MIDWEST WIRELINE

DUAL INDUCTION LOG

Company Satchell Creek Petroleum LLC
Well Liggett A-1
Field
County Butler
State Kansas

Location: SE NW SE NE
1915 FNL & 711 FEL
SEC 34 TWP 25S RGE 7E

API # : 15-015-24174-00-00

State Kansas

Other Services
CNL/CDL
MEL/BHCS

Elevation
K.B. 1497
D.F.
G.L. 1485

Permanent Datum Ground Level Elevation 1485
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

Date	11/13/2022		
Run Number	One		
Depth Driller	3260		
Depth Logger	3261		
Bottom Logged Interval	3260		
Top Log Interval	250		
Casing Driller	8.625 @ 264		
Casing Logger	266		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	4000		
Density / Viscosity	9.6 / 49		
pH / Fluid Loss	10.6 / 7.2		
Source of Sample	Flowline		
Rm @ Meas. Temp	0.95 @ 70		
Rmf @ Meas. Temp	0.71 @ 70		
Rmc @ Meas. Temp	1.28 @ 70		
Source of Rmf / Rmc	Charts		
Rm @ BHT	0.61 @ 109		
Operating Rig Time	4 Hours		
Max Rec. Temp. F	109		
Equipment Number	P-24		
Location	Hays		
Recorded By	T. Martin		
Witnessed By	Carl Jordan		

<<< Fold Here >>>

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

Rosalia, KS, 2 W to Satchell Creek Rd,
1 N, 1/4 E, 2/3 N, E into

Log Measured From: Kelly Bushing 12 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: T. Martin	Primary Witness: Carl Jordan
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 (305-24)	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: satchell creek_liggett a-1.db: field/well/StkMl/pass3.1
Total length: 42.33 ft
Total weight: 685.00 lb
O.D.: 4.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\satchell creek_liggett a-1.db
Dataset field/well/StkMI/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	109	5.5	0	1	2	2.71

NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	0	0	-140	40	Off	3261

Variable Description

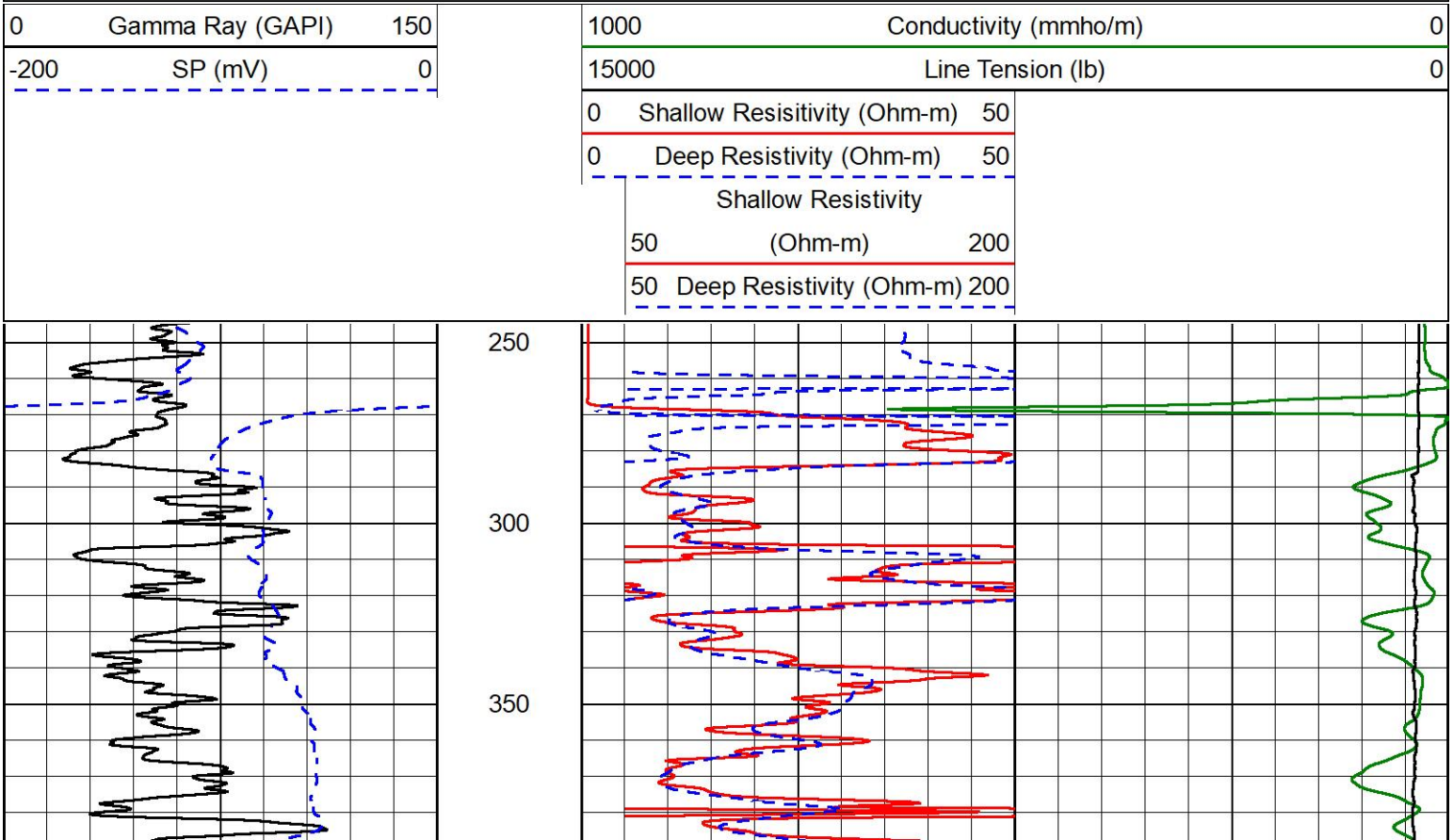
A : Cement Factor (a)
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
FLUIDDEN : Fluid Density
M : Cement Exp (m)
MATRXDEN : Matrix Density
NPORSEL : Neutron Porosity Curve Select
PERFS : Perforation Flag
SNDERR : Deep Sonde Error Correction
SNDERRM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

