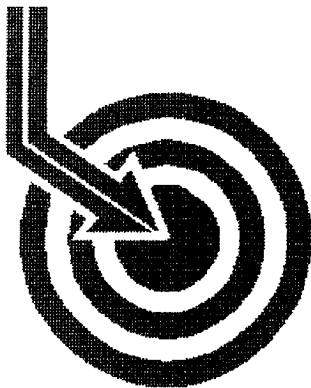




# Scientific Drilling

SUR: P-8-24s-32e, 660/S & 330/E  
BHL @ N-8-24e-32e, 625/S & 1625/E  
API #30-025-37914

## POGO

Field: Mesa Verde  
Site: Lea County, NM  
Well: Mesa Verde 8 Fed #2  
Wellpath: VH - Job #32K0806695  
Survey: 08/26/06

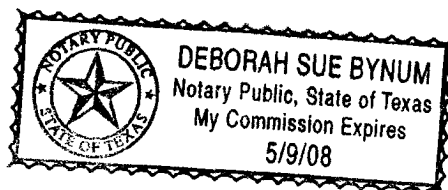
CONFIDENTIAL

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

.....P. W. Carter.....Company Representative

Notorized this date 26<sup>th</sup> of September, 2006.

Deborah Sue Bynum  
Notary Signature  
County of Midland  
State of Texas





# Scientific Drilling International

## Survey Report

|                                       |                                   |                                         |                   |
|---------------------------------------|-----------------------------------|-----------------------------------------|-------------------|
| <b>Company:</b> POGO                  | <b>Date:</b> 09/25/2006           | <b>Time:</b> 15:33:39                   | <b>Page:</b> 1    |
| <b>Field:</b> Mesa Verde              | <b>Co-ordinate(NE) Reference:</b> | <b>Site:</b> Lea County, NM, Grid North |                   |
| <b>Site:</b> Lea County, NM           | <b>Vertical (TVD) Reference:</b>  | <b>SITE</b> 0.0                         |                   |
| <b>Well:</b> Mesa Verde 8 Fed #2      | <b>Section (VS) Reference:</b>    | <b>Well</b> (0.00N,0.00E,112.81Azi)     |                   |
| <b>Wellpath:</b> VH - Job #32K0806695 | <b>Survey Calculation Method:</b> | <b>Minimum Curvature</b>                | <b>Db:</b> Sybase |

|                                                |                                      |
|------------------------------------------------|--------------------------------------|
| <b>Survey:</b> 08/26/06                        | <b>Start Date:</b> 08/26/2006        |
| <b>Company:</b> Scientific Drilling Internatio | <b>Engineer:</b> Gonzales/Rowe/Rando |
| <b>Tool:</b> Keeper;Keeper Gyro                | <b>Tied-to:</b> From Surface         |

### Survey

| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | VS<br>ft | N/S<br>ft | E/W<br>ft | DLS<br>deg/100ft | ClsD<br>ft | ClsA<br>deg |
|----------|-------------|-------------|-----------|----------|-----------|-----------|------------------|------------|-------------|
| 0.00     | 0.00        | 0.00        | 0.00      | 0.00     | 0.00      | 0.00      | 0.00             | 0.00       | 0.00        |
| 100.00   | 0.51        | 4.91        | 100.00    | -0.14    | 0.44      | 0.04      | 0.51             | 0.45       | 4.91        |
| 200.00   | 0.61        | 352.47      | 199.99    | -0.54    | 1.41      | 0.01      | 0.16             | 1.41       | 0.26        |
| 300.00   | 0.63        | 10.18       | 299.99    | -0.93    | 2.48      | 0.03      | 0.19             | 2.48       | 0.78        |
| 400.00   | 0.66        | 9.86        | 399.98    | -1.18    | 3.59      | 0.23      | 0.03             | 3.60       | 3.66        |
| 500.00   | 0.57        | 348.86      | 499.98    | -1.59    | 4.65      | 0.23      | 0.24             | 4.65       | 2.86        |
| 600.00   | 0.66        | 346.64      | 599.97    | -2.21    | 5.70      | 0.00      | 0.09             | 5.70       | 0.03        |
| 700.00   | 0.40        | 345.15      | 699.97    | -2.76    | 6.59      | -0.22     | 0.26             | 6.60       | 358.09      |
| 800.00   | 0.36        | 322.28      | 799.96    | -3.25    | 7.18      | -0.50     | 0.16             | 7.20       | 356.01      |
| 900.00   | 0.14        | 182.37      | 899.96    | -3.48    | 7.31      | -0.70     | 0.48             | 7.34       | 354.54      |
| 1000.00  | 0.52        | 204.79      | 999.96    | -3.45    | 6.77      | -0.89     | 0.39             | 6.83       | 352.48      |
| 1100.00  | 0.41        | 178.77      | 1099.96   | -3.32    | 6.00      | -1.08     | 0.24             | 6.10       | 349.83      |
| 1200.00  | 0.35        | 183.02      | 1199.96   | -3.07    | 5.34      | -1.08     | 0.07             | 5.45       | 348.52      |
| 1300.00  | 0.22        | 172.05      | 1299.95   | -2.87    | 4.84      | -1.07     | 0.14             | 4.96       | 347.50      |
| 1400.00  | 0.28        | 179.63      | 1399.95   | -2.67    | 4.41      | -1.05     | 0.07             | 4.53       | 346.65      |
| 1500.00  | 0.29        | 195.06      | 1499.95   | -2.54    | 3.92      | -1.11     | 0.08             | 4.08       | 344.19      |
| 1600.00  | 0.55        | 203.77      | 1599.95   | -2.52    | 3.24      | -1.37     | 0.27             | 3.52       | 337.07      |
| 1700.00  | 0.40        | 195.30      | 1699.95   | -2.48    | 2.46      | -1.66     | 0.17             | 2.97       | 326.08      |
| 1800.00  | 0.37        | 182.03      | 1799.94   | -2.32    | 1.80      | -1.76     | 0.09             | 2.52       | 315.70      |
| 1900.00  | 0.34        | 170.08      | 1899.94   | -2.04    | 1.19      | -1.72     | 0.08             | 2.09       | 304.63      |
| 2000.00  | 0.32        | 175.90      | 1999.94   | -1.76    | 0.62      | -1.65     | 0.04             | 1.76       | 290.51      |
| 2100.00  | 0.40        | 138.40      | 2099.94   | -1.32    | 0.08      | -1.40     | 0.24             | 1.40       | 273.15      |
| 2200.00  | 0.40        | 139.55      | 2199.94   | -0.69    | -0.45     | -0.94     | 0.01             | 1.04       | 244.38      |
| 2300.00  | 0.38        | 126.96      | 2299.93   | -0.06    | -0.91     | -0.45     | 0.09             | 1.02       | 206.02      |
| 2400.00  | 0.52        | 137.64      | 2399.93   | 0.68     | -1.45     | 0.12      | 0.16             | 1.45       | 175.10      |
| 2500.00  | 0.83        | 121.35      | 2499.92   | 1.80     | -2.16     | 1.05      | 0.36             | 2.40       | 154.13      |
| 2600.00  | 0.83        | 120.46      | 2599.91   | 3.24     | -2.91     | 2.29      | 0.01             | 3.70       | 141.74      |
| 2700.00  | 0.92        | 103.67      | 2699.90   | 4.75     | -3.46     | 3.70      | 0.27             | 5.06       | 133.13      |
| 2800.00  | 1.24        | 107.80      | 2799.88   | 6.62     | -3.98     | 5.51      | 0.33             | 6.80       | 125.88      |
| 2900.00  | 1.58        | 97.16       | 2899.85   | 9.02     | -4.49     | 7.90      | 0.43             | 9.09       | 119.57      |
| 3000.00  | 1.68        | 101.71      | 2999.81   | 11.79    | -4.95     | 10.71     | 0.16             | 11.80      | 114.83      |
| 3100.00  | 1.66        | 95.67       | 3099.77   | 14.61    | -5.40     | 13.58     | 0.18             | 14.62      | 111.66      |
| 3200.00  | 1.50        | 95.08       | 3199.73   | 17.24    | -5.65     | 16.33     | 0.16             | 17.28      | 109.10      |
| 3300.00  | 1.27        | 95.21       | 3299.70   | 19.55    | -5.87     | 18.74     | 0.23             | 19.63      | 107.40      |
| 3400.00  | 0.93        | 105.79      | 3399.69   | 21.41    | -6.19     | 20.62     | 0.39             | 21.53      | 106.72      |
| 3500.00  | 1.94        | 166.35      | 3499.66   | 23.22    | -8.06     | 21.80     | 1.69             | 23.24      | 110.29      |
| 3600.00  | 1.96        | 167.54      | 3599.60   | 25.21    | -11.37    | 22.57     | 0.05             | 25.27      | 116.74      |
| 3700.00  | 1.88        | 165.54      | 3699.54   | 27.19    | -14.63    | 23.35     | 0.10             | 27.55      | 122.07      |
| 3800.00  | 1.67        | 147.08      | 3799.50   | 29.39    | -17.44    | 24.55     | 0.61             | 30.12      | 125.39      |
| 3900.00  | 1.68        | 133.95      | 3899.45   | 31.96    | -19.68    | 26.40     | 0.38             | 32.93      | 126.71      |
| 4000.00  | 2.23        | 117.05      | 3999.40   | 35.27    | -21.59    | 29.19     | 0.79             | 36.30      | 126.49      |
| 4100.00  | 2.99        | 122.83      | 4099.29   | 39.78    | -23.88    | 33.11     | 0.80             | 40.83      | 125.81      |
| 4200.00  | 2.95        | 124.39      | 4199.16   | 44.87    | -26.75    | 37.42     | 0.09             | 46.00      | 125.56      |
| 4300.00  | 3.28        | 126.97      | 4299.01   | 50.16    | -29.93    | 41.83     | 0.36             | 51.44      | 125.58      |
| 4400.00  | 3.79        | 126.16      | 4398.82   | 56.15    | -33.60    | 46.79     | 0.51             | 57.60      | 125.68      |
| 4500.00  | 3.80        | 125.48      | 4498.60   | 62.60    | -37.47    | 52.15     | 0.05             | 64.22      | 125.69      |
| 4600.00  | 2.71        | 123.22      | 4598.44   | 68.16    | -40.69    | 56.83     | 1.10             | 69.89      | 125.60      |
| 4700.00  | 2.23        | 115.39      | 4698.34   | 72.43    | -42.82    | 60.57     | 0.59             | 74.17      | 125.26      |
| 4800.00  | 1.78        | 119.85      | 4798.28   | 75.91    | -44.42    | 63.67     | 0.48             | 77.64      | 124.90      |



# Scientific Drilling International

## Survey Report

Company: POGO  
 Field: Mesa Verde  
 Site: Lea County, NM  
 Well: Mesa Verde 8 Fed #2  
 Wellpath: VH - Job #32K0806695

Date: 09/25/2006 Time: 15:33:39 Page: 2  
 Co-ordinate(NE) Reference: Site: Lea County, NM, Grid North  
 Vertical (TVD) Reference: SITE 0.0  
 Section (VS) Reference: Well (0.00N,0.00E,112.81Azi)  
 Survey Calculation Method: Minimum Curvature Db: Sybase

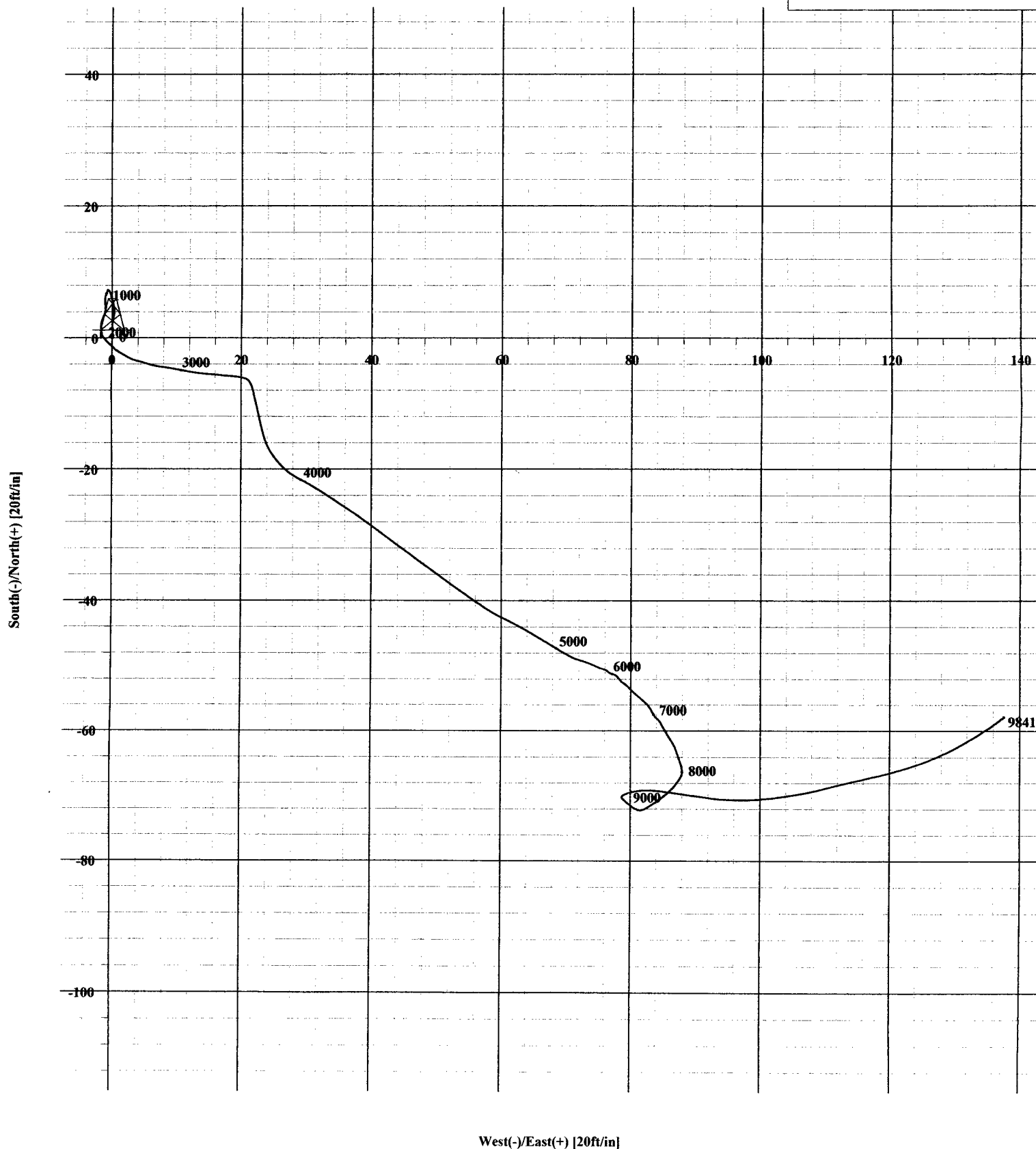
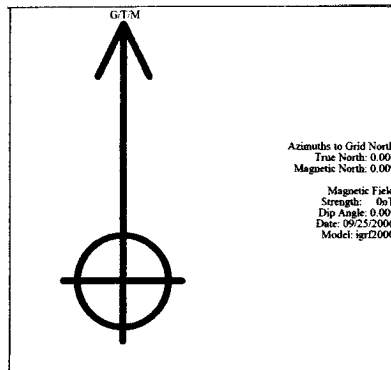
### Survey

