

Sec 9, T6S, R94W
RWF 344-9
Q220115 & RM-220110
Plan 3

Company Name: Terra Energy Partners, LLP
RWF 344-9
Garfield County, CO (Nad 83)
Rig: KB=30' @ 6399.40usft (H&P #329)
Created by: Chase Chambers
Date: 7:37, February 03 2022

PROJECT DETAILS: Garfield County, CO (Nad 83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Central Zone
System Datum: Mean Sea Level



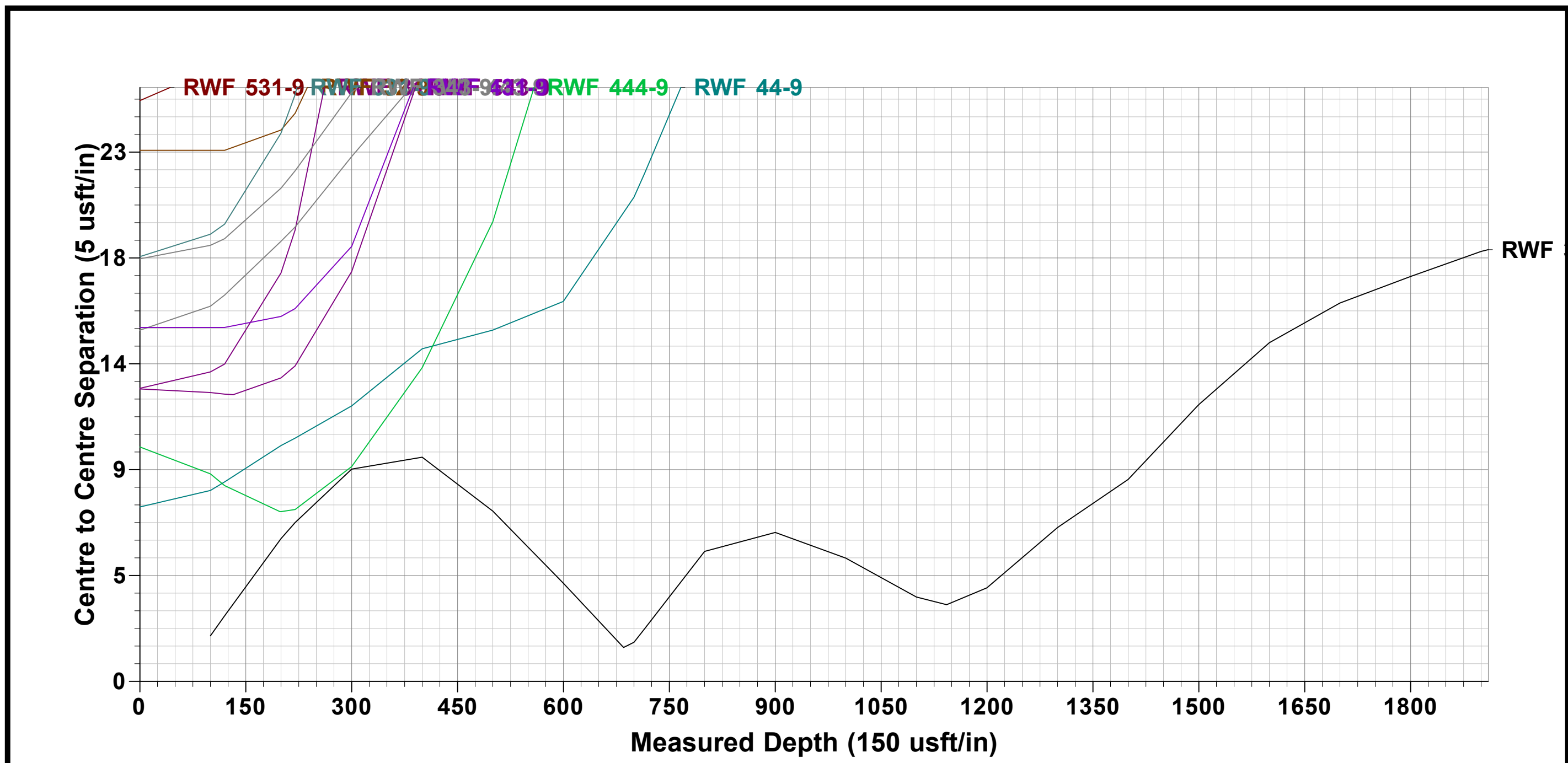
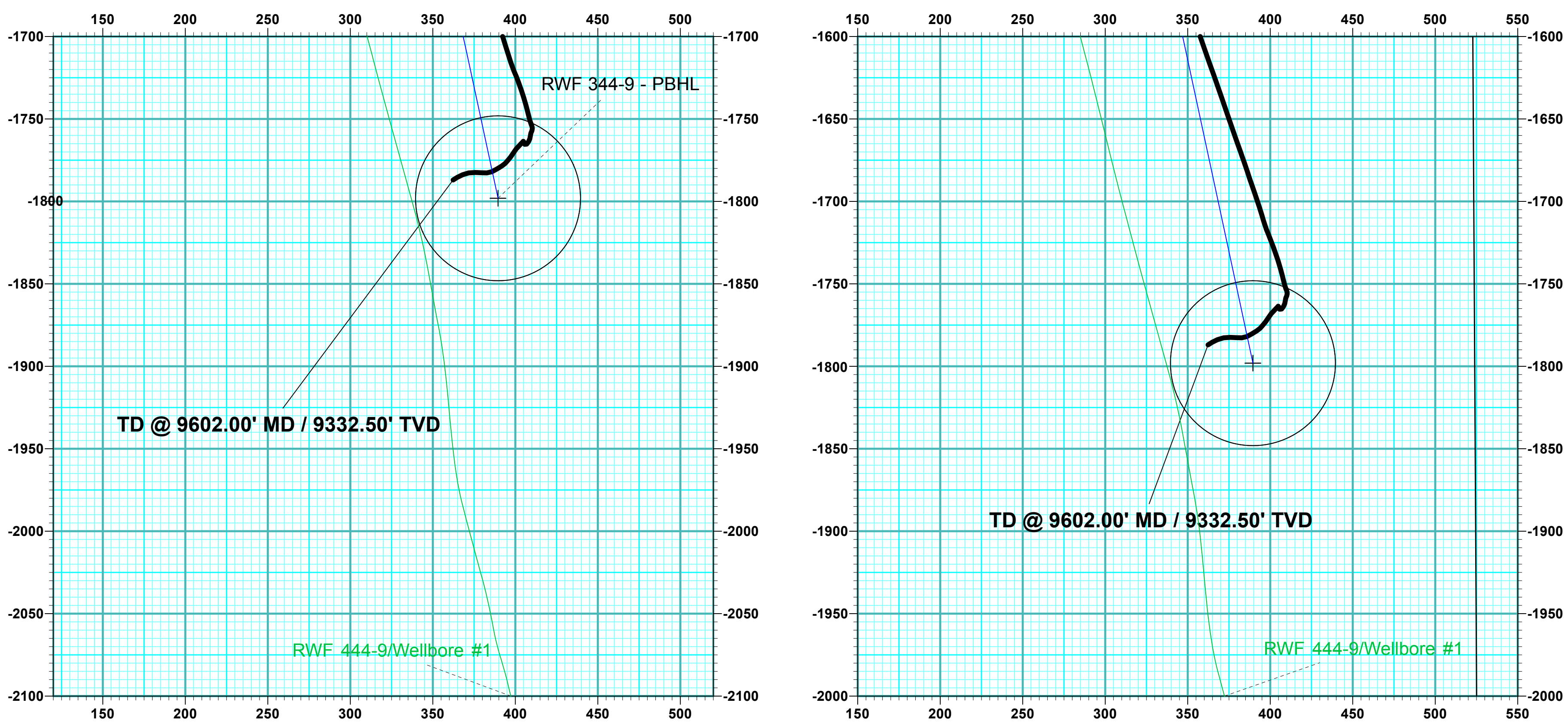
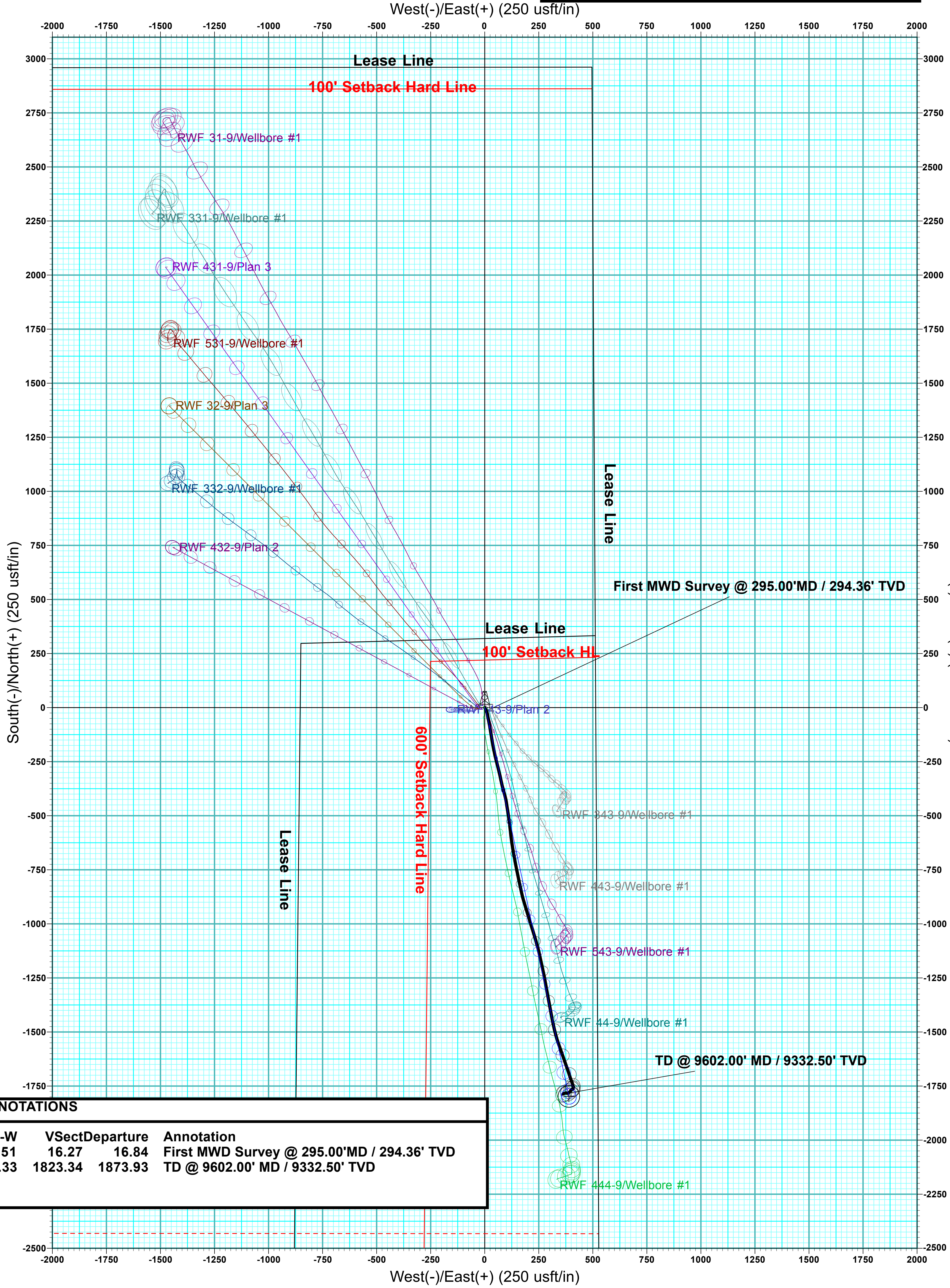
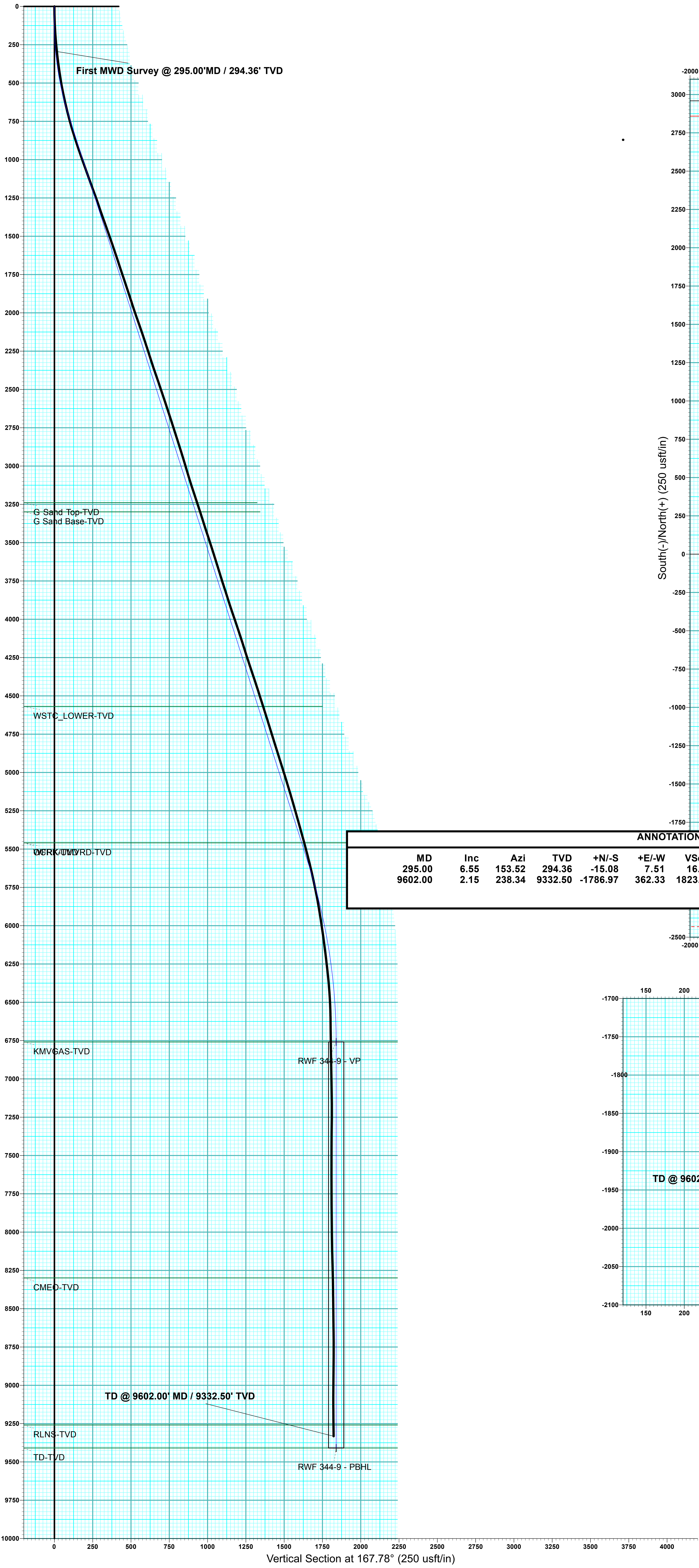
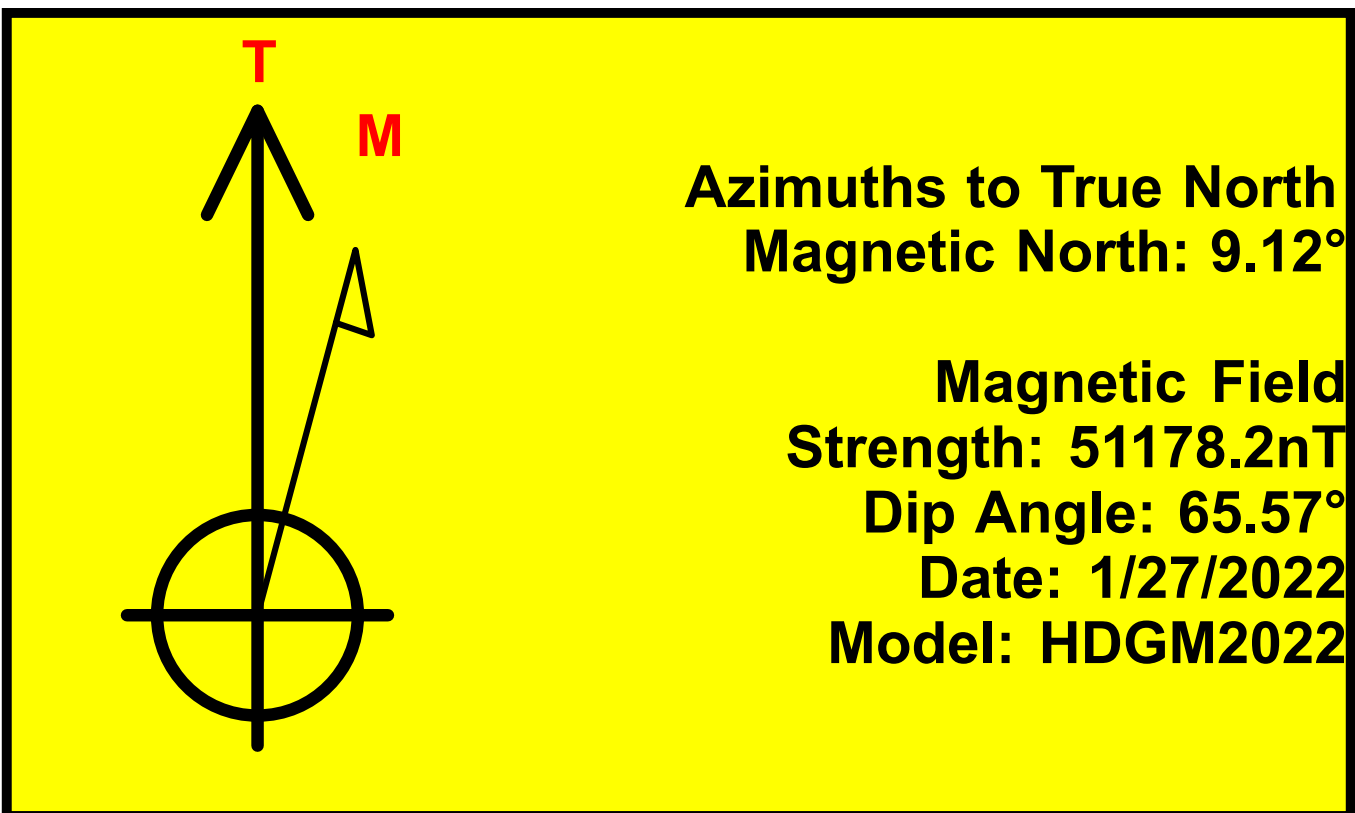
WELL DETAILS: RWF 344-9						
Ground Elevation: 6369.40						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	RWF 344-9
0.00	0.00	1630182.70	2327367.80	39.539391	-107.885271	

DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude
RWF 344-9 - VP	6759.00	-1798.09	389.54	1628375.00	2327710.00	39.534455
RWF 344-9 - PBHL	9409.00	-1798.09	389.54	1628375.00	2327710.00	39.534455

DESIGN ANNOTATIONS							
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSectDeparture	Annotation
120.00	0.00	0.00	120.00	0.00	0.00	0.00	Build 3°/100'
220.00	3.00	155.00	219.95	-2.37	1.11	2.55	EOB @ 3.00° Inc / 155.00° Azm - Build 3°/100'
715.32	17.77	167.89	705.84	-88.50	22.57	91.27	EOB @ 17.77° Inc / 167.89° Azm
5847.59	17.77	167.89	5593.27	-1619.92	351.29	1657.58	Drop 1.5°/100'
7032.22	0.00	0.00	6759.00	-1798.09	389.54	1839.80	EOD @ Vertical
9682.22	0.00	0.00	9409.00	-1798.09	389.54	1839.80	TD @ 9682.22° MD / 9409.00° TVD

SLOTS				
Slot Name	+N/-S	+E/-W	Northing	Easting
RWF 31-9	8.16	-9.42	1630191.10	2327358.60
RWF 32-9	-4.68	-22.08	1630178.60	2327345.60
RWF 331-9	6.66	-16.78	1630189.80	2327351.20
RWF 332-9	3.58	-31.40	1630187.10	2327336.50
RWF 343-9	12.83	12.57	1630195.20	2327380.70
RWF 344-9	0.00	0.00	1630182.70	2327367.80
RWF 431-9	-3.09	-14.72	1630180.00	2327353.00
RWF 432-9	-6.17	-29.35	1630177.30	2327338.30
RWF 43-9	-7.77	-36.71	1630175.90	2327330.90
RWF 443-9	2.99	14.63	1630185.30	2327382.50
RWF 444-9	9.75	-2.06	1630192.50	2327366.00
RWF 44-9	1.49	7.26	1630184.00	2327375.10
RWF 531-9	5.17	-24.14	1630188.50	2327343.80
RWF 543-9	11.24	5.31	1630193.80	2327373.40

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3239.00	3375.38	G Sand Top-TVD
3299.00	3438.38	G Sand Base-TVD
4569.00	4772.01	WSTC_LOWER-TVD
5459.00	5706.60	WFRK/UMVRD-TVD
5459.00	5706.60	KMVGAS-TVD
6759.00	7032.22	CMEQ-TVD
8299.00	9572.22	RLNS-TVD
9259.00	9532.22	TD-TVD
9409.00	9682.22	





Terra Energy Partners, LLP

Garfield County, CO (Nad 83)

Sec 9, T6S, R94W

RWF 344-9 - Slot RWF 344-9

Wellbore #1

Design: Wellbore #1

KLX Survey Report

03 February, 2022



Company:	Terra Energy Partners, LLP	Local Co-ordinate Reference:	Well RWF 344-9 - Slot RWF 344-9
Project:	Garfield County, CO (Nad 83)	TVD Reference:	KB=30' @ 6399.40usft (H&P #329)
Site:	Sec 9, T6S, R94W	MD Reference:	KB=30' @ 6399.40usft (H&P #329)
Well:	RWF 344-9	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project	Garfield County, CO (Nad 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site		Sec 9, T6S, R94W			
Site Position:		Northing:	1,630,177.30 usft	Latitude:	39.539375
From:	Map	Easting:	2,327,338.30 usft	Longitude:	-107.885375
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.50 °

