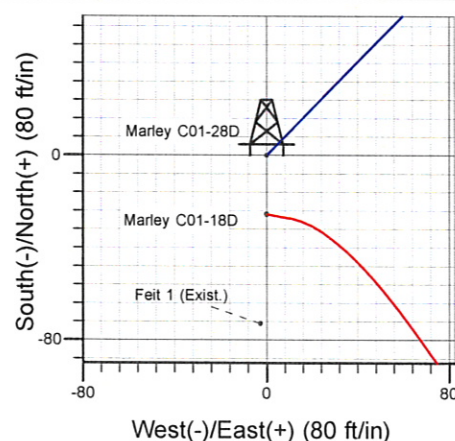
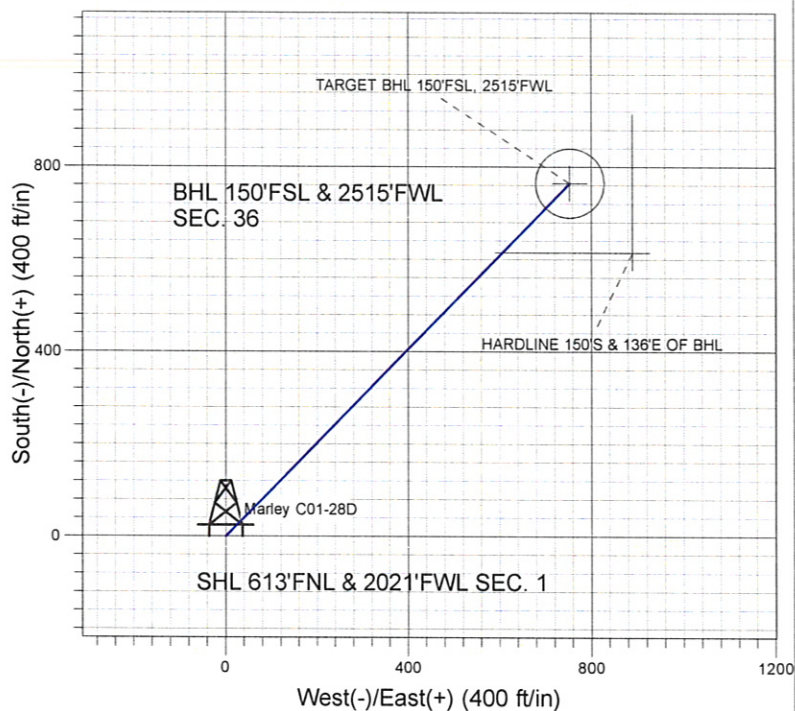
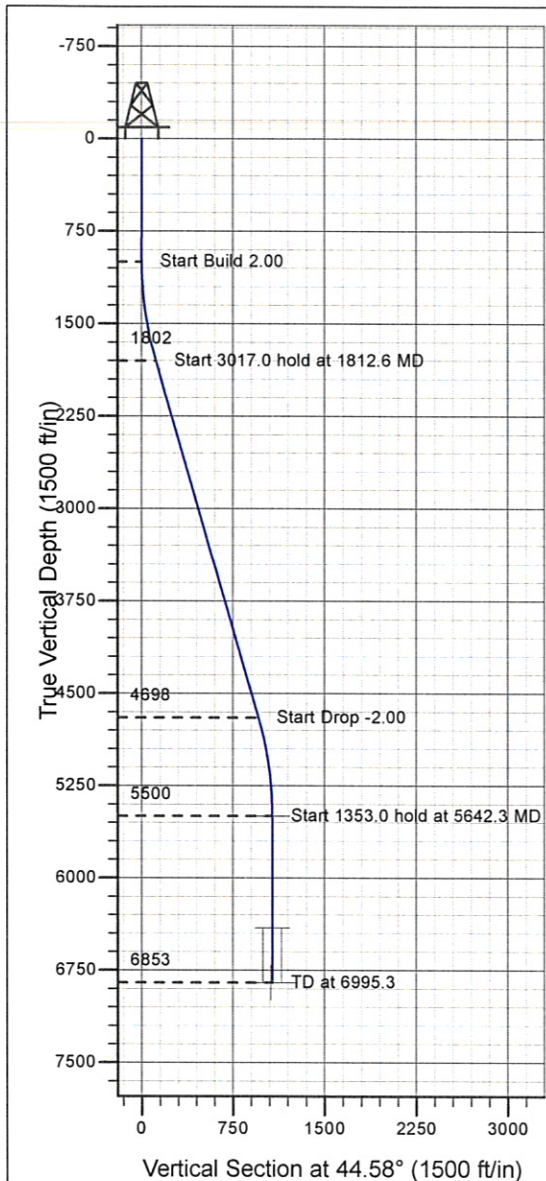


