

## PathFinder Energy Services, Inc.

EOG PETROLEUM, INC.  
LUCKY WOLF 30 FC#2H  
EDDY COUNTY, NM

Rig: MCVAY 4

PathFinder Office Supervisor: FRANCISCO SINISTERRA

PathFinder Field Engineers: CHRIS CARSON

## Survey Report

RECEIVED

AUG 4 2011

NMOCD ARTESIA

Survey Horiz. Reference: WELLHEAD  
Ref Coordinates: LAT: 32.53.29.7035 N LON: 104.13.22.9275 W  
Reference: NAD27 new mexico east Transverse Mercator  
Ref GRID Coord: X: 533856.8000 Y: 688087.6000  
North Aligned To: TRUE NORTH  
Total Magnetic Correction: 8.07° EAST TO TRUE  
Vertical Section Plane: 93.44  
Survey Vert. Reference: 18.50' Rotary Table To Ground  
Altitude: 3516.50' Ground To MSL

Survey Calculations by RX5 V5.11i using Minimum Curvature

| Measured<br>Depth<br>(ft)                 | Incl<br>(deg) | Drift<br>Dir.<br>(deg) | TVD<br>(ft) | Course<br>Length<br>(ft) | Vertical<br>Section<br>(ft) | TOTAL<br>Rectangular Offsets<br>(ft) (ft) |        | Closure<br>Dist Dir<br>(ft) (deg) |        | DLS<br>(dg/100ft) | TEMP<br>(F) |
|-------------------------------------------|---------------|------------------------|-------------|--------------------------|-----------------------------|-------------------------------------------|--------|-----------------------------------|--------|-------------------|-------------|
| TIE IN TO SURFACE.                        |               |                        |             |                          |                             |                                           |        |                                   |        |                   |             |
| 0.00                                      | 0.00          | 0.00                   | 0.00        | 0.00                     | -0.00                       | 0.00                                      | 0.00   | 0.00@                             | 0.00   | 0.00              | 0.00        |
| THE FOLLOWING ARE SINGLESOT SURVEYS.      |               |                        |             |                          |                             |                                           |        |                                   |        |                   |             |
| 188.00                                    | 0.20          | 214.67                 | 188.00      | 188.00                   | -0.17                       | 0.27 S                                    | 0.19 W | 0.33@                             | 214.67 | 0.11              | 0.00        |
| 383.00                                    | 0.40          | 33.17                  | 383.00      | 195.00                   | -0.01                       | 0.02 N                                    | 0.01 W | 0.02@                             | 338.59 | 0.31              | 0.00        |
| 486.00                                    | 0.70          | 58.67                  | 485.99      | 103.00                   | 0.69                        | 0.65 N                                    | 0.73 E | 0.97@                             | 48.26  | 0.37              | 0.00        |
| THE FOLLOWING ARE PATHFINDER MWD SURVEYS. |               |                        |             |                          |                             |                                           |        |                                   |        |                   |             |
| 685.00                                    | 0.44          | 3.45                   | 684.99      | 199.00                   | 1.68                        | 2.04 N                                    | 1.81 E | 2.73@                             | 41.55  | 0.29              | 93.80       |
| 873.00                                    | 0.53          | 7.90                   | 872.98      | 188.00                   | 1.75                        | 3.62 N                                    | 1.97 E | 4.13@                             | 28.57  | 0.05              | 90.18       |
| 1060.00                                   | 0.62          | 15.05                  | 1059.97     | 187.00                   | 2.02                        | 5.46 N                                    | 2.36 E | 5.94@                             | 23.34  | 0.06              | 93.80       |
| 1247.00                                   | 0.62          | 4.37                   | 1246.96     | 187.00                   | 2.24                        | 7.44 N                                    | 2.69 E | 7.92@                             | 19.90  | 0.06              | 93.80       |
