

Well Name: Lower Latham PC G01-32D

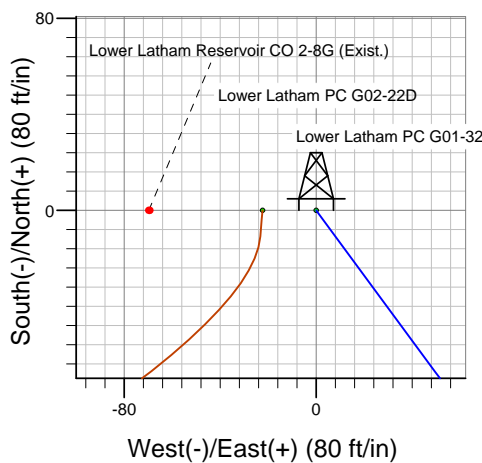
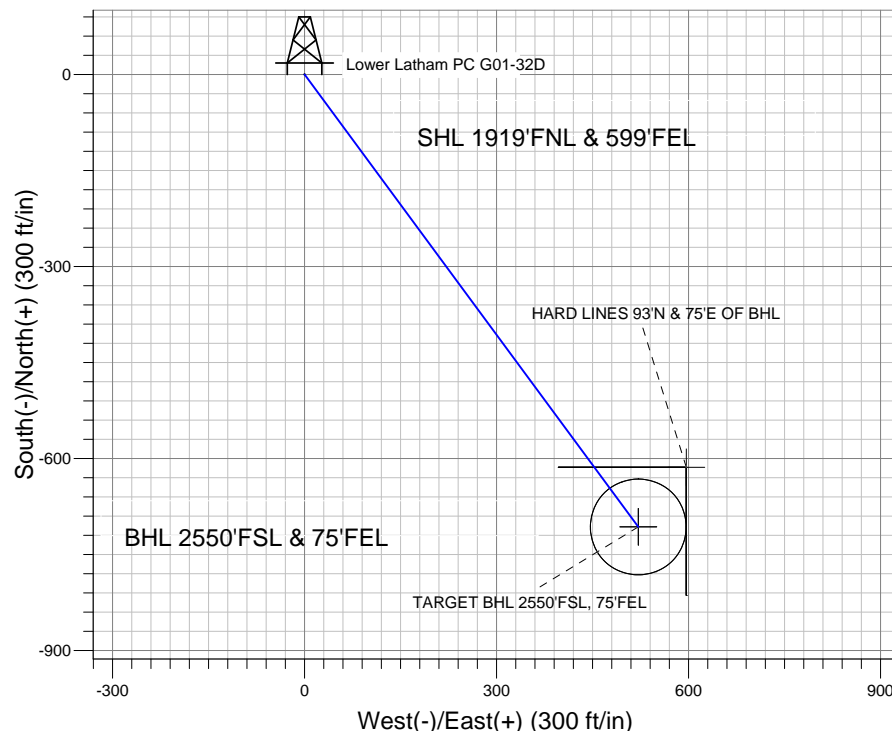
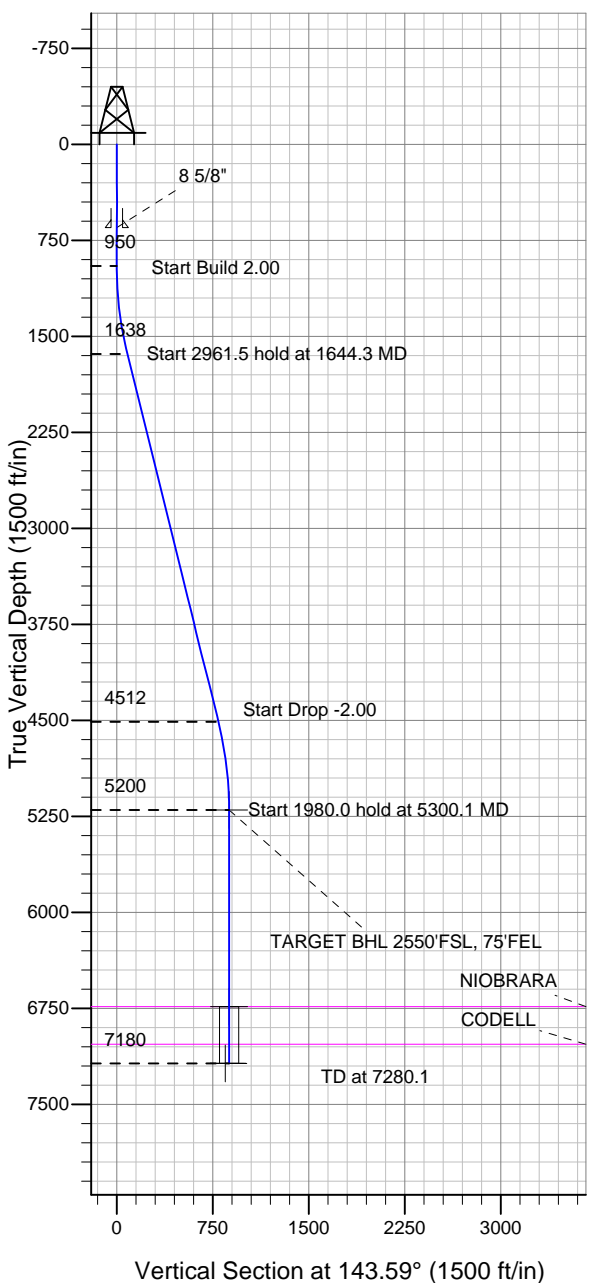
Surface Location: Lower Latham PC G02-22D Pad Sec.2-T4N-R65W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone

Ground Elevation: 4692.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1369073.50	3244440.34	40.343190	-104.623050	

Original Well Elev WELL @ 4705.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Lower Latham PC G02-22D Pad Sec.2-T4N-R65W
 Lower Latham PC G01-32D
 Noble Lower Latham PC G01-32D Plan #1 (4-18-11)
 12:21, April 25 2011



Azimuths to True North
 Magnetic North: 8.80°

Magnetic Field
 Strength: 53134.8snT
 Dip Angle: 67.03°
 Date: 4/18/2011
 Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 2550'FSL, 75'FEL	5200.0	-706.7	521.3	40.341250	-104.621180	Point
TARGET CIRCLE 2550'FSL & 75'FEL	6736.0	-706.7	521.3	40.341250	-104.621180	Circle (Radius: 75.0)
HARD LINES 93'N & 75'E OF BHL	7180.0	-613.7	596.3	40.341505	-104.620911	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	950.0	0.00	0.00	950.0	0.0	0.0	0.00	0.00	0.0	
3	1644.3	13.89	143.59	1637.5	-67.4	49.7	2.00	143.59	83.7	
4	4605.8	13.89	143.59	4512.5	-639.4	471.6	0.00	0.00	794.5	
5	5300.1	0.00	0.00	5200.0	-706.7	521.3	2.00	180.00	878.2	TARGET BHL 2550'FSL, 75'FEL
6	7280.1	0.00	0.00	7180.0	-706.7	521.3	0.00	0.00	878.2	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.2-T4N-R65W

Lower Latham PC G02-22D Pad Sec.2-T4N-R65W

Lower Latham PC G01-32D

Wellbore #1

Plan: Noble Lower Latham PC G01-32D Plan #1 (4-18-11)

Standard Planning Report

25 April, 2011



Database:	Landmark	Local Co-ordinate Reference:	Well Lower Latham PC G01-32D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4705.0ft (Original Well Elev)
Project:	SEC.2-T4N-R65W	MD Reference:	WELL @ 4705.0ft (Original Well Elev)
Site:	Lower Latham PC G02-22D Pad Sec.2-T4N-R65W	North Reference:	True
Well:	Lower Latham PC G01-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Lower Latham PC G01-32D Plan #1 (4-1		

Project	SEC.2-T4N-R65W		
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						Lower Latham PC G02-22D Pad Sec.2-T4N-R65W											
Site Position:						Northing:			1,369,073.30ft			Latitude:			40.343190		
From:			Lat/Long			Easting:			3,244,418.04ft			Longitude:			-104.623130		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.57 °		

Well	Lower Latham PC G01-32D					
Well Position	+N/-S	0.0 ft	Northing:	1,369,073.50 ft	Latitude:	40.343190
	+E/-W	22.3 ft	Easting:	3,244,440.34 ft	Longitude:	-104.623050
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,692.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/18/2011	8.81	67.03	53,135

