Company	MIDWESTERN EXPLORATION COMPANY
Well	MARIAN #2-14
Field	WIDE AWAKE
County	STEVENS
State	KANSAS

RECON

COMPENSATED NEUTRON
LITHOLOGY DENSITY
GAMMA RAY XY-CALIPER
MICROLOG

	SEC	TWP	RGE	
	14	35S	35W	

OTHER SERVICES:
DIL

Location. 2310 FNL & 330' FEL	SE SE NE
SURF. SAME	API#. 015-189-22753

Permanent Datum .	Ground Level	Elev 2951
Log Measured From .	Kelly Bushing	
Drilling Measured From	Kelly Bushing	

ELEVATIONS K.B. 2963
G.L. 2951
D.F. N/A

Date		28-OCT-2010					
Run No.		ONE					
TD Driller		6770	ft.			ft.	
TD RECON		6775	ft.			ft.	
Bot Logged Interval		6774	ft.			ft.	
Top Logged Interval		1649	ft.			ft.	
Casing Depth Driller		8 5/8	in.	@ 1651		in.	@
Casing Depth RECON		8 5/8	in.	@ 1649		in.	@
Bit Size		7 7/8	in.			in.	
Drilling Fluid Type		DISPERSED					
Density	Viscosity	9.2		55			
Fluid Loss	PH	8.0		9.0			
Source Of Sample		Flowline					
RM @ Measured Temp		2.22	Ohmm	@ 75		Ohmm	@
RMF @ Measured Temp		1.66	Ohmm	@ 75		Ohmm	@
RMC @ Measured Temp		2.77	Ohmm	@ 75		Ohmm	@
RM @ MRT		1.23	Ohmm	@ 141		Ohmm	@
Max Recorded Temp		141	DegF			DegF	
Time Drilling Stopped		28-OCT-2010		11:45			
Time Circulation Stopped		28-OCT-2010		14:45			
Time Logger On Bottom		28-OCT-2010		19:17			
Unit Num	Location	S407		OKLAHOMA CITY, OK.			
Recorded By		H. GARCIA					
Witnessed By		MR. B. DAUGHERTY			MR. T. WILLIAMS		

RIG INFORMATION

Drill Contr/Rig# H2 DRLG. #1

GENERAL REMARKS SECTION

FIRST RUN IN THE HOLE
CNL AND LDT LOGGED IN A LIMESTONE MATRIX
TOP MARK 1683.6, BOTTOM MARK 6688.6
CNL/LDT LOGGED MATRIX: 2.71 g/cc.

CHLORIDES: 1100 mg/l
LCM: 6 lbs/bbl

AHV CALCULATED ON 4.5" PROD. CASING

CREW: J. ROSE, T. DENNETT

THANK YOU FOR USING RECON PETROTECHNOLOGIES LTD.

CEMENT VOLUME CALCULATIONS SUMMARY

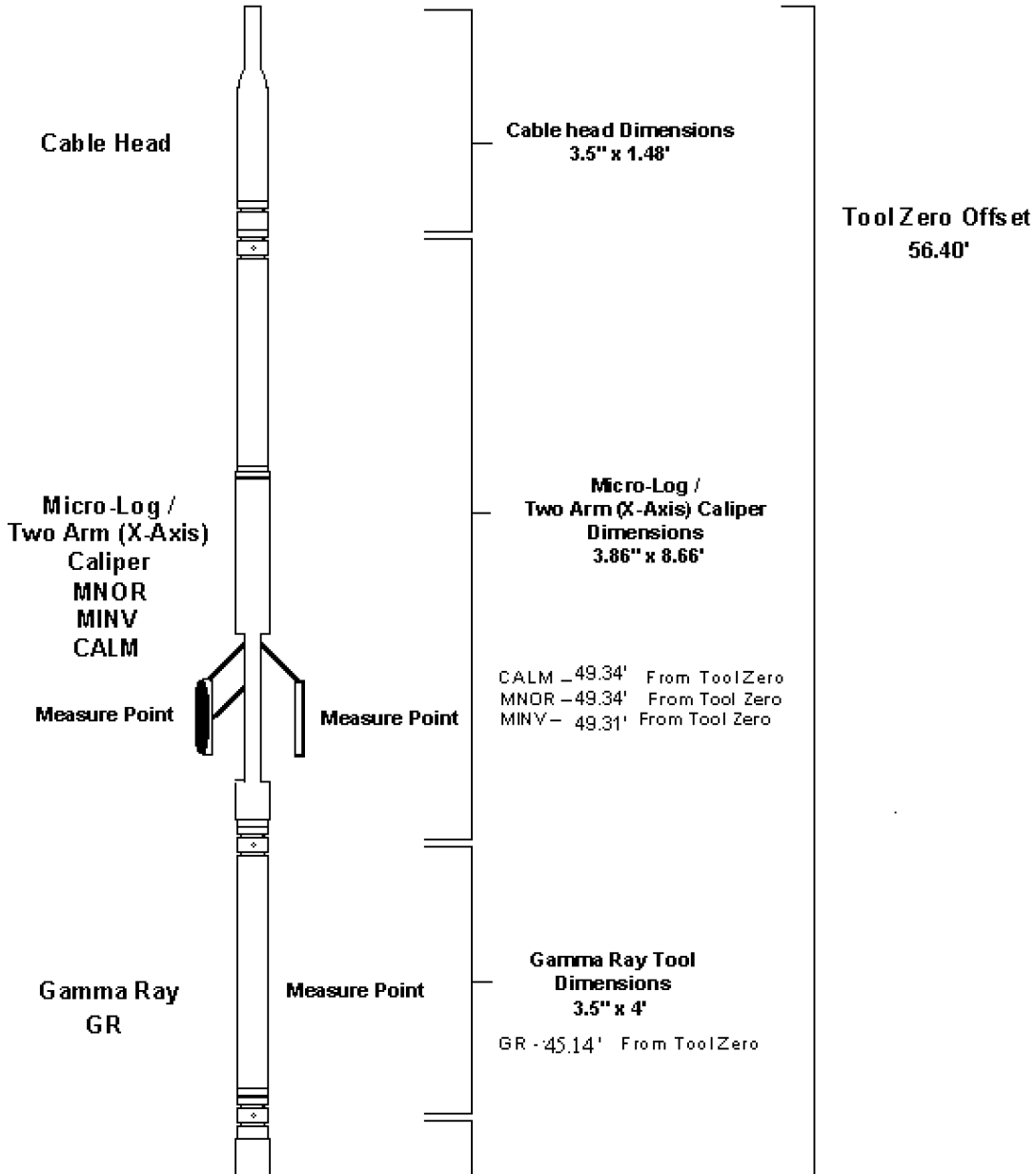
Tool Type	**LDT-CNT**		
Tool Serial #	**RN2007 / RL4101**	**Caliper Type**	**X-Y CALIPERS**

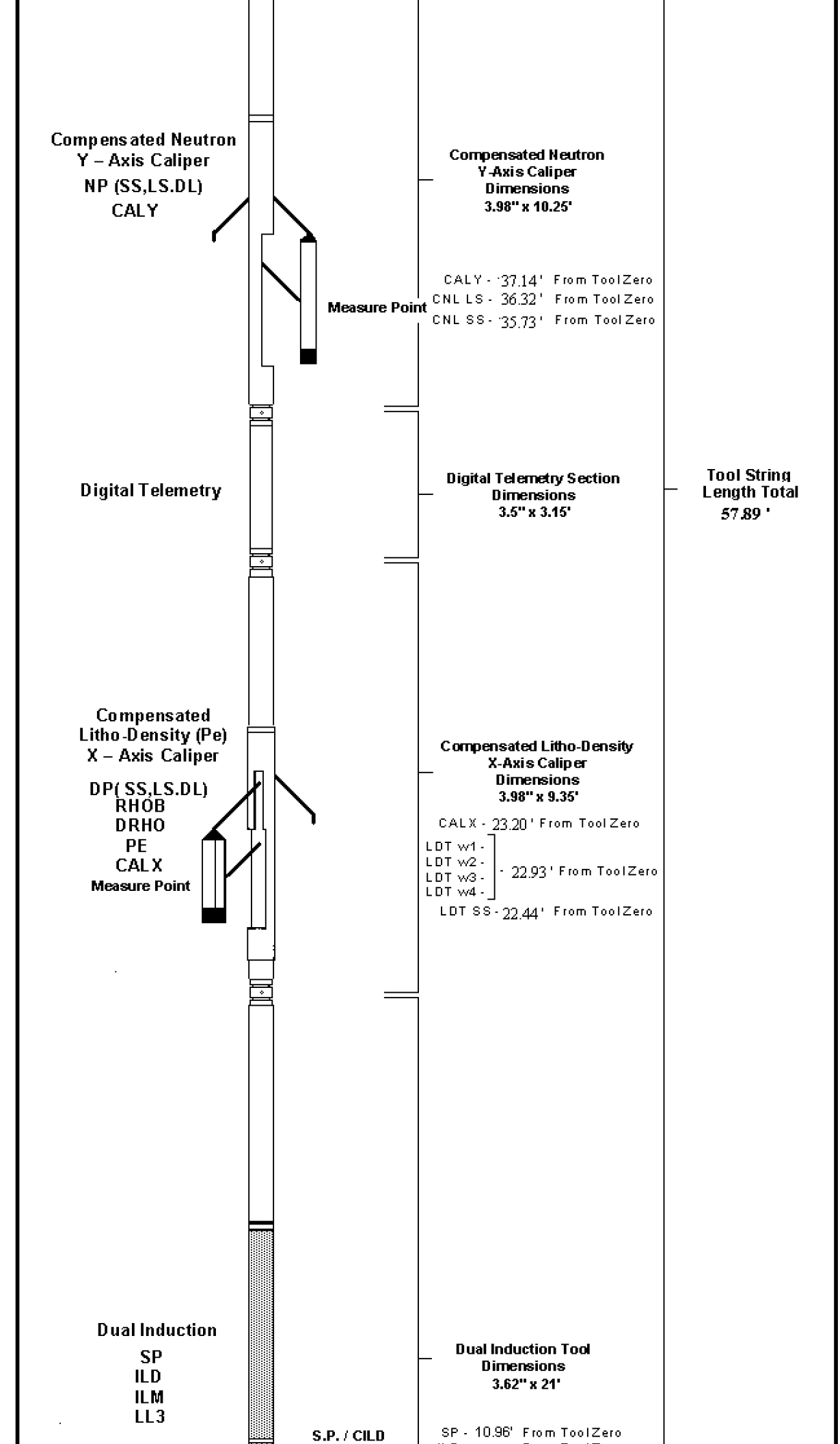
	Borehole Total	Annular Volume with Casing	From Depth (MKb)	To Depth (MKb)
VOLUMES	**1197.940 Cubic Feet**	**823.249 Cubic Feet**	**3400**	**TD**

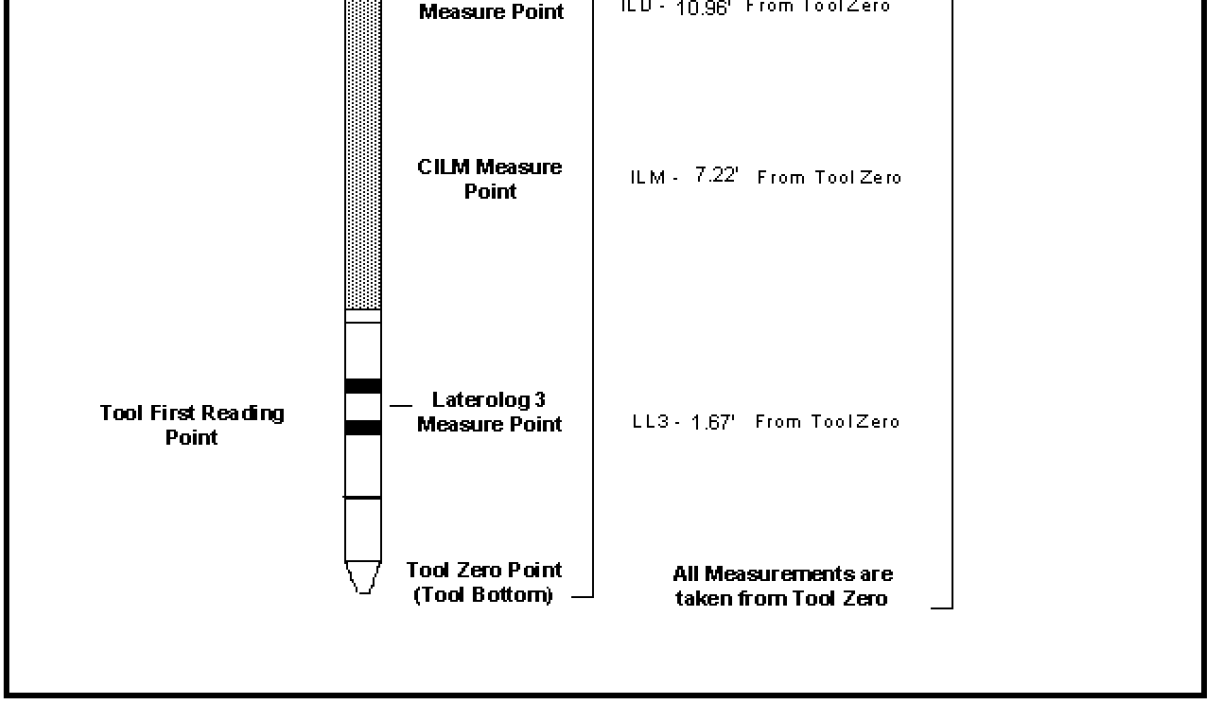
CASING INFORMATION

	SIZE (in)	GRADE	WEIGHT (lbs/ft)	ID (in)	TOP DEPTH	BOT DEPTH
SURFACE CASING	**8 5/8**	**J-55**	**24**	**8.097**	**Surface**	**1649**
INTERMEDIATE CASING	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
PRODUCTION CASING	**4 1/2**	**J-55**	**10.5**	**4.052**	**Surface**	**TD**

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




Compensated Neutron
Y – Axis Caliper
NP (SS,LS.DL)
CALY
Measure Point
Compensated Neutron
Y-Axis Caliper
Dimensions
3.98" x 10.25'
CALY - 37.14' From ToolZero
CNL LS - 36.32' From ToolZero
CNL SS - 35.73' From ToolZero
Digital Telemetry
Digital Telemetry Section
Dimensions
3.5" x 3.15'
Tool String
Length Total
57.89 '
Compensated
Litho-Density (Pe)
X – Axis Caliper
DP(SS,LS.DL)
RHOB
DRHO
PE
CALX
Measure Point
Compensated Litho-Density
X-Axis Caliper
Dimensions
3.98" x 9.35'
CALX - 23.20' From ToolZero
LDT w1 -
LDT w2 -
LDT w3 -
LDT w4 -
22.93' From ToolZero
LDT SS - 22.44' From ToolZero
Dual Induction
SP
ILD
ILM
LL3
Dual Induction Tool
Dimensions
3.62" x 21'
S.P. / CILD
SP - 10.96' From ToolZero



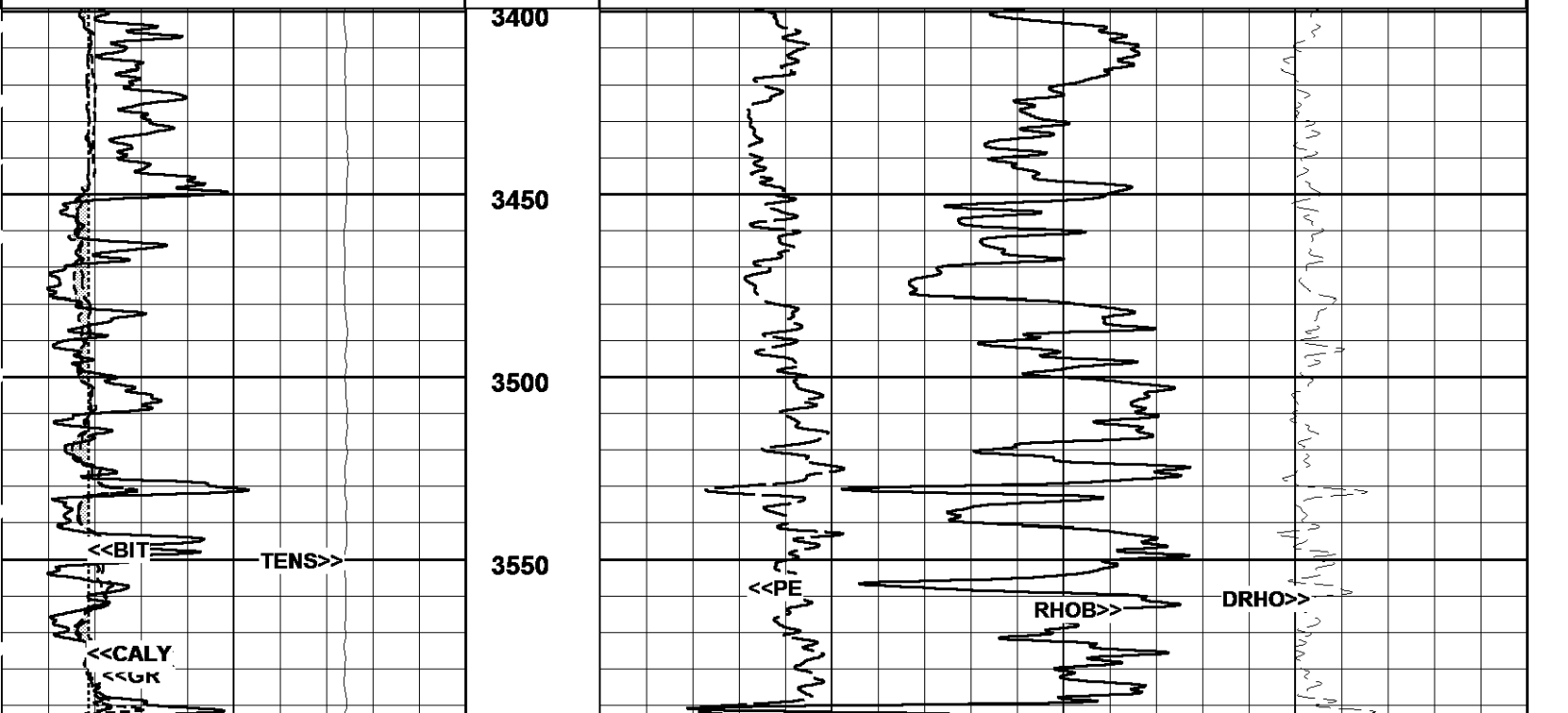
10/28/2010
21:52:57 => End Time

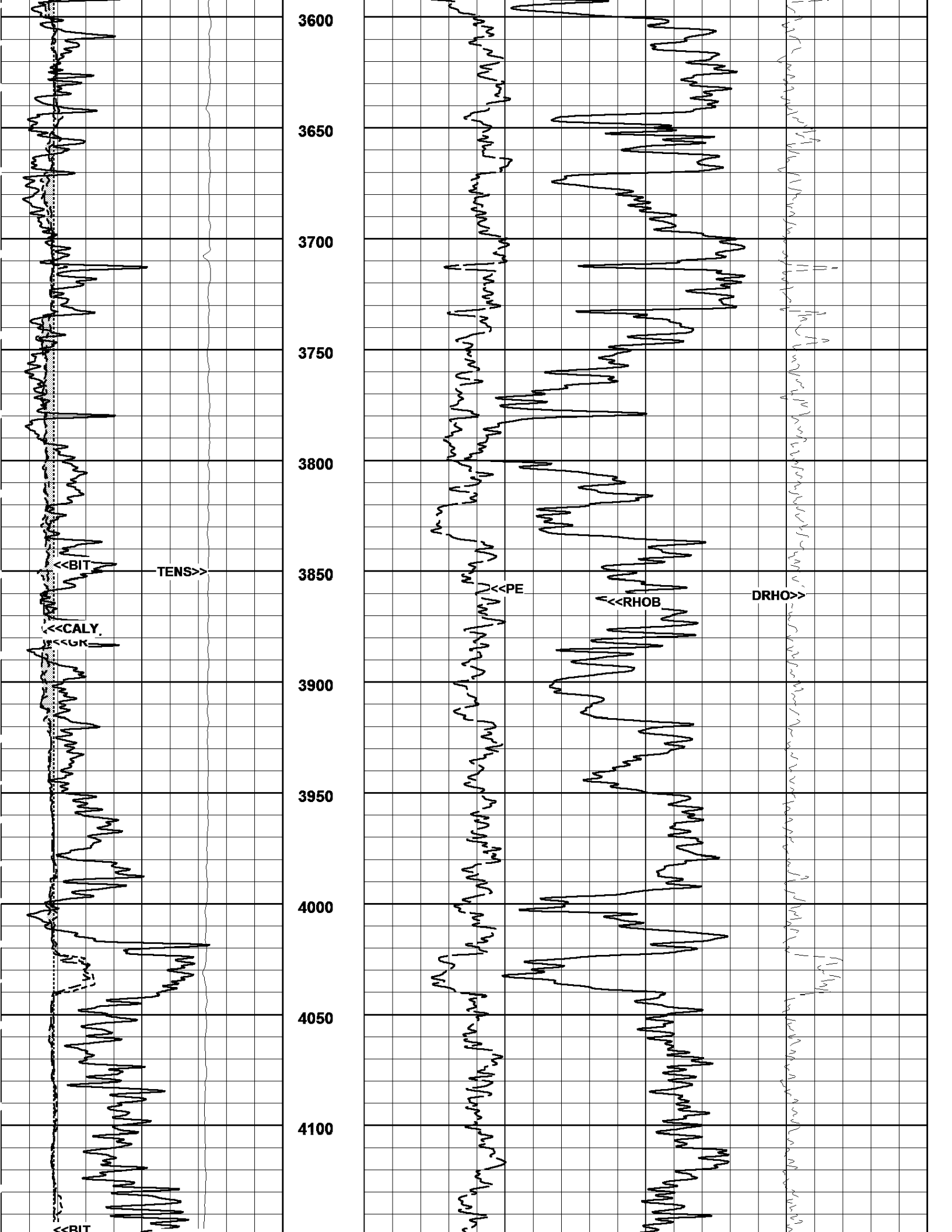
MAIN PASS - RHOB (2"/100Ft)

Log UP - (VER 10.16)
End Depth=> 3399.75 Feet

Bit Size (BIT)		
6.	Ref in	16.
Tension (TENS)		
10000.	Lbs	0.
Y-Caliper (CALY)		
6.	in	16.
X-Caliper (CALX)		
6.	in	16.
Gamma Ray (GR)		
0.	API	150.

