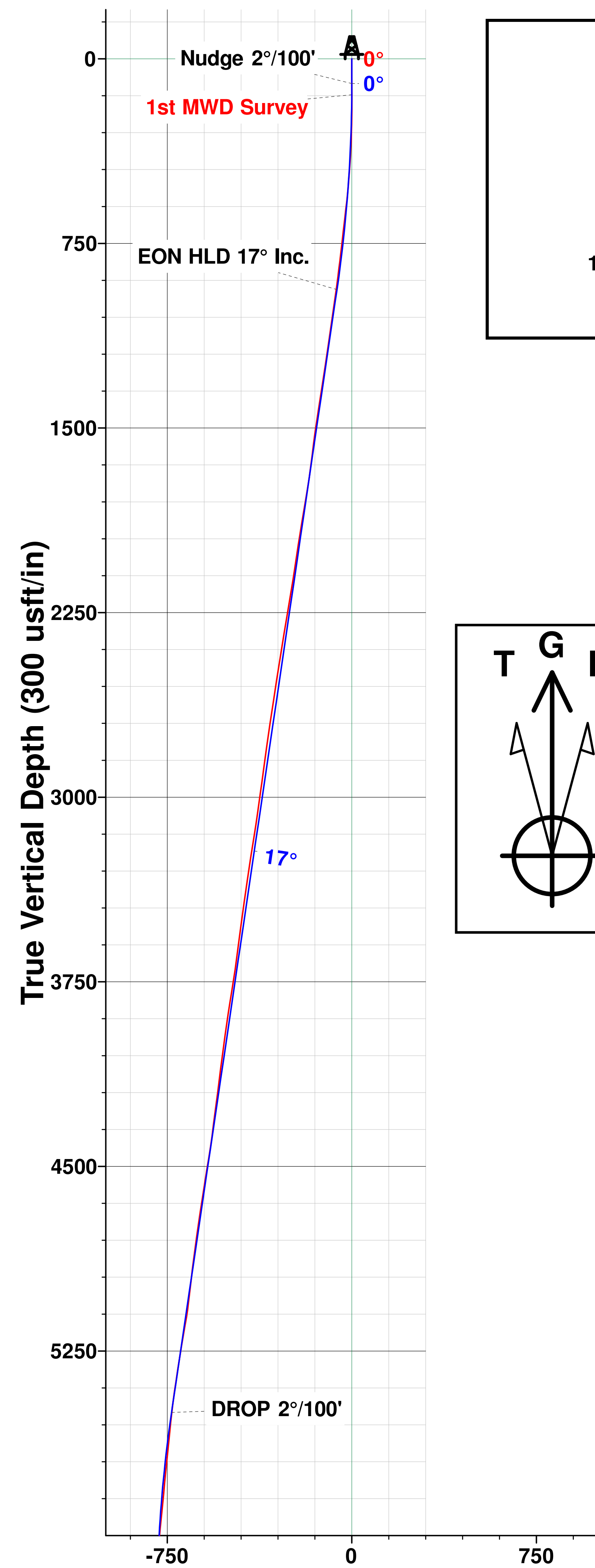




EXTRACTION OIL & GAS  
Project: Arapahoe County, Co. (NAD 83)  
Site: Sec 22-T4S-R64W  
Well: Houlihan 4-64 22A 21-1  
Wellbore: Wellbore #1  
Plan: Plan #1 (Houlihan 4-64 22A 21-1/Wellbore #1)

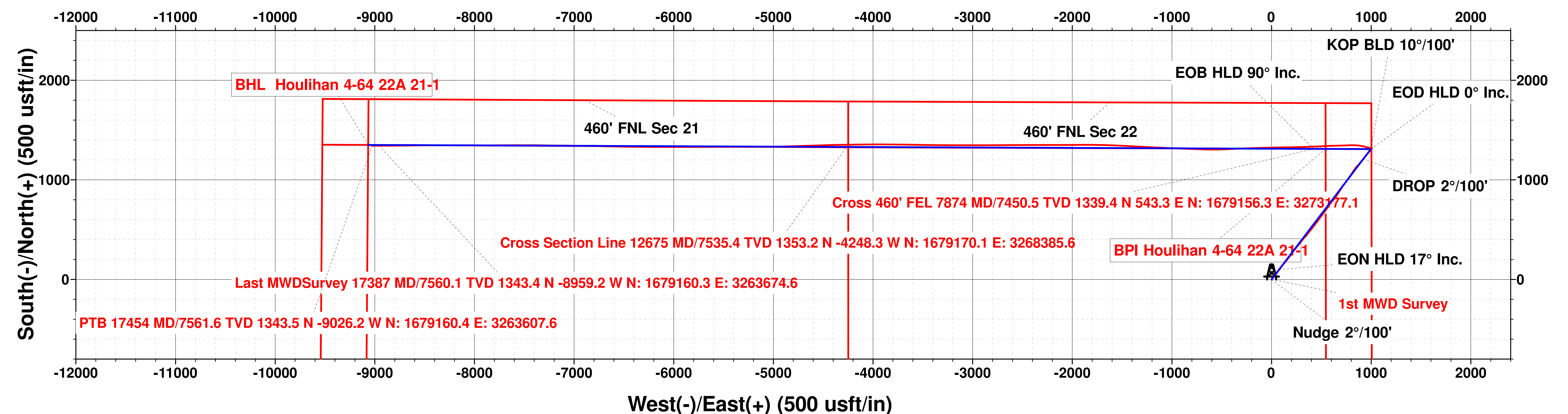
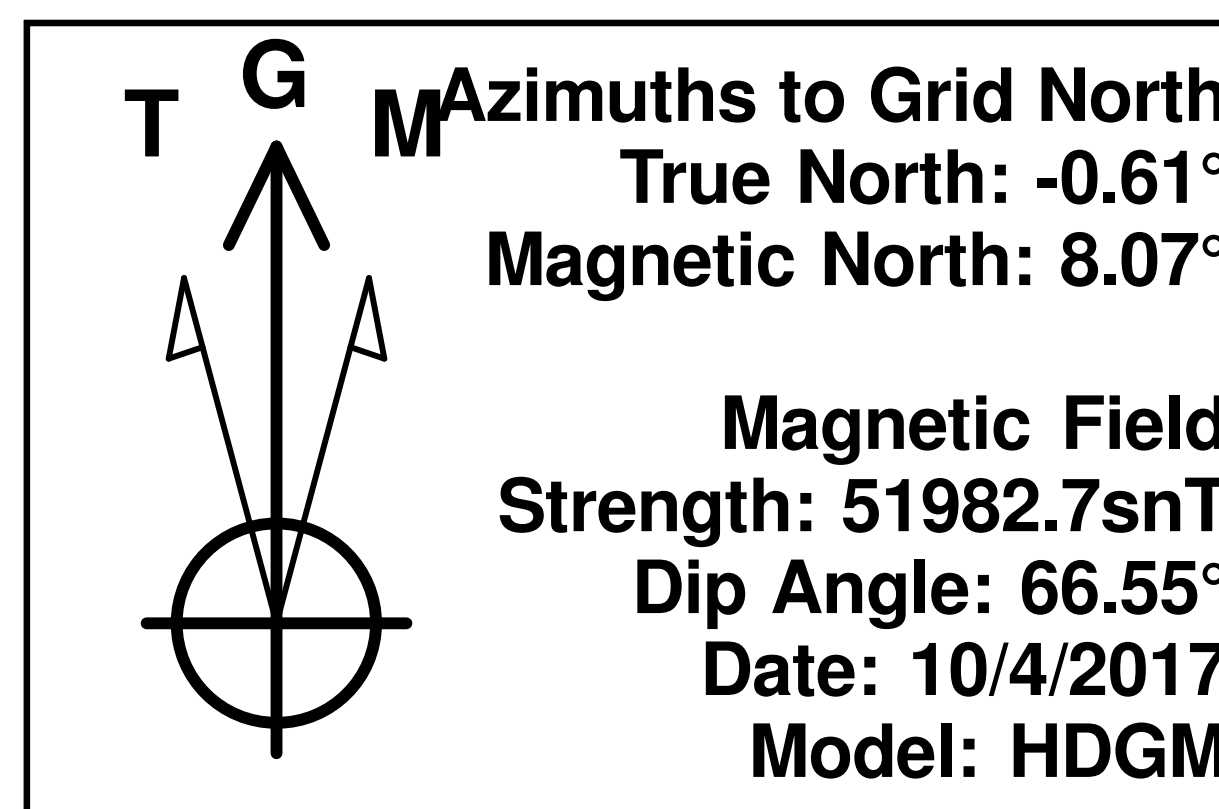