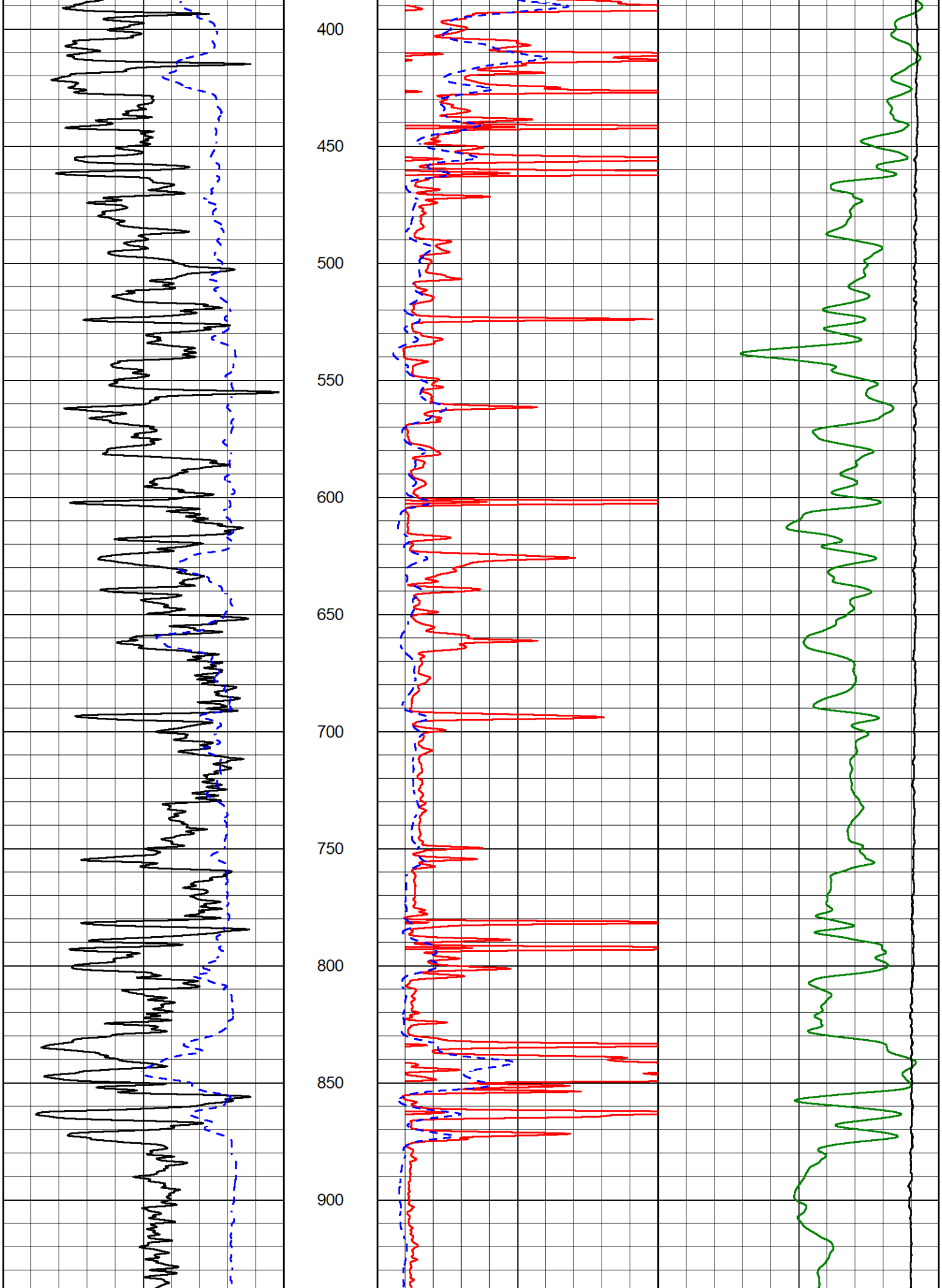
MIDWEST WIRELINE

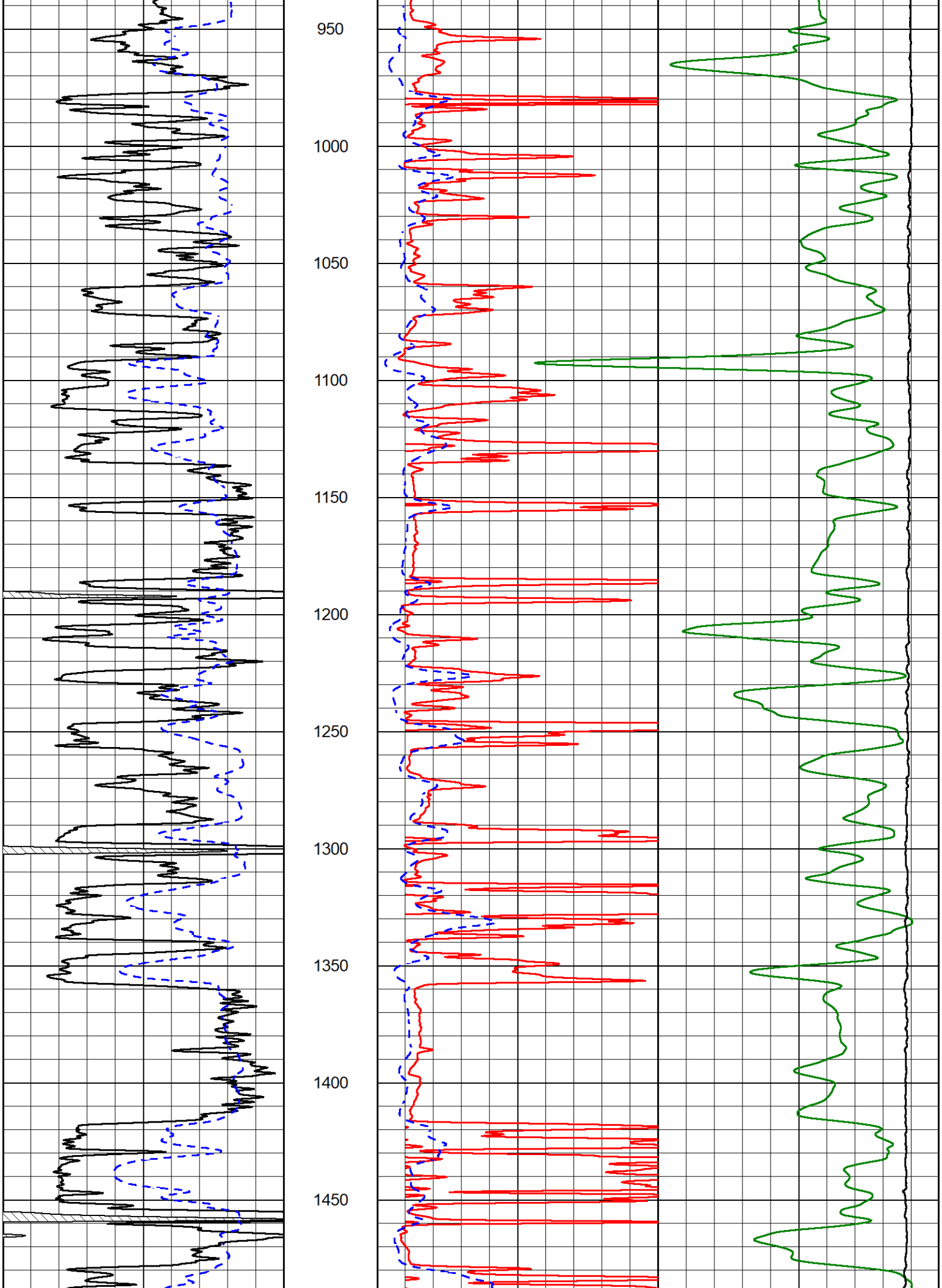
2" SCALE RESISTIVITY

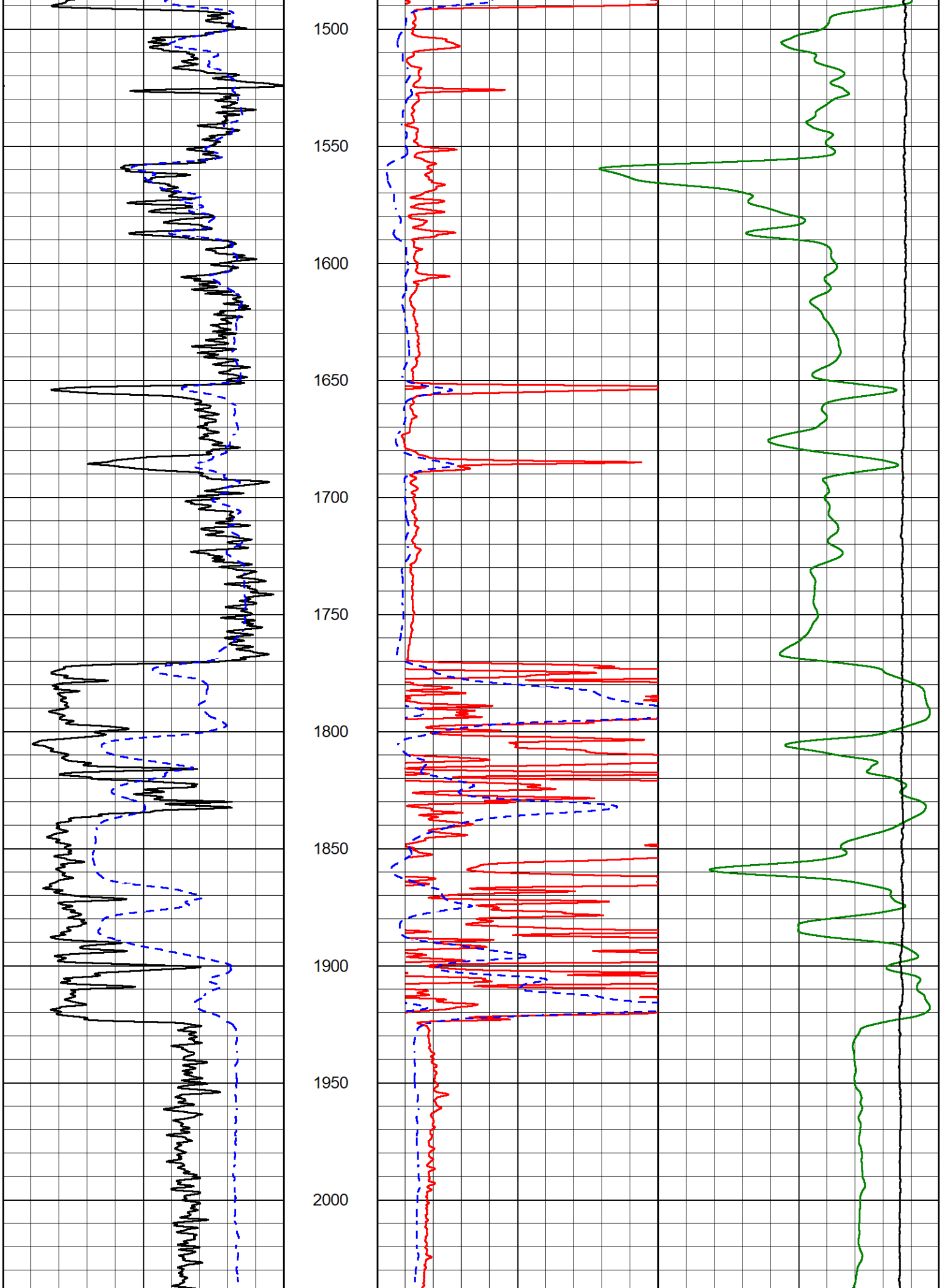
MAIN PASS

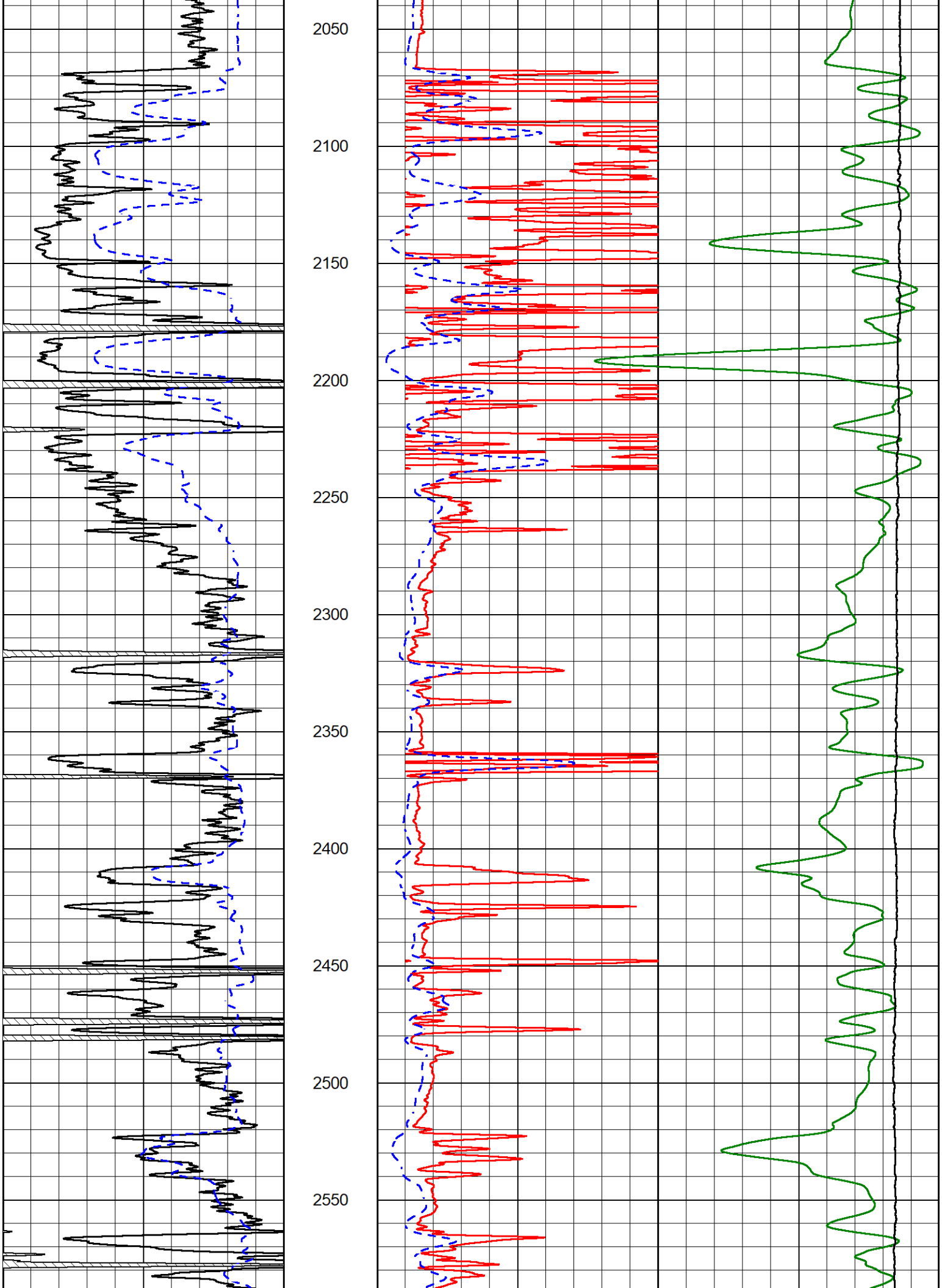
Database File	satchell creek_liggett a-1.db
Dataset Pathname	StkMI/pass3.2
Presentation Format	_dil2in
Dataset Creation	Sun Nov 13 19:15:31 2022
Charted by	Depth in Feet scaled 1:600

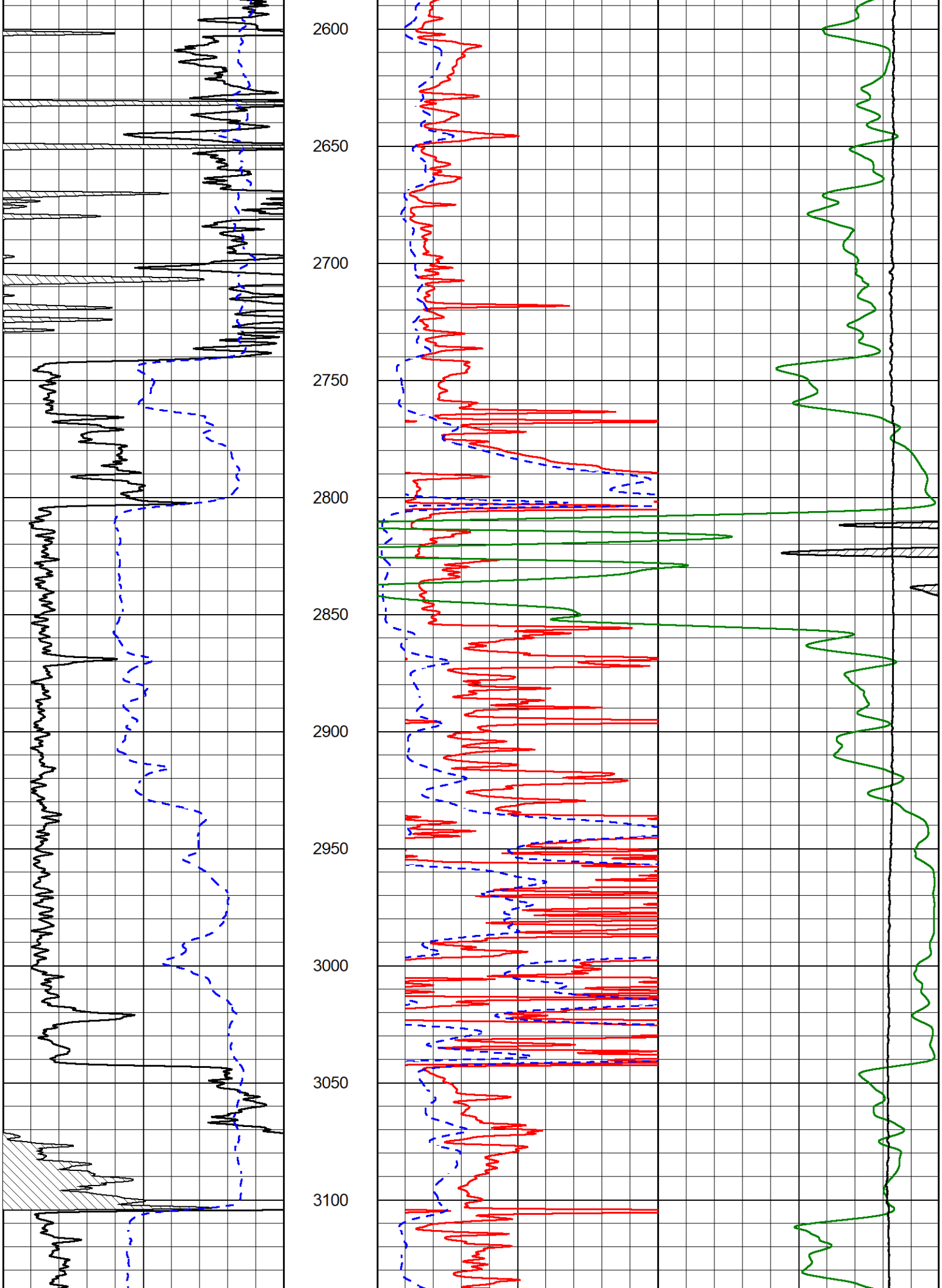


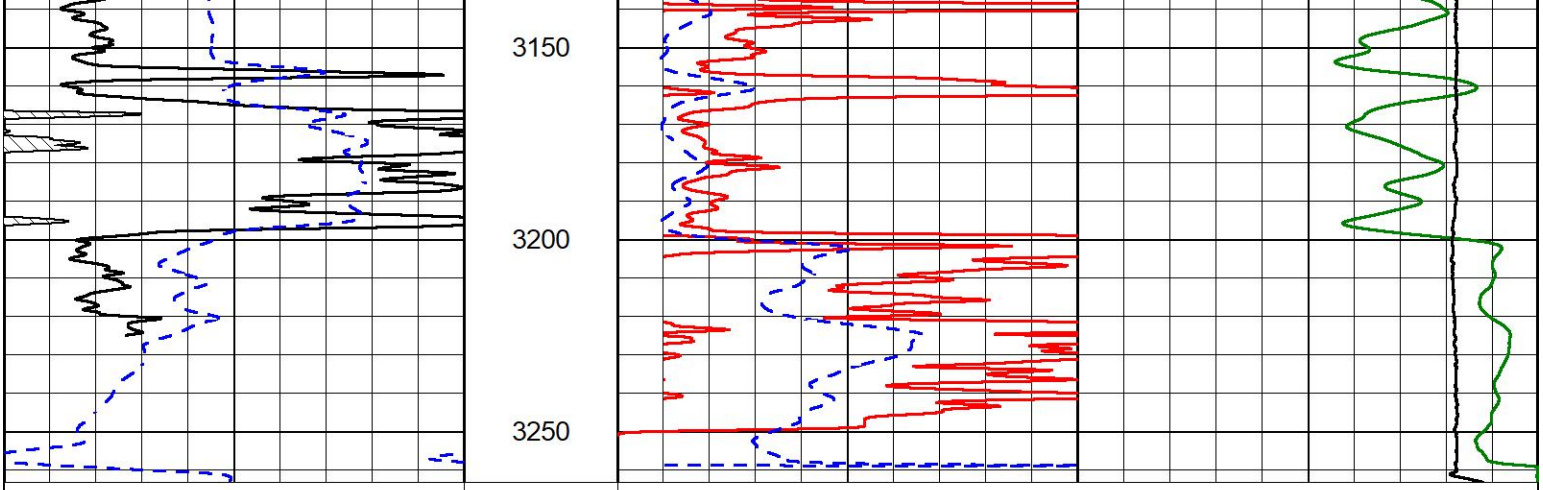

400
450
500
550
600
650
700
750
800
850
900


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



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

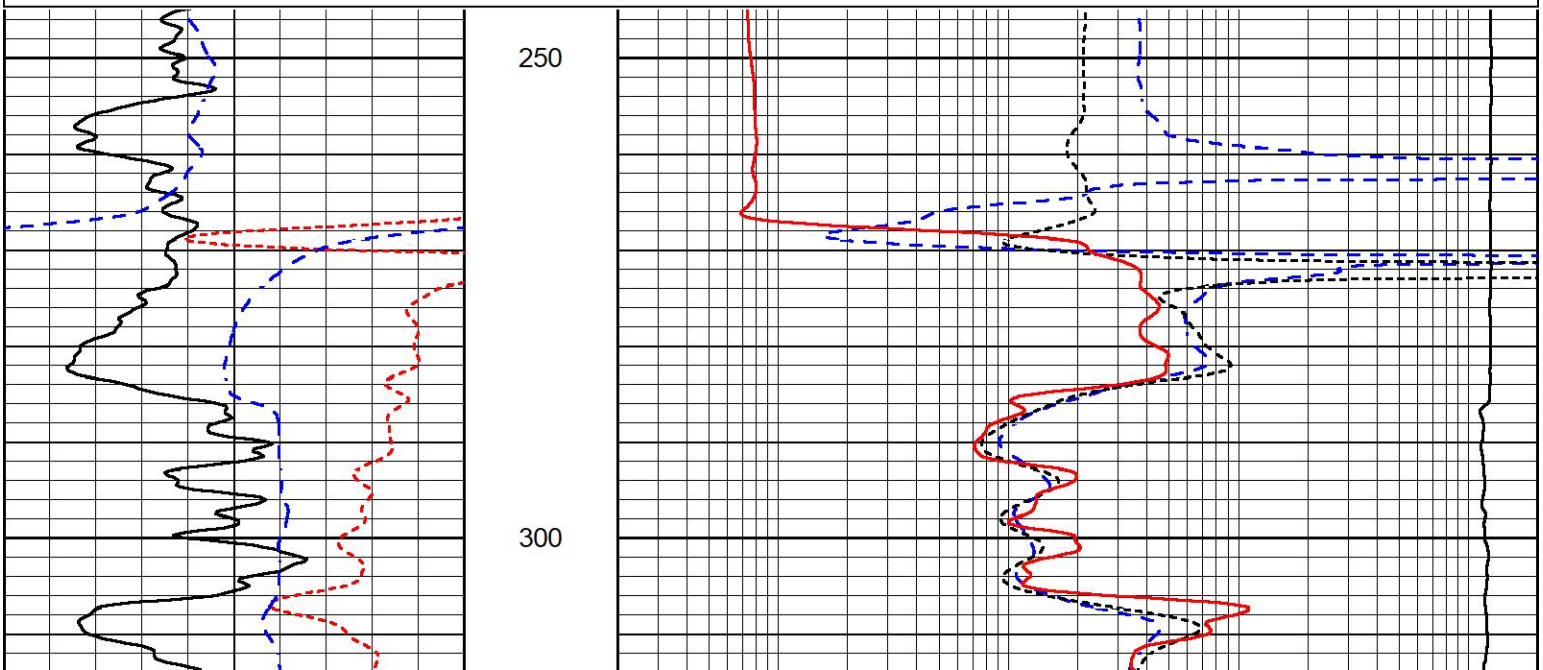
MIDWEST WIRELINE

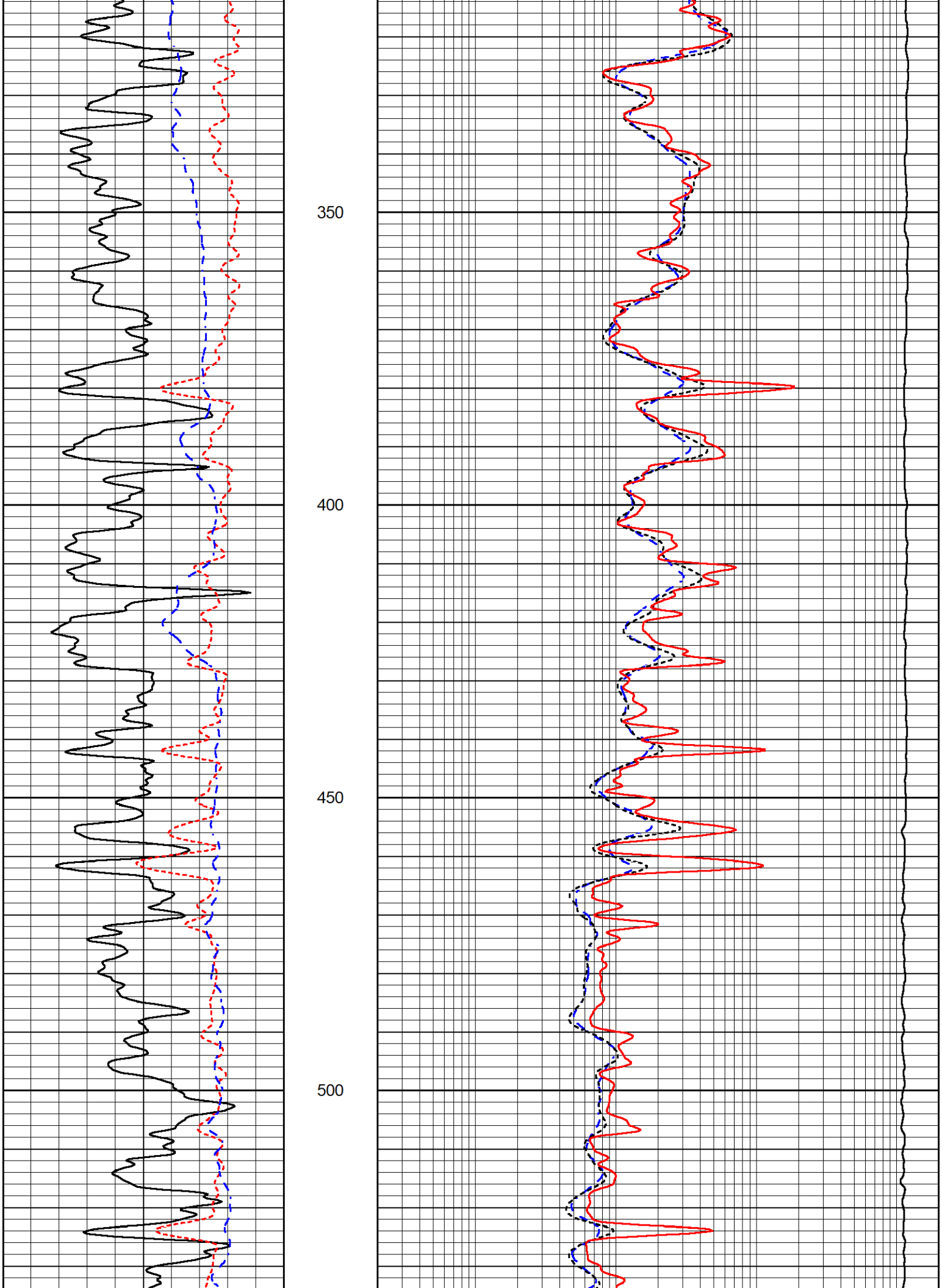
DETAIL SECTION

