

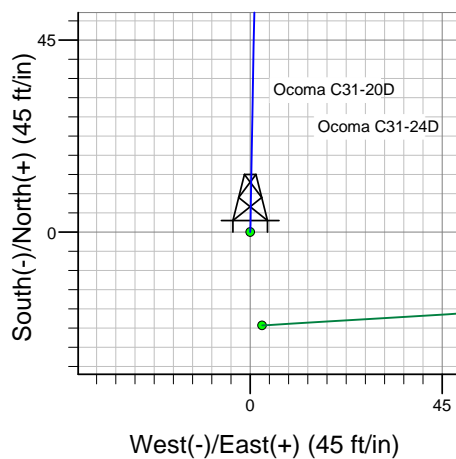
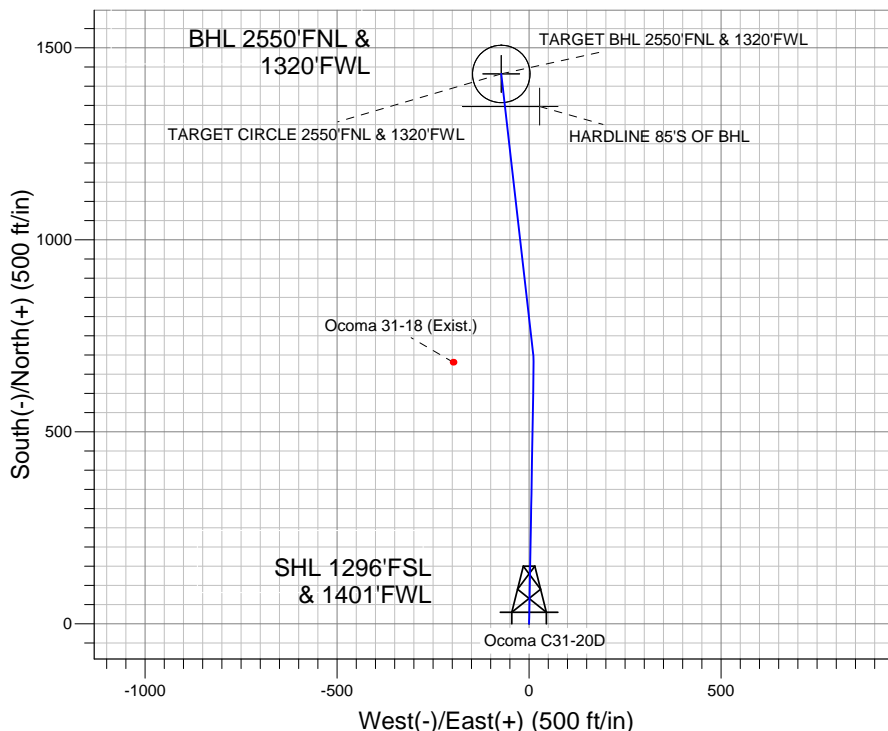
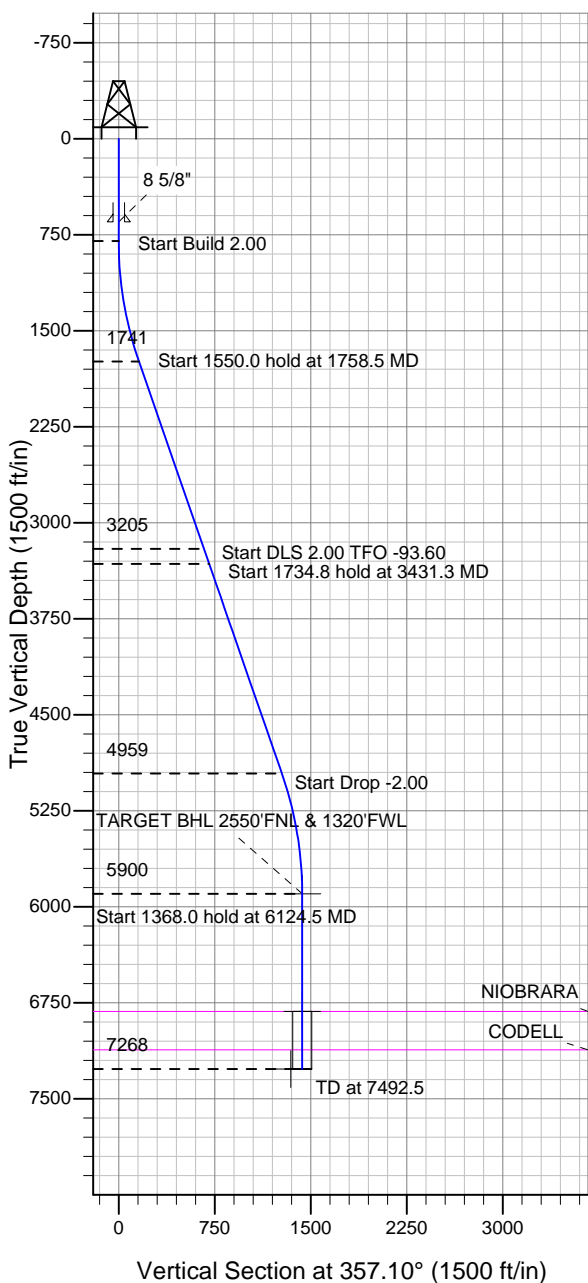
ENSIGN

Directional

Well Name: Ocoma C31-20D

Surface Location: Ocoma C31-20D Pad Sec.31-T4N-R64W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 4865.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1340699.33 3251879.31 40.265100 -104.597400
 Original Well Elev WELL @ 4878.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Ocoma C31-20D Pad Sec.31-T4N-R64W
 Ocoma C31-20D
 Noble Ocoma C31-20D Plan #1 8-26-11
 14:44, August 26 2011



Azimuths to True North
 Magnetic North: 8.74°

Magnetic Field
 Strength: 53057.5nT
 Dip Angle: 66.96°
 Date: 8/26/2011
 Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 2550'FNL & 1320'FWL	5900.0	1431.7	-72.6	40.269030	-104.597660	Point
TARGET CIRCLE 2550'FNL & 1320'FWL	6818.0	1431.7	-72.6	40.269030	-104.597660	Circle (Radius: 75.0)
HARDLINE 85'S OF BHL	7268.0	1347.0	27.4	40.268798	-104.597302	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	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1758.5	19.17	1.00	1740.7	158.8	2.8	2.00	1.00	158.5	
4	3308.5	19.17	1.00	3204.8	667.7	11.7	0.00	0.00	666.3	
5	3431.3	19.17	353.51	3320.8	707.9	9.7	2.00	-93.60	706.5	
6	5166.1	19.17	353.51	4959.4	1273.9	-54.6	0.00	0.00	1275.0	
7	6124.5	0.00	0.00	5900.0	1431.7	-72.6	2.00	180.00	1433.5	TARGET BHL 2550'FNL & 1320'FWL
8	7492.5	0.00	0.00	7268.0	1431.7	-72.6	0.00	0.00	1433.5	