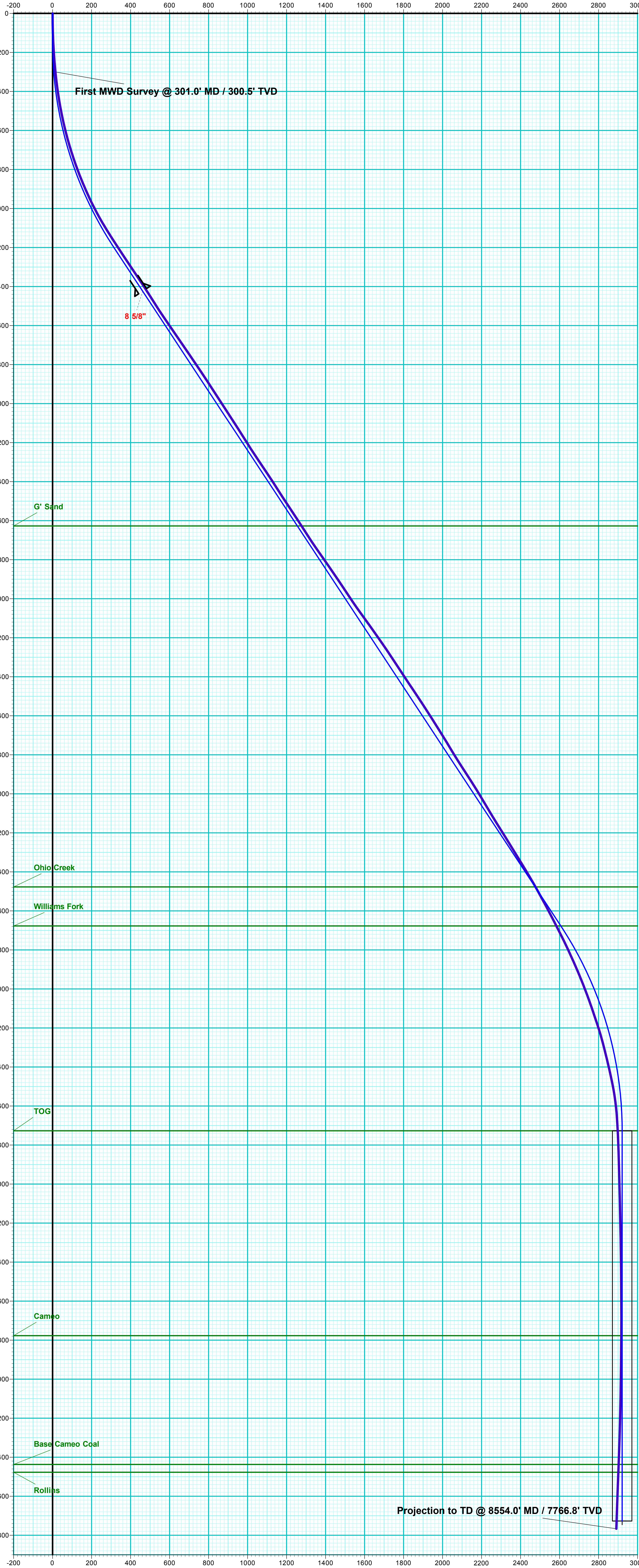


Company Name: Laramie Energy, LLC
BCU 0993-21-07E
Mesa County, CO
Rig: H&P #522
Created By: Will Jircik
Date: 09/19/2018

PROJECT DETAILS: Mesa County, CO
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Central Zone
System Datum: Mean Sea Level

BCU 0993-21-07E
Mesa County, CO
Q181187 & RM-181003
Design #2

WELL DETAILS: BCU 0993-21-07E					
			7257.0		
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1529650.47	2354508.62	39.265383	-107.780120



FORMATION TOP DETAILS		
TVDPATH	MDPATH	FORMATION
2627.0	2970.9	G' Sand
4477.0	5186.7	Ohio Creek
4677.0	5426.3	Williams Fork
5727.0	6538.0	TOG
6777.0	7588.0	Cameo
7437.0	8248.0	Base Cameo Coal
7477.0	8288.0	Rollins

