

## Results of Directional Survey

DD

|             |              |           |                        |      |
|-------------|--------------|-----------|------------------------|------|
| API number: | 30-025-41505 |           |                        |      |
| OGRID:      |              | Operator: | CONOCOPHILLIPS COMPANY |      |
|             |              | Property: | RUBY FEDERAL           | # 33 |

|         |        |   |    |          |          |
|---------|--------|---|----|----------|----------|
| surface | ULSTR: | G | 18 | T 17S    | R 32E    |
|         |        |   |    | 1725 FNL | 1688 FEL |

|        |        |        |     |          |          |
|--------|--------|--------|-----|----------|----------|
| BH Loc | ULSTR: | G      | 18  | T 17S    | R 32E    |
| 6975   | MD     | 6938.6 | TVD | 2222 FNL | 1661 FEL |

|             |        |        |     |          |          |
|-------------|--------|--------|-----|----------|----------|
| Top Perf/OH | ULSTR: | G      | 18  | T 17S    | R 32E    |
| 5470        | MD     | 5433.8 | TVD | 2209 FNL | 1638 FEL |

|             |        |        |     |          |          |
|-------------|--------|--------|-----|----------|----------|
| Bot Perf/OH | ULSTR: | G      | 18  | T 17S    | R 32E    |
| 6534        | MD     | 6497.6 | TVD | 2218 FNL | 1654 FEL |

|              |      |         |       |         |
|--------------|------|---------|-------|---------|
|              | MD   | N/S     | E/W   | VD      |
|              | 5456 | -484.26 | 49.87 | 5419.8  |
| TOP PERFS/OH | 5470 | -484.37 | 49.65 | 5433.80 |
|              | 5545 | -484.95 | 48.48 | 5508.79 |
|              | 6528 | -493.36 | 33.70 | 6491.64 |
| BOT PERFS/OH | 6534 | -493.41 | 33.60 | 6497.64 |
|              | 6617 | -494.07 | 32.15 | 6580.62 |

|              |      |         |       |         |
|--------------|------|---------|-------|---------|
| NEXT TO LAST | 6920 | -496.46 | 27.48 | 6883.58 |
| LAST READING | 6975 | -496.76 | 26.67 | 6938.57 |
| TD           | 6975 | -496.76 | 26.67 | 6938.57 |

|                  |         |         |
|------------------|---------|---------|
| Surface Location | 1725 FN | 1688 FE |
| Projected BHL    | 2222 FN | 1661 FE |
| Location of      |         |         |
| Top Perfs/OH     | 2209 FN | 1638 FE |
| Bottom Perfs/OH  | 2218 FN | 1654 FE |

### SUMMARY of Subsurface Locations

|                  |              |         |         |             |
|------------------|--------------|---------|---------|-------------|
| Surface Location | G-18-17S-32E | 1725 FN | 1688 FE | Vert. Depth |
| Top Perfs/OH     | G-18-17S-32E | 2209 FN | 1638 FE | 5433.80     |
| Bottom Perfs/OH  | G-18-17S-32E | 2218 FN | 1654 FE | 6497.64     |
| Projected TD     | G-18-17S-32E | 2222 FN | 1661 FE | 6938.57     |

NOV 12 2010

HOBBS OCD

NOV 06 2014



RECEIVED

1407 Northpark Dr.  
Kingwood, TX 77339  
Cell: (281) 851-8112  
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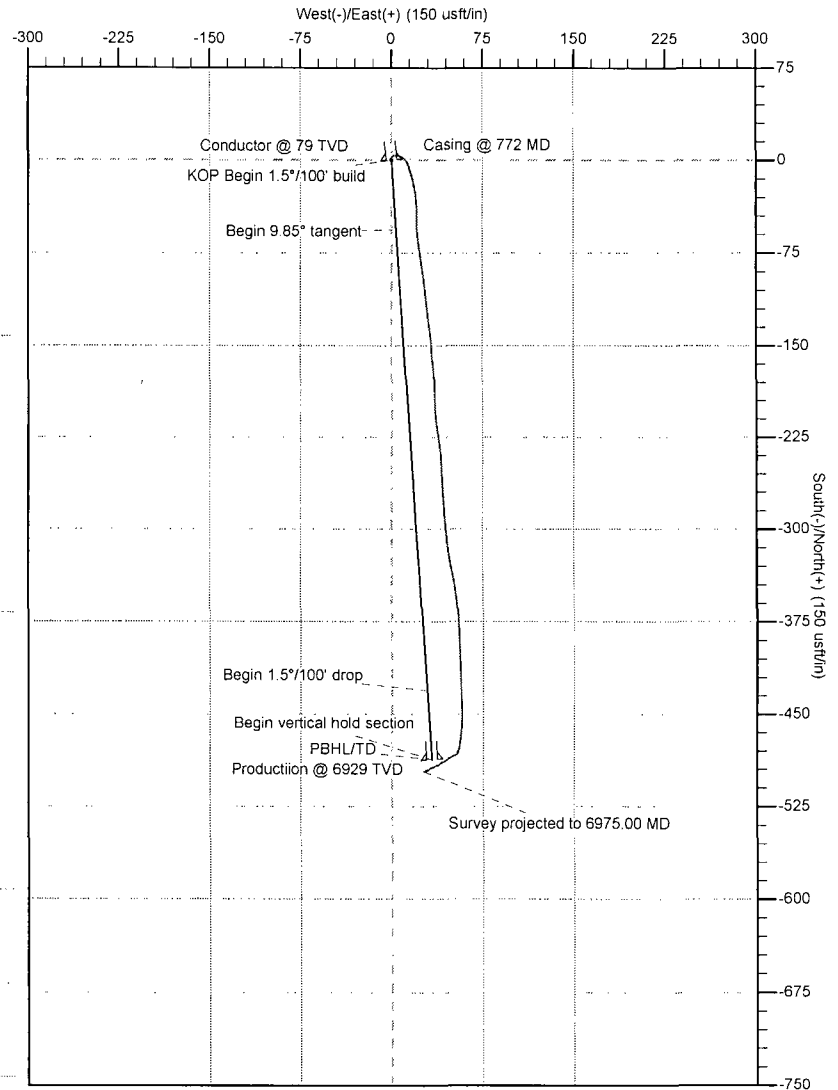
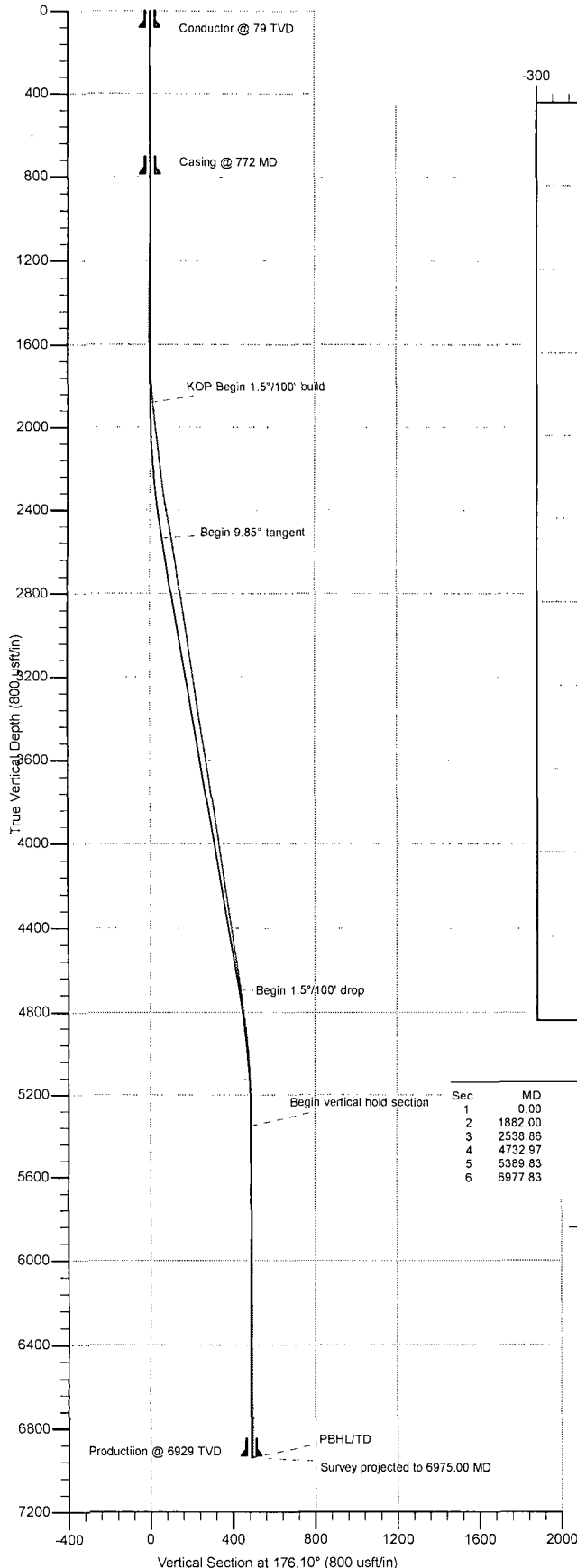
BlueStar MWD, LP performed a MWD survey for ConocoPhillips' Ruby Federal 33, located in Lea County, NM. The API number is: 30-025-41505. The surveys were taken from 900 MD to 6920 MD and ranged over the dates from 01-Feb-14 to 07-Feb-14 and are certified as being true and correct.



