

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-101  
June 16, 2008

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

|                                                                     |                                            |                                           |
|---------------------------------------------------------------------|--------------------------------------------|-------------------------------------------|
| <sup>1</sup> Operator Name and Address<br>Marbob Energy Corporation |                                            | <sup>2</sup> OGRID Number<br>14049        |
|                                                                     |                                            | <sup>3</sup> API Number<br>30 - 015-37935 |
| <sup>5</sup> Property Code<br>38205                                 | <sup>5</sup> Property Name<br>Coffin State | <sup>6</sup> Well No.<br>#1               |
| <sup>9</sup> Proposed Pool 1<br>Wildcat                             |                                            | <sup>10</sup> Proposed Pool 2             |

**RECEIVED**  
AUG 25 2010  
NMOCD ARTESIA

<sup>7</sup> Surface Location

| UL or lot no | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|--------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| D            | 30      | 19S      | 26E   |         | 330           | North            | 330           | West           | Eddy   |

<sup>8</sup> Proposed Bottom Hole Location If Different From Surface

| UL or lot no | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|--------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| E            | 30      | 19-S     | 26-E  |         | 2310          | North            | 330           | West           | Eddy   |

Additional Well Information

|                                   |                                       |                                 |                                    |                                               |
|-----------------------------------|---------------------------------------|---------------------------------|------------------------------------|-----------------------------------------------|
| <sup>11</sup> Work Type Code<br>E | <sup>12</sup> Well Type Code<br>O     | <sup>13</sup> Cable/Rotary      | <sup>14</sup> Lease Type Code<br>S | <sup>15</sup> Ground Level Elevation<br>3405' |
| <sup>16</sup> Multiple            | <sup>17</sup> Proposed Depth<br>4700' | <sup>18</sup> Formation<br>Yeso | <sup>19</sup> Contractor           | <sup>20</sup> Spud Date<br>8/23/10            |

<sup>21</sup> Proposed Casing and Cement Program

| Hole Size | Casing Size | Casing weight/foot | Setting Depth | Sacks of Cement | Estimated TOC |
|-----------|-------------|--------------------|---------------|-----------------|---------------|
| 6 1/8"    | 4 1/2"      | 11.6               | 4700'         | 150             | 2000          |
|           |             |                    |               |                 |               |
|           |             |                    |               |                 |               |
|           |             |                    |               |                 |               |
|           |             |                    |               |                 |               |

<sup>22</sup> Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary

Plan to reenter Coffin #1 and drill to new BHL by setting a whip stock at 2450' and drilling horizontal with cut brine in 6 1/8" hole, running 4 1/2" 11.6# J-55 casing and cementing.

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature: *Nancy T. Agnew*

Printed name: Nancy T. Agnew

Title: Land Department

E-mail Address: [landtech@marbob.com](mailto:landtech@marbob.com)

Date: 08/25/2010

Phone: 575-748-3303

OIL CONSERVATION DIVISION

Approved by:

*[Signature]*

Title:

**Geologist**

Approval Date:

9/16/10

Expiration Date:

9/16/12

Conditions of Approval Attached ☐

State of New Mexico

DISTRICT I

1625 N. FRENCH DR., HOBBS, NM 88240

Energy, Minerals and Natural Resources Department

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.

Santa Fe, New Mexico 87505

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

|                            |                                            |                      |
|----------------------------|--------------------------------------------|----------------------|
| API Number<br>30-015-37935 | Pool Code<br>97788                         | Pool Name<br>Wildcat |
| Property Code              | Property Name<br>COFFIN STATE              | Well Number<br>1     |
| OGRID No.<br>14049         | Operator Name<br>MARBOB ENERGY CORPORATION | Elevation<br>3405'   |

