

ENSIGN

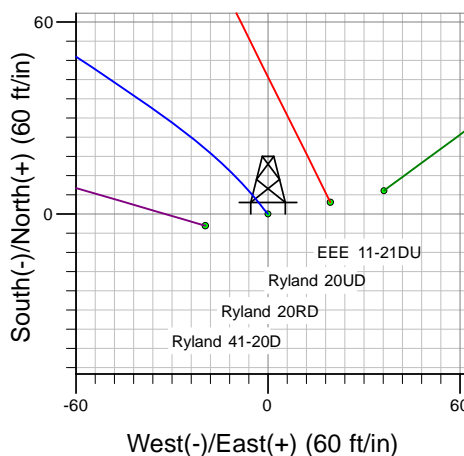
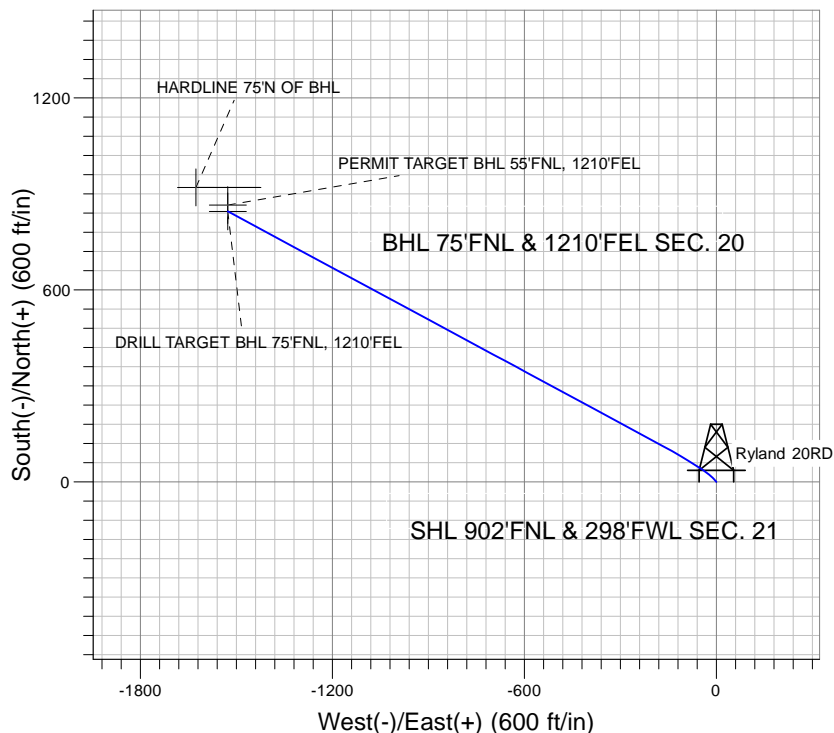
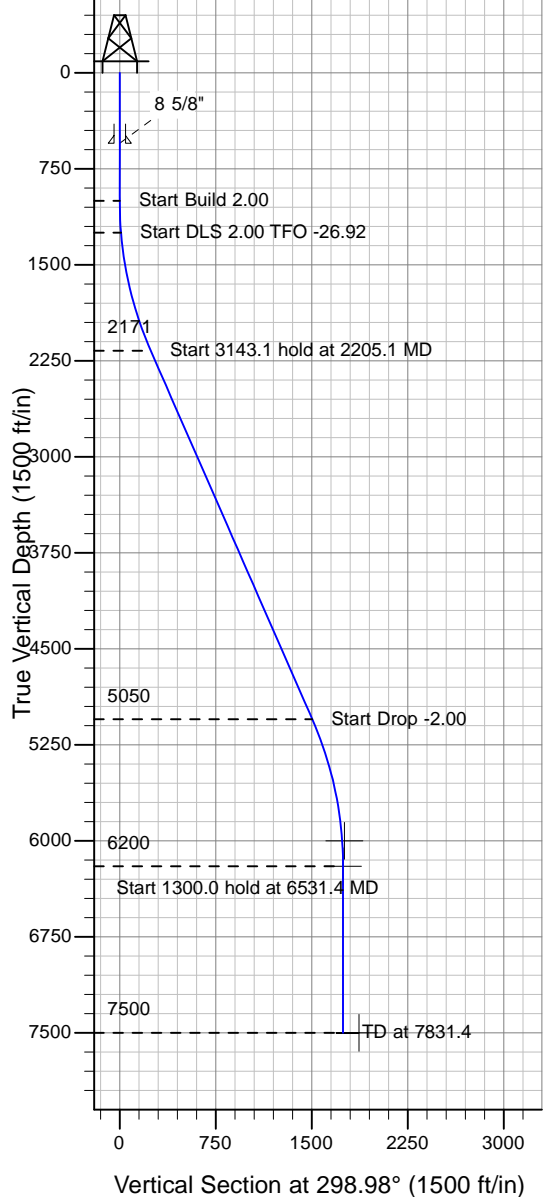
Directional

Well Name: Ryland 20RD

Surface Location: EEE/Ryland 41-20D 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 1353839.79 3166069.06 40° 18' 11.376 N 104° 54' 16.452 W
 Original Well Elev WELL @ 4935.0ft (Original Well Elev)

PETROLEUM DEVELOPMENT CORP Weld County CO



EEE/Ryland 41-20D Pad Sec.21-T4N-R67W
 Ryland 20RD
 Plan #1 (3-5-10)
 13:41, March 11 2010



Azimuths to True North
 Magnetic North: 9.09°
 Magnetic Field
 Strength: 53237.4nT
 Dip Angle: 67.01°
 Date: 12/31/2009
 Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

| Name | TVD | +N/-S | +E/-W | Latitude | Longitude | Shape |
|------------------------------------|--------|-------|---------|------------------|-------------------|---------|
| PERMIT TARGET BHL 55'FNL, 1210'FEL | 6000.0 | 865.5 | -1526.7 | 40° 18' 19.928 N | 104° 54' 36.158 W | Point |
| DRILL TARGET BHL 75'FNL, 1210'FEL | 6200.0 | 845.5 | -1526.7 | 40° 18' 19.730 N | 104° 54' 36.158 W | Point |
| HARDLINE 75'N OF BHL | 7500.0 | 920.5 | -1626.7 | 40° 18' 20.472 N | 104° 54' 37.448 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 | 1250.0 | 5.00 | 320.00 | 1249.7 | 8.4 | -7.0 | 2.00 | 320.00 | 10.2 | |
| 4 | 2205.1 | 23.66 | 298.34 | 2171.3 | 132.4 | -204.3 | 2.00 | -26.92 | 242.8 | |
| 5 | 5348.2 | 23.66 | 298.34 | 5050.2 | 731.2 | -1314.7 | 0.00 | 0.00 | 1504.3 | |
| 6 | 6531.4 | 0.00 | 0.00 | 6200.0 | 845.5 | -1526.7 | 2.00 | 180.00 | 1745.2 | DRILL TARGET BHL 75'FNL, 1210'FEL |
| 7 | 7831.4 | 0.00 | 0.00 | 7500.0 | 845.5 | -1526.7 | 0.00 | 0.00 | 1745.2 | |