

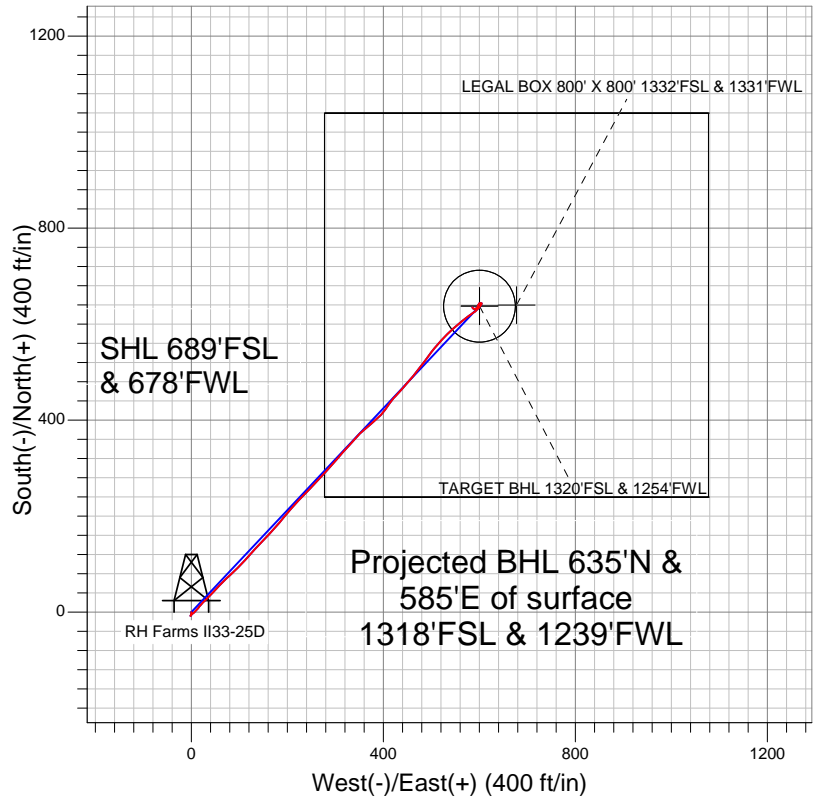


# Well Name: RH Farms II33-25D

Surface Location: RH Farms II33-12D Pad Sec.33-T7N-R66W  
North American Datum 1983 US State Plane 1983Colorado Northern Zone  
Ground Elevation: 4865.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1435154.57	3196956.50	40.525740	-104.791500	
Original Well Elev WELL @ 4878.0ft (Original Well Elev)						

