

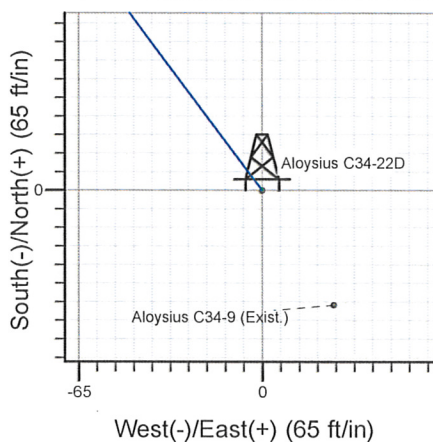
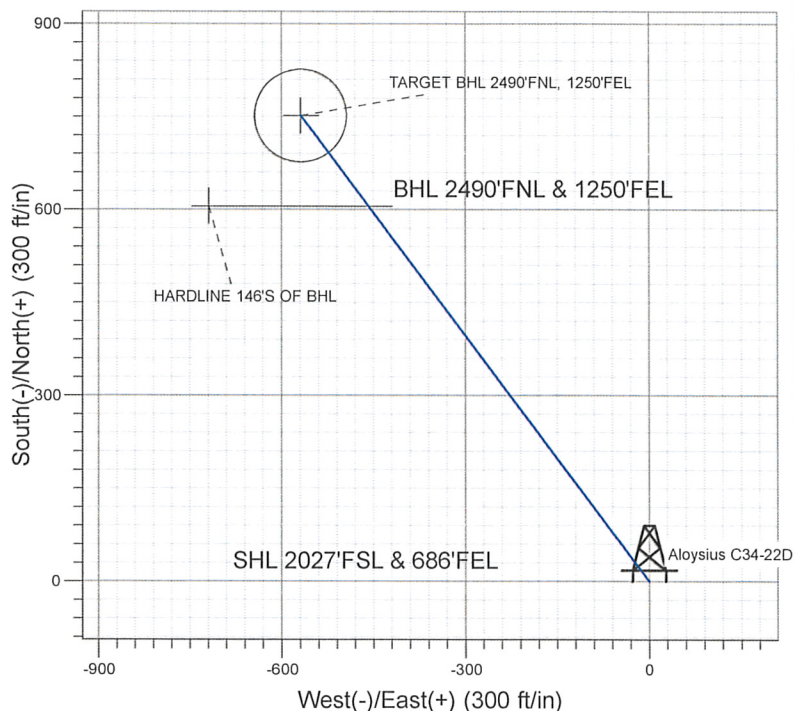
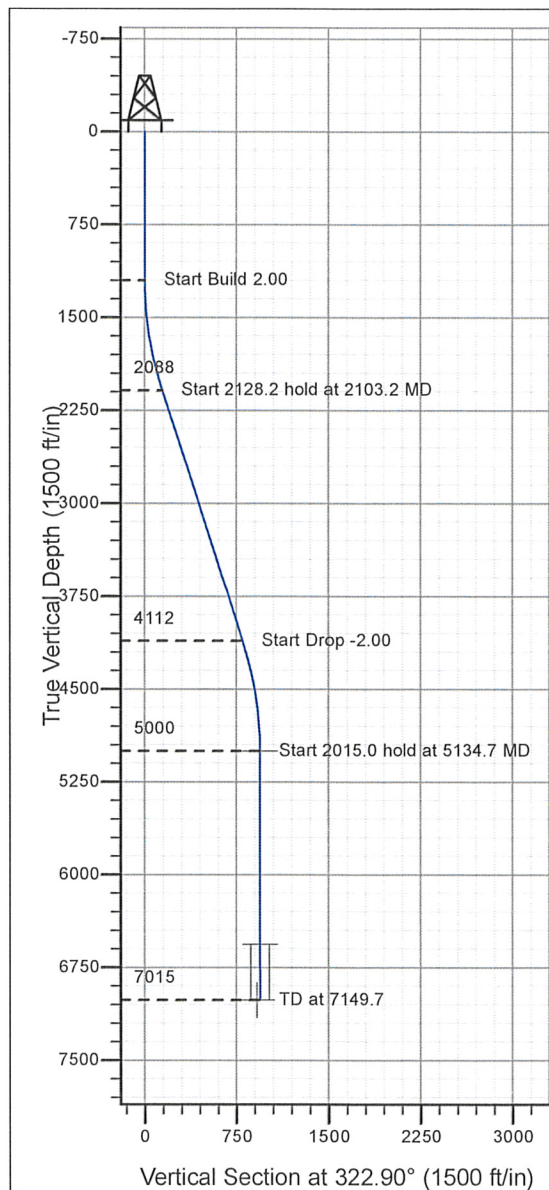
## Well Name: Aloysius C34-22D

Surface Location: Aloysius C34-22D Pad Sec.34-T4N-R64W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4692.0

+N/-S+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1341706.32	3270653.25	40° 16' 2.352 N 104° 31' 48.324 W	
		Original Well Elev	WELL @ 4705.0ft	(Original Well Elev)	

## NOBLE ENERGY INC WELD COUNTY CO



Aloysius C34-22D Pad Sec.34-T4N-R64W  
Aloysius C34-22D  
Noble Aloysius C34-22D Plan #1 (12-2-09)  
16:54, December 02 2009

Azimuths to True North  
Magnetic North:  $8.90^\circ$

Magnetic Field  
Strength: 53268.9snT  
Dip Angle: 67.04°  
Date: 12/2/2009  
Model: IGRF200510

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 2490'FNL, 1250'FEL	5000.0	751.6	-568.4	40° 16' 9.779 N	104° 31' 55.657 W	Point
TARGET CIRCLE 2490'FNL, 1250'FEL	6565.0	751.6	-568.4	40° 16' 9.779 N	104° 31' 55.657 W	Circle (Radius: 75.0)
HARDLINE 146'S OF BHL	7015.0	605.6	-718.4	40° 16' 8.336 N	104° 31' 57.592 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	1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	
3	2103.2	18.06	322.90	2088.3	112.6	-85.2	2.00	322.90	141.2	
4	4231.4	18.06	322.90	4111.7	639.0	-483.3	0.00	0.00	801.2	
5	5134.7	0.00	0.00	5000.0	751.6	-568.4	2.00	180.00	942.4	TARGET BHL 2490'FNL, 1250'FEL
6	7149.7	0.00	0.00	7015.0	751.6	-568.4	0.00	0.00	942.4	



## **Directional**

### **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.34-T4N-R64W**

**Aloysius C34-22D Pad Sec.34-T4N-R64W**

**Aloysius C34-22D**

**Wellbore #1**

**Plan: Noble Aloysius C34-22D Plan #1 (12-2-09)**

### **Standard Planning Report**

**02 December, 2009**





Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Aloysius C34-22D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4705.0ft (Original Well Elev)
Project:	SEC.34-T4N-R64W	MD Reference:	WELL @ 4705.0ft (Original Well Elev)
Site:	Aloysius C34-22D Pad Sec.34-T4N-R64W	North Reference:	True
Well:	Aloysius C34-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Aloysius C34-22D Plan #1 (12-2-09)		

Project	SEC.34-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	Aloysius C34-22D Pad Sec.34-T4N-R64W		
Site Position:		Northing:	1,341,706.33 ft
From:	Lat/Long	Easting:	3,270,653.25 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40° 16' 2.352 N
		Longitude:	104° 31' 48.324 W
		Grid Convergence:	0.63 °

Well	Aloysius C34-22D		
Well Position	+N/-S	0.0 ft	Northing:
	+E/-W	0.0 ft	Easting:
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40° 16' 2.352 N
		Longitude:	104° 31' 48.324 W
		Ground Level:	4,692.0 ft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF200510	12/2/2009	8.90
			Dip Angle (°)
			67.04
			Field Strength (nT)
			53,269

Design	Noble Aloysius C34-22D Plan #1 (12-2-09)		
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Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	322.90

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	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,103.2	18.06	322.90	2,088.3	112.6	-85.2	2.00	2.00	0.00	322.90	
4,231.4	18.06	322.90	4,111.7	639.0	-483.3	0.00	0.00	0.00	0.00	
5,134.7	0.00	0.00	5,000.0	751.6	-568.4	2.00	-2.00	0.00	180.00	TARGET BHL 249C
7,149.7	0.00	0.00	7,015.0	751.6	-568.4	0.00	0.00	0.00	0.00	

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Aloysius C34-22D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4705.0ft (Original Well Elev)
Project:	SEC.34-T4N-R64W	MD Reference:	WELL @ 4705.0ft (Original Well Elev)
Site:	Aloysius C34-22D Pad Sec.34-T4N-R64W	North Reference:	True
Well:	Aloysius C34-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Aloysius C34-22D Plan #1 (12-2-09)		

