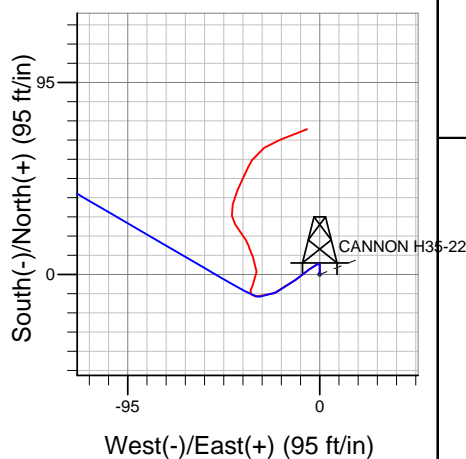
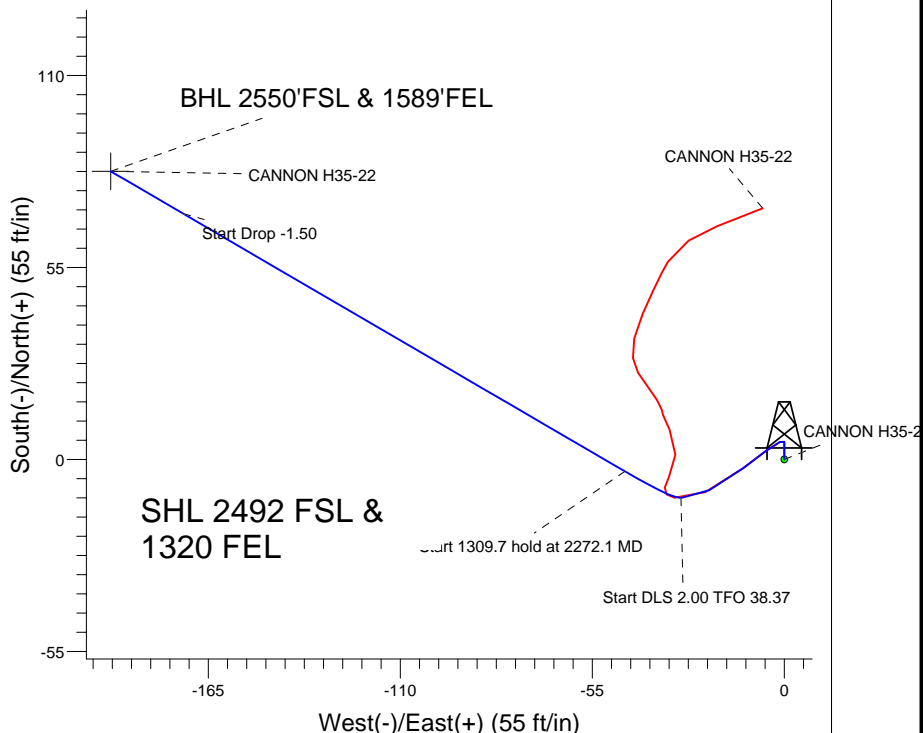


### NOBLE ENERGY INC WELD COUNTY CO



CANNON H35-22  
PLAN 1 (JULY 26, 2011)  
13:32, July 26 2011

Azimuths to True North  
Magnetic North: 8.76°

Magnetic Field  
Strength: 53059.0snT  
Dip Angle: 66.89°  
Date: 7/26/2011  
Model: IGRF2010

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

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape Point
BHL 2550'FSL & 1589'FEL	4000.0	82.6	-193.0	40.181407	-104.627191	

#### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	2000.0	1.20	268.52	1999.5	-11.0	-29.6	0.00	0.00	22.9	
2	2272.1	6.43	300.25	2270.9	-3.4	-45.6	2.00	38.37	40.6	
3	3581.8	6.43	300.25	3572.4	70.5	-172.3	0.00	0.00	186.1	
4	4010.3	0.00	0.00	4000.0	82.6	-193.0	1.50	180.00	209.9	BHL 2550'FSL & 1589'FEL
5	7760.3	0.00	0.00	7750.0	82.6	-193.0	0.00	0.00	209.9	



## **Directional**

# **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.35-T3N-R65W**

**CANNON H 35-22 PAD 35-3N-65W**

**CANNON H35-22**

**Wellbore #1**

**Plan: PLAN 1 (JULY 26,2011)**

## **Standard Planning Report**

**26 July, 2011**



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well CANNON H35-22
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	RKB @ 4852.0ft (RKB CADE 21)
<b>Project:</b>	SEC.35-T3N-R65W	<b>MD Reference:</b>	RKB @ 4852.0ft (RKB CADE 21)
<b>Site:</b>	CANNON H 35-22 PAD 35-3N-65W	<b>North Reference:</b>	True
<b>Well:</b>	CANNON H35-22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN 1 (JULY 26,2011)		

<b>Project</b>	SEC.35-T3N-R65W		
<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						CANNON H 35-22 PAD 35-3N-65W							
Site Position:						Northing:		1,310,048.74 ft		Latitude:		40.181180	
From:			Lat/Long			Easting:		3,244,060.08 ft		Longitude:		-104.626500	
Position Uncertainty:			0.0 ft			Slot Radius:		"		Grid Convergence:		0.56 °	

Well	CANNON H35-22					
Well Position	+N/-S	0.0 ft	Northing:	1,310,048.74 ft	Latitude:	40.181180
	+E/-W	0.0 ft	Easting:	3,244,060.08 ft	Longitude:	-104.626500
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,839.0 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	7/26/2011	8.76	66.89	53,059

<b>Design</b>	PLAN 1 (JULY 26,2011)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	2,000.0
<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	293.15
	4,500.0	0.0	0.0	293.15

<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
2,000.0	1.20	268.52	1,999.5	-11.0	-29.6	0.00	0.00	0.00	0.00	
2,272.1	6.43	300.25	2,270.9	-3.4	-45.6	2.00	1.92	11.66	38.37	
3,581.8	6.43	300.25	3,572.4	70.5	-172.3	0.00	0.00	0.00	0.00	
4,010.3	0.00	0.00	4,000.0	82.6	-193.0	1.50	-1.50	0.00	180.00	BHL 2550'FSL & 15
7,760.3	0.00	0.00	7,750.0	82.6	-193.0	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well CANNON H35-22
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	RKB @ 4852.0ft (RKB CADE 21)
<b>Project:</b>	SEC.35-T3N-R65W	<b>MD Reference:</b>	RKB @ 4852.0ft (RKB CADE 21)
<b>Site:</b>	CANNON H 35-22 PAD 35-3N-65W	<b>North Reference:</b>	True
<b>Well:</b>	CANNON H35-22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN 1 (JULY 26,2011)		

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	1.20	268.52	1,999.5	-11.0	-29.6	22.9	0.00	0.00	0.00
2,100.0	3.03	292.68	2,099.4	-10.0	-33.1	26.5	2.00	1.83	24.16
2,200.0	5.00	298.33	2,199.2	-6.9	-39.4	33.5	2.00	1.96	5.65
2,272.1	6.43	300.25	2,270.9	-3.4	-45.6	40.6	2.00	1.98	2.67
2,300.0	6.43	300.25	2,298.6	-1.8	-48.3	43.7	0.00	0.00	0.00
2,400.0	6.43	300.25	2,398.0	3.8	-58.0	54.8	0.00	0.00	0.00
2,500.0	6.43	300.25	2,497.4	9.4	-67.7	65.9	0.00	0.00	0.00
2,600.0	6.43	300.25	2,596.7	15.1	-77.4	77.0	0.00	0.00	0.00
2,700.0	6.43	300.25	2,696.1	20.7	-87.0	88.2	0.00	0.00	0.00
2,800.0	6.43	300.25	2,795.5	26.4	-96.7	99.3	0.00	0.00	0.00
2,900.0	6.43	300.25	2,894.9	32.0	-106.4	110.4	0.00	0.00	0.00
3,000.0	6.43	300.25	2,994.2	37.6	-116.0	121.5	0.00	0.00	0.00
3,100.0	6.43	300.25	3,093.6	43.3	-125.7	132.6	0.00	0.00	0.00
3,200.0	6.43	300.25	3,193.0	48.9	-135.4	143.7	0.00	0.00	0.00
3,300.0	6.43	300.25	3,292.3	54.6	-145.0	154.8	0.00	0.00	0.00
3,400.0	6.43	300.25	3,391.7	60.2	-154.7	165.9	0.00	0.00	0.00
3,500.0	6.43	300.25	3,491.1	65.8	-164.4	177.0	0.00	0.00	0.00
3,581.8	6.43	300.25	3,572.4	70.5	-172.3	186.1	0.00	0.00	0.00
3,600.0	6.15	300.25	3,590.5	71.5	-174.0	188.1	1.50	-1.50	0.00
3,700.0	4.65	300.25	3,690.0	76.2	-182.1	197.4	1.50	-1.50	0.00
3,800.0	3.15	300.25	3,789.8	79.6	-188.0	204.2	1.50	-1.50	0.00
3,900.0	1.65	300.25	3,889.7	81.7	-191.6	208.4	1.50	-1.50	0.00
4,000.0	0.15	300.25	3,989.7	82.5	-193.0	209.9	1.50	-1.50	0.00
4,010.3	0.00	0.00	4,000.0	82.6	-193.0	209.9	1.50	-1.50	0.00
4,100.0	0.00	0.00	4,089.7	82.6	-193.0	209.9	0.00	0.00	0.00
4,200.0	0.00	0.00	4,189.7	82.6	-193.0	209.9	0.00	0.00	0.00
4,300.0	0.00	0.00	4,289.7	82.6	-193.0	209.9	0.00	0.00	0.00
4,400.0	0.00	0.00	4,389.7	82.6	-193.0	209.9	0.00	0.00	0.00
4,500.0	0.00	0.00	4,489.7	82.6	-193.0	209.9	0.00	0.00	0.00
4,600.0	0.00	0.00	4,589.7	82.6	-193.0	209.9	0.00	0.00	0.00
4,700.0	0.00	0.00	4,689.7	82.6	-193.0	209.9	0.00	0.00	0.00
4,800.0	0.00	0.00	4,789.7	82.6	-193.0	209.9	0.00	0.00	0.00
4,900.0	0.00	0.00	4,889.7	82.6	-193.0	209.9	0.00	0.00	0.00
5,000.0	0.00	0.00	4,989.7	82.6	-193.0	209.9	0.00	0.00	0.00
5,100.0	0.00	0.00	5,089.7	82.6	-193.0	209.9	0.00	0.00	0.00
5,200.0	0.00	0.00	5,189.7	82.6	-193.0	209.9	0.00	0.00	0.00
5,300.0	0.00	0.00	5,289.7	82.6	-193.0	209.9	0.00	0.00	0.00
5,400.0	0.00	0.00	5,389.7	82.6	-193.0	209.9	0.00	0.00	0.00
5,500.0	0.00	0.00	5,489.7	82.6	-193.0	209.9	0.00	0.00	0.00
5,600.0	0.00	0.00	5,589.7	82.6	-193.0	209.9	0.00	0.00	0.00
5,700.0	0.00	0.00	5,689.7	82.6	-193.0	209.9	0.00	0.00	0.00
5,800.0	0.00	0.00	5,789.7	82.6	-193.0	209.9	0.00	0.00	0.00
5,900.0	0.00	0.00	5,889.7	82.6	-193.0	209.9	0.00	0.00	0.00
6,000.0	0.00	0.00	5,989.7	82.6	-193.0	209.9	0.00	0.00	0.00
6,100.0	0.00	0.00	6,089.7	82.6	-193.0	209.9	0.00	0.00	0.00
6,200.0	0.00	0.00	6,189.7	82.6	-193.0	209.9	0.00	0.00	0.00
6,300.0	0.00	0.00	6,289.7	82.6	-193.0	209.9	0.00	0.00	0.00
6,400.0	0.00	0.00	6,389.7	82.6	-193.0	209.9	0.00	0.00	0.00
6,500.0	0.00	0.00	6,489.7	82.6	-193.0	209.9	0.00	0.00	0.00
6,600.0	0.00	0.00	6,589.7	82.6	-193.0	209.9	0.00	0.00	0.00
6,700.0	0.00	0.00	6,689.7	82.6	-193.0	209.9	0.00	0.00	0.00
6,800.0	0.00	0.00	6,789.7	82.6	-193.0	209.9	0.00	0.00	0.00
6,900.0	0.00	0.00	6,889.7	82.6	-193.0	209.9	0.00	0.00	0.00
7,000.0	0.00	0.00	6,989.7	82.6	-193.0	209.9	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well CANNON H35-22
<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>TVD Reference:</b>	RKB @ 4852.0ft (RKB CADE 21)
<b>Project:</b>	SEC.35-T3N-R65W	<b>MD Reference:</b>	RKB @ 4852.0ft (RKB CADE 21)
<b>Site:</b>	CANNON H 35-22 PAD 35-3N-65W	<b>North Reference:</b>	True
<b>Well:</b>	CANNON H35-22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN 1 (JULY 26,2011)		

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)
7,100.0	0.00	0.00	7,089.7	82.6	-193.0	209.9	0.00	0.00	0.00
7,200.0	0.00	0.00	7,189.7	82.6	-193.0	209.9	0.00	0.00	0.00
7,300.0	0.00	0.00	7,289.7	82.6	-193.0	209.9	0.00	0.00	0.00
7,400.0	0.00	0.00	7,389.7	82.6	-193.0	209.9	0.00	0.00	0.00
7,500.0	0.00	0.00	7,489.7	82.6	-193.0	209.9	0.00	0.00	0.00
7,600.0	0.00	0.00	7,589.7	82.6	-193.0	209.9	0.00	0.00	0.00
7,700.0	0.00	0.00	7,689.7	82.6	-193.0	209.9	0.00	0.00	0.00
7,760.3	0.00	0.00	7,750.0	82.6	-193.0	209.9	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									
BHL 2550'FSL & 1589	0.00	0.00	4,000.0	82.6	-193.0	1,310,129.38	3,243,866.26	40.181407	-104.627191
- plan hits target center									
- Point									