

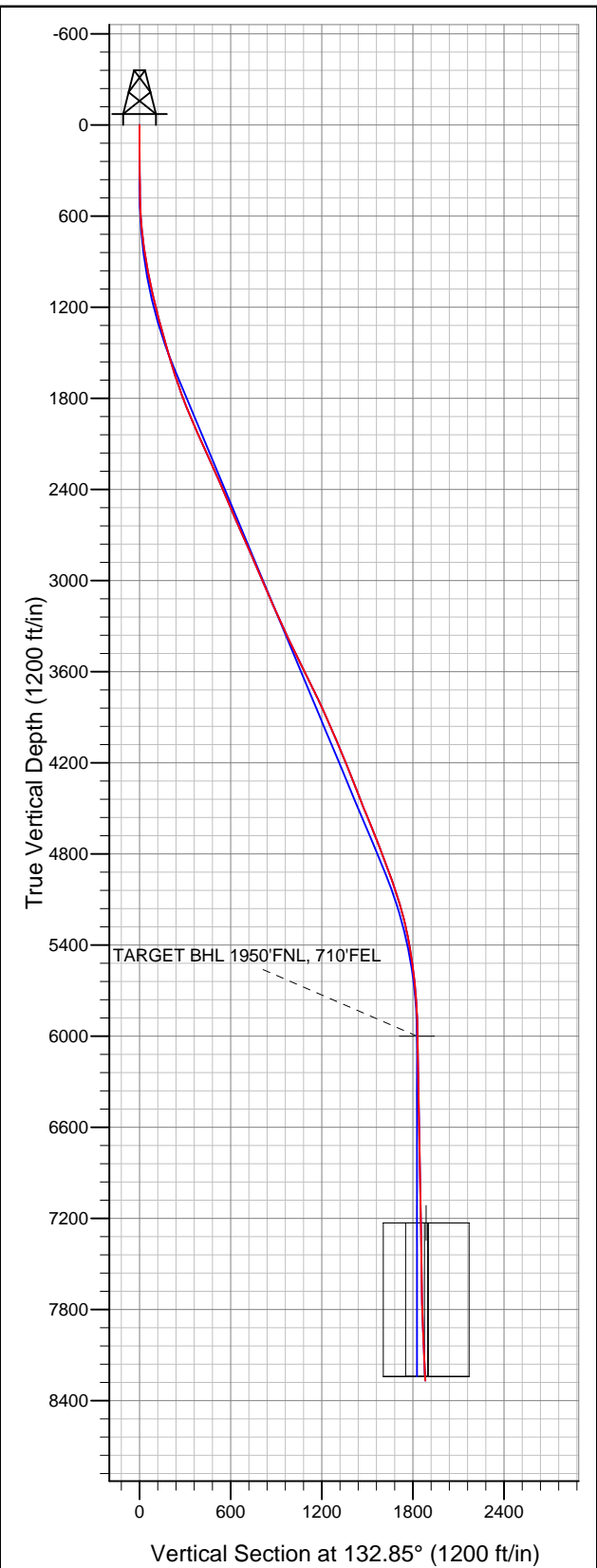


# Well Name: Vista USX WW33-08D

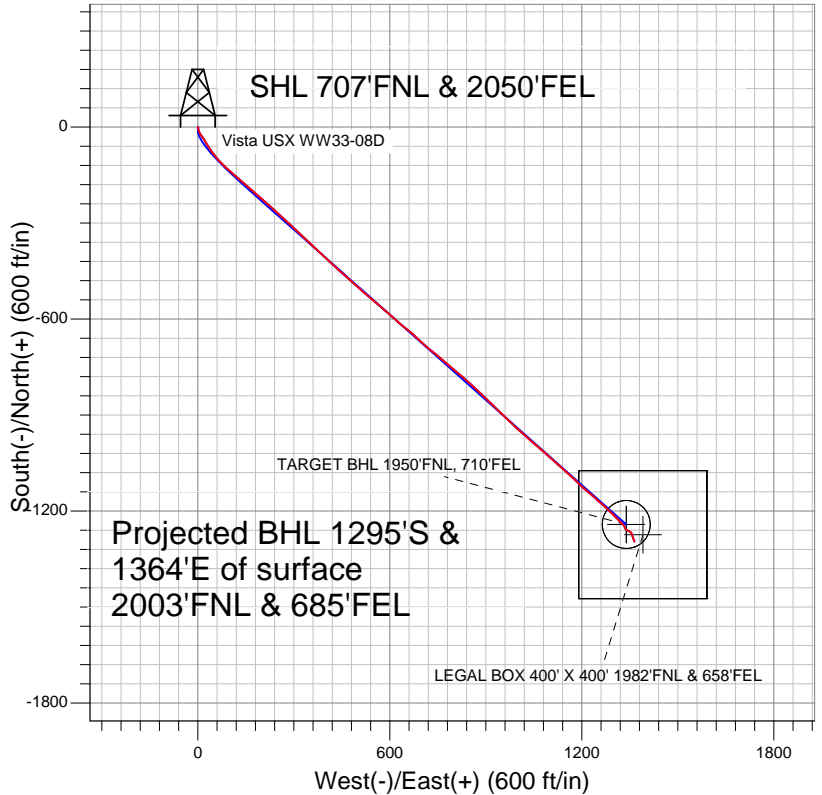
Surface Location: Stewardson USX WW33-01D Pad Sec.33-T1N-R66W  
 North American Datum 1983 US State Plane 1983Colorado Northern Zone  
 Ground Elevation: 5071.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1248404.74	3201667.09	40.013010	-104.780010	

Original Well EleWELL @ 5084.0ft (Original Well Elev)



## NOBLE ENERGY INC WELD COUNTY CO



### LEGEND

- Vista USX WW33-08D, Wellbore #1, Vista USX WW33-08D Plan #1 (6-16-11) V0
- Wellbore #1
- Survey #1

## Final Survey Plot

Projected Final Survey -  
 8610'MD & 8267'TVD @ 1881' VS  
 2.8 deg Inc 157.4 deg AZ

Project: SEC.33-T1N-R66W  
 Site: Stewardson USX WW33-01D Pad Sec.33-T1N-R66W  
 Well: Vista USX WW33-08D  
 Plan: Wellbore #1



# **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.33-T1N-R66W**

**Stewardson USX WW33-01D Pad Sec.33-T1N-R66W**

**Vista USX WW33-08D**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**29 September, 2011**



<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Vista USX WW33-08D
<b>Project:</b>	SEC.33-T1N-R66W	<b>TVD Reference:</b>	WELL @ 5084.0ft (Original Well Elev)
<b>Site:</b>	Stewardson USX WW33-01D Pad Sec.33-T1N-R66W	<b>MD Reference:</b>	WELL @ 5084.0ft (Original Well Elev)
<b>Well:</b>	Vista USX WW33-08D	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

<b>Project</b>	SEC.33-T1N-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	Stewardson USX WW33-01D Pad Sec.33-T1N-R66W				
Site Position:		Northing:	1,248,458.80ft	Latitude:	40.013160
From:	Lat/Long	Easting:	3,201,593.82ft	Longitude:	-104.780270
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.47 °

Well	Vista USX WW33-08D					
Well Position	+N-S	0.0 ft	Northing:	1,248,404.74 ft	Latitude:	40.013010
	+E-W	0.0 ft	Easting:	3,201,667.09 ft	Longitude:	-104.780010
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,071.0 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	6/22/2011	8.84	66.73	52,922

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	6,000.0	0.0	0.0	132.85	

<b>Survey Program</b>	<b>Date</b>	9/29/2011			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
165.0	8,610.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
165.0	0.30	96.90	165.0	-0.1	0.4	0.3	0.18	0.18	0.00	
320.0	0.40	154.40	320.0	-0.6	1.1	1.2	0.22	0.06	37.10	
412.0	1.10	167.40	412.0	-1.7	1.4	2.2	0.78	0.76	14.13	
505.0	2.60	176.00	504.9	-4.7	1.7	4.5	1.64	1.61	9.25	
597.0	4.00	171.40	596.8	-10.0	2.4	8.5	1.55	1.52	-5.00	
689.0	5.50	151.40	688.5	-17.0	5.0	15.2	2.41	1.63	-21.74	
781.0	7.40	144.70	779.9	-25.7	10.5	25.2	2.22	2.07	-7.28	
853.0	8.60	146.60	851.2	-34.0	16.1	35.0	1.71	1.67	2.64	
935.0	10.40	148.80	932.1	-45.5	23.3	48.0	2.24	2.20	2.68	
1,016.0	11.60	148.90	1,011.6	-58.7	31.3	62.9	1.48	1.48	0.12	
1,098.0	13.50	144.40	1,091.6	-73.5	41.2	80.2	2.60	2.32	-5.49	

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Vista USX WW33-08D
<b>Project:</b>	SEC.33-T1N-R66W	<b>TVD Reference:</b>	WELL @ 5084.0ft (Original Well Elev)
<b>Site:</b>	Stewardson USX WW33-01D Pad Sec.33-T1N-R66W	<b>MD Reference:</b>	WELL @ 5084.0ft (Original Well Elev)
<b>Well:</b>	Vista USX WW33-08D	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

