

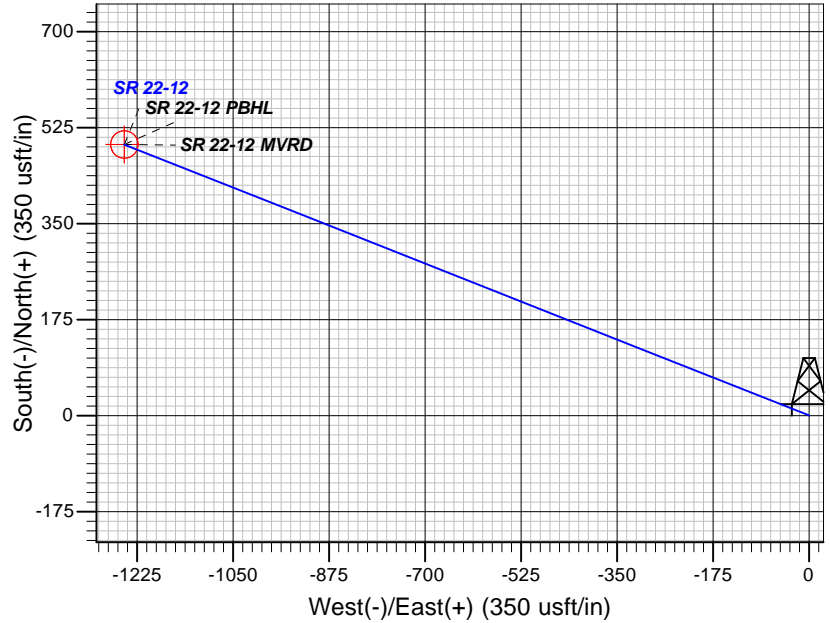
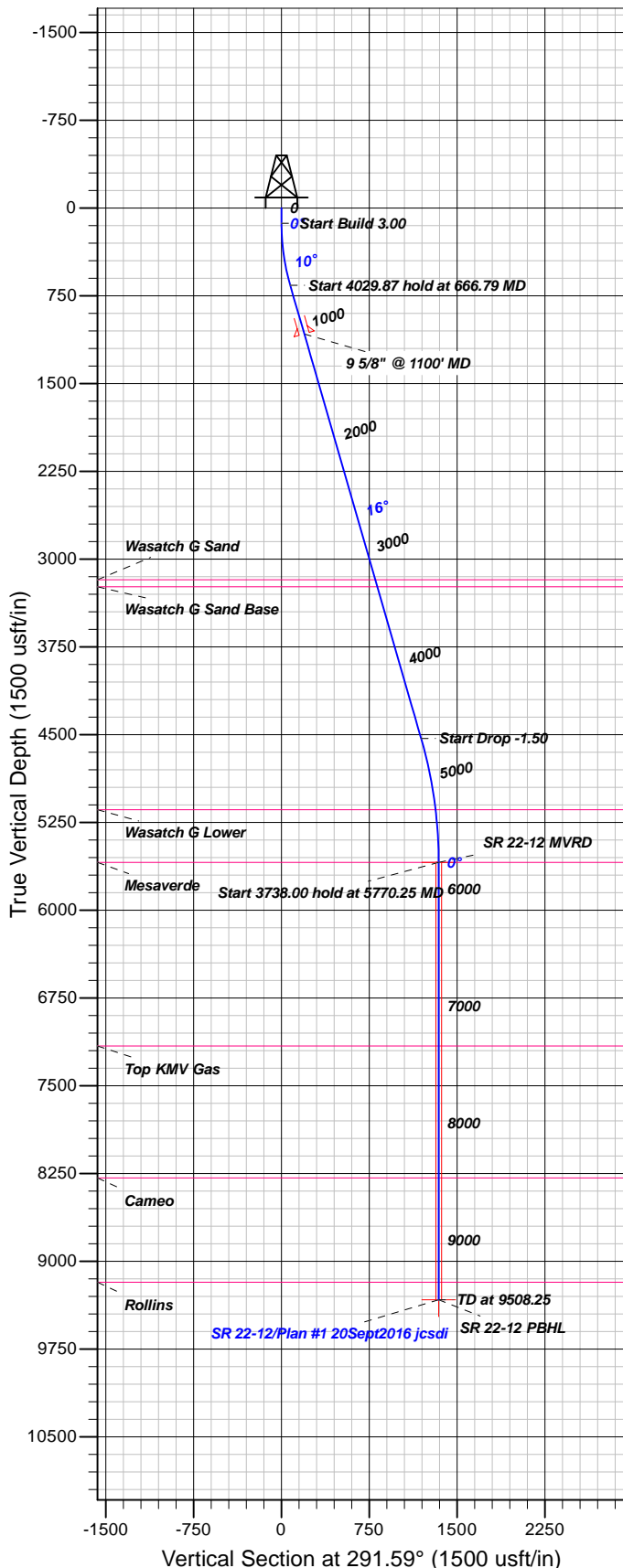
Well Details: SR 22-12

