

Sec 9, T6S, R94W
RWF 444-9
Q211036 & RM-210906
Plan 3

Company Name: Terra Energy Partners, LLP
RWF 444-9
Garfield County, CO (Nad 83)
Rig: KB=30' @ 6399.40usft (H&P #329)
Created by: Chase Chambers
Date: 3:21, December 30 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



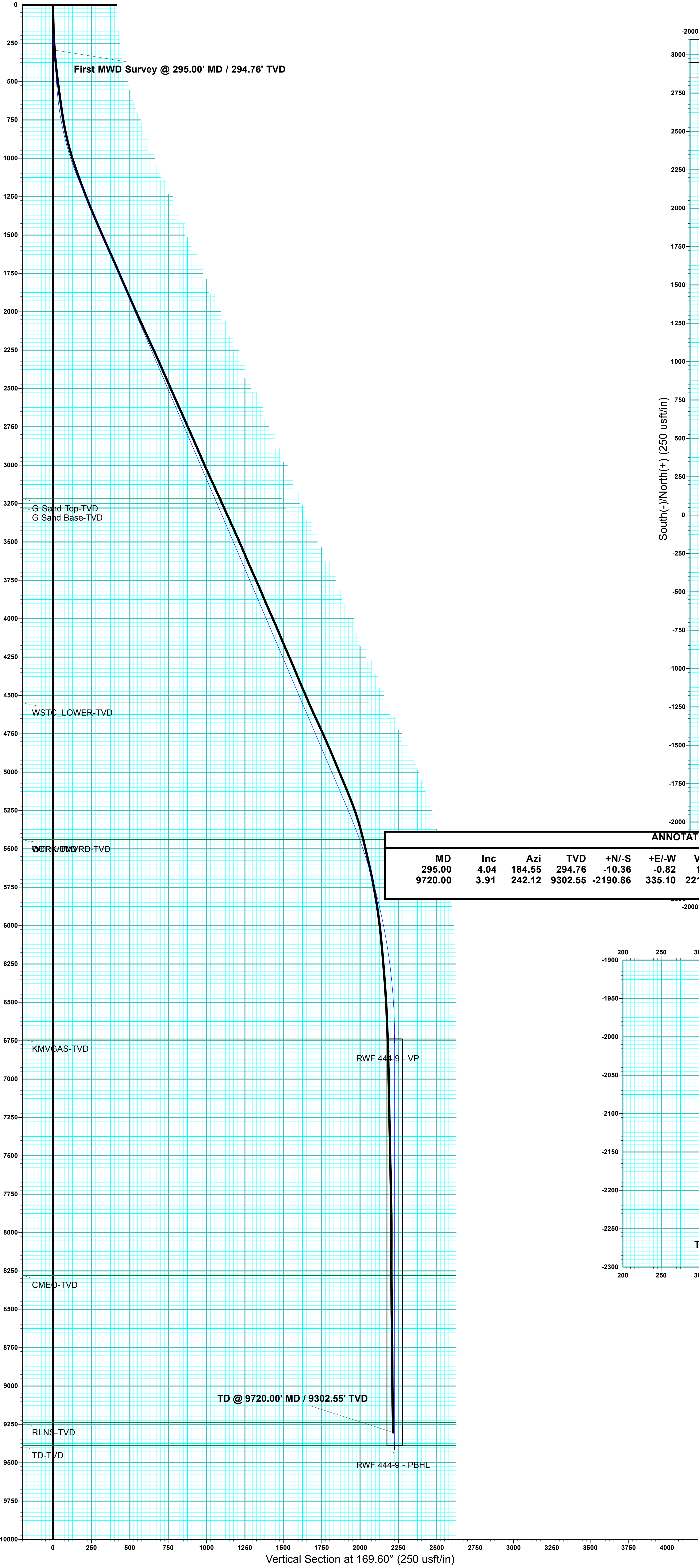
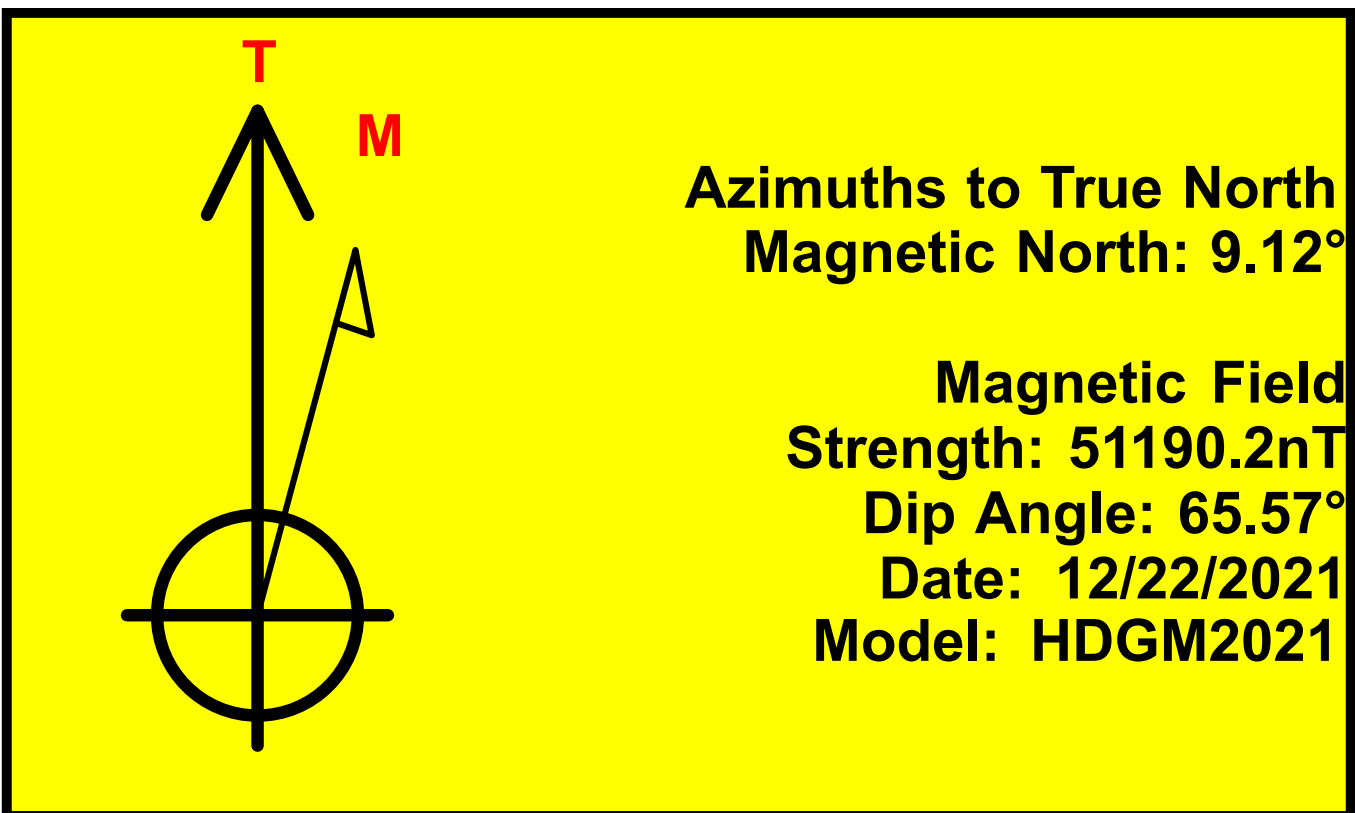
WELL DETAILS: RWF 444-9						
Ground Elevation: 6369.40						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	RWF 444-9
0.00	0.00	1630192.50	2327366.00	39.539418	-107.885278	

