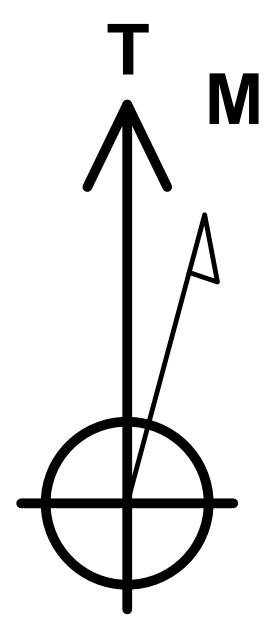
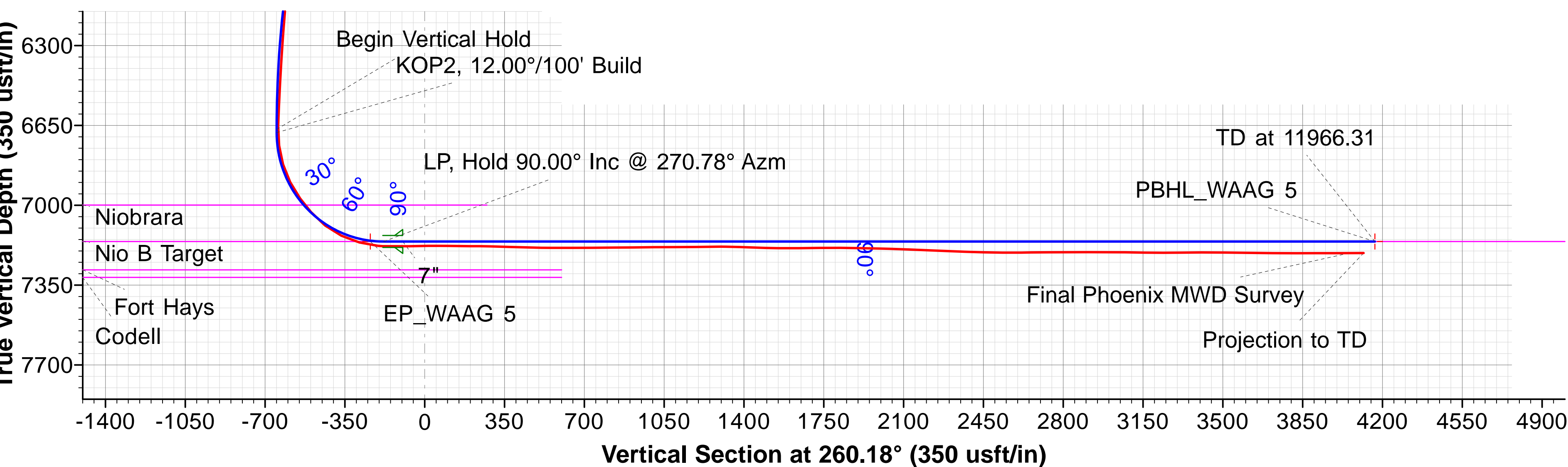
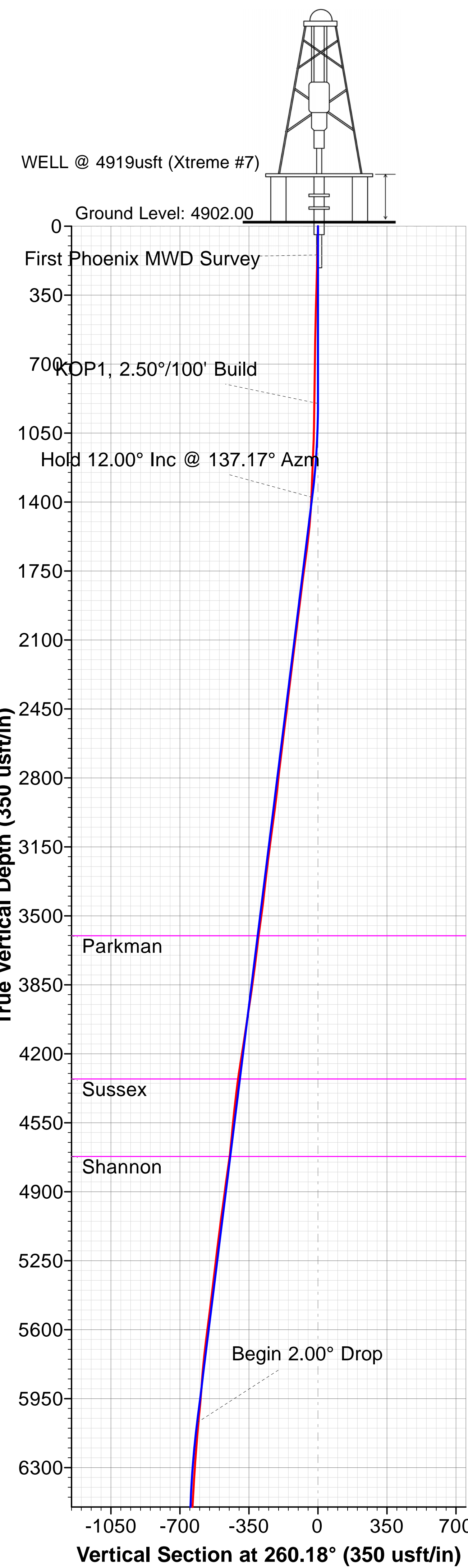




Project: Weld County, CO (NAD83)  
Site: Sec.19-T7N-R65W  
Well: WAAG 5  
Wellbore: Wellbore #1 / #1422519  
Design: Plan #2 01-17-15  
Rig: Xtreme #7



Azimuths to True North  
Magnetic North: 8.45°  
Magnetic Field  
Strength: 52760.5nT  
Dip Angle: 67.06°  
Date: 1/17/2015  
Model: IGRF2015

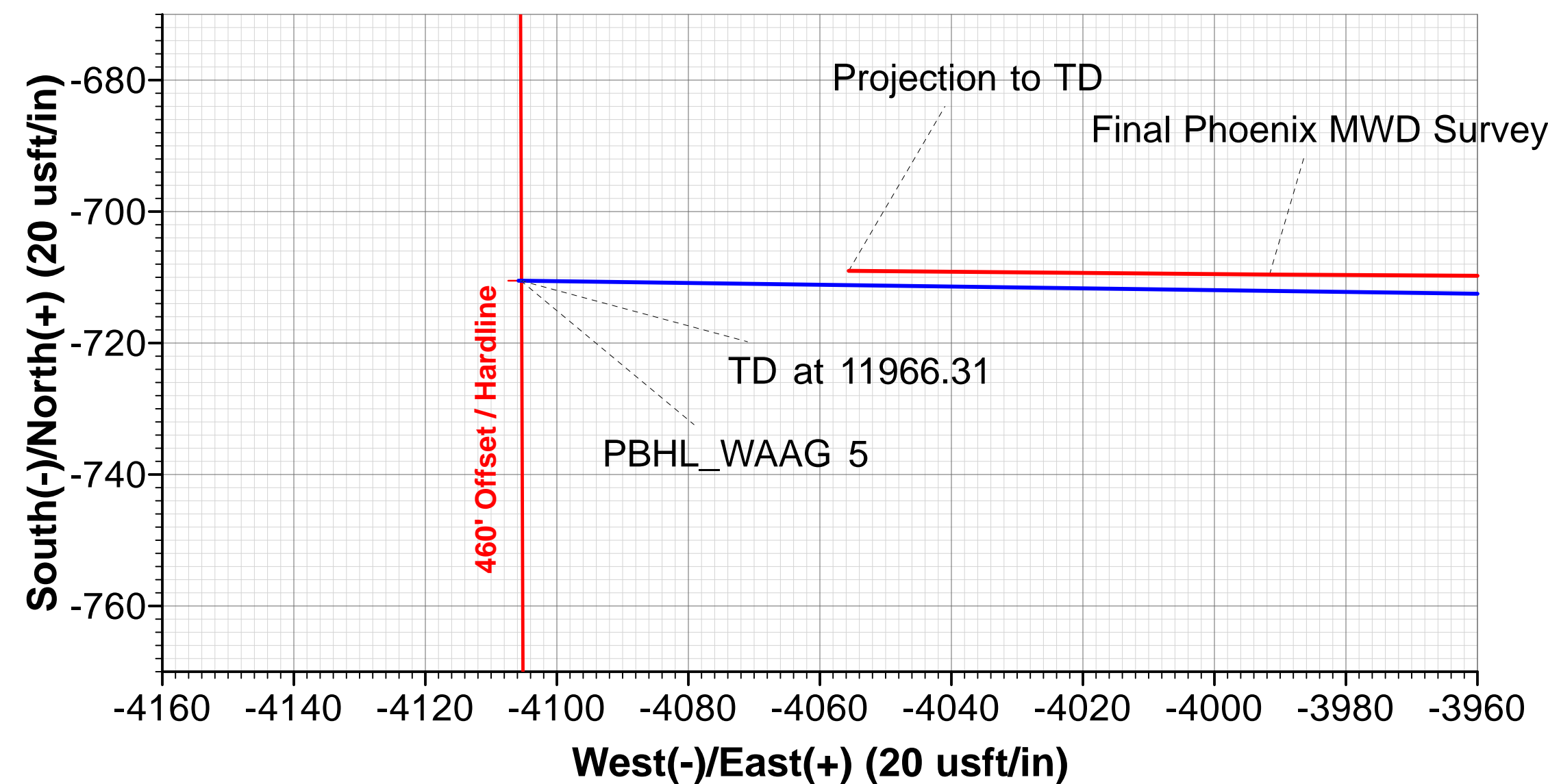
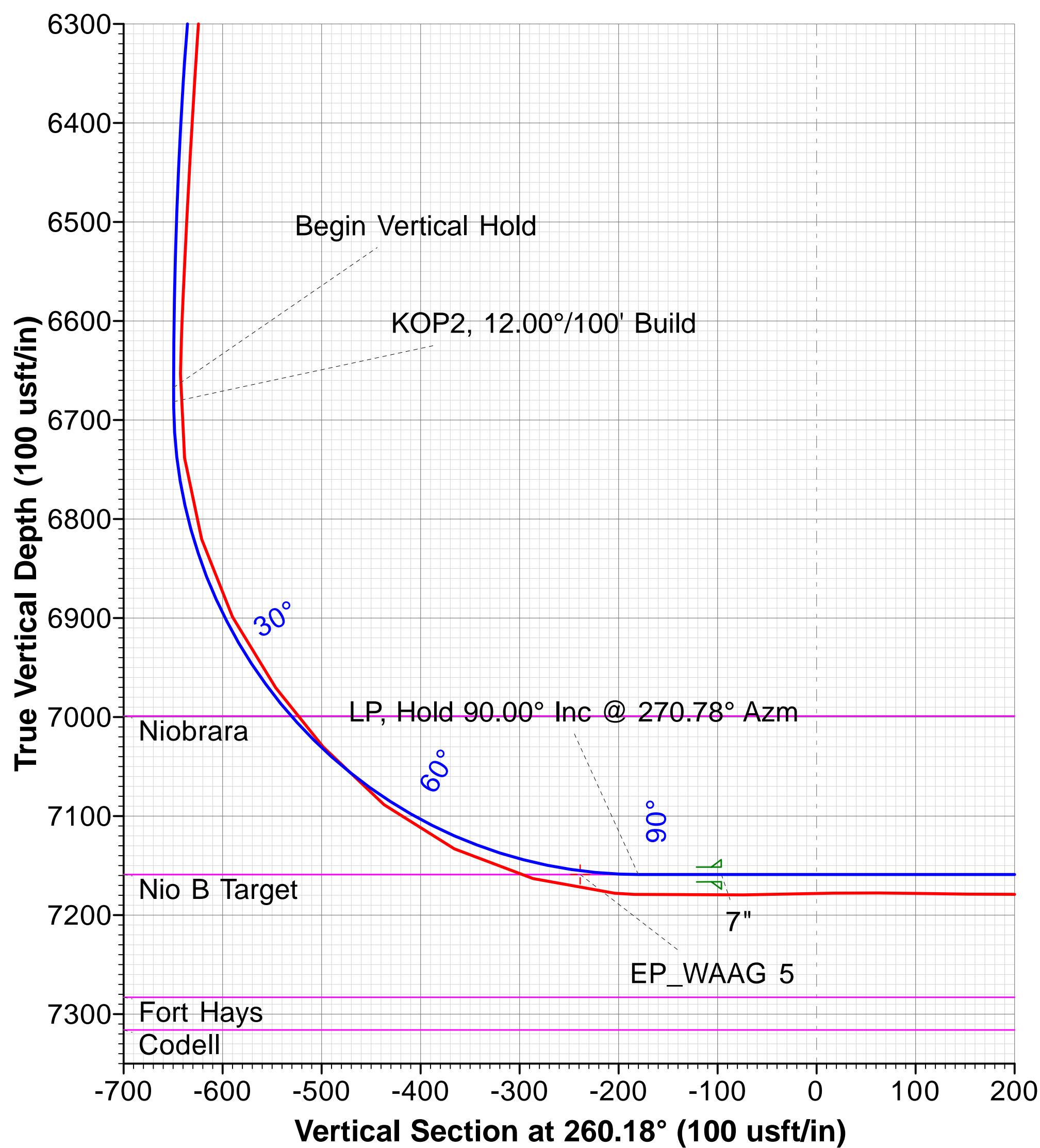
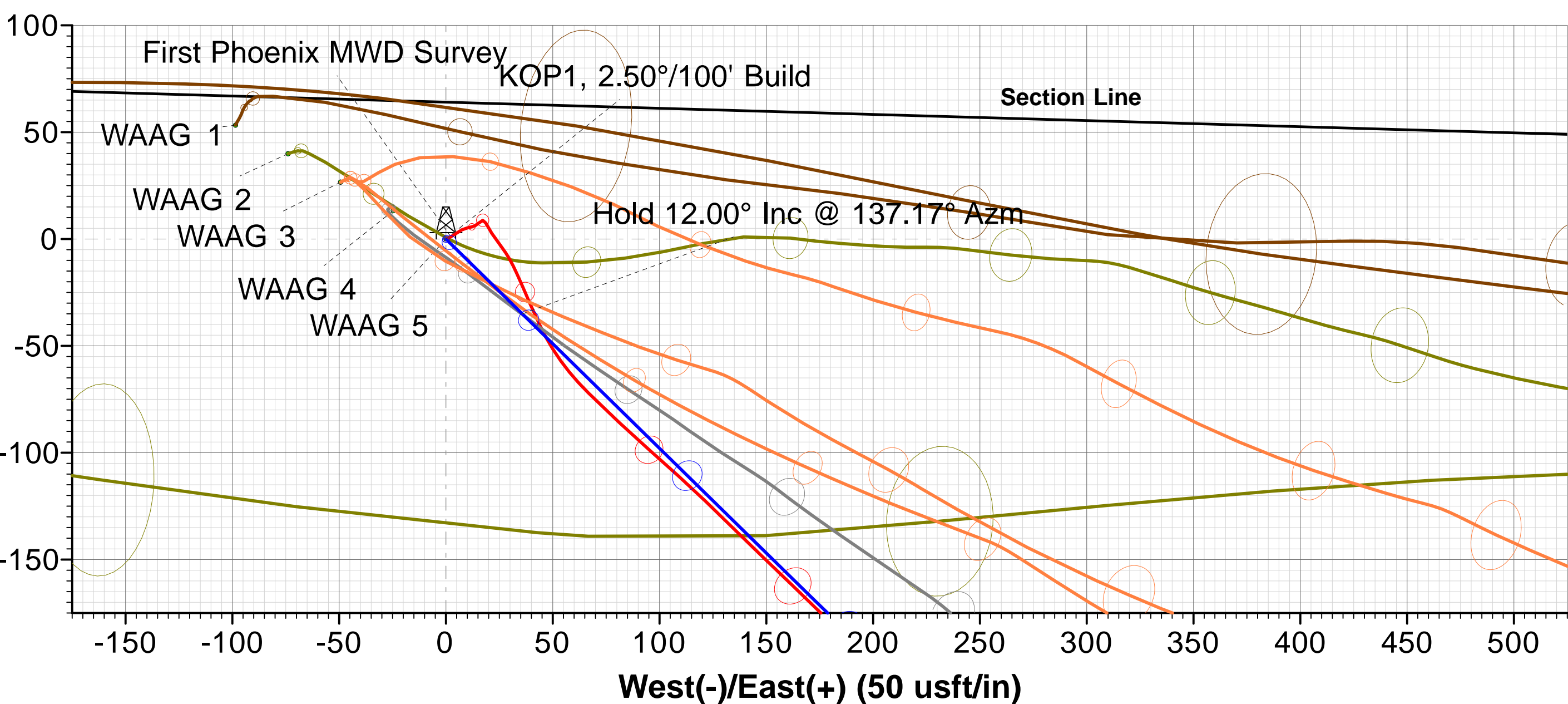
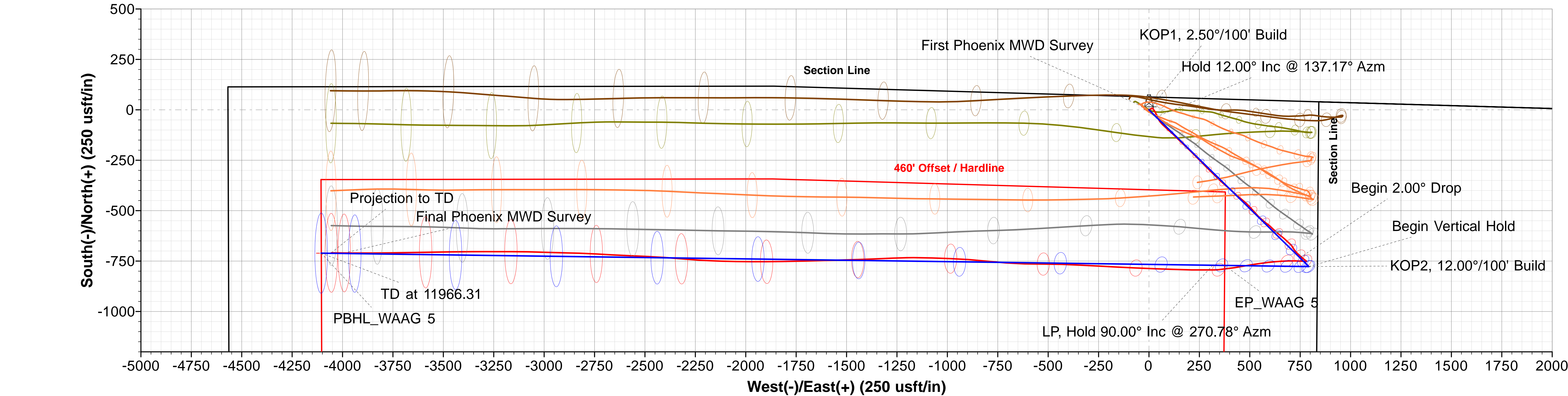


WELL DETAILS											
					Ground Level:		4902.00				
+N/-S		+E/-W		Northing		Easting		Latitude		Longitude	
0.00		0.00		1450703.69		3219711.80		40° 34' 4.409 N		104° 42' 32.936 W	

SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00		KOP1, 2.50°/100' Build
3	1380.00	12.00	134.40	1376.50	-35.04	35.78	2.50	134.40	-29.28		Hold 12.00° Inc @ 137.17° Azm
4	6180.00	12.00	134.40	6071.61	-733.29	748.81	0.00	0.00	-612.81		Begin 2.00° Drop
5	6780.00	0.00	0.00	6667.23	-777.09	793.54	2.00	180.00	-649.41		Begin Vertical Hold
6	6794.31	0.00	0.00	6681.54	-777.09	793.54	0.00	0.00	-649.41		KOP2, 12.00°/100' Build
7	7544.31	90.00	270.78	7159.00	-770.60	316.12	12.00	270.78	-180.09		LP, Hold 90.00° Inc @ 270.78° Azm
8	11966.31	90.00	270.78	7159.00	-710.51	-4105.48	0.00	0.00	4166.51	PBHL_WAAG 5	TD at 11966.31

DESIGN TARGET DETAILS											
Name				TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
EP_WAAG 5				7159.00	-771.71	375.88	1449935.36	3220094.55	40° 33' 56.783 N	104° 42' 28.066 W	Point
PBHL_WAAG 5				7159.00	-710.51	-4105.48	1449956.59	3215612.82	40° 33' 57.385 N	104° 43' 26.134 W	Point

PROJECT DETAILS: Weld County, CO (NAD83)				SITE DETAILS: Sec.19-T7N-R65W			
Geodetic System: US State Plane 1983				Site Centre Northing: 1450756.06			
Datum: North American Datum 1983				Easting: 3219612.83			
Ellipsoid: GRS 1980				Positional Uncertainty: 0.00			
Zone: Colorado Northern Zone				Convergence: 0.51			
System Datum: Mean Sea Level				Local North: True			
FORMATION TOP DETAILS							
TVDPath	MDPath	Formation	DipAngle	DipDir	Map System: US State Plane 1983		
3601.00	3654.20	Parkman	0.00	260.18	Datum: North American Datum 1983		
4328.00	4397.44	Sussex	0.00	260.18	Ellipsoid: GRS 1980		
4721.00	4799.22	Shannon	0.00	260.18	Zone Name: Colorado Northern Zone		
6999.00	7141.59	Niobrara	0.00	260.18	Local Origin: Well WAAG 5, True North		
7159.00	7542.16	Nio B Target	0.00	260.18	Latitude: 40° 34' 4.409 N		
					Longitude: 104° 42' 32.936 W		
					Grid East: 3219711.80		
					Grid North: 1450703.69		
					Scale Factor: 1.000		
					Geomagnetic Model: IGRF2015		
					Sample Date: 17-Jan-15		
					Magnetic Declination: 8.45°		
					Dip Angle from Horizontal: 67.06°		
					Magnetic Field Strength: 52761		
To convert a Magnetic Direction to a Grid Direction, Add 7.94°							
To convert a Magnetic Direction to a True Direction, Add 8.45° East							
To convert a True Direction to a Grid Direction, Subtract 0.51°							



LEGEND	
—	WAAG 1, Wellbore #1 / #1422515, Surveys (Xtreme #7) V0
—	WAAG 2, Wellbore #1 / #1422516, Surveys (Xtreme #7) V0
—	WAAG 5, Wellbore #1 / #1422519, Surveys (Xtreme #7) V0
—	WAAG 4, Wellbore #1 / #1422518, Surveys (Xtreme #7) V0
—	WAAG 3, Wellbore #2 / #1422517, Surveys (Xtreme #7) V0
—	WAAG 3, Wellbore #1 / #1422517, Surveys (Xtreme #7) V0
—	WAAG 3, Wellbore #3 / #1422517, Surveys (Xtreme #7) V0
—	Plan #2 01-17-15