

Dr.



|            |           |        |        |            |                     |
|------------|-----------|--------|--------|------------|---------------------|
| 04/30/2011 | 1,105.00  | 17.14  | 62.82  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 1,137.00  | 17.84  | 62.13  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 1,169.00  | 18.55  | 62.16  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 1,200.00  | 19.21  | 62.87  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 1,232.00  | 20.03  | 62.98  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 1,264.00  | 20.65  | 63.23  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 1,296.00  | 21.48  | 63.71  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 1,327.00  | 22.11  | 63.57  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 1,359.00  | 22.85  | 63.53  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 1,391.00  | 23.75  | 63.53  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 1,455.00  | 25.39  | 63.14  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 1,518.00  | 26.12  | 63.12  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 1,581.00  | 26.15  | 62.71  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 1,645.00  | 26.49  | 63.02  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 1,708.00  | 26.62  | 63.05  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 1,772.00  | 27.00  | 63.34  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 1,836.00  | 26.84  | 63.48  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 1,899.00  | 27.35  | 63.62  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 1,961.00  | 27.83  | 63.37  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 2,024.00  | 27.74  | 62.73  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 2,088.00  | 27.96  | 62.36  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 2,152.00  | 28.07  | 64.07  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 2,215.00  | 27.99  | 64.37  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 2,279.00  | 27.20  | 62.92  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 2,342.00  | 27.07  | 63.09  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 2,405.00  | 27.44  | 63.80  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 2,466.00  | 27.93  | 63.71  | IncAzi-MWD | Scientific Drilling |
| 04/30/2011 | 2,530.00  | 28.69  | 63.85  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 2,593.00  | 28.42  | 63.18  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 2,656.00  | 27.76  | 63.79  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 2,719.00  | 26.50  | 64.70  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 2,783.00  | 25.61  | 63.06  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 2,846.00  | 25.25  | 62.60  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 2,909.00  | 24.82  | 63.09  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 2,972.00  | 24.27  | 63.15  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 3,035.00  | 23.80  | 63.55  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 3,099.00  | 22.95  | 63.07  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 3,162.00  | 22.94  | 61.93  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 3,193.00  | 22.20  | 62.58  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 3,225.00  | 21.20  | 62.76  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 3,256.00  | 19.97  | 62.96  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | -3,288.00 | -19.09 | -64.11 | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 3,319.00  | 18.19  | 65.20  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 3,351.00  | 17.37  | 64.92  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 3,382.00  | 16.36  | 66.33  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 3,414.00  | 15.25  | 66.78  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 3,445.00  | 14.44  | 67.22  | IncAzi-MWD | Scientific Drilling |
| 05/01/2011 | 3,476.00  | 13.65  | 67.82  | IncAzi-MWD | Scientific Drilling |

|            |          |       |        |            |                      |
|------------|----------|-------|--------|------------|----------------------|
| 05/01/2011 | 3,508.00 | 12.67 | 68.45  | IncAzi-MWD | Scientific Drilling  |
| 05/01/2011 | 3,539.00 | 12.16 | 67.50  | IncAzi-MWD | Scientific Drilling  |
| 05/01/2011 | 3,571.00 | 11.42 | 65.20  | IncAzi-MWD | Scientific Drilling  |
| 05/01/2011 | 3,602.00 | 10.65 | 66.58  | IncAzi-MWD | Scientific Drilling  |
| 05/01/2011 | 3,634.00 | 10.16 | 67.58  | IncAzi-MWD | Scientific Drilling  |
| 05/01/2011 | 3,665.00 | 10.00 | 68.54  | IncAzi-MWD | Scientific Drilling  |
| 05/01/2011 | 3,697.00 | 9.28  | 70.26  | IncAzi-MWD | Scientific Drilling  |
| 05/01/2011 | 3,729.00 | 8.32  | 71.90  | IncAzi-MWD | Scientific Drilling  |
| 05/01/2011 | 3,760.00 | 7.45  | 74.03  | IncAzi-MWD | Scientific Drilling  |
| 05/01/2011 | 3,792.00 | 6.84  | 75.54  | IncAzi-MWD | Scientific Drilling  |
| 05/01/2011 | 3,823.00 | 5.85  | 75.00  | IncAzi-MWD | Scientific Drilling  |
| 05/01/2011 | 3,855.00 | 4.70  | 74.88  | IncAzi-MWD | Scientific Drilling  |
| 05/01/2011 | 3,886.00 | 3.67  | 78.68  | IncAzi-MWD | Scientific Drilling  |
| 05/01/2011 | 3,918.00 | 2.72  | 87.35  | IncAzi-MWD | Scientific Drilling  |
| 05/01/2011 | 3,981.00 | 2.00  | 104.38 | IncAzi-MWD | Scientific Drilling  |
| 08/01/2011 | 8,200.00 | 1.00  | .00    | Inc-WL     | Phoenix Services LLC |

I, the undersigned, certify that I, acting in my capacity as DRILLING ENGINEER for ConocoPhillips Company am authorized by said Company to make this report; and that said report was prepared under my supervision and directions, and that the facts stated herein are true to the best of my knowledge and belief.

