



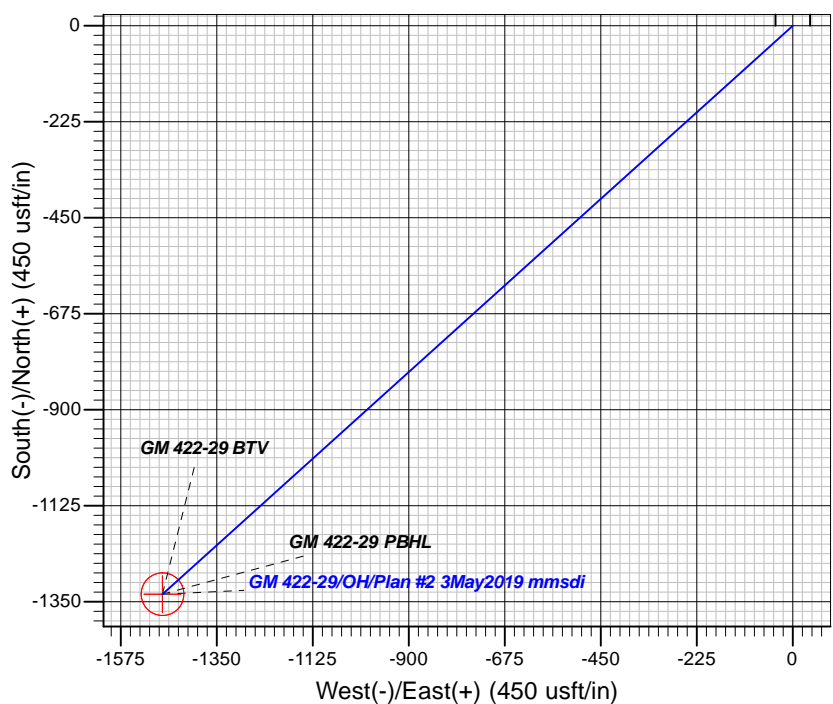
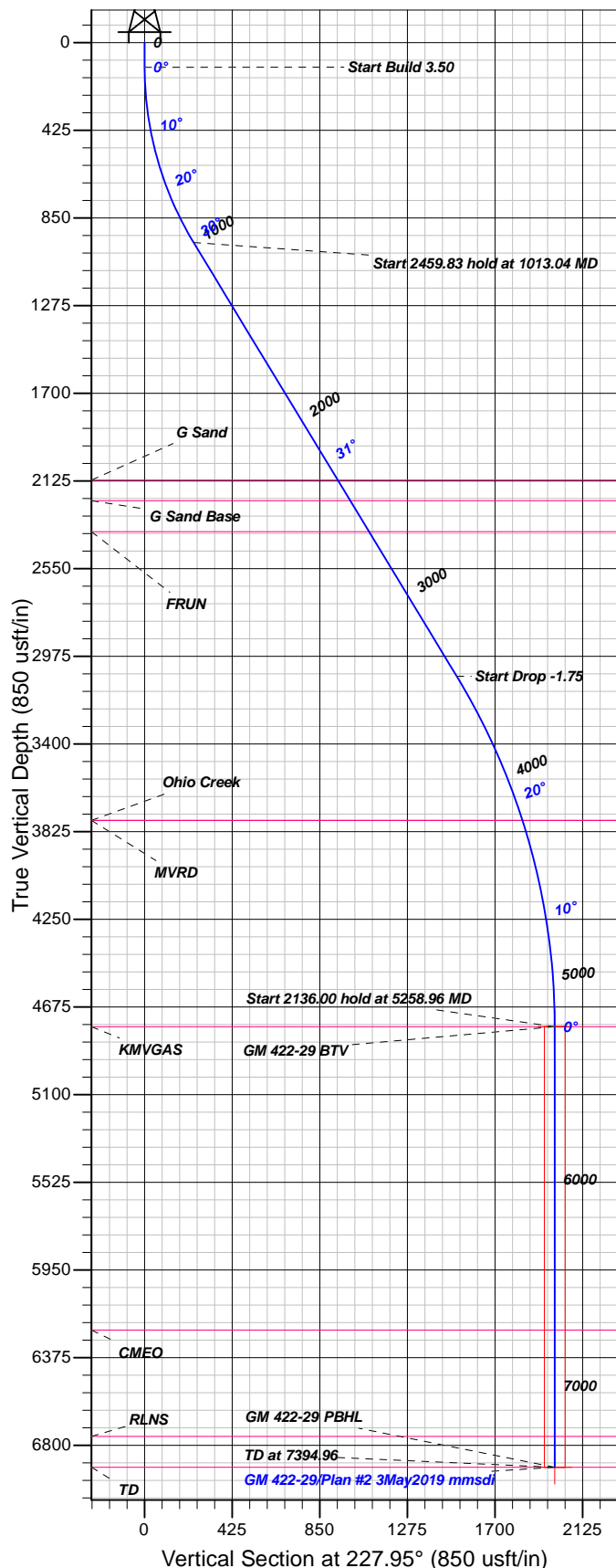
Azimuths to True North
Magnetic North: 9.50°

Magnetic Field
Strength: 51557.8snT
Dip Angle: 65.75°
Date: 3/20/2019
Model: HDGM

Well Details: GM 422-29

GL 5849' & RKB 24' @ 5873.00usft (H&P 318)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1617138.74	2255446.94	39.4981347	-108.1388346	GM 422-29 (A9)



FORMATION TOP DETAILS

TVDP	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target
2121.00	2360.17									
2221.00	2477.15									
2371.00	2652.62									
3771.00	4242.72									
3771.00	4242.72									
4771.00	5258.96									
6242.00	6729.96									
6757.00	7244.96									
6907.00	7394.96									

Plan: Plan #2 3May2019 mmsdi

10:58, May 06 2019
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

No casing data is available

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	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	1013.04	31.26	227.95	969.40	-159.15	-176.44	3.50	227.95	237.61	
4	3472.87	31.26	227.95	3072.20	-1014.01	-1124.19	0.00	0.00	0.00	
5	5258.96	0.00	0.00	4771.00	-1332.30	-1477.07	1.75	180.00	1989.16	GM 422-29 BTV
6	7394.96	0.00	0.00	6907.00	-1332.30	-1477.07	0.00	0.00	1989.16	GM 422-29 PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
GM 422-29 BTV	4771.00	-1332.30	-1477.07	1615849.90	2253931.80	39.4944768	-108.1440686	Circle (Radius: 50.00)
- plan hits target center								
GM 422-29 PBHL	6907.00	-1332.30	-1477.07	1615849.90	2253931.80	39.4944768	-108.1440686	Point
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

GR 12-29 Pad

GM 422-29 - Slot GM 422-29 (A9)

OH

Plan: Plan #2 3May2019 mmsdi

Standard Planning Report

06 May, 2019



Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 422-29 - Slot GM 422-29 (A9)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5849' & RKB 24' @ 5873.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5849' & RKB 24' @ 5873.00usft (H&P 318)
Site:	GR 12-29 Pad	North Reference:	True
Well:	GM 422-29	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 3May2019 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 12-29 Pad					
Site Position:		Northing:	1,617,169.51 usft	Latitude:	39.4982149	
From:	Map	Easting:	2,255,394.48 usft	Longitude:	-108.1390236	
Position Uncertainty:		0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.66 °

Well	GM 422-29 - Slot GM 422-29 (A9)					
Well Position	+N/-S	-29.23 usft	Northing:	1,617,138.74 usft	Latitude:	39.4981347
	+E/-W	53.33 usft	Easting:	2,255,446.94 usft	Longitude:	-108.1388346
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	5,849.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/20/2019	9.50	65.75	51,558

Design	Plan #2 3May2019 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	227.95

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	
1,013.04	31.26	227.95	969.40	-159.15	-176.44	3.50	3.50	0.00	227.95	
3,472.87	31.26	227.95	3,072.20	-1,014.01	-1,124.19	0.00	0.00	0.00	0.00	
5,258.96	0.00	0.00	4,771.00	-1,332.30	-1,477.07	1.75	-1.75	0.00	180.00	GM 422-29 BTV
7,394.96	0.00	0.00	6,907.00	-1,332.30	-1,477.07	0.00	0.00	0.00	0.00	GM 422-29 PBHL

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 422-29 - Slot GM 422-29 (A9)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5849' & RKB 24' @ 5873.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5849' & RKB 24' @ 5873.00usft (H&P 318)
Site:	GR 12-29 Pad	North Reference:	True
Well:	GM 422-29	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 3May2019 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	
Start Build 3.50										
200.00	2.80	227.95	199.97	-1.31	-1.45	1.95	3.50	3.50	0.00	
300.00	6.30	227.95	299.64	-6.62	-7.34	9.89	3.50	3.50	0.00	
400.00	9.80	227.95	398.64	-16.00	-17.74	23.89	3.50	3.50	0.00	
500.00	13.30	227.95	496.60	-29.41	-32.60	43.91	3.50	3.50	0.00	
600.00	16.80	227.95	593.15	-46.80	-51.88	69.87	3.50	3.50	0.00	
700.00	20.30	227.95	687.94	-68.10	-75.50	101.68	3.50	3.50	0.00	
800.00	23.80	227.95	780.61	-93.24	-103.37	139.21	3.50	3.50	0.00	
900.00	27.30	227.95	870.82	-122.13	-135.40	182.34	3.50	3.50	0.00	
1,000.00	30.80	227.95	958.23	-154.64	-171.45	230.89	3.50	3.50	0.00	
1,013.04	31.26	227.95	969.40	-159.15	-176.44	237.61	3.50	3.50	0.00	
Start 2459.83 hold at 1013.04 MD										
1,100.00	31.26	227.95	1,043.74	-189.37	-209.94	282.73	0.00	0.00	0.00	
1,200.00	31.26	227.95	1,129.22	-224.12	-248.47	334.62	0.00	0.00	0.00	
1,300.00	31.26	227.95	1,214.71	-258.87	-287.00	386.50	0.00	0.00	0.00	
1,400.00	31.26	227.95	1,300.19	-293.62	-325.53	438.39	0.00	0.00	0.00	
1,500.00	31.26	227.95	1,385.68	-328.38	-364.06	490.28	0.00	0.00	0.00	
1,600.00	31.26	227.95	1,471.16	-363.13	-402.59	542.16	0.00	0.00	0.00	
1,700.00	31.26	227.95	1,556.65	-397.88	-441.12	594.05	0.00	0.00	0.00	
1,800.00	31.26	227.95	1,642.13	-432.64	-479.65	645.94	0.00	0.00	0.00	
1,900.00	31.26	227.95	1,727.62	-467.39	-518.18	697.82	0.00	0.00	0.00	
2,000.00	31.26	227.95	1,813.11	-502.14	-556.71	749.71	0.00	0.00	0.00	
2,100.00	31.26	227.95	1,898.59	-536.90	-595.23	801.60	0.00	0.00	0.00	
2,200.00	31.26	227.95	1,984.08	-571.65	-633.76	853.49	0.00	0.00	0.00	
2,300.00	31.26	227.95	2,069.56	-606.40	-672.29	905.37	0.00	0.00	0.00	
2,360.17	31.26	227.95	2,121.00	-627.31	-695.48	936.59	0.00	0.00	0.00	
G Sand										
2,400.00	31.26	227.95	2,155.05	-641.15	-710.82	957.26	0.00	0.00	0.00	
2,477.15	31.26	227.95	2,221.00	-667.97	-740.55	997.29	0.00	0.00	0.00	
G Sand Base										
2,500.00	31.26	227.95	2,240.53	-675.91	-749.35	1,009.15	0.00	0.00	0.00	
2,600.00	31.26	227.95	2,326.02	-710.66	-787.88	1,061.03	0.00	0.00	0.00	
2,652.62	31.26	227.95	2,371.00	-728.95	-808.15	1,088.34	0.00	0.00	0.00	
FRUN										
2,700.00	31.26	227.95	2,411.50	-745.41	-826.41	1,112.92	0.00	0.00	0.00	
2,800.00	31.26	227.95	2,496.99	-780.17	-864.94	1,164.81	0.00	0.00	0.00	
2,900.00	31.26	227.95	2,582.47	-814.92	-903.47	1,216.70	0.00	0.00	0.00	
3,000.00	31.26	227.95	2,667.96	-849.67	-942.00	1,268.58	0.00	0.00	0.00	
3,100.00	31.26	227.95	2,753.44	-884.42	-980.53	1,320.47	0.00	0.00	0.00	
3,200.00	31.26	227.95	2,838.93	-919.18	-1,019.06	1,372.36	0.00	0.00	0.00	
3,300.00	31.26	227.95	2,924.41	-953.93	-1,057.58	1,424.24	0.00	0.00	0.00	
3,400.00	31.26	227.95	3,009.90	-988.68	-1,096.11	1,476.13	0.00	0.00	0.00	
3,472.87	31.26	227.95	3,072.20	-1,014.01	-1,124.19	1,513.94	0.00	0.00	0.00	
Start Drop -1.75										
3,500.00	30.78	227.95	3,095.44	-1,023.37	-1,134.57	1,527.92	1.75	-1.75	0.00	
3,600.00	29.03	227.95	3,182.12	-1,056.77	-1,171.59	1,577.78	1.75	-1.75	0.00	
3,700.00	27.28	227.95	3,270.29	-1,088.37	-1,206.63	1,624.97	1.75	-1.75	0.00	
3,800.00	25.53	227.95	3,359.85	-1,118.16	-1,239.66	1,669.44	1.75	-1.75	0.00	

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 422-29 - Slot GM 422-29 (A9)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5849' & RKB 24' @ 5873.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5849' & RKB 24' @ 5873.00usft (H&P 318)
Site:	GR 12-29 Pad	North Reference:	True
Well:	GM 422-29	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 3May2019 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)	
3,900.00	23.78	227.95	3,450.73	-1,146.10	-1,270.63	1,711.15	1.75	-1.75	0.00	
4,000.00	22.03	227.95	3,542.84	-1,172.17	-1,299.53	1,750.08	1.75	-1.75	0.00	
4,100.00	20.28	227.95	3,636.09	-1,196.34	-1,326.33	1,786.17	1.75	-1.75	0.00	
4,200.00	18.53	227.95	3,730.41	-1,218.59	-1,351.01	1,819.39	1.75	-1.75	0.00	
4,242.72	17.78	227.95	3,771.00	-1,227.51	-1,360.89	1,832.71	1.75	-1.75	0.00	
Ohio Creek - MVRD										
4,300.00	16.78	227.95	3,825.69	-1,238.91	-1,373.53	1,849.72	1.75	-1.75	0.00	
4,400.00	15.03	227.95	3,921.86	-1,257.26	-1,393.88	1,877.13	1.75	-1.75	0.00	
4,500.00	13.28	227.95	4,018.82	-1,273.65	-1,412.04	1,901.59	1.75	-1.75	0.00	
4,600.00	11.53	227.95	4,116.48	-1,288.03	-1,427.99	1,923.07	1.75	-1.75	0.00	
4,700.00	9.78	227.95	4,214.75	-1,300.42	-1,441.72	1,941.56	1.75	-1.75	0.00	
4,800.00	8.03	227.95	4,313.54	-1,310.79	-1,453.22	1,957.04	1.75	-1.75	0.00	
4,900.00	6.28	227.95	4,412.76	-1,319.13	-1,462.47	1,969.50	1.75	-1.75	0.00	
5,000.00	4.53	227.95	4,512.31	-1,325.45	-1,469.47	1,978.92	1.75	-1.75	0.00	
5,100.00	2.78	227.95	4,612.10	-1,329.72	-1,474.20	1,985.30	1.75	-1.75	0.00	
5,200.00	1.03	227.95	4,712.04	-1,331.95	-1,476.67	1,988.63	1.75	-1.75	0.00	
5,258.96	0.00	0.00	4,771.00	-1,332.30	-1,477.07	1,989.16	1.75	-1.75	223.97	
Start 2136.00 hold at 5258.96 MD - KMGAS - GM 422-29 BTV										
5,300.00	0.00	0.00	4,812.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
5,400.00	0.00	0.00	4,912.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,012.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,112.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,212.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,312.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,412.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,512.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
6,100.00	0.00	0.00	5,612.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
6,200.00	0.00	0.00	5,712.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
6,300.00	0.00	0.00	5,812.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
6,400.00	0.00	0.00	5,912.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,012.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,112.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,212.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
6,729.96	0.00	0.00	6,242.00	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
CMEQ										
6,800.00	0.00	0.00	6,312.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,412.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,512.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
7,100.00	0.00	0.00	6,612.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
7,200.00	0.00	0.00	6,712.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
7,244.96	0.00	0.00	6,757.00	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
RLNS										
7,300.00	0.00	0.00	6,812.04	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
7,394.96	0.00	0.00	6,907.00	-1,332.30	-1,477.07	1,989.16	0.00	0.00	0.00	
TD at 7394.96 - TD - GM 422-29 PBHL										

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 422-29 - Slot GM 422-29 (A9)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5849' & RKB 24' @ 5873.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5849' & RKB 24' @ 5873.00usft (H&P 318)
Site:	GR 12-29 Pad	North Reference:	True
Well:	GM 422-29	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 3May2019 mmsdi		

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 422-29 BTV - plan hits target center - Circle (radius 50.00)	0.00	0.00	4,771.00	-1,332.30	-1,477.07	1,615,849.90	2,253,931.80	39.4944768	-108.1440686
GM 422-29 PBHL - plan hits target center - Point	0.00	0.00	6,907.00	-1,332.30	-1,477.07	1,615,849.90	2,253,931.80	39.4944768	-108.1440686

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,360.17	2,121.00	G Sand		0.00	0.00	
2,477.15	2,221.00	G Sand Base		0.00	0.00	
2,652.62	2,371.00	FRUN		0.00	0.00	
4,242.72	3,771.00	Ohio Creek		0.00	0.00	
4,242.72	3,771.00	MVRD		0.00	0.00	
5,258.96	4,771.00	KMVGAS		0.00	0.00	
6,729.96	6,242.00	CME0		0.00	0.00	
7,244.96	6,757.00	RLNS		0.00	0.00	
7,394.96	6,907.00	TD		0.00	0.00	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
120.00	120.00	0.00	0.00	Start Build 3.50	
1,013.04	969.40	-159.15	-176.44	Start 2459.83 hold at 1013.04 MD	
3,472.87	3,072.20	-1,014.01	-1,124.19	Start Drop -1.75	
5,258.96	4,771.00	-1,332.30	-1,477.07	Start 2136.00 hold at 5258.96 MD	
7,394.96	6,907.00	-1,332.30	-1,477.07	TD at 7394.96	