



## Marbob

Eddy County  
Myox 21 State Com  
#8H  
OH

Plan: Plan #1

## Pathfinder X & Y Planning Report

17 May, 2010

*MR*



# PATHFINDER

30 015 37034



Pathfinder  
Pathfinder X & Y Planning Report



|           |                   |                              |                            |
|-----------|-------------------|------------------------------|----------------------------|
| Company:  | Marbob            | Local Co-ordinate Reference: | Well #8H                   |
| Project:  | Eddy County       | TVD Reference:               | WELL @ 3021.00ft (17' KB ) |
| Site:     | Myox 21 State Com | MD Reference:                | WELL @ 3021.00ft (17' KB ) |
| Well:     | #8H               | North Reference:             | Grid                       |
| Wellbore: | OH                | Survey Calculation Method:   | Minimum Curvature          |
| Design:   | Plan #1           | Database:                    | Midland Database           |

|             |                                      |               |                |
|-------------|--------------------------------------|---------------|----------------|
| Project     | Eddy County                          |               |                |
| Map System: | US State Plane 1927 (Exact solution) | System Datum: | Mean Sea Level |
| Geo Datum:  | NAD 1927 (NADCON CONUS)              |               |                |
| Map Zone:   | New Mexico East 3001                 |               |                |

|                       |                   |              |                |                   |                  |
|-----------------------|-------------------|--------------|----------------|-------------------|------------------|
| Site                  | Myox 21 State Com |              |                |                   |                  |
| Site Position:        |                   | Northing:    | 407,692.600 ft | Latitude:         | 32° 7' 14.329 N  |
| From:                 | Map               | Easting:     | 572,457.100 ft | Longitude:        | 104° 5' 57.444 W |
| Position Uncertainty: | 0.00 ft           | Slot Radius: | "              | Grid Convergence: | 0.12 °           |

|                      |       |         |                     |                |               |                  |
|----------------------|-------|---------|---------------------|----------------|---------------|------------------|
| Well                 | #8H   |         |                     |                |               |                  |
| Well Position        | +N/-S | 0.00 ft | Northing:           | 407,692.600 ft | Latitude:     | 32° 7' 14.329 N  |
|                      | +E/-W | 0.00 ft | Easting:            | 572,457.100 ft | Longitude:    | 104° 5' 57.444 W |
| Position Uncertainty |       | 0.00 ft | Wellhead Elevation: | ft             | Ground Level: | 3,004.00 ft      |

|           |            |             |                 |               |                     |
|-----------|------------|-------------|-----------------|---------------|---------------------|
| Wellbore  | OH         |             |                 |               |                     |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|           | IGRF200510 | 05/17/2010  | 7.94            | 60.04         | 48,637              |

|                   |                       |            |               |               |
|-------------------|-----------------------|------------|---------------|---------------|
| Design            | Plan #1               |            |               |               |
| Audit Notes:      |                       |            |               |               |
| Version:          | Phase:                | PLAN       | Tie On Depth: | 0.00          |
| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft)    | Direction (°) |
|                   | 0.00                  | 0.00       | 0.00          | 175.11        |

|                     |           |                   |           |                |
|---------------------|-----------|-------------------|-----------|----------------|
| Survey Tool Program | Date      | 05/17/2010        |           |                |
| From (ft)           | To (ft)   | Survey (Wellbore) | Tool Name | Description    |
| 0.00                | 10,753.28 | Plan #1 (OH)      | MWD       | MWD - Standard |



# Pathfinder

Pathfinder X & Y Planning Report



|                  |                   |                                     |                            |
|------------------|-------------------|-------------------------------------|----------------------------|
| <b>Company:</b>  | Marbob            | <b>Local Co-ordinate Reference:</b> | Well #8H                   |
| <b>Project:</b>  | Eddy County       | <b>TVD Reference:</b>               | WELL @ 3021.00ft (17' KB ) |
| <b>Site:</b>     | Myox 21 State Com | <b>MD Reference:</b>                | WELL @ 3021.00ft (17' KB ) |
| <b>Well:</b>     | #8H               | <b>North Reference:</b>             | Grid                       |
| <b>Wellbore:</b> | OH                | <b>Survey Calculation Method:</b>   | Minimum Curvature          |
| <b>Design:</b>   | Plan #1           | <b>Database:</b>                    | Midland Database           |

