

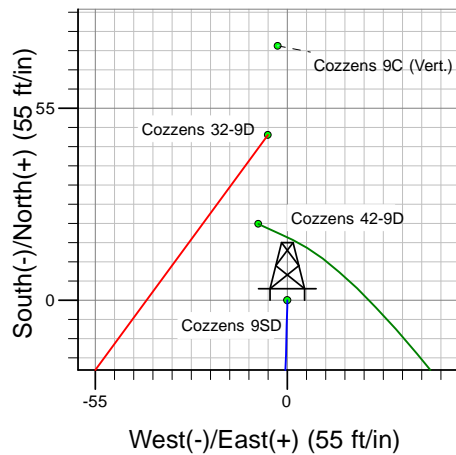
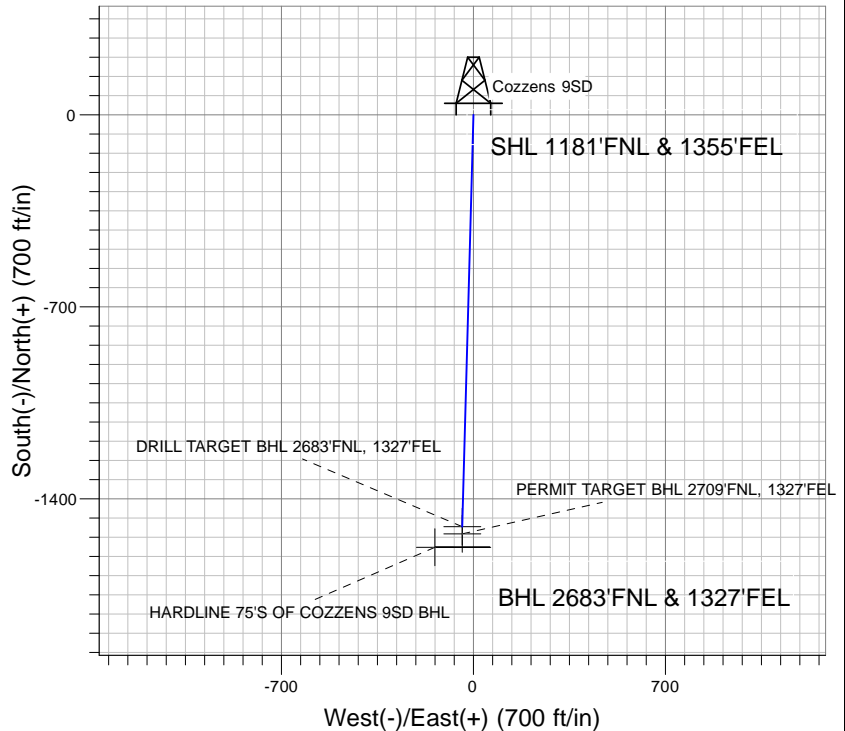
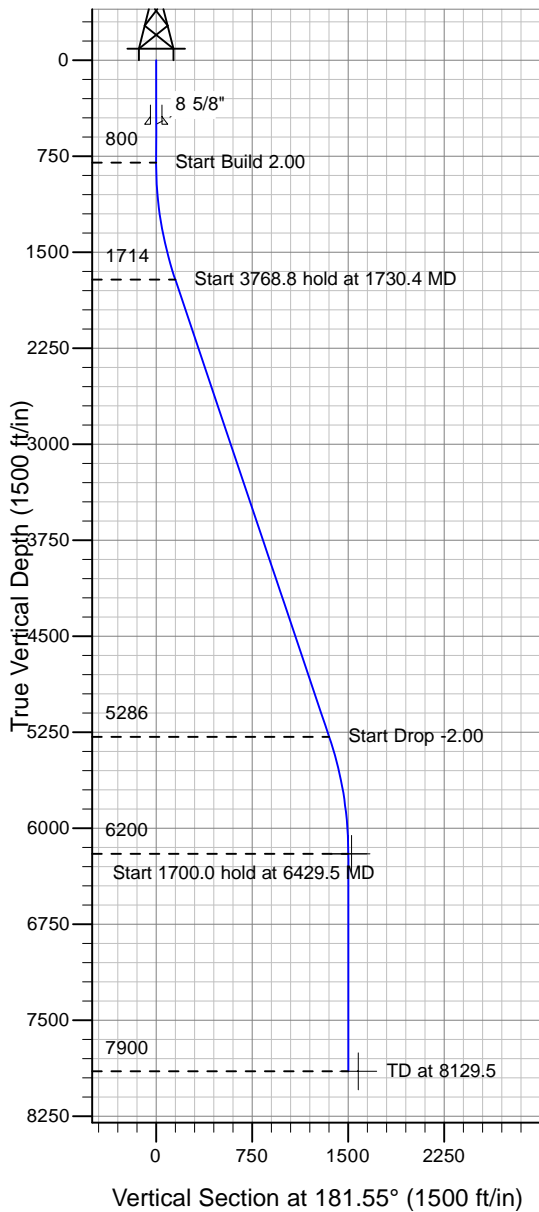
ENSIGN

Directional

Well Name: Cozzens 9SD

Surface Location: Cozzens NE 1/4 Pad Sec.9-T6N-R65W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4760.0
 +N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1428003.15 3232530.87 40° 30' 18.936 N 104° 39' 49.608 W
 Original Well Elev WELL @ 4773.0ft (Original Well Elev)

PETROLEUM DEVELOPMENT CORP Weld County CO



Azimuths to True North
 Magnetic North: 9.13°
 Magnetic Field
 Strength: 53488.6snT
 Dip Angle: 67.25°
 Date: 11/10/2008
 Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
DRILL TARGET BHL 2683'FNL, 1327'FEL	6200.0	-1501.5	-40.5	40° 30' 4.099 N 104° 39' 50.132 W		Point
PERMIT TARGET BHL 2709'FNL, 1327'FEL	6200.0	-1527.5	-40.5	40° 30' 3.842 N 104° 39' 50.133 W		Point
HARDLINE 75'S OF COZZENS 9SD BHL	7900.0	-1576.5	-140.5	40° 30' 3.358 N 104° 39' 51.427 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	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1730.4	18.61	181.55	1714.1	-149.7	-4.0	2.00	181.55	149.7	
4	5499.2	18.61	181.55	5285.9	-1351.8	-36.5	0.00	0.00	1352.3	
5	6429.5	0.00	0.00	6200.0	-1501.5	-40.5	2.00	180.00	1502.0	DRILL TARGET BHL 2683'FNL, 1327'FEL
6	8129.5	0.00	0.00	7900.0	-1501.5	-40.5	0.00	0.00	1502.0	