

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 AS-DRILLED PLAT

¹ API Number 30-015- 44840	² Pool Code 98220	³ Pool Name Purple Sage; Wolfcamp
⁴ Property Code 321151	⁵ Property Name MUY WAYNO 18 FEDERAL	⁶ Well Number 121H
⁷ OGRID No. 005380	⁸ Operator Name XTO ENERGY, INC.	⁹ Elevation 3,160'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
3	18	25 S	30 E		2,310	SOUTH	380	WEST	EDDY

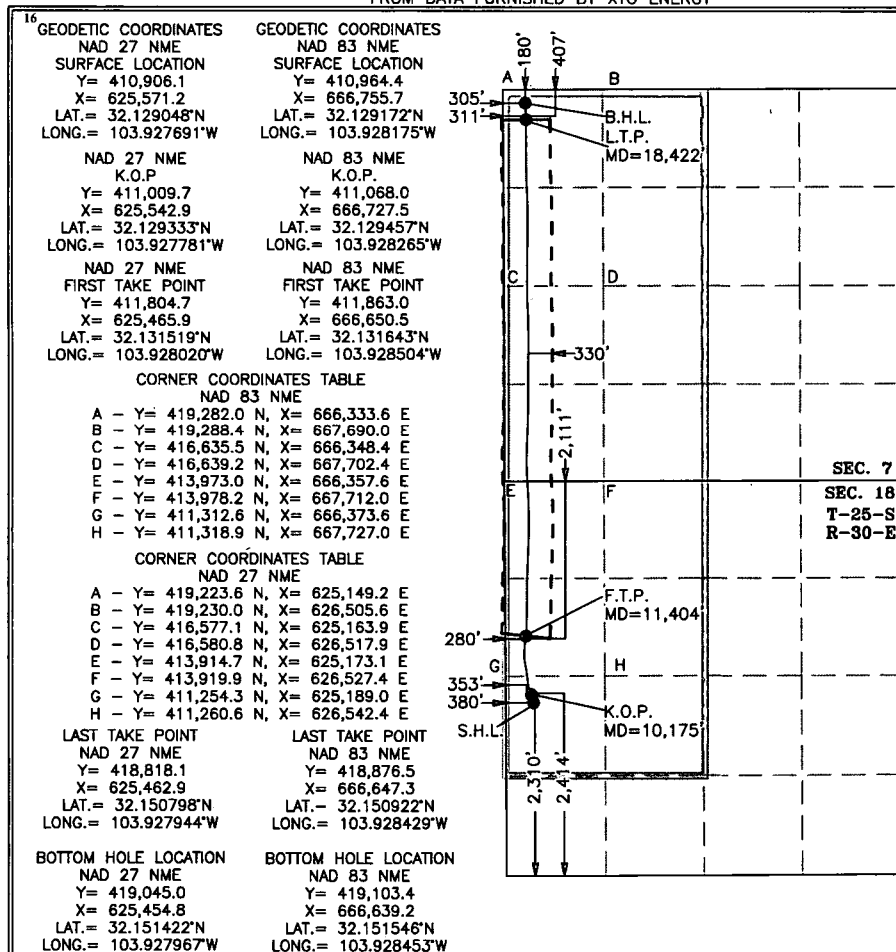
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	7	25 S	30 E		180	NORTH	305	WEST	EDDY

¹² Dedicated Acres 483.44	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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.

NOTE: AS-DRILLED BOTTOM HOLE PLOTTED
FROM DATA FURNISHED BY XTO ENERGY



¹⁷ 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.

Cheryl Rowell 9/4/19
Signature Date

Cheryl Rowell
Printed Name

cheryl_rowell@xtoenergy.com
E-mail Address

¹⁸ 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.

9-4-2019

Date of Survey

Signature and Seal of
Professional Surveyor:

MARK DILLON HARP 23786
Certificate Number



JC 2017060867

SEP 09 2019

Intent ☐ As Drilled ☒

API #
30-015-44840

RECEIVED

Operator Name:	Property Name:	Well Number
XTO ENERGY, INC.	Muy Wayno 18 Federal	121H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
3	18	25S	30E		2414	South	353	West	Eddy
Latitude					Longitude				NAD
32.129457					103.928265				83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
2	18	25S	30E		2111	North	280	West	Eddy
Latitude					Longitude				NAD
32.131643					103.928504				83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
1	7	25S	30E		407	North	311	West	Eddy
Latitude					Longitude				NAD
32.150922					103.928429				83

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☒

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #
30-015-44838

Operator Name:	Property Name:	Well Number
XTO ENERGY, INC.	Muy Wayno 18 Federal	102H

