

# ENSIGN

## Directional

### Well Name: Easton G12-20D

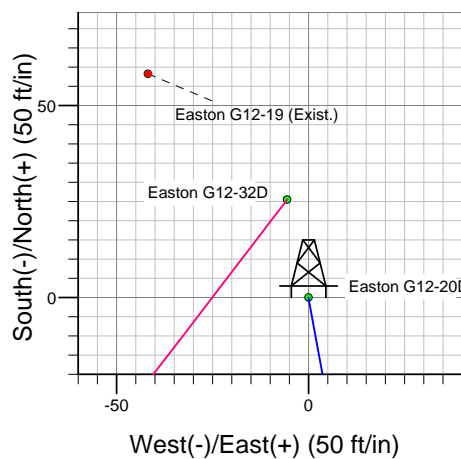
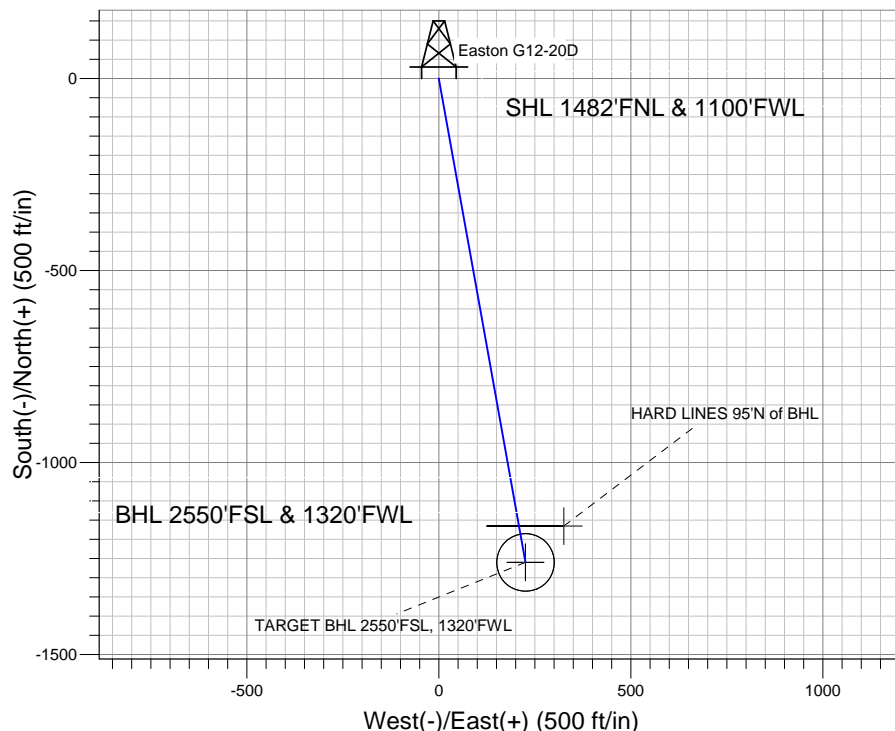
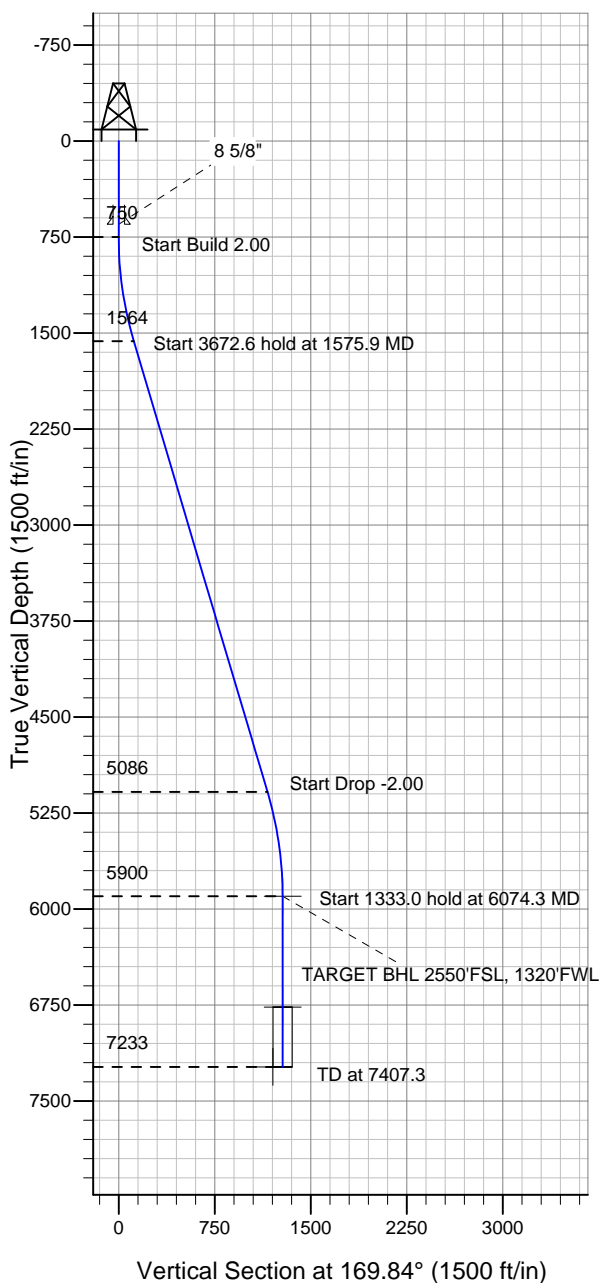
Surface Location: Easton G12-20D Pad Sec.12-T4N-R65W  
North American Datum 1983 US State Plane 1983 Colorado Northern Zone

