

# Results of Directional Survey

DD

|             |              |           |                        |
|-------------|--------------|-----------|------------------------|
| API number: | 30-025-41503 |           |                        |
| OGRID:      |              | Operator: | CONOCOPHILLIPS COMPANY |
|             |              | Property: | RUBY FEDERAL # 30      |

|         |        |   |    |      |     |     |     |
|---------|--------|---|----|------|-----|-----|-----|
| surface | ULSTR: | E | 17 | T    | 17S | R   | 32E |
|         |        |   |    | 1450 | FNL | 330 | FWL |

|        |        |        |     |      |     |     |     |
|--------|--------|--------|-----|------|-----|-----|-----|
| BH Loc | ULSTR: | E      | 17  | T    | 17S | R   | 32E |
| 6968   | MD     | 6961.8 | TVD | 1654 | FNL | 311 | FWL |

|             |        |        |     |      |     |     |     |
|-------------|--------|--------|-----|------|-----|-----|-----|
| Top Perf/OH | ULSTR: | E      | 17  | T    | 17S | R   | 32E |
| 5483        | MD     | 5476.9 | TVD | 1639 | FNL | 320 | FWL |

|             |        |        |     |      |     |     |     |
|-------------|--------|--------|-----|------|-----|-----|-----|
| Bot Perf/OH | ULSTR: | E      | 17  | T    | 17S | R   | 32E |
| 6597        | MD     | 6590.8 | TVD | 1650 | FNL | 314 | FWL |

|              |      |         |        |         |
|--------------|------|---------|--------|---------|
|              | MD   | N/S     | E/W    | VD      |
|              | 5456 | -188.52 | -9.73  | 5449.9  |
| TOP PERFS/OH | 5483 | -188.81 | -9.82  | 5476.90 |
|              | 5546 | -189.49 | -10.03 | 5539.89 |
|              | 6528 | -199.03 | -15.66 | 6521.83 |
| BOT PERFS/OH | 6597 | -199.87 | -16.23 | 6590.82 |
|              | 6618 | -200.13 | -16.40 | 6611.82 |

|              |      |         |        |         |
|--------------|------|---------|--------|---------|
| NEXT TO LAST | 6913 | -203.37 | -18.57 | 6906.79 |
| LAST READING | 6968 | -203.89 | -19.13 | 6961.79 |
| TD           | 6968 | -203.89 | -19.13 | 6961.79 |

|                  |      |    |     |    |
|------------------|------|----|-----|----|
| Surface Location | 1450 | FN | 330 | FW |
| Projected BHL    | 1654 | FN | 311 | FW |
| Location of      |      |    |     |    |
| Top Perfs/OH     | 1639 | FN | 320 | FW |
| Bottom Perfs/OH  | 1650 | FN | 314 | FW |

## SUMMARY of Subsurface Locations

|                  |              |      |    |     |    |             |
|------------------|--------------|------|----|-----|----|-------------|
| Surface Location | E-17-17S-32E | 1450 | FN | 330 | FW | Vert. Depth |
|                  |              |      |    |     |    |             |
| Top Perfs/OH     | E-17-17S-32E | 1639 | FN | 320 | FW | 5476.90     |
| Bottom Perfs/OH  | E-17-17S-32E | 1650 | FN | 314 | FW | 6590.82     |
|                  |              |      |    |     |    |             |
| Projected TD     | E-17-17S-32E | 1654 | FN | 311 | FW | 6961.79     |

JUN 04 2011

HOBBS OCD

MAY 16 2014



RECEIVED

1407 Northpark Dr.  
Kingwood, TX 77339  
Cell: (281) 851-8112  
Efax: (281) 966-1566

BlueStar MWD, LP performed a MWD survey for ConocoPhillips' Ruby Federal 30, located in Lea County, NM. The API number is: 30-025-41503. The surveys were taken from 810 MD to 6913 MD and ranged over the dates from 26-Jan-14 to 30-Jan-14 and are certified as being true and correct.

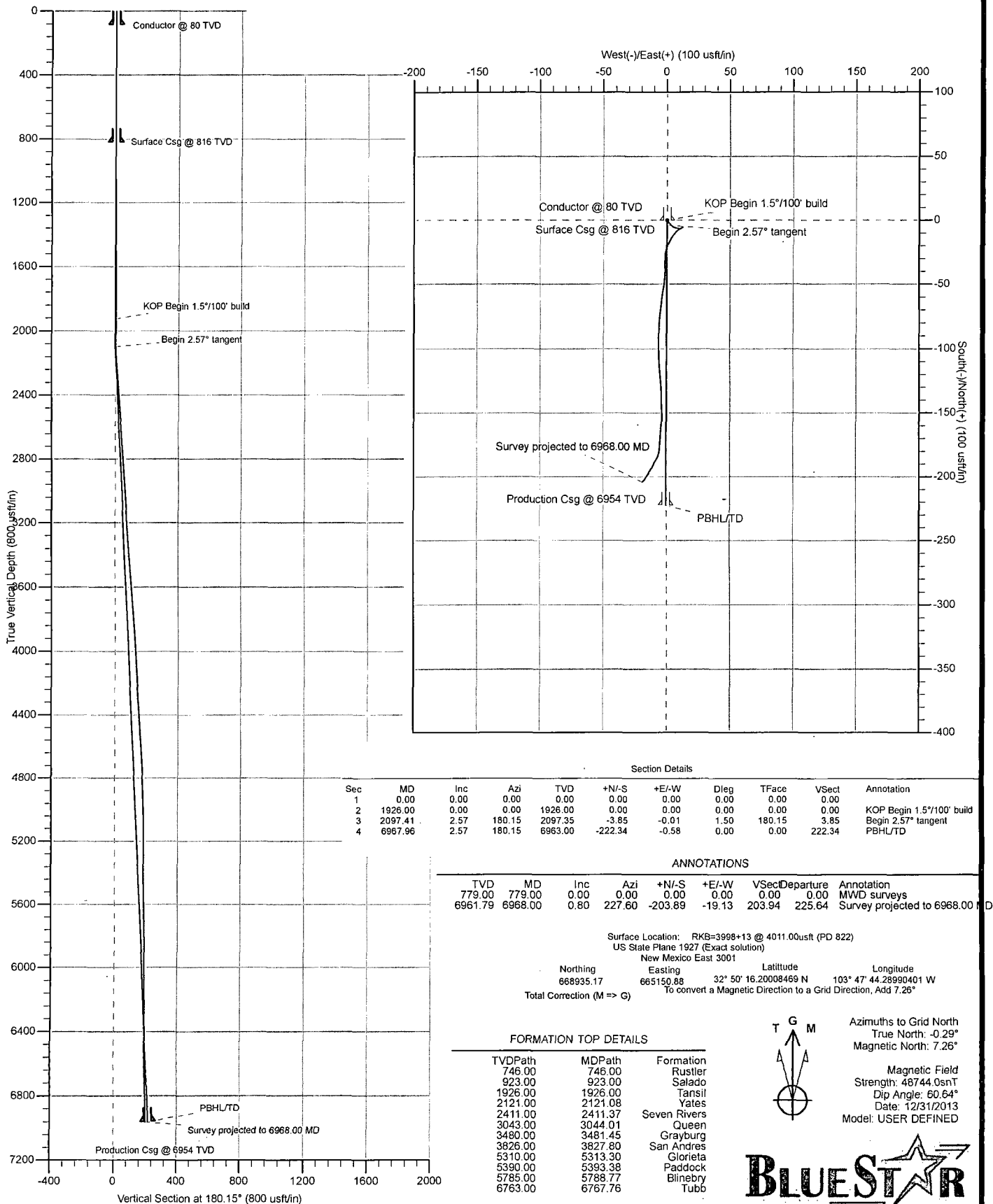
A handwritten signature in black ink, appearing to read "Greg Nazzari". The signature is fluid and cursive, with a large initial "G" and "N".

Certification by Greg Nazzari  
President

MAY 16 2014

RECEIVED  
ConocoPhillips

Well: Ruby Federal 30  
 Site: Ruby Federal  
 Project: Lea County, New Mexico  
 Design: rev0  
 Rig: PD 822





HOBBS OCD

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## **ConocoPhillips**

Lea County, New Mexico

Ruby Federal

Ruby Federal 30

Original Hole

Design: Surveys Original Hole

## **Standard Survey Report**

04 February, 2014

|           |                        |                              |                                    |
|-----------|------------------------|------------------------------|------------------------------------|
| Company:  | ConocoPhillips         | Local Co-ordinate Reference: | Well Ruby Federal 30               |
| Project:  | Lea County, New Mexico | TVD Reference:               | RKB=3998+13 @ 4011.00usft (PD 822) |
| Site:     | Ruby Federal           | MD Reference:                | RKB=3998+13 @ 4011.00usft (PD 822) |
| Well:     | Ruby Federal 30        | North Reference:             | Grid                               |
| Wellbore: | Original Hole          | Survey Calculation Method:   | Minimum Curvature                  |
| Design:   | Surveys Original Hole  | Database:                    | EDM 5000.1 Ddatabase               |

