

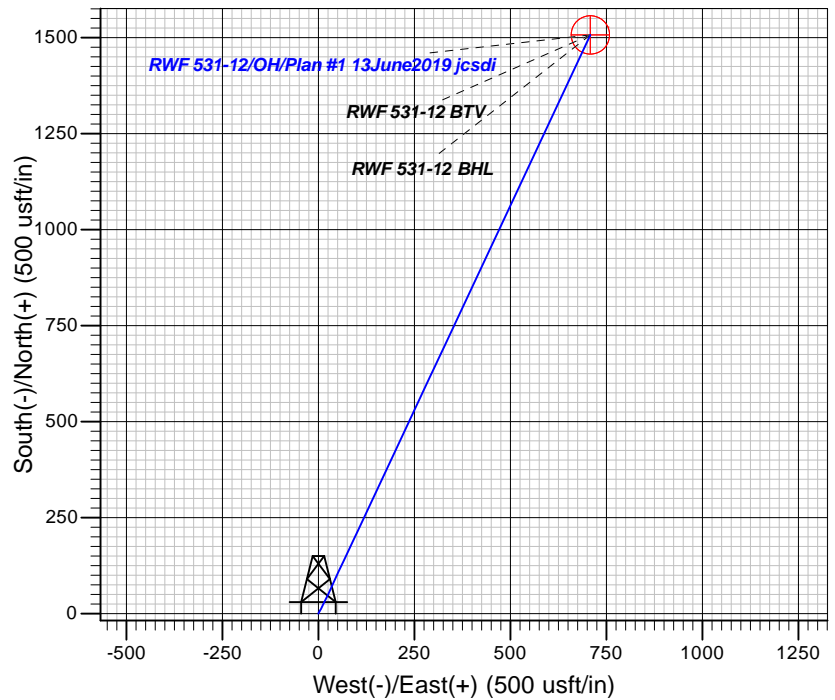
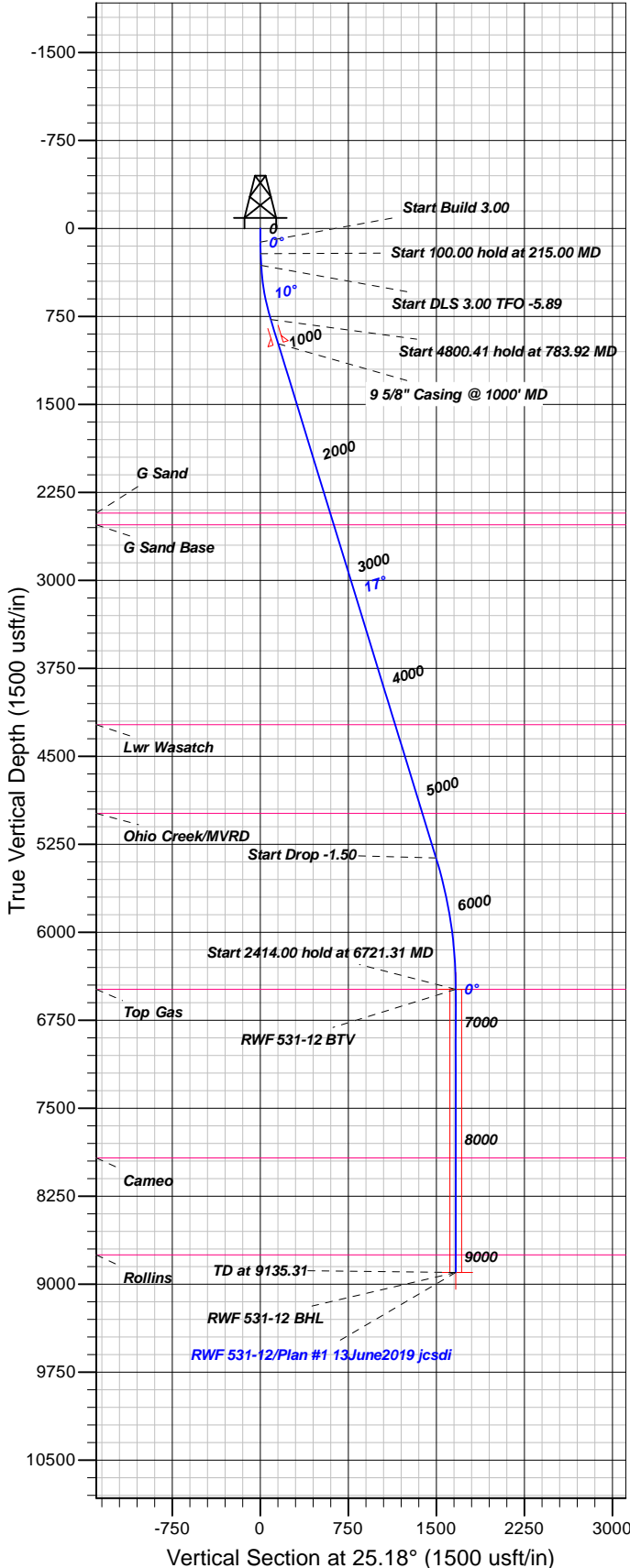


Azimuths to True North
Magnetic North: 9.37°
Magnetic Field
Strength: 51377.6snT
Dip Angle: 65.62°
Date: 6/13/2019
Model: BGGM2016

Well Details: RWF 531-12

GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1630844.10	2339722.00	39.5420889	-107.8415404	



FORMATION TOP DETAILS

TVDPth	MDPath	Formation
2425.00	2509.37	G Sand
2525.00	2613.97	G Sand Base
4230.00	4397.40	Lwr Wasatch
4985.00	5187.13	Ohio Creek/MVRD
6485.00	6721.31	Top Gas
7922.00	8158.31	Cameo
8749.00	8985.31	Rollins

Plan: Plan #1 13June2019 jcsdi

16:46, June 18 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

TVD	MD	Name	Size
982.00	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	115.00	0.00	0.00	115.00	0.00	0.00	0.00	0.00	0.00	
3	215.00	3.00	30.00	214.95	2.27	1.31	3.00	30.00	2.61	
4	315.00	3.00	30.00	314.82	6.80	3.93	0.00	0.00	7.82	
5	783.92	17.05	25.12	775.42	80.05	39.43	3.00	-5.89	89.22	
6	5584.34	17.05	25.12	5364.74	1354.77	637.10	0.00	0.00	1497.10	
7	6721.31	0.00	0.00	6485.00	1506.86	708.40	1.50	180.00	1665.07	RWF 531-12 BTV
8	9135.31	0.00	0.00	8899.00	1506.86	708.40	0.00	0.00	1665.07	RWF 531-12 BHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
RWF 531-12 BTV	6485.00	1506.86	708.40	1632332.20	2340469.00	39.5462258	-107.8390283	Circle (Radius: 50.00)
- plan hits target center								
RWF 531-12 BHL	8899.00	1506.86	708.40	1632332.20	2340469.00	39.5462258	-107.8390283	Point
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

RWF 12-12 Pad

RWF 531-12

OH

Plan: Plan #1 13June2019 jcsdi

Standard Planning Report

18 June, 2019



Database:	Grand Junction District	Local Co-ordinate Reference:	Well RWF 531-12
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Site:	RWF 12-12 Pad	North Reference:	True
Well:	RWF 531-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 13June2019 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	RWF 12-12 Pad			
Site Position:		Northing:	1,630,797.20 usft	Latitude: 39.5419586
From: Map		Easting:	2,339,698.60 usft	Longitude: -107.8416191
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence: -1.48 °

Well	RWF 531-12			
Well Position	+N/-S	47.49 usft	Northing:	1,630,844.10 usft
	+E/-W	22.18 usft	Easting:	2,339,722.00 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	5,466.80 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	6/13/2019	9.37	65.62	51,378

Design	Plan #1 13June2019 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	25.18

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	
115.00	0.00	0.00	115.00	0.00	0.00	0.00	0.00	0.00	0.00	
215.00	3.00	30.00	214.95	2.27	1.31	3.00	3.00	0.00	30.00	
315.00	3.00	30.00	314.82	6.80	3.93	0.00	0.00	0.00	0.00	
783.92	17.05	25.12	775.42	80.05	39.43	3.00	3.00	-1.04	-5.89	
5,584.34	17.05	25.12	5,364.74	1,354.77	637.10	0.00	0.00	0.00	0.00	
6,721.31	0.00	0.00	6,485.00	1,506.86	708.40	1.50	-1.50	0.00	180.00	RWF 531-12 BTV
9,135.31	0.00	0.00	8,899.00	1,506.86	708.40	0.00	0.00	0.00	0.00	RWF 531-12 BHL

Database:	Grand Junction District	Local Co-ordinate Reference:	Well RWF 531-12
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Site:	RWF 12-12 Pad	North Reference:	True
Well:	RWF 531-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 13June2019 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
115.00	0.00	0.00	115.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 3.00									
200.00	2.55	30.00	199.97	1.64	0.95	1.88	3.00	3.00	0.00
215.00	3.00	30.00	214.95	2.27	1.31	2.61	3.00	3.00	0.00
Start 100.00 hold at 215.00 MD									
300.00	3.00	30.00	299.84	6.12	3.53	7.04	0.00	0.00	0.00
315.00	3.00	30.00	314.82	6.80	3.93	7.82	0.00	0.00	0.00
Start DLS 3.00 TFO -5.89									
400.00	5.54	27.29	399.57	12.37	6.92	14.14	3.00	2.99	-3.19
500.00	8.54	26.17	498.81	23.33	12.41	26.40	3.00	3.00	-1.12
600.00	11.54	25.62	597.27	39.02	20.01	43.82	3.00	3.00	-0.54
700.00	14.54	25.30	694.68	59.39	29.70	66.38	3.00	3.00	-0.32
783.92	17.05	25.12	775.42	80.05	39.43	89.22	3.00	3.00	-0.22
Start 4800.41 hold at 783.92 MD									
800.00	17.05	25.12	790.80	84.32	41.43	93.94	0.00	0.00	0.00
900.00	17.05	25.12	886.40	110.88	53.88	123.27	0.00	0.00	0.00
1,000.00	17.05	25.12	982.00	137.43	66.33	152.59	0.00	0.00	0.00
9 5/8" Casing @ 1000' MD									
1,100.00	17.05	25.12	1,077.60	163.99	78.78	181.92	0.00	0.00	0.00
1,200.00	17.05	25.12	1,173.21	190.54	91.23	211.25	0.00	0.00	0.00
1,300.00	17.05	25.12	1,268.81	217.10	103.68	240.58	0.00	0.00	0.00
1,400.00	17.05	25.12	1,364.41	243.65	116.13	269.91	0.00	0.00	0.00
1,500.00	17.05	25.12	1,460.01	270.20	128.58	299.24	0.00	0.00	0.00
1,600.00	17.05	25.12	1,555.62	296.76	141.03	328.56	0.00	0.00	0.00
1,700.00	17.05	25.12	1,651.22	323.31	153.48	357.89	0.00	0.00	0.00
1,800.00	17.05	25.12	1,746.82	349.87	165.93	387.22	0.00	0.00	0.00
1,900.00	17.05	25.12	1,842.42	376.42	178.39	416.55	0.00	0.00	0.00
2,000.00	17.05	25.12	1,938.03	402.98	190.84	445.88	0.00	0.00	0.00
2,100.00	17.05	25.12	2,033.63	429.53	203.29	475.21	0.00	0.00	0.00
2,200.00	17.05	25.12	2,129.23	456.08	215.74	504.53	0.00	0.00	0.00
2,300.00	17.05	25.12	2,224.83	482.64	228.19	533.86	0.00	0.00	0.00
2,400.00	17.05	25.12	2,320.44	509.19	240.64	563.19	0.00	0.00	0.00
2,500.00	17.05	25.12	2,416.04	535.75	253.09	592.52	0.00	0.00	0.00
2,509.37	17.05	25.12	2,425.00	538.24	254.25	595.27	0.00	0.00	0.00
G Sand									
2,600.00	17.05	25.12	2,511.64	562.30	265.54	621.85	0.00	0.00	0.00
2,613.97	17.05	25.12	2,525.00	566.01	267.28	625.94	0.00	0.00	0.00
G Sand Base									
2,700.00	17.05	25.12	2,607.24	588.86	277.99	651.17	0.00	0.00	0.00
2,800.00	17.05	25.12	2,702.85	615.41	290.44	680.50	0.00	0.00	0.00
2,900.00	17.05	25.12	2,798.45	641.97	302.89	709.83	0.00	0.00	0.00
3,000.00	17.05	25.12	2,894.05	668.52	315.34	739.16	0.00	0.00	0.00
3,100.00	17.05	25.12	2,989.65	695.07	327.79	768.49	0.00	0.00	0.00
3,200.00	17.05	25.12	3,085.26	721.63	340.24	797.82	0.00	0.00	0.00
3,300.00	17.05	25.12	3,180.86	748.18	352.69	827.14	0.00	0.00	0.00
3,400.00	17.05	25.12	3,276.46	774.74	365.14	856.47	0.00	0.00	0.00
3,500.00	17.05	25.12	3,372.06	801.29	377.59	885.80	0.00	0.00	0.00
3,600.00	17.05	25.12	3,467.67	827.85	390.04	915.13	0.00	0.00	0.00
3,700.00	17.05	25.12	3,563.27	854.40	402.49	944.46	0.00	0.00	0.00
3,800.00	17.05	25.12	3,658.87	880.96	414.94	973.79	0.00	0.00	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well RWF 531-12
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Site:	RWF 12-12 Pad	North Reference:	True
Well:	RWF 531-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 13June2019 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)
3,900.00	17.05	25.12	3,754.48	907.51	427.39	1,003.11	0.00	0.00	0.00
4,000.00	17.05	25.12	3,850.08	934.06	439.84	1,032.44	0.00	0.00	0.00
4,100.00	17.05	25.12	3,945.68	960.62	452.29	1,061.77	0.00	0.00	0.00
4,200.00	17.05	25.12	4,041.28	987.17	464.74	1,091.10	0.00	0.00	0.00
4,300.00	17.05	25.12	4,136.89	1,013.73	477.19	1,120.43	0.00	0.00	0.00
4,397.40	17.05	25.12	4,230.00	1,039.59	489.32	1,148.99	0.00	0.00	0.00
Lwr Wasatch									
4,400.00	17.05	25.12	4,232.49	1,040.28	489.64	1,149.75	0.00	0.00	0.00
4,500.00	17.05	25.12	4,328.09	1,066.84	502.09	1,179.08	0.00	0.00	0.00
4,600.00	17.05	25.12	4,423.69	1,093.39	514.54	1,208.41	0.00	0.00	0.00
4,700.00	17.05	25.12	4,519.30	1,119.94	526.99	1,237.74	0.00	0.00	0.00
4,800.00	17.05	25.12	4,614.90	1,146.50	539.44	1,267.07	0.00	0.00	0.00
4,900.00	17.05	25.12	4,710.50	1,173.05	551.89	1,296.40	0.00	0.00	0.00
5,000.00	17.05	25.12	4,806.10	1,199.61	564.34	1,325.72	0.00	0.00	0.00
5,100.00	17.05	25.12	4,901.71	1,226.16	576.79	1,355.05	0.00	0.00	0.00
5,187.13	17.05	25.12	4,985.00	1,249.30	587.64	1,380.60	0.00	0.00	0.00
Ohio Creek/MVRD									
5,200.00	17.05	25.12	4,997.31	1,252.72	589.24	1,384.38	0.00	0.00	0.00
5,300.00	17.05	25.12	5,092.91	1,279.27	601.69	1,413.71	0.00	0.00	0.00
5,400.00	17.05	25.12	5,188.51	1,305.83	614.15	1,443.04	0.00	0.00	0.00
5,500.00	17.05	25.12	5,284.12	1,332.38	626.60	1,472.36	0.00	0.00	0.00
5,584.34	17.05	25.12	5,364.74	1,354.77	637.10	1,497.10	0.00	0.00	0.00
Start Drop -1.50									
5,600.00	16.82	25.12	5,379.73	1,358.91	639.03	1,501.66	1.50	-1.50	0.00
5,700.00	15.32	25.12	5,475.82	1,383.97	650.78	1,529.34	1.50	-1.50	0.00
5,800.00	13.82	25.12	5,572.60	1,406.74	661.46	1,554.50	1.50	-1.50	0.00
5,900.00	12.32	25.12	5,670.01	1,427.22	671.06	1,577.11	1.50	-1.50	0.00
6,000.00	10.82	25.12	5,767.97	1,445.38	679.57	1,597.16	1.50	-1.50	0.00
6,100.00	9.32	25.12	5,866.43	1,461.21	687.00	1,614.65	1.50	-1.50	0.00
6,200.00	7.82	25.12	5,965.31	1,474.70	693.32	1,629.55	1.50	-1.50	0.00
6,300.00	6.32	25.12	6,064.55	1,485.84	698.55	1,641.86	1.50	-1.50	0.00
6,400.00	4.82	25.12	6,164.07	1,494.63	702.67	1,651.56	1.50	-1.50	0.00
6,500.00	3.32	25.12	6,263.82	1,501.05	705.68	1,658.66	1.50	-1.50	0.00
6,600.00	1.82	25.12	6,363.71	1,505.11	707.58	1,663.14	1.50	-1.50	0.00
6,700.00	0.32	25.12	6,463.69	1,506.80	708.38	1,665.01	1.50	-1.50	0.00
6,721.31	0.00	0.00	6,485.00	1,506.86	708.40	1,665.07	1.50	-1.50	0.00
Start 2414.00 hold at 6721.31 MD - Top Gas - RWF 531-12 BTV									
6,800.00	0.00	0.00	6,563.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
6,900.00	0.00	0.00	6,663.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
7,000.00	0.00	0.00	6,763.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
7,100.00	0.00	0.00	6,863.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
7,200.00	0.00	0.00	6,963.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
7,300.00	0.00	0.00	7,063.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
7,400.00	0.00	0.00	7,163.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
7,500.00	0.00	0.00	7,263.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
7,600.00	0.00	0.00	7,363.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
7,700.00	0.00	0.00	7,463.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
7,800.00	0.00	0.00	7,563.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
7,900.00	0.00	0.00	7,663.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
8,000.00	0.00	0.00	7,763.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
8,100.00	0.00	0.00	7,863.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00

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Project:	Garfield County, CO NAD83	MD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Site:	RWF 12-12 Pad	North Reference:	True
Well:	RWF 531-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 13June2019 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)
8,158.31	0.00	0.00	7,922.00	1,506.86	708.40	1,665.07	0.00	0.00	0.00
Cameo									
8,200.00	0.00	0.00	7,963.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
8,300.00	0.00	0.00	8,063.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
8,400.00	0.00	0.00	8,163.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
8,500.00	0.00	0.00	8,263.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
8,600.00	0.00	0.00	8,363.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
8,700.00	0.00	0.00	8,463.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
8,800.00	0.00	0.00	8,563.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
8,900.00	0.00	0.00	8,663.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
8,985.31	0.00	0.00	8,749.00	1,506.86	708.40	1,665.07	0.00	0.00	0.00
Rollins									
9,000.00	0.00	0.00	8,763.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
9,100.00	0.00	0.00	8,863.69	1,506.86	708.40	1,665.07	0.00	0.00	0.00
9,135.31	0.00	0.00	8,899.00	1,506.86	708.40	1,665.07	0.00	0.00	0.00
TD at 9135.31 - RWF 531-12 BHL									

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
RWF 531-12 BTV - plan hits target center - Circle (radius 50.00)	0.00	0.00	6,485.00	1,506.86	708.40	1,632,332.20	2,340,469.00	39.5462259	-107.8390284
RWF 531-12 BHL - plan hits target center - Point	0.00	0.00	8,899.00	1,506.86	708.40	1,632,332.20	2,340,469.00	39.5462259	-107.8390284

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,000.00	982.00	9 5/8" Casing @ 1000' MD	9.62	12.25

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,509.37	2,425.00	G Sand		0.00	0.00
2,613.97	2,525.00	G Sand Base		0.00	0.00
4,397.40	4,230.00	Lwr Wasatch		0.00	0.00
5,187.13	4,985.00	Ohio Creek/MVRD		0.00	0.00
6,721.31	6,485.00	Top Gas		0.00	0.00
8,158.31	7,922.00	Cameo		0.00	0.00
8,985.31	8,749.00	Rollins		0.00	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well RWF 531-12
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Site:	RWF 12-12 Pad	North Reference:	True
Well:	RWF 531-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 13June2019 jcsdi		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
115.00	115.00	0.00	0.00	Start Build 3.00
215.00	214.95	2.27	1.31	Start 100.00 hold at 215.00 MD
315.00	314.82	6.80	3.93	Start DLS 3.00 TFO -5.89
783.92	775.42	80.05	39.43	Start 4800.41 hold at 783.92 MD
5,584.34	5,364.74	1,354.77	637.10	Start Drop -1.50
6,721.31	6,485.00	1,506.86	708.40	Start 2414.00 hold at 6721.31 MD
9,135.31	8,899.00	1,506.86	708.40	TD at 9135.31