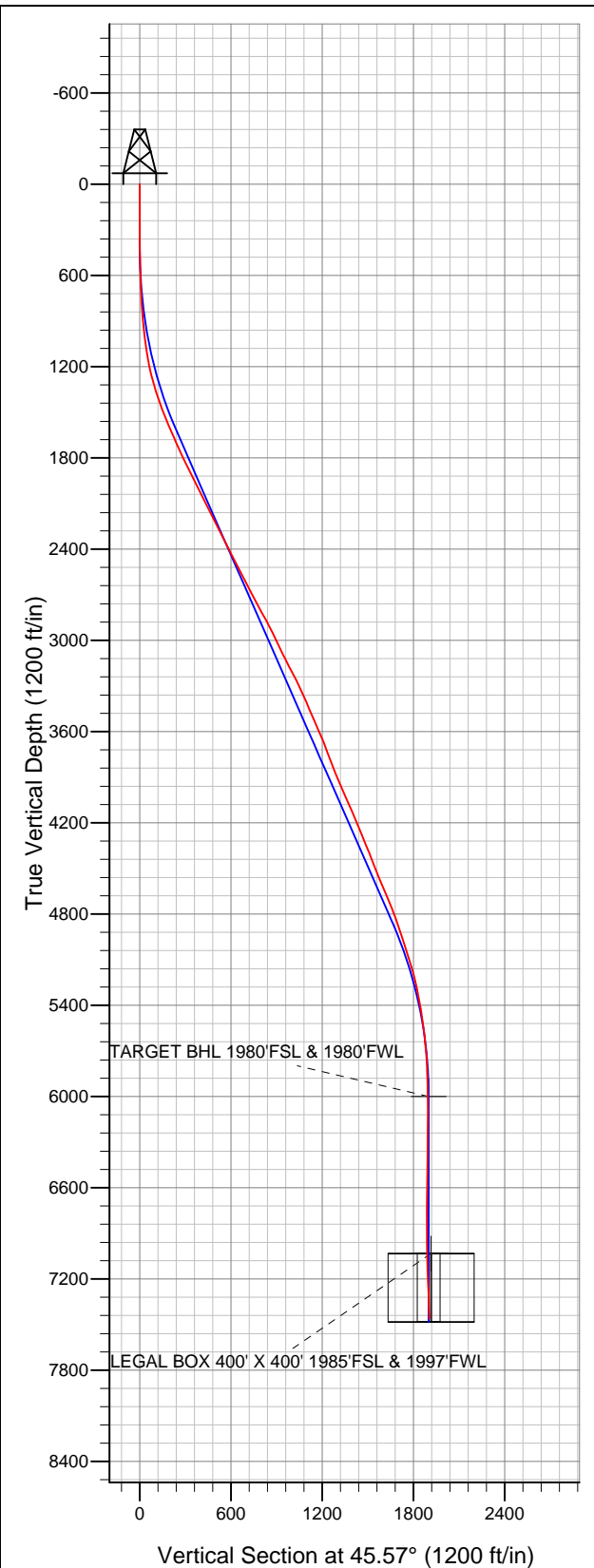




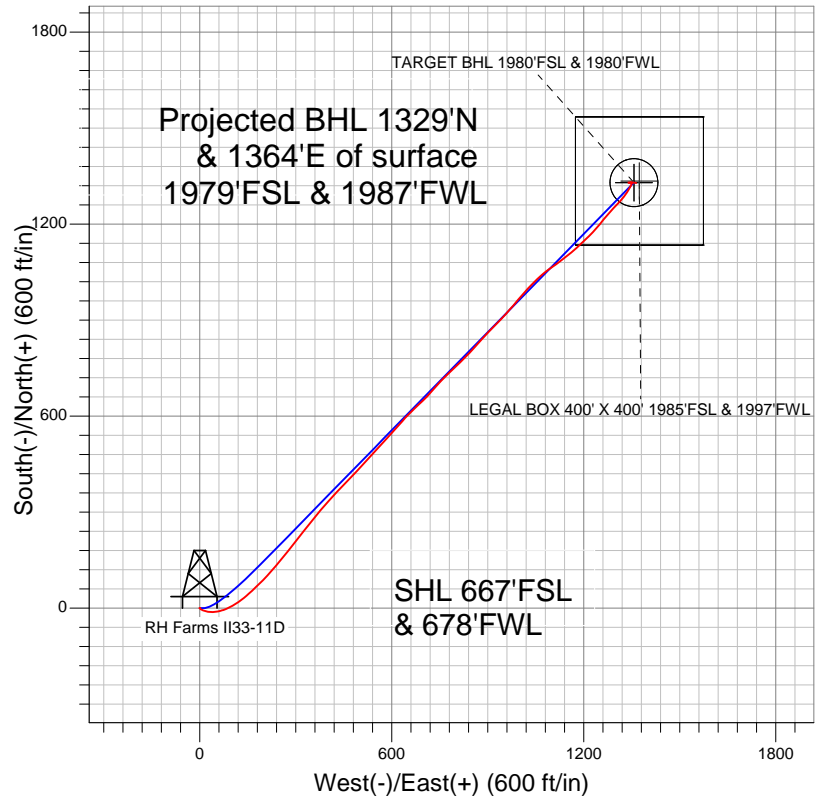
Well Name: RH Farms II33-11D

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	1435132.69	3196953.89	40.525680	-104.791510	
Original Well Elev WELL @ 4878.0ft (Original Well Elev)						



NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- Survey #1
- Wellbore #1
- RH Farms II33-11D, Wellbore #1, Noble RH Farms II33-11D Plan #1 (12-19-11) R V0

Final Survey Plot

Projected Final Survey -
7848'MD & 7462'TVD @ 1904'VS
2.40 deg Inc 103.10 deg AZ

Project: SEC.33-T7N-R66W
Site: RH Farms II33-12D Pad Sec.33-T7N-R66W
Well: RH Farms II33-11D
Plan: Wellbore #1



NOBLE ENERGY INC WELD COUNTY CO

SEC.33-T7N-R66W

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

RH Farms II33-11D

Wellbore #1

Survey: Survey #1

Standard Survey Report

27 December, 2011



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well RH Farms II33-11D
Project:	SEC.33-T7N-R66W	TVD Reference:	WELL @ 4878.0ft (Original Well Elev)
Site:	RH Farms II33-12D Pad Sec.33-T7N-R66W	MD Reference:	WELL @ 4878.0ft (Original Well Elev)
Well:	RH Farms II33-11D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.33-T7N-R66W, Weld County, CO		
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	RH Farms II33-12D Pad Sec.33-T7N-R66W		
Site Position:		Northing:	1,435,180.08 ft
From:	Lat/Long	Easting:	3,196,956.29 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40.525810
		Longitude:	-104.791500
		Grid Convergence:	0.46 °

Well	RH Farms II33-11D		
Well Position	+N/-S	0.0 ft	Northing:
	+E/-W	0.0 ft	Easting:
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40.525680
		Longitude:	-104.791510
		Ground Level:	4,865.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/19/2011	8.82	67.13	53,140

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	45.57	

Survey Program	Date	12/27/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
106.0	7,848.0	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	
106.0	0.40	300.10	106.0	0.2	-0.3	-0.1	0.38	0.38	0.00	
198.0	0.40	334.60	198.0	0.6	-0.7	-0.1	0.26	0.00	37.50	
291.0	0.90	142.10	291.0	0.4	-0.4	-0.1	1.39	0.54	180.11	
383.0	2.50	137.00	383.0	-1.7	1.4	-0.2	1.75	1.74	-5.54	
474.0	3.40	115.90	473.8	-4.3	5.2	0.7	1.53	0.99	-23.19	
566.0	3.50	113.40	565.7	-6.6	10.2	2.6	0.20	0.11	-2.72	
647.0	5.90	107.40	646.4	-8.8	16.4	5.5	3.02	2.96	-7.41	
729.0	5.80	101.50	728.0	-10.9	24.5	9.9	0.74	-0.12	-7.20	
811.0	5.40	92.90	809.6	-12.0	32.4	14.8	1.13	-0.49	-10.49	
893.0	6.30	87.20	891.1	-11.9	40.8	20.8	1.31	1.10	-6.95	
944.0	7.20	85.10	941.8	-11.5	46.8	25.3	1.83	1.76	-4.12	
992.0	7.70	81.30	989.4	-10.8	52.9	30.3	1.46	1.04	-7.92	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well RH Farms II33-11D
Project:	SEC.33-T7N-R66W	TVD Reference:	WELL @ 4878.0ft (Original Well Elev)
Site:	RH Farms II33-12D Pad Sec.33-T7N-R66W	MD Reference:	WELL @ 4878.0ft (Original Well Elev)
Well:	RH Farms II33-11D	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)
1,074.0	9.20	75.10	1,070.5	-8.3	64.7	40.4	2.14	1.83	-7.56
1,155.0	11.30	69.70	1,150.2	-3.8	78.4	53.3	2.85	2.59	-6.67
1,237.0	13.80	61.70	1,230.2	3.6	94.6	70.0	3.71	3.05	-9.76
1,319.0	15.70	58.60	1,309.5	14.0	112.6	90.2	2.51	2.32	-3.78
1,401.0	18.30	52.10	1,388.0	27.7	132.3	113.8	3.92	3.17	-7.93
1,482.0	20.60	48.00	1,464.3	45.0	152.9	140.7	3.30	2.84	-5.06
1,564.0	22.20	46.30	1,540.7	65.4	174.8	170.6	2.09	1.95	-2.07
1,646.0	23.20	45.70	1,616.3	87.4	197.6	202.3	1.25	1.22	-0.73
1,728.0	24.40	39.90	1,691.4	111.7	220.0	235.3	3.21	1.46	-7.07
1,809.0	24.60	40.60	1,765.1	137.3	241.7	268.7	0.44	0.25	0.86
1,891.0	25.90	39.10	1,839.2	164.2	264.1	303.5	1.77	1.59	-1.83
1,973.0	26.70	37.30	1,912.7	192.7	286.6	339.6	1.38	0.98	-2.20
2,055.0	27.00	38.90	1,985.9	221.8	309.4	376.3	0.95	0.37	1.95
2,136.0	26.70	38.40	2,058.2	250.4	332.3	412.6	0.46	-0.37	-0.62
2,218.0	27.00	39.10	2,131.3	279.3	355.5	449.4	0.53	0.37	0.85
2,300.0	26.50	39.80	2,204.6	307.8	378.9	486.1	0.72	-0.61	0.85
2,382.0	27.00	42.40	2,277.8	335.6	403.2	522.8	1.55	0.61	3.17
2,463.0	27.10	42.60	2,349.9	362.8	428.1	559.6	0.17	0.12	0.25
2,545.0	27.00	45.00	2,423.0	389.7	453.9	596.9	1.34	-0.12	2.93
2,627.0	26.60	42.40	2,496.1	416.4	479.4	633.8	1.51	-0.49	-3.17
2,709.0	27.00	42.20	2,569.3	443.7	504.3	670.7	0.50	0.49	-0.24
2,790.0	27.40	44.20	2,641.4	470.7	529.6	707.7	1.23	0.49	2.47
2,872.0	28.70	42.40	2,713.7	498.8	556.1	746.3	1.89	1.59	-2.20
2,954.0	28.00	40.50	2,785.9	528.0	581.8	785.1	1.39	-0.85	-2.32
3,035.0	29.20	42.90	2,857.0	556.9	607.6	823.8	2.05	1.48	2.96
3,117.0	26.60	41.50	2,929.5	585.3	633.4	862.1	3.27	-3.17	-1.71
3,199.0	25.10	45.40	3,003.3	611.3	658.0	897.8	2.76	-1.83	4.76
3,281.0	26.00	47.70	3,077.3	635.6	683.7	933.1	1.63	1.10	2.80
3,362.0	28.10	42.90	3,149.4	661.5	709.8	969.9	3.74	2.59	-5.93
3,444.0	27.80	41.00	3,221.9	690.1	735.5	1,008.3	1.15	-0.37	-2.32
3,526.0	25.30	45.20	3,295.2	716.9	760.5	1,044.9	3.81	-3.05	5.12
3,608.0	24.10	46.30	3,369.7	740.8	785.0	1,079.1	1.57	-1.46	1.34
3,689.0	23.00	45.20	3,444.0	763.4	808.2	1,111.5	1.46	-1.36	-1.36
3,771.0	22.90	45.90	3,519.5	785.8	831.0	1,143.5	0.35	-0.12	0.85
3,853.0	23.70	41.70	3,594.8	809.2	853.4	1,175.9	2.25	0.98	-5.12
3,935.0	22.00	41.50	3,670.3	833.0	874.6	1,207.6	2.08	-2.07	-0.24
4,016.0	20.30	43.80	3,745.9	854.5	894.3	1,236.8	2.34	-2.10	2.84
4,098.0	21.40	43.80	3,822.5	875.5	914.5	1,266.0	1.34	1.34	0.00
4,180.0	22.40	44.70	3,898.6	897.4	935.9	1,296.6	1.29	1.22	1.10
4,262.0	23.50	41.70	3,974.1	920.8	957.8	1,328.5	1.96	1.34	-3.66
4,343.0	24.10	39.60	4,048.2	945.6	979.0	1,361.1	1.28	0.74	-2.59
4,425.0	24.00	40.60	4,123.1	971.1	1,000.6	1,394.3	0.51	-0.12	1.22
4,507.0	22.20	43.30	4,198.5	995.1	1,022.0	1,426.4	2.55	-2.20	3.29
4,589.0	22.20	44.00	4,274.5	1,017.5	1,043.4	1,457.4	0.32	0.00	0.85
4,670.0	22.60	48.70	4,349.3	1,038.8	1,065.8	1,488.2	2.27	0.49	5.80
4,752.0	21.50	53.70	4,425.4	1,058.1	1,089.7	1,518.8	2.65	-1.34	6.10
4,834.0	21.50	54.20	4,501.6	1,075.7	1,114.0	1,548.6	0.22	0.00	0.61
4,915.0	23.00	53.30	4,576.6	1,093.9	1,138.7	1,578.9	1.90	1.85	-1.11
4,997.0	23.30	49.10	4,652.0	1,114.1	1,163.8	1,611.0	2.05	0.37	-5.12
5,079.0	22.20	46.60	4,727.6	1,135.3	1,187.4	1,642.7	1.79	-1.34	-3.05
5,161.0	20.60	46.80	4,804.0	1,155.9	1,209.1	1,672.6	1.95	-1.95	0.24
5,242.0	19.00	43.10	4,880.2	1,175.2	1,228.5	1,700.0	2.51	-1.98	-4.57
5,324.0	17.90	38.90	4,958.0	1,194.8	1,245.6	1,725.9	2.10	-1.34	-5.12
5,406.0	17.80	39.20	5,036.0	1,214.3	1,261.4	1,750.8	0.17	-0.12	0.37

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Site:	RH Farms II33-12D Pad Sec.33-T7N-R66W	MD Reference:	WELL @ 4878.0ft (Original Well Elev)
Well:	RH Farms II33-11D	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)
5,488.0	17.90	42.10	5,114.1	1,233.4	1,277.8	1,775.9	1.09	0.12	3.54
5,569.0	14.90	42.80	5,191.8	1,250.3	1,293.2	1,798.7	3.71	-3.70	0.86
5,651.0	12.70	42.40	5,271.4	1,264.7	1,306.4	1,818.2	2.69	-2.68	-0.49
5,733.0	10.60	43.60	5,351.7	1,276.8	1,317.7	1,834.8	2.58	-2.56	1.46
5,815.0	9.00	34.70	5,432.5	1,287.5	1,326.6	1,848.6	2.68	-1.95	-10.85
5,896.0	8.20	31.70	5,512.6	1,297.6	1,333.2	1,860.4	1.13	-0.99	-3.70
5,978.0	7.00	32.70	5,593.9	1,306.8	1,339.0	1,871.0	1.47	-1.46	1.22
6,060.0	5.50	31.90	5,675.4	1,314.4	1,343.8	1,879.7	1.83	-1.83	-0.98
6,142.0	4.00	24.80	5,757.1	1,320.3	1,347.0	1,886.2	1.96	-1.83	-8.66
6,223.0	2.20	20.40	5,838.0	1,324.3	1,348.8	1,890.2	2.24	-2.22	-5.43
6,305.0	1.70	9.70	5,920.0	1,327.0	1,349.5	1,892.6	0.75	-0.61	-13.05
6,385.1	1.01	339.95	6,000.0	1,328.8	1,349.5	1,893.9	1.20	-0.86	-37.14
TARGET BHL 1980'FSL & 1980'FWL									
6,387.0	1.00	338.80	6,001.9	1,328.9	1,349.5	1,893.9	1.20	-0.57	-60.34
6,469.0	0.70	337.00	6,083.9	1,330.0	1,349.0	1,894.4	0.37	-0.37	-2.20
6,550.0	0.40	294.80	6,164.9	1,330.6	1,348.6	1,894.5	0.60	-0.37	-52.10
6,632.0	0.40	247.70	6,246.9	1,330.6	1,348.0	1,894.1	0.39	0.00	-57.44
6,714.0	1.00	244.60	6,328.9	1,330.2	1,347.1	1,893.1	0.73	0.73	-3.78
6,795.0	1.10	257.60	6,409.9	1,329.7	1,345.7	1,891.8	0.32	0.12	16.05
6,877.0	1.10	253.50	6,491.9	1,329.3	1,344.2	1,890.5	0.10	0.00	-5.00
6,959.0	1.40	280.60	6,573.9	1,329.3	1,342.5	1,889.2	0.80	0.37	33.05
7,041.0	1.00	284.60	6,655.8	1,329.6	1,340.8	1,888.2	0.50	-0.49	4.88
7,122.0	0.60	282.70	6,736.8	1,329.9	1,339.7	1,887.6	0.49	-0.49	-2.35
7,204.0	0.30	12.90	6,818.8	1,330.2	1,339.3	1,887.6	0.82	-0.37	110.00
7,286.0	1.40	82.10	6,900.8	1,330.5	1,340.4	1,888.6	1.61	1.34	84.39
7,368.0	1.50	95.00	6,982.8	1,330.6	1,342.4	1,890.1	0.42	0.12	15.73
7,418.6	1.69	95.80	7,033.4	1,330.5	1,343.8	1,891.0	0.37	0.37	1.58
TARGET CIRCLE 1980'FSL & 1980'FWL									
7,419.1	1.69	95.81	7,033.9	1,330.4	1,343.8	1,891.0	0.37	0.37	1.40
LEGAL BOX 400' X 400' 1985'FSL & 1997'FWL									
7,449.0	1.80	96.20	7,063.8	1,330.4	1,344.7	1,891.6	0.37	0.37	1.32
7,531.0	2.40	89.50	7,145.7	1,330.2	1,347.7	1,893.6	0.79	0.73	-8.17
7,613.0	2.80	90.20	7,227.6	1,330.2	1,351.5	1,896.3	0.49	0.49	0.85
7,695.0	3.50	95.30	7,309.5	1,330.0	1,355.9	1,899.3	0.92	0.85	6.22
7,776.0	2.90	96.20	7,390.4	1,329.6	1,360.4	1,902.2	0.74	-0.74	1.11
7,797.0	2.60	99.90	7,411.3	1,329.4	1,361.4	1,902.9	1.66	-1.43	17.62
7,848.0	2.40	103.10	7,462.3	1,329.0	1,363.6	1,904.1	0.48	-0.39	6.27

Checked By: _____	Approved By: _____	Date: _____
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