Photo Electric (PE)		
0.	Barns/Elect	10.
Delta RHO (DRHO)		
-0.5	g/cc	0.5
Bulk Density (RHOB)		
2.	g/cc	3.

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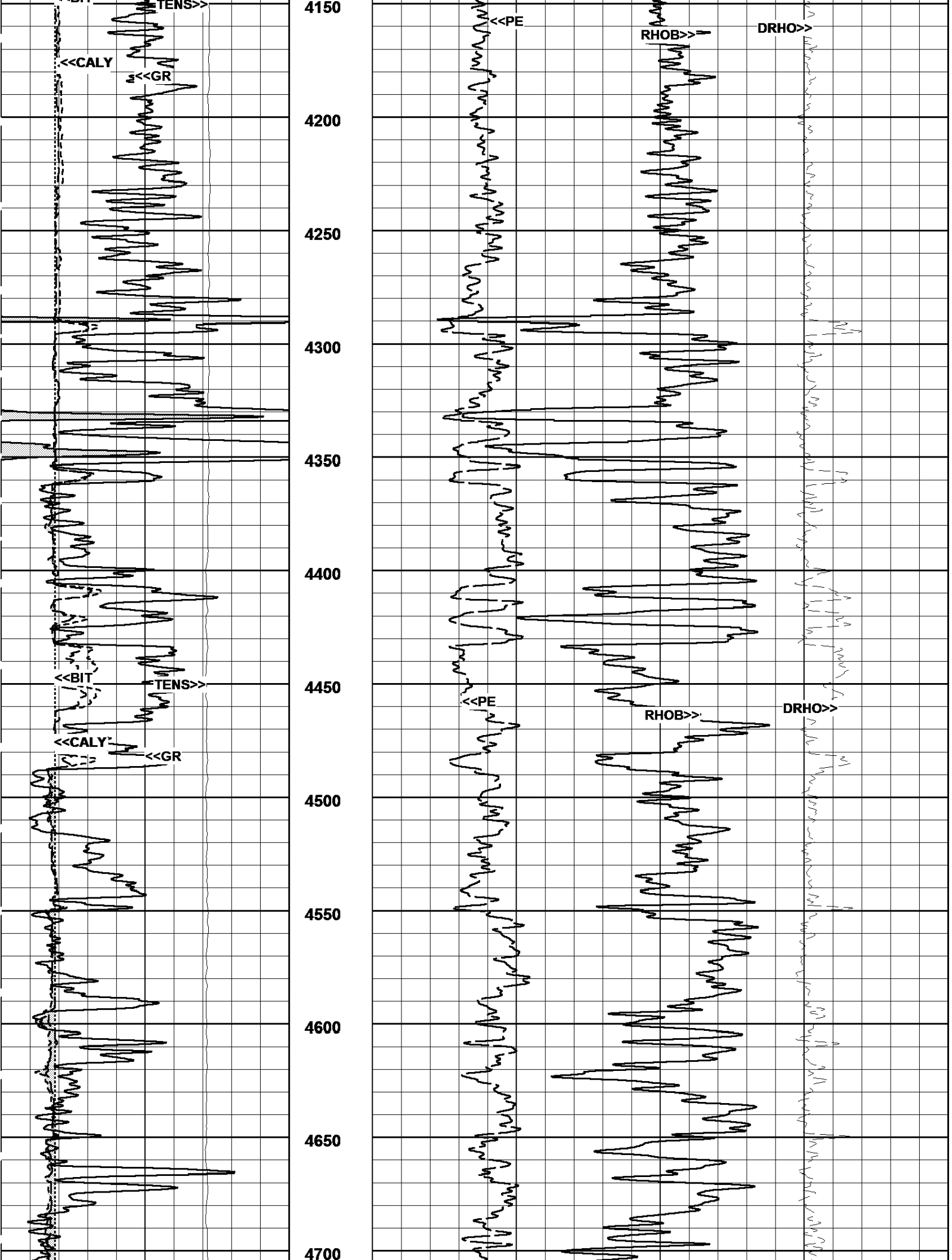
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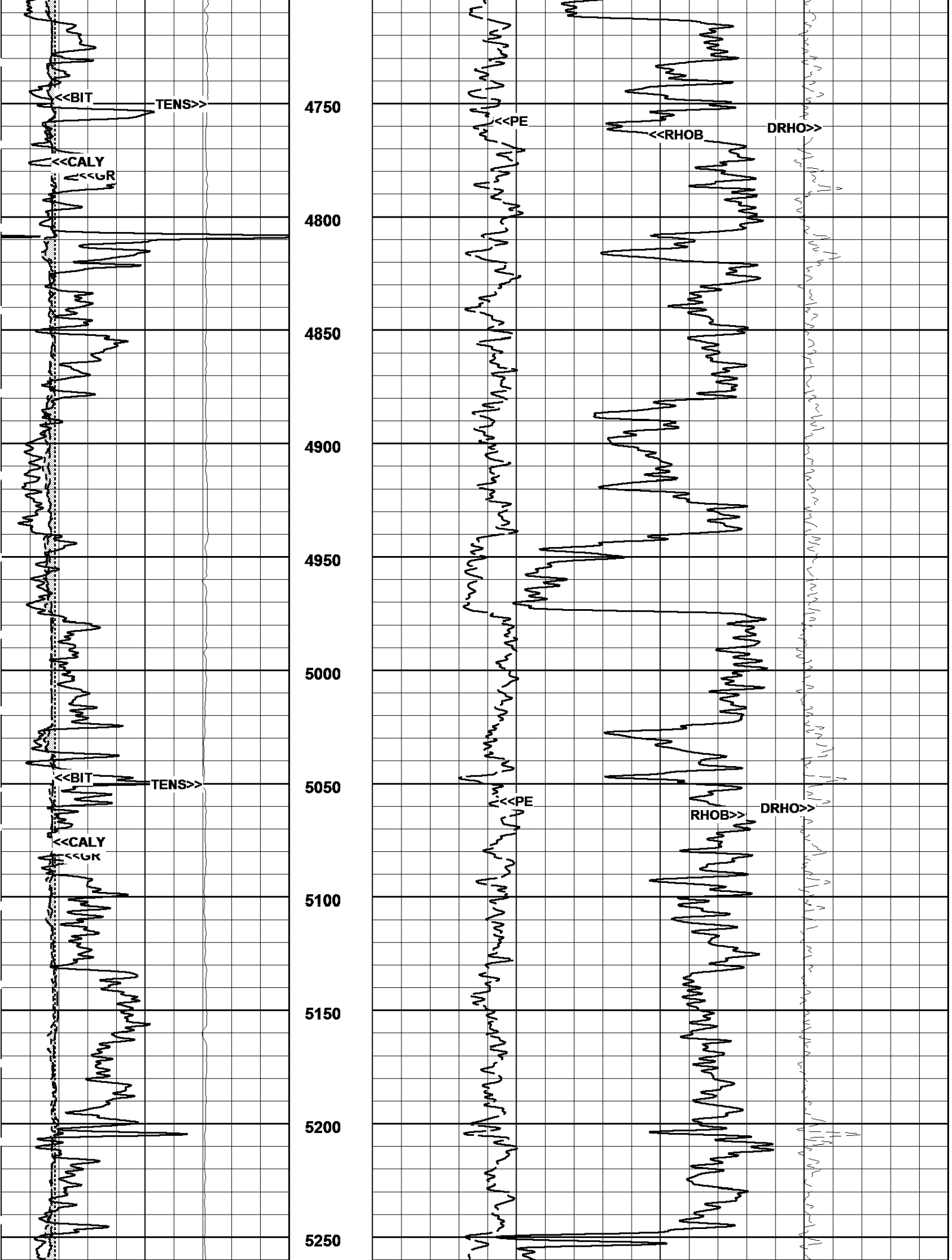
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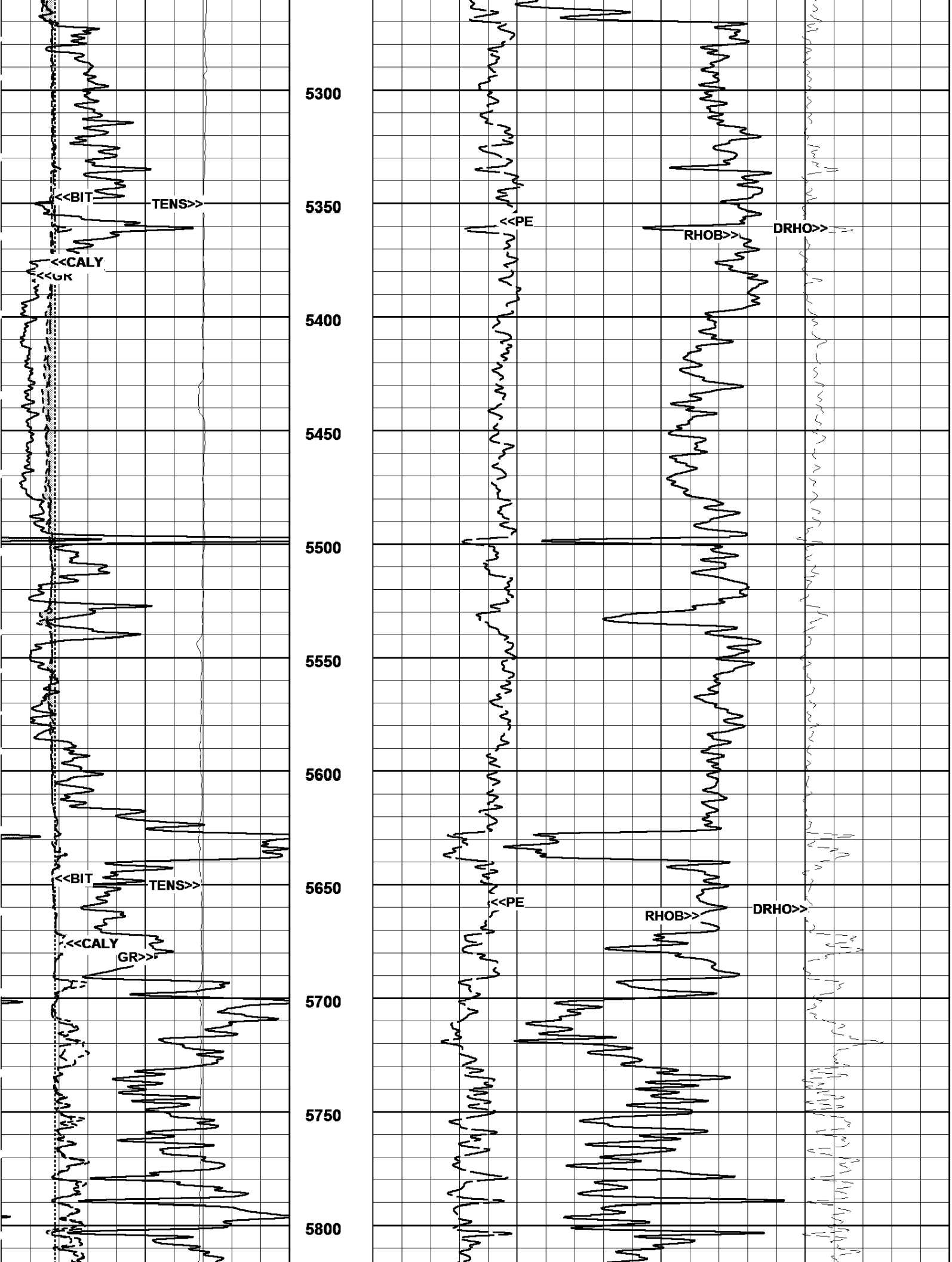
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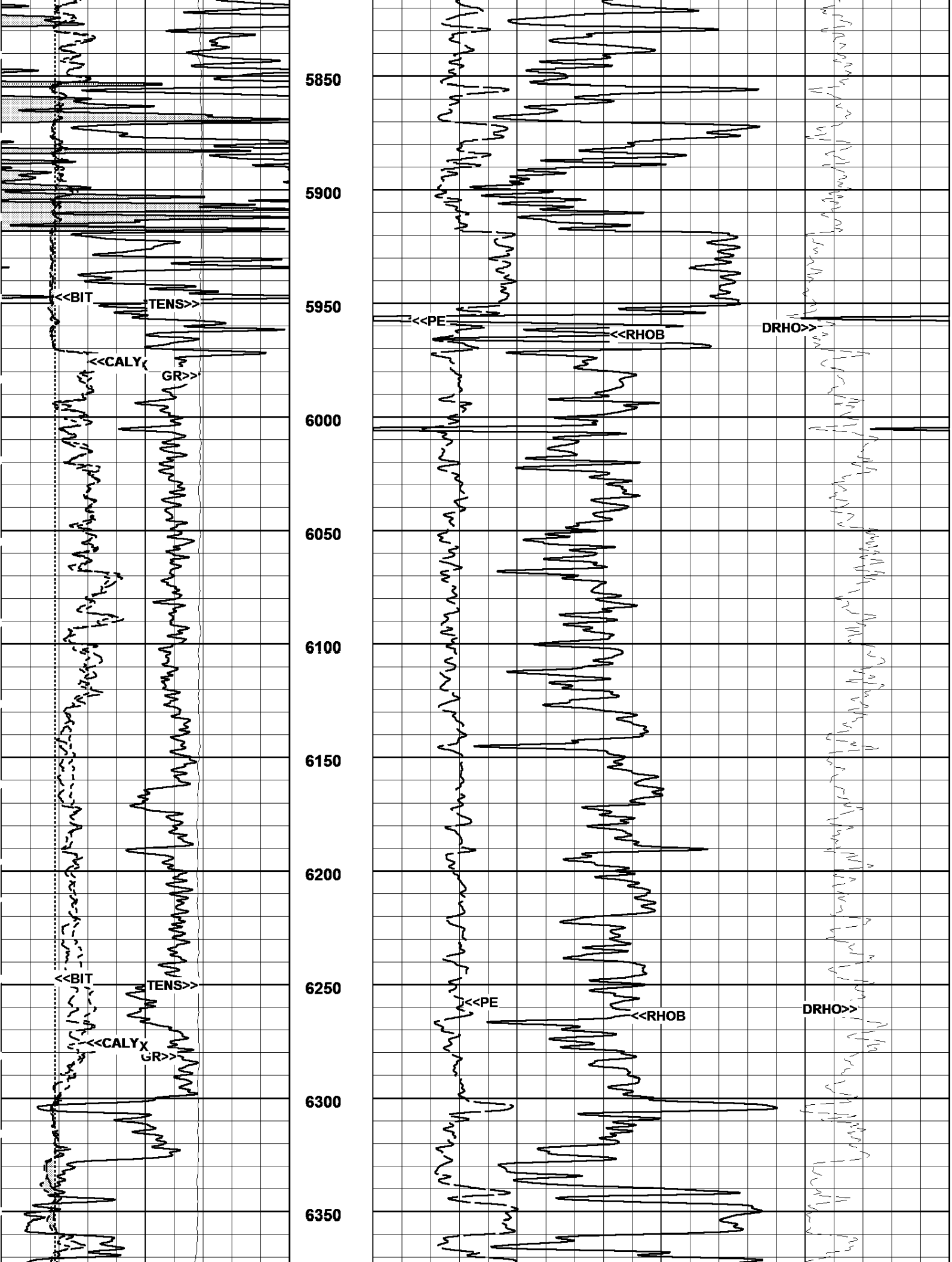
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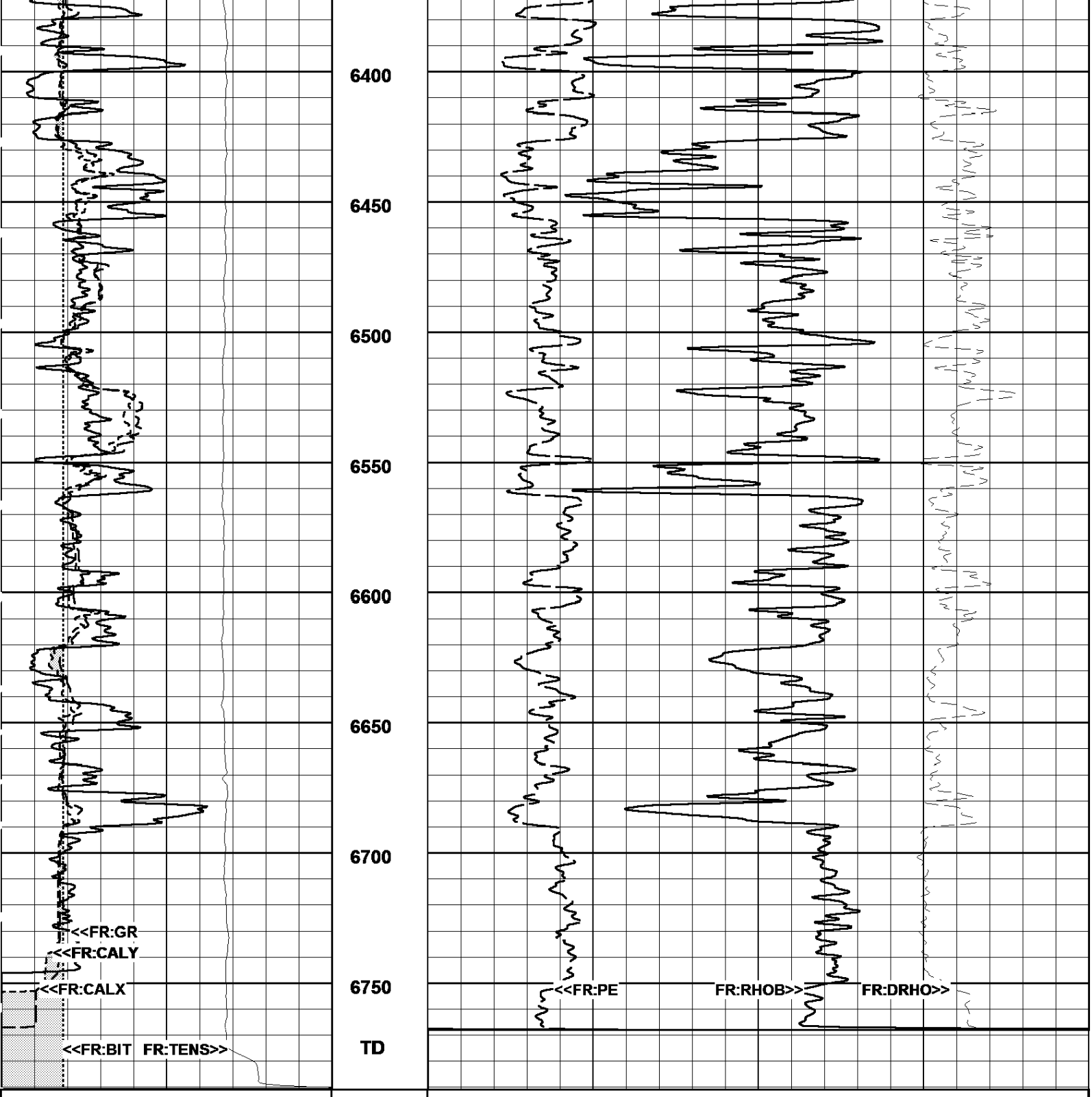


Gamma Ray (GR)		
0.	API	150.
X-Caliper (CALX)		
6.	in	16.
Y-Caliper (CALY)		
6.	in	16.
Tension (TENS)		
10000.	Lbs	0.
Bit Size (BIT)		
6.	Ref in	16.

