



Job Number: 03210

State/Country: New Mexico, U.S.A.

Company: Devon Energy Corporation

Declination: ☐

Lease/Well: Nebu #68A

Grid: ☐

Location: Rio Arriba County, Sec.2-30N-7W

File name: C:\WINSERVE\03210.SVY

Rig Name: D & J #1

Date/Time: 05-Dec-03 / 07:52

RKB: ☐

Curve Name: Nebu #68A

G.L. or M.S.L.: ☐

30-039-27448

WINSERVE SURVEY CALCULATIONS  
 Minimum Curvature Method  
 Vertical Section Plane 349.28  
 Vertical Section Referenced to Wellhead  
 Rectangular Coordinates Referenced to Wellhead

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | N-S<br>FT | E-W<br>FT | Vertical<br>Section<br>FT | CLOSURE<br>Distance<br>FT | Direction<br>Deg | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|---------------------------|-----------|-----------|---------------------------|---------------------------|------------------|-------------------------------|
| .00                     | .00                  | .00                       | .00                       | .00       | .00       | .00                       | .00                       | .00              | .00                           |
| 356.00                  | .80                  | 16.10                     | 355.99                    | 2.39      | .69       | 2.22                      | 2.49                      | 16.10            | .22                           |
| 446.00                  | 4.20                 | 5.60                      | 445.89                    | 6.27      | 1.19      | 5.94                      | 6.38                      | 10.70            | 3.80                          |
| 539.00                  | 6.90                 | 350.50                    | 538.45                    | 15.17     | .60       | 14.80                     | 15.19                     | 2.25             | 3.28                          |
| 632.00                  | 9.20                 | 350.70                    | 630.53                    | 28.02     | -1.53     | 27.82                     | 28.06                     | 356.88           | 2.47                          |
| 729.00                  | 11.80                | 351.60                    | 725.90                    | 45.49     | -4.23     | 45.48                     | 45.69                     | 354.69           | 2.69                          |
| 823.00                  | 14.90                | 349.30                    | 817.34                    | 66.88     | -7.88     | 67.18                     | 67.34                     | 353.28           | 3.35                          |
| 917.00                  | 17.40                | 347.50                    | 907.63                    | 92.48     | -13.17    | 93.31                     | 93.41                     | 351.90           | 2.71                          |
| 1010.00                 | 19.70                | 348.40                    | 995.79                    | 121.41    | -19.33    | 122.89                    | 122.94                    | 350.95           | 2.49                          |
| 1104.00                 | 20.00                | 348.70                    | 1084.21                   | 152.70    | -25.66    | 154.81                    | 154.84                    | 350.46           | .34                           |
| 1197.00                 | 20.10                | 350.50                    | 1171.57                   | 184.05    | -31.42    | 186.69                    | 186.72                    | 350.31           | .67                           |
| 1290.00                 | 20.00                | 349.40                    | 1258.93                   | 215.45    | -36.98    | 218.57                    | 218.60                    | 350.26           | .42                           |
| 1385.00                 | 20.60                | 350.70                    | 1348.03                   | 247.91    | -42.67    | 251.52                    | 251.55                    | 350.23           | .79                           |
| 1479.00                 | 20.00                | 347.20                    | 1436.20                   | 279.91    | -48.90    | 284.12                    | 284.15                    | 350.09           | 1.44                          |
| 1573.00                 | 20.00                | 346.60                    | 1524.53                   | 311.22    | -56.19    | 316.24                    | 316.25                    | 349.77           | .22                           |
| 1667.00                 | 19.90                | 347.00                    | 1612.89                   | 342.44    | -63.52    | 348.28                    | 348.28                    | 349.49           | .18                           |
| 1762.00                 | 19.60                | 347.20                    | 1702.30                   | 373.74    | -70.68    | 380.36                    | 380.36                    | 349.29           | .32                           |
| 1856.00                 | 20.10                | 347.50                    | 1790.71                   | 404.88    | -77.67    | 412.26                    | 412.26                    | 349.14           | .54                           |
| 1949.00                 | 19.70                | 347.50                    | 1878.16                   | 435.78    | -84.52    | 443.90                    | 443.90                    | 349.02           | .43                           |
| 2044.00                 | 19.90                | 347.50                    | 1967.55                   | 467.20    | -91.49    | 476.07                    | 476.07                    | 348.92           | .21                           |
| 2139.00                 | 20.10                | 348.70                    | 2056.82                   | 498.99    | -98.19    | 508.55                    | 508.56                    | 348.87           | .48                           |
| 2232.00                 | 20.70                | 349.40                    | 2143.98                   | 530.82    | -104.34   | 540.96                    | 540.98                    | 348.88           | .70                           |

