

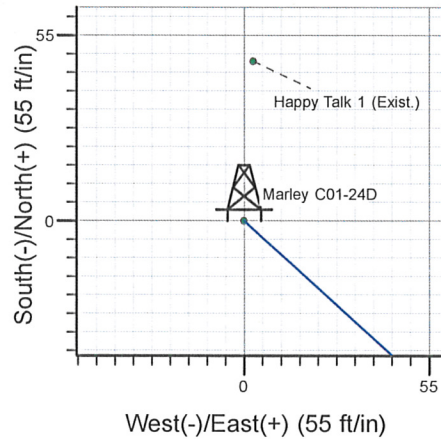
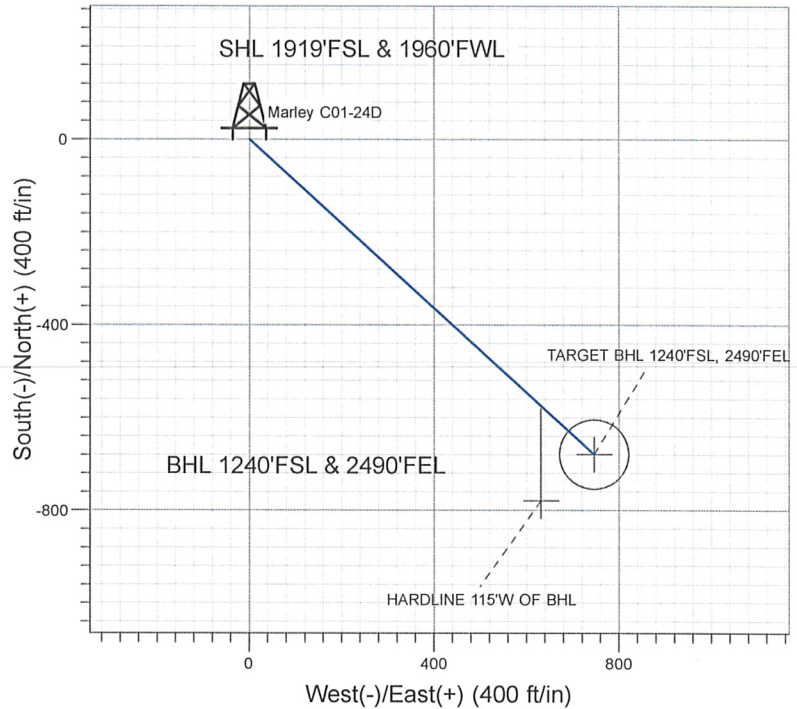
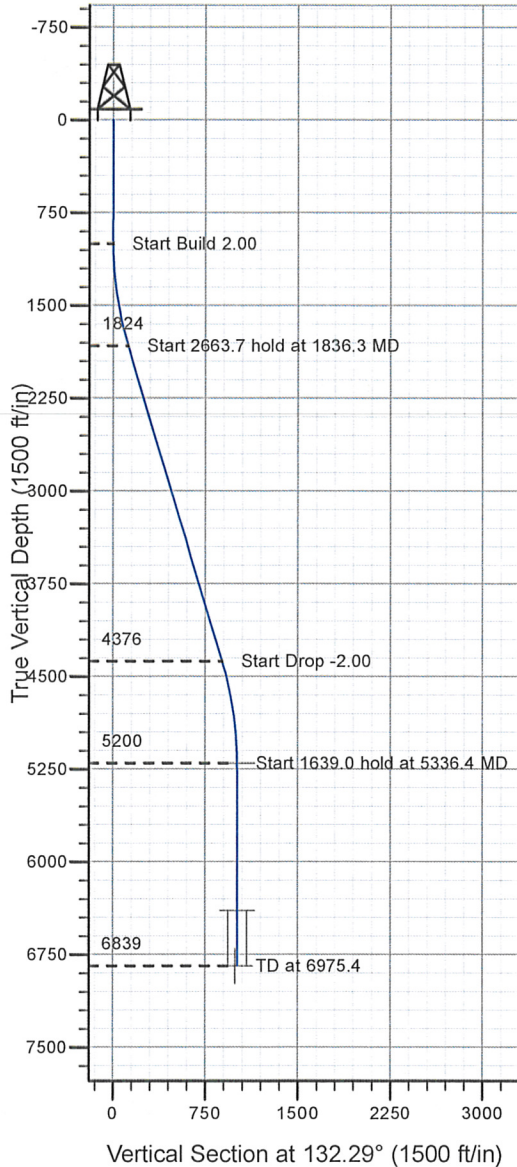
Well Name: Marley C01-24D