Ground Elevation: 4760.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1364325.56	3246176.89	40° 19' 48.396 N	104° 37' 1.164 W	

Original Well Elev WELL @ 4773.0ft (Original Well Elev)

### NOBLE ENERGY INC WELD COUNTY CO



Easton G12-20D Pad Sec.12-T4N-R65W  
Easton G12-20D  
Noble Easton G12-20D Plan #1 (11-22-10)  
10:23, November 24 2010



Azimuths to True North  
Magnetic North: 8.85°

Magnetic Field  
Strength: 53170.3snT  
Dip Angle: 67.04°  
Date: 11/23/2010  
Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 2550'FSL, 1320'FWL	5900.0	-1260.5	225.8	40° 19' 35.940 N	104° 36' 58.248 W	Point
TARGET CIRCLE 2550'FSL, 1320'FWL	6767.0	-1260.5	225.8	40° 19' 35.940 N	104° 36' 58.248 W	Circle (Radius: 75.0)
HARD LINES 95°N of BHL	7233.0	-1165.5	325.8	40° 19' 36.879 N	104° 36' 56.957 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	750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.0	
3	1575.9	16.52	169.84	1564.5	-116.4	20.8	2.00	169.84	118.2	
4	5248.5	16.52	169.84	5085.5	-1144.1	205.0	0.00	0.00	1162.3	
5	6074.3	0.00	0.00	5900.0	-1260.5	225.8	2.00	180.00	1280.6	TARGET BHL 2550'FSL, 1320'FWL
6	7407.3	0.00	0.00	7233.0	-1260.5	225.8	0.00	0.00	1280.6	



## **Directional**

# **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.12-T4N-R65W**

**Easton G12-20D Pad Sec.12-T4N-R65W**

**Easton G12-20D**

**Wellbore #1**

**Plan: Noble Easton G12-20D Plan #1 (11-22-10)**

## **Standard Planning Report**

**24 November, 2010**



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Easton G12-20D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4773.0ft (Original Well Elev)
<b>Project:</b>	SEC.12-T4N-R65W	<b>MD Reference:</b>	WELL @ 4773.0ft (Original Well Elev)
<b>Site:</b>	Easton G12-20D Pad Sec.12-T4N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Easton G12-20D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Easton G12-20D Plan #1 (11-22-10)		

<b>Project</b>	SEC.12-T4N-R65W, Weld County, Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site						Easton G12-20D Pad Sec.12-T4N-R65W											
Site Position:						Northing:			1,364,325.58 ft			Latitude:			40° 19' 48.396 N		
From:			Lat/Long			Easting:			3,246,176.89 ft			Longitude:			104° 37' 1.164 W		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.57 °		

Well	Easton G12-20D					
Well Position	+N/-S	0.0 ft	Northing:	1,364,325.56 ft	Latitude:	40° 19' 48.396 N
	+E/-W	0.0 ft	Easting:	3,246,176.89 ft	Longitude:	104° 37' 1.164 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,760.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	11/23/2010	8.85	67.04	53,170

