

Company				CMX INCORPORATED			
Well				BUSHTON #1-20			
Field				STOLTENBERG			
County				ELLSWORTH			
State				KANSAS			
COMPENSATED NEUTRON LITHOLOGY DENSITY GAMMA RAY X-Y CALIPER MICROLOG							
SEC		TWP		RGE		OTHER SERVICES: DIL	
20		17S		09W			
Location, 925' FSL & 710' FWL				SW/NE/SW/SW			
SURE. SAME		AP#.		015-053-21323-00-00			
Permanent Datum		Ground Level		Elev		ELEVATIONS	
Log Measured From		Kelly Bushing				K.B. 1777 G.L. 1764 D.F. 1775	
Drilling Measured From		Kelly Bushing					
Date		19-MAY-2015					
Run No.		ONE					
TD Driller		3320		ft		ft	
TD RECON		3317		ft		ft	
Bot Logged Interval		3316		ft		ft	
Top Logged Interval		340		ft		ft	
Casing Depth Driller		8 5/8		in.		@ 350	
Casing Depth RECON		8 5/8		in.		@ 350	
Bit Size		7 7/8		in.		in.	
Drilling Fluid Type		WBM					
Density		9.2		Viscosity		56	
Fluid Loss		PH		9.0		12.0	
Source Of Sample		Flowline					
RM @ Measured Temp		1.04		Ohmm		@ 75	
RMF @ Measured Temp		0.78		Ohmm		@ 75	
RMC @ Measured Temp		1.29		Ohmm		@ 75	
RM @ MRT		0.74		Ohmm		@ 107.6	
Max Recorded Temp		107.6		DegF		Ohmm DegF	
Time Drilling Stopped		19-MAY-2015		11:43			
Time Circulation Stopped		19-MAY-2015		13:10			
Time Logger On Bottom		19-MAY-2015		17:15			
Unit Num		Location		S406		OKLAHOMA CITY, OK	
Recorded By		K.HELDERMON					
Witnessed By		K.LEBLANC					

All interpretations are based on inferences from electrical or other readings, and therefore, RECON cannot and will not guarantee the accuracy of any interpretations of log data. RECON shall not be liable for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from	interpretations made by any of our officers, agents or employees, except in the case of provable Gross Neglegence or willfull damage. Interpretations are also subject to the terms and conditions of our Price Schedule and General Service Agreement.
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RIG INFORMATION	
Drill Contr/Rig#	DUKE DRILLING #7

GENERAL REMARKS SECTION	
FIRST RUN IN THE HOLE CNL AND LDT LOGGED IN A LIMESTONE MATRIX TOP MARK - 298, BOTTOM MARK - 3301.5 CNL/LDT LOGGED MATRIX: 2.71 g/cc. CHLORIDES: 5000 LCM: 0 THANK YOU FOR USING RECON PETROTECHNOLOGIES LTD.	AHV CALCULATED ON 5.5" PROD. CASING CREW: J.THOMAS

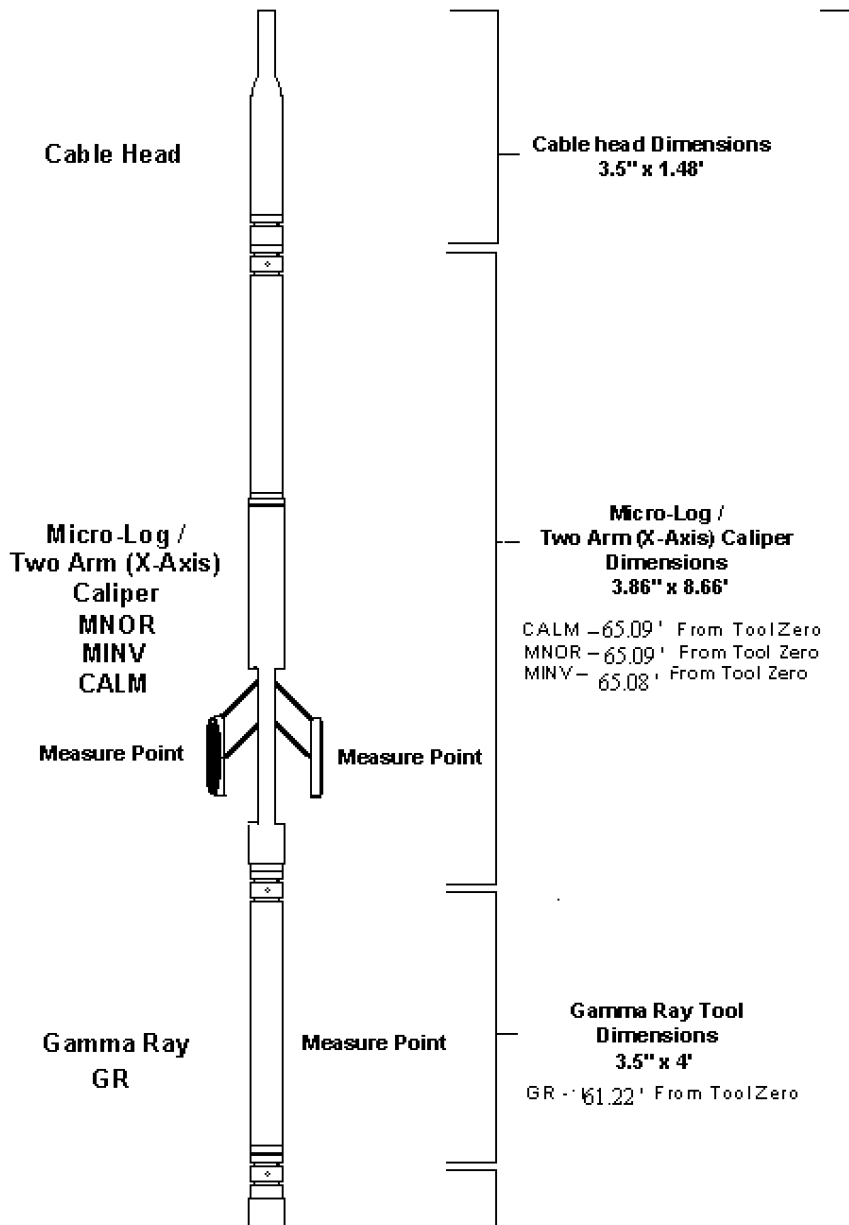
CEMENT VOLUME CALCULATIONS SUMMARY

Tool Type	LDT-CNT	Caliper Type		
Tool Serial #	RN2007 / RL4101			
	Borehole Total	Annular Volume with Casing	From Depth (MKb)	To Depth (MKb)
VOLUMES	1431 Cubic Feet	938 Cubic Feet	340	3317

CASING INFORMATION

	SIZE (in)	GRADE	WEIGHT (lbs/ft)	ID (in)	TOP DEPTH	BOT DEPTH
SURFACE CASING	8 5/8	J-55	24	8.098	Surface	350
INTERMEDIATE CASING	N/A	N/A	N/A	N/A	Surface	N/A
PRODUCTION CASING	5 1/2	N/A	N/A	N/A	Surface	N/A

DUAL INDUCTION – SP / BHC SONIC /
GAMMA RAY / LITHO-DENSITY / X CALIPER
COMPENSATED NEUTRON / Y-CALIPER
MICRO - LOG / M-CALIPER



Compensated Neutron
Y - Axis Caliper
NP (SS,LS,DL)
CALY

Compensated Neutron
Y-Axis Caliper
Dimensions
3.98" x 10.25'

CALY - 52.89' From ToolZero
CNL LS - 52.07' From ToolZero
CNL SS - 51.48' From ToolZero

Measure Point

Digital Telemetry

Digital Telemetry Section
Dimensions
3.5" x 3.15'

Compensated
Litho-Density (Pe)
X - Axis Caliper

Compensated Litho-Density
X-Axis Caliper
Dimensions
3.98" x 9.35'

DP(SS,LS,DL)
RHOB
DRHO
PE
CALX
Measure Point

CALX - 38.94' From ToolZero
LDT w1 -
LDT w2 -
LDT w3 - -38.68' From ToolZero
LDT w4 -
LDT SS - 38.19' From ToolZero

Tool String
Length Total
73.64 '

Borehole
Compensated
Sonic

T-1
Transmitter 1

Borehole Compensated Sonic
Tool Dimensions
3.5" x 15.75'

SP(SS,LS,DL)
DT
TTI
VDL
TT

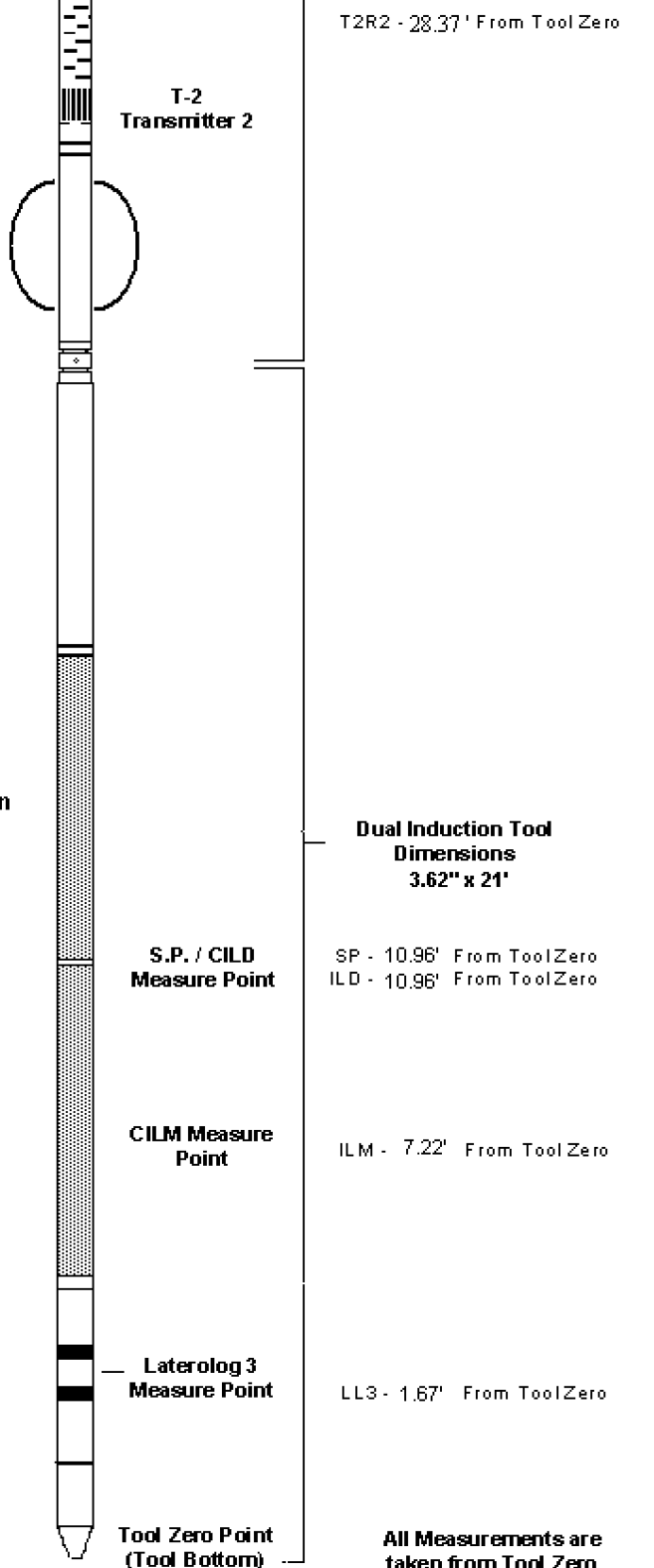
T1R1 - 33.35' From ToolZero
T1R2 - 31.35' From ToolZero

Measure Point
Tool First Reading
Point

R-1
Receiver 1

R-2
Receiver 2

T2R1 - 28.54' From ToolZero



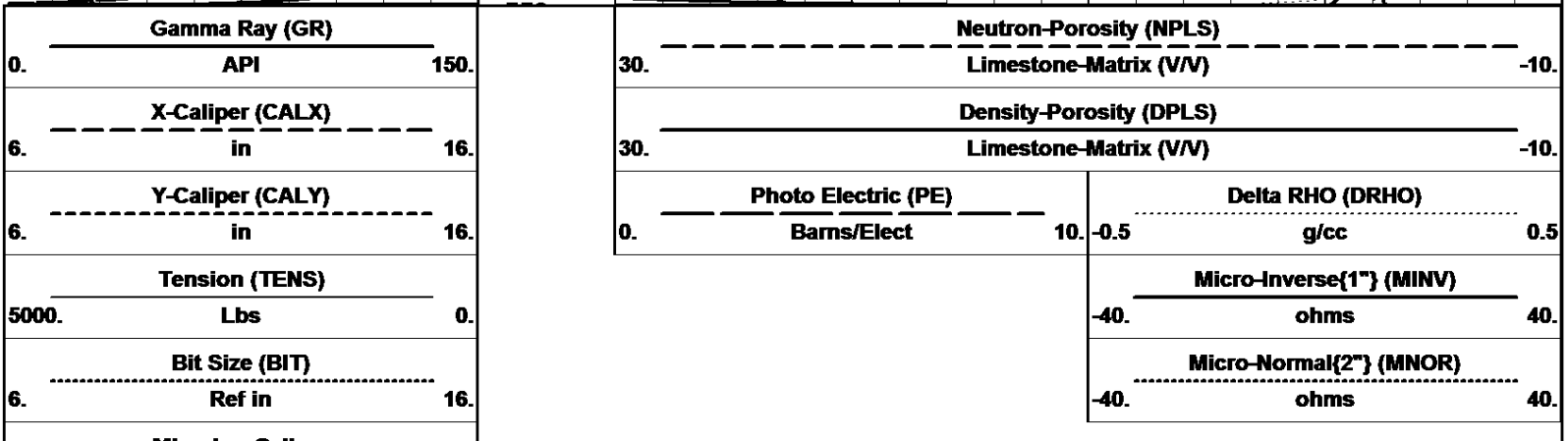
05/20/2015
01:22:29 => End Time

ANHYDRITE MARKER (5"/100Ft)

Log UP - (VER 11.19)
End Depth=> 399.90 Feet

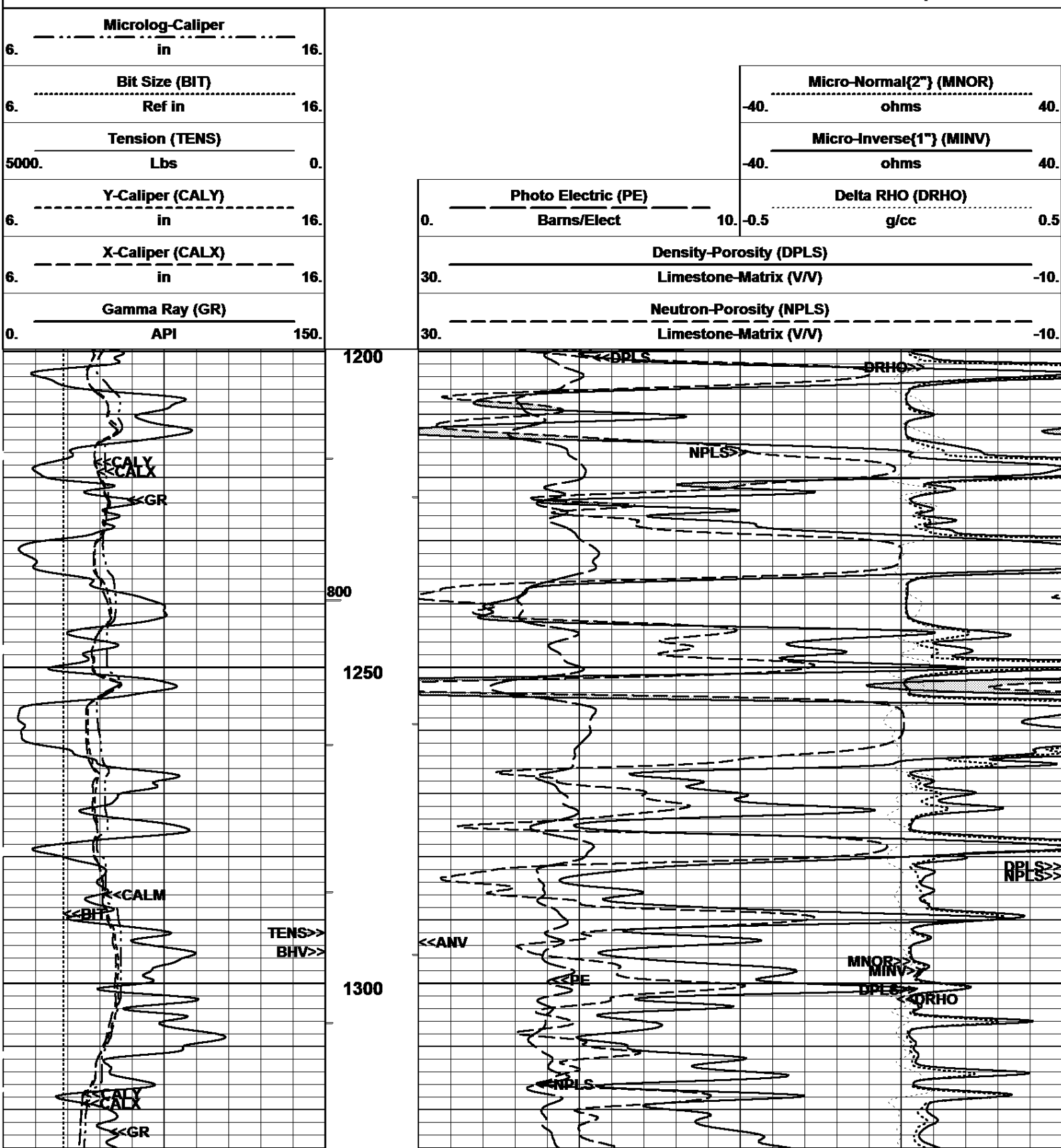
Microlog-Caliper 6. in 16.				
Bit Size (BIT) 6. Ref in 16.				
Tension (TENS) 5000. Lbs 0.				

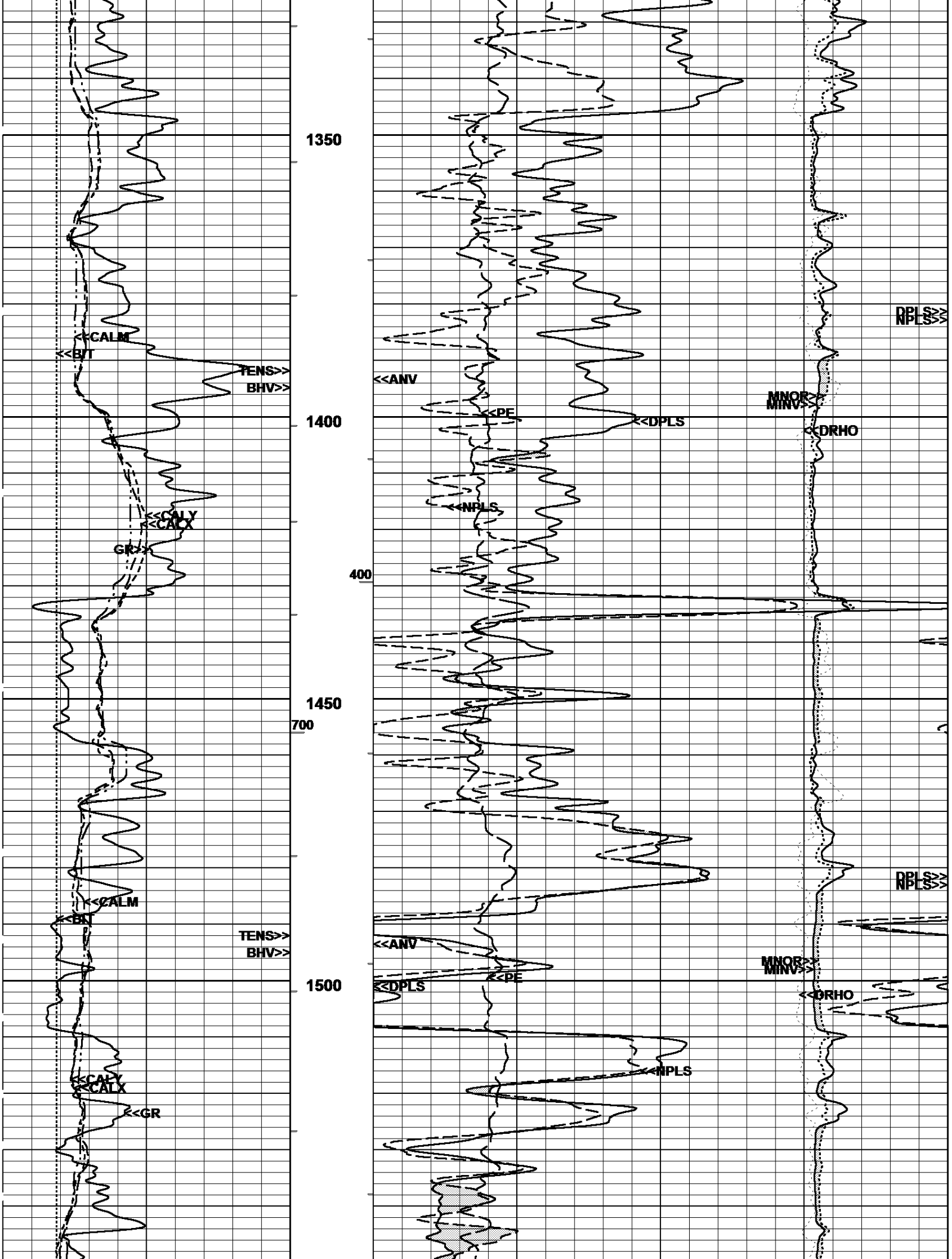
Micro-Normal{2"} (MNOR) -40. ohms 40.	
Micro-Inverse{1"} (MINV) -40. ohms 40.	

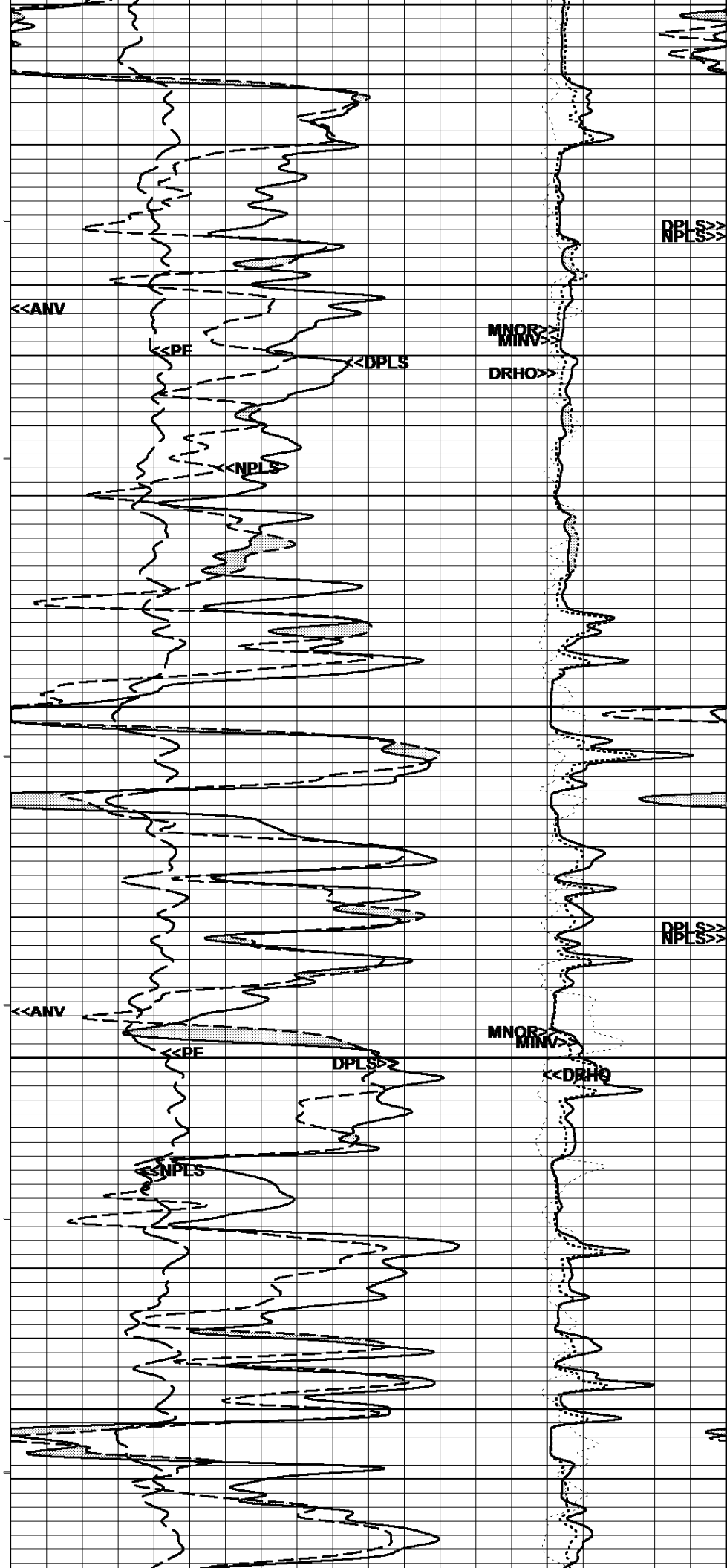
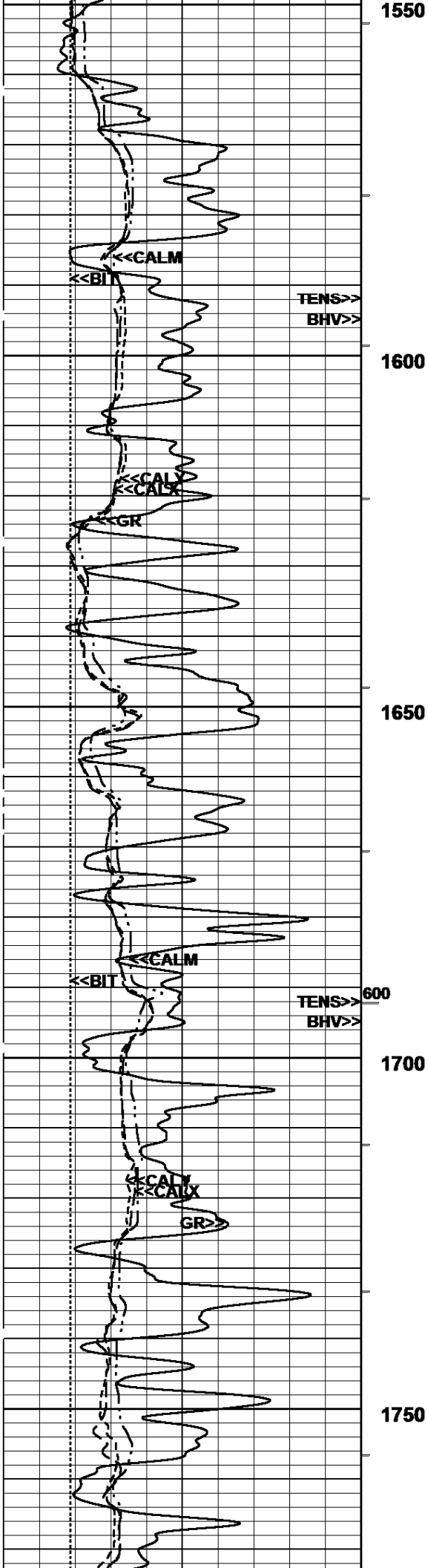


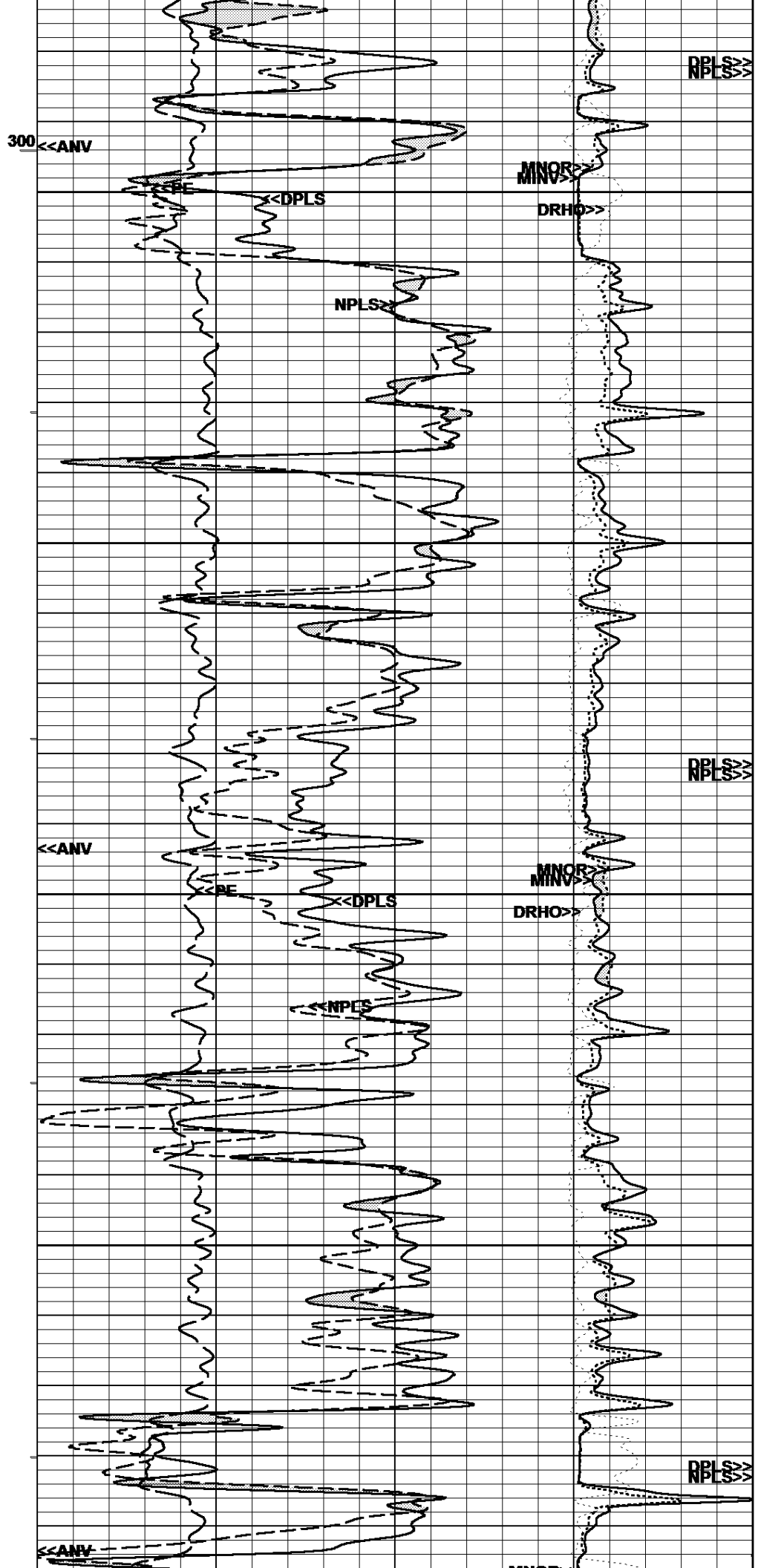
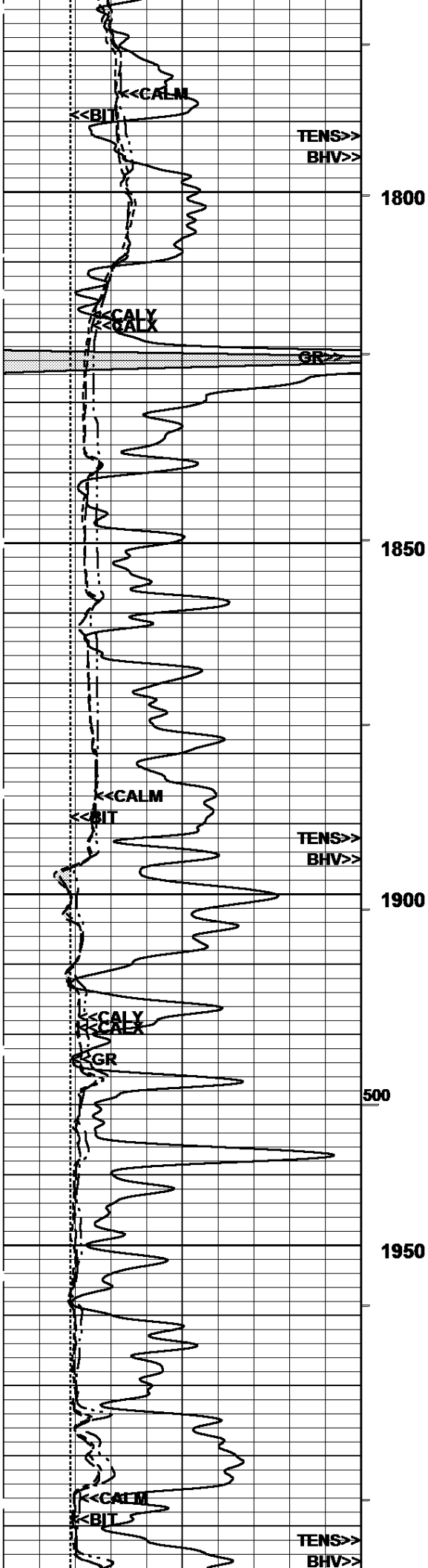
Microlog-Caliper					
6.	in	16.			
05/19/2015			ANHYDRITE MARKER (5"/100Ft)		
23:39:27 => Start Time			Log UP - (VER 11.19)		
			Start Depth=> 549.90 Feet		

05/20/2015			MAIN PASS - LIMESTONE (5"/100Ft)		
01:22:29 => End Time			Log UP - (VER 11.19)		
			End Depth=> 1199.90 Feet		









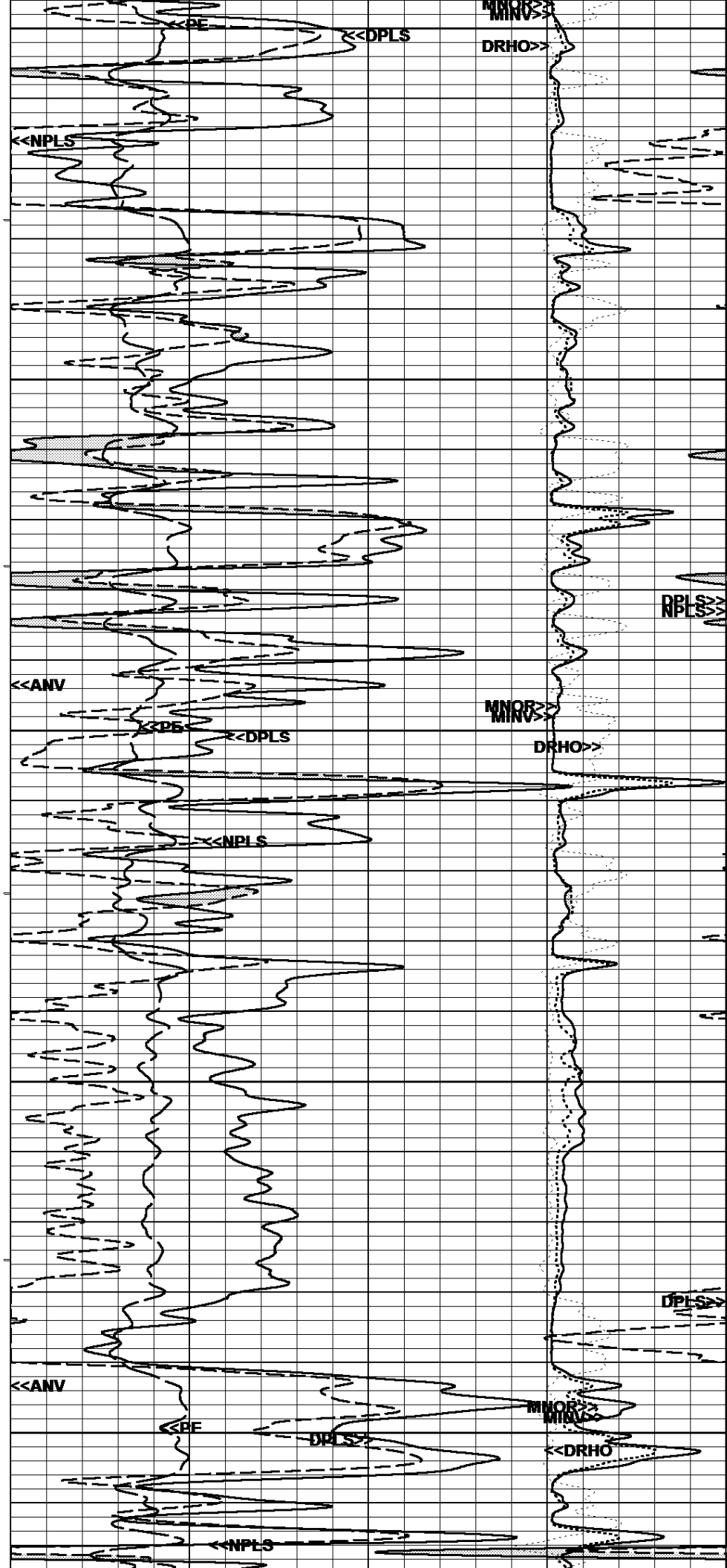
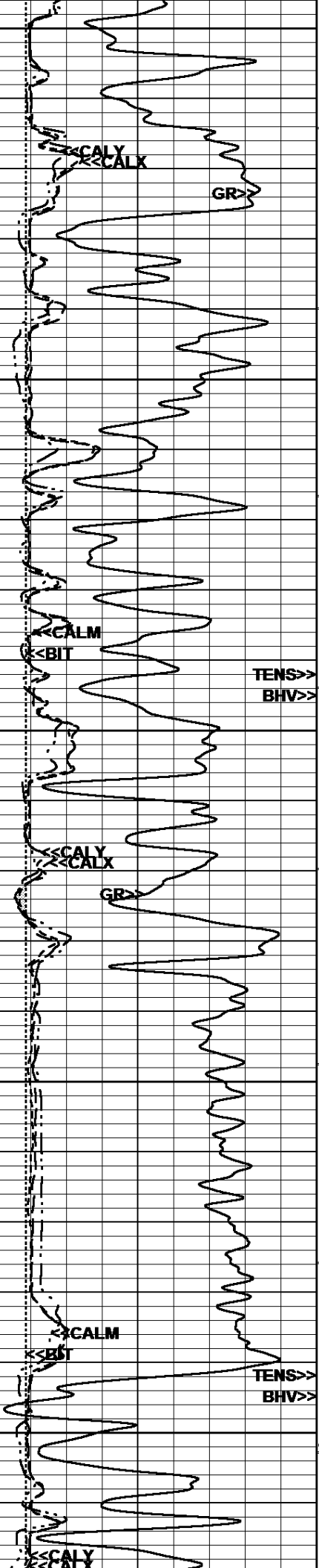
2000

2050

2100

2150

2200

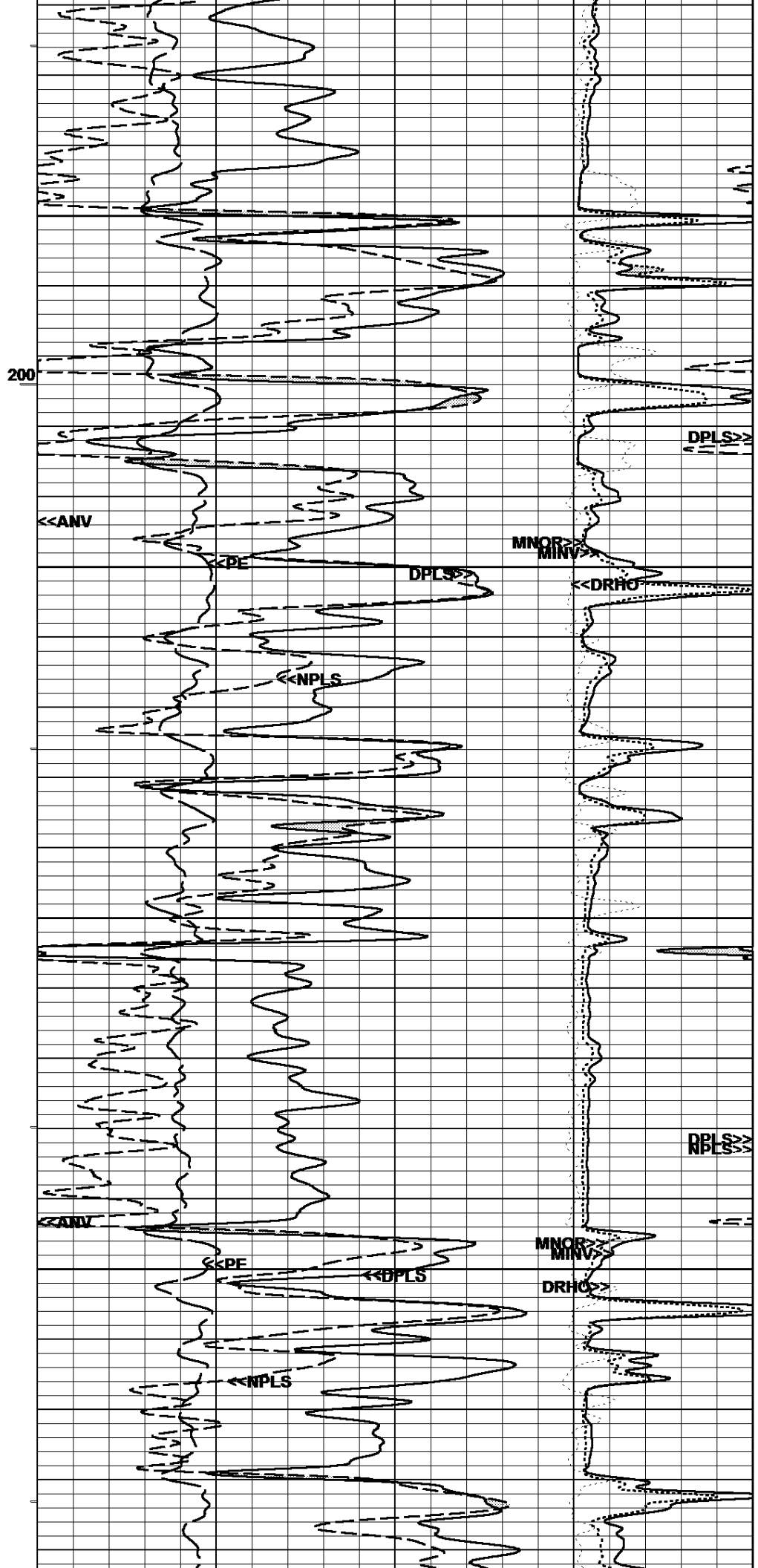
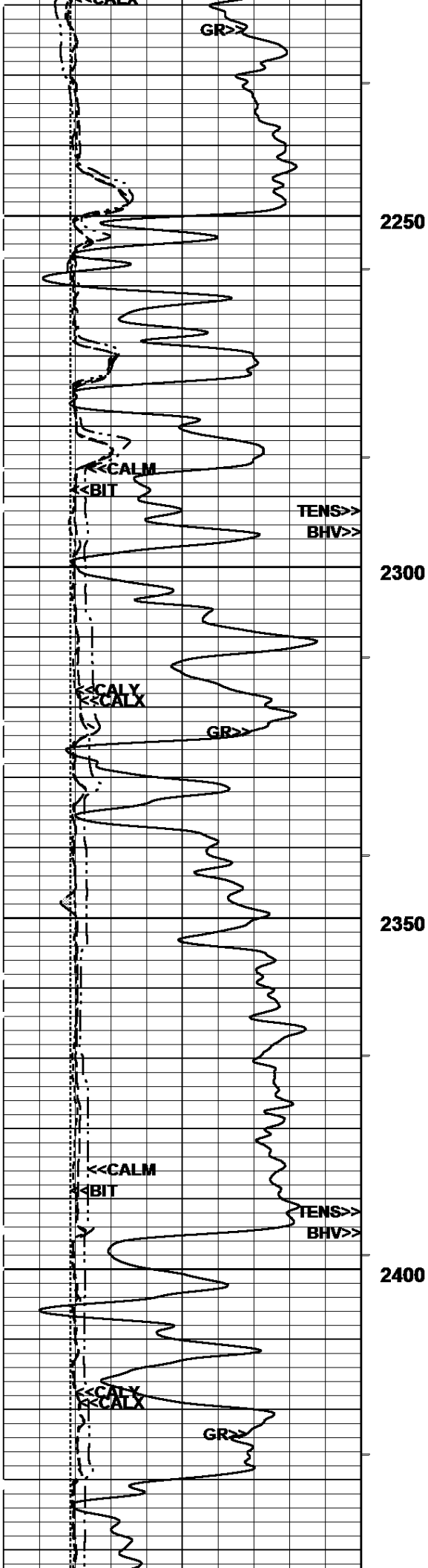