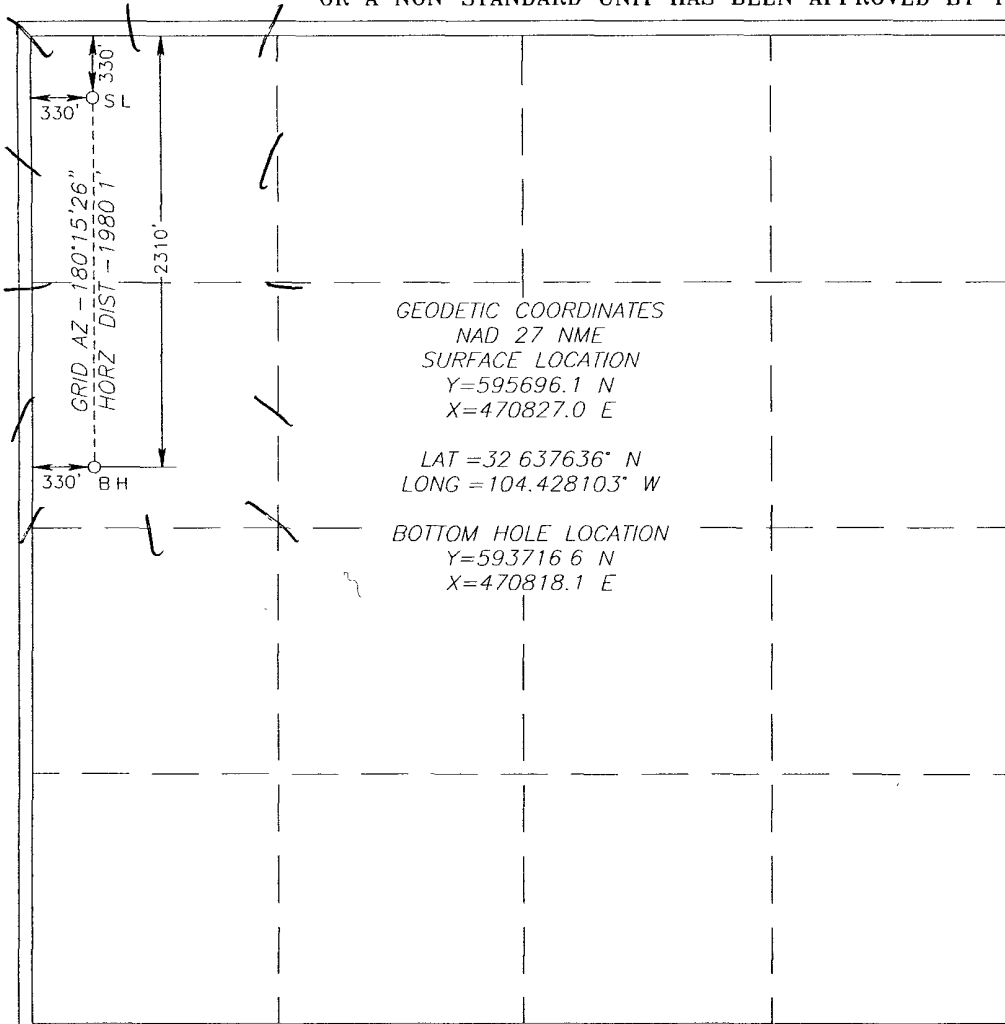
Surface Location

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| D             | 30      | 19-S     | 26-E  |         | 330           | NORTH            | 330           | WEST           | EDDY   |

Bottom Hole Location If Different From Surface

| UL or lot No.         | Section         | Township           | Range     | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|-----------------------|-----------------|--------------------|-----------|---------|---------------|------------------|---------------|----------------|--------|
| E                     | 30              | 19-S               | 26-E      |         | 2310          | NORTH            | 330           | WEST           | EDDY   |
| Dedicated Acres<br>80 | Joint or Infill | Consolidation Code | Order No. |         |               |                  |               |                |        |

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Nancy T. Agnew 8/25/10  
Signature Date

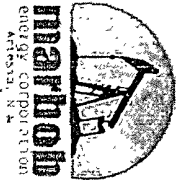
Nancy T. Agnew  
Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Ronald J. Eidson 8/10/2010  
Date Surveyed Seal of Professional Surveyor

Certificate No. GARY EIDSON 12641  
RONALD J. EIDSON 3239



**Marbob**

Eddy County  
Coffin State

#1  
OH

Plan: Plan #1

## Pathfinder X & Y Planning Report

13 August, 2010

# PATHFINDER



# Pathfinder

## Pathfinder X & Y Planning Report



|           |              |                              |                                     |
|-----------|--------------|------------------------------|-------------------------------------|
| Company:  | Marbob       | Local Co-ordinate Reference: | Well #1                             |
| Project:  | Eddy County  | TVD Reference:               | WFL 3 0424 050 (Original Well Elev, |
| Site:     | Cotton State | MD Reference:                | WFL 3 0424 050 (Original Well Elev, |
| Well:     | #1           | 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:                | Cotton State |             |                |                  |                   |
| Site Position:       | From: Map    | Northing    | 595,696.100 ft | Latitude         | 32° 38' 15.58" N  |
| Position Uncertainty | 0.00 ft      | Easting     | 470,827.000 ft | Longitude        | 104° 25' 41.17" W |
|                      |              | Spot Radius | "              | Grid Convergence | 0.00"             |

