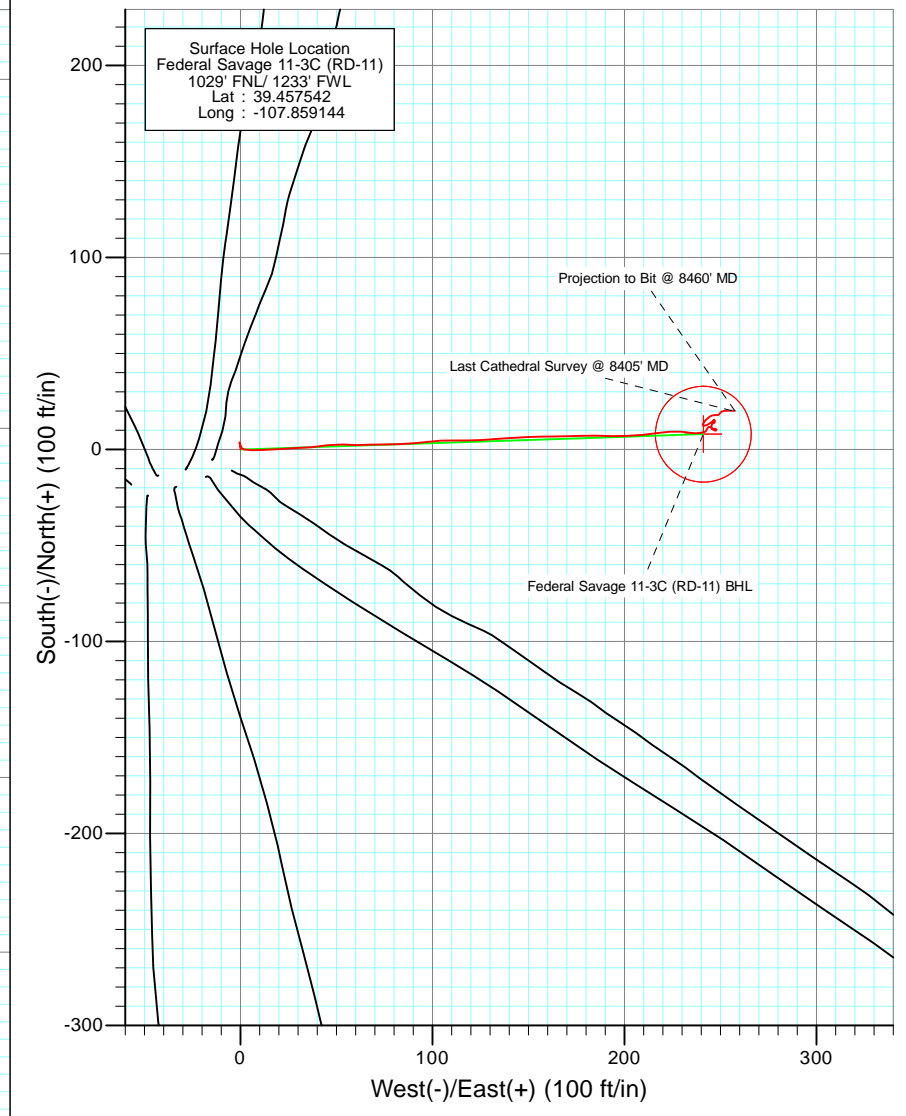
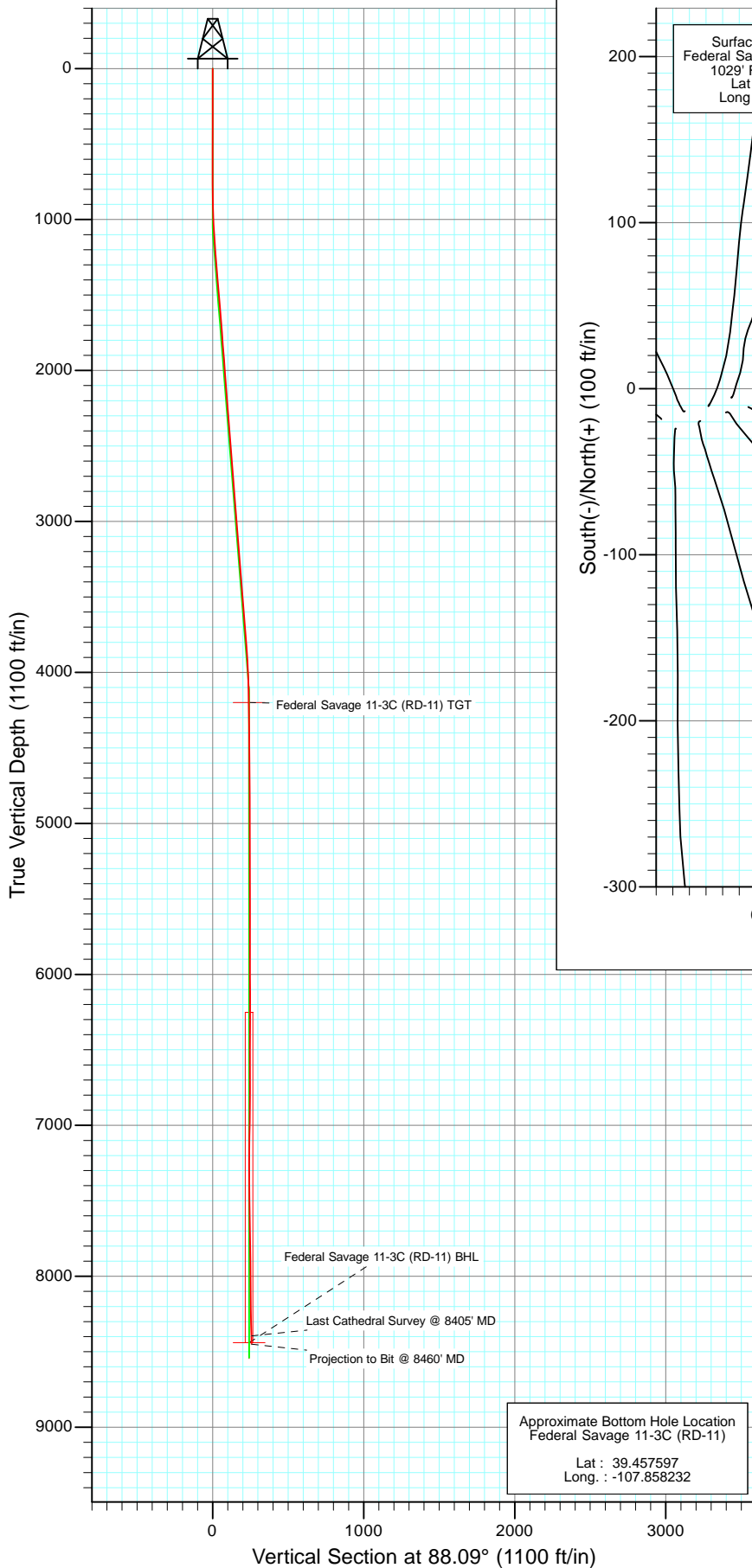




Project: S. Piceance (Parachute)
 Site: NWNW S11-T7S-R94W (RD-11)
 Well: Federal Savage 11-3C (RD-11)
 Wellbore: DD
 Design: FINAL



Azimuths to True North
 Magnetic North: 10.29°

Magnetic Field
 Strength: 52249.8snT
 Dip Angle: 65.73°
 Date: 5/24/2011
 Model: IGRF2010

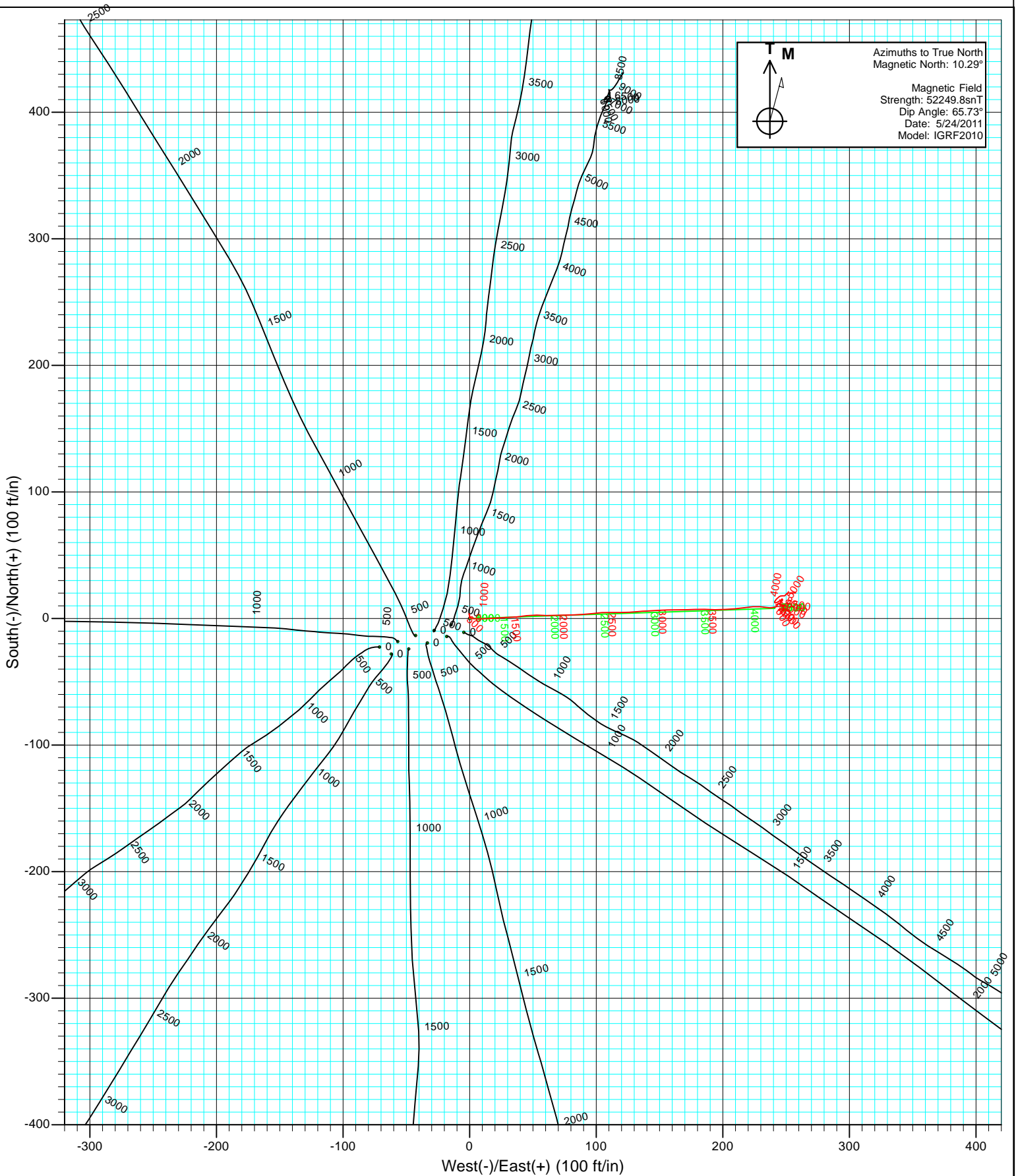
DESIGN DETAILS: DD

115344: SC
 KBE @ 6409.0ft (Original Well Elev)

| Target | Azimuth | Origin | N/S | E/W | From TVD |
|----------------------------------|---------|--------|-----|-----|----------|
| Federal Savage 11-3C (RD-11) BHL | 88.09 | Slot | 0.0 | 0.0 | 0.0 |

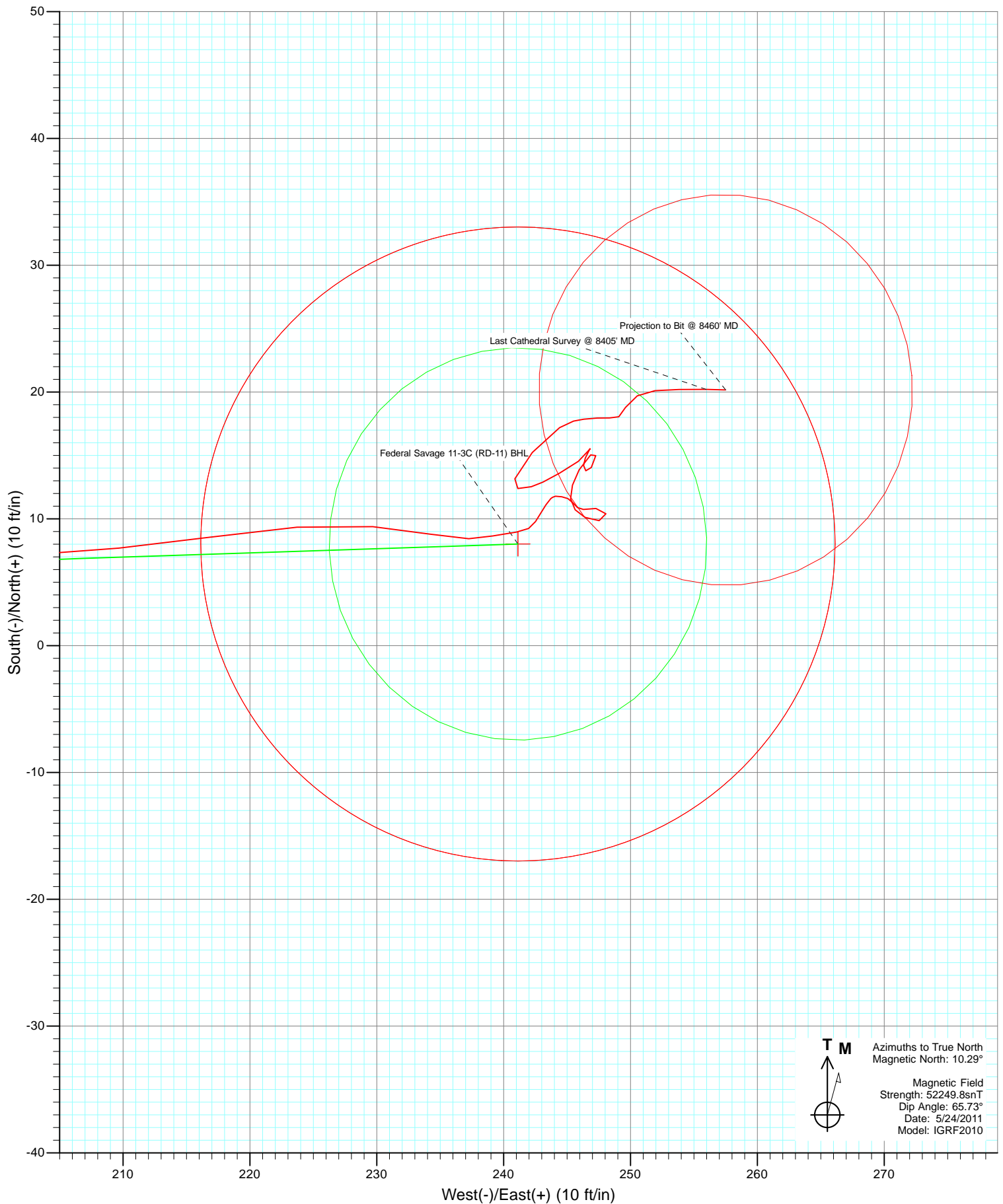


Project: S. Piceance (Parachute)
Site: NWNW S11-T7S-R94W (RD-11)
Well: Federal Savage 11-3C (RD-11)
Wellbore: DD
Design: FINAL





Project: S. Piceance (Parachute)
Site: NWNW S11-T7S-R94W (RD-11)
Well: Federal Savage 11-3C (RD-11)
Wellbore: DD
Design: FINAL



Cathedral Energy Services

Survey Report

| | | | |
|------------------|------------------------------|-------------------------------------|-------------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Federal Savage 11-3C (RD-11) |
| Project: | S. Piceance (Parachute) | TVD Reference: | KBE @ 6409.0ft (Original Well Elev) |
| Site: | NWNW S11-T7S-R94W (RD-11) | MD Reference: | KBE @ 6409.0ft (Original Well Elev) |
| Well: | Federal Savage 11-3C (RD-11) | North Reference: | True |
| Wellbore: | DD | Survey Calculation Method: | Minimum Curvature |
| Design: | DD | Database: | USA EDM 5000 Multi Users DB |

| | | | |
|--------------------|--|----------------------|----------------|
| Project | S. Piceance (Parachute), Garfield County, CO | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | Colorado Central Zone | | |

| | | | | |
|------------------------------|---------------------------|---------------------|-----------------|----------------------------------|
| Site | NWNW S11-T7S-R94W (RD-11) | | | |
| Site Position: | | Northing: | 1,600,170.34 ft | Latitude: 39.457481 |
| From: | Lat/Long | Easting: | 2,333,893.08 ft | Longitude: -107.859394 |
| Position Uncertainty: | 0.0 ft | Slot Radius: | 13.200 in | Grid Convergence: -1.49 ° |

| | | | | |
|-----------------------------|------------------------------|----------------------------|------------------|---------------------------------|
| Well | Federal Savage 11-3C (RD-11) | | | |
| Well Position | +N/-S | 0.0 ft | Northing: | 1,600,190.71 ft |
| | +E/-W | 0.0 ft | Easting: | 2,333,964.22 ft |
| Position Uncertainty | 0.0 ft | Wellhead Elevation: | ft | Ground Level: 6,387.0 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | DD | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 5/24/2011 | 10.29 | 65.73 | 52,250 |

| | | | | | |
|--------------------------|-------------------------|---------------|--------------|----------------------|-----|
| Design | DD | | | | |
| Audit Notes: | | | | | |
| Version: | 1.0 | Phase: | ACTUAL | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) | +N/-S | +E/-W | Direction | |
| | (ft) | (ft) | (ft) | (°) | |
| | 0.0 | 0.0 | 0.0 | 88.09 | |

| | | | | | |
|-----------------------|----------------|--------------------------|------------------|--------------------|--|
| Survey Program | Date | 9/9/2011 | | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description | |
| 112.0 | 8,460.0 | Survey #1 (DD) | MWD | Geolink MWD | |

| | | | | | | | | | | |
|----------------------------|------------------------|--------------------|----------------------------|-------------------|-------------------|------------------------------|------------------------------|-----------------------------|------------------------------|--|
| Survey | | | | | | | | | | |
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Formations / Comments | |
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | | |
| 112.0 | 0.40 | 12.80 | 112.0 | 0.4 | 0.1 | 0.1 | 0.36 | 0.36 | | |
| 205.0 | 0.70 | 347.00 | 205.0 | 1.3 | 0.0 | 0.1 | 0.41 | 0.32 | | |
| 296.0 | 0.50 | 10.70 | 296.0 | 2.2 | 0.0 | 0.1 | 0.35 | -0.22 | | |
| 388.0 | 0.80 | 344.60 | 388.0 | 3.2 | -0.1 | 0.0 | 0.45 | 0.33 | | |
| 480.0 | 0.20 | 264.00 | 480.0 | 3.8 | -0.4 | -0.3 | 0.86 | -0.65 | | |
| 573.0 | 0.50 | 155.90 | 573.0 | 3.4 | -0.4 | -0.3 | 0.64 | 0.32 | | |
| 664.0 | 0.40 | 162.00 | 664.0 | 2.7 | -0.2 | -0.1 | 0.12 | -0.11 | | |
| 755.0 | 0.50 | 175.40 | 755.0 | 2.0 | -0.1 | 0.0 | 0.16 | 0.11 | | |
| 847.0 | 0.80 | 154.90 | 847.0 | 1.1 | 0.3 | 0.3 | 0.41 | 0.33 | | |
| 939.0 | 1.80 | 106.40 | 938.9 | 0.1 | 1.9 | 1.9 | 1.53 | 1.09 | | |
| 1,032.0 | 3.50 | 89.90 | 1,031.8 | -0.3 | 6.2 | 6.1 | 1.99 | 1.83 | | |
| 1,128.0 | 3.70 | 86.80 | 1,127.7 | -0.2 | 12.2 | 12.2 | 0.29 | 0.21 | | |

Cathedral Energy Services

Survey Report

| | | | |
|------------------|------------------------------|-------------------------------------|-------------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Federal Savage 11-3C (RD-11) |
| Project: | S. Piceance (Parachute) | TVD Reference: | KBE @ 6409.0ft (Original Well Elev) |
| Site: | NWNW S11-T7S-R94W (RD-11) | MD Reference: | KBE @ 6409.0ft (Original Well Elev) |
| Well: | Federal Savage 11-3C (RD-11) | North Reference: | True |
| Wellbore: | DD | Survey Calculation Method: | Minimum Curvature |
| Design: | DD | Database: | USA EDM 5000 Multi Users DB |

Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Formations / Comments |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|-----------------------|
| 1,223.0 | 4.10 | 87.50 | 1,222.4 | 0.2 | 18.6 | 18.6 | 0.42 | 0.42 | |
| 1,250.0 | 4.20 | 85.90 | 1,249.4 | 0.3 | 20.6 | 20.6 | 0.57 | 0.37 | |
| 1,360.0 | 5.00 | 87.20 | 1,359.0 | 0.8 | 29.4 | 29.4 | 0.73 | 0.73 | |
| 1,455.0 | 4.60 | 85.60 | 1,453.7 | 1.3 | 37.3 | 37.3 | 0.44 | -0.42 | |
| 1,550.0 | 4.90 | 80.80 | 1,548.4 | 2.2 | 45.1 | 45.2 | 0.52 | 0.32 | |
| 1,646.0 | 4.70 | 93.50 | 1,644.0 | 2.7 | 53.1 | 53.2 | 1.12 | -0.21 | |
| 1,741.0 | 4.40 | 90.80 | 1,738.7 | 2.4 | 60.6 | 60.7 | 0.39 | -0.32 | |
| 1,836.0 | 4.30 | 87.00 | 1,833.4 | 2.5 | 67.8 | 67.9 | 0.32 | -0.11 | |
| 1,932.0 | 4.00 | 90.70 | 1,929.2 | 2.6 | 74.8 | 74.8 | 0.42 | -0.31 | |
| 2,027.0 | 4.80 | 86.70 | 2,023.9 | 2.8 | 82.0 | 82.1 | 0.90 | 0.84 | |
| 2,123.0 | 4.50 | 86.60 | 2,119.6 | 3.3 | 89.8 | 89.9 | 0.31 | -0.31 | |
| 2,218.0 | 4.70 | 83.80 | 2,214.3 | 3.9 | 97.4 | 97.5 | 0.32 | 0.21 | |
| 2,313.0 | 4.00 | 85.50 | 2,309.0 | 4.6 | 104.6 | 104.7 | 0.75 | -0.74 | |
| 2,409.0 | 4.30 | 91.60 | 2,404.8 | 4.8 | 111.5 | 111.6 | 0.56 | 0.31 | |
| 2,504.0 | 4.50 | 89.50 | 2,499.5 | 4.7 | 118.8 | 118.9 | 0.27 | 0.21 | |
| 2,600.0 | 4.20 | 86.60 | 2,595.2 | 4.9 | 126.1 | 126.2 | 0.39 | -0.31 | |
| 2,695.0 | 4.00 | 84.20 | 2,690.0 | 5.5 | 132.8 | 133.0 | 0.28 | -0.21 | |
| 2,791.0 | 5.20 | 88.00 | 2,785.7 | 6.0 | 140.5 | 140.6 | 1.29 | 1.25 | |
| 2,886.0 | 4.70 | 85.80 | 2,880.3 | 6.4 | 148.7 | 148.8 | 0.56 | -0.53 | |
| 2,981.0 | 4.70 | 89.40 | 2,975.0 | 6.7 | 156.5 | 156.6 | 0.31 | 0.00 | |
| 3,076.0 | 4.50 | 88.40 | 3,069.7 | 6.9 | 164.1 | 164.2 | 0.23 | -0.21 | |
| 3,171.0 | 4.10 | 90.30 | 3,164.4 | 7.0 | 171.2 | 171.4 | 0.45 | -0.42 | |
| 3,267.0 | 4.00 | 86.70 | 3,260.2 | 7.1 | 178.0 | 178.1 | 0.28 | -0.10 | |
| 3,362.0 | 5.10 | 91.60 | 3,354.9 | 7.2 | 185.5 | 185.7 | 1.23 | 1.16 | |
| 3,457.0 | 4.80 | 91.70 | 3,449.5 | 7.0 | 193.7 | 193.8 | 0.32 | -0.32 | |
| 3,553.0 | 5.00 | 86.40 | 3,545.2 | 7.1 | 201.9 | 202.0 | 0.52 | 0.21 | |
| 3,648.0 | 4.40 | 85.10 | 3,639.8 | 7.7 | 209.7 | 209.8 | 0.64 | -0.63 | |
| 3,743.0 | 4.40 | 81.30 | 3,734.6 | 8.6 | 216.9 | 217.1 | 0.31 | 0.00 | |
| 3,838.0 | 3.90 | 85.80 | 3,829.3 | 9.3 | 223.7 | 223.9 | 0.63 | -0.53 | |
| 3,932.0 | 3.40 | 94.00 | 3,923.1 | 9.4 | 229.7 | 229.9 | 0.77 | -0.53 | |
| 4,027.0 | 2.20 | 102.90 | 4,018.0 | 8.8 | 234.3 | 234.4 | 1.34 | -1.26 | |
| 4,123.0 | 1.40 | 86.90 | 4,114.0 | 8.4 | 237.3 | 237.4 | 0.98 | -0.83 | |
| 4,218.0 | 0.90 | 77.80 | 4,208.9 | 8.7 | 239.1 | 239.3 | 0.56 | -0.53 | |
| 4,313.0 | 1.40 | 82.80 | 4,303.9 | 9.0 | 241.0 | 241.2 | 0.54 | 0.53 | |
| 4,409.0 | 0.90 | 26.30 | 4,399.9 | 9.8 | 242.5 | 242.7 | 1.22 | -0.52 | |
| 4,504.0 | 1.00 | 36.70 | 4,494.9 | 11.1 | 243.3 | 243.6 | 0.21 | 0.11 | |
| 4,600.0 | 0.10 | 168.10 | 4,590.9 | 11.7 | 243.9 | 244.1 | 1.11 | -0.94 | |
| 4,696.0 | 0.10 | 346.80 | 4,686.9 | 11.7 | 243.9 | 244.1 | 0.21 | 0.00 | |
| 4,791.0 | 0.30 | 90.00 | 4,781.9 | 11.8 | 244.1 | 244.3 | 0.35 | 0.21 | |
| 4,886.0 | 0.30 | 100.30 | 4,876.9 | 11.7 | 244.6 | 244.8 | 0.06 | 0.00 | |
| 4,982.0 | 0.30 | 111.20 | 4,972.9 | 11.6 | 245.1 | 245.3 | 0.06 | 0.00 | |
| 5,077.0 | 0.40 | 144.20 | 5,067.9 | 11.2 | 245.5 | 245.7 | 0.23 | 0.11 | |
| 5,172.0 | 0.20 | 121.40 | 5,162.9 | 10.9 | 245.8 | 246.1 | 0.24 | -0.21 | |
| 5,268.0 | 0.40 | 100.30 | 5,258.9 | 10.7 | 246.3 | 246.5 | 0.23 | 0.21 | |
| 5,364.0 | 0.80 | 77.70 | 5,354.9 | 10.8 | 247.3 | 247.5 | 0.48 | 0.42 | |
| 5,459.0 | 0.70 | 167.00 | 5,449.9 | 10.4 | 248.1 | 248.3 | 1.11 | -0.11 | |
| 5,554.0 | 0.80 | 271.90 | 5,544.9 | 9.9 | 247.5 | 247.7 | 1.25 | 0.11 | |
| 5,650.0 | 0.60 | 298.50 | 5,640.9 | 10.1 | 246.4 | 246.6 | 0.39 | -0.21 | |
| 5,745.0 | 0.60 | 317.30 | 5,735.9 | 10.7 | 245.6 | 245.9 | 0.21 | 0.00 | |
| 5,841.0 | 0.60 | 358.10 | 5,831.9 | 11.6 | 245.3 | 245.5 | 0.44 | 0.00 | |
| 5,937.0 | 0.70 | 16.40 | 5,927.9 | 12.7 | 245.4 | 245.7 | 0.24 | 0.10 | |
| 6,032.0 | 0.90 | 28.10 | 6,022.8 | 13.9 | 246.0 | 246.3 | 0.27 | 0.21 | |
| 6,128.0 | 0.90 | 47.80 | 6,118.8 | 15.0 | 246.9 | 247.2 | 0.32 | 0.00 | |

Cathedral Energy Services

Survey Report

| | | | |
|------------------|------------------------------|-------------------------------------|-------------------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Federal Savage 11-3C (RD-11) |
| Project: | S. Piceance (Parachute) | TVD Reference: | KBE @ 6409.0ft (Original Well Elev) |
| Site: | NWNW S11-T7S-R94W (RD-11) | MD Reference: | KBE @ 6409.0ft (Original Well Elev) |
| Well: | Federal Savage 11-3C (RD-11) | North Reference: | True |
| Wellbore: | DD | Survey Calculation Method: | Minimum Curvature |
| Design: | DD | Database: | USA EDM 5000 Multi Users DB |

| Survey | | | | | | | | | |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|----------------------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Formations / Comments |
| 6,223.0 | 0.70 | 194.70 | 6,213.8 | 15.0 | 247.3 | 247.6 | 1.62 | -0.21 | |
| 6,319.0 | 0.50 | 209.20 | 6,309.8 | 14.1 | 246.9 | 247.2 | 0.26 | -0.21 | |
| 6,415.0 | 0.30 | 293.40 | 6,405.8 | 13.8 | 246.5 | 246.8 | 0.58 | -0.21 | |
| 6,510.0 | 0.40 | 8.40 | 6,500.8 | 14.2 | 246.3 | 246.6 | 0.46 | 0.11 | |
| 6,606.0 | 0.30 | 22.10 | 6,596.8 | 14.8 | 246.4 | 246.8 | 0.14 | -0.10 | |
| 6,702.0 | 0.70 | 27.00 | 6,692.8 | 15.5 | 246.8 | 247.2 | 0.42 | 0.42 | |
| 6,797.0 | 0.70 | 204.70 | 6,787.8 | 15.5 | 246.8 | 247.2 | 1.47 | 0.00 | |
| 6,892.0 | 1.00 | 235.80 | 6,882.8 | 14.5 | 245.9 | 246.2 | 0.57 | 0.32 | |
| 6,988.0 | 1.10 | 240.00 | 6,978.8 | 13.6 | 244.4 | 244.7 | 0.13 | 0.10 | |
| 7,083.0 | 0.70 | 244.10 | 7,073.8 | 12.9 | 243.1 | 243.4 | 0.43 | -0.42 | |
| 7,177.0 | 0.50 | 255.10 | 7,167.8 | 12.5 | 242.2 | 242.5 | 0.24 | -0.21 | |
| 7,272.0 | 0.80 | 266.70 | 7,262.7 | 12.4 | 241.1 | 241.4 | 0.34 | 0.32 | |
| 7,368.0 | 1.10 | 28.50 | 7,358.7 | 13.2 | 240.9 | 241.2 | 1.74 | 0.31 | |
| 7,463.0 | 1.90 | 36.40 | 7,453.7 | 15.2 | 242.3 | 242.6 | 0.87 | 0.84 | |
| 7,558.0 | 1.70 | 60.30 | 7,548.7 | 17.2 | 244.4 | 244.9 | 0.81 | -0.21 | |
| 7,654.0 | 0.80 | 92.90 | 7,644.6 | 17.9 | 246.3 | 246.8 | 1.16 | -0.94 | |
| 7,749.0 | 0.50 | 73.80 | 7,739.6 | 18.0 | 247.4 | 247.8 | 0.39 | -0.32 | |
| 7,844.0 | 0.70 | 100.30 | 7,834.6 | 18.0 | 248.4 | 248.8 | 0.35 | 0.21 | |
| 7,940.0 | 0.30 | 38.40 | 7,930.6 | 18.1 | 249.1 | 249.6 | 0.64 | -0.42 | |
| 8,035.0 | 0.80 | 34.50 | 8,025.6 | 18.8 | 249.6 | 250.1 | 0.53 | 0.53 | |
| 8,130.0 | 0.80 | 56.60 | 8,120.6 | 19.7 | 250.5 | 251.1 | 0.32 | 0.00 | |
| 8,226.0 | 1.00 | 87.20 | 8,216.6 | 20.1 | 251.9 | 252.5 | 0.53 | 0.21 | |
| 8,321.0 | 1.30 | 87.60 | 8,311.6 | 20.2 | 253.8 | 254.4 | 0.32 | 0.32 | |
| 8,405.0 | 1.60 | 91.50 | 8,395.6 | 20.2 | 256.0 | 256.5 | 0.38 | 0.36 | Last Cathedral Survey @ 8405' MD |
| 8,460.0 | 1.60 | 91.50 | 8,450.5 | 20.2 | 257.5 | 258.0 | 0.00 | 0.00 | Projection to Bit @ 8460' MD |

| Targets | | | | | | | | | |
|-------------------------|---|---------------|--------------|----------|------------|------------|---------------|--------------|-----------------------|
| Target Name | - hit/miss target | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude Longitude |
| Federal Savage 11-3C (I | - actual wellpath misses target center by 20.2ft at 8449.0ft MD (8439.6 TVD, 20.2 N, 257.2 E) | 0.00 | 0.00 | 8,440.0 | 8.0 | 241.1 | 1,600,192.47 | 2,334,205.48 | 39.457564 -107.858290 |
| - Circle (radius 25.0) | | | | | | | | | |
| Federal Savage 11-3C (I | - actual wellpath misses target center by 2.2ft at 4209.1ft MD (4200.0 TVD, 8.6 N, 239.0 E) | 0.00 | 0.00 | 4,200.0 | 8.0 | 241.1 | 1,600,192.47 | 2,334,205.48 | 39.457564 -107.858290 |
| - Point | | | | | | | | | |

| Design Annotations | | | | | |
|---------------------|---------------------|-------------------|------------|----------------------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment | |
| | | +N/-S (ft) | +E/-W (ft) | | |
| 8,405.0 | 8,395.6 | 20.2 | 256.0 | Last Cathedral Survey @ 8405' MD | |
| 8,460.0 | 8,450.5 | 20.2 | 257.5 | Projection to Bit @ 8460' MD | |

Checked By: _____ Approved By: _____ Date: _____