

Confidentiality Requested:

Yes No

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

**WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

Deepening Re-perf. Conv. to EOR Conv. to SWD
 Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Lario Oil & Gas Company
Well Name	KNOBBE 1-4
Doc ID	1373383

All Electric Logs Run

Dual Induction
Microlog
GR-CNL-LDT
Sonic

Form	ACO1 - Well Completion
Operator	Lario Oil & Gas Company
Well Name	KNOBBE 1-4
Doc ID	1373383

Tops

Name	Top	Datum
Heebner	3962	-572
Lansing	3900	-610
Stark Shale	4202	-912
Hushpuckney	4249	-959
Base KC	4330	-1040
Marmaton	4365	-1075
Pawnee	4460	-1170
Ft. Scott	4484	-1194
Johnson	4607	-1317
Morrow	4712	-1422
Mississippian	4827	-1537



PRESSURE PUMPING LLC

REMIT TO
QES Pressure Pumping LLC
Dept:970
P.O.Box 4346
Houston, TX 77210-4346

MAIN OFFICE

P.O.Box884
Chanute,KS 66720
620/431-9210,1-800/467-8676
Fax 620/431-0012

Invoice

Invoice#

811161

Invoice Date: 08/31/17

Terms: Net 30

Page 1

LARIO OIL & GAS

P.O. BOX 1093
GARDEN CITY KS 67846
USA
3162655611

KNOBBE1-4 ✓

September 6, 2017 AK

Part No	Description	Quantity	Unit Price	Discount(%)	Total
CE0471	Cement Pump Charge 301' - 500' (Coalbed/Methane)	1.000	1,150.0000	30.000	805.00
CE0002	Equipment Mileage Charge - Heavy Equipment	40.000	7.1500	30.000	200.20
CE0710	Cement Delivery Charge	1.000	822.4000	30.000	575.68
CC5871	<u>Surface Blend</u> II, 2% Gel/3% CaCl	250.000	23.0000	30.000	4,025.00

Subtotal 8,008.40

Discounted Amount 2,402.52

SubTotal After Discount 5,605.88

Amount Due 8,497.15 If paid after 09/30/17

Tax: 342.13

Total: 5,948.01

SEP - 7 2017



8940
8831

TICKET NUMBER 53555
LOCATION Oakley, KS
FOREMAN Walt Dinkel

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

WELL TICKET & TREATMENT REPORT
CEMENT

Invoice # 811161

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
8-31-17	4793	Knobbe 1-4	4	19S	37W	Wichita

CUSTOMER	TRUCK #	DRIVER	TRUCK #	DRIVER
Lario Oil & Gas	731	Corey Davis		
	460	Kyle Crosswell		

CITY	STATE	ZIP CODE
Garden City	KS	67846

JOB TYPE Surface HOLE SIZE 12"14 HOLE DEPTH 363' CASING SIZE & WEIGHT 8 5/8 - 24"
 CASING DEPTH 362' DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 15.2 SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT IN CASING 15-20'
 DISPLACEMENT 21 3/4 DISPLACEMENT PSI _____ MIX PSI _____ RATE 4 BPM

REMARKS: Safety, Monitor, Rig up on Southwind #1, circ casing on bottom
Mixed 250 SKs Surface Blend II; Displace 21 3/4 BBL, R20,
Shot in

Cement Did Cure

Approx 3 BBL to Pt

Thank You
Walt Dinkel

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
Cen 471 ✓	1	PUMP CHARGE	1,150.00	1,150.00 ✓
Cen 002 ✓	40	MILEAGE	7.15	286.00 ✓
Cen 710 ✓	11.75	Tax Mileage Delivery	17.5	206.25 ✓
CC5871 ✓	250 SKs	Surface Blend II	23.00	5,750.00 ✓
				8,008.40
		Less 30% Disc		2,402.52 ✓
				5,605.88 ✓
				342.13 ✓
				5,948.01 ✓

Flavin 3737 AUTHORIZATION Jeff Hood TITLE _____ DATE _____

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



PRESSURE PUMPING LLC

REMIT TO
QES Pressure Pumping LLC
Dept:970
P.O.Box 4346
Houston, TX 77210-4346

MAIN OFFICE

P.O.Box884
Chanute, KS 66720
620/431-9210, 1-800/467-8676
Fax 620/431-0012

Invoice

Invoice# 811271

Invoice Date: 09/18/17

Terms: Net 30

Page 1

LARIO OIL & GAS

P.O. BOX 1093
GARDEN CITY KS 67846
USA
3162655611

KNOBBE 1-4

*drilling afc 17-059
September 22, 2017 JK*

Part No	Description	Quantity	Unit Price	Discount(%)	Total
CE0453	Cement Pump Charge 4001' - 5000'	1.000	2,800.0000	30.000	1,960.00
CE0002	Equipment Mileage Charge - Heavy Equipment	40.000	7.1500	30.000	200.20
CE0710	Cement Delivery Charge	1.000	3,005.8000	30.000	2,104.06
CC5862	ThixoBlend III	300.000	26.0000	30.000	5,460.00
CC6077	Kolseal	1,500.000	0.5000	30.000	525.00
CC5831	Lite-Weight Blend VII (60:40:8)	670.000	17.5000	30.000	8,207.50
CC6075	Celloflake	168.000	3.0000	30.000	352.80
CC6125	Mud Flush, Viscous	500.000	0.6500	30.000	227.50
CP8484	4 1/2" Float Shoe, AFU	1.000	470.0000	30.000	329.00
CP8253	4 1/2" Latch Down Plug & Assembly	1.000	340.0000	30.000	238.00
CP8553	4 1/2" Centralizer	16.000	78.0000	30.000	873.60
CP8628	4 1/2" Basket	1.000	350.0000	30.000	245.00
CP8800	4 1/2" DV Tool	1.000	5,040.0000	30.000	3,528.00

Subtotal 34,643.80

Discounted Amount 10,393.14

SubTotal After Discount 24,250.66

Amount Due 37,070.72 If paid after 10/18/17

Tax: 1,698.85

Total: 25,949.51

APR	EXPI	FILE	OK	3/27
GC				
KB				
OD	US	KE	BB	SP

SEP 25 2017



620-431-9210 or 800-467-8676

LD TICKET & TREATMENT REPORT
CEMENT

TICKET NUMBER 53610
LOCATION Oakley KS
FOREMAN Jerry

Invoice # 81071 KS

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY	
9-11-17	4793	Knobbe 1-4	4	19S	37W	Wichita	
CUSTOMER		Mailing Address		TRUCK #	DRIVER	TRUCK #	DRIVER
Larc Oils & Gas		Leat: W to 10, 45, Winto		753	Travis W	assist	Jimmy B
PO. Box 1013				772-427	Seth O		
Garden City		KS 67846		530-7129	Walt D		
				566	Miks S		

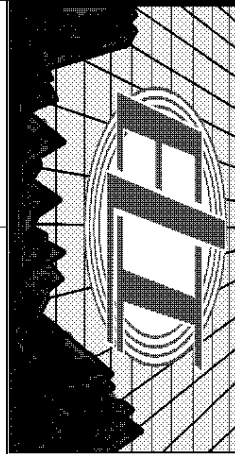
JOB TYPE 2 Stage HOLE SIZE 7 7/8 HOLE DEPTH 5001 CASING SIZE & WEIGHT 4 1/2 11.6#
CASING DEPTH 4941 DRILL PIPE _____ TUBING _____ OTHER DV @ 2309
SLURRY WEIGHT 14.2/125 SLURRY VOL. 1.42/1.89 WATER gal/sk _____ CEMENT LEFT in CASING 17'
DISPLACEMENT 77/35 3/4 DISPLACEMENT PSI 700/1300 RATE _____

REMARKS: Safety meeting arig up on Southwind / run float casing. Con on 118, 115, 112, 109, 106, 103, 100, 97, 94, 91, 88, 85, 82, 79, 59, 56 Basket on 57, DV tool top 57 set @ 2309
Run casing to bottom pump well thru exirc 1 1/2 hrs pump 5 bbl H₂O, mud flush, 5 H₂O behind
mix 300 sks thixoblend III shut down release plug clean pumps lines displace 79 1/2 bbl
(35 H₂O + 44 1/2 mud) final lift 700# plug landed @ 1300# open tool 1100# & circulate 3 hrs
mix 620 sks lifeblend VII shut down release plug clean pumps & lines displace
36 bbl final lift 700# plug landed & tool closed @ 1900# released
back & float held approx 30 sks to pit
Cement did Circulate
30 sks Rat hole 20 moaz hole

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0453	1	PUMP CHARGE	2800.00	2800.00
CE0002	40	MILEAGE	7.15	286.00
CE0710	42.94	ten mileage delivery	1.75	3005.30
CC5862	300 sks	thixoblend III	26.00	7800.00
CC6077	1500#	Kal seal	.50	750.00
CC5851	670 sks	lifeblend VII (60/40 8%)	17.50	11,725.00
CC6075	168#	flo.seal	3.00	504.00
CC6125	500 gal	mud flush	.65	325.00
CP8484	1	4 1/2 APU float shoe	470.00	470.00
CP 8253	1	4 1/2 latchdown assy	340.00	340.00
CP 8553	16	4 1/2 Centralizers	78.00	1248.00
CP 7628	1	4 1/2 basket	350.00	350.00
CP 8800	1	4 1/2 DV Tool	5040.00	5040.00
			Subtotal	34643.80
			-30%	10393.14
			Subtotal	24250.66
			SALES TAX	1698.84
			ESTIMATED TOTAL	25949.50

AUTHORIZATION Reuben Paddock TITLE Production Foreman DATE 9/11/17

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



DUAL INDUCTION LOG

Company LARIO OIL & GAS COMPANY
 Well KNOBBE #1-4
 Field WILDCAT
 County WICHITA
 State KANSAS

Company LARIO OIL & GAS COMPANY
 Well KNOBBE #1-4
 Field WILDCAT
 County WICHITA State KANSAS

Location: API # : 15-203-20322-0000
 1290' FNL & 1775' FEL
 SW - SE - NW - NE
 SEC 4 TWP 19S RGE 37W

Permanent Datum GROUND LEVEL Elevation 3280
 Log Measured From KELLY BUSHING 10' A.G.L.
 Drilling Measured From KELLY BUSHING

Other Services
 CDL/CNL/PE
 MEL/SONIC
 Elevation
 K.B. 3290
 D.F. 3288
 G.L. 3280

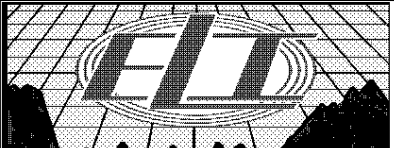
Date	9/10/17
Run Number	ONE
Depth Driller	5000
Depth Logger	5001
Bottom Logged Interval	4999
Top Log Interval	00
Casing Driller	8 5/8" @ 360'
Casing Logger	360
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	8.9/53
pH / Fluid Loss	10.5/6.4
Source of Sample	FLOWLINE
Rim @ Meas. Temp	.400 @ 85F
Rmf @ Meas. Temp	.300 @ 85F
Rmc @ Meas. Temp	.480 @ 85F
Source of Rmf / Rmc	MEASUREMENT
Rim @ BHT	.272 @ 125F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	11:00 P.M.
Maximum Recorded Temperature	125F
Equipment Number	922339
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	STEVE DAVIS

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, 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. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
 DIRECTIONS
 LEOTI, KS. (4 WAY STOP) 2 1/2W. ON HWY 96 TO "RD. 10", 3 1/2S., W. INTO



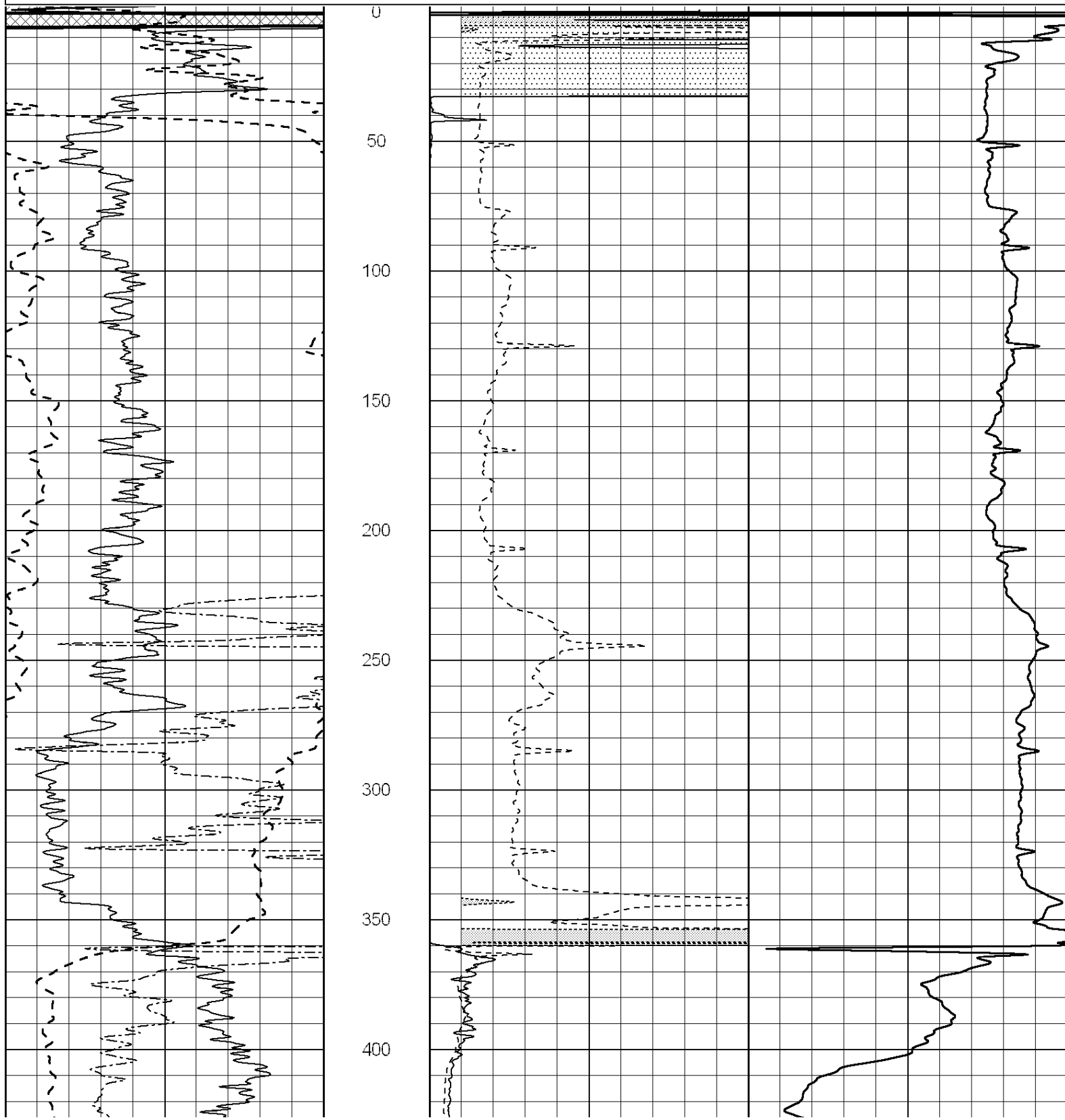
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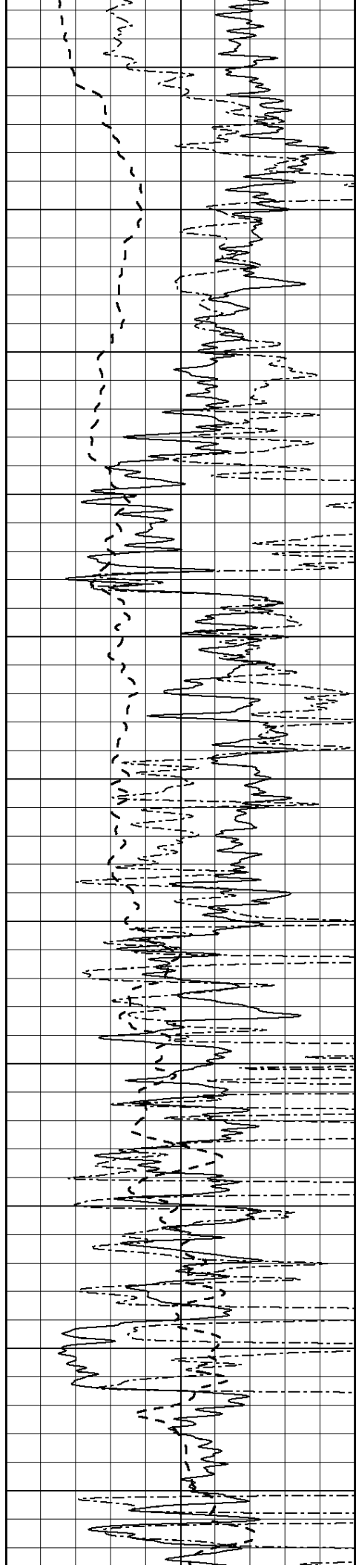
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 Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1

0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
1000	CILD (mmho/m)	0

50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500





450

500

550

600

650

700

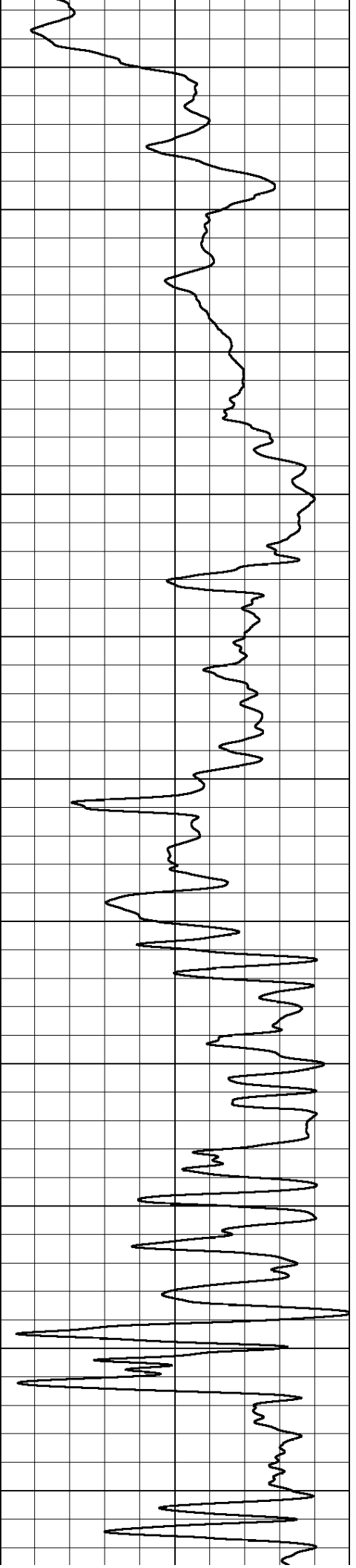
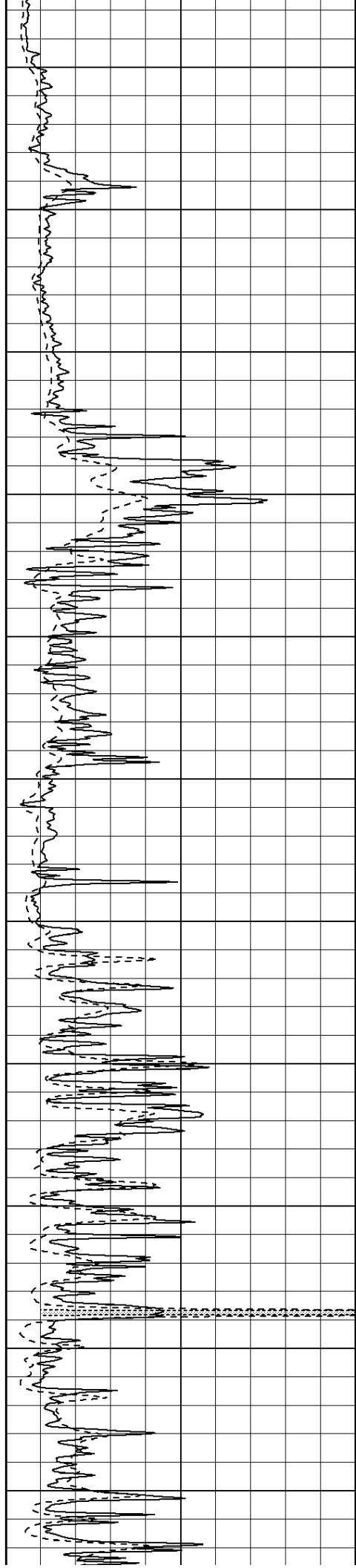
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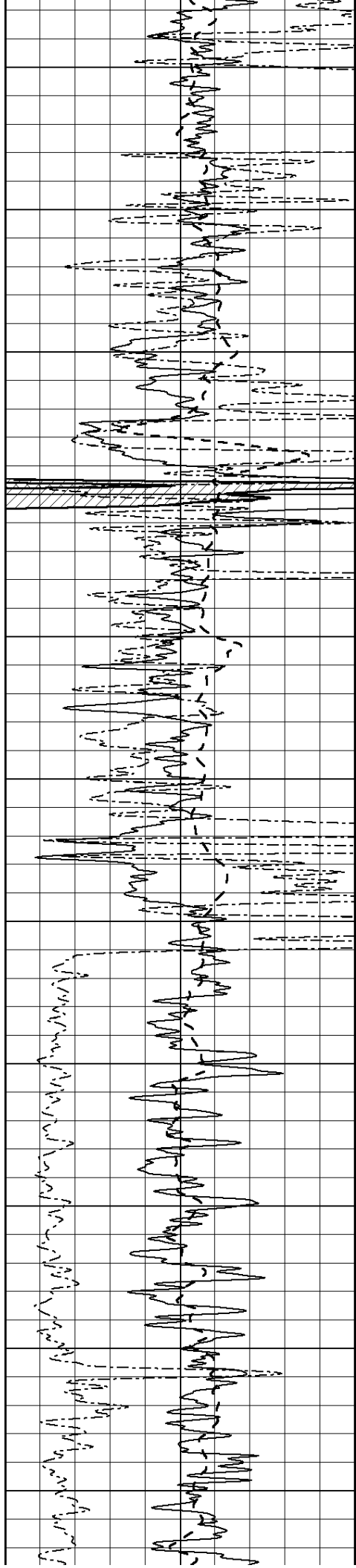
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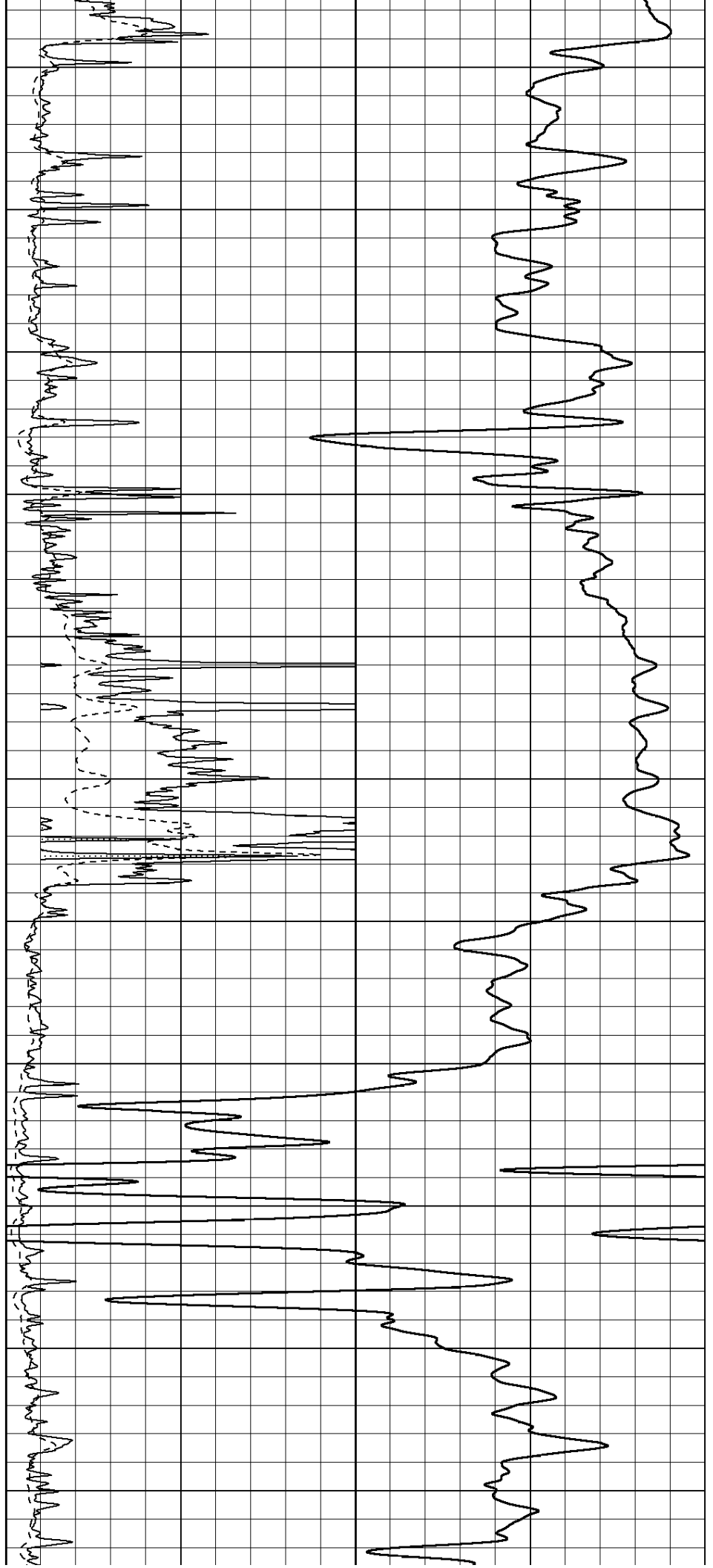
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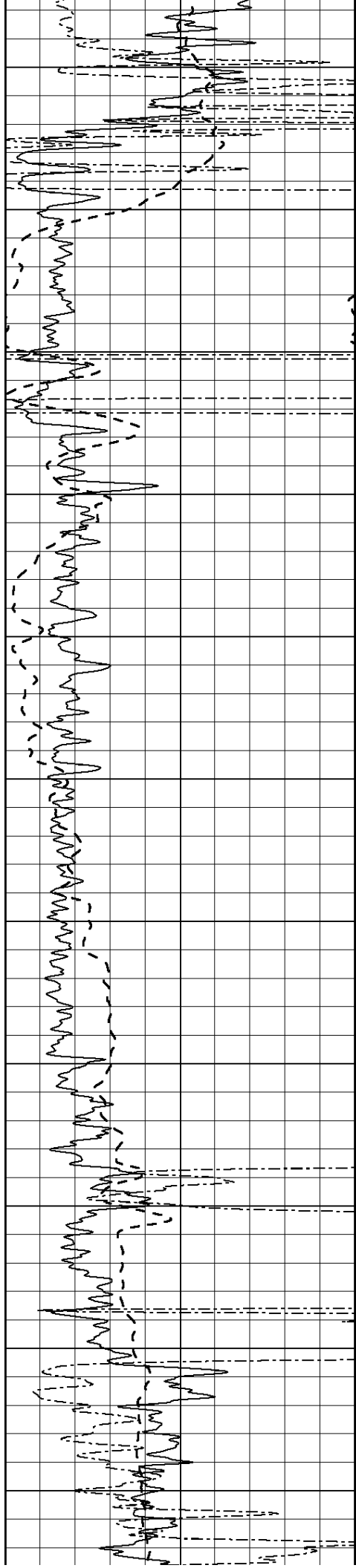
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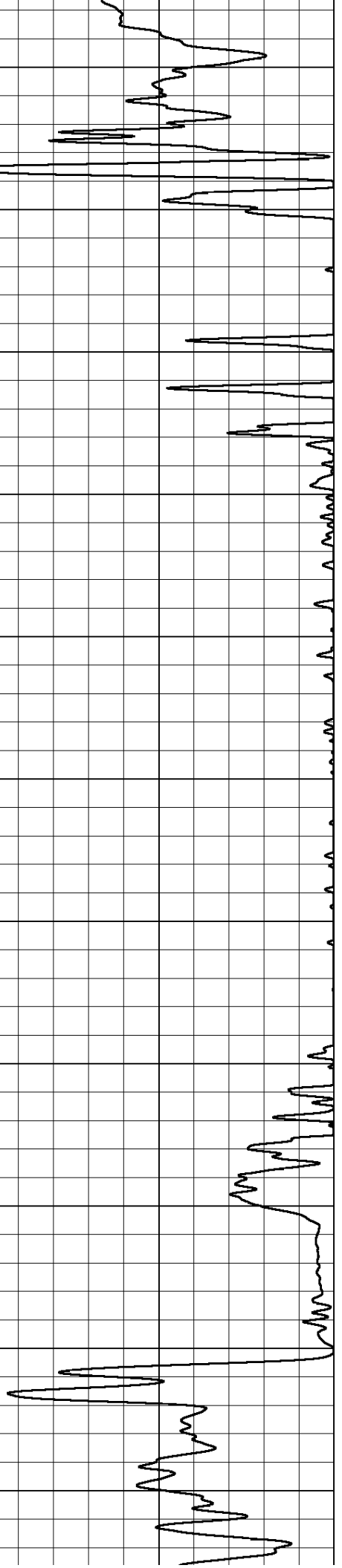
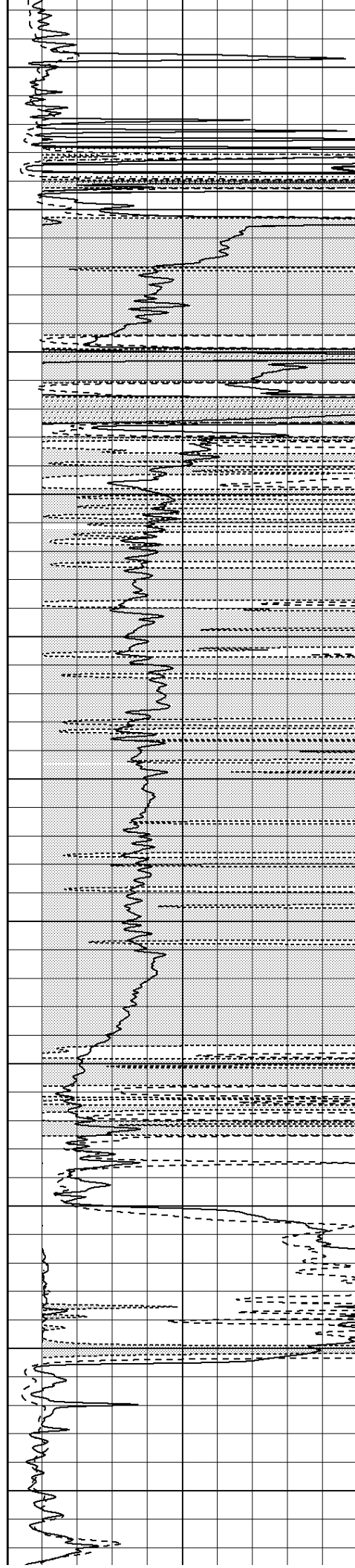
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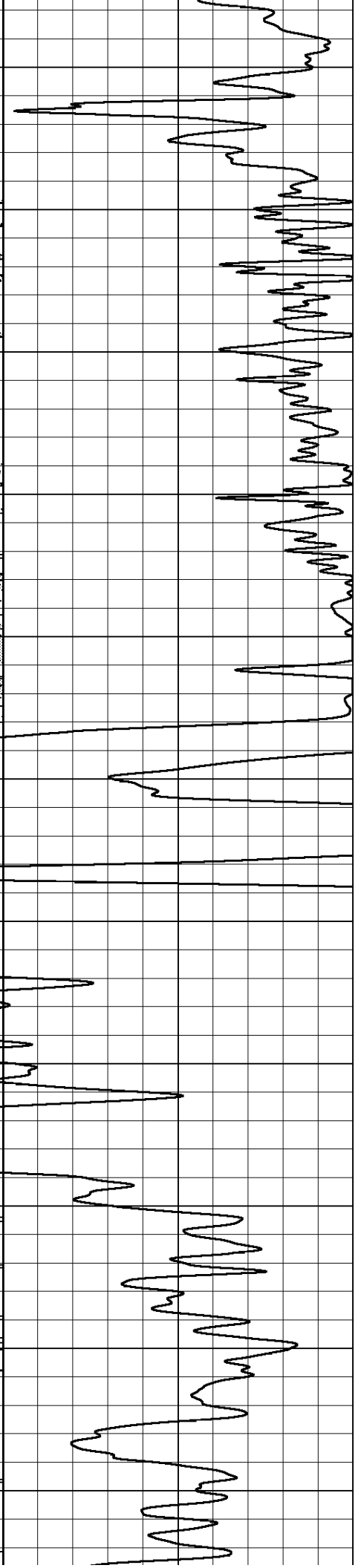
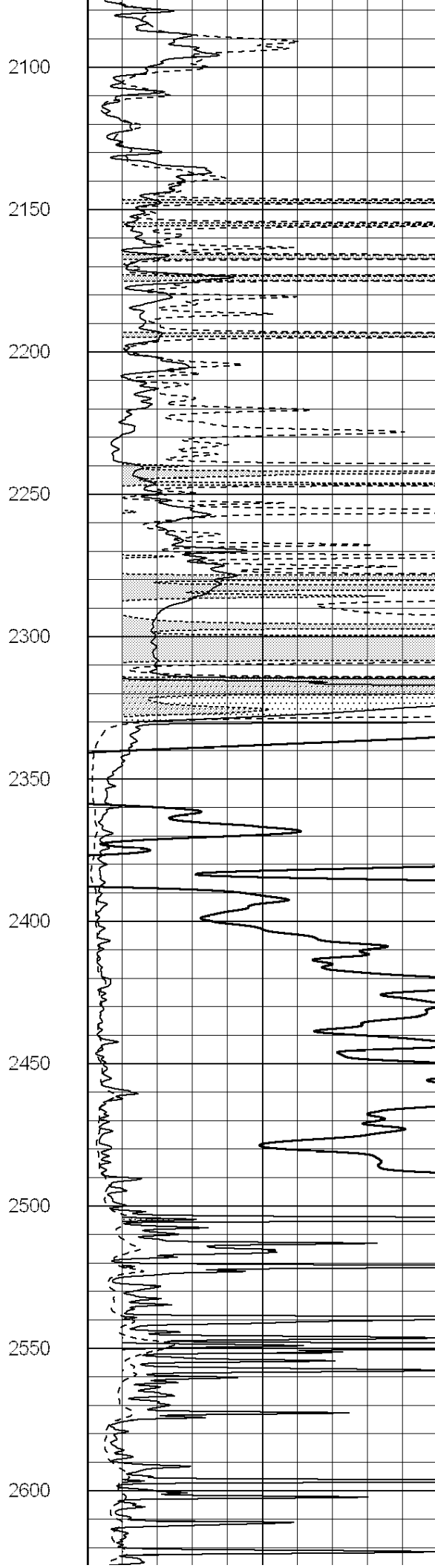
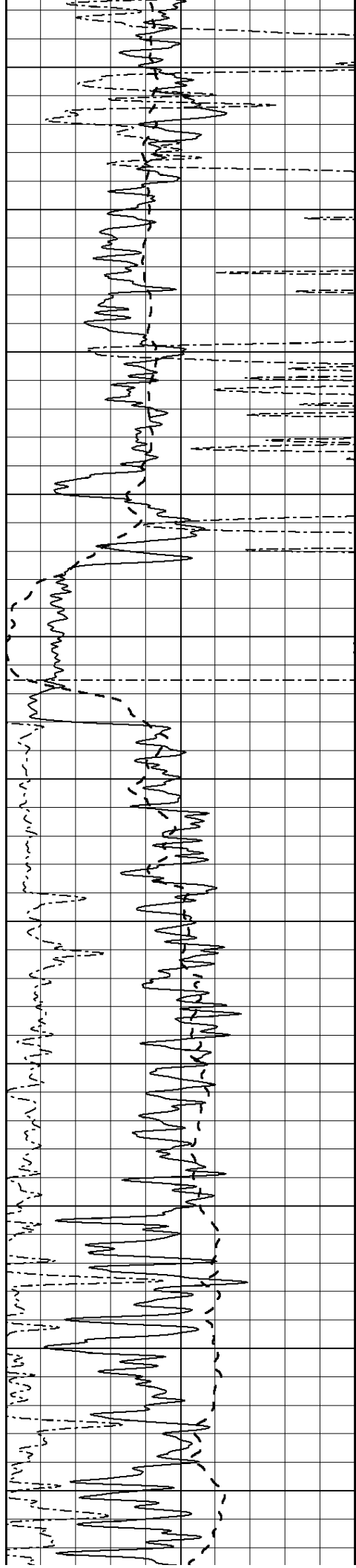
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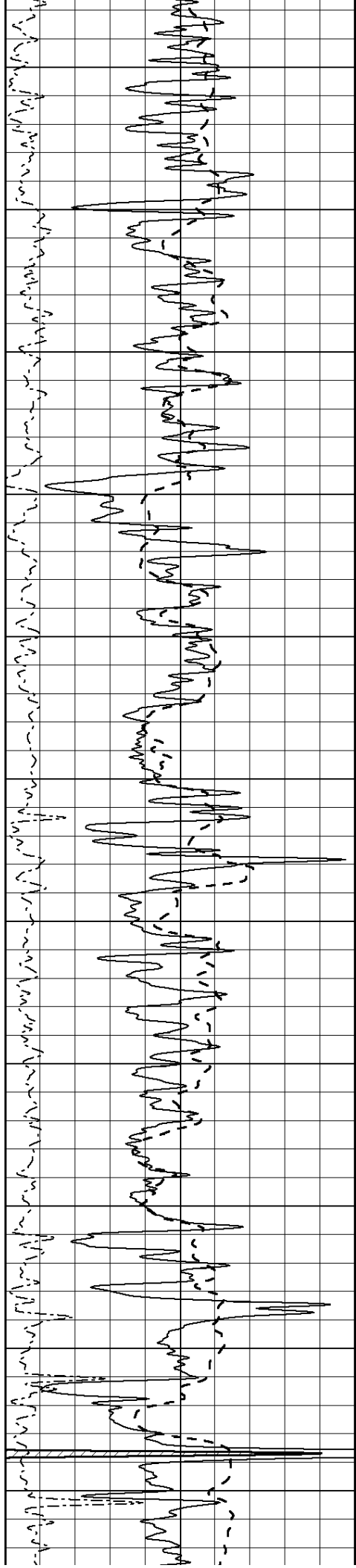
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2700

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2800

2850

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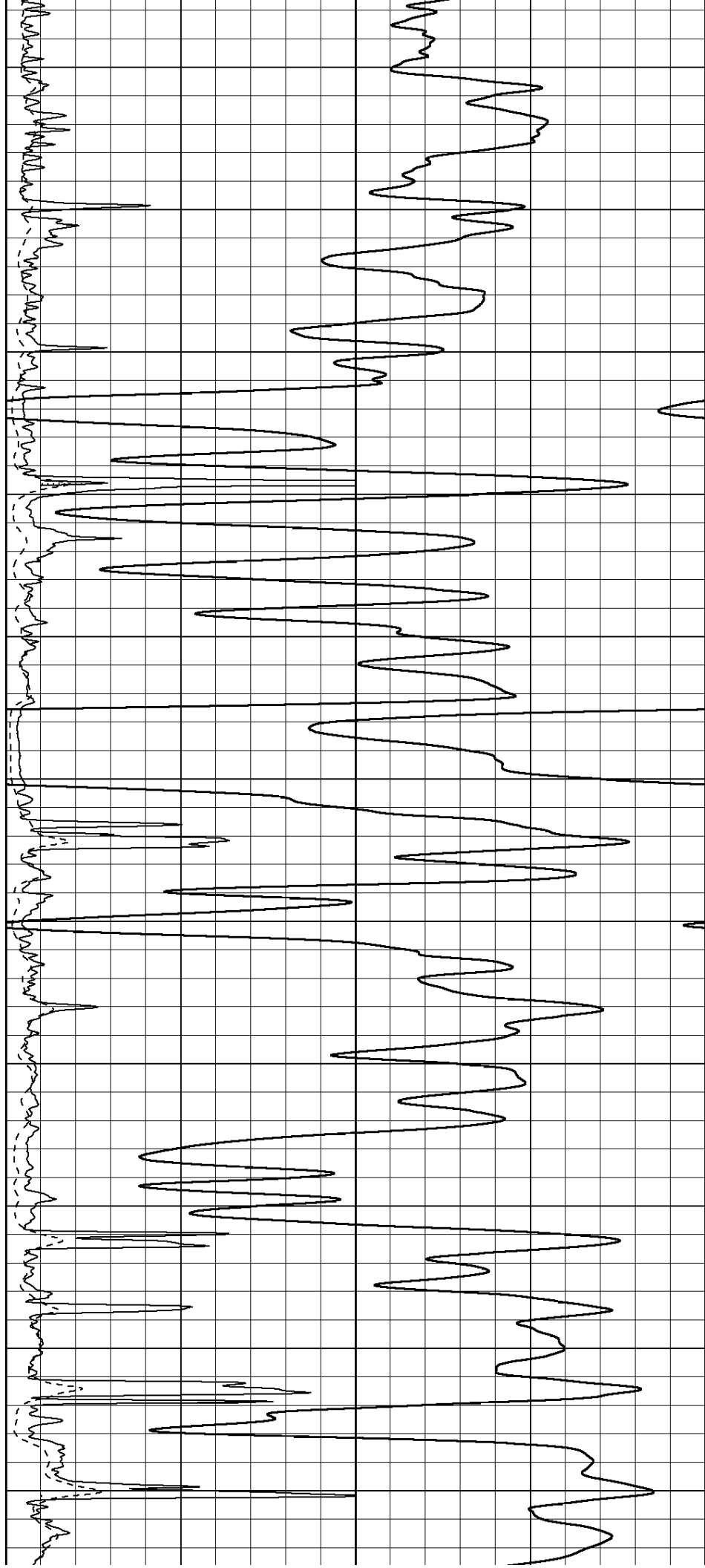
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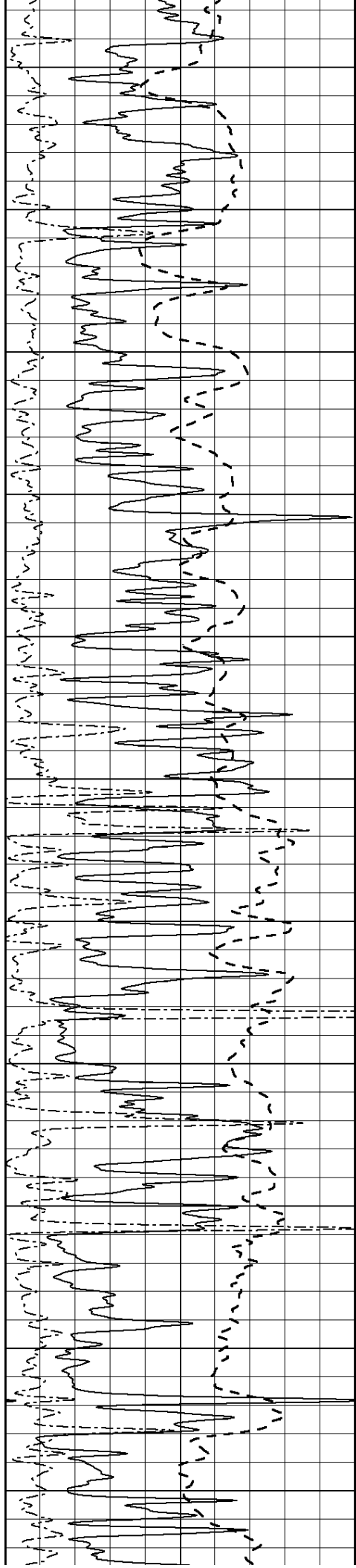
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3100

3150





3200

3250

3300

3350

3400

3450

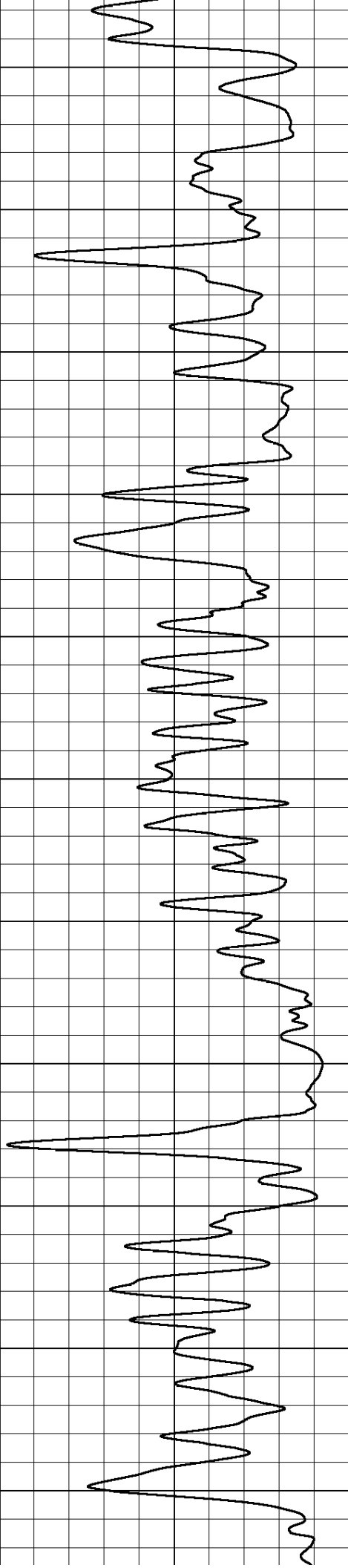
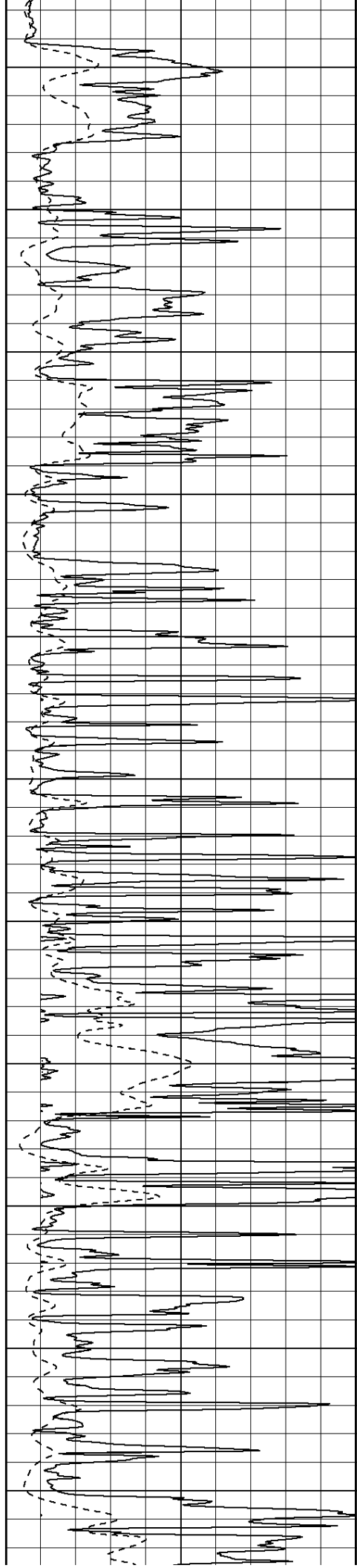
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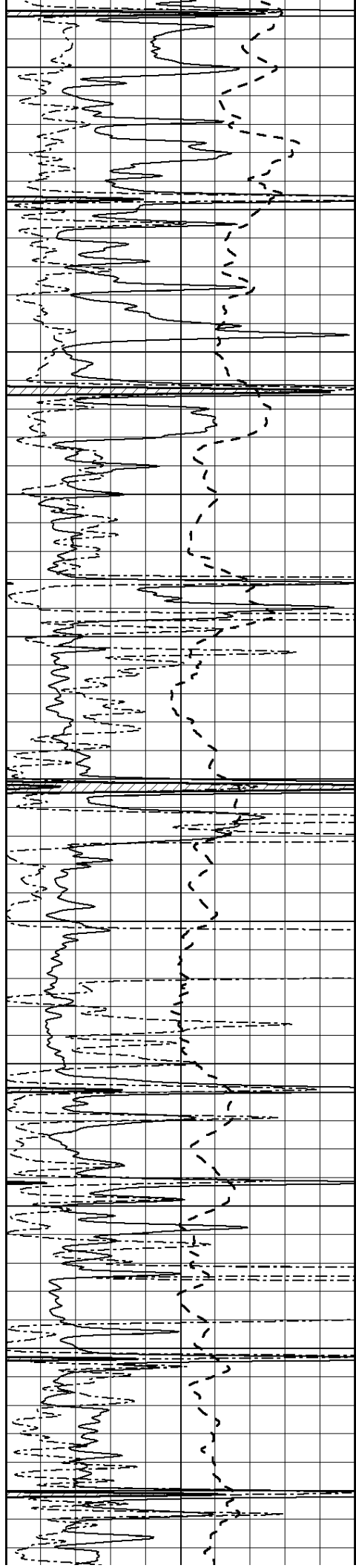
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3650

