

# ENSIGN

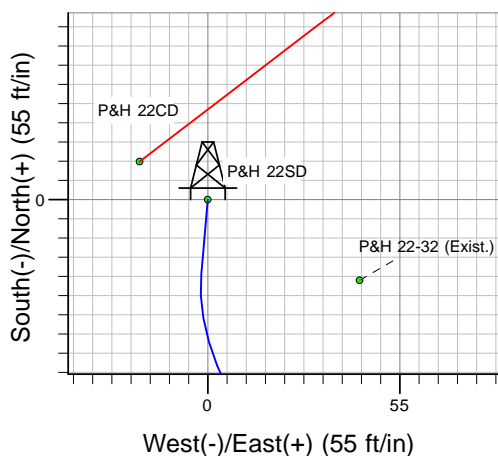
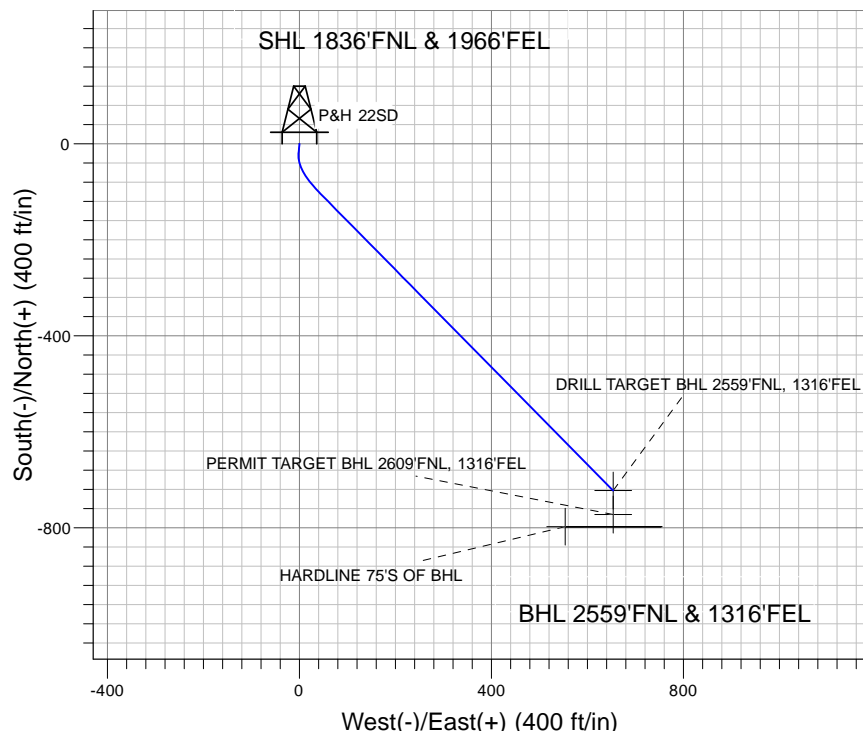
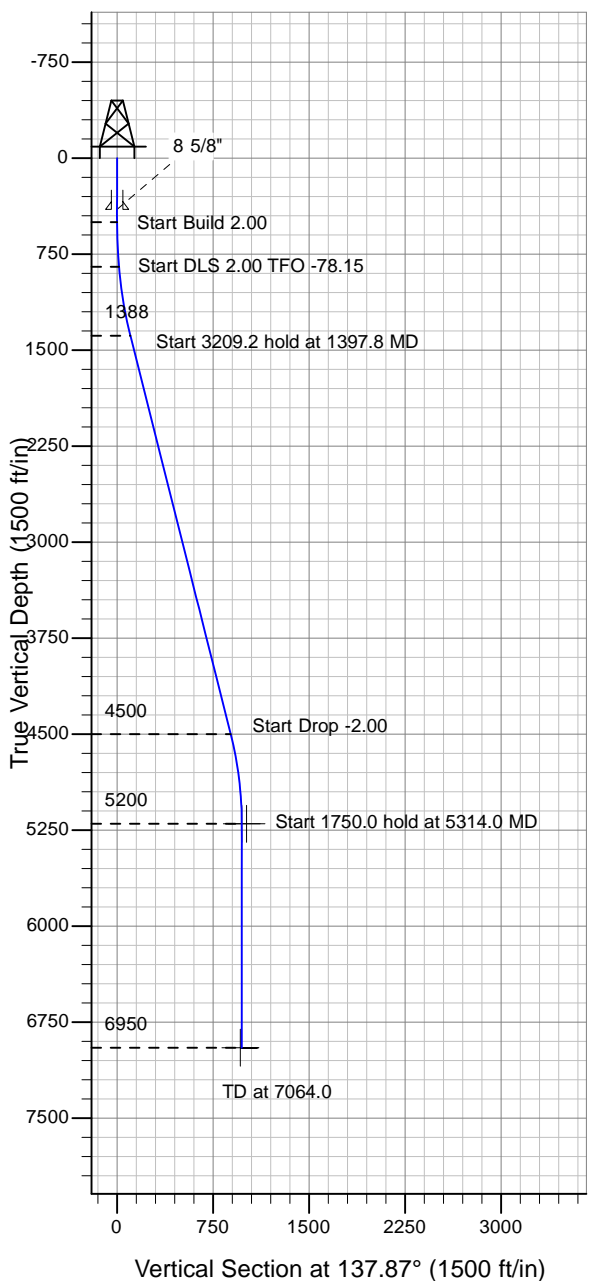
## Directional

### Well Name: P&H 22SD

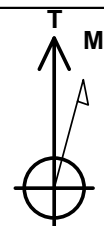
Surface Location: P&H 22CD Pad Sec.22-T5N-R64W  
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
 Ground Elevation: 4600.0

+N/-S+E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1385313.69 3269234.67 40° 23' 13.416 N 104° 32' 0.492 W  
 Original Well Elev WELL @ 4613.0ft (Original Well Elev)

### PETROLEUM DEVELOPMENT CORP Weld County CO



P&H 22CD Pad Sec.22-T5N-R64W  
 P&H 22SD  
 Plan #1 (5-19-10)  
 18:31, May 19 2010



Azimuths to True North  
 Magnetic North: 8.88°

Magnetic Field  
 Strength: 53265.0nT  
 Dip Angle: 67.12°  
 Date: 5/19/2010  
 Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
DRILL TARGET BHL 2559'FNL, 1316'FEL	5200.0	-722.6	653.6	40° 23' 6.275 N	104° 31' 52.046 W	Point
PERMIT TARGET BHL 2609'FNL, 1316'FEL	5200.0	-772.6	653.6	40° 23' 5.781 N	104° 31' 52.046 W	Point
HARDLINE 75'S OF BHL	6950.0	-797.6	553.6	40° 23' 5.534 N	104° 31' 53.338 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	500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0	
3	850.0	7.00	185.00	849.1	-21.3	-1.9	2.00	185.00	14.5	
4	1397.8	14.14	135.41	1388.2	-102.4	42.3	2.00	-78.15	104.4	
5	4606.9	14.14	135.41	4500.1	-660.8	592.7	0.00	0.00	887.6	
6	5314.0	0.00	0.00	5200.0	-722.6	653.6	2.00	180.00	974.3	DRILL TARGET BHL 2559'FNL, 1316'FEL
7	7064.0	0.00	0.00	6950.0	-722.6	653.6	0.00	0.00	974.3	