

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: 9/18/2020 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 30-015-45852		² Pool Code 98220		³ Pool Name PURPLE SAGE; WOLFCAMP		
⁴ Property Code 325339		⁵ Property Name POKER LAKE UNIT 25 BD			⁶ Well Number 122H	
⁷ OGRID No. 373075		⁸ Operator Name XTO PERMIAN OPERATING, LLC.			⁹ Elevation 3,344'	

¹⁰ Surface Location

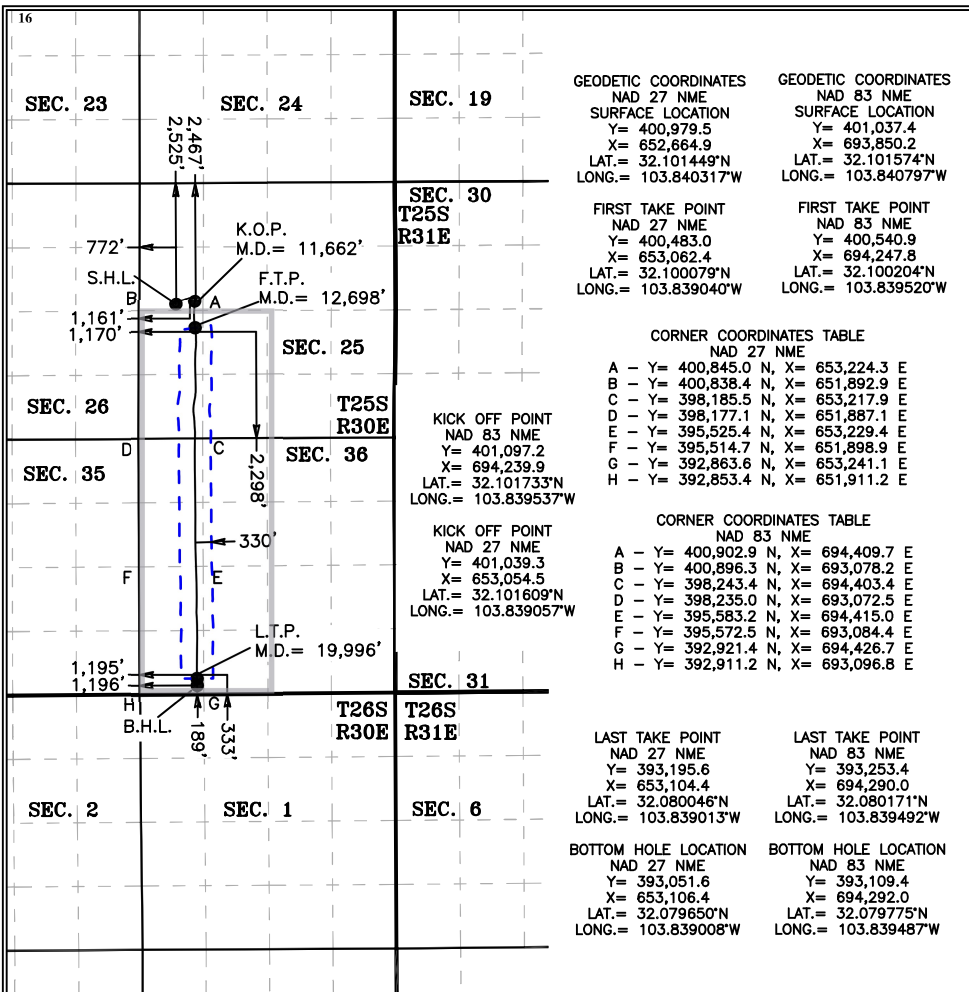
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	25	25 S	30 E		2,525	NORTH	772	WEST	EDDY

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
M	36	25 S	30 E		189	SOUTH	1,196	WEST	EDDY

¹² Dedicated Acres 480	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 6/30/20
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.

6-30-2020
Date of Survey

Signature and Seal of Professional Surveyor:

MARK DILLON HARP

MARK DILLON HARP 23786
Certificate Number

JC 2018010046

Intent As Drilled

API # 30-015-45852		
Operator Name: XTO Permian Operating LLC	Property Name: Poker Lake Unit 25 BD	Well Number 122H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
E	25	25S	30E		2467	FNL	1161	FWL	Eddy
Latitude 32.101733					Longitude 103.839537				NAD 83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
L	25	25S	30E		2298	FSL	1170	FWL	Eddy
Latitude 32.100204					Longitude 103.839520				NAD 83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
M	36	25S	30E		333	FSL	1915	FWL	Eddy
Latitude 32.080171					Longitude 103.839492				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 # 30-015-46242		
Operator Name: XTO Permian Operating LLC	Property Name: Poker Lake Unit 25 BD	Well Number 202H



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 / **POKER LAKE UNIT 25 BD 122H-162H/ 30-015-45852**

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	156' to 12304'	10-21-19 TO 10-25-19	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

Survey Report

Company: XTO ENERGY INC.	Local Co-ordinate Reference: Well PLU 25 BD 122H_RSN 162H - Slot PLU 25 BD 122H_RSN 162H SHL
Project: Eddy County, NM (NMEZ) NAD27 Grid	TVD Reference: 3344+22 @ 3366.00usft (122-162 Akita22)
Site: Poker Lake Unit 25 BD	MD Reference: 3344+22 @ 3366.00usft (122-162 Akita22)
Well: PLU 25 BD 122H_RSN 162H	North Reference: Grid
Wellbore: 122H-162H	Survey Calculation Method: Minimum Curvature
Design: 122H-162H 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 Poker Lake Unit 25 BD					
Site Position:	Northing:	400,979.50 usft	Latitude:	32° 6' 5.217 N	
From: Map	Easting:	652,664.90 usft	Longitude:	103° 50' 25.140 W	
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	0.26 °

Well PLU 25 BD 122H_RSN 162H - Slot PLU 25 BD 122H_RSN 162H SHL					
Well Position	+N/-S	0.00 usft	Northing:	400,979.50 usft	Latitude: 32° 6' 5.217 N
	+E/-W	0.00 usft	Easting:	652,664.90 usft	Longitude: 103° 50' 25.140 W
Position Uncertainty	0.00 usft		Wellhead Elevation:	usft	Ground Level: 3,344.00 usft

Wellbore 122H-162H					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	User Defined	06/23/19	6.80	59.73	47,787.00000000

Design 122H-162H AsDrilled					
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00		177.00

Survey Program		Date	10/30/19		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
156.00	11,426.00	Survey #1 (122H-162H)	MWD	OWSG MWD - Standard	
11,534.00	12,262.00	Survey #2 (122H-162H)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction	
12,304.00	12,304.00	Survey #3 (122H-162H)	Projection	Projection	

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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PLU 25 BD 122H_RSN 162H SHL										
156.00	0.31	47.28	156.00	0.29	0.31	-0.27	0.20	0.20	0.00	0.00
251.00	0.18	264.64	251.00	0.45	0.35	-0.43	0.49	-0.14	-150.15	
346.00	0.40	311.04	346.00	0.65	-0.05	-0.65	0.32	0.23	48.84	
441.00	0.35	262.44	441.00	0.83	-0.59	-0.86	0.33	-0.05	-51.16	
536.00	0.35	202.32	535.99	0.52	-0.98	-0.57	0.37	0.00	-63.28	
631.00	0.44	250.22	630.99	0.13	-1.44	-0.21	0.35	0.09	50.42	

