

Sec 9, T6S, R94W
RWF 32-9
Q220151 & RM-220147
Plan 4

Company Name: Terra Energy Partners, LLP
RWF 32-9
Garfield County, CO (Nad 83)
Rig: KB=30' @ 6399.40usft (H&P #329)
Created by: Chase Chambers
Date: 5:19, February 16 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



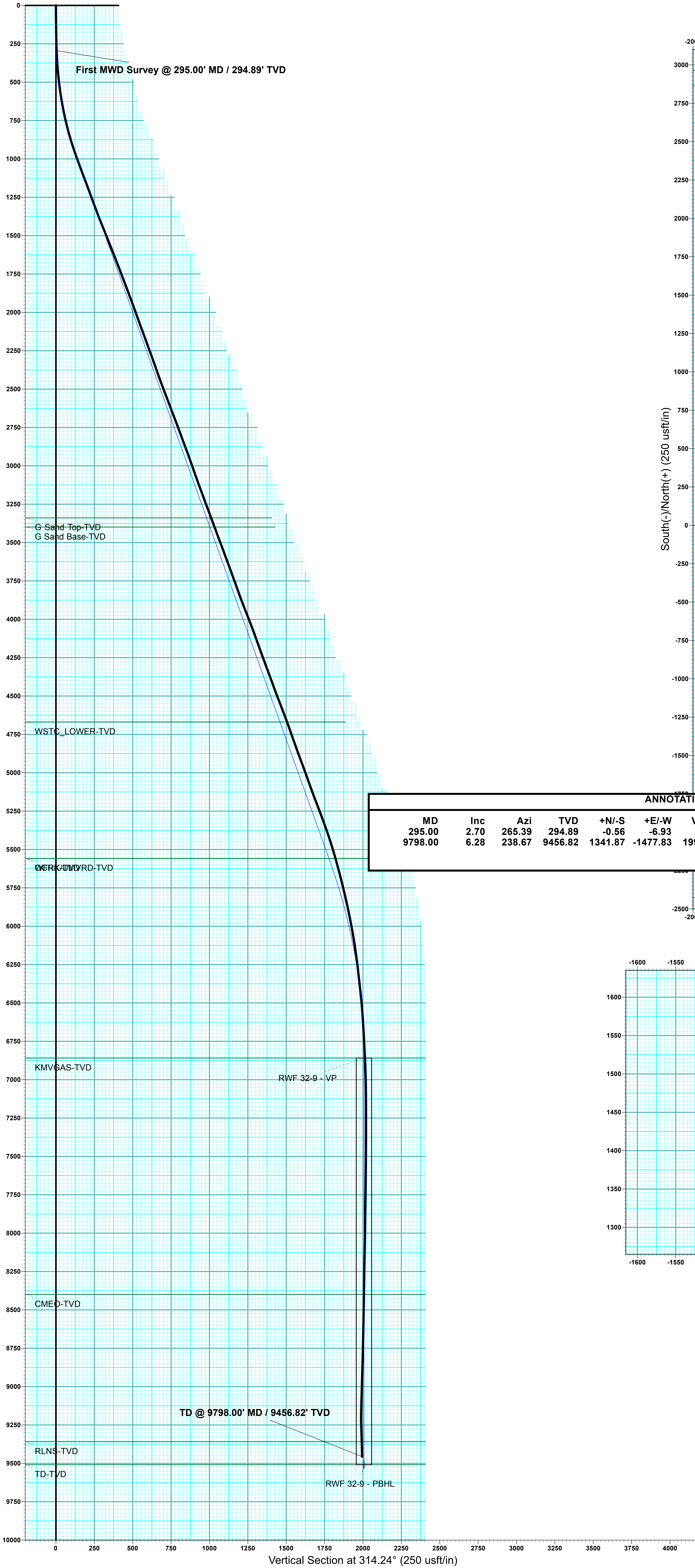
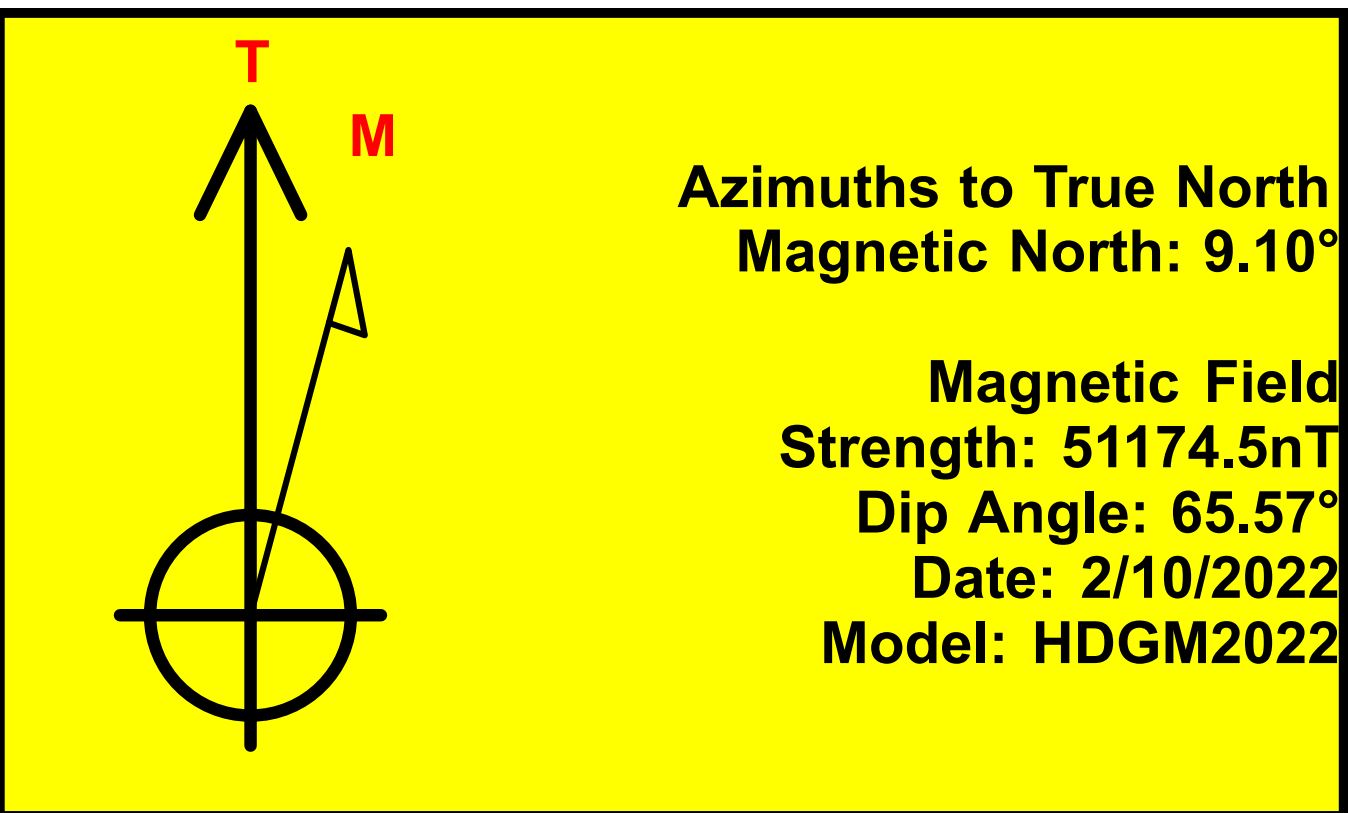
WELL DETAILS: RWF 32-9						
Ground Elevation:			6369.40			
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	RWF 32-9
0.00	0.00	1630178.60	2327345.60	39.539379	-107.885349	

DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude
RWF 32-9 - VP	6859.00	1400.13	-1437.85	1631616.00	2325945.00	39.543222
RWF 32-9 - PBHL	9509.00	1400.13	-1437.85	1631616.00	2325945.00	39.543222

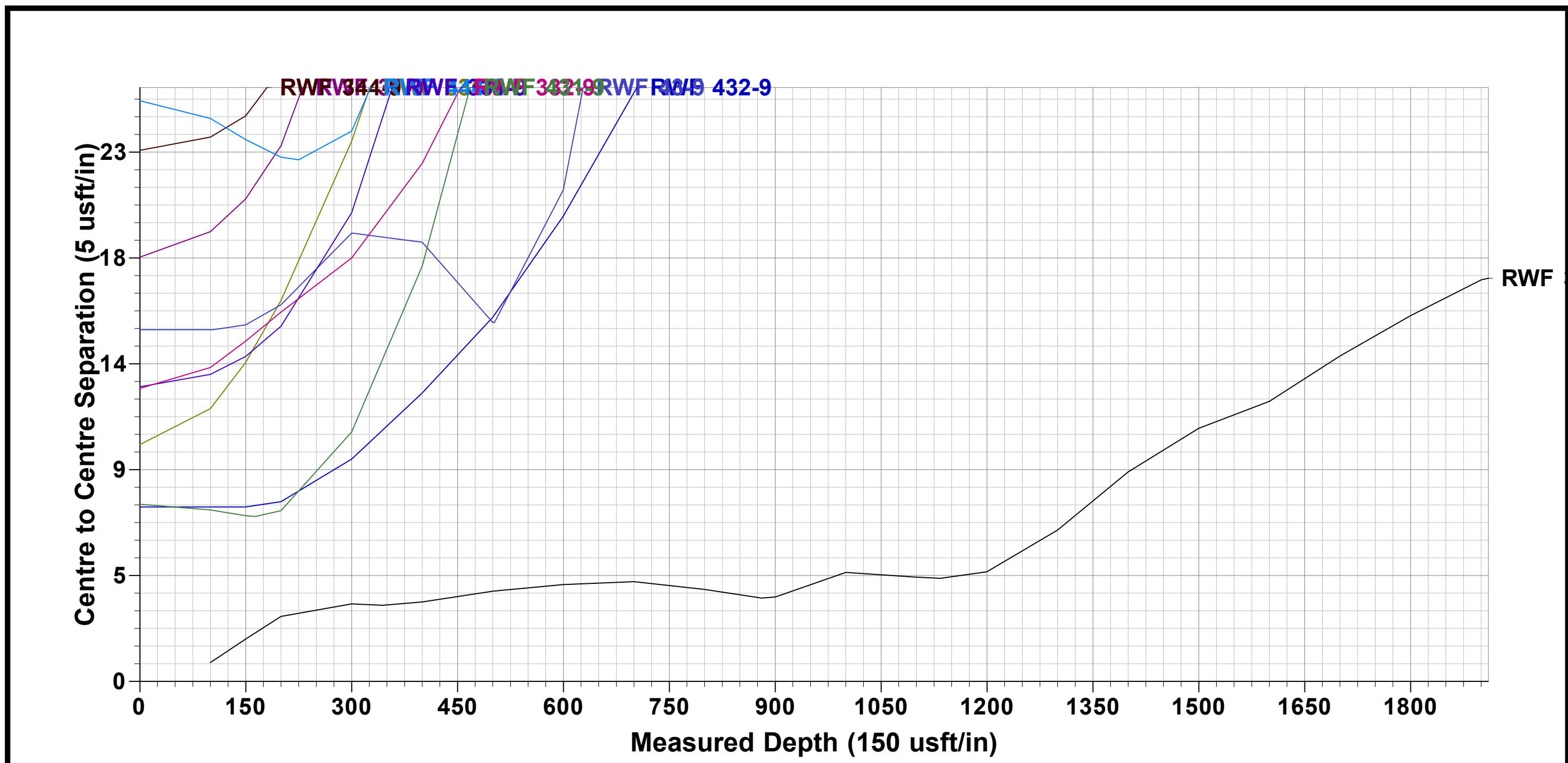
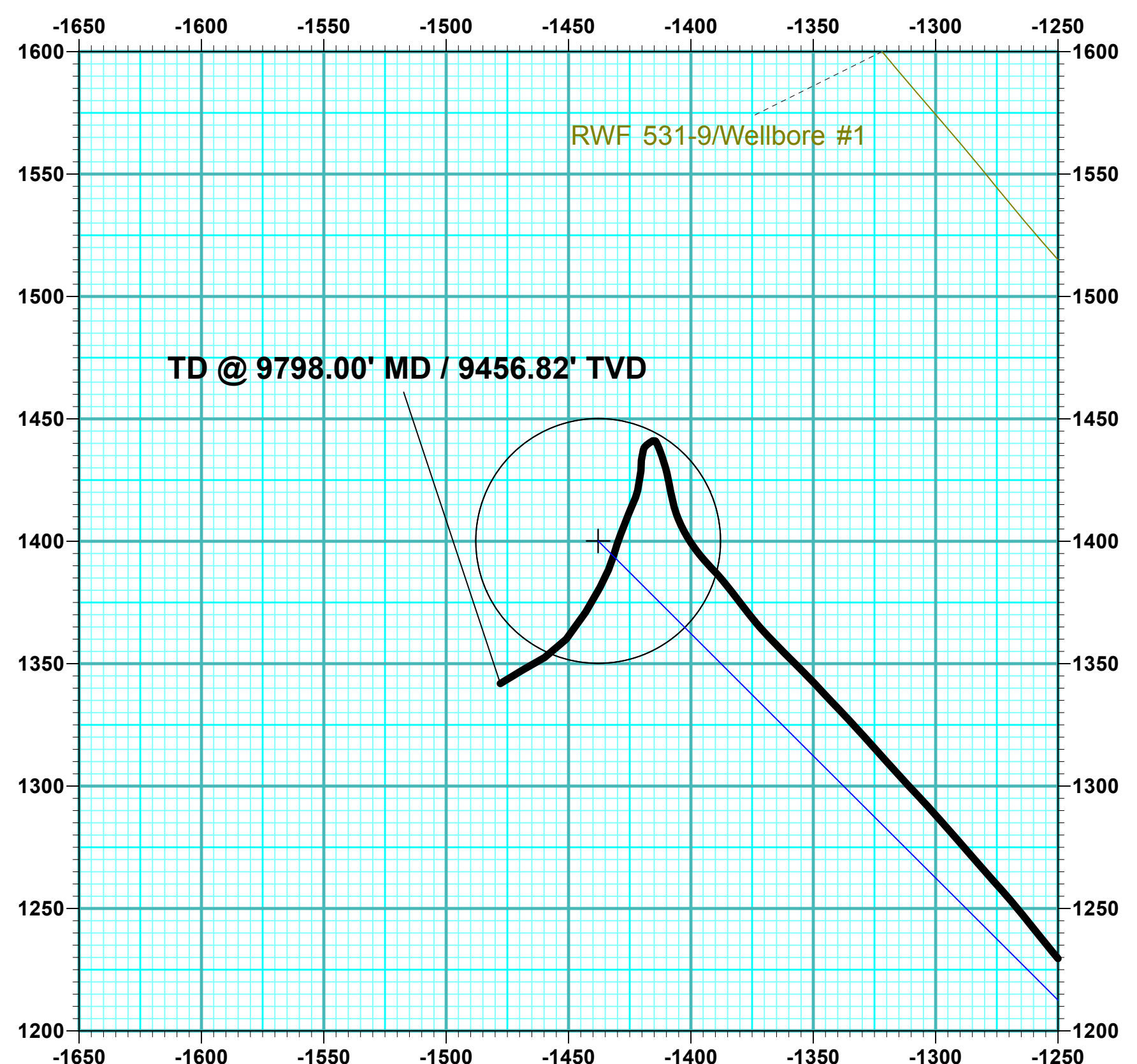
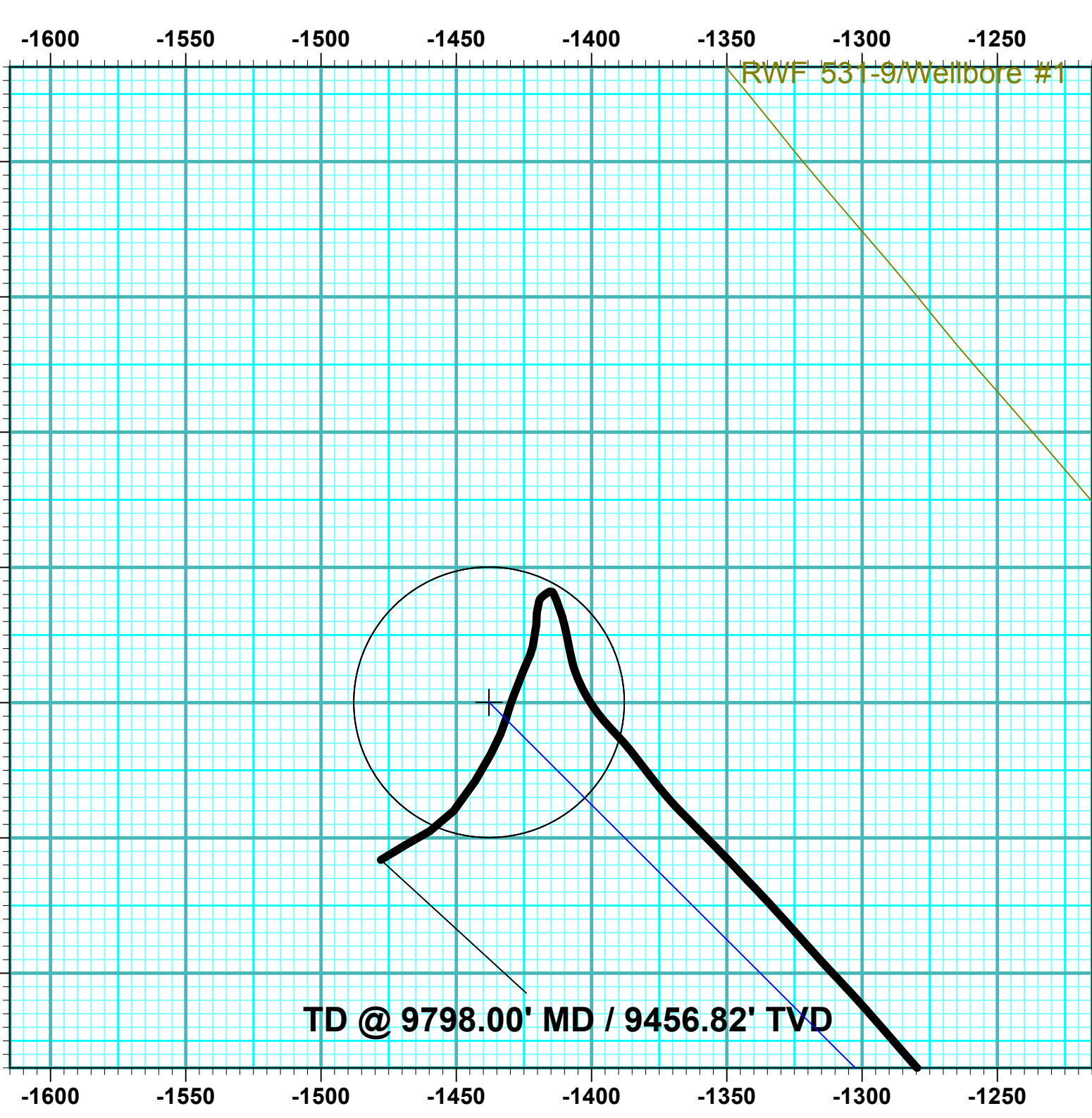
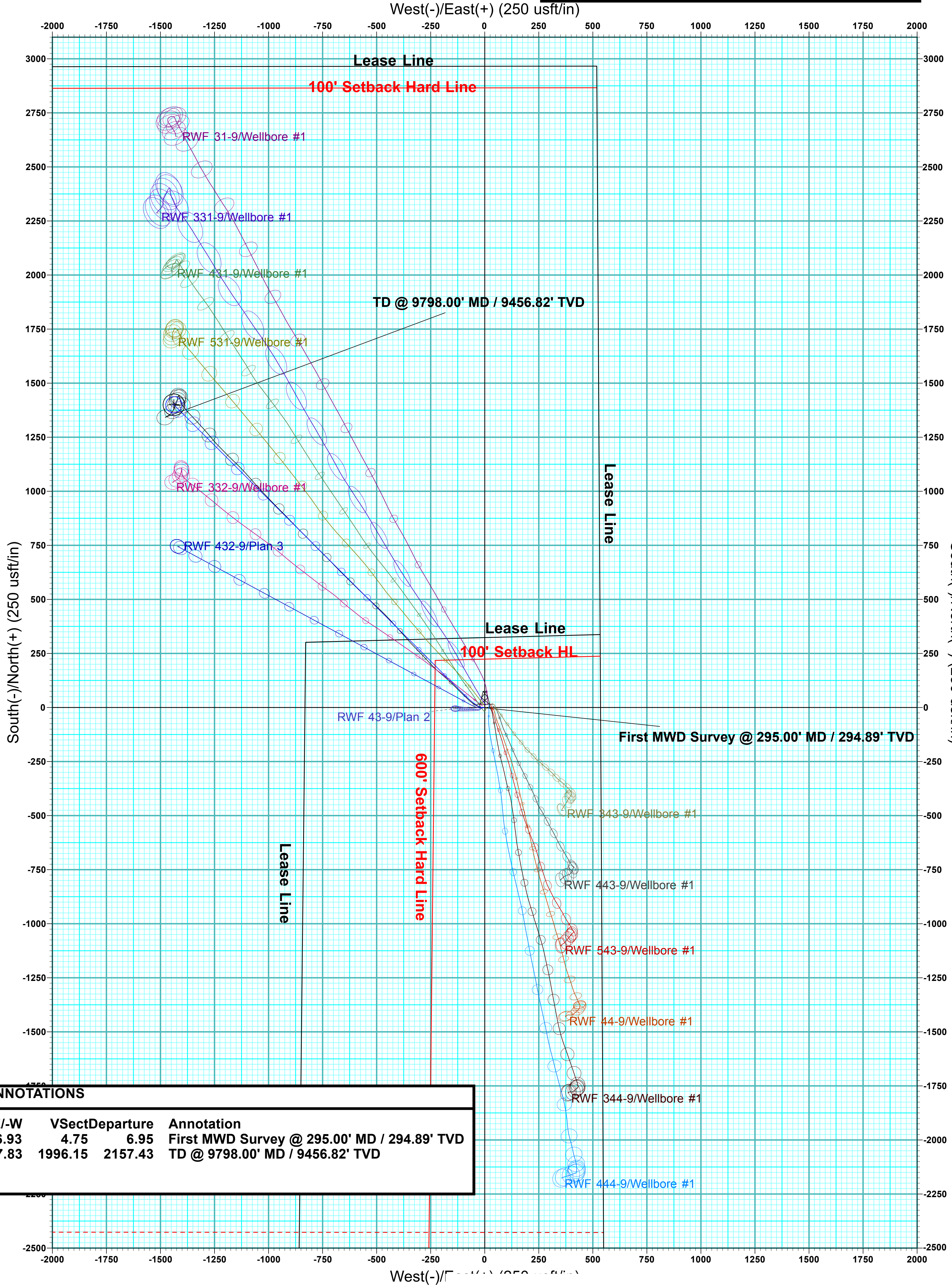
DESIGN ANNOTATIONS							
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSectDeparture	Annotation
150.00	0.00	0.00	150.00	0.00	0.00	0.00	Start Build 2.00
400.00	5.00	270.00	399.68	0.00	-10.90	7.81	Start DLS 3.00 TFO 56.79
952.92	19.76	314.95	939.04	66.50	-101.79	119.32	Start 4918.14 hold at 952.92 MD
5871.06	19.76	314.95	5567.55	1241.22	-1278.65	1782.01	Start Drop -1.50
7188.47	0.00	0.00	6859.00	1400.13	-1437.85	2006.94	Start 2650.00 hold at 7188.47 MD
9838.47	0.00	0.00	9509.00	1400.13	-1437.85	2006.94	TD at 9838.47

SLOTS				
Slot Name	+N/-S	+E/-W	Northing	Easting
RWF 31-9	12.84	12.67	1630191.10	2327358.60
RWF 32-9	0.00	0.00	1630178.60	2327345.60
RWF 331-9	11.34	5.30	1630189.80	2327351.20
RWF 332-9	8.26	-9.32	1630187.10	2327336.50
RWF 343-9	17.52	34.65	1630195.20	2327380.70
RWF 344-9	4.68	22.08	1630182.70	2327367.80
RWF 431-9	1.59	7.36	1630180.00	2327353.00
RWF 432-9	-1.49	-7.26	1630177.30	2327338.30
RWF 43-9	-3.09	-14.62	1630175.90	2327330.90
RWF 443-9	7.67	36.71	1630185.30	2327382.50
RWF 444-9	14.43	20.03	1630192.50	2327366.00
RWF 44-9	6.17	29.35	1630184.00	2327375.10
RWF 531-9	9.85	-2.06	1630188.50	2327343.80
RWF 543-9	15.92	27.39	1630193.80	2327373.40

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3339.00	3503.05	G Sand Top-TVD
3399.00	3566.81	G Sand Base-TVD
4669.00	4916.28	WSTC_LOWER-TVD
5559.00	5861.97	WFRK/UMVRD-TVD
5559.00	5861.97	KMV GAS-TVD
6859.00	7108.47	CMEQ-TVD
8399.00	8728.47	RLNS-TVD
9359.00	9688.47	TD-TVD
9509.00	9838.47	



