

**NM STATE DRILLING PERMITTING**

**MIS AMIGOS STATE 106H**

|              |                    | Deepest TVD | 12503         | KOP         |              | 11943         | End of Curve |               | 12914       | Measured depth |                  | 18046 |
|--------------|--------------------|-------------|---------------|-------------|--------------|---------------|--------------|---------------|-------------|----------------|------------------|-------|
| Casing Type  | Fluid Type         | Mud Weight  | Hole Size     | Casing Size | Casing Grade | Casing Weight | Top MD       | Setting Depth | Lead Cement | Tail Cement    | Total Sks Cement | TOC   |
| Surface      | FW/Native          | 8.5 - 10.0  | 17.5          | 13.375      | J-55 LTC     | 54.5          | 0            | 1250          | 743         | 289            | 1032             | 0     |
| Intermediate | Brine / OBM        | 9.0-10.3    | 12.25         | 9.625       | J-55 LTC     | 40            | 0            | 5039          | 776         | 488            | 1264             | 1710  |
| DV Tool      |                    |             |               |             |              |               |              | 1710          | 394         | 17             | 411              | 0     |
| Production   | FW/Cut Brine / OBM | 9.0-10.5    | 8-3/4" to EOC | 5.5         | P110 BTC     | 17            | 0            | 18046         | 1347        | 1137           | 2484             | 4539  |
|              | Cut Brine / OBM    | 9.3         | 8-1/2" to TD  |             |              |               |              |               |             |                |                  |       |

1st Stage

2nd Stage

**Max Expected Surface Pressure**  
3296

**BOP**  
Cameron 5M Double Ram BOP  
Test Pressure 5000

**Total Vertical Section** 5132

**Contingencies**

1. XTO Requests option to use OBM in intermediate hole section
2. Should losses be seen from 9-5/8" shoe to landing point, 4-string contingency may be utilized
3. XTO requests variance to have the option to batch drill this well. XTO will set Intermediate csg, ensure cement is circulated to surface and well is dead. With floats holding, and no flow on annulus, a TA cap will be installed as per GE recommendations. XTO will contact the state before skidding to the other well. Once all surface and Intermediate are completed on the pad, XTO will begin drilling the production hole of each well.
4. DV Tool may be set in intermediate fr/ 1300' - 5000'
5. OBM may be used in production hole
6. If cmt is not circulated to surface on 5.5" casing, it will be brought at least 500' into intermediate shoe
7. 8.5" lateral may be drilled if no issues in 8.75" hole



## **XTO Energy**

**Lea County, NM (NAD-27)**

**Mis Amigos**

**#106H**

**OH**

**Plan: PERMIT**

**HOBBS OCD**

**JUL 01 2019**

**RECEIVED**

## **Standard Planning Report**

**11 June, 2019**



Project: Lea County, NM (NAD-27)  
Site: Mia Amigos  
Well: #106H  
Wellbore: OH  
Design: PERMIT

PROJECT DETAILS: Lea County, NM (NAD-27)  
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

WELL DETAILS: #106H

Rig Name: RKS - 15 @ 3673.00usf  
Ground Level: 3658.00  
Northing: 457562.00  
Easting: 723864.50  
Latitude: 32.2558792  
Longitude: -103.6091675

DESIGN TARGET DETAILS

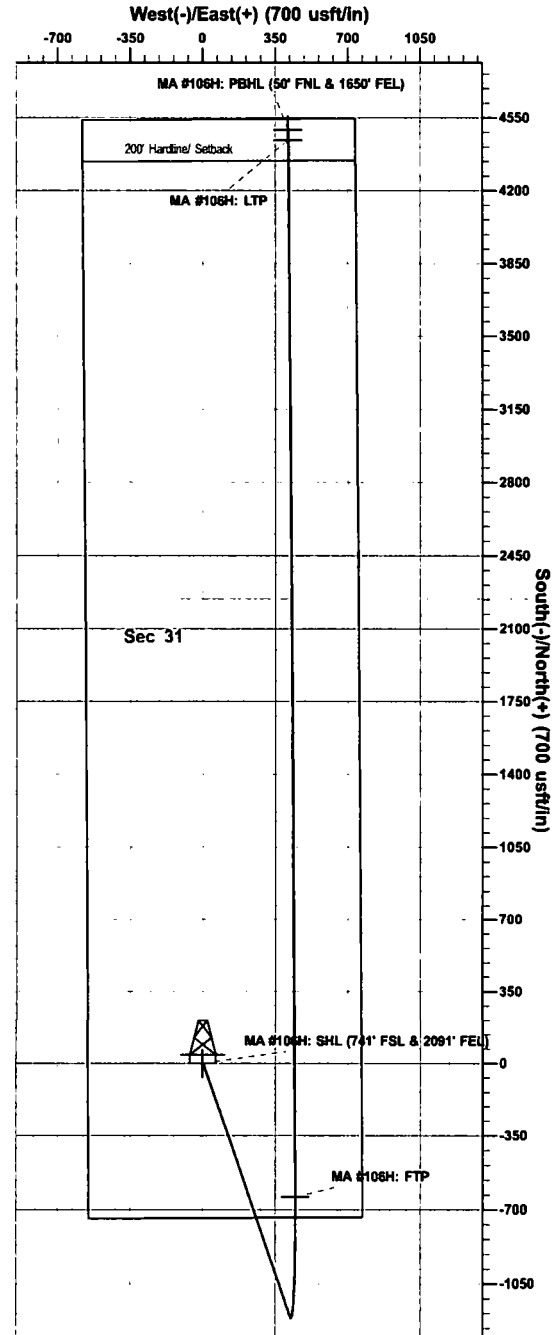
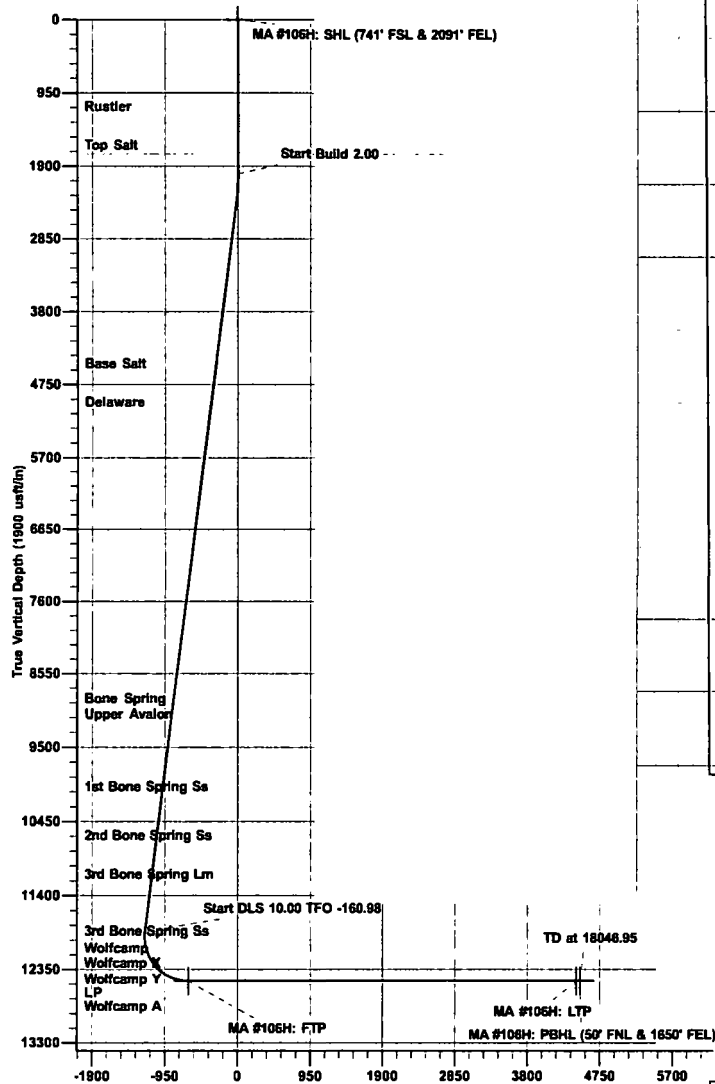
| Name                                 | TVD      | +N/-S   | +E/-W  | Northing  | Easting   | Latitude   | Longitude    | Shape |
|--------------------------------------|----------|---------|--------|-----------|-----------|------------|--------------|-------|
| MA #106H: SHL (741' FSL & 2091' FEL) | 0.00     | 0.00    | 0.00   | 457562.00 | 723864.50 | 32.2558792 | -103.6091675 | Point |
| MA #106H: FTP                        | 12503.00 | -639.20 | 445.50 | 456922.80 | 724310.00 | 32.2541139 | -103.6077404 | Point |
| MA #106H: LTP                        | 12503.00 | 4443.10 | 411.20 | 462005.10 | 724275.70 | 32.2680846 | -103.6077403 | Point |
| MA #106H: PBHL (50' FNL & 1650' FEL) | 12503.00 | 4493.10 | 410.90 | 462055.10 | 724275.40 | 32.2682220 | -103.6077401 | Point |

