CC 0697-04-07E
Garfield County, CO
Q190889 & RM-190779
Design #3

Company Name: Laramie Energy, LLC
CC 0697-04-07E
Garfield County, CO
Rig: RKB 30'
Created By: Will Jircik
Date: 19:47, May 24 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 0697-04-07E

8609.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1639415.45	2233530.22	39.557493	-108.218828

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
606.0	607.6	Mahogany
4757.0	4782.2	Wasatch 'G' Sand
6457.0	6482.2	Ohio Creek
6607.0	6632.2	Williams Fork
7407.0	7432.2	TOG
9057.0	9082.2	Cameo
9287.0	9312.2	Base Cameo Coal
9307.0	9332.2	Rollins

LARAMIE ENERGY

QES
QUINTANA ENERGY SERVICES

T M Azimuths to True North
Magnetic North: 9.58°

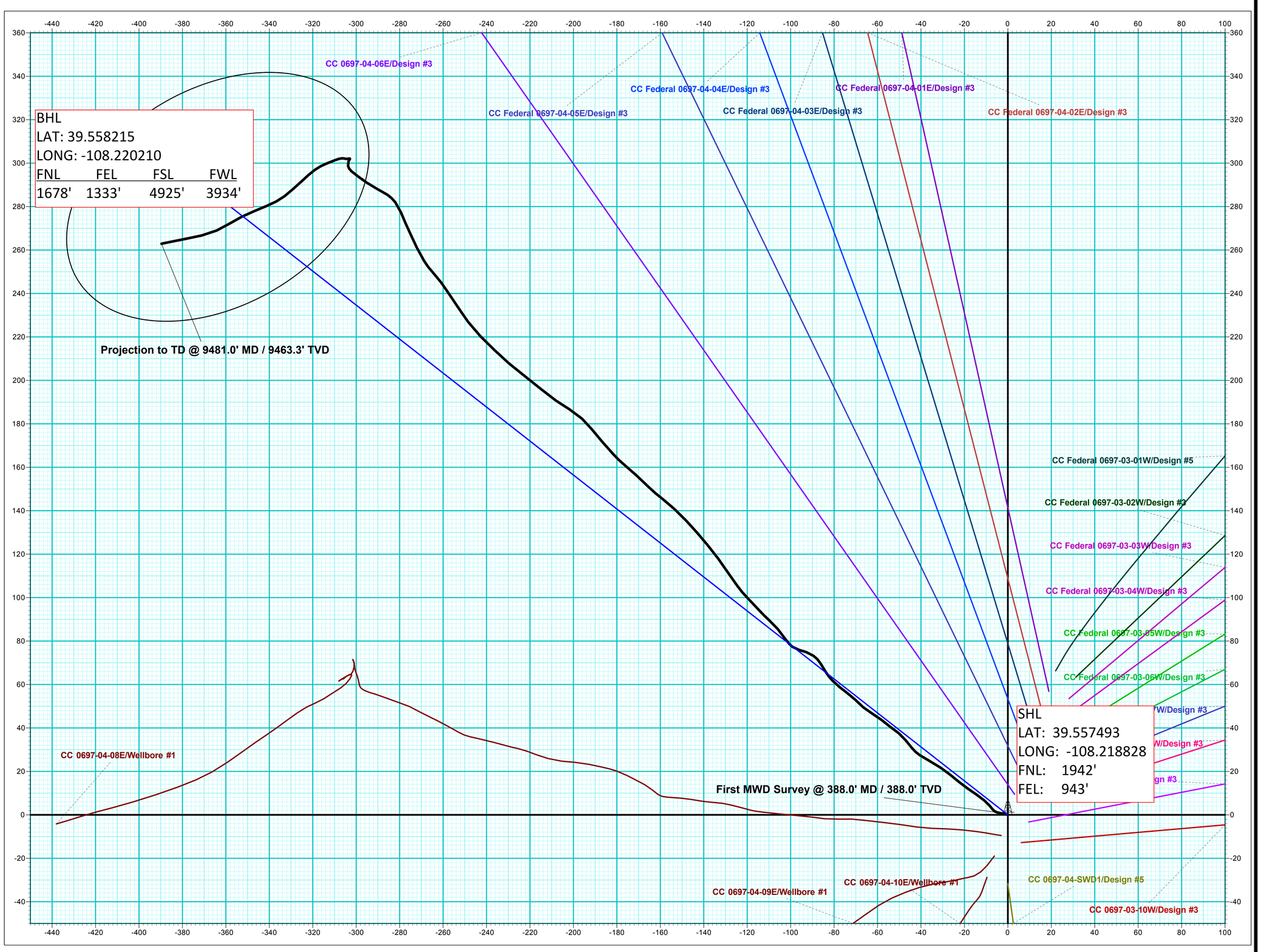
Strength: 51437.7snT
Dip Angle: 65.80°
Date: 5/18/2019
Model: HDGM

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')
411.9	6.36	308.03	411.5	7.2	-9.2	11.7	11.7	EOB @ 6.36° Inc / 308.03° Azm
4370.3	6.36	308.03	4345.5	277.3	-354.5	450.0	450.0	Drop @ 3.00°/100'
4582.2	0.00	0.00	4557.0	284.5	-363.7	461.8	461.8	EOD @ Vertical
9582.2	0.00	0.00	9557.0	284.5	-363.7	461.8	461.8	TD @ 9582.2' MD / 9557.0' TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL - CC 0697-04-07E	9557.0	284.5	-363.7	1639710.70	2233175.18	39.558274	-108.220118

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
388.0	1.50	283.10	388.0	1.2	-4.9	4.6	5.1	First MWD Survey @ 388.0' MD / 388.0' TVD
9481.0	5.40	258.40	9463.3	262.9	-389.7	468.9	535.0	Projection to TD @ 9481.0' MD / 9463.3' TVD