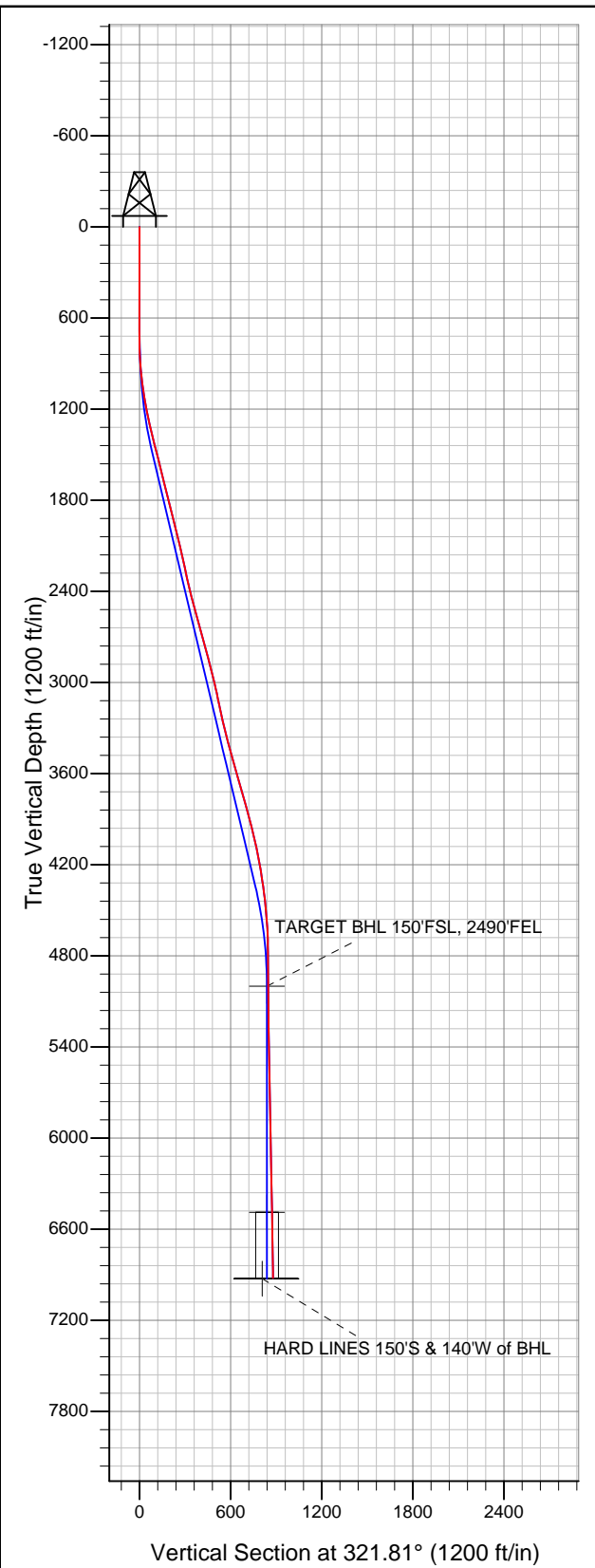


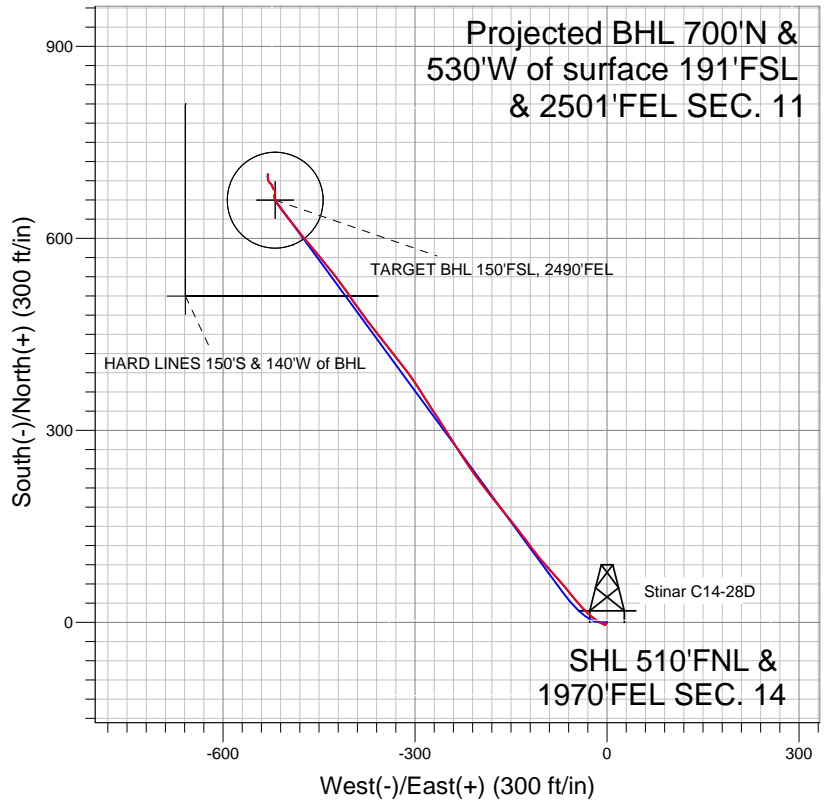


# Well Name: Stinar C14-28D

Surface Location: Stinar C14-28D Pad Sec.14-T4N-R64W  
North American Datum 1983 US State Plane 1983 Colorado Northern Zone  
Ground Elevation: 4638.0  
+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.0 0.0 1360318.12 3274543.38 40.318290 -104.515410  
Original Well Elev WELL @ 4651.0ft (Original Well Elev)



## NOBLE ENERGY INC WELD COUNTY CO



### LEGEND

- Stinar C14-28D, Wellbore #1, Noble Stinar C14-28D Plan #1 (11-15-10) V0
- Wellbore #1
- Survey #1

## Final Survey Plot

Projected Final Survey -  
7022'MD & 6923'TVD @ 878'VS  
1.0 deg Inc 12.4 deg AZ

Project: SEC.14-T4N-R64W  
Site: Stinar C14-28D Pad Sec.14-T4N-R64W  
Well: Stinar C14-28D  
Plan: Wellbore #1



# **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.14-T4N-R64W**

**Stinar C14-28D Pad Sec.14-T4N-R64W**

**Stinar C14-28D**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**08 December, 2011**



<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Stinar C14-28D
<b>Project:</b>	SEC.14-T4N-R64W	<b>TVD Reference:</b>	WELL @ 4651.0ft (Original Well Elev)
<b>Site:</b>	Stinar C14-28D Pad Sec.14-T4N-R64W	<b>MD Reference:</b>	WELL @ 4651.0ft (Original Well Elev)
<b>Well:</b>	Stinar C14-28D	<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.14-T4N-R64W, 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

<b>Site</b>	Stinar C14-28D Pad Sec.14-T4N-R64W		
<b>Site Position:</b>		<b>Northing:</b>	1,360,318.14 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,274,543.38 ft
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40.318290
		<b>Longitude:</b>	-104.515410
		<b>Grid Convergence:</b>	0.64 °

<b>Well</b>	Stinar C14-28D		
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b> 1,360,318.12 ft
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b> 3,274,543.38 ft
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b>	ft
		<b>Latitude:</b>	40.318290
		<b>Longitude:</b>	-104.515410
		<b>Ground Level:</b>	4,638.0 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	11/16/2010	8.80	67.05	53,180

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<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	321.81	