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)
1,180.0	14.60	142.60	1,171.2	-89.5	53.0	99.7	1.44	1.34	-2.20
1,262.0	14.60	137.90	1,250.5	-105.4	66.2	120.2	1.44	0.00	-5.73
1,343.0	15.10	133.30	1,328.8	-120.2	80.7	140.9	1.58	0.62	-5.68
1,391.0	15.80	131.70	1,375.1	-128.8	90.2	153.7	1.71	1.46	-3.33
1,476.0	15.70	129.60	1,456.9	-143.9	107.7	176.8	0.68	-0.12	-2.47
1,558.0	16.40	133.10	1,535.7	-158.9	124.7	199.4	1.46	0.85	4.27
1,640.0	17.10	131.00	1,614.2	-174.7	142.2	223.1	1.13	0.85	-2.56
1,722.0	18.60	130.80	1,692.3	-191.1	161.2	248.2	1.83	1.83	-0.24
1,803.0	20.00	131.00	1,768.7	-208.7	181.5	274.9	1.73	1.73	0.25
1,885.0	21.40	132.20	1,845.4	-227.9	203.1	303.9	1.78	1.71	1.46
1,967.0	23.00	132.10	1,921.3	-248.7	226.1	334.9	1.95	1.95	-0.12
2,048.0	24.00	131.50	1,995.6	-270.2	250.2	367.2	1.27	1.23	-0.74
2,130.0	24.00	132.10	2,070.5	-292.4	275.0	400.5	0.30	0.00	0.73
2,212.0	24.40	133.80	2,145.3	-315.4	299.6	434.1	0.98	0.49	2.07
2,294.0	24.40	132.80	2,220.0	-338.6	324.3	468.0	0.50	0.00	-1.22
2,375.0	23.50	132.10	2,294.0	-360.8	348.6	500.9	1.17	-1.11	-0.86
2,457.0	23.60	133.80	2,369.2	-383.1	372.5	533.7	0.84	0.12	2.07
2,539.0	23.80	135.20	2,444.3	-406.2	396.0	566.6	0.73	0.24	1.71
2,620.0	23.30	130.80	2,518.5	-428.3	419.7	598.9	2.26	-0.62	-5.43
2,702.0	23.50	132.60	2,593.8	-449.9	444.0	631.5	0.91	0.24	2.20
2,784.0	23.20	131.00	2,669.1	-471.6	468.2	664.0	0.86	-0.37	-1.95
2,866.0	23.90	132.90	2,744.2	-493.5	492.6	696.7	1.26	0.85	2.32
2,947.0	23.90	130.10	2,818.3	-515.2	517.1	729.5	1.40	0.00	-3.46
3,029.0	23.50	130.50	2,893.4	-536.6	542.3	762.5	0.53	-0.49	0.49
3,111.0	23.90	131.20	2,968.5	-558.1	567.2	795.4	0.60	0.49	0.85
3,193.0	23.10	130.80	3,043.7	-579.6	591.9	828.1	0.99	-0.98	-0.49
3,274.0	23.40	132.40	3,118.1	-600.8	615.8	860.1	0.86	0.37	1.98
3,356.0	23.90	129.00	3,193.2	-622.2	640.7	892.9	1.77	0.61	-4.15
3,438.0	24.40	129.90	3,268.0	-643.5	666.6	926.4	0.76	0.61	1.10
3,519.0	25.50	133.60	3,341.5	-666.3	692.1	960.5	2.36	1.36	4.57
3,601.0	25.50	129.90	3,415.5	-689.8	718.4	995.8	1.94	0.00	-4.51
3,683.0	25.80	129.10	3,489.4	-712.4	745.8	1,031.3	0.56	0.37	-0.98
3,765.0	26.40	130.30	3,563.0	-735.4	773.6	1,067.3	0.97	0.73	1.46
3,846.0	26.70	130.30	3,635.5	-758.8	801.2	1,103.4	0.37	0.37	0.00
3,928.0	26.60	130.80	3,708.8	-782.8	829.1	1,140.2	0.30	-0.12	0.61
4,010.0	25.00	133.60	3,782.6	-806.7	855.6	1,175.9	2.45	-1.95	3.41
4,091.0	24.10	131.30	3,856.3	-829.4	880.4	1,209.5	1.62	-1.11	-2.84
4,173.0	23.20	134.50	3,931.4	-851.8	904.5	1,242.4	1.91	-1.10	3.90
4,255.0	24.00	134.70	4,006.6	-874.8	927.9	1,275.2	0.98	0.98	0.24
4,337.0	23.90	134.70	4,081.5	-898.3	951.5	1,308.5	0.12	-0.12	0.00
4,418.0	22.20	133.60	4,156.0	-920.4	974.3	1,340.2	2.16	-2.10	-1.36
4,500.0	21.20	132.10	4,232.2	-941.0	996.5	1,370.5	1.39	-1.22	-1.83
4,582.0	21.60	131.70	4,308.6	-961.0	1,018.8	1,400.4	0.52	0.49	-0.49
4,663.0	21.40	131.50	4,383.9	-980.7	1,041.0	1,430.1	0.26	-0.25	-0.25
4,745.0	21.50	131.00	4,460.2	-1,000.4	1,063.5	1,460.1	0.25	0.12	-0.61
4,827.0	22.90	131.90	4,536.2	-1,021.0	1,086.7	1,491.0	1.76	1.71	1.10
4,909.0	23.00	131.00	4,611.7	-1,042.1	1,110.7	1,523.0	0.45	0.12	-1.10
4,990.0	21.60	131.30	4,686.6	-1,062.3	1,133.8	1,553.7	1.73	-1.73	0.37
5,072.0	20.50	132.80	4,763.1	-1,082.1	1,155.7	1,583.2	1.49	-1.34	1.83
5,154.0	20.60	133.80	4,839.9	-1,101.8	1,176.7	1,612.0	0.45	0.12	1.22
5,236.0	20.00	131.70	4,916.8	-1,121.1	1,197.5	1,640.4	1.15	-0.73	-2.56
5,317.0	19.20	130.80	4,993.1	-1,139.0	1,218.0	1,667.6	1.06	-0.99	-1.11
5,399.0	18.30	131.00	5,070.8	-1,156.3	1,237.9	1,693.9	1.10	-1.10	0.24

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Vista USX WW33-08D
<b>Project:</b>	SEC.33-T1N-R66W	<b>TVD Reference:</b>	WELL @ 5084.0ft (Original Well Elev)
<b>Site:</b>	Stewardson USX WW33-01D Pad Sec.33-T1N-R66W	<b>MD Reference:</b>	WELL @ 5084.0ft (Original Well Elev)
<b>Well:</b>	Vista USX WW33-08D	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

