

ENSIGN

Directional

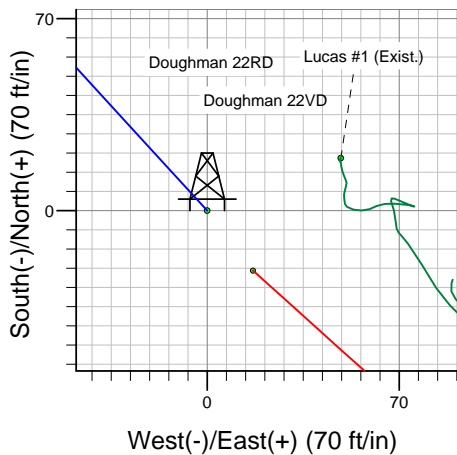
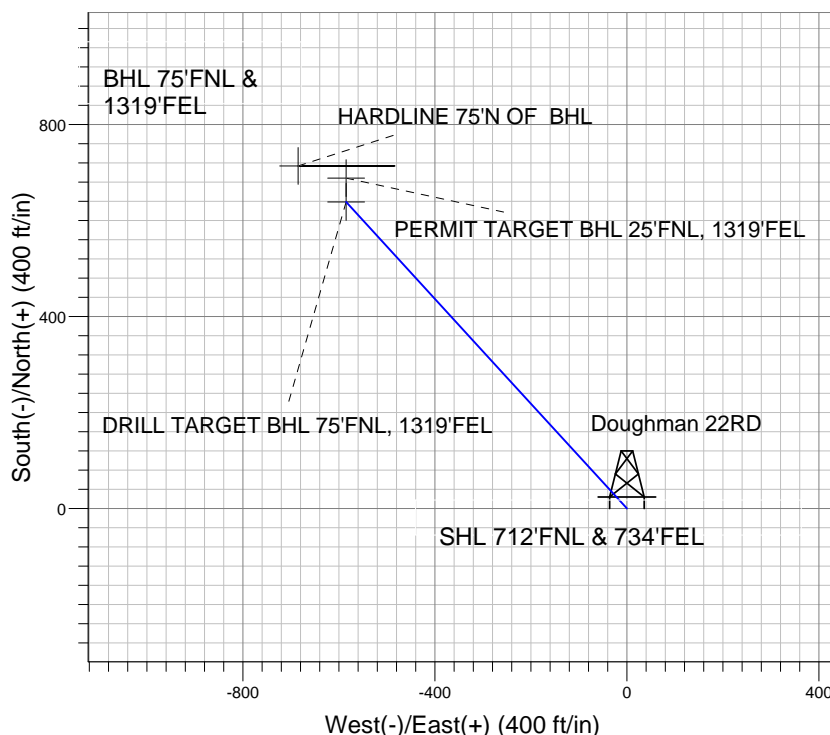
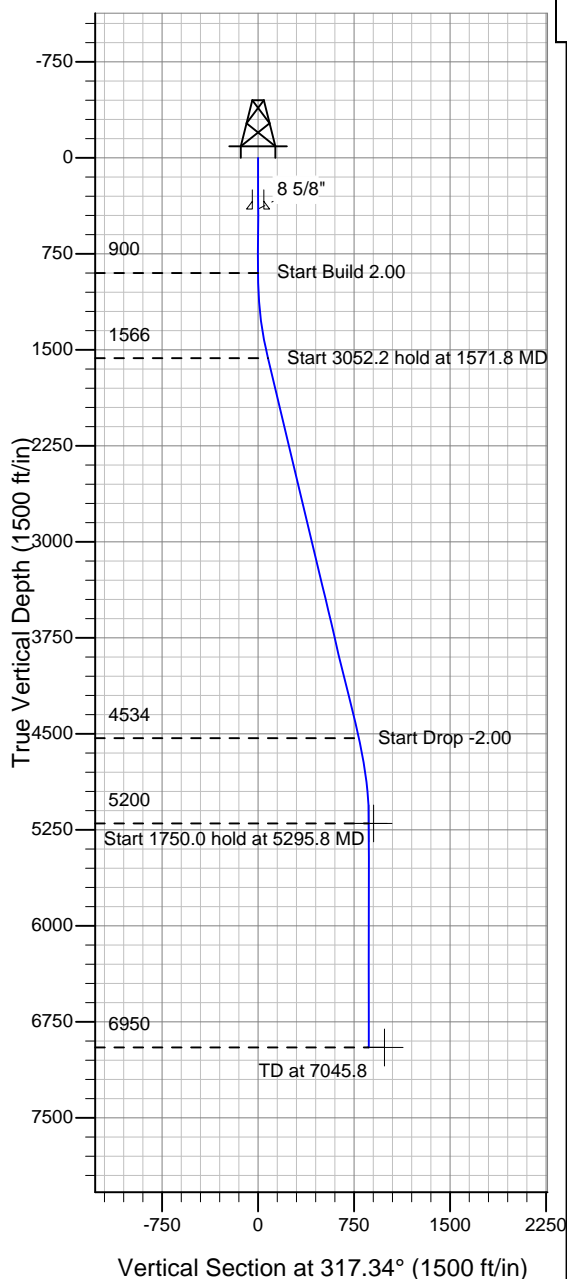
Well Name: **Doughman 22RD**

Surface Location: Doughman 22VD Pad Sec.22-T5N-R64W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4572.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1386441.82	3270453.64	40° 23' 24.432 N	104° 31' 44.580 W	
Original Well Elev WELL @ 4585.0ft (Original Well Elev)						

PETROLEUM DEVELOPMENT CORP Weld County CO



Doughman 22RD
Plan #2 (8-11-10)
15:14, August 11 2010



Azimuths to True North
Magnetic North: 8.89°
Magnetic Field
Strength: 53326.1snT
Dip Angle: 67.14°
Date: 12/31/2009
Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
DRILL TARGET BHL 75'FNL, 1319'FEL	5200.0	638.6	-585.0	40° 23' 30.742 N	104° 31' 52.140 W	Point
PERMIT TARGET BHL 25'FNL, 1319'FEL	5200.0	688.6	-585.0	40° 23' 31.236 N	104° 31' 52.140 W	Point
HARDLINE 75'N OF BHL	6950.0	713.6	-685.0	40° 23' 31.483 N	104° 31' 53.433 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	900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.0	
3	1571.8	13.44	317.51	1565.7	57.8	-53.0	2.00	317.51	78.4	
4	4624.0	13.44	317.51	4534.3	580.8	-532.0	0.00	0.00	787.6	
5	5295.8	0.00	0.00	5200.0	638.6	-585.0	2.00	180.00	866.0	DRILL TARGET BHL 75'FNL, 1319'FEL
6	7045.8	0.00	0.00	6950.0	638.6	-585.0	0.00	0.00	866.0	