

Sec 9, T6S, R94W
RWF 531-9
Q210957 & RM-210815
Plan 2

Company Name: Terra Energy Partners, LLP
RWF 531-9
Garfield County, CO (Nad 83)
Rig: KB=30' @ 6399.40usft (H&P #329)
Created by: Chase Chambers
Date: 5:22, December 04 2021

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



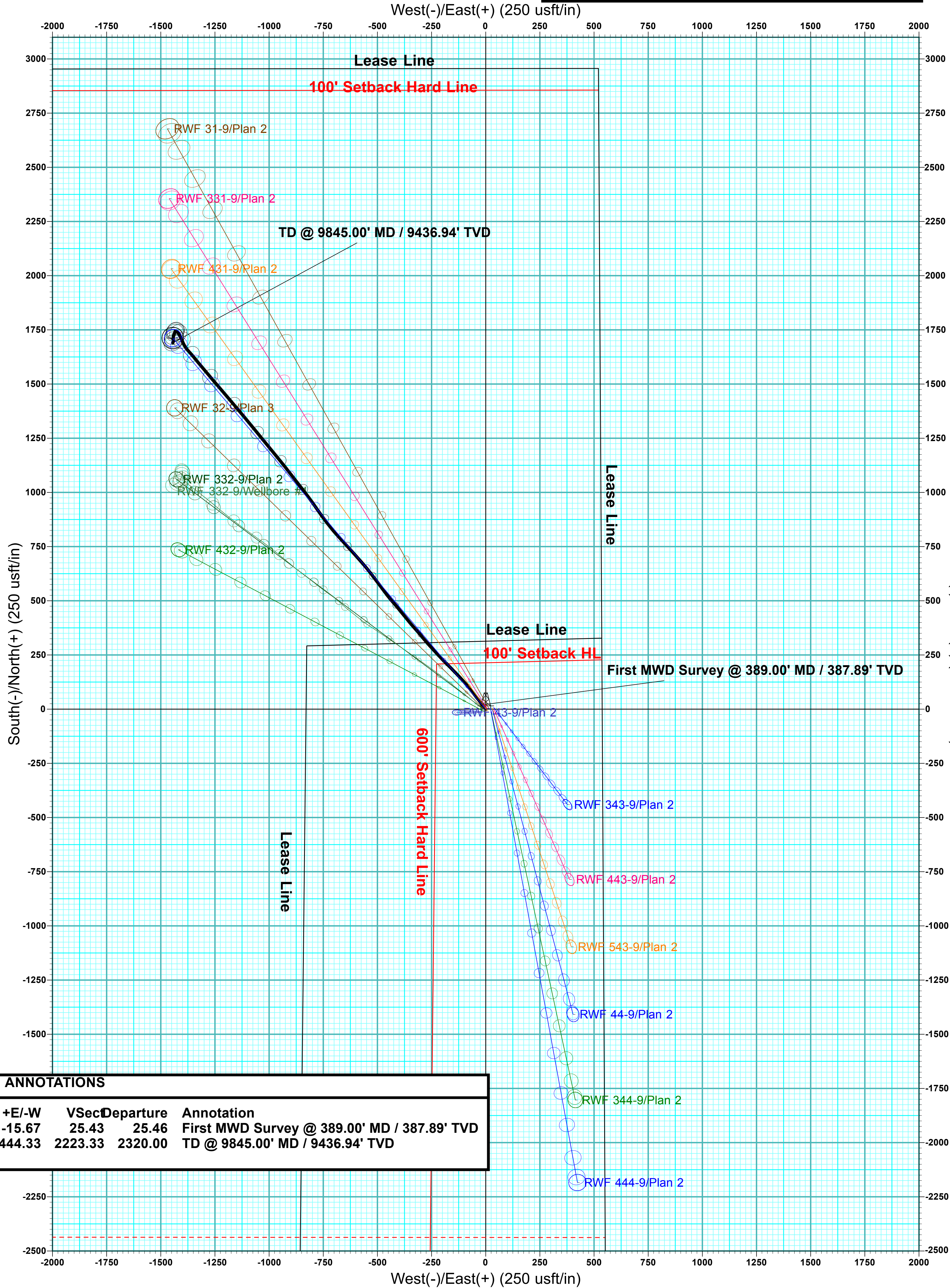
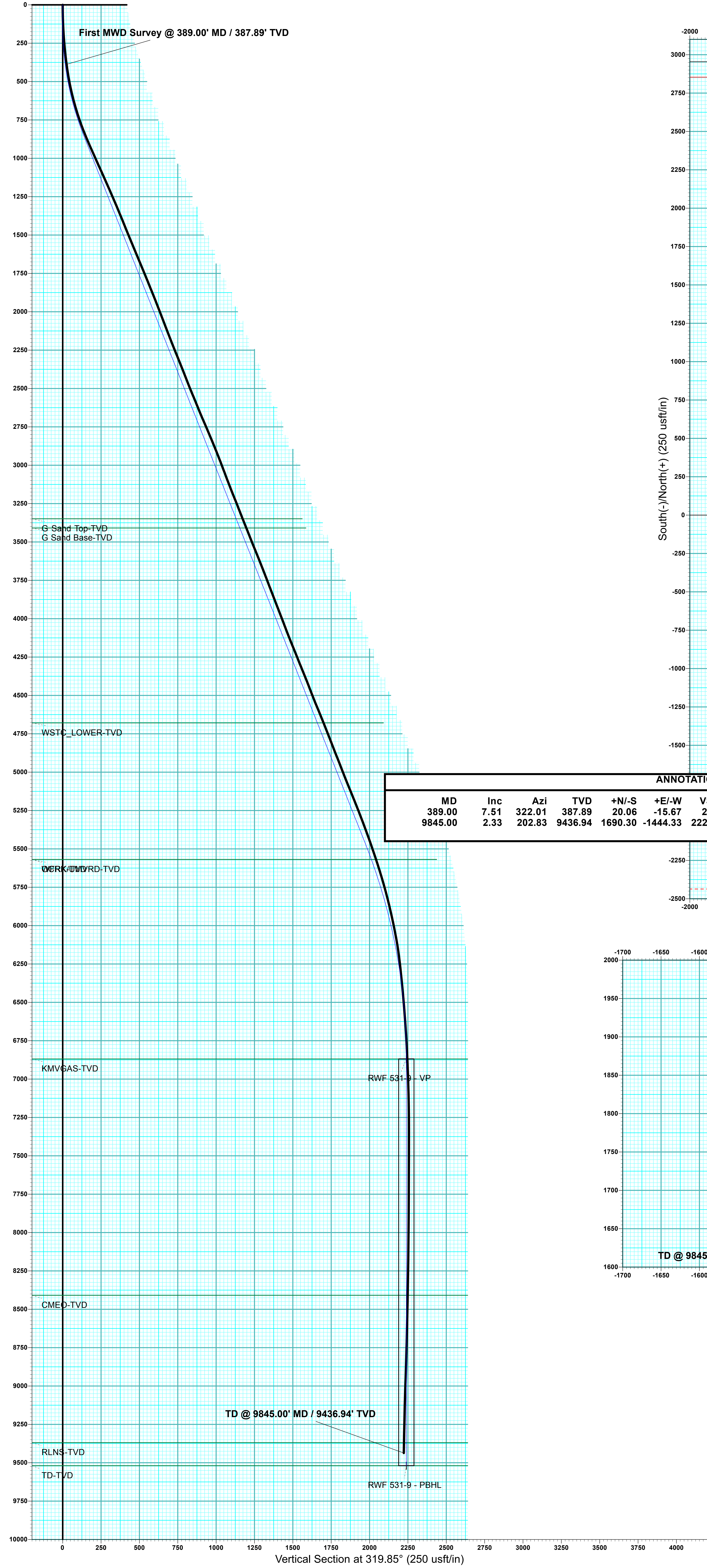
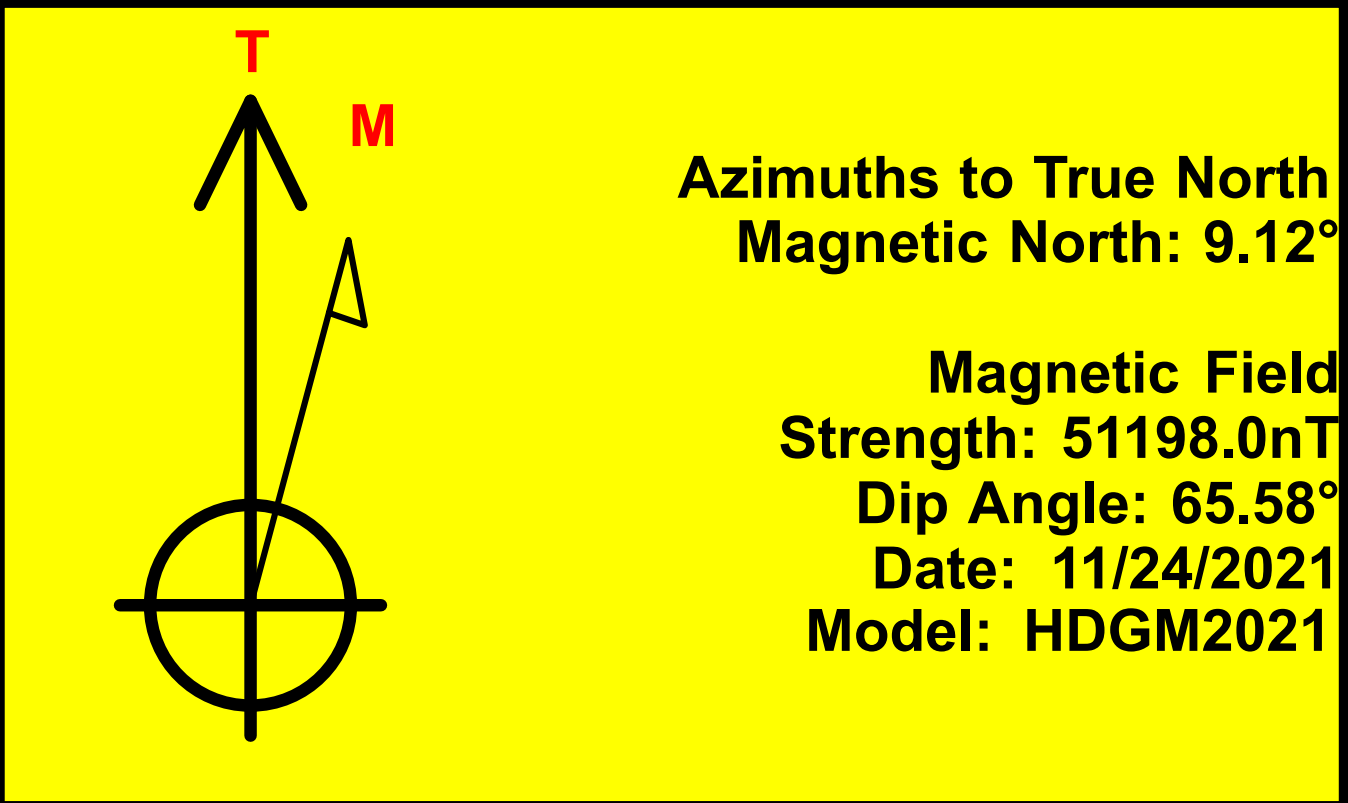
WELL DETAILS: RWF 531-9						
Ground Elevation:			6369.40			
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	RWF 531-9
0.00	0.00	1630188.50	2327343.80	39.539406	-107.885356	

