

XTOENERGY

HOBBS OCD

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XTO Energy Inc

Lea County, NM (NAD27)

Ocioso 21 Federal Com

1H

Wellbore #1

Plan: Plan 1 05-01-15

Standard Planning Report

01 May, 2015

Database: Compass 5000 GCR
Company: XTO Energy Inc
Project: Lea County, NM (NAD27)
Site: Ocio 21 Federal Com
Well: 1H
Wellbore: Wellbore #1
Design: Plan 1 05-01-15

Local Co-ordinate Reference: Well 1H
TVD Reference: RKB @ 3596.00usft (Noram 25)
MD Reference: RKB @ 3596.00usft (Noram 25)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Lea County, NM (NAD27)		
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	Ocio 21 Federal Com				
Site Position:		Northing:	595,808.50 usft	Latitude:	32° 38' 12.29691 N
From:	Map	Easting:	671,150.90 usft	Longitude:	103° 46' 38.46509 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.30 °

Well	1H				
Well Position	+N/-S	0.00 usft	Northing:	595,808.50 usft	Latitude: 32° 38' 12.29691 N
	+E/-W	0.00 usft	Easting:	671,150.90 usft	Longitude: 103° 46' 38.46509 W
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft	Ground Level: 3,571.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/1/2015	7.42	60.67	48,620

Design	Plan 1 05-01-15				
Audit Notes:					
Version:	Phase:	PROTOTYPE		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	357.05	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,814.06	0.00	0.00	8,814.06	0.00	0.00	0.00	0.00	0.00	0.00	
9,718.46	90.44	357.05	9,387.00	576.59	-29.75	10.00	10.00	0.00	357.05	
14,886.49	90.44	357.05	9,347.31	5,737.60	-296.00	0.00	0.00	0.00	0.00	BHL_1H

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Site:	Ocioso 21 Federal Com	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1 05-01-15		

Planned 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
838.00	0.00	0.00	838.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
966.00	0.00	0.00	966.00	0.00	0.00	0.00	0.00	0.00	0.00
Top Salt									
2,447.00	0.00	0.00	2,447.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Salt									
2,624.00	0.00	0.00	2,624.00	0.00	0.00	0.00	0.00	0.00	0.00
Yates									
2,941.00	0.00	0.00	2,941.00	0.00	0.00	0.00	0.00	0.00	0.00
Seven Rivers									
4,756.00	0.00	0.00	4,756.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware									
5,839.00	0.00	0.00	5,839.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon									
7,233.00	0.00	0.00	7,233.00	0.00	0.00	0.00	0.00	0.00	0.00
Bone Spring									
8,434.00	0.00	0.00	8,434.00	0.00	0.00	0.00	0.00	0.00	0.00
First Bone Spring Sand									
8,814.06	0.00	0.00	8,814.06	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Begin 10.00°/100' Build									
8,900.00	8.59	357.05	8,899.68	6.42	-0.33	6.43	10.00	10.00	0.00
9,000.00	18.59	357.05	8,996.75	29.87	-1.54	29.91	10.00	10.00	0.00
9,100.00	28.59	357.05	9,088.28	69.79	-3.60	69.88	10.00	10.00	0.00
9,185.60	37.15	357.05	9,160.11	116.15	-5.99	116.30	10.00	10.00	0.00
Second Bone Spring Sand									
9,200.00	38.59	357.05	9,171.47	124.98	-6.45	125.14	10.00	10.00	0.00
9,300.00	48.59	357.05	9,243.80	193.75	-10.00	194.01	10.00	10.00	0.00
9,400.00	58.59	357.05	9,303.08	274.03	-14.14	274.39	10.00	10.00	0.00
9,500.00	68.59	357.05	9,347.49	363.36	-18.75	363.84	10.00	10.00	0.00
9,600.00	78.59	357.05	9,375.70	459.04	-23.68	459.65	10.00	10.00	0.00
9,700.00	88.59	357.05	9,386.85	558.16	-28.80	558.90	10.00	10.00	0.00
9,718.46	90.44	357.05	9,387.00	576.59	-29.75	577.36	10.00	10.00	0.00
LP, Hold 90.44° Inc									
9,800.00	90.44	357.05	9,386.37	658.02	-33.95	658.90	0.00	0.00	0.00
9,900.00	90.44	357.05	9,385.61	757.88	-39.10	758.89	0.00	0.00	0.00
10,000.00	90.44	357.05	9,384.84	857.75	-44.25	858.89	0.00	0.00	0.00
10,100.00	90.44	357.05	9,384.07	957.61	-49.40	958.89	0.00	0.00	0.00
10,200.00	90.44	357.05	9,383.30	1,057.48	-54.55	1,058.88	0.00	0.00	0.00
10,300.00	90.44	357.05	9,382.53	1,157.34	-59.71	1,158.88	0.00	0.00	0.00
10,400.00	90.44	357.05	9,381.77	1,257.21	-64.86	1,258.88	0.00	0.00	0.00
10,500.00	90.44	357.05	9,381.00	1,357.07	-70.01	1,358.87	0.00	0.00	0.00
10,600.00	90.44	357.05	9,380.23	1,456.93	-75.16	1,458.87	0.00	0.00	0.00
10,700.00	90.44	357.05	9,379.46	1,556.80	-80.31	1,558.87	0.00	0.00	0.00
10,800.00	90.44	357.05	9,378.69	1,656.66	-85.47	1,658.87	0.00	0.00	0.00
10,900.00	90.44	357.05	9,377.93	1,756.53	-90.62	1,758.86	0.00	0.00	0.00
11,000.00	90.44	357.05	9,377.16	1,856.39	-95.77	1,858.86	0.00	0.00	0.00
11,100.00	90.44	357.05	9,376.39	1,956.26	-100.92	1,958.86	0.00	0.00	0.00
11,200.00	90.44	357.05	9,375.62	2,056.12	-106.07	2,058.85	0.00	0.00	0.00
11,300.00	90.44	357.05	9,374.85	2,155.98	-111.23	2,158.85	0.00	0.00	0.00
11,400.00	90.44	357.05	9,374.09	2,255.85	-116.38	2,258.85	0.00	0.00	0.00
11,500.00	90.44	357.05	9,373.32	2,355.71	-121.53	2,358.85	0.00	0.00	0.00

