PIONEER Pioneer Energy Services

DUAL INDUCTION LOG

Company CHARLES N. GRIFFIN
Well SHARRON NO.4
Field TONI-MIKE
County BARBER
State KANSAS

Company CHARLES N. GRIFFIN
Well SHARRON NO.4
Field TONI-MIKE
County BARBER State KANSAS

Location: API # : 15-007-24311-00-00
660' FSL & 890' FWL
SEC 34 TWP 32S RGE 12W

Other Services: CNL/CDL

Permanent Datum GROUND LEVEL Elevation 1523'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation: K.B. 1528' D.F. N/A G.L. 1523'

Date	3/3/17		
Run Number	ONE		
Depth Driller	4880'		
Depth Logger	4882'		
Bottom Logged Interval	4881'		
Top Log Interval	200'		
Casing Driller	8.625" @ 246'		
Casing Logger	246'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity,ppm CL	4,000		
Density / Viscosity	9.2 / 52		
pH / Fluid Loss	11.0 / 9.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.75 @ 56		
Rmf @ Meas. Temp	.56 @ 56		
Rmc @ Meas. Temp	1.01 @ 56		
Source of Rmf / Rmc	CHARTS		
Rm @ BHT	.34 @ 125		
Operating Rig Time	2 HOURS		
Max Rec. Temp. F	125 DEG/F		
Equipment Number	108		
Location	HAYS		
Recorded By	J. HENRICKSON		
Witnessed By	BRUCE REED	CHARLES GRIFFIN	

<<< Fold Here >>>

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

MEDICINE LODGE, KS
SOUTH TO SPRING HILL ROAD, WEST THROUGH TWO CATTLE GUARDS
SOUTH AND EAST TO PUMP UNIT, 3/4 SOUTH TO WELL

Log Measured From: KELLY BUSHING 5 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneeres.com 785-625-3858

Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: J. HENRICKSON	Primary Witness: BRUCE REED
Operator: K. PFANNENSTIEL	Secondary Witness: CHARLES GRIFFIN
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\charles_griffin_sharron_4.db
Dataset field/well/stack/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	124	4.5	0	1	2	2.71

NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	0	0	-260	38	Off	4882

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
			GR-M&W (89-M&W)	3.00	3.50	50.00
GR	33.00					
CNLSC	29.90		CNT-M&W (tk10-MW)	5.50	3.50	100.00
CNSSC	29.15					
			CDL-M&W (168-986)	8.50	4.00	250.00
LSD	20.85					
DCAL	20.83					
SSD	20.35					
RLL3F	15.80					
RLL3	15.80					
			DIL-PSI HIGH TEMP (PSI 216 HT)	18.50	3.50	220.00
CILD	8.00					

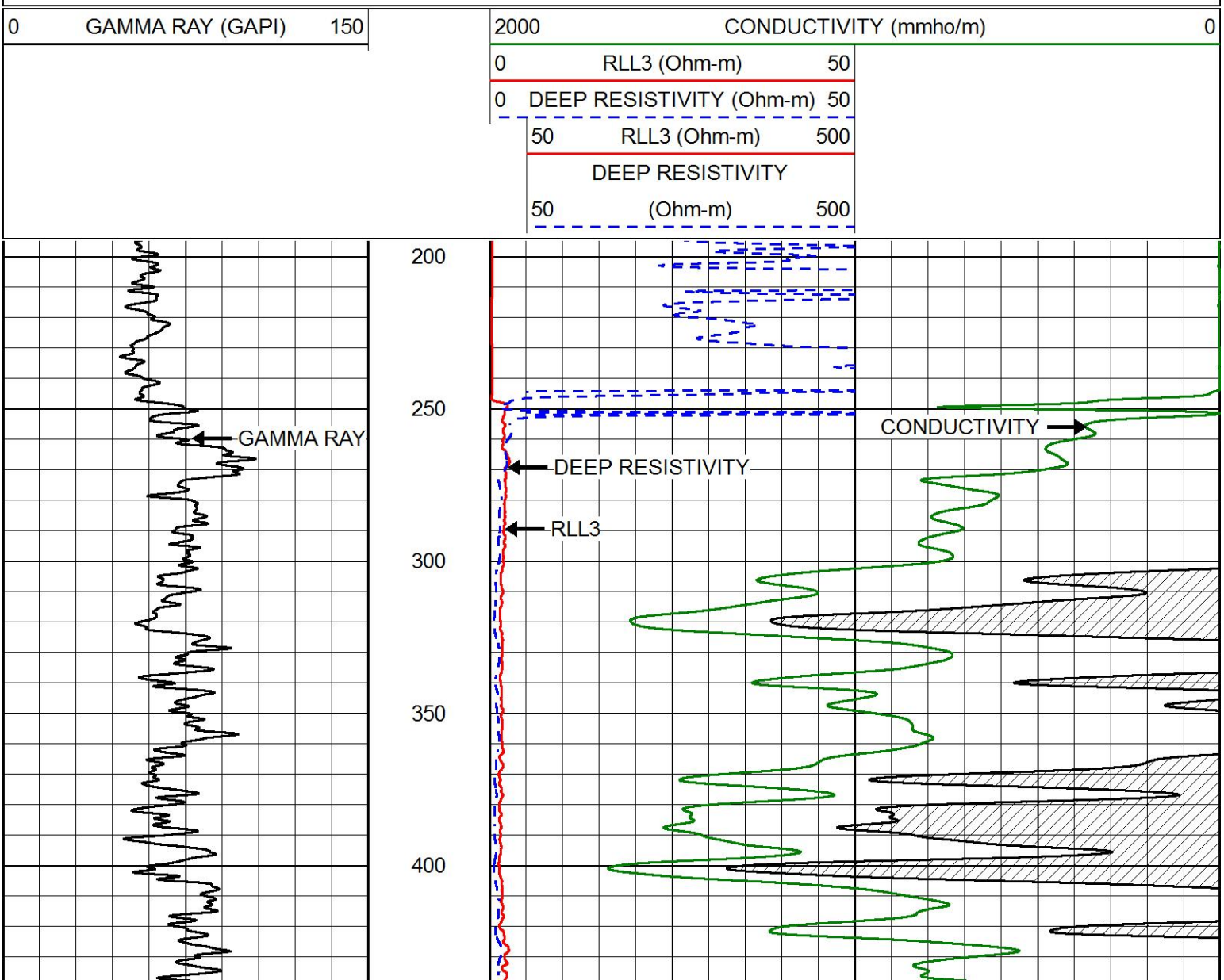
CILM	4.70					
SP	0.20					

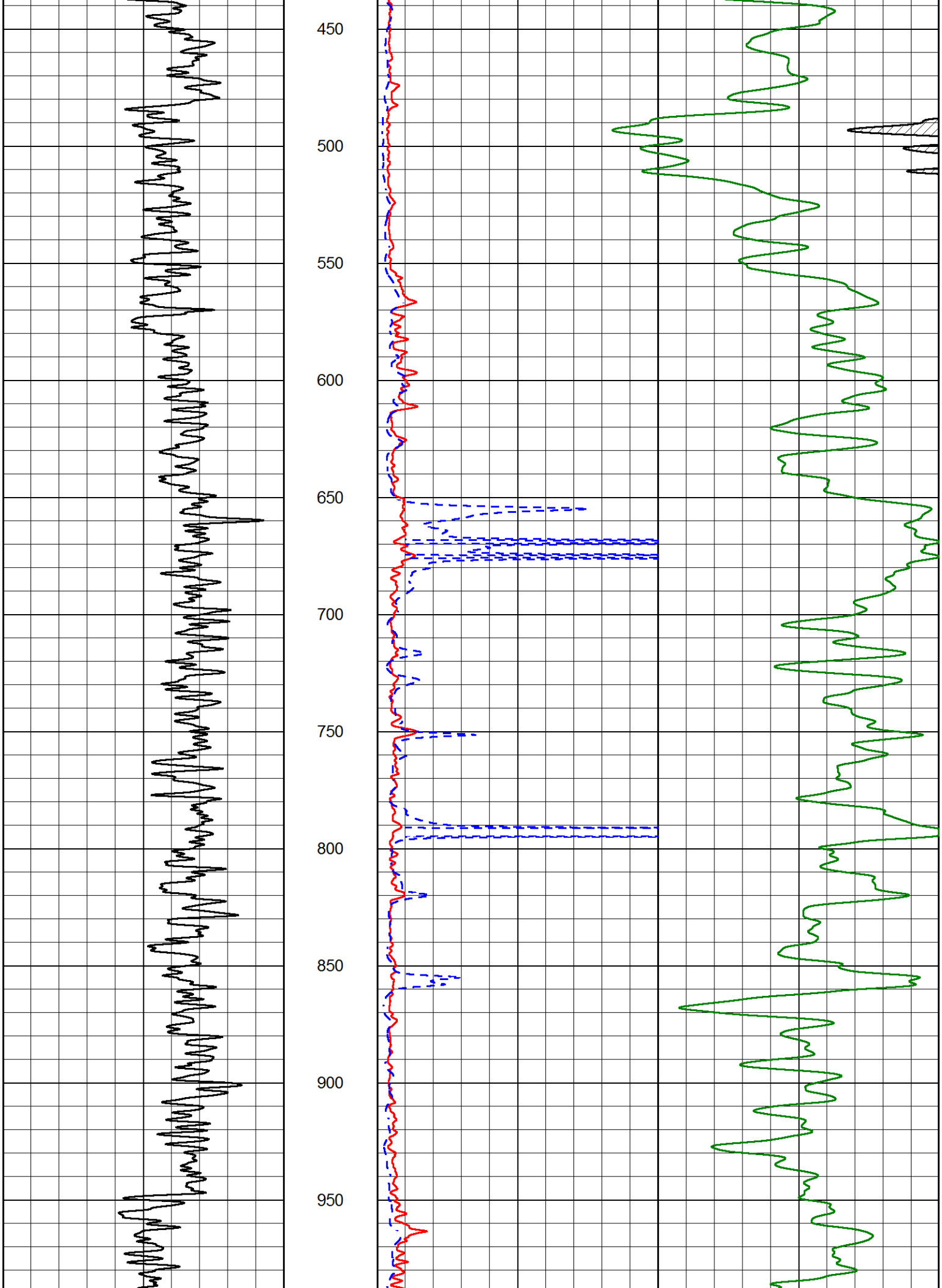
Dataset: charles_griffin_sharron_4.db: field/well/stack/pass3.1
Total length: 35.50 ft
Total weight: 620.00 lb
O.D.: 4.00 in

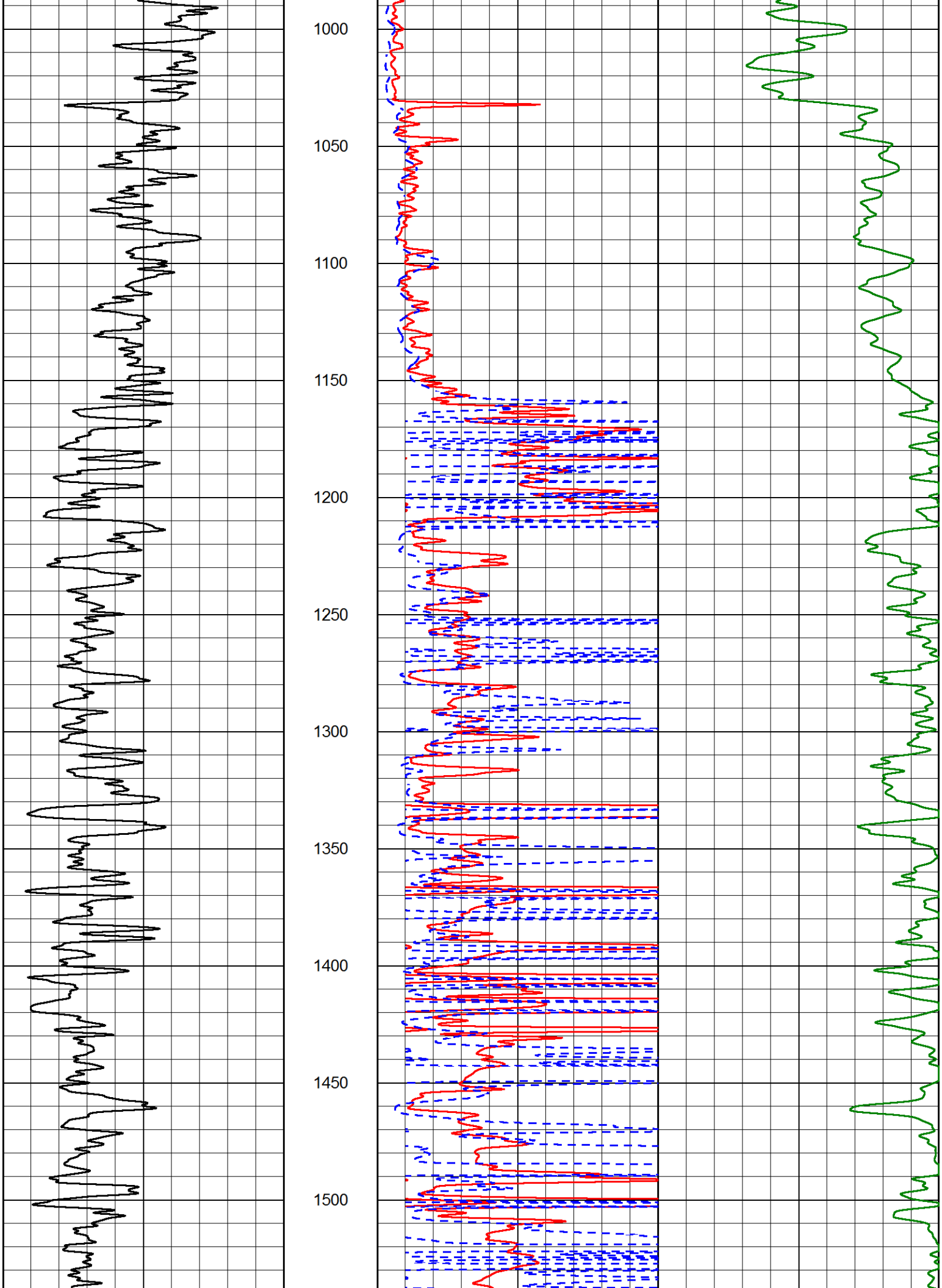
PIONEER
Pioneer Energy Services

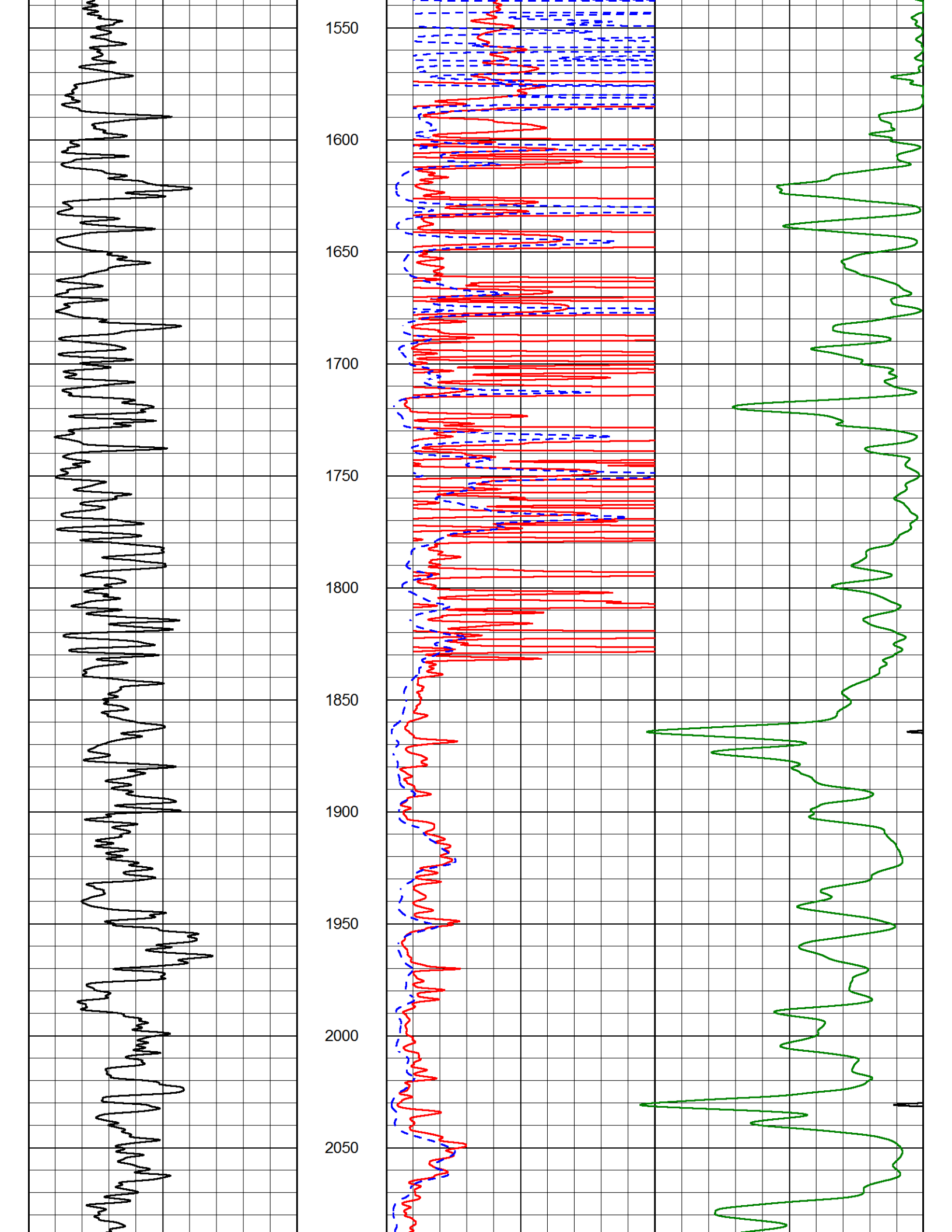
MAIN PASS

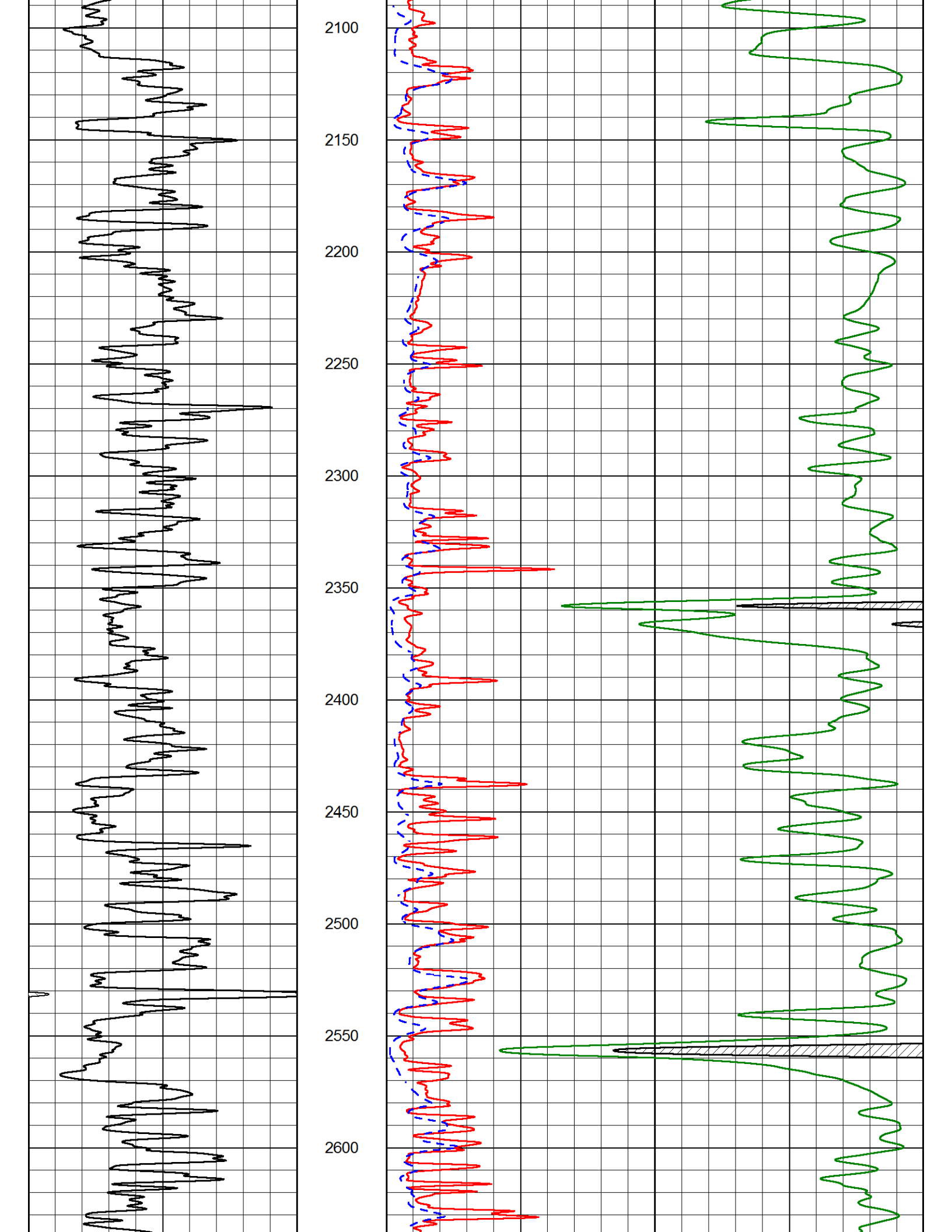
Database File	charles_griffin_sharron_4.db
Dataset Pathname	stack/pass3.1
Presentation Format	dil2in
Dataset Creation	Fri Mar 03 20:14:18 2017
Charted by	Depth in Feet scaled 1:600