Carroll Cleary

Subscribed and sworn to me this 24<sup>th</sup> Day of August, 2011

Denise D. Journey

Notary Public in and for San Juan County, New Mexico

My Commission expires May 26, 2015



**Scientific Drilling**  
Directional Drilling Operations

## ConocoPhillips

SJB (NM West)  
SEC 24-T31N-R8W  
SJ 32-8 #15N

Original Hole

Design: Original Hole

## Standard Survey Report

04 May, 2011

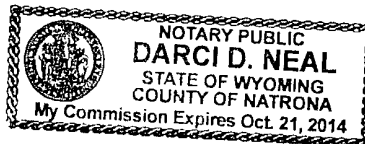


This survey is correct to the best of my knowledge and is supported by actual field data.

Notarized this date 4<sup>th</sup> of May, 2011.

Darci D. Neal

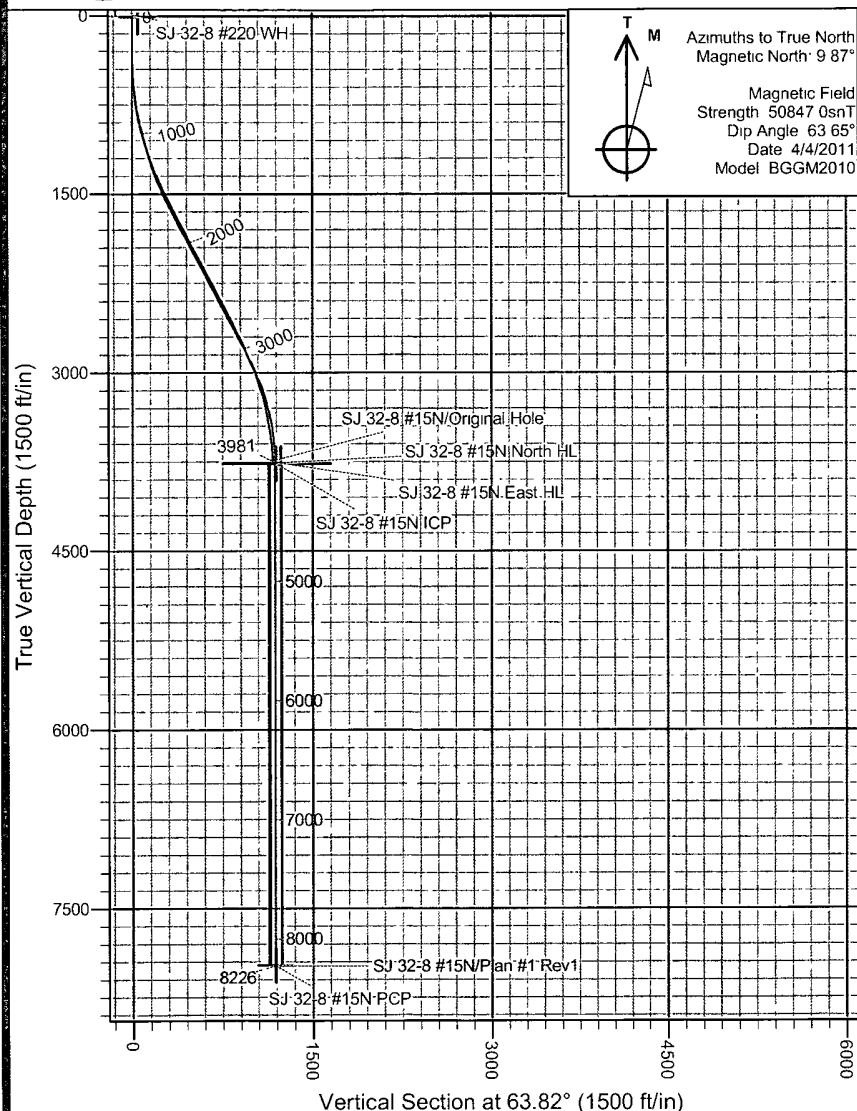
Notary Signature  
County of Natrona  
State of Wyoming



