MIDWEST WIRELINE

DUAL INDUCTION LOG

Company Te-Pe Oil & Gas
Well Steinle B #8
Field Hall-Gurney
County Russell
State Kansas

Location: API # : 15-167-24131-00-00
2260 FNL & 2310 FEL
SEC 29 TWP 15S RGE 12W

Permanent Datum Ground Level Elevation 1871
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

Other Services
CNL/CDL
MEL

Elevation
K.B. 1881
D.F.
G.L. 1871

Date	2/12/2023		
Run Number	One		
Depth Driller	3385		
Depth Logger	3384		
Bottom Logged Interval	3383		
Top Log Interval	350		
Casing Driller	8.625 @ 394		
Casing Logger	394		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	4550		
Density / Viscosity	9.1 / 52		
pH / Fluid Loss	11.0 / 7.6		
Source of Sample	Flowline		
Rm @ Meas. Temp	0.55 @ 42		
Rmf @ Meas. Temp	0.41 @ 42		
Rmc @ Meas. Temp	0.74 @ 42		
Source of Rmf / Rmc	Charts		
Rm @ BHT	0.21 @ 110		
Operating Rig Time	3 Hours		
Max Rec. Temp. F	110		
Equipment Number	P-24		
Location	Hays		
Recorded By	D. Schmidt		
Witnessed By	Randy Kilian		

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All interpretations are opinions based on inferences from electrical or other measurements and Midwest Wireline LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Midwest Wireline LLC will not be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

Bunker Hill,
South to the T, 2 East to 195th,
5 South to Stickney Rd, 1/2 West,
South into

Log Measured From: Kelly Bushing 10 Ft. Above Permanent Datum

THANK YOU FOR USING MIDWEST WIRELINE LLC
785-625-3858

Your Midwest Wireline Crew	This Log Record Was Witnessed By
Engineer: D. Schmidt	Primary Witness: Randy Kilian
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
GR	40.33		GR-M&W (106)	3.00	3.50	50.00
CNLSC	37.23		CNT-M&W (207-MW)	5.00	3.50	100.00
CNSSC	36.48					
			CDL-M&W (307-08)	8.50	4.00	250.00
LSD	28.18					
DCAL	28.17					
SSD	27.68					
			ML-PSIML (401)	7.58	4.00	65.00
MCAL	19.58					
MI	19.58					
MN	19.58					
RLL3F	15.50					
RLL3	15.50					
			DIL-M&W (502 HT)	18.25	3.50	220.00
CILD	8.33					
CILM	4.50					
SP	0.20					

Dataset:	te-pe_steinle b 8.db: field/well/stkml/pass3.5
Total length:	42.33 ft
Total weight:	685.00 lb
O.D.:	4.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\te-pe_steinle b 8.db
Dataset field/well/stkml/pass3.5/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	110	5.5	0	1	2	2.71

NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	No	0	0	485	30	Off	3384

Variable Description

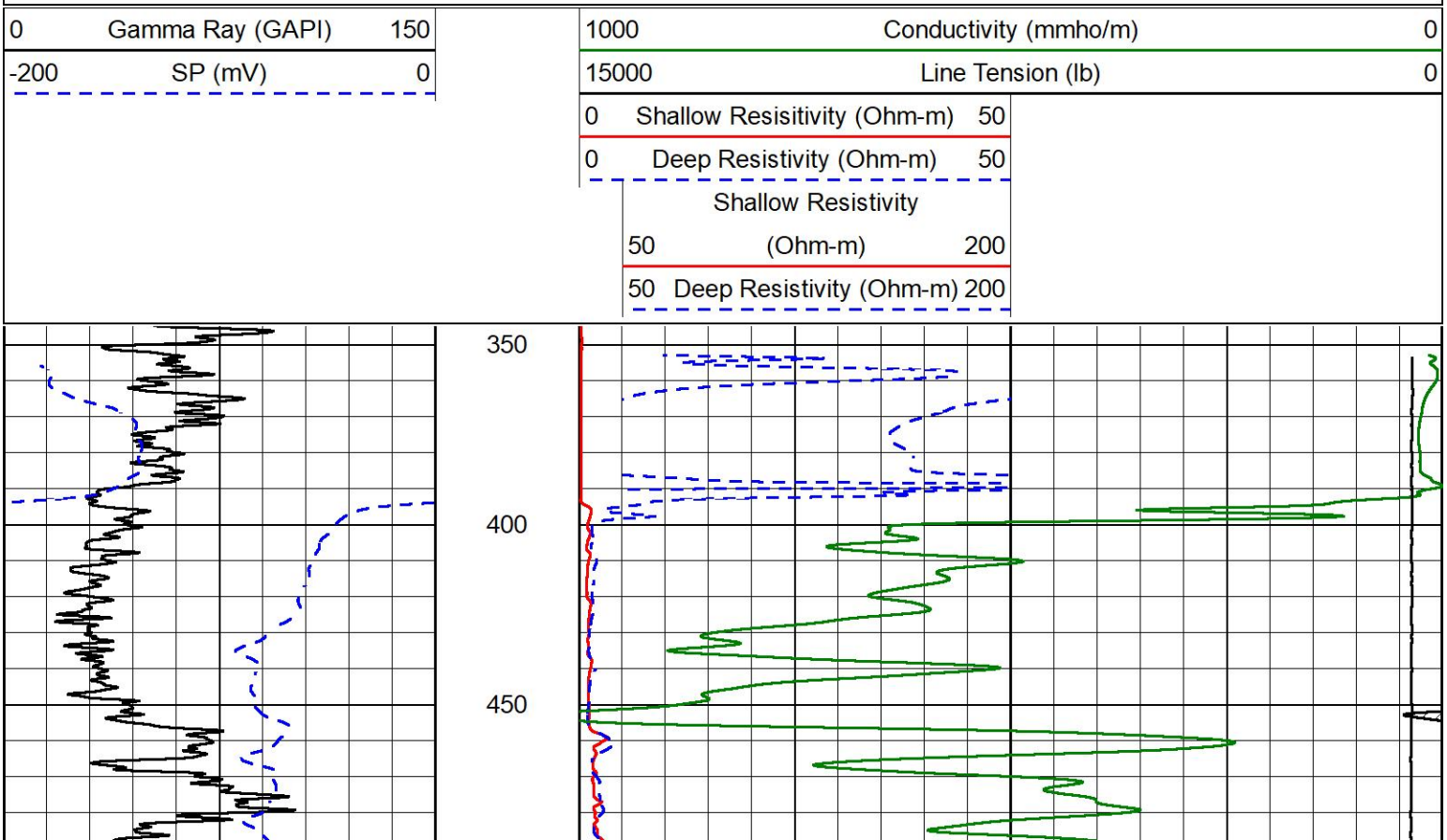
A : Cement Factor (a)
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
FLUIDDEN : Fluid Density
M : Cement Exp (m)
MATRXDEN : Matrix Density
NPORSEL : Neutron Porosity Curve Select
PERFS : Perforation Flag
SNDERR : Deep Sonde Error Correction
SNDERRM : Medium Sonde Error Correction
SPSHIFT : S.P. Baseline Offset
SRFTEMP : Surface Temperature
SZCOR : CN Size Cor. ?
TDEPTH : Total Depth