| Planned Survey |            |            |             |               |             |             |                |                   |                  |                 |
|----------------|------------|------------|-------------|---------------|-------------|-------------|----------------|-------------------|------------------|-----------------|
| MD<br>(ft)     | Inc<br>(°) | Azi<br>(°) | TVD<br>(ft) | TVDSS<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | DLeg<br>(°/100ft) | Northing<br>(ft) | Easting<br>(ft) |
| 0.00           | 0.00       | 0.00       | 0.00        | -3,021.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 100.00         | 0.00       | 0.00       | 100.00      | -2,921.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 200.00         | 0.00       | 0.00       | 200.00      | -2,821.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 300.00         | 0.00       | 0.00       | 300.00      | -2,721.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 400.00         | 0.00       | 0.00       | 400.00      | -2,621.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 500.00         | 0.00       | 0.00       | 500.00      | -2,521.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 600.00         | 0.00       | 0.00       | 600.00      | -2,421.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 700.00         | 0.00       | 0.00       | 700.00      | -2,321.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 800.00         | 0.00       | 0.00       | 800.00      | -2,221.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 900.00         | 0.00       | 0.00       | 900.00      | -2,121.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 1,000.00       | 0.00       | 0.00       | 1,000.00    | -2,021.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 1,100.00       | 0.00       | 0.00       | 1,100.00    | -1,921.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 1,200.00       | 0.00       | 0.00       | 1,200.00    | -1,821.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 1,300.00       | 0.00       | 0.00       | 1,300.00    | -1,721.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 1,400.00       | 0.00       | 0.00       | 1,400.00    | -1,621.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 1,500.00       | 0.00       | 0.00       | 1,500.00    | -1,521.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 1,600.00       | 0.00       | 0.00       | 1,600.00    | -1,421.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 1,700.00       | 0.00       | 0.00       | 1,700.00    | -1,321.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 1,800.00       | 0.00       | 0.00       | 1,800.00    | -1,221.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 1,900.00       | 0.00       | 0.00       | 1,900.00    | -1,121.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 2,000.00       | 0.00       | 0.00       | 2,000.00    | -1,021.00     | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 2,100.00       | 0.00       | 0.00       | 2,100.00    | -921.00       | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 2,200.00       | 0.00       | 0.00       | 2,200.00    | -821.00       | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 2,300.00       | 0.00       | 0.00       | 2,300.00    | -721.00       | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 2,400.00       | 0.00       | 0.00       | 2,400.00    | -621.00       | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 2,500.00       | 0.00       | 0.00       | 2,500.00    | -521.00       | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |
| 2,600.00       | 0.00       | 0.00       | 2,600.00    | -421.00       | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |



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| Site:     | Myox 21 State Com | MD Reference:                | WELL @ 3021.00ft (17' KB ) |
| Well:     | #8H               | North Reference:             | Grid                       |
| Wellbore: | OH                | Survey Calculation Method:   | Minimum Curvature          |
| Design:   | Plan #1           | Database:                    | Midland Database           |