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)
5,481.0	16.30	131.50	5,149.1	-1,172.4	1,256.2	1,718.3	2.45	-2.44	0.61
5,562.0	14.00	133.10	5,227.3	-1,186.6	1,271.9	1,739.4	2.89	-2.84	1.98
5,644.0	12.20	133.10	5,307.1	-1,199.3	1,285.5	1,758.0	2.20	-2.20	0.00
5,725.0	10.30	134.50	5,386.6	-1,210.2	1,296.9	1,773.8	2.37	-2.35	1.73
5,808.0	8.70	135.00	5,468.4	-1,219.8	1,306.6	1,787.5	1.93	-1.93	0.60
5,889.0	7.60	136.60	5,548.6	-1,228.1	1,314.6	1,799.0	1.39	-1.36	1.98
5,971.0	6.50	136.10	5,630.0	-1,235.4	1,321.6	1,809.0	1.34	-1.34	-0.61
6,053.0	4.70	134.70	5,711.6	-1,241.1	1,327.2	1,817.0	2.20	-2.20	-1.71
6,134.0	3.60	139.60	5,792.4	-1,245.3	1,331.2	1,822.9	1.43	-1.36	6.05
6,216.0	2.50	155.60	5,874.2	-1,248.9	1,333.6	1,827.1	1.68	-1.34	19.51
6,298.0	1.10	175.30	5,956.2	-1,251.3	1,334.4	1,829.3	1.84	-1.71	24.02
6,341.7	1.03	170.60	5,999.9	-1,252.1	1,334.5	1,829.9	0.25	-0.15	-10.77
<b>TARGET BHL 1950'FNL, 710'FEL</b>									
6,461.0	0.90	154.70	6,119.2	-1,254.1	1,335.1	1,831.6	0.25	-0.11	-13.32
6,625.0	1.00	140.30	6,283.2	-1,256.3	1,336.5	1,834.3	0.16	0.06	-8.78
6,788.0	1.20	124.80	6,446.1	-1,258.4	1,338.8	1,837.4	0.22	0.12	-9.51
6,952.0	1.10	117.50	6,610.1	-1,260.1	1,341.6	1,840.6	0.11	-0.06	-4.45
7,115.0	1.40	119.20	6,773.1	-1,261.8	1,344.8	1,844.0	0.19	0.18	1.04
7,279.0	1.50	118.50	6,937.0	-1,263.8	1,348.4	1,848.0	0.06	0.06	-0.43
7,442.0	0.60	112.20	7,100.0	-1,265.1	1,351.1	1,850.9	0.56	-0.55	-3.87
7,571.8	0.44	113.36	7,229.8	-1,265.6	1,352.2	1,852.0	0.12	-0.12	0.89
<b>TARGET CIRCLE 1950'FNL &amp; 710'FEL</b>									
7,572.3	0.44	113.36	7,230.3	-1,265.6	1,352.2	1,852.0	0.00	0.00	0.00
<b>LEGAL BOX 400' X 400' 1982'FNL &amp; 658'FEL</b>									
7,605.0	0.40	113.80	7,263.0	-1,265.7	1,352.4	1,852.3	0.12	-0.12	1.36
7,769.0	0.50	147.30	7,427.0	-1,266.5	1,353.3	1,853.5	0.17	0.06	20.43
7,932.0	1.10	156.10	7,589.9	-1,268.5	1,354.3	1,855.6	0.37	0.37	5.40
8,096.0	2.20	158.80	7,753.9	-1,272.9	1,356.1	1,859.9	0.67	0.67	1.65
8,260.0	2.40	159.30	7,917.7	-1,279.1	1,358.4	1,865.8	0.12	0.12	0.30
8,424.0	3.10	161.60	8,081.6	-1,286.5	1,361.1	1,872.8	0.43	0.43	1.40
8,560.0	2.80	157.40	8,217.4	-1,293.0	1,363.5	1,879.0	0.27	-0.22	-3.09
8,610.0	2.80	157.40	8,267.3	-1,295.3	1,364.4	1,881.2	0.00	0.00	0.00

Checked By: _____	Approved By: _____	Date: _____
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