.00 |
| 3,200.0 | 3.58 | 90.00 | 3,196.3 | 0.0 | 119.2 | 2.0 | 0.00 | 0.00 | 0.00 |
| 3,300.0 | 3.58 | 90.00 | 3,296.1 | 0.0 | 125.5 | 2.1 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 3.58 | 90.00 | 3,395.9 | 0.0 | 131.7 | 2.2 | 0.00 | 0.00 | 0.00 |
| 3,500.0 | 3.58 | 90.00 | 3,495.7 | 0.0 | 138.0 | 2.3 | 0.00 | 0.00 | 0.00 |
| 3,600.0 | 3.58 | 90.00 | 3,595.6 | 0.0 | 144.2 | 2.4 | 0.00 | 0.00 | 0.00 |
| 3,700.0 | 3.58 | 90.00 | 3,695.4 | 0.0 | 150.4 | 2.6 | 0.00 | 0.00 | 0.00 |
| 3,800.0 | 3.58 | 90.00 | 3,795.2 | 0.0 | 156.7 | 2.7 | 0.00 | 0.00 | 0.00 |
| 3,826.1 | 3.58 | 90.00 | 3,821.2 | 0.0 | 158.3 | 2.7 | 0.00 | 0.00 | 0.00 |
| Start Drop -2.00 | | | | | | | | | |
| 3,900.0 | 2.10 | 90.00 | 3,895.0 | 0.0 | 162.0 | 2.7 | 2.00 | -2.00 | 0.00 |
| 4,000.0 | 0.10 | 90.00 | 3,995.0 | 0.0 | 163.9 | 2.8 | 2.00 | -2.00 | 0.00 |
| 4,005.0 | 0.00 | 0.00 | 4,000.0 | 0.0 | 163.9 | 2.8 | 2.00 | -2.00 | 0.00 |
| 4,100.0 | 0.00 | 0.00 | 4,095.0 | 0.0 | 163.9 | 2.8 | 0.00 | 0.00 | 0.00 |
| 4,200.0 | 0.00 | 0.00 | 4,195.0 | 0.0 | 163.9 | 2.8 | 0.00 | 0.00 | 0.00 |
| 4,300.0 | 0.00 | 0.00 | 4,295.0 | 0.0 | 163.9 | 2.8 | 0.00 | 0.00 | 0.00 |
| 4,400.0 | 0.00 | 0.00 | 4,395.0 | 0.0 | 163.9 | 2.8 | 0.00 | 0.00 | 0.00 |
| 4,500.0 | 0.00 | 0.00 | 4,495.0 | 0.0 | 163.9 | 2.8 | 0.00 | 0.00 | 0.00 |

| | | | |
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| Project: | Sec.33-T10N-R57W | MD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Site: | Horsetail 33M Pad Sec.33-T10N-R57W | North Reference: | True |
| Well: | Horsetail #33M-2804 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #1 (10-24-13) | | |

| 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) | Turn Rate (°/100ft) |
| 4,600.0 | 0.00 | 0.00 | 4,595.0 | 0.0 | 163.9 | 2.8 | 0.00 | 0.00 | 0.00 |
| 4,700.0 | 0.00 | 0.00 | 4,695.0 | 0.0 | 163.9 | 2.8 | 0.00 | 0.00 | 0.00 |
| 4,800.0 | 0.00 | 0.00 | 4,795.0 | 0.0 | 163.9 | 2.8 | 0.00 | 0.00 | 0.00 |
| 4,900.0 | 0.00 | 0.00 | 4,895.0 | 0.0 | 163.9 | 2.8 | 0.00 | 0.00 | 0.00 |
| 4,986.1 | 0.00 | 0.00 | 4,981.1 | 0.0 | 163.9 | 2.8 | 0.00 | 0.00 | 0.00 |
| KOP #2 - Start Build 11.00 | | | | | | | | | |
| 5,000.0 | 1.53 | 360.00 | 4,995.0 | 0.2 | 163.9 | 3.0 | 10.98 | 10.98 | 0.00 |
| 5,100.0 | 12.53 | 360.00 | 5,094.1 | 12.4 | 163.9 | 15.2 | 11.00 | 11.00 | 0.00 |
| 5,200.0 | 23.53 | 360.00 | 5,189.0 | 43.3 | 163.9 | 46.1 | 11.00 | 11.00 | 0.00 |
| 5,300.0 | 34.53 | 360.00 | 5,276.3 | 91.7 | 163.9 | 94.5 | 11.00 | 11.00 | 0.00 |
| 5,400.0 | 45.53 | 360.00 | 5,352.8 | 156.0 | 163.9 | 158.7 | 11.00 | 11.00 | 0.00 |
| 5,471.1 | 53.35 | 360.00 | 5,399.0 | 209.9 | 163.9 | 212.7 | 11.00 | 11.00 | 0.00 |
| Niobrara Top | | | | | | | | | |
| 5,500.0 | 56.53 | 360.00 | 5,415.6 | 233.6 | 163.9 | 236.3 | 11.00 | 11.00 | 0.00 |
| 5,600.0 | 67.53 | 360.00 | 5,462.4 | 321.8 | 163.9 | 324.5 | 11.00 | 11.00 | 0.00 |
| 5,700.0 | 78.53 | 360.00 | 5,491.6 | 417.3 | 163.9 | 420.0 | 11.00 | 11.00 | 0.00 |
| 5,800.0 | 89.53 | 360.00 | 5,502.0 | 516.6 | 163.9 | 519.3 | 11.00 | 11.00 | 0.00 |
| 5,804.3 | 90.00 | 360.00 | 5,502.0 | 520.9 | 163.9 | 523.6 | 11.00 | 11.00 | 0.00 |
| 7" | | | | | | | | | |
| 5,900.0 | 90.00 | 360.00 | 5,502.0 | 616.6 | 163.9 | 619.2 | 0.00 | 0.00 | 0.00 |
| 6,000.0 | 90.00 | 360.00 | 5,502.0 | 716.6 | 163.9 | 719.2 | 0.00 | 0.00 | 0.00 |
| 6,100.0 | 90.00 | 360.00 | 5,502.0 | 816.6 | 163.9 | 819.2 | 0.00 | 0.00 | 0.00 |
| 6,200.0 | 90.00 | 360.00 | 5,502.0 | 916.6 | 163.9 | 919.2 | 0.00 | 0.00 | 0.00 |
| 6,300.0 | 90.00 | 360.00 | 5,502.0 | 1,016.6 | 163.9 | 1,019.2 | 0.00 | 0.00 | 0.00 |
| 6,400.0 | 90.00 | 360.00 | 5,502.0 | 1,116.6 | 163.9 | 1,119.2 | 0.00 | 0.00 | 0.00 |
| 6,500.0 | 90.00 | 360.00 | 5,502.0 | 1,216.6 | 163.9 | 1,219.2 | 0.00 | 0.00 | 0.00 |
| 6,600.0 | 90.00 | 360.00 | 5,502.0 | 1,316.6 | 163.9 | 1,319.1 | 0.00 | 0.00 | 0.00 |
| 6,700.0 | 90.00 | 360.00 | 5,502.0 | 1,416.6 | 163.9 | 1,419.1 | 0.00 | 0.00 | 0.00 |
| 6,800.0 | 90.00 | 360.00 | 5,502.0 | 1,516.6 | 163.9 | 1,519.1 | 0.00 | 0.00 | 0.00 |
| 6,900.0 | 90.00 | 360.00 | 5,502.0 | 1,616.6 | 163.9 | 1,619.1 | 0.00 | 0.00 | 0.00 |
| 7,000.0 | 90.00 | 360.00 | 5,502.0 | 1,716.6 | 163.9 | 1,719.1 | 0.00 | 0.00 | 0.00 |
| 7,100.0 | 90.00 | 360.00 | 5,502.0 | 1,816.6 | 163.9 | 1,819.1 | 0.00 | 0.00 | 0.00 |
| 7,200.0 | 90.00 | 360.00 | 5,502.0 | 1,916.6 | 163.9 | 1,919.1 | 0.00 | 0.00 | 0.00 |
| 7,300.0 | 90.00 | 360.00 | 5,502.0 | 2,016.6 | 163.9 | 2,019.0 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 90.00 | 360.00 | 5,502.0 | 2,116.6 | 163.9 | 2,119.0 | 0.00 | 0.00 | 0.00 |
| 7,500.0 | 90.00 | 360.00 | 5,502.0 | 2,216.6 | 163.9 | 2,219.0 | 0.00 | 0.00 | 0.00 |
| 7,600.0 | 90.00 | 360.00 | 5,502.0 | 2,316.6 | 163.9 | 2,319.0 | 0.00 | 0.00 | 0.00 |
| 7,700.0 | 90.00 | 360.00 | 5,502.0 | 2,416.6 | 163.9 | 2,419.0 | 0.00 | 0.00 | 0.00 |
| 7,800.0 | 90.00 | 360.00 | 5,502.0 | 2,516.6 | 163.9 | 2,519.0 | 0.00 | 0.00 | 0.00 |
| 7,900.0 | 90.00 | 360.00 | 5,502.0 | 2,616.6 | 163.9 | 2,619.0 | 0.00 | 0.00 | 0.00 |
| 8,000.0 | 90.00 | 360.00 | 5,502.0 | 2,716.6 | 163.9 | 2,718.9 | 0.00 | 0.00 | 0.00 |
| 8,100.0 | 90.00 | 360.00 | 5,502.0 | 2,816.6 | 163.9 | 2,818.9 | 0.00 | 0.00 | 0.00 |
| 8,200.0 | 90.00 | 360.00 | 5,502.0 | 2,916.6 | 163.9 | 2,918.9 | 0.00 | 0.00 | 0.00 |
| 8,300.0 | 90.00 | 360.00 | 5,502.0 | 3,016.6 | 163.9 | 3,018.9 | 0.00 | 0.00 | 0.00 |
| 8,400.0 | 90.00 | 360.00 | 5,502.0 | 3,116.6 | 163.9 | 3,118.9 | 0.00 | 0.00 | 0.00 |
| 8,500.0 | 90.00 | 360.00 | 5,502.0 | 3,216.6 | 163.9 | 3,218.9 | 0.00 | 0.00 | 0.00 |
| 8,600.0 | 90.00 | 360.00 | 5,502.0 | 3,316.6 | 163.9 | 3,318.9 | 0.00 | 0.00 | 0.00 |
| 8,700.0 | 90.00 | 360.00 | 5,502.0 | 3,416.6 | 163.9 | 3,418.8 | 0.00 | 0.00 | 0.00 |
| 8,800.0 | 90.00 | 360.00 | 5,502.0 | 3,516.6 | 163.9 | 3,518.8 | 0.00 | 0.00 | 0.00 |
| 8,900.0 | 90.00 | 360.00 | 5,502.0 | 3,616.6 | 163.9 | 3,618.8 | 0.00 | 0.00 | 0.00 |
| 9,000.0 | 90.00 | 360.00 | 5,502.0 | 3,716.6 | 163.9 | 3,718.8 | 0.00 | 0.00 | 0.00 |
| 9,100.0 | 90.00 | 360.00 | 5,502.0 | 3,816.6 | 163.9 | 3,818.8 | 0.00 | 0.00 | 0.00 |
| 9,200.0 | 90.00 | 360.00 | 5,502.0 | 3,916.6 | 163.9 | 3,918.8 | 0.00 | 0.00 | 0.00 |

| | | | |
|------------------|------------------------------------|-------------------------------------|-------------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Horsetail #33M-2804 |
| Company: | Whiting Oil & Gas | TVD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Project: | Sec.33-T10N-R57W | MD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Site: | Horsetail 33M Pad Sec.33-T10N-R57W | North Reference: | True |
| Well: | Horsetail #33M-2804 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #1 (10-24-13) | | |

| 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) | Turn Rate (°/100ft) |
| 9,300.0 | 90.00 | 360.00 | 5,502.0 | 4,016.6 | 163.9 | 4,018.8 | 0.00 | 0.00 | 0.00 |
| 9,400.0 | 90.00 | 360.00 | 5,502.0 | 4,116.6 | 163.9 | 4,118.7 | 0.00 | 0.00 | 0.00 |
| 9,500.0 | 90.00 | 360.00 | 5,502.0 | 4,216.6 | 163.9 | 4,218.7 | 0.00 | 0.00 | 0.00 |
| 9,600.0 | 90.00 | 360.00 | 5,502.0 | 4,316.6 | 163.9 | 4,318.7 | 0.00 | 0.00 | 0.00 |
| 9,700.0 | 90.00 | 360.00 | 5,502.0 | 4,416.6 | 163.9 | 4,418.7 | 0.00 | 0.00 | 0.00 |
| 9,800.0 | 90.00 | 360.00 | 5,502.0 | 4,516.6 | 163.9 | 4,518.7 | 0.00 | 0.00 | 0.00 |
| 9,900.0 | 90.00 | 360.00 | 5,502.0 | 4,616.6 | 163.9 | 4,618.7 | 0.00 | 0.00 | 0.00 |
| 10,000.0 | 90.00 | 360.00 | 5,502.0 | 4,716.6 | 163.9 | 4,718.7 | 0.00 | 0.00 | 0.00 |
| 10,100.0 | 90.00 | 360.00 | 5,502.0 | 4,816.6 | 163.9 | 4,818.6 | 0.00 | 0.00 | 0.00 |
| 10,200.0 | 90.00 | 360.00 | 5,502.0 | 4,916.6 | 163.9 | 4,918.6 | 0.00 | 0.00 | 0.00 |
| 10,300.0 | 90.00 | 360.00 | 5,502.0 | 5,016.6 | 163.9 | 5,018.6 | 0.00 | 0.00 | 0.00 |
| 10,400.0 | 90.00 | 360.00 | 5,502.0 | 5,116.6 | 163.9 | 5,118.6 | 0.00 | 0.00 | 0.00 |
| 10,500.0 | 90.00 | 360.00 | 5,502.0 | 5,216.6 | 163.9 | 5,218.6 | 0.00 | 0.00 | 0.00 |
| 10,600.0 | 90.00 | 360.00 | 5,502.0 | 5,316.6 | 163.9 | 5,318.6 | 0.00 | 0.00 | 0.00 |
| 10,700.0 | 90.00 | 360.00 | 5,502.0 | 5,416.6 | 163.9 | 5,418.6 | 0.00 | 0.00 | 0.00 |
| 10,800.0 | 90.00 | 360.00 | 5,502.0 | 5,516.6 | 163.9 | 5,518.5 | 0.00 | 0.00 | 0.00 |
| 10,900.0 | 90.00 | 360.00 | 5,502.0 | 5,616.6 | 163.9 | 5,618.5 | 0.00 | 0.00 | 0.00 |
| 11,000.0 | 90.00 | 360.00 | 5,502.0 | 5,716.6 | 163.9 | 5,718.5 | 0.00 | 0.00 | 0.00 |
| 11,100.0 | 90.00 | 360.00 | 5,502.0 | 5,816.6 | 163.9 | 5,818.5 | 0.00 | 0.00 | 0.00 |
| 11,200.0 | 90.00 | 360.00 | 5,502.0 | 5,916.6 | 163.9 | 5,918.5 | 0.00 | 0.00 | 0.00 |
| 11,300.0 | 90.00 | 360.00 | 5,502.0 | 6,016.6 | 163.9 | 6,018.5 | 0.00 | 0.00 | 0.00 |
| 11,400.0 | 90.00 | 360.00 | 5,502.0 | 6,116.6 | 163.9 | 6,118.5 | 0.00 | 0.00 | 0.00 |
| 11,500.0 | 90.00 | 360.00 | 5,502.0 | 6,216.6 | 163.9 | 6,218.4 | 0.00 | 0.00 | 0.00 |
| 11,600.0 | 90.00 | 360.00 | 5,502.0 | 6,316.6 | 163.9 | 6,318.4 | 0.00 | 0.00 | 0.00 |
| 11,700.0 | 90.00 | 360.00 | 5,502.0 | 6,416.6 | 163.9 | 6,418.4 | 0.00 | 0.00 | 0.00 |
| 11,800.0 | 90.00 | 360.00 | 5,502.0 | 6,516.6 | 163.9 | 6,518.4 | 0.00 | 0.00 | 0.00 |
| 11,900.0 | 90.00 | 360.00 | 5,502.0 | 6,616.6 | 163.9 | 6,618.4 | 0.00 | 0.00 | 0.00 |
| 12,000.0 | 90.00 | 360.00 | 5,502.0 | 6,716.6 | 163.9 | 6,718.4 | 0.00 | 0.00 | 0.00 |
| 12,100.0 | 90.00 | 360.00 | 5,502.0 | 6,816.6 | 163.9 | 6,818.4 | 0.00 | 0.00 | 0.00 |
| 12,200.0 | 90.00 | 360.00 | 5,502.0 | 6,916.6 | 163.9 | 6,918.3 | 0.00 | 0.00 | 0.00 |
| 12,300.0 | 90.00 | 360.00 | 5,502.0 | 7,016.6 | 163.9 | 7,018.3 | 0.00 | 0.00 | 0.00 |
| 12,400.0 | 90.00 | 360.00 | 5,502.0 | 7,116.6 | 163.9 | 7,118.3 | 0.00 | 0.00 | 0.00 |
| 12,500.0 | 90.00 | 360.00 | 5,502.0 | 7,216.6 | 163.9 | 7,218.3 | 0.00 | 0.00 | 0.00 |
| 12,600.0 | 90.00 | 360.00 | 5,502.0 | 7,316.6 | 163.9 | 7,318.3 | 0.00 | 0.00 | 0.00 |
| 12,700.0 | 90.00 | 360.00 | 5,502.0 | 7,416.6 | 163.9 | 7,418.3 | 0.00 | 0.00 | 0.00 |
| 12,800.0 | 90.00 | 360.00 | 5,502.0 | 7,516.6 | 163.9 | 7,518.3 | 0.00 | 0.00 | 0.00 |
| 12,900.0 | 90.00 | 360.00 | 5,502.0 | 7,616.6 | 163.9 | 7,618.2 | 0.00 | 0.00 | 0.00 |
| 13,000.0 | 90.00 | 360.00 | 5,502.0 | 7,716.6 | 163.9 | 7,718.2 | 0.00 | 0.00 | 0.00 |
| 13,100.0 | 90.00 | 360.00 | 5,502.0 | 7,816.6 | 163.9 | 7,818.2 | 0.00 | 0.00 | 0.00 |
| 13,200.0 | 90.00 | 360.00 | 5,502.0 | 7,916.6 | 163.9 | 7,918.2 | 0.00 | 0.00 | 0.00 |
| 13,300.0 | 90.00 | 360.00 | 5,502.0 | 8,016.6 | 163.9 | 8,018.2 | 0.00 | 0.00 | 0.00 |
| 13,400.0 | 90.00 | 360.00 | 5,502.0 | 8,116.6 | 163.9 | 8,118.2 | 0.00 | 0.00 | 0.00 |
| 13,500.0 | 90.00 | 360.00 | 5,502.0 | 8,216.6 | 163.9 | 8,218.2 | 0.00 | 0.00 | 0.00 |
| 13,600.0 | 90.00 | 360.00 | 5,502.0 | 8,316.6 | 163.9 | 8,318.1 | 0.00 | 0.00 | 0.00 |
| 13,700.0 | 90.00 | 360.00 | 5,502.0 | 8,416.6 | 163.9 | 8,418.1 | 0.00 | 0.00 | 0.00 |
| 13,800.0 | 90.00 | 360.00 | 5,502.0 | 8,516.6 | 163.9 | 8,518.1 | 0.00 | 0.00 | 0.00 |
| 13,900.0 | 90.00 | 360.00 | 5,502.0 | 8,616.6 | 163.9 | 8,618.1 | 0.00 | 0.00 | 0.00 |
| 14,000.0 | 90.00 | 360.00 | 5,502.0 | 8,716.6 | 163.9 | 8,718.1 | 0.00 | 0.00 | 0.00 |
| 14,100.0 | 90.00 | 360.00 | 5,502.0 | 8,816.6 | 163.9 | 8,818.1 | 0.00 | 0.00 | 0.00 |
| 14,200.0 | 90.00 | 360.00 | 5,502.0 | 8,916.6 | 163.9 | 8,918.1 | 0.00 | 0.00 | 0.00 |
| 14,300.0 | 90.00 | 360.00 | 5,502.0 | 9,016.6 | 163.9 | 9,018.0 | 0.00 | 0.00 | 0.00 |
| 14,400.0 | 90.00 | 360.00 | 5,502.0 | 9,116.6 | 163.9 | 9,118.0 | 0.00 | 0.00 | 0.00 |
| 14,500.0 | 90.00 | 360.00 | 5,502.0 | 9,216.6 | 163.9 | 9,218.0 | 0.00 | 0.00 | 0.00 |
| 14,600.0 | 90.00 | 360.00 | 5,502.0 | 9,316.6 | 163.9 | 9,318.0 | 0.00 | 0.00 | 0.00 |

| Plan Annotations | | | | | |
|------------------|---------------------------|---------------------------|-------------------|-------|----------------------------|
| | Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment |
| | | | +N/-S | +E/-W | |
| | | | (ft) | (ft) | |
| | | | | | |
| | 1,200.0 | 1,200.0 | 0.0 | 0.0 | KOP - Start Build 2.00 |
| | 3,826.1 | 3,821.2 | 0.0 | 158.3 | Start Drop -2.00 |
| | 4,986.1 | 4,981.1 | 0.0 | 163.9 | KOP #2 - Start Build 11.00 |
| | 14,936.6 | 5,502.0 | 9,653.2 | 163.9 | TD at 14936.6 |



Whiting Oil & Gas

Sec.33-T10N-R57W

Horsetail 33M Pad Sec.33-T10N-R57W

Horsetail #33M-2804

Wellbore #1

Plan #1 (10-24-13)

Anticollision Report

29 October, 2013

| | | | |
|---------------------------|------------------------------------|-------------------------------------|-------------------------------|
| Company: | Whiting Oil & Gas | Local Co-ordinate Reference: | Well Horsetail #33M-2804 |
| Project: | Sec.33-T10N-R57W | TVD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Reference Site: | Horsetail 33M Pad Sec.33-T10N-R57W | MD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Horsetail #33M-2804 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-24-13) | Offset TVD Reference: | Offset Datum |

| | | | |
|-------------------------------------|---|-----------------------|---------------------|
| Reference | Plan #1 (10-24-13) | | |
| Filter type: | NO GLOBAL FILTER: Using user defined selection & filtering criteria | | |
| Interpolation Method: | MD Interval 100.0ft | Error Model: | ISCWSA |
| Depth Range: | Unlimited | Scan Method: | Closest Approach 3D |
| Results Limited by: | Maximum center-center distance of 1,000.0ft | Error Surface: | Elliptical Conic |
| Warning Levels Evaluated at: | 2.00 Sigma | | |

| | | | | |
|----------------------------|------------------------|----------------------------------|------------------|--------------------|
| Survey Tool Program | Date 10/29/2013 | | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description |
| 0.0 | 14,936.6 | Plan #1 (10-24-13) (Wellbore #1) | MWD | MWD - Standard |

| | | | | | | |
|--|--------------------------------------|-----------------------------------|--------------------------------------|---------------------------------------|--------------------------|-----------------|
| 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 | | | | | | |
| Horsetail 33M Pad Sec.33-T10N-R57W | | | | | | |
| Horsetail #33M-2801 - Wellbore #1 - Plan #1 (10-24-13) | 1,000.0 | 1,000.0 | 90.0 | 85.7 | 21.078 | CC, ES |
| Horsetail #33M-2801 - Wellbore #1 - Plan #1 (10-24-13) | 14,936.6 | 14,953.6 | 991.3 | 619.9 | 2.669 | SF |
| Horsetail #33M-2802 - Wellbore #1 - Plan #1 (10-24-13) | 1,200.0 | 1,200.0 | 59.8 | 54.7 | 11.572 | CC, ES |
| Horsetail #33M-2802 - Wellbore #1 - Plan #1 (10-24-13) | 14,936.6 | 14,887.0 | 659.7 | 288.5 | 1.777 | SF |
| Horsetail #33M-2803 - Wellbore #1 - Plan #1 (10-24-13) | 1,200.0 | 1,200.0 | 29.9 | 24.8 | 5.789 | CC |
| Horsetail #33M-2803 - Wellbore #1 - Plan #1 (10-24-13) | 14,936.6 | 14,765.1 | 334.9 | -31.9 | 0.913 | Level 1, ES, SF |

| | | | | | | | | | | | | | | |
|----------------------------|---|----------------------------|----------------------------|-----------------------|--------------------------|--|--|--|---------------------------------------|---------------------------------------|--------------------------------|--------------------------|---------------------------|--------|
| Offset Design | Horsetail 33M Pad Sec.33-T10N-R57W - Horsetail #33M-2801 - Wellbore #1 - Plan #1 (10-24-13) | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
| Survey Program: | 0-MWD | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Reference | Offset | Semi Major Axis | Reference | Offset | Highside Toolface | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Minimum Separation (ft) | 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) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | | |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -91.15 | -1.8 | -90.0 | 90.0 | | | | | |
| 100.0 | 100.0 | 100.0 | 100.0 | 0.1 | 0.1 | -91.15 | -1.8 | -90.0 | 90.0 | 89.8 | 0.22 | 400.482 | | |
| 200.0 | 200.0 | 200.0 | 200.0 | 0.3 | 0.3 | -91.15 | -1.8 | -90.0 | 90.0 | 89.3 | 0.67 | 133.494 | | |
| 300.0 | 300.0 | 300.0 | 300.0 | 0.6 | 0.6 | -91.15 | -1.8 | -90.0 | 90.0 | 88.9 | 1.12 | 80.096 | | |
| 400.0 | 400.0 | 400.0 | 400.0 | 0.8 | 0.8 | -91.15 | -1.8 | -90.0 | 90.0 | 88.4 | 1.57 | 57.212 | | |
| 500.0 | 500.0 | 500.0 | 500.0 | 1.0 | 1.0 | -91.15 | -1.8 | -90.0 | 90.0 | 88.0 | 2.02 | 44.498 | | |
| 600.0 | 600.0 | 600.0 | 600.0 | 1.2 | 1.2 | -91.15 | -1.8 | -90.0 | 90.0 | 87.5 | 2.47 | 36.407 | | |
| 700.0 | 700.0 | 700.0 | 700.0 | 1.5 | 1.5 | -91.15 | -1.8 | -90.0 | 90.0 | 87.1 | 2.92 | 30.806 | | |
| 800.0 | 800.0 | 800.0 | 800.0 | 1.7 | 1.7 | -91.15 | -1.8 | -90.0 | 90.0 | 86.6 | 3.37 | 26.699 | | |
| 900.0 | 900.0 | 900.0 | 900.0 | 1.9 | 1.9 | -91.15 | -1.8 | -90.0 | 90.0 | 86.2 | 3.82 | 23.558 | | |
| 1,000.0 | 1,000.0 | 1,000.0 | 1,000.0 | 2.1 | 2.1 | -91.15 | -1.8 | -90.0 | 90.0 | 85.7 | 4.27 | 21.078 | CC, ES | |
| 1,100.0 | 1,100.0 | 1,096.9 | 1,096.9 | 2.4 | 2.3 | -91.13 | -1.8 | -91.6 | 91.7 | 87.0 | 4.70 | 19.509 | | |
| 1,200.0 | 1,200.0 | 1,193.6 | 1,193.5 | 2.6 | 2.5 | -91.08 | -1.8 | -96.5 | 96.8 | 91.6 | 5.12 | 18.883 | | |
| 1,300.0 | 1,300.0 | 1,293.1 | 1,292.7 | 2.8 | 2.8 | 179.01 | -1.8 | -103.4 | 105.4 | 99.8 | 5.54 | 19.023 | | |
| 1,400.0 | 1,399.8 | 1,392.4 | 1,391.8 | 3.0 | 3.0 | 179.11 | -1.8 | -110.2 | 117.4 | 111.4 | 5.94 | 19.756 | | |
| 1,500.0 | 1,499.6 | 1,491.5 | 1,490.7 | 3.2 | 3.2 | 179.20 | -1.8 | -117.0 | 130.5 | 124.1 | 6.35 | 20.541 | | |
| 1,600.0 | 1,599.5 | 1,590.7 | 1,589.6 | 3.4 | 3.4 | 179.27 | -1.8 | -123.8 | 143.6 | 136.8 | 6.77 | 21.213 | | |
| 1,700.0 | 1,699.3 | 1,689.8 | 1,688.5 | 3.7 | 3.7 | 179.33 | -1.8 | -130.6 | 156.6 | 149.5 | 7.19 | 21.793 | | |
| 1,800.0 | 1,799.1 | 1,789.0 | 1,787.4 | 3.9 | 3.9 | 179.38 | -1.8 | -137.5 | 169.7 | 162.1 | 7.61 | 22.297 | | |
| 1,900.0 | 1,898.9 | 1,888.1 | 1,886.3 | 4.1 | 4.1 | 179.43 | -1.8 | -144.3 | 182.8 | 174.8 | 8.04 | 22.738 | | |
| 2,000.0 | 1,998.7 | 1,987.2 | 1,985.2 | 4.3 | 4.4 | 179.46 | -1.8 | -151.1 | 195.9 | 187.4 | 8.47 | 23.126 | | |

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

| | | | |
|---------------------------|------------------------------------|-------------------------------------|-------------------------------|
| Company: | Whiting Oil & Gas | Local Co-ordinate Reference: | Well Horsetail #33M-2804 |
| Project: | Sec.33-T10N-R57W | TVD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Reference Site: | Horsetail 33M Pad Sec.33-T10N-R57W | MD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Horsetail #33M-2804 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-24-13) | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 0-MWWD | | | | | | | | | | | | | 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) | Minimum Separation (ft) | Separation Factor | | |
| 2,100.0 | 2,098.5 | 2,086.4 | 2,084.1 | 4.6 | 4.6 | 179.50 | -1.8 | -157.9 | 209.0 | 200.1 | 8.90 | 23.471 | | |
| 2,200.0 | 2,198.3 | 2,185.5 | 2,183.0 | 4.8 | 4.9 | 179.53 | -1.8 | -164.7 | 222.1 | 212.7 | 9.34 | 23.778 | | |
| 2,300.0 | 2,298.1 | 2,284.7 | 2,281.9 | 5.1 | 5.1 | 179.55 | -1.8 | -171.5 | 235.2 | 225.4 | 9.78 | 24.054 | | |
| 2,400.0 | 2,397.9 | 2,383.8 | 2,380.8 | 5.3 | 5.4 | 179.58 | -1.8 | -178.3 | 248.2 | 238.0 | 10.22 | 24.301 | | |
| 2,500.0 | 2,497.7 | 2,482.9 | 2,479.7 | 5.5 | 5.6 | 179.60 | -1.8 | -185.2 | 261.3 | 250.7 | 10.66 | 24.526 | | |
| 2,600.0 | 2,597.5 | 2,582.1 | 2,578.6 | 5.8 | 5.9 | 179.62 | -1.8 | -192.0 | 274.4 | 263.3 | 11.10 | 24.729 | | |
| 2,700.0 | 2,697.3 | 2,681.2 | 2,677.5 | 6.0 | 6.1 | 179.64 | -1.8 | -198.8 | 287.5 | 276.0 | 11.54 | 24.915 | | |
| 2,800.0 | 2,797.1 | 2,780.4 | 2,776.5 | 6.3 | 6.4 | 179.65 | -1.8 | -205.6 | 300.6 | 288.6 | 11.98 | 25.085 | | |
| 2,900.0 | 2,896.9 | 2,879.5 | 2,875.4 | 6.5 | 6.6 | 179.67 | -1.8 | -212.4 | 313.7 | 301.2 | 12.43 | 25.241 | | |
| 3,000.0 | 2,996.7 | 2,978.6 | 2,974.3 | 6.8 | 6.9 | 179.68 | -1.8 | -219.2 | 326.8 | 313.9 | 12.87 | 25.385 | | |
| 3,100.0 | 3,096.5 | 3,077.8 | 3,073.2 | 7.0 | 7.1 | 179.69 | -1.8 | -226.0 | 339.8 | 326.5 | 13.32 | 25.518 | | |
| 3,200.0 | 3,196.3 | 3,176.9 | 3,172.1 | 7.2 | 7.4 | 179.70 | -1.8 | -232.9 | 352.9 | 339.2 | 13.76 | 25.641 | | |
| 3,300.0 | 3,296.1 | 3,276.1 | 3,271.0 | 7.5 | 7.6 | 179.71 | -1.8 | -239.7 | 366.0 | 351.8 | 14.21 | 25.755 | | |
| 3,400.0 | 3,395.9 | 3,375.2 | 3,369.9 | 7.7 | 7.9 | 179.72 | -1.8 | -246.5 | 379.1 | 364.4 | 14.66 | 25.861 | | |
| 3,500.0 | 3,495.7 | 3,474.3 | 3,468.8 | 8.0 | 8.1 | 179.73 | -1.8 | -253.3 | 392.2 | 377.1 | 15.11 | 25.960 | | |
| 3,600.0 | 3,595.6 | 3,573.5 | 3,567.7 | 8.2 | 8.4 | 179.74 | -1.8 | -260.1 | 405.3 | 389.7 | 15.56 | 26.053 | | |
| 3,700.0 | 3,695.4 | 3,672.6 | 3,666.6 | 8.5 | 8.7 | 179.75 | -1.8 | -266.9 | 418.4 | 402.4 | 16.00 | 26.140 | | |
| 3,800.0 | 3,795.2 | 3,771.8 | 3,765.5 | 8.7 | 8.9 | 179.76 | -1.8 | -273.7 | 431.5 | 415.0 | 16.45 | 26.221 | | |
| 3,900.0 | 3,895.0 | 3,871.0 | 3,864.5 | 9.0 | 9.2 | 179.76 | -1.8 | -280.6 | 443.6 | 426.7 | 16.91 | 26.237 | | |
| 4,000.0 | 3,995.0 | 3,982.0 | 3,975.3 | 9.1 | 9.4 | 179.77 | -1.8 | -287.3 | 451.6 | 434.3 | 17.34 | 26.045 | | |
| 4,100.0 | 4,095.0 | 4,100.8 | 4,094.1 | 9.3 | 9.6 | -90.23 | -1.8 | -290.0 | 453.9 | 436.1 | 17.76 | 25.553 | | |
| 4,200.0 | 4,195.0 | 4,201.7 | 4,195.0 | 9.5 | 9.8 | -90.23 | -1.8 | -290.0 | 453.9 | 435.7 | 18.17 | 24.977 | | |
| 4,300.0 | 4,295.0 | 4,301.7 | 4,295.0 | 9.7 | 10.0 | -90.23 | -1.8 | -290.0 | 453.9 | 435.3 | 18.59 | 24.418 | | |
| 4,400.0 | 4,395.0 | 4,401.7 | 4,395.0 | 9.9 | 10.2 | -90.23 | -1.8 | -290.0 | 453.9 | 434.9 | 19.01 | 23.881 | | |
| 4,500.0 | 4,495.0 | 4,501.7 | 4,495.0 | 10.1 | 10.4 | -90.23 | -1.8 | -290.0 | 453.9 | 434.5 | 19.43 | 23.365 | | |
| 4,600.0 | 4,595.0 | 4,601.7 | 4,595.0 | 10.3 | 10.6 | -90.23 | -1.8 | -290.0 | 453.9 | 434.1 | 19.85 | 22.870 | | |
| 4,700.0 | 4,695.0 | 4,701.7 | 4,695.0 | 10.6 | 10.8 | -90.23 | -1.8 | -290.0 | 453.9 | 433.6 | 20.27 | 22.393 | | |
| 4,800.0 | 4,795.0 | 4,801.7 | 4,795.0 | 10.8 | 11.0 | -90.23 | -1.8 | -290.0 | 453.9 | 433.2 | 20.69 | 21.936 | | |
| 4,900.0 | 4,895.0 | 4,901.7 | 4,895.0 | 11.0 | 11.2 | -90.23 | -1.8 | -290.0 | 453.9 | 432.8 | 21.12 | 21.495 | | |
| 5,000.0 | 4,995.0 | 4,982.1 | 4,975.2 | 11.2 | 11.4 | -89.90 | 0.4 | -291.1 | 455.4 | 433.9 | 21.50 | 21.180 | | |
| 5,100.0 | 5,094.1 | 5,050.0 | 5,042.2 | 11.4 | 11.6 | -88.84 | 10.4 | -296.0 | 462.8 | 440.9 | 21.87 | 21.165 | | |
| 5,200.0 | 5,189.0 | 5,124.4 | 5,113.2 | 11.6 | 11.8 | -87.78 | 30.1 | -305.6 | 475.8 | 453.5 | 22.26 | 21.372 | | |
| 5,300.0 | 5,276.3 | 5,200.0 | 5,181.5 | 11.9 | 12.0 | -86.80 | 59.3 | -319.9 | 494.1 | 471.3 | 22.73 | 21.736 | | |
| 5,400.0 | 5,352.8 | 5,263.0 | 5,234.2 | 12.2 | 12.3 | -85.59 | 90.1 | -335.0 | 517.0 | 493.7 | 23.30 | 22.185 | | |
| 5,500.0 | 5,415.6 | 5,330.8 | 5,286.0 | 12.7 | 12.6 | -84.41 | 129.5 | -354.3 | 544.2 | 520.1 | 24.09 | 22.585 | | |
| 5,600.0 | 5,462.4 | 5,400.0 | 5,332.4 | 13.4 | 13.1 | -83.22 | 175.5 | -376.8 | 575.0 | 549.9 | 25.14 | 22.869 | | |
| 5,700.0 | 5,491.6 | 5,465.2 | 5,369.6 | 14.3 | 13.6 | -81.82 | 223.5 | -400.3 | 608.9 | 582.4 | 26.45 | 23.016 | | |
| 5,800.0 | 5,502.0 | 5,532.7 | 5,400.7 | 15.5 | 14.3 | -80.46 | 277.3 | -426.6 | 645.1 | 617.1 | 28.05 | 23.001 | | |
| 5,900.0 | 5,502.0 | 5,604.2 | 5,425.0 | 16.8 | 15.2 | -82.92 | 337.6 | -456.1 | 684.2 | 654.1 | 30.14 | 22.698 | | |
| 6,000.0 | 5,502.0 | 5,681.7 | 5,440.7 | 18.1 | 16.2 | -84.64 | 405.7 | -489.4 | 726.1 | 693.6 | 32.48 | 22.355 | | |
| 6,100.0 | 5,502.0 | 5,772.0 | 5,445.0 | 19.6 | 17.6 | -85.30 | 486.7 | -528.9 | 769.5 | 734.4 | 35.11 | 21.918 | | |
| 6,200.0 | 5,502.0 | 5,928.5 | 5,445.0 | 21.2 | 20.0 | -85.68 | 630.6 | -590.3 | 808.6 | 769.9 | 38.77 | 20.858 | | |
| 6,300.0 | 5,502.0 | 6,095.3 | 5,445.0 | 22.8 | 22.7 | -85.96 | 789.0 | -642.6 | 839.9 | 797.0 | 42.89 | 19.584 | | |
| 6,400.0 | 5,502.0 | 6,270.7 | 5,445.0 | 24.5 | 25.6 | -86.15 | 959.8 | -682.4 | 862.6 | 815.2 | 47.38 | 18.208 | | |
| 6,500.0 | 5,502.0 | 6,452.4 | 5,445.0 | 26.1 | 28.5 | -86.26 | 1,139.6 | -707.0 | 876.1 | 824.0 | 52.08 | 16.822 | | |
| 6,600.0 | 5,502.0 | 6,617.8 | 5,445.0 | 27.9 | 31.1 | -86.29 | 1,304.8 | -714.5 | 880.3 | 823.8 | 56.55 | 15.567 | | |
| 6,700.0 | 5,502.0 | 6,717.8 | 5,445.0 | 29.6 | 32.6 | -86.29 | 1,404.8 | -715.9 | 881.7 | 821.7 | 59.93 | 14.713 | | |
| 6,800.0 | 5,502.0 | 6,817.8 | 5,445.0 | 31.4 | 34.2 | -86.30 | 1,504.8 | -717.2 | 883.0 | 819.6 | 63.35 | 13.938 | | |
| 6,900.0 | 5,502.0 | 6,917.7 | 5,445.0 | 33.2 | 35.8 | -86.30 | 1,604.8 | -718.5 | 884.3 | 817.5 | 66.83 | 13.233 | | |
| 7,000.0 | 5,502.0 | 7,017.7 | 5,445.0 | 35.0 | 37.4 | -86.31 | 1,704.8 | -719.9 | 885.7 | 815.3 | 70.34 | 12.591 | | |
| 7,100.0 | 5,502.0 | 7,117.7 | 5,445.0 | 36.8 | 39.1 | -86.32 | 1,804.8 | -721.2 | 887.0 | 813.1 | 73.89 | 12.005 | | |
| 7,200.0 | 5,502.0 | 7,217.7 | 5,445.0 | 38.6 | 40.7 | -86.32 | 1,904.7 | -722.5 | 888.3 | 810.9 | 77.46 | 11.467 | | |

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

| | | | |
|---------------------------|------------------------------------|-------------------------------------|-------------------------------|
| Company: | Whiting Oil & Gas | Local Co-ordinate Reference: | Well Horsetail #33M-2804 |
| Project: | Sec.33-T10N-R57W | TVD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Reference Site: | Horsetail 33M Pad Sec.33-T10N-R57W | MD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Horsetail #33M-2804 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-24-13) | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWDD | | | | | | | | | | | | 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) | Minimum Separation (ft) | Separation Factor | Warning |
| 7,300.0 | 5,502.0 | 7,317.7 | 5,445.0 | 40.4 | 42.5 | -86.33 | 2,004.7 | -723.9 | 889.7 | 808.6 | 81.07 | 10.974 | |
| 7,400.0 | 5,502.0 | 7,417.7 | 5,445.0 | 42.3 | 44.2 | -86.33 | 2,104.7 | -725.2 | 891.0 | 806.3 | 84.69 | 10.521 | |
| 7,500.0 | 5,502.0 | 7,517.7 | 5,445.0 | 44.1 | 45.9 | -86.34 | 2,204.7 | -726.5 | 892.3 | 804.0 | 88.33 | 10.102 | |
| 7,600.0 | 5,502.0 | 7,617.7 | 5,445.0 | 46.0 | 47.7 | -86.34 | 2,304.7 | -727.9 | 893.6 | 801.7 | 91.99 | 9.714 | |
| 7,700.0 | 5,502.0 | 7,717.7 | 5,445.0 | 47.9 | 49.4 | -86.35 | 2,404.6 | -729.2 | 895.0 | 799.3 | 95.67 | 9.355 | |
| 7,800.0 | 5,502.0 | 7,817.7 | 5,445.0 | 49.7 | 51.2 | -86.35 | 2,504.6 | -730.5 | 896.3 | 797.0 | 99.36 | 9.021 | |
| 7,900.0 | 5,502.0 | 7,917.7 | 5,445.0 | 51.6 | 53.0 | -86.36 | 2,604.6 | -731.9 | 897.6 | 794.6 | 103.06 | 8.710 | |
| 8,000.0 | 5,502.0 | 8,017.7 | 5,445.0 | 53.5 | 54.8 | -86.36 | 2,704.6 | -733.2 | 899.0 | 792.2 | 106.77 | 8.420 | |
| 8,100.0 | 5,502.0 | 8,117.6 | 5,445.0 | 55.4 | 56.6 | -86.37 | 2,804.6 | -734.5 | 900.3 | 789.8 | 110.49 | 8.148 | |
| 8,200.0 | 5,502.0 | 8,217.6 | 5,445.0 | 57.2 | 58.4 | -86.38 | 2,904.6 | -735.9 | 901.6 | 787.4 | 114.22 | 7.894 | |
| 8,300.0 | 5,502.0 | 8,317.6 | 5,445.0 | 59.1 | 60.2 | -86.38 | 3,004.5 | -737.2 | 903.0 | 785.0 | 117.96 | 7.655 | |
| 8,400.0 | 5,502.0 | 8,417.6 | 5,445.0 | 61.0 | 62.1 | -86.39 | 3,104.5 | -738.5 | 904.3 | 782.6 | 121.70 | 7.430 | |
| 8,500.0 | 5,502.0 | 8,517.6 | 5,445.0 | 62.9 | 63.9 | -86.39 | 3,204.5 | -739.9 | 905.6 | 780.2 | 125.45 | 7.219 | |
| 8,600.0 | 5,502.0 | 8,617.6 | 5,445.0 | 64.8 | 65.8 | -86.40 | 3,304.5 | -741.2 | 907.0 | 777.7 | 129.21 | 7.019 | |
| 8,700.0 | 5,502.0 | 8,717.6 | 5,445.0 | 66.7 | 67.6 | -86.40 | 3,404.5 | -742.5 | 908.3 | 775.3 | 132.97 | 6.831 | |
| 8,800.0 | 5,502.0 | 8,817.6 | 5,445.0 | 68.6 | 69.5 | -86.41 | 3,504.5 | -743.9 | 909.6 | 772.9 | 136.74 | 6.652 | |
| 8,900.0 | 5,502.0 | 8,917.6 | 5,445.0 | 70.5 | 71.3 | -86.41 | 3,604.4 | -745.2 | 910.9 | 770.4 | 140.51 | 6.483 | |
| 9,000.0 | 5,502.0 | 9,017.6 | 5,445.0 | 72.4 | 73.2 | -86.42 | 3,704.4 | -746.5 | 912.3 | 768.0 | 144.29 | 6.322 | |
| 9,100.0 | 5,502.0 | 9,117.6 | 5,445.0 | 74.3 | 75.0 | -86.42 | 3,804.4 | -747.9 | 913.6 | 765.5 | 148.07 | 6.170 | |
| 9,200.0 | 5,502.0 | 9,217.5 | 5,445.0 | 76.2 | 76.9 | -86.43 | 3,904.4 | -749.2 | 914.9 | 763.1 | 151.86 | 6.025 | |
| 9,300.0 | 5,502.0 | 9,317.5 | 5,445.0 | 78.1 | 78.8 | -86.43 | 4,004.4 | -750.5 | 916.3 | 760.6 | 155.64 | 5.887 | |
| 9,400.0 | 5,502.0 | 9,417.5 | 5,445.0 | 80.0 | 80.6 | -86.44 | 4,104.3 | -751.9 | 917.6 | 758.2 | 159.43 | 5.755 | |
| 9,500.0 | 5,502.0 | 9,517.5 | 5,445.0 | 81.9 | 82.5 | -86.44 | 4,204.3 | -753.2 | 918.9 | 755.7 | 163.23 | 5.630 | |
| 9,600.0 | 5,502.0 | 9,617.5 | 5,445.0 | 83.8 | 84.4 | -86.45 | 4,304.3 | -754.5 | 920.3 | 753.2 | 167.03 | 5.510 | |
| 9,700.0 | 5,502.0 | 9,717.5 | 5,445.0 | 85.7 | 86.3 | -86.45 | 4,404.3 | -755.9 | 921.6 | 750.8 | 170.82 | 5.395 | |
| 9,800.0 | 5,502.0 | 9,817.5 | 5,445.0 | 87.6 | 88.2 | -86.46 | 4,504.3 | -757.2 | 922.9 | 748.3 | 174.63 | 5.285 | |
| 9,900.0 | 5,502.0 | 9,917.5 | 5,445.0 | 89.5 | 90.0 | -86.46 | 4,604.3 | -758.5 | 924.3 | 745.8 | 178.43 | 5.180 | |
| 10,000.0 | 5,502.0 | 10,017.5 | 5,445.0 | 91.4 | 91.9 | -86.47 | 4,704.2 | -759.9 | 925.6 | 743.3 | 182.24 | 5.079 | |
| 10,100.0 | 5,502.0 | 10,117.5 | 5,445.0 | 93.4 | 93.8 | -86.47 | 4,804.2 | -761.2 | 926.9 | 740.9 | 186.04 | 4.982 | |
| 10,200.0 | 5,502.0 | 10,217.5 | 5,445.0 | 95.3 | 95.7 | -86.48 | 4,904.2 | -762.5 | 928.2 | 738.4 | 189.85 | 4.889 | |
| 10,300.0 | 5,502.0 | 10,317.4 | 5,445.0 | 97.2 | 97.6 | -86.48 | 5,004.2 | -763.9 | 929.6 | 735.9 | 193.67 | 4.800 | |
| 10,400.0 | 5,502.0 | 10,417.4 | 5,445.0 | 99.1 | 99.5 | -86.49 | 5,104.2 | -765.2 | 930.9 | 733.4 | 197.48 | 4.714 | |
| 10,500.0 | 5,502.0 | 10,517.4 | 5,445.0 | 101.0 | 101.4 | -86.49 | 5,204.1 | -766.5 | 932.2 | 730.9 | 201.29 | 4.631 | |
| 10,600.0 | 5,502.0 | 10,617.4 | 5,445.0 | 102.9 | 103.3 | -86.50 | 5,304.1 | -767.9 | 933.6 | 728.5 | 205.11 | 4.552 | |
| 10,700.0 | 5,502.0 | 10,717.4 | 5,445.0 | 104.8 | 105.2 | -86.50 | 5,404.1 | -769.2 | 934.9 | 726.0 | 208.93 | 4.475 | |
| 10,800.0 | 5,502.0 | 10,817.4 | 5,445.0 | 106.7 | 107.1 | -86.51 | 5,504.1 | -770.5 | 936.2 | 723.5 | 212.75 | 4.401 | |
| 10,900.0 | 5,502.0 | 10,917.4 | 5,445.0 | 108.7 | 109.0 | -86.51 | 5,604.1 | -771.9 | 937.6 | 721.0 | 216.57 | 4.329 | |
| 11,000.0 | 5,502.0 | 11,017.4 | 5,445.0 | 110.6 | 110.9 | -86.52 | 5,704.1 | -773.2 | 938.9 | 718.5 | 220.39 | 4.260 | |
| 11,100.0 | 5,502.0 | 11,117.4 | 5,445.0 | 112.5 | 112.8 | -86.52 | 5,804.0 | -774.5 | 940.2 | 716.0 | 224.21 | 4.193 | |
| 11,200.0 | 5,502.0 | 11,217.4 | 5,445.0 | 114.4 | 114.7 | -86.53 | 5,904.0 | -775.9 | 941.6 | 713.5 | 228.04 | 4.129 | |
| 11,300.0 | 5,502.0 | 11,317.4 | 5,445.0 | 116.3 | 116.6 | -86.53 | 6,004.0 | -777.2 | 942.9 | 711.0 | 231.86 | 4.067 | |
| 11,400.0 | 5,502.0 | 11,417.3 | 5,445.0 | 118.2 | 118.5 | -86.54 | 6,104.0 | -778.5 | 944.2 | 708.5 | 235.69 | 4.006 | |
| 11,500.0 | 5,502.0 | 11,517.3 | 5,445.0 | 120.2 | 120.4 | -86.54 | 6,204.0 | -779.9 | 945.5 | 706.0 | 239.51 | 3.948 | |
| 11,600.0 | 5,502.0 | 11,617.3 | 5,445.0 | 122.1 | 122.3 | -86.55 | 6,304.0 | -781.2 | 946.9 | 703.5 | 243.34 | 3.891 | |
| 11,700.0 | 5,502.0 | 11,717.3 | 5,445.0 | 124.0 | 124.2 | -86.55 | 6,403.9 | -782.5 | 948.2 | 701.0 | 247.17 | 3.836 | |
| 11,800.0 | 5,502.0 | 11,817.3 | 5,445.0 | 125.9 | 126.1 | -86.56 | 6,503.9 | -783.9 | 949.5 | 698.5 | 251.00 | 3.783 | |
| 11,900.0 | 5,502.0 | 11,917.3 | 5,445.0 | 127.8 | 128.0 | -86.56 | 6,603.9 | -785.2 | 950.9 | 696.0 | 254.83 | 3.731 | |
| 12,000.0 | 5,502.0 | 12,017.3 | 5,445.0 | 129.7 | 129.9 | -86.57 | 6,703.9 | -786.5 | 952.2 | 693.5 | 258.66 | 3.681 | |
| 12,100.0 | 5,502.0 | 12,117.3 | 5,445.0 | 131.7 | 131.8 | -86.57 | 6,803.9 | -787.9 | 953.5 | 691.0 | 262.49 | 3.633 | |
| 12,200.0 | 5,502.0 | 12,217.3 | 5,445.0 | 133.6 | 133.8 | -86.58 | 6,903.8 | -789.2 | 954.9 | 688.5 | 266.32 | 3.585 | |
| 12,300.0 | 5,502.0 | 12,317.3 | 5,445.0 | 135.5 | 135.7 | -86.58 | 7,003.8 | -790.5 | 956.2 | 686.0 | 270.15 | 3.539 | |
| 12,400.0 | 5,502.0 | 12,417.3 | 5,445.0 | 137.4 | 137.6 | -86.59 | 7,103.8 | -791.9 | 957.5 | 683.5 | 273.99 | 3.495 | |

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

| | | | |
|---------------------------|------------------------------------|-------------------------------------|-------------------------------|
| Company: | Whiting Oil & Gas | Local Co-ordinate Reference: | Well Horsetail #33M-2804 |
| Project: | Sec.33-T10N-R57W | TVD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Reference Site: | Horsetail 33M Pad Sec.33-T10N-R57W | MD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Horsetail #33M-2804 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-24-13) | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|---------------------------|---------|
| Survey Program: 0-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) | Minimum Separation (ft) | Separation Factor | Warning |
| 12,500.0 | 5,502.0 | 12,517.3 | 5,445.0 | 139.3 | 139.5 | -86.59 | 7,203.8 | -793.2 | 958.9 | 681.0 | 277.82 | 3.451 | |
| 12,600.0 | 5,502.0 | 12,617.2 | 5,445.0 | 141.3 | 141.4 | -86.60 | 7,303.8 | -794.5 | 960.2 | 678.5 | 281.66 | 3.409 | |
| 12,700.0 | 5,502.0 | 12,717.2 | 5,445.0 | 143.2 | 143.3 | -86.60 | 7,403.8 | -795.9 | 961.5 | 676.0 | 285.49 | 3.368 | |
| 12,800.0 | 5,502.0 | 12,817.2 | 5,445.0 | 145.1 | 145.2 | -86.61 | 7,503.7 | -797.2 | 962.8 | 673.5 | 289.33 | 3.328 | |
| 12,900.0 | 5,502.0 | 12,917.2 | 5,445.0 | 147.0 | 147.1 | -86.61 | 7,603.7 | -798.5 | 964.2 | 671.0 | 293.16 | 3.289 | |
| 13,000.0 | 5,502.0 | 13,017.2 | 5,445.0 | 149.0 | 149.1 | -86.62 | 7,703.7 | -799.9 | 965.5 | 668.5 | 297.00 | 3.251 | |
| 13,100.0 | 5,502.0 | 13,117.2 | 5,445.0 | 150.9 | 151.0 | -86.62 | 7,803.7 | -801.2 | 966.8 | 666.0 | 300.84 | 3.214 | |
| 13,200.0 | 5,502.0 | 13,217.2 | 5,445.0 | 152.8 | 152.9 | -86.62 | 7,903.7 | -802.5 | 968.2 | 663.5 | 304.68 | 3.178 | |
| 13,300.0 | 5,502.0 | 13,317.2 | 5,445.0 | 154.7 | 154.8 | -86.63 | 8,003.7 | -803.9 | 969.5 | 661.0 | 308.51 | 3.142 | |
| 13,400.0 | 5,502.0 | 13,417.2 | 5,445.0 | 156.6 | 156.7 | -86.63 | 8,103.6 | -805.2 | 970.8 | 658.5 | 312.35 | 3.108 | |
| 13,500.0 | 5,502.0 | 13,517.2 | 5,445.0 | 158.6 | 158.6 | -86.64 | 8,203.6 | -806.5 | 972.2 | 656.0 | 316.19 | 3.075 | |
| 13,600.0 | 5,502.0 | 13,617.2 | 5,445.0 | 160.5 | 160.6 | -86.64 | 8,303.6 | -807.9 | 973.5 | 653.5 | 320.03 | 3.042 | |
| 13,700.0 | 5,502.0 | 13,717.1 | 5,445.0 | 162.4 | 162.5 | -86.65 | 8,403.6 | -809.2 | 974.8 | 651.0 | 323.87 | 3.010 | |
| 13,800.0 | 5,502.0 | 13,817.1 | 5,445.0 | 164.3 | 164.4 | -86.65 | 8,503.6 | -810.5 | 976.2 | 648.4 | 327.71 | 2.979 | |
| 13,900.0 | 5,502.0 | 13,917.1 | 5,445.0 | 166.2 | 166.3 | -86.66 | 8,603.5 | -811.9 | 977.5 | 645.9 | 331.55 | 2.948 | |
| 14,000.0 | 5,502.0 | 14,017.1 | 5,445.0 | 168.2 | 168.2 | -86.66 | 8,703.5 | -813.2 | 978.8 | 643.4 | 335.39 | 2.918 | |
| 14,100.0 | 5,502.0 | 14,117.1 | 5,445.0 | 170.1 | 170.2 | -86.67 | 8,803.5 | -814.5 | 980.1 | 640.9 | 339.23 | 2.889 | |
| 14,200.0 | 5,502.0 | 14,217.1 | 5,445.0 | 172.0 | 172.1 | -86.67 | 8,903.5 | -815.9 | 981.5 | 638.4 | 343.07 | 2.861 | |
| 14,300.0 | 5,502.0 | 14,317.1 | 5,445.0 | 173.9 | 174.0 | -86.67 | 9,003.5 | -817.2 | 982.8 | 635.9 | 346.91 | 2.833 | |
| 14,400.0 | 5,502.0 | 14,417.1 | 5,445.0 | 175.9 | 175.9 | -86.68 | 9,103.5 | -818.5 | 984.1 | 633.4 | 350.76 | 2.806 | |
| 14,500.0 | 5,502.0 | 14,517.1 | 5,445.0 | 177.8 | 177.8 | -86.68 | 9,203.4 | -819.9 | 985.5 | 630.9 | 354.60 | 2.779 | |
| 14,600.0 | 5,502.0 | 14,617.1 | 5,445.0 | 179.7 | 179.7 | -86.69 | 9,303.4 | -821.2 | 986.8 | 628.4 | 358.44 | 2.753 | |
| 14,700.0 | 5,502.0 | 14,717.1 | 5,445.0 | 181.6 | 181.7 | -86.69 | 9,403.4 | -822.5 | 988.1 | 625.8 | 362.28 | 2.728 | |
| 14,800.0 | 5,502.0 | 14,817.0 | 5,445.0 | 183.5 | 183.6 | -86.70 | 9,503.4 | -823.9 | 989.5 | 623.3 | 366.13 | 2.703 | |
| 14,900.0 | 5,502.0 | 14,917.0 | 5,445.0 | 185.5 | 185.5 | -86.70 | 9,603.4 | -825.2 | 990.8 | 620.8 | 369.97 | 2.678 | |
| 14,936.6 | 5,502.0 | 14,953.6 | 5,445.0 | 186.2 | 186.2 | -86.70 | 9,640.0 | -825.7 | 991.3 | 619.9 | 371.38 | 2.669 SF | |

| | | | |
|---------------------------|------------------------------------|-------------------------------------|-------------------------------|
| Company: | Whiting Oil & Gas | Local Co-ordinate Reference: | Well Horsetail #33M-2804 |
| Project: | Sec.33-T10N-R57W | TVD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Reference Site: | Horsetail 33M Pad Sec.33-T10N-R57W | MD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Horsetail #33M-2804 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-24-13) | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 0-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) | Minimum Separation (ft) | Separation Factor | | |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -91.04 | -1.1 | -59.8 | 59.8 | | | | | |
| 100.0 | 100.0 | 100.0 | 100.0 | 0.1 | 0.1 | -91.04 | -1.1 | -59.8 | 59.8 | 59.6 | 0.22 | 266.157 | | |
| 200.0 | 200.0 | 200.0 | 200.0 | 0.3 | 0.3 | -91.04 | -1.1 | -59.8 | 59.8 | 59.1 | 0.67 | 88.719 | | |
| 300.0 | 300.0 | 300.0 | 300.0 | 0.6 | 0.6 | -91.04 | -1.1 | -59.8 | 59.8 | 58.7 | 1.12 | 53.231 | | |
| 400.0 | 400.0 | 400.0 | 400.0 | 0.8 | 0.8 | -91.04 | -1.1 | -59.8 | 59.8 | 58.2 | 1.57 | 38.022 | | |
| 500.0 | 500.0 | 500.0 | 500.0 | 1.0 | 1.0 | -91.04 | -1.1 | -59.8 | 59.8 | 57.8 | 2.02 | 29.573 | | |
| 600.0 | 600.0 | 600.0 | 600.0 | 1.2 | 1.2 | -91.04 | -1.1 | -59.8 | 59.8 | 57.4 | 2.47 | 24.196 | | |
| 700.0 | 700.0 | 700.0 | 700.0 | 1.5 | 1.5 | -91.04 | -1.1 | -59.8 | 59.8 | 56.9 | 2.92 | 20.474 | | |
| 800.0 | 800.0 | 800.0 | 800.0 | 1.7 | 1.7 | -91.04 | -1.1 | -59.8 | 59.8 | 56.5 | 3.37 | 17.744 | | |
| 900.0 | 900.0 | 900.0 | 900.0 | 1.9 | 1.9 | -91.04 | -1.1 | -59.8 | 59.8 | 56.0 | 3.82 | 15.656 | | |
| 1,000.0 | 1,000.0 | 1,000.0 | 1,000.0 | 2.1 | 2.1 | -91.04 | -1.1 | -59.8 | 59.8 | 55.6 | 4.27 | 14.008 | | |
| 1,100.0 | 1,100.0 | 1,100.0 | 1,100.0 | 2.4 | 2.4 | -91.04 | -1.1 | -59.8 | 59.8 | 55.1 | 4.72 | 12.674 | | |
| 1,200.0 | 1,200.0 | 1,200.0 | 1,200.0 | 2.6 | 2.6 | -91.04 | -1.1 | -59.8 | 59.8 | 54.7 | 5.17 | 11.572 CC, ES | | |
| 1,300.0 | 1,300.0 | 1,300.0 | 1,300.0 | 2.8 | 2.8 | -178.99 | -1.1 | -59.8 | 61.6 | 56.0 | 5.60 | 10.988 | | |
| 1,400.0 | 1,399.8 | 1,399.8 | 1,399.8 | 3.0 | 3.0 | -179.06 | -1.1 | -59.8 | 66.7 | 60.7 | 6.02 | 11.078 | | |
| 1,500.0 | 1,499.6 | 1,499.6 | 1,499.6 | 3.2 | 3.3 | -179.14 | -1.1 | -59.8 | 73.0 | 66.5 | 6.45 | 11.313 | | |
| 1,600.0 | 1,599.5 | 1,597.5 | 1,597.5 | 3.4 | 3.5 | -179.94 | 0.1 | -61.0 | 80.4 | 73.5 | 6.87 | 11.698 | | |
| 1,700.0 | 1,699.3 | 1,695.4 | 1,695.2 | 3.7 | 3.7 | -177.72 | 3.6 | -64.5 | 90.3 | 83.0 | 7.30 | 12.370 | | |
| 1,800.0 | 1,799.1 | 1,794.7 | 1,794.4 | 3.9 | 3.9 | -175.53 | 7.8 | -68.7 | 101.0 | 93.3 | 7.72 | 13.078 | | |
| 1,900.0 | 1,898.9 | 1,894.1 | 1,893.6 | 4.1 | 4.1 | -173.76 | 12.1 | -73.0 | 111.9 | 103.7 | 8.15 | 13.722 | | |
| 2,000.0 | 1,998.7 | 1,993.4 | 1,992.7 | 4.3 | 4.4 | -172.30 | 16.4 | -77.3 | 122.8 | 114.3 | 8.59 | 14.305 | | |
| 2,100.0 | 2,098.5 | 2,092.8 | 2,091.9 | 4.6 | 4.6 | -171.09 | 20.6 | -81.5 | 133.9 | 124.8 | 9.02 | 14.836 | | |
| 2,200.0 | 2,198.3 | 2,192.1 | 2,191.1 | 4.8 | 4.8 | -170.05 | 24.9 | -85.8 | 144.9 | 135.5 | 9.46 | 15.319 | | |
| 2,300.0 | 2,298.1 | 2,291.5 | 2,290.3 | 5.1 | 5.1 | -169.17 | 29.1 | -90.0 | 156.1 | 146.2 | 9.90 | 15.761 | | |
| 2,400.0 | 2,397.9 | 2,390.9 | 2,389.4 | 5.3 | 5.3 | -168.40 | 33.4 | -94.3 | 167.2 | 156.9 | 10.34 | 16.165 | | |
| 2,500.0 | 2,497.7 | 2,490.2 | 2,488.6 | 5.5 | 5.5 | -167.73 | 37.7 | -98.6 | 178.4 | 167.6 | 10.79 | 16.537 | | |
| 2,600.0 | 2,597.5 | 2,589.6 | 2,587.8 | 5.8 | 5.8 | -167.14 | 41.9 | -102.8 | 189.6 | 178.4 | 11.23 | 16.879 | | |
| 2,700.0 | 2,697.3 | 2,688.9 | 2,686.9 | 6.0 | 6.0 | -166.61 | 46.2 | -107.1 | 200.8 | 189.1 | 11.68 | 17.194 | | |
| 2,800.0 | 2,797.1 | 2,788.3 | 2,786.1 | 6.3 | 6.2 | -166.14 | 50.5 | -111.4 | 212.0 | 199.9 | 12.13 | 17.487 | | |
| 2,900.0 | 2,896.9 | 2,887.6 | 2,885.3 | 6.5 | 6.5 | -165.72 | 54.7 | -115.6 | 223.3 | 210.7 | 12.57 | 17.758 | | |
| 3,000.0 | 2,996.7 | 2,987.0 | 2,984.4 | 6.8 | 6.7 | -165.34 | 59.0 | -119.9 | 234.5 | 221.5 | 13.02 | 18.010 | | |
| 3,100.0 | 3,096.5 | 3,086.3 | 3,083.6 | 7.0 | 7.0 | -164.99 | 63.3 | -124.2 | 245.8 | 232.3 | 13.47 | 18.245 | | |
| 3,200.0 | 3,196.3 | 3,185.7 | 3,182.8 | 7.2 | 7.2 | -164.67 | 67.5 | -128.4 | 257.1 | 243.1 | 13.92 | 18.465 | | |
| 3,300.0 | 3,296.1 | 3,285.0 | 3,282.0 | 7.5 | 7.4 | -164.38 | 71.8 | -132.7 | 268.3 | 254.0 | 14.37 | 18.671 | | |
| 3,400.0 | 3,395.9 | 3,384.4 | 3,381.1 | 7.7 | 7.7 | -164.11 | 76.0 | -136.9 | 279.6 | 264.8 | 14.82 | 18.863 | | |
| 3,500.0 | 3,495.7 | 3,483.7 | 3,480.3 | 8.0 | 7.9 | -163.87 | 80.3 | -141.2 | 290.9 | 275.6 | 15.28 | 19.044 | | |
| 3,600.0 | 3,595.6 | 3,583.1 | 3,579.5 | 8.2 | 8.2 | -163.64 | 84.6 | -145.5 | 302.2 | 286.5 | 15.73 | 19.215 | | |
| 3,700.0 | 3,695.4 | 3,682.4 | 3,678.6 | 8.5 | 8.4 | -163.43 | 88.8 | -149.7 | 313.5 | 297.3 | 16.18 | 19.376 | | |
| 3,800.0 | 3,795.2 | 3,781.8 | 3,777.8 | 8.7 | 8.7 | -163.23 | 93.1 | -154.0 | 324.8 | 308.2 | 16.63 | 19.527 | | |
| 3,900.0 | 3,895.0 | 3,887.1 | 3,883.0 | 9.0 | 8.9 | -163.07 | 97.2 | -158.1 | 334.8 | 317.7 | 17.08 | 19.594 | | |
| 4,000.0 | 3,995.0 | 3,998.6 | 3,994.4 | 9.1 | 9.1 | -163.01 | 98.9 | -159.8 | 338.5 | 321.0 | 17.48 | 19.366 | | |
| 4,100.0 | 4,095.0 | 4,099.2 | 4,095.0 | 9.3 | 9.3 | -73.01 | 98.9 | -159.8 | 338.5 | 320.6 | 17.87 | 18.938 | | |
| 4,200.0 | 4,195.0 | 4,199.2 | 4,195.0 | 9.5 | 9.5 | -73.01 | 98.9 | -159.8 | 338.5 | 320.2 | 18.30 | 18.496 | | |
| 4,300.0 | 4,295.0 | 4,299.2 | 4,295.0 | 9.7 | 9.7 | -73.01 | 98.9 | -159.8 | 338.5 | 319.8 | 18.73 | 18.073 | | |
| 4,400.0 | 4,395.0 | 4,399.2 | 4,395.0 | 9.9 | 9.9 | -73.01 | 98.9 | -159.8 | 338.5 | 319.3 | 19.16 | 17.668 | | |
| 4,500.0 | 4,495.0 | 4,499.2 | 4,495.0 | 10.1 | 10.1 | -73.01 | 98.9 | -159.8 | 338.5 | 318.9 | 19.59 | 17.280 | | |
| 4,600.0 | 4,595.0 | 4,599.2 | 4,595.0 | 10.3 | 10.4 | -73.01 | 98.9 | -159.8 | 338.5 | 318.5 | 20.02 | 16.908 | | |
| 4,700.0 | 4,695.0 | 4,699.2 | 4,695.0 | 10.6 | 10.6 | -73.01 | 98.9 | -159.8 | 338.5 | 318.0 | 20.45 | 16.551 | | |
| 4,800.0 | 4,795.0 | 4,799.2 | 4,795.0 | 10.8 | 10.8 | -73.01 | 98.9 | -159.8 | 338.5 | 317.6 | 20.88 | 16.208 | | |
| 4,900.0 | 4,895.0 | 4,899.2 | 4,895.0 | 11.0 | 11.0 | -73.01 | 98.9 | -159.8 | 338.5 | 317.2 | 21.32 | 15.878 | | |
| 4,966.3 | 4,961.3 | 4,965.5 | 4,961.3 | 11.1 | 11.2 | -73.11 | 98.9 | -159.8 | 338.3 | 316.7 | 21.61 | 15.659 | | |
| 5,000.0 | 4,995.0 | 4,995.2 | 4,991.0 | 11.2 | 11.2 | -73.02 | 99.0 | -159.8 | 338.5 | 316.8 | 21.74 | 15.569 | | |

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

| | | | |
|---------------------------|------------------------------------|-------------------------------------|-------------------------------|
| Company: | Whiting Oil & Gas | Local Co-ordinate Reference: | Well Horsetail #33M-2804 |
| Project: | Sec.33-T10N-R57W | TVD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Reference Site: | Horsetail 33M Pad Sec.33-T10N-R57W | MD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Horsetail #33M-2804 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-24-13) | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWDD | | | | | | | | | | | | 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) | Minimum Separation (ft) | Separation Factor | |
| 5,100.0 | 5,094.1 | 5,066.1 | 5,061.6 | 11.4 | 11.4 | -73.41 | 104.7 | -162.2 | 340.4 | 318.3 | 22.10 | 15.407 | |
| 5,200.0 | 5,189.0 | 5,136.9 | 5,130.6 | 11.6 | 11.6 | -74.36 | 119.2 | -168.0 | 345.5 | 323.0 | 22.45 | 15.389 | |
| 5,300.0 | 5,276.3 | 5,207.7 | 5,196.8 | 11.9 | 11.9 | -75.75 | 142.2 | -177.4 | 354.0 | 331.1 | 22.89 | 15.469 | |
| 5,400.0 | 5,352.8 | 5,278.3 | 5,258.9 | 12.2 | 12.2 | -77.39 | 173.3 | -189.9 | 366.5 | 343.0 | 23.51 | 15.592 | |
| 5,500.0 | 5,415.6 | 5,350.0 | 5,316.7 | 12.7 | 12.6 | -79.16 | 212.5 | -205.8 | 383.3 | 358.9 | 24.39 | 15.713 | |
| 5,600.0 | 5,462.4 | 5,420.2 | 5,367.2 | 13.4 | 13.1 | -80.71 | 257.6 | -224.1 | 404.6 | 379.0 | 25.60 | 15.807 | |
| 5,700.0 | 5,491.6 | 5,492.3 | 5,411.7 | 14.3 | 13.7 | -82.08 | 310.1 | -245.4 | 430.5 | 403.4 | 27.14 | 15.865 | |
| 5,800.0 | 5,502.0 | 5,566.1 | 5,448.8 | 15.5 | 14.4 | -83.16 | 369.2 | -269.3 | 460.7 | 431.7 | 28.99 | 15.889 | |
| 5,900.0 | 5,502.0 | 5,645.8 | 5,478.3 | 16.8 | 15.4 | -87.06 | 437.8 | -297.1 | 495.0 | 463.8 | 31.27 | 15.830 | |
| 6,000.0 | 5,502.0 | 5,733.9 | 5,497.4 | 18.1 | 16.6 | -89.46 | 517.4 | -329.4 | 532.0 | 498.2 | 33.78 | 15.746 | |
| 6,100.0 | 5,502.0 | 5,834.8 | 5,502.0 | 19.6 | 18.1 | -90.00 | 610.8 | -367.0 | 569.3 | 532.7 | 36.63 | 15.544 | |
| 6,200.0 | 5,502.0 | 5,971.1 | 5,502.0 | 21.2 | 20.2 | -90.00 | 739.5 | -411.6 | 602.2 | 562.1 | 40.08 | 15.023 | |
| 6,300.0 | 5,502.0 | 6,113.6 | 5,502.0 | 22.8 | 22.4 | -90.00 | 877.2 | -448.4 | 628.0 | 584.2 | 43.83 | 14.330 | |
| 6,400.0 | 5,502.0 | 6,261.2 | 5,502.0 | 24.5 | 24.8 | -90.00 | 1,022.1 | -475.6 | 646.4 | 598.6 | 47.82 | 13.518 | |
| 6,500.0 | 5,502.0 | 6,412.2 | 5,502.0 | 26.1 | 27.2 | -90.00 | 1,172.2 | -491.7 | 657.1 | 605.1 | 51.97 | 12.644 | |
| 6,600.0 | 5,502.0 | 6,556.6 | 5,502.0 | 27.9 | 29.5 | -90.00 | 1,316.6 | -496.1 | 660.0 | 603.9 | 56.07 | 11.770 | |
| 6,700.0 | 5,502.0 | 6,656.6 | 5,502.0 | 29.6 | 31.1 | -90.00 | 1,416.6 | -496.1 | 660.0 | 600.5 | 59.48 | 11.096 | |
| 6,800.0 | 5,502.0 | 6,756.6 | 5,502.0 | 31.4 | 32.7 | -90.00 | 1,516.6 | -496.1 | 660.0 | 597.0 | 62.92 | 10.489 | |
| 6,900.0 | 5,502.0 | 6,856.6 | 5,502.0 | 33.2 | 34.3 | -90.00 | 1,616.6 | -496.1 | 660.0 | 593.5 | 66.41 | 9.937 | |
| 7,000.0 | 5,502.0 | 6,956.6 | 5,502.0 | 35.0 | 36.0 | -90.00 | 1,716.6 | -496.1 | 660.0 | 590.0 | 69.94 | 9.436 | |
| 7,100.0 | 5,502.0 | 7,056.6 | 5,502.0 | 36.8 | 37.7 | -90.00 | 1,816.6 | -496.1 | 660.0 | 586.4 | 73.50 | 8.978 | |
| 7,200.0 | 5,502.0 | 7,156.6 | 5,502.0 | 38.6 | 39.4 | -90.00 | 1,916.6 | -496.1 | 659.9 | 582.9 | 77.09 | 8.560 | |
| 7,300.0 | 5,502.0 | 7,256.6 | 5,502.0 | 40.4 | 41.2 | -90.00 | 2,016.6 | -496.1 | 659.9 | 579.2 | 80.71 | 8.177 | |
| 7,400.0 | 5,502.0 | 7,356.6 | 5,502.0 | 42.3 | 42.9 | -90.00 | 2,116.6 | -496.0 | 659.9 | 575.6 | 84.34 | 7.824 | |
| 7,500.0 | 5,502.0 | 7,456.6 | 5,502.0 | 44.1 | 44.7 | -90.00 | 2,216.6 | -496.0 | 659.9 | 571.9 | 88.00 | 7.499 | |
| 7,600.0 | 5,502.0 | 7,556.6 | 5,502.0 | 46.0 | 46.5 | -90.00 | 2,316.6 | -496.0 | 659.9 | 568.3 | 91.67 | 7.199 | |
| 7,700.0 | 5,502.0 | 7,656.6 | 5,502.0 | 47.9 | 48.3 | -90.00 | 2,416.6 | -496.0 | 659.9 | 564.6 | 95.35 | 6.921 | |
| 7,800.0 | 5,502.0 | 7,756.6 | 5,502.0 | 49.7 | 50.1 | -90.00 | 2,516.6 | -496.0 | 659.9 | 560.9 | 99.05 | 6.662 | |
| 7,900.0 | 5,502.0 | 7,856.6 | 5,502.0 | 51.6 | 51.9 | -90.00 | 2,616.6 | -496.0 | 659.9 | 557.2 | 102.76 | 6.422 | |
| 8,000.0 | 5,502.0 | 7,956.6 | 5,502.0 | 53.5 | 53.7 | -90.00 | 2,716.6 | -496.0 | 659.9 | 553.4 | 106.48 | 6.197 | |
| 8,100.0 | 5,502.0 | 8,056.6 | 5,502.0 | 55.4 | 55.5 | -90.00 | 2,816.6 | -496.0 | 659.9 | 549.7 | 110.21 | 5.988 | |
| 8,200.0 | 5,502.0 | 8,156.6 | 5,502.0 | 57.2 | 57.4 | -90.00 | 2,916.6 | -496.0 | 659.9 | 546.0 | 113.95 | 5.791 | |
| 8,300.0 | 5,502.0 | 8,256.6 | 5,502.0 | 59.1 | 59.2 | -90.00 | 3,016.6 | -496.0 | 659.9 | 542.2 | 117.69 | 5.607 | |
| 8,400.0 | 5,502.0 | 8,356.6 | 5,502.0 | 61.0 | 61.0 | -90.00 | 3,116.6 | -496.0 | 659.9 | 538.5 | 121.45 | 5.434 | |
| 8,500.0 | 5,502.0 | 8,456.6 | 5,502.0 | 62.9 | 62.9 | -90.00 | 3,216.6 | -496.0 | 659.9 | 534.7 | 125.20 | 5.271 | |
| 8,600.0 | 5,502.0 | 8,556.6 | 5,502.0 | 64.8 | 64.7 | -90.00 | 3,316.6 | -496.0 | 659.9 | 530.9 | 128.97 | 5.117 | |
| 8,700.0 | 5,502.0 | 8,656.6 | 5,502.0 | 66.7 | 66.6 | -90.00 | 3,416.6 | -496.0 | 659.9 | 527.2 | 132.74 | 4.971 | |
| 8,800.0 | 5,502.0 | 8,756.6 | 5,502.0 | 68.6 | 68.5 | -90.00 | 3,516.6 | -496.0 | 659.9 | 523.4 | 136.51 | 4.834 | |
| 8,900.0 | 5,502.0 | 8,856.6 | 5,502.0 | 70.5 | 70.3 | -90.00 | 3,616.6 | -496.0 | 659.9 | 519.6 | 140.29 | 4.704 | |
| 9,000.0 | 5,502.0 | 8,956.6 | 5,502.0 | 72.4 | 72.2 | -90.00 | 3,716.6 | -496.0 | 659.9 | 515.8 | 144.07 | 4.580 | |
| 9,100.0 | 5,502.0 | 9,056.6 | 5,502.0 | 74.3 | 74.1 | -90.00 | 3,816.6 | -496.0 | 659.9 | 512.0 | 147.86 | 4.463 | |
| 9,200.0 | 5,502.0 | 9,156.6 | 5,502.0 | 76.2 | 75.9 | -90.00 | 3,916.6 | -496.0 | 659.9 | 508.2 | 151.65 | 4.351 | |
| 9,300.0 | 5,502.0 | 9,256.6 | 5,502.0 | 78.1 | 77.8 | -90.00 | 4,016.6 | -496.0 | 659.9 | 504.4 | 155.44 | 4.245 | |
| 9,400.0 | 5,502.0 | 9,356.6 | 5,502.0 | 80.0 | 79.7 | -90.00 | 4,116.6 | -496.0 | 659.9 | 500.6 | 159.24 | 4.144 | |
| 9,500.0 | 5,502.0 | 9,456.6 | 5,502.0 | 81.9 | 81.6 | -90.00 | 4,216.6 | -496.0 | 659.9 | 496.8 | 163.03 | 4.047 | |
| 9,600.0 | 5,502.0 | 9,556.6 | 5,502.0 | 83.8 | 83.5 | -90.00 | 4,316.6 | -496.0 | 659.9 | 493.0 | 166.84 | 3.955 | |
| 9,700.0 | 5,502.0 | 9,656.6 | 5,502.0 | 85.7 | 85.4 | -90.00 | 4,416.6 | -496.0 | 659.9 | 489.2 | 170.64 | 3.867 | |
| 9,800.0 | 5,502.0 | 9,756.6 | 5,502.0 | 87.6 | 87.2 | -90.00 | 4,516.6 | -496.0 | 659.8 | 485.4 | 174.44 | 3.783 | |
| 9,900.0 | 5,502.0 | 9,856.6 | 5,502.0 | 89.5 | 89.1 | -90.00 | 4,616.6 | -496.0 | 659.8 | 481.6 | 178.25 | 3.702 | |
| 10,000.0 | 5,502.0 | 9,956.6 | 5,502.0 | 91.4 | 91.0 | -90.00 | 4,716.6 | -496.0 | 659.8 | 477.8 | 182.06 | 3.624 | |
| 10,100.0 | 5,502.0 | 10,056.6 | 5,502.0 | 93.4 | 92.9 | -90.00 | 4,816.6 | -496.0 | 659.8 | 474.0 | 185.87 | 3.550 | |
| 10,200.0 | 5,502.0 | 10,156.6 | 5,502.0 | 95.3 | 94.8 | -90.00 | 4,916.6 | -495.9 | 659.8 | 470.1 | 189.69 | 3.479 | |

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

| Offset Design Horsetail 33M Pad Sec.33-T10N-R57W - Horsetail #33M-2802 - Wellbore #1 - Plan #1 (10-24-13) | | | | | | | | | | | | Offset Site Error: 0.0 ft | |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------------------|---------|
| Survey Program: 0-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) | Minimum Separation (ft) | Separation Factor | |
| 10,300.0 | 5,502.0 | 10,256.6 | 5,502.0 | 97.2 | 96.7 | -90.00 | 5,016.6 | -495.9 | 659.8 | 466.3 | 193.50 | 3.410 | |
| 10,400.0 | 5,502.0 | 10,356.6 | 5,502.0 | 99.1 | 98.6 | -90.00 | 5,116.6 | -495.9 | 659.8 | 462.5 | 197.32 | 3.344 | |
| 10,500.0 | 5,502.0 | 10,456.6 | 5,502.0 | 101.0 | 100.5 | -90.00 | 5,216.6 | -495.9 | 659.8 | 458.7 | 201.14 | 3.280 | |
| 10,600.0 | 5,502.0 | 10,556.6 | 5,502.0 | 102.9 | 102.4 | -90.00 | 5,316.6 | -495.9 | 659.8 | 454.9 | 204.96 | 3.219 | |
| 10,700.0 | 5,502.0 | 10,656.6 | 5,502.0 | 104.8 | 104.3 | -90.00 | 5,416.6 | -495.9 | 659.8 | 451.0 | 208.78 | 3.160 | |
| 10,800.0 | 5,502.0 | 10,756.6 | 5,502.0 | 106.7 | 106.2 | -90.00 | 5,516.6 | -495.9 | 659.8 | 447.2 | 212.60 | 3.104 | |
| 10,900.0 | 5,502.0 | 10,856.6 | 5,502.0 | 108.7 | 108.1 | -90.00 | 5,616.6 | -495.9 | 659.8 | 443.4 | 216.42 | 3.049 | |
| 11,000.0 | 5,502.0 | 10,956.6 | 5,502.0 | 110.6 | 110.0 | -90.00 | 5,716.6 | -495.9 | 659.8 | 439.6 | 220.25 | 2.996 | |
| 11,100.0 | 5,502.0 | 11,056.6 | 5,502.0 | 112.5 | 111.9 | -90.00 | 5,816.6 | -495.9 | 659.8 | 435.7 | 224.07 | 2.945 | |
| 11,200.0 | 5,502.0 | 11,156.6 | 5,502.0 | 114.4 | 113.8 | -90.00 | 5,916.6 | -495.9 | 659.8 | 431.9 | 227.90 | 2.895 | |
| 11,300.0 | 5,502.0 | 11,256.6 | 5,502.0 | 116.3 | 115.7 | -90.00 | 6,016.6 | -495.9 | 659.8 | 428.1 | 231.73 | 2.847 | |
| 11,400.0 | 5,502.0 | 11,356.6 | 5,502.0 | 118.2 | 117.6 | -90.00 | 6,116.6 | -495.9 | 659.8 | 424.2 | 235.55 | 2.801 | |
| 11,500.0 | 5,502.0 | 11,456.6 | 5,502.0 | 120.2 | 119.5 | -90.00 | 6,216.6 | -495.9 | 659.8 | 420.4 | 239.38 | 2.756 | |
| 11,600.0 | 5,502.0 | 11,556.6 | 5,502.0 | 122.1 | 121.4 | -90.00 | 6,316.6 | -495.9 | 659.8 | 416.6 | 243.21 | 2.713 | |
| 11,700.0 | 5,502.0 | 11,656.6 | 5,502.0 | 124.0 | 123.3 | -90.00 | 6,416.6 | -495.9 | 659.8 | 412.7 | 247.04 | 2.671 | |
| 11,800.0 | 5,502.0 | 11,756.6 | 5,502.0 | 125.9 | 125.2 | -90.00 | 6,516.6 | -495.9 | 659.8 | 408.9 | 250.87 | 2.630 | |
| 11,900.0 | 5,502.0 | 11,856.6 | 5,502.0 | 127.8 | 127.2 | -90.00 | 6,616.6 | -495.9 | 659.8 | 405.1 | 254.71 | 2.590 | |
| 12,000.0 | 5,502.0 | 11,956.6 | 5,502.0 | 129.7 | 129.1 | -90.00 | 6,716.6 | -495.9 | 659.8 | 401.2 | 258.54 | 2.552 | |
| 12,100.0 | 5,502.0 | 12,056.6 | 5,502.0 | 131.7 | 131.0 | -90.00 | 6,816.6 | -495.9 | 659.8 | 397.4 | 262.37 | 2.515 | |
| 12,200.0 | 5,502.0 | 12,156.6 | 5,502.0 | 133.6 | 132.9 | -90.00 | 6,916.6 | -495.9 | 659.8 | 393.5 | 266.21 | 2.478 | |
| 12,300.0 | 5,502.0 | 12,256.6 | 5,502.0 | 135.5 | 134.8 | -90.00 | 7,016.6 | -495.9 | 659.7 | 389.7 | 270.04 | 2.443 | |
| 12,400.0 | 5,502.0 | 12,356.6 | 5,502.0 | 137.4 | 136.7 | -90.00 | 7,116.6 | -495.9 | 659.7 | 385.9 | 273.88 | 2.409 | |
| 12,500.0 | 5,502.0 | 12,456.6 | 5,502.0 | 139.3 | 138.6 | -90.00 | 7,216.6 | -495.9 | 659.7 | 382.0 | 277.71 | 2.376 | |
| 12,600.0 | 5,502.0 | 12,556.6 | 5,502.0 | 141.3 | 140.5 | -90.00 | 7,316.6 | -495.9 | 659.7 | 378.2 | 281.55 | 2.343 | |
| 12,700.0 | 5,502.0 | 12,656.6 | 5,502.0 | 143.2 | 142.4 | -90.00 | 7,416.6 | -495.9 | 659.7 | 374.3 | 285.38 | 2.312 | |
| 12,800.0 | 5,502.0 | 12,756.6 | 5,502.0 | 145.1 | 144.4 | -90.00 | 7,516.6 | -495.9 | 659.7 | 370.5 | 289.22 | 2.281 | |
| 12,900.0 | 5,502.0 | 12,856.6 | 5,502.0 | 147.0 | 146.3 | -90.00 | 7,616.6 | -495.9 | 659.7 | 366.7 | 293.06 | 2.251 | |
| 13,000.0 | 5,502.0 | 12,956.6 | 5,502.0 | 149.0 | 148.2 | -90.00 | 7,716.6 | -495.8 | 659.7 | 362.8 | 296.90 | 2.222 | |
| 13,100.0 | 5,502.0 | 13,056.6 | 5,502.0 | 150.9 | 150.1 | -90.00 | 7,816.6 | -495.8 | 659.7 | 359.0 | 300.74 | 2.194 | |
| 13,200.0 | 5,502.0 | 13,156.6 | 5,502.0 | 152.8 | 152.0 | -90.00 | 7,916.6 | -495.8 | 659.7 | 355.1 | 304.57 | 2.166 | |
| 13,300.0 | 5,502.0 | 13,256.6 | 5,502.0 | 154.7 | 153.9 | -90.00 | 8,016.6 | -495.8 | 659.7 | 351.3 | 308.41 | 2.139 | |
| 13,400.0 | 5,502.0 | 13,356.6 | 5,502.0 | 156.6 | 155.8 | -90.00 | 8,116.6 | -495.8 | 659.7 | 347.5 | 312.25 | 2.113 | |
| 13,500.0 | 5,502.0 | 13,456.6 | 5,502.0 | 158.6 | 157.8 | -90.00 | 8,216.6 | -495.8 | 659.7 | 343.6 | 316.09 | 2.087 | |
| 13,600.0 | 5,502.0 | 13,556.6 | 5,502.0 | 160.5 | 159.7 | -90.00 | 8,316.6 | -495.8 | 659.7 | 339.8 | 319.93 | 2.062 | |
| 13,700.0 | 5,502.0 | 13,656.6 | 5,502.0 | 162.4 | 161.6 | -90.00 | 8,416.6 | -495.8 | 659.7 | 335.9 | 323.77 | 2.038 | |
| 13,800.0 | 5,502.0 | 13,756.6 | 5,502.0 | 164.3 | 163.5 | -90.00 | 8,516.6 | -495.8 | 659.7 | 332.1 | 327.62 | 2.014 | |
| 13,900.0 | 5,502.0 | 13,856.6 | 5,502.0 | 166.2 | 165.4 | -90.00 | 8,616.6 | -495.8 | 659.7 | 328.2 | 331.46 | 1.990 | |
| 14,000.0 | 5,502.0 | 13,956.6 | 5,502.0 | 168.2 | 167.3 | -90.00 | 8,716.6 | -495.8 | 659.7 | 324.4 | 335.30 | 1.967 | |
| 14,100.0 | 5,502.0 | 14,056.6 | 5,502.0 | 170.1 | 169.3 | -90.00 | 8,816.6 | -495.8 | 659.7 | 320.5 | 339.14 | 1.945 | |
| 14,200.0 | 5,502.0 | 14,156.6 | 5,502.0 | 172.0 | 171.2 | -90.00 | 8,916.6 | -495.8 | 659.7 | 316.7 | 342.98 | 1.923 | |
| 14,300.0 | 5,502.0 | 14,256.6 | 5,502.0 | 173.9 | 173.1 | -90.00 | 9,016.6 | -495.8 | 659.7 | 312.8 | 346.82 | 1.902 | |
| 14,400.0 | 5,502.0 | 14,356.6 | 5,502.0 | 175.9 | 175.0 | -90.00 | 9,116.6 | -495.8 | 659.7 | 309.0 | 350.67 | 1.881 | |
| 14,500.0 | 5,502.0 | 14,456.6 | 5,502.0 | 177.8 | 176.9 | -90.00 | 9,216.6 | -495.8 | 659.7 | 305.2 | 354.51 | 1.861 | |
| 14,600.0 | 5,502.0 | 14,556.6 | 5,502.0 | 179.7 | 178.9 | -90.00 | 9,316.6 | -495.8 | 659.7 | 301.3 | 358.35 | 1.841 | |
| 14,700.0 | 5,502.0 | 14,656.6 | 5,502.0 | 181.6 | 180.8 | -90.00 | 9,416.6 | -495.8 | 659.7 | 297.5 | 362.20 | 1.821 | |
| 14,800.0 | 5,502.0 | 14,756.6 | 5,502.0 | 183.5 | 182.7 | -90.00 | 9,516.6 | -495.8 | 659.7 | 293.6 | 366.04 | 1.802 | |
| 14,900.0 | 5,502.0 | 14,856.6 | 5,502.0 | 185.5 | 184.6 | -90.00 | 9,616.6 | -495.8 | 659.6 | 289.8 | 369.89 | 1.783 | |
| 14,927.0 | 5,502.0 | 14,883.6 | 5,502.0 | 186.0 | 185.1 | -90.00 | 9,643.6 | -495.8 | 659.6 | 288.7 | 370.92 | 1.778 | |
| 14,936.6 | 5,502.0 | 14,887.0 | 5,502.0 | 186.2 | 185.2 | -90.00 | 9,647.0 | -495.8 | 659.7 | 288.5 | 371.17 | 1.777 | SF |

| | | | |
|---------------------------|------------------------------------|-------------------------------------|-------------------------------|
| Company: | Whiting Oil & Gas | Local Co-ordinate Reference: | Well Horsetail #33M-2804 |
| Project: | Sec.33-T10N-R57W | TVD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Reference Site: | Horsetail 33M Pad Sec.33-T10N-R57W | MD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Horsetail #33M-2804 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-24-13) | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|-----------------------|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|--------|
| Survey Program: 0-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) | Minimum Separation (ft) | Separation Factor | | |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -92.11 | -1.1 | -29.9 | 29.9 | | | | | |
| 100.0 | 100.0 | 100.0 | 100.0 | 0.1 | 0.1 | -92.11 | -1.1 | -29.9 | 29.9 | 29.7 | 0.22 | 133.146 | | |
| 200.0 | 200.0 | 200.0 | 200.0 | 0.3 | 0.3 | -92.11 | -1.1 | -29.9 | 29.9 | 29.3 | 0.67 | 44.382 | | |
| 300.0 | 300.0 | 300.0 | 300.0 | 0.6 | 0.6 | -92.11 | -1.1 | -29.9 | 29.9 | 28.8 | 1.12 | 26.629 | | |
| 400.0 | 400.0 | 400.0 | 400.0 | 0.8 | 0.8 | -92.11 | -1.1 | -29.9 | 29.9 | 28.4 | 1.57 | 19.021 | | |
| 500.0 | 500.0 | 500.0 | 500.0 | 1.0 | 1.0 | -92.11 | -1.1 | -29.9 | 29.9 | 27.9 | 2.02 | 14.794 | | |
| 600.0 | 600.0 | 600.0 | 600.0 | 1.2 | 1.2 | -92.11 | -1.1 | -29.9 | 29.9 | 27.5 | 2.47 | 12.104 | | |
| 700.0 | 700.0 | 700.0 | 700.0 | 1.5 | 1.5 | -92.11 | -1.1 | -29.9 | 29.9 | 27.0 | 2.92 | 10.242 | | |
| 800.0 | 800.0 | 800.0 | 800.0 | 1.7 | 1.7 | -92.11 | -1.1 | -29.9 | 29.9 | 26.6 | 3.37 | 8.876 | | |
| 900.0 | 900.0 | 900.0 | 900.0 | 1.9 | 1.9 | -92.11 | -1.1 | -29.9 | 29.9 | 26.1 | 3.82 | 7.832 | | |
| 1,000.0 | 1,000.0 | 1,000.0 | 1,000.0 | 2.1 | 2.1 | -92.11 | -1.1 | -29.9 | 29.9 | 25.7 | 4.27 | 7.008 | | |
| 1,100.0 | 1,100.0 | 1,100.0 | 1,100.0 | 2.4 | 2.4 | -92.11 | -1.1 | -29.9 | 29.9 | 25.2 | 4.72 | 6.340 | | |
| 1,200.0 | 1,200.0 | 1,200.0 | 1,200.0 | 2.6 | 2.6 | -92.11 | -1.1 | -29.9 | 29.9 | 24.8 | 5.17 | 5.789 CC | | |
| 1,300.0 | 1,300.0 | 1,300.0 | 1,300.0 | 2.8 | 2.8 | 178.01 | -1.1 | -29.9 | 31.7 | 26.1 | 5.60 | 5.652 | | |
| 1,400.0 | 1,399.8 | 1,399.8 | 1,399.8 | 3.0 | 3.0 | 178.28 | -1.1 | -29.9 | 36.8 | 30.8 | 6.02 | 6.114 | | |
| 1,500.0 | 1,499.6 | 1,499.6 | 1,499.6 | 3.2 | 3.3 | 178.53 | -1.1 | -29.9 | 43.1 | 36.6 | 6.45 | 6.677 | | |
| 1,600.0 | 1,599.5 | 1,599.5 | 1,599.5 | 3.4 | 3.5 | 178.72 | -1.1 | -29.9 | 49.3 | 42.4 | 6.88 | 7.166 | | |
| 1,700.0 | 1,699.3 | 1,699.3 | 1,699.3 | 3.7 | 3.7 | 178.86 | -1.1 | -29.9 | 55.5 | 48.2 | 7.31 | 7.595 | | |
| 1,800.0 | 1,799.1 | 1,799.1 | 1,799.1 | 3.9 | 3.9 | 178.98 | -1.1 | -29.9 | 61.8 | 54.0 | 7.75 | 7.973 | | |
| 1,900.0 | 1,898.9 | 1,898.9 | 1,898.9 | 4.1 | 4.2 | 179.07 | -1.1 | -29.9 | 68.0 | 59.8 | 8.19 | 8.310 | | |
| 2,000.0 | 1,998.7 | 1,998.7 | 1,998.7 | 4.3 | 4.4 | 179.15 | -1.1 | -29.9 | 74.3 | 65.6 | 8.62 | 8.611 | | |
| 2,100.0 | 2,098.5 | 2,098.0 | 2,098.0 | 4.6 | 4.6 | -179.61 | 0.6 | -30.2 | 80.8 | 71.7 | 9.06 | 8.913 | | |
| 2,200.0 | 2,198.3 | 2,197.2 | 2,197.1 | 4.8 | 4.8 | -176.42 | 5.5 | -31.0 | 88.0 | 78.5 | 9.50 | 9.264 | | |
| 2,300.0 | 2,298.1 | 2,296.8 | 2,296.5 | 5.1 | 5.1 | -173.16 | 11.4 | -32.0 | 95.7 | 85.8 | 9.94 | 9.631 | | |
| 2,400.0 | 2,397.9 | 2,396.4 | 2,395.9 | 5.3 | 5.3 | -170.40 | 17.2 | -33.0 | 103.7 | 93.4 | 10.39 | 9.989 | | |
| 2,500.0 | 2,497.7 | 2,495.9 | 2,495.3 | 5.5 | 5.5 | -168.04 | 23.1 | -33.9 | 111.9 | 101.1 | 10.83 | 10.333 | | |
| 2,600.0 | 2,597.5 | 2,595.5 | 2,594.6 | 5.8 | 5.7 | -166.00 | 29.0 | -34.9 | 120.3 | 109.0 | 11.28 | 10.662 | | |
| 2,700.0 | 2,697.3 | 2,695.1 | 2,694.0 | 6.0 | 6.0 | -164.23 | 34.9 | -35.9 | 128.8 | 117.1 | 11.74 | 10.974 | | |
| 2,800.0 | 2,797.1 | 2,794.6 | 2,793.4 | 6.3 | 6.2 | -162.68 | 40.8 | -36.9 | 137.4 | 125.2 | 12.19 | 11.271 | | |
| 2,900.0 | 2,896.9 | 2,894.2 | 2,892.8 | 6.5 | 6.4 | -161.31 | 46.6 | -37.9 | 146.1 | 133.4 | 12.65 | 11.552 | | |
| 3,000.0 | 2,996.7 | 2,993.8 | 2,992.2 | 6.8 | 6.7 | -160.09 | 52.5 | -38.8 | 154.9 | 141.7 | 13.10 | 11.818 | | |
| 3,100.0 | 3,096.5 | 3,093.3 | 3,091.6 | 7.0 | 6.9 | -159.01 | 58.4 | -39.8 | 163.7 | 150.1 | 13.56 | 12.069 | | |
| 3,200.0 | 3,196.3 | 3,192.9 | 3,191.0 | 7.2 | 7.1 | -158.04 | 64.3 | -40.8 | 172.6 | 158.5 | 14.02 | 12.307 | | |
| 3,300.0 | 3,296.1 | 3,292.5 | 3,290.3 | 7.5 | 7.4 | -157.16 | 70.2 | -41.8 | 181.5 | 167.0 | 14.48 | 12.531 | | |
| 3,400.0 | 3,395.9 | 3,392.0 | 3,389.7 | 7.7 | 7.6 | -156.36 | 76.0 | -42.8 | 190.4 | 175.5 | 14.94 | 12.744 | | |
| 3,500.0 | 3,495.7 | 3,491.6 | 3,489.1 | 8.0 | 7.8 | -155.64 | 81.9 | -43.7 | 199.4 | 184.0 | 15.41 | 12.946 | | |
| 3,600.0 | 3,595.6 | 3,591.1 | 3,588.5 | 8.2 | 8.1 | -154.98 | 87.8 | -44.7 | 208.5 | 192.6 | 15.87 | 13.137 | | |
| 3,700.0 | 3,695.4 | 3,690.7 | 3,687.9 | 8.5 | 8.3 | -154.37 | 93.7 | -45.7 | 217.5 | 201.2 | 16.33 | 13.318 | | |
| 3,800.0 | 3,795.2 | 3,790.3 | 3,787.3 | 8.7 | 8.6 | -153.82 | 99.6 | -46.7 | 226.6 | 209.8 | 16.80 | 13.490 | | |
| 3,900.0 | 3,895.0 | 3,889.9 | 3,886.7 | 9.0 | 8.8 | -153.25 | 105.4 | -47.7 | 234.8 | 217.6 | 17.25 | 13.608 | | |
| 4,000.0 | 3,995.0 | 3,989.7 | 3,986.3 | 9.1 | 9.0 | -152.35 | 111.3 | -48.6 | 240.1 | 222.4 | 17.68 | 13.577 | | |
| 4,100.0 | 4,095.0 | 4,092.7 | 4,089.2 | 9.3 | 9.3 | -61.32 | 116.8 | -49.6 | 243.4 | 225.3 | 18.11 | 13.440 | | |
| 4,200.0 | 4,195.0 | 4,198.3 | 4,194.7 | 9.5 | 9.5 | -60.92 | 118.9 | -49.9 | 244.6 | 226.1 | 18.50 | 13.222 | | |
| 4,300.0 | 4,295.0 | 4,298.5 | 4,295.0 | 9.7 | 9.6 | -60.92 | 118.9 | -49.9 | 244.6 | 225.7 | 18.91 | 12.940 | | |
| 4,400.0 | 4,395.0 | 4,398.5 | 4,395.0 | 9.9 | 9.9 | -60.92 | 118.9 | -49.9 | 244.6 | 225.3 | 19.33 | 12.653 | | |
| 4,500.0 | 4,495.0 | 4,498.5 | 4,495.0 | 10.1 | 10.1 | -60.92 | 118.9 | -49.9 | 244.6 | 224.9 | 19.77 | 12.377 | | |
| 4,600.0 | 4,595.0 | 4,598.5 | 4,595.0 | 10.3 | 10.3 | -60.92 | 118.9 | -49.9 | 244.6 | 224.4 | 20.20 | 12.113 | | |
| 4,700.0 | 4,695.0 | 4,698.5 | 4,695.0 | 10.6 | 10.5 | -60.92 | 118.9 | -49.9 | 244.6 | 224.0 | 20.63 | 11.859 | | |
| 4,800.0 | 4,795.0 | 4,798.5 | 4,795.0 | 10.8 | 10.7 | -60.92 | 118.9 | -49.9 | 244.6 | 223.6 | 21.06 | 11.616 | | |
| 4,900.0 | 4,895.0 | 4,898.5 | 4,895.0 | 11.0 | 11.0 | -60.92 | 118.9 | -49.9 | 244.6 | 223.1 | 21.49 | 11.381 | | |
| 5,000.0 | 4,995.0 | 4,982.2 | 4,978.6 | 11.2 | 11.2 | -60.36 | 121.7 | -50.4 | 246.9 | 225.0 | 21.90 | 11.274 | | |
| 5,100.0 | 5,094.1 | 5,058.6 | 5,053.7 | 11.4 | 11.4 | -59.32 | 135.0 | -52.7 | 252.1 | 229.9 | 22.20 | 11.356 | | |

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

| Offset Design Horsetail 33M Pad Sec.33-T10N-R57W - Horsetail #33M-2803 - Wellbore #1 - Plan #1 (10-24-13) | | | | | | | | | | | | | Offset Site Error: 0.0 ft | |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------------------|---------|
| Survey Program: 0-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) | Minimum Separation (ft) | Separation Factor | | |
| 5,200.0 | 5,189.0 | 5,134.6 | 5,125.6 | 11.6 | 11.6 | -59.25 | 158.9 | -56.7 | 257.0 | 234.6 | 22.39 | 11.480 | | |
| 5,300.0 | 5,276.3 | 5,210.5 | 5,193.2 | 11.9 | 11.9 | -60.08 | 192.7 | -62.5 | 261.5 | 238.9 | 22.57 | 11.588 | | |
| 5,400.0 | 5,352.8 | 5,286.6 | 5,255.3 | 12.2 | 12.3 | -61.75 | 236.0 | -70.0 | 265.7 | 242.8 | 22.93 | 11.587 | | |
| 5,500.0 | 5,415.6 | 5,363.2 | 5,310.7 | 12.7 | 12.8 | -64.15 | 288.2 | -78.9 | 270.1 | 246.4 | 23.70 | 11.397 | | |
| 5,600.0 | 5,462.4 | 5,440.8 | 5,358.2 | 13.4 | 13.5 | -67.17 | 348.6 | -89.2 | 275.0 | 250.0 | 25.01 | 10.996 | | |
| 5,700.0 | 5,491.6 | 5,519.9 | 5,396.8 | 14.3 | 14.2 | -70.68 | 416.5 | -100.8 | 281.2 | 254.3 | 26.92 | 10.446 | | |
| 5,800.0 | 5,502.0 | 5,600.0 | 5,424.7 | 15.5 | 15.1 | -74.48 | 490.4 | -113.5 | 289.1 | 259.8 | 29.30 | 9.869 | | |
| 5,900.0 | 5,502.0 | 5,686.3 | 5,441.6 | 16.8 | 16.3 | -78.30 | 573.7 | -127.7 | 300.9 | 268.8 | 32.06 | 9.384 | | |
| 6,000.0 | 5,502.0 | 5,783.0 | 5,445.0 | 18.1 | 17.6 | -79.51 | 668.9 | -143.8 | 316.5 | 281.7 | 34.86 | 9.081 | | |
| 6,100.0 | 5,502.0 | 5,902.0 | 5,445.0 | 19.6 | 19.2 | -79.97 | 787.1 | -158.3 | 328.6 | 290.6 | 37.95 | 8.658 | | |
| 6,200.0 | 5,502.0 | 6,022.5 | 5,445.0 | 21.2 | 20.9 | -80.18 | 907.3 | -165.5 | 334.4 | 293.2 | 41.22 | 8.113 | | |
| 6,300.0 | 5,502.0 | 6,131.8 | 5,445.0 | 22.8 | 22.6 | -80.21 | 1,016.6 | -166.3 | 335.1 | 290.6 | 44.47 | 7.534 | | |
| 6,400.0 | 5,502.0 | 6,231.8 | 5,445.0 | 24.5 | 24.2 | -80.21 | 1,116.6 | -166.3 | 335.1 | 287.3 | 47.71 | 7.022 | | |
| 6,500.0 | 5,502.0 | 6,331.8 | 5,445.0 | 26.1 | 25.8 | -80.21 | 1,216.6 | -166.3 | 335.1 | 284.0 | 51.03 | 6.566 | | |
| 6,600.0 | 5,502.0 | 6,431.8 | 5,445.0 | 27.9 | 27.5 | -80.21 | 1,316.6 | -166.3 | 335.1 | 280.6 | 54.41 | 6.158 | | |
| 6,700.0 | 5,502.0 | 6,531.8 | 5,445.0 | 29.6 | 29.2 | -80.20 | 1,416.6 | -166.3 | 335.0 | 277.2 | 57.85 | 5.792 | | |
| 6,800.0 | 5,502.0 | 6,631.8 | 5,445.0 | 31.4 | 31.0 | -80.20 | 1,516.6 | -166.3 | 335.0 | 273.7 | 61.33 | 5.463 | | |
| 6,900.0 | 5,502.0 | 6,731.8 | 5,445.0 | 33.2 | 32.8 | -80.20 | 1,616.6 | -166.3 | 335.0 | 270.2 | 64.84 | 5.167 | | |
| 7,000.0 | 5,502.0 | 6,831.8 | 5,445.0 | 35.0 | 34.5 | -80.20 | 1,716.6 | -166.3 | 335.0 | 266.7 | 68.39 | 4.899 | | |
| 7,100.0 | 5,502.0 | 6,931.8 | 5,445.0 | 36.8 | 36.3 | -80.20 | 1,816.6 | -166.3 | 335.0 | 263.1 | 71.96 | 4.656 | | |
| 7,200.0 | 5,502.0 | 7,031.8 | 5,445.0 | 38.6 | 38.1 | -80.20 | 1,916.6 | -166.3 | 335.0 | 259.5 | 75.56 | 4.434 | | |
| 7,300.0 | 5,502.0 | 7,131.8 | 5,445.0 | 40.4 | 40.0 | -80.20 | 2,016.6 | -166.3 | 335.0 | 255.9 | 79.17 | 4.232 | | |
| 7,400.0 | 5,502.0 | 7,231.8 | 5,445.0 | 42.3 | 41.8 | -80.20 | 2,116.6 | -166.3 | 335.0 | 252.2 | 82.81 | 4.046 | | |
| 7,500.0 | 5,502.0 | 7,331.8 | 5,445.0 | 44.1 | 43.6 | -80.20 | 2,216.6 | -166.3 | 335.0 | 248.6 | 86.45 | 3.875 | | |
| 7,600.0 | 5,502.0 | 7,431.8 | 5,445.0 | 46.0 | 45.5 | -80.20 | 2,316.6 | -166.3 | 335.0 | 244.9 | 90.11 | 3.718 | | |
| 7,700.0 | 5,502.0 | 7,531.8 | 5,445.0 | 47.9 | 47.3 | -80.20 | 2,416.6 | -166.2 | 335.0 | 241.2 | 93.79 | 3.572 | | |
| 7,800.0 | 5,502.0 | 7,631.8 | 5,445.0 | 49.7 | 49.2 | -80.20 | 2,516.6 | -166.2 | 335.0 | 237.6 | 97.47 | 3.437 | | |
| 7,900.0 | 5,502.0 | 7,731.8 | 5,445.0 | 51.6 | 51.0 | -80.20 | 2,616.6 | -166.2 | 335.0 | 233.9 | 101.16 | 3.312 | | |
| 8,000.0 | 5,502.0 | 7,831.8 | 5,445.0 | 53.5 | 52.9 | -80.20 | 2,716.6 | -166.2 | 335.0 | 230.2 | 104.86 | 3.195 | | |
| 8,100.0 | 5,502.0 | 7,931.8 | 5,445.0 | 55.4 | 54.8 | -80.20 | 2,816.6 | -166.2 | 335.0 | 226.4 | 108.57 | 3.086 | | |
| 8,200.0 | 5,502.0 | 8,031.8 | 5,445.0 | 57.2 | 56.7 | -80.20 | 2,916.6 | -166.2 | 335.0 | 222.7 | 112.28 | 2.984 | | |
| 8,300.0 | 5,502.0 | 8,131.8 | 5,445.0 | 59.1 | 58.5 | -80.20 | 3,016.6 | -166.2 | 335.0 | 219.0 | 116.00 | 2.888 | | |
| 8,400.0 | 5,502.0 | 8,231.8 | 5,445.0 | 61.0 | 60.4 | -80.20 | 3,116.6 | -166.2 | 335.0 | 215.3 | 119.73 | 2.798 | | |
| 8,500.0 | 5,502.0 | 8,331.8 | 5,445.0 | 62.9 | 62.3 | -80.20 | 3,216.6 | -166.2 | 335.0 | 211.5 | 123.46 | 2.714 | | |
| 8,600.0 | 5,502.0 | 8,431.8 | 5,445.0 | 64.8 | 64.2 | -80.20 | 3,316.6 | -166.2 | 335.0 | 207.8 | 127.19 | 2.634 | | |
| 8,700.0 | 5,502.0 | 8,531.8 | 5,445.0 | 66.7 | 66.1 | -80.20 | 3,416.6 | -166.2 | 335.0 | 204.1 | 130.93 | 2.559 | | |
| 8,800.0 | 5,502.0 | 8,631.8 | 5,445.0 | 68.6 | 68.0 | -80.20 | 3,516.6 | -166.2 | 335.0 | 200.3 | 134.68 | 2.487 | | |
| 8,900.0 | 5,502.0 | 8,731.8 | 5,445.0 | 70.5 | 69.9 | -80.20 | 3,616.6 | -166.2 | 335.0 | 196.6 | 138.42 | 2.420 | | |
| 9,000.0 | 5,502.0 | 8,831.8 | 5,445.0 | 72.4 | 71.8 | -80.20 | 3,716.6 | -166.2 | 335.0 | 192.8 | 142.17 | 2.356 | | |
| 9,100.0 | 5,502.0 | 8,931.8 | 5,445.0 | 74.3 | 73.7 | -80.20 | 3,816.6 | -166.2 | 335.0 | 189.1 | 145.92 | 2.296 | | |
| 9,200.0 | 5,502.0 | 9,031.8 | 5,445.0 | 76.2 | 75.6 | -80.20 | 3,916.6 | -166.2 | 335.0 | 185.3 | 149.68 | 2.238 | | |
| 9,300.0 | 5,502.0 | 9,131.8 | 5,445.0 | 78.1 | 77.5 | -80.20 | 4,016.6 | -166.2 | 335.0 | 181.6 | 153.44 | 2.183 | | |
| 9,400.0 | 5,502.0 | 9,231.8 | 5,445.0 | 80.0 | 79.4 | -80.20 | 4,116.6 | -166.2 | 335.0 | 177.8 | 157.20 | 2.131 | | |
| 9,500.0 | 5,502.0 | 9,331.8 | 5,445.0 | 81.9 | 81.3 | -80.20 | 4,216.6 | -166.2 | 335.0 | 174.0 | 160.96 | 2.081 | | |
| 9,600.0 | 5,502.0 | 9,431.8 | 5,445.0 | 83.8 | 83.2 | -80.20 | 4,316.6 | -166.2 | 335.0 | 170.3 | 164.72 | 2.034 | | |
| 9,700.0 | 5,502.0 | 9,531.8 | 5,445.0 | 85.7 | 85.1 | -80.20 | 4,416.6 | -166.2 | 335.0 | 166.5 | 168.49 | 1.988 | | |
| 9,800.0 | 5,502.0 | 9,631.8 | 5,445.0 | 87.6 | 87.0 | -80.20 | 4,516.6 | -166.2 | 335.0 | 162.7 | 172.26 | 1.945 | | |
| 9,900.0 | 5,502.0 | 9,731.8 | 5,445.0 | 89.5 | 88.9 | -80.20 | 4,616.6 | -166.2 | 335.0 | 158.9 | 176.03 | 1.903 | | |
| 10,000.0 | 5,502.0 | 9,831.8 | 5,445.0 | 91.4 | 90.8 | -80.20 | 4,716.6 | -166.2 | 335.0 | 155.2 | 179.80 | 1.863 | | |
| 10,100.0 | 5,502.0 | 9,931.8 | 5,445.0 | 93.4 | 92.7 | -80.20 | 4,816.6 | -166.2 | 335.0 | 151.4 | 183.57 | 1.825 | | |
| 10,200.0 | 5,502.0 | 10,031.8 | 5,445.0 | 95.3 | 94.6 | -80.20 | 4,916.6 | -166.2 | 335.0 | 147.6 | 187.34 | 1.788 | | |
| 10,300.0 | 5,502.0 | 10,131.8 | 5,445.0 | 97.2 | 96.5 | -80.20 | 5,016.6 | -166.2 | 335.0 | 143.8 | 191.12 | 1.753 | | |

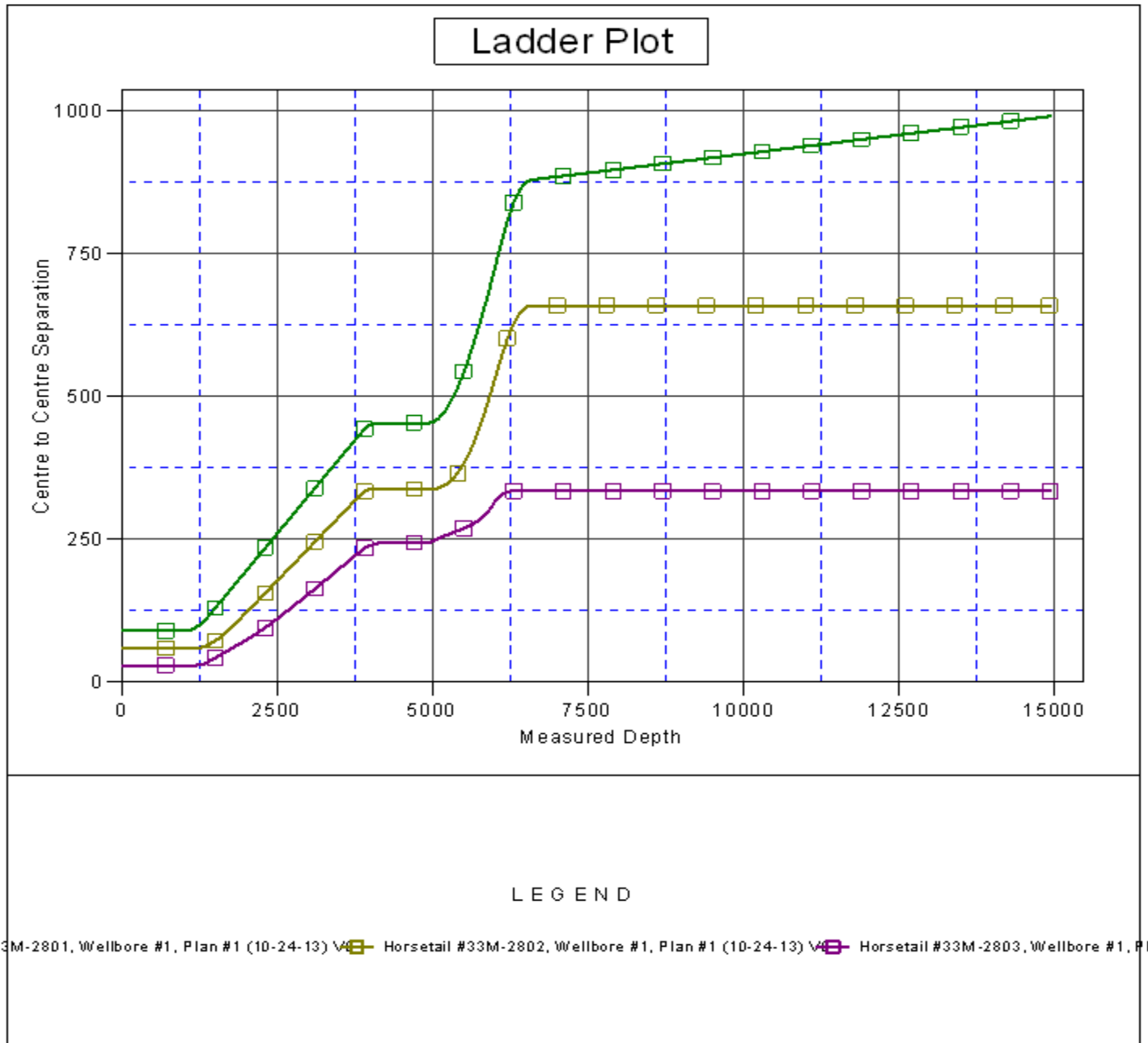
| | | | |
|---------------------------|------------------------------------|-------------------------------------|-------------------------------|
| Company: | Whiting Oil & Gas | Local Co-ordinate Reference: | Well Horsetail #33M-2804 |
| Project: | Sec.33-T10N-R57W | TVD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Reference Site: | Horsetail 33M Pad Sec.33-T10N-R57W | MD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Horsetail #33M-2804 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-24-13) | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-----------------------|---------|
| Survey Program: 0-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) | Minimum Separation (ft) | Separation Factor | Warning |
| 10,400.0 | 5,502.0 | 10,231.8 | 5,445.0 | 99.1 | 98.4 | -80.20 | 5,116.6 | -166.2 | 335.0 | 140.1 | 194.89 | 1.719 | |
| 10,500.0 | 5,502.0 | 10,331.8 | 5,445.0 | 101.0 | 100.3 | -80.20 | 5,216.6 | -166.2 | 335.0 | 136.3 | 198.67 | 1.686 | |
| 10,600.0 | 5,502.0 | 10,431.8 | 5,445.0 | 102.9 | 102.2 | -80.20 | 5,316.6 | -166.2 | 335.0 | 132.5 | 202.45 | 1.655 | |
| 10,700.0 | 5,502.0 | 10,531.8 | 5,445.0 | 104.8 | 104.2 | -80.20 | 5,416.6 | -166.2 | 335.0 | 128.7 | 206.23 | 1.624 | |
| 10,800.0 | 5,502.0 | 10,631.8 | 5,445.0 | 106.7 | 106.1 | -80.20 | 5,516.6 | -166.2 | 334.9 | 124.9 | 210.01 | 1.595 | |
| 10,900.0 | 5,502.0 | 10,731.8 | 5,445.0 | 108.7 | 108.0 | -80.20 | 5,616.6 | -166.2 | 334.9 | 121.2 | 213.79 | 1.567 | |
| 11,000.0 | 5,502.0 | 10,831.8 | 5,445.0 | 110.6 | 109.9 | -80.20 | 5,716.6 | -166.2 | 334.9 | 117.4 | 217.57 | 1.539 | |
| 11,100.0 | 5,502.0 | 10,931.8 | 5,445.0 | 112.5 | 111.8 | -80.20 | 5,816.6 | -166.2 | 334.9 | 113.6 | 221.36 | 1.513 | |
| 11,200.0 | 5,502.0 | 11,031.8 | 5,445.0 | 114.4 | 113.7 | -80.20 | 5,916.6 | -166.2 | 334.9 | 109.8 | 225.14 | 1.488 Level 3 | |
| 11,300.0 | 5,502.0 | 11,131.8 | 5,445.0 | 116.3 | 115.6 | -80.20 | 6,016.6 | -166.2 | 334.9 | 106.0 | 228.93 | 1.463 Level 3 | |
| 11,400.0 | 5,502.0 | 11,231.8 | 5,445.0 | 118.2 | 117.6 | -80.20 | 6,116.6 | -166.2 | 334.9 | 102.2 | 232.71 | 1.439 Level 3 | |
| 11,500.0 | 5,502.0 | 11,331.8 | 5,445.0 | 120.2 | 119.5 | -80.20 | 6,216.6 | -166.2 | 334.9 | 98.4 | 236.50 | 1.416 Level 3 | |
| 11,600.0 | 5,502.0 | 11,431.8 | 5,445.0 | 122.1 | 121.4 | -80.20 | 6,316.6 | -166.2 | 334.9 | 94.6 | 240.28 | 1.394 Level 3 | |
| 11,700.0 | 5,502.0 | 11,531.8 | 5,445.0 | 124.0 | 123.3 | -80.20 | 6,416.6 | -166.2 | 334.9 | 90.9 | 244.07 | 1.372 Level 3 | |
| 11,800.0 | 5,502.0 | 11,631.8 | 5,445.0 | 125.9 | 125.2 | -80.20 | 6,516.6 | -166.2 | 334.9 | 87.1 | 247.86 | 1.351 Level 3 | |
| 11,900.0 | 5,502.0 | 11,731.8 | 5,445.0 | 127.8 | 127.1 | -80.20 | 6,616.6 | -166.2 | 334.9 | 83.3 | 251.65 | 1.331 Level 3 | |
| 12,000.0 | 5,502.0 | 11,831.8 | 5,445.0 | 129.7 | 129.1 | -80.20 | 6,716.6 | -166.2 | 334.9 | 79.5 | 255.44 | 1.311 Level 3 | |
| 12,100.0 | 5,502.0 | 11,931.8 | 5,445.0 | 131.7 | 131.0 | -80.20 | 6,816.6 | -166.2 | 334.9 | 75.7 | 259.23 | 1.292 Level 3 | |
| 12,200.0 | 5,502.0 | 12,031.8 | 5,445.0 | 133.6 | 132.9 | -80.20 | 6,916.6 | -166.2 | 334.9 | 71.9 | 263.02 | 1.273 Level 3 | |
| 12,300.0 | 5,502.0 | 12,131.8 | 5,445.0 | 135.5 | 134.8 | -80.20 | 7,016.6 | -166.2 | 334.9 | 68.1 | 266.81 | 1.255 Level 3 | |
| 12,400.0 | 5,502.0 | 12,231.8 | 5,445.0 | 137.4 | 136.7 | -80.20 | 7,116.6 | -166.1 | 334.9 | 64.3 | 270.60 | 1.238 Level 2 | |
| 12,500.0 | 5,502.0 | 12,331.8 | 5,445.0 | 139.3 | 138.6 | -80.20 | 7,216.6 | -166.1 | 334.9 | 60.5 | 274.39 | 1.221 Level 2 | |
| 12,600.0 | 5,502.0 | 12,431.8 | 5,445.0 | 141.3 | 140.6 | -80.20 | 7,316.6 | -166.1 | 334.9 | 56.7 | 278.18 | 1.204 Level 2 | |
| 12,700.0 | 5,502.0 | 12,531.8 | 5,445.0 | 143.2 | 142.5 | -80.20 | 7,416.6 | -166.1 | 334.9 | 52.9 | 281.97 | 1.188 Level 2 | |
| 12,800.0 | 5,502.0 | 12,631.8 | 5,445.0 | 145.1 | 144.4 | -80.20 | 7,516.6 | -166.1 | 334.9 | 49.1 | 285.76 | 1.172 Level 2 | |
| 12,900.0 | 5,502.0 | 12,731.8 | 5,445.0 | 147.0 | 146.3 | -80.20 | 7,616.6 | -166.1 | 334.9 | 45.3 | 289.56 | 1.157 Level 2 | |
| 13,000.0 | 5,502.0 | 12,831.8 | 5,445.0 | 149.0 | 148.2 | -80.20 | 7,716.6 | -166.1 | 334.9 | 41.5 | 293.35 | 1.142 Level 2 | |
| 13,100.0 | 5,502.0 | 12,931.8 | 5,445.0 | 150.9 | 150.2 | -80.20 | 7,816.6 | -166.1 | 334.9 | 37.8 | 297.14 | 1.127 Level 2 | |
| 13,200.0 | 5,502.0 | 13,031.8 | 5,445.0 | 152.8 | 152.1 | -80.20 | 7,916.6 | -166.1 | 334.9 | 34.0 | 300.94 | 1.113 Level 2 | |
| 13,300.0 | 5,502.0 | 13,131.8 | 5,445.0 | 154.7 | 154.0 | -80.20 | 8,016.6 | -166.1 | 334.9 | 30.2 | 304.73 | 1.099 Level 2 | |
| 13,400.0 | 5,502.0 | 13,231.8 | 5,445.0 | 156.6 | 155.9 | -80.20 | 8,116.6 | -166.1 | 334.9 | 26.4 | 308.53 | 1.085 Level 2 | |
| 13,500.0 | 5,502.0 | 13,331.8 | 5,445.0 | 158.6 | 157.8 | -80.20 | 8,216.6 | -166.1 | 334.9 | 22.6 | 312.32 | 1.072 Level 2 | |
| 13,600.0 | 5,502.0 | 13,431.8 | 5,445.0 | 160.5 | 159.8 | -80.20 | 8,316.6 | -166.1 | 334.9 | 18.8 | 316.12 | 1.059 Level 2 | |
| 13,700.0 | 5,502.0 | 13,531.8 | 5,445.0 | 162.4 | 161.7 | -80.20 | 8,416.6 | -166.1 | 334.9 | 15.0 | 319.91 | 1.047 Level 2 | |
| 13,800.0 | 5,502.0 | 13,631.8 | 5,445.0 | 164.3 | 163.6 | -80.20 | 8,516.6 | -166.1 | 334.9 | 11.2 | 323.71 | 1.035 Level 2 | |
| 13,900.0 | 5,502.0 | 13,731.8 | 5,445.0 | 166.2 | 165.5 | -80.20 | 8,616.6 | -166.1 | 334.9 | 7.4 | 327.50 | 1.023 Level 2 | |
| 14,000.0 | 5,502.0 | 13,831.8 | 5,445.0 | 168.2 | 167.5 | -80.20 | 8,716.6 | -166.1 | 334.9 | 3.6 | 331.30 | 1.011 Level 2 | |
| 14,100.0 | 5,502.0 | 13,931.8 | 5,445.0 | 170.1 | 169.4 | -80.20 | 8,816.6 | -166.1 | 334.9 | -0.2 | 335.09 | 0.999 Level 1 | |
| 14,200.0 | 5,502.0 | 14,031.8 | 5,445.0 | 172.0 | 171.3 | -80.20 | 8,916.6 | -166.1 | 334.9 | -4.0 | 338.89 | 0.988 Level 1 | |
| 14,300.0 | 5,502.0 | 14,131.8 | 5,445.0 | 173.9 | 173.2 | -80.20 | 9,016.6 | -166.1 | 334.9 | -7.8 | 342.69 | 0.977 Level 1 | |
| 14,400.0 | 5,502.0 | 14,231.8 | 5,445.0 | 175.9 | 175.1 | -80.20 | 9,116.6 | -166.1 | 334.9 | -11.6 | 346.48 | 0.966 Level 1 | |
| 14,500.0 | 5,502.0 | 14,331.8 | 5,445.0 | 177.8 | 177.1 | -80.20 | 9,216.6 | -166.1 | 334.9 | -15.4 | 350.28 | 0.956 Level 1 | |
| 14,600.0 | 5,502.0 | 14,431.8 | 5,445.0 | 179.7 | 179.0 | -80.20 | 9,316.6 | -166.1 | 334.9 | -19.2 | 354.08 | 0.946 Level 1 | |
| 14,700.0 | 5,502.0 | 14,531.8 | 5,445.0 | 181.6 | 180.9 | -80.20 | 9,416.6 | -166.1 | 334.9 | -23.0 | 357.88 | 0.936 Level 1 | |
| 14,800.0 | 5,502.0 | 14,631.8 | 5,445.0 | 183.5 | 182.8 | -80.20 | 9,516.6 | -166.1 | 334.9 | -26.8 | 361.67 | 0.926 Level 1 | |
| 14,900.0 | 5,502.0 | 14,731.8 | 5,445.0 | 185.5 | 184.8 | -80.20 | 9,616.6 | -166.1 | 334.8 | -30.6 | 365.47 | 0.916 Level 1 | |
| 14,928.2 | 5,502.0 | 14,760.0 | 5,445.0 | 186.0 | 185.3 | -80.20 | 9,644.8 | -166.1 | 334.8 | -31.7 | 366.54 | 0.914 Level 1 | |
| 14,936.6 | 5,502.0 | 14,765.1 | 5,445.0 | 186.2 | 185.4 | -80.20 | 9,649.9 | -166.1 | 334.9 | -31.9 | 366.80 | 0.913 Level 1, ES, SF | |

| | | | |
|---------------------------|------------------------------------|-------------------------------------|-------------------------------|
| Company: | Whiting Oil & Gas | Local Co-ordinate Reference: | Well Horsetail #33M-2804 |
| Project: | Sec.33-T10N-R57W | TVD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Reference Site: | Horsetail 33M Pad Sec.33-T10N-R57W | MD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Horsetail #33M-2804 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-24-13) | Offset TVD Reference: | Offset Datum |

Reference Depths are relative to WELL @ 4651.3ft (RKB - 17.3')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Horsetail #33M-2804
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 1.12°



| | | | |
|---------------------------|------------------------------------|-------------------------------------|-------------------------------|
| Company: | Whiting Oil & Gas | Local Co-ordinate Reference: | Well Horsetail #33M-2804 |
| Project: | Sec.33-T10N-R57W | TVD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Reference Site: | Horsetail 33M Pad Sec.33-T10N-R57W | MD Reference: | WELL @ 4651.3ft (RKB - 17.3') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Horsetail #33M-2804 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-24-13) | Offset TVD Reference: | Offset Datum |

Reference Depths are relative to WELL @ 4651.3ft (RKB - 17.3')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Horsetail #33M-2804
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 1.12°

