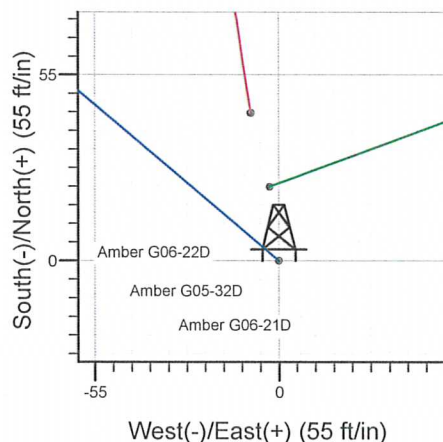
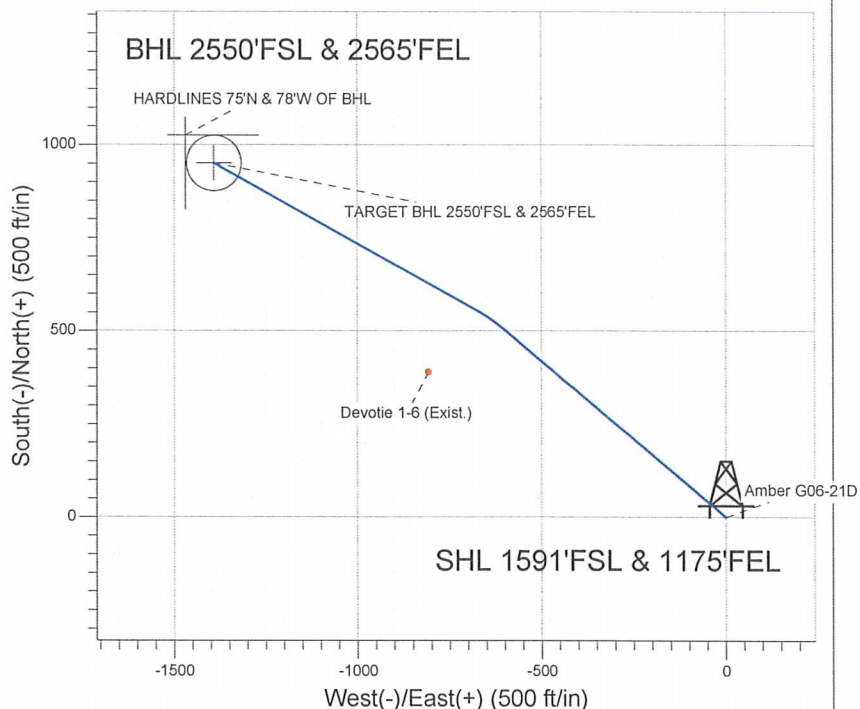
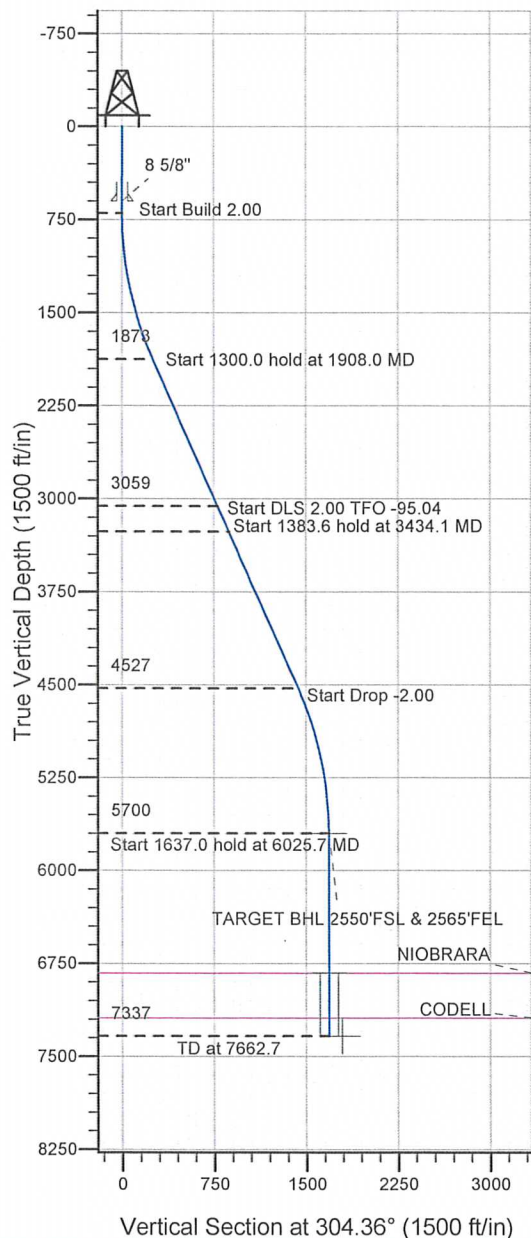


### Well Name: Amber G06-21D

Surface Location: Amber G06-22D Pad Sec.6-T4N-R65W  
 North American Datum 1983, US State Plane 1983 Colorado Northern Zone  
 Ground Elevation: 4684.0  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1367254.95 3222786.32 40.338760 -104.700790  
 Original Well Elev @ 4697.0ft (Original Well Elev)

### NOBLE ENERGY INC WELD COUNTY CO



Amber G06-22D Pad Sec.6-T4N-R65W  
 Amber G06-21D  
 Noble Amber G06-21D Plan #2 (9-09-11)  
 14:57, September 13 2011



Azimuths to True North  
 Magnetic North: 8.79°  
 Magnetic Field  
 Strength: 53081.7snT  
 Dip Angle: 67.00°  
 Date: 9/12/2011  
 Model: IGRF2010

#### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 2550'FSL & 2565'FEL	5700.0	950.9	-1391.0	40.341370	-104.705780	Point
TARGET CIRCLE 2550'FSL & 2565'FEL	6827.0	950.9	-1391.0	40.341370	-104.705780	Circle (Radius: 75.0)
HARDLINES 75°N & 78°W OF BHL	7337.0	1025.9	-1469.0	40.341576	-104.706060	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	700.0	0.00	0.00	700.0	0.0	0.0	0.00	0.00	0.0	
3	1908.0	24.16	310.00	1872.5	161.3	-192.2	2.00	310.00	249.7	
4	3208.0	24.16	310.00	3058.6	503.3	-599.8	0.00	0.00	779.2	
5	3434.1	24.16	298.94	3265.1	555.5	-675.8	2.00	-95.04	871.4	
6	4817.7	24.16	298.94	4527.4	829.5	-1171.4	0.00	0.00	1435.1	
7	6025.7	0.00	0.00	5700.0	950.9	-1391.0	2.00	180.00	1685.0	TARGET BHL 2550'FSL & 2565'FEL
8	7662.7	0.00	0.00	7337.0	950.9	-1391.0	0.00	0.00	1685.0	



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

**SEC.6-T4N-R65W**

**Amber G06-22D Pad Sec.6-T4N-R65W**

**Amber G06-21D**

**Wellbore #1**

**Plan: Noble Amber G06-21D Plan #2 (9-09-11)**

## **Standard Planning Report**

**13 September, 2011**





Database: Landmark  
Company: NOBLE ENERGY INC WELD COUNTY CO  
Project: SEC.6-T4N-R65W  
Site: Amber G06-22D Pad Sec.6-T4N-R65W  
Well: Amber G06-21D  
Wellbore: Wellbore #1  
Design: Noble Amber G06-21D Plan #2 (9-09-11)

Local Co-ordinate Reference: Well Amber G06-21D  
TVD Reference: WELL @ 4697.0ft (Original Well Elev)  
MD Reference: WELL @ 4697.0ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature

Project	SEC.6-T4N-R65W, 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	Amber G06-22D Pad Sec.6-T4N-R65W				
Site Position:		Northing:	1,367,298.61 ft	Latitude:	40.338880
From:	Lat/Long	Easting:	3,222,777.56 ft	Longitude:	-104.700820
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.52 °

Well	Amber G06-21D					
Well Position	+N/-S	-43.7 ft	Northing:	1,367,254.95 ft	Latitude:	40.338760
	+E/-W	8.4 ft	Easting:	3,222,786.32 ft	Longitude:	-104.700790
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,684.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/12/2011	8.79	67.00	53,082

Design	Noble Amber G06-21D Plan #2 (9-09-11)			
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	304.36

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	
700.0	0.00	0.00	700.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,908.0	24.16	310.00	1,872.5	161.3	-192.2	2.00	2.00	0.00	310.00	
3,208.0	24.16	310.00	3,058.6	503.3	-599.8	0.00	0.00	0.00	0.00	
3,434.1	24.16	298.94	3,265.1	555.5	-675.8	2.00	0.00	-4.89	-95.04	
4,817.7	24.16	298.94	4,527.4	829.5	-1,171.4	0.00	0.00	0.00	0.00	
6,025.7	0.00	0.00	5,700.0	950.9	-1,391.0	2.00	-2.00	0.00	180.00	TARGET BHL 255C
7,662.7	0.00	0.00	7,337.0	950.9	-1,391.0	0.00	0.00	0.00	0.00	

Database: Landmark  
Company: NOBLE ENERGY INC WELD COUNTY CO  
Project: SEC.6-T4N-R65W  
Site: Amber G06-22D Pad Sec.6-T4N-R65W  
Well: Amber G06-21D  
Wellbore: Wellbore #1  
Design: Noble Amber G06-21D Plan #2 (9-09-11)

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

Well Amber G06-21D  
WELL @ 4697.0ft (Original Well Elev)  
WELL @ 4697.0ft (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)
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
8 5/8"									
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
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.40	310.00	720.0	0.0	-0.1	0.1	2.00	2.00	0.00
760.0	1.20	310.00	760.0	0.4	-0.5	0.6	2.00	2.00	0.00
800.0	2.00	310.00	800.0	1.1	-1.3	1.7	2.00	2.00	0.00
840.0	2.80	310.00	839.9	2.2	-2.6	3.4	2.00	2.00	0.00
880.0	3.60	310.00	879.9	3.6	-4.3	5.6	2.00	2.00	0.00
920.0	4.40	310.00	919.8	5.4	-6.5	8.4	2.00	2.00	0.00
960.0	5.20	310.00	959.6	7.6	-9.0	11.7	2.00	2.00	0.00
1,000.0	6.00	310.00	999.5	10.1	-12.0	15.6	2.00	2.00	0.00
1,040.0	6.80	310.00	1,039.2	13.0	-15.4	20.1	2.00	2.00	0.00
1,080.0	7.60	310.00	1,078.9	16.2	-19.3	25.0	2.00	2.00	0.00
1,120.0	8.40	310.00	1,118.5	19.8	-23.5	30.6	2.00	2.00	0.00
1,160.0	9.20	310.00	1,158.0	23.7	-28.2	36.7	2.00	2.00	0.00
1,200.0	10.00	310.00	1,197.5	28.0	-33.3	43.3	2.00	2.00	0.00
1,240.0	10.80	310.00	1,236.8	32.6	-38.9	50.5	2.00	2.00	0.00
1,280.0	11.60	310.00	1,276.0	37.6	-44.8	58.2	2.00	2.00	0.00
1,320.0	12.40	310.00	1,315.2	43.0	-51.2	66.5	2.00	2.00	0.00
1,360.0	13.20	310.00	1,354.2	48.7	-58.0	75.3	2.00	2.00	0.00
1,400.0	14.00	310.00	1,393.1	54.7	-65.2	84.7	2.00	2.00	0.00
1,440.0	14.80	310.00	1,431.8	61.1	-72.8	94.6	2.00	2.00	0.00
1,480.0	15.60	310.00	1,470.4	67.8	-80.8	105.0	2.00	2.00	0.00
1,520.0	16.40	310.00	1,508.8	74.9	-89.3	116.0	2.00	2.00	0.00
1,560.0	17.20	310.00	1,547.1	82.4	-98.1	127.5	2.00	2.00	0.00
1,600.0	18.00	310.00	1,585.3	90.1	-107.4	139.5	2.00	2.00	0.00
1,640.0	18.80	310.00	1,623.2	98.2	-117.1	152.1	2.00	2.00	0.00
1,680.0	19.60	310.00	1,661.0	106.7	-127.2	165.2	2.00	2.00	0.00
1,720.0	20.40	310.00	1,698.6	115.5	-137.6	178.8	2.00	2.00	0.00
1,760.0	21.20	310.00	1,736.0	124.6	-148.5	192.9	2.00	2.00	0.00
1,800.0	22.00	310.00	1,773.2	134.1	-159.8	207.6	2.00	2.00	0.00
1,840.0	22.80	310.00	1,810.2	143.9	-171.5	222.8	2.00	2.00	0.00
1,880.0	23.60	310.00	1,846.9	154.0	-183.5	238.4	2.00	2.00	0.00
1,908.0	24.16	310.00	1,872.5	161.3	-192.2	249.7	2.00	2.00	0.00
1,920.0	24.16	310.00	1,883.5	164.5	-196.0	254.6	0.00	0.00	0.00
1,960.0	24.16	310.00	1,920.0	175.0	-208.5	270.9	0.00	0.00	0.00
2,000.0	24.16	310.00	1,956.5	185.5	-221.1	287.2	0.00	0.00	0.00