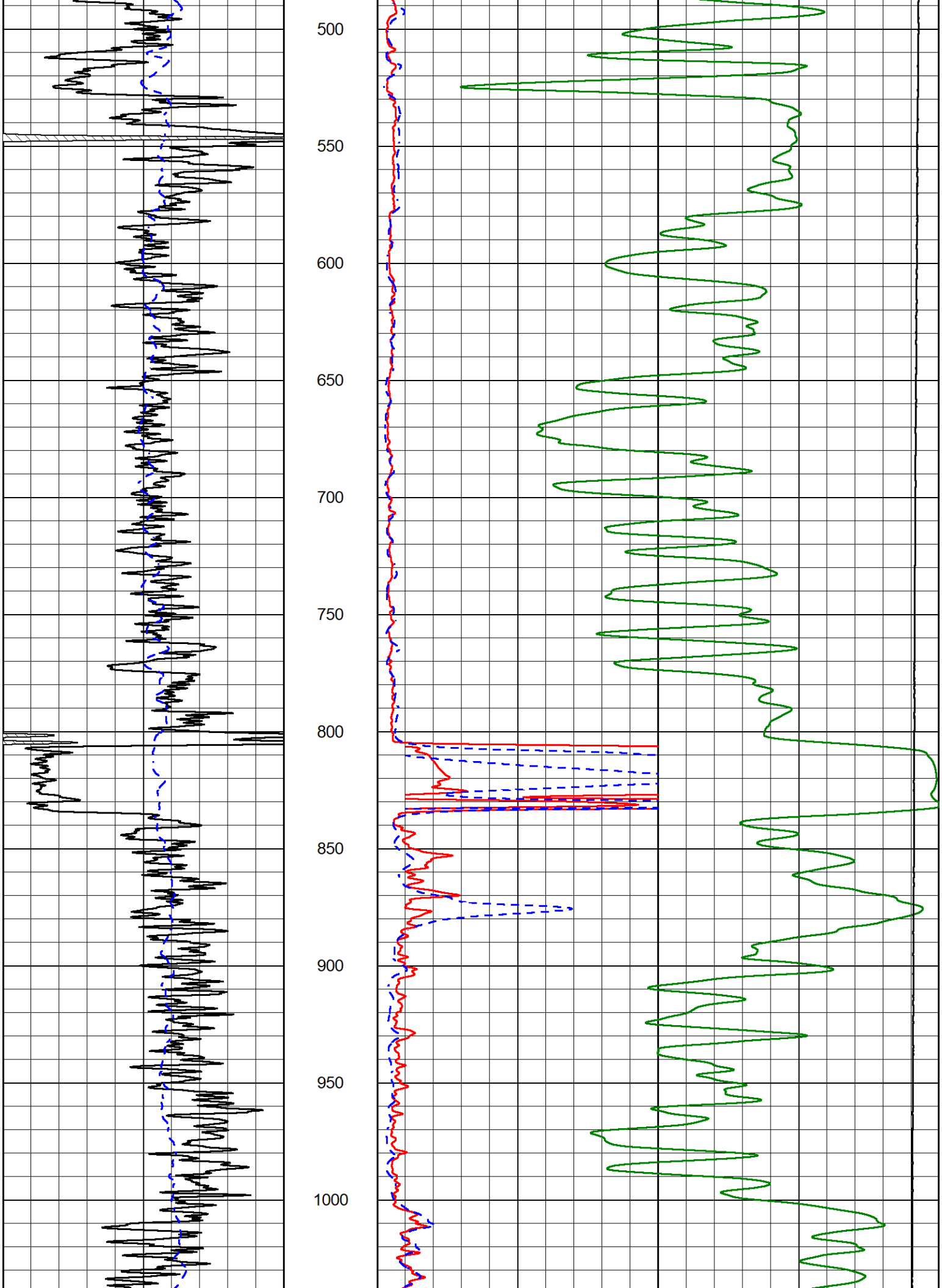
MIDWEST WIRELINE

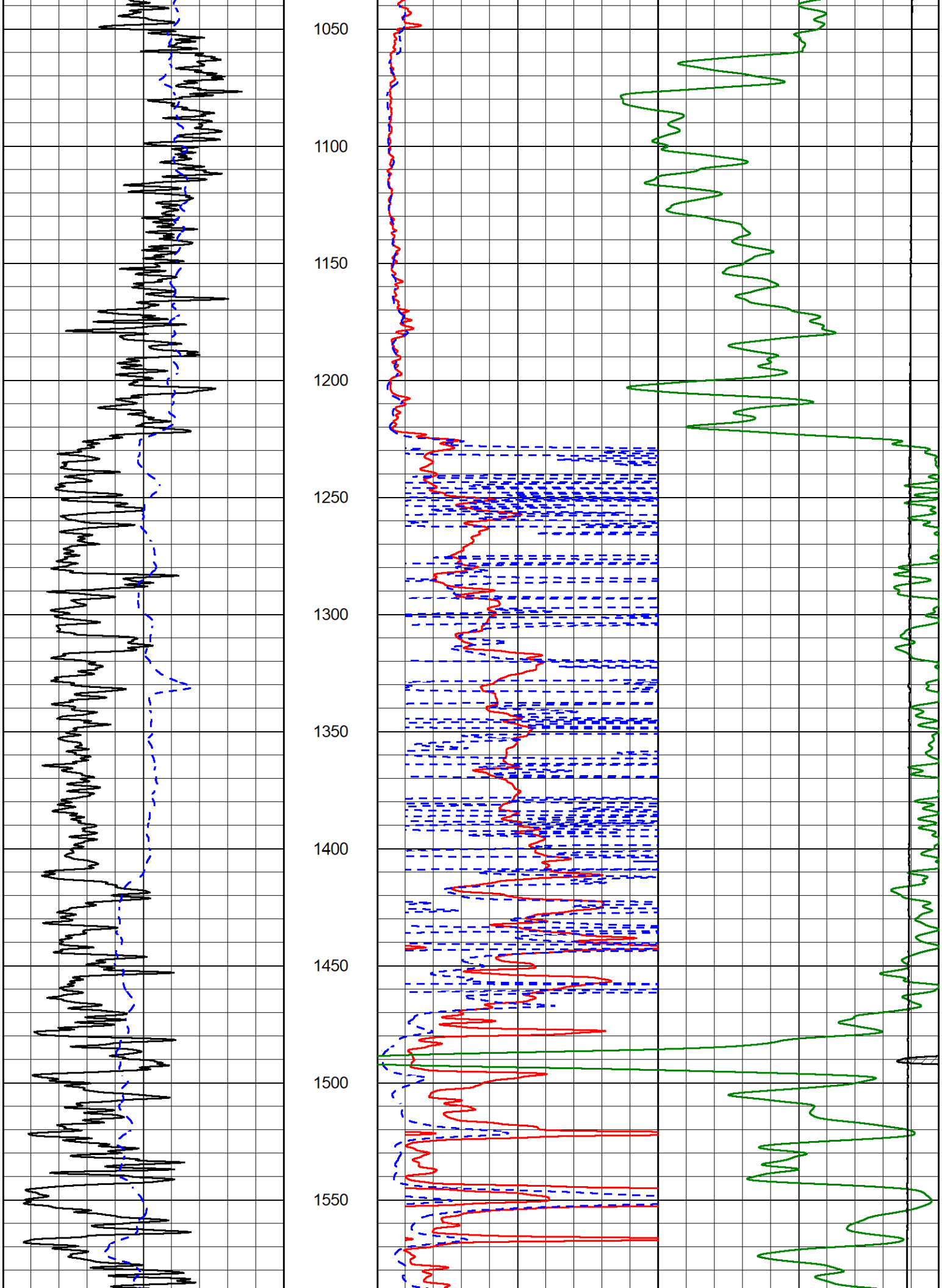
2" SCALE RESISTIVITY

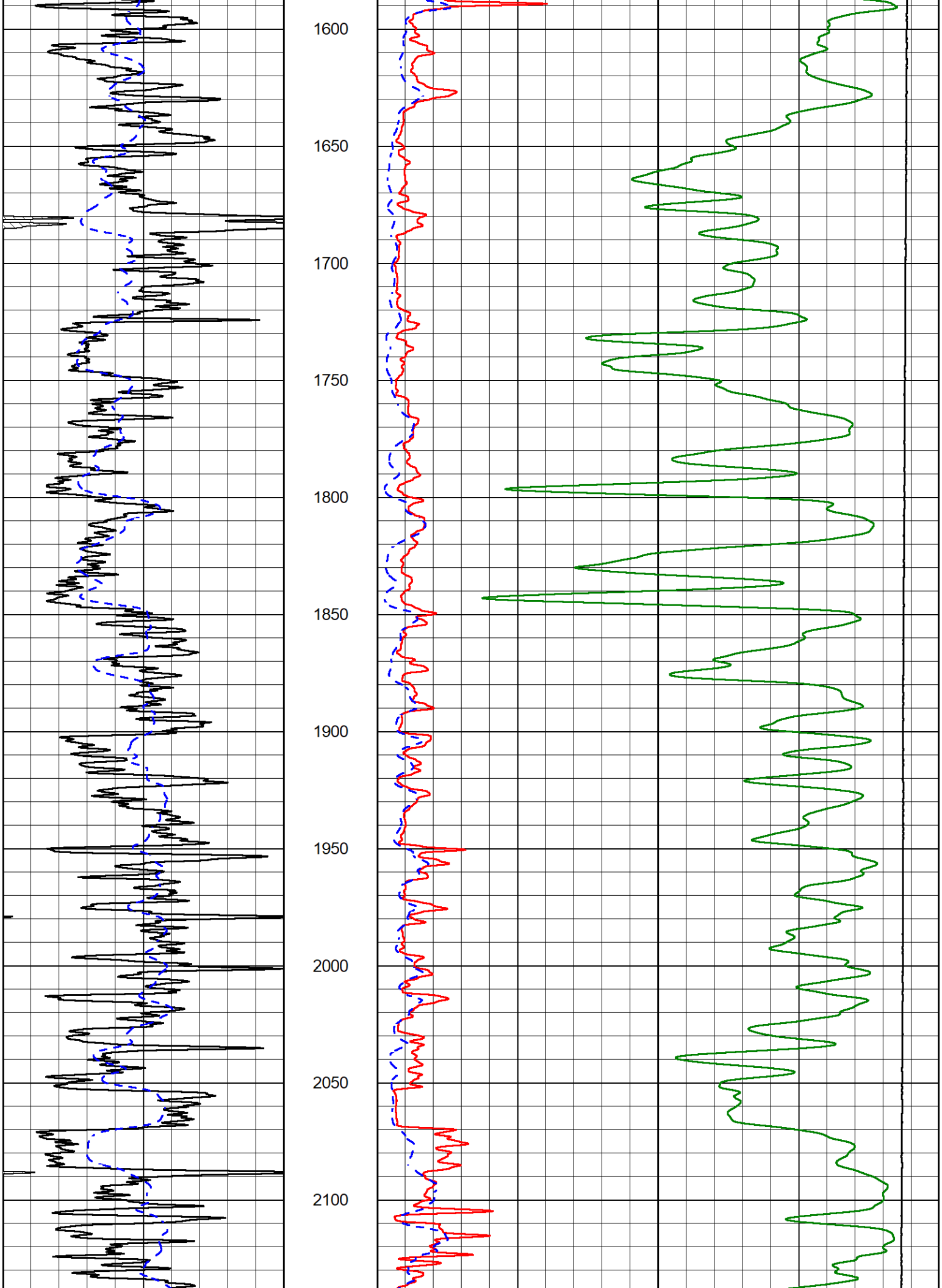
MAIN PASS

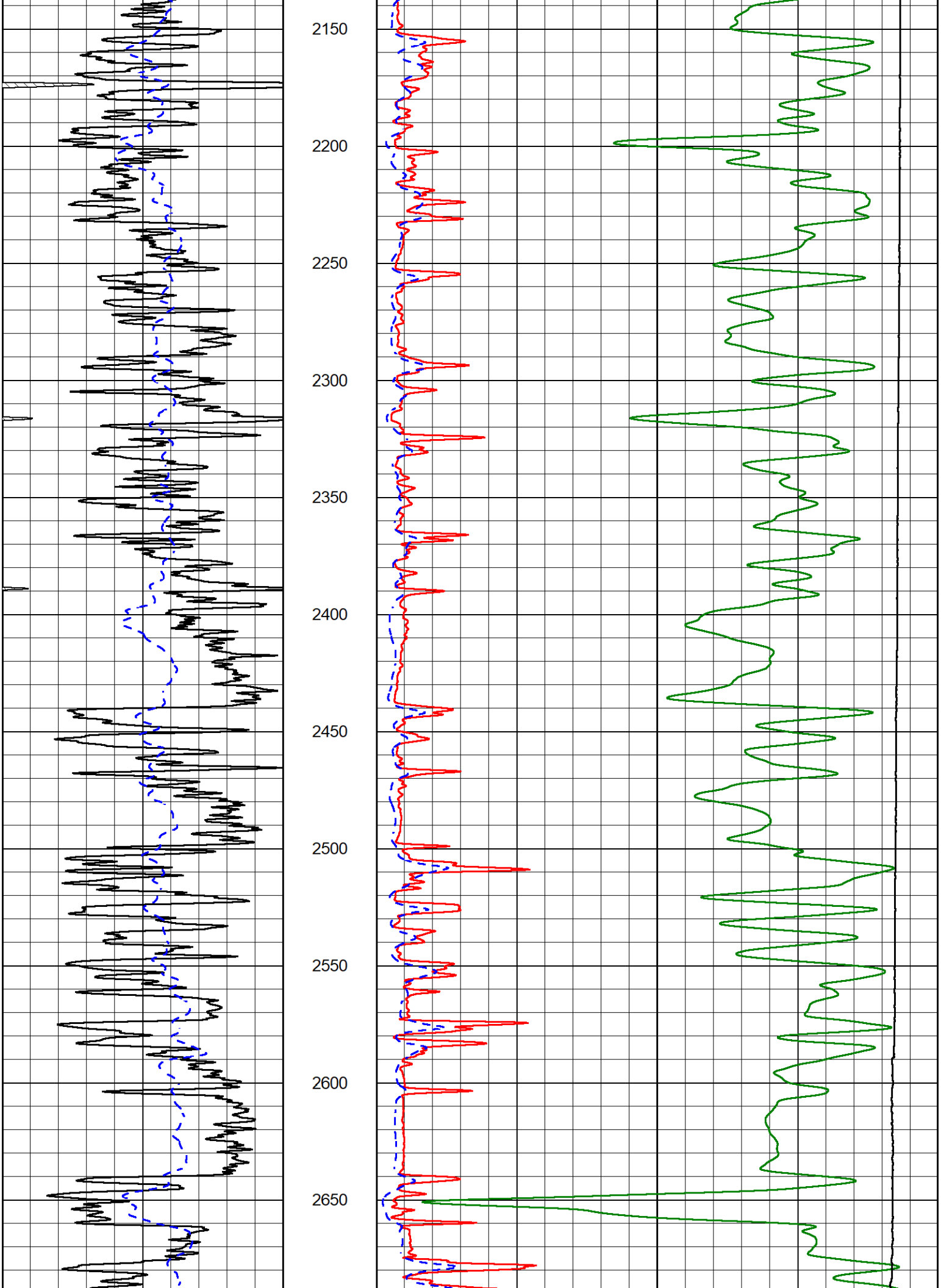
Database File	te-pe_steinle b 8.db
Dataset Pathname	stkml/pass3.3
Presentation Format	_dil2in
Dataset Creation	Sun Feb 12 08:20:08 2023
Charted by	Depth in Feet scaled 1:600