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
RWF 531-9 - VP	6869.00	1712.17	-1444.25	1631938.00	2325945.00	39.544106	-107.890477
RWF 531-9 - PBHL	9519.00	1712.17	-1444.25	1631938.00	2325945.00	39.544106	-107.890477

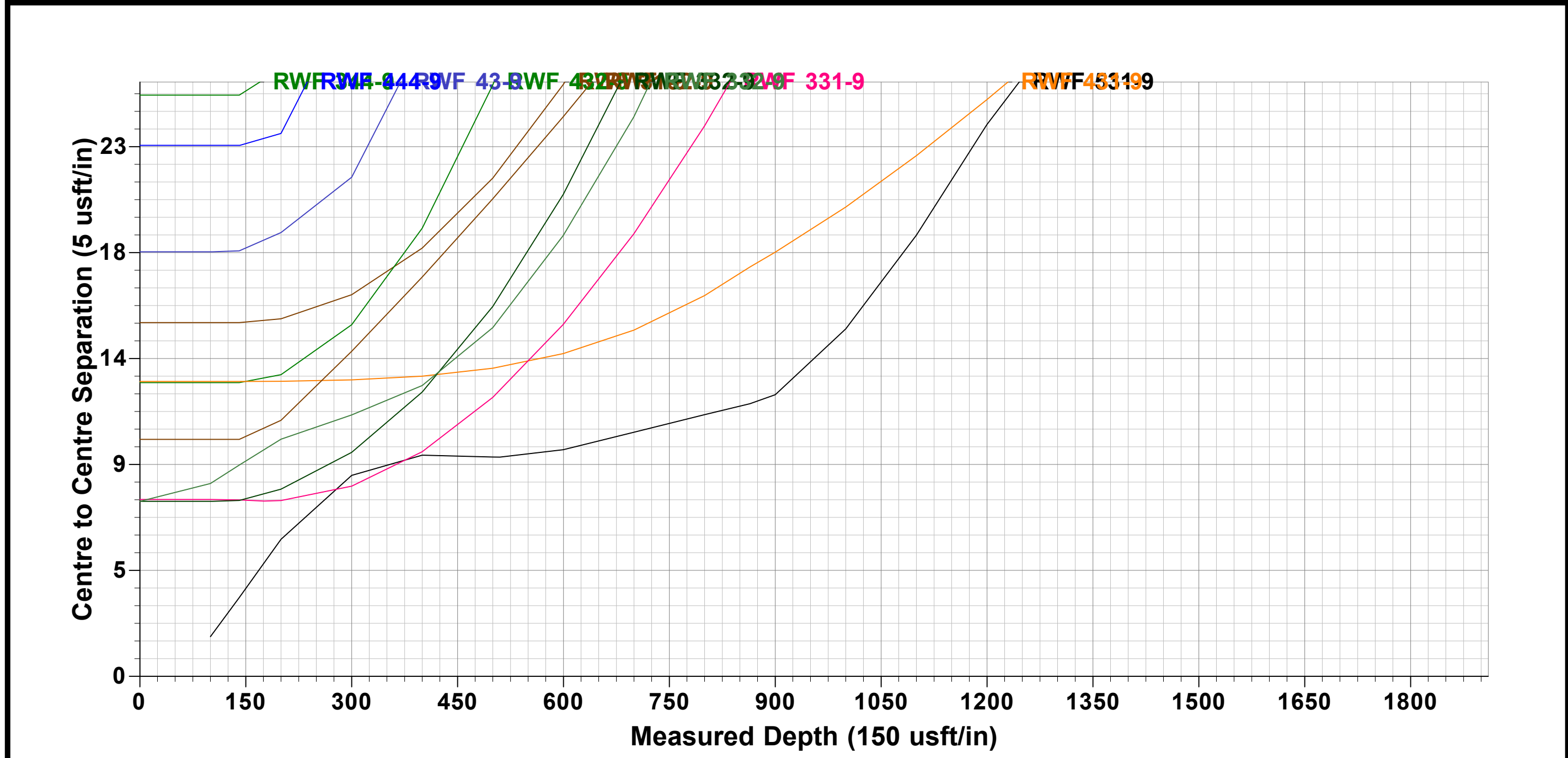
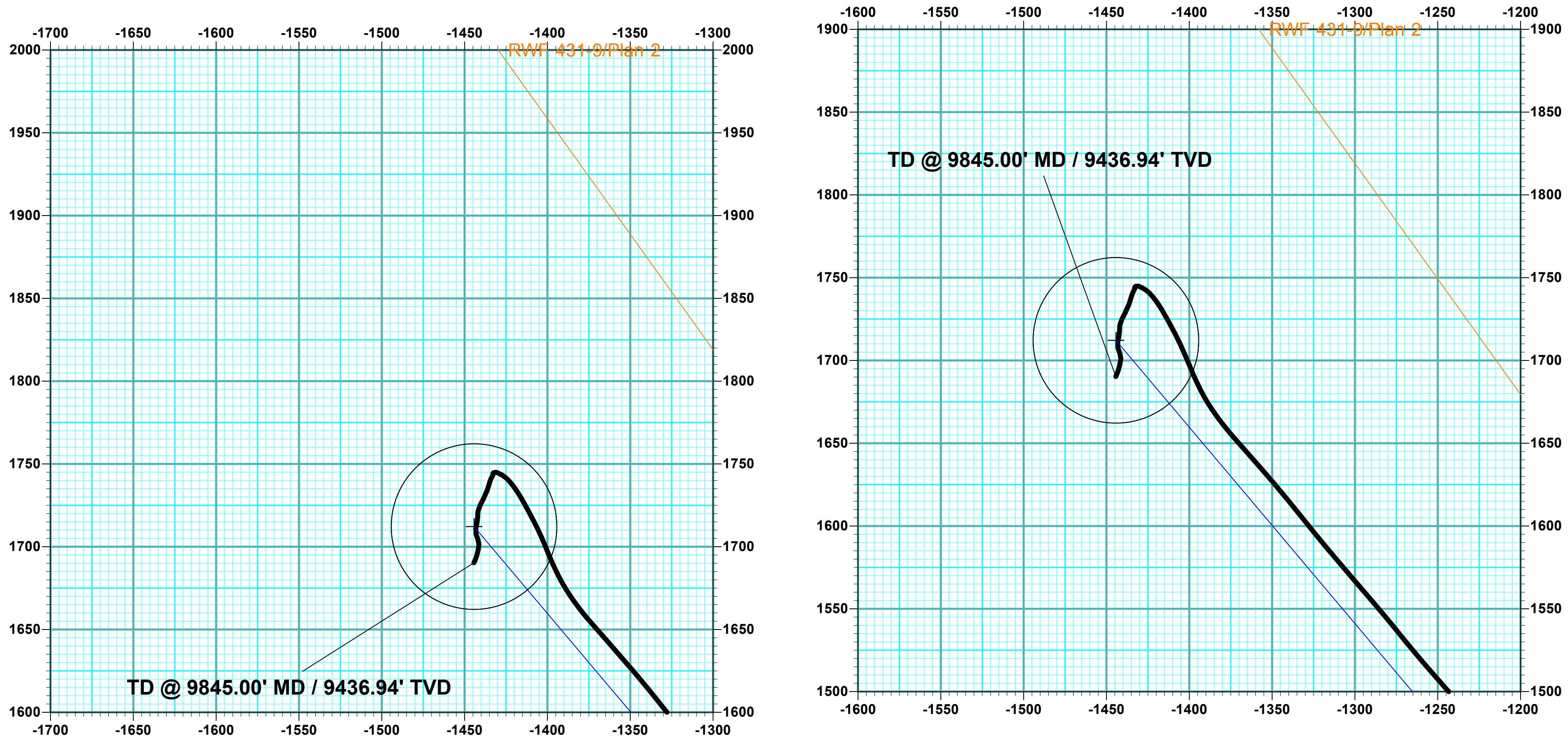
DESIGN ANNOTATIONS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
141.00	0.00	0.00	141.00	0.00	0.00	0.00	0.00	Start Build 3.00
864.18	21.70	319.85	847.02	103.41	-87.23	135.29	135.29	Start 4961.39 hold at 864.18 MD
5825.57	21.70	319.85	5456.96	1505.35	-1269.79	1969.37	1969.37	Start Drop -1.50
7271.93	0.00	0.00	6869.00	1712.17	-1444.25	2239.95	2239.95	Start 2650.00 hold at 7271.93 MD
9921.93	0.00	0.00	9519.00	1712.17	-1444.25	2239.95	2239.95	TD at 9921.93