## NOBLE ENERGY INC WELD COUNTY CO



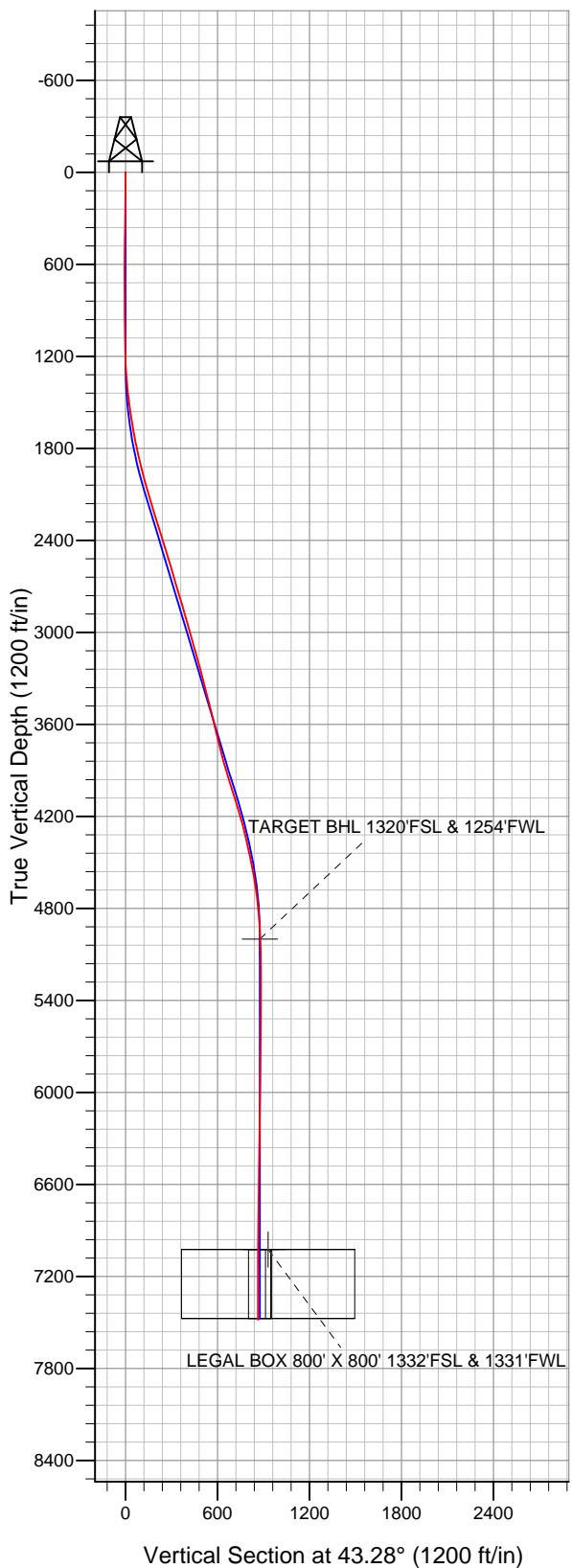
### LEGEND

- Survey #1
- RH Farms II33-25D, Wellbore #1, Noble RH Farms II33-25D Plan #1 (12-24-11) R V0
- Wellbore #1

## Final Survey Plot

Projected Final Survey -  
7595'MD & 7482'TVD @ 864'VS  
0.20 deg Inc 300 deg AZ

Project: SEC.33-T7N-R66W  
Site: RH Farms II33-12D Pad Sec.33-T7N-R66W  
Well: RH Farms II33-25D  
Plan: Wellbore #1





# **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.33-T7N-R66W**

**RH Farms II33-12D Pad Sec.33-T7N-R66W**

**RH Farms II33-25D**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**03 January, 2012**



<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well RH Farms II33-25D
<b>Project:</b>	SEC.33-T7N-R66W	<b>TVD Reference:</b>	WELL @ 4878.0ft (Original Well Elev)
<b>Site:</b>	RH Farms II33-12D Pad Sec.33-T7N-R66W	<b>MD Reference:</b>	WELL @ 4878.0ft (Original Well Elev)
<b>Well:</b>	RH Farms II33-25D	<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-T7N-R66W, Weld County, CO		
<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>	RH Farms II33-12D Pad Sec.33-T7N-R66W		
<b>Site Position:</b>		<b>Northing:</b>	1,435,180.08 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,196,956.29 ft
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40.525810
		<b>Longitude:</b>	-104.791500
		<b>Grid Convergence:</b>	0.46 °

<b>Well</b>	RH Farms II33-25D		
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b> 1,435,154.57 ft
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b> 3,196,956.50 ft
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b>	ft
		<b>Latitude:</b>	40.525740
		<b>Longitude:</b>	-104.791500
		<b>Ground Level:</b>	4,865.0 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	12/24/2011	8.82	67.13	53,139

<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	43.28	

<b>Survey Program</b>	<b>Date</b>	1/3/2012			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
74.0	7,595.0	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	
74.0	0.50	168.10	74.0	-0.3	0.1	-0.2	0.68	0.68	0.00	
165.0	1.00	194.60	165.0	-1.5	-0.1	-1.1	0.65	0.55	29.12	
259.0	1.10	174.80	259.0	-3.2	-0.2	-2.4	0.40	0.11	-21.06	
351.0	1.10	188.80	351.0	-4.9	-0.2	-3.7	0.29	0.00	15.22	
443.0	0.90	197.40	442.9	-6.5	-0.6	-5.1	0.27	-0.22	9.35	
535.0	0.70	223.10	534.9	-7.6	-1.2	-6.3	0.44	-0.22	27.93	
627.0	0.30	330.90	626.9	-7.8	-1.7	-6.8	0.91	-0.43	117.17	
708.0	0.30	357.60	707.9	-7.4	-1.8	-6.6	0.17	0.00	32.96	
790.0	0.30	66.80	789.9	-7.1	-1.6	-6.3	0.42	0.00	84.39	
872.0	0.70	44.30	871.9	-6.6	-1.1	-5.6	0.53	0.49	-27.44	
954.0	0.20	117.60	953.9	-6.3	-0.6	-5.0	0.82	-0.61	89.39	
994.0	0.40	52.80	993.9	-6.3	-0.4	-4.9	0.91	0.50	-162.00	

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well RH Farms II33-25D
<b>Project:</b>	SEC.33-T7N-R66W	<b>TVD Reference:</b>	WELL @ 4878.0ft (Original Well Elev)
<b>Site:</b>	RH Farms II33-12D Pad Sec.33-T7N-R66W	<b>MD Reference:</b>	WELL @ 4878.0ft (Original Well Elev)
<b>Well:</b>	RH Farms II33-25D	<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)
1,045.0	0.60	42.10	1,044.9	-6.0	-0.1	-4.4	0.43	0.39	-20.98
1,074.0	0.40	22.00	1,073.9	-5.8	0.0	-4.2	0.91	-0.69	-69.31
1,155.0	1.30	45.70	1,154.9	-4.9	0.8	-3.0	1.17	1.11	29.26
1,237.0	2.70	50.10	1,236.9	-3.0	3.0	-0.1	1.72	1.71	5.37
1,319.0	3.80	49.40	1,318.7	0.0	6.5	4.5	1.34	1.34	-0.85
1,401.0	5.50	41.00	1,400.5	4.8	11.1	11.1	2.23	2.07	-10.24
1,482.0	7.20	39.40	1,481.0	11.6	16.9	20.0	2.11	2.10	-1.98
1,564.0	8.40	42.80	1,562.2	20.0	24.2	31.2	1.57	1.46	4.15
1,646.0	9.30	45.40	1,643.2	29.0	33.0	43.8	1.20	1.10	3.17
1,728.0	10.50	44.90	1,724.0	39.0	43.0	57.9	1.47	1.46	-0.61
1,809.0	12.00	42.90	1,803.4	50.4	54.0	73.7	1.91	1.85	-2.47
1,891.0	13.50	43.50	1,883.4	63.5	66.4	91.8	1.84	1.83	0.73
1,973.0	14.60	48.20	1,963.0	77.4	80.7	111.6	1.93	1.34	5.73
2,055.0	15.70	45.60	2,042.1	92.0	96.3	133.0	1.58	1.34	-3.17
2,136.0	17.10	42.10	2,119.8	108.5	112.1	155.9	2.11	1.73	-4.32
2,218.0	17.30	41.70	2,198.2	126.6	128.3	180.1	0.28	0.24	-0.49
2,300.0	17.90	43.60	2,276.3	144.8	145.1	204.9	1.01	0.73	2.32
2,382.0	17.10	44.00	2,354.5	162.6	162.2	229.6	0.99	-0.98	0.49
2,463.0	16.70	39.60	2,432.0	180.1	177.9	253.1	1.65	-0.49	-5.43
2,545.0	16.30	41.00	2,510.6	197.9	192.9	276.3	0.69	-0.49	1.71
2,627.0	16.80	41.00	2,589.2	215.5	208.2	299.7	0.61	0.61	0.00
2,709.0	16.10	42.40	2,667.9	232.9	223.7	322.9	0.98	-0.85	1.71
2,790.0	16.90	45.20	2,745.6	249.5	239.6	345.9	1.39	0.99	3.46
2,872.0	16.60	42.90	2,824.1	266.4	256.0	369.5	0.89	-0.37	-2.80
2,954.0	16.30	42.80	2,902.7	283.5	271.8	392.7	0.37	-0.37	-0.12
3,035.0	14.90	42.20	2,980.7	299.5	286.5	414.5	1.74	-1.73	-0.74
3,117.0	14.90	40.80	3,060.0	315.3	300.5	435.6	0.44	0.00	-1.71
3,199.0	16.30	41.20	3,139.0	332.0	315.0	457.6	1.71	1.71	0.49
3,281.0	16.70	42.10	3,217.6	349.4	330.5	480.9	0.58	0.49	1.10
3,362.0	13.70	41.90	3,295.7	365.1	344.7	502.1	3.70	-3.70	-0.25
3,444.0	14.00	49.40	3,375.4	378.8	358.7	521.7	2.22	0.37	9.15
3,526.0	14.90	50.00	3,454.8	392.0	374.3	542.0	1.11	1.10	0.73
3,608.0	14.20	47.30	3,534.1	405.6	389.8	562.5	1.19	-0.85	-3.29
3,689.0	13.70	35.20	3,612.8	420.2	402.6	581.9	3.65	-0.62	-14.94
3,771.0	13.10	36.80	3,692.5	435.6	413.8	600.8	0.86	-0.73	1.95
3,853.0	14.50	41.30	3,772.2	450.8	426.1	620.3	2.15	1.71	5.49
3,935.0	15.70	42.20	3,851.3	466.7	440.3	641.6	1.49	1.46	1.10
4,016.0	16.90	39.80	3,929.1	483.9	455.2	664.3	1.70	1.48	-2.96
4,098.0	17.70	39.20	4,007.4	502.7	470.7	688.7	1.00	0.98	-0.73
4,180.0	17.90	35.70	4,085.4	522.6	486.0	713.6	1.33	0.24	-4.27
4,262.0	15.90	37.70	4,163.9	541.7	500.2	737.3	2.54	-2.44	2.44
4,343.0	15.00	41.20	4,242.0	558.4	513.9	758.8	1.60	-1.11	4.32
4,425.0	14.00	43.80	4,321.4	573.5	527.7	779.3	1.45	-1.22	3.17
4,507.0	12.40	47.50	4,401.2	586.6	541.1	798.0	2.21	-1.95	4.51
4,589.0	11.80	49.10	4,481.4	598.0	553.9	815.1	0.84	-0.73	1.95
4,670.0	11.00	52.80	4,560.8	608.1	566.3	831.0	1.34	-0.99	4.57
4,752.0	9.10	52.80	4,641.5	616.8	577.7	845.1	2.32	-2.32	0.00
4,834.0	7.40	55.90	4,722.7	623.7	587.3	856.7	2.14	-2.07	3.78
4,915.0	5.30	47.00	4,803.2	629.1	594.3	865.5	2.86	-2.59	-10.99
4,997.0	4.00	42.20	4,884.9	633.8	599.0	872.1	1.65	-1.59	-5.85
5,079.0	3.00	30.60	4,966.7	637.8	602.0	877.1	1.49	-1.22	-14.15
5,112.2	2.72	31.15	4,999.9	639.2	602.9	878.7	0.86	-0.85	1.65
TARGET BHL 1320'FSL & 1254'FWL									
5,161.0	2.30	32.20	5,048.6	641.1	604.0	880.8	0.86	-0.85	2.15

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well RH Farms II33-25D
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<b>Site:</b>	RH Farms II33-12D Pad Sec.33-T7N-R66W	<b>MD Reference:</b>	WELL @ 4878.0ft (Original Well Elev)
<b>Well:</b>	RH Farms II33-25D	<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)	
5,242.0	0.60	31.50	5,129.6	642.8	605.1	882.8	2.10	-2.10	-0.86	
5,324.0	0.20	301.50	5,211.6	643.2	605.2	883.2	0.77	-0.49	-109.76	
5,406.0	0.50	315.70	5,293.6	643.6	604.8	883.2	0.38	0.37	17.32	
5,488.0	0.50	273.90	5,375.6	643.8	604.2	883.0	0.44	0.00	-50.98	
5,569.0	0.80	250.70	5,456.6	643.7	603.3	882.2	0.49	0.37	-28.64	
5,651.0	0.80	266.70	5,538.6	643.5	602.2	881.3	0.27	0.00	19.51	
5,733.0	0.50	304.80	5,620.6	643.6	601.4	880.8	0.62	-0.37	46.46	
5,815.0	0.40	264.10	5,702.6	643.8	600.8	880.6	0.40	-0.12	-49.63	
5,896.0	0.40	243.00	5,783.6	643.6	600.3	880.1	0.18	0.00	-26.05	
5,978.0	0.70	183.90	5,865.6	643.0	600.0	879.4	0.73	0.37	-72.07	
6,060.0	1.00	218.90	5,947.6	642.0	599.5	878.3	0.71	0.37	42.68	
6,142.0	1.10	223.50	6,029.6	640.8	598.5	876.8	0.16	0.12	5.61	
6,223.0	0.90	200.30	6,110.6	639.7	597.7	875.5	0.55	-0.25	-28.64	
6,305.0	0.90	195.00	6,192.5	638.4	597.3	874.3	0.10	0.00	-6.46	
6,387.0	1.00	202.50	6,274.5	637.2	596.9	873.1	0.19	0.12	9.15	
6,469.0	1.00	209.00	6,356.5	635.9	596.3	871.7	0.14	0.00	7.93	
6,550.0	0.90	214.70	6,437.5	634.7	595.6	870.4	0.17	-0.12	7.04	
6,632.0	0.40	211.00	6,519.5	634.0	595.1	869.5	0.61	-0.61	-4.51	
6,714.0	0.70	245.80	6,601.5	633.5	594.5	868.7	0.53	0.37	42.44	
6,795.0	0.80	245.40	6,682.5	633.1	593.5	867.8	0.12	0.12	-0.49	
6,877.0	0.50	249.50	6,764.5	632.7	592.6	866.9	0.37	-0.37	5.00	
6,959.0	0.70	256.30	6,846.5	632.5	591.8	866.2	0.26	0.24	8.29	
7,041.0	0.90	238.20	6,928.5	632.0	590.8	865.1	0.39	0.24	-22.07	
7,122.0	0.80	234.00	7,009.5	631.3	589.8	864.0	0.15	-0.12	-5.19	
7,135.8	0.69	239.12	7,023.2	631.2	589.6	863.8	0.91	-0.77	37.18	
<b>LEGAL BOX 800' X 800' 1332'FSL &amp; 1331'FWL</b>										
7,136.4	0.69	239.41	7,023.9	631.2	589.6	863.8	0.91	-0.74	43.09	
<b>TARGET CIRCLE 1320'FSL &amp; 1254'FWL</b>										
7,204.0	0.40	301.30	7,091.5	631.2	589.1	863.3	0.91	-0.43	91.61	
7,286.0	0.70	296.20	7,173.5	631.5	588.4	863.1	0.37	0.37	-6.22	
7,368.0	1.20	326.60	7,255.4	632.5	587.5	863.2	0.85	0.61	37.07	
7,449.0	1.10	321.20	7,336.4	633.8	586.5	863.5	0.18	-0.12	-6.67	
7,531.0	0.80	338.60	7,418.4	634.9	585.8	863.8	0.50	-0.37	21.22	
7,544.0	0.50	323.30	7,431.4	635.0	585.7	863.9	2.65	-2.31	-117.69	
7,595.0	0.20	300.00	7,482.4	635.3	585.5	863.9	0.64	-0.59	-45.69	

Checked By: _____	Approved By: _____	Date: _____
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