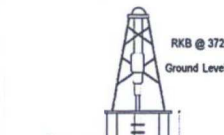
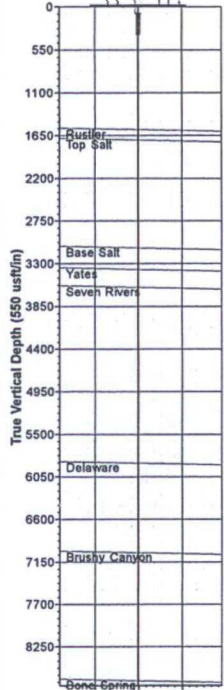


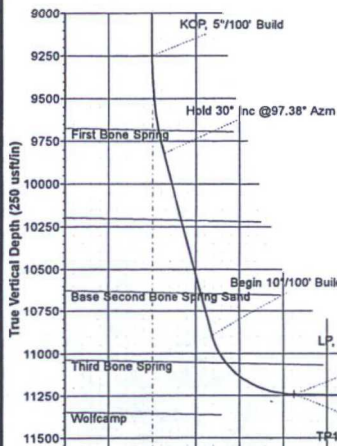
XTOENERGY



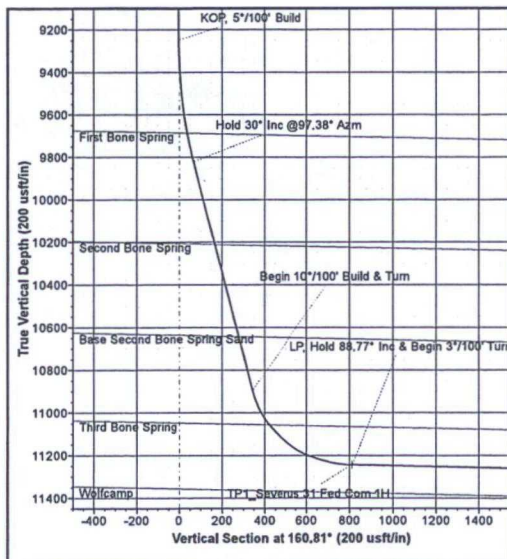
RKB @ 3725.00usf (Noram 25)
Ground Level: 3700.00



Vertical Section at 160.81° (550 usf/in)



Vertical Section at 160.81° (250 usf/in)



Vertical Section at 160.81° (200 usf/in)

Project: Lea County, NM (NAD27)
Site: Severus 31 Federal Com
Well: 1H
Design: Plan 5 08-12-15
Rig: Noram 25

WELL DETAILS

Ground Level: 3700.00
Northing: 559895.80
Easting: 726740.90
Latitude: 32° 32' 13.59493 N
Longitude: 103° 35' 51.30951 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	V-Set	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	9248.00	0.00	0.00	9248.00	0.00	0.00	0.00	0.00	0.00		
3	9848.10	30.00	97.38	9821.04	-19.73	152.30	5.00	97.38	68.69		KOP, 5°/100' Build
4	11085.28	30.00	97.38	10892.42	-99.20	765.85	0.00	0.00	345.42		Hold 30° Inc @ 97.38° Azm
5	11776.99	88.77	145.00	11243.00	-448.10	1188.30	10.00	52.20	813.79	TP1 Severus 31 Fed Com 1H	Begin 10°/100' Build & Turn
6	12800.67	88.77	175.72	11265.52	-1400.49	1528.20	3.00	90.34	1824.98		LP, Hold 88.77° Inc & Begin 3°/100' Turn
7	16622.43	88.77	175.72	11347.55	-5210.70	1813.50	0.00	0.00	5517.28	BHL Severus 31 Fed Com 1H	Hold 175.72° Azm
											TD at 16622.43 MD

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape
TP1 Severus 31 Fed Com 1H	11243.00	-448.10	1188.30	559447.70	727928.20	32° 32' 9.07953 N	103° 35' 37.46563 W	Point
TP2 Severus 31 Fed Com 1H	11344.60	-5080.80	1796.50	554815.00	728537.40	32° 31' 23.19682 N	103° 35' 30.73808 W	Point
BHL Severus 31 Fed Com 1H	11347.55	-5210.70	1813.50	554685.10	728554.40	32° 31' 21.91027 N	103° 35' 30.55010 W	Rectangle (Sides: 13821.76 W100.00)

CASING DETAILS

No casing data is available

LEGEND

Plan 5 08-12-15

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
1570.00	1570.00	Rustler	1.23	160.81
1704.00	1704.00	Top Salt	1.23	160.81
3095.00	3095.00	Base Salt	1.23	160.81
3371.00	3371.00	Yates	1.23	160.81
3603.00	3603.00	Seven Rivers	1.23	160.81
5868.00	5868.00	Delaware	1.23	160.81
7028.00	7028.00	Brushy Canyon	1.23	160.81
8685.00	8685.00	Bone Spring	1.23	160.81
9884.83	9884.83	First Bone Spring	1.23	160.81
10298.63	10298.63	Second Bone Spring	1.23	160.81
10641.02	10784.97	Base Second Bone Spring Sand	1.23	160.81
11055.12	11290.35	Third Bone Spring	1.23	160.81

Map System: US State Plane 1927 (Exact solution)

Datum: NAD 1927 (NADCON CONUS)

Ellipsoid: Clarke 1866

Zone Name: New Mexico East 3001

Local Origin: Well 1H, Grid North

Latitude: 32° 32' 13.59493 N

Longitude: 103° 35' 51.30951 W

Grid East: 726740.90

Grid North: 559895.80

Scale Factor: 1.000

Geomagnetic Model: HDGM

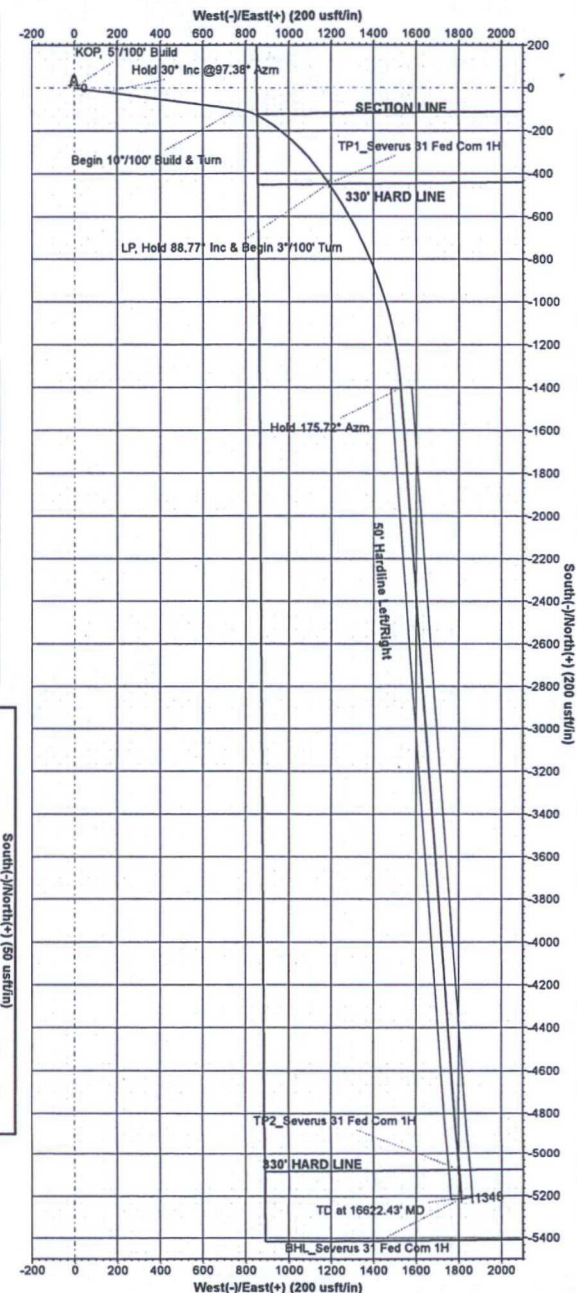
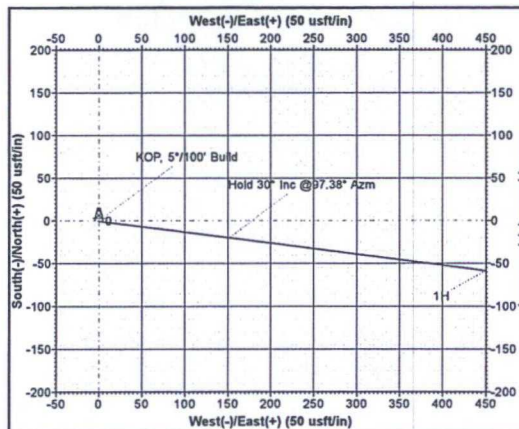
Sample Date: 14-Jul-15

Magnetic Declination: 7.02°

Dip Angle from Horizontal: 60.53°

Magnetic Field Strength: 48560

To convert a Magnetic Direction to a Grid Direction, Add 6.62°
To convert a Magnetic Direction to a True Direction, Add 7.02° East
To convert a True Direction to a Grid Direction, Subtract 0.40°



XTOENERGY

XTO Energy Inc

Lea County, NM (NAD27)

Severus 31 Federal Com

1H

OH

Plan: Plan 5 08-12-15

Standard Planning Report

12 August, 2015



Phoenix Technology Services LP

Planning Report



XTOENERGY

Database:	Compass 5000 GCR	Local Co-ordinate Reference:	Well 1H
Company:	XTO Energy Inc	TVD Reference:	RKB @ 3725.00usft (Noram 25)
Project:	Lea County, NM (NAD27)	MD Reference:	RKB @ 3725.00usft (Noram 25)
Site:	Severus 31 Federal Com	North Reference:	Grid
Well:	1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 5 08-12-15		

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	Severus 31 Federal Com				
Site Position:		Northing:	559,895.80 usft	Latitude:	32° 32' 13.59493 N
From:	Map	Easting:	726,740.90 usft	Longitude:	103° 35' 51.30951 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.40°

Well	1H					
Well Position	+N/-S	0.00 usft	Northing:	559,895.80 usft	Latitude:	32° 32' 13.59493 N
	+E/-W	0.00 usft	Easting:	726,740.90 usft	Longitude:	103° 35' 51.30951 W
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft	Ground Level:	3,700.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	7/14/2015	7.02	60.53	48,560

Design	Plan 5 08-12-15			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	160.81

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	
9,248.00	0.00	0.00	9,248.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,848.10	30.00	97.38	9,821.04	-19.73	152.30	5.00	5.00	0.00	97.38	
11,085.28	30.00	97.38	10,892.42	-99.20	765.85	0.00	0.00	0.00	0.00	
11,776.99	88.77	145.00	11,243.00	-448.10	1,188.30	10.00	8.50	6.88	52.20	TP1_Severus 31 Fed
12,800.67	88.77	175.72	11,265.52	-1,400.49	1,528.20	3.00	0.00	3.00	90.34	
16,622.43	88.77	175.72	11,347.55	-5,210.70	1,813.50	0.00	0.00	0.00	0.00	BHL_Severus 31 Fed

Phoenix Technology Services LP
Planning Report



XTOENERGY

Database: Compass 5000 GCR
Company: XTO Energy Inc
Project: Lea County, NM (NAD27)
Site: Severus 31 Federal Com
Well: 1H
Wellbore: OH
Design: Plan 5 08-12-15

Local Co-ordinate Reference: Well 1H
TVD Reference: RKB @ 3725.00usft (Noram 25)
MD Reference: RKB @ 3725.00usft (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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,570.00	0.00	0.00	1,570.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,704.00	0.00	0.00	1,704.00	0.00	0.00	0.00	0.00	0.00	0.00
Top Salt									
3,095.00	0.00	0.00	3,095.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Salt									
3,371.00	0.00	0.00	3,371.00	0.00	0.00	0.00	0.00	0.00	0.00
Yates									
3,603.00	0.00	0.00	3,603.00	0.00	0.00	0.00	0.00	0.00	0.00
Seven Rivers									
5,868.00	0.00	0.00	5,868.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware									
7,026.00	0.00	0.00	7,026.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon									
8,685.00	0.00	0.00	8,685.00	0.00	0.00	0.00	0.00	0.00	0.00
Bone Spring									
9,248.00	0.00	0.00	9,248.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 5°/100' Build									
9,300.00	2.60	97.38	9,299.98	-0.15	1.17	0.53	5.00	5.00	0.00
9,400.00	7.60	97.38	9,399.55	-1.29	9.98	4.50	5.00	5.00	0.00
9,500.00	12.60	97.38	9,497.97	-3.55	27.37	12.34	5.00	5.00	0.00
9,600.00	17.60	97.38	9,594.49	-6.89	53.20	23.99	5.00	5.00	0.00
9,696.17	22.41	97.38	9,684.83	-11.12	85.81	38.70	5.00	5.00	0.00
First Bone Spring									
9,700.00	22.60	97.38	9,688.37	-11.30	87.27	39.36	5.00	5.00	0.00
9,800.00	27.60	97.38	9,778.90	-16.75	129.32	58.33	5.00	5.00	0.00
9,848.10	30.00	97.38	9,821.04	-19.73	152.30	68.69	5.00	5.00	0.00
Hold 30° Inc @97.38° Azm									
9,900.00	30.00	97.38	9,865.99	-23.06	178.04	80.30	0.00	0.00	0.00
10,000.00	30.00	97.38	9,952.59	-29.48	227.63	102.67	0.00	0.00	0.00
10,100.00	30.00	97.38	10,039.19	-35.91	277.23	125.04	0.00	0.00	0.00
10,200.00	30.00	97.38	10,125.78	-42.33	326.82	147.40	0.00	0.00	0.00
10,296.82	30.00	97.38	10,209.63	-48.55	374.83	169.06	0.00	0.00	0.00
Second Bone Spring									
10,300.00	30.00	97.38	10,212.38	-48.76	376.41	169.77	0.00	0.00	0.00
10,400.00	30.00	97.38	10,298.98	-55.18	426.00	192.14	0.00	0.00	0.00
10,500.00	30.00	97.38	10,385.58	-61.60	475.60	214.51	0.00	0.00	0.00
10,600.00	30.00	97.38	10,472.18	-68.03	525.19	236.87	0.00	0.00	0.00
10,700.00	30.00	97.38	10,558.78	-74.45	574.78	259.24	0.00	0.00	0.00
10,794.97	30.00	97.38	10,641.02	-80.55	621.88	280.49	0.00	0.00	0.00
Base Second Bone Spring Sand									
10,800.00	30.00	97.38	10,645.37	-80.87	624.38	281.61	0.00	0.00	0.00
10,900.00	30.00	97.38	10,731.97	-87.30	673.97	303.98	0.00	0.00	0.00
11,000.00	30.00	97.38	10,818.57	-93.72	723.56	326.35	0.00	0.00	0.00
11,085.28	30.00	97.38	10,892.42	-99.20	765.85	345.42	0.00	0.00	0.00
Begin 10°/100' Build & Turn									
11,100.00	30.93	99.64	10,905.11	-100.31	773.23	348.89	10.00	6.26	15.38
11,200.00	38.03	112.16	10,987.60	-116.27	827.23	381.72	10.00	7.10	12.52
11,290.35	45.27	120.31	11,055.12	-143.02	880.83	424.60	10.00	8.02	9.02
Third Bone Spring									
11,300.00	46.08	121.06	11,061.86	-146.54	886.76	429.88	10.00	8.34	7.72

Phoenix Technology Services LP

Planning Report



XTOENERGY

Database: Compass 5000 GCR
 Company: XTO Energy Inc
 Project: Lea County, NM (NAD27)
 Site: Severus 31 Federal Com
 Well: 1H
 Wellbore: OH
 Design: Plan 5 08-12-15