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

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

|                      |                 |                     |                        |
|----------------------|-----------------|---------------------|------------------------|
| Well                 | Ruby Federal 30 |                     |                        |
| Well Position        | +N/-S           | 0.00 usft           | Northings:             |
|                      | +E/-W           | 0.00 usft           | Easting:               |
| Position Uncertainty | 0.00 usft       | Wellhead Elevation: | usft                   |
|                      |                 | Latitude:           | 32° 50' 16.20008469 N  |
|                      |                 | Longitude:          | 103° 47' 44.28990401 W |
|                      |                 | Ground Level:       | 3,998.00 usft          |

|           |               |             |                |
|-----------|---------------|-------------|----------------|
| Wellbore  | Original Hole |             |                |
| Magnetics | Model Name    | Sample Date | Declination    |
|           | User Defined  | 12/31/2013  | 7.55           |
|           |               |             | Dip Angle      |
|           |               |             | 60.64          |
|           |               |             | Field Strength |
|           |               |             | 48,744         |

|                   |                       |               |           |
|-------------------|-----------------------|---------------|-----------|
| Design            | Surveys Original Hole |               |           |
| Audit Notes:      |                       |               |           |
| Version:          | 1.0                   | Phase:        | ACTUAL    |
|                   |                       | Tie On Depth: | 0.00      |
| Vertical Section: | Depth From (TVD)      | +N/-S         | +E/-W     |
|                   | (usft)                | (usft)        | (usft)    |
|                   | 0.00                  | 0.00          | 0.00      |
|                   |                       |               | Direction |
|                   |                       |               | (°)       |
|                   |                       |               | 180.15    |

|                |               |                     |                |
|----------------|---------------|---------------------|----------------|
| Survey Program | Date 2/4/2014 |                     |                |
| From           | To            | Survey (Wellbore)   | Tool Name      |
| (usft)         | (usft)        |                     |                |
| 779.00         | 6,968.00      | MWD (Original Hole) | MWD            |
|                |               |                     | Description    |
|                |               |                     | MWD - Standard |

|             |             |         |          |        |        |          |             |             |             |  |
|-------------|-------------|---------|----------|--------|--------|----------|-------------|-------------|-------------|--|
| Survey      |             |         |          |        |        |          |             |             |             |  |
| Measured    | Inclination | Azimuth | Vertical | +N/-S  | +E/-W  | Vertical | Dogleg      | Build       | Turn        |  |
| Depth       | (°)         | (°)     | Depth    | (usft) | (usft) | Section  | Rate        | Rate        | Rate        |  |
| (usft)      |             |         | (usft)   |        |        | (usft)   | (°/100usft) | (°/100usft) | (°/100usft) |  |
| 0.00        | 0.00        | 0.00    | 0.00     | 0.00   | 0.00   | 0.00     | 0.00        | 0.00        | 0.00        |  |
| 779.00      | 0.00        | 0.00    | 779.00   | 0.00   | 0.00   | 0.00     | 0.00        | 0.00        | 0.00        |  |
| MWD surveys |             |         |          |        |        |          |             |             |             |  |
| 810.00      | 0.90        | 153.10  | 810.00   | -0.22  | 0.11   | 0.22     | 2.90        | 2.90        | 0.00        |  |
| 899.00      | 0.70        | 130.00  | 898.99   | -1.19  | 0.84   | 1.19     | 0.42        | -0.22       | -25.96      |  |
| 989.00      | 1.00        | 139.80  | 988.98   | -2.14  | 1.77   | 2.14     | 0.37        | 0.33        | 10.89       |  |
| 1,079.00    | 0.70        | 144.90  | 1,078.97 | -3.19  | 2.59   | 3.19     | 0.34        | -0.33       | 5.67        |  |
| 1,168.00    | 0.70        | 129.60  | 1,167.96 | -3.98  | 3.33   | 3.98     | 0.21        | 0.00        | -17.19      |  |
| 1,257.00    | 0.70        | 126.40  | 1,256.96 | -4.65  | 4.18   | 4.64     | 0.04        | 0.00        | -3.60       |  |
| 1,347.00    | 0.90        | 118.40  | 1,346.95 | -5.32  | 5.25   | 5.30     | 0.25        | 0.22        | -8.89       |  |
| 1,437.00    | 1.00        | 102.80  | 1,436.94 | -5.83  | 6.63   | 5.81     | 0.31        | 0.11        | -17.33      |  |