Certification by Greg Nazzal  
President



Well: Ruby Federal 33  
Site: Ruby Federal  
Project: Lea County, New Mexico  
Design: rev0  
Rig: PD 822



Section Details

| Sec | MD      | Inc  | Azi    | TVD     | +N/-S   | +E/-W | Dleg | TFace  | VSec   | Annotation                  |
|-----|---------|------|--------|---------|---------|-------|------|--------|--------|-----------------------------|
| 1   | 0.00    | 0.00 | 0.00   | 0.00    | 0.00    | 0.00  | 0.00 | 0.00   | 0.00   | KOP Begin 1.5°/100' build   |
| 2   | 1882.00 | 0.00 | 0.00   | 1882.00 | 0.00    | 0.00  | 0.00 | 0.00   | 0.00   | Begin 9.85° tangent         |
| 3   | 2538.86 | 9.85 | 176.10 | 2535.62 | -56.21  | 3.83  | 1.50 | 176.10 | 56.34  | Begin 1.5°/100' drop        |
| 4   | 4732.97 | 9.85 | 176.10 | 4697.38 | -430.79 | 29.37 | 0.00 | 0.00   | 431.79 | Begin vertical hold section |
| 5   | 5389.83 | 0.00 | 176.10 | 5351.00 | -487.00 | 33.20 | 1.50 | 180.00 | 488.13 | PBHL/TD                     |
| 6   | 6977.83 | 0.00 | 176.10 | 6939.00 | -487.00 | 33.20 | 0.00 | 176.10 | 488.13 |                             |

ANNOTATIONS

| TVD     | MD      | Inc  | Azi    | +N/-S   | +E/-W | VSec   | Departure | Annotation                     |
|---------|---------|------|--------|---------|-------|--------|-----------|--------------------------------|
| 772.00  | 772.00  | 0.00 | 0.00   | 0.00    | 0.00  | 0.00   | 0.00      | Casing @ 772 MD                |
| 900.00  | 900.00  | 0.30 | 12.00  | 0.33    | 0.07  | -0.32  | 0.34      | MWD surveys                    |
| 6938.57 | 6975.00 | 0.90 | 249.80 | -496.76 | 26.67 | 497.43 | 533.40    | Survey projected to 6975.00 MD |

Surface Location: RKB=3970+13 @ 3983.00usft (PD 822)

US State Plane 1927 (Exact solution)

New Mexico East 3001

Northing

668652.10

Easting

663133.60

Latitude

32° 50' 13.50007500 N

Longitude

103° 48' 7.94995075 W

Total Correction (M => G)

To convert a Magnetic Direction to a Grid Direction, Add 7.26°



Azimuths to Grid North  
True North: -0.29°  
Magnetic North: 7.26°

Magnetic Field  
Strength: 48742.0snT  
Dip Angle: 60.64°  
Date: 12/31/2013  
Model: USER DEFINED



|                  |                        |                                     |                                    |
|------------------|------------------------|-------------------------------------|------------------------------------|
| <b>Company:</b>  | ConocoPhillips         | <b>Local Co-ordinate Reference:</b> | Well Ruby Federal 33               |
| <b>Project:</b>  | Lea County, New Mexico | <b>TVD Reference:</b>               | RKB=3970+13 @ 3983.00usft (PD 822) |
| <b>Site:</b>     | Ruby Federal           | <b>MD Reference:</b>                | RKB=3970+13 @ 3983.00usft (PD 822) |
| <b>Well:</b>     | Ruby Federal 33        | <b>North Reference:</b>             | Grid                               |
| <b>Wellbore:</b> | Original Hole          | <b>Survey Calculation Method:</b>   | Minimum Curvature                  |
| <b>Design:</b>   | Surveys Original Hole  | <b>Database:</b>                    | EDM 5000.1 Ddatabase               |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Lea County, New Mexico               |                      |                |
| <b>Map System:</b> | US State Plane 1927 (Exact solution) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)              |                      |                |
| <b>Map Zone:</b>   | New Mexico East 3001                 |                      |                |

|                              |              |                          |                        |
|------------------------------|--------------|--------------------------|------------------------|
| <b>Site</b>                  | Ruby Federal |                          |                        |
| <b>Site Position:</b>        |              | <b>Northing:</b>         | 665,437.81 usft        |
| <b>From:</b>                 | Map          | <b>Easting:</b>          | 666,996.38 usft        |
| <b>Position Uncertainty:</b> | 0.00 usft    | <b>Slot Radius:</b>      | 13-3/8 "               |
|                              |              | <b>Latitude:</b>         | 32° 49' 41.50007426 N  |
|                              |              | <b>Longitude:</b>        | 103° 47' 22.87078135 W |
|                              |              | <b>Grid Convergence:</b> | 0.29 °                 |

