PIONEER
Pioneer Energy Services

DUAL INDUCTION LOG

Company LEBSACK OIL PRODUCTION, INC.
Well PFEIFER-AMYX NO. 1
Field TANKER
County FINNEY
State KANSAS

Location: API #: 15-055-22473-00-00
2200' FSL & 440' FWL
SEC 7 TWP 22S RGE 33W

Other Services
CNL/CDL
MEL

Permanent Datum GROUND LEVEL Elevation 2904'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 2917'
D.F. N/A
G.L. 2904'

Date	12/10/2017			
Run Number	ONE			
Depth Driller	4860'			
Depth Logger	4859'			
Bottom Logged Interval	4858'			
Top Log Interval	450'			
Casing Driller	8.625" @ 478'			
Casing Logger	476'			
Bit Size	7.875"			
Type Fluid in Hole	CHEMICAL			
Salinity,ppm CL	4000			
Density / Viscosity	9.5 55			
pH / Fluid Loss	10.5 7.2			
Source of Sample	FLOWLINE			
Rm @ Meas. Temp	.80 @ 51			
Rmf @ Meas. Temp	.60 @ 51			
Rmc @ Meas. Temp	1.08 @ 51			
Source of Rmf / Rmc	CHARTS			
Rm @ BHT	.33 @ 125			
Operating Rig Time	3 HOURS			
Max Rec. Temp. F	125 DEG/F			
Equipment Number	108			
Location	HAYS			
Recorded By	J. HENRICKSON			
Witnessed By	JOSH AUSTIN			

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Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

GARDEN CITY KANSAS