**ConocoPhillips**



Project: SJB (NM West)  
 Site: SEC 24-T31N-R8W  
 Well: SJ 32-8 #15N  
 Wellbore: Original Hole  
 Design: Original Hole



Azimuths to True North  
 Magnetic North: 9.87°  
 Magnetic Field  
 Strength 50847.0 nT  
 Dip Angle 63.65°  
 Date 4/4/2011  
 Model BGGM2010

+N/-S  
 0.0

+E/-W  
 0.0

Northing  
 2139508.37

**WELL DETAILS: SJ 32-8 #15N**  
 AWS 730 @ 6475.0ft (15' DF + 6460' GL)

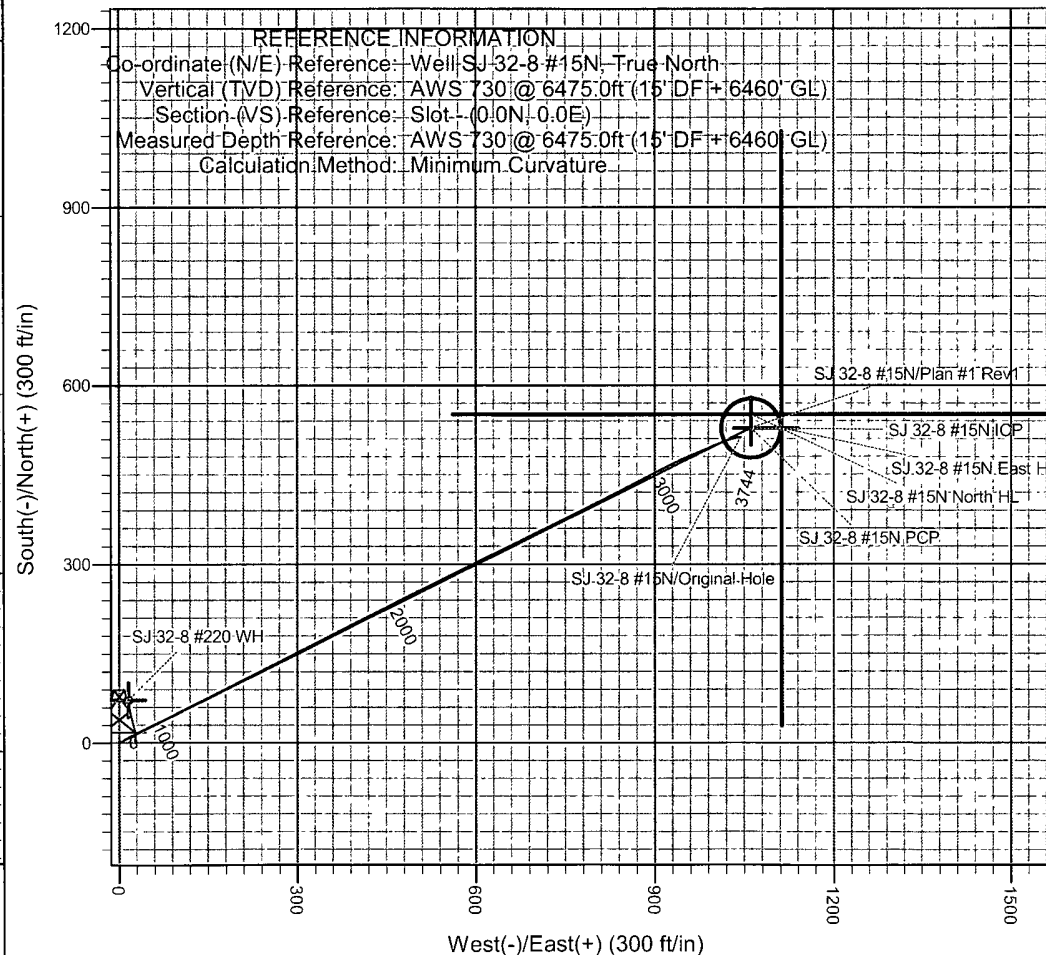
Ground Level: 6460.0

Easting  
 558706.61

Latitude  
 36° 52' 46.653 N

Longitude  
 107° 37' 57.396 W

Slope



### REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well SJ 32-8 #15N-True North  
 Vertical (TVD) Reference: AWS 730 @ 6475.0ft (15' DF + 6460' GL)  
 Section (VS) Reference: Slot: (0.0N, 0.0E)  
 Measured Depth Reference: AWS 730 @ 6475.0ft (15' DF + 6460' GL)  
 Calculation Method: Minimum Curvature

