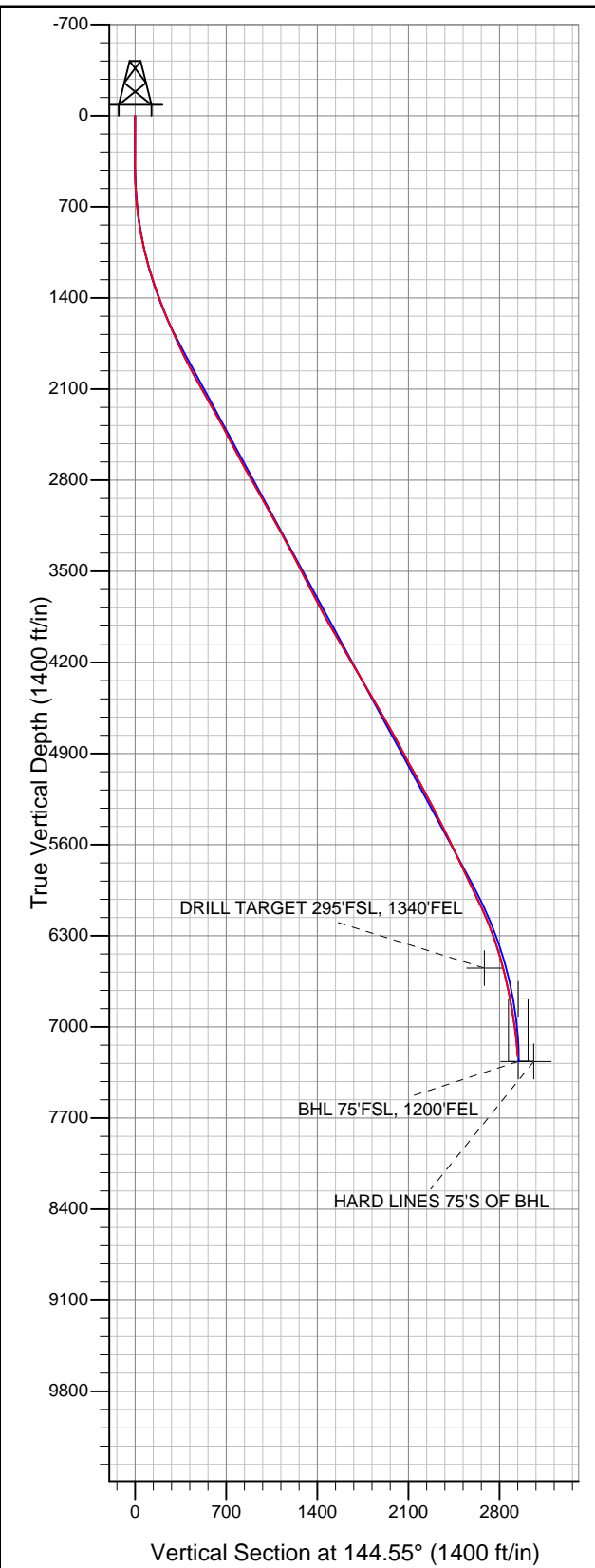
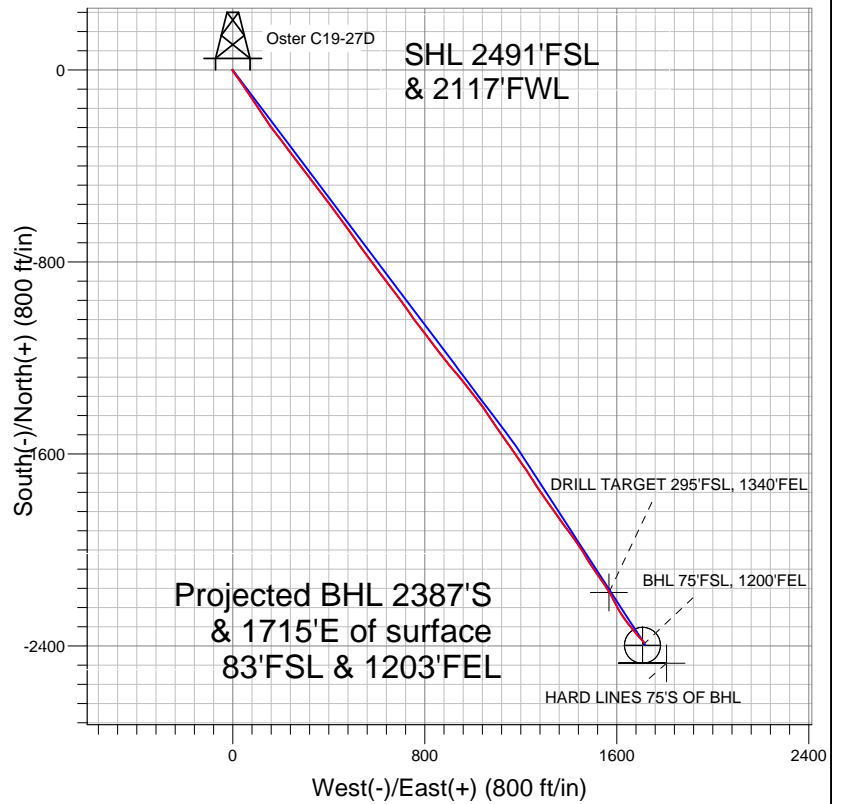


Well Name: Oster C19-27D

Surface Location: NEI C18-32D Pad Sec.18-T4N-R64W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 4834.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1357748.08 3252511.75 40.311880 -104.594510
 Original Well Elev WELL @ 4847.0ft (Original Well Elev)



NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- Oster C19-27D, Wellbore #1, higher angle plan 11-22-11 V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
 7912'MD & 7230'TVD @ 2939'VS
 4.5 deg Inc 140.0 deg AZ

Project: SEC.18-T4N-R64W
 Site: NEI C18-32D Pad Sec.18-T4N-R64W
 Well: Oster C19-27D
 Plan: Wellbore #1



NOBLE ENERGY INC WELD COUNTY CO

SEC.18-T4N-R64W

NEI C18-32D Pad Sec.18-T4N-R64W

Oster C19-27D

Wellbore #1

Survey: Survey #1

Standard Survey Report

28 November, 2011



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Oster C19-27D
Project:	SEC.18-T4N-R64W	TVD Reference:	WELL @ 4847.0ft (Original Well Elev)
Site:	NEI C18-32D Pad Sec.18-T4N-R64W	MD Reference:	WELL @ 4847.0ft (Original Well Elev)
Well:	Oster C19-27D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.18-T4N-R64W, 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	NEI C18-32D Pad Sec.18-T4N-R64W		
Site Position:		Northing:	1,357,747.19ft
From:	Lat/Long	Easting:	3,252,422.52ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40.311880
		Longitude:	-104.594830
		Grid Convergence:	0.58 °

Well	Oster C19-27D		
Well Position	+N/-S	0.0 ft	Northing:
	+E/-W	0.0 ft	Easting:
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40.311880
		Longitude:	-104.594510
		Ground Level:	4,834.0ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/8/2011	8.71	66.99	53,061

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 (°)	
	7,267.0	0.0	0.0	144.55	

Survey Program	Date	11/28/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
260.0	7,912.0	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	
260.0	0.70	310.90	260.0	1.0	-1.2	-1.5	0.27	0.27	0.00	
351.0	0.40	192.80	351.0	1.1	-1.7	-1.9	1.05	-0.33	-129.78	
479.0	1.60	164.30	479.0	-1.1	-1.3	0.1	0.99	0.94	-22.27	
607.0	4.00	144.30	606.8	-6.4	1.8	6.3	2.00	1.88	-15.63	
666.0	5.40	144.60	665.6	-10.3	4.6	11.1	2.37	2.37	0.51	
726.0	5.90	142.50	725.3	-15.1	8.1	17.0	0.90	0.83	-3.50	
854.0	8.80	146.40	852.3	-28.5	17.5	33.4	2.30	2.27	3.05	
983.0	12.20	143.20	979.1	-47.6	31.2	56.9	2.67	2.64	-2.48	
1,111.0	15.70	145.70	1,103.3	-72.8	49.0	87.7	2.77	2.73	1.95	
1,240.0	17.50	144.80	1,226.9	-103.0	70.0	124.5	1.41	1.40	-0.70	
1,368.0	19.10	148.90	1,348.4	-136.7	92.0	164.7	1.60	1.25	3.20	
1,496.0	21.20	146.00	1,468.6	-173.8	115.7	208.7	1.82	1.64	-2.27	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Oster C19-27D
Project:	SEC.18-T4N-R64W	TVD Reference:	WELL @ 4847.0ft (Original Well Elev)
Site:	NEI C18-32D Pad Sec.18-T4N-R64W	MD Reference:	WELL @ 4847.0ft (Original Well Elev)
Well:	Oster C19-27D	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)	
1,625.0	23.20	145.70	1,588.0	-214.1	143.1	257.4	1.55	1.55	-0.23	
1,753.0	23.70	142.70	1,705.5	-255.4	172.9	308.4	1.01	0.39	-2.34	
1,882.0	26.10	142.40	1,822.5	-298.5	205.9	362.6	1.86	1.86	-0.23	
2,010.0	27.80	143.20	1,936.6	-344.8	241.0	420.6	1.36	1.33	0.63	
2,138.0	29.50	143.60	2,048.9	-394.0	277.6	482.0	1.34	1.33	0.31	
2,267.0	29.50	141.50	2,161.2	-444.4	316.2	545.4	0.80	0.00	-1.63	
2,395.0	29.00	142.50	2,272.8	-493.7	354.7	607.9	0.55	-0.39	0.78	
2,524.0	28.00	143.60	2,386.2	-542.9	391.7	669.4	0.88	-0.78	0.85	
2,652.0	28.30	143.90	2,499.1	-591.6	427.4	729.8	0.26	0.23	0.23	
2,780.0	28.50	144.10	2,611.7	-640.9	463.2	790.7	0.17	0.16	0.16	
2,909.0	28.60	144.80	2,725.0	-691.0	499.0	852.4	0.27	0.08	0.54	
3,037.0	29.90	142.70	2,836.6	-741.4	536.0	914.9	1.29	1.02	-1.64	
3,166.0	29.80	143.90	2,948.5	-792.9	574.4	979.1	0.47	-0.08	0.93	
3,294.0	28.60	143.80	3,060.3	-843.3	611.2	1,041.5	0.94	-0.94	-0.08	
3,422.0	29.10	141.50	3,172.4	-892.4	648.7	1,103.2	0.95	0.39	-1.80	
3,551.0	28.00	142.70	3,285.7	-941.1	686.6	1,164.8	0.96	-0.85	0.93	
3,679.0	26.90	147.10	3,399.3	-989.3	720.5	1,223.8	1.80	-0.86	3.44	
3,808.0	27.70	142.70	3,513.9	-1,037.6	754.5	1,282.9	1.68	0.62	-3.41	
3,936.0	27.90	142.70	3,627.2	-1,085.1	790.7	1,342.6	0.16	0.16	0.00	
4,064.0	26.90	142.40	3,740.8	-1,131.9	826.5	1,401.5	0.79	-0.78	-0.23	
4,193.0	28.10	143.20	3,855.2	-1,179.3	862.5	1,461.0	0.97	0.93	0.62	
4,321.0	31.00	140.20	3,966.6	-1,228.8	901.7	1,524.0	2.54	2.27	-2.34	
4,450.0	31.30	139.90	4,077.0	-1,280.0	944.6	1,590.5	0.26	0.23	-0.23	
4,578.0	30.00	142.40	4,187.1	-1,330.8	985.5	1,655.7	1.42	-1.02	1.95	
4,706.0	29.90	142.70	4,298.0	-1,381.5	1,024.4	1,719.5	0.14	-0.08	0.23	
4,835.0	30.50	146.00	4,409.5	-1,434.2	1,062.2	1,784.4	1.37	0.47	2.56	
4,963.0	30.00	146.00	4,520.1	-1,487.7	1,098.2	1,848.8	0.39	-0.39	0.00	
5,092.0	30.10	144.60	4,631.7	-1,540.8	1,135.0	1,913.4	0.55	0.08	-1.09	
5,220.0	29.50	145.30	4,742.8	-1,592.9	1,171.5	1,977.0	0.54	-0.47	0.55	
5,348.0	27.80	145.00	4,855.1	-1,643.2	1,206.6	2,038.4	1.33	-1.33	-0.23	
5,477.0	27.90	148.00	4,969.2	-1,693.5	1,239.8	2,098.6	1.09	0.08	2.33	
5,605.0	29.70	145.30	5,081.4	-1,744.9	1,273.8	2,160.2	1.73	1.41	-2.11	
5,734.0	28.80	145.20	5,193.9	-1,796.7	1,309.7	2,223.3	0.70	-0.70	-0.08	
5,862.0	27.70	145.00	5,306.7	-1,846.4	1,344.3	2,283.8	0.86	-0.86	-0.16	
5,990.0	26.10	143.40	5,420.8	-1,893.4	1,378.2	2,341.7	1.37	-1.25	-1.25	
6,119.0	25.90	143.90	5,536.8	-1,938.9	1,411.7	2,398.3	0.23	-0.16	0.39	
6,247.0	25.90	146.20	5,651.9	-1,984.7	1,443.7	2,454.2	0.78	0.00	1.80	
6,376.0	25.50	148.90	5,768.1	-2,031.9	1,473.8	2,510.0	0.96	-0.31	2.09	
6,504.0	24.90	146.70	5,884.0	-2,078.1	1,502.8	2,564.4	0.87	-0.47	-1.72	
6,632.0	25.90	142.90	5,999.6	-2,122.9	1,534.4	2,619.3	1.49	0.78	-2.97	
6,761.0	24.40	150.40	6,116.4	-2,168.5	1,564.6	2,674.0	2.73	-1.16	5.81	
6,889.0	22.80	151.70	6,233.7	-2,213.4	1,589.4	2,724.9	1.31	-1.25	1.02	
7,018.0	17.70	151.80	6,354.7	-2,252.7	1,610.6	2,769.2	3.95	-3.95	0.08	
7,146.0	15.60	142.70	6,477.3	-2,283.5	1,630.2	2,805.7	2.61	-1.64	-7.11	
7,184.7	15.15	142.70	6,514.6	-2,291.7	1,636.4	2,816.0	1.17	-1.17	0.00	
DRILL TARGET 295'FSL, 1340'FEL										
7,274.0	14.10	142.70	6,601.0	-2,309.6	1,650.1	2,838.5	1.17	-1.17	0.00	
7,403.0	11.90	140.40	6,726.7	-2,332.4	1,668.1	2,867.5	1.75	-1.71	-1.78	
7,476.7	11.21	140.29	6,799.0	-2,343.7	1,677.5	2,882.2	0.94	-0.94	-0.15	
TARGET CIRCLE 75'FSL & 1200'FEL										
7,531.0	10.70	140.20	6,852.2	-2,351.7	1,684.1	2,892.5	0.94	-0.94	-0.17	
7,660.0	7.80	138.70	6,979.6	-2,367.4	1,697.5	2,913.1	2.26	-2.25	-1.16	
7,788.0	5.70	137.80	7,106.7	-2,378.7	1,707.5	2,928.1	1.64	-1.64	-0.70	
7,864.0	4.80	140.40	7,182.3	-2,383.9	1,712.1	2,935.0	1.22	-1.18	3.42	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Oster C19-27D
Project:	SEC.18-T4N-R64W	TVD Reference:	WELL @ 4847.0ft (Original Well Elev)
Site:	NEI C18-32D Pad Sec.18-T4N-R64W	MD Reference:	WELL @ 4847.0ft (Original Well Elev)
Well:	Oster C19-27D	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)
7,912.0	4.50	140.00	7,230.2	-2,386.9	1,714.6	2,938.9	0.63	-0.63	-0.83
BHL 75'FSL, 1200'FEL - HARD LINES 75'S OF BHL									

Checked By: _____ Approved By: _____ Date: _____