| 1434.00                                   | 0.53          | 347.17                 | 1433.95     | 187.00                   | 2.02                        | 9.30 N                                    | 2.58 E | 9.65@                             | 15.51  | 0.10              | 97.41       |
| 1622.00                                   | 0.79          | 358.27                 | 1621.94     | 188.00                   | 1.66                        | 11.44 N                                   | 2.35 E | 11.68@                            | 11.60  | 0.15              | 101.02      |
| 1809.00                                   | 0.62          | 9.32                   | 1808.92     | 187.00                   | 1.64                        | 13.73 N                                   | 2.47 E | 13.95@                            | 10.21  | 0.12              | 101.02      |
| 1996.00                                   | 0.53          | 12.26                  | 1995.91     | 187.00                   | 1.88                        | 15.57 N                                   | 2.82 E | 15.82@                            | 10.27  | 0.05              | 101.02      |
| 2183.00                                   | 0.62          | 0.17                   | 2182.90     | 187.00                   | 1.96                        | 17.43 N                                   | 3.01 E | 17.68@                            | 9.79   | 0.08              | 101.02      |
| 2370.00                                   | 0.44          | 350.15                 | 2369.90     | 187.00                   | 1.73                        | 19.15 N                                   | 2.89 E | 19.36@                            | 8.58   | 0.11              | 101.02      |
| 2558.00                                   | 0.35          | 357.24                 | 2557.89     | 188.00                   | 1.51                        | 20.43 N                                   | 2.74 E | 20.61@                            | 7.63   | 0.05              | 101.02      |
| 2745.00                                   | 0.44          | 350.68                 | 2744.89     | 187.00                   | 1.28                        | 21.71 N                                   | 2.59 E | 21.86@                            | 6.81   | 0.05              | 101.02      |
| 2932.00                                   | 0.44          | 339.45                 | 2931.88     | 187.00                   | 0.83                        | 23.09 N                                   | 2.22 E | 23.20@                            | 5.50   | 0.05              | 104.64      |
| 3119.00                                   | 0.35          | 357.78                 | 3118.88     | 187.00                   | 0.49                        | 24.33 N                                   | 1.95 E | 24.41@                            | 4.58   | 0.08              | 101.02      |
| 3306.00                                   | 0.18          | 318.01                 | 3305.87     | 187.00                   | 0.22                        | 25.12 N                                   | 1.73 E | 25.18@                            | 3.94   | 0.13              | 101.02      |
| 3494.00                                   | 0.18          | 325.77                 | 3493.87     | 188.00                   | -0.17                       | 25.59 N                                   | 1.37 E | 25.62@                            | 3.06   | 0.01              | 104.64      |
| 3681.00                                   | 0.09          | 358.18                 | 3680.87     | 187.00                   | -0.36                       | 25.98 N                                   | 1.20 E | 26.00@                            | 2.64   | 0.06              | 104.64      |
| 3868.00                                   | 0.44          | 359.73                 | 3867.87     | 187.00                   | -0.42                       | 26.84 N                                   | 1.19 E | 26.87@                            | 2.54   | 0.19              | 108.25      |
| 4055.00                                   | 0.44          | 346.36                 | 4054.87     | 187.00                   | -0.68                       | 28.26 N                                   | 1.02 E | 28.28@                            | 2.06   | 0.05              | 108.25      |
| 4242.00                                   | 0.18          | 353.48                 | 4241.86     | 187.00                   | -0.94                       | 29.25 N                                   | 0.81 E | 29.26@                            | 1.59   | 0.14              | 104.64      |