3700





3750

3800

3850

3900

3950

4000

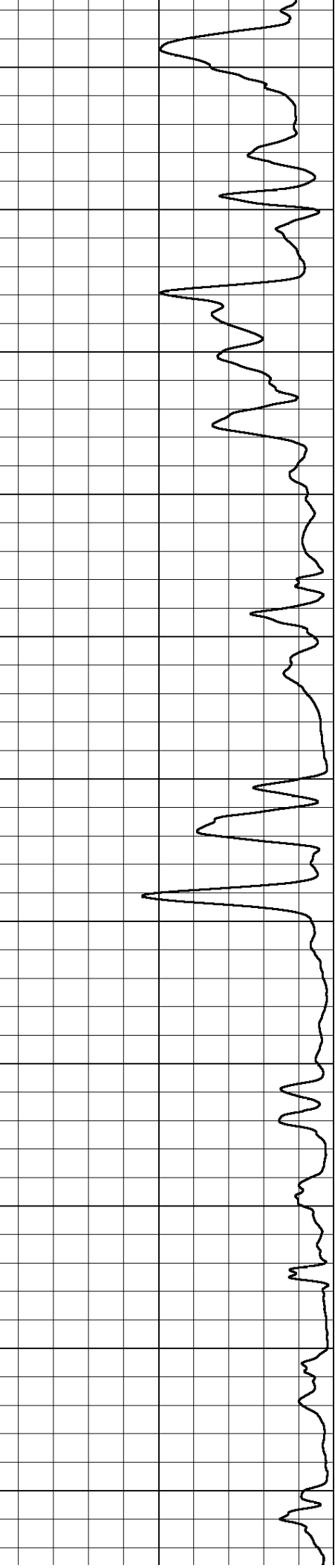
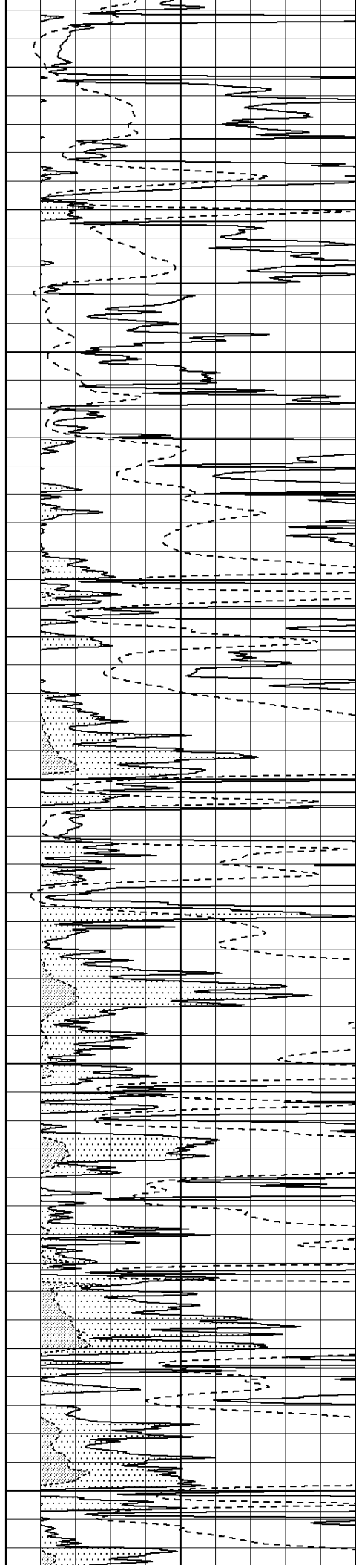
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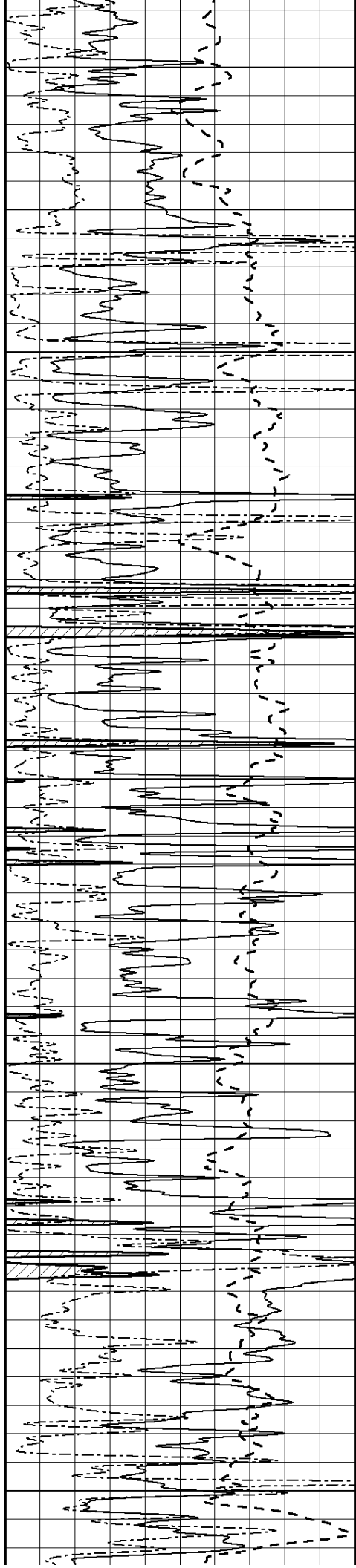
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4200

4250





4300

4350

4400

4450

4500

4550

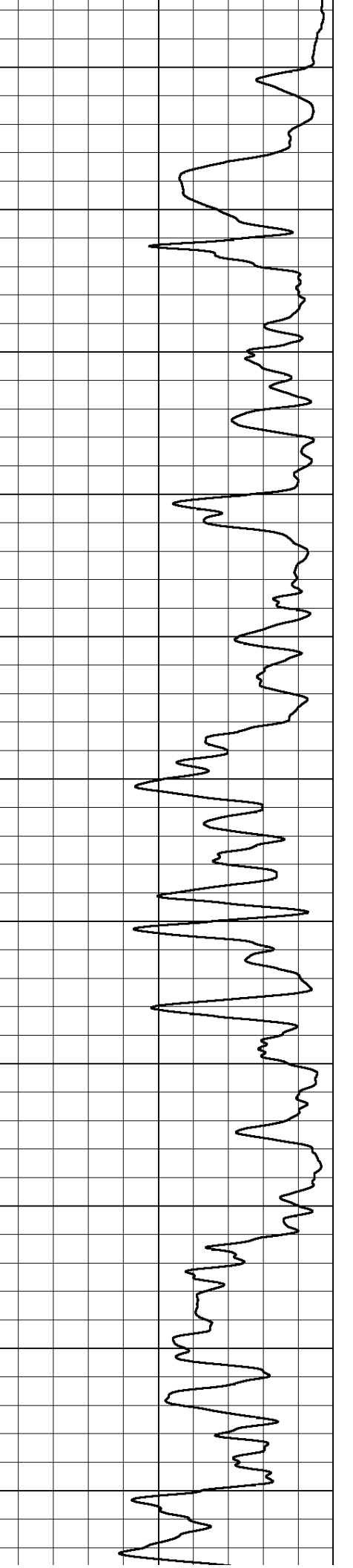
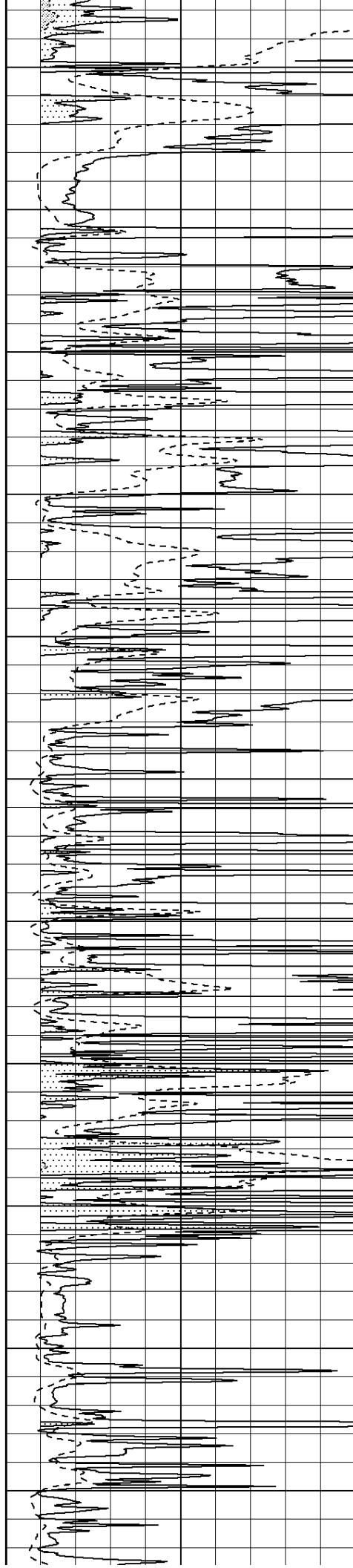
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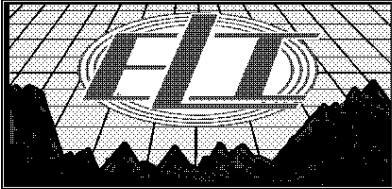
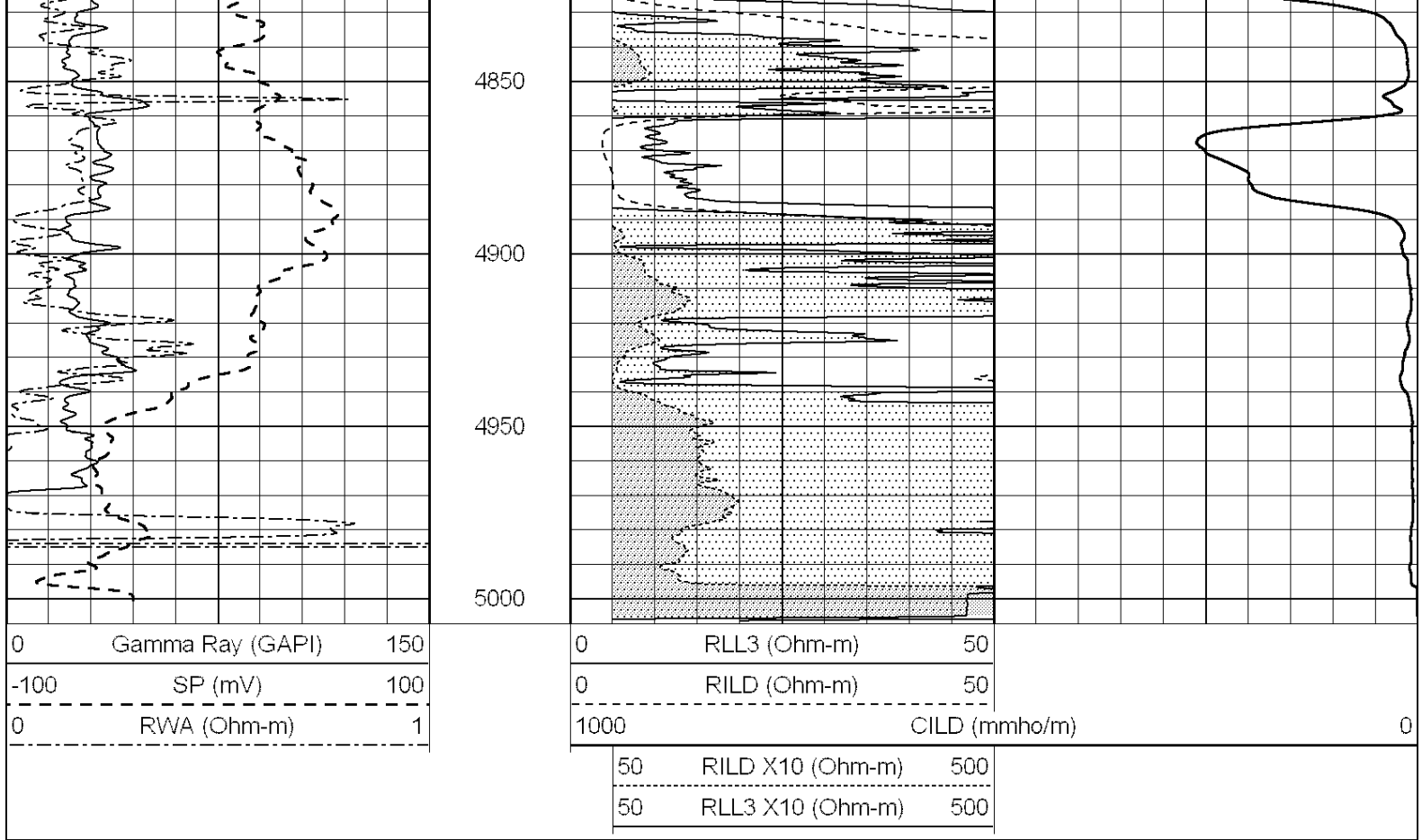
4650

4700

4750

4800

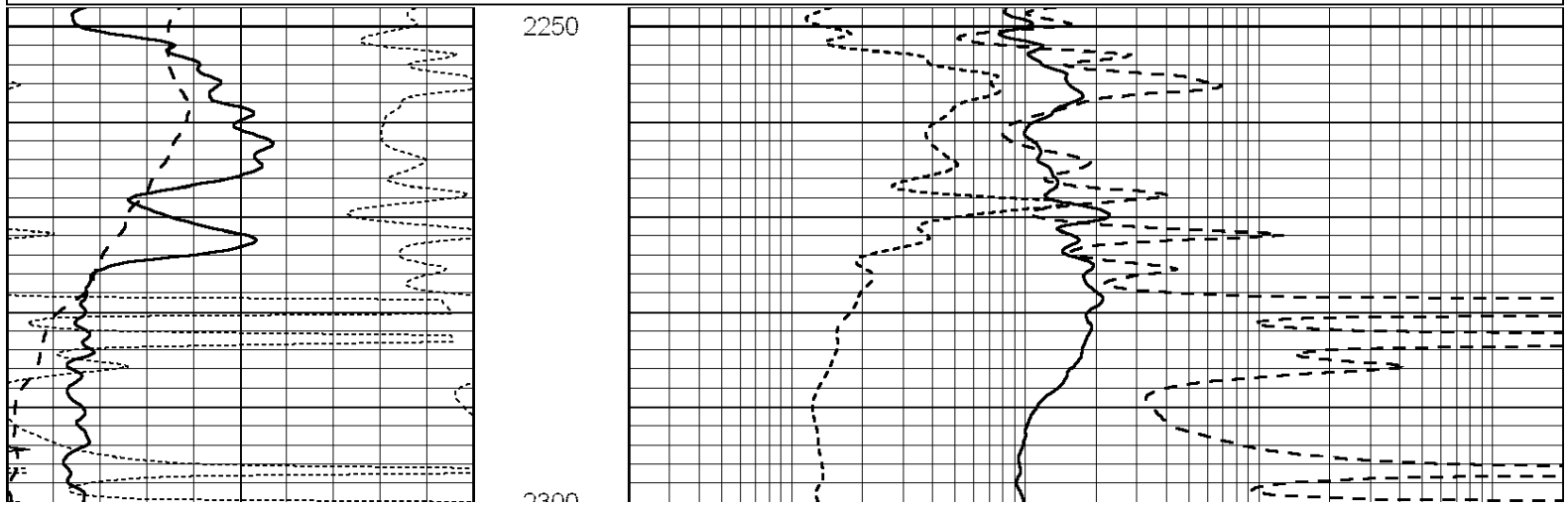


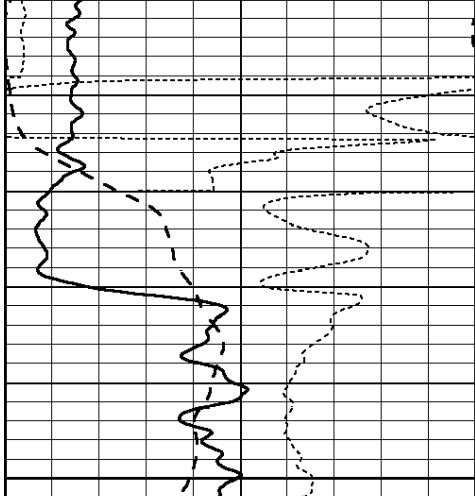


ANHYDRITE

Database File: 1826pe.db
 Dataset Pathname: pass3.8
 Presentation Format: _dil
 Dataset Creation: Mon Sep 11 01:17:19 2017
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			

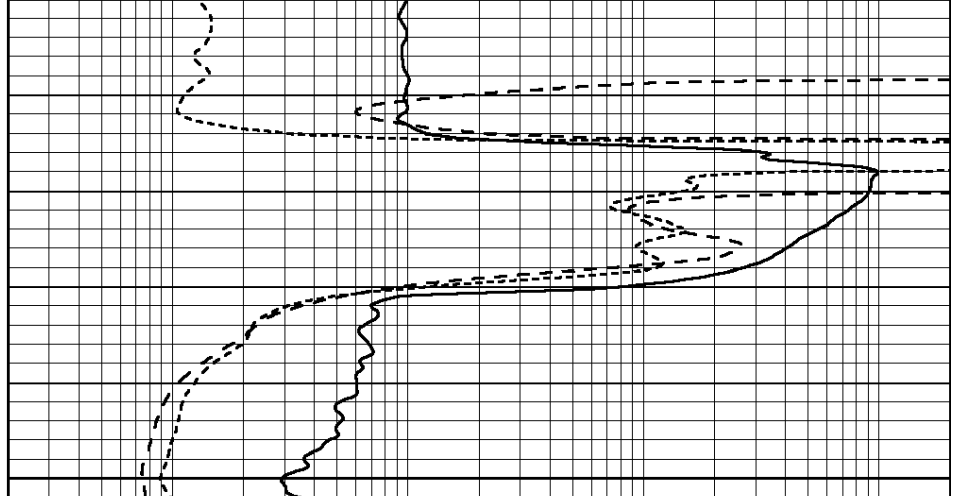




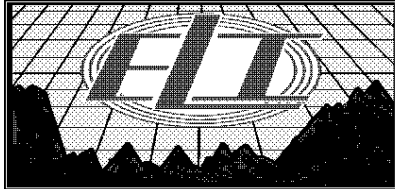
2300

2350

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20



0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

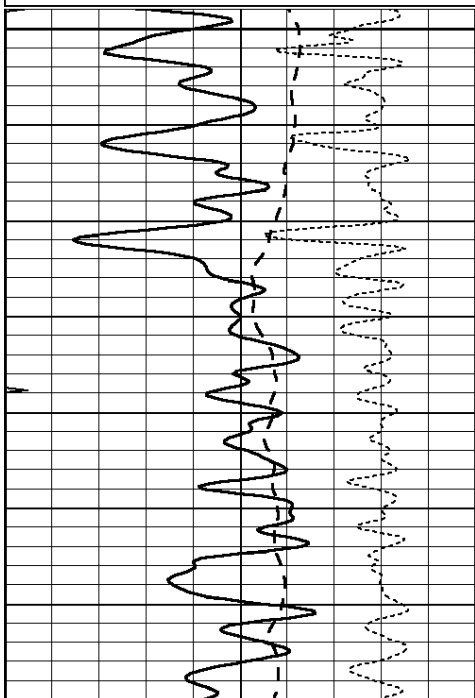


MAIN SECTION

Database File: 1826pe.db
 Dataset Pathname: pass3.7
 Presentation Format: _dil
 Dataset Creation: Mon Sep 11 01:15:33 2017
 Charted by: Depth in Feet scaled 1:240

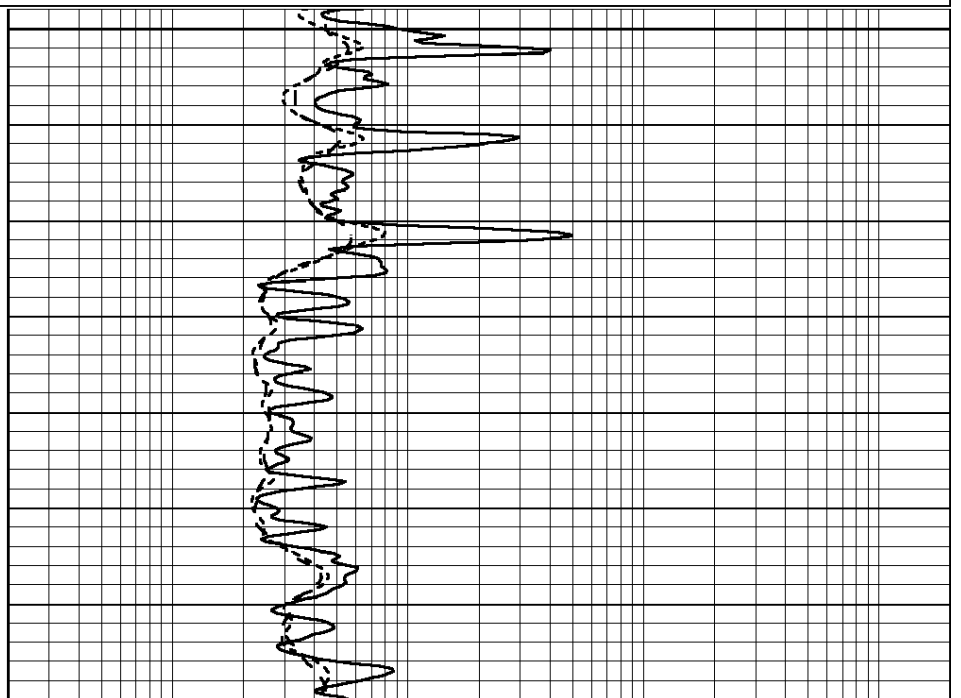
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

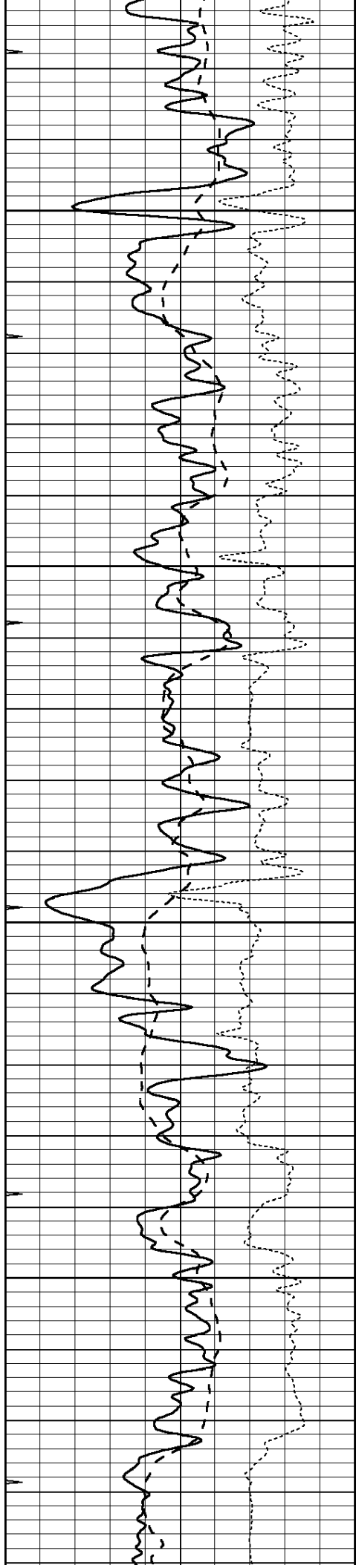
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



2600

2650



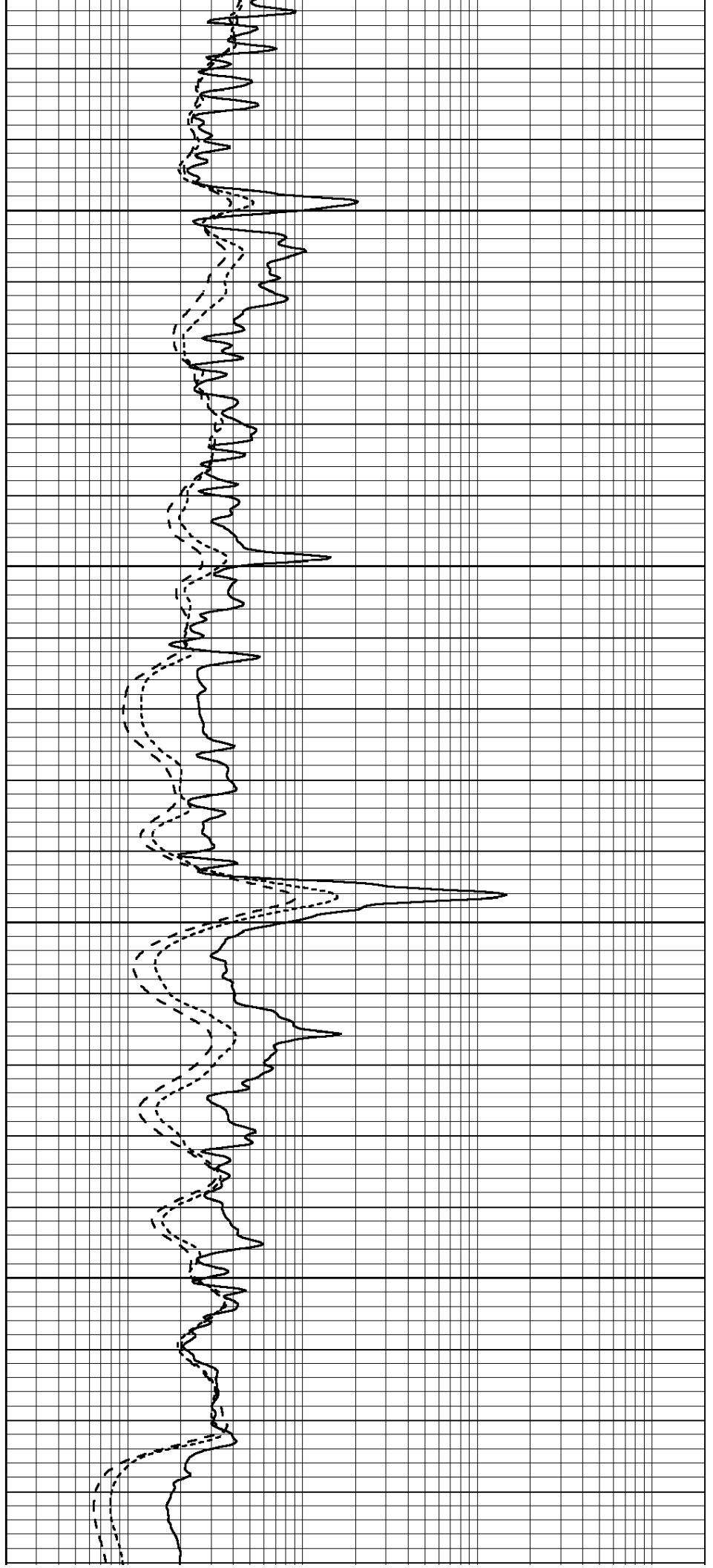


2700

2750

2800

2850

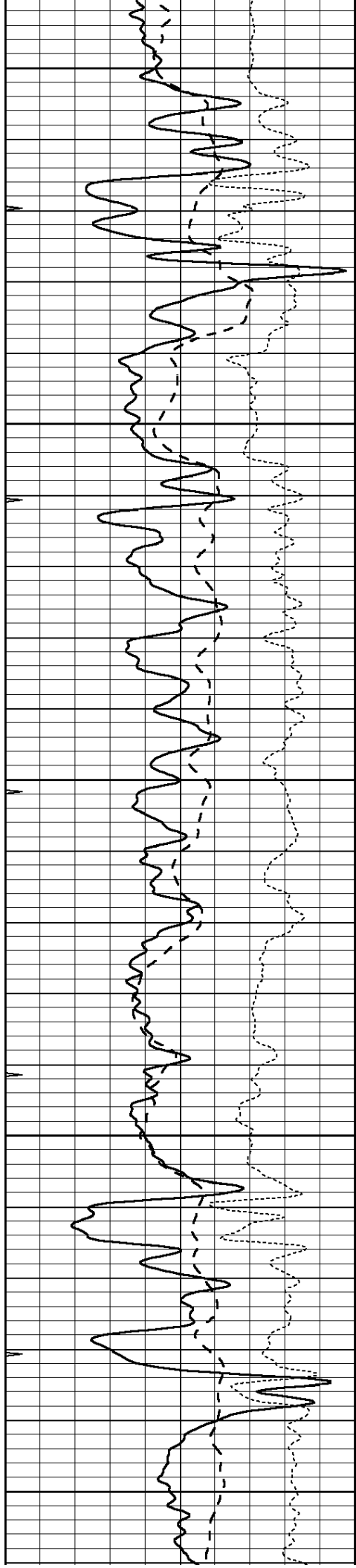


2700

2750

2800

2850



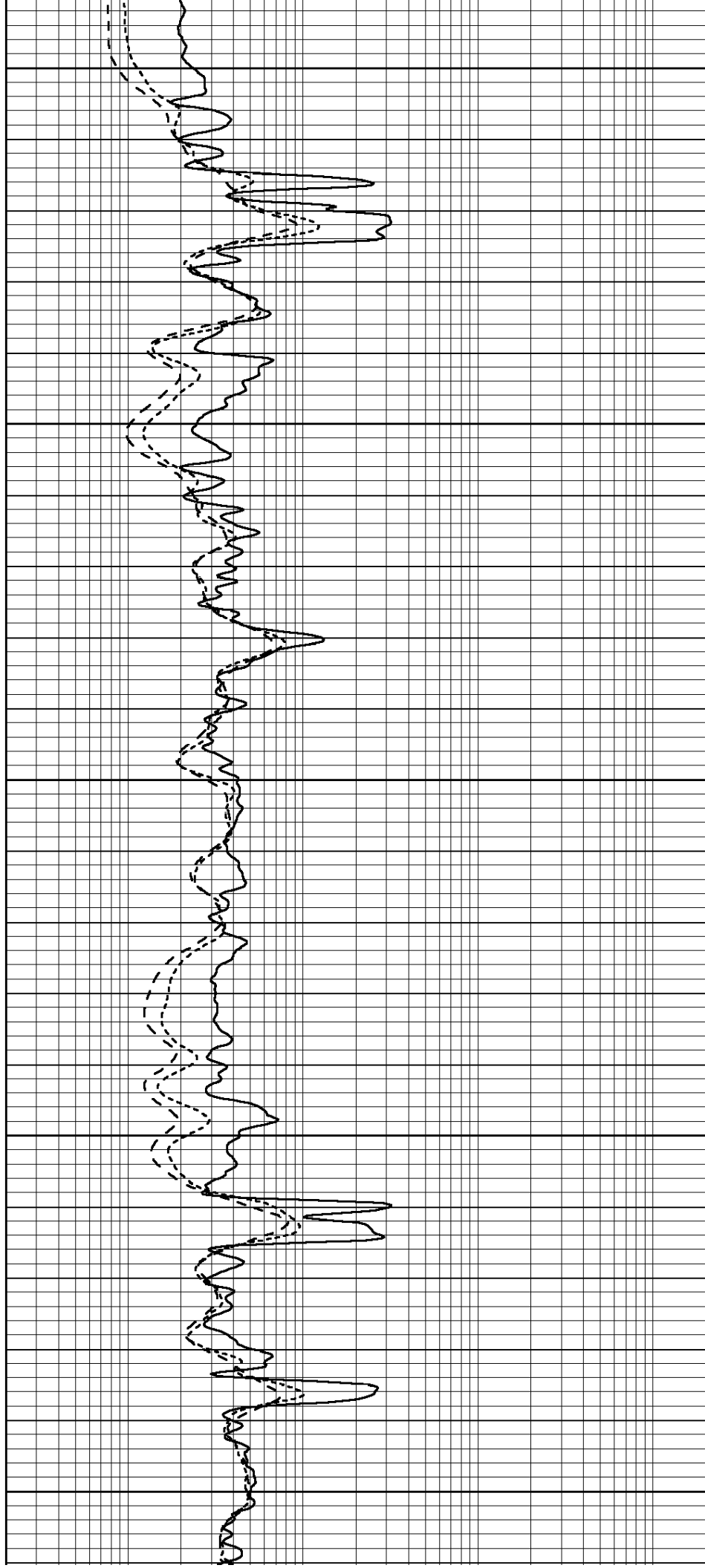
2900

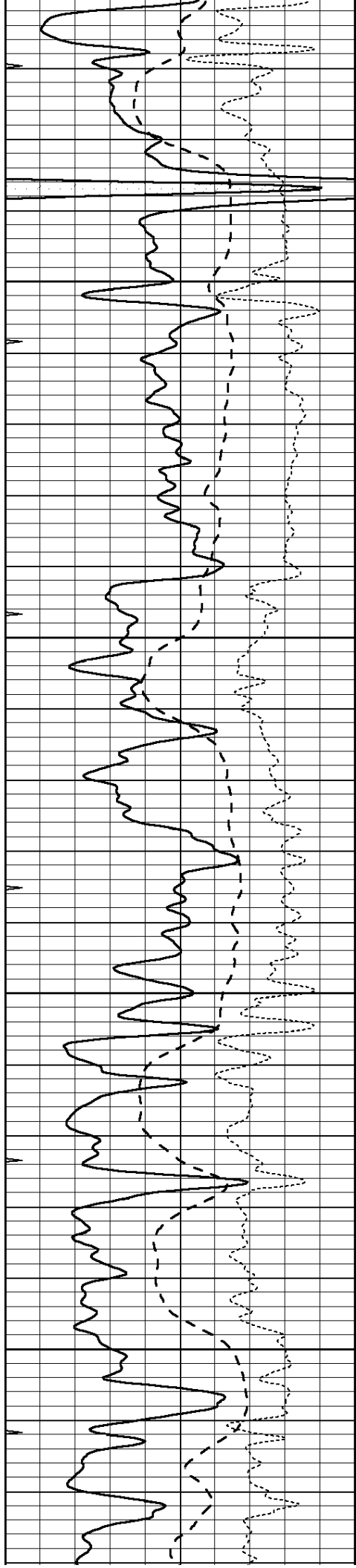
2950

3000

3050

3100



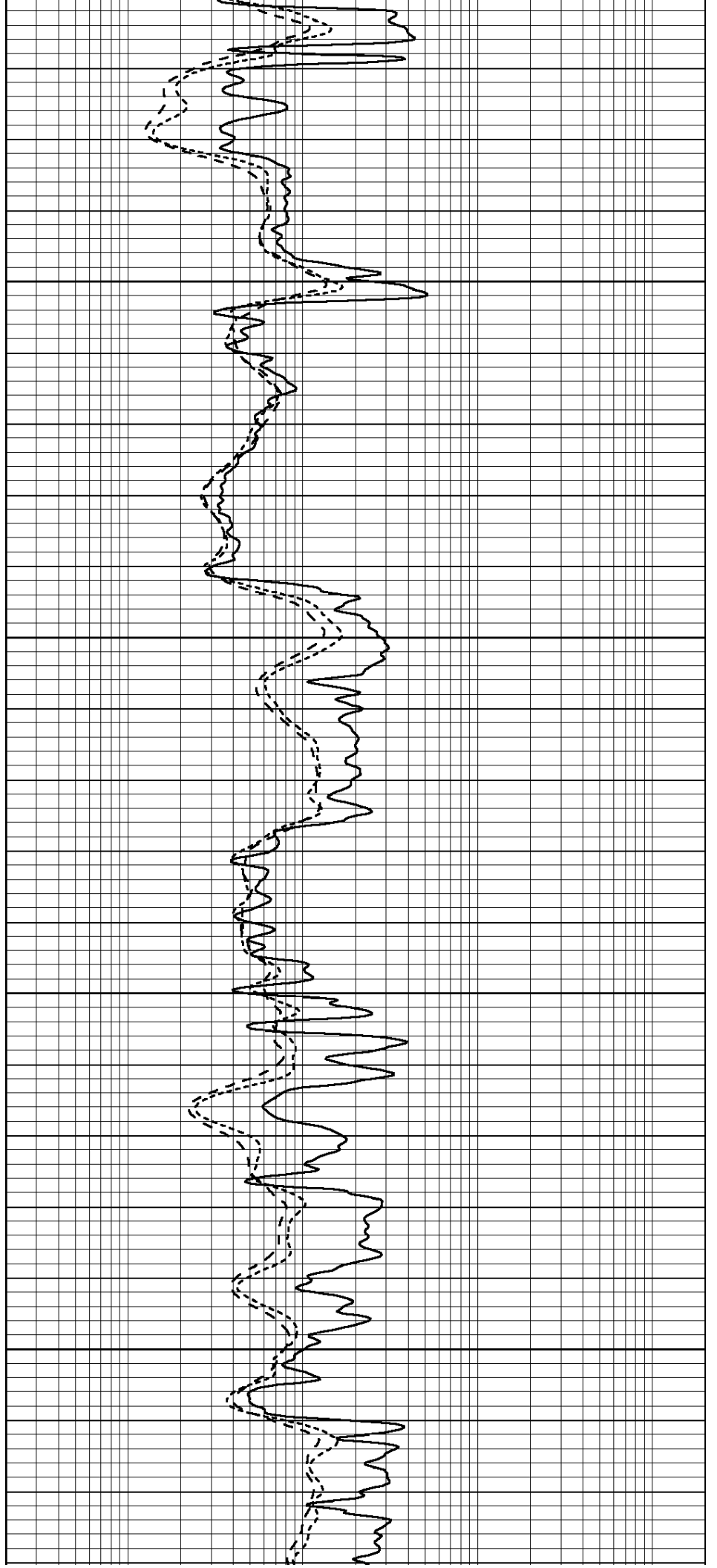


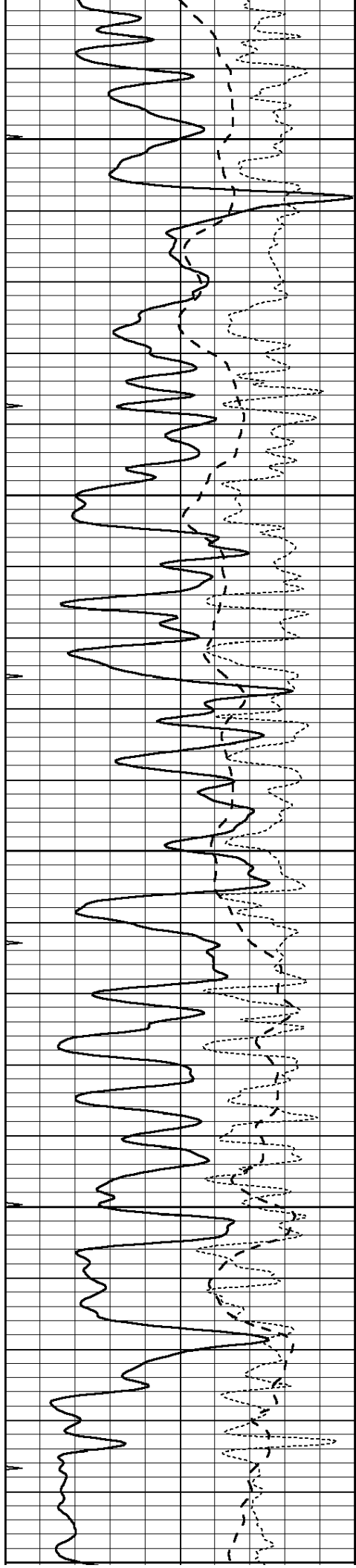
3150

3200

3250

3300





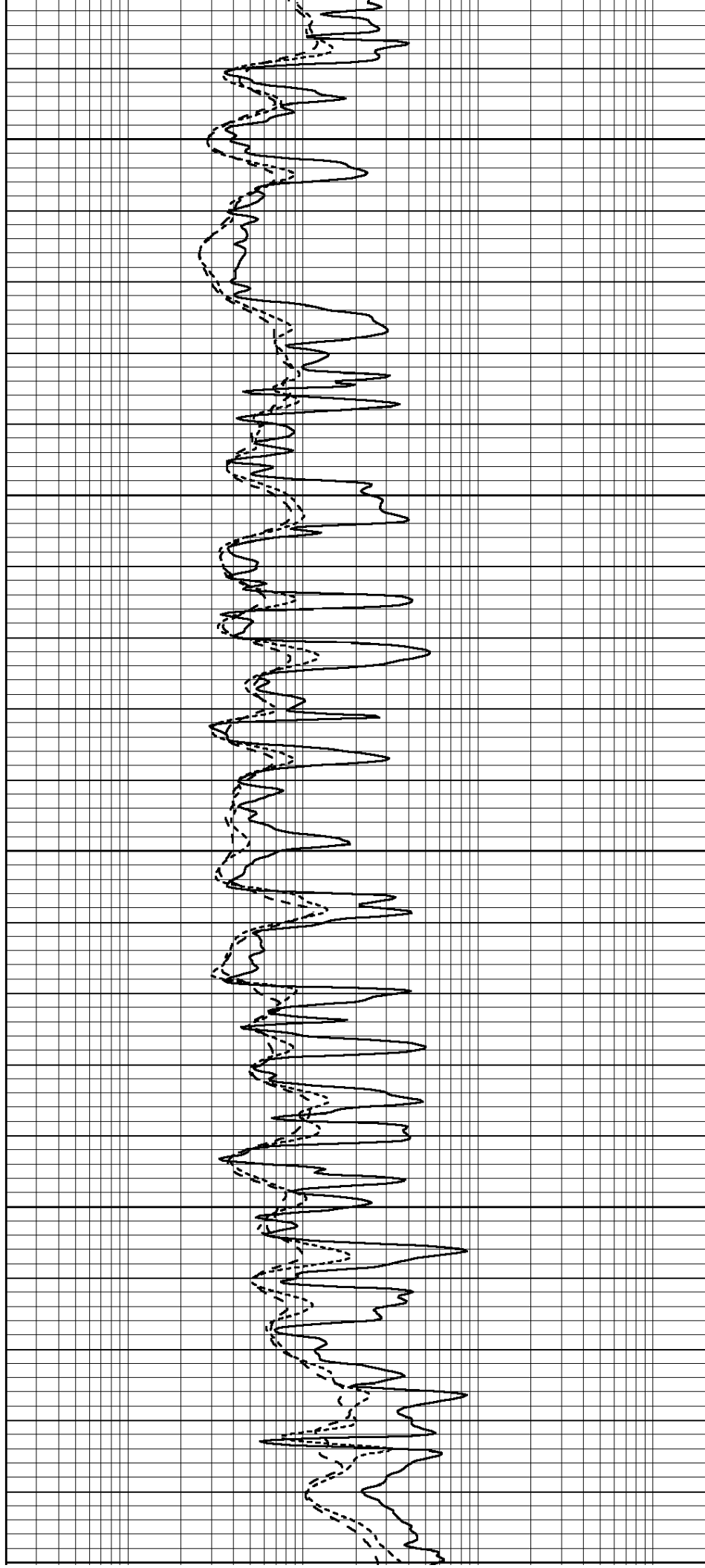
3350

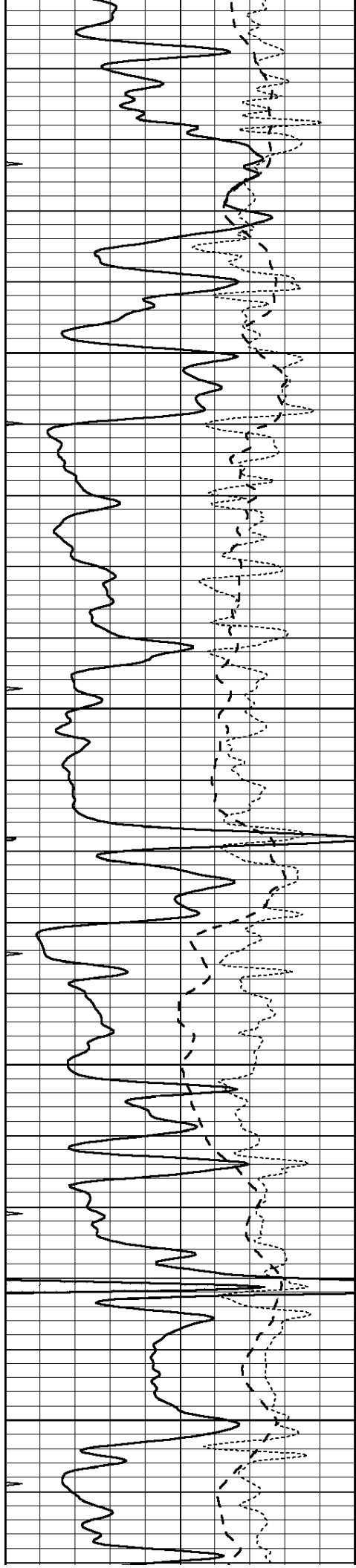
3400

3450

3500

3550





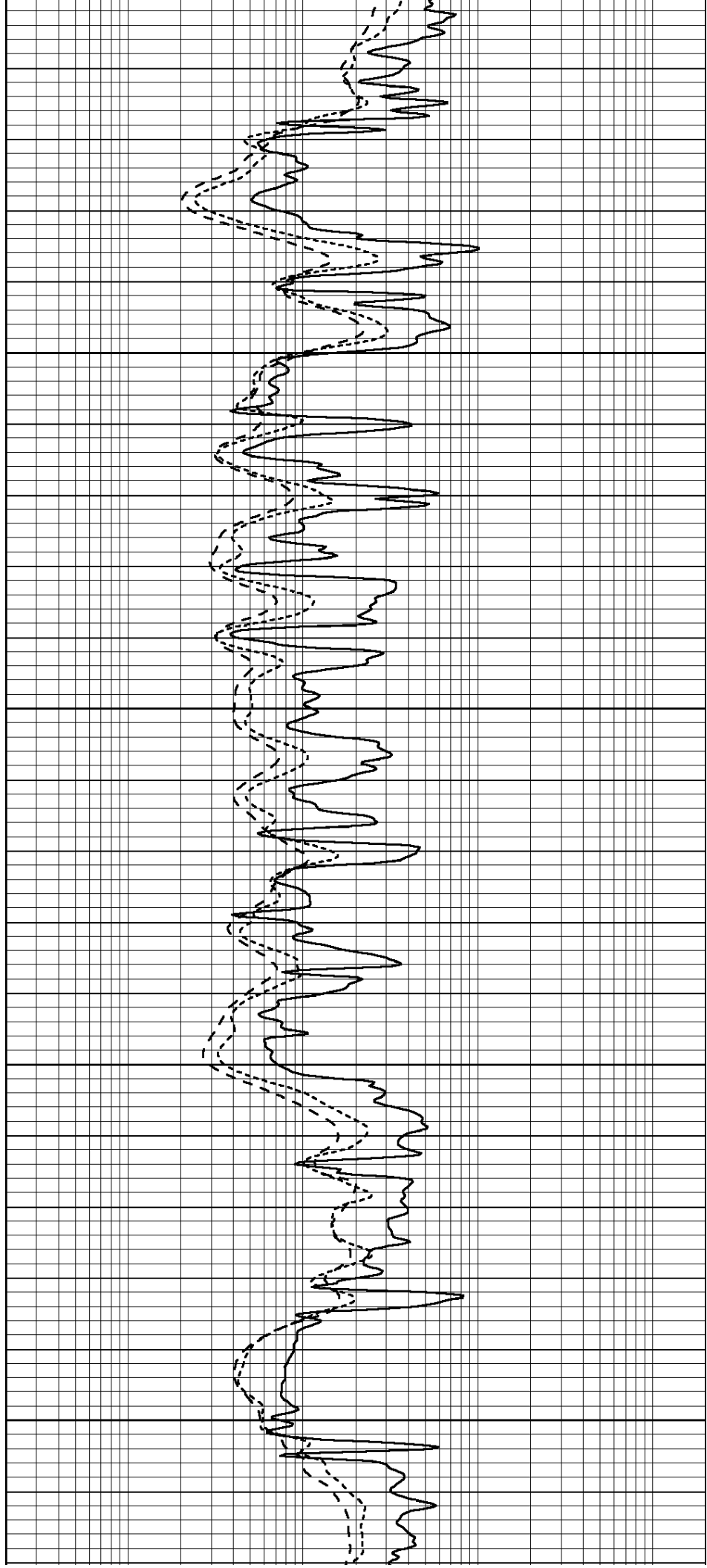
3600

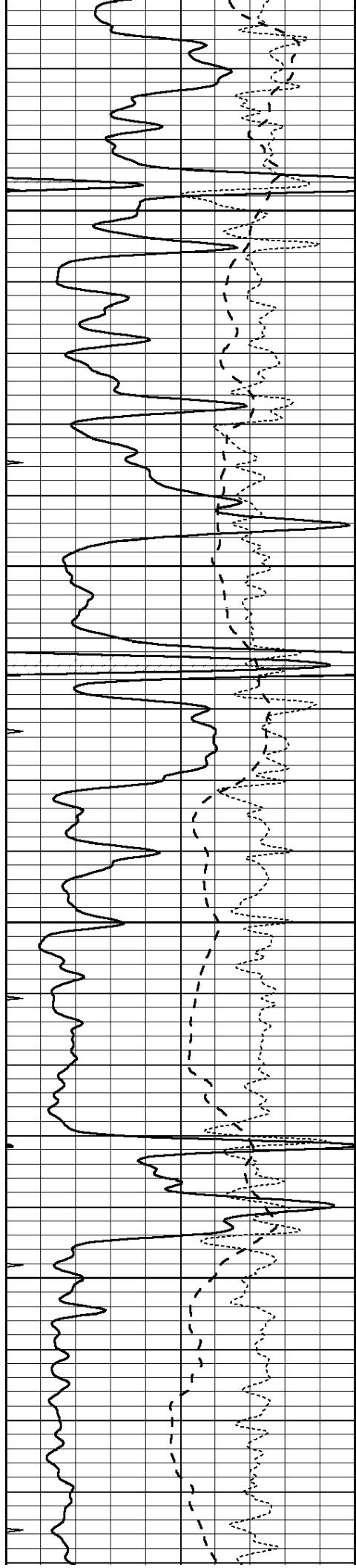
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3650

