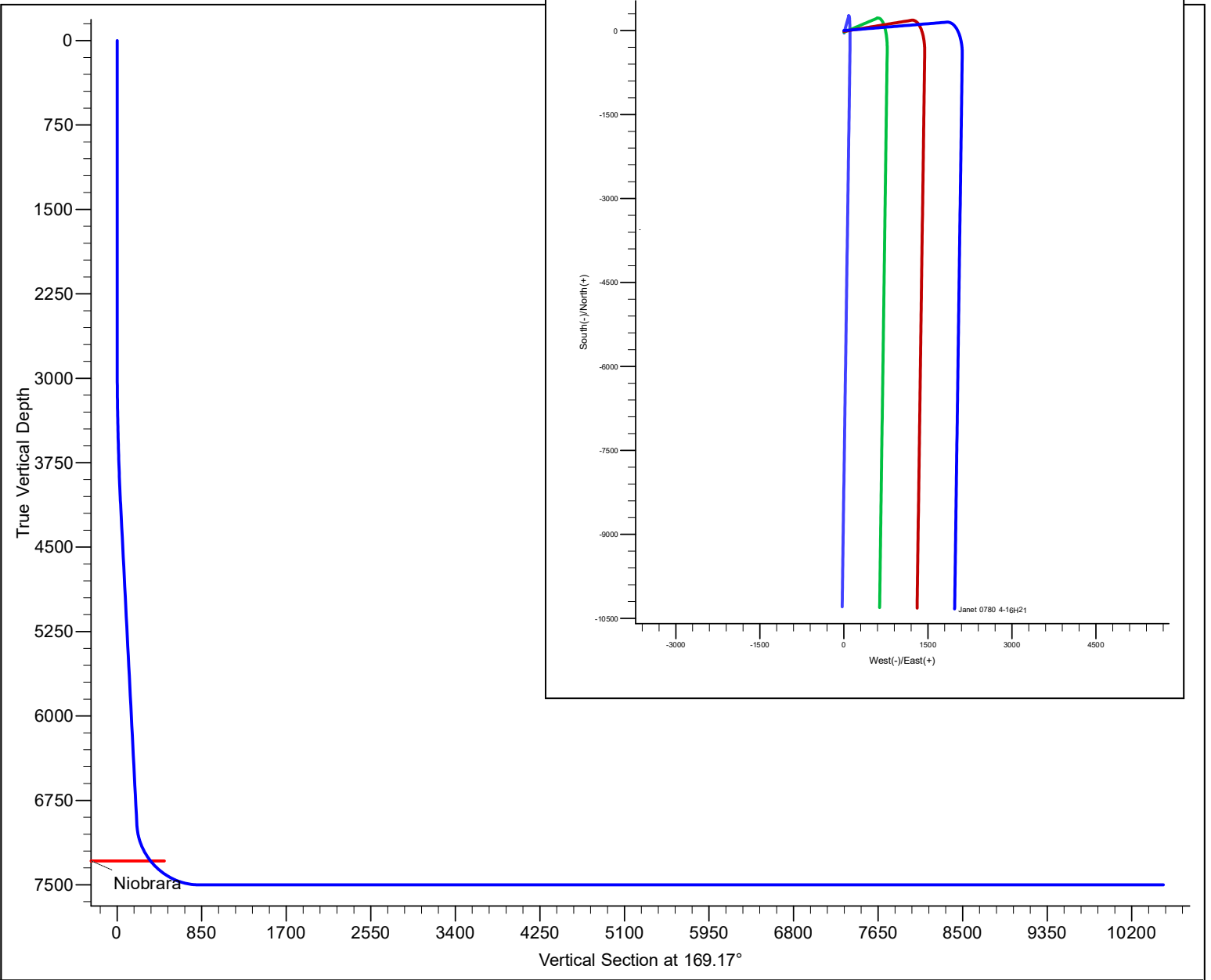


|   |        |                   |                |                       |            |                  |      |            |  |  |  |
|---|--------|-------------------|----------------|-----------------------|------------|------------------|------|------------|--|--|--|
| PROJECT DETAILS: North Park Basin   |        |                   |                |                       |            |                  |      |            |  | <div><div><div><div><div></div><div>G</div></div><div><div></div><div>T</div></div><div><div></div><div>M</div></div></div><div><div></div></div></div><div><div><div></div><div></div></div></div></div> <div>Azimuths to Grid North<br/>True North: 0.57°<br/>Magnetic North: 10.46°<br/><br/>Magnetic Field<br/>Strength: 53191.1snT<br/>Dip Angle: 66.98°<br/>Date: 12/31/2009<br/>Model: IGRF200510</div> |  |
| Geodetic System: US State Plane 1983<br>Datum: North American Datum 1983<br>Ellipsoid: GRS 1980<br>Zone: Colorado Northern Zone<br><br>System Datum: Mean Sea Level |        |                   |                |                       |            |                  |      |            |  |  |  |
| FORMATION TOP DETAILS   |        |                   |                |                       |            |                  |      |            |  | CASING DETAILS   |  |
| TVDPPath<br>7288.0  |        | MDPath<br>7785.8  |                | Formation<br>Niobrara |            | DipAngle<br>0.00 |      | DipDir     |  | No casing data is available  |  |
| DESIGN DETAILS: Design #1   |        |                   |                |                       |            |                  |      |            |  | Project: North Park Basin<br>Site: T7N-R80W-S9<br>Well: Janet 0780 4-16H21<br>Wellbore: Wellbore #1<br>Design: Design #1   |  |
| 0' Vertical Section coordinates   |        |                   |                |                       |            |                  |      |            |  |  |  |
| Type<br>TD  | Target | Azimuth<br>169.17 | Origin<br>Slot | Type                  | N/S<br>0.0 | E/W<br>0.0       | From | TVD<br>0.0 |  |  |  |



|                 |         |       |        |        |          |        |       |       |         |             |  |
|-----------------|---------|-------|--------|--------|----------|--------|-------|-------|---------|-------------|--|
| SECTION DETAILS |         |       |        |        |          |        |       |       |         |             |  |
| Sec             | MD      | Inc   | Azi    | TVD    | +N/-S    | +E/-W  | Dleg  | TFace | VSect   | Target      |  |
| 1               | 0.0     | 0.00  | 0.00   | 0.0    | 0.0      | 0.0    | 0.00  | 0.00  | 0.0     |             |  |
| 2               | 2800.0  | 0.00  | 0.00   | 2800.0 | 0.0      | 0.0    | 0.00  | 0.00  | 0.0     |             |  |
| 3               | 4206.2  | 28.12 | 85.34  | 4150.4 | 27.5     | 337.1  | 2.00  | 85.34 | 36.4    |             |  |
| 4               | 7405.0  | 28.12 | 85.34  | 6971.5 | 150.0    | 1840.0 | 0.00  | 0.00  | 198.5   |             |  |
| 5               | 8330.6  | 90.00 | 180.79 | 7500.0 | -426.2   | 2113.3 | 10.00 | 94.81 | 815.8   | Janet 4 BHL |  |
| 6               | 18236.4 | 90.00 | 180.79 | 7500.0 | -10331.0 | 1977.1 | 0.00  | 0.00  | 10518.5 | Janet 4 BHL |  |

# **SandRidge Energy**

**North Park Basin**

**T7N-R80W-S9**

**Janet 0780 4-16H21**

**Wellbore #1**

**Plan: Design #1**

## **Standard Survey Report**

**08 August, 2017**

# SandRidge Energy

## Survey Report

|                  |                    |                                     |  |
|------------------|--------------------|-------------------------------------|--|
| <b>Company:</b>  | SandRidge Energy   | <b>Local Co-ordinate Reference:</b> | Well Janet 0780 4-16H21                |
| <b>Project:</b>  | North Park Basin   | <b>TVD Reference:</b>               | WELL @ 8151.0usft (Original Well Elev) |
| <b>Site:</b>     | T7N-R80W-S9        | <b>MD Reference:</b>                | WELL @ 8151.0usft (Original Well Elev) |
| <b>Well:</b>     | Janet 0780 4-16H21 | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Wellbore #1        | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Design #1          | <b>Database:</b>                    | EDMProd                                |

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

|                              |             |                          |                   |
|------------------------------|-------------|--------------------------|-------------------|
| <b>Site</b>                  | T7N-R80W-S9 |                          |                   |
| <b>Site Position:</b>        |             | <b>Northing:</b>         | 1,457,270.18 usft |
| <b>From:</b>                 | Map         | <b>Easting:</b>          | 2,753,429.57 usft |
| <b>Position Uncertainty:</b> | 0.0 usft    | <b>Slot Radius:</b>      | 13-3/16 "         |
|                              |             | <b>Latitude:</b>         | 40° 35' 6.782 N   |
|                              |             | <b>Longitude:</b>        | 106° 23' 15.932 W |
|                              |             | <b>Grid Convergence:</b> | -0.57 °           |

|                             |                    |                            |                   |
|-----------------------------|--------------------|----------------------------|-------------------|
| <b>Well</b>                 | Janet 0780 4-16H21 |                            |                   |
| <b>Well Position</b>        | <b>+N/-S</b>       | 0.0 usft                   | <b>Northing:</b>  |
|                             | <b>+E/-W</b>       | 0.0 usft                   | <b>Easting:</b>   |
| <b>Position Uncertainty</b> | 0.0 usft           | <b>Wellhead Elevation:</b> | 0.0 usft          |
|                             |                    | <b>Latitude:</b>           | 40° 35' 3.391 N   |
|                             |                    | <b>Longitude:</b>          | 106° 23' 14.444 W |
|                             |                    | <b>Ground Level:</b>       | 8,126.0 usft      |

|                  |                   |                    |                       |
|------------------|-------------------|--------------------|-----------------------|
| <b>Wellbore</b>  | Wellbore #1       |                    |                       |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination</b>    |
|                  |                   |                    | (°)                   |
|                  | IGRF200510        | 12/31/2009         | 9.88                  |
|                  |                   |                    | <b>Dip Angle</b>      |
|                  |                   |                    | (°)                   |
|                  |                   |                    | 66.98                 |
|                  |                   |                    | <b>Field Strength</b> |
|                  |                   |                    | (nT)                  |
|                  |                   |                    | 53,191                |

|                          |                         |              |                      |
|--------------------------|-------------------------|--------------|----------------------|
| <b>Design</b>            | Design #1               |              |                      |
| <b>Audit Notes:</b>      |                         |              |                      |
| <b>Version:</b>          | <b>Phase:</b>           | PROTOTYPE    | <b>Tie On Depth:</b> |
|                          |                         |              | 0.0                  |
| <b>Vertical Section:</b> | <b>Depth From (TVD)</b> | <b>+N/-S</b> | <b>+E/-W</b>         |
|                          | (usft)                  | (usft)       | (usft)               |
|                          | 0.0                     | 0.0          | 0.0                  |
|                          |                         |              | <b>Direction</b>     |
|                          |                         |              | (°)                  |
|                          |                         |              | 169.17               |

|                            |             |                          |                  |                               |
|----------------------------|-------------|--------------------------|------------------|-------------------------------|
| <b>Survey Tool Program</b> | <b>Date</b> | 8/8/2017                 |                  |                               |
| <b>From</b>                | <b>To</b>   | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Description</b>            |
| (usft)                     | (usft)      |                          |                  |                               |
| 0.0                        | 18,236.4    | Design #1 (Wellbore #1)  | Sperry MWD       | Fixed:v2:standard declination |

|                       |                    |                |                 |               |               |                 |                    |                    |                    |
|-----------------------|--------------------|----------------|-----------------|---------------|---------------|-----------------|--------------------|--------------------|--------------------|
| <b>Planned Survey</b> |                    |                |                 |               |               |                 |                    |                    |                    |
| <b>Measured</b>       | <b>Inclination</b> | <b>Azimuth</b> | <b>Vertical</b> | <b>+N/-S</b>  | <b>+E/-W</b>  | <b>Vertical</b> | <b>Dogleg</b>      | <b>Build</b>       | <b>Turn</b>        |
| <b>Depth</b>          | <b>(°)</b>         | <b>(°)</b>     | <b>Depth</b>    | <b>(usft)</b> | <b>(usft)</b> | <b>Section</b>  | <b>Rate</b>        | <b>Rate</b>        | <b>Rate</b>        |
| <b>(usft)</b>         |                    |                | <b>(usft)</b>   |               |               | <b>(usft)</b>   | <b>(°/100usft)</b> | <b>(°/100usft)</b> | <b>(°/100usft)</b> |
| 0.0                   | 0.00               | 0.00           | 0.0             | 0.0           | 0.0           | 0.0             | 0.00               | 0.00               | 0.00               |
| 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               |

# SandRidge Energy

## Survey Report

|                  |                    |                                     |  |
|------------------|--------------------|-------------------------------------|--|
| <b>Company:</b>  | SandRidge Energy   | <b>Local Co-ordinate Reference:</b> | Well Janet 0780 4-16H21                |
| <b>Project:</b>  | North Park Basin   | <b>TVD Reference:</b>               | WELL @ 8151.0usft (Original Well Elev) |
| <b>Site:</b>     | T7N-R80W-S9        | <b>MD Reference:</b>                | WELL @ 8151.0usft (Original Well Elev) |
| <b>Well:</b>     | Janet 0780 4-16H21 | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Wellbore #1        | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Design #1          | <b>Database:</b>                    | EDMProd                                |