NORTH TO TENNIS ROAD, 6 WEST, 1/2 SOUTH, EAST INTO

Log Measured From: KELLY BUSHING 13 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: JOSH AUSTIN
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\lebsack_pfeifer_amyx_1.db
Dataset field/well/stackml/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	125	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	-485	42	Off	4859

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
GR	40.58		GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC	37.48		CNT-M&W (tk10-MW)	5.50	3.50	100.00
CNSSC	36.73					
LSD	28.43		CDL-M&W (168-986)	8.50	4.00	250.00
DCAL	28.42					
SSD	27.93					
MCAL	19.83		ML-PSI STKBL ML (PSI-02) Stackable Microlog Tools	7.58	4.00	65.00
MI	19.83					
MN	19.83					
RLL3	15.80					
RLL3F	15.79					
CILD	8.00		DIL-M&W (1987)	18.50	3.50	220.00

CILM	4.70					
SP	0.20					

Dataset: lebsack_pfeifer_amyx_1.db: field/well/stackml/pass3.1
Total length: 43.08 ft
Total weight: 685.00 lb
O.D.: 4.00 in

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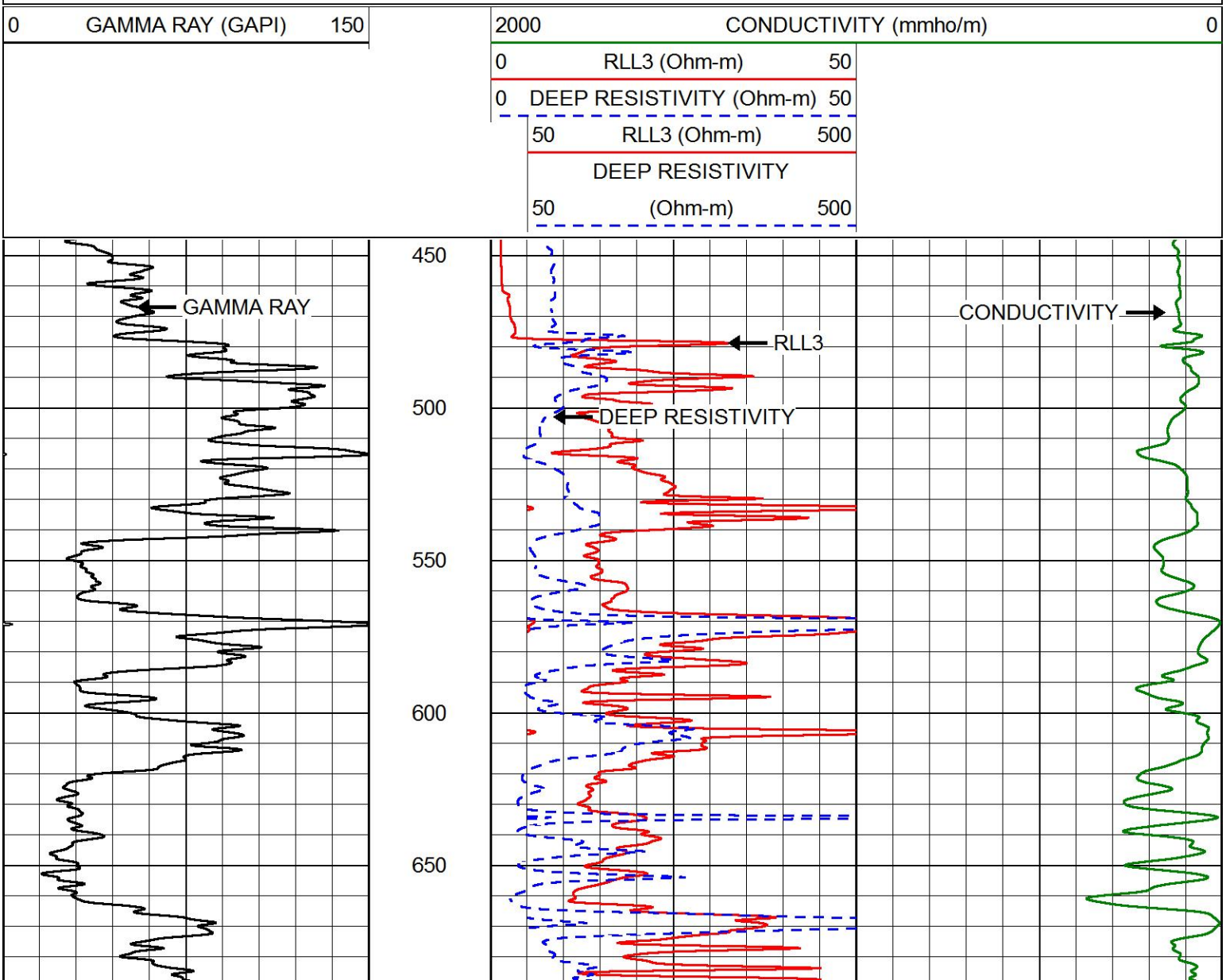
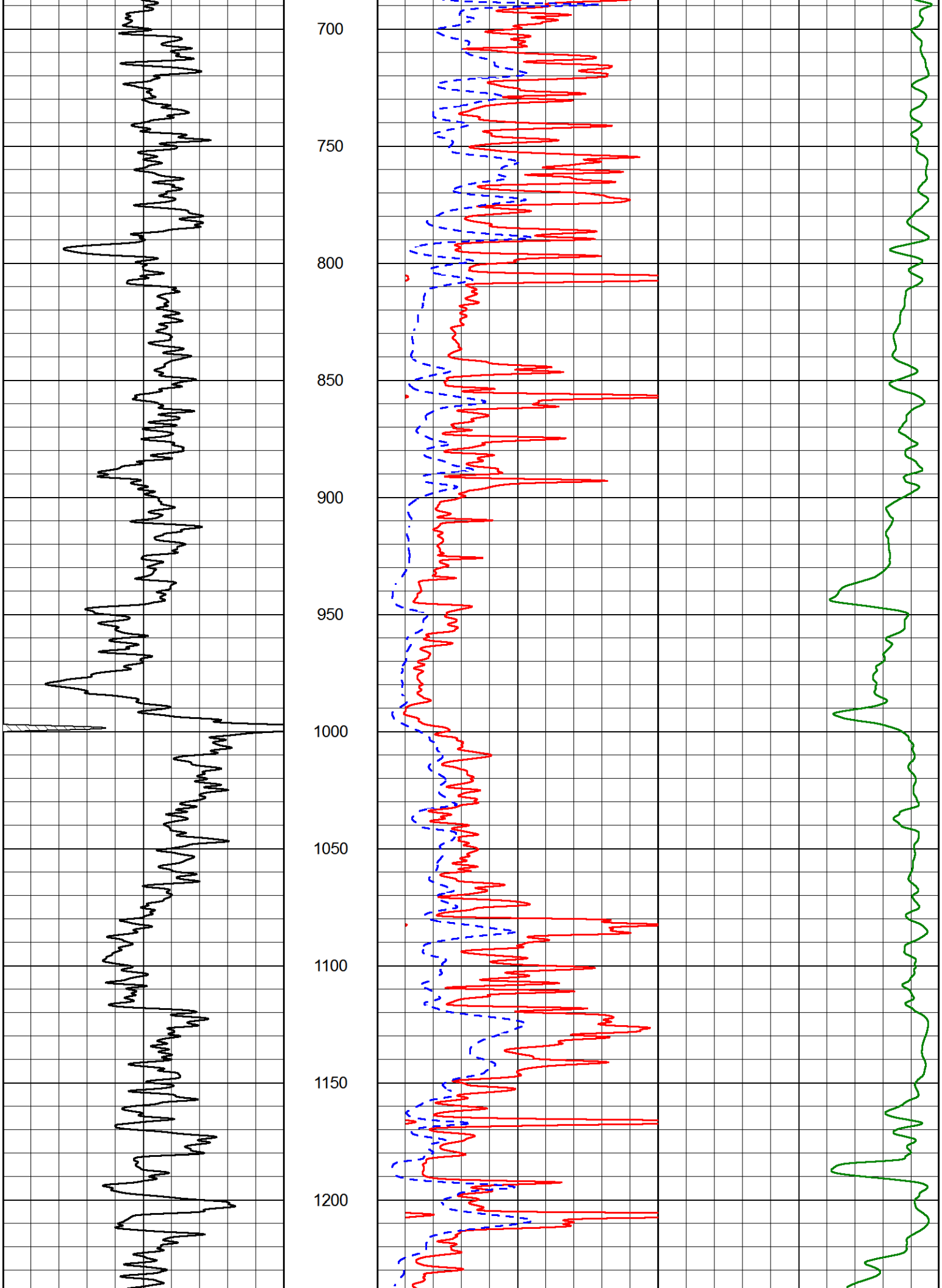
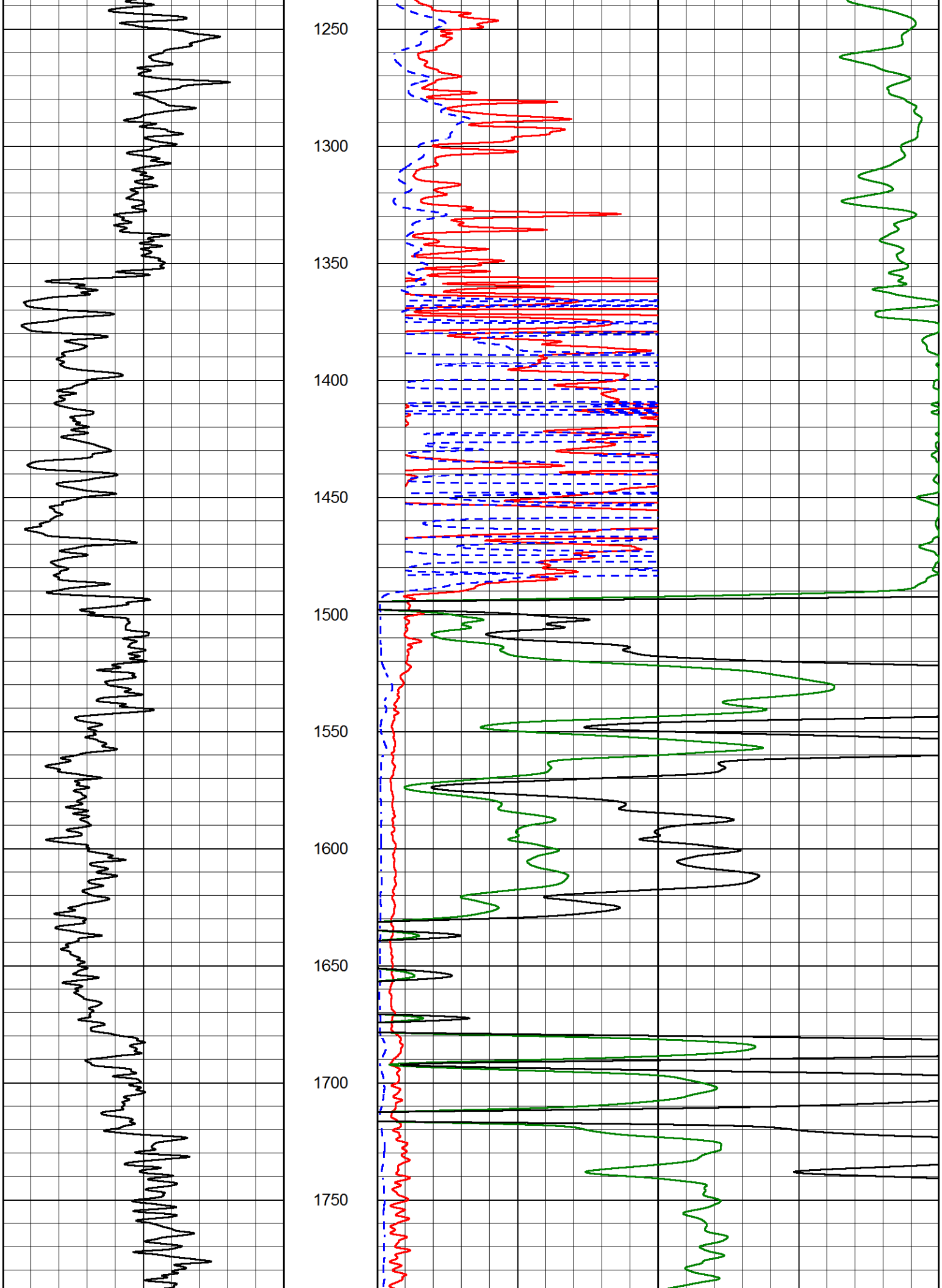
MAIN PASS

