

**VES**

VAUGHN ENERGY SERVICES

Company: EOG RESOURCES

Lease/Well: BEVO/4-36M

Location: S36 T12N R63W

Rig Name: PRODUCTION

State/County: COLORADO/WELD

Latitude: 40.97

GRID North is 0.72 Degrees East of True North

VS-Azi: 0.00 Degrees

2072003

FIELD COPY ONLY (NOT DEFINITIVE)

DEPTH REFERENCE : KB = 0' (16' AGL)

## DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: bevo4-36m.ut

Minimum Curvature Method

Report Date/Time: 6/8/2010 / 11:20

Vaughn Energy Services

Rifle, Colorado

970 456 2071

Surveyor: S.Anderson

Bevo 4-36M API# 05-123-30585

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | TVD<br>FT | +N/-S<br>FT | +E/-W<br>FT | Vertical<br>Section<br>FT | Closure<br>Distance<br>FT | Closure<br>Direction<br>Deg | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|-----------|-------------|-------------|---------------------------|---------------------------|-----------------------------|-------------------------------|
| 0.00                    | 0.00                 | 0.00                      | 0.00      | 0.00        | 0.00        | 0.00                      | 0.00                      | 0.00                        | ----                          |
| 100.00                  | 0.18                 | 284.43                    | 100.00    | 0.04        | -0.15       | 0.04                      | 0.16                      | 284.43                      | 0.18                          |
| 200.00                  | 0.19                 | 76.94                     | 200.00    | 0.11        | -0.15       | 0.11                      | 0.19                      | 308.09                      | 0.35                          |
| 300.00                  | 0.26                 | 269.22                    | 300.00    | 0.15        | -0.22       | 0.15                      | 0.26                      | 304.42                      | 0.44                          |
| 400.00                  | 0.41                 | 261.54                    | 400.00    | 0.09        | -0.80       | 0.09                      | 0.80                      | 276.63                      | 0.15                          |
| 500.00                  | 0.17                 | 211.20                    | 500.00    | -0.08       | -1.22       | -0.08                     | 1.23                      | 266.06                      | 0.33                          |
| 600.00                  | 0.20                 | 160.18                    | 600.00    | -0.37       | -1.24       | -0.37                     | 1.29                      | 253.17                      | 0.16                          |
| 700.00                  | 0.21                 | 195.10                    | 700.00    | -0.72       | -1.23       | -0.72                     | 1.42                      | 239.57                      | 0.13                          |
| 800.00                  | 0.16                 | 242.77                    | 799.99    | -0.97       | -1.40       | -0.97                     | 1.70                      | 235.42                      | 0.16                          |
| 900.00                  | 0.27                 | 322.69                    | 899.99    | -0.84       | -1.66       | -0.84                     | 1.87                      | 243.08                      | 0.28                          |
| 1000.00                 | 0.19                 | 0.00                      | 999.99    | -0.50       | -1.80       | -0.50                     | 1.87                      | 254.60                      | 0.16                          |
| 1100.00                 | 0.16                 | 143.04                    | 1099.99   | -0.44       | -1.72       | -0.44                     | 1.78                      | 255.57                      | 0.33                          |
| 1200.00                 | 0.24                 | 24.62                     | 1199.99   | -0.36       | -1.55       | -0.36                     | 1.60                      | 256.78                      | 0.34                          |
| 1300.00                 | 0.18                 | 145.93                    | 1299.99   | -0.31       | -1.38       | -0.31                     | 1.41                      | 257.44                      | 0.36                          |
| 1400.00                 | 0.23                 | 91.16                     | 1399.99   | -0.44       | -1.09       | -0.44                     | 1.17                      | 247.91                      | 0.20                          |
| 1500.00                 | 0.17                 | 338.48                    | 1499.99   | -0.31       | -0.94       | -0.31                     | 0.99                      | 251.94                      | 0.34                          |
| 1600.00                 | 0.24                 | 68.84                     | 1599.99   | -0.09       | -0.80       | -0.09                     | 0.80                      | 263.53                      | 0.30                          |
| 1700.00                 | 0.26                 | 3.40                      | 1699.99   | 0.21        | -0.59       | 0.21                      | 0.62                      | 290.07                      | 0.27                          |
| 1800.00                 | 0.22                 | 101.02                    | 1799.99   | 0.41        | -0.38       | 0.41                      | 0.56                      | 316.52                      | 0.36                          |
| 1900.00                 | 0.30                 | 123.53                    | 1899.99   | 0.23        | 0.02        | 0.23                      | 0.23                      | 4.97                        | 0.13                          |
| 2000.00                 | 0.40                 | 134.10                    | 1999.99   | -0.16       | 0.49        | -0.16                     | 0.52                      | 108.48                      | 0.13                          |
| 2100.00                 | 0.38                 | 144.69                    | 2099.98   | -0.68       | 0.93        | -0.68                     | 1.15                      | 125.98                      | 0.08                          |
| 2200.00                 | 0.35                 | 140.82                    | 2199.98   | -1.18       | 1.31        | -1.18                     | 1.76                      | 131.92                      | 0.04                          |
| 2300.00                 | 0.26                 | 95.94                     | 2299.98   | -1.44       | 1.73        | -1.44                     | 2.25                      | 129.65                      | 0.24                          |
| 2400.00                 | 0.45                 | 70.52                     | 2399.98   | -1.33       | 2.33        | -1.33                     | 2.68                      | 119.70                      | 0.24                          |
| 2500.00                 | 0.12                 | 161.41                    | 2499.98   | -1.30       | 2.73        | -1.30                     | 3.02                      | 115.40                      | 0.46                          |
| 2600.00                 | 0.11                 | 289.65                    | 2599.98   | -1.36       | 2.68        | -1.36                     | 3.00                      | 116.99                      | 0.20                          |
| 2700.00                 | 0.26                 | 110.68                    | 2699.98   | -1.41       | 2.80        | -1.41                     | 3.14                      | 116.75                      | 0.37                          |
| 2800.00                 | 0.35                 | 62.82                     | 2799.98   | -1.35       | 3.29        | -1.35                     | 3.56                      | 112.33                      | 0.26                          |
| 2900.00                 | 0.52                 | 25.78                     | 2899.97   | -0.80       | 3.77        | -0.80                     | 3.85                      | 102.04                      | 0.32                          |
| 3000.00                 | 0.47                 | 23.07                     | 2999.97   | -0.01       | 4.13        | -0.01                     | 4.13                      | 90.20                       | 0.05                          |
| 3100.00                 | 0.46                 | 36.38                     | 3099.97   | 0.69        | 4.53        | 0.69                      | 4.58                      | 81.34                       | 0.11                          |