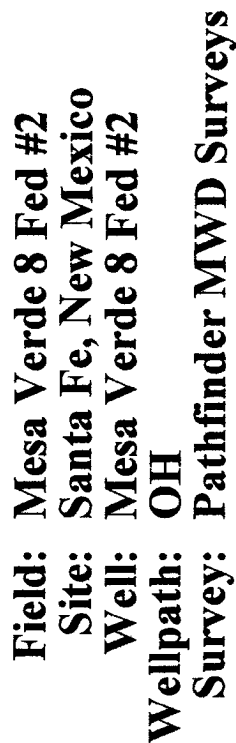
| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | VS<br>ft | N/S<br>ft | E/W<br>ft | DLS<br>deg/100ft | ClsD<br>ft | ClsA<br>deg |
|----------|-------------|-------------|-----------|----------|-----------|-----------|------------------|------------|-------------|
| 4900.00  | 1.58        | 119.91      | 4898.24   | 78.82    | -45.89    | 66.21     | 0.20             | 80.56      | 124.72      |
| 5000.00  | 1.40        | 121.90      | 4998.21   | 81.40    | -47.22    | 68.44     | 0.19             | 83.15      | 124.60      |
| 5100.00  | 1.18        | 118.41      | 5098.18   | 83.63    | -48.35    | 70.39     | 0.23             | 85.40      | 124.49      |
| 5200.00  | 0.74        | 105.33      | 5198.17   | 85.29    | -49.01    | 71.92     | 0.49             | 87.03      | 124.28      |
| 5300.00  | 0.67        | 110.45      | 5298.16   | 86.52    | -49.39    | 73.09     | 0.09             | 88.21      | 124.05      |
| 5400.00  | 0.53        | 113.29      | 5398.15   | 87.56    | -49.78    | 74.06     | 0.14             | 89.23      | 123.91      |
| 5500.00  | 0.61        | 113.82      | 5498.15   | 88.56    | -50.17    | 74.97     | 0.08             | 90.21      | 123.79      |
| 5600.00  | 0.34        | 100.23      | 5598.14   | 89.38    | -50.44    | 75.75     | 0.29             | 91.01      | 123.66      |
| 5700.00  | 0.26        | 128.67      | 5698.14   | 89.89    | -50.64    | 76.22     | 0.17             | 91.51      | 123.60      |
| 5800.00  | 0.05        | 146.27      | 5798.14   | 90.14    | -50.81    | 76.42     | 0.21             | 91.77      | 123.62      |
| 5900.00  | 0.33        | 122.55      | 5898.14   | 90.46    | -51.01    | 76.69     | 0.28             | 92.10      | 123.63      |
| 6000.00  | 0.21        | 99.62       | 5998.14   | 90.93    | -51.19    | 77.11     | 0.16             | 92.56      | 123.58      |
| 6100.00  | 0.15        | 114.08      | 6098.14   | 91.24    | -51.28    | 77.41     | 0.07             | 92.85      | 123.52      |
| 6200.00  | 0.35        | 128.65      | 6198.14   | 91.66    | -51.52    | 77.77     | 0.21             | 93.29      | 123.52      |
| 6300.00  | 0.42        | 143.13      | 6298.14   | 92.27    | -52.00    | 78.23     | 0.12             | 93.94      | 123.61      |
| 6400.00  | 0.60        | 124.46      | 6398.13   | 93.10    | -52.59    | 78.88     | 0.24             | 94.80      | 123.69      |
| 6500.00  | 0.61        | 136.52      | 6498.13   | 94.10    | -53.28    | 79.68     | 0.13             | 95.85      | 123.77      |
| 6600.00  | 0.77        | 132.57      | 6598.12   | 95.22    | -54.12    | 80.54     | 0.17             | 97.03      | 123.90      |
| 6700.00  | 0.68        | 130.52      | 6698.11   | 96.42    | -54.96    | 81.48     | 0.09             | 98.28      | 124.00      |
| 6800.00  | 0.64        | 133.92      | 6798.11   | 97.50    | -55.73    | 82.34     | 0.06             | 99.42      | 124.09      |
| 6900.00  | 0.66        | 150.18      | 6898.10   | 98.48    | -56.62    | 83.03     | 0.18             | 100.49     | 124.29      |
| 7000.00  | 0.50        | 149.30      | 6998.09   | 99.29    | -57.49    | 83.54     | 0.16             | 101.41     | 124.54      |
| 7100.00  | 0.46        | 126.85      | 7098.09   | 100.03   | -58.11    | 84.08     | 0.19             | 102.20     | 124.65      |
| 7200.00  | 0.48        | 152.84      | 7198.09   | 100.74   | -58.72    | 84.59     | 0.21             | 102.98     | 124.77      |
| 7300.00  | 0.70        | 148.48      | 7298.08   | 101.56   | -59.61    | 85.10     | 0.22             | 103.91     | 125.01      |
| 7400.00  | 0.53        | 150.78      | 7398.08   | 102.42   | -60.54    | 85.65     | 0.17             | 104.88     | 125.25      |
| 7500.00  | 0.69        | 144.96      | 7498.07   | 103.29   | -61.43    | 86.22     | 0.17             | 105.87     | 125.47      |
| 7600.00  | 0.62        | 155.63      | 7598.06   | 104.20   | -62.42    | 86.79     | 0.14             | 106.90     | 125.72      |
| 7700.00  | 0.56        | 163.29      | 7698.06   | 104.91   | -63.38    | 87.15     | 0.10             | 107.76     | 126.03      |
| 7800.00  | 0.61        | 158.37      | 7798.05   | 105.59   | -64.34    | 87.49     | 0.07             | 108.60     | 126.33      |
| 7900.00  | 0.59        | 166.86      | 7898.05   | 106.27   | -65.34    | 87.80     | 0.09             | 109.45     | 126.66      |
| 8000.00  | 0.46        | 176.77      | 7998.04   | 106.74   | -66.24    | 87.94     | 0.16             | 110.10     | 126.99      |
| 8100.00  | 0.53        | 207.60      | 8098.04   | 106.88   | -67.05    | 87.75     | 0.27             | 110.44     | 127.38      |
| 8200.00  | 0.74        | 216.23      | 8198.03   | 106.69   | -67.98    | 87.15     | 0.23             | 110.53     | 127.96      |
| 8300.00  | 0.86        | 224.99      | 8298.02   | 106.26   | -69.04    | 86.24     | 0.17             | 110.47     | 128.68      |
| 8400.00  | 1.05        | 232.05      | 8398.01   | 105.53   | -70.13    | 84.99     | 0.22             | 110.19     | 129.53      |
| 8500.00  | 0.98        | 236.44      | 8498.00   | 104.61   | -71.17    | 83.55     | 0.10             | 109.75     | 130.42      |
| 8600.00  | 0.85        | 241.25      | 8597.98   | 103.67   | -72.00    | 82.19     | 0.15             | 109.26     | 131.22      |
| 8700.00  | 0.61        | 295.68      | 8697.98   | 102.68   | -72.12    | 81.06     | 0.70             | 108.50     | 131.66      |
| 8800.00  | 0.93        | 307.57      | 8797.97   | 101.36   | -71.40    | 79.94     | 0.36             | 107.18     | 131.77      |
| 8900.00  | 0.83        | 312.32      | 8897.95   | 99.90    | -70.41    | 78.76     | 0.12             | 105.65     | 131.80      |
| 9000.00  | 2.27        | 74.74       | 8997.93   | 100.77   | -69.40    | 80.13     | 2.80             | 106.01     | 130.90      |
| 9100.00  | 3.69        | 98.04       | 9097.80   | 105.44   | -69.33    | 85.23     | 1.84             | 109.87     | 129.13      |
| 9200.00  | 4.64        | 97.72       | 9197.53   | 112.46   | -70.33    | 92.43     | 0.95             | 116.14     | 127.27      |
| 9300.00  | 5.32        | 83.96       | 9297.16   | 120.43   | -70.38    | 101.04    | 1.37             | 123.14     | 124.86      |
| 9400.00  | 4.80        | 75.89       | 9396.77   | 127.83   | -68.87    | 109.71    | 0.88             | 129.54     | 122.12      |
| 9500.00  | 4.32        | 77.23       | 9496.45   | 134.24   | -67.02    | 117.44    | 0.49             | 135.22     | 119.71      |
| 9600.00  | 4.08        | 70.94       | 9596.18   | 139.95   | -65.03    | 124.48    | 0.52             | 140.44     | 117.58      |
| 9700.00  | 3.59        | 61.65       | 9695.96   | 144.57   | -62.38    | 130.60    | 0.79             | 144.73     | 115.53      |
| 9800.00  | 3.15        | 55.39       | 9795.79   | 148.01   | -59.33    | 135.61    | 0.57             | 148.03     | 113.63      |
| 9845.00  | 3.15        | 52.13       | 9840.72   | 149.28   | -57.87    | 137.61    | 0.40             | 149.28     | 112.81      |



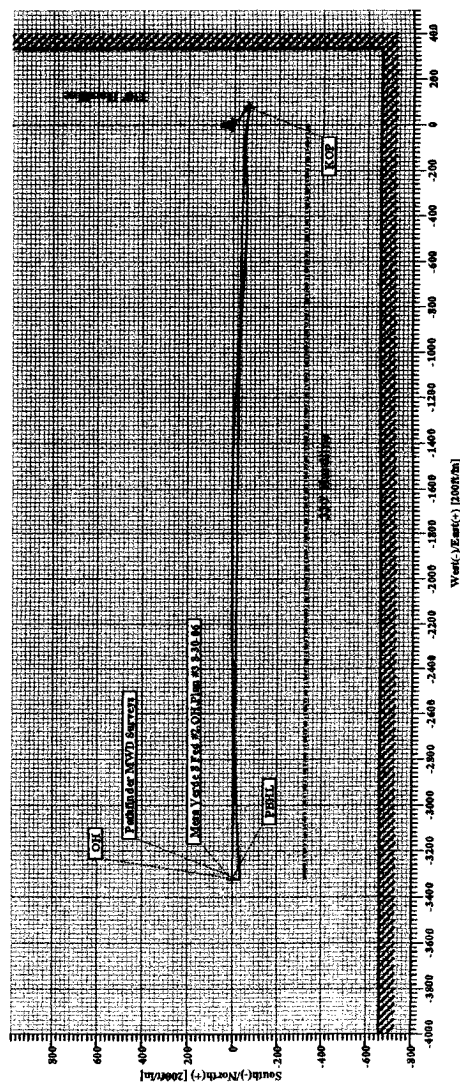
Scientific  
Drilling

Field: Mesa Verde  
Site: Lea County, NM  
Well: Mesa Verde 8 Fed #2  
Wellpath: VH - Job #32K0806695  
Survey: 08/26/06





# PATHFINDER



**SITE DETAILS**

Santa Fe, New Mexico

Site Centre Latitude: 32°13'35.700N  
Longitude: 103°41'21.200W

Ground Level: 3615.00  
Positional Uncertainty: 0.00  
Convergence: 1.37

| TARGET DETAILS |         |        |          |       |
|----------------|---------|--------|----------|-------|
| Name           | TVD     | +N/-S  | +E/-W    | Shape |
| KOP            | 9200.00 | -65.00 | 75.00    | Point |
| PBHL           | 9700.00 | 0.00   | -3324.70 | Point |

| WELLPATH DETAILS |                 |              |              |                   |
|------------------|-----------------|--------------|--------------|-------------------|
| OH               |                 |              |              |                   |
| Rig:             | Ref. Datum:     | SITE         | 0.00ft       |                   |
|                  | V Section Angle | Origin +N/-S | Origin +E/-W | Starting From TVD |
|                  | 270.00°         | 0.00         | 0.00         | 0.00              |

| No. | ANNOTATIONS |                   |
|-----|-------------|-------------------|
|     | TVD         | MD<br>Amotisation |
| 1   | 8897.54     | 9000.00           |
| 2   | 9757.84     | 1202.32           |
| 3   | 9757.84     | 1202.32           |
| 4   | 9779.46     | 1202.81           |