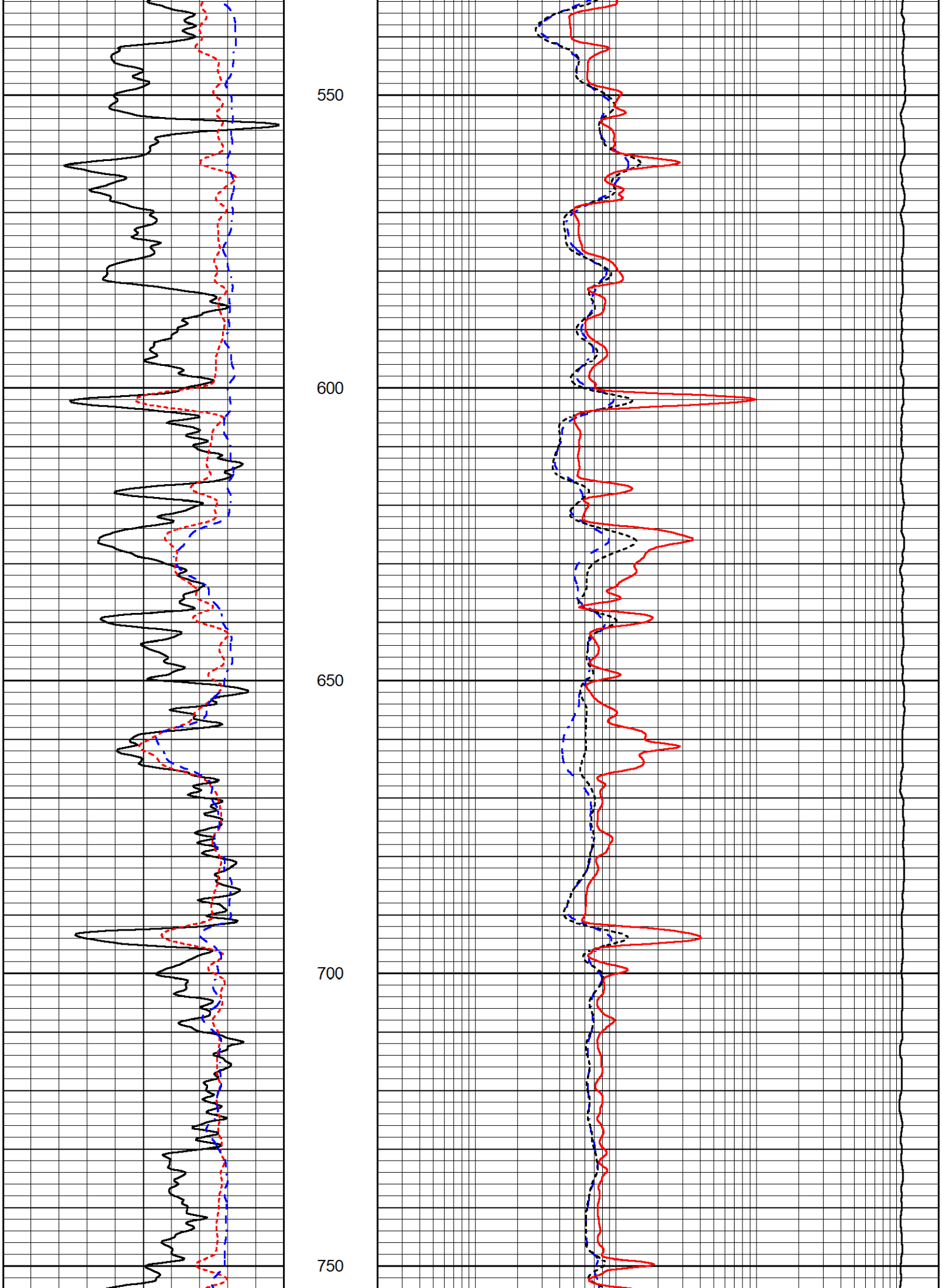
MAIN PASS

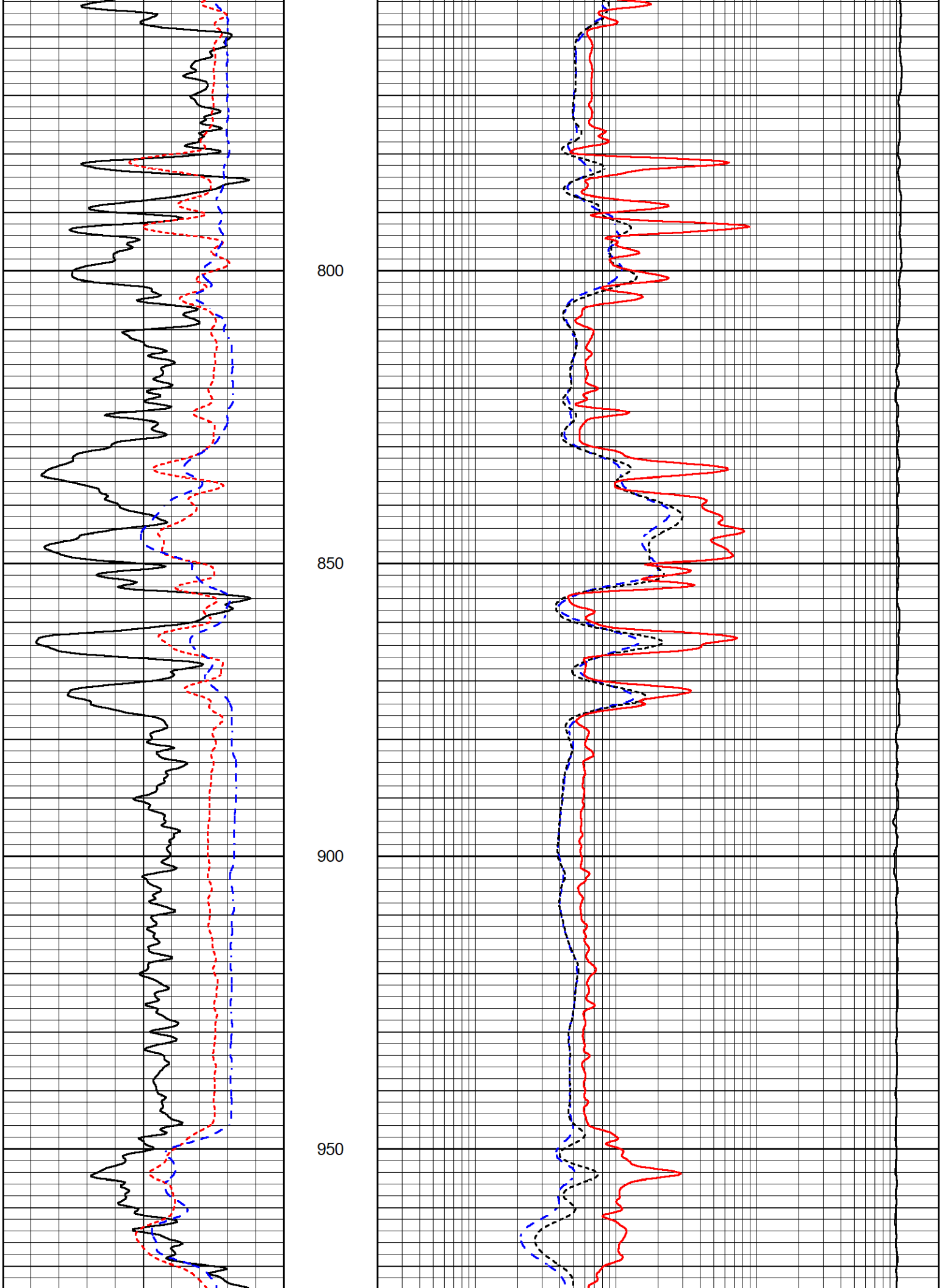
Database File	satchell creek_liggett a-1.db
Dataset Pathname	StkMI/pass3.1
Presentation Format	_dil
Dataset Creation	Sun Nov 13 19:15:45 2022
Charted by	Depth in Feet scaled 1:240

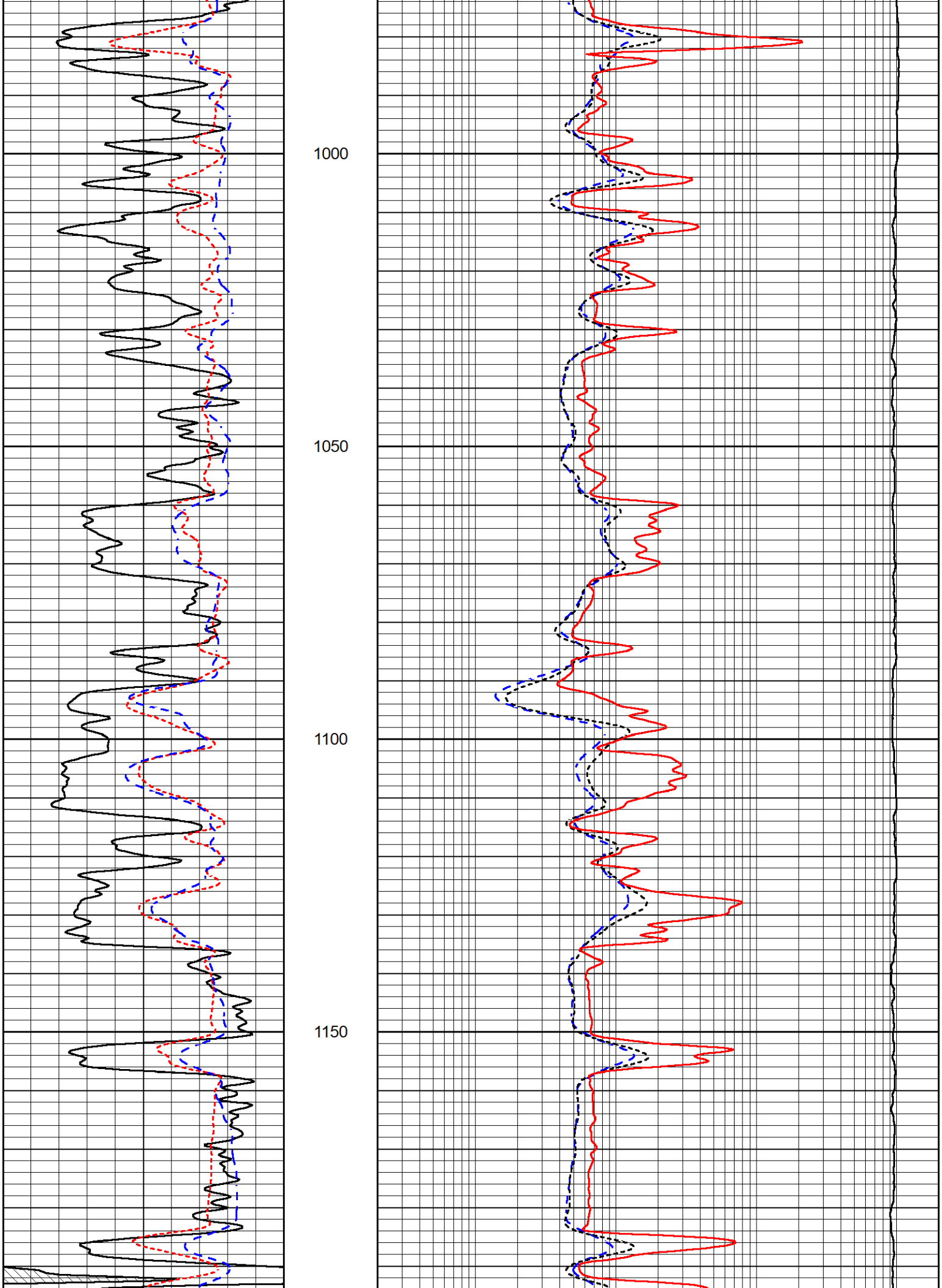
0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0

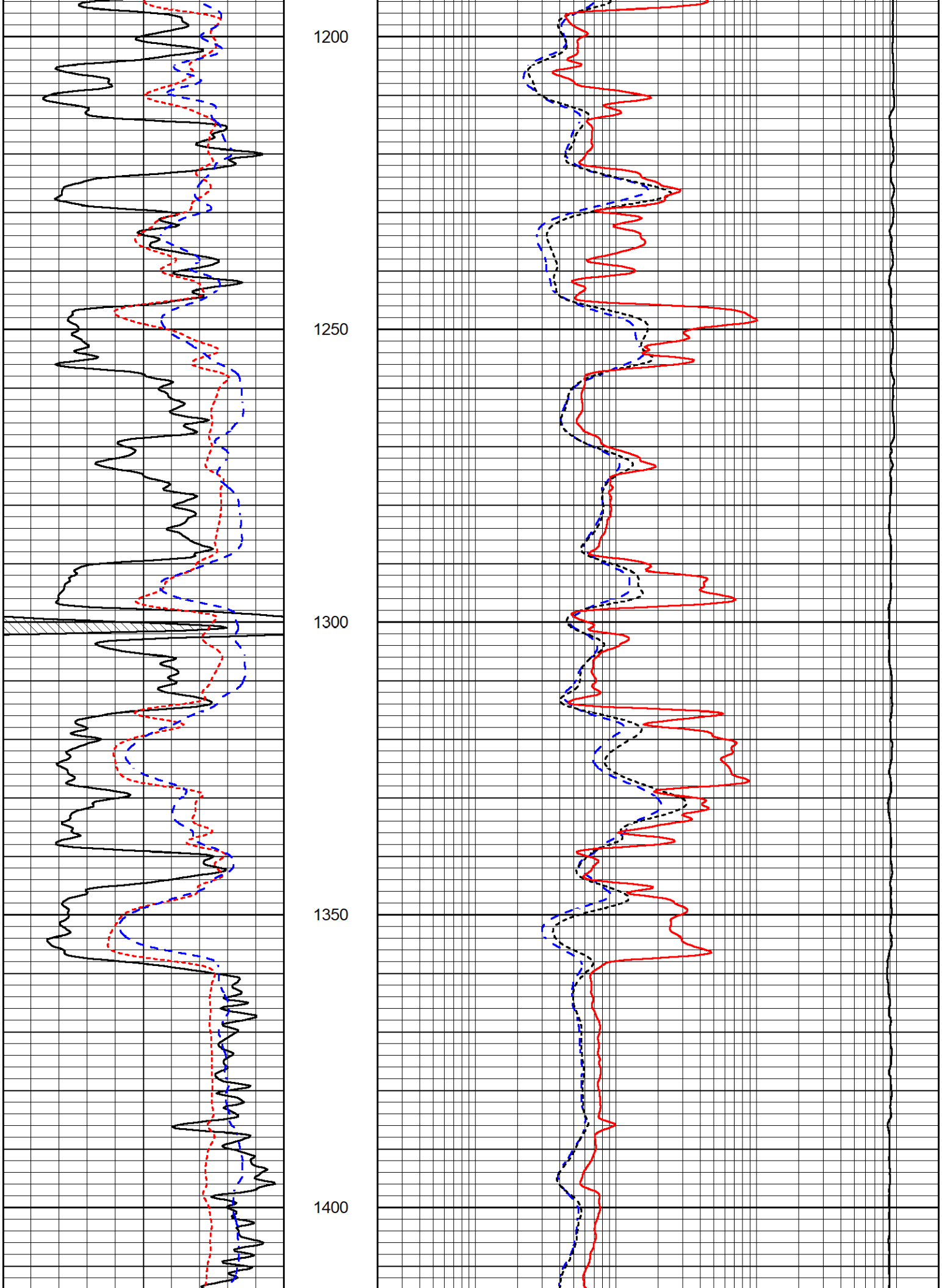


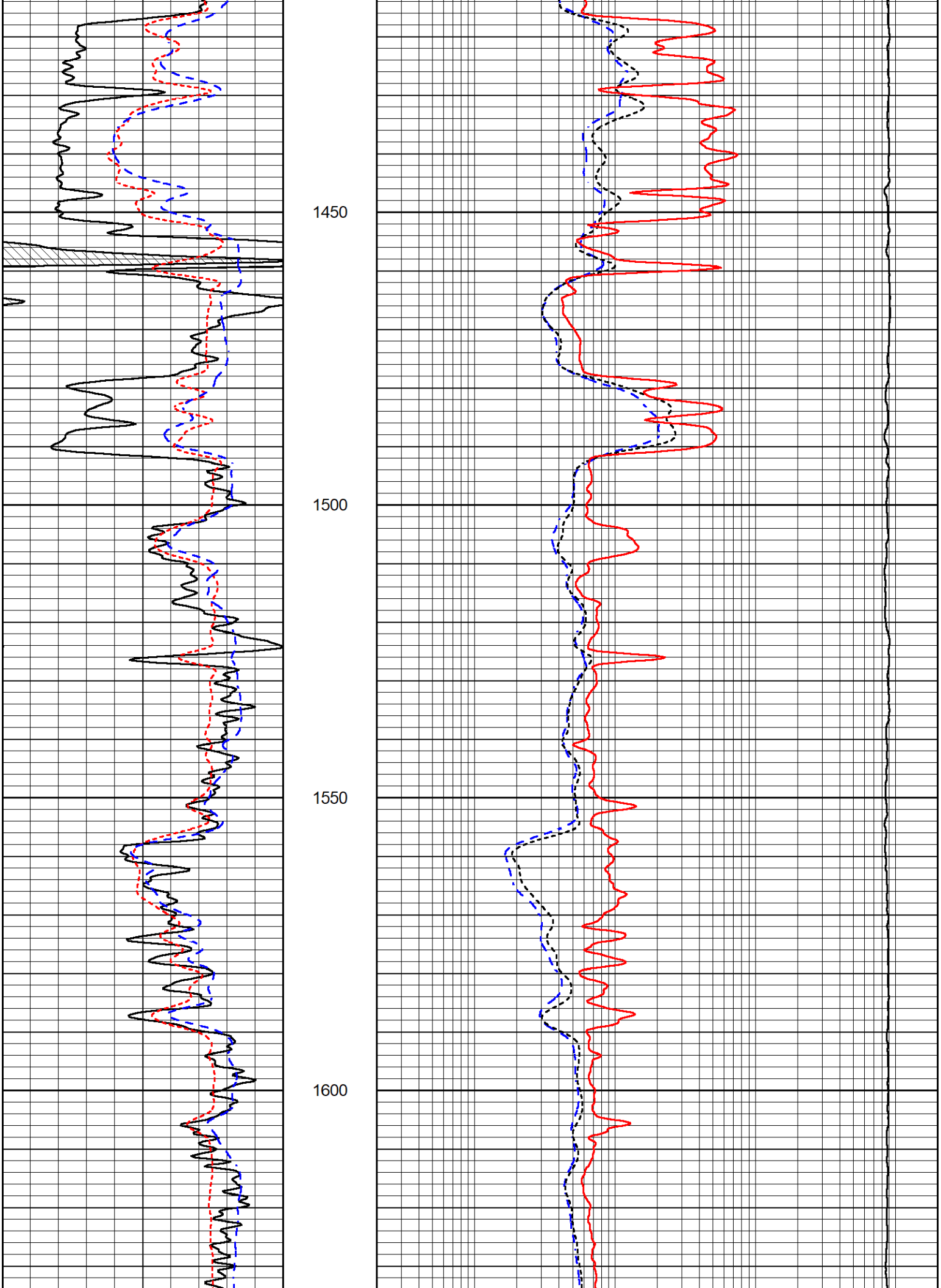

350
400
450
500

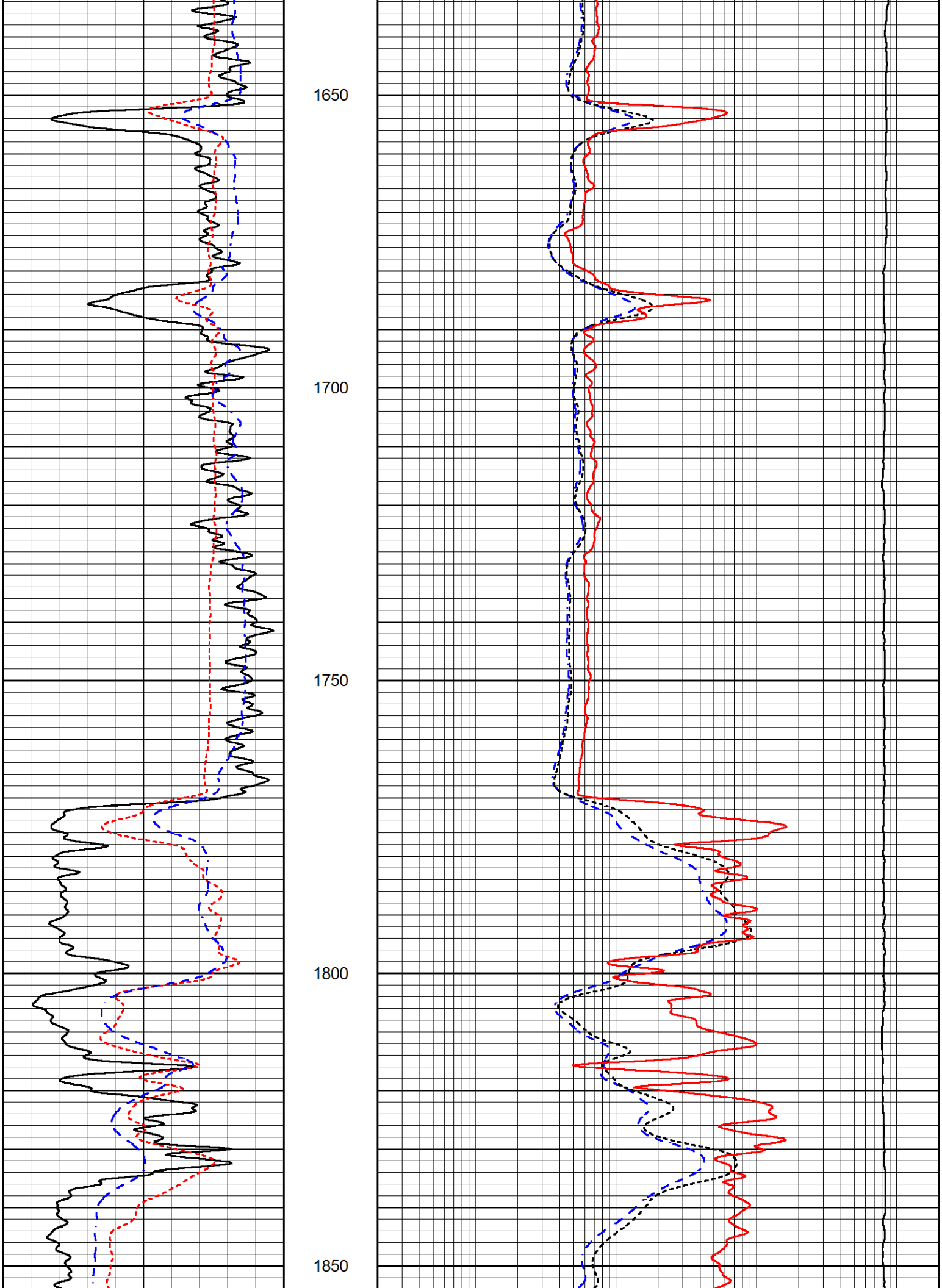

550
600
650
700
750

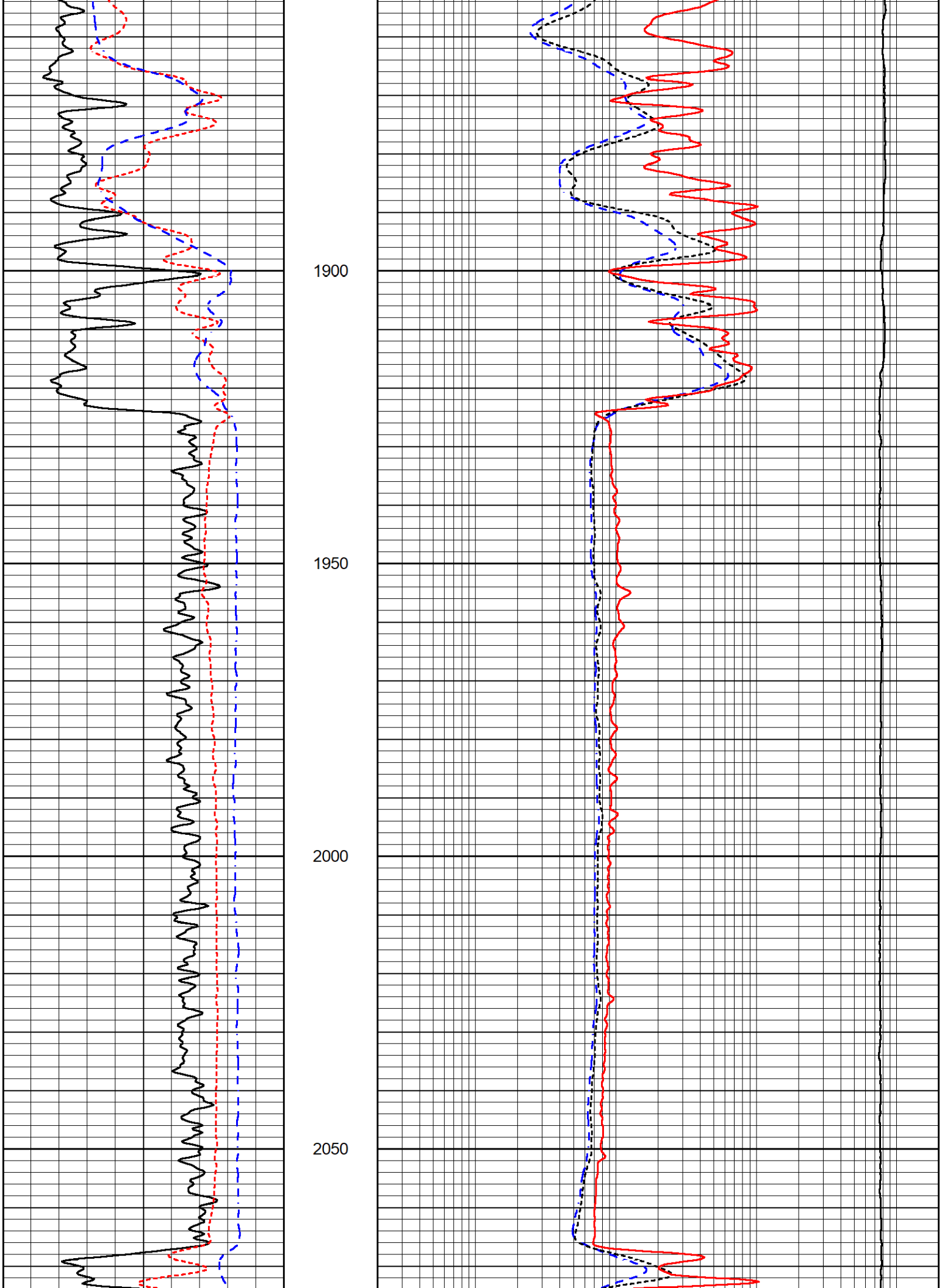

800
850
900
950

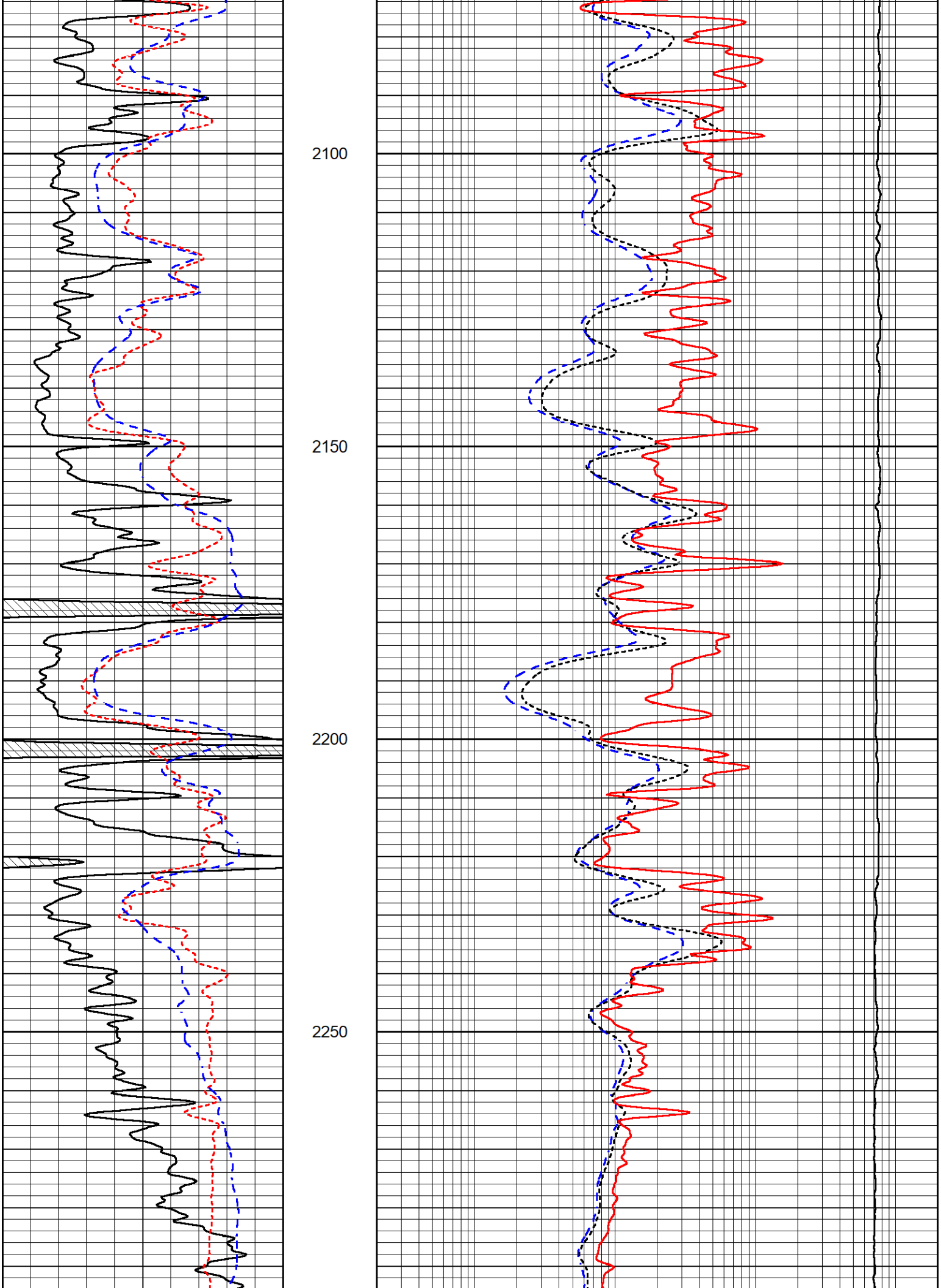

1000
1050
1100
1150

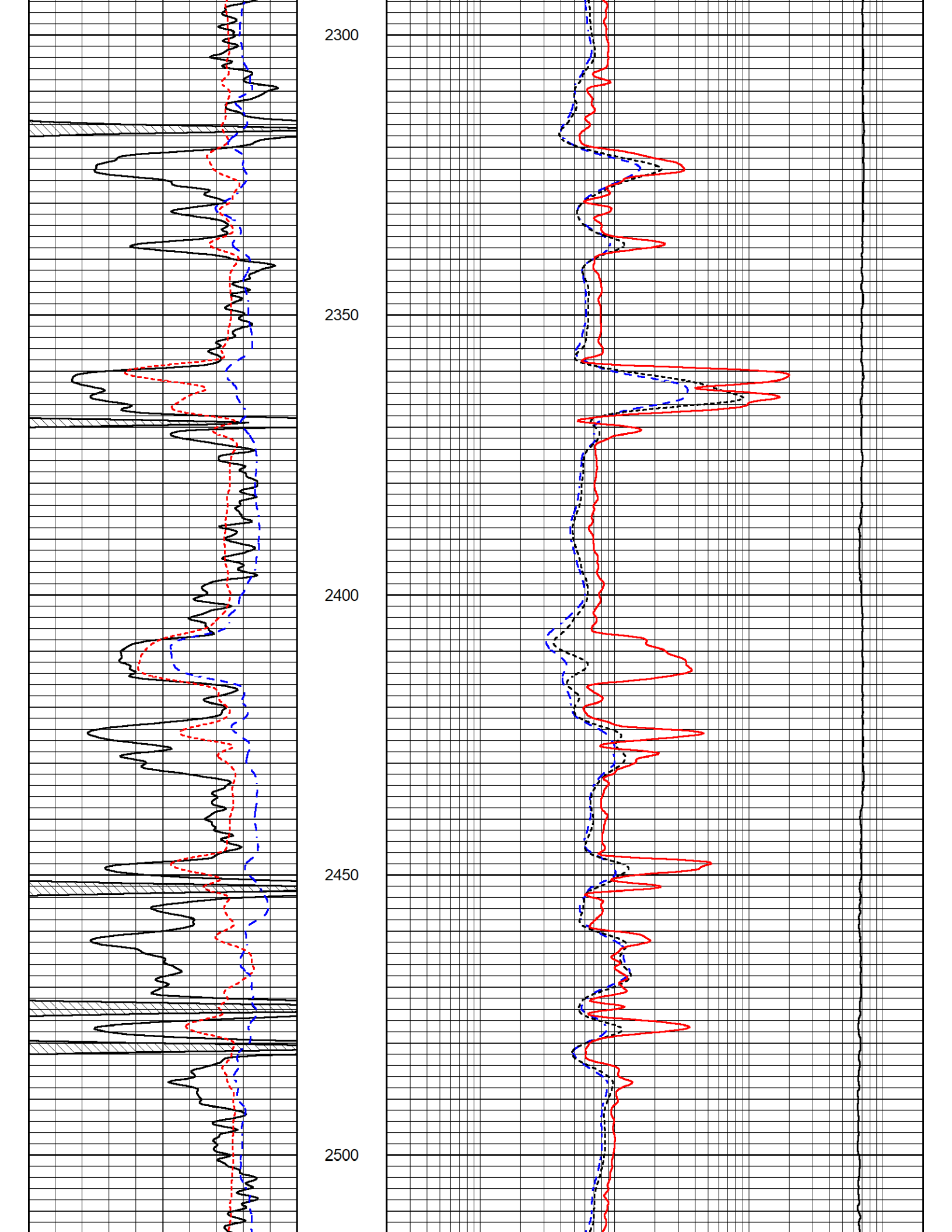

1200
1250
1300
1350
1400

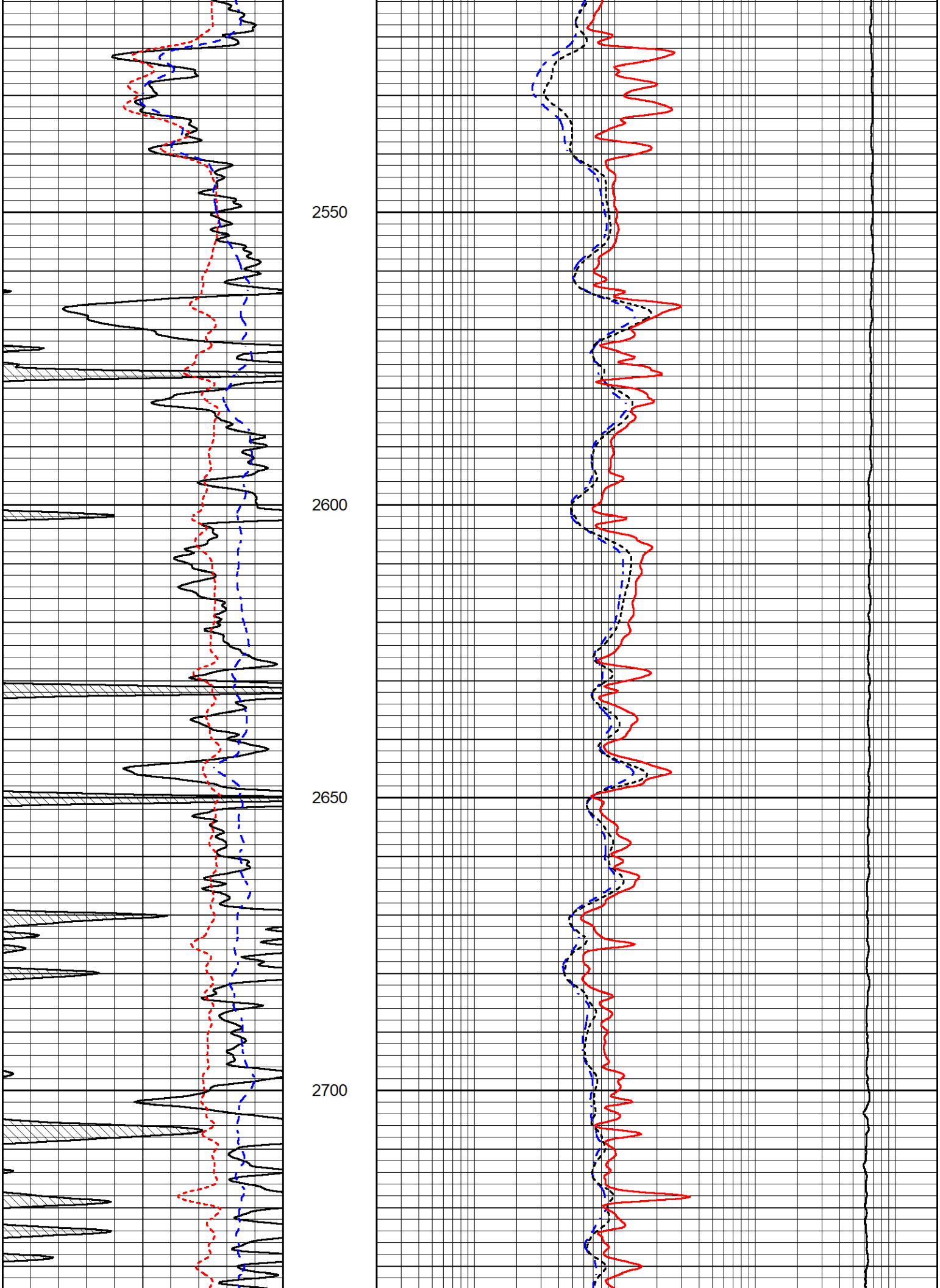

1450
1500
1550
1600

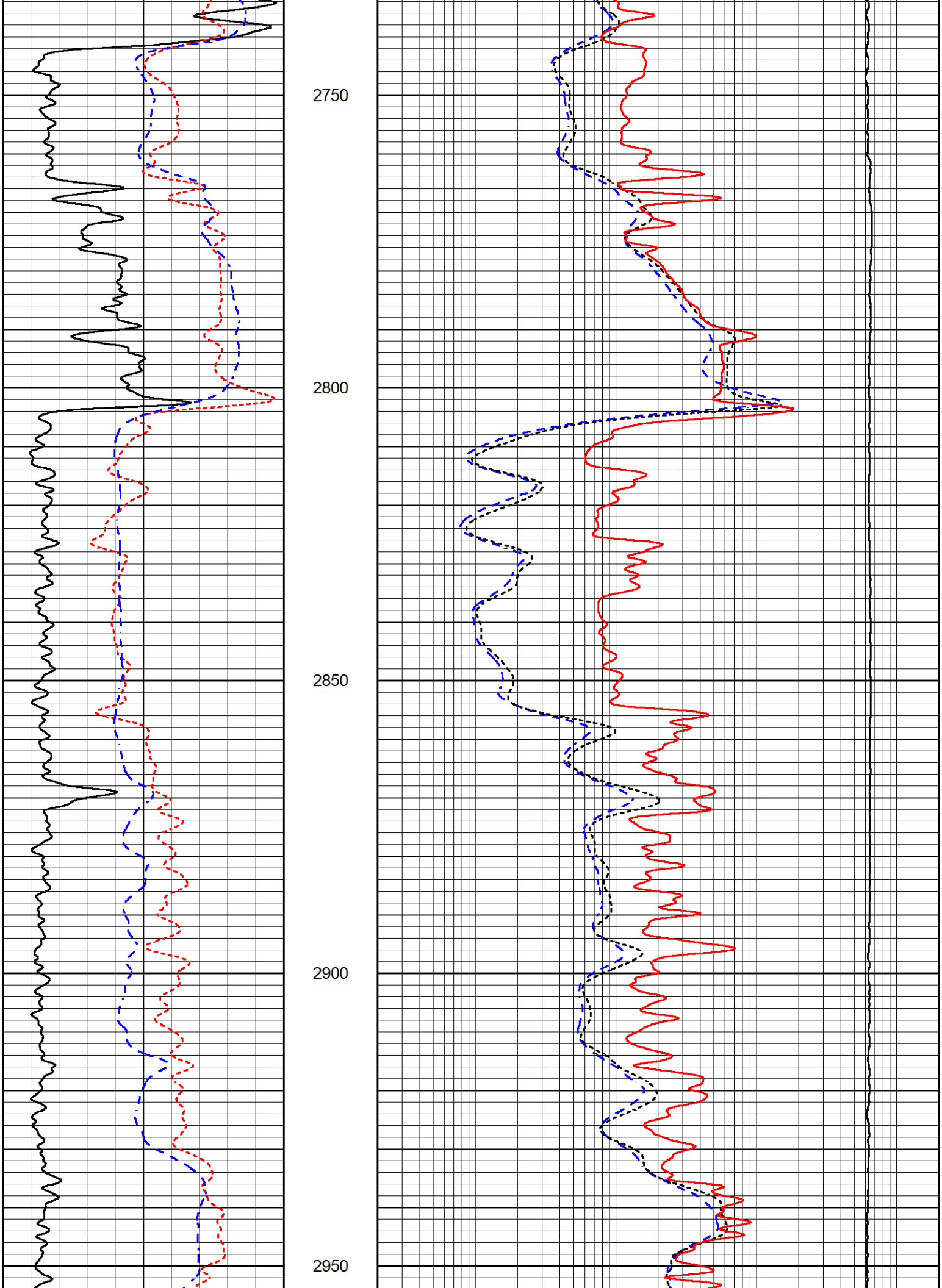

1650
1700
1750
1800
1850

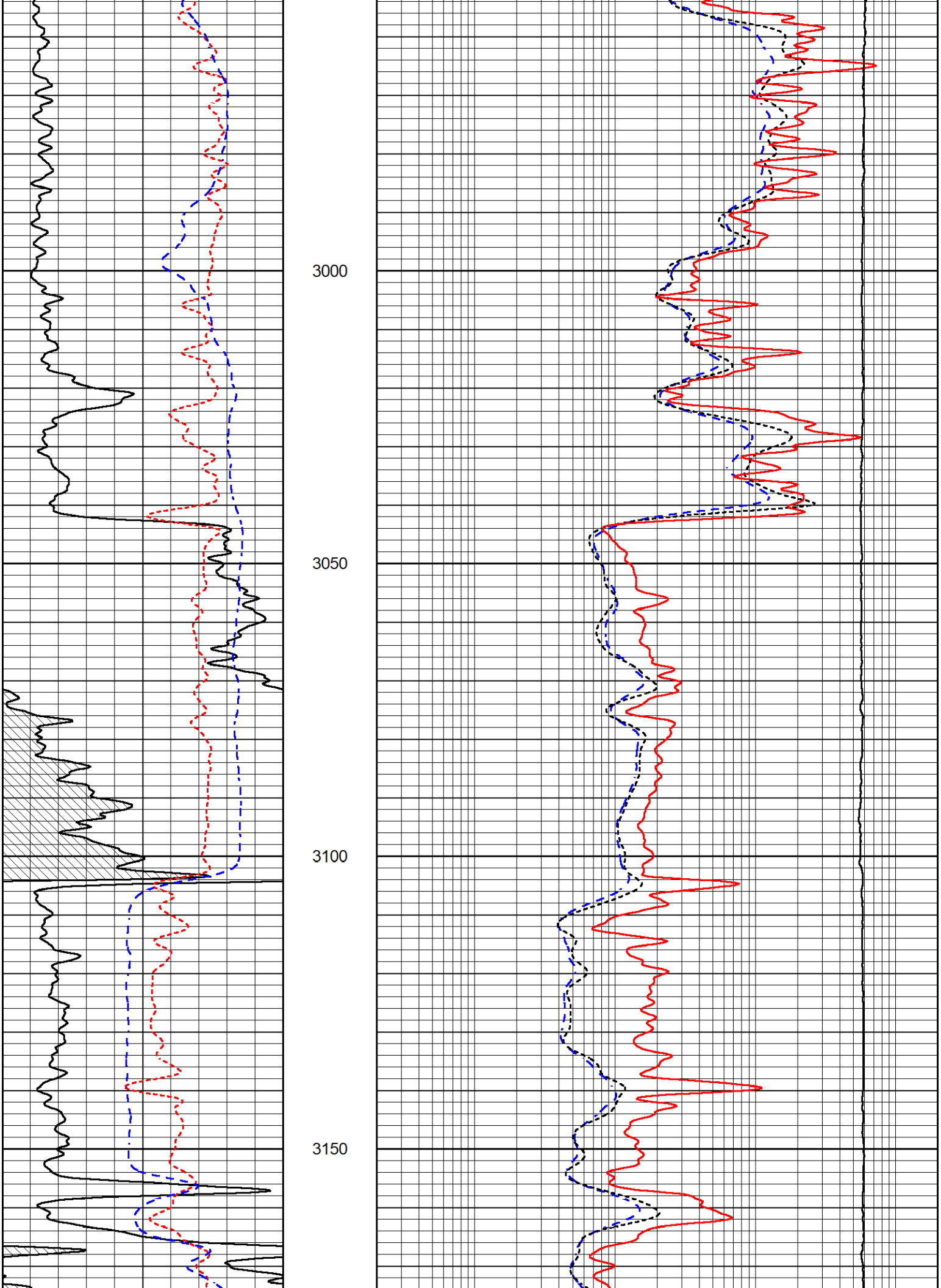

1900
1950
2000
2050

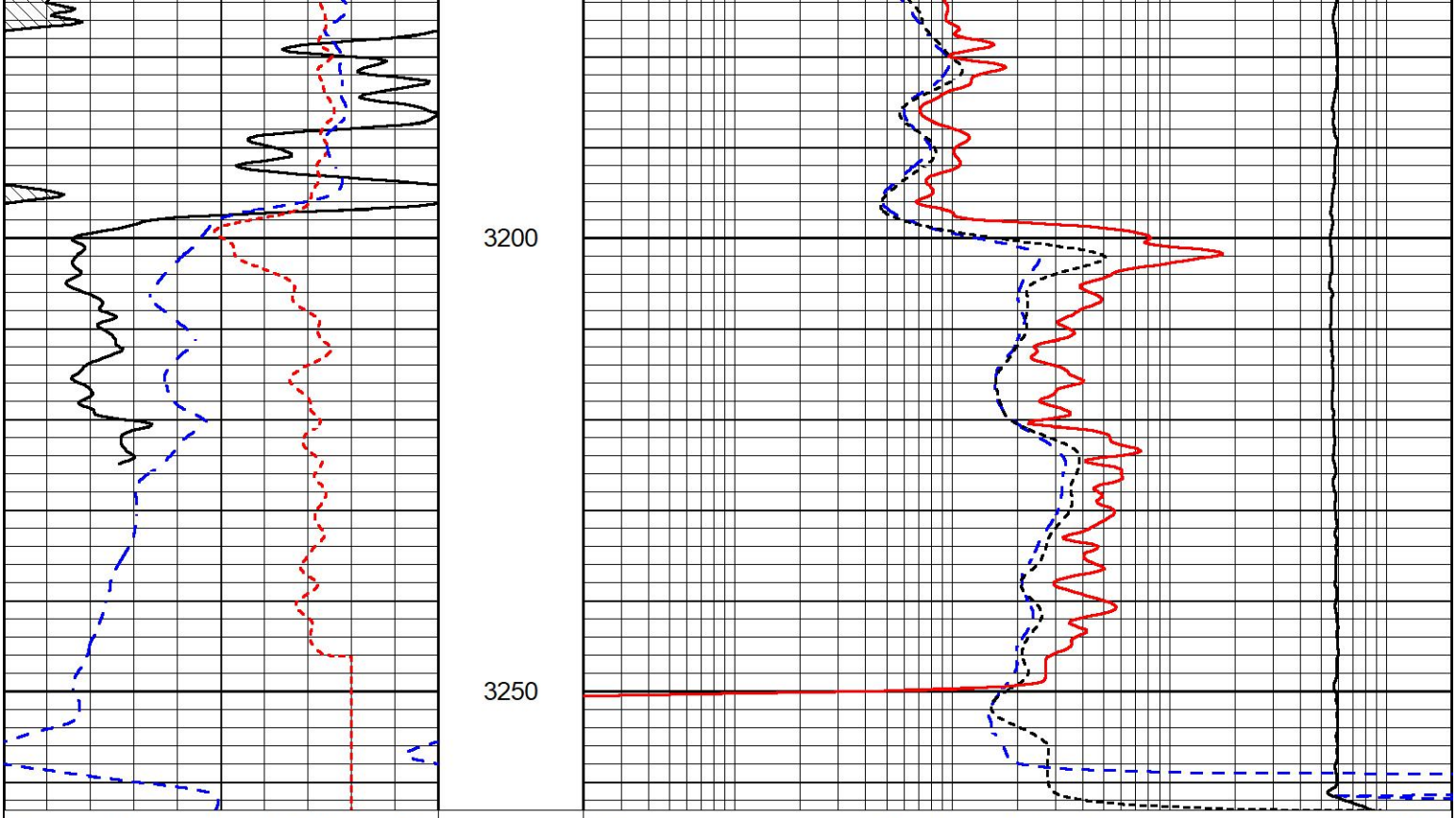

2100
2150
2200
2250


2300
2350
2400
2450
2500


2550
2600
2650
2700


2750
2800
2850
2900
2950


3000
3050
3100
3150



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

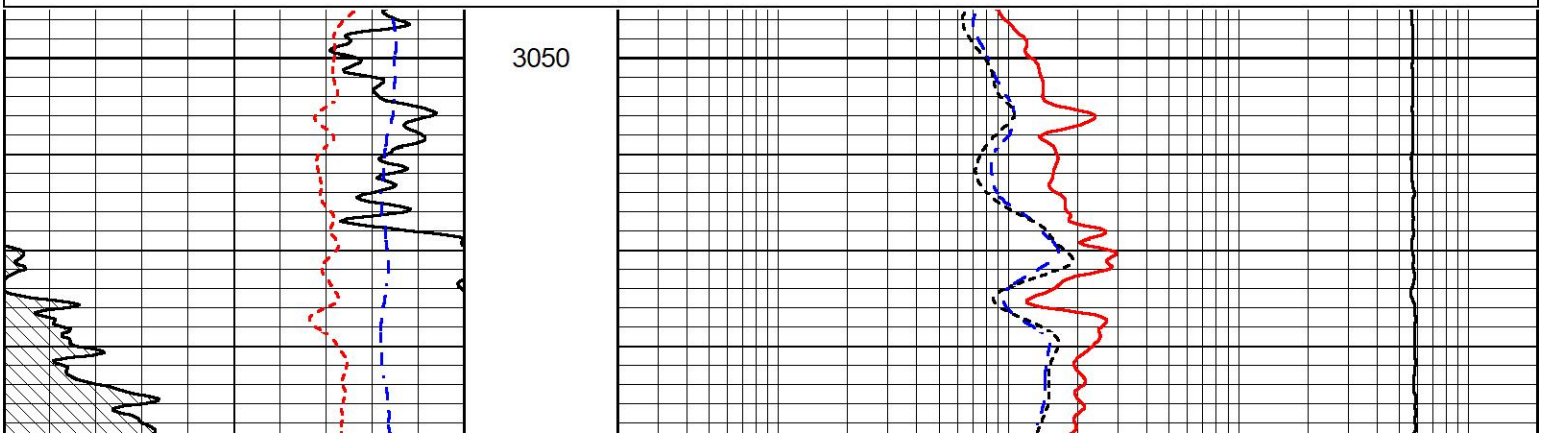
REPEAT SECTION

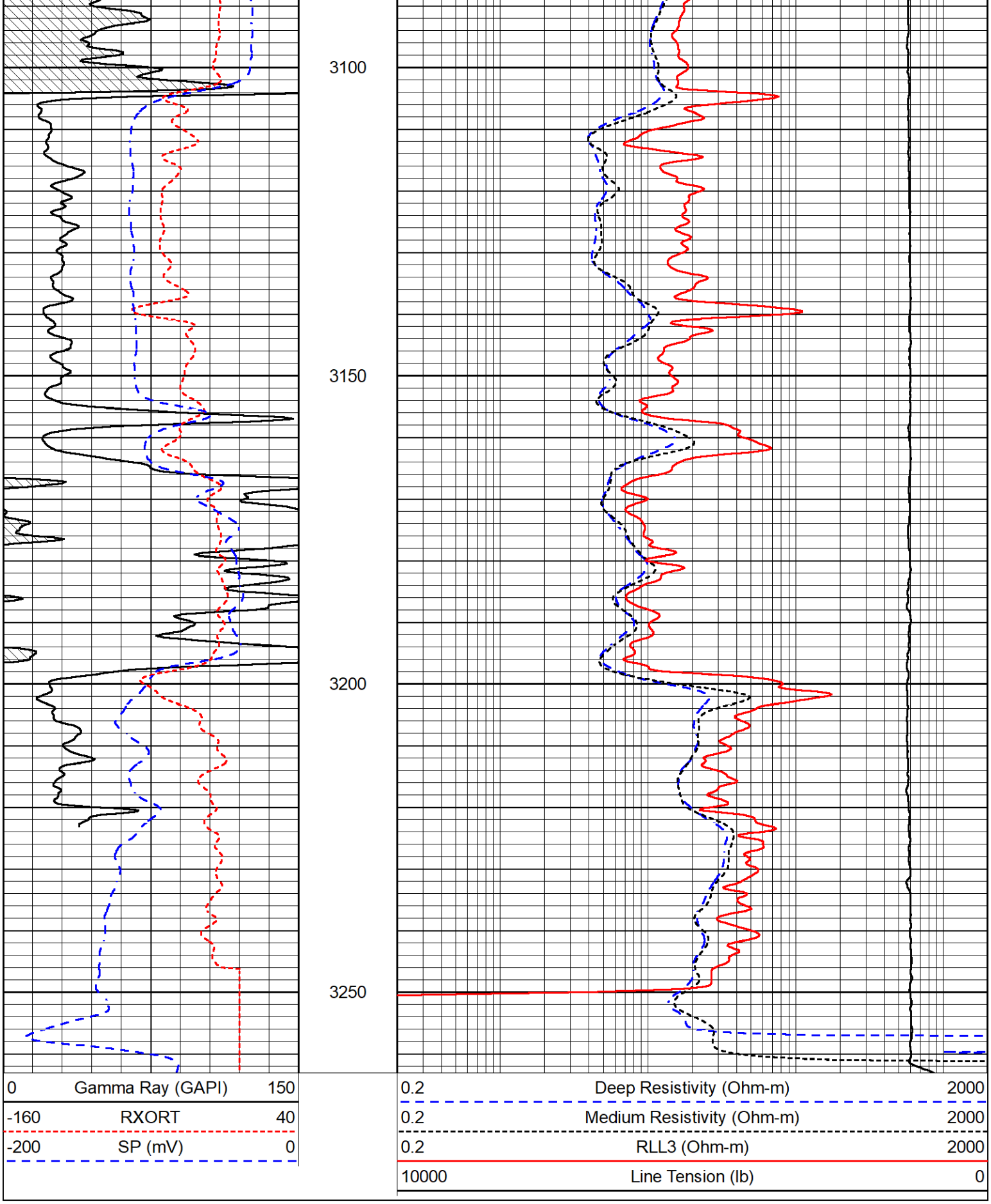
REPEAT PASS

Database File	satchell creek_liggett a-1.db
Dataset Pathname	StkMI/pass2.1
Presentation Format	_dil
Dataset Creation	Sun Nov 13 18:42:57 2022
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	satchell creek_liggett a-1.db
Dataset Pathname	StkMl/pass3.1
Dataset Creation	Sun Nov 13 19:15:45 2022

Dual Induction Calibration Report

Dual Induction Calibration Report

Serial-Model: 502 HT-M&W
Surface Cal Performed: Mon Nov 7 15:53:48 2022

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		m	b
Deep	83.639	487.104	0.000	255.800	mmho/m	0.454	-31.000
Medium	113.335	1585.690	0.000	255.800	mmho/m	0.350	-11.000

Microlog Calibration Report

Serial-Model: 401-PSIML
Performed: Mon Nov 7 15:53:59 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	16000.0000	-0.4000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	15500.0000	0.0000
Caliper	1.0052	1.0858	5.0000	16.5000	in	98.0000	-93.2000

Compensated Density Calibration Report

Serial-Model: 305-24-M&W
Source #: 20762B
Master Calibration Performed: Mon Jun 20 16:54:11 2022

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4771.35	5494.27	cps
Aluminum	2.650	g/cc	908.54	3539.54	cps

Spine Angle = 75.15 Density/Spine Ratio = 0.522

	Size		Reading
Small Ring	4.00	in	1.74
Large Ring	14.00	in	1.38

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	Satchell Creek Petroleum LLC
Well	Liggett A-1
Field	
County	Butler
State	Kansas