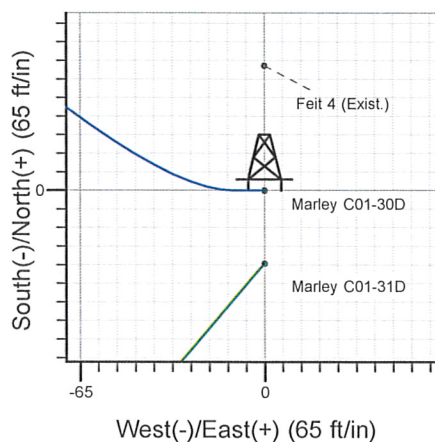
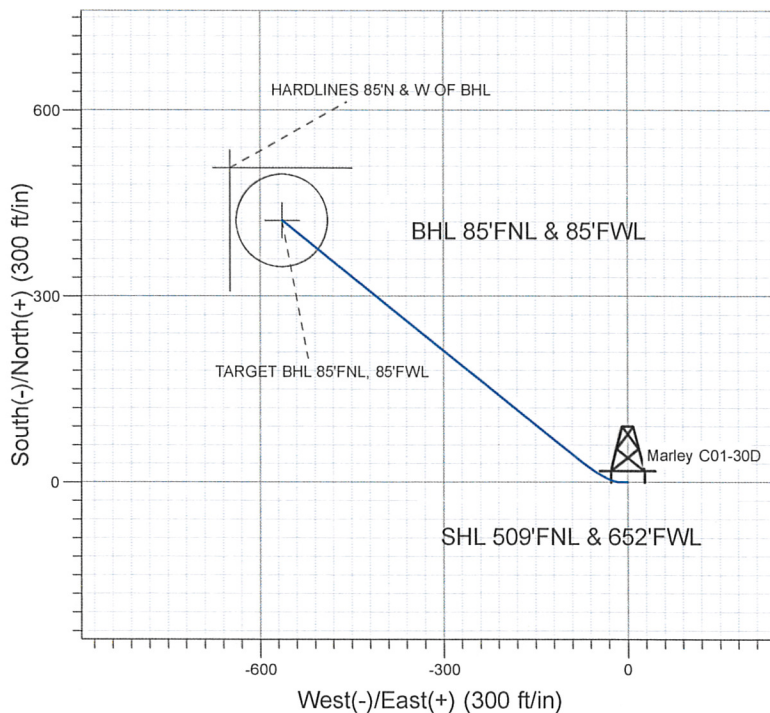
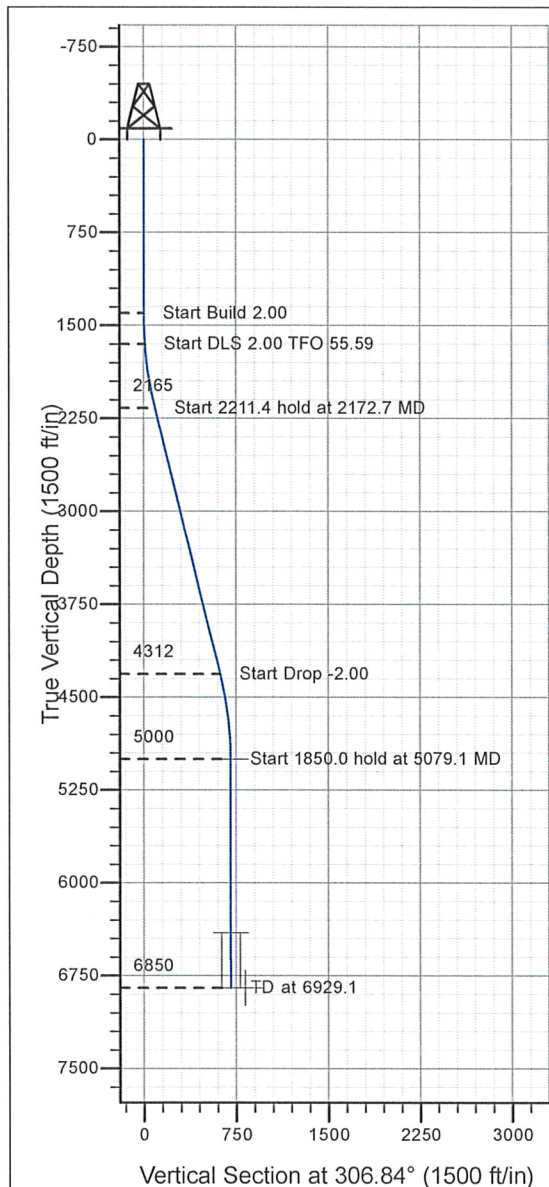