KZ 06/29/2018

SEP 09 2019

Survey Report

RECEIVED

Company:	XTO Energy	Local Co-ordinate Reference:	Well Muy Wayno 18 Federal 121H
Project:	Eddy County, NM (NAD27) NMEZ Grid	TVD Reference:	3159+32 @ 3191.00usft (Patterson793)
Site:	Muy Wayno 18 Federal	MD Reference:	3159+32 @ 3191.00usft (Patterson793)
Well:	Muy Wayno 18 Federal 121H	North Reference:	Grid
Wellbore:	121H L1	Survey Calculation Method:	Minimum Curvature
Design:	121H L1 (AsDrilled)	Database:	STRYKER_EDM

Project	Eddy County, NM (NAD27) NMEZ Grid		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Muy Wayno 18 Federal		
Site Position:	Map	Northing:	410,906.20 usft
From:		Easting:	625,601.10 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in
		Latitude:	32° 7' 44.571 N
		Longitude:	103° 55' 39.337 W
		Grid Convergence:	0.22 °

Well	Muy Wayno 18 Federal 121H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 7' 44.571 N
		Longitude:	103° 55' 39.686 W
		Ground Level:	3,159.00 usft

Wellbore	121H L1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2015	2018/11/09	6.96
			Dip Angle
			(°)
			Field Strength
			(nT)
			47,702.48285492

Design	121H L1 (AsDrilled)		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			359.71

Survey Program	Date	2018/12/27		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
187.00	18,604.00	Survey #1 (121H L1)	MWD	OWSG MWD - Standard
18,649.00	18,649.00	Survey #2 (121H L1)	Projection	Projection

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate
(usft)			(usft)			(usft)	(°/100ft)	(°/100ft)	(°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MUY WAYNO 18 FED 121H_SHL									
187.00	0.50	166.20	187.00	-0.79	0.19	-0.79	0.27	0.27	0.00
278.00	1.10	205.50	277.99	-1.97	-0.09	-1.97	0.86	0.66	43.19
371.00	1.40	179.50	370.97	-3.91	-0.46	-3.91	0.68	0.32	-27.96
436.00	1.30	176.20	435.95	-5.44	-0.41	-5.44	0.19	-0.15	-5.08
525.00	1.30	173.00	524.93	-7.45	-0.22	-7.45	0.08	0.00	-3.60
588.00	1.00	192.40	587.91	-8.69	-0.25	-8.69	0.77	-0.48	30.79
682.00	1.40	168.60	681.89	-10.62	-0.20	-10.62	0.67	0.43	-25.32
776.00	0.80	169.70	775.88	-12.39	0.15	-12.39	0.64	-0.64	1.17

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Muy Wayno 18 Federal 121H
Project:	Eddy County, NM (NAD27) NMEZ Grid	TVD Reference:	3159+32 @ 3191.00usft (Patterson793)
Site:	Muy Wayno 18 Federal	MD Reference:	3159+32 @ 3191.00usft (Patterson793)
Well:	Muy Wayno 18 Federal 121H	North Reference:	Grid
Wellbore:	121H L1	Survey Calculation Method:	Minimum Curvature
Design:	121H L1 (AsDrilled)	Database:	STRYKER_EDM

