District I

1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720

Phone: (5/5) 393-6161 Fax: (5/5) 393-0/ <u>District II</u> 811 S. First St., Artesia, NM 88210

811 S. First St., Artesia, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720 <u>District III</u>

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: 9/24/2020

Form C-102 Revised August 1, 2011

Submit one copy to appropriate

District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT AS-DRILLED PLAT

¹ API Numbe 30-015-454;				
⁴ Property Code 325573			operty Name AKE UNIT 15 TWR	⁶ Well Number 108H
⁷ OGRID No.		8 O _l	perator Name	⁹ Elevation
373075		XTO PERMIA	N OPERATING, LLC.	3,567'

¹⁰ Surface Location

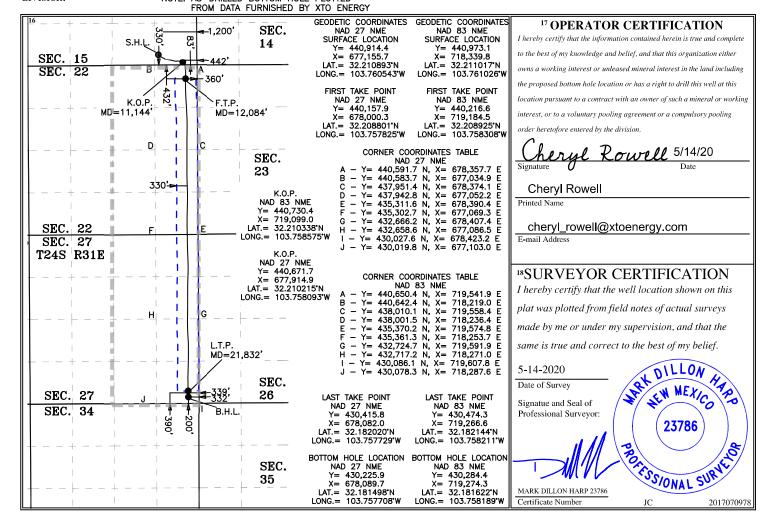
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	15	24 S	31 E		330	SOUTH	1,200	EAST	EDDY

11 Bottom Hole Location If Different From Surface

			" D U	шош по	e Location n	Different From	II Surrace		
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	27	24 S	31 E		200	SOUTH	332	EAST	EDDY
12 Dedicated Acres	¹³ Joint o	r Infill	Consolidation	Code 15 Or	der No.				
480									

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



Inten	t	As Dril	led xx											
API#). 												
Ope	015-450 rator Nar D PERM		ERATIN	G, LL	С		erty N (ER L			IIT 15	5 TW	'R		Well Number 108H
Kick C	Off Point	(KOP)												
UL P	Section 15	Township 24S	Range 31E	Lot	Feet 83		From N	I/S	Feet 442		From W	n E/W	County EDDY	
32.2	ude 210338	3			Longitu 103.		75						NAD 83	
First 7	Гake Poir	nt (FTP)												
UL A	Section 22	Township 24S	Range 31E	Lot	Feet 432		From N	I/S	Feet 360		From E	n E/W	County EDDY	
132.2	^{ide} 208925	5			Longitu 103.7		808		•				NAD 83	
Last T	ake Poin	t (LTP)												
UL P	Section 27	Township 24S	Range 31E	Lot	Feet 355	From	n N/S	Feet		From W	E/W	Count		
Latitu 32.	ude 182144	1		<u> </u>	Longitu 103.		211			L		NAD 83		
Is this	s well the	defining v	vell for th	e Horiz	ontal Sp	oacing	Unit?	1	No					
		. (.11 112		.,	٦									
is this	s well an	infill well?		Yes	_									
	ll is yes p ng Unit.	lease prov	ide API if	availab	le, Oper	rator N	Name a	and v	vell n	umbei	for I	Definir	ng well fo	r Horizontal
API #)15-452	202												
	rator Nai					I -	erty N							Well Number
XTC) Permi	an Opera	ating LL(3		Poke	er Lal	ke U	nit 1	5 TW	/R			127H



MWD SURVEY CERTIFICATION Gordon Technologies, LLC

State Of		New I	Mexico		•				
County Of		Ed	ddy						
I,	Marcus	Mitcham		_certify tha	at; I am e	mployed	by Gordo	n Technologies	, LLC.;
that I did on	the day(s) of	August 8,	2019	through		October	4, 2019	conduct
or supervise	e the takin	g of a MV	VD survey	from a de	pth of		177	feet to a d	epth of
22,02	22	feet; that	the data i	is true, cor	rect, con	nplete and	d within th	ne limitations of	the
tool set forth	n by Gordo	on Techn	ologies, L	LC.; that I	am auth	orized and	d qualified	d to make this r	eport;
that this sur	vey was c	onducted	at the red	quest of		XTO Perm	nian Opera	ating LLC	_for the
Р	LU 15 TW	/R 108H		_ Well, A.	P.I. No.		30-015-	45452	_ in
Delaware	e Basin / F	urple Sa	ge WO	_Field and	that I ha	ıve review	ved this re	eport and find th	nat
it conforms	to the prin	ciples an	d procedu	ıres set for	th by Go	rdon Tecl	hnologies	s, LLC.	
					1	la .		. , ,	
					_//	ara	MAN	tchan	2
							Sign	ature	
							MWD Co	ordinator	
								tlo.	