T

M

Azimuths to True North

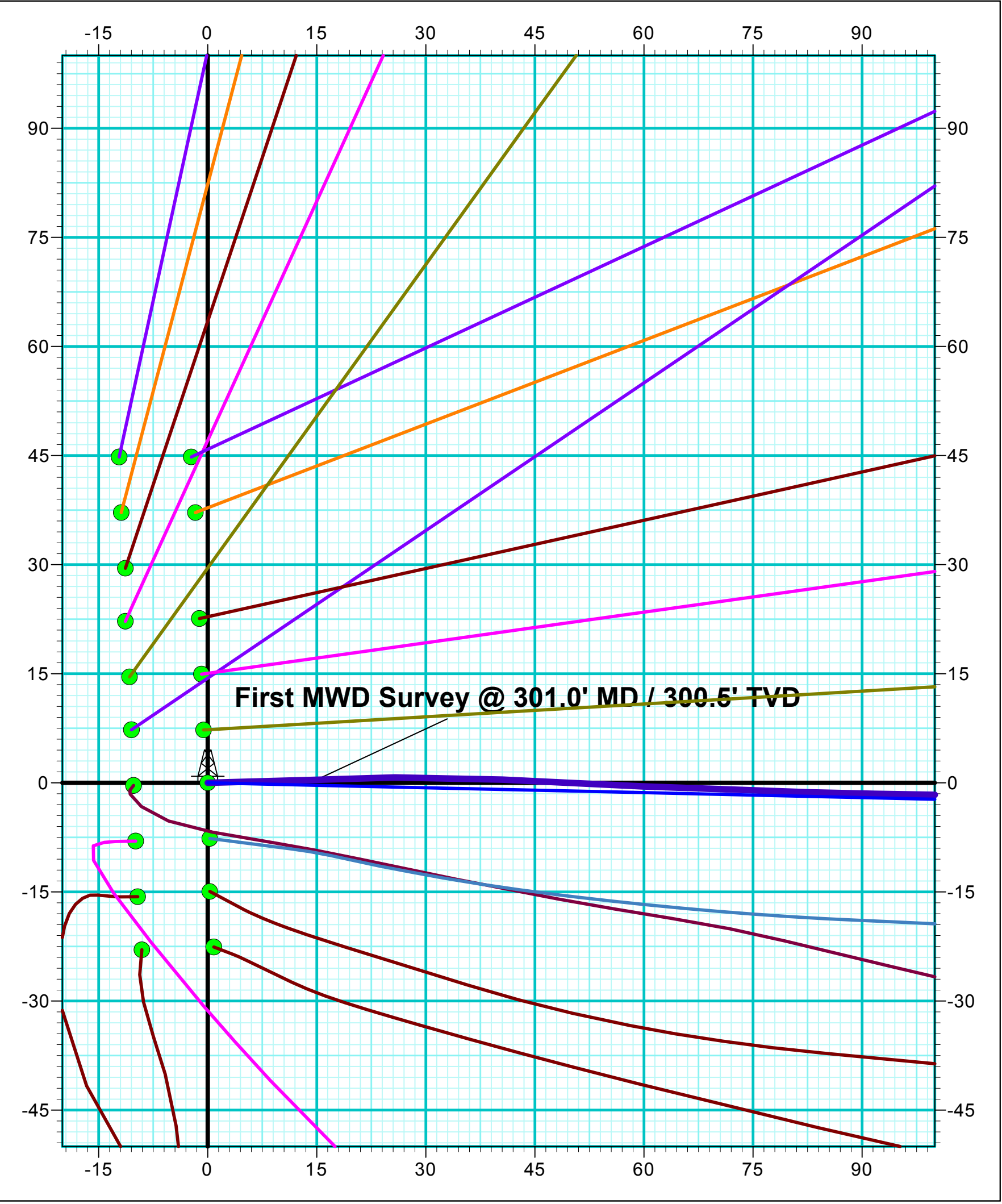
Magnetic North: 9.47°

Strength: 51386.5snT

Dip Angle: 65.43°

Date: 9/3/2018

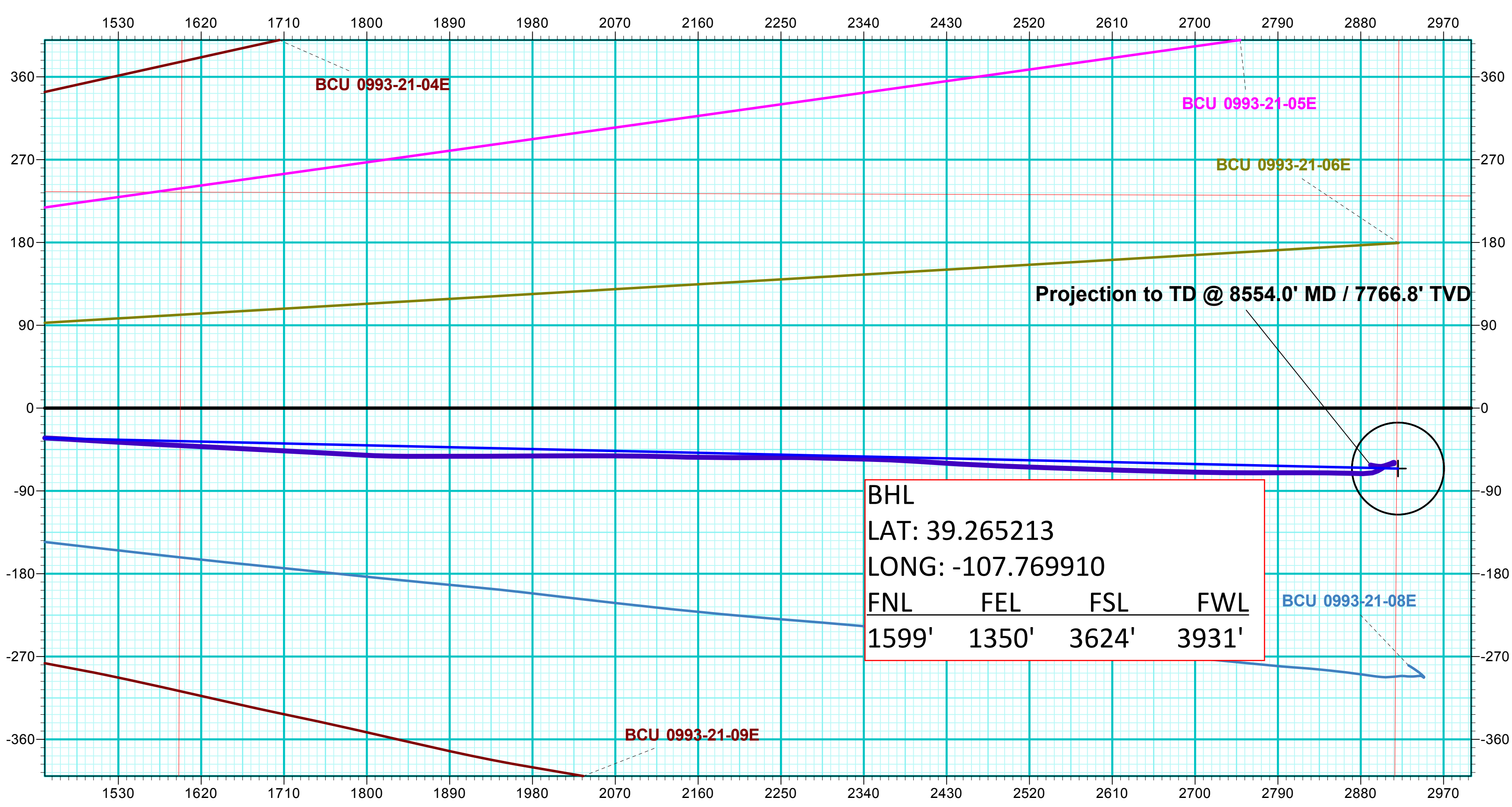
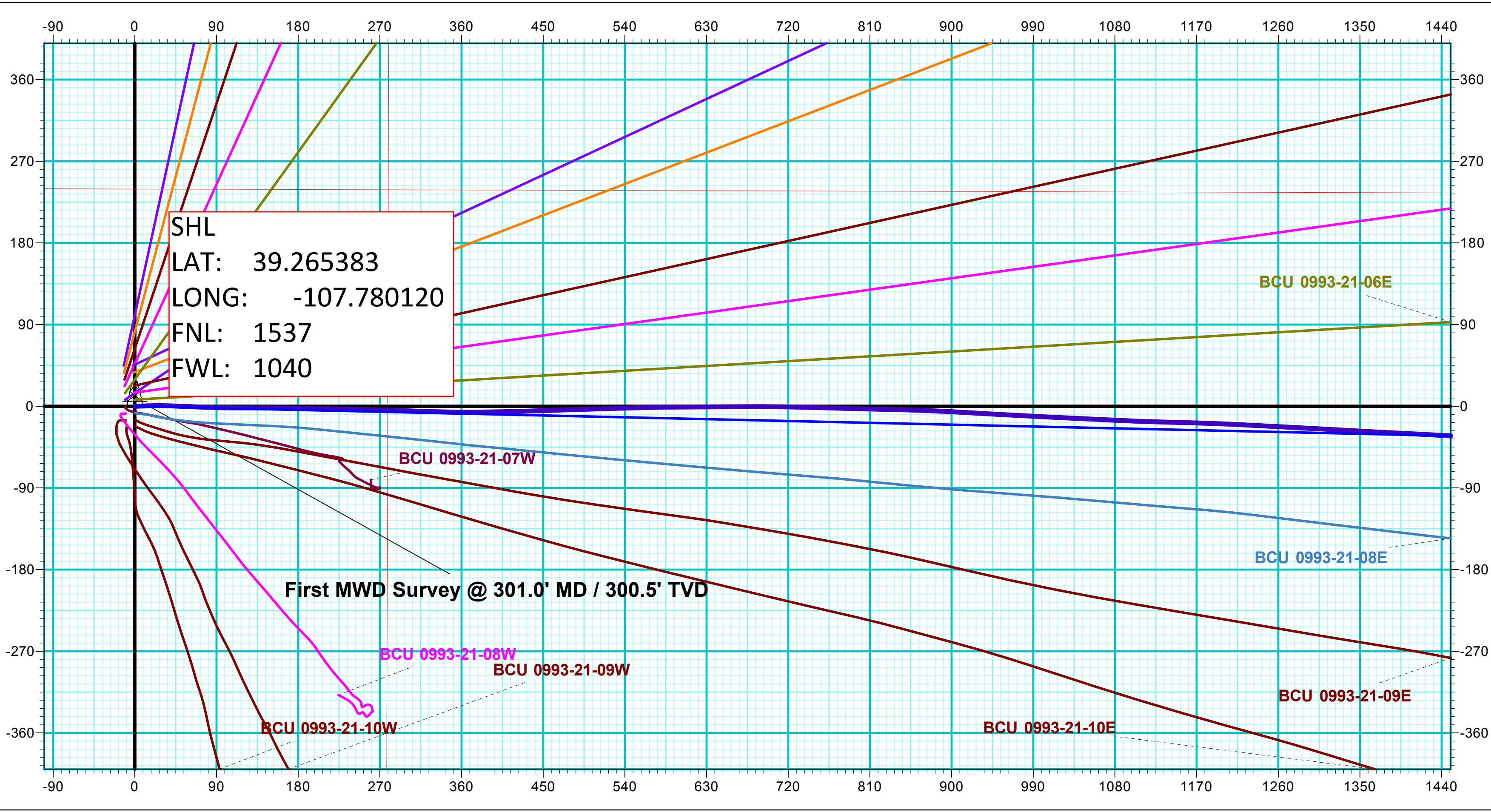
Model: USER DEFINED



DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL - BCU 0993-21-07E	7727.0	-65.7	2920.4	1529511.46	2357426.49	39.265202	-107.769805	Circle (Radius: 50.0)

DESIGN ANNOTATIONS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation	
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.0	KOP/ (Build 3.00°/100')	
1263.1	33.39	91.29	1201.2	-7.1	315.2	315.3	315.3	EOB @ 33.39° Inc / 91.29° Azm	
5424.9	33.39	91.29	4675.8	-58.6	2605.2	2605.9	2605.9	Drop @ 3.00°/100'	
6538.0	0.00	0.00	5727.0	-65.7	2920.4	2921.2	2921.2	EOD @ Vertical	
8538.0	0.00	0.00	7727.0	-65.7	2920.4	2921.2	2921.2	TD @ 8538.0' MD / 7727.0' TVD	

ANNOTATIONS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation	
301.0	5.70	88.40	300.5	0.4	15.0	14.9	15.0	First MWD Survey @ 301.0' MD / 300.5' TVD	
8554.0	2.00	283.00	7766.8	-61.9	2890.7	2891.3	2948.9	Projection to TD @ 8554.0' MD / 7766.8' TVD	



Vertical Section at 91.29° (200 usft/in)