Surface Location: Marley C01-24D Pad Sec.1-T4N-R64W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4611.0

+N/-S+E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1368066.79 3278424.33 40° 20' 21.984 N 104° 30' 4.248 W
Original Well Elev WELL @ 4624.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Marley C01-24D Pad Sec.1-T4N-R64W
Marley C01-24D
Noble Marley C01-24D Plan #1 11-13-09
16:21, November 13 2009



Azimuths to True North
Magnetic North: 8.89°

Magnetic Field
Strength: 53315.8snT
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 1240'FSL, 2490'FEL	5200.0	-679.0	746.4	40° 20' 15.274 N	104° 29' 54.609 W	Point
TARGET CIRCLE 1240'FSL, 2490'FEL	6393.0	-679.0	746.4	40° 20' 15.274 N	104° 29' 54.609 W	Circle (Radius: 75.0)
HARDLINE 115°W OF BHL	6839.0	-779.0	631.4	40° 20' 14.286 N	104° 29' 56.094 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	1836.3	16.73	132.29	1824.5	-81.6	89.7	2.00	132.29	121.2	
4	4500.0	16.73	132.29	4375.5	-597.4	656.8	0.00	0.00	887.8	
5	5336.4	0.00	0.00	5200.0	-679.0	746.4	2.00	180.00	1009.0	TARGET BHL 1240'FSL, 2490'FEL
6	6975.4	0.00	0.00	6839.0	-679.0	746.4	0.00	0.00	1009.0	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.1-T4N-R64W

Marley C01-24D Pad Sec.1-T4N-R64W

Marley C01-24D

Wellbore #1

Plan: Noble Marley C01-24D Plan #1 11-13-09

Standard Planning Report

13 November, 2009



Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Marley C01-24D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4624.0ft (Original Well Elev)
Project:	SEC.1-T4N-R64W	MD Reference:	WELL @ 4624.0ft (Original Well Elev)
Site:	Marley C01-24D Pad Sec.1-T4N-R64W	North Reference:	True
Well:	Marley C01-24D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Marley C01-24D Plan #1 11-13-09		

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 C01-24D Pad Sec.1-T4N-R64W		
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Site Position:		Northing:	1,368,066.80 ft	Latitude:	40° 20' 21.984 N
From:	Lat/Long	Easting:	3,278,424.33 ft	Longitude:	104° 30' 4.248 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.65 °

Well	Marley C01-24D					
Well Position	+N/-S	0.0 ft	Northing:	1,368,066.79 ft	Latitude:	40° 20' 21.984 N
	+E/-W	0.0 ft	Easting:	3,278,424.33 ft	Longitude:	104° 30' 4.248 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,611.0 ft

Wellbore	Wellbore #1				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/13/2009	8.89	67.11	53,316

Design	Noble Marley C01-24D Plan #1 11-13-09				
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Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	132.29

Plan Sections										
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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	
1,836.3	16.73	132.29	1,824.5	-81.6	89.7	2.00	2.00	0.00	132.29	
4,500.0	16.73	132.29	4,375.5	-597.4	656.8	0.00	0.00	0.00	0.00	
5,336.4	0.00	0.00	5,200.0	-679.0	746.4	2.00	-2.00	0.00	180.00	TARGET BHL 124C
6,975.4	0.00	0.00	6,839.0	-679.0	746.4	0.00	0.00	0.00	0.00	

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Marley C01-24D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4624.0ft (Original Well Elev)
Project:	SEC.1-T4N-R64W	MD Reference:	WELL @ 4624.0ft (Original Well Elev)
Site:	Marley C01-24D Pad Sec.1-T4N-R64W	North Reference:	True
Well:	Marley C01-24D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Marley C01-24D Plan #1 11-13-09		

