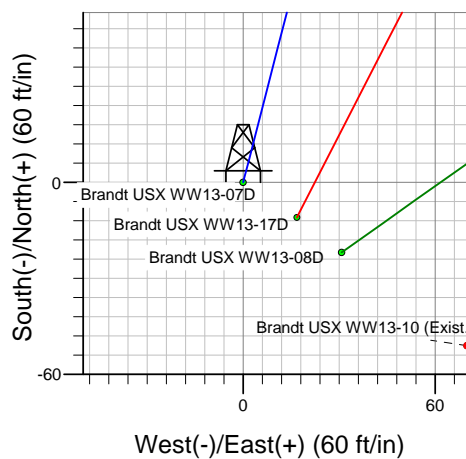
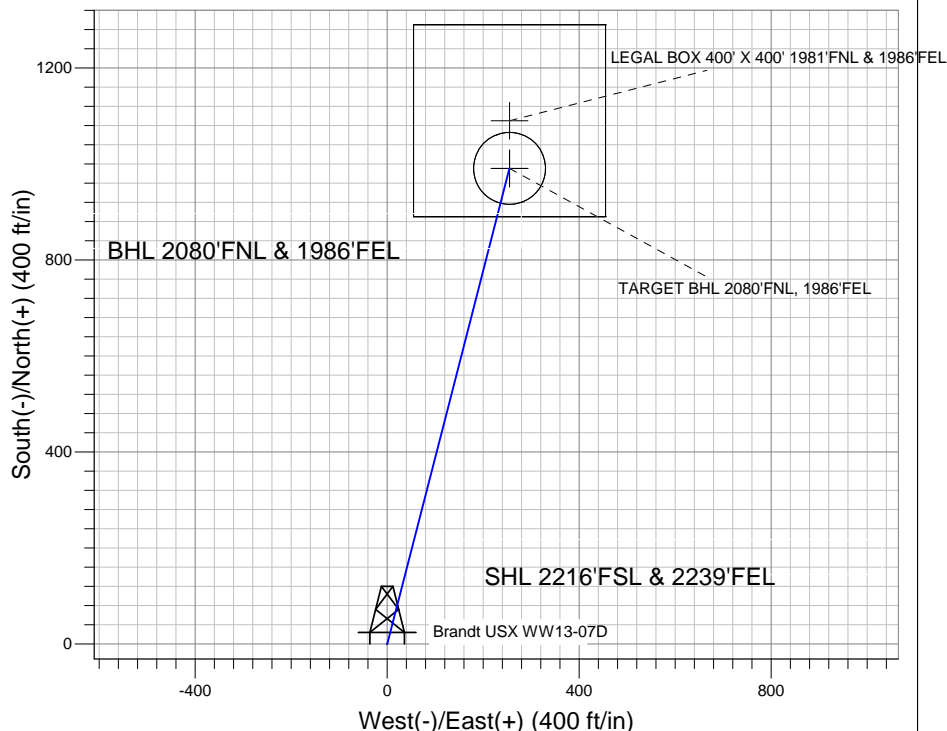
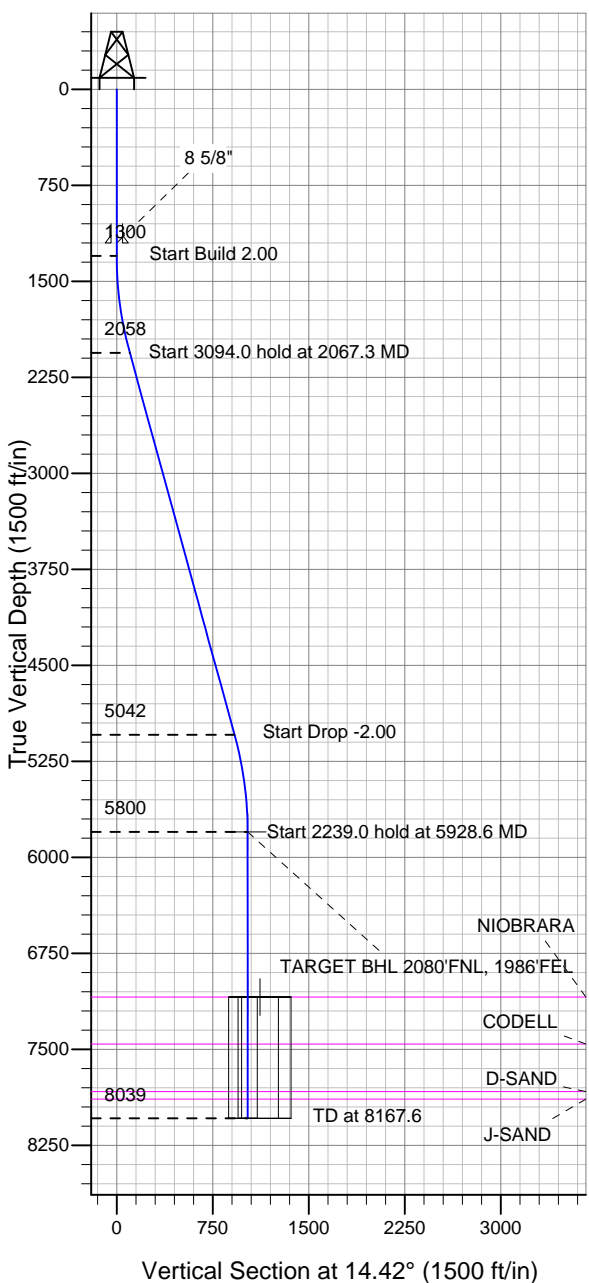