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
RWF 444-9 - VP	6739.00	-2188.71	401.60	1627994.00	2327710.00	39.533409	-107.883854
RWF 444-9 - PBHL	9389.00	-2188.71	401.60	1627994.00	2327710.00	39.533409	-107.883854

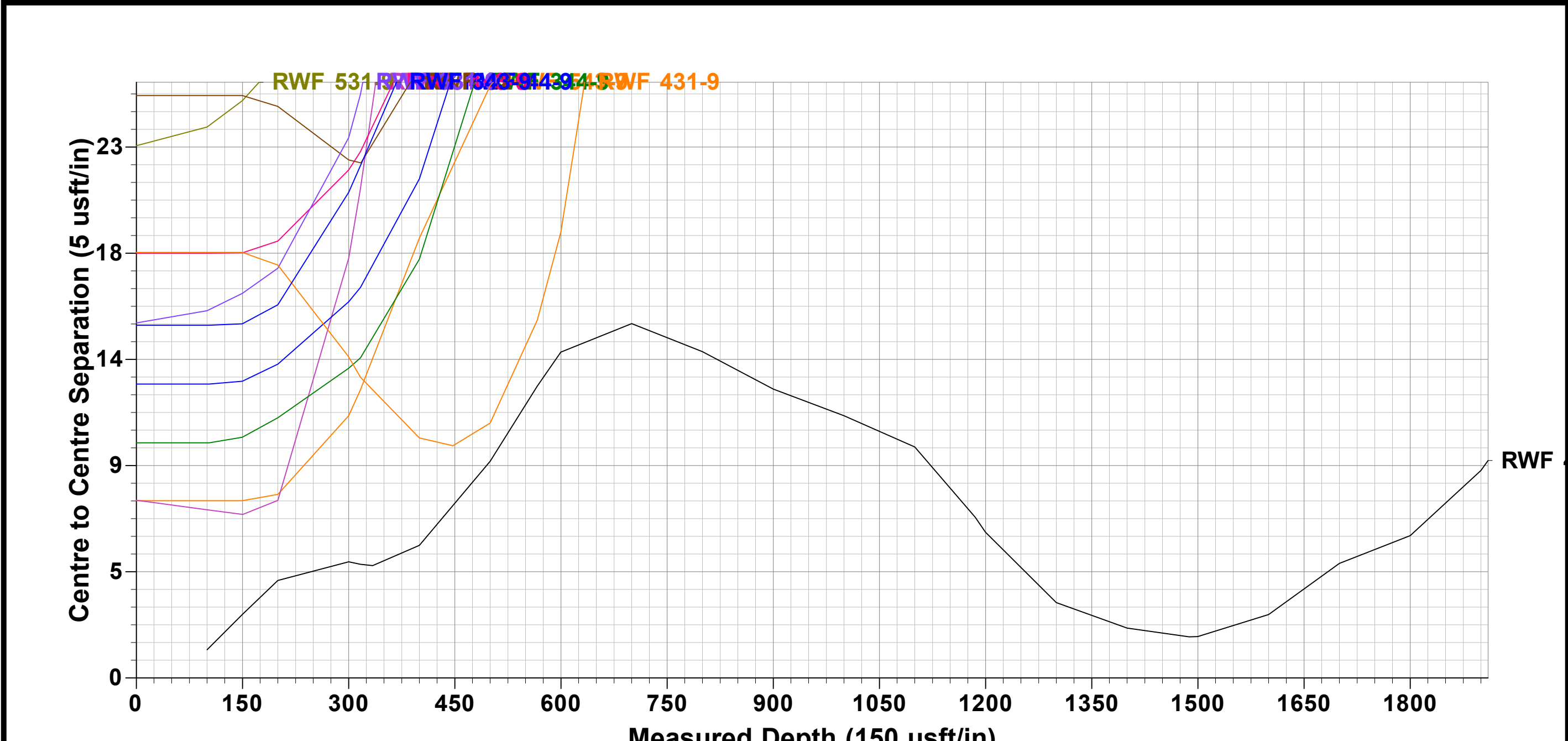
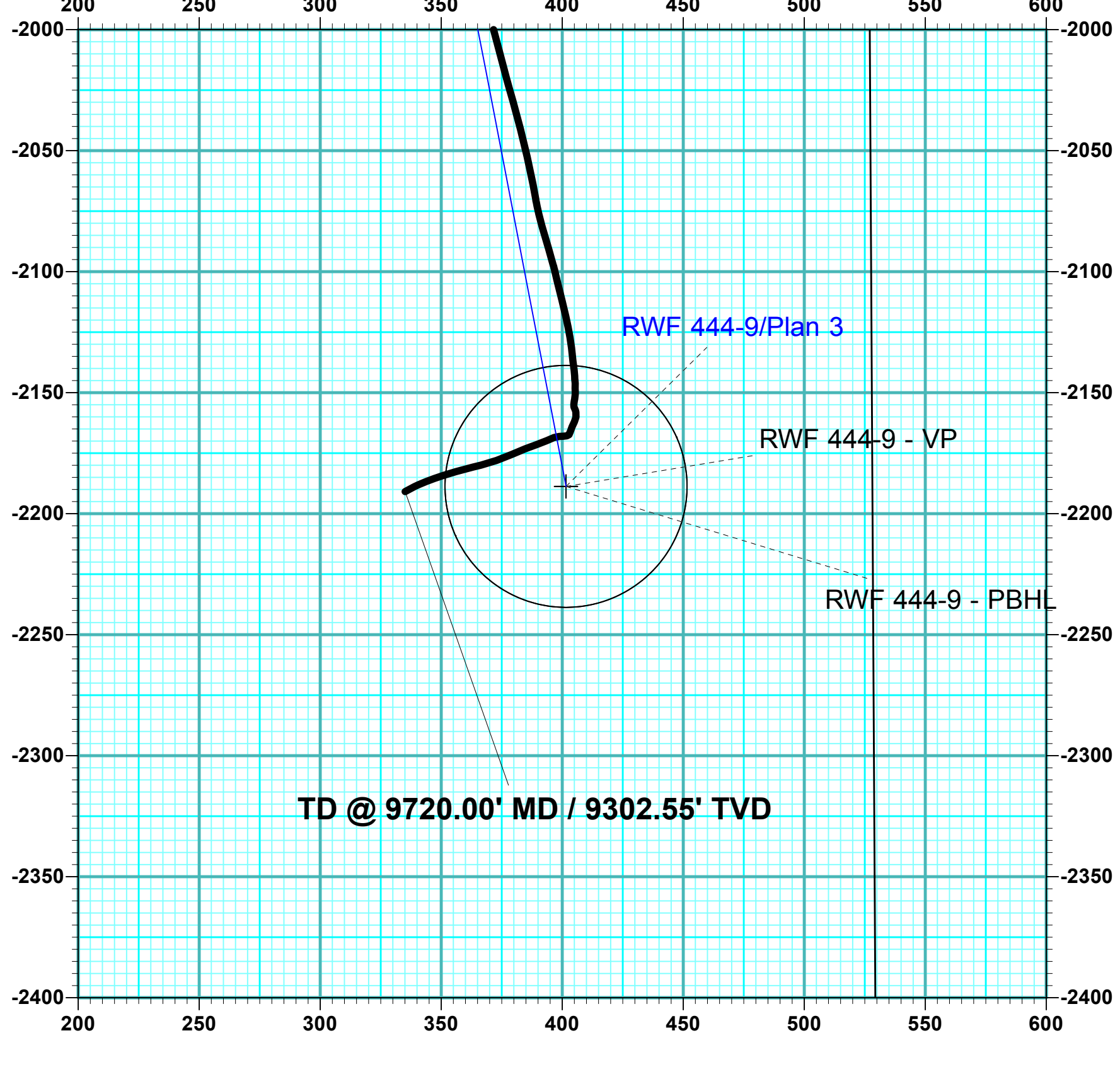