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
851.00	0.70	147.90	850.87	-13.29	0.49	-13.30	0.40	-0.13	-29.07	
951.00	0.70	142.70	950.86	-14.30	1.18	-14.30	0.06	0.00	-5.20	
1,044.00	0.50	115.90	1,043.86	-14.93	1.89	-14.94	0.36	-0.22	-28.82	
1,139.00	0.50	98.20	1,138.85	-15.17	2.67	-15.18	0.16	0.00	-18.63	
1,232.00	0.70	16.00	1,231.85	-14.68	3.23	-14.70	0.86	0.22	-88.39	
1,326.00	1.10	358.10	1,325.84	-13.23	3.36	-13.24	0.52	0.43	-19.04	
1,420.00	1.00	345.00	1,419.82	-11.53	3.12	-11.55	0.28	-0.11	-13.94	
1,516.00	0.70	339.40	1,515.81	-10.17	2.69	-10.19	0.32	-0.31	-5.83	
1,610.00	0.70	355.60	1,609.81	-9.06	2.45	-9.08	0.21	0.00	17.23	
1,705.00	0.70	348.50	1,704.80	-7.92	2.29	-7.93	0.09	0.00	-7.47	
1,800.00	0.60	314.50	1,799.79	-7.00	1.82	-7.01	0.41	-0.11	-35.79	
1,894.00	0.70	314.90	1,893.79	-6.25	1.06	-6.25	0.11	0.11	0.43	
1,990.00	0.50	344.60	1,989.78	-5.43	0.53	-5.43	0.38	-0.21	30.94	
2,085.00	0.40	350.90	2,084.78	-4.70	0.37	-4.71	0.12	-0.11	6.63	
2,179.00	0.30	295.30	2,178.78	-4.27	0.10	-4.28	0.36	-0.11	-59.15	
2,274.00	0.20	278.80	2,273.78	-4.14	-0.29	-4.14	0.13	-0.11	-17.37	
2,368.00	0.20	72.70	2,367.78	-4.07	-0.30	-4.07	0.41	0.00	163.72	
2,462.00	0.10	337.80	2,461.78	-3.94	-0.17	-3.94	0.25	-0.11	-100.96	
2,556.00	0.30	312.70	2,555.77	-3.70	-0.38	-3.70	0.23	0.21	-26.70	
2,651.00	0.30	316.20	2,650.77	-3.35	-0.74	-3.35	0.02	0.00	3.68	
2,745.00	0.00	25.60	2,744.77	-3.18	-0.91	-3.17	0.32	-0.32	0.00	
2,839.00	0.70	132.40	2,838.77	-3.56	-0.49	-3.56	0.74	0.74	0.00	
2,932.00	1.40	129.70	2,931.75	-4.67	0.81	-4.68	0.75	0.75	-2.90	
3,026.00	2.00	133.80	3,025.71	-6.54	2.88	-6.55	0.65	0.64	4.36	
3,121.00	2.40	132.30	3,120.64	-9.03	5.54	-9.05	0.43	0.42	-1.58	
3,215.00	1.90	135.70	3,214.58	-11.47	8.09	-11.51	0.55	-0.53	3.62	
3,318.00	1.50	131.80	3,317.53	-13.59	10.28	-13.64	0.40	-0.39	-3.79	
3,429.00	0.90	131.50	3,428.51	-15.13	12.02	-15.19	0.54	-0.54	-0.27	
3,524.00	0.70	277.90	3,523.50	-15.55	12.00	-15.61	1.61	-0.21	154.10	
3,618.00	1.00	284.10	3,617.49	-15.27	10.64	-15.32	0.33	0.32	6.60	
3,712.00	1.20	289.00	3,711.47	-14.75	8.91	-14.79	0.23	0.21	5.21	
3,807.00	1.20	284.00	3,806.45	-14.18	7.01	-14.22	0.11	0.00	-5.26	
3,901.00	1.20	289.20	3,900.43	-13.62	5.12	-13.65	0.12	0.00	5.53	
3,996.00	1.20	287.90	3,995.41	-12.99	3.24	-13.01	0.03	0.00	-1.37	
4,090.00	1.40	283.10	4,089.39	-12.43	1.18	-12.43	0.24	0.21	-5.11	
4,184.00	1.40	283.60	4,183.36	-11.90	-1.05	-11.89	0.01	0.00	0.53	
4,278.00	1.40	288.90	4,277.33	-11.25	-3.25	-11.24	0.14	0.00	5.64	
4,373.00	1.50	288.70	4,372.30	-10.48	-5.53	-10.45	0.11	0.11	-0.21	
4,467.00	1.50	284.30	4,466.27	-9.78	-7.89	-9.74	0.12	0.00	-4.68	
4,561.00	2.10	299.10	4,560.22	-8.64	-10.58	-8.59	0.80	0.64	15.74	
4,656.00	3.50	330.40	4,655.11	-5.27	-13.54	-5.20	2.13	1.47	32.95	
4,750.00	5.00	353.80	4,748.86	1.30	-15.40	1.37	2.41	1.60	24.89	
4,844.00	5.50	359.00	4,842.46	9.87	-15.92	9.95	0.73	0.53	5.53	

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Muy Wayno 18 Federal 121H
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Well:	Muy Wayno 18 Federal 121H	North Reference:	Grid
Wellbore:	121H L1	Survey Calculation Method:	Minimum Curvature
Design:	121H L1 (AsDrilled)	Database:	STRYKER_EDM

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,939.00	5.30	356.50	4,937.04	18.80	-16.27	18.89	0.32	-0.21	-2.63
5,033.00	5.10	355.20	5,030.66	27.30	-16.88	27.38	0.25	-0.21	-1.38
5,127.00	4.60	352.80	5,124.32	35.20	-17.70	35.29	0.57	-0.53	-2.55
5,221.00	5.00	352.70	5,217.99	43.01	-18.70	43.10	0.43	0.43	-0.11
5,316.00	5.00	351.30	5,312.63	51.21	-19.85	51.30	0.13	0.00	-1.47
5,411.00	4.70	351.10	5,407.29	59.14	-21.08	59.25	0.32	-0.32	-0.21
5,505.00	4.40	349.30	5,500.99	66.49	-22.34	66.60	0.35	-0.32	-1.91
5,599.00	4.00	351.60	5,594.74	73.28	-23.49	73.39	0.46	-0.43	2.45
5,693.00	3.80	349.30	5,688.52	79.58	-24.55	79.70	0.27	-0.21	-2.45
5,787.00	3.30	346.50	5,782.34	85.27	-25.76	85.40	0.56	-0.53	-2.98
5,881.00	3.20	347.90	5,876.19	90.47	-26.94	90.60	0.14	-0.11	1.49
5,974.00	3.00	348.00	5,969.05	95.39	-27.99	95.53	0.22	-0.22	0.11
6,069.00	2.80	351.50	6,063.93	100.11	-28.85	100.26	0.28	-0.21	3.68
6,163.00	2.80	358.30	6,157.82	104.68	-29.26	104.82	0.35	0.00	7.23
6,257.00	2.80	359.90	6,251.71	109.27	-29.33	109.42	0.08	0.00	1.70
6,352.00	2.20	7.50	6,346.62	113.40	-29.09	113.54	0.72	-0.63	8.00
6,446.00	2.20	13.60	6,440.55	116.94	-28.43	117.08	0.25	0.00	6.49
6,540.00	1.20	30.10	6,534.51	119.55	-27.52	119.68	1.17	-1.06	17.55
6,634.00	0.90	39.40	6,628.49	120.97	-26.55	121.10	0.37	-0.32	9.89
6,728.00	0.80	46.10	6,722.48	121.99	-25.61	122.12	0.15	-0.11	7.13
6,821.00	0.50	46.10	6,815.47	122.73	-24.85	122.85	0.32	-0.32	0.00
6,915.00	0.50	57.20	6,909.47	123.23	-24.21	123.35	0.10	0.00	11.81
7,009.00	0.90	119.30	7,003.46	123.09	-23.22	123.21	0.85	0.43	66.06
7,103.00	0.90	155.20	7,097.45	122.06	-22.27	122.17	0.59	0.00	38.19
7,197.00	0.70	219.30	7,191.44	120.95	-22.32	121.06	0.92	-0.21	68.19
7,292.00	0.90	283.60	7,286.44	120.67	-23.42	120.79	0.91	0.21	67.68
7,386.00	0.80	284.00	7,380.43	121.01	-24.77	121.13	0.11	-0.11	0.43
7,480.00	0.40	221.80	7,474.42	120.92	-25.63	121.05	0.75	-0.43	-66.17
7,573.00	0.20	259.10	7,567.42	120.65	-26.00	120.78	0.29	-0.22	40.11
7,665.00	0.60	216.90	7,659.42	120.23	-26.45	120.36	0.51	0.43	-45.87
7,759.00	0.90	260.10	7,753.41	119.71	-27.47	119.85	0.66	0.32	45.96
7,853.00	2.10	280.90	7,847.38	119.91	-29.89	120.06	1.38	1.28	22.13
7,946.00	1.90	281.80	7,940.32	120.55	-33.07	120.71	0.22	-0.22	0.97
8,040.00	0.50	291.80	8,034.30	121.02	-34.98	121.19	1.50	-1.49	10.64
8,134.00	0.60	175.90	8,128.30	120.68	-35.33	120.85	0.99	0.11	-123.30
8,228.00	1.30	143.40	8,222.28	119.33	-34.65	119.50	0.91	0.74	-34.57
8,322.00	1.10	159.90	8,316.26	117.63	-33.71	117.80	0.42	-0.21	17.55
8,416.00	1.30	162.80	8,410.24	115.76	-33.08	115.93	0.22	0.21	3.09
8,510.00	0.40	111.90	8,504.23	114.62	-32.46	114.78	1.16	-0.96	-54.15
8,603.00	0.60	0.60	8,597.23	114.99	-32.16	115.15	0.90	0.22	-119.68
8,697.00	0.90	71.40	8,691.22	115.72	-31.45	115.87	0.96	0.32	75.32
8,791.00	1.70	24.40	8,785.20	117.22	-30.18	117.37	1.35	0.85	-50.00
8,885.00	2.00	50.30	8,879.15	119.54	-28.34	119.68	0.94	0.32	27.55

Survey Report

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Well:	Muy Wayno 18 Federal 121H	North Reference:	Grid
Wellbore:	121H L1	Survey Calculation Method:	Minimum Curvature
Design:	121H L1 (AsDrilled)	Database:	STRYKER_EDM

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,979.00	2.30	126.40	8,973.10	119.47	-25.56	119.59	2.83	0.32	80.96
9,074.00	3.00	156.30	9,068.01	116.06	-23.02	116.17	1.61	0.74	31.47
9,167.00	1.90	180.90	9,160.92	112.29	-22.07	112.40	1.61	-1.18	26.45
9,261.00	2.00	188.50	9,254.87	109.11	-22.34	109.22	0.29	0.11	8.09
9,355.00	2.00	196.10	9,348.81	105.91	-23.03	106.02	0.28	0.00	8.09
9,449.00	1.80	188.00	9,442.76	102.87	-23.69	102.99	0.36	-0.21	-8.62
9,461.00	1.80	190.00	9,454.75	102.50	-23.75	102.62	0.52	0.00	16.67
9,548.00	2.10	188.80	9,541.70	99.58	-24.23	99.70	0.35	0.34	-1.38
9,642.00	0.60	306.20	9,635.68	98.17	-24.90	98.29	2.59	-1.60	124.89
9,737.00	0.60	294.90	9,730.68	98.67	-25.75	98.80	0.12	0.00	-11.89
9,831.00	0.80	346.10	9,824.67	99.52	-26.35	99.65	0.67	0.21	54.47
9,925.00	0.70	335.10	9,918.66	100.67	-26.75	100.81	0.19	-0.11	-11.70
10,019.00	0.60	327.50	10,012.66	101.61	-27.26	101.74	0.14	-0.11	-8.09
10,112.00	0.40	324.30	10,105.65	102.28	-27.71	102.42	0.22	-0.22	-3.44
10,206.00	2.30	341.10	10,199.62	104.33	-28.51	104.48	2.04	2.02	17.87
10,238.00	4.40	341.70	10,231.57	106.11	-29.10	106.25	6.56	6.56	1.87
10,269.00	6.80	345.70	10,262.42	109.02	-29.93	109.16	7.84	7.74	12.90
10,300.00	8.30	352.80	10,293.15	113.01	-30.67	113.17	5.69	4.84	22.90
10,332.00	10.70	346.80	10,324.71	118.20	-31.63	118.36	8.10	7.50	-18.75
10,363.00	13.70	343.00	10,355.00	124.51	-33.36	124.68	10.01	9.68	-12.26
10,395.00	16.50	338.20	10,385.90	132.36	-36.16	132.54	9.58	8.75	-15.00
10,426.00	19.10	334.50	10,415.41	141.02	-39.98	141.22	9.14	8.39	-11.94
10,457.00	20.60	334.80	10,444.57	150.54	-44.49	150.76	4.85	4.84	0.97
10,489.00	22.70	335.20	10,474.31	161.24	-49.47	161.48	6.58	6.56	1.25
10,520.00	23.30	335.30	10,502.85	172.24	-54.54	172.51	1.94	1.94	0.32
10,552.00	25.10	335.30	10,532.03	184.15	-60.02	184.45	5.62	5.62	0.00
10,583.00	27.60	337.50	10,559.81	196.76	-65.52	197.09	8.66	8.06	7.10
10,615.00	30.40	344.10	10,587.80	211.41	-70.58	211.76	13.28	8.75	20.62
10,647.00	33.40	350.10	10,614.97	227.88	-74.31	228.25	13.63	9.37	18.75
10,678.00	36.60	352.20	10,640.36	245.44	-77.03	245.83	11.03	10.32	6.77
10,709.00	39.70	352.50	10,664.74	264.42	-79.58	264.82	10.02	10.00	0.97
10,741.00	43.70	353.00	10,688.63	285.53	-82.26	285.94	12.54	12.50	1.56
10,772.00	47.50	354.20	10,710.31	307.54	-84.73	307.96	12.57	12.26	3.87
10,803.00	51.30	355.80	10,730.48	330.98	-86.77	331.41	12.87	12.26	5.16
10,827.00	51.97	354.90	10,745.38	349.74	-88.29	350.18	4.07	2.81	-3.76
Wellpath Crosses Unit Line @ Heel									
10,835.00	52.20	354.60	10,750.30	356.03	-88.87	356.46	4.07	2.83	-3.72
10,866.00	56.60	353.20	10,768.34	381.08	-91.56	381.53	14.66	14.19	-4.52
10,898.00	60.80	350.80	10,784.96	408.15	-95.37	408.62	14.60	13.12	-7.50
10,929.00	62.90	350.10	10,799.58	435.10	-99.91	435.59	7.06	6.77	-2.26
10,961.00	66.00	349.60	10,813.38	463.51	-105.00	464.03	9.79	9.69	-1.56
10,992.00	71.60	348.70	10,824.59	491.89	-110.44	492.43	18.27	18.06	-2.90
11,024.00	76.90	348.40	10,833.27	522.06	-116.55	522.64	16.59	16.56	-0.94
11,055.00	80.80	350.30	10,839.27	551.95	-122.17	552.55	13.94	12.58	6.13

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Muy Wayno 18 Federal 121H
Project:	Eddy County, NM (NAD27) NMEZ Grid	TVD Reference:	3159+32 @ 3191.00usft (Patterson793)
Site:	Muy Wayno 18 Federal	MD Reference:	3159+32 @ 3191.00usft (Patterson793)
Well:	Muy Wayno 18 Federal 121H	North Reference:	Grid
Wellbore:	121H L1	Survey Calculation Method:	Minimum Curvature
Design:	121H L1 (AsDrilled)	Database:	STRYKER_EDM

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,086.00	85.40	353.50	10,842.99	582.40	-126.50	583.03	18.03	14.84	10.32
11,118.00	89.80	356.40	10,844.33	614.24	-129.31	614.88	16.46	13.75	9.06
11,150.00	93.00	359.40	10,843.55	646.20	-130.49	646.84	13.70	10.00	9.37
11,181.00	95.40	2.40	10,841.28	677.11	-130.00	677.75	12.37	7.74	9.68
11,187.60	94.61	3.04	10,840.70	683.67	-129.69	684.31	15.35	-11.92	9.71
MUY WAYNO 18 FED 121H_LP p3									
11,210.78	91.85	5.28	10,839.40	706.75	-128.01	707.38	15.35	-11.94	9.67
MUY WAYNO 18 FED 121H_FTP									
11,212.00	91.70	5.40	10,839.36	707.97	-127.90	708.60	15.35	-11.95	9.65
Wellpath Crosses FTP									
11,243.00	87.60	7.90	10,839.55	738.75	-124.31	739.36	15.49	-13.23	8.06
11,338.00	90.00	6.50	10,841.54	832.97	-112.40	833.52	2.92	2.53	-1.47
11,432.00	89.40	6.00	10,842.03	926.41	-102.17	926.91	0.83	-0.64	-0.53
11,527.00	90.30	0.70	10,842.28	1,021.21	-96.62	1,021.68	5.66	0.95	-5.58
11,621.00	89.70	359.60	10,842.28	1,115.21	-96.38	1,115.68	1.33	-0.64	-1.17
11,715.00	92.40	1.10	10,840.56	1,209.18	-95.80	1,209.64	3.29	2.87	1.60
11,809.00	91.20	1.80	10,837.60	1,303.10	-93.42	1,303.55	1.48	-1.28	0.74
11,904.00	91.30	0.50	10,835.53	1,398.06	-91.52	1,398.50	1.37	0.11	-1.37
11,998.00	89.80	0.10	10,834.63	1,492.05	-91.03	1,492.48	1.65	-1.60	-0.43
12,093.00	89.70	359.20	10,835.04	1,587.05	-91.61	1,587.48	0.95	-0.11	-0.95
12,186.00	91.30	3.10	10,834.23	1,680.00	-89.74	1,680.43	4.53	1.72	4.19
12,280.00	91.10	2.80	10,832.26	1,773.86	-84.90	1,774.26	0.38	-0.21	-0.32
12,374.00	90.60	2.30	10,830.87	1,867.75	-80.72	1,868.13	0.75	-0.53	-0.53
12,468.00	89.10	1.40	10,831.12	1,961.70	-77.69	1,962.06	1.86	-1.60	-0.96
12,562.00	90.40	0.90	10,831.53	2,055.68	-75.80	2,056.03	1.48	1.38	-0.53
12,657.00	90.50	1.90	10,830.78	2,150.65	-73.48	2,150.99	1.06	0.11	1.05
12,751.00	91.40	3.10	10,829.22	2,244.54	-69.38	2,244.86	1.60	0.96	1.28
12,844.00	88.60	0.20	10,829.22	2,337.48	-66.70	2,337.79	4.33	-3.01	-3.12
12,939.00	88.60	1.00	10,831.54	2,432.45	-65.71	2,432.75	0.84	0.00	0.84
13,033.00	88.50	358.80	10,833.92	2,526.41	-65.87	2,526.71	2.34	-0.11	-2.34
13,127.00	88.80	358.60	10,836.14	2,620.36	-68.01	2,620.67	0.38	0.32	-0.21
13,222.00	89.40	358.00	10,837.63	2,715.31	-70.82	2,715.63	0.89	0.63	-0.63
13,316.00	86.70	356.40	10,840.83	2,809.13	-75.41	2,809.47	3.34	-2.87	-1.70
13,410.00	88.50	356.70	10,844.76	2,902.87	-81.06	2,903.24	1.94	1.91	0.32
13,504.00	90.40	356.20	10,845.66	2,996.68	-86.88	2,997.08	2.09	2.02	-0.53
13,598.00	92.70	357.40	10,843.12	3,090.49	-92.13	3,090.92	2.76	2.45	1.28
13,692.00	92.30	358.00	10,839.02	3,184.33	-95.90	3,184.77	0.77	-0.43	0.64
13,786.00	92.70	359.80	10,834.92	3,278.22	-97.70	3,278.66	1.96	0.43	1.91
13,879.00	91.20	2.10	10,831.76	3,371.14	-96.16	3,371.58	2.95	-1.61	2.47
13,974.00	91.60	1.60	10,829.44	3,466.06	-93.09	3,466.49	0.67	0.42	-0.53
14,068.00	91.50	1.00	10,826.89	3,560.01	-90.96	3,560.41	0.65	-0.11	-0.64
14,162.00	92.00	2.80	10,824.02	3,653.91	-87.85	3,654.30	1.99	0.53	1.91
14,256.00	91.40	1.30	10,821.23	3,747.80	-84.48	3,748.18	1.72	-0.64	-1.60
14,351.00	88.10	1.80	10,821.65	3,842.75	-81.92	3,843.11	3.51	-3.47	0.53

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Muy Wayno 18 Federal 121H
Project:	Eddy County, NM (NAD27) NMEZ Grid	TVD Reference:	3159+32 @ 3191.00usft (Patterson793)
Site:	Muy Wayno 18 Federal	MD Reference:	3159+32 @ 3191.00usft (Patterson793)
Well:	Muy Wayno 18 Federal 121H	North Reference:	Grid
Wellbore:	121H L1	Survey Calculation Method:	Minimum Curvature
Design:	121H L1 (AsDrilled)	Database:	STRYKER_EDM

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
14,445.00	87.70	0.90	10,825.09	3,936.66	-79.70	3,937.01	1.05	-0.43	-0.96
14,559.00	88.90	1.50	10,828.47	4,050.58	-77.32	4,050.92	1.18	1.05	0.53
14,654.00	86.80	359.80	10,832.04	4,145.50	-76.24	4,145.83	2.84	-2.21	-1.79
14,747.00	88.00	359.80	10,836.26	4,238.40	-76.56	4,238.73	1.29	1.29	0.00
14,841.00	90.00	359.70	10,837.90	4,332.38	-76.97	4,332.71	2.13	2.13	-0.11
14,935.00	90.10	0.30	10,837.82	4,426.38	-76.97	4,426.71	0.65	0.11	0.64
15,029.00	90.50	0.20	10,837.32	4,520.38	-76.56	4,520.71	0.44	-0.43	-0.11
15,124.00	90.30	0.40	10,836.66	4,615.38	-76.06	4,615.70	0.30	-0.21	0.21
15,218.00	90.70	0.50	10,835.84	4,709.37	-75.33	4,709.69	0.44	0.43	0.11
15,312.00	91.10	0.30	10,834.36	4,803.36	-74.67	4,803.67	0.48	0.43	-0.21
15,406.00	91.40	359.90	10,832.31	4,897.33	-74.51	4,897.64	0.53	0.32	-0.43
15,500.00	88.50	359.40	10,832.39	4,991.32	-75.08	4,991.63	3.13	-3.09	-0.53
15,594.00	88.00	359.50	10,835.27	5,085.27	-75.98	5,085.59	0.54	-0.53	0.11
15,688.00	90.20	358.60	10,836.74	5,179.24	-77.54	5,179.56	2.53	2.34	-0.96
15,782.00	90.20	357.40	10,836.41	5,273.18	-80.82	5,273.52	1.28	0.00	-1.28
15,875.00	89.90	356.70	10,836.33	5,366.06	-85.61	5,366.42	0.82	-0.32	-0.75
15,970.00	92.80	359.50	10,834.09	5,460.96	-88.76	5,461.33	4.24	3.05	2.95
16,063.00	92.40	359.50	10,829.88	5,553.86	-89.57	5,554.24	0.43	-0.43	0.00
16,157.00	90.50	357.80	10,827.50	5,647.80	-91.78	5,648.18	2.71	-2.02	-1.81
16,251.00	90.10	358.80	10,827.00	5,741.75	-94.57	5,742.15	1.15	-0.43	1.06
16,345.00	90.40	0.30	10,826.59	5,835.75	-95.31	5,836.15	1.63	0.32	1.60
16,440.00	90.90	2.10	10,825.52	5,930.71	-93.32	5,931.11	1.97	0.53	1.89
16,534.00	89.40	1.30	10,825.27	6,024.67	-90.53	6,025.05	1.81	-1.60	-0.85
16,631.00	89.00	1.00	10,826.62	6,121.64	-88.58	6,122.01	0.52	-0.41	-0.31
16,725.00	89.30	1.00	10,828.02	6,215.62	-86.94	6,215.97	0.32	0.32	0.00
16,820.00	88.80	0.80	10,829.59	6,310.59	-85.45	6,310.94	0.57	-0.53	-0.21
16,914.00	88.70	359.70	10,831.64	6,404.57	-85.04	6,404.91	1.17	-0.11	-1.17
17,008.00	88.50	0.20	10,833.94	6,498.54	-85.12	6,498.88	0.57	-0.21	0.53
17,102.00	90.60	359.90	10,834.68	6,592.53	-85.04	6,592.87	2.26	2.23	-0.32
17,196.00	90.40	359.20	10,833.86	6,686.52	-85.78	6,686.87	0.77	-0.21	-0.74
17,291.00	90.60	358.90	10,833.03	6,781.51	-87.36	6,781.86	0.38	0.21	-0.32
17,386.00	90.30	358.00	10,832.28	6,876.47	-89.92	6,876.83	1.00	-0.32	-0.95
17,480.00	90.60	358.10	10,831.55	6,970.41	-93.12	6,970.79	0.34	0.32	0.11
17,574.00	89.90	357.30	10,831.14	7,064.33	-96.90	7,064.73	1.13	-0.74	-0.85
17,669.00	89.60	357.10	10,831.55	7,159.22	-101.54	7,159.63	0.38	-0.32	-0.21
17,763.00	89.30	356.80	10,832.45	7,253.08	-106.54	7,253.52	0.45	-0.32	-0.32
17,858.00	91.00	0.80	10,832.20	7,348.03	-108.53	7,348.48	4.57	1.79	4.21
17,953.00	90.70	0.50	10,830.79	7,443.02	-107.45	7,443.46	0.45	-0.32	-0.32
18,047.00	90.50	0.30	10,829.81	7,537.01	-106.79	7,537.45	0.30	-0.21	-0.21
18,141.00	89.70	0.30	10,829.65	7,631.01	-106.30	7,631.44	0.85	-0.85	0.00
18,237.00	89.00	359.30	10,830.74	7,727.00	-106.64	7,727.44	1.27	-0.73	-1.04
18,331.00	90.20	0.00	10,831.39	7,820.99	-107.21	7,821.43	1.48	1.28	0.74
18,425.00	89.30	358.80	10,831.80	7,914.98	-108.19	7,915.43	1.60	-0.96	-1.28

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Muy Wayno 18 Federal 121H
Project:	Eddy County, NM (NAD27) NMEZ Grid	TVD Reference:	3159+32 @ 3191.00usft (Patterson793)
Site:	Muy Wayno 18 Federal	MD Reference:	3159+32 @ 3191.00usft (Patterson793)
Well:	Muy Wayno 18 Federal 121H	North Reference:	Grid
Wellbore:	121H L1	Survey Calculation Method:	Minimum Curvature
Design:	121H L1 (AsDrilled)	Database:	STRYKER_EDM

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
18,498.39	89.92	358.18	10,832.30	7,988.35	-110.13	7,988.80	1.19	0.84	-0.84
MUY WAYNO 18 FED 121H_LTP									
18,520.00	90.10	358.00	10,832.30	8,009.94	-110.85	8,010.40	1.19	0.84	-0.84
18,604.00	90.40	357.40	10,831.93	8,093.88	-114.22	8,094.34	0.80	0.36	-0.71
18,627.95	90.40	357.40	10,831.77	8,117.80	-115.30	8,118.28	0.00	0.00	0.00
MUY WAYNO 18 FED 121H_PBHL									
18,628.00	90.40	357.40	10,831.77	8,117.85	-115.31	8,118.32	0.00	0.00	0.00
Wellpath Crosses LTP									
18,649.00	90.40	357.40	10,831.62	8,138.83	-116.26	8,139.31	0.00	0.00	0.00
TD @ 180°FNL,305°FWL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
MUY WAYNO 18 FED 1: - hit/miss target - Shape - Point	0.00	0.00	0.00	0.00	0.00	410,906.10	625,571.10	32° 7' 44.571 N	103° 55' 39.686 W
MUY WAYNO 18 FED 1: - actual wellpath misses target center by 27.14usft at 18498.39usft MD (10832.30 TVD, 7988.35 N, -110.13 E) - Point	0.00	0.00	10,814.0 0	7,989.00	-90.10	418,895.10	625,481.00	32° 9' 3.636 N	103° 55' 40.384 W
MUY WAYNO 18 FED 1: - actual wellpath misses target center by 78.35usft at 11211.61usft MD (10839.37 TVD, 707.58 N, -127.93 E) - Point	0.00	0.00	10,814.0 0	699.90	-54.20	411,606.00	625,516.90	32° 7' 51.499 N	103° 55' 40.286 W
MUY WAYNO 18 FED 1: - actual wellpath hits target center - Point	0.00	0.00	10,831.6 2	8,138.83	-116.26	419,044.93	625,454.84	32° 9' 5.119 N	103° 55' 40.682 W
MUY WAYNO 18 FED 1: - actual wellpath misses target center by 27.42usft at 18627.95usft MD (10831.77 TVD, 8117.80 N, -115.30 E) - Rectangle (sides W100.00 H7,412.00 D0.00)	0.00	0.00	10,844.0 0	8,119.00	-90.80	419,025.10	625,480.30	32° 9' 4.922 N	103° 55' 40.387 W
MUY WAYNO 18 FED 1: - actual wellpath misses target center by 49.55usft at 11186.50usft MD (10840.79 TVD, 682.58 N, -129.75 E) - Point	0.00	0.00	10,844.0 0	680.51	-80.34	411,586.61	625,490.76	32° 7' 51.309 N	103° 55' 40.591 W

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,827.00	10,745.38	349.74	-88.29	Wellpath Crosses Unit Line @ Heel
11,212.00	10,839.36	707.97	-127.90	Wellpath Crosses FTP
18,628.00	10,831.77	8,117.85	-115.31	Wellpath Crosses LTP
18,649.00	10,831.62	8,138.83	-116.26	TD @ 180°FNL,305°FWL

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Muy Wayno 18 Federal 121H
Project:	Eddy County, NM (NAD27) NMEZ Grid	TVD Reference:	3159+32 @ 3191.00usft (Patterson793)
Site:	Muy Wayno 18 Federal	MD Reference:	3159+32 @ 3191.00usft (Patterson793)
Well:	Muy Wayno 18 Federal 121H	North Reference:	Grid
Wellbore:	121H L1	Survey Calculation Method:	Minimum Curvature
Design:	121H L1 (AsDrilled)	Database:	STRYKER_EDM

Checked By: _____	Approved By: _____	Date: _____
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