

ENSIGN

Directional

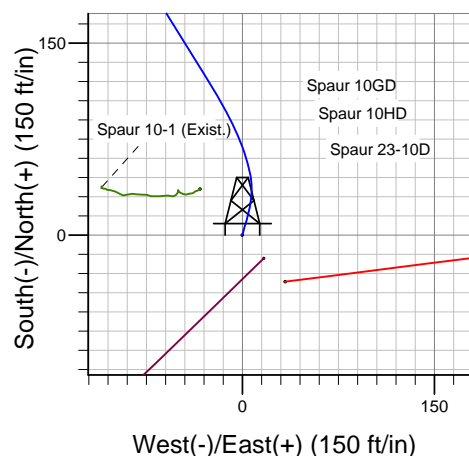
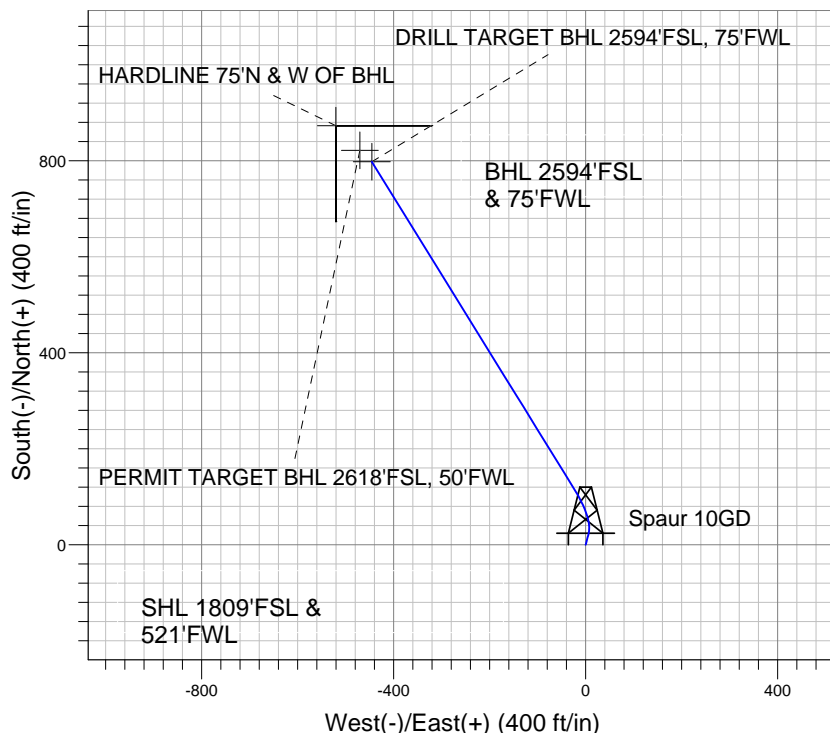
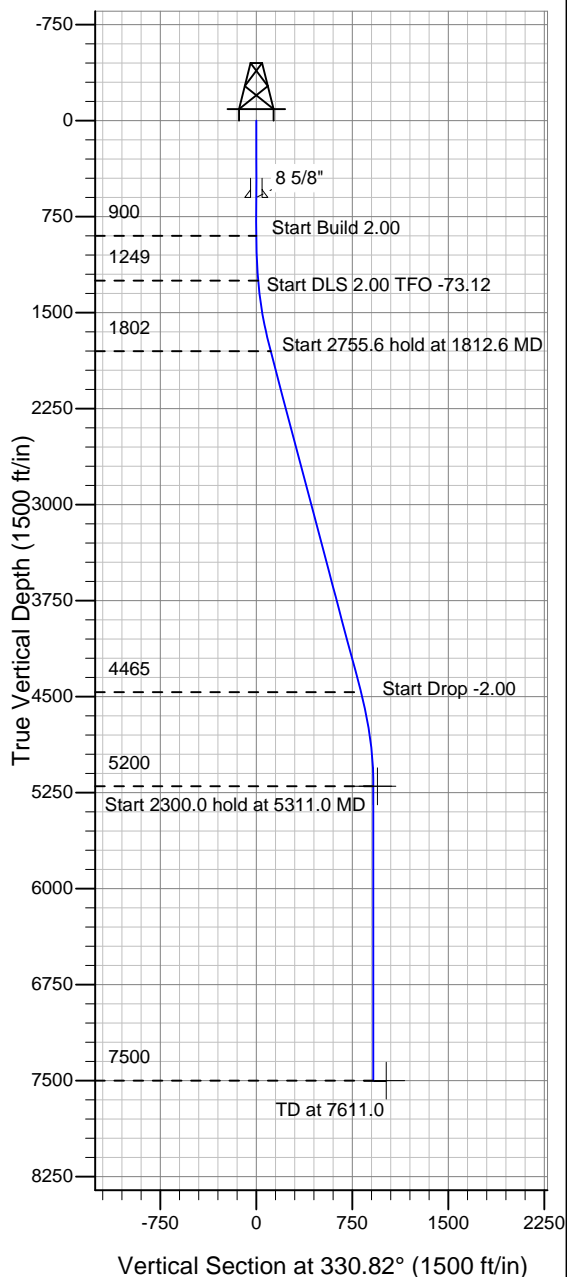
Well Name: Spaur 10GD

Surface Location: Spaur 10GD Pad Sec.10-T4N-R67W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4805.0

+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1361716.92 3171550.86 40° 19' 28.848 N 104° 53' 4.992 W
Original Well Elev WELL @ 4818.0ft (Original Well Elev)

PETROLEUM DEVELOPMENT CORP Weld County CO



Spaur 10GD
Plan #1 (6-27-10)
10:15, June 30 2010



Azimuths to True North
Magnetic North: 9.08°
Magnetic Field
Strength: 53251.8snT
Dip Angle: 67.03°
Date: 12/31/2009
Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
DRILL TARGET BHL 2594'FSL, 75'FWL	5200.0	797.8	-445.6	40° 19' 36.732 N	104° 53' 10.745 W	Point
PERMIT TARGET BHL 2618'FSL, 50'FWL	5200.0	821.8	-470.6	40° 19' 36.968 N	104° 53' 11.069 W	Point
HARDLINE 75°N & W OF BHL	7500.0	872.8	-520.6	40° 19' 37.473 N	104° 53' 11.714 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	1250.0	7.00	15.00	1249.1	20.6	5.5	2.00	15.00	15.3	
4	1812.6	14.86	328.27	1802.0	115.4	-23.6	2.00	-73.12	112.3	
5	4568.2	14.86	328.27	4465.4	716.3	-395.2	0.00	0.00	818.1	
6	5311.0	0.00	0.00	5200.0	797.8	-445.6	2.00	180.00	913.8	DRILL TARGET BHL 2594'FSL, 75'FWL
7	7611.0	0.00	0.00	7500.0	797.8	-445.6	0.00	0.00	913.8	