| Planned Survey |             |            |             |               |             |             |                |                   |                  |                 |  |
|----------------|-------------|------------|-------------|---------------|-------------|-------------|----------------|-------------------|------------------|-----------------|--|
| MD<br>(ft)     | Incl<br>(°) | Azi<br>(°) | TVD<br>(ft) | TVDSS<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | DLeg<br>(°/100ft) | Northing<br>(ft) | Easting<br>(ft) |  |
| 2,700.00       | 0.00        | 0.00       | 2,700.00    | -321.00       | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 2,800.00       | 0.00        | 0.00       | 2,800.00    | -221.00       | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 2,900.00       | 0.00        | 0.00       | 2,900.00    | -121.00       | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 3,000.00       | 0.00        | 0.00       | 3,000.00    | -21.00        | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 3,100.00       | 0.00        | 0.00       | 3,100.00    | 79.00         | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 3,200.00       | 0.00        | 0.00       | 3,200.00    | 179.00        | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 3,300.00       | 0.00        | 0.00       | 3,300.00    | 279.00        | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 3,400.00       | 0.00        | 0.00       | 3,400.00    | 379.00        | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 3,500.00       | 0.00        | 0.00       | 3,500.00    | 479.00        | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 3,600.00       | 0.00        | 0.00       | 3,600.00    | 579.00        | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 3,700.00       | 0.00        | 0.00       | 3,700.00    | 679.00        | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 3,800.00       | 0.00        | 0.00       | 3,800.00    | 779.00        | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 3,900.00       | 0.00        | 0.00       | 3,900.00    | 879.00        | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 4,000.00       | 0.00        | 0.00       | 4,000.00    | 979.00        | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 4,100.00       | 0.00        | 0.00       | 4,100.00    | 1,079.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 4,200.00       | 0.00        | 0.00       | 4,200.00    | 1,179.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 4,300.00       | 0.00        | 0.00       | 4,300.00    | 1,279.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 4,400.00       | 0.00        | 0.00       | 4,400.00    | 1,379.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 4,500.00       | 0.00        | 0.00       | 4,500.00    | 1,479.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 4,600.00       | 0.00        | 0.00       | 4,600.00    | 1,579.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 4,700.00       | 0.00        | 0.00       | 4,700.00    | 1,679.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 4,800.00       | 0.00        | 0.00       | 4,800.00    | 1,779.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 4,900.00       | 0.00        | 0.00       | 4,900.00    | 1,879.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 5,000.00       | 0.00        | 0.00       | 5,000.00    | 1,979.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 5,100.00       | 0.00        | 0.00       | 5,100.00    | 2,079.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 5,200.00       | 0.00        | 0.00       | 5,200.00    | 2,179.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 5,300.00       | 0.00        | 0.00       | 5,300.00    | 2,279.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |



**Pathfinder**  
Pathfinder X & Y Planning Report



|                  |                   |                                     |                           |
|------------------|-------------------|-------------------------------------|---------------------------|
| <b>Company:</b>  | Marbob            | <b>Local Co-ordinate Reference:</b> | Well #8H                  |
| <b>Project:</b>  | Eddy County       | <b>TVD Reference:</b>               | WELL @ 3021.00ft (17' KB) |
| <b>Site:</b>     | Myox 21 State Com | <b>MD Reference:</b>                | WELL @ 3021.00ft (17' KB) |
| <b>Well:</b>     | #8H               | <b>North Reference:</b>             | Grid                      |
| <b>Wellbore:</b> | OH                | <b>Survey Calculation Method:</b>   | Minimum Curvature         |
| <b>Design:</b>   | Plan #1           | <b>Database:</b>                    | Midland Database          |

