

NM STATE DRILLING PERMITTING

Mls Amigos State 406H

		Deepest TVD	10027	KOP	9472	End of Curve	10489	Measured depth	15601			
Casing Type	Fluid Type	Mud Weight	Hole Size	Casing Size	Casing Grade	Casing Weight	Top MD	Setting Depth	Lead Cement	Tail Cement	Total Skcs 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	15601	1045	1142	2187	4539
	Cut Brine / OBM	9.3	8-1/2" to TD									

1st Stage  
2nd Stage

Max Expected Surface Pressure  
2643

BOP  
Cameron SM 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**

**#406H**

**OH**

**Plan: PERMIT**

## **Standard Planning Report**

**26 June, 2019**

**HOBBS OCD**  
**JUL 01 2019**  
**RECEIVED**



Project: Lea County, NM (NAD-27)  
 Site: Mis Arriagos  
 Well: #406H  
 Wellbore: OH  
 Design: PERMIT

PROJECT DETAILS: Lea County, NM (NAD-27)  
 Geodetic System: US State Plane 1827 (Exact solution)  
 Datum: NAD 1927 (NADCON CONUS)  
 Ellipsoid: Clarke 1866  
 Zone: New Mexico East 3001  
 System Datum: Mean Sea Level

WELL DETAILS: #406H

		Rig Name:		Ref Elev @ 3657.00usft			
		Ground Level	3657.00				
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
0.00	0.00	457562.00	723834.60	32.2558798	-103.6082642		

DESIGN TARGET DETAILS

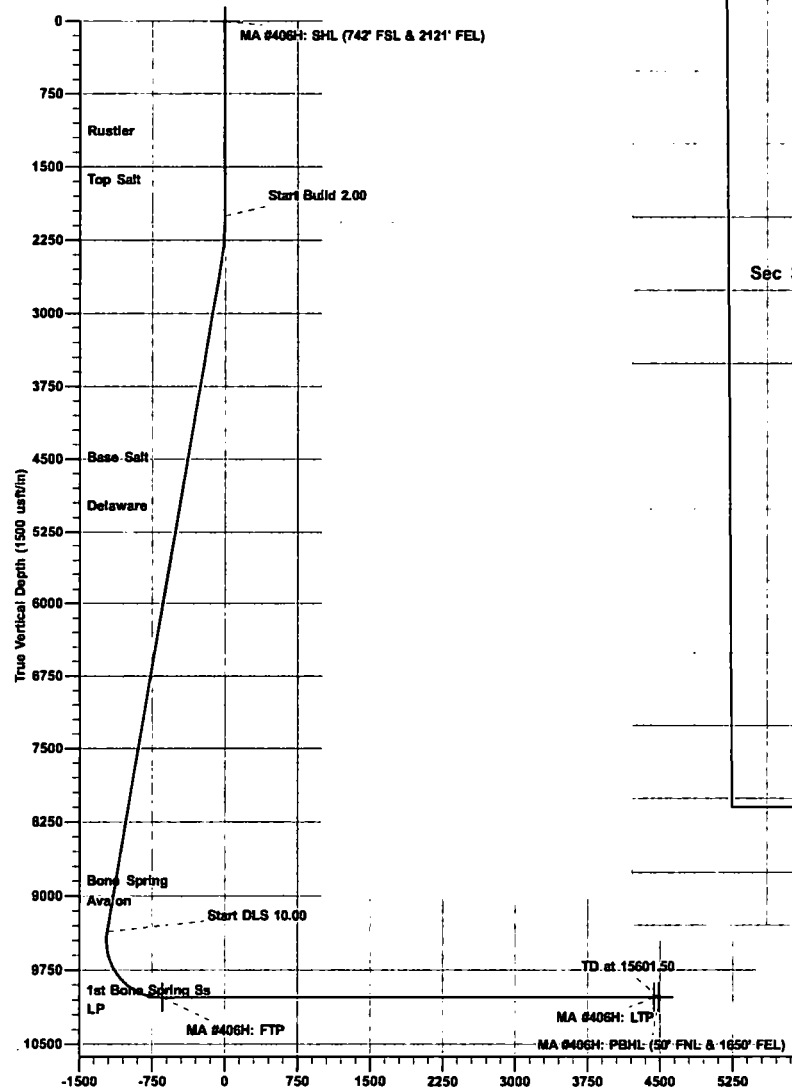
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
MA #406H: SHL (742' FSL & 2121' FEL)	0.00	0.00	0.00	457562.00	723834.60	32.2558798	-103.6082642	Point
MA #406H: FTP	10027.00	-639.20	475.40	456922.80	724310.00	32.2541139	-103.6077404	Point
MA #406H: LTP	10027.00	4443.10	441.10	462005.10	724275.70	32.2680846	-103.6077403	Point
MA #406H: PBHL (50' FNL & 1650' FEL)	10027.00	4483.10	440.80	462055.10	724275.40	32.2682220	-103.6077401	Point