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	132.29	1,040.0	-0.2	0.2	0.3	2.00	2.00	0.00
1,080.0	1.60	132.29	1,080.0	-0.8	0.8	1.1	2.00	2.00	0.00
1,120.0	2.40	132.29	1,120.0	-1.7	1.9	2.5	2.00	2.00	0.00
1,160.0	3.20	132.29	1,159.9	-3.0	3.3	4.5	2.00	2.00	0.00
1,200.0	4.00	132.29	1,199.8	-4.7	5.2	7.0	2.00	2.00	0.00
1,240.0	4.80	132.29	1,239.7	-6.8	7.4	10.0	2.00	2.00	0.00
1,280.0	5.60	132.29	1,279.6	-9.2	10.1	13.7	2.00	2.00	0.00
1,320.0	6.40	132.29	1,319.3	-12.0	13.2	17.9	2.00	2.00	0.00
1,360.0	7.20	132.29	1,359.1	-15.2	16.7	22.6	2.00	2.00	0.00
1,400.0	8.00	132.29	1,398.7	-18.8	20.6	27.9	2.00	2.00	0.00
1,440.0	8.80	132.29	1,438.3	-22.7	24.9	33.7	2.00	2.00	0.00
1,480.0	9.60	132.29	1,477.8	-27.0	29.7	40.1	2.00	2.00	0.00
1,520.0	10.40	132.29	1,517.1	-31.7	34.8	47.1	2.00	2.00	0.00
1,560.0	11.20	132.29	1,556.4	-36.7	40.4	54.6	2.00	2.00	0.00
1,600.0	12.00	132.29	1,595.6	-42.1	46.3	62.6	2.00	2.00	0.00
1,640.0	12.80	132.29	1,634.7	-47.9	52.7	71.2	2.00	2.00	0.00
1,680.0	13.60	132.29	1,673.6	-54.0	59.4	80.3	2.00	2.00	0.00
1,720.0	14.40	132.29	1,712.4	-60.6	66.6	90.0	2.00	2.00	0.00
1,760.0	15.20	132.29	1,751.1	-67.4	74.1	100.2	2.00	2.00	0.00
1,800.0	16.00	132.29	1,789.6	-74.7	82.1	111.0	2.00	2.00	0.00
1,836.3	16.73	132.29	1,824.5	-81.6	89.7	121.2	2.00	2.00	0.00
1,840.0	16.73	132.29	1,828.0	-82.3	90.4	122.3	0.00	0.00	0.00
1,880.0	16.73	132.29	1,866.3	-90.0	99.0	133.8	0.00	0.00	0.00
1,920.0	16.73	132.29	1,904.6	-97.8	107.5	145.3	0.00	0.00	0.00
1,960.0	16.73	132.29	1,942.9	-105.5	116.0	156.8	0.00	0.00	0.00
2,000.0	16.73	132.29	1,981.2	-113.3	124.5	168.3	0.00	0.00	0.00
2,040.0	16.73	132.29	2,019.6	-121.0	133.0	179.8	0.00	0.00	0.00
2,080.0	16.73	132.29	2,057.9	-128.7	141.5	191.3	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Marley C01-24D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4624.0ft (Original Well Elev)
Project:	SEC.1-T4N-R64W	MD Reference:	WELL @ 4624.0ft (Original Well Elev)
Site:	Marley C01-24D Pad Sec.1-T4N-R64W	North Reference:	True
Well:	Marley C01-24D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Marley C01-24D Plan #1 11-13-09		