Survey Report

Company:	XTO ENERGY INC.	Local Co-ordinate Reference:	Well PLU 25 BD 122H_RSN 162H - Slot PLU 25 BD 122H_RSN 162H SHL
Project:	Eddy County, NM (NMEZ) NAD27 Grid	TVD Reference:	3344+22 @ 3366.00usft (122-162 Akita22)
Site:	Poker Lake Unit 25 BD	MD Reference:	3344+22 @ 3366.00usft (122-162 Akita22)
Well:	PLU 25 BD 122H_RSN 162H	North Reference:	Grid
Wellbore:	122H-162H	Survey Calculation Method:	Minimum Curvature
Design:	122H-162H AsDrilled	Database:	CRUDE_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)	
726.00	0.57	240.20	725.99	-0.23	-2.19	0.11	0.16	0.14	-10.55	
822.00	1.10	228.60	821.98	-1.07	-3.30	0.90	0.58	0.55	-12.08	
917.00	0.62	235.90	916.97	-1.96	-4.41	1.73	0.52	-0.51	7.68	
1,011.00	0.22	269.82	1,010.96	-2.25	-5.01	1.99	0.48	-0.43	36.09	
1,046.00	0.18	194.24	1,045.96	-2.30	-5.09	2.03	0.71	-0.11	-215.94	
1,227.00	1.54	4.13	1,226.94	-0.15	-4.98	-0.11	0.95	0.75	93.86	
1,322.00	1.71	3.07	1,321.91	2.54	-4.82	-2.78	0.18	0.18	-1.12	
1,416.00	1.76	356.66	1,415.86	5.38	-4.82	-5.62	0.21	0.05	-6.82	
1,512.00	2.11	350.33	1,511.81	8.59	-5.21	-8.85	0.43	0.36	-6.59	
1,607.00	2.51	344.09	1,606.73	12.32	-6.07	-12.62	0.50	0.42	-6.57	
1,701.00	2.37	352.09	1,700.65	16.22	-6.90	-16.56	0.39	-0.15	8.51	
1,795.00	2.90	346.73	1,794.55	20.46	-7.72	-20.84	0.62	0.56	-5.70	
1,889.00	3.16	355.08	1,888.42	25.36	-8.48	-25.76	0.54	0.28	8.88	
1,983.00	2.95	342.68	1,982.28	30.25	-9.43	-30.70	0.74	-0.22	-13.19	
2,077.00	0.84	354.90	2,076.23	33.24	-10.21	-33.73	2.27	-2.24	13.00	
2,171.00	0.35	42.36	2,170.22	34.14	-10.08	-34.62	0.70	-0.52	50.49	
2,265.00	0.66	26.98	2,264.22	34.83	-9.64	-35.29	0.36	0.33	-16.36	
2,358.00	0.97	21.36	2,357.21	36.04	-9.11	-36.47	0.34	0.33	-6.04	
2,452.00	1.10	32.96	2,451.19	37.54	-8.33	-37.93	0.26	0.14	12.34	
2,546.00	1.36	21.18	2,545.17	39.34	-7.43	-39.68	0.38	0.28	-12.53	
2,640.00	1.71	24.08	2,639.14	41.66	-6.46	-41.94	0.38	0.37	3.09	
2,734.00	0.26	28.39	2,733.12	43.13	-5.78	-43.37	1.54	-1.54	4.59	
2,828.00	0.22	331.96	2,827.12	43.48	-5.77	-43.72	0.24	-0.04	-60.03	
2,921.00	0.62	350.86	2,920.12	44.13	-5.93	-44.38	0.45	0.43	20.32	
3,015.00	0.75	322.12	3,014.11	45.12	-6.39	-45.39	0.39	0.14	-30.57	
3,109.00	0.92	334.69	3,108.10	46.29	-7.09	-46.59	0.26	0.18	13.37	
3,203.00	1.05	337.15	3,202.09	47.76	-7.75	-48.10	0.15	0.14	2.62	
3,297.00	1.93	16.26	3,296.06	50.08	-7.64	-50.41	1.38	0.94	41.61	
3,390.00	2.20	35.68	3,389.00	53.03	-6.16	-53.28	0.80	0.29	20.88	
3,484.00	1.93	48.43	3,482.94	55.54	-3.92	-55.67	0.57	-0.29	13.56	
3,578.00	1.71	59.15	3,576.89	57.31	-1.53	-57.32	0.43	-0.23	11.40	
3,672.00	1.93	77.61	3,670.84	58.37	1.22	-58.23	0.66	0.23	19.64	
3,766.00	2.46	162.24	3,764.80	56.79	3.38	-56.54	3.17	0.56	90.03	
3,859.00	3.12	74.44	3,857.72	55.57	6.43	-55.16	4.19	0.71	-94.41	
3,943.00	3.30	73.30	3,941.59	56.88	10.94	-56.23	0.23	0.21	-1.36	
4,055.00	3.25	74.18	4,053.40	58.67	17.09	-57.69	0.06	-0.04	0.79	
4,149.00	4.79	77.43	4,147.17	60.25	23.48	-58.94	1.66	1.64	3.46	
4,243.00	7.25	77.52	4,240.64	62.39	33.10	-60.57	2.62	2.62	0.10	
4,336.00	9.49	81.12	4,332.65	64.84	46.41	-62.32	2.47	2.41	3.87	
4,430.00	10.07	81.03	4,425.28	67.31	62.19	-63.97	0.62	0.62	-0.10	
4,525.00	8.75	77.96	4,519.00	70.12	77.46	-65.97	1.49	-1.39	-3.23	
4,619.00	8.92	75.50	4,611.89	73.43	91.50	-68.54	0.44	0.18	-2.62	
4,714.00	9.14	75.58	4,705.71	77.16	105.94	-71.51	0.23	0.23	0.08	

Survey Report

Company:	XTO ENERGY INC.	Local Co-ordinate Reference:	Well PLU 25 BD 122H_RSN 162H - Slot PLU 25 BD 122H_RSN 162H SHL
Project:	Eddy County, NM (NMEZ) NAD27 Grid	TVD Reference:	3344+22 @ 3366.00usft (122-162 Akita22)
Site:	Poker Lake Unit 25 BD	MD Reference:	3344+22 @ 3366.00usft (122-162 Akita22)
Well:	PLU 25 BD 122H_RSN 162H	North Reference:	Grid
Wellbore:	122H-162H	Survey Calculation Method:	Minimum Curvature
Design:	122H-162H AsDrilled	Database:	CRUDE_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)
4,809.00	9.67	75.14	4,799.43	81.08	120.96	-74.64	0.56	0.56	-0.46
4,904.00	10.02	73.47	4,893.03	85.48	136.60	-78.21	0.48	0.37	-1.76
4,998.00	10.02	72.42	4,985.60	90.28	152.23	-82.18	0.19	0.00	-1.12
5,093.00	9.32	65.48	5,079.25	95.96	167.11	-87.09	1.43	-0.74	-7.31
5,187.00	9.32	71.37	5,172.01	101.56	181.25	-91.93	1.01	0.00	6.27
5,282.00	8.84	73.21	5,265.82	106.12	195.53	-95.74	0.59	-0.51	1.94
5,376.00	9.27	72.60	5,358.65	110.47	209.67	-99.35	0.47	0.46	-0.65
5,471.00	9.54	71.19	5,452.38	115.30	224.42	-103.39	0.37	0.28	-1.48
5,566.00	7.87	74.09	5,546.28	119.62	238.13	-106.99	1.82	-1.76	3.05
5,660.00	8.00	75.67	5,639.38	123.00	250.65	-109.72	0.27	0.14	1.68
5,754.00	7.91	76.02	5,732.47	126.18	263.27	-112.23	0.11	-0.10	0.37
5,848.00	8.26	75.41	5,825.54	129.45	276.08	-114.82	0.38	0.37	-0.65
5,943.00	8.22	76.90	5,919.56	132.71	289.30	-117.38	0.23	-0.04	1.57
6,037.00	6.68	77.96	6,012.76	135.37	301.19	-119.42	1.64	-1.64	1.13
6,131.00	4.53	82.44	6,106.31	137.00	310.22	-120.58	2.33	-2.29	4.77
6,225.00	2.51	77.17	6,200.13	137.94	315.91	-121.22	2.17	-2.15	-5.61
6,319.00	2.46	75.85	6,294.04	138.89	319.87	-121.96	0.08	-0.05	-1.40
6,413.00	2.33	76.46	6,387.96	139.84	323.68	-122.70	0.14	-0.14	0.65
6,507.00	2.24	74.53	6,481.88	140.77	327.31	-123.45	0.13	-0.10	-2.05
6,602.00	2.33	77.96	6,576.81	141.67	330.99	-124.15	0.17	0.09	3.61
6,696.00	2.07	77.43	6,670.74	142.44	334.51	-124.74	0.28	-0.28	-0.56
6,790.00	1.93	81.56	6,764.68	143.04	337.74	-125.17	0.21	-0.15	4.39
6,885.00	1.93	87.63	6,859.62	143.34	340.92	-125.30	0.22	0.00	6.39
6,979.00	2.33	91.84	6,953.56	143.35	344.41	-125.12	0.46	0.43	4.48
7,074.00	2.42	96.24	7,048.48	143.07	348.33	-124.64	0.21	0.09	4.63
7,168.00	2.33	96.77	7,142.40	142.62	352.20	-124.00	0.10	-0.10	0.56
7,263.00	2.33	102.13	7,237.32	141.99	356.01	-123.16	0.23	0.00	5.64
7,358.00	2.59	106.43	7,332.23	140.98	359.96	-121.95	0.34	0.27	4.53
7,452.00	2.42	109.33	7,426.14	139.72	363.87	-120.49	0.23	-0.18	3.09
7,546.00	2.15	115.05	7,520.07	138.32	367.34	-118.90	0.38	-0.29	6.09
7,641.00	2.64	117.95	7,614.98	136.54	370.88	-116.94	0.53	0.52	3.05
7,735.00	2.59	122.69	7,708.89	134.38	374.58	-114.59	0.24	-0.05	5.04
7,829.00	2.59	126.12	7,802.79	131.98	378.09	-112.01	0.16	0.00	3.65
7,924.00	2.24	124.19	7,897.71	129.67	381.36	-109.53	0.38	-0.37	-2.03
8,018.00	2.11	130.25	7,991.64	127.52	384.20	-107.24	0.28	-0.14	6.45
8,112.00	1.49	124.98	8,085.59	125.70	386.52	-105.30	0.68	-0.66	-5.61
8,206.00	0.92	112.41	8,179.57	124.71	388.22	-104.22	0.66	-0.61	-13.37
8,300.00	1.05	108.81	8,273.56	124.14	389.73	-103.58	0.15	0.14	-3.83
8,394.00	1.05	125.33	8,367.54	123.37	391.25	-102.72	0.32	0.00	17.57
8,489.00	1.93	128.14	8,462.51	121.88	393.22	-101.13	0.93	0.93	2.96
8,583.00	1.93	121.02	8,556.45	120.08	395.82	-99.20	0.25	0.00	-7.57
8,678.00	1.76	124.54	8,651.40	118.43	398.39	-97.42	0.21	-0.18	3.71