Bulk Density (RHOB)		
2.	g/cc	3.
Photo Electric (PE)		
0.	Barns/Elect	10.
Delta RHO (DRHO)		
-0.5	g/cc	0.5

10/28/2010
19:51:29 => Start Time

MAIN PASS - RHOB (2"/100Ft)

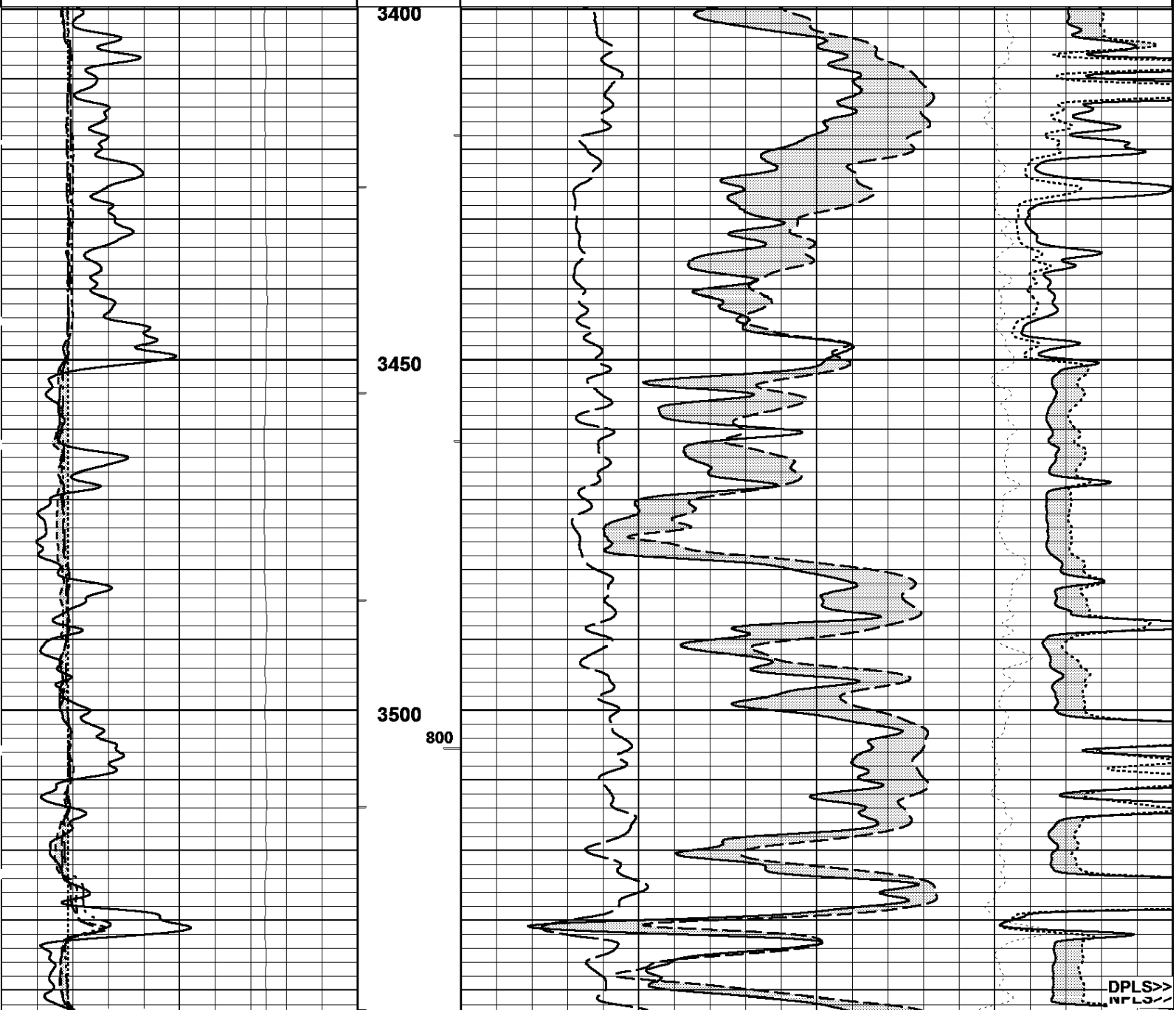
Log UP - (VER 10.16)
Start Depth=> 6790.75 Feet

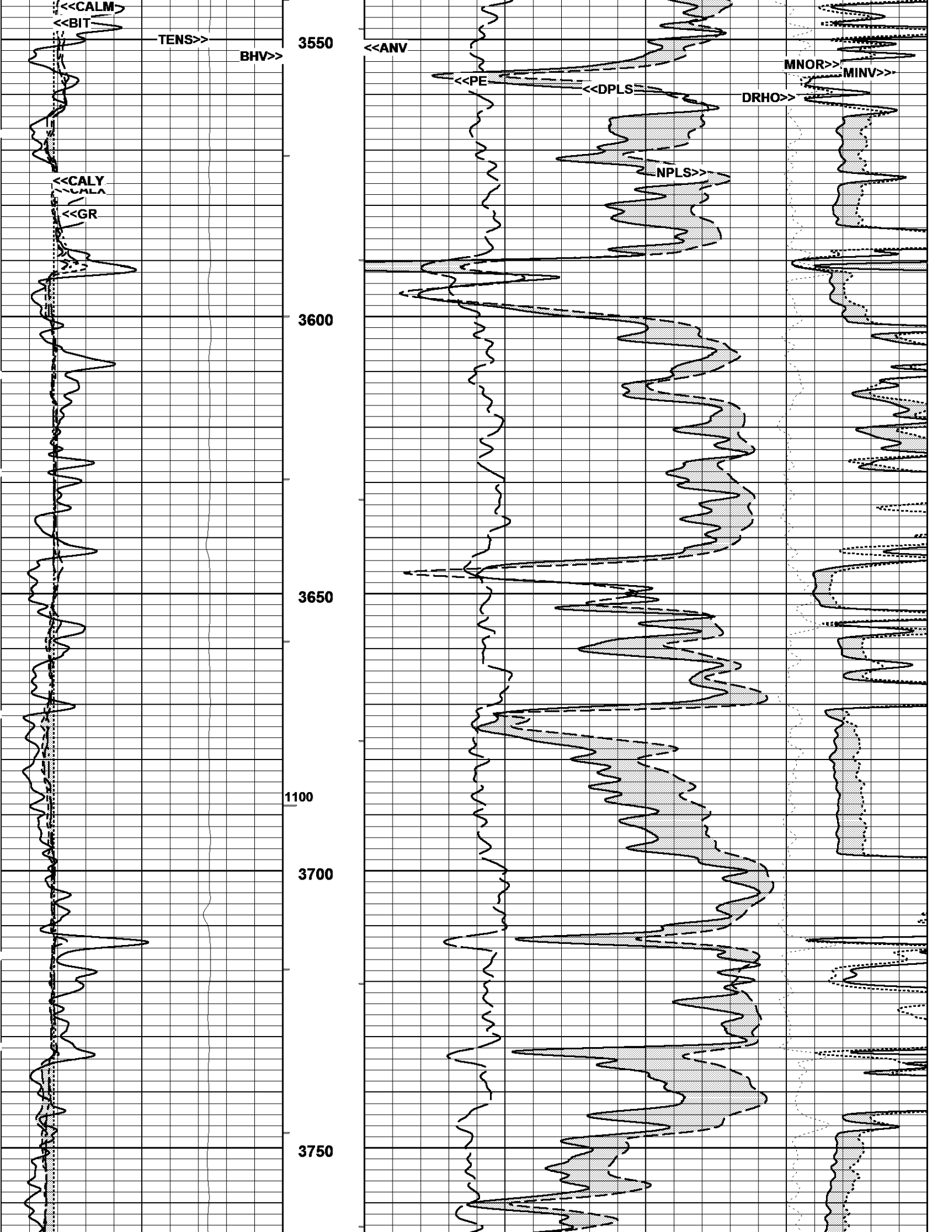
10/28/2010
21:52:57 => End Time

MAIN PASS - LIMESTONE (5"/100Ft)

Log UP - (VER 10.16)
End Depth=> 3399.90 Feet

Microlog-Caliper	6. in 16.	
Bit Size (BIT)	6. Ref in 16.	
Tension (TENS)	10000. Lbs 0.	
Y-Caliper (CALY)	6. in 16.	
X-Caliper (CALX)	6. in 16.	
Gamma Ray (GR)	0. API 150.	
Micro-Normal{2"} (MNOR)	-40. ohms 40.	
Micro-Inverse{1"} (MINV)	-40. ohms 40.	
Photo Electric (PE)	0. Barns/Elect 10.	
Delta RHO (DRHO)	-0.5 g/cc 0.5	
Density-Porosity (DPLS)	30. Limestone-Matrix (V/V) -10.	
Neutron-Porosity (NPLS)	30. Limestone-Matrix (V/V) -10.	