<b>Survey Program</b>	<b>Date</b>	12/8/2011			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
684.0	7,022.0	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	
684.0	0.80	215.20	684.0	-3.9	-2.8	-1.4	0.12	0.12	0.00	
770.0	1.30	287.50	770.0	-4.1	-4.0	-0.7	1.51	0.58	84.07	
854.0	3.30	299.50	853.9	-2.6	-7.0	2.3	2.44	2.38	14.29	
940.0	5.30	298.30	939.6	0.5	-12.7	8.2	2.33	2.33	-1.40	
1,026.0	7.10	308.60	1,025.1	5.7	-20.3	17.0	2.45	2.09	11.98	
1,111.0	9.00	311.30	1,109.3	13.3	-29.4	28.7	2.28	2.24	3.18	
1,197.0	10.80	317.20	1,194.0	23.7	-40.0	43.3	2.40	2.09	6.86	
1,281.0	12.70	322.30	1,276.3	36.8	-51.0	60.4	2.58	2.26	6.07	
1,367.0	14.30	318.40	1,359.9	52.2	-63.8	80.5	2.14	1.86	-4.53	
1,452.0	14.10	319.10	1,442.3	67.9	-77.6	101.3	0.31	-0.24	0.82	
1,538.0	14.00	318.80	1,525.7	83.6	-91.3	122.2	0.14	-0.12	-0.35	
1,624.0	14.30	319.80	1,609.1	99.6	-105.0	143.2	0.45	0.35	1.16	

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Stinar C14-28D
<b>Project:</b>	SEC.14-T4N-R64W	<b>TVD Reference:</b>	WELL @ 4651.0ft (Original Well Elev)
<b>Site:</b>	Stinar C14-28D Pad Sec.14-T4N-R64W	<b>MD Reference:</b>	WELL @ 4651.0ft (Original Well Elev)
<b>Well:</b>	Stinar C14-28D	<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)
1,708.0	13.50	322.90	1,690.6	115.3	-117.6	163.3	1.30	-0.95	3.69
1,793.0	13.60	322.70	1,773.3	131.2	-129.6	183.2	0.13	0.12	-0.24
1,878.0	14.40	323.80	1,855.8	147.6	-141.9	203.8	0.99	0.94	1.29
1,963.0	14.50	319.60	1,938.1	164.3	-155.1	225.0	1.24	0.12	-4.94
2,049.0	14.30	322.20	2,021.4	180.9	-168.5	246.4	0.79	-0.23	3.02
2,134.0	12.90	320.80	2,104.0	196.5	-181.0	266.4	1.69	-1.65	-1.65
2,219.0	12.10	324.90	2,187.0	211.2	-192.1	284.7	1.41	-0.94	4.82
2,304.0	12.40	323.00	2,270.0	225.7	-202.7	302.8	0.59	0.35	-2.24
2,389.0	13.60	322.80	2,352.9	241.0	-214.2	321.9	1.41	1.41	-0.24
2,475.0	14.10	329.20	2,436.4	258.0	-225.7	342.4	1.87	0.58	7.44
2,559.0	14.90	327.80	2,517.7	276.0	-236.7	363.3	1.04	0.95	-1.67
2,646.0	15.80	326.30	2,601.6	295.3	-249.3	386.2	1.13	1.03	-1.72
2,731.0	16.20	327.30	2,683.3	314.9	-262.1	409.5	0.57	0.47	1.18
2,816.0	14.80	326.90	2,765.2	334.0	-274.4	432.2	1.65	-1.65	-0.47
2,902.0	14.50	328.00	2,848.4	352.3	-286.1	453.8	0.48	-0.35	1.28
2,988.0	14.50	326.30	2,931.7	370.4	-297.8	475.2	0.49	0.00	-1.98
3,073.0	13.20	324.20	3,014.2	387.1	-309.4	495.5	1.64	-1.53	-2.47
3,159.0	11.30	320.80	3,098.2	401.6	-320.5	513.8	2.36	-2.21	-3.95
3,244.0	12.10	322.10	3,181.5	415.1	-331.2	531.0	0.99	0.94	1.53
3,329.0	13.10	322.90	3,264.4	429.8	-342.5	549.6	1.19	1.18	0.94
3,416.0	14.40	320.60	3,348.9	446.0	-355.3	570.2	1.62	1.49	-2.64
3,501.0	14.90	322.30	3,431.1	462.8	-368.7	591.7	0.78	0.59	2.00
3,587.0	16.10	324.30	3,514.0	481.3	-382.4	614.7	1.53	1.40	2.33
3,673.0	16.30	324.70	3,596.6	500.8	-396.3	638.7	0.27	0.23	0.47
3,758.0	16.00	325.60	3,678.3	520.2	-409.8	662.3	0.46	-0.35	1.06
3,844.0	16.40	322.40	3,760.8	539.6	-423.9	686.2	1.14	0.47	-3.72
3,929.0	15.00	321.30	3,842.7	557.7	-438.1	709.2	1.68	-1.65	-1.29
4,015.0	14.00	318.60	3,925.9	574.2	-452.0	730.7	1.40	-1.16	-3.14
4,100.0	13.60	321.00	4,008.5	589.7	-465.1	751.0	0.82	-0.47	2.82
4,186.0	11.80	321.00	4,092.4	604.4	-477.0	769.9	2.09	-2.09	0.00
4,272.0	10.50	321.80	4,176.7	617.4	-487.3	786.5	1.52	-1.51	0.93
4,358.0	9.20	322.20	4,261.5	628.9	-496.4	801.2	1.51	-1.51	0.47
4,444.0	8.10	322.00	4,346.5	639.2	-504.4	814.2	1.28	-1.28	-0.23
4,530.0	6.30	323.30	4,431.8	647.7	-510.9	825.0	2.10	-2.09	1.51
4,616.0	5.10	324.00	4,517.4	654.6	-516.0	833.5	1.40	-1.40	0.81
4,701.0	4.00	341.60	4,602.1	660.5	-519.1	840.1	2.08	-1.29	20.71
4,787.0	2.00	354.80	4,688.0	664.8	-520.2	844.1	2.45	-2.33	15.35
4,872.0	0.60	28.90	4,773.0	666.7	-520.1	845.6	1.81	-1.65	40.12
5,043.0	0.90	15.70	4,944.0	668.7	-519.3	846.7	0.20	0.18	-7.72
5,098.9	0.96	11.79	4,999.8	669.6	-519.1	847.3	0.16	0.11	-6.99
TARGET BHL 150°FSL, 2490°FEL									
5,214.0	1.10	5.20	5,114.9	671.7	-518.8	848.7	0.16	0.12	-5.73
5,385.0	0.70	331.00	5,285.9	674.2	-519.2	850.9	0.38	-0.23	-20.00
5,556.0	0.90	323.50	5,456.9	676.2	-520.5	853.3	0.13	0.12	-4.39
5,727.0	0.80	323.40	5,627.9	678.2	-522.0	855.8	0.06	-0.06	-0.06
5,898.0	1.20	346.50	5,798.9	680.9	-523.1	858.6	0.33	0.23	13.51
6,068.0	1.30	315.70	5,968.8	684.1	-524.9	862.2	0.39	0.06	-18.12
6,239.0	1.20	321.30	6,139.8	686.8	-527.4	865.9	0.09	-0.06	3.27
6,410.0	0.90	324.80	6,310.7	689.3	-529.3	869.0	0.18	-0.18	2.05
6,581.0	1.30	354.10	6,481.7	692.4	-530.2	872.0	0.40	0.23	17.13
6,587.6	1.29	354.17	6,488.3	692.5	-530.2	872.1	0.18	-0.18	1.13
TARGET CIRCLE 150°FSL & 2490°FEL									
6,752.0	1.00	356.60	6,652.7	695.8	-530.5	874.9	0.18	-0.18	1.48
6,976.0	1.00	12.40	6,876.6	699.6	-530.2	877.7	0.12	0.00	7.05

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Stinar C14-28D
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<b>Site:</b>	Stinar C14-28D Pad Sec.14-T4N-R64W	<b>MD Reference:</b>	WELL @ 4651.0ft (Original Well Elev)
<b>Well:</b>	Stinar C14-28D	<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)
7,021.6	1.00	12.40	6,922.3	700.4	-530.0	878.2	0.00	0.00	0.00
<b>HARD LINES 150'S &amp; 140'W of BHL</b>									
7,022.0	1.00	12.40	6,922.6	700.4	-530.0	878.2	0.00	0.00	0.00

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_