Database File	lebsack_pfeifer_amyx_1.db
Dataset Pathname	stackml/pass3.1
Presentation Format	dil2in
Dataset Creation	Sun Dec 10 11:42:42 2017
Charted by	Depth in Feet scaled 1:600




700
750
800
850
900
950
1000
1050
1100
1150
1200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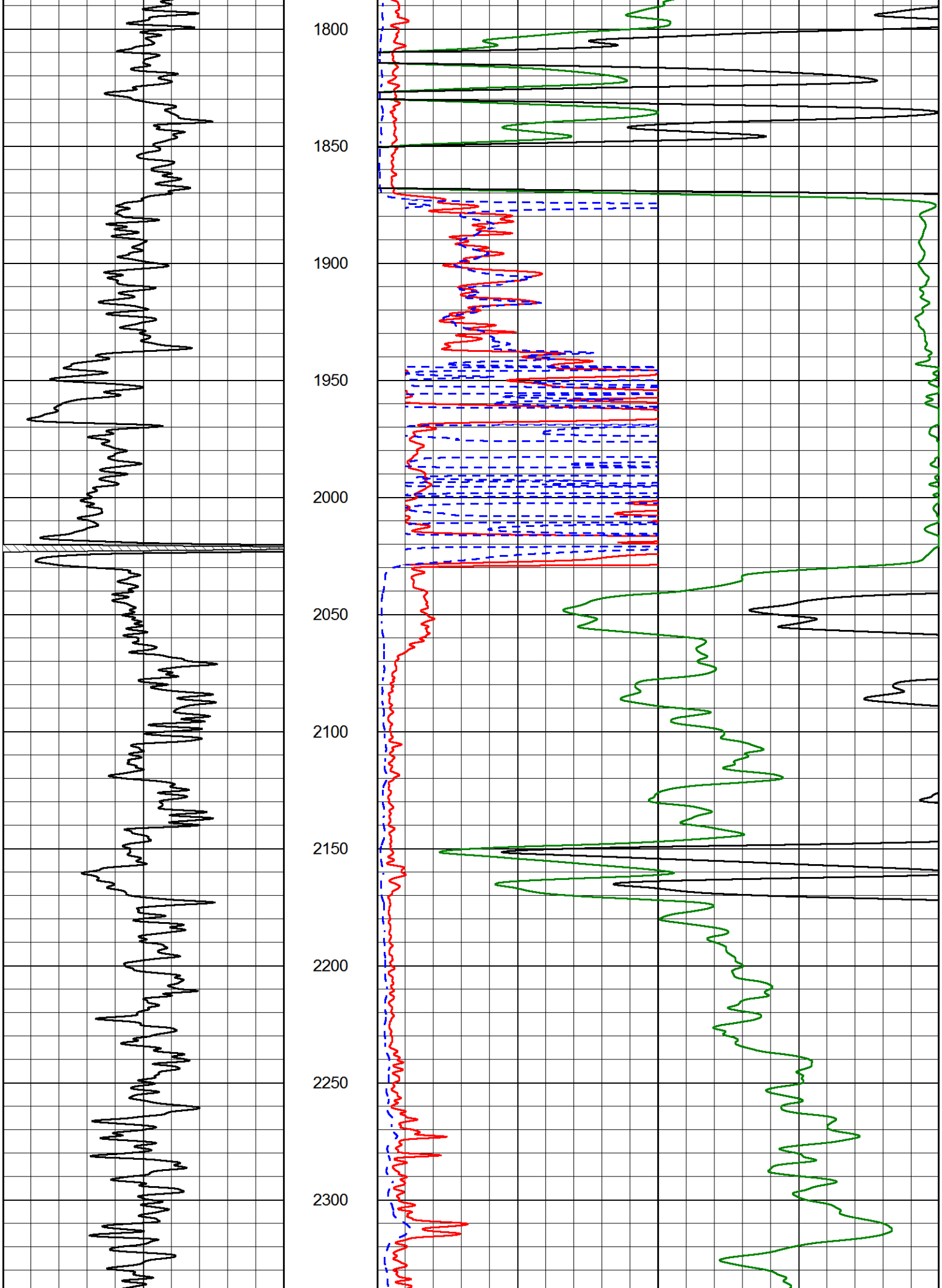
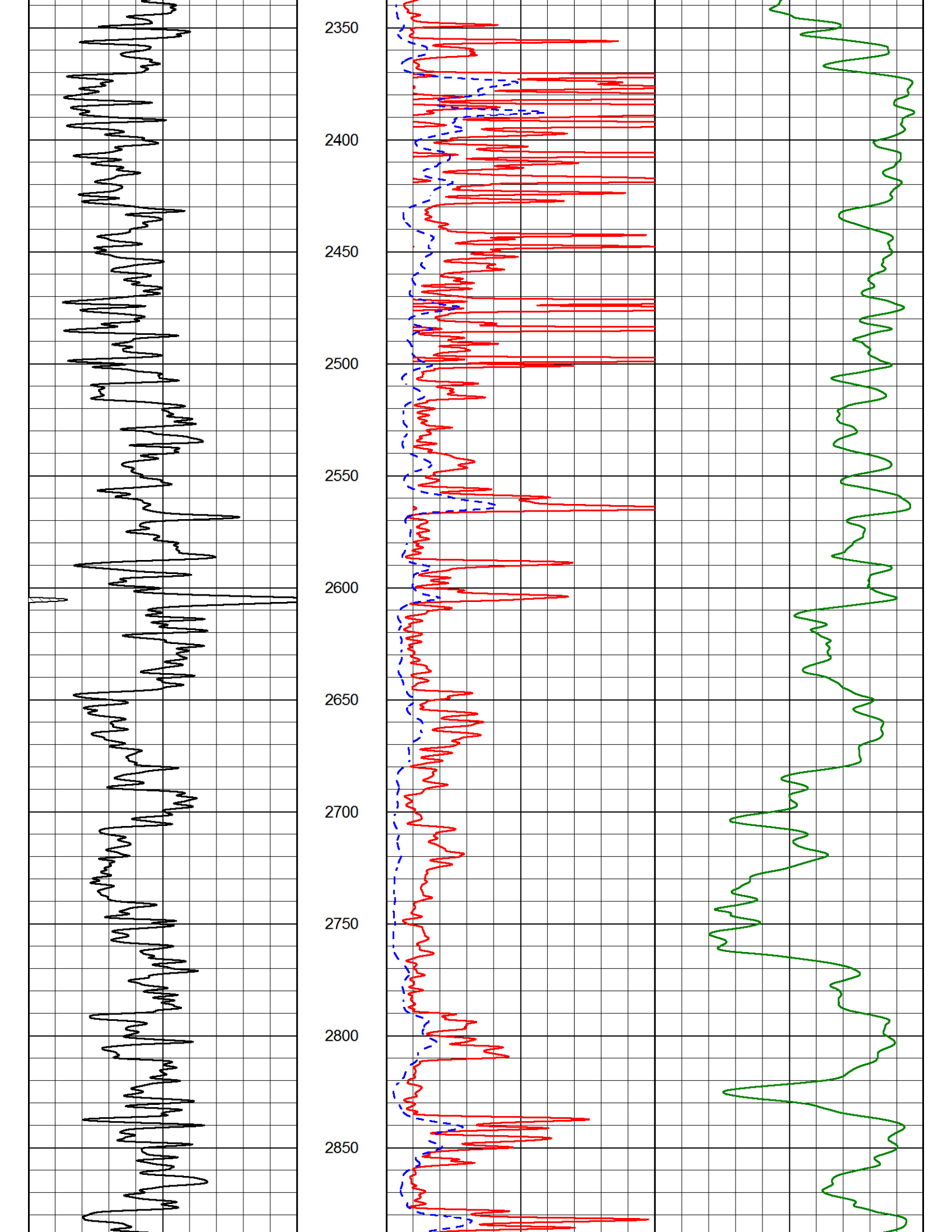
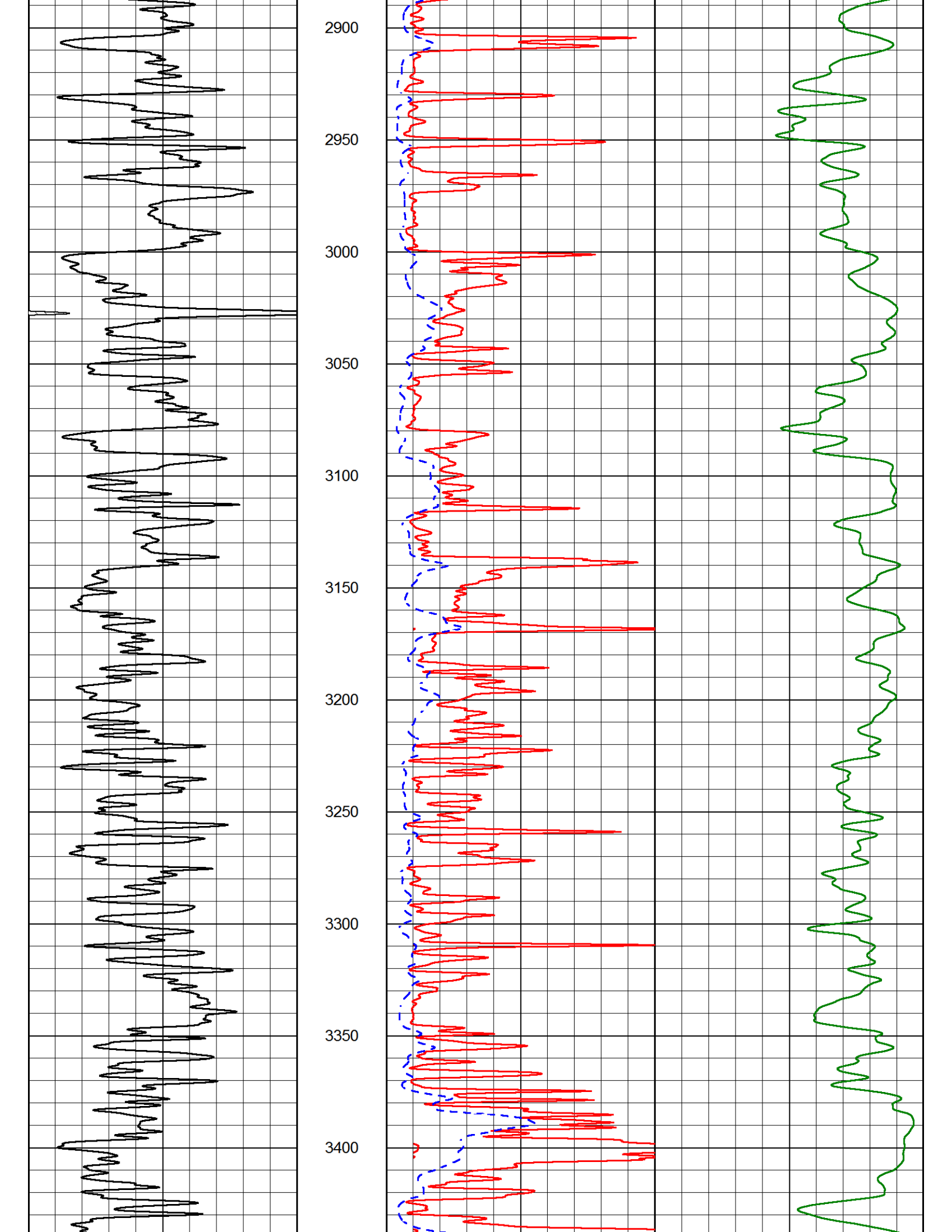
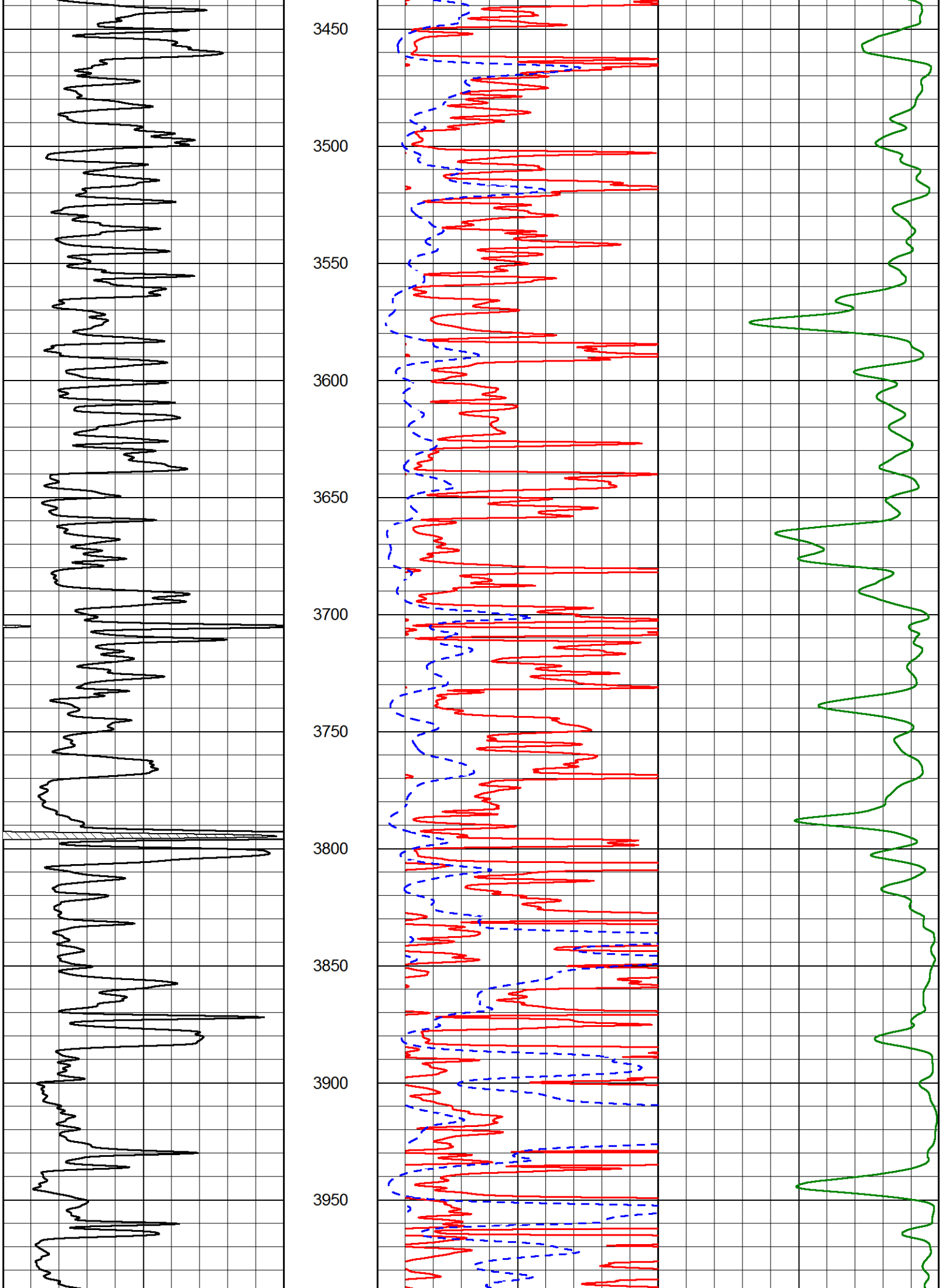
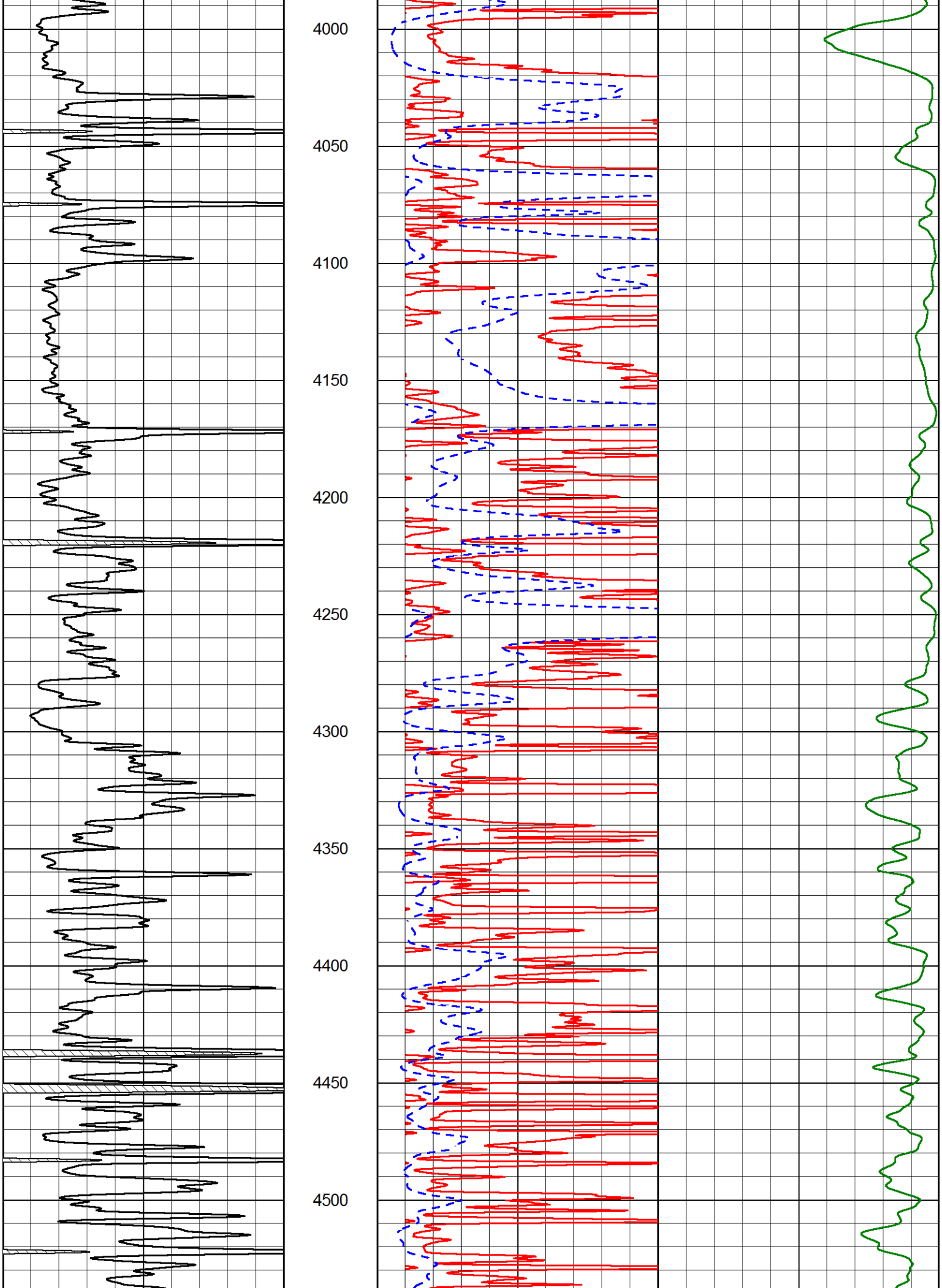
1300
1350
1400
1450
1500
1550
1600
1650
1700
1750