ENSIGN**Directional****Well Name: Marley C01-28D**Surface Location: Marley C01-28D Pad Sec.1-T4N-R64W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4605.0

+N/-S+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1370814.26	3278471.43	40° 20' 49.128 N 104° 30' 3.240 W	
Original Well Elev WELL @ 4618.0ft (Original Well Elev)					

NOBLE ENERGY INC WELD COUNTY CO

Marley C01-28D Pad Sec.1-T4N-R64W
Marley C01-28D
Noble Marley C01-28D Plan #2 (02-24-10)
12:13, February 24 2010



Azimuths to True North
Magnetic North: 8.89°

Magnetic Field
Strength: 53319.9nT
Dip Angle: 67.11°
Date: 11/13/2009
Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 150'FSL, 2515'FWL	5500.0	764.5	753.4	40° 20' 56.683 N	104° 29' 53.509 W	Point
TARGET CIRCLE 150'FSL, 2515'FWL	6407.0	764.5	753.4	40° 20' 56.682 N	104° 29' 53.509 W	Circle (Radius: 75.0)
HARDLINE 150'S & 136'E OF BHL	6853.0	614.5	889.4	40° 20' 55.200 N	104° 29' 51.753 W	Polygon

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1812.6	16.25	44.58	1801.8	81.5	80.4	2.00	44.58	114.5	
4	4829.6	16.25	44.58	4698.2	683.0	673.0	0.00	0.00	958.9	
5	5642.3	0.00	0.00	5500.0	764.5	753.4	2.00	180.00	1073.3	TARGET BHL 150'FSL, 2515'FWL
6	6995.3	0.00	0.00	6853.0	764.5	753.4	0.00	0.00	1073.3	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.1-T4N-R64W

Marley C01-28D Pad Sec.1-T4N-R64W

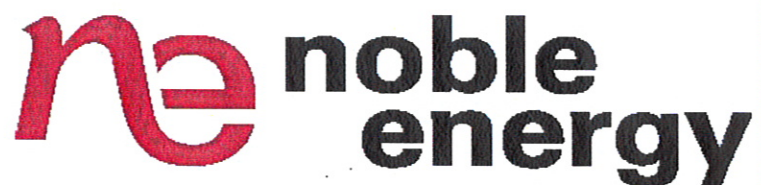
Marley C01-28D

Wellbore #1

Plan: Noble Marley C01-28D Plan #2 (02-24-10)

Standard Planning Report

24 February, 2010



Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Marley C01-28D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4618.0ft (Original Well Elev)
Project:	SEC.1-T4N-R64W	MD Reference:	WELL @ 4618.0ft (Original Well Elev)
Site:	Marley C01-28D Pad Sec.1-T4N-R64W	North Reference:	True
Well:	Marley C01-28D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Marley C01-28D Plan #2 (02-24-10)		

Project	SEC.1-T4N-R64W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site		Marley C01-28D Pad Sec.1-T4N-R64W			
Site Position:		Northing:	1,374,456.97 ft	Latitude:	40° 21' 25.128 N
From:	Lat/Long	Easting:	3,278,430.38 ft	Longitude:	104° 30' 3.240 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.65 °

Well	Marley C01-28D					
Well Position	+N/-S	-3,643.1 ft	Northing:	1,370,814.26 ft	Latitude:	40° 20' 49.128 N
	+E/-W	0.0 ft	Easting:	3,278,471.43 ft	Longitude:	104° 30' 3.240 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,605.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/13/2009	8.89	67.11	53,320

Design	Noble Marley C01-28D Plan #2 (02-24-10)			
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Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0

Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	44.58

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,812.6	16.25	44.58	1,801.8	81.5	80.4	2.00	2.00	0.00	44.58	
4,829.6	16.25	44.58	4,698.2	683.0	673.0	0.00	0.00	0.00	0.00	
5,642.3	0.00	0.00	5,500.0	764.5	753.4	2.00	-2.00	0.00	180.00	TARGET BHL 150'
6,995.3	0.00	0.00	6,853.0	764.5	753.4	0.00	0.00	0.00	0.00	

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Marley C01-28D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4618.0ft (Original Well Elev)
Project:	SEC.1-T4N-R64W	MD Reference:	WELL @ 4618.0ft (Original Well Elev)
Site:	Marley C01-28D Pad Sec.1-T4N-R64W	North Reference:	True
Well:	Marley C01-28D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Marley C01-28D Plan #2 (02-24-10)		

Planned 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
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.00	0.00	760.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00
960.0	0.00	0.00	960.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,040.0	0.80	44.58	1,040.0	0.2	0.2	0.3	2.00	2.00	0.00
1,080.0	1.60	44.58	1,080.0	0.8	0.8	1.1	2.00	2.00	0.00
1,120.0	2.40	44.58	1,120.0	1.8	1.8	2.5	2.00	2.00	0.00
1,160.0	3.20	44.58	1,159.9	3.2	3.1	4.5	2.00	2.00	0.00
1,200.0	4.00	44.58	1,199.8	5.0	4.9	7.0	2.00	2.00	0.00
1,240.0	4.80	44.58	1,239.7	7.2	7.1	10.0	2.00	2.00	0.00
1,280.0	5.60	44.58	1,279.6	9.7	9.6	13.7	2.00	2.00	0.00
1,320.0	6.40	44.58	1,319.3	12.7	12.5	17.9	2.00	2.00	0.00
1,360.0	7.20	44.58	1,359.1	16.1	15.9	22.6	2.00	2.00	0.00
1,400.0	8.00	44.58	1,398.7	19.9	19.6	27.9	2.00	2.00	0.00
1,440.0	8.80	44.58	1,438.3	24.0	23.7	33.7	2.00	2.00	0.00
1,480.0	9.60	44.58	1,477.8	28.6	28.2	40.1	2.00	2.00	0.00
1,520.0	10.40	44.58	1,517.1	33.5	33.0	47.1	2.00	2.00	0.00
1,560.0	11.20	44.58	1,556.4	38.9	38.3	54.6	2.00	2.00	0.00
1,600.0	12.00	44.58	1,595.6	44.6	43.9	62.6	2.00	2.00	0.00
1,640.0	12.80	44.58	1,634.7	50.7	50.0	71.2	2.00	2.00	0.00
1,680.0	13.60	44.58	1,673.6	57.2	56.4	80.3	2.00	2.00	0.00
1,720.0	14.40	44.58	1,712.4	64.1	63.2	90.0	2.00	2.00	0.00
1,760.0	15.20	44.58	1,751.1	71.4	70.3	100.2	2.00	2.00	0.00
1,800.0	16.00	44.58	1,789.6	79.0	77.9	111.0	2.00	2.00	0.00
1,812.6	16.25	44.58	1,801.8	81.5	80.4	114.5	2.00	2.00	0.00
1,840.0	16.25	44.58	1,828.1	87.0	85.7	122.1	0.00	0.00	0.00
1,880.0	16.25	44.58	1,866.5	95.0	93.6	133.3	0.00	0.00	0.00
1,920.0	16.25	44.58	1,904.9	102.9	101.4	144.5	0.00	0.00	0.00
1,960.0	16.25	44.58	1,943.3	110.9	109.3	155.7	0.00	0.00	0.00
2,000.0	16.25	44.58	1,981.7	118.9	117.2	166.9	0.00	0.00	0.00
2,040.0	16.25	44.58	2,020.1	126.9	125.0	178.1	0.00	0.00	0.00
2,080.0	16.25	44.58	2,058.5	134.8	132.9	189.3	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Marley C01-28D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4618.0ft (Original Well Elev)
Project:	SEC.1-T4N-R64W	MD Reference:	WELL @ 4618.0ft (Original Well Elev)
Site:	Marley C01-28D Pad Sec.1-T4N-R64W	North Reference:	True
Well:	Marley C01-28D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Marley C01-28D Plan #2 (02-24-10)		