Company: XTO Energy

Project: Eddy County, NM (NAD27) NMEZ Grid PLU 15 TWIN WELLS RANCH Site:

PLU 15 TWIN WELLS RANCH 108H Well:

Wellbore: 15-108H Lateral 15-108H Lateral AsDrilled Design:

Local Co-ordinate Reference:

TVD Reference: 3567+32 @ 3599.00usft (Pat793ad) 3567+32 @ 3599.00usft (Pat793ad) MD Reference:

Well PLU 15 TWIN WELLS RANCH 108H

North Reference:

Survey Calculation Method: Minimum Curvature PREDATOR EDM Database:

Eddy County, NM (NAD27) NMEZ Grid **Project**

US State Plane 1927 (Exact solution) Map System:

NAD 1927 (NADCON CONUS) Geo Datum:

Map Zone: New Mexico East 3001

Mean Sea Level System Datum:

Site PLU 15 TWIN WELLS RANCH

Northing: 440,894.90 usft Site Position: Latitude: 32.21088250 From: Мар Easting: 674,201.00 usft Longitude: -103.77009603 **Position Uncertainty:** 0.00 usft Slot Radius: 13.20 in **Grid Convergence:** 0.30°

Well PLU 15 TWIN WELLS RANCH 108H **Well Position** +N/-S 0.00 usft Northing: 440,914.40 usft Latitude: 32.21089318 +E/-W 0.00 usft Easting: 677,155.70 usft Longitude: -103.76054279 0.00 usft 3.567.00 usft **Position Uncertainty** Wellhead Elevation: usft Ground Level:

15-108H Lateral Wellbore **Model Name** Sample Date Declination Dip Angle Field Strength Magnetics (°) (°) (nT) **IFR** 07/16/19 6.85 59.90 47,871.00000000

15-108H Lateral AsDrilled Design Audit Notes: ACTUAL Version: 1.0 Phase: Tie On Depth: 0.00 **Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (usft) (usft) (usft) (°) 0.00 0.00 174.99 0.00

10/07/19 **Survey Program** Date From То (usft) (usft) Survey (Wellbore) **Tool Name** Description 177.00 11,140.00 Survey #1 (15-108H Lateral) **MWD** OWSG MWD - Standard 11,186.00 21,968.00 Survey #2 (15-108H Lateral) MWD+IFR1+MS OWSG MWD + IFR1 + Multi-Station Correction 22,022.00 22,022.00 Survey #3 (15-108H Lateral) Projection Projection

Survey Measured Vertical Vertical Dogleg Build Turn Depth Inclination Azimuth Depth +N/-S +E/-W Section Rate Rate Rate (usft) (usft) (usft) (°/100ft) (°/100ft) (°/100ft) (usft) (usft) (°) (°) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 PLU 15 TWR 108H SHL 0.83 134.55 176.99 -0.90 0.91 0.98 0.47 0.47 0.00 177.00 136.98 208.00 0.94 207.99 -1.24 1.25 1.35 0.37 0.35 7.84 0.65 2.34 300.00 134.82 299.98 -2.16 2.13 0.32 -0.32 -2.35 390.00 0.58 156.12 389.98 -2.94 2.68 3.16 0.26 -0.08 23.67 480.00 0.84 164.97 479.97 -3.99 3.03 4.24 0.31 0.29 9.83 510.00 1.11 155.23 509.96 -4.47 3.21 4.73 1.05 0.90 -32.47 574.00 1.08 187.24 573.95 -5.63 3.40 5.90 0.94 -0.05 50.02

Company: XTO Energy

Project: Eddy County, NM (NAD27) NMEZ Grid
Site: PLU 15 TWIN WELLS RANCH
Well: PLU 15 TWIN WELLS RANCH 108H

Wellbore: 15-108H Lateral

Design: 15-108H Lateral AsDrilled

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method: Database: Well PLU 15 TWIN WELLS RANCH 108H

3567+32 @ 3599.00usft (Pat793ad) 3567+32 @ 3599.00usft (Pat793ad)