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	16.73	132.29	2,096.2	-136.5	150.1	202.9	0.00	0.00	0.00	
2,160.0	16.73	132.29	2,134.5	-144.2	158.6	214.4	0.00	0.00	0.00	
2,200.0	16.73	132.29	2,172.8	-152.0	167.1	225.9	0.00	0.00	0.00	
2,240.0	16.73	132.29	2,211.1	-159.7	175.6	237.4	0.00	0.00	0.00	
2,280.0	16.73	132.29	2,249.4	-167.5	184.1	248.9	0.00	0.00	0.00	
2,320.0	16.73	132.29	2,287.7	-175.2	192.6	260.4	0.00	0.00	0.00	
2,360.0	16.73	132.29	2,326.0	-183.0	201.2	271.9	0.00	0.00	0.00	
2,400.0	16.73	132.29	2,364.3	-190.7	209.7	283.4	0.00	0.00	0.00	
2,440.0	16.73	132.29	2,402.6	-198.5	218.2	294.9	0.00	0.00	0.00	
2,480.0	16.73	132.29	2,440.9	-206.2	226.7	306.5	0.00	0.00	0.00	
2,520.0	16.73	132.29	2,479.2	-214.0	235.2	318.0	0.00	0.00	0.00	
2,560.0	16.73	132.29	2,517.6	-221.7	243.7	329.5	0.00	0.00	0.00	
2,600.0	16.73	132.29	2,555.9	-229.4	252.3	341.0	0.00	0.00	0.00	
2,640.0	16.73	132.29	2,594.2	-237.2	260.8	352.5	0.00	0.00	0.00	
2,680.0	16.73	132.29	2,632.5	-244.9	269.3	364.0	0.00	0.00	0.00	
2,720.0	16.73	132.29	2,670.8	-252.7	277.8	375.5	0.00	0.00	0.00	
2,760.0	16.73	132.29	2,709.1	-260.4	286.3	387.0	0.00	0.00	0.00	
2,800.0	16.73	132.29	2,747.4	-268.2	294.8	398.6	0.00	0.00	0.00	
2,840.0	16.73	132.29	2,785.7	-275.9	303.3	410.1	0.00	0.00	0.00	
2,880.0	16.73	132.29	2,824.0	-283.7	311.9	421.6	0.00	0.00	0.00	
2,920.0	16.73	132.29	2,862.3	-291.4	320.4	433.1	0.00	0.00	0.00	
2,960.0	16.73	132.29	2,900.6	-299.2	328.9	444.6	0.00	0.00	0.00	
3,000.0	16.73	132.29	2,938.9	-306.9	337.4	456.1	0.00	0.00	0.00	
3,040.0	16.73	132.29	2,977.2	-314.7	345.9	467.6	0.00	0.00	0.00	
3,080.0	16.73	132.29	3,015.6	-322.4	354.4	479.1	0.00	0.00	0.00	
3,120.0	16.73	132.29	3,053.9	-330.1	363.0	490.6	0.00	0.00	0.00	
3,160.0	16.73	132.29	3,092.2	-337.9	371.5	502.2	0.00	0.00	0.00	
3,200.0	16.73	132.29	3,130.5	-345.6	380.0	513.7	0.00	0.00	0.00	
3,240.0	16.73	132.29	3,168.8	-353.4	388.5	525.2	0.00	0.00	0.00	
3,280.0	16.73	132.29	3,207.1	-361.1	397.0	536.7	0.00	0.00	0.00	
3,320.0	16.73	132.29	3,245.4	-368.9	405.5	548.2	0.00	0.00	0.00	
3,360.0	16.73	132.29	3,283.7	-376.6	414.1	559.7	0.00	0.00	0.00	
3,400.0	16.73	132.29	3,322.0	-384.4	422.6	571.2	0.00	0.00	0.00	
3,440.0	16.73	132.29	3,360.3	-392.1	431.1	582.7	0.00	0.00	0.00	
3,480.0	16.73	132.29	3,398.6	-399.9	439.6	594.3	0.00	0.00	0.00	
3,520.0	16.73	132.29	3,436.9	-407.6	448.1	605.8	0.00	0.00	0.00	
3,560.0	16.73	132.29	3,475.2	-415.4	456.6	617.3	0.00	0.00	0.00	
3,600.0	16.73	132.29	3,513.6	-423.1	465.1	628.8	0.00	0.00	0.00	
3,640.0	16.73	132.29	3,551.9	-430.9	473.7	640.3	0.00	0.00	0.00	
3,680.0	16.73	132.29	3,590.2	-438.6	482.2	651.8	0.00	0.00	0.00	
3,720.0	16.73	132.29	3,628.5	-446.3	490.7	663.3	0.00	0.00	0.00	
3,760.0	16.73	132.29	3,666.8	-454.1	499.2	674.8	0.00	0.00	0.00	
3,800.0	16.73	132.29	3,705.1	-461.8	507.7	686.4	0.00	0.00	0.00	
3,840.0	16.73	132.29	3,743.4	-469.6	516.2	697.9	0.00	0.00	0.00	
3,880.0	16.73	132.29	3,781.7	-477.3	524.8	709.4	0.00	0.00	0.00	
3,920.0	16.73	132.29	3,820.0	-485.1	533.3	720.9	0.00	0.00	0.00	
3,960.0	16.73	132.29	3,858.3	-492.8	541.8	732.4	0.00	0.00	0.00	
4,000.0	16.73	132.29	3,896.6	-500.6	550.3	743.9	0.00	0.00	0.00	
4,040.0	16.73	132.29	3,934.9	-508.3	558.8	755.4	0.00	0.00	0.00	
4,080.0	16.73	132.29	3,973.2	-516.1	567.3	766.9	0.00	0.00	0.00	
4,120.0	16.73	132.29	4,011.6	-523.8	575.9	778.4	0.00	0.00	0.00	
4,160.0	16.73	132.29	4,049.9	-531.6	584.4	790.0	0.00	0.00	0.00	
4,200.0	16.73	132.29	4,088.2	-539.3	592.9	801.5	0.00	0.00	0.00	
4,240.0	16.73	132.29	4,126.5	-547.0	601.4	813.0	0.00	0.00	0.00	