|                  |                        |                                     |                                    |
|------------------|------------------------|-------------------------------------|------------------------------------|
| <b>Company:</b>  | ConocoPhillips         | <b>Local Co-ordinate Reference:</b> | Well Ruby Federal 30               |
| <b>Project:</b>  | Lea County, New Mexico | <b>TVD Reference:</b>               | RKB=3998+13 @ 4011.00usft (PD 822) |
| <b>Site:</b>     | Ruby Federal           | <b>MD Reference:</b>                | RKB=3998+13 @ 4011.00usft (PD 822) |
| <b>Well:</b>     | Ruby Federal 30        | <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) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 1,526.00              | 1.40            | 104.89      | 1,525.92              | -6.28        | 8.44         | 6.26                    | 0.45                    | 0.45                   | 2.35                  |
| 1,616.00              | 0.80            | 98.80       | 1,615.90              | -6.66        | 10.13        | 6.63                    | 0.68                    | -0.67                  | -6.77                 |
| 1,705.00              | 0.40            | 7.70        | 1,704.90              | -6.44        | 10.78        | 6.41                    | 1.01                    | -0.45                  | -102.36               |
| 1,795.00              | 0.80            | 63.90       | 1,794.89              | -5.86        | 11.39        | 5.83                    | 0.74                    | 0.44                   | 62.44                 |
| 1,884.00              | 0.80            | 42.30       | 1,883.88              | -5.12        | 12.36        | 5.09                    | 0.34                    | 0.00                   | -24.27                |
| 1,974.00              | 1.00            | 229.90      | 1,973.88              | -5.16        | 12.19        | 5.13                    | 2.00                    | 0.22                   | -191.56               |
| 2,063.00              | 2.00            | 247.20      | 2,062.85              | -6.27        | 10.16        | 6.24                    | 1.22                    | 1.12                   | 19.44                 |
| 2,152.00              | 3.40            | 224.30      | 2,151.75              | -8.76        | 6.88         | 8.74                    | 1.96                    | 1.57                   | -25.73                |
| 2,241.00              | 4.30            | 211.70      | 2,240.55              | -13.48       | 3.29         | 13.48                   | 1.38                    | 1.01                   | -14.16                |
| 2,331.00              | 3.90            | 201.10      | 2,330.32              | -19.21       | 0.41         | 19.21                   | 0.95                    | -0.44                  | -11.78                |
| 2,420.00              | 4.10            | 188.10      | 2,419.10              | -25.18       | -1.12        | 25.19                   | 1.04                    | 0.22                   | -14.61                |
| 2,509.00              | 4.10            | 177.10      | 2,507.88              | -31.51       | -1.41        | 31.52                   | 0.88                    | 0.00                   | -12.36                |
| 2,598.00              | 3.50            | 181.80      | 2,596.68              | -37.40       | -1.34        | 37.41                   | 0.76                    | -0.67                  | 5.28                  |
| 2,688.00              | 4.40            | 183.40      | 2,686.47              | -43.60       | -1.63        | 43.60                   | 1.01                    | 1.00                   | 1.78                  |
| 2,777.00              | 4.20            | 189.10      | 2,775.22              | -50.22       | -2.35        | 50.23                   | 0.53                    | -0.22                  | 6.40                  |
| 2,866.00              | 3.40            | 191.80      | 2,864.02              | -56.02       | -3.40        | 56.03                   | 0.92                    | -0.90                  | 3.03                  |
| 2,955.00              | 3.80            | 185.00      | 2,952.85              | -61.55       | -4.20        | 61.56                   | 0.66                    | 0.45                   | -7.64                 |
| 3,045.00              | 4.40            | 186.20      | 3,042.62              | -67.95       | -4.83        | 67.96                   | 0.67                    | 0.67                   | 1.33                  |
| 3,134.00              | 3.70            | 188.90      | 3,131.39              | -74.18       | -5.64        | 74.20                   | 0.81                    | -0.79                  | 3.03                  |
| 3,224.00              | 3.60            | 184.80      | 3,221.21              | -79.87       | -6.33        | 79.88                   | 0.31                    | -0.11                  | -4.56                 |