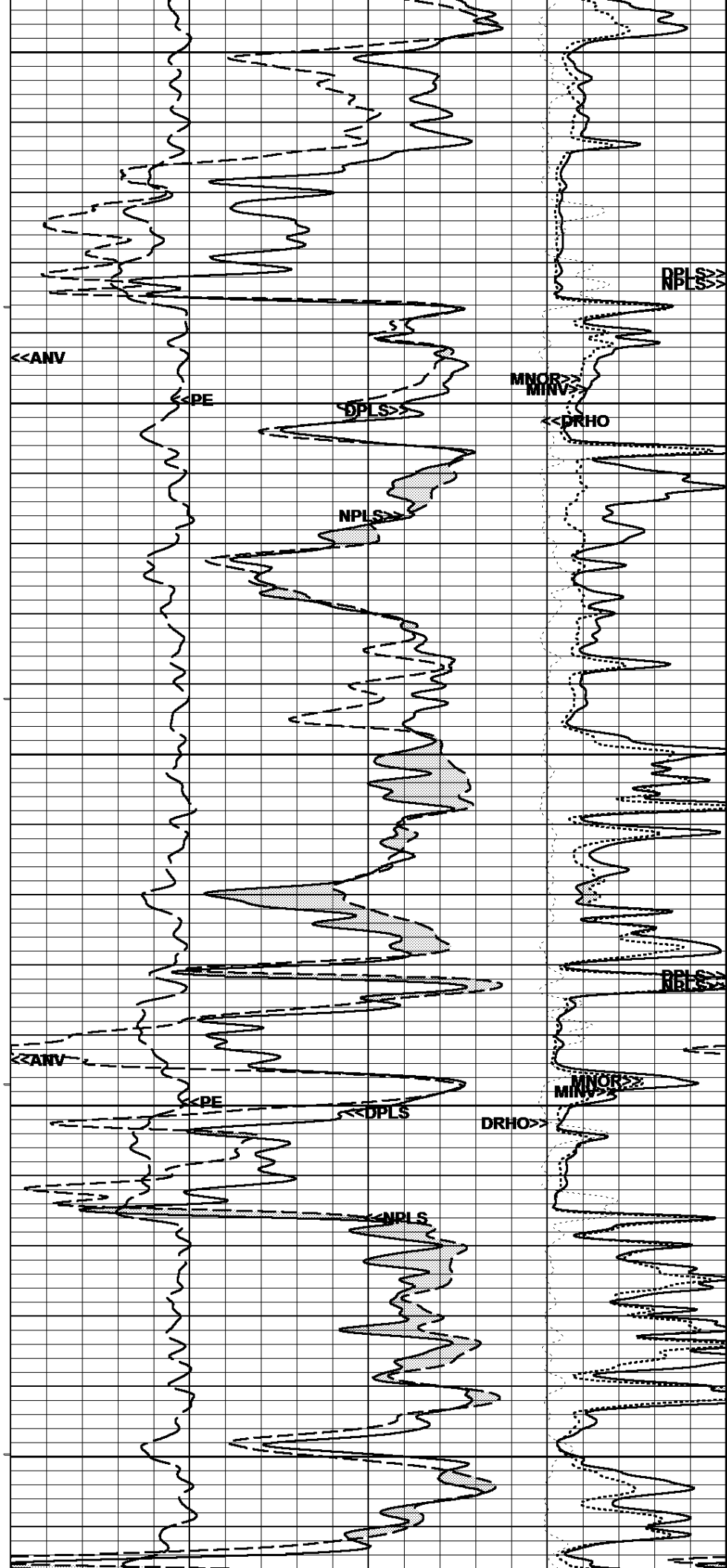
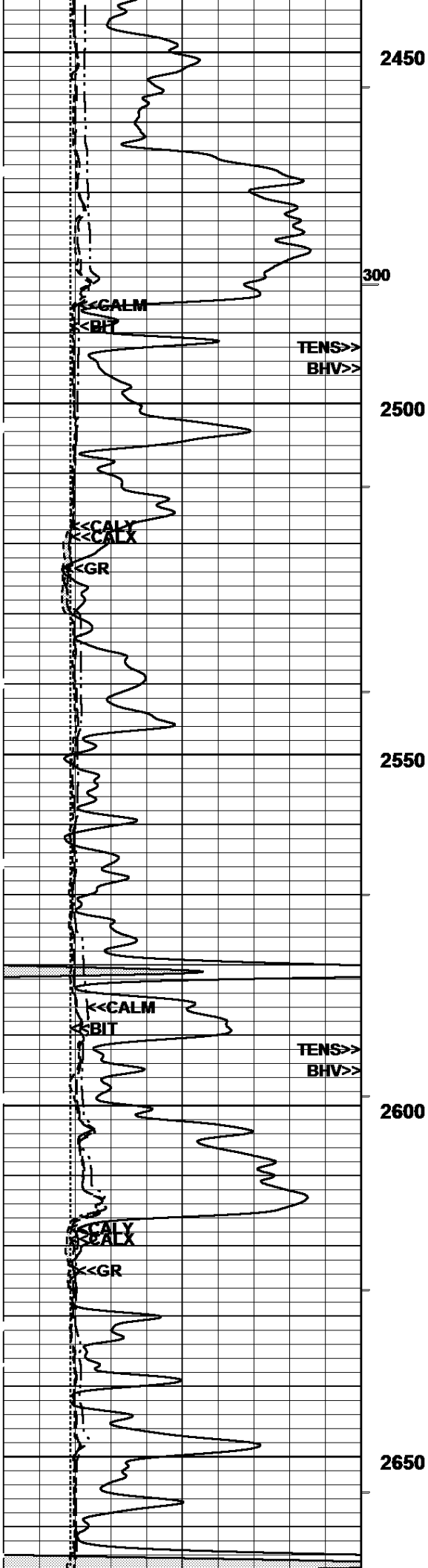
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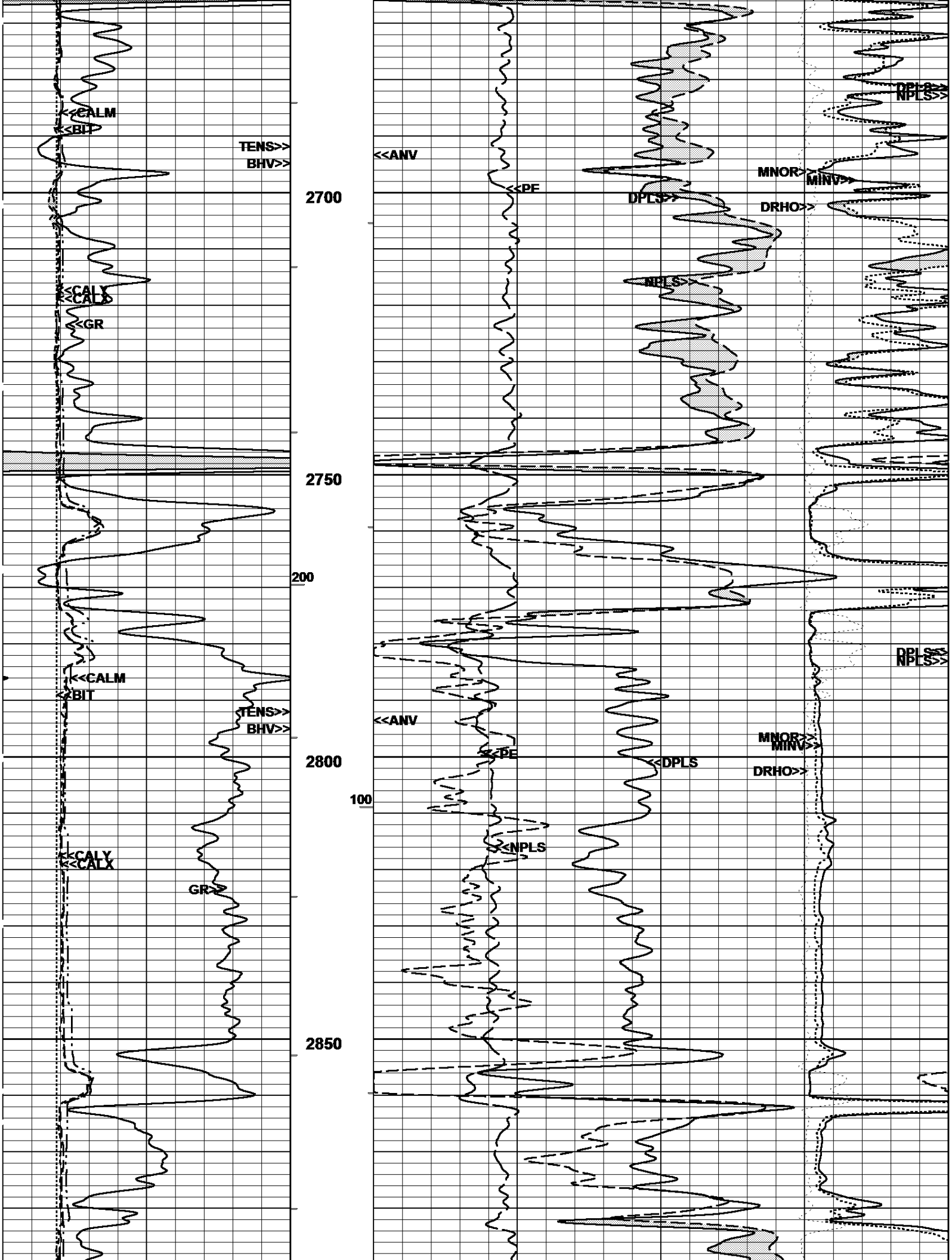
DRHO

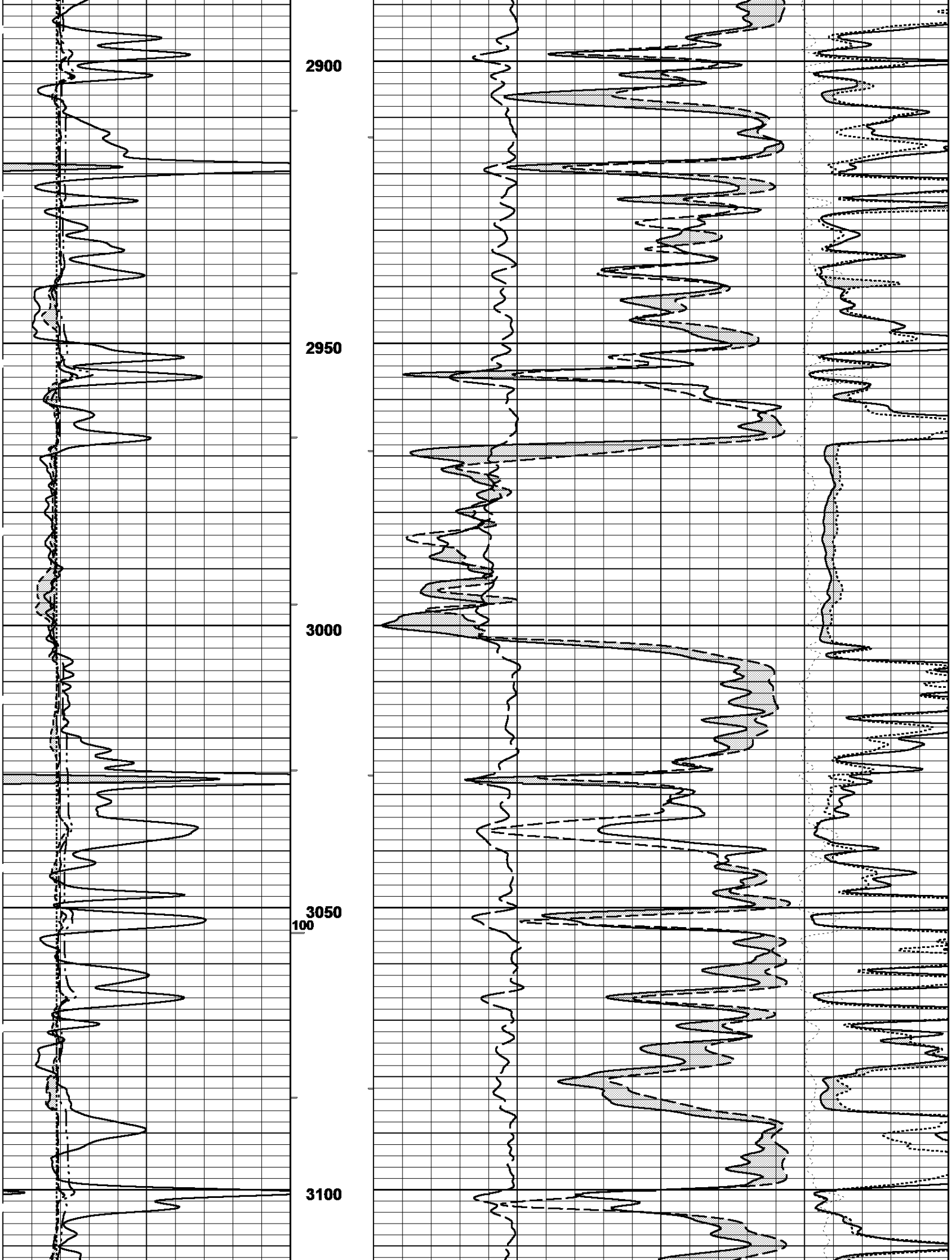
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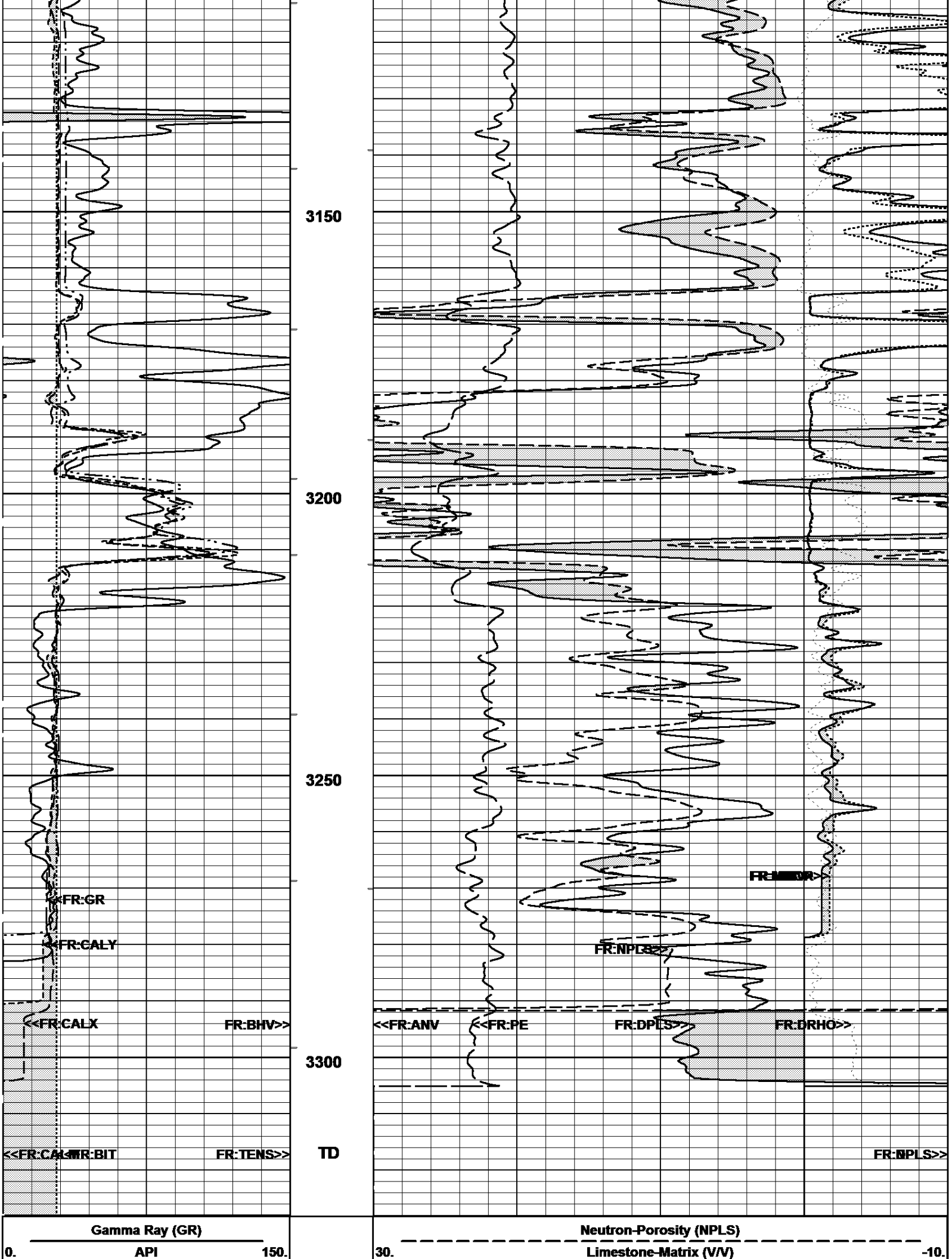
DRHO



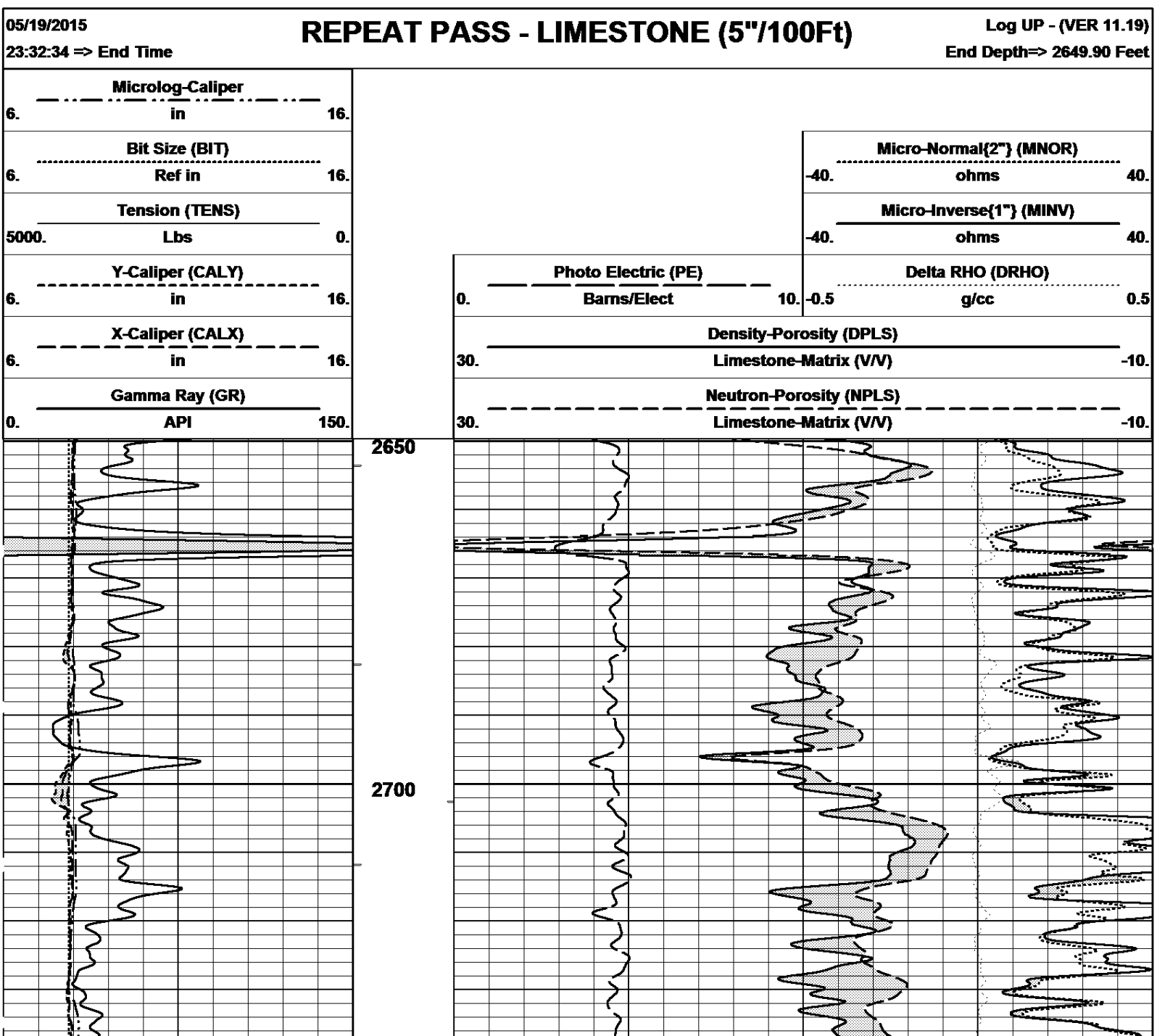


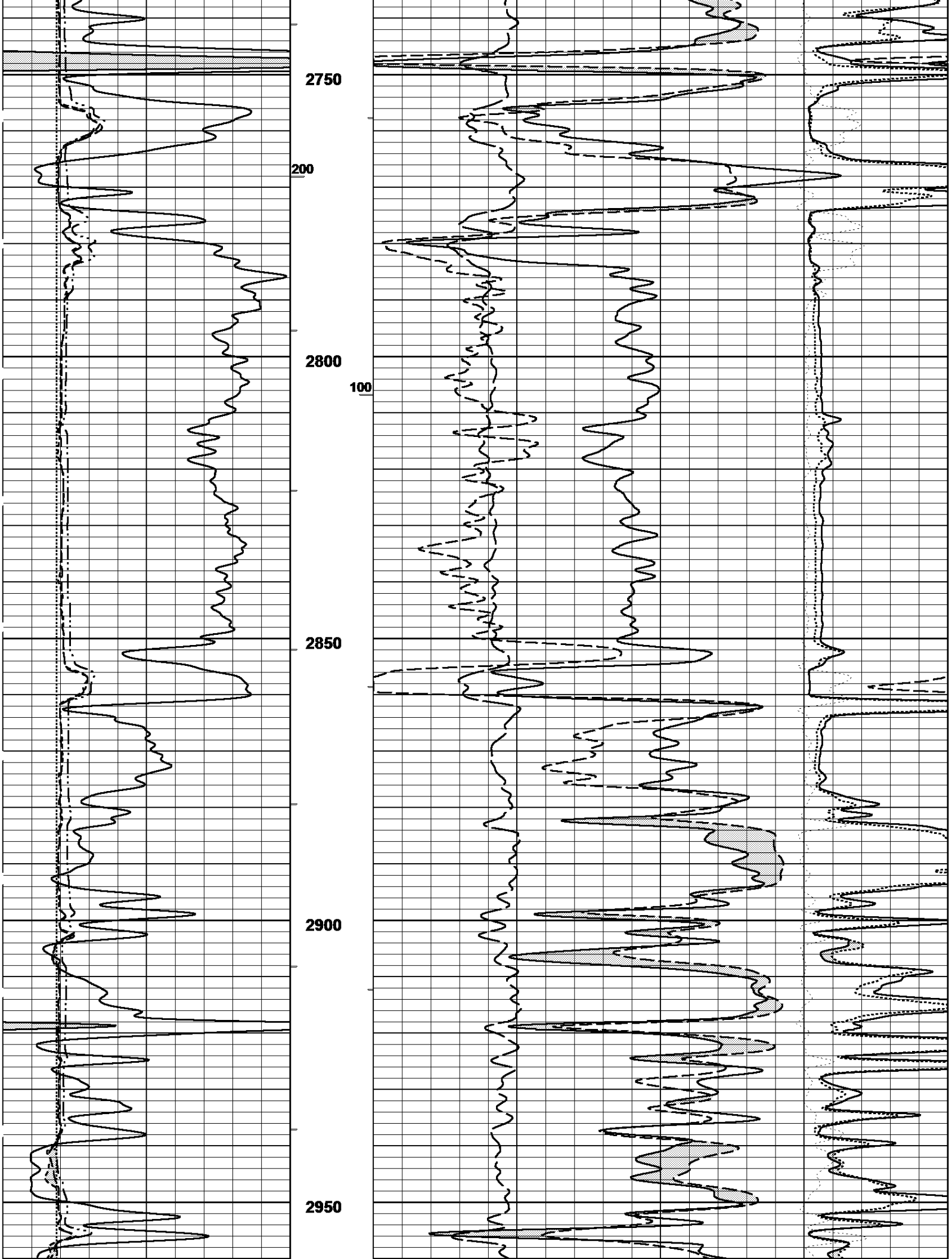


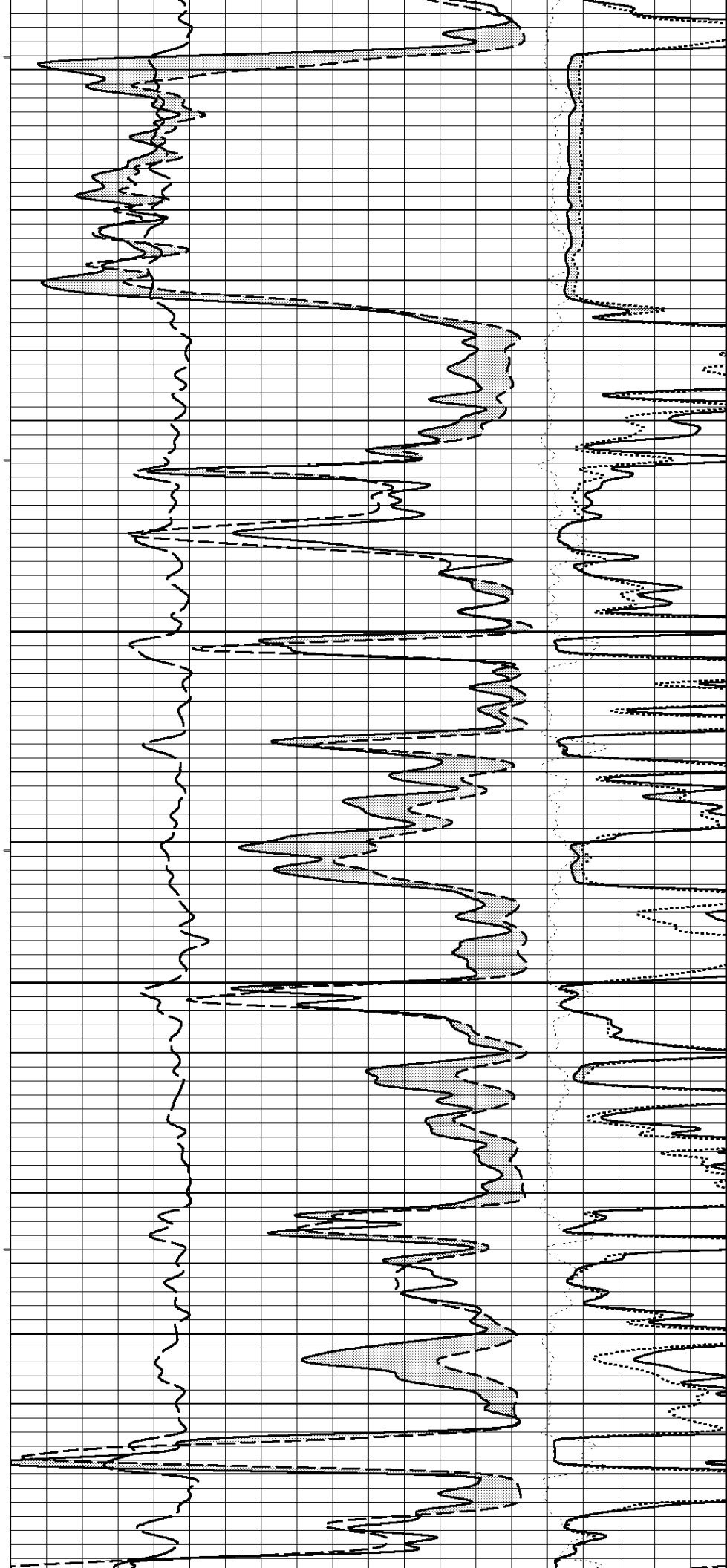
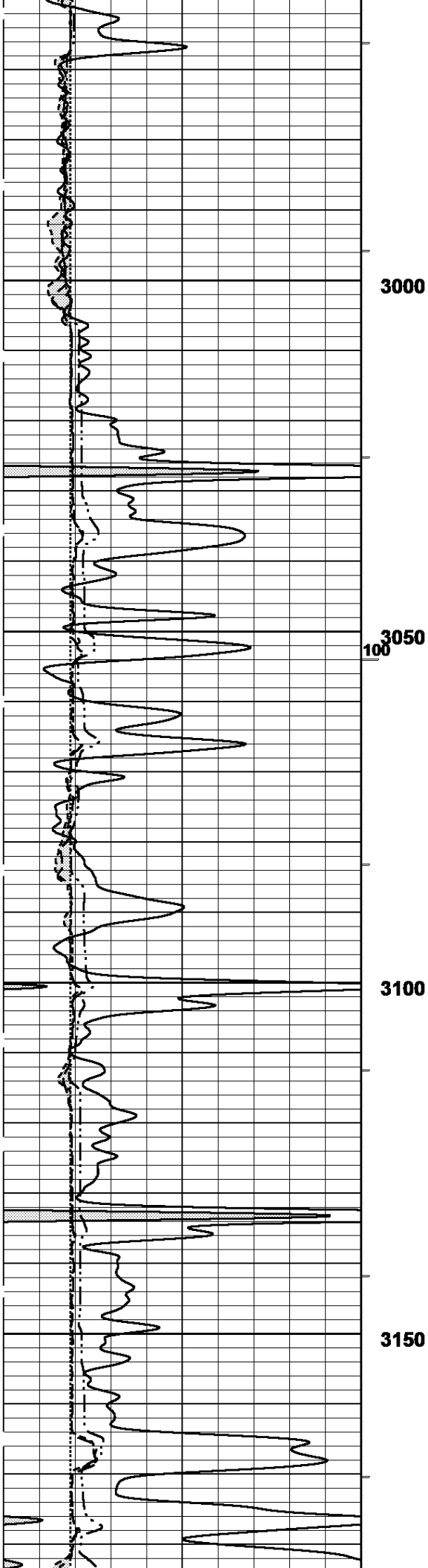


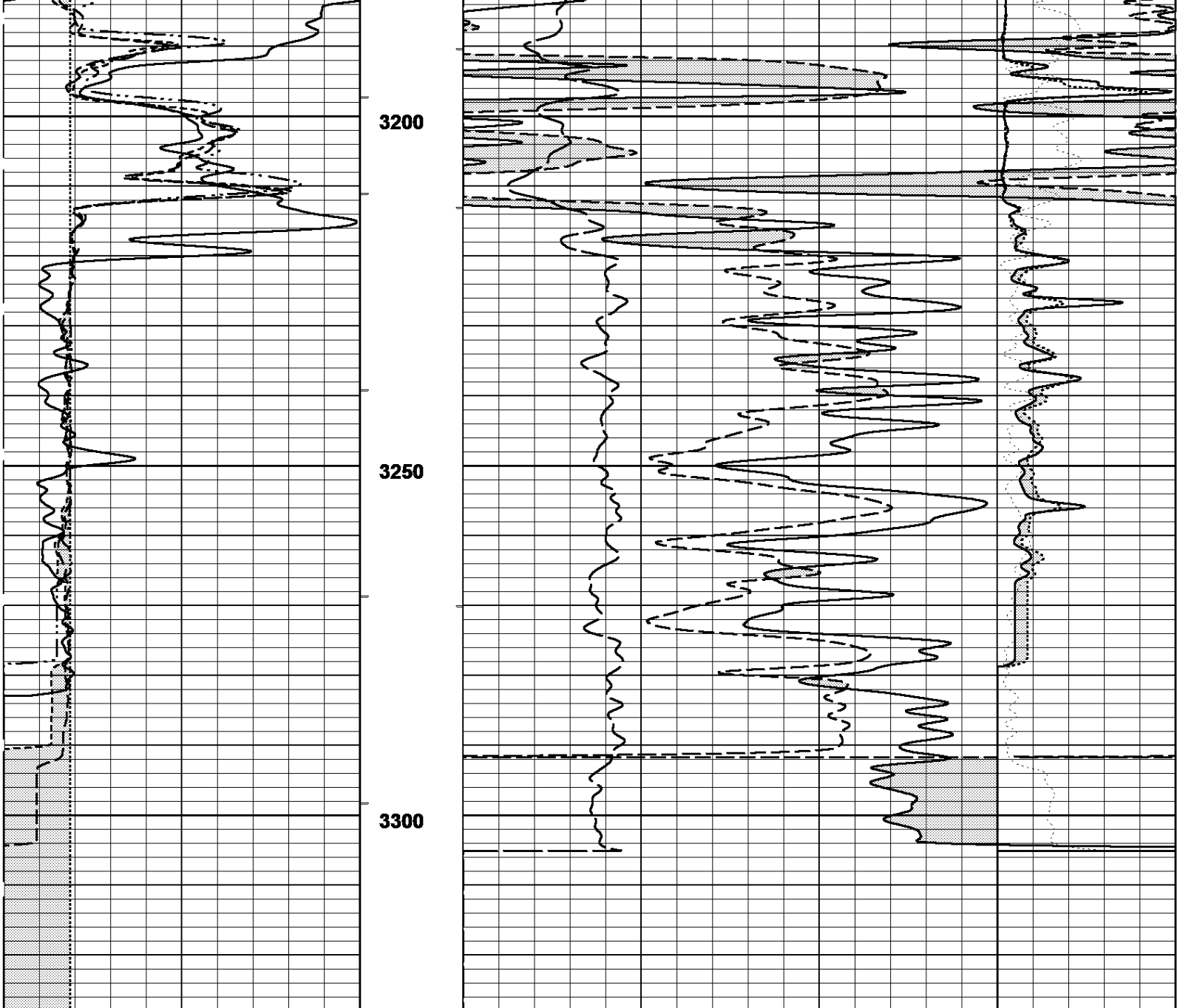


X-Caliper (CALX) 6. in 16.			Density-Porosity (DPLS) 30. Limestone-Matrix (V/V) -10.		
Y-Caliper (CALY) 6. in 16.			Photo Electric (PE) 0. Barns/Elect 10.		
Tension (TENS) 5000. Lbs 0.			Delta RHO (DRHO) -0.5 g/cc 0.5		
Bit Size (BIT) 6. Ref in 16.			Micro-Inverse{1"} (MINV) -40. ohms 40.		
Microlog-Caliper 6. in 16.			Micro-Normal{2"} (MNOR) -40. ohms 40.		
05/19/2015 23:39:27 => Start Time			MAIN PASS - LIMESTONE (5"/100Ft) Log UP - (VER 11.19) Start Depth=> 3328.00 Feet		

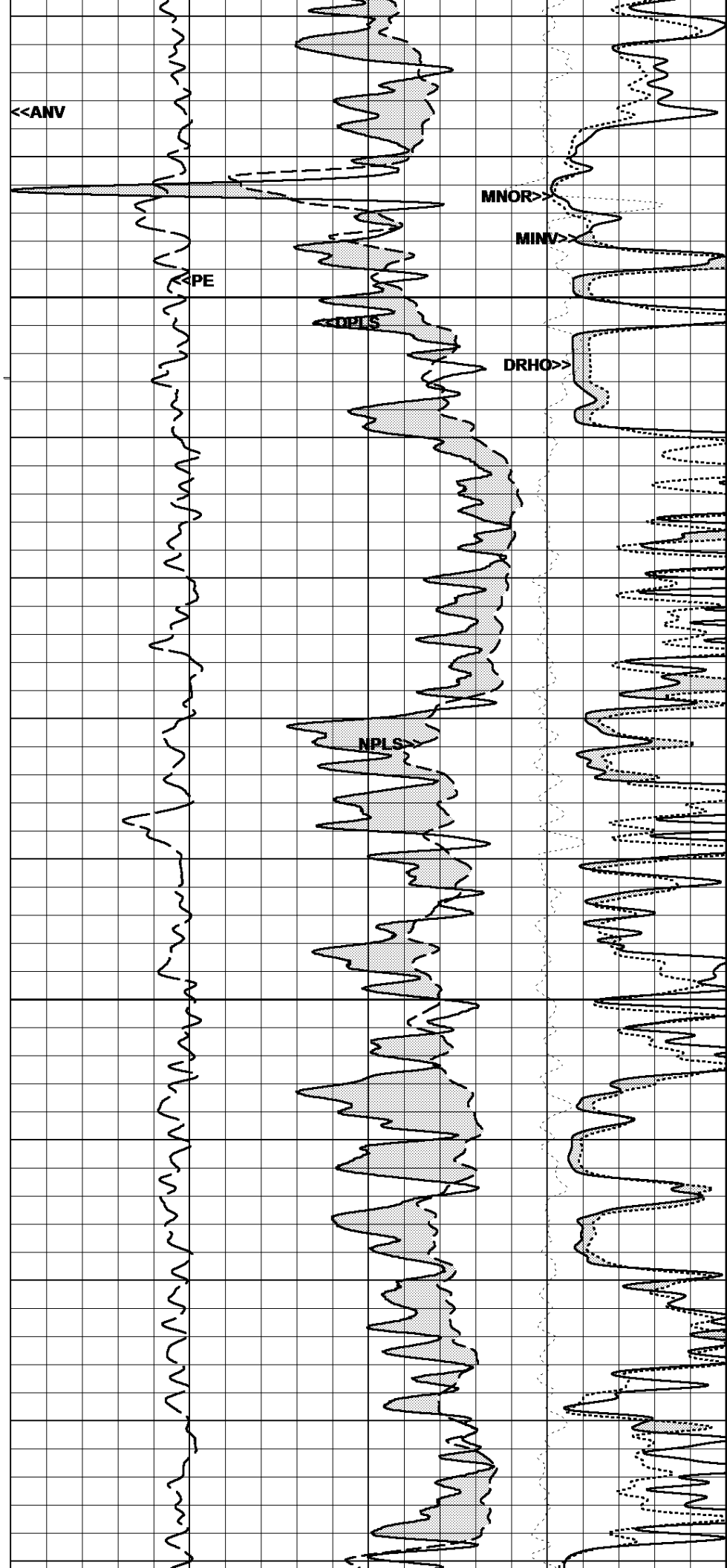
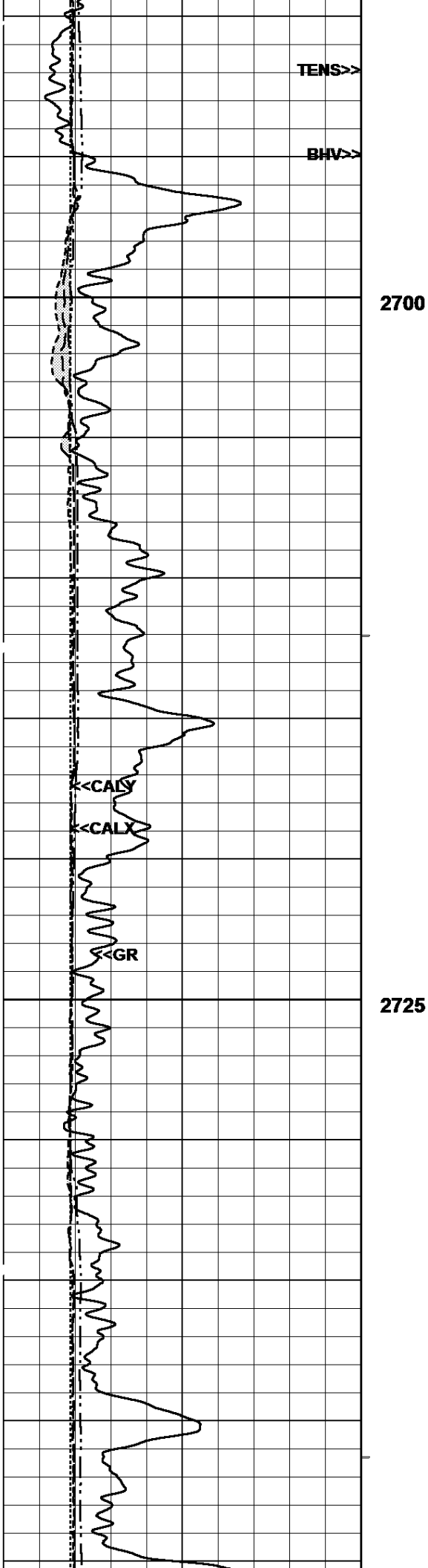


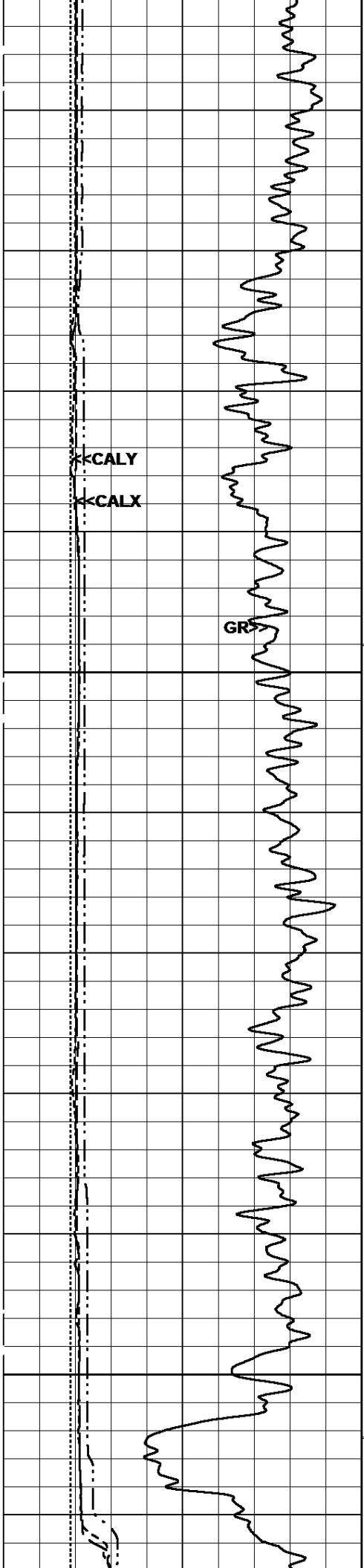






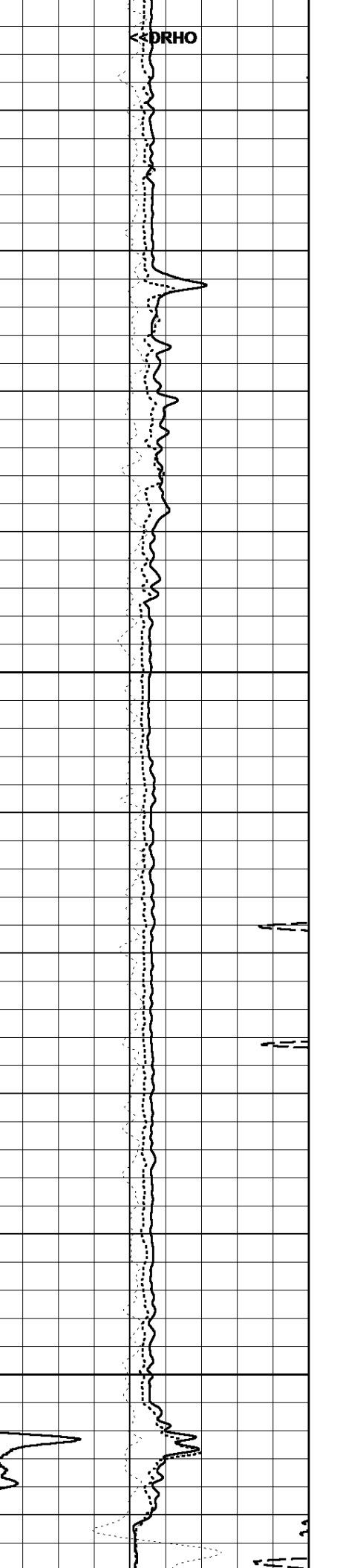
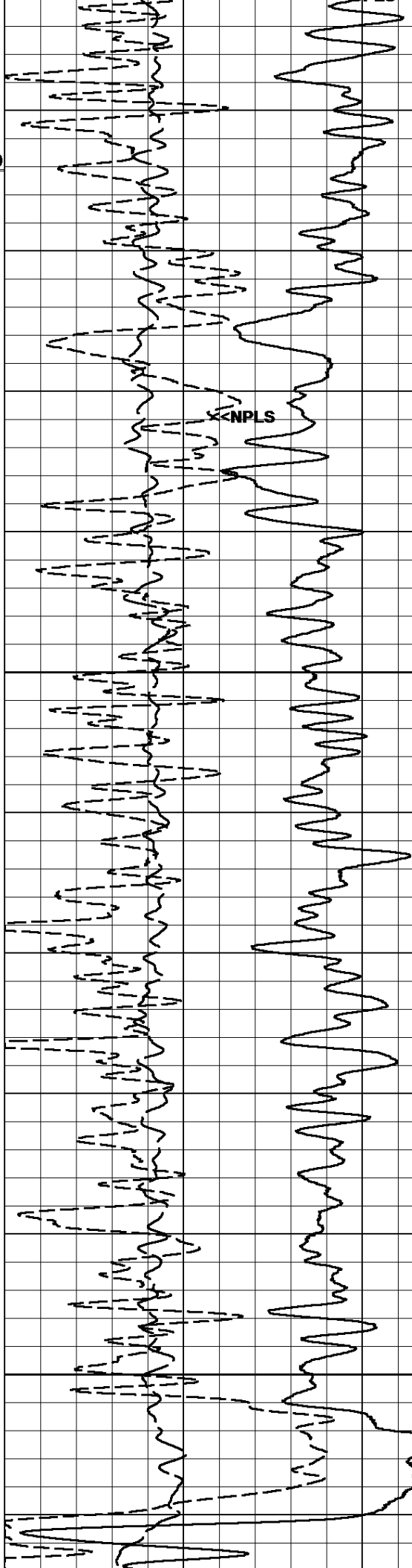
Gamma Ray (GR)		Neutron Porosity (NPLS)	
0.	API	150.	
X-Caliper (CALX)		Limestone-Matrix (V/V)	
6.	in	16.	-10.
Y-Caliper (CALY)		Density Porosity (DPLS)	
6.	in	16.	-10.
Tension (TENS)		Photo Electric (PE)	
5000.	Lbs	0.	10.
Bit Size (BIT)		Delta RHO (DRHO)	
6.	Ref in	16.	-0.5
Microlog-Caliper		Micro-Inverse{1"} (MINV)	
6.	in	16.	0.5
		Micro-Normal{2"} (MNOR)	
		-40. ohms 40.	

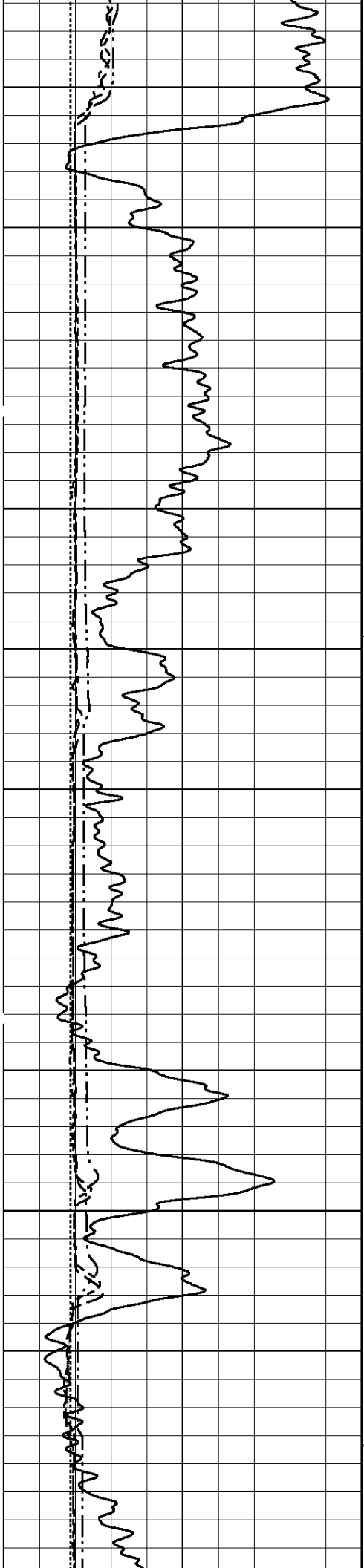




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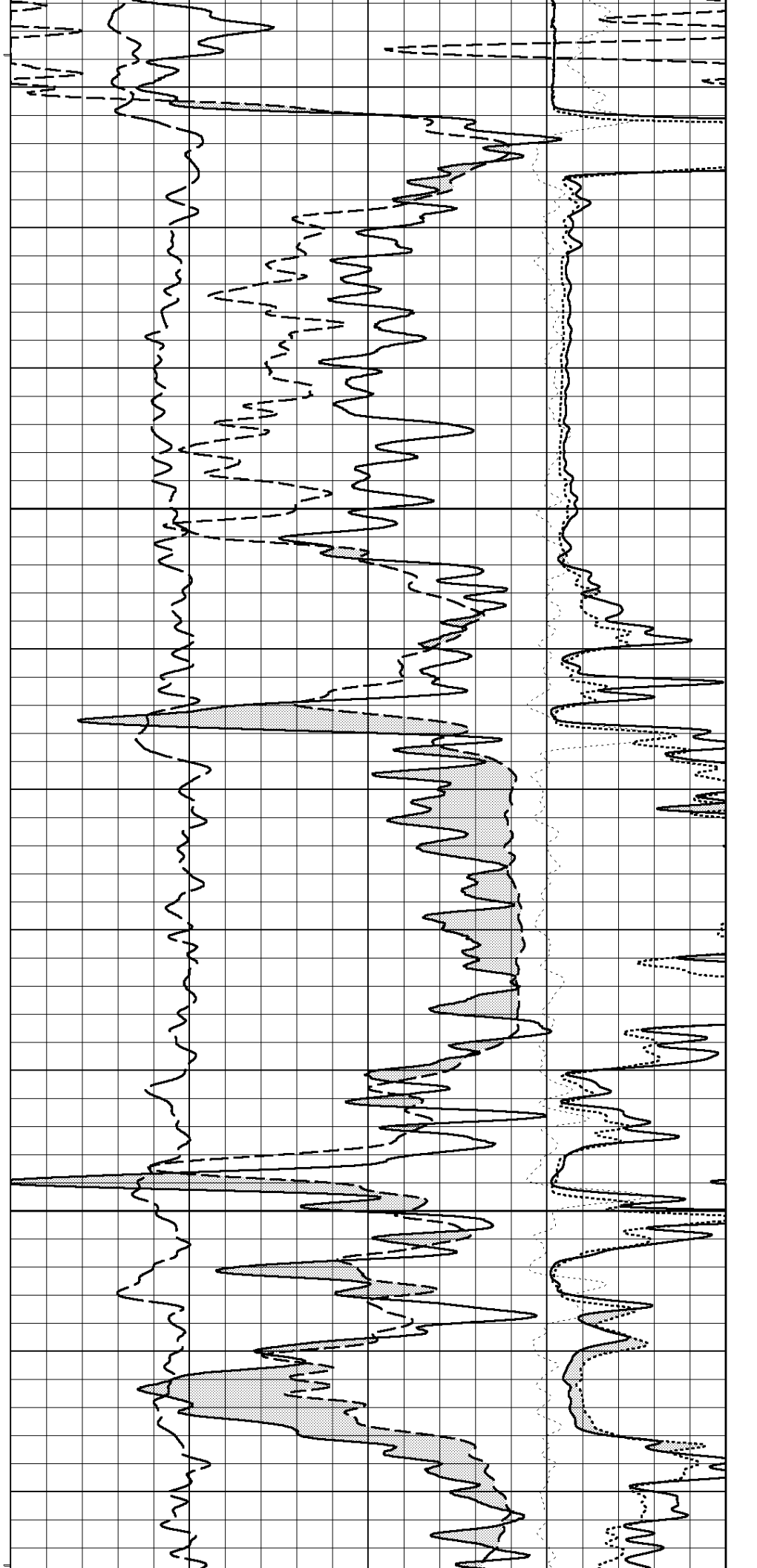
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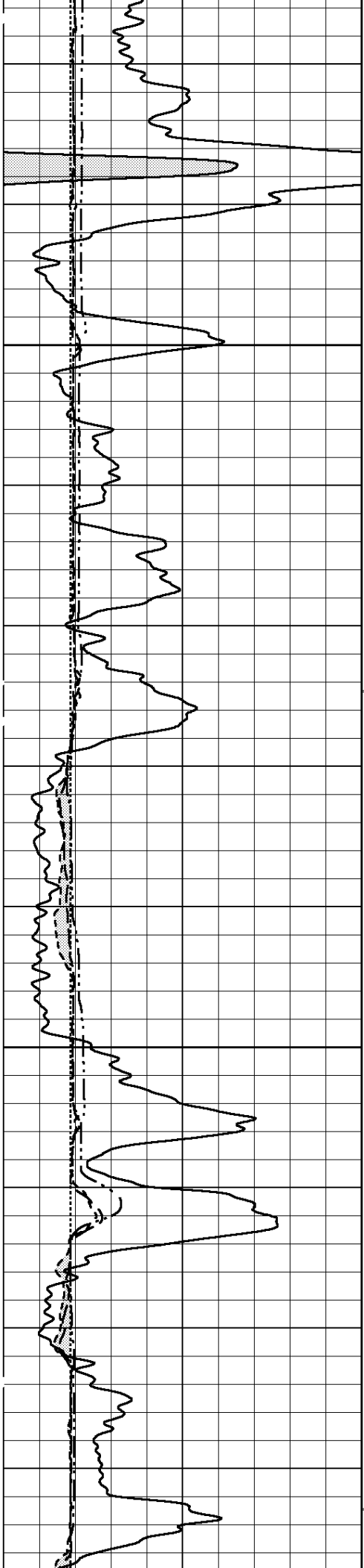




2875

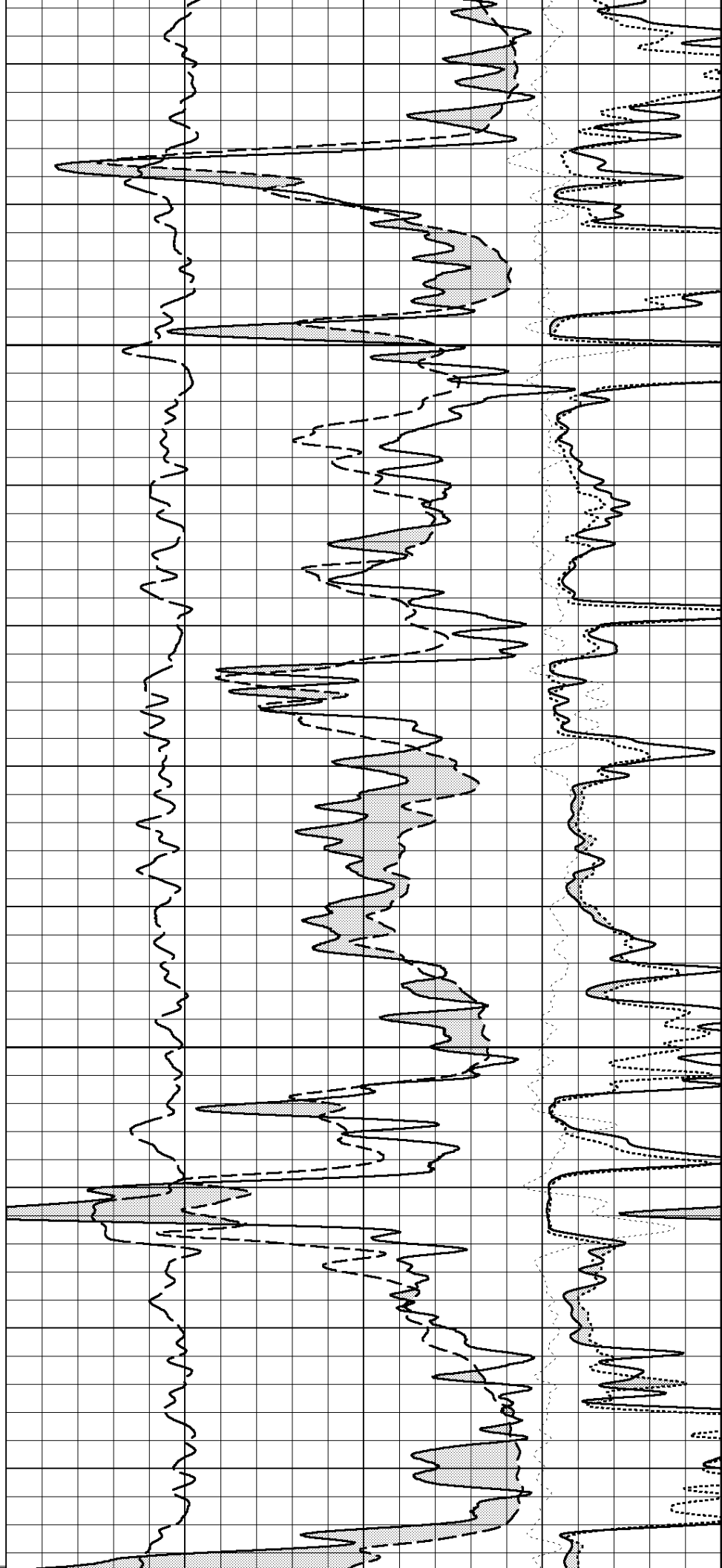
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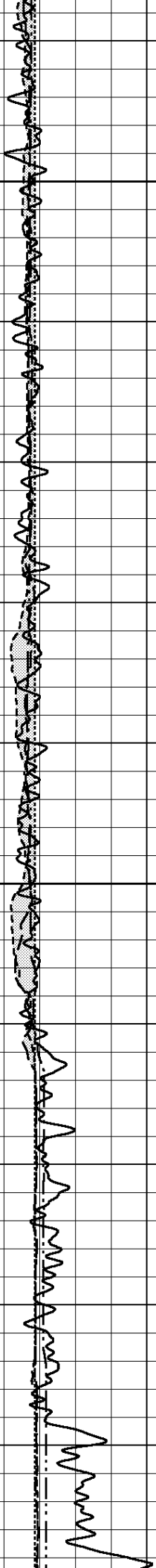
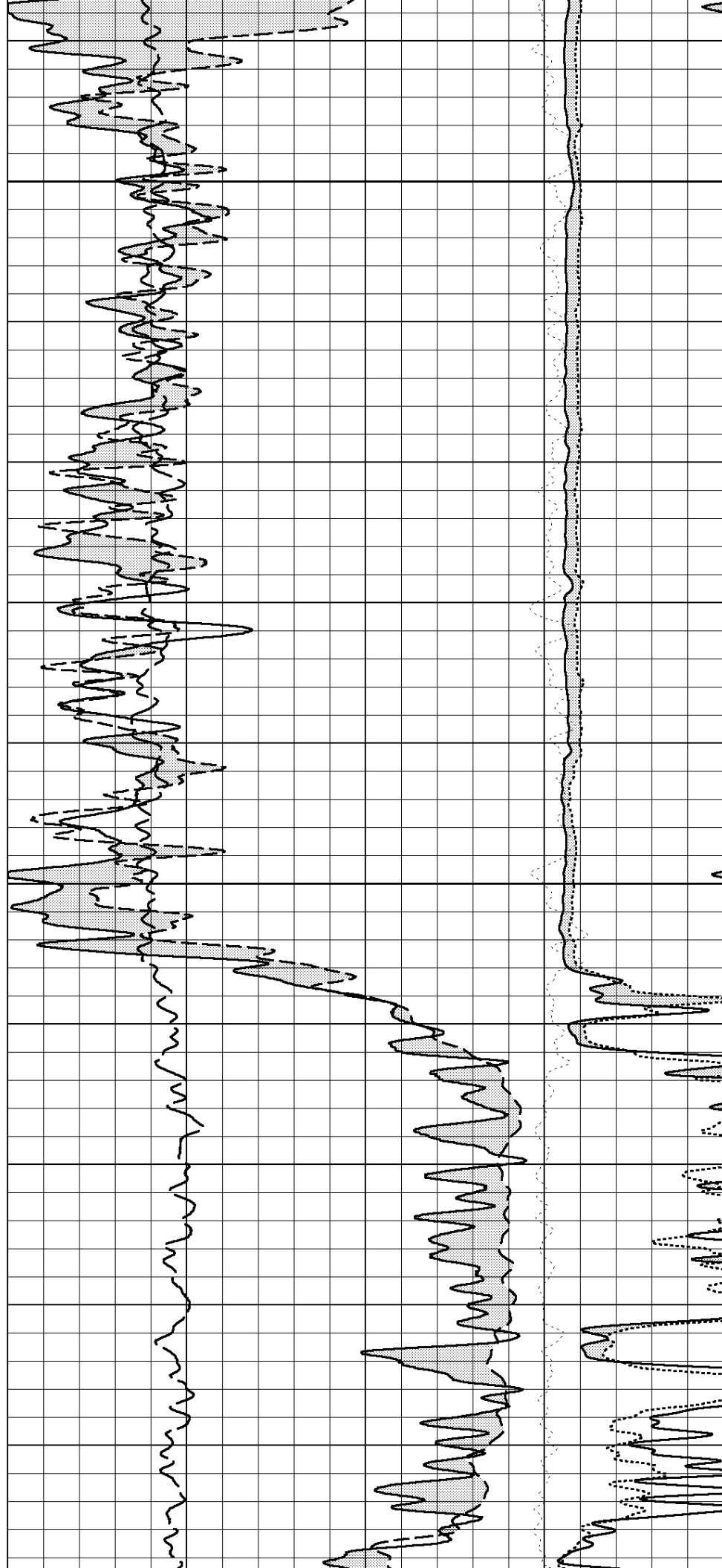
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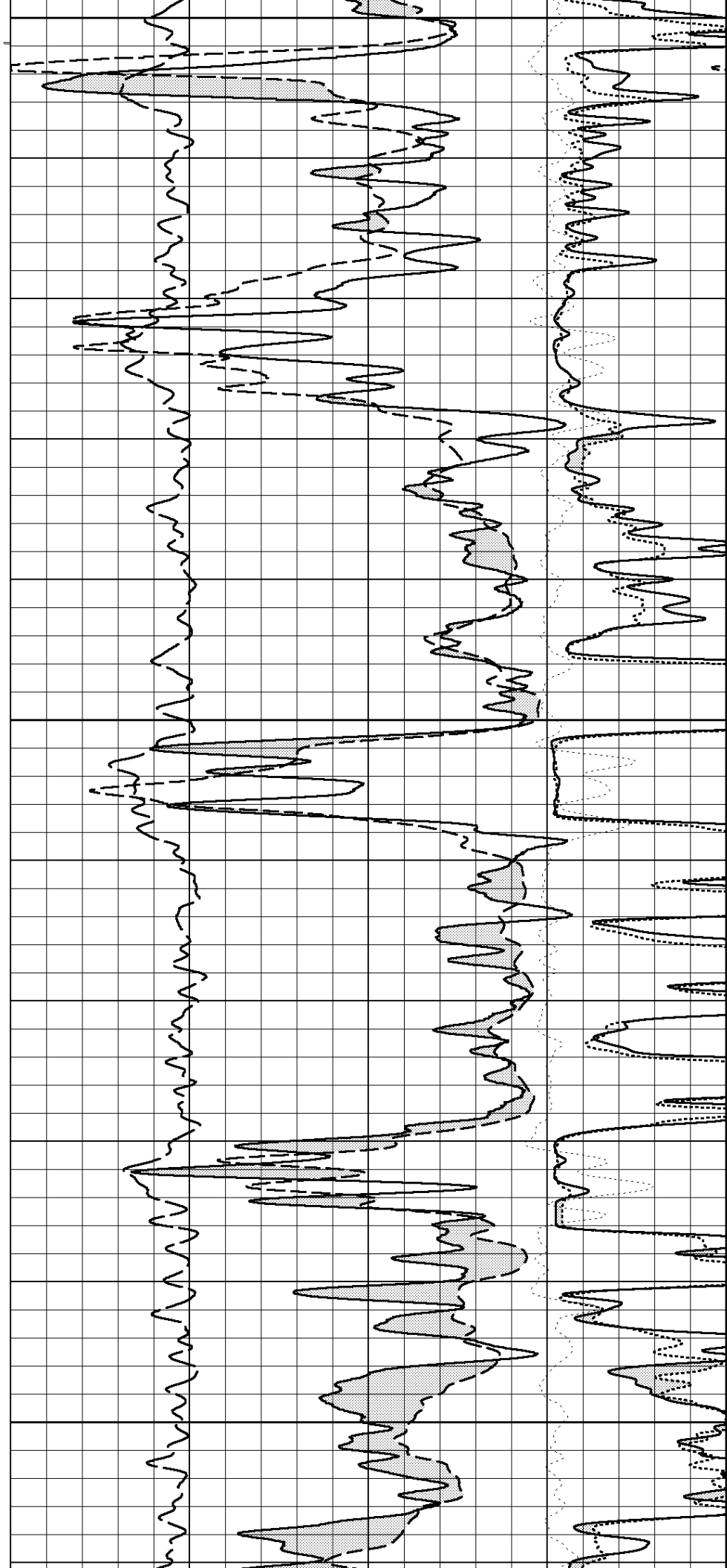
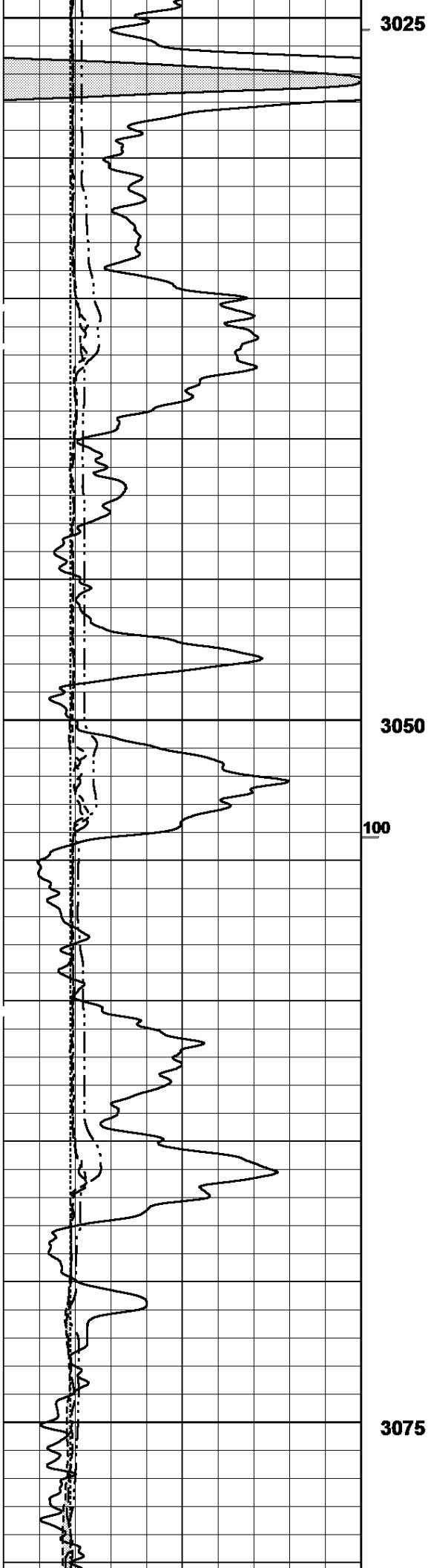
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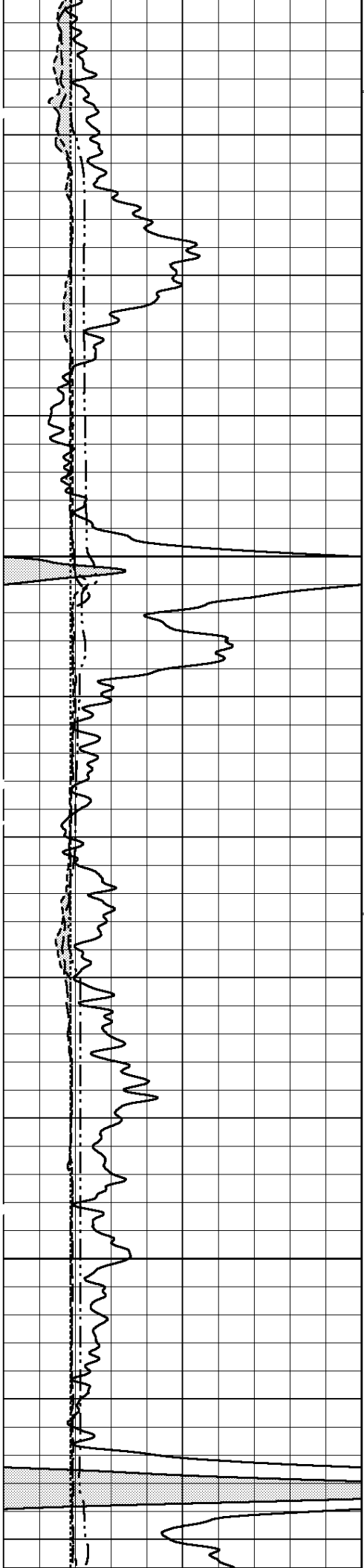


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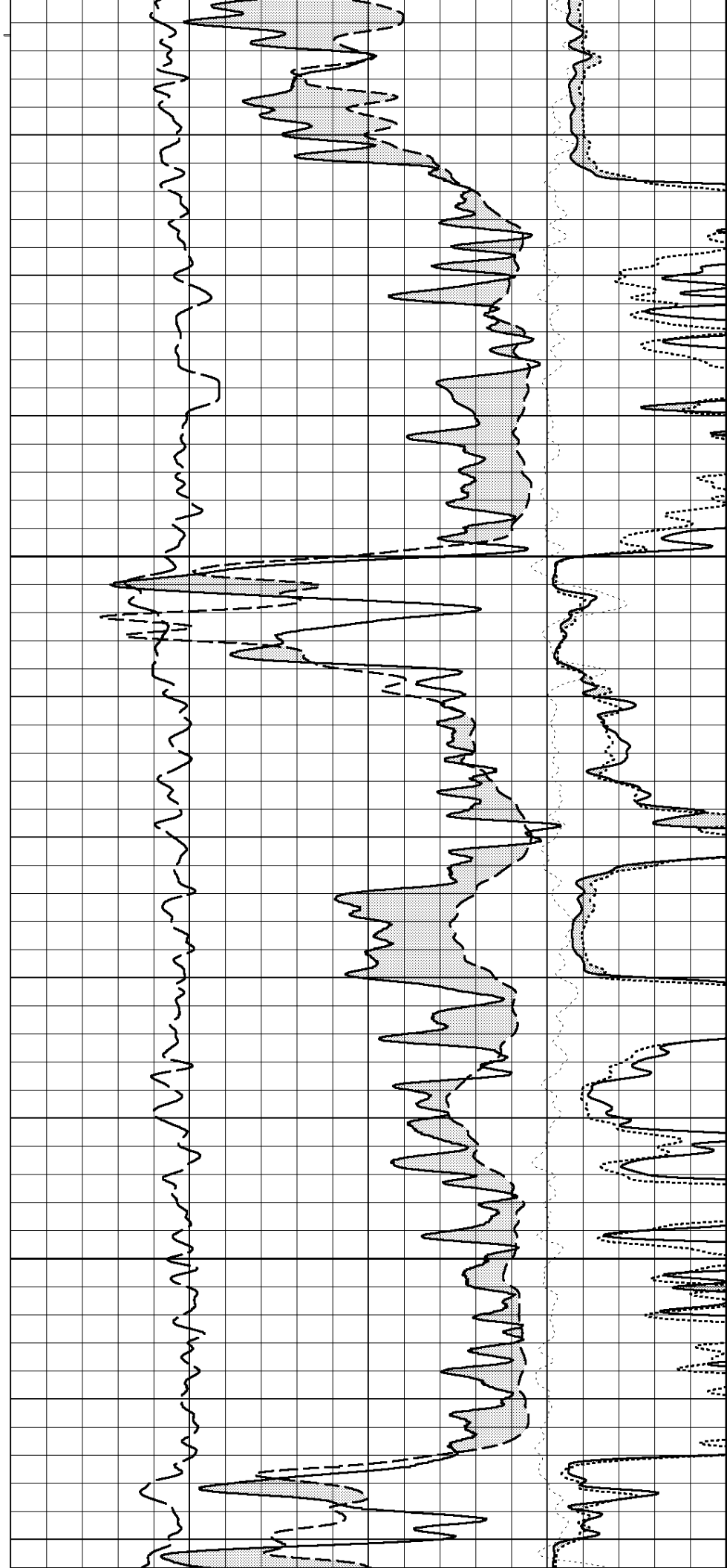


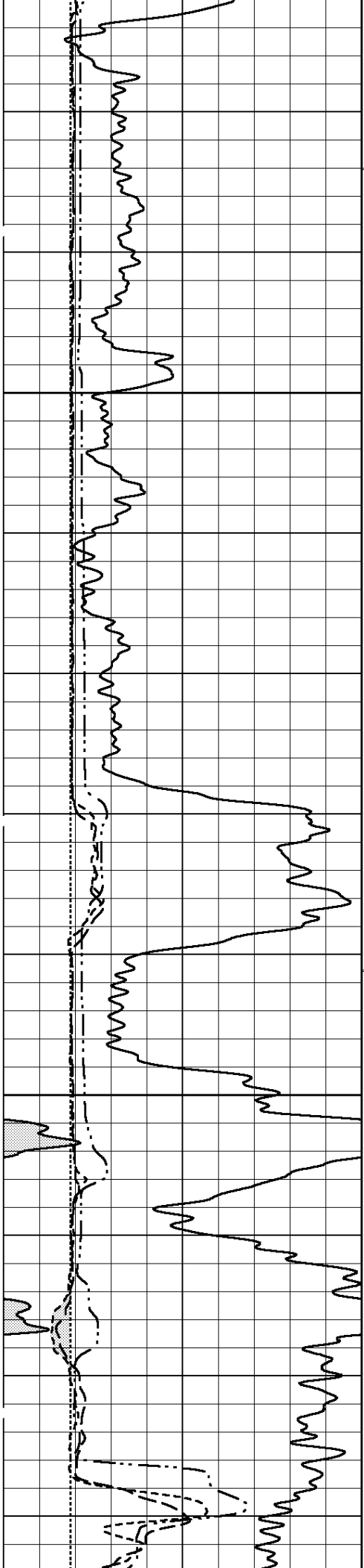




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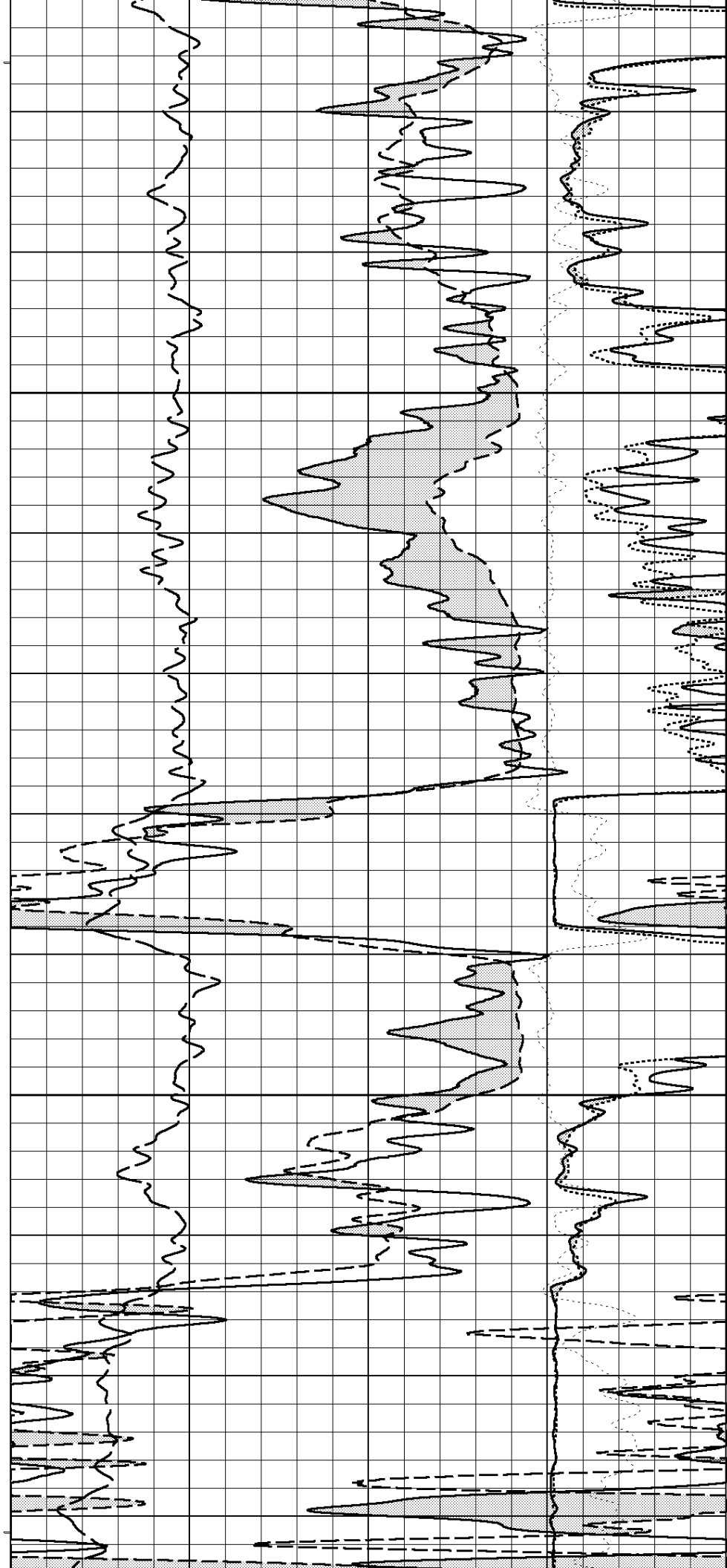
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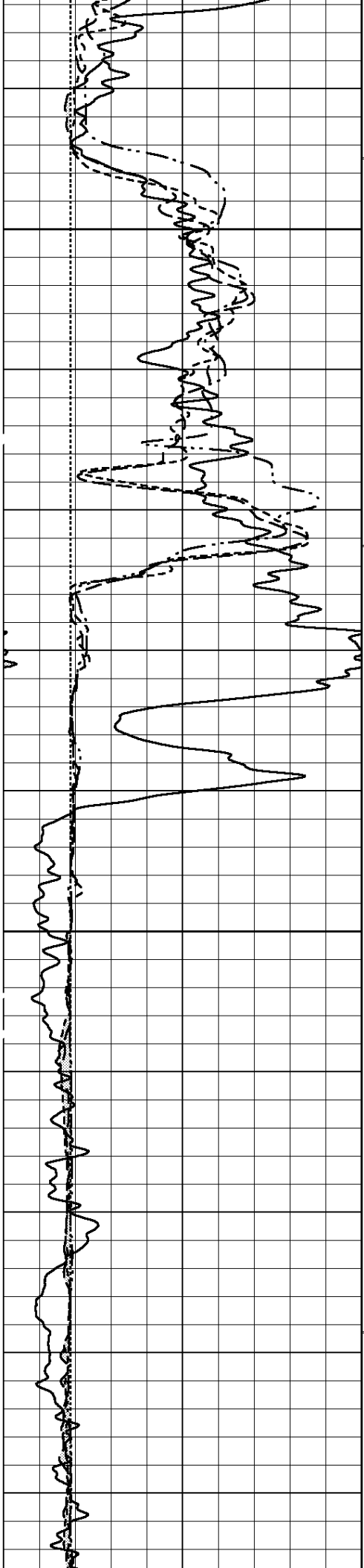




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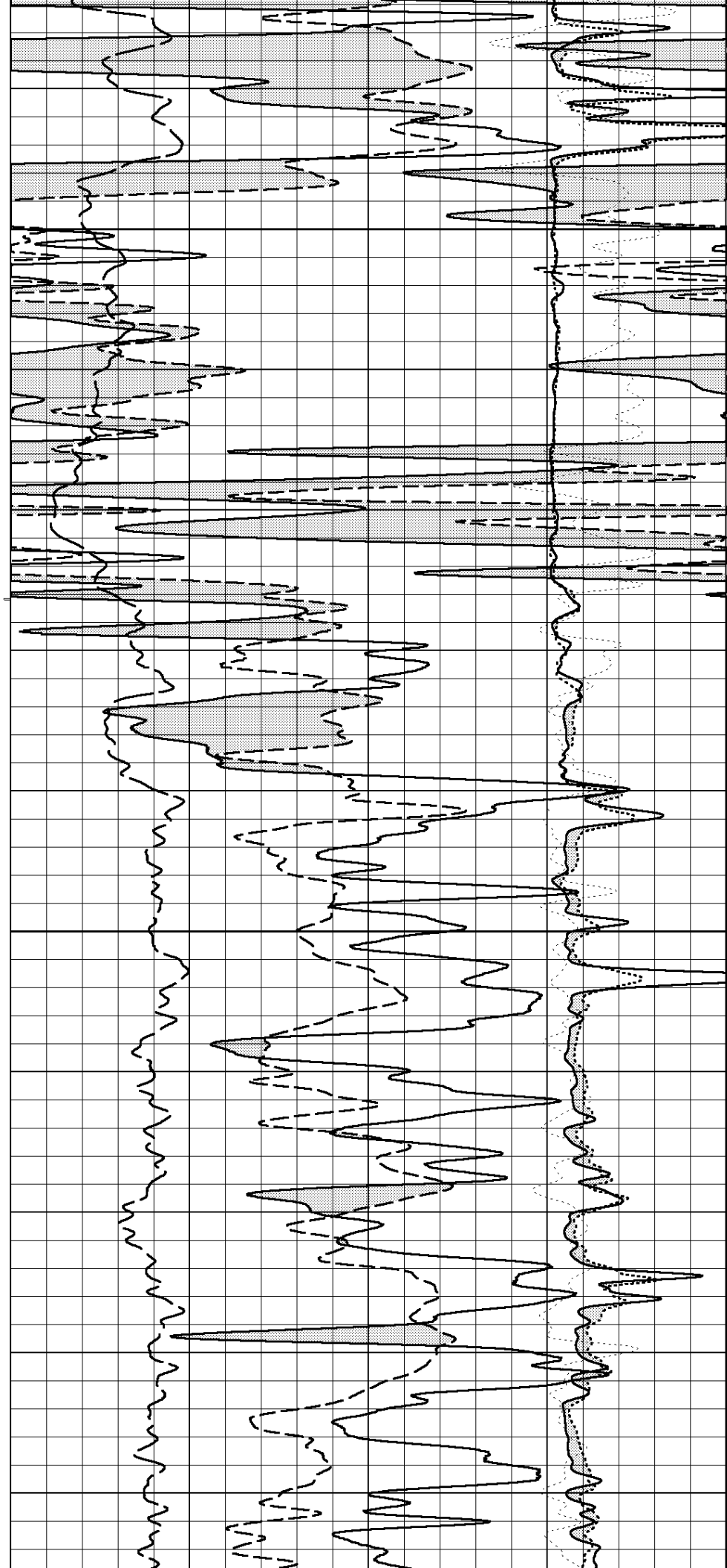
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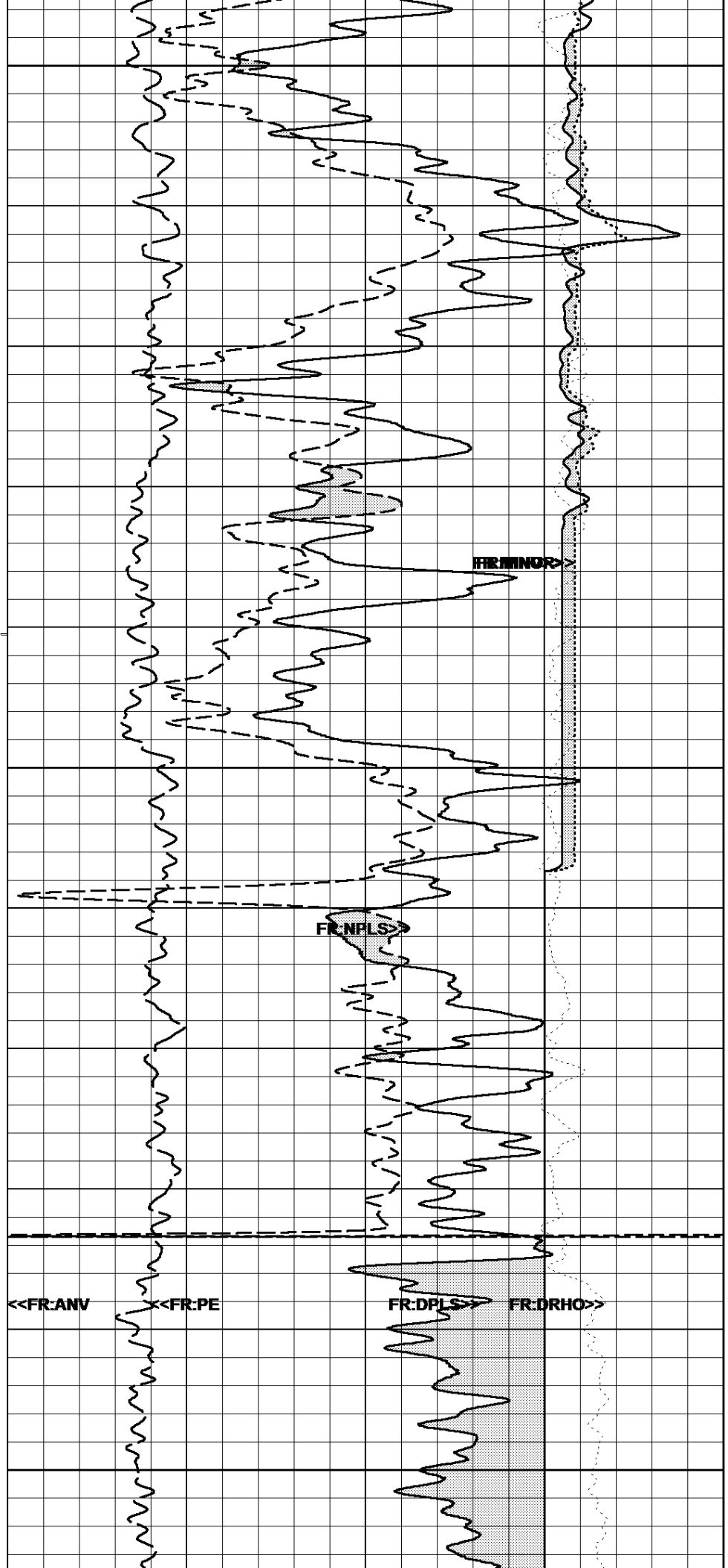
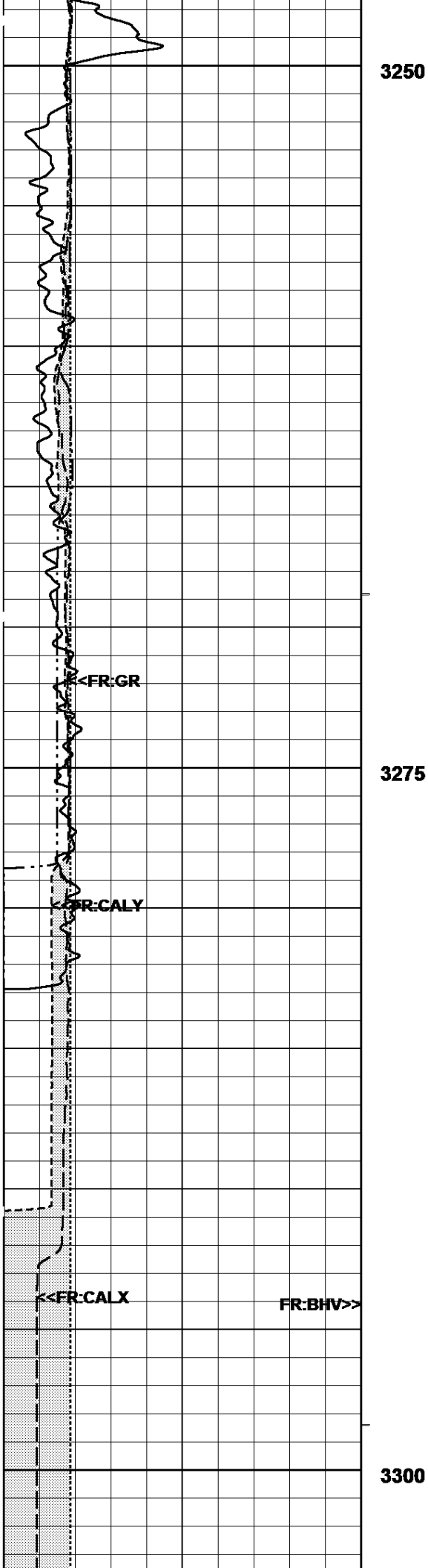


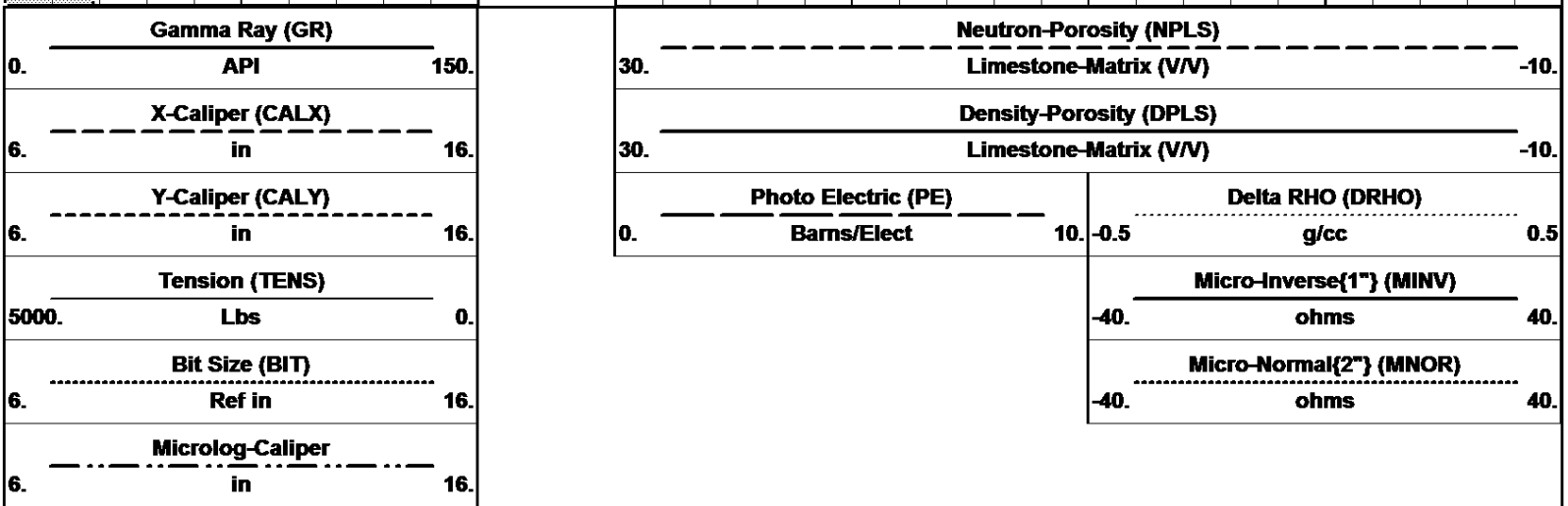
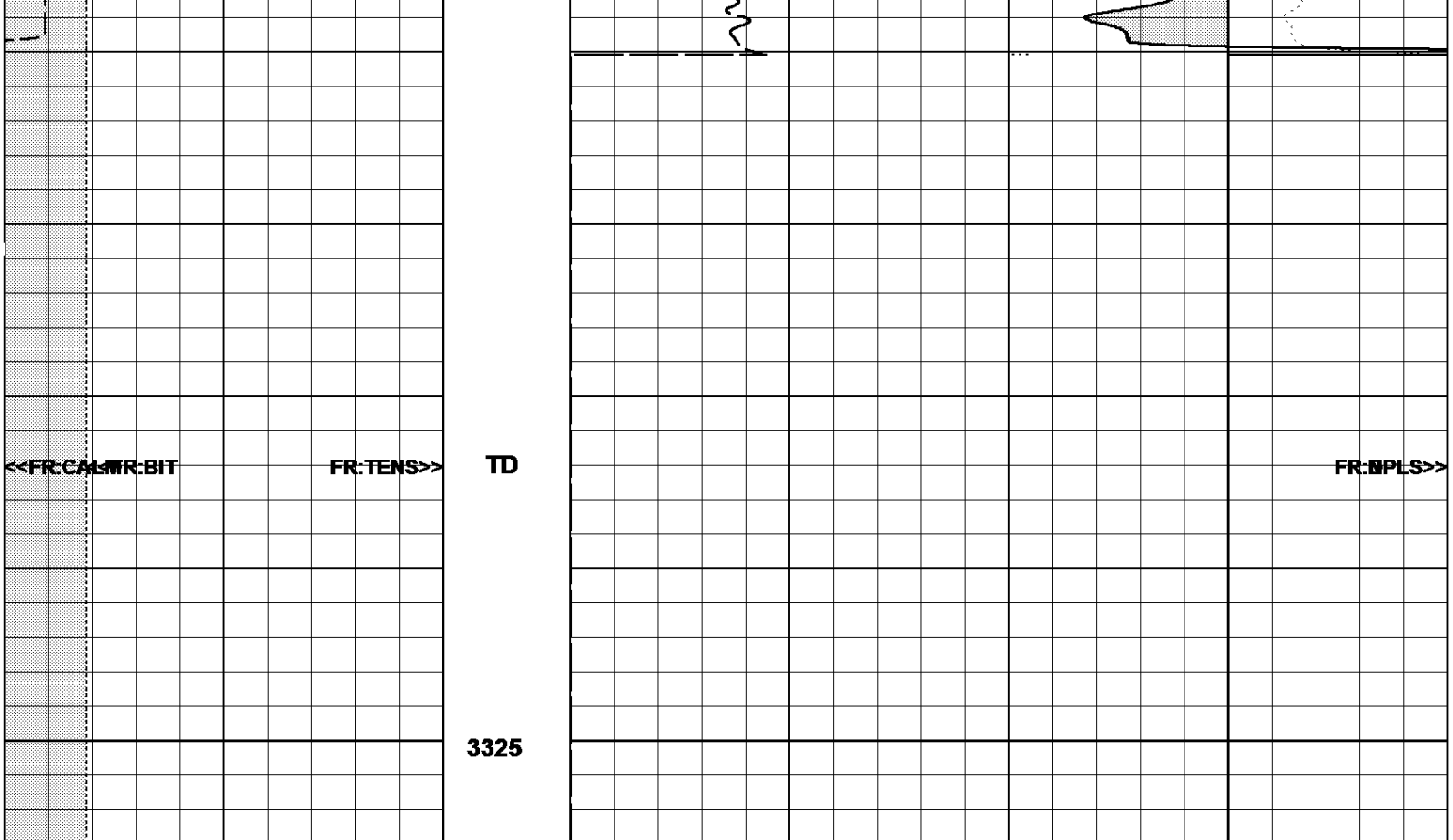


3200

3225

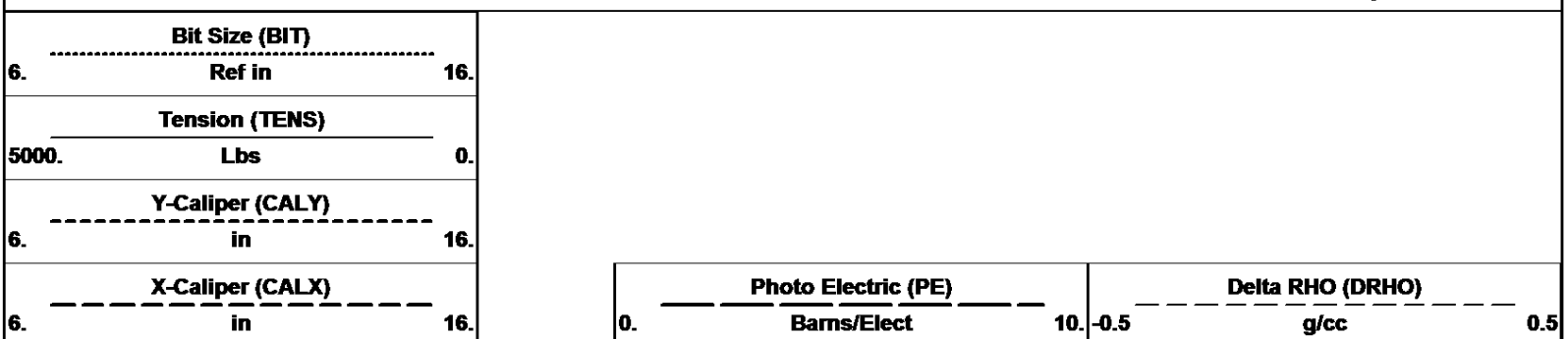


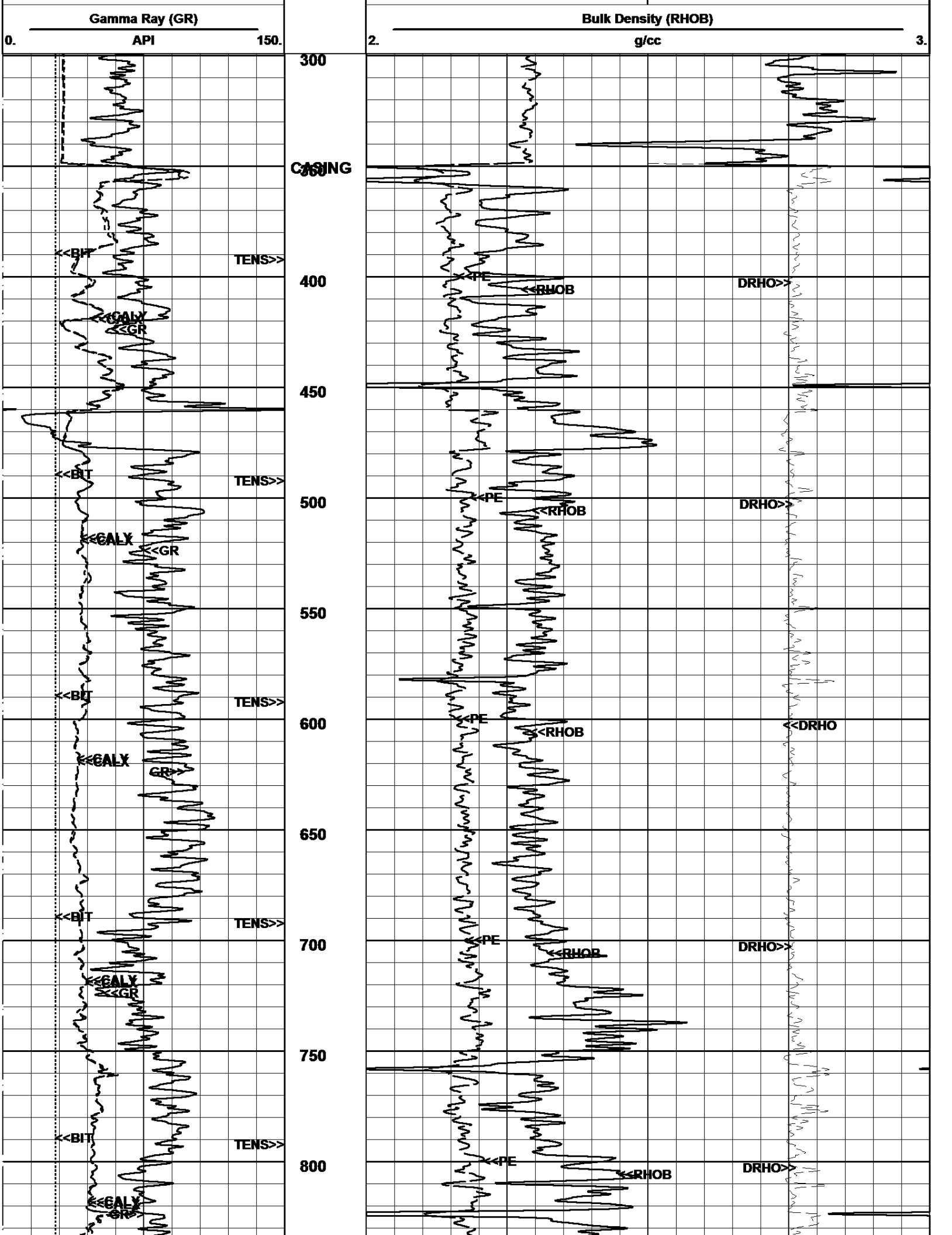


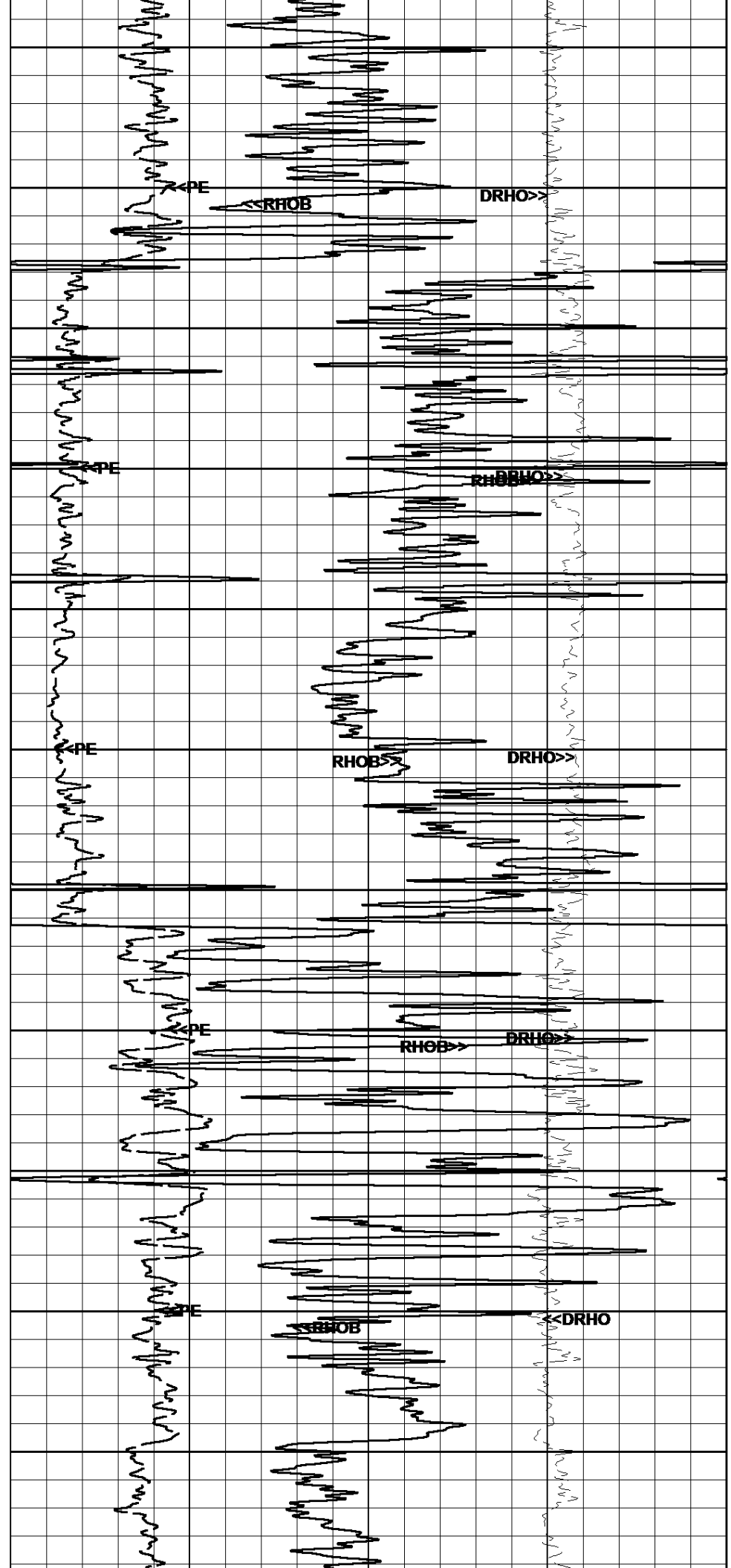
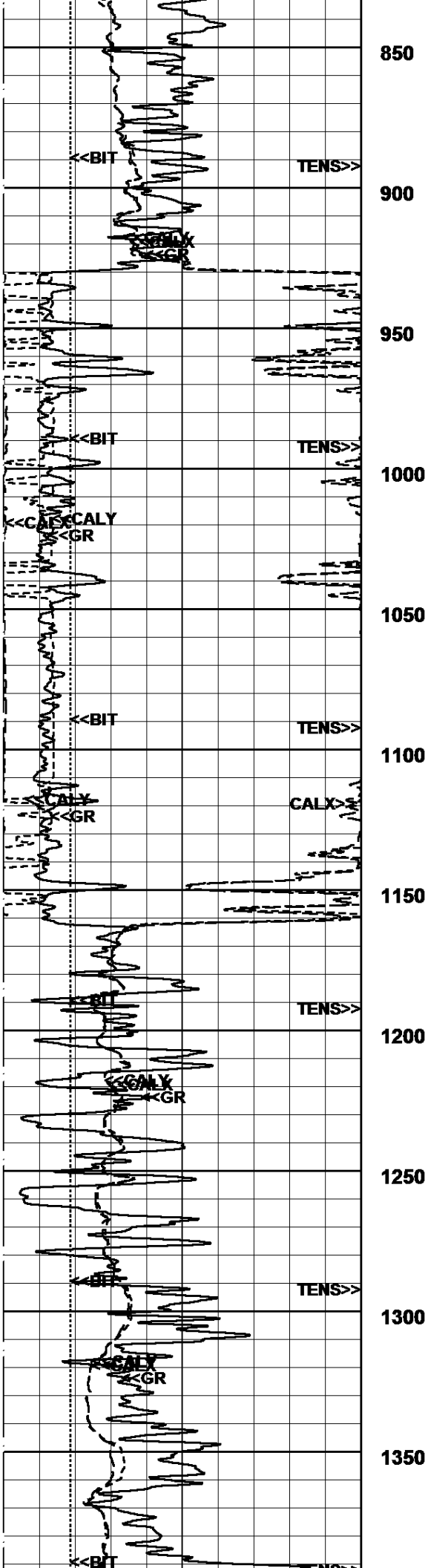


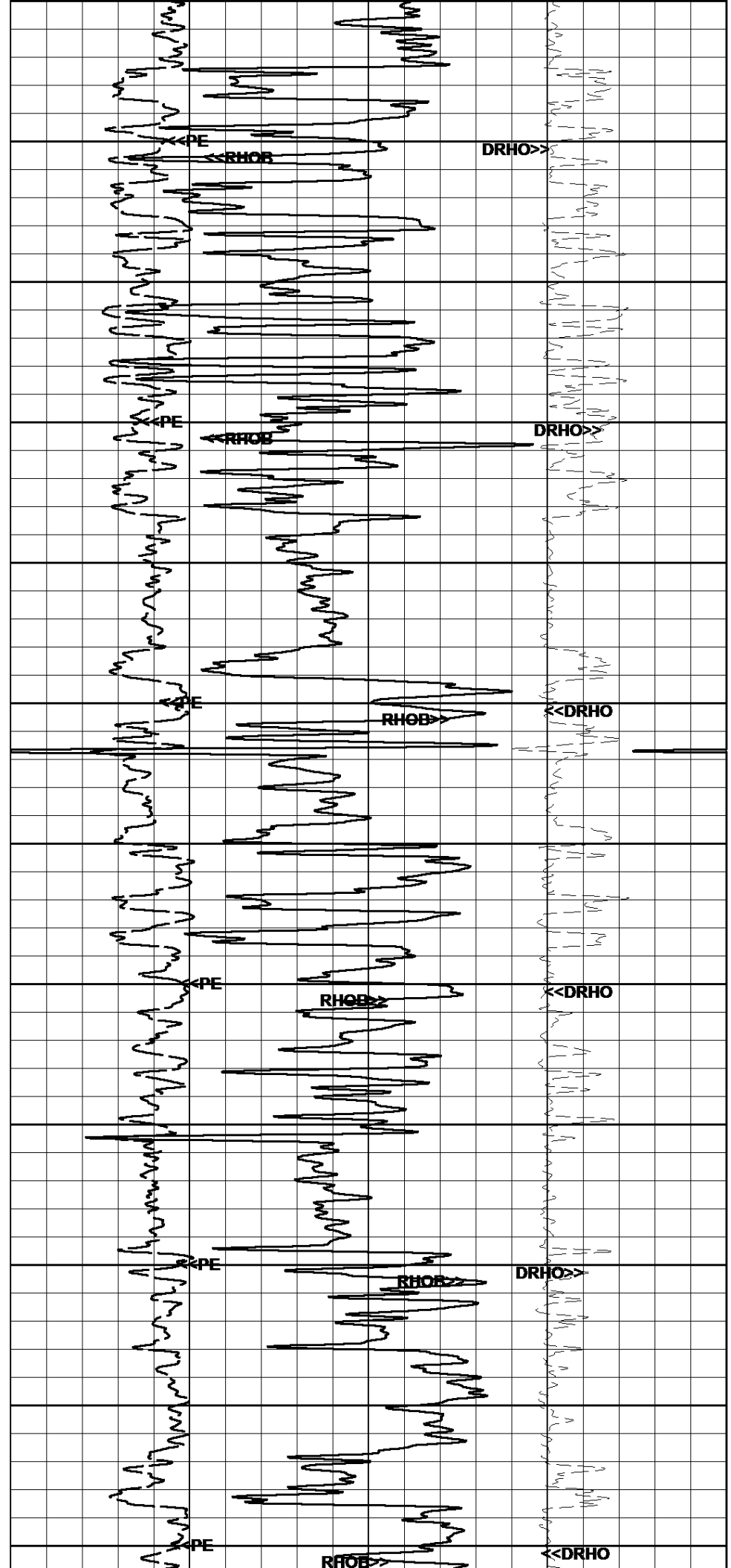
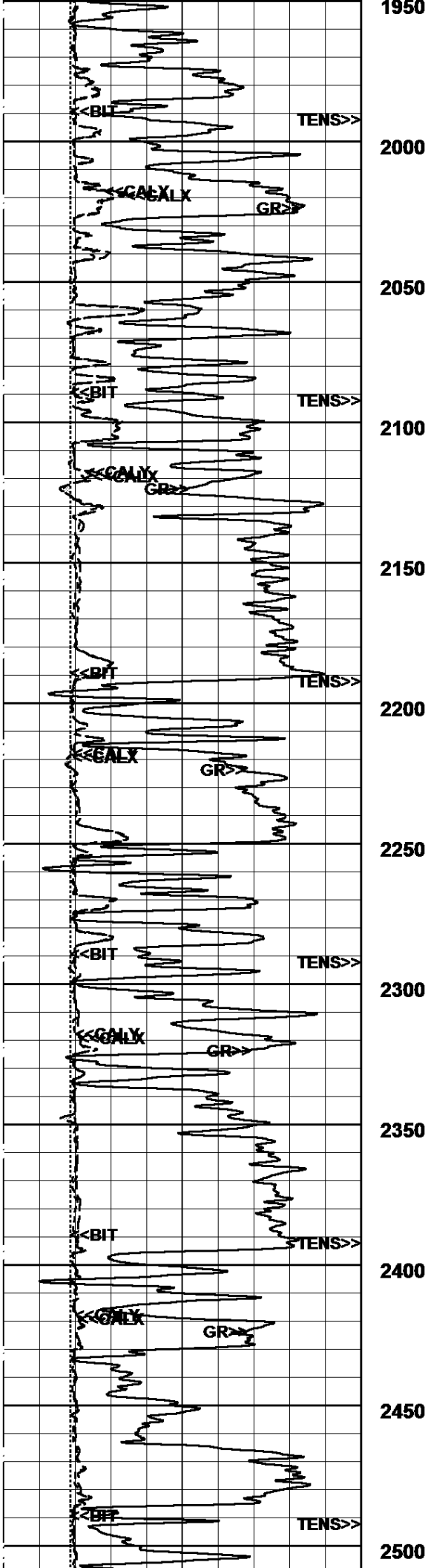
05/19/2015 HIGH DEFINITION PASS - LIMESTONE (20"/100ft) Log UP - (VER 11.19)
22:57:15 => Start Time Start Depth=> 3328.00 Feet

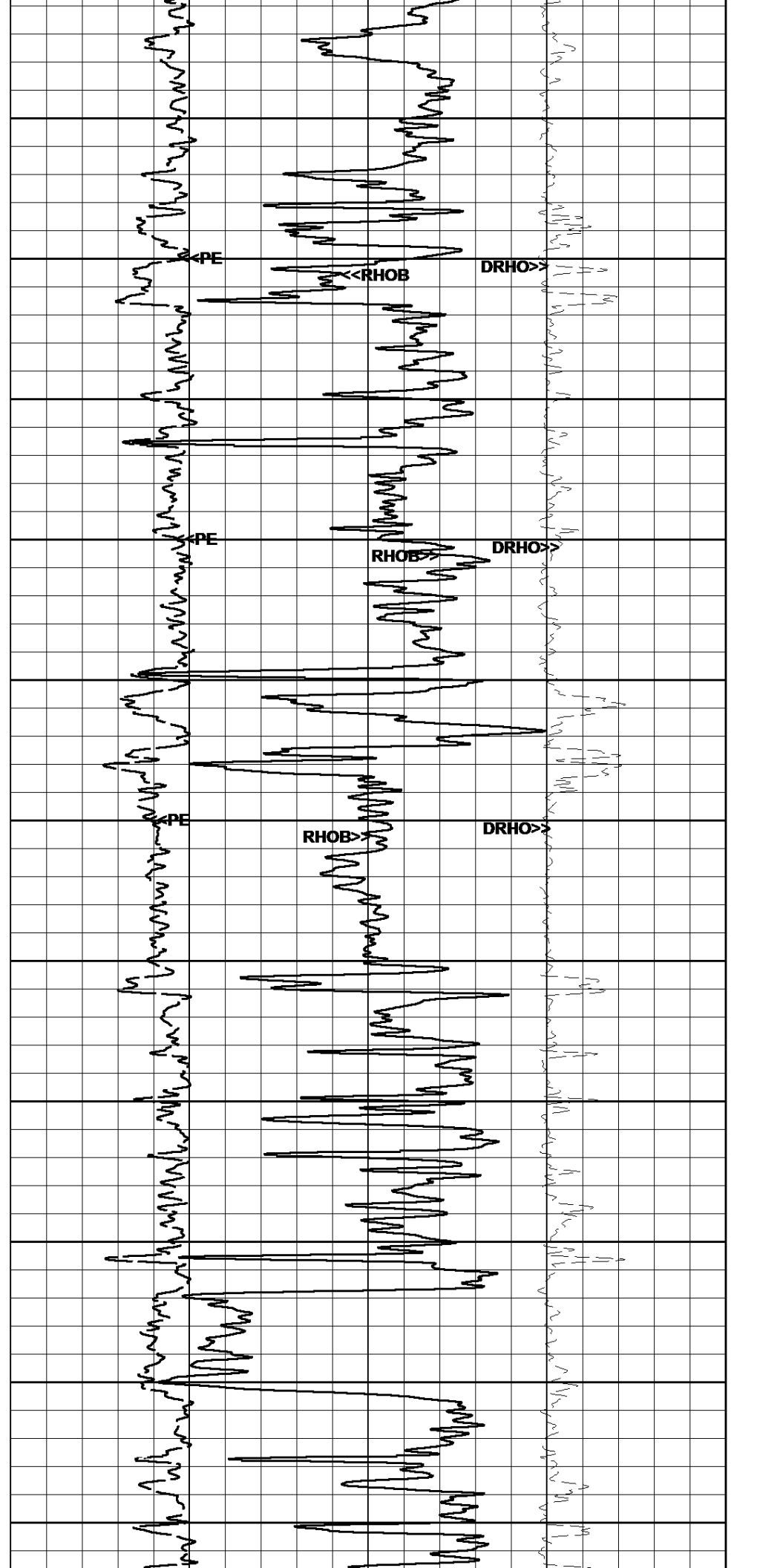
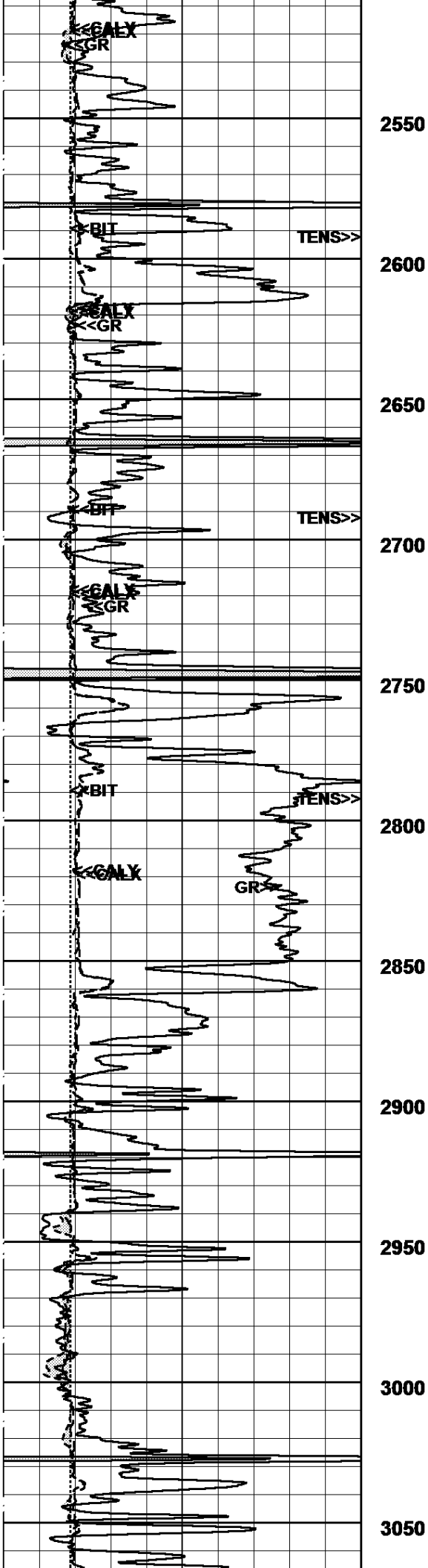
05/20/2015 MAIN PASS - RHOB (2"/100ft) Log UP - (VER 11.19)
01:22:29 => End Time End Depth=> 299.75 Feet

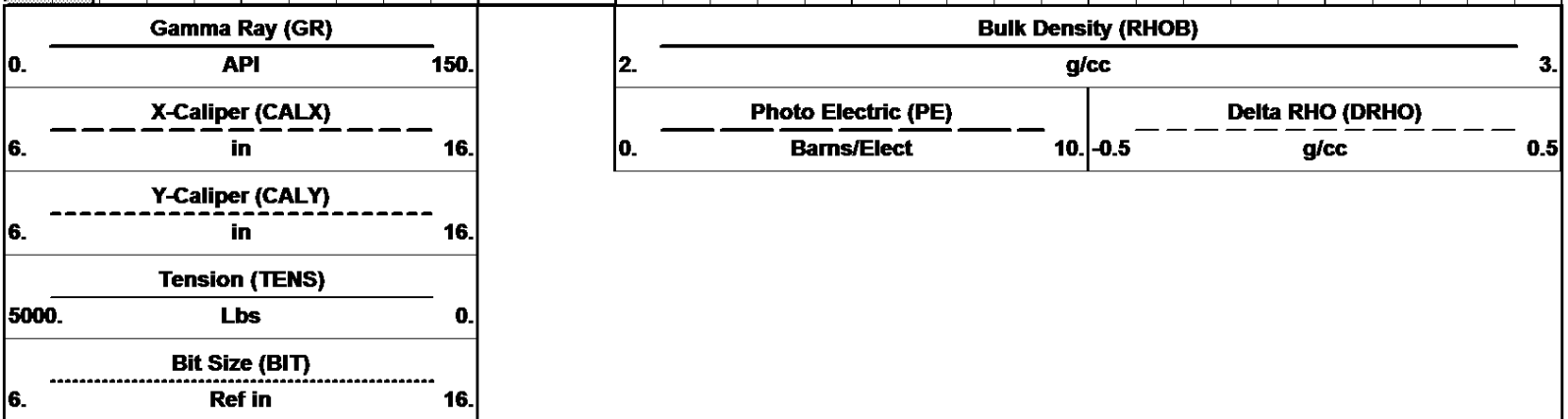
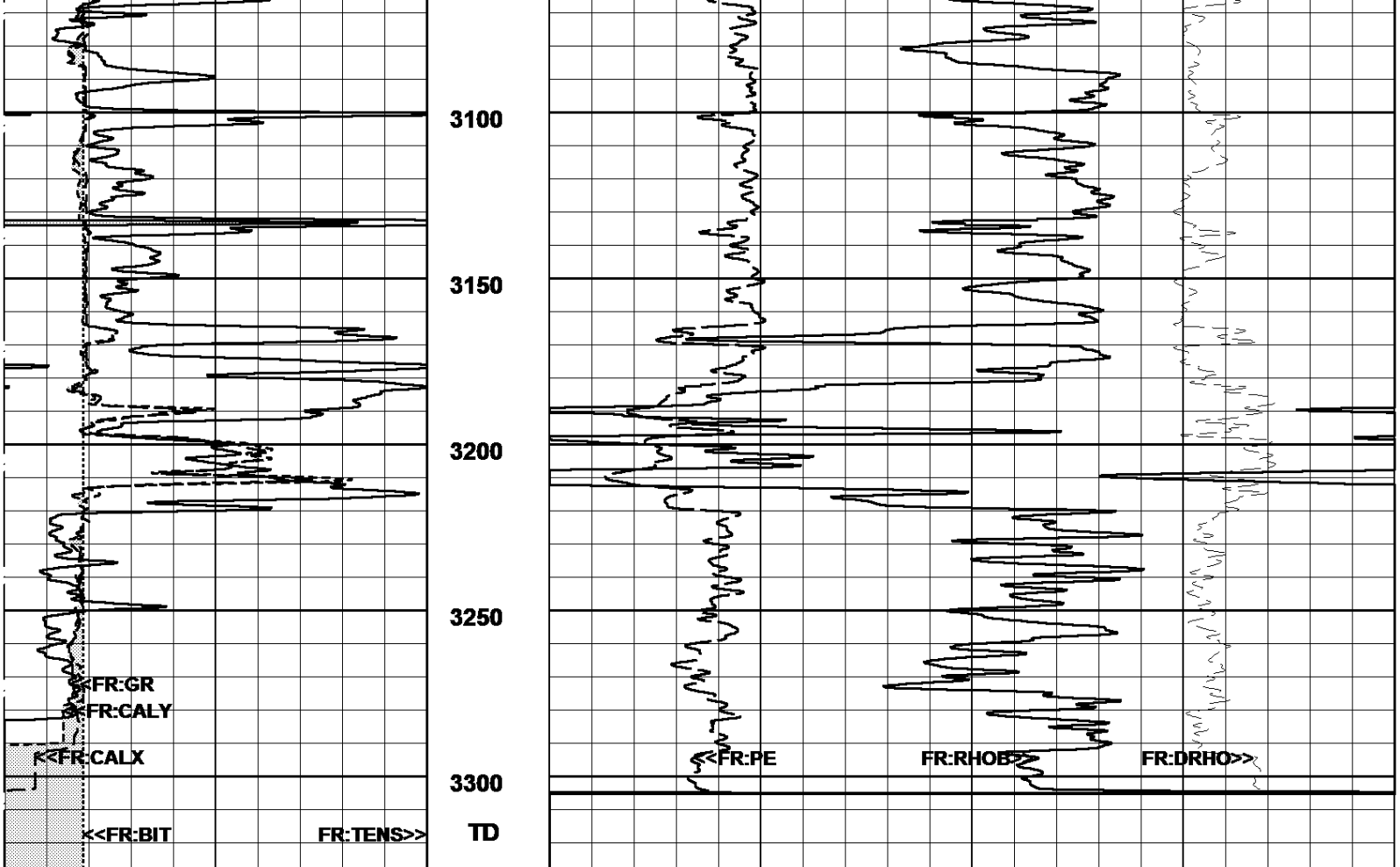












05/19/2015
23:39:27 => Start Time

MAIN PASS - RHOB (2"/100ft)

Log UP - (VER 11.19)
Start Depth=> 3328.00 Feet

Litho-Density/PE Calibrations

TOOL TYPE
SERIAL NUM

LFDC/Pe
RL4101

SOURCE TYPE
SOURCE NUM

CESIUM 137

SOURCE STRGTH 2 CURIE

MASTER BLOCK CALIBRATIONS

	W1(cps)	W2(cps)	W3(cps)	W4(cps)	SS	UNITS	CALIBRATION DATE	CALIBRATION TIME
ALUMINUM	4302.143	3706.407	1881.395	3.929	3331.6543	2.523(g/cc)	M/D/Y> 5/18/2015	H:M:S> 15:54:4
MAGNESIUM	12826.128	10859.213	4834.089	4.006	4949.0817	1.679(g/cc)		
BACKGROUND	1399.682	1235.921	854.160	3.775	4.7151			

SAND		12821.058	10856.096	4840.258	4.051		1.739(PE)		
IRON		3848.667	3355.053	1759.629	3.753		4.530(PE)		
FIELD VERIFIER(cps)		1614.960	1433.200	973.680	4.560	5.1200			
VER NUM	LDP-4102								
WELL SITE CALIBRATIONS									
VER NUM	LDP-4102	W1(cps)	W2(cps)	W3(cps)	W4(cps)	SS		CALIBRATION DATE	CALIBRATION TIME

Compensated Neutron Calibrations

TOOL TYPE SERIAL NUM		CNT-B		SOURCE TYPE SOURCE NUM		AM241BE		SOURCE STRGTH 20 CURIE	
		RN2007				5929NE			
MASTER TANK CALIBRATIONS									
		NEAR(cps)	FAR(cps)	RATIO	K VALUE	CALIBRATION DATE	CALIBRATION TIME		
LOW PHI	3.150			0.6746	1.0268	M/D/Y> 4/10/2015	H:M:S> 13:48:43		
MED PHI	19.130			1.1557	1.0268				
HIGH PHI	31.300			1.3854	1.0269				
FIELD VERIFIER(cps)		294.161	282.345	1.0418					
VER NUM	7430								
WELL SITE CALIBRATIONS									
VER NUM	7430	NEAR(cps)	FAR(cps)	RATIO		CALIBRATION DATE	CALIBRATION TIME		

GAMMA RAY CALIBRATION

SERIAL NUM		RG3007			
BLANKET NUM		1A			
MASTER CALIBRATIONS					
	BackGrnd	CalVal: 175.000 API	Gain/Offset	CALIBRATION DATE	CALIBRATION TIME
BASE CALS	35.381 - raw	215.417 - raw	0.972 - gain 0.000 - off	M/D/Y> 4/7/2015	H:M:S> 11:44:55

X CALIPER

SERIAL NUM	RL4101				
MASTER CALIBRATIONS					
	ZeroVal: 6.000 In	CalVal: 10.000 In	Gain/Offset	CALIBRATION DATE	CALIBRATION TIME
BASE CALS	2713.692 - raw	4888.636 - raw	0.002 - gain 1.009 - off	M/D/Y> 5/18/2015	H:M:S> 16:14:55

Y CALIPER CALIBRATIONS

SERIAL NUM	RN2007

MASTER CALIBRATIONS					
	ZeroVal: 6.000 in	CalVal: 10.000 in	Gain/Offset	CALIBRATION DATE	CALIBRATION TIME
BASE CALS	772.886 - raw	1456.720 - raw	0.006 - gain 1.479 - off	M/D/Y> 4/10/2015	H:M:S> 13:57:43

MICRO INVERSE CALIBRATIONS

SERIAL NUM	RM8007

MASTER CALIBRATIONS					
	ZeroVal: 0.200 ohmm	CalVal: 10.000 ohmm	Gain/Offset	CALIBRATION DATE	CALIBRATION TIME
BASE CALS	14.853 - raw	278.493 - raw	0.037 - gain -0.352 - off	M/D/Y> 4/7/2015	H:M:S> 11:0:54

MICRO NORMAL CALIBRATIONS

SERIAL NUM	RM8007

MASTER CALIBRATIONS					
	ZeroVal: 0.200 ohmm	CalVal: 10.000 ohmm	Gain/Offset	CALIBRATION DATE	CALIBRATION TIME
BASE CALS	28.036 - raw	367.563 - raw	0.029 - gain -0.609 - off	M/D/Y> 4/7/2015	H:M:S> 11:5:56

MICRO CALIPER CALIBRATIONS

SERIAL NUM	RM8007

MASTER CALIBRATIONS					
	ZeroVal: 6.000 in	CalVal: 10.000 in	Gain/Offset	CALIBRATION DATE	CALIBRATION TIME
BASE CALS	2626.944 - raw	4610.595 - raw	0.002 - gain 0.703 - off	M/D/Y> 4/7/2015	H:M:S> 11:13:19

Company	CMX INCORPORATED
Well	BUSHTON #1-20
Field	STOLTENBERG
County	ELLSWORTH
State	KANSAS



COMPENSATED NEUTRON
LITHOLOGY DENSITY
GAMMA RAY X-Y CALIPER
MICROLOG