SECTION DETAILS

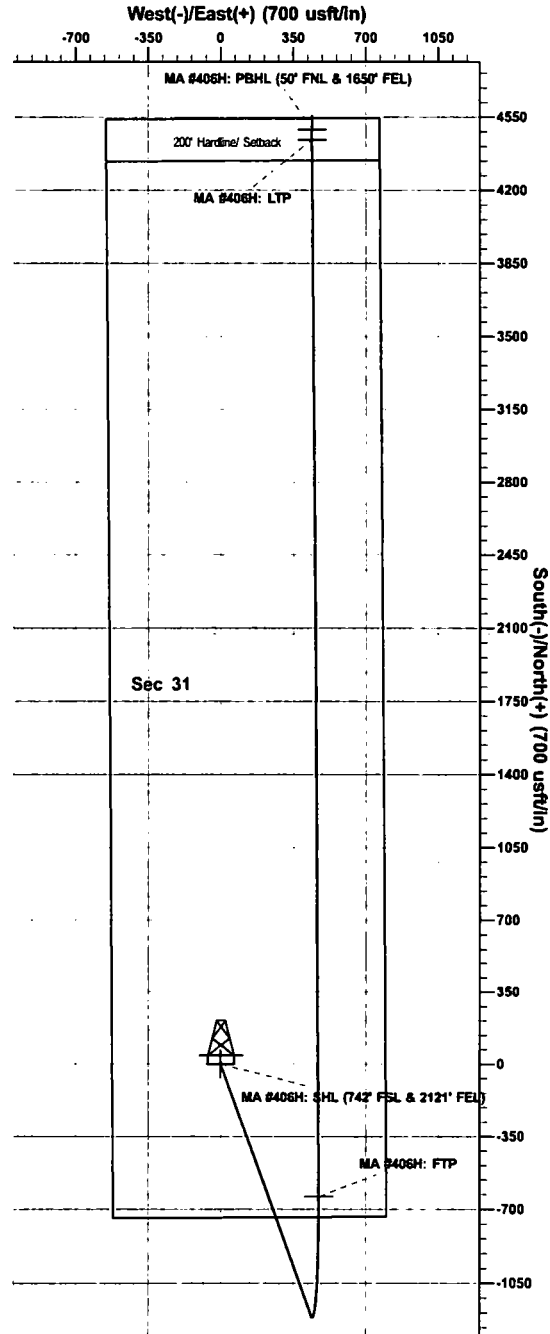
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00
3	2511.46	10.23	159.98	2508.75	-42.78	15.59	2.00	159.98	-42.89
4	9472.79	10.23	159.98	9359.43	-1204.35	438.74	0.00	0.00	-1207.30
5	10469.08	90.00	359.61	10027.00	-639.20	475.40	10.00	-160.08	-642.42
6	15551.50	90.00	359.61	10027.00	4443.10	441.14	0.00	0.00	4439.99
7	15601.50	90.00	359.61	10027.00	4483.10	440.80	0.00	0.00	4490.00

FORMATION TOP DETAILS

TVDPath	Formation
1207.00	Rustler
1707.00	Top Salt
4557.00	Base Salt
5057.00	Delaware
8957.00	Bone Spring
9077.00	Avalon
10027.00	LP



Vertical Section at 359.61° (1500 usf/in)



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 Producers are at the sole risk and responsibility of the user.