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | TVD<br>FT | +N/-S<br>FT | +E/-W<br>FT | Vertical<br>Section<br>FT | Closure<br>Distance<br>FT | Closure<br>Direction<br>Deg | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|-----------|-------------|-------------|---------------------------|---------------------------|-----------------------------|-------------------------------|
| 3200.00                 | 0.48                 | 53.16                     | 3199.96   | 1.26        | 5.10        | 1.26                      | 5.25                      | 76.09                       | 0.14                          |
| 3300.00                 | 0.40                 | 44.83                     | 3299.96   | 1.76        | 5.67        | 1.76                      | 5.94                      | 72.79                       | 0.10                          |
| 3400.00                 | 0.43                 | 98.91                     | 3399.96   | 1.94        | 6.29        | 1.94                      | 6.58                      | 72.84                       | 0.38                          |
| 3500.00                 | 0.31                 | 6.34                      | 3499.96   | 2.16        | 6.70        | 2.16                      | 7.04                      | 72.15                       | 0.55                          |
| 3600.00                 | 0.30                 | 24.36                     | 3599.96   | 2.67        | 6.84        | 2.67                      | 7.34                      | 68.67                       | 0.10                          |
| 3700.00                 | 0.58                 | 5.77                      | 3699.95   | 3.41        | 7.00        | 3.41                      | 7.78                      | 64.02                       | 0.30                          |
| 3800.00                 | 0.33                 | 331.65                    | 3799.95   | 4.16        | 6.91        | 4.16                      | 8.07                      | 58.95                       | 0.36                          |
| 3900.00                 | 0.39                 | 329.54                    | 3899.95   | 4.71        | 6.60        | 4.71                      | 8.11                      | 54.52                       | 0.07                          |
| 4000.00                 | 0.39                 | 325.37                    | 3999.95   | 5.28        | 6.23        | 5.28                      | 8.17                      | 49.73                       | 0.03                          |
| 4100.00                 | 0.54                 | 339.03                    | 4099.94   | 6.01        | 5.87        | 6.01                      | 8.40                      | 44.33                       | 0.19                          |
| 4200.00                 | 0.12                 | 273.67                    | 4199.94   | 6.46        | 5.59        | 6.46                      | 8.54                      | 40.90                       | 0.51                          |
| 4300.00                 | 0.36                 | 28.63                     | 4299.94   | 6.74        | 5.64        | 6.74                      | 8.79                      | 39.93                       | 0.42                          |
| 4400.00                 | 0.90                 | 95.92                     | 4399.93   | 6.94        | 6.57        | 6.94                      | 9.55                      | 43.45                       | 0.83                          |
| 4500.00                 | 0.75                 | 127.30                    | 4499.92   | 6.46        | 7.87        | 6.46                      | 10.18                     | 50.60                       | 0.47                          |
| 4600.00                 | 0.66                 | 117.43                    | 4599.92   | 5.80        | 8.90        | 5.80                      | 10.62                     | 56.91                       | 0.15                          |
| 4700.00                 | 0.48                 | 91.56                     | 4699.91   | 5.52        | 9.84        | 5.52                      | 11.28                     | 60.70                       | 0.31                          |
| 4800.00                 | 0.42                 | 117.36                    | 4799.91   | 5.34        | 10.58       | 5.34                      | 11.85                     | 63.22                       | 0.21                          |
| 4900.00                 | 0.29                 | 21.07                     | 4899.91   | 5.41        | 11.00       | 5.41                      | 12.25                     | 63.81                       | 0.53                          |
| 5000.00                 | 0.69                 | 110.69                    | 4999.91   | 5.43        | 11.65       | 5.43                      | 12.86                     | 65.02                       | 0.75                          |
| 5100.00                 | 0.10                 | 25.20                     | 5099.90   | 5.30        | 12.26       | 5.30                      | 13.35                     | 66.64                       | 0.69                          |
| 5200.00                 | 0.23                 | 274.69                    | 5199.90   | 5.39        | 12.10       | 5.39                      | 13.25                     | 65.97                       | 0.28                          |
| 5300.00                 | 0.93                 | 280.84                    | 5299.90   | 5.56        | 11.10       | 5.56                      | 12.42                     | 63.38                       | 0.71                          |
| 5400.00                 | 1.60                 | 286.74                    | 5399.87   | 6.12        | 8.97        | 6.12                      | 10.86                     | 55.69                       | 0.67                          |
| 5500.00                 | 0.49                 | 290.42                    | 5499.85   | 6.67        | 7.23        | 6.67                      | 9.84                      | 47.32                       | 1.11                          |
| 5600.00                 | 0.15                 | 349.92                    | 5599.85   | 6.95        | 6.81        | 6.95                      | 9.73                      | 44.42                       | 0.43                          |
| 5700.00                 | 1.26                 | 86.26                     | 5699.84   | 7.15        | 7.88        | 7.15                      | 10.64                     | 47.78                       | 1.28                          |
| 5800.00                 | 1.64                 | 99.88                     | 5799.81   | 6.98        | 10.39       | 6.98                      | 12.52                     | 56.11                       | 0.51                          |
| 5900.00                 | 1.25                 | 94.31                     | 5899.78   | 6.65        | 12.89       | 6.65                      | 14.51                     | 62.71                       | 0.41                          |