Well	RWF 344-9 - Slot RWF 344-9					
Well Position	+N/-S	0.00 usft	Northing:	1,630,182.70 usft	Latitude:	39.539392
	+E/-W	0.00 usft	Easting:	2,327,367.80 usft	Longitude:	-107.885271
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	6,369.40 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2022	1/27/2022	9.12	65.57	51,178.20000000

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	168.54	

Survey Program	Date	2/3/2022			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
295.00	9,602.00	KLX MWD Surveys (Wellbore #1)	OWSG (REV5) MWD HDGM	OWSG MWD - Standard	

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
First MWD Survey @ 295.00'MD / 294.36' TVD									
295.00	6.55	153.52	294.36	-15.08	7.51	16.27	2.22	2.22	0.00
389.00	7.38	163.63	387.67	-25.67	11.60	27.46	1.57	0.88	10.76
483.00	9.45	173.12	480.65	-39.12	14.23	41.17	2.64	2.20	10.10
576.00	11.78	166.88	572.06	-55.95	17.30	58.27	2.79	2.51	-6.71
670.00	13.45	169.61	663.79	-76.05	21.45	78.80	1.89	1.78	2.90
764.00	15.51	170.75	754.80	-99.21	25.44	102.29	2.21	2.19	1.21
859.00	17.75	170.75	845.82	-126.04	29.81	129.45	2.36	2.36	0.00
953.00	18.90	170.57	935.05	-155.21	34.61	158.99	1.22	1.22	-0.19
1,047.00	19.51	168.73	1,023.82	-185.62	40.17	189.90	0.91	0.65	-1.96

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Site:	Sec 9, T6S, R94W	MD Reference:	KB=30' @ 6399.40usft (H&P #329)
Well:	RWF 344-9	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
1,174.00	20.30	166.88	1,143.23	-227.87	49.32	233.13	0.80	0.62	-1.46
1,267.00	19.73	165.92	1,230.61	-258.81	56.80	264.94	0.71	-0.61	-1.03
1,362.00	18.85	165.21	1,320.28	-289.20	64.62	296.28	0.96	-0.93	-0.75
1,456.00	19.82	168.55	1,408.98	-319.51	71.66	327.37	1.56	1.03	3.55
1,550.00	19.29	166.53	1,497.56	-350.23	78.44	358.83	0.91	-0.56	-2.15
1,644.00	18.72	165.13	1,586.44	-379.90	85.92	389.40	0.78	-0.61	-1.49
1,738.00	18.24	163.90	1,675.59	-408.62	93.88	419.12	0.66	-0.51	-1.31
1,832.00	18.63	171.63	1,764.78	-437.61	100.14	448.78	2.63	0.41	8.22
1,926.00	18.37	171.45	1,853.92	-467.11	104.53	478.57	0.28	-0.28	-0.19
2,020.00	17.84	170.14	1,943.27	-495.95	109.20	507.76	0.71	-0.56	-1.39
2,114.00	19.69	173.48	2,032.27	-525.87	113.46	537.93	2.28	1.97	3.55
2,208.00	18.94	172.86	2,120.98	-556.74	117.16	568.92	0.83	-0.80	-0.66
2,302.00	18.19	172.68	2,210.09	-586.43	120.92	598.76	0.80	-0.80	-0.19
2,396.00	17.67	174.00	2,299.52	-615.17	124.28	627.60	0.70	-0.55	1.40
2,490.00	19.25	169.52	2,388.68	-644.60	128.59	657.30	2.26	1.68	-4.77
2,585.00	18.72	169.87	2,478.52	-675.01	134.12	688.20	0.57	-0.56	0.37
2,679.00	18.41	170.31	2,567.63	-704.49	139.27	718.11	0.36	-0.33	0.47
2,773.00	18.02	168.64	2,656.92	-733.37	144.64	747.49	0.69	-0.41	-1.78
2,867.00	17.84	168.38	2,746.35	-761.73	150.40	776.43	0.21	-0.19	-0.28
2,957.00	17.80	167.85	2,832.03	-788.68	156.07	803.97	0.19	-0.04	-0.59
3,046.00	17.36	168.20	2,916.88	-814.98	161.65	830.85	0.51	-0.49	0.39
3,138.00	16.30	167.32	3,004.93	-841.01	167.29	857.48	1.18	-1.15	-0.96
3,230.00	17.36	167.06	3,092.99	-866.98	173.20	884.11	1.16	1.15	-0.28
3,320.00	18.59	163.02	3,178.60	-893.79	180.40	911.82	1.95	1.37	-4.49
3,412.00	18.19	163.46	3,265.90	-921.58	188.77	940.72	0.46	-0.43	0.48
3,503.00	17.45	162.58	3,352.54	-948.22	196.89	968.43	0.87	-0.81	-0.97
3,592.00	18.37	163.98	3,437.22	-974.43	204.76	995.69	1.14	1.03	1.57
3,683.00	17.93	161.87	3,523.70	-1,001.53	213.08	1,023.89	0.87	-0.48	-2.32
3,773.00	17.62	162.93	3,609.40	-1,027.71	221.39	1,051.21	0.50	-0.34	1.18
3,863.00	17.05	162.40	3,695.31	-1,053.31	229.37	1,077.89	0.66	-0.63	-0.59
3,953.00	18.11	164.60	3,781.11	-1,079.38	237.08	1,104.96	1.39	1.18	2.44
4,044.00	17.40	163.72	3,867.77	-1,106.07	244.65	1,132.63	0.83	-0.78	-0.97
4,135.00	18.98	167.15	3,954.23	-1,133.56	251.75	1,160.98	2.10	1.74	3.77
4,227.00	18.68	168.03	4,041.30	-1,162.56	258.14	1,190.67	0.45	-0.33	0.96
4,319.00	17.97	168.38	4,128.64	-1,190.88	264.05	1,219.60	0.78	-0.77	0.38
4,410.00	17.27	166.62	4,215.37	-1,217.77	270.01	1,247.14	0.97	-0.77	-1.93
4,500.00	18.81	169.08	4,300.94	-1,245.01	275.85	1,275.00	1.91	1.71	2.73
4,592.00	18.37	169.96	4,388.14	-1,273.85	281.18	1,304.32	0.57	-0.48	0.96
4,683.00	17.75	169.78	4,474.66	-1,301.62	286.14	1,332.53	0.68	-0.68	-0.20
4,774.00	17.58	168.99	4,561.37	-1,328.76	291.23	1,360.14	0.32	-0.19	-0.87
4,866.00	17.58	169.61	4,649.07	-1,356.07	296.39	1,387.92	0.20	0.00	0.67
4,957.00	16.79	169.43	4,736.01	-1,382.51	301.28	1,414.80	0.87	-0.87	-0.20
5,048.00	17.97	169.70	4,822.85	-1,409.24	306.20	1,441.98	1.30	1.30	0.30