| Planned Survey |            |            |             |               |             |             |                |                   |                  |                 |  |
|----------------|------------|------------|-------------|---------------|-------------|-------------|----------------|-------------------|------------------|-----------------|--|
| MD<br>(ft)     | Inc<br>(°) | Azi<br>(°) | TVD<br>(ft) | TVDSS<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | DLeg<br>(°/100ft) | Northing<br>(ft) | Easting<br>(ft) |  |
| 5,400.00       | 0.00       | 0.00       | 5,400.00    | 2,379.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 5,500.00       | 0.00       | 0.00       | 5,500.00    | 2,479.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 5,600.00       | 0.00       | 0.00       | 5,600.00    | 2,579.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 5,700.00       | 0.00       | 0.00       | 5,700.00    | 2,679.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 5,800.00       | 0.00       | 0.00       | 5,800.00    | 2,779.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 5,900.00       | 0.00       | 0.00       | 5,900.00    | 2,879.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 6,000.00       | 0.00       | 0.00       | 6,000.00    | 2,979.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 6,100.00       | 0.00       | 0.00       | 6,100.00    | 3,079.00      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 6,197.50       | 0.00       | 0.00       | 6,197.50    | 3,176.50      | 0.00        | 0.00        | 0.00           | 0.00              | 407,692.60       | 572,457.10      |  |
| 6,200.00       | 0.30       | 175.11     | 6,200.00    | 3,179.00      | -0.01       | 0.00        | 0.01           | 12.00             | 407,692.59       | 572,457.10      |  |
| 6,225.00       | 3.30       | 175.11     | 6,224.98    | 3,203.98      | -0.79       | 0.07        | 0.79           | 12.00             | 407,691.81       | 572,457.17      |  |
| 6,250.00       | 6.30       | 175.11     | 6,249.89    | 3,228.89      | -2.87       | 0.25        | 2.88           | 12.00             | 407,689.73       | 572,457.35      |  |
| 6,275.00       | 9.30       | 175.11     | 6,274.66    | 3,253.66      | -6.25       | 0.53        | 6.28           | 12.00             | 407,686.35       | 572,457.63      |  |
| 6,300.00       | 12.30      | 175.11     | 6,299.21    | 3,278.21      | -10.92      | 0.93        | 10.96          | 12.00             | 407,681.68       | 572,458.03      |  |
| 6,325.00       | 15.30      | 175.11     | 6,323.49    | 3,302.49      | -16.86      | 1.44        | 16.92          | 12.00             | 407,675.74       | 572,458.54      |  |
| 6,350.00       | 18.30      | 175.11     | 6,347.42    | 3,326.42      | -24.06      | 2.06        | 24.15          | 12.00             | 407,668.54       | 572,459.16      |  |
| 6,375.00       | 21.30      | 175.11     | 6,370.94    | 3,349.94      | -32.49      | 2.78        | 32.61          | 12.00             | 407,660.11       | 572,459.88      |  |
| 6,400.00       | 24.30      | 175.11     | 6,393.98    | 3,372.98      | -42.14      | 3.61        | 42.30          | 12.00             | 407,650.46       | 572,460.71      |  |
| 6,425.00       | 27.30      | 175.11     | 6,416.49    | 3,395.49      | -52.98      | 4.53        | 53.18          | 12.00             | 407,639.62       | 572,461.63      |  |
| 6,450.00       | 30.30      | 175.11     | 6,438.40    | 3,417.40      | -64.98      | 5.56        | 65.22          | 12.00             | 407,627.62       | 572,462.66      |  |
| 6,475.00       | 33.30      | 175.11     | 6,459.64    | 3,438.64      | -78.11      | 6.68        | 78.39          | 12.00             | 407,614.49       | 572,463.78      |  |
| 6,500.00       | 36.30      | 175.11     | 6,480.17    | 3,459.17      | -92.32      | 7.90        | 92.66          | 12.00             | 407,600.28       | 572,465.00      |  |
| 6,525.00       | 39.30      | 175.11     | 6,499.92    | 3,478.92      | -107.58     | 9.20        | 107.98         | 12.00             | 407,585.02       | 572,466.30      |  |
| 6,550.00       | 42.30      | 175.11     | 6,518.84    | 3,497.84      | -123.86     | 10.60       | 124.31         | 12.00             | 407,568.74       | 572,467.70      |  |
| 6,575.00       | 45.30      | 175.11     | 6,536.89    | 3,515.89      | -141.09     | 12.07       | 141.61         | 12.00             | 407,551.51       | 572,469.17      |  |
| 6,600.00       | 48.30      | 175.11     | 6,554.00    | 3,533.00      | -159.25     | 13.62       | 159.83         | 12.00             | 407,533.35       | 572,470.72      |  |
| 6,625.00       | 51.30      | 175.11     | 6,570.14    | 3,549.14      | -178.27     | 15.25       | 178.92         | 12.00             | 407,514.33       | 572,472.35      |  |



# Pathfinder

Pathfinder X & Y Planning Report



|                  |                   |                                     |                            |
|------------------|-------------------|-------------------------------------|----------------------------|
| <b>Company:</b>  | Marbob            | <b>Local Co-ordinate Reference:</b> | Well #8H                   |
| <b>Project:</b>  | Eddy County       | <b>TVD Reference:</b>               | WELL @ 3021.00ft (17' KB ) |
| <b>Site:</b>     | Myox 21 State Com | <b>MD Reference:</b>                | WELL @ 3021.00ft (17' KB ) |
| <b>Well:</b>     | #8H               | <b>North Reference:</b>             | Grid                       |
| <b>Wellbore:</b> | OH                | <b>Survey Calculation Method:</b>   | Minimum Curvature          |
| <b>Design:</b>   | Plan #1           | <b>Database:</b>                    | Midland Database           |