<b>Design</b>	Noble Easton G12-20D Plan #1 (11-22-10)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	169.84

<b>Plan Sections</b>										
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	
750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,575.9	16.52	169.84	1,564.5	-116.4	20.8	2.00	2.00	0.00	169.84	
5,248.5	16.52	169.84	5,085.5	-1,144.1	205.0	0.00	0.00	0.00	0.00	
6,074.3	0.00	0.00	5,900.0	-1,260.5	225.8	2.00	-2.00	0.00	180.00	TARGET BHL 255C
7,407.3	0.00	0.00	7,233.0	-1,260.5	225.8	0.00	0.00	0.00	0.00	

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<b>Project:</b>	SEC.12-T4N-R65W	<b>MD Reference:</b>	WELL @ 4773.0ft (Original Well Elev)
<b>Site:</b>	Easton G12-20D Pad Sec.12-T4N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Easton G12-20D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Easton G12-20D Plan #1 (11-22-10)		

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
750.0	0.00	0.00	750.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.20	169.84	760.0	0.0	0.0	0.0	2.00	2.00	0.00
800.0	1.00	169.84	800.0	-0.4	0.1	0.4	2.00	2.00	0.00
840.0	1.80	169.84	840.0	-1.4	0.2	1.4	2.00	2.00	0.00
880.0	2.60	169.84	880.0	-2.9	0.5	2.9	2.00	2.00	0.00
920.0	3.40	169.84	919.9	-5.0	0.9	5.0	2.00	2.00	0.00
960.0	4.20	169.84	959.8	-7.6	1.4	7.7	2.00	2.00	0.00
1,000.0	5.00	169.84	999.7	-10.7	1.9	10.9	2.00	2.00	0.00
1,040.0	5.80	169.84	1,039.5	-14.4	2.6	14.7	2.00	2.00	0.00
1,080.0	6.60	169.84	1,079.3	-18.7	3.3	19.0	2.00	2.00	0.00
1,120.0	7.40	169.84	1,119.0	-23.5	4.2	23.9	2.00	2.00	0.00
1,160.0	8.20	169.84	1,158.6	-28.8	5.2	29.3	2.00	2.00	0.00
1,200.0	9.00	169.84	1,198.2	-34.7	6.2	35.3	2.00	2.00	0.00
1,240.0	9.80	169.84	1,237.6	-41.1	7.4	41.8	2.00	2.00	0.00
1,280.0	10.60	169.84	1,277.0	-48.1	8.6	48.9	2.00	2.00	0.00
1,320.0	11.40	169.84	1,316.2	-55.6	10.0	56.5	2.00	2.00	0.00
1,360.0	12.20	169.84	1,355.4	-63.7	11.4	64.7	2.00	2.00	0.00
1,400.0	13.00	169.84	1,394.4	-72.3	12.9	73.4	2.00	2.00	0.00
1,440.0	13.80	169.84	1,433.3	-81.4	14.6	82.7	2.00	2.00	0.00
1,480.0	14.60	169.84	1,472.1	-91.1	16.3	92.5	2.00	2.00	0.00
1,520.0	15.40	169.84	1,510.8	-101.2	18.1	102.9	2.00	2.00	0.00
1,560.0	16.20	169.84	1,549.3	-112.0	20.1	113.7	2.00	2.00	0.00
1,575.9	16.52	169.84	1,564.5	-116.4	20.8	118.2	2.00	2.00	0.00
1,600.0	16.52	169.84	1,587.6	-123.1	22.1	125.1	0.00	0.00	0.00
1,640.0	16.52	169.84	1,626.0	-134.3	24.1	136.5	0.00	0.00	0.00
1,680.0	16.52	169.84	1,664.3	-145.5	26.1	147.8	0.00	0.00	0.00
1,720.0	16.52	169.84	1,702.7	-156.7	28.1	159.2	0.00	0.00	0.00
1,760.0	16.52	169.84	1,741.0	-167.9	30.1	170.6	0.00	0.00	0.00
1,800.0	16.52	169.84	1,779.4	-179.1	32.1	181.9	0.00	0.00	0.00
1,840.0	16.52	169.84	1,817.7	-190.3	34.1	193.3	0.00	0.00	0.00
1,880.0	16.52	169.84	1,856.1	-201.5	36.1	204.7	0.00	0.00	0.00
1,920.0	16.52	169.84	1,894.4	-212.7	38.1	216.1	0.00	0.00	0.00
1,960.0	16.52	169.84	1,932.8	-223.9	40.1	227.4	0.00	0.00	0.00