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Site:	Sec 9, T6S, R94W	MD Reference:	KB=30' @ 6399.40usft (H&P #329)
Well:	RWF 344-9	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
5,140.00	17.49	168.82	4,910.48	-1,436.76	311.42	1,469.99	0.60	-0.52	-0.96
5,232.00	17.18	167.50	4,998.30	-1,463.59	317.04	1,497.40	0.54	-0.34	-1.43
5,323.00	16.74	167.76	5,085.34	-1,489.52	322.73	1,523.95	0.49	-0.48	0.29
5,413.00	16.61	163.81	5,171.56	-1,514.54	329.06	1,549.73	1.27	-0.14	-4.39
5,504.00	15.78	163.02	5,258.95	-1,538.87	336.30	1,575.01	0.94	-0.91	-0.87
5,596.00	16.08	159.59	5,347.42	-1,562.77	344.40	1,600.04	1.07	0.33	-3.73
5,687.00	15.29	160.82	5,435.03	-1,585.92	352.73	1,624.38	0.94	-0.87	1.35
5,779.00	14.50	160.91	5,523.94	-1,608.26	360.49	1,647.82	0.86	-0.86	0.10
5,870.00	14.06	160.38	5,612.13	-1,629.44	367.92	1,670.05	0.50	-0.48	-0.58
5,961.00	11.95	161.61	5,700.79	-1,648.79	374.61	1,690.35	2.34	-2.32	1.35
6,053.00	11.65	159.94	5,790.84	-1,666.55	380.80	1,708.99	0.49	-0.33	-1.82
6,146.00	9.45	161.79	5,882.27	-1,682.63	386.41	1,725.86	2.39	-2.37	1.99
6,238.00	8.88	160.64	5,973.09	-1,696.50	391.12	1,740.39	0.65	-0.62	-1.25
6,330.00	8.00	163.90	6,064.09	-1,709.35	395.25	1,753.81	1.09	-0.96	3.54
6,422.00	7.34	157.57	6,155.27	-1,720.94	399.27	1,765.96	1.16	-0.72	-6.88
6,513.00	6.42	160.64	6,245.62	-1,731.11	403.17	1,776.70	1.09	-1.01	3.37
6,605.00	6.02	164.60	6,337.07	-1,740.61	406.16	1,786.61	0.64	-0.43	4.30
6,697.00	4.13	166.18	6,428.71	-1,748.48	408.23	1,794.74	2.06	-2.05	1.72
6,789.00	2.37	158.27	6,520.56	-1,753.47	409.73	1,799.92	1.97	-1.91	-8.60
6,881.00	0.79	191.84	6,612.52	-1,755.85	410.30	1,802.37	1.92	-1.72	36.49
6,973.00	0.97	191.84	6,704.51	-1,757.24	410.01	1,803.67	0.20	0.20	0.00
7,065.00	0.88	210.30	6,796.50	-1,758.61	409.50	1,804.91	0.34	-0.10	20.07
7,157.00	1.19	176.90	6,888.49	-1,760.17	409.19	1,806.38	0.72	0.34	-36.30
7,249.00	1.10	207.66	6,980.47	-1,761.91	408.83	1,808.01	0.67	-0.10	33.43
7,340.00	1.32	198.26	7,071.45	-1,763.68	408.10	1,809.60	0.32	0.24	-10.33
7,432.00	1.19	235.26	7,163.43	-1,765.23	406.98	1,810.90	0.88	-0.14	40.22
7,524.00	0.79	308.21	7,255.42	-1,765.38	405.70	1,810.79	1.33	-0.43	79.29
7,616.00	0.70	2.18	7,347.41	-1,764.43	405.22	1,809.76	0.74	-0.10	58.66
7,707.00	0.31	301.18	7,438.41	-1,763.74	405.03	1,809.06	0.67	-0.43	-67.03
7,798.00	0.09	279.12	7,529.41	-1,763.61	404.75	1,808.87	0.25	-0.24	-24.24
7,889.00	0.18	65.72	7,620.41	-1,763.54	404.81	1,808.81	0.29	0.10	161.10
7,980.00	0.40	216.63	7,711.40	-1,763.73	404.75	1,808.99	0.62	0.24	165.84
8,070.00	0.75	229.73	7,801.40	-1,764.37	404.11	1,809.48	0.41	0.39	14.56
8,160.00	0.70	221.90	7,891.39	-1,765.15	403.30	1,810.09	0.12	-0.06	-8.70
8,252.00	1.41	222.25	7,983.38	-1,766.41	402.16	1,811.10	0.77	0.77	0.38
8,343.00	1.45	223.31	8,074.35	-1,768.08	400.62	1,812.43	0.05	0.04	1.16
8,434.00	1.93	209.33	8,165.31	-1,770.25	399.08	1,814.25	0.69	0.53	-15.36
8,524.00	2.59	218.74	8,255.24	-1,773.16	397.06	1,816.70	0.84	0.73	10.46
8,614.00	1.14	219.71	8,345.19	-1,775.43	395.22	1,818.56	1.61	-1.61	1.08
8,703.00	1.45	222.25	8,434.17	-1,776.95	393.90	1,819.78	0.35	0.35	2.85
8,795.00	1.76	240.80	8,526.13	-1,778.50	391.88	1,820.90	0.65	0.34	20.16
8,885.00	2.46	237.28	8,616.07	-1,780.22	389.05	1,822.03	0.79	0.78	-3.91
8,975.00	2.29	245.90	8,705.99	-1,782.00	385.78	1,823.12	0.44	-0.19	9.58

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Site:	Sec 9, T6S, R94W	MD Reference:	KB=30' @ 6399.40usft (H&P #329)
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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
9,064.00	1.76	272.09	8,794.94	-1,782.67	382.79	1,823.19	1.18	-0.60	29.43
9,156.00	2.24	269.36	8,886.88	-1,782.64	379.58	1,822.52	0.53	0.52	-2.97
9,248.00	2.55	276.40	8,978.80	-1,782.43	375.75	1,821.55	0.46	0.34	7.65
9,339.00	2.50	256.80	9,069.71	-1,782.66	371.81	1,820.99	0.95	-0.05	-21.54
9,431.00	2.37	248.62	9,161.63	-1,783.81	368.08	1,821.38	0.40	-0.14	-8.89
9,520.00	2.15	238.34	9,250.56	-1,785.36	364.95	1,822.27	0.52	-0.25	-11.55
TD @ 9602.00' MD / 9332.50' TVD									
9,602.00	2.15	238.34	9,332.50	-1,786.97	362.33	1,823.34	0.00	0.00	0.00

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
295.00	294.36	-15.08	7.51	First MWD Survey @ 295.00'MD / 294.36' TVD
9,602.00	9,332.50	-1,786.97	362.33	TD @ 9602.00' MD / 9332.50' TVD

Checked By: _____	Approved By: _____	Date: _____
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