Survey Report

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Wellbore:	122H-162H	Survey Calculation Method:	Minimum Curvature
Design:	122H-162H AsDrilled	Database:	CRUDE_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)
8,773.00	1.36	145.46	8,746.37	116.68	400.23	-95.57	0.73	-0.42	22.02
8,868.00	1.67	157.23	8,841.34	114.47	401.41	-93.31	0.46	0.33	12.39
8,963.00	1.71	151.70	8,936.30	111.95	402.61	-90.72	0.18	0.04	-5.82
9,058.00	1.76	154.42	9,031.25	109.38	403.92	-88.09	0.10	0.05	2.86
9,153.00	1.27	166.64	9,126.22	107.04	404.79	-85.71	0.62	-0.52	12.86
9,248.00	1.63	166.81	9,221.19	104.70	405.34	-83.35	0.38	0.38	0.18
9,343.00	1.19	159.78	9,316.16	102.46	405.99	-81.07	0.50	-0.46	-7.40
9,439.00	1.32	159.96	9,412.14	100.49	406.71	-79.06	0.14	0.14	0.19
9,534.00	1.63	165.67	9,507.11	98.15	407.42	-76.69	0.36	0.33	6.01
9,629.00	1.80	191.95	9,602.06	95.38	407.45	-73.93	0.84	0.18	27.66
9,723.00	2.51	197.49	9,696.00	91.97	406.52	-70.57	0.79	0.76	5.89
9,818.00	2.73	200.92	9,790.90	87.88	405.09	-66.56	0.28	0.23	3.61
9,913.00	2.68	200.56	9,885.79	83.68	403.50	-62.45	0.06	-0.05	-0.38
10,008.00	3.03	194.94	9,980.67	79.18	402.08	-58.03	0.47	0.37	-5.92
10,103.00	2.11	205.13	10,075.58	75.17	400.69	-54.10	1.08	-0.97	10.73
10,198.00	0.84	213.22	10,170.54	73.00	399.56	-51.99	1.35	-1.34	8.52
10,293.00	1.45	190.02	10,265.53	71.24	398.97	-50.26	0.79	0.64	-24.42
10,388.00	1.49	167.69	10,360.50	68.85	399.03	-47.87	0.60	0.04	-23.51
10,483.00	1.63	171.56	10,455.46	66.30	399.49	-45.31	0.18	0.15	4.07
10,578.00	0.62	72.51	10,550.45	65.12	400.18	-44.09	1.93	-1.06	-104.26
10,673.00	0.57	41.75	10,645.44	65.63	400.98	-44.55	0.34	-0.05	-32.38
10,766.00	0.31	18.37	10,738.44	66.21	401.37	-45.12	0.33	-0.28	-25.14
10,860.00	0.57	303.48	10,832.44	66.71	401.06	-45.63	0.61	0.28	-79.67
10,954.00	0.97	270.61	10,926.43	66.98	399.87	-45.96	0.62	0.43	-34.97
11,048.00	1.05	259.54	11,020.41	66.83	398.23	-45.90	0.22	0.09	-11.78
11,142.00	0.79	248.73	11,114.40	66.44	396.78	-45.58	0.33	-0.28	-11.50
11,237.00	0.84	238.01	11,209.39	65.83	395.58	-45.04	0.17	0.05	-11.28
11,332.00	1.10	235.98	11,304.38	64.95	394.23	-44.23	0.28	0.27	-2.14
11,426.00	1.05	226.76	11,398.36	63.86	392.86	-43.21	0.19	-0.05	-9.81
11,534.00	1.27	223.86	11,506.34	62.32	391.31	-41.75	0.21	0.20	-2.69
11,627.00	1.09	219.72	11,599.32	60.89	390.03	-40.40	0.21	-0.19	-4.45
11,722.00	2.95	189.16	11,694.26	57.79	389.06	-37.34	2.20	1.96	-32.17
11,816.00	6.57	180.35	11,787.92	50.02	388.64	-29.61	3.92	3.85	-9.37
11,856.00	9.83	182.72	11,827.51	44.32	388.47	-23.93	8.19	8.15	5.92
11,886.00	10.68	187.54	11,857.03	39.00	387.98	-18.64	4.02	2.83	16.07
11,980.00	13.02	189.16	11,949.02	19.91	385.15	0.27	2.51	2.49	1.72
12,025.00	14.21	185.69	11,992.75	9.41	383.80	10.69	3.21	2.64	-7.71
12,073.00	14.85	184.10	12,039.22	-2.59	382.77	22.62	1.57	1.33	-3.31
12,105.00	17.73	177.28	12,069.93	-11.55	382.71	31.56	10.79	9.00	-21.31
12,136.00	22.76	177.57	12,099.01	-22.26	383.19	42.28	16.23	16.23	0.94
12,168.00	28.16	180.59	12,127.89	-36.01	383.37	56.02	17.35	16.87	9.44
12,213.00	35.89	182.26	12,166.01	-59.84	382.74	79.79	17.29	17.18	3.71
12,262.00	45.04	183.61	12,203.25	-91.56	381.08	111.38	18.76	18.67	2.76

Survey Report

Company: XTO ENERGY INC.	Local Co-ordinate Reference: Well PLU 25 BD 122H_RSN 162H - Slot PLU 25 BD 122H_RSN 162H SHL
Project: Eddy County, NM (NMEZ) NAD27 Grid	TVD Reference: 3344+22 @ 3366.00usft (122-162 Akita22)
Site: Poker Lake Unit 25 BD	MD Reference: 3344+22 @ 3366.00usft (122-162 Akita22)
Well: PLU 25 BD 122H_RSN 162H	North Reference: Grid
Wellbore: 122H-162H	Survey Calculation Method: Minimum Curvature
Design: 122H-162H AsDrilled	Database: CRUDE_EDM

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)
12,304.00	52.70	181.00	12,230.86	-123.14	379.85	142.86	18.83	18.24	-6.21
PLU 25 BD 122H_RSN 162H PBHLp4_200FSL_160FEL - PLU 25 BD 122H_RSN 162H LTP p4_330FSL_160FEL - PLU 25 BD 122H_RSN 162I									

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PLU 25 BD 122H_RSN - hit/miss target - Shape - Point	0.00	0.00	0.00	0.00	0.00	400,979.50	652,664.90	32° 6' 5.217 N	103° 50' 25.140 W
PLU 25 BD 122H_RSN - actual wellpath hits target center - Point	0.00	0.00	12,230.86	-123.14	379.85	400,856.36	653,044.75	32° 6' 3.981 N	103° 50' 20.730 W
PLU 25 BD 122H_RSN - actual wellpath misses target center by 7794.49usft at 12304.00usft MD (12230.86 TVD, -123.14 N, 379.85 E) - Rectangle (sides W100.00 H7,433.00 D0.00) - Point	0.00	0.00	12,315.09	-7,917.10	415.30	393,062.40	653,080.20	32° 4' 46.849 N	103° 50' 20.733 W
PLU 25 BD 122H_RSN - actual wellpath misses target center by 7664.50usft at 12304.00usft MD (12230.86 TVD, -123.14 N, 379.85 E) - Point	0.00	0.00	12,315.32	-7,787.10	414.70	393,192.40	653,079.60	32° 4' 48.135 N	103° 50' 20.733 W
PLU 25 BD 122H_RSN - actual wellpath misses target center by 374.97usft at 12304.00usft MD (12230.86 TVD, -123.14 N, 379.85 E) - Point	0.00	0.00	12,328.00	-484.90	397.10	400,494.60	653,062.00	32° 6' 0.400 N	103° 50' 20.549 W

