

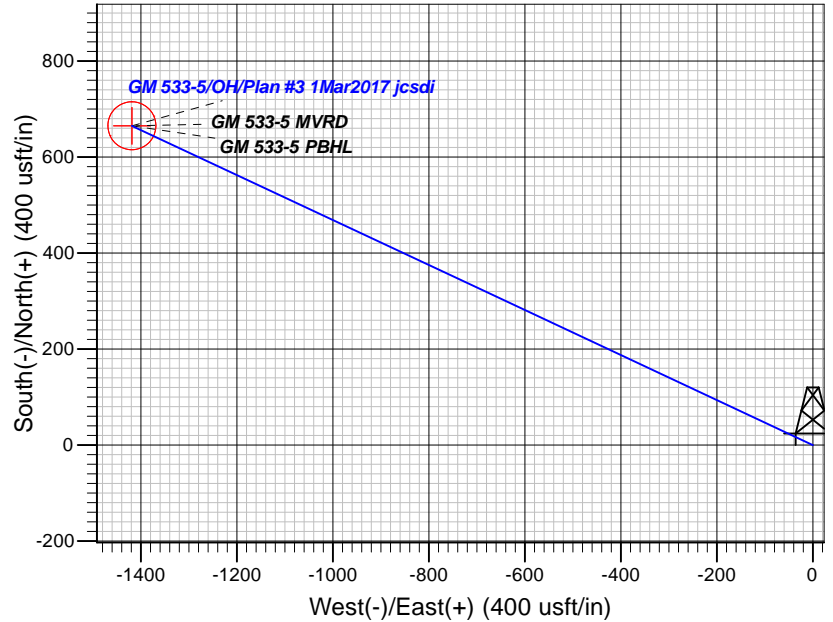
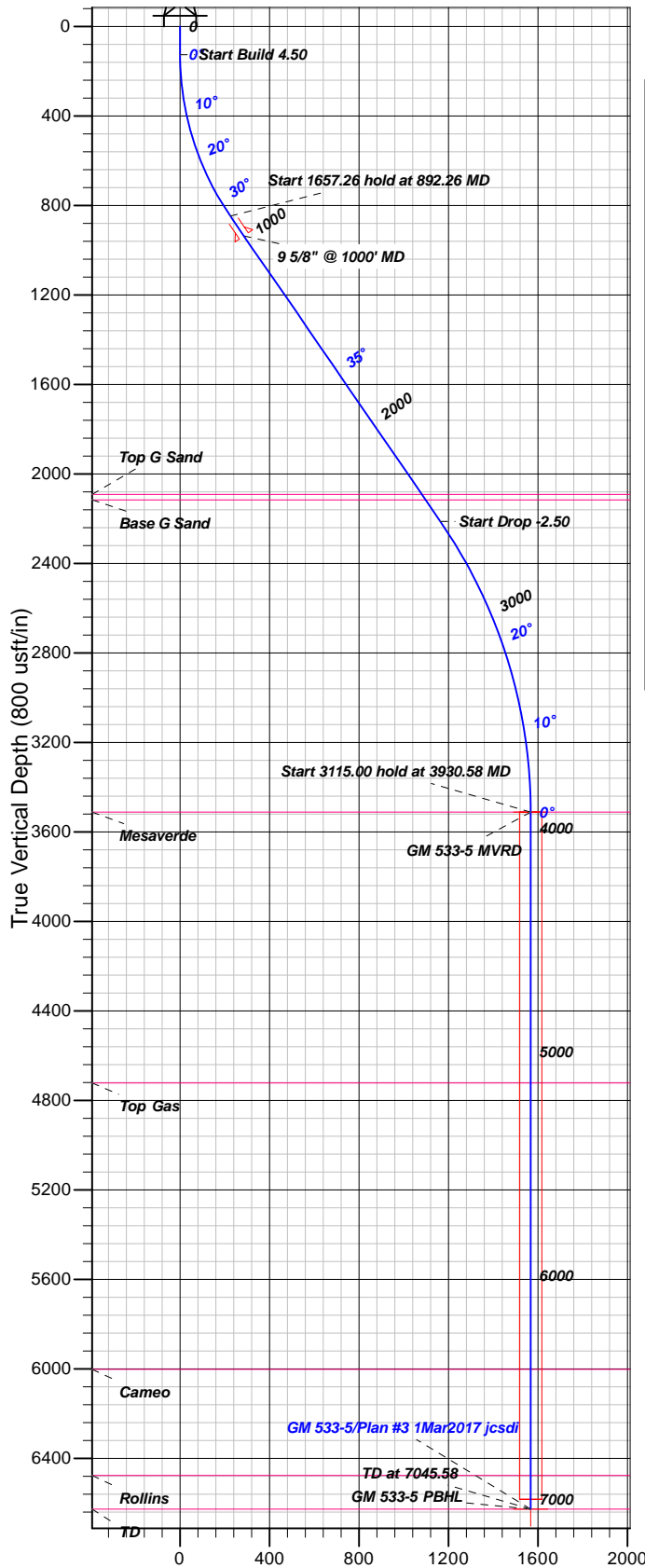
## Well Details: GM 533-5

GL 5977' & RKB 24' @ 6001.00usft (H&P 271)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1603495.61	2258784.39	39.4609592	-108.1256155	A9

**T M** Azimuths to True North  
Magnetic North: 9.65°

Magnetic Field  
Strength: 51850.7snT  
Dip Angle: 65.78°  
Date: 12/21/2016  
Model: HDGM



### FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
2091.00	2402.63	Top G Sand
2116.00	2432.98	Base G Sand
3511.00	3930.58	Mesaverde
4721.00	5140.58	Top Gas
6001.00	6420.58	Cameo
6476.00	6895.58	Rollins
6626.00	7045.58	TD

Plan: Plan #3 1Mar2017 jcsdi

16:52, March 06 2017  
Created By: Janie Collins

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
935.42	1000.00	9 5/8" @ 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	125.00	0.00	0.00	125.00	0.00	0.00	0.00	0.00	0.00	
3	892.26	34.53	295.12	846.66	95.21	-203.05	4.50	295.12	224.26	
4	2549.52	34.53	295.12	2212.02	493.99	-1053.52	0.00	0.00	0.00	
5	3930.58	0.00	0.00	3511.00	665.36	-1419.01	2.50	180.00	1567.26	GM 533-5 MVRD
6	7045.58	0.00	0.00	6626.00	665.36	-1419.01	0.00	0.00	1567.26	GM 533-5 PBHL

### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
GM 533-5 MVRD	3511.00	665.36	-1419.01	1604201.70	2257385.20	39.4627858	-108.1306415	Circle (Radius: 50.00)
- plan hits target center								
GM 533-5 PBHL	6626.00	665.36	-1419.01	1604201.70	2257385.20	39.4627858	-108.1306415	Point
- plan hits target center								



# **TEP Rocky Mountain LLC**

**Garfield County, CO NAD83**

**MV 34-5 Pad**

**GM 533-5 - Slot A9**

**OH**

**Plan: Plan #3 1Mar2017 jcsdi**

## **Standard Planning Report**

**06 March, 2017**



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well GM 533-5 - Slot A9
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 5977' & RKB 24' @ 6001.00usft (H&P 271)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 5977' & RKB 24' @ 6001.00usft (H&P 271)
<b>Site:</b>	MV 34-5 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 533-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #3 1Mar2017 jcsdi		

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

Site		MV 34-5 Pad			
Site Position:		Northing:	1,603,476.79 usft	Latitude:	39.4609066
From:	Map	Easting:	2,258,772.10 usft	Longitude:	-108.1256571
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.66 °

Well	GM 533-5 - Slot A9					
Well Position	+N/-S	19.16 usft	Northing:	1,603,495.61 usft	Latitude:	39.4609592
	+E/-W	11.74 usft	Easting:	2,258,784.39 usft	Longitude:	-108.1256155
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	5,977.00 usft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	12/21/2016	9.65	65.78	51,851

<b>Design</b>	Plan #3 1Mar2017 jcsdi			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	295.12

<b>Plan Sections</b>										
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	
125.00	0.00	0.00	125.00	0.00	0.00	0.00	0.00	0.00	0.00	
892.26	34.53	295.12	846.66	95.21	-203.05	4.50	4.50	0.00	295.12	
2,549.52	34.53	295.12	2,212.02	493.99	-1,053.52	0.00	0.00	0.00	0.00	
3,930.58	0.00	0.00	3,511.00	665.36	-1,419.01	2.50	-2.50	0.00	180.00	GM 533-5 MVRD
7,045.58	0.00	0.00	6,626.00	665.36	-1,419.01	0.00	0.00	0.00	0.00	GM 533-5 PBHL

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well GM 533-5 - Slot A9
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 5977' & RKB 24' @ 6001.00usft (H&P 271)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 5977' & RKB 24' @ 6001.00usft (H&P 271)
<b>Site:</b>	MV 34-5 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 533-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #3 1Mar2017 jcsdi		

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	
125.00	0.00	0.00	125.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	3.38	295.12	199.96	0.94	-2.00	2.21	4.50	4.50	0.00	
300.00	7.88	295.12	299.45	5.10	-10.87	12.01	4.50	4.50	0.00	
400.00	12.38	295.12	397.87	12.56	-26.78	29.58	4.50	4.50	0.00	
500.00	16.88	295.12	494.60	23.28	-49.64	54.83	4.50	4.50	0.00	
600.00	21.38	295.12	589.06	37.18	-79.30	87.58	4.50	4.50	0.00	
700.00	25.88	295.12	680.65	54.19	-115.57	127.64	4.50	4.50	0.00	
800.00	30.38	295.12	768.82	74.20	-158.24	174.77	4.50	4.50	0.00	
892.26	34.53	295.12	846.66	95.21	-203.05	224.26	4.50	4.50	0.00	
900.00	34.53	295.12	853.04	97.07	-207.02	228.65	0.00	0.00	0.00	
1,000.00	34.53	295.12	935.42	121.13	-258.34	285.33	0.00	0.00	0.00	
<b>9 5/8" @ 1000' MD</b>										
1,100.00	34.53	295.12	1,017.81	145.20	-309.66	342.01	0.00	0.00	0.00	
1,200.00	34.53	295.12	1,100.20	169.26	-360.98	398.69	0.00	0.00	0.00	
1,300.00	34.53	295.12	1,182.58	193.32	-412.29	455.37	0.00	0.00	0.00	
1,400.00	34.53	295.12	1,264.97	217.38	-463.61	512.05	0.00	0.00	0.00	
1,500.00	34.53	295.12	1,347.35	241.45	-514.93	568.73	0.00	0.00	0.00	
1,600.00	34.53	295.12	1,429.74	265.51	-566.25	625.40	0.00	0.00	0.00	
1,700.00	34.53	295.12	1,512.13	289.57	-617.56	682.08	0.00	0.00	0.00	
1,800.00	34.53	295.12	1,594.51	313.63	-668.88	738.76	0.00	0.00	0.00	
1,900.00	34.53	295.12	1,676.90	337.70	-720.20	795.44	0.00	0.00	0.00	
2,000.00	34.53	295.12	1,759.29	361.76	-771.52	852.12	0.00	0.00	0.00	
2,100.00	34.53	295.12	1,841.67	385.82	-822.84	908.80	0.00	0.00	0.00	
2,200.00	34.53	295.12	1,924.06	409.88	-874.15	965.48	0.00	0.00	0.00	
2,300.00	34.53	295.12	2,006.45	433.95	-925.47	1,022.16	0.00	0.00	0.00	
2,400.00	34.53	295.12	2,088.83	458.01	-976.79	1,078.84	0.00	0.00	0.00	
2,402.63	34.53	295.12	2,091.00	458.64	-978.14	1,080.33	0.00	0.00	0.00	
<b>Top G Sand</b>										
2,432.98	34.53	295.12	2,116.00	465.94	-993.71	1,097.53	0.00	0.00	0.00	
<b>Base G Sand</b>										
2,500.00	34.53	295.12	2,171.22	482.07	-1,028.11	1,135.51	0.00	0.00	0.00	
2,549.52	34.53	295.12	2,212.02	493.99	-1,053.52	1,163.58	0.00	0.00	0.00	
2,600.00	33.26	295.12	2,253.92	505.94	-1,079.01	1,191.73	2.50	-2.50	0.00	
2,700.00	30.76	295.12	2,338.70	528.44	-1,127.00	1,244.74	2.50	-2.50	0.00	
2,800.00	28.26	295.12	2,425.72	549.35	-1,171.60	1,294.00	2.50	-2.50	0.00	
2,900.00	25.76	295.12	2,514.80	568.64	-1,212.72	1,339.42	2.50	-2.50	0.00	
3,000.00	23.26	295.12	2,605.78	586.25	-1,250.29	1,380.91	2.50	-2.50	0.00	
3,100.00	20.76	295.12	2,698.48	602.16	-1,284.23	1,418.39	2.50	-2.50	0.00	
3,200.00	18.26	295.12	2,792.73	616.34	-1,314.47	1,451.79	2.50	-2.50	0.00	
3,300.00	15.76	295.12	2,888.34	628.76	-1,340.96	1,481.05	2.50	-2.50	0.00	
3,400.00	13.26	295.12	2,985.14	639.40	-1,363.65	1,506.11	2.50	-2.50	0.00	
3,500.00	10.76	295.12	3,082.94	648.24	-1,382.50	1,526.93	2.50	-2.50	0.00	
3,600.00	8.26	295.12	3,181.56	655.26	-1,397.46	1,543.46	2.50	-2.50	0.00	
3,700.00	5.76	295.12	3,280.80	660.44	-1,408.52	1,555.67	2.50	-2.50	0.00	
3,800.00	3.26	295.12	3,380.49	663.78	-1,415.64	1,563.54	2.50	-2.50	0.00	
3,900.00	0.76	295.12	3,480.42	665.27	-1,418.83	1,567.05	2.50	-2.50	0.00	
3,919.60	0.27	295.12	3,500.02	665.35	-1,418.99	1,567.23	2.50	-2.50	0.00	
<b>GM 34-5 MVRD</b>										
3,930.58	0.00	0.00	3,511.00	665.36	-1,419.01	1,567.26	2.50	-2.50	0.00	

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well GM 533-5 - Slot A9
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 5977' & RKB 24' @ 6001.00usft (H&P 271)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 5977' & RKB 24' @ 6001.00usft (H&P 271)
<b>Site:</b>	MV 34-5 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 533-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #3 1Mar2017 jcsdi		

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)	
<b>Mesaverde - GM 533-5 MVRD</b>										
4,000.00	0.00	0.00	3,580.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
4,100.00	0.00	0.00	3,680.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
4,200.00	0.00	0.00	3,780.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
4,300.00	0.00	0.00	3,880.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
4,400.00	0.00	0.00	3,980.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
4,500.00	0.00	0.00	4,080.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
4,600.00	0.00	0.00	4,180.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
4,700.00	0.00	0.00	4,280.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
4,800.00	0.00	0.00	4,380.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,480.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
5,000.00	0.00	0.00	4,580.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
5,100.00	0.00	0.00	4,680.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
5,140.58	0.00	0.00	4,721.00	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
<b>Top Gas</b>										
5,200.00	0.00	0.00	4,780.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
5,300.00	0.00	0.00	4,880.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
5,400.00	0.00	0.00	4,980.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,080.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,180.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,280.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,380.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,480.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,580.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
6,100.00	0.00	0.00	5,680.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
6,200.00	0.00	0.00	5,780.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
6,300.00	0.00	0.00	5,880.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
6,400.00	0.00	0.00	5,980.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
6,420.58	0.00	0.00	6,001.00	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
<b>Cameo</b>										
6,500.00	0.00	0.00	6,080.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,180.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,280.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,380.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
6,895.58	0.00	0.00	6,476.00	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
<b>Rollins</b>										
6,900.00	0.00	0.00	6,480.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,580.42	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
<b>GM 34-5 PBHL</b>										
7,045.58	0.00	0.00	6,626.00	665.36	-1,419.01	1,567.26	0.00	0.00	0.00	
<b>TD - GM 533-5 PBHL</b>										

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well GM 533-5 - Slot A9
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 5977' & RKB 24' @ 6001.00usft (H&P 271)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 5977' & RKB 24' @ 6001.00usft (H&P 271)
<b>Site:</b>	MV 34-5 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 533-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #3 1Mar2017 jcsdi		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
GM 533-5 MVRD - plan hits target center - Circle (radius 50.00)	0.00	0.00	3,511.00	665.36	-1,419.01	1,604,201.70	2,257,385.20	39.4627858	-108.1306415
GM 533-5 PBHL - plan hits target center - Point	0.00	0.00	6,626.00	665.36	-1,419.01	1,604,201.70	2,257,385.20	39.4627858	-108.1306415

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,000.00	935.42	9 5/8" @ 1000' MD	9.62	9.62	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,402.63	2,091.00	Top G Sand		0.00	0.00
2,432.98	2,116.00	Base G Sand		0.00	0.00
3,930.58	3,511.00	Mesaverde		0.00	0.00
5,140.58	4,721.00	Top Gas		0.00	0.00
6,420.58	6,001.00	Cameo		0.00	0.00
6,895.58	6,476.00	Rollins		0.00	0.00
7,045.58	6,626.00	TD		0.00	0.00