Grid

Minimum Curvature
PREDATOR_EDM

ırvey									
Measured Depth (usft)	I Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
669.0	00 1.11	174.94	668.94	-7.43	3.36	7.70	0.25	0.03	-12.95
764.0	00 1.38	180.78	763.91	-9.50	3.43	9.76	0.31	0.28	6.15
853.0	00 1.51	186.40	852.89	-11.73	3.29	11.97	0.22	0.15	6.31
960.0	00 1.88	182.45	959.84	-14.89	3.05	15.10	0.36	0.35	-3.69
1,054.0	00 1.58	164.70	1,053.80	-17.68	3.33	17.90	0.65	-0.32	-18.88
1,148.0	00 2.16	142.90	1,147.75	-20.34	4.74	20.68	0.97	0.62	-23.19
1,242.0	00 1.58	140.05	1,241.70	-22.75	6.64	23.24	0.62	-0.62	-3.03
1,336.0	00 1.18	136.36	1,335.67	-24.44	8.14	25.06	0.44	-0.43	-3.93
1,431.0	00 0.59	84.74	1,430.66	-25.10	9.30	25.82	0.99	-0.62	-54.34
1,525.0	00 1.50	28.29	1,524.64	-23.98	10.37	24.79	1.35	0.97	-60.05
1,620.0	00 2.87	22.16	1,619.57	-20.68	11.85	21.63	1.46	1.44	-6.45
1,713.0	00 2.96	25.90	1,712.45	-16.36	13.78	17.50	0.23	0.10	4.02
1,808.0	00 2.94	30.23	1,807.33	-12.05	16.08	13.41	0.24	-0.02	4.56
1,902.0	00 2.44	18.52	1,901.22	-8.07	17.93	9.60	0.79	-0.53	-12.46
1,996.0	00 1.07	351.68	1,995.18	-5.30	18.44	6.89	1.66	-1.46	-28.55
2,091.0	0.99	290.53	2,090.17	-4.14	17.54	5.65	1.11	-0.08	-64.37
2,185.0	00 2.05	285.51	2,184.13	-3.40	15.16	4.71	1.14	1.13	-5.34
2,280.0	00 1.23	272.17	2,279.09	-2.91	12.50	3.99	0.95	-0.86	-14.04
2,374.0	00 0.95	232.05	2,373.08	-3.35	10.88	4.29	0.84	-0.30	-42.68
2,468.0	00 1.67	230.45	2,467.05	-4.70	9.21	5.49	0.77	0.77	-1.70
2,563.0		223.46	2,562.01	-6.53	7.25	7.14	0.23	-0.11	-7.36
2,657.0	00 1.23	224.76	2,655.99	-8.18	5.65	8.64	0.36	-0.36	1.38
2,752.0		218.99	2,750.94	-10.26	3.84	10.55	0.93	0.92	-6.07
2,846.0		204.57	2,844.86	-13.74	1.77	13.85	1.06	0.83	-15.34
2,941.0		168.76	2,939.71	-18.86	1.36	18.90	2.23	0.78	-37.69
3,035.0		142.09	3,033.47	-24.81	4.31	25.09	2.33	1.16	-28.37
3,129.0	5.04	113.44	3,127.14	-29.50	10.48	30.30	2.59	0.35	-30.48
3,224.0		107.44	3,221.68	-32.71	19.22	34.26	1.40	1.25	-6.32
3,318.0		109.44	3,315.27	-35.48	27.60	37.75	1.80	-1.79	2.13
3,413.0		112.07	3,409.99	-38.04	34.39	40.90	0.42	-0.36	2.77
3,507.0		113.99	3,503.78	-40.49	40.19	43.85	0.80	-0.79	2.04
3,602.0	00 2.62	116.46	3,598.64	-42.63	44.76	46.38	0.91	-0.89	2.60
3,696.0		117.32	3,692.54	-44.56	48.57	48.63	0.05	-0.03	0.91
3,790.0		117.95	3,786.35	-47.36	53.90	51.89	2.31	2.31	0.67
3,885.0		117.54	3,880.87	-51.77	62.28	57.01	2.02	2.02	-0.43
3,977.0		118.12	3,972.30	-56.51	71.27	62.52	0.74	-0.74	0.63
4,072.0	5.20	122.40	4,066.85	-61.15	79.28	67.84	0.95	-0.84	4.51
4,167.0		129.10	4,161.48	-66.06	86.11	73.32	0.67	-0.24	7.05
4,261.0		133.46	4,255.13	-71.35	92.14	79.12	0.42	-0.15	4.64
4,356.0		120.16	4,349.82	-75.97	98.26	84.26	1.19	-0.36	-14.00
4,543.0		109.64	4,536.30	-81.89	110.89	91.26	0.47	-0.21	-5.63
4,638.0	00 4.17	108.10	4,631.05	-84.11	117.37	94.03	0.14	0.07	-1.62
4,732.0	00 4.03	107.51	4,724.81	-86.16	123.77	96.64	0.16	-0.15	-0.63

Company: XTO Energy

Project: Eddy County, NM (NAD27) NMEZ Grid
Site: PLU 15 TWIN WELLS RANCH
Well: PLU 15 TWIN WELLS RANCH 108H

Wellbore: 15-108H Lateral

Design: 15-108H Lateral AsDrilled

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method: Database: Well PLU 15 TWIN WELLS RANCH 108H

3567+32 @ 3599.00usft (Pat793ad) 3567+32 @ 3599.00usft (Pat793ad)

Grid

Minimum Curvature
PREDATOR_EDM

Survey										
										_
D	asured epth usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
	4,826.00	5.11	116.15	4,818.51	-89.00	130.67	100.07	1.36	1.15	9.19
	4,920.00	6.06	121.70	4,912.07	-93.45	138.65	105.20	1.16	1.01	5.90
!	5,014.00	5.95	122.51	5,005.55	-98.68	146.98	111.14	0.15	-0.12	0.86
	5,109.00	6.07	122.29	5,100.03	-104.01	155.38	117.18	0.13	0.13	-0.23
	5,203.00	6.08	121.56	5,193.50	-109.27	163.82	123.16	0.08	0.01	-0.78
!	5,297.00	6.29	120.06	5,286.95	-114.45	172.52	129.08	0.28	0.22	-1.60
,	5,391.00	6.07	120.46	5,380.41	-119.55	181.26	134.92	0.24	-0.23	0.43
,	5,485.00	6.04	118.64	5,473.88	-124.44	189.89	140.55	0.21	-0.03	-1.94
	5,580.00	5.93	118.48	5,568.37	-129.18	198.59	146.03	0.12	-0.12	-0.17
1	5,673.00	5.99	119.57	5,660.86	-133.86	207.03	151.43	0.14	0.06	1.17
!	5,768.00	5.99	117.66	5,755.34	-138.61	215.73	156.92	0.21	0.00	-2.01
!	5,862.00	6.33	109.12	5,848.80	-142.58	224.97	161.69	1.04	0.36	-9.09
	5,956.00	6.53	105.12	5,942.21	-145.68	235.03	165.64	0.52	0.21	-4.26
(6,050.00	6.43	105.52	6,035.61	-148.48	245.26	169.33	0.12	-0.11	0.43
	6,144.00	6.63	104.81	6,129.00	-151.27	255.58	173.02	0.23	0.21	-0.76
(6,239.00	6.38	104.55	6,223.39	-154.00	265.99	176.64	0.26	-0.26	-0.27
(6,333.00	6.66	103.88	6,316.78	-156.62	276.34	180.16	0.31	0.30	-0.71
(6,428.00	6.98	102.19	6,411.11	-159.16	287.33	183.65	0.40	0.34	-1.78
,	6,523.00	7.13	102.74	6,505.39	-161.68	298.72	187.15	0.17	0.16	0.58
	6,618.00	7.14	101.78	6,599.66	-164.19	310.25	190.65	0.13	0.01	-1.01
(6,712.00	6.99	100.45	6,692.94	-166.42	321.59	193.87	0.24	-0.16	-1.41
(6,806.00	7.27	100.19	6,786.21	-168.51	333.07	196.95	0.30	0.30	-0.28
	6,900.00	7.19	100.31	6,879.47	-170.61	344.71	200.06	0.09	-0.09	0.13
(6,994.00	7.25	101.06	6,972.72	-172.80	356.32	203.26	0.12	0.06	0.80
	7,088.00	7.14	102.29	7,065.98	-175.18	367.85	206.64	0.20	-0.12	1.31
	7,183.00	6.99	101.89	7,160.26	-177.63	379.28	210.07	0.17	-0.16	-0.42
	7,277.00	6.85	102.28	7,253.58	-180.00	390.35	213.40	0.16	-0.15	0.41
	7,371.00	6.68	103.93	7,346.92	-182.51	401.14	216.84	0.27	-0.18	1.76
	7,465.00	6.58	104.05	7,440.29	-185.13	411.67	220.38	0.11	-0.11	0.13
	7,557.00	6.56	105.43	7,531.69	-187.81	421.85	223.93	0.17	-0.02	1.50
	7,651.00	6.63	105.34	7,625.07	-190.68	432.26	227.70	0.08	0.07	-0.10
	7,745.00	6.46	104.89	7,718.45	-193.47	442.60	231.38	0.19	-0.18	-0.48
	7,840.00	6.65	104.58	7,812.83	-196.23	453.09	235.05	0.20	0.20	-0.33
	7,934.00	6.58	104.88	7,906.21	-198.98	463.56	238.70	0.08	-0.07	0.32
	8,029.00	6.13	99.39	8,000.62	-201.21	473.83	241.82	0.80	-0.47	-5.78
(8,123.00	5.78	95.87	8,094.12	-202.51	483.49	243.96	0.54	-0.37	-3.74
	8,217.00	5.69	97.45	8,187.65	-203.60	492.81	245.86	0.19	-0.10	1.68
	8,311.00	5.26	99.69	8,281.22	-204.93	501.68	247.96	0.51	-0.46	2.38
,	8,405.00	5.18	102.37	8,374.83	-206.56	510.07	250.32	0.27	-0.09	2.85
	8,500.00	4.82	103.56	8,469.47	-208.42	518.14	252.87	0.39	-0.38	1.25
	8,594.00	4.34	107.68	8,563.17	-210.42	525.37	255.50	0.62	-0.51	4.38
	8,690.00	4.12	106.91	8,658.90	-212.53	532.13	258.19	0.24	-0.23	-0.80
	8,785.00	3.78	100.40	8,753.68	-214.09	538.48	260.29	0.59	-0.36	-6.85
	8,879.00	3.96	88.88	8,847.47	-214.58	544.77	261.34	0.85	0.19	-12.26

Company: XTO Energy

Project: Eddy County, NM (NAD27) NMEZ Grid
Site: PLU 15 TWIN WELLS RANCH
Well: PLU 15 TWIN WELLS RANCH 108H

Wellbore: 15-108H Lateral

Design: 15-108H Lateral AsDrilled

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:
Database:

Well PLU 15 TWIN WELLS RANCH 108H

3567+32 @ 3599.00usft (Pat793ad) 3567+32 @ 3599.00usft (Pat793ad)

Grid

Minimum Curvature
PREDATOR_EDM

у									
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100ft)	(°/100ft)	(°/100ft)
8,974.00		78.81	8,942.18	-213.73	552.02	261.12	1.27	0.98	-10.60
9,068.00	5.73	77.56	9,035.78	-211.94	560.53	260.09	0.90	0.89	-1.33
9,162.00	7.02	77.85	9,129.20	-209.72	570.73	258.76	1.37	1.37	0.31
9,254.00	7.20	79.61	9,220.49	-207.50	581.90	257.53	0.31	0.20	1.91
9,348.00	8.25	82.24	9,313.63	-205.53	594.38	256.65	1.18	1.12	2.80
9,443.00	9.03	93.52	9,407.56	-205.07	608.57	257.43	1.96	0.82	11.87
9,537.00	8.79	97.76	9,500.43	-206.49	623.05	260.11	0.74	-0.26	4.51
9,632.00	7.98	98.31	9,594.41	-208.42	636.77	263.23	0.86	-0.85	0.58
9,726.00		99.78	9,687.59	-210.36	648.98	266.23	0.92	-0.89	1.56
9,822.00		101.06	9,782.91	-212.43	660.26	269.27	0.60	-0.58	1.33
9,916.00	6.29	104.37	9,876.32	-214.74	670.53	272.47	0.50	-0.31	3.52
10,011.00		105.30	9,970.80	-217.27	680.10	275.83	0.66	-0.65	0.98
10,106.00		99.27	10,065.36	-219.22	689.01	278.55	0.69	-0.33	-6.35
10,200.00		104.42	10,158.98	-220.94	697.29	280.99	0.64	-0.40	5.48
10,295.00		103.61	10,253.62	-222.93	705.27	283.67	0.08	-0.03	-0.85
10,389.00		103.04	10,347.28	-224.77	713.03	286.18	0.19	-0.18	-0.61
10,484.00		108.36	10,441.96	-226.86	720.49	288.92	0.50	-0.20	5.60
10,553.00		111.92	10,510.74	-228.78	725.71	291.28	0.42	0.09	5.16
10,714.00		114.94	10,671.30	-233.47	736.61	296.90	0.54	-0.52	1.88
10,808.00	4.19	98.34	10,765.07	-235.28	742.84	299.26	1.29	0.40	-17.66
10,903.00	3.09	103.41	10,859.88	-236.38	748.76	300.87	1.21	-1.16	5.34
10,997.00	2.58	128.16	10,953.77	-238.28	752.89	303.11	1.40	-0.54	26.33
11,091.00	3.10	127.61	11,047.65	-241.13	756.57	306.28	0.55	0.55	-0.59
11,140.00	3.39	118.01	11,096.58	-242.62	758.90	307.97	1.25	0.59	-19.59
11,186.00	4.41	117.21	11,142.47	-244.07	761.67	309.65	2.22	2.22	-1.74
11,230.00	5.55	115.39	11,186.30	-245.76	765.10	311.63	2.62	2.59	-4.14
11,281.00	7.48	120.21	11,236.97	-248.48	770.20	314.80	3.93	3.78	9.45
11,318.00	10.94	125.89	11,273.49	-251.75	775.12	318.48	9.66	9.35	15.35
11,343.00		133.15	11,297.93	-255.13	779.16	322.20	11.68	9.96	29.04
11,375.00		139.05	11,328.89	-260.97	784.74	328.51	8.85	7.53	18.44
11,406.00) 19.30	145.78	11,358.44	-268.41	790.40	336.41	12.93	11.16	21.71
11,438.00		151.61	11,388.21	-278.45	796.43	346.93	15.30	13.78	18.22
11,469.00		152.89	11,416.22	-290.19	802.60	359.17	10.69	10.55	4.13
11,501.00		154.95	11,444.39	-303.83	809.26	373.34	8.91	8.37	6.44
11,532.00		156.51	11,470.97	-318.36	815.81	388.39	8.72	8.32	5.03
11,546.00	33.09	158.03	11,482.76	-325.33	818.73	395.59	8.45	6.08	10.88
	Crosses Unit Line		11,702.70	-020.00	010.73	555.55	0.40	0.00	10.00
11,564.00		159.89	11,497.74	-334.64	822.30	405.18	8.45	6.22	10.32
11,595.00		163.76	11,523.07	-351.63	827.86	422.58	9.71	6.52	12.48
11,627.00		167.08	11,548.53	-370.38	832.73	441.69	9.11	6.59	10.37
11,659.00		170.32	11,573.22	-370.36	836.70	461.92	9.11	7.31	10.37
								7.51	
11,690.00		172.49	11,596.25	-410.86	839.79	482.62	9.80	8.61	7.00
11,722.00	46.18	174.84	11,618.97	-433.25	842.27	505.15	10.24	8.84	7.34

Company: XTO Energy

Project: Eddy County, NM (NAD27) NMEZ Grid PLU 15 TWIN WELLS RANCH Site: Well: PLU 15 TWIN WELLS RANCH 108H

Wellbore: 15-108H Lateral 15-108H Lateral AsDrilled Design:

Loc

TVD MD North

Survey Calculation Method: Minimum Curvature PREDATOR_EDM Database:

cal Co-ordinate Reference:	Well PLU 15 TWIN WELLS RANCH 108H
