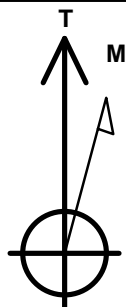


Great Western

Well Name: Spaur Brothers EH 31-019HN
 Surface Location: Spaur Brothers South Pad Sec.31-T7N-R63W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4736.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1435230.65 3286049.25 40.523553 -104.471033
 RKB - 16.5' WELL @ 4752.5ft (RKB - 16.5')

WELLBORE TARGET DETAILS

| Name | TVD | +N/-S | +E/-W | Shape |
|---------------------------|--------|--------|---------|-------|
| SHL 262'FSL & 210'FEL | 1.0 | 0.0 | 0.0 | Point |
| BHL 1'FSL & 470'FWL | 6715.0 | -304.2 | -4463.8 | Point |
| Entry Pt. 1'FSL & 460'FEL | 6715.0 | -263.0 | -248.8 | Point |



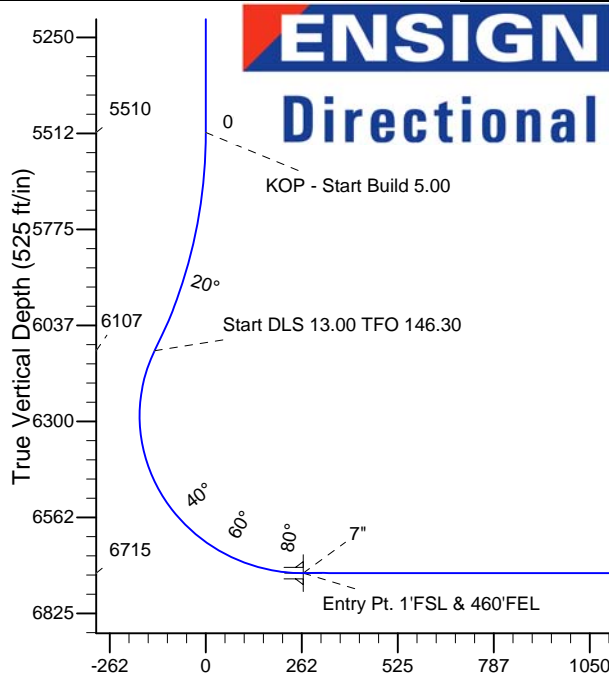
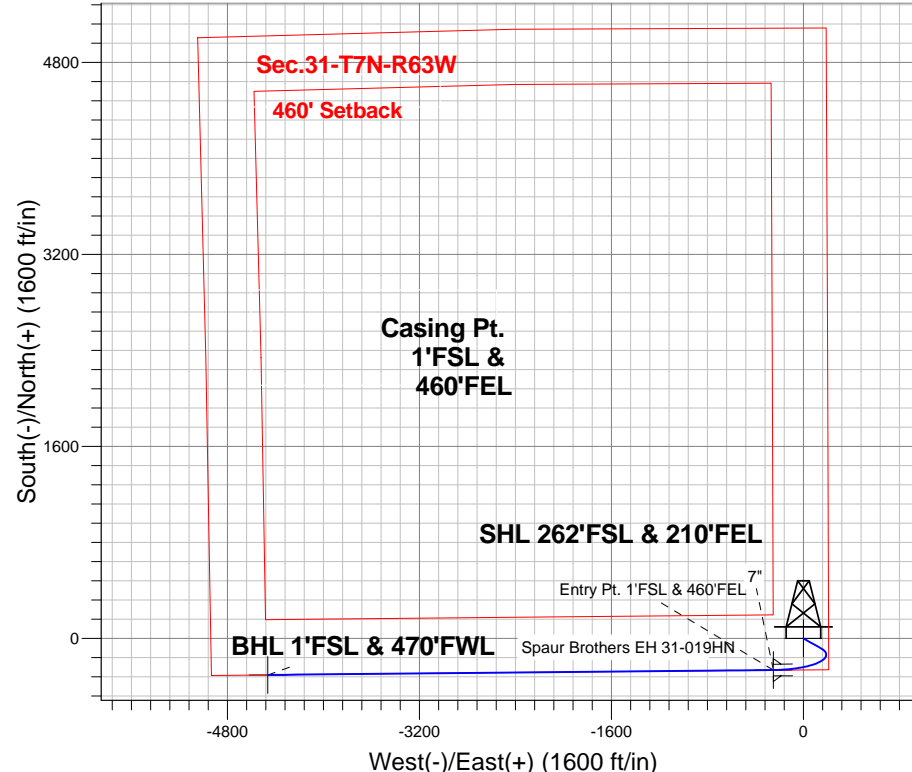
Azimuths to True North
 Magnetic North: 8.39°

Magnetic Field
 Strength: 52974.8snT
 Dip Angle: 67.11°
 Date: 11/6/2013
 Model: IGRF2010

Spaur Brothers South Pad Sec.31-T7N-R63W
 Spaur Brothers EH 31-019HN
 Plan #1 (11-6-13)
 8:45, November 07 2013

ANNOTATIONS

| TVD | MD | Annotation |
|--------|---------|----------------------------|
| 5510.0 | 5510.0 | KOP - Start Build 5.00 |
| 6107.1 | 6137.9 | Start DLS 13.00 TFO 146.30 |
| 6715.0 | 11244.6 | TD at 11244.6 |



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 | 5510.0 | 0.00 | 0.00 | 5510.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 3 | 6115.1 | 30.25 | 119.39 | 6087.3 | -76.6 | 136.0 | 5.00 | 119.39 | -130.5 | |
| 4 | 6137.9 | 30.25 | 119.39 | 6107.1 | -82.2 | 146.0 | 0.00 | 0.00 | -140.1 | |
| 5 | 7029.4 | 90.00 | 269.45 | 6715.0 | -263.0 | -248.8 | 13.00 | 146.30 | 266.1 | Entry Pt. 1'FSL & 460'FEL |
| 6 | 7030.3 | 90.00 | 269.44 | 6715.0 | -263.0 | -249.7 | 1.00 | -90.00 | 267.0 | |
| 7 | 11244.6 | 90.00 | 269.44 | 6715.0 | -304.2 | -4463.8 | 0.00 | 0.00 | 4474.2 | BHL 1'FSL & 470'FWL |

Vertical Section at 266.10° (525 ft/in)



Great Western

SEC.31-T7N-R63W

Spaur Brothers South Pad Sec.31-T7N-R63W

Spaur Brothers EH 31-019HN

Wellbore #1

Plan: Plan #1 (11-6-13)

Standard Planning Report

07 November, 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 | |
| 5,510.0 | 0.00 | 0.00 | 5,510.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,115.1 | 30.25 | 119.39 | 6,087.3 | -76.6 | 136.0 | 5.00 | 5.00 | 0.00 | 119.39 | |
| 6,137.9 | 30.25 | 119.39 | 6,107.1 | -82.2 | 146.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7,029.4 | 90.00 | 269.45 | 6,715.0 | -263.0 | -248.8 | 13.00 | 6.70 | 16.83 | 146.30 | Entry Pt. 1'FSL & 470'F |
| 7,030.3 | 90.00 | 269.44 | 6,715.0 | -263.0 | -249.7 | 1.00 | 0.00 | -1.00 | -90.00 | |
| 11,244.6 | 90.00 | 269.44 | 6,715.0 | -304.2 | -4,463.8 | 0.00 | 0.00 | 0.00 | 0.00 | BHL 1'FSL & 470'F |

| | | | |
|------------------|--|-------------------------------------|---------------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Spaur Brothers EH 31-019HN |
| Company: | Great Western | TVD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Project: | SEC.31-T7N-R63W | MD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Site: | Spaur Brothers South Pad Sec.31-T7N-R63W | North Reference: | True |
| Well: | Spaur Brothers EH 31-019HN | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #1 (11-6-13) | | |

| 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 262°FSL & 210°FEL | | | | | | | | | |
| 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 |
| 1,300.0 | 0.00 | 0.00 | 1,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,400.0 | 0.00 | 0.00 | 1,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,500.0 | 0.00 | 0.00 | 1,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,600.0 | 0.00 | 0.00 | 1,600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,700.0 | 0.00 | 0.00 | 1,700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,800.0 | 0.00 | 0.00 | 1,800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,900.0 | 0.00 | 0.00 | 1,900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,000.0 | 0.00 | 0.00 | 2,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,100.0 | 0.00 | 0.00 | 2,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,200.0 | 0.00 | 0.00 | 2,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,300.0 | 0.00 | 0.00 | 2,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,400.0 | 0.00 | 0.00 | 2,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,500.0 | 0.00 | 0.00 | 2,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,600.0 | 0.00 | 0.00 | 2,600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,700.0 | 0.00 | 0.00 | 2,700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,800.0 | 0.00 | 0.00 | 2,800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,900.0 | 0.00 | 0.00 | 2,900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,000.0 | 0.00 | 0.00 | 3,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,100.0 | 0.00 | 0.00 | 3,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,200.0 | 0.00 | 0.00 | 3,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,300.0 | 0.00 | 0.00 | 3,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 0.00 | 0.00 | 3,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,500.0 | 0.00 | 0.00 | 3,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,600.0 | 0.00 | 0.00 | 3,600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,700.0 | 0.00 | 0.00 | 3,700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,800.0 | 0.00 | 0.00 | 3,800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 3,900.0 | 0.00 | 0.00 | 3,900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,000.0 | 0.00 | 0.00 | 4,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,100.0 | 0.00 | 0.00 | 4,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,200.0 | 0.00 | 0.00 | 4,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,300.0 | 0.00 | 0.00 | 4,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,400.0 | 0.00 | 0.00 | 4,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,500.0 | 0.00 | 0.00 | 4,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,600.0 | 0.00 | 0.00 | 4,600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,700.0 | 0.00 | 0.00 | 4,700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,800.0 | 0.00 | 0.00 | 4,800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 4,900.0 | 0.00 | 0.00 | 4,900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 5,000.0 | 0.00 | 0.00 | 5,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 5,100.0 | 0.00 | 0.00 | 5,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |

| | | | |
|------------------|--|-------------------------------------|---------------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Spaur Brothers EH 31-019HN |
| Company: | Great Western | TVD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Project: | SEC.31-T7N-R63W | MD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Site: | Spaur Brothers South Pad Sec.31-T7N-R63W | North Reference: | True |
| Well: | Spaur Brothers EH 31-019HN | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #1 (11-6-13) | | |