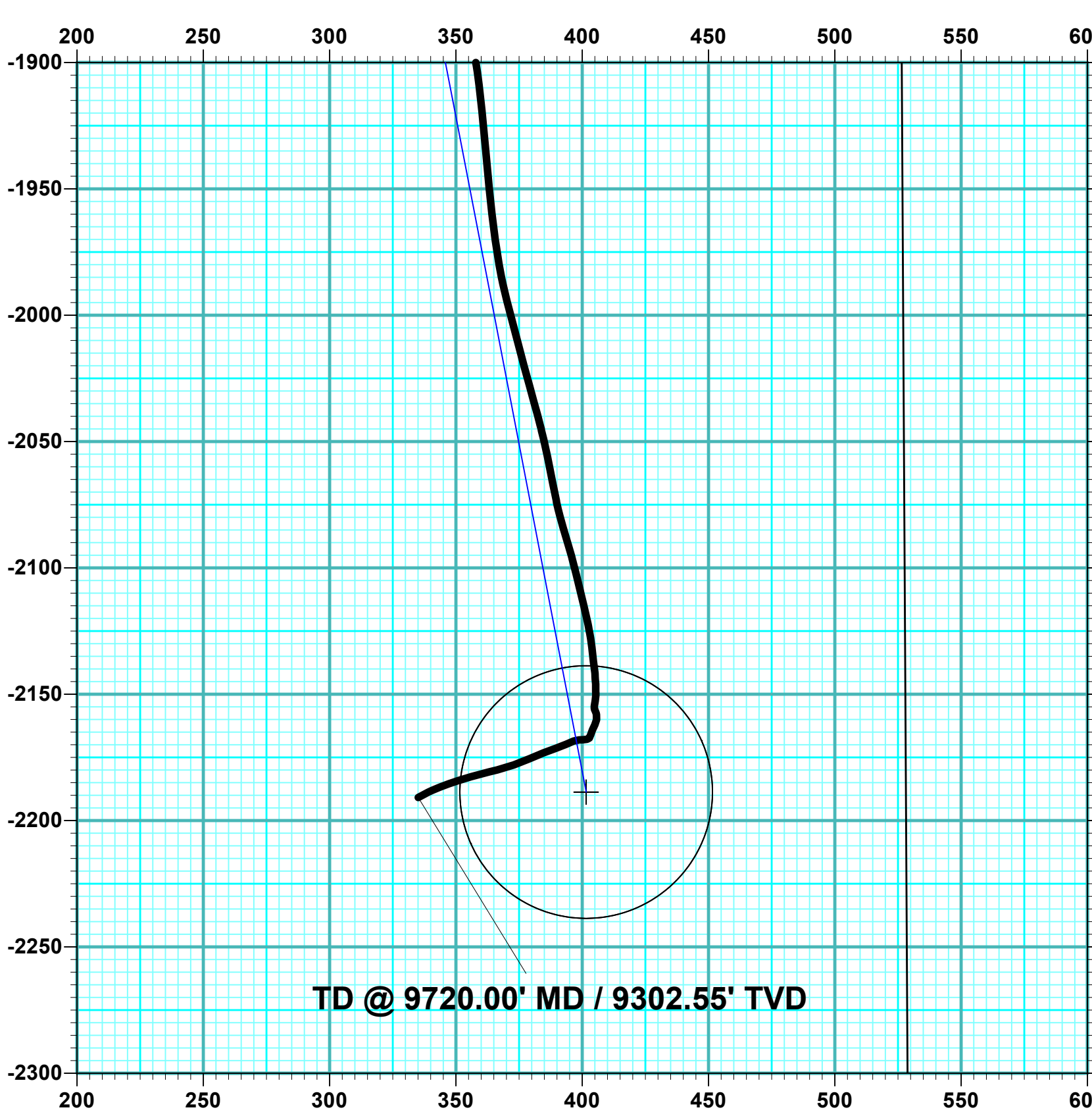
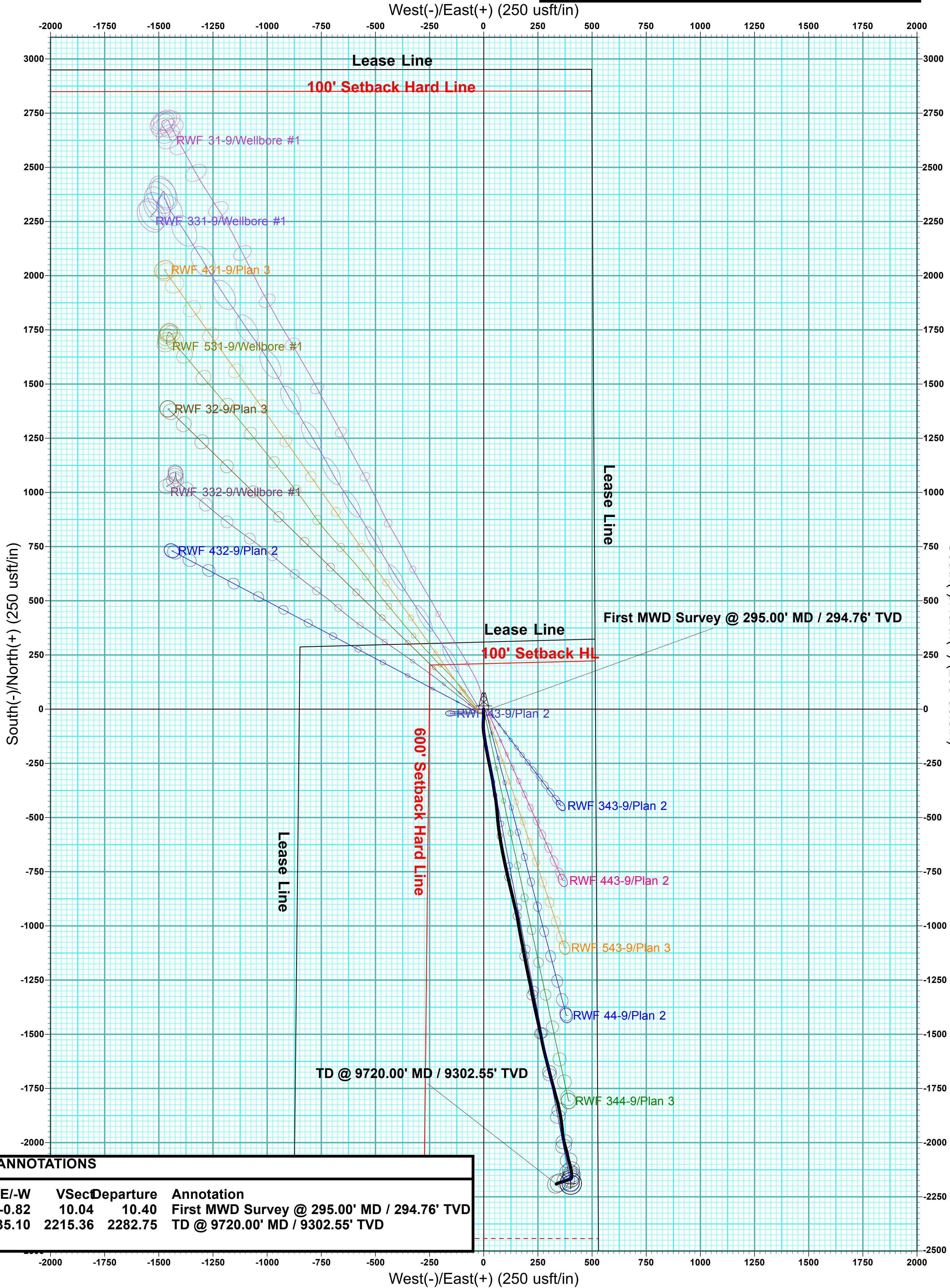
DESIGN ANNOTATIONS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	Start Build 3.00
316.67	5.00	190.00	316.46	-7.16	-1.26	6.81	7.27	Start 250.00 hold at 316.67 MD
566.67	5.00	190.00	565.50	-28.62	-5.05	27.23	29.06	Start DLS 3.00 TFO -26.16
1185.54	23.16	169.09	1163.51	-175.94	13.47	175.48	177.96	Start 4430.38 hold at 1185.54 MD
5615.92	23.16	169.09	5236.99	-1886.57	343.34	1917.55	1920.10	Start Drop -1.50
7159.61	0.00	0.00	6739.00	-2188.71	401.60	2225.25	2227.81	Start 2650.00 hold at 7159.61 MD
9809.61	0.00	0.00	9389.00	-2188.71	401.60	2225.25	2227.81	TD at 9809.61

SLOTS				
Slot Name	+N/-S	+E/-W	Northing	Easting
RWF 31-9	-1.59	-7.36	1630191.10	2327358.60
RWF 32-9	-14.43	-20.03	1630178.60	2327345.60
RWF 331-9	-3.09	-14.72	1630189.80	2327351.20
RWF 332-9	-6.17	-29.35	1630187.10	2327336.50
RWF 343-9	3.08	14.62	1630195.20	2327380.70
RWF 344-9	-9.75	2.06	1630182.70	2327367.80
RWF 431-9	-12.84	-12.67	1630180.00	2327353.00
RWF 432-9	-15.92	-27.29	1630177.30	2327338.30
RWF 43-9	-17.52	-34.65	1630175.90	2327330.90
RWF 443-9	-6.76	16.68	1630185.30	2327382.50
RWF 444-9	0.00	0.00	1630192.50	2327366.00
RWF 44-9	-8.26	9.32	1630184.00	2327375.10
RWF 531-9	-4.58	-22.09	1630188.50	2327343.80
RWF 543-9	1.49	7.36	1630193.80	2327373.40

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3219.00	3421.12	G Sand Top-TVD
3279.00	3486.38	G Sand Base-TVD
4549.00	4867.65	WSTC_LOWER-TVD
5439.00	5833.11	OCRK-TVD
5439.00	5833.11	WFRK/UMVRD-TVD
6739.00	7159.61	KMVGAS-TVD
8279.00	8699.61	CMEO-TVD
9239.00	9659.61	RLNS-TVD
9389.00	9809.61	TD-TVD



ANNOTATIONS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
295.00	4.04	184.55	294.76	-10.36	-0.82	10.04	10.40	First MWD Survey @ 295.00' MD / 294.76' TVD
9720.00	3.91	242.12	9302.55	-2190.86	335.10	2215.36	2282.75	TD @ 9720.00' MD / 9302.55' TVD





Terra Energy Partners, LLP

Garfield County, CO (Nad 83)

Sec 9, T6S, R94W

RWF 444-9 - Slot RWF 444-9

Wellbore #1

Design: Wellbore #1

KLX Survey Report

30 December, 2021



Company:	Terra Energy Partners, LLP	Local Co-ordinate Reference:	Well RWF 444-9 - Slot RWF 444-9
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 444-9	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 444-9 - Slot RWF 444-9				
Well Position	+N/-S	0.00 usft	Northing:	1,630,192.50 usft	Latitude:	39.539418
	+E/-W	0.00 usft	Easting:	2,327,366.00 usft	Longitude:	-107.885278
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	12/22/2021	9.12	65.57	51,190.20000000

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	169.60	

Survey Program	Date	12/30/2021			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
295.00	9,720.00	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 / 294.76' TVD									
295.00	4.04	184.55	294.76	-10.36	-0.82	10.04	1.37	1.37	0.00
387.00	5.98	180.16	386.40	-18.39	-1.10	17.89	2.15	2.11	-4.77
482.00	7.16	178.05	480.77	-29.25	-0.91	28.61	1.27	1.24	-2.22
576.00	7.87	182.09	573.97	-41.54	-0.94	40.69	0.94	0.76	4.30
670.00	8.13	183.67	667.05	-54.60	-1.60	53.42	0.36	0.28	1.68
764.00	9.98	181.56	759.88	-69.38	-2.25	67.83	2.00	1.97	-2.24
858.00	12.52	175.94	852.07	-87.69	-1.75	85.93	2.94	2.70	-5.98
952.00	15.64	172.95	943.23	-110.43	0.53	108.71	3.41	3.32	-3.18
1,046.00	18.50	170.93	1,033.08	-137.74	4.43	136.28	3.11	3.04	-2.15