D Reference:	3567+32 @ 3599.00usft (Pat793ad)
Reference:	3567+32 @ 3599.00usft (Pat793ad)
rth Reference:	Grid

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)
	11,753.00	48.90	176.04	11,639.90	-456.04	844.08	528.01	9.23	8.77	3.87
	11,784.00	51.74	177.18	11,659.69	-479.86	845.49	551.86	9.59	9.16	3.68
	11,815.00	54.60	178.04	11,678.27	-504.65	846.52	576.64	9.49	9.23	2.77
	11,847.00	59.30	178.21	11,695.72	-531.45	847.39	603.42	14.69	14.69	0.53
	11,893.00	66.79	179.80	11,716.55	-572.41	848.09	644.29	16.57	16.28	3.46
	11,924.00	69.86	180.05	11,728.00	-601.22	848.12	672.99	9.93	9.90	0.81
	11,955.00	72.99	180.35	11,737.88	-630.60	848.02	702.25	10.14	10.10	0.97
	11,979.00	74.68	180.95	11,744.56	-653.65	847.76	725.19	7.43	7.03	2.51
	PLU 15 TWR	108H FTP_330	FNL_330FEL							
	11,981.00	74.82	181.00	11,745.08	-655.58	847.72	727.10	7.43	7.03	2.48
	Wellpath Cro	sses FTP								
	11,987.00	75.24	181.15	11,746.63	-661.37	847.62	732.87	7.43	7.03	2.48
	12,018.00	76.89	181.61	11,754.10	-691.45	846.89	762.77	5.51	5.32	1.48
	12,050.00	80.91	181.65	11,760.26	-722.83	846.00	793.95	12.56	12.56	0.12
	12,082.00	85.03	182.88	11,764.17	-754.56	844.74	825.45	13.43	12.87	3.84
	12,113.00	86.80	183.00	11,766.38	-785.44	843.15	856.07	5.72	5.71	0.39
	12,143.90	88.47	182.01	11,767.66	-816.28	841.81	886.67	6.28	5.40	-3.19
	PLU 15 TWR	108H LP p1 (~1	163'PastFTP)							
	12,207.00	91.88	180.00	11,767.47	-879.36	840.70	949.42	6.28	5.40	-3.19
	12,302.00	89.94	177.87	11,765.96	-974.32	842.46	1,044.17	3.03	-2.04	-2.24
	12,396.00	88.99	176.48	11,766.83	-1,068.20	847.09	1,138.09	1.79	-1.01	-1.48
	12,490.00	89.08	179.68	11,768.42	-1,162.12	850.24	1,231.93	3.41	0.10	3.40
	12,585.00	90.17	179.20	11,769.04	-1,257.11	851.17	1,326.64	1.25	1.15	-0.51
	12,679.00	90.00	177.29	11,768.90	-1,351.06	854.05	1,420.48	2.04	-0.18	-2.03
	12,774.00	90.45	176.83	11,768.53	-1,445.94	858.92	1,515.42	0.68	0.47	-0.48
	12,868.00	90.28	175.83	11,767.93	-1,539.74	864.94	1,609.39	1.08	-0.18	-1.06
	12,962.00	89.83	175.46	11,767.84	-1,633.47	872.08	1,703.39	0.62	-0.48	-0.39
	13,057.00	88.51	178.35	11,769.21	-1,728.31	877.21	1,798.31	3.34	-1.39	3.04
	13,150.00	88.57	178.45	11,771.58	-1,821.24	879.80	1,891.12	0.13	0.06	0.11
	13,243.00	88.49	177.64	11,773.97	-1,914.15	882.97	1,983.95	0.87	-0.09	-0.87
	13,338.00	88.74	177.38	11,776.27	-2,009.04	887.10	2,078.83	0.38	0.26	-0.27
	13,432.00	88.99	176.35	11,778.13	-2,102.88	892.24	2,172.76	1.13	0.27	-1.10
	13,526.00	87.84	178.89	11,780.73	-2,196.75	896.14	2,266.62	2.97	-1.22	2.70
	13,620.00	89.13	181.78	11,783.21	-2,290.70	895.59	2,360.16	3.37	1.37	3.07
	13,714.00	90.98	182.79	11,783.12	-2,384.62	891.84	2,453.40	2.24	1.97	1.07
	13,808.00	92.21	181.78	11,780.51	-2,478.51	888.10	2,546.60	1.69	1.31	-1.07
	13,902.00	90.76	180.17	11,778.07	-2,572.46	886.50	2,640.05	2.30	-1.54	-1.71
	13,997.00	90.39	179.48	11,777.12	-2,667.45	886.79	2,734.71	0.82	-0.39	-0.73
	14,091.00	90.25	179.81	11,776.59	-2,761.45	887.37	2,828.39	0.38	-0.15	0.35
	14,186.00	90.22	179.66	11,776.20	-2,856.45	887.81	2,923.07	0.16	-0.03	-0.16
	14,280.00	89.78	180.19	11,776.20	-2,950.45	887.93	3,016.72	0.73	-0.47	0.56
	14,374.00	88.88	180.34	11,777.30	-3,044.44	887.50	3,110.31	0.97	-0.96	0.16
	14,468.00	91.01	180.52	11,777.39	-3,138.43	886.79	3,203.88	2.27	2.27	0.19
	14,562.00	89.94	179.93	11,776.61	-3,232.43	886.42	3,297.49	1.30	-1.14	-0.63