30-015-37034

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EOG PETROLEUM, INC.  
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EDDY COUNTY, NM  
RIG:MCVAY 4

Page 02/04

| Measured<br>Depth<br>(ft) | Incl<br>(deg) | Drift<br>Dir.<br>(deg) | TVD<br>(ft) | Course<br>Length<br>(ft) | Vertical<br>Section<br>(ft) | TOTAL<br>Rectangular Offsets<br>(ft) (ft) |          | Closure<br>Dist Dir<br>(ft) (deg) |        | DLS<br>(dg/100ft) | TEMP<br>(F) |
|---------------------------|---------------|------------------------|-------------|--------------------------|-----------------------------|-------------------------------------------|----------|-----------------------------------|--------|-------------------|-------------|
| 4430.00                   | 0.26          | 296.00                 | 4429.86     | 188.00                   | -1.39                       | 29.73 N                                   | 0.40 E   | 29.73@                            | 0.77   | 0.12              | 108.25      |
| 4617.00                   | 0.09          | 254.96                 | 4616.86     | 187.00                   | -1.92                       | 29.87 N                                   | 0.13 W   | 29.88@                            | 359.76 | 0.11              | 108.25      |
| 4804.00                   | 0.18          | 298.11                 | 4803.86     | 187.00                   | -2.32                       | 29.98 N                                   | 0.53 W   | 29.98@                            | 358.99 | 0.07              | 108.25      |
| 4991.00                   | 0.18          | 222.61                 | 4990.86     | 187.00                   | -2.78                       | 29.90 N                                   | 0.98 W   | 29.91@                            | 358.11 | 0.12              | 111.87      |
| 5178.00                   | 0.26          | 117.85                 | 5177.86     | 187.00                   | -2.58                       | 29.48 N                                   | 0.81 W   | 29.49@                            | 358.43 | 0.19              | 104.64      |
| 5365.00                   | 0.44          | 137.53                 | 5364.85     | 187.00                   | -1.67                       | 28.76 N                                   | 0.05 E   | 28.76@                            | 0.10   | 0.12              | 108.25      |
| 5552.00                   | 0.44          | 124.44                 | 5551.85     | 187.00                   | -0.54                       | 27.82 N                                   | 1.13 E   | 27.84@                            | 2.32   | 0.05              | 111.87      |
| 5647.00                   | 0.62          | 116.88                 | 5646.85     | 95.00                    | 0.24                        | 27.38 N                                   | 1.89 E   | 27.45@                            | 3.94   | 0.20              | 111.87      |
| 5804.00                   | 1.67          | 97.85                  | 5803.81     | 157.00                   | 3.30                        | 26.68 N                                   | 4.91 E   | 27.13@                            | 10.43  | 0.70              | 111.87      |
| 5835.00                   | 4.13          | 97.25                  | 5834.77     | 31.00                    | 4.87                        | 26.48 N                                   | 6.47 E   | 27.26@                            | 13.72  | 7.94              | 111.87      |
| 5867.00                   | 7.03          | 93.23                  | 5866.62     | 32.00                    | 7.97                        | 26.23 N                                   | 9.57 E   | 27.92@                            | 20.04  | 9.14              | 111.87      |
| 5899.00                   | 9.32          | 90.99                  | 5898.29     | 32.00                    | 12.52                       | 26.07 N                                   | 14.11 E  | 29.64@                            | 28.43  | 7.22              | 111.87      |
| 5931.00                   | 12.31         | 89.52                  | 5929.72     | 32.00                    | 18.52                       | 26.05 N                                   | 20.12 E  | 32.92@                            | 37.67  | 9.38              | 111.87      |
| 5962.00                   | 14.77         | 91.16                  | 5959.85     | 31.00                    | 25.76                       | 26.00 N                                   | 27.37 E  | 37.75@                            | 46.47  | 8.03              | 111.87      |
| 5994.00                   | 17.59         | 92.17                  | 5990.58     | 32.00                    | 34.67                       | 25.74 N                                   | 36.28 E  | 44.48@                            | 54.65  | 8.86              | 111.87      |
| 6026.00                   | 21.10         | 95.18                  | 6020.77     | 32.00                    | 45.27                       | 25.03 N                                   | 46.86 E  | 53.12@                            | 61.89  | 11.40             | 111.87      |
| 6058.00                   | 25.15         | 96.35                  | 6050.19     | 32.00                    | 57.82                       | 23.76 N                                   | 59.36 E  | 63.93@                            | 68.18  | 12.74             | 111.87      |
| 6090.00                   | 28.31         | 95.23                  | 6078.77     | 32.00                    | 72.20                       | 22.32 N                                   | 73.67 E  | 76.98@                            | 73.15  | 10.00             | 111.87      |
| 6121.00                   | 32.27         | 93.77                  | 6105.53     | 31.00                    | 87.83                       | 21.10 N                                   | 89.26 E  | 91.72@                            | 76.70  | 12.99             | 111.87      |
| 6153.00                   | 35.88         | 92.84                  | 6132.04     | 32.00                    | 105.76                      | 20.07 N                                   | 107.15 E | 109.02@                           | 79.39  | 11.40             | 111.87      |
| 6185.00                   | 39.66         | 92.13                  | 6157.33     | 32.00                    | 125.35                      | 19.23 N                                   | 126.73 E | 128.18@                           | 81.37  | 11.89             | 115.48      |
| 6216.00                   | 43.26         | 91.58                  | 6180.55     | 31.00                    | 145.86                      | 18.57 N                                   | 147.24 E | 148.41@                           | 82.81  | 11.67             | 115.48      |
| 6248.00                   | 47.04         | 91.93                  | 6203.12     | 32.00                    | 168.54                      | 17.87 N                                   | 169.91 E | 170.85@                           | 84.00  | 11.84             | 111.87      |
| 6280.00                   | 49.95         | 92.21                  | 6224.32     | 32.00                    | 192.49                      | 17.01 N                                   | 193.86 E | 194.60@                           | 84.99  | 9.12              | 115.48      |
| 6312.00                   | 53.99         | 92.54                  | 6244.03     | 32.00                    | 217.69                      | 15.96 N                                   | 219.04 E | 219.62@                           | 85.83  | 12.65             | 115.48      |
| 6343.00                   | 57.16         | 92.73                  | 6261.56     | 31.00                    | 243.25                      | 14.78 N                                   | 244.58 E | 245.03@                           | 86.54  | 10.24             | 115.48      |
| 6375.00                   | 60.15         | 93.43                  | 6278.20     | 32.00                    | 270.58                      | 13.31 N                                   | 271.87 E | 272.19@                           | 87.20  | 9.53              | 111.87      |
| 6407.00                   | 62.43         | 93.76                  | 6293.57     | 32.00                    | 298.64                      | 11.55 N                                   | 299.88 E | 300.10@                           | 87.79  | 7.18              | 108.25      |
| 6438.00                   | 64.63         | 93.94                  | 6307.39     | 31.00                    | 326.39                      | 9.69 N                                    | 327.56 E | 327.70@                           | 88.31  | 7.12              | 108.25      |