ANNOTATIONS							
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSectDeparture	Annotation
295.00	2.70	265.39	294.89	-0.56	-6.93	4.75	First MWD Survey @ 295.00' MD / 294.89' TVD
9798.00	6.28	238.67	9456.82	1341.87	-1477.83	1996.15	TD @ 9798.00' MD / 9456.82' TVD





Terra Energy Partners, LLP

Garfield County, CO (Nad 83)

Sec 9, T6S, R94W

RWF 32-9 - Slot RWF 32-9

Wellbore #1

Design: Wellbore #1

KLX Survey Report

16 February, 2022



Company:	Terra Energy Partners, LLP	Local Co-ordinate Reference:	Well RWF 32-9 - Slot RWF 32-9
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 32-9	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 32-9 - Slot RWF 32-9					
Well Position	+N/-S	0.00 usft	Northing:	1,630,178.60 usft	Latitude:	39.539379
	+E/-W	0.00 usft	Easting:	2,327,345.60 usft	Longitude:	-107.885349
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	2/10/2022	9.10	65.57	51,174.50000000

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	312.24	

Survey Program	Date	2/16/2022			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
295.00	9,798.00	KLX MWD Surveys PVA (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 / 294.89' TVD									
295.00	2.70	265.39	294.89	-0.56	-6.93	4.75	0.92	0.92	0.00
389.00	5.14	278.75	388.67	-0.10	-13.30	9.78	2.75	2.60	14.21
483.00	6.90	288.15	482.15	2.30	-22.82	18.45	2.14	1.87	10.00
576.00	8.92	294.39	574.26	7.02	-34.70	30.41	2.36	2.17	6.71
669.00	11.12	303.27	665.84	14.92	-48.77	46.14	2.88	2.37	9.55
764.00	13.27	309.51	758.69	26.88	-64.84	66.08	2.65	2.26	6.57
858.00	16.04	314.61	849.63	42.87	-82.42	89.84	3.25	2.95	5.43
952.00	18.81	313.55	939.31	62.44	-102.65	117.97	2.97	2.95	-1.13
1,046.00	20.21	315.05	1,027.91	84.37	-125.10	149.34	1.58	1.49	1.60

Company:	Terra Energy Partners, LLP	Local Co-ordinate Reference:	Well RWF 32-9 - Slot RWF 32-9
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 32-9	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)
1,172.00	20.74	313.55	1,145.95	115.15	-156.65	193.38	0.59	0.42	-1.19
1,266.00	20.17	311.53	1,234.02	137.36	-180.85	226.22	0.97	-0.61	-2.15
1,360.00	20.39	310.65	1,322.20	158.77	-205.40	258.80	0.40	0.23	-0.94
1,455.00	21.84	313.55	1,410.82	181.73	-230.77	293.01	1.88	1.53	3.05
1,549.00	21.93	317.42	1,498.05	206.70	-255.32	327.97	1.54	0.10	4.12
1,643.00	21.84	316.81	1,585.28	232.37	-279.16	362.88	0.26	-0.10	-0.65
1,737.00	21.09	316.37	1,672.75	257.36	-302.80	397.18	0.82	-0.80	-0.47
1,831.00	20.87	314.70	1,760.52	281.38	-326.37	430.78	0.68	-0.23	-1.78
1,925.00	20.70	318.65	1,848.41	305.63	-349.25	464.02	1.50	-0.18	4.20
2,019.00	20.26	318.56	1,936.47	330.31	-370.99	496.70	0.47	-0.47	-0.10
2,113.00	19.56	317.95	2,024.85	354.19	-392.31	528.54	0.78	-0.74	-0.65
2,207.00	20.61	318.48	2,113.13	378.26	-413.81	560.64	1.13	1.12	0.56
2,301.00	19.78	317.60	2,201.35	402.40	-435.50	592.92	0.94	-0.88	-0.94
2,395.00	20.08	315.66	2,289.72	425.68	-457.51	624.87	0.77	0.32	-2.06
2,489.00	19.20	313.73	2,378.26	447.91	-479.96	656.43	1.16	-0.94	-2.05
2,584.00	20.43	312.76	2,467.63	469.96	-503.42	688.63	1.34	1.29	-1.02
2,678.00	21.14	313.99	2,555.51	492.88	-527.66	721.97	0.89	0.76	1.31
2,772.00	20.61	312.50	2,643.34	515.83	-552.05	755.46	0.80	-0.56	-1.59
2,866.00	20.79	314.26	2,731.27	538.65	-576.20	788.68	0.69	0.19	1.87
2,956.00	19.95	314.78	2,815.65	560.61	-598.54	819.98	0.95	-0.93	0.58
3,047.00	20.70	314.61	2,900.98	582.84	-621.01	851.56	0.83	0.82	-0.19
3,139.00	19.29	315.14	2,987.43	605.03	-643.30	882.98	1.55	-1.53	0.58
3,230.00	19.29	313.82	3,073.32	626.09	-664.75	913.02	0.48	0.00	-1.45
3,319.00	20.65	316.98	3,156.97	647.75	-686.06	943.36	1.95	1.53	3.55
3,411.00	20.00	315.93	3,243.24	670.91	-708.07	975.22	0.81	-0.71	-1.14
3,502.00	20.79	315.14	3,328.54	693.54	-730.29	1,006.88	0.92	0.87	-0.87
3,591.00	19.91	313.64	3,411.98	715.20	-752.40	1,037.81	1.15	-0.99	-1.69
3,681.00	21.09	315.84	3,496.28	737.39	-774.77	1,069.29	1.57	1.31	2.44
3,772.00	19.69	316.01	3,581.58	760.17	-796.83	1,100.93	1.54	-1.54	0.19
3,862.00	20.70	315.31	3,666.05	782.38	-818.54	1,131.94	1.15	1.12	-0.78
3,952.00	19.51	314.17	3,750.56	804.16	-840.51	1,162.85	1.39	-1.32	-1.27
4,043.00	19.78	316.10	3,836.26	825.85	-862.09	1,193.40	0.77	0.30	2.12
4,134.00	21.84	315.84	3,921.32	849.09	-884.56	1,225.66	2.27	2.26	-0.29
4,226.00	20.96	316.19	4,006.98	873.24	-907.87	1,259.15	0.97	-0.96	0.38
4,318.00	20.26	315.84	4,093.09	896.54	-930.36	1,291.47	0.77	-0.76	-0.38
4,409.00	19.42	313.90	4,178.69	918.33	-952.24	1,322.32	1.17	-0.92	-2.13
4,499.00	20.43	315.93	4,263.30	940.00	-973.95	1,352.95	1.36	1.12	2.26
4,591.00	20.52	317.24	4,349.49	963.37	-996.06	1,385.03	0.51	0.10	1.42
4,681.00	19.60	315.57	4,434.03	985.73	-1,017.34	1,415.82	1.20	-1.02	-1.86
4,773.00	21.45	317.77	4,520.19	1,009.21	-1,039.45	1,447.97	2.18	2.01	2.39
4,864.00	20.74	317.86	4,605.09	1,033.48	-1,061.44	1,480.57	0.78	-0.78	0.10
4,956.00	20.13	318.91	4,691.30	1,057.49	-1,082.78	1,512.50	0.77	-0.66	1.14
5,047.00	19.16	318.30	4,777.00	1,080.44	-1,103.00	1,542.91	1.09	-1.07	-0.67