Company: XTO Energy

Project: Eddy County, NM (NAD27) NMEZ Grid
Site: PLU 15 TWIN WELLS RANCH
Well: PLU 15 TWIN WELLS RANCH 108H

Wellbore: 15-108H Lateral

Design: 15-108H Lateral AsDrilled

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Well PLU 15 TWIN WELLS RANCH 108H 3567+32 @ 3599.00usft (Pat793ad) 3567+32 @ 3599.00usft (Pat793ad)

Grid

Survey Calculation Method: Minimum Curvature

Database: PREDATOR_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)
14,657.00	87.95	179.30	11,778.36	-3,327.40	887.06	3,392.16	2.20	-2.09	-0.66
14,751.00	89.47	179.40	11,780.48	-3,421.37	888.13	3,485.86	1.62	1.62	0.11
14,846.00	90.76	180.40	11,780.29	-3,516.37	888.29	3,580.51	1.72	1.36	1.05
14,940.00	91.12	180.23	11,778.75	-3,610.35	887.78	3,674.09	0.42	0.38	-0.18
15,034.00	91.12	179.95	11,776.91	-3,704.33	887.63	3,767.70	0.30	0.00	-0.30
15,128.00	90.87	179.01	11,775.28	-3,798.31	888.48	3,861.39	1.03	-0.27	-1.00
15,222.00	90.11	178.37	11,774.47	-3,892.28	890.63	3,955.19	1.06	-0.81	-0.68
15,316.00	89.86	178.18	11,774.50	-3,986.24	893.46	4,049.04	0.33	-0.27	-0.20
15,410.00	89.50	177.30	11,775.02	-4,080.17	897.17	4,142.93	1.01	-0.38	-0.94
15,505.00	88.80	177.96	11,776.43	-4,175.07	901.10	4,237.81	1.01	-0.74	0.69
15,598.00	89.05	178.85	11,778.18	-4,268.02	903.68	4,330.63	0.99	0.27	0.96
15,693.00	88.09	178.79	11,780.55	-4,362.97	905.64	4,425.39	1.01	-1.01	-0.06
15,787.00	89.64	181.50	11,782.41	-4,456.94	905.40	4,518.98	3.32	1.65	2.88
15,881.00	88.37	180.33	11,784.04	-4,550.91	903.90	4,612.46	1.84	-1.35	-1.24
15,976.00	91.09	181.90	11,784.49	-4,645.88	902.05	4,706.90	3.31	2.86	1.65
16,071.00	91.43	181.46	11,782.40	-4,740.81	899.27	4,801.23	0.59	0.36	-0.46
16,165.00	92.10	181.16	11,779.50	-4,834.74	897.12	4,894.62	0.78	0.71	-0.32
16,260.00	90.45	181.08	11,777.39	-4,929.70	895.26	4,989.05	1.74	-1.74	-0.08
16,354.00	88.43	180.19	11,778.31	-5,023.68	894.22	5,082.58	2.35	-2.15	-0.95
16,449.00	90.31	181.31	11,779.35	-5,118.66	892.98	5,177.09	2.30	1.98	1.18
16,543.00	90.28	180.33	11,778.87	-5,212.65	891.63	5,270.60	1.04	-0.03	-1.04
16,637.00	88.99	179.56	11,779.47	-5,306.65	891.72	5,364.25	1.60	-1.37	-0.82
16,731.00	89.27	178.93	11,780.90	-5,400.63	892.96	5,457.98	0.73	0.30	-0.67
16,824.00	89.44	178.24	11,781.94	-5,493.59	895.26	5,550.79	0.76	0.18	-0.74
16,919.00	88.66	178.00	11,783.52	-5,588.53	898.37	5,645.63	0.86	-0.82	-0.25
17,013.00	90.11	180.23	11,784.53	-5,682.50	899.83	5,739.37	2.83	1.54	2.37
17,107.00	91.09	179.87	11,783.54	-5,776.50	899.74	5,833.00	1.11	1.04	-0.38
17,201.00	90.59	179.10	11,782.16	-5,870.48	900.59	5,926.70	0.98	-0.53	-0.82
17,295.00	90.87	178.71	11,780.97	-5,964.46	902.38	6,020.47	0.51	0.30	-0.41
17,388.00	89.97	178.04	11,780.29	-6,057.41	905.02	6,113.31	1.21	-0.97	-0.72
17,481.00	89.86	177.08	11,780.42	-6,150.33	908.98	6,206.21	1.04	-0.12	-1.03
17,575.00	88.46	177.66	11,781.80	-6,244.22	913.29	6,300.12	1.61	-1.49	0.62
17,670.00	88.40	177.76	11,784.40	-6,339.11	917.09	6,394.98	0.12	-0.06	0.11
17,689.00	88.43	177.89	11,784.93	-6,358.08	917.81	6,413.95	0.70	0.16	0.68
17,783.00	89.16	179.05	11,786.91	-6,452.03	920.32	6,507.75	1.46	0.78	1.23
17,877.00	89.22	178.59	11,788.24	-6,546.00	922.25	6,601.53	0.49	0.06	-0.49
17,971.00	88.12	179.15	11,790.42	-6,639.95	924.11	6,695.29	1.31	-1.17	0.60
18,065.00	88.38	179.75	11,793.29	-6,733.90	925.01	6,788.96	0.70	0.28	0.64
18,159.00	92.21	182.49	11,792.80	-6,827.86	923.17	6,882.39	5.01	4.07	2.91
18,253.00	91.99	182.19	11,789.36	-6,921.72	919.34	6,975.56	0.40	-0.23	-0.32
18,346.00	90.64	181.93	11,787.23	-7,014.63	916.00	7,067.82	1.48	-1.45	-0.28
18,441.00	90.67	181.08	11,786.14	-7,109.59	913.50	7,162.20	0.90	0.03	-0.89
18,535.00	93.78	180.87	11,782.49	-7,203.49	911.90	7,255.61	3.32	3.31	-0.22

Company: XTO Energy

Project: Eddy County, NM (NAD27) NMEZ Grid
Site: PLU 15 TWIN WELLS RANCH
Well: PLU 15 TWIN WELLS RANCH 108H

Wellbore: 15-108H Lateral

Design: 15-108H Lateral AsDrilled

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method: Database: Well PLU 15 TWIN WELLS RANCH 108H

3567+32 @ 3599.00usft (Pat793ad) 3567+32 @ 3599.00usft (Pat793ad)

Grid

Minimum Curvature PREDATOR_EDM

rvey										
N	Measured			Vertical			Vertical	Dogleg	Build	Turn
	Depth (usft)	Inclination (°)	Azimuth (°)	Depth (usft)	+N/-S (usft)	+E/-W (usft)	Section (usft)	Rate (°/100ft)	Rate (°/100ft)	Rate (°/100ft)
	18,628.00	92.49	180.41	11,777.40	-7,296.35	910.87	7,348.02	1.47	-1.39	-0.49
	18,721.00	92.55	180.62	11,773.32	-7,389.25	910.03	7,440.50	0.23	0.06	0.23
	18,814.00	91.82	180.28	11,769.77	-7,482.18	909.30	7,533.01	0.87	-0.78	-0.37
	18,908.00	91.12	179.98	11,767.36	-7,576.15	909.09	7,626.60	0.81	-0.74	-0.32
	19,001.00	91.34	180.13	11,765.36	-7,669.13	909.00	7,719.21	0.29	0.24	0.16
	19,095.00	90.87	179.87	11,763.55	-7,763.11	909.00	7,812.83	0.57	-0.50	-0.28
	19,189.00	91.06	179.93	11,761.97	-7,857.10	909.16	7,906.48	0.21	0.20	0.06
	19,282.00	92.21	180.28	11,759.31	-7,950.06	908.99	7,999.07	1.29	1.24	0.38
	19,374.00	90.84	180.63	11,756.86	-8,042.02	908.26	8,090.61	1.54	-1.49	0.38
	19,468.00	90.67	180.96	11,755.63	-8,136.00	906.96	8,184.12	0.39	-0.18	0.35
	19,562.00	89.38	180.67	11,755.58	-8,229.99	905.62	8,277.64	1.41	-1.37	-0.31
	19,655.00	87.98	180.47	11,757.73	-8,322.96	904.70	8,370.17	1.52	-1.51	-0.22
	19,750.00	86.81	179.96	11,762.04	-8,417.86	904.34	8,464.67	1.34	-1.23	-0.54
	19,843.00	87.70	178.69	11,766.50	-8,510.74	905.43	8,557.30	1.67	0.96	-1.37
	19,936.00	89.19	177.35	11,769.02	-8,603.65	908.65	8,650.13	2.15	1.60	-1.44
	19,954.00	89.44	177.16	11,769.24	-8,621.63	909.51	8,668.11	1.74	1.39	-1.06
	20,048.00	89.78	176.65	11,769.88	-8,715.49	914.58	8,762.06	0.65	0.36	-0.54
	20,140.00	89.24	175.98	11,770.66	-8,807.29	920.50	8,854.03	0.94	-0.59	-0.73
	20,217.00	90.22	177.25	11,771.03	-8,884.15	925.04	8,931.00	2.08	1.27	1.65
	20,311.00	89.75	177.13	11,771.05	-8,978.04	929.65	9,024.93	0.52	-0.50	-0.13
	20,405.00	90.42	179.60	11,770.91	-9,071.99	932.33	9,118.76	2.72	0.71	2.63
	20,498.00	90.70	180.45	11,770.00	-9,164.99	932.29	9,211.39	0.96	0.30	0.91
	20,592.00	90.50	179.39	11,769.02	-9,258.98	932.42	9,305.04	1.15	-0.21	-1.13
	20,685.00	90.22	179.23	11,768.43	-9,351.97	933.54	9,397.77	0.35	-0.30	-0.17
	20,779.00	90.64	180.88	11,767.73	-9,445.97	933.45	9,491.40	1.81	0.45	1.76
	20,872.00	89.66	180.43	11,767.49	-9,538.96	932.39	9,583.94	1.16	-1.05	-0.48
	20,966.00	90.53	181.98	11,767.33	-9,632.94	930.41	9,677.39	1.89	0.93	1.65
	21,059.00	90.98	182.04	11,766.10	-9,725.87	927.15	9,769.68	0.49	0.48	0.06
	21,152.00	90.90	181.87	11,764.58	-9,818.80	923.98	9,861.98	0.20	-0.09	-0.18
	21,246.00	90.62	181.84	11,763.33	-9,912.75	920.94	9,955.30	0.30	-0.30	-0.03
	21,340.00	90.22	180.81	11,762.64	-10,006.72	918.76	10,048.72	1.18	-0.43	-1.10
	21,434.00	90.03	179.81	11,762.44	-10,100.71	918.25	10,142.31	1.08	-0.20	-1.06
	21,528.00	90.14	179.28	11,762.30	-10,194.71	919.00	10,236.02	0.58	0.12	-0.56
	21,622.00	90.22	178.55	11,762.00	-10,288.69	920.78	10,329.80	0.78	0.09	-0.78
	21,716.00	90.34	178.67	11,761.54	-10,382.66	923.06	10,423.61	0.18	0.13	0.13
	21,811.00	90.00	178.28	11,761.26	-10,477.63	925.59	10,518.43	0.54	-0.36	-0.41
	21,892.00	89.49	177.66	11,761.62	-10,558.58	928.46	10,599.32	0.99	-0.63	-0.77
	Wellpath Cro		4	44	10 555 51	000 15	10 555 55			
	21,892.33	89.49	177.66	11,761.62	-10,558.91	928.47	10,599.65	0.00	0.00	0.00
	PLU 15 TWR 21,905.00	108H LTP_330I 89.41	FSL_330FEL 177.56	11,761.75	-10,571.56	929.00	10,612.31	1.02	-0.64	-0.79
	21,968.00	89.47	177.50	11,762.36	-10,634.50	931.72	10,675.24	0.13	0.10	-0.10
	22,022.00	89.47	177.50	11,762.86	-10,688.45	934.07	10,729.19	0.00	0.00	0.00

Company: XTO Energy

Project: Eddy County, NM (NAD27) NMEZ Grid PLU 15 TWIN WELLS RANCH Site: PLU 15 TWIN WELLS RANCH 108H

Wellbore: 15-108H Lateral 15-108H Lateral AsDrilled Design:

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method: Database:

Well PLU 15 TWIN WELLS RANCH 108H

3567+32 @ 3599.00usft (Pat793ad) 3567+32 @ 3599.00usft (Pat793ad)

Minimum Curvature PREDATOR_EDM

Survey

Well:

Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100ft)	(°/100ft)	(°/100ft)

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
PLU 15 TWR 108H SHI - actual wellpath hits - Point		0.00	0.00	0.00	0.00	440,914.40	677,155.70	32.21089318	-103.76054279
PLU 15 TWR 108H LTP - actual wellpath mis - Point	0.00 ses target cen		11,742.00 usft at 2189	-10,558.80 2.33usft MD (1	935.50 1761.62 TVD,	430,355.60 -10558.91 N, 928.	678,091.20 47 E)	32.18185469	-103.75770095
PLU 15 TWR 108H FTF - actual wellpath mis - Point			11,742.00 Jusft at 1197	-654.70 9.00usft MD (1	874.10 1744.56 TVD,	440,259.70 -653.65 N, 847.76	678,029.80 E)	32.20908067	-103.75772805
PLU 15 TWR 108H PBH - actual wellpath mis - Rectangle (sides W	ses target cen	ter by 4.46u		-10,688.70 .00usft MD (11	936.30 762.86 TVD, -	430,225.70 10688.45 N, 934.0	678,092.00 7 E)	32.18149760	-103.75770061
PLU 15 TWR 108H BHL - actual wellpath hits - Point		0.01	11,762.86	-10,688.45	934.07	430,225.95	678,089.77	32.18149832	-103.75770782

Design Annotations				
Measur		Local	Coordinates	
Depti (usft)	•	+N/-S (usft)	+E/-W (usft)	Comment
11,54	6.00 11,482	2.76 -325.33	818.73	Wellpath Crosses Unit Line @ Heel
11,98	1.00 11,745	5.08 -655.58	847.72	Wellpath Crosses FTP
21,89	2.00 11,761	1.62 -10,558.58	928.46	Wellpath Crosses LTP
22,02	2.00 11,762	2.86 -10,688.45	934.07	TD @ 200'FSL,332FEL

Checked By:	Approved By:	Date: