



## **SM Energy**

Eddy County, NM (NAD 83)

Sec 34, T19S, R29E

Osage 34 Fed #6H

Original Wellbore

Survey: MWD Survey

## **Standard Survey Report**

06 October, 2013



|                  |                          |                                     |                                        |
|------------------|--------------------------|-------------------------------------|----------------------------------------|
| <b>Company:</b>  | SM Energy                | <b>Local Co-ordinate Reference:</b> | Well Osage 34 Fed #6H                  |
| <b>Project:</b>  | Eddy County, NM (NAD 83) | <b>TVD Reference:</b>               | WELL @ 3350.0usft (Original Well Elev) |
| <b>Site:</b>     | Sec 34, T19S; R29E       | <b>MD Reference:</b>                | WELL @ 3350.0usft (Original Well Elev) |
| <b>Well:</b>     | Osage 34 Fed #6H         | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Original Wellbore        | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Original Wellbore        | <b>Database:</b>                    | EDM 5000.1 Single User Db              |

|                    |                           |                      |                |
|--------------------|---------------------------|----------------------|----------------|
| <b>Project</b>     | Eddy County, NM (NAD 83)  |                      |                |
| <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>   | New Mexico Eastern Zone   |                      |                |

|                              |                    |                          |                  |
|------------------------------|--------------------|--------------------------|------------------|
| <b>Site</b>                  | Sec 34, T19S, R29E |                          |                  |
| <b>Site Position:</b>        |                    | <b>Northing:</b>         | 0.00 usft        |
| <b>From:</b>                 | Map                | <b>Easting:</b>          | 0.00 usft        |
| <b>Position Uncertainty:</b> | 0.0 usft           | <b>Slot Radius:</b>      | 13-3/16 "        |
|                              |                    | <b>Latitude:</b>         | 30° 59' 18.404 N |
|                              |                    | <b>Longitude:</b>        | 106° 3' 38.987 W |
|                              |                    | <b>Grid Convergence:</b> | -0.89 °          |

|                             |                  |                            |                                    |
|-----------------------------|------------------|----------------------------|------------------------------------|
| <b>Well</b>                 | Osage 34 Fed #6H |                            |                                    |
| <b>Well Position</b>        | <b>+N/-S</b>     | 0.0 usft                   | <b>Latitude:</b> 32° 36' 52.477 N  |
|                             | <b>+E/-W</b>     | 0.0 usft                   | <b>Longitude:</b> 104° 3' 15.345 W |
| <b>Position Uncertainty</b> | 0.0 usft         | <b>Wellhead Elevation:</b> | 3,350.0 usft                       |
|                             |                  | <b>Ground Level:</b>       | 3,332.0 usft                       |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | Original Wellbore |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2010          | 7/31/2013          | 7.58                   | 60.41                | 48,586                     |

|                          |                                |                     |                     |                      |     |
|--------------------------|--------------------------------|---------------------|---------------------|----------------------|-----|
| <b>Design</b>            | Original Wellbore              |                     |                     |                      |     |
| <b>Audit Notes:</b>      |                                |                     |                     |                      |     |
| <b>Version:</b>          | 1.0                            | <b>Phase:</b>       | ACTUAL              | <b>Tie On Depth:</b> | 0.0 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Direction (°)</b> |     |
|                          | 0.0                            | 0.0                 | 0.0                 | 269.51               |     |

|                       |                        |                                         |                  |                    |  |
|-----------------------|------------------------|-----------------------------------------|------------------|--------------------|--|
| <b>Survey Program</b> | <b>Date:</b> 10/6/2013 |                                         |                  |                    |  |
| <b>From (usft)</b>    | <b>To (usft)</b>       | <b>Survey (Wellbore)</b>                | <b>Tool Name</b> | <b>Description</b> |  |
| 179.0                 | 1,603.0                | Nabors M-09 Surveys (Original Wellbore) | MWD              | MWD - Standard     |  |
| 1,715.0               | 11,871.0               | MWD Survey (Original Wellbore)          | MWD              | MWD - Standard     |  |

|                              |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|--|
| <b>Survey</b>                |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
| <b>Measured Depth (usft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Vertical Section (usft)</b> | <b>Dogleg Rate (°/100usft)</b> | <b>Build Rate (°/100usft)</b> | <b>Turn Rate (°/100usft)</b> |  |
| 1,603.0                      | 0.40                   | 115.00             | 1,602.8                      | 10.8                | 18.8                | -18.9                          | 0.00                           | 0.00                          | 0.00                         |  |
| 1,715.0                      | 1.10                   | 104.60             | 1,714.7                      | 10.3                | 20.2                | -20.3                          | 0.63                           | 0.63                          | -9.29                        |  |
| <b>First MWD Survey</b>      |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
| 1,810.0                      | 1.10                   | 114.80             | 1,809.7                      | 9.7                 | 21.9                | -22.0                          | 0.21                           | 0.00                          | 10.74                        |  |
| 1,906.0                      | 1.50                   | 134.10             | 1,905.7                      | 8.5                 | 23.6                | -23.7                          | 0.61                           | 0.42                          | 20.10                        |  |
| 2,001.0                      | 1.70                   | 135.80             | 2,000.7                      | 6.6                 | 25.5                | -25.6                          | 0.22                           | 0.21                          | 1.79                         |  |
| 2,097.0                      | 1.70                   | 141.60             | 2,096.6                      | 4.5                 | 27.4                | -27.4                          | 0.18                           | 0.00                          | 6.04                         |  |
| 2,192.0                      | 1.80                   | 142.80             | 2,191.6                      | 2.2                 | 29.2                | -29.2                          | 0.11                           | 0.11                          | 1.26                         |  |
| 2,288.0                      | 1.20                   | 176.40             | 2,287.5                      | 0.0                 | 30.1                | -30.1                          | 1.08                           | -0.63                         | 35.00                        |  |
| 2,383.0                      | 1.30                   | 210.50             | 2,382.5                      | -2.0                | 29.6                | -29.6                          | 0.78                           | 0.11                          | 35.89                        |  |

|           |                          |                              |                                        |
|-----------|--------------------------|------------------------------|----------------------------------------|
| Company:  | SM Energy                | Local Co-ordinate Reference: | Well Osage 34 Fed #6H                  |
| Project:  | Eddy County, NM (NAD 83) | TVD Reference:               | WELL @ 3350.0usft (Original Well Elev) |
| Site:     | Sec 34, T19S, R29E       | MD Reference:                | WELL @ 3350.0usft (Original Well Elev) |
| Well:     | Osage 34 Fed #6H         | North Reference:             | Grid                                   |
| Wellbore: | Original Wellbore        | Survey Calculation Method:   | Minimum Curvature                      |
| Design:   | Original Wellbore        | Database:                    | EDM 5000.1 Single User Db              |

| 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) |  |
| 2,479.0               | 1.40            | 226.60      | 2,478.5               | -3.7         | 28.2         | -28.2                   | 0.41                    | 0.10                   | 16.77                 |  |
| 2,574.0               | 1.40            | 234.30      | 2,573.5               | -5.2         | 26.5         | -26.4                   | 0.20                    | 0.00                   | 8.11                  |  |
| 2,670.0               | 1.40            | 245.20      | 2,669.4               | -6.4         | 24.4         | -24.4                   | 0.28                    | 0.00                   | 11.35                 |  |
| 2,765.0               | 1.10            | 251.80      | 2,764.4               | -7.1         | 22.5         | -22.5                   | 0.35                    | -0.32                  | 6.95                  |  |
| 2,860.0               | 1.20            | 246.70      | 2,859.4               | -7.8         | 20.7         | -20.7                   | 0.15                    | 0.11                   | -5.37                 |  |
| 2,956.0               | 1.20            | 258.60      | 2,955.4               | -8.4         | 18.8         | -18.8                   | 0.26                    | 0.00                   | 12.40                 |  |
| 3,051.0               | 1.30            | 258.40      | 3,050.4               | -8.8         | 16.8         | -16.7                   | 0.11                    | 0.11                   | -0.21                 |  |
| 3,146.0               | 1.50            | 252.00      | 3,145.3               | -9.4         | 14.6         | -14.5                   | 0.27                    | 0.21                   | -6.74                 |  |
| 3,242.0               | 1.50            | 248.60      | 3,241.3               | -10.3        | 12.2         | -12.1                   | 0.09                    | 0.00                   | -3.54                 |  |
| 3,363.0               | 1.60            | 249.70      | 3,362.3               | -11.4        | 9.1          | -9.0                    | 0.09                    | 0.08                   | 0.91                  |  |
| 3,459.0               | 1.70            | 248.90      | 3,458.2               | -12.4        | 6.6          | -6.4                    | 0.11                    | 0.10                   | -0.83                 |  |
| 3,554.0               | 1.80            | 238.40      | 3,553.2               | -13.7        | 4.0          | -3.9                    | 0.35                    | 0.11                   | -11.05                |  |
| 3,650.0               | 1.70            | 235.30      | 3,649.1               | -15.3        | 1.5          | -1.4                    | 0.14                    | -0.10                  | -3.23                 |  |
| 3,745.0               | 1.50            | 238.80      | 3,744.1               | -16.7        | -0.7         | 0.9                     | 0.23                    | -0.21                  | 3.68                  |  |
| 3,841.0               | 1.40            | 241.70      | 3,840.1               | -17.9        | -2.8         | 3.0                     | 0.13                    | -0.10                  | 3.02                  |  |
| 3,936.0               | 1.70            | 312.80      | 3,935.0               | -17.5        | -4.9         | 5.0                     | 1.91                    | 0.32                   | 74.84                 |  |
| 4,032.0               | 1.50            | 313.60      | 4,031.0               | -15.7        | -6.8         | 7.0                     | 0.21                    | -0.21                  | 0.83                  |  |
| 4,127.0               | 1.50            | 318.80      | 4,126.0               | -13.9        | -8.5         | 8.7                     | 0.14                    | 0.00                   | 5.47                  |  |
| 4,222.0               | 1.50            | 327.80      | 4,220.9               | -11.9        | -10.0        | 10.1                    | 0.25                    | 0.00                   | 9.47                  |  |
| 4,318.0               | 1.50            | 335.70      | 4,316.9               | -9.7         | -11.2        | 11.3                    | 0.22                    | 0.00                   | 8.23                  |  |
| 4,413.0               | 1.70            | 342.80      | 4,411.9               | -7.2         | -12.1        | 12.2                    | 0.30                    | 0.21                   | 7.47                  |  |
| 4,509.0               | 1.70            | 345.50      | 4,507.8               | -4.5         | -12.9        | 13.0                    | 0.08                    | 0.00                   | 2.81                  |  |
| 4,604.0               | 2.00            | 358.90      | 4,602.8               | -1.5         | -13.3        | 13.3                    | 0.55                    | 0.32                   | 14.11                 |  |
| 4,700.0               | 1.10            | 8.70        | 4,698.7               | 1.1          | -13.2        | 13.2                    | 0.97                    | -0.94                  | 10.21                 |  |
| 4,795.0               | 1.10            | 15.20       | 4,793.7               | 2.9          | -12.8        | 12.8                    | 0.13                    | 0.00                   | 6.84                  |  |
| 4,891.0               | 1.20            | 27.30       | 4,889.7               | 4.7          | -12.1        | 12.1                    | 0.27                    | 0.10                   | 12.60                 |  |
| 4,986.0               | 1.20            | 32.70       | 4,984.7               | 6.4          | -11.1        | 11.1                    | 0.12                    | 0.00                   | 5.68                  |  |
| 5,082.0               | 1.40            | 23.70       | 5,080.6               | 8.3          | -10.1        | 10.0                    | 0.30                    | 0.21                   | -9.38                 |  |
| 5,177.0               | 1.40            | 16.40       | 5,175.6               | 10.5         | -9.3         | 9.2                     | 0.19                    | 0.00                   | -7.68                 |  |
| 5,272.0               | 1.30            | 16.20       | 5,270.6               | 12.6         | -8.7         | 8.6                     | 0.11                    | -0.11                  | -0.21                 |  |
| 5,368.0               | 1.50            | 14.90       | 5,366.6               | 14.9         | -8.1         | 7.9                     | 0.21                    | 0.21                   | -1.35                 |  |
| 5,463.0               | 1.50            | 79.10       | 5,461.5               | 16.3         | -6.5         | 6.4                     | 1.68                    | 0.00                   | 67.58                 |  |
| 5,559.0               | 1.50            | 83.20       | 5,557.5               | 16.7         | -4.0         | 3.9                     | 0.11                    | 0.00                   | 4.27                  |  |
| 5,654.0               | 1.50            | 84.50       | 5,652.5               | 17.0         | -1.6         | 1.4                     | 0.04                    | 0.00                   | 1.37                  |  |
| 5,750.0               | 1.20            | 87.10       | 5,748.4               | 17.2         | 0.7          | -0.8                    | 0.32                    | -0.31                  | 2.71                  |  |
| 5,845.0               | 1.10            | 95.80       | 5,843.4               | 17.1         | 2.6          | -2.7                    | 0.21                    | -0.11                  | 9.16                  |  |
| 5,940.0               | 1.00            | 87.20       | 5,938.4               | 17.1         | 4.3          | -4.5                    | 0.20                    | -0.11                  | -9.05                 |  |
| 6,036.0               | 0.80            | 77.70       | 6,034.4               | 17.3         | 5.8          | -6.0                    | 0.26                    | -0.21                  | -9.90                 |  |
| 6,131.0               | 0.70            | 67.20       | 6,129.4               | 17.6         | 7.0          | -7.1                    | 0.18                    | -0.11                  | -11.05                |  |
| 6,227.0               | 0.80            | 43.10       | 6,225.4               | 18.3         | 8.0          | -8.2                    | 0.34                    | 0.10                   | -25.10                |  |
| 6,322.0               | 1.10            | 27.00       | 6,320.4               | 19.6         | 8.9          | -9.0                    | 0.42                    | 0.32                   | -16.95                |  |
| 6,417.0               | 0.70            | 154.90      | 6,415.4               | 19.9         | 9.5          | -9.7                    | 1.71                    | -0.42                  | 134.63                |  |
| 6,513.0               | 0.10            | 146.60      | 6,511.4               | 19.3         | 9.8          | -10.0                   | 0.63                    | -0.63                  | -8.65                 |  |

|                  |                          |                                     |                                        |
|------------------|--------------------------|-------------------------------------|----------------------------------------|
| <b>Company:</b>  | SM Energy                | <b>Local Co-ordinate Reference:</b> | Well Osage 34 Fed #6H                  |
| <b>Project:</b>  | Eddy County, NM (NAD 83) | <b>TVD Reference:</b>               | WELL @ 3350.0usft (Original Well Elev) |
| <b>Site:</b>     | Sec 34, T19S, R29E       | <b>MD Reference:</b>                | WELL @ 3350.0usft (Original Well Elev) |
| <b>Well:</b>     | Osage 34 Fed #6H         | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Original Wellbore        | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Original Wellbore        | <b>Database:</b>                    | EDM 5000.1 Single User Db              |

| 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) |
| 6,573.0               | 0.30            | 25.80       | 6,571.4               | 19.4         | 9.9          | -10.1                   | 0.60                    | 0.33                   | -201.33               |
| 6,605.0               | 1.20            | 279.00      | 6,603.4               | 19.5         | 9.6          | -9.8                    | 4.12                    | 2.81                   | -333.75               |
| 6,637.0               | 4.50            | 267.20      | 6,635.3               | 19.5         | 8.0          | -8.2                    | 10.42                   | 10.31                  | -36.88                |
| 6,669.0               | 7.30            | 266.60      | 6,667.1               | 19.4         | 4.8          | -4.9                    | 8.75                    | 8.75                   | -1.88                 |
| 6,700.0               | 10.00           | 268.50      | 6,697.8               | 19.2         | 0.1          | -0.3                    | 8.76                    | 8.71                   | 6.13                  |
| 6,732.0               | 13.40           | 270.10      | 6,729.1               | 19.1         | -6.4         | 6.2                     | 10.67                   | 10.63                  | 5.00                  |
| 6,764.0               | 16.90           | 270.70      | 6,760.0               | 19.2         | -14.8        | 14.6                    | 10.95                   | 10.94                  | 1.88                  |
| 6,796.0               | 20.40           | 269.70      | 6,790.3               | 19.2         | -25.0        | 24.8                    | 10.98                   | 10.94                  | -3.13                 |
| 6,828.0               | 24.60           | 268.90      | 6,819.9               | 19.0         | -37.2        | 37.1                    | 13.16                   | 13.13                  | -2.50                 |
| 6,859.0               | 28.30           | 267.50      | 6,847.6               | 18.6         | -51.0        | 50.9                    | 12.10                   | 11.94                  | -4.52                 |
| 6,891.0               | 31.30           | 266.60      | 6,875.4               | 17.8         | -66.9        | 66.7                    | 9.48                    | 9.38                   | -2.81                 |
| 6,923.0               | 34.20           | 266.30      | 6,902.3               | 16.7         | -84.2        | 84.0                    | 9.08                    | 9.06                   | -0.94                 |
| 6,955.0               | 37.20           | 266.30      | 6,928.3               | 15.5         | -102.8       | 102.7                   | 9.38                    | 9.38                   | 0.00                  |
| 6,987.0               | 41.00           | 266.60      | 6,953.1               | 14.2         | -123.0       | 122.8                   | 11.89                   | 11.88                  | 0.94                  |
| 7,018.0               | 44.60           | 266.00      | 6,975.9               | 12.9         | -144.0       | 143.8                   | 11.69                   | 11.61                  | -1.94                 |
| 7,050.0               | 47.50           | 266.50      | 6,998.1               | 11.4         | -167.0       | 166.8                   | 9.13                    | 9.06                   | 1.56                  |
| 7,082.0               | 50.90           | 266.10      | 7,019.0               | 9.8          | -191.1       | 191.0                   | 10.67                   | 10.63                  | -1.25                 |
| 7,114.0               | 52.70           | 266.70      | 7,038.8               | 8.2          | -216.2       | 216.1                   | 5.81                    | 5.63                   | 1.88                  |
| 7,146.0               | 53.50           | 266.40      | 7,058.0               | 6.7          | -241.8       | 241.7                   | 2.61                    | 2.50                   | -0.94                 |
| 7,178.0               | 56.20           | 266.40      | 7,076.4               | 5.0          | -267.9       | 267.8                   | 8.44                    | 8.44                   | 0.00                  |
| 7,210.0               | 59.30           | 266.60      | 7,093.5               | 3.4          | -294.9       | 294.8                   | 9.70                    | 9.69                   | 0.63                  |
| 7,241.0               | 62.20           | 267.10      | 7,108.6               | 1.9          | -321.9       | 321.9                   | 9.46                    | 9.35                   | 1.61                  |
| 7,273.0               | 64.20           | 267.80      | 7,123.0               | 0.6          | -350.4       | 350.4                   | 6.55                    | 6.25                   | 2.19                  |
| 7,305.0               | 66.40           | 267.40      | 7,136.4               | -0.6         | -379.5       | 379.5                   | 6.97                    | 6.88                   | -1.25                 |
| 7,337.0               | 69.20           | 267.40      | 7,148.5               | -1.9         | -409.1       | 409.1                   | 8.75                    | 8.75                   | 0.00                  |
| 7,369.0               | 72.70           | 267.20      | 7,158.9               | -3.3         | -439.3       | 439.3                   | 10.95                   | 10.94                  | -0.63                 |
| 7,401.0               | 75.30           | 266.40      | 7,167.8               | -5.1         | -470.0       | 470.0                   | 8.47                    | 8.13                   | -2.50                 |
| 7,432.0               | 78.30           | 267.10      | 7,174.8               | -6.8         | -500.1       | 500.1                   | 9.92                    | 9.68                   | 2.26                  |
| 7,464.0               | 81.70           | 268.40      | 7,180.4               | -8.0         | -531.6       | 531.6                   | 11.35                   | 10.63                  | 4.06                  |
| 7,496.0               | 84.80           | 269.50      | 7,184.2               | -8.6         | -563.4       | 563.4                   | 10.27                   | 9.69                   | 3.44                  |
| 7,507.0               | 85.90           | 269.30      | 7,185.0               | -8.7         | -574.3       | 574.4                   | 10.16                   | 10.00                  | -1.82                 |
| 7,588.0               | 91.90           | 269.00      | 7,186.6               | -9.9         | -655.3       | 655.3                   | 7.42                    | 7.41                   | -0.37                 |
| 7,682.0               | 89.50           | 271.60      | 7,185.5               | -9.4         | -749.2       | 749.3                   | 3.76                    | -2.55                  | 2.77                  |
| 7,777.0               | 89.60           | 271.90      | 7,186.2               | -6.5         | -844.2       | 844.2                   | 0.33                    | 0.11                   | 0.32                  |
| 7,872.0               | 88.80           | 272.20      | 7,187.5               | -3.1         | -939.1       | 939.1                   | 0.90                    | -0.84                  | 0.32                  |
| 7,967.0               | 90.50           | 270.10      | 7,188.1               | -1.2         | -1,034.1     | 1,034.1                 | 2.84                    | 1.79                   | -2.21                 |
| 8,062.0               | 88.80           | 268.60      | 7,188.7               | -2.3         | -1,129.1     | 1,129.1                 | 2.39                    | -1.79                  | -1.58                 |
| 8,157.0               | 88.70           | 267.30      | 7,190.8               | -5.7         | -1,224.0     | 1,224.0                 | 1.37                    | -0.11                  | -1.37                 |
| 8,251.0               | 91.60           | 266.20      | 7,190.5               | -11.0        | -1,317.8     | 1,317.9                 | 3.30                    | 3.09                   | -1.17                 |
| 8,346.0               | 93.50           | 267.60      | 7,186.3               | -16.1        | -1,412.6     | 1,412.7                 | 2.48                    | 2.00                   | 1.47                  |
| 8,441.0               | 94.20           | 267.00      | 7,179.9               | -20.6        | -1,507.3     | 1,507.4                 | 0.97                    | 0.74                   | -0.63                 |
| 8,536.0               | 94.20           | 270.20      | 7,172.9               | -22.9        | -1,602.0     | 1,602.1                 | 3.36                    | 0.00                   | 3.37                  |
| 8,630.0               | 93.80           | 271.10      | 7,166.4               | -21.9        | -1,695.7     | 1,695.9                 | 1.05                    | -0.43                  | 0.96                  |

|           |                          |                              |                                        |
|-----------|--------------------------|------------------------------|----------------------------------------|
| Company:  | SM Energy                | Local Co-ordinate Reference: | Well Osage 34 Fed #6H                  |
| Project:  | Eddy County, NM (NAD 83) | TVD Reference:               | WELL @ 3350.0usft (Original Well Elev) |
| Site:     | Sec 34, T19S, R29E       | MD Reference:                | WELL @ 3350.0usft (Original Well Elev) |
| Well:     | Osage 34 Fed #6H         | North Reference:             | Grid                                   |
| Wellbore: | Original Wellbore        | Survey Calculation Method:   | Minimum Curvature                      |
| Design:   | Original Wellbore        | Database:                    | EDM-5000.1 Single User.Db              |

| 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 8,725.0               | 91.80           | 272.30      | 7,161.7               | -19.0        | -1,790.6     | 1,790.7                 | 2.45                    | -2.11                  | 1.26                  |
| 8,820.0               | 92.60           | 272.20      | 7,158.1               | -15.3        | -1,885.4     | 1,885.5                 | 0.85                    | 0.84                   | -0.11                 |
| 8,915.0               | 91.20           | 271.60      | 7,155.0               | -12.2        | -1,980.3     | 1,980.4                 | 1.60                    | -1.47                  | -0.63                 |
| 9,008.0               | 91.70           | 271.90      | 7,152.6               | -9.3         | -2,073.2     | 2,073.3                 | 0.63                    | 0.54                   | 0.32                  |
| 9,102.0               | 90.60           | 272.20      | 7,150.7               | -6.0         | -2,167.2     | 2,167.1                 | 1.21                    | -1.17                  | 0.32                  |
| 9,198.0               | 89.20           | 271.60      | 7,150.9               | -2.8         | -2,263.1     | 2,263.1                 | 1.59                    | -1.46                  | -0.63                 |
| 9,293.0               | 92.00           | 269.40      | 7,149.9               | -2.0         | -2,358.1     | 2,358.0                 | 3.75                    | 2.95                   | -2.32                 |
| 9,387.0               | 90.50           | 268.60      | 7,147.8               | -3.6         | -2,452.0     | 2,452.0                 | 1.81                    | -1.60                  | -0.85                 |
| 9,482.0               | 90.90           | 268.30      | 7,146.7               | -6.2         | -2,547.0     | 2,547.0                 | 0.53                    | 0.42                   | -0.32                 |
| 9,577.0               | 91.50           | 268.60      | 7,144.7               | -8.7         | -2,641.9     | 2,641.9                 | 0.71                    | 0.63                   | 0.32                  |
| 9,671.0               | 89.90           | 268.30      | 7,143.5               | -11.3        | -2,735.9     | 2,735.9                 | 1.73                    | -1.70                  | -0.32                 |
| 9,766.0               | 90.10           | 268.60      | 7,143.5               | -13.8        | -2,830.9     | 2,830.9                 | 0.38                    | 0.21                   | 0.32                  |
| 9,861.0               | 90.60           | 269.10      | 7,143.0               | -15.8        | -2,925.8     | 2,925.9                 | 0.74                    | 0.53                   | 0.53                  |
| 9,956.0               | 90.80           | 269.10      | 7,141.8               | -17.2        | -3,020.8     | 3,020.9                 | 0.21                    | 0.21                   | 0.00                  |
| 10,050.0              | 91.60           | 270.30      | 7,139.8               | -17.7        | -3,114.8     | 3,114.8                 | 1.53                    | 0.85                   | 1.28                  |
| 10,145.0              | 91.40           | 270.00      | 7,137.3               | -17.5        | -3,209.8     | 3,209.8                 | 0.38                    | -0.21                  | -0.32                 |
| 10,240.0              | 90.30           | 270.00      | 7,135.9               | -17.5        | -3,304.8     | 3,304.8                 | 1.16                    | -1.16                  | 0.00                  |
| 10,335.0              | 91.10           | 269.30      | 7,134.8               | -18.1        | -3,399.7     | 3,399.8                 | 1.12                    | 0.84                   | -0.74                 |
| 10,430.0              | 92.40           | 268.50      | 7,131.9               | -19.9        | -3,494.7     | 3,494.7                 | 1.61                    | 1.37                   | -0.84                 |
| 10,524.0              | 92.70           | 269.10      | 7,127.7               | -21.9        | -3,588.6     | 3,588.6                 | 0.71                    | 0.32                   | 0.64                  |
| 10,619.0              | 90.90           | 269.90      | 7,124.7               | -22.7        | -3,683.5     | 3,683.6                 | 2.07                    | -1.89                  | 0.84                  |
| 10,714.0              | 92.60           | 270.50      | 7,121.8               | -22.4        | -3,778.5     | 3,778.5                 | 1.90                    | 1.79                   | 0.63                  |
| 10,809.0              | 89.80           | 270.80      | 7,119.8               | -21.3        | -3,873.4     | 3,873.5                 | 2.96                    | -2.95                  | 0.32                  |
| 10,903.0              | 89.60           | 270.90      | 7,120.3               | -19.9        | -3,967.4     | 3,967.4                 | 0.24                    | -0.21                  | 0.11                  |
| 10,998.0              | 90.20           | 270.40      | 7,120.5               | -18.8        | -4,062.4     | 4,062.4                 | 0.82                    | 0.63                   | -0.53                 |
| 11,093.0              | 89.30           | 268.70      | 7,120.9               | -19.6        | -4,157.4     | 4,157.4                 | 2.02                    | -0.95                  | -1.79                 |
| 11,188.0              | 88.40           | 267.80      | 7,122.8               | -22.5        | -4,252.3     | 4,252.4                 | 1.34                    | -0.95                  | -0.95                 |
| 11,283.0              | 89.10           | 268.40      | 7,124.9               | -25.6        | -4,347.3     | 4,347.3                 | 0.97                    | 0.74                   | 0.63                  |
| 11,378.0              | 89.60           | 268.60      | 7,125.9               | -28.1        | -4,442.2     | 4,442.3                 | 0.57                    | 0.53                   | 0.21                  |
| 11,473.0              | 88.90           | 267.40      | 7,127.2               | -31.4        | -4,537.2     | 4,537.3                 | 1.46                    | -0.74                  | -1.26                 |
| 11,567.0              | 88.90           | 267.40      | 7,129.0               | -35.7        | -4,631.0     | 4,631.2                 | 0.00                    | 0.00                   | 0.00                  |
| 11,662.0              | 92.00           | 269.00      | 7,128.2               | -38.7        | -4,726.0     | 4,726.1                 | 3.67                    | 3.26                   | 1.68                  |
| 11,758.0              | 88.30           | 267.10      | 7,128.0               | -41.9        | -4,821.9     | 4,822.1                 | 4.33                    | -3.85                  | -1.98                 |
| 11,821.0              | 87.90           | 267.20      | 7,130.1               | -45.0        | -4,884.8     | 4,885.0                 | 0.65                    | -0.63                  | 0.16                  |
| Last MWD Survey       |                 |             |                       |              |              |                         |                         |                        |                       |
| 11,871.0              | 87.90           | 267.20      | 7,131.9               | -47.5        | -4,934.7     | 4,934.9                 | 0.00                    | 0.00                   | 0.00                  |
| PTB - TD              |                 |             |                       |              |              |                         |                         |                        |                       |

|           |                          |                              |                                        |
|-----------|--------------------------|------------------------------|----------------------------------------|
| Company:  | SM Energy                | Local Co-ordinate Reference: | Well Osage 34 Fed #6H                  |
| Project:  | Eddy County, NM (NAD 83) | TVD Reference:               | WELL @ 3350.0usft (Original Well Elev) |
| Site:     | Sec 34, T19S, R29E       | MD Reference:                | WELL @ 3350.0usft (Original Well Elev) |
| Well:     | Osage 34 Fed #6H         | North Reference:             | Grid                                   |
| Wellbore: | Original Wellbore        | Survey Calculation Method:   | Minimum Curvature                      |
| Design:   | Original Wellbore        | Database:                    | EDM 5000.1 Single User Db              |

| Survey Annotations          |                             |                   |                 |                  |
|-----------------------------|-----------------------------|-------------------|-----------------|------------------|
| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates |                 | Comment          |
|                             |                             | +N/-S<br>(usft)   | +E/-W<br>(usft) |                  |
| 1,715.0                     | 1,714.7                     | 10.3              | 20.2            | First MWD Survey |
| 11,821.0                    | 7,130.1                     | -45.0             | -4,884.8        | Last MWD Survey  |
| 11,871.0                    | 7,131.9                     | -47.5             | -4,934.7        | PTB - TD         |

|                   |                    |             |
|-------------------|--------------------|-------------|
| Checked By: _____ | Approved By: _____ | Date: _____ |
|-------------------|--------------------|-------------|