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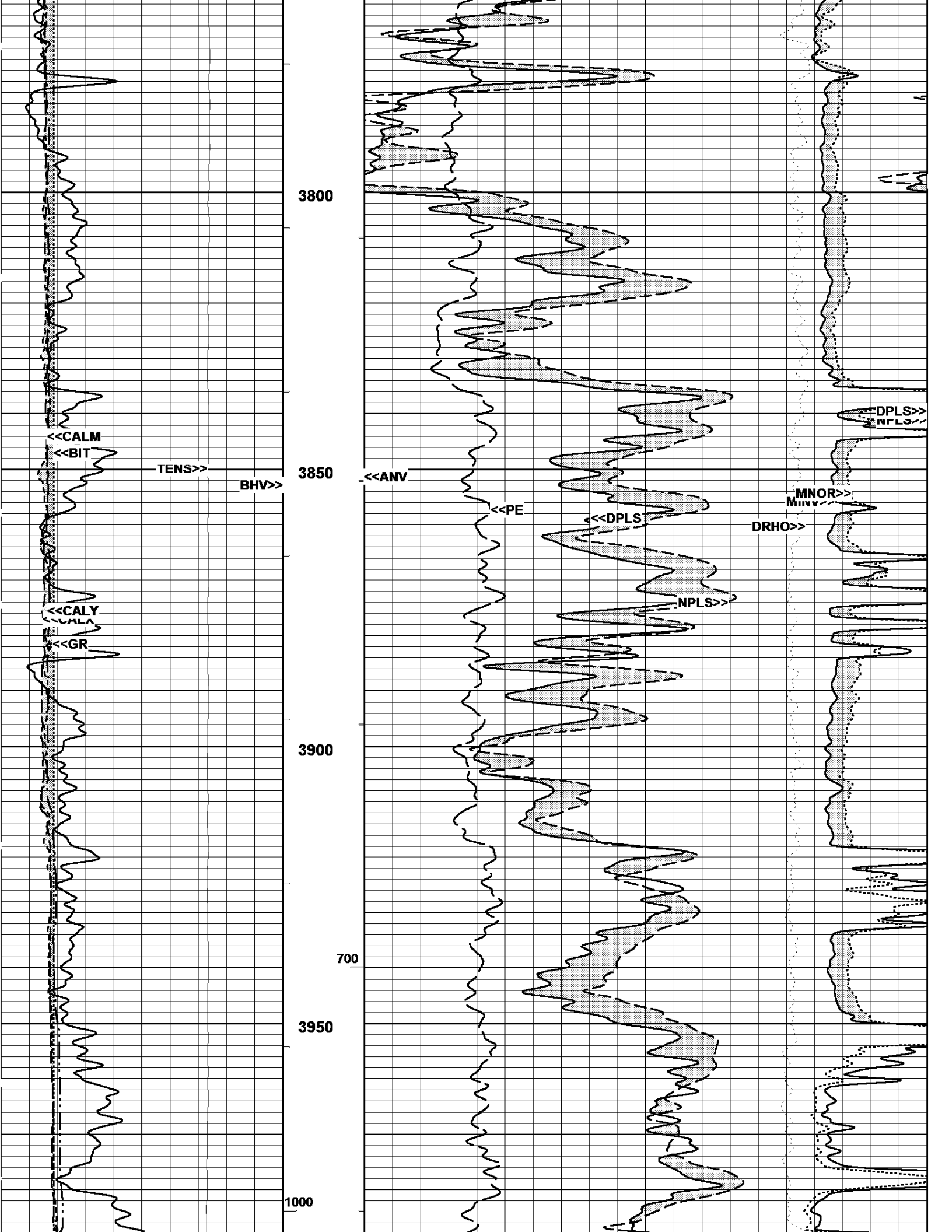
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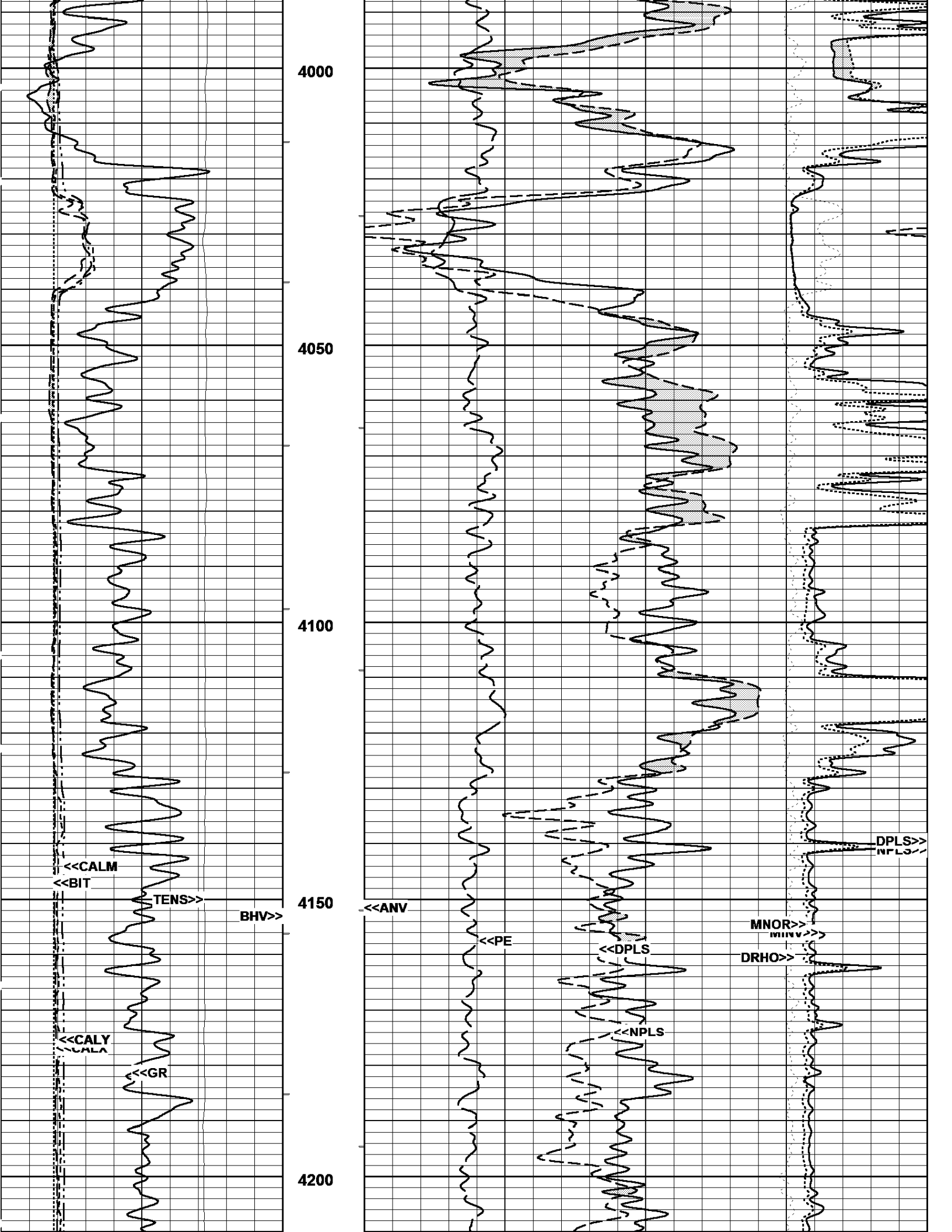
MNOR>>
DRHO>>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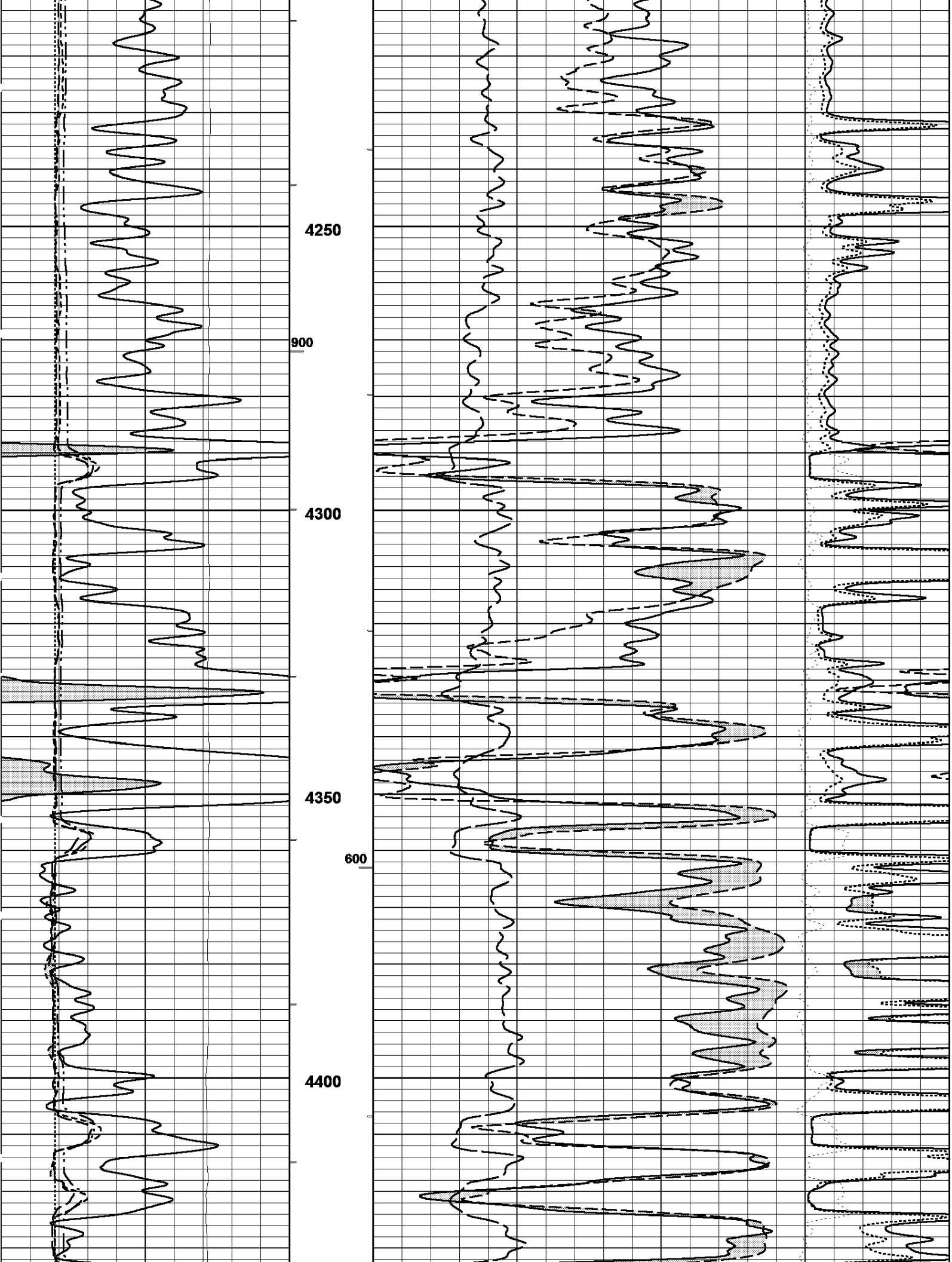
DRHO>>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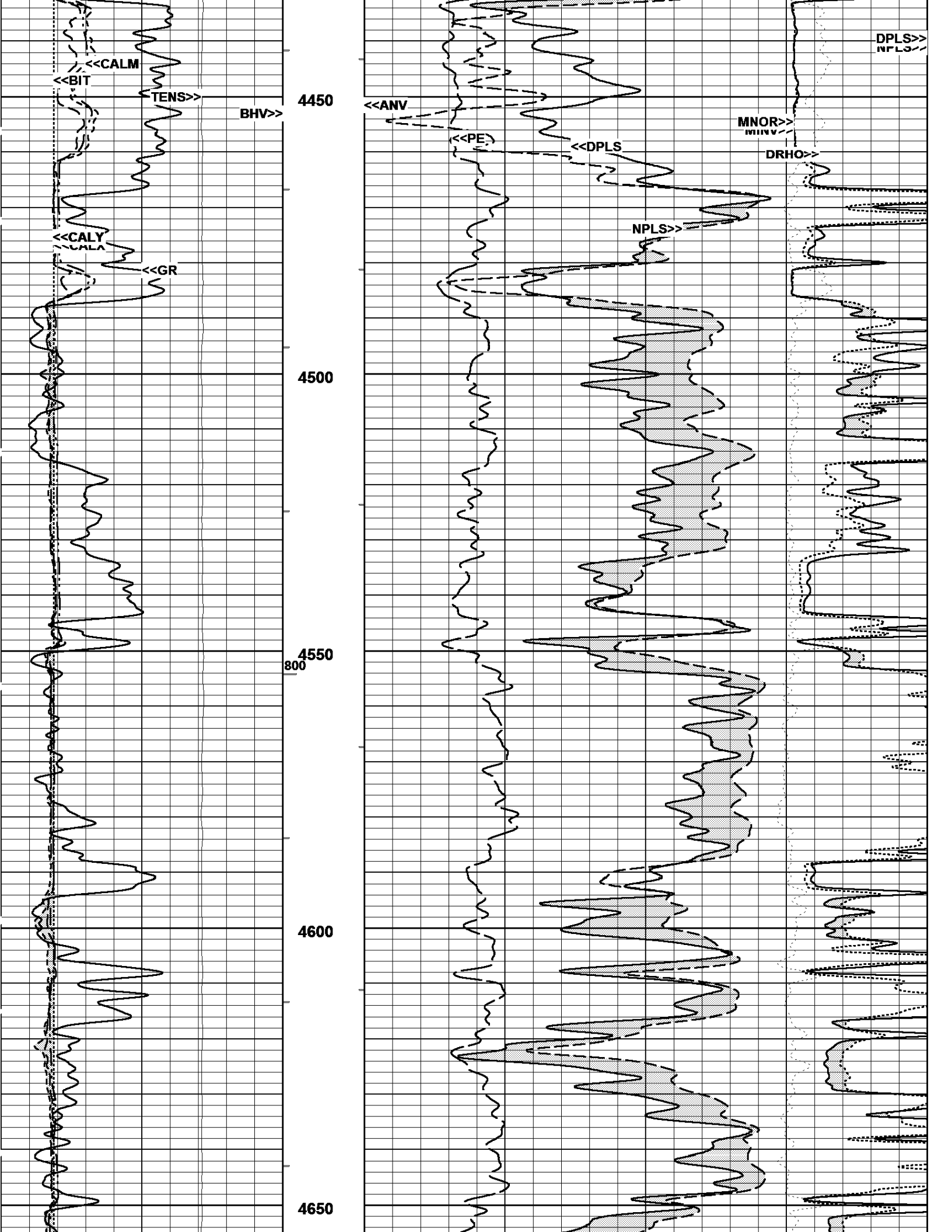
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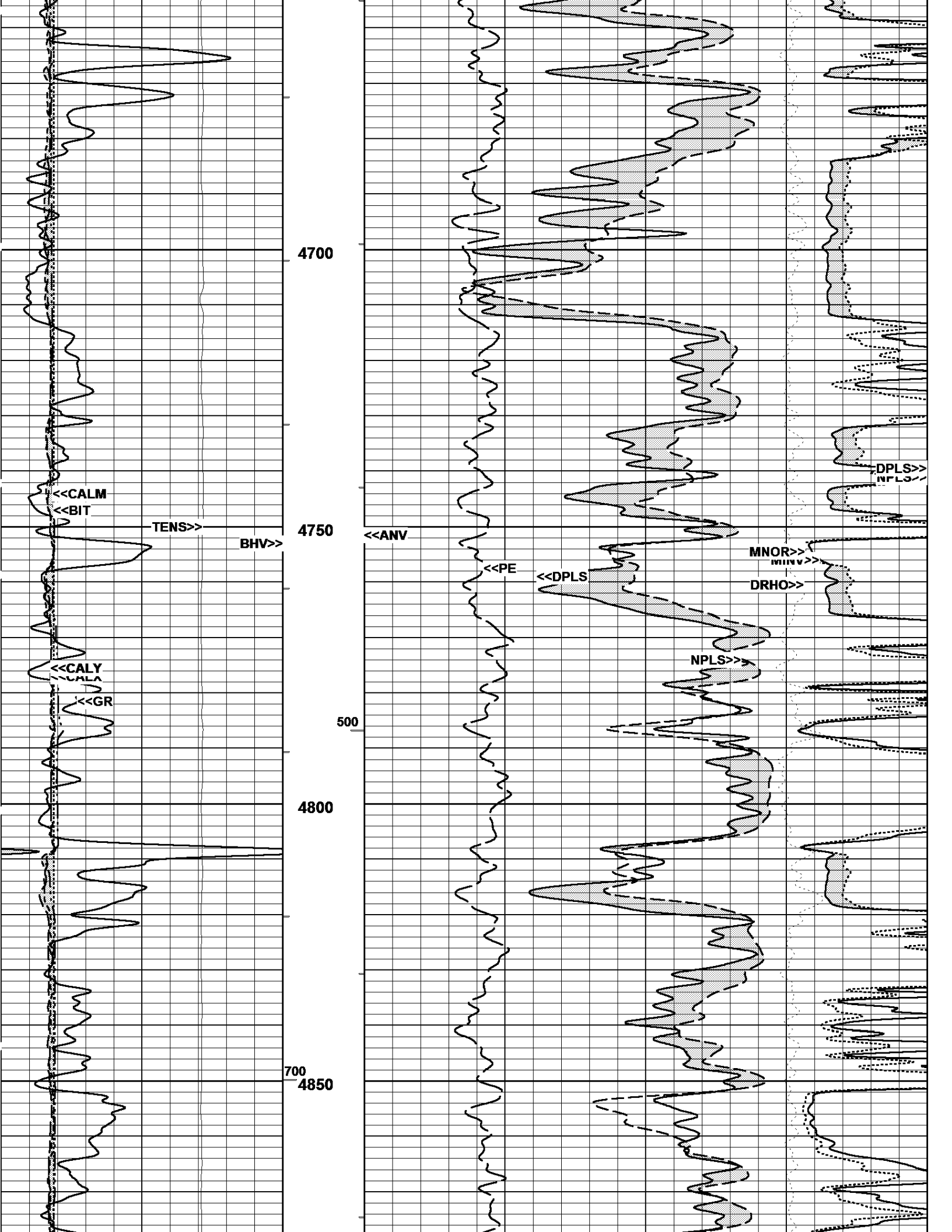
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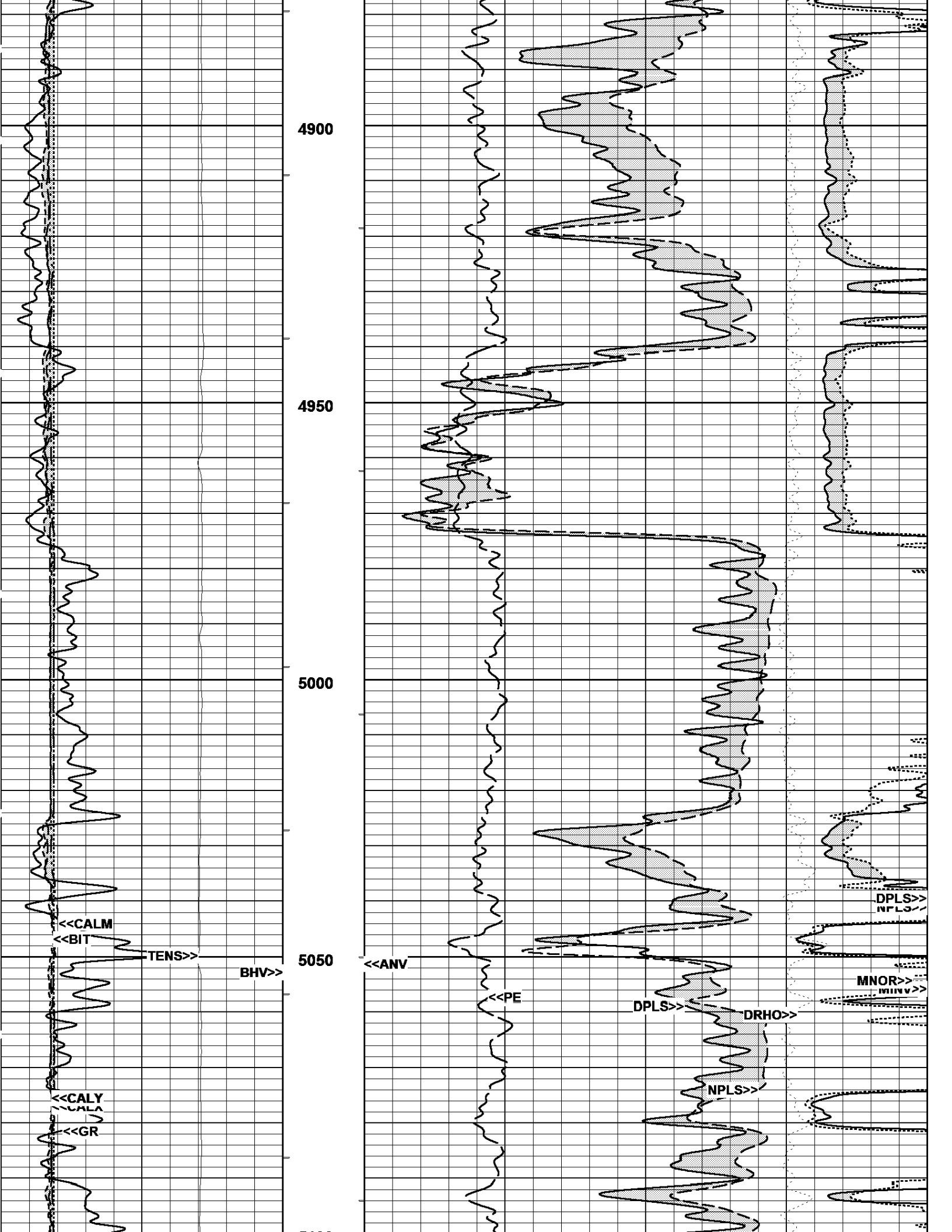
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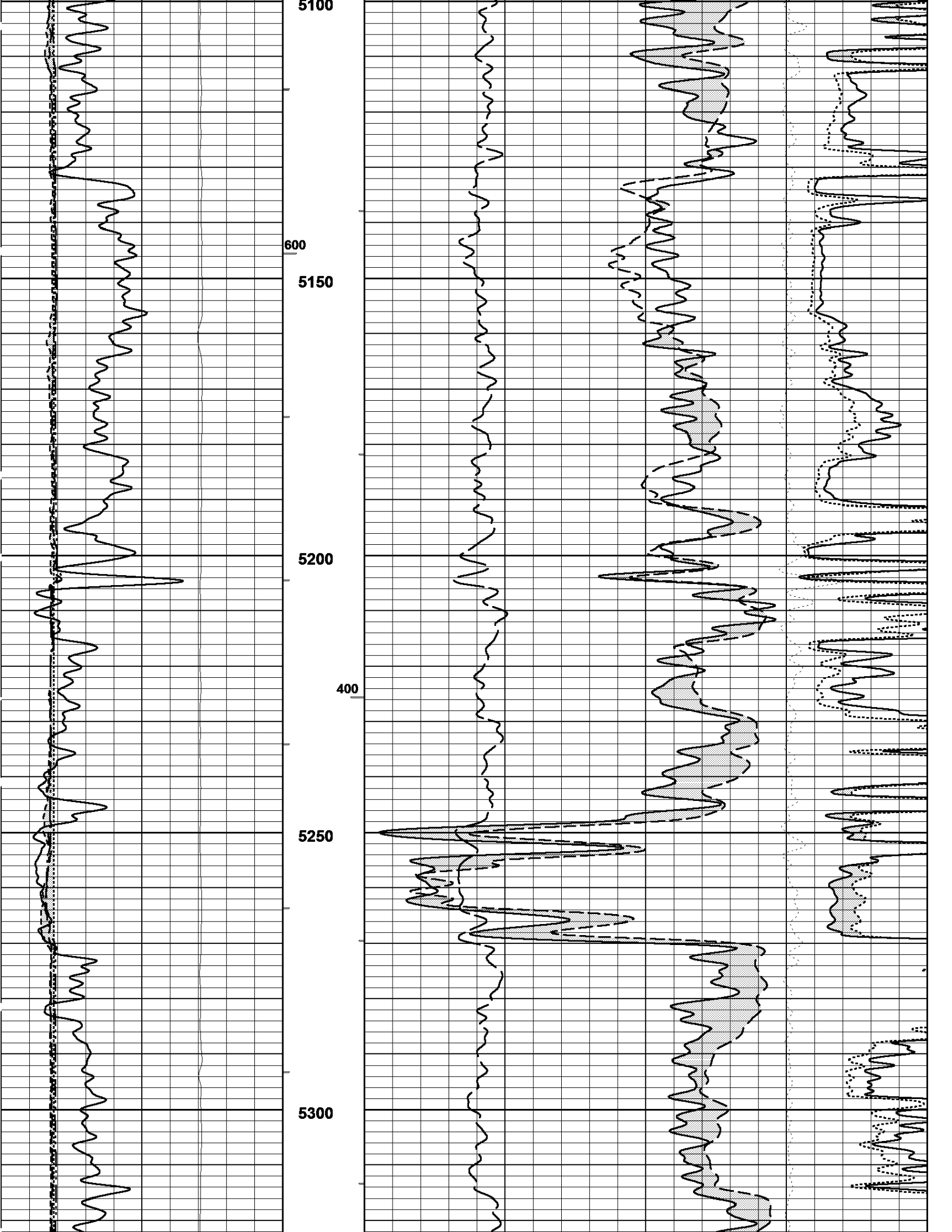
