



Well: Perla Verde 31 State Well 3H
 Site: Perla Verde 31 State
 Project: Lea County, New Mexico
 Design: rev0
 Rig: Nabors 730

Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	10502.21	0.00	0.00	10502.21	0.00	0.00	0.00	0.00	0.00	KOP Begin 10°/100' build
3	11416.15	91.39	359.54	11075.00	586.88	-4.68	10.00	359.54	586.90	Begin 91.39° lateral
4	15773.30	91.39	359.54	10969.00	4942.60	-39.40	0.00	0.00	4942.76	PBHL/TD

RKB Elevation: RKB=3701+23 @ 3724.00usft (Nabors 730)
 US State Plane 1927 (Exact solution)
 New Mexico East 3001

Northing Easting Latitude Longitude
 586806.90 757031.50 32.60991300 -103.49862522
 Total Correction (M => G) To convert a Magnetic Direction to a Grid Direction, Add 6.77°



Azimuths to Grid North
 True North: -0.45°
 Magnetic North: 6.77°

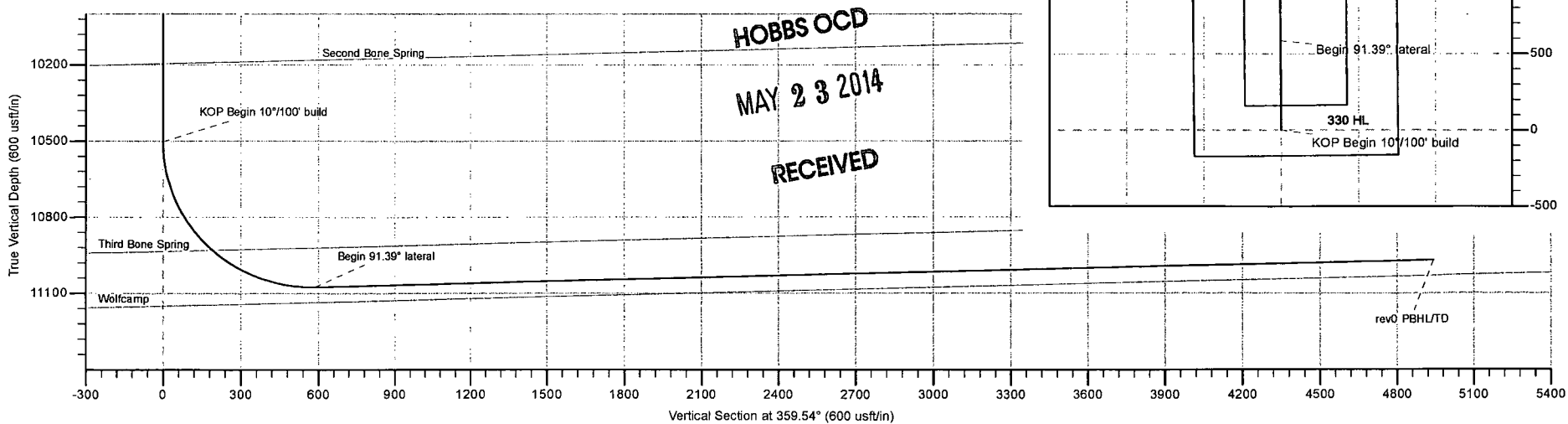
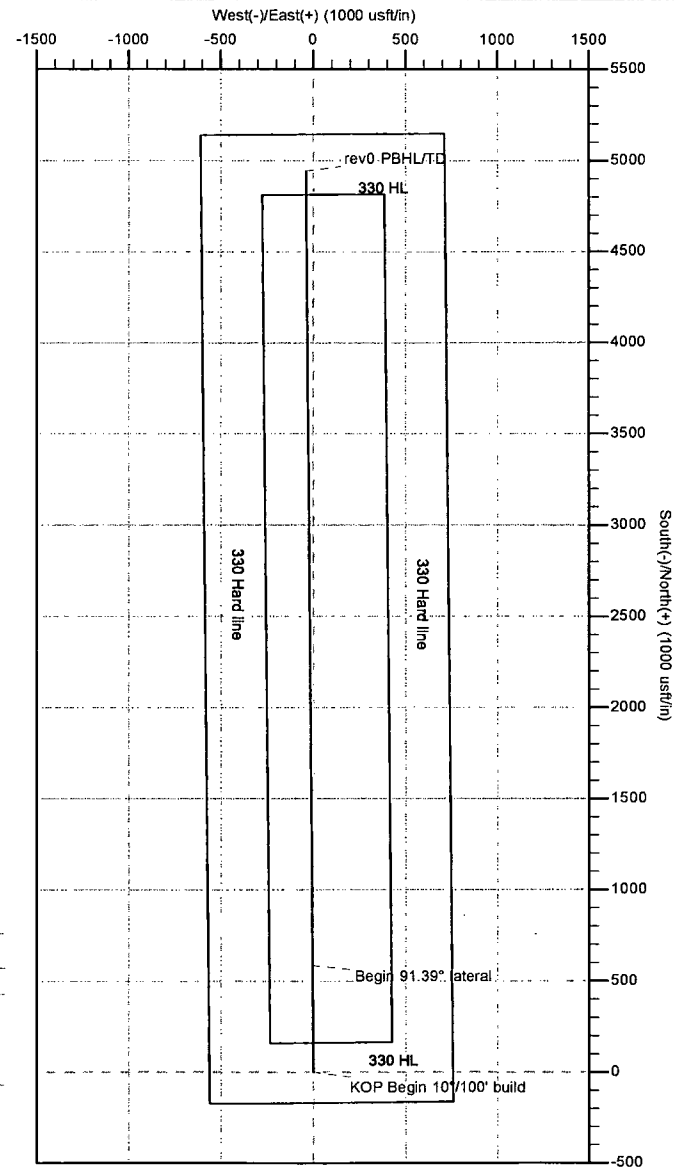
Magnetic Field
 Strength: 48564.0nT
 Dip Angle: 60.48°
 Date: 5/8/2014
 Model: IGRF2010

FORMATION TOP DETAILS

TVDPth	MDPath	Formation
1785.00	1785.00	Rustler
1909.00	1909.00	Top Salt
3410.00	3410.00	Base Salt
3652.00	3652.00	Yates
4073.00	4073.00	Seven Rivers
4619.00	4619.00	Queen
5783.00	5783.00	Delaware
6658.00	6658.00	Brushy Canyon
8167.00	8167.00	Bone Spring
9609.00	9609.00	First Bone Spring
10196.00	10196.00	Second Bone Spring
10930.34	10985.71	Third Bone Spring



PRODIRECTIONAL



HOBBS OCD
 MAY 23 2014
 RECEIVED

MAY 27 2014



Standard_report

Company:	XTO Energy Inc.	Local Co-ordinate Reference:	Well Perla Verde 31' State Well 3H
Project:	Lea County, New Mexico	TVD Reference:	RKB=3701+23 @ 3724.00usft (Nabors 730)
Site:	Perla Verde 31' State	MD Reference:	RKB=3701+23 @ 3724.00usft (Nabors 730)
Well:	Perla Verde 31' State Well 3H	North Reference:	Grid
Wellbore:	Original hole	Survey Calculation Method:	Minimum Curvature
Design:	rev0	Database:	EDM 5000.1 Ddatabase

Project	Lea County, New Mexico		
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	Perla Verde 31' State		
Site Position:		Northing:	586,592.70 usft
From:	Map	Easting:	755,501.80 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.60990689
		Longitude:	-103.50359282
		Grid Convergence:	0.45 °

Well	Perla Verde 31' State Well 3H					
Well Position	+N/-S	0.00 usft	Northing:	586,606.90 usft	Latitude:	32.60991300
	+E/-W	0.00 usft	Easting:	757,031.50 usft	Longitude:	-103.49862522
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,701.00 usft

Wellbore	Original hole				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	5/8/2014	7.22	60.48	48,564

Design	rev0				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.00	0.00	0.00	359.54	

Survey Tool Program	Date	5/8/2014			
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
0.00	15,773.08	rev0 (Original hole)	MWD	MWD - Standard	



Standard_report

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Site:	Perla Verde 31 State	MD Reference:	RKB=3701+23 @ 3724.00usft (Nabors 730)
Well:	Perla Verde 31 State Well 3H	North Reference:	Grid
Wellbore:	Original hole	Survey Calculation Method:	Minimum Curvature
Design:	rev0	Database:	EDM 5000.1 Database

Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V. Sec (usft)	Northing (usft)	Easting (usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
1,785.00	0.00	0.00	1,785.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
Rustler										
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
1,909.00	0.00	0.00	1,909.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
Top Salt										
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	



Standard_report

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Site:	Perla Verde 31 State	MD Reference:	RKB=3701+23 @ 3724.00usft (Nabors 730)
Well:	Perla Verde 31 State Well 3H	North Reference:	Grd
Wellbore:	Original hole	Survey Calculation Method:	Minimum Curvature
Design:	rev0	Database:	EDM 5000.1 Database

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)		TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V. Sec (usft)	Northing (usft)	Easting (usft)	
2,300.00	0.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
2,400.00	0.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
2,500.00	0.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
2,600.00	0.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
2,700.00	0.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
2,800.00	0.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
2,900.00	0.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
3,000.00	0.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
3,100.00	0.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
3,200.00	0.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
3,300.00	0.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
3,400.00	0.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
3,410.00	0.00	0.00	0.00	3,410.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
Base Salt											
3,500.00	0.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
3,600.00	0.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
3,652.00	0.00	0.00	0.00	3,652.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
Yates											
3,700.00	0.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
3,800.00	0.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
3,900.00	0.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
4,000.00	0.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
4,073.00	0.00	0.00	0.00	4,073.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
Seven Rivers											
4,100.00	0.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
4,200.00	0.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
4,300.00	0.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
4,400.00	0.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	



Standard_report

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Well:	Perla Verde 31 State Well 3H	North Reference:	Grid
Wellbore:	Original hole	Survey Calculation Method:	Minimum Curvature
Design:	rev0	Database:	EDM 5000.1 Ddatabase

Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V. Sec (usft)	Northing (usft)	Easting (usft)	
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
4,619.00	0.00	0.00	4,619.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
Queen										
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
5,783.00	0.00	0.00	5,783.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
Delaware										
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
6,658.00	0.00	0.00	6,658.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
Brushy Canyon										



Standard_report

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MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V. Sec (usft)	Northing (usft)	Easting (usft)	
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
8,167.00	0.00	0.00	8,167.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
Bone Spring										
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	



Standard_report

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Project:	Lea County, New Mexico	TVD Reference:	RKB=3701+23 @ 3724.00usft (Nabors 730)
Site:	Perla Verde 31 State	MD Reference:	RKB=3701+23 @ 3724.00usft (Nabors 730)
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Design:	rev0	Database:	EDM 5000.1 Ddatabase

Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V. Sec (usft)	Northing (usft)	Easting (usft)	
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
9,609.00	0.00	0.00	9,609.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
First Bone Spring										
9,700.00	0.00	0.00	9,700.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
9,800.00	0.00	0.00	9,800.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
9,900.00	0.00	0.00	9,900.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
10,000.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
10,100.00	0.00	0.00	10,100.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
10,196.00	0.00	0.00	10,196.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
Second Bone Spring										
10,200.00	0.00	0.00	10,200.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
10,300.00	0.00	0.00	10,300.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
10,400.00	0.00	0.00	10,400.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
10,500.00	0.00	0.00	10,500.00	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
10,502.21	0.00	0.00	10,502.21	0.00	0.00	0.00	0.00	586,606.90	757,031.50	
KOP Begin 10°/100' build										
10,600.00	9.78	359.54	10,599.53	8.32	-0.07	10.00	8.32	586,615.22	757,031.43	
10,700.00	19.78	359.54	10,696.09	33.80	-0.27	10.00	33.80	586,640.70	757,031.23	
10,800.00	29.78	359.54	10,786.77	75.66	-0.60	10.00	75.66	586,682.56	757,030.90	
10,900.00	39.78	359.54	10,868.80	132.63	-1.06	10.00	132.63	586,739.53	757,030.44	
10,985.71	48.35	359.54	10,930.34	192.18	-1.53	10.00	192.19	586,799.08	757,029.97	
Third Bone Spring										
11,000.00	49.78	359.54	10,939.70	202.97	-1.62	10.00	202.98	586,809.87	757,029.88	
11,100.00	59.78	359.54	10,997.30	284.56	-2.27	10.00	284.57	586,891.46	757,029.23	



Standard_report

Company: XTO Energy Inc
Project: Lea County, New Mexico
Site: Perla Verde 31 State
Well: Perla Verde 31 State Well 3H
Wellbore: Original hole
Design: rev0

Local Co-ordinate Reference: Well Perla Verde 31 State Well 3H
TVD Reference: RKB=3701+23 @ 3724.00usft (Nabors 730)
MD Reference: RKB=3701+23 @ 3724.00usft (Nabors 730)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Ddatabase

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V: Sec (usft)	Northing (usft)	Easting (usft)
11,200.00	69.78	359.54	11,039.85	374.91	-2.99	10.00	374.92	586,981.81	757,028.51
11,300.00	79.78	359.54	11,066.07	471.27	-3.76	10.00	471.29	587,078.17	757,027.74
11,400.00	89.78	359.54	11,075.16	570.73	-4.55	10.00	570.75	587,177.63	757,026.95
11,416.15	91.39	359.54	11,075.00	586.88	-4.68	10.00	586.90	587,193.78	757,026.82
Begin 91.39° lateral									
11,500.00	91.39	359.54	11,072.96	670.70	-5.35	0.00	670.72	587,277.60	757,026.15
11,600.00	91.39	359.54	11,070.52	770.67	-6.14	0.00	770.69	587,377.57	757,025.36
11,700.00	91.39	359.54	11,068.09	870.64	-6.94	0.00	870.66	587,477.54	757,024.56
11,800.00	91.39	359.54	11,065.66	970.60	-7.74	0.00	970.63	587,577.50	757,023.76
11,900.00	91.39	359.54	11,063.23	1,070.57	-8.53	0.00	1,070.60	587,677.47	757,022.97
12,000.00	91.39	359.54	11,060.79	1,170.54	-9.33	0.00	1,170.57	587,777.44	757,022.17
12,100.00	91.39	359.54	11,058.36	1,270.50	-10.13	0.00	1,270.54	587,877.40	757,021.37
12,200.00	91.39	359.54	11,055.93	1,370.47	-10.92	0.00	1,370.52	587,977.37	757,020.58
12,300.00	91.39	359.54	11,053.50	1,470.44	-11.72	0.00	1,470.49	588,077.34	757,019.78
12,400.00	91.39	359.54	11,051.06	1,570.41	-12.52	0.00	1,570.46	588,177.31	757,018.98
12,500.00	91.39	359.54	11,048.63	1,670.37	-13.32	0.00	1,670.43	588,277.27	757,018.18
12,600.00	91.39	359.54	11,046.20	1,770.34	-14.11	0.00	1,770.40	588,377.24	757,017.39
12,700.00	91.39	359.54	11,043.76	1,870.31	-14.91	0.00	1,870.37	588,477.21	757,016.59
12,800.00	91.39	359.54	11,041.33	1,970.27	-15.71	0.00	1,970.34	588,577.17	757,015.79
12,900.00	91.39	359.54	11,038.90	2,070.24	-16.50	0.00	2,070.31	588,677.14	757,015.00
13,000.00	91.39	359.54	11,036.47	2,170.21	-17.30	0.00	2,170.28	588,777.11	757,014.20
13,100.00	91.39	359.54	11,034.03	2,270.18	-18.10	0.00	2,270.25	588,877.08	757,013.40
13,200.00	91.39	359.54	11,031.60	2,370.14	-18.89	0.00	2,370.22	588,977.04	757,012.61
13,300.00	91.39	359.54	11,029.17	2,470.11	-19.69	0.00	2,470.19	589,077.01	757,011.81
13,400.00	91.39	359.54	11,026.74	2,570.08	-20.49	0.00	2,570.16	589,176.98	757,011.01
13,500.00	91.39	359.54	11,024.30	2,670.05	-21.28	0.00	2,670.13	589,276.95	757,010.22
13,600.00	91.39	359.54	11,021.87	2,770.01	-22.08	0.00	2,770.10	589,376.91	757,009.42



Standard_report

Company:	XTO Energy Inc	Local Co-ordinate Reference:	Well Perla Verde 31 State Well 3H
Project:	Lea County, New Mexico	TVD Reference:	RKB=3701+23 @ 3724.00usft (Nabors 730)
Site:	Perla Verde 31 State	MD Reference:	RKB=3701+23 @ 3724.00usft (Nabors 730)
Well:	Perla Verde 31 State Well 3H	North Reference:	Grid
Wellbore:	Original hole	Survey Calculation Method:	Minimum Curvature
Design:	rev0	Database:	EDM 5000.1 Database

Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100ft)	V. Sec (usft)	Northing (usft)	Easting (usft)	
13,700.00	91.39	359.54	11,019.44	2,869.98	-22.88	0.00	2,870.07	589,476.88	757,008.62	
13,800.00	91.39	359.54	11,017.00	2,969.95	-23.67	0.00	2,970.04	589,576.85	757,007.83	
13,900.00	91.39	359.54	11,014.57	3,069.91	-24.47	0.00	3,070.01	589,676.81	757,007.03	
14,000.00	91.39	359.54	11,012.14	3,169.88	-25.27	0.00	3,169.98	589,776.78	757,006.23	
14,100.00	91.39	359.54	11,009.71	3,269.85	-26.07	0.00	3,269.95	589,876.75	757,005.43	
14,200.00	91.39	359.54	11,007.27	3,369.82	-26.86	0.00	3,369.92	589,976.72	757,004.64	
14,300.00	91.39	359.54	11,004.84	3,469.78	-27.66	0.00	3,469.89	590,076.68	757,003.84	
14,400.00	91.39	359.54	11,002.41	3,569.75	-28.46	0.00	3,569.86	590,176.65	757,003.04	
14,500.00	91.39	359.54	10,999.98	3,669.72	-29.25	0.00	3,669.83	590,276.62	757,002.25	
14,600.00	91.39	359.54	10,997.54	3,769.69	-30.05	0.00	3,769.80	590,376.59	757,001.45	
14,700.00	91.39	359.54	10,995.11	3,869.65	-30.85	0.00	3,869.78	590,476.55	757,000.65	
14,800.00	91.39	359.54	10,992.68	3,969.62	-31.64	0.00	3,969.75	590,576.52	756,999.86	
14,900.00	91.39	359.54	10,990.24	4,069.59	-32.44	0.00	4,069.72	590,676.49	756,999.06	
15,000.00	91.39	359.54	10,987.81	4,169.55	-33.24	0.00	4,169.69	590,776.45	756,998.26	
15,100.00	91.39	359.54	10,985.38	4,269.52	-34.03	0.00	4,269.66	590,876.42	756,997.47	
15,200.00	91.39	359.54	10,982.95	4,369.49	-34.83	0.00	4,369.63	590,976.39	756,996.67	
15,300.00	91.39	359.54	10,980.51	4,469.46	-35.63	0.00	4,469.60	591,076.36	756,995.87	
15,400.00	91.39	359.54	10,978.08	4,569.42	-36.43	0.00	4,569.57	591,176.32	756,995.07	
15,500.00	91.39	359.54	10,975.65	4,669.39	-37.22	0.00	4,669.54	591,276.29	756,994.28	
15,600.00	91.39	359.54	10,973.22	4,769.36	-38.02	0.00	4,769.51	591,376.26	756,993.48	
15,700.00	91.39	359.54	10,970.78	4,869.32	-38.82	0.00	4,869.48	591,476.22	756,992.68	
15,773.30	91.39	359.54	10,969.00	4,942.60	-39.40	0.00	4,942.76	591,549.50	756,992.10	

PPH/LTD



Standard_report

Company:	XTO Energy Inc	Local Co-ordinate Reference:	Well Perla Verde 31 State Well 3H
Project:	Lea County, New Mexico	TVD Reference:	RKB=3701+23 @ 3724.00usft (Nabors 730)
Site:	Perla Verde 31 State	MD Reference:	RKB=3701+23 @ 3724.00usft (Nabors 730)
Well:	Perla Verde 31 State Well 3H	North Reference:	Grid
Wellbore:	Original hole	Survey Calculation Method:	Minimum Curvature
Design:	rev0	Database:	EDM 5000.1 Ddatabase

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,785.00	1,785.00	Rustler		-1.39	359.54	
1,909.00	1,909.00	Top Salt		-1.39	359.54	
3,410.00	3,410.00	Base Salt		-1.39	359.54	
3,652.00	3,652.00	Yates		-1.39	359.54	
4,073.00	4,073.00	Seven Rivers		-1.39	359.54	
4,619.00	4,619.00	Queen		-1.39	359.54	
5,783.00	5,783.00	Delaware		-1.39	359.54	
6,658.00	6,658.00	Brushy Canyon		-1.39	359.54	
8,167.00	8,167.00	Bone Spring		-1.39	359.54	
9,609.00	9,609.00	First Bone Spring		-1.39	359.54	
10,196.00	10,196.00	Second Bone Spring		-1.39	359.54	
10,985.71	10,935.00	Third Bone Spring		-1.39	359.54	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
10,502.21	10,502.21	0.00	0.00	KOP Begin 10°/100' build	
11,416.15	11,075.00	586.88	-4.68	Begin 91.39° lateral	
15,773.30	10,969.00	4,942.60	-39.40	PBHL/TD	