Plan: PERMIT (#406H/OH)

Created By: Matthew May Date: 16:10, June 25 2019

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 30-025-		<sup>2</sup> Pool Code	<sup>3</sup> Pool Name
<sup>4</sup> Property Code	<sup>5</sup> Property Name MIS AMIGOS		<sup>6</sup> Well Number 406H
<sup>7</sup> OGRID No. 005380	<sup>8</sup> Operator Name XTO ENERGY, INC.		<sup>9</sup> Elevation 3,657'

<sup>10</sup> Surface Location

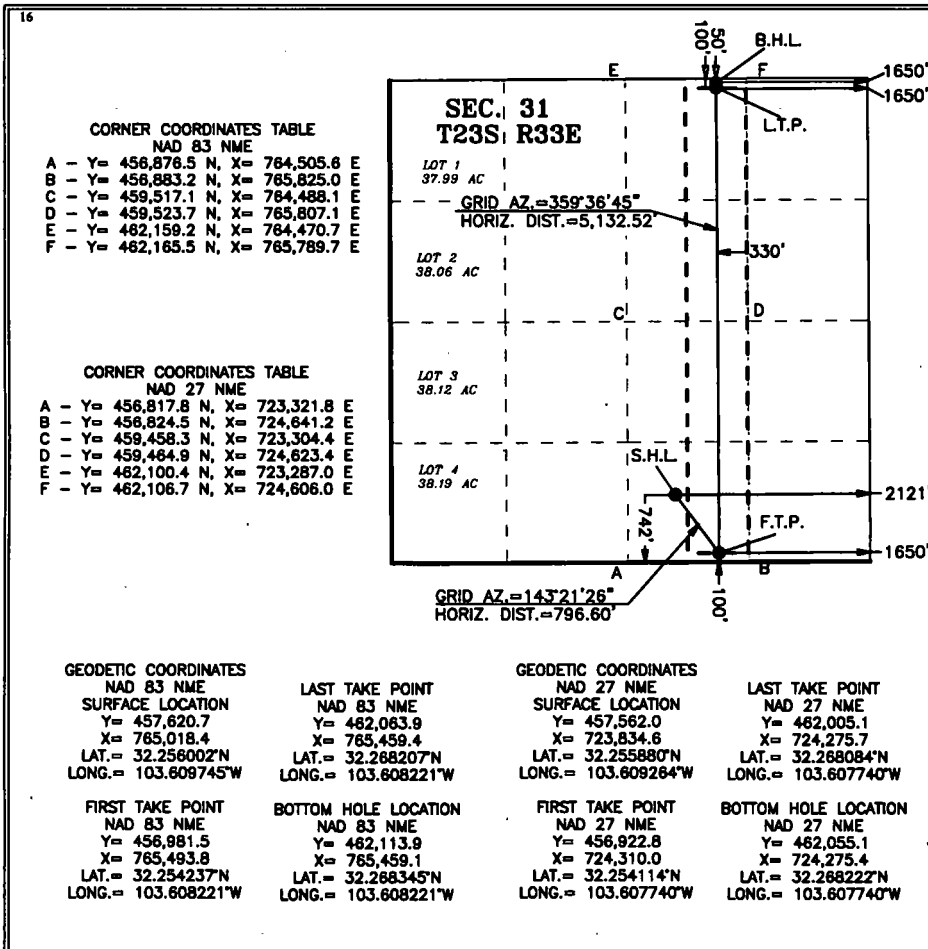
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	31	23 S	33 E		742	SOUTH	2,121	EAST	LEA

<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.
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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.



<sup>17</sup> OPERATOR CERTIFICATION

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.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_

E-mail Address \_\_\_\_\_

<sup>18</sup> 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.

05-21-2019

Date of Survey

Signature and Seal of Professional Surveyor:

*[Signature]*



MARK DILLON HARP 23786  
Certificate Number

RR 2018112887



Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #406H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	Ref GL @ 3657.00usft
<b>Project:</b>	Lea County, NM (NAD-27)	<b>MD Reference:</b>	Ref GL @ 3657.00usft
<b>Site:</b>	Mis Amigos	<b>North Reference:</b>	Grid
<b>Well:</b>	#406H	<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>Latitude:</b>	32.2547479
<b>From:</b>	Map	<b>Easting:</b>	725,352.60 usft	<b>Longitude:</b>	-103.6043629
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.39 °

<b>Well</b>	#406H					
<b>Well Position</b>	<b>+N/-S</b>	401.50 usft	<b>Northing:</b>	457,562.00 usft	<b>Latitude:</b>	32.2558798
	<b>+E/-W</b>	-1,518.00 usft	<b>Easting:</b>	723,834.60 usft	<b>Longitude:</b>	-103.6092642
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft	<b>Ground Level:</b>	3,657.00 usft

<b>Wellbore</b>	OH
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<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
	IGRF2015	06/26/19	(°)	(°)	(nT)
			6.75	60.06	47,743

<b>Design</b>	PERMIT
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<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

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
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	
2,511.46	10.23	159.98	2,508.75	-42.78	15.59	2.00	2.00	0.00	159.98	
9,472.79	10.23	159.98	9,359.43	-1,204.35	438.74	0.00	0.00	0.00	0.00	
10,469.08	90.00	359.61	10,027.00	-639.20	475.40	10.00	8.01	-16.10	-160.08	MA #406H: FTP
15,551.50	90.00	359.61	10,027.00	4,443.10	441.14	0.00	0.00	0.00	0.00	MA #406H: LTP
15,601.50	90.00	359.61	10,027.00	4,493.10	440.80	0.00	0.00	0.00	0.00	MA #406H: PBHL (!



Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #406H
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<b>Project:</b>	Lea County, NM (NAD-27)	<b>MD Reference:</b>	Ref GL @ 3657.00usft
<b>Site:</b>	Mis Amigos	<b>North Reference:</b>	Grid
<b>Well:</b>	#406H	<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)
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
1,207.00	0.00	0.00	1,207.00	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
1,707.00	0.00	0.00	1,707.00	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	159.98	2,099.98	-1.64	0.60	-1.64	2.00	2.00	0.00
2,200.00	4.00	159.98	2,199.84	-6.56	2.39	-6.57	2.00	2.00	0.00
2,300.00	6.00	159.98	2,299.45	-14.75	5.37	-14.78	2.00	2.00	0.00
2,400.00	8.00	159.98	2,398.70	-26.20	9.54	-26.26	2.00	2.00	0.00
2,500.00	10.00	159.98	2,497.47	-40.89	14.90	-40.99	2.00	2.00	0.00
2,511.46	10.23	159.98	2,508.75	-42.78	15.59	-42.89	2.00	2.00	0.00
2,600.00	10.23	159.98	2,595.88	-57.56	20.97	-57.70	0.00	0.00	0.00
2,700.00	10.23	159.98	2,694.29	-74.24	27.05	-74.43	0.00	0.00	0.00
2,800.00	10.23	159.98	2,792.70	-90.93	33.13	-91.15	0.00	0.00	0.00
2,900.00	10.23	159.98	2,891.11	-107.62	39.20	-107.88	0.00	0.00	0.00
3,000.00	10.23	159.98	2,989.52	-124.30	45.28	-124.61	0.00	0.00	0.00
3,100.00	10.23	159.98	3,087.93	-140.99	51.36	-141.33	0.00	0.00	0.00
3,200.00	10.23	159.98	3,186.34	-157.67	57.44	-158.06	0.00	0.00	0.00
3,300.00	10.23	159.98	3,284.75	-174.36	63.52	-174.79	0.00	0.00	0.00
3,400.00	10.23	159.98	3,383.16	-191.05	69.60	-191.51	0.00	0.00	0.00
3,500.00	10.23	159.98	3,481.57	-207.73	75.68	-208.24	0.00	0.00	0.00
3,600.00	10.23	159.98	3,579.99	-224.42	81.75	-224.97	0.00	0.00	0.00
3,700.00	10.23	159.98	3,678.40	-241.10	87.83	-241.70	0.00	0.00	0.00
3,800.00	10.23	159.98	3,776.81	-257.79	93.91	-258.42	0.00	0.00	0.00
3,900.00	10.23	159.98	3,875.22	-274.48	99.99	-275.15	0.00	0.00	0.00
4,000.00	10.23	159.98	3,973.63	-291.16	106.07	-291.88	0.00	0.00	0.00
4,100.00	10.23	159.98	4,072.04	-307.85	112.15	-308.60	0.00	0.00	0.00
4,200.00	10.23	159.98	4,170.45	-324.53	118.23	-325.33	0.00	0.00	0.00
4,300.00	10.23	159.98	4,268.86	-341.22	124.30	-342.06	0.00	0.00	0.00
4,400.00	10.23	159.98	4,367.27	-357.90	130.38	-358.78	0.00	0.00	0.00
4,500.00	10.23	159.98	4,465.68	-374.59	136.46	-375.51	0.00	0.00	0.00
4,592.80	10.23	159.98	4,557.00	-390.07	142.10	-391.03	0.00	0.00	0.00
<b>Base Salt</b>									



Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #406H
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<b>Project:</b>	Lea County, NM (NAD-27)	<b>MD Reference:</b>	Ref GL @ 3657.00usft
<b>Site:</b>	Mis Amigos	<b>North Reference:</b>	Grid
<b>Well:</b>	#406H	<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)
4,600.00	10.23	159.98	4,564.09	-391.28	142.54	-392.24	0.00	0.00	0.00
4,700.00	10.23	159.98	4,662.50	-407.96	148.62	-408.96	0.00	0.00	0.00
4,800.00	10.23	159.98	4,760.91	-424.65	154.70	-425.69	0.00	0.00	0.00
4,900.00	10.23	159.98	4,859.32	-441.33	160.78	-442.42	0.00	0.00	0.00
5,000.00	10.23	159.98	4,957.73	-458.02	166.85	-459.15	0.00	0.00	0.00
5,100.00	10.23	159.98	5,056.14	-474.71	172.93	-475.87	0.00	0.00	0.00
5,100.87	10.23	159.98	5,057.00	-474.85	172.99	-476.02	0.00	0.00	0.00
<b>Delaware</b>									
5,200.00	10.23	159.98	5,154.55	-491.39	179.01	-492.60	0.00	0.00	0.00
5,300.00	10.23	159.98	5,252.96	-508.08	185.09	-509.33	0.00	0.00	0.00
5,400.00	10.23	159.98	5,351.37	-524.76	191.17	-526.05	0.00	0.00	0.00
5,500.00	10.23	159.98	5,449.79	-541.45	197.25	-542.78	0.00	0.00	0.00
5,600.00	10.23	159.98	5,548.20	-558.14	203.33	-559.51	0.00	0.00	0.00
5,700.00	10.23	159.98	5,646.61	-574.82	209.41	-576.23	0.00	0.00	0.00
5,800.00	10.23	159.98	5,745.02	-591.51	215.48	-592.96	0.00	0.00	0.00
5,900.00	10.23	159.98	5,843.43	-608.19	221.56	-609.69	0.00	0.00	0.00
6,000.00	10.23	159.98	5,941.84	-624.88	227.64	-626.41	0.00	0.00	0.00
6,100.00	10.23	159.98	6,040.25	-641.56	233.72	-643.14	0.00	0.00	0.00
6,200.00	10.23	159.98	6,138.66	-658.25	239.80	-659.87	0.00	0.00	0.00
6,300.00	10.23	159.98	6,237.07	-674.94	245.88	-676.59	0.00	0.00	0.00
6,400.00	10.23	159.98	6,335.48	-691.62	251.96	-693.32	0.00	0.00	0.00
6,500.00	10.23	159.98	6,433.89	-708.31	258.03	-710.05	0.00	0.00	0.00
6,600.00	10.23	159.98	6,532.30	-724.99	264.11	-726.78	0.00	0.00	0.00
6,700.00	10.23	159.98	6,630.71	-741.68	270.19	-743.50	0.00	0.00	0.00
6,800.00	10.23	159.98	6,729.12	-758.37	276.27	-760.23	0.00	0.00	0.00
6,900.00	10.23	159.98	6,827.53	-775.05	282.35	-776.96	0.00	0.00	0.00
7,000.00	10.23	159.98	6,925.94	-791.74	288.43	-793.68	0.00	0.00	0.00
7,100.00	10.23	159.98	7,024.35	-808.42	294.51	-810.41	0.00	0.00	0.00
7,200.00	10.23	159.98	7,122.76	-825.11	300.58	-827.14	0.00	0.00	0.00
7,300.00	10.23	159.98	7,221.17	-841.80	306.66	-843.86	0.00	0.00	0.00
7,400.00	10.23	159.98	7,319.59	-858.48	312.74	-860.59	0.00	0.00	0.00
7,500.00	10.23	159.98	7,418.00	-875.17	318.82	-877.32	0.00	0.00	0.00
7,600.00	10.23	159.98	7,516.41	-891.85	324.90	-894.04	0.00	0.00	0.00
7,700.00	10.23	159.98	7,614.82	-908.54	330.98	-910.77	0.00	0.00	0.00
7,800.00	10.23	159.98	7,713.23	-925.23	337.06	-927.50	0.00	0.00	0.00