### Planned Survey

| Measured Depth (usft)                 | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 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                  |
| <b>Start Build 2.00</b>               |                 |             |                       |              |              |                         |                         |                        |                       |
| 2,900.0                               | 2.00            | 85.34       | 2,900.0               | 0.1          | 1.7          | 0.2                     | 2.00                    | 2.00                   | 0.00                  |
| 3,000.0                               | 4.00            | 85.34       | 2,999.8               | 0.6          | 7.0          | 0.8                     | 2.00                    | 2.00                   | 0.00                  |
| 3,100.0                               | 6.00            | 85.34       | 3,099.5               | 1.3          | 15.6         | 1.7                     | 2.00                    | 2.00                   | 0.00                  |
| 3,200.0                               | 8.00            | 85.34       | 3,198.7               | 2.3          | 27.8         | 3.0                     | 2.00                    | 2.00                   | 0.00                  |
| 3,300.0                               | 10.00           | 85.34       | 3,297.5               | 3.5          | 43.4         | 4.7                     | 2.00                    | 2.00                   | 0.00                  |
| 3,400.0                               | 12.00           | 85.34       | 3,395.6               | 5.1          | 62.4         | 6.7                     | 2.00                    | 2.00                   | 0.00                  |
| 3,500.0                               | 14.00           | 85.34       | 3,493.1               | 6.9          | 84.8         | 9.2                     | 2.00                    | 2.00                   | 0.00                  |
| 3,600.0                               | 16.00           | 85.34       | 3,589.6               | 9.0          | 110.6        | 11.9                    | 2.00                    | 2.00                   | 0.00                  |
| 3,700.0                               | 18.00           | 85.34       | 3,685.3               | 11.4         | 139.7        | 15.1                    | 2.00                    | 2.00                   | 0.00                  |
| 3,800.0                               | 20.00           | 85.34       | 3,779.8               | 14.0         | 172.2        | 18.6                    | 2.00                    | 2.00                   | 0.00                  |
| 3,900.0                               | 22.00           | 85.34       | 3,873.2               | 16.9         | 207.9        | 22.4                    | 2.00                    | 2.00                   | 0.00                  |
| 4,000.0                               | 24.00           | 85.34       | 3,965.2               | 20.1         | 246.9        | 26.6                    | 2.00                    | 2.00                   | 0.00                  |
| 4,100.0                               | 26.00           | 85.34       | 4,055.8               | 23.6         | 289.0        | 31.2                    | 2.00                    | 2.00                   | 0.00                  |
| 4,200.0                               | 28.00           | 85.34       | 4,144.9               | 27.2         | 334.2        | 36.1                    | 2.00                    | 2.00                   | 0.00                  |
| 4,206.2                               | 28.12           | 85.34       | 4,150.4               | 27.5         | 337.1        | 36.4                    | 2.00                    | 2.00                   | 0.00                  |
| <b>Start 3198.8 hold at 4206.2 MD</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 4,300.0                               | 28.12           | 85.34       | 4,233.1               | 31.1         | 381.2        | 41.1                    | 0.00                    | 0.00                   | 0.00                  |
| 4,400.0                               | 28.12           | 85.34       | 4,321.3               | 34.9         | 428.2        | 46.2                    | 0.00                    | 0.00                   | 0.00                  |
| 4,500.0                               | 28.12           | 85.34       | 4,409.5               | 38.7         | 475.2        | 51.3                    | 0.00                    | 0.00                   | 0.00                  |
| 4,600.0                               | 28.12           | 85.34       | 4,497.7               | 42.6         | 522.1        | 56.3                    | 0.00                    | 0.00                   | 0.00                  |
| 4,700.0                               | 28.12           | 85.34       | 4,585.9               | 46.4         | 569.1        | 61.4                    | 0.00                    | 0.00                   | 0.00                  |
| 4,800.0                               | 28.12           | 85.34       | 4,674.1               | 50.2         | 616.1        | 66.5                    | 0.00                    | 0.00                   | 0.00                  |
| 4,900.0                               | 28.12           | 85.34       | 4,762.3               | 54.1         | 663.1        | 71.5                    | 0.00                    | 0.00                   | 0.00                  |
| 5,000.0                               | 28.12           | 85.34       | 4,850.5               | 57.9         | 710.1        | 76.6                    | 0.00                    | 0.00                   | 0.00                  |

# SandRidge Energy

## Survey Report

|                  |                    |                                     |  |
|------------------|--------------------|-------------------------------------|--|
| <b>Company:</b>  | SandRidge Energy   | <b>Local Co-ordinate Reference:</b> | Well Janet 0780 4-16H21                |
| <b>Project:</b>  | North Park Basin   | <b>TVD Reference:</b>               | WELL @ 8151.0usft (Original Well Elev) |
| <b>Site:</b>     | T7N-R80W-S9        | <b>MD Reference:</b>                | WELL @ 8151.0usft (Original Well Elev) |
| <b>Well:</b>     | Janet 0780 4-16H21 | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Wellbore #1        | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Design #1          | <b>Database:</b>                    | EDMProd                                |

### Planned Survey

| Measured Depth (usft)                 | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 5,100.0                               | 28.12           | 85.34       | 4,938.7               | 61.7         | 757.1        | 81.7                    | 0.00                    | 0.00                   | 0.00                  |
| 5,200.0                               | 28.12           | 85.34       | 5,026.9               | 65.5         | 804.0        | 86.8                    | 0.00                    | 0.00                   | 0.00                  |
| 5,300.0                               | 28.12           | 85.34       | 5,115.1               | 69.4         | 851.0        | 91.8                    | 0.00                    | 0.00                   | 0.00                  |
| 5,400.0                               | 28.12           | 85.34       | 5,203.3               | 73.2         | 898.0        | 96.9                    | 0.00                    | 0.00                   | 0.00                  |
| 5,500.0                               | 28.12           | 85.34       | 5,291.4               | 77.0         | 945.0        | 102.0                   | 0.00                    | 0.00                   | 0.00                  |
| 5,600.0                               | 28.12           | 85.34       | 5,379.6               | 80.9         | 992.0        | 107.0                   | 0.00                    | 0.00                   | 0.00                  |