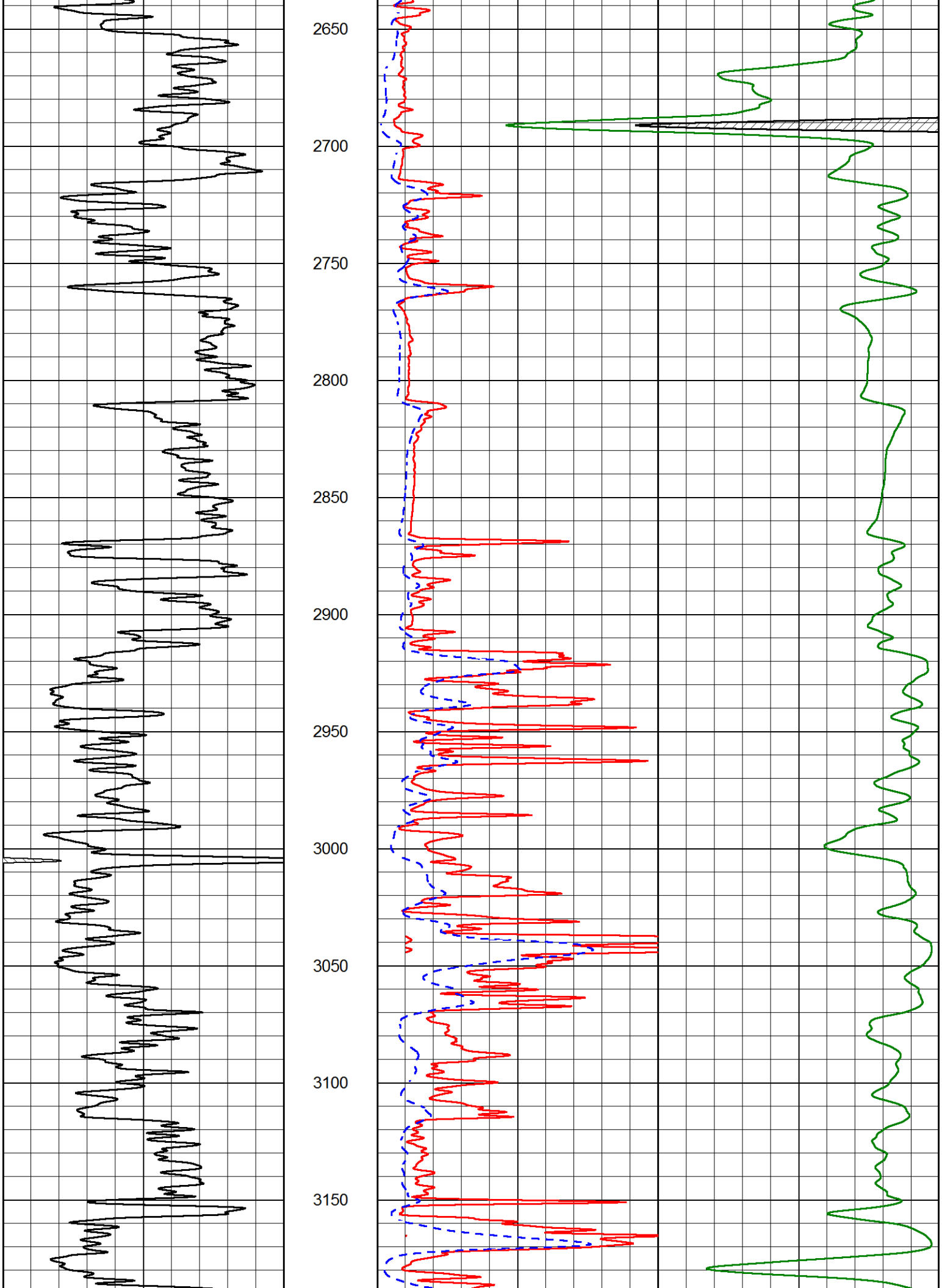


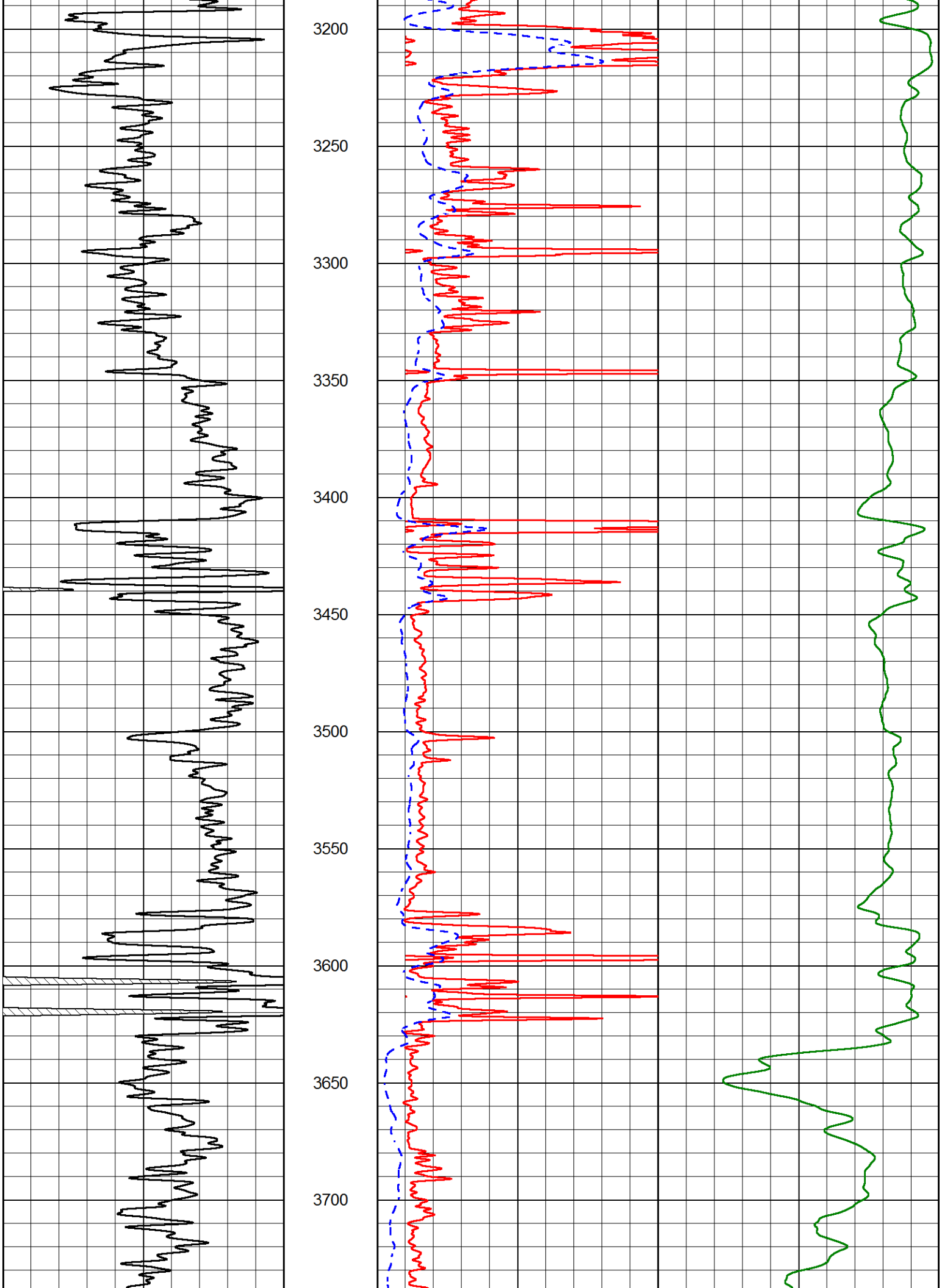

450
500
550
600
650
700
750
800
850
900
950

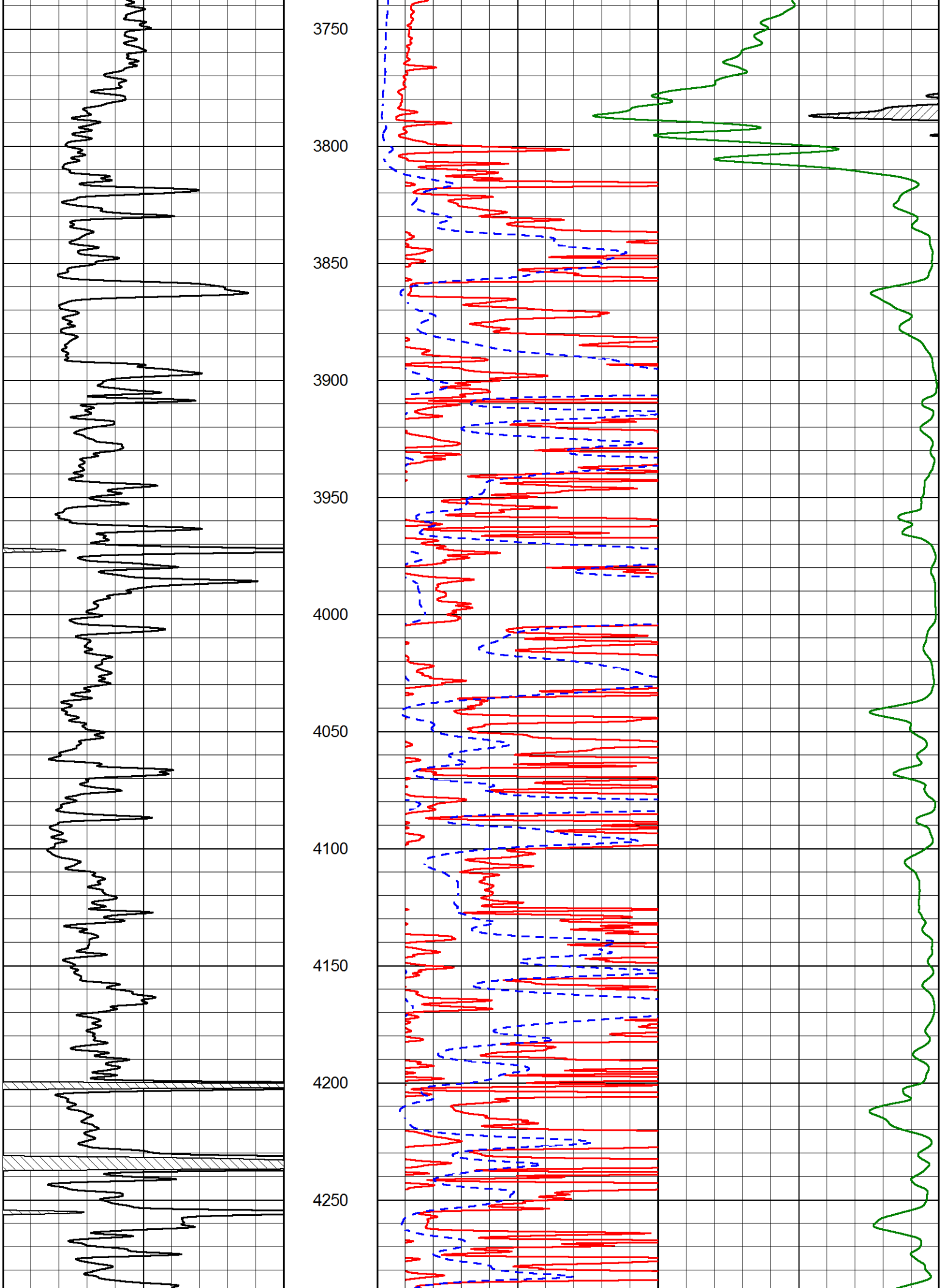

1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500

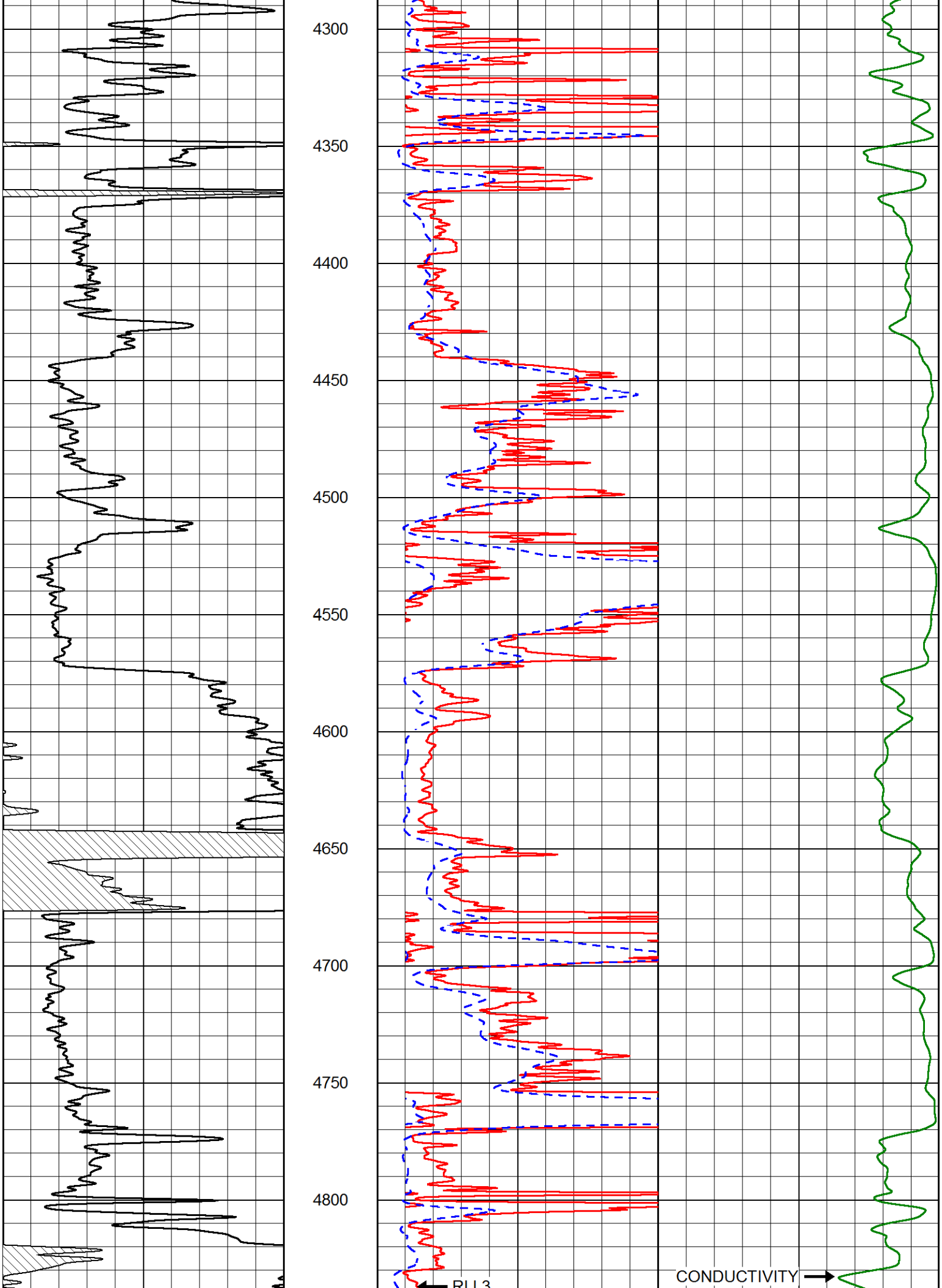

1550
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050