Vertical Section at 278.47° (300 usft/in)

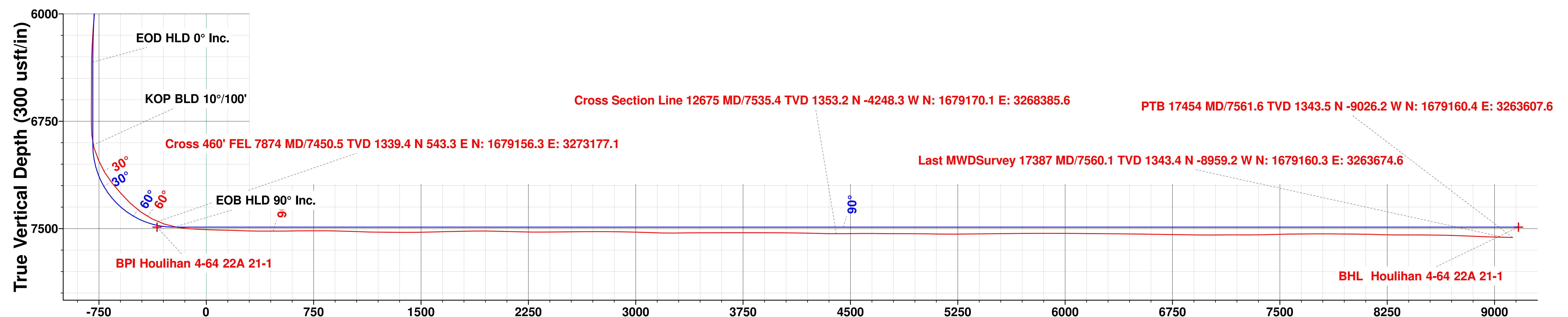
WELL DETAILS: Houlihan 4-64 22A 21-1				
Ground Elevation:: 5705.3				
RKB Elevation: B=25 @ 5730.3usft				
Rig Name:				
Northing	Easting	Latitude	Longitude	
1677816.96	3272633.89	39° 41' 25.500 N	104° 31' 52.340 W	

PROJECT DETAILS: Arapahoe County, Co. (NAD 83)				
Geodetic System: US State Plane 1983				
Datum: North American Datum 1983				
Ellipsoid: GRS 1980				
Zone: Colorado Central Zone				
System Datum: Mean Sea Level				
Local North: Grid				

Section Details								
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
100.0	0.00	0.00	100.0	0.0	0.0	0.00	0.00	0.0
950.0	17.00	37.29	937.6	99.6	75.8	2.00	37.29	-60.3
5720.0	17.00	37.29	5499.2	1209.1	920.8	0.00	0.00	-732.5
6570.0	0.00	0.00	6336.7	1308.7	996.6	2.00	180.00	-792.9
7150.3	0.00	0.00	6917.0	1308.7	996.6	0.00	0.00	-792.9
8050.3	90.00	270.24	7490.0	1311.1	423.7	10.00	270.24	-225.8
17540.8	90.00	270.24	7490.0	1350.9	-9066.8	0.00	0.00	9166.9



DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL Houlihan 4-64 22A 21-1	7490.0	1350.9	-9066.8	1679167.88	3263567.10	39° 41' 39.790 N 104° 33' 48.140 W	
BPI Houlihan 4-64 22A 21-1	7490.0	1311.2	543.4	1679128.12	3273177.28	39° 41' 38.400 N 104° 31' 45.210 W	



Vertical Section at 278.47° (300 usft/in)