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<b>Site:</b>	Easton G12-20D Pad Sec.12-T4N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Easton G12-20D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Easton G12-20D Plan #1 (11-22-10)		

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)	
2,000.0	16.52	169.84	1,971.1	-235.1	42.1	238.8	0.00	0.00	0.00	
2,040.0	16.52	169.84	2,009.5	-246.3	44.1	250.2	0.00	0.00	0.00	
2,080.0	16.52	169.84	2,047.8	-257.4	46.1	261.5	0.00	0.00	0.00	
2,120.0	16.52	169.84	2,086.2	-268.6	48.1	272.9	0.00	0.00	0.00	
2,160.0	16.52	169.84	2,124.5	-279.8	50.1	284.3	0.00	0.00	0.00	
2,200.0	16.52	169.84	2,162.9	-291.0	52.1	295.7	0.00	0.00	0.00	
2,240.0	16.52	169.84	2,201.2	-302.2	54.2	307.0	0.00	0.00	0.00	
2,280.0	16.52	169.84	2,239.6	-313.4	56.2	318.4	0.00	0.00	0.00	
2,320.0	16.52	169.84	2,277.9	-324.6	58.2	329.8	0.00	0.00	0.00	
2,360.0	16.52	169.84	2,316.3	-335.8	60.2	341.1	0.00	0.00	0.00	
2,400.0	16.52	169.84	2,354.6	-347.0	62.2	352.5	0.00	0.00	0.00	
2,440.0	16.52	169.84	2,392.9	-358.2	64.2	363.9	0.00	0.00	0.00	
2,480.0	16.52	169.84	2,431.3	-369.4	66.2	375.3	0.00	0.00	0.00	
2,520.0	16.52	169.84	2,469.6	-380.6	68.2	386.6	0.00	0.00	0.00	
2,560.0	16.52	169.84	2,508.0	-391.8	70.2	398.0	0.00	0.00	0.00	
2,600.0	16.52	169.84	2,546.3	-403.0	72.2	409.4	0.00	0.00	0.00	
2,640.0	16.52	169.84	2,584.7	-414.2	74.2	420.8	0.00	0.00	0.00	
2,680.0	16.52	169.84	2,623.0	-425.4	76.2	432.1	0.00	0.00	0.00	
2,720.0	16.52	169.84	2,661.4	-436.5	78.2	443.5	0.00	0.00	0.00	
2,760.0	16.52	169.84	2,699.7	-447.7	80.2	454.9	0.00	0.00	0.00	
2,800.0	16.52	169.84	2,738.1	-458.9	82.2	466.2	0.00	0.00	0.00	
2,840.0	16.52	169.84	2,776.4	-470.1	84.2	477.6	0.00	0.00	0.00	
2,880.0	16.52	169.84	2,814.8	-481.3	86.2	489.0	0.00	0.00	0.00	
2,920.0	16.52	169.84	2,853.1	-492.5	88.2	500.4	0.00	0.00	0.00	
2,960.0	16.52	169.84	2,891.5	-503.7	90.3	511.7	0.00	0.00	0.00	
3,000.0	16.52	169.84	2,929.8	-514.9	92.3	523.1	0.00	0.00	0.00	
3,040.0	16.52	169.84	2,968.2	-526.1	94.3	534.5	0.00	0.00	0.00	
3,080.0	16.52	169.84	3,006.5	-537.3	96.3	545.8	0.00	0.00	0.00	
3,120.0	16.52	169.84	3,044.9	-548.5	98.3	557.2	0.00	0.00	0.00	
3,160.0	16.52	169.84	3,083.2	-559.7	100.3	568.6	0.00	0.00	0.00	
3,200.0	16.52	169.84	3,121.6	-570.9	102.3	580.0	0.00	0.00	0.00	
3,240.0	16.52	169.84	3,159.9	-582.1	104.3	591.3	0.00	0.00	0.00	
3,280.0	16.52	169.84	3,198.3	-593.3	106.3	602.7	0.00	0.00	0.00	
3,320.0	16.52	169.84	3,236.6	-604.5	108.3	614.1	0.00	0.00	0.00	
3,360.0	16.52	169.84	3,275.0	-615.6	110.3	625.5	0.00	0.00	0.00	
3,400.0	16.52	169.84	3,313.3	-626.8	112.3	636.8	0.00	0.00	0.00	
3,440.0	16.52	169.84	3,351.7	-638.0	114.3	648.2	0.00	0.00	0.00	
3,480.0	16.52	169.84	3,390.0	-649.2	116.3	659.6	0.00	0.00	0.00	
3,520.0	16.52	169.84	3,428.4	-660.4	118.3	670.9	0.00	0.00	0.00	
3,560.0	16.52	169.84	3,466.7	-671.6	120.3	682.3	0.00	0.00	0.00	
3,600.0	16.52	169.84	3,505.1	-682.8	122.3	693.7	0.00	0.00	0.00	
3,640.0	16.52	169.84	3,543.4	-694.0	124.3	705.1	0.00	0.00	0.00	
3,680.0	16.52	169.84	3,581.8	-705.2	126.4	716.4	0.00	0.00	0.00	
3,720.0	16.52	169.84	3,620.1	-716.4	128.4	727.8	0.00	0.00	0.00	
3,760.0	16.52	169.84	3,658.5	-727.6	130.4	739.2	0.00	0.00	0.00	
3,800.0	16.52	169.84	3,696.8	-738.8	132.4	750.5	0.00	0.00	0.00	
3,840.0	16.52	169.84	3,735.2	-750.0	134.4	761.9	0.00	0.00	0.00	
3,880.0	16.52	169.84	3,773.5	-761.2	136.4	773.3	0.00	0.00	0.00	
3,920.0	16.52	169.84	3,811.9	-772.4	138.4	784.7	0.00	0.00	0.00	
3,960.0	16.52	169.84	3,850.2	-783.6	140.4	796.0	0.00	0.00	0.00	
4,000.0	16.52	169.84	3,888.6	-794.7	142.4	807.4	0.00	0.00	0.00	
4,040.0	16.52	169.84	3,926.9	-805.9	144.4	818.8	0.00	0.00	0.00	
4,080.0	16.52	169.84	3,965.3	-817.1	146.4	830.1	0.00	0.00	0.00	
4,120.0	16.52	169.84	4,003.6	-828.3	148.4	841.5	0.00	0.00	0.00	

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<b>Project:</b>	SEC.12-T4N-R65W	<b>MD Reference:</b>	WELL @ 4773.0ft (Original Well Elev)
<b>Site:</b>	Easton G12-20D Pad Sec.12-T4N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Easton G12-20D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Easton G12-20D Plan #1 (11-22-10)		

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)
4,160.0	16.52	169.84	4,042.0	-839.5	150.4	852.9	0.00	0.00	0.00
4,200.0	16.52	169.84	4,080.3	-850.7	152.4	864.3	0.00	0.00	0.00
4,240.0	16.52	169.84	4,118.7	-861.9	154.4	875.6	0.00	0.00	0.00
4,280.0	16.52	169.84	4,157.0	-873.1	156.4	887.0	0.00	0.00	0.00
4,320.0	16.52	169.84	4,195.4	-884.3	158.4	898.4	0.00	0.00	0.00
4,360.0	16.52	169.84	4,233.7	-895.5	160.4	909.8	0.00	0.00	0.00
4,400.0	16.52	169.84	4,272.1	-906.7	162.5	921.1	0.00	0.00	0.00
4,440.0	16.52	169.84	4,310.4	-917.9	164.5	932.5	0.00	0.00	0.00
4,480.0	16.52	169.84	4,348.8	-929.1	166.5	943.9	0.00	0.00	0.00
4,520.0	16.52	169.84	4,387.1	-940.3	168.5	955.2	0.00	0.00	0.00
4,560.0	16.52	169.84	4,425.5	-951.5	170.5	966.6	0.00	0.00	0.00
4,600.0	16.52	169.84	4,463.8	-962.7	172.5	978.0	0.00	0.00	0.00
4,640.0	16.52	169.84	4,502.2	-973.8	174.5	989.4	0.00	0.00	0.00
4,680.0	16.52	169.84	4,540.5	-985.0	176.5	1,000.7	0.00	0.00	0.00
4,720.0	16.52	169.84	4,578.9	-996.2	178.5	1,012.1	0.00	0.00	0.00
4,760.0	16.52	169.84	4,617.2	-1,007.4	180.5	1,023.5	0.00	0.00	0.00
4,800.0	16.52	169.84	4,655.6	-1,018.6	182.5	1,034.8	0.00	0.00	0.00
4,840.0	16.52	169.84	4,693.9	-1,029.8	184.5	1,046.2	0.00	0.00	0.00
4,880.0	16.52	169.84	4,732.3	-1,041.0	186.5	1,057.6	0.00	0.00	0.00
4,920.0	16.52	169.84	4,770.6	-1,052.2	188.5	1,069.0	0.00	0.00	0.00
4,960.0	16.52	169.84	4,809.0	-1,063.4	190.5	1,080.3	0.00	0.00	0.00
5,000.0	16.52	169.84	4,847.3	-1,074.6	192.5	1,091.7	0.00	0.00	0.00
5,040.0	16.52	169.84	4,885.7	-1,085.8	194.5	1,103.1	0.00	0.00	0.00
5,080.0	16.52	169.84	4,924.0	-1,097.0	196.6	1,114.4	0.00	0.00	0.00
5,120.0	16.52	169.84	4,962.4	-1,108.2	198.6	1,125.8	0.00	0.00	0.00
5,160.0	16.52	169.84	5,000.7	-1,119.4	200.6	1,137.2	0.00	0.00	0.00
5,200.0	16.52	169.84	5,039.1	-1,130.6	202.6	1,148.6	0.00	0.00	0.00
5,240.0	16.52	169.84	5,077.4	-1,141.8	204.6	1,159.9	0.00	0.00	0.00
5,248.5	16.52	169.84	5,085.5	-1,144.1	205.0	1,162.3	0.00	0.00	0.00
5,280.0	15.89	169.84	5,115.8	-1,152.8	206.5	1,171.1	2.00	-2.00	0.00
5,320.0	15.09	169.84	5,154.4	-1,163.3	208.4	1,181.8	2.00	-2.00	0.00
5,360.0	14.29	169.84	5,193.0	-1,173.3	210.2	1,192.0	2.00	-2.00	0.00
5,400.0	13.49	169.84	5,231.9	-1,182.7	211.9	1,201.6	2.00	-2.00	0.00
5,440.0	12.69	169.84	5,270.8	-1,191.6	213.5	1,210.6	2.00	-2.00	0.00
5,480.0	11.89	169.84	5,309.9	-1,200.0	215.0	1,219.1	2.00	-2.00	0.00
5,520.0	11.09	169.84	5,349.1	-1,207.9	216.4	1,227.1	2.00	-2.00	0.00
5,560.0	10.29	169.84	5,388.4	-1,215.2	217.7	1,234.5	2.00	-2.00	0.00
5,600.0	9.49	169.84	5,427.8	-1,221.9	218.9	1,241.4	2.00	-2.00	0.00
5,640.0	8.69	169.84	5,467.3	-1,228.1	220.1	1,247.7	2.00	-2.00	0.00
5,680.0	7.89	169.84	5,506.9	-1,233.8	221.1	1,253.5	2.00	-2.00	0.00
5,720.0	7.09	169.84	5,546.6	-1,238.9	222.0	1,258.7	2.00	-2.00	0.00
5,760.0	6.29	169.84	5,586.3	-1,243.5	222.8	1,263.3	2.00	-2.00	0.00
5,800.0	5.49	169.84	5,626.1	-1,247.6	223.5	1,267.4	2.00	-2.00	0.00
5,840.0	4.69	169.84	5,665.9	-1,251.1	224.2	1,271.0	2.00	-2.00	0.00
5,880.0	3.89	169.84	5,705.8	-1,254.0	224.7	1,274.0	2.00	-2.00	0.00
5,920.0	3.09	169.84	5,745.7	-1,256.4	225.1	1,276.4	2.00	-2.00	0.00
5,960.0	2.29	169.84	5,785.7	-1,258.2	225.4	1,278.3	2.00	-2.00	0.00
6,000.0	1.49	169.84	5,825.7	-1,259.5	225.7	1,279.6	2.00	-2.00	0.00
6,040.0	0.69	169.84	5,865.7	-1,260.3	225.8	1,280.4	2.00	-2.00	0.00
6,074.3	0.00	0.00	5,900.0	-1,260.5	225.8	1,280.6	2.00	-2.00	0.00
TARGET BHL 2550'FSL, 1320'FWL									
6,080.0	0.00	0.00	5,905.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,120.0	0.00	0.00	5,945.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,160.0	0.00	0.00	5,985.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Easton G12-20D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4773.0ft (Original Well Elev)
<b>Project:</b>	SEC.12-T4N-R65W	<b>MD Reference:</b>	WELL @ 4773.0ft (Original Well Elev)
<b>Site:</b>	Easton G12-20D Pad Sec.12-T4N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Easton G12-20D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Easton G12-20D Plan #1 (11-22-10)		

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)
6,200.0	0.00	0.00	6,025.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,240.0	0.00	0.00	6,065.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,280.0	0.00	0.00	6,105.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,320.0	0.00	0.00	6,145.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,360.0	0.00	0.00	6,185.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,400.0	0.00	0.00	6,225.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,440.0	0.00	0.00	6,265.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,480.0	0.00	0.00	6,305.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,520.0	0.00	0.00	6,345.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,560.0	0.00	0.00	6,385.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,600.0	0.00	0.00	6,425.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,640.0	0.00	0.00	6,465.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,680.0	0.00	0.00	6,505.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,720.0	0.00	0.00	6,545.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,760.0	0.00	0.00	6,585.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,800.0	0.00	0.00	6,625.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,840.0	0.00	0.00	6,665.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,880.0	0.00	0.00	6,705.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,920.0	0.00	0.00	6,745.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
6,941.3	0.00	0.00	6,767.0	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 2550'FSL, 1320'FWL									
6,960.0	0.00	0.00	6,785.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
7,000.0	0.00	0.00	6,825.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
7,040.0	0.00	0.00	6,865.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
7,080.0	0.00	0.00	6,905.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
7,120.0	0.00	0.00	6,945.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
7,160.0	0.00	0.00	6,985.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
7,200.0	0.00	0.00	7,025.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
7,240.0	0.00	0.00	7,065.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
7,257.3	0.00	0.00	7,083.0	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
CODELL									
7,280.0	0.00	0.00	7,105.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
7,320.0	0.00	0.00	7,145.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
7,360.0	0.00	0.00	7,185.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
7,400.0	0.00	0.00	7,225.7	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
7,407.3	0.00	0.00	7,233.0	-1,260.5	225.8	1,280.6	0.00	0.00	0.00
HARD LINES 95'N of BHL									



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Easton G12-20D
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	WELL @ 4773.0ft (Original Well Elev)
<b>Project:</b>	SEC.12-T4N-R65W	<b>MD Reference:</b>	WELL @ 4773.0ft (Original Well Elev)
<b>Site:</b>	Easton G12-20D Pad Sec.12-T4N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Easton G12-20D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Noble Easton G12-20D Plan #1 (11-22-10)		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
TARGET CIRCLE 25' - plan hits target	0.00	0.00	6,767.0	-1,260.5	225.8	1,363,067.44	3,246,415.27	40° 19' 35.940 N	104° 36' 58.248 W
- Circle (radius 75.0)									
TARGET BHL 2550'F - plan hits target	0.00	0.00	5,900.0	-1,260.5	225.8	1,363,067.44	3,246,415.27	40° 19' 35.940 N	104° 36' 58.248 W
- Point									
HARD LINES 95'N of - plan misses by 137.9ft at 7407.3ft MD (7233.0 TVD, -1260.5 N, 225.8 E)	0.00	0.00	7,233.0	-1,165.5	325.8	1,363,163.42	3,246,514.27	40° 19' 36.879 N	104° 36' 56.957 W
- Polygon									
Point 1			7,233.0	0.0	0.0	1,363,163.42	3,246,514.27		
Point 2			7,233.0	0.0	-200.0	1,363,161.43	3,246,314.29		

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 (°)
6,941.3	6,767.0	NIOBRARA		0.00	
7,257.3	7,083.0	CODELL		0.00	