|                             |                 |                            |                                  |
|-----------------------------|-----------------|----------------------------|----------------------------------|
| <b>Well</b>                 | Ruby Federal 33 |                            |                                  |
| <b>Well Position</b>        | <b>+N/-S</b>    | 0.00 usft                  | <b>Northing:</b> 668,652.10 usft |
|                             | <b>+E/-W</b>    | 0.00 usft                  | <b>Easting:</b> 663,133.60 usft  |
| <b>Position Uncertainty</b> | 0.00 usft       | <b>Wellhead Elevation:</b> | usft                             |
|                             |                 | <b>Latitude:</b>           | 32° 50' 13.50007500 N            |
|                             |                 | <b>Longitude:</b>          | 103° 48' 7.94995075 W            |
|                             |                 | <b>Ground Level:</b>       | 3,970.00 usft                    |

|                  |                   |                    |                       |
|------------------|-------------------|--------------------|-----------------------|
| <b>Wellbore</b>  | Original Hole     |                    |                       |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination</b>    |
|                  | User Defined      | 12/31/2013         | 7.55                  |
|                  |                   |                    | <b>Dip Angle</b>      |
|                  |                   |                    | 60.64                 |
|                  |                   |                    | <b>Field Strength</b> |
|                  |                   |                    | 48,742                |

|                          |                         |                      |                  |
|--------------------------|-------------------------|----------------------|------------------|
| <b>Design</b>            | Surveys Original Hole   |                      |                  |
| <b>Audit Notes:</b>      |                         |                      |                  |
| <b>Version:</b>          | 1.0                     | <b>Phase:</b>        | ACTUAL           |
|                          |                         | <b>Tie On Depth:</b> | 0.00             |
| <b>Vertical Section:</b> | <b>Depth From (TVD)</b> | <b>+N/-S</b>         | <b>+E/-W</b>     |
|                          | (usft)                  | (usft)               | (usft)           |
|                          | 0.00                    | 0.00                 | 0.00             |
|                          |                         |                      | <b>Direction</b> |
|                          |                         |                      | (°)              |
|                          |                         |                      | 176.10           |

|                       |               |                          |                    |
|-----------------------|---------------|--------------------------|--------------------|
| <b>Survey Program</b> | Date 2/7/2014 |                          |                    |
| <b>From</b>           | <b>To</b>     | <b>Survey (Wellbore)</b> | <b>Tool Name</b>   |
| (usft)                | (usft)        |                          |                    |
| 772.00                | 6,975.00      | MWD (Original Hole)      | MWD                |
|                       |               |                          | <b>Description</b> |
|                       |               |                          | MWD - Standard     |

|                        |                    |                |                       |              |              |                     |                    |                      |                       |
|------------------------|--------------------|----------------|-----------------------|--------------|--------------|---------------------|--------------------|----------------------|-----------------------|
| <b>Survey</b>          |                    |                |                       |              |              |                     |                    |                      |                       |
| <b>Measured Depth</b>  | <b>Inclination</b> | <b>Azimuth</b> | <b>Vertical Depth</b> | <b>+N/-S</b> | <b>+E/-W</b> | <b>Map Northing</b> | <b>Map Easting</b> | <b>Latitude</b>      | <b>Longitude</b>      |
| (usft)                 | (°)                | (°)            | (usft)                | (usft)       | (usft)       | (usft)              | (usft)             |                      |                       |
| 0.00                   | 0.00               | 0.00           | 0.00                  | 0.00         | 0.00         | 668,652.10          | 663,133.60         | 2° 50' 13.50007500 N | 103° 48' 7.94995075 W |
| 772.00                 | 0.00               | 0.00           | 772.00                | 0.00         | 0.00         | 668,652.10          | 663,133.60         | 2° 50' 13.50007500 N | 103° 48' 7.94995075 W |
| <b>Casing @ 772 MD</b> |                    |                |                       |              |              |                     |                    |                      |                       |
| 900.00                 | 0.30               | 12.00          | 900.00                | 0.33         | 0.07         | 668,652.43          | 663,133.67         | 2° 50' 13.50331491 N | 103° 48' 7.94911487 W |
| <b>MWD surveys</b>     |                    |                |                       |              |              |                     |                    |                      |                       |
| 989.00                 | 0.30               | 355.80         | 989.00                | 0.79         | 0.10         | 668,652.89          | 663,133.71         | 2° 50' 13.50786785 N | 103° 48' 7.94871998 W |
| 1,079.00               | 0.70               | 10.50          | 1,078.99              | 1.56         | 0.18         | 668,653.67          | 663,133.79         | 2° 50' 13.51553776 N | 103° 48' 7.94770231 W |
| 1,168.00               | 0.50               | 16.30          | 1,167.99              | 2.47         | 0.39         | 668,654.58          | 663,134.00         | 2° 50' 13.52450488 N | 103° 48' 7.94521026 W |
| 1,257.00               | 0.60               | 40.50          | 1,256.99              | 3.20         | 0.80         | 668,655.30          | 663,134.41         | 2° 50' 13.53167873 N | 103° 48' 7.94034297 W |
| 1,346.00               | 0.60               | 58.30          | 1,345.98              | 3.80         | 1.50         | 668,655.90          | 663,135.11         | 2° 50' 13.53757315 N | 103° 48' 7.93211384 W |
| 1,436.00               | 0.90               | 90.80          | 1,435.97              | 4.03         | 2.61         | 668,656.14          | 663,136.22         | 2° 50' 13.53987060 N | 103° 48' 7.91911727 W |
| 1,525.00               | 1.50               | 89.30          | 1,524.95              | 4.04         | 4.47         | 668,656.14          | 663,138.08         | 2° 50' 13.53982214 N | 103° 48' 7.89727370 W |

Company: ConocoPhillips  
Project: Lea County, New Mexico  
Site: Ruby Federal  
Well: Ruby Federal 33  
Wellbore: Original Hole  
Design: Surveys Original Hole

Local Co-ordinate Reference: Well Ruby Federal 33  
TVD Reference: RKB=3970+13 @ 3983.00usft (PD 822)  
MD Reference: RKB=3970+13 @ 3983.00usft (PD 822)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Database: EDM 5000.1 Ddatabase