Planned 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)
2,120.0	16.25	44.58	2,096.9	142.8	140.7	200.5	0.00	0.00	0.00
2,160.0	16.25	44.58	2,135.3	150.8	148.6	211.7	0.00	0.00	0.00
2,200.0	16.25	44.58	2,173.7	158.8	156.5	222.9	0.00	0.00	0.00
2,240.0	16.25	44.58	2,212.1	166.7	164.3	234.1	0.00	0.00	0.00
2,280.0	16.25	44.58	2,250.5	174.7	172.2	245.3	0.00	0.00	0.00
2,320.0	16.25	44.58	2,288.9	182.7	180.0	256.5	0.00	0.00	0.00
2,360.0	16.25	44.58	2,327.3	190.7	187.9	267.7	0.00	0.00	0.00
2,400.0	16.25	44.58	2,365.7	198.6	195.7	278.9	0.00	0.00	0.00
2,440.0	16.25	44.58	2,404.1	206.6	203.6	290.1	0.00	0.00	0.00
2,480.0	16.25	44.58	2,442.5	214.6	211.5	301.3	0.00	0.00	0.00
2,520.0	16.25	44.58	2,480.9	222.6	219.3	312.5	0.00	0.00	0.00
2,560.0	16.25	44.58	2,519.3	230.5	227.2	323.7	0.00	0.00	0.00
2,600.0	16.25	44.58	2,557.7	238.5	235.0	334.8	0.00	0.00	0.00
2,640.0	16.25	44.58	2,596.1	246.5	242.9	346.0	0.00	0.00	0.00
2,680.0	16.25	44.58	2,634.5	254.5	250.7	357.2	0.00	0.00	0.00
2,720.0	16.25	44.58	2,672.9	262.4	258.6	368.4	0.00	0.00	0.00
2,760.0	16.25	44.58	2,711.3	270.4	266.5	379.6	0.00	0.00	0.00
2,800.0	16.25	44.58	2,749.7	278.4	274.3	390.8	0.00	0.00	0.00
2,840.0	16.25	44.58	2,788.1	286.3	282.2	402.0	0.00	0.00	0.00
2,880.0	16.25	44.58	2,826.5	294.3	290.0	413.2	0.00	0.00	0.00
2,920.0	16.25	44.58	2,864.9	302.3	297.9	424.4	0.00	0.00	0.00
2,960.0	16.25	44.58	2,903.3	310.3	305.8	435.6	0.00	0.00	0.00
3,000.0	16.25	44.58	2,941.7	318.2	313.6	446.8	0.00	0.00	0.00
3,040.0	16.25	44.58	2,980.1	326.2	321.5	458.0	0.00	0.00	0.00
3,080.0	16.25	44.58	3,018.5	334.2	329.3	469.2	0.00	0.00	0.00
3,120.0	16.25	44.58	3,056.9	342.2	337.2	480.4	0.00	0.00	0.00
3,160.0	16.25	44.58	3,095.3	350.1	345.0	491.6	0.00	0.00	0.00
3,200.0	16.25	44.58	3,133.7	358.1	352.9	502.8	0.00	0.00	0.00
3,240.0	16.25	44.58	3,172.1	366.1	360.8	514.0	0.00	0.00	0.00
3,280.0	16.25	44.58	3,210.5	374.1	368.6	525.2	0.00	0.00	0.00
3,320.0	16.25	44.58	3,248.9	382.0	376.5	536.4	0.00	0.00	0.00
3,360.0	16.25	44.58	3,287.3	390.0	384.3	547.6	0.00	0.00	0.00
3,400.0	16.25	44.58	3,325.7	398.0	392.2	558.7	0.00	0.00	0.00
3,440.0	16.25	44.58	3,364.1	406.0	400.0	569.9	0.00	0.00	0.00
3,480.0	16.25	44.58	3,402.5	413.9	407.9	581.1	0.00	0.00	0.00
3,520.0	16.25	44.58	3,440.9	421.9	415.8	592.3	0.00	0.00	0.00
3,560.0	16.25	44.58	3,479.3	429.9	423.6	603.5	0.00	0.00	0.00
3,600.0	16.25	44.58	3,517.7	437.8	431.5	614.7	0.00	0.00	0.00
3,640.0	16.25	44.58	3,556.1	445.8	439.3	625.9	0.00	0.00	0.00
3,680.0	16.25	44.58	3,594.5	453.8	447.2	637.1	0.00	0.00	0.00
3,720.0	16.25	44.58	3,632.9	461.8	455.0	648.3	0.00	0.00	0.00
3,760.0	16.25	44.58	3,671.3	469.7	462.9	659.5	0.00	0.00	0.00
3,800.0	16.25	44.58	3,709.7	477.7	470.8	670.7	0.00	0.00	0.00
3,840.0	16.25	44.58	3,748.1	485.7	478.6	681.9	0.00	0.00	0.00
3,880.0	16.25	44.58	3,786.5	493.7	486.5	693.1	0.00	0.00	0.00
3,920.0	16.25	44.58	3,824.9	501.6	494.3	704.3	0.00	0.00	0.00
3,960.0	16.25	44.58	3,863.3	509.6	502.2	715.5	0.00	0.00	0.00
4,000.0	16.25	44.58	3,901.7	517.6	510.1	726.7	0.00	0.00	0.00
4,040.0	16.25	44.58	3,940.1	525.6	517.9	737.9	0.00	0.00	0.00
4,080.0	16.25	44.58	3,978.5	533.5	525.8	749.1	0.00	0.00	0.00
4,120.0	16.25	44.58	4,016.9	541.5	533.6	760.3	0.00	0.00	0.00
4,160.0	16.25	44.58	4,055.3	549.5	541.5	771.4	0.00	0.00	0.00
4,200.0	16.25	44.58	4,093.7	557.5	549.3	782.6	0.00	0.00	0.00
4,240.0	16.25	44.58	4,132.1	565.4	557.2	793.8	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Marley C01-28D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4618.0ft (Original Well Elev)
Project:	SEC.1-T4N-R64W	MD Reference:	WELL @ 4618.0ft (Original Well Elev)
Site:	Marley C01-28D Pad Sec.1-T4N-R64W	North Reference:	True
Well:	Marley C01-28D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Marley C01-28D Plan #2 (02-24-10)		