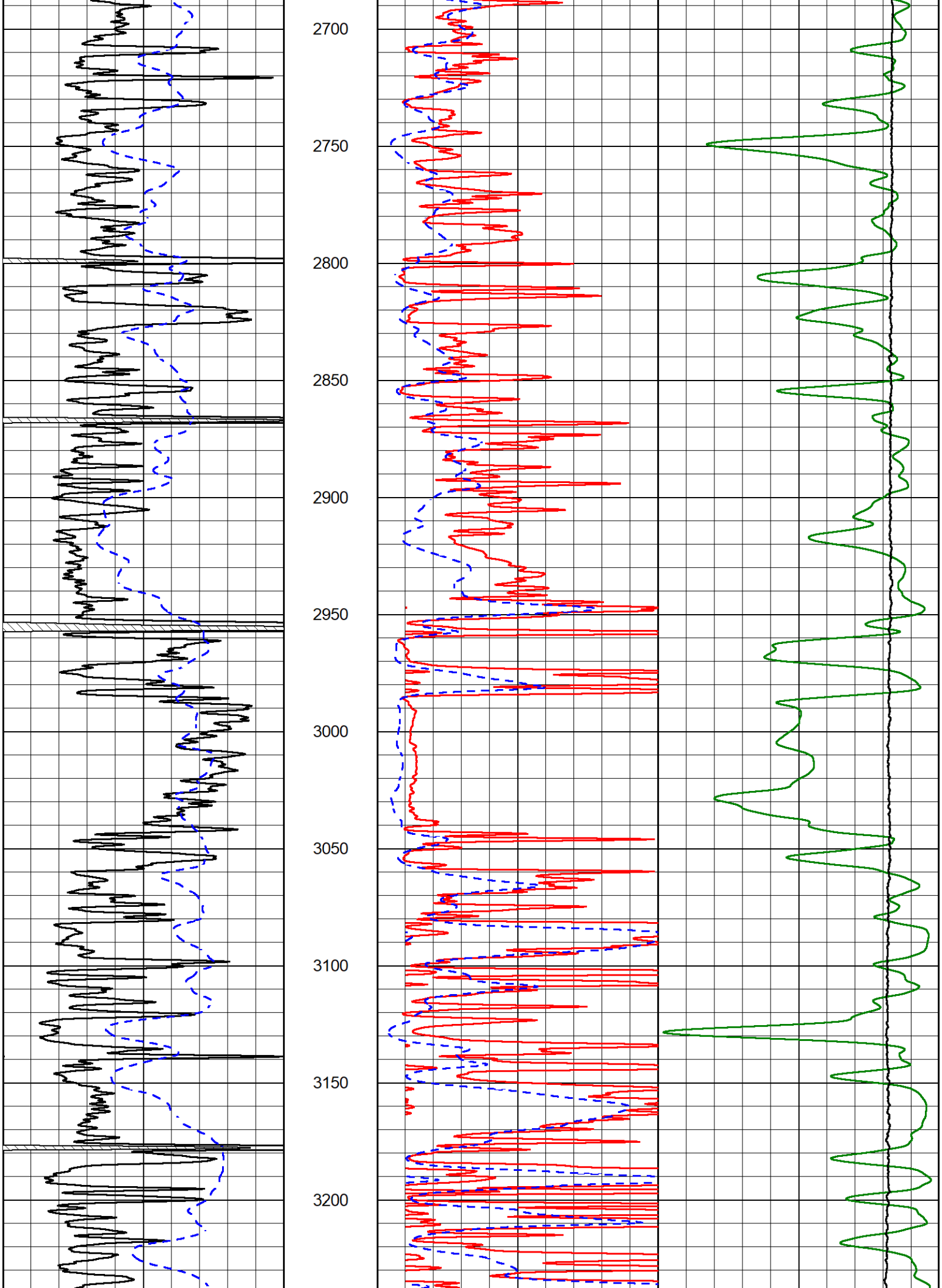


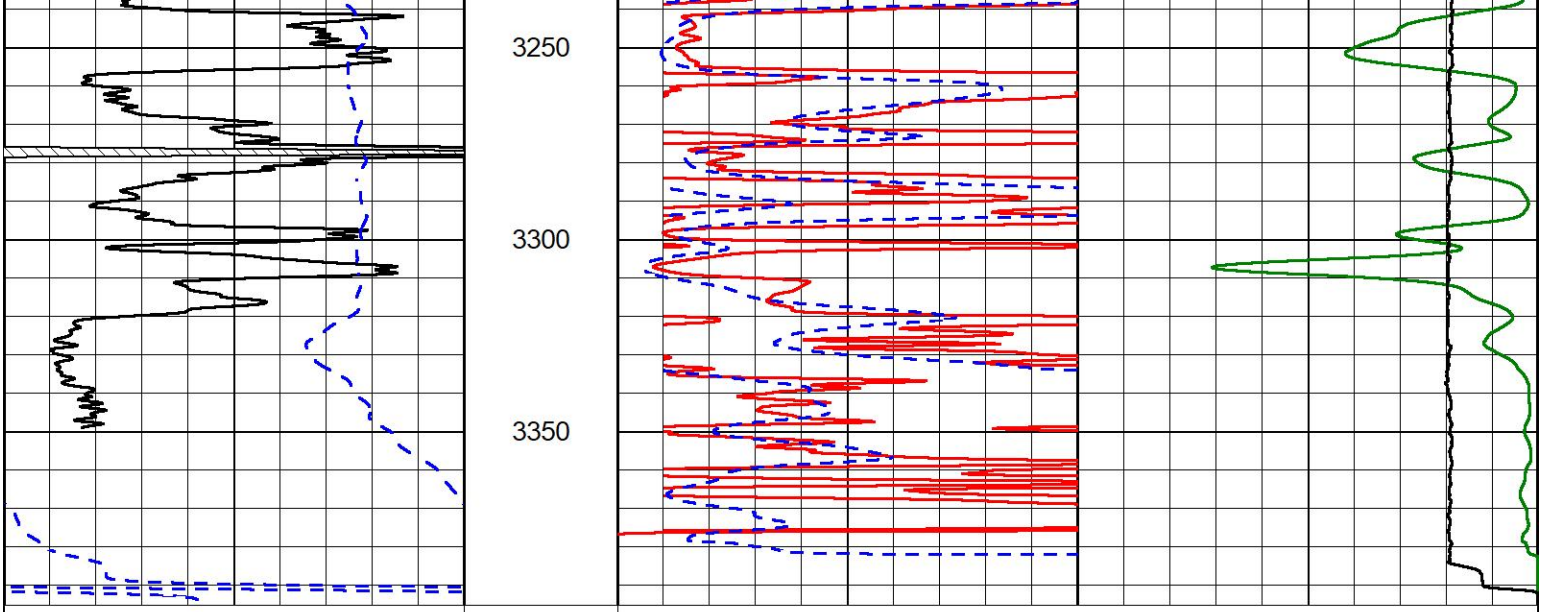

500
550
600
650
700
750
800
850
900
950
1000


1050
1100
1150
1200
1250
1300
1350
1400
1450
1500
1550


1600
1650
1700
1750
1800
1850
1900
1950
2000
2050
2100


2150
2200
2250
2300
2350
2400
2450
2500
2550
2600
2650


2700
2750
2800
2850
2900
2950
3000
3050
3100
3150
3200



0	Gamma Ray (GAPI)	150
-200	SP (mV)	0

1000	Conductivity (mmho/m)	0
15000	Line Tension (lb)	0
0	Shallow Resisitivity (Ohm-m)	50
0	Deep Resistivity (Ohm-m)	50
50	Shallow Resistivity (Ohm-m)	200
50	Deep Resistivity (Ohm-m)	200

MIDWEST WIRELINE

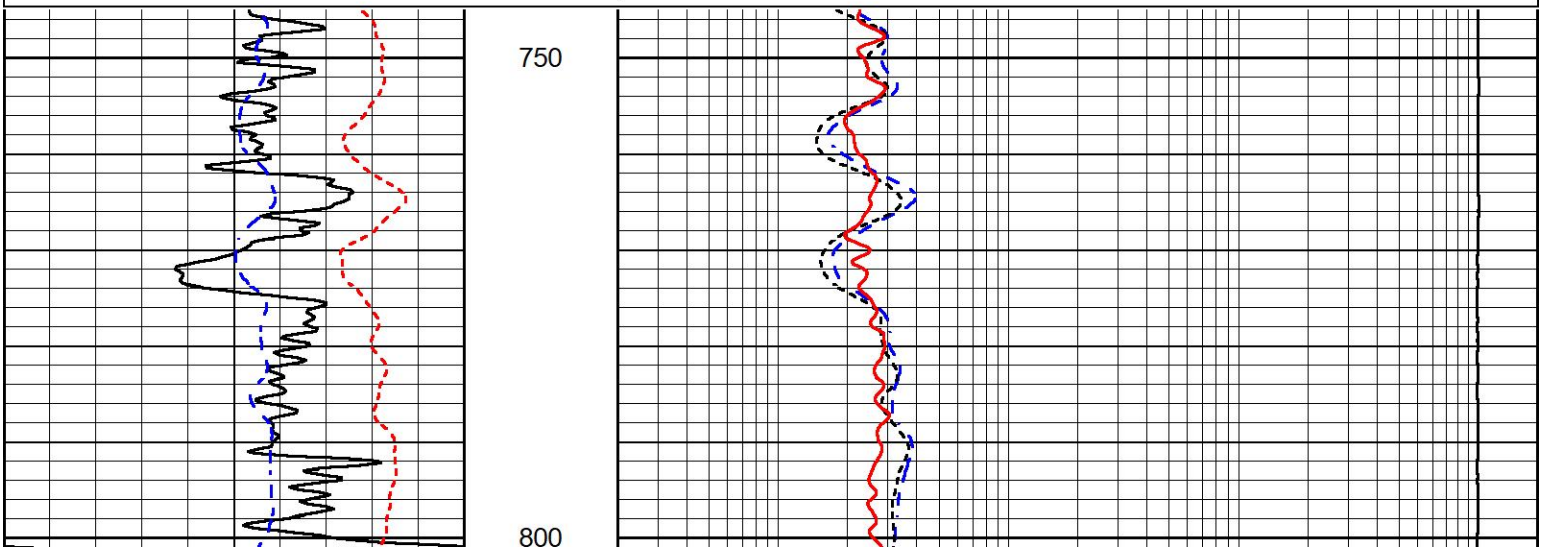
ANHYDRITE SECTION

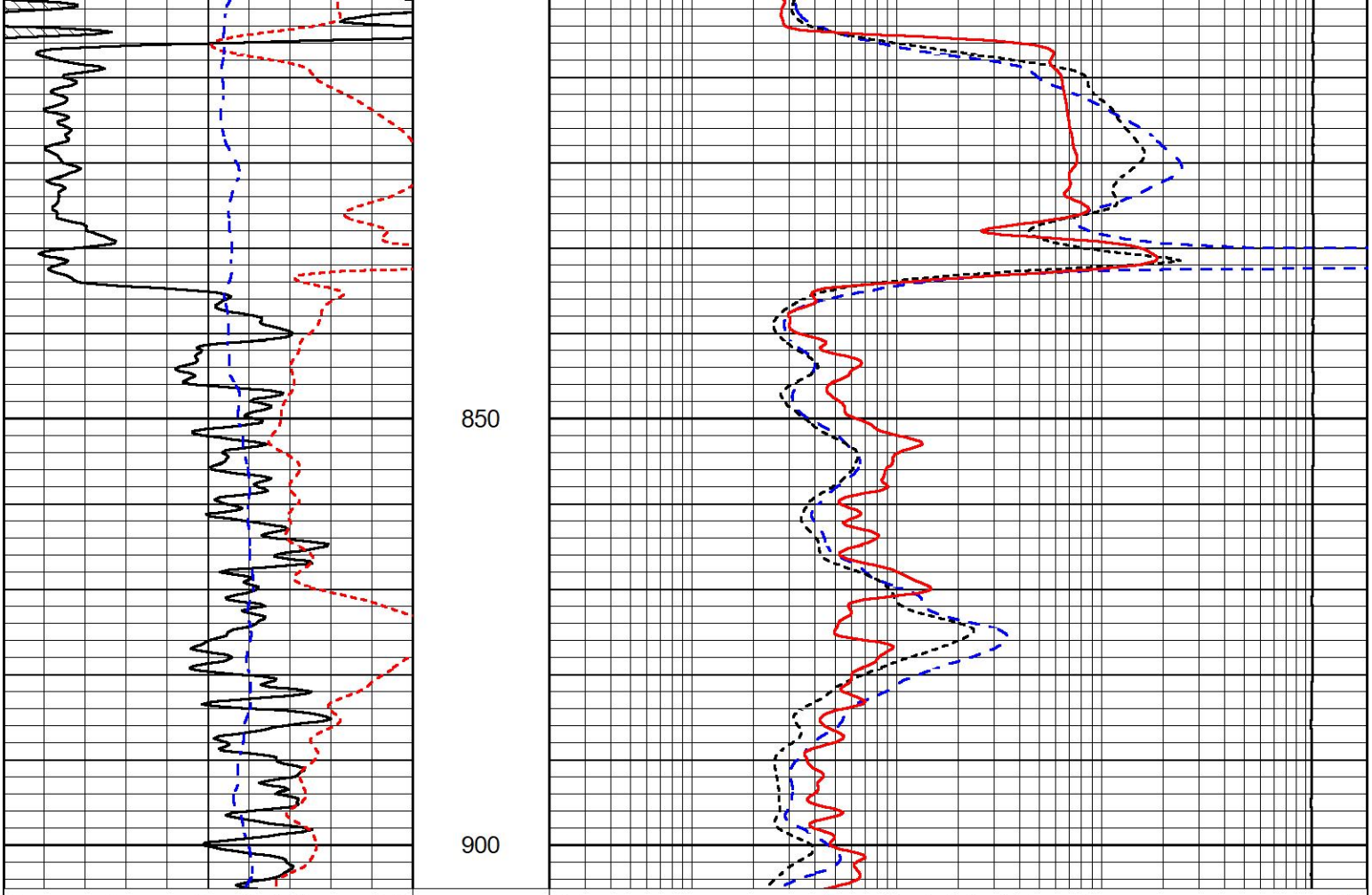
MAIN PASS

Database File	te-pe_steinle b 8.db
Dataset Pathname	stkml/pass3.4
Presentation Format	_dil
Dataset Creation	Sun Feb 12 08:20:15 2023
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0





