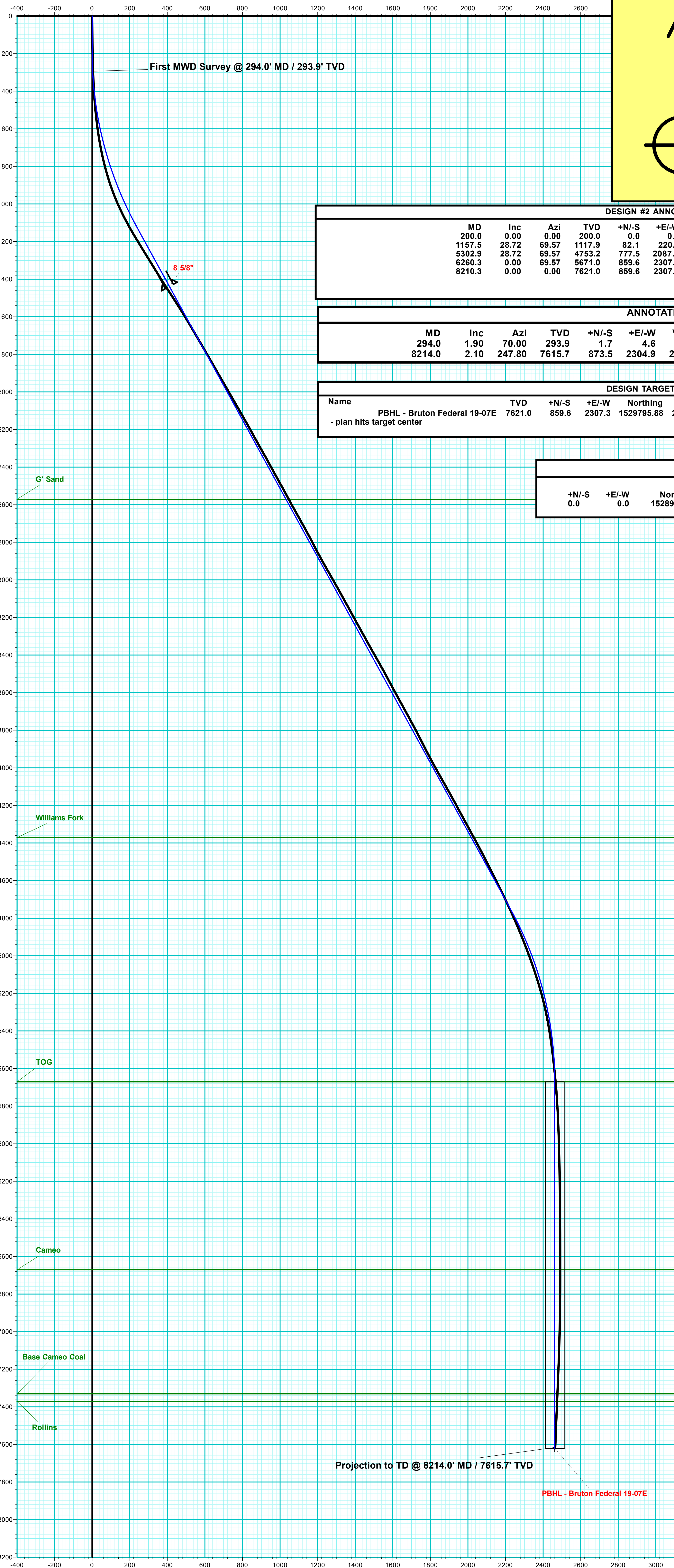


Bruton Federal 19-07E  
Mesa County, CO  
Q171190 & RM-171008  
Design #2

Company Name: Laramie Energy, LLC  
Bruton Federal 19-07E  
Mesa County, CO  
Rig: H&P #290  
Created By: Will Jircik  
Date: 9/28/2017

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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M

Azimuths to True North

Magnetic North: 9.56°

Strength: 51387.7snT

Dip Angle: 65.42°

Date: 9/18/2017

Model: IGRF2015

DESIGN #2 ANNOTATIONS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.0	KOP (Build 3° / 100)	
1157.5	28.72	69.57	1117.9	82.1	220.2	235.0	235.0	EOB @ 28.72° Inc. / 69.57° Azm	
5302.9	28.72	69.57	4753.2	777.5	2087.1	2227.3	2227.3	Drop 3° / 100'	
6260.3	0.00	69.57	5671.0	859.6	2307.3	2462.3	2462.3	EOD @ Vertical	
8210.3	0.00	0.00	7621.0	859.6	2307.3	2462.3	2462.3	TD @ 8210 MD / 7621' TVD	

ANNOTATIONS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation	
294.0	1.90	70.00	293.9	1.7	4.6	4.9	4.9	First MWD Survey @ 294.0' MD / 293.9' TVD	
8214.0	2.10	247.80	7615.7	873.5	2304.9	2464.7	2522.6	Projection to TD @ 8214.0' MD / 7615.7' TVD	

DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
PBHL - Bruton Federal 19-07E	7621.0	859.6	2307.3	1529795.88	2346933.16	39.265257	-107.806881	Circle (Radius: 50.0)	
- plan hits target center									

WELL DETAILS: Bruton Federal 19-07E							
+N/-S	+E/-W	Northing	Easting	Ground Level:	7262.0	Latitude	Longitude
0.0	0.0	1528995.36	2344604.66			39.262897	-107.815031

FORMATION TOP DETAILS		
TVDPATH	MDPATH	FORMATION
2571.0	2814.5	G' Sand
4371.0	4867.1	Williams Fork
5671.0	6260.3	TOG
6671.0	7260.3	Cameo
7331.0	7920.3	Base Cameo Coal
7371.0	7960.3	Rollins