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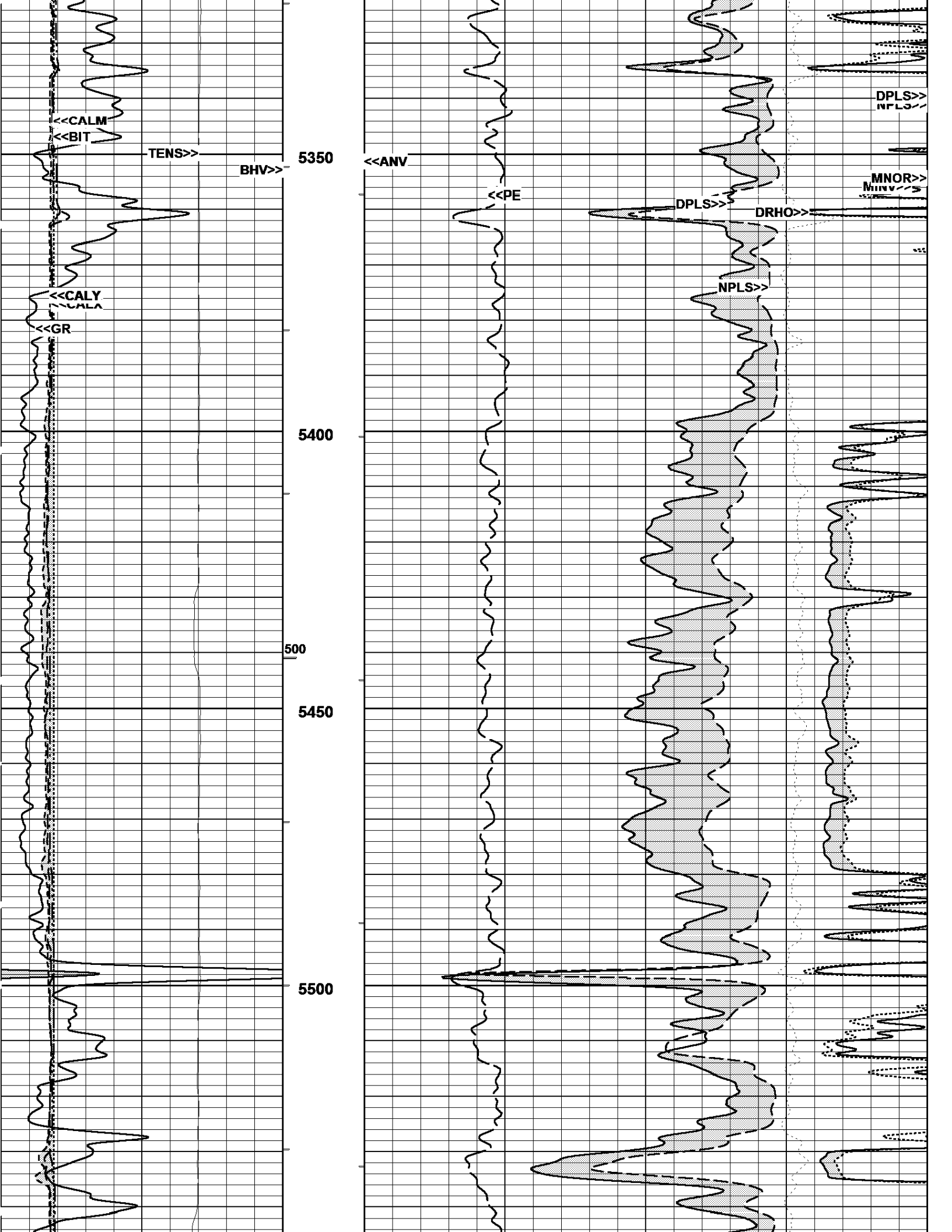
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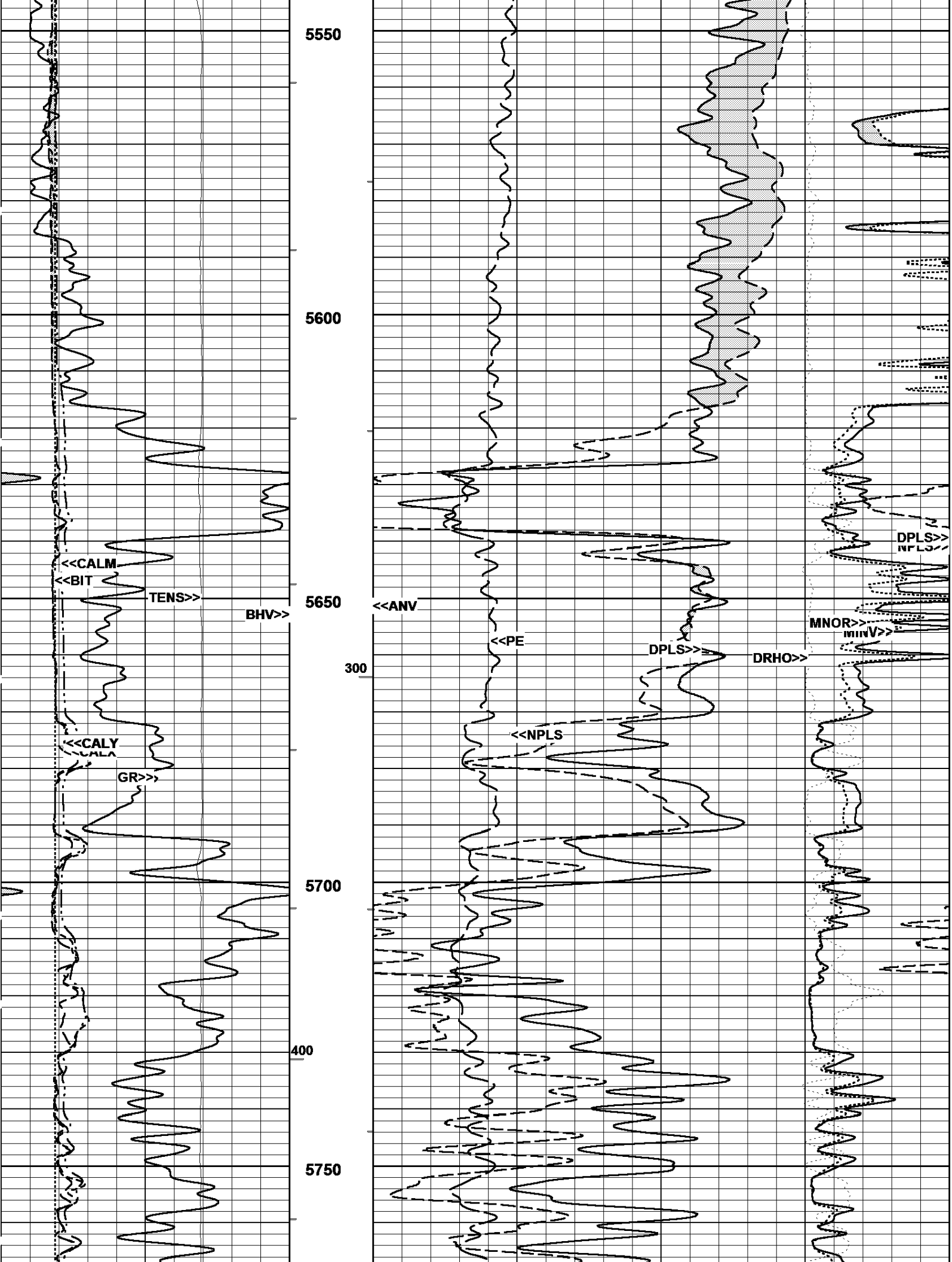
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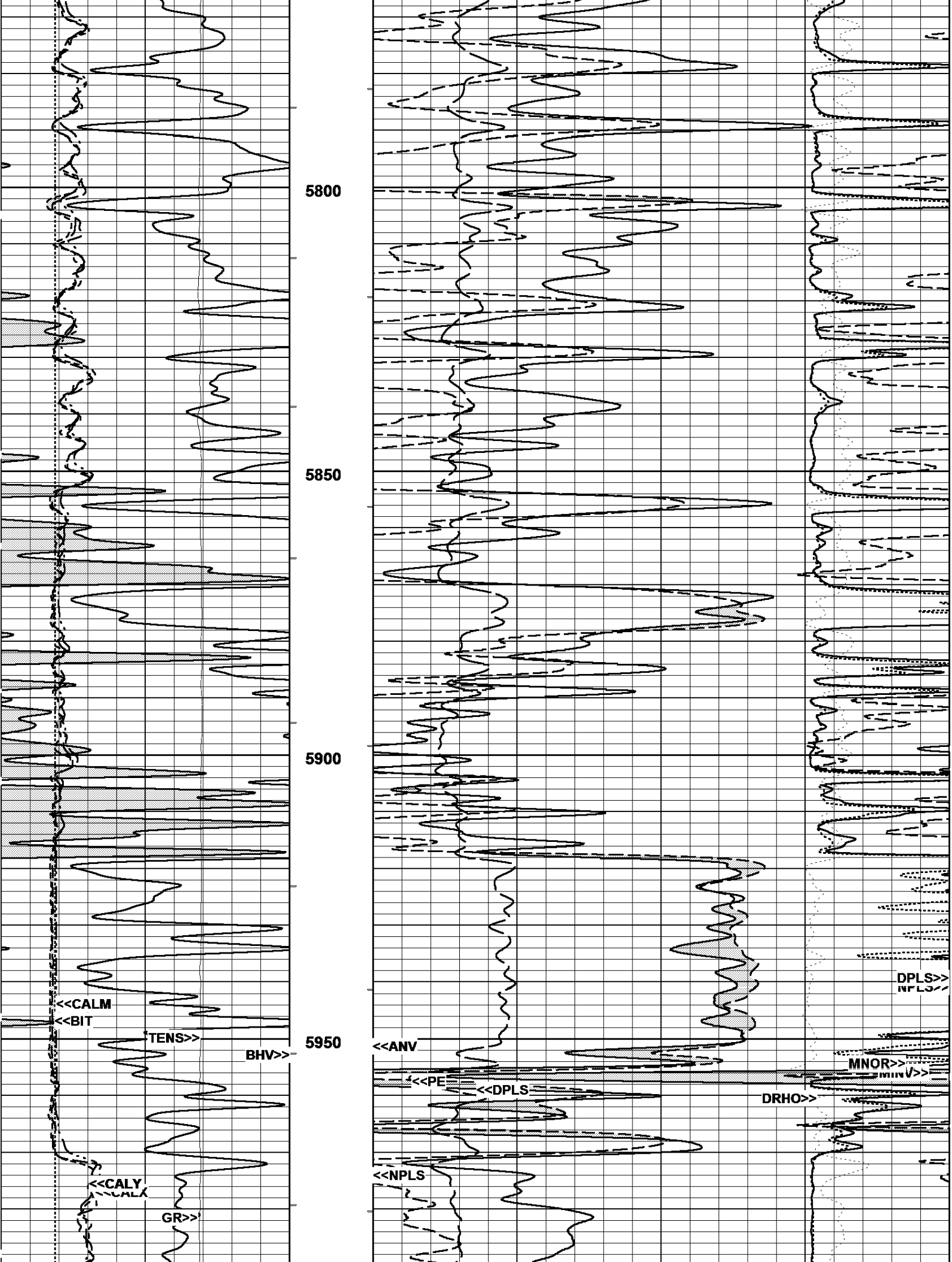
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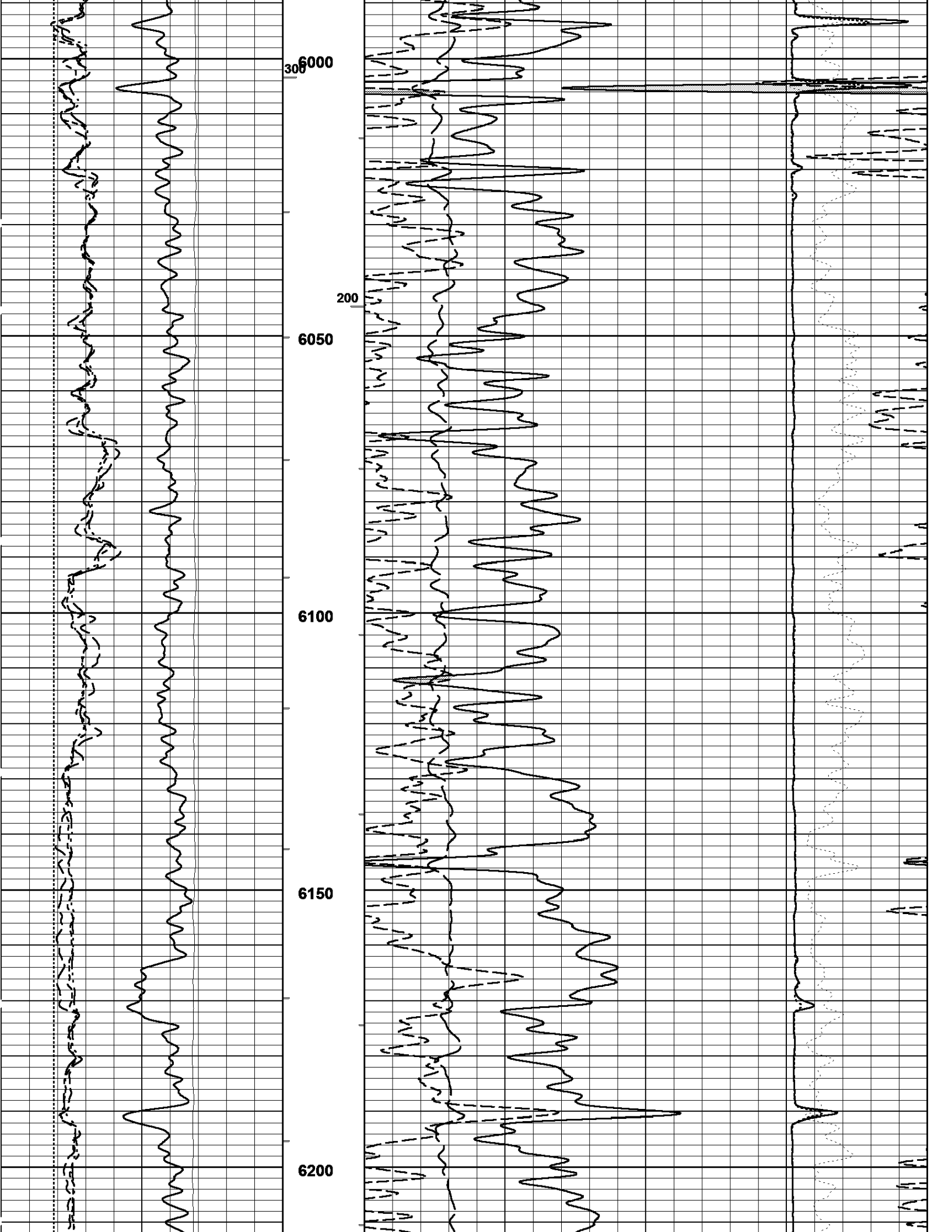
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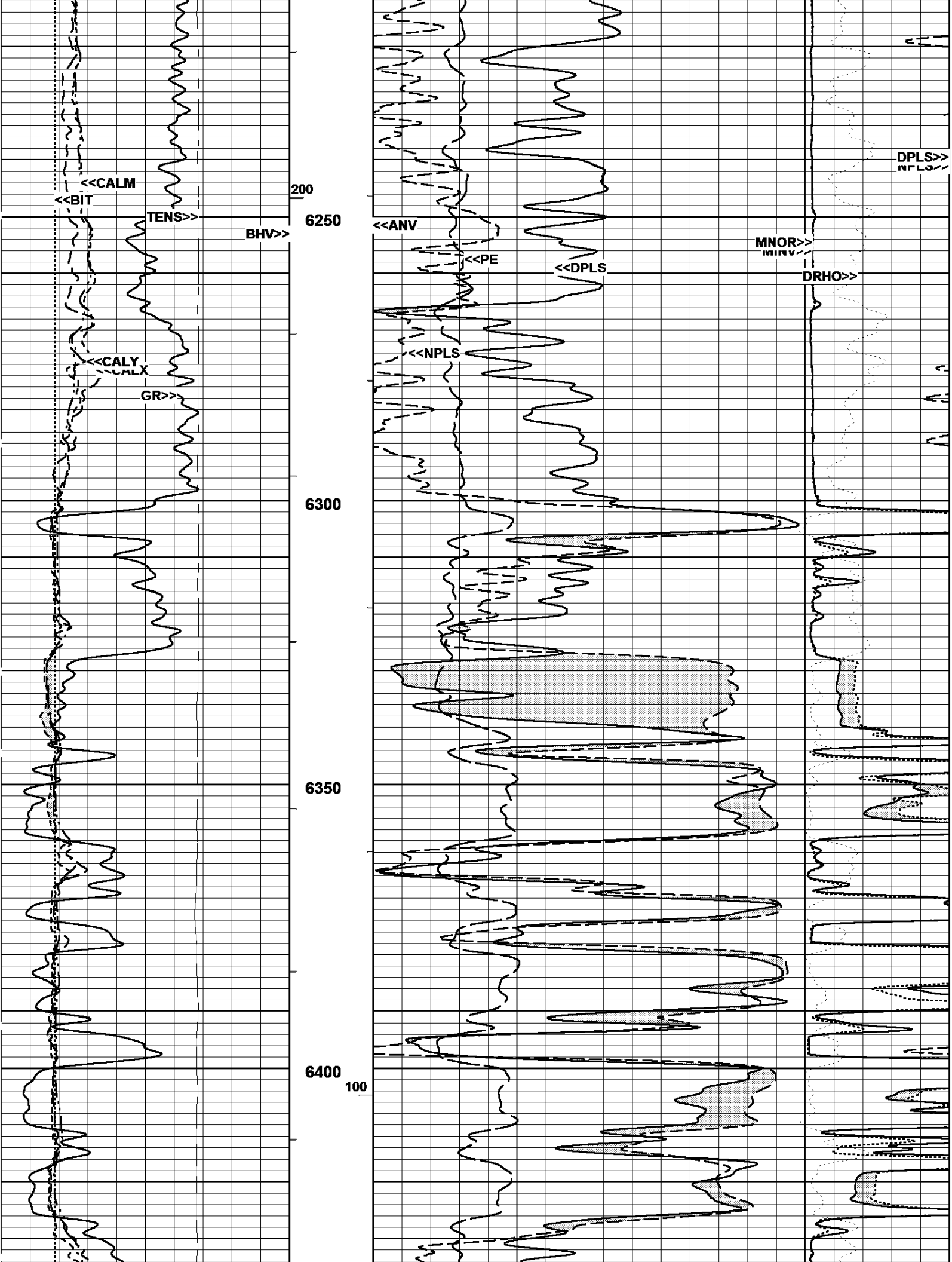
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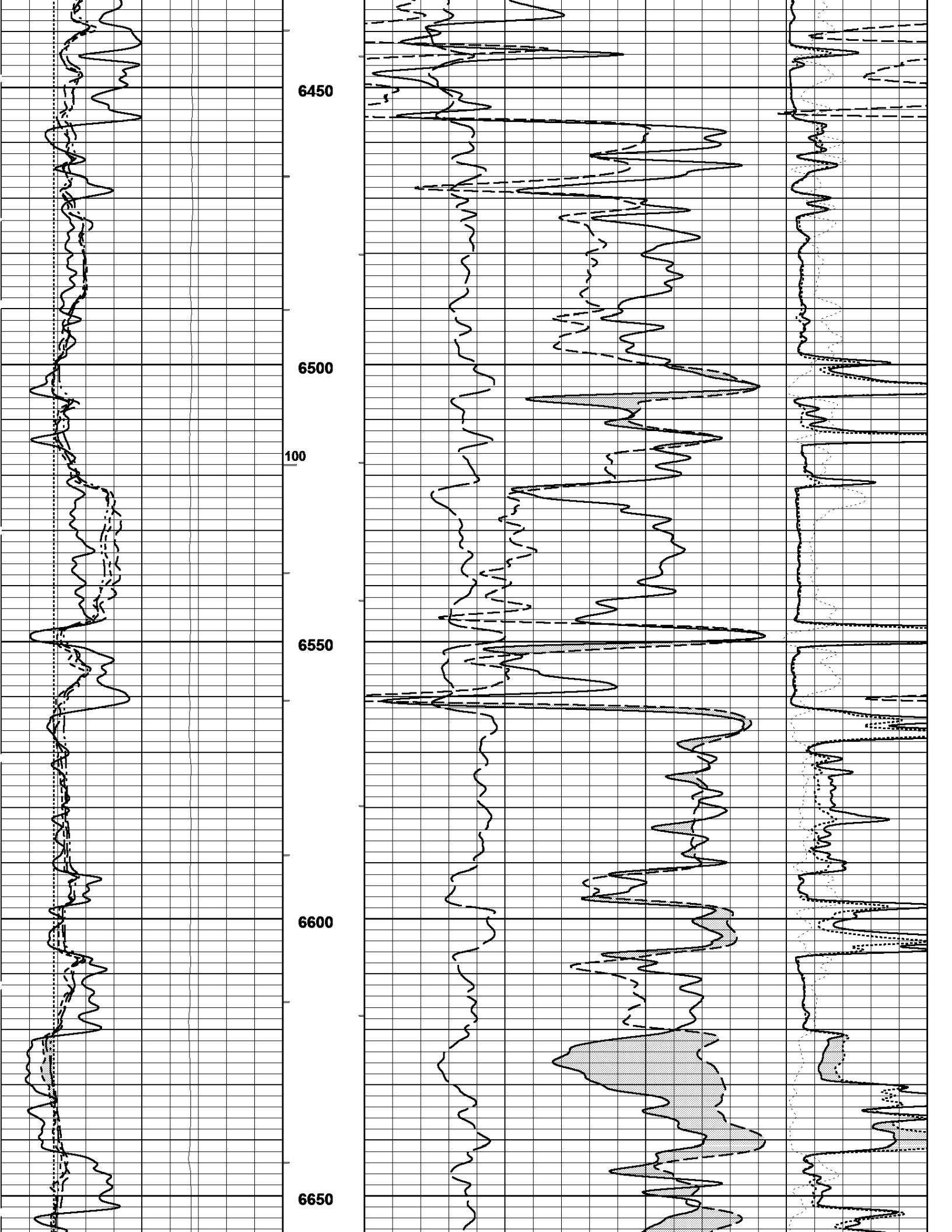
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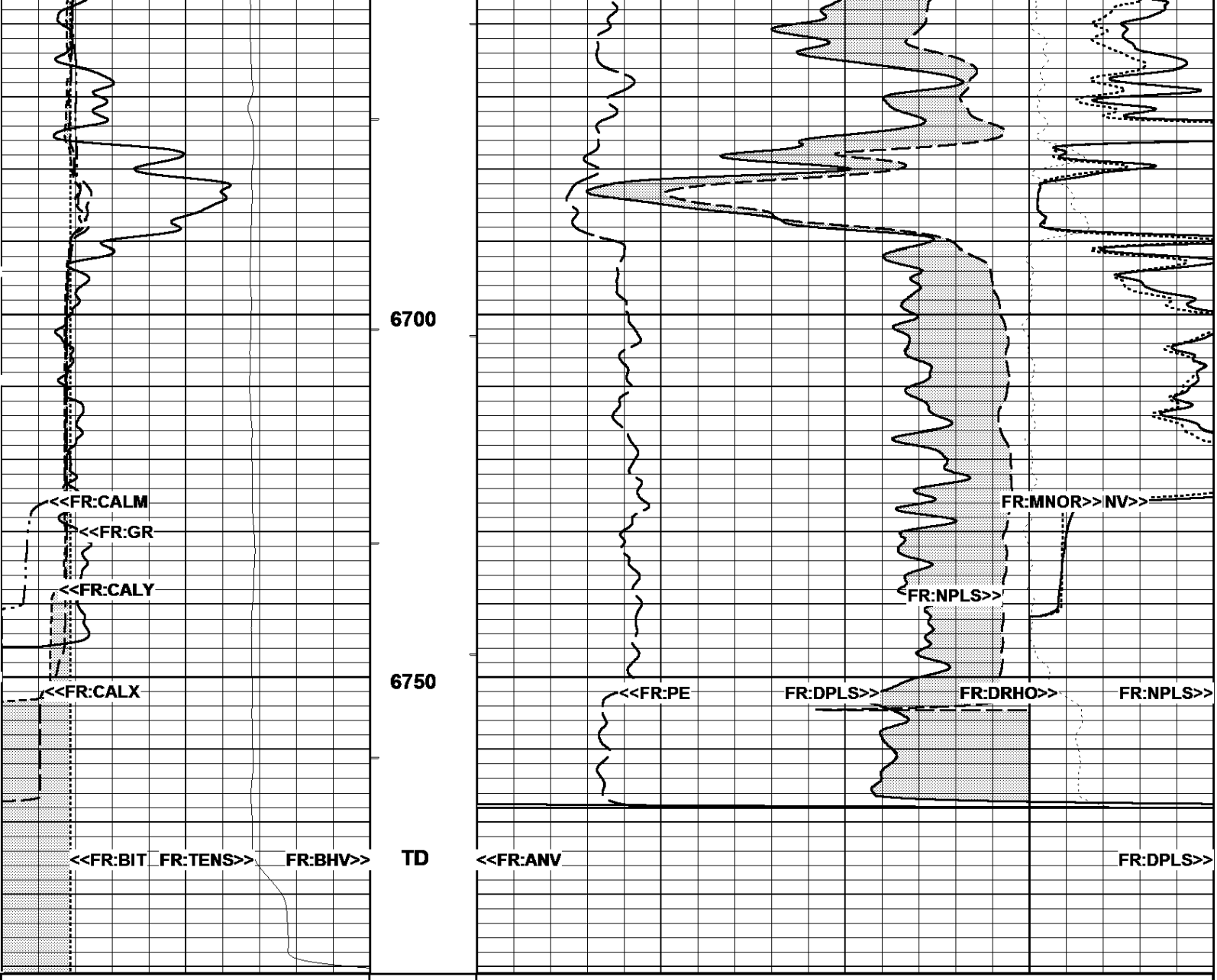