Planned 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)
4,280.0	16.25	44.58	4,170.5	573.4	565.1	805.0	0.00	0.00	0.00
4,320.0	16.25	44.58	4,208.9	581.4	572.9	816.2	0.00	0.00	0.00
4,360.0	16.25	44.58	4,247.3	589.4	580.8	827.4	0.00	0.00	0.00
4,400.0	16.25	44.58	4,285.7	597.3	588.6	838.6	0.00	0.00	0.00
4,440.0	16.25	44.58	4,324.1	605.3	596.5	849.8	0.00	0.00	0.00
4,480.0	16.25	44.58	4,362.6	613.3	604.3	861.0	0.00	0.00	0.00
4,520.0	16.25	44.58	4,401.0	621.2	612.2	872.2	0.00	0.00	0.00
4,560.0	16.25	44.58	4,439.4	629.2	620.1	883.4	0.00	0.00	0.00
4,600.0	16.25	44.58	4,477.8	637.2	627.9	894.6	0.00	0.00	0.00
4,640.0	16.25	44.58	4,516.2	645.2	635.8	905.8	0.00	0.00	0.00
4,680.0	16.25	44.58	4,554.6	653.1	643.6	917.0	0.00	0.00	0.00
4,720.0	16.25	44.58	4,593.0	661.1	651.5	928.2	0.00	0.00	0.00
4,760.0	16.25	44.58	4,631.4	669.1	659.4	939.4	0.00	0.00	0.00
4,800.0	16.25	44.58	4,669.8	677.1	667.2	950.6	0.00	0.00	0.00
4,829.6	16.25	44.58	4,698.2	683.0	673.0	958.9	0.00	0.00	0.00
4,840.0	16.05	44.58	4,708.2	685.0	675.1	961.7	2.00	-2.00	0.00
4,880.0	15.25	44.58	4,746.7	692.7	682.6	972.5	2.00	-2.00	0.00
4,920.0	14.45	44.58	4,785.4	700.0	689.8	982.8	2.00	-2.00	0.00
4,960.0	13.65	44.58	4,824.2	706.9	696.6	992.5	2.00	-2.00	0.00
5,000.0	12.85	44.58	4,863.1	713.4	703.1	1,001.7	2.00	-2.00	0.00
5,040.0	12.05	44.58	4,902.2	719.6	709.1	1,010.3	2.00	-2.00	0.00
5,080.0	11.25	44.58	4,941.3	725.3	714.8	1,018.3	2.00	-2.00	0.00
5,120.0	10.45	44.58	4,980.6	730.7	720.1	1,025.9	2.00	-2.00	0.00
5,160.0	9.65	44.58	5,020.0	735.7	725.0	1,032.9	2.00	-2.00	0.00
5,200.0	8.85	44.58	5,059.5	740.2	729.5	1,039.3	2.00	-2.00	0.00
5,240.0	8.05	44.58	5,099.0	744.4	733.6	1,045.2	2.00	-2.00	0.00
5,280.0	7.25	44.58	5,138.7	748.2	737.3	1,050.5	2.00	-2.00	0.00
5,320.0	6.45	44.58	5,178.4	751.6	740.7	1,055.2	2.00	-2.00	0.00
5,360.0	5.65	44.58	5,218.2	754.6	743.6	1,059.5	2.00	-2.00	0.00
5,400.0	4.85	44.58	5,258.0	757.2	746.2	1,063.1	2.00	-2.00	0.00
5,440.0	4.05	44.58	5,297.9	759.4	748.4	1,066.2	2.00	-2.00	0.00
5,480.0	3.25	44.58	5,337.8	761.2	750.2	1,068.8	2.00	-2.00	0.00
5,520.0	2.45	44.58	5,377.8	762.7	751.6	1,070.7	2.00	-2.00	0.00
5,560.0	1.65	44.58	5,417.7	763.7	752.6	1,072.2	2.00	-2.00	0.00
5,600.0	0.85	44.58	5,457.7	764.3	753.2	1,073.0	2.00	-2.00	0.00
5,640.0	0.05	44.58	5,497.7	764.5	753.4	1,073.3	2.00	-2.00	0.00
5,642.3	0.00	0.00	5,500.0	764.5	753.4	1,073.3	2.00	-2.00	0.00
TARGET BHL 150°FSL, 2515°FSL									
5,680.0	0.00	0.00	5,537.7	764.5	753.4	1,073.3	0.00	0.00	0.00
5,720.0	0.00	0.00	5,577.7	764.5	753.4	1,073.3	0.00	0.00	0.00
5,760.0	0.00	0.00	5,617.7	764.5	753.4	1,073.3	0.00	0.00	0.00
5,800.0	0.00	0.00	5,657.7	764.5	753.4	1,073.3	0.00	0.00	0.00
5,840.0	0.00	0.00	5,697.7	764.5	753.4	1,073.3	0.00	0.00	0.00
5,880.0	0.00	0.00	5,737.7	764.5	753.4	1,073.3	0.00	0.00	0.00
5,920.0	0.00	0.00	5,777.7	764.5	753.4	1,073.3	0.00	0.00	0.00
5,960.0	0.00	0.00	5,817.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,000.0	0.00	0.00	5,857.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,040.0	0.00	0.00	5,897.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,080.0	0.00	0.00	5,937.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,120.0	0.00	0.00	5,977.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,160.0	0.00	0.00	6,017.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,200.0	0.00	0.00	6,057.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,240.0	0.00	0.00	6,097.7	764.5	753.4	1,073.3	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Marley C01-28D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4618.0ft (Original Well Elev)
Project:	SEC.1-T4N-R64W	MD Reference:	WELL @ 4618.0ft (Original Well Elev)
Site:	Marley C01-28D Pad Sec.1-T4N-R64W	North Reference:	True
Well:	Marley C01-28D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Marley C01-28D Plan #2 (02-24-10)		

Planned 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)
6,280.0	0.00	0.00	6,137.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,320.0	0.00	0.00	6,177.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,360.0	0.00	0.00	6,217.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,400.0	0.00	0.00	6,257.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,440.0	0.00	0.00	6,297.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,480.0	0.00	0.00	6,337.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,520.0	0.00	0.00	6,377.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,549.3	0.00	0.00	6,407.0	764.5	753.4	1,073.3	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 150'FSL, 2515'FWL									
6,560.0	0.00	0.00	6,417.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,600.0	0.00	0.00	6,457.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,640.0	0.00	0.00	6,497.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,680.0	0.00	0.00	6,537.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,720.0	0.00	0.00	6,577.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,760.0	0.00	0.00	6,617.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,800.0	0.00	0.00	6,657.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,840.0	0.00	0.00	6,697.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,845.3	0.00	0.00	6,703.0	764.5	753.4	1,073.3	0.00	0.00	0.00
CODELL									
6,880.0	0.00	0.00	6,737.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,920.0	0.00	0.00	6,777.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,960.0	0.00	0.00	6,817.7	764.5	753.4	1,073.3	0.00	0.00	0.00
6,995.3	0.00	0.00	6,853.0	764.5	753.4	1,073.3	0.00	0.00	0.00
HARDLINE 150'S & 136'E OF BHL									

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
TARGET BHL 150'FS	0.00	0.00	5,500.0	764.5	753.4	1,371,587.18	3,279,216.12	40° 20' 56.683 N	104° 29' 53.509 W
- plan hits target center									
- Point									
HARDLINE 150'S & 1	0.00	0.00	6,853.0	614.5	889.4	1,371,438.71	3,279,353.81	40° 20' 55.200 N	104° 29' 51.753 W
- plan misses target center by 202.5ft at 6995.3ft MD (6853.0 TVD, 764.5 N, 753.4 E)									
- Polygon									
Point 1			6,853.0	0.0	0.0	1,371,438.71	3,279,353.81		
Point 2			6,853.0	0.0	-300.0	1,371,435.33	3,279,053.84		
Point 3			6,853.0	0.0	0.0	1,371,438.71	3,279,353.81		
Point 4			6,853.0	300.0	0.0	1,371,738.68	3,279,350.43		
TARGET CIRCLE 150'	0.00	0.00	6,407.0	764.5	753.4	1,371,587.16	3,279,216.13	40° 20' 56.682 N	104° 29' 53.509 W
- plan hits target center									
- Circle (radius 75.0)									

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,549.3	6,407.0	NIOBRARA		0.00	
6,845.3	6,703.0	CODELL		0.00	

Database:	EDM den0-adp01 Server Data
Company:	NOBLE ENERGY INC WELD COUNTY CO
Project:	SEC.1-T4N-R64W
Site:	Marley C01-28D Pad Sec.1-T4N-R64W
Well:	Marley C01-28D
Wellbore:	Wellbore #1
Design:	Noble Marley C01-28D Plan #2 (02-24-10)

Local Co-ordinate Reference:	Well Marley C01-28D
TVD Reference:	WELL @ 4618.0ft (Original Well Elev)
MD Reference:	WELL @ 4618.0ft (Original Well Elev)
North Reference:	True
Survey Calculation Method:	Minimum Curvature