GL 7254' & RKB 24' @ 7278.00usft (H&P 318)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1599216.80	2341058.50	39.4553812	-107.8339220	A6

T M Azimuths to True North
Magnetic North: 9.60°

Magnetic Field
Strength: 51598.3snT
Dip Angle: 65.62°
Date: 9/19/2016
Model: BGGM2016



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3175.00	3284.77	Wasatch G Sand
3235.00	3347.22	Wasatch G Sand Base
5140.00	5318.19	Wasatch G Lower
5591.00	5770.25	Mesaverde
7160.00	7339.25	Top KMV Gas
8288.00	8467.25	Cameo
9179.00	9358.25	Rollins

Plan: Plan #1 20Sept2016 jcsdi

8:40, September 30 2016
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
1075.96	1100.00	9 5/8" @ 1100' MD	9.62

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	130.00	0.00	0.00	130.00	0.00	0.00	0.00	0.00	0.00	
3	666.79	16.10	291.59	659.75	27.58	-69.68	3.00	291.59	74.94	
4	4696.66	16.10	291.59	4531.49	438.94	-1109.04	0.00	0.00	1192.74	
5	5770.25	0.00	0.00	5591.00	494.09	-1248.40	1.50	180.00	1342.63	SR 22-12 MVRD
6	9508.25	0.00	0.00	9329.00	494.09	-1248.40	0.00	0.00	1342.63	SR 22-12 PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SR 22-12 MVRD	5591.00	494.09	-1248.40	1599742.80	2339823.20	39.4567376	-107.8383434	Circle (Radius: 25.00)
- plan hits target center								
SR 22-12 PBHL	9329.00	494.09	-1248.40	1599742.80	2339823.20	39.4567376	-107.8383434	Point
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

RU 32-12 Pad

SR 22-12 - Slot A6

OH

Plan: Plan #1 20Sept2016 jcsdi

Standard Planning Report

30 September, 2016



Database:	Grand Junction District	Local Co-ordinate Reference:	Well SR 22-12 - Slot A6
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Site:	RU 32-12 Pad	North Reference:	True
Well:	SR 22-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 20Sept2016 jcsdi		

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	RU 32-12 Pad			
Site Position:		Northing:	1,599,253.30 usft	Latitude: 39.4554808
From: Map		Easting:	2,341,050.00 usft	Longitude: -107.8339555
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence: -1.47 °

Well	SR 22-12 - Slot A6			
Well Position	+N/-S	-36.27 usft	Northing:	1,599,216.80 usft
	+E/-W	9.43 usft	Easting:	2,341,058.50 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	7,254.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	9/19/2016	9.60	65.62	51,598

Design	Plan #1 20Sept2016 jcsdi			
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	291.59

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	
130.00	0.00	0.00	130.00	0.00	0.00	0.00	0.00	0.00	0.00	
666.79	16.10	291.59	659.75	27.58	-69.68	3.00	3.00	0.00	291.59	
4,696.66	16.10	291.59	4,531.49	438.94	-1,109.04	0.00	0.00	0.00	0.00	
5,770.25	0.00	0.00	5,591.00	494.09	-1,248.40	1.50	-1.50	0.00	180.00	SR 22-12 MVRD
9,508.25	0.00	0.00	9,329.00	494.09	-1,248.40	0.00	0.00	0.00	0.00	SR 22-12 PBHL

Database:	Grand Junction District	Local Co-ordinate Reference:	Well SR 22-12 - Slot A6
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Site:	RU 32-12 Pad	North Reference:	True
Well:	SR 22-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 20Sept2016 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	
130.00	0.00	0.00	130.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	2.10	291.59	199.98	0.47	-1.19	1.28	3.00	3.00	0.00	
300.00	5.10	291.59	299.78	2.78	-7.03	7.56	3.00	3.00	0.00	
400.00	8.10	291.59	399.10	7.01	-17.72	19.05	3.00	3.00	0.00	
500.00	11.10	291.59	497.69	13.15	-33.22	35.73	3.00	3.00	0.00	
600.00	14.10	291.59	595.27	21.18	-53.50	57.54	3.00	3.00	0.00	
666.79	16.10	291.59	659.75	27.58	-69.68	74.94	3.00	3.00	0.00	
700.00	16.10	291.59	691.66	30.97	-78.25	84.15	0.00	0.00	0.00	
800.00	16.10	291.59	787.73	41.18	-104.04	111.89	0.00	0.00	0.00	
900.00	16.10	291.59	883.81	51.38	-129.83	139.63	0.00	0.00	0.00	
1,000.00	16.10	291.59	979.89	61.59	-155.62	167.37	0.00	0.00	0.00	
1,100.00	16.10	291.59	1,075.96	71.80	-181.41	195.10	0.00	0.00	0.00	
9 5/8" @ 1100' MD										
1,200.00	16.10	291.59	1,172.04	82.01	-207.20	222.84	0.00	0.00	0.00	
1,300.00	16.10	291.59	1,268.11	92.21	-232.99	250.58	0.00	0.00	0.00	
1,400.00	16.10	291.59	1,364.19	102.42	-258.79	278.32	0.00	0.00	0.00	
1,500.00	16.10	291.59	1,460.27	112.63	-284.58	306.06	0.00	0.00	0.00	
1,600.00	16.10	291.59	1,556.34	122.84	-310.37	333.79	0.00	0.00	0.00	
1,700.00	16.10	291.59	1,652.42	133.05	-336.16	361.53	0.00	0.00	0.00	
1,800.00	16.10	291.59	1,748.49	143.25	-361.95	389.27	0.00	0.00	0.00	
1,900.00	16.10	291.59	1,844.57	153.46	-387.74	417.01	0.00	0.00	0.00	
2,000.00	16.10	291.59	1,940.65	163.67	-413.53	444.74	0.00	0.00	0.00	
2,100.00	16.10	291.59	2,036.72	173.88	-439.33	472.48	0.00	0.00	0.00	
2,200.00	16.10	291.59	2,132.80	184.08	-465.12	500.22	0.00	0.00	0.00	
2,300.00	16.10	291.59	2,228.87	194.29	-490.91	527.96	0.00	0.00	0.00	
2,400.00	16.10	291.59	2,324.95	204.50	-516.70	555.70	0.00	0.00	0.00	
2,500.00	16.10	291.59	2,421.03	214.71	-542.49	583.43	0.00	0.00	0.00	
2,600.00	16.10	291.59	2,517.10	224.92	-568.28	611.17	0.00	0.00	0.00	
2,700.00	16.10	291.59	2,613.18	235.12	-594.07	638.91	0.00	0.00	0.00	
2,800.00	16.10	291.59	2,709.25	245.33	-619.87	666.65	0.00	0.00	0.00	
2,900.00	16.10	291.59	2,805.33	255.54	-645.66	694.39	0.00	0.00	0.00	
3,000.00	16.10	291.59	2,901.41	265.75	-671.45	722.12	0.00	0.00	0.00	
3,100.00	16.10	291.59	2,997.48	275.95	-697.24	749.86	0.00	0.00	0.00	
3,200.00	16.10	291.59	3,093.56	286.16	-723.03	777.60	0.00	0.00	0.00	
3,284.77	16.10	291.59	3,175.00	294.81	-744.89	801.11	0.00	0.00	0.00	
Wasatch G Sand										
3,300.00	16.10	291.59	3,189.63	296.37	-748.82	805.34	0.00	0.00	0.00	
3,347.22	16.10	291.59	3,235.00	301.19	-761.00	818.43	0.00	0.00	0.00	
Wasatch G Sand Base										
3,400.00	16.10	291.59	3,285.71	306.58	-774.61	833.08	0.00	0.00	0.00	
3,500.00	16.10	291.59	3,381.79	316.78	-800.40	860.81	0.00	0.00	0.00	
3,600.00	16.10	291.59	3,477.86	326.99	-826.20	888.55	0.00	0.00	0.00	
3,700.00	16.10	291.59	3,573.94	337.20	-851.99	916.29	0.00	0.00	0.00	
3,800.00	16.10	291.59	3,670.02	347.41	-877.78	944.03	0.00	0.00	0.00	
3,900.00	16.10	291.59	3,766.09	357.62	-903.57	971.76	0.00	0.00	0.00	
4,000.00	16.10	291.59	3,862.17	367.82	-929.36	999.50	0.00	0.00	0.00	
4,100.00	16.10	291.59	3,958.24	378.03	-955.15	1,027.24	0.00	0.00	0.00	
4,200.00	16.10	291.59	4,054.32	388.24	-980.94	1,054.98	0.00	0.00	0.00	
4,300.00	16.10	291.59	4,150.40	398.45	-1,006.74	1,082.72	0.00	0.00	0.00	
4,400.00	16.10	291.59	4,246.47	408.65	-1,032.53	1,110.45	0.00	0.00	0.00	

Database:	Grand Junction District	Local Co-ordinate Reference:	Well SR 22-12 - Slot A6
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Site:	RU 32-12 Pad	North Reference:	True
Well:	SR 22-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 20Sept2016 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)
4,500.00	16.10	291.59	4,342.55	418.86	-1,058.32	1,138.19	0.00	0.00	0.00
4,600.00	16.10	291.59	4,438.62	429.07	-1,084.11	1,165.93	0.00	0.00	0.00
4,696.66	16.10	291.59	4,531.49	438.94	-1,109.04	1,192.74	0.00	0.00	0.00
4,700.00	16.05	291.59	4,534.70	439.28	-1,109.90	1,193.67	1.50	-1.50	0.00
4,800.00	14.55	291.59	4,631.15	448.99	-1,134.44	1,220.06	1.50	-1.50	0.00
4,900.00	13.05	291.59	4,728.26	457.77	-1,156.62	1,243.92	1.50	-1.50	0.00
5,000.00	11.55	291.59	4,825.96	465.61	-1,176.44	1,265.23	1.50	-1.50	0.00
5,100.00	10.05	291.59	4,924.19	472.51	-1,193.87	1,283.97	1.50	-1.50	0.00
5,200.00	8.55	291.59	5,022.87	478.46	-1,208.90	1,300.14	1.50	-1.50	0.00
5,300.00	7.05	291.59	5,121.94	483.45	-1,221.52	1,313.72	1.50	-1.50	0.00
5,318.19	6.78	291.59	5,140.00	484.26	-1,223.56	1,315.91	1.50	-1.50	0.00
Wasatch G Lower									
5,400.00	5.55	291.59	5,221.33	487.50	-1,231.73	1,324.69	1.50	-1.50	0.00
5,500.00	4.05	291.59	5,320.98	490.58	-1,239.52	1,333.07	1.50	-1.50	0.00
5,600.00	2.55	291.59	5,420.81	492.70	-1,244.88	1,338.83	1.50	-1.50	0.00
5,700.00	1.05	291.59	5,520.76	493.86	-1,247.80	1,341.98	1.50	-1.50	0.00
5,770.25	0.00	0.00	5,591.00	494.09	-1,248.40	1,342.63	1.50	-1.50	97.38
Mesaverde - SR 22-12 MVRD									
5,800.00	0.00	0.00	5,620.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
5,900.00	0.00	0.00	5,720.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
6,000.00	0.00	0.00	5,820.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
6,100.00	0.00	0.00	5,920.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
6,200.00	0.00	0.00	6,020.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
6,300.00	0.00	0.00	6,120.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
6,400.00	0.00	0.00	6,220.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
6,500.00	0.00	0.00	6,320.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
6,600.00	0.00	0.00	6,420.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
6,700.00	0.00	0.00	6,520.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
6,800.00	0.00	0.00	6,620.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
6,900.00	0.00	0.00	6,720.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
7,000.00	0.00	0.00	6,820.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
7,100.00	0.00	0.00	6,920.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
7,200.00	0.00	0.00	7,020.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
7,300.00	0.00	0.00	7,120.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
7,339.25	0.00	0.00	7,160.00	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
Top KMV Gas									
7,400.00	0.00	0.00	7,220.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
7,500.00	0.00	0.00	7,320.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
7,600.00	0.00	0.00	7,420.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
7,700.00	0.00	0.00	7,520.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
7,800.00	0.00	0.00	7,620.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
7,900.00	0.00	0.00	7,720.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
8,000.00	0.00	0.00	7,820.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
8,100.00	0.00	0.00	7,920.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
8,200.00	0.00	0.00	8,020.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
8,300.00	0.00	0.00	8,120.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
8,400.00	0.00	0.00	8,220.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
8,467.25	0.00	0.00	8,288.00	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
Cameo									
8,500.00	0.00	0.00	8,320.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00
8,600.00	0.00	0.00	8,420.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well SR 22-12 - Slot A6
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Site:	RU 32-12 Pad	North Reference:	True
Well:	SR 22-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 20Sept2016 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)	
8,700.00	0.00	0.00	8,520.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,620.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,720.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,820.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00	
9,100.00	0.00	0.00	8,920.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,020.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,120.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00	
9,358.25	0.00	0.00	9,179.00	494.09	-1,248.40	1,342.63	0.00	0.00	0.00	
Rollins										
9,400.00	0.00	0.00	9,220.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,320.75	494.09	-1,248.40	1,342.63	0.00	0.00	0.00	
9,508.25	0.00	0.00	9,329.00	494.09	-1,248.40	1,342.63	0.00	0.00	0.00	
SR 22-12 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									
SR 22-12 MVRD	0.00	0.00	5,591.00	494.09	-1,248.40	1,599,742.80	2,339,823.20	39.4567376	-107.8383434
- plan hits target center									
- Circle (radius 25.00)									
SR 22-12 PBHL	0.00	0.00	9,329.00	494.09	-1,248.40	1,599,742.80	2,339,823.20	39.4567376	-107.8383434
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,100.00	1,075.96	9 5/8" @ 1100' MD	9.62	9.62	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,284.77	3,175.00	Wasatch G Sand		0.00	0.00	
3,347.22	3,235.00	Wasatch G Sand Base		0.00	0.00	
5,318.19	5,140.00	Wasatch G Lower		0.00	0.00	
5,770.25	5,591.00	Mesaverde		0.00	0.00	
7,339.25	7,160.00	Top KMV Gas		0.00	0.00	
8,467.25	8,288.00	Cameo		0.00	0.00	
9,358.25	9,179.00	Rollins		0.00	0.00	