Well Name: Brandt USX WW13-07D

Surface Location: Brandt USX WW13-07D Pad Sec.13-T1N-R66W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 5048.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1262058.40 3217231.01 40.050130 -104.724020
 Original Well Elev WELL @ 5061.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Brandt USX WW13-07D Pad Sec.13-T1N-R66W
 Brandt USX WW13-07D
 Noble Brandt USX WW13-07D Plan #3 (7-12-11)
 14:26, July 12 2011



Azimuths to True North
 Magnetic North: 8.80°

Magnetic Field
 Strength: 52941.9snT
 Dip Angle: 66.77°
 Date: 7/12/2011
 Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 2080'FNL, 1986'FEL	5800.0	990.9	254.8	40.052850	-104.723110	Point
LEGAL BOX 400' X 400' 1981'FNL & 1986'FEL	7090.0	1089.9	254.8	40.053122	-104.723110	Rectangle (Sides: L400.0 W400.0)
TARGET CIRCLE 2080'FNL & 1986'FEL	7090.0	990.9	254.8	40.052850	-104.723110	Circle (Radius: 75.0)

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	1300.0	0.00	0.00	1300.0	0.0	0.0	0.00	0.00	0.0	
3	2067.3	15.35	14.42	2058.2	98.9	25.4	2.00	14.42	102.1	
4	5161.3	15.35	14.42	5041.8	892.0	229.3	0.00	0.00	921.0	
5	5928.6	0.00	0.00	5800.0	990.9	254.8	2.00	180.00	1023.1	TARGET BHL 2080'FNL, 1986'FEL
6	8167.6	0.00	0.00	8039.0	990.9	254.8	0.00	0.00	1023.1	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.13-T1N-R66W

Brandt USX WW13-07D Pad Sec.13-T1N-R66W

Brandt USX WW13-07D

Wellbore #1

Plan: Noble Brandt USX WW13-07D Plan #3 (7-12-11)

Standard Planning Report

12 July, 2011



Database:	Landmark	Local Co-ordinate Reference:	Well Brandt USX WW13-07D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 5061.0ft (Original Well Elev)
Project:	SEC.13-T1N-R66W	MD Reference:	WELL @ 5061.0ft (Original Well Elev)
Site:	Brandt USX WW13-07D Pad Sec.13-T1N-R66W	North Reference:	True
Well:	Brandt USX WW13-07D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Brandt USX WW13-07D Plan #3 (7-12-1		

Project	SEC.13-T1N-R66W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site						Brandt USX WW13-07D Pad Sec.13-T1N-R66W											
Site Position:						Northing:			1,262,058.41 ft			Latitude:			40.050130		
From:			Lat/Long			Easting:			3,217,231.01 ft			Longitude:			-104.724020		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.50 °		

Well	Brandt USX WW13-07D					
Well Position	+N/-S	0.0 ft	Northing:	1,262,058.40 ft	Latitude:	40.050130
	+E/-W	0.0 ft	Easting:	3,217,231.01 ft	Longitude:	-104.724020
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,048.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/12/2011	8.80	66.77	52,942

Design	Noble Brandt USX WW13-07D Plan #3 (7-12-11)			
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	14.42

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	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,067.3	15.35	14.42	2,058.2	98.9	25.4	2.00	2.00	0.00	14.42	
5,161.3	15.35	14.42	5,041.8	892.0	229.3	0.00	0.00	0.00	0.00	
5,928.6	0.00	0.00	5,800.0	990.9	254.8	2.00	-2.00	0.00	180.00	TARGET BHL 208C
8,167.6	0.00	0.00	8,039.0	990.9	254.8	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Brandt USX WW13-07D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 5061.0ft (Original Well Elev)
Project:	SEC.13-T1N-R66W	MD Reference:	WELL @ 5061.0ft (Original Well Elev)
Site:	Brandt USX WW13-07D Pad Sec.13-T1N-R66W	North Reference:	True
Well:	Brandt USX WW13-07D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Brandt USX WW13-07D Plan #3 (7-12-1		

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
8 5/8"									
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
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,320.0	0.40	14.42	1,320.0	0.1	0.0	0.1	2.00	2.00	0.00
1,360.0	1.20	14.42	1,360.0	0.6	0.2	0.6	2.00	2.00	0.00
1,400.0	2.00	14.42	1,400.0	1.7	0.4	1.7	2.00	2.00	0.00
1,440.0	2.80	14.42	1,439.9	3.3	0.9	3.4	2.00	2.00	0.00
1,480.0	3.60	14.42	1,479.9	5.5	1.4	5.7	2.00	2.00	0.00
1,520.0	4.40	14.42	1,519.8	8.2	2.1	8.4	2.00	2.00	0.00
1,560.0	5.20	14.42	1,559.6	11.4	2.9	11.8	2.00	2.00	0.00
1,600.0	6.00	14.42	1,599.5	15.2	3.9	15.7	2.00	2.00	0.00
1,640.0	6.80	14.42	1,639.2	19.5	5.0	20.2	2.00	2.00	0.00
1,680.0	7.60	14.42	1,678.9	24.4	6.3	25.2	2.00	2.00	0.00
1,720.0	8.40	14.42	1,718.5	29.8	7.7	30.7	2.00	2.00	0.00
1,760.0	9.20	14.42	1,758.0	35.7	9.2	36.9	2.00	2.00	0.00
1,800.0	10.00	14.42	1,797.5	42.2	10.8	43.5	2.00	2.00	0.00
1,840.0	10.80	14.42	1,836.8	49.1	12.6	50.7	2.00	2.00	0.00
1,880.0	11.60	14.42	1,876.0	56.7	14.6	58.5	2.00	2.00	0.00
1,920.0	12.40	14.42	1,915.2	64.7	16.6	66.8	2.00	2.00	0.00
1,960.0	13.20	14.42	1,954.2	73.3	18.8	75.7	2.00	2.00	0.00
2,000.0	14.00	14.42	1,993.1	82.4	21.2	85.1	2.00	2.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Brandt USX WW13-07D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 5061.0ft (Original Well Elev)
Project:	SEC.13-T1N-R66W	MD Reference:	WELL @ 5061.0ft (Original Well Elev)
Site:	Brandt USX WW13-07D Pad Sec.13-T1N-R66W	North Reference:	True
Well:	Brandt USX WW13-07D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Brandt USX WW13-07D Plan #3 (7-12-1		

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)	
2,040.0	14.80	14.42	2,031.8	92.1	23.7	95.0	2.00	2.00	0.00	
2,067.3	15.35	14.42	2,058.2	98.9	25.4	102.1	2.00	2.00	0.00	
2,080.0	15.35	14.42	2,070.4	102.2	26.3	105.5	0.00	0.00	0.00	
2,120.0	15.35	14.42	2,109.0	112.4	28.9	116.1	0.00	0.00	0.00	
2,160.0	15.35	14.42	2,147.6	122.7	31.5	126.7	0.00	0.00	0.00	
2,200.0	15.35	14.42	2,186.1	132.9	34.2	137.3	0.00	0.00	0.00	
2,240.0	15.35	14.42	2,224.7	143.2	36.8	147.8	0.00	0.00	0.00	
2,280.0	15.35	14.42	2,263.3	153.4	39.4	158.4	0.00	0.00	0.00	
2,320.0	15.35	14.42	2,301.8	163.7	42.1	169.0	0.00	0.00	0.00	
2,360.0	15.35	14.42	2,340.4	173.9	44.7	179.6	0.00	0.00	0.00	
2,400.0	15.35	14.42	2,379.0	184.2	47.4	190.2	0.00	0.00	0.00	
2,440.0	15.35	14.42	2,417.6	194.5	50.0	200.8	0.00	0.00	0.00	
2,480.0	15.35	14.42	2,456.1	204.7	52.6	211.4	0.00	0.00	0.00	
2,520.0	15.35	14.42	2,494.7	215.0	55.3	221.9	0.00	0.00	0.00	
2,560.0	15.35	14.42	2,533.3	225.2	57.9	232.5	0.00	0.00	0.00	
2,600.0	15.35	14.42	2,571.9	235.5	60.5	243.1	0.00	0.00	0.00	
2,640.0	15.35	14.42	2,610.4	245.7	63.2	253.7	0.00	0.00	0.00	
2,680.0	15.35	14.42	2,649.0	256.0	65.8	264.3	0.00	0.00	0.00	
2,720.0	15.35	14.42	2,687.6	266.2	68.4	274.9	0.00	0.00	0.00	
2,760.0	15.35	14.42	2,726.2	276.5	71.1	285.5	0.00	0.00	0.00	
2,800.0	15.35	14.42	2,764.7	286.7	73.7	296.0	0.00	0.00	0.00	
2,840.0	15.35	14.42	2,803.3	297.0	76.4	306.6	0.00	0.00	0.00	
2,880.0	15.35	14.42	2,841.9	307.2	79.0	317.2	0.00	0.00	0.00	
2,920.0	15.35	14.42	2,880.5	317.5	81.6	327.8	0.00	0.00	0.00	
2,960.0	15.35	14.42	2,919.0	327.7	84.3	338.4	0.00	0.00	0.00	
3,000.0	15.35	14.42	2,957.6	338.0	86.9	349.0	0.00	0.00	0.00	
3,040.0	15.35	14.42	2,996.2	348.2	89.5	359.6	0.00	0.00	0.00	
3,080.0	15.35	14.42	3,034.8	358.5	92.2	370.2	0.00	0.00	0.00	
3,120.0	15.35	14.42	3,073.3	368.7	94.8	380.7	0.00	0.00	0.00	
3,160.0	15.35	14.42	3,111.9	379.0	97.4	391.3	0.00	0.00	0.00	
3,200.0	15.35	14.42	3,150.5	389.2	100.1	401.9	0.00	0.00	0.00	
3,240.0	15.35	14.42	3,189.0	399.5	102.7	412.5	0.00	0.00	0.00	
3,280.0	15.35	14.42	3,227.6	409.8	105.3	423.1	0.00	0.00	0.00	
3,320.0	15.35	14.42	3,266.2	420.0	108.0	433.7	0.00	0.00	0.00	
3,360.0	15.35	14.42	3,304.8	430.3	110.6	444.3	0.00	0.00	0.00	
3,400.0	15.35	14.42	3,343.3	440.5	113.3	454.8	0.00	0.00	0.00	
3,440.0	15.35	14.42	3,381.9	450.8	115.9	465.4	0.00	0.00	0.00	
3,480.0	15.35	14.42	3,420.5	461.0	118.5	476.0	0.00	0.00	0.00	
3,520.0	15.35	14.42	3,459.1	471.3	121.2	486.6	0.00	0.00	0.00	
3,560.0	15.35	14.42	3,497.6	481.5	123.8	497.2	0.00	0.00	0.00	
3,600.0	15.35	14.42	3,536.2	491.8	126.4	507.8	0.00	0.00	0.00	
3,640.0	15.35	14.42	3,574.8	502.0	129.1	518.4	0.00	0.00	0.00	
3,680.0	15.35	14.42	3,613.4	512.3	131.7	528.9	0.00	0.00	0.00	
3,720.0	15.35	14.42	3,651.9	522.5	134.3	539.5	0.00	0.00	0.00	
3,760.0	15.35	14.42	3,690.5	532.8	137.0	550.1	0.00	0.00	0.00	
3,800.0	15.35	14.42	3,729.1	543.0	139.6	560.7	0.00	0.00	0.00	
3,840.0	15.35	14.42	3,767.7	553.3	142.2	571.3	0.00	0.00	0.00	
3,880.0	15.35	14.42	3,806.2	563.5	144.9	581.9	0.00	0.00	0.00	
3,920.0	15.35	14.42	3,844.8	573.8	147.5	592.5	0.00	0.00	0.00	
3,960.0	15.35	14.42	3,883.4	584.0	150.2	603.0	0.00	0.00	0.00	
4,000.0	15.35	14.42	3,921.9	594.3	152.8	613.6	0.00	0.00	0.00	
4,040.0	15.35	14.42	3,960.5	604.6	155.4	624.2	0.00	0.00	0.00	
4,080.0	15.35	14.42	3,999.1	614.8	158.1	634.8	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Brandt USX WW13-07D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 5061.0ft (Original Well Elev)
Project:	SEC.13-T1N-R66W	MD Reference:	WELL @ 5061.0ft (Original Well Elev)
Site:	Brandt USX WW13-07D Pad Sec.13-T1N-R66W	North Reference:	True
Well:	Brandt USX WW13-07D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Brandt USX WW13-07D Plan #3 (7-12-1		

