

ENSIGN

Directional

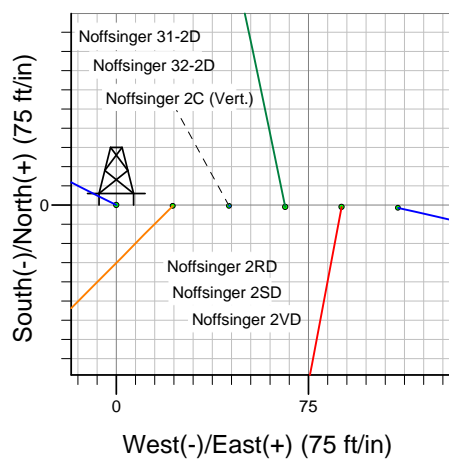
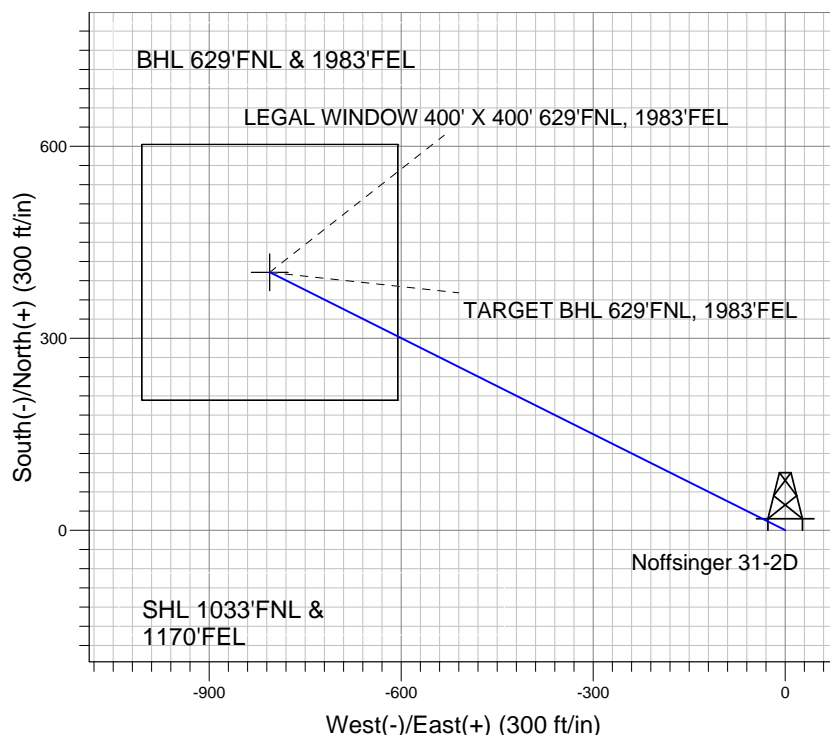
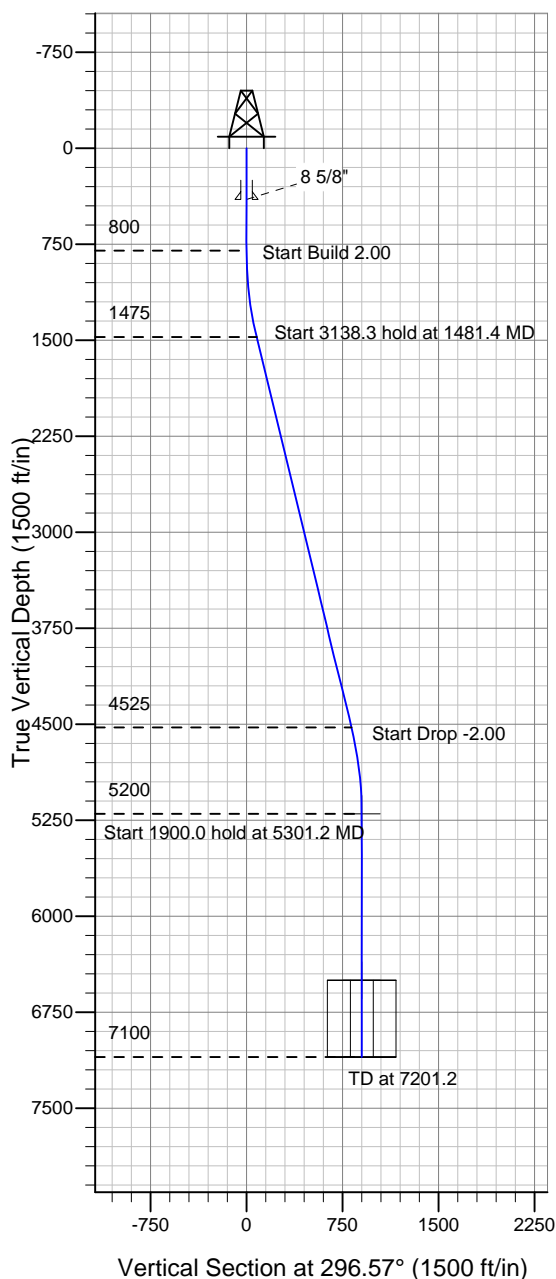
Well Name: Noffsinger 31-2D

Surface Location: Noffsinger Pad Sec.2-T5N-R65W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4647.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1401529.35	3243578.17	40° 25' 56.283 N	104° 37' 29.978 W	
Original Well Elev WELL @ 4660.0ft (Original Well Elev)						

PETROLEUM DEVELOPMENT CORP Weld County CO



Noffsinger 31-2D
Plan #2 (6-15-10)
11:46, June 18 2010



Azimuths to True North
Magnetic North: 9.11°
Magnetic Field
Strength: 53461.2snT
Dip Angle: 67.20°
Date: 10/21/2008
Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 629'FNL, 1983'FEL	5200.0	403.0	-805.6	40° 26' 0.265 N	104° 37' 40.397 W	Point
LEGAL WINDOW 400' X 400' 629'FNL, 1983'FEL	6500.0	403.0	-805.6	40° 26' 0.266 N	104° 37' 40.396 W	Rectangle (Sides: L400.0 W400.0)

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	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1481.4	13.63	296.57	1475.0	36.1	-72.1	2.00	296.57	80.7	
4	4619.7	13.63	296.57	4525.0	366.9	-733.5	0.00	0.00	820.1	
5	5301.2	0.00	0.00	5200.0	403.0	-805.6	2.00	180.00	900.8	TARGET BHL 629'FNL, 1983'FEL
6	7201.2	0.00	0.00	7100.0	403.0	-805.6	0.00	0.00	900.8	