3700

3750



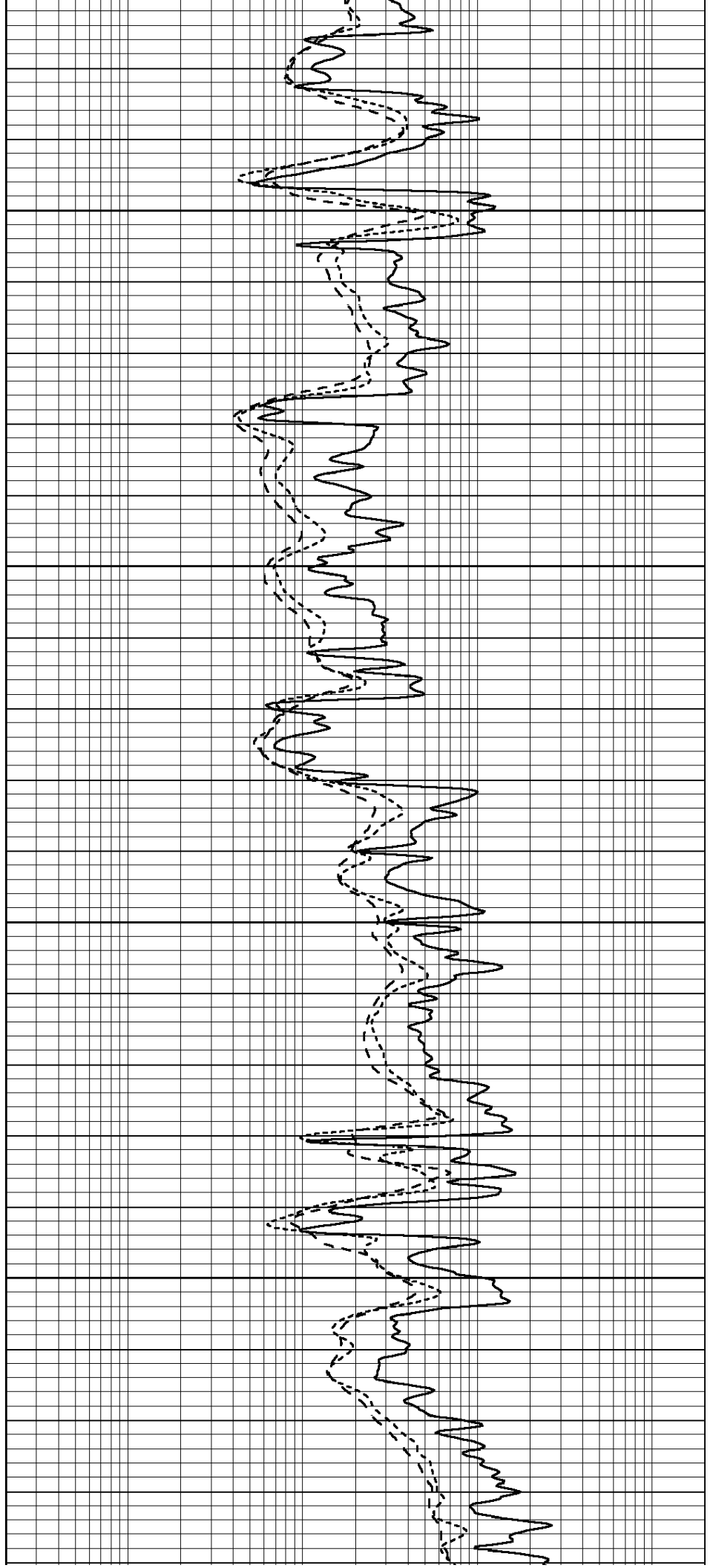


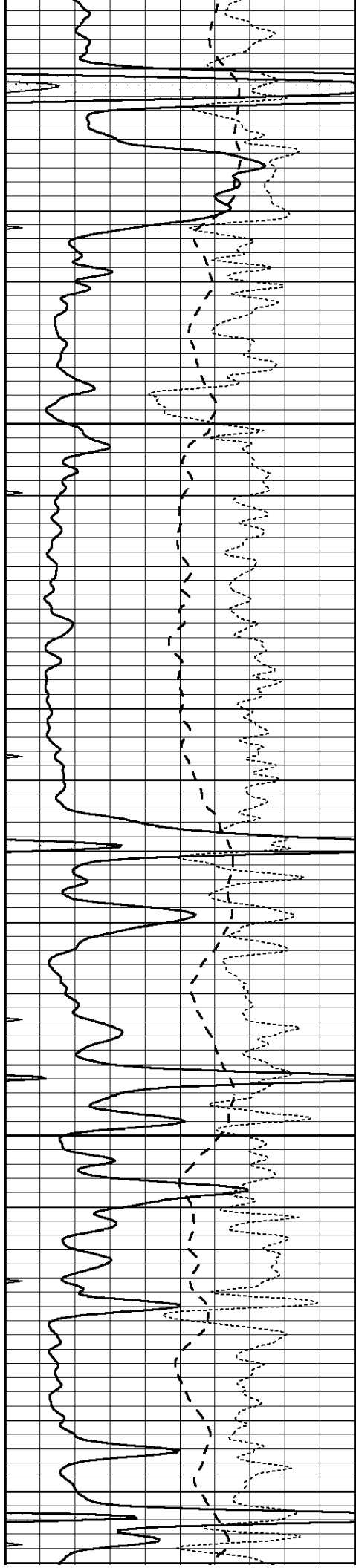
3800

3850

3900

3950





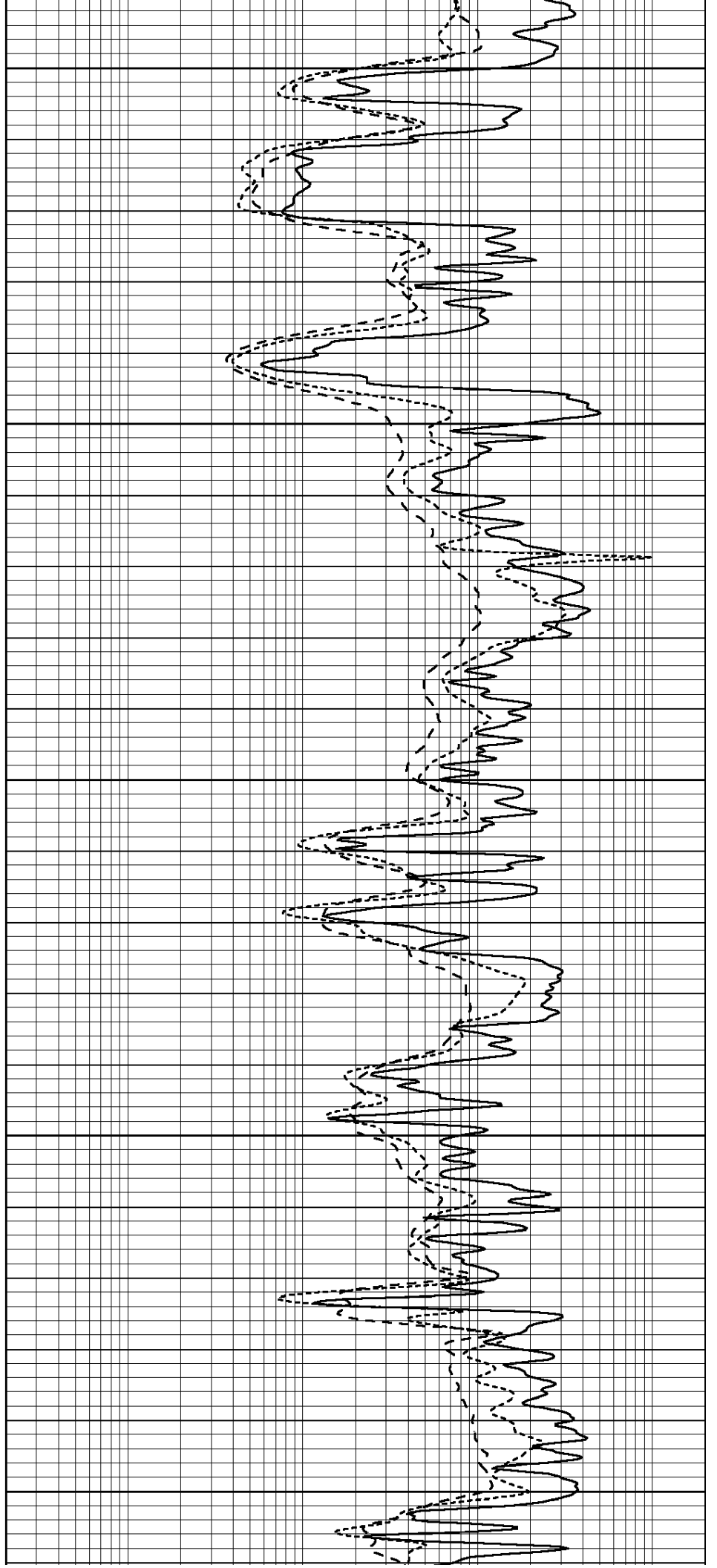
4000

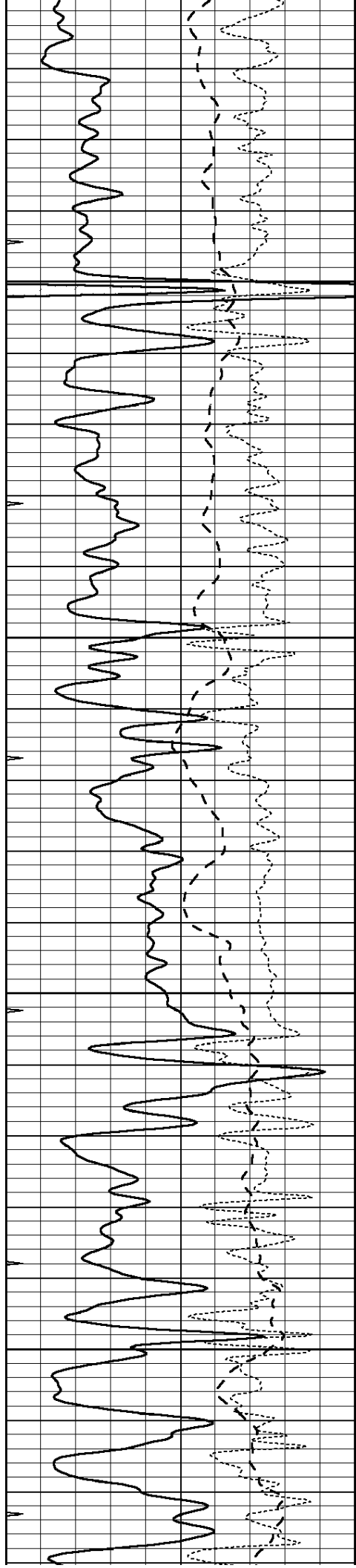
4050

4100

4150

4200



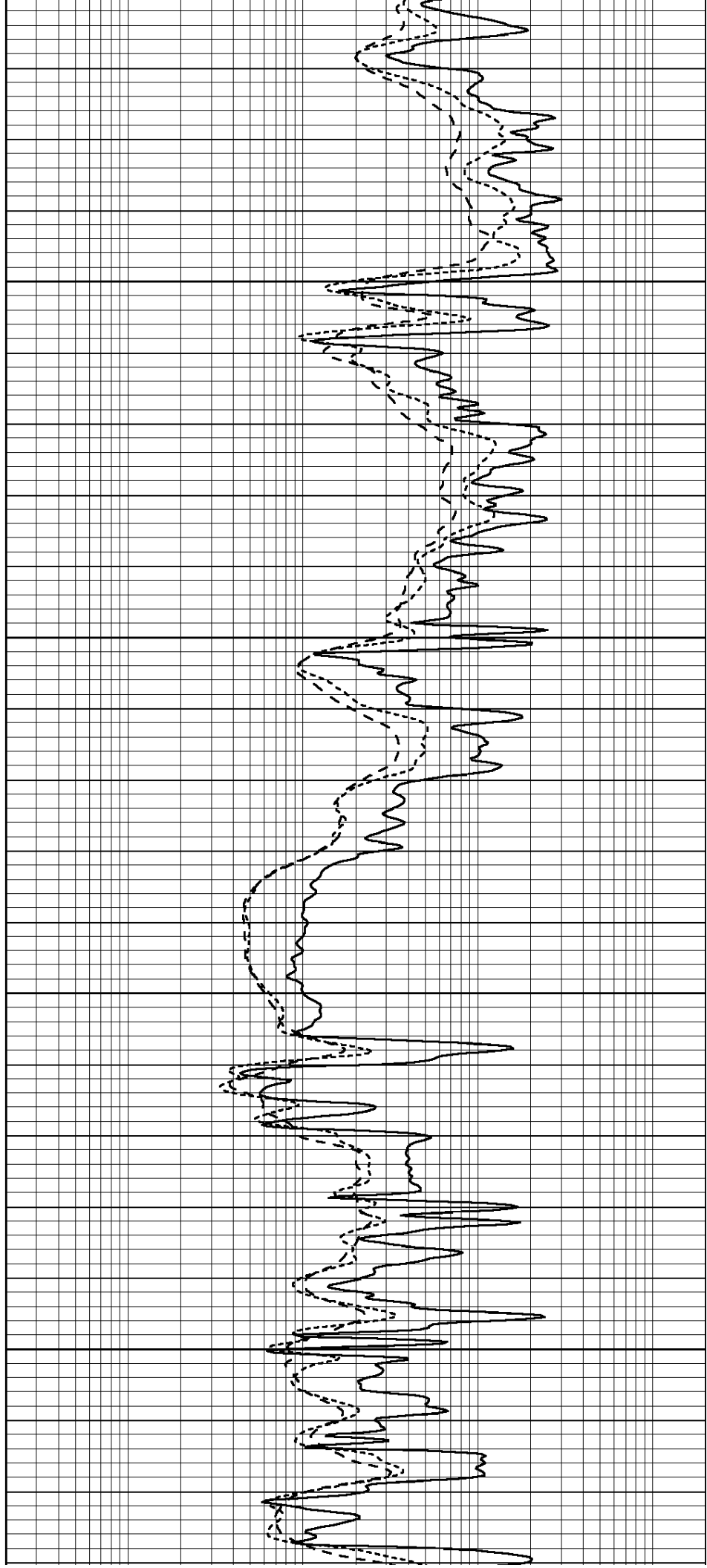


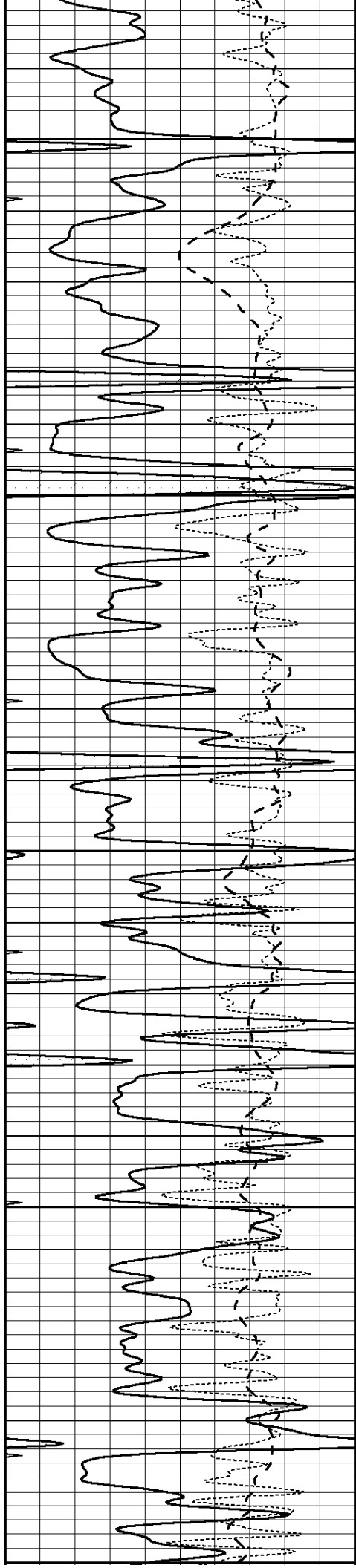
4250

4300

4350

4400





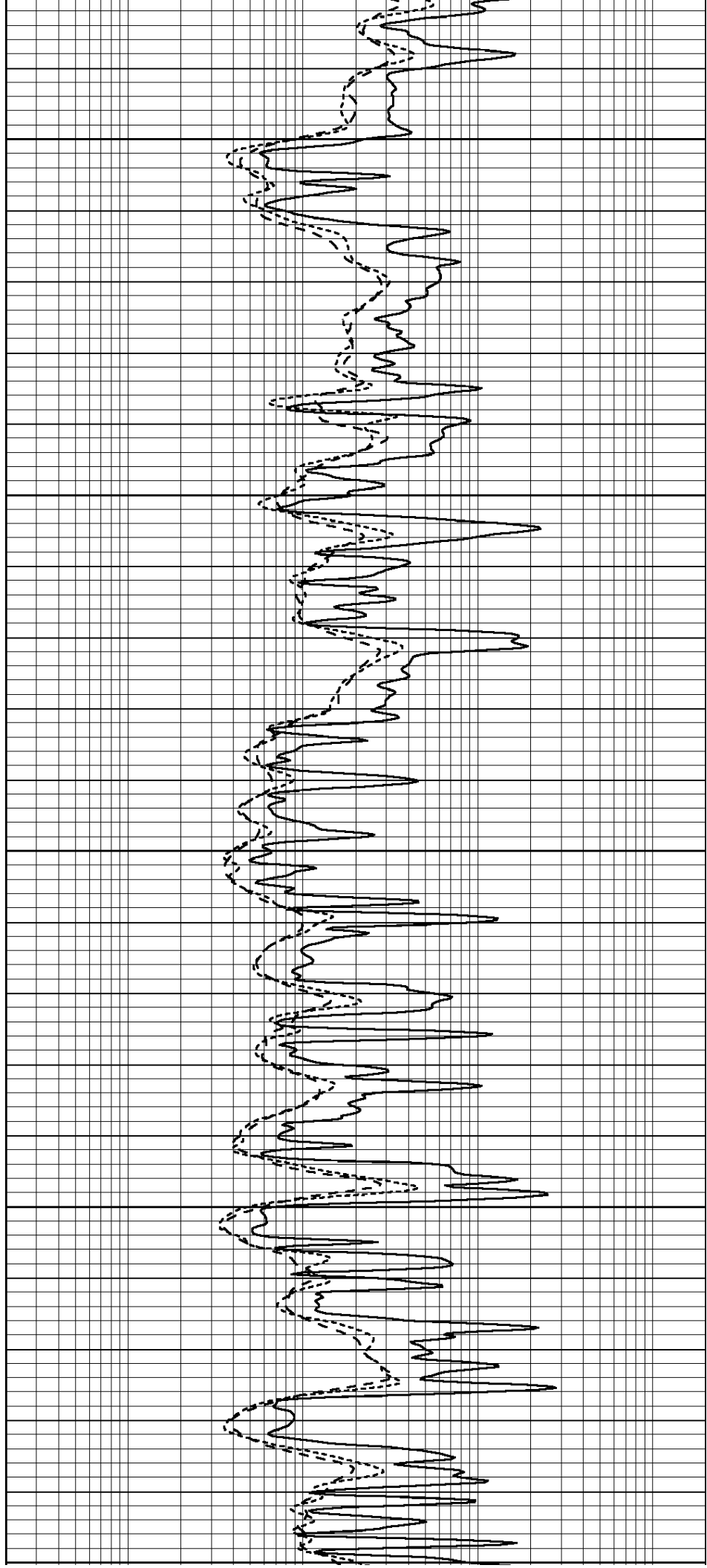
4450

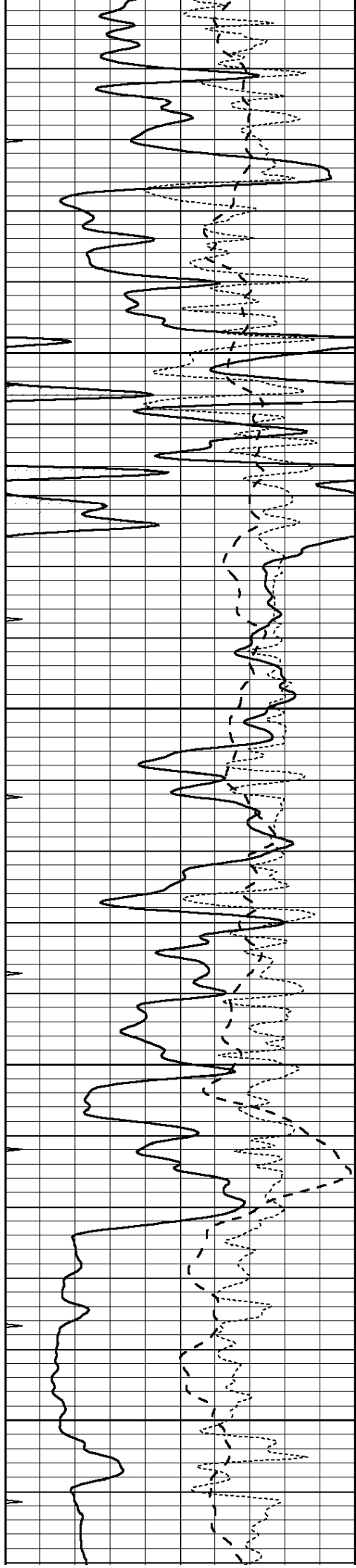
4500

4550

4600

4650





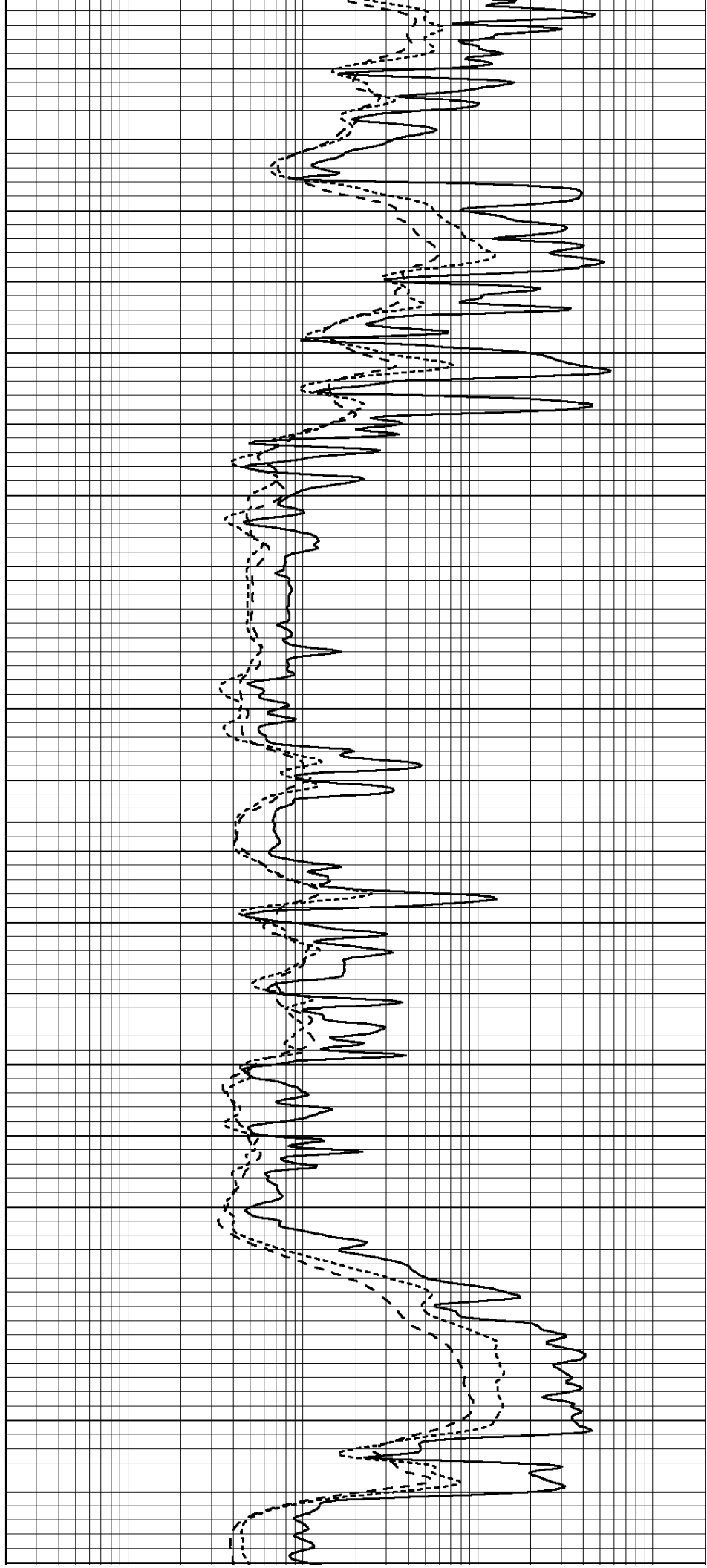
4650

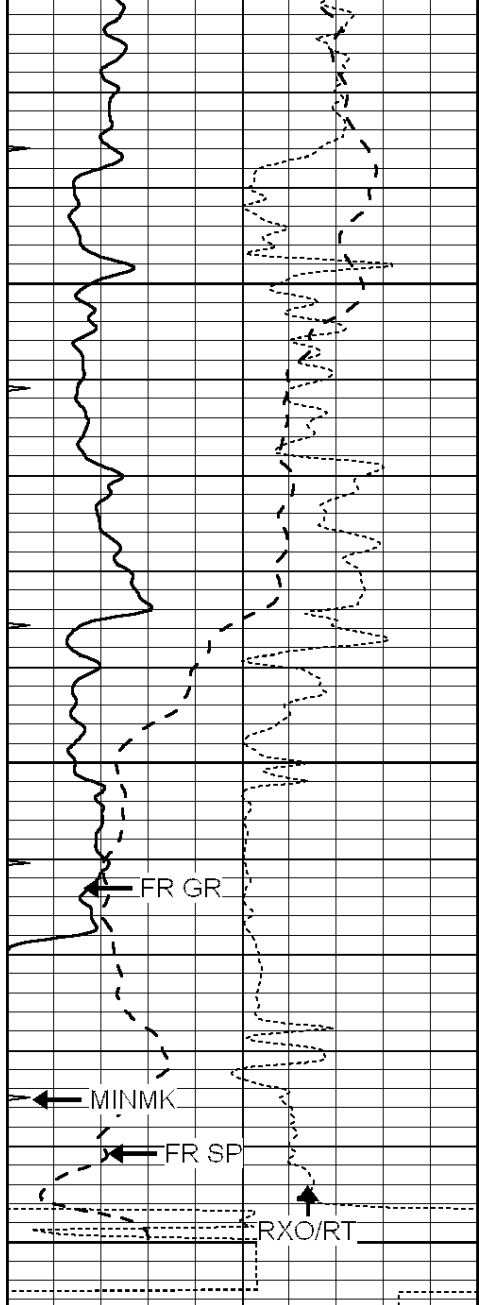
4700

4750

4800

4850



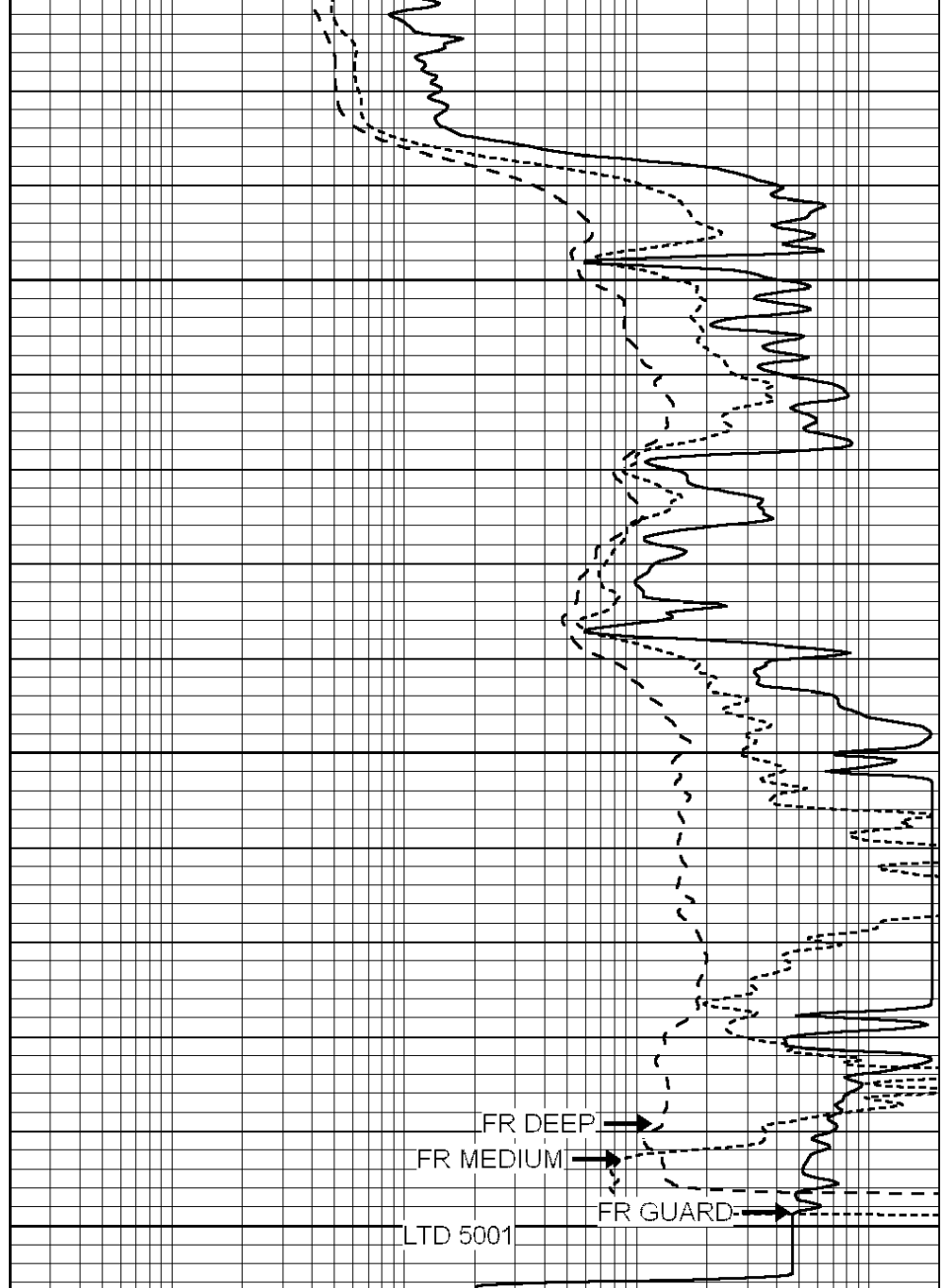


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

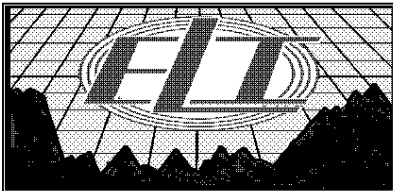
4900

4950

5000



0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

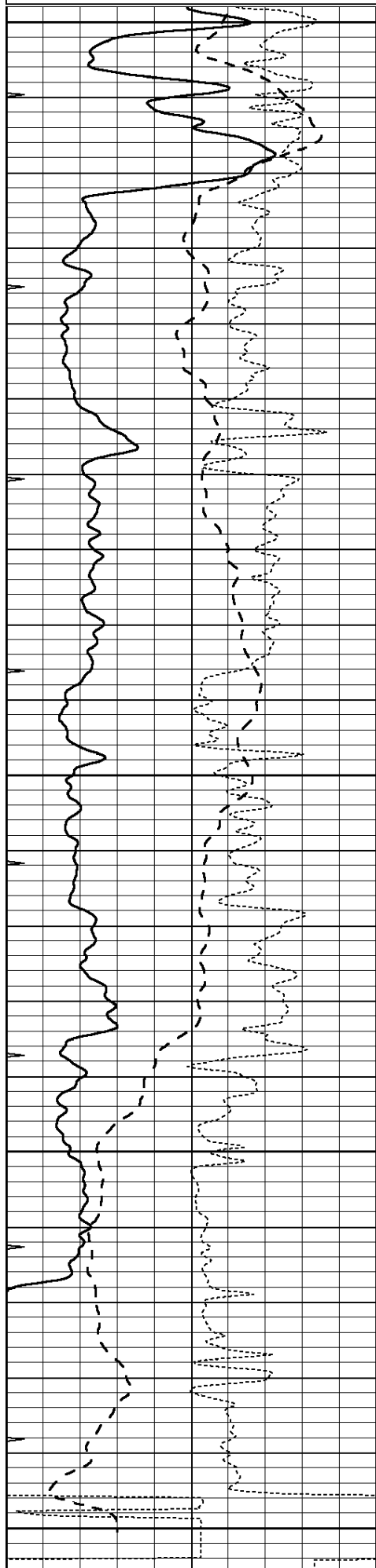


REPEAT SECTION

Database File: 1826pe.db
 Dataset Pathname: pass2.7
 Presentation Format: _dil
 Dataset Creation: Mon Sep 11 00:04:06 2017
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



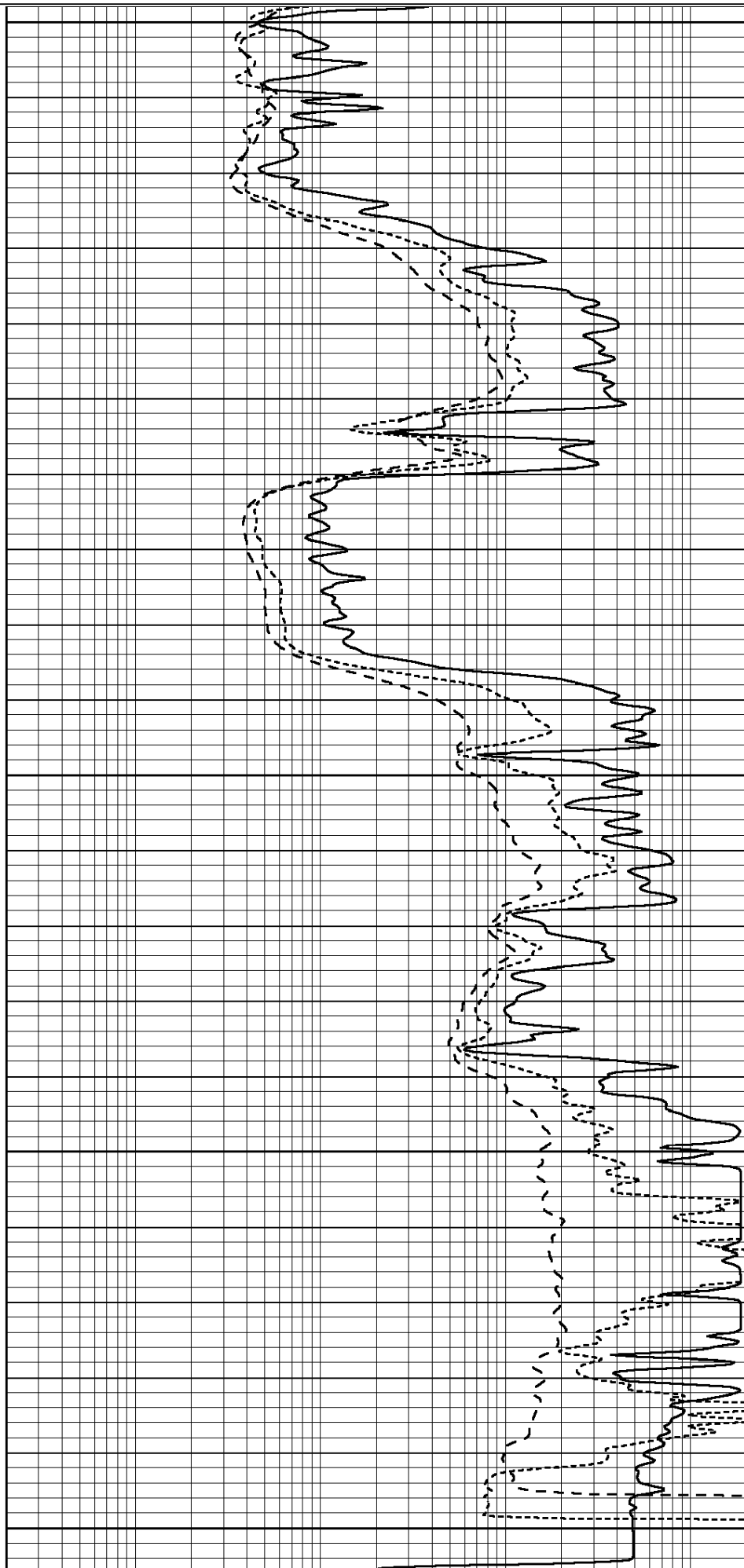
4800

4850

4900

4950

5000



0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			

Calibration Report

Database File: 1598ddn.db
Dataset Pathname: pass4
Dataset Creation: Wed Aug 30 02:13:00 2017 by Log SOC 120430

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
Surface Cal Performed: Wed Aug 30 00:06:33 2017
Downhole Cal Performed: Mon Jul 28 12:02:56 2008
After Survey Verification Performed: Mon Jul 28 12:02:56 2008

Surface Calibration

Loop:	Readings				References		Results	
	Air	Loop			Air	Loop	m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	620.000	0.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-44.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102

Downhole Calibration

	Readings				References		Results	
	Zero	Cal			Zero	Cal	m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	mmho-m		

After Survey Verification

	Readings				Targets		Results	
	Zero	Cal			Zero	Cal	m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		

Litho Density Calibration Report

Serial: 002 Model: PRB

Master Calibration

Performed Mon Aug 21 11:27:42 2017

	Background	Magnesium	Aluminum	Sandstone	
Window 1	837.1	10632.5	2945.1	12110.1	cps
Window 2	772.0	9117.4	2570.1	10197.3	cps
Window 3	631.7	4669.0	1481.9	5042.9	cps
Window 4	187.0	187.5	185.9	189.9	cps
Long Space	0.0	8345.4	1798.1	9425.3	cps

Long Space	1.1	1927.9	1285.9	2050.2	cps
Short Space		1.7100	2.5960	1.3800	g/cc
Rho		0.0000	2.5700	1.5500	
Pe					
Rib Angle	: 45.2	Rib Slope	: 1.008	Density/Spine Ratio	: 0.558
Spine Angle	: 75.2	Spine Slope	: 3.790	Spine Intercept	: -19.6

Before Survey Verification

Performed Wed Dec 31 18:00:00 1969

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

After Survey Verification

Performed Wed Dec 31 18:00:00 1969

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

Compensated Neutron Calibration Report

Serial Number: 070808
Tool Model: Probe

PRE-SURVEY VERIFICATION

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

POST-SURVEY VERIFICATION

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

Gamma Ray Calibration Report

Serial Number: 070558
Tool Model: OPEN_GR
Performed: Wed May 31 00:09:32 2017

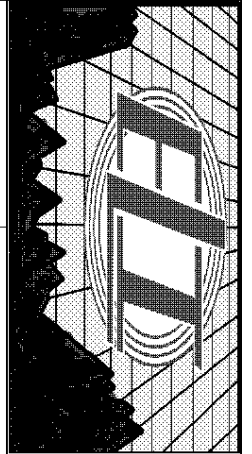
Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity:

0.2800

GAP/cps



MICRO LOG

Company LARIO OIL & GAS COMPANY
 Well KNOBBE #1-4
 Field WILDCAT
 County WICHITA
 State KANSAS

Company LARIO OIL & GAS COMPANY
 Well KNOBBE #1-4
 Field WILDCAT
 County WICHITA
 State KANSAS

Location: API # : 15-203-20322-0000
 1290' FNL & 1775' FEL
 SW - SE - NW - NE

Permanent Datum GROUND LEVEL Elevation 3280
 Log Measured From KELLY BUSHING 10' A.G.L.
 Drilling Measured From KELLY BUSHING

SEC 4 TWP 19S RGE 37W

Other Services
 CDL/CNL/PE
 DIL/SONIC

Elevation
 K.B. 3290
 D.F. 3288
 G.L. 3280

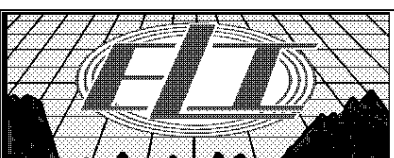
Date	9/11/17
Run Number	TWO
Depth Driller	5000
Depth Logger	5001
Bottom Logged Interval	4985
Top Log Interval	2600
Casing Driller	8 5/8" @ 360'
Casing Logger	360
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	8.9/53
pH / Fluid Loss	10.5/6.4
Source of Sample	FLOWLINE
Rim @ Meas. Temp	.400 @ 85F
Rmf @ Meas. Temp	.300 @ 85F
Rmc @ Meas. Temp	.480 @ 85F
Source of Rmf / Rmc	MEASUREMENT
Rim @ BHT	.272 @ 125F
Time Circulation Stopped	5.5 HOURS
Time Logger on Bottom	1:45 A.M.
Maximum Recorded Temperature	125F
Equipment Number	922339
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	STEVE DAVIS

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, 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. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

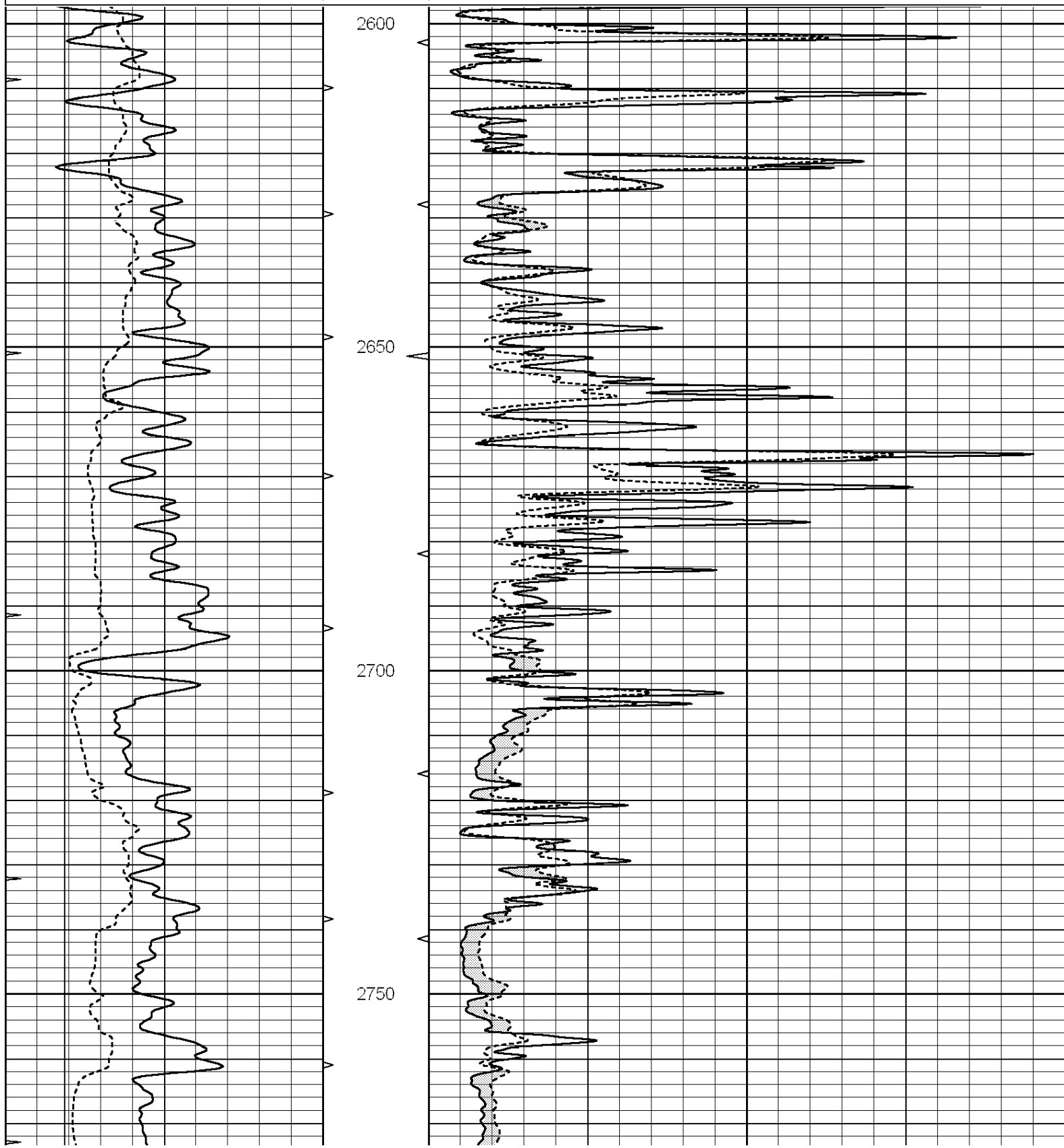
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
 DIRECTIONS
 LEOTI, KS. (4 WAY STOP) 2 1/2W. ON HWY 96 TO "RD. 10", 3 1/2S., W. INTO

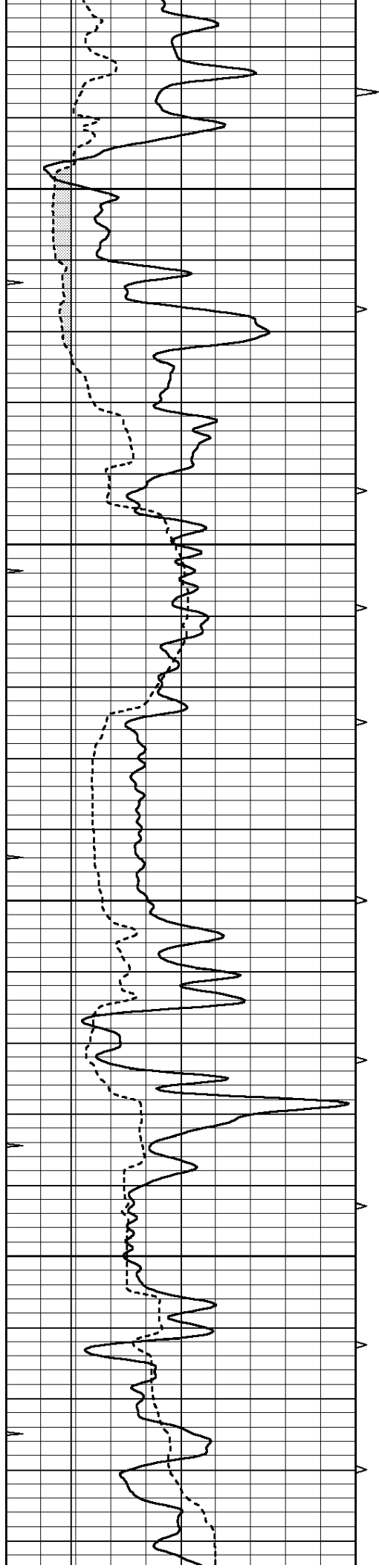


MAIN SECTION

Database File: 1826pe.db
 Dataset Pathname: pass6.2
 Presentation Format: micro
 Dataset Creation: Mon Sep 11 03:27:03 2017
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	0	MEL1.5 (Ohm-m)	40
6	CALIPER (in)	16	10 (ft3)	0	MEL 20 (Ohm-m)	40
0	MINMK	20	TBHV			
			0 (ft3)	10		



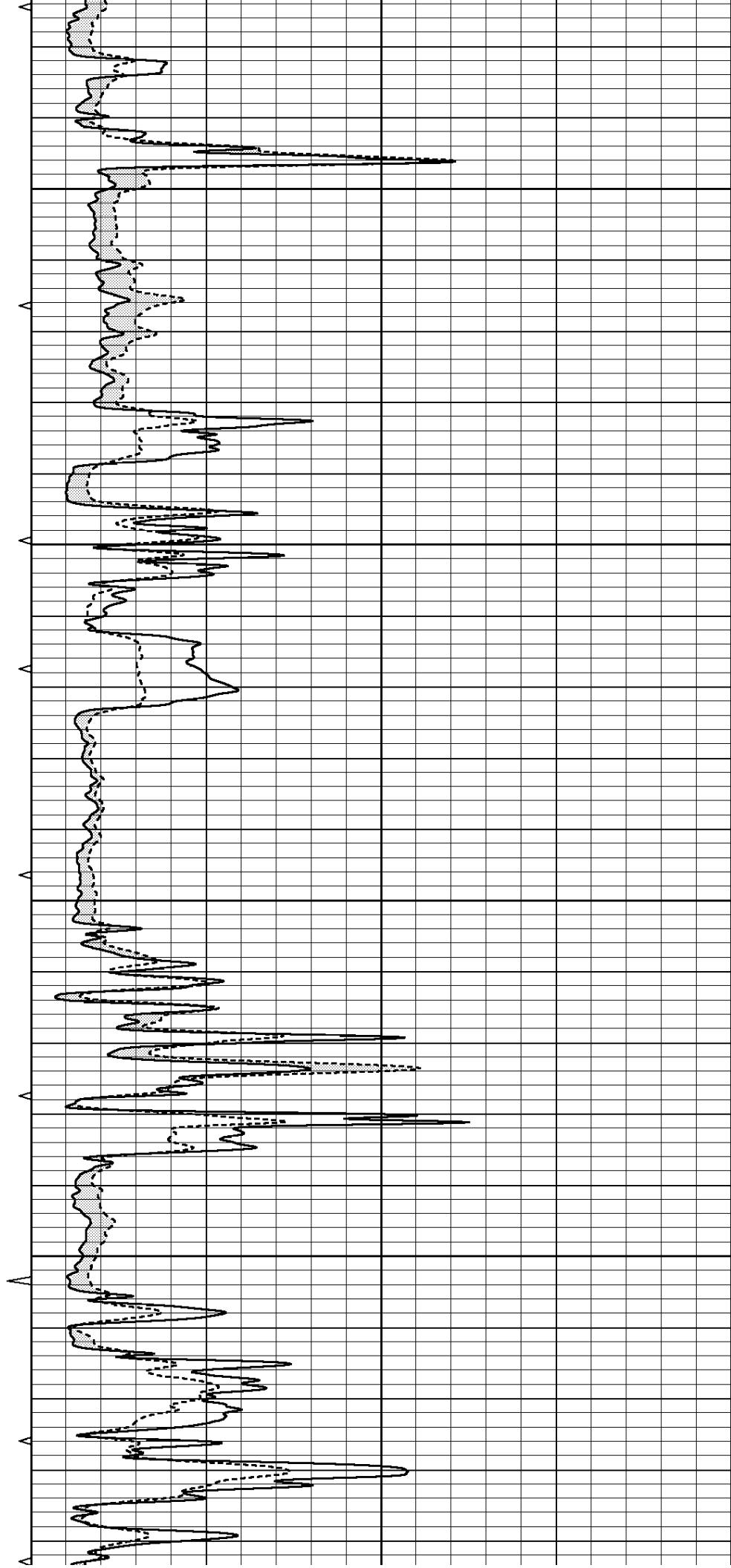


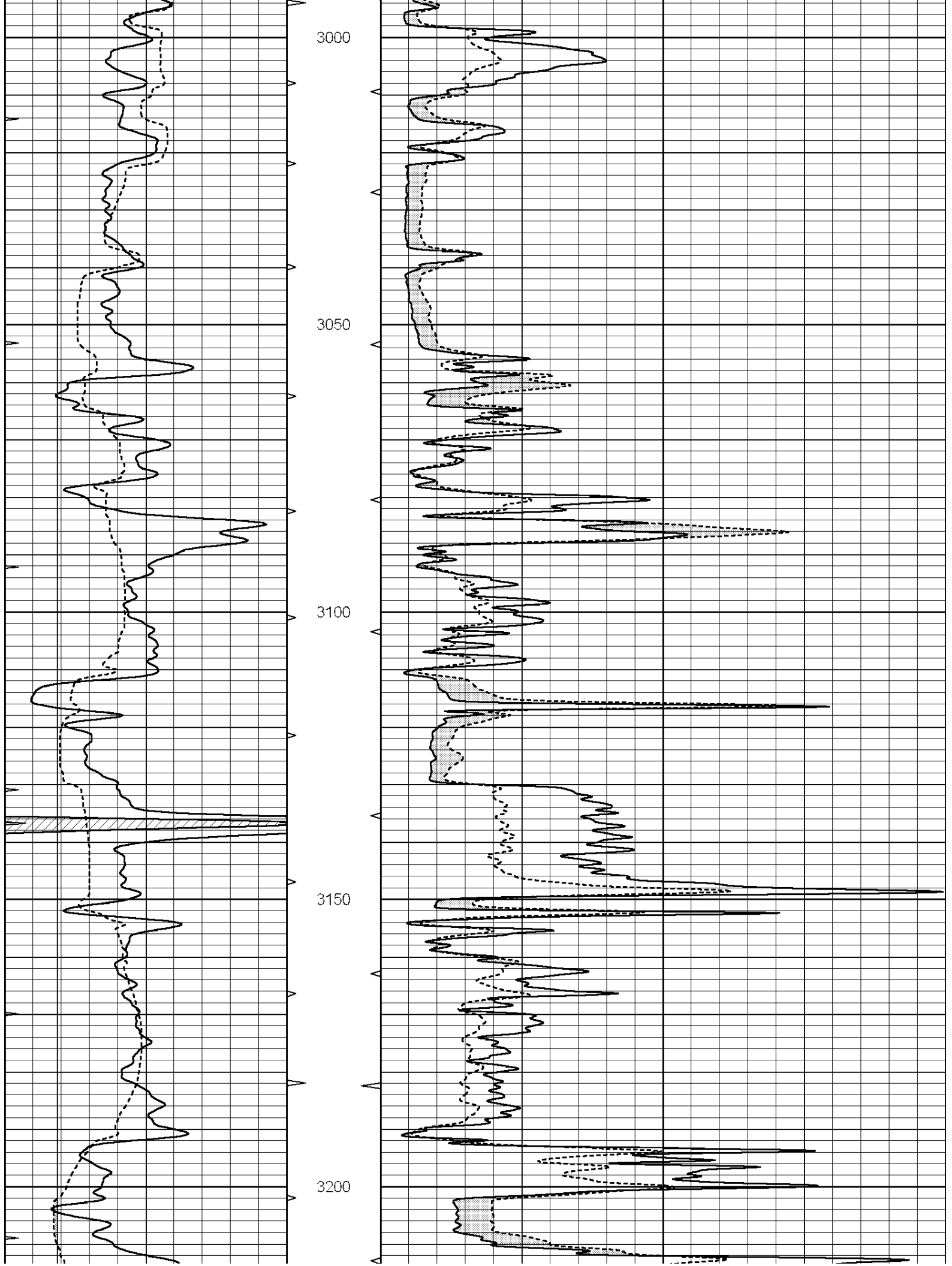
2800

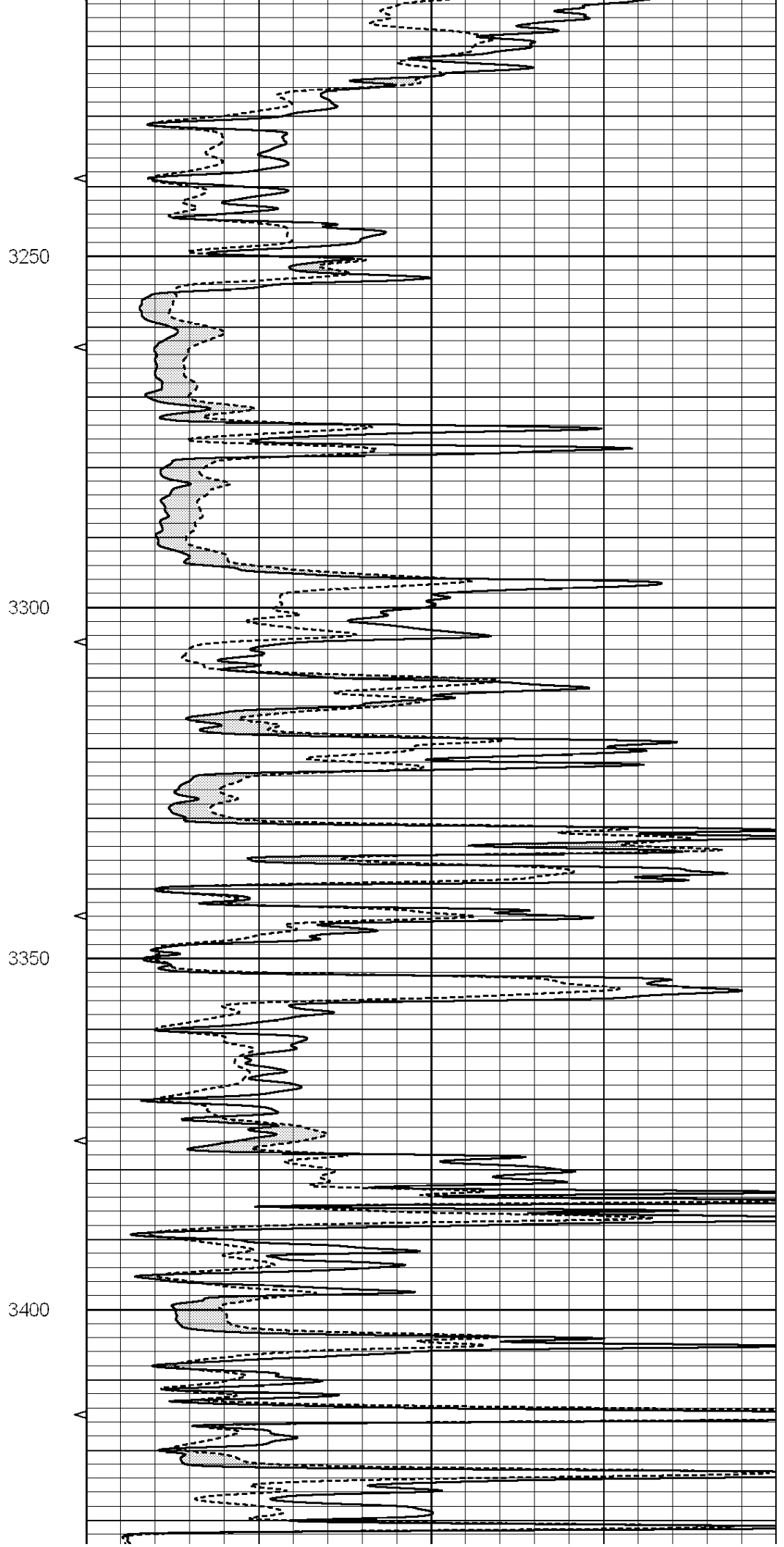
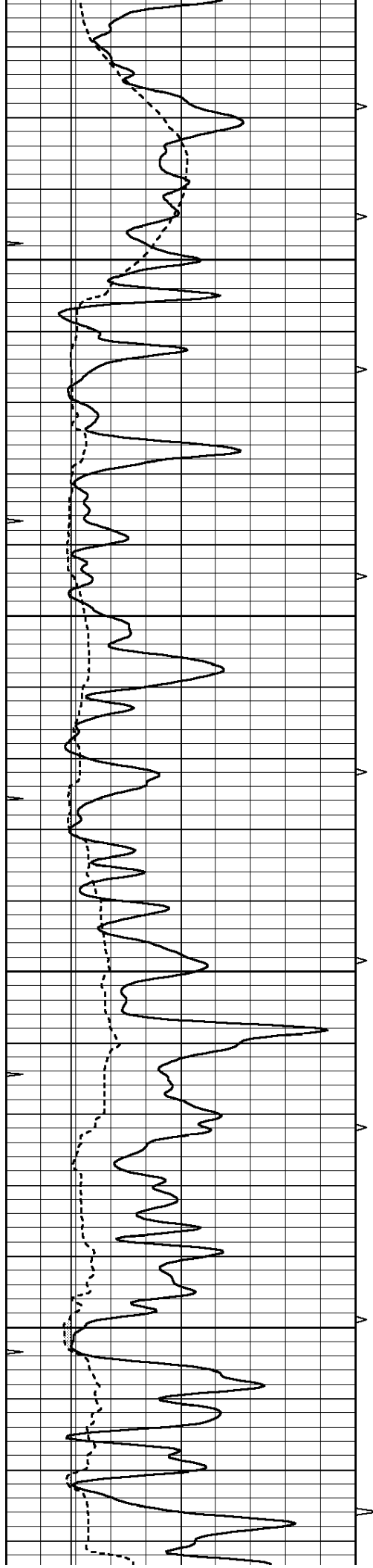
2850

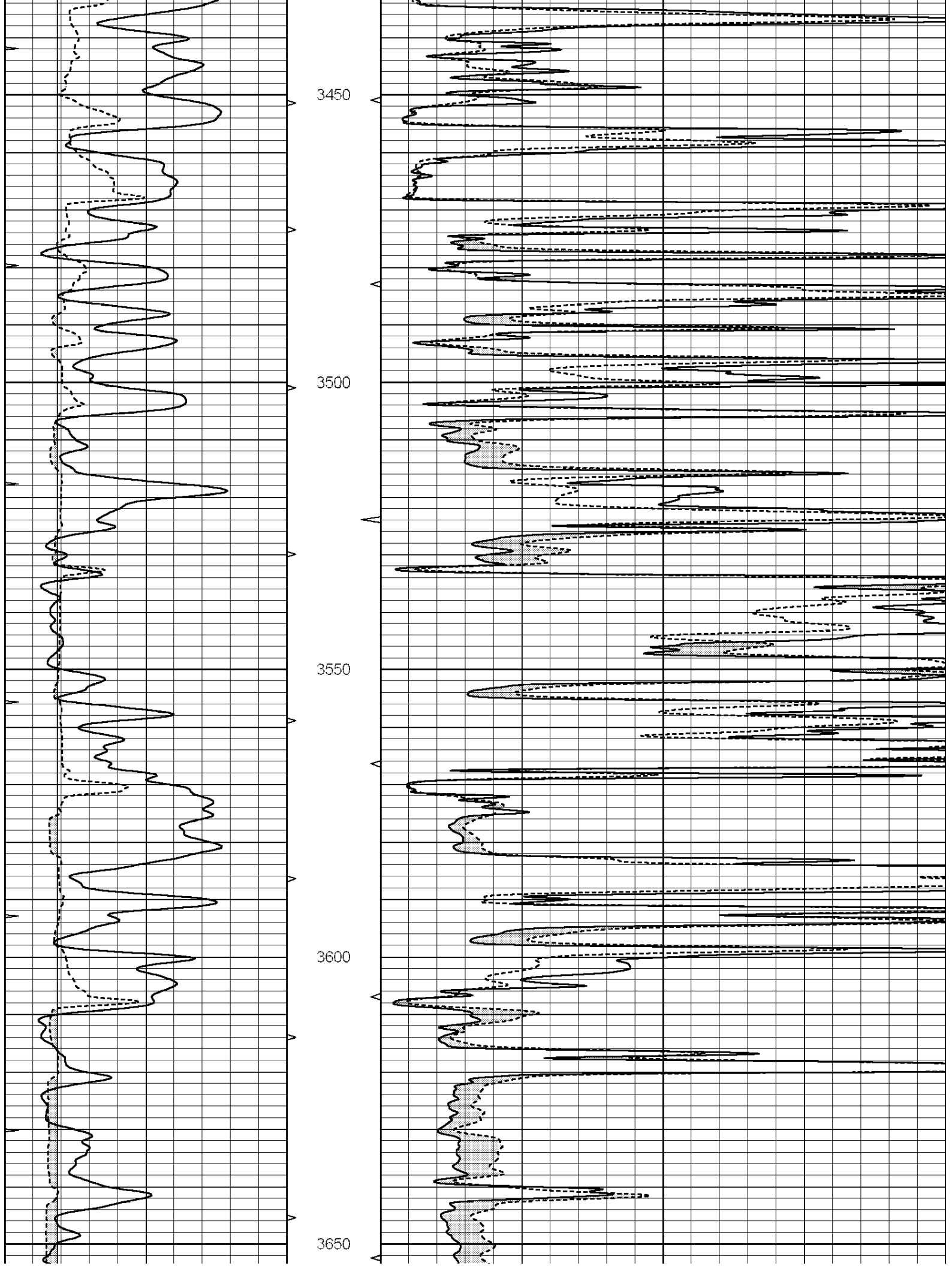
2900

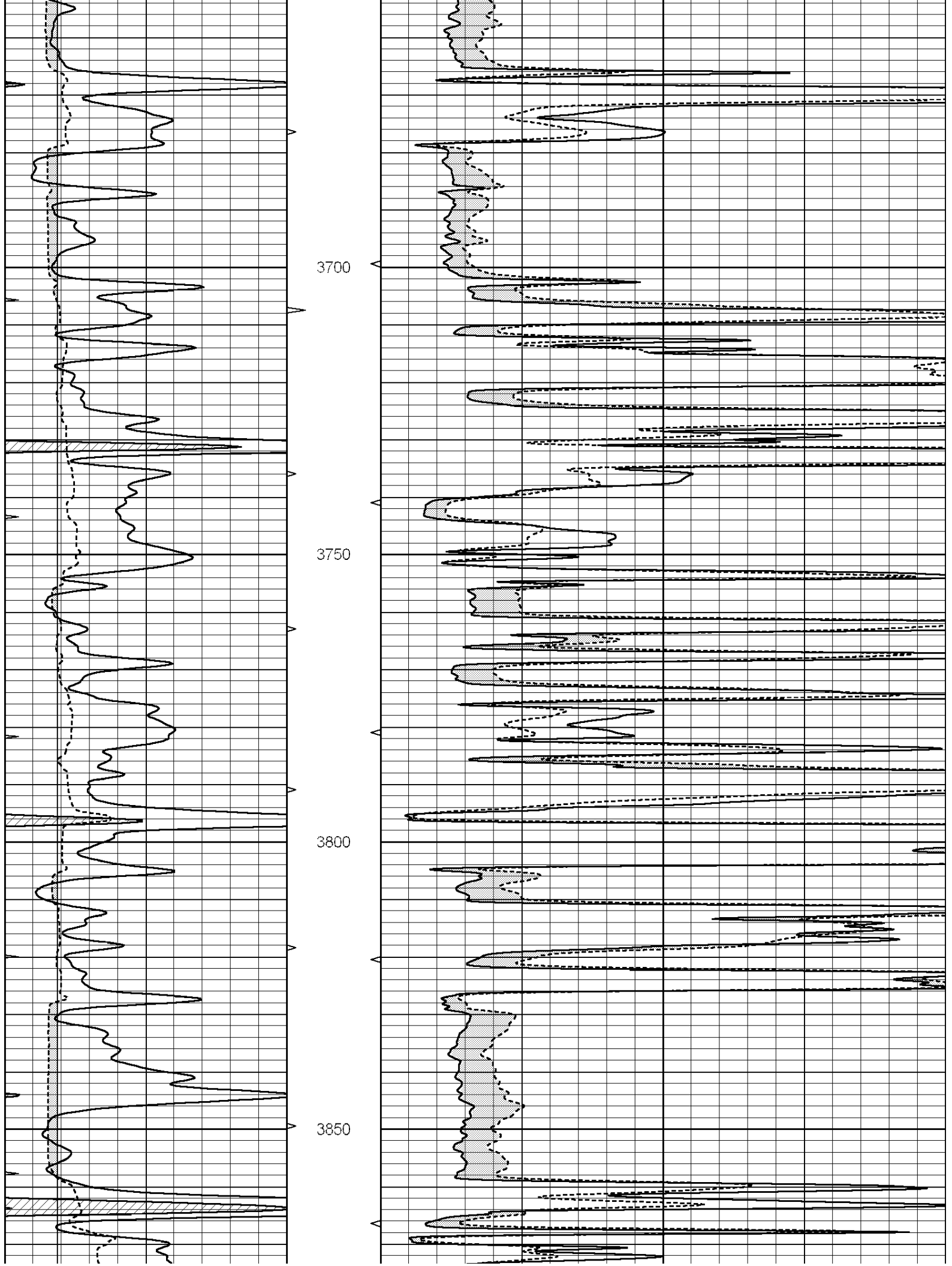
2950

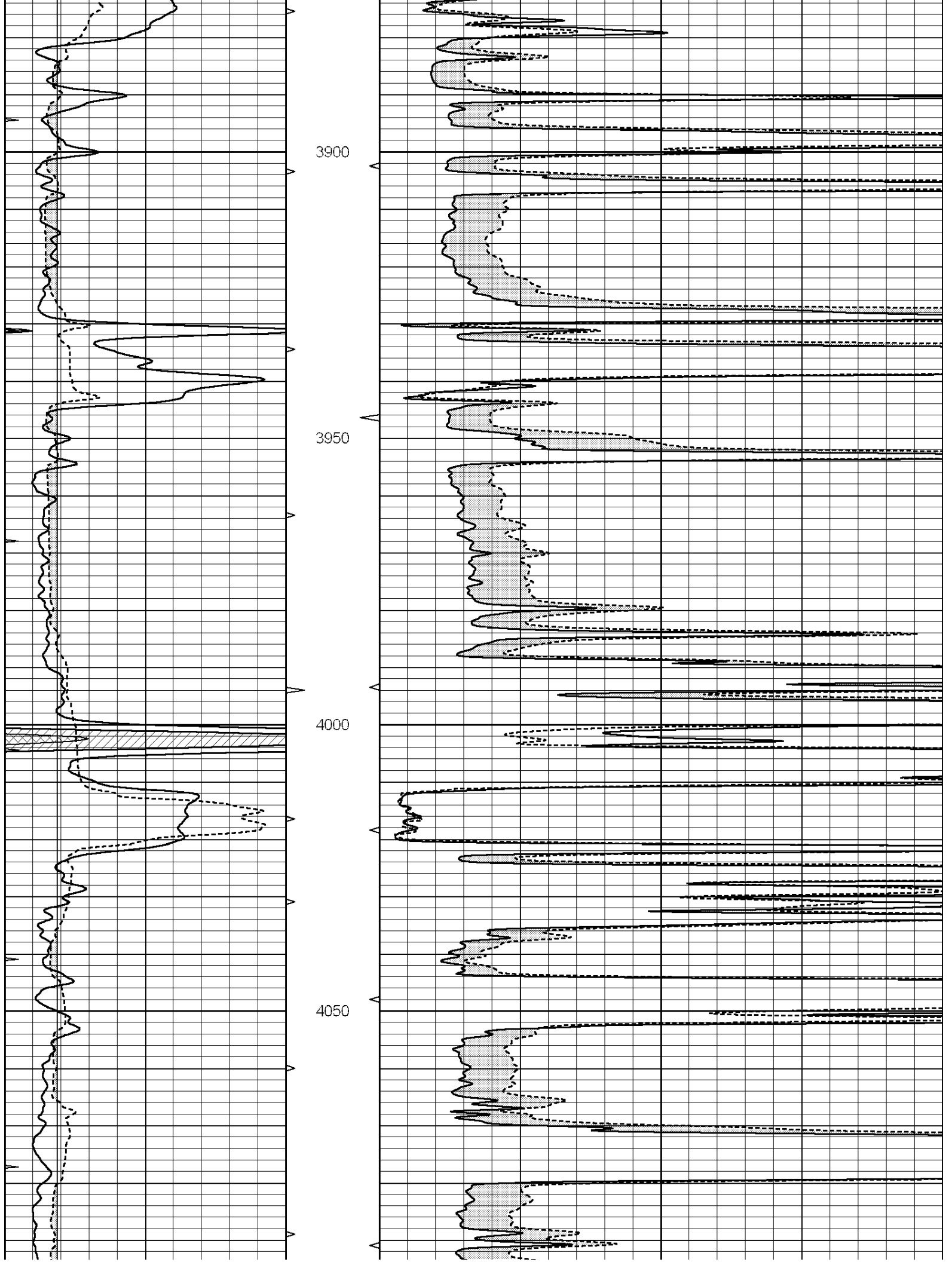


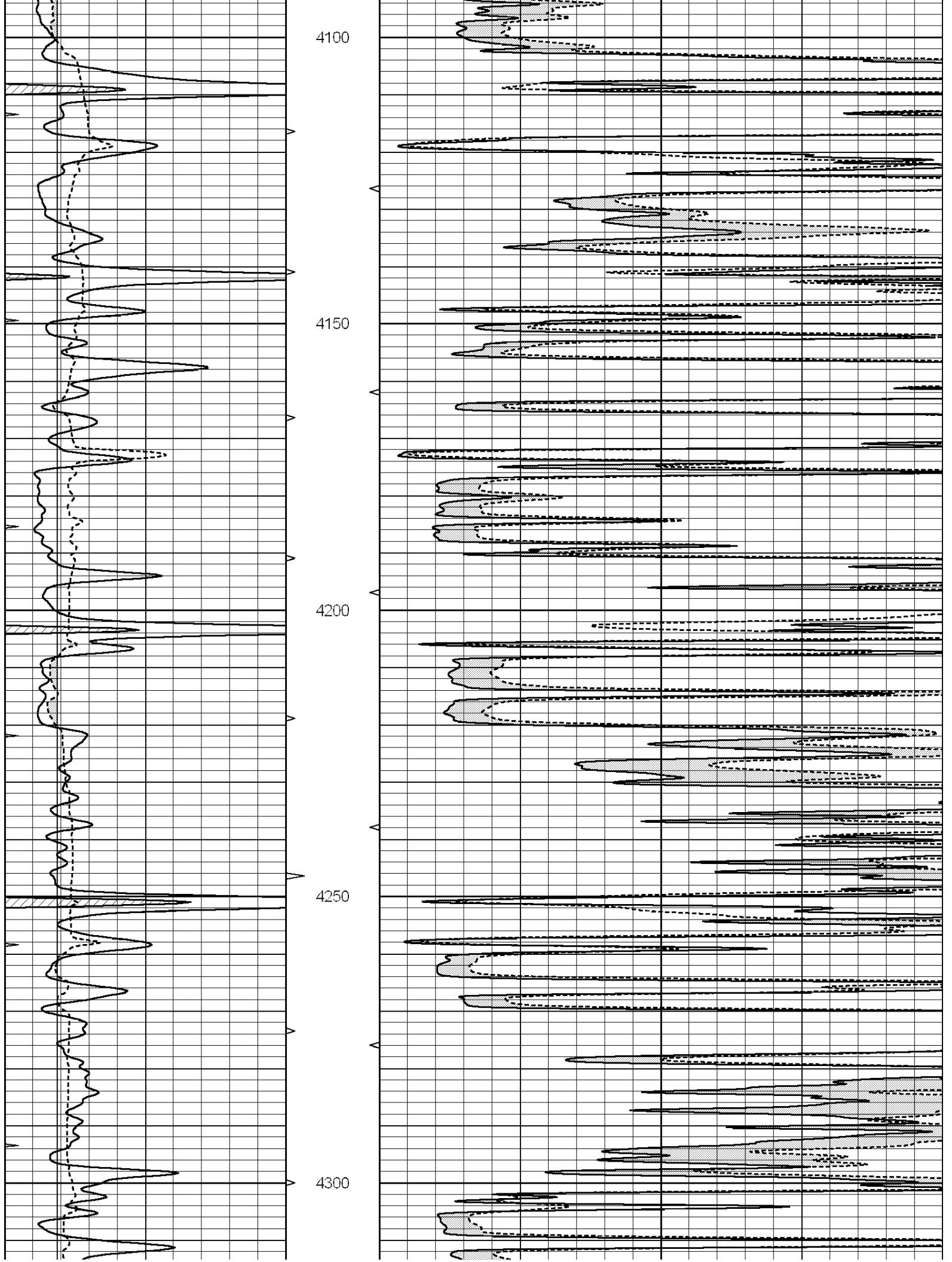


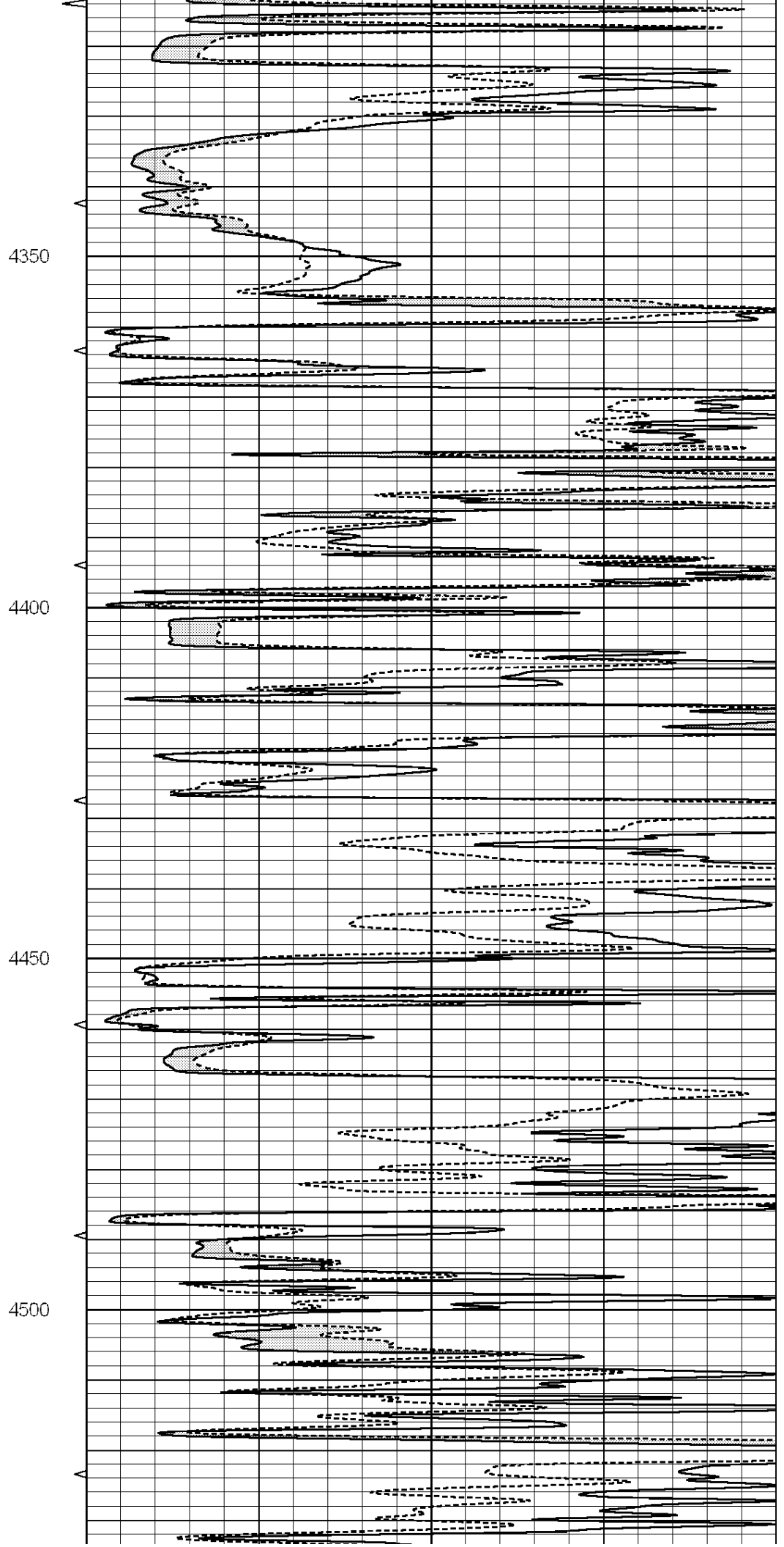
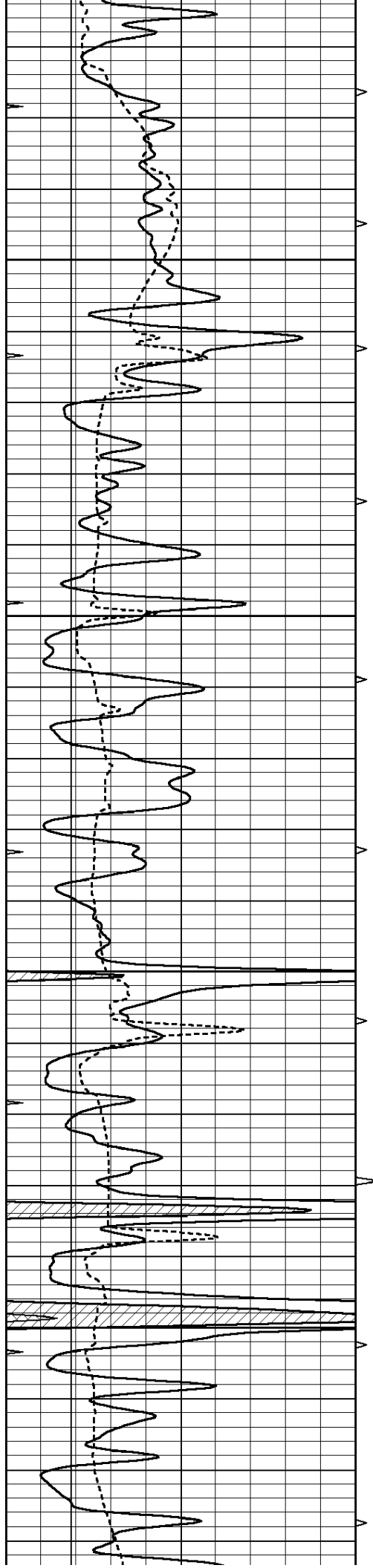


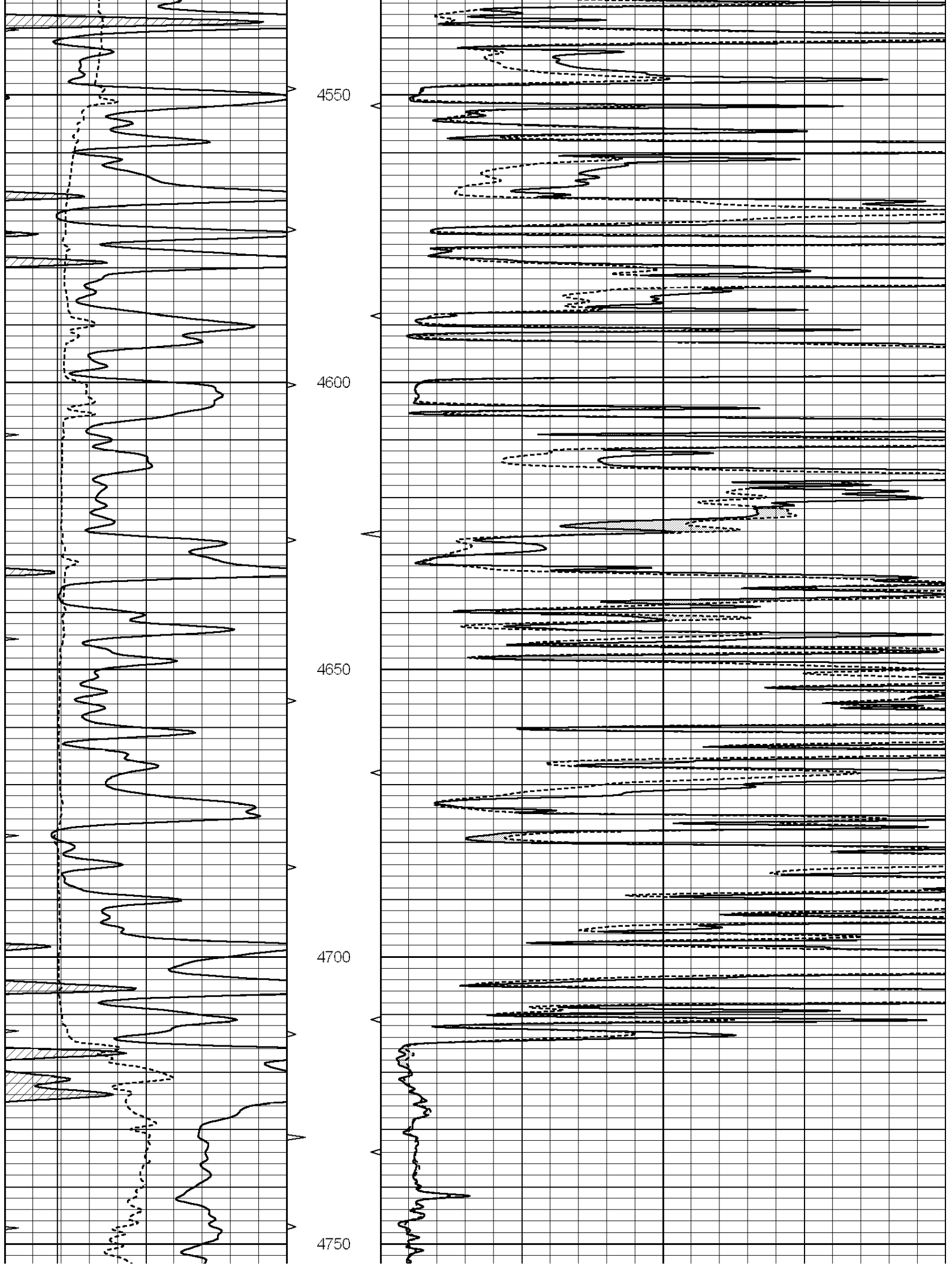


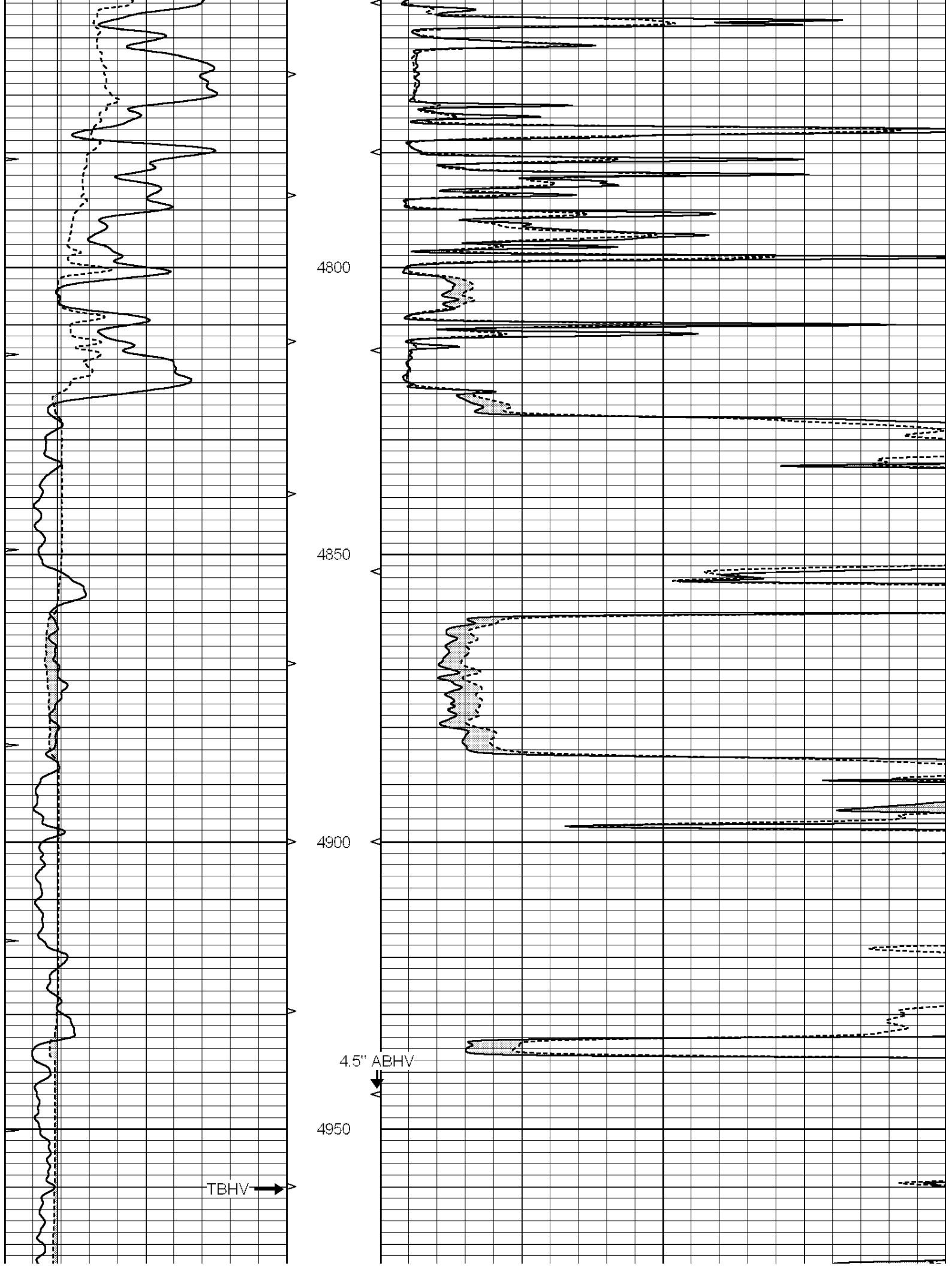


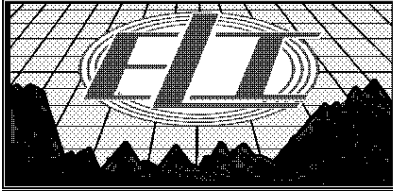
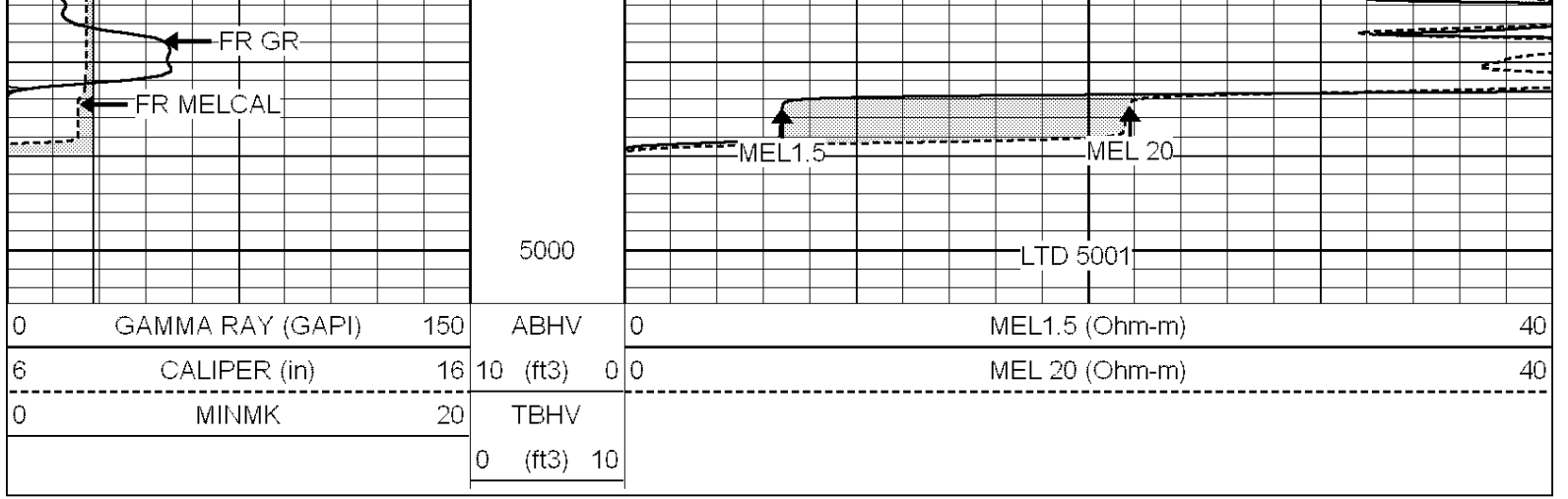








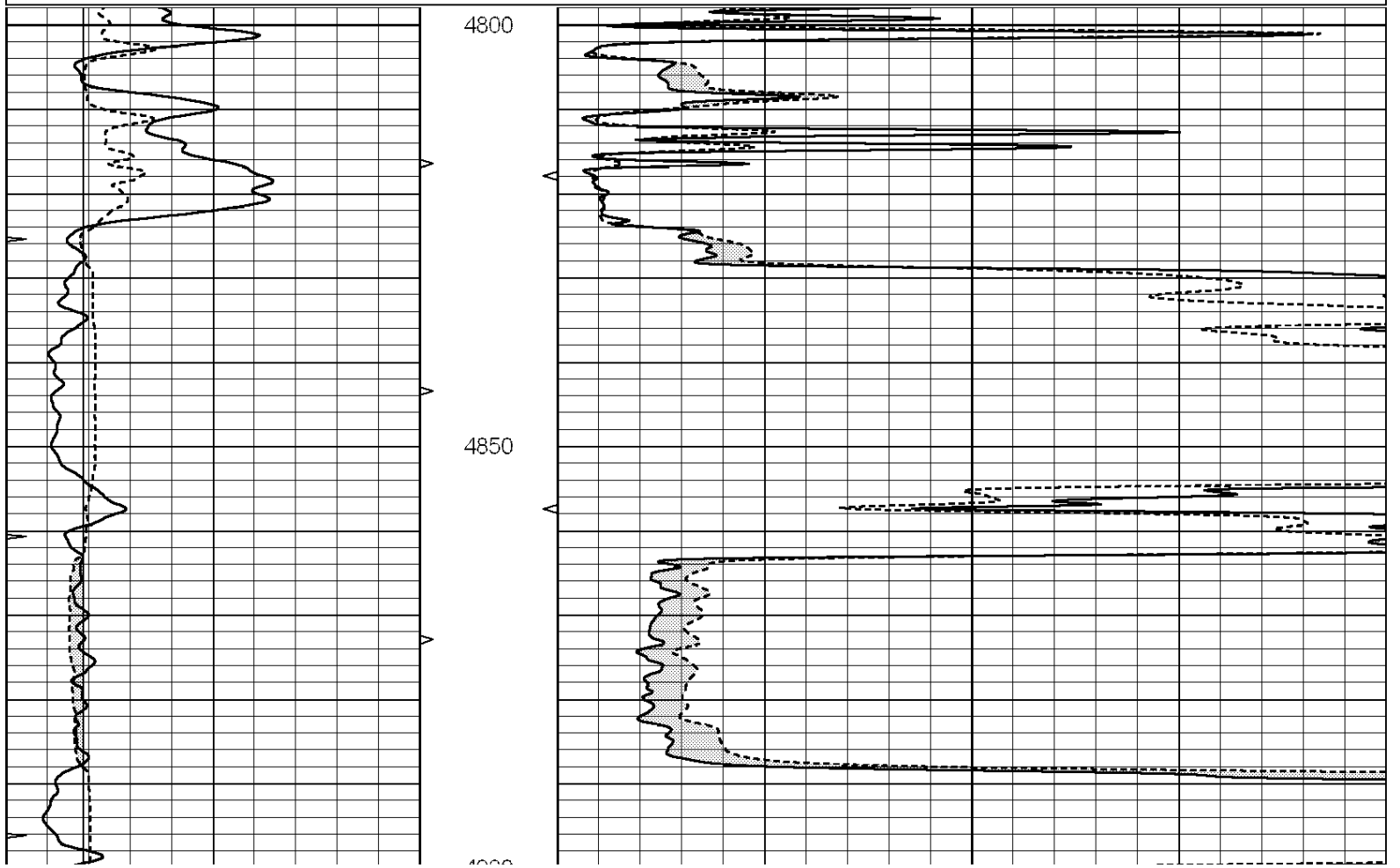


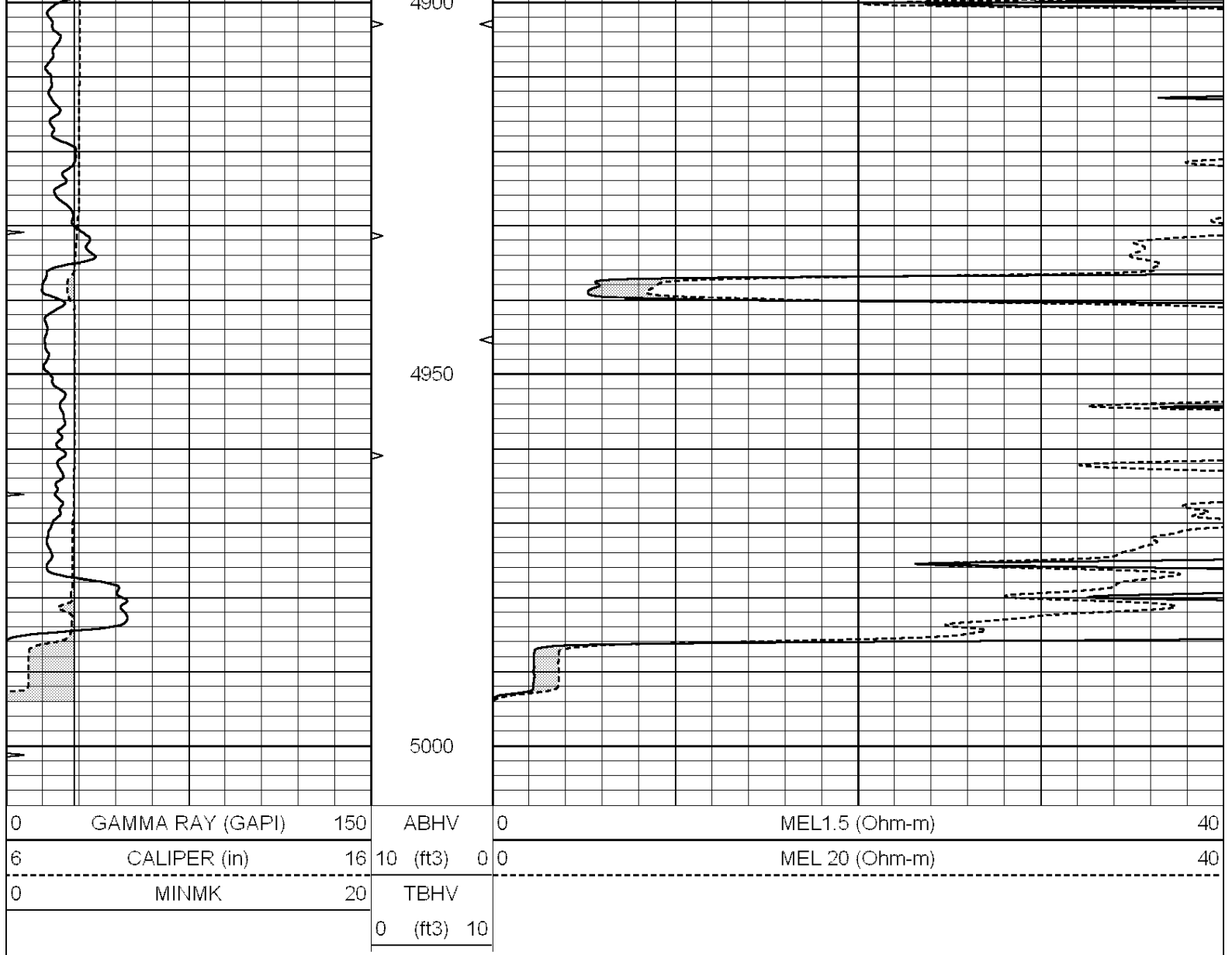


REPEAT SECTION

Database File: 1826pe.db
 Dataset Pathname: pass5.1
 Presentation Format: micro
 Dataset Creation: Mon Sep 11 02:17:11 2017 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	0	MEL1.5 (Ohm-m)	40
6	CALIPER (in)	16	10 (ft3)	0 0	MEL 20 (Ohm-m)	40
0	MINMK	20	TBHV			
			0 (ft3)	10		





Calibration Report

Database File: 1826pe.db
 Dataset Pathname: pass6.2
 Dataset Creation: Mon Sep 11 03:27:03 2017

MICRO Calibration Report

Serial Number: 070911
 Tool Model: ProbeN
 Performed: Tue Aug 08 06:25:06 2017

Caliper Calibration: Gain=3.961 Offset=2.157
 References Low Cal High Cal
 Readings 7.900 18.000
 1.450 4.000

1.5" Calibration: Gain=40.000 Offset=0.000
 References Low Cal High Cal
 Readings 0.000 20.000
 0.001 1.240

2" Calibration: Gain=48.000 Offset=0.000
 References Low Cal High Cal
 Readings 0.000 20.000

Reference
Readings

0.000
0.001

20.000
1.076

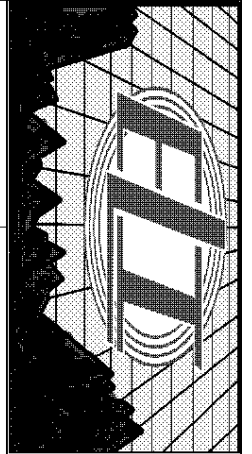
Gamma Ray Calibration Report

Serial Number: 110959
Tool Model: OPEN_GR
Performed: Tue Aug 08 03:45:01 2017

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.2100 GAPI/cps



**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company LARIO OIL & GAS COMPANY
Well KNOBBE #1-4
Field WILDCAT
County WICHITA
State KANSAS

Company LARIO OIL & GAS COMPANY
Well KNOBBE #1-4
Field WILDCAT
County WICHITA State KANSAS

Location: API # : 15-203-20322-0000
1290' FNL & 1775' FEL
SW - SE - NW - NE
SEC 4 TWP 19S RGE 37W

Permanent Datum GROUND LEVEL Elevation 3280
Log Measured From KELLY BUSHING 10' A.G.L.
Drilling Measured From KELLY BUSHING

Other Services
DIL/MEL
SONIC
Elevation
K.B. 3290
D.F. 3288
G.L. 3280

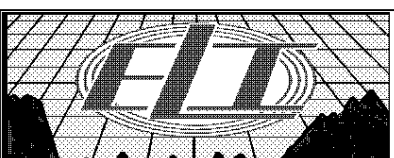
Date	9/10/17
Run Number	ONE
Depth Driller	5000
Depth Logger	5001
Bottom Logged Interval	4977
Top Log Interval	2600
Casing Driller	8 5/8" @ 360'
Casing Logger	360
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	8.9/53
pH / Fluid Loss	10.5/6.4
Source of Sample	FLOWLINE
Rim @ Meas. Temp	.400 @ 85F
Rmf @ Meas. Temp	.300 @ 85F
Rmc @ Meas. Temp	.480 @ 85F
Source of Rmf / Rmc	MEASUREMENT
Rim @ BHT	.272 @ 125F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	11:00 P.M.
Maximum Recorded Temperature	125F
Equipment Number	922339
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	STEVE DAVIS

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, 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. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

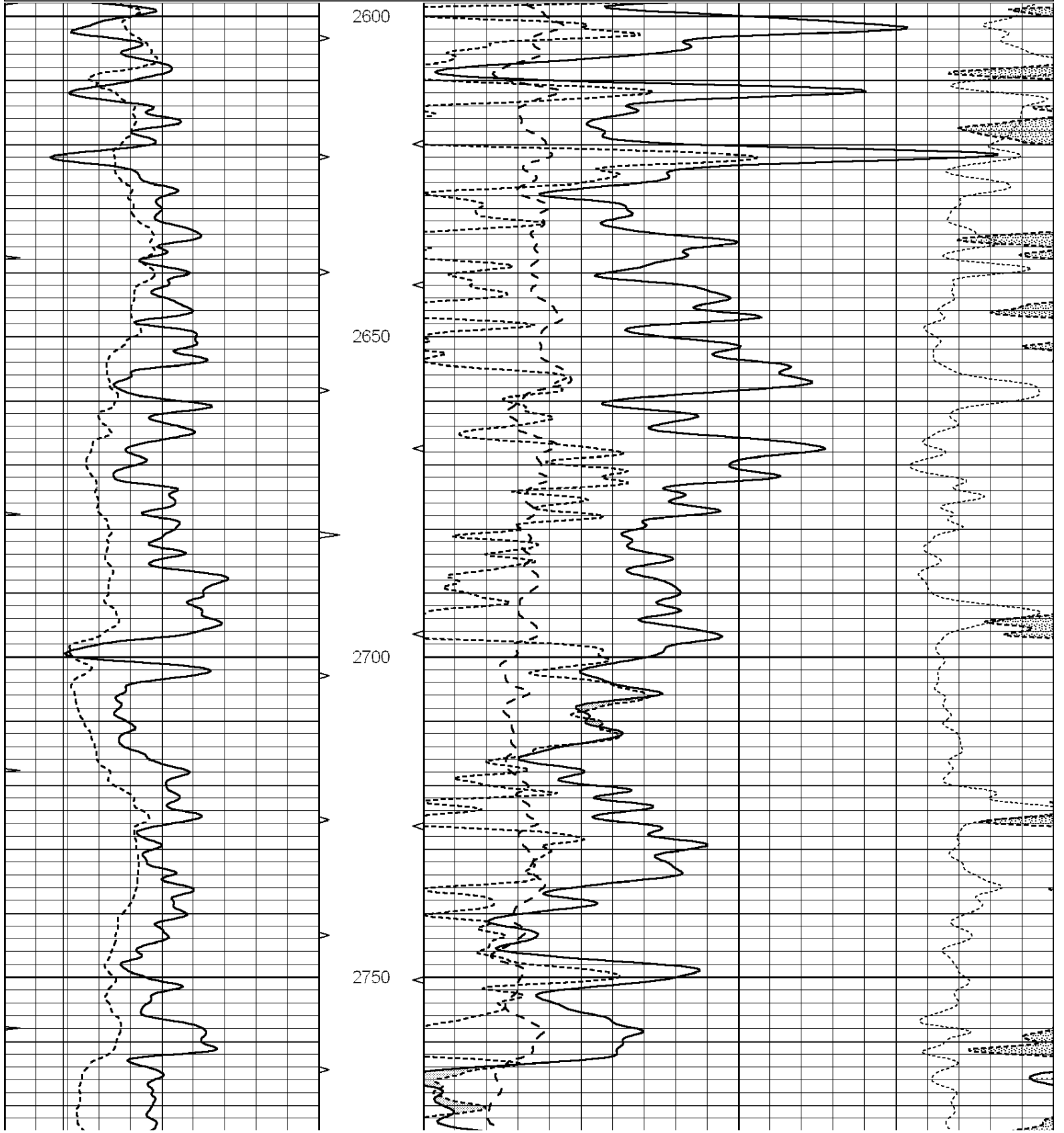
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
LEOTI, KS. (4 WAY STOP) 2 1/2W. ON HWY 96 TO "RD. 10", 3 1/2S., W. INTO

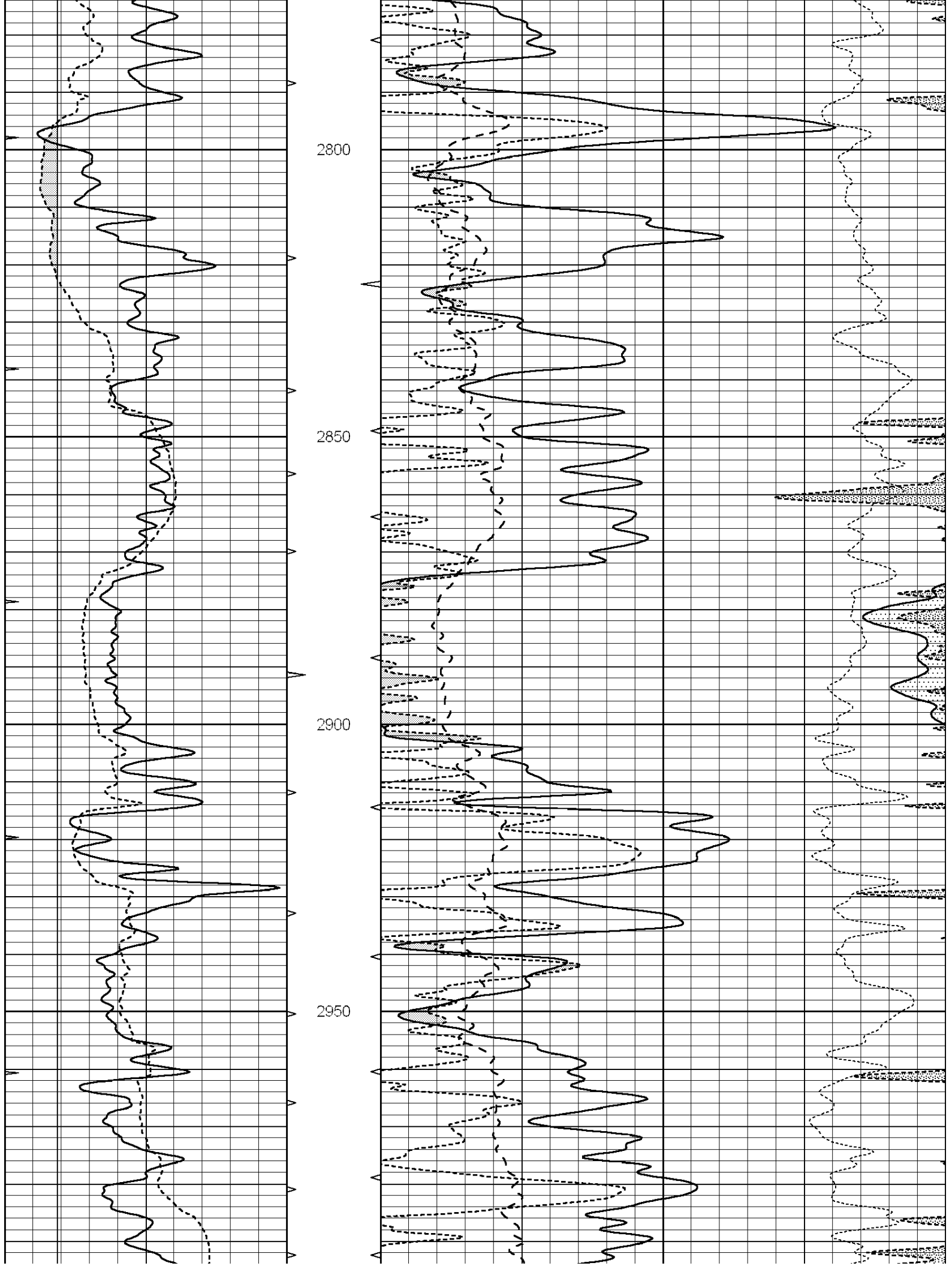


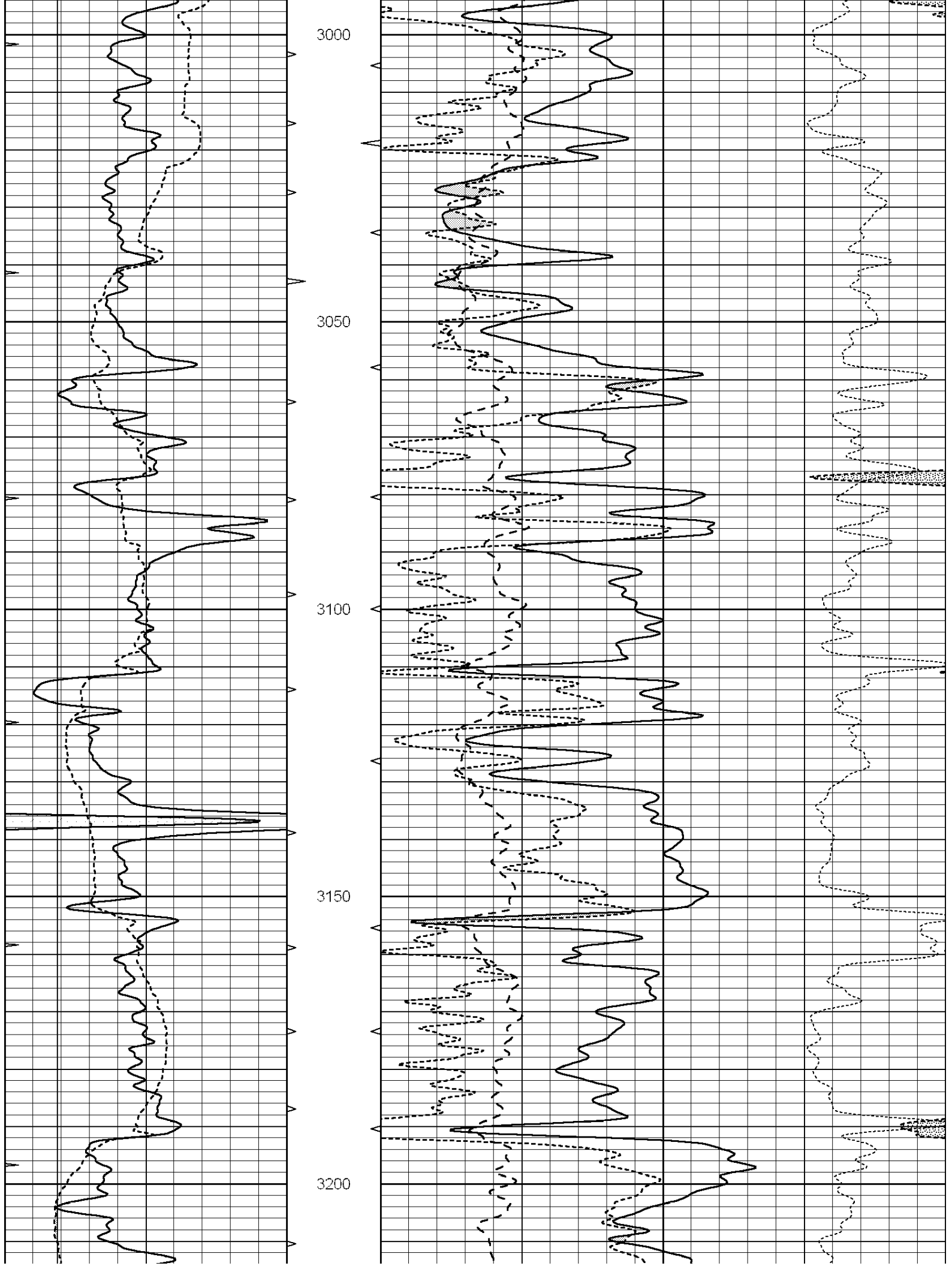
MAIN SECTION

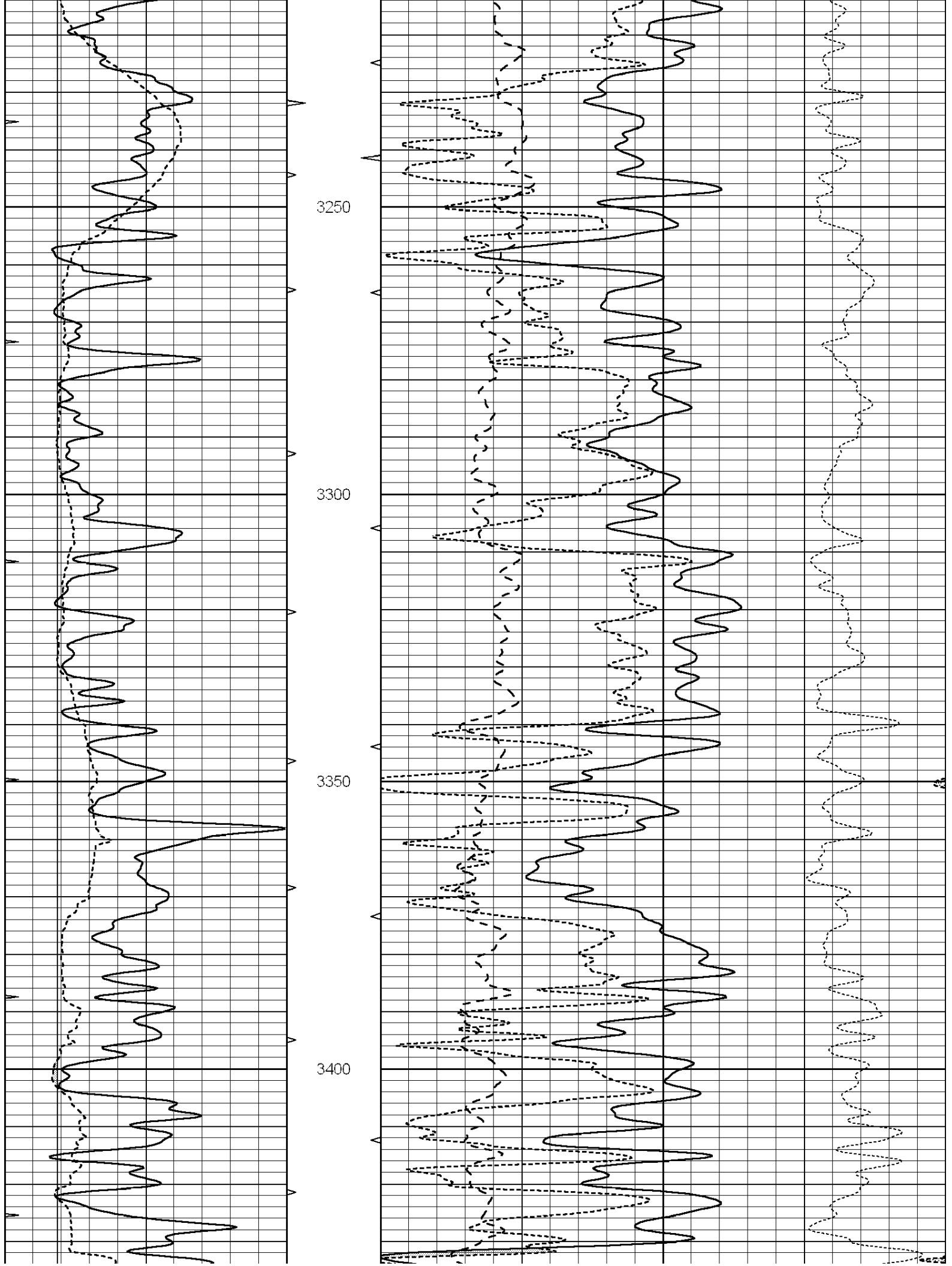
Database File: 1826pe.db
 Dataset Pathname: pass3.7
 Presentation Format: ldt_neu
 Dataset Creation: Mon Sep 11 01:15:33 2017
 Charted by: Depth in Feet scaled 1:240

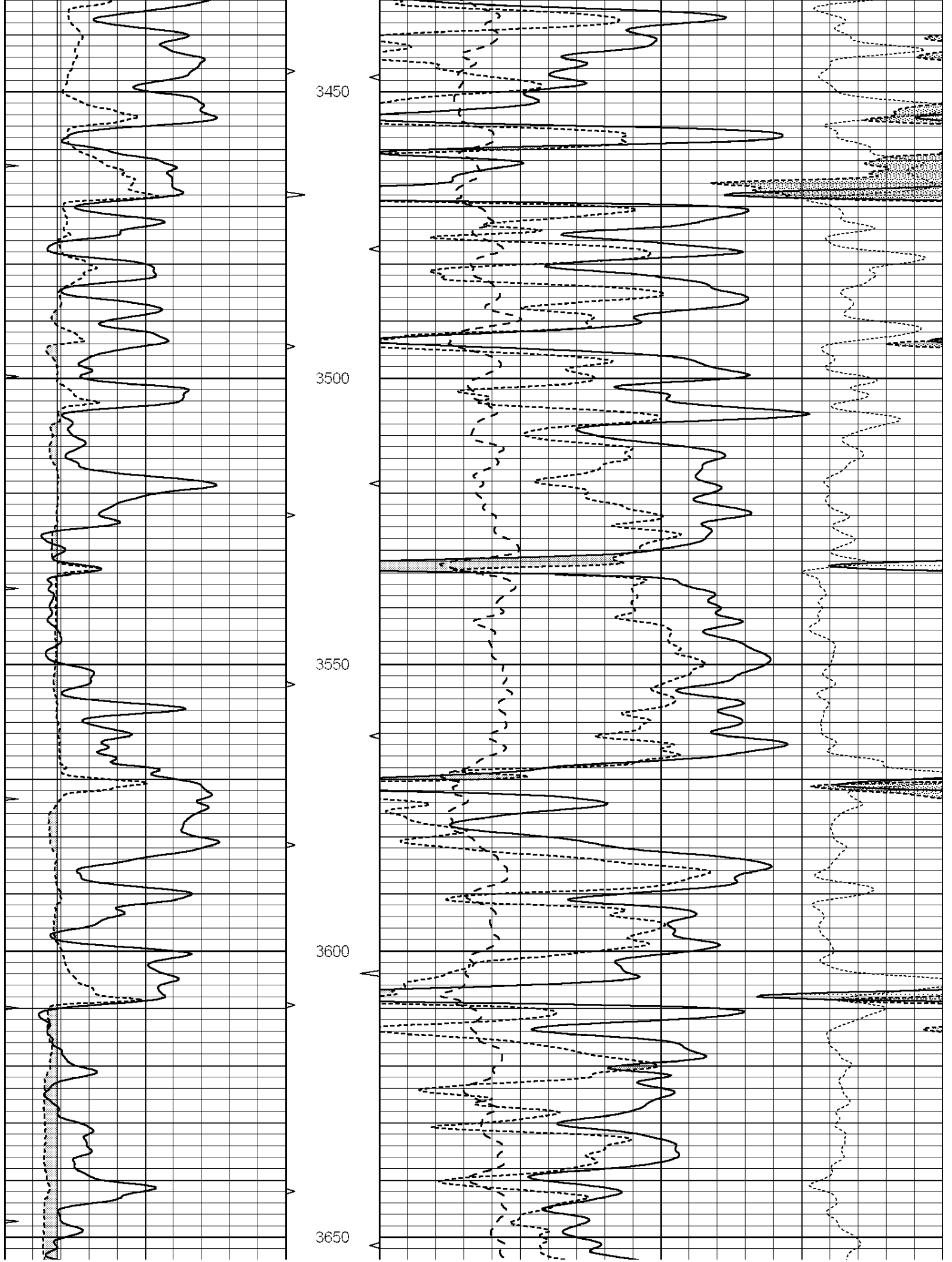
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6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)	-10		
0	MINMK	20	TBHV	0	PE	10	-0.25	CORRECTION (g/cc)	0.25
			0 (ft3)	10					

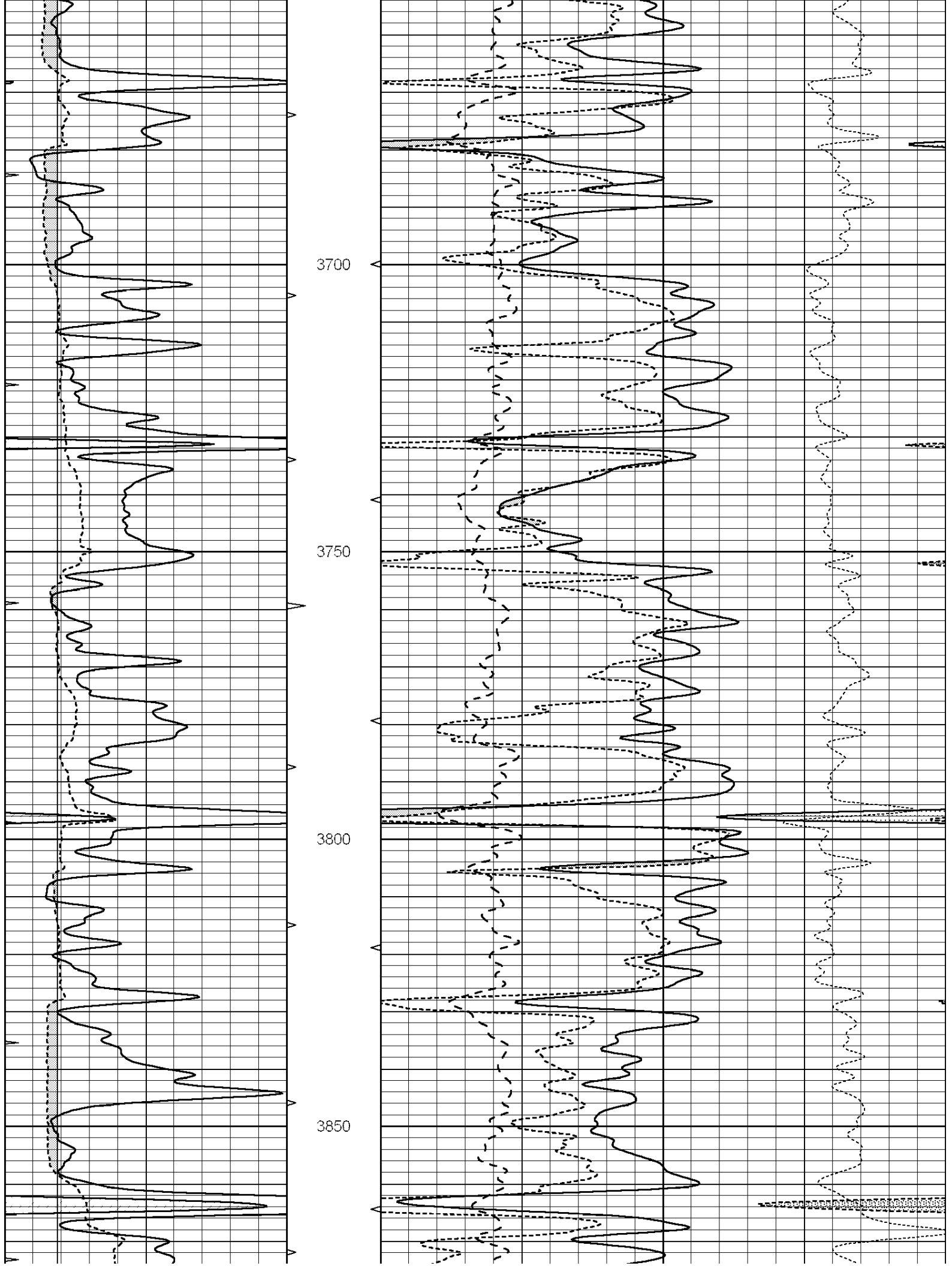


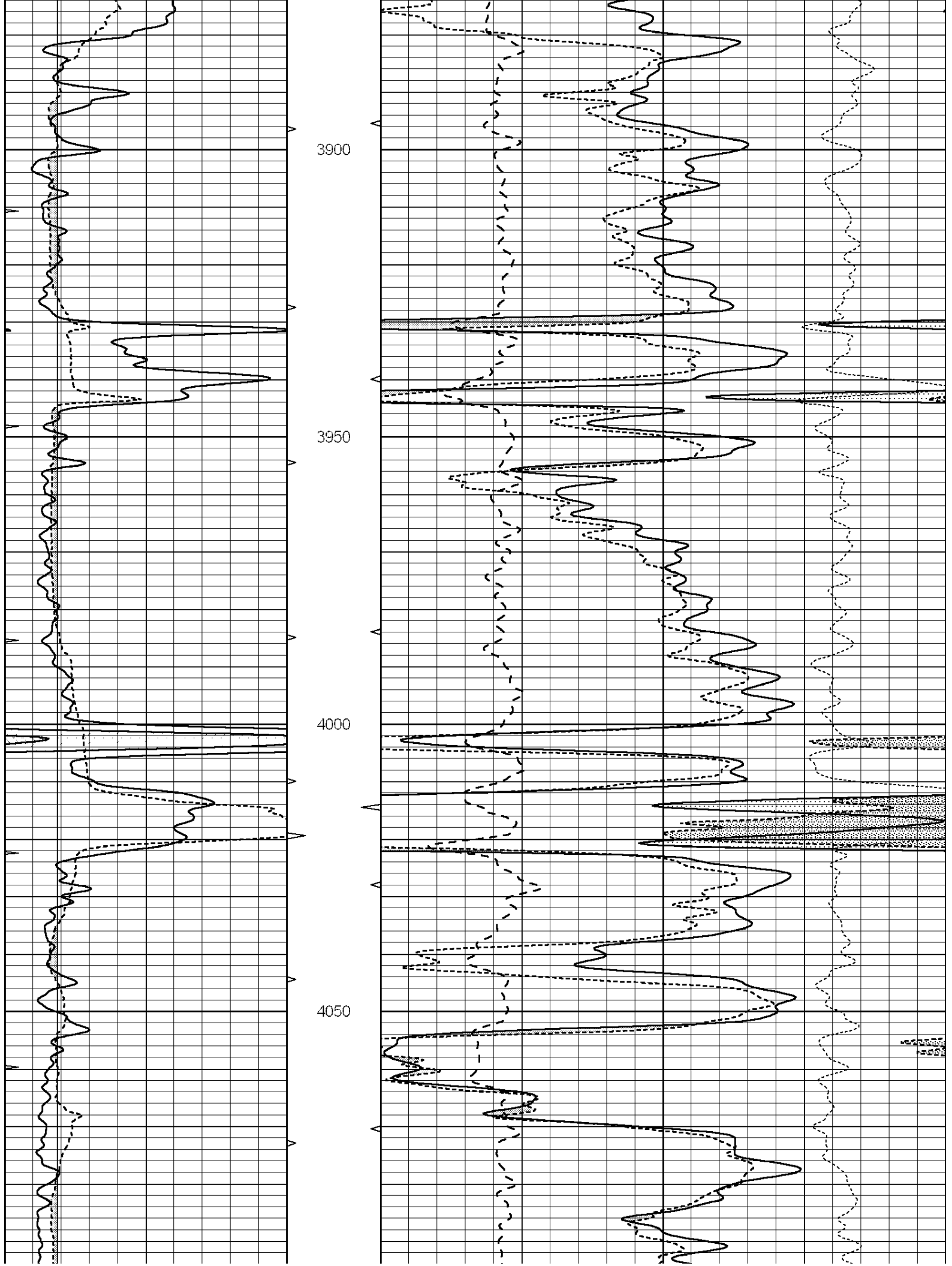


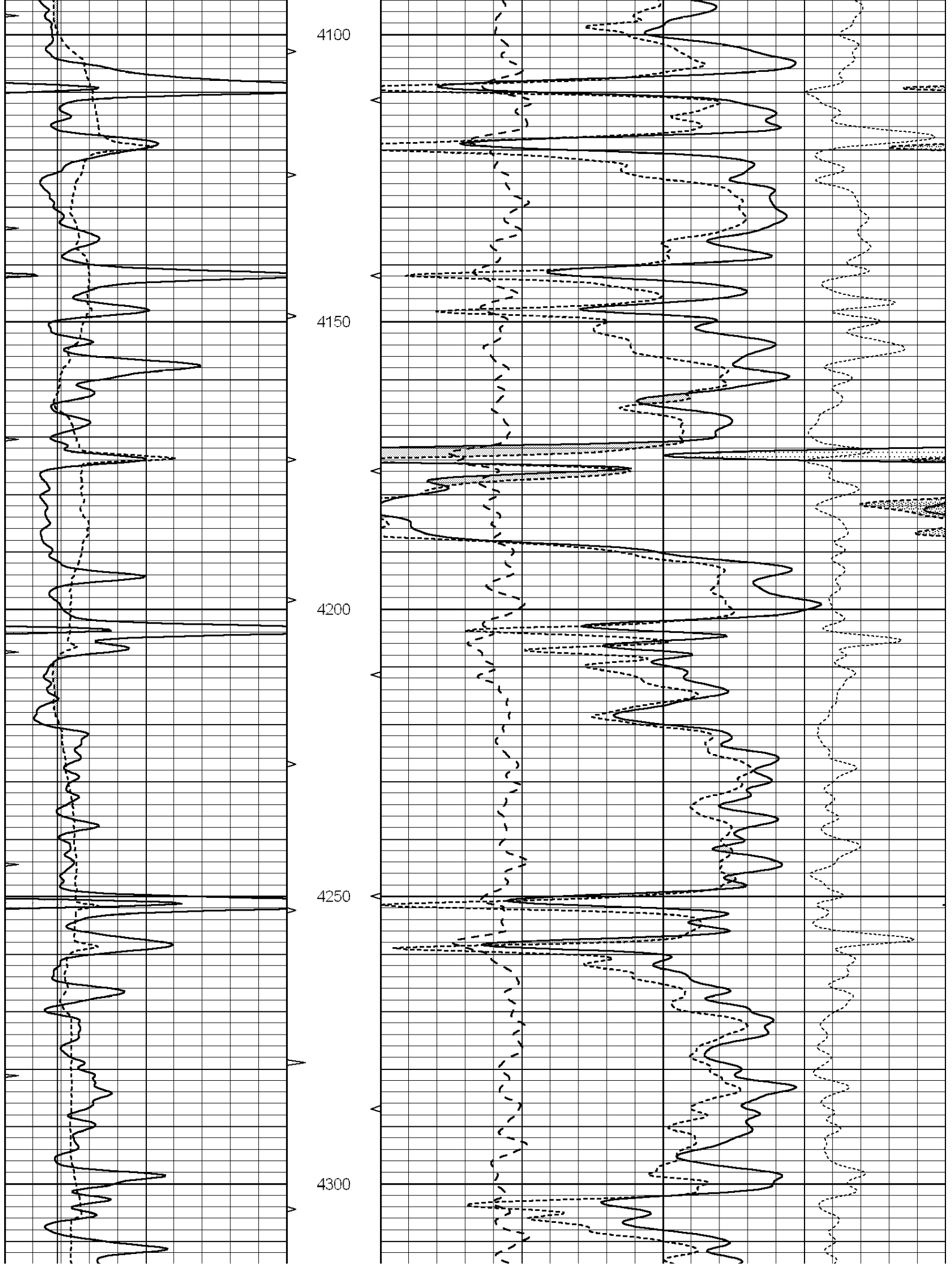


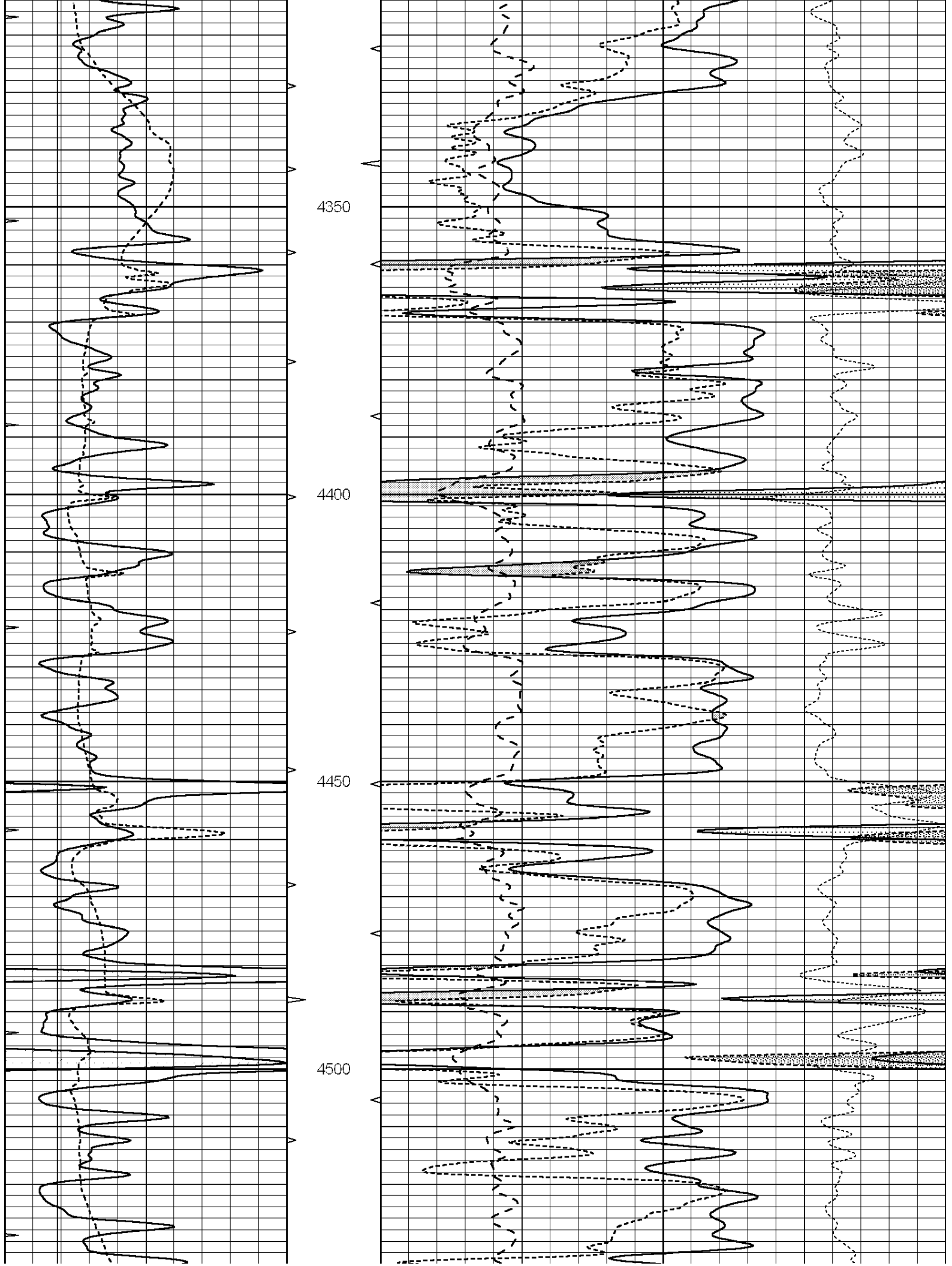


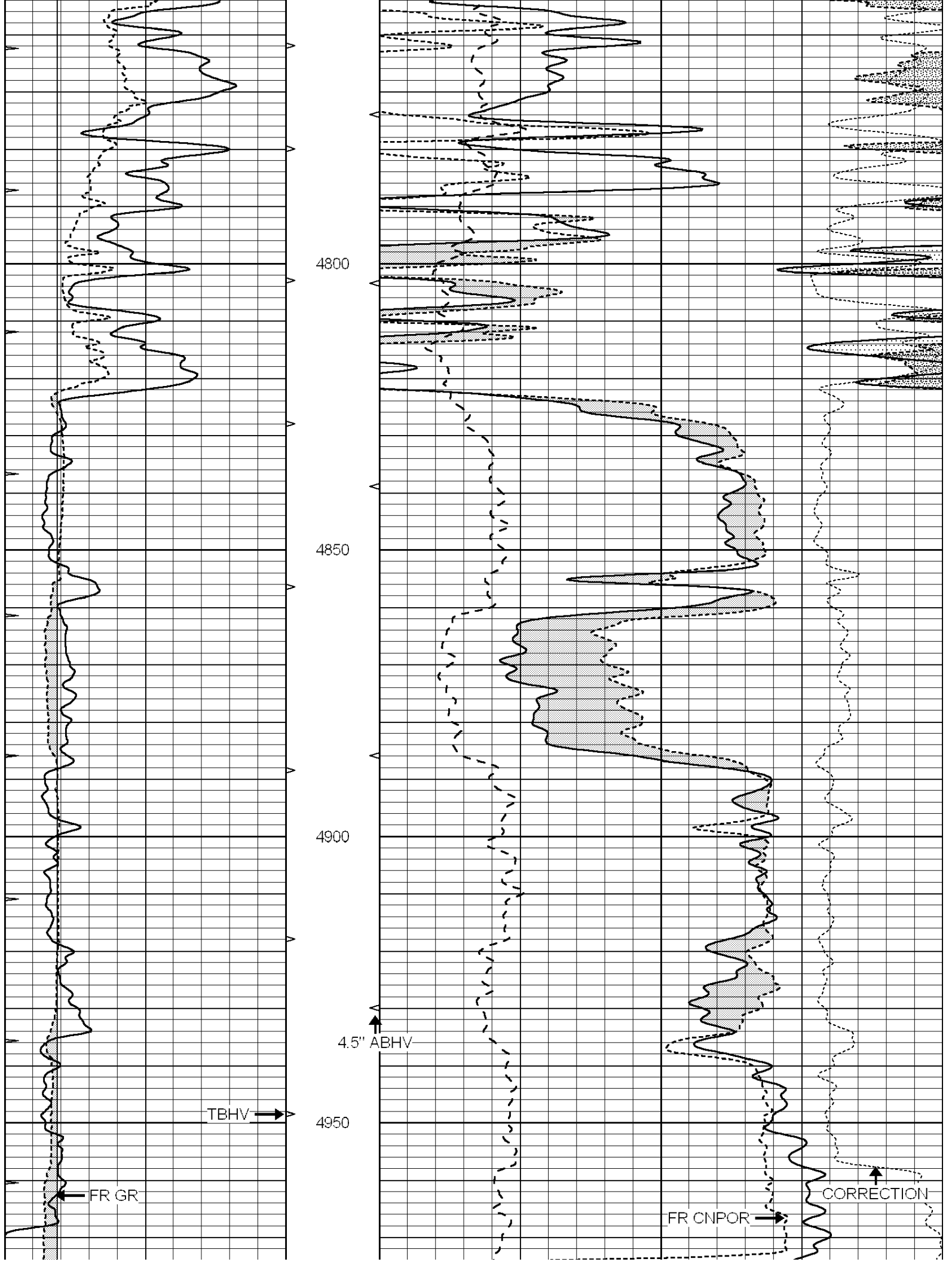


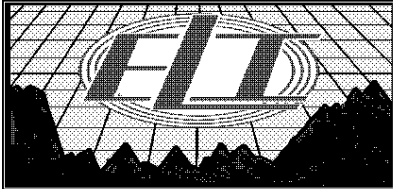
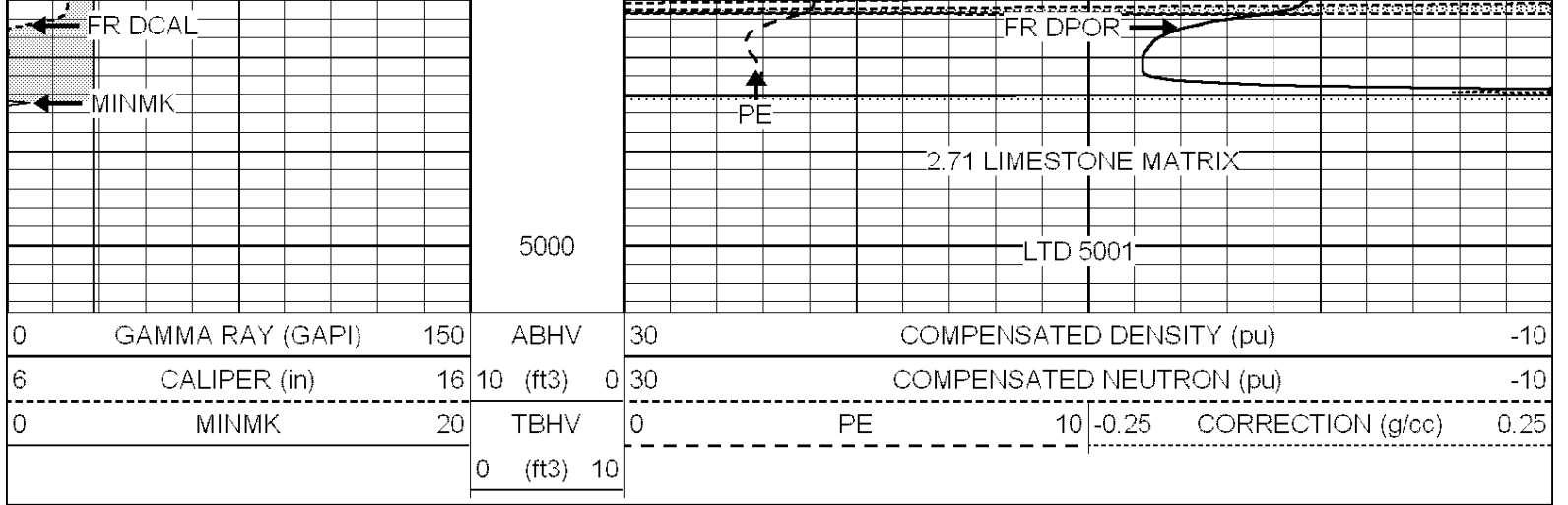








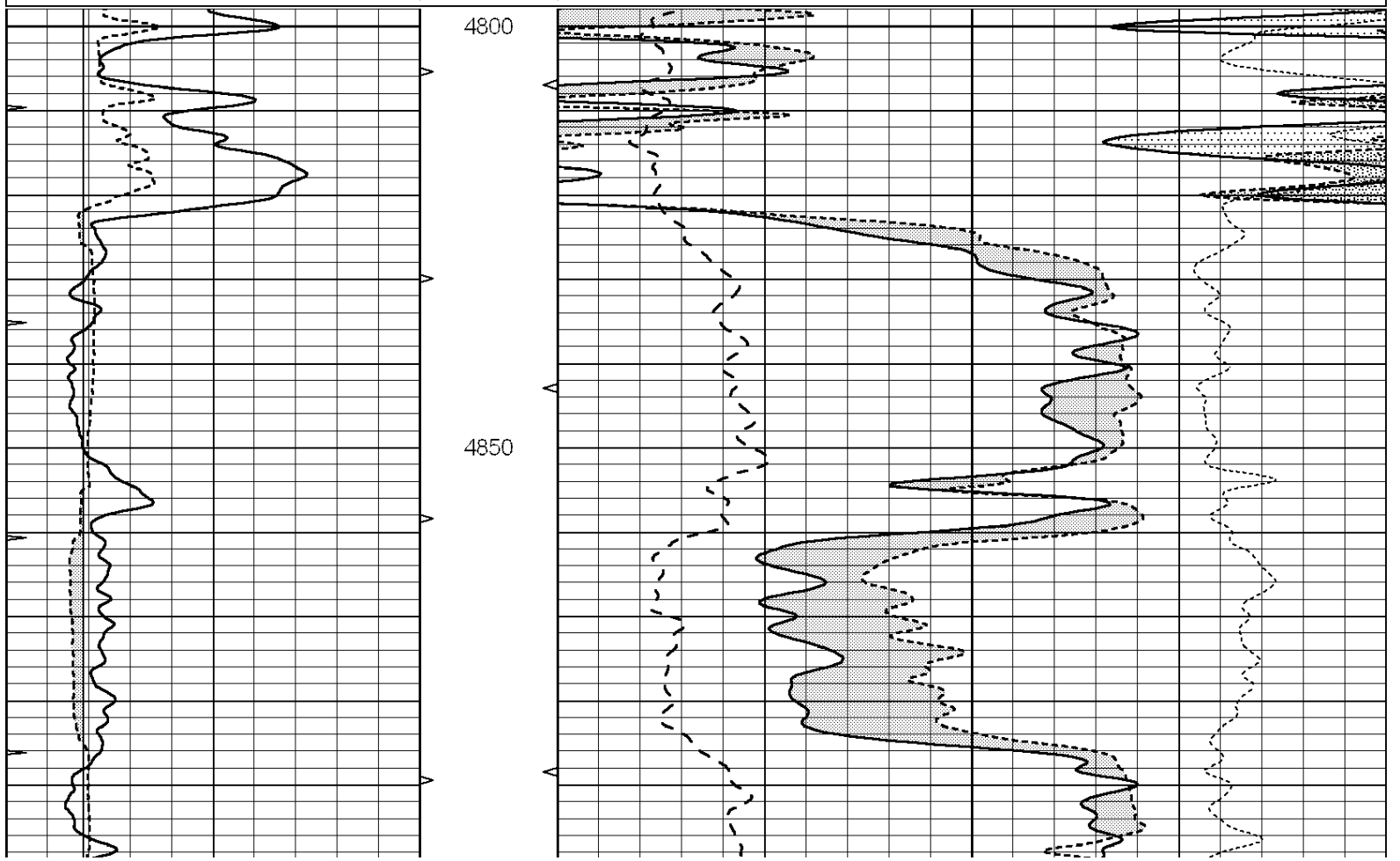


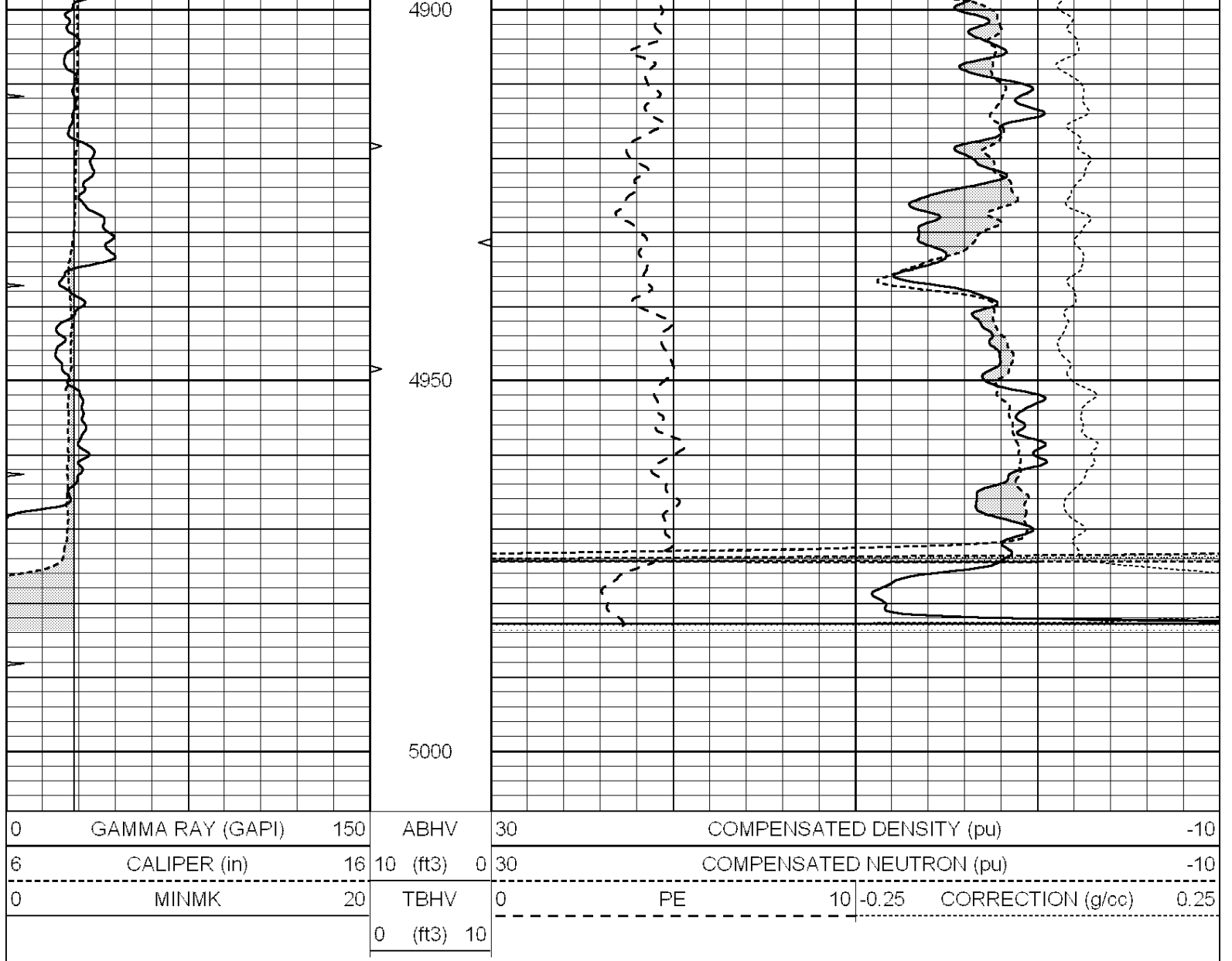


REPEAT SECTION

Database File: 1826pe.db
 Dataset Pathname: pass2.7
 Presentation Format: ldt_neu
 Dataset Creation: Mon Sep 11 00:04:06 2017
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10			
6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)	-10		
0	MINMK	20	TBHV	0	PE	10	-0.25	CORRECTION (g/cc)	0.25
			0 (ft3)	10					





Calibration Report

Database File: 1598ddn.db
 Dataset Pathname: pass4
 Dataset Creation: Wed Aug 30 02:13:00 2017 by Log SOC 120430

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
 Surface Cal Performed: Wed Aug 30 00:06:33 2017
 Downhole Cal Performed: Mon Jul 28 12:02:56 2008
 After Survey Verification Performed: Mon Jul 28 12:02:56 2008

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop	V	Air	Loop	mmho/m	m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	620.000	0.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-44.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	mmho-m		

After Survey Verification								
	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		

Litho Density Calibration Report
Serial: 002 Model: PRB

Master Calibration		Performed Mon Aug 21 11:27:42 2017				
	Background	Magnesium	Aluminum	Sandstone		
Window 1	837.1	10632.5	2945.1	12110.1	cps	
Window 2	772.0	9117.4	2570.1	10197.3	cps	
Window 3	631.7	4669.0	1481.9	5042.9	cps	
Window 4	187.0	187.5	185.9	189.9	cps	
Long Space	0.0	8345.4	1798.1	9425.3	cps	
Short Space	1.1	1927.9	1285.9	2050.2	cps	
Rho		1.7100	2.5960	1.3800	g/cc	
Pe		0.0000	2.5700	1.5500		
Rib Angle	: 45.2	Rib Slope	: 1.008	Density/Spine Ratio	: 0.558	
Spine Angle	: 75.2	Spine Slope	: 3.790	Spine Intercept	: -19.6	

Before Survey Verification		Performed Wed Dec 31 18:00:00 1969				
Window 1	0.0	0.0	0.0	0.0	cps	
Window 2	0.0	0.0	0.0	0.0	cps	
Window 3	0.0	0.0	0.0	0.0	cps	
Window 4	0.0	0.0	0.0	0.0	cps	
Long Space	0.0	0.0	0.0	0.0	cps	
Short Space	0.0	0.0	0.0	0.0	cps	
Measured Rho		0.0000	0.0000	0.0000	g/cc	
Measured Correction		0.0000	0.0000	0.0000	g/cc	
Measured Pe			0.0000	0.0000		

