

ENSIGN

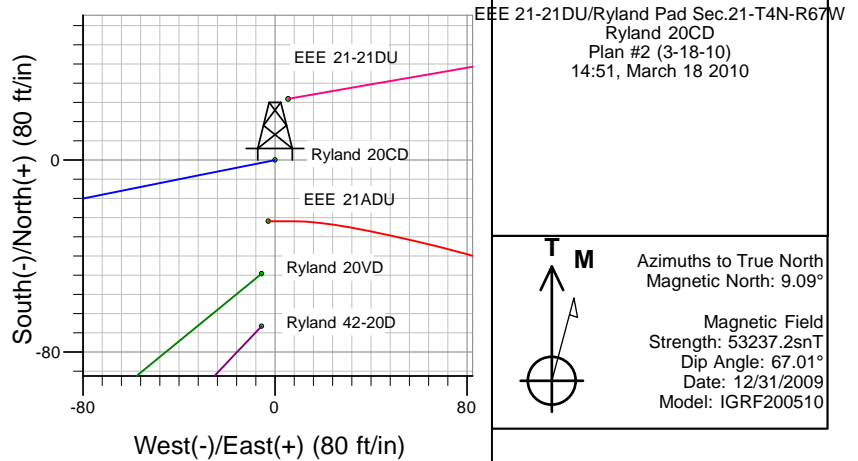
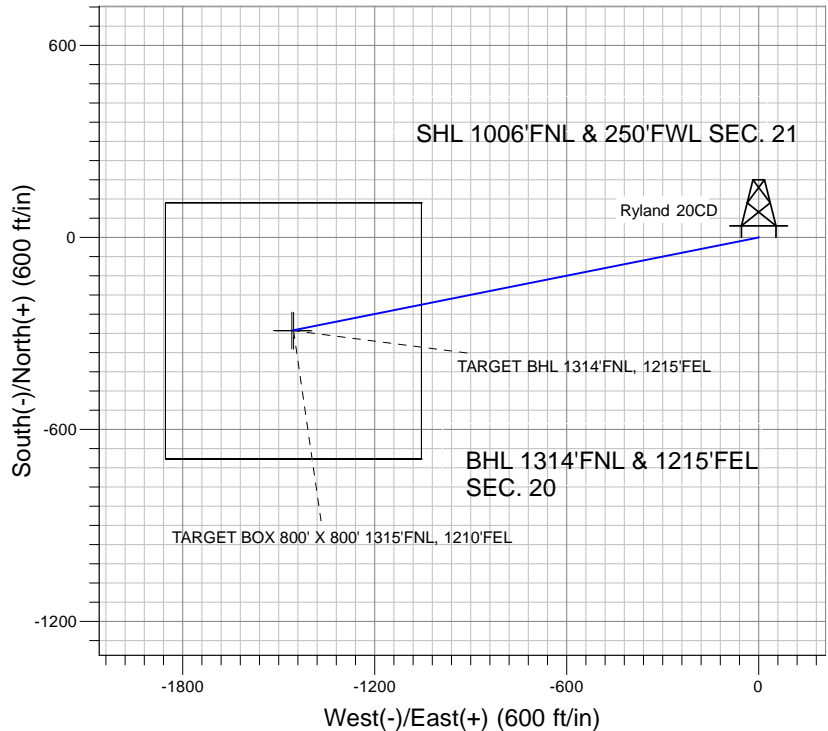
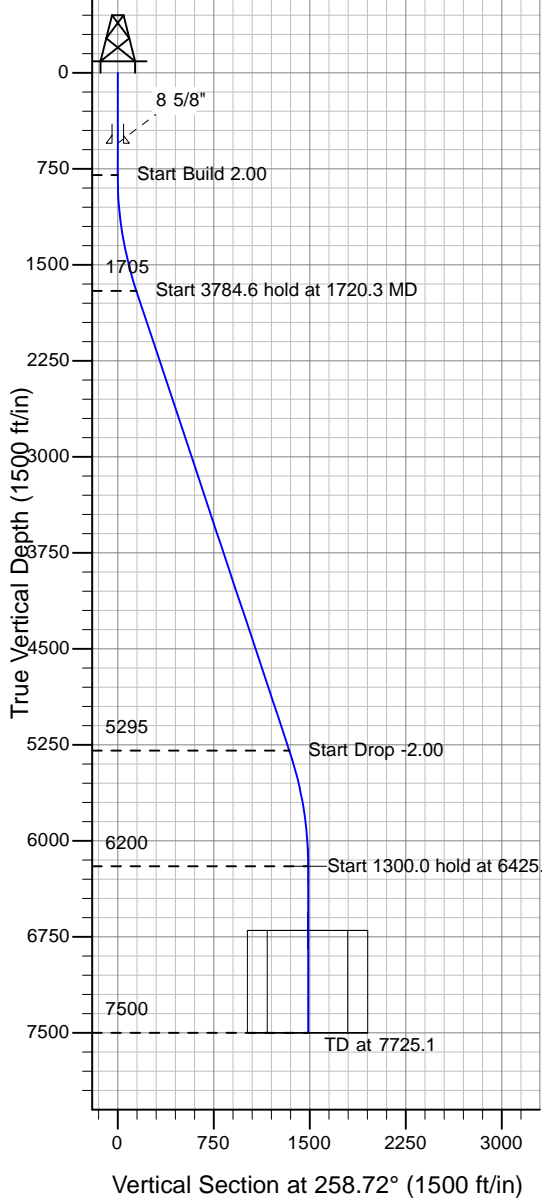
Directional

Well Name: Ryland 20CD

Surface Location: EEE 21-21DU/Ryland Pad Sec.21-T4N-R67W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4922.0

+N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1353737.47 3166022.33 40° 18' 10.368 N 104° 54' 17.064 W
 Original Well Elev WELL @ 4935.0ft (Original Well Elev)

PETROLEUM DEVELOPMENT CORP Weld County CO



Azimuths to True North
 Magnetic North: 9.09°
 Magnetic Field
 Strength: 53237.2snT
 Dip Angle: 67.01°
 Date: 12/31/2009
 Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1314'FNL, 1215'FEL	6200.0	-291.1	-1459.3	40° 18' 7.491 N	104° 54' 35.898 W	Point
TARGET BOX 800' X 800' 1315'FNL, 1210'FEL	6700.0	-292.1	-1454.3	40° 18' 7.481 N	104° 54' 35.834 W	Rectangle (Sides: L800.0 W800.0)

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	1720.3	18.41	258.72	1704.5	-28.7	-143.7	2.00	258.72	146.5	
4	5504.8	18.41	258.72	5295.5	-262.4	-1315.5	0.00	0.00	1341.5	
5	6425.1	0.00	0.00	6200.0	-291.1	-1459.3	2.00	180.00	1488.0	TARGET BHL 1314'FNL, 1215'FEL
6	7725.1	0.00	0.00	7500.0	-291.1	-1459.3	0.00	0.00	1488.0	