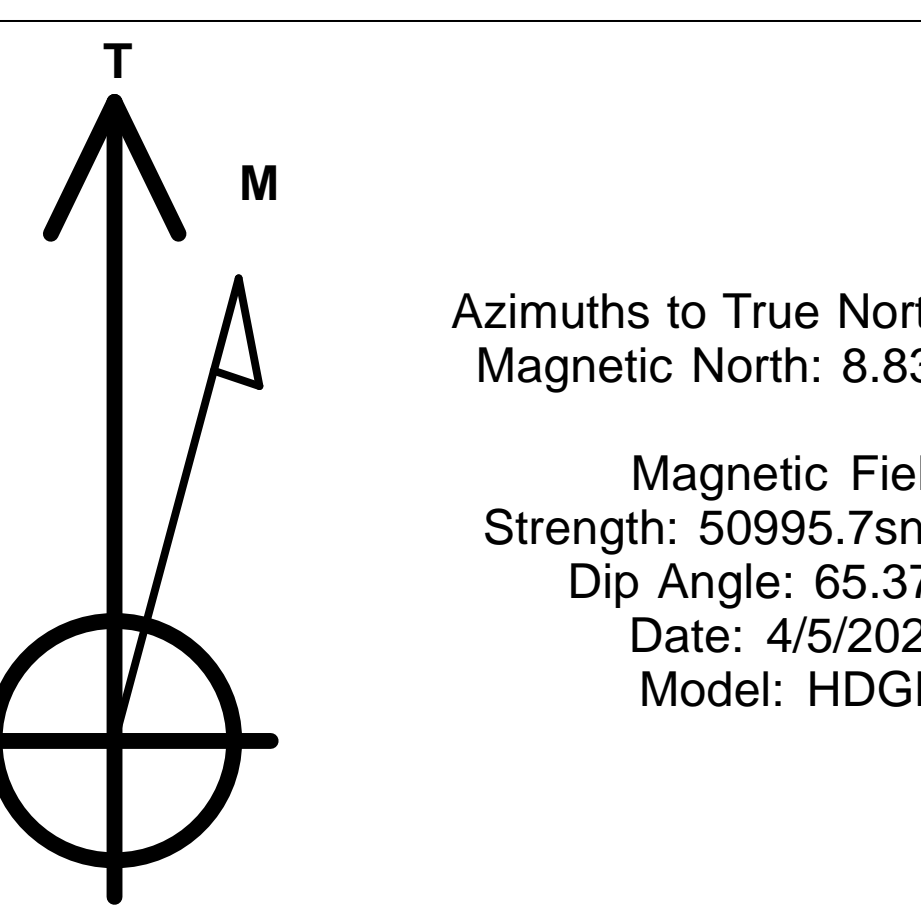


S. Leverich 13-09 Pad
WMC 423-18-793
Well WMC 423-18-793 - Slot WMC 423-18-793, True North Surveys

Terra Energy Partners, LLP
WMC 423-18-793
Garfield County, CO (Nad 83)
RKB @ 30' @ 8037.0ft

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



Azimuths to True North
Magnetic North: 6.83°
Magnetic Field
Strength: 50995.7nT
Dip Angle: 65.37°
Date: 4/5/2023
Model: HDGM

WELL DETAILS: WMC 423-18-793

+N/-S	+E/-W	Northing	Ground Level: Easting	8007.0 Latitude	Longitude	Slot
0.0	0.0	1591990.800	2342255.600	39.435633	-107.829028	WMC 423-18-793

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
VP	7041.0	1191.7	2382.0	1593121.000	2344667.400	39.438905	-107.820594
BHL	10331.0	1191.7	2382.0	1593121.000	2344667.400	39.438905	-107.820594

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation
386.8	387.0	2.90	30.63	8.4	5.0	8.2	9.8	First Survey @ 387' MD, 386.8' TVD
10043.0	10615.0	3.38	146.82	1217.4	2432.9	2720.5	2766.8	PTB @ 10615 MD, 10043.03 TVD

SLOTS

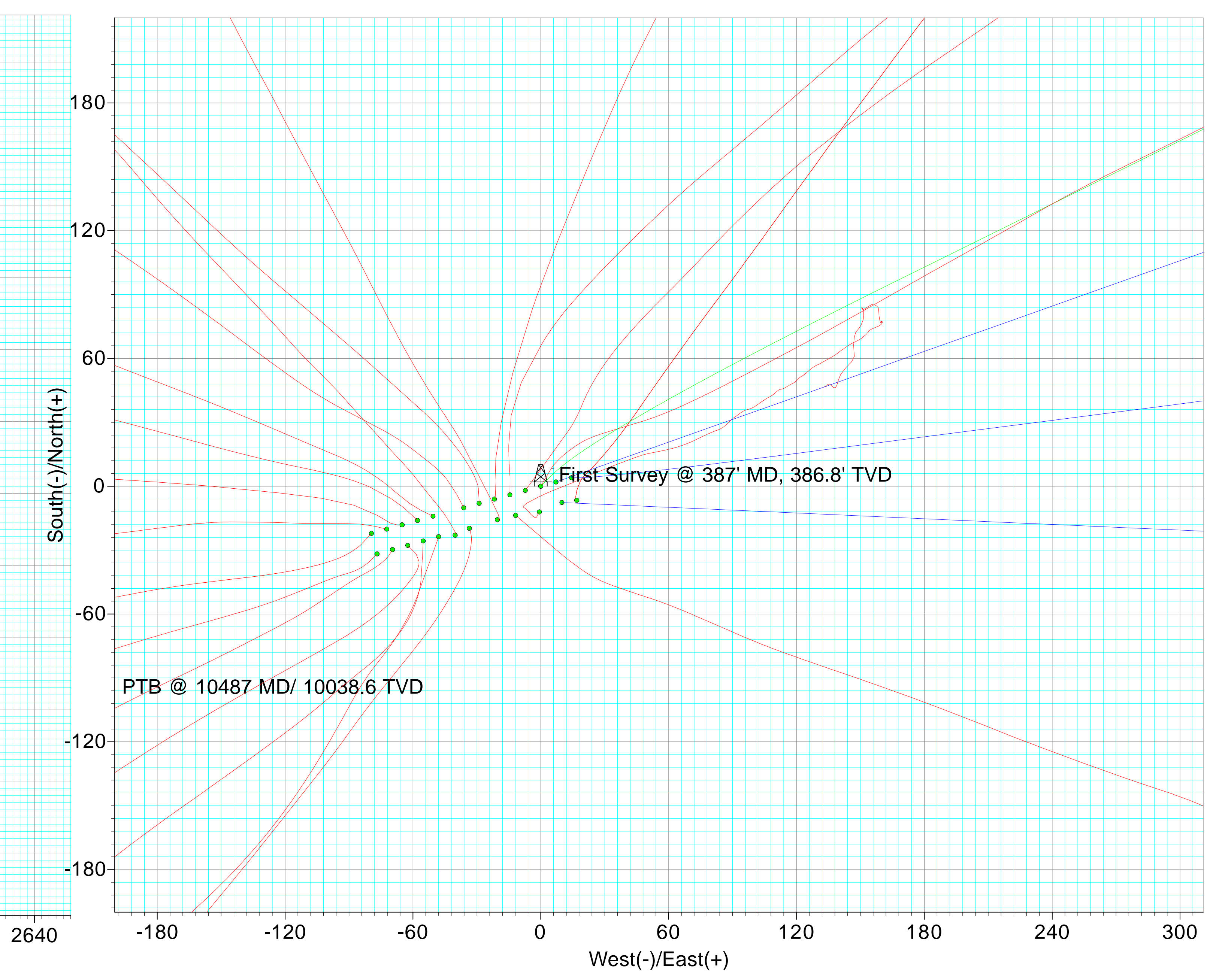
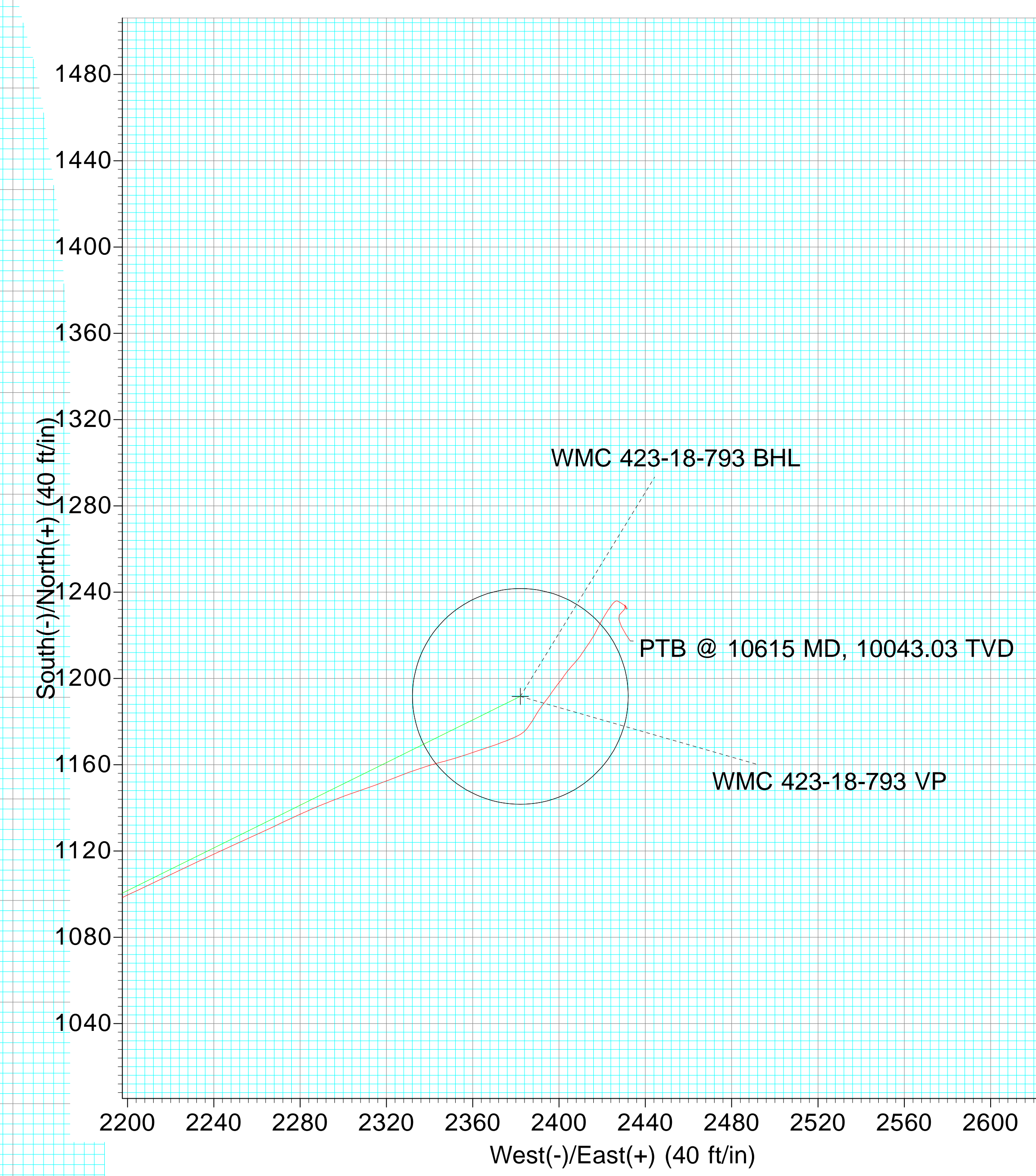
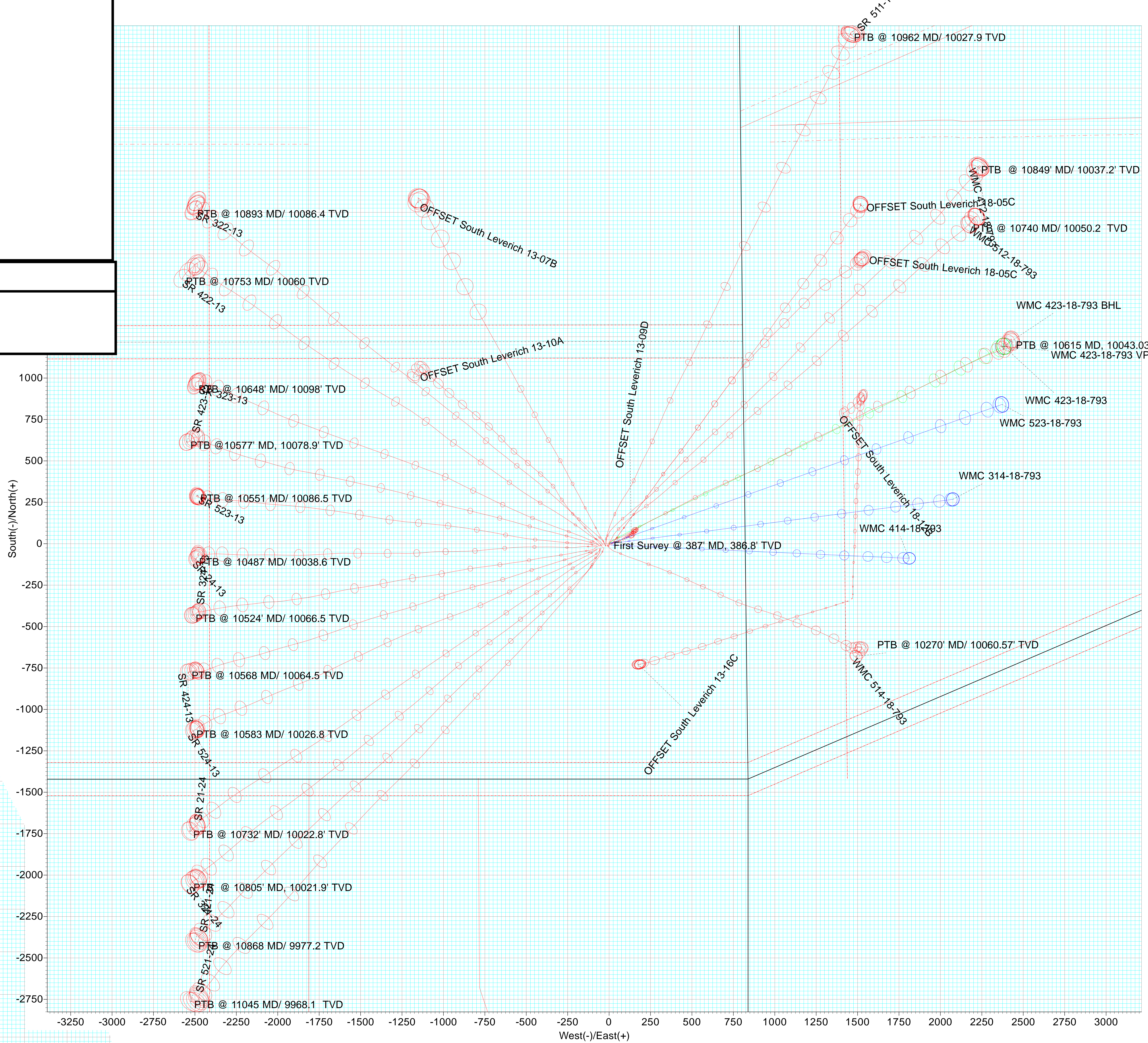
Slot Name	+N/-S	+E/-W	Northing	Easting
OFFSET South Leverich 13-07B	-15.7	-20.4	1591975.598	2342234.824
OFFSET South Leverich 13-09D	-12.1	-0.6	1591978.733	2342254.682
OFFSET South Leverich 13-10A	-23.0	-40.2	1591968.823	2342214.873
OFFSET South Leverich 13-16C	-347.1	1448.3	1591606.646	2343694.566
OFFSET South Leverich 18-05C	-6.6	16.9	1591983.730	2342272.330
OFFSET South Leverich 18-12B	-332.6	1462.5	1591620.850	2343709.057
SR 21-24	-27.8	-62.4	1591964.600	2342192.500
SR 24-13	-20.2	-72.3	1591972.500	2342182.800
SR 321-24	-25.7	-55.2	1591966.500	2342199.800
SR 322-13	-8.0	-28.9	1591983.500	2342226.500
SR 323-13	-14.1	-50.6	1591978.000	2342204.700
SR 324-13	-22.1	-79.5	1591970.700	2342175.600
SR 421-24	-23.7	-47.9	1591968.300	2342207.100
SR 422-13	-10.1	-36.2	1591981.600	2342219.200
SR 423-13	-16.1	-57.8	1591976.200	2342197.400
SR 424-13	-31.8	-76.8	1591961.000	2342178.000
SR 511-18	-6.1	-21.8	1591985.300	2342233.700
SR 521-24	-19.8	-33.5	1591971.900	2342221.600
SR 523-13	-18.2	-65.1	1591974.300	2342190.100
SR 524-13	-29.8	-69.6	1591962.800	2342185.300
WMC 314-18-793	4.0	14.4	1591994.400	2342270.100
WMC 412-18-793	-4.1	-14.5	1591987.100	2342241.000
WMC 414-18-793	-7.6	9.9	1591982.900	2342265.300
WMC 423-18-793	0.0	0.0	1591990.800	2342255.600
WMC 512-18-793	-2.0	-7.3	1591989.000	2342248.300
WMC 514-18-793	13.7	-11.8	1591977.400	2342243.500
WMC 523-18-793	2.0	7.2	1591992.600	2342262.800

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4096.0	4464.7	G_SAND
4596.0	5021.8	FRUN
6051.0	6612.2	L_WSCH
6471.0	7041.5	OCRK
7041.0	7613.7	TGAS
7041.0	7613.7	U_MVRD
9117.0	9689.7	CMEO
9981.0	10553.7	RLNS

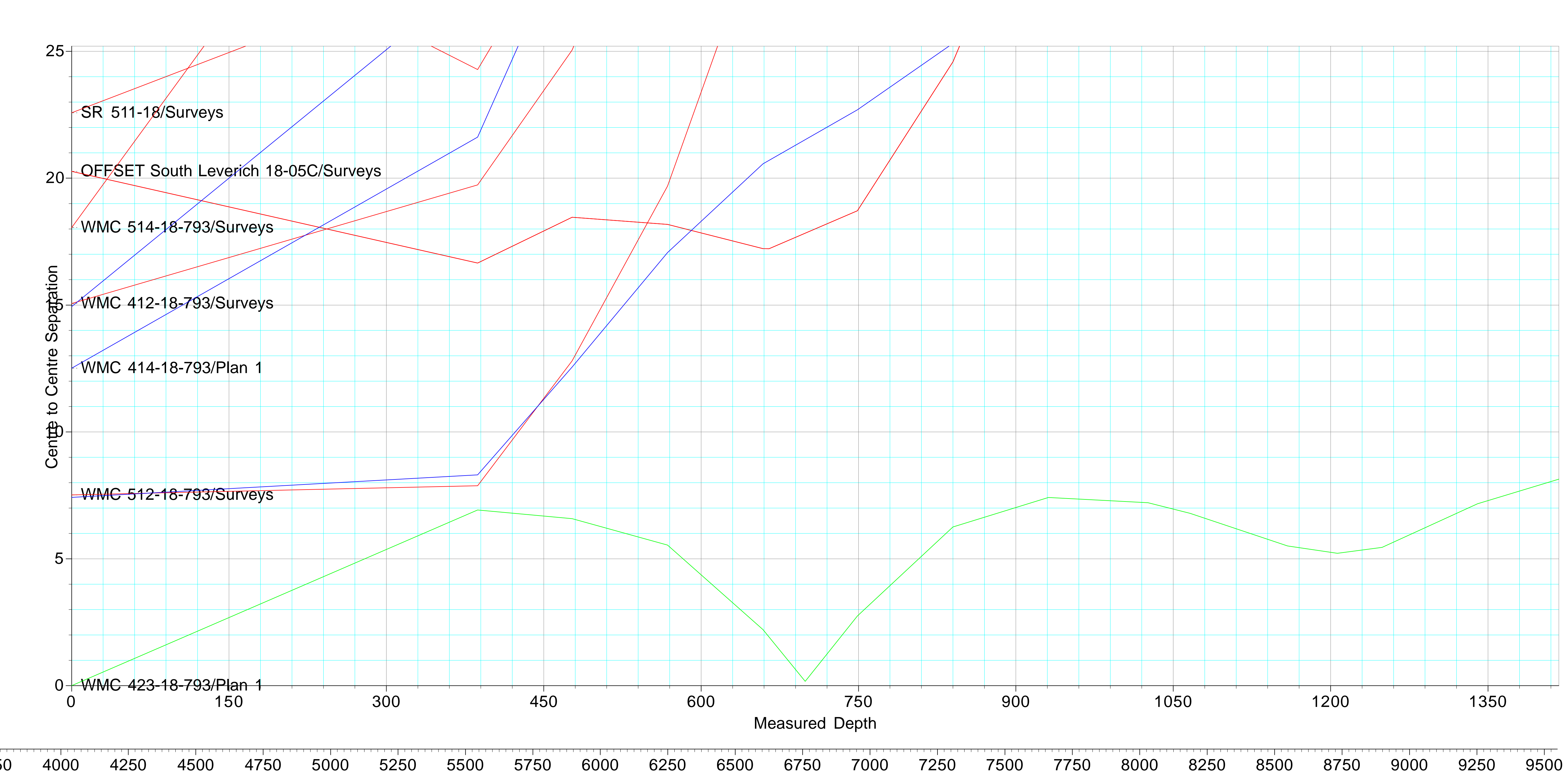
CASING DETAILS

No casing data is available



ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation
386.8	387.0	2.90	30.63	8.4	5.0	8.2	9.8	First Survey @ 387' MD, 386.8' TVD
10043.0	10615.0	3.38	146.82	1217.4	2432.9	2720.5	2766.8	PTB @ 10615 MD, 10043.03 TVD





Directional Survey Certification

Survey Company: Native Navigation Survey Company Job #: 23092841

Well Name: WMC 423-18-793 A.P.I.# 05-045-24558 Operator Terra Energy Partners

Latitude: 40.217433 Longitude: -107.829028 County, State: Garfield County, CO

Legal Description (S,TS,R): Sec 13, T7S, R94W

Final Report 9/29/2023 Date of First Survey 9/19/2023 Date of Last Survey: 9/25/2023

Datum: NAD83 Survey MD From: 387.00 To: 10551 FT. Tool Type: MWD + HRGM

Bit to Sensor: 64 FT. Rig (Company & Number): HP 329 RKB Height: 30.00 FT.

Ground Elevation: 8007.00 Northings: 1591990.8 Eastings: 2342255.6

Surveyor Kyle Temple Depth of Final Projection: 10615 FT.

The data and calculations for this survey have been checked by me and conform to the calibration standards and operational procedures set forth by Native Navigation. I am authorized and qualified to review the data, calculations and this report, and that the report represents a true and correct Directional Survey of this well, based on the original data corrected to True North and obtained at the well site. Wellbore coordinates are calculated using the minimum curvature method.