0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0

MIDWEST WIRELINE

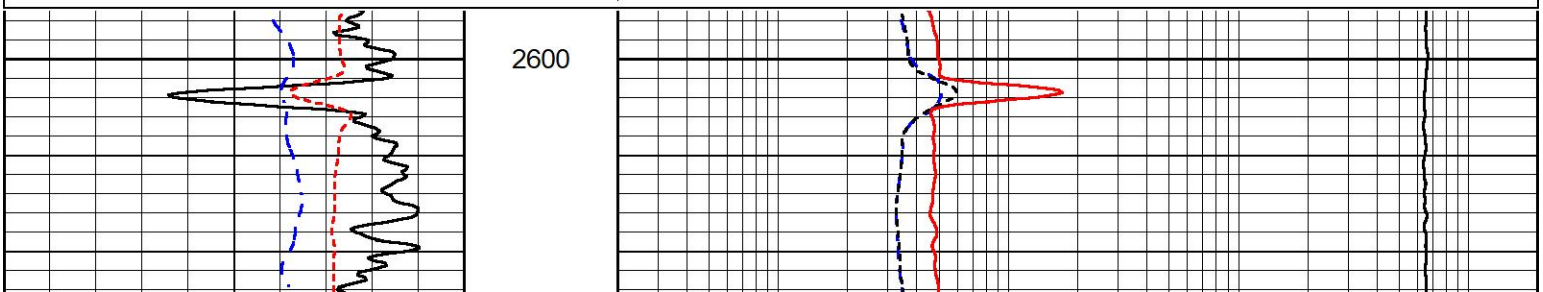
DETAIL SECTION

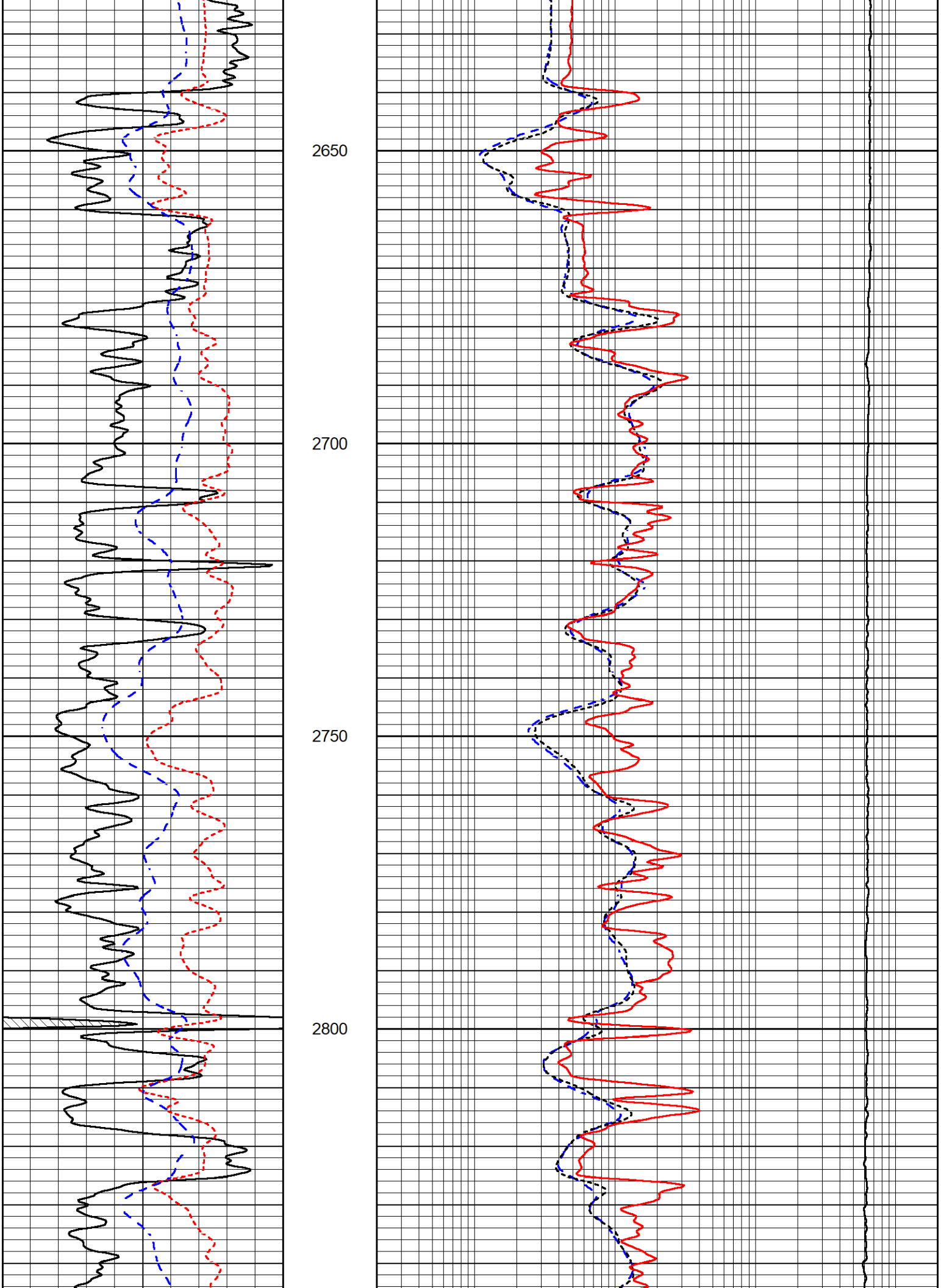
MAIN PASS

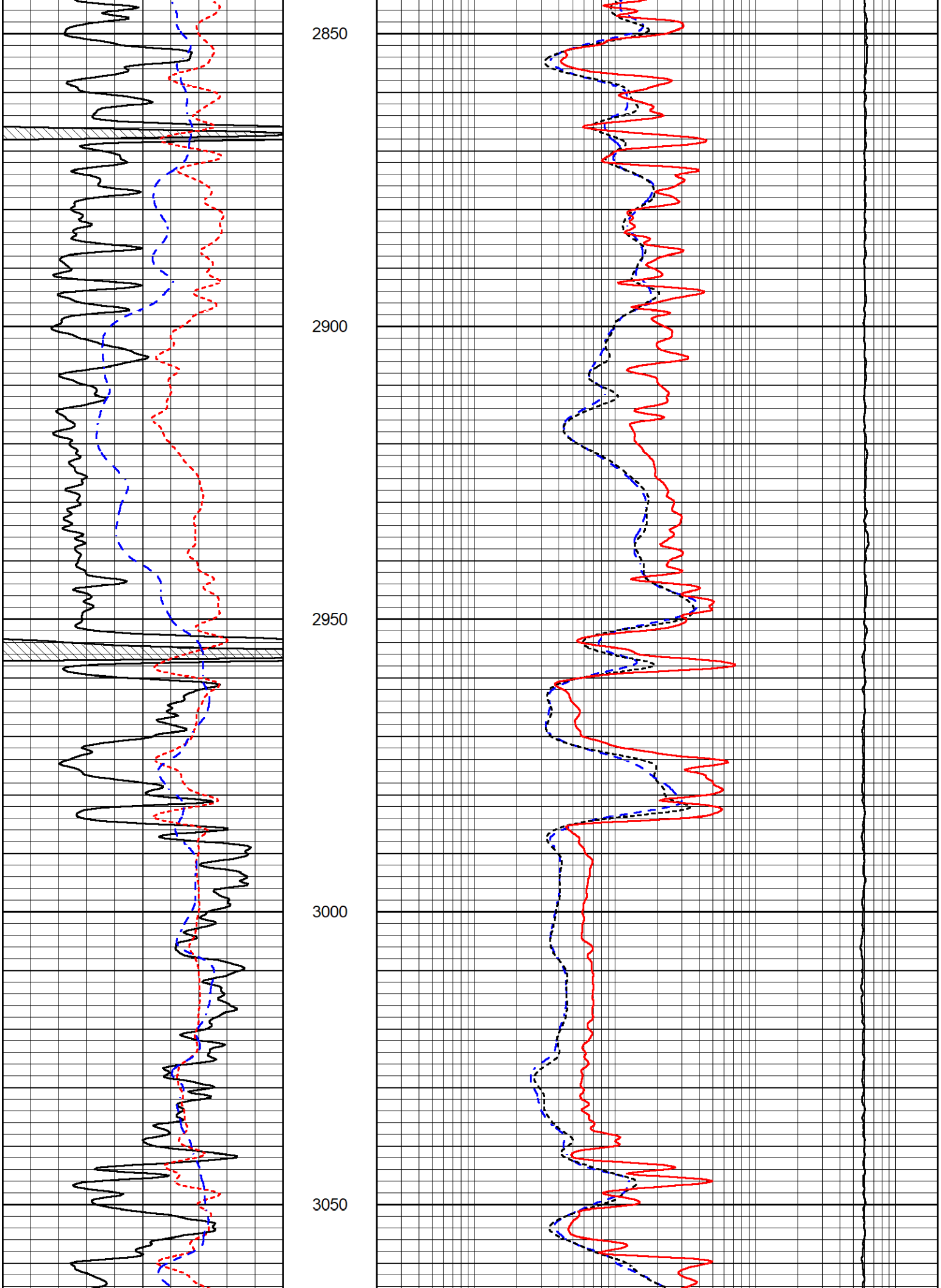
Database File	te-pe_steinle b 8.db
Dataset Pathname	stkml/pass3.1
Presentation Format	_dil
Dataset Creation	Sun Feb 12 08:07:28 2023
Charted by	Depth in Feet scaled 1:240

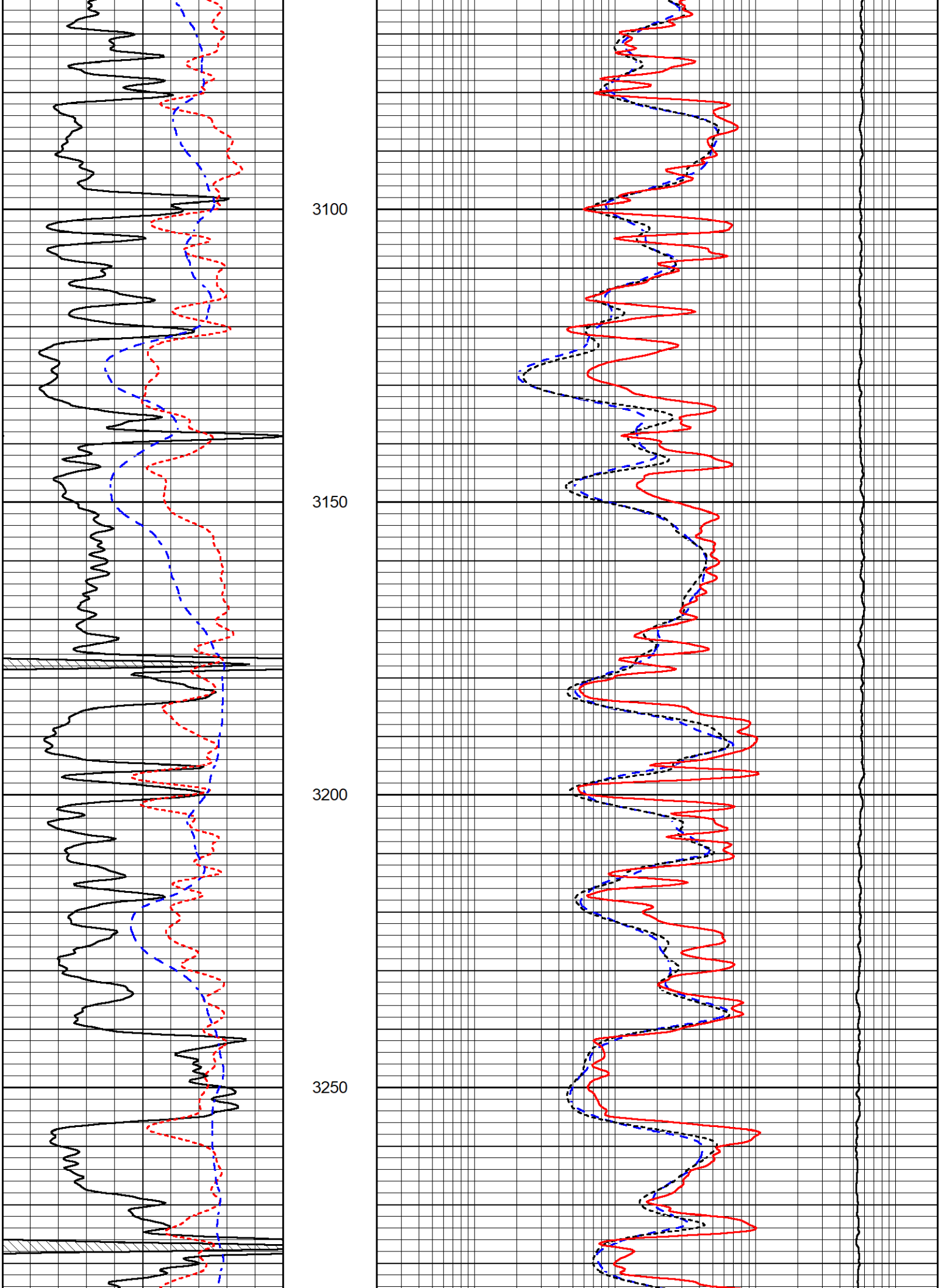
0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

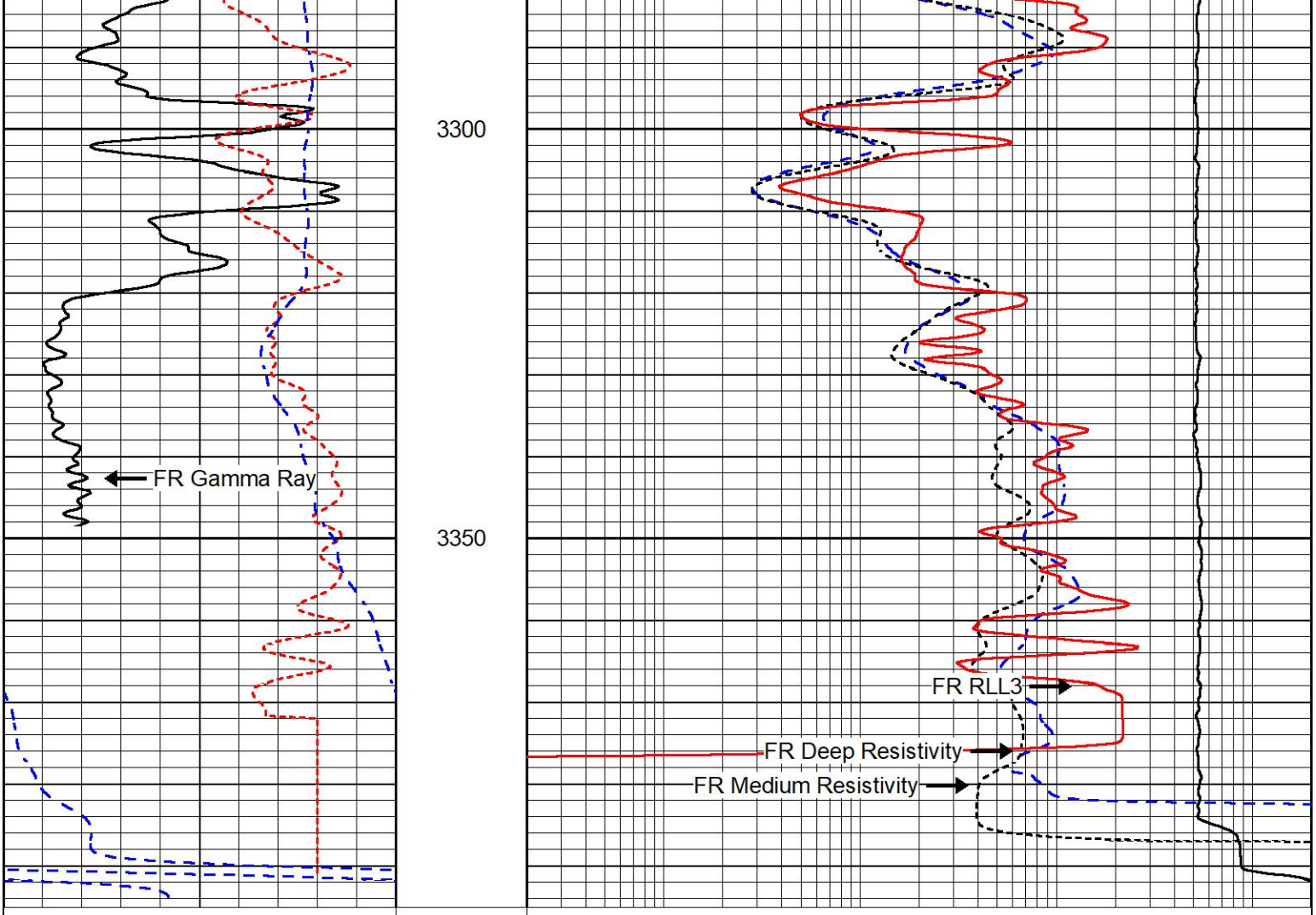
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0




2650
2700
2750
2800


2850
2900
2950
3000
3050


3100
3150
3200
3250



0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0

MIDWEST WIRELINE

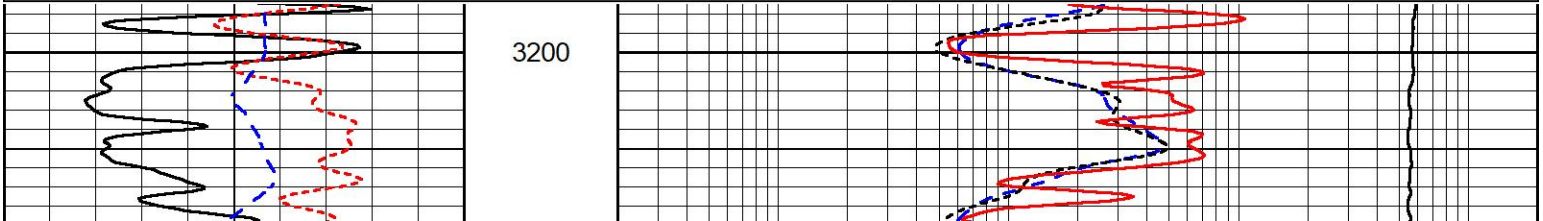
REPEAT SECTION

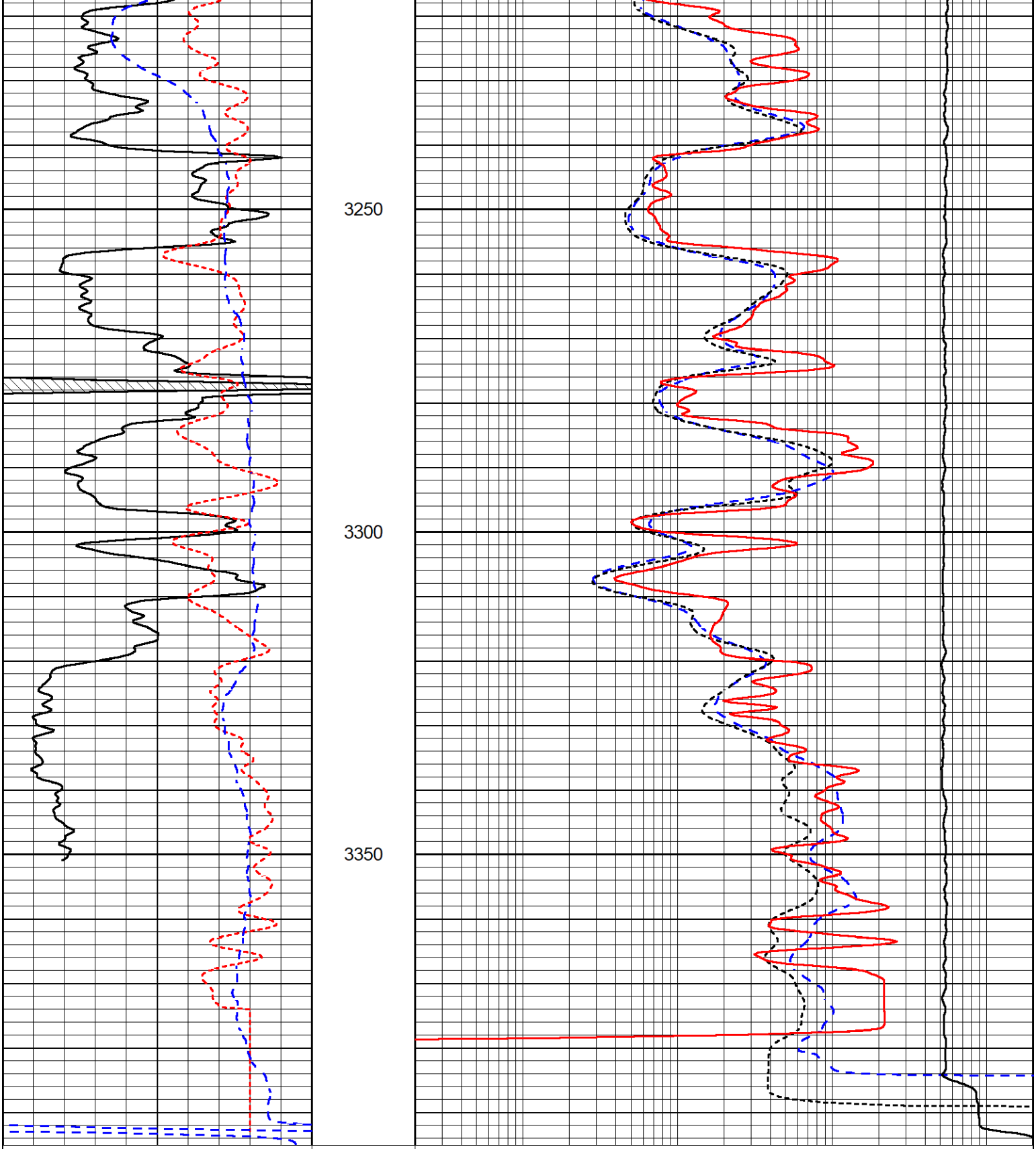
REPEAT PASS

Database File	te-pe_steinle b 8.db
Dataset Pathname	stkml/pass2.1
Presentation Format	_dil
Dataset Creation	Sun Feb 12 07:38:38 2023
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0





Calibration Report

Database File	te-pe_steinle b 8.db
Dataset Pathname	stkml/pass3.5
Dataset Creation	Sun Feb 12 07:45:06 2023

Dual Induction Calibration Report

Serial-Model: 502 HT-M&W
Surface Cal Performed: Tue Dec 6 09:44:10 2022

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		m	b
Deep	83.639	487.104	0.000	255.800	mmho/m	0.454	-33.000
Medium	113.335	1585.690	0.000	255.800	mmho/m	0.350	-9.000

Microlog Calibration Report

Serial-Model: 401-PSIML
Performed: Tue Jan 31 07:24:49 2023

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	19000.0000	-1.4000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	18000.0000	-0.9000
Caliper	1.0052	1.0858	5.0000	16.5000	in	142.7190	-139.0500

Compensated Density Calibration Report

Serial-Model: 307-08-M&W
Source #: 20762B
Master Calibration Performed: Thu Dec 8 14:11:34 2022

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4131.04	5675.82	cps
Aluminum	2.635	g/cc	781.38	3576.78	cps

Spine Angle = 74.50 Density/Spine Ratio = 0.509

	Size		Reading
Small Ring	6.00	in	1.16
Large Ring	18.00	in	1.01

Compensated Neutron Calibration Report

Serial Number: 207-MW
Tool Model: M&W

CALIBRATION

Detector	Readings		Target		Normalization
Short Space	6240.00	cps	1000.00	cps	1.6025
Long Space	460.00	cps	1000.00	cps	1.9500

PRE-SURVEY VERIFICATION

	Detector	Readings		Measured	Target
1)	Short Space		cps		
	Long Space		cps	pu	pu

2)	Short Space	cps	
	Long Space	cps	pu
3)	Short Space	cps	
	Long Space	cps	pu

POST-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space	cps		
	Long Space	cps	pu	pu
2)	Short Space	cps		
	Long Space	cps	pu	pu
3)	Short Space	cps		
	Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number:	106	
Tool Model:	M&W	
Performed:	Fri Dec 3 15:10:46 2021	
Calibrator Value:	500.0	GAPI
Background Reading:	24.0	cps
Calibrator Reading:	637.0	cps
Sensitivity:	0.5500	GAPI/cps

MIDWEST WIRELINE

Company	Te-Pe Oil & Gas
Well	Steinle B #8
Field	Hall-Gurney
County	Russell
State	Kansas