

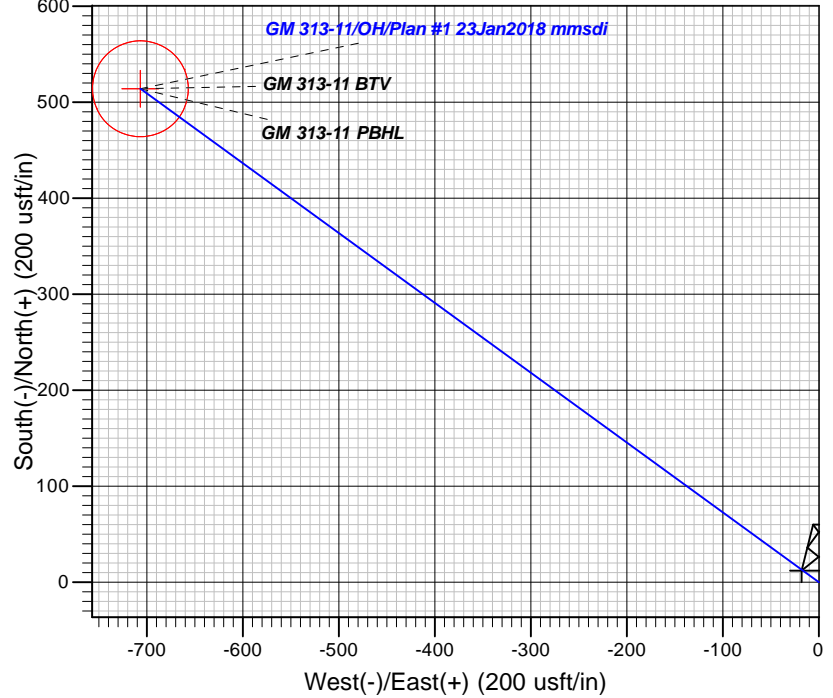
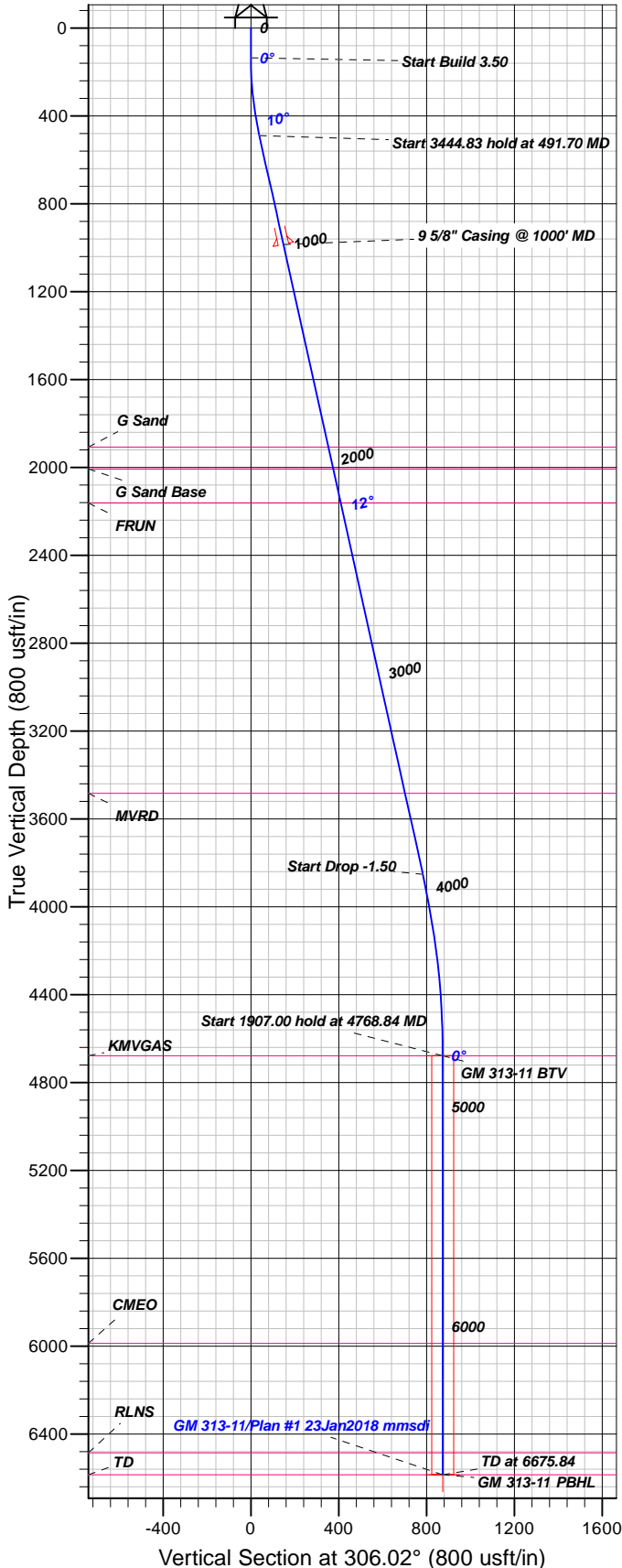


Azimuths to True North
Magnetic North: 9.47°

Magnetic Field
Strength: 51724.2snT
Dip Angle: 65.70°
Date: 1/23/2018
Model: HDGM

Well Details: GM 313-11

GL 5793' & RKB 24' @ 5817.00usft
+N/-S 0.00 +E/-W 0.00 Northing 1599239.50 Easting 2271899.80 Latitude 39.4503102 Longitude -108.0787540 Slot GM 313-11



FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
1907.00	1944.16	G Sand
2007.00	2046.58	G Sand Base
2162.00	2205.34	FRUN
3483.00	3558.33	MVRD
4678.00	4768.84	KMVGAS
5987.00	6077.84	CMEO
6485.00	6575.84	RLNS
6585.00	6675.84	TD

Plan: Plan #1 23Jan2018 mmsdi

10:08, January 30 2018
Created By: Mel Mireles

PROJECT DETAILS: Garfield County, CO NAD83

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Central Zone

System Datum: Mean Sea Level

CASING DETAILS

TVDP	MD	Name	Size
985.16	1000.00	5/8" Casing @ 1000' MD	9.62

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	135.00	0.00	0.00	135.00	0.00	0.00	0.00	0.00	0.00	
3	491.70	12.48	306.02	488.89	22.77	-31.31	3.50	306.02	38.71	
4	3936.53	12.48	306.02	3852.26	460.73	-633.60	0.00	0.00	783.40	
5	4768.84	0.00	0.00	4678.00	513.85	-706.65	1.50	180.00	873.72	GM 313-11 BTV
6	6675.84	0.00	0.00	6585.00	513.85	-706.65	0.00	0.00	873.72	GM 313-11 PBHL

DESIGN TARGET DETAILS

Name	TVDP	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
GM 313-11 BTV	4678.00	513.85	-706.65	1599773.20	2271208.02	39.4517209	-108.0812565	Circle (Radius: 50.00)
- plan hits target center								
GM 313-11 PBHL	6585.00	513.85	-706.65	1599773.20	2271208.02	39.4517209	-108.0812565	Point
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

GR 23-11V Pad

GM 313-11 - Slot GM 313-11

OH

Plan: Plan #1 23Jan2018 mmsdi

Standard Planning Report

30 January, 2018



Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 313-11 - Slot GM 313-11
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5793' & RKB 24' @ 5817.00usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 5793' & RKB 24' @ 5817.00usft
Site:	GR 23-11V Pad	North Reference:	True
Well:	GM 313-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 23Jan2018 mmsdi		

Project	Garfield County, CO NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	GR 23-11V Pad			
Site Position:		Northing:	1,599,230.76 usft	Latitude: 39.4502880
From: Map		Easting:	2,271,922.71 usft	Longitude: -108.0786721
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence: -1.63 °

Well	GM 313-11 - Slot GM 313-11			
Well Position	+N/-S	8.09 usft	Northing:	1,599,239.50 usft
	+E/-W	-23.15 usft	Easting:	2,271,899.80 usft
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft
			Ground Level:	5,793.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	1/23/2018	9.47	65.70	51,724

Design	Plan #1 23Jan2018 mmsdi			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	306.02

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
135.00	0.00	0.00	135.00	0.00	0.00	0.00	0.00	0.00	0.00	
491.70	12.48	306.02	488.89	22.77	-31.31	3.50	3.50	0.00	306.02	
3,936.53	12.48	306.02	3,852.26	460.73	-633.60	0.00	0.00	0.00	0.00	
4,768.84	0.00	0.00	4,678.00	513.85	-706.65	1.50	-1.50	0.00	180.00	GM 313-11 BTV
6,675.84	0.00	0.00	6,585.00	513.85	-706.65	0.00	0.00	0.00	0.00	GM 313-11 PBHL

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 313-11 - Slot GM 313-11
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5793' & RKB 24' @ 5817.00usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 5793' & RKB 24' @ 5817.00usft
Site:	GR 23-11V Pad	North Reference:	True
Well:	GM 313-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 23Jan2018 mmsdi		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
135.00	0.00	0.00	135.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 3.50									
200.00	2.28	306.02	199.98	0.76	-1.04	1.29	3.50	3.50	0.00
300.00	5.78	306.02	299.72	4.89	-6.72	8.31	3.50	3.50	0.00
400.00	9.28	306.02	398.84	12.59	-17.31	21.40	3.50	3.50	0.00
491.70	12.48	306.02	488.89	22.77	-31.31	38.71	3.50	3.50	0.00
Start 3444.83 hold at 491.70 MD									
500.00	12.48	306.02	496.99	23.82	-32.76	40.50	0.00	0.00	0.00
600.00	12.48	306.02	594.62	36.53	-50.24	62.12	0.00	0.00	0.00
700.00	12.48	306.02	692.26	49.25	-67.73	83.74	0.00	0.00	0.00
800.00	12.48	306.02	789.89	61.96	-85.21	105.36	0.00	0.00	0.00
900.00	12.48	306.02	887.53	74.68	-102.69	126.97	0.00	0.00	0.00
1,000.00	12.48	306.02	985.16	87.39	-120.18	148.59	0.00	0.00	0.00
9 5/8" Casing @ 1000' MD									
1,100.00	12.48	306.02	1,082.80	100.10	-137.66	170.21	0.00	0.00	0.00
1,200.00	12.48	306.02	1,180.44	112.82	-155.15	191.83	0.00	0.00	0.00
1,300.00	12.48	306.02	1,278.07	125.53	-172.63	213.44	0.00	0.00	0.00
1,400.00	12.48	306.02	1,375.71	138.24	-190.11	235.06	0.00	0.00	0.00
1,500.00	12.48	306.02	1,473.34	150.96	-207.60	256.68	0.00	0.00	0.00
1,600.00	12.48	306.02	1,570.98	163.67	-225.08	278.30	0.00	0.00	0.00
1,700.00	12.48	306.02	1,668.61	176.38	-242.56	299.92	0.00	0.00	0.00
1,800.00	12.48	306.02	1,766.25	189.10	-260.05	321.53	0.00	0.00	0.00
1,900.00	12.48	306.02	1,863.88	201.81	-277.53	343.15	0.00	0.00	0.00
1,944.16	12.48	306.02	1,907.00	207.43	-285.25	352.70	0.00	0.00	0.00
G Sand									
2,000.00	12.48	306.02	1,961.52	214.53	-295.02	364.77	0.00	0.00	0.00
2,046.58	12.48	306.02	2,007.00	220.45	-303.16	374.84	0.00	0.00	0.00
G Sand Base									
2,100.00	12.48	306.02	2,059.15	227.24	-312.50	386.39	0.00	0.00	0.00
2,200.00	12.48	306.02	2,156.79	239.95	-329.98	408.00	0.00	0.00	0.00
2,205.34	12.48	306.02	2,162.00	240.63	-330.92	409.16	0.00	0.00	0.00
FRUN									
2,300.00	12.48	306.02	2,254.43	252.67	-347.47	429.62	0.00	0.00	0.00
2,400.00	12.48	306.02	2,352.06	265.38	-364.95	451.24	0.00	0.00	0.00
2,500.00	12.48	306.02	2,449.70	278.09	-382.44	472.86	0.00	0.00	0.00
2,600.00	12.48	306.02	2,547.33	290.81	-399.92	494.48	0.00	0.00	0.00
2,700.00	12.48	306.02	2,644.97	303.52	-417.40	516.09	0.00	0.00	0.00
2,800.00	12.48	306.02	2,742.60	316.24	-434.89	537.71	0.00	0.00	0.00
2,900.00	12.48	306.02	2,840.24	328.95	-452.37	559.33	0.00	0.00	0.00
3,000.00	12.48	306.02	2,937.87	341.66	-469.86	580.95	0.00	0.00	0.00
3,100.00	12.48	306.02	3,035.51	354.38	-487.34	602.56	0.00	0.00	0.00
3,200.00	12.48	306.02	3,133.14	367.09	-504.82	624.18	0.00	0.00	0.00
3,300.00	12.48	306.02	3,230.78	379.80	-522.31	645.80	0.00	0.00	0.00
3,400.00	12.48	306.02	3,328.41	392.52	-539.79	667.42	0.00	0.00	0.00
3,500.00	12.48	306.02	3,426.05	405.23	-557.28	689.04	0.00	0.00	0.00
3,558.33	12.48	306.02	3,483.00	412.65	-567.47	701.64	0.00	0.00	0.00
MVRD									
3,600.00	12.48	306.02	3,523.69	417.95	-574.76	710.65	0.00	0.00	0.00
3,700.00	12.48	306.02	3,621.32	430.66	-592.24	732.27	0.00	0.00	0.00
3,800.00	12.48	306.02	3,718.96	443.37	-609.73	753.89	0.00	0.00	0.00
3,900.00	12.48	306.02	3,816.59	456.09	-627.21	775.51	0.00	0.00	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 313-11 - Slot GM 313-11
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5793' & RKB 24' @ 5817.00usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 5793' & RKB 24' @ 5817.00usft
Site:	GR 23-11V Pad	North Reference:	True
Well:	GM 313-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 23Jan2018 mmsdi		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,936.53	12.48	306.02	3,852.26	460.73	-633.60	783.40	0.00	0.00	0.00
Start Drop -1.50									
4,000.00	11.53	306.02	3,914.34	468.50	-644.28	796.61	1.50	-1.50	0.00
4,100.00	10.03	306.02	4,012.57	479.50	-659.41	815.32	1.50	-1.50	0.00
4,200.00	8.53	306.02	4,111.26	488.99	-672.45	831.45	1.50	-1.50	0.00
4,300.00	7.03	306.02	4,210.33	496.95	-683.41	844.99	1.50	-1.50	0.00
4,400.00	5.53	306.02	4,309.73	503.39	-692.26	855.93	1.50	-1.50	0.00
4,500.00	4.03	306.02	4,409.38	508.29	-699.00	864.27	1.50	-1.50	0.00
4,600.00	2.53	306.02	4,509.21	511.66	-703.63	869.99	1.50	-1.50	0.00
4,700.00	1.03	306.02	4,609.16	513.49	-706.15	873.10	1.50	-1.50	0.00
4,768.84	0.00	0.00	4,678.00	513.85	-706.65	873.72	1.50	-1.50	0.00
Start 1907.00 hold at 4768.84 MD - KMGAS - GM 313-11 BTV									
4,800.00	0.00	0.00	4,709.16	513.85	-706.65	873.72	0.00	0.00	0.00
4,900.00	0.00	0.00	4,809.16	513.85	-706.65	873.72	0.00	0.00	0.00
5,000.00	0.00	0.00	4,909.16	513.85	-706.65	873.72	0.00	0.00	0.00
5,100.00	0.00	0.00	5,009.16	513.85	-706.65	873.72	0.00	0.00	0.00
5,200.00	0.00	0.00	5,109.16	513.85	-706.65	873.72	0.00	0.00	0.00
5,300.00	0.00	0.00	5,209.16	513.85	-706.65	873.72	0.00	0.00	0.00
5,400.00	0.00	0.00	5,309.16	513.85	-706.65	873.72	0.00	0.00	0.00
5,500.00	0.00	0.00	5,409.16	513.85	-706.65	873.72	0.00	0.00	0.00
5,600.00	0.00	0.00	5,509.16	513.85	-706.65	873.72	0.00	0.00	0.00
5,700.00	0.00	0.00	5,609.16	513.85	-706.65	873.72	0.00	0.00	0.00
5,800.00	0.00	0.00	5,709.16	513.85	-706.65	873.72	0.00	0.00	0.00
5,900.00	0.00	0.00	5,809.16	513.85	-706.65	873.72	0.00	0.00	0.00
6,000.00	0.00	0.00	5,909.16	513.85	-706.65	873.72	0.00	0.00	0.00
6,077.84	0.00	0.00	5,987.00	513.85	-706.65	873.72	0.00	0.00	0.00
CME0									
6,100.00	0.00	0.00	6,009.16	513.85	-706.65	873.72	0.00	0.00	0.00
6,200.00	0.00	0.00	6,109.16	513.85	-706.65	873.72	0.00	0.00	0.00
6,300.00	0.00	0.00	6,209.16	513.85	-706.65	873.72	0.00	0.00	0.00
6,400.00	0.00	0.00	6,309.16	513.85	-706.65	873.72	0.00	0.00	0.00
6,500.00	0.00	0.00	6,409.16	513.85	-706.65	873.72	0.00	0.00	0.00
6,575.84	0.00	0.00	6,485.00	513.85	-706.65	873.72	0.00	0.00	0.00
RLNS									
6,600.00	0.00	0.00	6,509.16	513.85	-706.65	873.72	0.00	0.00	0.00
6,675.84	0.00	0.00	6,585.00	513.85	-706.65	873.72	0.00	0.00	0.00
TD at 6675.84 - TD - GM 313-11 PBHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
GM 313-11 BTV	0.00	0.00	4,678.00	513.85	-706.65	1,599,773.20	2,271,208.02	39.4517210	-108.0812565
- plan hits target center									
- Circle (radius 50.00)									
GM 313-11 PBHL	0.00	0.00	6,585.00	513.85	-706.65	1,599,773.20	2,271,208.02	39.4517210	-108.0812565
- plan hits target center									
- Point									

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 313-11 - Slot GM 313-11
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5793' & RKB 24' @ 5817.00usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 5793' & RKB 24' @ 5817.00usft
Site:	GR 23-11V Pad	North Reference:	True
Well:	GM 313-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 23Jan2018 mmsdi		

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,000.00	985.16	9 5/8" Casing @ 1000' MD	9.62	13.50

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,944.16	1,907.00	G Sand		0.00	0.00
2,046.58	2,007.00	G Sand Base		0.00	0.00
2,205.34	2,162.00	FRUN		0.00	0.00
3,558.33	3,483.00	MVRD		0.00	0.00
4,768.84	4,678.00	KMVGAS		0.00	0.00
6,077.84	5,987.00	CMEO		0.00	0.00
6,575.84	6,485.00	RLNS		0.00	0.00
6,675.84	6,585.00	TD		0.00	0.00

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
135.00	135.00	0.00	0.00	Start Build 3.50
491.70	488.89	22.77	-31.31	Start 3444.83 hold at 491.70 MD
3,936.53	3,852.26	460.73	-633.60	Start Drop -1.50
4,768.84	4,678.00	513.85	-706.65	Start 1907.00 hold at 4768.84 MD
6,675.84	6,585.00	513.85	-706.65	TD at 6675.84