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Site:	Sec 9, T6S, R94W	MD Reference:	KB=30' @ 6399.40usft (H&P #329)
Well:	RWF 32-9	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)
5,139.00	20.04	315.40	4,863.67	1,102.94	-1,124.12	1,573.66	1.43	0.96	-3.15
5,230.00	20.57	314.52	4,949.02	1,125.25	-1,146.46	1,605.20	0.67	0.58	-0.97
5,321.00	19.51	313.82	5,034.51	1,146.98	-1,168.83	1,636.37	1.19	-1.16	-0.77
5,412.00	20.04	314.70	5,120.14	1,168.47	-1,190.87	1,667.14	0.67	0.58	0.97
5,503.00	21.27	316.63	5,205.29	1,191.44	-1,213.29	1,699.17	1.54	1.35	2.12
5,594.00	20.17	314.52	5,290.40	1,214.44	-1,235.81	1,731.31	1.46	-1.21	-2.32
5,686.00	19.82	321.90	5,376.87	1,237.84	-1,256.75	1,762.54	2.77	-0.38	8.02
5,778.00	17.36	318.30	5,464.07	1,260.36	-1,275.51	1,791.57	2.95	-2.67	-3.91
5,868.00	15.86	319.18	5,550.31	1,279.69	-1,292.48	1,817.13	1.69	-1.67	0.98
5,960.00	14.72	316.72	5,639.05	1,297.72	-1,308.71	1,841.26	1.43	-1.24	-2.67
6,052.00	14.11	318.48	5,728.16	1,314.62	-1,324.16	1,864.06	0.82	-0.66	1.91
6,143.00	12.66	316.54	5,816.68	1,330.17	-1,338.37	1,885.03	1.67	-1.59	-2.13
6,235.00	12.00	316.28	5,906.56	1,344.40	-1,351.92	1,904.63	0.72	-0.72	-0.28
6,327.00	10.77	314.52	5,996.75	1,357.34	-1,364.66	1,922.76	1.39	-1.34	-1.91
6,419.00	9.23	321.81	6,087.35	1,369.17	-1,375.35	1,938.62	2.16	-1.67	7.92
6,511.00	8.13	322.43	6,178.30	1,380.12	-1,383.88	1,952.30	1.20	-1.20	0.67
6,603.00	6.42	315.57	6,269.55	1,388.95	-1,391.44	1,963.84	2.08	-1.86	-7.46
6,694.00	6.64	323.40	6,359.97	1,396.81	-1,398.14	1,974.08	1.01	0.24	8.60
6,786.00	6.46	333.94	6,451.37	1,405.73	-1,403.59	1,984.11	1.32	-0.20	11.46
6,878.00	5.32	345.63	6,542.89	1,414.51	-1,406.92	1,992.48	1.79	-1.24	12.71
6,970.00	4.17	349.68	6,634.57	1,421.93	-1,408.58	1,998.70	1.30	-1.25	4.40
7,062.00	3.56	347.04	6,726.36	1,428.01	-1,409.82	2,003.70	0.69	-0.66	-2.87
7,154.00	3.16	341.33	6,818.20	1,433.19	-1,411.27	2,008.26	0.57	-0.43	-6.21
7,246.00	2.59	338.78	6,910.08	1,437.53	-1,412.83	2,012.33	0.63	-0.62	-2.77
7,338.00	1.41	330.43	7,002.03	1,440.45	-1,414.14	2,015.27	1.32	-1.28	-9.08
7,430.00	1.10	246.14	7,094.01	1,441.08	-1,415.51	2,016.70	1.85	-0.34	-91.62
7,521.00	0.92	228.74	7,185.00	1,440.25	-1,416.86	2,017.14	0.39	-0.20	-19.12
7,613.00	1.01	237.26	7,276.98	1,439.32	-1,418.10	2,017.43	0.18	0.10	9.26
7,705.00	0.75	205.10	7,368.97	1,438.34	-1,419.03	2,017.46	0.60	-0.28	-34.96
7,796.00	0.75	193.58	7,459.97	1,437.22	-1,419.43	2,017.00	0.17	0.00	-12.66
7,887.00	0.79	186.46	7,550.96	1,436.02	-1,419.64	2,016.35	0.11	0.04	-7.82
7,978.00	0.92	195.43	7,641.95	1,434.69	-1,419.90	2,015.65	0.20	0.14	9.86
8,069.00	1.19	187.61	7,732.93	1,433.05	-1,420.22	2,014.79	0.34	0.30	-8.59
8,159.00	1.54	177.67	7,822.91	1,430.91	-1,420.30	2,013.41	0.47	0.39	-11.04
8,250.00	1.10	188.75	7,913.88	1,428.83	-1,420.38	2,012.07	0.56	-0.48	12.18
8,341.00	1.45	190.42	8,004.86	1,426.83	-1,420.72	2,010.98	0.39	0.38	1.84
8,432.00	2.11	188.13	8,095.82	1,424.04	-1,421.17	2,009.43	0.73	0.73	-2.52
8,523.00	2.07	191.47	8,186.76	1,420.77	-1,421.73	2,007.65	0.14	-0.04	3.67
8,613.00	1.93	202.81	8,276.70	1,417.78	-1,422.64	2,006.32	0.47	-0.16	12.60
8,703.00	2.24	202.72	8,366.64	1,414.76	-1,423.91	2,005.23	0.34	0.34	-0.10
8,793.00	2.72	202.99	8,456.56	1,411.18	-1,425.42	2,003.93	0.53	0.53	0.30
8,885.00	2.81	200.17	8,548.45	1,407.05	-1,427.05	2,002.37	0.18	0.10	-3.07
8,974.00	2.81	202.11	8,637.34	1,402.98	-1,428.62	2,000.80	0.11	0.00	2.18

Company:	Terra Energy Partners, LLP	Local Co-ordinate Reference:	Well RWF 32-9 - Slot RWF 32-9
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 32-9	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)	
9,064.00	2.81	198.24	8,727.23	1,398.84	-1,430.14	1,999.14	0.21	0.00	-4.30	
9,154.00	3.52	195.87	8,817.10	1,394.09	-1,431.59	1,997.02	0.80	0.79	-2.63	
9,246.00	4.04	202.72	8,908.90	1,388.38	-1,433.61	1,994.68	0.75	0.57	7.45	
9,338.00	5.89	208.17	9,000.55	1,381.23	-1,437.09	1,992.45	2.07	2.01	5.92	
9,429.00	8.92	211.51	9,090.78	1,371.10	-1,442.99	1,990.00	3.36	3.33	3.67	
9,521.00	8.17	220.21	9,181.76	1,360.02	-1,450.94	1,988.44	1.62	-0.82	9.46	
9,611.00	6.81	241.22	9,271.01	1,352.57	-1,459.74	1,989.95	3.37	-1.51	23.34	
9,700.00	6.42	238.93	9,359.41	1,347.46	-1,468.63	1,993.09	0.53	-0.44	-2.57	
9,735.00	6.28	238.67	9,394.20	1,345.46	-1,471.94	1,994.20	0.41	-0.40	-0.74	
TD @ 9798.00' MD / 9456.82' TVD										
9,798.00	6.28	238.67	9,456.82	1,341.87	-1,477.83	1,996.15	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	294.89	-0.56	-6.93	First MWD Survey @ 295.00' MD / 294.89' TVD	
9,798.00	9,456.82	1,341.87	-1,477.83	TD @ 9798.00' MD / 9456.82' TVD	

Checked By: _____	Approved By: _____	Date: _____
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