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)
4,120.0	15.35	14.42	4,037.7	625.1	160.7	645.4	0.00	0.00	0.00
4,160.0	15.35	14.42	4,076.2	635.3	163.3	656.0	0.00	0.00	0.00
4,200.0	15.35	14.42	4,114.8	645.6	166.0	666.6	0.00	0.00	0.00
4,240.0	15.35	14.42	4,153.4	655.8	168.6	677.1	0.00	0.00	0.00
4,280.0	15.35	14.42	4,192.0	666.1	171.2	687.7	0.00	0.00	0.00
4,320.0	15.35	14.42	4,230.5	676.3	173.9	698.3	0.00	0.00	0.00
4,360.0	15.35	14.42	4,269.1	686.6	176.5	708.9	0.00	0.00	0.00
4,400.0	15.35	14.42	4,307.7	696.8	179.2	719.5	0.00	0.00	0.00
4,440.0	15.35	14.42	4,346.3	707.1	181.8	730.1	0.00	0.00	0.00
4,480.0	15.35	14.42	4,384.8	717.3	184.4	740.7	0.00	0.00	0.00
4,520.0	15.35	14.42	4,423.4	727.6	187.1	751.2	0.00	0.00	0.00
4,560.0	15.35	14.42	4,462.0	737.8	189.7	761.8	0.00	0.00	0.00
4,600.0	15.35	14.42	4,500.6	748.1	192.3	772.4	0.00	0.00	0.00
4,640.0	15.35	14.42	4,539.1	758.3	195.0	783.0	0.00	0.00	0.00
4,680.0	15.35	14.42	4,577.7	768.6	197.6	793.6	0.00	0.00	0.00
4,720.0	15.35	14.42	4,616.3	778.8	200.2	804.2	0.00	0.00	0.00
4,760.0	15.35	14.42	4,654.9	789.1	202.9	814.8	0.00	0.00	0.00
4,800.0	15.35	14.42	4,693.4	799.3	205.5	825.3	0.00	0.00	0.00
4,840.0	15.35	14.42	4,732.0	809.6	208.1	835.9	0.00	0.00	0.00
4,880.0	15.35	14.42	4,770.6	819.9	210.8	846.5	0.00	0.00	0.00
4,920.0	15.35	14.42	4,809.1	830.1	213.4	857.1	0.00	0.00	0.00
4,960.0	15.35	14.42	4,847.7	840.4	216.1	867.7	0.00	0.00	0.00
5,000.0	15.35	14.42	4,886.3	850.6	218.7	878.3	0.00	0.00	0.00
5,040.0	15.35	14.42	4,924.9	860.9	221.3	888.9	0.00	0.00	0.00
5,080.0	15.35	14.42	4,963.4	871.1	224.0	899.4	0.00	0.00	0.00
5,120.0	15.35	14.42	5,002.0	881.4	226.6	910.0	0.00	0.00	0.00
5,160.0	15.35	14.42	5,040.6	891.6	229.2	920.6	0.00	0.00	0.00
5,161.3	15.35	14.42	5,041.8	892.0	229.3	921.0	0.00	0.00	0.00
5,200.0	14.57	14.42	5,079.2	901.6	231.8	930.9	2.00	-2.00	0.00
5,240.0	13.77	14.42	5,118.0	911.1	234.2	940.7	2.00	-2.00	0.00
5,280.0	12.97	14.42	5,156.9	920.1	236.5	950.0	2.00	-2.00	0.00
5,320.0	12.17	14.42	5,196.0	928.5	238.7	958.7	2.00	-2.00	0.00
5,360.0	11.37	14.42	5,235.1	936.4	240.7	966.9	2.00	-2.00	0.00
5,400.0	10.57	14.42	5,274.4	943.8	242.6	974.5	2.00	-2.00	0.00
5,440.0	9.77	14.42	5,313.8	950.6	244.4	981.5	2.00	-2.00	0.00
5,480.0	8.97	14.42	5,353.2	956.9	246.0	988.1	2.00	-2.00	0.00
5,520.0	8.17	14.42	5,392.8	962.7	247.5	994.0	2.00	-2.00	0.00
5,560.0	7.37	14.42	5,432.4	967.9	248.9	999.4	2.00	-2.00	0.00
5,600.0	6.57	14.42	5,472.1	972.6	250.1	1,004.3	2.00	-2.00	0.00
5,640.0	5.77	14.42	5,511.9	976.8	251.1	1,008.6	2.00	-2.00	0.00
5,680.0	4.97	14.42	5,551.7	980.4	252.1	1,012.3	2.00	-2.00	0.00
5,720.0	4.17	14.42	5,591.6	983.5	252.9	1,015.5	2.00	-2.00	0.00
5,760.0	3.37	14.42	5,631.5	986.1	253.5	1,018.1	2.00	-2.00	0.00
5,800.0	2.57	14.42	5,671.4	988.1	254.0	1,020.2	2.00	-2.00	0.00
5,840.0	1.77	14.42	5,711.4	989.6	254.4	1,021.7	2.00	-2.00	0.00
5,880.0	0.97	14.42	5,751.4	990.5	254.6	1,022.7	2.00	-2.00	0.00
5,920.0	0.17	14.42	5,791.4	990.9	254.7	1,023.1	2.00	-2.00	0.00
5,928.6	0.00	0.00	5,800.0	990.9	254.8	1,023.1	2.00	-2.00	0.00
TARGET BHL 2080'FNL, 1986'FEL									
5,960.0	0.00	0.00	5,831.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,000.0	0.00	0.00	5,871.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,040.0	0.00	0.00	5,911.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,080.0	0.00	0.00	5,951.4	990.9	254.8	1,023.1	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Brandt USX WW13-07D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 5061.0ft (Original Well Elev)
Project:	SEC.13-T1N-R66W	MD Reference:	WELL @ 5061.0ft (Original Well Elev)
Site:	Brandt USX WW13-07D Pad Sec.13-T1N-R66W	North Reference:	True
Well:	Brandt USX WW13-07D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Brandt USX WW13-07D Plan #3 (7-12-1		

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)
6,120.0	0.00	0.00	5,991.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,160.0	0.00	0.00	6,031.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,200.0	0.00	0.00	6,071.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,240.0	0.00	0.00	6,111.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,280.0	0.00	0.00	6,151.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,320.0	0.00	0.00	6,191.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,360.0	0.00	0.00	6,231.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,400.0	0.00	0.00	6,271.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,440.0	0.00	0.00	6,311.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,480.0	0.00	0.00	6,351.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,520.0	0.00	0.00	6,391.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,560.0	0.00	0.00	6,431.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,600.0	0.00	0.00	6,471.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,640.0	0.00	0.00	6,511.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,680.0	0.00	0.00	6,551.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,720.0	0.00	0.00	6,591.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,760.0	0.00	0.00	6,631.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,800.0	0.00	0.00	6,671.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,840.0	0.00	0.00	6,711.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,880.0	0.00	0.00	6,751.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,920.0	0.00	0.00	6,791.4	990.9	254.8	1,023.1	0.00	0.00	0.00
6,960.0	0.00	0.00	6,831.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,000.0	0.00	0.00	6,871.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,040.0	0.00	0.00	6,911.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,080.0	0.00	0.00	6,951.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,120.0	0.00	0.00	6,991.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,160.0	0.00	0.00	7,031.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,200.0	0.00	0.00	7,071.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,218.6	0.00	0.00	7,090.0	990.9	254.8	1,023.1	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 2080'FNL & 1986'FEL - LEGAL BOX 400' X 400' 1981'FNL & 1986'FEL									
7,240.0	0.00	0.00	7,111.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,280.0	0.00	0.00	7,151.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,320.0	0.00	0.00	7,191.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,360.0	0.00	0.00	7,231.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,400.0	0.00	0.00	7,271.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,440.0	0.00	0.00	7,311.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,480.0	0.00	0.00	7,351.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,520.0	0.00	0.00	7,391.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,560.0	0.00	0.00	7,431.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,586.6	0.00	0.00	7,458.0	990.9	254.8	1,023.1	0.00	0.00	0.00
CODELL									
7,600.0	0.00	0.00	7,471.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,640.0	0.00	0.00	7,511.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,680.0	0.00	0.00	7,551.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,720.0	0.00	0.00	7,591.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,760.0	0.00	0.00	7,631.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,800.0	0.00	0.00	7,671.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,840.0	0.00	0.00	7,711.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,880.0	0.00	0.00	7,751.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,920.0	0.00	0.00	7,791.4	990.9	254.8	1,023.1	0.00	0.00	0.00
7,958.6	0.00	0.00	7,830.0	990.9	254.8	1,023.1	0.00	0.00	0.00
D-SAND									
7,960.0	0.00	0.00	7,831.4	990.9	254.8	1,023.1	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Brandt USX WW13-07D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 5061.0ft (Original Well Elev)
Project:	SEC.13-T1N-R66W	MD Reference:	WELL @ 5061.0ft (Original Well Elev)
Site:	Brandt USX WW13-07D Pad Sec.13-T1N-R66W	North Reference:	True
Well:	Brandt USX WW13-07D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Brandt USX WW13-07D Plan #3 (7-12-1		

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)
8,000.0	0.00	0.00	7,871.4	990.9	254.8	1,023.1	0.00	0.00	0.00
8,017.6	0.00	0.00	7,889.0	990.9	254.8	1,023.1	0.00	0.00	0.00
J-SAND									
8,040.0	0.00	0.00	7,911.4	990.9	254.8	1,023.1	0.00	0.00	0.00
8,080.0	0.00	0.00	7,951.4	990.9	254.8	1,023.1	0.00	0.00	0.00
8,120.0	0.00	0.00	7,991.4	990.9	254.8	1,023.1	0.00	0.00	0.00
8,160.0	0.00	0.00	8,031.4	990.9	254.8	1,023.1	0.00	0.00	0.00
8,167.6	0.00	0.00	8,039.0	990.9	254.8	1,023.1	0.00	0.00	0.00

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 20'	0.00	0.00	7,090.0	990.9	254.8	1,263,051.43	3,217,477.07	40.052850	-104.723110
- plan hits target center									
- Circle (radius 75.0)									
TARGET BHL 2080'F	0.00	0.00	5,800.0	990.9	254.8	1,263,051.43	3,217,477.07	40.052850	-104.723110
- plan hits target center									
- Point									
LEGAL BOX 400' X 400'	0.00	0.00	7,090.0	1,089.9	254.8	1,263,150.41	3,217,476.25	40.053122	-104.723110
- plan misses target center by 99.0ft at 7218.6ft MD (7090.0 TVD, 990.9 N, 254.8 E)									
- Rectangle (sides W400.0 H400.0 D949.0)									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
1,200.0	1,200.0	8 5/8"	8-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,218.6	7,090.0	NIOBRARA		0.00	
7,586.6	7,458.0	CODELL		0.00	
7,958.6	7,830.0	D-SAND		0.00	
8,017.6	7,889.0	J-SAND		0.00	