

# ENSIGN

## Directional

### Well Name: Donaldson USX EE29-06D

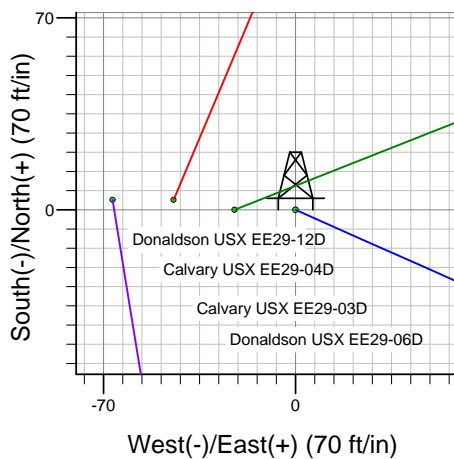
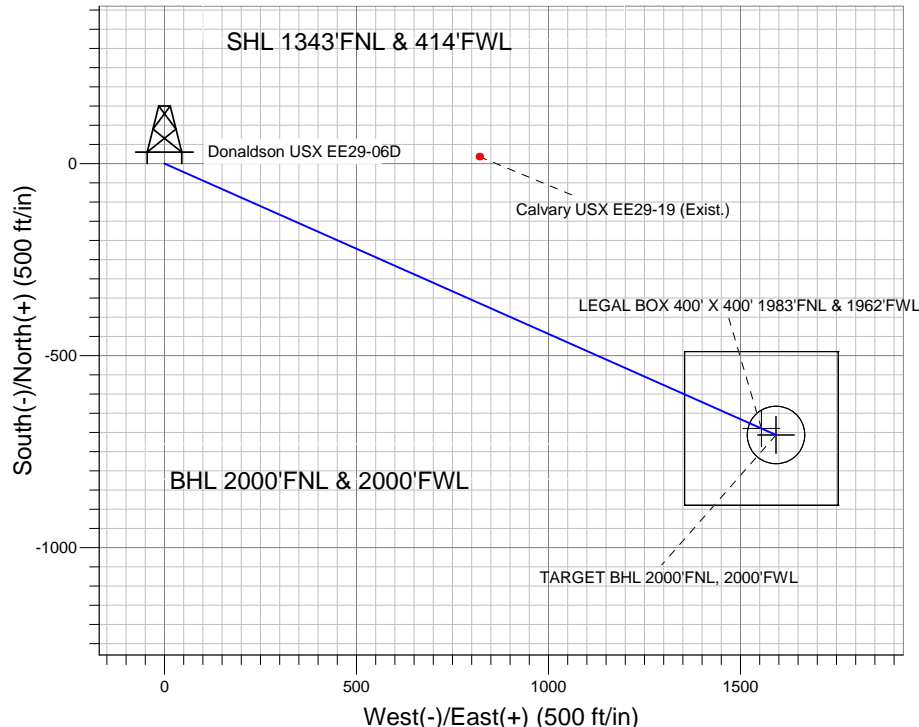
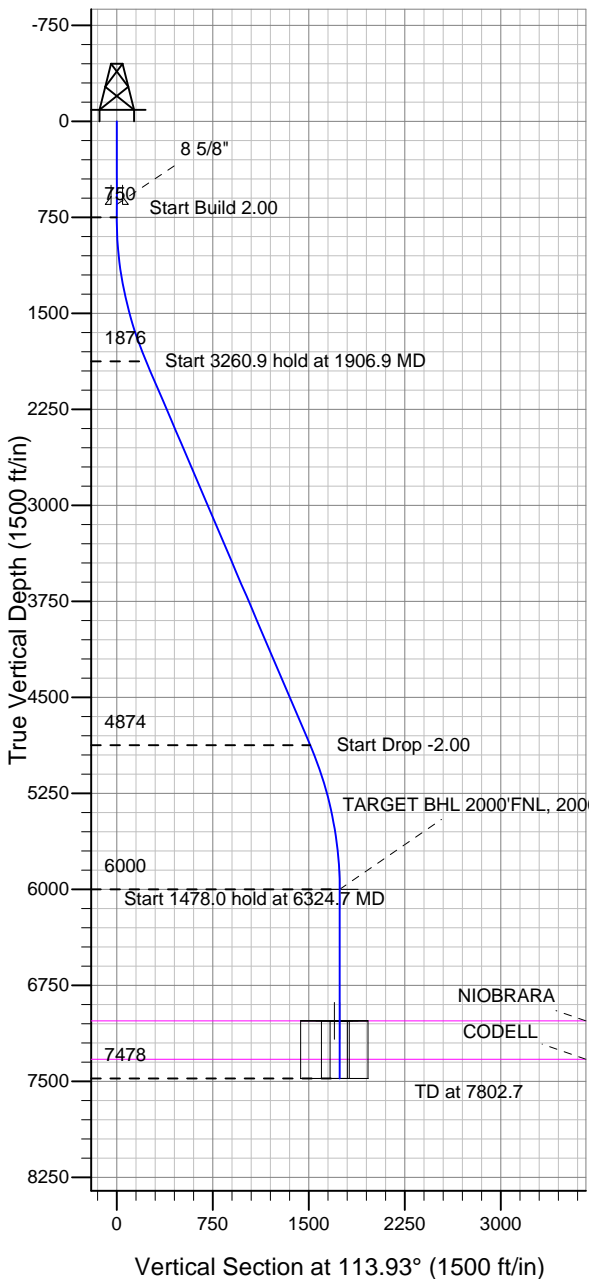
Surface Location: Donaldson USX EE29-12D Pad Sec.29-T7N-R65W  
North American Datum 1983 US State Plane 1983 Colorado Northern Zone

Ground Elevation: 4925.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1444053.49	3223680.98	40.549540	-104.695080	

Original Well Elev WELL @ 4938.0ft (Original Well Elev)

## NOBLE ENERGY INC WELD COUNTY CO



Donaldson USX EE29-12D Pad Sec.29-T7N-R65W  
Donaldson USX EE29-06D  
Noble Donaldson USX EE29-06D Plan #1 (5-04-11)  
9:52, May 09 2011



Azimuths to True North  
Magnetic North: 8.85°

Magnetic Field  
Strength: 53227.1nT  
Dip Angle: 67.19°  
Date: 5/9/2011  
Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 2000'FNL, 2000'FWL	6000.0	-706.7	1592.4	40.547600	-104.689350	Point
LEGAL BOX 400' X 400' 1983'FNL & 1962'FWL	7028.0	-689.7	1554.4	40.547647	-104.689487	Rectangle (Sides: L400.0 W400.0)
TARGET CIRCLE 2000'FNL & 2000'FWL	7028.0	-706.7	1592.4	40.547600	-104.689350	Circle (Radius: 75.0)

### 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	750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.0	
3	1906.9	23.14	113.93	1875.7	-93.5	210.6	2.00	113.93	230.4	
4	5167.8	23.14	113.93	4874.3	-613.2	1381.8	0.00	0.00	1511.8	
5	6324.7	0.00	0.00	6000.0	-706.7	1592.4	2.00	180.00	1742.2	TARGET BHL 2000'FNL, 2000'FWL
6	7802.7	0.00	0.00	7478.0	-706.7	1592.4	0.00	0.00	1742.2	



## **Directional**

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

**SEC.29-T7N-R65W**

**Donaldson USX EE29-12D Pad Sec.29-T7N-R65W**

**Donaldson USX EE29-06D**

**Wellbore #1**

**Plan: Noble Donaldson USX EE29-06D Plan #1 (5-04-11)**

### **Standard Planning Report**

**09 May, 2011**



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Donaldson USX EE29-06D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Project:</b>	SEC.29-T7N-R65W	<b>MD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Site:</b>	Donaldson USX EE29-12D Pad Sec.29-T7N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Donaldson USX EE29-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Donaldson USX EE29-06D Plan #1 (5-04-11)		

<b>Project</b>	SEC.29-T7N-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						Donaldson USX EE29-12D Pad Sec.29-T7N-R65W											
Site Position:						Northing:			1,444,056.55 ft			Latitude:			40.549550		
From:			Lat/Long			Easting:			3,223,614.25 ft			Longitude:			-104.695320		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.52 °		

Well	Donaldson USX EE29-06D					
Well Position	+N-S	-3.7 ft	Northing:	1,444,053.49 ft	Latitude:	40.549540
	+E-W	66.7 ft	Easting:	3,223,680.98 ft	Longitude:	-104.695080
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,925.0 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	5/9/2011	8.85	67.19	53,227

<b>Design</b>	Noble Donaldson USX EE29-06D Plan #1 (5-04-11)			
<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	113.93

<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	
750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,906.9	23.14	113.93	1,875.7	-93.5	210.6	2.00	2.00	0.00	113.93	
5,167.8	23.14	113.93	4,874.3	-613.2	1,381.8	0.00	0.00	0.00	0.00	
6,324.7	0.00	0.00	6,000.0	-706.7	1,592.4	2.00	-2.00	0.00	180.00	TARGET BHL 200C
7,802.7	0.00	0.00	7,478.0	-706.7	1,592.4	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Donaldson USX EE29-06D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Project:</b>	SEC.29-T7N-R65W	<b>MD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Site:</b>	Donaldson USX EE29-12D Pad Sec.29-T7N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Donaldson USX EE29-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Donaldson USX EE29-06D Plan #1 (5-0-		

**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
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
650.0	0.00	0.00	650.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>8 5/8"</b>									
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
750.0	0.00	0.00	750.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.20	113.93	760.0	0.0	0.0	0.0	2.00	2.00	0.00
800.0	1.00	113.93	800.0	-0.2	0.4	0.4	2.00	2.00	0.00
840.0	1.80	113.93	840.0	-0.6	1.3	1.4	2.00	2.00	0.00
880.0	2.60	113.93	880.0	-1.2	2.7	2.9	2.00	2.00	0.00
920.0	3.40	113.93	919.9	-2.0	4.6	5.0	2.00	2.00	0.00
960.0	4.20	113.93	959.8	-3.1	7.0	7.7	2.00	2.00	0.00
1,000.0	5.00	113.93	999.7	-4.4	10.0	10.9	2.00	2.00	0.00
1,040.0	5.80	113.93	1,039.5	-5.9	13.4	14.7	2.00	2.00	0.00
1,080.0	6.60	113.93	1,079.3	-7.7	17.4	19.0	2.00	2.00	0.00
1,120.0	7.40	113.93	1,119.0	-9.7	21.8	23.9	2.00	2.00	0.00
1,160.0	8.20	113.93	1,158.6	-11.9	26.8	29.3	2.00	2.00	0.00
1,200.0	9.00	113.93	1,198.2	-14.3	32.2	35.3	2.00	2.00	0.00
1,240.0	9.80	113.93	1,237.6	-17.0	38.2	41.8	2.00	2.00	0.00
1,280.0	10.60	113.93	1,277.0	-19.8	44.7	48.9	2.00	2.00	0.00
1,320.0	11.40	113.93	1,316.2	-22.9	51.7	56.5	2.00	2.00	0.00
1,360.0	12.20	113.93	1,355.4	-26.2	59.1	64.7	2.00	2.00	0.00
1,400.0	13.00	113.93	1,394.4	-29.8	67.1	73.4	2.00	2.00	0.00
1,440.0	13.80	113.93	1,433.3	-33.5	75.6	82.7	2.00	2.00	0.00
1,480.0	14.60	113.93	1,472.1	-37.5	84.6	92.5	2.00	2.00	0.00
1,520.0	15.40	113.93	1,510.8	-41.7	94.0	102.9	2.00	2.00	0.00
1,560.0	16.20	113.93	1,549.3	-46.1	104.0	113.7	2.00	2.00	0.00
1,600.0	17.00	113.93	1,587.6	-50.8	114.4	125.2	2.00	2.00	0.00
1,640.0	17.80	113.93	1,625.8	-55.6	125.3	137.1	2.00	2.00	0.00
1,680.0	18.60	113.93	1,663.8	-60.7	136.8	149.6	2.00	2.00	0.00
1,720.0	19.40	113.93	1,701.6	-66.0	148.7	162.7	2.00	2.00	0.00
1,760.0	20.20	113.93	1,739.2	-71.5	161.1	176.2	2.00	2.00	0.00
1,800.0	21.00	113.93	1,776.6	-77.2	173.9	190.3	2.00	2.00	0.00
1,840.0	21.80	113.93	1,813.9	-83.1	187.3	204.9	2.00	2.00	0.00
1,880.0	22.60	113.93	1,850.9	-89.2	201.1	220.0	2.00	2.00	0.00
1,906.9	23.14	113.93	1,875.7	-93.5	210.6	230.4	2.00	2.00	0.00
1,920.0	23.14	113.93	1,887.8	-95.6	215.3	235.6	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Donaldson USX EE29-06D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Project:</b>	SEC.29-T7N-R65W	<b>MD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Site:</b>	Donaldson USX EE29-12D Pad Sec.29-T7N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Donaldson USX EE29-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Donaldson USX EE29-06D Plan #1 (5-0-		

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	113.93	1,924.5	-101.9	229.7	251.3	0.00	0.00	0.00	
2,000.0	23.14	113.93	1,961.3	-108.3	244.1	267.0	0.00	0.00	0.00	
2,040.0	23.14	113.93	1,998.1	-114.7	258.4	282.7	0.00	0.00	0.00	
2,080.0	23.14	113.93	2,034.9	-121.1	272.8	298.5	0.00	0.00	0.00	
2,120.0	23.14	113.93	2,071.7	-127.4	287.2	314.2	0.00	0.00	0.00	
2,160.0	23.14	113.93	2,108.5	-133.8	301.5	329.9	0.00	0.00	0.00	
2,200.0	23.14	113.93	2,145.2	-140.2	315.9	345.6	0.00	0.00	0.00	
2,240.0	23.14	113.93	2,182.0	-146.6	330.3	361.3	0.00	0.00	0.00	
2,280.0	23.14	113.93	2,218.8	-152.9	344.6	377.0	0.00	0.00	0.00	
2,320.0	23.14	113.93	2,255.6	-159.3	359.0	392.8	0.00	0.00	0.00	
2,360.0	23.14	113.93	2,292.4	-165.7	373.4	408.5	0.00	0.00	0.00	
2,400.0	23.14	113.93	2,329.1	-172.1	387.7	424.2	0.00	0.00	0.00	
2,440.0	23.14	113.93	2,365.9	-178.4	402.1	439.9	0.00	0.00	0.00	
2,480.0	23.14	113.93	2,402.7	-184.8	416.5	455.6	0.00	0.00	0.00	
2,520.0	23.14	113.93	2,439.5	-191.2	430.8	471.4	0.00	0.00	0.00	
2,560.0	23.14	113.93	2,476.3	-197.6	445.2	487.1	0.00	0.00	0.00	
2,600.0	23.14	113.93	2,513.1	-204.0	459.6	502.8	0.00	0.00	0.00	
2,640.0	23.14	113.93	2,549.8	-210.3	473.9	518.5	0.00	0.00	0.00	
2,680.0	23.14	113.93	2,586.6	-216.7	488.3	534.2	0.00	0.00	0.00	
2,720.0	23.14	113.93	2,623.4	-223.1	502.7	549.9	0.00	0.00	0.00	
2,760.0	23.14	113.93	2,660.2	-229.5	517.0	565.7	0.00	0.00	0.00	
2,800.0	23.14	113.93	2,697.0	-235.8	531.4	581.4	0.00	0.00	0.00	
2,840.0	23.14	113.93	2,733.8	-242.2	545.8	597.1	0.00	0.00	0.00	
2,880.0	23.14	113.93	2,770.5	-248.6	560.1	612.8	0.00	0.00	0.00	
2,920.0	23.14	113.93	2,807.3	-255.0	574.5	628.5	0.00	0.00	0.00	
2,960.0	23.14	113.93	2,844.1	-261.3	588.9	644.2	0.00	0.00	0.00	
3,000.0	23.14	113.93	2,880.9	-267.7	603.2	660.0	0.00	0.00	0.00	
3,040.0	23.14	113.93	2,917.7	-274.1	617.6	675.7	0.00	0.00	0.00	
3,080.0	23.14	113.93	2,954.5	-280.5	632.0	691.4	0.00	0.00	0.00	
3,120.0	23.14	113.93	2,991.2	-286.8	646.3	707.1	0.00	0.00	0.00	
3,160.0	23.14	113.93	3,028.0	-293.2	660.7	722.8	0.00	0.00	0.00	
3,200.0	23.14	113.93	3,064.8	-299.6	675.1	738.6	0.00	0.00	0.00	
3,240.0	23.14	113.93	3,101.6	-306.0	689.4	754.3	0.00	0.00	0.00	
3,280.0	23.14	113.93	3,138.4	-312.3	703.8	770.0	0.00	0.00	0.00	
3,320.0	23.14	113.93	3,175.1	-318.7	718.2	785.7	0.00	0.00	0.00	
3,360.0	23.14	113.93	3,211.9	-325.1	732.5	801.4	0.00	0.00	0.00	
3,400.0	23.14	113.93	3,248.7	-331.5	746.9	817.1	0.00	0.00	0.00	
3,440.0	23.14	113.93	3,285.5	-337.8	761.3	832.9	0.00	0.00	0.00	
3,480.0	23.14	113.93	3,322.3	-344.2	775.6	848.6	0.00	0.00	0.00	
3,520.0	23.14	113.93	3,359.1	-350.6	790.0	864.3	0.00	0.00	0.00	
3,560.0	23.14	113.93	3,395.8	-357.0	804.4	880.0	0.00	0.00	0.00	
3,600.0	23.14	113.93	3,432.6	-363.3	818.7	895.7	0.00	0.00	0.00	
3,640.0	23.14	113.93	3,469.4	-369.7	833.1	911.4	0.00	0.00	0.00	
3,680.0	23.14	113.93	3,506.2	-376.1	847.5	927.2	0.00	0.00	0.00	
3,720.0	23.14	113.93	3,543.0	-382.5	861.8	942.9	0.00	0.00	0.00	
3,760.0	23.14	113.93	3,579.8	-388.8	876.2	958.6	0.00	0.00	0.00	
3,800.0	23.14	113.93	3,616.5	-395.2	890.6	974.3	0.00	0.00	0.00	
3,840.0	23.14	113.93	3,653.3	-401.6	904.9	990.0	0.00	0.00	0.00	
3,880.0	23.14	113.93	3,690.1	-408.0	919.3	1,005.8	0.00	0.00	0.00	
3,920.0	23.14	113.93	3,726.9	-414.3	933.7	1,021.5	0.00	0.00	0.00	
3,960.0	23.14	113.93	3,763.7	-420.7	948.0	1,037.2	0.00	0.00	0.00	
4,000.0	23.14	113.93	3,800.4	-427.1	962.4	1,052.9	0.00	0.00	0.00	
4,040.0	23.14	113.93	3,837.2	-433.5	976.8	1,068.6	0.00	0.00	0.00	

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<b>Project:</b>	SEC.29-T7N-R65W	<b>MD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Site:</b>	Donaldson USX EE29-12D Pad Sec.29-T7N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Donaldson USX EE29-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Donaldson USX EE29-06D Plan #1 (5-0)		

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	113.93	3,874.0	-439.9	991.1	1,084.3	0.00	0.00	0.00
4,120.0	23.14	113.93	3,910.8	-446.2	1,005.5	1,100.1	0.00	0.00	0.00
4,160.0	23.14	113.93	3,947.6	-452.6	1,019.9	1,115.8	0.00	0.00	0.00
4,200.0	23.14	113.93	3,984.4	-459.0	1,034.2	1,131.5	0.00	0.00	0.00
4,240.0	23.14	113.93	4,021.1	-465.4	1,048.6	1,147.2	0.00	0.00	0.00
4,280.0	23.14	113.93	4,057.9	-471.7	1,063.0	1,162.9	0.00	0.00	0.00
4,320.0	23.14	113.93	4,094.7	-478.1	1,077.3	1,178.6	0.00	0.00	0.00
4,360.0	23.14	113.93	4,131.5	-484.5	1,091.7	1,194.4	0.00	0.00	0.00
4,400.0	23.14	113.93	4,168.3	-490.9	1,106.1	1,210.1	0.00	0.00	0.00
4,440.0	23.14	113.93	4,205.1	-497.2	1,120.4	1,225.8	0.00	0.00	0.00
4,480.0	23.14	113.93	4,241.8	-503.6	1,134.8	1,241.5	0.00	0.00	0.00
4,520.0	23.14	113.93	4,278.6	-510.0	1,149.2	1,257.2	0.00	0.00	0.00
4,560.0	23.14	113.93	4,315.4	-516.4	1,163.5	1,273.0	0.00	0.00	0.00
4,600.0	23.14	113.93	4,352.2	-522.7	1,177.9	1,288.7	0.00	0.00	0.00
4,640.0	23.14	113.93	4,389.0	-529.1	1,192.3	1,304.4	0.00	0.00	0.00
4,680.0	23.14	113.93	4,425.8	-535.5	1,206.6	1,320.1	0.00	0.00	0.00
4,720.0	23.14	113.93	4,462.5	-541.9	1,221.0	1,335.8	0.00	0.00	0.00
4,760.0	23.14	113.93	4,499.3	-548.2	1,235.4	1,351.5	0.00	0.00	0.00
4,800.0	23.14	113.93	4,536.1	-554.6	1,249.7	1,367.3	0.00	0.00	0.00
4,840.0	23.14	113.93	4,572.9	-561.0	1,264.1	1,383.0	0.00	0.00	0.00
4,880.0	23.14	113.93	4,609.7	-567.4	1,278.5	1,398.7	0.00	0.00	0.00
4,920.0	23.14	113.93	4,646.4	-573.7	1,292.8	1,414.4	0.00	0.00	0.00
4,960.0	23.14	113.93	4,683.2	-580.1	1,307.2	1,430.1	0.00	0.00	0.00
5,000.0	23.14	113.93	4,720.0	-586.5	1,321.6	1,445.8	0.00	0.00	0.00
5,040.0	23.14	113.93	4,756.8	-592.9	1,335.9	1,461.6	0.00	0.00	0.00
5,080.0	23.14	113.93	4,793.6	-599.2	1,350.3	1,477.3	0.00	0.00	0.00
5,120.0	23.14	113.93	4,830.4	-605.6	1,364.7	1,493.0	0.00	0.00	0.00
5,160.0	23.14	113.93	4,867.1	-612.0	1,379.0	1,508.7	0.00	0.00	0.00
5,167.8	23.14	113.93	4,874.3	-613.2	1,381.8	1,511.8	0.00	0.00	0.00
5,200.0	22.49	113.93	4,904.0	-618.3	1,393.2	1,524.3	2.00	-2.00	0.00
5,240.0	21.69	113.93	4,941.1	-624.4	1,407.0	1,539.3	2.00	-2.00	0.00
5,280.0	20.89	113.93	4,978.3	-630.3	1,420.3	1,553.8	2.00	-2.00	0.00
5,320.0	20.09	113.93	5,015.8	-636.0	1,433.1	1,567.8	2.00	-2.00	0.00
5,360.0	19.29	113.93	5,053.5	-641.4	1,445.4	1,581.3	2.00	-2.00	0.00
5,400.0	18.49	113.93	5,091.3	-646.7	1,457.2	1,594.3	2.00	-2.00	0.00
5,440.0	17.69	113.93	5,129.3	-651.7	1,468.6	1,606.7	2.00	-2.00	0.00
5,480.0	16.89	113.93	5,167.5	-656.6	1,479.4	1,618.6	2.00	-2.00	0.00
5,520.0	16.09	113.93	5,205.9	-661.2	1,489.8	1,629.9	2.00	-2.00	0.00
5,560.0	15.29	113.93	5,244.4	-665.6	1,499.7	1,640.8	2.00	-2.00	0.00
5,600.0	14.49	113.93	5,283.0	-669.7	1,509.1	1,651.0	2.00	-2.00	0.00
5,640.0	13.69	113.93	5,321.8	-673.7	1,518.0	1,660.8	2.00	-2.00	0.00
5,680.0	12.89	113.93	5,360.8	-677.4	1,526.4	1,670.0	2.00	-2.00	0.00
5,720.0	12.09	113.93	5,399.8	-680.9	1,534.3	1,678.6	2.00	-2.00	0.00
5,760.0	11.29	113.93	5,439.0	-684.2	1,541.7	1,686.7	2.00	-2.00	0.00
5,800.0	10.49	113.93	5,478.3	-687.3	1,548.6	1,694.3	2.00	-2.00	0.00
5,840.0	9.69	113.93	5,517.6	-690.1	1,555.1	1,701.3	2.00	-2.00	0.00
5,880.0	8.89	113.93	5,557.1	-692.7	1,561.0	1,707.8	2.00	-2.00	0.00
5,920.0	8.09	113.93	5,596.7	-695.1	1,566.4	1,713.7	2.00	-2.00	0.00
5,960.0	7.29	113.93	5,636.3	-697.3	1,571.3	1,719.0	2.00	-2.00	0.00
6,000.0	6.49	113.93	5,676.0	-699.3	1,575.6	1,723.8	2.00	-2.00	0.00
6,040.0	5.69	113.93	5,715.8	-701.0	1,579.5	1,728.1	2.00	-2.00	0.00
6,080.0	4.89	113.93	5,755.6	-702.5	1,582.9	1,731.8	2.00	-2.00	0.00
6,120.0	4.09	113.93	5,795.5	-703.7	1,585.8	1,734.9	2.00	-2.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Donaldson USX EE29-06D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Project:</b>	SEC.29-T7N-R65W	<b>MD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Site:</b>	Donaldson USX EE29-12D Pad Sec.29-T7N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Donaldson USX EE29-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Donaldson USX EE29-06D Plan #1 (5-0)		

**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	3.29	113.93	5,835.4	-704.8	1,588.1	1,737.5	2.00	-2.00	0.00
6,200.0	2.49	113.93	5,875.4	-705.6	1,590.0	1,739.5	2.00	-2.00	0.00
6,240.0	1.69	113.93	5,915.3	-706.2	1,591.3	1,741.0	2.00	-2.00	0.00
6,280.0	0.89	113.93	5,955.3	-706.6	1,592.1	1,741.9	2.00	-2.00	0.00
6,320.0	0.09	113.93	5,995.3	-706.7	1,592.4	1,742.2	2.00	-2.00	0.00
6,324.7	0.00	0.00	6,000.0	-706.7	1,592.4	1,742.2	2.00	-2.00	-2,438.32
<b>TARGET BHL 2000'FNL, 2000'FWL</b>									
6,360.0	0.00	0.00	6,035.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
6,400.0	0.00	0.00	6,075.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
6,440.0	0.00	0.00	6,115.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
6,480.0	0.00	0.00	6,155.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
6,520.0	0.00	0.00	6,195.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
6,560.0	0.00	0.00	6,235.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
6,600.0	0.00	0.00	6,275.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
6,640.0	0.00	0.00	6,315.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
6,680.0	0.00	0.00	6,355.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
6,720.0	0.00	0.00	6,395.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
6,760.0	0.00	0.00	6,435.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
6,800.0	0.00	0.00	6,475.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
6,840.0	0.00	0.00	6,515.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
6,880.0	0.00	0.00	6,555.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
6,920.0	0.00	0.00	6,595.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
6,960.0	0.00	0.00	6,635.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,000.0	0.00	0.00	6,675.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,040.0	0.00	0.00	6,715.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,080.0	0.00	0.00	6,755.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,120.0	0.00	0.00	6,795.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,160.0	0.00	0.00	6,835.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,200.0	0.00	0.00	6,875.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,240.0	0.00	0.00	6,915.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,280.0	0.00	0.00	6,955.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,320.0	0.00	0.00	6,995.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,352.7	0.00	0.00	7,028.0	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
<b>NOBRARA - LEGAL BOX 400' X 400' 1983'FNL &amp; 1962'FWL - TARGET CIRCLE 2000'FNL &amp; 2000'FWL</b>									
7,360.0	0.00	0.00	7,035.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,400.0	0.00	0.00	7,075.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,440.0	0.00	0.00	7,115.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,480.0	0.00	0.00	7,155.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,520.0	0.00	0.00	7,195.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,560.0	0.00	0.00	7,235.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,600.0	0.00	0.00	7,275.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,640.0	0.00	0.00	7,315.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,652.7	0.00	0.00	7,328.0	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
<b>CODELL</b>									
7,680.0	0.00	0.00	7,355.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,720.0	0.00	0.00	7,395.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,760.0	0.00	0.00	7,435.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,800.0	0.00	0.00	7,475.3	-706.7	1,592.4	1,742.2	0.00	0.00	0.00
7,802.7	0.00	0.00	7,478.0	-706.7	1,592.4	1,742.2	0.00	0.00	0.00



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Donaldson USX EE29-06D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Project:</b>	SEC.29-T7N-R65W	<b>MD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Site:</b>	Donaldson USX EE29-12D Pad Sec.29-T7N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Donaldson USX EE29-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Donaldson USX EE29-06D Plan #1 (5-0)		

**Targets**
**Target Name**

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
LEGAL BOX 400' X 41	0.00	0.00	7,028.0	-689.7	1,554.4	1,443,377.95	3,225,241.52	40.547647	-104.689487
- plan misses target center by 41.7ft at 7352.7ft MD (7028.0 TVD, -706.7 N, 1592.4 E)									
- Rectangle (sides W400.0 H400.0 D450.0)									
TARGET CIRCLE 200'	0.00	0.00	7,028.0	-706.7	1,592.4	1,443,361.28	3,225,279.72	40.547600	-104.689350
- plan hits target center									
- Circle (radius 75.0)									
TARGET BHL 2000'F	0.00	0.00	6,000.0	-706.7	1,592.4	1,443,361.28	3,225,279.72	40.547600	-104.689350
- plan hits target center									
- Point									

**Casing Points**

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
650.0	650.0	8 5/8"	8-5/8	12-1/4

**Formations**

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,352.7	7,028.0	NIOBRARA		0.00	
7,652.7	7,328.0	CODELL		0.00	





## **Directional**

# **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.29-T7N-R65W**

**Donaldson USX EE29-12D Pad Sec.29-T7N-R65W**

**Donaldson USX EE29-06D**

**Wellbore #1**

**Noble Donaldson USX EE29-06D Plan #1 (5-04-11)**

## **Anticollision Report**

**09 May, 2011**



<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Donaldson USX EE29-06D
<b>Project:</b>	SEC.29-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Reference Site:</b>	Donaldson USX EE29-12D Pad Sec.29-T7N-R65W	<b>MD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Donaldson USX EE29-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Noble Donaldson USX EE29-06D Plan #1 (5-04-11)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Noble Donaldson USX EE29-06D PI		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b> 5/9/2011			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	7,802.7	Noble Donaldson USX EE29-06D Plan #1	MWD	MWD - Standard

<b>Summary</b>						
<b>Site Name</b>	<b>Reference Measured Depth (ft)</b>	<b>Offset Measured Depth (ft)</b>	<b>Distance Between Centres (ft)</b>	<b>Distance Between Ellipses (ft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Offset Well - Wellbore - Design</b>						
Donaldson USX EE29-12D Pad Sec.29-T7N-R65W						
Calvary USX EE29-03D - Wellbore #1 - Noble Calvary U:	750.0	749.0	22.2	19.1	7.070	CC, ES
Calvary USX EE29-03D - Wellbore #1 - Noble Calvary U:	800.0	799.0	22.6	19.3	6.737	SF
Calvary USX EE29-19 (Exist.) - Wellbore #1 - Design #1	3,208.6	3,069.7	349.2	325.7	14.832	CC, ES
Calvary USX EE29-19 (Exist.) - Wellbore #1 - Design #1	3,400.0	3,245.7	357.2	332.0	14.157	SF

<b>Offset Design</b>												
Donaldson USX EE29-12D Pad Sec.29-T7N-R65W - Calvary USX EE29-03D - Wellbore #1 - Noble Cal												
Survey Program: 0-MWD												
<b>Reference</b>	<b>Offset</b>	<b>Semi Major Axis</b>	<b>Distance</b>									
<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Reference (ft)</b>	<b>Offset (ft)</b>	<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre +N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Between Centres (ft)</b>	<b>Between Ellipses (ft)</b>	<b>Minimum Separation (ft)</b>	<b>Separation Factor</b>
0.0	0.0	0.0	0.0	0.0	0.0	-89.98	0.0	-22.2	22.3			
100.0	100.0	99.0	99.0	0.1	0.1	-89.98	0.0	-22.2	22.2	22.0	0.22	99.410
200.0	200.0	199.0	199.0	0.3	0.3	-89.98	0.0	-22.2	22.2	21.6	0.67	33.081
300.0	300.0	299.0	299.0	0.6	0.6	-89.98	0.0	-22.2	22.2	21.1	1.12	19.822
400.0	400.0	399.0	399.0	0.8	0.8	-89.98	0.0	-22.2	22.2	20.7	1.57	14.151
500.0	500.0	499.0	499.0	1.0	1.0	-89.98	0.0	-22.2	22.2	20.2	2.02	11.003
600.0	600.0	599.0	599.0	1.2	1.2	-89.98	0.0	-22.2	22.2	19.8	2.47	9.000
700.0	700.0	699.0	699.0	1.5	1.5	-89.98	0.0	-22.2	22.2	19.3	2.92	7.615
750.0	750.0	749.0	749.0	1.6	1.6	-89.98	0.0	-22.2	22.2	19.1	3.14	7.070 CC, ES
800.0	800.0	799.0	799.0	1.7	1.7	156.53	0.0	-22.2	22.6	19.3	3.36	6.737 SF
900.0	899.9	898.9	898.9	1.9	1.9	159.59	0.0	-22.2	25.9	22.1	3.77	6.854
1,000.0	999.7	999.2	999.2	2.1	2.1	164.24	0.2	-21.8	32.1	27.9	4.19	7.670
1,100.0	1,099.1	1,099.9	1,099.8	2.3	2.3	170.91	1.4	-18.6	39.5	34.9	4.59	8.589
1,200.0	1,198.2	1,200.5	1,200.2	2.6	2.6	178.56	4.0	-12.1	48.0	43.0	5.00	9.600
1,300.0	1,296.6	1,300.9	1,300.1	2.9	2.8	-173.77	7.9	-2.3	58.4	53.0	5.43	10.759
1,400.0	1,394.4	1,401.1	1,399.3	3.2	3.1	-166.63	13.0	10.7	71.0	65.1	5.90	12.046
1,500.0	1,491.5	1,500.9	1,497.5	3.7	3.4	-160.29	19.4	26.9	86.1	79.7	6.43	13.392
1,600.0	1,587.6	1,600.2	1,594.7	4.1	3.7	-154.81	27.0	46.1	103.9	96.8	7.06	14.707
1,700.0	1,682.7	1,698.9	1,690.4	4.7	4.1	-150.11	35.8	68.3	124.2	116.4	7.81	15.912
1,800.0	1,776.6	1,797.0	1,784.7	5.3	4.5	-146.10	45.7	93.4	147.2	138.5	8.68	16.961
1,906.9	1,875.7	1,901.0	1,883.6	6.1	5.1	-142.43	57.5	123.2	174.7	164.9	9.76	17.890

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Donaldson USX EE29-06D
<b>Project:</b>	SEC.29-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Reference Site:</b>	Donaldson USX EE29-12D Pad Sec.29-T7N-R65W	<b>MD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Donaldson USX EE29-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Noble Donaldson USX EE29-06D Plan #1 (5-04-11)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Donaldson USX EE29-12D Pad Sec.29-T7N-R65W - Calvary USX EE29-03D - Wellbore #1 - Noble Cal										Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
2,000.0	1,961.3	1,991.0	1,968.2	6.8	5.6	-139.71	68.8	151.7	199.9	189.0	10.87	18.382		
2,100.0	2,053.3	2,087.2	2,057.6	7.6	6.2	-136.67	81.9	184.9	227.1	214.9	12.20	18.619		
2,200.0	2,145.2	2,182.7	2,145.0	8.4	6.9	-133.56	96.0	220.6	254.7	241.1	13.64	18.679		
2,300.0	2,237.2	2,277.9	2,231.7	9.2	7.7	-130.84	110.4	257.0	282.9	267.8	15.14	18.693		
2,400.0	2,329.1	2,373.0	2,318.4	10.0	8.4	-128.61	124.8	293.5	311.7	295.0	16.65	18.716		
2,500.0	2,421.1	2,468.1	2,405.1	10.8	9.2	-126.76	139.2	329.9	340.7	322.6	18.18	18.745		
2,600.0	2,513.1	2,563.3	2,491.8	11.7	10.0	-125.19	153.6	366.3	370.1	350.4	19.71	18.776		
2,700.0	2,605.0	2,658.4	2,578.5	12.5	10.7	-123.85	168.0	402.8	399.7	378.4	21.25	18.809		
2,800.0	2,697.0	2,753.5	2,665.2	13.3	11.5	-122.70	182.4	439.2	429.4	406.6	22.79	18.843		
2,900.0	2,788.9	2,848.7	2,751.9	14.2	12.3	-121.70	196.9	475.6	459.3	435.0	24.33	18.875		
3,000.0	2,880.9	2,943.8	2,838.6	15.0	13.1	-120.82	211.3	512.1	489.3	463.4	25.88	18.907		
3,100.0	2,972.8	3,039.0	2,925.3	15.8	13.9	-120.03	225.7	548.5	519.4	492.0	27.43	18.938		
3,200.0	3,064.8	3,134.1	3,012.0	16.7	14.7	-119.34	240.1	584.9	549.6	520.6	28.97	18.968		
3,300.0	3,156.8	3,229.2	3,098.7	17.5	15.5	-118.72	254.5	621.4	579.8	549.3	30.52	18.996		
3,400.0	3,248.7	3,324.4	3,185.4	18.4	16.3	-118.16	268.9	657.8	610.1	578.0	32.07	19.023		
3,500.0	3,340.7	3,419.5	3,272.1	19.2	17.2	-117.65	283.3	694.2	640.5	606.8	33.62	19.049		
3,600.0	3,432.6	3,514.6	3,358.8	20.1	18.0	-117.18	297.7	730.7	670.8	635.7	35.17	19.073		
3,700.0	3,524.6	3,609.8	3,445.5	20.9	18.8	-116.76	312.1	767.1	701.3	664.5	36.72	19.096		
3,800.0	3,616.5	3,704.9	3,532.2	21.8	19.6	-116.37	326.5	803.5	731.7	693.4	38.27	19.118		
3,900.0	3,708.5	3,800.1	3,618.9	22.6	20.4	-116.02	340.9	840.0	762.2	722.4	39.83	19.138		
4,000.0	3,800.4	3,895.2	3,705.6	23.4	21.2	-115.69	355.3	876.4	792.7	751.3	41.38	19.158		
4,100.0	3,892.4	3,990.3	3,792.3	24.3	22.1	-115.38	369.7	912.8	823.2	780.3	42.93	19.176		
4,200.0	3,984.4	4,085.5	3,879.0	25.1	22.9	-115.10	384.1	949.3	853.8	809.3	44.48	19.194		
4,300.0	4,076.3	4,180.6	3,965.7	26.0	23.7	-114.84	398.5	985.7	884.3	838.3	46.03	19.211		
4,400.0	4,168.3	4,275.8	4,052.4	26.8	24.5	-114.59	412.9	1,022.1	914.9	867.3	47.59	19.227		
4,500.0	4,260.2	4,370.9	4,139.1	27.7	25.3	-114.36	427.3	1,058.6	945.5	896.4	49.14	19.242		
4,600.0	4,352.2	4,466.0	4,225.8	28.5	26.2	-114.15	441.7	1,095.0	976.1	925.4	50.69	19.257		
4,700.0	4,444.1	4,561.2	4,312.5	29.4	27.0	-113.94	456.1	1,131.4	1,006.7	954.5	52.24	19.270		
4,800.0	4,536.1	4,656.3	4,399.2	30.2	27.8	-113.75	470.6	1,167.9	1,037.4	983.6	53.80	19.284		
4,900.0	4,628.1	4,751.4	4,485.8	31.1	28.6	-113.57	485.0	1,204.3	1,068.0	1,012.7	55.35	19.296		
5,000.0	4,720.0	4,846.6	4,572.5	31.9	29.5	-113.40	499.4	1,240.7	1,098.7	1,041.8	56.90	19.308		
5,100.0	4,812.0	4,941.7	4,659.2	32.8	30.3	-113.24	513.8	1,277.2	1,129.3	1,070.9	58.45	19.320		
5,167.8	4,874.3	5,006.2	4,718.0	33.4	30.8	-113.14	523.5	1,301.9	1,150.1	1,090.6	59.51	19.327		
5,200.0	4,904.0	5,036.9	4,746.0	33.6	31.1	-113.27	528.2	1,313.6	1,159.9	1,099.9	60.01	19.329		
5,300.0	4,997.0	5,134.5	4,834.9	34.2	31.9	-113.56	542.9	1,351.0	1,189.5	1,128.0	61.46	19.353		
5,400.0	5,091.3	5,246.1	4,937.8	34.8	32.7	-113.72	558.9	1,391.3	1,217.0	1,154.2	62.83	19.371		
5,500.0	5,186.7	5,359.4	5,043.7	35.3	33.4	-113.87	573.6	1,428.4	1,241.9	1,177.9	64.03	19.394		
5,600.0	5,283.0	5,474.0	5,152.5	35.8	34.0	-114.00	586.8	1,462.0	1,264.1	1,199.0	65.13	19.409		
5,700.0	5,380.3	5,589.9	5,263.9	36.2	34.6	-114.11	598.6	1,491.8	1,283.6	1,217.5	66.11	19.417		
5,800.0	5,478.3	5,706.9	5,377.6	36.5	35.1	-114.20	608.8	1,517.6	1,300.3	1,233.3	66.96	19.418		
5,900.0	5,576.9	5,825.0	5,493.3	36.8	35.5	-114.27	617.4	1,539.2	1,314.2	1,246.5	67.69	19.414		
6,000.0	5,676.0	5,943.8	5,610.7	37.1	35.8	-114.33	624.2	1,556.5	1,325.2	1,256.9	68.30	19.403		
6,100.0	5,775.6	6,063.3	5,729.4	37.3	36.1	-114.37	629.3	1,569.3	1,333.3	1,264.5	68.78	19.385		
6,200.0	5,875.4	6,183.3	5,849.0	37.4	36.3	-114.40	632.5	1,577.5	1,338.4	1,269.3	69.14	19.358		
6,300.0	5,975.3	6,303.5	5,969.1	37.5	36.4	-114.41	633.9	1,581.1	1,340.7	1,271.3	69.39	19.321		
6,324.7	6,000.0	6,333.1	5,998.8	37.5	36.4	-0.48	634.0	1,581.2	1,340.7	1,271.3	69.43	19.311		
6,400.0	6,075.3	6,408.7	6,074.3	37.6	36.5	-0.48	634.0	1,581.2	1,340.7	1,271.2	69.54	19.279		
6,500.0	6,175.3	6,508.7	6,174.3	37.7	36.6	-0.48	634.0	1,581.2	1,340.7	1,271.0	69.71	19.234		
6,600.0	6,275.3	6,608.7	6,274.3	37.7	36.7	-0.48	634.0	1,581.2	1,340.7	1,270.9	69.87	19.188		
6,700.0	6,375.3	6,708.7	6,374.3	37.8	36.7	-0.48	634.0	1,581.2	1,340.7	1,270.7	70.04	19.142		
6,800.0	6,475.3	6,808.7	6,474.3	37.9	36.8	-0.48	634.0	1,581.2	1,340.7	1,270.5	70.21	19.095		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Donaldson USX EE29-06D
<b>Project:</b>	SEC.29-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Reference Site:</b>	Donaldson USX EE29-12D Pad Sec.29-T7N-R65W	<b>MD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Donaldson USX EE29-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Noble Donaldson USX EE29-06D Plan #1 (5-04-11)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Donaldson USX EE29-12D Pad Sec.29-T7N-R65W - Calvary USX EE29-03D - Wellbore #1 - Noble Cal												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.0 ft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
6,900.0	6,575.3	6,908.7	6,574.3	38.0	36.9	-0.48	634.0	1,581.2	1,340.7	1,270.4	70.39	19.048	
7,000.0	6,675.3	7,008.7	6,674.3	38.0	37.0	-0.48	634.0	1,581.2	1,340.7	1,270.2	70.56	19.000	
7,100.0	6,775.3	7,108.7	6,774.3	38.1	37.1	-0.48	634.0	1,581.2	1,340.7	1,270.0	70.74	18.953	
7,200.0	6,875.3	7,208.7	6,874.3	38.2	37.2	-0.48	634.0	1,581.2	1,340.7	1,269.8	70.92	18.904	
7,300.0	6,975.3	7,308.7	6,974.3	38.3	37.2	-0.48	634.0	1,581.2	1,340.7	1,269.6	71.11	18.855	
7,400.0	7,075.3	7,408.7	7,074.3	38.4	37.3	-0.48	634.0	1,581.2	1,340.7	1,269.5	71.29	18.806	
7,500.0	7,175.3	7,508.7	7,174.3	38.5	37.4	-0.48	634.0	1,581.2	1,340.7	1,269.3	71.48	18.757	
7,600.0	7,275.3	7,608.7	7,274.3	38.5	37.5	-0.48	634.0	1,581.2	1,340.7	1,269.1	71.67	18.707	
7,700.0	7,375.3	7,708.7	7,374.3	38.6	37.6	-0.48	634.0	1,581.2	1,340.7	1,268.9	71.86	18.657	
7,802.7	7,478.0	7,811.3	7,477.0	38.7	37.7	-0.48	634.0	1,581.2	1,340.7	1,268.7	72.06	18.605	