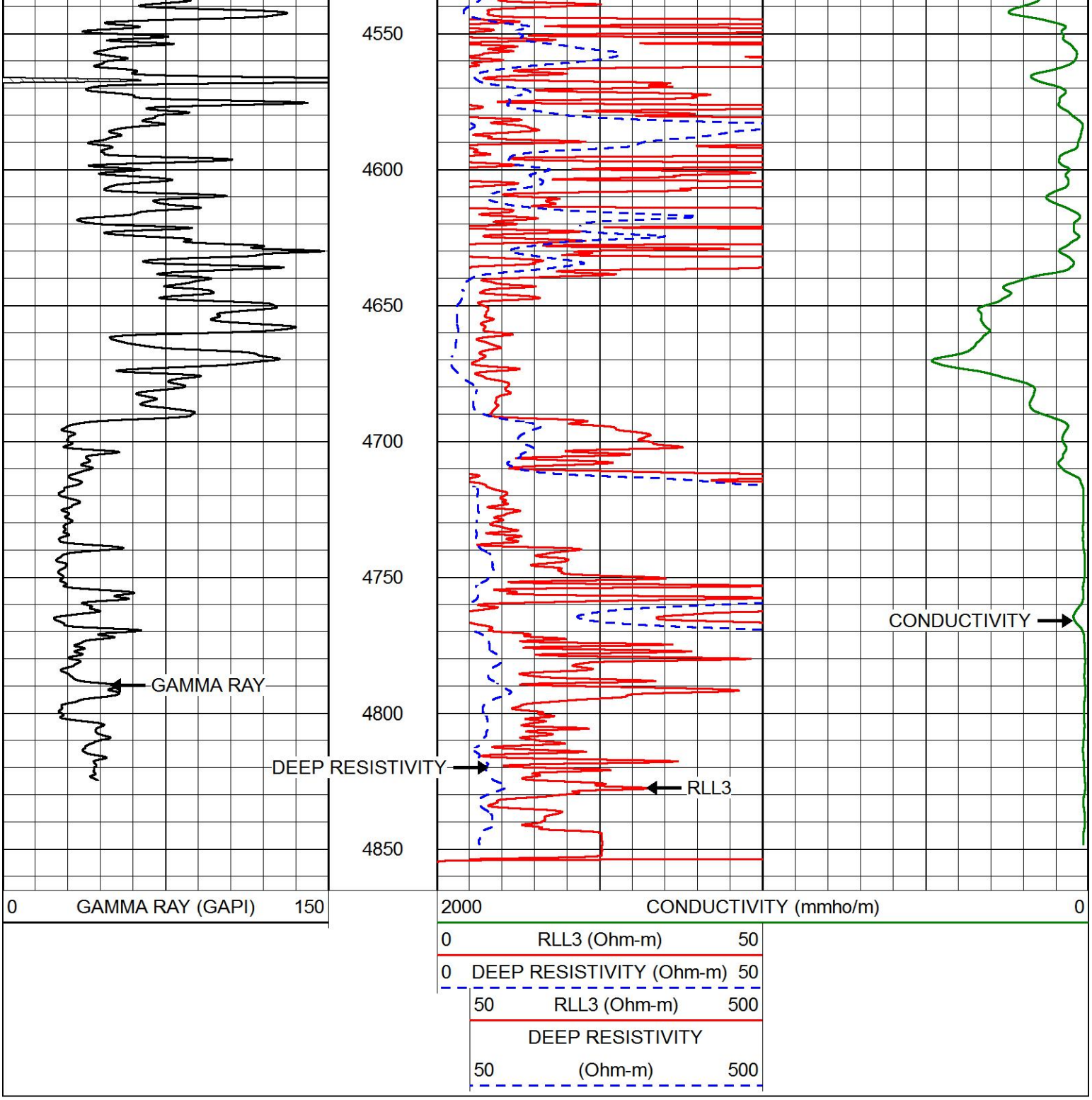

1800
1850
1900
1950
2000
2050
2100
2150
2200
2250
2300


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



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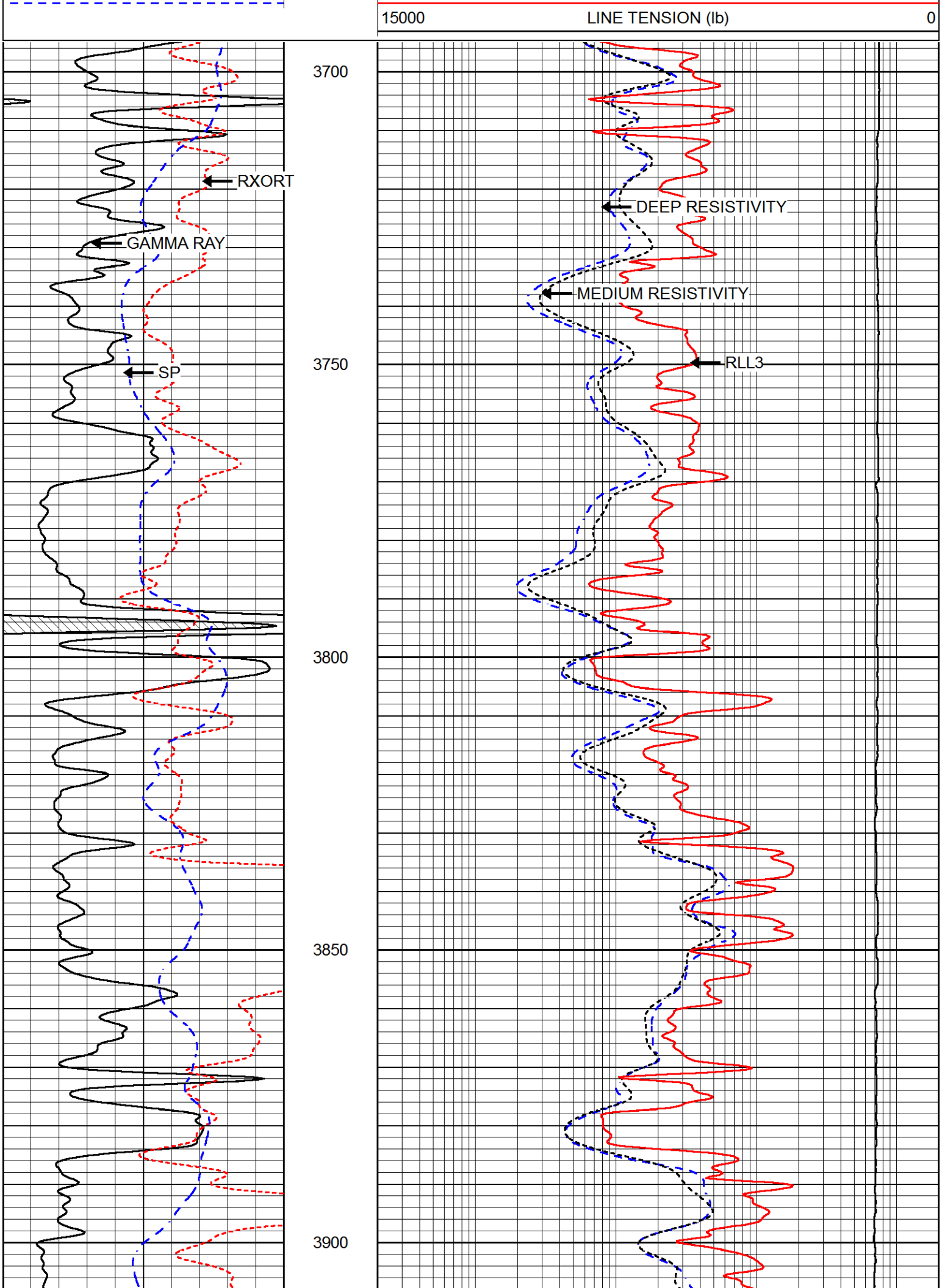
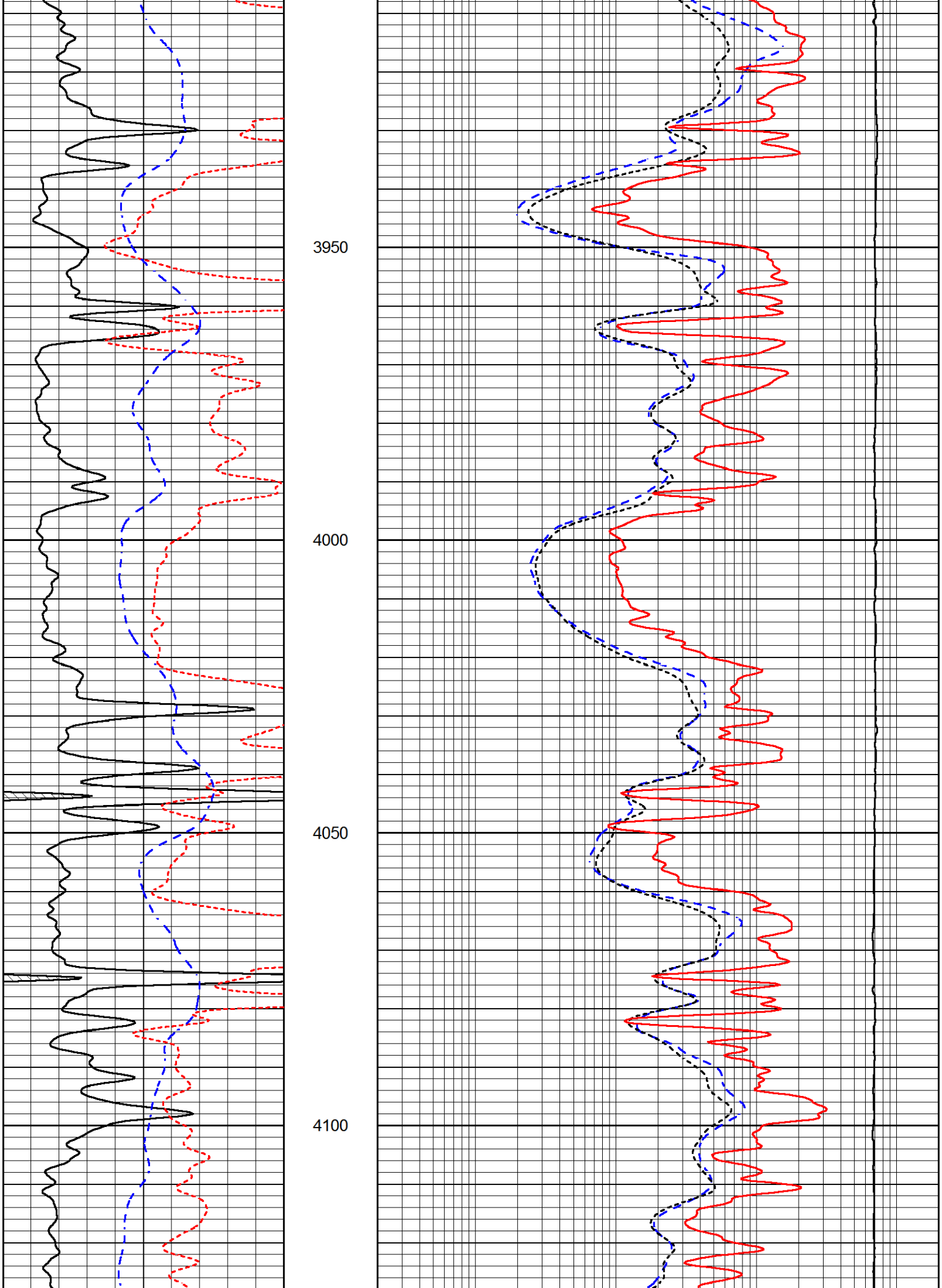
MAIN PASS