|                      |         |                    |          |                |             |                   |
|----------------------|---------|--------------------|----------|----------------|-------------|-------------------|
| Well:                | #1      |                    |          |                |             |                   |
| Well Position        | +N-S    | 0.00 ft            | Northing | 595,696.100 ft | Latitude    | 32° 38' 15.58" N  |
|                      | +E-W    | 0.00 ft            | Easting  | 470,827.000 ft | Longitude   | 104° 25' 41.17" W |
| Position Uncertainty | 0.00 ft | Wellhead Elevation | ft       | Ground Level   | 0.405 00 ft |                   |

|           |            |             |             |           |                |
|-----------|------------|-------------|-------------|-----------|----------------|
| Wellbore: | C          |             |             |           |                |
| Magnetics | Model Name | Sample Date | Declination | Dip Angle | Field Strength |
|           | IGRF200510 | 08/13/2010  | (°)         | (°)       | (nT)           |
|           |            |             | 8.10        | 60.40     | 40,585         |

|                   |                  |           |              |           |
|-------------------|------------------|-----------|--------------|-----------|
| Design:           | Plan #1          |           |              |           |
| Audit Notes       |                  |           |              |           |
| Version           | Phase            | PROTOTYPE | Tie On Depth | 0.00      |
| Vertical Section: | Depth From (TVD) | +N-S      | +E-W         | Direction |
|                   | (ft)             | (ft)      | (ft)         | (°)       |
|                   | 0.00             | 0.00      | 0.00         | 80.25     |

|                     |          |                 |           |              |
|---------------------|----------|-----------------|-----------|--------------|
| Survey Tool Program | Date     | 08/13/2010      |           |              |
| From (ft)           | To (ft)  | Survey Wellbore | Tool Name | Description  |
| 0.00                | 4,699.58 | Plan #1 (CH)    | MWD       | MWD Standard |



# Pathfinder Pathfinder X & Y Planning Report



|           |             |                              |                                     |
|-----------|-------------|------------------------------|-------------------------------------|
| Company:  | Marbob      | Local Co-ordinate Reference: | Well #1                             |
| Project:  | Eddy County | TVD Reference:               | WELL @ 3424.00 (Original well Elev) |
| Site:     | Colin State | MD Reference:                | WELL @ 3424.00 (Original well Elev) |
| Well:     | #1          | North Reference:             | Gnd                                 |
| Wellbore: | OH          | Survey Calculation Method:   | Minimum Curvature                   |
| Design:   | Plan #1     | Database:                    | Midland Database                    |

| Planned Survey |      |            |             |               |             |             |                |                   |                  |                 |  |
|----------------|------|------------|-------------|---------------|-------------|-------------|----------------|-------------------|------------------|-----------------|--|
| MD<br>(ft)     | Inc  | 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        | -3,124.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 100.00         | 0.00 | 0.00       | 100.00      | -3,124.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 200.00         | 0.00 | 0.00       | 200.00      | -3,124.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 300.00         | 0.00 | 0.00       | 300.00      | -3,124.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 400.00         | 0.00 | 0.00       | 400.00      | -3,024.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 500.00         | 0.00 | 0.00       | 500.00      | -2,924.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 600.00         | 0.00 | 0.00       | 600.00      | -2,824.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 700.00         | 0.00 | 0.00       | 700.00      | -2,724.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 800.00         | 0.00 | 0.00       | 800.00      | -2,624.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 900.00         | 0.00 | 0.00       | 900.00      | -2,524.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 1,000.00       | 0.00 | 0.00       | 1,000.00    | -2,424.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 1,100.00       | 0.00 | 0.00       | 1,100.00    | -2,324.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 1,200.00       | 0.00 | 0.00       | 1,200.00    | -2,224.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 1,300.00       | 0.00 | 0.00       | 1,300.00    | -2,124.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 1,400.00       | 0.00 | 0.00       | 1,400.00    | -2,024.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 1,500.00       | 0.00 | 0.00       | 1,500.00    | -1,924.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 1,600.00       | 0.00 | 0.00       | 1,600.00    | -1,824.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 1,700.00       | 0.00 | 0.00       | 1,700.00    | -1,724.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 1,800.00       | 0.00 | 0.00       | 1,800.00    | -1,624.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 1,900.00       | 0.00 | 0.00       | 1,900.00    | -1,524.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 2,000.00       | 0.00 | 0.00       | 2,000.00    | -1,424.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 2,100.00       | 0.00 | 0.00       | 2,100.00    | -1,324.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 2,200.00       | 0.00 | 0.00       | 2,200.00    | -1,224.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 2,300.00       | 0.00 | 0.00       | 2,300.00    | -1,124.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 2,400.00       | 0.00 | 0.00       | 2,400.00    | -1,024.00     | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 2,447.50       | 0.00 | 0.00       | 2,447.50    | -976.50       | 0.00        | 0.00        | 0.00           | 0.00              | 595,696.10       | 470,827.00      |  |
| 2,450.00       | 0.30 | 180.26     | 2,450.00    | -974.00       | -0.01       | 0.00        | 0.00           | 12.00             | 595,696.10       | 470,827.00      |  |



# Pathfinder Pathfinder X & Y Planning Report



|           |             |                              |                                       |
|-----------|-------------|------------------------------|---------------------------------------|
| Company:  | Marbob      | Local Co-ordinate Reference: | Well #1                               |
| Project:  | Eddy County | TVD Reference:               | WELL @ 3424.00ft (Original Well Elev) |
| Site:     | Coffin Sta  | MD Reference:                | WELL @ 3424.00ft (Original Well Elev) |
| Well:     | #1          | North Reference:             | Grid                                  |
| Wellbore: | OH          | Survey Calculation Method:   | Minimum Curvature                     |
| Design:   | Plan #1     | Database:                    | Midland Database                      |

| Planned Survey |            |           |             |               |             |             |                |                   |                  |                 |  |
|----------------|------------|-----------|-------------|---------------|-------------|-------------|----------------|-------------------|------------------|-----------------|--|
| MD<br>(ft)     | Inc<br>(°) | At<br>(°) | TVD<br>(ft) | TVDSS<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | Diag<br>(%/100ft) | Northing<br>(ft) | Easting<br>(ft) |  |
| 2,475.00       | 3.30       | 180.25    | 2,474.98    | -949.00       | -0.79       | 0.00        | 0.79           | 12.00             | 595,653.31       | 470,821.11      |  |
| 2,500.00       | 6.30       | 180.25    | 2,499.89    | -924.11       | -2.98       | -0.01       | 2.88           | 11.00             | 595,653.22       | 470,825.46      |  |
| 2,525.00       | 9.30       | 180.25    | 2,524.66    | -899.34       | -6.28       | -0.03       | 6.28           | 10.00             | 595,659.62       | 470,821.11      |  |
| 2,550.00       | 12.30      | 180.26    | 2,549.21    | -874.79       | -10.90      | -0.05       | 10.90          | 9.00              | 595,665.14       | 470,811.95      |  |
| 2,575.00       | 15.30      | 180.26    | 2,573.49    | -850.31       | -16.97      | -0.08       | 16.89          | 8.00              | 595,675.16       | 471,120.92      |  |
| 2,600.00       | 18.30      | 180.26    | 2,597.42    | -826.58       | -24.15      | -0.11       | 24.11          | 7.00              | 595,671.11       | 470,826.69      |  |
| 2,625.00       | 21.30      | 180.26    | 2,620.94    | -803.06       | -32.01      | -0.15       | 32.01          | 12.00             | 595,660.44       | 470,826.85      |  |
| 2,650.00       | 24.30      | 180.26    | 2,643.98    | -780.02       | -40.30      | -0.19       | 40.30          | 12.00             | 595,641.80       | 470,826.81      |  |
| 2,675.00       | 27.30      | 180.26    | 2,666.49    | -757.51       | -53.18      | -0.24       | 53.18          | 12.00             | 595,612.92       | 471,826.78      |  |
| 2,700.00       | 30.30      | 180.26    | 2,689.40    | -735.00       | -65.22      | -0.30       | 65.22          | 12.00             | 595,600.88       | 470,826.70      |  |
| 2,725.00       | 33.30      | 180.26    | 2,709.64    | -714.30       | -78.39      | -0.36       | 78.39          | 12.00             | 595,517.71       | 470,826.54      |  |
| 2,750.00       | 36.30      | 180.26    | 2,730.17    | -693.83       | -92.66      | -0.42       | 92.66          | 11.00             | 595,403.44       | 470,826.58      |  |
| 2,775.00       | 39.30      | 180.26    | 2,749.92    | -674.08       | -107.97     | -0.49       | 107.98         | 11.00             | 595,358.10       | 470,816.71      |  |
| 2,800.00       | 42.30      | 180.26    | 2,768.84    | -655.16       | -124.31     | -0.56       | 124.31         | 11.00             | 595,371.70       | 470,126.44      |  |
| 2,825.00       | 45.30      | 180.26    | 2,783.89    | -637.11       | -141.61     | -0.64       | 141.61         | 12.00             | 595,354.49       | 470,126.36      |  |
| 2,850.00       | 48.30      | 180.26    | 2,804.00    | -620.00       | -159.80     | -0.73       | 159.81         | 12.00             | 595,300.27       | 470,826.27      |  |
| 2,875.00       | 51.30      | 180.26    | 2,820.14    | -603.88       | -178.92     | -0.81       | 178.92         | 12.00             | 595,211.18       | 470,826.14      |  |
| 2,900.00       | 54.30      | 180.26    | 2,835.25    | -588.73       | -198.83     | -0.90       | 198.83         | 12.00             | 595,117.27       | 470,826.11      |  |
| 2,925.00       | 57.30      | 180.26    | 2,849.30    | -574.00       | -219.50     | -1.00       | 219.51         | 12.00             | 595,116.60       | 470,821.11      |  |
| 2,950.00       | 60.30      | 180.26    | 2,862.25    | -560.73       | -240.88     | -1.09       | 240.89         | 12.00             | 595,155.24       | 470,821.11      |  |
| 2,975.00       | 63.30      | 180.26    | 2,874.07    | -549.93       | -262.91     | -1.19       | 262.92         | 12.00             | 595,133.15       | 470,821.11      |  |
| 3,000.00       | 66.30      | 180.26    | 2,884.71    | -539.29       | -285.53     | -1.30       | 285.53         | 11.00             | 595,1410.57      | 470,811.70      |  |
| 3,025.00       | 69.30      | 180.26    | 2,894.10    | -529.84       | -308.57     | -1.40       | 308.60         | 11.00             | 595,167.41       | 470,826.90      |  |
| 3,050.00       | 72.30      | 180.26    | 2,902.08    | -521.62       | -332.25     | -1.51       | 332.28         | 12.00             | 595,363.67       | 470,126.49      |  |
| 3,075.00       | 75.30      | 180.26    | 2,909.16    | -514.64       | -356.73     | -1.62       | 356.76         | 12.00             | 595,339.10       | 470,126.39      |  |
| 3,100.00       | 78.29      | 180.26    | 2,915.07    | -508.93       | -380.32     | -1.73       | 380.32         | 12.00             | 595,111.40       | 470,826.11      |  |
| 3,125.00       | 81.29      | 180.26    | 2,919.50    | -504.50       | -405.22     | -1.84       | 405.22         | 11.00             | 595,150.58       | 470,825.16      |  |



# Pathfinder Pathfinder X & Y Planning Report



|           |              |                              |                                   |
|-----------|--------------|------------------------------|-----------------------------------|
| Company:  | Marbun       | Local Co-ordinate Reference: | Well #1                           |
| Project:  | Eddy County  | TVD Reference:               | WE 1 @ 3424.00' (Original Y Elev) |
| Site:     | Cottin State | MD Reference:                | WE 1 @ 3424.00' (Original Y Elev) |
| Well:     | #1           | North Reference:             | Grn                               |
| Wellbore: | OH           | Survey Calculation Method:   | Minimum Curvature                 |
| Design:   | Plan #1      | Database:                    | Midland Data 198                  |

| Planned Survey |            |            |             |               |             |             |                |                     |                  |                 |  |  |
|----------------|------------|------------|-------------|---------------|-------------|-------------|----------------|---------------------|------------------|-----------------|--|--|
| TVD<br>(ft)    | Inc<br>(°) | Azi<br>(°) | TVD<br>(ft) | TVDSS<br>(ft) | N/S<br>(ft) | E/W<br>(ft) | V. Sec<br>(ft) | D Leg<br>(ft/100ft) | Northing<br>(ft) | Easting<br>(ft) |  |  |
| 3,150.00       | 84.29      | 180.25     | 2,922.50    | -499.37       | -430.07     | 1.95        | 430.02         | 1.00                | 555,266.11       | 470,829.15      |  |  |
| 3,175.00       | 87.29      | 180.26     | 2,924.47    | -499.53       | -454.97     | 2.06        | 454.00         | 12.00               | 555,241.11       | 470,824.94      |  |  |
| 3,197.56       | 90.00      | 180.26     | 2,925.00    | -499.00       | -477.00     | 2.17        | 477.10         | 12.00               | 555,211.90       | 470,824.83      |  |  |
| 3,200.00       | 90.00      | 180.26     | 2,925.00    | -499.00       | -479.94     | 2.18        | 479.54         | 0.00                | 555,211.16       | 470,824.50      |  |  |
| 3,300.00       | 90.00      | 180.26     | 2,925.00    | -499.00       | -579.94     | 2.85        | 579.14         | 0.00                | 555,115.15       | 470,829.07      |  |  |
| 3,400.00       | 90.00      | 180.26     | 2,925.00    | -499.00       | -679.94     | 3.09        | 679.94         | 0.00                | 555,116.16       | 470,820.10      |  |  |
| 3,500.00       | 90.00      | 180.26     | 2,925.00    | -499.00       | -779.94     | 3.54        | 779.94         | 1.00                | 554,916.16       | 470,823.10      |  |  |
| 3,600.00       | 90.00      | 180.26     | 2,925.00    | -499.00       | -879.94     | 3.99        | 879.94         | 0.00                | 554,916.16       | 470,820.10      |  |  |
| 3,700.00       | 90.00      | 180.26     | 2,925.00    | -499.00       | -979.90     | 4.45        | 979.91         | 0.00                | 554,716.17       | 470,822.05      |  |  |
| 3,800.00       | 90.00      | 180.26     | 2,925.00    | -499.00       | -1,079.93   | 4.90        | 1,079.94       | 0.00                | 554,616.17       | 470,820.10      |  |  |
| 3,900.00       | 90.00      | 180.26     | 2,925.00    | -499.00       | -1,179.93   | 5.35        | 1,179.94       | 0.00                | 554,516.17       | 470,821.05      |  |  |
| 4,000.00       | 90.00      | 180.26     | 2,925.00    | -499.00       | -1,279.93   | 5.81        | 1,279.94       | 0.00                | 554,416.17       | 470,821.19      |  |  |
| 4,100.00       | 90.00      | 180.26     | 2,925.00    | -499.00       | -1,379.93   | 6.26        | 1,379.94       | 0.00                | 554,316.17       | 470,820.74      |  |  |
| 4,200.00       | 90.00      | 180.26     | 2,925.00    | -499.00       | -1,479.93   | 6.72        | 1,479.94       | 0.00                | 554,216.17       | 470,820.29      |  |  |
| 4,300.00       | 90.00      | 180.26     | 2,925.00    | -499.00       | -1,579.93   | 7.17        | 1,579.94       | 0.00                | 554,116.17       | 470,819.19      |  |  |
| 4,400.00       | 90.00      | 180.26     | 2,925.00    | -499.00       | -1,679.93   | 7.62        | 1,679.94       | 0.00                | 554,016.17       | 470,819.19      |  |  |
| 4,500.00       | 90.00      | 180.26     | 2,925.00    | -499.00       | -1,779.93   | 8.08        | 1,779.94       | 1.00                | 553,916.17       | 470,819.94      |  |  |
| 4,600.00       | 90.00      | 180.26     | 2,925.00    | -499.00       | -1,879.93   | 8.53        | 1,879.94       | 1.00                | 553,816.17       | 470,819.47      |  |  |
| 4,699.58       | 90.00      | 180.26     | 2,925.00    | -499.00       | -1,979.50   | 8.98        | 1,979.51       | 0.00                | 553,716.17       | 470,818.02      |  |  |

PBHL(ps#1)



# Pathfinder

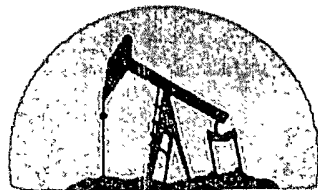
## Pathfinder X & Y Planning Report



|           |              |                              |                                       |
|-----------|--------------|------------------------------|---------------------------------------|
| Company:  | Marathon     | Local Co-ordinate Reference: | Well #1                               |
| Project:  | Eddy County  | TVD Reference:               | WELL @ 3424.00ft (Original Well Elev) |
| Site:     | Coffin State | MD Reference:                | WELL @ 3425.00ft (Original Well Elev) |
| Well:     | #1           | 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           | (deg)     |         | (ft)     |           | (ft)  | (ft)        | (ft)        |                   |                     |  |
| Shape                     |           |         |          |           |       |             |             |                   |                     |  |
| PBHL(cs#1)                | 0.00      | 360.00  | 2,920.00 | -1,979.50 | -0.90 | 593,710.600 | +10,818.100 | 32° 37' 54" 339 N | 104° 25' 41" 25.1 W |  |
| - plan hits target center |           |         |          |           |       |             |             |                   |                     |  |
| - Point                   |           |         |          |           |       |             |             |                   |                     |  |

|            |             |      |
|------------|-------------|------|
| Checked By | Approved By | Date |
|------------|-------------|------|



**marbob**  
energy corporation  
Artesia, N.M.

Project: Eddy County  
Site: Coffin State  
Well: #1  
Wellbore: OH  
Plan: Plan #1 (7/1/04)



Azimuths to Grid North  
True North: 0.0°  
Magnetic North: 8.5°

Magnetic Field  
Strength: 48884 oerf  
Dip Angle: 50.45°  
Date: 08/10/2010  
Model: IGRF200510

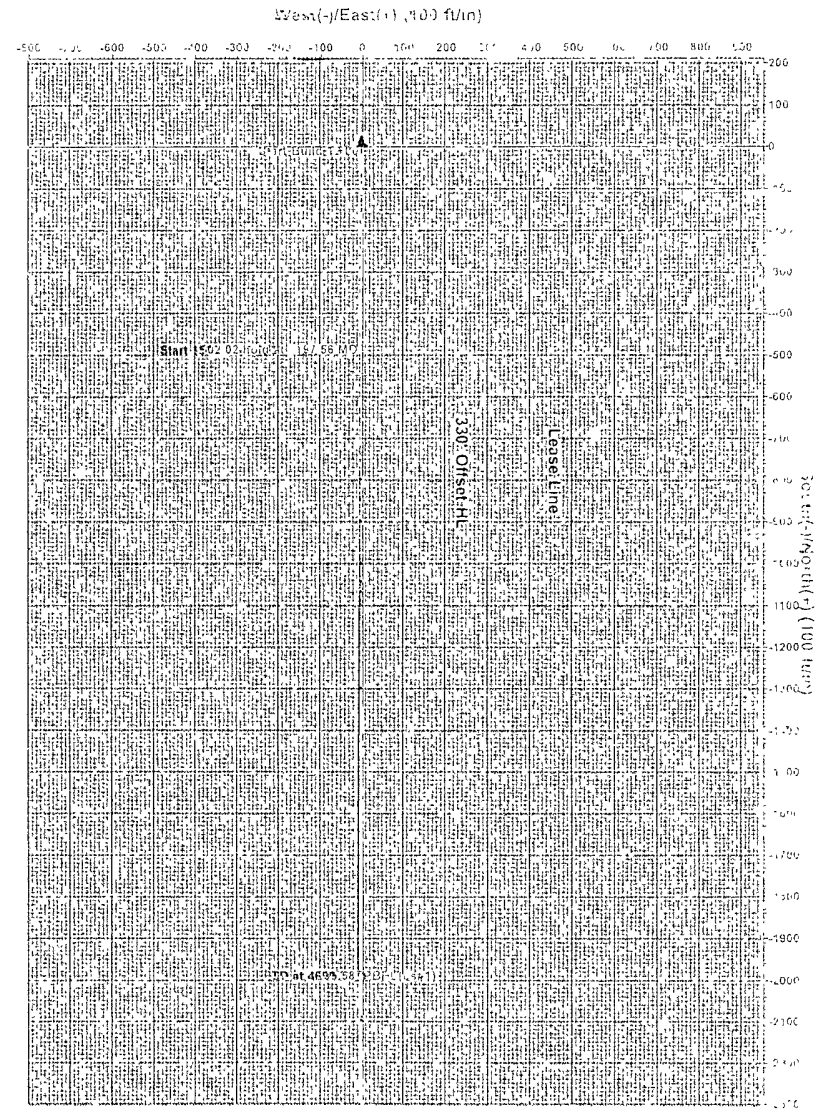
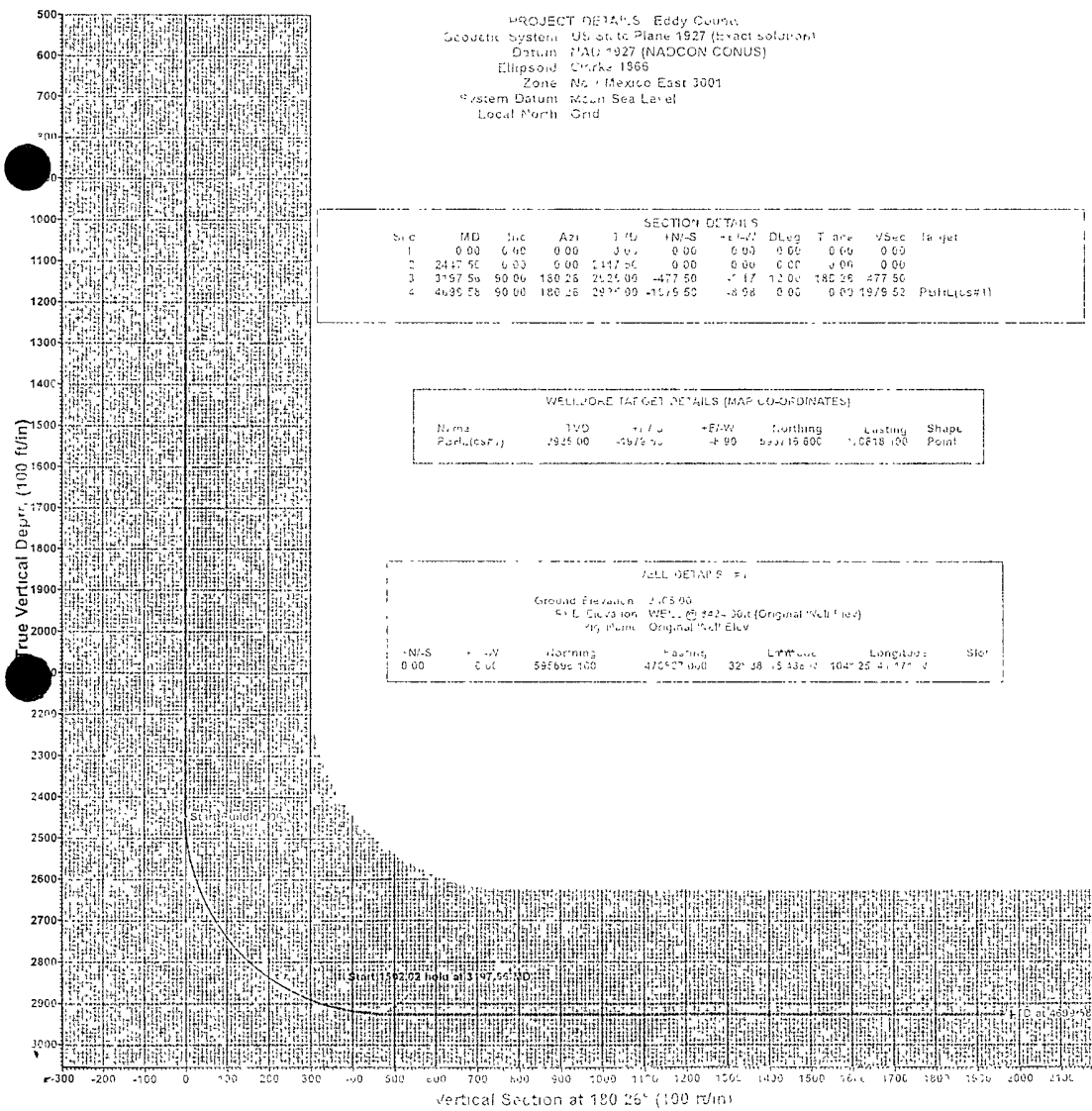
**PATHFINDER**

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

| Sec | MD      | Sec   | API    | 100'    | IN-S     | 100'  | DLeg  | T. ang | VSec    | Target      |
|-----|---------|-------|--------|---------|----------|-------|-------|--------|---------|-------------|
| 1   | 0.00    | 0.00  | 0.00   | 0.00    | 0.00     | 0.00  | 0.00  | 0.00   | 0.00    |             |
| 2   | 2417.50 | 0.00  | 0.00   | 2417.50 | 0.00     | 0.00  | 0.00  | 0.00   | 0.00    |             |
| 3   | 3197.50 | 90.00 | 180.26 | 2525.00 | -477.50  | -1.17 | 12.00 | 180.26 | 477.50  |             |
| 4   | 4695.50 | 90.00 | 180.26 | 2975.00 | -1575.50 | -8.98 | 0.00  | 0.00   | 1979.52 | PathLegs#11 |

| WELLBORE TARGET DETAILS (MAP CO-ORDINATES) |         |          |       |           |            |       |
|--------------------------------------------|---------|----------|-------|-----------|------------|-------|
| Name                                       | 100'    | 100'     | 100'  | 100'      | 100'       | Shape |
| PathLegs#11                                | 2925.00 | -4575.50 | -4.99 | 55515.800 | 1.0E18.100 | Point |

| WELL DETAILS #1                                    |      |           |            |       |           |                |
|----------------------------------------------------|------|-----------|------------|-------|-----------|----------------|
| Ground Elevation: 2.63.00                          |      |           |            |       |           |                |
| K/L Elev. 304.00 WEL: 342-364 (Original Well Elev) |      |           |            |       |           |                |
| Wg. Elev: Original Well Elev                       |      |           |            |       |           |                |
| IN-S                                               | 100' | 100'      | 100'       | 100'  | 100'      | Stop           |
| 0.00                                               | 0.00 | 59569.100 | 470527.000 | 32.38 | 15.430.12 | 104° 25' 41" N |



Plan View at 180.26°  
Created By: Kate Bingham Date: 10/09/2010  
Check: \_\_\_\_\_