7,900.00	10.23	159.98	7,811.64	-941.91	343.13	-944.22	0.00	0.00	0.00
8,000.00	10.23	159.98	7,910.05	-958.60	349.21	-960.95	0.00	0.00	0.00
8,100.00	10.23	159.98	8,008.46	-975.28	355.29	-977.68	0.00	0.00	0.00
8,200.00	10.23	159.98	8,106.87	-991.97	361.37	-994.41	0.00	0.00	0.00
8,300.00	10.23	159.98	8,205.28	-1,008.65	367.45	-1,011.13	0.00	0.00	0.00
8,400.00	10.23	159.98	8,303.69	-1,025.34	373.53	-1,027.86	0.00	0.00	0.00
8,500.00	10.23	159.98	8,402.10	-1,042.03	379.61	-1,044.59	0.00	0.00	0.00
8,600.00	10.23	159.98	8,500.51	-1,058.71	385.69	-1,061.31	0.00	0.00	0.00
8,700.00	10.23	159.98	8,598.92	-1,075.40	391.76	-1,078.04	0.00	0.00	0.00
8,800.00	10.23	159.98	8,697.33	-1,092.08	397.84	-1,094.77	0.00	0.00	0.00
8,900.00	10.23	159.98	8,795.74	-1,108.77	403.92	-1,111.49	0.00	0.00	0.00
9,000.00	10.23	159.98	8,894.15	-1,125.46	410.00	-1,128.22	0.00	0.00	0.00
9,063.86	10.23	159.98	8,957.00	-1,136.11	413.88	-1,138.90	0.00	0.00	0.00
<b>Bone Spring</b>									
9,100.00	10.23	159.98	8,992.56	-1,142.14	416.08	-1,144.95	0.00	0.00	0.00
9,185.80	10.23	159.98	9,077.00	-1,156.46	421.29	-1,159.30	0.00	0.00	0.00
<b>Avalon</b>									
9,200.00	10.23	159.98	9,090.97	-1,158.83	422.16	-1,161.67	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 #406H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	Ref GL @ 3657.00usft
<b>Project:</b>	Lea County, NM (NAD-27)	<b>MD Reference:</b>	Ref GL @ 3657.00usft
<b>Site:</b>	Mis Amigos	<b>North Reference:</b>	Grid
<b>Well:</b>	#406H	<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)
9,300.00	10.23	159.98	9,189.39	-1,175.51	428.24	-1,178.40	0.00	0.00	0.00
9,400.00	10.23	159.98	9,287.80	-1,192.20	434.31	-1,195.13	0.00	0.00	0.00
9,472.79	10.23	159.98	9,359.43	-1,204.35	438.74	-1,207.30	0.00	0.00	0.00
9,500.00	7.73	153.07	9,386.30	-1,208.25	440.39	-1,211.22	10.00	-9.20	-25.40
9,550.00	3.96	118.45	9,436.05	-1,212.07	443.44	-1,215.06	10.00	-7.54	-69.25
9,600.00	4.65	47.86	9,485.94	-1,211.53	446.46	-1,214.54	10.00	1.37	-141.18
9,650.00	8.80	22.67	9,535.59	-1,206.64	449.43	-1,209.67	10.00	8.31	-50.38
9,700.00	13.54	14.20	9,584.64	-1,197.43	452.35	-1,200.49	10.00	9.47	-16.94
9,750.00	18.41	10.11	9,632.69	-1,183.98	455.17	-1,187.05	10.00	9.75	-8.18
9,800.00	23.34	7.69	9,679.40	-1,166.38	457.88	-1,169.47	10.00	9.85	-4.83
9,850.00	28.29	6.08	9,724.40	-1,144.77	460.46	-1,147.88	10.00	9.90	-3.22
9,900.00	33.25	4.92	9,767.34	-1,119.32	462.90	-1,122.44	10.00	9.93	-2.33
9,950.00	38.23	4.03	9,807.92	-1,090.21	465.16	-1,093.35	10.00	9.95	-1.78
10,000.00	43.20	3.31	9,845.80	-1,057.67	467.24	-1,060.83	10.00	9.96	-1.43
10,050.00	48.19	2.72	9,880.72	-1,021.95	469.11	-1,025.12	10.00	9.96	-1.18
10,100.00	53.17	2.22	9,912.39	-983.32	470.77	-986.50	10.00	9.97	-1.01