| 3,313.00              | 4.20            | 178.50      | 3,310.00              | -85.91       | -6.48        | 85.92                   | 0.83                    | 0.67                   | -7.08                 |
| 3,402.00              | 3.60            | 181.40      | 3,398.80              | -91.96       | -6.46        | 91.98                   | 0.71                    | -0.67                  | 3.26                  |
| 3,536.00              | 4.40            | 177.10      | 3,532.47              | -101.30      | -6.30        | 101.31                  | 0.64                    | 0.60                   | -3.21                 |
| 3,626.00              | 4.20            | 178.60      | 3,622.22              | -108.04      | -6.05        | 108.06                  | 0.25                    | -0.22                  | 1.67                  |
| 3,715.00              | 4.10            | 175.80      | 3,710.98              | -114.47      | -5.74        | 114.49                  | 0.25                    | -0.11                  | -3.15                 |
| 3,804.00              | 3.90            | 173.90      | 3,799.77              | -120.66      | -5.18        | 120.67                  | 0.27                    | -0.22                  | -2.13                 |
| 3,894.00              | 3.80            | 175.70      | 3,889.56              | -126.67      | -4.63        | 126.68                  | 0.17                    | -0.11                  | 2.00                  |
| 3,983.00              | 3.60            | 179.10      | 3,978.38              | -132.41      | -4.37        | 132.42                  | 0.33                    | -0.22                  | 3.82                  |
| 4,072.00              | 3.50            | 178.50      | 4,067.21              | -137.92      | -4.25        | 137.93                  | 0.12                    | -0.11                  | -0.67                 |
| 4,162.00              | 3.40            | 178.10      | 4,157.04              | -143.33      | -4.09        | 143.34                  | 0.11                    | -0.11                  | -0.44                 |
| 4,296.00              | 3.30            | 178.00      | 4,290.82              | -151.16      | -3.82        | 151.17                  | 0.07                    | -0.07                  | -0.07                 |
| 4,385.00              | 3.50            | 184.10      | 4,379.66              | -156.43      | -3.93        | 156.44                  | 0.46                    | 0.22                   | 6.85                  |
| 4,475.00              | 3.40            | 187.00      | 4,469.50              | -161.81      | -4.45        | 161.83                  | 0.22                    | -0.11                  | 3.22                  |
| 4,564.00              | 3.30            | 185.00      | 4,558.34              | -166.99      | -5.00        | 167.00                  | 0.17                    | -0.11                  | -2.25                 |
| 4,653.00              | 3.10            | 180.70      | 4,647.21              | -171.94      | -5.25        | 171.96                  | 0.35                    | -0.22                  | -4.83                 |
| 4,742.00              | 3.30            | 185.10      | 4,736.07              | -176.90      | -5.51        | 176.92                  | 0.36                    | 0.22                   | 4.94                  |
| 4,832.00              | 2.10            | 195.20      | 4,825.97              | -181.07      | -6.17        | 181.09                  | 1.43                    | -1.33                  | 11.22                 |
| 4,921.00              | 0.80            | 191.00      | 4,914.94              | -183.26      | -6.71        | 183.27                  | 1.46                    | -1.46                  | -4.72                 |
| 5,010.00              | 0.60            | 203.60      | 5,003.93              | -184.29      | -7.02        | 184.31                  | 0.28                    | -0.22                  | 14.16                 |
| 5,100.00              | 0.60            | 214.10      | 5,093.92              | -185.12      | -7.47        | 185.14                  | 0.12                    | 0.00                   | 11.67                 |
| 5,189.00              | 0.80            | 210.20      | 5,182.92              | -186.04      | -8.05        | 186.06                  | 0.23                    | 0.22                   | -4.38                 |
| 5,278.00              | 0.80            | 210.40      | 5,271.91              | -187.11      | -8.67        | 187.13                  | 0.00                    | 0.00                   | 0.22                  |
| 5,367.00              | 0.50            | 227.30      | 5,360.90              | -187.91      | -9.27        | 187.93                  | 0.40                    | -0.34                  | 18.99                 |

|           |                       |                              |                                    |
|-----------|-----------------------|------------------------------|------------------------------------|
| Company:  | ConocoPhillips        | Local Co-ordinate Reference: | Well Ruby Federal 30               |
| Project:  | Lea County New Mexico | TVD Reference:               | RKB=3998+13 @ 4011.00usft (PD 822) |
| Site:     | Ruby Federal          | MD Reference:                | RKB=3998+13 @ 4011.00usft (PD 822) |
| Well:     | Ruby Federal 30       | North Reference:             | Grid                               |
| Wellbore: | Original Hole         | Survey Calculation Method:   | Minimum Curvature                  |
| Design:   | Surveys Original Hole | Database:                    | EDM 5000.1 Ddatabase               |

| Survey                         |                 |             |                       |              |              |                         |                         |                        |                       |
|--------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft)          | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 5,456.00                       | 0.50            | 205.70      | 5,449.90              | -188.52      | -9.73        | 188.55                  | 0.21                    | 0.00                   | -24.27                |
| 5,546.00                       | 0.80            | 191.90      | 5,539.89              | -189.49      | -10.03       | 189.52                  | 0.37                    | 0.33                   | -15.33                |
| 5,635.00                       | 0.70            | 214.00      | 5,628.89              | -190.55      | -10.46       | 190.58                  | 0.34                    | -0.11                  | 24.83                 |
| 5,725.00                       | 0.70            | 197.60      | 5,718.88              | -191.53      | -10.93       | 191.56                  | 0.22                    | 0.00                   | -18.22                |
| 5,814.00                       | 0.50            | 210.70      | 5,807.87              | -192.38      | -11.30       | 192.41                  | 0.27                    | -0.22                  | 14.72                 |
| 5,903.00                       | 0.80            | 226.20      | 5,896.87              | -193.15      | -11.94       | 193.18                  | 0.39                    | 0.34                   | 17.42                 |
| 5,993.00                       | 0.60            | 203.30      | 5,986.86              | -194.02      | -12.58       | 194.05                  | 0.38                    | -0.22                  | -25.44                |
| 6,082.00                       | 0.70            | 220.20      | 6,075.86              | -194.86      | -13.12       | 194.89                  | 0.24                    | 0.11                   | 18.99                 |
| 6,171.00                       | 0.70            | 208.50      | 6,164.85              | -195.75      | -13.73       | 195.79                  | 0.16                    | 0.00                   | -13.15                |
| 6,261.00                       | 0.70            | 195.00      | 6,254.84              | -196.77      | -14.13       | 196.80                  | 0.18                    | 0.00                   | -15.00                |
| 6,350.00                       | 0.40            | 204.80      | 6,343.84              | -197.57      | -14.40       | 197.61                  | 0.35                    | -0.34                  | 11.01                 |
| 6,439.00                       | 0.60            | 226.30      | 6,432.84              | -198.18      | -14.87       | 198.22                  | 0.30                    | 0.22                   | 24.16                 |
| 6,528.00                       | 0.90            | 220.50      | 6,521.83              | -199.03      | -15.66       | 199.07                  | 0.35                    | 0.34                   | -6.52                 |
| 6,618.00                       | 0.80            | 206.20      | 6,611.82              | -200.13      | -16.40       | 200.17                  | 0.26                    | -0.11                  | -15.89                |
| 6,707.00                       | 0.80            | 216.60      | 6,700.81              | -201.19      | -17.04       | 201.23                  | 0.16                    | 0.00                   | 11.69                 |
| 6,797.00                       | 0.70            | 206.00      | 6,790.80              | -202.19      | -17.66       | 202.23                  | 0.19                    | -0.11                  | -11.78                |
| 6,913.00                       | 0.80            | 227.60      | 6,906.79              | -203.37      | -18.57       | 203.42                  | 0.26                    | 0.09                   | 18.62                 |
| 6,968.00                       | 0.80            | 227.60      | 6,961.79              | -203.89      | -19.13       | 203.94                  | 0.00                    | 0.00                   | 0.00                  |
| Survey projected to 6968.00 MD |                 |             |                       |              |              |                         |                         |                        |                       |

| Design Annotations    |                       |                   |              |                                |
|-----------------------|-----------------------|-------------------|--------------|--------------------------------|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              | Comment                        |
|                       |                       | +N/-S (usft)      | +E/-W (usft) |                                |
| 779.00                | 779.00                | 0.00              | 0.00         | MWD surveys                    |
| 6,968.00              | 6,961.79              | -203.89           | -19.13       | Survey projected to 6968.00 MD |