

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

NMOCD-REC'D: 03/19/2020

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 30-015-45054	² Pool Code 98220	³ Pool Name PURPLE SAGE; WOLFCAMP (GAS)
⁴ Property Code 325590	⁵ Property Name POKER LAKE UNIT 15 TWR	⁶ Well Number 104H
⁷ OGRID No. 373075	⁸ Operator Name XTO PERMIAN OPERATING, LLC.	⁹ Elevation 3,539'

¹⁰ Surface Location

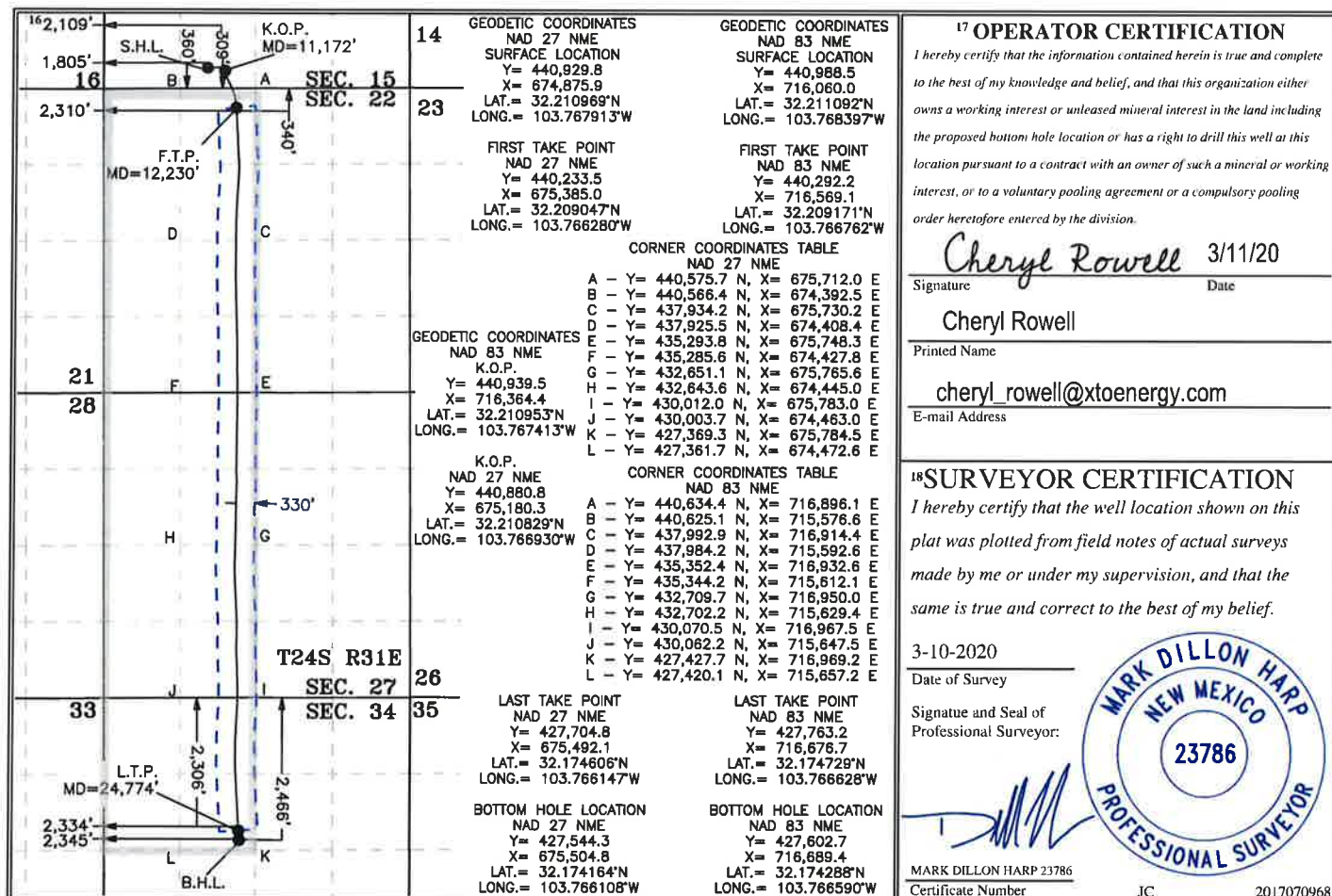
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	15	24 S	31 E		360	SOUTH	1,805	WEST	EDDY

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
F	34	24 S	31 E		2,466	NORTH	2,345	WEST	EDDY

¹² Dedicated Acres 800	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



Intent ☐ As Drilled ☒ XX

API #
30-015-45054

Operator Name: XTO PERMIAN OPERATING, LLC	Property Name: POKER LAKE UNIT 15 TWR	Well Number 104H
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Kick Off Point (KOP)

UL N	Section 15	Township 24S	Range 31E	Lot	Feet 309	From N/S S	Feet 2109	From E/W W	County EDDY
Latitude 32.210953					Longitude 103.767413				NAD 83

First Take Point (FTP)

UL C	Section 22	Township 24S	Range 31E	Lot	Feet 340	From N/S N	Feet 2310	From E/W W	County EDDY
Latitude 32.209171					Longitude 103.766762				NAD 83

Last Take Point (LTP)

UL F	Section 34	Township 24S	Range 31E	Lot	Feet 2306	From N/S N	Feet 2334	From E/W W	County EDDY
Latitude 32.174729					Longitude 103.766628				NAD 83

Is this well the defining well for the Horizontal Spacing Unit? ☐ No

Is this well an infill well? ☐ Yes

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

API #
30-015-45202

Operator Name: XTO Permian Operating LLC	Property Name: Poker Lake Unit 15 TWR	Well Number 127H
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KZ 06/29/2018



Crude Oilfield Solutions
11767 Katy Fwy Ste. 420
Houston, TX 77079
P: 832-338-9496

To: New Mexico Energy, Minerals and
Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505 (505) 476-3220

Re: Certified Survey Report / **PLU 15 Twin Wells Ranch 104H/ 30-015-45054**

Via: Electronic Filing

Crude Oilfield Solutions, respectfully submits for filing the
required directional certified survey performed on the referenced well by
Crude Oilfield Solutions. Other information required by your office is as follows:

<u>Name & Title of Supervisor</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Nicholas Flores MWD Coordinator	199' to 24935'	3-22-19 TO 4-10-19	MWD

The directional MWD surveys performed by Crude Oilfield Solutions are attached.

Please file this certified survey report. If there are any questions or additional data
required, please let me know at your earliest opportunity.

Thank You

Sincerely,

Nicholas A. Flores

Nicholas Flores
MWD Manager

XTO ENERGY INC.

