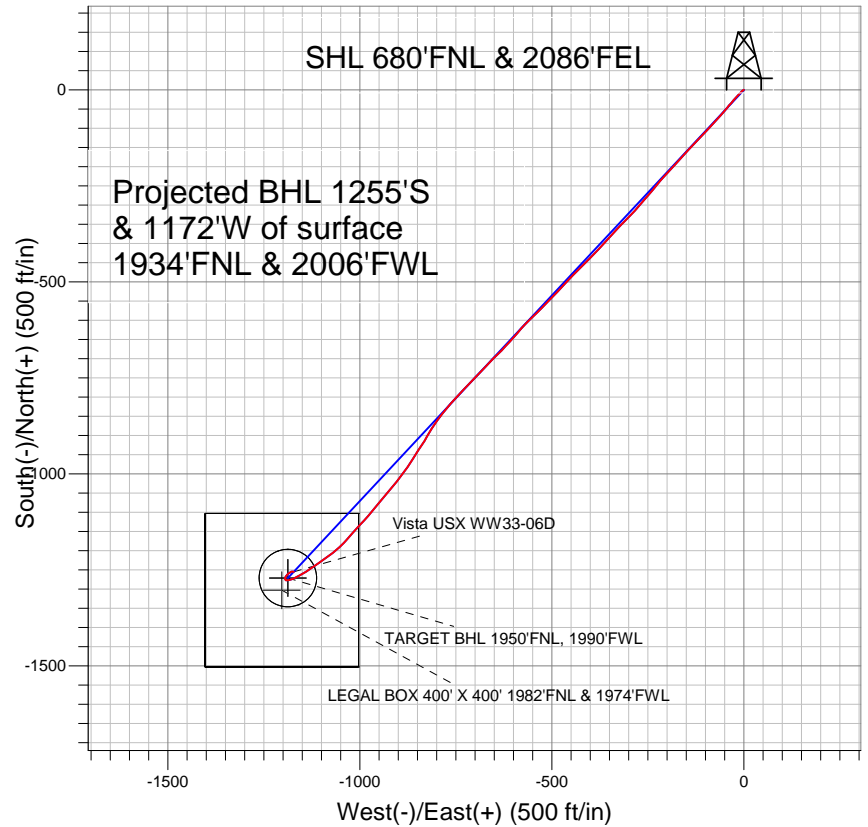


NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- Vista USX WW33-06D, Wellbore #1, Vista USX WW33-06D Plan #1 (6-16-11) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
8589' MD & 8279' TVD @ 1718'VS
1.1 deg Inc 98.1 deg AZ

Project: SEC.33-T1N-R66W
Site: Stewardson USX WW33-01D Pad Sec.33-T1N-R66W
Well: Vista USX WW33-06D
Plan: Wellbore #1



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.33-T1N-R66W

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

Vista USX WW33-06D

Wellbore #1

Survey: Survey #1

Standard Survey Report

19 September, 2011



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Vista USX WW33-06D
Project:	SEC.33-T1N-R66W	TVD Reference:	WELL @ 5085.0ft (Original Well Elev)
Site:	Stewardson USX WW33-01D Pad Sec.33-T1N-R66W	MD Reference:	WELL @ 5085.0ft (Original Well Elev)
Well:	Vista USX WW33-06D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.33-T1N-R66W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

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

Well	Vista USX WW33-06D					
Well Position	+N-S	0.0 ft	Northing:	1,248,433.59 ft	Latitude:	40.013090
	+E-W	0.0 ft	Easting:	3,201,630.44 ft	Longitude:	-104.780140
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,072.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	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 (°)	
	0.0	0.0	0.0	223.05	