SECTION DETAILS

| Sec | MD       | Inc   | Azi    | TVD      | +N/-S    | +E/-W  | Oleg  | TFace   | VSec     |
|-----|----------|-------|--------|----------|----------|--------|-------|---------|----------|
| 1   | 0.00     | 0.00  | 0.00   | 0.00     | 0.00     | 0.00   | 0.00  | 0.00    | 0.00     |
| 2   | 2000.00  | 0.00  | 0.00   | 2000.00  | 0.00     | 0.00   | 0.00  | 0.00    | 0.00     |
| 3   | 2378.82  | 7.54  | 160.75 | 2375.73  | -23.38   | 8.18   | 2.00  | 160.75  | -23.42   |
| 4   | 11943.24 | 7.54  | 160.75 | 11858.52 | -1207.80 | 421.81 | 0.00  | 0.00    | -1210.74 |
| 5   | 12914.54 | 90.00 | 359.61 | 12503.00 | -639.20  | 445.50 | 10.00 | -160.98 | -642.22  |
| 6   | 17996.95 | 90.00 | 359.61 | 12503.00 | 4443.10  | 411.24 | 0.00  | 0.00    | 4440.20  |
| 7   | 18046.95 | 90.00 | 359.61 | 12503.00 | 4493.10  | 410.90 | 0.00  | 0.00    | 4490.20  |

FORMATION TOP DETAILS

| TVDPath  | Formation          |
|----------|--------------------|
| 1223.00  | Rustler            |
| 1723.00  | Top Salt           |
| 4573.00  | Base Salt          |
| 5073.00  | Delaware           |
| 8973.00  | Bone Spring        |
| 9093.00  | Upper Avalon       |
| 10098.00 | 1st Bone Spring Ss |
| 10723.00 | 2nd Bone Spring Ss |
| 11223.00 | 3rd Bone Spring Lm |
| 11948.00 | 3rd Bone Spring Ss |
| 12298.00 | Wolfcamp           |
| 12363.00 | Wolfcamp X         |
| 12478.00 | Wolfcamp Y         |
| 12503.00 | LP                 |



The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented. Any decisions made or wells drilled utilizing this or any other information supplied by Prototype are at the sole risk and responsibility of the customer.

Plan: PERMIT (#106H/OH)

Created By: Matthew May Date: 13:49, June 11 2019

Vertical Section at 359.61° (1900 usf/in)

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office  
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

|                                    |  |                                                |  |                        |                                  |
|------------------------------------|--|------------------------------------------------|--|------------------------|----------------------------------|
| <sup>1</sup> API Number<br>30-025- |  | <sup>2</sup> Pool Code                         |  | <sup>3</sup> Pool Name |                                  |
| <sup>4</sup> Property Code         |  | <sup>5</sup> Property Name<br>MIS AMIGOS       |  |                        | <sup>6</sup> Well Number<br>106H |
| <sup>7</sup> OGRID No.<br>005380   |  | <sup>8</sup> Operator Name<br>XTO ENERGY, INC. |  |                        | <sup>9</sup> Elevation<br>3,658' |

<sup>10</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 |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| O             | 31      | 23 S     | 33 E  |         | 741           | SOUTH            | 2,091         | EAST           | LEA    |

<sup>11</sup> 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 |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| B             | 31      | 23 S     | 33 E  |         | 50            | NORTH            | 1,650         | EAST           | LEA    |

|                               |                               |                                  |                         |
|-------------------------------|-------------------------------|----------------------------------|-------------------------|
| <sup>12</sup> Dedicated Acres | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code | <sup>15</sup> 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.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| <p><b>16</b></p> <p>CORNER COORDINATES TABLE<br/>NAD 83 NME</p> <p>A - Y= 456,878.5 N, X= 784,505.8 E<br/>B - Y= 456,883.2 N, X= 785,825.0 E<br/>C - Y= 459,517.1 N, X= 784,488.1 E<br/>D - Y= 459,523.7 N, X= 785,807.1 E<br/>E - Y= 482,159.2 N, X= 784,470.7 E<br/>F - Y= 482,165.5 N, X= 785,789.7 E</p> <p>CORNER COORDINATES TABLE<br/>NAD 27 NME</p> <p>A - Y= 456,817.8 N, X= 723,321.8 E<br/>B - Y= 456,824.5 N, X= 724,841.2 E<br/>C - Y= 458,458.3 N, X= 723,304.4 E<br/>D - Y= 459,464.9 N, X= 724,823.4 E<br/>E - Y= 482,100.4 N, X= 723,287.0 E<br/>F - Y= 482,106.7 N, X= 724,606.0 E</p> <p>GEODETIC COORDINATES<br/>NAD 83 NME<br/>SURFACE LOCATION<br/>Y= 457,620.7<br/>X= 785,048.3<br/>LAT.= 32.256002°N<br/>LONG.= 103.609648°W</p> <p>FIRST TAKE POINT<br/>NAD 83 NME<br/>Y= 456,981.5<br/>X= 785,493.8<br/>LAT.= 32.254237°N<br/>LONG.= 103.608221°W</p> <p>GEODETIC COORDINATES<br/>NAD 27 NME<br/>SURFACE LOCATION<br/>Y= 457,562.0<br/>X= 723,884.5<br/>LAT.= 32.255879°N<br/>LONG.= 103.609167°W</p> <p>FIRST TAKE POINT<br/>NAD 27 NME<br/>Y= 456,922.8<br/>X= 724,310.0<br/>LAT.= 32.254114°N<br/>LONG.= 103.607740°W</p> |  |  |  | <p><b>17 OPERATOR CERTIFICATION</b><br/>I hereby certify that the information contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>Signature _____ Date _____</p> <p>Printed Name _____</p> <p>E-mail Address _____</p> |  |  |  |
| <p><b>18 SURVEYOR CERTIFICATION</b><br/>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.</p> <p>05-21-2019<br/>Date of Survey</p> <p>Signature and Seal of Professional Surveyor: _____</p> <p>MARK DILLON HARP 23786<br/>Certificate Number</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  | <p><b>MARK DILLON HARP</b><br/>NEW MEXICO<br/>23786<br/>PROFESSIONAL SURVEYOR</p> <p>RR 2018112886</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |



# Planning Report

|                  |                              |                                     |                         |
|------------------|------------------------------|-------------------------------------|-------------------------|
| <b>Database:</b> | EDM 5000.1.13 Single User Db | <b>Local Co-ordinate Reference:</b> | Well #106H              |
| <b>Company:</b>  | XTO Energy                   | <b>TVD Reference:</b>               | RKB = 15' @ 3673.00usft |
| <b>Project:</b>  | Lea County, NM (NAD-27)      | <b>MD Reference:</b>                | RKB = 15' @ 3673.00usft |
| <b>Site:</b>     | Mis Amigos                   | <b>North Reference:</b>             | Grid                    |
| <b>Well:</b>     | #106H                        | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Wellbore:</b> | OH                           |                                     |                         |
| <b>Design:</b>   | PERMIT                       |                                     |                         |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Lea County, NM (NAD-27)              |                      |                |
| <b>Map System:</b> | US State Plane 1927 (Exact solution) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)              |                      |                |
| <b>Map Zone:</b>   | New Mexico East 3001                 |                      |                |

|                              |            |                          |                 |
|------------------------------|------------|--------------------------|-----------------|
| <b>Site</b>                  | Mis Amigos |                          |                 |
| <b>Site Position:</b>        |            | <b>Northing:</b>         | 457,160.50 usft |
| <b>From:</b>                 | Map        | <b>Easting:</b>          | 725,352.60 usft |
| <b>Position Uncertainty:</b> | 0.00 usft  | <b>Slot Radius:</b>      | 13-3/16 "       |
|                              |            | <b>Latitude:</b>         | 32.2547479      |
|                              |            | <b>Longitude:</b>        | -103.6043629    |
|                              |            | <b>Grid Convergence:</b> | 0.39 °          |

|                             |              |                            |                                  |
|-----------------------------|--------------|----------------------------|----------------------------------|
| <b>Well</b>                 | #106H        |                            |                                  |
| <b>Well Position</b>        | <b>+N/-S</b> | 401.50 usft                | <b>Northing:</b> 457,562.00 usft |
|                             | <b>+E/-W</b> | -1,488.10 usft             | <b>Easting:</b> 723,864.50 usft  |
| <b>Position Uncertainty</b> | 0.00 usft    | <b>Wellhead Elevation:</b> | 0.00 usft                        |
|                             |              | <b>Latitude:</b>           | 32.2558792                       |
|                             |              | <b>Longitude:</b>          | -103.6091675                     |
|                             |              | <b>Ground Level:</b>       | 3,658.00 usft                    |

|                 |    |  |  |
|-----------------|----|--|--|
| <b>Wellbore</b> | OH |  |  |
|-----------------|----|--|--|

|                  |                   |                    |                    |                  |                       |
|------------------|-------------------|--------------------|--------------------|------------------|-----------------------|
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination</b> | <b>Dip Angle</b> | <b>Field Strength</b> |
|                  |                   |                    | (°)                | (°)              | (nT)                  |
|                  | IGRF2015          | 06/11/19           | 6.76               | 60.06            | 47,747                |

|               |        |  |  |
|---------------|--------|--|--|
| <b>Design</b> | PERMIT |  |  |
|---------------|--------|--|--|

|                          |                         |              |                      |                  |
|--------------------------|-------------------------|--------------|----------------------|------------------|
| <b>Audit Notes:</b>      |                         |              |                      |                  |
| <b>Version:</b>          | <b>Phase:</b>           | PLAN         | <b>Tie On Depth:</b> | 0.00             |
| <b>Vertical Section:</b> | <b>Depth From (TVD)</b> | <b>+N/-S</b> | <b>+E/-W</b>         | <b>Direction</b> |
|                          | (usft)                  | (usft)       | (usft)               | (°)              |
|                          | 0.00                    | 0.00         | 0.00                 | 359.61           |

|                      |                    |                |                 |              |              |               |              |             |            |                   |
|----------------------|--------------------|----------------|-----------------|--------------|--------------|---------------|--------------|-------------|------------|-------------------|
| <b>Plan Sections</b> |                    |                |                 |              |              |               |              |             |            |                   |
| <b>Measured</b>      | <b>Inclination</b> | <b>Azimuth</b> | <b>Vertical</b> | <b>+N/-S</b> | <b>+E/-W</b> | <b>Dogleg</b> | <b>Build</b> | <b>Turn</b> | <b>TFO</b> | <b>Target</b>     |
| <b>Depth</b>         | (°)                | (°)            | <b>Depth</b>    | (usft)       | (usft)       | <b>Rate</b>   | <b>Rate</b>  | <b>Rate</b> | (°)        |                   |
| (usft)               |                    |                | (usft)          |              |              | (°/100usft)   | (°/100usft)  | (°/100usft) |            |                   |
| 0.00                 | 0.00               | 0.00           | 0.00            | 0.00         | 0.00         | 0.00          | 0.00         | 0.00        | 0.00       |                   |
| 2,000.00             | 0.00               | 0.00           | 2,000.00        | 0.00         | 0.00         | 0.00          | 0.00         | 0.00        | 0.00       |                   |
| 2,376.82             | 7.54               | 160.75         | 2,375.73        | -23.36       | 8.16         | 2.00          | 2.00         | 0.00        | 160.75     |                   |
| 11,943.24            | 7.54               | 160.75         | 11,859.52       | -1,207.90    | 421.81       | 0.00          | 0.00         | 0.00        | 0.00       |                   |
| 12,914.54            | 90.00              | 359.61         | 12,503.00       | -639.20      | 445.50       | 10.00         | 8.49         | -16.59      | -160.98    | MA #106H: FTP     |
| 17,996.95            | 90.00              | 359.61         | 12,503.00       | 4,443.10     | 411.24       | 0.00          | 0.00         | 0.00        | 0.00       | MA #106H: LTP     |
| 18,046.95            | 90.00              | 359.61         | 12,503.00       | 4,493.10     | 410.90       | 0.00          | 0.00         | 0.00        | 0.00       | MA #106H: PBHL (! |



# Planning Report

**Database:** EDM 5000.1.13 Single User Db  
**Company:** XTO Energy  
**Project:** Lea County, NM (NAD-27)  
**Site:** Mis Amigos  
**Well:** #106H  
**Wellbore:** OH  
**Design:** PERMIT

**Local Co-ordinate Reference:** Well #106H  
**TVD Reference:** RKB = 15' @ 3673.00usft  
**MD Reference:** RKB = 15' @ 3673.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

## Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 0.00                  | 0.00            | 0.00        | 0.00                  | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 100.00                | 0.00            | 0.00        | 100.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 200.00                | 0.00            | 0.00        | 200.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 300.00                | 0.00            | 0.00        | 300.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 400.00                | 0.00            | 0.00        | 400.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 500.00                | 0.00            | 0.00        | 500.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 600.00                | 0.00            | 0.00        | 600.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 700.00                | 0.00            | 0.00        | 700.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 800.00                | 0.00            | 0.00        | 800.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 900.00                | 0.00            | 0.00        | 900.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,000.00              | 0.00            | 0.00        | 1,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,100.00              | 0.00            | 0.00        | 1,100.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,200.00              | 0.00            | 0.00        | 1,200.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,223.00              | 0.00            | 0.00        | 1,223.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| <b>Rustler</b>        |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,300.00              | 0.00            | 0.00        | 1,300.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,400.00              | 0.00            | 0.00        | 1,400.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,500.00              | 0.00            | 0.00        | 1,500.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,600.00              | 0.00            | 0.00        | 1,600.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,700.00              | 0.00            | 0.00        | 1,700.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,723.00              | 0.00            | 0.00        | 1,723.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| <b>Top Salt</b>       |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,800.00              | 0.00            | 0.00        | 1,800.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,900.00              | 0.00            | 0.00        | 1,900.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,000.00              | 0.00            | 0.00        | 2,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,100.00              | 2.00            | 160.75      | 2,099.98              | -1.65        | 0.58         | -1.65                   | 2.00                    | 2.00                   | 0.00                  |
| 2,200.00              | 4.00            | 160.75      | 2,199.84              | -6.59        | 2.30         | -6.60                   | 2.00                    | 2.00                   | 0.00                  |
| 2,300.00              | 6.00            | 160.75      | 2,299.45              | -14.82       | 5.17         | -14.85                  | 2.00                    | 2.00                   | 0.00                  |
| 2,376.82              | 7.54            | 160.75      | 2,375.73              | -23.36       | 8.16         | -23.42                  | 2.00                    | 2.00                   | 0.00                  |
| 2,400.00              | 7.54            | 160.75      | 2,398.71              | -26.23       | 9.16         | -26.30                  | 0.00                    | 0.00                   | 0.00                  |
| 2,500.00              | 7.54            | 160.75      | 2,497.85              | -38.62       | 13.48        | -38.71                  | 0.00                    | 0.00                   | 0.00                  |
| 2,600.00              | 7.54            | 160.75      | 2,596.99              | -51.00       | 17.81        | -51.12                  | 0.00                    | 0.00                   | 0.00                  |
| 2,700.00              | 7.54            | 160.75      | 2,696.12              | -63.38       | 22.13        | -63.53                  | 0.00                    | 0.00                   | 0.00                  |
| 2,800.00              | 7.54            | 160.75      | 2,795.26              | -75.76       | 26.46        | -75.94                  | 0.00                    | 0.00                   | 0.00                  |
| 2,900.00              | 7.54            | 160.75      | 2,894.40              | -88.14       | 30.78        | -88.35                  | 0.00                    | 0.00                   | 0.00                  |
| 3,000.00              | 7.54            | 160.75      | 2,993.53              | -100.53      | 35.10        | -100.76                 | 0.00                    | 0.00                   | 0.00                  |
| 3,100.00              | 7.54            | 160.75      | 3,092.67              | -112.91      | 39.43        | -113.17                 | 0.00                    | 0.00                   | 0.00                  |
| 3,200.00              | 7.54            | 160.75      | 3,191.80              | -125.29      | 43.75        | -125.59                 | 0.00                    | 0.00                   | 0.00                  |
| 3,300.00              | 7.54            | 160.75      | 3,290.94              | -137.67      | 48.08        | -138.00                 | 0.00                    | 0.00                   | 0.00                  |
| 3,400.00              | 7.54            | 160.75      | 3,390.08              | -150.06      | 52.40        | -150.41                 | 0.00                    | 0.00                   | 0.00                  |
| 3,500.00              | 7.54            | 160.75      | 3,489.21              | -162.44      | 56.72        | -162.82                 | 0.00                    | 0.00                   | 0.00                  |
| 3,600.00              | 7.54            | 160.75      | 3,588.35              | -174.82      | 61.05        | -175.23                 | 0.00                    | 0.00                   | 0.00                  |
| 3,700.00              | 7.54            | 160.75      | 3,687.48              | -187.20      | 65.37        | -187.64                 | 0.00                    | 0.00                   | 0.00                  |
| 3,800.00              | 7.54            | 160.75      | 3,786.62              | -199.58      | 69.70        | -200.05                 | 0.00                    | 0.00                   | 0.00                  |
| 3,900.00              | 7.54            | 160.75      | 3,885.76              | -211.97      | 74.02        | -212.47                 | 0.00                    | 0.00                   | 0.00                  |
| 4,000.00              | 7.54            | 160.75      | 3,984.89              | -224.35      | 78.34        | -224.88                 | 0.00                    | 0.00                   | 0.00                  |
| 4,100.00              | 7.54            | 160.75      | 4,084.03              | -236.73      | 82.67        | -237.29                 | 0.00                    | 0.00                   | 0.00                  |
| 4,200.00              | 7.54            | 160.75      | 4,183.17              | -249.11      | 86.99        | -249.70                 | 0.00                    | 0.00                   | 0.00                  |
| 4,300.00              | 7.54            | 160.75      | 4,282.30              | -261.50      | 91.32        | -262.11                 | 0.00                    | 0.00                   | 0.00                  |
| 4,400.00              | 7.54            | 160.75      | 4,381.44              | -273.88      | 95.64        | -274.52                 | 0.00                    | 0.00                   | 0.00                  |
| 4,500.00              | 7.54            | 160.75      | 4,480.57              | -286.26      | 99.96        | -286.93                 | 0.00                    | 0.00                   | 0.00                  |
| 4,593.23              | 7.54            | 160.75      | 4,573.00              | -297.80      | 104.00       | -298.51                 | 0.00                    | 0.00                   | 0.00                  |
| <b>Base Salt</b>      |                 |             |                       |              |              |                         |                         |                        |                       |



# Planning Report

**Database:** EDM 5000.1.13 Single User Db  
**Company:** XTO Energy  
**Project:** Lea County, NM (NAD-27)  
**Site:** Mis Amigos  
**Well:** #106H  
**Wellbore:** OH  
**Design:** PERMIT

**Local Co-ordinate Reference:** Well #106H  
**TVD Reference:** RKB = 15' @ 3673.00usft  
**MD Reference:** RKB = 15' @ 3673.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

## Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 4,600.00              | 7.54            | 160.75      | 4,579.71              | -298.64      | 104.29       | -299.35                 | 0.00                    | 0.00                   | 0.00                  |
| 4,700.00              | 7.54            | 160.75      | 4,678.85              | -311.02      | 108.61       | -311.76                 | 0.00                    | 0.00                   | 0.00                  |
| 4,800.00              | 7.54            | 160.75      | 4,777.98              | -323.41      | 112.94       | -324.17                 | 0.00                    | 0.00                   | 0.00                  |
| 4,900.00              | 7.54            | 160.75      | 4,877.12              | -335.79      | 117.26       | -336.58                 | 0.00                    | 0.00                   | 0.00                  |
| 5,000.00              | 7.54            | 160.75      | 4,976.26              | -348.17      | 121.58       | -348.99                 | 0.00                    | 0.00                   | 0.00                  |
| 5,097.59              | 7.54            | 160.75      | 5,073.00              | -360.26      | 125.80       | -361.10                 | 0.00                    | 0.00                   | 0.00                  |
| <b>Delaware</b>       |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,100.00              | 7.54            | 160.75      | 5,075.39              | -360.55      | 125.91       | -361.40                 | 0.00                    | 0.00                   | 0.00                  |
| 5,200.00              | 7.54            | 160.75      | 5,174.53              | -372.94      | 130.23       | -373.81                 | 0.00                    | 0.00                   | 0.00                  |
| 5,300.00              | 7.54            | 160.75      | 5,273.66              | -385.32      | 134.56       | -386.23                 | 0.00                    | 0.00                   | 0.00                  |
| 5,400.00              | 7.54            | 160.75      | 5,372.80              | -397.70      | 138.88       | -398.64                 | 0.00                    | 0.00                   | 0.00                  |
| 5,500.00              | 7.54            | 160.75      | 5,471.94              | -410.08      | 143.20       | -411.05                 | 0.00                    | 0.00                   | 0.00                  |
| 5,600.00              | 7.54            | 160.75      | 5,571.07              | -422.47      | 147.53       | -423.46                 | 0.00                    | 0.00                   | 0.00                  |
| 5,700.00              | 7.54            | 160.75      | 5,670.21              | -434.85      | 151.85       | -435.87                 | 0.00                    | 0.00                   | 0.00                  |
| 5,800.00              | 7.54            | 160.75      | 5,769.34              | -447.23      | 156.18       | -448.28                 | 0.00                    | 0.00                   | 0.00                  |
| 5,900.00              | 7.54            | 160.75      | 5,868.48              | -459.61      | 160.50       | -460.69                 | 0.00                    | 0.00                   | 0.00                  |
| 6,000.00              | 7.54            | 160.75      | 5,967.62              | -471.99      | 164.82       | -473.11                 | 0.00                    | 0.00                   | 0.00                  |
| 6,100.00              | 7.54            | 160.75      | 6,066.75              | -484.38      | 169.15       | -485.52                 | 0.00                    | 0.00                   | 0.00                  |
| 6,200.00              | 7.54            | 160.75      | 6,165.89              | -496.76      | 173.47       | -497.93                 | 0.00                    | 0.00                   | 0.00                  |
| 6,300.00              | 7.54            | 160.75      | 6,265.03              | -509.14      | 177.80       | -510.34                 | 0.00                    | 0.00                   | 0.00                  |
| 6,400.00              | 7.54            | 160.75      | 6,364.16              | -521.52      | 182.12       | -522.75                 | 0.00                    | 0.00                   | 0.00                  |
| 6,500.00              | 7.54            | 160.75      | 6,463.30              | -533.91      | 186.44       | -535.16                 | 0.00                    | 0.00                   | 0.00                  |
| 6,600.00              | 7.54            | 160.75      | 6,562.43              | -546.29      | 190.77       | -547.57                 | 0.00                    | 0.00                   | 0.00                  |
| 6,700.00              | 7.54            | 160.75      | 6,661.57              | -558.67      | 195.09       | -559.98                 | 0.00                    | 0.00                   | 0.00                  |
| 6,800.00              | 7.54            | 160.75      | 6,760.71              | -571.05      | 199.42       | -572.40                 | 0.00                    | 0.00                   | 0.00                  |
| 6,900.00              | 7.54            | 160.75      | 6,859.84              | -583.43      | 203.74       | -584.81                 | 0.00                    | 0.00                   | 0.00                  |
| 7,000.00              | 7.54            | 160.75      | 6,958.98              | -595.82      | 208.06       | -597.22                 | 0.00                    | 0.00                   | 0.00                  |
| 7,100.00              | 7.54            | 160.75      | 7,058.11              | -608.20      | 212.39       | -609.63                 | 0.00                    | 0.00                   | 0.00                  |
| 7,200.00              | 7.54            | 160.75      | 7,157.25              | -620.58      | 216.71       | -622.04                 | 0.00                    | 0.00                   | 0.00                  |
| 7,300.00              | 7.54            | 160.75      | 7,256.39              | -632.96      | 221.04       | -634.45                 | 0.00                    | 0.00                   | 0.00                  |
| 7,400.00              | 7.54            | 160.75      | 7,355.52              | -645.35      | 225.36       | -646.86                 | 0.00                    | 0.00                   | 0.00                  |
| 7,500.00              | 7.54            | 160.75      | 7,454.66              | -657.73      | 229.68       | -659.28                 | 0.00                    | 0.00                   | 0.00                  |
| 7,600.00              | 7.54            | 160.75      | 7,553.80              | -670.11      | 234.01       | -671.69                 | 0.00                    | 0.00                   | 0.00                  |
| 7,700.00              | 7.54            | 160.75      | 7,652.93              | -682.49      | 238.33       | -684.10                 | 0.00                    | 0.00                   | 0.00                  |
| 7,800.00              | 7.54            | 160.75      | 7,752.07              | -694.87      | 242.66       | -696.51                 | 0.00                    | 0.00                   | 0.00                  |
| 7,900.00              | 7.54            | 160.75      | 7,851.20              | -707.26      | 246.98       | -708.92                 | 0.00                    | 0.00                   | 0.00                  |
| 8,000.00              | 7.54            | 160.75      | 7,950.34              | -719.64      | 251.30       | -721.33                 | 0.00                    | 0.00                   | 0.00                  |
| 8,100.00              | 7.54            | 160.75      | 8,049.48              | -732.02      | 255.63       | -733.74                 | 0.00                    | 0.00                   | 0.00                  |
| 8,200.00              | 7.54            | 160.75      | 8,148.61              | -744.40      | 259.95       | -746.16                 | 0.00                    | 0.00                   | 0.00                  |
| 8,300.00              | 7.54            | 160.75      | 8,247.75              | -756.79      | 264.28       | -758.57                 | 0.00                    | 0.00                   | 0.00                  |
| 8,400.00              | 7.54            | 160.75      | 8,346.89              | -769.17      | 268.60       | -770.98                 | 0.00                    | 0.00                   | 0.00                  |
| 8,500.00              | 7.54            | 160.75      | 8,446.02              | -781.55      | 272.92       | -783.39                 | 0.00                    | 0.00                   | 0.00                  |
| 8,600.00              | 7.54            | 160.75      | 8,545.16              | -793.93      | 277.25       | -795.80                 | 0.00                    | 0.00                   | 0.00                  |
| 8,700.00              | 7.54            | 160.75      | 8,644.29              | -806.31      | 281.57       | -808.21                 | 0.00                    | 0.00                   | 0.00                  |
| 8,800.00              | 7.54            | 160.75      | 8,743.43              | -818.70      | 285.90       | -820.62                 | 0.00                    | 0.00                   | 0.00                  |
| 8,900.00              | 7.54            | 160.75      | 8,842.57              | -831.08      | 290.22       | -833.04                 | 0.00                    | 0.00                   | 0.00                  |
| 9,000.00              | 7.54            | 160.75      | 8,941.70              | -843.46      | 294.54       | -845.45                 | 0.00                    | 0.00                   | 0.00                  |
| 9,031.57              | 7.54            | 160.75      | 8,973.00              | -847.37      | 295.91       | -849.36                 | 0.00                    | 0.00                   | 0.00                  |
| <b>Bone Spring</b>    |                 |             |                       |              |              |                         |                         |                        |                       |
| 9,100.00              | 7.54            | 160.75      | 9,040.84              | -855.84      | 298.87       | -857.86                 | 0.00                    | 0.00                   | 0.00                  |
| 9,152.62              | 7.54            | 160.75      | 9,093.00              | -862.36      | 301.14       | -864.39                 | 0.00                    | 0.00                   | 0.00                  |
| <b>Upper Avalon</b>   |                 |             |                       |              |              |                         |                         |                        |                       |
| 9,200.00              | 7.54            | 160.75      | 9,139.97              | -868.23      | 303.19       | -870.27                 | 0.00                    | 0.00                   | 0.00                  |



# Planning Report

Database: EDM 5000.1.13 Single User Db  
 Company: XTO Energy  
 Project: Lea County, NM (NAD-27)  
 Site: Mis Amigos  
 Well: #106H  
 Wellbore: OH  
 Design: PERMIT

Local Co-ordinate Reference: Well #106H  
 TVD Reference: RKB = 15' @ 3673.00usft  
 MD Reference: RKB = 15' @ 3673.00usft  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