| Planned Survey |            |            |             |               |             |             |                |                   |                  |                 |  |
|----------------|------------|------------|-------------|---------------|-------------|-------------|----------------|-------------------|------------------|-----------------|--|
| MD<br>(ft)     | Inc<br>(°) | Azi<br>(°) | TVD<br>(ft) | TVDSS<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | DLeg<br>(°/100ft) | Northing<br>(ft) | Easting<br>(ft) |  |
| 6,650.00       | 54.30      | 175.11     | 6,585.25    | 3,564.25      | -198.11     | 16.95       | 198.83         | 12.00             | 407,494.49       | 572,474.05      |  |
| 6,675.00       | 57.30      | 175.11     | 6,599.30    | 3,578.30      | -218.71     | 18.71       | 219.51         | 12.00             | 407,473.89       | 572,475.81      |  |
| 6,700.00       | 60.30      | 175.11     | 6,612.25    | 3,591.25      | -240.01     | 20.53       | 240.89         | 12.00             | 407,452.59       | 572,477.63      |  |
| 6,725.00       | 63.30      | 175.11     | 6,624.07    | 3,603.07      | -261.96     | 22.41       | 262.92         | 12.00             | 407,430.64       | 572,479.51      |  |
| 6,750.00       | 66.30      | 175.11     | 6,634.71    | 3,613.71      | -284.49     | 24.34       | 285.53         | 12.00             | 407,408.11       | 572,481.44      |  |
| 6,775.00       | 69.29      | 175.11     | 6,644.16    | 3,623.16      | -307.55     | 26.31       | 308.68         | 12.00             | 407,385.05       | 572,483.41      |  |
| 6,800.00       | 72.29      | 175.11     | 6,652.38    | 3,631.38      | -331.07     | 28.32       | 332.28         | 12.00             | 407,361.53       | 572,485.42      |  |
| 6,825.00       | 75.29      | 175.11     | 6,659.36    | 3,638.36      | -354.99     | 30.37       | 356.29         | 12.00             | 407,337.61       | 572,487.47      |  |
| 6,850.00       | 78.29      | 175.11     | 6,665.07    | 3,644.07      | -379.24     | 32.45       | 380.62         | 12.00             | 407,313.36       | 572,489.55      |  |
| 6,875.00       | 81.29      | 175.11     | 6,669.50    | 3,648.50      | -403.75     | 34.54       | 405.22         | 12.00             | 407,288.85       | 572,491.64      |  |
| 6,900.00       | 84.29      | 175.11     | 6,672.63    | 3,651.63      | -428.46     | 36.66       | 430.02         | 12.00             | 407,264.14       | 572,493.76      |  |
| 6,925.00       | 87.29      | 175.11     | 6,674.47    | 3,653.47      | -453.30     | 38.78       | 454.95         | 12.00             | 407,239.30       | 572,495.88      |  |
| 6,947.56       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -475.76     | 40.70       | 477.50         | 12.00             | 407,216.84       | 572,497.80      |  |
| 7,000.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -528.02     | 45.17       | 529.94         | 0.00              | 407,164.58       | 572,502.27      |  |
| 7,100.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -627.65     | 53.70       | 629.94         | 0.00              | 407,064.95       | 572,510.80      |  |
| 7,200.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -727.29     | 62.22       | 729.94         | 0.00              | 406,965.31       | 572,519.32      |  |
| 7,300.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -826.92     | 70.75       | 829.94         | 0.00              | 406,865.68       | 572,527.85      |  |
| 7,400.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -926.56     | 79.27       | 929.94         | 0.00              | 406,766.04       | 572,536.37      |  |
| 7,500.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -1,026.20   | 87.80       | 1,029.94       | 0.00              | 406,666.40       | 572,544.90      |  |
| 7,600.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -1,125.83   | 96.32       | 1,129.94       | 0.00              | 406,566.77       | 572,553.42      |  |
| 7,700.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -1,225.47   | 104.84      | 1,229.94       | 0.00              | 406,467.13       | 572,561.94      |  |
| 7,800.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -1,325.10   | 113.37      | 1,329.94       | 0.00              | 406,367.50       | 572,570.47      |  |
| 7,900.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -1,424.74   | 121.89      | 1,429.94       | 0.00              | 406,267.86       | 572,578.99      |  |
| 8,000.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -1,524.38   | 130.42      | 1,529.94       | 0.00              | 406,168.22       | 572,587.52      |  |
| 8,100.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -1,624.01   | 138.94      | 1,629.94       | 0.00              | 406,068.59       | 572,596.04      |  |
| 8,200.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -1,723.65   | 147.47      | 1,729.94       | 0.00              | 405,968.95       | 572,604.57      |  |
| 8,300.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -1,823.28   | 155.99      | 1,829.94       | 0.00              | 405,869.32       | 572,613.09      |  |