| 5,700.0                               | 28.12           | 85.34       | 5,467.8               | 84.7         | 1,039.0      | 112.1                   | 0.00                    | 0.00                   | 0.00                  |
| 5,800.0                               | 28.12           | 85.34       | 5,556.0               | 88.5         | 1,085.9      | 117.2                   | 0.00                    | 0.00                   | 0.00                  |
| 5,900.0                               | 28.12           | 85.34       | 5,644.2               | 92.4         | 1,132.9      | 122.2                   | 0.00                    | 0.00                   | 0.00                  |
| 6,000.0                               | 28.12           | 85.34       | 5,732.4               | 96.2         | 1,179.9      | 127.3                   | 0.00                    | 0.00                   | 0.00                  |
| 6,100.0                               | 28.12           | 85.34       | 5,820.6               | 100.0        | 1,226.9      | 132.4                   | 0.00                    | 0.00                   | 0.00                  |
| 6,200.0                               | 28.12           | 85.34       | 5,908.8               | 103.8        | 1,273.9      | 137.4                   | 0.00                    | 0.00                   | 0.00                  |
| 6,300.0                               | 28.12           | 85.34       | 5,997.0               | 107.7        | 1,320.9      | 142.5                   | 0.00                    | 0.00                   | 0.00                  |
| 6,400.0                               | 28.12           | 85.34       | 6,085.2               | 111.5        | 1,367.8      | 147.6                   | 0.00                    | 0.00                   | 0.00                  |
| 6,500.0                               | 28.12           | 85.34       | 6,173.4               | 115.3        | 1,414.8      | 152.6                   | 0.00                    | 0.00                   | 0.00                  |
| 6,600.0                               | 28.12           | 85.34       | 6,261.6               | 119.2        | 1,461.8      | 157.7                   | 0.00                    | 0.00                   | 0.00                  |
| 6,700.0                               | 28.12           | 85.34       | 6,349.8               | 123.0        | 1,508.8      | 162.8                   | 0.00                    | 0.00                   | 0.00                  |
| 6,800.0                               | 28.12           | 85.34       | 6,438.0               | 126.8        | 1,555.8      | 167.9                   | 0.00                    | 0.00                   | 0.00                  |
| 6,900.0                               | 28.12           | 85.34       | 6,526.1               | 130.7        | 1,602.7      | 172.9                   | 0.00                    | 0.00                   | 0.00                  |
| 7,000.0                               | 28.12           | 85.34       | 6,614.3               | 134.5        | 1,649.7      | 178.0                   | 0.00                    | 0.00                   | 0.00                  |
| 7,100.0                               | 28.12           | 85.34       | 6,702.5               | 138.3        | 1,696.7      | 183.1                   | 0.00                    | 0.00                   | 0.00                  |
| 7,200.0                               | 28.12           | 85.34       | 6,790.7               | 142.1        | 1,743.7      | 188.1                   | 0.00                    | 0.00                   | 0.00                  |
| 7,300.0                               | 28.12           | 85.34       | 6,878.9               | 146.0        | 1,790.7      | 193.2                   | 0.00                    | 0.00                   | 0.00                  |
| 7,400.0                               | 28.12           | 85.34       | 6,967.1               | 149.8        | 1,837.7      | 198.3                   | 0.00                    | 0.00                   | 0.00                  |
| 7,405.0                               | 28.12           | 85.34       | 6,971.5               | 150.0        | 1,840.0      | 198.5                   | 0.00                    | 0.00                   | 0.00                  |
| <b>Start DLS 10.00 TFO 94.81</b>      |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,500.0                               | 28.79           | 105.31      | 7,055.2               | 145.8        | 1,884.5      | 211.0                   | 10.00                   | 0.71                   | 21.02                 |
| 7,600.0                               | 32.38           | 123.74      | 7,141.5               | 124.5        | 1,930.1      | 240.5                   | 10.00                   | 3.58                   | 18.43                 |
| 7,700.0                               | 38.09           | 138.04      | 7,223.3               | 86.6         | 1,973.1      | 285.8                   | 10.00                   | 5.71                   | 14.29                 |
| 7,785.8                               | 44.07           | 147.44      | 7,288.0               | 41.7         | 2,006.9      | 336.3                   | 10.00                   | 6.96                   | 10.96                 |
| <b>Niobrara</b>                       |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,800.0                               | 45.12           | 148.79      | 7,298.1               | 33.2         | 2,012.2      | 345.6                   | 10.00                   | 7.43                   | 9.53                  |
| 7,900.0                               | 52.93           | 157.09      | 7,363.7               | -34.0        | 2,046.2      | 418.0                   | 10.00                   | 7.81                   | 8.30                  |
| 8,000.0                               | 61.21           | 163.79      | 7,418.0               | -113.0       | 2,074.0      | 500.9                   | 10.00                   | 8.28                   | 6.70                  |
| 8,100.0                               | 69.77           | 169.48      | 7,459.5               | -201.5       | 2,094.9      | 591.6                   | 10.00                   | 8.56                   | 5.69                  |
| 8,200.0                               | 78.49           | 174.57      | 7,486.9               | -296.6       | 2,108.1      | 687.6                   | 10.00                   | 8.72                   | 5.09                  |
| 8,300.0                               | 87.30           | 179.35      | 7,499.2               | -395.6       | 2,113.3      | 785.7                   | 10.00                   | 8.81                   | 4.78                  |
| 8,330.6                               | 90.00           | 180.79      | 7,500.0               | -426.2       | 2,113.3      | 815.8                   | 10.00                   | 8.83                   | 4.70                  |
| <b>Start 9905.8 hold at 8330.6 MD</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 8,400.0                               | 90.00           | 180.79      | 7,500.0               | -495.6       | 2,112.3      | 883.8                   | 0.00                    | 0.00                   | 0.00                  |
| 8,500.0                               | 90.00           | 180.79      | 7,500.0               | -595.5       | 2,111.0      | 981.7                   | 0.00                    | 0.00                   | 0.00                  |
| 8,600.0                               | 90.00           | 180.79      | 7,500.0               | -695.5       | 2,109.6      | 1,079.7                 | 0.00                    | 0.00                   | 0.00                  |
| 8,700.0                               | 90.00           | 180.79      | 7,500.0               | -795.5       | 2,108.2      | 1,177.6                 | 0.00                    | 0.00                   | 0.00                  |
| 8,800.0                               | 90.00           | 180.79      | 7,500.0               | -895.5       | 2,106.8      | 1,275.6                 | 0.00                    | 0.00                   | 0.00                  |

# SandRidge Energy

## Survey Report

|                  |                    |                                     |  |
|------------------|--------------------|-------------------------------------|--|
| <b>Company:</b>  | SandRidge Energy   | <b>Local Co-ordinate Reference:</b> | Well Janet 0780 4-16H21                |
| <b>Project:</b>  | North Park Basin   | <b>TVD Reference:</b>               | WELL @ 8151.0usft (Original Well Elev) |
| <b>Site:</b>     | T7N-R80W-S9        | <b>MD Reference:</b>                | WELL @ 8151.0usft (Original Well Elev) |
| <b>Well:</b>     | Janet 0780 4-16H21 | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Wellbore #1        | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Design #1          | <b>Database:</b>                    | EDMProd                                |

### Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 8,900.0               | 90.00           | 180.79      | 7,500.0               | -995.5       | 2,105.5      | 1,373.5                 | 0.00                    | 0.00                   | 0.00                  |
| 9,000.0               | 90.00           | 180.79      | 7,500.0               | -1,095.5     | 2,104.1      | 1,471.5                 | 0.00                    | 0.00                   | 0.00                  |
| 9,100.0               | 90.00           | 180.79      | 7,500.0               | -1,195.5     | 2,102.7      | 1,569.4                 | 0.00                    | 0.00                   | 0.00                  |
| 9,200.0               | 90.00           | 180.79      | 7,500.0               | -1,295.5     | 2,101.3      | 1,667.4                 | 0.00                    | 0.00                   | 0.00                  |
| 9,300.0               | 90.00           | 180.79      | 7,500.0               | -1,395.5     | 2,100.0      | 1,765.3                 | 0.00                    | 0.00                   | 0.00                  |
| 9,400.0               | 90.00           | 180.79      | 7,500.0               | -1,495.5     | 2,098.6      | 1,863.3                 | 0.00                    | 0.00                   | 0.00                  |
| 9,500.0               | 90.00           | 180.79      | 7,500.0               | -1,595.5     | 2,097.2      | 1,961.2                 | 0.00                    | 0.00                   | 0.00                  |
| 9,600.0               | 90.00           | 180.79      | 7,500.0               | -1,695.4     | 2,095.8      | 2,059.2                 | 0.00                    | 0.00                   | 0.00                  |
| 9,700.0               | 90.00           | 180.79      | 7,500.0               | -1,795.4     | 2,094.5      | 2,157.1                 | 0.00                    | 0.00                   | 0.00                  |
| 9,800.0               | 90.00           | 180.79      | 7,500.0               | -1,895.4     | 2,093.1      | 2,255.1                 | 0.00                    | 0.00                   | 0.00                  |
| 9,900.0               | 90.00           | 180.79      | 7,500.0               | -1,995.4     | 2,091.7      | 2,353.0                 | 0.00                    | 0.00                   | 0.00                  |
| 10,000.0              | 90.00           | 180.79      | 7,500.0               | -2,095.4     | 2,090.3      | 2,451.0                 | 0.00                    | 0.00                   | 0.00                  |
| 10,100.0              | 90.00           | 180.79      | 7,500.0               | -2,195.4     | 2,089.0      | 2,548.9                 | 0.00                    | 0.00                   | 0.00                  |
| 10,200.0              | 90.00           | 180.79      | 7,500.0               | -2,295.4     | 2,087.6      | 2,646.9                 | 0.00                    | 0.00                   | 0.00                  |
| 10,300.0              | 90.00           | 180.79      | 7,500.0               | -2,395.4     | 2,086.2      | 2,744.8                 | 0.00                    | 0.00                   | 0.00                  |
| 10,400.0              | 90.00           | 180.79      | 7,500.0               | -2,495.4     | 2,084.8      | 2,842.8                 | 0.00                    | 0.00                   | 0.00                  |
| 10,500.0              | 90.00           | 180.79      | 7,500.0               | -2,595.4     | 2,083.5      | 2,940.7                 | 0.00                    | 0.00                   | 0.00                  |
| 10,600.0              | 90.00           | 180.79      | 7,500.0               | -2,695.3     | 2,082.1      | 3,038.7                 | 0.00                    | 0.00                   | 0.00                  |
| 10,700.0              | 90.00           | 180.79      | 7,500.0               | -2,795.3     | 2,080.7      | 3,136.6                 | 0.00                    | 0.00                   | 0.00                  |
| 10,800.0              | 90.00           | 180.79      | 7,500.0               | -2,895.3     | 2,079.3      | 3,234.6                 | 0.00                    | 0.00                   | 0.00                  |
| 10,900.0              | 90.00           | 180.79      | 7,500.0               | -2,995.3     | 2,078.0      | 3,332.5                 | 0.00                    | 0.00                   | 0.00                  |
| 11,000.0              | 90.00           | 180.79      | 7,500.0               | -3,095.3     | 2,076.6      | 3,430.5                 | 0.00                    | 0.00                   | 0.00                  |
| 11,100.0              | 90.00           | 180.79      | 7,500.0               | -3,195.3     | 2,075.2      | 3,528.4                 | 0.00                    | 0.00                   | 0.00                  |
| 11,200.0              | 90.00           | 180.79      | 7,500.0               | -3,295.3     | 2,073.8      | 3,626.4                 | 0.00                    | 0.00                   | 0.00                  |
| 11,300.0              | 90.00           | 180.79      | 7,500.0               | -3,395.3     | 2,072.5      | 3,724.3                 | 0.00                    | 0.00                   | 0.00                  |
| 11,400.0              | 90.00           | 180.79      | 7,500.0               | -3,495.3     | 2,071.1      | 3,822.3                 | 0.00                    | 0.00                   | 0.00                  |
| 11,500.0              | 90.00           | 180.79      | 7,500.0               | -3,595.3     | 2,069.7      | 3,920.2                 | 0.00                    | 0.00                   | 0.00                  |
| 11,600.0              | 90.00           | 180.79      | 7,500.0               | -3,695.3     | 2,068.3      | 4,018.2                 | 0.00                    | 0.00                   | 0.00                  |
| 11,700.0              | 90.00           | 180.79      | 7,500.0               | -3,795.2     | 2,067.0      | 4,116.1                 | 0.00                    | 0.00                   | 0.00                  |
| 11,800.0              | 90.00           | 180.79      | 7,500.0               | -3,895.2     | 2,065.6      | 4,214.1                 | 0.00                    | 0.00                   | 0.00                  |
| 11,900.0              | 90.00           | 180.79      | 7,500.0               | -3,995.2     | 2,064.2      | 4,312.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,000.0              | 90.00           | 180.79      | 7,500.0               | -4,095.2     | 2,062.8      | 4,410.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,100.0              | 90.00           | 180.79      | 7,500.0               | -4,195.2     | 2,061.5      | 4,507.9                 | 0.00                    | 0.00                   | 0.00                  |
| 12,200.0              | 90.00           | 180.79      | 7,500.0               | -4,295.2     | 2,060.1      | 4,605.9                 | 0.00                    | 0.00                   | 0.00                  |
| 12,300.0              | 90.00           | 180.79      | 7,500.0               | -4,395.2     | 2,058.7      | 4,703.8                 | 0.00                    | 0.00                   | 0.00                  |
| 12,400.0              | 90.00           | 180.79      | 7,500.0               | -4,495.2     | 2,057.3      | 4,801.8                 | 0.00                    | 0.00                   | 0.00                  |
| 12,500.0              | 90.00           | 180.79      | 7,500.0               | -4,595.2     | 2,055.9      | 4,899.7                 | 0.00                    | 0.00                   | 0.00                  |
| 12,600.0              | 90.00           | 180.79      | 7,500.0               | -4,695.2     | 2,054.6      | 4,997.7                 | 0.00                    | 0.00                   | 0.00                  |
| 12,700.0              | 90.00           | 180.79      | 7,500.0               | -4,795.1     | 2,053.2      | 5,095.6                 | 0.00                    | 0.00                   | 0.00                  |
| 12,800.0              | 90.00           | 180.79      | 7,500.0               | -4,895.1     | 2,051.8      | 5,193.6                 | 0.00                    | 0.00                   | 0.00                  |
| 12,900.0              | 90.00           | 180.79      | 7,500.0               | -4,995.1     | 2,050.4      | 5,291.5                 | 0.00                    | 0.00                   | 0.00                  |
| 13,000.0              | 90.00           | 180.79      | 7,500.0               | -5,095.1     | 2,049.1      | 5,389.5                 | 0.00                    | 0.00                   | 0.00                  |
| 13,100.0              | 90.00           | 180.79      | 7,500.0               | -5,195.1     | 2,047.7      | 5,487.4                 | 0.00                    | 0.00                   | 0.00                  |

# SandRidge Energy

## Survey Report

|                  |                    |                                     |  |
|------------------|--------------------|-------------------------------------|--|
| <b>Company:</b>  | SandRidge Energy   | <b>Local Co-ordinate Reference:</b> | Well Janet 0780 4-16H21                |
| <b>Project:</b>  | North Park Basin   | <b>TVD Reference:</b>               | WELL @ 8151.0usft (Original Well Elev) |
| <b>Site:</b>     | T7N-R80W-S9        | <b>MD Reference:</b>                | WELL @ 8151.0usft (Original Well Elev) |
| <b>Well:</b>     | Janet 0780 4-16H21 | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Wellbore #1        | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Design #1          | <b>Database:</b>                    | EDMProd                                |

### Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 13,200.0              | 90.00           | 180.79      | 7,500.0               | -5,295.1     | 2,046.3      | 5,585.4                 | 0.00                    | 0.00                   | 0.00                  |
| 13,300.0              | 90.00           | 180.79      | 7,500.0               | -5,395.1     | 2,044.9      | 5,683.3                 | 0.00                    | 0.00                   | 0.00                  |
| 13,400.0              | 90.00           | 180.79      | 7,500.0               | -5,495.1     | 2,043.6      | 5,781.3                 | 0.00                    | 0.00                   | 0.00                  |
| 13,500.0              | 90.00           | 180.79      | 7,500.0               | -5,595.1     | 2,042.2      | 5,879.2                 | 0.00                    | 0.00                   | 0.00                  |
| 13,600.0              | 90.00           | 180.79      | 7,500.0               | -5,695.1     | 2,040.8      | 5,977.2                 | 0.00                    | 0.00                   | 0.00                  |
| 13,700.0              | 90.00           | 180.79      | 7,500.0               | -5,795.1     | 2,039.4      | 6,075.1                 | 0.00                    | 0.00                   | 0.00                  |
| 13,800.0              | 90.00           | 180.79      | 7,500.0               | -5,895.0     | 2,038.1      | 6,173.1                 | 0.00                    | 0.00                   | 0.00                  |
| 13,900.0              | 90.00           | 180.79      | 7,500.0               | -5,995.0     | 2,036.7      | 6,271.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,000.0              | 90.00           | 180.79      | 7,500.0               | -6,095.0     | 2,035.3      | 6,369.0                 | 0.00                    | 0.00                   | 0.00                  |
| 14,100.0              | 90.00           | 180.79      | 7,500.0               | -6,195.0     | 2,033.9      | 6,466.9                 | 0.00                    | 0.00                   | 0.00                  |
| 14,200.0              | 90.00           | 180.79      | 7,500.0               | -6,295.0     | 2,032.6      | 6,564.9                 | 0.00                    | 0.00                   | 0.00                  |
| 14,300.0              | 90.00           | 180.79      | 7,500.0               | -6,395.0     | 2,031.2      | 6,662.8                 | 0.00                    | 0.00                   | 0.00                  |
| 14,400.0              | 90.00           | 180.79      | 7,500.0               | -6,495.0     | 2,029.8      | 6,760.8                 | 0.00                    | 0.00                   | 0.00                  |
| 14,500.0              | 90.00           | 180.79      | 7,500.0               | -6,595.0     | 2,028.4      | 6,858.7                 | 0.00                    | 0.00                   | 0.00                  |
| 14,600.0              | 90.00           | 180.79      | 7,500.0               | -6,695.0     | 2,027.1      | 6,956.7                 | 0.00                    | 0.00                   | 0.00                  |
| 14,700.0              | 90.00           | 180.79      | 7,500.0               | -6,795.0     | 2,025.7      | 7,054.6                 | 0.00                    | 0.00                   | 0.00                  |
| 14,800.0              | 90.00           | 180.79      | 7,500.0               | -6,895.0     | 2,024.3      | 7,152.6                 | 0.00                    | 0.00                   | 0.00                  |
| 14,900.0              | 90.00           | 180.79      | 7,500.0               | -6,994.9     | 2,022.9      | 7,250.5                 | 0.00                    | 0.00                   | 0.00                  |
| 15,000.0              | 90.00           | 180.79      | 7,500.0               | -7,094.9     | 2,021.6      | 7,348.5                 | 0.00                    | 0.00                   | 0.00                  |
| 15,100.0              | 90.00           | 180.79      | 7,500.0               | -7,194.9     | 2,020.2      | 7,446.4                 | 0.00                    | 0.00                   | 0.00                  |
| 15,200.0              | 90.00           | 180.79      | 7,500.0               | -7,294.9     | 2,018.8      | 7,544.4                 | 0.00                    | 0.00                   | 0.00                  |
| 15,300.0              | 90.00           | 180.79      | 7,500.0               | -7,394.9     | 2,017.4      | 7,642.3                 | 0.00                    | 0.00                   | 0.00                  |
| 15,400.0              | 90.00           | 180.79      | 7,500.0               | -7,494.9     | 2,016.1      | 7,740.3                 | 0.00                    | 0.00                   | 0.00                  |
| 15,500.0              | 90.00           | 180.79      | 7,500.0               | -7,594.9     | 2,014.7      | 7,838.2                 | 0.00                    | 0.00                   | 0.00                  |
| 15,600.0              | 90.00           | 180.79      | 7,500.0               | -7,694.9     | 2,013.3      | 7,936.2                 | 0.00                    | 0.00                   | 0.00                  |
| 15,700.0              | 90.00           | 180.79      | 7,500.0               | -7,794.9     | 2,011.9      | 8,034.1                 | 0.00                    | 0.00                   | 0.00                  |
| 15,800.0              | 90.00           | 180.79      | 7,500.0               | -7,894.9     | 2,010.6      | 8,132.1                 | 0.00                    | 0.00                   | 0.00                  |
| 15,900.0              | 90.00           | 180.79      | 7,500.0               | -7,994.8     | 2,009.2      | 8,230.0                 | 0.00                    | 0.00                   | 0.00                  |
| 16,000.0              | 90.00           | 180.79      | 7,500.0               | -8,094.8     | 2,007.8      | 8,328.0                 | 0.00                    | 0.00                   | 0.00                  |
| 16,100.0              | 90.00           | 180.79      | 7,500.0               | -8,194.8     | 2,006.4      | 8,425.9                 | 0.00                    | 0.00                   | 0.00                  |
| 16,200.0              | 90.00           | 180.79      | 7,500.0               | -8,294.8     | 2,005.1      | 8,523.9                 | 0.00                    | 0.00                   | 0.00                  |
| 16,300.0              | 90.00           | 180.79      | 7,500.0               | -8,394.8     | 2,003.7      | 8,621.8                 | 0.00                    | 0.00                   | 0.00                  |
| 16,400.0              | 90.00           | 180.79      | 7,500.0               | -8,494.8     | 2,002.3      | 8,719.8                 | 0.00                    | 0.00                   | 0.00                  |
| 16,500.0              | 90.00           | 180.79      | 7,500.0               | -8,594.8     | 2,000.9      | 8,817.7                 | 0.00                    | 0.00                   | 0.00                  |
| 16,600.0              | 90.00           | 180.79      | 7,500.0               | -8,694.8     | 1,999.6      | 8,915.7                 | 0.00                    | 0.00                   | 0.00                  |
| 16,700.0              | 90.00           | 180.79      | 7,500.0               | -8,794.8     | 1,998.2      | 9,013.6                 | 0.00                    | 0.00                   | 0.00                  |
| 16,800.0              | 90.00           | 180.79      | 7,500.0               | -8,894.8     | 1,996.8      | 9,111.6                 | 0.00                    | 0.00                   | 0.00                  |
| 16,900.0              | 90.00           | 180.79      | 7,500.0               | -8,994.8     | 1,995.4      | 9,209.5                 | 0.00                    | 0.00                   | 0.00                  |
| 17,000.0              | 90.00           | 180.79      | 7,500.0               | -9,094.7     | 1,994.1      | 9,307.5                 | 0.00                    | 0.00                   | 0.00                  |
| 17,100.0              | 90.00           | 180.79      | 7,500.0               | -9,194.7     | 1,992.7      | 9,405.4                 | 0.00                    | 0.00                   | 0.00                  |
| 17,200.0              | 90.00           | 180.79      | 7,500.0               | -9,294.7     | 1,991.3      | 9,503.4                 | 0.00                    | 0.00                   | 0.00                  |
| 17,300.0              | 90.00           | 180.79      | 7,500.0               | -9,394.7     | 1,989.9      | 9,601.3                 | 0.00                    | 0.00                   | 0.00                  |
| 17,400.0              | 90.00           | 180.79      | 7,500.0               | -9,494.7     | 1,988.6      | 9,699.3                 | 0.00                    | 0.00                   | 0.00                  |
| 17,500.0              | 90.00           | 180.79      | 7,500.0               | -9,594.7     | 1,987.2      | 9,797.2                 | 0.00                    | 0.00                   | 0.00                  |

# SandRidge Energy

## Survey Report

|                  |                    |                                     |  |
|------------------|--------------------|-------------------------------------|--|
| <b>Company:</b>  | SandRidge Energy   | <b>Local Co-ordinate Reference:</b> | Well Janet 0780 4-16H21                |
| <b>Project:</b>  | North Park Basin   | <b>TVD Reference:</b>               | WELL @ 8151.0usft (Original Well Elev) |
| <b>Site:</b>     | T7N-R80W-S9        | <b>MD Reference:</b>                | WELL @ 8151.0usft (Original Well Elev) |
| <b>Well:</b>     | Janet 0780 4-16H21 | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Wellbore #1        | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Design #1          | <b>Database:</b>                    | EDMProd                                |

### Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 17,600.0              | 90.00           | 180.79      | 7,500.0               | -9,694.7     | 1,985.8      | 9,895.2                 | 0.00                    | 0.00                   | 0.00                  |
| 17,700.0              | 90.00           | 180.79      | 7,500.0               | -9,794.7     | 1,984.4      | 9,993.1                 | 0.00                    | 0.00                   | 0.00                  |
| 17,800.0              | 90.00           | 180.79      | 7,500.0               | -9,894.7     | 1,983.1      | 10,091.1                | 0.00                    | 0.00                   | 0.00                  |
| 17,900.0              | 90.00           | 180.79      | 7,500.0               | -9,994.7     | 1,981.7      | 10,189.0                | 0.00                    | 0.00                   | 0.00                  |
| 18,000.0              | 90.00           | 180.79      | 7,500.0               | -10,094.6    | 1,980.3      | 10,286.9                | 0.00                    | 0.00                   | 0.00                  |
| 18,100.0              | 90.00           | 180.79      | 7,500.0               | -10,194.6    | 1,978.9      | 10,384.9                | 0.00                    | 0.00                   | 0.00                  |
| 18,200.0              | 90.00           | 180.79      | 7,500.0               | -10,294.6    | 1,977.6      | 10,482.8                | 0.00                    | 0.00                   | 0.00                  |
| 18,236.4              | 90.00           | 180.79      | 7,500.0               | -10,331.0    | 1,977.1      | 10,518.5                | 0.00                    | 0.00                   | 0.00                  |
| TD at 18236.4         |                 |             |                       |              |              |                         |                         |                        |                       |

### Design Targets

| Target Name<br>- hit/miss target<br>- Shape         | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude         | Longitude         |
|---|---------------|--------------|------------|--------------|--------------|-----------------|----------------|------------------|-------------------|
| Janet 4 BHL<br>- plan hits target center<br>- Point | 0.00          | 0.00         | 7,500.0    | -10,331.0    | 1,977.1      | 1,446,594.90    | 2,755,518.03   | 40° 33' 21.503 N | 106° 22' 47.492 W |

### Formations

| Measured Depth (usft) | Vertical Depth (usft) | Name     | Lithology | Dip (°) | Dip Direction (°) |
|-----------------------|-----------------------|----------|-----------|---------|-------------------|
| 7,785.8               | 7,288.0               | Niobrara |           | 0.00    |                   |

### Plan Annotations

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              | Comment                        |
|-----------------------|-----------------------|-------------------|--------------|--------------------------------|
|                       |                       | +N/-S (usft)      | +E/-W (usft) |                                |
| 2800                  | 2800                  | 0                 | 0            | Start Build 2.00               |
| 4206                  | 4150                  | 27                | 337          | Start 3198.8 hold at 4206.2 MD |
| 7405                  | 6972                  | 150               | 1840         | Start DLS 10.00 TFO 94.81      |
| 8331                  | 7500                  | -426              | 2113         | Start 9905.8 hold at 8330.6 MD |
| 18,236                | 7500                  | -10,331           | 1977         | TD at 18236.4                  |

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



# **SandRidge Energy**

**North Park Basin**

**T7N-R80W-S9**

**Janet 0780 4-16H21**

**Wellbore #1**

**Design #1**

## **Anticollision Summary Report**

**08 August, 2017**

# SandRidge Energy

## Anticollision Summary Report

|                           |                    |                                     |  |
|---------------------------|--------------------|-------------------------------------|--|
| <b>Company:</b>           | SandRidge Energy   | <b>Local Co-ordinate Reference:</b> | Well Janet 0780 4-16H21                |
| <b>Project:</b>           | North Park Basin   | <b>TVD Reference:</b>               | WELL @ 8151.0usft (Original Well Elev) |
| <b>Reference Site:</b>    | T7N-R80W-S9        | <b>MD Reference:</b>                | WELL @ 8151.0usft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0 usft           | <b>North Reference:</b>             | Grid                                   |
| <b>Reference Well:</b>    | Janet 0780 4-16H21 | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Well Error:</b>        | 0.0 usft           | <b>Output errors are at</b>         | 2.00 sigma                             |
| <b>Reference Wellbore</b> | Wellbore #1        | <b>Database:</b>                    | EDMProd                                |
| <b>Reference Design:</b>  | Design #1          | <b>Offset TVD Reference:</b>        | Offset Datum                           |

|                                     |   |                       |   |
|-------------------------------------|---|-----------------------|---|
| <b>Reference</b>                    | Design #1   |                       |   |
| <b>Filter type:</b>                 | NO GLOBAL FILTER: Using user defined selection & filtering criteria |                       | WARNING: There is hidden tight data in this project |
| <b>Interpolation Method:</b>        | Stations  | <b>Error Model:</b>   | ISCWSA  |
| <b>Depth Range:</b>                 | Unlimited   | <b>Scan Method:</b>   | Closest Approach 3D                                 |
| <b>Results Limited by:</b>          | Maximum center-center distance of 10,000.0 usft                     |                       | <b>Error Surface:</b> Elliptical Conic              |
| <b>Warning Levels Evaluated at:</b> | 2.00 Sigma  | <b>Casing Method:</b> | Not applied   |

|                            |                  |                          |                  |                               |
|----------------------------|------------------|--------------------------|------------------|-------------------------------|
| <b>Survey Tool Program</b> | <b>Date</b>      | 8/8/2017                 |                  |                               |
| <b>From (usft)</b>         | <b>To (usft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Description</b>            |
| 0.0                        | 18,236.4         | Design #1 (Wellbore #1)  | Sperry MWD       | Fixed:v2:standard declination |

| <b>Summary</b>                               |                                 |                              |                                 |                                  |                   |                 |
|--|---------------------------------|------------------------------|---------------------------------|----------------------------------|-------------------|-----------------|
| Site Name                                    | Reference Measured Depth (usft) | Offset Measured Depth (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Separation Factor | Warning         |
| Offset Well - Wellbore - Design              |                                 |                              |                                 |                                  |                   |                 |
| T7N-R80W-S9                                  |                                 |                              |                                 |                                  |                   |                 |
| Janet 0780 1-16H21 - Wellbore #1 - Design #1 | 2,800.0                         | 2,800.0                      | 45.0                            | 32.7                             | 3.657             | CC              |
| Janet 0780 1-16H21 - Wellbore #1 - Design #1 | 2,900.0                         | 2,900.0                      | 45.0                            | 32.3                             | 3.534             | ES              |
| Janet 0780 1-16H21 - Wellbore #1 - Design #1 | 3,000.0                         | 2,999.8                      | 45.5                            | 32.4                             | 3.457             | SF              |
| Janet 0780 2-16H21 - Wellbore #1 - Design #1 | 2,800.0                         | 2,800.0                      | 30.0                            | 17.7                             | 2.438             | CC              |
| Janet 0780 2-16H21 - Wellbore #1 - Design #1 | 2,900.0                         | 2,900.0                      | 30.1                            | 17.3                             | 2.358             | ES              |
| Janet 0780 2-16H21 - Wellbore #1 - Design #1 | 3,000.0                         | 2,999.8                      | 30.8                            | 17.6                             | 2.338             | SF              |
| Janet 0780 3-16H21 - Wellbore #1 - Design #1 | 2,800.0                         | 2,800.0                      | 15.0                            | 2.7                              | 1.219             | Level 2, CC     |
| Janet 0780 3-16H21 - Wellbore #1 - Design #1 | 2,900.0                         | 2,900.0                      | 15.1                            | 2.4                              | 1.185             | Level 2, ES, SF |

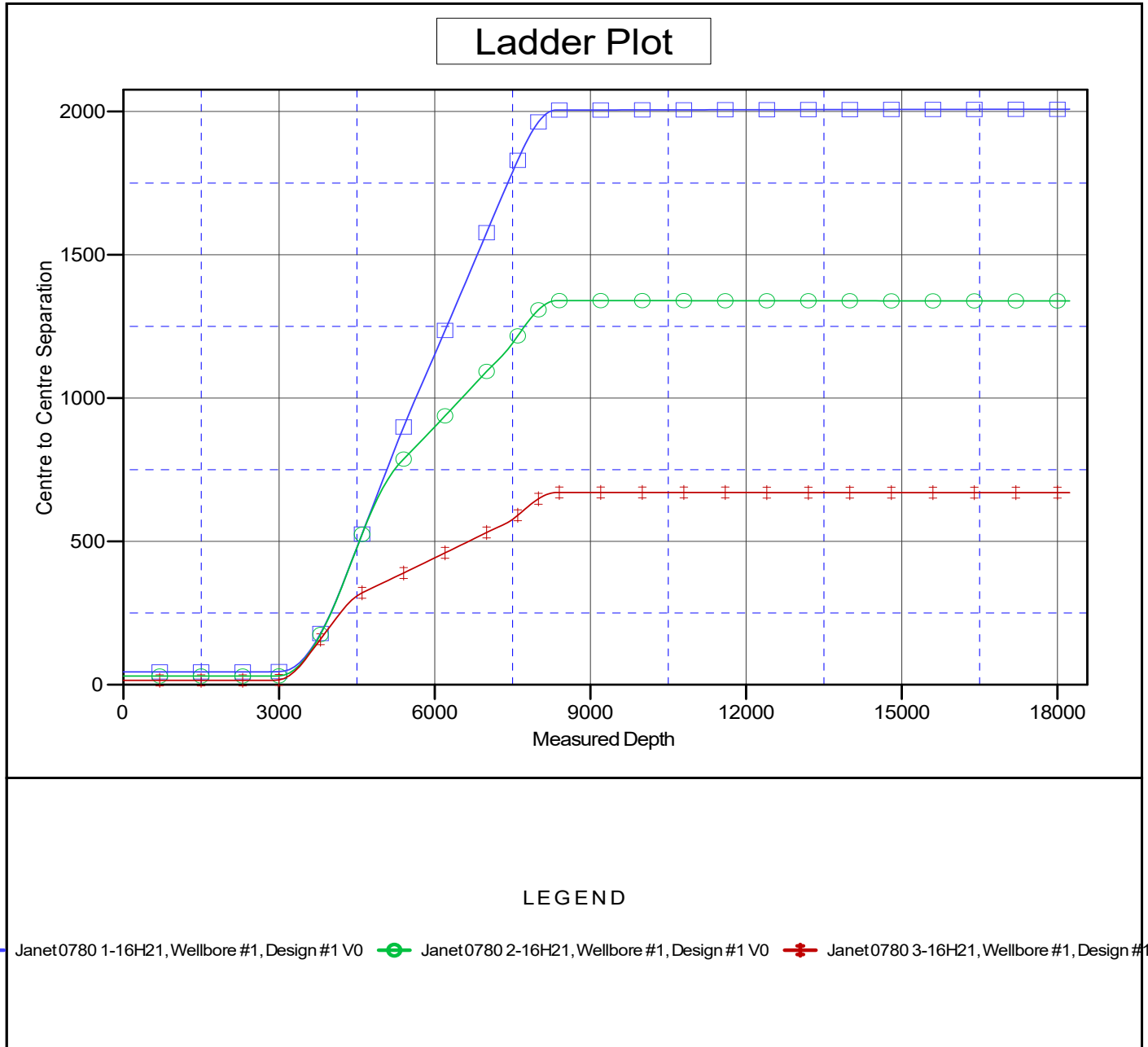
# SandRidge Energy

## Anticollision Summary Report

|                           |                    |                                     |  |
|---------------------------|--------------------|-------------------------------------|--|
| <b>Company:</b>           | SandRidge Energy   | <b>Local Co-ordinate Reference:</b> | Well Janet 0780 4-16H21                |
| <b>Project:</b>           | North Park Basin   | <b>TVD Reference:</b>               | WELL @ 8151.0usft (Original Well Elev) |
| <b>Reference Site:</b>    | T7N-R80W-S9        | <b>MD Reference:</b>                | WELL @ 8151.0usft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0 usft           | <b>North Reference:</b>             | Grid                                   |
| <b>Reference Well:</b>    | Janet 0780 4-16H21 | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Well Error:</b>        | 0.0 usft           | <b>Output errors are at</b>         | 2.00 sigma                             |
| <b>Reference Wellbore</b> | Wellbore #1        | <b>Database:</b>                    | EDMProd                                |
| <b>Reference Design:</b>  | Design #1          | <b>Offset TVD Reference:</b>        | Offset Datum                           |

Reference Depths are relative to WELL @ 8151.0usft (Original Well Ele)  
Offset Depths are relative to Offset Datum  
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Janet 0780 4-16H21  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: -0.57°



# SandRidge Energy

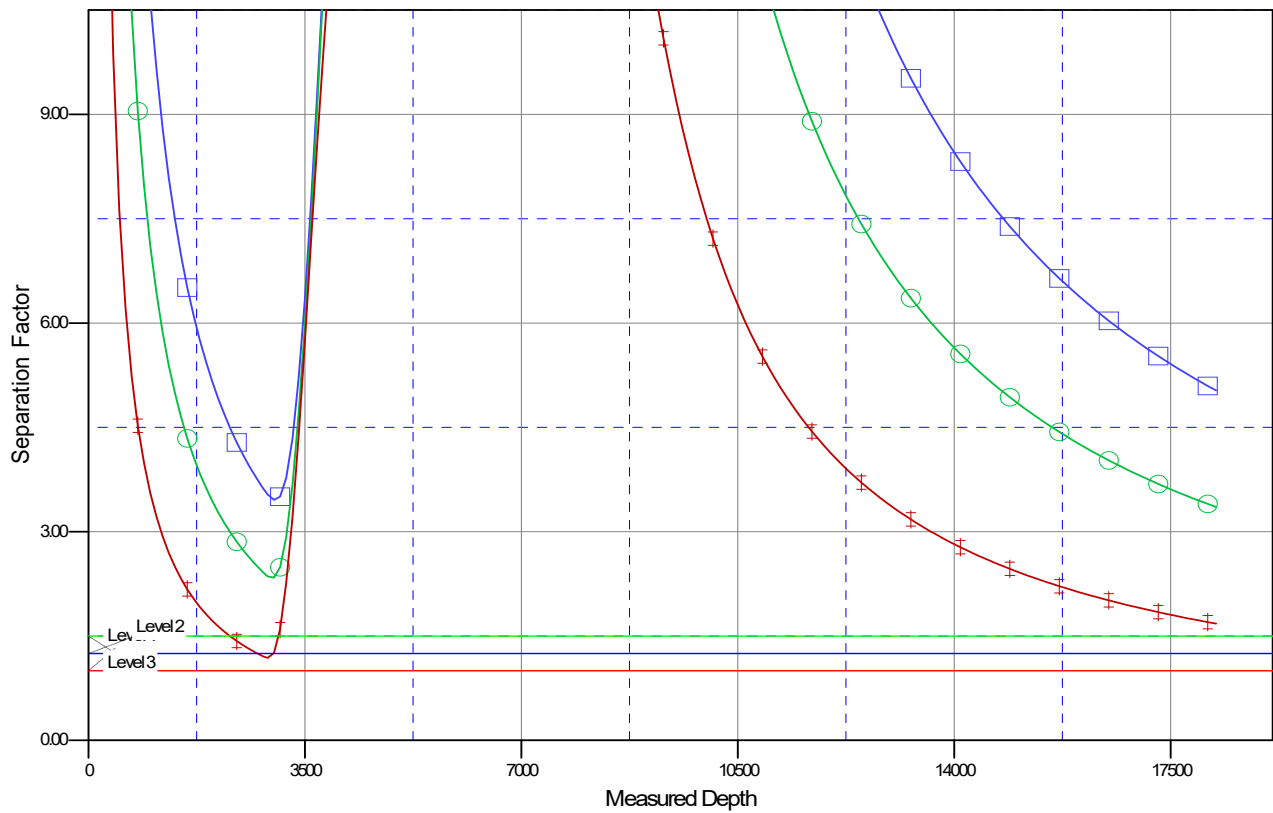
## Anticollision Summary Report

|                           |                    |                                     |  |
|---------------------------|--------------------|-------------------------------------|--|
| <b>Company:</b>           | SandRidge Energy   | <b>Local Co-ordinate Reference:</b> | Well Janet 0780 4-16H21                |
| <b>Project:</b>           | North Park Basin   | <b>TVD Reference:</b>               | WELL @ 8151.0usft (Original Well Elev) |
| <b>Reference Site:</b>    | T7N-R80W-S9        | <b>MD Reference:</b>                | WELL @ 8151.0usft (Original Well Elev) |
| <b>Site Error:</b>        | 0.0 usft           | <b>North Reference:</b>             | Grid                                   |
| <b>Reference Well:</b>    | Janet 0780 4-16H21 | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Well Error:</b>        | 0.0 usft           | <b>Output errors are at</b>         | 2.00 sigma                             |
| <b>Reference Wellbore</b> | Wellbore #1        | <b>Database:</b>                    | EDMProd                                |
| <b>Reference Design:</b>  | Design #1          | <b>Offset TVD Reference:</b>        | Offset Datum                           |

Reference Depths are relative to WELL @ 8151.0usft (Original Well Ele  
Offset Depths are relative to Offset Datum  
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Janet 0780 4-16H21  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: -0.57°

### Separation Factor Plot



### LEGEND

■ Janet0780 1-16H21, Wellbore #1, Design #1 V0 
 ● Janet0780 2-16H21, Wellbore #1, Design #1 V0 
 + Janet0780 3-16H21, Wellbore #1, Design #1 V0