

ENSIGN

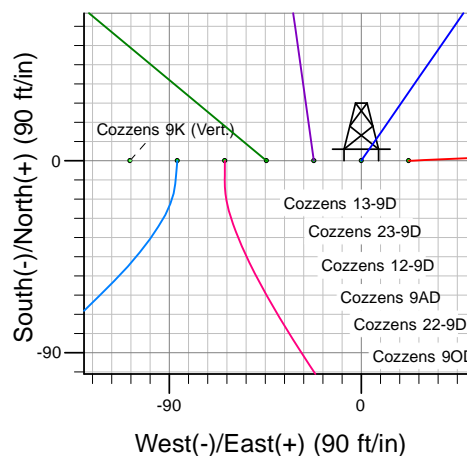
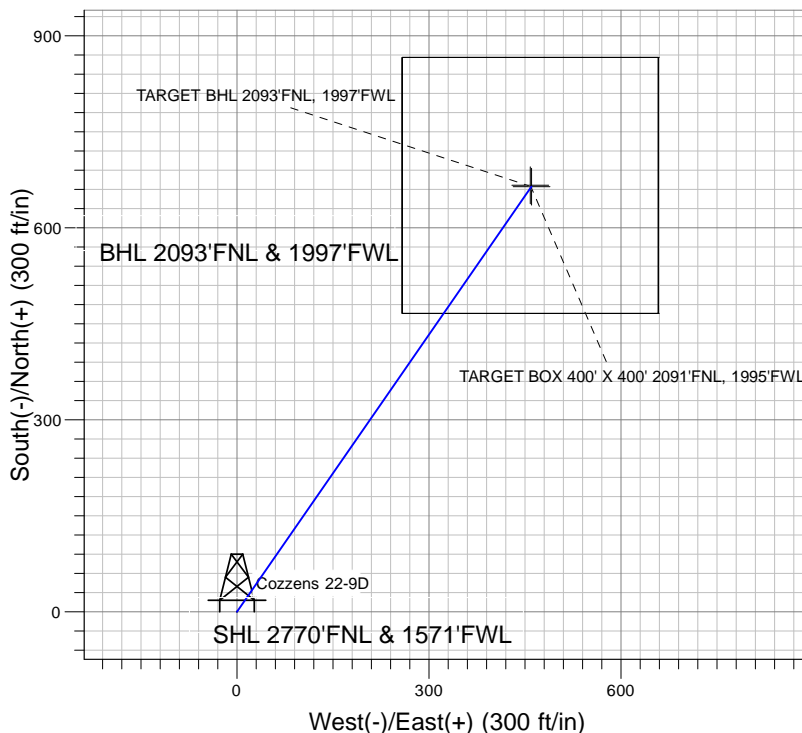
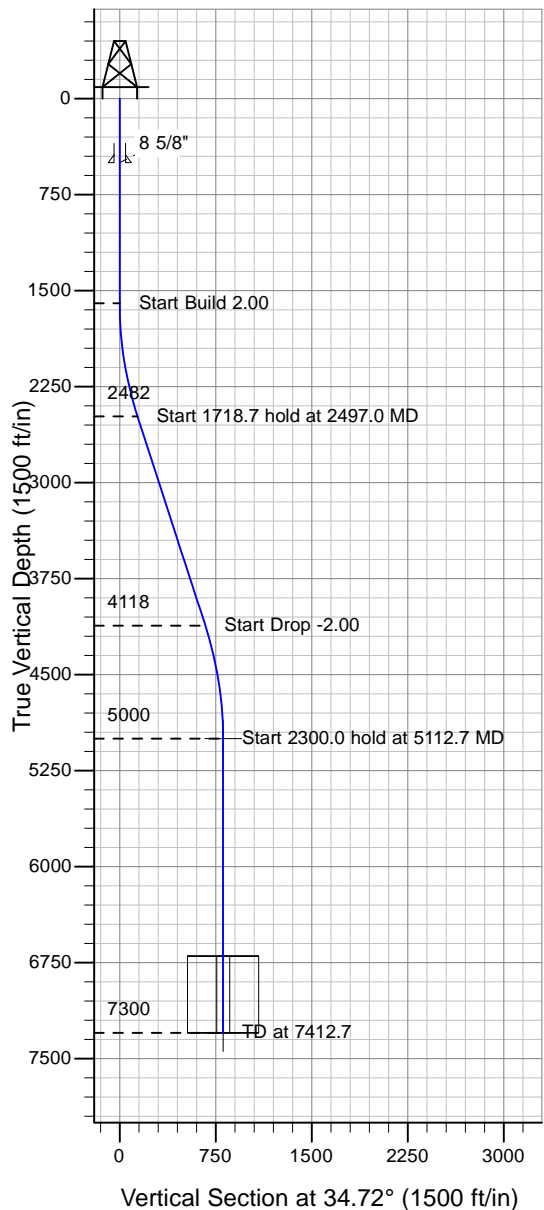
Directional

Well Name: Cozzens 22-9D

Surface Location: Cozzens 13-9D Pad Sec.9-TN-R65W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4750.0

+N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1426406.83 3230137.51 40° 30' 3.384 N 104° 40' 20.784 W
 Original Well Elev WELL @ 4763.0ft (Original Well Elev)

PETROLEUM DEVELOPMENT CORP Weld County CO



Cozzens 13-9D Pad Sec.9-TN-R65W
 Cozzens 22-9D
 Plan #2 (10-5-09)
 15:49, October 06 2009



Azimuths to True North
 Magnetic North: 9.01°
 Magnetic Field
 Strength: 53392.1nT
 Dip Angle: 67.21°
 Date: 10/5/2009
 Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 2093'FNL, 1997'FWL	5000.0	664.2	460.2	40° 30' 9.947 N	104° 40' 14.827 W	Point
TARGET BOX 400' X 400' 2091'FNL, 1995'FWL	7300.0	666.2	458.2	40° 30' 9.967 N	104° 40' 14.853 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	1600.0	0.00	0.00	1600.0	0.0	0.0	0.00	0.00	0.0	
3	2497.0	17.94	34.72	2482.4	114.5	79.3	2.00	34.72	139.3	
4	4215.7	17.94	34.72	4117.6	549.7	380.8	0.00	0.00	668.7	
5	5112.7	0.00	0.00	5000.0	664.2	460.2	2.00	180.00	808.0	TARGET BHL 2093'FNL, 1997'FWL
6	7412.7	0.00	0.00	7300.0	664.2	460.2	0.00	0.00	808.0	