Local Co-ordinate Reference: Well 1H
 TVD Reference: RKB @ 3725.00usft (Noram 25)
 MD Reference: RKB @ 3725.00usft (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)
11,400.00	54.65	127.76	11,125.63	-190.21	950.01	491.90	10.00	8.57	6.71
11,500.00	63.52	133.16	11,176.99	-245.94	1,015.07	565.92	10.00	8.87	5.39
11,600.00	72.56	137.77	11,214.36	-312.04	1,079.94	649.67	10.00	9.04	4.61
11,700.00	81.70	141.93	11,236.61	-386.50	1,142.67	740.61	10.00	9.14	4.17
11,776.99	88.77	145.00	11,243.00	-448.10	1,188.30	813.80	10.00	9.18	3.98
LP, Hold 88.77° Inc & Begin 3°/100' Turn									
11,800.00	88.77	145.69	11,243.50	-467.03	1,201.38	835.97	3.00	-0.02	3.00
11,900.00	88.75	148.69	11,245.66	-551.05	1,255.55	933.12	3.00	-0.02	3.00
12,000.00	88.74	151.69	11,247.85	-637.78	1,305.24	1,031.37	3.00	-0.01	3.00
12,100.00	88.73	154.69	11,250.06	-727.01	1,350.33	1,130.46	3.00	-0.01	3.00
12,200.00	88.73	157.69	11,252.28	-818.46	1,390.68	1,230.10	3.00	0.00	3.00
12,300.00	88.72	160.69	11,254.51	-911.91	1,426.18	1,330.02	3.00	0.00	3.00
12,400.00	88.73	163.69	11,256.73	-1,007.08	1,456.75	1,429.95	3.00	0.00	3.00
12,500.00	88.73	166.70	11,258.95	-1,103.73	1,482.30	1,529.63	3.00	0.01	3.00
12,600.00	88.74	169.70	11,261.15	-1,201.58	1,502.74	1,628.76	3.00	0.01	3.00
12,700.00	88.75	172.70	11,263.34	-1,300.37	1,518.04	1,727.09	3.00	0.01	3.00
12,800.00	88.77	175.70	11,265.50	-1,399.82	1,528.15	1,824.34	3.00	0.02	3.00
12,800.67	88.77	175.72	11,265.52	-1,400.49	1,528.20	1,824.98	3.00	0.02	3.00
Hold 175.72° Azm									
12,900.00	88.77	175.72	11,267.65	-1,499.52	1,535.62	1,920.95	0.00	0.00	0.00
13,000.00	88.77	175.72	11,269.79	-1,599.22	1,543.08	2,017.56	0.00	0.00	0.00
13,100.00	88.77	175.72	11,271.94	-1,698.91	1,550.55	2,114.17	0.00	0.00	0.00
13,200.00	88.77	175.72	11,274.09	-1,798.61	1,558.01	2,210.78	0.00	0.00	0.00
13,300.00	88.77	175.72	11,276.23	-1,898.31	1,565.48	2,307.40	0.00	0.00	0.00
13,400.00	88.77	175.72	11,278.38	-1,998.01	1,572.94	2,404.01	0.00	0.00	0.00
13,500.00	88.77	175.72	11,280.53	-2,097.70	1,580.41	2,500.62	0.00	0.00	0.00
13,600.00	88.77	175.72	11,282.67	-2,197.40	1,587.87	2,597.23	0.00	0.00	0.00
13,700.00	88.77	175.72	11,284.82	-2,297.10	1,595.34	2,693.84	0.00	0.00	0.00
13,800.00	88.77	175.72	11,286.97	-2,396.80	1,602.80	2,790.46	0.00	0.00	0.00
13,900.00	88.77	175.72	11,289.11	-2,496.50	1,610.27	2,887.07	0.00	0.00	0.00
14,000.00	88.77	175.72	11,291.26	-2,596.19	1,617.73	2,983.68	0.00	0.00	0.00
14,100.00	88.77	175.72	11,293.41	-2,695.89	1,625.20	3,080.29	0.00	0.00	0.00
14,200.00	88.77	175.72	11,295.55	-2,795.59	1,632.66	3,176.90	0.00	0.00	0.00
14,300.00	88.77	175.72	11,297.70	-2,895.29	1,640.13	3,273.52	0.00	0.00	0.00
14,400.00	88.77	175.72	11,299.85	-2,994.99	1,647.59	3,370.13	0.00	0.00	0.00
14,500.00	88.77	175.72	11,301.99	-3,094.68	1,655.06	3,466.74	0.00	0.00	0.00
14,600.00	88.77	175.72	11,304.14	-3,194.38	1,662.52	3,563.35	0.00	0.00	0.00
14,700.00	88.77	175.72	11,306.29	-3,294.08	1,669.99	3,659.96	0.00	0.00	0.00
14,800.00	88.77	175.72	11,308.43	-3,393.78	1,677.45	3,756.58	0.00	0.00	0.00
14,900.00	88.77	175.72	11,310.58	-3,493.47	1,684.92	3,853.19	0.00	0.00	0.00
15,000.00	88.77	175.72	11,312.72	-3,593.17	1,692.38	3,949.80	0.00	0.00	0.00
15,100.00	88.77	175.72	11,314.87	-3,692.87	1,699.85	4,046.41	0.00	0.00	0.00
15,200.00	88.77	175.72	11,317.02	-3,792.57	1,707.31	4,143.02	0.00	0.00	0.00
15,300.00	88.77	175.72	11,319.16	-3,892.27	1,714.78	4,239.64	0.00	0.00	0.00
15,400.00	88.77	175.72	11,321.31	-3,991.96	1,722.24	4,336.25	0.00	0.00	0.00
15,500.00	88.77	175.72	11,323.46	-4,091.66	1,729.71	4,432.86	0.00	0.00	0.00
15,600.00	88.77	175.72	11,325.60	-4,191.36	1,737.17	4,529.47	0.00	0.00	0.00
15,700.00	88.77	175.72	11,327.75	-4,291.06	1,744.64	4,626.08	0.00	0.00	0.00
15,800.00	88.77	175.72	11,329.90	-4,390.76	1,752.10	4,722.70	0.00	0.00	0.00
15,900.00	88.77	175.72	11,332.04	-4,490.45	1,759.57	4,819.31	0.00	0.00	0.00
16,000.00	88.77	175.72	11,334.19	-4,590.15	1,767.03	4,915.92	0.00	0.00	0.00
16,100.00	88.77	175.72	11,336.34	-4,689.85	1,774.50	5,012.53	0.00	0.00	0.00
16,200.00	88.77	175.72	11,338.48	-4,789.55	1,781.97	5,109.14	0.00	0.00	0.00
16,300.00	88.77	175.72	11,340.63	-4,889.24	1,789.43	5,205.76	0.00	0.00	0.00

Phoenix Technology Services LP

Planning Report



XTOENERGY

Database: Compass 5000 GCR
Company: XTO Energy Inc
Project: Lea County, NM (NAD27)
Site: Severus 31 Federal Com
Well: 1H
Wellbore: OH
Design: Plan 5 08-12-15

Local Co-ordinate Reference: Well 1H
TVD Reference: RKB @ 3725.00usft (Noram 25)
MD Reference: RKB @ 3725.00usft (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)
16,400.00	88.77	175.72	11,342.78	-4,988.94	1,796.90	5,302.37	0.00	0.00	0.00
16,500.00	88.77	175.72	11,344.92	-5,088.64	1,804.36	5,398.98	0.00	0.00	0.00
16,600.00	88.77	175.72	11,347.07	-5,188.34	1,811.83	5,495.59	0.00	0.00	0.00
16,622.43	88.77	175.72	11,347.55	-5,210.70	1,813.50	5,517.26	0.00	0.00	0.00

TD at 16622.43' MD

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
TP1_Severus 31 Fed Cc	0.00	0.00	11,243.00	-448.10	1,188.30	559,447.70	727,929.20	32° 32' 9.07953 N	103° 35' 37.46563 W
- plan hits target center									
- Point									
TP2_Severus 31 Fed Cc	0.00	0.00	11,344.60	-5,080.80	1,796.50	554,815.00	728,537.40	32° 31' 23.19682 N	103° 35' 30.73808 W
- plan misses target center by 7.25usft at 16491.59usft MD (11344.74 TVD, -5080.26 N, 1803.73 E)									
- Point									
BHL_Severus 31 Fed Cc	1.23	175.72	11,347.55	-5,210.70	1,813.50	554,685.10	728,554.40	32° 31' 21.91027 N	103° 35' 30.55010 W
- plan hits target center									
- Rectangle (sides W100.00 H3,821.76 D0.00)									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,570.00	1,570.00	Rustler		1.23	160.81
1,704.00	1,704.00	Top Salt		1.23	160.81
3,095.00	3,095.00	Base Salt		1.23	160.81
3,371.00	3,371.00	Yates		1.23	160.81
3,603.00	3,603.00	Seven Rivers		1.23	160.81
5,868.00	5,868.00	Delaware		1.23	160.81
7,026.00	7,026.00	Brushy Canyon		1.23	160.81
8,685.00	8,685.00	Bone Spring		1.23	160.81
9,696.17	9,684.83	First Bone Spring		1.23	160.81
10,296.82	10,209.63	Second Bone Spring		1.23	160.81
10,794.97	10,641.02	Base Second Bone Spring Sand		1.23	160.81
11,290.35	11,055.12	Third Bone Spring		1.23	160.81

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
9,248.00	9,248.00	0.00	0.00	KOP, 5°/100' Build
9,848.10	9,821.04	-19.73	152.30	Hold 30° Inc @97.38° Azm
11,085.28	10,892.42	-99.20	765.85	Begin 10°/100' Build & Turn
11,776.99	11,243.00	-448.10	1,188.30	LP, Hold 88.77° Inc & Begin 3°/100' Turn
12,800.67	11,265.52	-1,400.49	1,528.20	Hold 175.72° Azm
16,622.43	11,347.55	-5,210.70	1,813.50	TD at 16622.43' MD