## Planned Survey

| Measured Depth (usft)     | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 9,300.00                  | 7.54            | 160.75      | 9,239.11              | -880.61      | 307.52       | -882.68                 | 0.00                    | 0.00                   | 0.00                  |
| 9,400.00                  | 7.54            | 160.75      | 9,338.25              | -892.99      | 311.84       | -895.09                 | 0.00                    | 0.00                   | 0.00                  |
| 9,500.00                  | 7.54            | 160.75      | 9,437.38              | -905.37      | 316.16       | -907.50                 | 0.00                    | 0.00                   | 0.00                  |
| 9,600.00                  | 7.54            | 160.75      | 9,536.52              | -917.75      | 320.49       | -919.91                 | 0.00                    | 0.00                   | 0.00                  |
| 9,700.00                  | 7.54            | 160.75      | 9,635.66              | -930.14      | 324.81       | -932.33                 | 0.00                    | 0.00                   | 0.00                  |
| 9,800.00                  | 7.54            | 160.75      | 9,734.79              | -942.52      | 329.14       | -944.74                 | 0.00                    | 0.00                   | 0.00                  |
| 9,900.00                  | 7.54            | 160.75      | 9,833.93              | -954.90      | 333.46       | -957.15                 | 0.00                    | 0.00                   | 0.00                  |
| 10,000.00                 | 7.54            | 160.75      | 9,933.06              | -967.28      | 337.78       | -969.56                 | 0.00                    | 0.00                   | 0.00                  |
| 10,100.00                 | 7.54            | 160.75      | 10,032.20             | -979.67      | 342.11       | -981.97                 | 0.00                    | 0.00                   | 0.00                  |
| 10,166.37                 | 7.54            | 160.75      | 10,098.00             | -987.88      | 344.98       | -990.21                 | 0.00                    | 0.00                   | 0.00                  |
| <b>1st Bone Spring Ss</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,200.00                 | 7.54            | 160.75      | 10,131.34             | -992.05      | 346.43       | -994.38                 | 0.00                    | 0.00                   | 0.00                  |
| 10,300.00                 | 7.54            | 160.75      | 10,230.47             | -1,004.43    | 350.76       | -1,006.79               | 0.00                    | 0.00                   | 0.00                  |
| 10,400.00                 | 7.54            | 160.75      | 10,329.61             | -1,016.81    | 355.08       | -1,019.21               | 0.00                    | 0.00                   | 0.00                  |
| 10,500.00                 | 7.54            | 160.75      | 10,428.75             | -1,029.19    | 359.40       | -1,031.62               | 0.00                    | 0.00                   | 0.00                  |
| 10,600.00                 | 7.54            | 160.75      | 10,527.88             | -1,041.58    | 363.73       | -1,044.03               | 0.00                    | 0.00                   | 0.00                  |
| 10,700.00                 | 7.54            | 160.75      | 10,627.02             | -1,053.96    | 368.05       | -1,056.44               | 0.00                    | 0.00                   | 0.00                  |
| 10,796.82                 | 7.54            | 160.75      | 10,723.00             | -1,065.95    | 372.24       | -1,068.46               | 0.00                    | 0.00                   | 0.00                  |
| <b>2nd Bone Spring Ss</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,800.00                 | 7.54            | 160.75      | 10,726.15             | -1,066.34    | 372.38       | -1,068.85               | 0.00                    | 0.00                   | 0.00                  |
| 10,900.00                 | 7.54            | 160.75      | 10,825.29             | -1,078.72    | 376.70       | -1,081.26               | 0.00                    | 0.00                   | 0.00                  |
| 11,000.00                 | 7.54            | 160.75      | 10,924.43             | -1,091.11    | 381.02       | -1,093.67               | 0.00                    | 0.00                   | 0.00                  |
| 11,100.00                 | 7.54            | 160.75      | 11,023.56             | -1,103.49    | 385.35       | -1,106.09               | 0.00                    | 0.00                   | 0.00                  |
| 11,200.00                 | 7.54            | 160.75      | 11,122.70             | -1,115.87    | 389.67       | -1,118.50               | 0.00                    | 0.00                   | 0.00                  |
| 11,300.00                 | 7.54            | 160.75      | 11,221.83             | -1,128.25    | 394.00       | -1,130.91               | 0.00                    | 0.00                   | 0.00                  |
| 11,301.18                 | 7.54            | 160.75      | 11,223.00             | -1,128.40    | 394.05       | -1,131.05               | 0.00                    | 0.00                   | 0.00                  |
| <b>3rd Bone Spring Lm</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 11,400.00                 | 7.54            | 160.75      | 11,320.97             | -1,140.64    | 398.32       | -1,143.32               | 0.00                    | 0.00                   | 0.00                  |
| 11,500.00                 | 7.54            | 160.75      | 11,420.11             | -1,153.02    | 402.64       | -1,155.73               | 0.00                    | 0.00                   | 0.00                  |
| 11,600.00                 | 7.54            | 160.75      | 11,519.24             | -1,165.40    | 406.97       | -1,168.14               | 0.00                    | 0.00                   | 0.00                  |
| 11,700.00                 | 7.54            | 160.75      | 11,618.38             | -1,177.78    | 411.29       | -1,180.55               | 0.00                    | 0.00                   | 0.00                  |
| 11,800.00                 | 7.54            | 160.75      | 11,717.52             | -1,190.16    | 415.62       | -1,192.97               | 0.00                    | 0.00                   | 0.00                  |
| 11,900.00                 | 7.54            | 160.75      | 11,816.65             | -1,202.55    | 419.94       | -1,205.38               | 0.00                    | 0.00                   | 0.00                  |
| 11,943.24                 | 7.54            | 160.75      | 11,859.52             | -1,207.90    | 421.81       | -1,210.74               | 0.00                    | 0.00                   | 0.00                  |
| 11,950.00                 | 6.90            | 158.92      | 11,866.22             | -1,208.70    | 422.10       | -1,211.54               | 10.00                   | -9.40                  | -27.12                |
| 12,000.00                 | 2.85            | 120.32      | 11,916.04             | -1,212.13    | 424.26       | -1,214.99               | 10.00                   | -8.11                  | -77.20                |
| 12,031.99                 | 3.01            | 54.12       | 11,948.00             | -1,212.04    | 425.62       | -1,214.91               | 10.00                   | 0.50                   | -206.92               |
| <b>3rd Bone Spring Ss</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 12,050.00                 | 4.31            | 34.20       | 11,965.97             | -1,211.20    | 426.39       | -1,214.08               | 10.00                   | 7.23                   | -110.61               |
| 12,100.00                 | 8.89            | 15.49       | 12,015.64             | -1,205.92    | 428.47       | -1,208.81               | 10.00                   | 9.16                   | -37.43                |
| 12,150.00                 | 13.76           | 9.67        | 12,064.65             | -1,196.33    | 430.51       | -1,199.23               | 10.00                   | 9.75                   | -11.63                |
| 12,200.00                 | 18.70           | 6.87        | 12,112.64             | -1,182.50    | 432.47       | -1,185.42               | 10.00                   | 9.88                   | -5.60                 |
| 12,250.00                 | 23.67           | 5.21        | 12,159.25             | -1,164.54    | 434.34       | -1,167.47               | 10.00                   | 9.93                   | -3.32                 |
| 12,300.00                 | 28.64           | 4.11        | 12,204.12             | -1,142.58    | 436.11       | -1,145.52               | 10.00                   | 9.95                   | -2.22                 |
| 12,350.00                 | 33.63           | 3.30        | 12,246.90             | -1,116.79    | 437.77       | -1,119.74               | 10.00                   | 9.97                   | -1.61                 |
| 12,400.00                 | 38.61           | 2.68        | 12,287.28             | -1,087.36    | 439.29       | -1,090.33               | 10.00                   | 9.97                   | -1.24                 |
| 12,413.86                 | 39.99           | 2.54        | 12,298.00             | -1,078.60    | 439.69       | -1,081.56               | 10.00                   | 9.98                   | -1.07                 |
| <b>Wolfcamp</b>           |                 |             |                       |              |              |                         |                         |                        |                       |
| 12,450.00                 | 43.60           | 2.19        | 12,324.94             | -1,054.53    | 440.68       | -1,057.51               | 10.00                   | 9.98                   | -0.96                 |
| 12,500.00                 | 48.59           | 1.78        | 12,359.60             | -1,018.54    | 441.92       | -1,021.52               | 10.00                   | 9.98                   | -0.83                 |
| 12,505.17                 | 49.11           | 1.74        | 12,363.00             | -1,014.65    | 442.04       | -1,017.64               | 10.00                   | 9.98                   | -0.75                 |
| <b>Wolfcamp X</b>         |                 |             |                       |              |              |                         |                         |                        |                       |
| 12,550.00                 | 53.59           | 1.42        | 12,391.00             | -979.66      | 443.00       | -982.65                 | 10.00                   | 9.98                   | -0.70                 |



## Planning Report

**Database:** EDM 5000.1.13 Single User Db  
**Company:** XTO Energy  
**Project:** Lea County, NM (NAD-27)  
**Site:** Mis Amigos  
**Well:** #106H  
**Wellbore:** OH  
**Design:** PERMIT

**Local Co-ordinate Reference:** Well #106H  
**TVD Reference:** RKB = 15' @ 3673.00usft  
**MD Reference:** RKB = 15' @ 3673.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

### Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 12,600.00             | 58.58           | 1.11        | 12,418.89             | -938.19      | 443.92       | -941.19                 | 10.00                   | 9.99                   | -0.62                 |
| 12,650.00             | 63.57           | 0.83        | 12,443.06             | -894.45      | 444.66       | -897.45                 | 10.00                   | 9.99                   | -0.56                 |
| 12,700.00             | 68.57           | 0.58        | 12,463.34             | -848.76      | 445.22       | -851.78                 | 10.00                   | 9.99                   | -0.51                 |
| 12,744.58             | 73.02           | 0.36        | 12,478.00             | -806.68      | 445.56       | -809.69                 | 10.00                   | 9.99                   | -0.48                 |
| <b>Wolfcamp Y</b>     |                 |             |                       |              |              |                         |                         |                        |                       |
| 12,750.00             | 73.56           | 0.34        | 12,479.56             | -801.49      | 445.59       | -804.50                 | 10.00                   | 9.99                   | -0.47                 |
| 12,800.00             | 78.56           | 0.11        | 12,491.60             | -752.98      | 445.78       | -755.99                 | 10.00                   | 9.99                   | -0.45                 |
| 12,850.00             | 83.55           | 359.89      | 12,499.37             | -703.60      | 445.78       | -706.62                 | 10.00                   | 9.99                   | -0.44                 |
| 12,900.00             | 88.55           | 359.68      | 12,502.82             | -653.73      | 445.59       | -656.75                 | 10.00                   | 9.99                   | -0.43                 |
| 12,914.54             | 90.00           | 359.61      | 12,503.00             | -639.20      | 445.50       | -642.22                 | 10.00                   | 9.99                   | -0.43                 |
| <b>LP</b>             |                 |             |                       |              |              |                         |                         |                        |                       |
| 13,000.00             | 90.00           | 359.61      | 12,503.00             | -553.74      | 444.92       | -556.75                 | 0.00                    | 0.00                   | 0.00                  |
| 13,100.00             | 90.00           | 359.61      | 12,503.00             | -453.74      | 444.25       | -456.75                 | 0.00                    | 0.00                   | 0.00                  |
| 13,200.00             | 90.00           | 359.61      | 12,503.00             | -353.74      | 443.58       | -356.75                 | 0.00                    | 0.00                   | 0.00                  |
| 13,300.00             | 90.00           | 359.61      | 12,503.00             | -253.74      | 442.90       | -256.75                 | 0.00                    | 0.00                   | 0.00                  |
| 13,400.00             | 90.00           | 359.61      | 12,503.00             | -153.75      | 442.23       | -156.75                 | 0.00                    | 0.00                   | 0.00                  |
| 13,500.00             | 90.00           | 359.61      | 12,503.00             | -53.75       | 441.55       | -56.75                  | 0.00                    | 0.00                   | 0.00                  |
| 13,600.00             | 90.00           | 359.61      | 12,503.00             | 46.25        | 440.88       | 43.25                   | 0.00                    | 0.00                   | 0.00                  |
| 13,700.00             | 90.00           | 359.61      | 12,503.00             | 146.25       | 440.20       | 143.25                  | 0.00                    | 0.00                   | 0.00                  |
| 13,800.00             | 90.00           | 359.61      | 12,503.00             | 246.24       | 439.53       | 243.25                  | 0.00                    | 0.00                   | 0.00                  |
| 13,900.00             | 90.00           | 359.61      | 12,503.00             | 346.24       | 438.86       | 343.25                  | 0.00                    | 0.00                   | 0.00                  |
| 14,000.00             | 90.00           | 359.61      | 12,503.00             | 446.24       | 438.18       | 443.25                  | 0.00                    | 0.00                   | 0.00                  |
| 14,100.00             | 90.00           | 359.61      | 12,503.00             | 546.24       | 437.51       | 543.25                  | 0.00                    | 0.00                   | 0.00                  |
| 14,200.00             | 90.00           | 359.61      | 12,503.00             | 646.23       | 436.83       | 643.25                  | 0.00                    | 0.00                   | 0.00                  |
| 14,300.00             | 90.00           | 359.61      | 12,503.00             | 746.23       | 436.16       | 743.25                  | 0.00                    | 0.00                   | 0.00                  |
| 14,400.00             | 90.00           | 359.61      | 12,503.00             | 846.23       | 435.49       | 843.25                  | 0.00                    | 0.00                   | 0.00                  |
| 14,500.00             | 90.00           | 359.61      | 12,503.00             | 946.23       | 434.81       | 943.25                  | 0.00                    | 0.00                   | 0.00                  |
| 14,600.00             | 90.00           | 359.61      | 12,503.00             | 1,046.23     | 434.14       | 1,043.25                | 0.00                    | 0.00                   | 0.00                  |
| 14,700.00             | 90.00           | 359.61      | 12,503.00             | 1,146.22     | 433.46       | 1,143.25                | 0.00                    | 0.00                   | 0.00                  |
| 14,800.00             | 90.00           | 359.61      | 12,503.00             | 1,246.22     | 432.79       | 1,243.25                | 0.00                    | 0.00                   | 0.00                  |
| 14,900.00             | 90.00           | 359.61      | 12,503.00             | 1,346.22     | 432.12       | 1,343.25                | 0.00                    | 0.00                   | 0.00                  |
| 15,000.00             | 90.00           | 359.61      | 12,503.00             | 1,446.22     | 431.44       | 1,443.25                | 0.00                    | 0.00                   | 0.00                  |
| 15,100.00             | 90.00           | 359.61      | 12,503.00             | 1,546.21     | 430.77       | 1,543.25                | 0.00                    | 0.00                   | 0.00                  |
| 15,200.00             | 90.00           | 359.61      | 12,503.00             | 1,646.21     | 430.09       | 1,643.25                | 0.00                    | 0.00                   | 0.00                  |
| 15,300.00             | 90.00           | 359.61      | 12,503.00             | 1,746.21     | 429.42       | 1,743.25                | 0.00                    | 0.00                   | 0.00                  |
| 15,400.00             | 90.00           | 359.61      | 12,503.00             | 1,846.21     | 428.74       | 1,843.25                | 0.00                    | 0.00                   | 0.00                  |
| 15,500.00             | 90.00           | 359.61      | 12,503.00             | 1,946.21     | 428.07       | 1,943.25                | 0.00                    | 0.00                   | 0.00                  |
| 15,600.00             | 90.00           | 359.61      | 12,503.00             | 2,046.20     | 427.40       | 2,043.25                | 0.00                    | 0.00                   | 0.00                  |
| 15,700.00             | 90.00           | 359.61      | 12,503.00             | 2,146.20     | 426.72       | 2,143.25                | 0.00                    | 0.00                   | 0.00                  |
| 15,800.00             | 90.00           | 359.61      | 12,503.00             | 2,246.20     | 426.05       | 2,243.25                | 0.00                    | 0.00                   | 0.00                  |
| 15,900.00             | 90.00           | 359.61      | 12,503.00             | 2,346.20     | 425.37       | 2,343.25                | 0.00                    | 0.00                   | 0.00                  |
| 16,000.00             | 90.00           | 359.61      | 12,503.00             | 2,446.19     | 424.70       | 2,443.25                | 0.00                    | 0.00                   | 0.00                  |
| 16,100.00             | 90.00           | 359.61      | 12,503.00             | 2,546.19     | 424.03       | 2,543.25                | 0.00                    | 0.00                   | 0.00                  |
| 16,200.00             | 90.00           | 359.61      | 12,503.00             | 2,646.19     | 423.35       | 2,643.25                | 0.00                    | 0.00                   | 0.00                  |
| 16,300.00             | 90.00           | 359.61      | 12,503.00             | 2,746.19     | 422.68       | 2,743.25                | 0.00                    | 0.00                   | 0.00                  |
| 16,400.00             | 90.00           | 359.61      | 12,503.00             | 2,846.18     | 422.00       | 2,843.25                | 0.00                    | 0.00                   | 0.00                  |
| 16,500.00             | 90.00           | 359.61      | 12,503.00             | 2,946.18     | 421.33       | 2,943.25                | 0.00                    | 0.00                   | 0.00                  |
| 16,600.00             | 90.00           | 359.61      | 12,503.00             | 3,046.18     | 420.65       | 3,043.25                | 0.00                    | 0.00                   | 0.00                  |
| 16,700.00             | 90.00           | 359.61      | 12,503.00             | 3,146.18     | 419.98       | 3,143.25                | 0.00                    | 0.00                   | 0.00                  |
| 16,800.00             | 90.00           | 359.61      | 12,503.00             | 3,246.18     | 419.31       | 3,243.25                | 0.00                    | 0.00                   | 0.00                  |
| 16,900.00             | 90.00           | 359.61      | 12,503.00             | 3,346.17     | 418.63       | 3,343.25                | 0.00                    | 0.00                   | 0.00                  |
| 17,000.00             | 90.00           | 359.61      | 12,503.00             | 3,446.17     | 417.96       | 3,443.25                | 0.00                    | 0.00                   | 0.00                  |
| 17,100.00             | 90.00           | 359.61      | 12,503.00             | 3,546.17     | 417.28       | 3,543.25                | 0.00                    | 0.00                   | 0.00                  |
| 17,200.00             | 90.00           | 359.61      | 12,503.00             | 3,646.17     | 416.61       | 3,643.25                | 0.00                    | 0.00                   | 0.00                  |