Pathfinder  
Pathfinder X & Y Planning Report



|           |                   |                              |                           |
|-----------|-------------------|------------------------------|---------------------------|
| Company:  | Marbob            | Local Co-ordinate Reference: | Well #8H                  |
| Project:  | Eddy County       | TVD Reference:               | WELL @ 3021.00ft (17' KB) |
| Site:     | Myox 21 State Com | MD Reference:                | WELL @ 3021.00ft (17' KB) |
| Well:     | #8H               | North Reference:             | Grid                      |
| Wellbore: | OH                | Survey Calculation Method:   | Minimum Curvature         |
| Design:   | Plan #1           | Database:                    | Midland Database          |

| Planned Survey |            |            |             |               |             |             |                |                   |                  |                 |
|----------------|------------|------------|-------------|---------------|-------------|-------------|----------------|-------------------|------------------|-----------------|
| MD<br>(ft)     | Inc<br>(°) | Azi<br>(°) | TVD<br>(ft) | TVDSS<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | DLeg<br>(°/100ft) | Northing<br>(ft) | Easting<br>(ft) |
| 8,400.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -1,922.92   | 164.51      | 1,929.94       | 0.00              | 405,769.68       | 572,621.61      |
| 8,500.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -2,022.56   | 173.04      | 2,029.94       | 0.00              | 405,670.04       | 572,630.14      |
| 8,600.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -2,122.19   | 181.56      | 2,129.94       | 0.00              | 405,570.41       | 572,638.66      |
| 8,700.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -2,221.83   | 190.09      | 2,229.94       | 0.00              | 405,470.77       | 572,647.19      |
| 8,800.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -2,321.46   | 198.61      | 2,329.94       | 0.00              | 405,371.14       | 572,655.71      |
| 8,900.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -2,421.10   | 207.14      | 2,429.94       | 0.00              | 405,271.50       | 572,664.24      |
| 9,000.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -2,520.74   | 215.66      | 2,529.94       | 0.00              | 405,171.86       | 572,672.76      |
| 9,100.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -2,620.37   | 224.18      | 2,629.94       | 0.00              | 405,072.23       | 572,681.28      |
| 9,200.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -2,720.01   | 232.71      | 2,729.94       | 0.00              | 404,972.59       | 572,689.81      |
| 9,300.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -2,819.64   | 241.23      | 2,829.94       | 0.00              | 404,872.96       | 572,698.33      |
| 9,400.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -2,919.28   | 249.76      | 2,929.94       | 0.00              | 404,773.32       | 572,706.86      |
| 9,500.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -3,018.92   | 258.28      | 3,029.94       | 0.00              | 404,673.68       | 572,715.38      |
| 9,600.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -3,118.55   | 266.81      | 3,129.94       | 0.00              | 404,574.05       | 572,723.91      |
| 9,700.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -3,218.19   | 275.33      | 3,229.94       | 0.00              | 404,474.41       | 572,732.43      |
| 9,800.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -3,317.82   | 283.85      | 3,329.94       | 0.00              | 404,374.78       | 572,740.95      |
| 9,900.00       | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -3,417.46   | 292.38      | 3,429.94       | 0.00              | 404,275.14       | 572,749.48      |
| 10,000.00      | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -3,517.10   | 300.90      | 3,529.94       | 0.00              | 404,175.50       | 572,758.00      |
| 10,100.00      | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -3,616.73   | 309.43      | 3,629.94       | 0.00              | 404,075.87       | 572,766.53      |
| 10,200.00      | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -3,716.37   | 317.95      | 3,729.94       | 0.00              | 403,976.23       | 572,775.05      |
| 10,300.00      | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -3,816.00   | 326.48      | 3,829.94       | 0.00              | 403,876.60       | 572,783.58      |
| 10,400.00      | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -3,915.64   | 335.00      | 3,929.94       | 0.00              | 403,776.96       | 572,792.10      |
| 10,500.00      | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -4,015.28   | 343.52      | 4,029.94       | 0.00              | 403,677.32       | 572,800.62      |
| 10,600.00      | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -4,114.91   | 352.05      | 4,129.94       | 0.00              | 403,577.69       | 572,809.15      |
| 10,700.00      | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -4,214.55   | 360.57      | 4,229.94       | 0.00              | 403,478.05       | 572,817.67      |
| 10,753.28      | 90.00      | 175.11     | 6,675.00    | 3,654.00      | -4,267.64   | 365.12      | 4,283.23       | 0.00              | 403,424.96       | 572,822.22      |



Pathfinder  
Pathfinder X & Y Planning Report



|           |                   |                              |                            |
|-----------|-------------------|------------------------------|----------------------------|
| Company:  | Marbob            | Local Co-ordinate Reference: | Well #8H                   |
| Project:  | Eddy County       | TVD Reference:               | WELL @ 3021.00ft (17' KB ) |
| Site:     | Myox 21 State Com | MD Reference:                | WELL @ 3021.00ft (17' KB ) |
| Well:     | #8H               | North Reference:             | Grid                       |
| Wellbore: | OH                | Survey Calculation Method:   | Minimum Curvature          |
| Design:   | Plan #1           | Database:                    | Midland Database           |

| Targets                   |           |          |          |           |        |             |             |                 |                  |
|---------------------------|-----------|----------|----------|-----------|--------|-------------|-------------|-----------------|------------------|
| Target Name               | Dip Angle | Dip Dir. | TVD      | +N/-S     | +E/-W  | Northing    | Easting     | Latitude        | Longitude        |
| - hit/miss target         | (°)       | (°)      | (ft)     | (ft)      | (ft)   | (ft)        | (ft)        |                 |                  |
| - Shape                   |           |          |          |           |        |             |             |                 |                  |
| PBHL(Myox#8H)             | 0.00      | 0.00     | 6,675.00 | -4,267.70 | 364.40 | 403,424.900 | 572,821.500 | 32° 6' 32.086 N | 104° 5' 53.315 W |
| - plan hits target center |           |          |          |           |        |             |             |                 |                  |
| - Point                   |           |          |          |           |        |             |             |                 |                  |

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



Project: Eddy County  
Site: Myox 21 State Con  
Well: #8H  
Wellbore: OH  
Plan: Plan #1 (#8H/OH)



Azimuths to Grid North  
True North: -0.12°  
Magnetic North: 7.81°

Magnetic Field  
Strength: 48637.0snT  
Dip Angle: 60.04°  
Date: 05/17/2010  
Model: IGRF200510

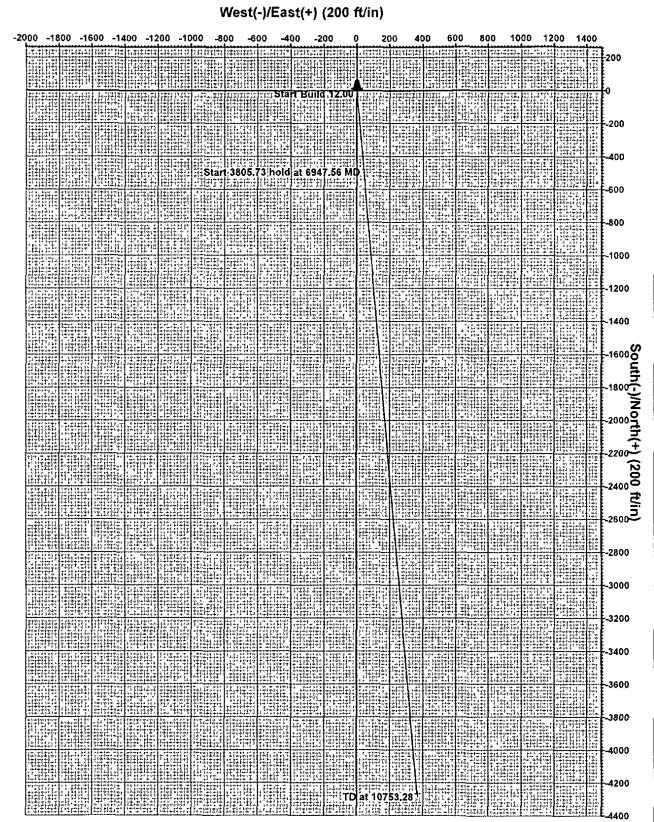
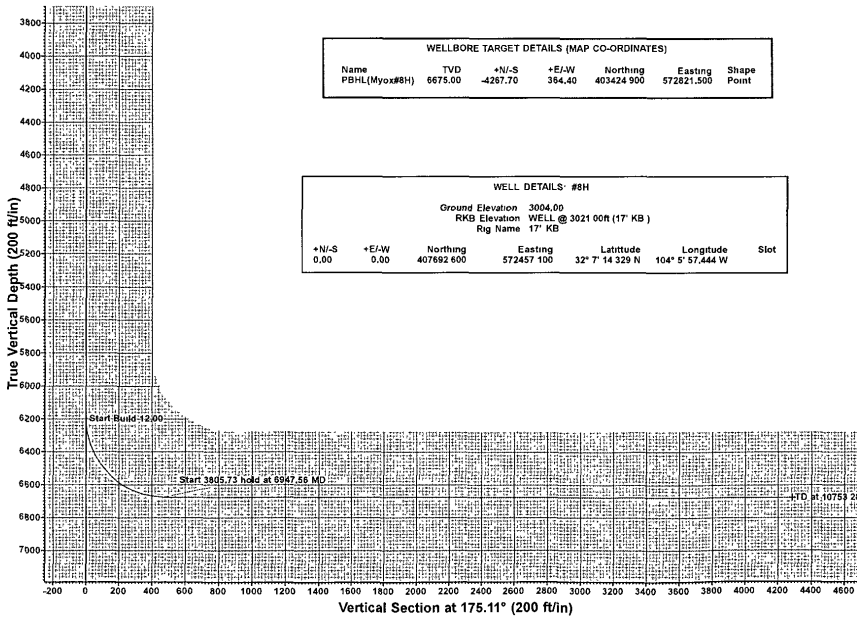
# PATHFINDER

PROJECT DETAILS: Eddy County  
Geodetic System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: New Mexico East 3001  
System Datum: Mean Sea Level  
Local North: Grd

| SECTION DETAILS |          |       |        |         |          |        |       |        |                       |
|-----------------|----------|-------|--------|---------|----------|--------|-------|--------|-----------------------|
| Sec             | MD       | Inc   | Azi    | TVD     | +N/-S    | +E/-W  | DLeg  | TFace  | VSec Target           |
| 1               | 0.00     | 0.00  | 0.00   | 0.00    | 0.00     | 0.00   | 0.00  | 0.00   | 0.00                  |
| 2               | 6197.50  | 0.00  | 0.00   | 6197.50 | 0.00     | 0.00   | 0.00  | 0.00   | 0.00                  |
| 3               | 6947.96  | 90.00 | 175.11 | 6675.00 | -475.75  | 40.70  | 12.00 | 175.11 | 477.50                |
| 4               | 10753.28 | 90.00 | 175.11 | 6675.00 | -4267.64 | 365.12 | 0.00  | 0.00   | 4283.23 PBHL(Myox#8H) |

| WELLBORE TARGET DETAILS (MAP CO-ORDINATES) |         |          |        |            |                     |
|--------------------------------------------|---------|----------|--------|------------|---------------------|
| Name                                       | TVD     | +N/-S    | +E/-W  | Northing   | Easting Shape Point |
| PBHL(Myox#8H)                              | 6675.00 | -4267.70 | 364.40 | 403424.900 | 572621.500          |

| WELL DETAILS: #8H |       |                           |            |                 |                  |      |
|-------------------|-------|---------------------------|------------|-----------------|------------------|------|
| Ground Elevation  |       | 3004.00                   |            |                 |                  |      |
| RKB Elevation     |       | WELL @ 3021.00ft (17' KB) |            |                 |                  |      |
| Rig Name          |       | 17' KB                    |            |                 |                  |      |
| +N/-S             | +E/-W | Northing                  | Easting    | Latitude        | Longitude        | Slot |
| 0.00              | 0.00  | 407692.600                | 572457.100 | 32° 7' 14.329 N | 104° 5' 57.444 W |      |



Plan Plan #1 (#8H/OH)  
Created By: Nate Bingham Date: 13 45, May 17 2010