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	0.80	322.90	1,240.0	0.2	-0.2	0.3	2.00	2.00	0.00
1,280.0	1.60	322.90	1,280.0	0.9	-0.7	1.1	2.00	2.00	0.00
1,320.0	2.40	322.90	1,320.0	2.0	-1.5	2.5	2.00	2.00	0.00
1,360.0	3.20	322.90	1,359.9	3.6	-2.7	4.5	2.00	2.00	0.00
1,400.0	4.00	322.90	1,399.8	5.6	-4.2	7.0	2.00	2.00	0.00
1,440.0	4.80	322.90	1,439.7	8.0	-6.1	10.0	2.00	2.00	0.00
1,480.0	5.60	322.90	1,479.6	10.9	-8.2	13.7	2.00	2.00	0.00
1,520.0	6.40	322.90	1,519.3	14.2	-10.8	17.9	2.00	2.00	0.00
1,560.0	7.20	322.90	1,559.1	18.0	-13.6	22.6	2.00	2.00	0.00
1,600.0	8.00	322.90	1,598.7	22.2	-16.8	27.9	2.00	2.00	0.00
1,640.0	8.80	322.90	1,638.3	26.9	-20.3	33.7	2.00	2.00	0.00
1,680.0	9.60	322.90	1,677.8	32.0	-24.2	40.1	2.00	2.00	0.00
1,720.0	10.40	322.90	1,717.1	37.5	-28.4	47.1	2.00	2.00	0.00
1,760.0	11.20	322.90	1,756.4	43.5	-32.9	54.6	2.00	2.00	0.00
1,800.0	12.00	322.90	1,795.6	49.9	-37.8	62.6	2.00	2.00	0.00
1,840.0	12.80	322.90	1,834.7	56.8	-42.9	71.2	2.00	2.00	0.00
1,880.0	13.60	322.90	1,873.6	64.1	-48.5	80.3	2.00	2.00	0.00
1,920.0	14.40	322.90	1,912.4	71.8	-54.3	90.0	2.00	2.00	0.00
1,960.0	15.20	322.90	1,951.1	79.9	-60.5	100.2	2.00	2.00	0.00
2,000.0	16.00	322.90	1,989.6	88.5	-66.9	111.0	2.00	2.00	0.00
2,040.0	16.80	322.90	2,028.0	97.5	-73.8	122.3	2.00	2.00	0.00
2,080.0	17.60	322.90	2,066.2	107.0	-80.9	134.1	2.00	2.00	0.00
2,103.2	18.06	322.90	2,088.3	112.6	-85.2	141.2	2.00	2.00	0.00



Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Aloysius C34-22D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4705.0ft (Original Well Elev)
Project:	SEC.34-T4N-R64W	MD Reference:	WELL @ 4705.0ft (Original Well Elev)
Site:	Aloysius C34-22D Pad Sec.34-T4N-R64W	North Reference:	True
Well:	Aloysius C34-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Aloysius C34-22D Plan #1 (12-2-09)		

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	18.06	322.90	2,104.3	116.8	-88.3	146.4	0.00	0.00	0.00
2,160.0	18.06	322.90	2,142.3	126.7	-95.8	158.8	0.00	0.00	0.00
2,200.0	18.06	322.90	2,180.3	136.6	-103.3	171.2	0.00	0.00	0.00
2,240.0	18.06	322.90	2,218.4	146.5	-110.8	183.6	0.00	0.00	0.00
2,280.0	18.06	322.90	2,256.4	156.3	-118.2	196.0	0.00	0.00	0.00
2,320.0	18.06	322.90	2,294.4	166.2	-125.7	208.4	0.00	0.00	0.00
2,360.0	18.06	322.90	2,332.5	176.1	-133.2	220.8	0.00	0.00	0.00
2,400.0	18.06	322.90	2,370.5	186.0	-140.7	233.2	0.00	0.00	0.00
2,440.0	18.06	322.90	2,408.5	195.9	-148.2	245.6	0.00	0.00	0.00
2,480.0	18.06	322.90	2,446.5	205.8	-155.7	258.0	0.00	0.00	0.00
2,520.0	18.06	322.90	2,484.6	215.7	-163.1	270.4	0.00	0.00	0.00
2,560.0	18.06	322.90	2,522.6	225.6	-170.6	282.9	0.00	0.00	0.00
2,600.0	18.06	322.90	2,560.6	235.5	-178.1	295.3	0.00	0.00	0.00
2,640.0	18.06	322.90	2,598.7	245.4	-185.6	307.7	0.00	0.00	0.00
2,680.0	18.06	322.90	2,636.7	255.3	-193.1	320.1	0.00	0.00	0.00
2,720.0	18.06	322.90	2,674.7	265.2	-200.5	332.5	0.00	0.00	0.00
2,760.0	18.06	322.90	2,712.7	275.1	-208.0	344.9	0.00	0.00	0.00
2,800.0	18.06	322.90	2,750.8	285.0	-215.5	357.3	0.00	0.00	0.00
2,840.0	18.06	322.90	2,788.8	294.8	-223.0	369.7	0.00	0.00	0.00
2,880.0	18.06	322.90	2,826.8	304.7	-230.5	382.1	0.00	0.00	0.00
2,920.0	18.06	322.90	2,864.8	314.6	-238.0	394.5	0.00	0.00	0.00
2,960.0	18.06	322.90	2,902.9	324.5	-245.4	406.9	0.00	0.00	0.00
3,000.0	18.06	322.90	2,940.9	334.4	-252.9	419.3	0.00	0.00	0.00
3,040.0	18.06	322.90	2,978.9	344.3	-260.4	431.7	0.00	0.00	0.00
3,080.0	18.06	322.90	3,017.0	354.2	-267.9	444.1	0.00	0.00	0.00
3,120.0	18.06	322.90	3,055.0	364.1	-275.4	456.5	0.00	0.00	0.00
3,160.0	18.06	322.90	3,093.0	374.0	-282.8	468.9	0.00	0.00	0.00
3,200.0	18.06	322.90	3,131.0	383.9	-290.3	481.3	0.00	0.00	0.00
3,240.0	18.06	322.90	3,169.1	393.8	-297.8	493.7	0.00	0.00	0.00
3,280.0	18.06	322.90	3,207.1	403.7	-305.3	506.1	0.00	0.00	0.00
3,320.0	18.06	322.90	3,245.1	413.6	-312.8	518.5	0.00	0.00	0.00
3,360.0	18.06	322.90	3,283.2	423.5	-320.3	530.9	0.00	0.00	0.00
3,400.0	18.06	322.90	3,321.2	433.4	-327.7	543.3	0.00	0.00	0.00
3,440.0	18.06	322.90	3,359.2	443.2	-335.2	555.7	0.00	0.00	0.00
3,480.0	18.06	322.90	3,397.2	453.1	-342.7	568.1	0.00	0.00	0.00
3,520.0	18.06	322.90	3,435.3	463.0	-350.2	580.5	0.00	0.00	0.00
3,560.0	18.06	322.90	3,473.3	472.9	-357.7	592.9	0.00	0.00	0.00
3,600.0	18.06	322.90	3,511.3	482.8	-365.2	605.3	0.00	0.00	0.00
3,640.0	18.06	322.90	3,549.4	492.7	-372.6	617.8	0.00	0.00	0.00
3,680.0	18.06	322.90	3,587.4	502.6	-380.1	630.2	0.00	0.00	0.00
3,720.0	18.06	322.90	3,625.4	512.5	-387.6	642.6	0.00	0.00	0.00
3,760.0	18.06	322.90	3,663.4	522.4	-395.1	655.0	0.00	0.00	0.00
3,800.0	18.06	322.90	3,701.5	532.3	-402.6	667.4	0.00	0.00	0.00
3,840.0	18.06	322.90	3,739.5	542.2	-410.0	679.8	0.00	0.00	0.00
3,880.0	18.06	322.90	3,777.5	552.1	-417.5	692.2	0.00	0.00	0.00
3,920.0	18.06	322.90	3,815.6	562.0	-425.0	704.6	0.00	0.00	0.00
3,960.0	18.06	322.90	3,853.6	571.9	-432.5	717.0	0.00	0.00	0.00
4,000.0	18.06	322.90	3,891.6	581.7	-440.0	729.4	0.00	0.00	0.00
4,040.0	18.06	322.90	3,929.6	591.6	-447.5	741.8	0.00	0.00	0.00
4,080.0	18.06	322.90	3,967.7	601.5	-454.9	754.2	0.00	0.00	0.00
4,120.0	18.06	322.90	4,005.7	611.4	-462.4	766.6	0.00	0.00	0.00
4,160.0	18.06	322.90	4,043.7	621.3	-469.9	779.0	0.00	0.00	0.00
4,200.0	18.06	322.90	4,081.8	631.2	-477.4	791.4	0.00	0.00	0.00
4,231.4	18.06	322.90	4,111.7	639.0	-483.3	801.2	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Aloysius C34-22D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4705.0ft (Original Well Elev)
Project:	SEC.34-T4N-R64W	MD Reference:	WELL @ 4705.0ft (Original Well Elev)
Site:	Aloysius C34-22D Pad Sec.34-T4N-R64W	North Reference:	True
Well:	Aloysius C34-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Aloysius C34-22D Plan #1 (12-2-09)		

## 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	17.89	322.90	4,119.8	641.1	-484.9	803.8	2.00	-2.00	0.00
4,280.0	17.09	322.90	4,157.9	650.7	-492.1	815.8	2.00	-2.00	0.00
4,320.0	16.29	322.90	4,196.2	659.8	-499.0	827.3	2.00	-2.00	0.00
4,360.0	15.49	322.90	4,234.7	668.6	-505.6	838.3	2.00	-2.00	0.00
4,400.0	14.69	322.90	4,273.3	676.9	-511.9	848.7	2.00	-2.00	0.00
4,440.0	13.89	322.90	4,312.1	684.8	-517.9	858.6	2.00	-2.00	0.00
4,480.0	13.09	322.90	4,351.0	692.2	-523.5	867.9	2.00	-2.00	0.00
4,520.0	12.29	322.90	4,390.0	699.2	-528.8	876.7	2.00	-2.00	0.00
4,560.0	11.49	322.90	4,429.2	705.8	-533.8	884.9	2.00	-2.00	0.00
4,600.0	10.69	322.90	4,468.4	711.9	-538.4	892.6	2.00	-2.00	0.00
4,640.0	9.89	322.90	4,507.8	717.6	-542.7	899.8	2.00	-2.00	0.00
4,680.0	9.09	322.90	4,547.2	722.9	-546.7	906.4	2.00	-2.00	0.00
4,720.0	8.29	322.90	4,586.8	727.7	-550.4	912.4	2.00	-2.00	0.00
4,760.0	7.49	322.90	4,626.4	732.1	-553.7	917.9	2.00	-2.00	0.00
4,800.0	6.69	322.90	4,666.1	736.0	-556.7	922.8	2.00	-2.00	0.00
4,840.0	5.89	322.90	4,705.8	739.5	-559.3	927.2	2.00	-2.00	0.00
4,880.0	5.09	322.90	4,745.6	742.6	-561.6	931.1	2.00	-2.00	0.00
4,920.0	4.29	322.90	4,785.5	745.2	-563.6	934.3	2.00	-2.00	0.00
4,960.0	3.49	322.90	4,825.4	747.4	-565.2	937.0	2.00	-2.00	0.00
5,000.0	2.69	322.90	4,865.4	749.1	-566.5	939.2	2.00	-2.00	0.00
5,040.0	1.89	322.90	4,905.3	750.4	-567.5	940.8	2.00	-2.00	0.00
5,080.0	1.09	322.90	4,945.3	751.2	-568.1	941.8	2.00	-2.00	0.00
5,120.0	0.29	322.90	4,985.3	751.6	-568.4	942.3	2.00	-2.00	0.00
5,134.7	0.00	0.00	5,000.0	751.6	-568.4	942.4	2.00	-2.00	0.00
TARGET BHL 2490'FNL, 1250'FEL									
5,160.0	0.00	0.00	5,025.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,200.0	0.00	0.00	5,065.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,240.0	0.00	0.00	5,105.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,280.0	0.00	0.00	5,145.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,320.0	0.00	0.00	5,185.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,360.0	0.00	0.00	5,225.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,400.0	0.00	0.00	5,265.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,440.0	0.00	0.00	5,305.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,480.0	0.00	0.00	5,345.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,520.0	0.00	0.00	5,385.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,560.0	0.00	0.00	5,425.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,600.0	0.00	0.00	5,465.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,640.0	0.00	0.00	5,505.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,680.0	0.00	0.00	5,545.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,720.0	0.00	0.00	5,585.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,760.0	0.00	0.00	5,625.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,800.0	0.00	0.00	5,665.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,840.0	0.00	0.00	5,705.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,880.0	0.00	0.00	5,745.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,920.0	0.00	0.00	5,785.3	751.6	-568.4	942.4	0.00	0.00	0.00
5,960.0	0.00	0.00	5,825.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,000.0	0.00	0.00	5,865.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,040.0	0.00	0.00	5,905.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,080.0	0.00	0.00	5,945.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,120.0	0.00	0.00	5,985.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,160.0	0.00	0.00	6,025.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,200.0	0.00	0.00	6,065.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,240.0	0.00	0.00	6,105.3	751.6	-568.4	942.4	0.00	0.00	0.00



Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Aloysius C34-22D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4705.0ft (Original Well Elev)
Project:	SEC.34-T4N-R64W	MD Reference:	WELL @ 4705.0ft (Original Well Elev)
Site:	Aloysius C34-22D Pad Sec.34-T4N-R64W	North Reference:	True
Well:	Aloysius C34-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Aloysius C34-22D Plan #1 (12-2-09)		

**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	6,145.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,320.0	0.00	0.00	6,185.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,360.0	0.00	0.00	6,225.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,400.0	0.00	0.00	6,265.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,440.0	0.00	0.00	6,305.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,480.0	0.00	0.00	6,345.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,520.0	0.00	0.00	6,385.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,560.0	0.00	0.00	6,425.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,600.0	0.00	0.00	6,465.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,640.0	0.00	0.00	6,505.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,680.0	0.00	0.00	6,545.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,699.7	0.00	0.00	6,565.0	751.6	-568.4	942.4	0.00	0.00	0.00
<b>NIOBRARA - TARGET CIRCLE 2490'FNL, 1250'FEL</b>									
6,720.0	0.00	0.00	6,585.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,760.0	0.00	0.00	6,625.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,800.0	0.00	0.00	6,665.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,840.0	0.00	0.00	6,705.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,880.0	0.00	0.00	6,745.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,920.0	0.00	0.00	6,785.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,960.0	0.00	0.00	6,825.3	751.6	-568.4	942.4	0.00	0.00	0.00
6,999.7	0.00	0.00	6,865.0	751.6	-568.4	942.4	0.00	0.00	0.00
<b>CODELL</b>									
7,000.0	0.00	0.00	6,865.3	751.6	-568.4	942.4	0.00	0.00	0.00
7,040.0	0.00	0.00	6,905.3	751.6	-568.4	942.4	0.00	0.00	0.00
7,080.0	0.00	0.00	6,945.3	751.6	-568.4	942.4	0.00	0.00	0.00
7,120.0	0.00	0.00	6,985.3	751.6	-568.4	942.4	0.00	0.00	0.00
7,149.7	0.00	0.00	7,015.0	751.6	-568.4	942.4	0.00	0.00	0.00
<b>HARDLINE 146'S OF BHL</b>									

**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 2490'F	0.00	0.00	5,000.0	751.6	-568.4	1,342,451.65	3,270,076.65	40° 16' 9.779 N	104° 31' 55.657 W
- plan hits target center									
- Point									
TARGET CIRCLE 2490'F	0.00	0.00	6,565.0	751.6	-568.4	1,342,451.63	3,270,076.69	40° 16' 9.779 N	104° 31' 55.657 W
- plan hits target center									
- Circle (radius 75.0)									
HARDLINE 146'S OF BHL	0.00	0.00	7,015.0	605.6	-718.4	1,342,304.00	3,269,928.31	40° 16' 8.336 N	104° 31' 57.592 W
- plan misses target center by 209.3ft at 7149.7ft MD (7015.0 TVD, 751.6 N, -568.4 E)									
- Polygon									
Point 1			7,015.0	0.0	0.0	1,342,304.00	3,269,928.31		
Point 2			7,015.0	0.0	300.0	1,342,307.29	3,270,228.28		

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Aloysius C34-22D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4705.0ft (Original Well Elev)
Project:	SEC.34-T4N-R64W	MD Reference:	WELL @ 4705.0ft (Original Well Elev)
Site:	Aloysius C34-22D Pad Sec.34-T4N-R64W	North Reference:	True
Well:	Aloysius C34-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Aloysius C34-22D Plan #1 (12-2-09)		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,699.7	6,565.0	NIOBRARA		0.00	
6,999.7	6,865.0	CODELL		0.00	