CC Federal 0697-04-05E
Garfield County, CO
Q190976 & RM-190860
Design #3

Company Name: Laramie Energy, LLC
CC Federal 0697-04-05E
Garfield County, CO
Rig: RKB 30'
Created By: Will Jircik
Date: 22:35, June 07 2019

PROJECT DETAILS:	Garfield 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

WELL DETAILS: CC Federal 0697-04-05E

8609.0

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.0	0.0	1639434.19	2233536.99	39.557545	-108.218806

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
606.0	607.9	Mahogany
4777.0	4809.6	Wasatch 'G' Sand
6477.0	6522.1	Ohio Creek
6627.0	6673.2	Williams Fork
7427.0	7477.9	TOG
9077.0	9127.9	Cameo
9307.0	9357.9	Base Cameo Coal
9327.0	9377.9	Rollins

DESIGN ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.0	KOP/ (Build 3.00°/100')
431.1	6.93	334.13	430.5	12.6	-6.1	14.0	14.0	EOB @ 6.93° Inc / 334.13° Azm
7246.9	6.93	334.13	7196.5	752.7	-364.9	836.5	836.5	Drop @ 3.00°/100'
7477.9	0.00	0.00	7427.0	765.3	-371.0	850.5	850.5	EOD @ Vertical
9627.9	0.00	0.00	9577.0	765.3	-371.0	850.5	850.5	TD @ 9627.9' MD / 9577.0' TVD

DESIGN TARGET DETAILS

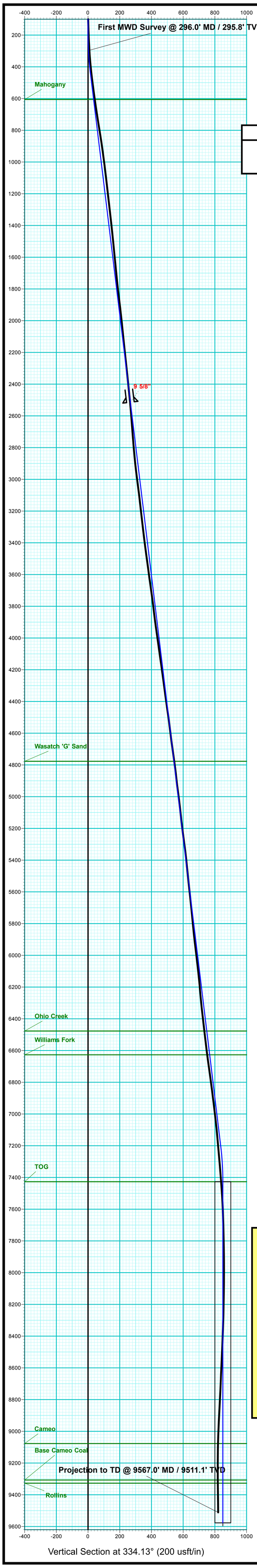
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL - CC Federal 0697-04-05E	9577.0	765.3	-371.0	1640210.26	2233189.01	39.559646	-108.220122

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
296.0	3.40	345.60	295.8	8.5	-2.2	8.6	8.8	First MWD Survey @ 296.0' MD / 295.8' TVD
9567.0	5.50	251.20	9511.1	725.6	-385.2	821.0	977.2	Projection to TD @ 9567.0' MD / 9511.1' TVD

QES
DIRECTIONAL DRILLING

LARAMIE ENERGY



T M Azimuths to True North
Magnetic North: 9.58°

Strength: 51431.7snT
Dip Angle: 65.80°
Date: 6/3/2019
Model: HDGM