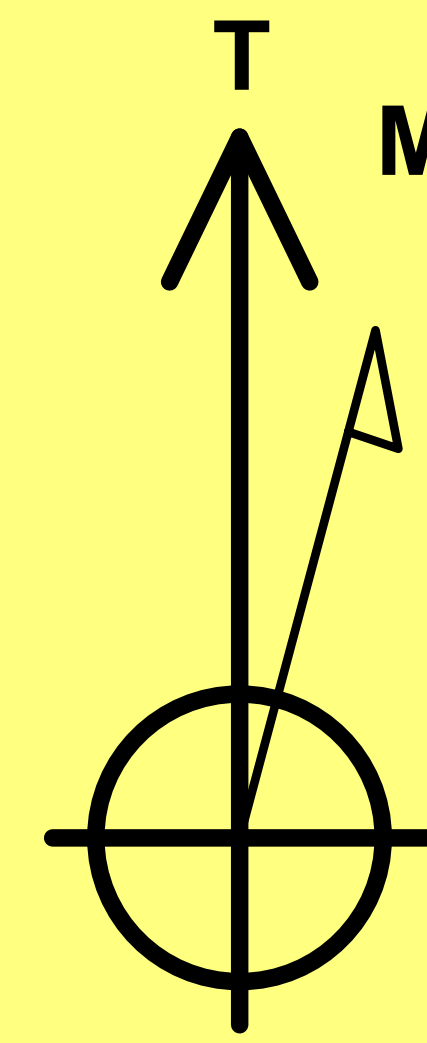


Company Name: Laramie Energy, LLC
Nichols 0994-24-05W
Mesa County, CO
Rig: H&P #290
Created By: Will Jircik
Date: 12/24/2017

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



Azimuths to True North
Magnetic North: 9.55°

Strength: 51364.2snT
Dip Angle: 65.42°
Date: 12/4/2017
Model: IGRF2015



WELL DETAILS: Nichols 0994-24-05W				
+N/-S	+E/-W	Northing	Ground Level: 7137.0	
0.0	0.0	1529733.31	Easting 2340206.80	Latitude 39.264614 Longitude -107.830625

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
2366.0	2445.7	G' Sand
4116.0	4291.2	Williams Fork
5516.0	5745.2	TOG
6416.0	6645.2	Cameo
7076.0	7305.2	Base Cameo Coal
7116.0	7345.2	Rollins

DESIGN #2 ANNOTATIONS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation	
494.0	0.00	0.00	494.0	0.0	0.0	0.0	0.0	KOP (Build 3° / 100')	
1111.0	18.51	297.40	1100.3	45.5	-87.7	98.8	98.8	EOB @ 18.51° Inc. / 297.40° Azm	
5128.2	18.51	297.40	4909.7	632.4	-1220.0	1374.2	1374.2	Drop 3° / 100'	
6745.2	0.00	0.00	5516.0	677.9	-1307.7	1473.0	1473.0	EOD @ Vertical	
7595.2	0.00	0.00	7366.0	677.9	-1307.7	1473.0	1473.0	TD @ 7595.2' MD / 7366.0' TVD	

ANNOTATIONS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
202.0	2.30	333.10	201.9	3.6	-1.8	3.3	4.1	First MWD Survey @ 202.0' MD / 201.9' TVD
7570.0	3.08	266.63	7356.5	688.4	-1330.9	1498.4	1515.5	Projection to TD @ 7570.0' MD / 7356.4' TVD

DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL - Nichols	0994-24-05W66.0	677.9	-1307.7	1530444.49	2338916.89	39.266475	-107.835244	Circle (Radius: 50.0)