| Survey Pathfinder: MWD Surveys (Mean Verde 8 Feb 2020H) |          |       |        |         |        |          |      |         |         |
|---------------------------------------------------------|----------|-------|--------|---------|--------|----------|------|---------|---------|
| No                                                      | MD       | Inc   | Az     | TVD     | +N/S   | +E/-W    | DLeg | TFace   | VSac    |
| 110                                                     | 12318.00 | 89.34 | 268.10 | 9758.10 | -9.13  | -2743.13 | 1.23 | -27.22  | 2743.13 |
| 111                                                     | 12349.00 | 89.43 | 268.63 | 9758.43 | -10.01 | -2774.12 | 1.73 | 80.36   | 2774.12 |
| 112                                                     | 12380.00 | 89.52 | 268.66 | 9758.72 | -10.80 | -2805.10 | 0.62 | -62.10  | 2805.10 |
| 113                                                     | 12411.00 | 89.43 | 268.46 | 9759.00 | -11.63 | -2836.09 | 0.29 | 180.00  | 2836.09 |
| 114                                                     | 12442.00 | 89.52 | 268.46 | 9759.29 | -12.42 | -2867.07 | 1.18 | -180.00 | 2867.07 |
| 115                                                     | 12473.00 | 88.72 | 267.67 | 9760.08 | -13.77 | -2900.05 | 1.59 | -122.13 | 2900.05 |
| 116                                                     | 12506.00 | 89.08 | 267.84 | 9760.68 | -14.99 | -2931.02 | 1.28 | 25.28   | 2931.02 |
| 117                                                     | 12538.00 | 89.52 | 267.75 | 9761.07 | -16.22 | -2962.99 | 1.40 | -11.56  | 2962.99 |
| 118                                                     | 12569.00 | 89.43 | 267.23 | 9761.35 | -17.58 | -2993.96 | 1.70 | -59.82  | 2993.96 |
| 119                                                     | 12600.00 | 89.60 | 267.58 | 9761.61 | -18.98 | -3024.93 | 1.26 | 64.09   | 3024.93 |
| 120                                                     | 12631.00 | 89.34 | 267.14 | 9761.90 | -20.41 | -3055.89 | 1.65 | -120.58 | 3055.89 |
| 121                                                     | 12663.00 | 89.16 | 266.43 | 9762.32 | -22.20 | -3087.84 | 2.29 | -104.23 | 3087.84 |
| 122                                                     | 12694.00 | 89.78 | 267.14 | 9762.61 | -23.94 | -3118.79 | 3.04 | 48.87   | 3118.79 |
| 123                                                     | 12725.00 | 90.22 | 267.49 | 9762.61 | -25.39 | -3149.75 | 1.81 | 38.50   | 3149.75 |
| 124                                                     | 12756.00 | 89.78 | 267.31 | 9762.61 | -26.80 | -3180.72 | 1.53 | -157.75 | 3180.72 |
| 125                                                     | 12788.00 | 89.78 | 266.87 | 9762.73 | -28.27 | -3212.69 | 0.28 | 90.00   | 3212.69 |
| 126                                                     | 12819.00 | 89.43 | 266.87 | 9762.94 | -29.82 | -3243.65 | 2.05 | -123.44 | 3243.65 |
| 127                                                     | 12850.00 | 89.25 | 266.96 | 9763.07 | -30.42 | -3254.63 | 1.83 | 153.44  | 3254.63 |
| 128                                                     | 12880.00 | 89.25 | 266.96 | 9763.07 | -34.13 | -3324.53 | 0.00 | 0.00    | 3324.53 |

Survey by **Mathematical Modeling** (Mass. Vets. & P. & A. Assoc.)

# Pathfinder Energy

## Survey Report

|                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Company:</b> Pogo<br><b>Field:</b> Mesa Verde 8 Fed #2<br><b>Site:</b> Santa Fe, New Mexico<br><b>Well:</b> Mesa Verde 8 Fed #2<br><b>Wellpath:</b> OH | <b>Date:</b> 9/21/2006 <b>Time:</b> 11:01:35 <b>Page:</b> 1<br><b>Co-ordinate(NE) Reference:</b> Well: Mesa Verde 8 Fed #2, Grid North<br><b>Vertical (TVD) Reference:</b> SITE 0.0<br><b>Section (VS) Reference:</b> Well (0.00N,0.00E,270.00Azi)<br><b>Survey Calculation Method:</b> Minimum Curvature <b>Db:</b> Sybase |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Field:** Mesa Verde 8 Fed #2

**Map System:** US State Plane Coordinate System 1927  
**Geo Datum:** NAD27 (Clarke 1866)  
**Sys Datum:** Mean Sea Level

**Map Zone:** New Mexico, Central Zone  
**Coordinate System:** Well Centre  
**Geomagnetic Model:** igrf2005

**Site:** Santa Fe, New Mexico

|                                      |                               |                                   |  |
|--------------------------------------|-------------------------------|-----------------------------------|--|
| <b>Site Position:</b>                | <b>Northing:</b> 455587.72 ft | <b>Latitude:</b> 32 13 35.700 N   |  |
| <b>From:</b> Geographic              | <b>Easting:</b> 1291976.58 ft | <b>Longitude:</b> 103 41 21.200 W |  |
| <b>Position Uncertainty:</b> 0.00 ft |                               | <b>North Reference:</b> Grid      |  |
| <b>Ground Level:</b> 3615.00 ft      |                               | <b>Grid Convergence:</b> 1.37 deg |  |

**Well:** Mesa Verde 8 Fed #2

**Slot Name:**

|                                      |                               |                                   |  |
|--------------------------------------|-------------------------------|-----------------------------------|--|
| <b>Well Position:</b> +N/-S 0.00 ft  | <b>Northing:</b> 455587.72 ft | <b>Latitude:</b> 32 13 35.700 N   |  |
| +E/-W 0.00 ft                        | <b>Easting:</b> 1291976.58 ft | <b>Longitude:</b> 103 41 21.200 W |  |
| <b>Position Uncertainty:</b> 0.00 ft |                               |                                   |  |

**Wellpath:** OH

**Current Datum:** SITE  
**Magnetic Data:** 8/30/2006  
**Field Strength:** 49128 nT  
**Vertical Section: Depth From (TVD)**  
 ft

**Height** 0.00 ft  
 +N/-S  
 ft

**Drilled From:** Surface  
**Tie-on Depth:** 0.00 ft  
**Above System Datum:** Mean Sea Level  
**Declination:** 8.20 deg  
**Mag Dip Angle:** 60.29 deg  
 +E/-W  
 ft    **Direction**  
          deg

|      |      |      |        |
|------|------|------|--------|
| 0.00 | 0.00 | 0.00 | 270.00 |
|------|------|------|--------|

**Survey:** Pathfinder MWD Surveys

**Start Date:** 9/1/2006

**Company:** Pathfinder Energy  
**Tool:**

**Engineer:** Midwellplan  
**Tied-to:** From: Definitive Path

**Survey:** Pathfinder MWD Surveys

| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | +N/-S<br>ft | +E/-W<br>ft | VS<br>ft | DLS<br>deg/100ft | Build<br>deg/100ft | Turn<br>deg/100ft | Tool/Comment |
|----------|-------------|-------------|-----------|-------------|-------------|----------|------------------|--------------------|-------------------|--------------|
| 8900.00  | 0.83        | 312.32      | 8897.95   | -70.41      | 78.76       | -78.76   | 0.00             | 0.00               | 0.00              |              |
| 8954.00  | 1.23        | 27.90       | 8951.95   | -69.64      | 78.74       | -78.74   | 2.41             | 0.74               | 139.96            |              |
| 8976.00  | 1.41        | 50.22       | 8973.94   | -69.26      | 79.06       | -79.06   | 2.46             | 0.82               | 101.45            |              |
| 9007.00  | 1.14        | 24.47       | 9004.93   | -68.73      | 79.48       | -79.48   | 2.02             | -0.87              | -83.06            |              |
| 9038.00  | 1.06        | 353.45      | 9035.93   | -68.17      | 79.58       | -79.58   | 1.91             | -0.26              | -100.06           |              |
| 9070.00  | 0.79        | 348.26      | 9067.92   | -67.66      | 79.50       | -79.50   | 0.88             | -0.84              | -16.22            |              |
| 9101.00  | 2.37        | 298.60      | 9098.91   | -67.14      | 78.89       | -78.89   | 6.30             | 5.10               | -160.19           |              |
| 9133.00  | 4.04        | 286.12      | 9130.86   | -66.51      | 77.23       | -77.23   | 5.63             | 5.22               | -39.00            |              |
| 9163.00  | 4.84        | 284.63      | 9160.77   | -65.90      | 74.99       | -74.99   | 2.69             | 2.67               | -4.97             |              |
| 9194.00  | 7.30        | 282.34      | 9191.60   | -65.15      | 71.80       | -71.80   | 7.97             | 7.94               | -7.39             |              |
| 9225.00  | 10.02       | 280.50      | 9222.24   | -64.23      | 67.22       | -67.22   | 8.82             | 8.77               | -5.94             |              |
| 9257.00  | 12.49       | 279.00      | 9253.62   | -63.18      | 61.06       | -61.06   | 7.77             | 7.72               | -4.69             |              |
| 9288.00  | 15.21       | 277.86      | 9283.72   | -62.10      | 53.72       | -53.72   | 8.82             | 8.77               | -3.68             |              |
| 9319.00  | 17.59       | 279.27      | 9313.45   | -60.79      | 45.07       | -45.07   | 7.78             | 7.68               | 4.55              |              |
| 9351.00  | 20.31       | 279.44      | 9343.72   | -59.10      | 34.82       | -34.82   | 8.50             | 8.50               | 0.53              |              |
| 9382.00  | 23.13       | 278.04      | 9372.51   | -57.37      | 23.48       | -23.48   | 9.25             | 9.10               | -4.52             |              |
| 9414.00  | 25.50       | 277.33      | 9401.67   | -55.61      | 10.42       | -10.42   | 7.46             | 7.41               | -2.22             |              |
| 9445.00  | 27.61       | 276.01      | 9429.40   | -54.01      | -3.34       | 3.34     | 7.07             | 6.81               | -4.26             |              |
| 9476.00  | 30.07       | 275.84      | 9456.55   | -52.46      | -18.21      | 18.21    | 7.94             | 7.94               | -0.55             |              |
| 9508.00  | 32.71       | 276.54      | 9483.87   | -50.66      | -34.78      | 34.78    | 8.33             | 8.25               | 2.19              |              |
| 9539.00  | 35.88       | 276.10      | 9509.48   | -48.74      | -52.14      | 52.14    | 10.26            | 10.23              | -1.42             |              |
| 9571.00  | 39.13       | 274.70      | 9534.86   | -46.92      | -71.53      | 71.53    | 10.50            | 10.16              | -4.37             |              |
| 9602.00  | 41.86       | 270.39      | 9558.44   | -46.05      | -91.63      | 91.63    | 12.61            | 8.81               | -13.90            |              |
| 9634.00  | 44.58       | 266.52      | 9581.76   | -46.66      | -113.53     | 113.53   | 11.86            | 8.50               | -12.09            |              |

# Pathfinder Energy

## Survey Report

|                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Company:</b> Pogo<br><b>Field:</b> Mesa Verde 8 Fed #2<br><b>Site:</b> Santa Fe, New Mexico<br><b>Well:</b> Mesa Verde 8 Fed #2<br><b>Wellpath:</b> OH | <b>Date:</b> 9/21/2006 <b>Time:</b> 11:01:35 <b>Page:</b> 2<br><b>Co-ordinate(NE) Reference:</b> Well: Mesa Verde 8 Fed #2, Grid North<br><b>Vertical (TVD) Reference:</b> SITE 0.0<br><b>Section (VS) Reference:</b> Well (0.00N,0.00E,270.00Azi)<br><b>Survey Calculation Method:</b> Minimum Curvature <b>Db:</b> Sybase |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Survey: Pathfinder MWD Surveys

| MD<br>ft | Incl<br>deg | Azlm<br>deg | TVD<br>ft | +N/-S<br>ft | +E/-W<br>ft | VS<br>ft | DLS<br>deg/100ft | Build<br>deg/100ft | Turn<br>deg/100ft | Tool/Comment |
|----------|-------------|-------------|-----------|-------------|-------------|----------|------------------|--------------------|-------------------|--------------|
| 9665.00  | 47.75       | 265.29      | 9603.22   | -48.26      | -135.83     | 135.83   | 10.62            | 10.23              | -3.97             |              |
| 9697.00  | 51.00       | 264.94      | 9624.06   | -50.33      | -160.02     | 160.02   | 10.19            | 10.16              | -1.09             |              |
| 9727.00  | 53.90       | 265.38      | 9642.34   | -52.33      | -183.72     | 183.72   | 9.74             | 9.67               | 1.47              |              |
| 9758.00  | 56.63       | 265.82      | 9660.00   | -54.29      | -209.12     | 209.12   | 8.88             | 8.81               | 1.42              |              |
| 9790.00  | 59.36       | 267.05      | 9676.96   | -55.97      | -236.20     | 236.20   | 9.13             | 8.53               | 3.84              |              |
| 9821.00  | 61.99       | 267.84      | 9692.14   | -57.17      | -263.20     | 263.20   | 8.77             | 8.48               | 2.55              |              |
| 9852.00  | 64.72       | 268.10      | 9706.04   | -58.15      | -290.89     | 290.89   | 8.84             | 8.81               | 0.84              |              |
| 9883.00  | 66.30       | 268.28      | 9718.89   | -59.04      | -319.08     | 319.08   | 5.12             | 5.10               | 0.58              |              |
| 9915.00  | 67.97       | 268.81      | 9731.33   | -59.79      | -348.56     | 348.56   | 5.44             | 5.22               | 1.66              |              |
| 9946.00  | 70.61       | 269.69      | 9742.29   | -60.17      | -377.55     | 377.55   | 8.92             | 8.52               | 2.84              |              |
| 9977.00  | 74.13       | 270.39      | 9751.68   | -60.15      | -407.09     | 407.09   | 11.56            | 11.35              | 2.26              |              |
| 10008.00 | 77.91       | 271.53      | 9759.16   | -59.64      | -437.16     | 437.16   | 12.70            | 12.19              | 3.68              |              |
| 10040.00 | 79.67       | 272.23      | 9765.38   | -58.61      | -468.53     | 468.53   | 5.90             | 5.50               | 2.19              |              |
| 10071.00 | 81.34       | 272.23      | 9770.50   | -57.42      | -499.08     | 499.08   | 5.39             | 5.39               | 0.00              |              |
| 10102.00 | 84.77       | 272.32      | 9774.25   | -56.20      | -529.83     | 529.83   | 11.07            | 11.06              | 0.29              |              |
| 10127.00 | 86.97       | 274.08      | 9776.05   | -54.81      | -554.72     | 554.72   | 11.26            | 8.80               | 7.04              |              |
| 10158.00 | 87.49       | 273.64      | 9777.54   | -52.72      | -585.61     | 585.61   | 2.20             | 1.68               | -1.42             |              |
| 10190.00 | 87.41       | 273.73      | 9778.97   | -50.67      | -617.51     | 617.51   | 0.38             | -0.25              | 0.28              |              |
| 10222.00 | 89.34       | 273.73      | 9779.88   | -48.59      | -649.43     | 649.43   | 6.03             | 6.03               | 0.00              |              |
| 10253.00 | 89.78       | 273.90      | 9780.11   | -46.52      | -680.36     | 680.36   | 1.52             | 1.42               | 0.55              |              |
| 10285.00 | 89.60       | 273.73      | 9780.29   | -44.39      | -712.29     | 712.29   | 0.77             | -0.56              | -0.53             |              |
| 10316.00 | 89.34       | 273.82      | 9780.57   | -42.35      | -743.22     | 743.22   | 0.89             | -0.84              | 0.29              |              |
| 10348.00 | 89.69       | 274.52      | 9780.84   | -40.03      | -775.14     | 775.14   | 2.45             | 1.09               | 2.19              |              |
| 10379.00 | 90.84       | 274.34      | 9780.70   | -37.63      | -806.04     | 806.04   | 3.75             | 3.71               | -0.58             |              |
| 10410.00 | 90.48       | 274.17      | 9780.34   | -35.33      | -836.96     | 836.96   | 1.28             | -1.16              | -0.55             |              |
| 10442.00 | 91.10       | 274.34      | 9779.90   | -32.96      | -868.86     | 868.86   | 2.01             | 1.94               | 0.53              |              |
| 10473.00 | 92.42       | 273.55      | 9778.95   | -30.83      | -899.78     | 899.78   | 4.96             | 4.26               | -2.55             |              |
| 10504.00 | 92.24       | 273.55      | 9777.69   | -28.91      | -930.69     | 930.69   | 0.58             | -0.58              | 0.00              |              |
| 10536.00 | 92.15       | 273.82      | 9776.46   | -26.85      | -962.60     | 962.60   | 0.89             | -0.28              | 0.84              |              |
| 10567.00 | 91.80       | 274.08      | 9775.40   | -24.72      | -993.51     | 993.51   | 1.41             | -1.13              | 0.84              |              |
| 10598.00 | 91.54       | 273.73      | 9774.49   | -22.61      | -1024.42    | 1024.42  | 1.41             | -0.84              | -1.13             |              |
| 10630.00 | 91.36       | 273.90      | 9773.68   | -20.48      | -1056.34    | 1056.34  | 0.77             | -0.56              | 0.53              |              |
| 10661.00 | 91.54       | 273.82      | 9772.90   | -18.39      | -1087.26    | 1087.26  | 0.64             | 0.58               | -0.26             |              |
| 10692.00 | 91.01       | 274.08      | 9772.21   | -16.26      | -1118.18    | 1118.18  | 1.90             | -1.71              | 0.84              |              |
| 10724.00 | 90.84       | 274.26      | 9771.69   | -13.93      | -1150.09    | 1150.09  | 0.77             | -0.53              | 0.56              |              |
| 10755.00 | 90.75       | 274.17      | 9771.26   | -11.65      | -1181.00    | 1181.00  | 0.41             | -0.29              | -0.29             |              |
| 10786.00 | 91.19       | 273.46      | 9770.74   | -9.59       | -1211.93    | 1211.93  | 2.69             | 1.42               | -2.29             |              |
| 10817.00 | 91.19       | 273.03      | 9770.09   | -7.84       | -1242.87    | 1242.87  | 1.39             | 0.00               | -1.39             |              |
| 10848.00 | 91.80       | 273.11      | 9769.28   | -6.18       | -1273.82    | 1273.82  | 1.98             | 1.97               | 0.26              |              |
| 10880.00 | 93.12       | 271.71      | 9767.91   | -4.83       | -1305.76    | 1305.76  | 6.01             | 4.12               | -4.37             |              |
| 10912.00 | 92.95       | 271.71      | 9766.22   | -3.88       | -1337.70    | 1337.70  | 0.53             | -0.53              | 0.00              |              |
| 10943.00 | 92.68       | 271.71      | 9764.69   | -2.96       | -1368.65    | 1368.65  | 0.87             | -0.87              | 0.00              |              |
| 10974.00 | 92.42       | 271.44      | 9763.31   | -2.10       | -1399.61    | 1399.61  | 1.21             | -0.84              | -0.87             |              |
| 11006.00 | 92.33       | 271.53      | 9761.99   | -1.28       | -1431.57    | 1431.57  | 0.40             | -0.28              | 0.28              |              |
| 11037.00 | 91.98       | 271.27      | 9760.82   | -0.52       | -1462.54    | 1462.54  | 1.41             | -1.13              | -0.84             |              |
| 11068.00 | 92.42       | 271.36      | 9759.63   | 0.19        | -1493.51    | 1493.51  | 1.45             | 1.42               | 0.29              |              |
| 11100.00 | 92.24       | 271.44      | 9758.33   | 0.97        | -1525.47    | 1525.47  | 0.62             | -0.56              | 0.25              |              |
| 11131.00 | 91.63       | 271.36      | 9757.29   | 1.73        | -1556.44    | 1556.44  | 1.98             | -1.97              | -0.26             |              |
| 11162.00 | 91.28       | 270.83      | 9756.50   | 2.32        | -1587.43    | 1587.43  | 2.05             | -1.13              | -1.71             |              |
| 11193.00 | 91.19       | 271.01      | 9755.83   | 2.82        | -1618.42    | 1618.42  | 0.65             | -0.29              | 0.58              |              |
| 11225.00 | 90.22       | 270.21      | 9755.44   | 3.16        | -1650.41    | 1650.41  | 3.93             | -3.03              | -2.50             |              |
| 11256.00 | 89.34       | 269.77      | 9755.56   | 3.15        | -1681.41    | 1681.41  | 3.17             | -2.84              | -1.42             |              |
| 11288.00 | 89.08       | 269.77      | 9756.00   | 3.03        | -1713.41    | 1713.41  | 0.81             | -0.81              | 0.00              |              |

# Pathfinder Energy

## Survey Report

|                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Company:</b> Pogo<br><b>Field:</b> Mesa Verde 8 Fed #2<br><b>Site:</b> Santa Fe, New Mexico<br><b>Well:</b> Mesa Verde 8 Fed #2<br><b>Wellpath:</b> OH | <b>Date:</b> 9/21/2006 <b>Time:</b> 11:01:35 <b>Page:</b> 3<br><b>Co-ordinate(N/E) Reference:</b> Well: Mesa Verde 8 Fed #2, Grid North<br><b>Vertical (TVD) Reference:</b> SITE 0.0<br><b>Section (VS) Reference:</b> Well (0.00N,0.00E,270.00Azi)<br><b>Survey Calculation Method:</b> Minimum Curvature <b>Db:</b> Sybase |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Survey:** Pathfinder MWD Surveys

| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | +N/-S<br>ft | +E/-W<br>ft | VS<br>ft | DLS<br>deg/100ft | Build<br>deg/100ft | Turn<br>deg/100ft | Tool/Comment |
|----------|-------------|-------------|-----------|-------------|-------------|----------|------------------|--------------------|-------------------|--------------|
| 11319.00 | 88.99       | 269.69      | 9756.52   | 2.88        | -1744.40    | 1744.40  | 0.39             | -0.29              | -0.26             |              |
| 11350.00 | 88.72       | 270.30      | 9757.14   | 2.88        | -1775.40    | 1775.40  | 2.15             | -0.87              | 1.97              |              |
| 11381.00 | 88.29       | 269.77      | 9757.95   | 2.90        | -1806.39    | 1806.39  | 2.20             | -1.39              | -1.71             |              |
| 11412.00 | 87.93       | 269.60      | 9758.97   | 2.73        | -1837.37    | 1837.37  | 1.28             | -1.16              | -0.55             |              |
| 11444.00 | 88.64       | 269.86      | 9759.93   | 2.58        | -1869.35    | 1869.35  | 2.36             | 2.22               | 0.81              |              |
| 11474.00 | 89.34       | 269.77      | 9760.46   | 2.48        | -1899.35    | 1899.35  | 2.35             | 2.33               | -0.30             |              |
| 11506.00 | 89.08       | 269.86      | 9760.90   | 2.38        | -1931.35    | 1931.35  | 0.86             | -0.81              | 0.28              |              |
| 11537.00 | 89.08       | 270.13      | 9761.39   | 2.37        | -1962.34    | 1962.34  | 0.87             | 0.00               | 0.87              |              |
| 11569.00 | 89.08       | 270.13      | 9761.91   | 2.44        | -1994.34    | 1994.34  | 0.00             | 0.00               | 0.00              |              |
| 11599.00 | 89.96       | 270.04      | 9762.16   | 2.49        | -2024.34    | 2024.34  | 2.95             | 2.93               | -0.30             |              |
| 11630.00 | 90.84       | 269.77      | 9761.94   | 2.44        | -2055.33    | 2055.33  | 2.97             | 2.84               | -0.87             |              |
| 11661.00 | 90.92       | 269.69      | 9761.47   | 2.29        | -2086.33    | 2086.33  | 0.36             | 0.26               | -0.26             |              |
| 11692.00 | 90.92       | 269.86      | 9760.97   | 2.17        | -2117.33    | 2117.33  | 0.55             | 0.00               | 0.55              |              |
| 11724.00 | 91.01       | 269.86      | 9760.43   | 2.09        | -2149.32    | 2149.32  | 0.28             | 0.28               | 0.00              |              |
| 11756.00 | 91.10       | 269.51      | 9759.84   | 1.92        | -2181.32    | 2181.32  | 1.13             | 0.28               | -1.09             |              |
| 11787.00 | 91.28       | 269.95      | 9759.20   | 1.77        | -2212.31    | 2212.31  | 1.53             | 0.58               | 1.42              |              |
| 11818.00 | 91.28       | 270.30      | 9758.51   | 1.84        | -2243.30    | 2243.30  | 1.13             | 0.00               | 1.13              |              |
| 11849.00 | 91.10       | 269.60      | 9757.86   | 1.81        | -2274.29    | 2274.29  | 2.33             | -0.58              | -2.26             |              |
| 11880.00 | 91.01       | 269.42      | 9757.29   | 1.55        | -2305.29    | 2305.29  | 0.65             | -0.29              | -0.58             |              |
| 11912.00 | 90.57       | 269.69      | 9756.85   | 1.30        | -2337.28    | 2337.28  | 1.61             | -1.37              | 0.84              |              |
| 11943.00 | 90.13       | 269.16      | 9756.66   | 0.99        | -2368.28    | 2368.28  | 2.22             | -1.42              | -1.71             |              |
| 11974.00 | 89.96       | 268.54      | 9756.64   | 0.36        | -2399.27    | 2399.27  | 2.07             | -0.55              | -2.00             |              |
| 12005.00 | 90.04       | 268.98      | 9756.64   | -0.31       | -2430.27    | 2430.27  | 1.44             | 0.26               | 1.42              |              |
| 12036.00 | 90.04       | 268.46      | 9756.61   | -1.00       | -2461.26    | 2461.26  | 1.68             | 0.00               | -1.68             |              |
| 12068.00 | 90.04       | 268.81      | 9756.59   | -1.76       | -2493.25    | 2493.25  | 1.09             | 0.00               | 1.09              |              |
| 12098.00 | 90.04       | 268.90      | 9756.57   | -2.36       | -2523.24    | 2523.24  | 0.30             | 0.00               | 0.30              |              |
| 12130.00 | 90.04       | 268.10      | 9756.55   | -3.20       | -2555.23    | 2555.23  | 2.50             | 0.00               | -2.50             |              |
| 12161.00 | 90.04       | 268.02      | 9756.53   | -4.25       | -2586.22    | 2586.22  | 0.26             | 0.00               | -0.26             |              |
| 12192.00 | 89.69       | 268.46      | 9756.60   | -5.20       | -2617.20    | 2617.20  | 1.81             | -1.13              | 1.42              |              |
| 12223.00 | 89.43       | 268.28      | 9756.84   | -6.08       | -2648.19    | 2648.19  | 1.02             | -0.84              | -0.58             |              |
| 12255.00 | 89.34       | 268.02      | 9757.18   | -7.12       | -2680.17    | 2680.17  | 0.86             | -0.28              | -0.81             |              |
| 12286.00 | 88.99       | 268.28      | 9757.63   | -8.12       | -2711.15    | 2711.15  | 1.41             | -1.13              | 0.84              |              |
| 12318.00 | 89.34       | 268.10      | 9758.10   | -9.13       | -2743.13    | 2743.13  | 1.23             | 1.09               | -0.56             |              |
| 12349.00 | 89.43       | 268.63      | 9758.43   | -10.01      | -2774.12    | 2774.12  | 1.73             | 0.29               | 1.71              |              |
| 12380.00 | 89.52       | 268.46      | 9758.72   | -10.80      | -2805.10    | 2805.10  | 0.62             | 0.29               | -0.55             |              |
| 12411.00 | 89.43       | 268.46      | 9759.00   | -11.63      | -2836.09    | 2836.09  | 0.29             | -0.29              | 0.00              |              |
| 12443.00 | 88.99       | 268.10      | 9759.44   | -12.59      | -2868.07    | 2868.07  | 1.78             | -1.37              | -1.12             |              |
| 12475.00 | 88.72       | 267.67      | 9760.08   | -13.77      | -2900.05    | 2900.05  | 1.59             | -0.84              | -1.34             |              |
| 12506.00 | 89.08       | 267.84      | 9760.68   | -14.99      | -2931.02    | 2931.02  | 1.28             | 1.16               | 0.55              |              |
| 12538.00 | 89.52       | 267.75      | 9761.07   | -16.22      | -2962.99    | 2962.99  | 1.40             | 1.37               | -0.28             |              |
| 12569.00 | 89.43       | 267.23      | 9761.35   | -17.58      | -2993.96    | 2993.96  | 1.70             | -0.29              | -1.68             |              |
| 12600.00 | 89.60       | 267.58      | 9761.61   | -18.98      | -3024.93    | 3024.93  | 1.26             | 0.55               | 1.13              |              |
| 12631.00 | 89.34       | 267.14      | 9761.90   | -20.41      | -3055.89    | 3055.89  | 1.65             | -0.84              | -1.42             |              |
| 12663.00 | 89.16       | 266.43      | 9762.32   | -22.20      | -3087.84    | 3087.84  | 2.29             | -0.56              | -2.22             |              |
| 12694.00 | 89.78       | 267.14      | 9762.61   | -23.94      | -3118.79    | 3118.79  | 3.04             | 2.00               | 2.29              |              |
| 12725.00 | 90.22       | 267.49      | 9762.61   | -25.39      | -3149.75    | 3149.75  | 1.81             | 1.42               | 1.13              |              |
| 12756.00 | 89.78       | 267.31      | 9762.61   | -26.80      | -3180.72    | 3180.72  | 1.53             | -1.42              | -0.58             |              |
| 12788.00 | 89.78       | 267.40      | 9762.73   | -28.27      | -3212.69    | 3212.69  | 0.28             | 0.00               | 0.28              |              |
| 12819.00 | 89.43       | 266.87      | 9762.94   | -29.82      | -3243.65    | 3243.65  | 2.05             | -1.13              | -1.71             |              |
| 12830.00 | 89.25       | 266.96      | 9763.07   | -30.42      | -3254.63    | 3254.63  | 1.83             | -1.64              | 0.82              |              |
| 12900.00 | 89.25       | 266.96      | 9763.99   | -34.13      | -3324.53    | 3324.53  | 0.00             | 0.00               | 0.00              |              |