| 6000.00                 | 1.08                 | 76.92                     | 5999.76   | 6.78        | 14.90       | 6.78                      | 16.37                     | 65.53                       | 0.39                          |
| 6100.00                 | 1.01                 | 67.06                     | 6099.74   | 7.34        | 16.63       | 7.34                      | 18.17                     | 66.19                       | 0.19                          |
| 6200.00                 | 0.72                 | 58.67                     | 6199.73   | 8.01        | 17.98       | 8.01                      | 19.68                     | 65.99                       | 0.31                          |
| 6300.00                 | 0.54                 | 69.09                     | 6299.73   | 8.51        | 18.96       | 8.51                      | 20.78                     | 65.83                       | 0.21                          |
| 6400.00                 | 0.26                 | 63.59                     | 6399.72   | 8.78        | 19.61       | 8.78                      | 21.48                     | 65.88                       | 0.29                          |
| 6500.00                 | 0.75                 | 69.66                     | 6499.72   | 9.11        | 20.43       | 9.11                      | 22.37                     | 65.97                       | 0.50                          |
| 6600.00                 | 0.45                 | 71.07                     | 6599.71   | 9.46        | 21.41       | 9.46                      | 23.41                     | 66.16                       | 0.30                          |
| 6700.00                 | 0.14                 | 37.22                     | 6699.71   | 9.69        | 21.86       | 9.69                      | 23.91                     | 66.10                       | 0.34                          |
| 6800.00                 | 0.22                 | 118.90                    | 6799.71   | 9.69        | 22.10       | 9.69                      | 24.13                     | 66.32                       | 0.24                          |
| 6900.00                 | 0.12                 | 24.46                     | 6899.71   | 9.69        | 22.31       | 9.69                      | 24.33                     | 66.52                       | 0.26                          |
| 7000.00                 | 0.16                 | 47.11                     | 6999.71   | 9.88        | 22.46       | 9.88                      | 24.54                     | 66.24                       | 0.07                          |
| 7100.00                 | 0.33                 | 8.87                      | 7099.71   | 10.27       | 22.61       | 10.27                     | 24.83                     | 65.57                       | 0.23                          |
| 7200.00                 | 0.59                 | 110.64                    | 7199.71   | 10.37       | 23.13       | 10.37                     | 25.35                     | 65.85                       | 0.73                          |
| 7300.00                 | 0.71                 | 114.99                    | 7299.70   | 9.93        | 24.17       | 9.93                      | 26.13                     | 67.66                       | 0.13                          |
| 7400.00                 | 0.68                 | 119.70                    | 7399.69   | 9.38        | 25.25       | 9.38                      | 26.93                     | 69.62                       | 0.06                          |
| 7500.00                 | 0.55                 | 122.19                    | 7499.69   | 8.83        | 26.17       | 8.83                      | 27.62                     | 71.36                       | 0.13                          |
| 7600.00                 | 0.63                 | 116.80                    | 7599.68   | 8.32        | 27.07       | 8.32                      | 28.32                     | 72.91                       | 0.10                          |
| 7700.00                 | 0.84                 | 117.90                    | 7699.67   | 7.73        | 28.21       | 7.73                      | 29.25                     | 74.67                       | 0.20                          |
| 7800.00                 | 0.94                 | 126.93                    | 7799.66   | 6.90        | 29.51       | 6.90                      | 30.31                     | 76.85                       | 0.18                          |
| 7900.00                 | 1.16                 | 121.47                    | 7899.65   | 5.87        | 31.04       | 5.87                      | 31.59                     | 79.29                       | 0.24                          |
| 8000.00                 | 0.11                 | 131.04                    | 7999.64   | 5.28        | 31.98       | 5.28                      | 32.41                     | 80.63                       | 1.05                          |
| 8100.00                 | 0.34                 | 255.35                    | 8099.64   | 5.13        | 31.76       | 5.13                      | 32.18                     | 80.82                       | 0.42                          |
| 8200.00                 | 0.55                 | 326.71                    | 8199.63   | 5.46        | 31.21       | 5.46                      | 31.68                     | 80.07                       | 0.55                          |
| 8300.00                 | 0.57                 | 356.29                    | 8299.63   | 6.36        | 30.91       | 6.36                      | 31.56                     | 78.38                       | 0.29                          |
| 8400.00                 | 0.61                 | 29.92                     | 8399.63   | 7.31        | 31.14       | 7.31                      | 31.99                     | 76.80                       | 0.34                          |

| Depth<br>FT | Angle<br>Deg | Direction<br>Deg | TVD<br>FT | +N/-S<br>FT | +E/-W<br>FT | vertical<br>Section<br>FT | Closure<br>Distance<br>FT | Closure<br>Direction<br>Deg | Dogleg<br>Severity<br>Deg/100 |
|-------------|--------------|------------------|-----------|-------------|-------------|---------------------------|---------------------------|-----------------------------|-------------------------------|
| 8500.00     | 0.61         | 350.29           | 8499.62   | 8.29        | 31.32       | 8.29                      | 32.40                     | 75.17                       | 0.41                          |
| 8600.00     | 0.79         | 13.46            | 8599.61   | 9.49        | 31.39       | 9.49                      | 32.79                     | 73.18                       | 0.33                          |
| 8639.00     | 0.63         | 20.59            | 8638.61   | 9.95        | 31.53       | 9.95                      | 33.06                     | 72.48                       | 0.46                          |

HORIZONTAL DISPLACEMENT IS  
33.06 FEET AT 72.48 DEGREES