

ENSIGN

Directional

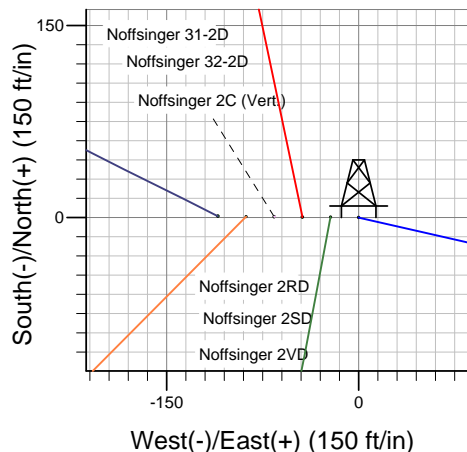
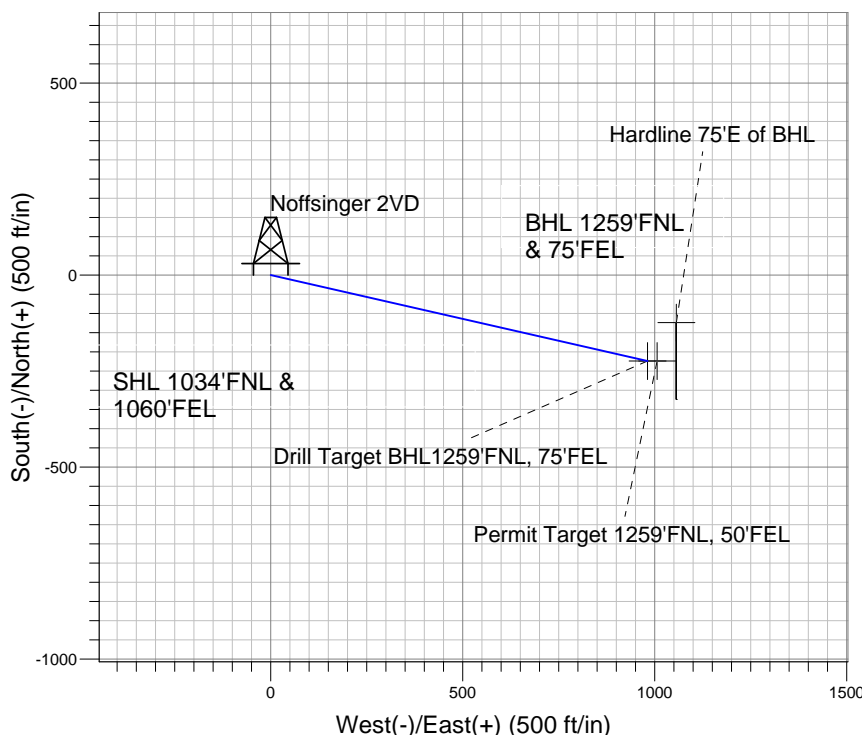
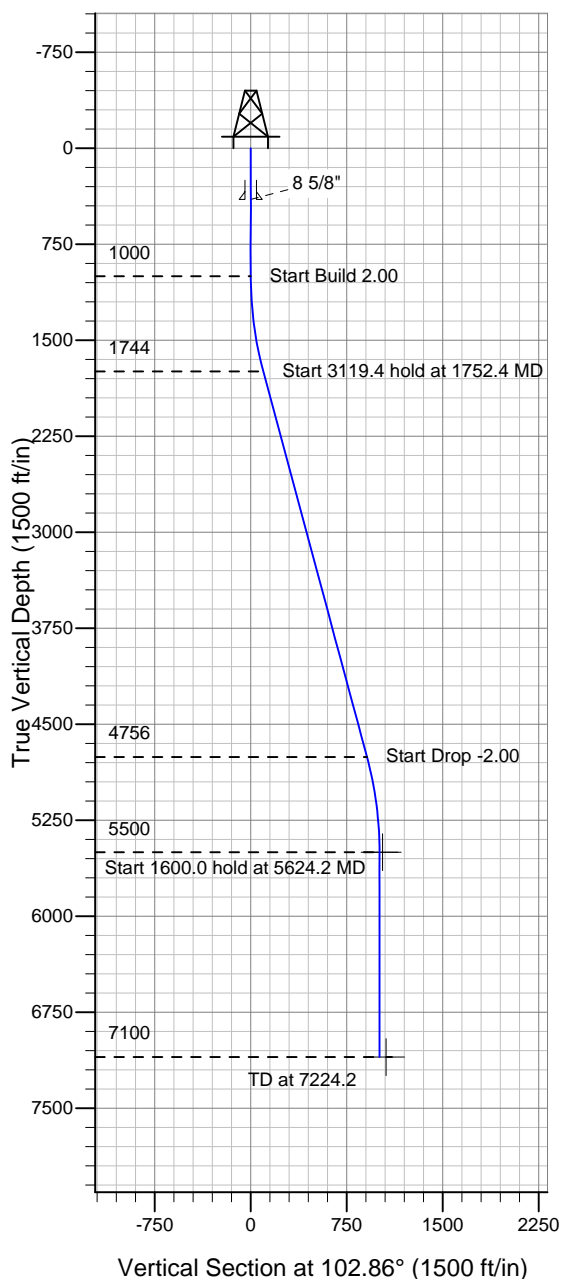
Well Name: Noffsinger 2VD

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 1401529.34 3243688.13 40° 25' 56.273 N 104° 37' 28.556 W
Original Well Elev WELL @ 4660.0ft (Original Well Elev)

PETROLEUM DEVELOPMENT CORP Weld County CO



Noffsinger 2VD
Plan#1 (6-14-10)
10:55, June 18 2010



Azimuths to True North
Magnetic North: 8.95°
Magnetic Field
Strength: 53337.5snT
Dip Angle: 67.16°
Date: 12/31/2009
Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Drill Target BHL1259'FNL, 75'FEL	5500.0	-224.0	981.1	40° 25' 54.059 N	104° 37' 15.869 W	Point
Permit Target 1259'FNL, 50'FEL	5500.0	-224.0	1006.1	40° 25' 54.059 N	104° 37' 15.546 W	Point
Hardline 75'E of BHL	7100.0	-124.0	1056.1	40° 25' 55.047 N	104° 37' 14.899 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	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1752.4	15.05	102.86	1743.8	-21.9	95.8	2.00	102.86	98.2	
4	4871.8	15.05	102.86	4756.2	-202.1	885.3	0.00	0.00	908.1	
5	5624.2	0.00	0.00	5500.0	-224.0	981.1	2.00	180.00	1006.3	Drill Target BHL1259'FNL, 75'FEL
6	7224.2	0.00	0.00	7100.0	-224.0	981.1	0.00	0.00	1006.3	