Signature

Well Planner
Title

Native Navigation
Company

9/29/23
Date



Terra Energy Partners, LLP

Garfield County, CO (Nad 83)

S. Leverich 13-09 Pad

WMC 423-18-793 - Slot WMC 423-18-793

OWB

Design: Surveys

Survey Certification Report

29 September, 2023



Company:	Terra Energy Partners, LLP	Local Co-ordinate Reference:	Well WMC 423-18-793 - Slot WMC 423-18-793
Project:	Garfield County, CO (Nad 83)	TVD Reference:	RKB @ 30' @ 8037.0ft
Site:	S. Leverich 13-09 Pad	MD Reference:	RKB @ 30' @ 8037.0ft
Well:	WMC 423-18-793	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	NN

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	S. Leverich 13-09 Pad				
Site Position:		Northing:	1,591,962.800 usft	Latitude:	39.435551
From:	Map	Easting:	2,342,185.300 usft	Longitude:	-107.829274
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16"	Grid Convergence:	-1.47 °

Well	WMC 423-18-793 - Slot WMC 423-18-793					
Well Position	+N/-S	0.0 ft	Northing:	1,591,990.800 usft	Latitude:	39.435633
	+E/-W	0.0 ft	Easting:	2,342,255.600 usft	Longitude:	-107.829028
Position Uncertainty		0.0 ft	Wellhead Elevation:	8,037.0 ft	Ground Level:	8,007.0 ft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/5/2023	8.83	65.37	50,996

Design	Surveys				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:		Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
		0.0	0.0	0.0	63.42

Survey Program	Date	9/26/2023			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
387.0	10,615.0	Surveys (OWB)	OWSG (REV5) MWD HDGM	OWSG MWD - Standard	

Survey									
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)		
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.00	
387.0	2.90	30.63	386.8	8.4	5.0	9.8	30.63		
First Survey @ 387' MD, 386.8' TVD									
477.0	5.54	46.71	476.6	13.4	9.3	16.3	34.87		
568.0	7.25	56.73	567.0	19.5	17.3	26.1	41.56		
659.0	9.62	72.99	657.0	24.9	29.4	38.5	49.72		
749.0	13.13	73.08	745.3	30.1	46.4	55.3	57.02		
840.0	16.00	65.17	833.3	38.4	67.6	77.8	60.44		
931.0	19.03	62.53	920.1	50.5	92.2	105.1	61.30		
1,026.0	22.46	61.92	1,008.9	66.2	122.0	138.7	61.52		
1,066.0	23.07	60.95	1,045.8	73.6	135.5	154.2	61.51		
1,159.0	25.27	60.25	1,130.7	92.3	168.7	192.3	61.33		

Company:	Terra Energy Partners, LLP	Local Co-ordinate Reference:	Well WMC 423-18-793 - Slot WMC 423-18-793
Project:	Garfield County, CO (Nad 83)	TVD Reference:	RKB @ 30' @ 8037.0ft
Site:	S. Leverich 13-09 Pad	MD Reference:	RKB @ 30' @ 8037.0ft
Well:	WMC 423-18-793	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	NN

Survey									
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)		
1,249.0	24.92	60.86	1,212.2	111.0	202.0	230.5	61.20		
1,340.0	24.61	60.16	1,294.8	129.8	235.1	268.6	61.10		
1,430.0	26.37	63.85	1,376.0	147.9	269.3	307.3	61.22		
1,520.0	25.58	63.50	1,456.9	165.4	304.7	346.7	61.50		
1,611.0	27.73	62.79	1,538.3	183.9	341.1	387.5	61.67		
1,702.0	27.25	62.27	1,619.0	203.2	378.3	429.5	61.76		
1,792.0	27.33	61.74	1,699.0	222.6	414.8	470.7	61.78		
1,883.0	26.67	63.15	1,780.1	241.7	451.4	512.0	61.83		
1,973.0	26.10	61.12	1,860.7	260.4	486.8	552.0	61.85		
2,062.0	25.14	61.65	1,940.9	278.8	520.5	590.5	61.82		
2,154.0	26.72	63.15	2,023.7	297.5	556.2	630.7	61.86		
2,246.0	25.93	63.76	2,106.1	315.7	592.7	671.5	61.96		
2,338.0	26.85	65.43	2,188.5	333.2	629.6	712.4	62.11		
2,429.0	25.66	66.05	2,270.2	349.8	666.3	752.5	62.30		
2,521.0	27.77	64.82	2,352.3	367.0	703.9	793.8	62.47		
2,612.0	27.11	64.90	2,433.1	384.8	741.9	835.7	62.59		
2,704.0	27.95	65.34	2,514.7	402.7	780.5	878.2	62.71		
2,796.0	27.33	66.49	2,596.2	420.1	819.4	920.8	62.86		
2,888.0	26.67	65.96	2,678.1	436.9	857.7	962.5	63.00		
2,979.0	28.34	63.06	2,758.9	455.0	895.6	1,004.5	63.06		
3,071.0	28.21	61.83	2,839.9	475.2	934.2	1,048.1	63.04		
3,163.0	27.03	61.56	2,921.4	495.4	971.8	1,090.8	62.99		
3,255.0	26.06	61.92	3,003.7	514.9	1,008.0	1,131.9	62.94		
3,348.0	28.08	63.41	3,086.5	534.3	1,045.6	1,174.2	62.93		
3,438.0	27.11	62.09	3,166.3	553.4	1,082.6	1,215.9	62.93		
3,531.0	26.41	62.88	3,249.3	572.7	1,119.8	1,257.7	62.91		
3,623.0	25.71	62.44	3,332.0	591.3	1,155.7	1,298.2	62.90		
3,715.0	26.59	63.41	3,414.5	609.7	1,191.8	1,338.7	62.90		
3,807.0	25.05	62.71	3,497.4	627.9	1,227.5	1,378.8	62.91		
3,898.0	27.38	66.05	3,579.0	645.2	1,263.7	1,418.9	62.95		
3,990.0	26.72	64.46	3,660.9	662.7	1,301.7	1,460.7	63.02		
4,083.0	25.53	64.64	3,744.4	680.3	1,338.7	1,501.7	63.06		
4,174.0	27.03	62.79	3,826.0	698.2	1,374.8	1,542.0	63.08		
4,266.0	26.28	61.12	3,908.2	717.6	1,411.3	1,583.2	63.05		
4,358.0	25.62	62.09	3,991.0	736.7	1,446.7	1,623.5	63.01		
4,450.0	26.81	61.21	4,073.5	756.0	1,482.4	1,664.1	62.98		
4,542.0	26.24	61.56	4,155.8	775.7	1,518.5	1,705.2	62.94		
4,634.0	24.92	61.48	4,238.8	794.6	1,553.4	1,744.9	62.91		
4,725.0	24.65	65.52	4,321.4	811.7	1,587.5	1,783.0	62.92		
4,817.0	25.80	68.07	4,404.6	827.1	1,623.6	1,822.1	63.00		
4,909.0	28.26	66.57	4,486.6	843.2	1,662.1	1,863.8	63.10		
5,000.0	26.89	65.87	4,567.3	860.2	1,700.7	1,905.9	63.17		
5,095.0	26.02	66.84	4,652.3	877.2	1,739.4	1,948.1	63.24		
5,190.0	27.82	64.03	4,737.0	895.1	1,778.5	1,991.1	63.28		

Company:	Terra Energy Partners, LLP	Local Co-ordinate Reference:	Well WMC 423-18-793 - Slot WMC 423-18-793
Project:	Garfield County, CO (Nad 83)	TVD Reference:	RKB @ 30' @ 8037.0ft
Site:	S. Leverich 13-09 Pad	MD Reference:	RKB @ 30' @ 8037.0ft
Well:	WMC 423-18-793	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	NN

Survey								
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	
5,284.0	26.72	65.52	4,820.6	913.5	1,817.5	2,034.1	63.32	
5,379.0	27.69	64.11	4,905.1	931.9	1,856.8	2,077.5	63.35	
5,474.0	26.72	64.46	4,989.5	950.8	1,895.9	2,121.0	63.37	
5,569.0	25.75	62.53	5,074.8	969.5	1,933.5	2,163.0	63.37	
5,665.0	24.70	62.62	5,161.6	988.4	1,969.8	2,203.9	63.35	
5,760.0	23.69	63.32	5,248.3	1,006.1	2,004.5	2,242.8	63.35	
5,855.0	23.16	63.32	5,335.4	1,023.0	2,038.2	2,280.6	63.35	
5,949.0	22.41	62.88	5,422.1	1,039.5	2,070.7	2,317.0	63.34	
6,043.0	20.00	65.52	5,509.7	1,054.3	2,101.3	2,351.0	63.35	
6,138.0	19.07	64.46	5,599.3	1,067.7	2,130.1	2,382.7	63.38	
6,232.0	18.28	66.49	5,688.3	1,080.2	2,157.4	2,412.8	63.40	
6,326.0	16.88	65.34	5,777.9	1,091.8	2,183.4	2,441.1	63.43	
6,420.0	16.08	64.55	5,868.1	1,103.1	2,207.5	2,467.8	63.45	
6,515.0	15.42	64.55	5,959.5	1,114.2	2,230.8	2,493.6	63.46	
6,609.0	14.63	65.52	6,050.3	1,124.5	2,252.9	2,517.9	63.48	
6,704.0	14.06	64.73	6,142.3	1,134.4	2,274.3	2,541.5	63.49	
6,798.0	11.03	68.42	6,234.1	1,142.6	2,292.9	2,561.8	63.51	
6,892.0	8.70	71.32	6,326.7	1,148.1	2,308.0	2,577.9	63.55	
6,986.0	8.22	68.60	6,419.6	1,152.9	2,321.0	2,591.6	63.59	
7,080.0	8.04	70.53	6,512.7	1,157.5	2,333.5	2,604.8	63.62	
7,175.0	5.80	75.45	6,607.0	1,160.9	2,344.4	2,616.1	63.66	
7,269.0	4.35	72.90	6,700.6	1,163.2	2,352.4	2,624.3	63.69	
7,363.0	4.61	71.23	6,794.3	1,165.4	2,359.4	2,631.5	63.71	
7,458.0	4.70	71.67	6,889.0	1,167.9	2,366.7	2,639.2	63.74	
7,552.0	4.48	69.21	6,982.7	1,170.4	2,373.8	2,646.6	63.75	
7,647.0	4.17	65.26	7,077.5	1,173.2	2,380.4	2,653.8	63.76	
7,741.0	3.47	36.87	7,171.2	1,176.9	2,385.2	2,659.7	63.74	
7,835.0	3.38	30.71	7,265.1	1,181.5	2,388.3	2,664.6	63.68	
7,929.0	3.25	34.58	7,358.9	1,186.1	2,391.3	2,669.3	63.62	
8,023.0	2.77	37.48	7,452.8	1,190.1	2,394.2	2,673.6	63.57	
8,118.0	2.81	34.23	7,547.7	1,193.9	2,396.9	2,677.7	63.52	
8,212.0	2.64	39.15	7,641.6	1,197.4	2,399.5	2,681.7	63.48	
8,306.0	2.90	34.14	7,735.5	1,201.1	2,402.2	2,685.8	63.44	
8,401.0	2.72	41.44	7,830.4	1,204.8	2,405.1	2,689.9	63.39	
8,496.0	2.33	41.79	7,925.3	1,207.9	2,407.8	2,693.8	63.36	
8,590.0	3.25	33.70	8,019.1	1,211.5	2,410.6	2,697.9	63.32	
8,685.0	2.94	34.76	8,114.0	1,215.8	2,413.5	2,702.4	63.26	
8,778.0	2.64	30.54	8,206.9	1,219.6	2,415.9	2,706.3	63.21	
8,873.0	2.94	26.06	8,301.8	1,223.7	2,418.1	2,710.1	63.16	
8,967.0	2.64	30.45	8,395.7	1,227.7	2,420.3	2,713.8	63.10	
9,061.0	2.72	33.09	8,489.6	1,231.4	2,422.6	2,717.6	63.06	
9,155.0	2.11	38.98	8,583.5	1,234.6	2,424.9	2,721.1	63.02	
9,250.0	1.14	95.49	8,678.5	1,235.9	2,426.9	2,723.5	63.01	
9,344.0	1.27	137.33	8,772.4	1,235.1	2,428.6	2,724.6	63.04	
9,439.0	1.05	110.87	8,867.4	1,234.0	2,430.1	2,725.4	63.08	

Company:	Terra Energy Partners, LLP	Local Co-ordinate Reference:	Well WMC 423-18-793 - Slot WMC 423-18-793
Project:	Garfield County, CO (Nad 83)	TVD Reference:	RKB @ 30' @ 8037.0ft
Site:	S. Leverich 13-09 Pad	MD Reference:	RKB @ 30' @ 8037.0ft
Well:	WMC 423-18-793	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	NN

MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)
9,532.0	0.88	144.01	8,960.4	1,233.1	2,431.3	2,726.1	63.11
9,627.0	0.40	217.39	9,055.4	1,232.2	2,431.5	2,725.9	63.13
9,721.0	0.53	313.81	9,149.4	1,232.3	2,431.0	2,725.5	63.12
9,815.0	0.92	347.91	9,243.4	1,233.3	2,430.5	2,725.5	63.10
9,910.0	0.26	90.48	9,338.4	1,234.1	2,430.6	2,725.9	63.08
10,005.0	0.92	190.06	9,433.4	1,233.3	2,430.7	2,725.7	63.10
10,099.0	0.83	209.31	9,527.4	1,232.0	2,430.2	2,724.6	63.12
10,193.0	1.36	230.05	9,621.4	1,230.7	2,429.0	2,723.0	63.13
10,287.0	0.88	206.06	9,715.3	1,229.3	2,427.9	2,721.3	63.15
10,382.0	1.53	173.27	9,810.3	1,227.4	2,427.7	2,720.3	63.18
10,476.0	2.81	153.94	9,904.2	1,224.1	2,428.8	2,719.9	63.25
10,551.0	3.38	146.82	9,979.1	1,220.6	2,430.9	2,720.1	63.34
10,615.0	3.38	146.82	10,043.0	1,217.4	2,432.9	2,720.5	63.42

PTB @ 10615 MD, 10043.03 TVD

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
387.0	386.8	8.4	5.0	First Survey @ 387' MD, 386.8' TVD
10,615.0	10,043.0	1,217.4	2,432.9	PTB @ 10615 MD, 10043.03 TVD

Checked By: _____ Approved By: _____ Date: _____