Survey

| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Map<br>Northing<br>(usft) | Map<br>Easting<br>(usft) | Latitude             | Longitude             |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|---------------------------|--------------------------|----------------------|-----------------------|
| 1,614.00                    | 3.10               | 118.40         | 1,613.88                    | 2.91            | 7.76            | 668,655.01                | 663,141.36               | 2° 50' 13.52847293 N | 103° 48' 7.85887443 W |
| 1,704.00                    | 2.80               | 136.70         | 1,703.76                    | 0.15            | 11.40           | 668,652.26                | 663,145.01               | 2° 50' 13.50100762 N | 103° 48' 7.81627706 W |
| 1,793.00                    | 3.60               | 158.20         | 1,792.63                    | -4.03           | 13.93           | 668,648.08                | 663,147.54               | 2° 50' 13.45955432 N | 103° 48' 7.78688665 W |
| 1,882.00                    | 5.20               | 163.80         | 1,881.36                    | -10.49          | 16.10           | 668,641.61                | 663,149.70               | 2° 50' 13.39544784 N | 103° 48' 7.76191631 W |
| 1,971.00                    | 6.40               | 167.00         | 1,969.91                    | -19.20          | 18.34           | 668,632.91                | 663,151.94               | 2° 50' 13.30918489 N | 103° 48' 7.73616243 W |
| 2,060.00                    | 7.20               | 171.50         | 2,058.28                    | -29.55          | 20.28           | 668,622.56                | 663,153.88               | 2° 50' 13.20667985 N | 103° 48' 7.71403170 W |
| 2,150.00                    | 6.80               | 184.10         | 2,147.61                    | -40.44          | 20.73           | 668,611.66                | 663,154.34               | 2° 50' 13.09886854 N | 103° 48' 7.70936751 W |
| 2,239.00                    | 7.10               | 175.90         | 2,235.96                    | -51.18          | 20.75           | 668,600.92                | 663,154.35               | 2° 50' 12.99257609 N | 103° 48' 7.70980663 W |
| 2,328.00                    | 8.20               | 173.20         | 2,324.17                    | -62.97          | 21.89           | 668,589.13                | 663,155.50               | 2° 50' 12.87586792 N | 103° 48' 7.69708384 W |
| 2,418.00                    | 10.10              | 171.30         | 2,413.02                    | -77.15          | 23.85           | 668,574.96                | 663,157.45               | 2° 50' 12.73550754 N | 103° 48' 7.67501982 W |
| 2,507.00                    | 11.10              | 171.70         | 2,500.50                    | -93.34          | 26.26           | 668,558.76                | 663,159.87               | 2° 50' 12.57516842 N | 103° 48' 7.64764354 W |
| 2,596.00                    | 10.50              | 174.90         | 2,587.92                    | -109.90         | 28.22           | 668,542.21                | 663,161.83               | 2° 50' 12.41125794 N | 103° 48' 7.62567476 W |
| 2,686.00                    | 9.10               | 171.70         | 2,676.61                    | -125.11         | 29.98           | 668,527.00                | 663,163.58               | 2° 50' 12.26065238 N | 103° 48' 7.60598458 W |
| 2,775.00                    | 9.50               | 171.70         | 2,764.44                    | -139.34         | 32.05           | 668,512.77                | 663,165.66               | 2° 50' 12.11972310 N | 103° 48' 7.58248918 W |
| 2,864.00                    | 8.70               | 178.10         | 2,852.32                    | -153.33         | 33.34           | 668,498.77                | 663,166.94               | 2° 50' 11.98117221 N | 103° 48' 7.56827131 W |
| 2,954.00                    | 8.60               | 171.40         | 2,941.30                    | -166.79         | 34.57           | 668,485.31                | 663,168.17               | 2° 50' 11.84795639 N | 103° 48' 7.55462551 W |
| 3,043.00                    | 7.90               | 181.20         | 3,029.38                    | -179.49         | 35.44           | 668,472.62                | 663,169.04               | 2° 50' 11.72229412 N | 103° 48' 7.54521188 W |
| 3,132.00                    | 8.20               | 178.20         | 3,117.51                    | -191.95         | 35.51           | 668,460.16                | 663,169.11               | 2° 50' 11.59901019 N | 103° 48' 7.54511069 W |
| 3,222.00                    | 9.40               | 174.30         | 3,206.45                    | -205.67         | 36.44           | 668,446.43                | 663,170.04               | 2° 50' 11.46311477 N | 103° 48' 7.53500095 W |
| 3,311.00                    | 8.20               | 173.30         | 3,294.40                    | -219.21         | 37.90           | 668,432.89                | 663,171.51               | 2° 50' 11.32910144 N | 103° 48' 7.51865869 W |
| 3,400.00                    | 9.20               | 171.60         | 3,382.37                    | -232.55         | 39.68           | 668,419.55                | 663,173.29               | 2° 50' 11.19699018 N | 103° 48' 7.49858413 W |
| 3,490.00                    | 9.70               | 177.90         | 3,471.15                    | -247.25         | 41.01           | 668,404.86                | 663,174.61               | 2° 50' 11.05151838 N | 103° 48' 7.48387510 W |
| 3,579.00                    | 9.30               | 176.10         | 3,558.93                    | -261.92         | 41.77           | 668,390.19                | 663,175.38               | 2° 50' 10.90634524 N | 103° 48' 7.47578665 W |
| 3,669.00                    | 9.00               | 175.50         | 3,647.79                    | -276.19         | 42.82           | 668,375.92                | 663,176.43               | 2° 50' 10.76505993 N | 103° 48' 7.46435739 W |
| 3,758.00                    | 8.80               | 174.10         | 3,735.71                    | -289.90         | 44.07           | 668,362.20                | 663,177.67               | 2° 50' 10.62932082 N | 103° 48' 7.45056222 W |
| 3,847.00                    | 8.80               | 175.00         | 3,823.67                    | -303.45         | 45.36           | 668,348.65                | 663,178.96               | 2° 50' 10.49514211 N | 103° 48' 7.43620501 W |
| 3,937.00                    | 8.40               | 174.00         | 3,912.65                    | -316.85         | 46.65           | 668,335.25                | 663,180.25               | 2° 50' 10.36252538 N | 103° 48' 7.42190863 W |
| 4,026.00                    | 8.80               | 166.50         | 4,000.66                    | -329.94         | 48.92           | 668,322.17                | 663,182.52               | 2° 50' 10.23293349 N | 103° 48' 7.39608830 W |
| 4,116.00                    | 8.90               | 171.40         | 4,089.59                    | -343.51         | 51.56           | 668,308.59                | 663,185.17               | 2° 50' 10.09844732 N | 103° 48' 7.36585077 W |
| 4,205.00                    | 8.80               | 171.70         | 4,177.53                    | -357.06         | 53.58           | 668,295.05                | 663,187.18               | 32° 50' 9.96433184 N | 103° 48' 7.34306493 W |
| 4,295.00                    | 9.10               | 177.60         | 4,266.43                    | -370.98         | 54.87           | 668,281.12                | 663,188.47               | 32° 50' 9.82649525 N | 103° 48' 7.32874456 W |
| 4,384.00                    | 8.90               | 177.30         | 4,354.34                    | -384.89         | 55.49           | 668,267.22                | 663,189.09               | 32° 50' 9.68883669 N | 103° 48' 7.32230906 W |
| 4,473.00                    | 8.80               | 177.70         | 4,442.28                    | -398.57         | 56.08           | 668,253.54                | 663,189.69               | 32° 50' 9.55344995 N | 103° 48' 7.31611215 W |
| 4,563.00                    | 8.50               | 178.80         | 4,531.25                    | -412.10         | 56.50           | 668,240.01                | 663,190.10               | 32° 50' 9.41956183 N | 103° 48' 7.31203876 W |
| 4,652.00                    | 8.40               | 177.90         | 4,619.29                    | -425.17         | 56.88           | 668,226.93                | 663,190.48               | 32° 50' 9.29019182 N | 103° 48' 7.30840285 W |
| 4,741.00                    | 8.20               | 177.80         | 4,707.36                    | -438.01         | 57.36           | 668,214.10                | 663,190.96               | 32° 50' 9.16312963 N | 103° 48' 7.30351201 W |
| 4,830.00                    | 8.20               | 178.50         | 4,795.45                    | -450.70         | 57.77           | 668,201.41                | 663,191.37               | 32° 50' 9.03757038 N | 103° 48' 7.29945687 W |
| 4,920.00                    | 6.80               | 185.30         | 4,884.68                    | -462.42         | 57.44           | 668,189.69                | 663,191.05               | 32° 50' 8.92159439 N | 103° 48' 7.30394711 W |
| 5,009.00                    | 5.30               | 189.20         | 4,973.18                    | -471.72         | 56.30           | 668,180.38                | 663,189.90               | 32° 50' 8.82958211 N | 103° 48' 7.31790283 W |
| 5,098.00                    | 3.10               | 190.50         | 5,061.93                    | -478.15         | 55.20           | 668,173.96                | 663,188.81               | 32° 50' 8.76606518 N | 103° 48' 7.33112528 W |
| 5,188.00                    | 1.80               | 214.50         | 5,151.85                    | -481.71         | 53.96           | 668,170.40                | 663,187.56               | 32° 50' 8.73092147 N | 103° 48' 7.34591680 W |
| 5,277.00                    | 0.90               | 243.60         | 5,240.83                    | -483.17         | 52.54           | 668,168.94                | 663,186.15               | 32° 50' 8.71651782 N | 103° 48' 7.36262025 W |
| 5,367.00                    | 0.90               | 251.20         | 5,330.82                    | -483.71         | 51.24           | 668,168.39                | 663,184.84               | 32° 50' 8.71121886 N | 103° 48' 7.37791458 W |
| 5,456.00                    | 1.00               | 245.40         | 5,419.80                    | -484.26         | 49.87           | 668,167.85                | 663,183.48               | 32° 50' 8.70585899 N | 103° 48' 7.39397805 W |
| 5,545.00                    | 1.00               | 241.70         | 5,508.79                    | -484.95         | 48.48           | 668,167.15                | 663,182.09               | 32° 50' 8.69908587 N | 103° 48' 7.41030920 W |
| 5,634.00                    | 1.00               | 236.70         | 5,597.78                    | -485.75         | 47.15           | 668,166.36                | 663,180.75               | 32° 50' 8.69128982 N | 103° 48' 7.42597807 W |
| 5,724.00                    | 1.00               | 228.70         | 5,687.76                    | -486.69         | 45.90           | 668,165.41                | 663,179.51               | 32° 50' 8.68195637 N | 103° 48' 7.44064226 W |
| 5,813.00                    | 0.90               | 241.00         | 5,776.75                    | -487.55         | 44.71           | 668,164.56                | 663,178.31               | 32° 50' 8.67359073 N | 103° 48' 7.45469561 W |
| 5,903.00                    | 0.90               | 245.30         | 5,866.74                    | -488.18         | 43.45           | 668,163.92                | 663,177.05               | 32° 50' 8.66734006 N | 103° 48' 7.46950490 W |
| 5,992.00                    | 0.90               | 238.90         | 5,955.73                    | -488.84         | 42.21           | 668,163.27                | 663,175.82               | 32° 50' 8.66093878 N | 103° 48' 7.48400061 W |
| 6,081.00                    | 1.00               | 235.90         | 6,044.72                    | -489.63         | 40.97           | 668,162.47                | 663,174.58               | 32° 50' 8.65311965 N | 103° 48' 7.49859937 W |
| 6,171.00                    | 1.10               | 237.70         | 6,134.70                    | -490.54         | 39.59           | 668,161.57                | 663,173.20               | 32° 50' 8.64426383 N | 103° 48' 7.51483258 W |
| 6,260.00                    | 1.00               | 243.10         | 6,223.69                    | -491.34         | 38.18           | 668,160.76                | 663,171.78               | 32° 50' 8.63634039 N | 103° 48' 7.53146061 W |
| 6,349.00                    | 1.10               | 245.80         | 6,312.67                    | -492.05         | 36.70           | 668,160.06                | 663,170.31               | 32° 50' 8.62947162 N | 103° 48' 7.54875180 W |
| 6,438.00                    | 1.00               | 247.10         | 6,401.66                    | -492.70         | 35.21           | 668,159.41                | 663,168.82               | 32° 50' 8.62309051 N | 103° 48' 7.56630757 W |

|                  |                        |                                     |                                    |
|------------------|------------------------|-------------------------------------|------------------------------------|
| <b>Company:</b>  | ConocoPhillips         | <b>Local Co-ordinate Reference:</b> | Well Ruby Federal 33               |
| <b>Project:</b>  | Lea County, New Mexico | <b>TVD Reference:</b>               | RKB=3970+13 @ 3983.00usft (PD 822) |
| <b>Site:</b>     | Ruby Federal           | <b>MD Reference:</b>                | RKB=3970+13 @ 3983.00usft (PD 822) |
| <b>Well:</b>     | Ruby Federal 33        | <b>North Reference:</b>             | Grid                               |
| <b>Wellbore:</b> | Original Hole          | <b>Survey Calculation Method:</b>   | Minimum Curvature                  |
| <b>Design:</b>   | Surveys Original Hole  | <b>Database:</b>                    | EDM 5000.1 Ddatabase               |

Survey

| Measured Depth (usft)          | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Map Northing (usft) | Map Easting (usft) | Latitude             | Longitude             |
|--------------------------------|-----------------|-------------|-----------------------|--------------|--------------|---------------------|--------------------|----------------------|-----------------------|
| 6,528.00                       | 1.10            | 245.60      | 6,491.64              | -493.36      | 33.70        | 668,158.74          | 663,167.30         | 32° 50' 8.61661044 N | 103° 48' 7.58404622 W |
| 6,617.00                       | 1.10            | 245.40      | 6,580.62              | -494.07      | 32.15        | 668,158.04          | 663,165.75         | 32° 50' 8.60967687 N | 103° 48' 7.60230966 W |
| 6,707.00                       | 1.00            | 238.80      | 6,670.61              | -494.84      | 30.69        | 668,157.27          | 663,164.29         | 32° 50' 8.60216530 N | 103° 48' 7.61943393 W |
| 6,796.00                       | 1.00            | 241.40      | 6,759.60              | -495.61      | 29.34        | 668,156.50          | 663,162.95         | 32° 50' 8.59457272 N | 103° 48' 7.63525689 W |
| 6,920.00                       | 0.90            | 249.80      | 6,883.58              | -496.46      | 27.48        | 668,155.64          | 663,161.08         | 32° 50' 8.58621277 N | 103° 48' 7.65715331 W |
| 6,975.00                       | 0.90            | 249.80      | 6,938.57              | -496.76      | 26.67        | 668,155.34          | 663,160.27         | 32° 50' 8.58330139 N | 103° 48' 7.66667319 W |
| Survey projected to 6975.00 MD |                 |             |                       |              |              |                     |                    |                      |                       |