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | N-S<br>FT | E-W<br>FT | Vertical<br>Section<br>FT | CLOSURE        |                  | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|---------------------------|-----------|-----------|---------------------------|----------------|------------------|-------------------------------|
|                         |                      |                           |                           |           |           |                           | Distance<br>FT | Direction<br>Deg |                               |
| 2325.00                 | 20.60                | 348.90                    | 2231.01                   | 563.03    | -110.51   | 573.76                    | 573.77         | 348.89           | .22                           |
| 2419.00                 | 19.00                | 349.60                    | 2319.45                   | 594.31    | -116.46   | 605.60                    | 605.61         | 348.91           | 1.72                          |
| 2512.00                 | 18.80                | 349.40                    | 2407.43                   | 623.93    | -121.95   | 635.73                    | 635.74         | 348.94           | .23                           |
| 2607.00                 | 20.30                | 350.70                    | 2496.96                   | 655.24    | -127.43   | 667.51                    | 667.52         | 348.99           | 1.64                          |
| 2701.00                 | 21.30                | 350.00                    | 2584.83                   | 688.15    | -133.03   | 700.88                    | 700.89         | 349.06           | 1.10                          |
|                         |                      |                           |                           |           |           |                           |                |                  |                               |
| 2796.00                 | 21.00                | 350.90                    | 2673.43                   | 721.95    | -138.72   | 735.15                    | 735.15         | 349.12           | .47                           |
| 2890.00                 | 20.80                | 350.50                    | 2761.24                   | 755.04    | -144.14   | 768.67                    | 768.68         | 349.19           | .26                           |
| 2983.00                 | 19.50                | 350.10                    | 2848.55                   | 786.62    | -149.53   | 800.70                    | 800.71         | 349.24           | 1.41                          |
| 3078.00                 | 18.60                | 349.10                    | 2938.35                   | 817.12    | -155.12   | 831.71                    | 831.71         | 349.25           | 1.01                          |
| 3172.00                 | 19.20                | 349.60                    | 3027.28                   | 847.04    | -160.75   | 862.16                    | 862.16         | 349.25           | .66                           |
|                         |                      |                           |                           |           |           |                           |                |                  |                               |
| 3265.00                 | 18.30                | 351.60                    | 3115.34                   | 876.53    | -165.64   | 892.04                    | 892.04         | 349.30           | 1.19                          |
| 3359.00                 | 18.60                | 350.10                    | 3204.51                   | 905.89    | -170.37   | 921.78                    | 921.78         | 349.35           | .60                           |
| 3457.00                 | 21.10                | 350.10                    | 3296.68                   | 938.67    | -176.09   | 955.05                    | 955.05         | 349.37           | 2.55                          |
| 3582.00                 | 17.10                | 352.60                    | 3414.78                   | 979.08    | -182.33   | 995.91                    | 995.91         | 349.45           | 3.27                          |
| 3704.00                 | 14.10                | 354.40                    | 3532.27                   | 1011.66   | -186.09   | 1028.62                   | 1028.64        | 349.58           | 2.49                          |
|                         |                      |                           |                           |           |           |                           |                |                  |                               |
| 3852.00                 | 10.30                | 356.50                    | 3676.90                   | 1042.82   | -188.66   | 1059.72                   | 1059.75        | 349.75           | 2.58                          |
| 3947.00                 | 14.90                | 346.10                    | 3769.60                   | 1063.17   | -192.12   | 1080.35                   | 1080.39        | 349.76           | 5.38                          |
| 4042.00                 | 17.90                | 352.60                    | 3860.73                   | 1089.51   | -196.93   | 1107.13                   | 1107.17        | 349.75           | 3.70                          |
| 4137.00                 | 18.00                | 357.00                    | 3951.11                   | 1118.65   | -199.58   | 1136.25                   | 1136.31        | 349.88           | 1.43                          |
| 4232.00                 | 18.80                | 358.80                    | 4041.26                   | 1148.61   | -200.67   | 1165.89                   | 1166.01        | 350.09           | 1.03                          |
|                         |                      |                           |                           |           |           |                           |                |                  |                               |
| 4358.00                 | 13.20                | 7.90                      | 4162.35                   | 1183.19   | -199.12   | 1199.58                   | 1199.83        | 350.45           | 4.86                          |
| 4452.00                 | 5.60                 | 358.60                    | 4255.02                   | 1198.43   | -197.75   | 1214.30                   | 1214.64        | 350.63           | 8.22                          |

Correc <sup>TVD</sup> is 197' to TMD

4452  
4255  
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197

4255  
197  
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442