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Page 03/04

| Measured<br>Depth<br>(ft) | Incl<br>(deg) | Drift<br>Dir.<br>(deg) | TVD<br>(ft) | Course<br>Length<br>(ft) | Vertical<br>Section<br>(ft) | TOTAL<br>Rectangular Offsets<br>(ft) (ft) |           | Closure<br>Dist Dir<br>(ft) (deg) |       | DLS<br>(dg/100ft) | TEMP<br>(F) |
|---------------------------|---------------|------------------------|-------------|--------------------------|-----------------------------|-------------------------------------------|-----------|-----------------------------------|-------|-------------------|-------------|
| 6470.00                   | 66.92         | 93.33                  | 6320.52     | 32.00                    | 355.57                      | 7.84 N                                    | 356.68 E  | 356.77@                           | 88.74 | 7.36              | 104.64      |
| 6502.00                   | 69.03         | 93.55                  | 6332.52     | 32.00                    | 385.23                      | 6.06 N                                    | 386.29 E  | 386.34@                           | 89.10 | 6.62              | 104.64      |
| 6534.00                   | 71.31         | 94.14                  | 6343.37     | 32.00                    | 415.33                      | 4.04 N                                    | 416.32 E  | 416.34@                           | 89.44 | 7.33              | 108.25      |
| 6565.00                   | 73.25         | 94.61                  | 6352.81     | 31.00                    | 444.86                      | 1.79 N                                    | 445.77 E  | 445.77@                           | 89.77 | 6.42              | 104.64      |
| 6597.00                   | 75.53         | 94.73                  | 6361.42     | 32.00                    | 475.67                      | 0.72 S                                    | 476.48 E  | 476.48@                           | 90.09 | 7.13              | 104.64      |
| 6629.00                   | 79.32         | 94.93                  | 6368.38     | 32.00                    | 506.88                      | 3.35 S                                    | 507.60 E  | 507.61@                           | 90.38 | 11.86             | 104.64      |
| 6667.00                   | 85.30         | 94.28                  | 6373.47     | 38.00                    | 544.52                      | 6.37 S                                    | 545.12 E  | 545.15@                           | 90.67 | 15.83             | 104.64      |
| 6730.00                   | 89.69         | 93.56                  | 6376.22     | 63.00                    | 607.44                      | 10.67 S                                   | 607.89 E  | 607.99@                           | 91.01 | 7.06              | 108.25      |
| 6794.00                   | 90.31         | 93.62                  | 6376.22     | 64.00                    | 671.44                      | 14.68 S                                   | 671.77 E  | 671.93@                           | 91.25 | 0.97              | 108.25      |
| 6889.00                   | 88.99         | 94.60                  | 6376.80     | 95.00                    | 766.43                      | 21.49 S                                   | 766.52 E  | 766.82@                           | 91.61 | 1.73              | 111.87      |
| 6984.00                   | 87.23         | 95.02                  | 6379.93     | 95.00                    | 861.34                      | 29.45 S                                   | 861.13 E  | 861.63@                           | 91.96 | 1.91              | 111.87      |
| 7047.00                   | 87.23         | 95.12                  | 6382.98     | 63.00                    | 924.24                      | 35.01 S                                   | 923.81 E  | 924.47@                           | 92.17 | 0.16              | 111.87      |
| 7111.00                   | 87.14         | 94.98                  | 6386.12     | 64.00                    | 988.14                      | 40.64 S                                   | 987.48 E  | 988.32@                           | 92.36 | 0.26              | 111.87      |
| 7174.00                   | 87.23         | 95.57                  | 6389.21     | 63.00                    | 1051.03                     | 46.42 S                                   | 1050.14 E | 1051.17@                          | 92.53 | 0.95              | 111.87      |
| 7238.00                   | 87.14         | 95.31                  | 6392.36     | 64.00                    | 1114.92                     | 52.48 S                                   | 1113.77 E | 1115.01@                          | 92.70 | 0.43              | 111.87      |
| 7302.00                   | 86.97         | 95.28                  | 6395.64     | 64.00                    | 1178.80                     | 58.38 S                                   | 1177.42 E | 1178.86@                          | 92.84 | 0.27              | 111.87      |
| 7366.00                   | 87.58         | 95.80                  | 6398.69     | 64.00                    | 1242.68                     | 64.55 S                                   | 1241.05 E | 1242.72@                          | 92.98 | 1.25              | 111.87      |
| 7461.00                   | 87.05         | 95.89                  | 6403.14     | 95.00                    | 1337.50                     | 74.22 S                                   | 1335.45 E | 1337.51@                          | 93.18 | 0.57              | 111.87      |
| 7556.00                   | 87.76         | 94.35                  | 6407.44     | 95.00                    | 1432.35                     | 82.69 S                                   | 1429.97 E | 1432.36@                          | 93.31 | 1.78              | 111.87      |
| 7651.00                   | 86.44         | 94.01                  | 6412.25     | 95.00                    | 1527.22                     | 89.60 S                                   | 1524.59 E | 1527.22@                          | 93.36 | 1.44              | 111.87      |
| 7747.00                   | 86.79         | 94.25                  | 6417.91     | 96.00                    | 1623.05                     | 96.50 S                                   | 1620.18 E | 1623.05@                          | 93.41 | 0.44              | 115.48      |
| 7842.00                   | 87.41         | 94.56                  | 6422.72     | 95.00                    | 1717.91                     | 103.79 S                                  | 1714.77 E | 1717.91@                          | 93.46 | 0.73              | 115.48      |
| 7905.00                   | 86.44         | 94.51                  | 6426.10     | 63.00                    | 1780.81                     | 108.76 S                                  | 1777.49 E | 1780.81@                          | 93.50 | 1.54              | 115.48      |
| 7937.00                   | 85.47         | 94.24                  | 6428.36     | 32.00                    | 1812.72                     | 111.20 S                                  | 1809.31 E | 1812.73@                          | 93.52 | 3.15              | 115.48      |
| 8032.00                   | 87.41         | 93.77                  | 6434.26     | 95.00                    | 1907.53                     | 117.82 S                                  | 1903.89 E | 1907.53@                          | 93.54 | 2.10              | 115.48      |
| 8096.00                   | 87.85         | 94.02                  | 6436.90     | 64.00                    | 1971.47                     | 122.17 S                                  | 1967.69 E | 1971.48@                          | 93.55 | 0.79              | 115.48      |
| 8159.00                   | 87.58         | 93.78                  | 6439.41     | 63.00                    | 2034.42                     | 126.45 S                                  | 2030.49 E | 2034.43@                          | 93.56 | 0.57              | 115.48      |
| 8223.00                   | 87.85         | 93.56                  | 6441.96     | 64.00                    | 2098.37                     | 130.54 S                                  | 2094.31 E | 2098.38@                          | 93.57 | 0.54              | 115.48      |
| 8286.00                   | 87.93         | 93.79                  | 6444.28     | 63.00                    | 2161.33                     | 134.58 S                                  | 2157.14 E | 2161.33@                          | 93.57 | 0.39              | 115.48      |

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## Survey Report

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RIG:MCVAY 4

Page 04/04

| Measured<br>Depth<br>(ft) | Incl<br>(deg) | Drift<br>Dir.<br>(deg) | TVD<br>(ft) | Course<br>Length<br>(ft) | Vertical<br>Section<br>(ft) | TOTAL<br>Rectangular Offsets<br>(ft) (ft) |           | Closure<br>Dist Dir<br>(ft) (deg) |       | DLS<br>(dg/100ft) | TEMP<br>(F) |
|---------------------------|---------------|------------------------|-------------|--------------------------|-----------------------------|-------------------------------------------|-----------|-----------------------------------|-------|-------------------|-------------|
| 8350.00                   | 88.37         | 93.73                  | 6446.35     | 64.00                    | 2225.29                     | 138.77 S                                  | 2220.97 E | 2225.30@                          | 93.58 | 0.69              | 115.48      |
| 8445.00                   | 89.52         | 94.17                  | 6448.10     | 95.00                    | 2320.27                     | 145.31 S                                  | 2315.72 E | 2320.28@                          | 93.59 | 1.30              | 115.48      |
| 8541.00                   | 89.52         | 93.83                  | 6448.90     | 96.00                    | 2416.26                     | 152.01 S                                  | 2411.49 E | 2416.27@                          | 93.61 | 0.35              | 115.48      |
| 8636.00                   | 89.25         | 93.26                  | 6449.92     | 95.00                    | 2511.26                     | 157.88 S                                  | 2506.30 E | 2511.27@                          | 93.60 | 0.66              | 119.09      |
| 8763.00                   | 90.66         | 93.01                  | 6450.02     | 127.00                   | 2638.25                     | 164.83 S                                  | 2633.11 E | 2638.26@                          | 93.58 | 1.13              | 119.09      |
| 8858.00                   | 91.45         | 93.97                  | 6448.27     | 95.00                    | 2733.23                     | 170.61 S                                  | 2727.91 E | 2733.24@                          | 93.58 | 1.31              | 119.09      |
| 8954.00                   | 89.69         | 93.88                  | 6447.32     | 96.00                    | 2829.22                     | 177.18 S                                  | 2823.68 E | 2829.23@                          | 93.59 | 1.84              | 119.09      |
| 9049.00                   | 89.16         | 92.80                  | 6448.27     | 95.00                    | 2924.22                     | 182.72 S                                  | 2918.51 E | 2924.22@                          | 93.58 | 1.27              | 119.09      |
| 9080.00                   | 89.87         | 93.03                  | 6448.54     | 31.00                    | 2955.21                     | 184.29 S                                  | 2949.47 E | 2955.22@                          | 93.58 | 2.41              | 119.09      |
| 9175.00                   | 89.16         | 92.17                  | 6449.34     | 95.00                    | 3050.20                     | 188.60 S                                  | 3044.37 E | 3050.20@                          | 93.54 | 1.17              | 115.48      |
| 9270.00                   | 87.32         | 90.59                  | 6452.26     | 95.00                    | 3145.08                     | 190.89 S                                  | 3139.29 E | 3145.09@                          | 93.48 | 2.55              | 115.48      |
| 9365.00                   | 88.64         | 90.85                  | 6455.61     | 95.00                    | 3239.92                     | 192.08 S                                  | 3234.22 E | 3239.92@                          | 93.40 | 1.42              | 115.48      |
| 9429.00                   | 89.43         | 91.43                  | 6456.68     | 64.00                    | 3303.85                     | 193.35 S                                  | 3298.20 E | 3303.86@                          | 93.36 | 1.53              | 119.09      |