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Donaldson USX EE29-06D
<b>Project:</b>	SEC.29-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Reference Site:</b>	Donaldson USX EE29-12D Pad Sec.29-T7N-R65W	<b>MD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Donaldson USX EE29-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Noble Donaldson USX EE29-06D Plan #1 (5-04-11)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Donaldson USX EE29-12D Pad Sec.29-T7N-R65W - Calvary USX EE29-19 (Exist.) - Wellbore #1 - Des													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance		Warning								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	88.73	18.2	819.8	820.0					
100.0	100.0	97.0	97.0	0.1	0.1	88.73	18.2	819.8	820.0	819.8	0.22	3,703.791		
200.0	200.0	197.0	197.0	0.3	0.3	88.73	18.2	819.8	820.0	819.4	0.67	1,228.395		
300.0	300.0	297.0	297.0	0.6	0.6	88.73	18.2	819.8	820.0	818.9	1.12	734.071		
400.0	400.0	397.0	397.0	0.8	0.8	88.73	18.2	819.8	820.0	818.5	1.57	523.434		
500.0	500.0	497.0	497.0	1.0	1.0	88.73	18.2	819.8	820.0	818.0	2.02	406.726		
600.0	600.0	597.0	597.0	1.2	1.2	88.73	18.2	819.8	820.0	817.6	2.47	332.574		
700.0	700.0	697.0	697.0	1.5	1.5	88.73	18.2	819.8	820.0	817.1	2.92	281.290		
750.0	750.0	747.0	747.0	1.6	1.6	88.73	18.2	819.8	820.0	816.9	3.14	261.155		
800.0	800.0	797.0	797.0	1.7	1.7	-25.22	18.2	819.8	819.6	816.3	3.35	244.313		
900.0	899.9	896.9	896.9	1.9	1.9	-25.35	18.2	819.8	816.5	812.7	3.77	216.570		
1,000.0	999.7	996.7	996.7	2.1	2.1	-25.62	18.2	819.8	810.2	806.0	4.19	193.268		
1,100.0	1,099.1	1,096.1	1,096.1	2.3	2.4	-26.02	18.2	819.8	800.8	796.1	4.62	173.315		
1,200.0	1,198.2	1,195.2	1,195.2	2.6	2.6	-26.58	18.2	819.8	788.3	783.2	5.06	155.889		
1,300.0	1,296.6	1,293.6	1,293.6	2.9	2.8	-27.30	18.2	819.8	772.7	767.2	5.50	140.389		
1,400.0	1,394.4	1,391.4	1,391.4	3.2	3.0	-28.20	18.2	819.8	754.2	748.3	5.97	126.380		
1,500.0	1,491.5	1,488.5	1,488.5	3.7	3.2	-29.30	18.2	819.8	732.9	726.4	6.45	113.538		
1,600.0	1,587.6	1,584.6	1,584.6	4.1	3.4	-30.63	18.2	819.8	708.8	701.8	6.97	101.633		
1,700.0	1,682.7	1,679.7	1,679.7	4.7	3.7	-32.23	18.2	819.8	682.1	674.5	7.54	90.500		
1,800.0	1,776.6	1,773.6	1,773.6	5.3	3.9	-34.14	18.2	819.8	652.9	644.8	8.16	80.032		
1,906.9	1,875.7	1,872.7	1,872.7	6.1	4.1	-36.59	18.2	819.8	619.4	610.4	8.91	69.514		
2,000.0	1,961.3	1,958.3	1,958.3	6.8	4.3	-38.65	18.2	819.8	589.5	579.8	9.66	61.015		
2,100.0	2,053.3	2,050.3	2,050.3	7.6	4.5	-41.08	18.2	819.8	558.3	547.8	10.53	53.013		
2,200.0	2,145.2	2,142.2	2,142.2	8.4	4.7	-43.78	18.2	819.8	528.2	516.8	11.47	46.052		
2,300.0	2,237.2	2,234.2	2,234.2	9.2	4.9	-46.77	18.2	819.8	499.4	487.0	12.48	40.019		
2,400.0	2,329.1	2,326.1	2,326.1	10.0	5.1	-50.08	18.2	819.8	472.1	458.6	13.56	34.814		
2,500.0	2,421.1	2,418.1	2,418.1	10.8	5.3	-53.75	18.2	819.8	446.6	431.9	14.72	30.352		
2,600.0	2,513.1	2,510.1	2,510.1	11.7	5.5	-57.80	18.2	819.8	423.3	407.3	15.94	26.560		
2,700.0	2,605.0	2,602.0	2,602.0	12.5	5.7	-62.24	18.2	819.8	402.4	385.2	17.21	23.378		
2,800.0	2,697.0	2,694.0	2,694.0	13.3	5.9	-67.08	18.2	819.8	384.4	365.8	18.52	20.751		
2,900.0	2,788.9	2,785.9	2,785.9	14.2	6.1	-72.29	18.2	819.8	369.7	349.8	19.84	18.632		
3,000.0	2,880.9	2,877.9	2,877.9	15.0	6.4	-77.82	18.2	819.8	358.7	337.6	21.13	16.977		
3,100.0	2,972.8	2,969.8	2,969.8	15.8	6.6	-83.59	18.2	819.8	351.8	329.5	22.35	15.743		
3,200.0	3,064.8	3,061.8	3,061.8	16.7	6.8	-89.49	18.2	819.8	349.2	325.8	23.46	14.890		
3,208.6	3,072.7	3,069.7	3,069.7	16.8	6.8	-90.00	18.2	819.8	349.2	325.7	23.54	14.832 CC, ES		
3,300.0	3,156.8	3,153.8	3,153.8	17.5	7.0	-95.40	18.2	819.8	351.1	326.6	24.42	14.375		
3,400.0	3,248.7	3,245.7	3,245.7	18.4	7.2	-101.20	18.2	819.8	357.2	332.0	25.23	14.157 SF		
3,500.0	3,340.7	3,337.7	3,337.7	19.2	7.4	-106.78	18.2	819.8	367.5	341.6	25.89	14.197		
3,600.0	3,432.6	3,429.6	3,429.6	20.1	7.6	-112.05	18.2	819.8	381.6	355.2	26.40	14.455		
3,700.0	3,524.6	3,521.6	3,521.6	20.9	7.8	-116.95	18.2	819.8	399.0	372.3	26.79	14.894		
3,800.0	3,616.5	3,613.5	3,613.5	21.8	8.0	-121.46	18.2	819.8	419.5	392.4	27.09	15.482		
3,900.0	3,708.5	3,705.5	3,705.5	22.6	8.2	-125.58	18.2	819.8	442.4	415.1	27.33	16.189		
4,000.0	3,800.4	3,797.4	3,797.4	23.4	8.4	-129.31	18.2	819.8	467.6	440.1	27.53	16.987		
4,100.0	3,892.4	3,889.4	3,889.4	24.3	8.6	-132.69	18.2	819.8	494.6	466.9	27.70	17.855		
4,200.0	3,984.4	3,981.4	3,981.4	25.1	8.8	-135.73	18.2	819.8	523.2	495.3	27.87	18.772		
4,300.0	4,076.3	4,073.3	4,073.3	26.0	9.0	-138.47	18.2	819.8	553.1	525.0	28.04	19.724		
4,400.0	4,168.3	4,165.3	4,165.3	26.8	9.2	-140.95	18.2	819.8	584.0	555.8	28.22	20.696		
4,500.0	4,260.2	4,257.2	4,257.2	27.7	9.5	-143.19	18.2	819.8	616.0	587.6	28.42	21.678		
4,600.0	4,352.2	4,349.2	4,349.2	28.5	9.7	-145.22	18.2	819.8	648.7	620.1	28.63	22.661		
4,700.0	4,444.1	4,441.1	4,441.1	29.4	9.9	-147.05	18.2	819.8	682.2	653.3	28.86	23.638		