**COMPANY DETAILS: ConocoPhillips**  
 Calculation Method: Minimum Curvature  
 Error System: ISCWSA  
 Scan Method: Closest Approach 3D  
 Error Surface: Combined Covariances  
 Warning Method: Risk Ratio

**PROJECT DETAILS: SJB (NM West)**  
 Geodetic System: US State Plane 1927 (Exact solution)  
 Datum: NAD 1927 (NADCON CONUS)  
 Ellipsoid: Clarke 1866  
 Zone: New Mexico West 3003  
 System Datum: Mean Sea Level

**SITE DETAILS: SEC 24-T31N-R8W**  
 San Juan County NM  
 Site Centre Latitude: 36° 52' 46.653 N  
 Longitude: 107° 37' 57.396 W  
 Positional Uncertainty: 7.5  
 Convergence: 0.12  
 Local North: True



Scientific Drilling  
Survey Report



|           |                 |                              |                                        |
|-----------|-----------------|------------------------------|----------------------------------------|
| Company:  | ConocoPhillips  | Local Co-ordinate Reference: | Well SJ 32-8 #15N                      |
| Project:  | SJB (NM West)   | TVD Reference:               | AWS 730 @ 6475.0ft (15' DF + 6460' GL) |
| Site:     | SEC 24-T31N-R8W | MD Reference:                | AWS 730 @ 6475.0ft (15' DF + 6460' GL) |
| Well:     | SJ 32-8 #15N    | North Reference:             | True                                   |
| Wellbore: | Original Hole   | Survey Calculation Method:   | Minimum Curvature                      |
| Design:   | Original Hole   | Database:                    | EDMCOP                                 |

|             |                                               |               |                             |
|-------------|-----------------------------------------------|---------------|-----------------------------|
| Project:    | SJB (NM West), New Mexico, S-Type MV/DK Wells |               |                             |
| Map System: | US State Plane 1927 (Exact solution)          | System Datum: | Mean Sea Level              |
| Geo Datum:  | NAD 1927 (NADCON CONUS)                       |               | Using Well Reference Point  |
| Map Zone:   | New Mexico West 3003                          |               | Using geodetic scale factor |

|                       |          |                 |                 |                   |                   |
|-----------------------|----------|-----------------|-----------------|-------------------|-------------------|
| Site                  |          | SEC 24-T31N-R8W |                 |                   |                   |
| Site Position:        |          | Northing:       | 2,139,508 37 ft | Latitude:         | 36° 52' 46.653 N  |
| From:                 | Lat/Long | Easting:        | 558,706 61 ft   | Longitude:        | 107° 37' 57.396 W |
| Position Uncertainty: | 15.0 ft  | Slot Radius:    | 6-1/8"          | Grid Convergence: | 0.12 °            |

|                      |       |                                 |                     |                 |               |                   |
|----------------------|-------|---------------------------------|---------------------|-----------------|---------------|-------------------|
| Well:                |       | SJ 32-8 #15N, S-Type MV/DK Well |                     |                 |               |                   |
| Well Position        | +N/-S | 0 0 ft                          | Northing:           | 2,139,508.37 ft | Latitude:     | 36° 52' 46.653 N  |
|                      | +E/-W | 0 0 ft                          | Easting:            | 558,706.61 ft   | Longitude:    | 107° 37' 57.396 W |
| Position Uncertainty |       | 3.5 ft                          | Wellhead Elevation: | ft              | Ground Level: | 6,460.0 ft        |

|           |               |             |                    |                  |                        |
|-----------|---------------|-------------|--------------------|------------------|------------------------|
| Wellbore: | Original Hole |             |                    |                  |                        |
| Magnetics | Model Name    | Sample Date | Declination<br>(°) | Dip Angle<br>(°) | Field Strength<br>(nT) |
|           | BGGM2010      | 4/4/2011    | 9 87               | 63 65            | 50,847                 |

|                   |                          |               |               |                  |     |
|-------------------|--------------------------|---------------|---------------|------------------|-----|
| Design:           | Original Hole            |               |               |                  |     |
| Audit Notes:      |                          |               |               |                  |     |
| Version:          | 1.0                      | Phase:        | ACTUAL        | Tie On Depth:    | 0.0 |
| Vertical Section: | Depth From (TVD)<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Direction<br>(°) |     |
|                   | 0.0                      | 0 0           | 0.0           | 63.82            |     |

|                |                |                           |           |                          |
|----------------|----------------|---------------------------|-----------|--------------------------|
| Survey Program | Date: 5/4/2011 |                           |           |                          |
| From<br>(ft)   | To<br>(ft)     | Survey (Wellbore)         | Tool Name | Description              |
| 266 0          | 3,981.0        | Survey #1 (Original Hole) | MWD SDI   | MWD - Standard ver 1.0.1 |

| Measured<br>Depth<br>(ft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Vertical<br>Section<br>(ft) | Dogleg<br>Rate<br>(°/100ft) | Build<br>Rate<br>(°/100ft) | Turn<br>Rate<br>(°/100ft) |
|---------------------------|--------------------|----------------|---------------------------|---------------|---------------|-----------------------------|-----------------------------|----------------------------|---------------------------|
| 0 0                       | 0.00               | 0 00           | 0 0                       | 0.0           | 0.0           | 0.0                         | 0 00                        | 0.00                       | 0.00                      |
| 266.0                     | 0.26               | 196.61         | 266.0                     | -0.6          | -0.2          | -0 4                        | 0.10                        | 0 10                       | 0.00                      |
| First SDI MWD Survey      |                    |                |                           |               |               |                             |                             |                            |                           |
| 296 0                     | 0.17               | 139.63         | 296.0                     | -0.7          | -0.2          | -0.4                        | 0.73                        | -0.30                      | -189.93                   |
| 327.0                     | 0.42               | 111.16         | 327.0                     | -0.8          | 0.0           | -0.4                        | 0 91                        | 0.81                       | -91.84                    |
| 357.0                     | 0.74               | 67.92          | 357.0                     | -0.7          | 0.3           | -0 1                        | 1.74                        | 1.07                       | -144.13                   |
| 388.0                     | 1.04               | 76 37          | 388.0                     | -0.6          | 0.7           | 0.4                         | 1.05                        | 0.97                       | 27.26                     |
| 419.0                     | 1.53               | 55 46          | 419.0                     | -0.3          | 1.3           | 1.1                         | 2.16                        | 1 58                       | -67.45                    |
| 450 0                     | 2.00               | 60.19          | 450 0                     | 0.2           | 2.1           | 2.0                         | 1 59                        | 1.52                       | 15.26                     |
| 481.0                     | 2.64               | 57 28          | 480 9                     | 0.9           | 3.2           | 3.3                         | 2 10                        | 2.06                       | -9.39                     |
| 511.0                     | 3.21               | 55.53          | 510 9                     | 1.7           | 4.5           | 4 8                         | 1 92                        | 1 90                       | -5 83                     |
| 542.0                     | 3.96               | 55.08          | 541.8                     | 2 8           | 6.1           | 6 7                         | 2.42                        | 2.42                       | -1.45                     |
| 572.0                     | 4.60               | 52.57          | 571.8                     | 4 2           | 7.9           | 8 9                         | 2 22                        | 2.13                       | -8.37                     |

|                  |                 |                                     |                                        |
|------------------|-----------------|-------------------------------------|----------------------------------------|
| <b>Company:</b>  | ConocoPhillips  | <b>Local Co-ordinate Reference:</b> | Well SJ 32-8 #15N                      |
| <b>Project:</b>  | SJB (NM West)   | <b>TVD Reference:</b>               | AWS 730 @ 6475.0ft (15' DF + 6460' GL) |
| <b>Site:</b>     | SEC 24-T31N-R8W | <b>MD Reference:</b>                | AWS 730 @ 6475.0ft (15' DF + 6460' GL) |
| <b>Well:</b>     | SJ 32-8 #15N    | <b>North Reference:</b>             | True                                   |
| <b>Wellbore:</b> | Original Hole   | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Original Hole   | <b>Database:</b>                    | EDMCOP                                 |

| Survey              |                 |             |                     |            |            |                       |                       |                      |                     |  |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|--|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |  |
| 603.0               | 5.30            | 56.51       | 602.6               | 5.7        | 10.1       | 11.5                  | 2.51                  | 2.26                 | 12.71               |  |
| 634.0               | 5.96            | 57.44       | 633.5               | 7.4        | 12.6       | 14.6                  | 2.15                  | 2.13                 | 3.00                |  |
| 665.0               | 6.84            | 61.76       | 664.3               | 9.1        | 15.6       | 18.0                  | 3.23                  | 2.84                 | 13.94               |  |
| 695.0               | 7.47            | 62.94       | 694.1               | 10.8       | 18.9       | 21.7                  | 2.16                  | 2.10                 | 3.93                |  |
| 726.0               | 8.22            | 62.81       | 724.8               | 12.8       | 22.7       | 26.0                  | 2.42                  | 2.42                 | -0.42               |  |
| 757.0               | 8.70            | 63.05       | 755.4               | 14.8       | 26.7       | 30.5                  | 1.55                  | 1.55                 | 0.77                |  |
| 788.0               | 9.44            | 62.86       | 786.1               | 17.1       | 31.1       | 35.4                  | 2.39                  | 2.39                 | -0.61               |  |
| 818.0               | 9.89            | 62.73       | 815.6               | 19.4       | 35.6       | 40.5                  | 1.50                  | 1.50                 | -0.43               |  |
| 853.0               | 10.73           | 63.35       | 850.1               | 22.2       | 41.1       | 46.7                  | 2.42                  | 2.40                 | 1.77                |  |
| 884.0               | 11.39           | 64.39       | 880.5               | 24.8       | 46.5       | 52.7                  | 2.22                  | 2.13                 | 3.35                |  |
| 915.0               | 12.24           | 64.41       | 910.8               | 27.6       | 52.2       | 59.0                  | 2.74                  | 2.74                 | 0.06                |  |
| 947.0               | 13.24           | 64.39       | 942.0               | 30.6       | 58.6       | 66.1                  | 3.13                  | 3.13                 | -0.06               |  |
| 978.0               | 13.97           | 64.52       | 972.2               | 33.8       | 65.2       | 73.4                  | 2.36                  | 2.35                 | 0.42                |  |
| 1,010.0             | 14.80           | 64.65       | 1,003.2             | 37.2       | 72.3       | 81.3                  | 2.60                  | 2.59                 | 0.41                |  |
| 1,042.0             | 15.71           | 63.64       | 1,034.0             | 40.8       | 79.9       | 89.7                  | 2.96                  | 2.84                 | -3.16               |  |
| 1,074.0             | 16.49           | 63.86       | 1,064.8             | 44.8       | 87.9       | 98.6                  | 2.44                  | 2.44                 | 0.69                |  |
| 1,105.0             | 17.14           | 62.82       | 1,094.5             | 48.8       | 95.9       | 107.6                 | 2.31                  | 2.10                 | -3.35               |  |
| 1,137.0             | 17.84           | 62.13       | 1,125.0             | 53.2       | 104.4      | 117.2                 | 2.28                  | 2.19                 | -2.16               |  |
| 1,169.0             | 18.55           | 62.16       | 1,155.4             | 57.9       | 113.2      | 127.2                 | 2.22                  | 2.22                 | 0.09                |  |
| 1,200.0             | 19.21           | 62.87       | 1,184.7             | 62.5       | 122.1      | 137.2                 | 2.25                  | 2.13                 | 2.29                |  |
| 1,232.0             | 20.03           | 62.98       | 1,214.9             | 67.4       | 131.7      | 147.9                 | 2.57                  | 2.56                 | 0.34                |  |
| 1,264.0             | 20.65           | 63.23       | 1,244.9             | 72.5       | 141.6      | 159.1                 | 1.96                  | 1.94                 | 0.78                |  |
| 1,296.0             | 21.48           | 63.71       | 1,274.7             | 77.6       | 151.9      | 170.6                 | 2.65                  | 2.59                 | 1.50                |  |
| 1,327.0             | 22.11           | 63.57       | 1,303.5             | 82.7       | 162.2      | 182.1                 | 2.04                  | 2.03                 | -0.45               |  |
| 1,359.0             | 22.85           | 63.53       | 1,333.1             | 88.1       | 173.2      | 194.3                 | 2.31                  | 2.31                 | -0.13               |  |
| 1,391.0             | 23.75           | 63.53       | 1,362.5             | 93.8       | 184.5      | 207.0                 | 2.81                  | 2.81                 | 0.00                |  |