After Survey Verification		Performed Wed Dec 31 18:00:00 1969				
Window 1	0.0	0.0	0.0	0.0	cps	
Window 2	0.0	0.0	0.0	0.0	cps	
Window 3	0.0	0.0	0.0	0.0	cps	
Window 4	0.0	0.0	0.0	0.0	cps	
Long Space	0.0	0.0	0.0	0.0	cps	
Short Space	0.0	0.0	0.0	0.0	cps	
Measured Rho		0.0000	0.0000	0.0000	g/cc	
Measured Correction		0.0000	0.0000	0.0000	g/cc	
Measured Pe			0.0000	0.0000		

Compensated Neutron Calibration Report

Serial Number: 070808
Tool Model: Probe

PRE-SURVEY VERIFICATION

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

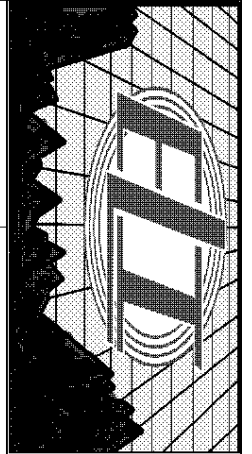
POST-SURVEY VERIFICATION

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

Gamma Ray Calibration Report

Serial Number: 070558
Tool Model: OPEN_GR
Performed: Wed May 31 00:09:32 2017

Calibrator Value: 1.0 GAPI
Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps
Sensitivity: 0.2800 GAPI/cps



SONIC LOG

Company LARIO OIL & GAS COMPANY
 Well KNOBBE #1-4
 Field WILDCAT
 County WICHITA
 State KANSAS

Company LARIO OIL & GAS COMPANY
 Well KNOBBE #1-4
 Field WILDCAT
 County WICHITA
 State KANSAS

Location: API # : 15-203-20322-0000
 1290' FNL & 1775' FEL
 SW - SE - NW - NE
 SEC 4 TWP 19S RGE 37W
 Permanent Datum GROUND LEVEL Elevation 3280
 Log Measured From KELLY BUSHING 10' A.G.L.
 Drilling Measured From KELLY BUSHING
 Other Services
 CDL/CNL/PE
 DIL/MEL
 Elevation
 K.B. 3290
 D.F. 3288
 G.L. 3280

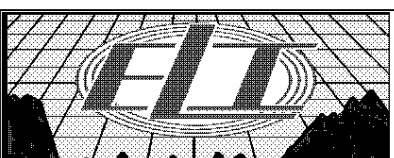
Date	9/11/17		
Run Number	TWO		
Depth Driller	5000		
Depth Logger	5001		
Bottom Logged Interval	4993		
Top Log Interval	300		
Casing Driller	8 5/8"@360'		
Casing Logger	360		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 6,200 PPM	
Density / Viscosity	8.9/53		
pH / Fluid Loss	10.5/6.4		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.400@85F		
Rmf @ Meas. Temp	.300@85F		
Rmc @ Meas. Temp	.480@85F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.272@125F		
Time Circulation Stopped	5.5 HOURS		
Time Logger on Bottom	1:45 A.M.		
Maximum Recorded Temperature	125F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	STEVE DAVIS		

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, 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. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

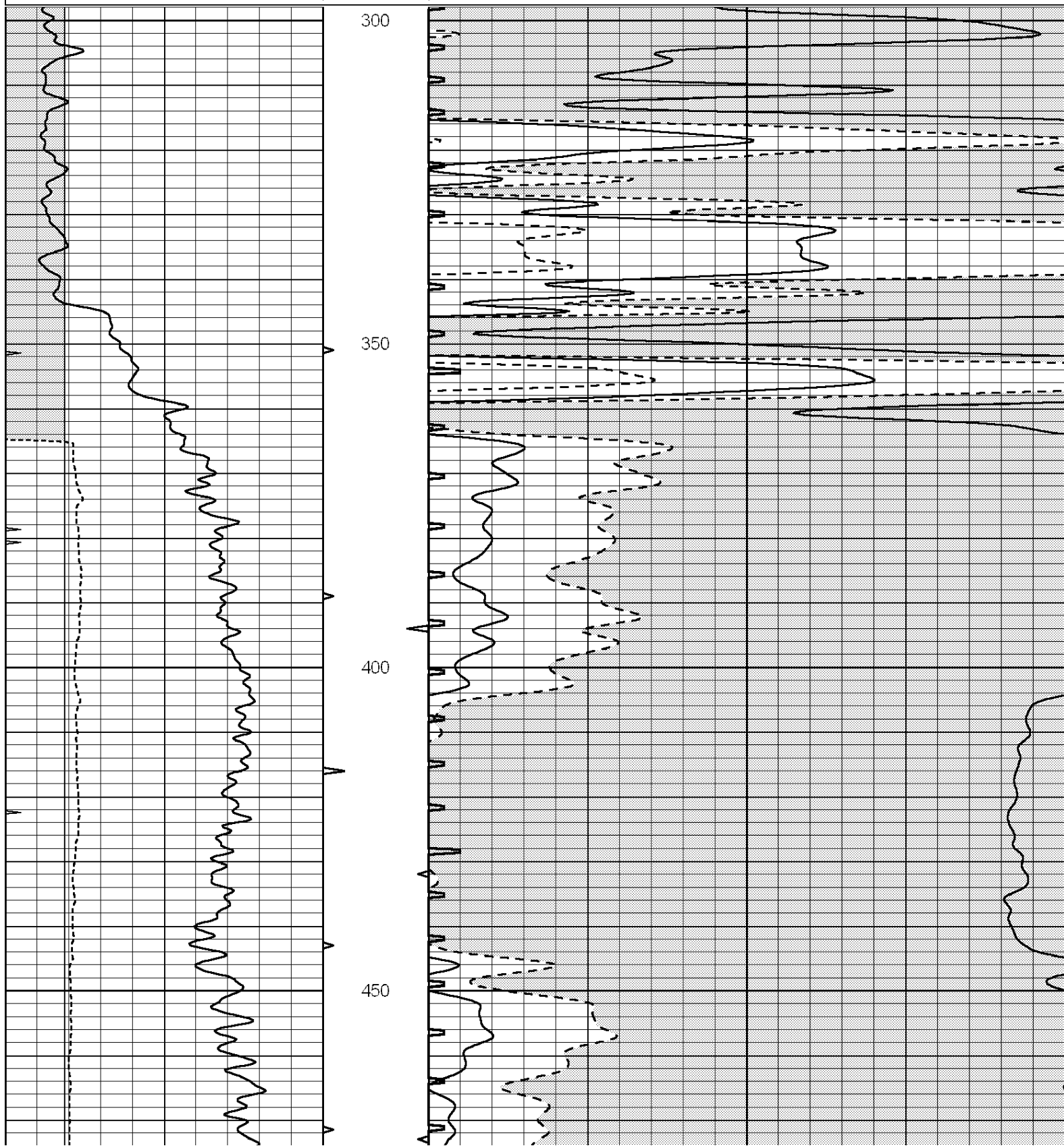
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
 DIRECTIONS
 LEOTI, KS. (4 WAY STOP) 2 1/2W. ON HWY 96 TO "RD. 10", 3 1/2S., W. INTO

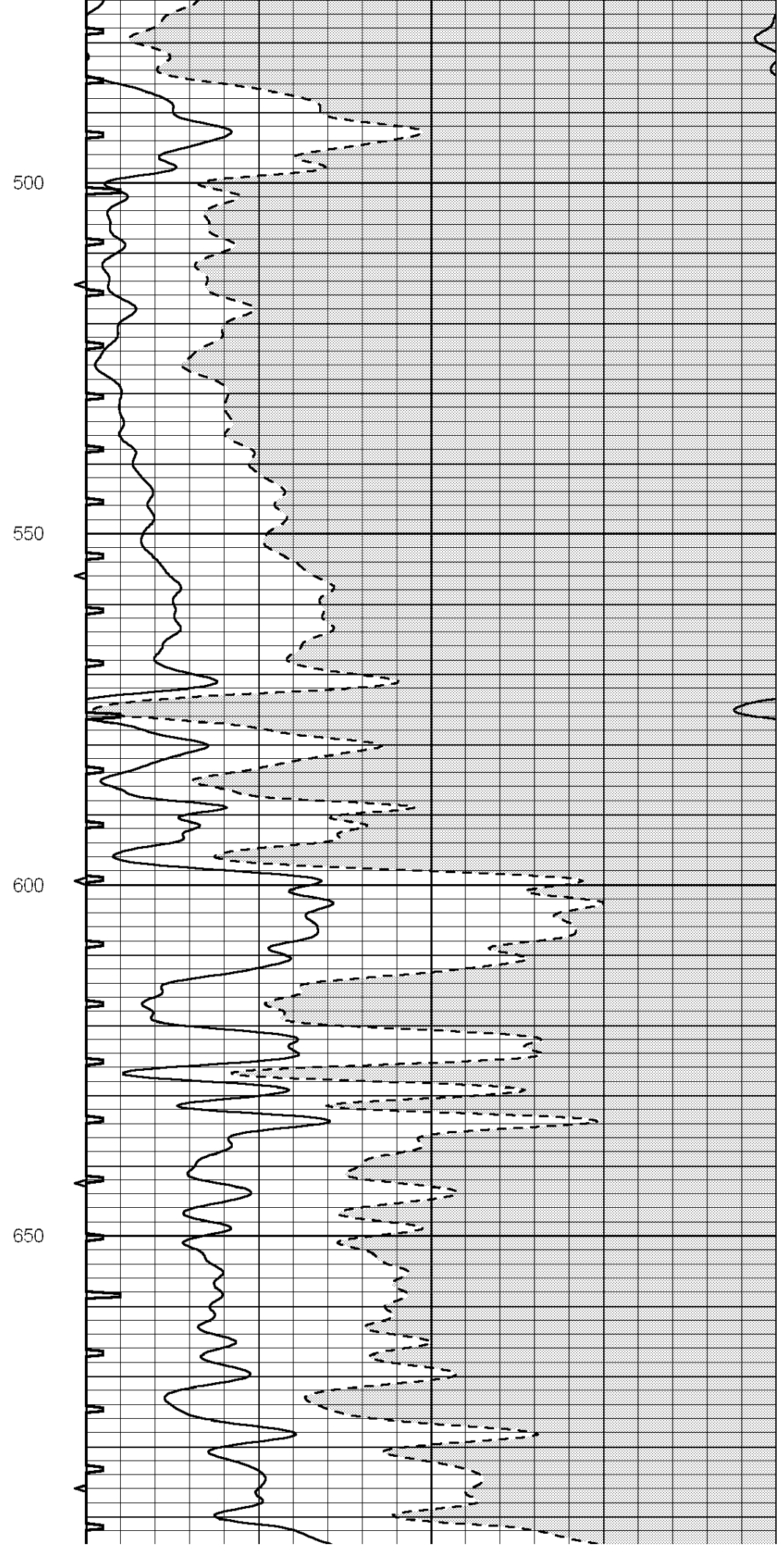
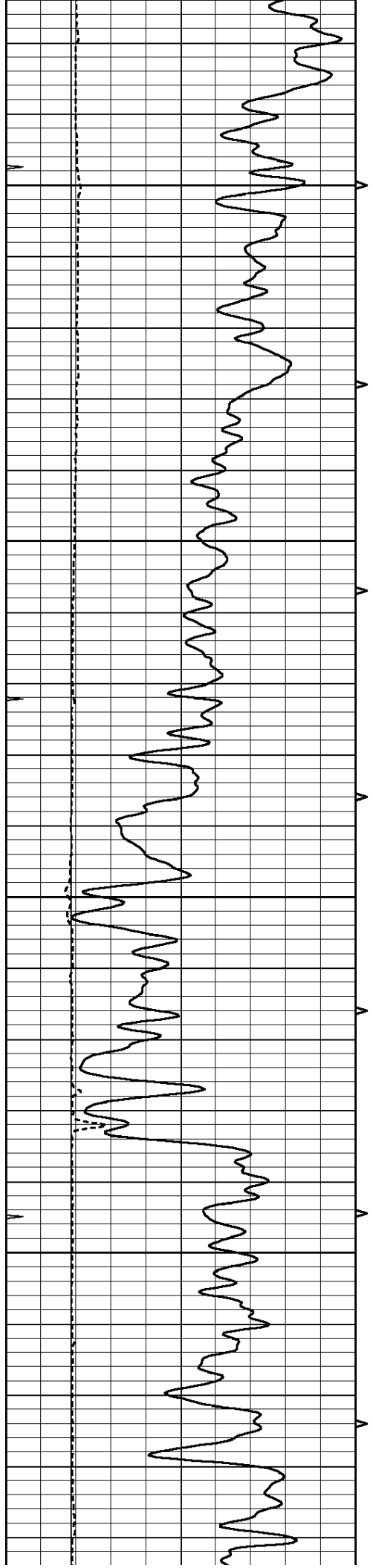


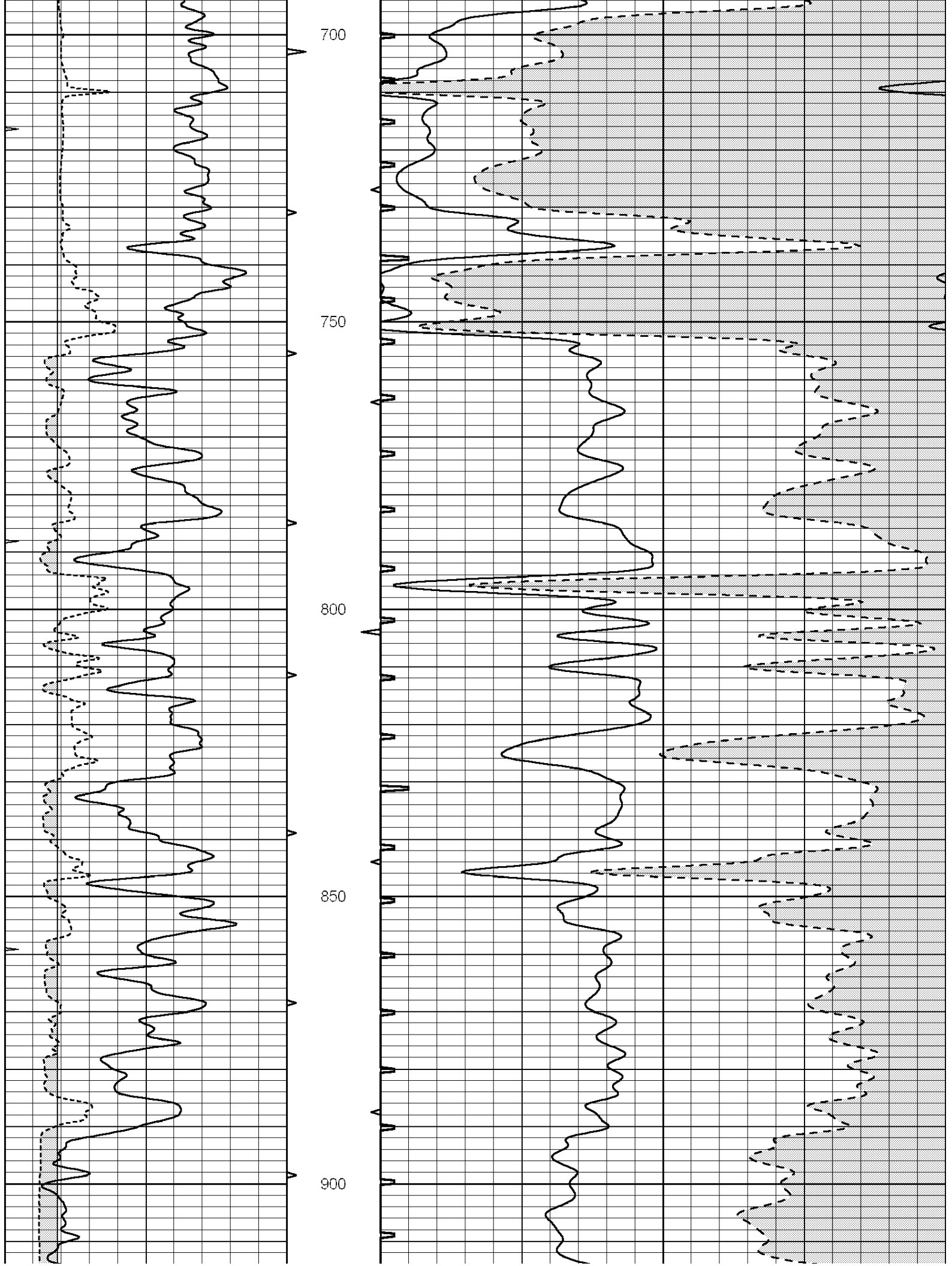
MAIN SECTION

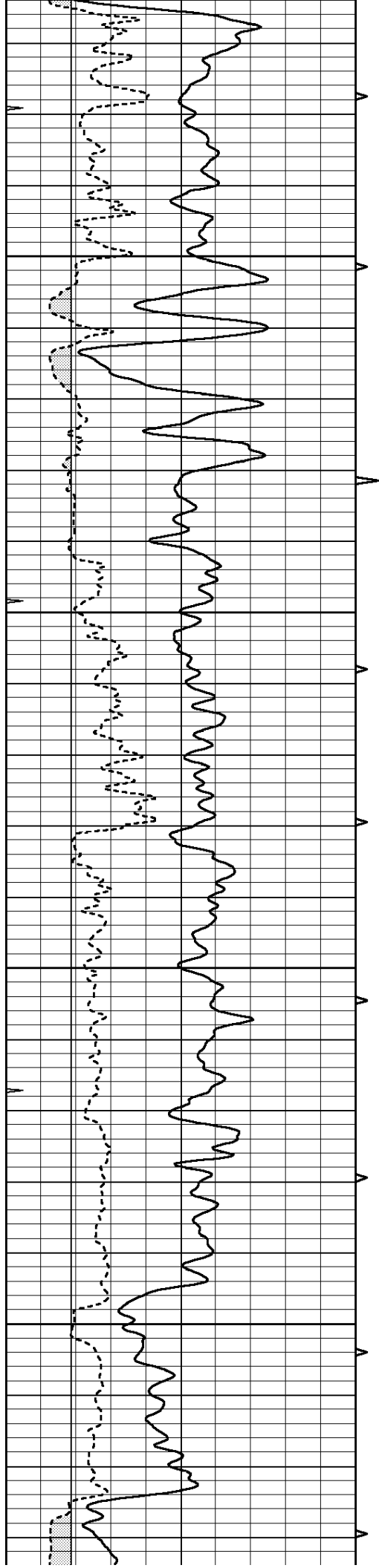
Database File: 1826pe.db
 Dataset Pathname: pass6.4
 Presentation Format: slt
 Dataset Creation: Mon Sep 11 04:07:59 2017
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	140	DELTA TIME (usec/ft)	40
6	CALIPER (in)	16	10 (ft3)	0	30	SONIC POROSITY (pu)
0	MINMK	20	TBHV	0	ITT (msec)	20
			0 (ft3)	10		







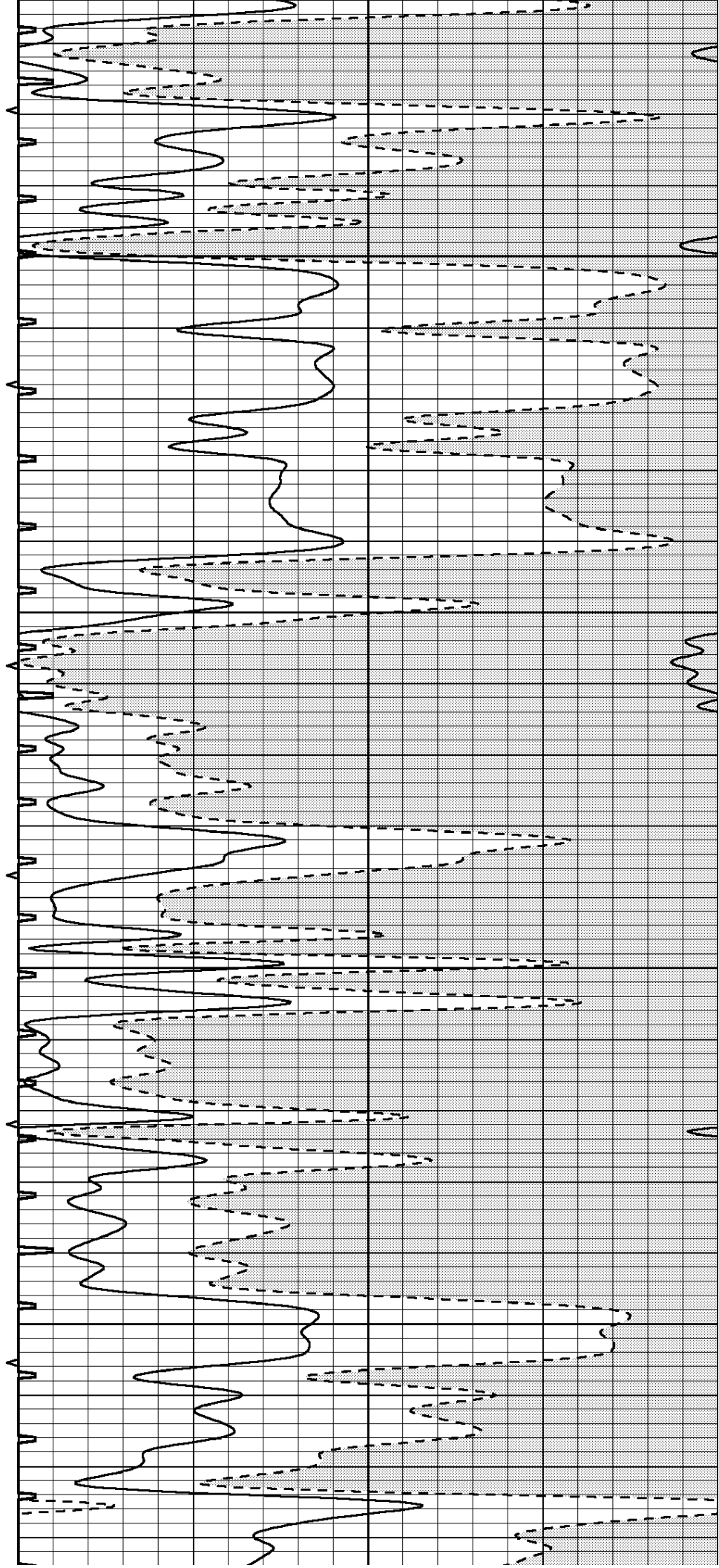


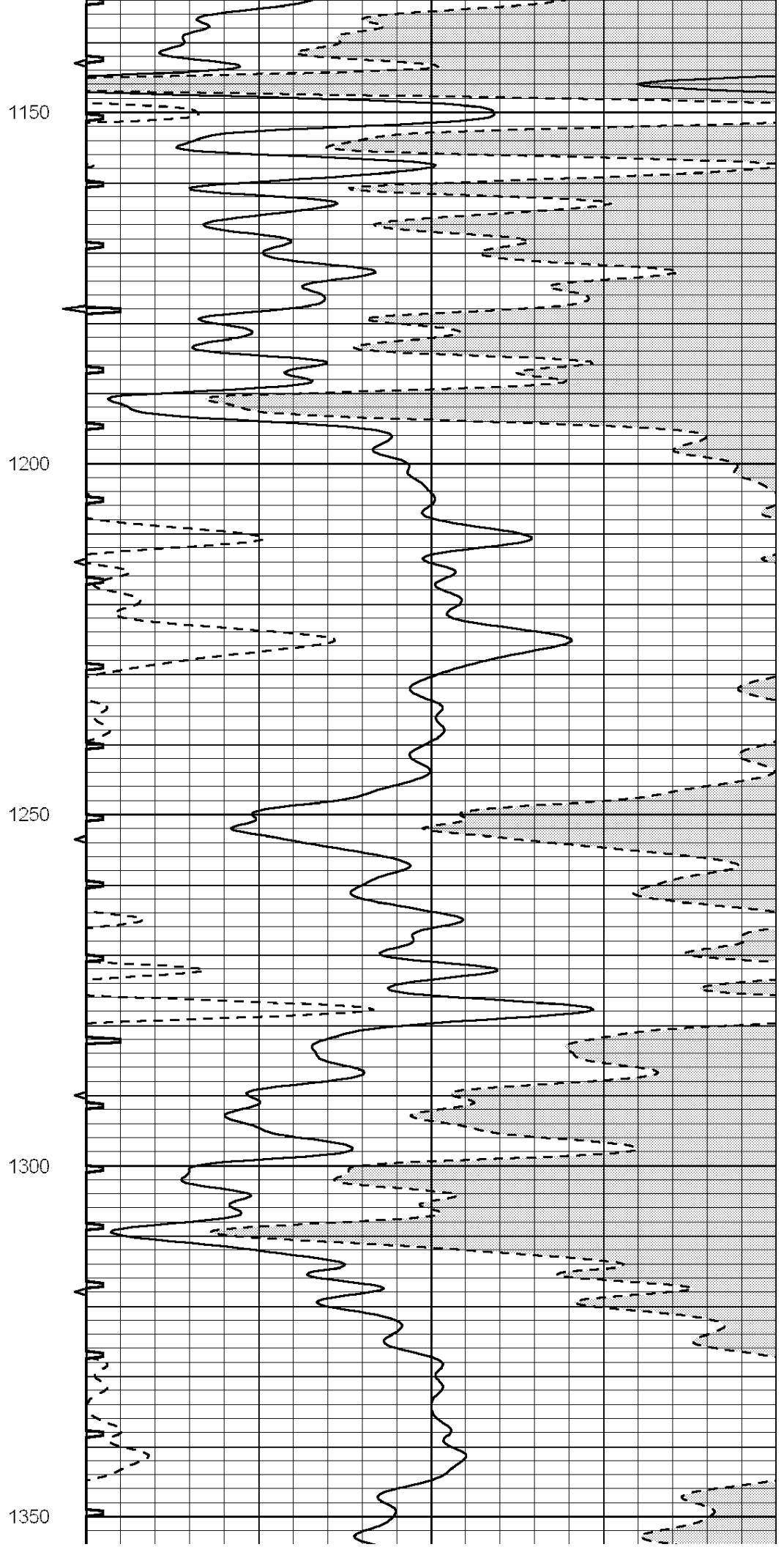
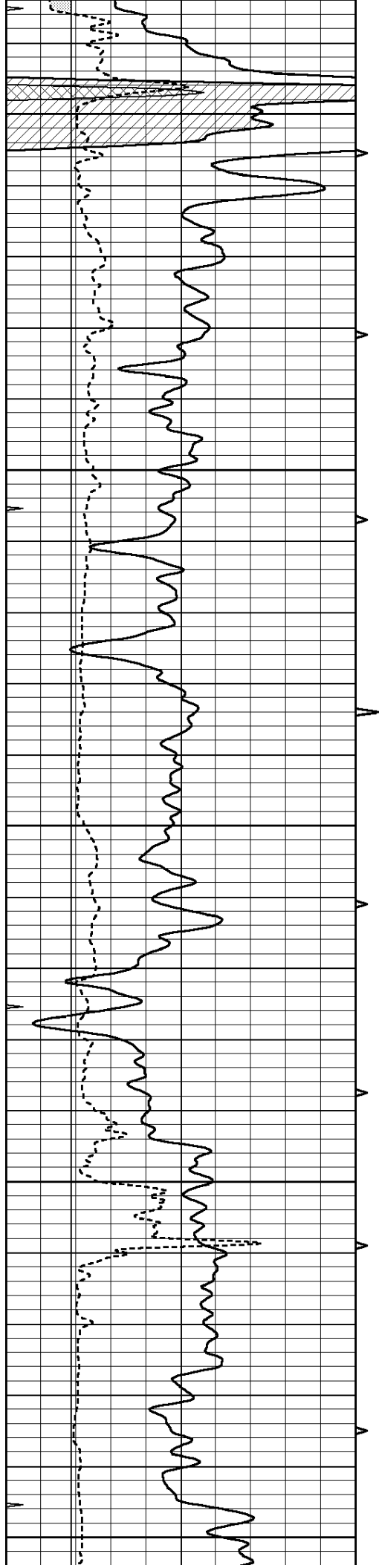
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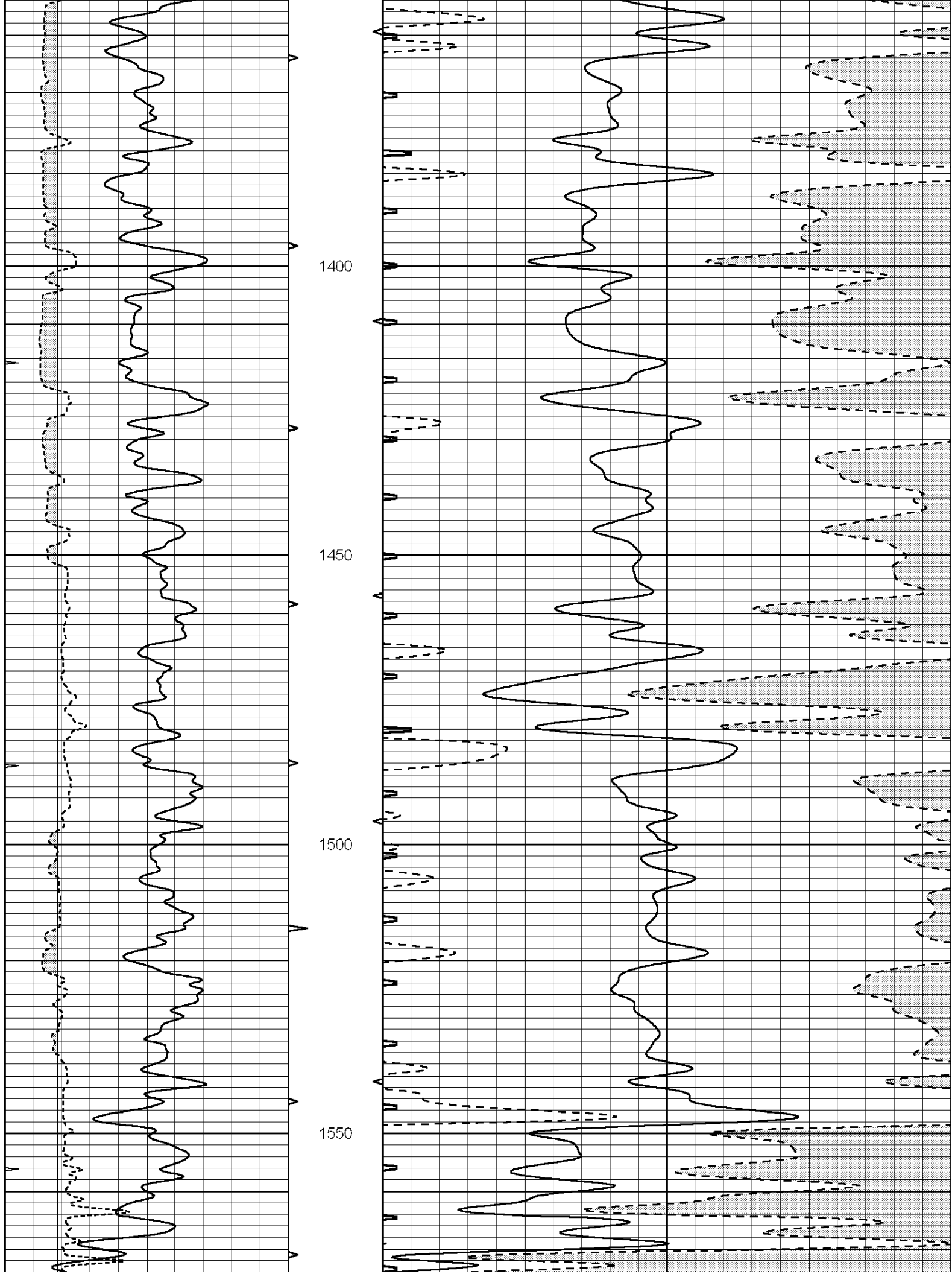
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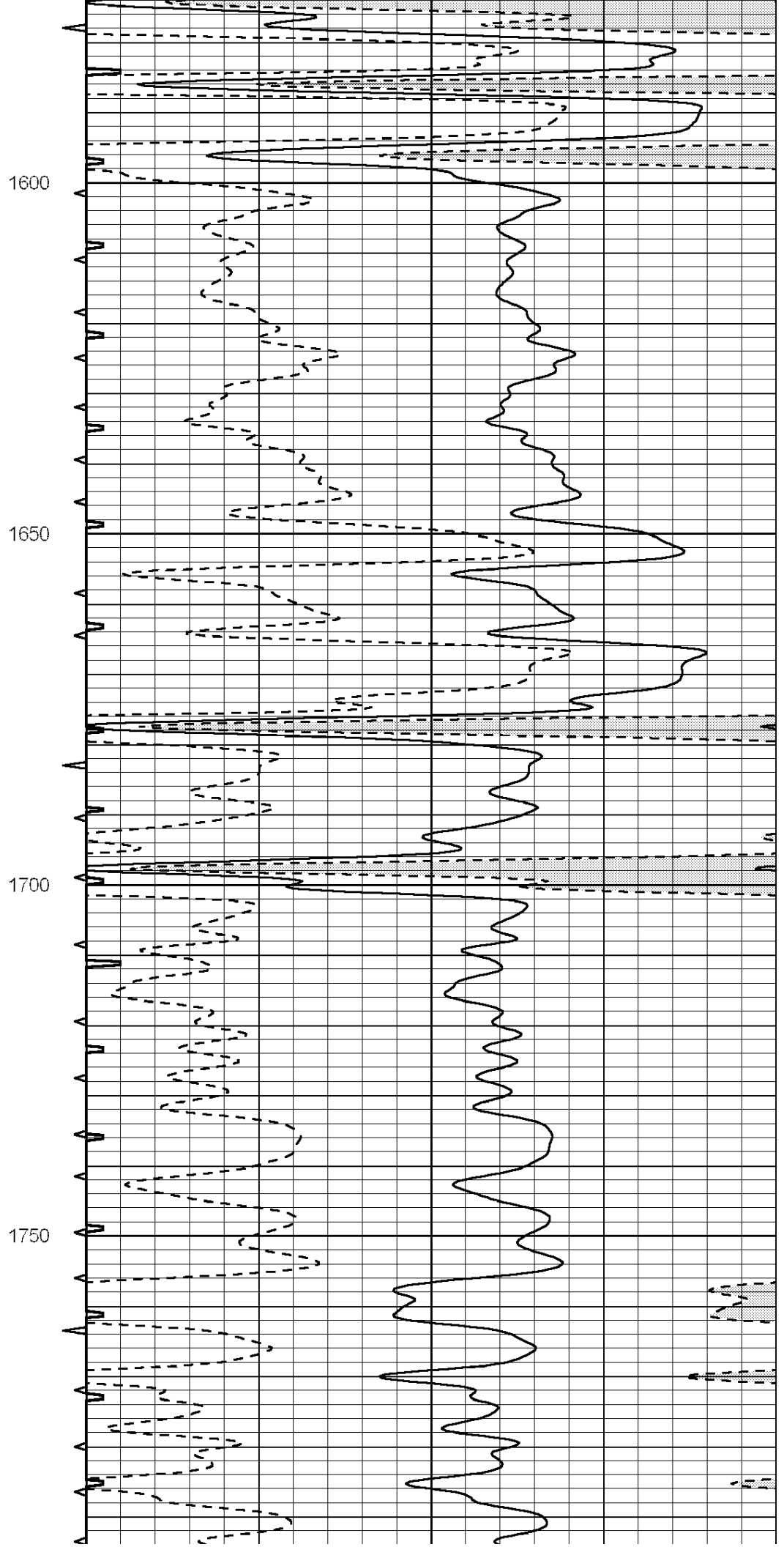
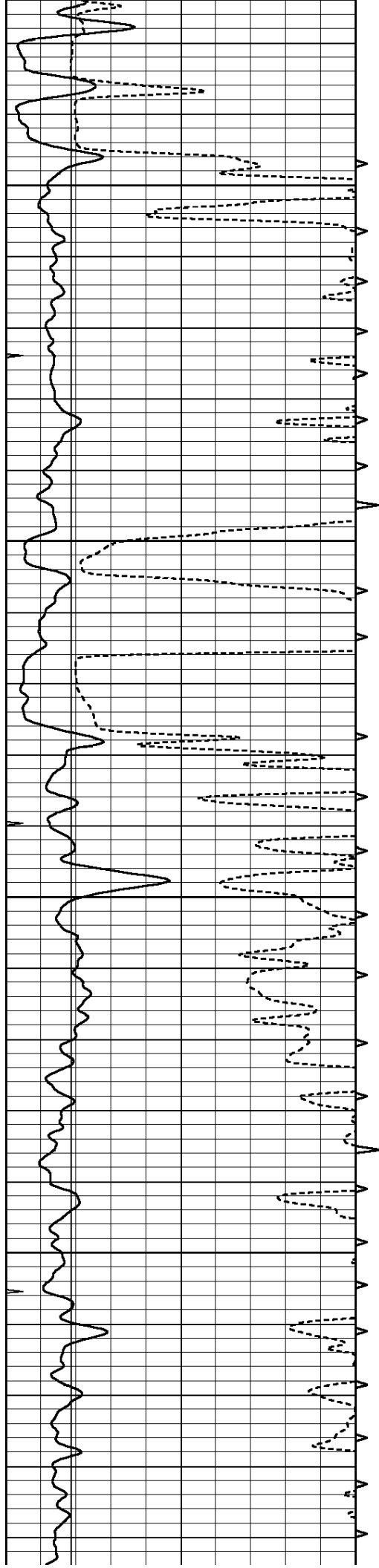
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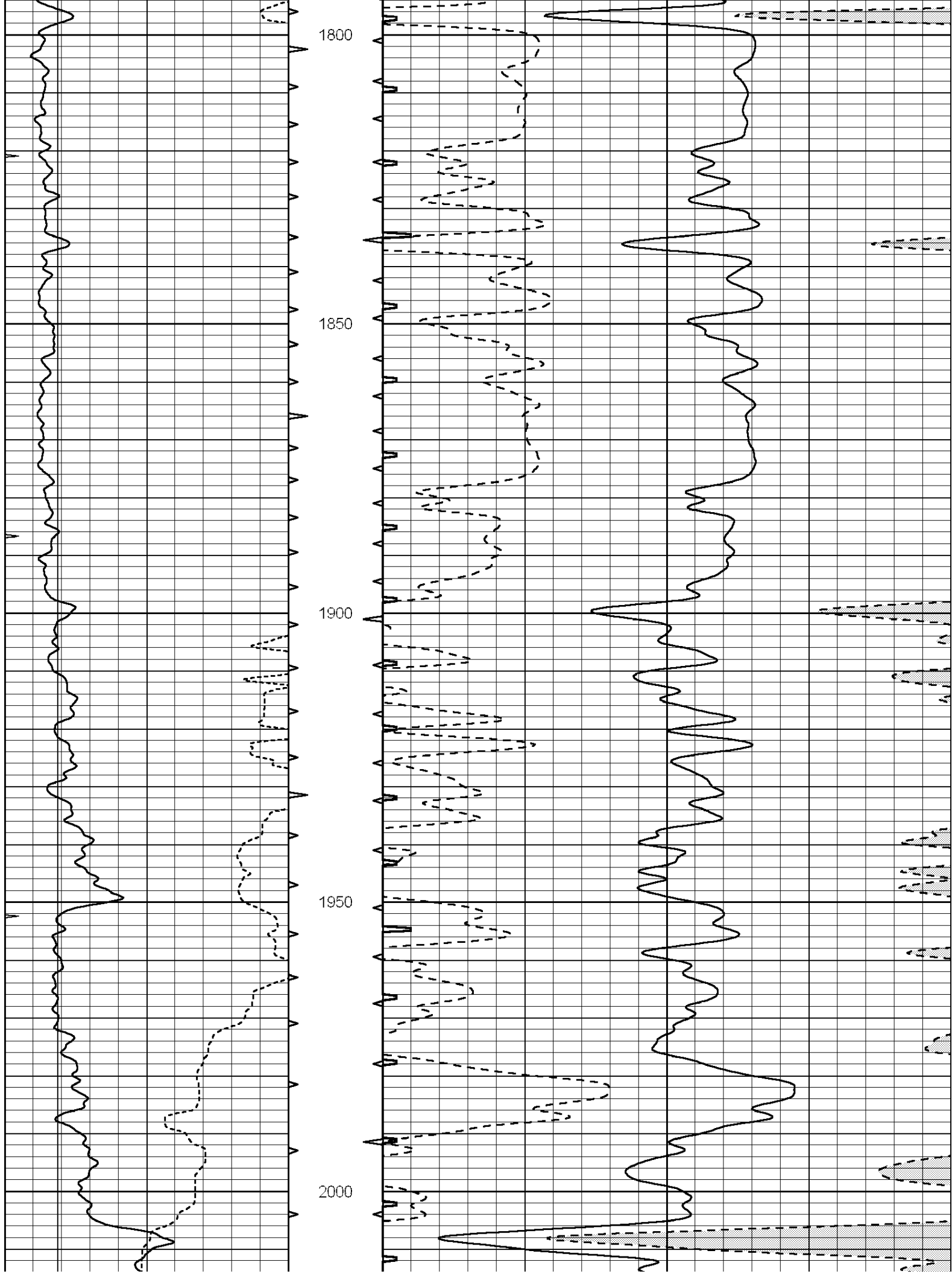
1100

