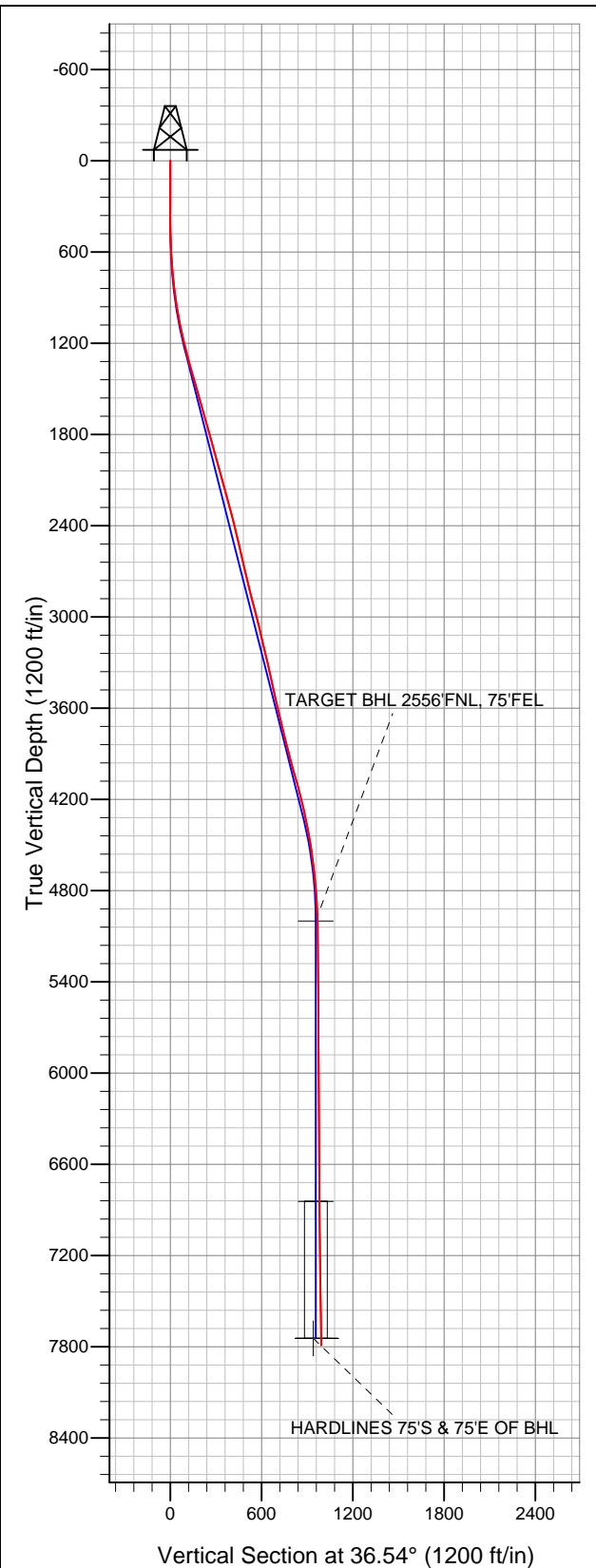




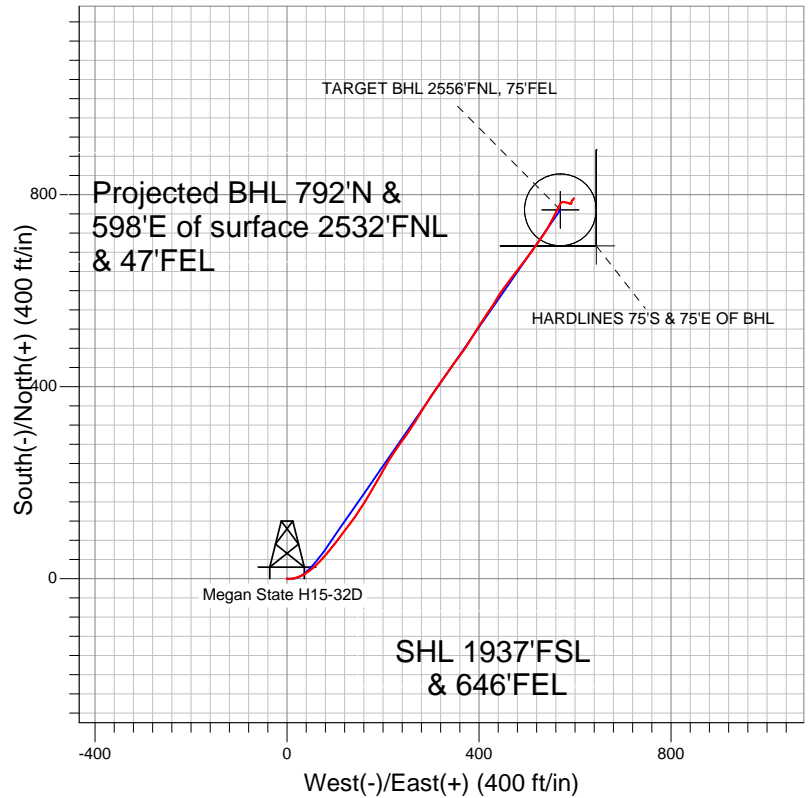
# Well Name: Megan State H15-32D

Surface Location: Megan State H15-33D Pad Sec.16-T3N-R65W  
 North American Datum 1983 US State Plane 1983Colorado Northern Zone  
 Ground Elevation: 4819.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1325365.96	3234082.42	40.223490	-104.661690	
Original Well Elev		WELL @ 4832.0ft (Original Well Elev)				



## NOBLE ENERGY INC WELD COUNTY CO



- LEGEND
- Wellbore #1
  - Megan State H15-32D, Wellbore #1, Noble Megan State H15-32D Plan #2 (3-21-12) V0
  - Survey #1

## Final Survey Plot

Projected Final Survey -  
 7905'MD & 7790'TVD @ 992'VS  
 0.70 deg Inc 28.10 deg AZ

Project: SEC.16-T3N-R65W  
 Site: Megan State H15-33D Pad Sec.16-T3N-R65W  
 Well: Megan State H15-32D  
 Plan: Wellbore #1



# **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.16-T3N-R65W**

**Megan State H15-33D Pad Sec.16-T3N-R65W**

**Megan State H15-32D**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**15 May, 2012**



<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Megan State H15-32D
<b>Project:</b>	SEC.16-T3N-R65W	<b>TVD Reference:</b>	WELL @ 4832.0ft (Original Well Elev)
<b>Site:</b>	Megan State H15-33D Pad Sec.16-T3N-R65W	<b>MD Reference:</b>	WELL @ 4832.0ft (Original Well Elev)
<b>Well:</b>	Megan State H15-32D	<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.16-T3N-R65W, 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>	Megan State H15-33D Pad Sec.16-T3N-R65W		
<b>Site Position:</b>		<b>Northing:</b>	1,325,340.48 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,234,082.66 ft
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40.223420
		<b>Longitude:</b>	-104.661690
		<b>Grid Convergence:</b>	0.54 °

<b>Well</b>	Megan State H15-32D		
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b>	ft
		<b>Latitude:</b>	40.223490
		<b>Longitude:</b>	-104.661690
		<b>Ground Level:</b>	4,819.0 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	3/23/2012	8.69	66.90	52,968

<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>	
	5,000.0	0.0	0.0	36.54	

<b>Survey Program</b>	<b>Date</b>	5/15/2012			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
110.0	7,905.0	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	
110.0	0.20	24.00	110.0	0.2	0.1	0.2	0.18	0.18	0.00	
205.0	0.50	83.60	205.0	0.4	0.6	0.6	0.46	0.32	62.74	
300.0	0.40	152.70	300.0	0.1	1.1	0.8	0.54	-0.11	72.74	
395.0	0.70	97.90	395.0	-0.2	1.8	0.9	0.60	0.32	-57.68	
490.0	2.10	85.00	490.0	-0.2	4.2	2.3	1.50	1.47	-13.58	
572.0	3.30	84.50	571.9	0.2	8.0	4.9	1.46	1.46	-0.61	
654.0	4.80	81.50	653.7	0.9	13.7	8.9	1.85	1.83	-3.66	
736.0	6.30	73.10	735.3	2.7	21.4	15.0	2.08	1.83	-10.24	
817.0	7.80	64.30	815.7	6.4	30.7	23.4	2.28	1.85	-10.86	
925.0	9.40	52.70	922.5	14.9	44.3	38.4	2.18	1.48	-10.74	
1,013.0	9.80	50.20	1,009.2	24.1	55.7	52.5	0.66	0.45	-2.84	
1,094.0	11.30	44.40	1,088.9	34.2	66.6	67.1	2.27	1.85	-7.16	

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Megan State H15-32D
<b>Project:</b>	SEC.16-T3N-R65W	<b>TVD Reference:</b>	WELL @ 4832.0ft (Original Well Elev)
<b>Site:</b>	Megan State H15-33D Pad Sec.16-T3N-R65W	<b>MD Reference:</b>	WELL @ 4832.0ft (Original Well Elev)
<b>Well:</b>	Megan State H15-32D	<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)
1,176.0	13.40	41.10	1,169.0	47.1	78.5	84.5	2.70	2.56	-4.02
1,258.0	14.50	37.90	1,248.5	62.3	91.0	104.3	1.64	1.34	-3.90
1,339.0	15.40	38.50	1,326.8	78.7	103.9	125.1	1.13	1.11	0.74
1,421.0	15.80	36.70	1,405.8	96.2	117.4	147.2	0.77	0.49	-2.20
1,503.0	15.90	37.20	1,484.7	114.1	130.8	169.6	0.21	0.12	0.61
1,585.0	15.90	33.90	1,563.5	132.4	143.9	192.0	1.10	0.00	-4.02
1,667.0	15.70	33.00	1,642.4	151.0	156.2	214.3	0.39	-0.24	-1.10
1,749.0	15.60	30.90	1,721.4	169.8	167.9	236.4	0.70	-0.12	-2.56
1,830.0	16.00	30.40	1,799.3	188.7	179.2	258.3	0.52	0.49	-0.62
1,912.0	15.50	29.30	1,878.2	208.1	190.2	280.4	0.71	-0.61	-1.34
1,994.0	15.90	29.00	1,957.2	227.4	201.0	302.4	0.50	0.49	-0.37
2,076.0	15.50	31.40	2,036.1	246.6	212.2	324.5	0.93	-0.49	2.93
2,158.0	15.20	34.20	2,115.2	264.8	224.0	346.1	0.98	-0.37	3.41
2,239.0	15.40	35.50	2,193.3	282.4	236.2	367.5	0.49	0.25	1.60
2,321.0	15.60	34.90	2,272.3	300.3	248.8	389.4	0.31	0.24	-0.73
2,403.0	14.60	34.60	2,351.5	317.8	261.0	410.8	1.22	-1.22	-0.37
2,484.0	13.50	31.40	2,430.1	334.3	271.7	430.4	1.66	-1.36	-3.95
2,566.0	12.90	29.50	2,509.9	350.5	281.2	449.0	0.90	-0.73	-2.32
2,648.0	12.40	33.00	2,589.9	365.8	290.5	466.9	1.12	-0.61	4.27
2,730.0	13.00	34.60	2,669.9	380.8	300.5	484.9	0.85	0.73	1.95
2,811.0	14.00	34.40	2,748.7	396.4	311.2	503.8	1.24	1.23	-0.25
2,893.0	14.50	34.10	2,828.2	413.1	322.6	523.9	0.62	0.61	-0.37
2,975.0	14.20	35.80	2,907.6	429.7	334.2	544.2	0.63	-0.37	2.07
3,057.0	14.20	36.20	2,987.1	446.0	346.1	564.4	0.12	0.00	0.49
3,139.0	13.60	37.10	3,066.7	461.8	357.8	584.1	0.78	-0.73	1.10
3,220.0	13.40	34.60	3,145.5	477.1	368.9	603.0	0.76	-0.25	-3.09
3,302.0	13.90	31.60	3,225.1	493.3	379.4	622.3	1.06	0.61	-3.66
3,384.0	13.00	33.00	3,304.9	509.4	389.6	641.3	1.17	-1.10	1.71
3,466.0	12.40	30.00	3,384.9	524.8	399.1	659.2	1.09	-0.73	-3.66
3,548.0	11.80	33.70	3,465.1	539.4	408.1	676.4	1.20	-0.73	4.51
3,629.0	13.10	37.10	3,544.2	553.6	418.2	693.8	1.84	1.60	4.20
3,711.0	13.40	30.90	3,624.0	569.2	428.7	712.6	1.77	0.37	-7.56
3,793.0	13.50	30.20	3,703.7	585.6	438.4	731.5	0.23	0.12	-0.85
3,875.0	13.80	35.80	3,783.4	601.8	449.0	750.8	1.65	0.37	6.83
3,956.0	14.60	36.90	3,862.0	617.8	460.7	770.7	1.04	0.99	1.36
4,038.0	14.90	38.60	3,941.2	634.3	473.5	791.6	0.64	0.37	2.07
4,120.0	15.70	37.60	4,020.3	651.3	486.9	813.2	1.03	0.98	-1.22
4,202.0	15.30	35.50	4,099.4	668.9	499.9	835.1	0.84	-0.49	-2.56
4,283.0	14.40	37.10	4,177.7	685.7	512.2	855.9	1.22	-1.11	1.98
4,365.0	13.10	35.50	4,257.3	701.4	523.7	875.3	1.65	-1.59	-1.95
4,447.0	11.70	33.90	4,337.4	715.8	533.8	892.9	1.76	-1.71	-1.95
4,529.0	10.50	30.70	4,417.9	729.2	542.2	908.7	1.64	-1.46	-3.90
4,611.0	9.20	26.70	4,498.6	741.5	549.0	922.6	1.79	-1.59	-4.88
4,692.0	7.80	27.60	4,578.8	752.1	554.5	934.4	1.74	-1.73	1.11
4,774.0	6.90	28.60	4,660.1	761.4	559.4	944.8	1.11	-1.10	1.22
4,856.0	5.20	27.70	4,741.6	769.0	563.5	953.3	2.08	-2.07	-1.10
4,938.0	4.00	26.30	4,823.4	774.8	566.5	959.8	1.47	-1.46	-1.71
5,020.0	3.10	20.70	4,905.2	779.5	568.5	964.7	1.17	-1.10	-6.83
5,101.0	1.10	45.80	4,986.1	782.1	569.9	967.6	2.66	-2.47	30.99
5,114.7	1.10	46.20	4,999.8	782.2	570.0	967.9	0.06	0.00	2.92
TARGET BHL 2556'FNL, 75'FEL									
5,265.0	1.10	50.60	5,150.1	784.2	572.2	970.7	0.06	0.00	2.93
5,429.0	0.50	100.00	5,314.1	785.0	574.1	972.5	0.53	-0.37	30.12
5,592.0	0.70	83.80	5,477.1	785.0	575.8	973.5	0.16	0.12	-9.94

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Megan State H15-32D
<b>Project:</b>	SEC.16-T3N-R65W	<b>TVD Reference:</b>	WELL @ 4832.0ft (Original Well Elev)
<b>Site:</b>	Megan State H15-33D Pad Sec.16-T3N-R65W	<b>MD Reference:</b>	WELL @ 4832.0ft (Original Well Elev)
<b>Well:</b>	Megan State H15-32D	<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)
5,755.0	0.10	200.50	5,640.1	785.0	576.7	974.1	0.46	-0.37	71.60
5,919.0	0.80	107.00	5,804.1	784.5	577.8	974.3	0.50	0.43	-57.01
6,082.0	1.10	91.20	5,967.1	784.2	580.4	975.6	0.24	0.18	-9.69
6,246.0	1.10	100.00	6,131.0	783.9	583.6	977.2	0.10	0.00	5.37
6,409.0	1.10	118.40	6,294.0	782.8	586.5	978.1	0.22	0.00	11.29
6,573.0	1.00	114.70	6,458.0	781.5	589.2	978.7	0.07	-0.06	-2.26
6,736.0	0.60	86.10	6,620.9	781.0	591.3	979.5	0.34	-0.25	-17.55
6,900.0	0.50	22.60	6,784.9	781.7	592.4	980.8	0.36	-0.06	-38.72
6,957.9	0.59	8.99	6,842.8	782.2	592.6	981.3	0.27	0.15	-23.51
TARGET CIRCLE 1937'FSL & 646'FEL									
7,063.0	0.80	353.50	6,947.9	783.5	592.6	982.3	0.27	0.20	-14.74
7,227.0	0.70	11.70	7,111.9	785.6	592.7	984.0	0.16	-0.06	11.10
7,390.0	0.60	26.30	7,274.9	787.3	593.2	985.8	0.12	-0.06	8.96
7,554.0	0.90	55.50	7,438.9	788.8	594.7	987.8	0.29	0.18	17.80
7,717.0	0.80	37.60	7,601.9	790.4	596.4	990.2	0.17	-0.06	-10.98
7,858.4	0.70	28.15	7,743.3	792.0	597.4	992.0	0.11	-0.07	-6.69
HARDLINES 75'S & 75'E OF BHL									
7,859.0	0.70	28.10	7,743.9	792.0	597.4	992.0	0.11	-0.06	-7.61
7,905.0	0.70	28.10	7,789.9	792.5	597.7	992.6	0.00	0.00	0.00

Checked By: _____	Approved By: _____	Date: _____
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