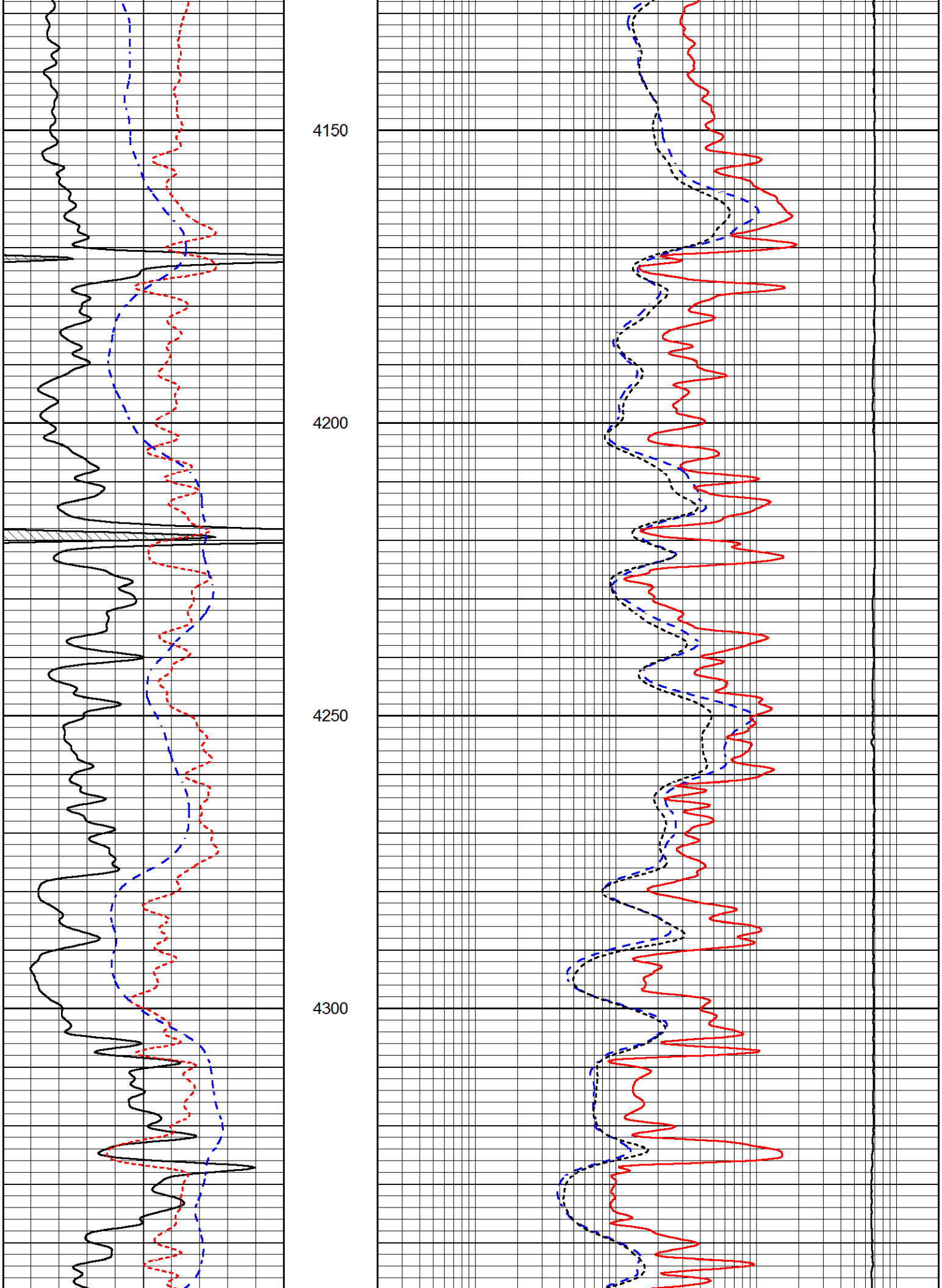
Database File	lebsack_pfeifer_amyx_1.db
Dataset Pathname	stackml/pass3.1
Presentation Format	dil
Dataset Creation	Sun Dec 10 11:42:42 2017
Charted by	Depth in Feet scaled 1:240

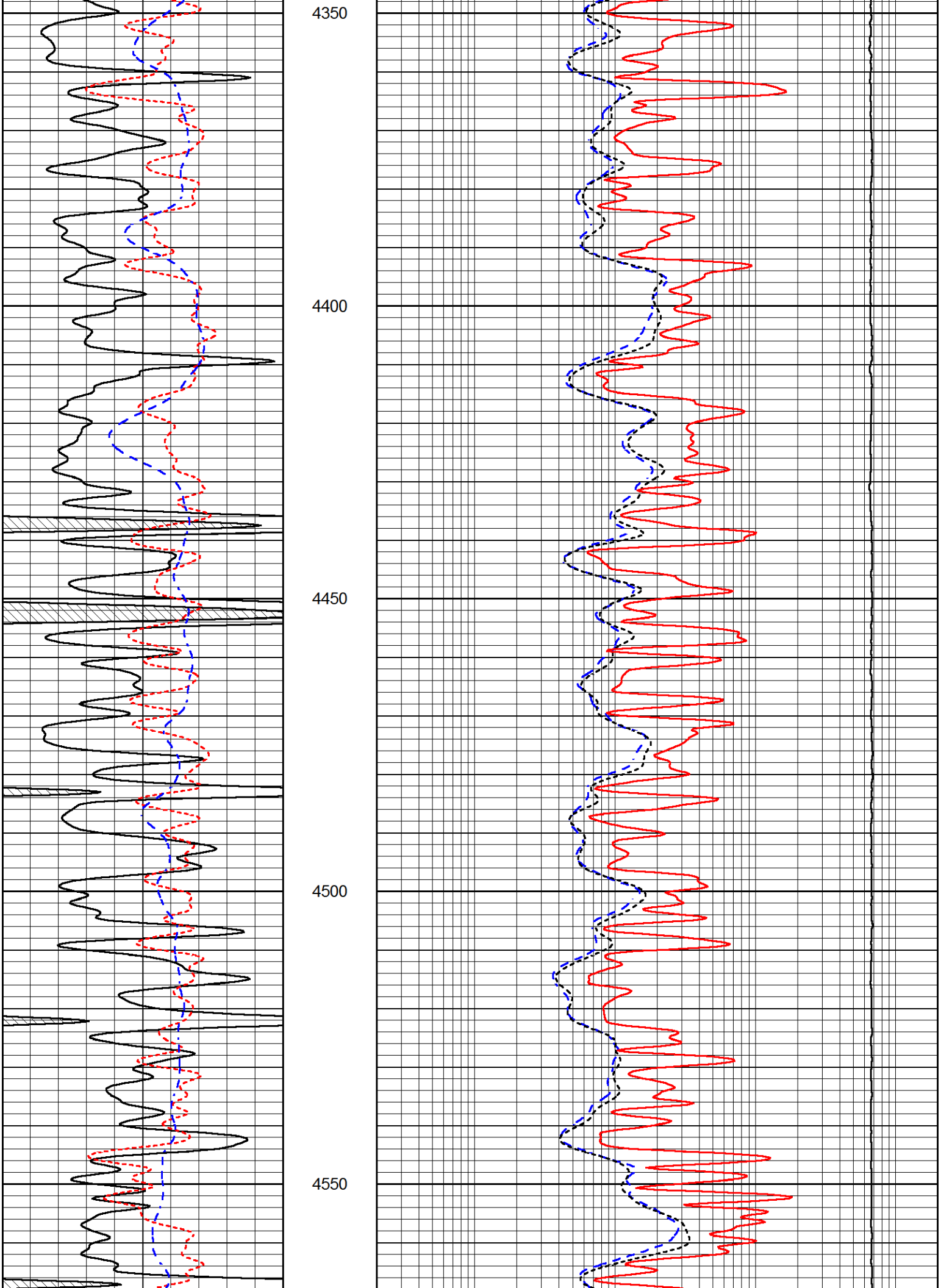
0	GAMMA RAY (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000