10,150.00	58.16	1.77	9,940.58	-942.07	472.20	-945.26	10.00	9.97	-0.89
10,200.00	63.15	1.37	9,965.08	-898.52	473.39	-901.72	10.00	9.98	-0.80
10,250.00	68.13	1.01	9,985.70	-852.99	474.34	-856.20	10.00	9.98	-0.73
10,300.00	73.12	0.67	10,002.28	-805.84	475.02	-809.06	10.00	9.98	-0.68
10,350.00	78.11	0.34	10,014.69	-757.43	475.45	-760.65	10.00	9.98	-0.65
10,400.00	83.10	0.03	10,022.85	-708.11	475.61	-711.34	10.00	9.98	-0.62
10,450.00	88.10	359.73	10,026.68	-658.28	475.51	-661.50	10.00	9.98	-0.61
10,469.08	90.00	359.61	10,027.00	-639.20	475.40	-642.42	10.00	9.98	-0.61
<b>LP</b>									
10,500.00	90.00	359.61	10,027.00	-608.28	475.19	-611.50	0.00	0.00	0.00
10,600.00	90.00	359.61	10,027.00	-508.28	474.52	-511.50	0.00	0.00	0.00
10,700.00	90.00	359.61	10,027.00	-408.29	473.84	-411.50	0.00	0.00	0.00
10,800.00	90.00	359.61	10,027.00	-308.29	473.17	-311.50	0.00	0.00	0.00
10,900.00	90.00	359.61	10,027.00	-208.29	472.49	-211.50	0.00	0.00	0.00
11,000.00	90.00	359.61	10,027.00	-108.29	471.82	-111.50	0.00	0.00	0.00
11,100.00	90.00	359.61	10,027.00	-8.30	471.15	-11.50	0.00	0.00	0.00
11,200.00	90.00	359.61	10,027.00	91.70	470.47	88.50	0.00	0.00	0.00
11,300.00	90.00	359.61	10,027.00	191.70	469.80	188.50	0.00	0.00	0.00
11,400.00	90.00	359.61	10,027.00	291.70	469.12	288.50	0.00	0.00	0.00
11,500.00	90.00	359.61	10,027.00	391.69	468.45	388.50	0.00	0.00	0.00
11,600.00	90.00	359.61	10,027.00	491.69	467.78	488.50	0.00	0.00	0.00
11,700.00	90.00	359.61	10,027.00	591.69	467.10	588.50	0.00	0.00	0.00
11,800.00	90.00	359.61	10,027.00	691.69	466.43	688.50	0.00	0.00	0.00
11,900.00	90.00	359.61	10,027.00	791.69	465.75	788.50	0.00	0.00	0.00
12,000.00	90.00	359.61	10,027.00	891.68	465.08	888.50	0.00	0.00	0.00
12,100.00	90.00	359.61	10,027.00	991.68	464.41	988.50	0.00	0.00	0.00
12,200.00	90.00	359.61	10,027.00	1,091.68	463.73	1,088.50	0.00	0.00	0.00
12,300.00	90.00	359.61	10,027.00	1,191.68	463.06	1,188.50	0.00	0.00	0.00
12,400.00	90.00	359.61	10,027.00	1,291.67	462.38	1,288.50	0.00	0.00	0.00
12,500.00	90.00	359.61	10,027.00	1,391.67	461.71	1,388.50	0.00	0.00	0.00
12,600.00	90.00	359.61	10,027.00	1,491.67	461.03	1,488.50	0.00	0.00	0.00
12,700.00	90.00	359.61	10,027.00	1,591.67	460.36	1,588.50	0.00	0.00	0.00
12,800.00	90.00	359.61	10,027.00	1,691.67	459.69	1,688.50	0.00	0.00	0.00
12,900.00	90.00	359.61	10,027.00	1,791.66	459.01	1,788.50	0.00	0.00	0.00
13,000.00	90.00	359.61	10,027.00	1,891.66	458.34	1,888.50	0.00	0.00	0.00
13,100.00	90.00	359.61	10,027.00	1,991.66	457.66	1,988.50	0.00	0.00	0.00
13,200.00	90.00	359.61	10,027.00	2,091.66	456.99	2,088.50	0.00	0.00	0.00
13,300.00	90.00	359.61	10,027.00	2,191.65	456.32	2,188.50	0.00	0.00	0.00





Planning Report

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<b>Project:</b>	Lea County, NM (NAD-27)	<b>MD Reference:</b>	Ref GL @ 3657.00usft
<b>Site:</b>	Mis Amigos	<b>North Reference:</b>	Grid
<b>Well:</b>	#406H	<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)	
13,400.00	90.00	359.61	10,027.00	2,291.65	455.64	2,288.50	0.00	0.00	0.00	
13,500.00	90.00	359.61	10,027.00	2,391.65	454.97	2,388.50	0.00	0.00	0.00	
13,600.00	90.00	359.61	10,027.00	2,491.65	454.29	2,488.50	0.00	0.00	0.00	
13,700.00	90.00	359.61	10,027.00	2,591.64	453.62	2,588.50	0.00	0.00	0.00	
13,800.00	90.00	359.61	10,027.00	2,691.64	452.94	2,688.50	0.00	0.00	0.00	
13,900.00	90.00	359.61	10,027.00	2,791.64	452.27	2,788.50	0.00	0.00	0.00	
14,000.00	90.00	359.61	10,027.00	2,891.64	451.60	2,888.50	0.00	0.00	0.00	
14,100.00	90.00	359.61	10,027.00	2,991.64	450.92	2,988.50	0.00	0.00	0.00	
14,200.00	90.00	359.61	10,027.00	3,091.63	450.25	3,088.50	0.00	0.00	0.00	
14,300.00	90.00	359.61	10,027.00	3,191.63	449.57	3,188.50	0.00	0.00	0.00	
14,400.00	90.00	359.61	10,027.00	3,291.63	448.90	3,288.50	0.00	0.00	0.00	
14,500.00	90.00	359.61	10,027.00	3,391.63	448.23	3,388.50	0.00	0.00	0.00	
14,600.00	90.00	359.61	10,027.00	3,491.62	447.55	3,488.50	0.00	0.00	0.00	
14,700.00	90.00	359.61	10,027.00	3,591.62	446.88	3,588.50	0.00	0.00	0.00	
14,800.00	90.00	359.61	10,027.00	3,691.62	446.20	3,688.50	0.00	0.00	0.00	
14,900.00	90.00	359.61	10,027.00	3,791.62	445.53	3,788.50	0.00	0.00	0.00	
15,000.00	90.00	359.61	10,027.00	3,891.62	444.85	3,888.50	0.00	0.00	0.00	
15,100.00	90.00	359.61	10,027.00	3,991.61	444.18	3,988.50	0.00	0.00	0.00	
15,200.00	90.00	359.61	10,027.00	4,091.61	443.51	4,088.50	0.00	0.00	0.00	
15,300.00	90.00	359.61	10,027.00	4,191.61	442.83	4,188.50	0.00	0.00	0.00	
15,400.00	90.00	359.61	10,027.00	4,291.61	442.16	4,288.50	0.00	0.00	0.00	
15,500.00	90.00	359.61	10,027.00	4,391.60	441.48	4,388.50	0.00	0.00	0.00	
15,551.50	90.00	359.61	10,027.00	4,443.10	441.14	4,439.99	0.00	0.00	0.00	
15,601.50	90.00	359.61	10,027.00	4,493.10	440.80	4,490.00	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
MA #406H: SHL (742' - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	457,562.00	723,834.60	32.2558798	-103.6092642	
MA #406H: FTP - plan hits target center - Point	0.00	0.00	10,027.00	-639.20	475.40	456,922.80	724,310.00	32.2541140	-103.6077404	
MA #406H: PBHL (50' - plan hits target center - Point	0.00	0.00	10,027.00	4,493.10	440.80	462,055.10	724,275.40	32.2682221	-103.6077401	
MA #406H: LTP - plan misses target center by 0.04usft at 15551.50usft MD (10027.00 TVD, 4443.10 N, 441.14 E) - Point	0.00	0.00	10,027.00	4,443.10	441.10	462,005.10	724,275.70	32.2680846	-103.6077402	



Planning Report

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<b>Project:</b>	Lea County, NM (NAD-27)	<b>MD Reference:</b>	Ref GL @ 3657.00usft
<b>Site:</b>	Mis Amigos	<b>North Reference:</b>	Grid
<b>Well:</b>	#406H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PERMIT		

Formations				
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip Direction (°)
1,207.00	1,207.00	Rustler		
1,707.00	1,707.00	Top Salt		
4,592.80	4,557.00	Base Salt		
5,100.87	5,057.00	Delaware		
9,063.86	8,957.00	Bone Spring		
9,185.80	9,077.00	Avalon		
10,469.08	10,027.00	LP		