Design Annotations

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              | Comment                        |
|-----------------------|-----------------------|-------------------|--------------|--------------------------------|
|                       |                       | +N/-S (usft)      | +E/-W (usft) |                                |
| 772.00                | 772.00                | 0.00              | 0.00         | Casing @ 772 MD                |
| 900.00                | 900.00                | 0.33              | 0.07         | MWD surveys                    |
| 6,975.00              | 6,938.57              | -496.76           | 26.67        | Survey projected to 6975.00 MD |

**Company:** ConocoPhillips  
**Project:** Lea County, New Mexico  
**Site:** Ruby Federal  
**Well:** Ruby Federal 33  
**Wellbore:** Original Hole  
**Design:** Surveys Original Hole

**Local Co-ordinate Reference:** Well Ruby Federal 33  
**TVD Reference:** RKB=3970+13 @ 3983.00usft (PD 822)  
**MD Reference:** RKB=3970+13 @ 3983.00usft (PD 822)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.1 Ddatabase

**Project:** Lea County, New Mexico

**Map System:** US State Plane 1927 (Exact solution)  
**Geo Datum:** NAD 1927 (NADCON CONUS)  
**Map Zone:** New Mexico East 3001

**System Datum:** Mean Sea Level

**Site:** Ruby Federal

|                              |           |                     |                 |                          |                        |
|------------------------------|-----------|---------------------|-----------------|--------------------------|------------------------|
| <b>Site Position:</b>        |           | <b>Northing:</b>    | 665,437.81 usft | <b>Latitude:</b>         | 32° 49' 41.50037426 N  |
| <b>From:</b> Map             |           | <b>Easting:</b>     | 666,996.38 usft | <b>Longitude:</b>        | 103° 47' 22.87078135 W |
| <b>Position Uncertainty:</b> | 0.00 usft | <b>Slot Radius:</b> | 13-3/8 "        | <b>Grid Convergence:</b> | 0.29 °                 |

**Well:** Ruby Federal 33

|                             |      |           |                            |                 |                      |                       |
|-----------------------------|------|-----------|----------------------------|-----------------|----------------------|-----------------------|
| <b>Well Position</b>        | +N-S | 0.00 usft | <b>Northing:</b>           | 668,652.10 usft | <b>Latitude:</b>     | 32° 50' 13.50007500 N |
|                             | +E-W | 0.00 usft | <b>Easting:</b>            | 663,133.60 usft | <b>Longitude:</b>    | 103° 48' 7.94995075 W |
| <b>Position Uncertainty</b> |      | 0.00 usft | <b>Wellhead Elevation:</b> | usft            | <b>Ground Level:</b> | 3,970.00 usft         |

**Wellbore:** Original Hole

| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination</b><br>(°) | <b>Dip Angle</b><br>(°) | <b>Field Strength</b><br>(nT) |
|------------------|-------------------|--------------------|---------------------------|-------------------------|-------------------------------|
|                  | User Defined      | 12/31/2013         | 7.55                      | 60.64                   | 48,742                        |

**Design:** Surveys Original Hole

**Audit Notes:**  
**Version:** 1.0      **Phase:** ACTUAL      **Tie On Depth:** 0.00

| <b>Vertical Section:</b> | <b>Depth From (TVD)</b><br>(usft) | <b>+N-S</b><br>(usft) | <b>+E-W</b><br>(usft) | <b>Direction</b><br>(°) |
|--------------------------|-----------------------------------|-----------------------|-----------------------|-------------------------|
|                          | 0.00                              | 0.00                  | 0.00                  | 176.10                  |

**Survey Program**      **Date** 2/7/2014

| <b>From</b><br>(usft) | <b>To</b><br>(usft) | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Description</b> |
|-----------------------|---------------------|--------------------------|------------------|--------------------|
| 772.00                | 6,975.00            | MWD (Original Hole)      | MWD              | MWD - Standard     |

Company: ConocoPhillips  
 Project: Lea County, New Mexico  
 Site: Ruby Federal  
 Well: Ruby Federal 33  
 Wellbore: Original Hole  
 Design: Surveys Original Hole

Local Co-ordinate Reference: Well Ruby Federal 33  
 TVD Reference: RKB=3970+13 @ 3983.00usft (PD 822)  
 MD Reference: RKB=3970+13 @ 3983.00usft (PD 822)  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 Database: EDM 5000.1 Ddatabase

Survey

| MD<br>(usft)           | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | DLeg<br>(°/100usft) | V. Sec<br>(usft) | Northing<br>(usft) | Easting<br>(usft) |
|------------------------|------------|----------------------|---------------|---------------|---------------|---------------------|------------------|--------------------|-------------------|
| 0.00                   | 0.00       | 0.00                 | 0.00          | 0.00          | 0.00          | 0.00                | 0.00             | 668,652.10         | 663,133.60        |
| 772.00                 | 0.00       | 0.00                 | 772.00        | 0.00          | 0.00          | 0.00                | 0.00             | 668,652.10         | 663,133.60        |
| <b>Casing @ 772 MD</b> |            |                      |               |               |               |                     |                  |                    |                   |
| 900.00                 | 0.30       | 12.00                | 900.00        | 0.33          | 0.07          | 0.23                | -0.32            | 668,652.43         | 663,133.67        |
| <b>MWD surveys</b>     |            |                      |               |               |               |                     |                  |                    |                   |
| 989.00                 | 0.30       | 355.80               | 989.00        | 0.79          | 0.10          | 0.09                | -0.78            | 668,652.89         | 663,133.70        |
| 1,079.00               | 0.70       | 10.50                | 1,078.99      | 1.56          | 0.18          | 0.46                | -1.55            | 668,653.66         | 663,133.78        |
| 1,168.00               | 0.50       | 16.30                | 1,167.99      | 2.47          | 0.39          | 0.23                | -2.44            | 668,654.57         | 663,133.99        |
| 1,257.00               | 0.60       | 40.50                | 1,256.99      | 3.20          | 0.80          | 0.28                | -3.14            | 668,655.30         | 663,134.40        |
| 1,346.00               | 0.60       | 58.30                | 1,345.98      | 3.80          | 1.50          | 0.21                | -3.69            | 668,655.90         | 663,135.10        |
| 1,436.00               | 0.90       | 90.80                | 1,435.97      | 4.03          | 2.61          | 0.57                | -3.85            | 668,656.13         | 663,136.21        |
| 1,525.00               | 1.50       | 89.30                | 1,524.95      | 4.04          | 4.47          | 0.68                | -3.73            | 668,656.14         | 663,138.07        |
| 1,614.00               | 3.10       | 118.40               | 1,613.88      | 2.91          | 7.76          | 2.17                | -2.37            | 668,655.01         | 663,141.36        |
| 1,704.00               | 2.80       | 136.70               | 1,703.76      | 0.15          | 11.40         | 1.09                | 0.62             | 668,652.25         | 663,145.00        |
| 1,793.00               | 3.60       | 158.20               | 1,792.63      | -4.03         | 13.93         | 1.61                | 4.96             | 668,648.07         | 663,147.53        |
| 1,882.00               | 5.20       | 163.80               | 1,881.36      | -10.49        | 16.10         | 1.86                | 11.56            | 668,641.61         | 663,149.70        |
| 1,971.00               | 6.40       | 167.00               | 1,969.91      | -19.20        | 18.34         | 1.40                | 20.40            | 668,632.90         | 663,151.94        |
| 2,060.00               | 7.20       | 171.50               | 2,058.28      | -29.55        | 20.28         | 1.08                | 30.86            | 668,622.55         | 663,153.88        |
| 2,150.00               | 6.80       | 184.10               | 2,147.61      | -40.44        | 20.73         | 1.76                | 41.76            | 668,611.66         | 663,154.33        |
| 2,239.00               | 7.10       | 175.90               | 2,235.96      | -51.18        | 20.75         | 1.16                | 52.48            | 668,600.92         | 663,154.35        |
| 2,328.00               | 8.20       | 173.20               | 2,324.17      | -62.97        | 21.89         | 1.30                | 64.32            | 668,589.13         | 663,155.49        |
| 2,418.00               | 10.10      | 171.30               | 2,413.02      | -77.15        | 23.85         | 2.14                | 78.59            | 668,574.95         | 663,157.45        |
| 2,507.00               | 11.10      | 171.70               | 2,500.50      | -93.34        | 26.26         | 1.13                | 94.91            | 668,558.76         | 663,159.86        |
| 2,596.00               | 10.50      | 174.90               | 2,587.92      | -109.90       | 28.22         | 0.95                | 111.56           | 668,542.20         | 663,161.82        |
| 2,686.00               | 9.10       | 171.70               | 2,676.61      | -125.11       | 29.98         | 1.67                | 126.86           | 668,526.99         | 663,163.58        |
| 2,775.00               | 9.50       | 171.70               | 2,764.44      | -139.34       | 32.05         | 0.45                | 141.20           | 668,512.76         | 663,165.65        |
| 2,864.00               | 8.70       | 178.10               | 2,852.32      | -153.33       | 33.34         | 1.45                | 155.25           | 668,498.77         | 663,166.94        |



|                  |                        |                                     |                                    |
|------------------|------------------------|-------------------------------------|------------------------------------|
| <b>Company:</b>  | ConocoPhillips         | <b>Local Co-ordinate Reference:</b> | Well Ruby Federal 33               |
| <b>Project:</b>  | Lea County, New Mexico | <b>TVD Reference:</b>               | RKB=3970+13 @ 3983.00usft (PD 822) |
| <b>Site:</b>     | Ruby Federal           | <b>MD Reference:</b>                | RKB=3970+13 @ 3983.00usft (PD 822) |
| <b>Well:</b>     | Ruby Federal 33        | <b>North Reference:</b>             | Grid                               |
| <b>Wellbore:</b> | Original Hole          | <b>Survey Calculation Method:</b>   | Minimum Curvature                  |
| <b>Design:</b>   | Surveys Original Hole  | <b>Database:</b>                    | EDM 5000.1 Ddatabase               |

| Survey       |            |                      |               |               |              |                     |                  |                    |                   |  |
|--------------|------------|----------------------|---------------|---------------|--------------|---------------------|------------------|--------------------|-------------------|--|
| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | N/S<br>(usft) | EW<br>(usft) | DLeg<br>(°/100usft) | V. Sec<br>(usft) | Northing<br>(usft) | Easting<br>(usft) |  |
| 2,954.00     | 8.60       | 171.40               | 2,941.30      | -166.79       | 34.57        | 1.12                | 168.76           | 668,485.31         | 663,168.17        |  |
| 3,043.00     | 7.90       | 181.20               | 3,029.38      | -179.49       | 35.44        | 1.76                | 181.48           | 668,472.61         | 663,169.04        |  |
| 3,132.00     | 8.20       | 178.20               | 3,117.51      | -191.95       | 35.51        | 0.58                | 193.92           | 668,460.15         | 663,169.11        |  |
| 3,222.00     | 9.40       | 174.30               | 3,206.45      | -205.67       | 36.44        | 1.49                | 207.68           | 668,446.43         | 663,170.04        |  |
| 3,311.00     | 8.20       | 173.30               | 3,294.40      | -219.21       | 37.90        | 1.36                | 221.28           | 668,432.89         | 663,171.50        |  |
| 3,400.00     | 9.20       | 171.60               | 3,382.37      | -232.55       | 39.68        | 1.16                | 234.71           | 668,419.55         | 663,173.28        |  |
| 3,490.00     | 9.70       | 177.90               | 3,471.15      | -247.25       | 41.01        | 1.28                | 249.46           | 668,404.85         | 663,174.61        |  |
| 3,579.00     | 9.30       | 176.10               | 3,558.93      | -261.92       | 41.77        | 0.56                | 264.15           | 668,390.18         | 663,175.37        |  |
| 3,669.00     | 9.00       | 175.50               | 3,647.79      | -276.19       | 42.82        | 0.35                | 278.46           | 668,375.91         | 663,176.42        |  |
| 3,758.00     | 8.80       | 174.10               | 3,735.71      | -289.90       | 44.07        | 0.33                | 292.23           | 668,362.20         | 663,177.67        |  |
| 3,847.00     | 8.80       | 175.00               | 3,823.67      | -303.45       | 45.36        | 0.15                | 305.84           | 668,348.65         | 663,178.96        |  |
| 3,937.00     | 8.40       | 174.00               | 3,912.65      | -316.85       | 46.65        | 0.47                | 319.29           | 668,335.25         | 663,180.25        |  |
| 4,026.00     | 8.80       | 166.50               | 4,000.66      | -329.94       | 48.92        | 1.34                | 332.50           | 668,322.16         | 663,182.52        |  |
| 4,116.00     | 8.90       | 171.40               | 4,089.59      | -343.51       | 51.56        | 0.84                | 346.23           | 668,308.59         | 663,185.16        |  |
| 4,205.00     | 8.80       | 171.70               | 4,177.53      | -357.06       | 53.58        | 0.12                | 359.87           | 668,295.04         | 663,187.18        |  |
| 4,295.00     | 9.10       | 177.60               | 4,266.43      | -370.98       | 54.87        | 1.07                | 373.85           | 668,281.12         | 663,188.47        |  |
| 4,384.00     | 8.90       | 177.30               | 4,354.34      | -384.89       | 55.49        | 0.23                | 387.77           | 668,267.21         | 663,189.09        |  |
| 4,473.00     | 8.80       | 177.70               | 4,442.28      | -398.57       | 56.08        | 0.13                | 401.46           | 668,253.53         | 663,189.68        |  |
| 4,563.00     | 8.50       | 178.80               | 4,531.25      | -412.10       | 56.50        | 0.38                | 414.99           | 668,240.00         | 663,190.10        |  |
| 4,652.00     | 8.40       | 177.90               | 4,619.29      | -425.17       | 56.88        | 0.19                | 428.05           | 668,226.93         | 663,190.48        |  |
| 4,741.00     | 8.20       | 177.80               | 4,707.36      | -438.01       | 57.36        | 0.23                | 440.90           | 668,214.09         | 663,190.96        |  |
| 4,830.00     | 8.20       | 178.50               | 4,795.45      | -450.70       | 57.77        | 0.11                | 453.58           | 668,201.40         | 663,191.37        |  |
| 4,920.00     | 6.80       | 185.30               | 4,884.68      | -462.42       | 57.44        | 1.84                | 465.25           | 668,189.68         | 663,191.04        |  |
| 5,009.00     | 5.30       | 189.20               | 4,973.18      | -471.72       | 56.30        | 1.75                | 474.46           | 668,180.38         | 663,189.90        |  |
| 5,098.00     | 3.10       | 190.50               | 5,061.93      | -478.15       | 55.20        | 2.47                | 480.80           | 668,173.95         | 663,188.80        |  |
| 5,188.00     | 1.80       | 214.50               | 5,151.85      | -481.71       | 53.96        | 1.81                | 484.26           | 668,170.39         | 663,187.56        |  |
| 5,277.00     | 0.90       | 243.60               | 5,240.83      | -483.17       | 52.54        | 1.24                | 485.62           | 668,168.93         | 663,186.14        |  |

|                  |                        |                                     |                                    |
|------------------|------------------------|-------------------------------------|------------------------------------|
| <b>Company:</b>  | ConocoPhillips         | <b>Local Co-ordinate Reference:</b> | Well Ruby Federal 33               |
| <b>Project:</b>  | Lea County, New Mexico | <b>TVD Reference:</b>               | RKB=3970+13 @ 3983.00usft (PD 822) |
| <b>Site:</b>     | Ruby Federal           | <b>MD Reference:</b>                | RKB=3970+13 @ 3983.00usft (PD 822) |
| <b>Well:</b>     | Ruby Federal 33        | <b>North Reference:</b>             | Grid                               |
| <b>Wellbore:</b> | Original Hole          | <b>Survey Calculation Method:</b>   | Minimum Curvature                  |
| <b>Design:</b>   | Surveys Original Hole  | <b>Database:</b>                    | EDM 5000.1 Ddatabase               |

| Survey                         |            |                      |               |               |               |                     |                  |                    |                   |  |
|--------------------------------|------------|----------------------|---------------|---------------|---------------|---------------------|------------------|--------------------|-------------------|--|
| MD<br>(usft)                   | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | DLeg<br>(°/100usft) | V. Sec<br>(usft) | Northing<br>(usft) | Easting<br>(usft) |  |
| 5,367.00                       | 0.90       | 251.20               | 5,330.81      | -483.71       | 51.24         | 0.13                | 486.08           | 668,168.39         | 663,184.84        |  |
| 5,456.00                       | 1.00       | 245.40               | 5,419.80      | -484.26       | 49.87         | 0.16                | 486.53           | 668,167.84         | 663,183.47        |  |
| 5,545.00                       | 1.00       | 241.70               | 5,508.79      | -484.95       | 48.48         | 0.07                | 487.13           | 668,167.15         | 663,182.08        |  |
| 5,634.00                       | 1.00       | 236.70               | 5,597.78      | -485.75       | 47.15         | 0.10                | 487.83           | 668,166.35         | 663,180.75        |  |
| 5,724.00                       | 1.00       | 228.70               | 5,687.76      | -486.69       | 45.90         | 0.16                | 488.69           | 668,165.41         | 663,179.50        |  |
| 5,813.00                       | 0.90       | 241.00               | 5,776.75      | -487.55       | 44.71         | 0.25                | 489.46           | 668,164.55         | 663,178.31        |  |
| 5,903.00                       | 0.90       | 245.30               | 5,866.74      | -488.18       | 43.45         | 0.08                | 490.01           | 668,163.92         | 663,177.05        |  |
| 5,992.00                       | 0.90       | 238.90               | 5,955.73      | -488.84       | 42.21         | 0.11                | 490.58           | 668,163.26         | 663,175.81        |  |
| 6,081.00                       | 1.00       | 235.90               | 6,044.72      | -489.63       | 40.97         | 0.13                | 491.29           | 668,162.47         | 663,174.57        |  |
| 6,171.00                       | 1.10       | 237.70               | 6,134.70      | -490.54       | 39.59         | 0.12                | 492.09           | 668,161.56         | 663,173.19        |  |
| 6,260.00                       | 1.00       | 243.10               | 6,223.69      | -491.34       | 38.18         | 0.16                | 492.80           | 668,160.76         | 663,171.78        |  |
| 6,349.00                       | 1.10       | 245.80               | 6,312.67      | -492.05       | 36.70         | 0.13                | 493.40           | 668,160.05         | 663,170.30        |  |
| 6,438.00                       | 1.00       | 247.10               | 6,401.66      | -492.70       | 35.21         | 0.12                | 493.95           | 668,159.40         | 663,168.81        |  |
| 6,528.00                       | 1.10       | 245.60               | 6,491.64      | -493.36       | 33.70         | 0.12                | 494.51           | 668,158.74         | 663,167.30        |  |
| 6,617.00                       | 1.10       | 245.40               | 6,580.62      | -494.07       | 32.15         | 0.00                | 495.11           | 668,158.03         | 663,165.75        |  |
| 6,707.00                       | 1.00       | 238.80               | 6,670.61      | -494.84       | 30.69         | 0.17                | 495.78           | 668,157.26         | 663,164.29        |  |
| 6,796.00                       | 1.00       | 241.40               | 6,759.60      | -495.61       | 29.34         | 0.05                | 496.46           | 668,156.49         | 663,162.94        |  |
| 6,920.00                       | 0.90       | 249.80               | 6,883.58      | -496.46       | 27.48         | 0.14                | 497.18           | 668,155.64         | 663,161.08        |  |
| 6,975.00                       | 0.90       | 249.80               | 6,938.57      | -496.76       | 26.67         | 0.00                | 497.43           | 668,155.34         | 663,160.27        |  |
| Survey projected to 6975.00 MD |            |                      |               |               |               |                     |                  |                    |                   |  |

Company: ConocoPhillips  
 Project: Lea County, New Mexico  
 Site: Ruby Federal  
 Well: Ruby Federal 33  
 Wellbore: Original Hole  
 Design: Surveys Original Hole

Local Co-ordinate Reference: Well Ruby Federal 33  
 TVD Reference: RKB=3970+13 @ 3983.00usft (PD 822)  
 MD Reference: RKB=3970+13 @ 3983.00usft (PD 822)  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 Database: EDM 5000.1 Ddatabase

Design Annotations

| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates |                 |                                |
|-----------------------------|-----------------------------|-------------------|-----------------|--------------------------------|
|                             |                             | +N/-S<br>(usft)   | +E/-W<br>(usft) | Comment                        |
| 772.00                      | 772.00                      | 0.00              | 0.00            | Casing @ 772 MD                |
| 900.00                      | 900.00                      | 0.33              | 0.07            | MWD surveys                    |
| 6,975.00                    | 6,938.57                    | -496.76           | 26.67           | Survey projected to 6975.00 MD |