SLOTS				
Slot Name	+N/-S	+E/-W	Northing	Easting
RWF 31-9	2.99	14.73	1630191.10	2327358.60
RWF 32-9	-9.85	2.06	1630178.60	2327345.60
RWF 331-9	1.49	7.36	1630189.80	2327351.20
RWF 332-9	-1.59	-7.26	1630187.10	2327336.50
RWF 343-9	7.67	36.71	1630195.20	2327380.70
RWF 344-9	-5.17	24.14	1630182.70	2327367.80
RWF 431-9	-8.26	9.42	1630180.00	2327353.00
RWF 432-9	-11.34	-5.20	1630177.30	2327338.30
RWF 43-9	-12.93	-12.56	1630175.90	2327330.90
RWF 443-9	-2.18	38.77	1630185.30	2327382.50
RWF 444-9	4.58	22.09	1630192.50	2327366.00
RWF 44-9	-3.68	31.41	1630184.00	2327375.10
RWF 531-9	0.00	0.00	1630188.50	2327343.80
RWF 543-9	6.08	29.45	1630193.80	2327373.40

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3349.00	3556.90	G Sand Top-TVD
3409.00	3621.48	G Sand Base-TVD
4679.00	4988.30	WSTC_LOWER-TVD
5569.00	5945.42	OCRK-TVD
5569.00	5945.42	WFRK/UMVRD-TVD
6869.00	7271.93	KMVGAS-TVD
8409.00	8811.93	CMEO-TVD
9369.00	9771.93	RLNS-TVD
9519.00	9921.93	TD-TVD



ANNOTATIONS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
389.00	7.51	322.01	387.89	20.06	-15.67	25.43	25.46	First MWD Survey @ 389.00' MD / 387.89' TVD
9845.00	2.33	202.83	9436.94	1690.30	-1444.33	2223.33	2320.00	TD @ 9845.00' MD / 9436.94' TVD





Terra Energy Partners, LLP

Garfield County, CO (Nad 83)

Sec 9, T6S, R94W

RWF 531-9 - Slot RWF 531-9

Wellbore #1

Design: Wellbore #1

KLX Survey Report

04 December, 2021



Company:	Terra Energy Partners, LLP	Local Co-ordinate Reference:	Well RWF 531-9 - Slot RWF 531-9
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 531-9	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 531-9 - Slot RWF 531-9				
Well Position	+N/-S	0.00 usft	Northing:	1,630,188.50 usft	Latitude:	39.539406
	+E/-W	0.00 usft	Easting:	2,327,343.80 usft	Longitude:	-107.885356
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)
	HDGM2021	11/24/2021	9.12	65.58	51,198.00000000

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	319.49	

Survey Program	Date	12/4/2021			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
389.00	9,845.00	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 @ 389.00' MD / 387.89' TVD										
389.00	7.51	322.01	387.89	20.06	-15.67	25.43	1.93	1.93	0.00	
483.00	10.11	322.45	480.77	31.45	-24.48	39.81	2.77	2.77	0.47	
577.00	13.32	322.45	572.80	46.58	-36.11	58.87	3.41	3.41	0.00	
671.00	16.13	323.33	663.70	65.64	-50.51	82.72	3.00	2.99	0.94	
765.00	19.07	320.96	753.30	88.05	-67.99	111.10	3.22	3.13	-2.52	
859.00	22.19	319.37	841.26	113.45	-89.22	144.21	3.37	3.32	-1.69	
953.00	23.86	317.26	927.77	140.89	-113.69	180.96	1.98	1.78	-2.24	
985.00	24.26	317.00	956.99	150.45	-122.56	194.00	1.29	1.25	-0.81	
1,058.00	24.17	315.86	1,023.56	172.14	-143.20	223.90	0.65	-0.12	-1.56	

Company:	Terra Energy Partners, LLP	Local Co-ordinate Reference:	Well RWF 531-9 - Slot RWF 531-9
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 531-9	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)
1,181.00	24.43	314.10	1,135.67	207.91	-179.00	274.35	0.63	0.21	-1.43
1,274.00	23.55	318.14	1,220.64	235.14	-205.21	312.07	2.00	-0.95	4.34
1,369.00	23.16	315.59	1,307.86	262.62	-230.95	349.69	1.14	-0.41	-2.68
1,463.00	21.97	318.49	1,394.66	288.99	-255.54	385.71	1.73	-1.27	3.09
1,557.00	22.46	320.34	1,481.69	315.98	-278.65	421.25	0.91	0.52	1.97
1,651.00	22.59	319.64	1,568.52	343.56	-301.81	457.26	0.32	0.14	-0.74
1,745.00	22.72	317.79	1,655.26	370.77	-325.69	493.46	0.77	0.14	-1.97
1,839.00	22.50	320.69	1,742.04	398.13	-349.29	529.58	1.21	-0.23	3.09
1,933.00	22.10	321.04	1,829.01	425.80	-371.80	565.24	0.45	-0.43	0.37
2,027.00	21.66	320.16	1,916.24	452.87	-394.03	600.27	0.58	-0.47	-0.94
2,121.00	21.23	320.16	2,003.73	479.25	-416.05	634.63	0.46	-0.46	0.00
2,215.00	21.09	319.37	2,091.39	505.16	-437.96	668.56	0.34	-0.15	-0.84
2,309.00	21.01	323.07	2,179.13	531.46	-459.10	702.29	1.42	-0.09	3.94
2,403.00	22.37	323.59	2,266.47	559.33	-479.85	736.95	1.46	1.45	0.55
2,497.00	21.97	322.63	2,353.52	587.70	-501.14	772.35	0.57	-0.43	-1.02
2,592.00	21.05	322.89	2,441.90	615.43	-522.22	807.13	0.97	-0.97	0.27
2,686.00	22.85	321.22	2,529.08	643.12	-543.83	842.23	2.03	1.91	-1.78
2,780.00	21.88	319.11	2,616.01	670.59	-566.73	877.99	1.34	-1.03	-2.24
2,874.00	23.55	318.41	2,702.72	697.88	-590.66	914.28	1.80	1.78	-0.74
2,966.00	22.98	317.88	2,787.24	724.95	-614.91	950.61	0.66	-0.62	-0.58
3,057.00	22.50	317.79	2,871.17	751.02	-638.52	985.77	0.53	-0.53	-0.10
3,148.00	21.31	317.62	2,955.59	776.13	-661.37	1,019.70	1.31	-1.31	-0.19
3,240.00	20.52	317.62	3,041.53	800.39	-683.50	1,052.52	0.86	-0.86	0.00
3,330.00	21.05	320.16	3,125.68	824.46	-704.49	1,084.45	1.16	0.59	2.82
3,422.00	22.19	322.45	3,211.20	850.92	-725.67	1,118.33	1.54	1.24	2.49
3,513.00	21.14	322.54	3,295.77	877.57	-746.12	1,151.88	1.15	-1.15	0.10
3,603.00	22.19	325.26	3,379.42	904.42	-765.68	1,184.99	1.61	1.17	3.02
3,694.00	21.45	325.44	3,463.90	932.24	-784.91	1,218.64	0.82	-0.81	0.20
3,785.00	22.50	323.59	3,548.29	959.96	-804.68	1,252.56	1.38	1.15	-2.03
3,877.00	21.84	323.07	3,633.48	987.81	-825.41	1,287.20	0.75	-0.72	-0.57
3,967.00	20.79	322.54	3,717.33	1,013.87	-845.19	1,319.85	1.19	-1.17	-0.59
4,059.00	21.31	322.19	3,803.19	1,040.04	-865.37	1,352.86	0.58	0.57	-0.38
4,150.00	20.87	321.22	3,888.09	1,065.74	-885.66	1,385.58	0.62	-0.48	-1.07
4,242.00	21.49	322.63	3,973.88	1,091.90	-906.15	1,418.78	0.87	0.67	1.53
4,334.00	20.43	322.19	4,059.79	1,117.98	-926.22	1,451.65	1.16	-1.15	-0.48
4,426.00	22.41	319.99	4,145.43	1,144.10	-947.34	1,485.23	2.32	2.15	-2.39
4,517.00	21.75	321.13	4,229.76	1,170.52	-969.07	1,519.43	0.86	-0.73	1.25
4,609.00	22.32	321.04	4,315.04	1,197.37	-990.76	1,553.93	0.62	0.62	-0.10
4,699.00	21.84	320.16	4,398.43	1,223.52	-1,012.23	1,587.75	0.65	-0.53	-0.98
4,791.00	20.83	321.04	4,484.13	1,249.38	-1,033.48	1,621.22	1.15	-1.10	0.96
4,883.00	22.81	320.87	4,569.53	1,275.93	-1,055.02	1,655.40	2.15	2.15	-0.18
4,975.00	21.88	320.78	4,654.62	1,303.05	-1,077.11	1,690.37	1.01	-1.01	-0.10
5,067.00	21.58	319.81	4,740.09	1,329.25	-1,098.87	1,724.42	0.51	-0.33	-1.05

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Site:	Sec 9, T6S, R94W	MD Reference:	KB=30' @ 6399.40usft (H&P #329)
Well:	RWF 531-9	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)
5,159.00	21.01	320.16	4,825.81	1,354.84	-1,120.35	1,757.83	0.63	-0.62	0.38
5,252.00	21.97	320.34	4,912.34	1,381.03	-1,142.14	1,791.90	1.03	1.03	0.19
5,345.00	20.87	319.37	4,998.91	1,407.00	-1,164.03	1,825.86	1.24	-1.18	-1.04
5,436.00	22.50	319.99	5,083.47	1,432.64	-1,185.78	1,859.48	1.81	1.79	0.68
5,528.00	22.06	319.46	5,168.60	1,459.25	-1,208.33	1,894.36	0.53	-0.48	-0.58
5,619.00	21.53	319.29	5,253.10	1,484.90	-1,230.33	1,928.15	0.59	-0.58	-0.19
5,711.00	20.39	318.67	5,339.01	1,509.73	-1,251.92	1,961.06	1.26	-1.24	-0.67
5,802.00	19.86	321.04	5,424.45	1,533.65	-1,272.11	1,992.36	1.07	-0.58	2.60
5,894.00	18.76	319.46	5,511.28	1,557.05	-1,291.55	2,022.78	1.32	-1.20	-1.72
5,986.00	18.11	319.37	5,598.56	1,579.14	-1,310.48	2,051.87	0.71	-0.71	-0.10
6,078.00	16.25	321.48	5,686.45	1,600.07	-1,327.81	2,079.04	2.13	-2.02	2.29
6,170.00	15.38	320.25	5,774.96	1,619.52	-1,343.63	2,104.10	1.01	-0.95	-1.34
6,262.00	13.54	318.67	5,864.05	1,636.99	-1,358.54	2,127.07	2.05	-2.00	-1.72
6,354.00	12.30	318.49	5,953.72	1,652.41	-1,372.15	2,147.64	1.35	-1.35	-0.20
6,446.00	11.12	324.30	6,043.80	1,666.96	-1,383.82	2,166.28	1.81	-1.28	6.32
6,538.00	9.27	332.56	6,134.35	1,680.74	-1,392.41	2,182.34	2.56	-2.01	8.98
6,629.00	7.21	337.30	6,224.41	1,692.51	-1,398.00	2,194.92	2.38	-2.26	5.21
6,721.00	6.06	337.66	6,315.79	1,702.33	-1,402.07	2,205.03	1.25	-1.25	0.39
6,813.00	5.71	333.61	6,407.31	1,710.92	-1,405.95	2,214.08	0.59	-0.38	-4.40
6,905.00	4.92	332.38	6,498.91	1,718.52	-1,409.81	2,222.36	0.87	-0.86	-1.34
6,997.00	4.31	331.06	6,590.61	1,725.04	-1,413.31	2,229.60	0.67	-0.66	-1.43
7,088.00	3.78	328.87	6,681.38	1,730.60	-1,416.52	2,235.91	0.61	-0.58	-2.41
7,179.00	3.08	324.65	6,772.22	1,735.16	-1,419.49	2,241.30	0.82	-0.77	-4.64
7,270.00	2.64	320.08	6,863.11	1,738.76	-1,422.24	2,245.83	0.54	-0.48	-5.02
7,360.00	2.20	311.20	6,953.03	1,741.49	-1,424.87	2,249.61	0.64	-0.49	-9.87
7,452.00	1.45	297.93	7,044.98	1,743.20	-1,427.23	2,252.44	0.93	-0.82	-14.42
7,542.00	1.49	298.54	7,134.95	1,744.29	-1,429.27	2,254.59	0.05	0.04	0.68
7,633.00	0.97	274.37	7,225.93	1,744.92	-1,431.07	2,256.24	0.80	-0.57	-26.56
7,722.00	0.62	249.06	7,314.92	1,744.80	-1,432.27	2,256.94	0.55	-0.39	-28.44
7,814.00	0.22	190.17	7,406.92	1,744.45	-1,432.77	2,256.99	0.59	-0.43	-64.01
7,904.00	0.44	192.81	7,496.92	1,743.94	-1,432.88	2,256.67	0.24	0.24	2.93
7,994.00	0.48	184.81	7,586.91	1,743.23	-1,432.99	2,256.20	0.08	0.04	-8.89
8,086.00	0.26	228.76	7,678.91	1,742.71	-1,433.17	2,255.93	0.37	-0.24	47.77
8,177.00	0.70	200.99	7,769.91	1,742.05	-1,433.53	2,255.66	0.53	0.48	-30.52
8,269.00	0.88	210.04	7,861.90	1,740.92	-1,434.08	2,255.16	0.24	0.20	9.84
8,360.00	1.01	192.28	7,952.89	1,739.53	-1,434.60	2,254.44	0.35	0.14	-19.52
8,450.00	0.79	204.85	8,042.88	1,738.19	-1,435.03	2,253.70	0.33	-0.24	13.97
8,540.00	1.40	192.28	8,132.86	1,736.55	-1,435.53	2,252.78	0.72	0.68	-13.97
8,630.00	1.54	202.74	8,222.83	1,734.36	-1,436.23	2,251.57	0.34	0.16	11.62
8,720.00	2.15	203.80	8,312.78	1,731.70	-1,437.38	2,250.29	0.68	0.68	1.18
8,809.00	2.29	204.32	8,401.72	1,728.56	-1,438.78	2,248.81	0.16	0.16	0.58
8,900.00	2.77	210.21	8,492.63	1,725.00	-1,440.64	2,247.31	0.60	0.53	6.47
8,992.00	2.24	185.69	8,584.54	1,721.29	-1,441.94	2,245.34	1.29	-0.58	-26.65

Company:	Terra Energy Partners, LLP	Local Co-ordinate Reference:	Well RWF 531-9 - Slot RWF 531-9
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 531-9	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)
9,082.00	2.07	177.96	8,674.48	1,717.91	-1,442.05	2,242.85	0.37	-0.19	-8.59
9,172.00	2.33	194.83	8,764.41	1,714.52	-1,442.46	2,240.53	0.77	0.29	18.74
9,261.00	2.37	187.19	8,853.34	1,710.95	-1,443.16	2,238.27	0.35	0.04	-8.58
9,353.00	1.98	165.83	8,945.27	1,707.52	-1,443.01	2,235.56	0.97	-0.42	-23.22
9,444.00	2.29	156.51	9,036.21	1,704.33	-1,441.90	2,232.41	0.51	0.34	-10.24
9,535.00	1.85	183.93	9,127.15	1,701.19	-1,441.27	2,229.63	1.18	-0.48	30.13
9,628.00	2.11	193.16	9,220.10	1,698.03	-1,441.77	2,227.54	0.44	0.28	9.92
9,716.00	1.98	195.27	9,308.04	1,694.98	-1,442.53	2,225.73	0.17	-0.15	2.40
9,788.00	2.33	202.83	9,379.99	1,692.44	-1,443.43	2,224.37	0.63	0.49	10.50
TD @ 9845.00' MD / 9436.94' TVD									
9,845.00	2.33	202.83	9,436.94	1,690.30	-1,444.33	2,223.33	0.00	0.00	0.00

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
389.00	387.89	20.06	-15.67	First MWD Survey @ 389.00' MD / 387.89' TVD
9,845.00	9,436.94	1,690.30	-1,444.33	TD @ 9845.00' MD / 9436.94' TVD

Checked By: _____	Approved By: _____	Date: _____
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