



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH075719	Company Well Field County	WPX ENERGY WPX ENERGY GM 423-34 GRAND VALLEY GARFIELD	State COLORADO
API No: 05045193090000			
54-6S-96W GM 23-34 PAD NABORS 574	Location SHL: 1958' FSL X 2182' FWL BHL: 1534' FSL X 2405' FEL (NMSE) SEC 34 TWP 6S RGE 96	Other Services RPM TEMP	
Permanent Datum Log Measured From Drill Measured From	GL KB KELLY BUSHING	Elevation 26 ft Above P. D.	Elevations KB 5381.5 ft DF GL 5355.5 ft

Date	16/AUG/13	
Run	ONE	
Service Order	824401	
Depth Driller	6587 ft	
Depth Logger	6560 ft	
Bottom Logged Interval	6550 ft	
Top Logged Interval	26 ft	
Time Started	0700	
Time Finished	1030	
Operator Rig Time	3.5 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	63 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	45 fpm	
Maximum Recorded Temperature	210 degF	
Reference Log	BAKER HUGHES HDIL	
Reference Log Date	29/JUL/15	
Equipment No.	4271	GRAND JCT
Recorded By	FLOYD RENEAU	
Witnessed By	LEWIS CARTER	

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In making interpretations of logs, our employees will give the customer the benefit of their best judgement. But since all interpretations are opinions based on inferences from electrical or other measurements, we cannot, and we do not guarantee the accuracy or correctness of any interpretation. We shall not be liable or responsible for any loss, cost, damages, or expenses whatsoever incurred or sustained by the customer resulting from any interpretation made by any of our employees.

Borehole Record		
Bit Size	From	To
13.5 In	0 ft	660 ft
7.75 In	660 ft	6587 ft

Casing Record				
Size	Weight	Grade	From	To
9.825 In			0 ft	660 ft
4.5 In	11.8 lbm/ft	I-80	0 ft	6587 ft

Remarks
All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes HDIL/ZDL/CN/GR open hole log dated 7/29/2013 at the clients request.
The amount of linear shift is 12 feet.
The depth matching process creates potential for collar lengths to vary from those recorded on other cased hole wireline units without a Gamma Ray reference.

BHT = 210°F

SJ = 3518'–3542'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10124106	CENT
1	1	GR	1355XA	10580209	CENT

PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	50.187	6579.000
RAL	Amp Gate Start Near	195.000	usec	50.187	6579.000
RAL	Amp Gate Start Radial	195.000	usec	50.187	6579.000
RAL	Amp Gate Width Far	25.000	usec	50.187	6579.000
RAL	Amp Gate Width Near	25.000	usec	50.187	6579.000
RAL	Amp Gate Width Radial	25.000	usec	50.187	6579.000
RAL	casing od	4.500	inches	50.187	6579.000
RAL	casing wt	11.600	lbm/ft	50.187	6579.000
RAL	FB Start Far	291.900	usec	50.187	6579.000
RAL	FB Start Near	175.391	usec	50.187	6579.000
RAL	FB Start Radial	175.391	usec	50.187	6579.000
RAL	FB Thresh Far	10.000	mv	50.187	6579.000
RAL	FB Thresh Near	4.000	mv	50.187	6579.000
RAL	FB Thresh Radial	4.000	mv	50.187	6579.000
RAL	Fluid Travel Time	200.000	usec/ft	50.187	6578.812

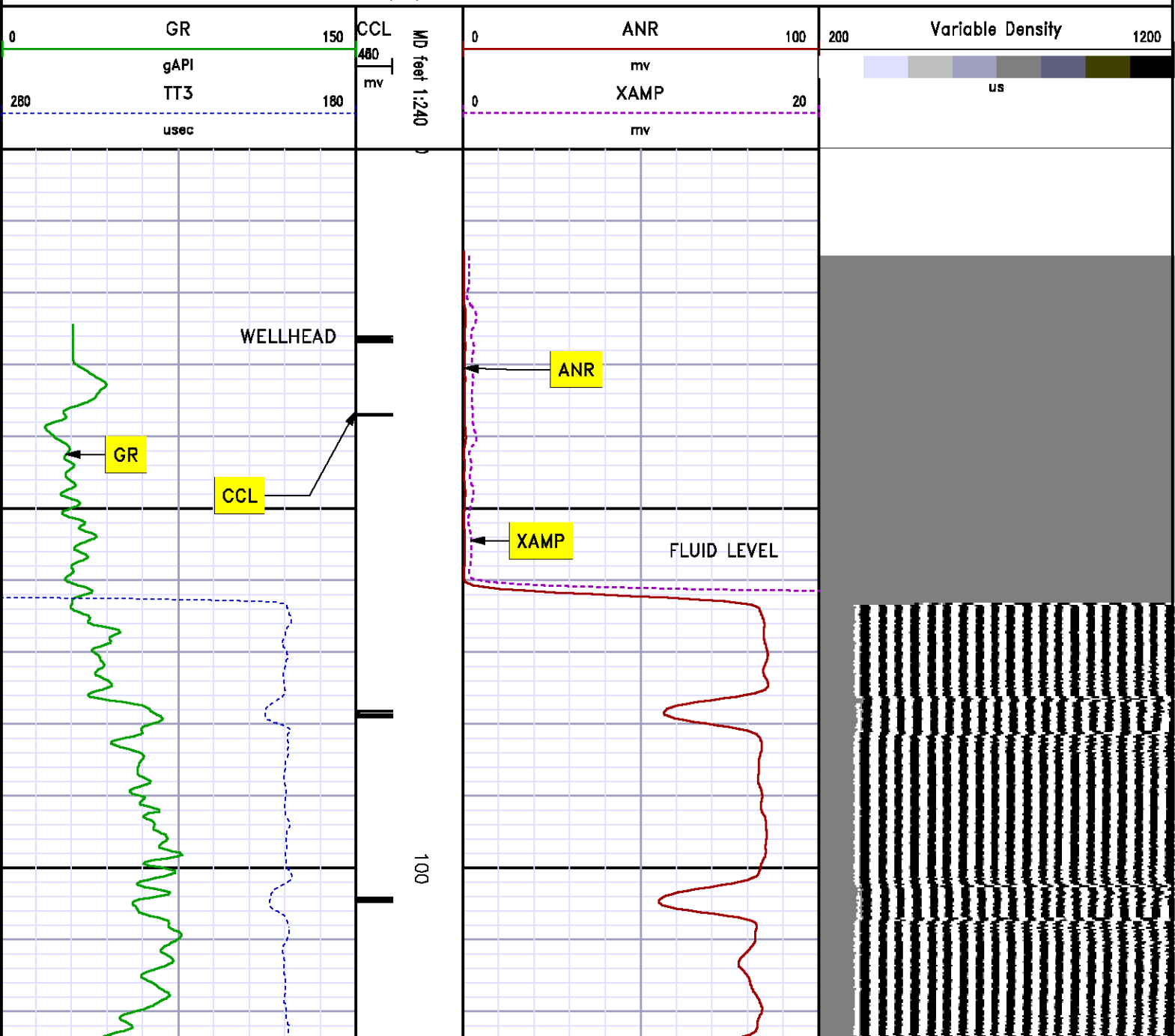
DEPTH OFFSETS
(for Acquired Curves)

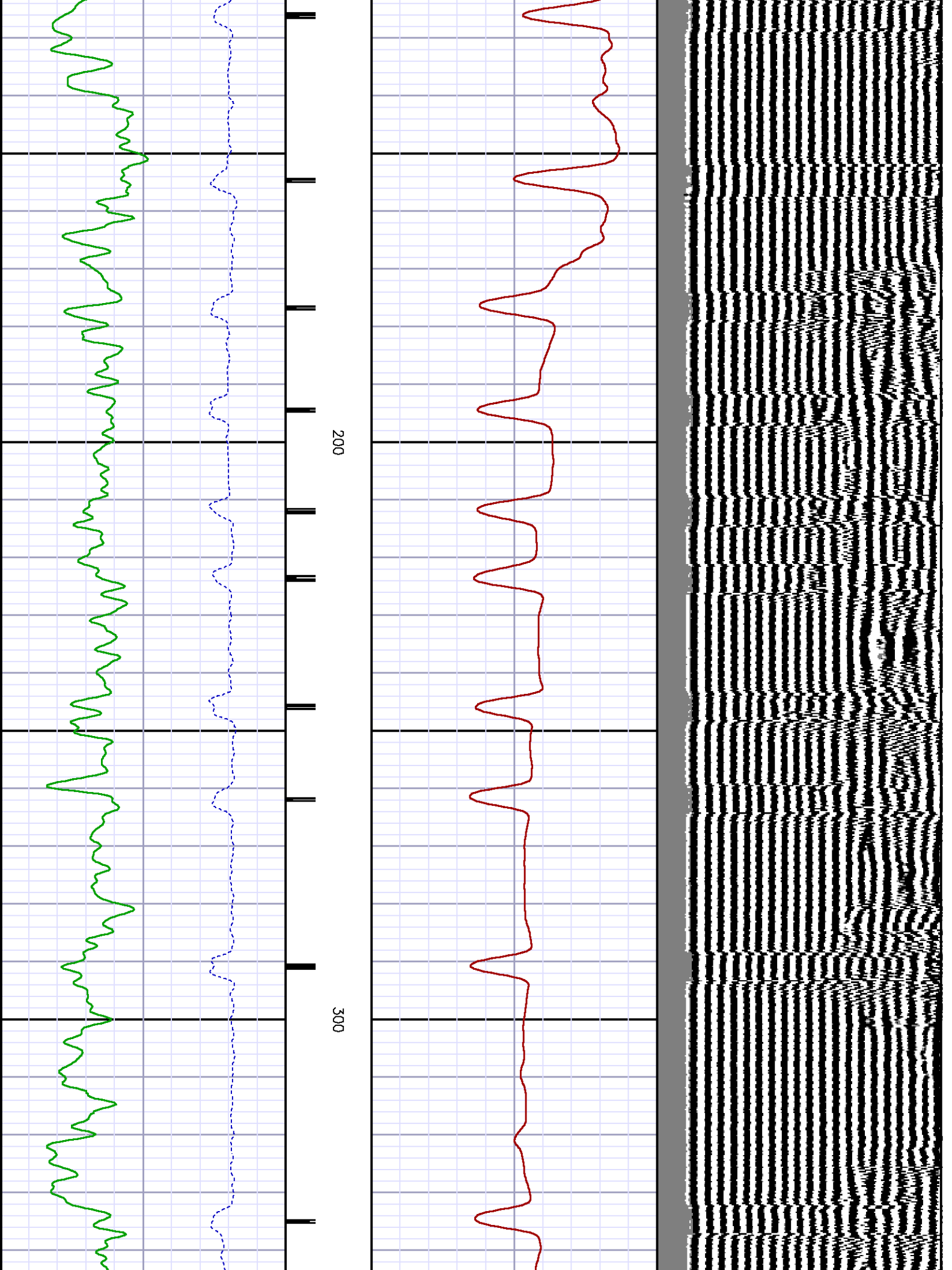
SERIES	DEPTH OFFSET	ACQUIRED CURVES
1426XA	14.000	121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

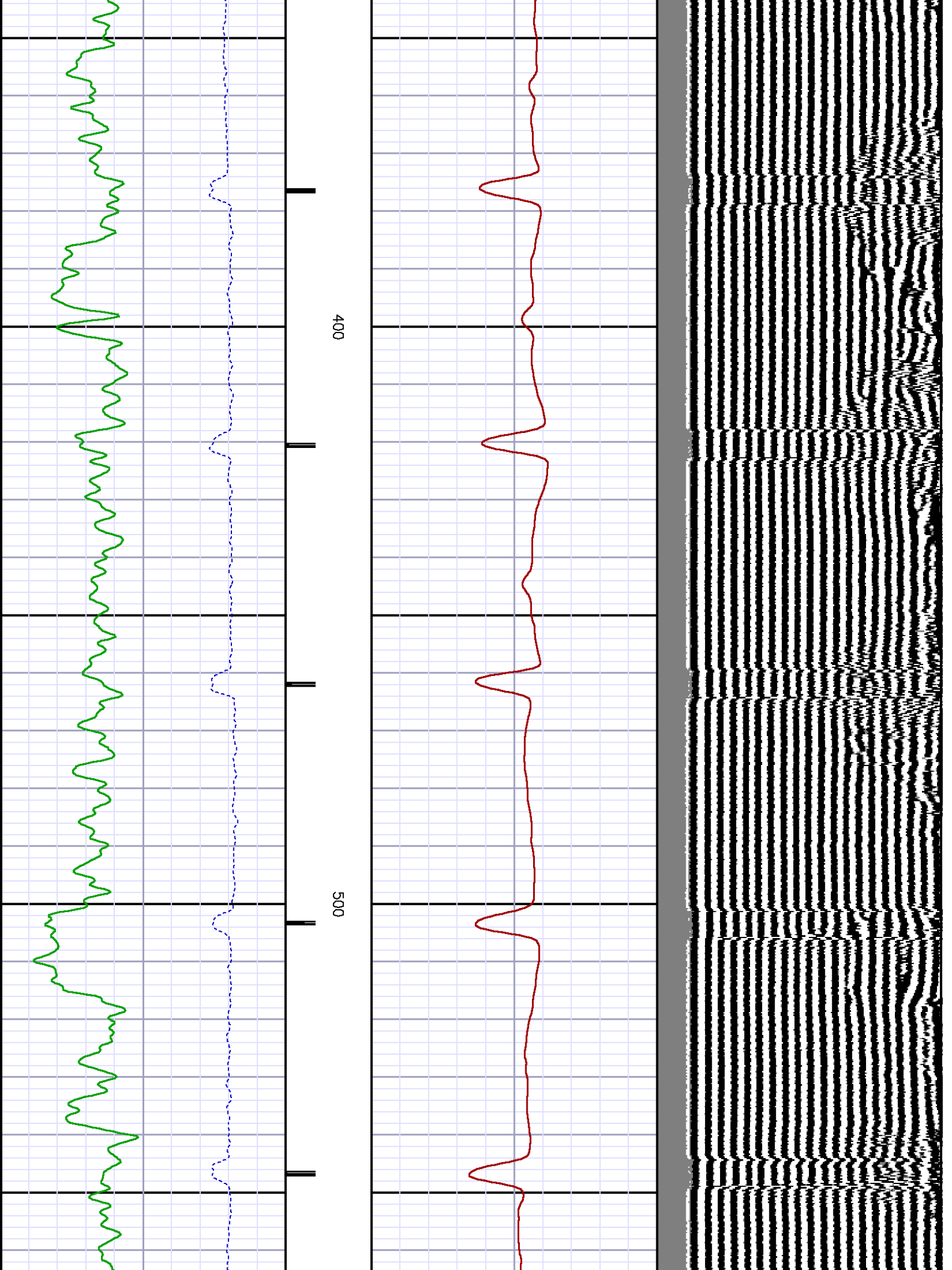
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 1426XA -10.040
 1355XA -5.620
 1355XA -1.500
 1355XA 0.000

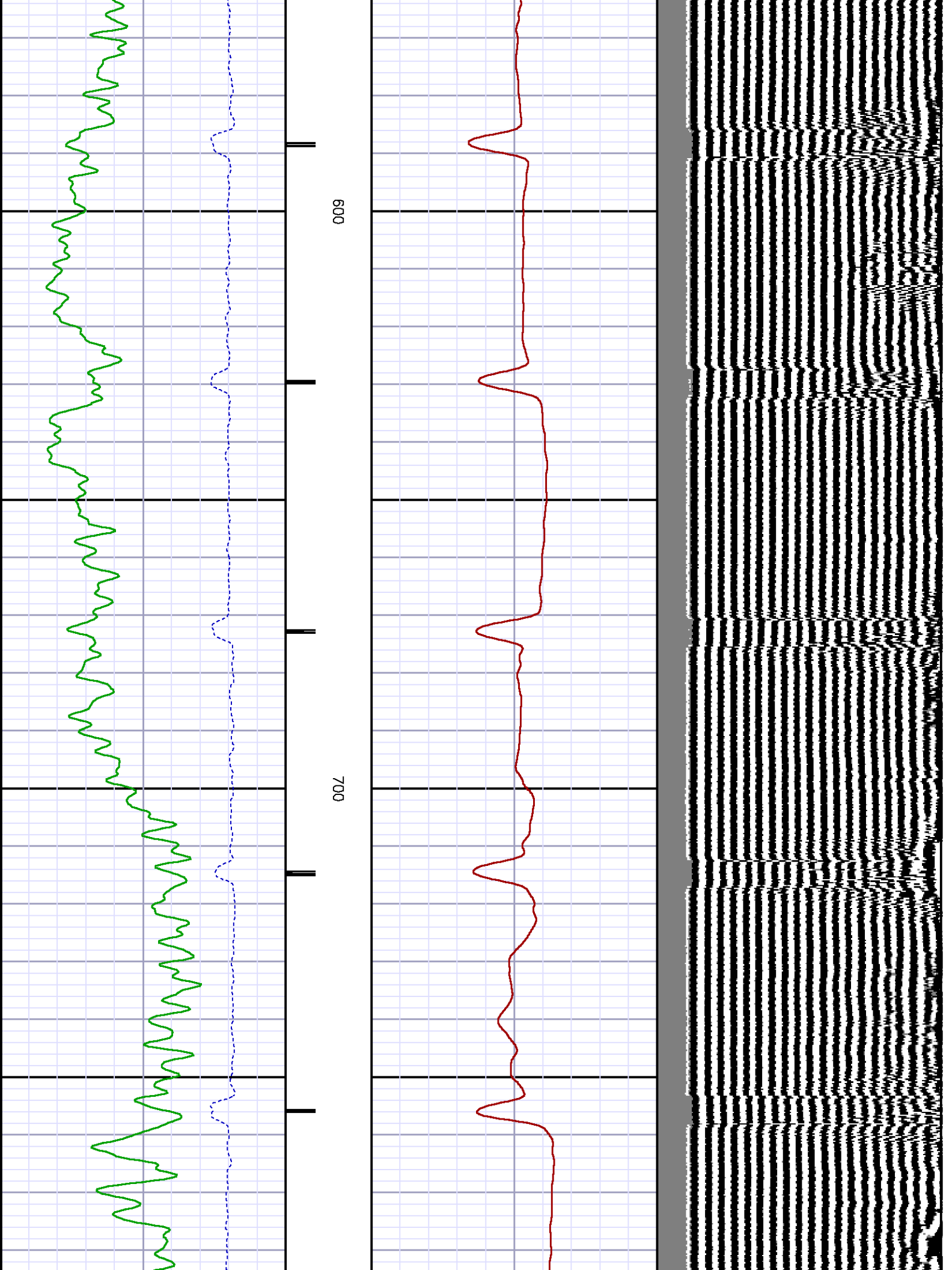
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FPR3	FPR5	TT3	TTR1	TTR2	TTR3
TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
AFAR	SIG	TT5			
CCL					
GR					
TEMP					

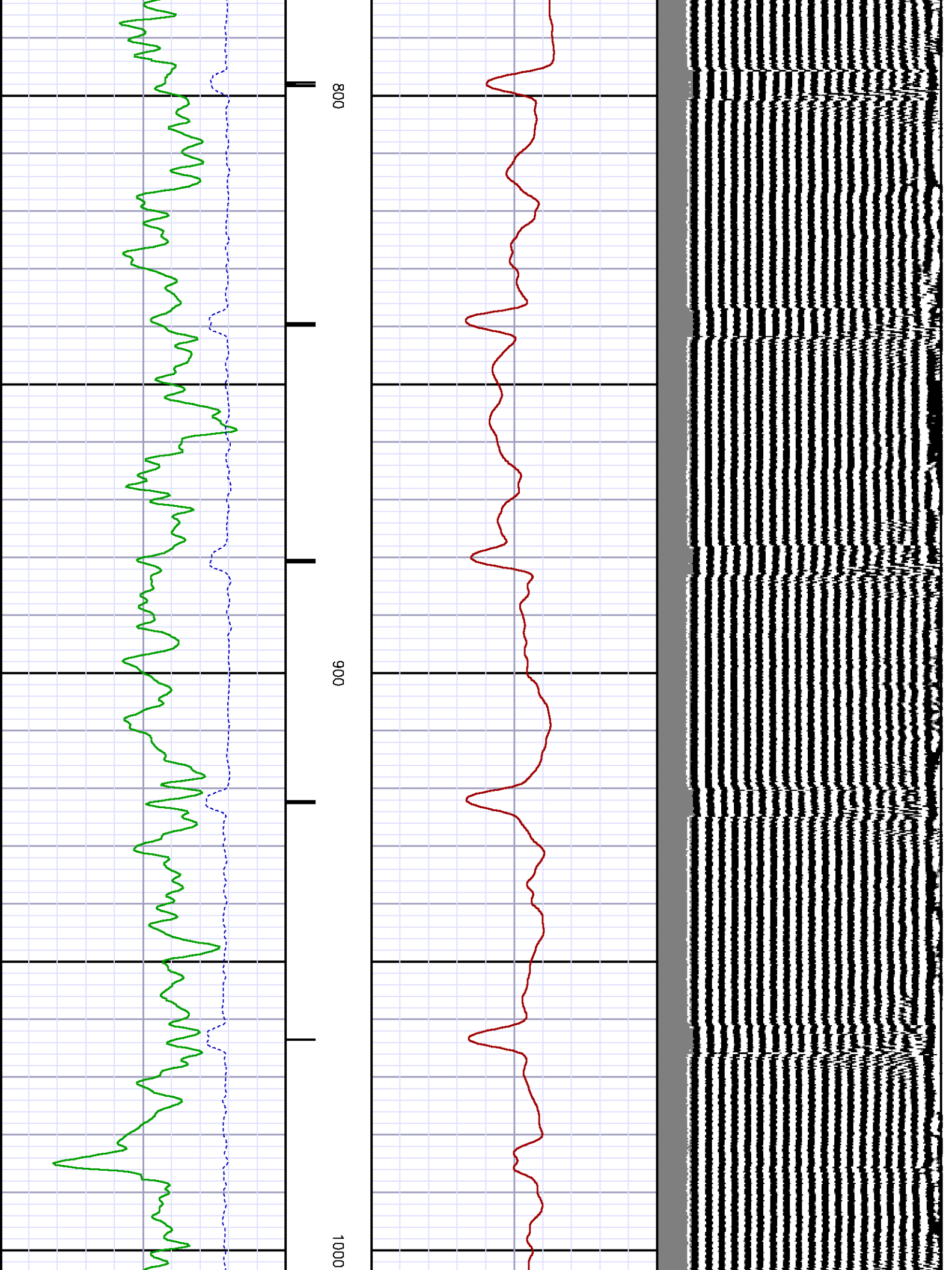
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 Well : WPX ENERGY GM 423-34
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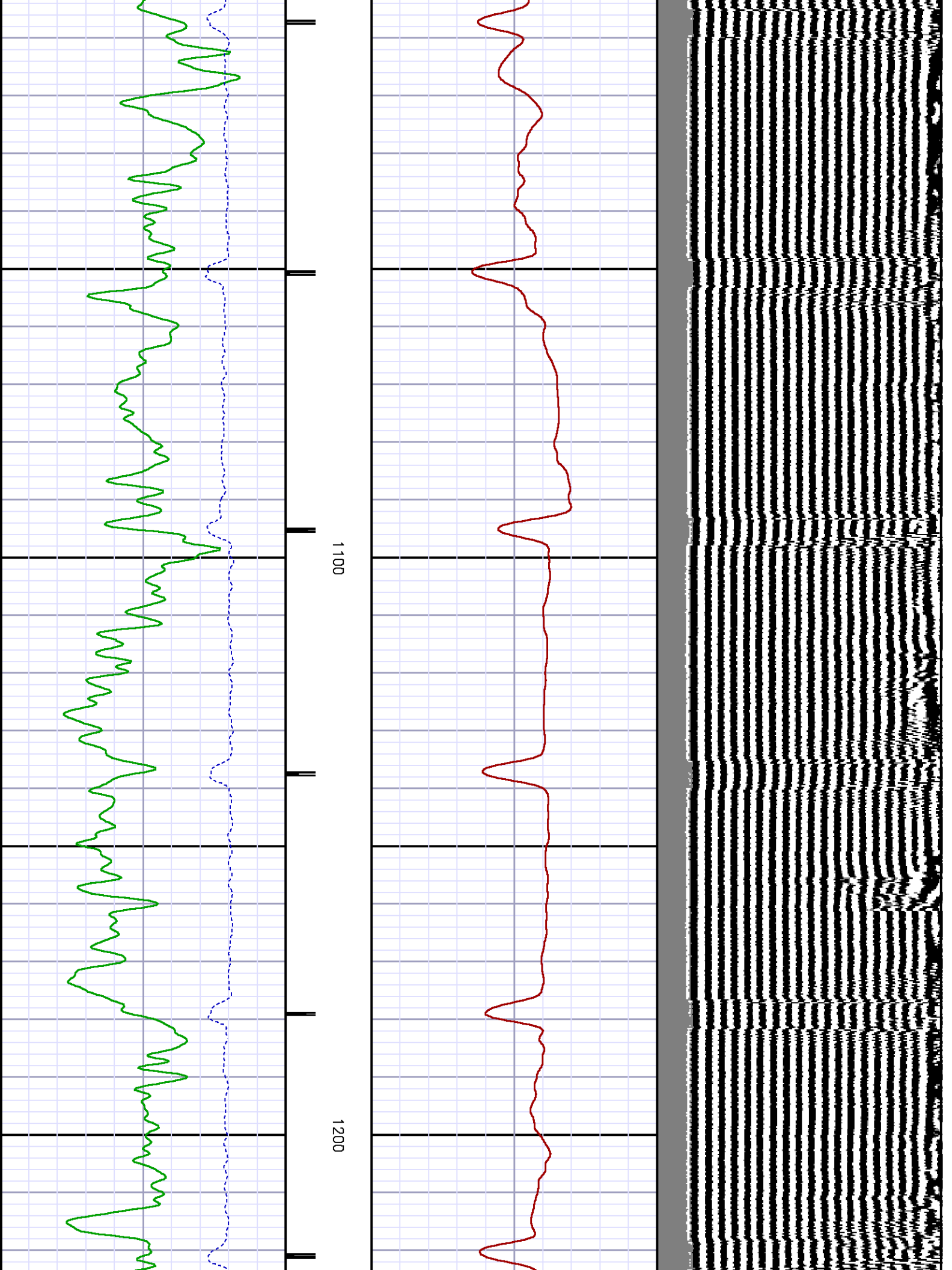


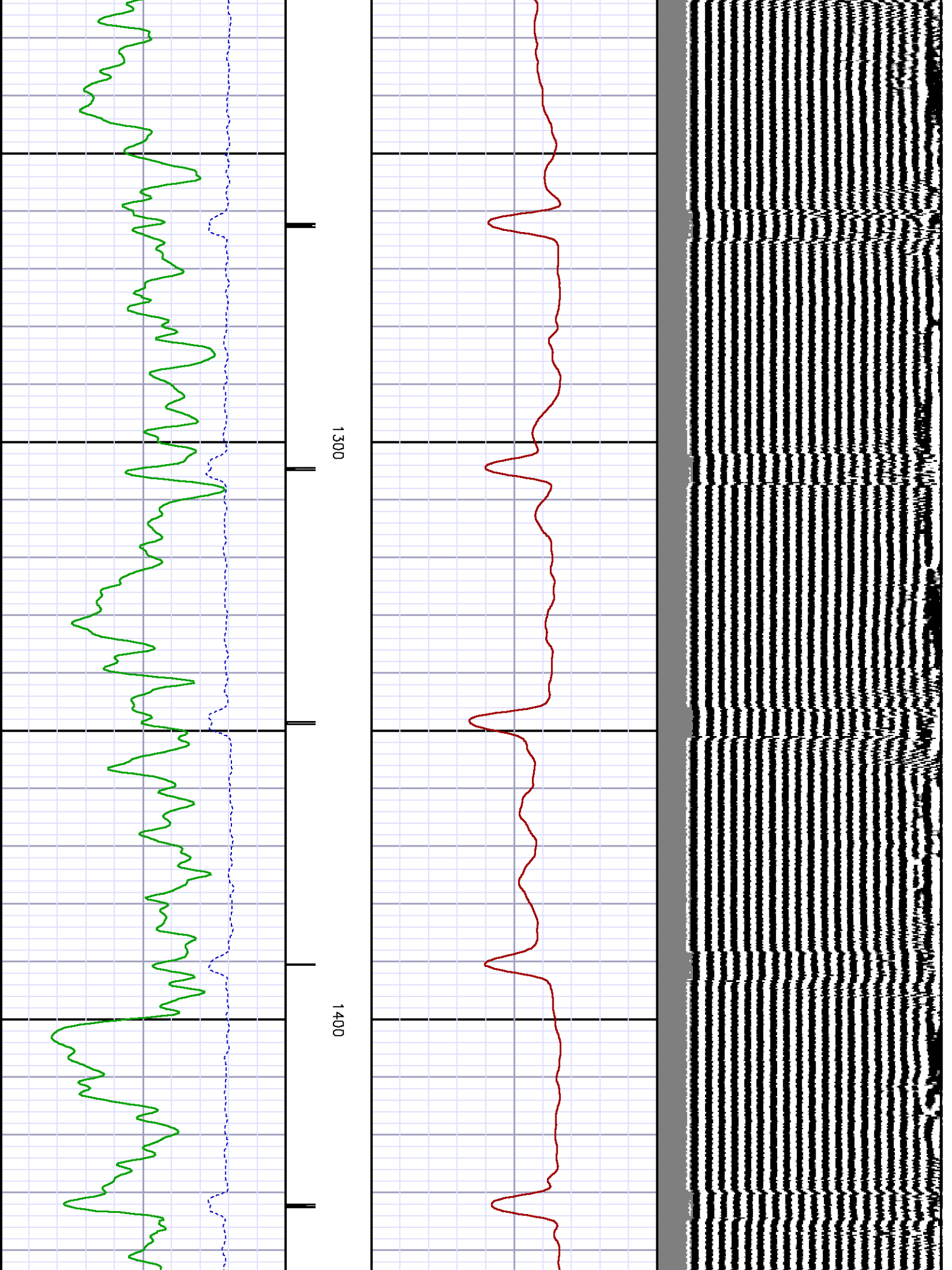


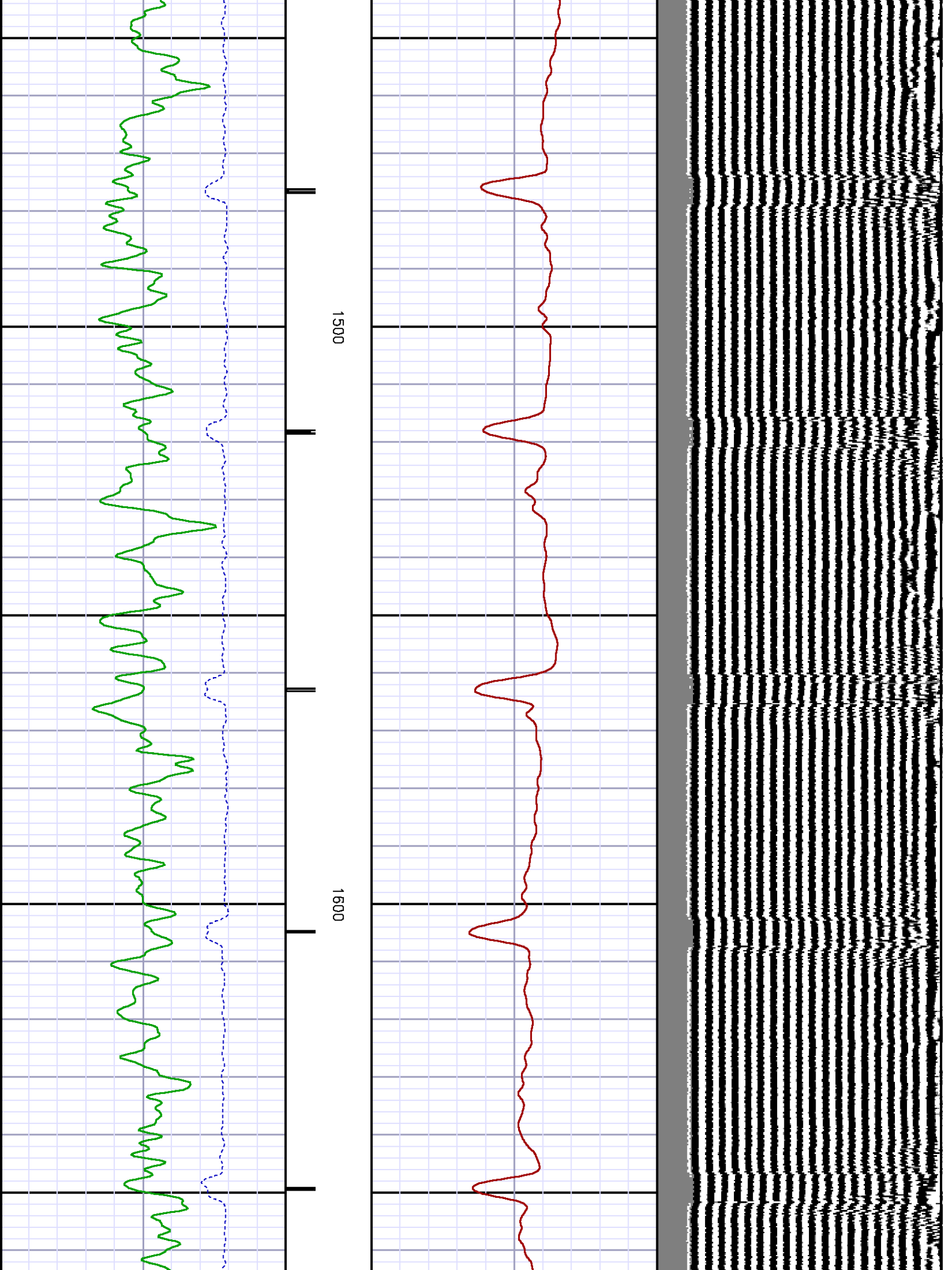


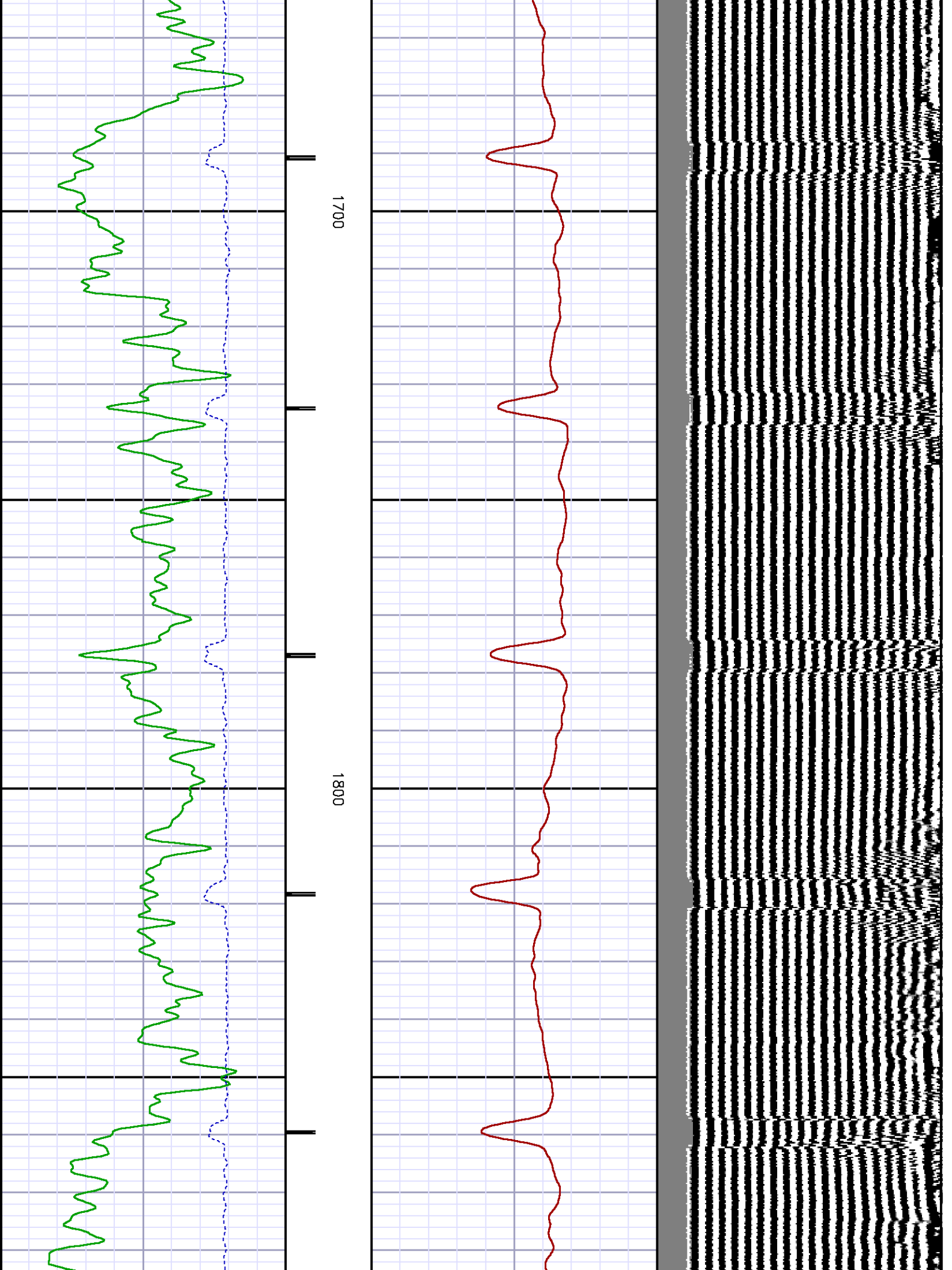


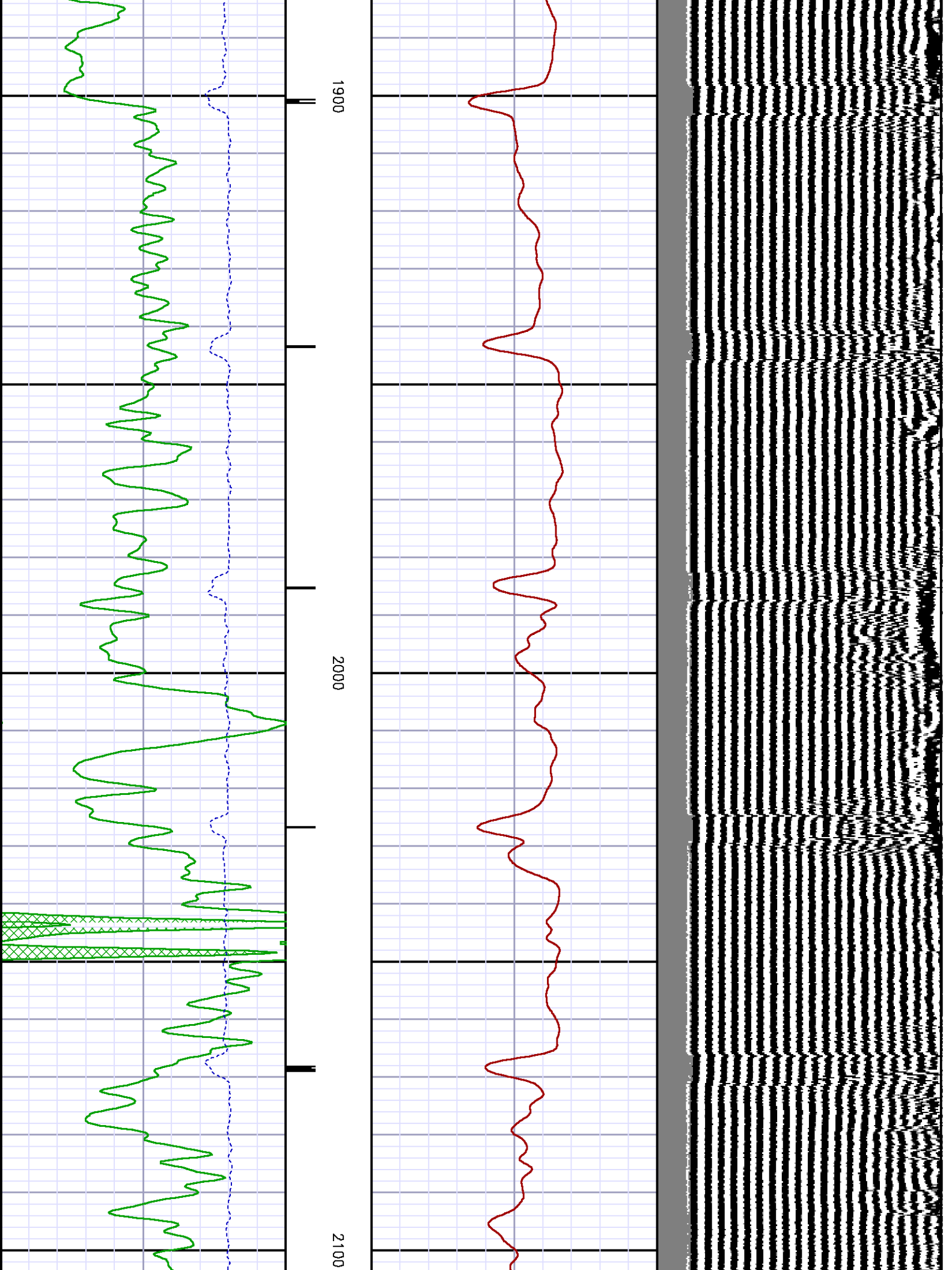


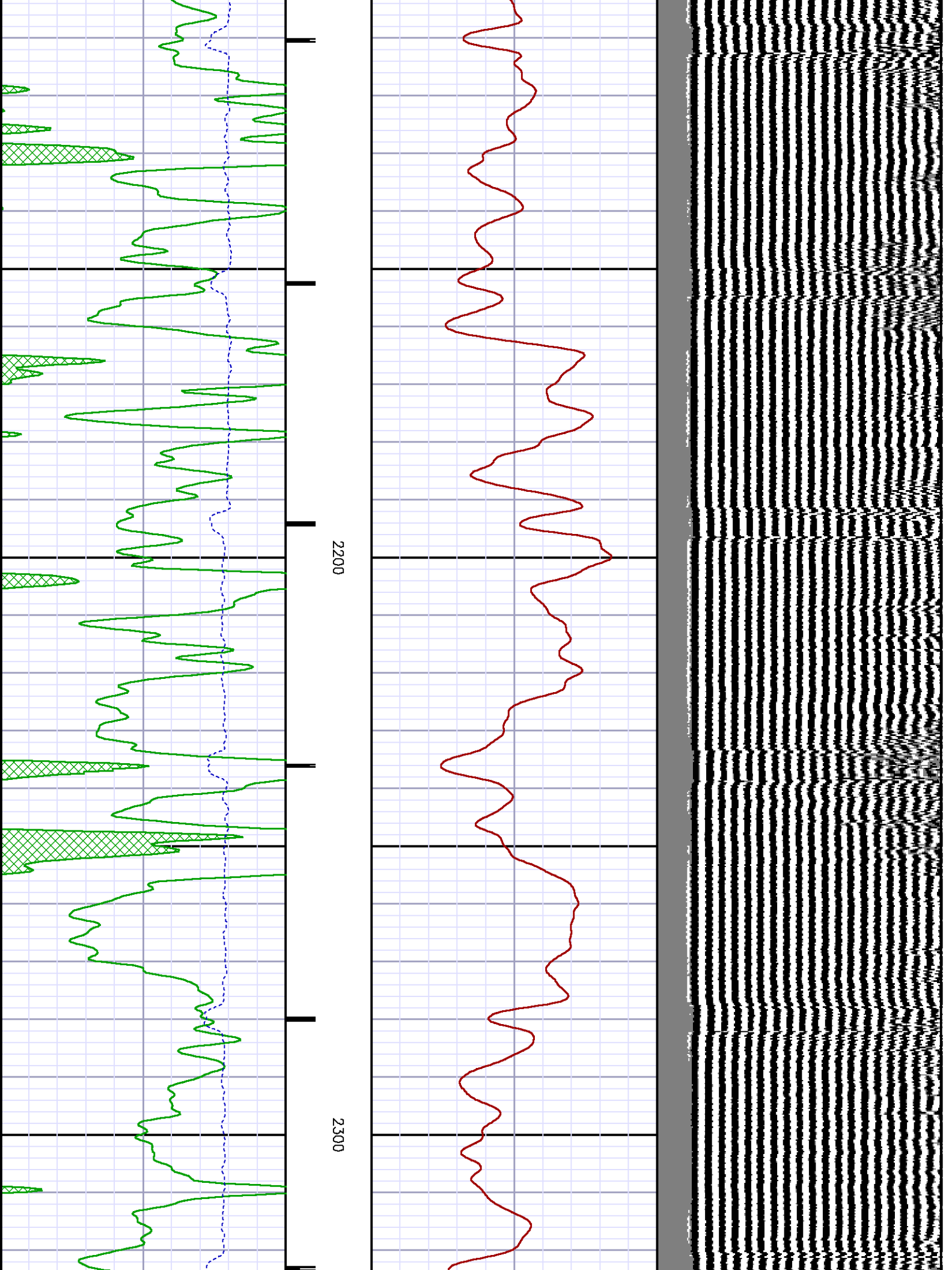


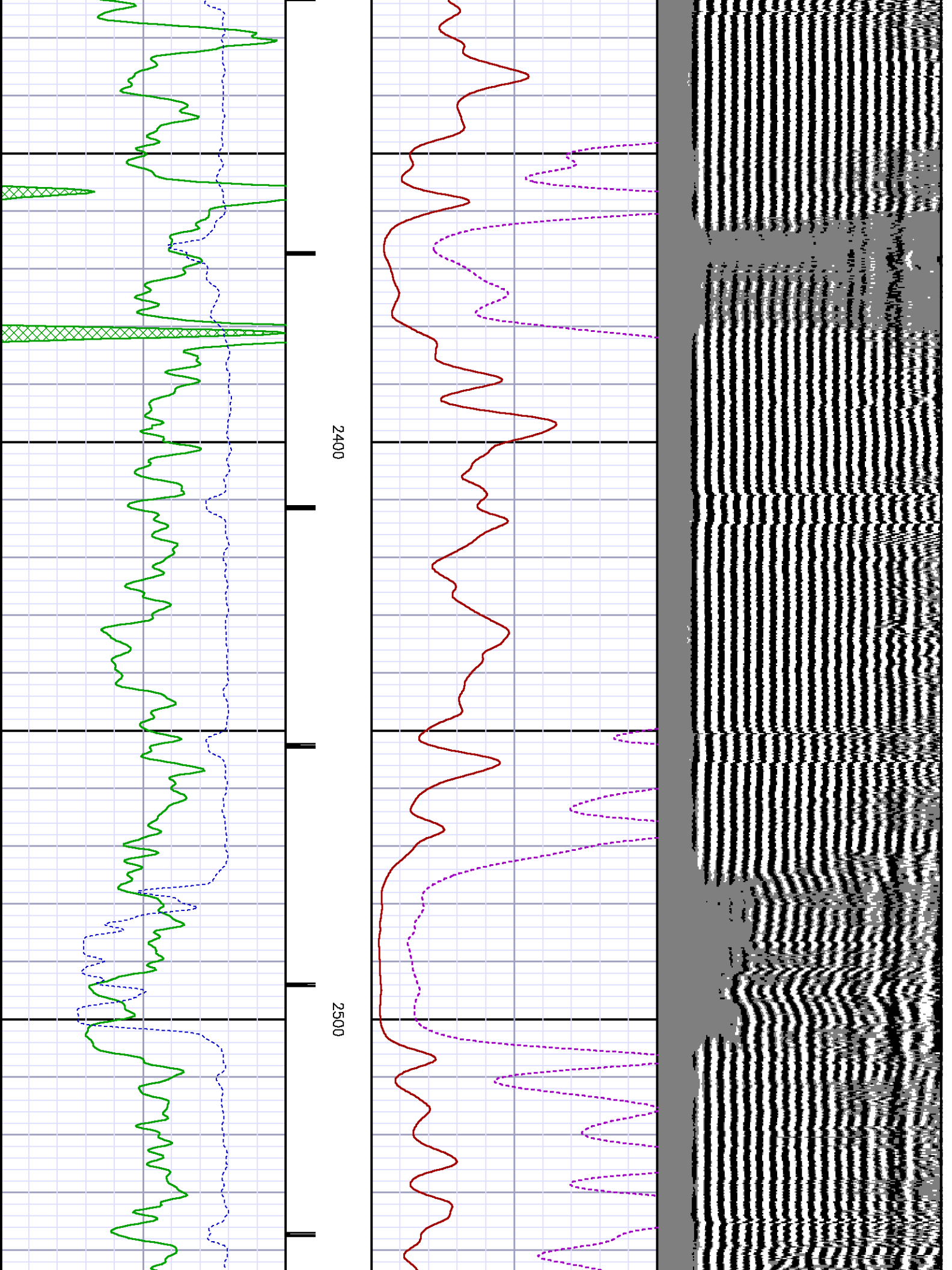


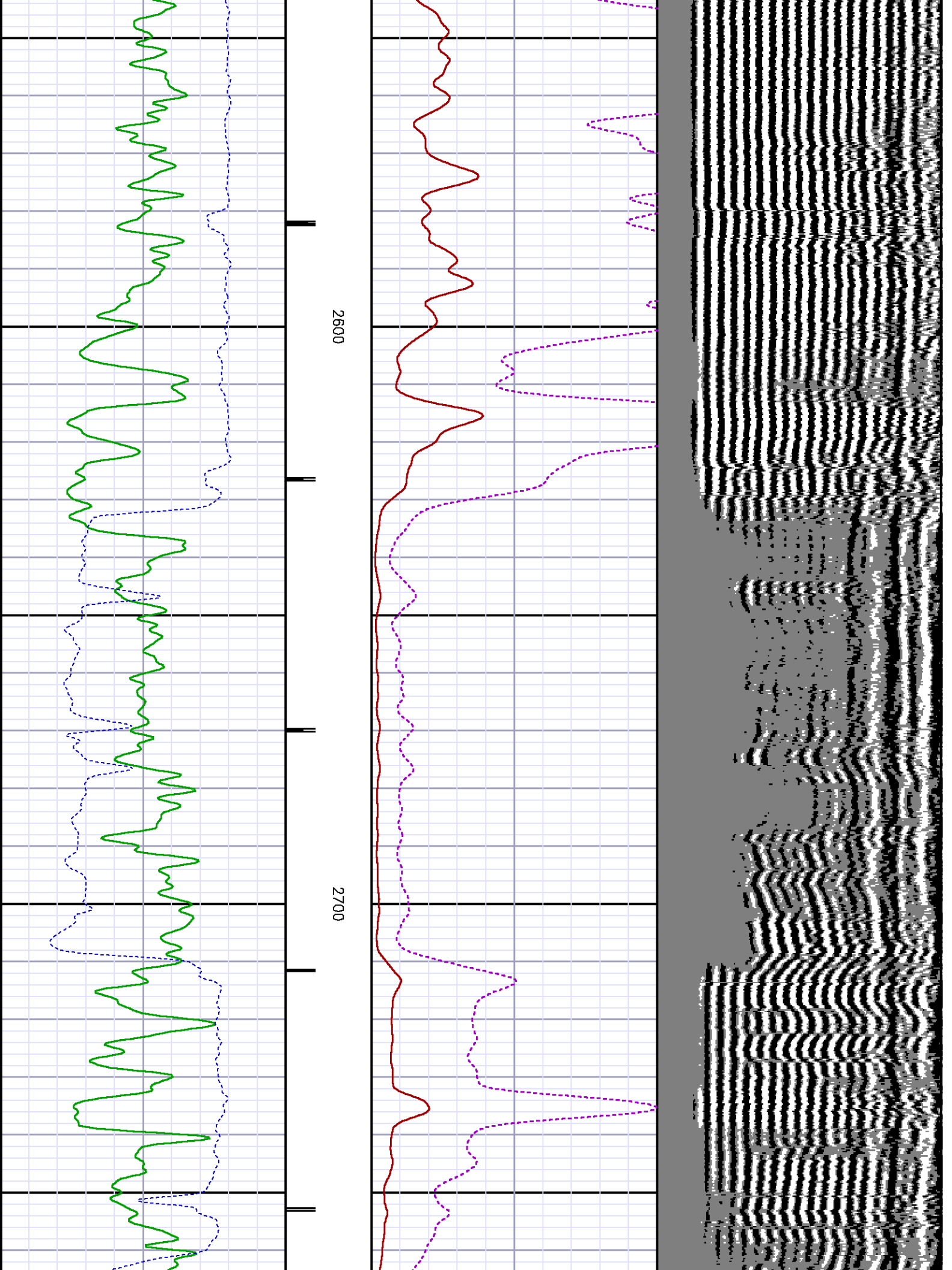


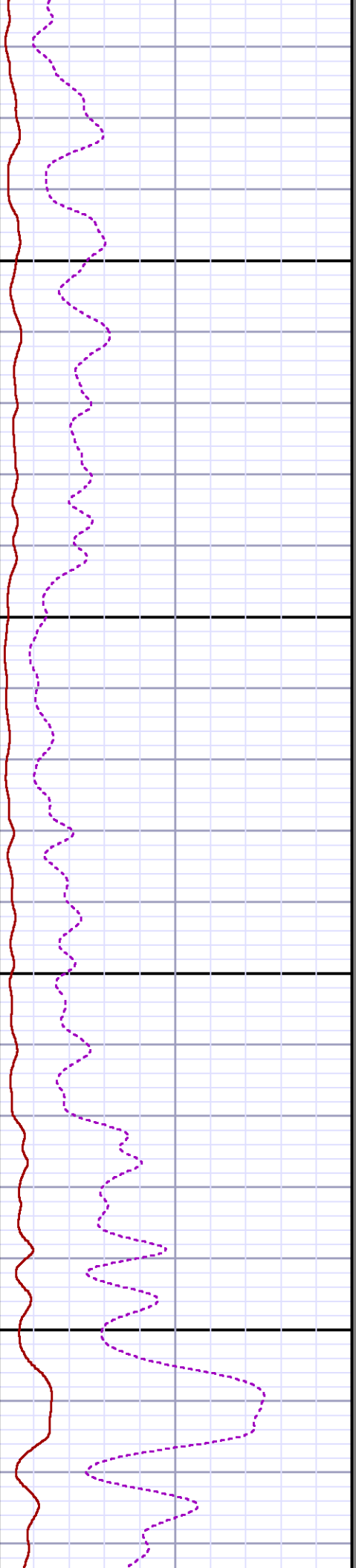
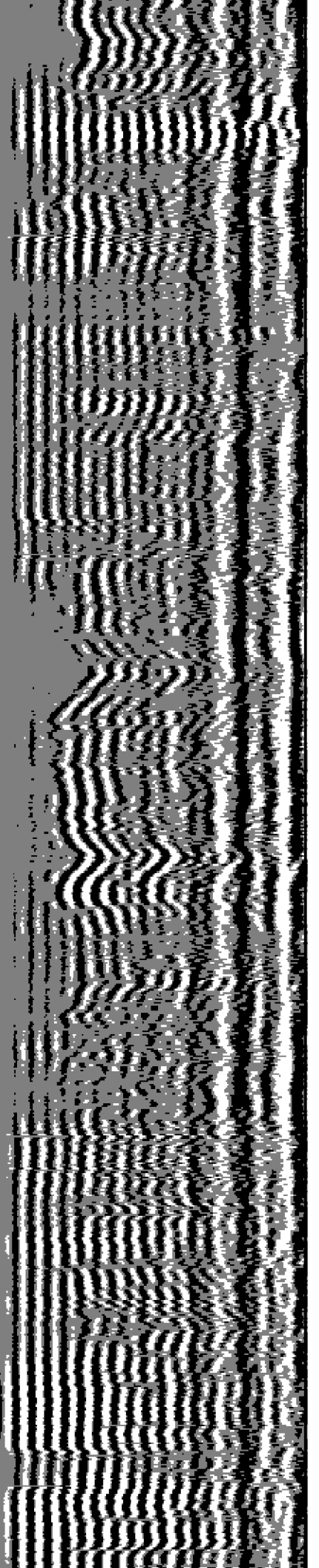






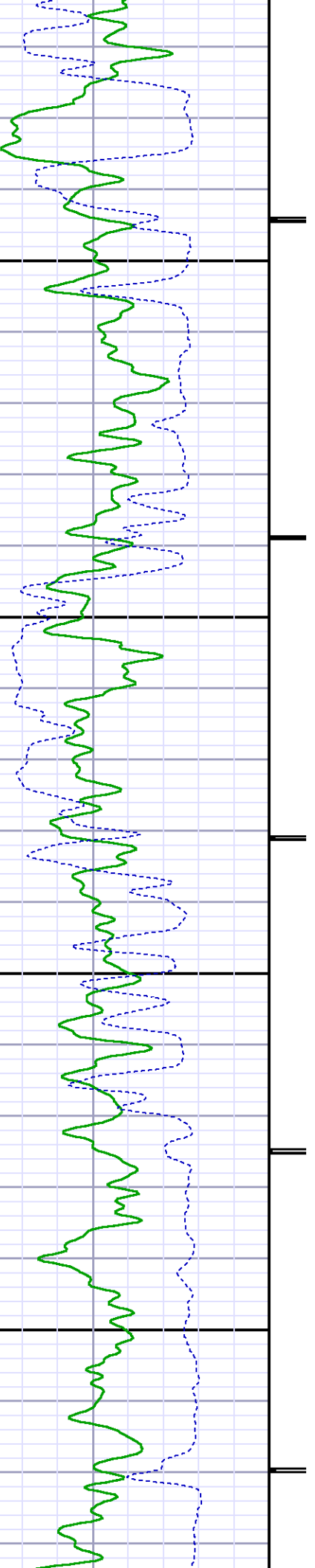


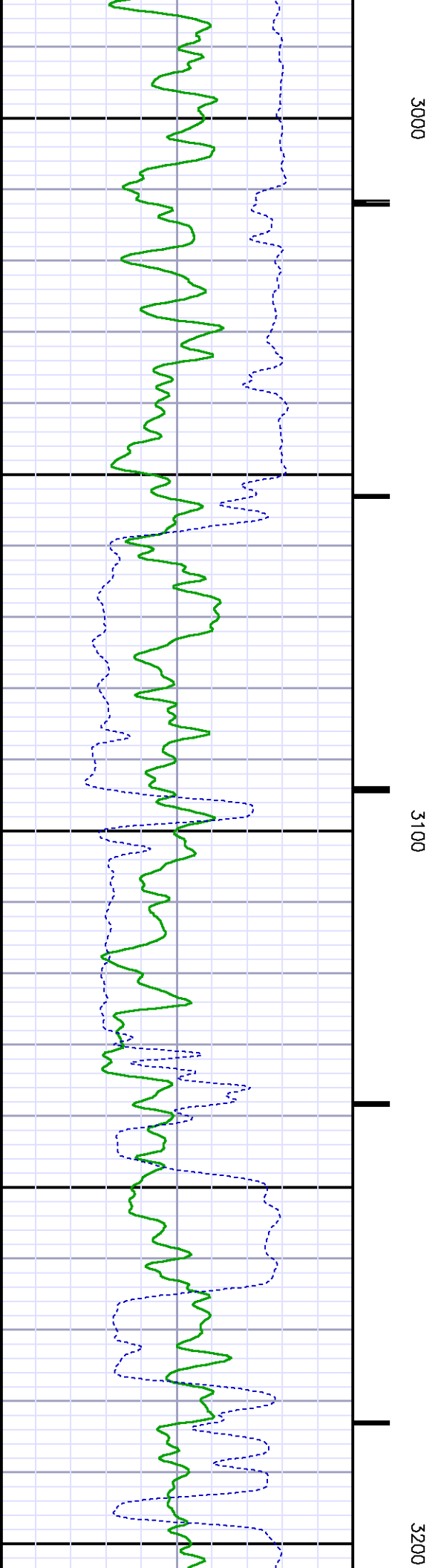
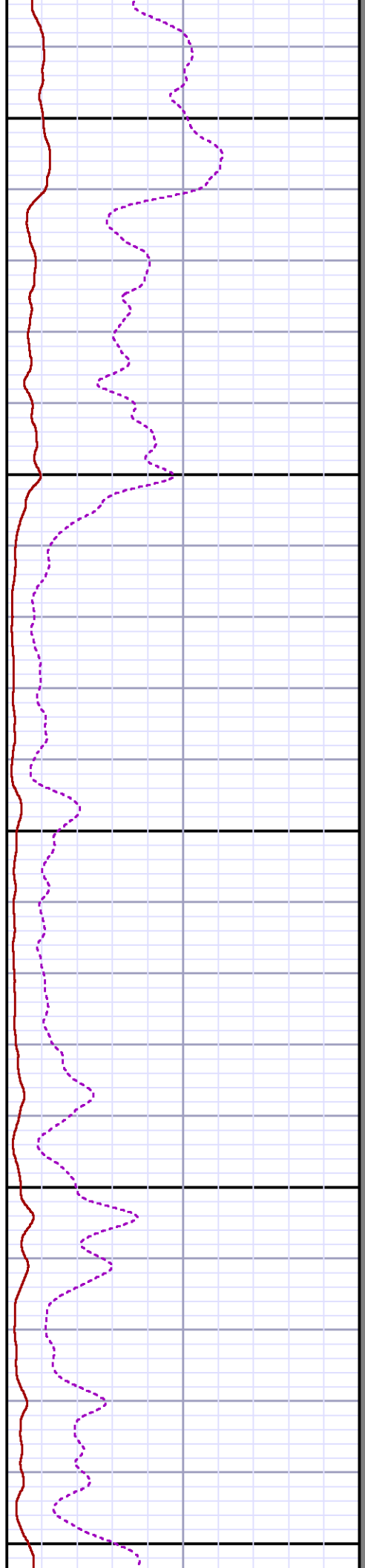
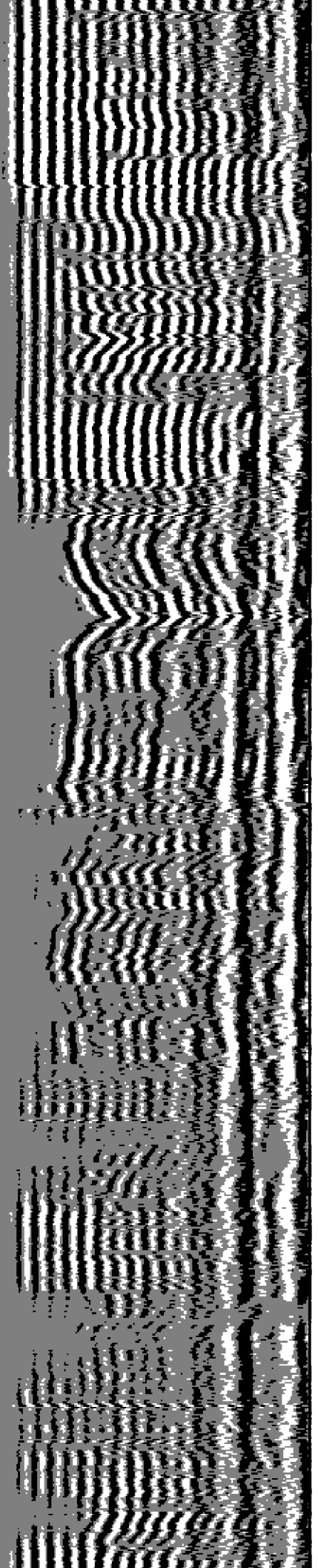


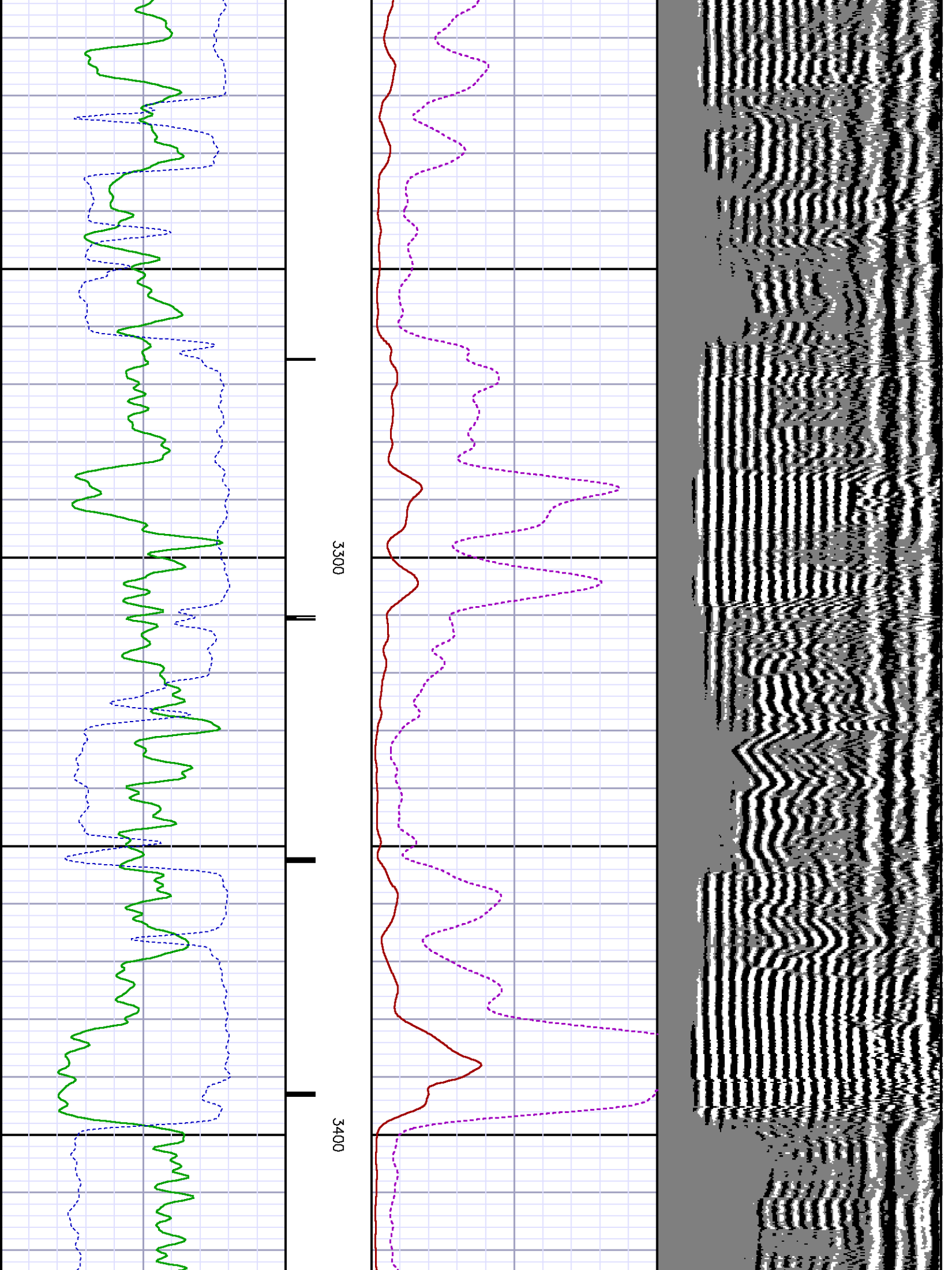


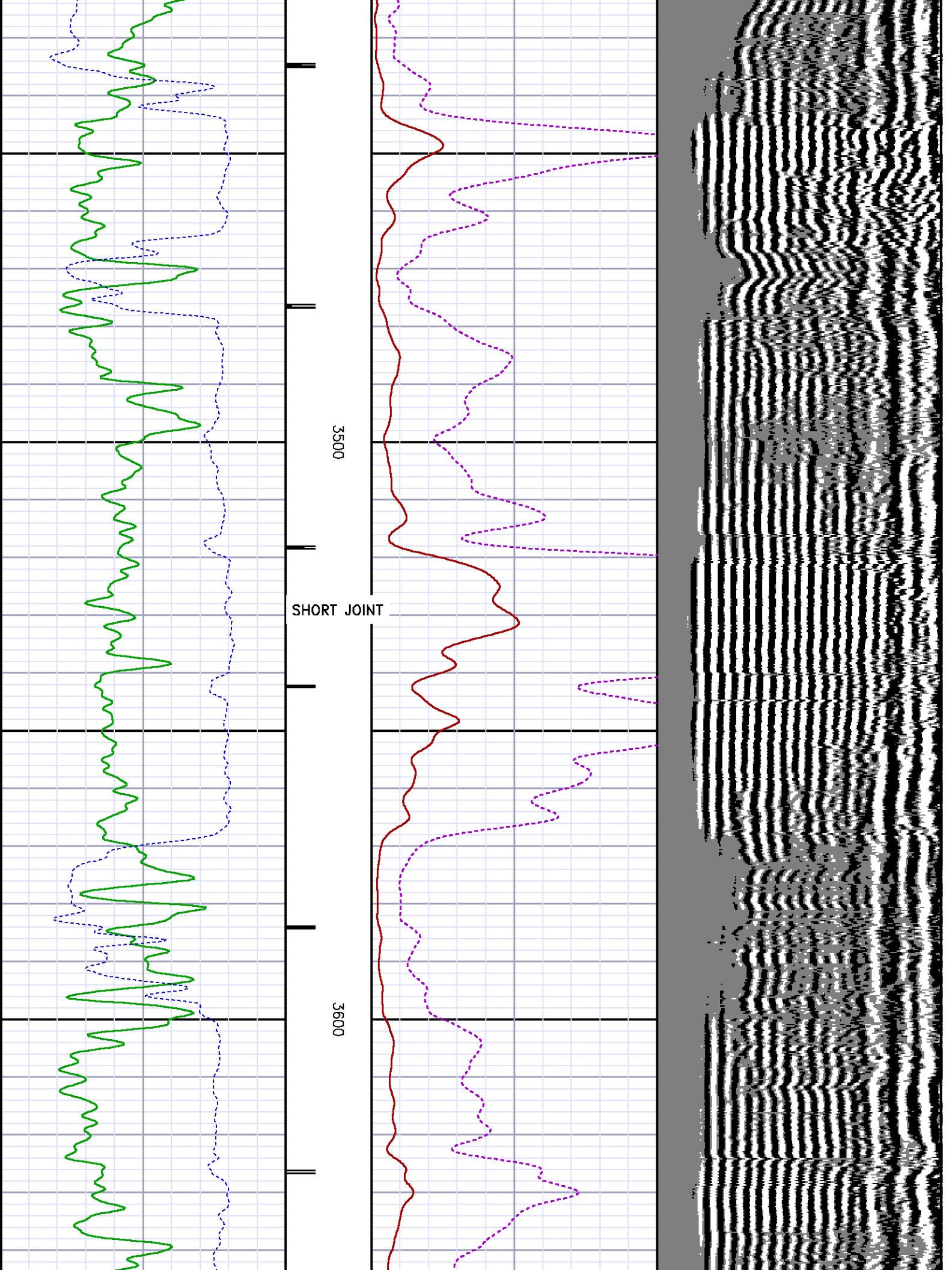
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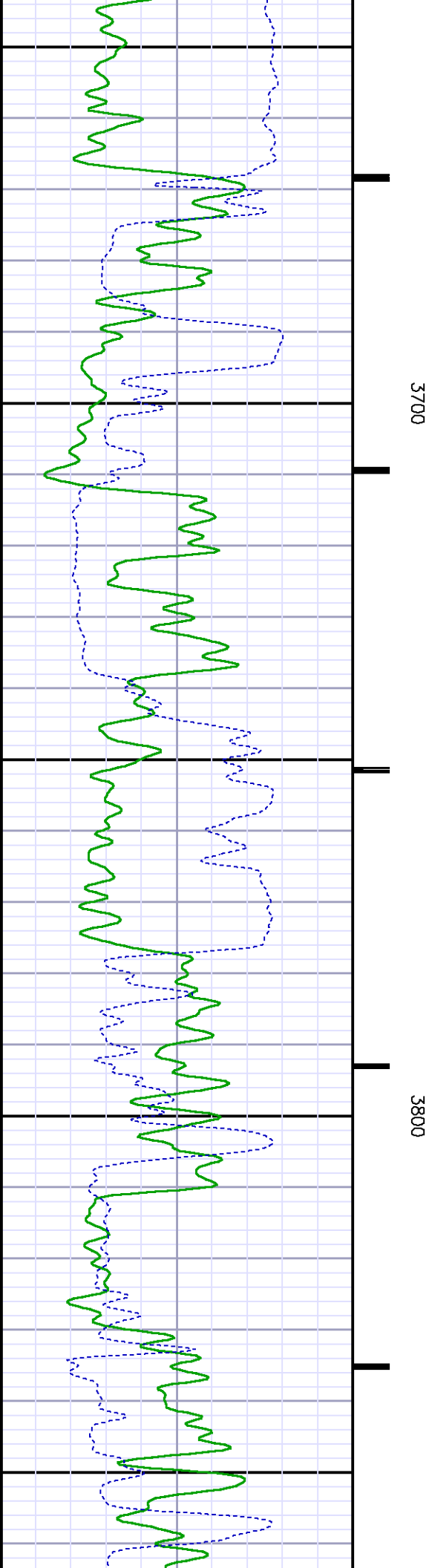
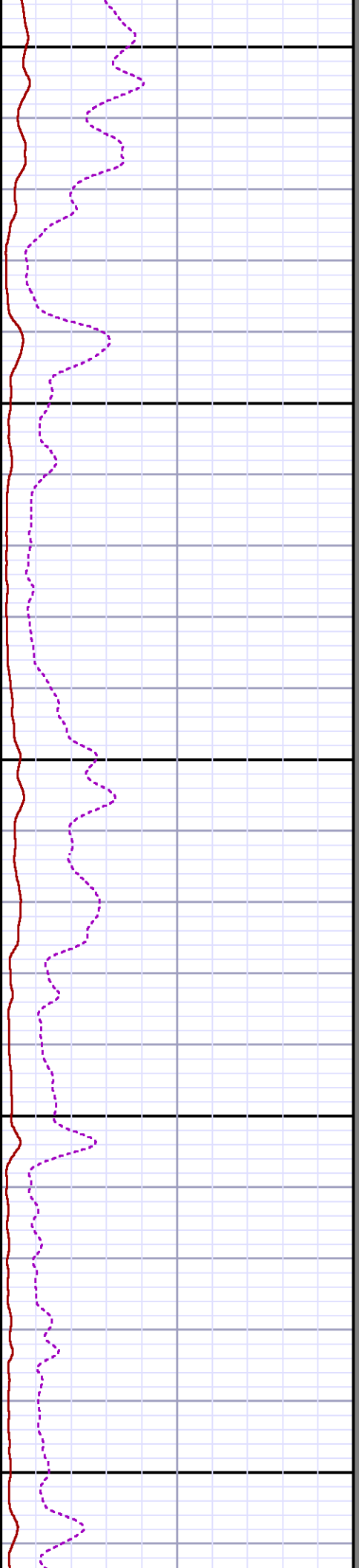
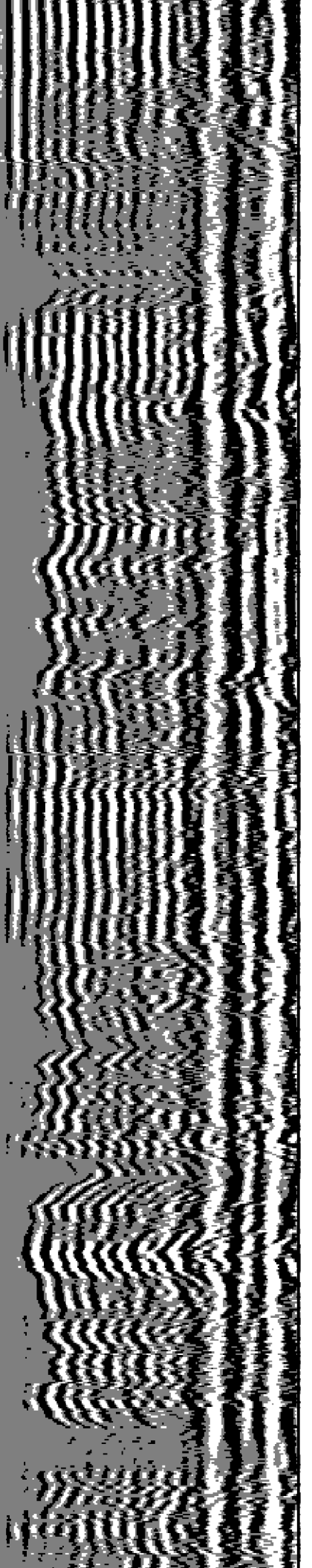
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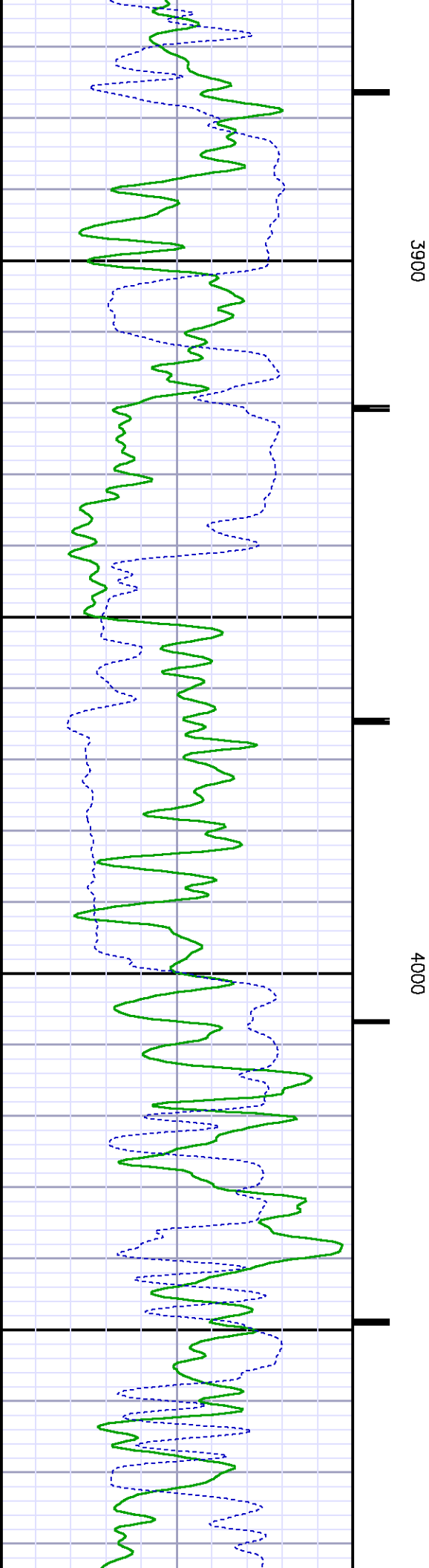
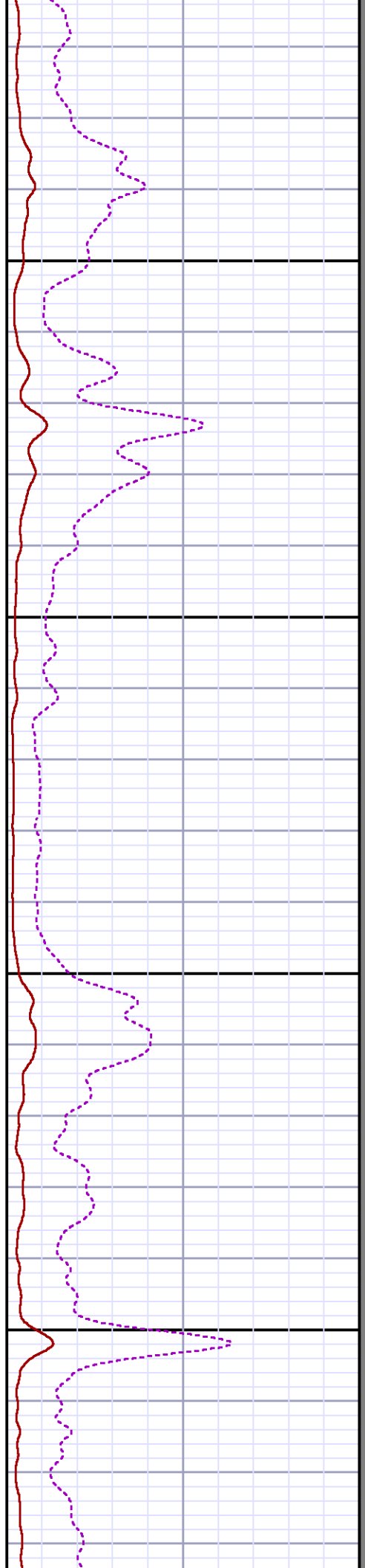
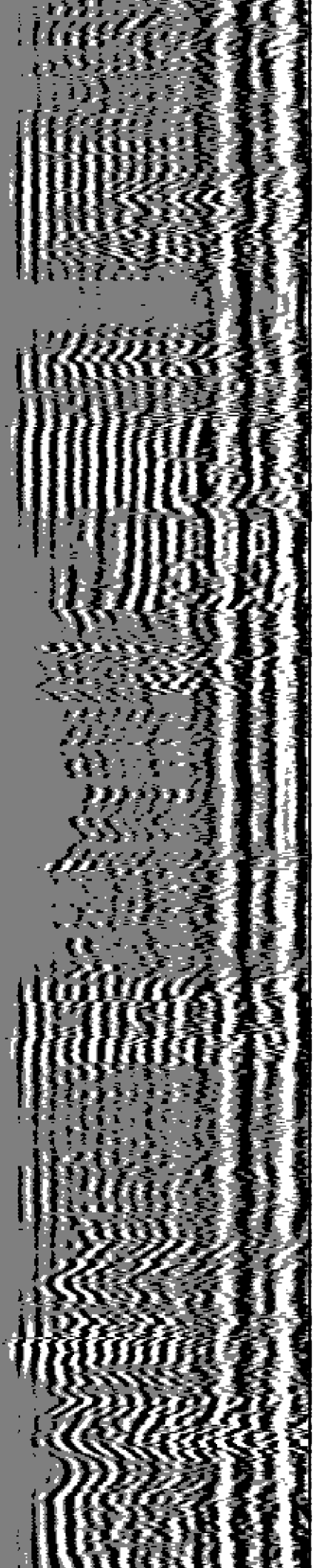


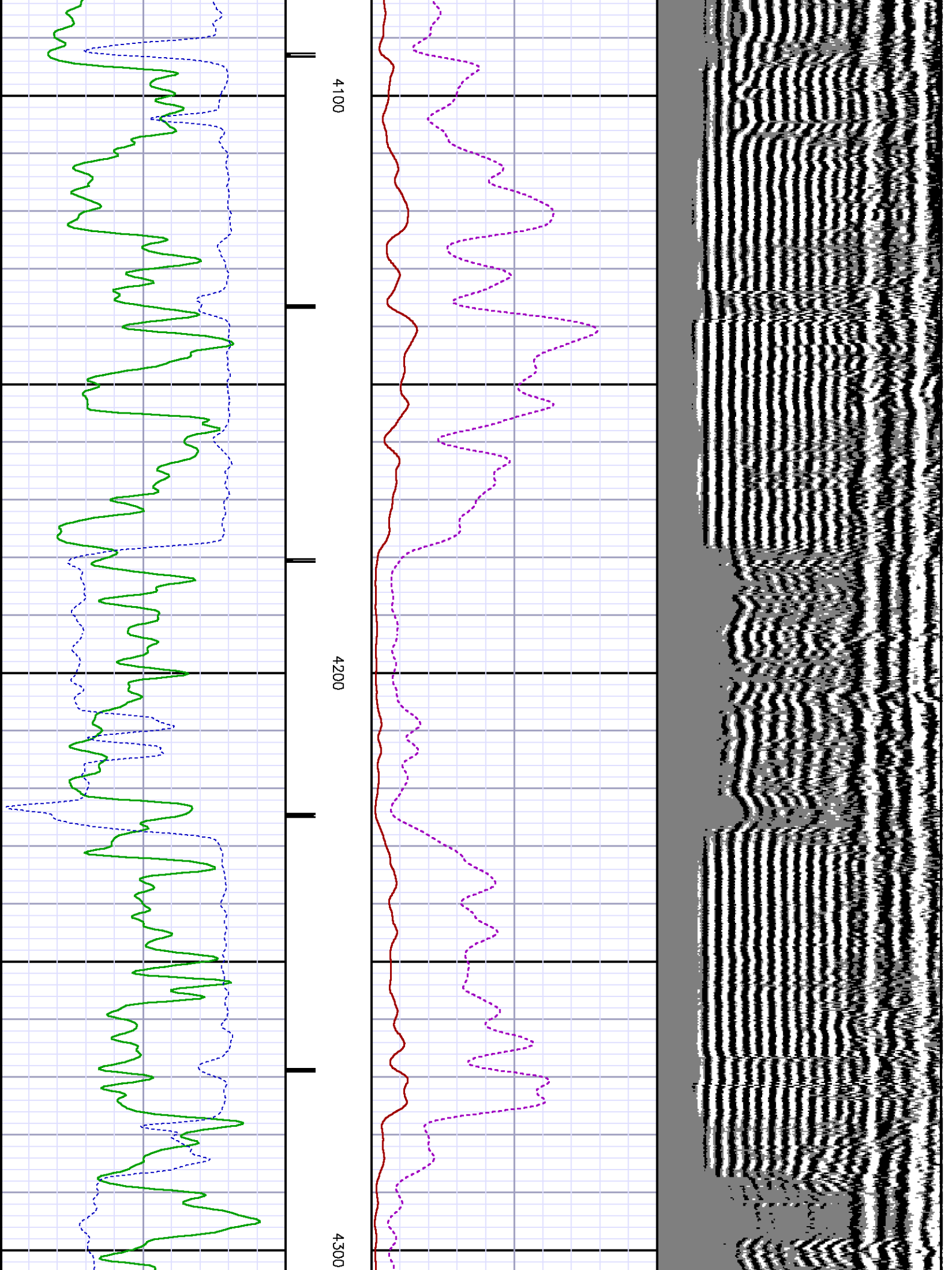


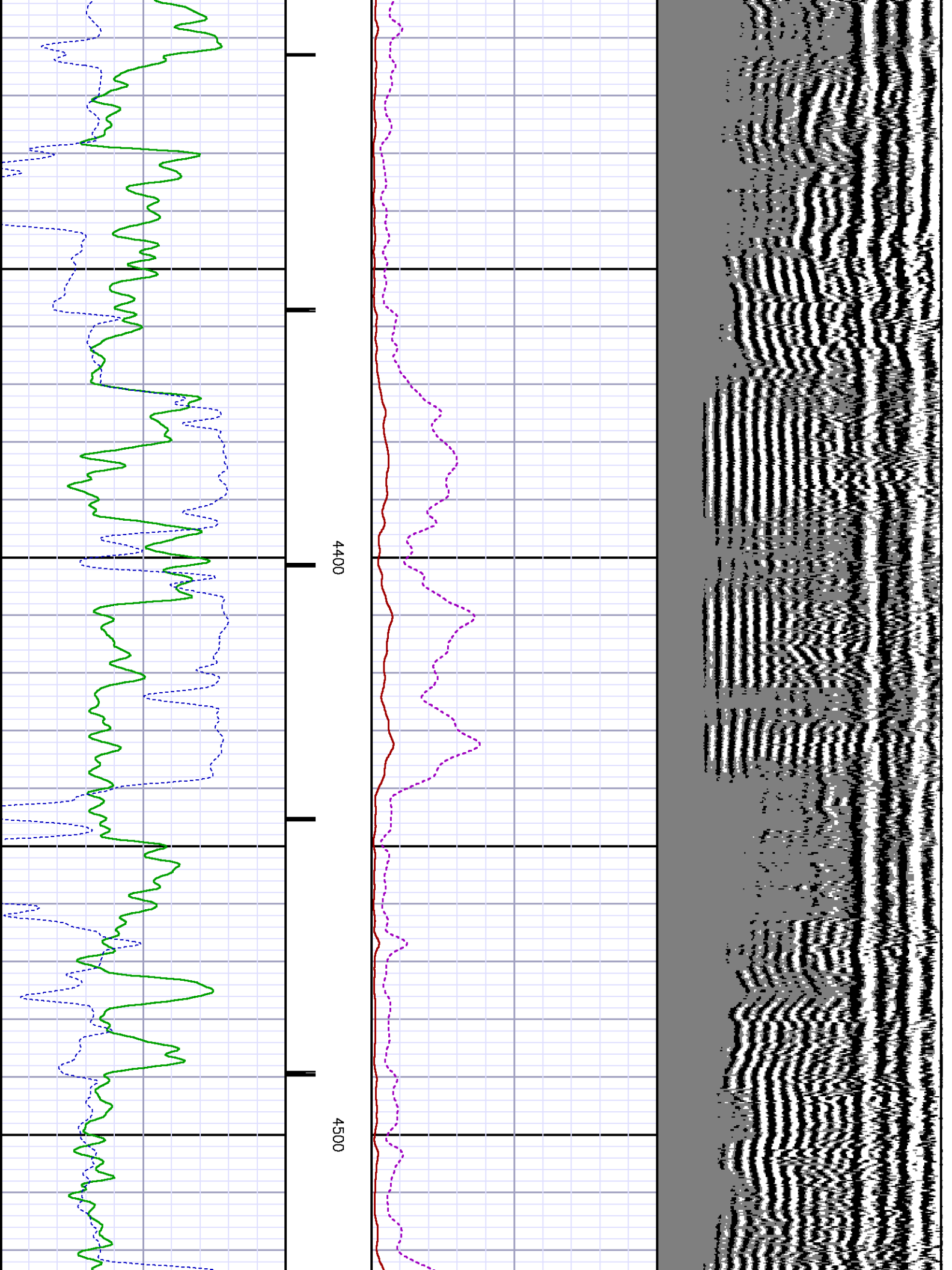


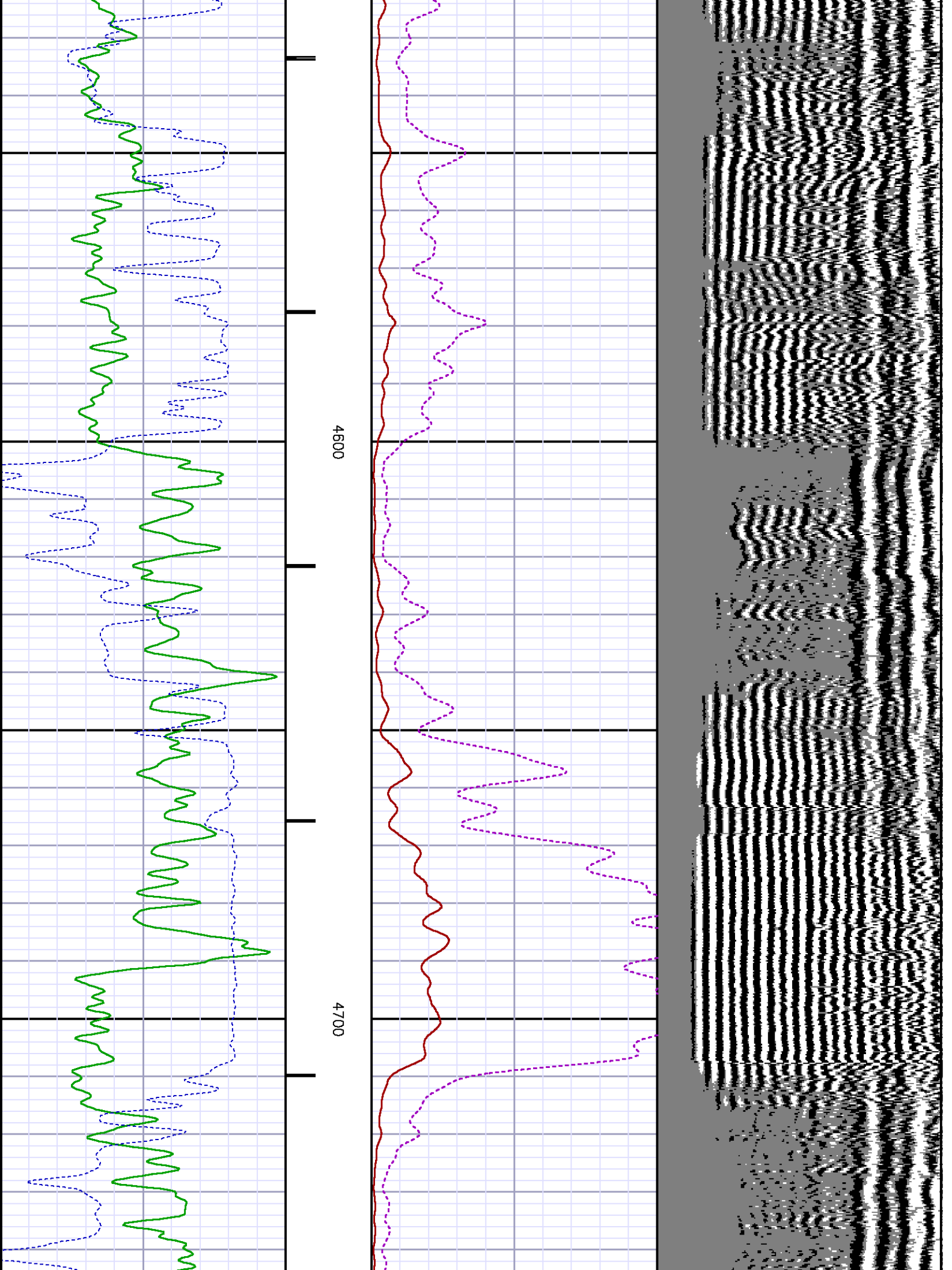


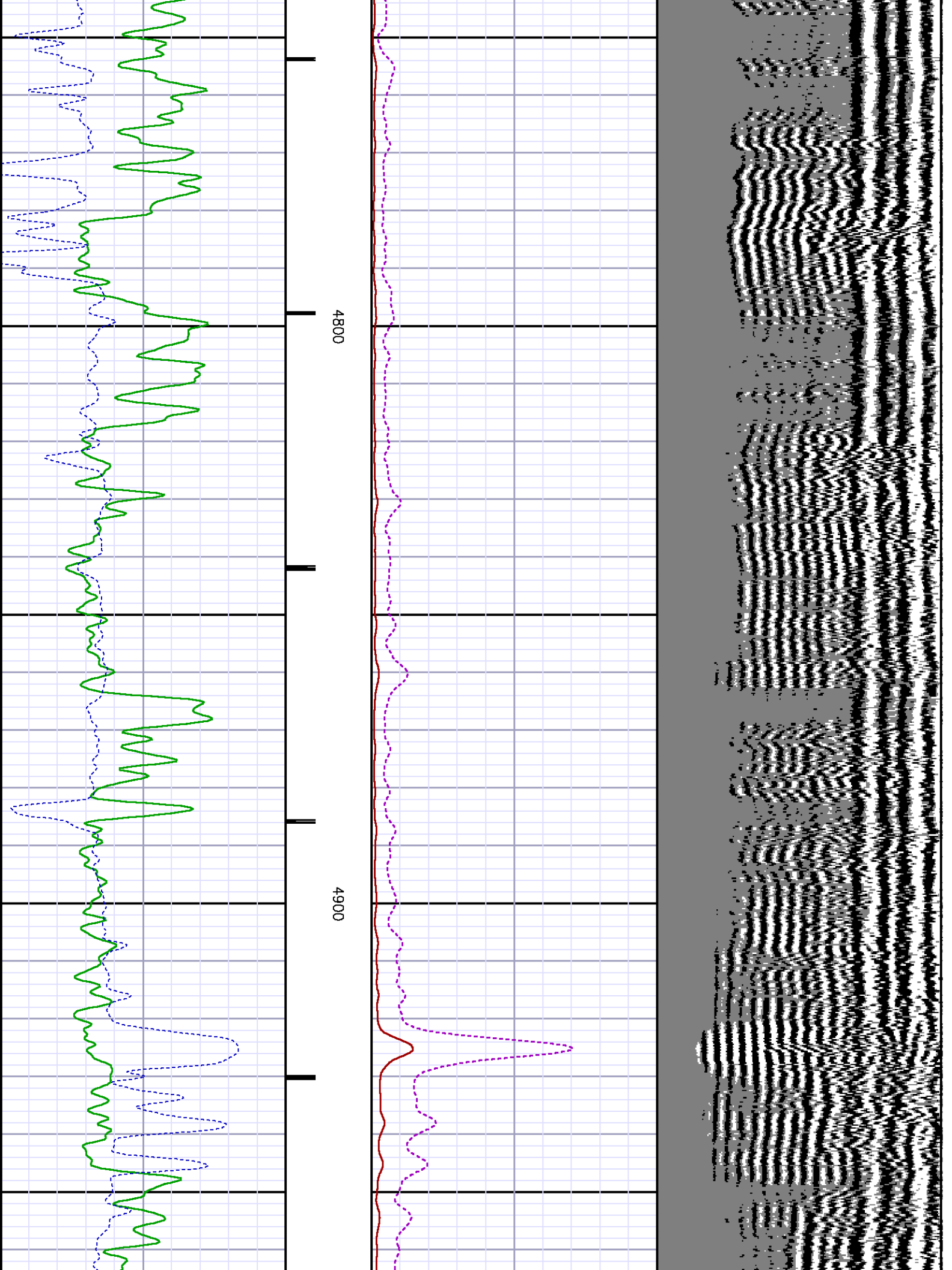


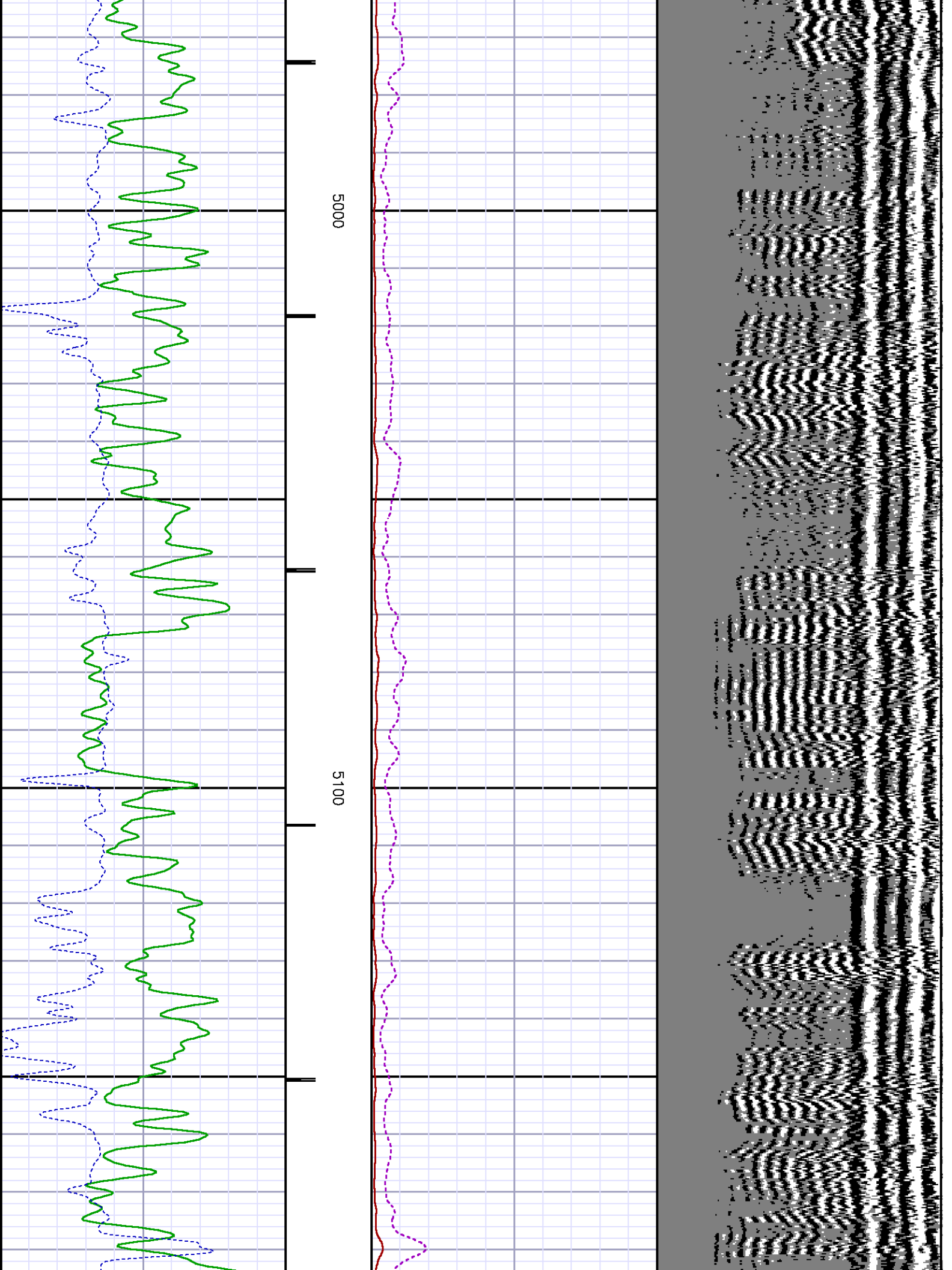


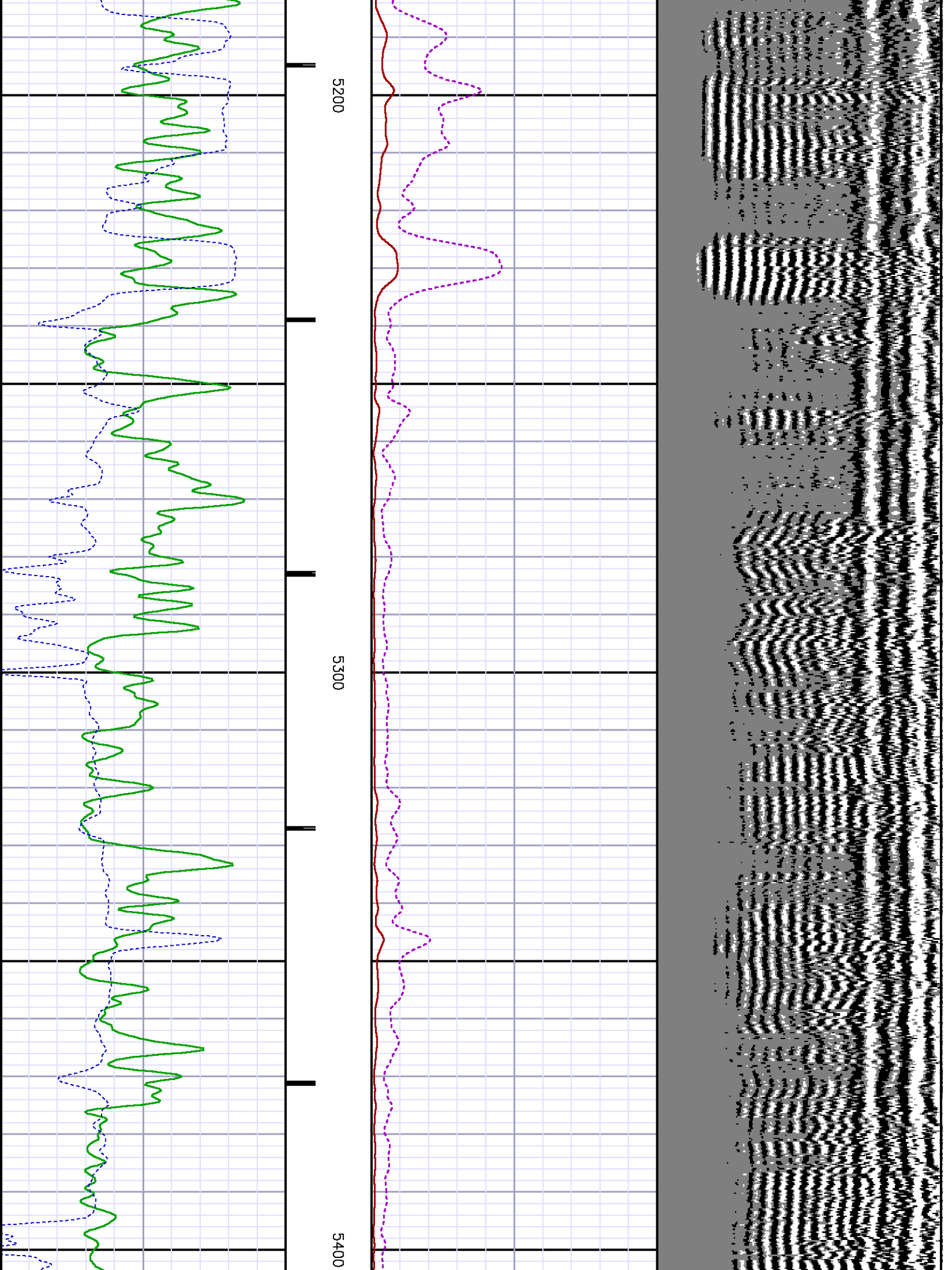


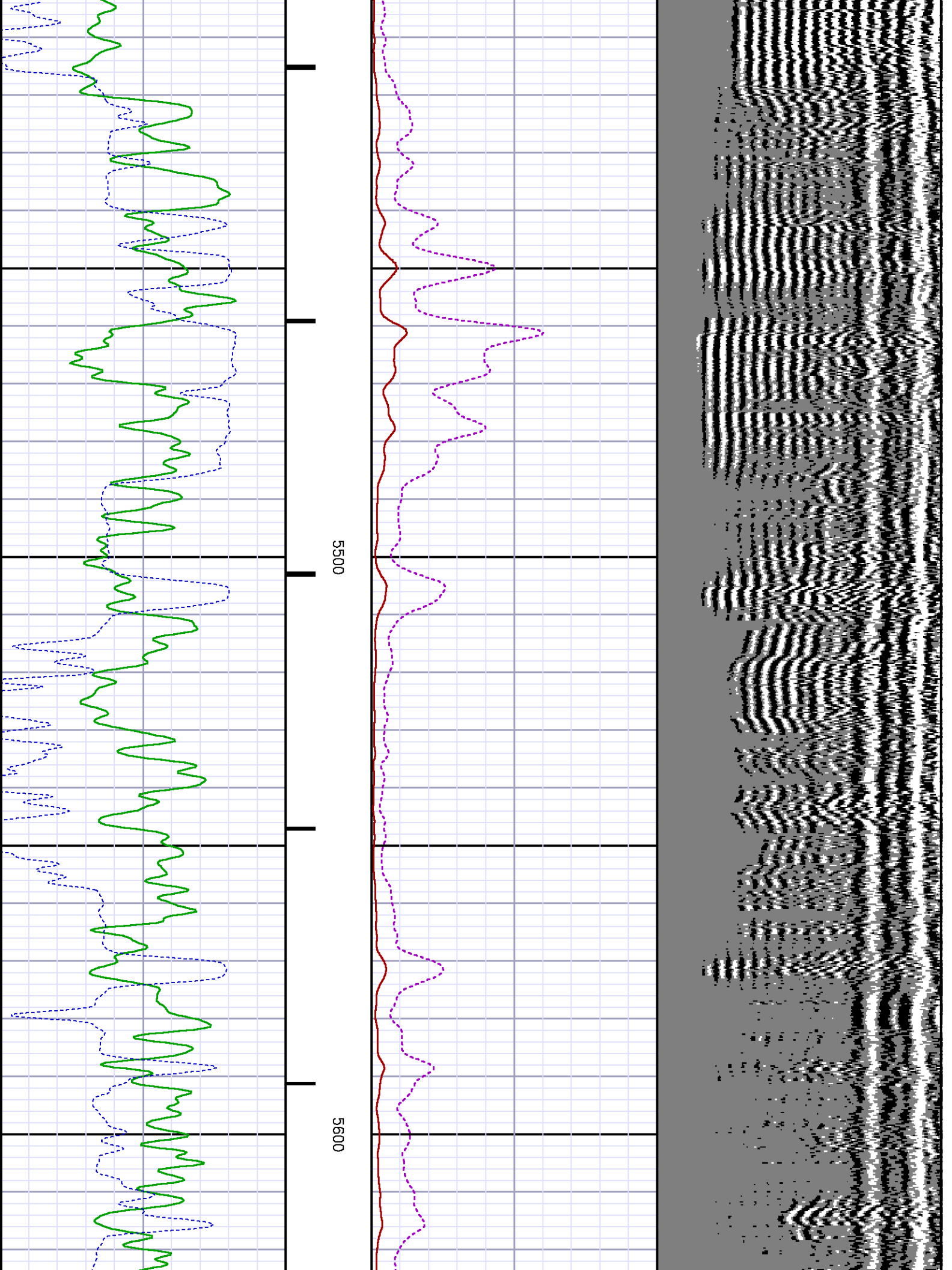


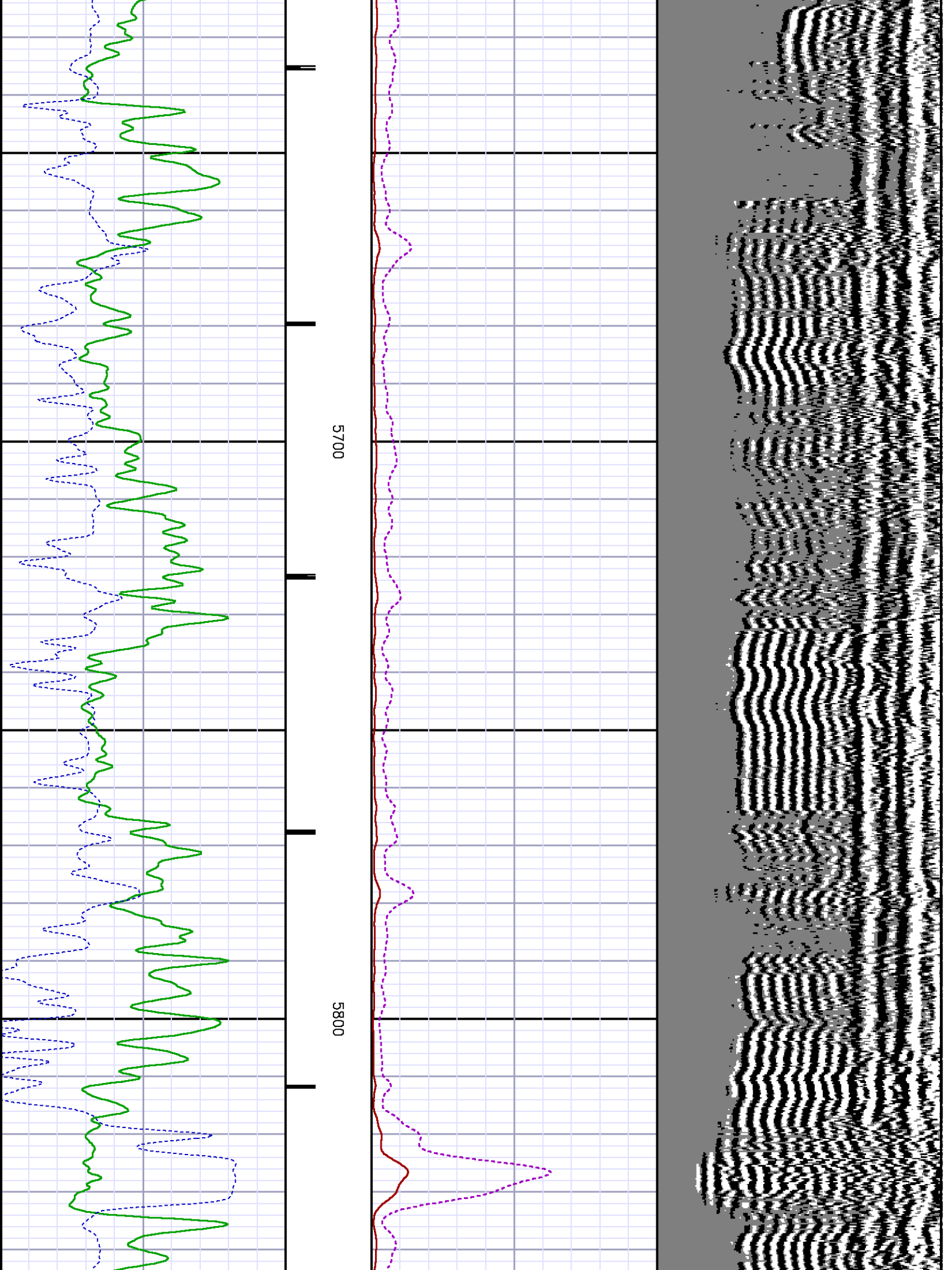


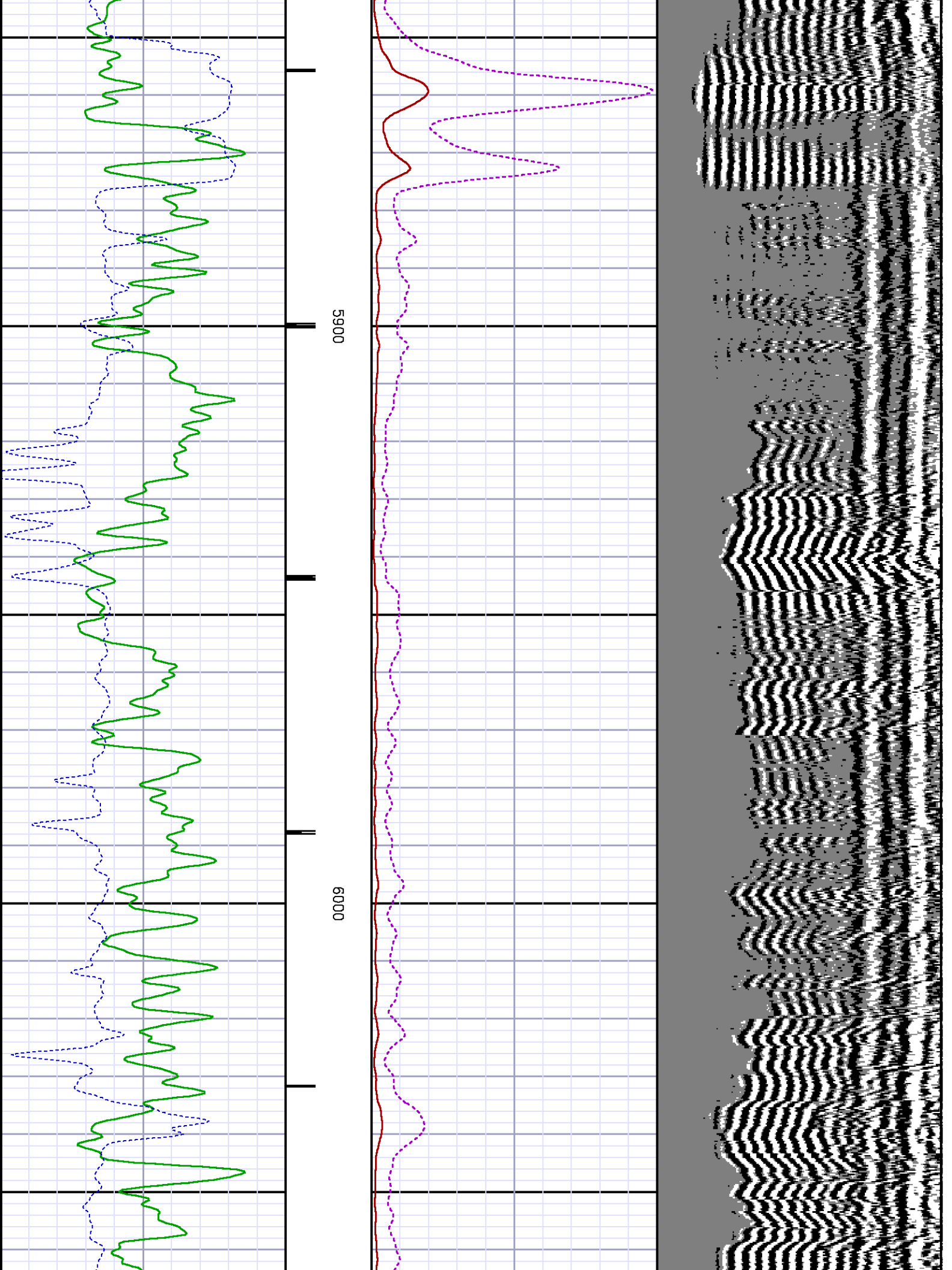


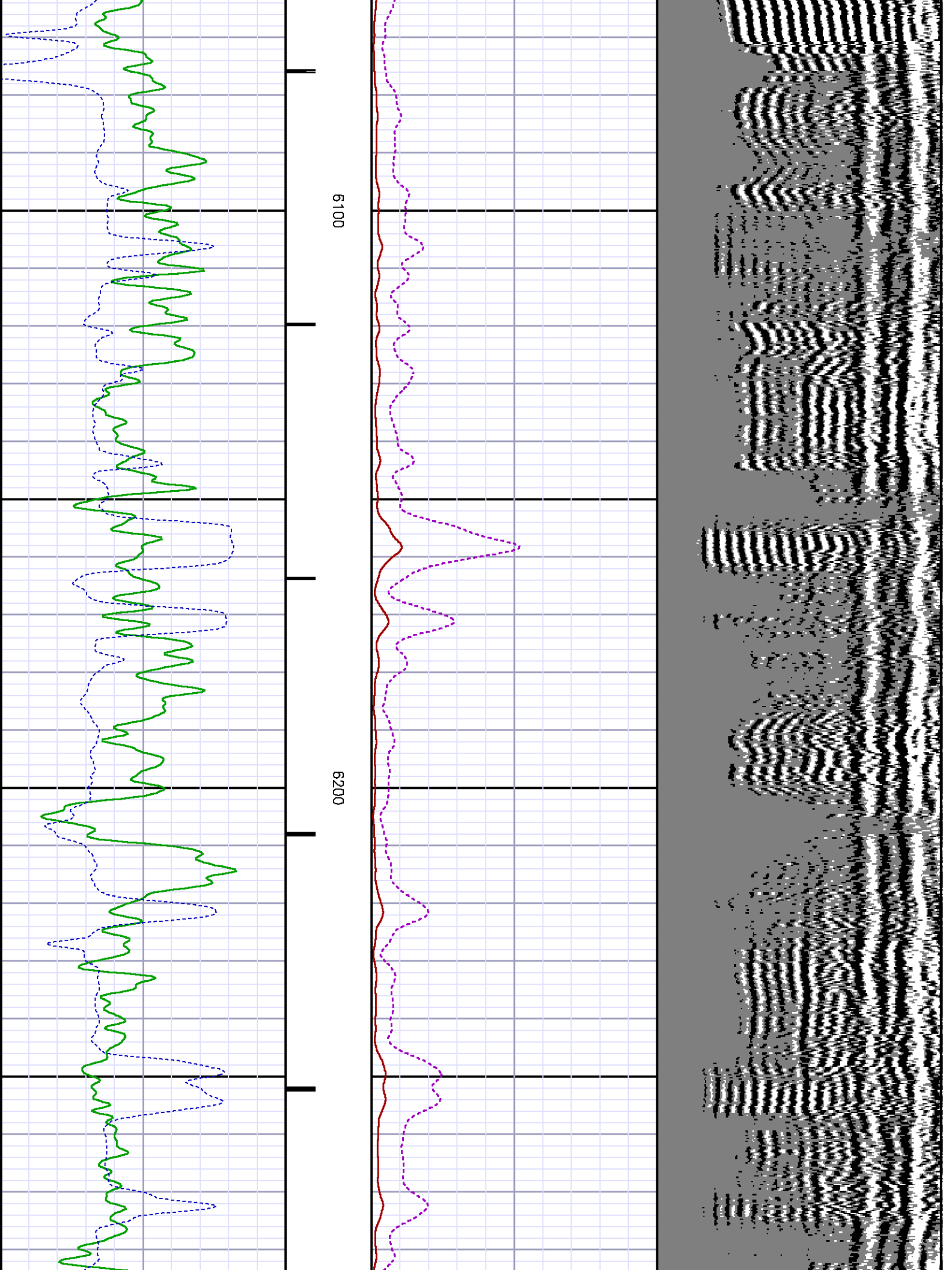


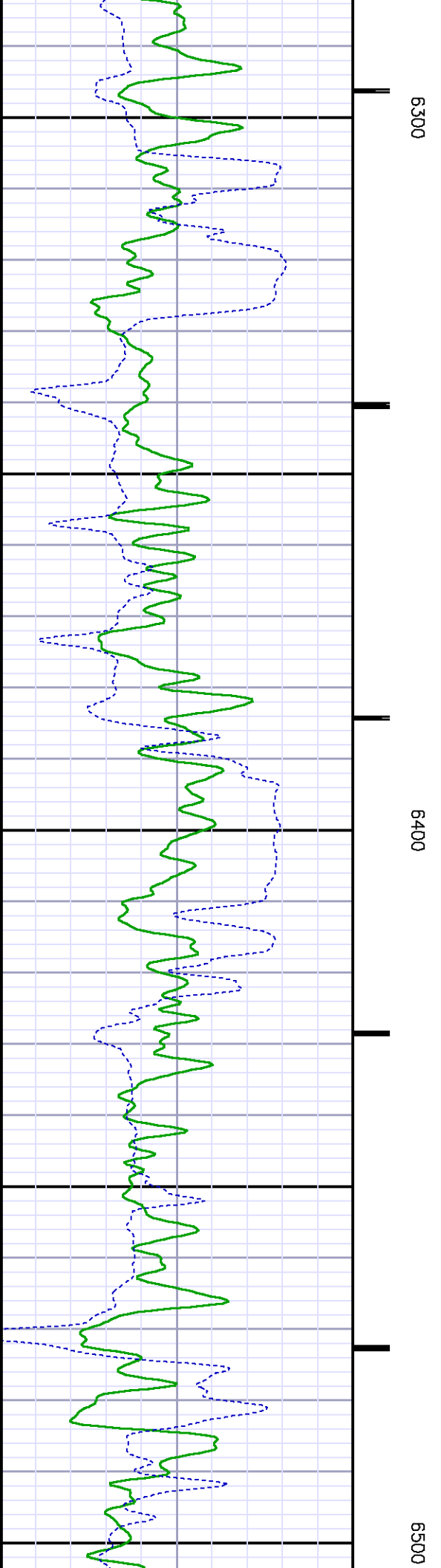
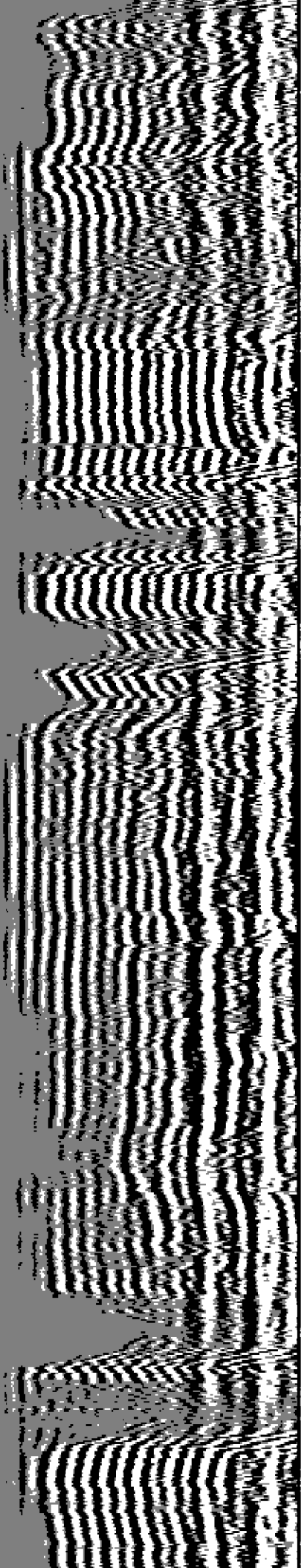


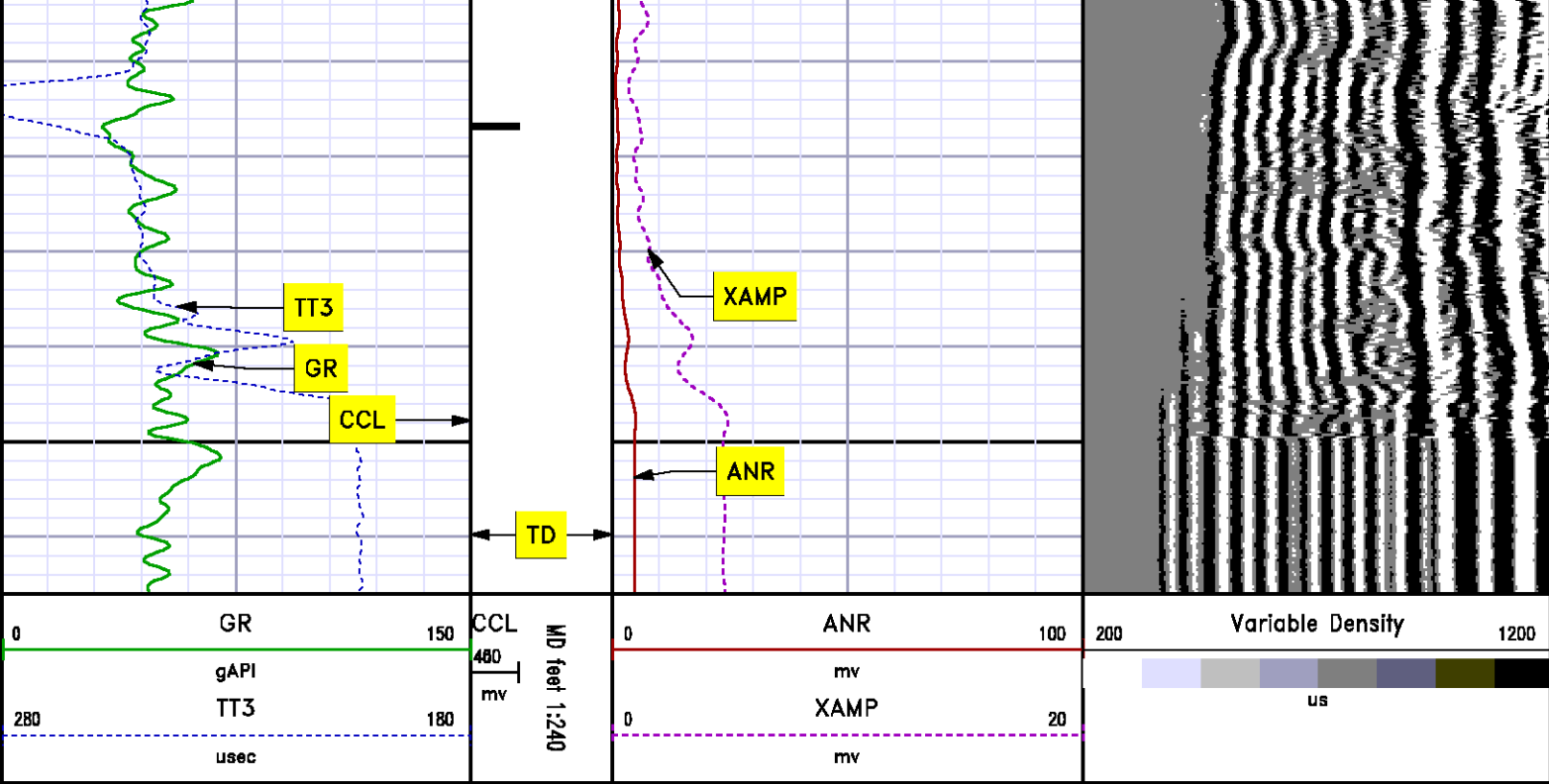












SECONDARY PRESENTATION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	50.187	6579.000
RAL	Amp Gate Start Near	195.000	usec	50.187	6579.000
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RAL	FB Thresh Far	10.000	mv	50.187	6579.000
RAL	FB Thresh Near	4.000	mv	50.187	6579.000
RAL	FB Thresh Radial	4.000	mv	50.187	6579.000
RAL	Fluid Travel Time	200.000	usec/ft	50.187	6578.812

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES							
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3	AR4		
		AR5	AR6	AR7	AR8	CHV	FPR2		
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3		
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP		
1426XA	-10.040	AFAR	SIG	TT5					
1355XA	-5.620	CCL							
1355XA	-1.500	GR							
1355XA	0.000	TEMP							

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

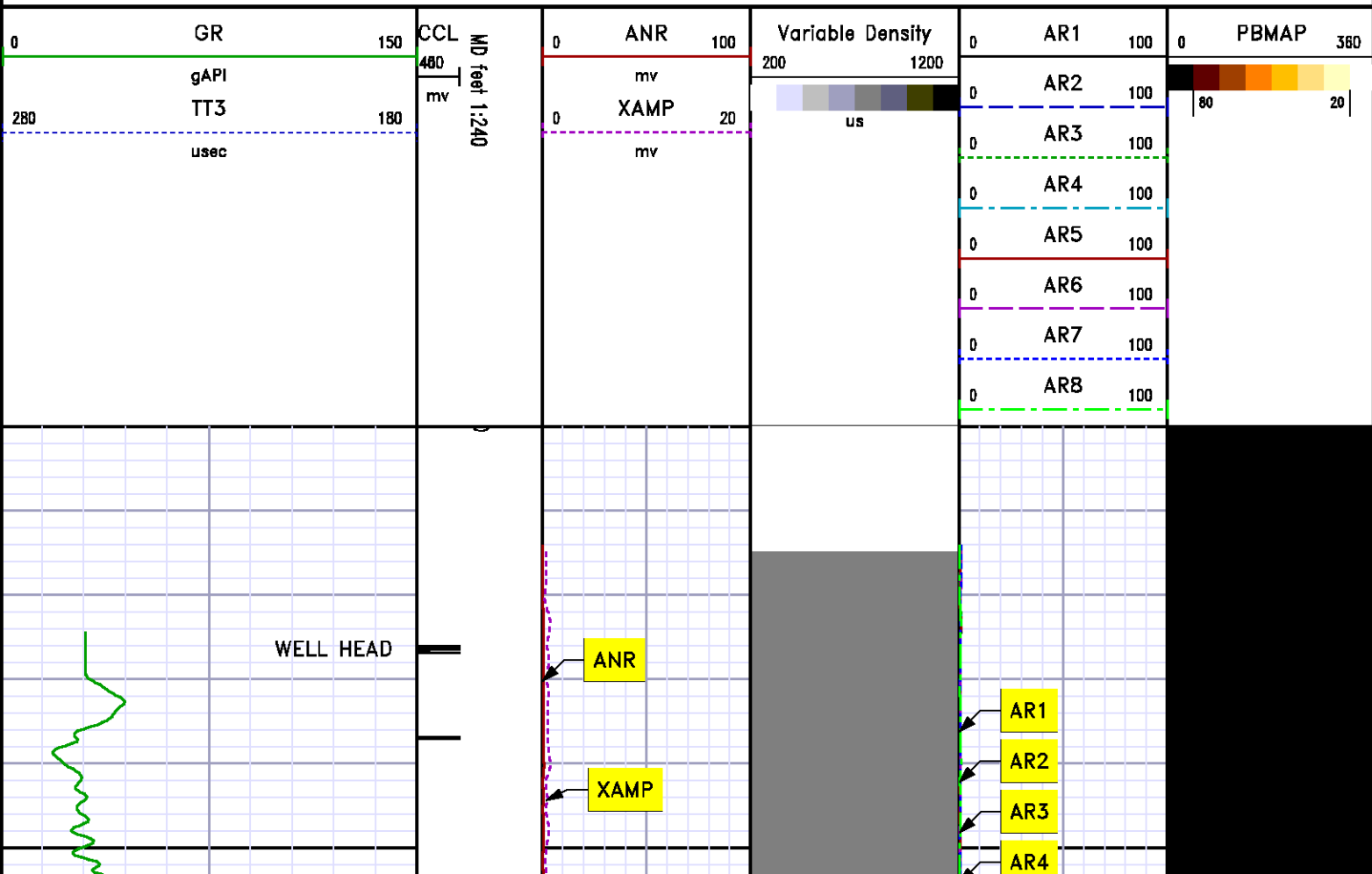
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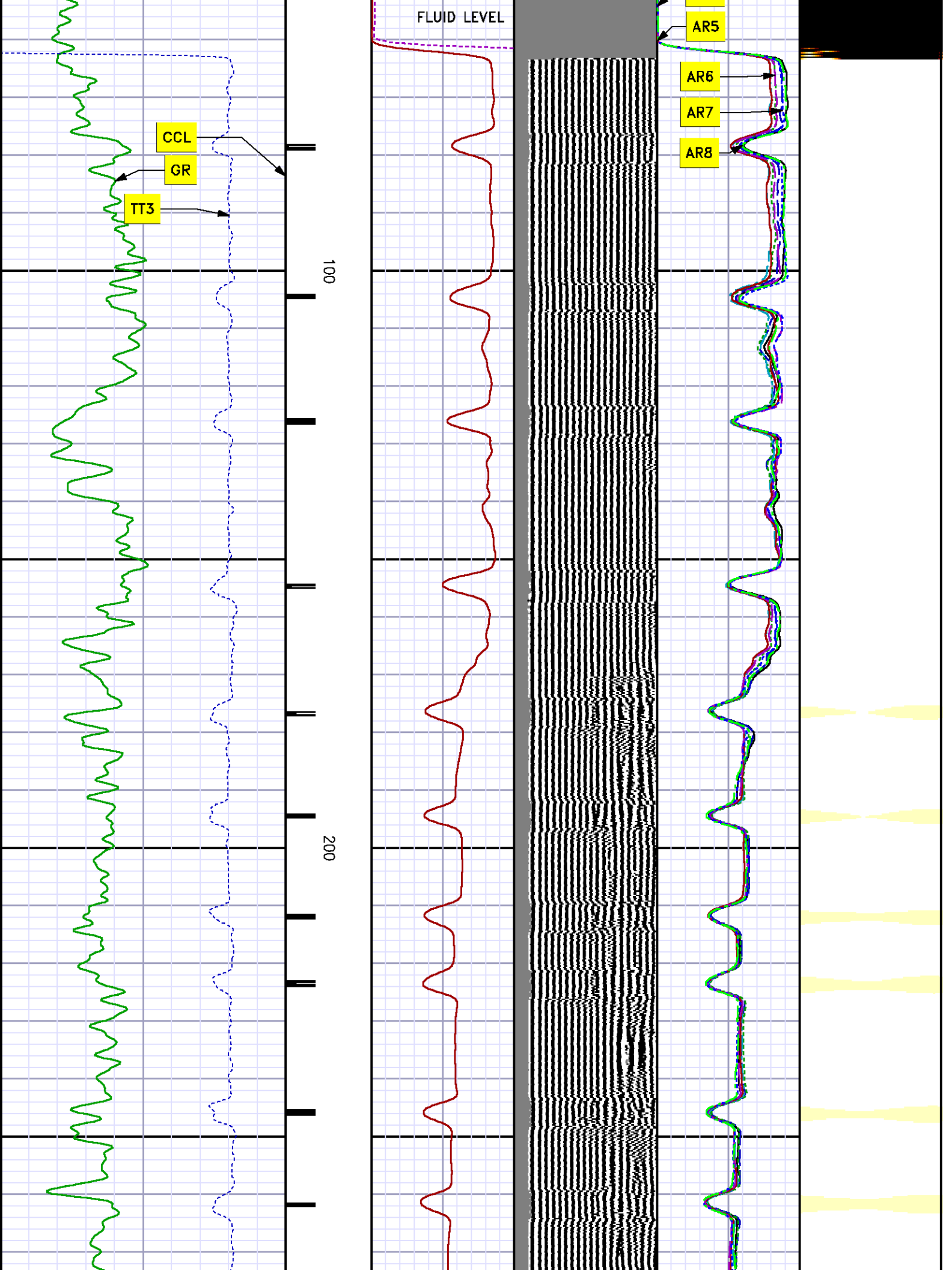
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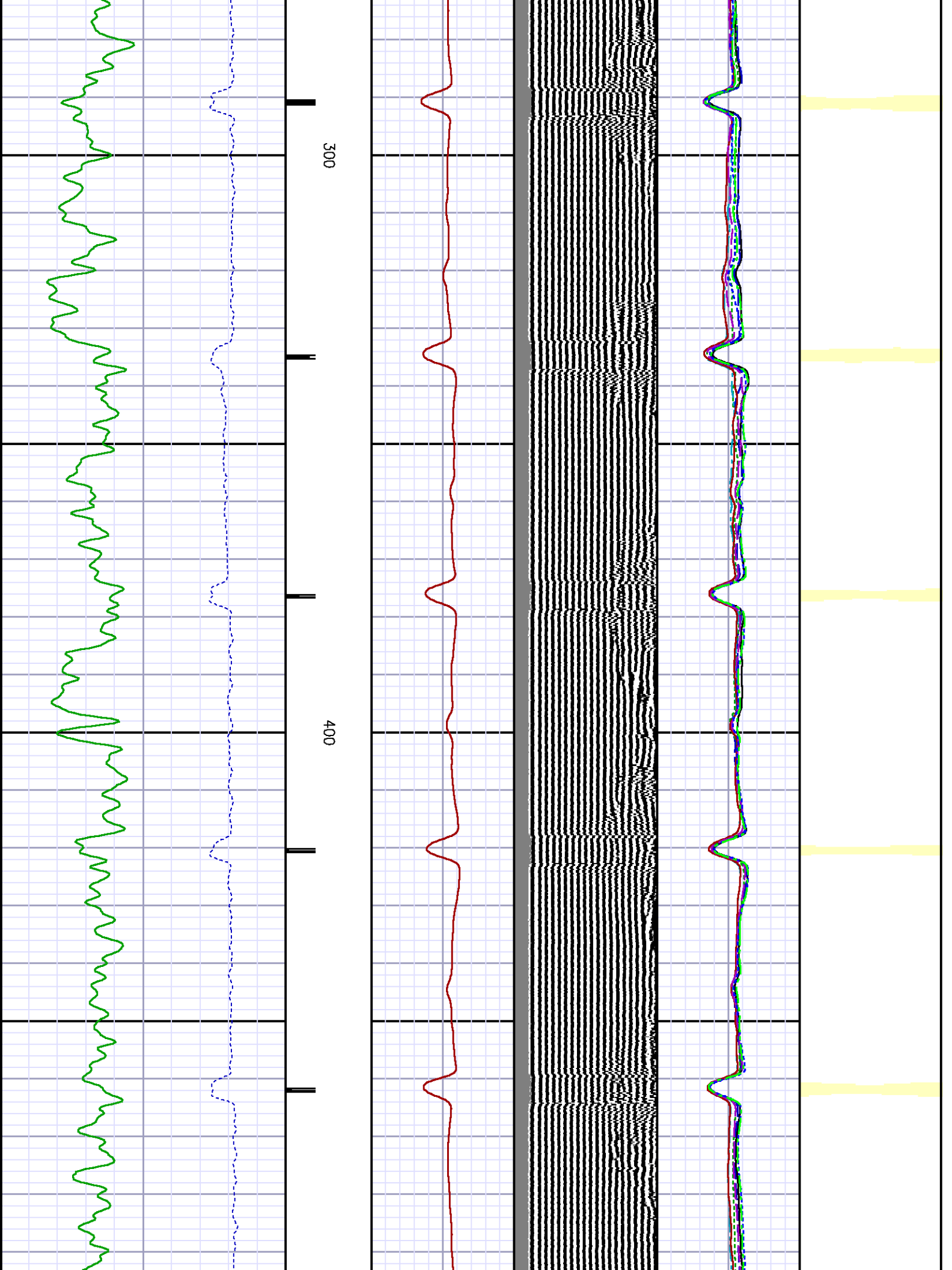
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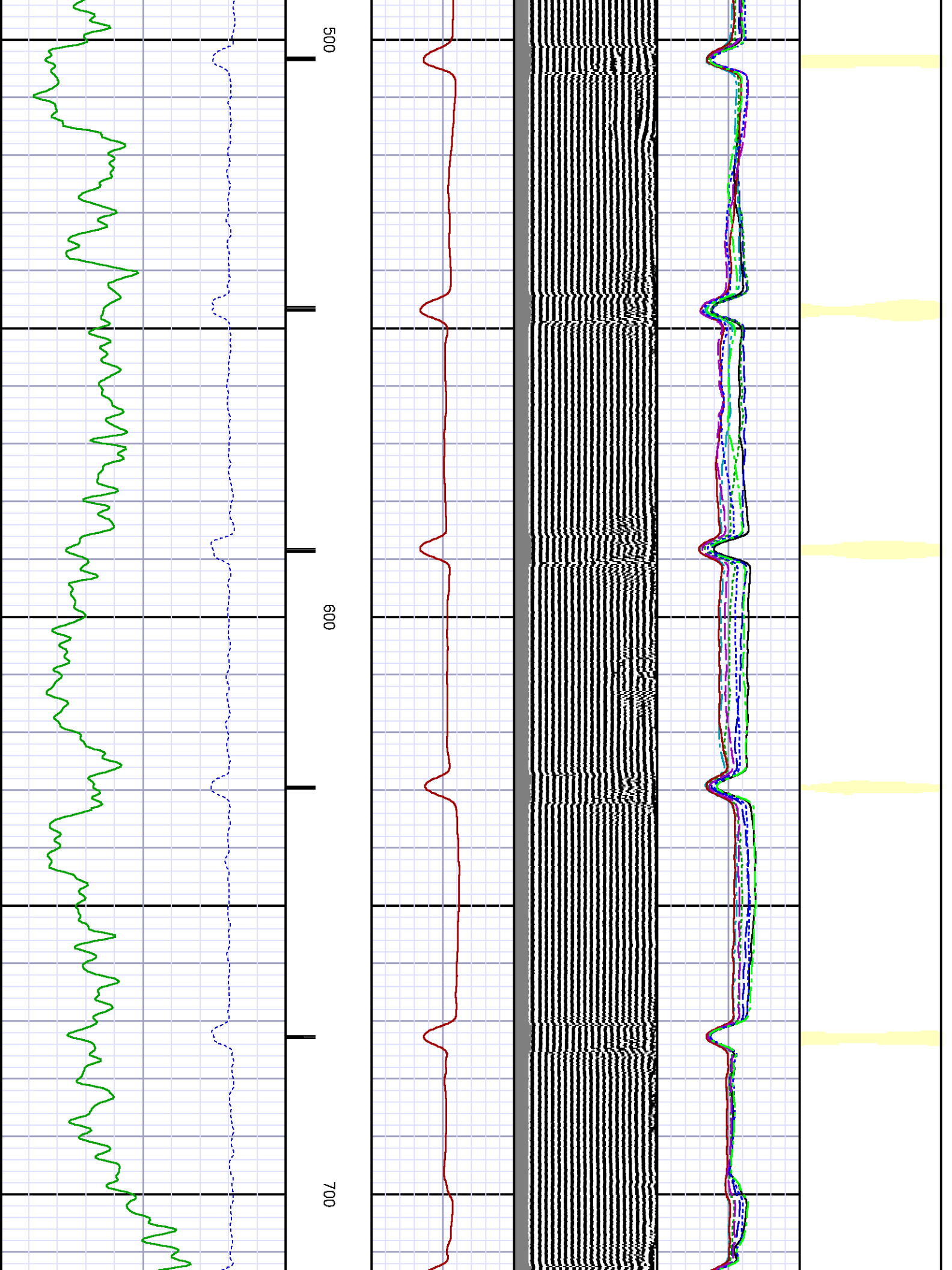
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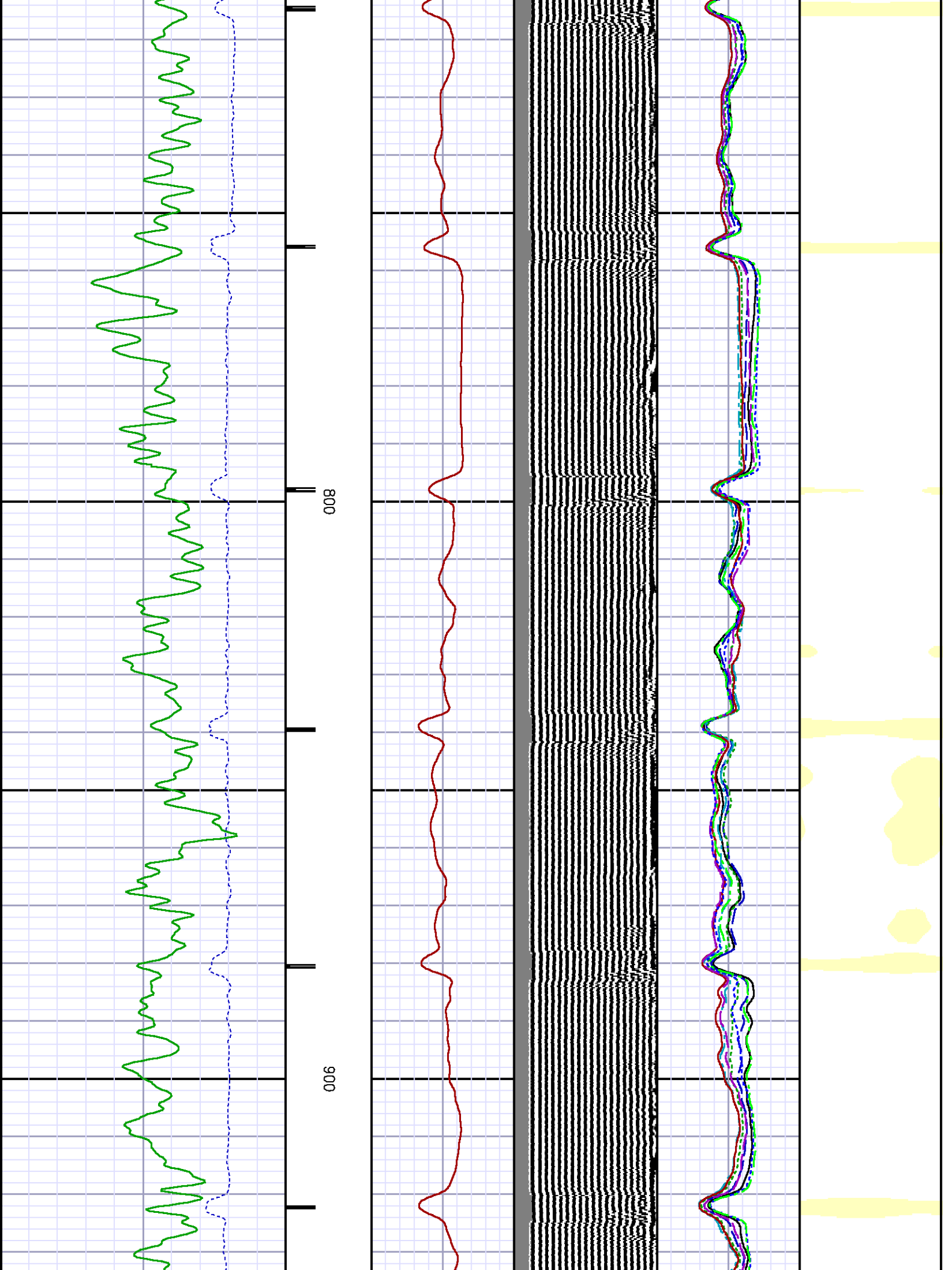
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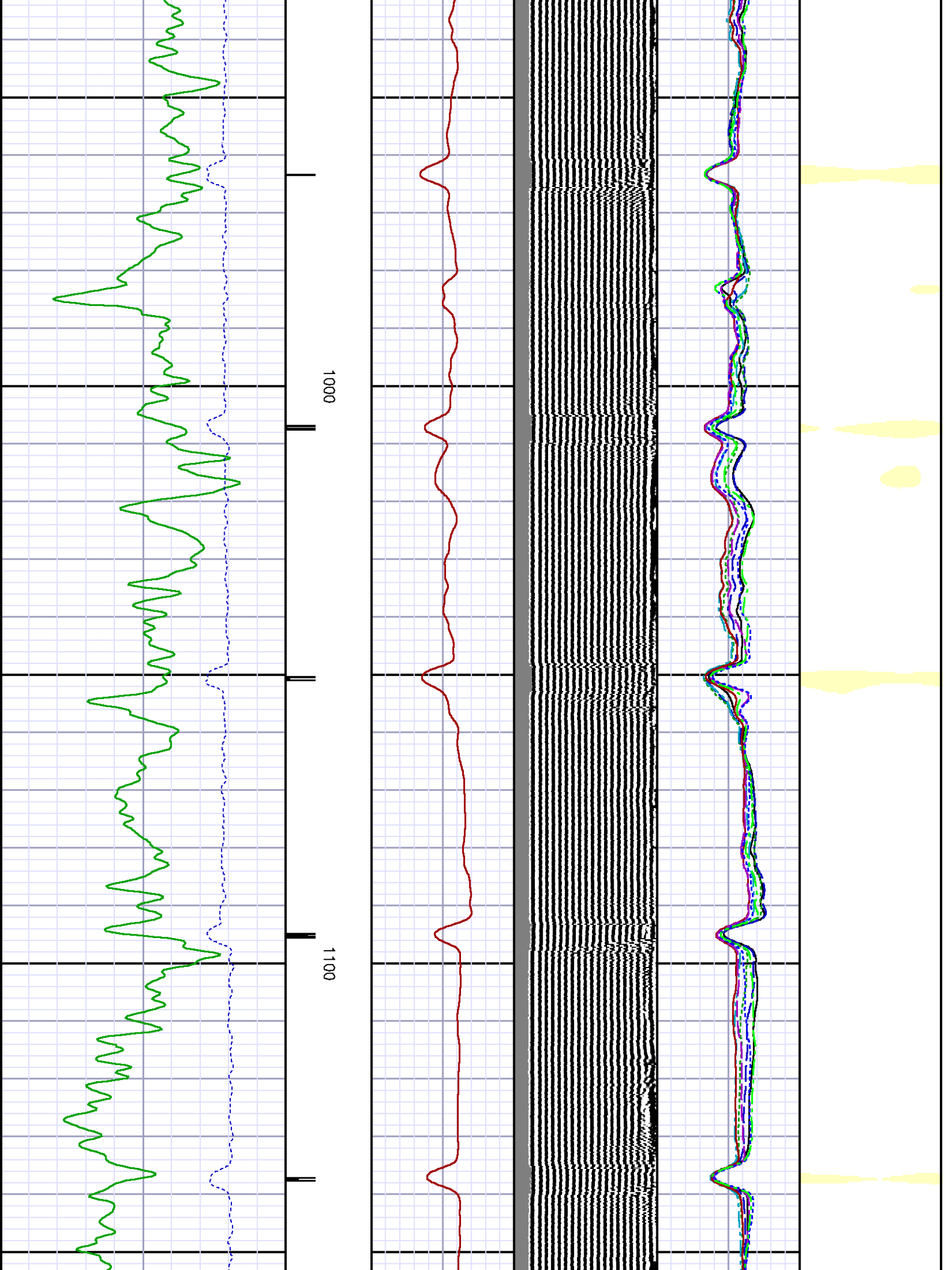


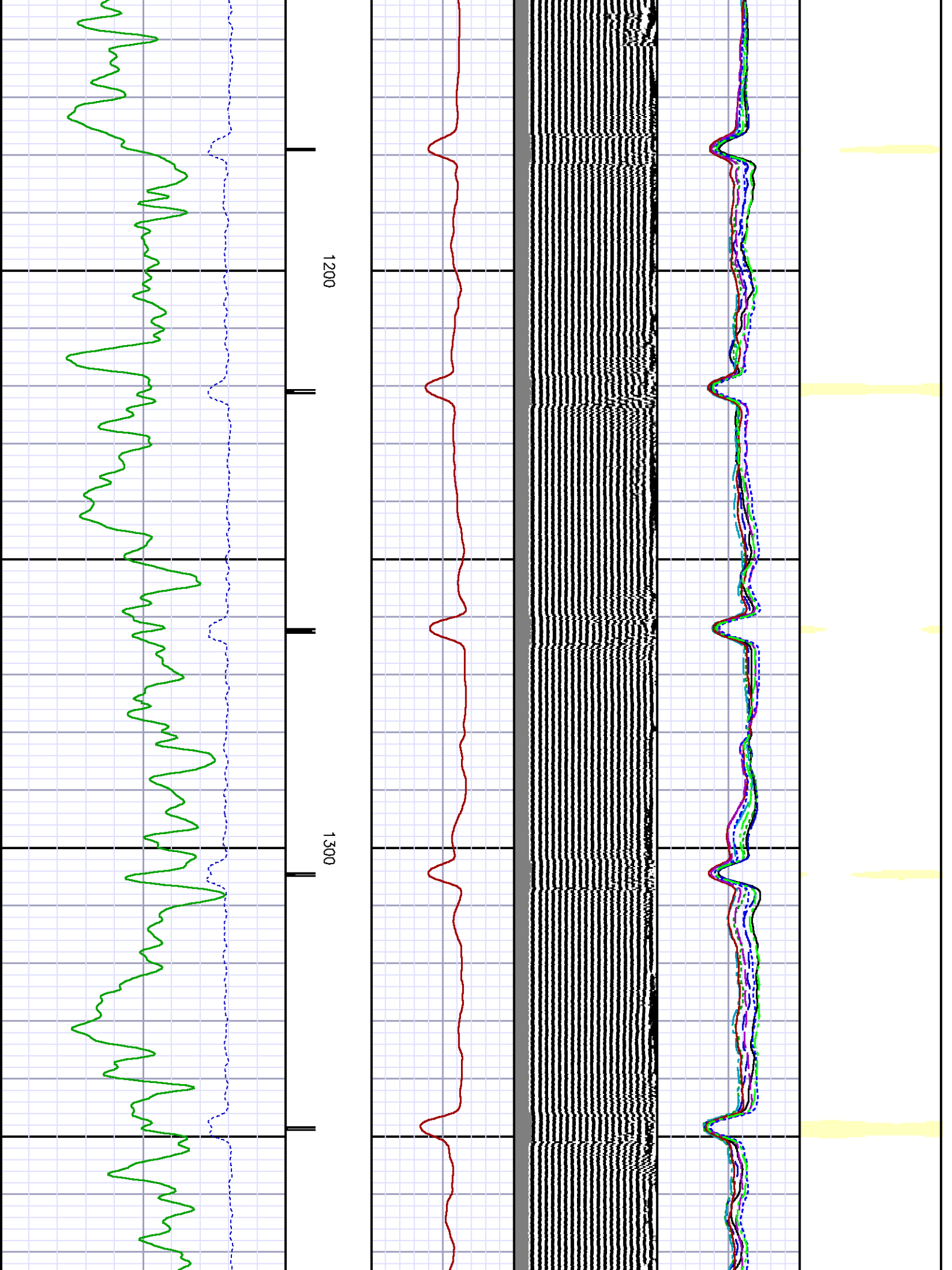


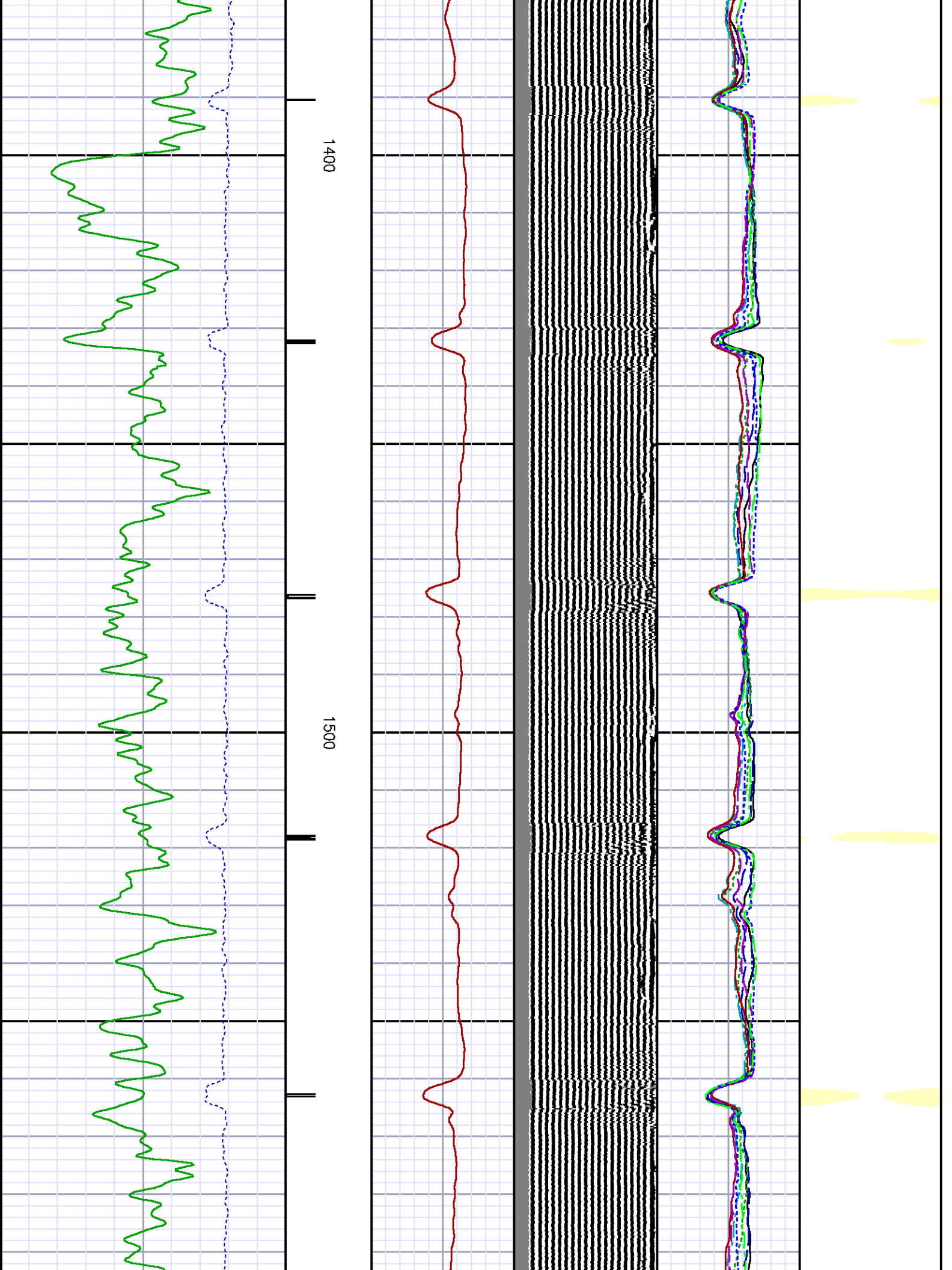


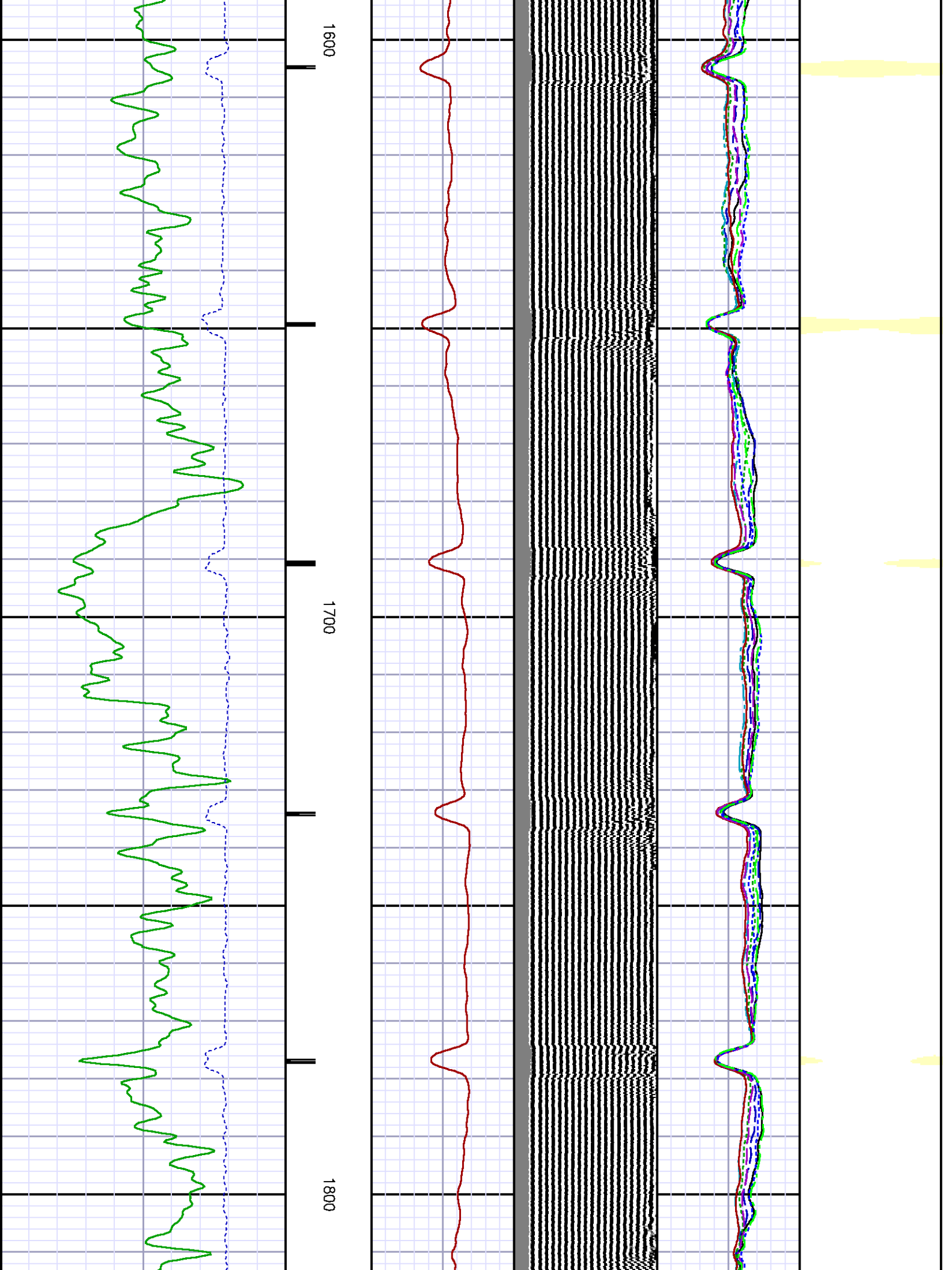


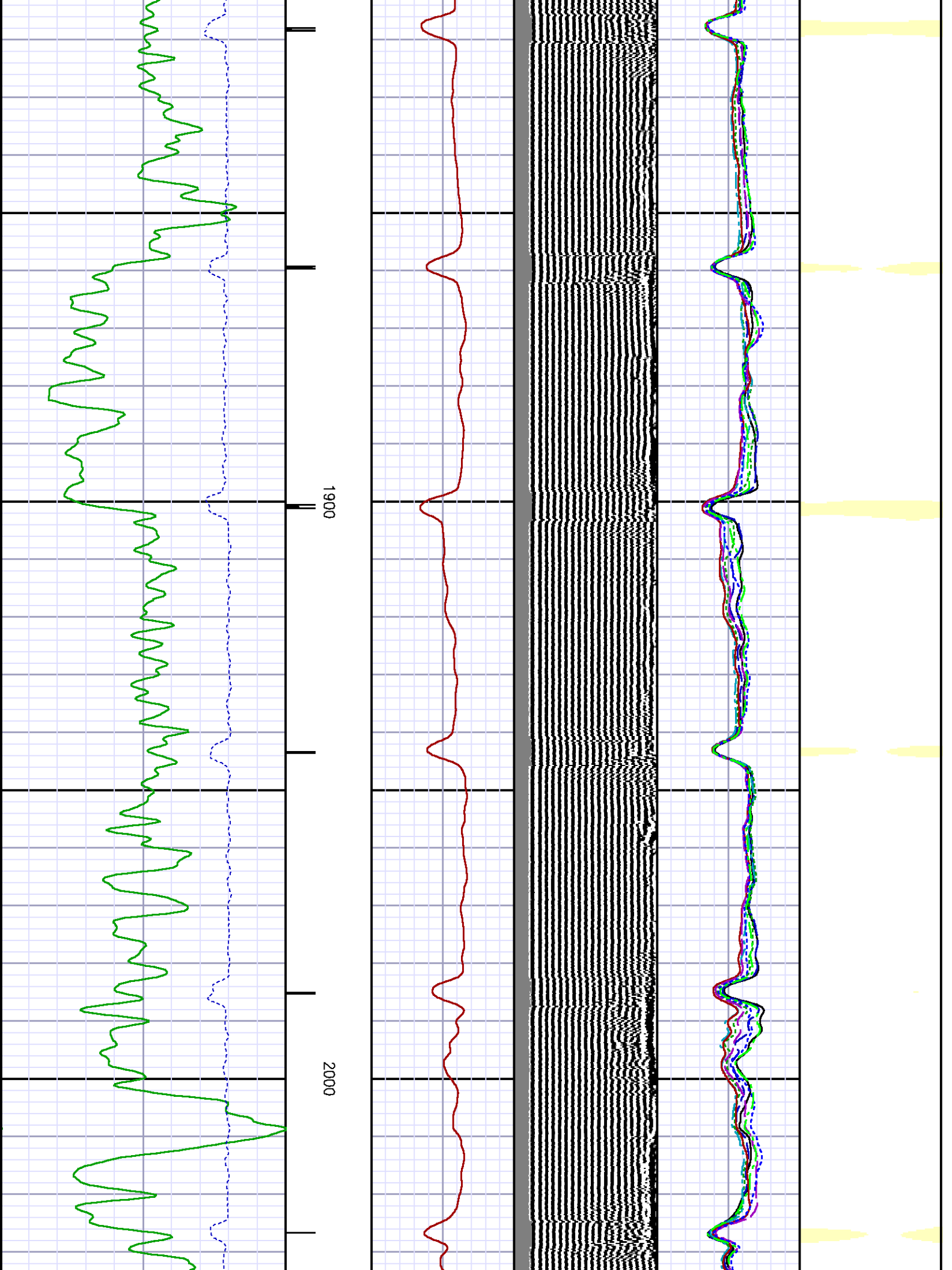


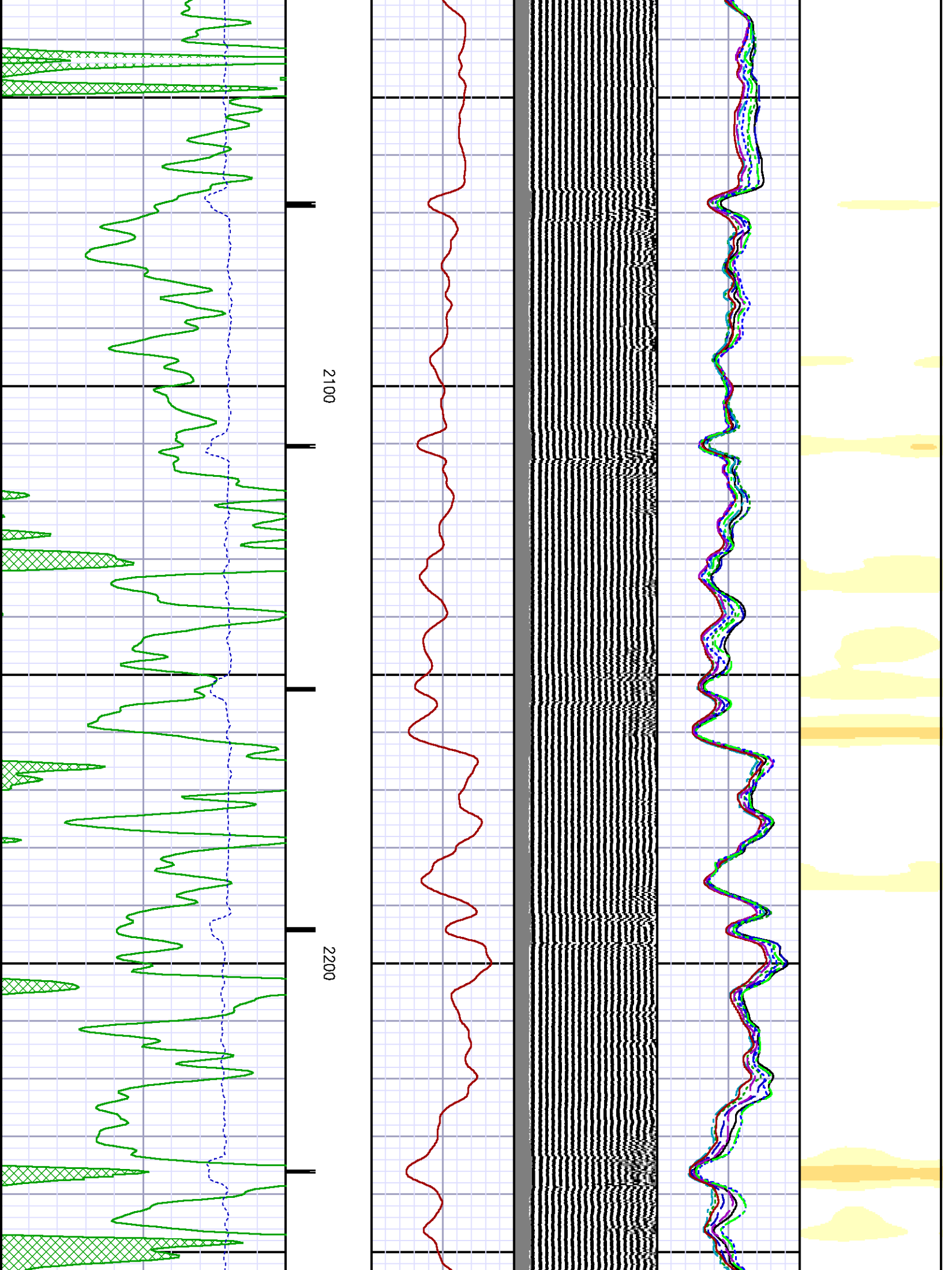


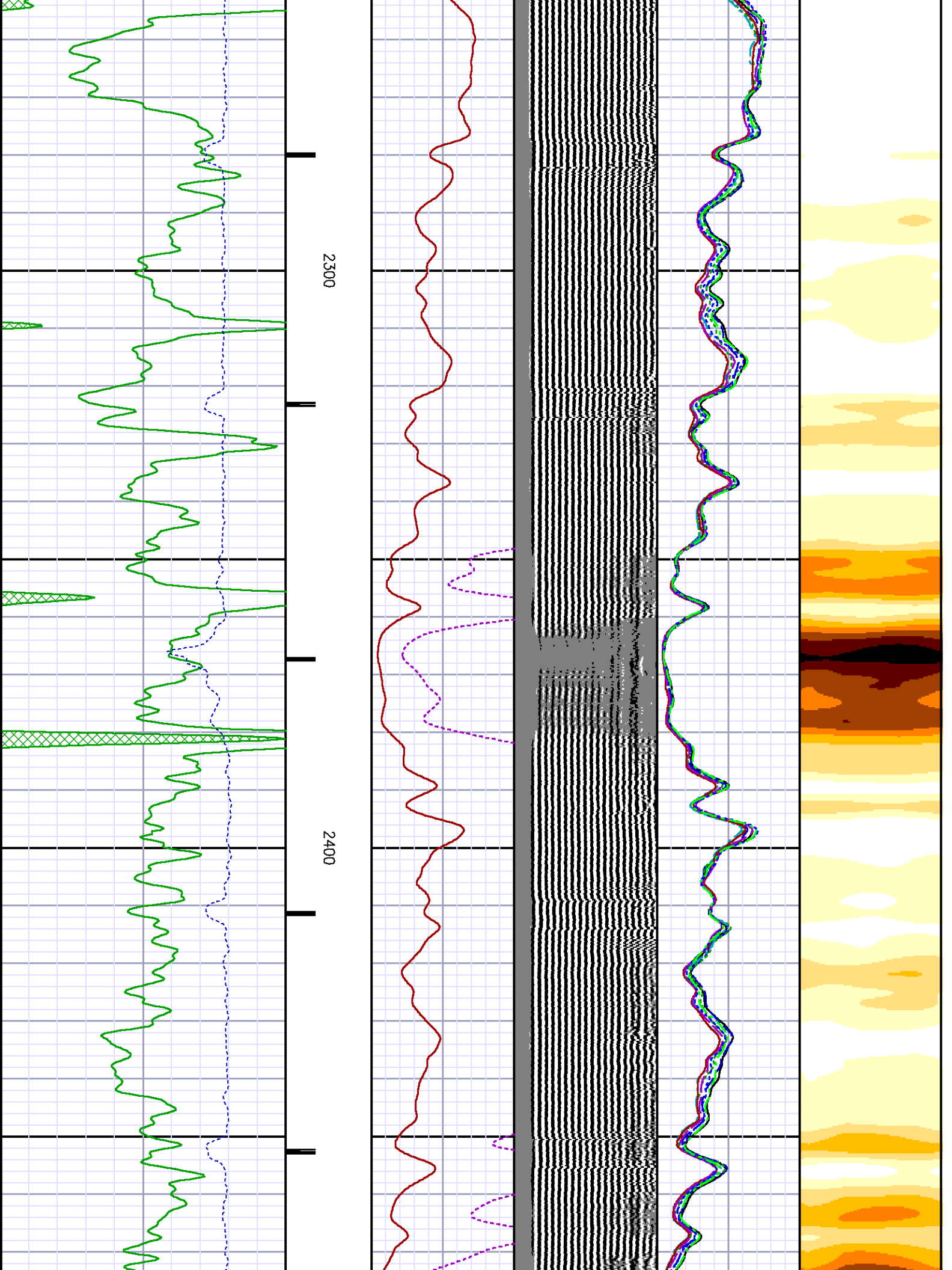


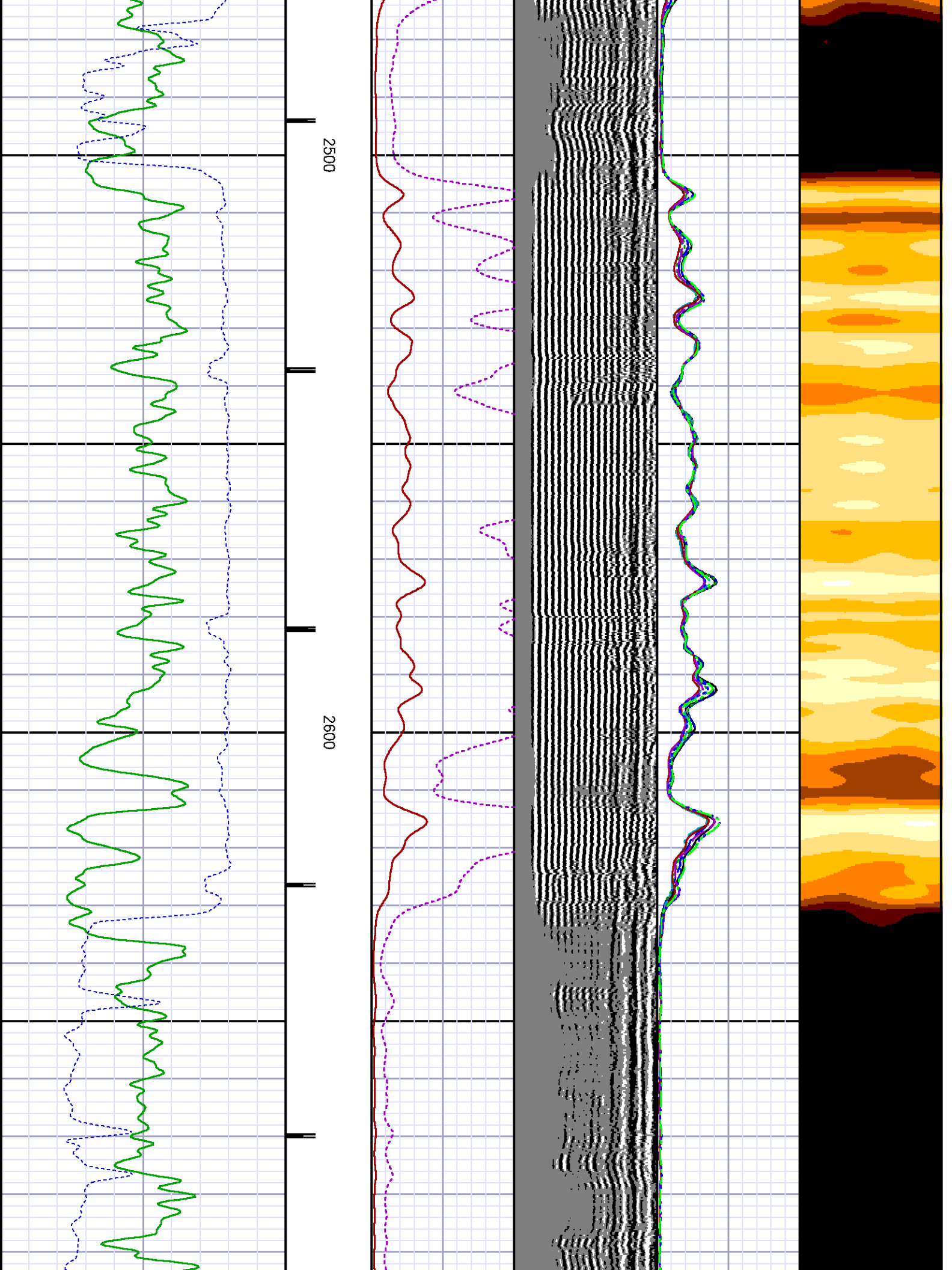


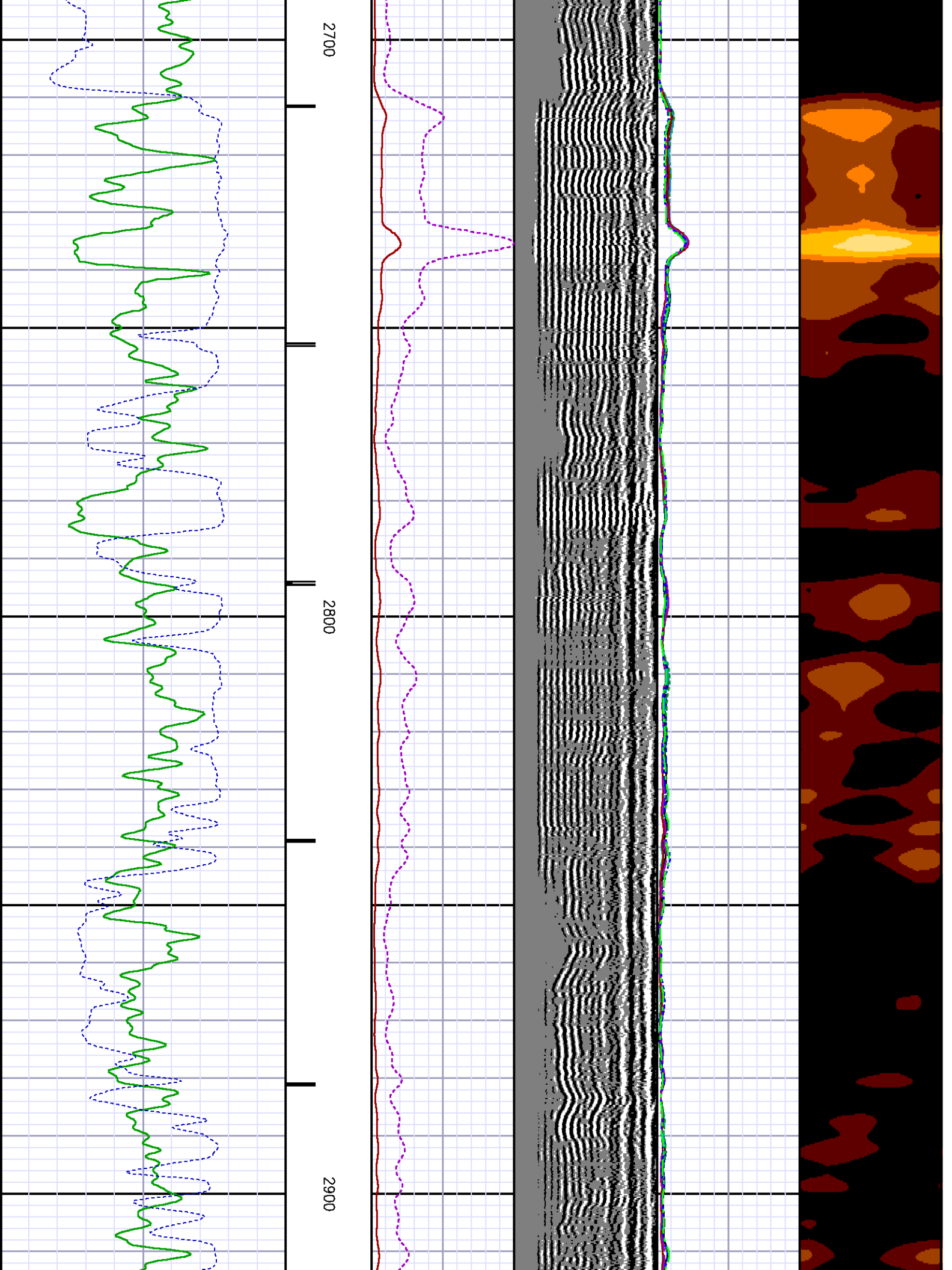


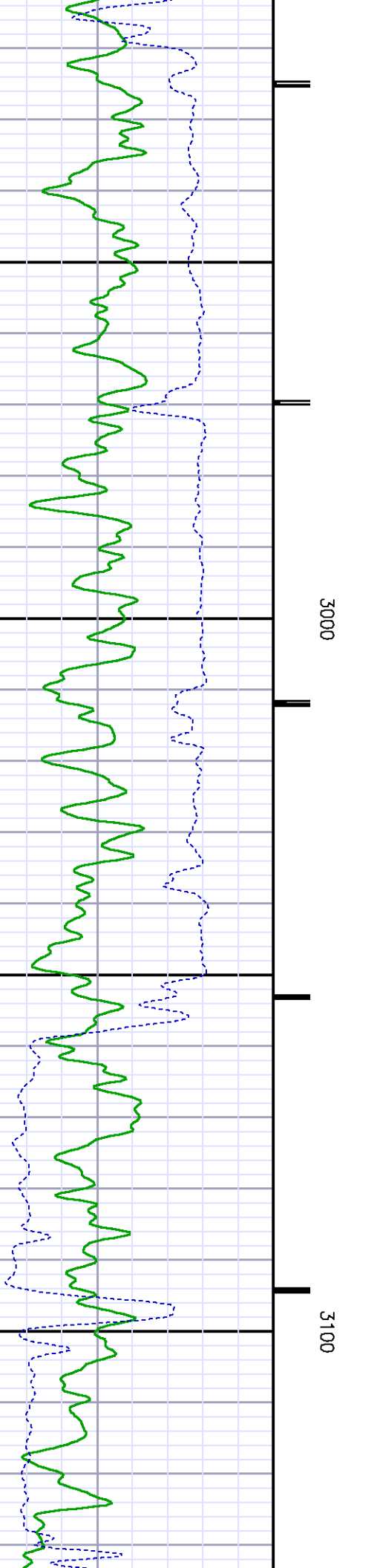
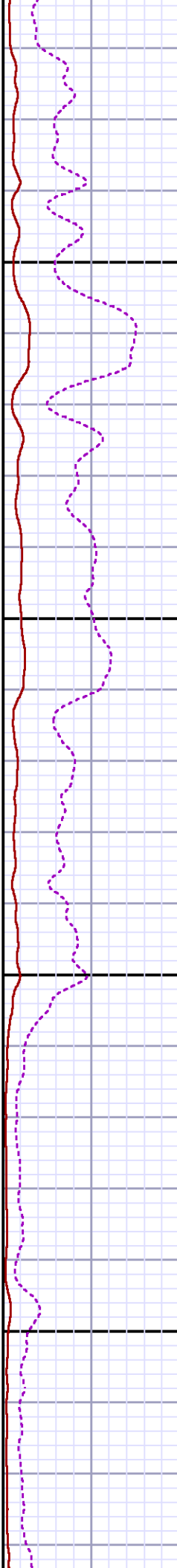
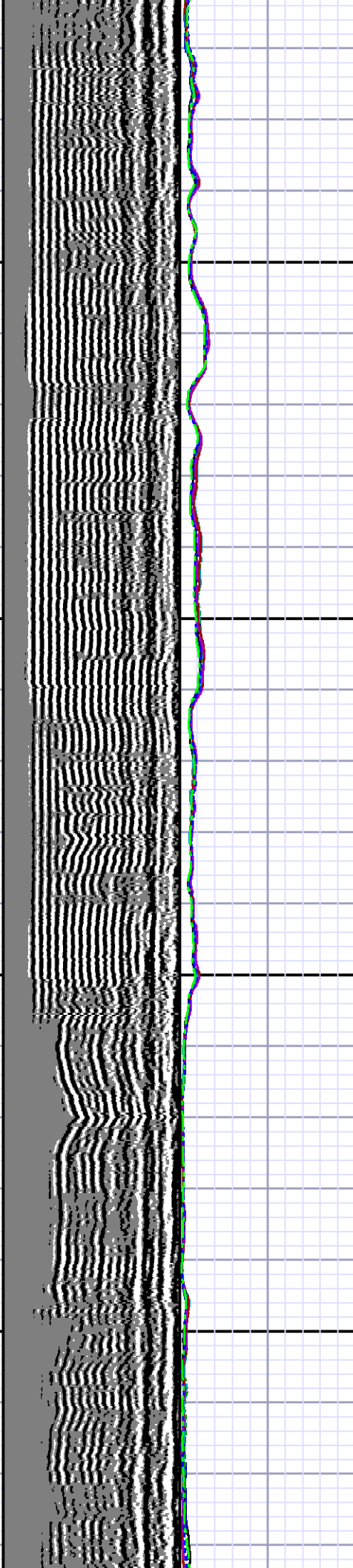
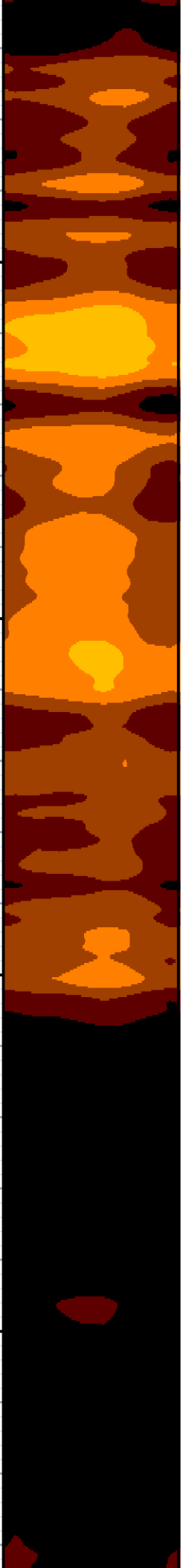


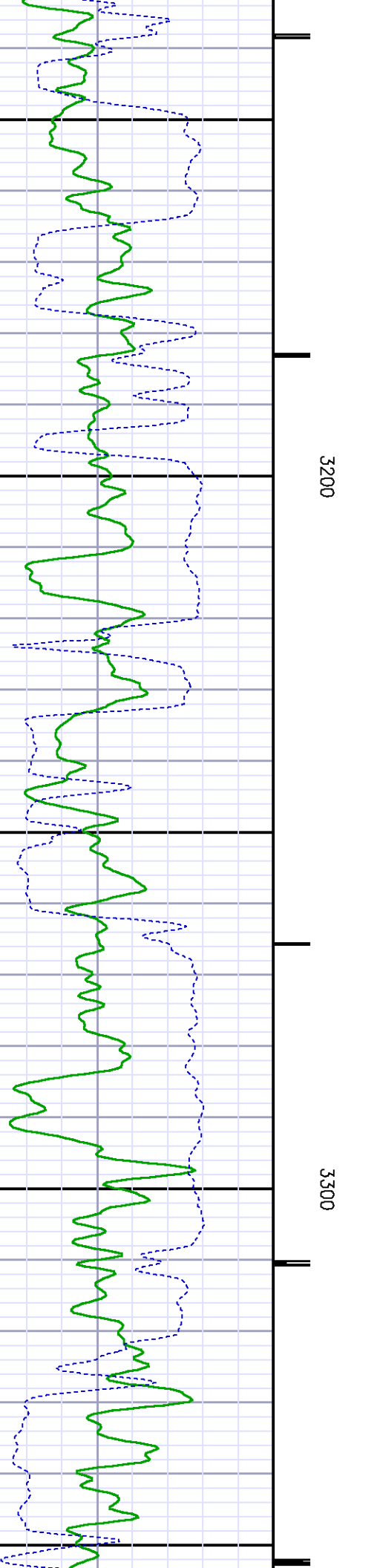
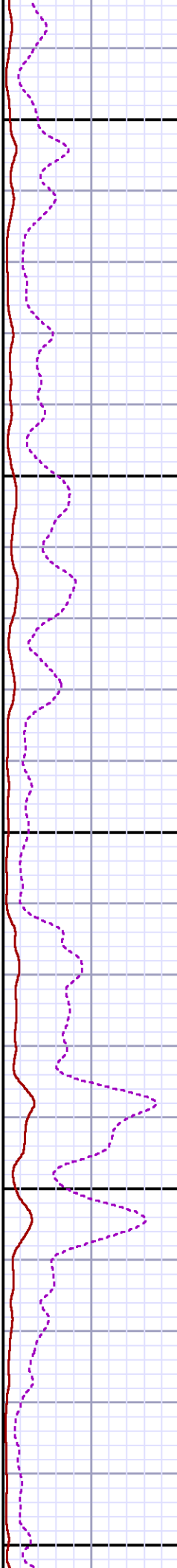
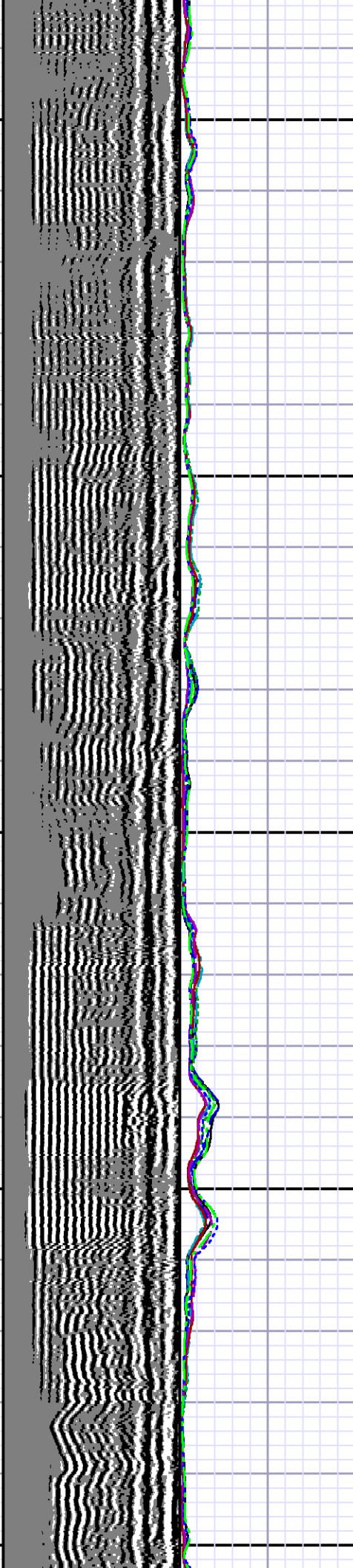


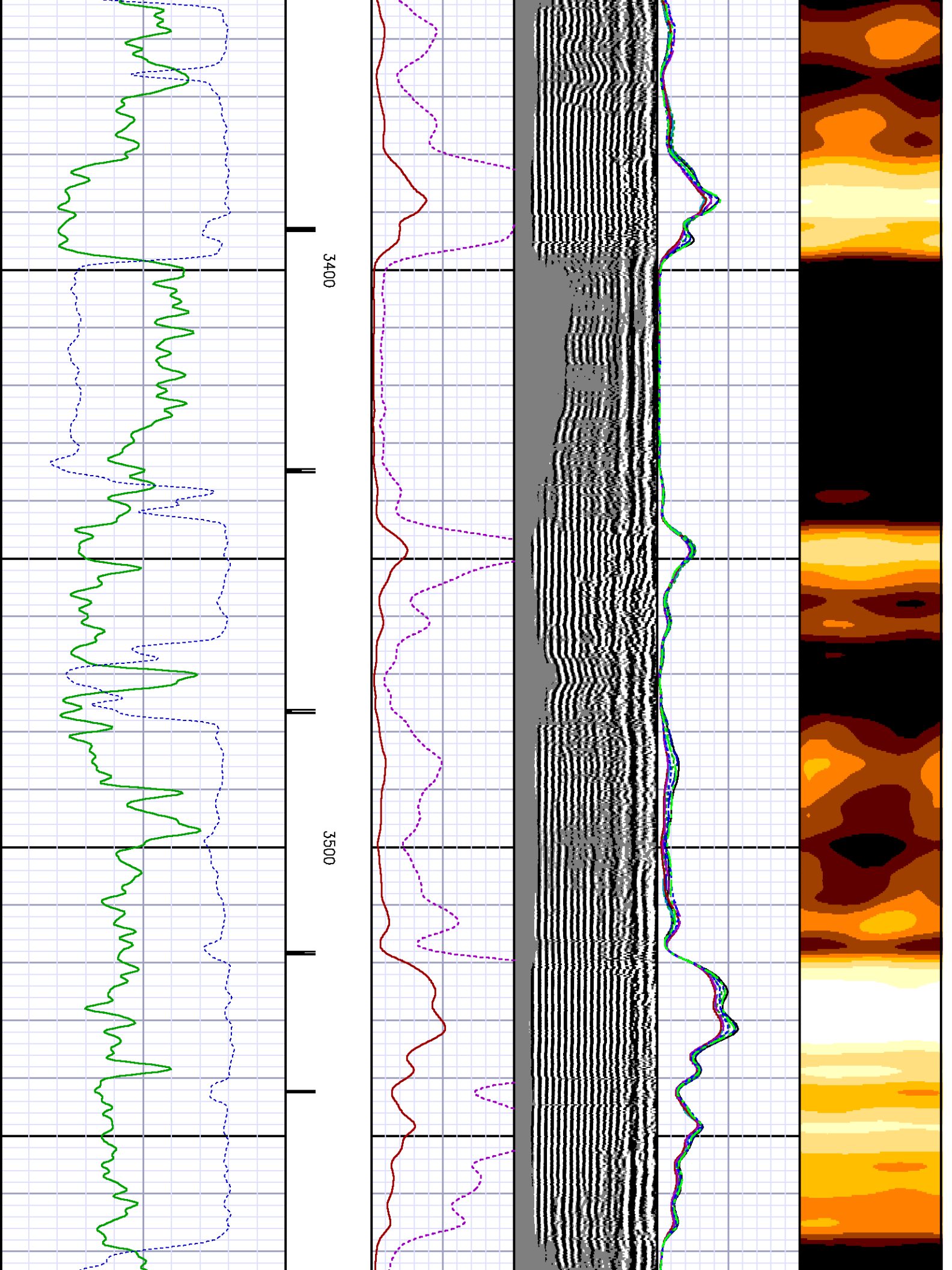


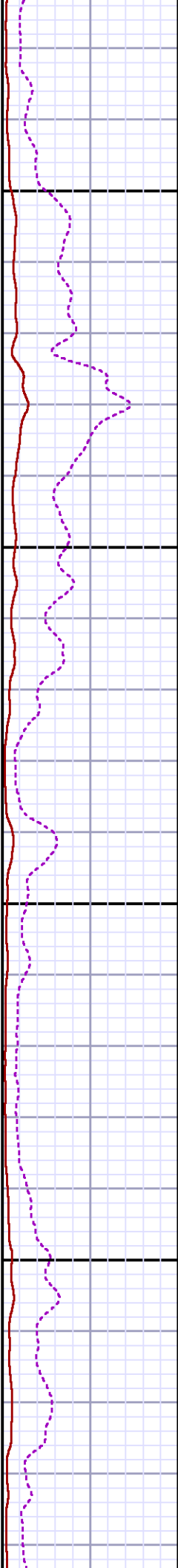
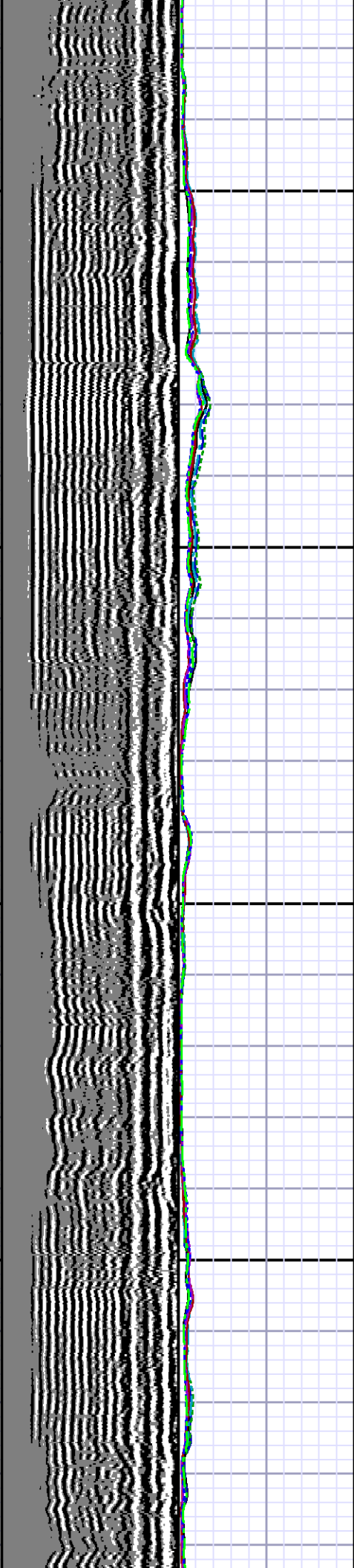
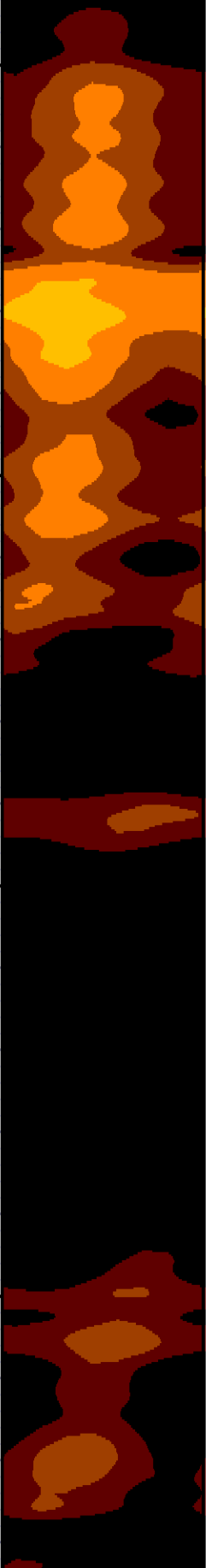






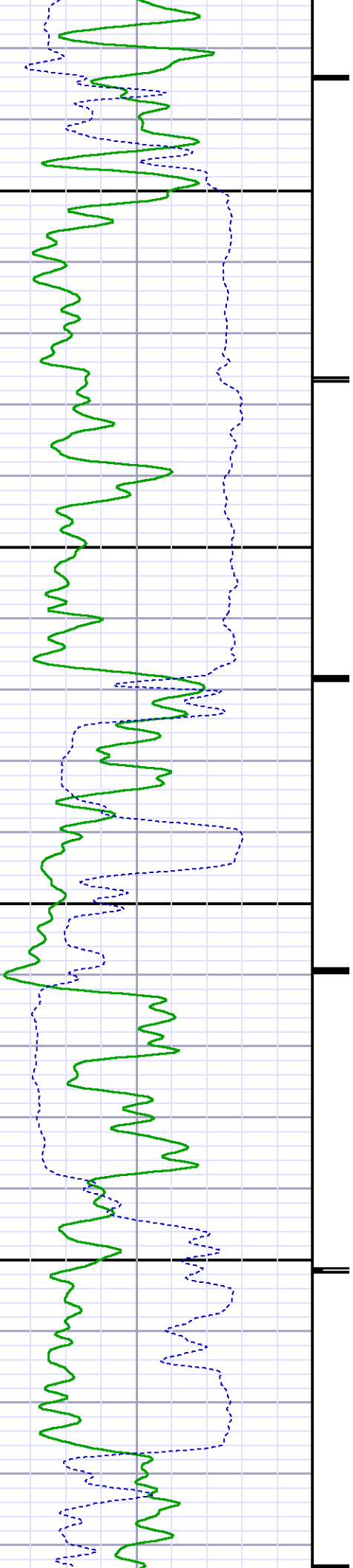


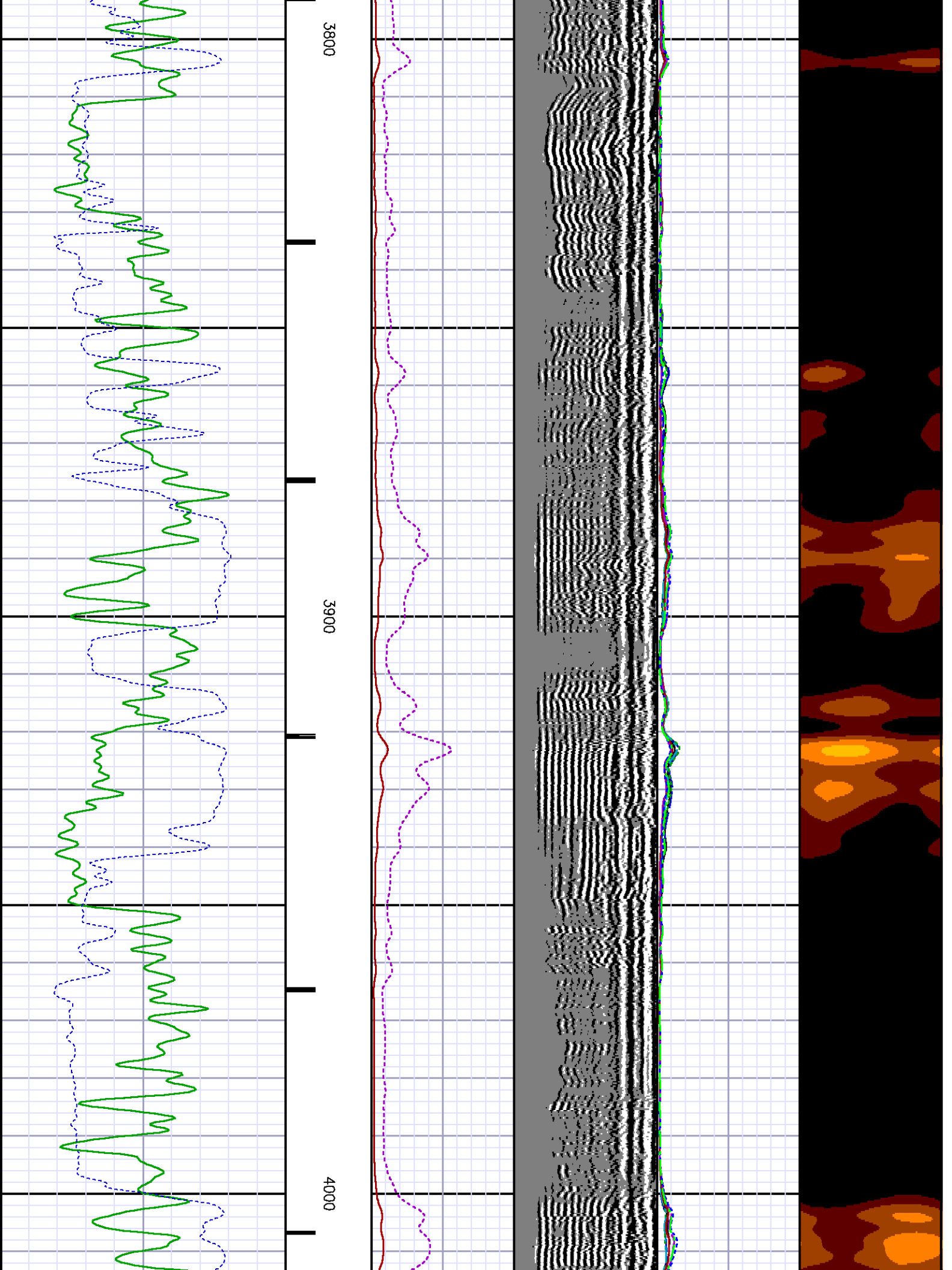


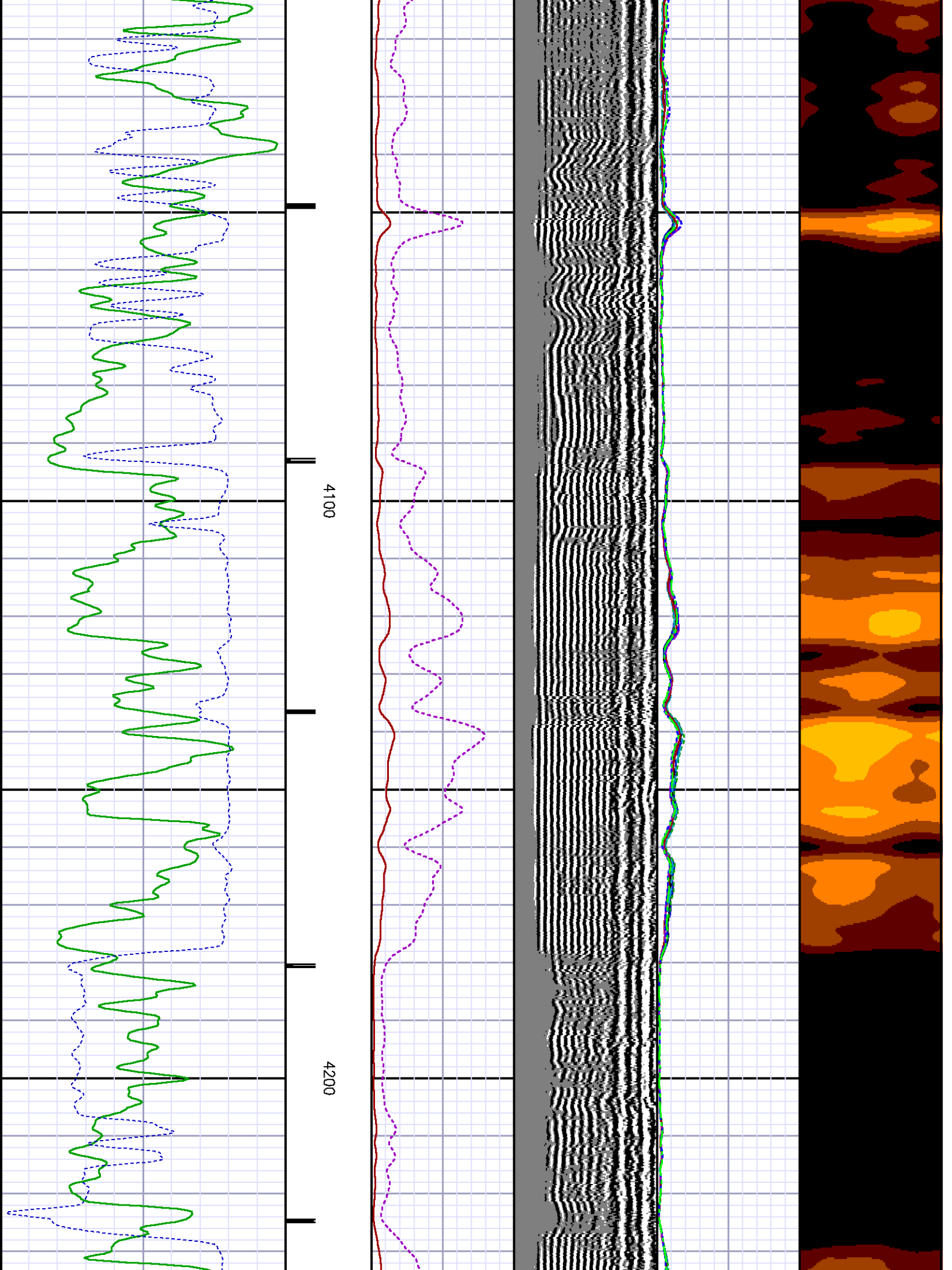


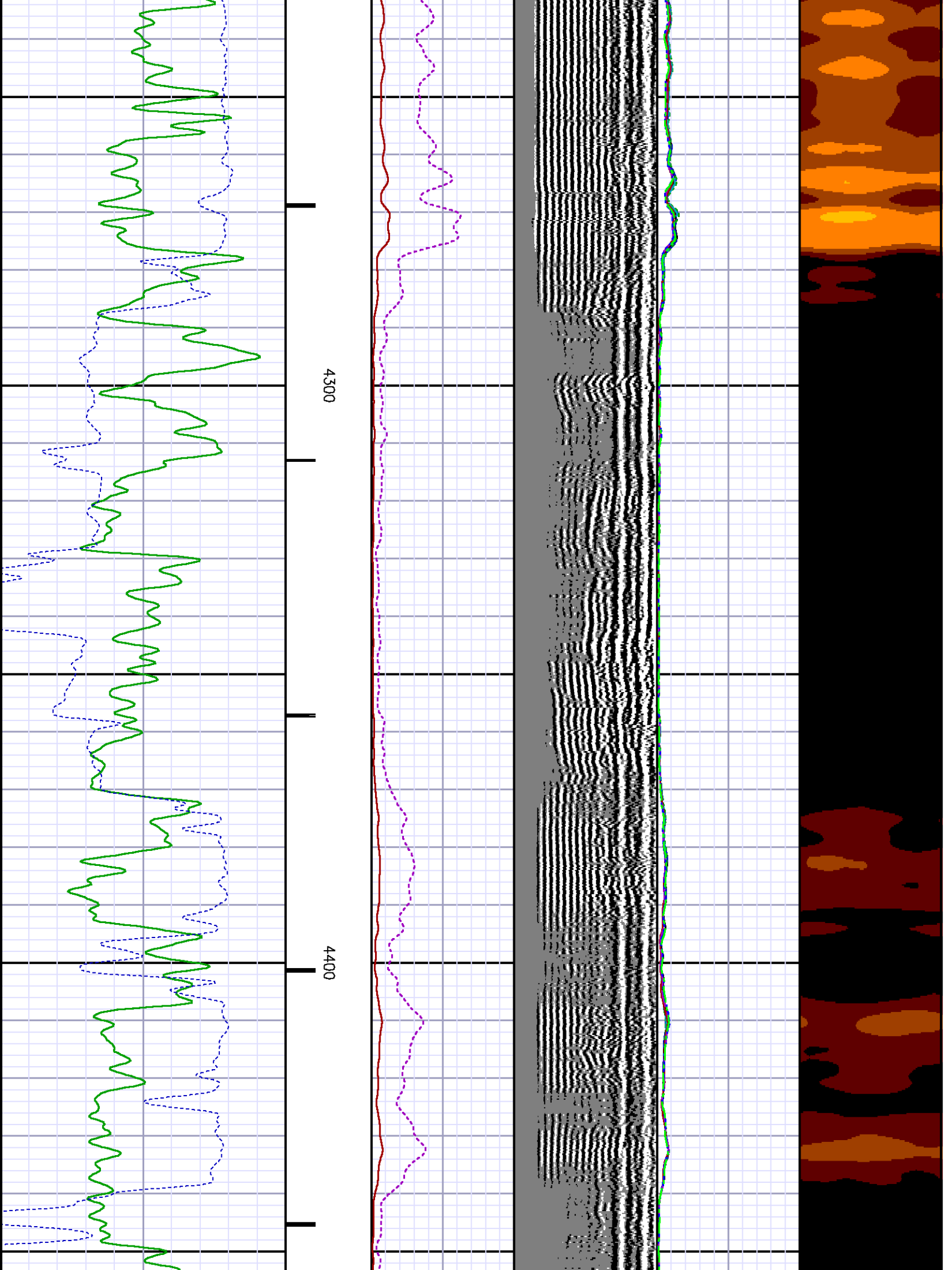
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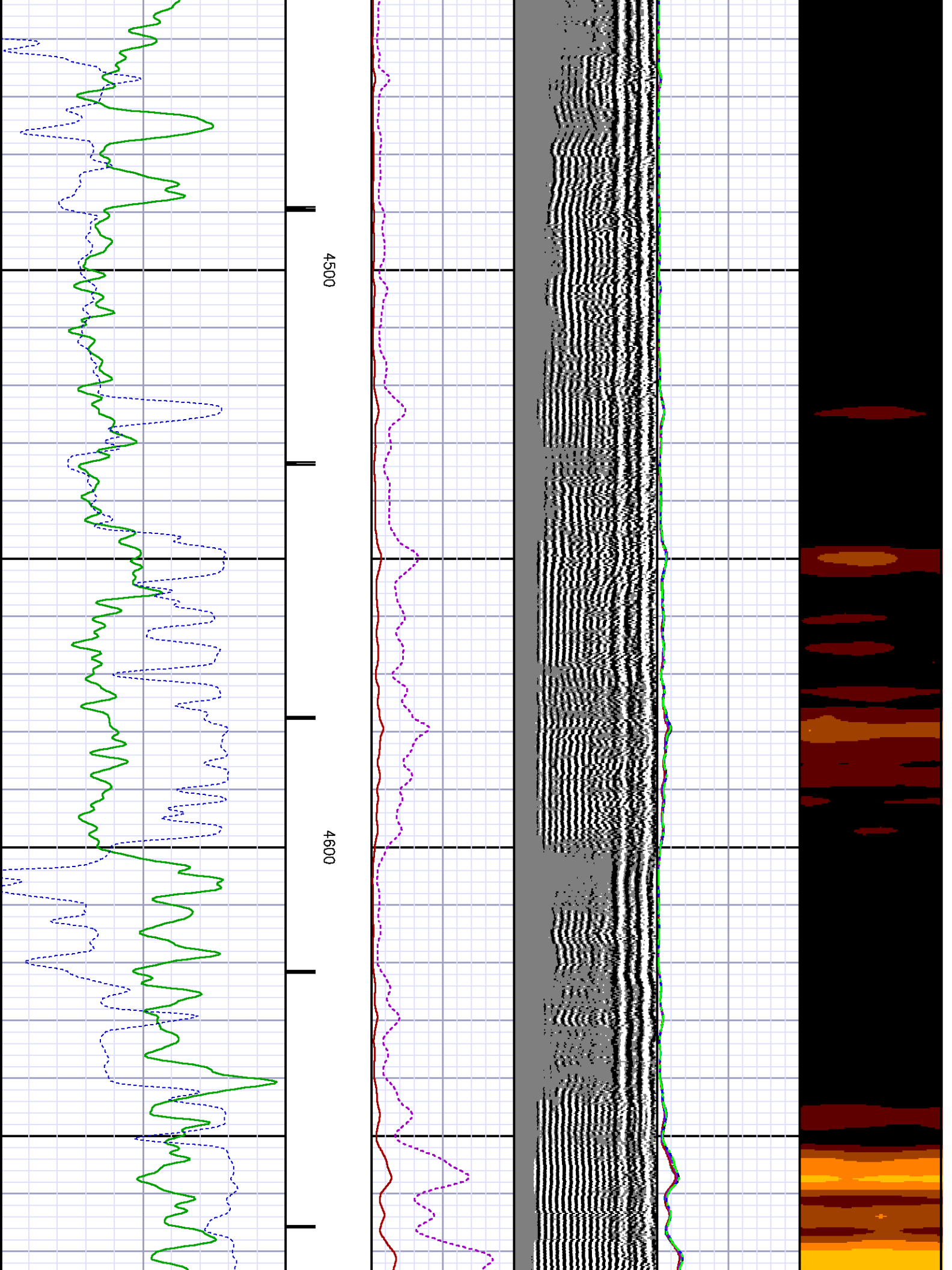
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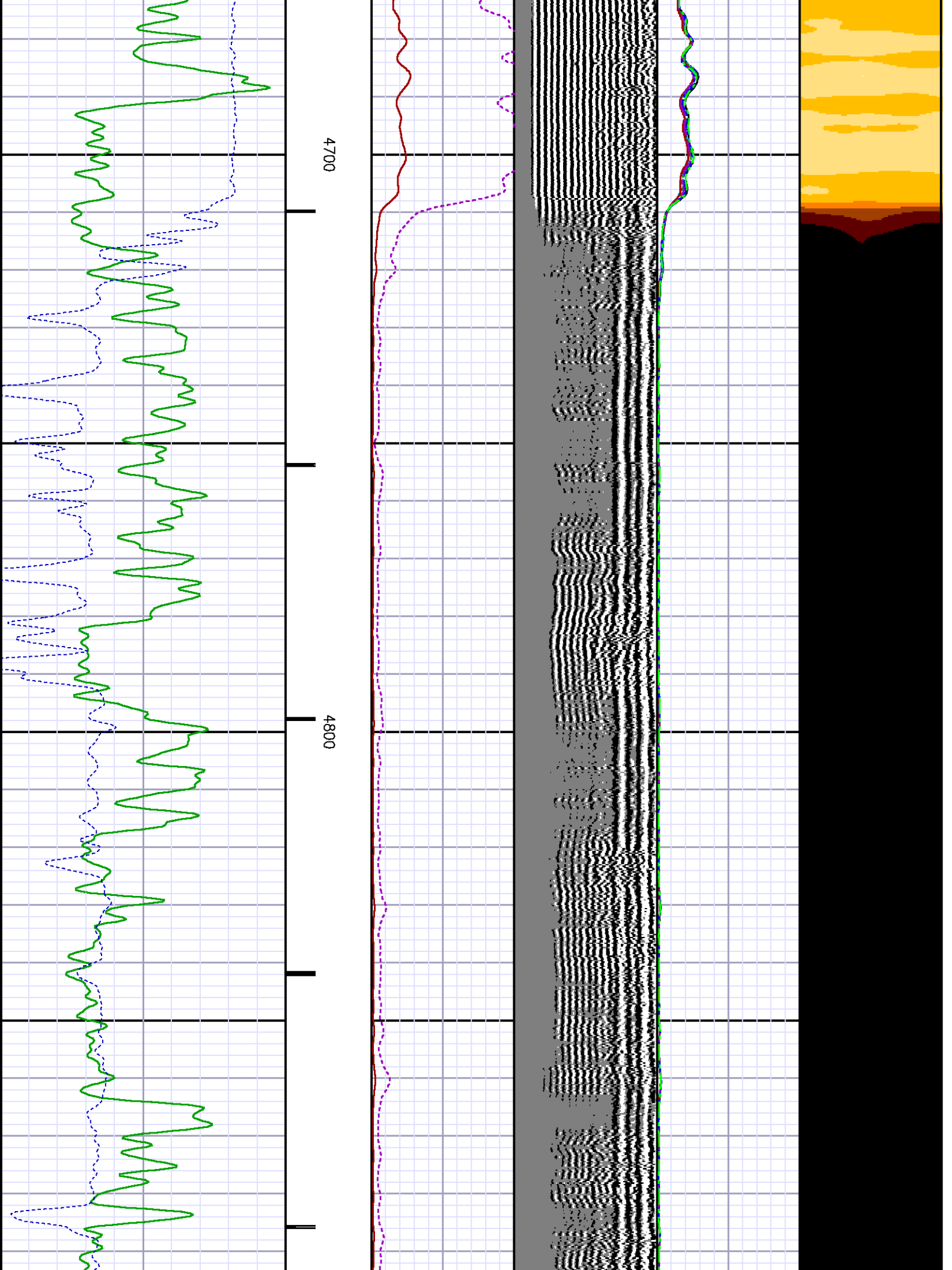


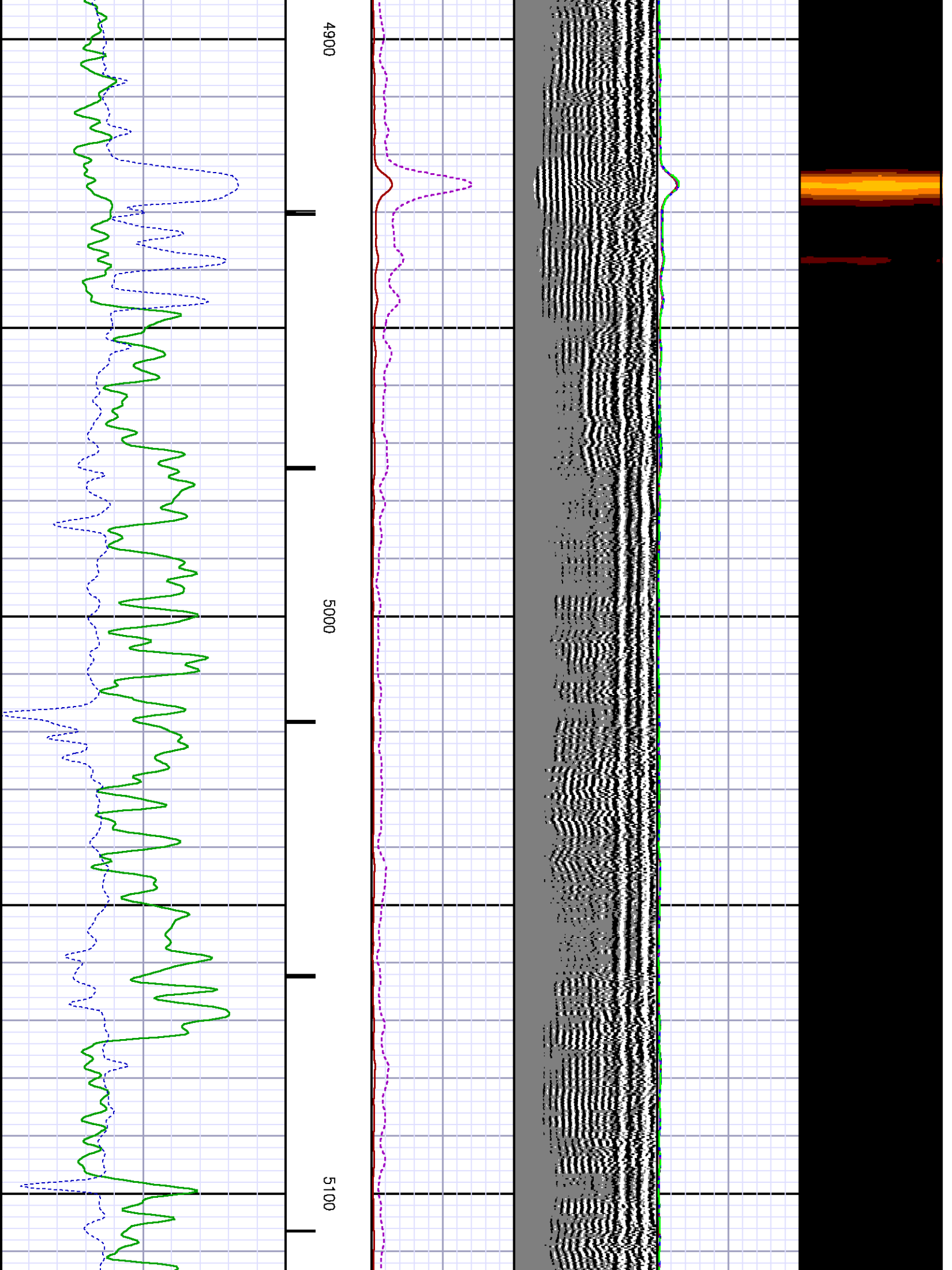


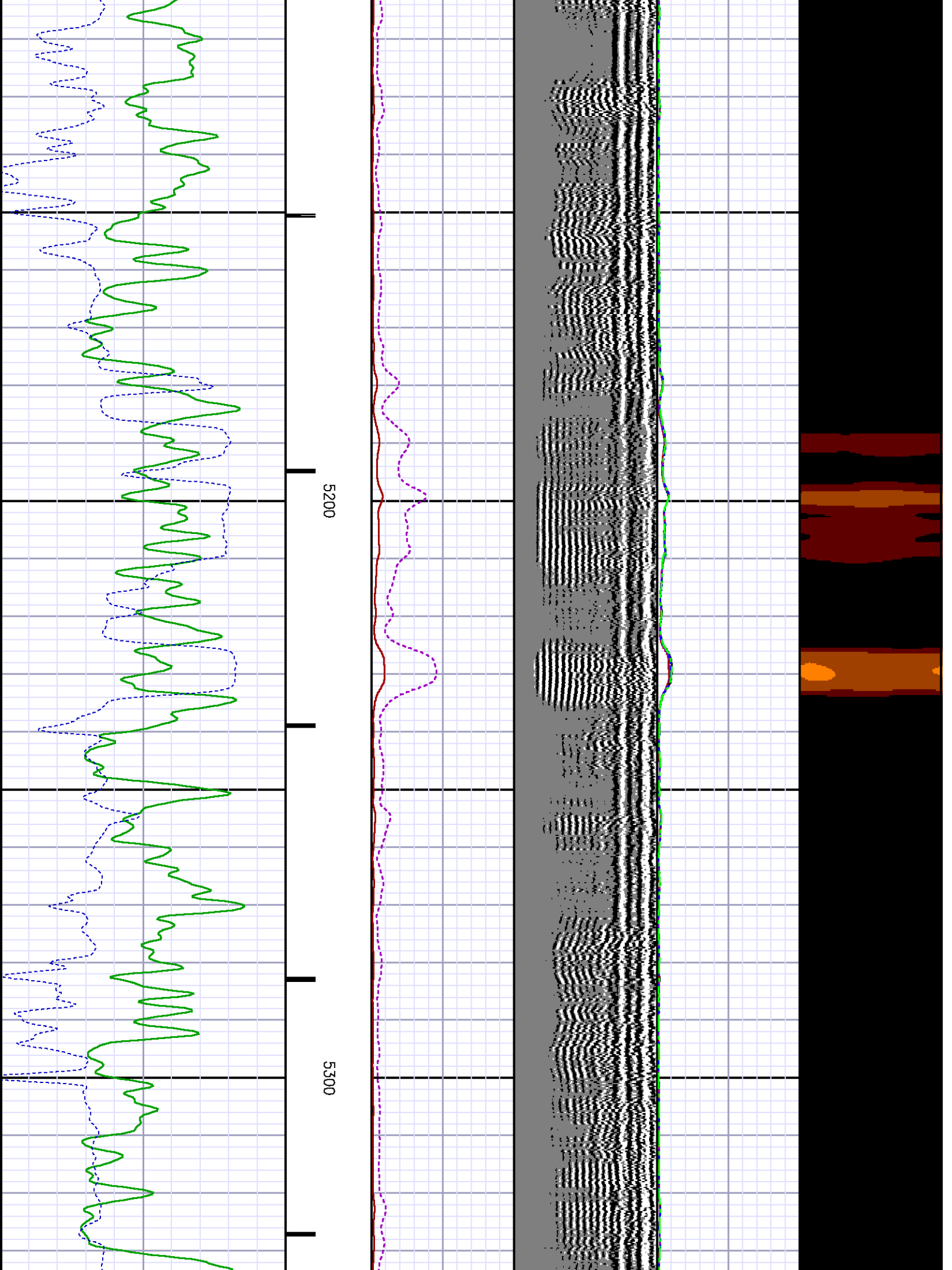


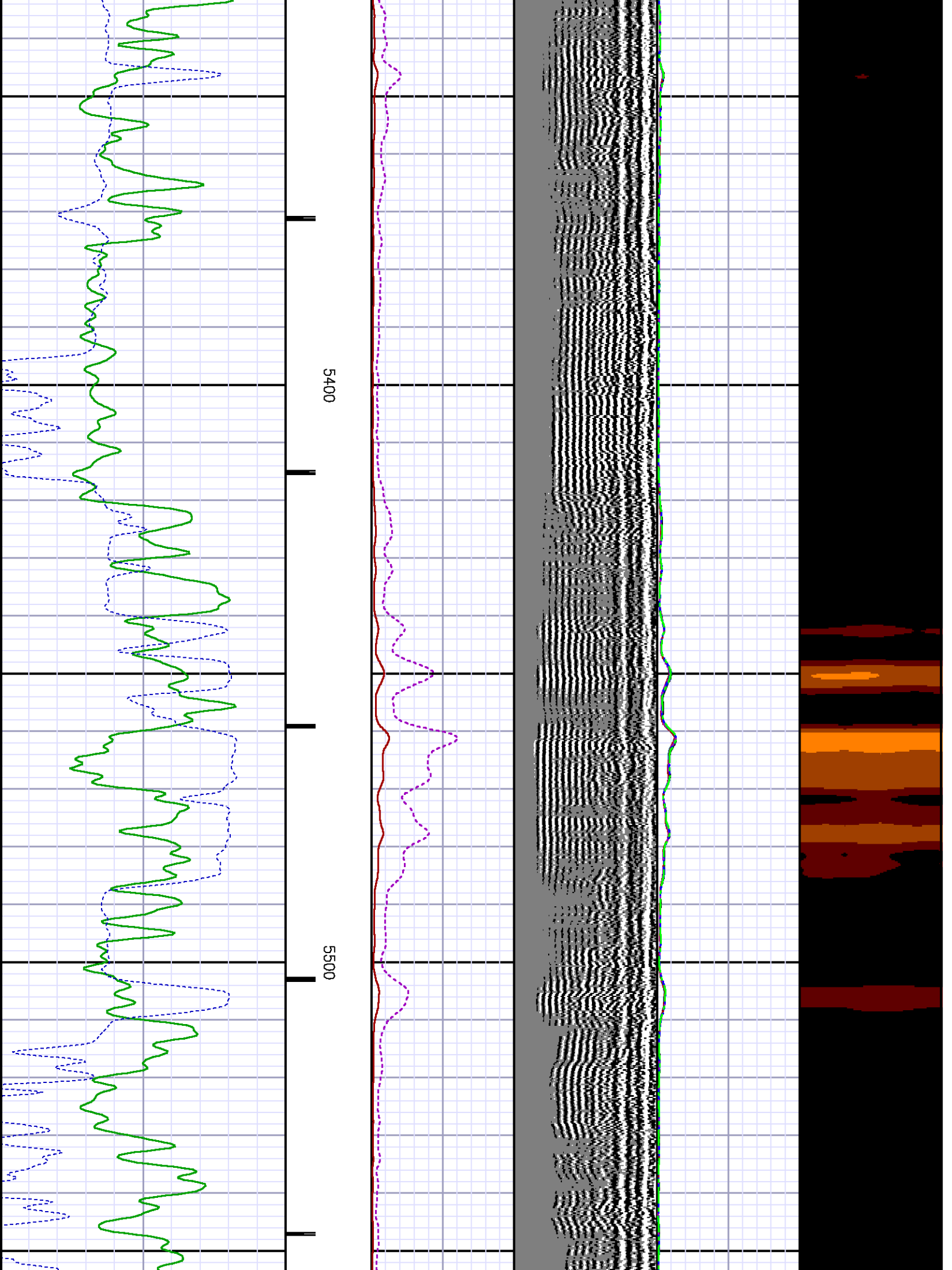


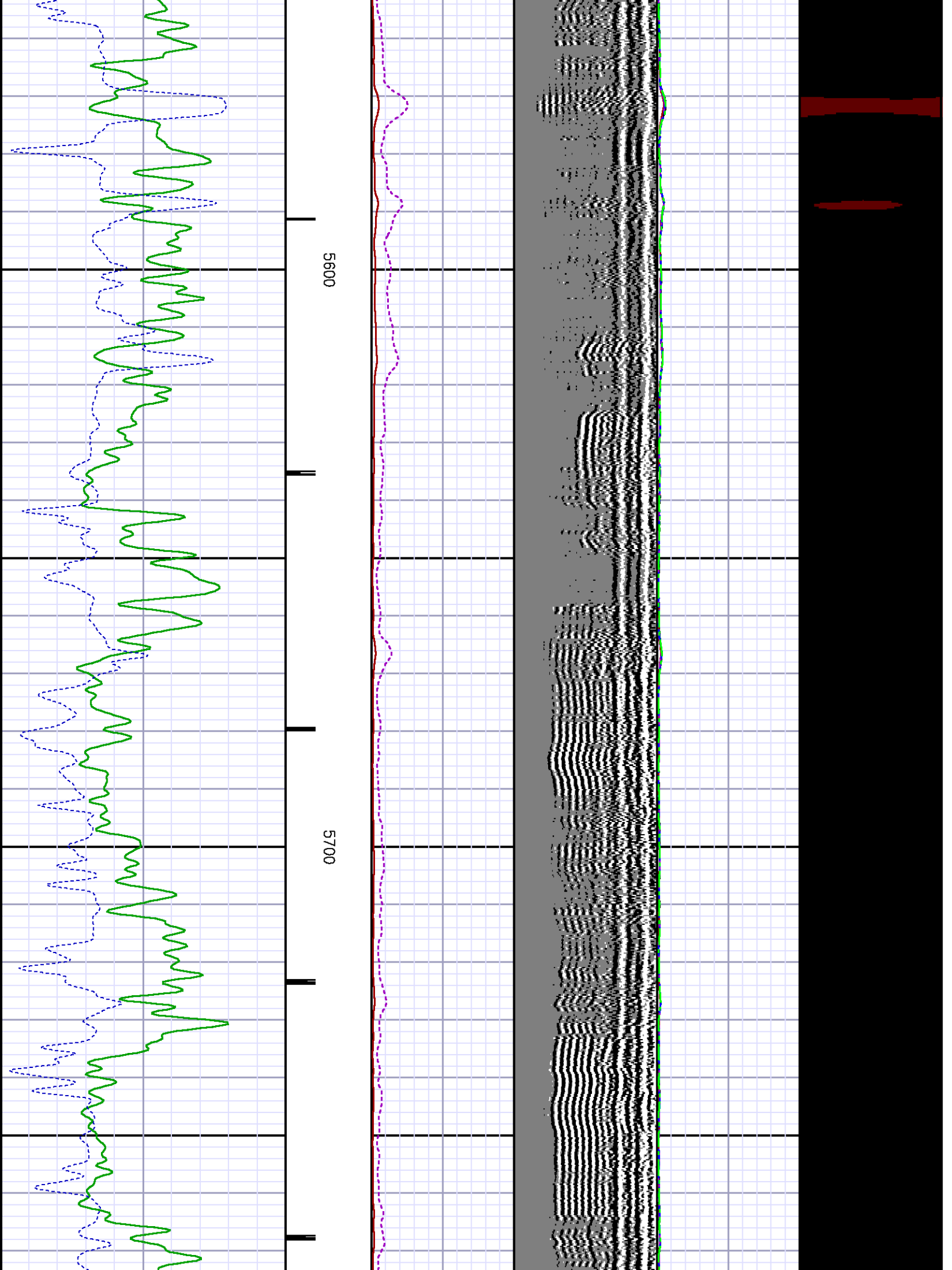


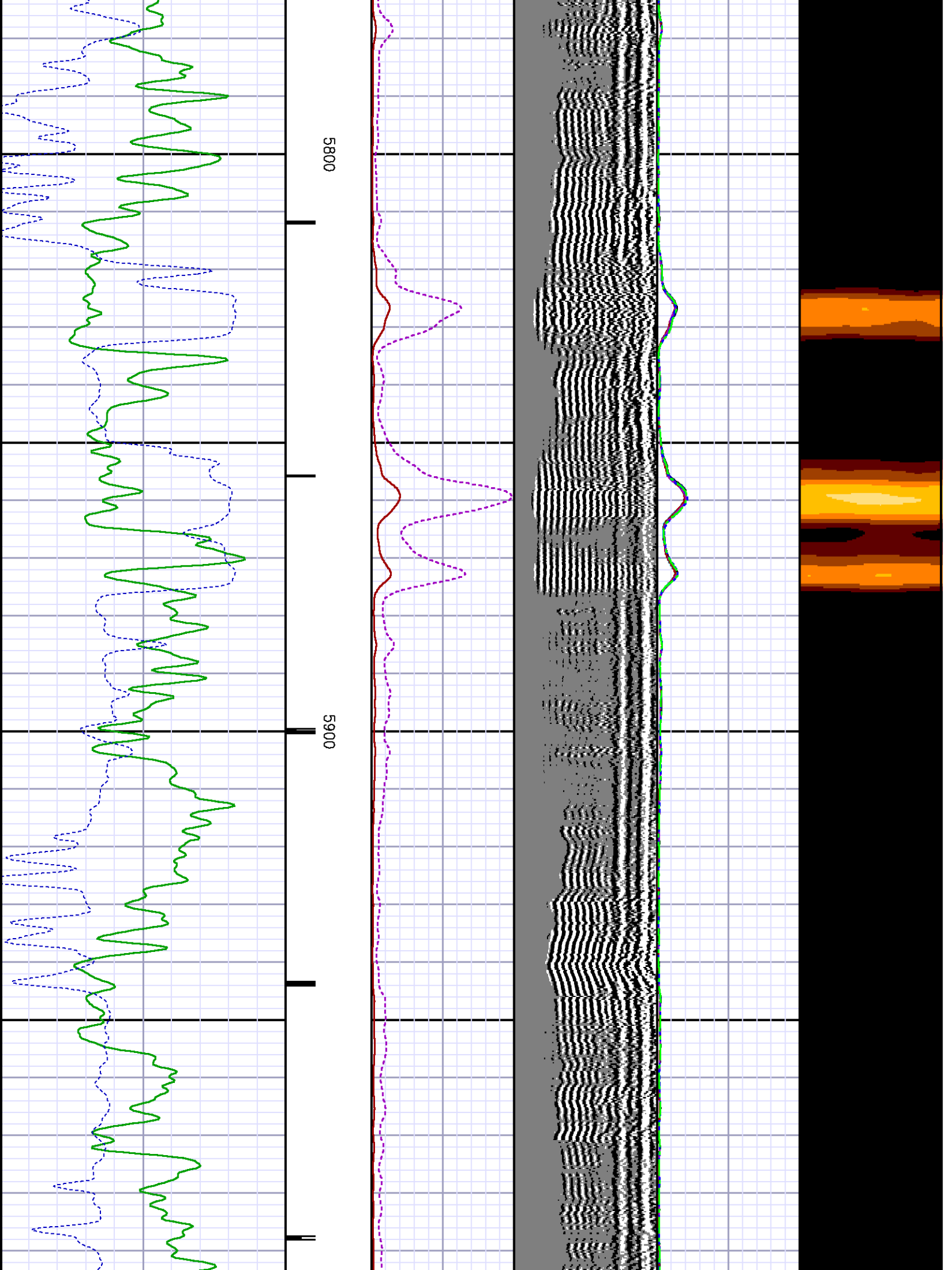


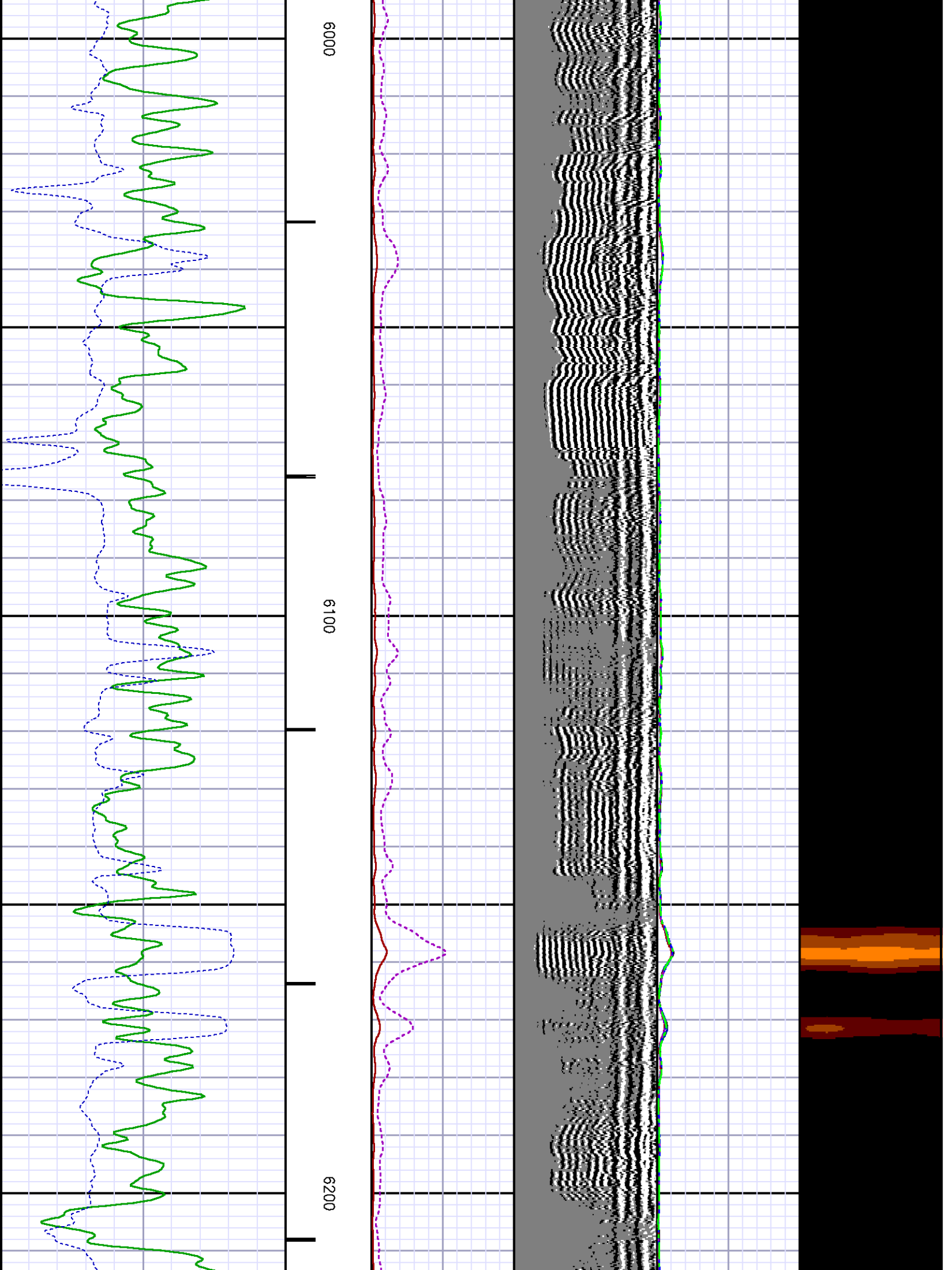


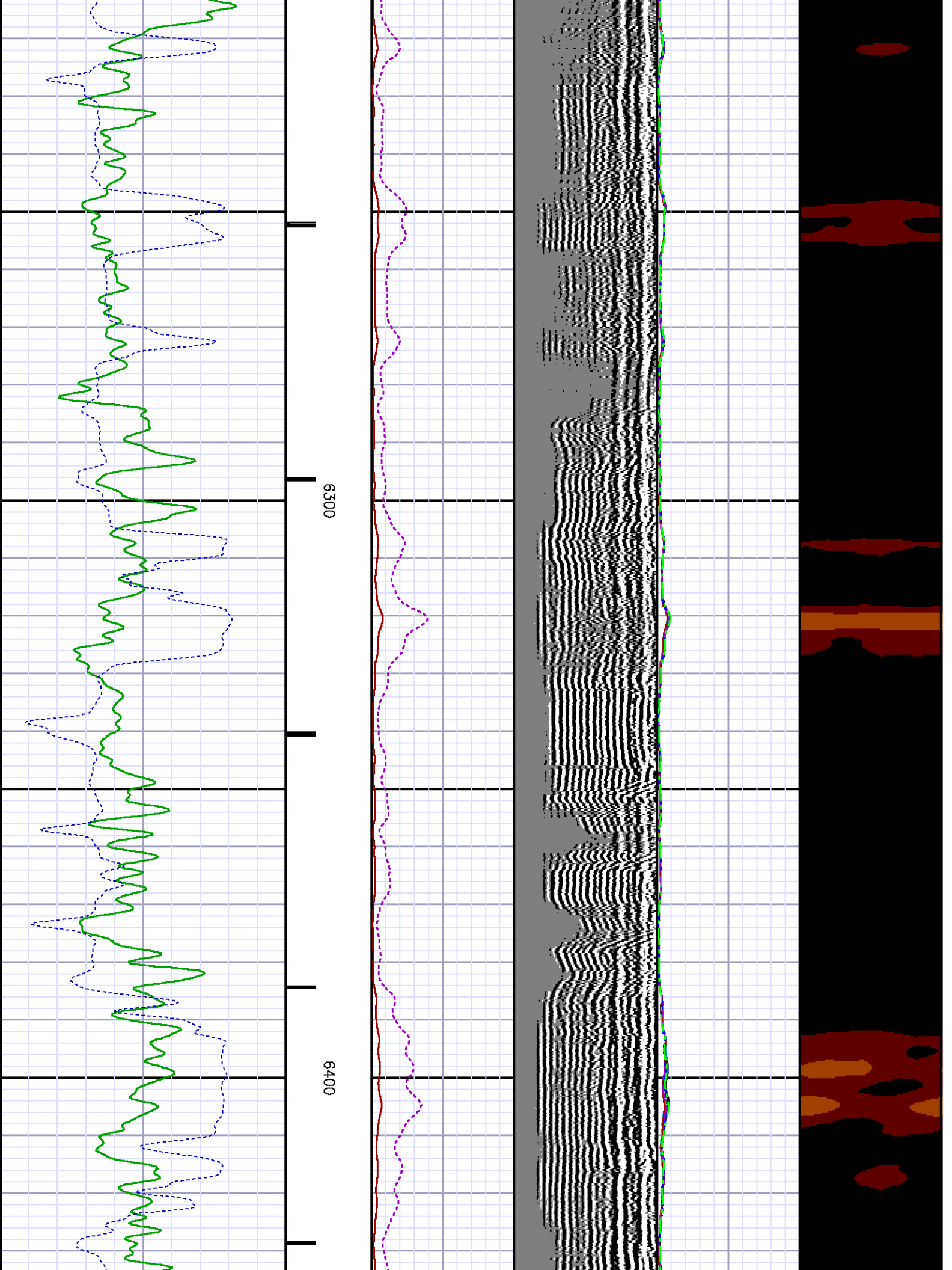


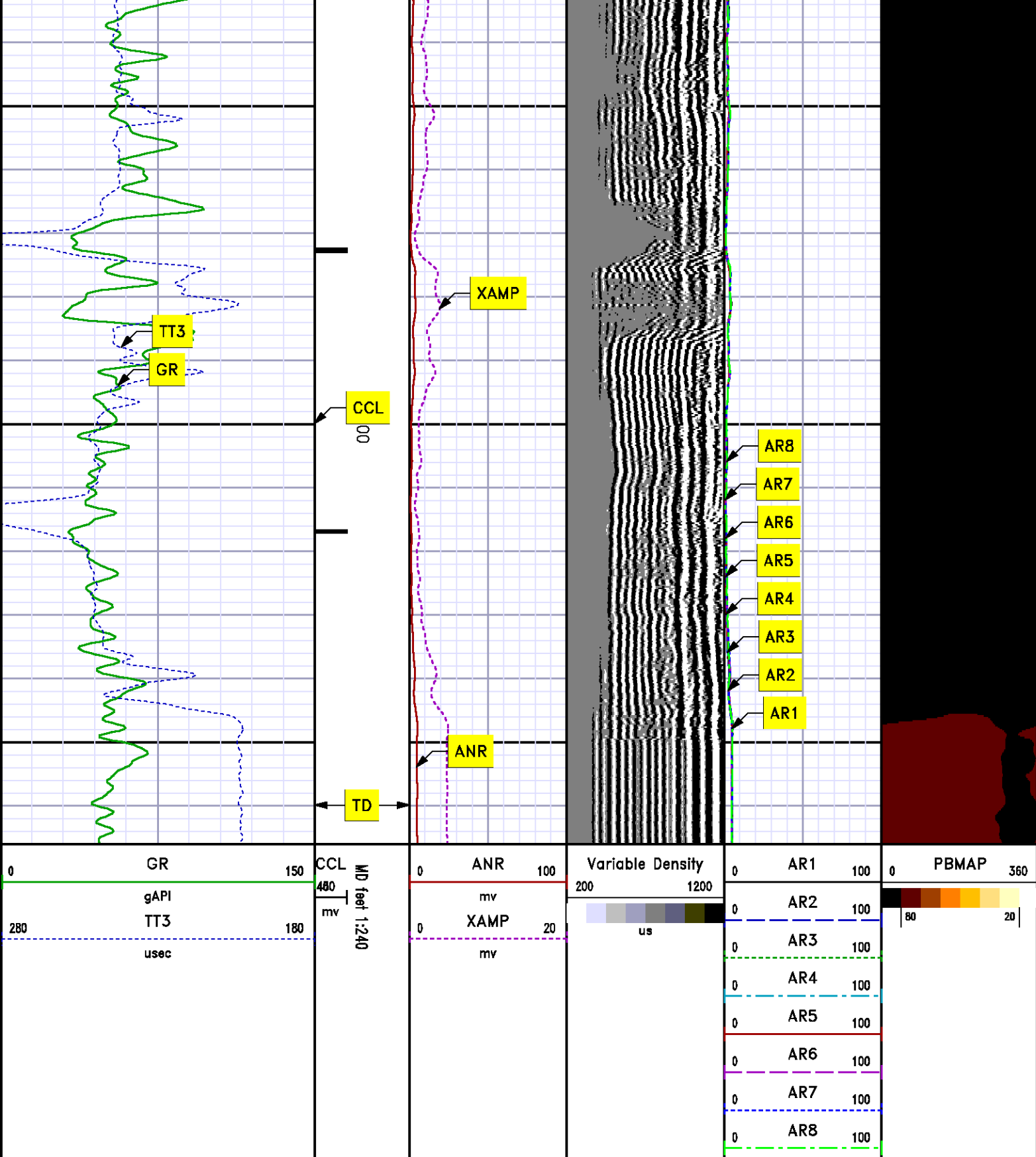












REPEAT SECTION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	6249.750	6580.000
RAL	Amp Gate Start Near	195.000	usec	6249.750	6580.000
RAL	Amp Gate Start Radial	195.000	usec	6249.750	6580.000
RAL	Amp Gate Width Far	25.000	usec	6249.750	6580.000
RAL	Amp Gate Width Near	25.000	usec	6249.750	6580.000
RAL	Amp Gate Width Radial	25.000	usec	6249.750	6580.000
RAL	casing od	4.500	inches	6249.750	6580.000
RAL	casing wt	11.600	lbm/ft	6249.750	6580.000
RAL	FB Start Far	291.900	usec	6249.750	6580.000
RAL	FB Start Near	175.391	usec	6249.750	6580.000
RAL	FB Start Radial	175.391	usec	6249.750	6580.000
RAL	FB Thresh Far	10.000	mv	6249.750	6580.000
RAL	FB Thresh Near	4.000	mv	6249.750	6580.000
RAL	FB Thresh Radial	4.000	mv	6249.750	6580.000
RAL	Fluid Travel Time	200.000	usec/ft	6249.750	6579.937

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-10.040	AFAR	SIG	TT5			
1355XA	-5.620	CCL					
1355XA	-1.500	GR					
1355XA	0.000	TEMP					

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

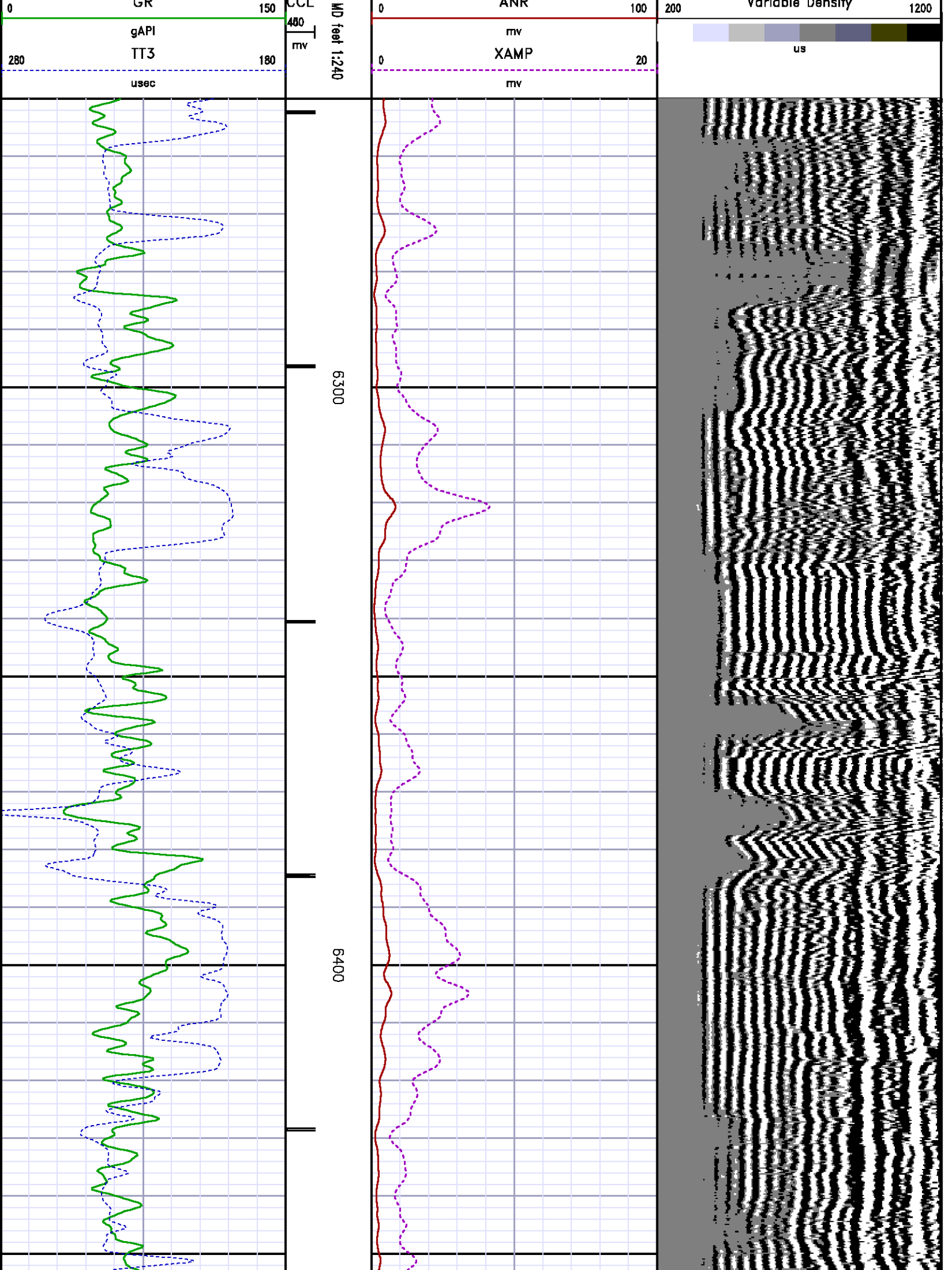
Well : WPX ENERGY GM 423-34

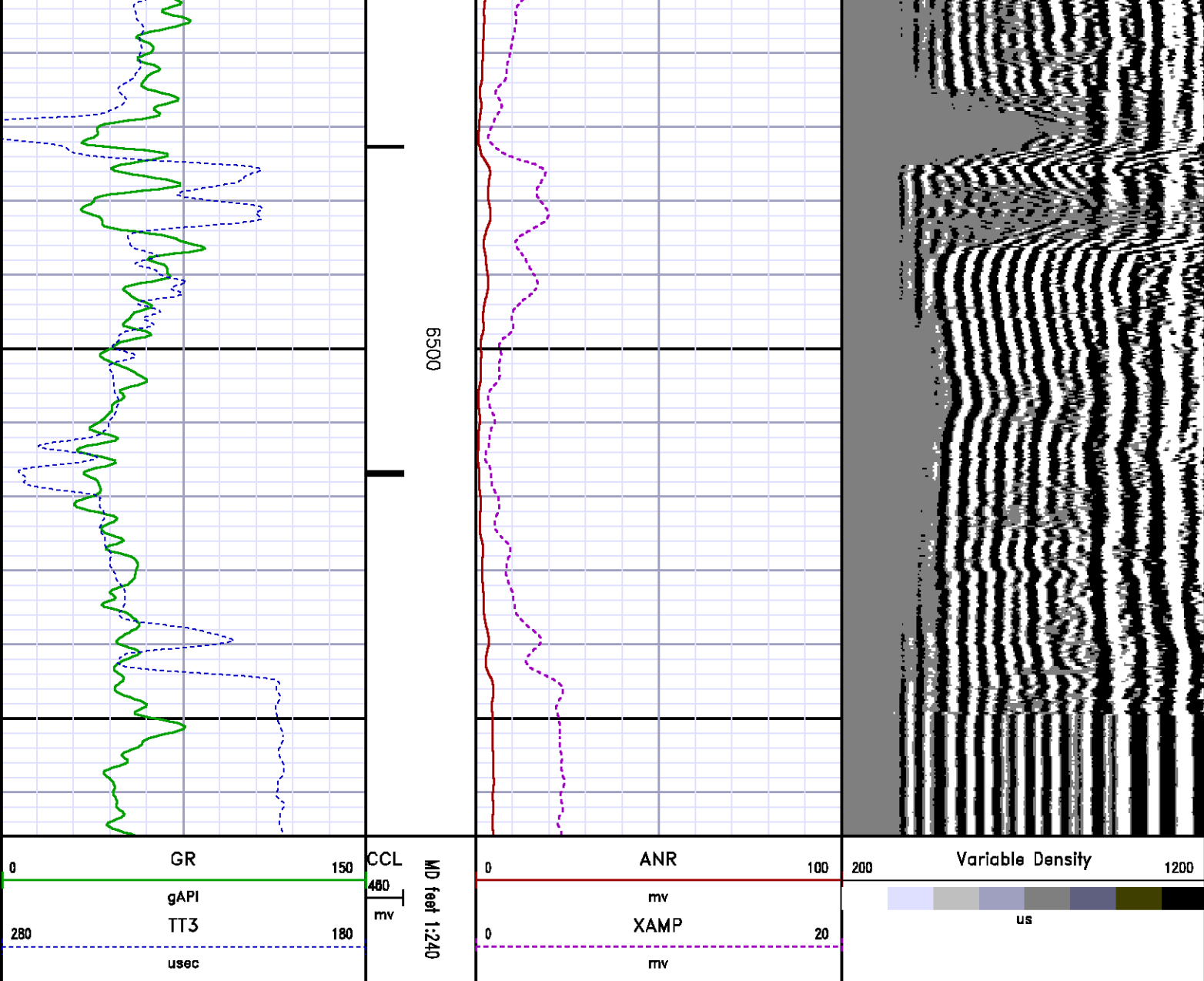
File Name : d:\welldata\wpx energy\gm 423-34\rat423\repeat.tif

Mode : PlotMgr 5.4.504

Interval : 6250.00 - 6566.00 feet UP

Created : 8/16/2013 8:02:17 AM





CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\106A16_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Aug 16 07:31:17 2013 TOOL SERIES: 1426XA ASSET: 106 SEQ: A16

Tool Delay
[u sec] -58.00

Tank OD
in 5.50

Tank Wt
lbm/ft 15.50

Tank ID
in 4.95

RECEIVER	Travel Time [usec]	Amp. Gate Start [usec]	Amp. Gate Width [usec]	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	218	216	30	166	25	-0.273	100.00	0.21
3 Ft. Receiver	218	216	30	157	25	-0.250	100.00	0.21
5 Ft. Receiver	326	324	30	225	25	0.201	150.00	0.23
Radial #1	217	216	30	166	25	-0.647	100.00	0.21
Radial #2	217	216	30	166	25	-0.044	100.00	0.21
Radial #3	218	216	30	166	25	-0.436	100.00	0.21
Radial #4	218	216	30	166	25	-0.320	100.00	0.21
Radial #5	218	216	30	166	25	-0.200	100.00	0.21
Radial #6	218	216	30	166	25	-0.448	100.00	0.21
Radial #7	216	216	30	166	25	-0.193	100.00	0.21
Radial #8	218	216	30	166	25	-0.130	100.00	0.21

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\106A16 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Aug 16 07:33:10 2013 TOOL SERIES: 1426XA ASSET: 106 SEQ: A16

Tool Delay [usec] -58.00 Casing OD in 4.50 Casing Wt lbm/ft 11.60 Casing ID in 4.00

RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	166	25	-0.060	0.000	1.03	100.000
3 Ft. Receiver	195	25	-1.884			
5 Ft. Receiver	305	25	-3.120			
Radial #1	195	25	-3.003			
Radial #2	195	25	-2.610			
Radial #3	195	25	-2.282			
Radial #4	195	25	-2.348			
Radial #5	195	25	-2.081			
Radial #6	195	25	-2.142			
Radial #7	195	25	-1.555			
Radial #8	195	25	-1.992			

GAMMA RAY

Calibration File: C:\case\calver\GR\209J3.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue Jul 30 08:43:58 2013 TOOL SERIES: 1355XA ASSET: 209 SEQ: J3

Calibrator # Background [cps] Calibrator On [cps] Multiplicative Background [api] Calibrator On [api] Differential [api]

SHOP	JIG	113.02	548.53	0.425	48.01	233.01	185.00
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Verification File: C:\case\calver\GR\209J3.VP

PRIMARY LOG VERIFICATION						
DATE/TIME PERFORMED:		Tue Jul 30 08:46:06 2013		TOOL SERIES:	1355XA	ASSET: 209 SEQ: J3
Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
SHOP JIG	112.22	543.20	0.425	47.67	230.74	183.07

TOOL DIAGRAM

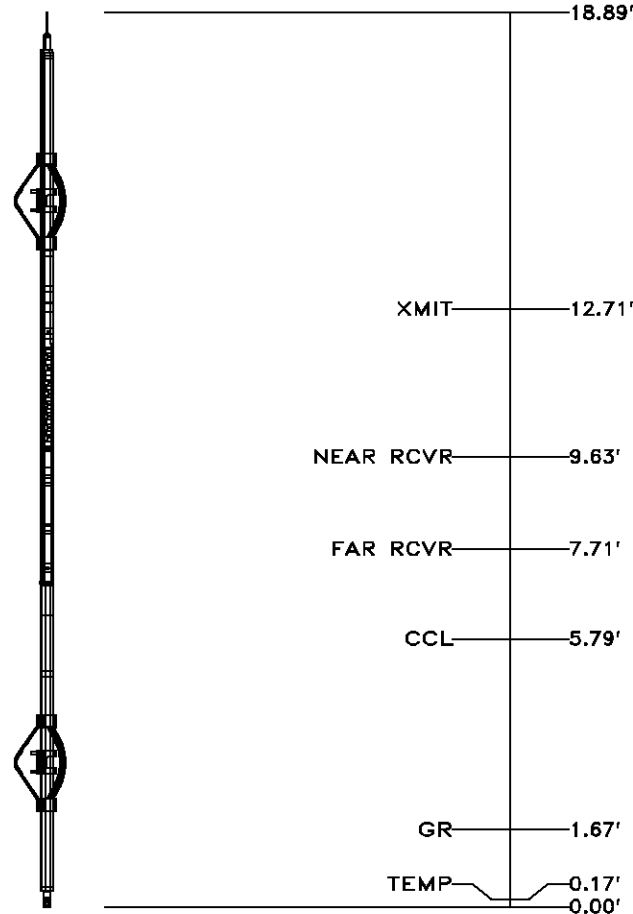
OTA SHORT CABLE HEAD

PROBE 2 3/4 DUAL RECEIVER RADII

Series 1426XA
 Mnemonic PROB
 Diameter 2.75"
 Length 11.17'
 Measure Point 0.75' FAR RCVR
 Measure Point 2.67' NEAR RCVR
 Measure Point 5.75' XMIT
 Temp Rating 350.00 °F
 Press Rating 18000.00 PSI

RAL GR/TEMP/CCL/CHV DETECTOR

Series 1355XA
 Mnemonic RAL
 Diameter 2.75"
 Weight 85.00 lb
 Length 6.96'
 Measure Point 0.17' TEMP
 Measure Point 1.67' GR
 Measure Point 5.79' CCL
 Temp Rating 400.00 °F
 Press Rating 20000.00 PSI



Total Length: 18.89'
 Total Weight: Not Available
 Max Diameter: 0' 2.75"



BAKER
HUGHES

Baker Atlas

CASE

Company		Well		API No:	
		WPX ENERGY GM 423-34		CH075719	
		Field		API No:	
		GRAND VALLEY		05045193090000	
		County		State	
		GARFIELD		COLORADO	
Location				Elevations	
SHL: 1958' FSL X 2182' FWL				KB 5381.5 ft	
BHL: 1534' FSL X 2405' FEL (NWSE)				DF	
				GL 5355.5 ft	
SEC 34 TWP 6S RGE 96				34-6S-96W	
				GM 23-34 PAD	
				NABORS 574	