4,800.0	4,536.1	4,533.1	4,533.1	30.2	10.1	-148.73	18.2	819.8	716.2	687.1	29.11	24.604		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Donaldson USX EE29-06D
<b>Project:</b>	SEC.29-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Reference Site:</b>	Donaldson USX EE29-12D Pad Sec.29-T7N-R65W	<b>MD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Donaldson USX EE29-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Noble Donaldson USX EE29-06D Plan #1 (5-04-11)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Donaldson USX EE29-12D Pad Sec.29-T7N-R65W - Calvary USX EE29-19 (Exist.) - Wellbore #1 - Des													<b>Offset Site Error:</b>	0.0 ft
<b>Survey Program:</b> 0-MWD													<b>Offset Well Error:</b>	0.0 ft
Reference	Offset	Semi Major Axis		Distance		Warning								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,900.0	4,628.1	4,625.1	4,625.1	31.1	10.3	-150.26	18.2	819.8	750.8	721.4	29.38	25.555		
5,000.0	4,720.0	4,717.0	4,717.0	31.9	10.5	-151.65	18.2	819.8	785.8	756.1	29.67	26.487		
5,100.0	4,812.0	4,809.0	4,809.0	32.8	10.7	-152.93	18.2	819.8	821.2	791.2	29.97	27.399		
5,167.8	4,874.3	4,871.3	4,871.3	33.4	10.8	-153.74	18.2	819.8	845.3	815.2	30.19	28.004		
5,200.0	4,904.0	4,901.0	4,901.0	33.6	10.9	-154.21	18.2	819.8	856.7	826.4	30.29	28.289		
5,300.0	4,997.0	4,994.0	4,994.0	34.2	11.1	-155.52	18.2	819.8	890.3	859.7	30.58	29.113		
5,400.0	5,091.3	5,088.3	5,088.3	34.8	11.3	-156.63	18.2	819.8	921.1	890.2	30.90	29.811		
5,500.0	5,186.7	5,183.7	5,183.7	35.3	11.5	-157.57	18.2	819.8	949.0	917.8	31.23	30.391		
5,600.0	5,283.0	5,280.0	5,280.0	35.8	11.8	-158.36	18.2	819.8	973.9	942.3	31.56	30.861		
5,700.0	5,380.3	5,377.3	5,377.3	36.2	12.0	-159.01	18.2	819.8	995.7	963.8	31.88	31.230		
5,800.0	5,478.3	5,475.3	5,475.3	36.5	12.2	-159.55	18.2	819.8	1,014.4	982.2	32.20	31.503		
5,900.0	5,576.9	5,573.9	5,573.9	36.8	12.4	-159.98	18.2	819.8	1,029.9	997.4	32.50	31.686		
6,000.0	5,676.0	5,673.0	5,673.0	37.1	12.6	-160.30	18.2	819.8	1,042.1	1,009.4	32.79	31.784		
6,100.0	5,775.6	5,772.6	5,772.6	37.3	12.9	-160.54	18.2	819.8	1,051.2	1,018.1	33.06	31.800		
6,200.0	5,875.4	5,872.4	5,872.4	37.4	13.1	-160.69	18.2	819.8	1,056.9	1,023.6	33.30	31.738		
6,300.0	5,975.3	5,972.3	5,972.3	37.5	13.3	-160.75	18.2	819.8	1,059.4	1,025.9	33.53	31.598		
6,324.7	6,000.0	5,997.0	5,997.0	37.5	13.4	-46.82	18.2	819.8	1,059.5	1,025.9	33.58	31.552		
6,400.0	6,075.3	6,072.3	6,072.3	37.6	13.5	-46.82	18.2	819.8	1,059.5	1,025.6	33.84	31.307		
6,500.0	6,175.3	6,172.3	6,172.3	37.7	13.8	-46.82	18.2	819.8	1,059.5	1,025.3	34.19	30.985		
6,600.0	6,275.3	6,272.3	6,272.3	37.7	14.0	-46.82	18.2	819.8	1,059.5	1,024.9	34.55	30.668		
6,700.0	6,375.3	6,372.3	6,372.3	37.8	14.2	-46.82	18.2	819.8	1,059.5	1,024.6	34.90	30.357		
6,800.0	6,475.3	6,472.3	6,472.3	37.9	14.4	-46.82	18.2	819.8	1,059.5	1,024.2	35.26	30.050		
6,900.0	6,575.3	6,572.3	6,572.3	38.0	14.7	-46.82	18.2	819.8	1,059.5	1,023.9	35.62	29.748		
7,000.0	6,675.3	6,672.3	6,672.3	38.0	14.9	-46.82	18.2	819.8	1,059.5	1,023.5	35.98	29.450		
7,100.0	6,775.3	6,772.3	6,772.3	38.1	15.1	-46.82	18.2	819.8	1,059.5	1,023.1	36.34	29.158		
7,200.0	6,875.3	6,872.3	6,872.3	38.2	15.3	-46.82	18.2	819.8	1,059.5	1,022.8	36.70	28.870		
7,300.0	6,975.3	6,972.3	6,972.3	38.3	15.6	-46.82	18.2	819.8	1,059.5	1,022.4	37.06	28.586		
7,400.0	7,075.3	7,072.3	7,072.3	38.4	15.8	-46.82	18.2	819.8	1,059.5	1,022.1	37.43	28.307		
7,500.0	7,175.3	7,172.3	7,172.3	38.5	16.0	-46.82	18.2	819.8	1,059.5	1,021.7	37.80	28.032		
7,600.0	7,275.3	7,272.3	7,272.3	38.5	16.2	-46.82	18.2	819.8	1,059.5	1,021.3	38.16	27.762		
7,700.0	7,375.3	7,372.3	7,372.3	38.6	16.5	-46.82	18.2	819.8	1,059.5	1,020.9	38.53	27.495		
7,802.7	7,478.0	7,475.0	7,475.0	38.7	16.7	-46.82	18.2	819.8	1,059.5	1,020.6	38.91	27.226		

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Donaldson USX EE29-06D
<b>Project:</b>	SEC.29-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Reference Site:</b>	Donaldson USX EE29-12D Pad Sec.29-T7N-R65W	<b>MD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Donaldson USX EE29-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Noble Donaldson USX EE29-06D Plan #1 (5-04-11)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4938.0ft (Original Well Elev) Coordinates are relative to: Donaldson USX EE29-06D  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.52°





<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Donaldson USX EE29-06D
<b>Project:</b>	SEC.29-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Reference Site:</b>	Donaldson USX EE29-12D Pad Sec.29-T7N-R65W	<b>MD Reference:</b>	WELL @ 4938.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Donaldson USX EE29-06D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Noble Donaldson USX EE29-06D Plan #1 (5-04-11)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4938.0ft (Original Well Elev)Coordinates are relative to: Donaldson USX EE29-06D  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.52°

