



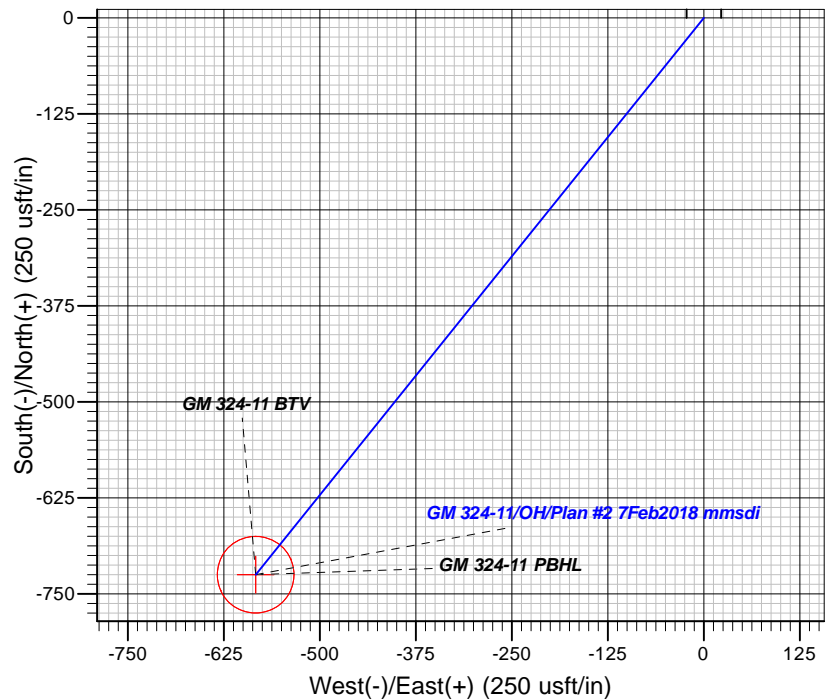
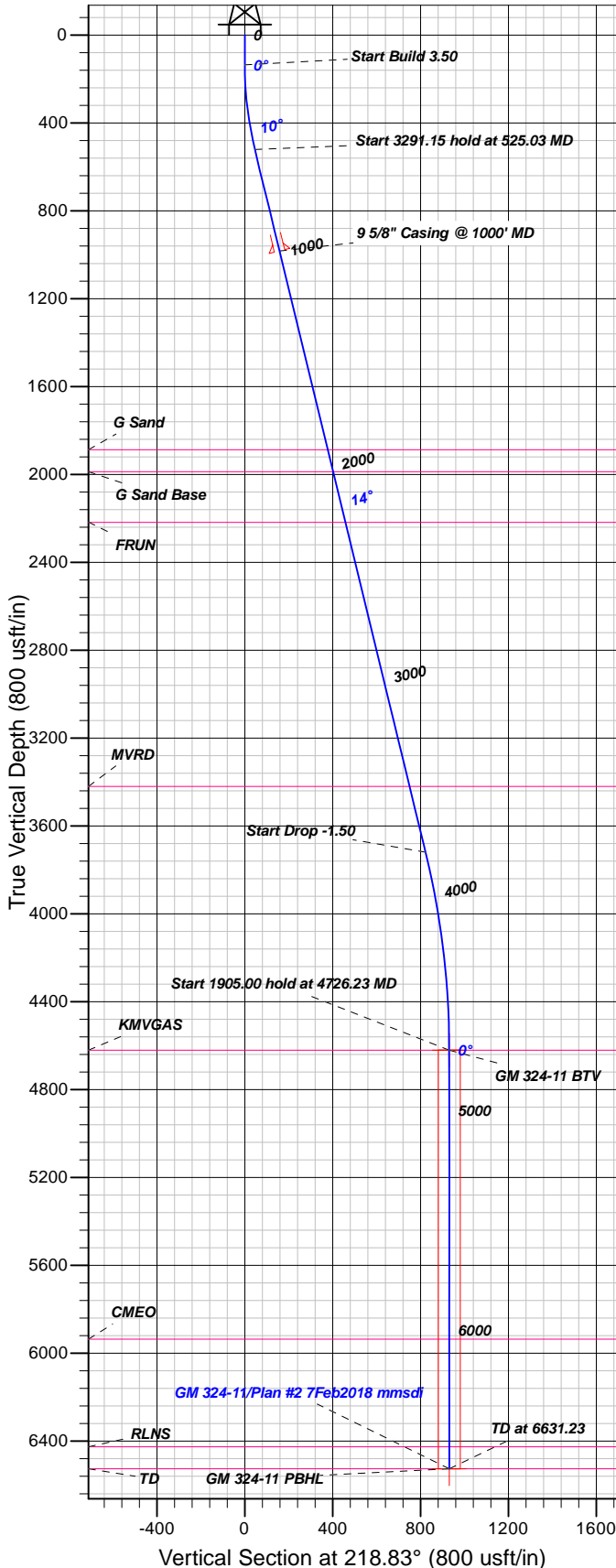
Azimuths to True North
Magnetic North: 9.47°

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

Well Details: GM 324-11

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1599214.99	2271938.93	39.4502460	-108.0786130	GM 324-11

GL 5793' & RKB 24' @ 5817.00usft



FORMATION TOP DETAILS

TVDPth	MDPath	Formation
1887.00	1930.38	G Sand
1987.00	2033.29	G Sand Base
2218.00	2271.00	FRUN
3420.00	3507.94	MVRD
4621.00	4726.23	KMVGAS
5936.00	6041.23	CMEO
6426.00	6531.23	RLNS
6526.00	6631.23	TD

Plan: Plan #2 7Feb2018 mmsdi

10:07, February 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
982.90	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	525.03	13.65	218.83	521.35	-36.02	-29.00	3.50	218.83	46.24	
4	3816.17	13.65	218.83	3719.52	-641.09	-516.03	0.00	0.00	822.97	
5	4726.23	0.00	0.00	4621.00	-725.15	-583.69	1.50	180.00	930.87	GM 324-11 BTV
6	6631.23	0.00	0.00	6526.00	-725.15	-583.69	0.00	0.00	930.87	GM 324-11 PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
GM 324-11 BTV	4621.00	-725.15	-583.69	1598506.70	2271334.90	39.4482551	-108.0806799	Circle (Radius: 50.00)
- plan hits target center								
GM 324-11 PBHL	6526.00	-725.15	-583.69	1598506.70	2271334.90	39.4482551	-108.0806799	Point
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

GR 23-11V Pad

GM 324-11 - Slot GM 324-11

OH

Plan: Plan #2 7Feb2018 mmsdi

Standard Planning Report

07 February, 2018



Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 324-11 - Slot GM 324-11
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 324-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 7Feb2018 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 324-11 - Slot GM 324-11					
Well Position	+N/-S	-15.30 usft	Northing:	1,599,214.99 usft	Latitude:	39.4502460
	+E/-W	16.66 usft	Easting:	2,271,938.93 usft	Longitude:	-108.0786131
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 #2 7Feb2018 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	218.83

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	
525.03	13.65	218.83	521.35	-36.02	-29.00	3.50	3.50	0.00	218.83	
3,816.17	13.65	218.83	3,719.52	-641.09	-516.03	0.00	0.00	0.00	0.00	
4,726.23	0.00	0.00	4,621.00	-725.15	-583.69	1.50	-1.50	0.00	180.00	GM 324-11 BTV
6,631.23	0.00	0.00	6,526.00	-725.15	-583.69	0.00	0.00	0.00	0.00	GM 324-11 PBHL

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 324-11 - Slot GM 324-11
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 324-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 7Feb2018 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	218.83	199.98	-1.01	-0.81	1.29	3.50	3.50	0.00
300.00	5.78	218.83	299.72	-6.47	-5.21	8.31	3.50	3.50	0.00
400.00	9.28	218.83	398.84	-16.67	-13.42	21.40	3.50	3.50	0.00
500.00	12.78	218.83	496.98	-31.57	-25.41	40.52	3.50	3.50	0.00
525.03	13.65	218.83	521.35	-36.02	-29.00	46.24	3.50	3.50	0.00
Start 3291.15 hold at 525.03 MD									
600.00	13.65	218.83	594.20	-49.81	-40.09	63.94	0.00	0.00	0.00
700.00	13.65	218.83	691.38	-68.19	-54.89	87.54	0.00	0.00	0.00
800.00	13.65	218.83	788.55	-86.58	-69.69	111.14	0.00	0.00	0.00
900.00	13.65	218.83	885.73	-104.96	-84.49	134.74	0.00	0.00	0.00
1,000.00	13.65	218.83	982.90	-123.35	-99.28	158.34	0.00	0.00	0.00
9 5/8" Casing @ 1000' MD									
1,100.00	13.65	218.83	1,080.08	-141.73	-114.08	181.94	0.00	0.00	0.00
1,200.00	13.65	218.83	1,177.25	-160.12	-128.88	205.54	0.00	0.00	0.00
1,300.00	13.65	218.83	1,274.43	-178.50	-143.68	229.14	0.00	0.00	0.00
1,400.00	13.65	218.83	1,371.60	-196.89	-158.48	252.74	0.00	0.00	0.00
1,500.00	13.65	218.83	1,468.78	-215.27	-173.27	276.34	0.00	0.00	0.00
1,600.00	13.65	218.83	1,565.95	-233.65	-188.07	299.94	0.00	0.00	0.00
1,700.00	13.65	218.83	1,663.13	-252.04	-202.87	323.54	0.00	0.00	0.00
1,800.00	13.65	218.83	1,760.30	-270.42	-217.67	347.14	0.00	0.00	0.00
1,900.00	13.65	218.83	1,857.48	-288.81	-232.47	370.75	0.00	0.00	0.00
1,930.38	13.65	218.83	1,887.00	-294.39	-236.96	377.91	0.00	0.00	0.00
G Sand									
2,000.00	13.65	218.83	1,954.65	-307.19	-247.27	394.35	0.00	0.00	0.00
2,033.29	13.65	218.83	1,987.00	-313.31	-252.19	402.20	0.00	0.00	0.00
G Sand Base									
2,100.00	13.65	218.83	2,051.83	-325.58	-262.06	417.95	0.00	0.00	0.00
2,200.00	13.65	218.83	2,149.01	-343.96	-276.86	441.55	0.00	0.00	0.00
2,271.00	13.65	218.83	2,218.00	-357.02	-287.37	458.30	0.00	0.00	0.00
FRUN									
2,300.00	13.65	218.83	2,246.18	-362.35	-291.66	465.15	0.00	0.00	0.00
2,400.00	13.65	218.83	2,343.36	-380.73	-306.46	488.75	0.00	0.00	0.00
2,500.00	13.65	218.83	2,440.53	-399.12	-321.26	512.35	0.00	0.00	0.00
2,600.00	13.65	218.83	2,537.71	-417.50	-336.06	535.95	0.00	0.00	0.00
2,700.00	13.65	218.83	2,634.88	-435.89	-350.85	559.55	0.00	0.00	0.00
2,800.00	13.65	218.83	2,732.06	-454.27	-365.65	583.15	0.00	0.00	0.00
2,900.00	13.65	218.83	2,829.23	-472.66	-380.45	606.75	0.00	0.00	0.00
3,000.00	13.65	218.83	2,926.41	-491.04	-395.25	630.35	0.00	0.00	0.00
3,100.00	13.65	218.83	3,023.58	-509.43	-410.05	653.95	0.00	0.00	0.00
3,200.00	13.65	218.83	3,120.76	-527.81	-424.85	677.55	0.00	0.00	0.00
3,300.00	13.65	218.83	3,217.93	-546.20	-439.64	701.15	0.00	0.00	0.00
3,400.00	13.65	218.83	3,315.11	-564.58	-454.44	724.75	0.00	0.00	0.00
3,500.00	13.65	218.83	3,412.28	-582.97	-469.24	748.35	0.00	0.00	0.00
3,507.94	13.65	218.83	3,420.00	-584.43	-470.42	750.23	0.00	0.00	0.00
MVRD									
3,600.00	13.65	218.83	3,509.46	-601.35	-484.04	771.96	0.00	0.00	0.00
3,700.00	13.65	218.83	3,606.63	-619.73	-498.84	795.56	0.00	0.00	0.00
3,800.00	13.65	218.83	3,703.81	-638.12	-513.63	819.16	0.00	0.00	0.00
3,816.17	13.65	218.83	3,719.52	-641.09	-516.03	822.97	0.00	0.00	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 324-11 - Slot GM 324-11
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 324-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 7Feb2018 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)
Start Drop -1.50									
3,900.00	12.39	218.83	3,801.19	-655.81	-527.87	841.86	1.50	-1.50	0.00
4,000.00	10.89	218.83	3,899.13	-671.53	-540.53	862.04	1.50	-1.50	0.00
4,100.00	9.39	218.83	3,997.57	-685.25	-551.57	879.65	1.50	-1.50	0.00
4,200.00	7.89	218.83	4,096.43	-696.95	-560.99	894.68	1.50	-1.50	0.00
4,300.00	6.39	218.83	4,195.65	-706.64	-568.79	907.12	1.50	-1.50	0.00
4,400.00	4.89	218.83	4,295.16	-714.30	-574.95	916.95	1.50	-1.50	0.00
4,500.00	3.39	218.83	4,394.90	-719.93	-579.49	924.18	1.50	-1.50	0.00
4,600.00	1.89	218.83	4,494.79	-723.52	-582.38	928.79	1.50	-1.50	0.00
4,700.00	0.39	218.83	4,594.77	-725.08	-583.63	930.78	1.50	-1.50	0.00
4,726.23	0.00	0.00	4,621.00	-725.15	-583.69	930.87	1.50	-1.50	538.10
Start 1905.00 hold at 4726.23 MD - KMGAS - GM 324-11 BTV									
4,800.00	0.00	0.00	4,694.77	-725.15	-583.69	930.87	0.00	0.00	0.00
4,900.00	0.00	0.00	4,794.77	-725.15	-583.69	930.87	0.00	0.00	0.00
5,000.00	0.00	0.00	4,894.77	-725.15	-583.69	930.87	0.00	0.00	0.00
5,100.00	0.00	0.00	4,994.77	-725.15	-583.69	930.87	0.00	0.00	0.00
5,200.00	0.00	0.00	5,094.77	-725.15	-583.69	930.87	0.00	0.00	0.00
5,300.00	0.00	0.00	5,194.77	-725.15	-583.69	930.87	0.00	0.00	0.00
5,400.00	0.00	0.00	5,294.77	-725.15	-583.69	930.87	0.00	0.00	0.00
5,500.00	0.00	0.00	5,394.77	-725.15	-583.69	930.87	0.00	0.00	0.00
5,600.00	0.00	0.00	5,494.77	-725.15	-583.69	930.87	0.00	0.00	0.00
5,700.00	0.00	0.00	5,594.77	-725.15	-583.69	930.87	0.00	0.00	0.00
5,800.00	0.00	0.00	5,694.77	-725.15	-583.69	930.87	0.00	0.00	0.00
5,900.00	0.00	0.00	5,794.77	-725.15	-583.69	930.87	0.00	0.00	0.00
6,000.00	0.00	0.00	5,894.77	-725.15	-583.69	930.87	0.00	0.00	0.00
6,041.23	0.00	0.00	5,936.00	-725.15	-583.69	930.87	0.00	0.00	0.00
CME0									
6,100.00	0.00	0.00	5,994.77	-725.15	-583.69	930.87	0.00	0.00	0.00
6,200.00	0.00	0.00	6,094.77	-725.15	-583.69	930.87	0.00	0.00	0.00
6,300.00	0.00	0.00	6,194.77	-725.15	-583.69	930.87	0.00	0.00	0.00
6,400.00	0.00	0.00	6,294.77	-725.15	-583.69	930.87	0.00	0.00	0.00
6,500.00	0.00	0.00	6,394.77	-725.15	-583.69	930.87	0.00	0.00	0.00
6,531.23	0.00	0.00	6,426.00	-725.15	-583.69	930.87	0.00	0.00	0.00
RLNS									
6,600.00	0.00	0.00	6,494.77	-725.15	-583.69	930.87	0.00	0.00	0.00
6,631.23	0.00	0.00	6,526.00	-725.15	-583.69	930.87	0.00	0.00	0.00
TD at 6631.23 - TD - GM 324-11 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 324-11 BTV	0.00	0.00	4,621.00	-725.15	-583.69	1,598,506.70	2,271,334.90	39.4482551	-108.0806800
- plan hits target center									
- Circle (radius 50.00)									
GM 324-11 PBHL	0.00	0.00	6,526.00	-725.15	-583.69	1,598,506.70	2,271,334.90	39.4482551	-108.0806800
- plan hits target center									
- Point									

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 324-11 - Slot GM 324-11
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 324-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 7Feb2018 mmsdi		

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,000.00	982.90	9 5/8" Casing @ 1000' MD	9.62	13.50

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,930.38	1,887.00	G Sand		0.00	0.00
2,033.29	1,987.00	G Sand Base		0.00	0.00
2,271.00	2,218.00	FRUN		0.00	0.00
3,507.94	3,420.00	MVRD		0.00	0.00
4,726.23	4,621.00	KMVGAS		0.00	0.00
6,041.23	5,936.00	CME0		0.00	0.00
6,531.23	6,426.00	RLNS		0.00	0.00
6,631.23	6,526.00	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
525.03	521.35	-36.02	-29.00	Start 3291.15 hold at 525.03 MD
3,816.17	3,719.52	-641.09	-516.03	Start Drop -1.50
4,726.23	4,621.00	-725.15	-583.69	Start 1905.00 hold at 4726.23 MD
6,631.23	6,526.00	-725.15	-583.69	TD at 6631.23