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 TVD Reference: RKB @ 3596.00usft (Noram 25)
 MD Reference: RKB @ 3596.00usft (Noram 25)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,600.00	90.44	357.05	9,372.55	2,455.58	-126.68	2,458.84	0.00	0.00	0.00
11,700.00	90.44	357.05	9,371.78	2,555.44	-131.83	2,558.84	0.00	0.00	0.00
11,800.00	90.44	357.05	9,371.01	2,655.31	-136.99	2,658.84	0.00	0.00	0.00
11,900.00	90.44	357.05	9,370.25	2,755.17	-142.14	2,758.83	0.00	0.00	0.00
12,000.00	90.44	357.05	9,369.48	2,855.03	-147.29	2,858.83	0.00	0.00	0.00
12,100.00	90.44	357.05	9,368.71	2,954.90	-152.44	2,958.83	0.00	0.00	0.00
12,200.00	90.44	357.05	9,367.94	3,054.76	-157.59	3,058.82	0.00	0.00	0.00
12,300.00	90.44	357.05	9,367.17	3,154.63	-162.75	3,158.82	0.00	0.00	0.00
12,400.00	90.44	357.05	9,366.41	3,254.49	-167.90	3,258.82	0.00	0.00	0.00
12,500.00	90.44	357.05	9,365.64	3,354.35	-173.05	3,358.82	0.00	0.00	0.00
12,600.00	90.44	357.05	9,364.87	3,454.22	-178.20	3,458.81	0.00	0.00	0.00
12,700.00	90.44	357.05	9,364.10	3,554.08	-183.35	3,558.81	0.00	0.00	0.00
12,800.00	90.44	357.05	9,363.33	3,653.95	-188.51	3,658.81	0.00	0.00	0.00
12,900.00	90.44	357.05	9,362.57	3,753.81	-193.66	3,758.80	0.00	0.00	0.00
13,000.00	90.44	357.05	9,361.80	3,853.68	-198.81	3,858.80	0.00	0.00	0.00
13,100.00	90.44	357.05	9,361.03	3,953.54	-203.96	3,958.80	0.00	0.00	0.00
13,200.00	90.44	357.05	9,360.26	4,053.40	-209.11	4,058.80	0.00	0.00	0.00
13,300.00	90.44	357.05	9,359.49	4,153.27	-214.27	4,158.79	0.00	0.00	0.00
13,400.00	90.44	357.05	9,358.73	4,253.13	-219.42	4,258.79	0.00	0.00	0.00
13,500.00	90.44	357.05	9,357.96	4,353.00	-224.57	4,358.79	0.00	0.00	0.00
13,600.00	90.44	357.05	9,357.19	4,452.86	-229.72	4,458.78	0.00	0.00	0.00
13,700.00	90.44	357.05	9,356.42	4,552.73	-234.87	4,558.78	0.00	0.00	0.00
13,800.00	90.44	357.05	9,355.65	4,652.59	-240.02	4,658.78	0.00	0.00	0.00
13,900.00	90.44	357.05	9,354.89	4,752.45	-245.18	4,758.77	0.00	0.00	0.00
14,000.00	90.44	357.05	9,354.12	4,852.32	-250.33	4,858.77	0.00	0.00	0.00
14,100.00	90.44	357.05	9,353.35	4,952.18	-255.48	4,958.77	0.00	0.00	0.00
14,200.00	90.44	357.05	9,352.58	5,052.05	-260.63	5,058.77	0.00	0.00	0.00
14,300.00	90.44	357.05	9,351.81	5,151.91	-265.78	5,158.76	0.00	0.00	0.00
14,400.00	90.44	357.05	9,351.05	5,251.78	-270.94	5,258.76	0.00	0.00	0.00
14,500.00	90.44	357.05	9,350.28	5,351.64	-276.09	5,358.76	0.00	0.00	0.00
14,600.00	90.44	357.05	9,349.51	5,451.50	-281.24	5,458.75	0.00	0.00	0.00
14,700.00	90.44	357.05	9,348.74	5,551.37	-286.39	5,558.75	0.00	0.00	0.00
14,800.00	90.44	357.05	9,347.97	5,651.23	-291.54	5,658.75	0.00	0.00	0.00
14,886.49	90.44	357.05	9,347.31	5,737.60	-296.00	5,745.23	0.00	0.00	0.00
TD at 14886.48' MD									

