

ENSIGN

Directional

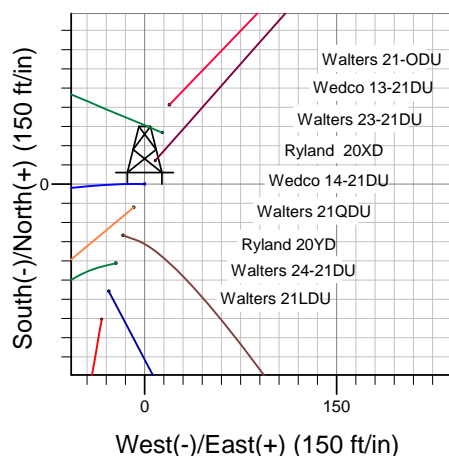
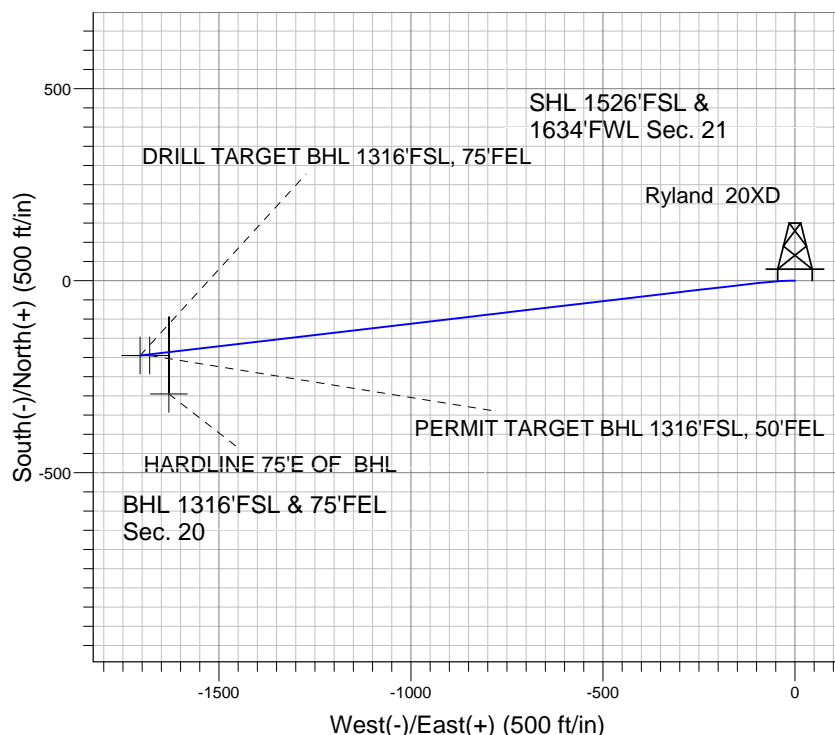
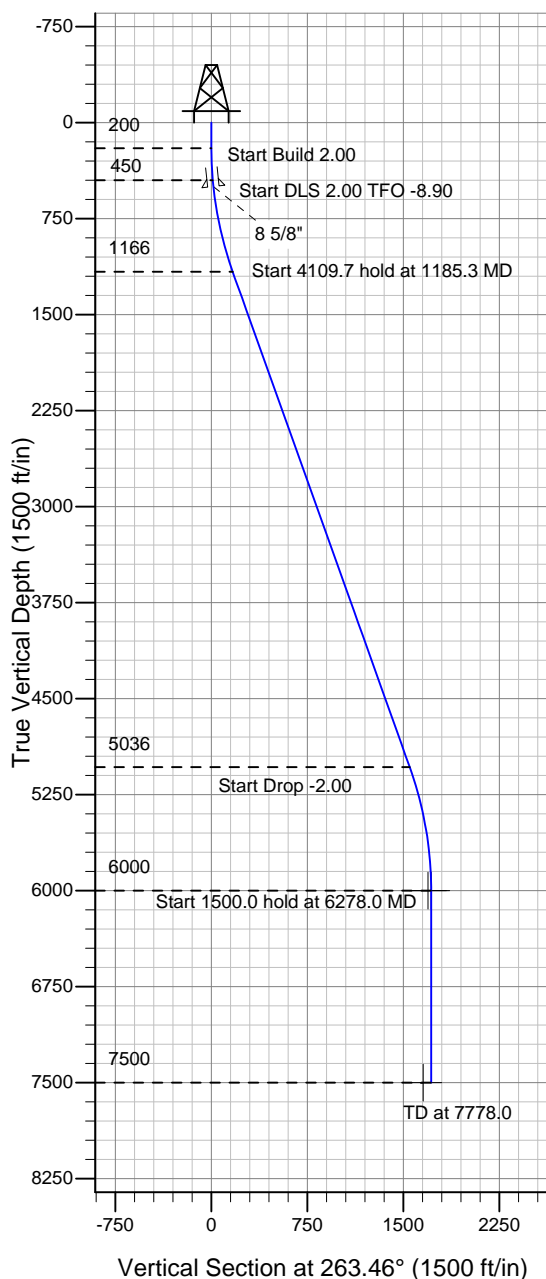
Well Name: **Ryland 20XD**

Surface Location: Walters/Wedco/Ryland Pad Sec.21-T4N-R67W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4940.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1350996.80	3167471.72	40° 17' 43.188 N	104° 53' 58.596 W	
Original Well Elev WELL @ 4953.0ft (Original Well Elev)						

PETROLEUM DEVELOPMENT CORP Weld County CO



Ryland 20XD
Plan #1 (6-4-10)
8:39, June 09 2010



Azimuths to True North
Magnetic North: 9.09°
Magnetic Field
Strength: 53233.7snT
Dip Angle: 67.00°
Date: 12/31/2009
Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
DRILL TARGET BHL 1316'FSL, 75'FEL	6000.0	-195.4	-1705.7	40° 17' 41.256 N	104° 54' 20.609 W	Point
PERMIT TARGET BHL 1316'FSL, 50'FEL	6000.0	-195.4	-1680.7	40° 17' 41.257 N	104° 54' 20.286 W	Point
HARDLINE 75'E OF BHL	7500.0	-295.4	-1630.7	40° 17' 40.268 N	104° 54' 19.641 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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	450.0	5.00	270.00	449.7	0.0	-10.9	2.00	270.00	10.8	
4	1185.3	19.66	263.30	1166.1	-14.5	-166.6	2.00	-8.90	167.2	
5	5295.0	19.66	263.30	5036.2	-175.9	-1539.8	0.00	0.00	1549.9	
6	6278.0	0.00	0.00	6000.0	-195.4	-1705.7	2.00	180.00	1716.9	DRILL TARGET BHL 1316'FSL, 75'FEL
7	7778.0	0.00	0.00	7500.0	-195.4	-1705.7	0.00	0.00	1716.9	