

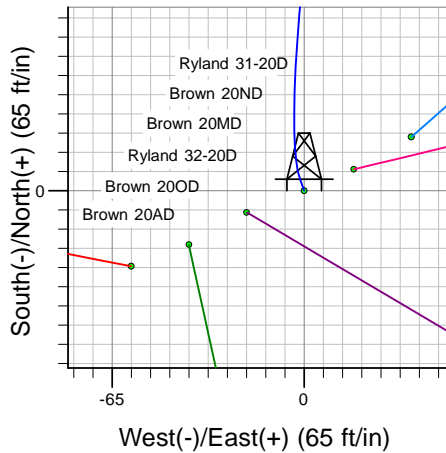
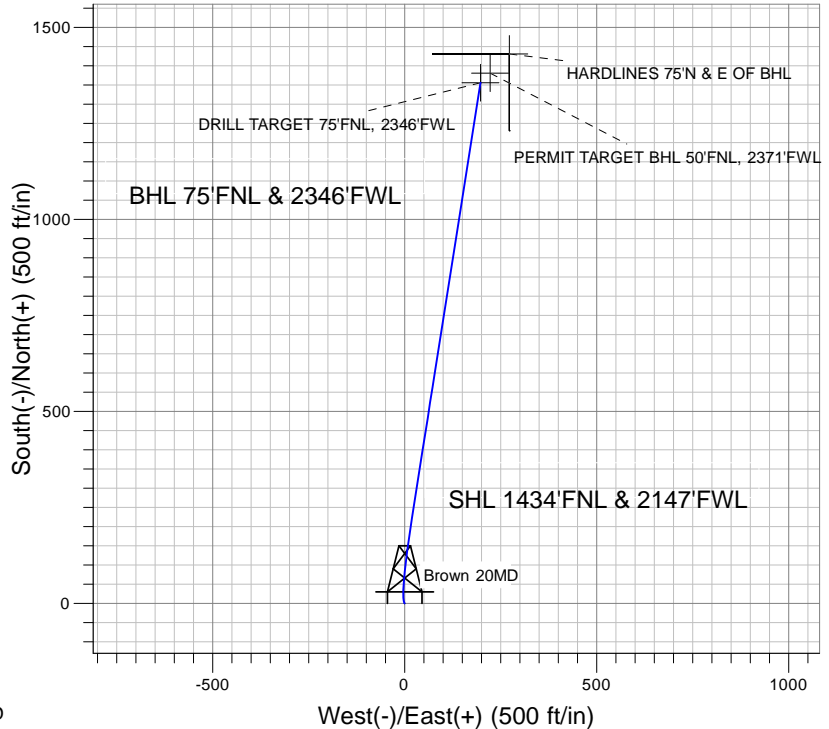
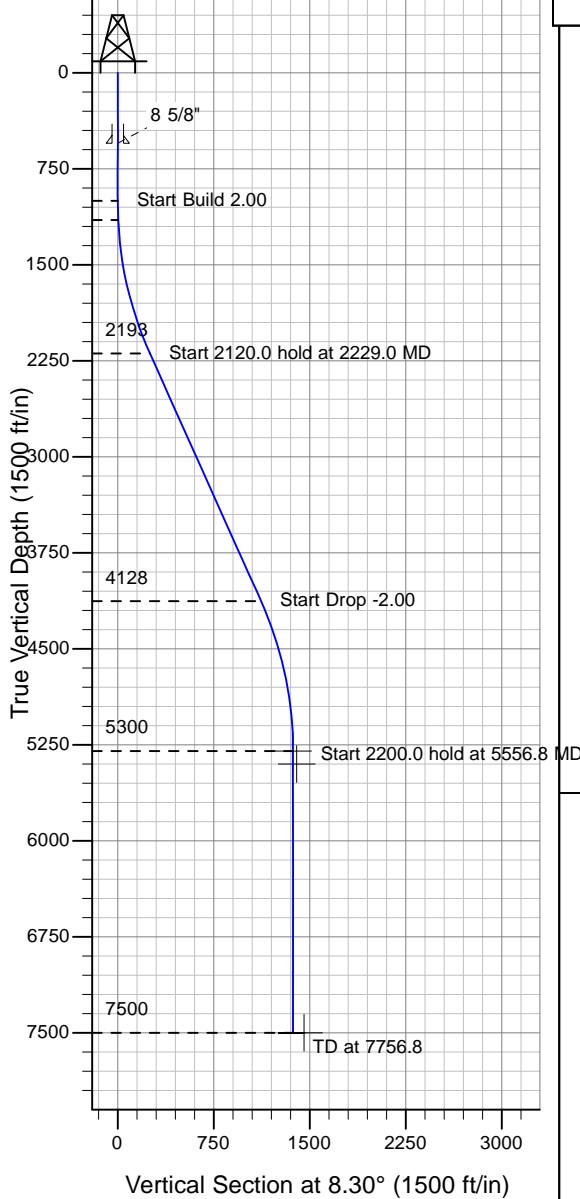
ENSIGN

Directional

Well Name: Brown 20MD

Surface Location: Brown/Ryland Pad Sec.20-T4N-R67W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4900.0
 +N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1353346.27 3163073.98 40° 18' 6.696 N 104° 54' 55.152 W
 Original Well Elev WELL @ 4913.0ft (Original Well Elev)

PETROLEUM DEVELOPMENT CORP Weld County CO



Brown/Ryland Pad Sec.20-T4N-R67W
 Brown 20MD
 Plan #1 (1-6-10)
 17:01, January 07 2010



Azimuths to True North
 Magnetic North: 9.09°

Magnetic Field
 Strength: 53235.7snT
 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 75'FNL, 2346'FWL	5300.0	1356.1	197.9	40° 18' 20.097 N	104° 54' 52.598 W	Point
PERMIT TARGET BHL 50'FNL, 2371'FWL	5400.0	1381.1	222.9	40° 18' 20.344 N	104° 54' 52.275 W	Point
HARDLINES 75'N & E OF BHL	7500.0	1431.1	272.9	40° 18' 20.838 N	104° 54' 51.630 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	1150.0	3.00	340.00	1149.9	3.7	-1.3	2.00	340.00	3.5	
4	2229.0	24.16	8.96	2193.3	251.2	23.7	2.00	32.60	252.0	
5	4348.9	24.16	8.96	4127.6	1108.3	158.8	0.00	0.00	1119.6	
6	5556.8	0.00	0.00	5300.0	1356.1	197.9	2.00	180.00	1370.5	DRILL TARGET 75'FNL, 2346'FWL
7	7756.8	0.00	0.00	7500.0	1356.1	197.9	0.00	0.00	1370.5	