

ENSIGN

Directional

Well Name: Harper USX EE27-01D

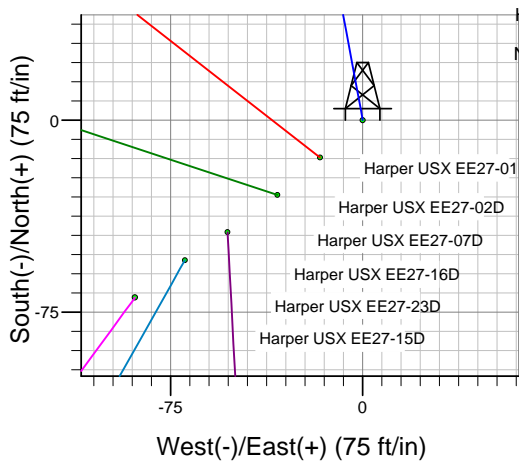
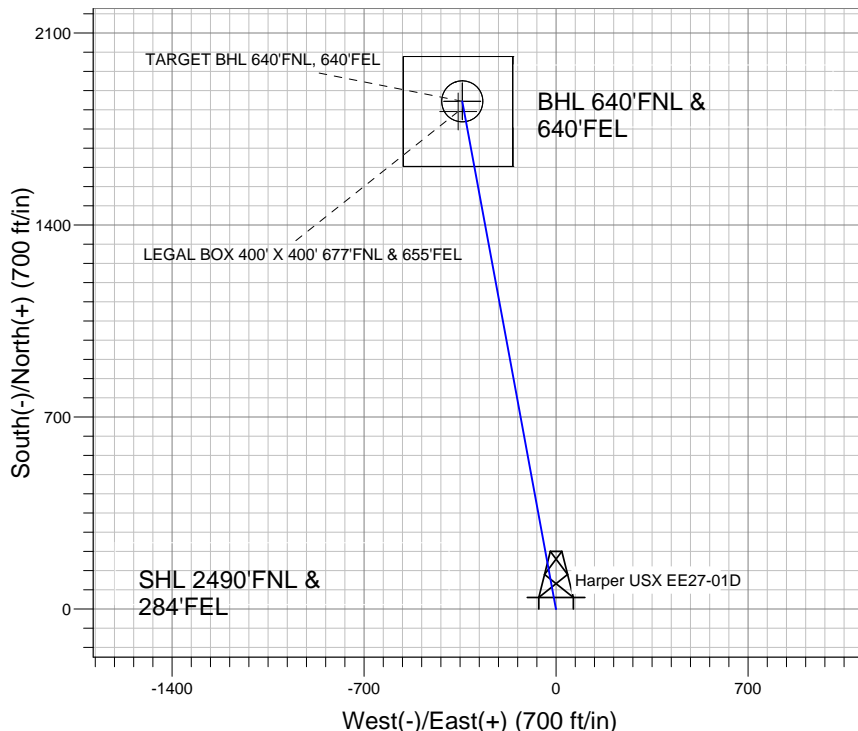
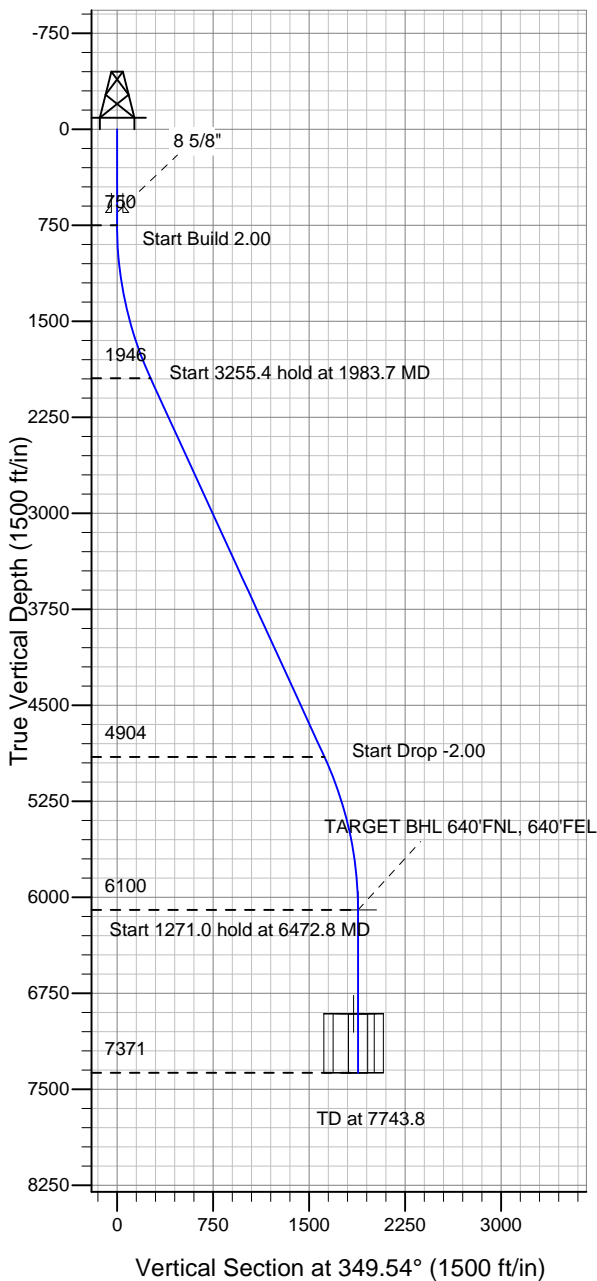
Surface Location: Harper USX EE27-01D Pad Sec.27-T7N-R65W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4868.0

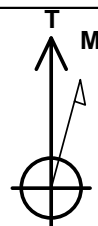
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1443200.43	3238765.81	40.546810	-104.640830	

Original Well Elev WELL @ 4881.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Harper USX EE27-01D Pad Sec.27-T7N-R65W
Harper USX EE27-01D
Noble Harper USX EE27-01D Plan #1 (4-27-11)
15:21, April 28 2011



Azimuths to True North
Magnetic North: 8.83°

Magnetic Field
Strength: 53235.5snT
Dip Angle: 67.19°
Date: 4/27/2011
Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 640'FNL, 640'FEL	6100.0	1850.8	-341.8	40.551890	-104.642060	Point
LEGAL BOX 400' X 400' 677'FNL & 655'FEL	6911.0	1813.8	-356.8	40.551789	-104.642114	Rectangle (Sides: L400.0 W400.0)
TARGET CIRCLE 640'FNL & 640'FEL	6911.0	1850.8	-341.8	40.551890	-104.642060	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	750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.0	
3	1983.7	24.67	349.54	1945.9	257.2	-47.5	2.00	349.54	261.6	
4	5239.1	24.67	349.54	4904.1	1593.6	-294.3	0.00	0.00	1620.5	
5	6472.8	0.00	0.00	6100.0	1850.8	-341.8	2.00	180.00	1882.1	TARGET BHL 640'FNL, 640'FEL
6	7743.8	0.00	0.00	7371.0	1850.8	-341.8	0.00	0.00	1882.1	