Database: Landmark  
Company: NOBLE ENERGY INC WELD COUNTY CO  
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MD Reference: WELL @ 4697.0ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: 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)
2,040.0	24.16	310.00	1,993.0	196.0	-233.6	303.5	0.00	0.00	0.00
2,080.0	24.16	310.00	2,029.5	206.6	-246.2	319.8	0.00	0.00	0.00
2,120.0	24.16	310.00	2,065.9	217.1	-258.7	336.1	0.00	0.00	0.00
2,160.0	24.16	310.00	2,102.4	227.6	-271.2	352.4	0.00	0.00	0.00
2,200.0	24.16	310.00	2,138.9	238.1	-283.8	368.7	0.00	0.00	0.00
2,240.0	24.16	310.00	2,175.4	248.6	-296.3	384.9	0.00	0.00	0.00
2,280.0	24.16	310.00	2,211.9	259.2	-308.9	401.2	0.00	0.00	0.00
2,320.0	24.16	310.00	2,248.4	269.7	-321.4	417.5	0.00	0.00	0.00
2,360.0	24.16	310.00	2,284.9	280.2	-333.9	433.8	0.00	0.00	0.00
2,400.0	24.16	310.00	2,321.4	290.7	-346.5	450.1	0.00	0.00	0.00
2,440.0	24.16	310.00	2,357.9	301.3	-359.0	466.4	0.00	0.00	0.00
2,480.0	24.16	310.00	2,394.4	311.8	-371.6	482.7	0.00	0.00	0.00
2,520.0	24.16	310.00	2,430.9	322.3	-384.1	499.0	0.00	0.00	0.00
2,560.0	24.16	310.00	2,467.4	332.8	-396.7	515.3	0.00	0.00	0.00
2,600.0	24.16	310.00	2,503.9	343.4	-409.2	531.6	0.00	0.00	0.00
2,640.0	24.16	310.00	2,540.4	353.9	-421.7	547.9	0.00	0.00	0.00
2,680.0	24.16	310.00	2,576.9	364.4	-434.3	564.2	0.00	0.00	0.00
2,720.0	24.16	310.00	2,613.4	374.9	-446.8	580.5	0.00	0.00	0.00
2,760.0	24.16	310.00	2,649.9	385.4	-459.4	596.7	0.00	0.00	0.00
2,800.0	24.16	310.00	2,686.4	396.0	-471.9	613.0	0.00	0.00	0.00
2,840.0	24.16	310.00	2,722.9	406.5	-484.4	629.3	0.00	0.00	0.00
2,880.0	24.16	310.00	2,759.4	417.0	-497.0	645.6	0.00	0.00	0.00
2,920.0	24.16	310.00	2,795.9	427.5	-509.5	661.9	0.00	0.00	0.00
2,960.0	24.16	310.00	2,832.4	438.1	-522.1	678.2	0.00	0.00	0.00
3,000.0	24.16	310.00	2,868.9	448.6	-534.6	694.5	0.00	0.00	0.00