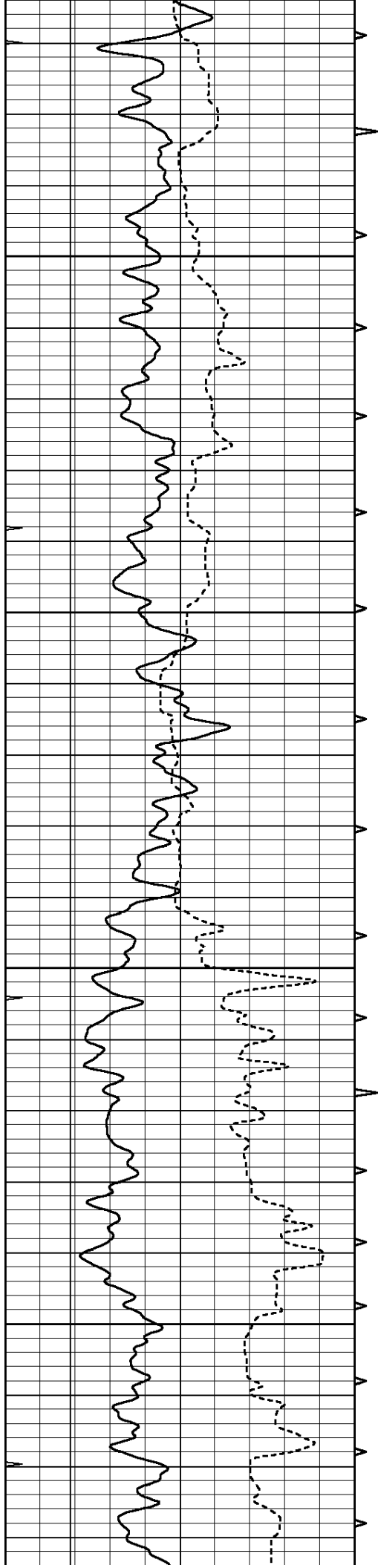










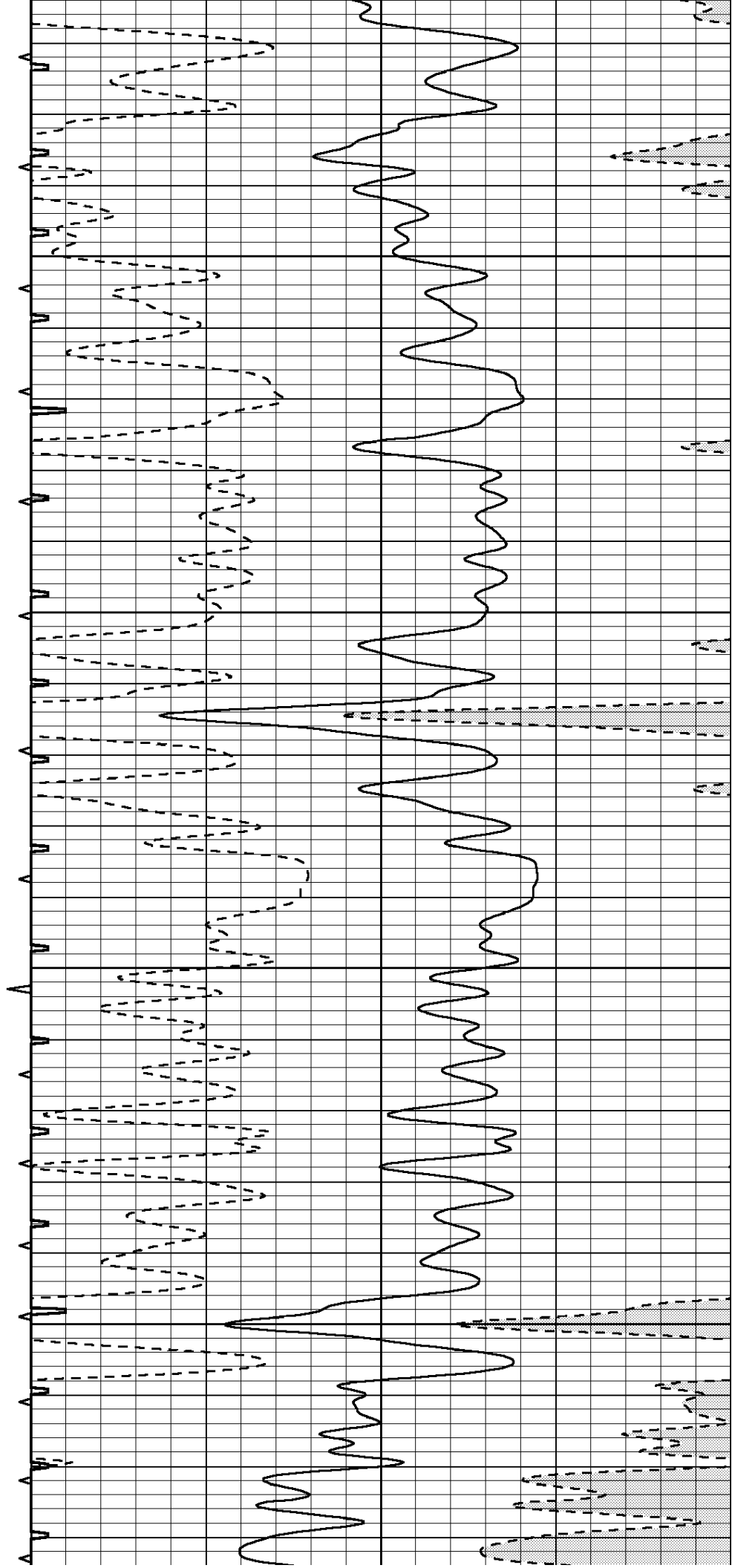


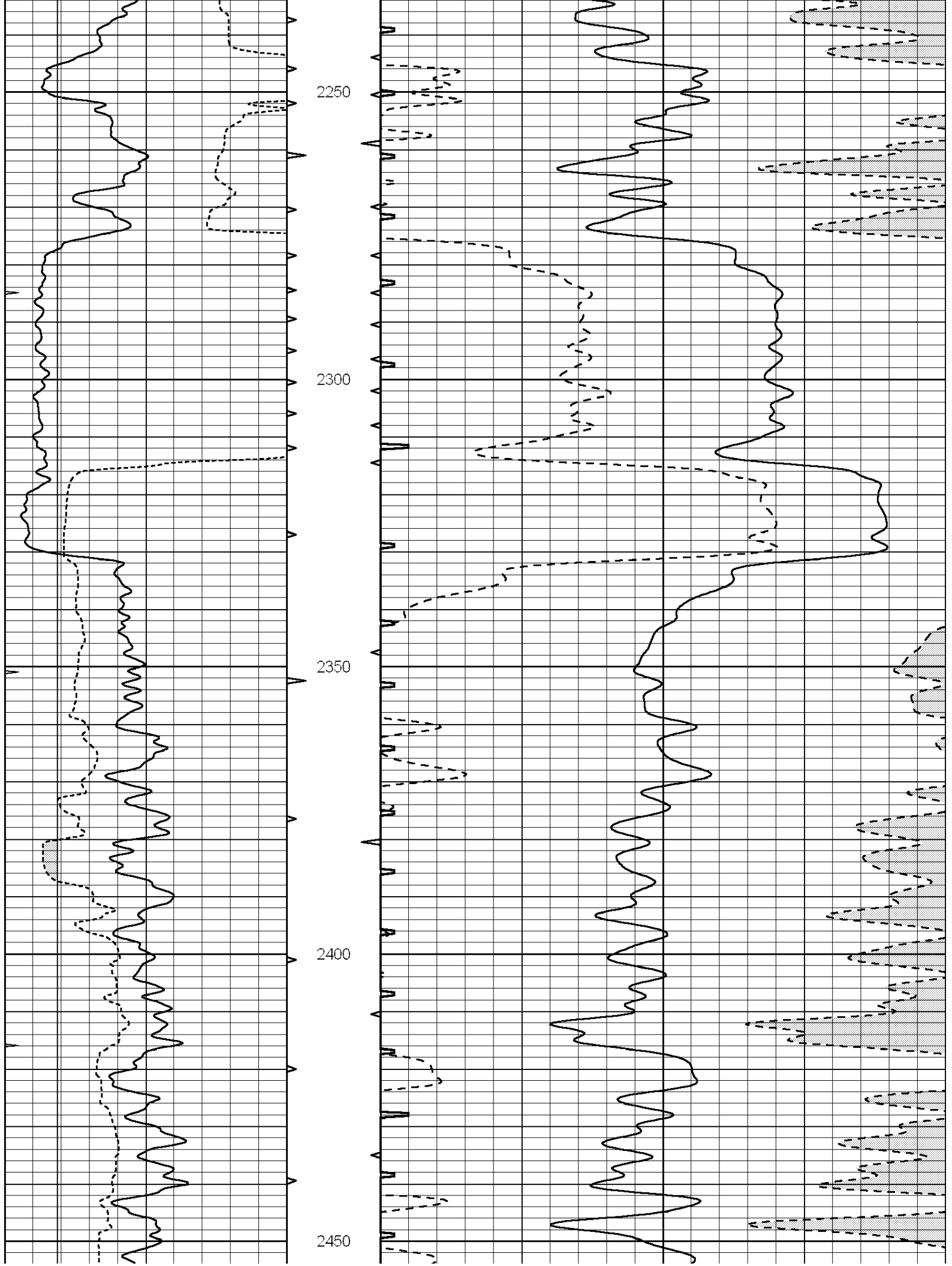
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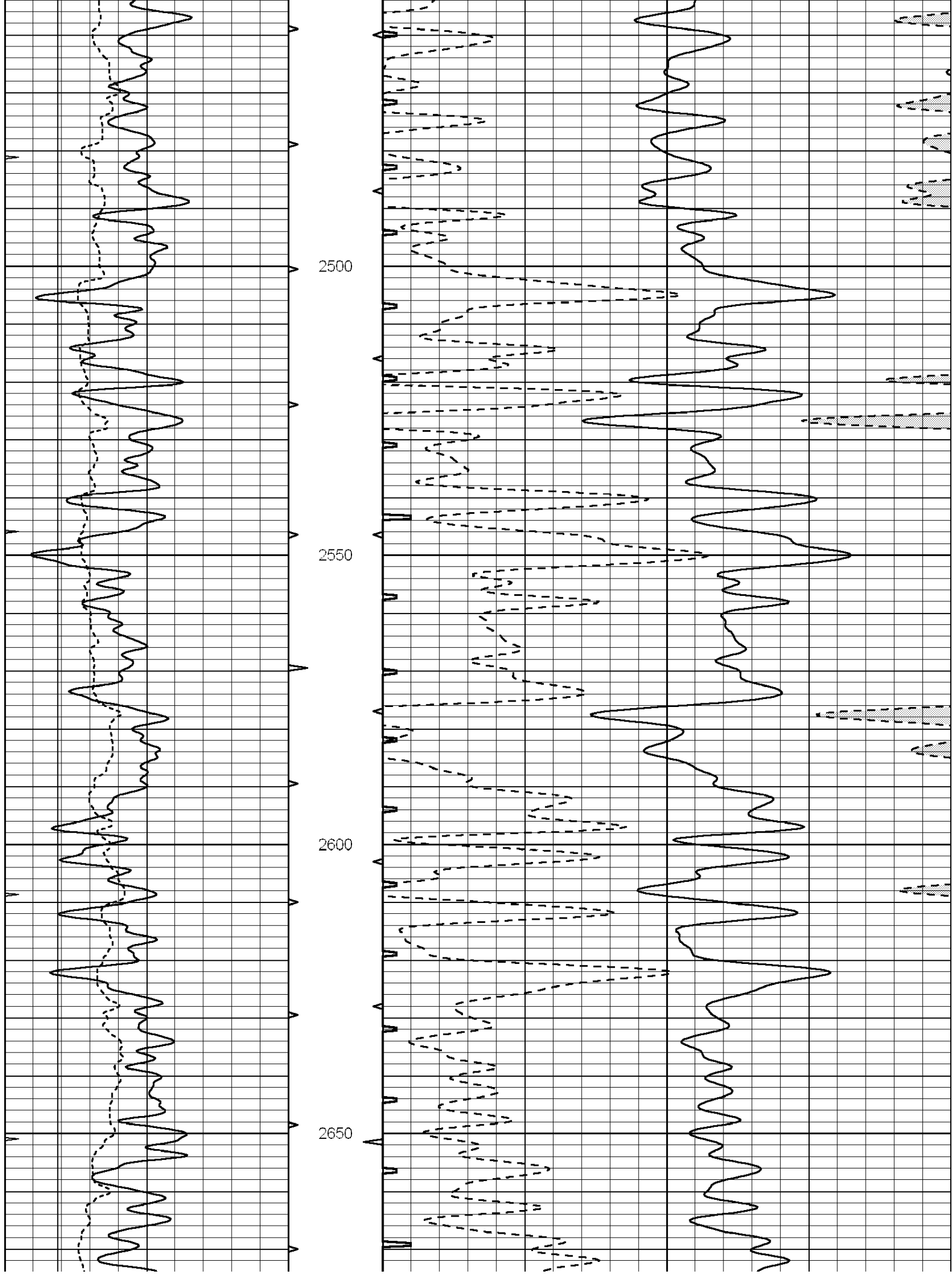
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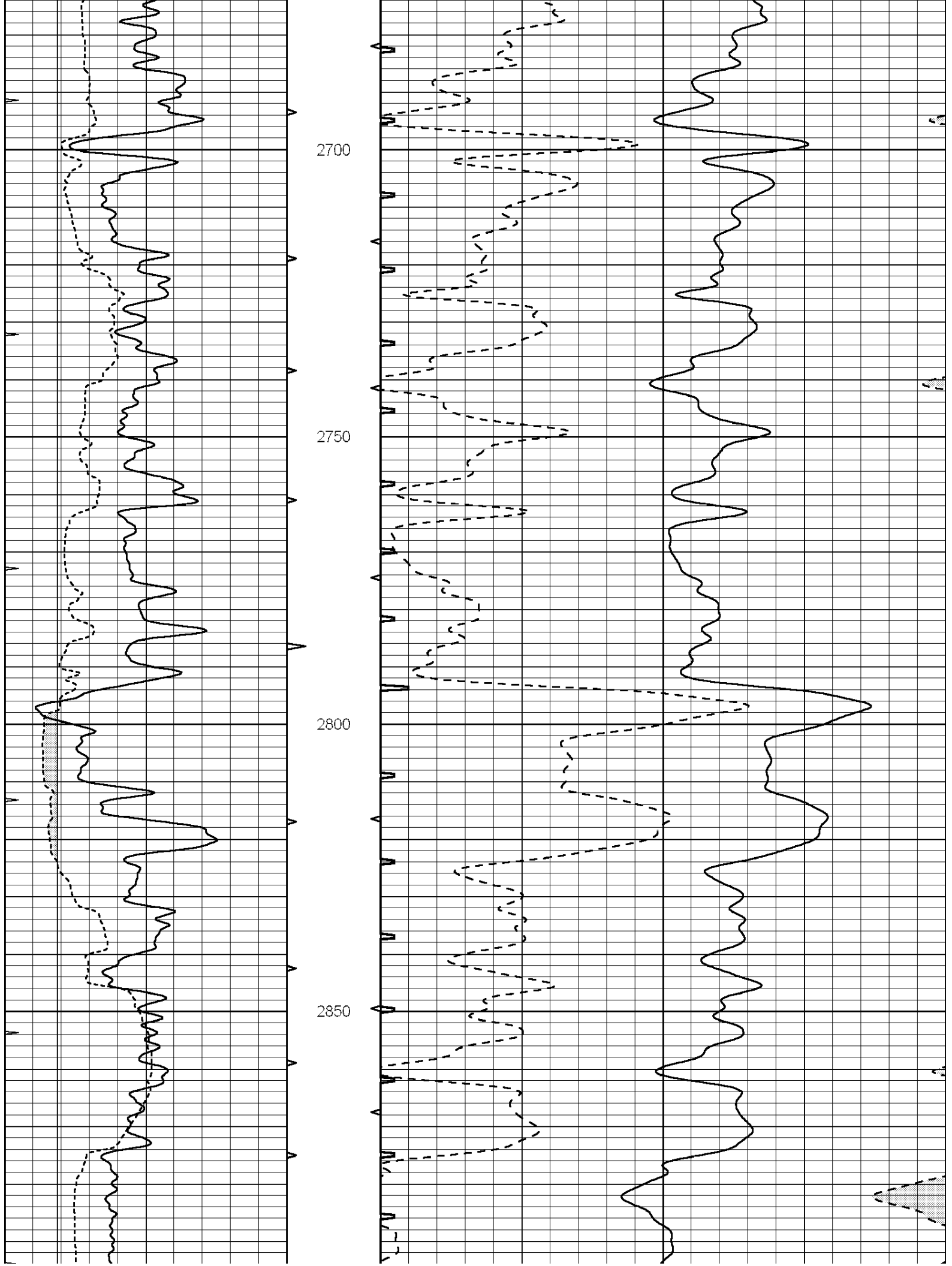
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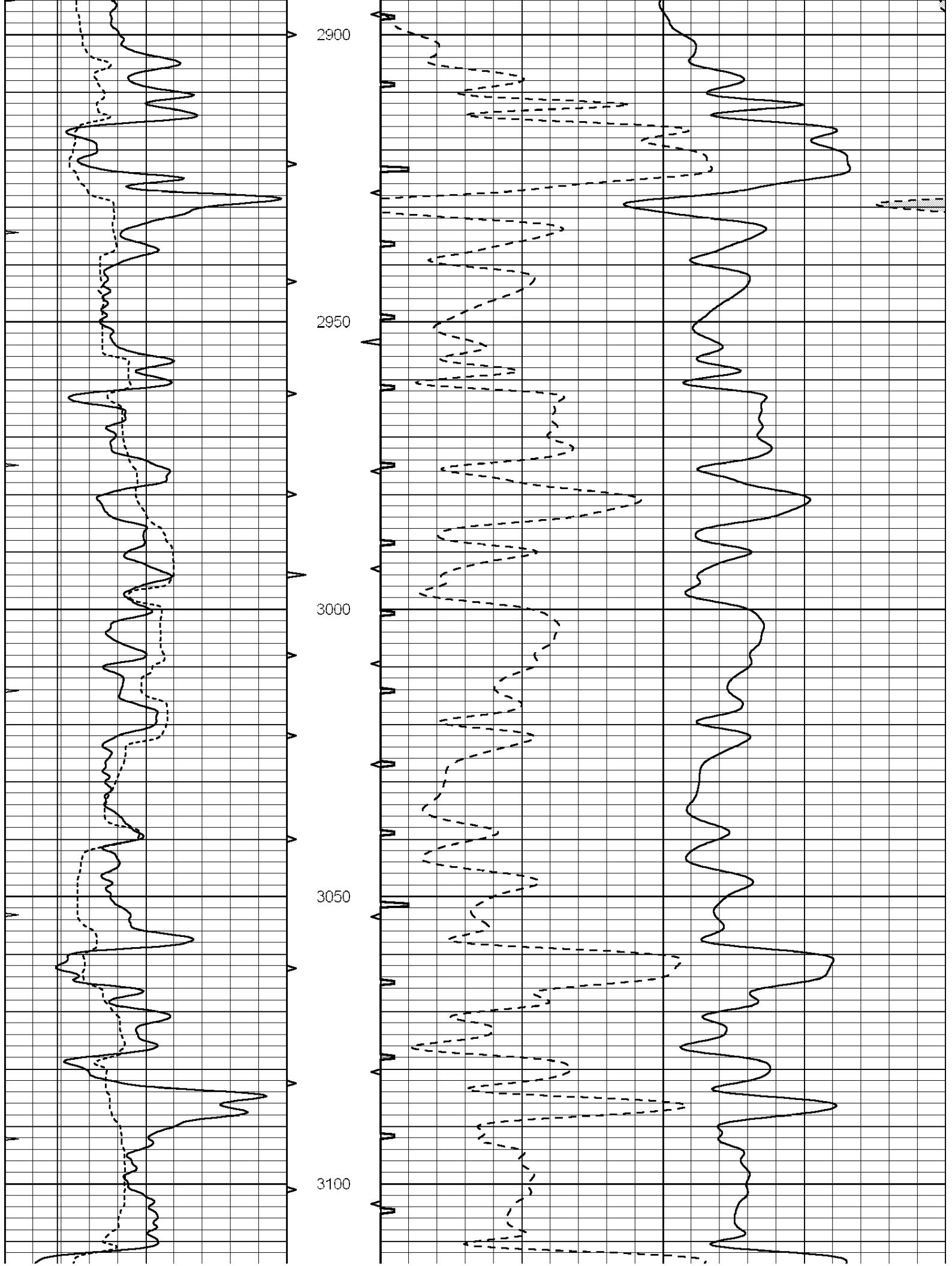
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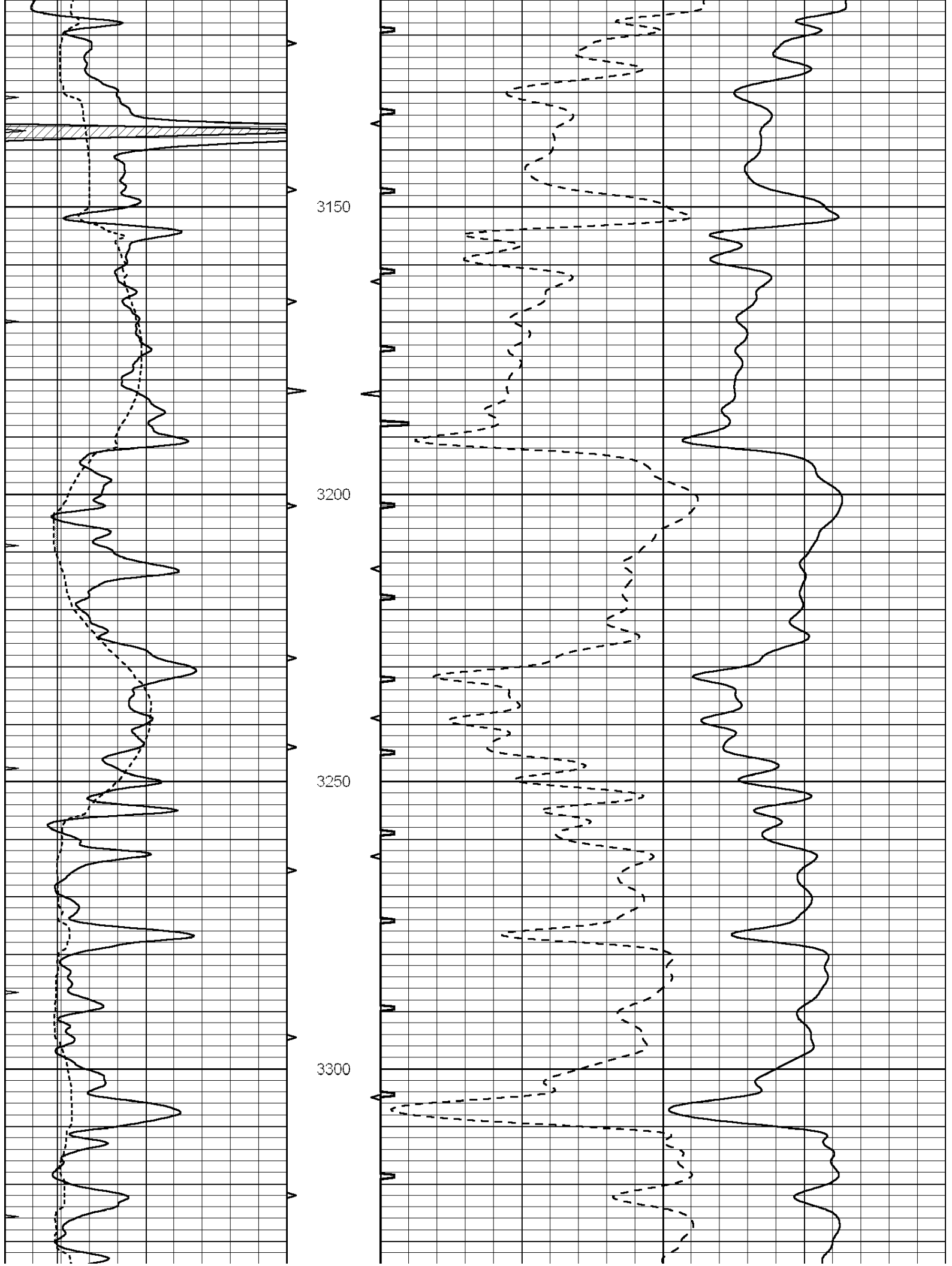


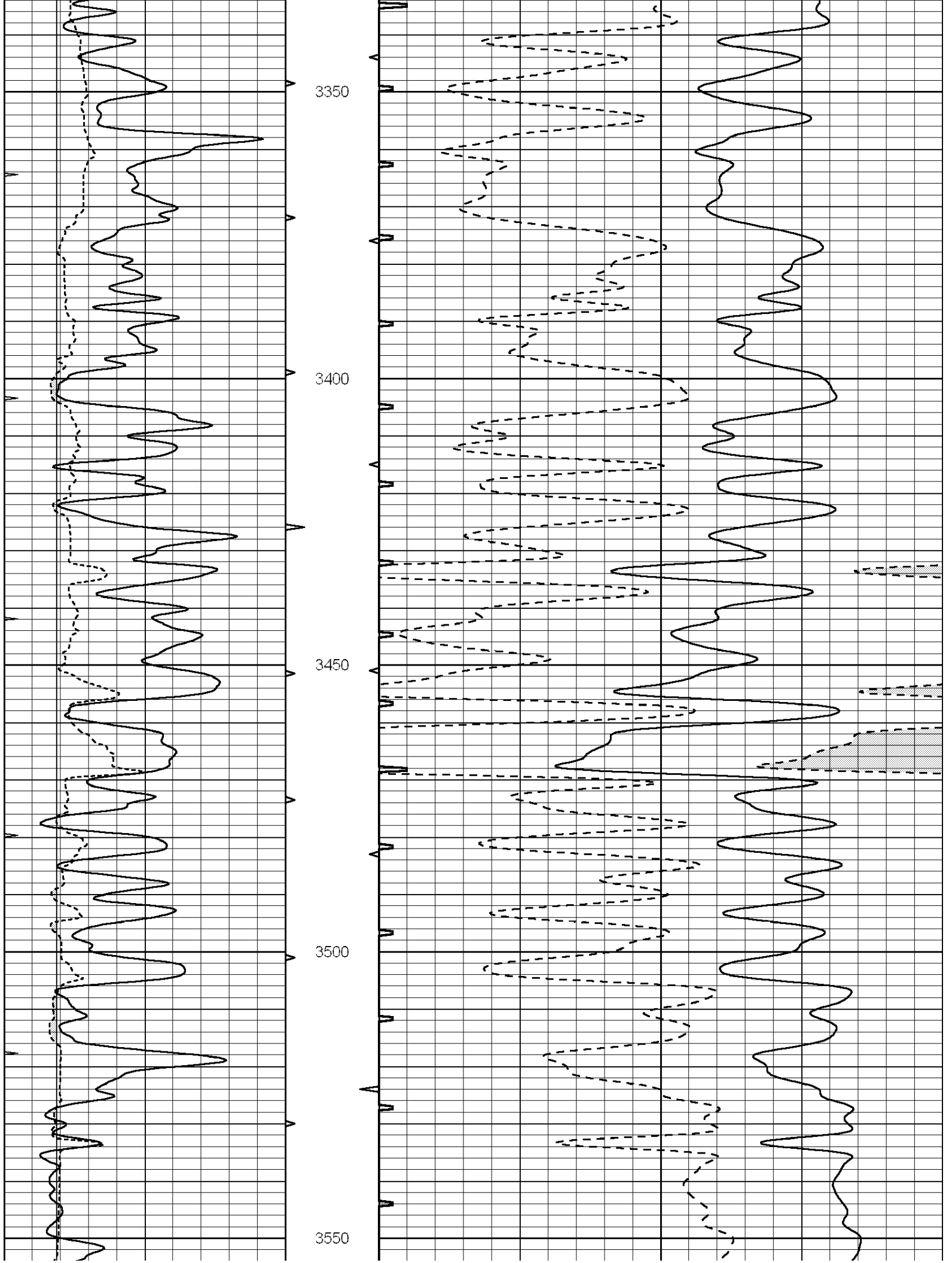


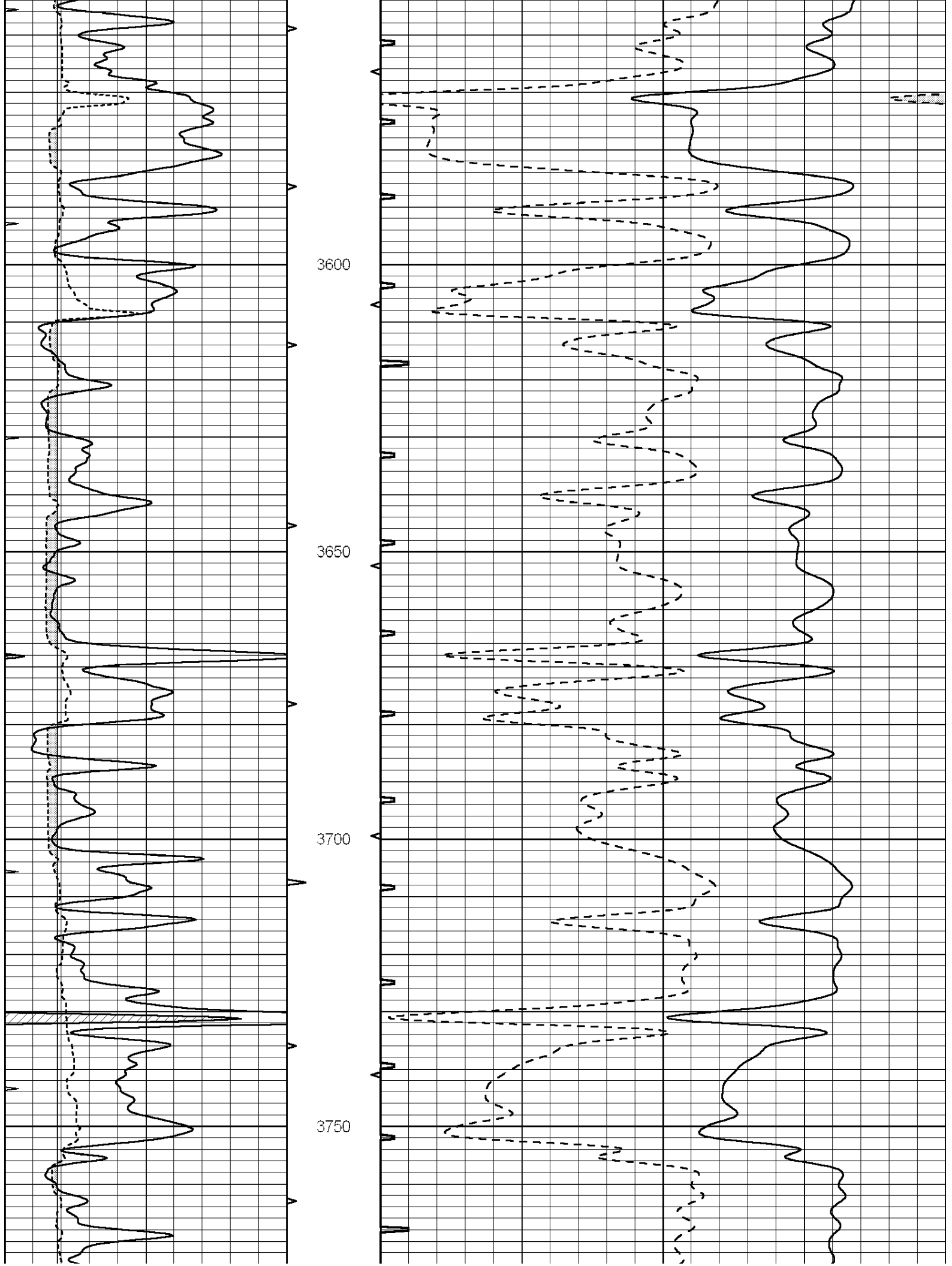


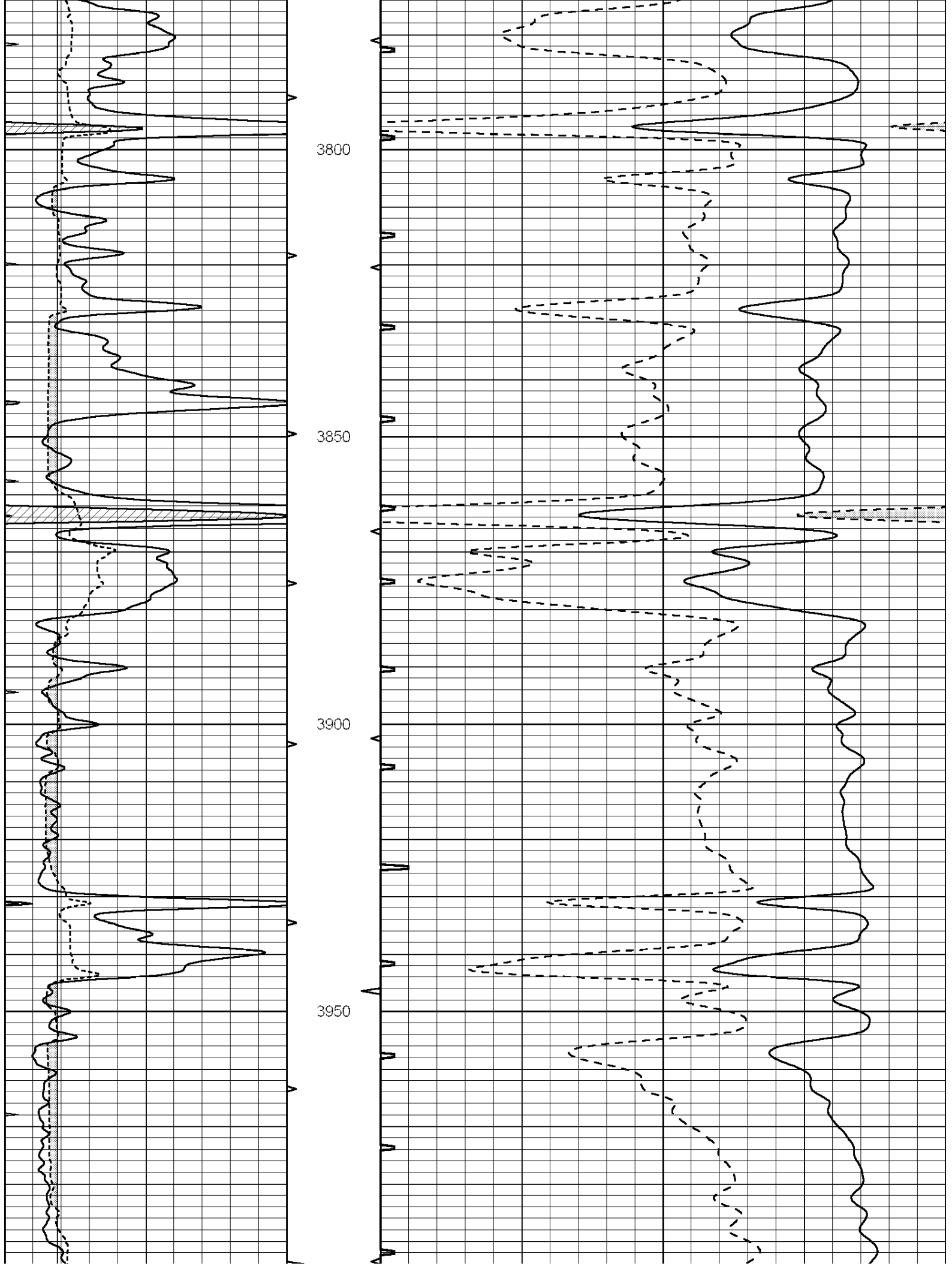


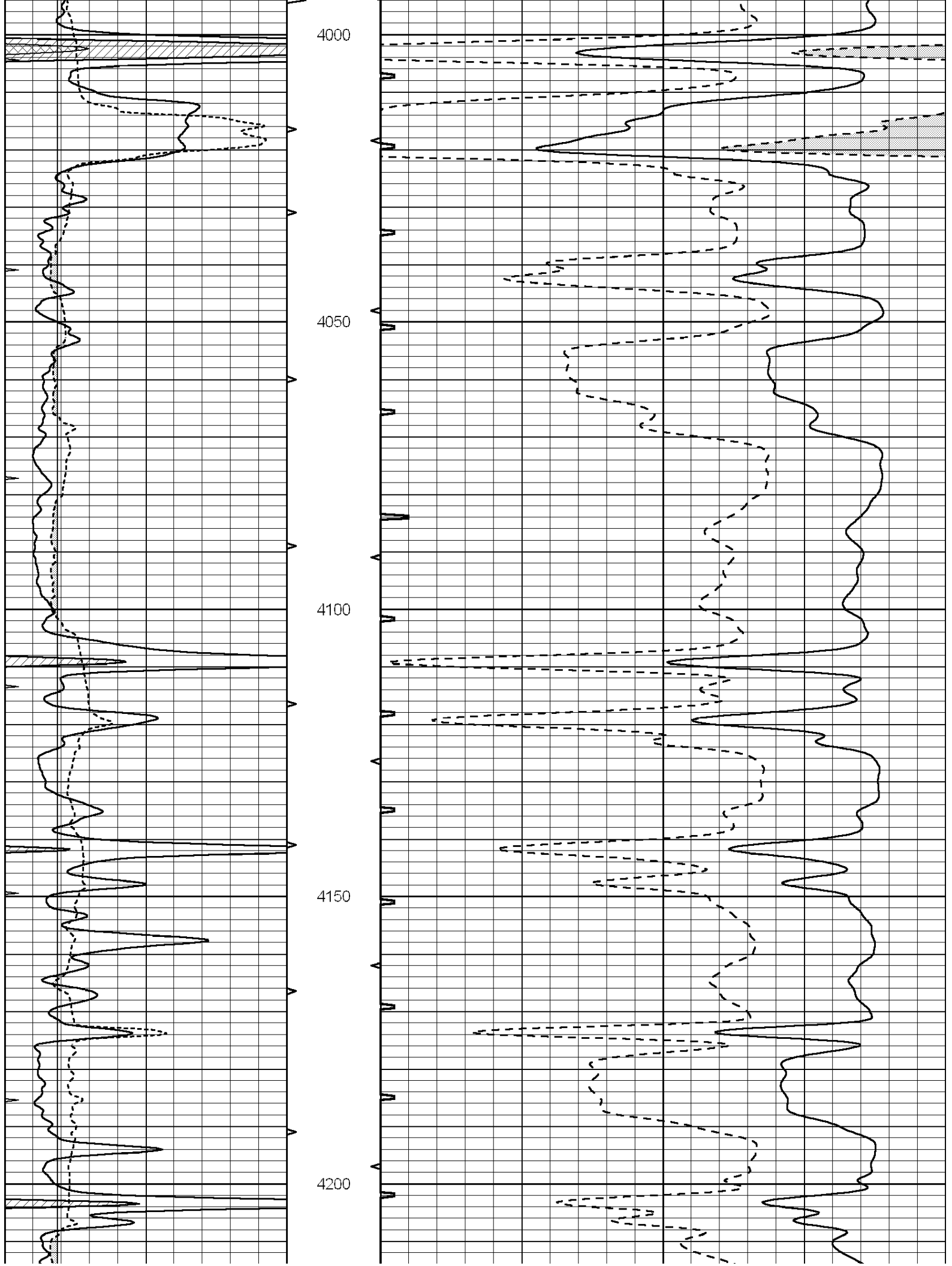


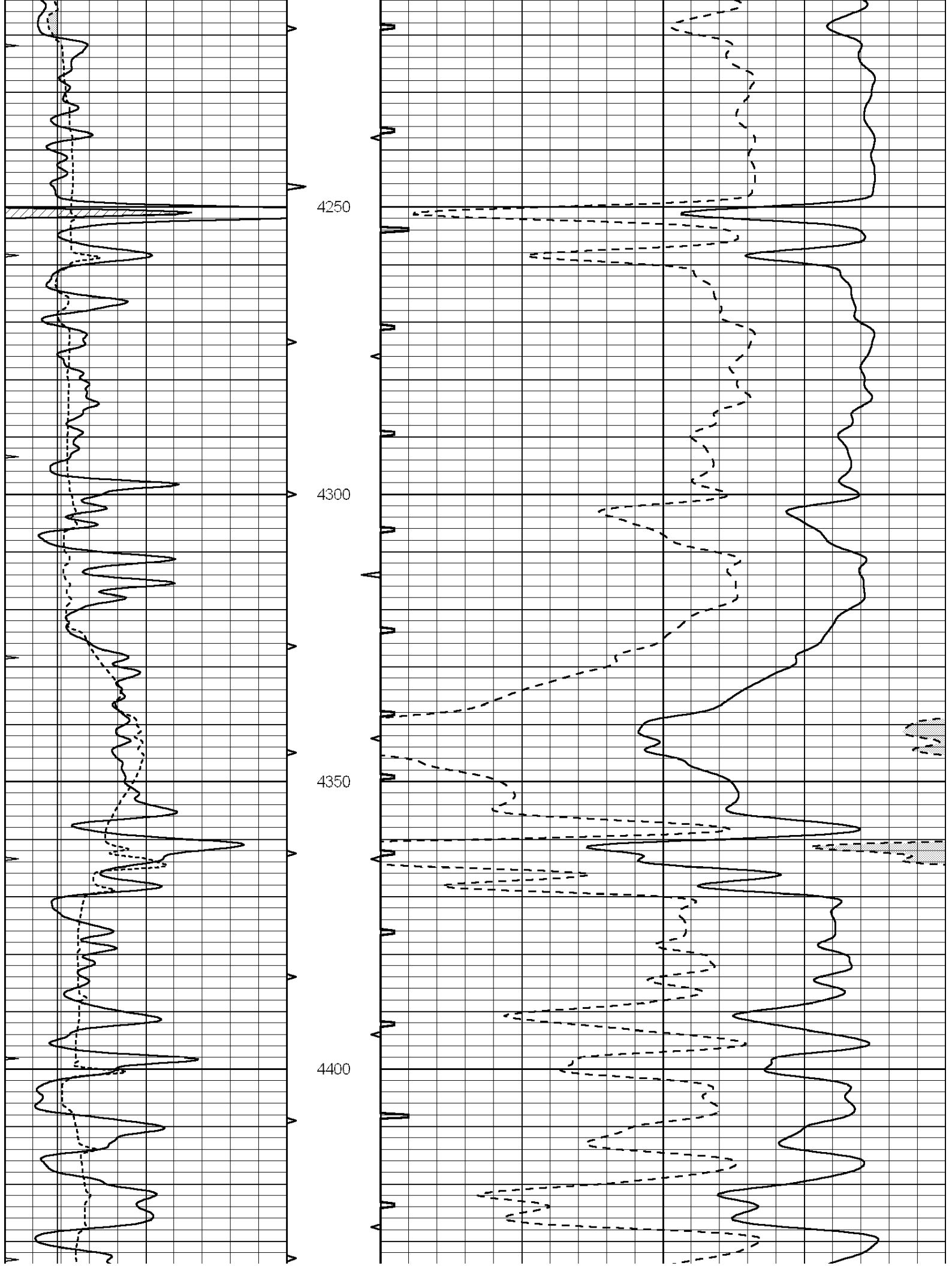


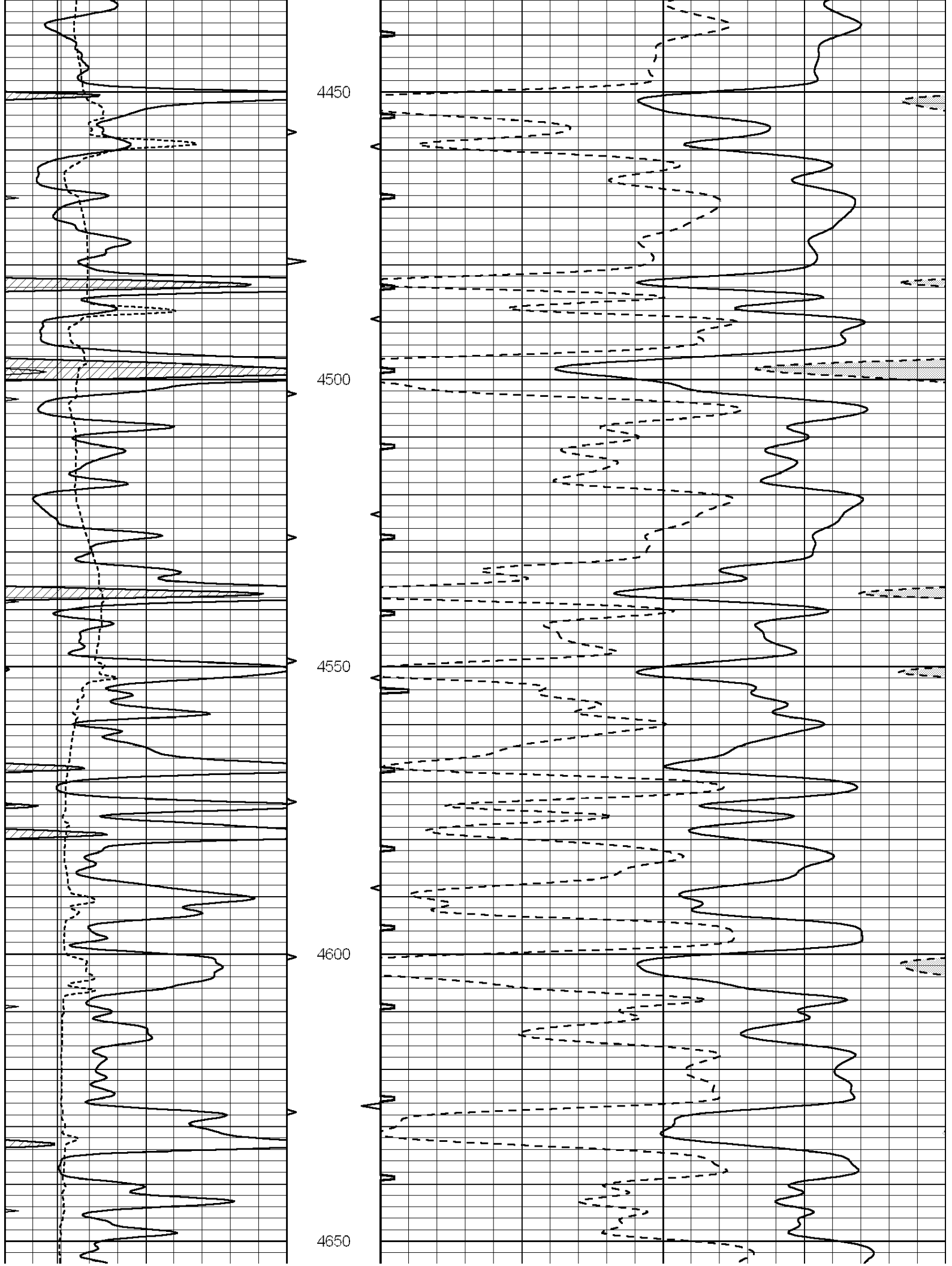


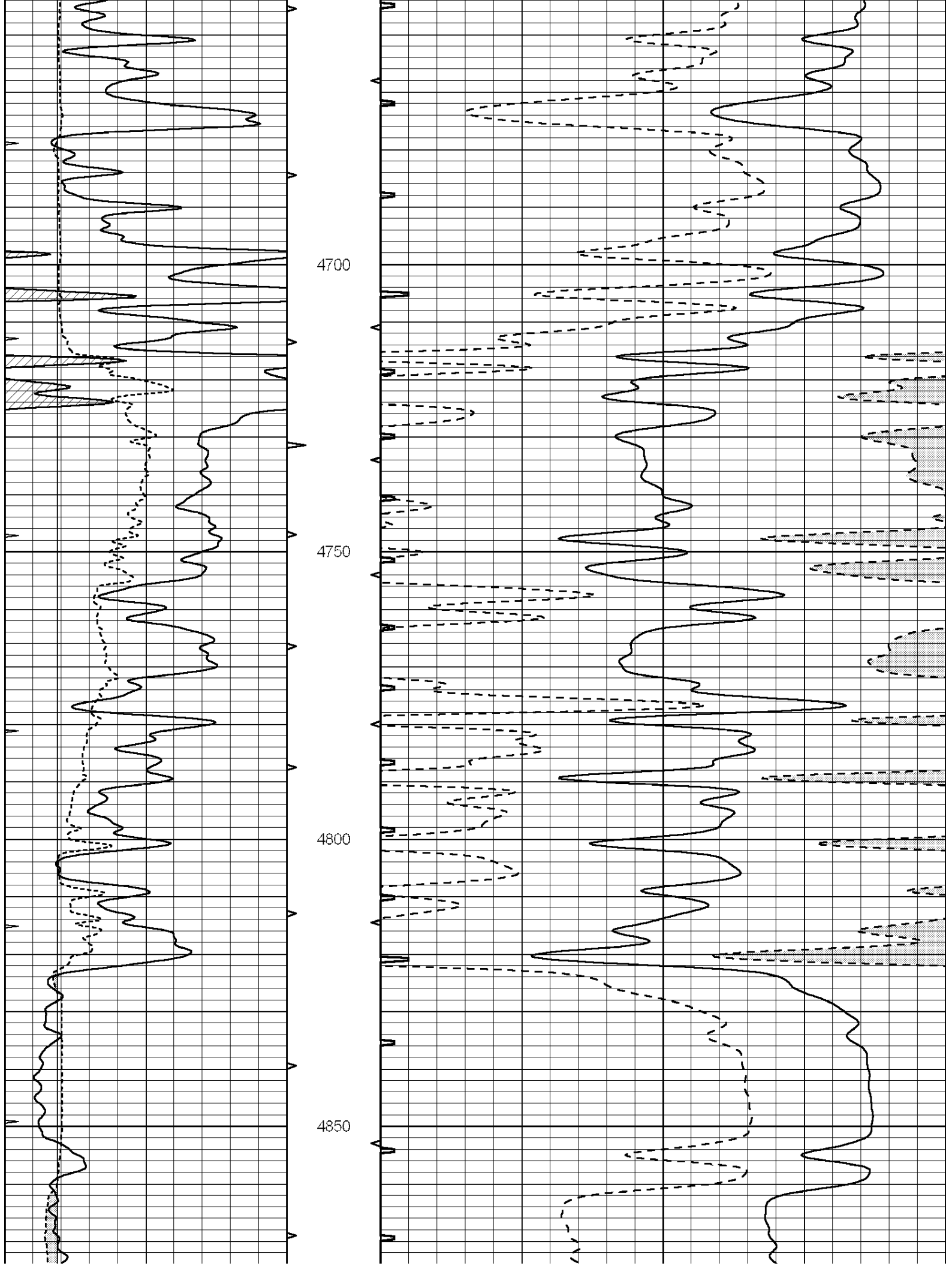


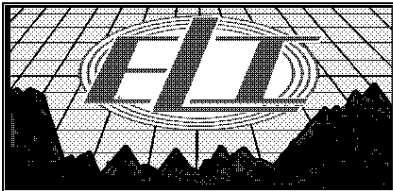
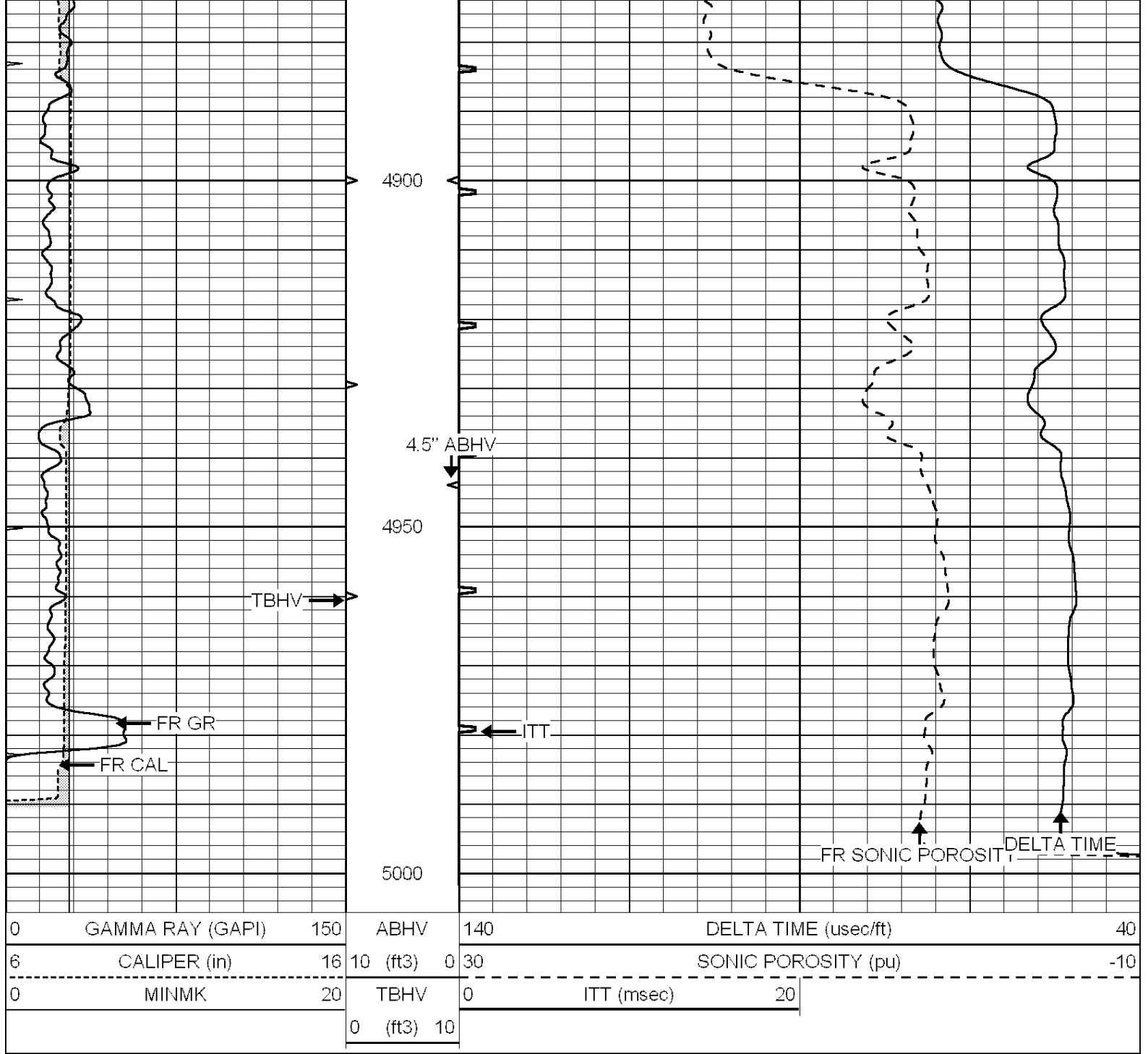






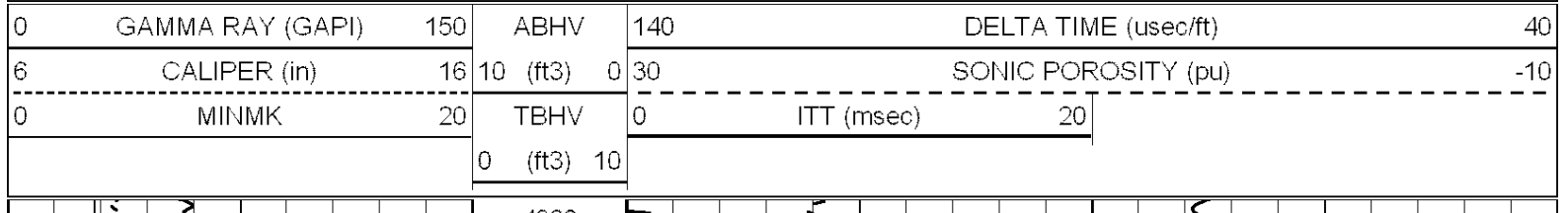


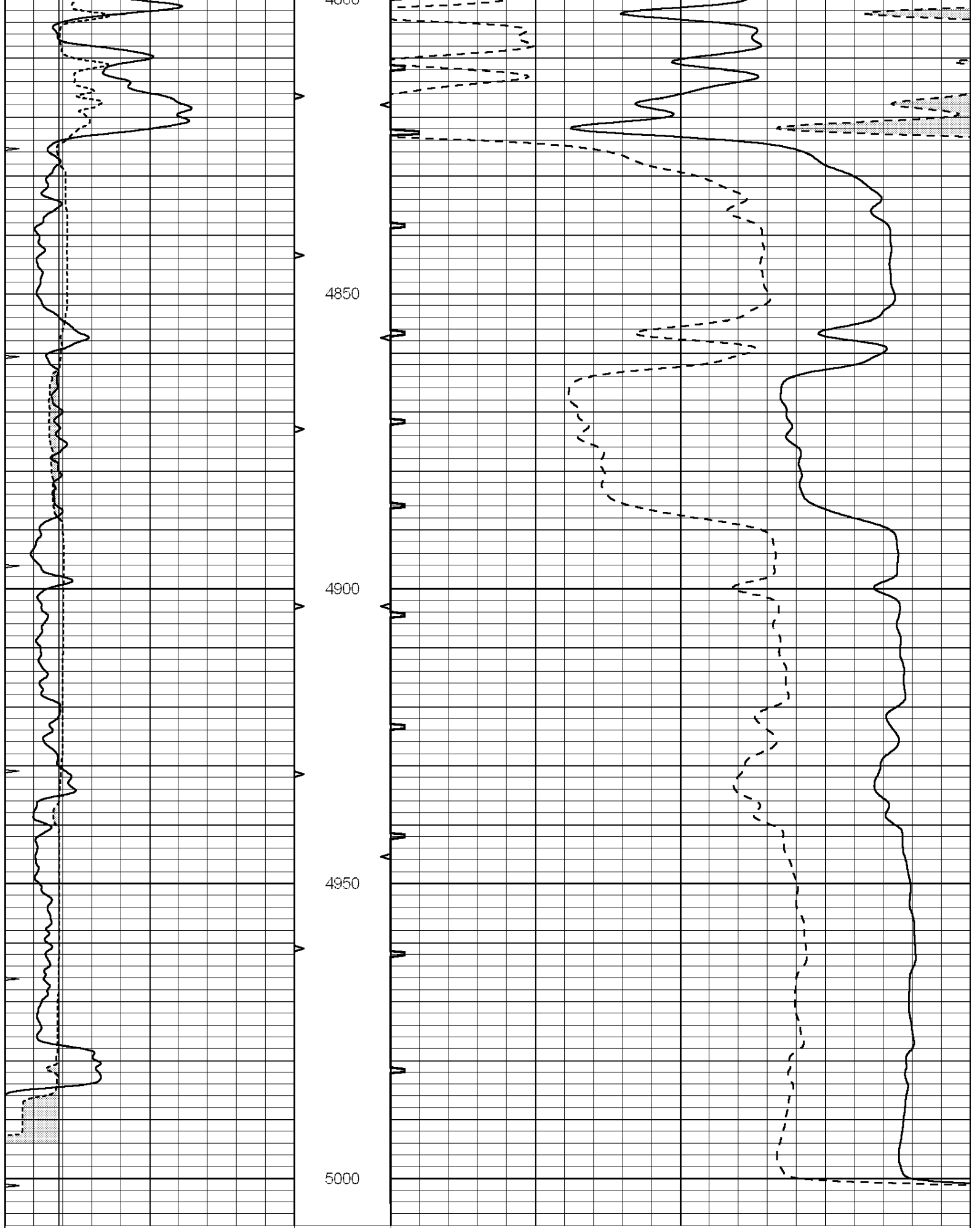




REPEAT SECTION

Database File: 1826pe.db
 Dataset Pathname: pass5.1
 Presentation Format: slt
 Dataset Creation: Mon Sep 11 02:17:11 2017 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240





0	GAMMA RAY (GAPI)	150	ABHV	140	DELTA TIME (usec/ft)	40	
6	CALIPER (in)	16	10 (ft3)	0	30	SONIC POROSITY (pu)	-10
0	MINIMK	20	TRHV	0	ITT (mean)	20	

S	MIN/MK	20	LEFT	S	FT (MSEC)	20
			0 (ft3) 10			



LARIO OIL & GAS COMPANY
KNOBBE #1-4
1290' FNL & 1775' FEL of Section 4-T19S-R37W
WICHITA COUNTY, KANSAS
API#15-203-20322-00-00

Geologist's Report
WellSight Systems

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: Lario Oil & Gas Knobbe #1-4
API: #15-203-20322-00-00
Location: 1290' FNL & 1775' FEL of Section 4-T19S-R37W
License Number: API#15-203-20322-00-00
Spud Date: 08/30/2017
Surface Coordinates: 1290' FNL & 1775' FEL of Section 4-T19S-R37W
Region: Wichita County, KS
Drilling Completed: 09/11/2017

Bottom Hole Vertical Test 4 12" @ 4992'
Coordinates:
Ground Elevation (ft): 3280 K.B. Elevation (ft): 3290
Logged Interval (ft): RTD To: 3400 Total Depth (ft): RTD 5000 LTD 5001
Formation: Mississippian
Type of Drilling Fluid: Chemical (Displaced @ 3504)

Printed by MudLog from WellSight Systems 1-800-447-1534 www.WellSight.com

Operator

Company: Lario Oil & Gas Company
Address: 301 S Market
Wichita, Kansas 67206
Division Geologist: John Hastings

Geologist

Name: Richard S.(Steve) Davis Jr.
Company: Consulting Geologist
Address: 7329 E Norfolk
Wichita, Kansas 67206
Cell 316-772-6479 Home 316-686-1193

FORMATION TOPS

KB 3290

Formation	Sample	E-Log	Datum	Formation	Sample	E-Log	Datum
KB 3290							
Anhydrite	2317	2314	+ 976	Hushpuckney	4250	4250	-960
B/Anhydrite	2334	2331	+ 959	Lansing L	4260	4260	-970
Stotler	3470	3469	-179	BKC	4329	4330	-1040
Topeka	3678	3680	-390	Marmaton	4362	4365	-1075
Heebner	3862	3862	-572	Pawnee	4460	4460	-1170
Toronto	3878	3880	-590	Fort Scott	4484	4485	-1195
Lansing	3902	3901	-611	Cherokee Sh	4496	4496	-1206
Lansing D	4026	4022	-732	Lwr Cherokee	4536	4536	-1246
Muncie Creek	4109	4108	-818	Johnson	4607	4606	-1316
Lansing H	4123	4120	-830	Morrow	4710	4710	-1420
Lansing I	4146	4149	-859	Basal Penn Sd	4802	4802	-1512
Lansing J	4174	4175	-885	Mississippi	4827	4827	-1537
Stark	4203	4202	-912				
Lansing K	4208	4206	-916	Total Depth	5000	5001	-1711

DAILY PENETRATION: 7:00 AM

Date	Depth	Activity
08/30/17	0	MIRU & Spud
08/31	362	WOC
09/01	1955	Drlg
09/02	3000	Drlg
09/03	3683	Drlg
09/04	4042	Drlg
09/05	4415	Drlg
09/06	4498	CFS
09/07	4665	Drlg
09/08	4940	Drlg
09/09	5000	WOR
09/10	5000	WOR
09/11	5000	TIH

CONTRACTOR:

Southwind Drilling Rig#1
Toolpusher: Larry Beavers

MUD:

Mud Co (displacement complete @ 3504')
Reed Atkins

DRILL STEM TESTING: Trilobite Testing Inc.

Mike Roberts

ELECTRIC LOG: ELI

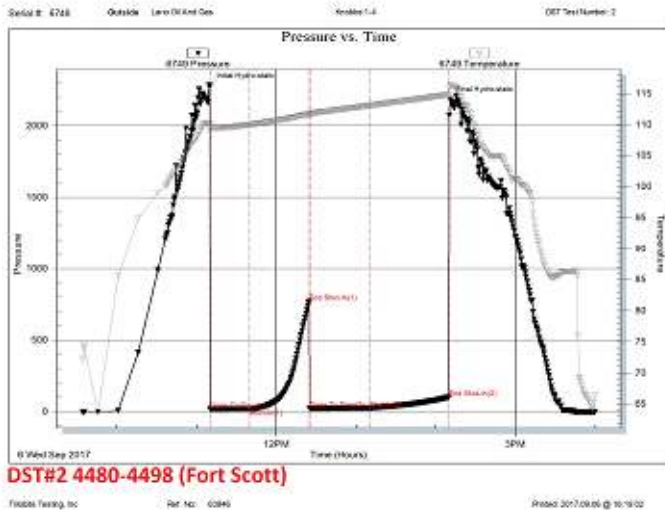
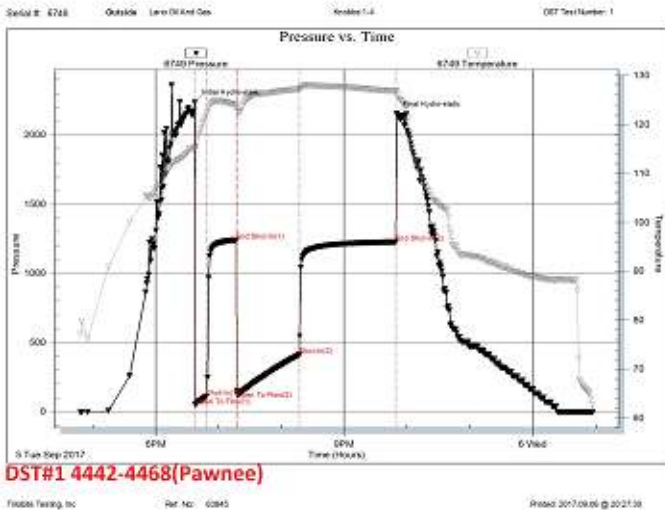
Jeff Luebbbers
(DIL, CDL/CNL, PE, MEL & Sonic)

CASING RECORD:

Surface: 8 5/8" @ 360' w/ 250 sacks
Production: 4 1/2" @ 4992'

BIT RECORD:

Bit No./Size	Make/Type	Out	Ftg	Hrs
#1/ 12 1/4"	JZ RT	362	362	3 3/4
#2/ 7 7/8"	JZ HA21Q	3985	3623	64 1/2
#3/ 7 7/8"	JZ HA28C	5000	1015	60 1/2



- Anhy
- Bent
- Brec
- Cht

- Clyst
- Coal
- Congl
- Dol

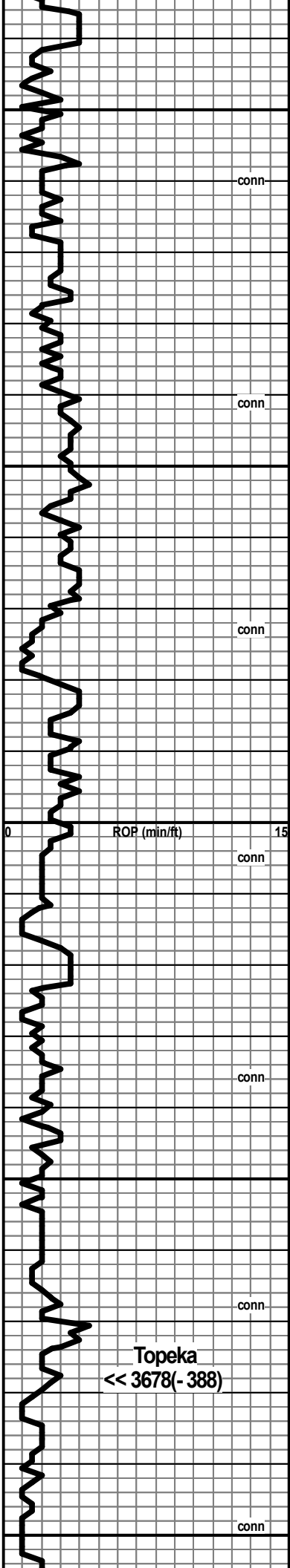
Rock Types

- Gyp
- Igne
- Lmst
- Meta

- Mrlst
- Salt
- Shale
- Shcol

- Shgy
- Sltst
- Ss
- Till

ROP (min/ft)	Depth	Lithology	Geological Descriptions	Remarks
0	15			
0	3400	conn	Shale, red, gy & gn	Start 20' Wet & Dry Samples @ 3400'
0	3450	conn	Shale, vcol	
0		conn	Stotler << 3470(-180)	



3500

3550

3600

3650

3700

conn

conn

conn

conn

conn

conn

conn

conn

conn

conn

Shale, red, gn & gy

Most Shale, red, gn & gy

LS, bm-gy, vf-fxn, chky-dns, sltly foss, NV por + Shale, gy-gn

Sltst, gy, gn & red + Shale, vcol

LS, gy-bm, vf-micxn, sltly foss, NV por, dns

Shale, red-bm, sft, wash red

LS, cm-wh, vf-micxn, sltly foss, chky-dns, rP vgy por, NS

LSAA + Shale, vcol

LS, cm-wh-bm, vf-micxn, chky-dns, sltly foss-ool, NV por

Shale, blk, sub carb (3700 spl)

LS, bm-gy, fxn, foss & ool, sft, arg, P mold por, NS

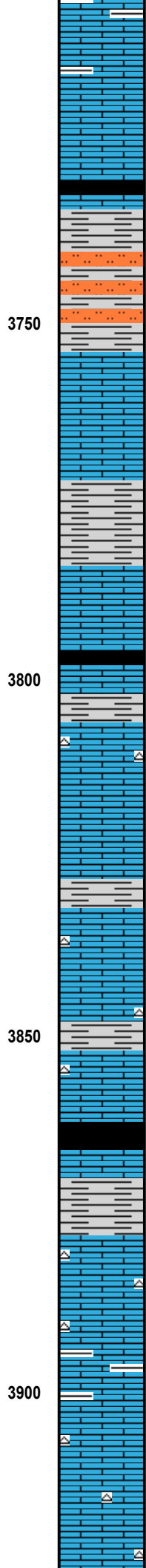
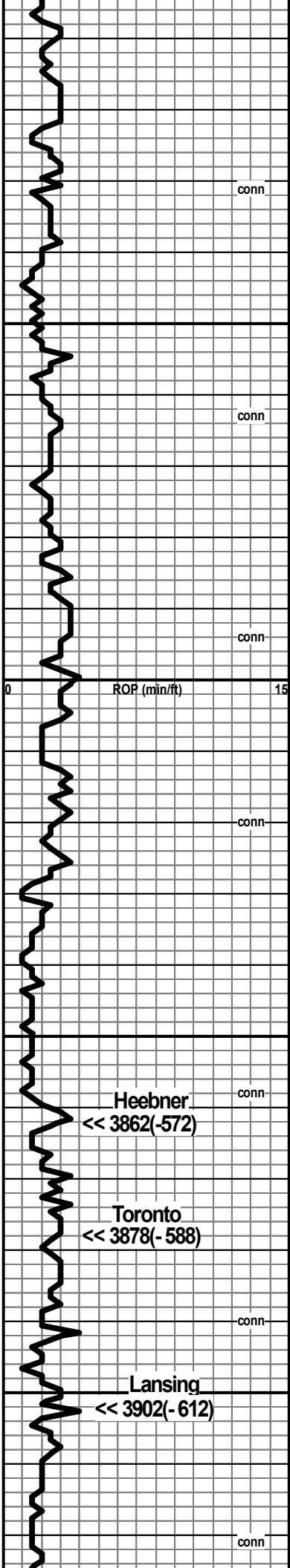
LS, cm-wh, f-vfxn, chky-cty IP, sub ool-foss, P ipart por, NS, most dns + Shale, dk gy-gn & red

Displacement complete @ 3504'

Vis 52 Wt 8.8 LCM 2.5#

Vis 52 Wt 8.8 LCM 3#

Topeka
 << 3678(- 388)



LS, tan-gy, vfxln, sltly foss, NV por, hd

Shale, blk, sub carb

Shale & Stst, gy-lt gn

LS, cm, vfxln, chky IP, sltly foss, NV por, mhd

Shale, gy-lt gn & blk

LS, lt gy-bm, vf-micxln, sltly foss, NV por, dns

Shale, blk, carb-sub carb

LS, cm-tan, fxln, foss & ool, chky IP, P ipart por, NS + Cht, tan-gy, sltly foss, opq

LS, bm-gy, vf-micxln, NV por, dns

LS, AA + Shale, blk-dk gy & gn

LS, gy-tan, fxln, arg, sltly foss, NV por, mhd-sft + Cht, gy, opq

LS, cm-gy, vfxln, sub ool-foss, chky IP, rP pp por, spt'd gils stn, NSFO, N fluor, N odor+ Cht, gy-tan, sltly foss, opq

Shale, blk, carb

LS, bm-vf-micxln, NV por, dns + Shale, dk gy-blk & gn

LS, cm-wh, f-vfxln, chky IP, sub ool-foss, P ixln por, hd, NS + Cht, wh-cm, opq

LS, cm-wh, vfxln, chky IP, sub ool, NV por, hd & Cht, wh, opq + Shale, gn, mar & blk

LS, cm, f-vfxln, sub chky, sltly foss & ool, hd, NV por + Cht, wh-lt gy, opq

LS, cm-off wh, vf-fxln, chky, foss-ool, rP ipart por, NS, most NV por + Cht, wh-lt gy, opq

Vis 53 Wt 8.9 Fil 7.2 PH 11.0
 Chl 3,500 LCM 1.5#
 9/03/2017 @3777

Start 10' Wet & Dry Samples @
 3880'

Vis 52 Wt 8.9 LCM 2#

Heebner
 << 3862(-572)

Toronto
 << 3878(-588)

Lansing
 << 3902(-612)

conn

conn

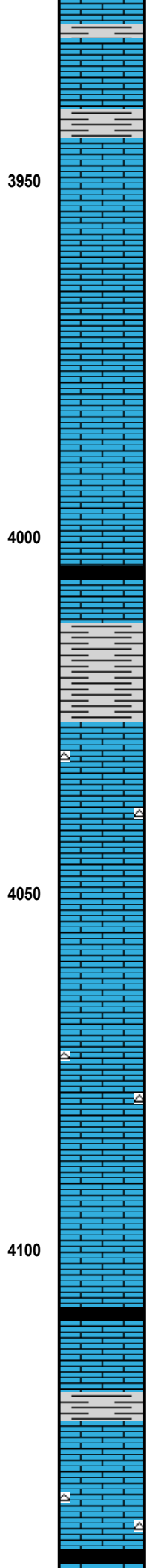
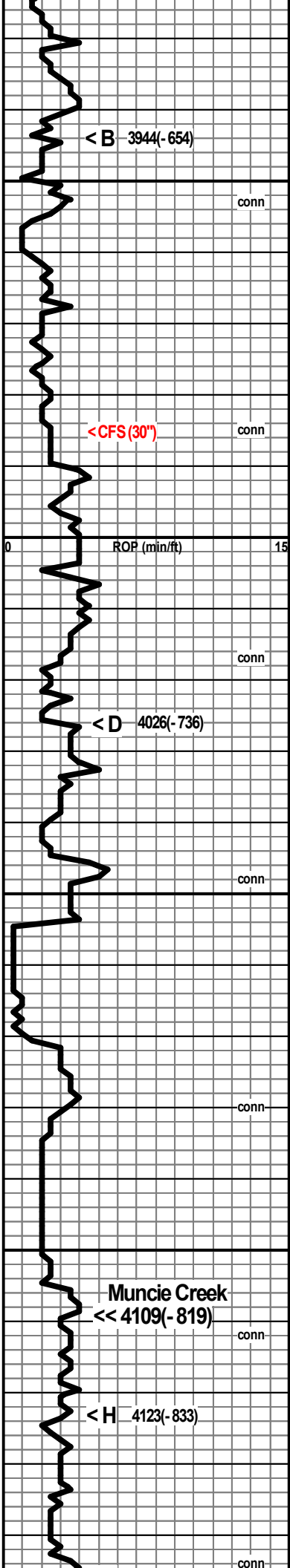
conn

conn

conn

conn

conn



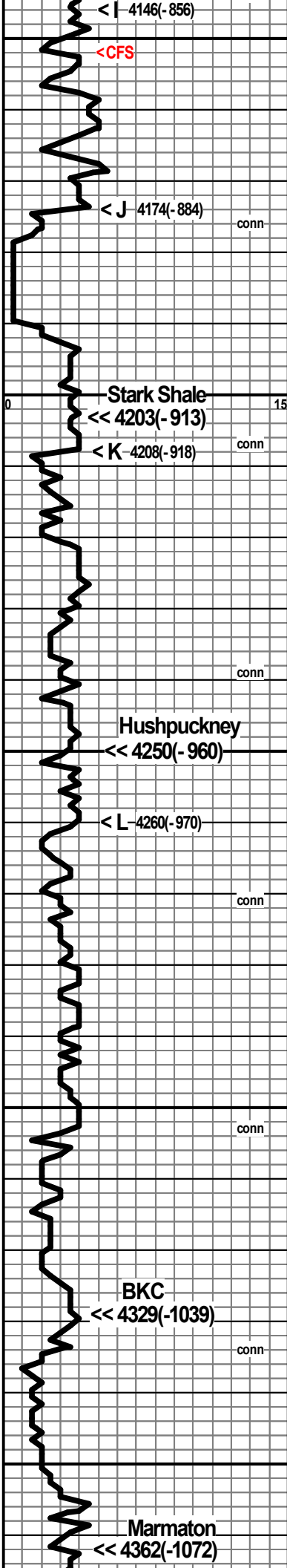
Shale, mar, blk & gn
 LS, cm-tan, vf-micxn, sltly foss, NV por, dns
 Shale, blk, mar, gn & gy
 LS, cm-wh, fxln, ool, F-P iool por, NS, hd
 LS, cm-wh, fxln, ool & foss, F-P ipart por & P vgy por, NS, hd
 LS, gy-cm, vfxln, foss-ool, r P vgy por, NS, most NV por, hd + Cht, lt gy, opq
 LS, cm-lt gy-wh, vf-fxln, sltly foss, chky IP, msft-hd, NV por
 LS, cm-tan, vf-micxn, few foss frag, NV por, dns
 Shale, blk, carb + LS, bm-lt gy, vf-fxln, sltly foss, NV por, dns
 Shale, blk, mar, gn & gy
 LS, tan-bm-gy, vf-micxn, NV por, dns + few pc's Cht, gy-tan, opq
 LS, bm-cm & wh, vf-fxln, P ixln por, NS, chky-dns
 LS, cm-tan & bm, fxln, F-P ooc por & oom por, NS, N fluor, N odor
 LS, lt gy-cm, f-vfxln, ool, r P oom por, NS, dns + Cht, lt gy-tan, opq
 LS, lt gy-tan, vf-micxn, sharp, sub ool, NV por, hd
 LS, lt gy-tan, vf-micxn, sharp, r P vgy por, NS, most NV por, dns
 Shale, blk, carb + few pc's pyr (4130 spl)
 LS, bm-dk gy, vf-micxn, NV por, dns
 Shale, mar & gy-gn
 LS, bm-gy, fxln, arg, foss & ool, NV por, m sft-hd
 LS, bm-lt gy, vf-micxn, sltly foss, sharp, NV por, dns + Cht, lt gy, opq
 Shale, blk, carb-sub carb

Connection "Very Tight" @3953'

Bit Trip @ 3985'
 Pipe Strap @ 3985'
 Strap 1.09' Short
 Survey 1 1/2 deg

Vis 51 Wt 9.2 LCM 1#

Vis 67 Wt 9.1 Fil 8.0 PH 11.0
 Chl 4,000 LCM 1#
 9/04/2017 @4130



4150
 4200
 4250
 4300
 4350

LS, cm-lt gy, f-mxdn, foss & ool, chky IP, r P ipart por & P ixln por, NS + LS, tan-cm, sltly foss, chky-dns, NV por & few pc's Cht, gy-tan, sltly foss, opq

Shale, gy-gn & mar

LS, cm-gy, micxln, foss & ool (dk gy), NV por, hd + Shale, gy-gn

LS, gy-tan-bm, fxdn, ool, G oom por, NS, N odor

LS, bm-gy, vf-micxln, sub ool, NV por, dns

Shale, blk, carb
 Shale, gy, gn & mar

LS, cm-lt gy, fxdn, F-P oom por, NS, m sft

LS, bm-cm-gy, f-vfxln, r P oom por, NS, dns

LS, wh-lt gy, f-vfxln, chky, P ixln por, NS, sft

LS AA + LS, tan-gy, vf-fxdn, foss-ool, r P pp-vgy por, NS, chky-dns

Shale, blk, carb (4270 spl)
 LS, lt gy-off wh, vf-fxdn, few foss frag, NV por, chky-dns + Shale, gy-blk & mar

LS, tan-lt gy, vf-micxln, sltly foss, sharp, dns, NV por+
 LS, wh-cm, fxdn, chky, NV por, sft + Shale, dk gy, blk & mar

LS, tan-lt gy, vf-micxln, sharp, sltly foss, NV por, dns +
 LS, wh-cm, fxdn, chky, NV por, sft

LS, wh-lt gy, f-vfxln, sltly foss, chky IP, NV por, mhd

Shale, bm, mar, blk & gn

LS, bm-gy, fxdn, arg, sltly foss, NV por, hd, NV por+
 Shale vcol AA

Sltst, gy-mar + Shale, gy(sft), mar & blk

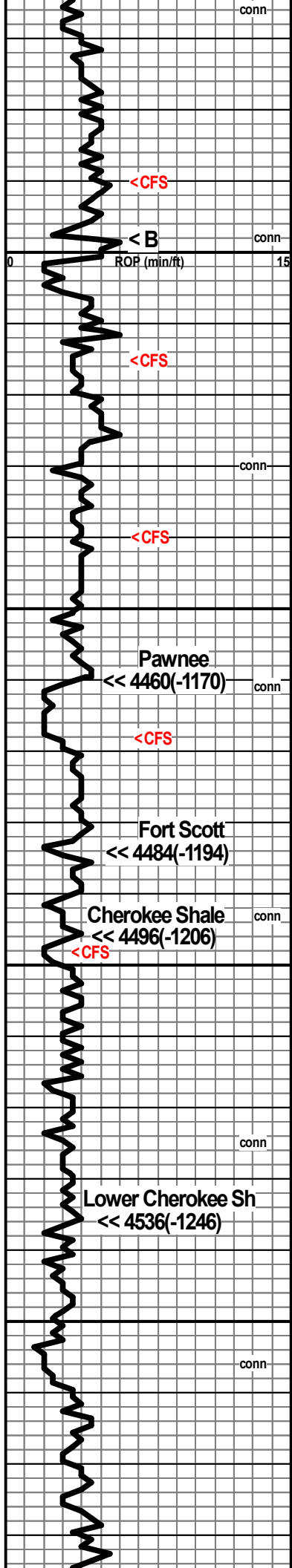
Shale, gy(sft), mar & blk + Sltst, gy-gn & mar

LS, cm-bm, fxdn, foss & ool, NV por, msft + Shale & sltst AA

LS, tan-lt gy, vf-micxln, am, chky IP, NV por, hd

Vis 59 Wt. 9.3 LCM 1.5#

Vis 53 Wt. 9.3 LCM 2#



4400
4450
4500
4550

D.S.T.#:1
D.S.T.#:2

< B
ROP (min/ft)
<CFS
<CFS
<CFS
<CFS
Pawnee
<< 4460(-1170)
<CFS
Fort Scott
<< 4484(-1194)
Cherokee Shale
<< 4496(-1206)
<CFS

Lower Cherokee Sh
<< 4536(-1246)

LS, tan-gy, vf-micln, arg, chky IP, NV por, dns
 LS, bm-tan, vf-micln, ool-sub ool, NV por, mhd + LS, tan-gy, vf-micln, NV por, hd
 LS, br-crm, f-mxln, foss, NV por, hd + LS, tan-gy, vf-fxln, chky IP-dns, NV por
 Shale, blk, gy, gn & mar
 LS, bm-gy, foss & ool, P ipart por & F-P mold por, sft, NS + Cht, gy-tan, ool, tmsl
 LS, lt gy-tan, vf-micln, NV por & LS, bm-gy, foss & ool, NV por, dns + Shale, vcol
 Shale, mar, gn, gy & blk
 LS, bm-crm, vf-micln, foss & ool, NV por, dns + LS, gy-bm-tan, vf-fxln, gran, NV por, dns
 LS, bm-dk gy, f-vfxln, arg, NV por, dns
 Shale, blk, carb-sub carb, dk gy & gn
 LS, dk gy, f-vfxln, arg, sltly foss, NV por, dns
 Shale, gy, blk & mar
 LS, gy-bm-wh, fxln, sltly foss, chky IP, F-P ixln por, SSFO(V lt) w/ few gas bubb, r pp spt'd stn, fnt odor on brk (5 unit gas)
 LS, gy-tan, f-vfxln, chky IP, sltly foss, hd + abnt Shale, vcol
 Shale, blk, carb (32 unit gas)
 LS, lt gy-bm, f-vfxln, chky IP, ool, P iool por & P pp-vgy por, hd, GSFO w/ gas bubb, spt'd-unf stn, fnt odor (78 unit gas)
 Shale, blk, carb (35 unit gas)
 LS, gy-bm, vf-micln, sub ool, r P pp por, spt'd res stn, NSFO, N odor + Cht, gy, ool
 Shale, blk, dk gy & gn
 Abnt Shale, lt gy, gn & blk + LS, off wh-gy, sub ool, chky, NV por, msft
 Shale, dk gy, gn, mar & blk
 Shale, blk, carb + pyr(4560 spl)
 Most Shale + LS, gy-tan, vf-micln, sub ool, chky IP, NV por, dns
 Shale, gy, gn & blk
 LS, gy-bm, vf-fxln, ool, P oom por, NS + Shale, gy, gn, mar & blk
 LS, tan-gy, vfxln, sltly foss, NV por

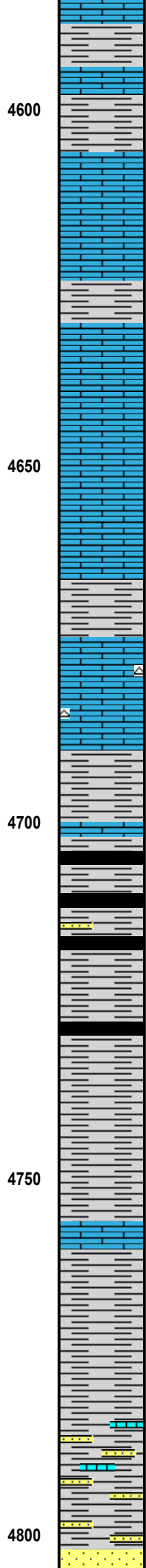
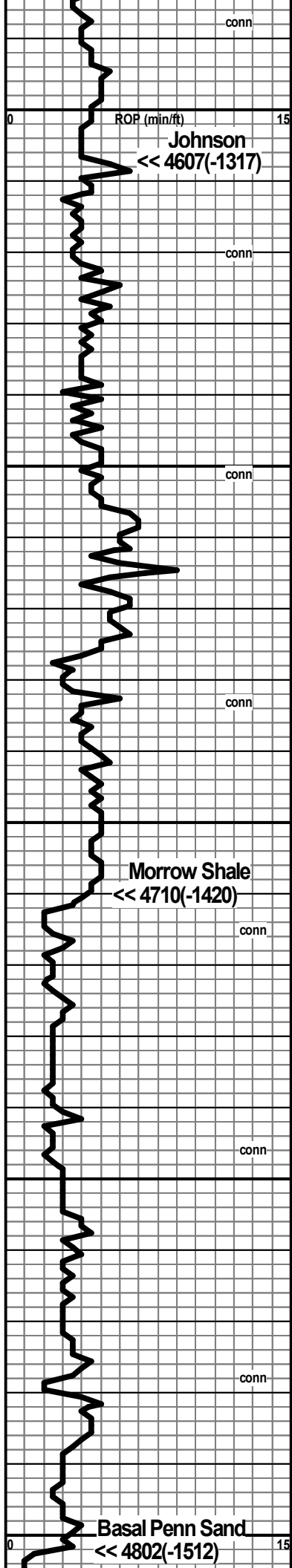
Vis 54 Wt 9.2 Fil 8.0 PH 10.5
Chl 4,400 LCM 1#
9/05/2017 @4440

DST#1 4442 - 4468
(Pawnee)
10 30 60 90
BLOW:
IF BOB 3 min
ISI 7" return
FF GTS 25 min
ISI BOB 9 min
RECOVERY: 3286' gip
402' GCO (40%g 60%o)
248' GCMO (5%g 85%o 10%am)
372' MCGO (20%g 75%o 5%am)
1,022' TOTAL FLUID (Gr 27)
IH 2236
IF 45 - 108
ISI 1241
FF 121 - 410
FSI 1227
FHP 2151 BHT 126 deg F

Vis 50 Wt 9.2 Fil 7.2 PH 10.5
Chl 5,500 LCM 1#
9/06/2017 @4498

DST#2 4480 - 4498
(Fort Scott)
30 45 45 60
BLOW:
IF 1/4"
FF No blow
RECOVERY:
25' OCM (2%o 98%)
IH 2277
IF 15 - 19
ISI 769
FF 21 - 24
FSI 101
FHP 2183 BHT 115 deg F

Vis 47 Wt 9.5 LCM 1#



LS, orn wh-it gy, vf-micxn, silty ross, NV por, dns + Shale, mar(silty), gy, gn & blk

Most Shale, mar, blk, dk gy & gn + LS, tan-cm, vf-micxn, few foss frag, NV por, dns

LS, gy-bm, micxn, NV por, dns (abnt shale)

LS, tan-gy, vf-micxn, foss-sub ool, chty IP, NV por, dns

Shale, blk-dky gy

LS, gy-tan, vf-fxn, silty foss, NV por, hd (most shale, vcol)

LS, gy-tan, vf-micxn, dns, NV por+ LS, bm, fxn, ool, r P-F oom por, NS (?new)

Shale, blk, gy, mar & gn + pyr

Most Shale, blk, sub carb, dlk gy & gn + LS, bm-gy, micxn-fxn, gran, NV por + few pc's Cht, bm, opq (62 unit gas)

(108 unit gas)

Shale, blk, carb + mar, gy & gm w/ few pc's LS, dk bm-gy, vfxn, NV por, dns (93 unit gas)

Shale, blk, sub carb-carb, mar, & gn w/ pyr + few clus SS, gy, vfgm, rd, comp, NV por, NS (80 unit gas)

Most Shale, dk gy, blk, car-sub carb, gn & mar + pyr (152 unit gas)

Shale, blk, sub carb-carb, dk gy, gn & mar + pyr (185 unit gas)

Shale, blk, sub carb, dk gy, gn & mar+ pyr (214 unit gas)

Most Shale, blk, sub carb-carb, gy, gn & mar + few pc's LS, bm-gy, vfxn, ool, NV por, dns (234 unit gas)

Shale, blk, sub carb, dk gy, gn & mar + pyr (131 unit gas)

(210 unit gas)

Most Shale, blk, sub carb-carb, gn, gy & mar + SS, wh-gn-clr qtz, f-vfgm, mod sort, rd-sub rd, glauc, comp-fri, P ig por, NSFO, N odor, N fluor (228 unit gas)

(140 unit gas)

SS, gv-clr qtz, vf-fam, rd-sub rd, mod sort, comp, P ia

Vis 47 Wt 9.3

Samples most shale, dec WOB and mix mud

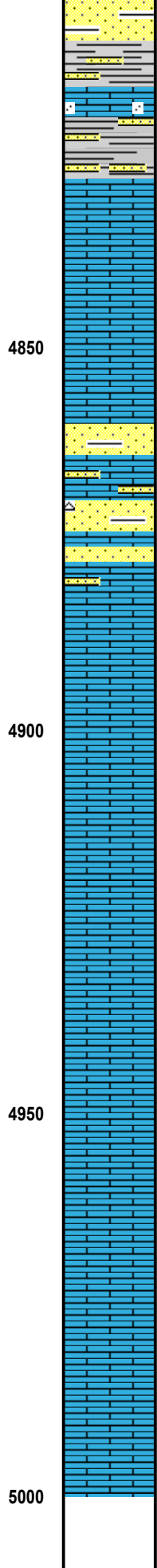
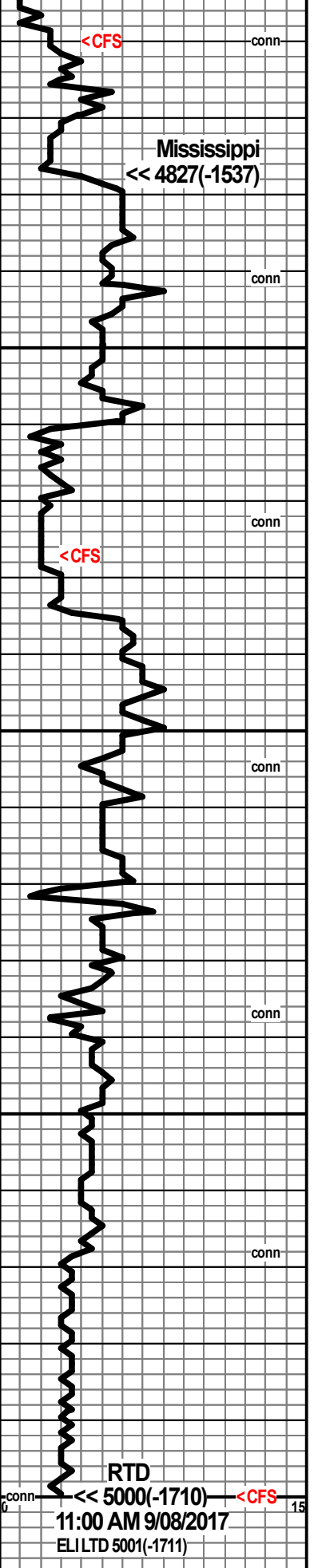
Vis 53 Wt 9.4 Fil 8.8 PH 9.5
Chl 5,000 LCM 1#
9/07/2017 @4690

Reduce pump pressure 800# - RTD

Johnson
<< 4607(-1317)

Morrow Shale
<< 4710(-1420)

Basal Penn Sand
<< 4802(-1512)



por, NSFO, N odor, N fluor+SS, clr qtz, sub rd, well sort, stlty glauc, fri, F ig por, NSFO, N odor, N fluor (170 unit gas)

LS, gy-bm, f-vfxln, arg, gran, foss, NV por, hd + Shale, blk, dk gy & gn & SS, gy-tan, f-vfgm, sub rd, mod sort, fri-comp, some glauc, NSFO, N odor, N fluor (173 unit gas)

LS, wh-cm, fxl, sdy, vf-fgm, chky IP, NV por (176 unit gas)

LS, wh-cm, fxl, sdy, sub ool, vf-fgm, chky IP, NV por (140 unit gas)

4850 LS, wh-cm, f-vfxln, sdy, f-vfgm, chky-dns, NV por + Shale, blk & gy (153 unit gas)

(Samples 70-80% shale slough)

LS, AA + few clus SS, wh-clr qtz, fgm, rd, well sort, comp, sil cnt, P ig por, NS (124 unit gas)

LS wh-cm, fxl, chky, NV por + few clus SS, clr qtz, f-mgm, sub rd, mod sort, fri, F ig por, NSFO, N odor, N fluor w/ Cht, wh, opq (120 unit gas)

LS, wh-cm, sdy, fgm, NV por, hd (106 unit gas)

4900 LS, wh-cm, fxl, sdy-sub ool, f-mgm, NV por, chky IP (84 unit gas)

(108 unit gas)

Few clus, SS, clr qtz, f-mgm, mod sor, sub rd, fri, G ig por, py, NSFO, N odor, N fluor + Qtzt, gy-wh (143 unit gas)

(93 unit gas)

LS, cm, fxl, ool, F iool por, NSFO, N odor, N fluor (115 unit gas)

4950 LS, wh-gy-cm, fxl, chky IP, sdy, f-mgm, sub ool, hd, NV por (112 unit gas)

LS, cm-wh, fxl, chky IP, sdy & ool, f-mgm, chky IP, NV por (161 unit gas)

LS, cm-wh, vfxln, ool, chky IP, NV por, hd (175 unit gas)

LS, tan-gy, f-vfxln, sub ool, chky, sft, NV por (179 unit gas)

Most Shale, gy, blk, gn & mar w/ LS, gy-bm, vfxln, sdy-sub ool, f-vfgn (200 unit gas)

Vis 65 Wt 9.4+

Pump pressure 800# - RTD

Vis 56 Wt 9.5 LCM 2#

Vis 61 Wt 9.4 Fil 8.0 PH 8.0
Chl 5,700 LCM 3#
9/08/2017 @4965

Vis 53 Wt 9.4 Fil 8.0 PH 10.0
Chl 5,000 LCM 2#
9/09/2017 @5000

Vis 53 Wt 8.9 Fil 6.4 PH 10.5
Chl 6,200 LCM 2#
9/10/2017 @5000
(80 bbls oil in spotted in system)

Survey @5000 3/4 deg

LARIO OIL & GAS CO.
KNOBBE #1-4
1290' FNI & 1775' FEI

RTD
 << 5000(-1710) <CFS
 11:00 AM 9/08/2017
 ELI LTD 5001(-1711)

1200 TREC 1170 TEE

Section 4-T19S-R37W

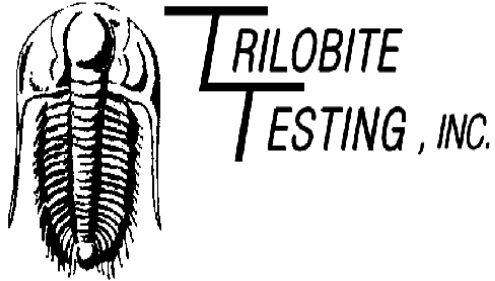
Wichita Co., Kansas

API#15-203-20322-00-00

GL 3280 KB 3290

5050

Note: Because of drawwork repairs, delays were encountered prior to running electric logs.



DRILL STEM TEST REPORT

Prepared For: **Lario Oil And Gas**

301 Market
Wichita KS
67202

ATTN: Steve Davis

Knobbe 1-4

4-19s-37w Wichita KS

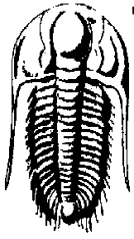
Start Date: 2017.09.05 @ 16:48:15

End Date: 2017.09.06 @ 00:57:45

Job Ticket #: 63845 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.09.06 @ 02:57:31



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Lario Oil And Gas

4-19s-37w Wichita KS

301 Market
Wichita KS
67202

Knobbe 1-4

Job Ticket: 63845

DST#: 1

ATTN: Steve Davis

Test Start: 2017.09.05 @ 16:48:15

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:37:45

Time Test Ended: 00:57:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 81

Interval: 4442.00 ft (KB) To 4468.00 ft (KB) (TVD)

Reference Elevations: 3240.00 ft (KB)

Total Depth: 4468.00 ft (KB) (TVD)

3230.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6749 Outside

Press@RunDepth: 410.44 psig @ 4443.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.09.05

End Date:

2017.09.06

Last Calib.:

2017.09.06

Start Time: 16:48:15

End Time:

00:57:45

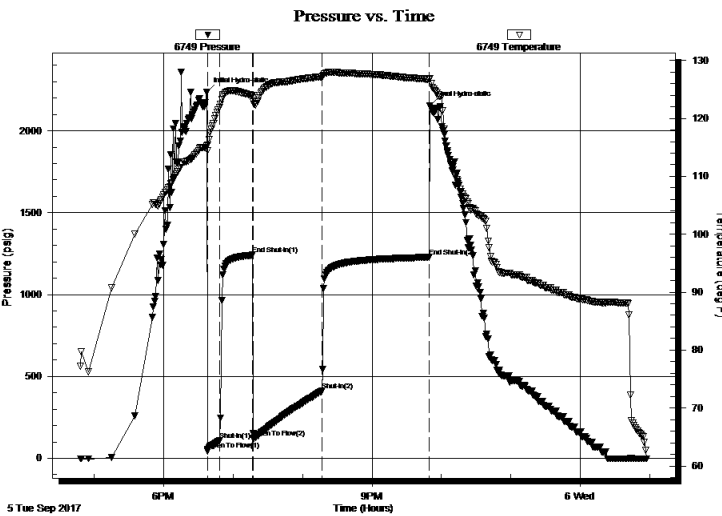
Time On Btm:

2017.09.05 @ 18:37:30

Time Off Btm:

2017.09.05 @ 21:50:15

TEST COMMENT: IF:BOB in 3 min.
IS:Built to 7" blow
FF:BOB instantly gas to surface in 25 min.
FS:BOB in 9 min.



PRESSURE SUMMARY

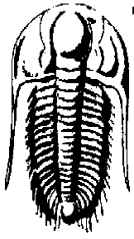
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2236.43	115.27	Initial Hydro-static
1	45.16	114.43	Open To Flow(1)
11	108.09	121.92	Shut-In(1)
40	1240.62	123.95	End Shut-In(1)
41	120.64	122.85	Open To Flow(2)
100	410.44	127.16	Shut-In(2)
192	1227.43	126.72	End Shut-In(2)
193	2150.76	126.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume(bbl)
0.00	3286 = GIP	0.00
402.00	gco 40%g 60%o	5.64
248.00	gcmo 5%g 10%m 85%o	3.48
372.00	mcgo 5%m 20%g 75%o	5.22

Gas Rates

	Choke(inches)	Pressure (psig)	Gas Rate(Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Lario Oil And Gas

4-19s-37w Wichita KS

301 Market
Wichita KS
67202

Knobbe 1-4

Job Ticket: 63845

DST#: 1

ATTN: Steve Davis

Test Start: 2017.09.05 @ 16:48:15

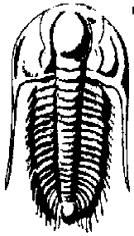
Tool Information

Drill Pipe:	Length: 4437.00 ft	Diameter: 3.80 inches	Volume: 62.24 bbl	Tool Weight:	1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 62.24 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	4442.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	26.00 ft				
Tool Length:	54.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4415.00	
Shut In Tool	5.00			4420.00	
Hydraulic tool	5.00			4425.00	
Jars	5.00			4430.00	
Safety Joint	3.00			4433.00	
Packer	5.00			4438.00	28.00 Bottom Of Top Packer
Packer	4.00			4442.00	
Stubb	1.00			4443.00	
Recorder	0.00	8672	Inside	4443.00	
Recorder	0.00	6749	Outside	4443.00	
Perforations	20.00			4463.00	
Bullnose	5.00			4468.00	26.00 Bottom Packers & Anchor Tool

Total Tool Length: 54.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Lario Oil And Gas

4-19s-37w Wichita KS

301 Market
Wichita KS
67202

Knobbe 1-4

Job Ticket: 63845

DST#: 1

ATTN: Steve Davis

Test Start: 2017.09.05 @ 16:48:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

27 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	3286 = GIP	0.000
402.00	gco 40%g 60%o	5.639
248.00	gcmo 5%g 10%m 85%o	3.479
372.00	mcgo 5%m 20%g 75%o	5.218

Total Length: 1022.00 ft Total Volume: 14.336 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API 26@50 corrected to 27



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Lario Oil And Gas

4-19s-37w Wichita KS

301 Market
Wichita KS
67202
ATTN: Steve Davis

Knobbe 1-4

Job Ticket: 63846

DST#: 2

Test Start: 2017.09.06 @ 09:34:15

GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:10:15

Time Test Ended: 16:00:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4480.00 ft (KB) To 4498.00 ft (KB) (TVD)

Reference Elevations: 3240.00 ft (KB)

Total Depth: 4480.00 ft (KB) (TVD)

3230.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6749 Outside

Press@RunDepth: 24.31 psig @ 4481.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.09.06

End Date:

2017.09.06

Last Calib.: 2017.09.06

Start Time: 09:34:15

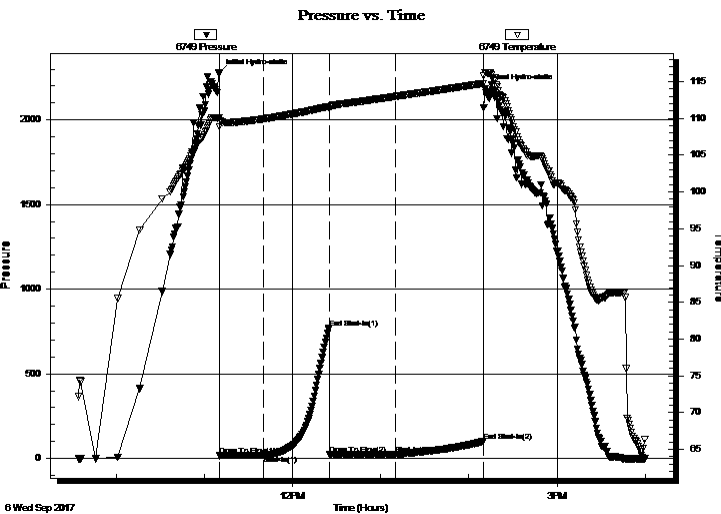
End Time:

16:00:00

Time On Btm: 2017.09.06 @ 11:10:00

Time Off Btm: 2017.09.06 @ 14:11:00

TEST COMMENT: IF: Built to 1/4" blow
IS: No return blow
FF: No blow
FS: No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2277.07	110.14	Initial Hydro-static
1	15.77	108.91	Open To Flow (1)
30	19.03	109.93	Shut-In(1)
75	769.55	111.65	End Shut-In(1)
75	21.93	111.36	Open To Flow (2)
120	24.31	112.99	Shut-In(2)
180	101.33	114.76	End Shut-In(2)
181	2183.04	116.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	ocm 2%o 98%m	0.35

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Lario Oil And Gas

4-19s-37w Wichita KS

301 Market
Wichita KS
67202

Knobbe 1-4

Job Ticket: 63846

DST#: 2

ATTN: Steve Davis

Test Start: 2017.09.06 @ 09:34:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	ocm 2%o 98%m	0.351

Total Length: 25.00 ft Total Volume: 0.351 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

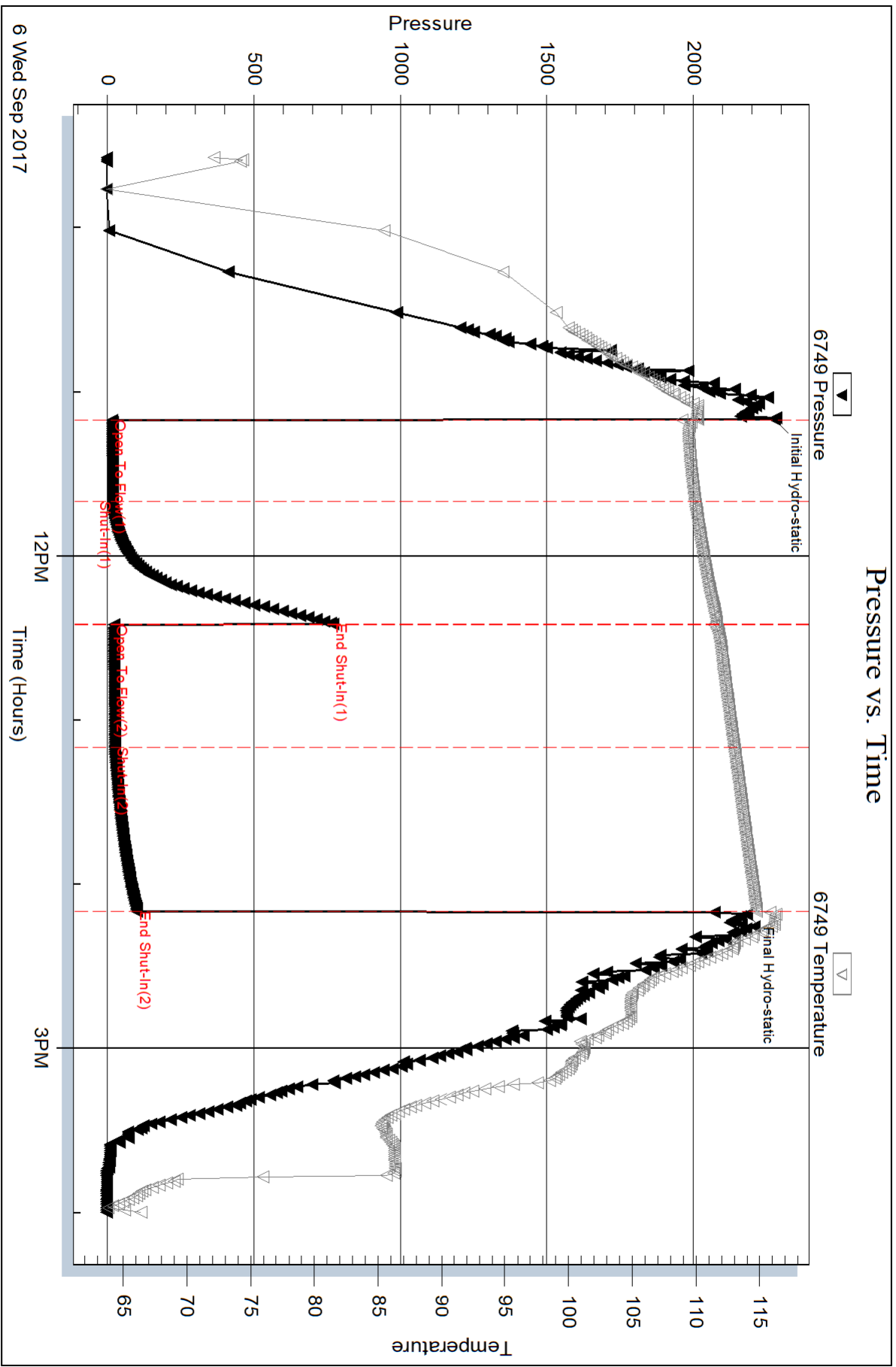
Recovery Comments:

Serial #: 6749

Outside Lario Oil And Gas

Knobbe 1-4

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 63846

Printed: 2017.09.06 @ 16:19:02

Serial #: 8672

Inside

Lario Oil And Gas

Knobbe 1-4

DST Test Number: 2