Survey Program	Date	9/19/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
105.0	8,589.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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	
105.0	0.20	251.20	105.0	-0.1	-0.2	0.2	0.19	0.19	0.00	
198.0	0.10	315.40	198.0	-0.1	-0.4	0.3	0.19	-0.11	69.03	
290.0	0.10	272.30	290.0	0.0	-0.5	0.4	0.08	0.00	-46.85	
382.0	1.60	235.90	382.0	-0.7	-1.7	1.7	1.65	1.63	-39.57	
475.0	3.30	231.40	474.9	-3.1	-4.8	5.6	1.84	1.83	-4.84	
567.0	5.30	222.10	566.6	-7.9	-9.8	12.4	2.30	2.17	-10.11	
659.0	7.50	223.30	658.1	-15.4	-16.7	22.7	2.40	2.39	1.30	
751.0	9.30	219.60	749.1	-25.5	-25.6	36.1	2.04	1.96	-4.02	
823.0	10.60	222.10	820.0	-34.9	-33.7	48.5	1.90	1.81	3.47	
905.0	11.90	220.10	900.4	-47.0	-44.2	64.5	1.66	1.59	-2.44	
987.0	13.80	220.50	980.3	-60.9	-56.0	82.7	2.32	2.32	0.49	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Vista USX WW33-06D
Project:	SEC.33-T1N-R66W	TVD Reference:	WELL @ 5085.0ft (Original Well Elev)
Site:	Stewardson USX WW33-01D Pad Sec.33-T1N-R66W	MD Reference:	WELL @ 5085.0ft (Original Well Elev)
Well:	Vista USX WW33-06D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)
1,068.0	15.20	221.70	1,058.8	-76.2	-69.4	103.0	1.77	1.73	1.48
1,150.0	17.20	222.40	1,137.5	-93.2	-84.7	125.9	2.45	2.44	0.85
1,232.0	18.50	223.50	1,215.6	-111.5	-101.8	151.0	1.64	1.59	1.34
1,313.0	20.20	224.70	1,292.0	-130.8	-120.5	177.9	2.16	2.10	1.48
1,395.0	20.70	222.90	1,368.8	-151.5	-140.3	206.5	0.98	0.61	-2.20
1,476.0	20.50	221.70	1,444.6	-172.6	-159.5	235.0	0.58	-0.25	-1.48
1,558.0	20.80	222.40	1,521.4	-194.0	-178.9	263.9	0.47	0.37	0.85
1,640.0	21.20	223.10	1,597.9	-215.6	-198.8	293.3	0.58	0.49	0.85
1,722.0	22.20	219.80	1,674.1	-238.3	-218.9	323.6	1.92	1.22	-4.02
1,803.0	23.70	220.50	1,748.7	-262.5	-239.2	355.1	1.88	1.85	0.86
1,885.0	25.10	220.30	1,823.4	-288.3	-261.2	389.0	1.71	1.71	-0.24
1,967.0	25.30	222.20	1,897.6	-314.5	-284.2	423.9	1.02	0.24	2.32
2,048.0	25.50	224.90	1,970.7	-339.7	-308.2	458.6	1.45	0.25	3.33
2,130.0	24.60	222.40	2,045.0	-364.8	-332.1	493.3	1.69	-1.10	-3.05
2,212.0	24.40	223.10	2,119.6	-389.8	-355.2	527.3	0.43	-0.24	0.85
2,294.0	24.30	223.30	2,194.4	-414.4	-378.3	561.1	0.16	-0.12	0.24
2,375.0	23.00	223.50	2,268.5	-438.0	-400.7	593.6	1.61	-1.60	0.25
2,457.0	22.70	225.70	2,344.1	-460.7	-423.0	625.4	1.10	-0.37	2.68