| 1,455.0             | 25.39           | 63.14       | 1,420.7             | 105.7      | 208.3      | 233.6                 | 2.57                  | 2.56                 | -0.61               |  |
| 1,518.0             | 26.12           | 63.12       | 1,477.4             | 118.1      | 232.7      | 261.0                 | 1.16                  | 1.16                 | -0.03               |  |
| 1,581.0             | 26.15           | 62.71       | 1,534.0             | 130.7      | 257.4      | 288.7                 | 0.29                  | 0.05                 | -0.65               |  |
| 1,645.0             | 26.49           | 63.02       | 1,591.3             | 143.7      | 282.7      | 317.1                 | 0.57                  | 0.53                 | 0.48                |  |
| 1,708.0             | 26.62           | 63.05       | 1,647.7             | 156.5      | 307.8      | 345.2                 | 0.21                  | 0.21                 | 0.05                |  |
| 1,772.0             | 27.00           | 63.34       | 1,704.8             | 169.5      | 333.5      | 374.1                 | 0.63                  | 0.59                 | 0.45                |  |
| 1,836.0             | 26.84           | 63.48       | 1,761.9             | 182.4      | 359.5      | 403.1                 | 0.27                  | -0.25                | 0.22                |  |
| 1,899.0             | 27.35           | 63.62       | 1,818.0             | 195.2      | 385.1      | 431.8                 | 0.82                  | 0.81                 | 0.22                |  |
| 1,961.0             | 27.83           | 63.37       | 1,872.9             | 208.0      | 410.8      | 460.5                 | 0.80                  | 0.77                 | -0.40               |  |
| 2,024.0             | 27.74           | 62.73       | 1,928.6             | 221.3      | 437.0      | 489.8                 | 0.49                  | -0.14                | -1.02               |  |
| 2,088.0             | 27.96           | 62.36       | 1,985.2             | 235.1      | 463.6      | 519.7                 | 0.44                  | 0.34                 | -0.58               |  |
| 2,152.0             | 28.07           | 64.07       | 2,041.7             | 248.7      | 490.4      | 549.8                 | 1.27                  | 0.17                 | 2.67                |  |
| 2,215.0             | 27.99           | 64.37       | 2,097.3             | 261.6      | 517.0      | 579.4                 | 0.26                  | -0.13                | 0.48                |  |
| 2,279.0             | 27.20           | 62.92       | 2,154.1             | 274.7      | 543.6      | 609.0                 | 1.62                  | -1.23                | -2.27               |  |
| 2,342.0             | 27.07           | 63.09       | 2,210.1             | 287.8      | 569.2      | 637.8                 | 0.24                  | -0.21                | 0.27                |  |
| 2,405.0             | 27.44           | 63.80       | 2,266.1             | 300.6      | 595.0      | 666.6                 | 0.78                  | 0.59                 | 1.13                |  |
| 2,466.0             | 27.93           | 63.71       | 2,320.1             | 313.2      | 620.4      | 695.0                 | 0.81                  | 0.80                 | -0.15               |  |
| 2,530.0             | 28.69           | 63.85       | 2,376.5             | 326.6      | 647.7      | 725.3                 | 1.19                  | 1.19                 | 0.22                |  |
| 2,593.0             | 28.42           | 63.18       | 2,431.8             | 340.0      | 674.6      | 755.4                 | 0.66                  | -0.43                | -1.06               |  |
| 2,656.0             | 27.76           | 63.79       | 2,487.4             | 353.3      | 701.2      | 785.1                 | 1.14                  | -1.05                | 0.97                |  |
| 2,719.0             | 26.50           | 64.70       | 2,543.5             | 365.8      | 727.0      | 813.8                 | 2.11                  | -2.00                | 1.44                |  |
| 2,783.0             | 25.61           | 63.06       | 2,601.0             | 378.1      | 752.3      | 841.9                 | 1.79                  | -1.39                | -2.56               |  |
| 2,846.0             | 25.25           | 62.60       | 2,657.9             | 390.5      | 776.3      | 869.0                 | 0.65                  | -0.57                | -0.73               |  |
| 2,909.0             | 24.82           | 63.09       | 2,714.9             | 402.6      | 800.1      | 895.6                 | 0.76                  | -0.68                | 0.78                |  |
| 2,972.0             | 24.27           | 63.15       | 2,772.3             | 414.5      | 823.4      | 921.8                 | 0.87                  | -0.87                | 0.10                |  |
| 3,035.0             | 23.80           | 63.55       | 2,829.8             | 426.0      | 846.3      | 947.5                 | 0.79                  | -0.75                | 0.63                |  |
| 3,099.0             | 22.95           | 63.07       | 2,888.5             | 437.4      | 869.0      | 972.8                 | 1.36                  | -1.33                | -0.75               |  |
| 3,162.0             | 22.94           | 61.93       | 2,946.6             | 448.7      | 890.8      | 997.4                 | 0.71                  | -0.02                | -1.81               |  |

|                  |                 |                                     |                                        |
|------------------|-----------------|-------------------------------------|----------------------------------------|
| <b>Company:</b>  | ConocoPhillips  | <b>Local Co-ordinate Reference:</b> | Well SJ 32-8 #15N                      |
| <b>Project:</b>  | SJB (NM West)   | <b>TVD Reference:</b>               | AWS 730 @ 6475.0ft (15' DF + 6460' GL) |
| <b>Site:</b>     | SEC 24-T31N-R8W | <b>MD Reference:</b>                | AWS 730 @ 6475.0ft (15' DF + 6460' GL) |
| <b>Well:</b>     | SJ 32-8 #15N    | <b>North Reference:</b>             | True                                   |
| <b>Wellbore:</b> | Original Hole   | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Original Hole   | <b>Database:</b>                    | EDMCOP                                 |

| Survey              |                 |             |                     |            |            |                       |                       |                      |                     |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 3,193.0             | 22.20           | 62.58       | 2,975.2             | 454.3      | 901.3      | 1,009.3               | 2.52                  | -2.39                | 2.10                |
| 3,225.0             | 21.20           | 62.76       | 3,004.9             | 459.7      | 911.9      | 1,021.1               | 3.13                  | -3.13                | 0.56                |
| 3,256.0             | 19.97           | 62.96       | 3,033.9             | 464.7      | 921.6      | 1,032.0               | 3.97                  | -3.97                | 0.65                |
| 3,288.0             | 19.09           | 64.11       | 3,064.1             | 469.4      | 931.1      | 1,042.7               | 3.00                  | -2.75                | 3.59                |
| 3,319.0             | 18.19           | 65.20       | 3,093.5             | 473.7      | 940.1      | 1,052.6               | 3.11                  | -2.90                | 3.52                |
| 3,351.0             | 17.37           | 64.92       | 3,123.9             | 477.8      | 948.9      | 1,062.4               | 2.58                  | -2.56                | -0.88               |
| 3,382.0             | 16.36           | 66.33       | 3,153.6             | 481.5      | 957.1      | 1,071.4               | 3.51                  | -3.26                | 4.55                |
| 3,414.0             | 15.25           | 66.78       | 3,184.4             | 485.0      | 965.1      | 1,080.1               | 3.49                  | -3.47                | 1.41                |
| 3,445.0             | 14.44           | 67.22       | 3,214.4             | 488.1      | 972.4      | 1,088.0               | 2.64                  | -2.61                | 1.42                |
| 3,476.0             | 13.65           | 67.82       | 3,244.4             | 491.0      | 979.4      | 1,095.5               | 2.59                  | -2.55                | 1.94                |
| 3,508.0             | 12.67           | 68.45       | 3,275.6             | 493.7      | 986.1      | 1,102.8               | 3.10                  | -3.06                | 1.97                |
| 3,539.0             | 12.16           | 67.50       | 3,305.9             | 496.2      | 992.3      | 1,109.4               | 1.77                  | -1.65                | -3.06               |
| 3,571.0             | 11.42           | 65.20       | 3,337.2             | 498.8      | 998.3      | 1,116.0               | 2.74                  | -2.31                | -7.19               |
| 3,602.0             | 10.65           | 66.58       | 3,367.6             | 501.2      | 1,003.7    | 1,121.9               | 2.63                  | -2.48                | 4.45                |
| 3,634.0             | 10.16           | 67.58       | 3,399.1             | 503.5      | 1,009.1    | 1,127.7               | 1.63                  | -1.53                | 3.13                |
| 3,665.0             | 10.00           | 68.54       | 3,429.6             | 505.5      | 1,014.1    | 1,133.1               | 0.75                  | -0.52                | 3.10                |
| 3,697.0             | 9.28            | 70.26       | 3,461.2             | 507.4      | 1,019.1    | 1,138.4               | 2.42                  | -2.25                | 5.38                |
| 3,729.0             | 8.32            | 71.90       | 3,492.8             | 509.0      | 1,023.7    | 1,143.3               | 3.10                  | -3.00                | 5.13                |
| 3,760.0             | 7.45            | 74.03       | 3,523.5             | 510.2      | 1,027.8    | 1,147.5               | 2.96                  | -2.81                | 6.87                |
| 3,792.0             | 6.84            | 75.54       | 3,555.2             | 511.3      | 1,031.6    | 1,151.4               | 1.99                  | -1.91                | 4.72                |
| 3,823.0             | 5.85            | 75.00       | 3,586.0             | 512.1      | 1,034.9    | 1,154.7               | 3.20                  | -3.19                | -1.74               |
| 3,855.0             | 4.70            | 74.88       | 3,617.9             | 512.9      | 1,037.8    | 1,157.6               | 3.59                  | -3.59                | -0.38               |
| 3,886.0             | 3.67            | 78.68       | 3,648.8             | 513.4      | 1,040.0    | 1,159.8               | 3.44                  | -3.32                | 12.26               |
| 3,918.0             | 2.72            | 87.35       | 3,680.8             | 513.7      | 1,041.7    | 1,161.5               | 3.32                  | -2.97                | 27.09               |
| 3,981.0             | 2.00            | 104.38      | 3,743.7             | 513.5      | 1,044.3    | 1,163.7               | 1.58                  | -1.14                | 27.03               |
| Last SDI MWD Survey |                 |             |                     |            |            |                       |                       |                      |                     |

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