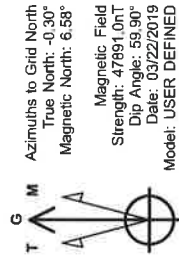
Project: Eddy County, NM (NMEZ) NAD27 Grid
 Site: PLU 15 Twin Wells Ranch 903H/104H
 Well: TWR 104H 3539+22 @ 3561.0usft (Planning 22KB)
 Wellbore: TWR 104H Lateral NAD 1927 (NADCON CONUS)
 Design: TWR 104H Lateral AsDrilled



ANNOTATIONS

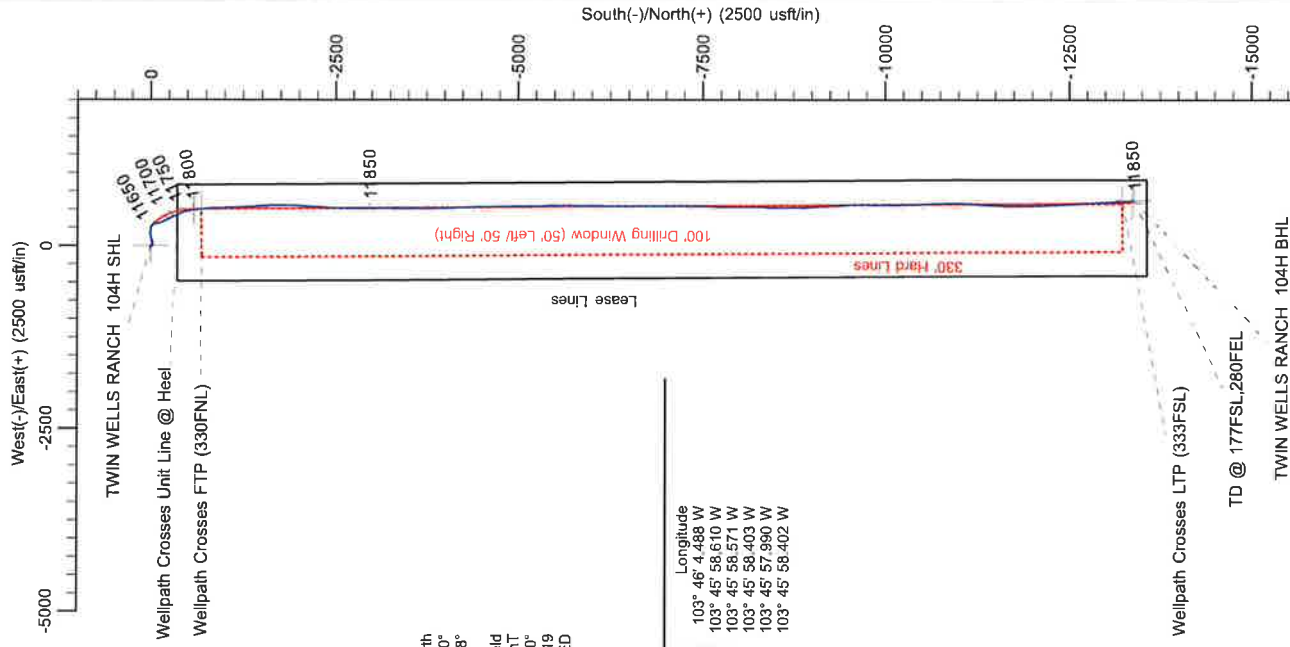
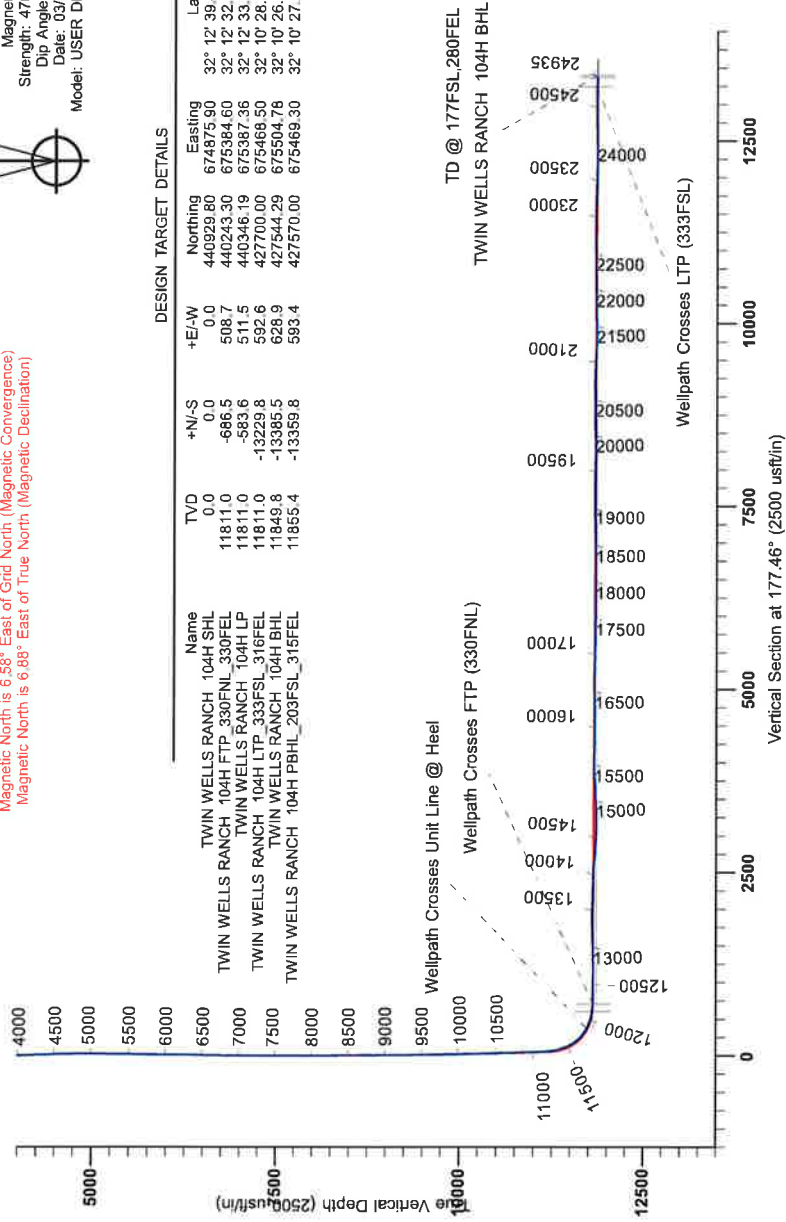
MD	Inc	Azi	TVD	+N/-S	+E/-W	Annotation
11867.0	63.55	154.17	11729.5	-357.2	428.0	Wellpath Crosses Unit Line @ Heel
12221.0	86.63	173.73	11810.7	-687.3	508.2	Wellpath Crosses FTP (330FNL)
24779.0	89.39	176.05	11845.3	-13230.1	616.3	Wellpath Crosses LTP (333FSL)
24935.0	87.97	175.12	11849.8	-13385.5	628.9	TD @ 177FSL,280FEL

To convert a Magnetic Direction to a Grid Direction, Add 6.58°
 Magnetic North is 6.58° East of Grid North (Magnetic Convergence)
 Magnetic North is 6.88° East of True North (Magnetic Declination)



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	TVD	North	East	Latitude	Longitude
TWIN WELLS RANCH 104H SHL	0.0	0.0	0.0	440929.80	674875.90	32° 12' 39.487 N	103° 46' 4.488 W
TWIN WELLS RANCH 104H FTP 330FNL	11811.0	508.7	11811.0	440243.30	675384.60	32° 12' 32.667 N	103° 45' 58.610 W
TWIN WELLS RANCH 104H LTP	11811.0	511.5	11811.0	440346.19	675387.36	32° 12' 33.685 N	103° 45' 58.571 W
TWIN WELLS RANCH 104H LTP 333FSL	11811.0	592.6	11811.0	427700.00	675468.50	32° 10' 28.535 N	103° 45' 58.403 W
TWIN WELLS RANCH 104H BHL	11849.8	628.9	11849.8	427544.29	675504.78	32° 10' 26.992 N	103° 45' 57.990 W
TWIN WELLS RANCH 104H PBHL 203FSL 315FEL	11855.4	593.4	11855.4	427570.00	675469.30	32° 10' 27.249 N	103° 45' 58.402 W



Design: TWR 104H Lateral AsDrilled (TWR 104H/TWR 104H Lateral)
 Created By: Mekka Williams
 eSomina Well Design
 mekka@esominawelldesign.com
 9:39 May 17 2019

CRUDE OILFIELD SOLUTIONS
 14427 Interdrive W Houston 77032
 832-230-2519



Survey Report

Company:	XTO ENERGY INC.	Local Co-ordinate Reference:	Well TWR 104H - Slot TWR 104H
Project:	Eddy County, NM (NMEZ) NAD27 Grid	TVD Reference:	3539+22 @ 3561.0usft (Planning 22KB)
Site:	PLU 15 Twin Wells Ranch 903H/104H	MD Reference:	3539+22 @ 3561.0usft (Planning 22KB)
Well:	TWR 104H	North Reference:	Grid
Wellbore:	TWR 104H Lateral	Survey Calculation Method:	Minimum Curvature
Design:	TWR 104H Lateral AsDrilled	Database:	CRUDE_EDM

Project	Eddy County, NM (NMEZ) NAD27 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	PLU 15 Twin Wells Ranch 903H/104H		
Site Position:		Northing:	440,929.80 usft
From:	Map	Easting:	674,875.90 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 12' 39.487 N
		Longitude:	103° 46' 4.488 W
		Grid Convergence:	0.30 °

Well	TWR 104H - Slot TWR 104H		
Well Position	+N/-S	0.0 usft	Northing: 440,929.80 usft
	+E/-W	0.0 usft	Easting: 674,875.90 usft
			Latitude: 32° 12' 39.487 N
			Longitude: 103° 46' 4.488 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Ground Level:	3,539.0 usft

Wellbore	TWR 104H Lateral		
Magnetics	Model Name	Sample Date	Declination (°)
	User Defined	03/22/19	6.88
			Dip Angle (°) 59.90
			Field Strength (nT) 47,891.00000000

Design	TWR 104H Lateral AsDrilled		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.0	0.0	0.0
			Direction (°) 177.46

Survey Program	Date	05/17/19		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
199.0	24,860.0	Survey #1 (TWR 104H Lateral)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction
24,935.0	24,935.0	Survey #2 (TWR 104H Lateral)	Projection	Projection

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
TWIN WELLS RANCH 104H SHL - TWIN WELLS RANCH 903H SHL									
199.0	0.57	346.69	199.0	1.0	-0.2	-1.0	0.29	0.29	0.00
301.0	0.57	329.28	301.0	1.9	-0.6	-1.9	0.17	0.00	-17.07
390.0	0.57	315.57	390.0	2.6	-1.1	-2.6	0.15	0.00	-15.40
480.0	0.35	307.14	480.0	3.1	-1.7	-3.1	0.26	-0.24	-9.37
568.0	0.26	248.78	568.0	3.2	-2.1	-3.3	0.35	-0.10	-66.32
658.0	0.40	222.41	658.0	2.9	-2.5	-3.0	0.23	0.16	-29.30
755.0	0.09	210.37	755.0	2.5	-2.7	-2.7	0.32	-0.32	-12.41
834.0	0.57	41.97	834.0	2.8	-2.5	-2.9	0.83	0.61	-213.16

Survey Report

Company:	XTO ENERGY INC.	Local Co-ordinate Reference:	Well TWR 104H - Slot TWR 104H
Project:	Eddy County, NM (NMEZ) NAD27 Grid	TVD Reference:	3539+22 @ 3561.0usft (Planning 22KB)
Site:	PLU 15 Twin Wells Ranch 903H/104H	MD Reference:	3539+22 @ 3561.0usft (Planning 22KB)
Well:	TWR 104H	North Reference:	Grid
Wellbore:	TWR 104H Lateral	Survey Calculation Method:	Minimum Curvature
Design:	TWR 104H Lateral AsDrilled	Database:	CRUDE_EDM

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)
942.0	0.44	20.17	942.0	3.6	-2.0	-3.7	0.21	-0.12	-20.19
1,036.0	0.48	33.18	1,036.0	4.2	-1.7	-4.3	0.12	0.04	13.84
1,130.0	0.44	30.98	1,130.0	4.9	-1.3	-4.9	0.05	-0.04	-2.34
1,223.0	0.62	30.72	1,223.0	5.6	-0.8	-5.6	0.19	0.19	-0.28
1,318.0	0.48	35.73	1,318.0	6.4	-0.3	-6.4	0.16	-0.15	5.27
1,412.0	0.70	19.65	1,412.0	7.2	0.1	-7.2	0.29	0.23	-17.11
1,507.0	0.62	11.12	1,506.9	8.3	0.4	-8.3	0.13	-0.08	-8.98
1,601.0	0.35	359.78	1,600.9	9.1	0.5	-9.0	0.30	-0.29	-12.06
1,695.0	0.26	25.89	1,694.9	9.6	0.6	-9.5	0.17	-0.10	27.78
1,789.0	0.31	356.35	1,788.9	10.0	0.7	-10.0	0.16	0.05	-31.43
1,882.0	0.22	33.71	1,881.9	10.4	0.7	-10.4	0.20	-0.10	40.17
1,977.0	0.22	24.74	1,976.9	10.7	0.9	-10.7	0.04	0.00	-9.44
2,072.0	0.18	275.85	2,071.9	10.9	0.8	-10.9	0.34	-0.04	-114.62
2,166.0	0.22	258.62	2,165.9	10.9	0.5	-10.8	0.08	0.04	-18.33
2,260.0	0.31	256.86	2,259.9	10.8	0.1	-10.8	0.10	0.10	-1.87
2,354.0	0.48	248.69	2,353.9	10.6	-0.5	-10.6	0.19	0.18	-8.69
2,449.0	0.44	260.47	2,448.9	10.4	-1.3	-10.4	0.11	-0.04	12.40
2,543.0	0.53	268.82	2,542.9	10.3	-2.0	-10.4	0.12	0.10	8.88
2,638.0	0.75	257.39	2,637.9	10.2	-3.1	-10.3	0.27	0.23	-12.03
2,732.0	0.66	257.48	2,731.9	9.9	-4.2	-10.1	0.10	-0.10	0.10
2,827.0	0.66	242.62	2,826.9	9.5	-5.2	-9.8	0.18	0.00	-15.64
2,922.0	0.62	232.08	2,921.9	9.0	-6.1	-9.2	0.13	-0.04	-11.09
3,016.0	0.62	221.88	3,015.9	8.3	-6.9	-8.6	0.12	0.00	-10.85
3,110.0	0.75	209.67	3,109.9	7.4	-7.5	-7.7	0.21	0.14	-12.99
3,205.0	0.62	190.51	3,204.9	6.3	-7.9	-6.7	0.28	-0.14	-20.17
3,300.0	0.75	168.09	3,299.9	5.2	-7.9	-5.6	0.31	0.14	-23.60
3,394.0	0.75	168.97	3,393.9	4.0	-7.6	-4.3	0.01	0.00	0.94
3,487.0	0.75	182.68	3,486.9	2.8	-7.5	-3.1	0.19	0.00	14.74
3,581.0	0.84	160.45	3,580.9	1.5	-7.3	-1.9	0.34	0.10	-23.65
3,674.0	0.92	140.14	3,673.8	0.3	-6.6	-0.6	0.34	0.09	-21.84
3,767.0	1.45	136.45	3,766.8	-1.1	-5.4	0.9	0.58	0.57	-3.97
3,861.0	1.71	130.39	3,860.8	-2.9	-3.5	2.7	0.33	0.28	-6.45
3,954.0	1.89	130.04	3,953.7	-4.8	-1.2	4.7	0.19	0.19	-0.38
4,049.0	2.46	128.37	4,048.7	-7.0	1.6	7.1	0.60	0.60	-1.76
4,143.0	2.90	132.94	4,142.6	-9.9	4.9	10.1	0.52	0.47	4.86
4,237.0	3.30	131.27	4,236.4	-13.3	8.7	13.7	0.44	0.43	-1.78
4,311.0	3.34	132.50	4,310.3	-16.2	11.9	16.7	0.11	0.05	1.66
4,426.0	3.56	129.33	4,425.1	-20.7	17.1	21.4	0.25	0.19	-2.76
4,519.0	2.24	132.32	4,518.0	-23.7	20.7	24.6	1.43	-1.42	3.22
4,614.0	1.67	118.26	4,612.9	-25.7	23.3	26.7	0.78	-0.60	-14.80
4,709.0	1.36	125.20	4,707.9	-27.0	25.4	28.1	0.38	-0.33	7.31
4,803.0	2.20	96.81	4,801.8	-27.8	28.1	29.0	1.27	0.89	-30.20
4,897.0	2.24	93.47	4,895.8	-28.1	31.7	29.5	0.14	0.04	-3.55

Survey Report

Company:	XTO ENERGY INC.	Local Co-ordinate Reference:	Well TWR 104H - Slot TWR 104H
Project:	Eddy County, NM (NMEZ) NAD27 Grid	TVD Reference:	3539+22 @ 3561.0usft (Planning 22KB)
Site:	PLU 15 Twin Wells Ranch 903H/104H	MD Reference:	3539+22 @ 3561.0usft (Planning 22KB)
Well:	TWR 104H	North Reference:	Grid
Wellbore:	TWR 104H Lateral	Survey Calculation Method:	Minimum Curvature
Design:	TWR 104H Lateral AsDrilled	Database:	CRUDE_EDM

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)
4,990.0	2.15	92.77	4,988.7	-28.3	35.3	29.9	0.10	-0.10	-0.75
5,085.0	2.73	74.49	5,083.6	-27.8	39.2	29.5	1.01	0.61	-19.24
5,180.0	2.95	72.73	5,178.5	-26.5	43.8	28.4	0.25	0.23	-1.85
5,274.0	3.03	74.05	5,272.4	-25.1	48.5	27.2	0.11	0.09	1.40
5,368.0	3.03	71.33	5,366.2	-23.6	53.2	25.9	0.15	0.00	-2.89
5,461.0	3.03	75.02	5,459.1	-22.2	57.9	24.7	0.21	0.00	3.97
5,554.0	2.95	74.75	5,552.0	-20.9	62.6	23.7	0.09	-0.09	-0.29
5,649.0	2.99	71.68	5,646.9	-19.5	67.3	22.5	0.17	0.04	-3.23
5,742.0	2.99	71.85	5,739.7	-18.0	71.9	21.1	0.01	0.00	0.18
5,837.0	3.12	69.57	5,834.6	-16.3	76.7	19.7	0.19	0.14	-2.40
5,932.0	3.12	73.17	5,929.5	-14.7	81.6	18.3	0.21	0.00	3.79
6,026.0	2.95	74.67	6,023.3	-13.3	86.4	17.1	0.20	-0.18	1.60
6,121.0	1.41	73.35	6,118.3	-12.3	89.8	16.3	1.62	-1.62	-1.39
6,215.0	2.24	73.87	6,212.2	-11.5	92.7	15.5	0.88	0.88	0.55
6,310.0	3.82	72.03	6,307.1	-10.0	97.5	14.3	1.67	1.66	-1.94
6,405.0	4.09	74.14	6,401.8	-8.1	103.8	12.6	0.32	0.28	2.22
6,499.0	2.51	74.14	6,495.7	-6.6	109.0	11.4	1.68	-1.68	0.00
6,593.0	3.82	73.61	6,589.5	-5.1	114.0	10.2	1.39	1.39	-0.56
6,688.0	3.91	72.47	6,684.3	-3.3	120.1	8.6	0.12	0.09	-1.20
6,782.0	3.78	73.26	6,778.1	-1.4	126.1	7.0	0.15	-0.14	0.84
6,876.0	3.56	74.84	6,871.9	0.2	131.9	5.6	0.26	-0.23	1.68
6,971.0	3.65	74.23	6,966.7	1.8	137.6	4.3	0.10	0.09	-0.64
7,064.0	3.47	73.79	7,059.6	3.4	143.2	2.9	0.20	-0.19	-0.47
7,158.0	3.25	80.29	7,153.4	4.7	148.6	1.9	0.47	-0.23	6.91
7,253.0	3.25	83.35	7,248.2	5.4	153.9	1.4	0.18	0.00	3.22
7,346.0	2.95	90.13	7,341.1	5.7	158.9	1.3	0.51	-0.32	7.29
7,440.0	2.95	87.06	7,435.0	5.9	163.7	1.4	0.17	0.00	-3.27
7,534.0	2.86	91.63	7,528.9	5.9	168.5	1.6	0.26	-0.10	4.86
7,627.0	2.99	90.22	7,621.7	5.8	173.2	1.8	0.16	0.14	-1.52
7,721.0	2.99	92.24	7,715.6	5.7	178.1	2.2	0.11	0.00	2.15
7,815.0	3.08	89.69	7,809.5	5.7	183.1	2.5	0.17	0.10	-2.71
7,908.0	3.08	91.72	7,902.3	5.6	188.1	2.7	0.12	0.00	2.18
8,002.0	3.03	91.98	7,996.2	5.4	193.1	3.1	0.06	-0.05	0.28
8,097.0	3.03	94.53	8,091.1	5.1	198.1	3.6	0.14	0.00	2.68
8,191.0	3.03	95.67	8,184.9	4.7	203.1	4.3	0.06	0.00	1.21
8,285.0	2.95	94.00	8,278.8	4.3	208.0	4.9	0.13	-0.09	-1.78
8,379.0	2.81	97.17	8,372.7	3.8	212.7	5.6	0.23	-0.15	3.37
8,471.0	2.59	93.56	8,464.6	3.4	217.0	6.2	0.30	-0.24	-3.92
8,564.0	2.68	89.96	8,557.5	3.3	221.2	6.5	0.20	0.10	-3.87
8,658.0	3.25	108.06	8,651.4	2.5	226.0	7.5	1.16	0.61	19.26
8,751.0	2.73	103.14	8,744.2	1.1	230.6	9.1	0.62	-0.56	-5.29
8,845.0	2.55	98.31	8,838.1	0.3	234.9	10.1	0.30	-0.19	-5.14
8,939.0	2.95	100.77	8,932.0	-0.4	239.3	11.0	0.44	0.43	2.62

Survey Report

Company:	XTO ENERGY INC.	Local Co-ordinate Reference:	Well TWR 104H - Slot TWR 104H
Project:	Eddy County, NM (NMEZ) NAD27 Grid	TVD Reference:	3539+22 @ 3561.0usft (Planning 22KB)
Site:	PLU 15 Twin Wells Ranch 903H/104H	MD Reference:	3539+22 @ 3561.0usft (Planning 22KB)
Well:	TWR 104H	North Reference:	Grid
Wellbore:	TWR 104H Lateral	Survey Calculation Method:	Minimum Curvature
Design:	TWR 104H Lateral AsDrilled	Database:	CRUDE_EDM

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)
9,034.0	2.68	96.37	9,026.9	-1.1	243.9	11.9	0.36	-0.28	-4.63
9,127.0	2.24	97.25	9,119.8	-1.6	247.9	12.6	0.47	-0.47	0.95
9,222.0	2.73	103.84	9,214.8	-2.4	251.9	13.5	0.60	0.52	6.94
9,316.0	2.51	103.23	9,308.7	-3.4	256.1	14.7	0.24	-0.23	-0.65
9,410.0	2.15	105.87	9,402.6	-4.3	259.8	15.8	0.40	-0.38	2.81
9,505.0	2.20	104.99	9,497.5	-5.3	263.3	16.9	0.06	0.05	-0.93
9,599.0	2.20	110.79	9,591.4	-6.4	266.7	18.2	0.24	0.00	6.17
9,693.0	2.02	119.93	9,685.4	-7.9	269.8	19.8	0.41	-0.19	9.72
9,787.0	1.98	122.74	9,779.3	-9.6	272.6	21.6	0.11	-0.04	2.99
9,882.0	1.85	127.84	9,874.3	-11.4	275.2	23.6	0.23	-0.14	5.37
9,976.0	2.07	131.53	9,968.2	-13.4	277.7	25.7	0.27	0.23	3.93
10,071.0	2.02	125.20	10,063.1	-15.5	280.4	28.0	0.24	-0.05	-6.66
10,165.0	2.20	130.92	10,157.1	-17.7	283.1	30.2	0.29	0.19	6.09
10,258.0	1.93	127.93	10,250.0	-19.8	285.7	32.5	0.31	-0.29	-3.22
10,352.0	2.11	125.64	10,344.0	-21.8	288.3	34.6	0.21	0.19	-2.44
10,447.0	2.15	125.73	10,438.9	-23.9	291.2	36.7	0.04	0.04	0.09
10,542.0	2.29	126.26	10,533.8	-26.0	294.2	39.0	0.15	0.15	0.56
10,580.0	2.46	127.49	10,571.8	-27.0	295.4	40.0	0.47	0.45	3.24
10,774.0	2.56	133.92	10,765.6	-32.5	301.8	45.9	0.15	0.05	3.31
10,868.0	1.85	160.74	10,859.5	-35.4	303.9	48.8	1.31	-0.76	28.53
10,963.0	2.34	182.01	10,954.5	-38.8	304.3	52.2	0.96	0.52	22.39
11,059.0	2.94	179.22	11,050.4	-43.2	304.3	56.6	0.64	0.63	-2.91
11,153.0	2.88	177.83	11,144.3	-48.0	304.4	61.4	0.10	-0.06	-1.48
11,185.0	3.66	181.52	11,176.2	-49.8	304.4	63.2	2.52	2.44	11.53
11,217.0	4.15	185.98	11,208.1	-52.0	304.2	65.4	1.80	1.53	13.94
11,248.0	6.26	179.86	11,239.0	-54.8	304.1	68.2	7.03	6.81	-19.74
11,280.0	8.48	171.82	11,270.7	-58.9	304.5	72.3	7.63	6.94	-25.13
11,311.0	11.39	171.58	11,301.3	-64.1	305.2	77.6	9.39	9.39	-0.77
11,342.0	13.78	168.92	11,331.5	-70.8	306.4	84.3	7.93	7.71	-8.58
11,374.0	16.76	169.05	11,362.4	-79.1	308.0	92.6	9.31	9.31	0.41
11,405.0	19.31	166.47	11,391.9	-88.4	310.1	102.1	8.62	8.23	-8.32
11,436.0	21.35	163.51	11,420.9	-98.8	312.9	112.6	7.37	6.58	-9.55
11,468.0	23.39	161.43	11,450.5	-110.4	316.5	124.4	6.84	6.38	-6.50
11,499.0	26.06	161.76	11,478.7	-122.8	320.6	136.8	8.62	8.61	1.06
11,530.0	27.92	162.06	11,506.3	-136.1	325.0	150.4	6.02	6.00	0.97
11,563.0	30.81	161.96	11,535.1	-151.5	330.0	166.0	8.76	8.76	-0.30
11,594.0	34.83	160.31	11,561.1	-167.4	335.4	182.1	13.28	12.97	-5.32
11,625.0	39.16	157.27	11,585.9	-184.8	342.2	199.8	15.16	13.97	-9.81
11,657.0	44.62	153.53	11,609.7	-204.2	351.1	219.5	18.76	17.06	-11.69
11,688.0	48.70	149.88	11,630.9	-224.0	361.8	239.8	15.70	13.16	-11.77
11,719.0	51.94	151.47	11,650.7	-244.8	373.5	261.1	11.17	10.45	5.13
11,749.0	53.83	150.86	11,668.8	-265.8	385.0	282.6	6.51	6.30	-2.03
11,780.0	56.73	156.15	11,686.5	-288.6	396.4	305.8	16.86	9.35	17.06
11,812.0	59.50	156.85	11,703.4	-313.5	407.2	331.2	8.85	8.66	2.19

Survey Report

Company:	XTO ENERGY INC.	Local Co-ordinate Reference:	Well TWR 104H - Slot TWR 104H
Project:	Eddy County, NM (NMEZ) NAD27 Grid	TVD Reference:	3539+22 @ 3561.0usft (Planning 22KB)
Site:	PLU 15 Twin Wells Ranch 903H/104H	MD Reference:	3539+22 @ 3561.0usft (Planning 22KB)
Well:	TWR 104H	North Reference:	Grid
Wellbore:	TWR 104H Lateral	Survey Calculation Method:	Minimum Curvature
Design:	TWR 104H Lateral AsDrilled	Database:	CRUDE_EDM

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)
11,843.0	62.16	153.52	11,718.5	-338.0	418.6	356.2	12.71	8.58	-10.74
11,867.0	63.55	154.17	11,729.5	-357.2	428.0	375.8	6.29	5.80	2.72
Wellpath Crosses Unit Line @ Heel									
11,874.0	63.96	154.36	11,732.6	-362.9	430.7	381.6	6.29	5.81	2.68
11,905.0	66.88	154.49	11,745.5	-388.3	442.9	407.5	9.43	9.42	0.42
11,936.0	69.80	157.75	11,756.9	-414.6	454.5	434.4	13.57	9.42	10.52
11,968.0	72.46	161.66	11,767.3	-443.0	465.0	463.2	14.24	8.31	12.22
11,998.0	75.03	165.57	11,775.7	-470.6	473.1	491.1	15.16	8.57	13.03
12,029.0	76.39	168.75	11,783.3	-499.9	479.8	520.7	10.87	4.39	10.26
12,057.0	76.85	169.53	11,789.8	-526.7	485.0	547.7	3.17	1.64	2.79
12,088.0	78.37	170.30	11,796.4	-556.5	490.3	577.7	5.47	4.90	2.48
12,119.0	81.55	170.78	11,801.8	-586.6	495.3	608.0	10.37	10.26	1.55
12,119.9	81.63	170.82	11,802.0	-587.5	495.4	608.8	10.00	9.03	4.35
TWIN WELLS RANCH 104H LP									
12,127.3	82.30	171.14	11,803.0	-594.7	496.6	616.1	10.00	9.03	4.34
TWIN WELLS RANCH 903H FTP_330FNL_330FWL									
12,150.0	84.35	172.12	11,805.6	-617.0	499.8	638.6	10.00	9.03	4.32
12,182.0	86.20	173.45	11,808.3	-648.7	503.8	670.3	7.11	5.78	4.16
12,220.2	86.82	173.72	11,810.6	-686.6	508.1	708.4	1.77	1.62	0.71
TWIN WELLS RANCH 104H FTP_330FNL_330FEL									
12,221.0	86.83	173.73	11,810.7	-687.3	508.2	709.2	1.77	1.62	0.71
Wellpath Crosses FTP (330FNL)									
12,276.0	87.72	174.12	11,813.3	-742.0	514.0	764.0	1.77	1.62	0.71
12,370.0	90.91	177.46	11,814.4	-835.7	520.9	857.9	4.91	3.39	3.55
12,465.0	90.10	178.79	11,813.6	-930.6	524.0	952.9	1.64	-0.85	1.40
12,559.0	87.97	176.59	11,815.1	-1,024.5	527.8	1,046.9	3.26	-2.27	-2.34
12,652.0	89.34	177.45	11,817.3	-1,117.4	532.6	1,139.9	1.74	1.47	0.92
12,747.0	91.64	177.50	11,816.5	-1,212.3	536.8	1,234.9	2.42	2.42	0.05
12,842.0	91.55	177.32	11,813.9	-1,307.1	541.1	1,329.8	0.21	-0.09	-0.19
12,938.0	91.19	177.84	11,811.6	-1,403.0	545.2	1,425.8	0.66	-0.38	0.54
13,031.0	92.17	176.68	11,808.8	-1,495.9	549.6	1,518.8	1.63	1.05	-1.25
13,125.0	91.56	174.29	11,805.8	-1,589.5	557.0	1,612.6	2.62	-0.65	-2.54
13,220.0	93.49	178.22	11,801.6	-1,684.2	563.2	1,707.5	4.60	2.03	4.14
13,316.0	91.98	181.74	11,797.0	-1,780.1	563.2	1,803.3	3.99	-1.57	3.67
13,410.0	88.33	183.52	11,796.8	-1,874.0	558.9	1,896.9	4.32	-3.88	1.89
13,505.0	87.41	182.91	11,800.3	-1,968.7	553.6	1,991.3	1.16	-0.97	-0.64
13,598.0	87.55	182.81	11,804.4	-2,061.5	549.0	2,083.8	0.18	0.15	-0.11
13,693.0	88.61	183.32	11,807.6	-2,156.3	543.9	2,178.3	1.24	1.12	0.54
13,787.0	89.82	184.24	11,808.8	-2,250.1	537.7	2,271.7	1.62	1.29	0.98
13,882.0	88.33	183.23	11,810.4	-2,344.9	531.5	2,366.2	1.89	-1.57	-1.06
13,976.0	87.72	182.62	11,813.6	-2,438.7	526.7	2,459.7	0.92	-0.65	-0.65
14,069.0	86.06	182.24	11,818.7	-2,531.5	522.8	2,552.2	1.83	-1.78	-0.41
14,163.0	85.98	181.94	11,825.2	-2,625.2	519.3	2,645.7	0.33	-0.09	-0.32
14,256.0	85.50	181.68	11,832.1	-2,717.9	516.4	2,738.1	0.59	-0.52	-0.28

Survey Report

Company:	XTO ENERGY INC.	Local Co-ordinate Reference:	Well TWR 104H - Slot TWR 104H
Project:	Eddy County, NM (NMEZ) NAD27 Grid	TVD Reference:	3539+22 @ 3561.0usft (Planning 22KB)
Site:	PLU 15 Twin Wells Ranch 903H/104H	MD Reference:	3539+22 @ 3561.0usft (Planning 22KB)
Well:	TWR 104H	North Reference:	Grid
Wellbore:	TWR 104H Lateral	Survey Calculation Method:	Minimum Curvature
Design:	TWR 104H Lateral AsDrilled	Database:	CRUDE_EDM

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)
14,349.0	85.75	180.78	11,839.2	-2,810.6	514.4	2,830.7	1.00	0.27	-0.97
14,442.0	86.48	178.74	11,845.5	-2,903.4	514.8	2,923.4	2.33	0.78	-2.19
14,535.0	86.03	179.31	11,851.6	-2,996.2	516.4	3,016.1	0.78	-0.48	0.61
14,629.0	88.75	179.06	11,855.9	-3,090.1	517.7	3,110.0	2.91	2.89	-0.27
14,722.0	91.25	180.05	11,855.9	-3,183.1	518.5	3,202.9	2.89	2.69	1.06
14,817.0	90.88	181.31	11,854.1	-3,278.0	517.3	3,297.7	1.38	-0.39	1.33
14,911.0	93.41	181.35	11,850.6	-3,371.9	515.1	3,391.5	2.69	2.69	0.04
15,004.0	93.32	180.62	11,845.1	-3,464.8	513.5	3,484.1	0.79	-0.10	-0.78
15,099.0	93.10	179.30	11,839.8	-3,559.6	513.6	3,578.9	1.41	-0.23	-1.39
15,193.0	92.93	178.81	11,834.8	-3,653.5	515.2	3,672.7	0.55	-0.18	-0.52
15,287.0	93.07	178.35	11,829.9	-3,747.3	517.5	3,766.6	0.51	0.15	-0.49
15,380.0	93.57	178.24	11,824.5	-3,840.1	520.3	3,859.4	0.55	0.54	-0.12
15,474.0	90.94	179.30	11,820.8	-3,934.0	522.3	3,953.3	3.02	-2.80	1.13
15,568.0	89.79	178.68	11,820.2	-4,028.0	523.9	4,047.2	1.39	-1.22	-0.66
15,661.0	88.78	177.99	11,821.4	-4,120.9	526.6	4,140.2	1.32	-1.09	-0.74
15,754.0	88.11	177.55	11,823.9	-4,213.8	530.2	4,233.2	0.86	-0.72	-0.47
15,848.0	88.67	177.97	11,826.6	-4,307.7	533.9	4,327.2	0.74	0.60	0.45
15,942.0	88.42	177.65	11,829.0	-4,401.6	537.5	4,421.1	0.43	-0.27	-0.34
16,037.0	89.76	178.23	11,830.5	-4,496.5	540.9	4,516.1	1.54	1.41	0.61
16,132.0	91.77	179.74	11,829.2	-4,591.5	542.6	4,611.1	2.65	2.12	1.59
16,225.0	91.22	178.98	11,826.8	-4,684.5	543.6	4,704.0	1.01	-0.59	-0.82
16,320.0	90.38	178.64	11,825.4	-4,779.4	545.6	4,798.9	0.95	-0.88	-0.36
16,415.0	90.66	179.21	11,824.6	-4,874.4	547.4	4,893.9	0.67	0.29	0.60
16,509.0	91.05	180.27	11,823.2	-4,968.4	547.8	4,987.8	1.20	0.41	1.13
16,604.0	91.25	180.30	11,821.3	-5,063.4	547.4	5,082.7	0.21	0.21	0.03
16,698.0	89.51	179.63	11,820.6	-5,157.4	547.4	5,176.6	1.98	-1.85	-0.71
16,792.0	87.32	178.43	11,823.2	-5,251.3	549.0	5,270.5	2.66	-2.33	-1.28
16,886.0	86.54	177.67	11,828.3	-5,345.1	552.2	5,364.4	1.16	-0.83	-0.81
16,981.0	89.82	179.18	11,831.3	-5,440.0	554.8	5,459.3	3.80	3.45	1.59
17,076.0	90.21	179.50	11,831.3	-5,535.0	555.9	5,554.2	0.53	0.41	0.34
17,170.0	88.81	178.43	11,832.1	-5,629.0	557.6	5,648.2	1.87	-1.49	-1.14
17,265.0	89.54	179.60	11,833.4	-5,724.0	559.2	5,743.1	1.45	0.77	1.23
17,393.0	89.43	180.92	11,834.6	-5,852.0	558.6	5,871.0	1.03	-0.09	1.03
17,486.0	90.13	182.11	11,835.0	-5,944.9	556.2	5,963.7	1.48	0.75	1.28
17,580.0	89.93	181.35	11,834.9	-6,038.9	553.3	6,057.5	0.84	-0.21	-0.81
17,673.0	89.31	180.76	11,835.5	-6,131.9	551.6	6,150.3	0.92	-0.67	-0.63
17,767.0	89.65	181.02	11,836.4	-6,225.9	550.2	6,244.1	0.46	0.36	0.28
17,861.0	89.37	180.40	11,837.2	-6,319.9	549.0	6,338.0	0.72	-0.30	-0.66
17,955.0	90.88	181.27	11,837.0	-6,413.8	547.6	6,431.8	1.85	1.61	0.93
18,049.0	90.29	180.04	11,836.0	-6,507.8	546.6	6,525.7	1.45	-0.63	-1.31
18,142.0	88.44	177.81	11,837.0	-6,600.8	548.3	6,618.6	3.12	-1.99	-2.40
18,236.0	89.99	181.05	11,838.3	-6,694.8	549.2	6,712.5	3.82	1.65	3.45
18,330.0	90.52	180.73	11,837.9	-6,788.8	547.8	6,806.4	0.66	0.56	-0.34

Survey Report

Company:	XTO ENERGY INC.	Local Co-ordinate Reference:	Well TWR 104H - Slot TWR 104H
Project:	Eddy County, NM (NMEZ) NAD27 Grid	TVD Reference:	3539+22 @ 3561.0usft (Planning 22KB)
Site:	PLU 15 Twin Wells Ranch 903H/104H	MD Reference:	3539+22 @ 3561.0usft (Planning 22KB)
Well:	TWR 104H	North Reference:	Grid
Wellbore:	TWR 104H Lateral	Survey Calculation Method:	Minimum Curvature
Design:	TWR 104H Lateral AsDrilled	Database:	CRUDE_EDM

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)
18,425.0	90.60	180.70	11,837.0	-6,883.7	546.6	6,901.2	0.09	0.08	-0.03
18,519.0	90.80	179.56	11,835.8	-6,977.7	546.4	6,995.1	1.23	0.21	-1.21
18,612.0	89.96	177.50	11,835.2	-7,070.7	548.8	7,088.1	2.39	-0.90	-2.22
18,707.0	90.94	178.65	11,834.5	-7,165.6	552.0	7,183.1	1.59	1.03	1.21
18,803.0	92.14	181.46	11,831.9	-7,261.6	551.9	7,278.9	3.18	1.25	2.93
18,897.0	92.93	181.39	11,827.7	-7,355.5	549.5	7,372.6	0.84	0.84	-0.07
18,991.0	90.10	180.97	11,825.2	-7,449.4	547.6	7,466.4	3.04	-3.01	-0.45
19,085.0	89.23	181.28	11,825.8	-7,543.4	545.8	7,560.2	0.98	-0.93	0.33
19,179.0	89.68	181.20	11,826.7	-7,637.4	543.7	7,653.9	0.49	0.48	-0.09
19,273.0	91.05	181.79	11,826.1	-7,731.3	541.3	7,747.7	1.59	1.46	0.63
19,367.0	89.15	182.27	11,825.9	-7,825.3	537.9	7,841.4	2.08	-2.02	0.51
19,461.0	89.29	180.94	11,827.2	-7,919.2	535.3	7,935.1	1.42	0.15	-1.41
19,555.0	89.17	179.94	11,828.5	-8,013.2	534.6	8,029.0	1.07	-0.13	-1.06
19,649.0	86.85	177.65	11,831.7	-8,107.1	536.6	8,122.9	3.47	-2.47	-2.44
19,744.0	87.44	180.32	11,836.5	-8,202.0	538.2	8,217.8	2.87	0.62	2.81
19,838.0	91.36	181.93	11,837.5	-8,295.9	536.4	8,311.5	4.51	4.17	1.71
19,931.0	92.31	182.00	11,834.5	-8,388.8	533.2	8,404.2	1.02	1.02	0.08
20,026.0	92.17	182.19	11,830.8	-8,483.7	529.7	8,498.8	0.25	-0.15	0.20
20,121.0	92.62	182.15	11,826.8	-8,578.5	526.1	8,593.4	0.48	0.47	-0.04
20,214.0	88.14	177.65	11,826.2	-8,671.5	526.3	8,686.3	6.83	-4.82	-4.84
20,308.0	90.18	179.04	11,827.6	-8,765.4	529.0	8,780.3	2.63	2.17	1.48
20,403.0	89.85	178.23	11,827.5	-8,860.4	531.3	8,875.2	0.92	-0.35	-0.85
20,497.0	90.52	177.28	11,827.2	-8,954.3	535.0	8,969.2	1.24	0.71	-1.01
20,591.0	92.28	177.87	11,824.9	-9,048.2	538.9	9,063.2	1.97	1.87	0.63
20,685.0	90.66	176.86	11,822.5	-9,142.1	543.3	9,157.2	2.03	-1.72	-1.07
20,780.0	88.95	177.16	11,822.8	-9,236.9	548.2	9,252.2	1.83	-1.80	0.32
20,874.0	89.90	176.58	11,823.8	-9,330.8	553.4	9,346.1	1.18	1.01	-0.62
20,969.0	87.91	176.32	11,825.6	-9,425.6	559.2	9,441.1	2.11	-2.09	-0.27
21,064.0	85.33	176.37	11,831.2	-9,520.2	565.3	9,535.9	2.72	-2.72	0.05
21,157.0	84.85	179.37	11,839.2	-9,612.8	568.7	9,628.6	3.26	-0.52	3.23
21,251.0	87.32	181.32	11,845.6	-9,706.6	568.2	9,722.2	3.34	2.63	2.07
21,346.0	89.26	181.30	11,848.4	-9,801.5	566.0	9,816.9	2.04	2.04	-0.02
21,442.0	92.37	181.74	11,847.0	-9,897.4	563.4	9,912.7	3.27	3.24	0.46
21,536.0	92.48	180.76	11,843.1	-9,991.3	561.4	10,006.4	1.05	0.12	-1.04
21,630.0	91.58	178.41	11,839.7	-10,085.3	562.1	10,100.3	2.68	-0.96	-2.50
21,725.0	90.77	177.92	11,837.8	-10,180.2	565.1	10,195.2	1.00	-0.85	-0.52
21,819.0	89.43	175.69	11,837.6	-10,274.0	570.3	10,289.2	2.77	-1.43	-2.37
21,915.0	90.55	178.89	11,837.6	-10,369.9	574.9	10,385.2	3.53	1.17	3.33
22,008.0	90.66	178.41	11,836.7	-10,462.9	577.1	10,478.2	0.53	0.12	-0.52
22,104.0	89.40	177.41	11,836.6	-10,558.8	580.6	10,574.2	1.68	-1.31	-1.04
22,198.0	92.40	178.97	11,835.1	-10,652.7	583.5	10,668.1	3.60	3.19	1.66
22,290.0	92.20	178.42	11,831.4	-10,744.6	585.6	10,760.0	0.64	-0.22	-0.60
22,384.0	90.60	180.09	11,829.1	-10,838.6	586.9	10,854.0	2.46	-1.70	1.78
22,479.0	90.21	179.27	11,828.5	-10,933.6	587.4	10,948.9	0.96	-0.41	-0.86

Survey Report

Company:	XTO ENERGY INC.	Local Co-ordinate Reference:	Well TWR 104H - Slot TWR 104H
Project:	Eddy County, NM (NMEZ) NAD27 Grid	TVD Reference:	3539+22 @ 3561.0usft (Planning 22KB)
Site:	PLU 15 Twin Wells Ranch 903H/104H	MD Reference:	3539+22 @ 3561.0usft (Planning 22KB)
Well:	TWR 104H	North Reference:	Grid
Wellbore:	TWR 104H Lateral	Survey Calculation Method:	Minimum Curvature
Design:	TWR 104H Lateral AsDrilled	Database:	CRUDE_EDM

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)
22,572.0	90.71	181.88	11,827.7	-11,026.6	586.5	11,041.7	2.86	0.54	2.81
22,667.0	89.87	184.02	11,827.2	-11,121.5	581.6	11,136.3	2.42	-0.88	2.25
22,761.0	88.53	184.07	11,828.6	-11,215.2	574.9	11,229.7	1.43	-1.43	0.05
22,856.0	88.95	183.71	11,830.7	-11,310.0	568.5	11,324.0	0.58	0.44	-0.38
22,949.0	89.23	182.94	11,832.1	-11,402.8	563.1	11,416.5	0.88	0.30	-0.83
23,043.0	89.68	181.62	11,833.0	-11,496.7	559.4	11,510.2	1.48	0.48	-1.40
23,137.0	91.19	180.80	11,832.3	-11,590.7	557.4	11,604.0	1.83	1.61	-0.87
23,231.0	87.74	181.20	11,833.2	-11,684.7	555.7	11,697.8	3.69	-3.67	0.43
23,325.0	86.54	180.57	11,837.9	-11,778.5	554.3	11,791.5	1.44	-1.28	-0.67
23,419.0	88.67	180.98	11,841.8	-11,872.4	553.0	11,885.3	2.31	2.27	0.44
23,513.0	88.61	180.25	11,844.0	-11,966.4	552.0	11,979.1	0.78	-0.06	-0.78
23,606.0	89.15	179.11	11,845.9	-12,059.4	552.5	12,072.0	1.36	0.58	-1.23
23,700.0	88.33	176.90	11,847.9	-12,153.3	555.8	12,166.0	2.51	-0.87	-2.35
23,794.0	87.94	175.82	11,851.0	-12,247.0	561.8	12,259.9	1.22	-0.41	-1.15
23,888.0	90.41	178.10	11,852.3	-12,340.9	566.7	12,353.9	3.58	2.63	2.43
23,982.0	90.97	177.51	11,851.2	-12,434.8	570.3	12,447.9	0.87	0.60	-0.63
24,076.0	91.25	176.62	11,849.4	-12,528.7	575.2	12,541.9	0.99	0.30	-0.95
24,170.0	92.90	176.47	11,846.0	-12,622.4	580.8	12,635.8	1.76	1.76	-0.16
24,264.0	93.10	176.30	11,841.1	-12,716.1	586.7	12,729.6	0.28	0.21	-0.18
24,358.0	89.93	177.03	11,838.6	-12,809.9	592.2	12,823.6	3.46	-3.37	0.78
24,451.0	87.86	176.35	11,840.4	-12,902.7	597.6	12,916.5	2.34	-2.23	-0.73
24,544.0	87.66	176.02	11,844.0	-12,995.5	603.8	13,009.5	0.41	-0.22	-0.35
24,638.0	90.29	177.87	11,845.7	-13,089.3	608.8	13,103.4	3.42	2.80	1.97
24,732.0	90.35	176.58	11,845.2	-13,183.2	613.3	13,197.4	1.37	0.06	-1.37
24,738.9	90.21	176.50	11,845.1	-13,190.1	613.7	13,204.3	2.33	-2.03	-1.14
TWIN WELLS RANCH 903H LTP_332FSL_337FWL									
24,777.1	89.43	176.07	11,845.2	-13,228.2	616.2	13,242.5	2.33	-2.03	-1.14
TWIN WELLS RANCH 104H LTP_333FSL_316FEL									
24,779.0	89.39	176.05	11,845.3	-13,230.1	616.3	13,244.4	2.33	-2.03	-1.14
Wellpath Crosses LTP (333FSL)									
24,826.0	88.44	175.51	11,846.1	-13,277.0	619.8	13,291.4	2.33	-2.03	-1.14
24,855.7	88.18	175.30	11,847.0	-13,306.6	622.2	13,321.1	1.13	-0.87	-0.72
TWIN WELLS RANCH 903H PBHL_202FSL_338FWL									
24,880.0	87.97	175.12	11,847.8	-13,330.7	624.2	13,345.3	1.13	-0.87	-0.72
TWIN WELLS RANCH 104H PBHL_203FSL_315FEL									
24,935.0	87.97	175.12	11,849.8	-13,385.5	628.9	13,400.2	0.00	0.00	0.00
TD @ 177FSL,280FEL - TWIN WELLS RANCH 104H BHL									

Survey Report

Company:	XTO ENERGY INC.	Local Co-ordinate Reference:	Well TWR 104H - Slot TWR 104H
Project:	Eddy County, NM (NMEZ) NAD27 Grid	TVD Reference:	3539+22 @ 3561.0usft (Planning 22KB)
Site:	PLU 15 Twin Wells Ranch 903H/104H	MD Reference:	3539+22 @ 3561.0usft (Planning 22KB)
Well:	TWR 104H	North Reference:	Grid
Wellbore:	TWR 104H Lateral	Survey Calculation Method:	Minimum Curvature
Design:	TWR 104H Lateral AsDrilled	Database:	CRUDE_EDM

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TWIN WELLS RANCH - actual wellpath hits target center - Point	0.00	0.00	0.0	0.0	0.0	440,929.80	674,875.90	32° 12' 39.487 N	103° 46' 4.488 W
TWIN WELLS RANCH - actual wellpath misses target center by 0.7usft at 12220.2usft MD (11810.6 TVD, -686.6 N, 508.1 E) - Point	0.00	0.00	11,811.0	-686.5	508.7	440,243.30	675,384.60	32° 12' 32.667 N	103° 45' 58.610 W
TWIN WELLS RANCH - actual wellpath misses target center by 41.6usft at 24777.1usft MD (11845.2 TVD, -13228.2 N, 616.2 E) - Point	0.00	0.00	11,811.0	-13,229.8	592.6	427,700.00	675,468.50	32° 10' 28.535 N	103° 45' 58.403 W
TWIN WELLS RANCH - actual wellpath misses target center by 18.8usft at 12119.9usft MD (11802.0 TVD, -587.5 N, 495.4 E) - Point	0.00	0.00	11,811.0	-583.6	511.5	440,346.19	675,387.36	32° 12' 33.685 N	103° 45' 58.571 W
TWIN WELLS RANCH - actual wellpath hits target center - Point	0.00	0.01	11,849.8	-13,385.5	628.9	427,544.29	675,504.78	32° 10' 26.992 N	103° 45' 57.990 W
TWIN WELLS RANCH - actual wellpath misses target center by 43.0usft at 24880.0usft MD (11847.8 TVD, -13330.7 N, 624.2 E) - Rectangle (sides W100.0 H12,673.5 D0.0)	0.00	0.00	11,855.4	-13,359.8	593.4	427,570.00	675,469.30	32° 10' 27.249 N	103° 45' 58.402 W

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,867.0	11,729.5	-357.2	428.0	Wellpath Crosses Unit Line @ Heel
12,221.0	11,810.7	-687.3	508.2	Wellpath Crosses FTP (330FNL)
24,779.0	11,845.3	-13,230.1	616.3	Wellpath Crosses LTP (333FSL)
24,935.0	11,849.8	-13,385.5	628.9	TD @ 177FSL,280FEL

Checked By: _____	Approved By: _____	Date: _____
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