Well Name: Marley C01-30D

Surface Location: Marley C01-30D Pad Sec.1-T4N-R64W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4607.0
 +N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1370900.87 3277101.81 40° 20' 50.136 N 104° 30' 20.916 W
 Original Well Elev WELL @ 4620.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Marley C01-30D Pad Sec.1-T4N-R64W
 Marley C01-30D
 Noble Marley C01-30D Plan #1 11-18-09
 12:23, November 18 2009



Azimuths to True North
 Magnetic North: 8.89°
 Magnetic Field
 Strength: 53318.1nT
 Dip Angle: 67.11°
 Date: 11/18/2009
 Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 85°FNL, 85°FWL	5000.0	422.6	-564.0	40° 20' 54.312 N	104° 30' 28.201 W	Point
TARGET CIRCLE 85°FNL, 85°FWL	6404.0	422.6	-564.0	40° 20' 54.312 N	104° 30' 28.200 W	Circle (Radius: 75.0)
HARDLINES 85°N & W OF BHL	6850.0	507.6	-649.0	40° 20' 55.152 N	104° 30' 29.298 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	1400.0	0.00	0.00	1400.0	0.0	0.0	0.00	0.00	0.0	
3	1650.0	5.00	270.00	1649.7	0.0	-10.9	2.00	270.00	8.7	
4	2172.7	13.90	308.55	2165.2	39.2	-83.0	2.00	55.59	89.9	
5	4384.1	13.90	308.55	4311.8	370.3	-498.4	0.00	0.00	620.9	
6	5079.1	0.00	0.00	5000.0	422.6	-564.0	2.00	180.00	704.8	TARGET BHL 85°FNL, 85°FWL
7	6929.1	0.00	0.00	6850.0	422.6	-564.0	0.00	0.00	704.8	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.1-T4N-R64W

Marley C01-30D Pad Sec.1-T4N-R64W

Marley C01-30D

Wellbore #1

Plan: Noble Marley C01-30D Plan #1 11-18-09

Standard Planning Report

18 November, 2009



Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Marley C01-30D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4620.0ft (Original Well Elev)
Project:	SEC.1-T4N-R64W	MD Reference:	WELL @ 4620.0ft (Original Well Elev)
Site:	Marley C01-30D Pad Sec.1-T4N-R64W	North Reference:	True
Well:	Marley C01-30D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Marley C01-30D Plan #1 11-18-09		

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 C01-30D Pad Sec.1-T4N-R64W			
Site Position:		Northing:	1,370,900.88 ft	Latitude:	40° 20' 50.136 N
From:	Lat/Long	Easting:	3,277,101.81 ft	Longitude:	104° 30' 20.916 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.64 °

Well	Marley C01-30D					
Well Position	+N/-S	0.0 ft	Northing:	1,370,900.87 ft	Latitude:	40° 20' 50.136 N
	+E/-W	0.0 ft	Easting:	3,277,101.81 ft	Longitude:	104° 30' 20.916 W
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,607.0 ft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/18/2009	8.89	67.11	53,318

Design	Noble Marley C01-30D Plan #1 11-18-09			
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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	306.84

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	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,650.0	5.00	270.00	1,649.7	0.0	-10.9	2.00	2.00	0.00	270.00	
2,172.7	13.90	308.55	2,165.2	39.2	-83.0	2.00	1.70	7.37	55.59	
4,384.1	13.90	308.55	4,311.8	370.3	-498.4	0.00	0.00	0.00	0.00	
5,079.1	0.00	0.00	5,000.0	422.6	-564.0	2.00	-2.00	0.00	180.00	TARGET BHL 85'FI
6,929.1	0.00	0.00	6,850.0	422.6	-564.0	0.00	0.00	0.00	0.00	

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Marley C01-30D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4620.0ft (Original Well Elev)
Project:	SEC.1-T4N-R64W	MD Reference:	WELL @ 4620.0ft (Original Well Elev)
Site:	Marley C01-30D Pad Sec.1-T4N-R64W	North Reference:	True
Well:	Marley C01-30D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Marley C01-30D Plan #1 11-18-09		

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	0.00	0.00	1,040.0	0.0	0.0	0.0	0.00	0.00	0.00
1,080.0	0.00	0.00	1,080.0	0.0	0.0	0.0	0.00	0.00	0.00
1,120.0	0.00	0.00	1,120.0	0.0	0.0	0.0	0.00	0.00	0.00
1,160.0	0.00	0.00	1,160.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,240.0	0.00	0.00	1,240.0	0.0	0.0	0.0	0.00	0.00	0.00
1,280.0	0.00	0.00	1,280.0	0.0	0.0	0.0	0.00	0.00	0.00
1,320.0	0.00	0.00	1,320.0	0.0	0.0	0.0	0.00	0.00	0.00
1,360.0	0.00	0.00	1,360.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,440.0	0.80	270.00	1,440.0	0.0	-0.3	0.2	2.00	2.00	0.00
1,480.0	1.60	270.00	1,480.0	0.0	-1.1	0.9	2.00	2.00	0.00
1,520.0	2.40	270.00	1,520.0	0.0	-2.5	2.0	2.00	2.00	0.00
1,560.0	3.20	270.00	1,559.9	0.0	-4.5	3.6	2.00	2.00	0.00
1,600.0	4.00	270.00	1,599.8	0.0	-7.0	5.6	2.00	2.00	0.00
1,640.0	4.80	270.00	1,639.7	0.0	-10.0	8.0	2.00	2.00	0.00
1,650.0	5.00	270.00	1,649.7	0.0	-10.9	8.7	2.00	2.00	0.00
1,680.0	5.36	275.30	1,679.6	0.1	-13.6	11.0	2.00	1.21	17.68
1,720.0	5.90	281.30	1,719.4	0.7	-17.5	14.4	2.00	1.36	14.99
1,760.0	6.50	286.24	1,759.1	1.7	-21.7	18.4	2.00	1.49	12.36
1,800.0	7.14	290.34	1,798.9	3.2	-26.2	22.9	2.00	1.59	10.23
1,840.0	7.80	293.75	1,838.5	5.2	-31.0	27.9	2.00	1.67	8.53
1,880.0	8.49	296.62	1,878.1	7.6	-36.1	33.5	2.00	1.72	7.18
1,920.0	9.20	299.05	1,917.6	10.5	-41.6	39.5	2.00	1.77	6.09
1,960.0	9.92	301.14	1,957.1	13.8	-47.3	46.1	2.00	1.80	5.22
2,000.0	10.65	302.95	1,996.4	17.6	-53.4	53.3	2.00	1.83	4.52
2,040.0	11.39	304.53	2,035.7	21.9	-59.7	60.9	2.00	1.85	3.94
2,080.0	12.14	305.91	2,074.9	26.6	-66.4	69.1	2.00	1.87	3.46

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.1-T4N-R64W
Site: Marley C01-30D Pad Sec.1-T4N-R64W
Well: Marley C01-30D
Wellbore: Wellbore #1
Design: Noble Marley C01-30D Plan #1 11-18-09

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well Marley C01-30D
WELL @ 4620.0ft (Original Well Elev)
WELL @ 4620.0ft (Original Well Elev)
True
Minimum Curvature

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	12.90	307.14	2,113.9	31.7	-73.3	77.7	2.00	1.89	3.06
2,160.0	13.66	308.23	2,152.8	37.4	-80.6	86.9	2.00	1.90	2.73
2,172.7	13.90	308.55	2,165.2	39.2	-83.0	89.9	2.00	1.91	2.54
2,200.0	13.90	308.55	2,191.7	43.3	-88.1	96.5	0.00	0.00	0.00
2,240.0	13.90	308.55	2,230.5	49.3	-95.6	106.1	0.00	0.00	0.00
2,280.0	13.90	308.55	2,269.3	55.3	-103.1	115.7	0.00	0.00	0.00
2,320.0	13.90	308.55	2,308.2	61.3	-110.7	125.3	0.00	0.00	0.00
2,360.0	13.90	308.55	2,347.0	67.3	-118.2	134.9	0.00	0.00	0.00
2,400.0	13.90	308.55	2,385.8	73.3	-125.7	144.5	0.00	0.00	0.00
2,440.0	13.90	308.55	2,424.6	79.2	-133.2	154.1	0.00	0.00	0.00
2,480.0	13.90	308.55	2,463.5	85.2	-140.7	163.7	0.00	0.00	0.00
2,520.0	13.90	308.55	2,502.3	91.2	-148.2	173.3	0.00	0.00	0.00
2,560.0	13.90	308.55	2,541.1	97.2	-155.7	182.9	0.00	0.00	0.00
2,600.0	13.90	308.55	2,580.0	103.2	-163.3	192.5	0.00	0.00	0.00
2,640.0	13.90	308.55	2,618.8	109.2	-170.8	202.1	0.00	0.00	0.00
2,680.0	13.90	308.55	2,657.6	115.2	-178.3	211.7	0.00	0.00	0.00
2,720.0	13.90	308.55	2,696.4	121.2	-185.8	221.3	0.00	0.00	0.00
2,760.0	13.90	308.55	2,735.3	127.2	-193.3	230.9	0.00	0.00	0.00
2,800.0	13.90	308.55	2,774.1	133.1	-200.8	240.6	0.00	0.00	0.00
2,840.0	13.90	308.55	2,812.9	139.1	-208.3	250.2	0.00	0.00	0.00
2,880.0	13.90	308.55	2,851.8	145.1	-215.9	259.8	0.00	0.00	0.00
2,920.0	13.90	308.55	2,890.6	151.1	-223.4	269.4	0.00	0.00	0.00
2,960.0	13.90	308.55	2,929.4	157.1	-230.9	279.0	0.00	0.00	0.00
3,000.0	13.90	308.55	2,968.2	163.1	-238.4	288.6	0.00	0.00	0.00
3,040.0	13.90	308.55	3,007.1	169.1	-245.9	298.2	0.00	0.00	0.00
3,080.0	13.90	308.55	3,045.9	175.1	-253.4	307.8	0.00	0.00	0.00
3,120.0	13.90	308.55	3,084.7	181.0	-260.9	317.4	0.00	0.00	0.00
3,160.0	13.90	308.55	3,123.6	187.0	-268.5	327.0	0.00	0.00	0.00
3,200.0	13.90	308.55	3,162.4	193.0	-276.0	336.6	0.00	0.00	0.00
3,240.0	13.90	308.55	3,201.2	199.0	-283.5	346.2	0.00	0.00	0.00
3,280.0	13.90	308.55	3,240.0	205.0	-291.0	355.8	0.00	0.00	0.00
3,320.0	13.90	308.55	3,278.9	211.0	-298.5	365.4	0.00	0.00	0.00
3,360.0	13.90	308.55	3,317.7	217.0	-306.0	375.0	0.00	0.00	0.00
3,400.0	13.90	308.55	3,356.5	223.0	-313.5	384.6	0.00	0.00	0.00
3,440.0	13.90	308.55	3,395.4	229.0	-321.1	394.2	0.00	0.00	0.00
3,480.0	13.90	308.55	3,434.2	234.9	-328.6	403.8	0.00	0.00	0.00
3,520.0	13.90	308.55	3,473.0	240.9	-336.1	413.4	0.00	0.00	0.00
3,560.0	13.90	308.55	3,511.8	246.9	-343.6	423.0	0.00	0.00	0.00
3,600.0	13.90	308.55	3,550.7	252.9	-351.1	432.6	0.00	0.00	0.00
3,640.0	13.90	308.55	3,589.5	258.9	-358.6	442.3	0.00	0.00	0.00
3,680.0	13.90	308.55	3,628.3	264.9	-366.2	451.9	0.00	0.00	0.00
3,720.0	13.90	308.55	3,667.2	270.9	-373.7	461.5	0.00	0.00	0.00
3,760.0	13.90	308.55	3,706.0	276.9	-381.2	471.1	0.00	0.00	0.00
3,800.0	13.90	308.55	3,744.8	282.8	-388.7	480.7	0.00	0.00	0.00
3,840.0	13.90	308.55	3,783.6	288.8	-396.2	490.3	0.00	0.00	0.00
3,880.0	13.90	308.55	3,822.5	294.8	-403.7	499.9	0.00	0.00	0.00
3,920.0	13.90	308.55	3,861.3	300.8	-411.2	509.5	0.00	0.00	0.00
3,960.0	13.90	308.55	3,900.1	306.8	-418.8	519.1	0.00	0.00	0.00
4,000.0	13.90	308.55	3,939.0	312.8	-426.3	528.7	0.00	0.00	0.00
4,040.0	13.90	308.55	3,977.8	318.8	-433.8	538.3	0.00	0.00	0.00
4,080.0	13.90	308.55	4,016.6	324.8	-441.3	547.9	0.00	0.00	0.00
4,120.0	13.90	308.55	4,055.4	330.8	-448.8	557.5	0.00	0.00	0.00
4,160.0	13.90	308.55	4,094.3	336.7	-456.3	567.1	0.00	0.00	0.00
4,200.0	13.90	308.55	4,133.1	342.7	-463.8	576.7	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Marley C01-30D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4620.0ft (Original Well Elev)
Project:	SEC.1-T4N-R64W	MD Reference:	WELL @ 4620.0ft (Original Well Elev)
Site:	Marley C01-30D Pad Sec.1-T4N-R64W	North Reference:	True
Well:	Marley C01-30D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Marley C01-30D Plan #1 11-18-09		

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)
4,240.0	13.90	308.55	4,171.9	348.7	-471.4	586.3	0.00	0.00	0.00
4,280.0	13.90	308.55	4,210.8	354.7	-478.9	595.9	0.00	0.00	0.00
4,320.0	13.90	308.55	4,249.6	360.7	-486.4	605.5	0.00	0.00	0.00
4,360.0	13.90	308.55	4,288.4	366.7	-493.9	615.1	0.00	0.00	0.00
4,384.1	13.90	308.55	4,311.8	370.3	-498.4	620.9	0.00	0.00	0.00
4,400.0	13.58	308.55	4,327.3	372.6	-501.4	624.7	2.00	-2.00	0.00
4,440.0	12.78	308.55	4,366.2	378.3	-508.5	633.8	2.00	-2.00	0.00
4,480.0	11.98	308.55	4,405.3	383.7	-515.2	642.4	2.00	-2.00	0.00
4,520.0	11.18	308.55	4,444.5	388.7	-521.5	650.4	2.00	-2.00	0.00
4,560.0	10.38	308.55	4,483.8	393.3	-527.4	657.9	2.00	-2.00	0.00
4,600.0	9.58	308.55	4,523.1	397.7	-532.8	664.8	2.00	-2.00	0.00
4,640.0	8.78	308.55	4,562.6	401.6	-537.8	671.2	2.00	-2.00	0.00
4,680.0	7.98	308.55	4,602.2	405.3	-542.3	677.0	2.00	-2.00	0.00
4,720.0	7.18	308.55	4,641.9	408.6	-546.5	682.3	2.00	-2.00	0.00
4,760.0	6.38	308.55	4,681.6	411.5	-550.2	687.0	2.00	-2.00	0.00
4,800.0	5.58	308.55	4,721.4	414.1	-553.4	691.2	2.00	-2.00	0.00
4,840.0	4.78	308.55	4,761.2	416.4	-556.2	694.8	2.00	-2.00	0.00
4,880.0	3.98	308.55	4,801.1	418.3	-558.6	697.9	2.00	-2.00	0.00
4,920.0	3.18	308.55	4,841.0	419.8	-560.6	700.4	2.00	-2.00	0.00
4,960.0	2.38	308.55	4,881.0	421.0	-562.1	702.3	2.00	-2.00	0.00
5,000.0	1.58	308.55	4,920.9	421.9	-563.2	703.7	2.00	-2.00	0.00
5,040.0	0.78	308.55	4,960.9	422.4	-563.8	704.5	2.00	-2.00	0.00
5,079.1	0.00	0.00	5,000.0	422.6	-564.0	704.8	2.00	-2.00	0.00
TARGET BHL 85'FNL, 85'FWL									
5,080.0	0.00	0.00	5,000.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,120.0	0.00	0.00	5,040.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,160.0	0.00	0.00	5,080.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,200.0	0.00	0.00	5,120.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,240.0	0.00	0.00	5,160.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,280.0	0.00	0.00	5,200.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,320.0	0.00	0.00	5,240.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,360.0	0.00	0.00	5,280.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,400.0	0.00	0.00	5,320.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,440.0	0.00	0.00	5,360.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,480.0	0.00	0.00	5,400.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,520.0	0.00	0.00	5,440.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,560.0	0.00	0.00	5,480.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,600.0	0.00	0.00	5,520.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,640.0	0.00	0.00	5,560.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,680.0	0.00	0.00	5,600.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,720.0	0.00	0.00	5,640.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,760.0	0.00	0.00	5,680.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,800.0	0.00	0.00	5,720.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,840.0	0.00	0.00	5,760.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,880.0	0.00	0.00	5,800.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,920.0	0.00	0.00	5,840.9	422.6	-564.0	704.8	0.00	0.00	0.00
5,960.0	0.00	0.00	5,880.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,000.0	0.00	0.00	5,920.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,040.0	0.00	0.00	5,960.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,080.0	0.00	0.00	6,000.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,120.0	0.00	0.00	6,040.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,160.0	0.00	0.00	6,080.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,200.0	0.00	0.00	6,120.9	422.6	-564.0	704.8	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Marley C01-30D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4620.0ft (Original Well Elev)
Project:	SEC.1-T4N-R64W	MD Reference:	WELL @ 4620.0ft (Original Well Elev)
Site:	Marley C01-30D Pad Sec.1-T4N-R64W	North Reference:	True
Well:	Marley C01-30D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Marley C01-30D Plan #1 11-18-09		

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)
6,240.0	0.00	0.00	6,160.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,280.0	0.00	0.00	6,200.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,320.0	0.00	0.00	6,240.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,360.0	0.00	0.00	6,280.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,400.0	0.00	0.00	6,320.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,440.0	0.00	0.00	6,360.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,480.0	0.00	0.00	6,400.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,483.1	0.00	0.00	6,404.0	422.6	-564.0	704.8	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 85'FNL, 85'FWL									
6,520.0	0.00	0.00	6,440.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,560.0	0.00	0.00	6,480.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,600.0	0.00	0.00	6,520.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,640.0	0.00	0.00	6,560.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,680.0	0.00	0.00	6,600.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,720.0	0.00	0.00	6,640.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,760.0	0.00	0.00	6,680.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,779.1	0.00	0.00	6,700.0	422.6	-564.0	704.8	0.00	0.00	0.00
CODELL									
6,800.0	0.00	0.00	6,720.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,840.0	0.00	0.00	6,760.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,880.0	0.00	0.00	6,800.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,920.0	0.00	0.00	6,840.9	422.6	-564.0	704.8	0.00	0.00	0.00
6,929.1	0.00	0.00	6,850.0	422.6	-564.0	704.8	0.00	0.00	0.00
HARDLINES 85'N & W 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 CIRCLE 85'	0.00	0.00	6,404.0	422.6	-564.0	1,371,317.10	3,276,533.14	40° 20' 54.312 N	104° 30' 28.200 W
- plan hits target center									
- Circle (radius 75.0)									
HARDLINES 85'N & v	0.00	0.00	6,850.0	507.6	-649.0	1,371,401.14	3,276,447.19	40° 20' 55.152 N	104° 30' 29.298 W
- plan misses target center by 120.2ft at 6929.1ft MD (6850.0 TVD, 422.6 N, -564.0 E)									
- Polygon									
Point 1			6,850.0	0.0	0.0	1,371,401.14	3,276,447.19		
Point 2			6,850.0	0.0	200.0	1,371,403.38	3,276,647.17		
Point 3			6,850.0	0.0	0.0	1,371,401.14	3,276,447.19		
Point 4			6,850.0	-200.0	0.0	1,371,201.16	3,276,449.43		
TARGET BHL 85'FNL	0.00	0.00	5,000.0	422.6	-564.0	1,371,317.07	3,276,533.10	40° 20' 54.312 N	104° 30' 28.201 W
- plan hits target center									
- Point									

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,483.1	6,404.0	NIOBRARA		0.00	
6,779.1	6,700.0	CODELL		0.00	

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.1-T4N-R64W
Site: Marley C01-30D Pad Sec.1-T4N-R64W
Well: Marley C01-30D
Wellbore: Wellbore #1
Design: Noble Marley C01-30D Plan #1 11-18-09

Local Co-ordinate Reference: Well Marley C01-30D
TVD Reference: WELL @ 4620.0ft (Original Well Elev)
MD Reference: WELL @ 4620.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature