

# ENSIGN

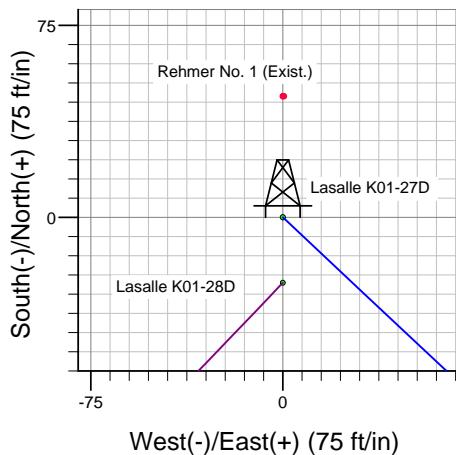
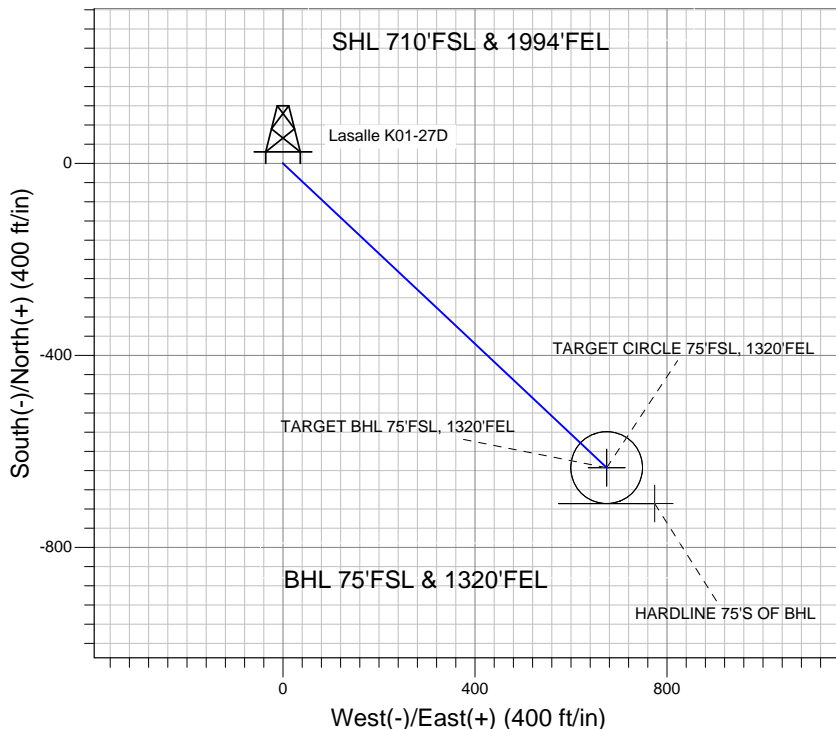
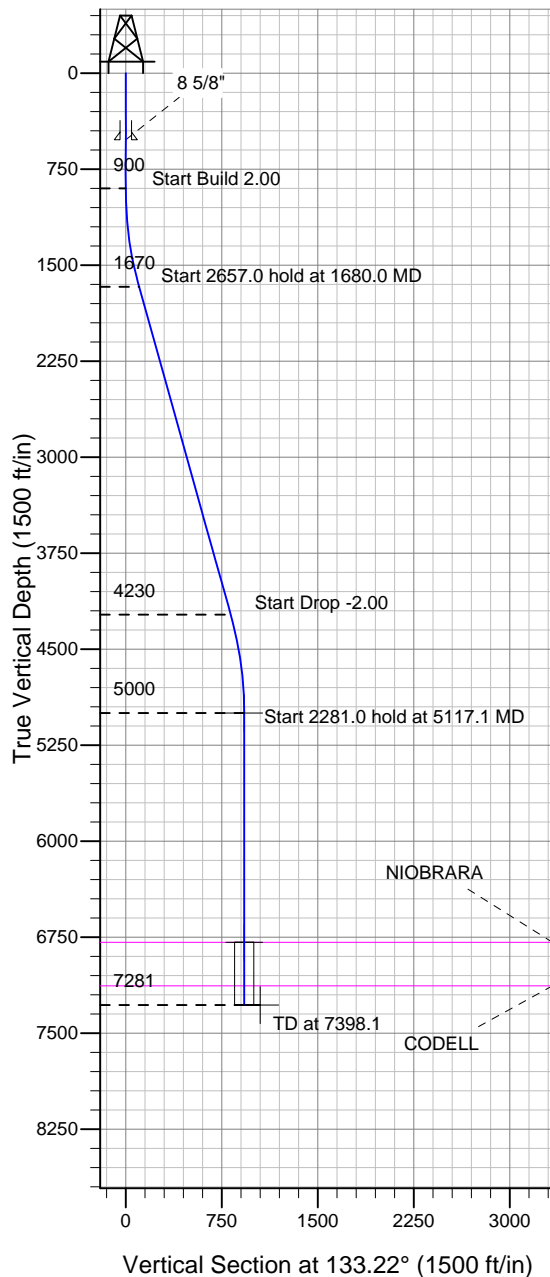
## Directional

Well Name: **Lasalle K01-27D**

Surface Location: Lasalle K01-28D Pad Sec.36-T5N-R66W  
North American Datum 1983, US State Plane 1983 Colorado Northern Zone  
Ground Elevation: 4663.0

+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.0 0.0 1371440.53 3216602.70 40° 21' 1.440 N 104° 43' 22.224 W  
Original Well EleWELL @ 4676.0ft (Original Well Elev)

### NOBLE ENERGY INC WELD COUNTY CO



Lasalle K01-28D Pad Sec.36-T5N-R66W  
Lasalle K01-27D  
Noble Lasalle K01-27D Plan #1 (9-03-10)  
8:11, September 10 2010



Azimuths to True North  
Magnetic North: 8.94°  
Magnetic Field  
Strength: 53193.7snT  
Dip Angle: 67.04°  
Date: 9/3/2010  
Model: IGRF2010

#### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 75'FSL, 1320'FEL	5000.0	-633.9	674.5	40° 20' 55.176 N	104° 43' 13.512 W	Point
TARGET CIRCLE 75'FSL, 1320'FEL	6791.0	-633.9	674.5	40° 20' 55.176 N	104° 43' 13.512 W	Circle (Radius: 75.0)
HARDLINE 75'S OF BHL	7281.0	-708.9	774.5	40° 20' 54.435 N	104° 43' 12.221 W	Polygon

#### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.0	
3	1680.0	15.60	133.22	1670.4	-72.3	76.9	2.00	133.22	105.5	
4	4337.1	15.60	133.22	4229.6	-561.6	597.6	0.00	0.00	820.1	
5	5117.1	0.00	0.00	5000.0	-633.9	674.5	2.00	180.00	925.6	TARGET BHL 75'FSL, 1320'FEL
6	7398.1	0.00	0.00	7281.0	-633.9	674.5	0.00	0.00	925.6	



## **Directional**

# **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.36-T5N-R66W**

**Lasalle K01-28D Pad Sec.36-T5N-R66W**

**Lasalle K01-27D**

**Wellbore #1**

**Plan: Noble Lasalle K01-27D Plan #1 (9-03-10)**

## **Standard Planning Report**

**10 September, 2010**



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Lasalle K01-27D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4676.0ft (Original Well Elev)
<b>Project:</b>	SEC.36-T5N-R66W	<b>MD Reference:</b>	WELL @ 4676.0ft (Original Well Elev)
<b>Site:</b>	Lasalle K01-28D Pad Sec.36-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Lasalle K01-27D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Lasalle K01-27D Plan #1 (9-03-10)		

<b>Project</b>	SEC.36-T5N-R66W, Weld County, Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site						Lasalle K01-28D Pad Sec.36-T5N-R66W											
Site Position:						Northing:			1,371,415.04 ft			Latitude:			40° 21' 1.188 N		
From:			Lat/Long			Easting:			3,216,602.92 ft			Longitude:			104° 43' 22.224 W		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.50 °		

Well	Lasalle K01-27D					
Well Position	+N-S	25.5 ft	Northing:	1,371,440.53 ft	Latitude:	40° 21' 1.440 N
	+E-W	0.0 ft	Easting:	3,216,602.70 ft	Longitude:	104° 43' 22.224 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,663.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	9/3/2010	8.94	67.04	53,194

<b>Design</b>	Noble Lasalle K01-27D Plan #1 (9-03-10)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	133.22

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,680.0	15.60	133.22	1,670.4	-72.3	76.9	2.00	2.00	0.00	133.22	
4,337.1	15.60	133.22	4,229.6	-561.6	597.6	0.00	0.00	0.00	0.00	
5,117.1	0.00	0.00	5,000.0	-633.9	674.5	2.00	-2.00	0.00	180.00	TARGET BHL 75'F!
7,398.1	0.00	0.00	7,281.0	-633.9	674.5	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Lasalle K01-27D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4676.0ft (Original Well Elev)
<b>Project:</b>	SEC.36-T5N-R66W	<b>MD Reference:</b>	WELL @ 4676.0ft (Original Well Elev)
<b>Site:</b>	Lasalle K01-28D Pad Sec.36-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Lasalle K01-27D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Lasalle K01-27D Plan #1 (9-03-10)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
560.0	0.00	0.00	560.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.00	0.00	760.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.40	133.22	920.0	0.0	0.1	0.1	2.00	2.00	0.00
960.0	1.20	133.22	960.0	-0.4	0.5	0.6	2.00	2.00	0.00
1,000.0	2.00	133.22	1,000.0	-1.2	1.3	1.7	2.00	2.00	0.00
1,040.0	2.80	133.22	1,039.9	-2.3	2.5	3.4	2.00	2.00	0.00
1,080.0	3.60	133.22	1,079.9	-3.9	4.1	5.7	2.00	2.00	0.00
1,120.0	4.40	133.22	1,119.8	-5.8	6.2	8.4	2.00	2.00	0.00
1,160.0	5.20	133.22	1,159.6	-8.1	8.6	11.8	2.00	2.00	0.00
1,200.0	6.00	133.22	1,199.5	-10.7	11.4	15.7	2.00	2.00	0.00
1,240.0	6.80	133.22	1,239.2	-13.8	14.7	20.2	2.00	2.00	0.00
1,280.0	7.60	133.22	1,278.9	-17.2	18.3	25.2	2.00	2.00	0.00
1,320.0	8.40	133.22	1,318.5	-21.0	22.4	30.7	2.00	2.00	0.00
1,360.0	9.20	133.22	1,358.0	-25.2	26.9	36.9	2.00	2.00	0.00
1,400.0	10.00	133.22	1,397.5	-29.8	31.7	43.5	2.00	2.00	0.00
1,440.0	10.80	133.22	1,436.8	-34.7	37.0	50.7	2.00	2.00	0.00
1,480.0	11.60	133.22	1,476.0	-40.1	42.6	58.5	2.00	2.00	0.00
1,520.0	12.40	133.22	1,515.2	-45.8	48.7	66.8	2.00	2.00	0.00
1,560.0	13.20	133.22	1,554.2	-51.8	55.2	75.7	2.00	2.00	0.00
1,600.0	14.00	133.22	1,593.1	-58.3	62.0	85.1	2.00	2.00	0.00
1,640.0	14.80	133.22	1,631.8	-65.1	69.3	95.0	2.00	2.00	0.00
1,680.0	15.60	133.22	1,670.4	-72.3	76.9	105.5	2.00	2.00	0.00
1,720.0	15.60	133.22	1,708.9	-79.6	84.7	116.3	0.00	0.00	0.00
1,760.0	15.60	133.22	1,747.5	-87.0	92.6	127.0	0.00	0.00	0.00
1,800.0	15.60	133.22	1,786.0	-94.4	100.4	137.8	0.00	0.00	0.00
1,840.0	15.60	133.22	1,824.5	-101.7	108.3	148.6	0.00	0.00	0.00
1,880.0	15.60	133.22	1,863.0	-109.1	116.1	159.3	0.00	0.00	0.00
1,920.0	15.60	133.22	1,901.6	-116.5	123.9	170.1	0.00	0.00	0.00
1,960.0	15.60	133.22	1,940.1	-123.8	131.8	180.8	0.00	0.00	0.00
2,000.0	15.60	133.22	1,978.6	-131.2	139.6	191.6	0.00	0.00	0.00
2,040.0	15.60	133.22	2,017.1	-138.6	147.5	202.3	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Lasalle K01-27D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4676.0ft (Original Well Elev)
<b>Project:</b>	SEC.36-T5N-R66W	<b>MD Reference:</b>	WELL @ 4676.0ft (Original Well Elev)
<b>Site:</b>	Lasalle K01-28D Pad Sec.36-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Lasalle K01-27D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Lasalle K01-27D Plan #1 (9-03-10)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
2,080.0	15.60	133.22	2,055.7	-145.9	155.3	213.1	0.00	0.00	0.00
2,120.0	15.60	133.22	2,094.2	-153.3	163.1	223.9	0.00	0.00	0.00
2,160.0	15.60	133.22	2,132.7	-160.7	171.0	234.6	0.00	0.00	0.00
2,200.0	15.60	133.22	2,171.2	-168.0	178.8	245.4	0.00	0.00	0.00
2,240.0	15.60	133.22	2,209.8	-175.4	186.7	256.1	0.00	0.00	0.00
2,280.0	15.60	133.22	2,248.3	-182.8	194.5	266.9	0.00	0.00	0.00
2,320.0	15.60	133.22	2,286.8	-190.1	202.3	277.6	0.00	0.00	0.00
2,360.0	15.60	133.22	2,325.3	-197.5	210.2	288.4	0.00	0.00	0.00
2,400.0	15.60	133.22	2,363.9	-204.9	218.0	299.2	0.00	0.00	0.00
2,440.0	15.60	133.22	2,402.4	-212.2	225.8	309.9	0.00	0.00	0.00
2,480.0	15.60	133.22	2,440.9	-219.6	233.7	320.7	0.00	0.00	0.00
2,520.0	15.60	133.22	2,479.5	-227.0	241.5	331.4	0.00	0.00	0.00
2,560.0	15.60	133.22	2,518.0	-234.3	249.4	342.2	0.00	0.00	0.00
2,600.0	15.60	133.22	2,556.5	-241.7	257.2	352.9	0.00	0.00	0.00
2,640.0	15.60	133.22	2,595.0	-249.1	265.0	363.7	0.00	0.00	0.00
2,680.0	15.60	133.22	2,633.6	-256.4	272.9	374.5	0.00	0.00	0.00
2,720.0	15.60	133.22	2,672.1	-263.8	280.7	385.2	0.00	0.00	0.00
2,760.0	15.60	133.22	2,710.6	-271.2	288.6	396.0	0.00	0.00	0.00
2,800.0	15.60	133.22	2,749.1	-278.5	296.4	406.7	0.00	0.00	0.00
2,840.0	15.60	133.22	2,787.7	-285.9	304.2	417.5	0.00	0.00	0.00
2,880.0	15.60	133.22	2,826.2	-293.3	312.1	428.2	0.00	0.00	0.00
2,920.0	15.60	133.22	2,864.7	-300.6	319.9	439.0	0.00	0.00	0.00
2,960.0	15.60	133.22	2,903.2	-308.0	327.8	449.8	0.00	0.00	0.00
3,000.0	15.60	133.22	2,941.8	-315.4	335.6	460.5	0.00	0.00	0.00
3,040.0	15.60	133.22	2,980.3	-322.7	343.4	471.3	0.00	0.00	0.00
3,080.0	15.60	133.22	3,018.8	-330.1	351.3	482.0	0.00	0.00	0.00
3,120.0	15.60	133.22	3,057.3	-337.5	359.1	492.8	0.00	0.00	0.00
3,160.0	15.60	133.22	3,095.9	-344.8	366.9	503.5	0.00	0.00	0.00
3,200.0	15.60	133.22	3,134.4	-352.2	374.8	514.3	0.00	0.00	0.00
3,240.0	15.60	133.22	3,172.9	-359.6	382.6	525.1	0.00	0.00	0.00
3,280.0	15.60	133.22	3,211.5	-366.9	390.5	535.8	0.00	0.00	0.00
3,320.0	15.60	133.22	3,250.0	-374.3	398.3	546.6	0.00	0.00	0.00
3,360.0	15.60	133.22	3,288.5	-381.7	406.1	557.3	0.00	0.00	0.00
3,400.0	15.60	133.22	3,327.0	-389.0	414.0	568.1	0.00	0.00	0.00
3,440.0	15.60	133.22	3,365.6	-396.4	421.8	578.8	0.00	0.00	0.00
3,480.0	15.60	133.22	3,404.1	-403.8	429.7	589.6	0.00	0.00	0.00
3,520.0	15.60	133.22	3,442.6	-411.1	437.5	600.4	0.00	0.00	0.00
3,560.0	15.60	133.22	3,481.1	-418.5	445.3	611.1	0.00	0.00	0.00
3,600.0	15.60	133.22	3,519.7	-425.9	453.2	621.9	0.00	0.00	0.00
3,640.0	15.60	133.22	3,558.2	-433.2	461.0	632.6	0.00	0.00	0.00
3,680.0	15.60	133.22	3,596.7	-440.6	468.9	643.4	0.00	0.00	0.00
3,720.0	15.60	133.22	3,635.2	-448.0	476.7	654.1	0.00	0.00	0.00
3,760.0	15.60	133.22	3,673.8	-455.3	484.5	664.9	0.00	0.00	0.00
3,800.0	15.60	133.22	3,712.3	-462.7	492.4	675.7	0.00	0.00	0.00
3,840.0	15.60	133.22	3,750.8	-470.1	500.2	686.4	0.00	0.00	0.00
3,880.0	15.60	133.22	3,789.3	-477.4	508.1	697.2	0.00	0.00	0.00
3,920.0	15.60	133.22	3,827.9	-484.8	515.9	707.9	0.00	0.00	0.00
3,960.0	15.60	133.22	3,866.4	-492.2	523.7	718.7	0.00	0.00	0.00
4,000.0	15.60	133.22	3,904.9	-499.5	531.6	729.5	0.00	0.00	0.00
4,040.0	15.60	133.22	3,943.5	-506.9	539.4	740.2	0.00	0.00	0.00
4,080.0	15.60	133.22	3,982.0	-514.3	547.2	751.0	0.00	0.00	0.00
4,120.0	15.60	133.22	4,020.5	-521.6	555.1	761.7	0.00	0.00	0.00
4,160.0	15.60	133.22	4,059.0	-529.0	562.9	772.5	0.00	0.00	0.00
4,200.0	15.60	133.22	4,097.6	-536.4	570.8	783.2	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Lasalle K01-27D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4676.0ft (Original Well Elev)
<b>Project:</b>	SEC.36-T5N-R66W	<b>MD Reference:</b>	WELL @ 4676.0ft (Original Well Elev)
<b>Site:</b>	Lasalle K01-28D Pad Sec.36-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Lasalle K01-27D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Lasalle K01-27D Plan #1 (9-03-10)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,240.0	15.60	133.22	4,136.1	-543.7	578.6	794.0	0.00	0.00	0.00
4,280.0	15.60	133.22	4,174.6	-551.1	586.4	804.8	0.00	0.00	0.00
4,320.0	15.60	133.22	4,213.1	-558.5	594.3	815.5	0.00	0.00	0.00
4,337.1	15.60	133.22	4,229.6	-561.6	597.6	820.1	0.00	0.00	0.00
4,360.0	15.14	133.22	4,251.7	-565.8	602.1	826.2	2.00	-2.00	0.00
4,400.0	14.34	133.22	4,290.4	-572.7	609.5	836.4	2.00	-2.00	0.00
4,440.0	13.54	133.22	4,329.2	-579.3	616.5	846.0	2.00	-2.00	0.00
4,480.0	12.74	133.22	4,368.1	-585.6	623.1	855.1	2.00	-2.00	0.00
4,520.0	11.94	133.22	4,407.2	-591.4	629.4	863.6	2.00	-2.00	0.00
4,560.0	11.14	133.22	4,446.4	-596.9	635.2	871.6	2.00	-2.00	0.00
4,600.0	10.34	133.22	4,485.7	-602.0	640.6	879.1	2.00	-2.00	0.00
4,640.0	9.54	133.22	4,525.1	-606.7	645.7	886.0	2.00	-2.00	0.00
4,680.0	8.74	133.22	4,564.6	-611.1	650.3	892.4	2.00	-2.00	0.00
4,720.0	7.94	133.22	4,604.2	-615.1	654.5	898.2	2.00	-2.00	0.00
4,760.0	7.14	133.22	4,643.8	-618.7	658.3	903.4	2.00	-2.00	0.00
4,800.0	6.34	133.22	4,683.6	-621.9	661.8	908.1	2.00	-2.00	0.00
4,840.0	5.54	133.22	4,723.3	-624.7	664.8	912.2	2.00	-2.00	0.00
4,880.0	4.74	133.22	4,763.2	-627.2	667.4	915.8	2.00	-2.00	0.00
4,920.0	3.94	133.22	4,803.1	-629.2	669.6	918.9	2.00	-2.00	0.00
4,960.0	3.14	133.22	4,843.0	-630.9	671.4	921.3	2.00	-2.00	0.00
5,000.0	2.34	133.22	4,882.9	-632.2	672.8	923.2	2.00	-2.00	0.00
5,040.0	1.54	133.22	4,922.9	-633.2	673.8	924.6	2.00	-2.00	0.00
5,080.0	0.74	133.22	4,962.9	-633.7	674.4	925.4	2.00	-2.00	0.00
5,117.1	0.00	0.00	5,000.0	-633.9	674.5	925.6	2.00	-2.00	0.00
TARGET BHL 75'FSL, 1320'FEL									
5,120.0	0.00	0.00	5,002.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,160.0	0.00	0.00	5,042.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,200.0	0.00	0.00	5,082.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,240.0	0.00	0.00	5,122.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,280.0	0.00	0.00	5,162.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,320.0	0.00	0.00	5,202.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,360.0	0.00	0.00	5,242.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,400.0	0.00	0.00	5,282.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,440.0	0.00	0.00	5,322.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,480.0	0.00	0.00	5,362.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,520.0	0.00	0.00	5,402.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,560.0	0.00	0.00	5,442.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,600.0	0.00	0.00	5,482.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,640.0	0.00	0.00	5,522.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,680.0	0.00	0.00	5,562.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,720.0	0.00	0.00	5,602.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,760.0	0.00	0.00	5,642.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,800.0	0.00	0.00	5,682.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,840.0	0.00	0.00	5,722.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,880.0	0.00	0.00	5,762.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,920.0	0.00	0.00	5,802.9	-633.9	674.5	925.6	0.00	0.00	0.00
5,960.0	0.00	0.00	5,842.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,000.0	0.00	0.00	5,882.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,040.0	0.00	0.00	5,922.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,080.0	0.00	0.00	5,962.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,120.0	0.00	0.00	6,002.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,160.0	0.00	0.00	6,042.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,200.0	0.00	0.00	6,082.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,240.0	0.00	0.00	6,122.9	-633.9	674.5	925.6	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Lasalle K01-27D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4676.0ft (Original Well Elev)
<b>Project:</b>	SEC.36-T5N-R66W	<b>MD Reference:</b>	WELL @ 4676.0ft (Original Well Elev)
<b>Site:</b>	Lasalle K01-28D Pad Sec.36-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Lasalle K01-27D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Lasalle K01-27D Plan #1 (9-03-10)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,280.0	0.00	0.00	6,162.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,320.0	0.00	0.00	6,202.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,360.0	0.00	0.00	6,242.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,400.0	0.00	0.00	6,282.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,440.0	0.00	0.00	6,322.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,480.0	0.00	0.00	6,362.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,520.0	0.00	0.00	6,402.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,560.0	0.00	0.00	6,442.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,600.0	0.00	0.00	6,482.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,640.0	0.00	0.00	6,522.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,680.0	0.00	0.00	6,562.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,720.0	0.00	0.00	6,602.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,760.0	0.00	0.00	6,642.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,800.0	0.00	0.00	6,682.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,840.0	0.00	0.00	6,722.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,880.0	0.00	0.00	6,762.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,908.1	0.00	0.00	6,791.0	-633.9	674.5	925.6	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 75'FSL, 1320'FEL									
6,920.0	0.00	0.00	6,802.9	-633.9	674.5	925.6	0.00	0.00	0.00
6,960.0	0.00	0.00	6,842.9	-633.9	674.5	925.6	0.00	0.00	0.00
7,000.0	0.00	0.00	6,882.9	-633.9	674.5	925.6	0.00	0.00	0.00
7,040.0	0.00	0.00	6,922.9	-633.9	674.5	925.6	0.00	0.00	0.00
7,080.0	0.00	0.00	6,962.9	-633.9	674.5	925.6	0.00	0.00	0.00
7,120.0	0.00	0.00	7,002.9	-633.9	674.5	925.6	0.00	0.00	0.00
7,160.0	0.00	0.00	7,042.9	-633.9	674.5	925.6	0.00	0.00	0.00
7,200.0	0.00	0.00	7,082.9	-633.9	674.5	925.6	0.00	0.00	0.00
7,240.0	0.00	0.00	7,122.9	-633.9	674.5	925.6	0.00	0.00	0.00
7,248.1	0.00	0.00	7,131.0	-633.9	674.5	925.6	0.00	0.00	0.00
CODELL									
7,280.0	0.00	0.00	7,162.9	-633.9	674.5	925.6	0.00	0.00	0.00
7,320.0	0.00	0.00	7,202.9	-633.9	674.5	925.6	0.00	0.00	0.00
7,360.0	0.00	0.00	7,242.9	-633.9	674.5	925.6	0.00	0.00	0.00
7,398.1	0.00	0.00	7,281.0	-633.9	674.5	925.6	0.00	0.00	0.00
HARDLINE 75'S OF BHL									