Checked By: _____ Approved By: _____ Date: _____



END OF WELL REPORT

XTO

Poker Lake Unit 25 Brushy Draw 162H

Eddy, County New Mexico

API: 30-015-45852

Akita 22

PB-191212



Submitted By: Julio Piña
Directional Well Planner
jpina@crescentdirectional.com



XTO Energy

Eddy County, NM (NAD27 NME)

Poker Lake Unit 25 Brushy Draw

Poker Lake Unit 25 Brushy Draw 162H - 122H

API: 30-015-45852

ST02 / PB-191212

Design: As-Drilled Surveys

Standard Survey Report

21 November, 2019



Windows User
Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Poker Lake Unit 25 Brushy Draw 162H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3366.00usft (Akita 22)
Site:	Poker Lake Unit 25 Brushy Draw	MD Reference:	KB @ 3366.00usft (Akita 22)
Well:	Poker Lake Unit 25 Brushy Draw 162H	North Reference:	Grid
Wellbore:	ST02 / PB-191212	Survey Calculation Method:	Minimum Curvature
Design:	As-Drilled Surveys	Database:	EDM 5000.14 Single User Db

Project	Eddy County, NM (NAD27 NME)		
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	Poker Lake Unit 25 Brushy Draw				
Site Position:		Northing:	400,979.50 usft	Latitude:	32° 6' 5.217 N
From:	Map	Easting:	652,664.90 usft	Longitude:	103° 50' 25.140 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.26 °

Well	Poker Lake Unit 25 Brushy Draw 162H					
Well Position	+N/-S	0.00 usft	Northing:	400,979.50 usft	Latitude:	32° 6' 5.217 N
	+E/-W	0.00 usft	Easting:	652,664.90 usft	Longitude:	103° 50' 25.140 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,344.00 usft

Wellbore	ST02 / PB-191212				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	11/08/19	6.70	59.70	47,768.40000000

Design	As-Drilled Surveys				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	176.81	

Survey Program	Date	11/21/19			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
156.00	12,025.00	Curde Surveys (OH / PB-191212)	MWD	MWD - Standard	
12,073.00	13,012.00	Crescent MWD Survey (OH / PB-191212)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction	
13,107.00	14,840.00	Crescent MWD Survey (ST01 / PB-191212)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction	
14,887.00	20,140.00	Crescent MWD Survey (ST02 / PB-191212)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
156.00	0.31	47.28	156.00	0.29	0.31	-0.27	0.20	0.20	0.00	0.00
251.00	0.18	264.64	251.00	0.45	0.35	-0.43	0.49	-0.14	-150.15	
346.00	0.40	311.04	346.00	0.65	-0.05	-0.65	0.32	0.23	48.84	
441.00	0.35	262.44	441.00	0.83	-0.59	-0.86	0.33	-0.05	-51.16	
536.00	0.35	202.32	535.99	0.52	-0.98	-0.58	0.37	0.00	-63.28	
631.00	0.44	250.22	630.99	0.13	-1.44	-0.21	0.35	0.09	50.42	
726.00	0.57	240.20	725.99	-0.23	-2.19	0.10	0.16	0.14	-10.55	



Windows User Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Poker Lake Unit 25 Brushy Draw 162H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3366.00usft (Akita 22)
Site:	Poker Lake Unit 25 Brushy Draw	MD Reference:	KB @ 3366.00usft (Akita 22)
Well:	Poker Lake Unit 25 Brushy Draw 162H	North Reference:	Grid
Wellbore:	ST02 / PB-191212	Survey Calculation Method:	Minimum Curvature
Design:	As-Drilled Surveys	Database:	EDM 5000.14 Single User Db

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)	
822.00	1.10	228.60	821.98	-1.07	-3.30	0.89	0.58	0.55	-12.08	
917.00	0.62	235.90	916.97	-1.96	-4.41	1.72	0.52	-0.51	7.68	
1,008.04	0.23	267.10	1,008.00	-2.25	-5.00	1.97	0.48	-0.43	34.27	
Rustler										
1,011.00	0.22	269.82	1,010.96	-2.25	-5.01	1.97	0.48	-0.32	91.90	
1,046.00	0.18	194.24	1,045.96	-2.30	-5.09	2.02	0.71	-0.11	-215.94	
1,158.04	0.89	3.35	1,158.00	-1.61	-5.08	1.32	0.95	0.63	150.94	
Top of Salt										
1,227.00	1.54	4.13	1,226.94	-0.15	-4.98	-0.12	0.95	0.95	1.13	
1,322.00	1.71	3.07	1,321.91	2.54	-4.82	-2.80	0.18	0.18	-1.12	
1,416.00	1.76	356.66	1,415.86	5.38	-4.82	-5.64	0.21	0.05	-6.82	
1,512.00	2.11	350.33	1,511.81	8.59	-5.21	-8.87	0.43	0.36	-6.59	
1,607.00	2.51	344.09	1,606.73	12.32	-6.07	-12.63	0.50	0.42	-6.57	
1,701.00	2.37	352.09	1,700.65	16.22	-6.90	-16.58	0.39	-0.15	8.51	
1,795.00	2.90	346.73	1,794.55	20.46	-7.72	-20.86	0.62	0.56	-5.70	
1,889.00	3.16	355.08	1,888.42	25.36	-8.48	-25.79	0.54	0.28	8.88	
1,983.00	2.95	342.68	1,982.28	30.25	-9.43	-30.72	0.74	-0.22	-13.19	
2,077.00	0.84	354.90	2,076.23	33.24	-10.21	-33.76	2.27	-2.24	13.00	
2,171.00	0.35	42.36	2,170.22	34.14	-10.08	-34.65	0.70	-0.52	50.49	
2,265.00	0.66	26.98	2,264.22	34.83	-9.64	-35.32	0.36	0.33	-16.36	
2,358.00	0.97	21.36	2,357.21	36.04	-9.11	-36.50	0.34	0.33	-6.04	
2,452.00	1.10	32.96	2,451.19	37.54	-8.33	-37.95	0.26	0.14	12.34	
2,546.00	1.36	21.18	2,545.17	39.34	-7.43	-39.69	0.38	0.28	-12.53	
2,640.00	1.71	24.08	2,639.14	41.66	-6.46	-41.96	0.38	0.37	3.09	
2,734.00	0.26	28.39	2,733.12	43.13	-5.78	-43.38	1.54	-1.54	4.59	
2,828.00	0.22	331.96	2,827.12	43.48	-5.77	-43.73	0.24	-0.04	-60.03	
2,921.00	0.62	350.86	2,920.12	44.13	-5.93	-44.39	0.45	0.43	20.32	
3,015.00	0.75	322.12	3,014.11	45.12	-6.39	-45.40	0.39	0.14	-30.57	
3,109.00	0.92	334.69	3,108.10	46.29	-7.09	-46.61	0.26	0.18	13.37	
3,203.00	1.05	337.15	3,202.09	47.76	-7.75	-48.12	0.15	0.14	2.62	
3,297.00	1.93	16.26	3,296.06	50.08	-7.64	-50.42	1.38	0.94	41.61	
3,390.00	2.20	35.68	3,389.00	53.03	-6.16	-53.29	0.80	0.29	20.88	
3,484.00	1.93	48.43	3,482.94	55.54	-3.92	-55.68	0.57	-0.29	13.56	
3,578.00	1.71	59.15	3,576.89	57.31	-1.53	-57.31	0.43	-0.23	11.40	
3,672.00	1.93	77.61	3,670.84	58.37	1.22	-58.21	0.66	0.23	19.64	
3,766.00	2.46	162.24	3,764.80	56.79	3.38	-56.52	3.17	0.56	90.03	
3,859.00	3.12	74.44	3,857.72	55.57	6.43	-55.13	4.19	0.71	-94.41	
3,917.37	3.24	73.63	3,916.00	56.46	9.54	-55.84	0.23	0.21	-1.38	
Base of Salt Castille										
3,943.00	3.30	73.30	3,941.59	56.88	10.94	-56.18	0.23	0.21	-1.30	
4,009.52	3.27	73.82	4,008.00	57.96	14.60	-57.05	0.06	-0.04	0.78	
Delaware										
4,055.00	3.25	74.18	4,053.40	58.67	17.09	-57.63	0.06	-0.04	0.79	
4,149.00	4.79	77.43	4,147.17	60.25	23.48	-58.85	1.66	1.64	3.46	



Windows User Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Poker Lake Unit 25 Brushy Draw 162H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3366.00usft (Akita 22)
Site:	Poker Lake Unit 25 Brushy Draw	MD Reference:	KB @ 3366.00usft (Akita 22)
Well:	Poker Lake Unit 25 Brushy Draw 162H	North Reference:	Grid
Wellbore:	ST02 / PB-191212	Survey Calculation Method:	Minimum Curvature
Design:	As-Drilled Surveys	Database:	EDM 5000.14 Single User Db

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)	
4,243.00	7.25	77.52	4,240.64	62.39	33.10	-60.45	2.62	2.62	0.10	
4,336.00	9.49	81.12	4,332.65	64.84	46.41	-62.16	2.47	2.41	3.87	
4,430.00	10.07	81.03	4,425.28	67.31	62.19	-63.75	0.62	0.62	-0.10	
4,525.00	8.75	77.96	4,519.00	70.12	77.46	-65.70	1.49	-1.39	-3.23	
4,619.00	8.92	75.50	4,611.89	73.43	91.50	-68.23	0.44	0.18	-2.62	
4,714.00	9.14	75.58	4,705.71	77.16	105.94	-71.15	0.23	0.23	0.08	
4,809.00	9.67	75.14	4,799.43	81.08	120.96	-74.23	0.56	0.56	-0.46	
4,904.00	10.02	73.47	4,893.03	85.48	136.60	-77.75	0.48	0.37	-1.76	
4,978.10	10.02	72.64	4,966.00	89.24	148.93	-80.82	0.19	0.00	-1.12	
Cherry Canyon										
4,998.00	10.02	72.42	4,985.60	90.28	152.23	-81.67	0.19	0.00	-1.12	
5,093.00	9.32	65.48	5,079.25	95.96	167.11	-86.53	1.43	-0.74	-7.31	
5,187.00	9.32	71.37	5,172.01	101.56	181.25	-91.32	1.01	0.00	6.27	
5,282.00	8.84	73.21	5,265.82	106.12	195.53	-95.09	0.59	-0.51	1.94	
5,376.00	9.27	72.60	5,358.65	110.47	209.67	-98.64	0.47	0.46	-0.65	
5,471.00	9.54	71.19	5,452.38	115.30	224.42	-102.64	0.37	0.28	-1.48	
5,566.00	7.87	74.09	5,546.28	119.62	238.13	-106.20	1.82	-1.76	3.05	
5,660.00	8.00	75.67	5,639.38	123.00	250.65	-108.88	0.27	0.14	1.68	
5,754.00	7.91	76.02	5,732.47	126.18	263.27	-111.35	0.11	-0.10	0.37	
5,848.00	8.26	75.41	5,825.54	129.45	276.08	-113.90	0.38	0.37	-0.65	
5,943.00	8.22	76.90	5,919.56	132.71	289.30	-116.42	0.23	-0.04	1.57	
6,037.00	6.68	77.96	6,012.76	135.37	301.19	-118.41	1.64	-1.64	1.13	
6,131.00	4.53	82.44	6,106.31	137.00	310.22	-119.54	2.33	-2.29	4.77	
6,225.00	2.51	77.17	6,200.13	137.94	315.91	-120.17	2.17	-2.15	-5.61	
6,319.00	2.46	75.85	6,294.04	138.89	319.87	-120.90	0.08	-0.05	-1.40	
6,413.00	2.33	76.46	6,387.96	139.84	323.68	-121.62	0.14	-0.14	0.65	
6,507.00	2.24	74.53	6,481.88	140.77	327.31	-122.36	0.13	-0.10	-2.05	
6,589.18	2.32	77.51	6,564.00	141.56	330.48	-122.97	0.17	0.09	3.63	
Brushy Canyon										
6,602.00	2.33	77.96	6,576.81	141.67	330.99	-123.05	0.17	0.10	3.49	
6,696.00	2.07	77.43	6,670.74	142.44	334.51	-123.62	0.28	-0.28	-0.56	
6,790.00	1.93	81.56	6,764.68	143.04	337.74	-124.04	0.21	-0.15	4.39	
6,885.00	1.93	87.63	6,859.62	143.34	340.92	-124.17	0.22	0.00	6.39	
6,979.00	2.33	91.84	6,953.56	143.35	344.41	-123.98	0.46	0.43	4.48	
7,074.00	2.42	96.24	7,048.48	143.07	348.33	-123.48	0.21	0.09	4.63	
7,168.00	2.33	96.77	7,142.40	142.62	352.20	-122.82	0.10	-0.10	0.56	
7,263.00	2.33	102.13	7,237.32	141.99	356.01	-121.98	0.23	0.00	5.64	
7,358.00	2.59	106.43	7,332.23	140.98	359.96	-120.75	0.34	0.27	4.53	
7,452.00	2.42	109.33	7,426.14	139.72	363.87	-119.27	0.23	-0.18	3.09	
7,546.00	2.15	115.05	7,520.07	138.32	367.34	-117.68	0.38	-0.29	6.09	
7,641.00	2.64	117.95	7,614.98	136.54	370.88	-115.71	0.53	0.52	3.05	
7,735.00	2.59	122.69	7,708.89	134.38	374.58	-113.34	0.24	-0.05	5.04	
7,829.00	2.59	126.12	7,802.79	131.98	378.09	-110.75	0.16	0.00	3.65	
7,924.00	2.24	124.19	7,897.71	129.67	381.36	-108.26	0.38	-0.37	-2.03	



Windows User
Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Poker Lake Unit 25 Brushy Draw 162H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3366.00usft (Akita 22)
Site:	Poker Lake Unit 25 Brushy Draw	MD Reference:	KB @ 3366.00usft (Akita 22)
Well:	Poker Lake Unit 25 Brushy Draw 162H	North Reference:	Grid
Wellbore:	ST02 / PB-191212	Survey Calculation Method:	Minimum Curvature
Design:	As-Drilled Surveys	Database:	EDM 5000.14 Single User Db

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)	
7,953.32	2.20	126.00	7,927.00	129.02	382.28	-107.56	0.28	-0.15	6.18	
Bone Spring										
8,018.00	2.11	130.25	7,991.64	127.52	384.20	-105.96	0.28	-0.13	6.57	
8,112.00	1.49	124.98	8,085.59	125.70	386.52	-104.01	0.68	-0.66	-5.61	
8,206.00	0.92	112.41	8,179.57	124.71	388.22	-102.93	0.66	-0.61	-13.37	
8,300.00	1.05	108.81	8,273.56	124.14	389.73	-102.28	0.15	0.14	-3.83	
8,394.00	1.05	125.33	8,367.54	123.37	391.25	-101.43	0.32	0.00	17.57	
8,489.00	1.93	128.14	8,462.51	121.88	393.22	-99.83	0.93	0.93	2.96	
8,583.00	1.93	121.02	8,556.45	120.08	395.82	-97.89	0.25	0.00	-7.57	
8,678.00	1.76	124.54	8,651.40	118.43	398.39	-96.10	0.21	-0.18	3.71	
8,773.00	1.36	145.46	8,746.37	116.68	400.23	-94.24	0.73	-0.42	22.02	
8,868.00	1.67	157.23	8,841.34	114.47	401.41	-91.98	0.46	0.33	12.39	
8,869.66	1.67	157.23	8,843.00	114.43	401.43	-91.93	0.00	0.00	0.00	
1st Bone Spring Sand										
8,963.00	1.71	151.70	8,936.30	111.95	402.61	-89.39	0.18	0.04	-5.92	
9,058.00	1.76	154.42	9,031.25	109.38	403.92	-86.76	0.10	0.05	2.86	
9,153.00	1.27	166.64	9,126.22	107.04	404.79	-84.37	0.62	-0.52	12.86	
9,235.81	1.58	166.79	9,209.00	105.04	405.26	-82.34	0.38	0.38	0.18	
2nd Bone Spring Carb										
9,248.00	1.63	166.81	9,221.19	104.70	405.34	-82.01	0.38	0.38	0.14	
9,343.00	1.19	159.78	9,316.16	102.46	405.99	-79.73	0.50	-0.46	-7.40	
9,439.00	1.32	159.96	9,412.14	100.49	406.71	-77.72	0.14	0.14	0.19	
9,534.00	1.63	165.67	9,507.11	98.15	407.42	-75.35	0.36	0.33	6.01	
9,629.00	1.80	191.95	9,602.06	95.38	407.45	-72.58	0.84	0.18	27.66	
9,684.97	2.22	195.68	9,658.00	93.48	406.97	-70.71	0.79	0.75	6.66	
2nd Bone Spring Sand										
9,723.00	2.51	197.49	9,696.00	91.97	406.52	-69.23	0.79	0.76	4.77	
9,818.00	2.73	200.92	9,790.90	87.88	405.09	-65.22	0.28	0.23	3.61	
9,913.00	2.68	200.56	9,885.79	83.68	403.50	-61.12	0.06	-0.05	-0.38	
10,008.00	3.03	194.94	9,980.67	79.18	402.08	-56.70	0.47	0.37	-5.92	
10,030.36	2.81	196.73	10,003.00	78.08	401.77	-55.63	1.08	-1.00	8.02	
3rd Bone Spring Carb										
10,103.00	2.11	205.13	10,075.58	75.17	400.69	-52.78	1.08	-0.96	11.56	
10,198.00	0.84	213.22	10,170.54	73.00	399.56	-50.68	1.35	-1.34	8.52	
10,293.00	1.45	190.02	10,265.53	71.24	398.97	-48.95	0.79	0.64	-24.42	
10,388.00	1.49	167.69	10,360.50	68.85	399.03	-46.56	0.60	0.04	-23.51	
10,406.51	1.52	168.50	10,379.00	68.37	399.13	-46.08	0.18	0.14	4.37	
Harkey Sand										
10,483.00	1.63	171.56	10,455.46	66.30	399.49	-43.99	0.18	0.15	4.00	
10,578.00	0.62	72.51	10,550.45	65.12	400.18	-42.77	1.93	-1.06	-104.26	
10,673.00	0.57	41.75	10,645.44	65.63	400.98	-43.23	0.34	-0.05	-32.38	
10,766.00	0.31	18.37	10,738.44	66.21	401.37	-43.80	0.33	-0.28	-25.14	
10,860.00	0.57	303.48	10,832.44	66.71	401.06	-44.31	0.61	0.28	-79.67	
10,881.57	0.64	292.56	10,854.00	66.82	400.86	-44.43	0.62	0.31	-50.63	



Windows User
Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Poker Lake Unit 25 Brushy Draw 162H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3366.00usft (Akita 22)
Site:	Poker Lake Unit 25 Brushy Draw	MD Reference:	KB @ 3366.00usft (Akita 22)
Well:	Poker Lake Unit 25 Brushy Draw 162H	North Reference:	Grid
Wellbore:	ST02 / PB-191212	Survey Calculation Method:	Minimum Curvature
Design:	As-Drilled Surveys	Database:	EDM 5000.14 Single User Db

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)
3rd Bone Spring Sand									
10,954.00	0.97	270.61	10,926.43	66.98	399.87	-44.64	0.62	0.46	-30.31
11,048.00	1.05	259.54	11,020.41	66.83	398.23	-44.59	0.22	0.09	-11.78
11,142.00	0.79	248.73	11,114.40	66.44	396.78	-44.28	0.33	-0.28	-11.50
11,237.00	0.84	238.01	11,209.39	65.83	395.58	-43.74	0.17	0.05	-11.28
11,239.61	0.85	237.94	11,212.00	65.81	395.55	-43.72	0.28	0.27	-2.77
Wolfcamp Shale									
11,332.00	1.10	235.98	11,304.38	64.95	394.23	-42.93	0.28	0.27	-2.12
11,374.63	1.07	231.91	11,347.00	64.48	393.58	-42.50	0.19	-0.06	-9.56
Wolfcamp A									
11,426.00	1.05	226.76	11,398.36	63.86	392.86	-41.92	0.19	-0.05	-10.02
11,534.00	1.27	223.86	11,506.34	62.32	391.31	-40.47	0.21	0.20	-2.69
11,627.00	1.09	219.72	11,599.32	60.89	390.03	-39.12	0.21	-0.19	-4.45
11,722.00	2.95	189.16	11,694.26	57.79	389.06	-36.07	2.20	1.96	-32.17
11,760.82	4.43	183.78	11,733.00	55.30	388.80	-33.60	3.92	3.82	-13.85
Wolfcamp B									
11,816.00	6.57	180.35	11,787.92	50.02	388.64	-28.33	3.92	3.87	-6.22
11,856.00	9.83	182.72	11,827.51	44.32	388.47	-22.65	8.19	8.15	5.93
11,886.00	10.68	187.54	11,857.03	39.00	387.98	-17.37	4.02	2.83	16.07
11,980.00	13.02	189.16	11,949.02	19.91	385.15	1.53	2.51	2.49	1.72
12,025.00	14.21	185.69	11,992.75	9.41	383.80	11.94	3.21	2.64	-7.71
12025' MD Tie-on									
12,052.10	14.57	184.78	12,019.00	2.70	383.18	18.60	1.57	1.33	-3.37
Wolfcamp C									
12,073.00	14.85	184.10	12,039.22	-2.59	382.77	23.86	1.57	1.34	-3.23
12073' MD First Crescent MWD Survey									
12,105.00	17.73	177.28	12,069.93	-11.55	382.71	32.81	10.79	9.00	-21.31
12,136.00	22.76	177.57	12,099.01	-22.26	383.19	43.53	16.23	16.23	0.94
12,168.00	28.16	180.59	12,127.89	-36.01	383.37	57.26	17.35	16.88	9.44
12,213.00	35.89	182.26	12,166.01	-59.84	382.74	81.03	17.29	17.18	3.71
12,262.00	45.05	183.61	12,203.25	-91.56	381.08	112.61	18.78	18.69	2.76
12,276.16	47.96	183.47	12,213.00	-101.82	380.45	122.81	20.54	20.53	-1.01
Wolfcamp D									
12,309.00	54.70	183.18	12,233.51	-127.40	378.97	148.27	20.54	20.53	-0.87
12,319.00	55.98	183.06	12,239.19	-135.61	378.52	156.45	12.86	12.82	-1.21
12319' MD Crossed North Survey/Lease Line									
12,354.00	60.47	182.66	12,257.62	-165.32	377.04	186.03	12.86	12.82	-1.14
12,398.39	64.85	181.78	12,278.00	-204.72	375.52	225.28	10.03	9.87	-1.98
Wolfcamp E									
12,401.00	65.11	181.73	12,279.10	-207.08	375.44	227.63	10.03	9.88	-1.90
12,449.00	70.01	181.38	12,297.42	-251.41	374.24	271.83	10.23	10.21	-0.73
12,496.00	78.78	178.61	12,310.05	-296.63	374.27	316.98	19.50	18.66	-5.89
12,543.00	85.48	175.64	12,316.49	-343.10	376.61	363.51	15.57	14.26	-6.32
12,568.00	88.91	174.88	12,317.71	-367.98	378.68	388.46	14.05	13.72	-3.04



Windows User
Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Poker Lake Unit 25 Brushy Draw 162H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3366.00usft (Akita 22)
Site:	Poker Lake Unit 25 Brushy Draw	MD Reference:	KB @ 3366.00usft (Akita 22)
Well:	Poker Lake Unit 25 Brushy Draw 162H	North Reference:	Grid
Wellbore:	ST02 / PB-191212	Survey Calculation Method:	Minimum Curvature
Design:	As-Drilled Surveys	Database:	EDM 5000.14 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
12,637.00	87.84	170.36	12,319.67	-436.36	387.53	457.23	6.73	-1.55	-6.55	
12,683.00	90.08	170.32	12,320.50	-481.70	395.25	502.93	4.87	4.87	-0.09	
12,730.00	90.36	172.76	12,320.32	-528.18	402.16	549.73	5.23	0.60	5.19	
12,824.00	89.64	175.79	12,320.32	-621.70	411.54	643.62	3.31	-0.77	3.22	
12,918.00	87.98	178.47	12,322.27	-715.55	416.24	737.59	3.35	-1.77	2.85	
13,012.00	89.72	180.18	12,324.16	-809.52	417.35	831.47	2.60	1.85	1.82	
13012' MD Tie-on OH										
13,107.00	90.39	184.02	12,324.07	-904.44	413.87	926.05	4.10	0.71	4.04	
13107' MD ST01 First Crescent MWD Survey										
13,184.00	87.51	187.12	12,325.48	-981.04	406.40	1,002.12	5.49	-3.74	4.03	
13,229.00	88.10	184.66	12,327.20	-1,025.77	401.79	1,046.52	5.62	1.31	-5.47	
13,246.00	87.79	181.60	12,327.81	-1,042.73	400.86	1,063.41	18.08	-1.82	-18.00	
13,250.89	87.86	181.55	12,328.00	-1,047.62	400.72	1,068.28	1.65	1.34	-0.96	
Wolfcamp E Target (Landing TVD)										
13,371.00	89.47	180.40	12,330.80	-1,167.67	398.68	1,188.03	1.65	1.34	-0.96	
13,466.00	90.67	180.79	12,330.69	-1,262.66	397.69	1,282.82	1.33	1.26	0.41	
13,559.00	91.60	176.94	12,328.84	-1,355.61	399.53	1,375.72	4.26	1.00	-4.14	
13,653.00	90.20	178.91	12,327.37	-1,449.53	402.94	1,469.69	2.57	-1.49	2.10	
13,747.00	90.45	179.09	12,326.83	-1,543.51	404.58	1,563.62	0.33	0.27	0.19	
13,841.00	89.50	176.84	12,326.88	-1,637.45	407.91	1,657.59	2.60	-1.01	-2.39	
13,935.00	91.40	180.59	12,326.14	-1,731.40	410.02	1,751.52	4.47	2.02	3.99	
14,029.00	90.34	180.91	12,324.71	-1,825.38	408.79	1,845.28	1.18	-1.13	0.34	
14,123.00	90.36	189.87	12,324.13	-1,918.86	399.97	1,938.13	9.53	0.02	9.53	
14,217.00	87.45	190.63	12,325.93	-2,011.34	383.25	2,029.53	3.20	-3.10	0.81	
14,266.00	91.34	190.24	12,326.45	-2,059.51	374.38	2,077.14	7.98	7.94	-0.80	
14,339.00	86.97	184.63	12,327.52	-2,131.85	364.94	2,148.84	9.74	-5.99	-7.68	
14,371.00	86.55	183.66	12,329.33	-2,163.71	362.63	2,180.53	3.30	-1.31	-3.03	
14,417.00	87.11	178.64	12,331.88	-2,209.62	361.71	2,226.31	10.96	1.22	-10.91	
14,464.00	86.08	175.44	12,334.67	-2,256.46	364.13	2,273.22	7.14	-2.19	-6.81	
14,511.00	87.65	173.88	12,337.24	-2,303.19	368.49	2,320.11	4.71	3.34	-3.32	
14,558.00	91.23	172.10	12,337.70	-2,349.82	374.23	2,367.00	8.51	7.62	-3.79	
14,606.00	93.50	175.08	12,335.72	-2,397.47	379.58	2,414.87	7.80	4.73	6.21	
14,653.00	93.98	176.77	12,332.65	-2,444.25	382.92	2,461.76	3.73	1.02	3.60	
14,700.00	91.48	178.21	12,330.42	-2,491.15	384.97	2,508.70	6.14	-5.32	3.06	
14,746.00	89.66	175.97	12,329.96	-2,537.08	387.31	2,554.69	6.27	-3.96	-4.87	
14,840.00	89.80	176.74	12,330.40	-2,630.89	393.28	2,648.69	0.83	0.15	0.82	
14840' MD Tie-on ST01										
14,887.00	87.23	180.11	12,331.62	-2,677.85	394.57	2,695.64	9.01	-5.47	7.17	
14887' MD ST02 First Crescent MWD Survey										
14,933.00	86.61	180.43	12,334.09	-2,723.78	394.36	2,741.49	1.52	-1.35	0.70	
14,991.00	86.10	181.19	12,337.78	-2,781.66	393.54	2,799.23	1.58	-0.88	1.31	
15,036.00	87.98	181.08	12,340.10	-2,826.59	392.65	2,844.04	4.18	4.18	-0.24	
15,085.00	91.18	180.72	12,340.46	-2,875.57	391.88	2,892.91	6.57	6.53	-0.73	
15,130.00	88.74	180.04	12,340.49	-2,920.57	391.58	2,937.82	5.63	-5.42	-1.51	



Windows User Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Poker Lake Unit 25 Brushy Draw 162H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3366.00usft (Akita 22)
Site:	Poker Lake Unit 25 Brushy Draw	MD Reference:	KB @ 3366.00usft (Akita 22)
Well:	Poker Lake Unit 25 Brushy Draw 162H	North Reference:	Grid
Wellbore:	ST02 / PB-191212	Survey Calculation Method:	Minimum Curvature
Design:	As-Drilled Surveys	Database:	EDM 5000.14 Single User Db

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)	
15,179.00	89.44	180.91	12,341.27	-2,969.56	391.18	2,986.71	2.28	1.43	1.78	
15,224.00	93.14	181.43	12,340.26	-3,014.53	390.26	3,031.57	8.30	8.22	1.16	
15,274.00	92.27	180.00	12,337.90	-3,064.47	389.63	3,081.39	3.34	-1.74	-2.86	
15,321.00	92.49	180.67	12,335.95	-3,111.43	389.36	3,128.26	1.50	0.47	1.43	
15,367.00	89.38	180.05	12,335.20	-3,157.41	389.07	3,174.16	6.89	-6.76	-1.35	
15,414.00	87.73	177.69	12,336.38	-3,204.39	390.00	3,221.11	6.13	-3.51	-5.02	
15,461.00	89.47	179.77	12,337.53	-3,251.36	391.04	3,268.07	5.77	3.70	4.43	
15,554.00	89.94	179.85	12,338.01	-3,344.35	391.35	3,360.94	0.51	0.51	0.09	
15,601.00	90.06	179.25	12,338.01	-3,391.35	391.72	3,407.88	1.30	0.26	-1.28	
15,648.00	90.36	178.95	12,337.84	-3,438.35	392.45	3,454.85	0.90	0.64	-0.64	
15,693.00	90.98	179.38	12,337.31	-3,483.34	393.11	3,499.81	1.68	1.38	0.96	
15,741.00	89.33	179.29	12,337.18	-3,531.33	393.67	3,547.76	3.44	-3.44	-0.19	
15,786.00	88.77	178.85	12,337.93	-3,576.32	394.40	3,592.72	1.58	-1.24	-0.98	
15,835.00	89.92	179.55	12,338.49	-3,625.31	395.08	3,641.67	2.75	2.35	1.43	
15,880.00	90.78	179.73	12,338.21	-3,670.31	395.36	3,686.61	1.95	1.91	0.40	
15,929.00	90.36	179.24	12,337.72	-3,719.30	395.80	3,735.56	1.32	-0.86	-1.00	
15,974.00	91.37	179.59	12,337.04	-3,764.30	396.26	3,780.50	2.38	2.24	0.78	
16,022.00	89.36	178.73	12,336.74	-3,812.29	396.97	3,828.46	4.55	-4.19	-1.79	
16,069.00	90.78	179.02	12,336.68	-3,859.28	397.89	3,875.43	3.08	3.02	0.62	
16,116.00	92.07	179.75	12,335.51	-3,906.26	398.39	3,922.37	3.15	2.74	1.55	
16,163.00	91.34	180.66	12,334.11	-3,953.24	398.23	3,969.26	2.48	-1.55	1.94	
16,208.00	88.29	179.33	12,334.26	-3,998.23	398.23	4,014.19	7.39	-6.78	-2.96	
16,255.00	89.02	179.48	12,335.36	-4,045.21	398.72	4,061.12	1.59	1.55	0.32	
16,302.00	84.02	177.22	12,338.21	-4,092.09	400.07	4,108.00	11.67	-10.64	-4.81	
16,349.00	90.44	180.15	12,340.49	-4,138.99	401.14	4,154.89	15.01	13.66	6.23	
16,396.00	91.65	179.36	12,339.63	-4,185.98	401.34	4,201.82	3.07	2.57	-1.68	
16,443.00	91.51	179.17	12,338.33	-4,232.96	401.94	4,248.76	0.50	-0.30	-0.40	
16,491.00	91.06	179.77	12,337.26	-4,280.95	402.39	4,296.70	1.56	-0.94	1.25	
16,584.00	89.10	179.35	12,337.13	-4,373.94	403.10	4,389.59	2.16	-2.11	-0.45	
16,679.00	90.31	180.04	12,337.61	-4,468.93	403.61	4,484.46	1.47	1.27	0.73	
16,772.00	87.17	180.53	12,339.66	-4,561.90	403.14	4,577.26	3.42	-3.38	0.53	
16,866.00	90.64	180.44	12,341.46	-4,655.86	402.35	4,671.03	3.69	3.69	-0.10	
16,960.00	89.05	179.38	12,341.71	-4,749.86	402.50	4,764.89	2.03	-1.69	-1.13	
17,053.00	91.15	179.54	12,341.55	-4,842.85	403.37	4,857.79	2.26	2.26	0.17	
17,147.00	90.62	178.59	12,340.10	-4,936.82	404.91	4,951.70	1.16	-0.56	-1.01	
17,241.00	90.06	178.21	12,339.54	-5,030.79	407.53	5,045.66	0.72	-0.60	-0.40	
17,334.00	90.87	180.18	12,338.78	-5,123.77	408.84	5,138.57	2.29	0.87	2.12	
17,428.00	91.20	180.65	12,337.09	-5,217.75	408.16	5,232.37	0.61	0.35	0.50	
17,522.00	88.71	179.53	12,337.16	-5,311.74	408.01	5,326.21	2.90	-2.65	-1.19	
17,616.00	92.38	178.42	12,336.26	-5,405.70	409.69	5,420.12	4.08	3.90	-1.18	
17,709.00	86.72	176.37	12,337.00	-5,498.56	413.91	5,513.07	6.47	-6.09	-2.20	
17,803.00	90.92	176.38	12,338.93	-5,592.33	419.86	5,607.03	4.47	4.47	0.01	
17,896.00	90.22	177.35	12,338.01	-5,685.19	424.94	5,700.02	1.29	-0.75	1.04	
17,990.00	90.50	178.65	12,337.41	-5,779.13	428.22	5,794.00	1.41	0.30	1.38	