Design	Noble Lower Latham PC G01-32D Plan #1 (4-18-11)			
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	143.59

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	
950.0	0.00	0.00	950.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,644.3	13.89	143.59	1,637.5	-67.4	49.7	2.00	2.00	0.00	143.59	
4,605.8	13.89	143.59	4,512.5	-639.4	471.6	0.00	0.00	0.00	0.00	
5,300.1	0.00	0.00	5,200.0	-706.7	521.3	2.00	-2.00	0.00	180.00	TARGET BHL 255C
7,280.1	0.00	0.00	7,180.0	-706.7	521.3	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Lower Latham PC G01-32D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4705.0ft (Original Well Elev)
Project:	SEC.2-T4N-R65W	MD Reference:	WELL @ 4705.0ft (Original Well Elev)
Site:	Lower Latham PC G02-22D Pad Sec.2-T4N-R65W	North Reference:	True
Well:	Lower Latham PC G01-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Lower Latham PC G01-32D Plan #1 (4-1		

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
650.0	0.00	0.00	650.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
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
950.0	0.00	0.00	950.0	0.0	0.0	0.0	0.00	0.00	0.00
960.0	0.20	143.59	960.0	0.0	0.0	0.0	2.00	2.00	0.00
1,000.0	1.00	143.59	1,000.0	-0.4	0.3	0.4	2.00	2.00	0.00
1,040.0	1.80	143.59	1,040.0	-1.1	0.8	1.4	2.00	2.00	0.00
1,080.0	2.60	143.59	1,080.0	-2.4	1.8	2.9	2.00	2.00	0.00
1,120.0	3.40	143.59	1,119.9	-4.1	3.0	5.0	2.00	2.00	0.00
1,160.0	4.20	143.59	1,159.8	-6.2	4.6	7.7	2.00	2.00	0.00
1,200.0	5.00	143.59	1,199.7	-8.8	6.5	10.9	2.00	2.00	0.00
1,240.0	5.80	143.59	1,239.5	-11.8	8.7	14.7	2.00	2.00	0.00
1,280.0	6.60	143.59	1,279.3	-15.3	11.3	19.0	2.00	2.00	0.00
1,320.0	7.40	143.59	1,319.0	-19.2	14.2	23.9	2.00	2.00	0.00
1,360.0	8.20	143.59	1,358.6	-23.6	17.4	29.3	2.00	2.00	0.00
1,400.0	9.00	143.59	1,398.2	-28.4	20.9	35.3	2.00	2.00	0.00
1,440.0	9.80	143.59	1,437.6	-33.6	24.8	41.8	2.00	2.00	0.00
1,480.0	10.60	143.59	1,477.0	-39.3	29.0	48.9	2.00	2.00	0.00
1,520.0	11.40	143.59	1,516.2	-45.5	33.5	56.5	2.00	2.00	0.00
1,560.0	12.20	143.59	1,555.4	-52.1	38.4	64.7	2.00	2.00	0.00
1,600.0	13.00	143.59	1,594.4	-59.1	43.6	73.4	2.00	2.00	0.00
1,640.0	13.80	143.59	1,633.3	-66.5	49.1	82.7	2.00	2.00	0.00
1,644.3	13.89	143.59	1,637.5	-67.4	49.7	83.7	2.00	2.00	0.00
1,680.0	13.89	143.59	1,672.2	-74.3	54.8	92.3	0.00	0.00	0.00
1,720.0	13.89	143.59	1,711.0	-82.0	60.5	101.9	0.00	0.00	0.00
1,760.0	13.89	143.59	1,749.8	-89.7	66.2	111.5	0.00	0.00	0.00
1,800.0	13.89	143.59	1,788.7	-97.4	71.9	121.1	0.00	0.00	0.00
1,840.0	13.89	143.59	1,827.5	-105.2	77.6	130.7	0.00	0.00	0.00
1,880.0	13.89	143.59	1,866.3	-112.9	83.3	140.3	0.00	0.00	0.00
1,920.0	13.89	143.59	1,905.2	-120.6	89.0	149.9	0.00	0.00	0.00

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Project:	SEC.2-T4N-R65W	MD Reference:	WELL @ 4705.0ft (Original Well Elev)
Site:	Lower Latham PC G02-22D Pad Sec.2-T4N-R65W	North Reference:	True
Well:	Lower Latham PC G01-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Lower Latham PC G01-32D Plan #1 (4-1)		

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)
1,960.0	13.89	143.59	1,944.0	-128.4	94.7	159.5	0.00	0.00	0.00
2,000.0	13.89	143.59	1,982.8	-136.1	100.4	169.1	0.00	0.00	0.00
2,040.0	13.89	143.59	2,021.7	-143.8	106.1	178.7	0.00	0.00	0.00
2,080.0	13.89	143.59	2,060.5	-151.5	111.8	188.3	0.00	0.00	0.00
2,120.0	13.89	143.59	2,099.3	-159.3	117.5	197.9	0.00	0.00	0.00
2,160.0	13.89	143.59	2,138.2	-167.0	123.2	207.5	0.00	0.00	0.00
2,200.0	13.89	143.59	2,177.0	-174.7	128.9	217.1	0.00	0.00	0.00
2,240.0	13.89	143.59	2,215.8	-182.4	134.6	226.7	0.00	0.00	0.00
2,280.0	13.89	143.59	2,254.6	-190.2	140.3	236.3	0.00	0.00	0.00
2,320.0	13.89	143.59	2,293.5	-197.9	146.0	245.9	0.00	0.00	0.00
2,360.0	13.89	143.59	2,332.3	-205.6	151.7	255.5	0.00	0.00	0.00
2,400.0	13.89	143.59	2,371.1	-213.3	157.4	265.1	0.00	0.00	0.00
2,440.0	13.89	143.59	2,410.0	-221.1	163.1	274.7	0.00	0.00	0.00
2,480.0	13.89	143.59	2,448.8	-228.8	168.8	284.3	0.00	0.00	0.00
2,520.0	13.89	143.59	2,487.6	-236.5	174.4	293.9	0.00	0.00	0.00
2,560.0	13.89	143.59	2,526.5	-244.2	180.1	303.5	0.00	0.00	0.00
2,600.0	13.89	143.59	2,565.3	-252.0	185.8	313.1	0.00	0.00	0.00
2,640.0	13.89	143.59	2,604.1	-259.7	191.5	322.7	0.00	0.00	0.00
2,680.0	13.89	143.59	2,643.0	-267.4	197.2	332.3	0.00	0.00	0.00
2,720.0	13.89	143.59	2,681.8	-275.1	202.9	341.9	0.00	0.00	0.00
2,760.0	13.89	143.59	2,720.6	-282.9	208.6	351.5	0.00	0.00	0.00
2,800.0	13.89	143.59	2,759.4	-290.6	214.3	361.1	0.00	0.00	0.00
2,840.0	13.89	143.59	2,798.3	-298.3	220.0	370.7	0.00	0.00	0.00
2,880.0	13.89	143.59	2,837.1	-306.0	225.7	380.3	0.00	0.00	0.00
2,920.0	13.89	143.59	2,875.9	-313.8	231.4	389.9	0.00	0.00	0.00
2,960.0	13.89	143.59	2,914.8	-321.5	237.1	399.5	0.00	0.00	0.00
3,000.0	13.89	143.59	2,953.6	-329.2	242.8	409.1	0.00	0.00	0.00
3,040.0	13.89	143.59	2,992.4	-336.9	248.5	418.7	0.00	0.00	0.00
3,080.0	13.89	143.59	3,031.3	-344.7	254.2	428.3	0.00	0.00	0.00
3,120.0	13.89	143.59	3,070.1	-352.4	259.9	437.9	0.00	0.00	0.00
3,160.0	13.89	143.59	3,108.9	-360.1	265.6	447.5	0.00	0.00	0.00
3,200.0	13.89	143.59	3,147.8	-367.8	271.3	457.1	0.00	0.00	0.00
3,240.0	13.89	143.59	3,186.6	-375.6	277.0	466.7	0.00	0.00	0.00
3,280.0	13.89	143.59	3,225.4	-383.3	282.7	476.3	0.00	0.00	0.00
3,320.0	13.89	143.59	3,264.2	-391.0	288.4	485.9	0.00	0.00	0.00
3,360.0	13.89	143.59	3,303.1	-398.7	294.1	495.5	0.00	0.00	0.00
3,400.0	13.89	143.59	3,341.9	-406.5	299.8	505.1	0.00	0.00	0.00
3,440.0	13.89	143.59	3,380.7	-414.2	305.5	514.7	0.00	0.00	0.00
3,480.0	13.89	143.59	3,419.6	-421.9	311.2	524.3	0.00	0.00	0.00
3,520.0	13.89	143.59	3,458.4	-429.7	316.9	533.9	0.00	0.00	0.00
3,560.0	13.89	143.59	3,497.2	-437.4	322.6	543.5	0.00	0.00	0.00
3,600.0	13.89	143.59	3,536.1	-445.1	328.3	553.1	0.00	0.00	0.00
3,640.0	13.89	143.59	3,574.9	-452.8	334.0	562.7	0.00	0.00	0.00
3,680.0	13.89	143.59	3,613.7	-460.6	339.7	572.3	0.00	0.00	0.00
3,720.0	13.89	143.59	3,652.6	-468.3	345.4	581.9	0.00	0.00	0.00
3,760.0	13.89	143.59	3,691.4	-476.0	351.1	591.5	0.00	0.00	0.00
3,800.0	13.89	143.59	3,730.2	-483.7	356.8	601.1	0.00	0.00	0.00
3,840.0	13.89	143.59	3,769.1	-491.5	362.5	610.7	0.00	0.00	0.00
3,880.0	13.89	143.59	3,807.9	-499.2	368.2	620.3	0.00	0.00	0.00
3,920.0	13.89	143.59	3,846.7	-506.9	373.9	629.9	0.00	0.00	0.00
3,960.0	13.89	143.59	3,885.5	-514.6	379.6	639.5	0.00	0.00	0.00
4,000.0	13.89	143.59	3,924.4	-522.4	385.3	649.1	0.00	0.00	0.00
4,040.0	13.89	143.59	3,963.2	-530.1	391.0	658.7	0.00	0.00	0.00

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Project:	SEC.2-T4N-R65W	MD Reference:	WELL @ 4705.0ft (Original Well Elev)
Site:	Lower Latham PC G02-22D Pad Sec.2-T4N-R65W	North Reference:	True
Well:	Lower Latham PC G01-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Lower Latham PC G01-32D Plan #1 (4-1)		

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)
4,080.0	13.89	143.59	4,002.0	-537.8	396.7	668.3	0.00	0.00	0.00
4,120.0	13.89	143.59	4,040.9	-545.5	402.4	677.9	0.00	0.00	0.00
4,160.0	13.89	143.59	4,079.7	-553.3	408.1	687.5	0.00	0.00	0.00
4,200.0	13.89	143.59	4,118.5	-561.0	413.8	697.1	0.00	0.00	0.00
4,240.0	13.89	143.59	4,157.4	-568.7	419.5	706.7	0.00	0.00	0.00
4,280.0	13.89	143.59	4,196.2	-576.4	425.2	716.3	0.00	0.00	0.00
4,320.0	13.89	143.59	4,235.0	-584.2	430.9	725.9	0.00	0.00	0.00
4,360.0	13.89	143.59	4,273.9	-591.9	436.6	735.5	0.00	0.00	0.00
4,400.0	13.89	143.59	4,312.7	-599.6	442.3	745.1	0.00	0.00	0.00
4,440.0	13.89	143.59	4,351.5	-607.3	448.0	754.7	0.00	0.00	0.00
4,480.0	13.89	143.59	4,390.3	-615.1	453.7	764.3	0.00	0.00	0.00
4,520.0	13.89	143.59	4,429.2	-622.8	459.4	773.9	0.00	0.00	0.00
4,560.0	13.89	143.59	4,468.0	-630.5	465.1	783.5	0.00	0.00	0.00
4,600.0	13.89	143.59	4,506.8	-638.2	470.8	793.1	0.00	0.00	0.00
4,605.8	13.89	143.59	4,512.5	-639.4	471.6	794.5	0.00	0.00	0.00
4,640.0	13.20	143.59	4,545.7	-645.8	476.3	802.5	2.00	-2.00	0.00
4,680.0	12.40	143.59	4,584.7	-652.9	481.6	811.3	2.00	-2.00	0.00
4,720.0	11.60	143.59	4,623.8	-659.6	486.5	819.7	2.00	-2.00	0.00
4,760.0	10.80	143.59	4,663.1	-665.9	491.2	827.4	2.00	-2.00	0.00
4,800.0	10.00	143.59	4,702.4	-671.7	495.4	834.7	2.00	-2.00	0.00
4,840.0	9.20	143.59	4,741.9	-677.1	499.4	841.3	2.00	-2.00	0.00
4,880.0	8.40	143.59	4,781.4	-682.0	503.0	847.4	2.00	-2.00	0.00
4,920.0	7.60	143.59	4,821.0	-686.5	506.3	853.0	2.00	-2.00	0.00
4,960.0	6.80	143.59	4,860.7	-690.5	509.3	858.0	2.00	-2.00	0.00
5,000.0	6.00	143.59	4,900.4	-694.1	512.0	862.5	2.00	-2.00	0.00
5,040.0	5.20	143.59	4,940.3	-697.2	514.3	866.4	2.00	-2.00	0.00
5,080.0	4.40	143.59	4,980.1	-699.9	516.3	869.7	2.00	-2.00	0.00
5,120.0	3.60	143.59	5,020.0	-702.2	517.9	872.5	2.00	-2.00	0.00
5,160.0	2.80	143.59	5,059.9	-704.0	519.3	874.8	2.00	-2.00	0.00
5,200.0	2.00	143.59	5,099.9	-705.3	520.3	876.4	2.00	-2.00	0.00
5,240.0	1.20	143.59	5,139.9	-706.2	520.9	877.6	2.00	-2.00	0.00
5,280.0	0.40	143.59	5,179.9	-706.7	521.2	878.1	2.00	-2.00	0.00
5,300.1	0.00	0.00	5,200.0	-706.7	521.3	878.2	2.00	-2.00	-714.13
TARGET BHL 2550'FSL, 75'FEL									
5,320.0	0.00	0.00	5,219.9	-706.7	521.3	878.2	0.00	0.00	0.00
5,360.0	0.00	0.00	5,259.9	-706.7	521.3	878.2	0.00	0.00	0.00
5,400.0	0.00	0.00	5,299.9	-706.7	521.3	878.2	0.00	0.00	0.00
5,440.0	0.00	0.00	5,339.9	-706.7	521.3	878.2	0.00	0.00	0.00
5,480.0	0.00	0.00	5,379.9	-706.7	521.3	878.2	0.00	0.00	0.00
5,520.0	0.00	0.00	5,419.9	-706.7	521.3	878.2	0.00	0.00	0.00
5,560.0	0.00	0.00	5,459.9	-706.7	521.3	878.2	0.00	0.00	0.00
5,600.0	0.00	0.00	5,499.9	-706.7	521.3	878.2	0.00	0.00	0.00
5,640.0	0.00	0.00	5,539.9	-706.7	521.3	878.2	0.00	0.00	0.00
5,680.0	0.00	0.00	5,579.9	-706.7	521.3	878.2	0.00	0.00	0.00
5,720.0	0.00	0.00	5,619.9	-706.7	521.3	878.2	0.00	0.00	0.00
5,760.0	0.00	0.00	5,659.9	-706.7	521.3	878.2	0.00	0.00	0.00
5,800.0	0.00	0.00	5,699.9	-706.7	521.3	878.2	0.00	0.00	0.00
5,840.0	0.00	0.00	5,739.9	-706.7	521.3	878.2	0.00	0.00	0.00
5,880.0	0.00	0.00	5,779.9	-706.7	521.3	878.2	0.00	0.00	0.00
5,920.0	0.00	0.00	5,819.9	-706.7	521.3	878.2	0.00	0.00	0.00
5,960.0	0.00	0.00	5,859.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,000.0	0.00	0.00	5,899.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,040.0	0.00	0.00	5,939.9	-706.7	521.3	878.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Lower Latham PC G01-32D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4705.0ft (Original Well Elev)
Project:	SEC.2-T4N-R65W	MD Reference:	WELL @ 4705.0ft (Original Well Elev)
Site:	Lower Latham PC G02-22D Pad Sec.2-T4N-R65W	North Reference:	True
Well:	Lower Latham PC G01-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Lower Latham PC G01-32D Plan #1 (4-1)		

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)
6,080.0	0.00	0.00	5,979.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,120.0	0.00	0.00	6,019.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,160.0	0.00	0.00	6,059.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,200.0	0.00	0.00	6,099.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,240.0	0.00	0.00	6,139.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,280.0	0.00	0.00	6,179.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,320.0	0.00	0.00	6,219.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,360.0	0.00	0.00	6,259.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,400.0	0.00	0.00	6,299.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,440.0	0.00	0.00	6,339.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,480.0	0.00	0.00	6,379.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,520.0	0.00	0.00	6,419.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,560.0	0.00	0.00	6,459.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,600.0	0.00	0.00	6,499.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,640.0	0.00	0.00	6,539.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,680.0	0.00	0.00	6,579.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,720.0	0.00	0.00	6,619.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,760.0	0.00	0.00	6,659.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,800.0	0.00	0.00	6,699.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,836.1	0.00	0.00	6,736.0	-706.7	521.3	878.2	0.00	0.00	0.00
NIORARA - TARGET CIRCLE 2550'FSL & 75'FEL									
6,840.0	0.00	0.00	6,739.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,880.0	0.00	0.00	6,779.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,920.0	0.00	0.00	6,819.9	-706.7	521.3	878.2	0.00	0.00	0.00
6,960.0	0.00	0.00	6,859.9	-706.7	521.3	878.2	0.00	0.00	0.00
7,000.0	0.00	0.00	6,899.9	-706.7	521.3	878.2	0.00	0.00	0.00
7,040.0	0.00	0.00	6,939.9	-706.7	521.3	878.2	0.00	0.00	0.00
7,080.0	0.00	0.00	6,979.9	-706.7	521.3	878.2	0.00	0.00	0.00
7,120.0	0.00	0.00	7,019.9	-706.7	521.3	878.2	0.00	0.00	0.00
7,130.1	0.00	0.00	7,030.0	-706.7	521.3	878.2	0.00	0.00	0.00
CODELL									
7,160.0	0.00	0.00	7,059.9	-706.7	521.3	878.2	0.00	0.00	0.00
7,200.0	0.00	0.00	7,099.9	-706.7	521.3	878.2	0.00	0.00	0.00
7,240.0	0.00	0.00	7,139.9	-706.7	521.3	878.2	0.00	0.00	0.00
7,280.0	0.00	0.00	7,179.9	-706.7	521.3	878.2	0.00	0.00	0.00
7,280.1	0.00	0.00	7,180.0	-706.7	521.3	878.2	0.00	0.00	0.00
HARD LINES 93'N & 75'E OF BHL									

Database:	Landmark	Local Co-ordinate Reference:	Well Lower Latham PC G01-32D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4705.0ft (Original Well Elev)
Project:	SEC.2-T4N-R65W	MD Reference:	WELL @ 4705.0ft (Original Well Elev)
Site:	Lower Latham PC G02-22D Pad Sec.2-T4N-R65W	North Reference:	True
Well:	Lower Latham PC G01-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Lower Latham PC G01-32D Plan #1 (4-1		

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
TARGET BHL 2550'F:	0.00	0.00	5,200.0	-706.7	521.3	1,368,371.98	3,244,968.57	40.341250	-104.621180
- plan hits target center									
- Point									
TARGET CIRCLE 255	0.00	0.00	6,736.0	-706.7	521.3	1,368,371.98	3,244,968.57	40.341250	-104.621180
- plan hits target center									
- Circle (radius 75.0)									
HARD LINES 93'N & 1	0.00	0.00	7,180.0	-613.7	596.3	1,368,465.76	3,245,042.66	40.341505	-104.620911
- plan misses target center by 119.5ft at 7280.1ft MD (7180.0 TVD, -706.7 N, 521.3 E)									
- Polygon									
Point 1			7,180.0	0.0	0.0	1,368,465.76	3,245,042.66		
Point 2			7,180.0	-200.0	0.0	1,368,265.78	3,245,044.63		
Point 3			7,180.0	0.0	0.0	1,368,465.76	3,245,042.66		
Point 4			7,180.0	0.0	-200.0	1,368,463.78	3,244,842.67		

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
650.0	650.0	8 5/8"	8-5/8	12-1/4

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,836.1	6,736.0	NIOBRARA		0.00	
7,130.1	7,030.0	CODELL		0.00	