

PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: Spaur 31V-404

Surface Location: Spaur NE-31 Pad Sec.31-T7N-R63W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

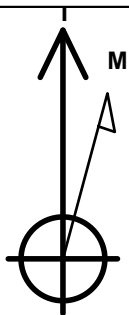
Ground Elevation: 4757.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1439021.11	3285950.50	40.533960	-104.471230	

RKB Ensign 32 - 15' WELL @ 4772.0ft (RKB Ensign 32 - 15')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
HARDLINES BHL 460'FWL	1.0	-278.6	-4501.4	Polygon
HARDLINES SHL 460'FEL	1.0	-200.0	-210.0	Polygon
SECTION HARDLINE 250'E OF SHL	1.0	-200.0	250.0	Polygon
BHL 1250'FNL & 500'FWL	6947.0	-21.4	-4461.4	Point



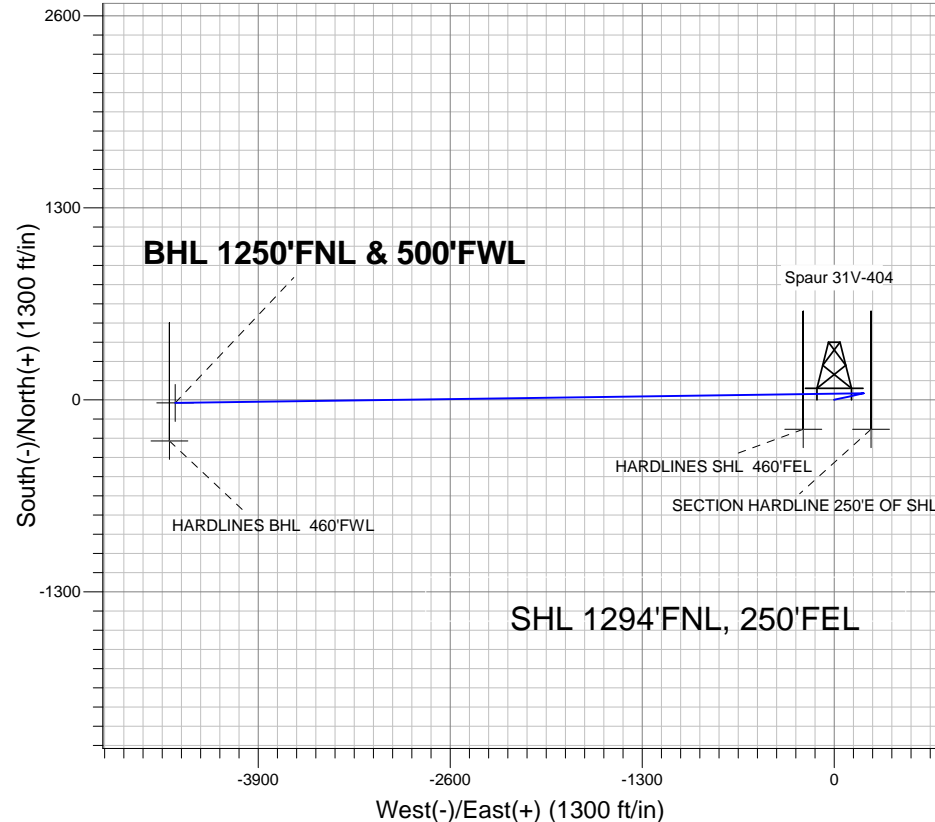
Azimuths to True North
Magnetic North: 8.62°

Magnetic Field
Strength: 53154.6nT
Dip Angle: 67.18°
Date: 3/13/2012
Model: IGRF2010

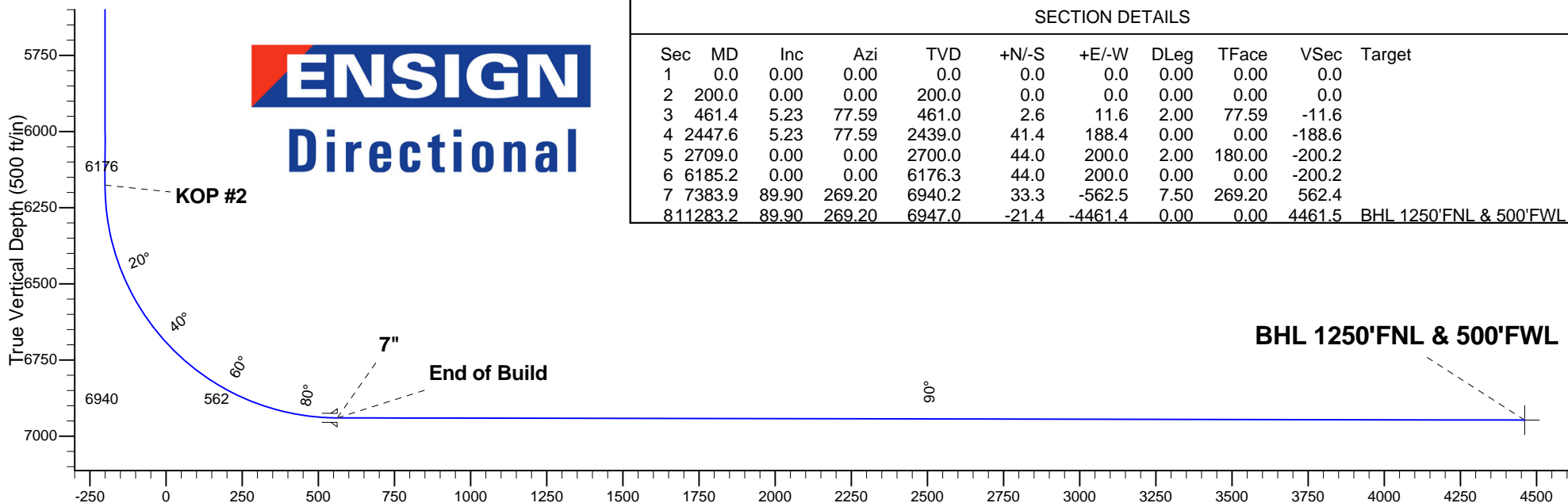
ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	KOP #1
6176.2	6185.2	KOP #2
6940.2	7383.9	End of Build

Spaur NE-31 Pad Sec.31-T7N-R63W
Spaur 31V-404
Plan #1 (3-07-12)
13:22, March 13 2012



ENSIGN
Directional



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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	461.4	5.23	77.59	461.0	2.6	11.6	2.00	77.59	-11.6	
4	2447.6	5.23	77.59	2439.0	41.4	188.4	0.00	0.00	-188.6	
5	2709.0	0.00	0.00	2700.0	44.0	200.0	2.00	180.00	-200.2	
6	6185.2	0.00	0.00	6176.3	44.0	200.0	0.00	0.00	-200.2	
7	7383.9	89.90	269.20	6940.2	33.3	-562.5	7.50	269.20	562.4	
8	11283.2	89.90	269.20	6947.0	-21.4	-4461.4	0.00	0.00	4461.5	BHL 1250'FNL & 500'FWL

Vertical Section at 269.72° (500 ft/in)