Windows User Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Poker Lake Unit 25 Brushy Draw 162H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3366.00usft (Akita 22)
Site:	Poker Lake Unit 25 Brushy Draw	MD Reference:	KB @ 3366.00usft (Akita 22)
Well:	Poker Lake Unit 25 Brushy Draw 162H	North Reference:	Grid
Wellbore:	ST02 / PB-191212	Survey Calculation Method:	Minimum Curvature
Design:	As-Drilled Surveys	Database:	EDM 5000.14 Single User Db

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)
18,075.00	92.55	179.44	12,335.15	-5,864.08	429.64	5,878.90	2.58	2.41	0.93
18,168.00	91.99	180.52	12,331.47	-5,957.01	429.67	5,971.68	1.31	-0.60	1.16
18,262.00	89.72	179.31	12,330.07	-6,050.99	429.81	6,065.52	2.74	-2.41	-1.29
18,356.00	88.24	179.96	12,331.74	-6,144.97	430.41	6,159.39	1.72	-1.57	0.69
18,451.00	88.91	181.16	12,334.10	-6,239.93	429.48	6,254.16	1.45	0.71	1.26
18,544.00	89.27	180.89	12,335.58	-6,332.90	427.82	6,346.89	0.48	0.39	-0.29
18,638.00	91.48	180.53	12,334.96	-6,426.89	426.65	6,440.67	2.38	2.35	-0.38
18,732.00	89.08	175.47	12,334.50	-6,520.79	429.93	6,534.61	5.96	-2.55	-5.38
18,825.00	88.94	175.43	12,336.11	-6,613.49	437.31	6,627.57	0.16	-0.15	-0.04
18,919.00	91.12	179.70	12,336.06	-6,707.37	441.30	6,721.53	5.10	2.32	4.54
19,013.00	93.70	181.03	12,332.11	-6,801.28	440.70	6,815.26	3.09	2.74	1.41
19,106.00	90.90	181.76	12,328.38	-6,894.17	438.44	6,907.88	3.11	-3.01	0.78
19,201.00	89.80	180.62	12,327.80	-6,989.14	436.47	7,002.60	1.67	-1.16	-1.20
19,294.00	91.15	181.46	12,327.03	-7,082.12	434.78	7,095.34	1.71	1.45	0.90
19,388.00	90.00	180.28	12,326.08	-7,176.10	433.35	7,189.09	1.75	-1.22	-1.26
19,482.00	90.17	179.68	12,325.94	-7,270.10	433.39	7,282.95	0.66	0.18	-0.64
19,576.00	88.18	179.96	12,327.30	-7,364.08	433.68	7,376.81	2.14	-2.12	0.30
19,669.00	90.64	177.83	12,328.25	-7,457.05	435.48	7,469.73	3.50	2.65	-2.29
19,763.00	91.93	178.75	12,326.15	-7,550.98	438.28	7,563.67	1.69	1.37	0.98
19,857.00	91.23	179.78	12,323.55	-7,644.94	439.48	7,657.55	1.32	-0.74	1.10
19,951.00	90.56	180.35	12,322.09	-7,738.92	439.38	7,751.38	0.94	-0.71	0.61
20,045.00	90.48	179.32	12,321.23	-7,832.92	439.65	7,845.25	1.10	-0.09	-1.10
20,090.00	90.64	178.78	12,320.79	-7,877.91	440.39	7,890.21	1.25	0.36	-1.20
20090° MD ST02 Last Crescent MWD Survey									
20,140.00	90.64	178.78	12,320.23	-7,927.90	441.46	7,940.18	0.00	0.00	0.00
20140° MD ST02 Projection to Bit									

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
PBHL(PLU 25 BU 25 #1)	-90.10	179.86	12,315.0 0	-7,917.10	415.30	393,062.40	653,080.20	32° 4' 46.849 N	103° 50' 20.733 W
- actual wellpath misses target center by 26.47usft at 20128.71usft MD (12320.36 TVD, -7916.61 N, 441.22 E) - Rectangle (sides W100.00 H0.00 D7,430.00)									
LTP(PLU 25 BU 25 #16)	0.00	0.00	12,315.2 3	-7,787.10	414.70	393,192.40	653,079.60	32° 4' 48.135 N	103° 50' 20.733 W
- actual wellpath misses target center by 25.43usft at 19999.17usft MD (12321.63 TVD, -7787.09 N, 439.31 E) - Point									
FTP(PLU 25 BU 25 #16)	0.00	0.00	12,328.0 0	-484.90	397.10	400,494.60	653,062.00	32° 6' 0.400 N	103° 50' 20.549 W
- actual wellpath misses target center by 7.61usft at 12686.41usft MD (12320.50 TVD, -485.06 N, 395.82 E) - Point									



Windows User

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Poker Lake Unit 25 Brushy Draw 162H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3366.00usft (Akita 22)
Site:	Poker Lake Unit 25 Brushy Draw	MD Reference:	KB @ 3366.00usft (Akita 22)
Well:	Poker Lake Unit 25 Brushy Draw 162H	North Reference:	Grid
Wellbore:	ST02 / PB-191212	Survey Calculation Method:	Minimum Curvature
Design:	As-Drilled Surveys	Database:	EDM 5000.14 Single User Db

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,008.04	1,008.00	Rustler		0.00		
1,158.04	1,158.00	Top of Salt		0.00		
3,917.37	3,916.00	Base of Salt Castille		0.00		
4,009.52	4,008.00	Delaware		0.00		
4,978.10	4,966.00	Cherry Canyon		0.00		
6,589.18	6,564.00	Brushy Canyon		0.00		
7,953.32	7,927.00	Bone Spring		0.00		
8,869.66	8,843.00	1st Bone Spring Sand		0.00		
9,235.81	9,209.00	2nd Bone Spring Carb		0.00		
9,684.97	9,658.00	2nd Bone Spring Sand		0.00		
10,030.36	10,003.00	3rd Bone Spring Carb		0.00		
10,406.51	10,379.00	Harkey Sand		0.00		
10,881.57	10,854.00	3rd Bone Spring Sand		0.00		
11,239.61	11,212.00	Wolfcamp Shale		0.00		
11,374.63	11,347.00	Wolfcamp A		0.00		
11,760.82	11,733.00	Wolfcamp B		0.00		
12,052.10	12,019.00	Wolfcamp C		0.00		
12,276.16	12,213.00	Wolfcamp D		0.00		
12,398.39	12,278.00	Wolfcamp E		0.00		
13,250.89	12,328.00	Wolfcamp E Target (Landing TVD)		0.00		

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
12,025.00	11,992.75	9.41	383.80	12025' MD Tie-on	
12,073.00	12,039.22	-2.59	382.77	12073' MD First Crescent MWD Survey	
12,319.00	12,239.19	-135.61	378.52	12319' MD Crossed North Survey/Lease Line	
13,012.00	12,324.16	-809.52	417.35	13012' MD Tie-on OH	
13,107.00	12,324.07	-904.44	413.87	13107' MD ST01 First Crescent MWD Survey	
14,840.00	12,330.40	-2,630.89	393.28	14840' MD Tie-on ST01	
14,887.00	12,331.62	-2,677.85	394.57	14887' MD ST02 First Crescent MWD Survey	
20,090.00	12,320.79	-7,877.91	440.39	20090' MD ST02 Last Crescent MWD Survey	
20,140.00	12,320.23	-7,927.90	441.46	20140' MD ST02 Projection to Bit	

Checked By: _____	Approved By: _____	Date: _____
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