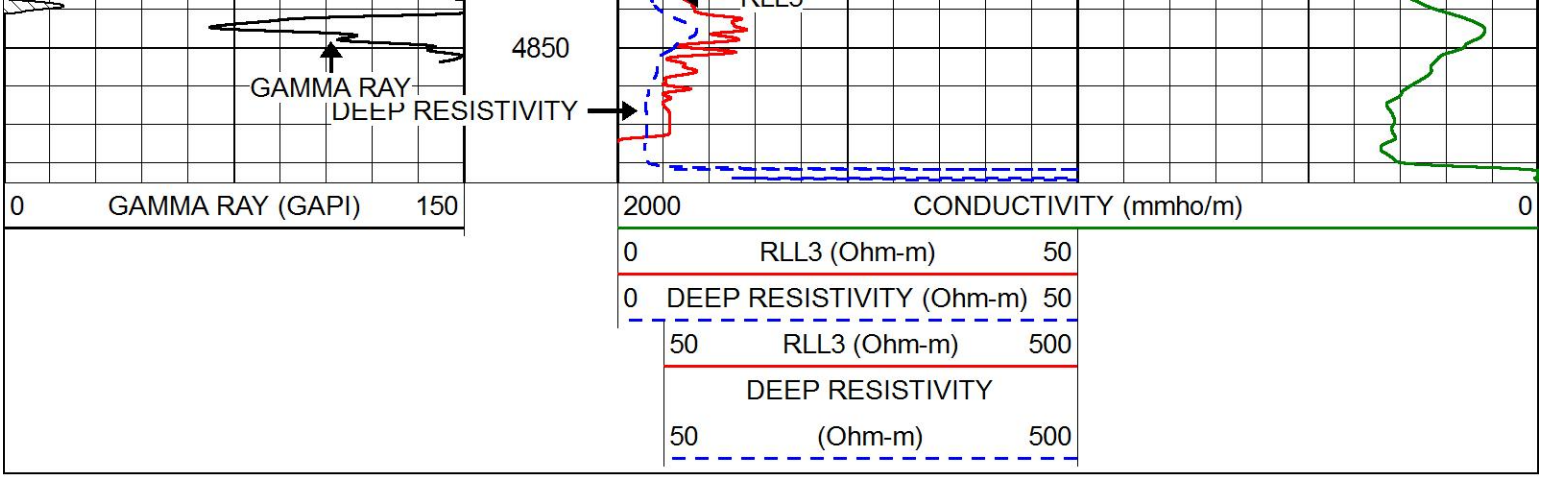

2100
2150
2200
2250
2300
2350
2400
2450
2500
2550
2600


2650
2700
2750
2800
2850
2900
2950
3000
3050
3100
3150


3200
3250
3300
3350
3400
3450
3500
3550
3600
3650
3700


3750
3800
3850
3900
3950
4000
4050
4100
4150
4200
4250


4300
4350
4400
4450
4500
4550
4600
4650
4700
4750
4800
RU 3
CONDUCTIVITY



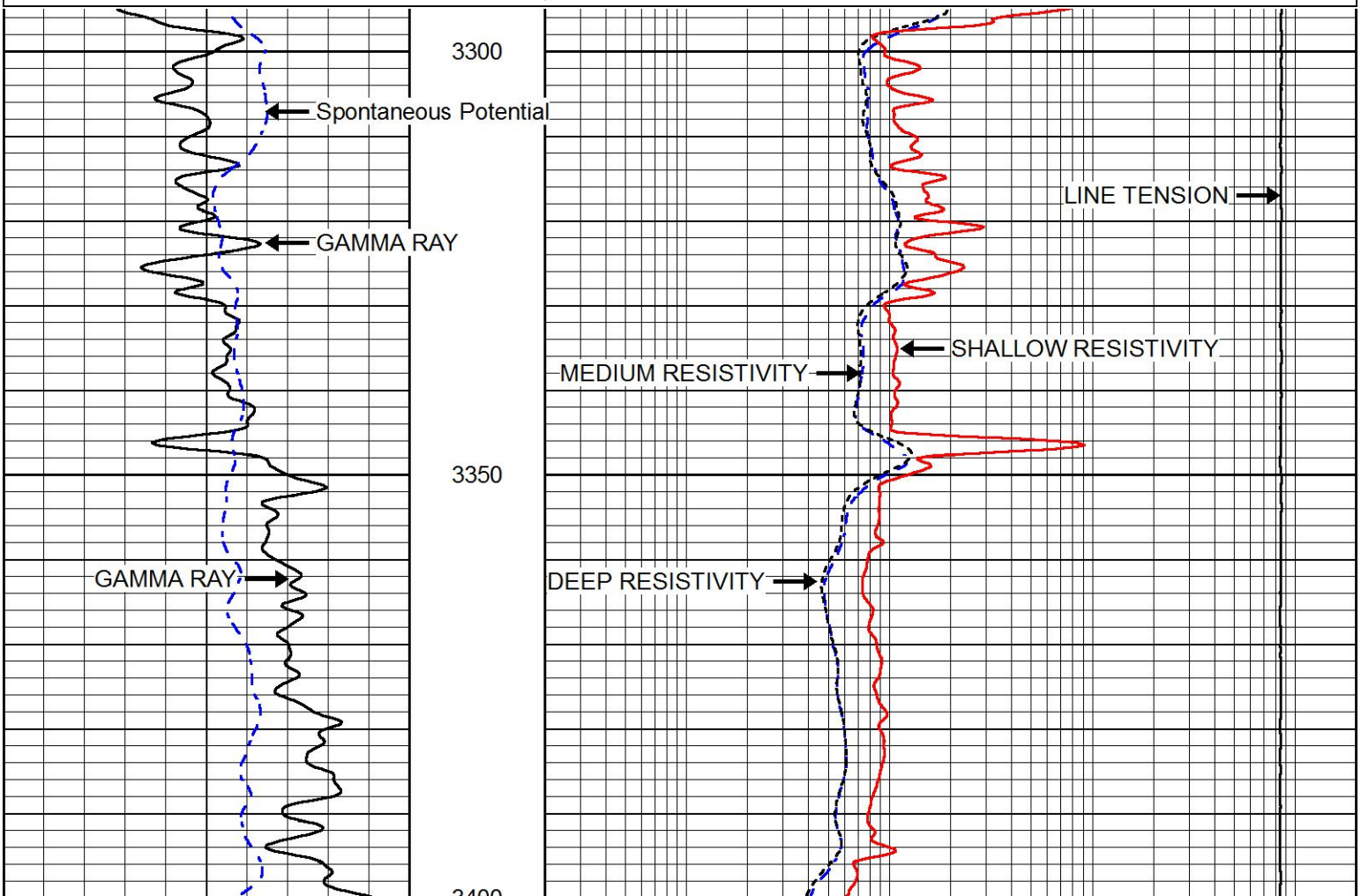
PIONEER
Pioneer Energy Services

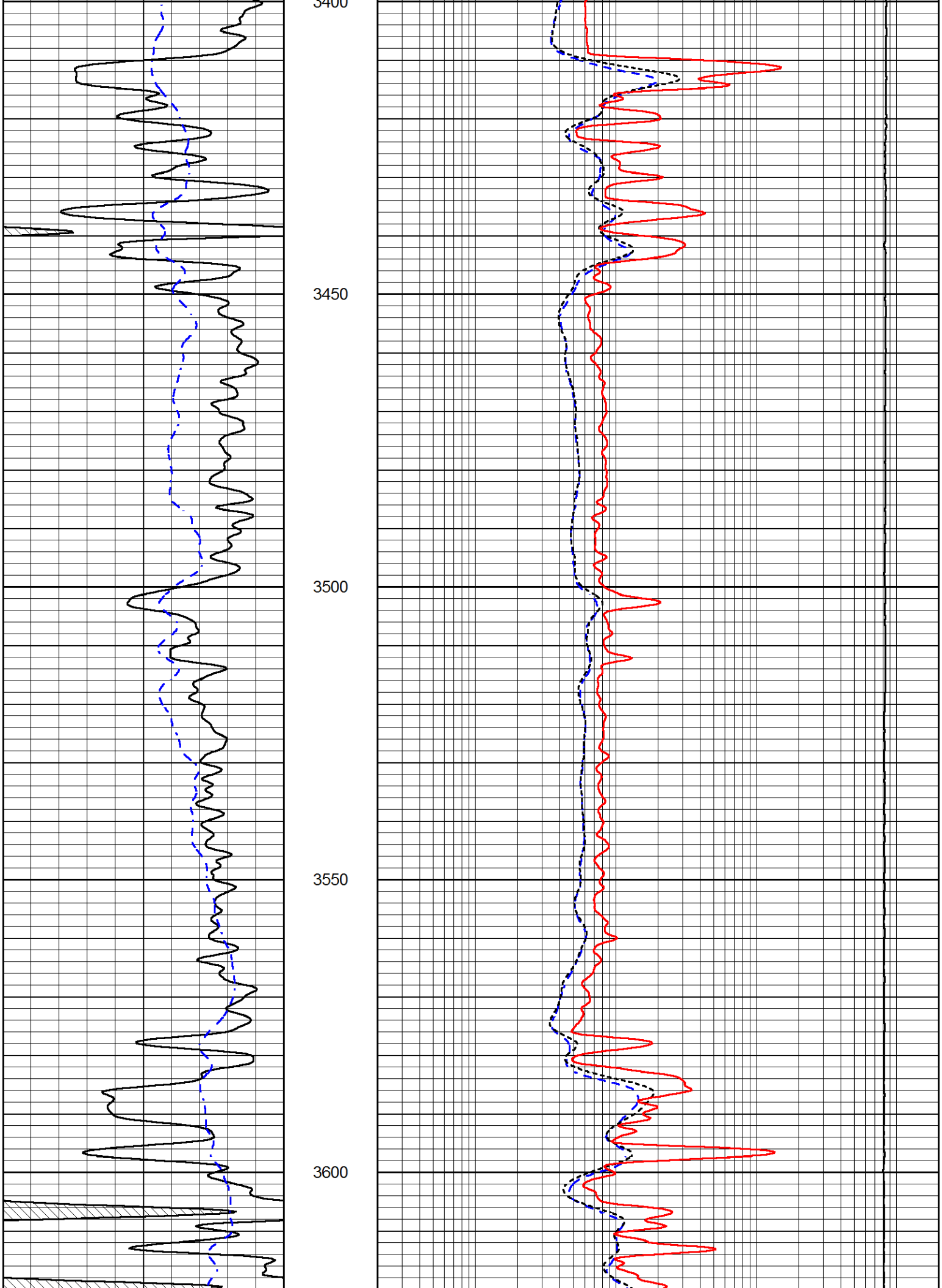
MAIN PASS

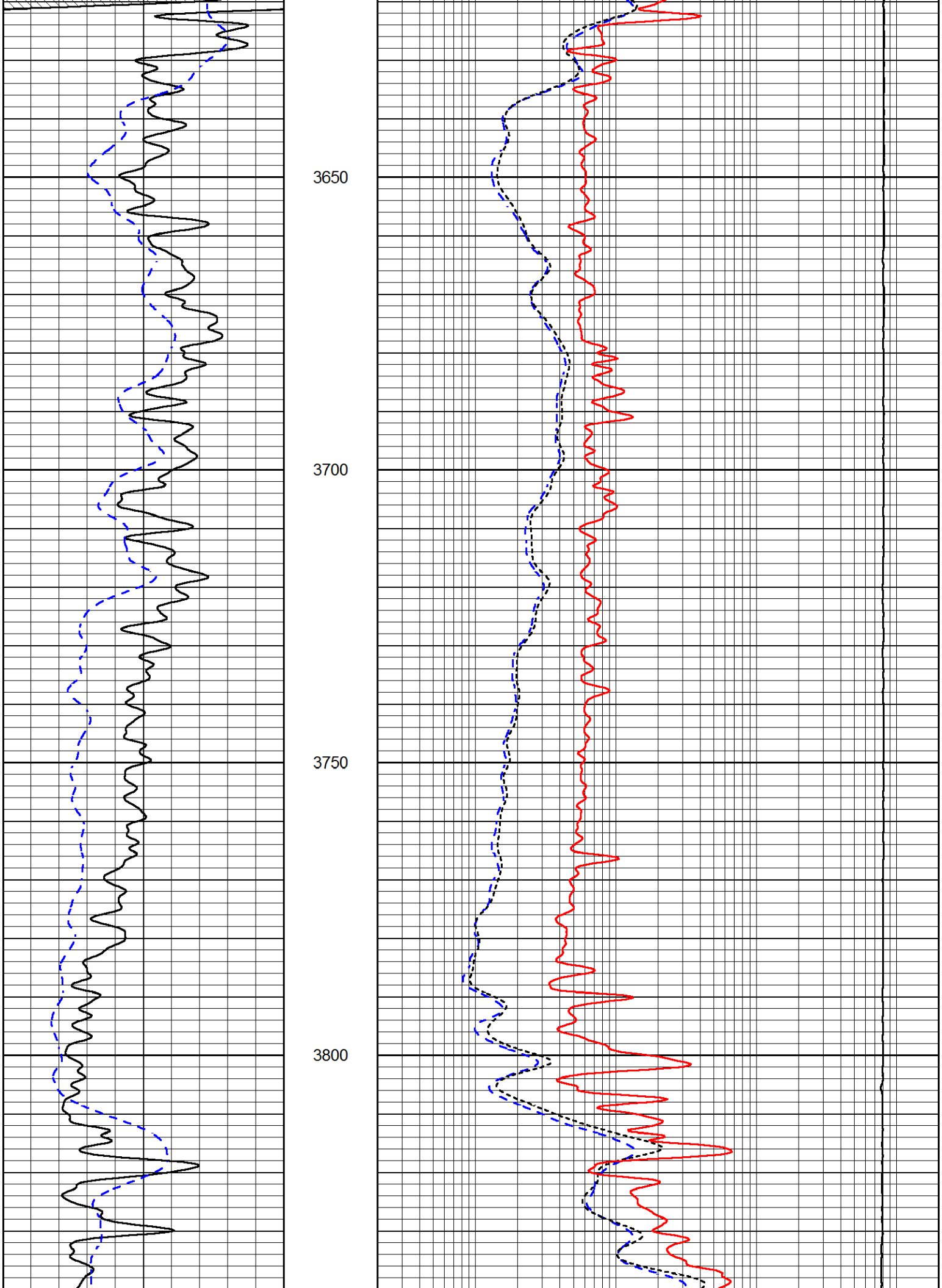
Database File	charles_griffin_sharron_4.db
Dataset Pathname	stack/pass3.1
Presentation Format	dil
Dataset Creation	Fri Mar 03 20:14:18 2017
Charted by	Depth in Feet scaled 1:240

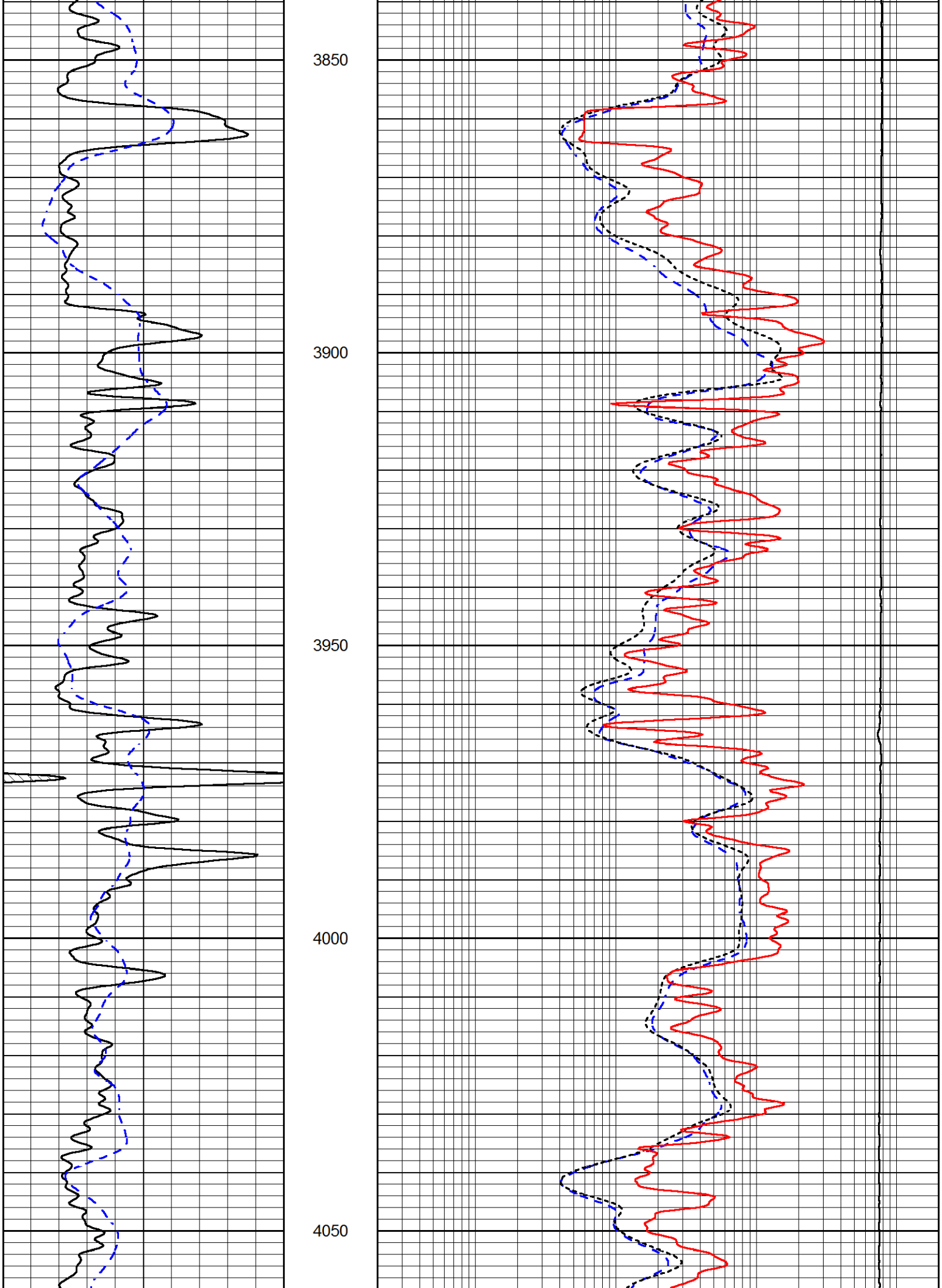
0 GAMMA RAY (GAPI) 150
-200 SP (mV) 0

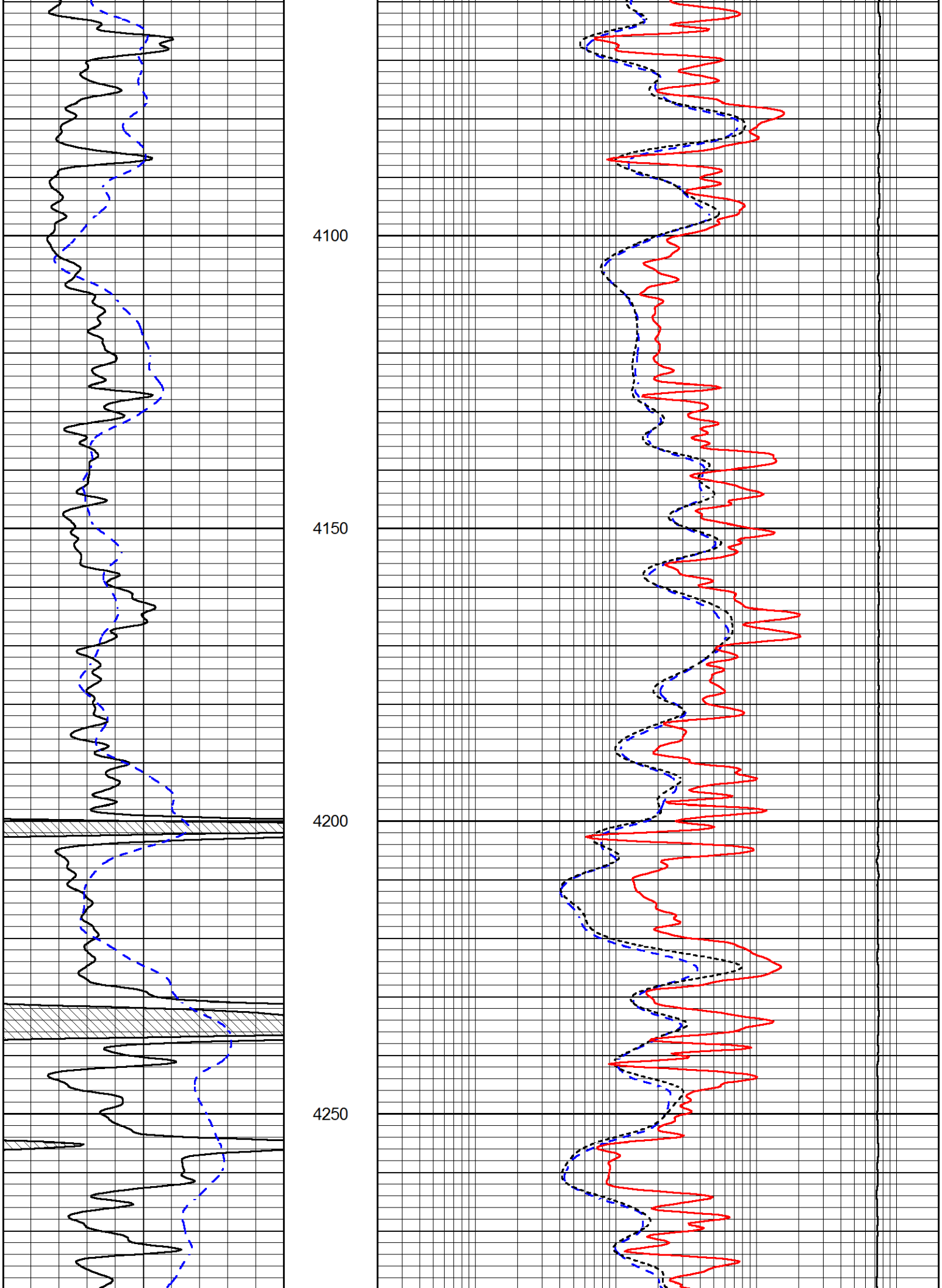
0.2 DEEP RESISTIVITY (Ohm-m) 2000
0.2 MEDIUM RESISTIVITY (Ohm-m) 2000
0.2 RLL3 (Ohm-m) 2000
15000 LINE TENSION (lb) 0

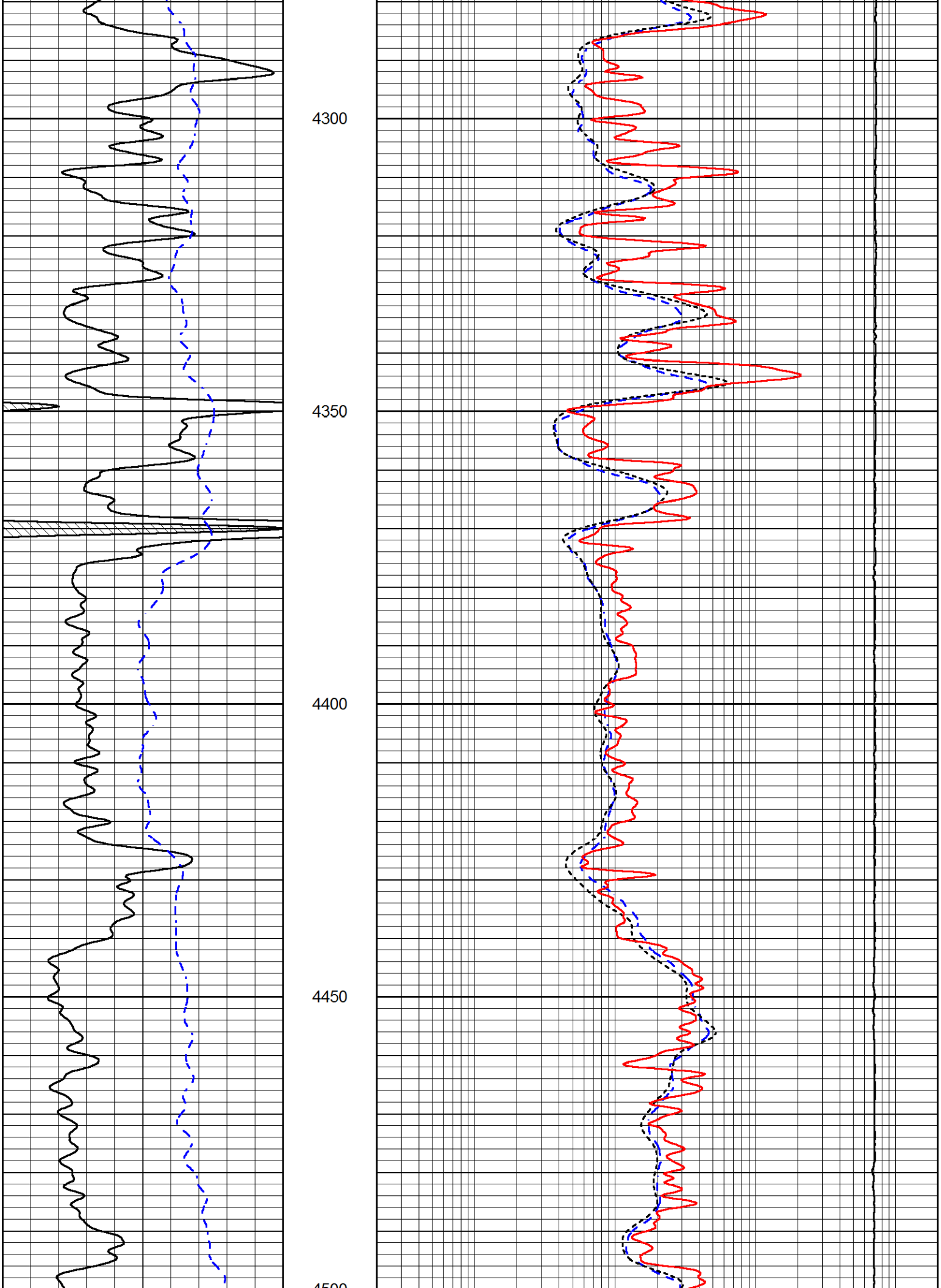


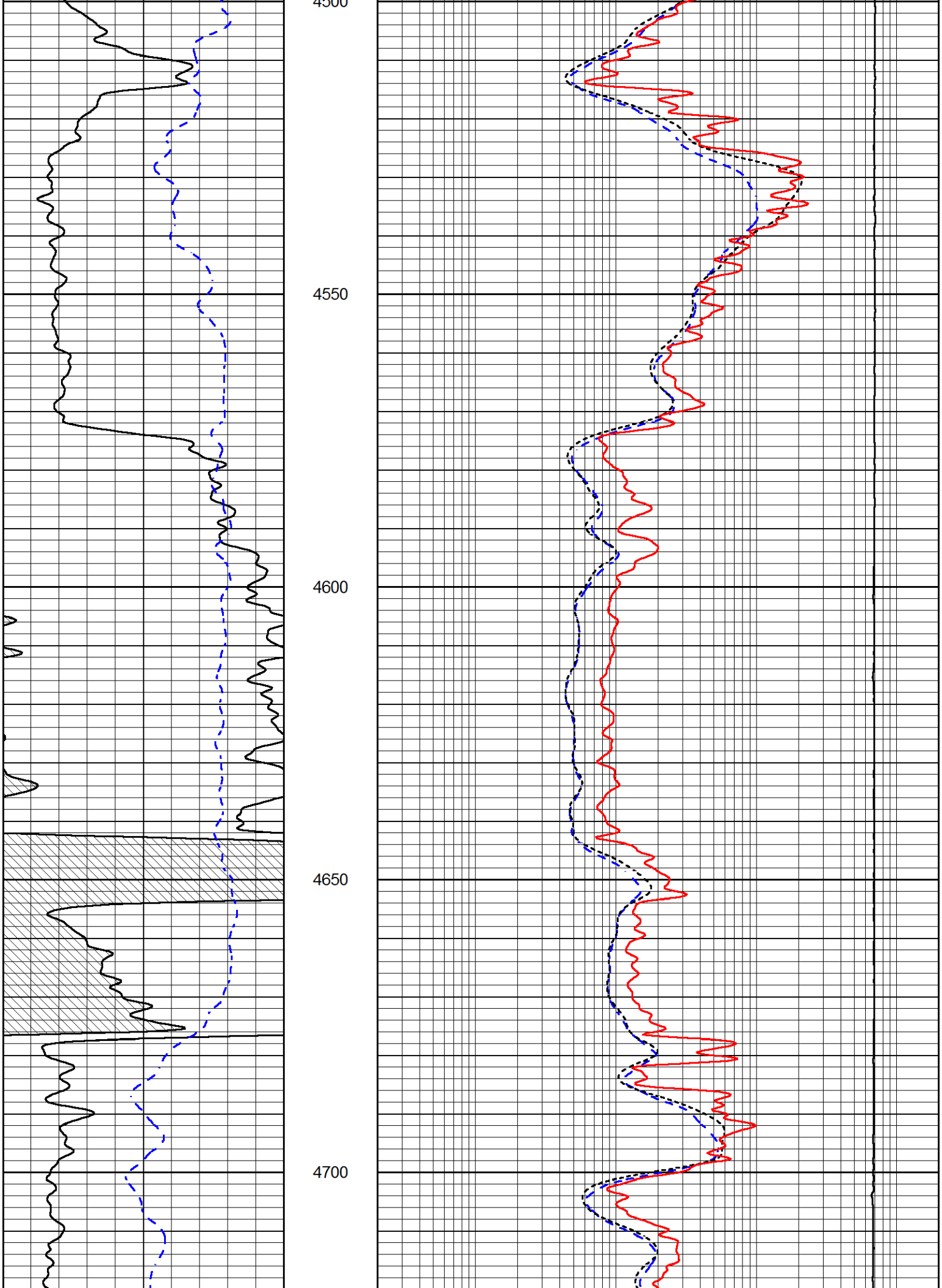

3400
3450
3500
3550
3600

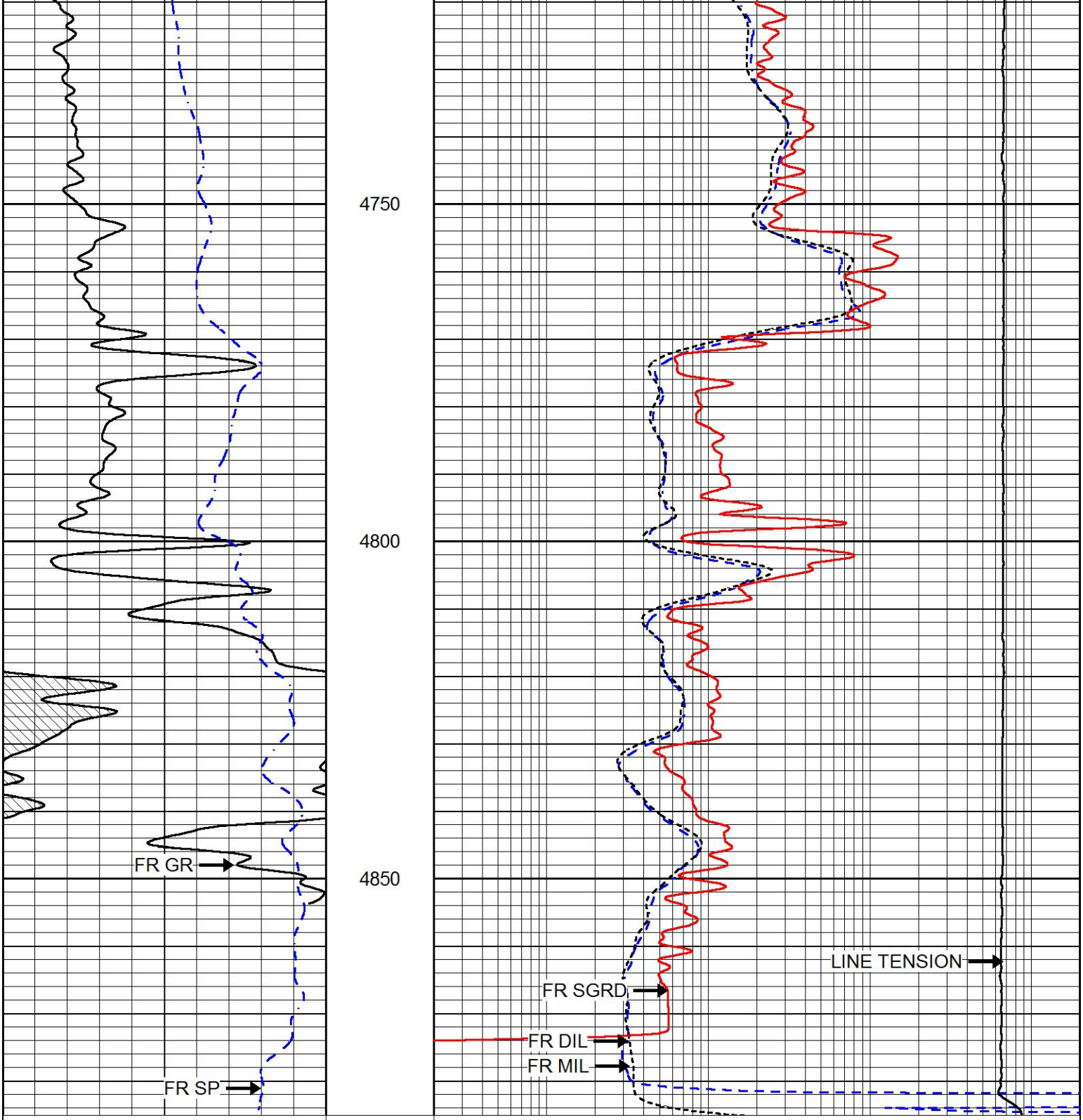

3650
3700
3750
3800


3850
3900
3950
4000
4050


4100
4150
4200
4250


4300
4350
4400
4450


4500
4550
4600
4650
4700



PIONEER
Pioneer Energy Services

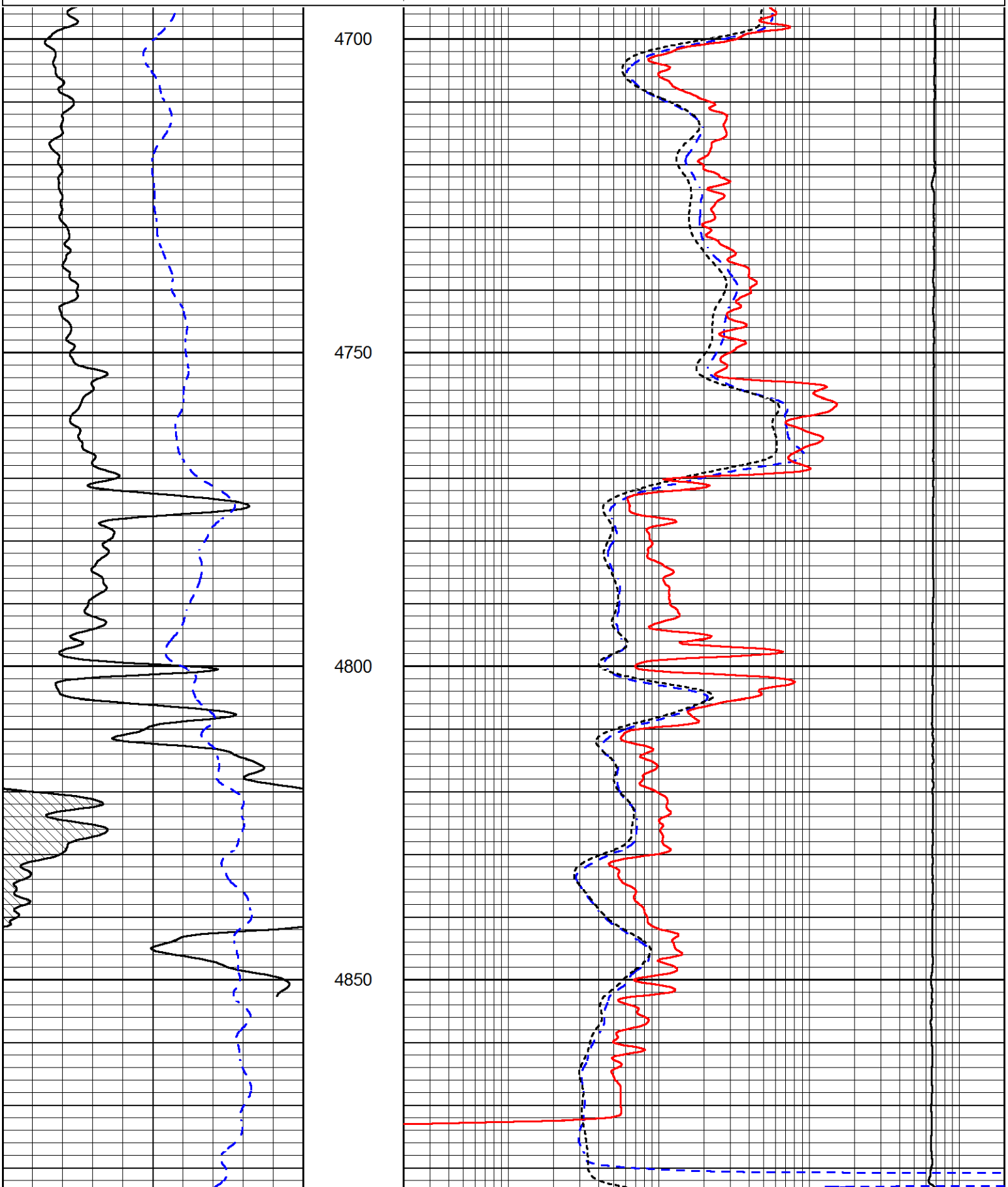
REPEAT SECTION

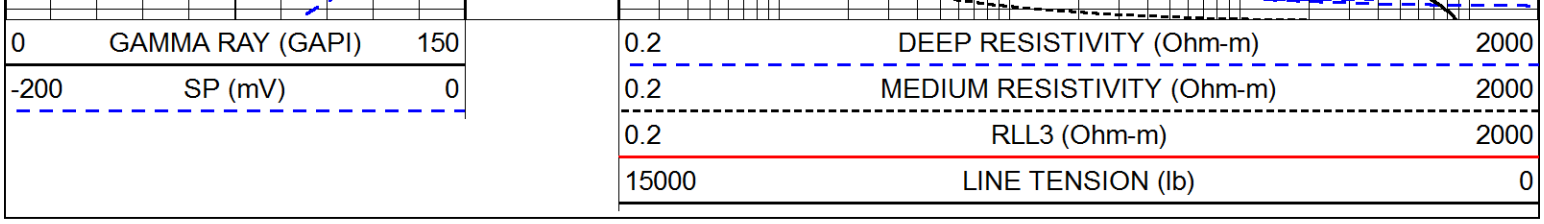
Database File	charles_griffin_sharron_4.db
Dataset Pathname	stack/pass2.1

Presentation Format	dil
Dataset Creation	Fri Mar 03 19:39:48 2017
Charted by	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-200	SP (mV)	0

0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
15000	LINE TENSION (lb)	0





0	GAMMA RAY (GAPI)	150
-200	SP (mV)	0

0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
15000	LINE TENSION (lb)	0

Calibration Report

Database File	charles_griffin_sharron_4.db
Dataset Pathname	stack/pass3.1
Dataset Creation	Fri Mar 03 20:14:18 2017

Dual Induction Calibration Report

Serial-Model:	PSI 216 HT-PSI HIGH TEMP
Calibration Performed:	Thu Mar 31 15:54:48 2016

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		Gain	Offset
Deep	75.411	495.929	4.000	250.000	mmho/m	0.600	-40.115
Medium	75.269	470.661	10.000	100.000	mmho/m	0.628	-22.133

Compensated Density Calibration Report

Serial-Model:	168-986-M&W
Source / Verifier:	/
Master Calibration Performed:	Fri Nov 18 10:05:18 2016

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4691.86	4818.19	cps
Aluminum	2.675	g/cc	859.57	3020.22	cps

Spine Angle = 74.61

Density/Spine Ratio = 0.523

	Size		Reading
Small Ring	4.00	in	1.03
Large Ring	14.00	in	1.23

Compensated Neutron Calibration Report

Serial Number:	tk10-MW
Tool Model:	M&W
Calibration Performed:	Wed Nov 16 11:21:36 2016

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

Gamma Ray Calibration Report

Serial Number:	89-M&W
Tool Model:	M&W
Calibration Performed:	Fri Dec 23 14:43:38 2016

Calibrator Value:	1000.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	6.2	cps
Sensitivity:	0.5200	GAPI/cps

PIONEER
Pioneer Energy Services

Company	CHARLES N. GRIFFIN
Well	SHARRON NO.4
Field	TONI-MIKE
County	BARBER
State	KANSAS