15000
LINE TENSION (lb)
0
3700
3750
3800
3850
3900
RXORT
GAMMA RAY
SP
DEEP RESISTIVITY
MEDIUM RESISTIVITY
RLL3


3950
4000
4050
4100


4150
4200
4250
4300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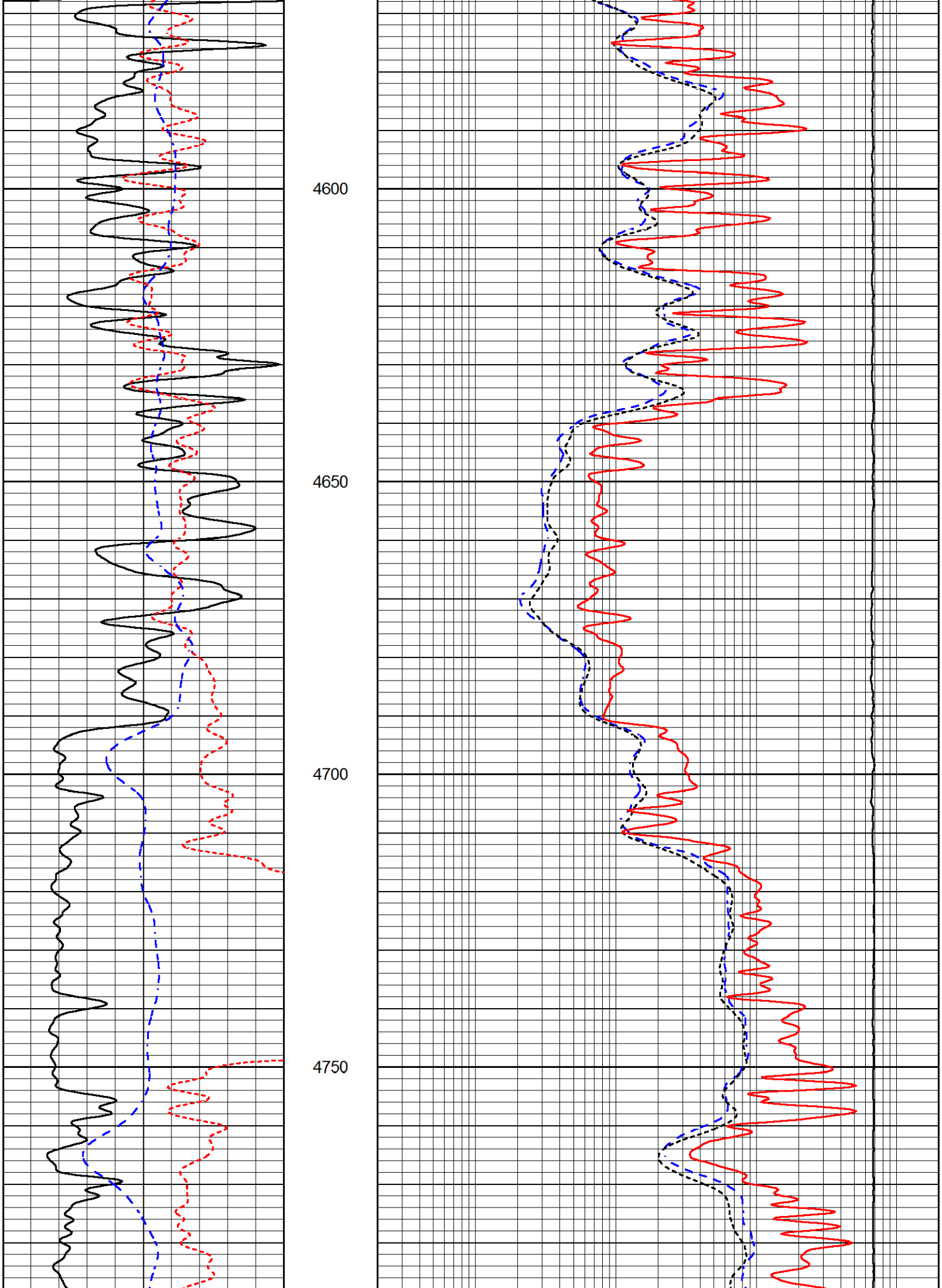
4400
4450
4500
4550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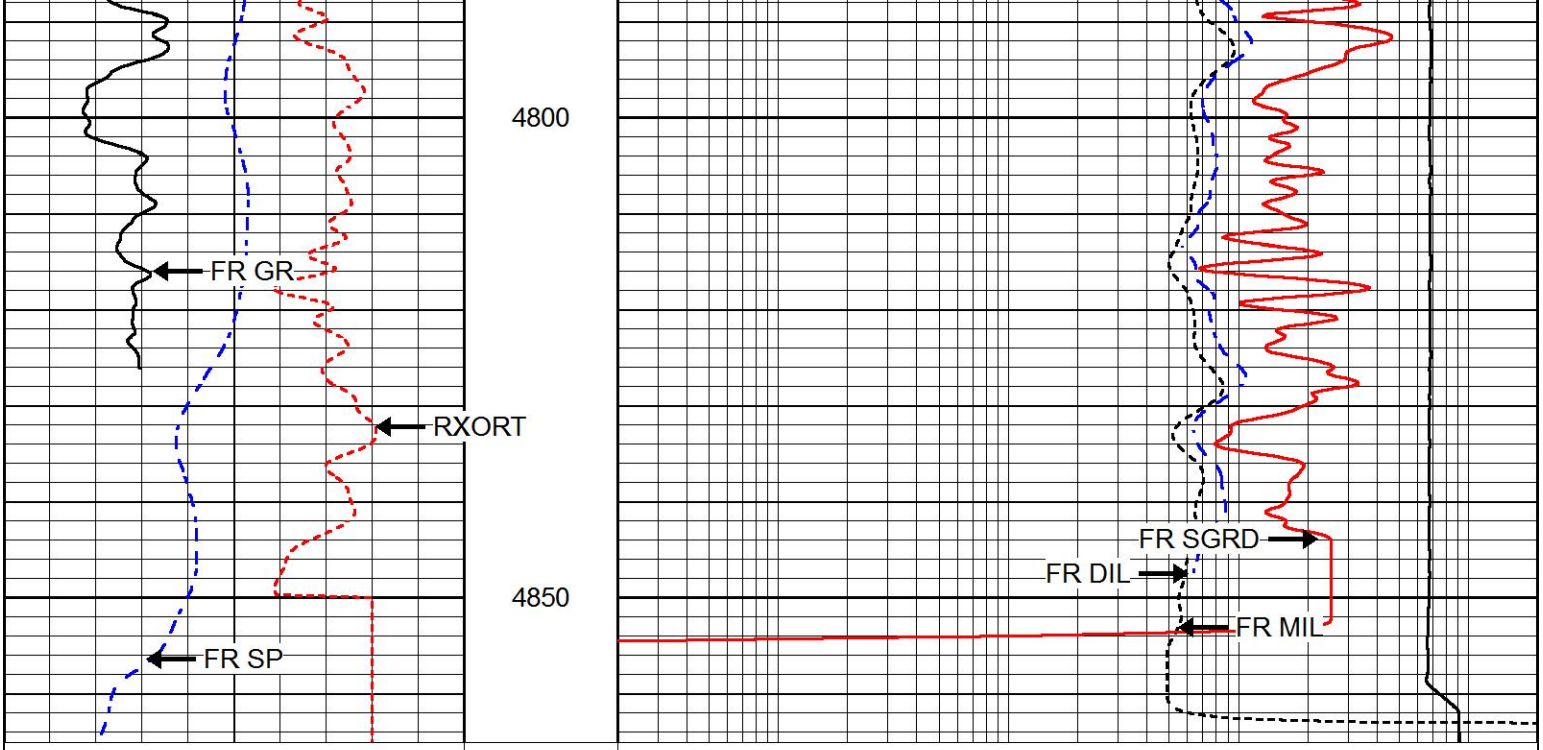
4650
4700
4750



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
15000	LINE TENSION (lb)	0

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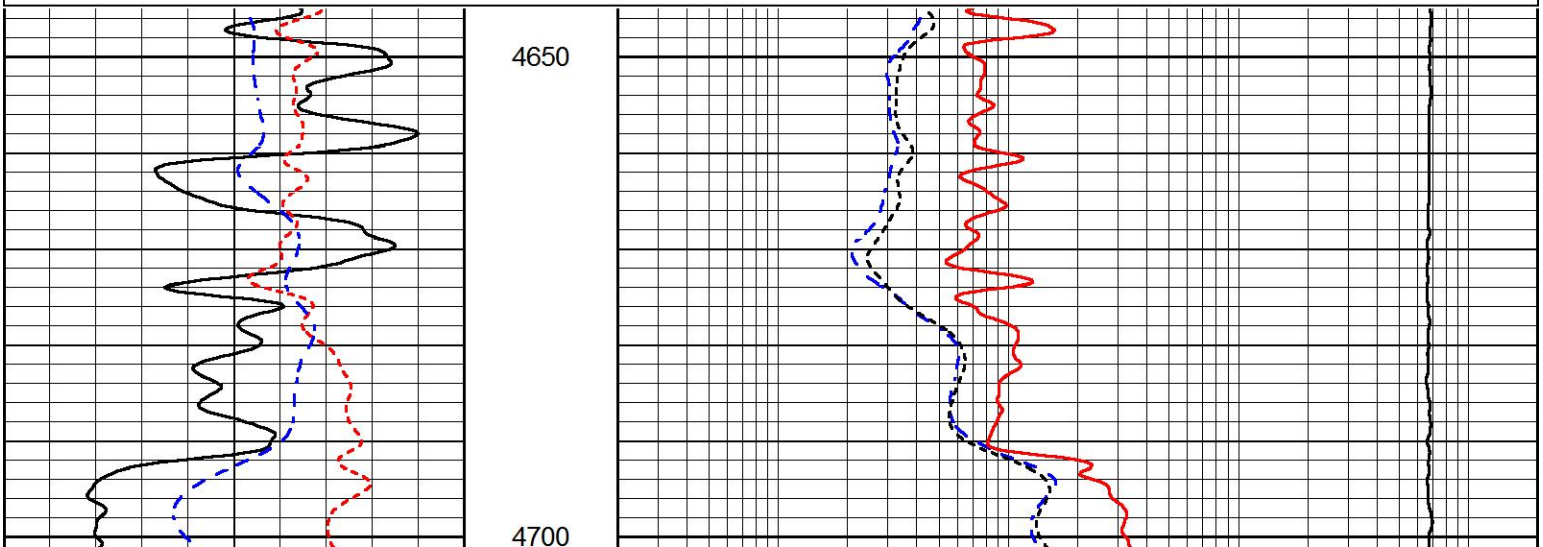
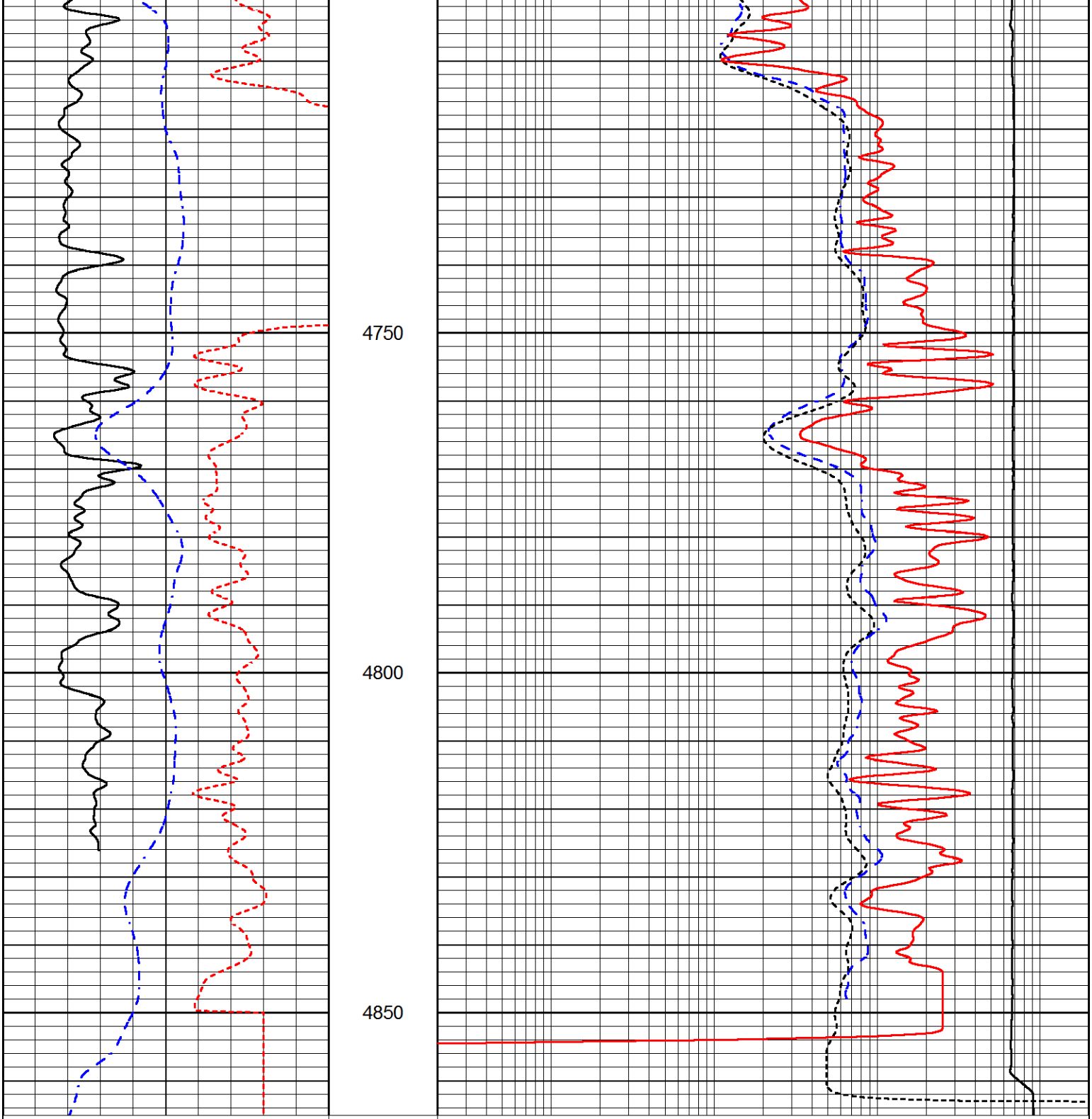
REPEAT SECTION

Database File	lebsack_pfeifer_amyx_1.db
Dataset Pathname	stackml/pass2.1
Presentation Format	dil
Dataset Creation	Sun Dec 10 11:43:58 2017
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
15000	LINE TENSION (lb)	0





Calibration Report

Database File	lebsack_pfeifer_amyx_1.db
Dataset Pathname	stackml/pass3.1
Dataset Creation	Sun Dec 10 11:42:42 2017

Dual Induction Calibration Report

Serial-Model:	1987-M&W
Calibration Performed:	Tue Apr 11 17:07:38 2017

Loop:	Readings Air	Readings Loop	References Air	References Loop		Results Gain	Results Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.530	-36.500
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.440	-110.500

Microlog Calibration Report

Serial-Model: PSI-02-PSI STKBL ML
Performed: Fri Jun 23 01:25:19 2017

	Readings Zero	Readings Cal	References Zero	References Cal		Results m	Results b
Normal	0.0031	0.0043	0.0000	10.0000	Ohm-m	15000.0000	0.0000
Inverse	0.0000	0.0013	0.0000	10.0000	Ohm-m	17000.0000	0.0000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1560	-131.4000

Compensated Density Calibration Report

Serial-Model: 168-986-M&W
Source / Verifier: /
Master Calibration Performed: Tue Apr 11 17:07:47 2017

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4691.86	4818.19	cps
Aluminum	2.705	g/cc	859.57	3020.22	cps

Spine Angle = 74.61 Density/Spine Ratio = 0.540

	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: Tue Apr 11 17:08:01 2017

Calibrator Value: 1000.0 GAPI

Background Reading: 0.0 cps

Calibrator Reading:	6.2	cps
Sensitivity:	0.5200	GAPI/cps

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Company	LEBSACK OIL PRODUCTION, INC.
Well	PFEIFER-AMYX NO. 1
Field	TANKER
County	FINNEY
State	KANSAS