Gamma Ray (GR)		
0.	API	150.
X-Caliper (CALX)		
6.	in	16.
Y-Caliper (CALY)		
6.	in	16.
Tension (TENS)		
10000.	Lbs	0.
Bit Size (BIT)		
6.	Ref in	16.
Microlog-Caliper		
6.	in	16.

Neutron-Porosity (NPLS)		
30.	Limestone-Matrix (V/V)	-10.
Density-Porosity (DPLS)		
30.	Limestone-Matrix (V/V)	-10.
Photo Electric (PE)		
0.	Barns/Elect	10.
Delta RHO (DRHO)		
-0.5	g/cc	0.5
Micro-Inverse{1"} (MINV)		
-40.	ohms	40.
Micro-Normal{2"} (MNOR)		
-40.	ohms	40.

10/28/2010
19:51:29 => Start Time

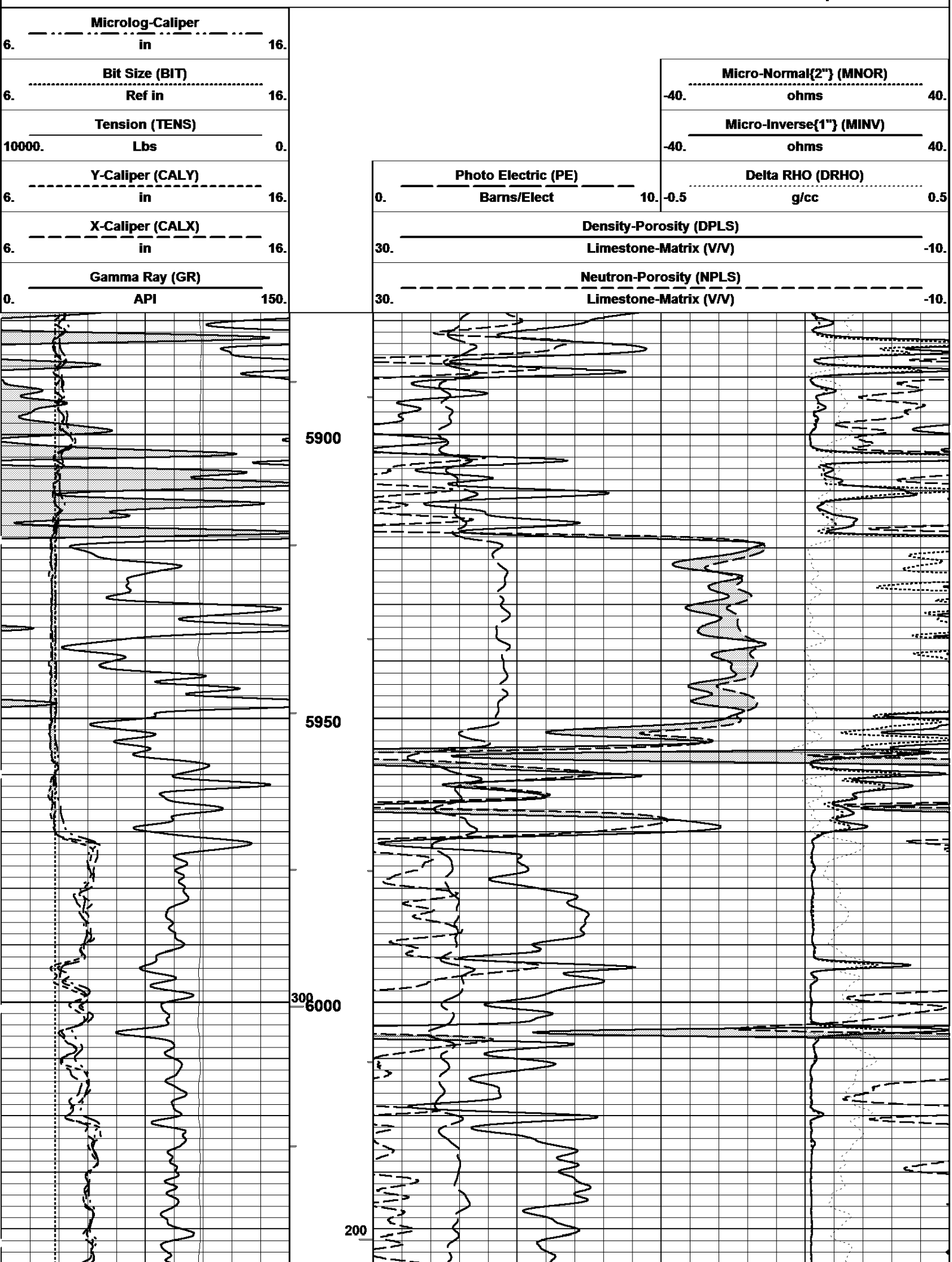
MAIN PASS - LIMESTONE (5"/100Ft)

Log UP - (VER 10.16)
Start Depth=> 6790.90 Feet

10/28/2010
19:43:49 => End Time

REPEAT PASS - LIMESTONE (5"/100Ft)

Log UP - (VER 10.16)
End Depth=> 5878.80 Feet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in
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Ref in
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Lbs
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6.
in
16.
X-Caliper (CALX)
6.
in
16.
Gamma Ray (GR)
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API
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Micro-Normal{2"} (MNOR)
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ohms
40.
Micro-Inverse{1"} (MINV)
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ohms
40.
Photo Electric (PE)
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Barns/Elect
10.
Delta RHO (DRHO)
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g/cc
0.5
Density-Porosity (DPLS)
30.
Limestone-Matrix (V/V)
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Neutron-Porosity (NPLS)
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-10.
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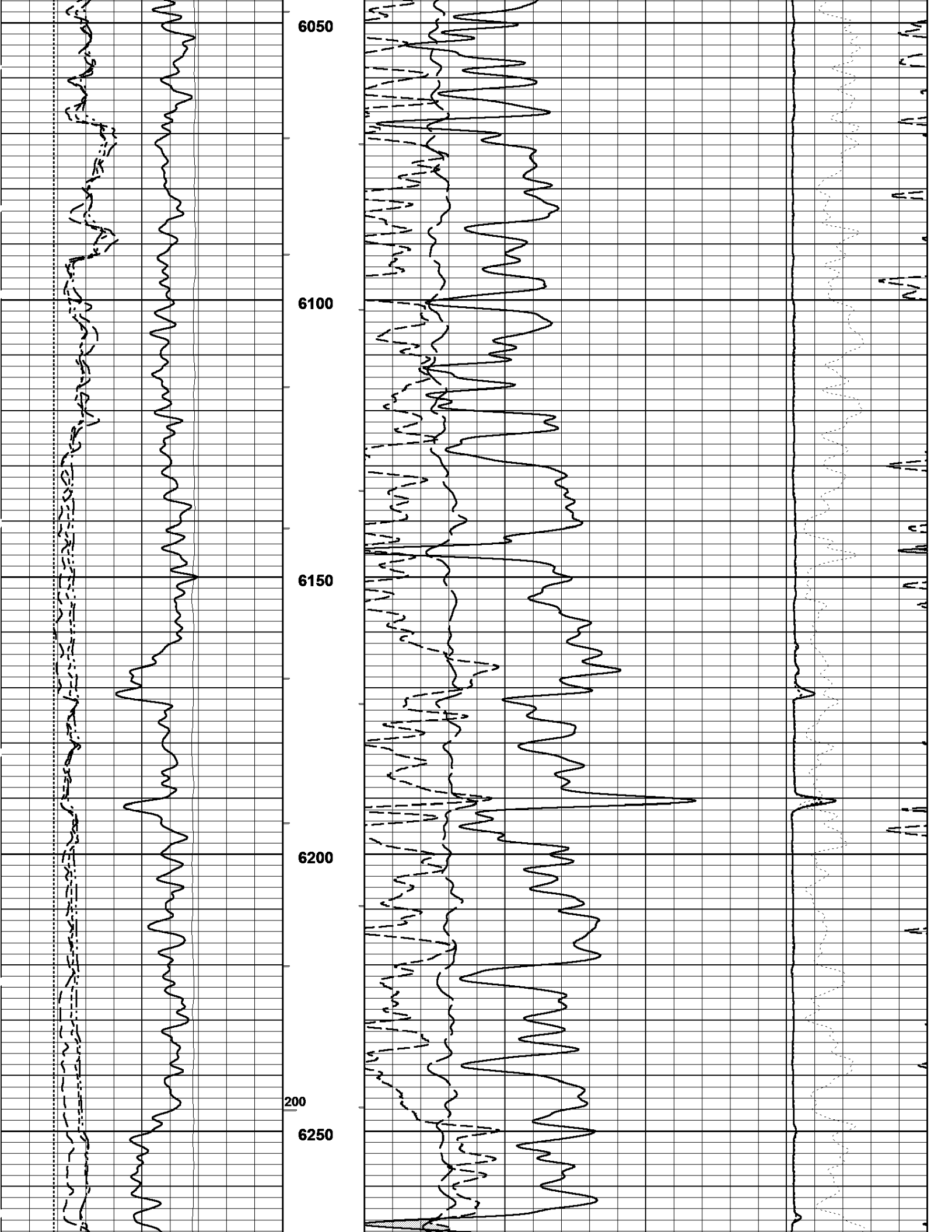
200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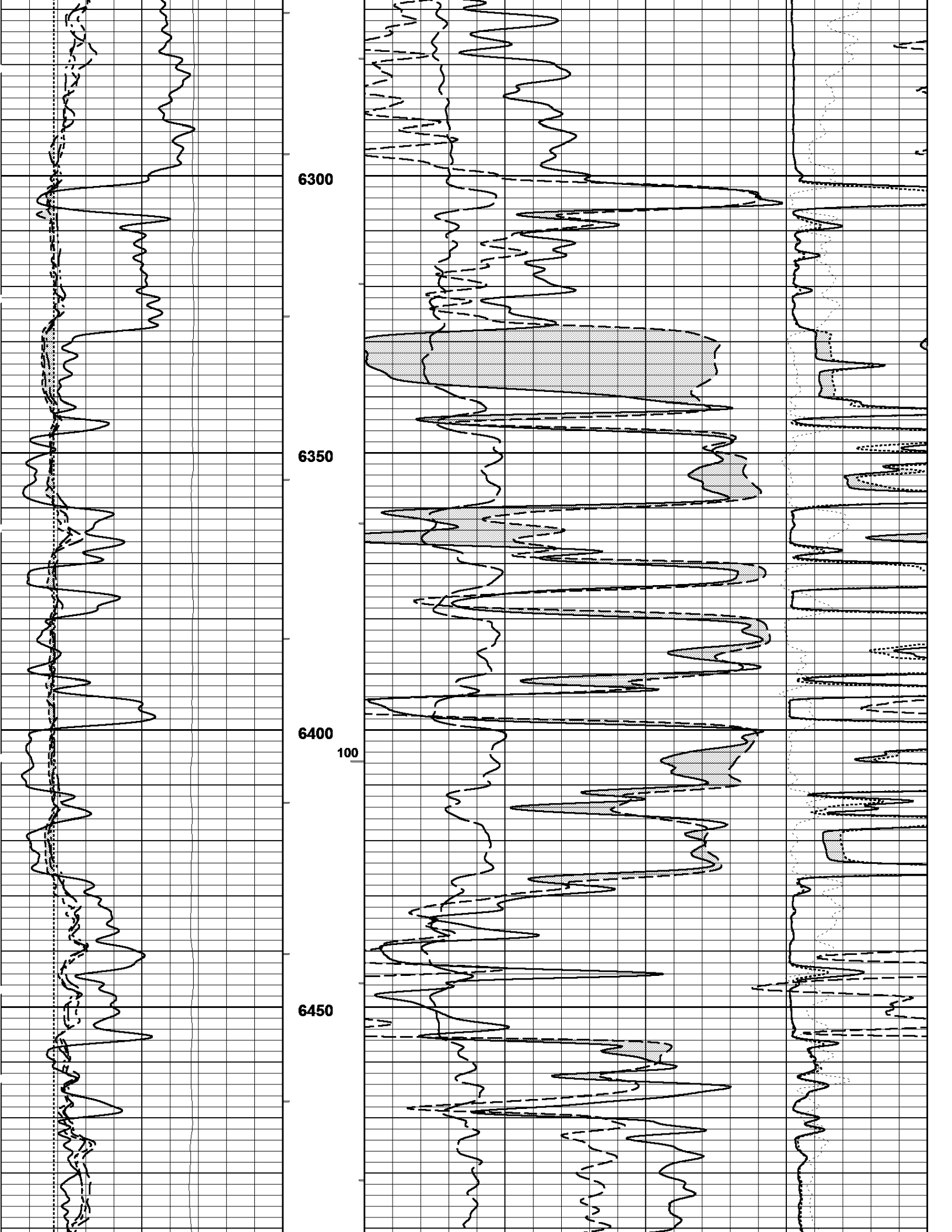
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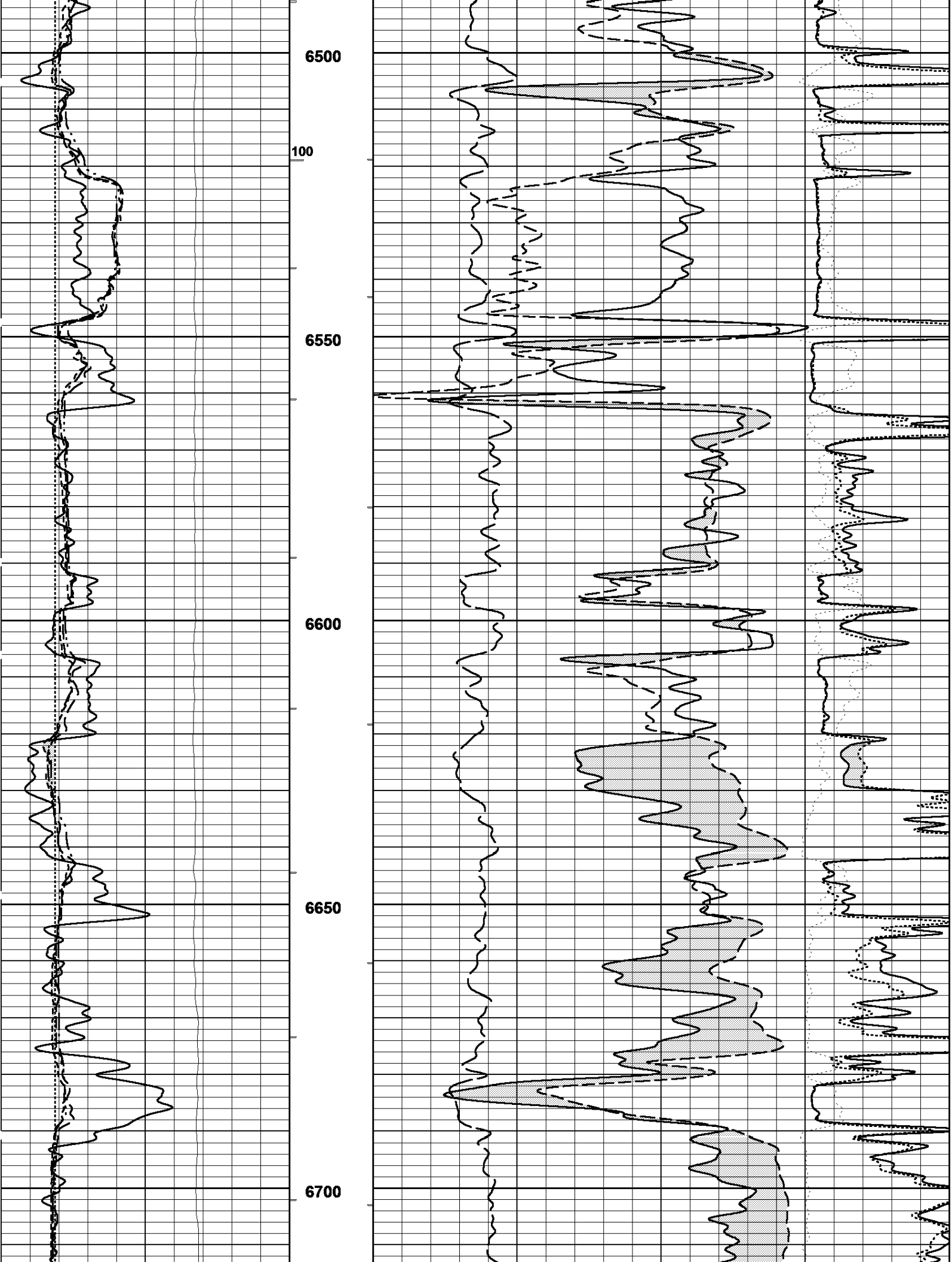
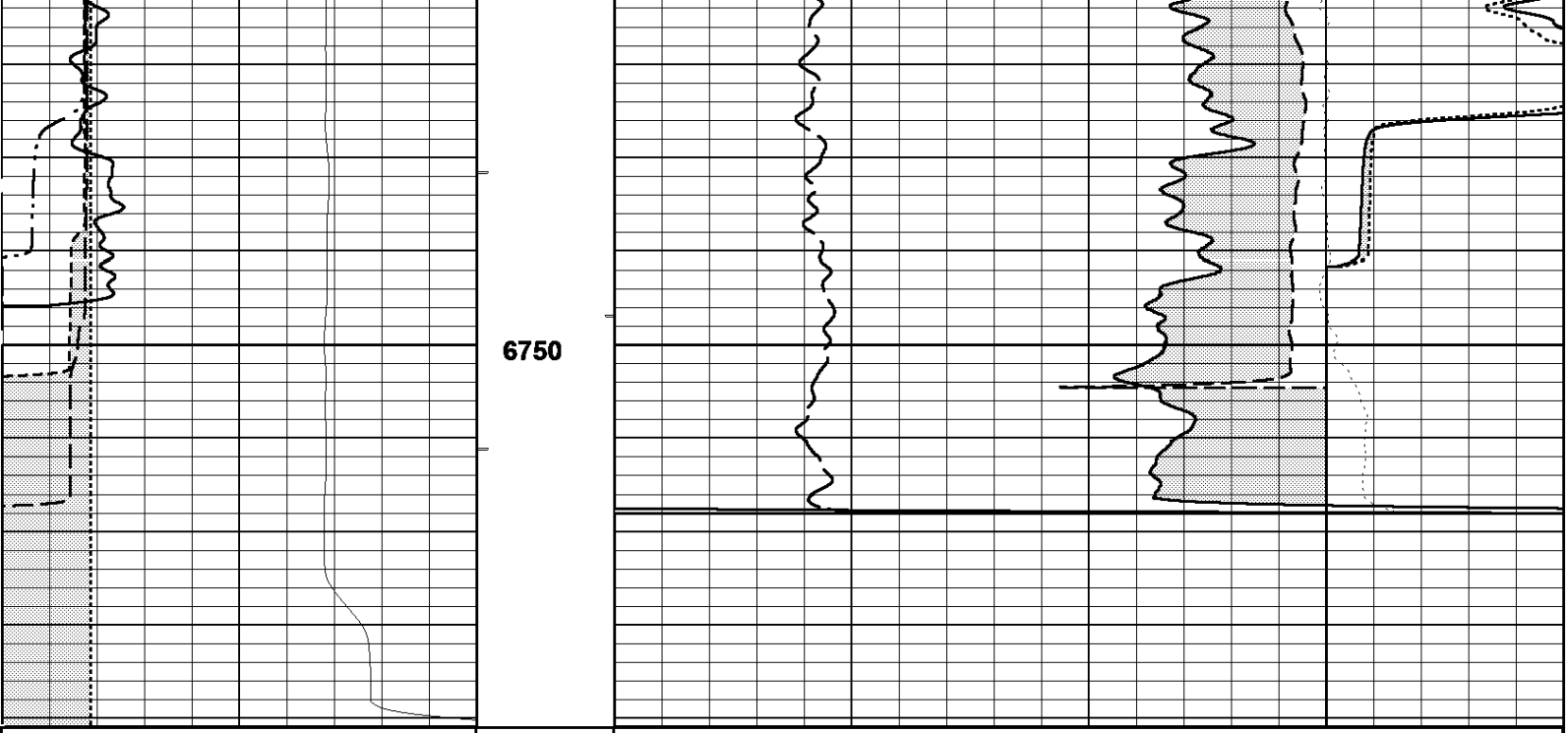

6500
100
6550
6600
6650
6700



Gamma Ray (GR)		Neutron-Porosity (NPLS)
0. API 150.		30. Limestone-Matrix (V/V) -10.
X-Caliper (CALX)		Density-Porosity (DPLS)
6. in 16.		30. Limestone-Matrix (V/V) -10.
Y-Caliper (CALY)		Photo Electric (PE) / Delta RHO (DRHO)
6. in 16.		0. Barns/Elect 10. / -0.5 g/cc 0.5
Tension (TENS)		Micro-Inverse{1"} (MINV)
10000. Lbs 0.		-40. ohms 40.
Bit Size (BIT)		Micro-Normal{2"} (MNOR)
6. Ref in 16.		-40. ohms 40.
Microlog-Caliper		
6. in 16.		

10/28/2010
19:18:31 => Start Time

REPEAT PASS - LIMESTONE (5"/100Ft)

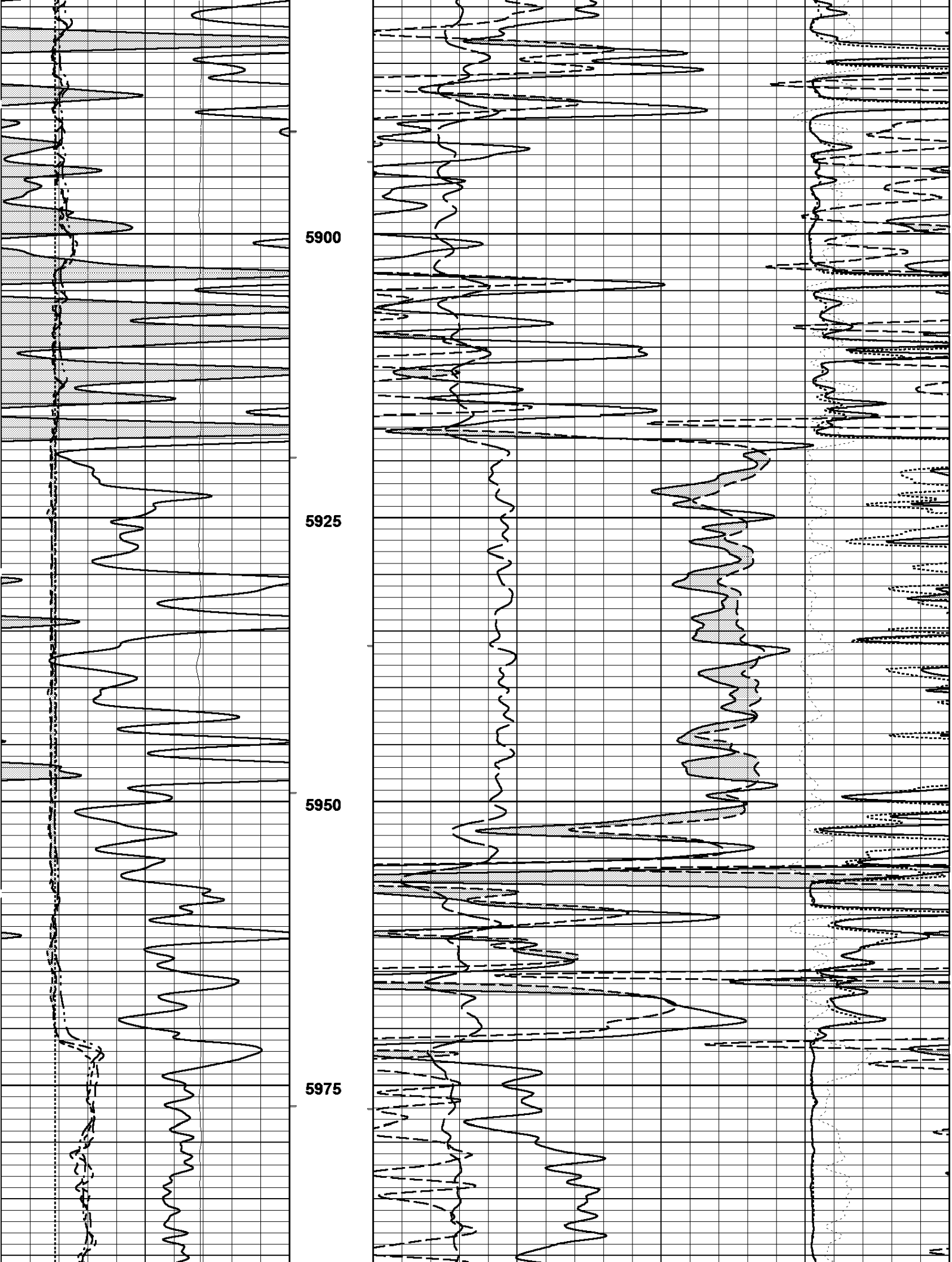
Log UP - (VER 10.16)
Start Depth=> 6790.90 Feet

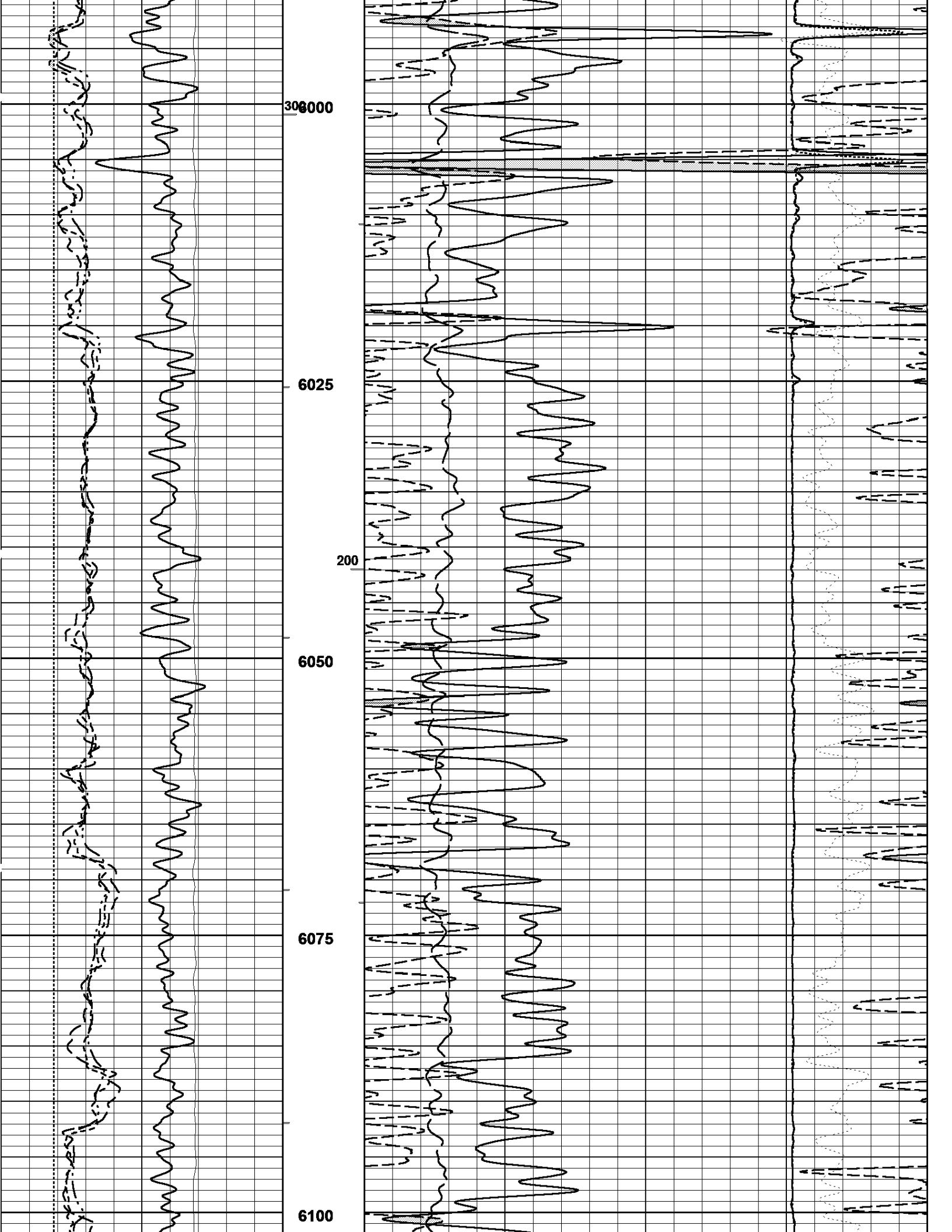
10/28/2010
19:43:49 => End Time

MAIN PASS (10"/100FT)

Log UP - (VER 10.16)
End Depth=> 5878.80 Feet

Microlog-Caliper		
6. in 16.		
Bit Size (BIT)		Micro-Normal{2"} (MNOR)
6. Ref in 16.		-40. ohms 40.
Tension (TENS)		Micro-Inverse{1"} (MINV)
10000. Lbs 0.		-40. ohms 40.
Y-Caliper (CALY)		Photo Electric (PE) / Delta RHO (DRHO)
6. in 16.		0. Barns/Elect 10. / -0.5 g/cc 0.5
X-Caliper (CALX)		Density-Porosity (DPLS)
6. in 16.		30. Limestone-Matrix (V/V) -10.
Gamma Ray (GR)		Neutron-Porosity (NPLS)
0. API 150.		30. Limestone-Matrix (V/V) -10.


5900
5925
5950
5975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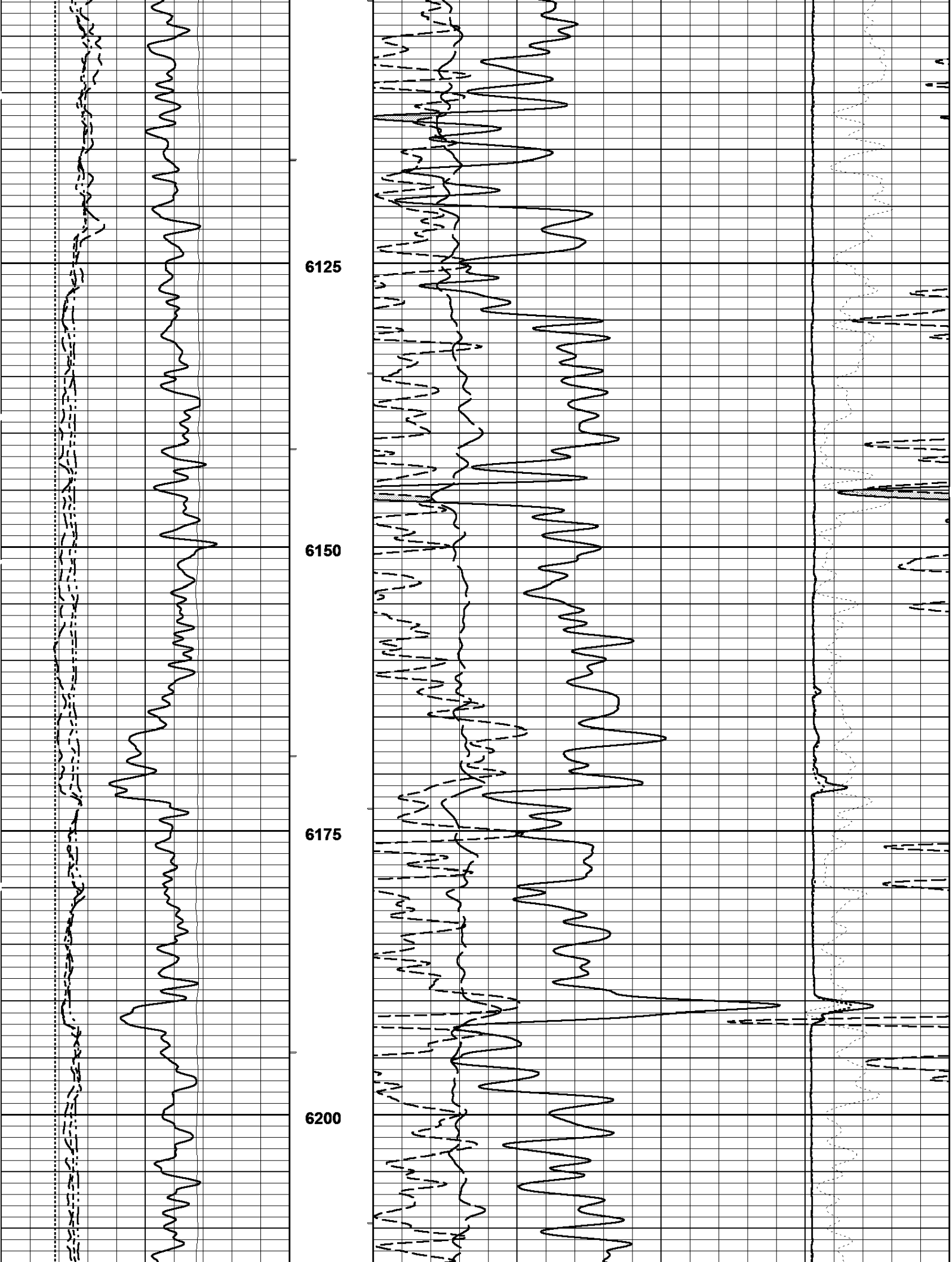
6000
6025
200
6050
6075
6100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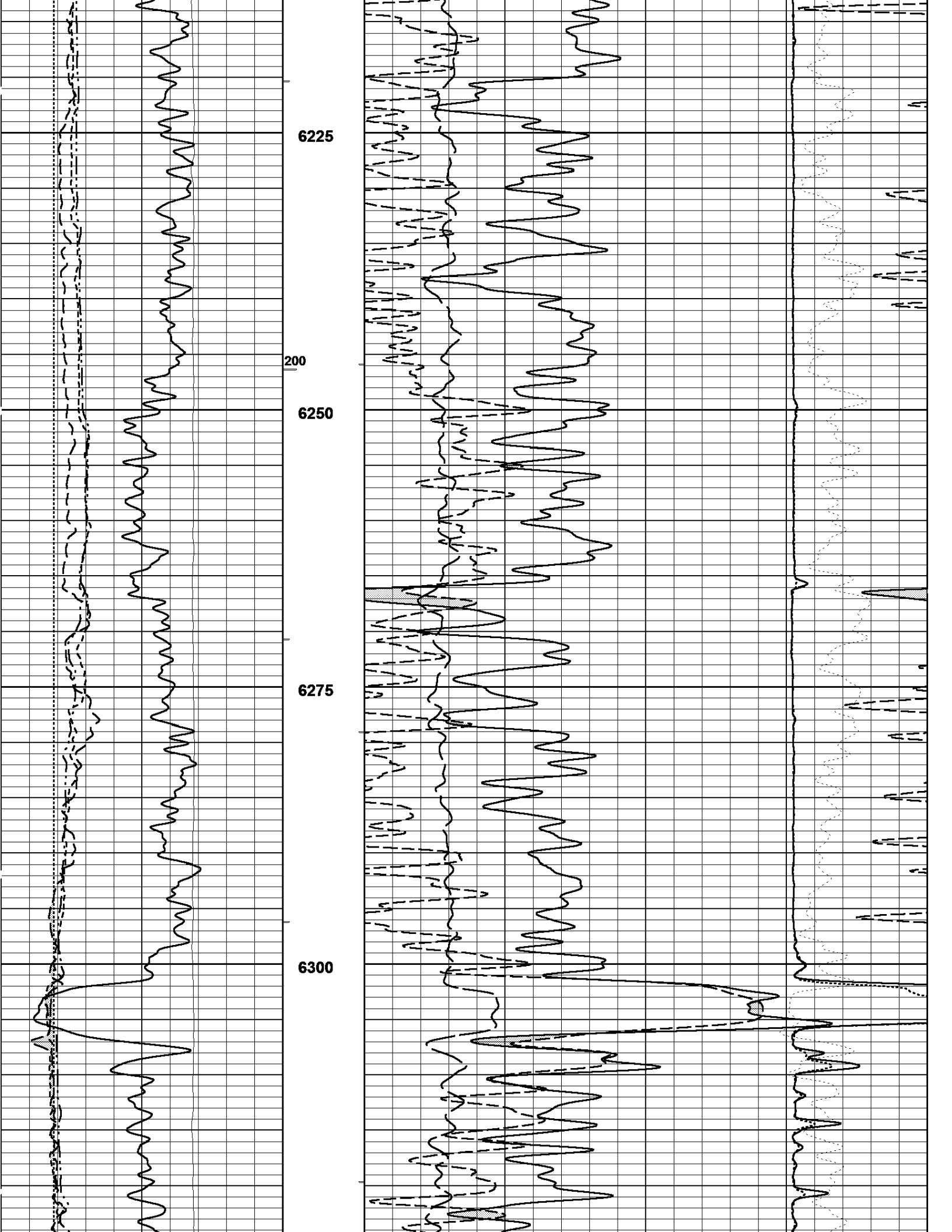
6150
6175
6200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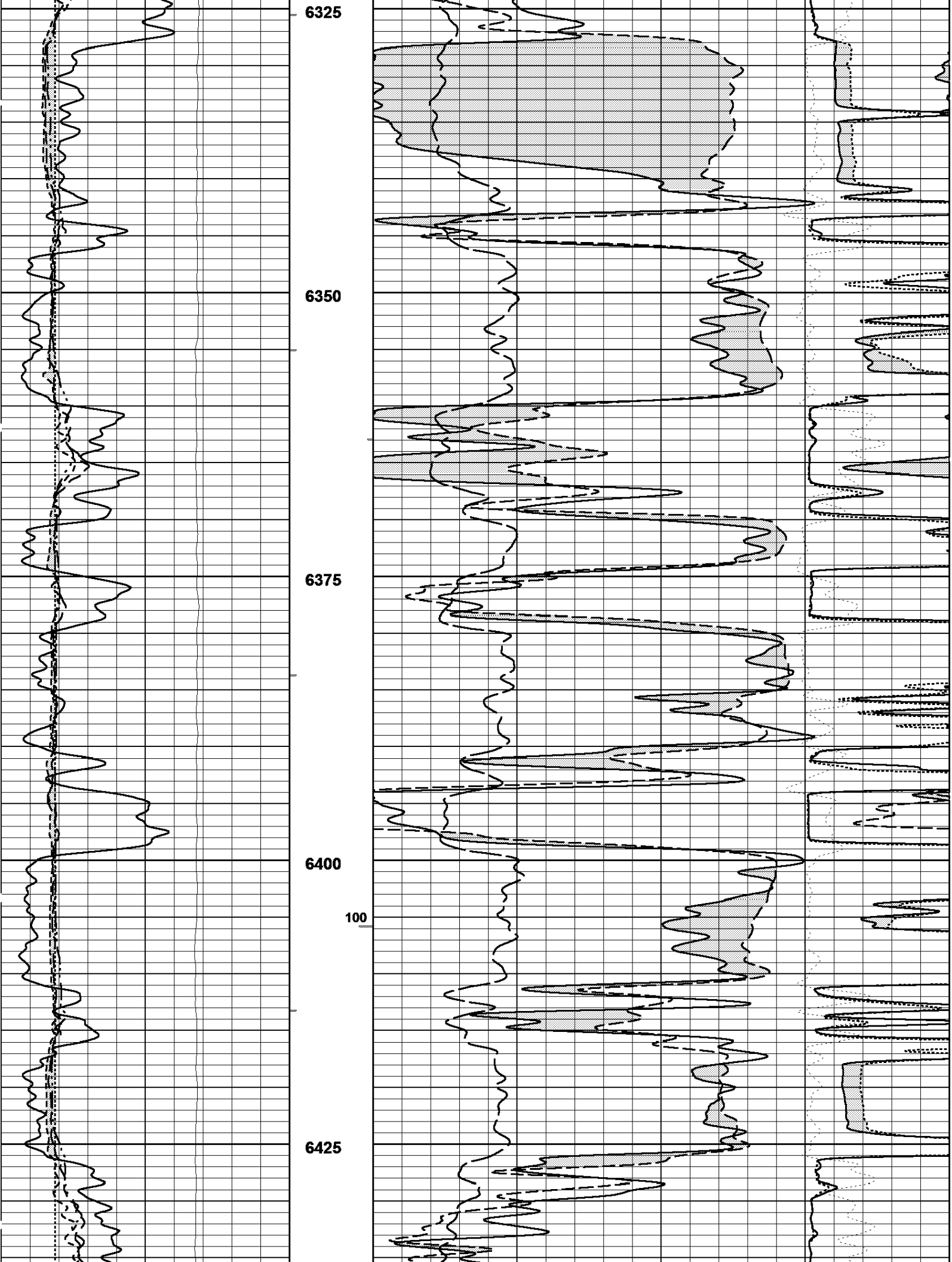
200
6250
6275
6300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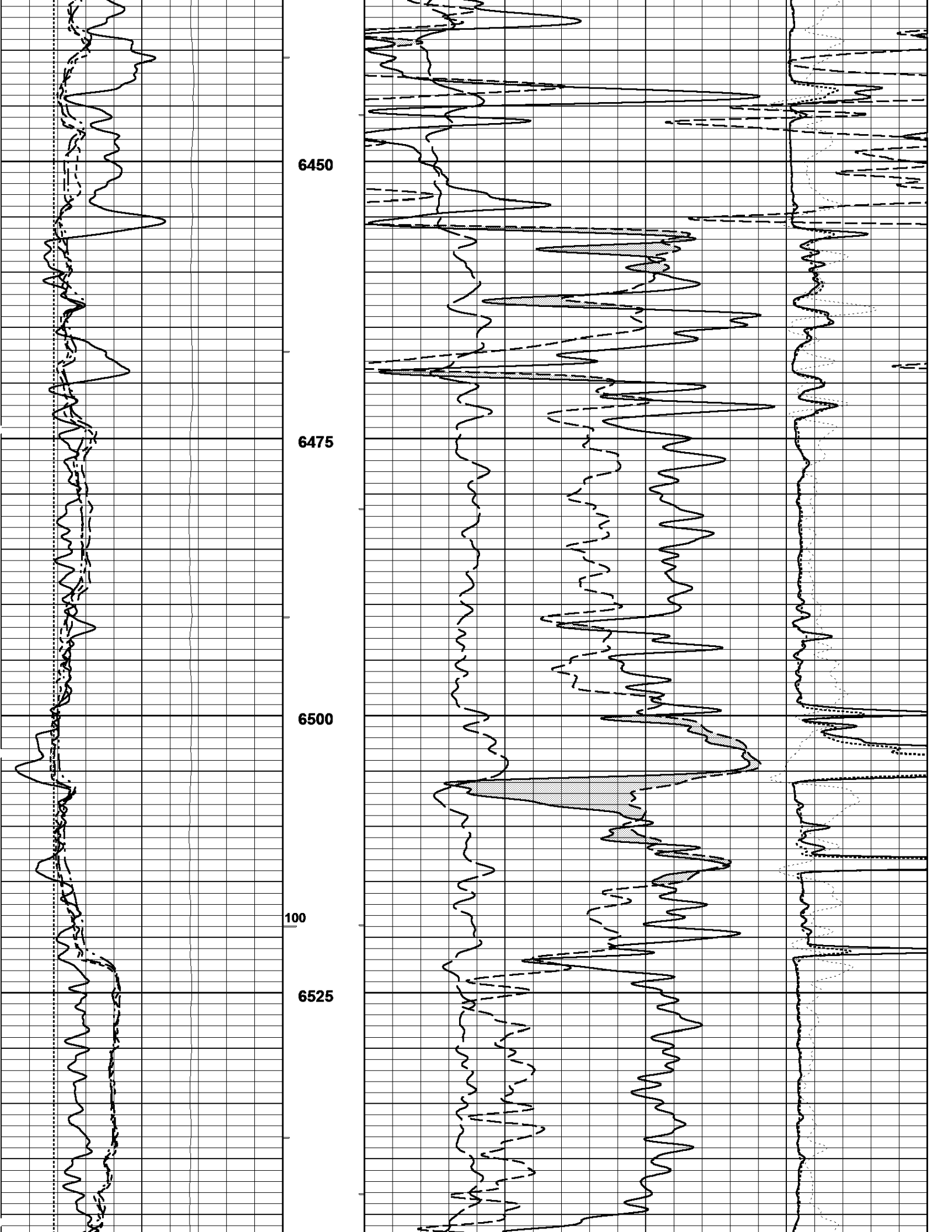
6400
100
6425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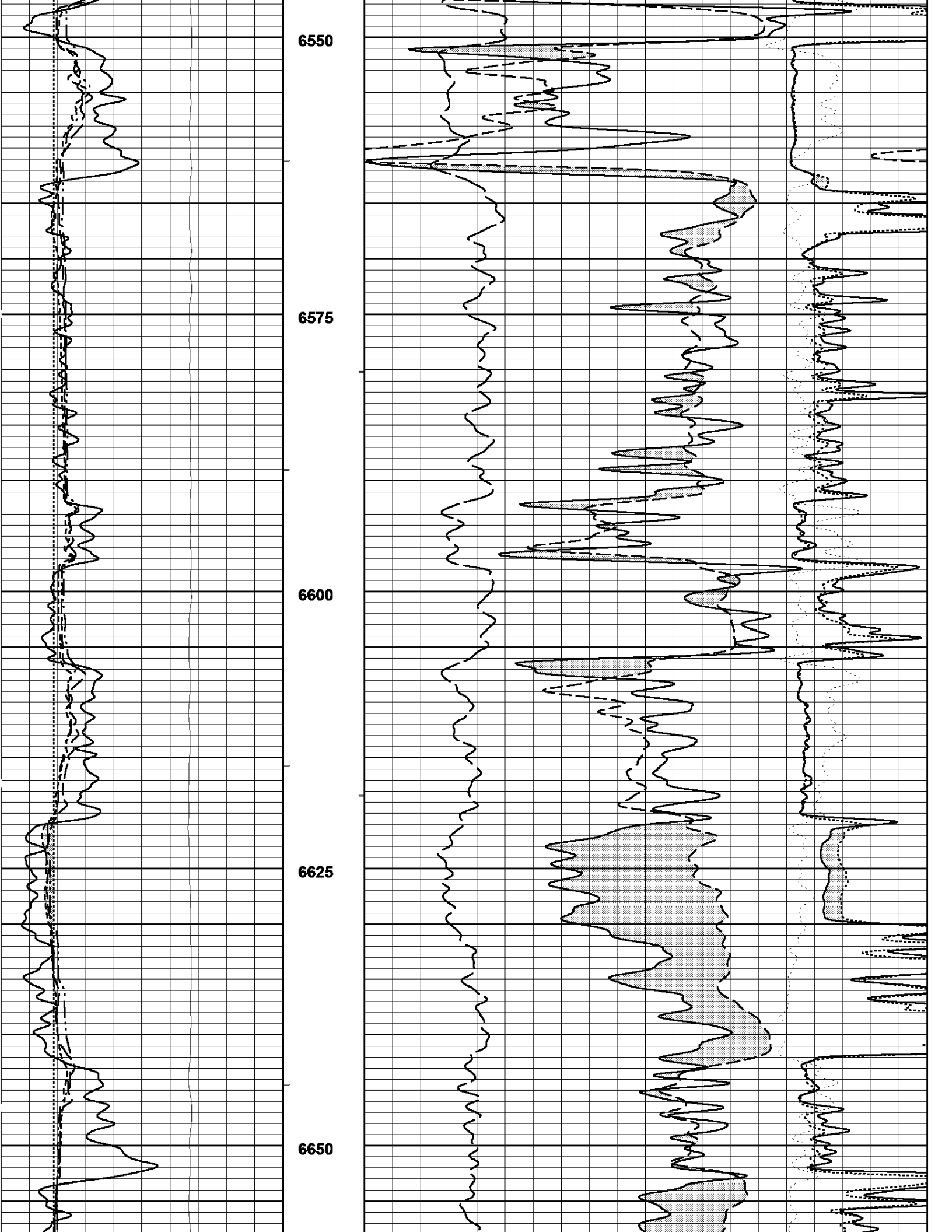
100
6525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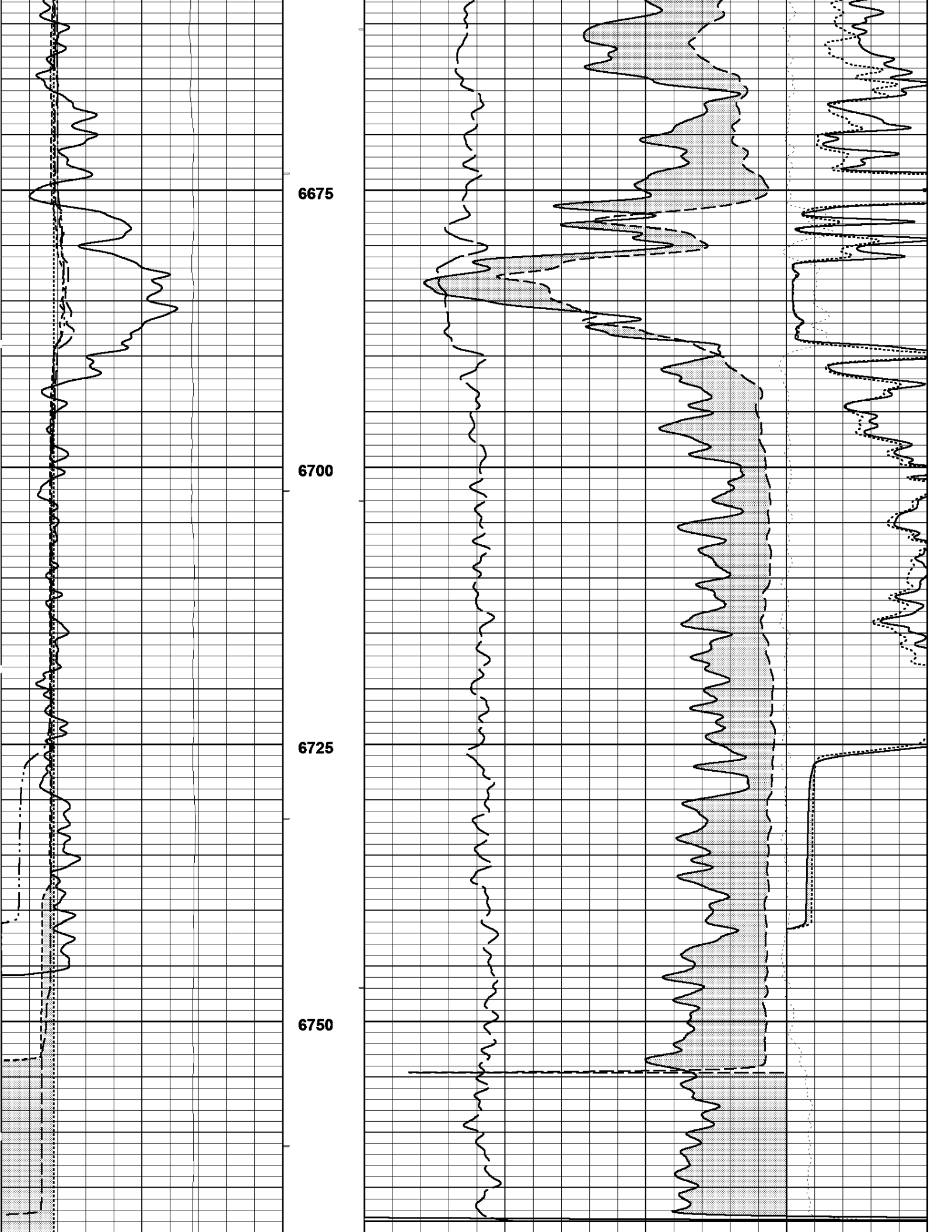
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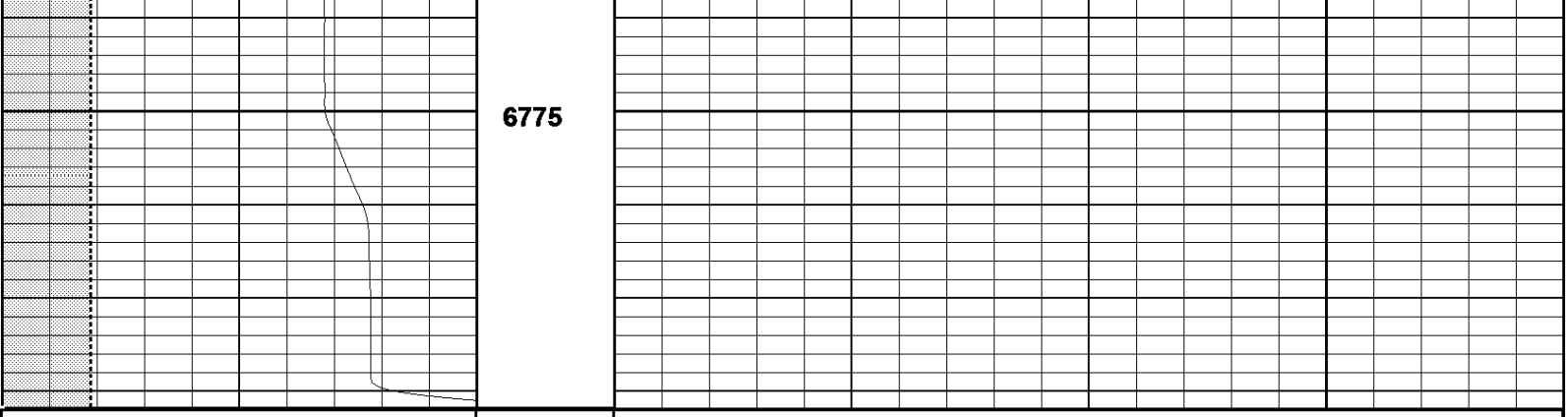
6700
6725
6750



Gamma Ray (GR)		
0.	API	150.
X-Caliper (CALX)		
6.	in	16.
Y-Caliper (CALY)		
6.	in	16.
Tension (TENS)		
10000.	Lbs	0.
Bit Size (BIT)		
6.	Ref in	16.
Microlog-Caliper		
6.	in	16.

Neutron-Porosity (NPLS)		
30.	Limestone-Matrix (V/V)	-10.
Density-Porosity (DPLS)		
30.	Limestone-Matrix (V/V)	-10.
Photo Electric (PE)		
0.	Barns/Elect	10.
Delta RHO (DRHO)		
-0.5	g/cc	0.5
Micro-Inverse{1"} (MINV)		
-40.	ohms	40.
Micro-Normal{2"} (MNOR)		
-40.	ohms	40.

10/28/2010
19:18:31 => Start Time

MAIN PASS (10"/100FT)

Log UP - (VER 10.16)
Start Depth=> 6790.90 Feet

Litho-Density/PE Calibrations

TOOL TYPE	LFDC/Pe	SOURCE TYPE	CESIUM 137	SOURCE STRGTH	2 CURIE
SERIAL NUM	RL4101	SOURCE NUM			

MASTER BLOCK CALIBRATIONS

	W1(cps)	W2(cps)	W3(cps)	W4(cps)	SS	UNITS	CALIBRATION DATE	CALIBRATION TIME
ALUMINUM	5758.400	4844.547	2329.187	4.073	4819.4078	2.528(g/cc)	M/D/Y> 9/14/2010	H:M:S> 17:43:17
MAGNESIUM	17632.360	14503.493	6232.480	5.080	7122.5011	1.693(g/cc)		
BACKGROUND	1540.386	1359.366	932.400	4.731	4.9655			
SAND	15296.107	12857.120	5655.173	4.633		1.800(PE)		
IRON	5126.950	4378.315	2167.882	4.094		4.600(PE)		
FIELD VERIFIER(cps)	1887.440	1658.720	1078.600	5.280	3.8400			
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	CNT-B	SOURCE TYPE	AM241BE	SOURCE STRGTH	20 CURIE
SERIAL NUM	RN2007	SOURCE NUM			

MASTER TANK CALIBRATIONS

		NEAR(cps)	FAR(cps)	RATIO	K VALUE	CALIBRATION DATE	CALIBRATION TIME
LOW PHI	0.676			0.4465	0.8931	M/D/Y> 9/14/2010	H:M:S> 12:39:42
MED PHI	13.587			0.8931	0.8931		
HIGH PHI	41.150			1.3396	0.8930		
FIELD VERIFIER(cps)		338.320	643.840	0.5255			
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: 135.000 API	Gain/Offset	CALIBRATION DATE	CALIBRATION TIME
BASE CALS	62.386 - raw	407.027 - raw	0.392 - gain 0.000 - off	M/D/Y> 9/14/2010	H:M:S> 14:50:51

X CALIPER

SERIAL NUM	RL4101

MASTER CALIBRATIONS

	ZeroVal: 6.000 in	CalVal: 10.000 in	Gain/Offset	CALIBRATION DATE	CALIBRATION TIME
BASE CALS	2915.840 - raw	4747.790 - raw	0.002 - gain -0.367 - off	M/D/Y> 10/22/2010	H:M:S> 16:8:17

Y Caliper Calibration

SERIAL NUM	RN2007

MASTER CALIBRATIONS

	ZeroVal: 6.000 in	CalVal: 10.000 in	Gain/Offset	CALIBRATION DATE	CALIBRATION TIME
BASE CALS	861.360 - raw	1491.973 - raw	0.006 - gain 0.536 - off	M/D/Y> 9/14/2010	H:M:S> 12:52:30

MICRO NORMAL CALIBRATIONS

SERIAL NUM	RM8002

MASTER CALIBRATIONS					
	ZeroVal: 0.020 ohmm	CalVal: 10.000 ohmm	Gain/Offset	CALIBRATION DATE	CALIBRATION TIME
BASE CALS	18.120 - raw	406.200 - raw	0.026 - gain -0.446 - off	M/D/Y> 10/27/2010	H:M:S> 13:51:6

MICRO INVERSE CALIBRATIONS

SERIAL NUM	RM8002

MASTER CALIBRATIONS					
	ZeroVal: 0.020 ohmm	CalVal: 10.000 ohmm	Gain/Offset	CALIBRATION DATE	CALIBRATION TIME
BASE CALS	29.933 - raw	292.300 - raw	0.038 - gain -1.119 - off	M/D/Y> 10/27/2010	H:M:S> 13:48:15

Company	MIDWESTERN EXPLORATION COMPANY
Well	MARIAN #2-14
Field	WIDE AWAKE
County	STEVENS
State	KANSAS

RECON

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LITHOLOGY DENSITY
GAMMA RAY XY-CALIPER
MICROLOG

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