Company:	Terra Energy Partners, LLP	Local Co-ordinate Reference:	Well RWF 444-9 - Slot RWF 444-9
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 444-9	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)
1,272.00	21.53	168.55	1,245.41	-213.81	18.32	213.61	1.39	1.34	-1.05
1,367.00	22.37	168.73	1,333.52	-248.63	25.32	249.11	0.89	0.88	0.19
1,461.00	23.60	168.11	1,420.06	-284.58	32.69	285.81	1.33	1.31	-0.66
1,555.00	23.60	170.05	1,506.20	-321.53	39.82	323.44	0.83	0.00	2.06
1,649.00	24.21	171.81	1,592.14	-359.14	45.81	361.51	1.00	0.65	1.87
1,743.00	23.69	169.17	1,678.05	-396.77	52.11	399.66	1.27	-0.55	-2.81
1,837.00	23.33	173.74	1,764.25	-433.82	57.69	437.11	1.98	-0.38	4.86
1,931.00	24.04	174.88	1,850.33	-471.39	61.42	474.74	0.90	0.76	1.21
2,025.00	23.55	175.23	1,936.34	-509.18	64.69	512.49	0.54	-0.52	0.37
2,119.00	24.87	172.60	2,022.07	-547.50	68.80	550.92	1.81	1.40	-2.80
2,213.00	24.17	171.72	2,107.60	-586.14	74.12	589.89	0.84	-0.74	-0.94
2,307.00	25.14	169.52	2,193.03	-624.82	80.52	629.09	1.42	1.03	-2.34
2,401.00	24.43	168.73	2,278.37	-663.52	87.95	668.50	0.83	-0.76	-0.84
2,495.00	23.38	168.33	2,364.30	-700.85	95.53	706.58	1.13	-1.12	-0.43
2,589.00	24.17	167.50	2,450.33	-737.90	103.46	744.46	0.91	0.84	-0.88
2,684.00	23.38	167.41	2,537.26	-775.29	111.78	782.73	0.83	-0.83	-0.09
2,778.00	24.61	166.44	2,623.14	-812.52	120.44	820.91	1.37	1.31	-1.03
2,867.00	23.86	166.27	2,704.30	-848.02	129.05	857.39	0.85	-0.84	-0.19
2,957.00	24.21	166.97	2,786.49	-883.68	137.53	893.99	0.50	0.39	0.78
3,048.00	23.51	165.92	2,869.71	-919.47	146.16	930.74	0.90	-0.77	-1.15
3,138.00	23.38	169.17	2,952.29	-954.42	153.88	966.52	1.44	-0.14	3.61
3,228.00	24.08	170.57	3,034.68	-990.07	160.24	1,002.73	1.00	0.78	1.56
3,319.00	25.05	169.43	3,117.44	-1,027.32	166.82	1,040.56	1.19	1.07	-1.25
3,410.00	24.61	169.17	3,200.03	-1,064.87	173.91	1,078.77	0.50	-0.48	-0.29
3,502.00	23.86	168.64	3,283.92	-1,101.93	181.18	1,116.53	0.85	-0.82	-0.58
3,594.00	24.96	169.78	3,367.70	-1,139.28	188.29	1,154.55	1.30	1.20	1.24
3,685.00	23.91	169.17	3,450.54	-1,176.29	195.16	1,192.19	1.19	-1.15	-0.67
3,775.00	23.47	167.94	3,532.96	-1,211.73	202.33	1,228.35	0.74	-0.49	-1.37
3,867.00	22.90	167.41	3,617.53	-1,247.11	210.06	1,264.55	0.66	-0.62	-0.58
3,957.00	24.35	169.52	3,699.99	-1,282.45	217.25	1,300.60	1.86	1.61	2.34
4,049.00	23.64	169.34	3,784.04	-1,319.23	224.11	1,338.01	0.78	-0.77	-0.20
4,140.00	22.68	167.59	3,867.70	-1,354.29	231.26	1,373.79	1.30	-1.05	-1.92
4,232.00	24.30	167.67	3,952.08	-1,390.11	239.11	1,410.44	1.76	1.76	0.09
4,323.00	23.42	167.67	4,035.30	-1,426.07	246.98	1,447.23	0.97	-0.97	0.00
4,415.00	22.54	167.85	4,120.00	-1,461.17	254.59	1,483.13	0.96	-0.96	0.20
4,506.00	23.82	168.20	4,203.65	-1,496.21	262.02	1,518.93	1.41	1.41	0.38
4,597.00	23.07	169.08	4,287.13	-1,531.71	269.16	1,555.13	0.91	-0.82	0.97
4,688.00	22.46	167.24	4,371.05	-1,566.17	276.37	1,590.33	1.03	-0.67	-2.02
4,779.00	23.77	165.65	4,454.74	-1,600.89	284.76	1,625.99	1.59	1.44	-1.75
4,870.00	23.03	165.48	4,538.25	-1,635.89	293.77	1,662.04	0.82	-0.81	-0.19
4,962.00	25.22	166.44	4,622.21	-1,672.37	302.87	1,699.57	2.42	2.38	1.04
5,054.00	24.57	165.21	4,705.67	-1,709.92	312.35	1,738.21	0.90	-0.71	-1.34
5,145.00	23.91	164.95	4,788.64	-1,746.02	321.97	1,775.46	0.73	-0.73	-0.29

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Site:	Sec 9, T6S, R94W	MD Reference:	KB=30' @ 6399.40usft (H&P #329)
Well:	RWF 444-9	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)
5,236.00	23.29	164.33	4,872.03	-1,781.15	331.62	1,811.75	0.73	-0.68	-0.68
5,327.00	22.32	164.77	4,955.92	-1,815.14	341.02	1,846.88	1.08	-1.07	0.48
5,419.00	22.90	169.61	5,040.85	-1,849.61	348.84	1,882.19	2.12	0.63	5.26
5,512.00	22.41	169.26	5,126.68	-1,884.82	355.40	1,918.02	0.55	-0.53	-0.38
5,604.00	20.87	174.53	5,212.20	-1,918.37	360.23	1,951.88	2.69	-1.67	5.73
5,696.00	17.58	174.53	5,299.06	-1,948.52	363.12	1,982.06	3.58	-3.58	0.00
5,788.00	14.72	171.63	5,387.42	-1,973.92	366.15	2,007.59	3.23	-3.11	-3.15
5,879.00	13.54	165.13	5,475.67	-1,995.66	370.56	2,029.77	2.17	-1.30	-7.14
5,971.00	12.88	165.21	5,565.23	-2,015.98	375.95	2,050.73	0.72	-0.72	0.09
6,063.00	12.44	164.42	5,655.00	-2,035.44	381.22	2,070.82	0.51	-0.48	-0.86
6,155.00	10.28	167.67	5,745.19	-2,053.01	385.64	2,088.90	2.45	-2.35	3.53
6,247.00	9.62	169.52	5,835.81	-2,068.59	388.79	2,104.79	0.80	-0.72	2.01
6,338.00	7.78	163.81	5,925.76	-2,081.98	391.89	2,118.52	2.23	-2.02	-6.27
6,431.00	6.68	163.63	6,018.02	-2,093.22	395.17	2,130.16	1.18	-1.18	-0.19
6,522.00	4.97	167.24	6,108.54	-2,102.14	397.53	2,139.37	1.92	-1.88	3.97
6,614.00	5.14	165.39	6,200.18	-2,110.01	399.45	2,147.46	0.26	0.18	-2.01
6,706.00	4.61	167.24	6,291.85	-2,117.61	401.31	2,155.26	0.60	-0.58	2.01
6,798.00	4.04	169.26	6,383.59	-2,124.40	402.73	2,162.20	0.64	-0.62	2.20
6,890.00	3.78	172.16	6,475.38	-2,130.59	403.75	2,168.47	0.35	-0.28	3.15
6,981.00	2.24	176.29	6,566.25	-2,135.33	404.27	2,173.23	1.71	-1.69	4.54
7,073.00	2.24	169.43	6,658.18	-2,138.89	404.72	2,176.82	0.29	0.00	-7.46
7,165.00	2.37	177.43	6,750.10	-2,142.56	405.13	2,180.50	0.38	0.14	8.70
7,256.00	1.36	174.53	6,841.05	-2,145.52	405.32	2,183.44	1.11	-1.11	-3.19
7,347.00	0.97	184.11	6,932.03	-2,147.36	405.37	2,185.26	0.48	-0.43	10.53
7,438.00	0.97	175.41	7,023.02	-2,148.90	405.37	2,186.77	0.16	0.00	-9.56
7,528.00	1.19	181.56	7,113.01	-2,150.59	405.41	2,188.44	0.28	0.24	6.83
7,619.00	1.45	190.44	7,203.98	-2,152.67	405.18	2,190.44	0.36	0.29	9.76
7,709.00	1.14	188.42	7,293.96	-2,154.67	404.84	2,192.36	0.35	-0.34	-2.24
7,800.00	1.10	155.19	7,384.94	-2,156.36	405.07	2,194.06	0.71	-0.04	-36.52
7,891.00	1.23	165.30	7,475.92	-2,158.10	405.69	2,195.88	0.27	0.14	11.11
7,982.00	1.36	192.02	7,566.90	-2,160.10	405.71	2,197.85	0.67	0.14	29.36
8,073.00	1.27	207.40	7,657.88	-2,162.05	405.02	2,199.65	0.40	-0.10	16.90
8,163.00	1.49	202.57	7,747.85	-2,164.02	404.11	2,201.42	0.28	0.24	-5.37
8,253.00	1.32	195.80	7,837.82	-2,166.10	403.38	2,203.33	0.26	-0.19	-7.52
8,343.00	0.53	225.16	7,927.81	-2,167.39	402.80	2,204.49	1.00	-0.88	32.62
8,435.00	0.75	257.59	8,019.81	-2,167.82	401.91	2,204.75	0.45	0.24	35.25
8,524.00	1.05	266.29	8,108.80	-2,167.99	400.53	2,204.68	0.37	0.34	9.78
8,614.00	1.14	268.49	8,198.78	-2,168.07	398.81	2,204.45	0.11	0.10	2.44
8,704.00	1.75	251.52	8,288.75	-2,168.53	396.62	2,204.50	0.82	0.68	-18.86
8,796.00	2.33	243.70	8,380.69	-2,169.80	393.61	2,205.21	0.70	0.63	-8.50
8,887.00	2.99	252.14	8,471.59	-2,171.35	389.69	2,206.03	0.84	0.73	9.27
8,978.00	3.69	248.18	8,562.44	-2,173.17	384.71	2,206.91	0.81	0.77	-4.35
9,070.00	4.00	245.72	8,654.23	-2,175.59	379.04	2,208.27	0.38	0.34	-2.67

Company:	Terra Energy Partners, LLP	Local Co-ordinate Reference:	Well RWF 444-9 - Slot RWF 444-9
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 444-9	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)
9,160.00	4.39	251.43	8,743.99	-2,177.97	372.91	2,209.51	0.63	0.43	6.34
9,249.00	4.31	255.39	8,832.73	-2,179.90	366.45	2,210.24	0.35	-0.09	4.45
9,341.00	4.13	256.09	8,924.48	-2,181.57	359.89	2,210.70	0.20	-0.20	0.76
9,431.00	4.00	251.87	9,014.26	-2,183.33	353.76	2,211.32	0.36	-0.14	-4.69
9,522.00	4.13	252.14	9,105.03	-2,185.32	347.62	2,212.17	0.14	0.14	0.30
9,613.00	3.95	246.95	9,195.80	-2,187.55	341.62	2,213.28	0.45	-0.20	-5.70
9,655.00	3.91	242.12	9,237.71	-2,188.79	339.02	2,214.03	0.79	-0.10	-11.50
TD @ 9720.00' MD / 9302.55' TVD									
9,720.00	3.91	242.12	9,302.55	-2,190.86	335.10	2,215.36	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	294.76	-10.36	-0.82	First MWD Survey @ 295.00' MD / 294.76' TVD
9,720.00	9,302.55	-2,190.86	335.10	TD @ 9720.00' MD / 9302.55' TVD