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Marley C01-24D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4624.0ft (Original Well Elev)
Project:	SEC.1-T4N-R64W	MD Reference:	WELL @ 4624.0ft (Original Well Elev)
Site:	Marley C01-24D Pad Sec.1-T4N-R64W	North Reference:	True
Well:	Marley C01-24D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Marley C01-24D Plan #1 11-13-09		

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	16.73	132.29	4,164.8	-554.8	609.9	824.5	0.00	0.00	0.00
4,320.0	16.73	132.29	4,203.1	-562.5	618.4	836.0	0.00	0.00	0.00
4,360.0	16.73	132.29	4,241.4	-570.3	627.0	847.5	0.00	0.00	0.00
4,400.0	16.73	132.29	4,279.7	-578.0	635.5	859.0	0.00	0.00	0.00
4,440.0	16.73	132.29	4,318.0	-585.8	644.0	870.5	0.00	0.00	0.00
4,480.0	16.73	132.29	4,356.3	-593.5	652.5	882.1	0.00	0.00	0.00
4,500.0	16.73	132.29	4,375.5	-597.4	656.8	887.8	0.00	0.00	0.00
4,520.0	16.33	132.29	4,394.6	-601.2	661.0	893.5	2.00	-2.00	0.00
4,560.0	15.53	132.29	4,433.1	-608.6	669.1	904.5	2.00	-2.00	0.00
4,600.0	14.73	132.29	4,471.7	-615.6	676.8	914.9	2.00	-2.00	0.00
4,640.0	13.93	132.29	4,510.5	-622.3	684.1	924.8	2.00	-2.00	0.00
4,680.0	13.13	132.29	4,549.4	-628.6	691.1	934.2	2.00	-2.00	0.00
4,720.0	12.33	132.29	4,588.4	-634.5	697.6	943.0	2.00	-2.00	0.00
4,760.0	11.53	132.29	4,627.5	-640.1	703.7	951.2	2.00	-2.00	0.00
4,800.0	10.73	132.29	4,666.8	-645.3	709.4	959.0	2.00	-2.00	0.00
4,840.0	9.93	132.29	4,706.1	-650.1	714.7	966.1	2.00	-2.00	0.00
4,880.0	9.13	132.29	4,745.6	-654.6	719.6	972.8	2.00	-2.00	0.00
4,920.0	8.33	132.29	4,785.1	-658.6	724.1	978.8	2.00	-2.00	0.00
4,960.0	7.53	132.29	4,824.7	-662.3	728.2	984.3	2.00	-2.00	0.00
5,000.0	6.73	132.29	4,864.4	-665.7	731.8	989.3	2.00	-2.00	0.00
5,040.0	5.93	132.29	4,904.2	-668.7	735.1	993.7	2.00	-2.00	0.00
5,080.0	5.13	132.29	4,944.0	-671.2	737.9	997.6	2.00	-2.00	0.00
5,120.0	4.33	132.29	4,983.8	-673.5	740.4	1,000.9	2.00	-2.00	0.00
5,160.0	3.53	132.29	5,023.8	-675.3	742.4	1,003.6	2.00	-2.00	0.00
5,200.0	2.73	132.29	5,063.7	-676.8	744.0	1,005.8	2.00	-2.00	0.00
5,240.0	1.93	132.29	5,103.7	-677.9	745.2	1,007.4	2.00	-2.00	0.00
5,280.0	1.13	132.29	5,143.6	-678.6	746.0	1,008.5	2.00	-2.00	0.00
5,320.0	0.33	132.29	5,183.6	-678.9	746.4	1,009.0	2.00	-2.00	0.00
5,336.4	0.00	0.00	5,200.0	-679.0	746.4	1,009.0	2.00	-2.00	-808.83
TARGET BHL 1240'FSL, 2490'FEL									
5,360.0	0.00	0.00	5,223.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,263.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
5,440.0	0.00	0.00	5,303.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
5,480.0	0.00	0.00	5,343.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
5,520.0	0.00	0.00	5,383.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
5,560.0	0.00	0.00	5,423.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,463.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
5,640.0	0.00	0.00	5,503.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
5,680.0	0.00	0.00	5,543.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
5,720.0	0.00	0.00	5,583.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
5,760.0	0.00	0.00	5,623.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,663.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
5,840.0	0.00	0.00	5,703.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
5,880.0	0.00	0.00	5,743.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
5,920.0	0.00	0.00	5,783.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
5,960.0	0.00	0.00	5,823.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,000.0	0.00	0.00	5,863.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,040.0	0.00	0.00	5,903.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,080.0	0.00	0.00	5,943.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,120.0	0.00	0.00	5,983.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,160.0	0.00	0.00	6,023.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,063.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,240.0	0.00	0.00	6,103.6	-679.0	746.4	1,009.0	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Marley C01-24D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4624.0ft (Original Well Elev)
Project:	SEC.1-T4N-R64W	MD Reference:	WELL @ 4624.0ft (Original Well Elev)
Site:	Marley C01-24D Pad Sec.1-T4N-R64W	North Reference:	True
Well:	Marley C01-24D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Marley C01-24D Plan #1 11-13-09		

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	6,143.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,320.0	0.00	0.00	6,183.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,360.0	0.00	0.00	6,223.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,263.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,440.0	0.00	0.00	6,303.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,480.0	0.00	0.00	6,343.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,520.0	0.00	0.00	6,383.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,529.4	0.00	0.00	6,393.0	-679.0	746.4	1,009.0	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 1240'FSL, 2490'FEL									
6,560.0	0.00	0.00	6,423.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,463.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,640.0	0.00	0.00	6,503.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,680.0	0.00	0.00	6,543.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,720.0	0.00	0.00	6,583.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,760.0	0.00	0.00	6,623.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,663.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,825.4	0.00	0.00	6,689.0	-679.0	746.4	1,009.0	0.00	0.00	0.00
CODELL									
6,840.0	0.00	0.00	6,703.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,880.0	0.00	0.00	6,743.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,920.0	0.00	0.00	6,783.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,960.0	0.00	0.00	6,823.6	-679.0	746.4	1,009.0	0.00	0.00	0.00
6,975.4	0.00	0.00	6,839.0	-679.0	746.4	1,009.0	0.00	0.00	0.00
HARDLINE 115'W OF BHL									

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
TARGET CIRCLE 1240'F - plan hits target center - Circle (radius 75.0)	0.00	0.00	6,393.0	-679.0	746.4	1,367,396.27	3,279,178.29	40° 20' 15.274 N	104° 29' 54.609 W
TARGET BHL 1240'F - plan hits target center - Point	0.00	0.00	5,200.0	-679.0	746.4	1,367,396.31	3,279,178.32	40° 20' 15.274 N	104° 29' 54.609 W
HARDLINE 115'W OF - plan misses target center by 152.4ft at 6975.4ft MD (6839.0 TVD, -679.0 N, 746.4 E) - Polygon	0.00	0.00	6,839.0	-779.0	631.4	1,367,294.98	3,279,064.43	40° 20' 14.286 N	104° 29' 56.094 W
Point 1			6,839.0	0.0	0.0	1,367,294.98	3,279,064.43		
Point 2			6,839.0	200.0	0.0	1,367,494.96	3,279,062.18		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,529.4	6,393.0	NIOBRARA		0.00	
6,825.4	6,689.0	CODELL		0.00	

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.1-T4N-R64W
Site: Marley C01-24D Pad Sec.1-T4N-R64W
Well: Marley C01-24D
Wellbore: Wellbore #1
Design: Noble Marley C01-24D Plan #1 11-13-09

Local Co-ordinate Reference: Well Marley C01-24D
TVD Reference: WELL @ 4624.0ft (Original Well Elev)
MD Reference: WELL @ 4624.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature