

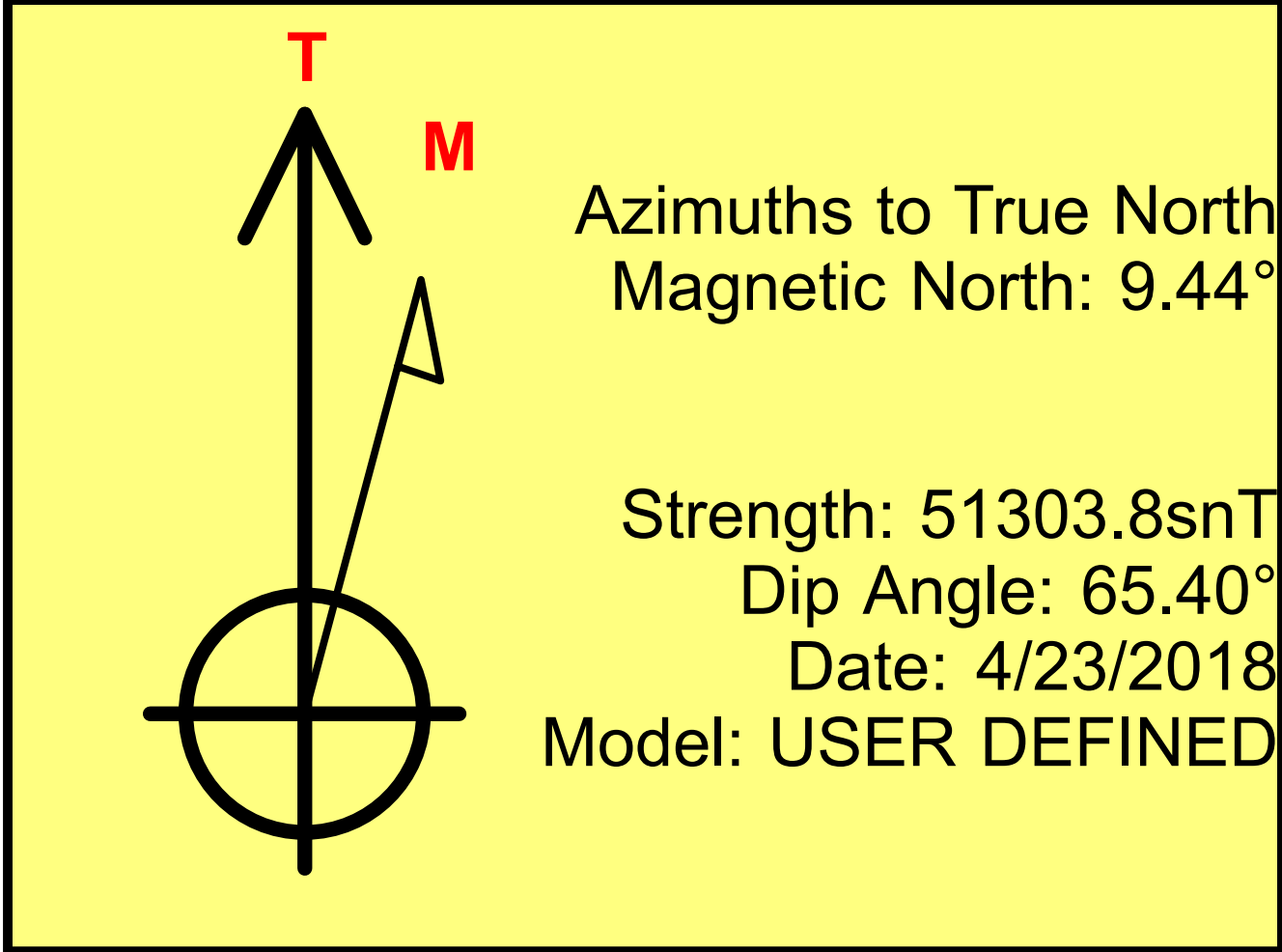
Nichols 0994-24-18W
Mesa County, CO
Q180507 & RM-180435
Design #4

Company Name: Laramie Energy, LLC
Nichols 0994-24-18W
Mesa County, CO
Rig: H&P #290
Created By: Will Jircik
Date: 4/29/2018



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

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
2316.0	2413.7	G' Sand
4066.0	4454.9	Williams Fork
5466.0	6039.8	TOG
6366.0	6940.2	Cameo
7026.0	7600.2	Base Cameo Coal
7066.0	7640.2	Rollins

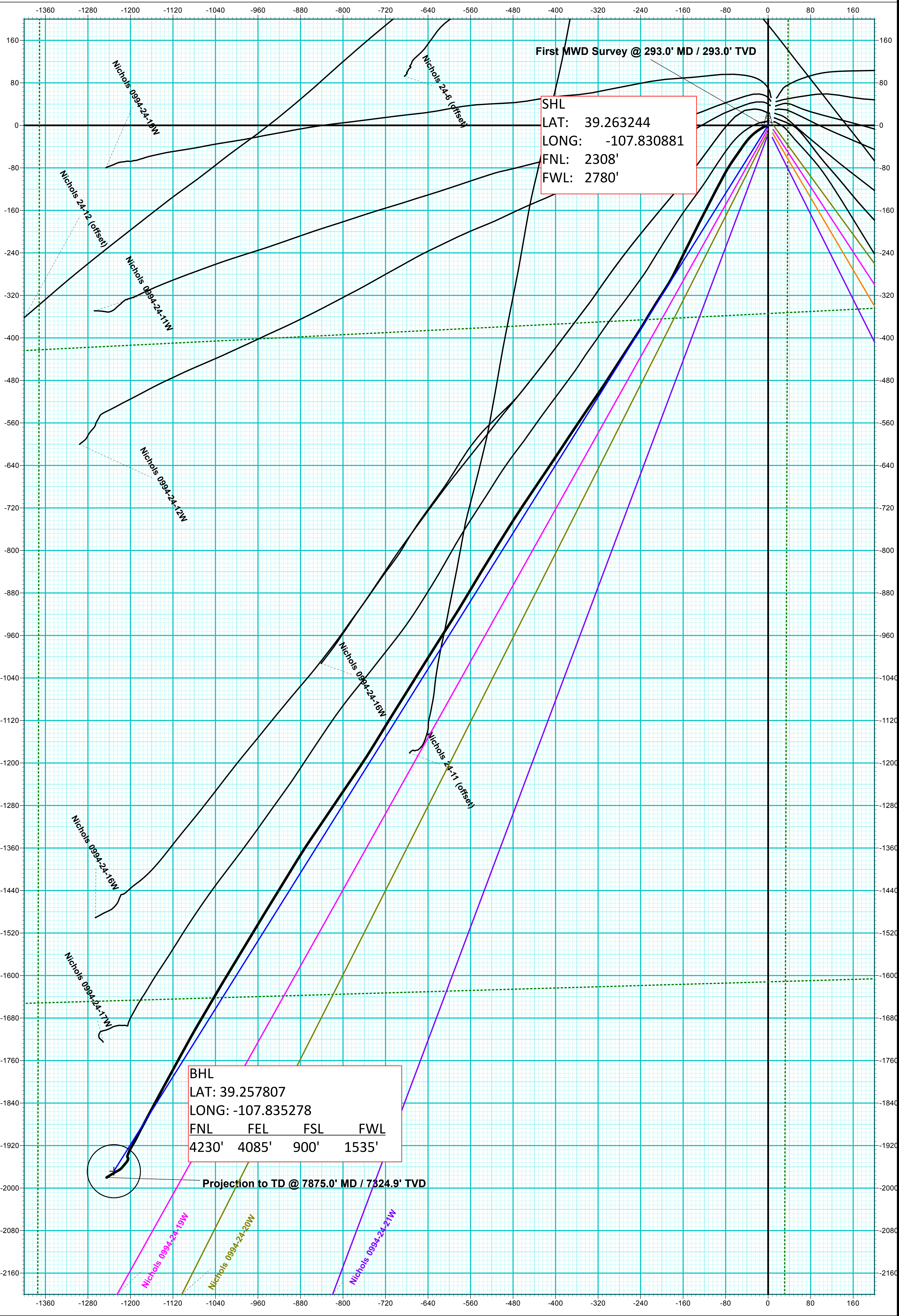


DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL - Nichols 0994-24-18W	1616.0	-1968.2	-1231.2	1527300.40	2338840.30	39.257840	-107.835229	Circle (Radius: 50.0)

DESIGN #4 ANNOTATIONS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation	
350.0	0.00	0.00	350.0	0.0	0.0	0.0	0.0	KOP (Build 3° / 100')	
1016.7	20.00	212.03	1003.2	-97.6	-61.1	115.2	115.2	EOB @ 20.00° Inc. / 212.03° Azm	
2822.4	20.00	212.03	2700.0	-621.2	-388.6	732.8	732.8	Build 3° / 100'	
3334.1	35.35	212.03	3151.8	-822.1	-514.3	969.7	969.7	EOB @ 35.35° Inc. / 212.03° Azm	
5061.8	35.35	212.03	4561.0	-1669.6	-1044.4	1969.4	1969.4	Drop 3° / 100'	
6240.2	0.00	0.00	5666.0	-1968.2	-1231.2	2321.5	2321.5	EOD @ Vertical	
7890.2	0.00	0.00	7316.0	-1968.2	-1231.2	2321.5	2321.5	TD @ 7890.2' MD / 7316.0' TVD	



ANNOTATIONS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation	
293.0	1.80	253.40	293.0	-1.3	-4.4	3.5	4.6	First MWD Survey @ 293.0' MD / 293.0' TVD	
7875.0	3.30	237.78	7324.9	-1980.1	-1244.9	2338.9	2351.7	Projection to TD @ 7875.0' MD / 7324.9' TVD	



Vertical Section at 212.03° (200 usft/in)