## Planning Report

|                  |                              |                                     |                         |
|------------------|------------------------------|-------------------------------------|-------------------------|
| <b>Database:</b> | EDM 5000.1.13 Single User Db | <b>Local Co-ordinate Reference:</b> | Well #106H              |
| <b>Company:</b>  | XTO Energy                   | <b>TVD Reference:</b>               | RKB = 15' @ 3673.00usft |
| <b>Project:</b>  | Lea County, NM (NAD-27)      | <b>MD Reference:</b>                | RKB = 15' @ 3673.00usft |
| <b>Site:</b>     | Mis Amigos                   | <b>North Reference:</b>             | Grid                    |
| <b>Well:</b>     | #106H                        | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Wellbore:</b> | OH                           |                                     |                         |
| <b>Design:</b>   | PERMIT                       |                                     |                         |

### Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 17,300.00             | 90.00           | 359.61      | 12,503.00             | 3,746.16     | 415.94       | 3,743.25                | 0.00                    | 0.00                   | 0.00                  |
| 17,400.00             | 90.00           | 359.61      | 12,503.00             | 3,846.16     | 415.26       | 3,843.25                | 0.00                    | 0.00                   | 0.00                  |
| 17,500.00             | 90.00           | 359.61      | 12,503.00             | 3,946.16     | 414.59       | 3,943.25                | 0.00                    | 0.00                   | 0.00                  |
| 17,600.00             | 90.00           | 359.61      | 12,503.00             | 4,046.16     | 413.91       | 4,043.25                | 0.00                    | 0.00                   | 0.00                  |
| 17,700.00             | 90.00           | 359.61      | 12,503.00             | 4,146.16     | 413.24       | 4,143.25                | 0.00                    | 0.00                   | 0.00                  |
| 17,800.00             | 90.00           | 359.61      | 12,503.00             | 4,246.15     | 412.56       | 4,243.25                | 0.00                    | 0.00                   | 0.00                  |
| 17,900.00             | 90.00           | 359.61      | 12,503.00             | 4,346.15     | 411.89       | 4,343.25                | 0.00                    | 0.00                   | 0.00                  |
| 17,996.95             | 90.00           | 359.61      | 12,503.00             | 4,443.10     | 411.24       | 4,440.20                | 0.00                    | 0.00                   | 0.00                  |
| 18,000.00             | 90.00           | 359.61      | 12,503.00             | 4,446.15     | 411.22       | 4,443.25                | 0.00                    | 0.00                   | 0.00                  |
| 18,046.95             | 90.00           | 359.61      | 12,503.00             | 4,493.10     | 410.90       | 4,490.20                | 0.00                    | 0.00                   | 0.00                  |

### Design Targets

| Target Name<br>- hit/miss target<br>- Shape                                                                                | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude   | Longitude    |
|----------------------------------------------------------------------------------------------------------------------------|---------------|--------------|------------|--------------|--------------|-----------------|----------------|------------|--------------|
| MA #106H: SHL (741'<br>- plan hits target center<br>- Point                                                                | 0.00          | 0.00         | 0.00       | 0.00         | 0.00         | 457,562.00      | 723,864.50     | 32.2558792 | -103.6091675 |
| MA #106H: FTP<br>- plan hits target center<br>- Point                                                                      | 0.00          | 0.00         | 12,503.00  | -639.20      | 445.50       | 456,922.80      | 724,310.00     | 32.2541140 | -103.6077404 |
| MA #106H: LTP<br>- plan misses target center by 0.04usft at 17996.95usft MD (12503.00 TVD, 4443.10 N, 411.24 E)<br>- Point | 0.00          | 0.00         | 12,503.00  | 4,443.10     | 411.20       | 462,005.10      | 724,275.70     | 32.2680846 | -103.6077402 |
| MA #106H: PBHL (50'<br>- plan hits target center<br>- Point                                                                | 0.00          | 0.00         | 12,503.00  | 4,493.10     | 410.90       | 462,055.10      | 724,275.40     | 32.2682221 | -103.6077401 |

### Formations

| Measured Depth (usft) | Vertical Depth (usft) | Name               | Lithology | Dip (°) | Dip Direction (°) |
|-----------------------|-----------------------|--------------------|-----------|---------|-------------------|
| 1,223.00              | 1,223.00              | Rustler            |           |         |                   |
| 1,723.00              | 1,723.00              | Top Salt           |           |         |                   |
| 4,593.23              | 4,573.00              | Base Salt          |           |         |                   |
| 5,097.59              | 5,073.00              | Delaware           |           |         |                   |
| 9,031.57              | 8,973.00              | Bone Spring        |           |         |                   |
| 9,152.62              | 9,093.00              | Upper Avalon       |           |         |                   |
| 10,166.37             | 10,098.00             | 1st Bone Spring Ss |           |         |                   |
| 10,796.82             | 10,723.00             | 2nd Bone Spring Ss |           |         |                   |
| 11,301.18             | 11,223.00             | 3rd Bone Spring Lm |           |         |                   |
| 12,031.99             | 11,948.00             | 3rd Bone Spring Ss |           |         |                   |
| 12,413.86             | 12,298.00             | Wolfcamp           |           |         |                   |
| 12,505.17             | 12,363.00             | Wolfcamp X         |           |         |                   |
| 12,744.58             | 12,478.00             | Wolfcamp Y         |           |         |                   |
| 12,914.54             | 12,503.00             | LP                 |           |         |                   |



## Planning Report

**Database:** EDM 5000.1.13 Single User Db  
**Company:** XTO Energy  
**Project:** Lea County, NM (NAD-27)  
**Site:** Mis Amigos  
**Well:** #106H  
**Wellbore:** OH  
**Design:** PERMIT

**Local Co-ordinate Reference:** Well #106H  
**TVD Reference:** RKB = 15' @ 3673.00usft  
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**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature