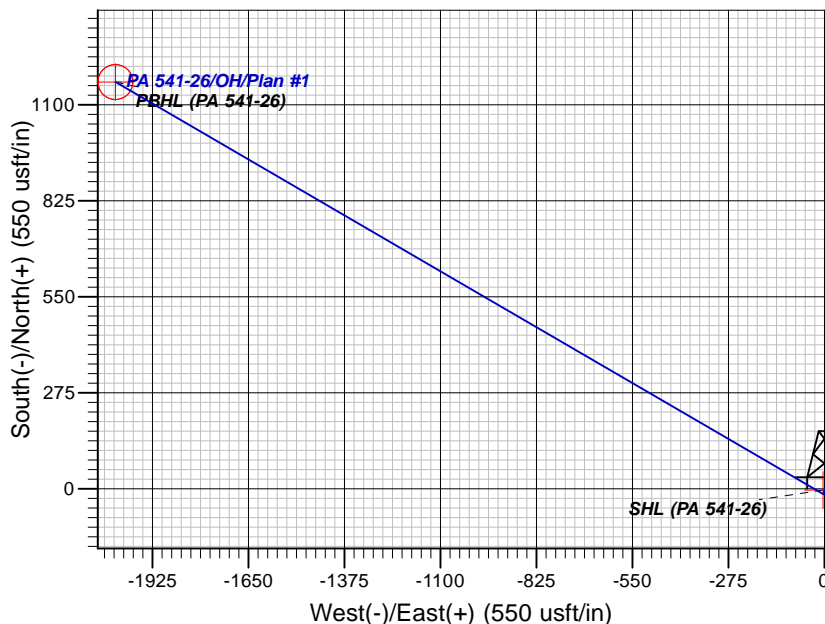


T **M** Azimuths to True North
Magnetic North: 9.45°

Magnetic Field
Strength: 51743.4nT
Dip Angle: 65.82°
Date: 5/23/2017
Model: HDGM

Magnetic Field
Strength: 51743.4snT
Dip Angle: 65.82°
Date: 5/23/2017
Model: HDGM



TVDPATH	MDPATH	FORMATION
4313.00	4856.41	Ohio Creek
4388.00	4942.68	Upper MVRD
5538.00	6169.94	Top of Gas
6838.00	7473.92	Cameo
7838.00	8473.92	RLNS

18:17, June 04 2017
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
1099.67	1100.00	9 5/8" @ 1100' MD	9.62

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	375.00	3.50	190.00	374.89	-26	-0.93	2.00	190.00	-1.81	
4	725.00	0.00	0.00	724.67	-15.79	-2.78	0.00	180.00	-5.44	
5	1125.00	0.00	0.00	1124.67	-15.79	-2.78	0.00	0.00	-5.44	
6	2314.37	35.68	300.20	2238.64	164.59	-312.63	3.00	300.20	353.08	
7	4495.17	35.68	300.20	4010.06	804.52	-1411.94	0.00	0.00	161625.06	
8	6873.92	0.00	0.00	6238.00	1165.27	-2031.64	1.50	180.00	202342.10	
9	8623.92	0.00	0.00	7988.00	1165.27	-2031.64	0.00	0.00	202342.10	PBHL (PA 541-26)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SHL (PA 541-26)	0.00	-3.40	-4.50	1615185.67	2308773.18	39.4968744	-107.9497450	Point
- plan misses target center by 5.64usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)								
PBHL (PA 541-26)	7988.00	1165.27	-2031.64	1616408.57	2306778.29	39.5000827	-107.9569287	Circle (Radius: 50.00)
- plan hits target center...								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

PA 22-25 Pad

PA 541-26 - Slot PA 541-26 (A7)

OH

Plan: Plan #1

Standard Planning Report

04 June, 2017



Database:	Grand Junction District	Local Co-ordinate Reference:	Well PA 541-26 - Slot PA 541-26 (A7)
Company:	TEP Rocky Mountain LLC	TVD Reference:	WELL @ 5248.00usft (Original Well Elev)
Project:	Garfield County, CO NAD83	MD Reference:	WELL @ 5248.00usft (Original Well Elev)
Site:	PA 22-25 Pad	North Reference:	True
Well:	PA 541-26	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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		PA 22-25 Pad			
Site Position:		Northing:	1,615,186.77 usft	Latitude:	39.4968742
From:	Map	Easting:	2,308,728.18 usft	Longitude:	-107.9499045
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.55 °

Well	PA 541-26 - Slot PA 541-26 (A7), B3					
Well Position	+N/-S	3.51 usft	Northing:	1,615,188.94 usft	Latitude:	39.4968838
	+E/-W	49.51 usft	Easting:	2,308,777.78 usft	Longitude:	-107.9497291
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	5,224.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/23/2017	9.45	65.82	51,743

Design	Plan #1			
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	299.84

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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
375.00	3.50	190.00	374.89	-5.26	-0.93	2.00	2.00	0.00	190.00	
725.00	0.00	0.00	724.67	-15.79	-2.78	1.00	-1.00	0.00	180.00	
1,125.00	0.00	0.00	1,124.67	-15.79	-2.78	0.00	0.00	0.00	0.00	
2,314.37	35.68	300.20	2,238.64	164.59	-312.63	3.00	3.00	0.00	300.20	
4,495.17	35.68	300.20	4,010.06	804.52	-1,411.94	0.00	0.00	0.00	0.00	
6,873.92	0.00	0.00	6,238.00	1,165.27	-2,031.64	1.50	-1.50	0.00	180.00	
8,623.92	0.00	0.00	7,988.00	1,165.27	-2,031.64	0.00	0.00	0.00	0.00	PBHL (PA 541-26)

Database:	Grand Junction District	Local Co-ordinate Reference:	Well PA 541-26 - Slot PA 541-26 (A7)
Company:	TEP Rocky Mountain LLC	TVD Reference:	WELL @ 5248.00usft (Original Well Elev)
Project:	Garfield County, CO NAD83	MD Reference:	WELL @ 5248.00usft (Original Well Elev)
Site:	PA 22-25 Pad	North Reference:	True
Well:	PA 541-26	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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
SHL (PA 541-26)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	2.00	190.00	299.98	-1.72	-0.30	-0.59	2.00	2.00	0.00
375.00	3.50	190.00	374.89	-5.26	-0.93	-1.81	2.00	2.00	0.00
400.00	3.25	190.00	399.85	-6.71	-1.18	-2.31	1.00	-1.00	0.00
500.00	2.25	190.00	499.73	-11.44	-2.02	-3.94	1.00	-1.00	0.00
600.00	1.25	190.00	599.68	-14.44	-2.55	-4.98	1.00	-1.00	0.00
700.00	0.25	190.00	699.67	-15.73	-2.77	-5.42	1.00	-1.00	0.00
725.00	0.00	0.00	724.67	-15.79	-2.78	-5.44	1.00	-1.00	0.00
800.00	0.00	0.00	799.67	-15.79	-2.78	-5.44	0.00	0.00	0.00
900.00	0.00	0.00	899.67	-15.79	-2.78	-5.44	0.00	0.00	0.00
1,000.00	0.00	0.00	999.67	-15.79	-2.78	-5.44	0.00	0.00	0.00
1,100.00	0.00	0.00	1,099.67	-15.79	-2.78	-5.44	0.00	0.00	0.00
9 5/8" @ 1100' MD									
1,125.00	0.00	0.00	1,124.67	-15.79	-2.78	-5.44	0.00	0.00	0.00
1,200.00	2.25	300.20	1,199.65	-15.05	-4.06	-3.97	3.00	3.00	0.00
1,300.00	5.25	300.20	1,299.43	-11.76	-9.71	2.57	3.00	3.00	0.00
1,400.00	8.25	300.20	1,398.72	-5.84	-19.86	14.32	3.00	3.00	0.00
1,500.00	11.25	300.20	1,497.27	2.68	-34.50	31.26	3.00	3.00	0.00
1,600.00	14.25	300.20	1,594.79	13.78	-53.57	53.32	3.00	3.00	0.00
1,700.00	17.25	300.20	1,691.03	27.43	-77.03	80.46	3.00	3.00	0.00
1,800.00	20.25	300.20	1,785.71	43.60	-104.80	112.60	3.00	3.00	0.00
1,900.00	23.25	300.20	1,878.58	62.24	-136.82	149.65	3.00	3.00	0.00
2,000.00	26.25	300.20	1,969.38	83.30	-173.00	191.51	3.00	3.00	0.00
2,100.00	29.25	300.20	2,057.87	106.72	-213.24	238.07	3.00	3.00	0.00
2,200.00	32.25	300.20	2,143.80	132.44	-257.42	289.19	3.00	3.00	0.00
2,300.00	35.25	300.20	2,226.94	160.39	-305.43	344.74	3.00	3.00	0.00
2,314.37	35.68	300.20	2,238.64	164.59	-312.63	353.08	3.00	3.00	0.00
2,400.00	35.68	300.20	2,308.20	189.71	-355.80	403.02	0.00	0.00	0.00
2,500.00	35.68	300.20	2,389.43	219.06	-406.21	461.35	0.00	0.00	0.00
2,600.00	35.68	300.20	2,470.65	248.40	-456.62	519.68	0.00	0.00	0.00
2,700.00	35.68	300.20	2,551.88	277.75	-507.02	578.00	0.00	0.00	0.00
2,800.00	35.68	300.20	2,633.11	307.09	-557.43	636.33	0.00	0.00	0.00
2,900.00	35.68	300.20	2,714.34	336.43	-607.84	694.66	0.00	0.00	0.00
3,000.00	35.68	300.20	2,795.56	365.78	-658.25	752.98	0.00	0.00	0.00
3,100.00	35.68	300.20	2,876.79	395.12	-708.66	811.31	0.00	0.00	0.00
3,200.00	35.68	300.20	2,958.02	424.47	-759.07	869.63	0.00	0.00	0.00
3,300.00	35.68	300.20	3,039.25	453.81	-809.47	927.96	0.00	0.00	0.00
3,400.00	35.68	300.20	3,120.47	483.15	-859.88	986.29	0.00	0.00	0.00
3,500.00	35.68	300.20	3,201.70	512.50	-910.29	1,044.61	0.00	0.00	0.00
3,600.00	35.68	300.20	3,282.93	541.84	-960.70	1,102.94	0.00	0.00	0.00
3,700.00	35.68	300.20	3,364.16	571.19	-1,011.11	1,161.26	0.00	0.00	0.00
3,800.00	35.68	300.20	3,445.38	600.53	-1,061.52	1,219.59	0.00	0.00	0.00
3,900.00	35.68	300.20	3,526.61	629.87	-1,111.92	1,277.92	0.00	0.00	0.00
4,000.00	35.68	300.20	3,607.84	659.22	-1,162.33	1,336.24	0.00	0.00	0.00
4,100.00	35.68	300.20	3,689.07	688.56	-1,212.74	1,394.57	0.00	0.00	0.00
4,200.00	35.68	300.20	3,770.29	717.91	-1,263.15	1,452.90	0.00	0.00	0.00
4,300.00	35.68	300.20	3,851.52	747.25	-1,313.56	1,511.22	0.00	0.00	0.00
4,400.00	35.68	300.20	3,932.75	776.60	-1,363.97	1,569.55	0.00	0.00	0.00
4,495.17	35.68	300.20	4,010.06	804.52	-1,411.94	1,625.06	0.00	0.00	0.00
4,500.00	35.61	300.20	4,013.98	805.94	-1,414.37	1,627.87	1.50	-1.50	0.00
4,600.00	34.11	300.20	4,096.03	834.69	-1,463.77	1,685.02	1.50	-1.50	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well PA 541-26 - Slot PA 541-26 (A7)
Company:	TEP Rocky Mountain LLC	TVD Reference:	WELL @ 5248.00usft (Original Well Elev)
Project:	Garfield County, CO NAD83	MD Reference:	WELL @ 5248.00usft (Original Well Elev)
Site:	PA 22-25 Pad	North Reference:	True
Well:	PA 541-26	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
4,700.00	32.61	300.20	4,179.55	862.36	-1,511.29	1,740.01	1.50	-1.50	0.00
4,800.00	31.11	300.20	4,264.49	888.91	-1,556.90	1,792.79	1.50	-1.50	0.00
4,856.41	30.26	300.20	4,313.00	903.39	-1,581.78	1,821.58	1.50	-1.50	0.00
Ohio Creek									
4,900.00	29.61	300.20	4,350.77	914.34	-1,600.58	1,843.33	1.50	-1.50	0.00
4,942.68	28.97	300.20	4,388.00	924.84	-1,618.63	1,864.21	1.50	-1.50	0.00
Upper MVRD									
5,000.00	28.11	300.20	4,438.35	938.62	-1,642.29	1,891.59	1.50	-1.50	0.00
5,100.00	26.61	300.20	4,527.16	961.74	-1,682.01	1,937.55	1.50	-1.50	0.00
5,141.91	25.98	300.20	4,564.74	971.08	-1,698.05	1,956.11	1.50	-1.50	0.00
PA 541-26 MVRD									
5,200.00	25.11	300.20	4,617.15	983.68	-1,719.70	1,981.16	1.50	-1.50	0.00
5,300.00	23.61	300.20	4,708.24	1,004.43	-1,755.35	2,022.40	1.50	-1.50	0.00
5,400.00	22.11	300.20	4,800.39	1,023.97	-1,788.92	2,061.25	1.50	-1.50	0.00
5,500.00	20.61	300.20	4,893.52	1,042.29	-1,820.39	2,097.66	1.50	-1.50	0.00
5,600.00	19.11	300.20	4,987.57	1,059.38	-1,849.75	2,131.63	1.50	-1.50	0.00
5,700.00	17.61	300.20	5,082.48	1,075.23	-1,876.97	2,163.13	1.50	-1.50	0.00
5,800.00	16.11	300.20	5,178.17	1,089.82	-1,902.03	2,192.13	1.50	-1.50	0.00
5,900.00	14.61	300.20	5,274.60	1,103.14	-1,924.92	2,218.61	1.50	-1.50	0.00
6,000.00	13.11	300.20	5,371.69	1,115.19	-1,945.62	2,242.56	1.50	-1.50	0.00
6,100.00	11.61	300.20	5,469.37	1,125.96	-1,964.12	2,263.97	1.50	-1.50	0.00
6,169.94	10.56	300.20	5,538.00	1,132.72	-1,975.74	2,277.41	1.50	-1.50	0.00
Top of Gas									
6,200.00	10.11	300.20	5,567.57	1,135.44	-1,980.40	2,282.80	1.50	-1.50	0.00
6,300.00	8.61	300.20	5,666.24	1,143.62	-1,994.45	2,299.07	1.50	-1.50	0.00
6,400.00	7.11	300.20	5,765.30	1,150.50	-2,006.27	2,312.74	1.50	-1.50	0.00
6,500.00	5.61	300.20	5,864.68	1,156.07	-2,015.84	2,323.81	1.50	-1.50	0.00
6,600.00	4.11	300.20	5,964.32	1,160.33	-2,023.16	2,332.28	1.50	-1.50	0.00
6,700.00	2.61	300.20	6,064.14	1,163.28	-2,028.22	2,338.14	1.50	-1.50	0.00
6,800.00	1.11	300.20	6,164.09	1,164.91	-2,031.03	2,341.38	1.50	-1.50	0.00
6,873.92	0.00	0.00	6,238.00	1,165.27	-2,031.64	2,342.10	1.50	-1.50	0.00
6,900.00	0.00	0.00	6,264.08	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
7,000.00	0.00	0.00	6,364.08	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
7,100.00	0.00	0.00	6,464.08	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
7,200.00	0.00	0.00	6,564.08	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
7,300.00	0.00	0.00	6,664.08	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
7,400.00	0.00	0.00	6,764.08	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
7,473.92	0.00	0.00	6,838.00	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
Cameo									
7,500.00	0.00	0.00	6,864.08	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
7,600.00	0.00	0.00	6,964.08	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
7,700.00	0.00	0.00	7,064.08	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
7,800.00	0.00	0.00	7,164.08	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
7,900.00	0.00	0.00	7,264.08	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
8,000.00	0.00	0.00	7,364.08	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
8,100.00	0.00	0.00	7,464.08	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
8,200.00	0.00	0.00	7,564.08	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
8,300.00	0.00	0.00	7,664.08	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
8,400.00	0.00	0.00	7,764.08	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
8,473.92	0.00	0.00	7,838.00	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
RLNS									
8,500.00	0.00	0.00	7,864.08	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
8,600.00	0.00	0.00	7,964.08	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well PA 541-26 - Slot PA 541-26 (A7)
Company:	TEP Rocky Mountain LLC	TVD Reference:	WELL @ 5248.00usft (Original Well Elev)
Project:	Garfield County, CO NAD83	MD Reference:	WELL @ 5248.00usft (Original Well Elev)
Site:	PA 22-25 Pad	North Reference:	True
Well:	PA 541-26	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
8,623.92	0.00	0.00	7,988.00	1,165.27	-2,031.64	2,342.10	0.00	0.00	0.00
PBHL (PA 541-26) - PA 541-26 PBHL									

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
SHL (PA 541-26) - plan misses target center by 5.64usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	-3.40	-4.50	1,615,185.67	2,308,773.18	39.4968745	-107.9497450
PBHL (PA 541-26) - plan hits target center - Circle (radius 50.00)	0.00	0.00	7,988.00	1,165.27	-2,031.64	1,616,408.56	2,306,778.29	39.5000828	-107.9569288

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,100.00	1,099.67	9 5/8" @ 1100' MD	9.62	13.50	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,856.41	4,312.99	Ohio Creek		0.00		
4,942.68	4,387.99	Upper MVRD		0.00		
6,169.94	5,537.99	Top of Gas		0.00		
7,473.92	6,837.99	Cameo		0.00		
8,473.92	7,837.99	RLNS		0.00		