

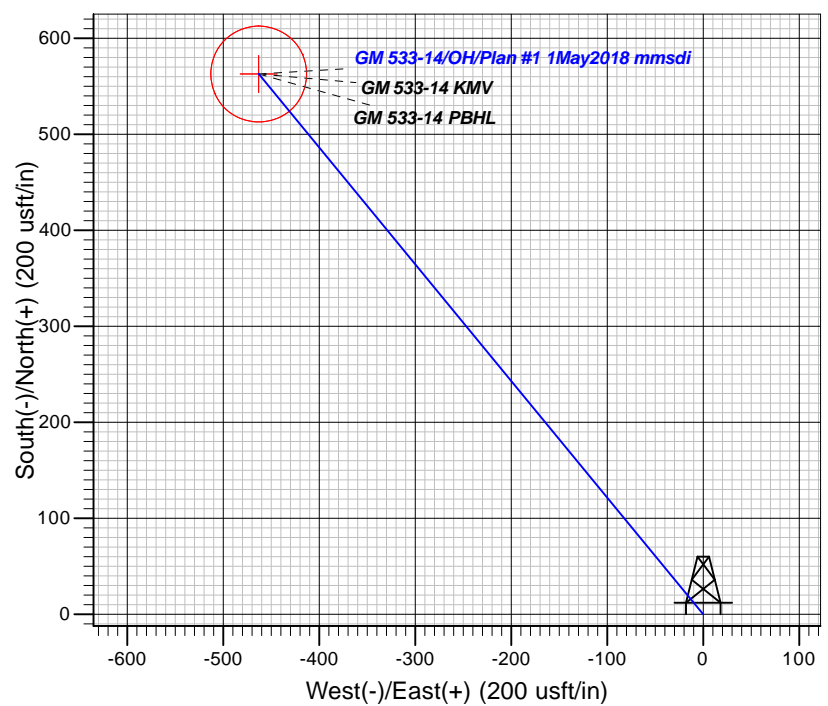
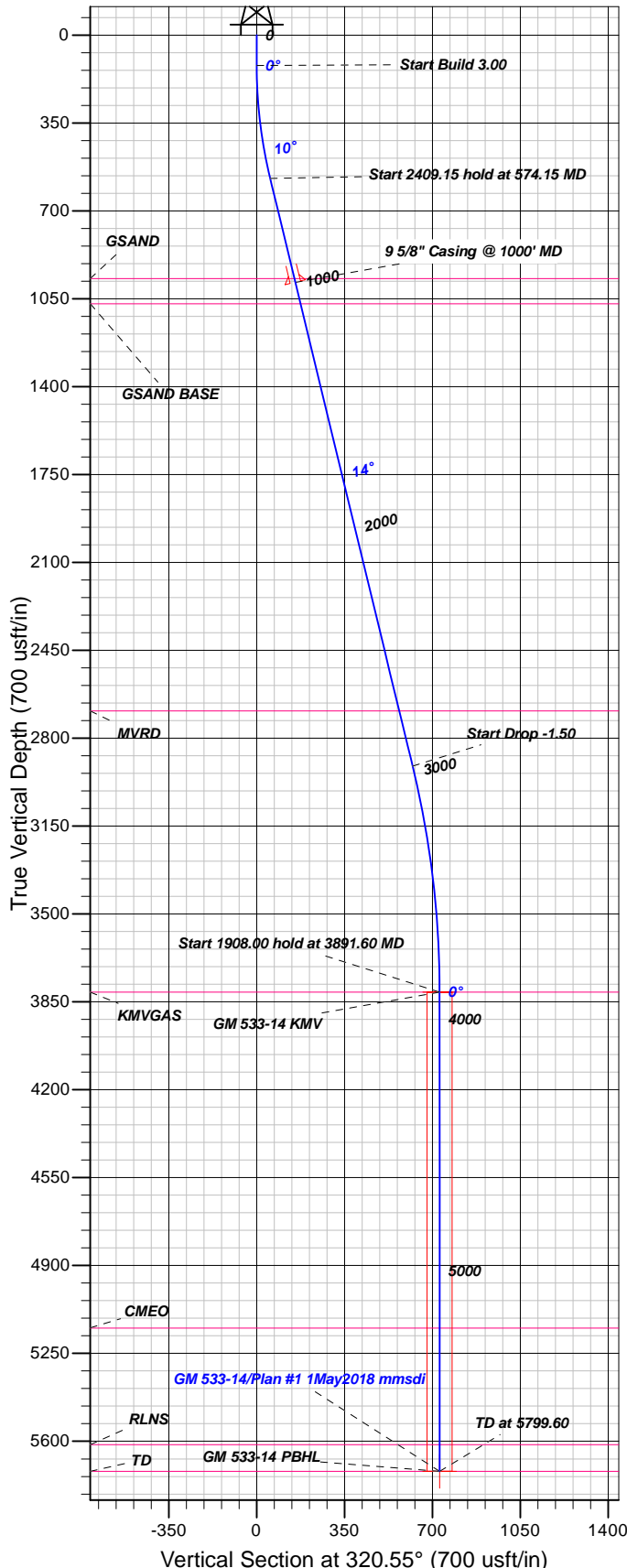


Azimuths to True North
Magnetic North: 9.42°

Magnetic Field
Strength: 51710.5snT
Dip Angle: 65.65°
Date: 5/3/2018
Model: HDGM

Well Details: GM 533-14

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1592883.30	2272799.50	39.4329364	-108.0749313	GM 533-14 (A9)



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
969.00	984.82	GSAND
1069.00	1087.72	GSAND BASE
2691.00	2756.68	MVRD
3811.00	3891.60	KMVGAS
5149.00	5229.60	CMEO
5614.00	5694.60	RLNS
5719.00	5799.60	TD

Plan: Plan #1 1May2018 mmsdi

14:36, May 07 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

TVD	MD	Name	Size
983.75	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	120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	
3	574.15	13.62	320.55	569.88	41.50	-34.15	3.00	320.55	53.74	
4	2983.30	13.62	320.55	2911.24	479.71	-394.74	0.00	0.00	621.24	
5	3891.60	0.00	0.00	3811.00	562.70	-463.03	1.50	180.00	728.72	GM 533-14 KMV
6	5799.60	0.00	0.00	5719.00	562.70	-463.03	0.00	0.00	728.72	GM 533-14 PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
GM 533-14 KMV	3811.00	562.70	-463.03	1593458.90	2272352.60	39.4344813	-108.0765706	Circle (Radius: 50.00)
- plan hits target center								
GM 533-14 PBHL	5719.00	562.70	-463.03	1593458.90	2272352.60	39.4344813	-108.0765706	Point
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

GM 34-14 Pad

GM 533-14 - Slot GM 533-14 (A9)

OH

Plan: Plan #1 1May2018 mmsdi

Standard Planning Report

07 May, 2018



Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 533-14 - Slot GM 533-14 (A9)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5172' & RKB 24' @ 5196.00usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 5172' & RKB 24' @ 5196.00usft
Site:	GM 34-14 Pad	North Reference:	True
Well:	GM 533-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 1May2018 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		GM 34-14 Pad			
Site Position:		Northing:	1,592,890.50 usft	Latitude:	39.4329552
From:	Map	Easting:	2,272,786.40 usft	Longitude:	-108.0749784
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.62 °

Well	GM 533-14 - Slot GM 533-14 (A9)					
Well Position	+N/-S	-6.83 usft	Northing:	1,592,883.30 usft	Latitude:	39.4329364
	+E/-W	13.30 usft	Easting:	2,272,799.50 usft	Longitude:	-108.0749313
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	5,172.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/3/2018	9.42	65.65	51,711

Design	Plan #1 1May2018 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	320.55

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	
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00	
574.15	13.62	320.55	569.88	41.50	-34.15	3.00	3.00	0.00	320.55	
2,983.30	13.62	320.55	2,911.24	479.71	-394.74	0.00	0.00	0.00	0.00	
3,891.60	0.00	0.00	3,811.00	562.70	-463.03	1.50	-1.50	0.00	180.00	GM 533-14 KMV
5,799.60	0.00	0.00	5,719.00	562.70	-463.03	0.00	0.00	0.00	0.00	GM 533-14 PBHL

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 533-14 - Slot GM 533-14 (A9)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5172' & RKB 24' @ 5196.00usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 5172' & RKB 24' @ 5196.00usft
Site:	GM 34-14 Pad	North Reference:	True
Well:	GM 533-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 1May2018 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
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	2.40	320.55	199.98	1.29	-1.06	1.68	3.00	3.00	0.00
300.00	5.40	320.55	299.73	6.55	-5.39	8.48	3.00	3.00	0.00
400.00	8.40	320.55	399.00	15.82	-13.02	20.49	3.00	3.00	0.00
500.00	11.40	320.55	497.50	29.10	-23.94	37.68	3.00	3.00	0.00
574.15	13.62	320.55	569.88	41.50	-34.15	53.74	3.00	3.00	0.00
600.00	13.62	320.55	595.00	46.20	-38.02	59.83	0.00	0.00	0.00
700.00	13.62	320.55	692.19	64.39	-52.98	83.39	0.00	0.00	0.00
800.00	13.62	320.55	789.38	82.58	-67.95	106.94	0.00	0.00	0.00
900.00	13.62	320.55	886.56	100.77	-82.92	130.50	0.00	0.00	0.00
984.82	13.62	320.55	969.00	116.20	-95.62	150.48	0.00	0.00	0.00
GSAND									
1,000.00	13.62	320.55	983.75	118.96	-97.89	154.06	0.00	0.00	0.00
9 5/8" Casing @ 1000' MD									
1,087.72	13.62	320.55	1,069.00	134.91	-111.02	174.72	0.00	0.00	0.00
GSAND BASE									
1,100.00	13.62	320.55	1,080.93	137.15	-112.85	177.61	0.00	0.00	0.00
1,200.00	13.62	320.55	1,178.12	155.34	-127.82	201.17	0.00	0.00	0.00
1,300.00	13.62	320.55	1,275.31	173.53	-142.79	224.72	0.00	0.00	0.00
1,400.00	13.62	320.55	1,372.49	191.72	-157.76	248.28	0.00	0.00	0.00
1,500.00	13.62	320.55	1,469.68	209.90	-172.72	271.83	0.00	0.00	0.00
1,600.00	13.62	320.55	1,566.87	228.09	-187.69	295.39	0.00	0.00	0.00
1,700.00	13.62	320.55	1,664.05	246.28	-202.66	318.95	0.00	0.00	0.00
1,800.00	13.62	320.55	1,761.24	264.47	-217.63	342.50	0.00	0.00	0.00
1,900.00	13.62	320.55	1,858.42	282.66	-232.59	366.06	0.00	0.00	0.00
2,000.00	13.62	320.55	1,955.61	300.85	-247.56	389.61	0.00	0.00	0.00
2,100.00	13.62	320.55	2,052.80	319.04	-262.53	413.17	0.00	0.00	0.00
2,200.00	13.62	320.55	2,149.98	337.23	-277.50	436.72	0.00	0.00	0.00
2,300.00	13.62	320.55	2,247.17	355.42	-292.46	460.28	0.00	0.00	0.00
2,400.00	13.62	320.55	2,344.35	373.61	-307.43	483.84	0.00	0.00	0.00
2,500.00	13.62	320.55	2,441.54	391.80	-322.40	507.39	0.00	0.00	0.00
2,600.00	13.62	320.55	2,538.73	409.99	-337.37	530.95	0.00	0.00	0.00
2,700.00	13.62	320.55	2,635.91	428.18	-352.33	554.50	0.00	0.00	0.00
2,756.68	13.62	320.55	2,691.00	438.49	-360.82	567.86	0.00	0.00	0.00
MVRD									
2,800.00	13.62	320.55	2,733.10	446.37	-367.30	578.06	0.00	0.00	0.00
2,900.00	13.62	320.55	2,830.28	464.55	-382.27	601.61	0.00	0.00	0.00
2,983.30	13.62	320.55	2,911.24	479.71	-394.74	621.24	0.00	0.00	0.00
3,000.00	13.37	320.55	2,927.48	482.72	-397.21	625.14	1.50	-1.50	0.00
3,100.00	11.87	320.55	3,025.06	499.59	-411.10	646.99	1.50	-1.50	0.00
3,200.00	10.37	320.55	3,123.18	514.49	-423.36	666.28	1.50	-1.50	0.00
3,300.00	8.87	320.55	3,221.77	527.40	-433.98	683.00	1.50	-1.50	0.00
3,400.00	7.37	320.55	3,320.76	538.31	-442.96	697.13	1.50	-1.50	0.00
3,500.00	5.87	320.55	3,420.09	547.22	-450.29	708.67	1.50	-1.50	0.00
3,600.00	4.37	320.55	3,519.69	554.11	-455.96	717.60	1.50	-1.50	0.00
3,700.00	2.87	320.55	3,619.48	558.99	-459.98	723.92	1.50	-1.50	0.00
3,800.00	1.37	320.55	3,719.41	561.86	-462.34	727.62	1.50	-1.50	0.00
3,891.60	0.00	0.00	3,811.00	562.70	-463.03	728.72	1.50	-1.50	0.00
KMVGAS - GM 533-14 KMV									
3,900.00	0.00	0.00	3,819.40	562.70	-463.03	728.72	0.00	0.00	0.00
4,000.00	0.00	0.00	3,919.40	562.70	-463.03	728.72	0.00	0.00	0.00
4,100.00	0.00	0.00	4,019.40	562.70	-463.03	728.72	0.00	0.00	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 533-14 - Slot GM 533-14 (A9)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5172' & RKB 24' @ 5196.00usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 5172' & RKB 24' @ 5196.00usft
Site:	GM 34-14 Pad	North Reference:	True
Well:	GM 533-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 1May2018 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)	
4,200.00	0.00	0.00	4,119.40	562.70	-463.03	728.72	0.00	0.00	0.00	
4,300.00	0.00	0.00	4,219.40	562.70	-463.03	728.72	0.00	0.00	0.00	
4,400.00	0.00	0.00	4,319.40	562.70	-463.03	728.72	0.00	0.00	0.00	
4,500.00	0.00	0.00	4,419.40	562.70	-463.03	728.72	0.00	0.00	0.00	
4,600.00	0.00	0.00	4,519.40	562.70	-463.03	728.72	0.00	0.00	0.00	
4,700.00	0.00	0.00	4,619.40	562.70	-463.03	728.72	0.00	0.00	0.00	
4,800.00	0.00	0.00	4,719.40	562.70	-463.03	728.72	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,819.40	562.70	-463.03	728.72	0.00	0.00	0.00	
5,000.00	0.00	0.00	4,919.40	562.70	-463.03	728.72	0.00	0.00	0.00	
5,100.00	0.00	0.00	5,019.40	562.70	-463.03	728.72	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,119.40	562.70	-463.03	728.72	0.00	0.00	0.00	
5,229.60	0.00	0.00	5,149.00	562.70	-463.03	728.72	0.00	0.00	0.00	
CMEO										
5,300.00	0.00	0.00	5,219.40	562.70	-463.03	728.72	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,319.40	562.70	-463.03	728.72	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,419.40	562.70	-463.03	728.72	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,519.40	562.70	-463.03	728.72	0.00	0.00	0.00	
5,694.60	0.00	0.00	5,614.00	562.70	-463.03	728.72	0.00	0.00	0.00	
RLNS										
5,700.00	0.00	0.00	5,619.40	562.70	-463.03	728.72	0.00	0.00	0.00	
5,799.60	0.00	0.00	5,719.00	562.70	-463.03	728.72	0.00	0.00	0.00	
TD - GM 533-14 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 533-14 KMV	0.00	0.00	3,811.00	562.70	-463.03	1,593,458.90	2,272,352.60	39.4344813	-108.0765707
- plan hits target center									
- Circle (radius 50.00)									
GM 533-14 PBHL	0.00	0.00	5,719.00	562.70	-463.03	1,593,458.90	2,272,352.60	39.4344813	-108.0765707
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,000.00	983.75	9 5/8" Casing @ 1000' MD	9.62	13.50	



Scientific Drilling, Intl

Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 533-14 - Slot GM 533-14 (A9)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5172' & RKB 24' @ 5196.00usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 5172' & RKB 24' @ 5196.00usft
Site:	GM 34-14 Pad	North Reference:	True
Well:	GM 533-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 1May2018 mmsdi		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
984.82	969.00	GSAND		0.00	0.00	
1,087.72	1,069.00	GSAND BASE		0.00	0.00	
2,756.68	2,691.00	MVRD		0.00	0.00	
3,891.60	3,811.00	KMVGAS		0.00	0.00	
5,229.60	5,149.00	CMEO		0.00	0.00	
5,694.60	5,614.00	RLNS		0.00	0.00	
5,799.60	5,719.00	TD		0.00	0.00	