

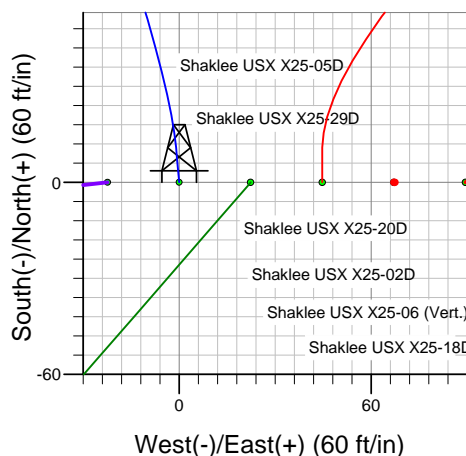
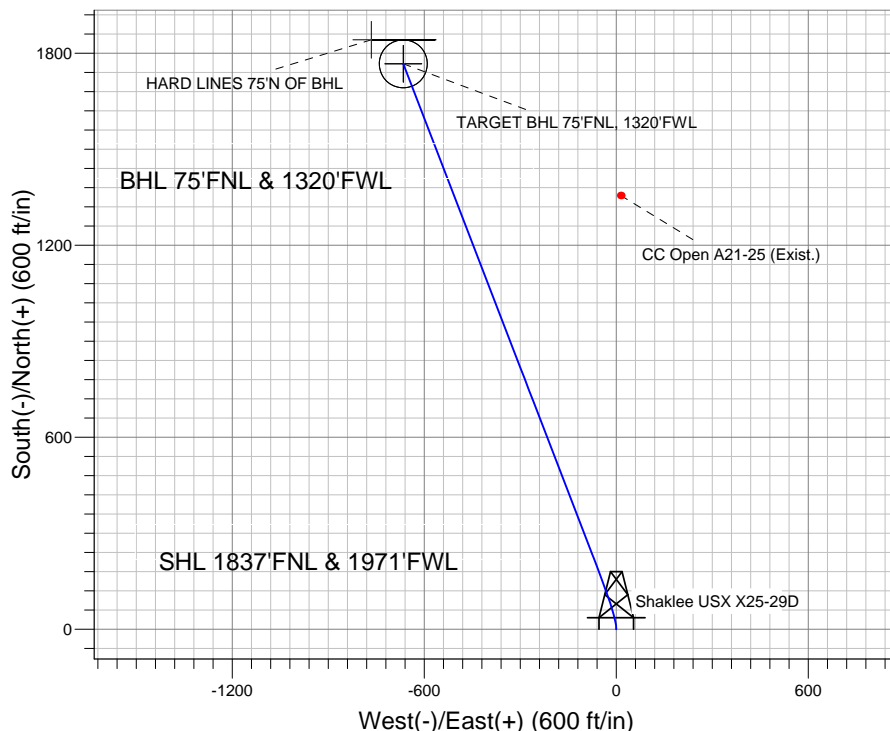
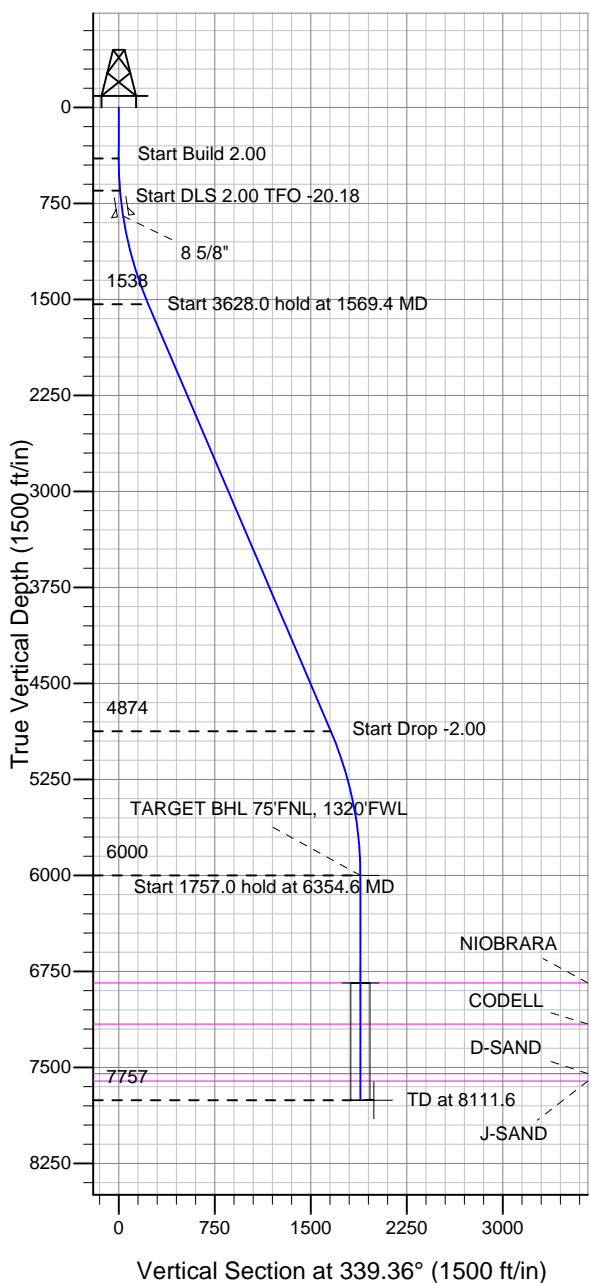
# ENSIGN

## Directional

### Well Name: Shaklee USX X25-29D

Surface Location: Shaklee USX X25-02D Pad Sec.25-T2N-R65W  
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone  
 Ground Elevation: 4904.0  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1284772.58 3247620.82 40.111700 -104.614660  
 Original Well Elev WELL @ 4917.0ft (Original Well Elev)

## NOBLE ENERGY INC WELD COUNTY CO



Shaklee USX X25-02D Pad Sec.25-T2N-R65W  
 Shaklee USX X25-29D  
 Noble Shaklee USX X25-29D Plan #1 (4-19-11)  
 13:12, April 26 2011



Azimuths to True North  
 Magnetic North: 8.78°

Magnetic Field  
 Strength: 53009.8snT  
 Dip Angle: 66.85°  
 Date: 4/26/2011  
 Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 75'FNL, 1320'FWL	6000.0	1766.9	-665.7	40.116550	-104.617040	Point
TARGET CIRCLE 75'FNL & 1320'FWL	6840.0	1766.9	-665.7	40.116550	-104.617040	Circle (Radius: 75.0)
HARD LINES 75'N OF BHL	7757.0	1841.9	-765.7	40.116756	-104.617398	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	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	650.0	5.00	355.00	649.7	10.9	-1.0	2.00	355.00	10.5	
4	1569.4	23.14	338.93	1538.0	221.2	-70.0	2.00	-20.18	231.7	
5	5197.4	23.14	338.93	4874.0	1551.7	-582.8	0.00	0.00	1657.6	
6	6354.6	0.00	0.00	6000.0	1766.9	-665.7	2.00	180.00	1888.1	TARGET BHL 75'FNL, 1320'FWL
7	8111.6	0.00	0.00	7757.0	1766.9	-665.7	0.00	0.00	1888.1	



## **Directional**

### **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.25-T2N-R65W**

**Shaklee USX X25-02D Pad Sec.25-T2N-R65W**

**Shaklee USX X25-29D**

**Wellbore #1**

**Plan: Noble Shaklee USX X25-29D Plan #1 (4-19-11)**

### **Standard Planning Report**

**26 April, 2011**



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Shaklee USX X25-29D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4917.0ft (Original Well Elev)
<b>Project:</b>	SEC.25-T2N-R65W	<b>MD Reference:</b>	WELL @ 4917.0ft (Original Well Elev)
<b>Site:</b>	Shaklee USX X25-02D Pad Sec.25-T2N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Shaklee USX X25-29D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Shaklee USX X25-29D Plan #1 (4-19-11)		

<b>Project</b>	SEC.25-T2N-R65W, 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						Shaklee USX X25-02D Pad Sec.25-T2N-R65W											
Site Position:						Northing:			1,284,773.06 ft			Latitude:			40.111700		
From:			Lat/Long			Easting:			3,247,665.57 ft			Longitude:			-104.614500		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.57 °		

Well	Shaklee USX X25-29D					
Well Position	+N/-S	0.0 ft	Northing:	1,284,772.58 ft	Latitude:	40.111700
	+E/-W	-44.8 ft	Easting:	3,247,620.82 ft	Longitude:	-104.614660
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,904.0 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	4/26/2011	8.78	66.85	53,010

<b>Design</b>	Noble Shaklee USX X25-29D Plan #1 (4-19-11)			
<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	339.36

<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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
650.0	5.00	355.00	649.7	10.9	-1.0	2.00	2.00	0.00	355.00	
1,569.4	23.14	338.93	1,538.0	221.2	-70.0	2.00	1.97	-1.75	-20.18	
5,197.4	23.14	338.93	4,874.0	1,551.7	-582.8	0.00	0.00	0.00	0.00	
6,354.6	0.00	0.00	6,000.0	1,766.9	-665.7	2.00	-2.00	0.00	180.00	TARGET BHL 75'FI
8,111.6	0.00	0.00	7,757.0	1,766.9	-665.7	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Shaklee USX X25-29D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4917.0ft (Original Well Elev)
<b>Project:</b>	SEC.25-T2N-R65W	<b>MD Reference:</b>	WELL @ 4917.0ft (Original Well Elev)
<b>Site:</b>	Shaklee USX X25-02D Pad Sec.25-T2N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Shaklee USX X25-29D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Shaklee USX X25-29D Plan #1 (4-19-11)		

**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	0.80	355.00	440.0	0.3	0.0	0.3	2.00	2.00	0.00
480.0	1.60	355.00	480.0	1.1	-0.1	1.1	2.00	2.00	0.00
520.0	2.40	355.00	520.0	2.5	-0.2	2.4	2.00	2.00	0.00
560.0	3.20	355.00	559.9	4.4	-0.4	4.3	2.00	2.00	0.00
600.0	4.00	355.00	599.8	7.0	-0.6	6.7	2.00	2.00	0.00
640.0	4.80	355.00	639.7	10.0	-0.9	9.7	2.00	2.00	0.00
650.0	5.00	355.00	649.7	10.9	-1.0	10.5	2.00	2.00	0.00
680.0	5.57	352.87	679.6	13.6	-1.2	13.2	2.00	1.89	-7.11
720.0	6.33	350.62	719.3	17.7	-1.8	17.2	2.00	1.91	-5.62
760.0	7.11	348.85	759.1	22.3	-2.7	21.8	2.00	1.93	-4.41
800.0	7.88	347.44	798.7	27.4	-3.8	27.0	2.00	1.95	-3.54
840.0	8.67	346.27	838.3	33.0	-5.1	32.7	2.00	1.96	-2.91
851.8	8.90	345.97	850.0	34.8	-5.5	34.5	2.00	1.96	-2.58
<b>8 5/8"</b>									
880.0	9.45	345.30	877.8	39.1	-6.6	38.9	2.00	1.96	-2.37
920.0	10.24	344.48	917.2	45.7	-8.4	45.8	2.00	1.97	-2.06
960.0	11.03	343.77	956.5	52.8	-10.4	53.1	2.00	1.97	-1.77
1,000.0	11.82	343.15	995.7	60.4	-12.7	61.0	2.00	1.98	-1.53
1,040.0	12.61	342.62	1,034.8	68.5	-15.2	69.5	2.00	1.98	-1.34
1,080.0	13.40	342.14	1,073.8	77.1	-17.9	78.4	2.00	1.98	-1.19
1,120.0	14.20	341.72	1,112.6	86.2	-20.9	88.0	2.00	1.98	-1.06
1,160.0	14.99	341.34	1,151.4	95.7	-24.1	98.1	2.00	1.99	-0.95
1,200.0	15.79	341.00	1,189.9	105.8	-27.5	108.7	2.00	1.99	-0.85
1,240.0	16.58	340.69	1,228.3	116.3	-31.1	119.8	2.00	1.99	-0.77
1,280.0	17.38	340.41	1,266.6	127.3	-35.0	131.5	2.00	1.99	-0.71
1,320.0	18.17	340.15	1,304.7	138.8	-39.2	143.7	2.00	1.99	-0.65
1,360.0	18.97	339.91	1,342.6	150.8	-43.5	156.4	2.00	1.99	-0.59
1,400.0	19.77	339.69	1,380.3	163.2	-48.1	169.7	2.00	1.99	-0.55
1,440.0	20.56	339.49	1,417.9	176.2	-52.9	183.5	2.00	1.99	-0.51
1,480.0	21.36	339.30	1,455.2	189.5	-57.9	197.8	2.00	1.99	-0.47
1,520.0	22.16	339.13	1,492.4	203.4	-63.2	212.6	2.00	1.99	-0.44
1,560.0	22.96	338.96	1,529.3	217.7	-68.7	228.0	2.00	1.99	-0.41
1,569.4	23.14	338.93	1,538.0	221.2	-70.0	231.7	2.00	1.99	-0.39
1,600.0	23.14	338.93	1,566.1	232.4	-74.3	243.7	0.00	0.00	0.00
1,640.0	23.14	338.93	1,602.9	247.1	-80.0	259.4	0.00	0.00	0.00
1,680.0	23.14	338.93	1,639.7	261.7	-85.6	275.1	0.00	0.00	0.00
1,720.0	23.14	338.93	1,676.5	276.4	-91.3	290.8	0.00	0.00	0.00
1,760.0	23.14	338.93	1,713.2	291.1	-96.9	306.6	0.00	0.00	0.00
1,800.0	23.14	338.93	1,750.0	305.7	-102.6	322.3	0.00	0.00	0.00
1,840.0	23.14	338.93	1,786.8	320.4	-108.2	338.0	0.00	0.00	0.00
1,880.0	23.14	338.93	1,823.6	335.1	-113.9	353.7	0.00	0.00	0.00
1,920.0	23.14	338.93	1,860.4	349.8	-119.6	369.4	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Shaklee USX X25-29D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4917.0ft (Original Well Elev)
<b>Project:</b>	SEC.25-T2N-R65W	<b>MD Reference:</b>	WELL @ 4917.0ft (Original Well Elev)
<b>Site:</b>	Shaklee USX X25-02D Pad Sec.25-T2N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Shaklee USX X25-29D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Shaklee USX X25-29D Plan #1 (4-19-11)		

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)
1,960.0	23.14	338.93	1,897.1	364.4	-125.2	385.2	0.00	0.00	0.00
2,000.0	23.14	338.93	1,933.9	379.1	-130.9	400.9	0.00	0.00	0.00
2,040.0	23.14	338.93	1,970.7	393.8	-136.5	416.6	0.00	0.00	0.00
2,080.0	23.14	338.93	2,007.5	408.4	-142.2	432.3	0.00	0.00	0.00
2,120.0	23.14	338.93	2,044.3	423.1	-147.8	448.1	0.00	0.00	0.00
2,160.0	23.14	338.93	2,081.0	437.8	-153.5	463.8	0.00	0.00	0.00
2,200.0	23.14	338.93	2,117.8	452.4	-159.1	479.5	0.00	0.00	0.00
2,240.0	23.14	338.93	2,154.6	467.1	-164.8	495.2	0.00	0.00	0.00
2,280.0	23.14	338.93	2,191.4	481.8	-170.4	510.9	0.00	0.00	0.00
2,320.0	23.14	338.93	2,228.2	496.5	-176.1	526.7	0.00	0.00	0.00
2,360.0	23.14	338.93	2,265.0	511.1	-181.7	542.4	0.00	0.00	0.00
2,400.0	23.14	338.93	2,301.7	525.8	-187.4	558.1	0.00	0.00	0.00
2,440.0	23.14	338.93	2,338.5	540.5	-193.0	573.8	0.00	0.00	0.00
2,480.0	23.14	338.93	2,375.3	555.1	-198.7	589.5	0.00	0.00	0.00
2,520.0	23.14	338.93	2,412.1	569.8	-204.4	605.3	0.00	0.00	0.00
2,560.0	23.14	338.93	2,448.9	584.5	-210.0	621.0	0.00	0.00	0.00
2,600.0	23.14	338.93	2,485.6	599.1	-215.7	636.7	0.00	0.00	0.00
2,640.0	23.14	338.93	2,522.4	613.8	-221.3	652.4	0.00	0.00	0.00
2,680.0	23.14	338.93	2,559.2	628.5	-227.0	668.1	0.00	0.00	0.00
2,720.0	23.14	338.93	2,596.0	643.2	-232.6	683.9	0.00	0.00	0.00
2,760.0	23.14	338.93	2,632.8	657.8	-238.3	699.6	0.00	0.00	0.00
2,800.0	23.14	338.93	2,669.5	672.5	-243.9	715.3	0.00	0.00	0.00
2,840.0	23.14	338.93	2,706.3	687.2	-249.6	731.0	0.00	0.00	0.00
2,880.0	23.14	338.93	2,743.1	701.8	-255.2	746.7	0.00	0.00	0.00
2,920.0	23.14	338.93	2,779.9	716.5	-260.9	762.5	0.00	0.00	0.00
2,960.0	23.14	338.93	2,816.7	731.2	-266.5	778.2	0.00	0.00	0.00
3,000.0	23.14	338.93	2,853.4	745.8	-272.2	793.9	0.00	0.00	0.00
3,040.0	23.14	338.93	2,890.2	760.5	-277.8	809.6	0.00	0.00	0.00
3,080.0	23.14	338.93	2,927.0	775.2	-283.5	825.4	0.00	0.00	0.00
3,120.0	23.14	338.93	2,963.8	789.8	-289.1	841.1	0.00	0.00	0.00
3,160.0	23.14	338.93	3,000.6	804.5	-294.8	856.8	0.00	0.00	0.00
3,200.0	23.14	338.93	3,037.4	819.2	-300.5	872.5	0.00	0.00	0.00
3,240.0	23.14	338.93	3,074.1	833.9	-306.1	888.2	0.00	0.00	0.00
3,280.0	23.14	338.93	3,110.9	848.5	-311.8	904.0	0.00	0.00	0.00
3,320.0	23.14	338.93	3,147.7	863.2	-317.4	919.7	0.00	0.00	0.00
3,360.0	23.14	338.93	3,184.5	877.9	-323.1	935.4	0.00	0.00	0.00
3,400.0	23.14	338.93	3,221.3	892.5	-328.7	951.1	0.00	0.00	0.00
3,440.0	23.14	338.93	3,258.0	907.2	-334.4	966.8	0.00	0.00	0.00
3,480.0	23.14	338.93	3,294.8	921.9	-340.0	982.6	0.00	0.00	0.00
3,520.0	23.14	338.93	3,331.6	936.5	-345.7	998.3	0.00	0.00	0.00
3,560.0	23.14	338.93	3,368.4	951.2	-351.3	1,014.0	0.00	0.00	0.00
3,600.0	23.14	338.93	3,405.2	965.9	-357.0	1,029.7	0.00	0.00	0.00
3,640.0	23.14	338.93	3,441.9	980.6	-362.6	1,045.4	0.00	0.00	0.00
3,680.0	23.14	338.93	3,478.7	995.2	-368.3	1,061.2	0.00	0.00	0.00
3,720.0	23.14	338.93	3,515.5	1,009.9	-373.9	1,076.9	0.00	0.00	0.00
3,760.0	23.14	338.93	3,552.3	1,024.6	-379.6	1,092.6	0.00	0.00	0.00
3,800.0	23.14	338.93	3,589.1	1,039.2	-385.3	1,108.3	0.00	0.00	0.00
3,840.0	23.14	338.93	3,625.8	1,053.9	-390.9	1,124.1	0.00	0.00	0.00
3,880.0	23.14	338.93	3,662.6	1,068.6	-396.6	1,139.8	0.00	0.00	0.00
3,920.0	23.14	338.93	3,699.4	1,083.2	-402.2	1,155.5	0.00	0.00	0.00
3,960.0	23.14	338.93	3,736.2	1,097.9	-407.9	1,171.2	0.00	0.00	0.00
4,000.0	23.14	338.93	3,773.0	1,112.6	-413.5	1,186.9	0.00	0.00	0.00
4,040.0	23.14	338.93	3,809.8	1,127.3	-419.2	1,202.7	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Shaklee USX X25-29D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4917.0ft (Original Well Elev)
<b>Project:</b>	SEC.25-T2N-R65W	<b>MD Reference:</b>	WELL @ 4917.0ft (Original Well Elev)
<b>Site:</b>	Shaklee USX X25-02D Pad Sec.25-T2N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Shaklee USX X25-29D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Shaklee USX X25-29D Plan #1 (4-19-11)		

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)
4,080.0	23.14	338.93	3,846.5	1,141.9	-424.8	1,218.4	0.00	0.00	0.00
4,120.0	23.14	338.93	3,883.3	1,156.6	-430.5	1,234.1	0.00	0.00	0.00
4,160.0	23.14	338.93	3,920.1	1,171.3	-436.1	1,249.8	0.00	0.00	0.00
4,200.0	23.14	338.93	3,956.9	1,185.9	-441.8	1,265.5	0.00	0.00	0.00
4,240.0	23.14	338.93	3,993.7	1,200.6	-447.4	1,281.3	0.00	0.00	0.00
4,280.0	23.14	338.93	4,030.4	1,215.3	-453.1	1,297.0	0.00	0.00	0.00
4,320.0	23.14	338.93	4,067.2	1,229.9	-458.7	1,312.7	0.00	0.00	0.00
4,360.0	23.14	338.93	4,104.0	1,244.6	-464.4	1,328.4	0.00	0.00	0.00
4,400.0	23.14	338.93	4,140.8	1,259.3	-470.1	1,344.1	0.00	0.00	0.00
4,440.0	23.14	338.93	4,177.6	1,274.0	-475.7	1,359.9	0.00	0.00	0.00
4,480.0	23.14	338.93	4,214.3	1,288.6	-481.4	1,375.6	0.00	0.00	0.00
4,520.0	23.14	338.93	4,251.1	1,303.3	-487.0	1,391.3	0.00	0.00	0.00
4,560.0	23.14	338.93	4,287.9	1,318.0	-492.7	1,407.0	0.00	0.00	0.00
4,600.0	23.14	338.93	4,324.7	1,332.6	-498.3	1,422.8	0.00	0.00	0.00
4,640.0	23.14	338.93	4,361.5	1,347.3	-504.0	1,438.5	0.00	0.00	0.00
4,680.0	23.14	338.93	4,398.2	1,362.0	-509.6	1,454.2	0.00	0.00	0.00
4,720.0	23.14	338.93	4,435.0	1,376.6	-515.3	1,469.9	0.00	0.00	0.00
4,760.0	23.14	338.93	4,471.8	1,391.3	-520.9	1,485.6	0.00	0.00	0.00
4,800.0	23.14	338.93	4,508.6	1,406.0	-526.6	1,501.4	0.00	0.00	0.00
4,840.0	23.14	338.93	4,545.4	1,420.7	-532.2	1,517.1	0.00	0.00	0.00
4,880.0	23.14	338.93	4,582.2	1,435.3	-537.9	1,532.8	0.00	0.00	0.00
4,920.0	23.14	338.93	4,618.9	1,450.0	-543.5	1,548.5	0.00	0.00	0.00
4,960.0	23.14	338.93	4,655.7	1,464.7	-549.2	1,564.2	0.00	0.00	0.00
5,000.0	23.14	338.93	4,692.5	1,479.3	-554.8	1,580.0	0.00	0.00	0.00
5,040.0	23.14	338.93	4,729.3	1,494.0	-560.5	1,595.7	0.00	0.00	0.00
5,080.0	23.14	338.93	4,766.1	1,508.7	-566.2	1,611.4	0.00	0.00	0.00
5,120.0	23.14	338.93	4,802.8	1,523.3	-571.8	1,627.1	0.00	0.00	0.00
5,160.0	23.14	338.93	4,839.6	1,538.0	-577.5	1,642.8	0.00	0.00	0.00
5,197.4	23.14	338.93	4,874.0	1,551.7	-582.8	1,657.6	0.00	0.00	0.00
5,200.0	23.09	338.93	4,876.4	1,552.7	-583.1	1,658.6	2.00	-2.00	0.00
5,240.0	22.29	338.93	4,913.3	1,567.1	-588.7	1,674.0	2.00	-2.00	0.00
5,280.0	21.49	338.93	4,950.4	1,581.0	-594.0	1,688.9	2.00	-2.00	0.00
5,320.0	20.69	338.93	4,987.7	1,594.4	-599.2	1,703.3	2.00	-2.00	0.00
5,360.0	19.89	338.93	5,025.3	1,607.4	-604.2	1,717.2	2.00	-2.00	0.00
5,400.0	19.09	338.93	5,063.0	1,619.8	-609.0	1,730.5	2.00	-2.00	0.00
5,440.0	18.29	338.93	5,100.9	1,631.8	-613.6	1,743.3	2.00	-2.00	0.00
5,480.0	17.49	338.93	5,138.9	1,643.3	-618.0	1,755.6	2.00	-2.00	0.00
5,520.0	16.69	338.93	5,177.1	1,654.2	-622.2	1,767.4	2.00	-2.00	0.00
5,560.0	15.89	338.93	5,215.5	1,664.7	-626.3	1,778.6	2.00	-2.00	0.00
5,600.0	15.09	338.93	5,254.1	1,674.7	-630.1	1,789.3	2.00	-2.00	0.00
5,640.0	14.29	338.93	5,292.8	1,684.1	-633.8	1,799.4	2.00	-2.00	0.00
5,680.0	13.49	338.93	5,331.6	1,693.1	-637.2	1,809.0	2.00	-2.00	0.00
5,720.0	12.69	338.93	5,370.6	1,701.5	-640.5	1,818.1	2.00	-2.00	0.00
5,760.0	11.89	338.93	5,409.7	1,709.5	-643.5	1,826.6	2.00	-2.00	0.00
5,800.0	11.09	338.93	5,448.9	1,716.9	-646.4	1,834.6	2.00	-2.00	0.00
5,840.0	10.29	338.93	5,488.2	1,723.9	-649.1	1,842.0	2.00	-2.00	0.00
5,880.0	9.49	338.93	5,527.6	1,730.3	-651.5	1,848.9	2.00	-2.00	0.00
5,920.0	8.69	338.93	5,567.1	1,736.2	-653.8	1,855.2	2.00	-2.00	0.00
5,960.0	7.89	338.93	5,606.6	1,741.5	-655.9	1,861.0	2.00	-2.00	0.00
6,000.0	7.09	338.93	5,646.3	1,746.4	-657.8	1,866.2	2.00	-2.00	0.00
6,040.0	6.29	338.93	5,686.0	1,750.8	-659.4	1,870.8	2.00	-2.00	0.00
6,080.0	5.49	338.93	5,725.8	1,754.6	-660.9	1,874.9	2.00	-2.00	0.00
6,120.0	4.69	338.93	5,765.7	1,757.9	-662.2	1,878.5	2.00	-2.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Shaklee USX X25-29D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4917.0ft (Original Well Elev)
<b>Project:</b>	SEC.25-T2N-R65W	<b>MD Reference:</b>	WELL @ 4917.0ft (Original Well Elev)
<b>Site:</b>	Shaklee USX X25-02D Pad Sec.25-T2N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Shaklee USX X25-29D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Shaklee USX X25-29D Plan #1 (4-19-11)		

**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)
6,160.0	3.89	338.93	5,805.5	1,760.7	-663.3	1,881.5	2.00	-2.00	0.00
6,200.0	3.09	338.93	5,845.5	1,763.0	-664.2	1,883.9	2.00	-2.00	0.00
6,240.0	2.29	338.93	5,885.4	1,764.7	-664.8	1,885.8	2.00	-2.00	0.00
6,280.0	1.49	338.93	5,925.4	1,766.0	-665.3	1,887.1	2.00	-2.00	0.00
6,320.0	0.69	338.93	5,965.4	1,766.7	-665.6	1,887.9	2.00	-2.00	0.00
6,354.6	0.00	0.00	6,000.0	1,766.9	-665.7	1,888.1	2.00	-2.00	0.00
<b>TARGET BHL 75'FNL, 1320'FWL</b>									
6,360.0	0.00	0.00	6,005.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
6,400.0	0.00	0.00	6,045.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
6,440.0	0.00	0.00	6,085.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
6,480.0	0.00	0.00	6,125.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
6,520.0	0.00	0.00	6,165.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
6,560.0	0.00	0.00	6,205.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
6,600.0	0.00	0.00	6,245.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
6,640.0	0.00	0.00	6,285.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
6,680.0	0.00	0.00	6,325.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
6,720.0	0.00	0.00	6,365.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
6,760.0	0.00	0.00	6,405.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
6,800.0	0.00	0.00	6,445.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
6,840.0	0.00	0.00	6,485.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
6,880.0	0.00	0.00	6,525.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
6,920.0	0.00	0.00	6,565.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
6,960.0	0.00	0.00	6,605.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,000.0	0.00	0.00	6,645.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,040.0	0.00	0.00	6,685.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,080.0	0.00	0.00	6,725.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,120.0	0.00	0.00	6,765.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,160.0	0.00	0.00	6,805.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,194.6	0.00	0.00	6,840.0	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
<b>NIOBRARA - TARGET CIRCLE 75'FNL &amp; 1320'FWL</b>									
7,200.0	0.00	0.00	6,845.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,240.0	0.00	0.00	6,885.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,280.0	0.00	0.00	6,925.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,320.0	0.00	0.00	6,965.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,360.0	0.00	0.00	7,005.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,400.0	0.00	0.00	7,045.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,440.0	0.00	0.00	7,085.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,480.0	0.00	0.00	7,125.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,516.6	0.00	0.00	7,162.0	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
<b>CODELL</b>									
7,520.0	0.00	0.00	7,165.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,560.0	0.00	0.00	7,205.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,600.0	0.00	0.00	7,245.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,640.0	0.00	0.00	7,285.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,680.0	0.00	0.00	7,325.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,720.0	0.00	0.00	7,365.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,760.0	0.00	0.00	7,405.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,800.0	0.00	0.00	7,445.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,840.0	0.00	0.00	7,485.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,880.0	0.00	0.00	7,525.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,903.6	0.00	0.00	7,549.0	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
<b>D-SAND</b>									



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Shaklee USX X25-29D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4917.0ft (Original Well Elev)
<b>Project:</b>	SEC.25-T2N-R65W	<b>MD Reference:</b>	WELL @ 4917.0ft (Original Well Elev)
<b>Site:</b>	Shaklee USX X25-02D Pad Sec.25-T2N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Shaklee USX X25-29D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Shaklee USX X25-29D Plan #1 (4-19-11)		

**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)
7,920.0	0.00	0.00	7,565.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,960.0	0.00	0.00	7,605.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
7,961.6	0.00	0.00	7,607.0	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
<b>J-SAND</b>									
8,000.0	0.00	0.00	7,645.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
8,040.0	0.00	0.00	7,685.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
8,080.0	0.00	0.00	7,725.4	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
8,111.6	0.00	0.00	7,757.0	1,766.9	-665.7	1,888.1	0.00	0.00	0.00
<b>HARD LINES 75'N OF BHL</b>									

**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									
HARD LINES 75'N OF	0.00	0.00	7,757.0	1,841.9	-765.7	1,286,606.67	3,246,836.80	40.116756	-104.617398
- plan misses target center by 125.1ft at 8111.6ft MD (7757.0 TVD, 1766.9 N, -665.7 E)									
- Polygon									
Point 1			7,757.0	0.0	0.0	1,286,606.67	3,246,836.80		
Point 2			7,757.0	0.0	200.0	1,286,608.67	3,247,036.78		
TARGET CIRCLE 75'	0.00	0.00	6,840.0	1,766.9	-665.7	1,286,532.64	3,246,937.58	40.116550	-104.617040
- plan hits target center									
- Circle (radius 75.0)									
TARGET BHL 75'FNL	0.00	0.00	6,000.0	1,766.9	-665.7	1,286,532.64	3,246,937.58	40.116550	-104.617040
- plan hits target center									
- Point									

**Casing Points**

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
851.8	850.0	8 5/8"	8-5/8	12-1/4

**Formations**

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,194.6	6,840.0	NIOBRARA		0.00	
7,516.6	7,162.0	CODELL		0.00	
7,903.6	7,549.0	D-SAND		0.00	
7,961.6	7,607.0	J-SAND		0.00	