2,539.0	22.30	224.30	2,419.9	-482.9	-445.2	656.8	0.82	-0.49	-1.71
2,620.0	21.20	223.50	2,495.1	-504.5	-466.0	686.8	1.41	-1.36	-0.99
2,702.0	20.80	222.90	2,571.7	-525.9	-486.1	716.2	0.55	-0.49	-0.73
2,784.0	20.30	224.20	2,648.4	-546.8	-506.0	745.0	0.83	-0.61	1.59
2,866.0	21.10	224.50	2,725.1	-567.5	-526.2	773.9	0.98	0.98	0.37
2,947.0	22.30	226.40	2,800.4	-588.5	-547.6	803.9	1.72	1.48	2.35
3,029.0	22.10	223.30	2,876.3	-610.5	-569.4	834.8	1.45	-0.24	-3.78
3,111.0	22.50	220.80	2,952.2	-633.6	-590.3	865.9	1.26	0.49	-3.05
3,193.0	21.80	222.10	3,028.1	-656.8	-610.7	896.8	1.04	-0.85	1.59
3,274.0	21.50	224.90	3,103.4	-678.4	-631.3	926.7	1.33	-0.37	3.46
3,356.0	21.70	224.70	3,179.7	-699.8	-652.6	956.9	0.26	0.24	-0.24
3,438.0	21.50	224.00	3,255.9	-721.4	-673.7	987.1	0.40	-0.24	-0.85
3,519.0	20.60	222.40	3,331.5	-742.6	-693.6	1,016.1	1.32	-1.11	-1.98
3,601.0	20.00	225.40	3,408.4	-763.1	-713.3	1,044.6	1.46	-0.73	3.66
3,683.0	20.60	223.50	3,485.3	-783.4	-733.2	1,073.0	1.09	0.73	-2.32
3,765.0	20.50	221.30	3,562.1	-804.7	-752.6	1,101.8	0.95	-0.12	-2.68
3,846.0	18.70	219.80	3,638.4	-825.3	-770.3	1,128.9	2.31	-2.22	-1.85
3,928.0	19.00	219.40	3,716.0	-845.7	-787.2	1,155.4	0.40	0.37	-0.49
4,010.0	18.60	213.30	3,793.6	-867.0	-802.8	1,181.6	2.45	-0.49	-7.44
4,091.0	19.60	211.30	3,870.2	-889.4	-817.0	1,207.6	1.48	1.23	-2.47
4,173.0	20.80	211.90	3,947.1	-913.5	-831.8	1,235.4	1.49	1.46	0.73
4,255.0	20.80	213.10	4,023.8	-938.1	-847.5	1,264.0	0.52	0.00	1.46
4,337.0	20.70	213.10	4,100.5	-962.4	-863.3	1,292.6	0.12	-0.12	0.00
4,418.0	21.60	214.50	4,176.0	-986.7	-879.6	1,321.5	1.27	1.11	1.73
4,500.0	22.60	216.60	4,252.0	-1,011.8	-897.5	1,352.0	1.55	1.22	2.56
4,582.0	23.10	219.80	4,327.6	-1,036.8	-917.2	1,383.8	1.63	0.61	3.90
4,663.0	22.20	221.20	4,402.3	-1,060.5	-937.5	1,414.9	1.30	-1.11	1.73
4,745.0	23.30	219.10	4,477.9	-1,084.7	-957.9	1,446.6	1.67	1.34	-2.56
4,827.0	23.00	221.00	4,553.3	-1,109.4	-978.6	1,478.8	0.98	-0.37	2.32
4,909.0	21.80	222.80	4,629.2	-1,132.7	-999.5	1,510.0	1.69	-1.46	2.20
4,990.0	19.70	222.10	4,704.9	-1,153.9	-1,018.9	1,538.7	2.61	-2.59	-0.86
5,072.0	17.90	222.20	4,782.5	-1,173.4	-1,036.6	1,565.1	2.20	-2.20	0.12
5,154.0	17.50	225.90	4,860.6	-1,191.4	-1,053.9	1,590.0	1.46	-0.49	4.51
5,236.0	15.70	233.20	4,939.2	-1,206.6	-1,071.7	1,613.3	3.36	-2.20	8.90
5,317.0	14.00	235.10	5,017.5	-1,218.8	-1,088.5	1,633.7	2.18	-2.10	2.35

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)
5,399.0	13.80	234.20	5,097.1	-1,230.2	-1,104.5	1,652.9	0.36	-0.24	-1.10
5,481.0	12.80	234.70	5,176.9	-1,241.1	-1,119.9	1,671.4	1.23	-1.22	0.61
5,562.0	11.60	237.50	5,256.1	-1,250.7	-1,134.1	1,688.1	1.65	-1.48	3.46
5,644.0	10.00	238.60	5,336.6	-1,258.8	-1,147.1	1,703.0	1.97	-1.95	1.34
5,726.0	8.20	242.40	5,417.6	-1,265.2	-1,158.4	1,715.3	2.31	-2.20	4.63
5,808.0	6.20	241.20	5,498.9	-1,270.1	-1,167.4	1,725.1	2.45	-2.44	-1.46
5,889.0	5.00	247.40	5,579.6	-1,273.6	-1,174.5	1,732.4	1.66	-1.48	7.65
5,971.0	3.90	257.20	5,661.3	-1,275.5	-1,180.6	1,738.0	1.63	-1.34	11.95
6,053.0	3.40	262.00	5,743.1	-1,276.5	-1,185.7	1,742.2	0.71	-0.61	5.85
6,134.0	2.50	266.70	5,824.0	-1,276.9	-1,189.8	1,745.3	1.15	-1.11	5.80
6,209.9	1.39	277.18	5,899.8	-1,276.9	-1,192.4	1,747.1	1.54	-1.47	13.81
TARGET BHL 1950'FNL, 1990'FWL									
6,216.0	1.30	278.80	5,906.0	-1,276.9	-1,192.5	1,747.2	1.54	-1.40	26.41
6,298.0	0.50	339.50	5,988.0	-1,276.4	-1,193.6	1,747.5	1.39	-0.98	74.02
6,461.0	0.40	335.10	6,151.0	-1,275.2	-1,194.1	1,747.0	0.06	-0.06	-2.70
6,625.0	0.60	338.10	6,315.0	-1,273.9	-1,194.6	1,746.4	0.12	0.12	1.83
6,788.0	0.50	326.60	6,478.0	-1,272.5	-1,195.3	1,745.9	0.09	-0.06	-7.06
6,952.0	0.80	28.20	6,642.0	-1,270.9	-1,195.2	1,744.6	0.44	0.18	37.56
7,115.0	1.40	34.80	6,804.9	-1,268.3	-1,193.5	1,741.5	0.38	0.37	4.05
7,279.0	1.30	32.00	6,968.9	-1,265.1	-1,191.4	1,737.7	0.07	-0.06	-1.71
7,442.0	1.40	44.30	7,131.8	-1,262.1	-1,189.0	1,733.9	0.19	0.06	7.55
7,550.3	1.13	49.28	7,240.1	-1,260.4	-1,187.3	1,731.5	0.27	-0.25	4.60
LEGAL BOX 400' X 400' 1982'FNL & 1974'FWL									
7,551.1	1.13	49.32	7,240.9	-1,260.4	-1,187.3	1,731.5	0.27	-0.24	5.69
TARGET CIRCLE 1950'FNL, 1990'FWL									
7,605.0	1.00	52.80	7,294.8	-1,259.8	-1,186.5	1,730.5	0.27	-0.24	6.44
7,769.0	1.00	54.90	7,458.8	-1,258.1	-1,184.2	1,727.7	0.02	0.00	1.28
7,932.0	1.00	58.20	7,621.7	-1,256.5	-1,181.8	1,725.0	0.04	0.00	2.02
8,096.0	0.80	66.30	7,785.7	-1,255.3	-1,179.5	1,722.5	0.14	-0.12	4.94
8,259.0	0.70	76.00	7,948.7	-1,254.6	-1,177.5	1,720.6	0.10	-0.06	5.95
8,423.0	1.00	106.00	8,112.7	-1,254.8	-1,175.2	1,719.2	0.32	0.18	18.29
8,539.0	1.10	98.10	8,228.7	-1,255.2	-1,173.1	1,718.1	0.15	0.09	-6.81
8,589.0	1.10	98.10	8,278.7	-1,255.3	-1,172.2	1,717.5	0.00	0.00	0.00

Checked By: _____	Approved By: _____	Date: _____
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