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
TARGET BHL 75'FSL	0.00	0.00	5,000.0	-633.9	674.5	1,370,812.61	3,217,282.73	40° 20' 55.176 N	104° 43' 13.512 W
- plan hits target									
- Point									
HARDLINE 75'S OF E	0.00	0.00	7,281.0	-708.9	774.5	1,370,738.48	3,217,383.34	40° 20' 54.435 N	104° 43' 12.221 W
- plan misses by 125.0ft at 7398.1ft MD (7281.0 TVD, -633.9 N, 674.5 E)									
- Polygon									
Point 1			7,281.0	0.0	0.0	1,370,738.48	3,217,383.34		
Point 2			7,281.0	0.0	-200.0	1,370,736.72	3,217,183.36		
TARGET CIRCLE 75'	0.00	0.00	6,791.0	-633.9	674.5	1,370,812.61	3,217,282.73	40° 20' 55.176 N	104° 43' 13.512 W
- plan hits target									
- Circle (radius 75.0)									

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Lasalle K01-27D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4676.0ft (Original Well Elev)
<b>Project:</b>	SEC.36-T5N-R66W	<b>MD Reference:</b>	WELL @ 4676.0ft (Original Well Elev)
<b>Site:</b>	Lasalle K01-28D Pad Sec.36-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Lasalle K01-27D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Lasalle K01-27D Plan #1 (9-03-10)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
520.0	520.0	8 5/8"	8-5/8	12-1/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,908.1	6,791.0	NIOBRARA		0.00	
7,248.1	7,131.0	CODELL		0.00	