| 9492.00                   | 89.87         | 91.57                  | 6457.07     | 63.00                    | 3366.82                     | 195.00 S                                  | 3361.17 E | 3366.82@                          | 93.32 | 0.73              | 119.09      |
| 9556.00                   | 89.78         | 91.60                  | 6457.26     | 64.00                    | 3430.78                     | 196.77 S                                  | 3425.15 E | 3430.80@                          | 93.29 | 0.15              | 119.09      |
| 9620.00                   | 89.43         | 91.82                  | 6457.71     | 64.00                    | 3494.75                     | 198.68 S                                  | 3489.12 E | 3494.77@                          | 93.26 | 0.65              | 119.09      |
| 9715.00                   | 89.34         | 92.25                  | 6458.72     | 95.00                    | 3589.72                     | 202.06 S                                  | 3584.05 E | 3589.74@                          | 93.23 | 0.46              | 119.09      |
| 9810.00                   | 88.72         | 92.53                  | 6460.33     | 95.00                    | 3684.69                     | 206.02 S                                  | 3678.96 E | 3684.72@                          | 93.21 | 0.72              | 119.09      |
| 9906.00                   | 88.37         | 93.47                  | 6462.77     | 96.00                    | 3780.65                     | 211.04 S                                  | 3774.79 E | 3780.69@                          | 93.20 | 1.04              | 119.09      |
| 10001.00                  | 87.93         | 93.36                  | 6465.84     | 95.00                    | 3875.60                     | 216.70 S                                  | 3869.57 E | 3875.64@                          | 93.21 | 0.48              | 119.09      |
| 10096.00                  | 88.02         | 93.69                  | 6469.19     | 95.00                    | 3970.54                     | 222.53 S                                  | 3964.33 E | 3970.58@                          | 93.21 | 0.36              | 119.09      |
| 10191.00                  | 88.29         | 93.70                  | 6472.25     | 95.00                    | 4065.49                     | 228.65 S                                  | 4059.09 E | 4065.52@                          | 93.22 | 0.28              | 119.09      |
| 10286.00                  | 88.99         | 94.24                  | 6474.51     | 95.00                    | 4160.46                     | 235.23 S                                  | 4153.83 E | 4160.49@                          | 93.24 | 0.93              | 119.09      |
| 10381.00                  | 89.78         | 94.62                  | 6475.53     | 95.00                    | 4255.44                     | 242.57 S                                  | 4248.54 E | 4255.46@                          | 93.27 | 0.92              | 119.09      |
| 10477.00                  | 90.31         | 95.03                  | 6475.45     | 96.00                    | 4351.41                     | 250.64 S                                  | 4344.20 E | 4351.43@                          | 93.30 | 0.70              | 119.09      |
| 10572.00                  | 90.48         | 95.20                  | 6474.80     | 95.00                    | 4446.37                     | 259.11 S                                  | 4438.82 E | 4446.38@                          | 93.34 | 0.25              | 119.09      |
| 10667.00                  | 90.75         | 95.27                  | 6473.78     | 95.00                    | 4541.32                     | 267.78 S                                  | 4533.42 E | 4541.32@                          | 93.38 | 0.29              | 122.71      |
| 10762.00                  | 91.19         | 95.52                  | 6472.17     | 95.00                    | 4636.25                     | 276.71 S                                  | 4627.98 E | 4636.25@                          | 93.42 | 0.53              | 122.71      |
| 10858.00                  | 91.01         | 94.99                  | 6470.33     | 96.00                    | 4732.18                     | 285.50 S                                  | 4723.56 E | 4732.18@                          | 93.46 | 0.58              | 122.71      |