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
BHL_1H - plan hits target center - Rectangle (sides W100.00 H5,168.02 D0.00)	-0.44	357.05	9,347.31	5,737.60	-296.00	601,546.10	670,854.90	32° 39' 9.08720 N	103° 46' 41.57587 W
TP2_1H - plan misses target center by 0.51usft at 14756.33usft MD (9348.31 TVD, 5607.63 N, -289.29 E) - Point	0.00	0.00	9,348.31	5,607.60	-289.80	601,416.10	670,861.10	32° 39' 7.80050 N	103° 46' 41.51130 W
TP1_1H - plan hits target center - Point	0.00	0.00	9,383.86	984.70	-50.80	596,793.20	671,100.10	32° 38' 22.04340 N	103° 46' 38.99890 W

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Project: Lea County, NM (NAD27)
Site: Ocioco 21 Federal Com
Well: 1H
Wellbore: Wellbore #1
Design: Plan 1 05-01-15

Local Co-ordinate Reference: Well 1H
TVD Reference: RKB @ 3596.00usft (Noram 25)
MD Reference: RKB @ 3596.00usft (Noram 25)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
838.00	12.00	Rustler		-0.44	357.05
966.00	140.00	Top Salt		-0.44	357.05
2,447.00	1,621.00	Base Salt		-0.44	357.05
2,624.00	1,798.00	Yates		-0.44	357.05
2,941.00	2,115.00	Seven Rivers		-0.44	357.05
4,756.00	3,930.00	Delaware		-0.44	357.05
5,839.00	5,013.00	Brushy Canyon		-0.44	357.05
7,233.00	6,407.00	Bone Spring		-0.44	357.05
8,434.00	7,608.00	First Bone Spring Sand		-0.44	357.05
9,185.60	8,334.11	Second Bone Spring Sand		-0.44	357.05

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,814.06	8,814.06	0.00	0.00	KOP, Begin 10.00°/100' Build
9,718.46	9,387.00	576.59	-29.75	LP, Hold 90.44° Inc
14,886.49	9,347.31	5,737.60	-296.00	TD at 14886.48' MD