| 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) |
| 5,200.0 | 0.00 | 0.00 | 5,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 5,300.0 | 0.00 | 0.00 | 5,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 5,400.0 | 0.00 | 0.00 | 5,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 5,500.0 | 0.00 | 0.00 | 5,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 5,510.0 | 0.00 | 0.00 | 5,510.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| KOP - Start Build 5.00 | | | | | | | | | |
| 5,600.0 | 4.50 | 119.39 | 5,599.9 | -1.7 | 3.1 | -3.0 | 5.00 | 5.00 | 0.00 |
| 5,700.0 | 9.50 | 119.39 | 5,699.1 | -7.7 | 13.7 | -13.1 | 5.00 | 5.00 | 0.00 |
| 5,800.0 | 14.50 | 119.39 | 5,796.9 | -17.9 | 31.8 | -30.5 | 5.00 | 5.00 | 0.00 |
| 5,900.0 | 19.50 | 119.39 | 5,892.5 | -32.3 | 57.3 | -54.9 | 5.00 | 5.00 | 0.00 |
| 6,000.0 | 24.50 | 119.39 | 5,985.2 | -50.6 | 89.9 | -86.2 | 5.00 | 5.00 | 0.00 |
| 6,100.0 | 29.50 | 119.39 | 6,074.3 | -72.9 | 129.4 | -124.2 | 5.00 | 5.00 | 0.00 |
| 6,115.1 | 30.25 | 119.39 | 6,087.3 | -76.6 | 136.0 | -130.5 | 5.00 | 5.00 | 0.00 |
| 6,137.9 | 30.25 | 119.39 | 6,107.1 | -82.2 | 146.0 | -140.1 | 0.00 | 0.00 | 0.00 |
| Start DLS 13.00 TFO 146.30 | | | | | | | | | |
| 6,200.0 | 23.92 | 130.47 | 6,162.4 | -98.1 | 169.2 | -162.2 | 13.00 | -10.20 | 17.84 |
| 6,300.0 | 16.91 | 162.69 | 6,256.3 | -125.3 | 189.1 | -180.1 | 13.00 | -7.01 | 32.22 |
| 6,400.0 | 18.13 | 206.69 | 6,352.1 | -153.2 | 186.4 | -175.6 | 13.00 | 1.22 | 44.00 |
| 6,500.0 | 26.46 | 233.65 | 6,444.8 | -180.4 | 161.4 | -148.7 | 13.00 | 8.33 | 26.97 |
| 6,600.0 | 37.42 | 247.08 | 6,529.6 | -205.6 | 115.2 | -101.0 | 13.00 | 10.96 | 13.43 |
| 6,700.0 | 49.27 | 254.93 | 6,602.2 | -227.3 | 50.4 | -34.8 | 13.00 | 11.85 | 7.85 |
| 6,800.0 | 61.48 | 260.35 | 6,659.0 | -244.6 | -29.8 | 46.4 | 13.00 | 12.22 | 5.42 |
| 6,900.0 | 73.87 | 264.62 | 6,696.9 | -256.5 | -121.4 | 138.5 | 13.00 | 12.39 | 4.27 |
| 7,000.0 | 86.34 | 268.38 | 6,714.1 | -262.5 | -219.5 | 236.8 | 13.00 | 12.46 | 3.76 |
| 7,029.4 | 90.00 | 269.45 | 6,715.0 | -263.0 | -248.8 | 266.1 | 12.98 | 12.46 | 3.63 |
| 7" - Entry Pt. 1'FSL & 460'FEL | | | | | | | | | |
| 7,030.3 | 90.00 | 269.44 | 6,715.0 | -263.0 | -249.7 | 267.0 | 1.00 | 0.52 | -0.85 |
| 7,100.0 | 90.00 | 269.44 | 6,715.0 | -263.7 | -319.5 | 336.6 | 0.00 | 0.00 | 0.00 |
| 7,200.0 | 90.00 | 269.44 | 6,715.0 | -264.7 | -419.5 | 436.5 | 0.00 | 0.00 | 0.00 |
| 7,300.0 | 90.00 | 269.44 | 6,715.0 | -265.7 | -519.4 | 536.3 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 90.00 | 269.44 | 6,715.0 | -266.6 | -619.4 | 636.1 | 0.00 | 0.00 | 0.00 |
| 7,500.0 | 90.00 | 269.44 | 6,715.0 | -267.6 | -719.4 | 736.0 | 0.00 | 0.00 | 0.00 |
| 7,600.0 | 90.00 | 269.44 | 6,715.0 | -268.6 | -819.4 | 835.8 | 0.00 | 0.00 | 0.00 |
| 7,700.0 | 90.00 | 269.44 | 6,715.0 | -269.6 | -919.4 | 935.6 | 0.00 | 0.00 | 0.00 |
| 7,800.0 | 90.00 | 269.44 | 6,715.0 | -270.5 | -1,019.4 | 1,035.5 | 0.00 | 0.00 | 0.00 |
| 7,900.0 | 90.00 | 269.44 | 6,715.0 | -271.5 | -1,119.4 | 1,135.3 | 0.00 | 0.00 | 0.00 |
| 8,000.0 | 90.00 | 269.44 | 6,715.0 | -272.5 | -1,219.4 | 1,235.1 | 0.00 | 0.00 | 0.00 |
| 8,100.0 | 90.00 | 269.44 | 6,715.0 | -273.5 | -1,319.4 | 1,334.9 | 0.00 | 0.00 | 0.00 |
| 8,200.0 | 90.00 | 269.44 | 6,715.0 | -274.4 | -1,419.4 | 1,434.8 | 0.00 | 0.00 | 0.00 |
| 8,300.0 | 90.00 | 269.44 | 6,715.0 | -275.4 | -1,519.4 | 1,534.6 | 0.00 | 0.00 | 0.00 |
| 8,400.0 | 90.00 | 269.44 | 6,715.0 | -276.4 | -1,619.4 | 1,634.4 | 0.00 | 0.00 | 0.00 |
| 8,500.0 | 90.00 | 269.44 | 6,715.0 | -277.4 | -1,719.4 | 1,734.3 | 0.00 | 0.00 | 0.00 |
| 8,600.0 | 90.00 | 269.44 | 6,715.0 | -278.4 | -1,819.4 | 1,834.1 | 0.00 | 0.00 | 0.00 |
| 8,700.0 | 90.00 | 269.44 | 6,715.0 | -279.3 | -1,919.4 | 1,933.9 | 0.00 | 0.00 | 0.00 |
| 8,800.0 | 90.00 | 269.44 | 6,715.0 | -280.3 | -2,019.4 | 2,033.8 | 0.00 | 0.00 | 0.00 |
| 8,900.0 | 90.00 | 269.44 | 6,715.0 | -281.3 | -2,119.4 | 2,133.6 | 0.00 | 0.00 | 0.00 |
| 9,000.0 | 90.00 | 269.44 | 6,715.0 | -282.3 | -2,219.4 | 2,233.4 | 0.00 | 0.00 | 0.00 |
| 9,100.0 | 90.00 | 269.44 | 6,715.0 | -283.2 | -2,319.4 | 2,333.3 | 0.00 | 0.00 | 0.00 |
| 9,200.0 | 90.00 | 269.44 | 6,715.0 | -284.2 | -2,419.4 | 2,433.1 | 0.00 | 0.00 | 0.00 |
| 9,300.0 | 90.00 | 269.44 | 6,715.0 | -285.2 | -2,519.4 | 2,532.9 | 0.00 | 0.00 | 0.00 |
| 9,400.0 | 90.00 | 269.44 | 6,715.0 | -286.2 | -2,619.3 | 2,632.7 | 0.00 | 0.00 | 0.00 |
| 9,500.0 | 90.00 | 269.44 | 6,715.0 | -287.1 | -2,719.3 | 2,732.6 | 0.00 | 0.00 | 0.00 |
| 9,600.0 | 90.00 | 269.44 | 6,715.0 | -288.1 | -2,819.3 | 2,832.4 | 0.00 | 0.00 | 0.00 |

| Plan Annotations | | | | |
|---------------------------|---------------------------|-------------------|---------------|----------------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment |
| | | +N/-S (ft) | +E/-W (ft) | |
| 5,510.0 | 5,510.0 | 0.0 | 0.0 | KOP - Start Build 5.00 |
| 6,137.9 | 6,107.1 | -82.2 | 146.0 | Start DLS 13.00 TFO 146.30 |
| 11,244.6 | 6,715.0 | -304.2 | -4,463.9 | TD at 11244.6 |



Great Western

SEC.31-T7N-R63W

Spaur Brothers South Pad Sec.31-T7N-R63W

Spaur Brothers EH 31-019HN

Wellbore #1

Plan #1 (11-6-13)

Anticollision Report

07 November, 2013

| | | | |
|---------------------------|--|-------------------------------------|---------------------------------|
| Company: | Great Western | Local Co-ordinate Reference: | Well Spaur Brothers EH 31-019HN |
| Project: | SEC.31-T7N-R63W | TVD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Reference Site: | Spaur Brothers South Pad Sec.31-T7N-R63W | MD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Spaur Brothers EH 31-019HN | 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 (11-6-13) | Offset TVD Reference: | Offset Datum |

| | | | |
|-------------------------------------|---|-----------------------|---------------------|
| Reference | Plan #1 (11-6-13) | | |
| 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 11/6/2013 | | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description |
| 0.0 | 11,244.6 | Plan #1 (11-6-13) (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 | | | | | | |
| Spaur Brothers South Pad Sec.31-T7N-R63W | | | | | | |
| Spaur Brothers EH 31-339HC - Wellbore #1 - Plan #1 (11-6-13) | 5,252.4 | 5,252.4 | 59.8 | 36.4 | 2.555 | CC |
| Spaur Brothers EH 31-339HC - Wellbore #1 - Plan #1 (11-6-13) | 5,300.0 | 5,299.2 | 60.0 | 36.4 | 2.541 | ES, SF |
| Spaur Brothers EH 31-339HN - Wellbore #1 - Plan #1 (11-6-13) | 4,900.0 | 4,900.0 | 90.0 | 68.2 | 4.128 | CC, ES, SF |
| Spaur Brothers EH 31-379HN - Wellbore #1 - Plan #1 (11-6-13) | 5,500.0 | 5,500.0 | 29.1 | 4.6 | 1.190 | Level 2, CC, ES, SF |

| | | | | | | | | | | | | |
|---|----------------------------|----------------------------|----------------------------|-----------------------|--------------------|------------------------------|--|--|--------------------------------------|---------------------------------------|--------------------------------|--------------------------|
| Offset Design | | | | | | | | | | | | |
| Spaur Brothers South Pad Sec.31-T7N-R63W - Spaur Brothers EH 31-339HC - Wellbore #1 - Plan #1 (11-6-13) | | | | | | | | | | | | |
| Survey Program: 0-MWD | | | | | | | | | | | | |
| Reference | | | | | | | | | | | | |
| 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 | 0.00 | 59.8 | 0.0 | 59.8 | | | |
| 100.0 | 100.0 | 100.0 | 100.0 | 0.1 | 0.1 | 0.00 | 59.8 | 0.0 | 59.8 | 59.5 | 0.22 | 265.843 |
| 200.0 | 200.0 | 200.0 | 200.0 | 0.3 | 0.3 | 0.00 | 59.8 | 0.0 | 59.8 | 59.1 | 0.67 | 88.614 |
| 300.0 | 300.0 | 300.0 | 300.0 | 0.6 | 0.6 | 0.00 | 59.8 | 0.0 | 59.8 | 58.6 | 1.12 | 53.169 |
| 400.0 | 400.0 | 400.0 | 400.0 | 0.8 | 0.8 | 0.00 | 59.8 | 0.0 | 59.8 | 58.2 | 1.57 | 37.978 |
| 500.0 | 500.0 | 500.0 | 500.0 | 1.0 | 1.0 | 0.00 | 59.8 | 0.0 | 59.8 | 57.7 | 2.02 | 29.538 |
| 600.0 | 600.0 | 600.0 | 600.0 | 1.2 | 1.2 | 0.00 | 59.8 | 0.0 | 59.8 | 57.3 | 2.47 | 24.168 |
| 700.0 | 700.0 | 700.0 | 700.0 | 1.5 | 1.5 | 0.00 | 59.8 | 0.0 | 59.8 | 56.8 | 2.92 | 20.449 |
| 800.0 | 800.0 | 800.0 | 800.0 | 1.7 | 1.7 | 0.00 | 59.8 | 0.0 | 59.8 | 56.4 | 3.37 | 17.723 |
| 900.0 | 900.0 | 900.0 | 900.0 | 1.9 | 1.9 | 0.00 | 59.8 | 0.0 | 59.8 | 55.9 | 3.82 | 15.638 |
| 1,000.0 | 1,000.0 | 1,000.0 | 1,000.0 | 2.1 | 2.1 | 0.00 | 59.8 | 0.0 | 59.8 | 55.5 | 4.27 | 13.992 |
| 1,100.0 | 1,100.0 | 1,100.0 | 1,100.0 | 2.4 | 2.4 | 0.00 | 59.8 | 0.0 | 59.8 | 55.0 | 4.72 | 12.659 |
| 1,200.0 | 1,200.0 | 1,200.0 | 1,200.0 | 2.6 | 2.6 | 0.00 | 59.8 | 0.0 | 59.8 | 54.6 | 5.17 | 11.558 |
| 1,300.0 | 1,300.0 | 1,300.0 | 1,300.0 | 2.8 | 2.8 | 0.00 | 59.8 | 0.0 | 59.8 | 54.1 | 5.62 | 10.634 |
| 1,400.0 | 1,400.0 | 1,400.0 | 1,400.0 | 3.0 | 3.0 | 0.00 | 59.8 | 0.0 | 59.8 | 53.7 | 6.07 | 9.846 |
| 1,500.0 | 1,500.0 | 1,500.0 | 1,500.0 | 3.3 | 3.3 | 0.00 | 59.8 | 0.0 | 59.8 | 53.2 | 6.52 | 9.167 |
| 1,600.0 | 1,600.0 | 1,600.0 | 1,600.0 | 3.5 | 3.5 | 0.00 | 59.8 | 0.0 | 59.8 | 52.8 | 6.97 | 8.576 |
| 1,700.0 | 1,700.0 | 1,700.0 | 1,700.0 | 3.7 | 3.7 | 0.00 | 59.8 | 0.0 | 59.8 | 52.3 | 7.42 | 8.056 |
| 1,800.0 | 1,800.0 | 1,800.0 | 1,800.0 | 3.9 | 3.9 | 0.00 | 59.8 | 0.0 | 59.8 | 51.9 | 7.87 | 7.596 |
| 1,900.0 | 1,900.0 | 1,900.0 | 1,900.0 | 4.2 | 4.2 | 0.00 | 59.8 | 0.0 | 59.8 | 51.4 | 8.32 | 7.185 |
| 2,000.0 | 2,000.0 | 2,000.0 | 2,000.0 | 4.4 | 4.4 | 0.00 | 59.8 | 0.0 | 59.8 | 51.0 | 8.77 | 6.816 |
| 2,100.0 | 2,100.0 | 2,100.0 | 2,100.0 | 4.6 | 4.6 | 0.00 | 59.8 | 0.0 | 59.8 | 50.5 | 9.22 | 6.484 |
| 2,200.0 | 2,200.0 | 2,200.0 | 2,200.0 | 4.8 | 4.8 | 0.00 | 59.8 | 0.0 | 59.8 | 50.1 | 9.66 | 6.182 |

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

| | | | |
|---------------------------|--|-------------------------------------|---------------------------------|
| Company: | Great Western | Local Co-ordinate Reference: | Well Spaur Brothers EH 31-019HN |
| Project: | SEC.31-T7N-R63W | TVD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Reference Site: | Spaur Brothers South Pad Sec.31-T7N-R63W | MD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Spaur Brothers EH 31-019HN | 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 (11-6-13) | 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 | |
| 2,300.0 | 2,300.0 | 2,300.0 | 2,300.0 | 5.1 | 5.1 | 0.00 | 59.8 | 0.0 | 59.8 | 49.6 | 10.11 | 5.908 | |
| 2,400.0 | 2,400.0 | 2,400.0 | 2,400.0 | 5.3 | 5.3 | 0.00 | 59.8 | 0.0 | 59.8 | 49.2 | 10.56 | 5.656 | |
| 2,500.0 | 2,500.0 | 2,500.0 | 2,500.0 | 5.5 | 5.5 | 0.00 | 59.8 | 0.0 | 59.8 | 48.7 | 11.01 | 5.425 | |
| 2,600.0 | 2,600.0 | 2,600.0 | 2,600.0 | 5.7 | 5.7 | 0.00 | 59.8 | 0.0 | 59.8 | 48.3 | 11.46 | 5.213 | |
| 2,700.0 | 2,700.0 | 2,700.0 | 2,700.0 | 6.0 | 6.0 | 0.00 | 59.8 | 0.0 | 59.8 | 47.8 | 11.91 | 5.016 | |
| 2,800.0 | 2,800.0 | 2,800.0 | 2,800.0 | 6.2 | 6.2 | 0.00 | 59.8 | 0.0 | 59.8 | 47.4 | 12.36 | 4.834 | |
| 2,900.0 | 2,900.0 | 2,900.0 | 2,900.0 | 6.4 | 6.4 | 0.00 | 59.8 | 0.0 | 59.8 | 46.9 | 12.81 | 4.664 | |
| 3,000.0 | 3,000.0 | 3,000.0 | 3,000.0 | 6.6 | 6.6 | 0.00 | 59.8 | 0.0 | 59.8 | 46.5 | 13.26 | 4.506 | |
| 3,100.0 | 3,100.0 | 3,100.0 | 3,100.0 | 6.9 | 6.9 | 0.00 | 59.8 | 0.0 | 59.8 | 46.0 | 13.71 | 4.358 | |
| 3,200.0 | 3,200.0 | 3,200.0 | 3,200.0 | 7.1 | 7.1 | 0.00 | 59.8 | 0.0 | 59.8 | 45.6 | 14.16 | 4.220 | |
| 3,300.0 | 3,300.0 | 3,300.0 | 3,300.0 | 7.3 | 7.3 | 0.00 | 59.8 | 0.0 | 59.8 | 45.1 | 14.61 | 4.090 | |
| 3,400.0 | 3,400.0 | 3,400.0 | 3,400.0 | 7.5 | 7.5 | 0.00 | 59.8 | 0.0 | 59.8 | 44.7 | 15.06 | 3.968 | |
| 3,500.0 | 3,500.0 | 3,500.0 | 3,500.0 | 7.8 | 7.8 | 0.00 | 59.8 | 0.0 | 59.8 | 44.2 | 15.51 | 3.853 | |
| 3,600.0 | 3,600.0 | 3,600.0 | 3,600.0 | 8.0 | 8.0 | 0.00 | 59.8 | 0.0 | 59.8 | 43.8 | 15.96 | 3.744 | |
| 3,700.0 | 3,700.0 | 3,700.0 | 3,700.0 | 8.2 | 8.2 | 0.00 | 59.8 | 0.0 | 59.8 | 43.3 | 16.41 | 3.642 | |
| 3,800.0 | 3,800.0 | 3,800.0 | 3,800.0 | 8.4 | 8.4 | 0.00 | 59.8 | 0.0 | 59.8 | 42.9 | 16.86 | 3.545 | |
| 3,900.0 | 3,900.0 | 3,900.0 | 3,900.0 | 8.7 | 8.7 | 0.00 | 59.8 | 0.0 | 59.8 | 42.4 | 17.31 | 3.453 | |
| 4,000.0 | 4,000.0 | 4,000.0 | 4,000.0 | 8.9 | 8.9 | 0.00 | 59.8 | 0.0 | 59.8 | 42.0 | 17.76 | 3.365 | |
| 4,100.0 | 4,100.0 | 4,100.0 | 4,100.0 | 9.1 | 9.1 | 0.00 | 59.8 | 0.0 | 59.8 | 41.5 | 18.21 | 3.282 | |
| 4,200.0 | 4,200.0 | 4,200.0 | 4,200.0 | 9.3 | 9.3 | 0.00 | 59.8 | 0.0 | 59.8 | 41.1 | 18.66 | 3.203 | |
| 4,300.0 | 4,300.0 | 4,300.0 | 4,300.0 | 9.6 | 9.6 | 0.00 | 59.8 | 0.0 | 59.8 | 40.6 | 19.11 | 3.128 | |
| 4,400.0 | 4,400.0 | 4,400.0 | 4,400.0 | 9.8 | 9.8 | 0.00 | 59.8 | 0.0 | 59.8 | 40.2 | 19.55 | 3.056 | |
| 4,500.0 | 4,500.0 | 4,500.0 | 4,500.0 | 10.0 | 10.0 | 0.00 | 59.8 | 0.0 | 59.8 | 39.7 | 20.00 | 2.987 | |
| 4,600.0 | 4,600.0 | 4,600.0 | 4,600.0 | 10.2 | 10.2 | 0.00 | 59.8 | 0.0 | 59.8 | 39.3 | 20.45 | 2.921 | |
| 4,700.0 | 4,700.0 | 4,700.0 | 4,700.0 | 10.5 | 10.5 | 0.00 | 59.8 | 0.0 | 59.8 | 38.8 | 20.90 | 2.859 | |
| 4,800.0 | 4,800.0 | 4,800.0 | 4,800.0 | 10.7 | 10.7 | 0.00 | 59.8 | 0.0 | 59.8 | 38.4 | 21.35 | 2.798 | |
| 4,900.0 | 4,900.0 | 4,900.0 | 4,900.0 | 10.9 | 10.9 | 0.00 | 59.8 | 0.0 | 59.8 | 38.0 | 21.80 | 2.741 | |
| 5,000.0 | 5,000.0 | 5,000.0 | 5,000.0 | 11.1 | 11.1 | 0.00 | 59.8 | 0.0 | 59.8 | 37.5 | 22.25 | 2.685 | |
| 5,100.0 | 5,100.0 | 5,100.0 | 5,100.0 | 11.4 | 11.4 | 0.00 | 59.8 | 0.0 | 59.8 | 37.1 | 22.70 | 2.632 | |
| 5,200.0 | 5,200.0 | 5,200.0 | 5,200.0 | 11.6 | 11.6 | 0.00 | 59.8 | 0.0 | 59.8 | 36.6 | 23.15 | 2.581 | |
| 5,252.4 | 5,252.4 | 5,252.4 | 5,252.4 | 11.7 | 11.7 | 0.00 | 59.8 | 0.0 | 59.8 | 36.4 | 23.39 | 2.555 CC | |
| 5,300.0 | 5,300.0 | 5,299.2 | 5,299.2 | 11.8 | 11.8 | 0.11 | 59.9 | 0.1 | 60.0 | 36.4 | 23.60 | 2.541 ES, SF | |
| 5,400.0 | 5,400.0 | 5,396.4 | 5,396.3 | 12.0 | 12.0 | 1.86 | 63.4 | 2.1 | 63.5 | 39.5 | 24.04 | 2.643 | |
| 5,500.0 | 5,500.0 | 5,492.9 | 5,492.4 | 12.2 | 12.2 | 5.15 | 71.1 | 6.4 | 71.7 | 47.3 | 24.47 | 2.932 | |
| 5,600.0 | 5,599.9 | 5,588.2 | 5,586.7 | 12.5 | 12.4 | -111.95 | 82.8 | 13.0 | 86.1 | 61.2 | 24.89 | 3.459 | |
| 5,700.0 | 5,699.1 | 5,681.3 | 5,678.1 | 12.6 | 12.7 | -113.00 | 98.1 | 21.8 | 108.2 | 82.9 | 25.25 | 4.284 | |
| 5,800.0 | 5,796.9 | 5,771.2 | 5,765.4 | 12.9 | 12.9 | -115.36 | 116.6 | 32.3 | 138.2 | 112.6 | 25.59 | 5.400 | |
| 5,900.0 | 5,892.5 | 5,856.9 | 5,847.7 | 13.1 | 13.1 | -117.73 | 137.6 | 44.1 | 176.1 | 150.3 | 25.87 | 6.808 | |
| 6,000.0 | 5,985.2 | 5,937.8 | 5,924.2 | 13.4 | 13.3 | -119.54 | 160.3 | 57.0 | 222.0 | 195.9 | 26.13 | 8.494 | |
| 6,100.0 | 6,074.3 | 6,013.2 | 5,994.6 | 13.7 | 13.6 | -120.60 | 184.0 | 70.5 | 275.3 | 248.9 | 26.40 | 10.431 | |
| 6,200.0 | 6,162.4 | 6,084.6 | 6,060.1 | 14.1 | 13.8 | -138.22 | 208.6 | 84.4 | 334.2 | 307.7 | 26.56 | 12.586 | |
| 6,300.0 | 6,256.3 | 6,153.6 | 6,122.4 | 14.4 | 14.1 | -176.17 | 234.4 | 99.1 | 394.2 | 367.2 | 27.04 | 14.578 | |
| 6,400.0 | 6,352.1 | 6,215.9 | 6,177.7 | 14.7 | 14.3 | 136.58 | 259.4 | 113.2 | 453.8 | 426.0 | 27.78 | 16.335 | |
| 6,500.0 | 6,444.8 | 6,268.2 | 6,223.4 | 14.8 | 14.6 | 107.08 | 281.5 | 125.8 | 513.5 | 485.0 | 28.51 | 18.008 | |
| 6,600.0 | 6,529.6 | 6,317.3 | 6,265.8 | 14.9 | 14.8 | 91.70 | 303.0 | 138.0 | 573.3 | 544.2 | 29.10 | 19.701 | |
| 6,700.0 | 6,602.2 | 6,354.5 | 6,298.0 | 15.0 | 15.0 | 81.31 | 319.3 | 147.2 | 633.0 | 603.6 | 29.44 | 21.502 | |
| 6,800.0 | 6,659.0 | 6,376.1 | 6,316.7 | 15.5 | 15.1 | 72.45 | 328.7 | 152.6 | 692.2 | 662.8 | 29.39 | 23.553 | |
| 6,900.0 | 6,696.9 | 6,381.0 | 6,320.9 | 16.5 | 15.2 | 64.23 | 330.8 | 153.8 | 749.7 | 720.9 | 28.86 | 25.982 | |
| 7,000.0 | 6,714.1 | 6,368.9 | 6,310.4 | 17.8 | 15.1 | 56.78 | 325.5 | 150.8 | 803.6 | 775.6 | 27.97 | 28.734 | |
| 7,100.0 | 6,715.0 | 6,344.4 | 6,289.2 | 19.3 | 15.0 | 53.43 | 314.8 | 144.7 | 855.2 | 827.1 | 28.18 | 30.354 | |
| 7,200.0 | 6,715.0 | 7,459.6 | 6,897.0 | 21.1 | 22.6 | 101.71 | 613.2 | -429.9 | 896.7 | 855.1 | 41.55 | 21.578 | |
| 7,300.0 | 6,715.0 | 7,559.6 | 6,897.0 | 23.1 | 24.4 | 101.71 | 612.0 | -529.9 | 896.4 | 851.0 | 45.45 | 19.723 | |

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

| Spaur Brothers South Pad Sec.31-T7N-R63W - Spaur Brothers EH 31-339HC - Wellbore #1 - Plan #1 (| | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|---|----------------|----------------|----------------|-----------------|--------|-------------------|------------------------|------------|-----------------|------------------|--------------------|-------------------|--------------------|--------|
| Survey Program: 0-MWD | | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Reference | | Offset | | Semi Major Axis | | | Distance | | | | | | | |
| Measured Depth | Vertical Depth | Measured Depth | Vertical Depth | Reference | Offset | Highside Toolface | Offset Wellbore Centre | | Between Centres | Between Ellipses | Minimum Separation | Separation Factor | Warning | |
| (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (°) | +N/-S (ft) | +E/-W (ft) | (ft) | (ft) | (ft) | | | |
| 7,400.0 | 6,715.0 | 7,659.6 | 6,897.0 | 25.3 | 26.5 | 101.72 | 610.9 | -629.9 | 896.2 | 846.6 | 49.66 | 18.049 | | |
| 7,500.0 | 6,715.0 | 7,759.6 | 6,897.0 | 27.6 | 28.7 | 101.72 | 609.7 | -729.9 | 896.0 | 841.9 | 54.09 | 16.564 | | |
| 7,600.0 | 6,715.0 | 7,859.6 | 6,897.0 | 29.9 | 31.0 | 101.72 | 608.5 | -829.9 | 895.8 | 837.1 | 58.71 | 15.258 | | |
| 7,700.0 | 6,715.0 | 7,959.6 | 6,897.0 | 32.4 | 33.3 | 101.72 | 607.3 | -929.9 | 895.6 | 832.1 | 63.47 | 14.110 | | |
| 7,800.0 | 6,715.0 | 8,059.6 | 6,897.0 | 34.9 | 35.7 | 101.73 | 606.1 | -1,029.8 | 895.4 | 827.1 | 68.35 | 13.101 | | |
| 7,900.0 | 6,715.0 | 8,159.6 | 6,897.0 | 37.4 | 38.2 | 101.73 | 604.9 | -1,129.8 | 895.2 | 821.9 | 73.31 | 12.211 | | |
| 8,000.0 | 6,715.0 | 8,259.6 | 6,897.0 | 40.0 | 40.7 | 101.73 | 603.7 | -1,229.8 | 895.0 | 816.6 | 78.34 | 11.424 | | |
| 8,100.0 | 6,715.0 | 8,359.6 | 6,897.0 | 42.6 | 43.3 | 101.74 | 602.5 | -1,329.8 | 894.8 | 811.3 | 83.44 | 10.724 | | |
| 8,200.0 | 6,715.0 | 8,459.6 | 6,897.0 | 45.2 | 45.9 | 101.74 | 601.4 | -1,429.8 | 894.6 | 806.0 | 88.58 | 10.099 | | |
| 8,300.0 | 6,715.0 | 8,559.6 | 6,897.0 | 47.8 | 48.5 | 101.74 | 600.2 | -1,529.8 | 894.4 | 800.6 | 93.76 | 9.539 | | |
| 8,400.0 | 6,715.0 | 8,659.6 | 6,897.0 | 50.5 | 51.1 | 101.74 | 599.0 | -1,629.8 | 894.2 | 795.2 | 98.98 | 9.034 | | |
| 8,500.0 | 6,715.0 | 8,759.6 | 6,897.0 | 53.2 | 53.8 | 101.75 | 597.8 | -1,729.8 | 893.9 | 789.7 | 104.23 | 8.577 | | |
| 8,600.0 | 6,715.0 | 8,859.6 | 6,897.0 | 55.9 | 56.4 | 101.75 | 596.6 | -1,829.8 | 893.7 | 784.2 | 109.50 | 8.162 | | |
| 8,700.0 | 6,715.0 | 8,959.6 | 6,897.0 | 58.6 | 59.1 | 101.75 | 595.4 | -1,929.8 | 893.5 | 778.7 | 114.80 | 7.784 | | |
| 8,800.0 | 6,715.0 | 9,059.6 | 6,897.0 | 61.3 | 61.8 | 101.76 | 594.2 | -2,029.8 | 893.3 | 773.2 | 120.11 | 7.438 | | |
| 8,900.0 | 6,715.0 | 9,159.6 | 6,897.0 | 64.0 | 64.5 | 101.76 | 593.0 | -2,129.8 | 893.1 | 767.7 | 125.44 | 7.120 | | |
| 9,000.0 | 6,715.0 | 9,259.6 | 6,897.0 | 66.7 | 67.2 | 101.76 | 591.8 | -2,229.8 | 892.9 | 762.1 | 130.78 | 6.828 | | |
| 9,100.0 | 6,715.0 | 9,359.6 | 6,897.0 | 69.5 | 69.9 | 101.76 | 590.7 | -2,329.7 | 892.7 | 756.6 | 136.14 | 6.557 | | |
| 9,200.0 | 6,715.0 | 9,459.6 | 6,897.0 | 72.2 | 72.7 | 101.77 | 589.5 | -2,429.7 | 892.5 | 751.0 | 141.50 | 6.307 | | |
| 9,300.0 | 6,715.0 | 9,559.6 | 6,897.0 | 75.0 | 75.4 | 101.77 | 588.3 | -2,529.7 | 892.3 | 745.4 | 146.88 | 6.075 | | |
| 9,400.0 | 6,715.0 | 9,659.6 | 6,897.0 | 77.7 | 78.1 | 101.77 | 587.1 | -2,629.7 | 892.1 | 739.8 | 152.27 | 5.859 | | |
| 9,500.0 | 6,715.0 | 9,759.6 | 6,897.0 | 80.5 | 80.9 | 101.77 | 585.9 | -2,729.7 | 891.9 | 734.2 | 157.66 | 5.657 | | |
| 9,600.0 | 6,715.0 | 9,859.6 | 6,897.0 | 83.2 | 83.6 | 101.78 | 584.7 | -2,829.7 | 891.7 | 728.6 | 163.06 | 5.468 | | |
| 9,700.0 | 6,715.0 | 9,959.6 | 6,897.0 | 86.0 | 86.4 | 101.78 | 583.5 | -2,929.7 | 891.4 | 723.0 | 168.47 | 5.291 | | |
| 9,800.0 | 6,715.0 | 10,059.6 | 6,897.0 | 88.7 | 89.1 | 101.78 | 582.3 | -3,029.7 | 891.2 | 717.4 | 173.88 | 5.126 | | |
| 9,900.0 | 6,715.0 | 10,159.6 | 6,897.0 | 91.5 | 91.9 | 101.79 | 581.1 | -3,129.7 | 891.0 | 711.7 | 179.30 | 4.969 | | |
| 10,000.0 | 6,715.0 | 10,259.6 | 6,897.0 | 94.3 | 94.6 | 101.79 | 580.0 | -3,229.7 | 890.8 | 706.1 | 184.73 | 4.822 | | |
| 10,100.0 | 6,715.0 | 10,359.6 | 6,897.0 | 97.0 | 97.4 | 101.79 | 578.8 | -3,329.7 | 890.6 | 700.5 | 190.15 | 4.684 | | |
| 10,200.0 | 6,715.0 | 10,459.6 | 6,897.0 | 99.8 | 100.1 | 101.79 | 577.6 | -3,429.7 | 890.4 | 694.8 | 195.59 | 4.553 | | |
| 10,300.0 | 6,715.0 | 10,559.6 | 6,897.0 | 102.6 | 102.9 | 101.80 | 576.4 | -3,529.7 | 890.2 | 689.2 | 201.02 | 4.428 | | |
| 10,400.0 | 6,715.0 | 10,659.6 | 6,897.0 | 105.4 | 105.7 | 101.80 | 575.2 | -3,629.7 | 890.0 | 683.5 | 206.46 | 4.311 | | |
| 10,500.0 | 6,715.0 | 10,759.6 | 6,897.0 | 108.1 | 108.4 | 101.80 | 574.0 | -3,729.6 | 889.8 | 677.9 | 211.90 | 4.199 | | |
| 10,600.0 | 6,715.0 | 10,859.6 | 6,897.0 | 110.9 | 111.2 | 101.81 | 572.8 | -3,829.6 | 889.6 | 672.2 | 217.35 | 4.093 | | |
| 10,700.0 | 6,715.0 | 10,959.6 | 6,897.0 | 113.7 | 114.0 | 101.81 | 571.6 | -3,929.6 | 889.4 | 666.6 | 222.79 | 3.992 | | |
| 10,800.0 | 6,715.0 | 11,059.6 | 6,897.0 | 116.5 | 116.8 | 101.81 | 570.5 | -4,029.6 | 889.2 | 660.9 | 228.24 | 3.896 | | |
| 10,900.0 | 6,715.0 | 11,159.6 | 6,897.0 | 119.3 | 119.5 | 101.81 | 569.3 | -4,129.6 | 889.0 | 655.3 | 233.70 | 3.804 | | |
| 11,000.0 | 6,715.0 | 11,259.6 | 6,897.0 | 122.1 | 122.3 | 101.82 | 568.1 | -4,229.6 | 888.7 | 649.6 | 239.15 | 3.716 | | |
| 11,100.0 | 6,715.0 | 11,359.6 | 6,897.0 | 124.8 | 125.1 | 101.82 | 566.9 | -4,329.6 | 888.5 | 643.9 | 244.61 | 3.632 | | |
| 11,200.0 | 6,715.0 | 11,459.6 | 6,897.0 | 127.6 | 127.9 | 101.82 | 565.7 | -4,429.6 | 888.3 | 638.3 | 250.07 | 3.552 | | |
| 11,244.6 | 6,715.0 | 11,504.2 | 6,897.0 | 128.9 | 129.1 | 101.82 | 565.2 | -4,474.1 | 888.2 | 635.7 | 252.50 | 3.518 | | |

| | | | |
|---------------------------|--|-------------------------------------|---------------------------------|
| Company: | Great Western | Local Co-ordinate Reference: | Well Spaur Brothers EH 31-019HN |
| Project: | SEC.31-T7N-R63W | TVD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Reference Site: | Spaur Brothers South Pad Sec.31-T7N-R63W | MD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Spaur Brothers EH 31-019HN | 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 (11-6-13) | 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 | 0.00 | 90.0 | 0.0 | 90.0 | | | | | |
| 100.0 | 100.0 | 100.0 | 100.0 | 0.1 | 0.1 | 0.00 | 90.0 | 0.0 | 90.0 | 89.8 | 0.22 | 400.377 | | |
| 200.0 | 200.0 | 200.0 | 200.0 | 0.3 | 0.3 | 0.00 | 90.0 | 0.0 | 90.0 | 89.3 | 0.67 | 133.459 | | |
| 300.0 | 300.0 | 300.0 | 300.0 | 0.6 | 0.6 | 0.00 | 90.0 | 0.0 | 90.0 | 88.9 | 1.12 | 80.075 | | |
| 400.0 | 400.0 | 400.0 | 400.0 | 0.8 | 0.8 | 0.00 | 90.0 | 0.0 | 90.0 | 88.4 | 1.57 | 57.197 | | |
| 500.0 | 500.0 | 500.0 | 500.0 | 1.0 | 1.0 | 0.00 | 90.0 | 0.0 | 90.0 | 88.0 | 2.02 | 44.486 | | |
| 600.0 | 600.0 | 600.0 | 600.0 | 1.2 | 1.2 | 0.00 | 90.0 | 0.0 | 90.0 | 87.5 | 2.47 | 36.398 | | |
| 700.0 | 700.0 | 700.0 | 700.0 | 1.5 | 1.5 | 0.00 | 90.0 | 0.0 | 90.0 | 87.1 | 2.92 | 30.798 | | |
| 800.0 | 800.0 | 800.0 | 800.0 | 1.7 | 1.7 | 0.00 | 90.0 | 0.0 | 90.0 | 86.6 | 3.37 | 26.692 | | |
| 900.0 | 900.0 | 900.0 | 900.0 | 1.9 | 1.9 | 0.00 | 90.0 | 0.0 | 90.0 | 86.2 | 3.82 | 23.552 | | |
| 1,000.0 | 1,000.0 | 1,000.0 | 1,000.0 | 2.1 | 2.1 | 0.00 | 90.0 | 0.0 | 90.0 | 85.7 | 4.27 | 21.072 | | |
| 1,100.0 | 1,100.0 | 1,100.0 | 1,100.0 | 2.4 | 2.4 | 0.00 | 90.0 | 0.0 | 90.0 | 85.3 | 4.72 | 19.066 | | |
| 1,200.0 | 1,200.0 | 1,200.0 | 1,200.0 | 2.6 | 2.6 | 0.00 | 90.0 | 0.0 | 90.0 | 84.8 | 5.17 | 17.408 | | |
| 1,300.0 | 1,300.0 | 1,300.0 | 1,300.0 | 2.8 | 2.8 | 0.00 | 90.0 | 0.0 | 90.0 | 84.4 | 5.62 | 16.015 | | |
| 1,400.0 | 1,400.0 | 1,400.0 | 1,400.0 | 3.0 | 3.0 | 0.00 | 90.0 | 0.0 | 90.0 | 83.9 | 6.07 | 14.829 | | |
| 1,500.0 | 1,500.0 | 1,500.0 | 1,500.0 | 3.3 | 3.3 | 0.00 | 90.0 | 0.0 | 90.0 | 83.5 | 6.52 | 13.806 | | |
| 1,600.0 | 1,600.0 | 1,600.0 | 1,600.0 | 3.5 | 3.5 | 0.00 | 90.0 | 0.0 | 90.0 | 83.0 | 6.97 | 12.915 | | |
| 1,700.0 | 1,700.0 | 1,700.0 | 1,700.0 | 3.7 | 3.7 | 0.00 | 90.0 | 0.0 | 90.0 | 82.6 | 7.42 | 12.133 | | |
| 1,800.0 | 1,800.0 | 1,800.0 | 1,800.0 | 3.9 | 3.9 | 0.00 | 90.0 | 0.0 | 90.0 | 82.1 | 7.87 | 11.439 | | |
| 1,900.0 | 1,900.0 | 1,900.0 | 1,900.0 | 4.2 | 4.2 | 0.00 | 90.0 | 0.0 | 90.0 | 81.7 | 8.32 | 10.821 | | |
| 2,000.0 | 2,000.0 | 2,000.0 | 2,000.0 | 4.4 | 4.4 | 0.00 | 90.0 | 0.0 | 90.0 | 81.2 | 8.77 | 10.266 | | |
| 2,100.0 | 2,100.0 | 2,100.0 | 2,100.0 | 4.6 | 4.6 | 0.00 | 90.0 | 0.0 | 90.0 | 80.8 | 9.22 | 9.765 | | |
| 2,200.0 | 2,200.0 | 2,200.0 | 2,200.0 | 4.8 | 4.8 | 0.00 | 90.0 | 0.0 | 90.0 | 80.3 | 9.66 | 9.311 | | |
| 2,300.0 | 2,300.0 | 2,300.0 | 2,300.0 | 5.1 | 5.1 | 0.00 | 90.0 | 0.0 | 90.0 | 79.9 | 10.11 | 8.897 | | |
| 2,400.0 | 2,400.0 | 2,400.0 | 2,400.0 | 5.3 | 5.3 | 0.00 | 90.0 | 0.0 | 90.0 | 79.4 | 10.56 | 8.519 | | |
| 2,500.0 | 2,500.0 | 2,500.0 | 2,500.0 | 5.5 | 5.5 | 0.00 | 90.0 | 0.0 | 90.0 | 79.0 | 11.01 | 8.171 | | |
| 2,600.0 | 2,600.0 | 2,600.0 | 2,600.0 | 5.7 | 5.7 | 0.00 | 90.0 | 0.0 | 90.0 | 78.5 | 11.46 | 7.851 | | |
| 2,700.0 | 2,700.0 | 2,700.0 | 2,700.0 | 6.0 | 6.0 | 0.00 | 90.0 | 0.0 | 90.0 | 78.1 | 11.91 | 7.554 | | |
| 2,800.0 | 2,800.0 | 2,800.0 | 2,800.0 | 6.2 | 6.2 | 0.00 | 90.0 | 0.0 | 90.0 | 77.6 | 12.36 | 7.280 | | |
| 2,900.0 | 2,900.0 | 2,900.0 | 2,900.0 | 6.4 | 6.4 | 0.00 | 90.0 | 0.0 | 90.0 | 77.2 | 12.81 | 7.024 | | |
| 3,000.0 | 3,000.0 | 3,000.0 | 3,000.0 | 6.6 | 6.6 | 0.00 | 90.0 | 0.0 | 90.0 | 76.7 | 13.26 | 6.786 | | |
| 3,100.0 | 3,100.0 | 3,100.0 | 3,100.0 | 6.9 | 6.9 | 0.00 | 90.0 | 0.0 | 90.0 | 76.3 | 13.71 | 6.564 | | |
| 3,200.0 | 3,200.0 | 3,200.0 | 3,200.0 | 7.1 | 7.1 | 0.00 | 90.0 | 0.0 | 90.0 | 75.8 | 14.16 | 6.355 | | |
| 3,300.0 | 3,300.0 | 3,300.0 | 3,300.0 | 7.3 | 7.3 | 0.00 | 90.0 | 0.0 | 90.0 | 75.4 | 14.61 | 6.160 | | |
| 3,400.0 | 3,400.0 | 3,400.0 | 3,400.0 | 7.5 | 7.5 | 0.00 | 90.0 | 0.0 | 90.0 | 74.9 | 15.06 | 5.976 | | |
| 3,500.0 | 3,500.0 | 3,500.0 | 3,500.0 | 7.8 | 7.8 | 0.00 | 90.0 | 0.0 | 90.0 | 74.5 | 15.51 | 5.803 | | |
| 3,600.0 | 3,600.0 | 3,600.0 | 3,600.0 | 8.0 | 8.0 | 0.00 | 90.0 | 0.0 | 90.0 | 74.0 | 15.96 | 5.639 | | |
| 3,700.0 | 3,700.0 | 3,700.0 | 3,700.0 | 8.2 | 8.2 | 0.00 | 90.0 | 0.0 | 90.0 | 73.6 | 16.41 | 5.485 | | |
| 3,800.0 | 3,800.0 | 3,800.0 | 3,800.0 | 8.4 | 8.4 | 0.00 | 90.0 | 0.0 | 90.0 | 73.1 | 16.86 | 5.338 | | |
| 3,900.0 | 3,900.0 | 3,900.0 | 3,900.0 | 8.7 | 8.7 | 0.00 | 90.0 | 0.0 | 90.0 | 72.7 | 17.31 | 5.200 | | |
| 4,000.0 | 4,000.0 | 4,000.0 | 4,000.0 | 8.9 | 8.9 | 0.00 | 90.0 | 0.0 | 90.0 | 72.2 | 17.76 | 5.068 | | |
| 4,100.0 | 4,100.0 | 4,100.0 | 4,100.0 | 9.1 | 9.1 | 0.00 | 90.0 | 0.0 | 90.0 | 71.8 | 18.21 | 4.943 | | |
| 4,200.0 | 4,200.0 | 4,200.0 | 4,200.0 | 9.3 | 9.3 | 0.00 | 90.0 | 0.0 | 90.0 | 71.3 | 18.66 | 4.824 | | |
| 4,300.0 | 4,300.0 | 4,300.0 | 4,300.0 | 9.6 | 9.6 | 0.00 | 90.0 | 0.0 | 90.0 | 70.9 | 19.11 | 4.710 | | |
| 4,400.0 | 4,400.0 | 4,400.0 | 4,400.0 | 9.8 | 9.8 | 0.00 | 90.0 | 0.0 | 90.0 | 70.4 | 19.55 | 4.602 | | |
| 4,500.0 | 4,500.0 | 4,500.0 | 4,500.0 | 10.0 | 10.0 | 0.00 | 90.0 | 0.0 | 90.0 | 70.0 | 20.00 | 4.499 | | |
| 4,600.0 | 4,600.0 | 4,600.0 | 4,600.0 | 10.2 | 10.2 | 0.00 | 90.0 | 0.0 | 90.0 | 69.5 | 20.45 | 4.400 | | |
| 4,700.0 | 4,700.0 | 4,700.0 | 4,700.0 | 10.5 | 10.5 | 0.00 | 90.0 | 0.0 | 90.0 | 69.1 | 20.90 | 4.305 | | |
| 4,800.0 | 4,800.0 | 4,800.0 | 4,800.0 | 10.7 | 10.7 | 0.00 | 90.0 | 0.0 | 90.0 | 68.6 | 21.35 | 4.214 | | |
| 4,900.0 | 4,900.0 | 4,900.0 | 4,900.0 | 10.9 | 10.9 | 0.00 | 90.0 | 0.0 | 90.0 | 68.2 | 21.80 | 4.128 CC, ES, SF | | |
| 5,000.0 | 5,000.0 | 4,995.7 | 4,995.7 | 11.1 | 11.1 | 0.56 | 92.2 | 0.9 | 92.3 | 70.1 | 22.24 | 4.151 | | |
| 5,100.0 | 5,100.0 | 5,091.0 | 5,090.7 | 11.4 | 11.3 | 2.08 | 98.8 | 3.6 | 99.3 | 76.7 | 22.67 | 4.381 | | |

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

| 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 | Vertical Depth | Measured Depth | Vertical Depth | Reference | Offset | Highside Toolface | Offset Wellbore Centre | | Between Centres | Between Ellipses | Minimum Separation | Separation Factor | Warning |
| (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (°) | +N/-S (ft) | +E/-W (ft) | (ft) | (ft) | (ft) | | |
| 5,200.0 | 5,200.0 | 5,185.3 | 5,184.2 | 11.6 | 11.5 | 4.17 | 109.7 | 8.0 | 111.1 | 88.0 | 23.11 | 4.809 | |
| 5,300.0 | 5,300.0 | 5,278.2 | 5,275.8 | 11.8 | 11.7 | 6.42 | 124.6 | 14.0 | 127.7 | 104.2 | 23.54 | 5.426 | |
| 5,400.0 | 5,400.0 | 5,369.4 | 5,364.7 | 12.0 | 12.0 | 8.57 | 143.2 | 21.6 | 149.0 | 125.1 | 23.97 | 6.219 | |
| 5,500.0 | 5,500.0 | 5,458.4 | 5,450.5 | 12.2 | 12.2 | 10.45 | 165.1 | 30.5 | 175.0 | 150.6 | 24.40 | 7.174 | |
| 5,600.0 | 5,599.9 | 5,544.8 | 5,532.6 | 12.5 | 12.4 | -106.80 | 189.9 | 40.5 | 206.5 | 181.7 | 24.79 | 8.330 | |
| 5,700.0 | 5,699.1 | 5,627.6 | 5,610.1 | 12.6 | 12.7 | -106.04 | 216.9 | 51.4 | 244.5 | 219.4 | 25.15 | 9.723 | |
| 5,800.0 | 5,796.9 | 5,700.0 | 5,676.8 | 12.9 | 12.9 | -105.77 | 243.0 | 62.0 | 288.8 | 263.3 | 25.48 | 11.334 | |
| 5,900.0 | 5,892.5 | 5,779.2 | 5,748.4 | 13.1 | 13.2 | -106.07 | 274.2 | 74.7 | 339.1 | 313.3 | 25.84 | 13.122 | |
| 6,000.0 | 5,985.2 | 5,846.9 | 5,808.6 | 13.4 | 13.5 | -105.94 | 303.1 | 86.4 | 395.4 | 369.2 | 26.22 | 15.082 | |
| 6,100.0 | 6,074.3 | 5,910.0 | 5,863.6 | 13.7 | 13.8 | -105.41 | 331.8 | 98.0 | 457.3 | 430.7 | 26.65 | 17.159 | |
| 6,200.0 | 6,162.4 | 5,982.0 | 5,925.9 | 14.1 | 14.2 | -124.82 | 365.2 | 111.6 | 523.4 | 496.6 | 26.75 | 19.563 | |
| 6,300.0 | 6,256.3 | 6,054.4 | 5,988.5 | 14.4 | 14.6 | -167.22 | 398.9 | 125.2 | 592.1 | 565.2 | 26.93 | 21.985 | |
| 6,400.0 | 6,352.1 | 6,123.8 | 6,048.5 | 14.7 | 15.0 | 141.30 | 431.1 | 138.3 | 660.2 | 632.6 | 27.68 | 23.854 | |
| 6,500.0 | 6,444.8 | 6,186.5 | 6,102.8 | 14.8 | 15.4 | 108.95 | 460.3 | 150.2 | 726.4 | 697.7 | 28.62 | 25.376 | |
| 6,600.0 | 6,529.6 | 6,239.5 | 6,148.7 | 14.9 | 15.7 | 91.39 | 485.0 | 160.1 | 789.9 | 760.5 | 29.38 | 26.888 | |
| 6,700.0 | 6,602.2 | 6,280.0 | 6,183.7 | 15.0 | 16.0 | 80.00 | 503.8 | 167.8 | 850.6 | 820.9 | 29.73 | 28.611 | |
| 6,800.0 | 6,659.0 | 6,306.0 | 6,206.1 | 15.5 | 16.1 | 71.34 | 515.9 | 172.7 | 908.0 | 878.4 | 29.62 | 30.653 | |
| 6,900.0 | 6,696.9 | 6,316.0 | 6,214.8 | 16.5 | 16.2 | 64.17 | 520.5 | 174.6 | 961.2 | 932.0 | 29.13 | 32.997 | |

| | | | |
|---------------------------|--|-------------------------------------|---------------------------------|
| Company: | Great Western | Local Co-ordinate Reference: | Well Spaur Brothers EH 31-019HN |
| Project: | SEC.31-T7N-R63W | TVD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Reference Site: | Spaur Brothers South Pad Sec.31-T7N-R63W | MD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Spaur Brothers EH 31-019HN | 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 (11-6-13) | 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 | 0.00 | 29.1 | 0.0 | 29.1 | | | | | |
| 100.0 | 100.0 | 100.0 | 100.0 | 0.1 | 0.1 | 0.00 | 29.1 | 0.0 | 29.1 | 28.9 | 0.22 | 129.671 | | |
| 200.0 | 200.0 | 200.0 | 200.0 | 0.3 | 0.3 | 0.00 | 29.1 | 0.0 | 29.1 | 28.5 | 0.67 | 43.224 | | |
| 300.0 | 300.0 | 300.0 | 300.0 | 0.6 | 0.6 | 0.00 | 29.1 | 0.0 | 29.1 | 28.0 | 1.12 | 25.934 | | |
| 400.0 | 400.0 | 400.0 | 400.0 | 0.8 | 0.8 | 0.00 | 29.1 | 0.0 | 29.1 | 27.6 | 1.57 | 18.524 | | |
| 500.0 | 500.0 | 500.0 | 500.0 | 1.0 | 1.0 | 0.00 | 29.1 | 0.0 | 29.1 | 27.1 | 2.02 | 14.408 | | |
| 600.0 | 600.0 | 600.0 | 600.0 | 1.2 | 1.2 | 0.00 | 29.1 | 0.0 | 29.1 | 26.7 | 2.47 | 11.788 | | |
| 700.0 | 700.0 | 700.0 | 700.0 | 1.5 | 1.5 | 0.00 | 29.1 | 0.0 | 29.1 | 26.2 | 2.92 | 9.975 | | |
| 800.0 | 800.0 | 800.0 | 800.0 | 1.7 | 1.7 | 0.00 | 29.1 | 0.0 | 29.1 | 25.8 | 3.37 | 8.645 | | |
| 900.0 | 900.0 | 900.0 | 900.0 | 1.9 | 1.9 | 0.00 | 29.1 | 0.0 | 29.1 | 25.3 | 3.82 | 7.628 | | |
| 1,000.0 | 1,000.0 | 1,000.0 | 1,000.0 | 2.1 | 2.1 | 0.00 | 29.1 | 0.0 | 29.1 | 24.9 | 4.27 | 6.825 | | |
| 1,100.0 | 1,100.0 | 1,100.0 | 1,100.0 | 2.4 | 2.4 | 0.00 | 29.1 | 0.0 | 29.1 | 24.4 | 4.72 | 6.175 | | |
| 1,200.0 | 1,200.0 | 1,200.0 | 1,200.0 | 2.6 | 2.6 | 0.00 | 29.1 | 0.0 | 29.1 | 24.0 | 5.17 | 5.638 | | |
| 1,300.0 | 1,300.0 | 1,300.0 | 1,300.0 | 2.8 | 2.8 | 0.00 | 29.1 | 0.0 | 29.1 | 23.5 | 5.62 | 5.187 | | |
| 1,400.0 | 1,400.0 | 1,400.0 | 1,400.0 | 3.0 | 3.0 | 0.00 | 29.1 | 0.0 | 29.1 | 23.1 | 6.07 | 4.803 | | |
| 1,500.0 | 1,500.0 | 1,500.0 | 1,500.0 | 3.3 | 3.3 | 0.00 | 29.1 | 0.0 | 29.1 | 22.6 | 6.52 | 4.471 | | |
| 1,600.0 | 1,600.0 | 1,600.0 | 1,600.0 | 3.5 | 3.5 | 0.00 | 29.1 | 0.0 | 29.1 | 22.2 | 6.97 | 4.183 | | |
| 1,700.0 | 1,700.0 | 1,700.0 | 1,700.0 | 3.7 | 3.7 | 0.00 | 29.1 | 0.0 | 29.1 | 21.7 | 7.42 | 3.929 | | |
| 1,800.0 | 1,800.0 | 1,800.0 | 1,800.0 | 3.9 | 3.9 | 0.00 | 29.1 | 0.0 | 29.1 | 21.3 | 7.87 | 3.705 | | |
| 1,900.0 | 1,900.0 | 1,900.0 | 1,900.0 | 4.2 | 4.2 | 0.00 | 29.1 | 0.0 | 29.1 | 20.8 | 8.32 | 3.505 | | |
| 2,000.0 | 2,000.0 | 2,000.0 | 2,000.0 | 4.4 | 4.4 | 0.00 | 29.1 | 0.0 | 29.1 | 20.4 | 8.77 | 3.325 | | |
| 2,100.0 | 2,100.0 | 2,100.0 | 2,100.0 | 4.6 | 4.6 | 0.00 | 29.1 | 0.0 | 29.1 | 19.9 | 9.22 | 3.163 | | |
| 2,200.0 | 2,200.0 | 2,200.0 | 2,200.0 | 4.8 | 4.8 | 0.00 | 29.1 | 0.0 | 29.1 | 19.5 | 9.66 | 3.016 | | |
| 2,300.0 | 2,300.0 | 2,300.0 | 2,300.0 | 5.1 | 5.1 | 0.00 | 29.1 | 0.0 | 29.1 | 19.0 | 10.11 | 2.882 | | |
| 2,400.0 | 2,400.0 | 2,400.0 | 2,400.0 | 5.3 | 5.3 | 0.00 | 29.1 | 0.0 | 29.1 | 18.6 | 10.56 | 2.759 | | |
| 2,500.0 | 2,500.0 | 2,500.0 | 2,500.0 | 5.5 | 5.5 | 0.00 | 29.1 | 0.0 | 29.1 | 18.1 | 11.01 | 2.646 | | |
| 2,600.0 | 2,600.0 | 2,600.0 | 2,600.0 | 5.7 | 5.7 | 0.00 | 29.1 | 0.0 | 29.1 | 17.7 | 11.46 | 2.543 | | |
| 2,700.0 | 2,700.0 | 2,700.0 | 2,700.0 | 6.0 | 6.0 | 0.00 | 29.1 | 0.0 | 29.1 | 17.2 | 11.91 | 2.447 | | |
| 2,800.0 | 2,800.0 | 2,800.0 | 2,800.0 | 6.2 | 6.2 | 0.00 | 29.1 | 0.0 | 29.1 | 16.8 | 12.36 | 2.358 | | |
| 2,900.0 | 2,900.0 | 2,900.0 | 2,900.0 | 6.4 | 6.4 | 0.00 | 29.1 | 0.0 | 29.1 | 16.3 | 12.81 | 2.275 | | |
| 3,000.0 | 3,000.0 | 3,000.0 | 3,000.0 | 6.6 | 6.6 | 0.00 | 29.1 | 0.0 | 29.1 | 15.9 | 13.26 | 2.198 | | |
| 3,100.0 | 3,100.0 | 3,100.0 | 3,100.0 | 6.9 | 6.9 | 0.00 | 29.1 | 0.0 | 29.1 | 15.4 | 13.71 | 2.126 | | |
| 3,200.0 | 3,200.0 | 3,200.0 | 3,200.0 | 7.1 | 7.1 | 0.00 | 29.1 | 0.0 | 29.1 | 15.0 | 14.16 | 2.058 | | |
| 3,300.0 | 3,300.0 | 3,300.0 | 3,300.0 | 7.3 | 7.3 | 0.00 | 29.1 | 0.0 | 29.1 | 14.5 | 14.61 | 1.995 | | |
| 3,400.0 | 3,400.0 | 3,400.0 | 3,400.0 | 7.5 | 7.5 | 0.00 | 29.1 | 0.0 | 29.1 | 14.1 | 15.06 | 1.935 | | |
| 3,500.0 | 3,500.0 | 3,500.0 | 3,500.0 | 7.8 | 7.8 | 0.00 | 29.1 | 0.0 | 29.1 | 13.6 | 15.51 | 1.879 | | |
| 3,600.0 | 3,600.0 | 3,600.0 | 3,600.0 | 8.0 | 8.0 | 0.00 | 29.1 | 0.0 | 29.1 | 13.2 | 15.96 | 1.826 | | |
| 3,700.0 | 3,700.0 | 3,700.0 | 3,700.0 | 8.2 | 8.2 | 0.00 | 29.1 | 0.0 | 29.1 | 12.7 | 16.41 | 1.776 | | |
| 3,800.0 | 3,800.0 | 3,800.0 | 3,800.0 | 8.4 | 8.4 | 0.00 | 29.1 | 0.0 | 29.1 | 12.3 | 16.86 | 1.729 | | |
| 3,900.0 | 3,900.0 | 3,900.0 | 3,900.0 | 8.7 | 8.7 | 0.00 | 29.1 | 0.0 | 29.1 | 11.8 | 17.31 | 1.684 | | |
| 4,000.0 | 4,000.0 | 4,000.0 | 4,000.0 | 8.9 | 8.9 | 0.00 | 29.1 | 0.0 | 29.1 | 11.4 | 17.76 | 1.641 | | |
| 4,100.0 | 4,100.0 | 4,100.0 | 4,100.0 | 9.1 | 9.1 | 0.00 | 29.1 | 0.0 | 29.1 | 10.9 | 18.21 | 1.601 | | |
| 4,200.0 | 4,200.0 | 4,200.0 | 4,200.0 | 9.3 | 9.3 | 0.00 | 29.1 | 0.0 | 29.1 | 10.5 | 18.66 | 1.562 | | |
| 4,300.0 | 4,300.0 | 4,300.0 | 4,300.0 | 9.6 | 9.6 | 0.00 | 29.1 | 0.0 | 29.1 | 10.0 | 19.11 | 1.526 | | |
| 4,400.0 | 4,400.0 | 4,400.0 | 4,400.0 | 9.8 | 9.8 | 0.00 | 29.1 | 0.0 | 29.1 | 9.6 | 19.55 | 1.490 Level 3 | | |
| 4,500.0 | 4,500.0 | 4,500.0 | 4,500.0 | 10.0 | 10.0 | 0.00 | 29.1 | 0.0 | 29.1 | 9.1 | 20.00 | 1.457 Level 3 | | |
| 4,600.0 | 4,600.0 | 4,600.0 | 4,600.0 | 10.2 | 10.2 | 0.00 | 29.1 | 0.0 | 29.1 | 8.7 | 20.45 | 1.425 Level 3 | | |
| 4,700.0 | 4,700.0 | 4,700.0 | 4,700.0 | 10.5 | 10.5 | 0.00 | 29.1 | 0.0 | 29.1 | 8.2 | 20.90 | 1.394 Level 3 | | |
| 4,800.0 | 4,800.0 | 4,800.0 | 4,800.0 | 10.7 | 10.7 | 0.00 | 29.1 | 0.0 | 29.1 | 7.8 | 21.35 | 1.365 Level 3 | | |
| 4,900.0 | 4,900.0 | 4,900.0 | 4,900.0 | 10.9 | 10.9 | 0.00 | 29.1 | 0.0 | 29.1 | 7.3 | 21.80 | 1.337 Level 3 | | |
| 5,000.0 | 5,000.0 | 5,000.0 | 5,000.0 | 11.1 | 11.1 | 0.00 | 29.1 | 0.0 | 29.1 | 6.9 | 22.25 | 1.310 Level 3 | | |
| 5,100.0 | 5,100.0 | 5,100.0 | 5,100.0 | 11.4 | 11.4 | 0.00 | 29.1 | 0.0 | 29.1 | 6.4 | 22.70 | 1.284 Level 3 | | |

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

| | | | |
|---------------------------|--|-------------------------------------|---------------------------------|
| Company: | Great Western | Local Co-ordinate Reference: | Well Spaur Brothers EH 31-019HN |
| Project: | SEC.31-T7N-R63W | TVD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Reference Site: | Spaur Brothers South Pad Sec.31-T7N-R63W | MD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Spaur Brothers EH 31-019HN | 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 (11-6-13) | 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 | | |
| 5,200.0 | 5,200.0 | 5,200.0 | 5,200.0 | 11.6 | 11.6 | 0.00 | 29.1 | 0.0 | 29.1 | 6.0 | 23.15 | 1.259 | Level 3 | |
| 5,300.0 | 5,300.0 | 5,300.0 | 5,300.0 | 11.8 | 11.8 | 0.00 | 29.1 | 0.0 | 29.1 | 5.5 | 23.60 | 1.235 | Level 2 | |
| 5,400.0 | 5,400.0 | 5,400.0 | 5,400.0 | 12.0 | 12.0 | 0.00 | 29.1 | 0.0 | 29.1 | 5.1 | 24.05 | 1.212 | Level 2 | |
| 5,500.0 | 5,500.0 | 5,500.0 | 5,500.0 | 12.2 | 12.2 | 0.00 | 29.1 | 0.0 | 29.1 | 4.6 | 24.50 | 1.190 | Level 2, CC, ES, SF | |
| 5,600.0 | 5,599.9 | 5,599.9 | 5,599.9 | 12.5 | 12.5 | -125.00 | 29.1 | 0.0 | 31.0 | 6.1 | 24.91 | 1.246 | Level 2 | |
| 5,700.0 | 5,699.1 | 5,698.9 | 5,698.8 | 12.6 | 12.7 | -134.51 | 30.3 | 3.1 | 39.5 | 14.3 | 25.19 | 1.567 | | |
| 5,800.0 | 5,796.9 | 5,797.0 | 5,795.5 | 12.9 | 12.9 | -132.42 | 36.0 | 18.1 | 55.6 | 30.2 | 25.45 | 2.185 | | |
| 5,900.0 | 5,892.5 | 5,892.4 | 5,886.6 | 13.1 | 13.1 | -125.85 | 45.9 | 44.5 | 79.4 | 53.6 | 25.79 | 3.077 | | |
| 6,000.0 | 5,985.2 | 5,983.6 | 5,969.4 | 13.4 | 13.4 | -118.96 | 59.2 | 80.1 | 111.4 | 85.1 | 26.30 | 4.237 | | |
| 6,100.0 | 6,074.3 | 6,074.0 | 6,047.7 | 13.7 | 13.7 | -113.83 | 75.1 | 122.4 | 150.6 | 123.6 | 26.94 | 5.588 | | |
| 6,200.0 | 6,162.4 | 6,163.8 | 6,126.6 | 14.1 | 14.1 | -126.51 | 91.3 | 161.8 | 192.9 | 165.6 | 27.36 | 7.051 | | |
| 6,300.0 | 6,256.3 | 6,251.9 | 6,209.8 | 14.4 | 14.3 | -161.89 | 108.2 | 185.1 | 238.1 | 210.5 | 27.64 | 8.616 | | |
| 6,400.0 | 6,352.1 | 6,340.6 | 6,296.4 | 14.7 | 14.5 | 151.34 | 125.6 | 191.1 | 284.4 | 256.3 | 28.01 | 10.151 | | |
| 6,500.0 | 6,444.8 | 6,431.9 | 6,384.9 | 14.8 | 14.7 | 122.17 | 143.3 | 178.7 | 329.6 | 301.1 | 28.49 | 11.569 | | |
| 6,600.0 | 6,529.6 | 6,527.9 | 6,473.2 | 14.9 | 14.8 | 107.32 | 160.7 | 145.9 | 371.8 | 342.8 | 29.04 | 12.804 | | |
| 6,700.0 | 6,602.2 | 6,630.7 | 6,557.8 | 15.0 | 14.9 | 98.96 | 177.1 | 90.1 | 408.8 | 379.1 | 29.71 | 13.758 | | |
| 6,800.0 | 6,659.0 | 6,741.8 | 6,632.2 | 15.5 | 15.3 | 94.03 | 191.3 | 9.4 | 438.5 | 407.7 | 30.78 | 14.246 | | |
| 6,900.0 | 6,696.9 | 6,860.9 | 6,687.5 | 16.5 | 16.3 | 91.27 | 201.4 | -95.3 | 458.8 | 426.2 | 32.61 | 14.068 | | |
| 7,000.0 | 6,714.1 | 6,985.7 | 6,713.8 | 17.8 | 17.9 | 90.09 | 205.5 | -216.9 | 468.0 | 432.6 | 35.41 | 13.219 | | |
| 7,100.0 | 6,715.0 | 7,092.8 | 6,715.0 | 19.3 | 19.6 | 90.00 | 204.8 | -323.9 | 468.5 | 429.9 | 38.63 | 12.130 | | |
| 7,200.0 | 6,715.0 | 7,192.8 | 6,715.0 | 21.1 | 21.4 | 90.00 | 203.8 | -423.9 | 468.6 | 426.3 | 42.27 | 11.084 | | |
| 7,300.0 | 6,715.0 | 7,292.8 | 6,715.0 | 23.1 | 23.4 | 90.00 | 202.9 | -523.9 | 468.6 | 422.3 | 46.31 | 10.118 | | |
| 7,400.0 | 6,715.0 | 7,392.8 | 6,715.0 | 25.3 | 25.6 | 90.00 | 201.9 | -623.9 | 468.6 | 418.0 | 50.65 | 9.251 | | |
| 7,500.0 | 6,715.0 | 7,492.8 | 6,715.0 | 27.6 | 27.9 | 90.00 | 201.0 | -723.9 | 468.6 | 413.4 | 55.23 | 8.485 | | |
| 7,600.0 | 6,715.0 | 7,592.8 | 6,715.0 | 29.9 | 30.3 | 90.00 | 200.0 | -823.9 | 468.7 | 408.7 | 59.98 | 7.814 | | |
| 7,700.0 | 6,715.0 | 7,692.8 | 6,715.0 | 32.4 | 32.7 | 90.00 | 199.1 | -923.9 | 468.7 | 403.8 | 64.87 | 7.225 | | |
| 7,800.0 | 6,715.0 | 7,792.8 | 6,715.0 | 34.9 | 35.2 | 90.00 | 198.1 | -1,023.9 | 468.7 | 398.8 | 69.87 | 6.709 | | |
| 7,900.0 | 6,715.0 | 7,892.8 | 6,715.0 | 37.4 | 37.7 | 90.00 | 197.2 | -1,123.9 | 468.7 | 393.8 | 74.95 | 6.254 | | |
| 8,000.0 | 6,715.0 | 7,992.8 | 6,715.0 | 40.0 | 40.3 | 90.00 | 196.3 | -1,223.9 | 468.8 | 388.7 | 80.11 | 5.852 | | |
| 8,100.0 | 6,715.0 | 8,092.8 | 6,715.0 | 42.6 | 42.9 | 90.00 | 195.3 | -1,323.9 | 468.8 | 383.5 | 85.32 | 5.494 | | |
| 8,200.0 | 6,715.0 | 8,192.8 | 6,715.0 | 45.2 | 45.5 | 90.00 | 194.4 | -1,423.9 | 468.8 | 378.2 | 90.59 | 5.175 | | |
| 8,300.0 | 6,715.0 | 8,292.8 | 6,715.0 | 47.8 | 48.2 | 90.00 | 193.4 | -1,523.8 | 468.9 | 373.0 | 95.89 | 4.889 | | |
| 8,400.0 | 6,715.0 | 8,392.8 | 6,715.0 | 50.5 | 50.9 | 90.00 | 192.5 | -1,623.8 | 468.9 | 367.7 | 101.23 | 4.632 | | |
| 8,500.0 | 6,715.0 | 8,492.8 | 6,715.0 | 53.2 | 53.5 | 90.00 | 191.5 | -1,723.8 | 468.9 | 362.3 | 106.59 | 4.399 | | |
| 8,600.0 | 6,715.0 | 8,592.8 | 6,715.0 | 55.9 | 56.2 | 90.00 | 190.6 | -1,823.8 | 468.9 | 357.0 | 111.99 | 4.187 | | |
| 8,700.0 | 6,715.0 | 8,692.8 | 6,715.0 | 58.6 | 58.9 | 90.00 | 189.6 | -1,923.8 | 469.0 | 351.6 | 117.40 | 3.995 | | |
| 8,800.0 | 6,715.0 | 8,792.8 | 6,715.0 | 61.3 | 61.7 | 90.00 | 188.7 | -2,023.8 | 469.0 | 346.2 | 122.83 | 3.818 | | |
| 8,900.0 | 6,715.0 | 8,892.8 | 6,715.0 | 64.0 | 64.4 | 90.00 | 187.7 | -2,123.8 | 469.0 | 340.7 | 128.27 | 3.656 | | |
| 9,000.0 | 6,715.0 | 8,992.8 | 6,715.0 | 66.7 | 67.1 | 90.00 | 186.8 | -2,223.8 | 469.0 | 335.3 | 133.73 | 3.507 | | |
| 9,100.0 | 6,715.0 | 9,092.8 | 6,715.0 | 69.5 | 69.8 | 90.00 | 185.8 | -2,323.8 | 469.1 | 329.9 | 139.21 | 3.370 | | |
| 9,200.0 | 6,715.0 | 9,192.8 | 6,715.0 | 72.2 | 72.6 | 90.00 | 184.9 | -2,423.8 | 469.1 | 324.4 | 144.69 | 3.242 | | |
| 9,300.0 | 6,715.0 | 9,292.8 | 6,715.0 | 75.0 | 75.3 | 90.00 | 183.9 | -2,523.8 | 469.1 | 318.9 | 150.18 | 3.124 | | |
| 9,400.0 | 6,715.0 | 9,392.8 | 6,715.0 | 77.7 | 78.1 | 90.00 | 183.0 | -2,623.8 | 469.2 | 313.5 | 155.69 | 3.013 | | |
| 9,500.0 | 6,715.0 | 9,492.8 | 6,715.0 | 80.5 | 80.8 | 90.00 | 182.0 | -2,723.8 | 469.2 | 308.0 | 161.20 | 2.911 | | |
| 9,600.0 | 6,715.0 | 9,592.8 | 6,715.0 | 83.2 | 83.6 | 90.00 | 181.1 | -2,823.8 | 469.2 | 302.5 | 166.71 | 2.814 | | |
| 9,700.0 | 6,715.0 | 9,692.8 | 6,715.0 | 86.0 | 86.3 | 90.00 | 180.1 | -2,923.8 | 469.2 | 297.0 | 172.24 | 2.724 | | |
| 9,800.0 | 6,715.0 | 9,792.8 | 6,715.0 | 88.7 | 89.1 | 90.00 | 179.2 | -3,023.8 | 469.3 | 291.5 | 177.77 | 2.640 | | |
| 9,900.0 | 6,715.0 | 9,892.8 | 6,715.0 | 91.5 | 91.9 | 90.00 | 178.2 | -3,123.8 | 469.3 | 286.0 | 183.30 | 2.560 | | |
| 10,000.0 | 6,715.0 | 9,992.8 | 6,715.0 | 94.3 | 94.6 | 90.00 | 177.3 | -3,223.8 | 469.3 | 280.5 | 188.84 | 2.485 | | |
| 10,100.0 | 6,715.0 | 10,092.8 | 6,715.0 | 97.0 | 97.4 | 90.00 | 176.3 | -3,323.8 | 469.3 | 275.0 | 194.39 | 2.415 | | |
| 10,200.0 | 6,715.0 | 10,192.8 | 6,715.0 | 99.8 | 100.2 | 90.00 | 175.4 | -3,423.8 | 469.4 | 269.4 | 199.93 | 2.348 | | |
| 10,300.0 | 6,715.0 | 10,292.8 | 6,715.0 | 102.6 | 103.0 | 90.00 | 174.4 | -3,523.8 | 469.4 | 263.9 | 205.49 | 2.284 | | |

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

| | | | |
|---------------------------|--|-------------------------------------|---------------------------------|
| Company: | Great Western | Local Co-ordinate Reference: | Well Spaur Brothers EH 31-019HN |
| Project: | SEC.31-T7N-R63W | TVD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Reference Site: | Spaur Brothers South Pad Sec.31-T7N-R63W | MD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Spaur Brothers EH 31-019HN | 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 (11-6-13) | Offset TVD Reference: | Offset Datum |

| Offset Design Spaur Brothers South Pad Sec.31-T7N-R63W - Spaur Brothers EH 31-379HN - Wellbore #1 - Plan #1 (| | | | | | | | | | | | 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 | 6,715.0 | 10,392.8 | 6,715.0 | 105.4 | 105.7 | 90.00 | 173.5 | -3,623.8 | 469.4 | 258.4 | 211.04 | 2.224 | |
| 10,500.0 | 6,715.0 | 10,492.8 | 6,715.0 | 108.1 | 108.5 | 90.00 | 172.5 | -3,723.7 | 469.5 | 252.9 | 216.60 | 2.167 | |
| 10,600.0 | 6,715.0 | 10,592.8 | 6,715.0 | 110.9 | 111.3 | 90.00 | 171.6 | -3,823.7 | 469.5 | 247.3 | 222.16 | 2.113 | |
| 10,700.0 | 6,715.0 | 10,692.8 | 6,715.0 | 113.7 | 114.1 | 90.00 | 170.7 | -3,923.7 | 469.5 | 241.8 | 227.73 | 2.062 | |
| 10,800.0 | 6,715.0 | 10,792.8 | 6,715.0 | 116.5 | 116.9 | 90.00 | 169.7 | -4,023.7 | 469.5 | 236.2 | 233.29 | 2.013 | |
| 10,900.0 | 6,715.0 | 10,892.8 | 6,715.0 | 119.3 | 119.7 | 90.00 | 168.8 | -4,123.7 | 469.6 | 230.7 | 238.86 | 1.966 | |
| 11,000.0 | 6,715.0 | 10,992.8 | 6,715.0 | 122.1 | 122.4 | 90.00 | 167.8 | -4,223.7 | 469.6 | 225.2 | 244.43 | 1.921 | |
| 11,100.0 | 6,715.0 | 11,092.8 | 6,715.0 | 124.8 | 125.2 | 90.00 | 166.9 | -4,323.7 | 469.6 | 219.6 | 250.01 | 1.878 | |
| 11,200.0 | 6,715.0 | 11,192.8 | 6,715.0 | 127.6 | 128.0 | 90.00 | 165.9 | -4,423.7 | 469.7 | 214.1 | 255.58 | 1.838 | |
| 11,244.6 | 6,715.0 | 11,237.4 | 6,715.0 | 128.9 | 129.3 | 90.00 | 165.5 | -4,468.3 | 469.7 | 211.6 | 258.07 | 1.820 | |

| | | | |
|---------------------------|--|-------------------------------------|---------------------------------|
| Company: | Great Western | Local Co-ordinate Reference: | Well Spaur Brothers EH 31-019HN |
| Project: | SEC.31-T7N-R63W | TVD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Reference Site: | Spaur Brothers South Pad Sec.31-T7N-R63W | MD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Spaur Brothers EH 31-019HN | 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 (11-6-13) | Offset TVD Reference: | Offset Datum |

Reference Depths are relative to WELL @ 4752.5ft (RKB - 16.5')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Spaur Brothers EH 31-019HN
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.66°



| | | | |
|---------------------------|--|-------------------------------------|---------------------------------|
| Company: | Great Western | Local Co-ordinate Reference: | Well Spaur Brothers EH 31-019HN |
| Project: | SEC.31-T7N-R63W | TVD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Reference Site: | Spaur Brothers South Pad Sec.31-T7N-R63W | MD Reference: | WELL @ 4752.5ft (RKB - 16.5') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Spaur Brothers EH 31-019HN | 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 (11-6-13) | Offset TVD Reference: | Offset Datum |

Reference Depths are relative to WELL @ 4752.5ft (RKB - 16.5')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Spaur Brothers EH 31-019HN
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.66°

