

Piceance Federal 29-19E
 Mesa County, CO
Q170509 & RM-170422
 Design #1

Company Name: Laramie Energy, LLC
 Piceance Federal 29-19E
 Mesa County, CO
 Rig: H&P #522
 Created By: Will Jircik
 Date: 5/6/2017

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



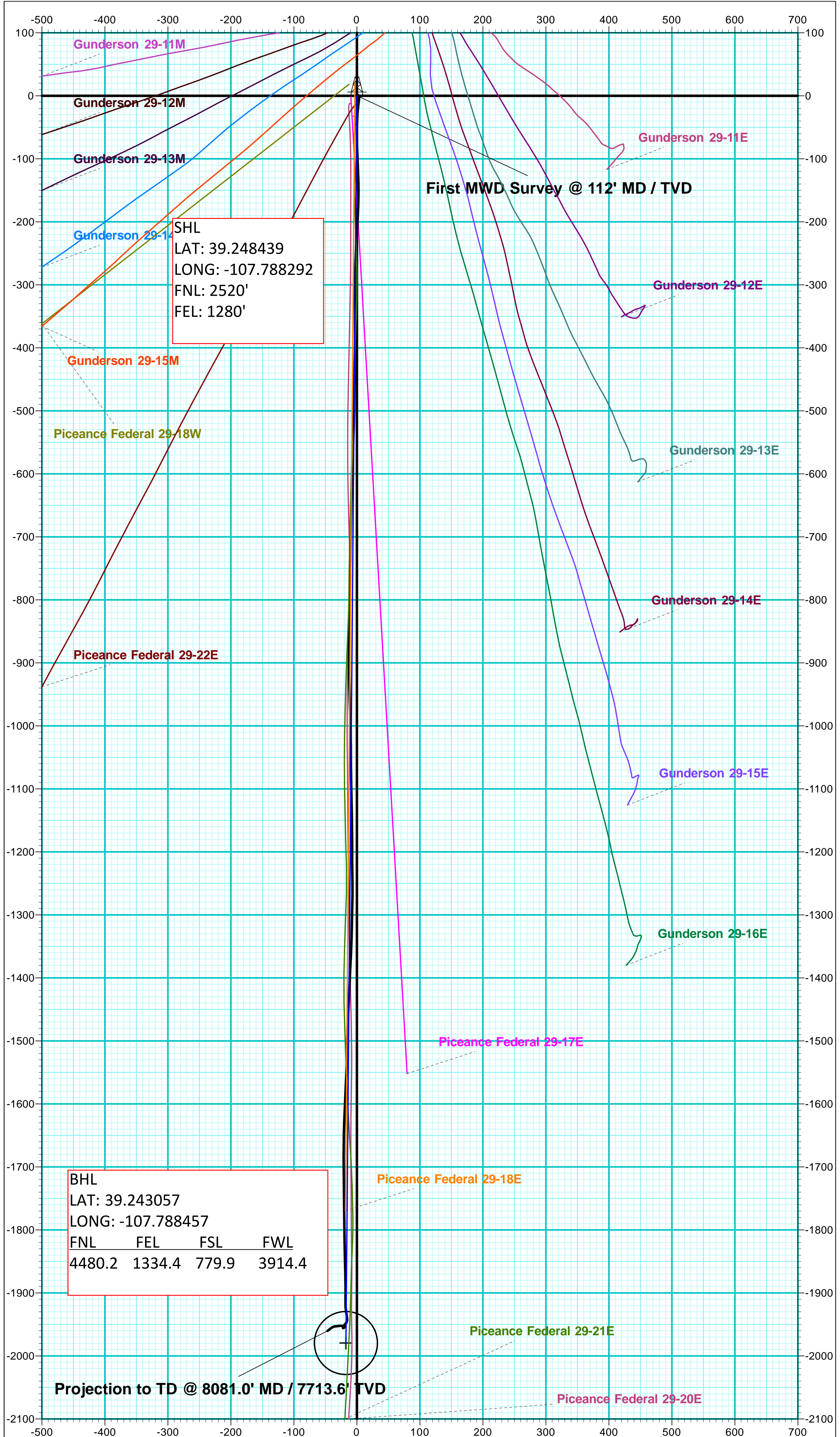
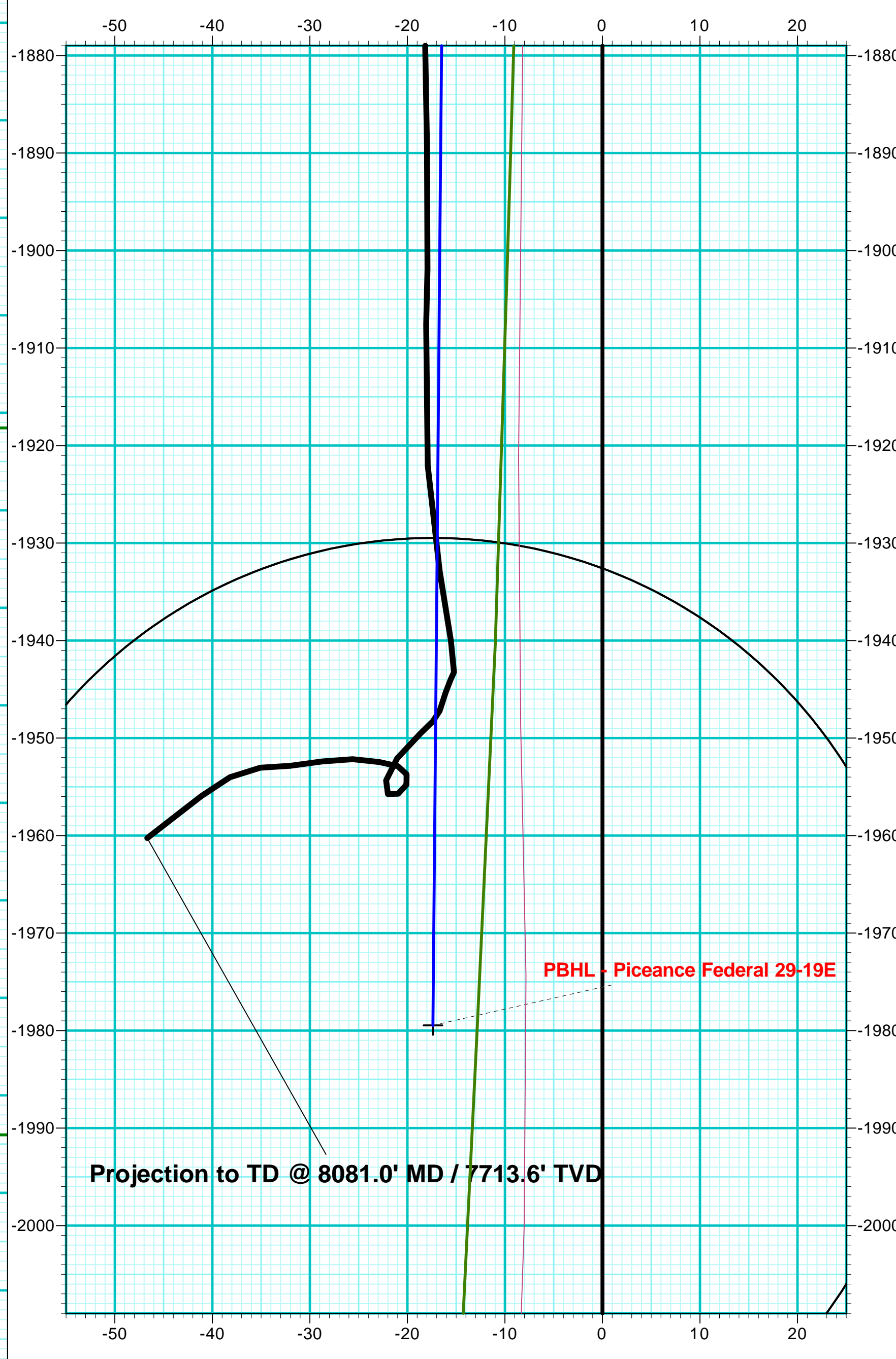
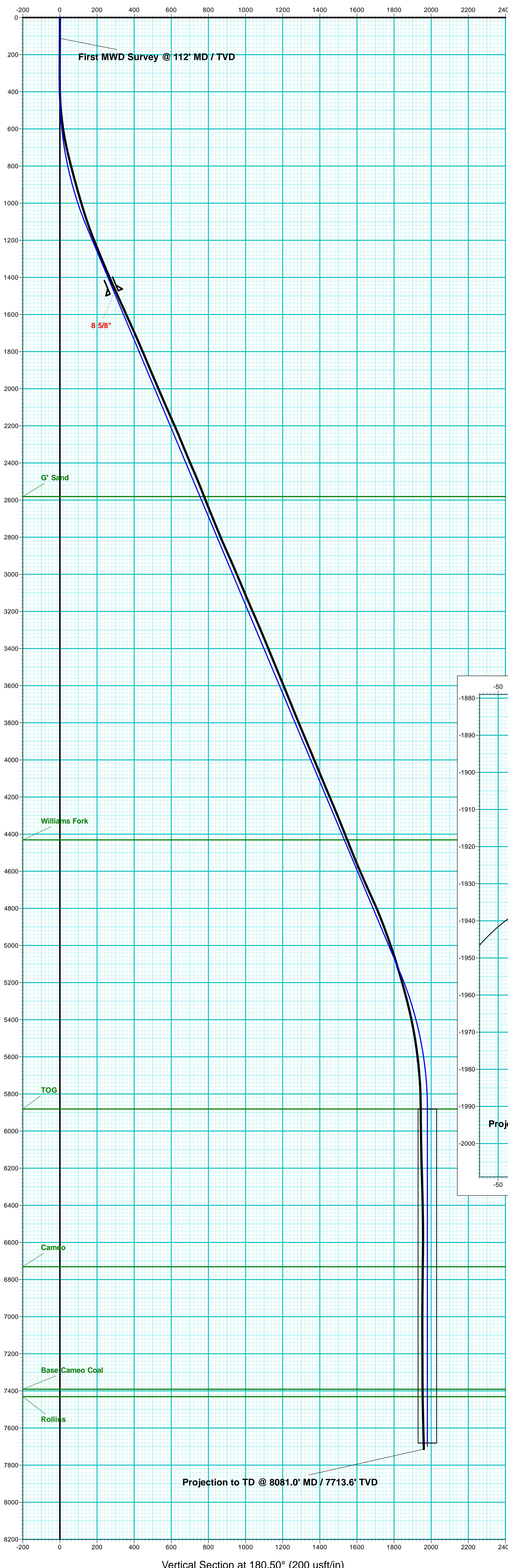
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 Azimuths to True North
 Magnetic North: 9.59°
 Strength: 51423.4snT
 Dip Angle: 65.42°
 Date: 5/2/2017
 Model: IGRF2015

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
2581.0	2722.9	G' Sand
4431.0	4729.6	Williams Fork
5881.0	6259.6	TOG
6731.0	7109.6	Cameo
7391.0	7769.6	Base Cameo Coal
7431.0	7809.6	Rollins

WELL DETAILS: Piceance Federal 29-19E						
Ground Level:						7531.0
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.0	0.0	1523539.27	2352040.31	39.248439	-107.788292	

DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL - Piceance Federal 29-19E	881.0	-1979.5	-17.4	1521560.86	2351973.09	39.243004	-107.788353	Circle (Radius: 50.0)
- plan hits target center								

ANNOTATIONS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	V Sect	Departure	Annotation	
112.0	0.50	73.90	112.0	0.1	0.5	-0.1	0.5	First MWD Survey @ 112' MD / TVD	
8081.0	2.60	231.90	7713.6	-1960.3	-46.7	1960.6	1997.2	Projection to TD @ 8081.0' MD / 7713.6' TVD	



Vertical Section at 180.50° (200 usf/in)