PathFinder Energy Services, Inc.  
Survey Report

EOG PETROLEUM, INC.  
LUCKY WOLF 30 FC#2H  
EDDY COUNTY, NM  
RIG:MCVAY 4

Page 05/04

| Measured<br>Depth<br>(ft)                    | Incl<br>(deg) | Drift<br>Dir.<br>(deg) | TVD<br>(ft) | Course<br>Length<br>(ft) | Vertical<br>Section<br>(ft) | TOTAL<br>Rectangular Offsets<br>(ft) (ft) |           | Closure<br>Dist Dir<br>(ft) (deg) |       | DLS<br>(dg/100ft) | TEMP<br>(F) |
|----------------------------------------------|---------------|------------------------|-------------|--------------------------|-----------------------------|-------------------------------------------|-----------|-----------------------------------|-------|-------------------|-------------|
| 10905.00                                     | 88.29         | 93.06                  | 6470.61     | 47.00                    | 4779.17                     | 288.80 S                                  | 4770.44 E | 4779.17@                          | 93.46 | 7.10              | 122.71      |
| STRAIGHT LINE PROJECTION TO BIT @ 10980' MD. |               |                        |             |                          |                             |                                           |           |                                   |       |                   |             |
| 10980.00                                     | 88.29         | 93.06                  | 6472.85     | 75.00                    | 4854.14                     | 292.80 S                                  | 4845.30 E | 4854.14@                          | 93.46 | 0.00              | 122.70      |