3,040.0	24.16	310.00	2,905.4	459.1	-547.1	710.8	0.00	0.00	0.00
3,080.0	24.16	310.00	2,941.9	469.6	-559.7	727.1	0.00	0.00	0.00
3,120.0	24.16	310.00	2,978.4	480.2	-572.2	743.4	0.00	0.00	0.00
3,160.0	24.16	310.00	3,014.9	490.7	-584.8	759.7	0.00	0.00	0.00
3,200.0	24.16	310.00	3,051.3	501.2	-597.3	776.0	0.00	0.00	0.00
3,208.0	24.16	310.00	3,058.6	503.3	-599.8	779.2	0.00	0.00	0.00
3,240.0	24.11	308.44	3,087.8	511.6	-610.0	792.3	2.00	-0.15	-4.88
3,280.0	24.07	306.48	3,124.4	521.5	-622.9	808.6	2.00	-0.09	-4.89
3,320.0	24.06	304.52	3,160.9	531.0	-636.2	824.9	2.00	-0.03	-4.90
3,360.0	24.07	302.56	3,197.4	540.0	-649.8	841.2	2.00	0.03	-4.90
3,400.0	24.11	300.60	3,233.9	548.5	-663.7	857.5	2.00	0.09	-4.89
3,434.1	24.16	298.94	3,265.1	555.5	-675.8	871.4	2.00	0.15	-4.88
3,440.0	24.16	298.94	3,270.4	556.6	-677.9	873.8	0.00	0.00	0.00
3,480.0	24.16	298.94	3,306.9	564.6	-692.2	890.1	0.00	0.00	0.00
3,520.0	24.16	298.94	3,343.4	572.5	-706.6	906.4	0.00	0.00	0.00
3,560.0	24.16	298.94	3,379.9	580.4	-720.9	922.7	0.00	0.00	0.00
3,600.0	24.16	298.94	3,416.4	588.3	-735.2	939.0	0.00	0.00	0.00
3,640.0	24.16	298.94	3,452.9	596.2	-749.6	955.3	0.00	0.00	0.00
3,680.0	24.16	298.94	3,489.4	604.2	-763.9	971.6	0.00	0.00	0.00
3,720.0	24.16	298.94	3,525.9	612.1	-778.2	987.9	0.00	0.00	0.00
3,760.0	24.16	298.94	3,562.4	620.0	-792.5	1,004.2	0.00	0.00	0.00
3,800.0	24.16	298.94	3,598.9	627.9	-806.9	1,020.5	0.00	0.00	0.00
3,840.0	24.16	298.94	3,635.4	635.9	-821.2	1,036.8	0.00	0.00	0.00
3,880.0	24.16	298.94	3,671.9	643.8	-835.5	1,053.1	0.00	0.00	0.00
3,920.0	24.16	298.94	3,708.4	651.7	-849.8	1,069.4	0.00	0.00	0.00
3,960.0	24.16	298.94	3,744.9	659.6	-864.2	1,085.7	0.00	0.00	0.00
4,000.0	24.16	298.94	3,781.4	667.5	-878.5	1,102.0	0.00	0.00	0.00
4,040.0	24.16	298.94	3,817.9	675.5	-892.8	1,118.3	0.00	0.00	0.00
4,080.0	24.16	298.94	3,854.4	683.4	-907.2	1,134.6	0.00	0.00	0.00

Database: Landmark  
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Project: SEC.6-T4N-R65W  
Site: Amber G06-22D Pad Sec.6-T4N-R65W  
Well: Amber G06-21D  
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Local Co-ordinate Reference:  
TVD Reference:  
MD Reference:  
North Reference:  
Survey Calculation Method:

Well Amber G06-21D  
WELL @ 4697.0ft (Original Well Elev)  
WELL @ 4697.0ft (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)
4,120.0	24.16	298.94	3,890.9	691.3	-921.5	1,150.9	0.00	0.00	0.00
4,160.0	24.16	298.94	3,927.4	699.2	-935.8	1,167.2	0.00	0.00	0.00
4,200.0	24.16	298.94	3,963.9	707.1	-950.1	1,183.5	0.00	0.00	0.00
4,240.0	24.16	298.94	4,000.4	715.1	-964.5	1,199.8	0.00	0.00	0.00
4,280.0	24.16	298.94	4,036.8	723.0	-978.8	1,216.1	0.00	0.00	0.00
4,320.0	24.16	298.94	4,073.3	730.9	-993.1	1,232.4	0.00	0.00	0.00
4,360.0	24.16	298.94	4,109.8	738.8	-1,007.5	1,248.7	0.00	0.00	0.00
4,400.0	24.16	298.94	4,146.3	746.8	-1,021.8	1,265.0	0.00	0.00	0.00
4,440.0	24.16	298.94	4,182.8	754.7	-1,036.1	1,281.2	0.00	0.00	0.00
4,480.0	24.16	298.94	4,219.3	762.6	-1,050.4	1,297.5	0.00	0.00	0.00
4,520.0	24.16	298.94	4,255.8	770.5	-1,064.8	1,313.8	0.00	0.00	0.00
4,560.0	24.16	298.94	4,292.3	778.4	-1,079.1	1,330.1	0.00	0.00	0.00
4,600.0	24.16	298.94	4,328.8	786.4	-1,093.4	1,346.4	0.00	0.00	0.00
4,640.0	24.16	298.94	4,365.3	794.3	-1,107.8	1,362.7	0.00	0.00	0.00
4,680.0	24.16	298.94	4,401.8	802.2	-1,122.1	1,379.0	0.00	0.00	0.00
4,720.0	24.16	298.94	4,438.3	810.1	-1,136.4	1,395.3	0.00	0.00	0.00
4,760.0	24.16	298.94	4,474.8	818.0	-1,150.7	1,411.6	0.00	0.00	0.00
4,800.0	24.16	298.94	4,511.3	826.0	-1,165.1	1,427.9	0.00	0.00	0.00
4,817.7	24.16	298.94	4,527.4	829.5	-1,171.4	1,435.1	0.00	0.00	0.00
4,840.0	23.71	298.94	4,547.8	833.9	-1,179.3	1,444.2	2.00	-2.00	0.00
4,880.0	22.91	298.94	4,584.6	841.5	-1,193.2	1,459.9	2.00	-2.00	0.00
4,920.0	22.11	298.94	4,621.5	848.9	-1,206.6	1,475.2	2.00	-2.00	0.00
4,960.0	21.31	298.94	4,658.7	856.1	-1,219.5	1,489.9	2.00	-2.00	0.00
5,000.0	20.51	298.94	4,696.0	863.0	-1,232.0	1,504.1	2.00	-2.00	0.00
5,040.0	19.71	298.94	4,733.6	869.7	-1,244.1	1,517.8	2.00	-2.00	0.00
5,080.0	18.91	298.94	4,771.3	876.1	-1,255.6	1,531.0	2.00	-2.00	0.00
5,120.0	18.11	298.94	4,809.3	882.2	-1,266.8	1,543.6	2.00	-2.00	0.00
5,160.0	17.31	298.94	4,847.4	888.1	-1,277.4	1,555.7	2.00	-2.00	0.00
5,200.0	16.51	298.94	4,885.6	893.7	-1,287.6	1,567.3	2.00	-2.00	0.00
5,240.0	15.71	298.94	4,924.1	899.1	-1,297.3	1,578.4	2.00	-2.00	0.00
5,280.0	14.91	298.94	4,962.7	904.2	-1,306.6	1,588.9	2.00	-2.00	0.00
5,320.0	14.11	298.94	5,001.4	909.1	-1,315.3	1,598.9	2.00	-2.00	0.00
5,360.0	13.31	298.94	5,040.2	913.6	-1,323.6	1,608.3	2.00	-2.00	0.00
5,400.0	12.51	298.94	5,079.2	918.0	-1,331.5	1,617.2	2.00	-2.00	0.00
5,440.0	11.71	298.94	5,118.3	922.0	-1,338.8	1,625.6	2.00	-2.00	0.00
5,480.0	10.91	298.94	5,157.6	925.8	-1,345.7	1,633.4	2.00	-2.00	0.00
5,520.0	10.11	298.94	5,196.9	929.4	-1,352.1	1,640.7	2.00	-2.00	0.00
5,560.0	9.31	298.94	5,236.3	932.6	-1,358.0	1,647.4	2.00	-2.00	0.00
5,600.0	8.51	298.94	5,275.8	935.6	-1,363.4	1,653.5	2.00	-2.00	0.00
5,640.0	7.71	298.94	5,315.4	938.4	-1,368.3	1,659.2	2.00	-2.00	0.00
5,680.0	6.91	298.94	5,355.1	940.8	-1,372.8	1,664.2	2.00	-2.00	0.00
5,720.0	6.11	298.94	5,394.8	943.0	-1,376.8	1,668.8	2.00	-2.00	0.00
5,760.0	5.31	298.94	5,434.6	944.9	-1,380.3	1,672.7	2.00	-2.00	0.00
5,800.0	4.51	298.94	5,474.5	946.6	-1,383.3	1,676.1	2.00	-2.00	0.00
5,840.0	3.71	298.94	5,514.4	948.0	-1,385.8	1,679.0	2.00	-2.00	0.00
5,880.0	2.91	298.94	5,554.3	949.1	-1,387.8	1,681.3	2.00	-2.00	0.00
5,920.0	2.11	298.94	5,594.3	950.0	-1,389.3	1,683.0	2.00	-2.00	0.00
5,960.0	1.31	298.94	5,634.3	950.5	-1,390.4	1,684.2	2.00	-2.00	0.00
6,000.0	0.51	298.94	5,674.3	950.8	-1,390.9	1,684.9	2.00	-2.00	0.00
6,025.7	0.00	0.00	5,700.0	950.9	-1,391.0	1,685.0	2.00	-2.00	0.00
TARGET BHL 2550'FSL & 2565'FEL									
6,040.0	0.00	0.00	5,714.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,080.0	0.00	0.00	5,754.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,120.0	0.00	0.00	5,794.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00



Database: Landmark  
Company: NOBLE ENERGY INC WELD COUNTY CO  
Project: SEC.6-T4N-R65W  
Site: Amber G06-22D Pad Sec.6-T4N-R65W  
Well: Amber G06-21D  
Wellbore: Wellbore #1  
Design: Noble Amber G06-21D Plan #2 (9-09-11)

Local Co-ordinate Reference: Well Amber G06-21D  
TVD Reference: WELL @ 4697.0ft (Original Well Elev)  
MD Reference: WELL @ 4697.0ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: 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)
6,160.0	0.00	0.00	5,834.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,200.0	0.00	0.00	5,874.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,240.0	0.00	0.00	5,914.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,280.0	0.00	0.00	5,954.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,320.0	0.00	0.00	5,994.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,360.0	0.00	0.00	6,034.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,074.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,440.0	0.00	0.00	6,114.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,480.0	0.00	0.00	6,154.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,520.0	0.00	0.00	6,194.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,560.0	0.00	0.00	6,234.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,274.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,640.0	0.00	0.00	6,314.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,680.0	0.00	0.00	6,354.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,720.0	0.00	0.00	6,394.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,760.0	0.00	0.00	6,434.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,474.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,840.0	0.00	0.00	6,514.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,880.0	0.00	0.00	6,554.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,920.0	0.00	0.00	6,594.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
6,960.0	0.00	0.00	6,634.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,674.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
7,040.0	0.00	0.00	6,714.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
7,080.0	0.00	0.00	6,754.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
7,120.0	0.00	0.00	6,794.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
7,152.7	0.00	0.00	6,827.0	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 2550'FSL & 2565'FEL									
7,160.0	0.00	0.00	6,834.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
7,200.0	0.00	0.00	6,874.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
7,240.0	0.00	0.00	6,914.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
7,280.0	0.00	0.00	6,954.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
7,320.0	0.00	0.00	6,994.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
7,360.0	0.00	0.00	7,034.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,074.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
7,440.0	0.00	0.00	7,114.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
7,480.0	0.00	0.00	7,154.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
7,512.7	0.00	0.00	7,187.0	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
CODELL									
7,520.0	0.00	0.00	7,194.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
7,560.0	0.00	0.00	7,234.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,274.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
7,640.0	0.00	0.00	7,314.3	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
7,662.7	0.00	0.00	7,337.0	950.9	-1,391.0	1,685.0	0.00	0.00	0.00
HARDLINES 75'N & 78'W OF BHL									

**Database:** Landmark  
**Company:** NOBLE ENERGY INC WELD COUNTY CO  
**Project:** SEC.6-T4N-R65W  
**Site:** Amber G06-22D Pad Sec.6-T4N-R65W  
**Well:** Amber G06-21D  
**Wellbore:** Wellbore #1  
**Design:** Noble Amber G06-21D Plan #2 (9-09-11)

**Local Co-ordinate Reference:** Well Amber G06-21D  
**TVD Reference:** WELL @ 4697.0ft (Original Well Elev)  
**MD Reference:** WELL @ 4697.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

**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 BHL 2550'F. - plan hits target center - Point	0.00	0.00	5,700.0	950.9	-1,391.0	1,368,193.24	3,221,386.83	40.341370	-104.705780
HARDLINES 75'N & 7 - plan misses target center by 108.2ft at 7662.7ft MD (7337.0 TVD, 950.9 N, -1391.0 E) - Polygon	0.00	0.00	7,337.0	1,025.9	-1,469.0	1,368,267.53	3,221,308.20	40.341576	-104.706060
Point 1			7,337.0	0.0	0.0	1,368,267.53	3,221,308.20		
Point 2			7,337.0	0.0	200.0	1,368,269.34	3,221,508.18		
Point 3			7,337.0	0.0	0.0	1,368,267.53	3,221,308.20		
Point 4			7,337.0	-200.0	0.0	1,368,067.55	3,221,310.00		
TARGET CIRCLE 25ft - plan hits target center - Circle (radius 75.0)	0.00	0.00	6,827.0	950.9	-1,391.0	1,368,193.24	3,221,386.83	40.341370	-104.705780

**Casing Points**

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
600.0	600.0	8 5/8"	8-5/8	12-1/4

**Formations**

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,152.7	6,827.0	NIOBRARA		0.00	
7,512.7	7,187.0	CODELL		0.00	