

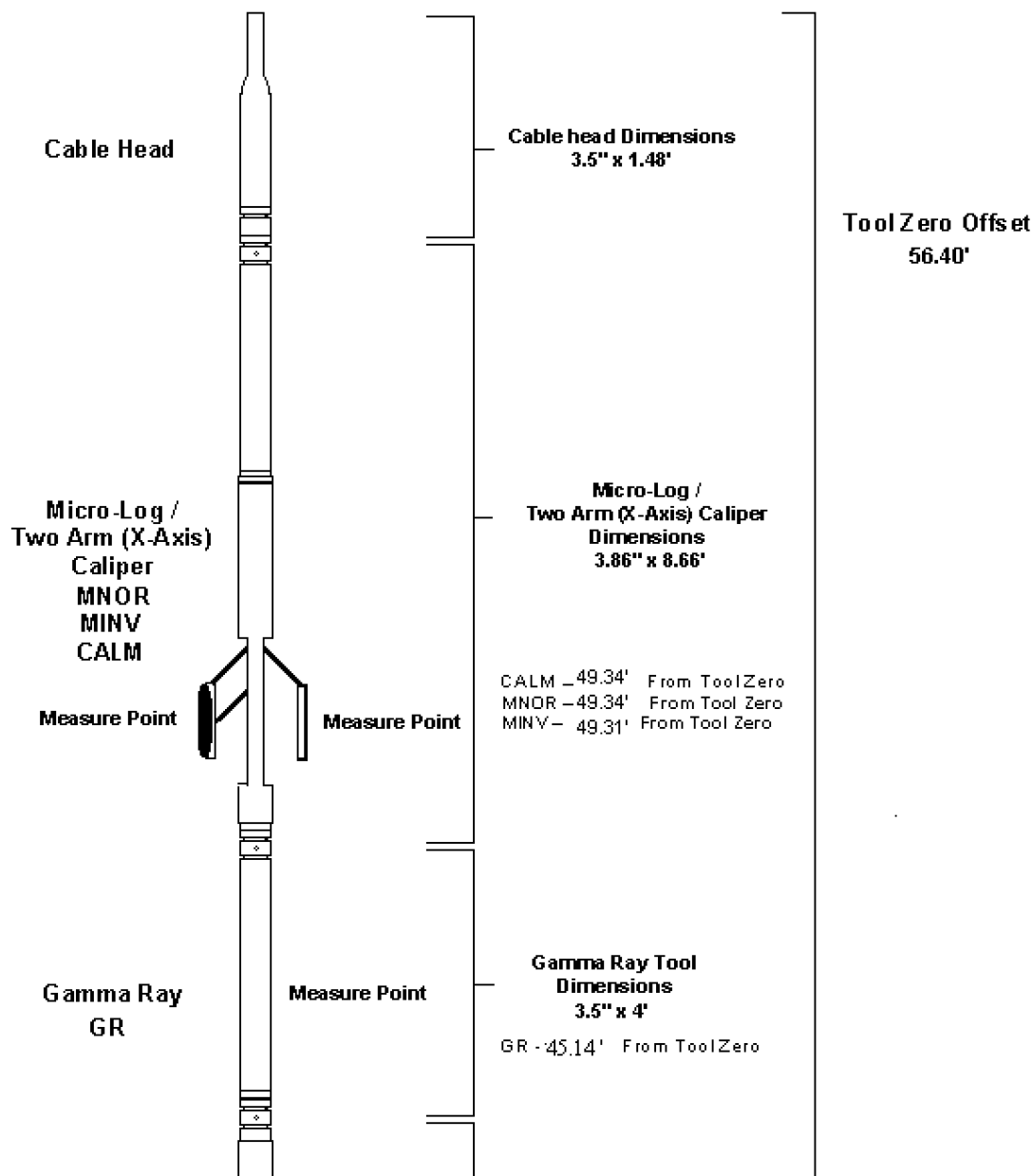
CEMENT VOLUME CALCULATIONS SUMMARY

Tool Type	LDT-CNT	Caliper Type		
Tool Serial #	RN2008 / RL4102			
	Borehole Total	Annular Volume with Casing	From Depth (MKb)	To Depth (MKb)
VOLUMES	551.001 Cubic Feet	284.149 Cubic Feet	4000	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	351
INTERMEDIATE CASING	N/A	N/A	N/A	N/A	N/A	N/A
PRODUCTION CASING	5 1/2	J-55	15.5	4.950	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

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

Measure Point

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 - 22.93' From ToolZero
LDT w4 -
LDT SS - 22.44' From ToolZero

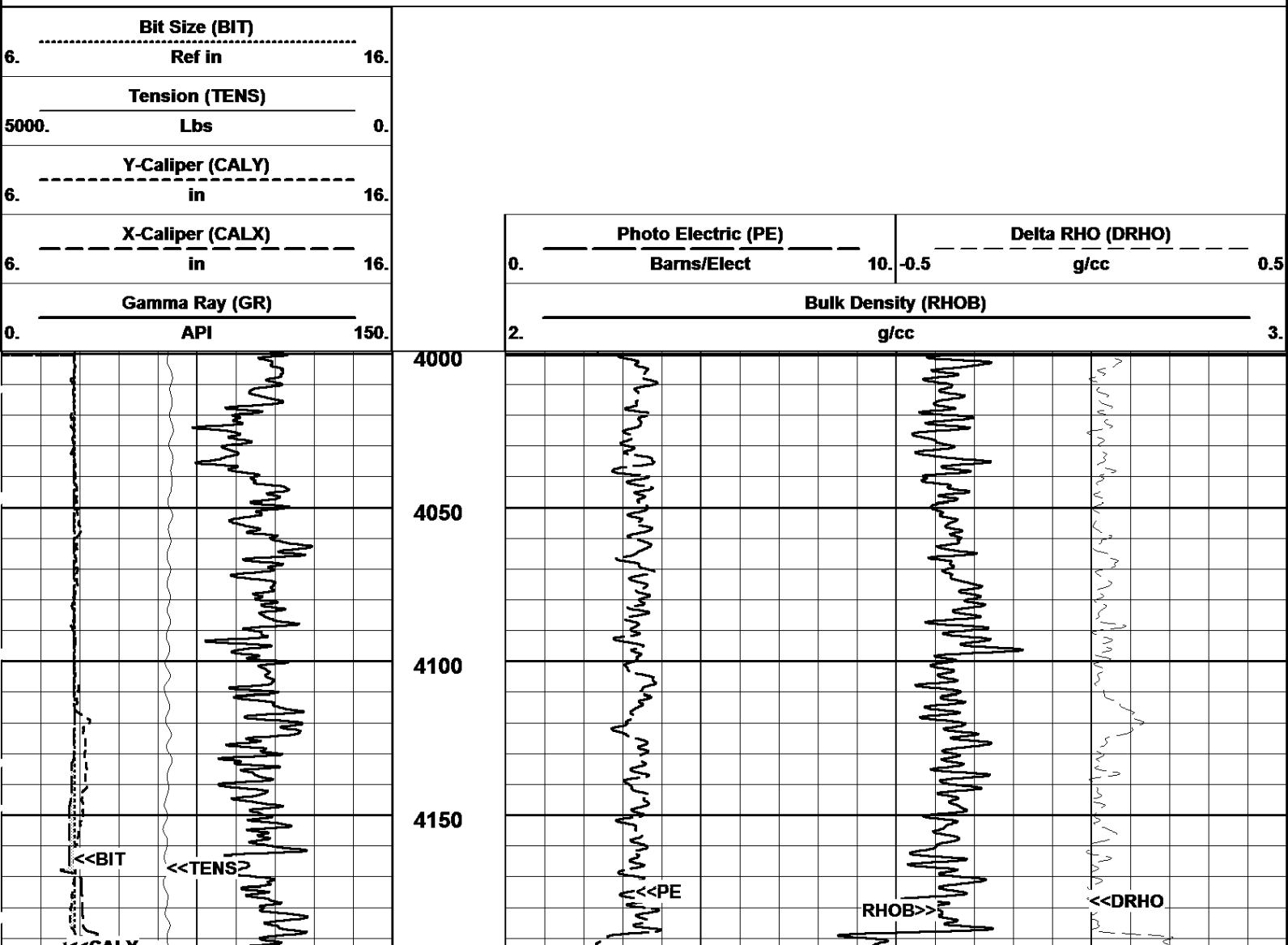
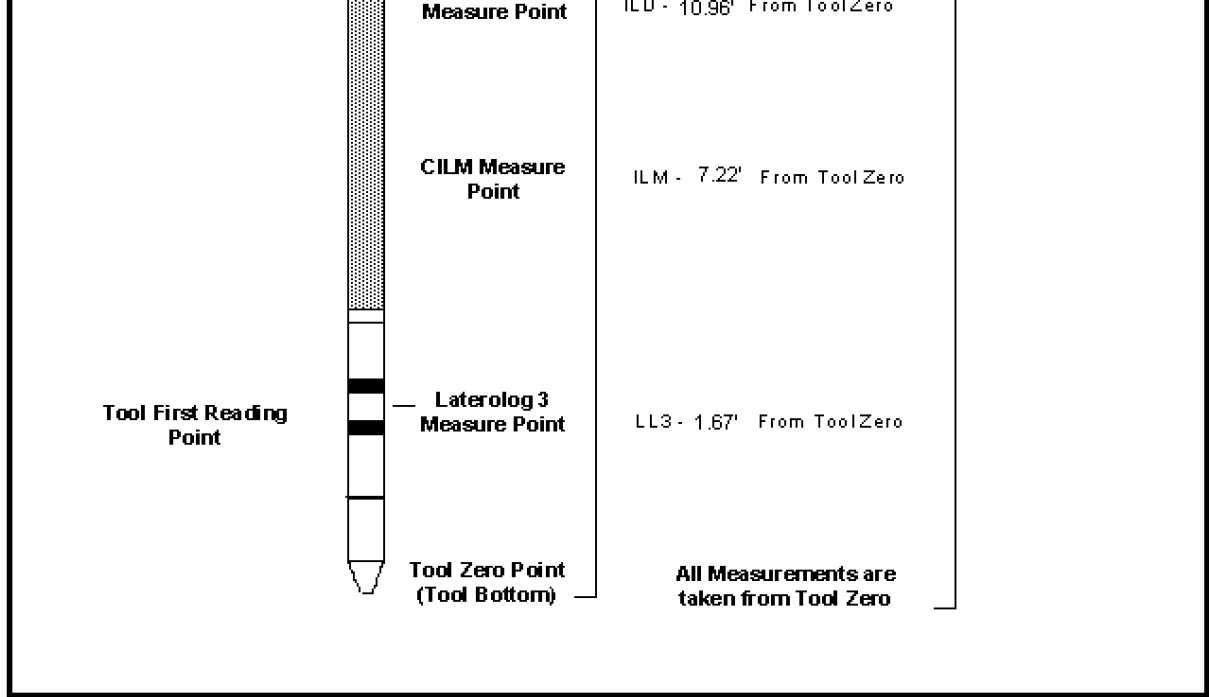
Dual Induction

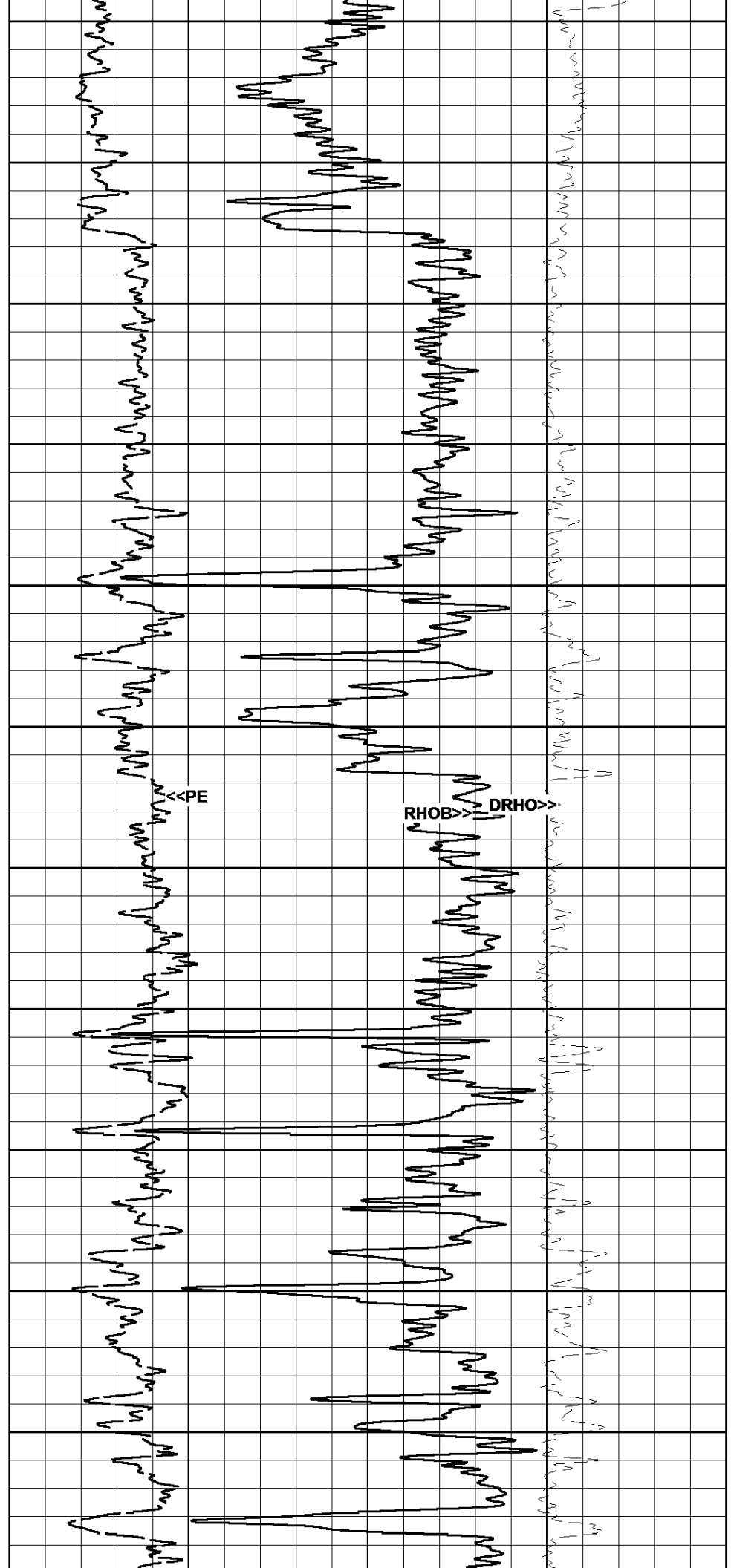
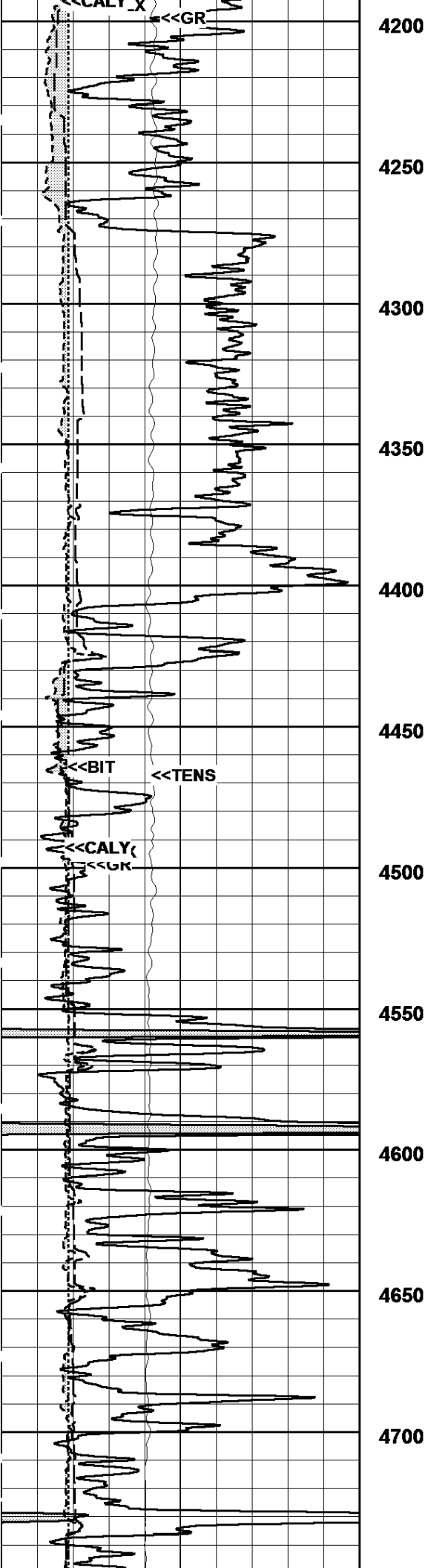
SP
ILD
ILM
LL3

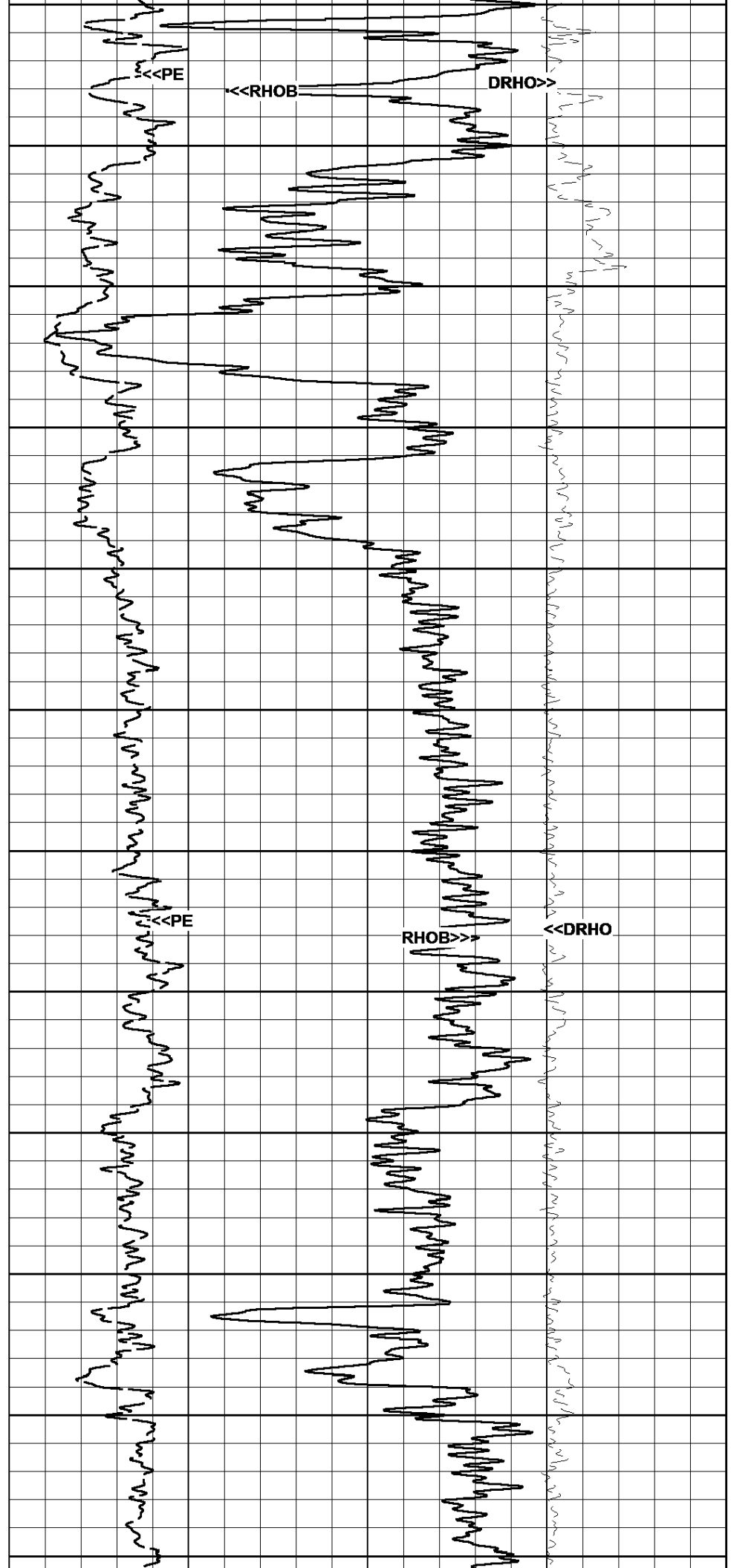
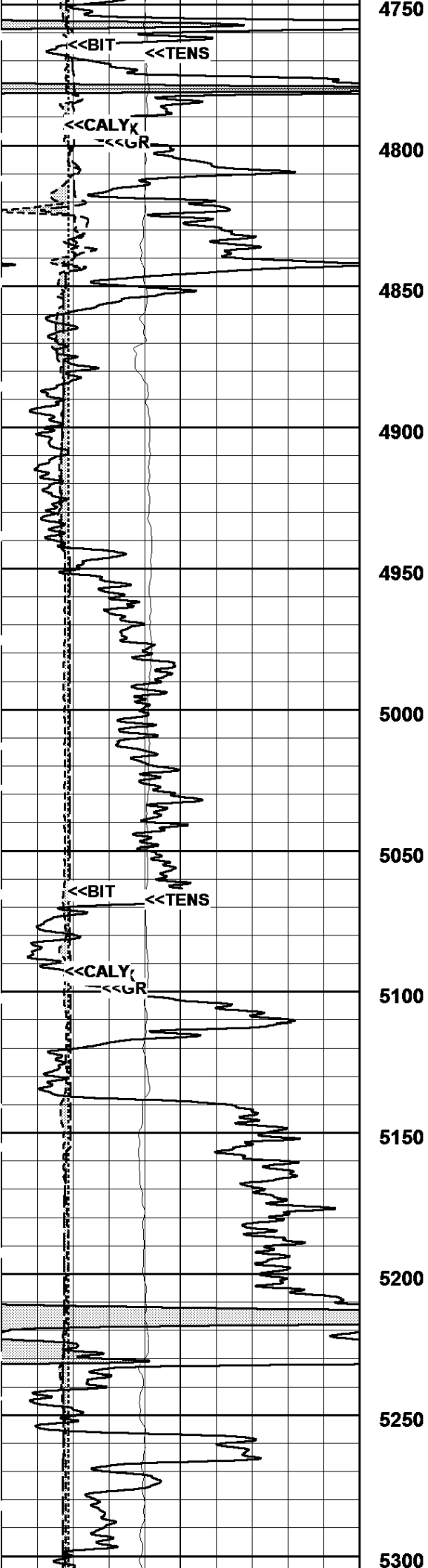
Dual Induction Tool
Dimensions
3.62" x 21'

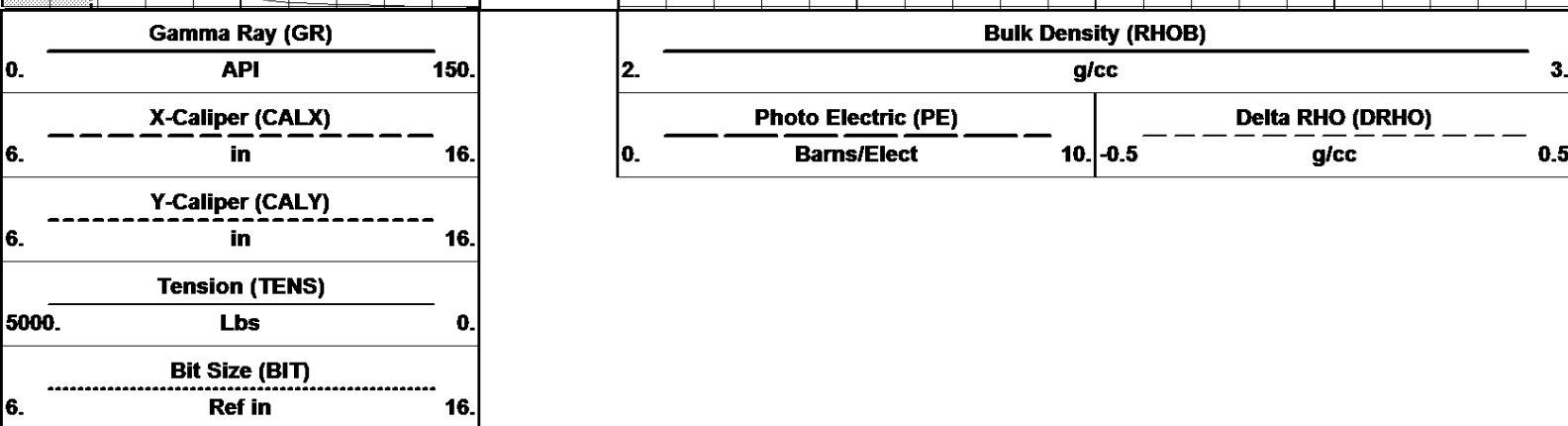
SP - 10.96' From ToolZero

S.P. / CILD





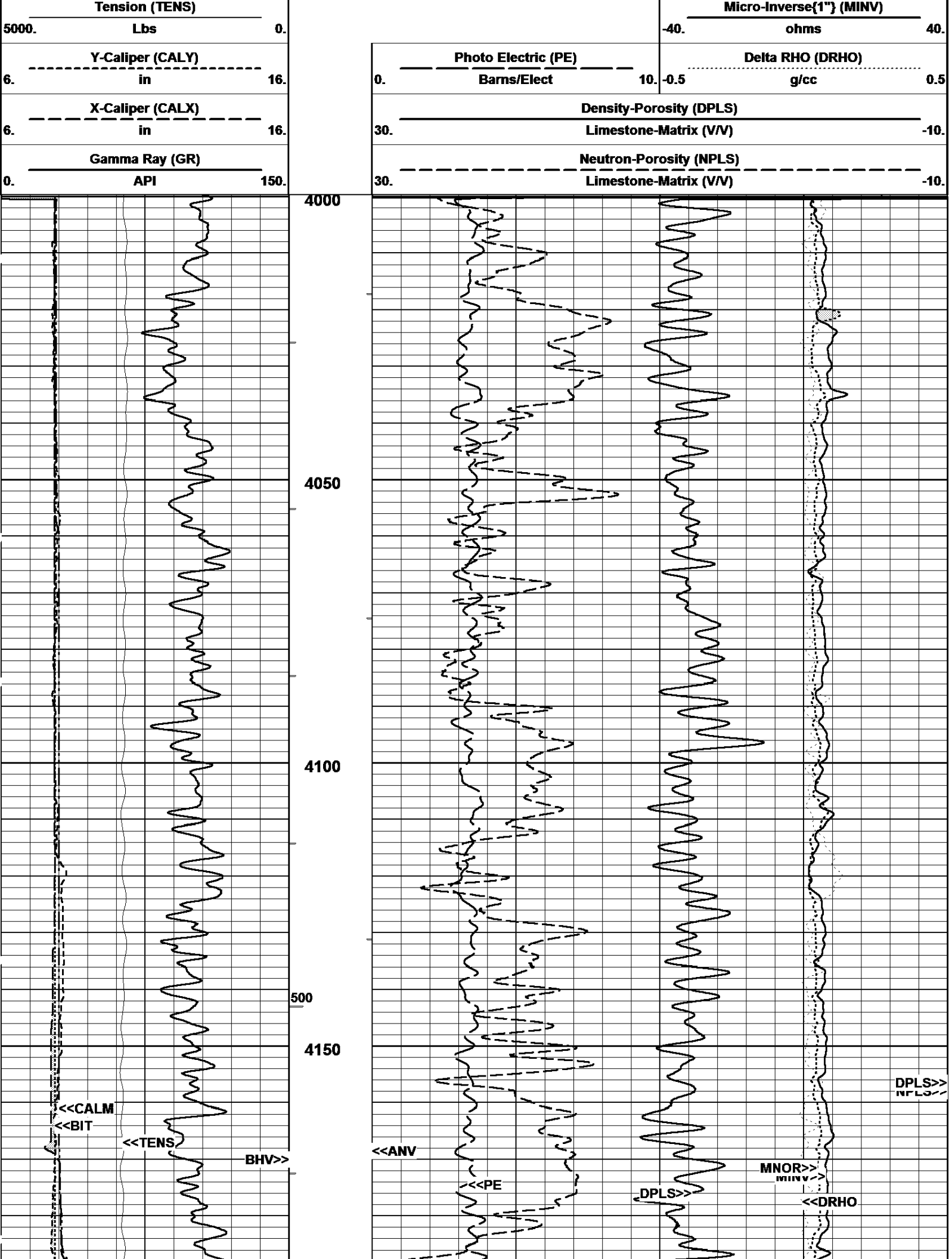


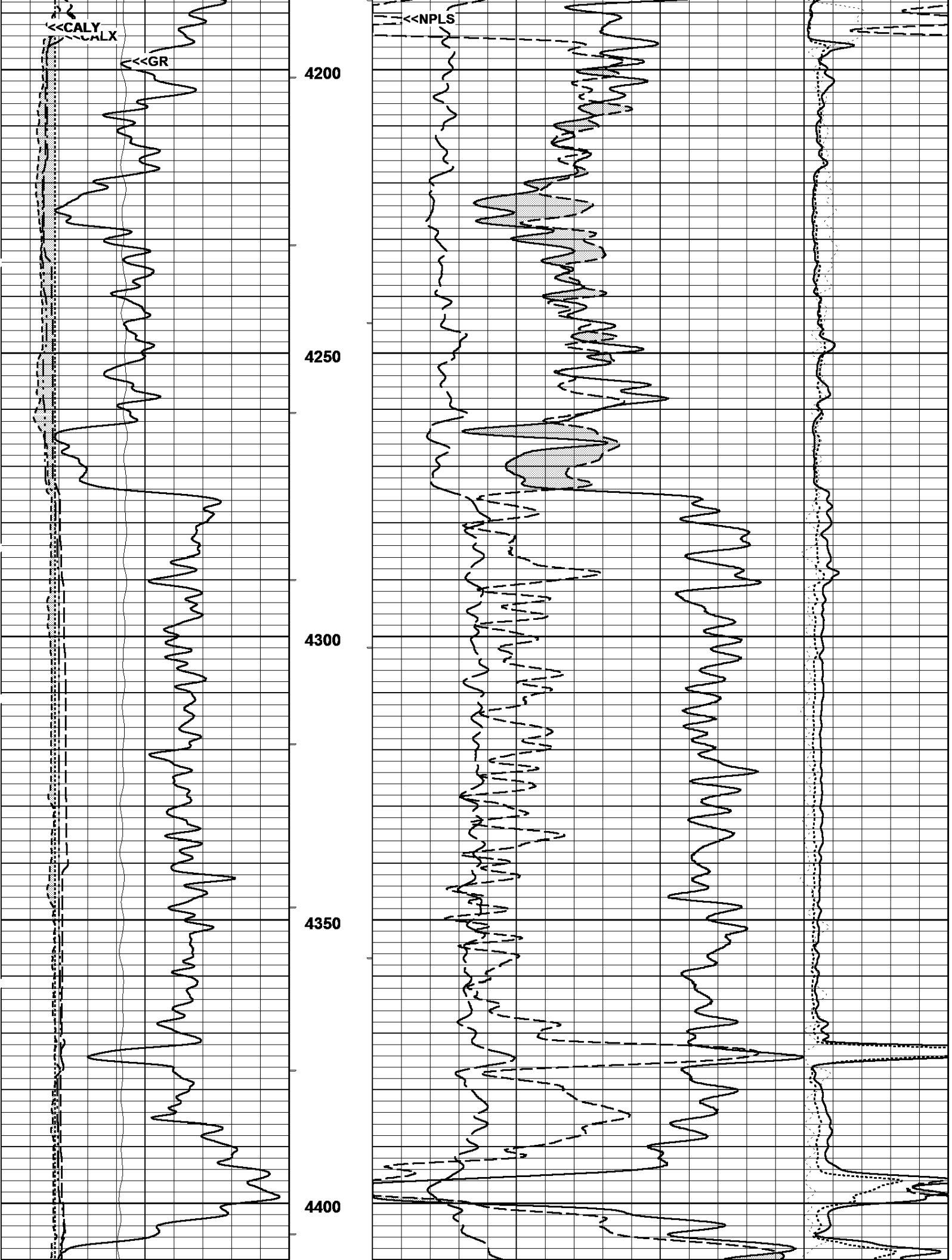


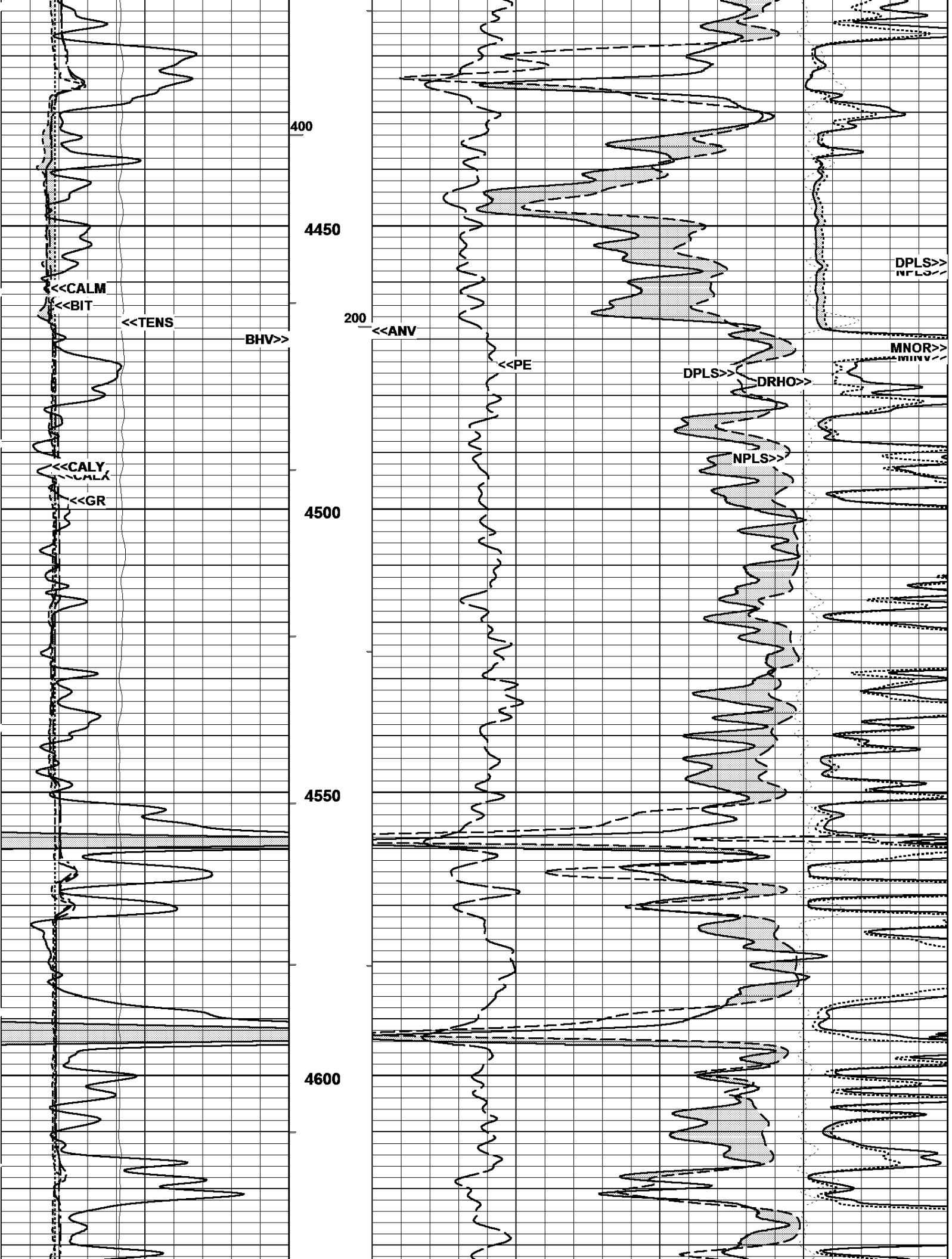
Log UP - (VER 11.14a)
Start Depth=> 5610.75 Feet

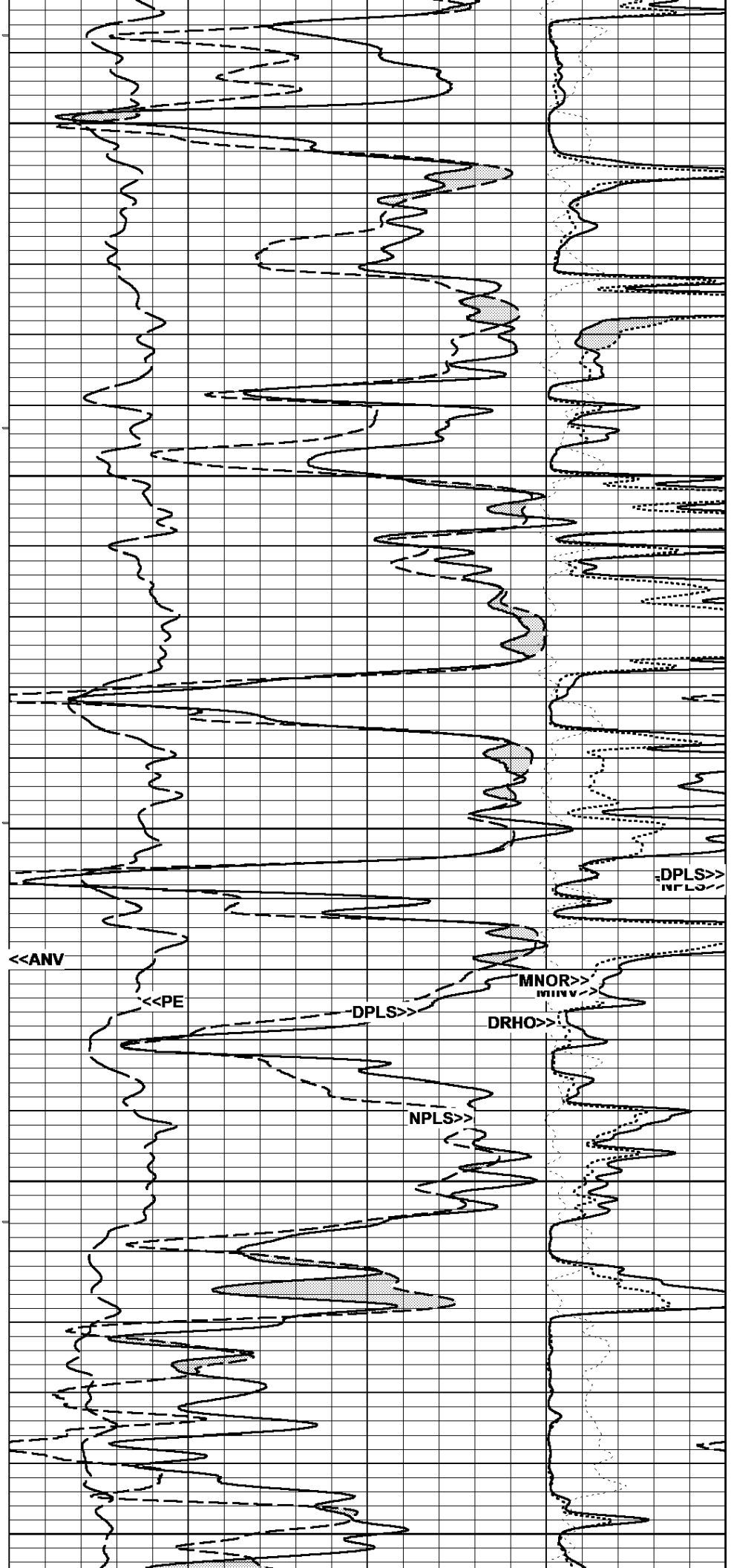
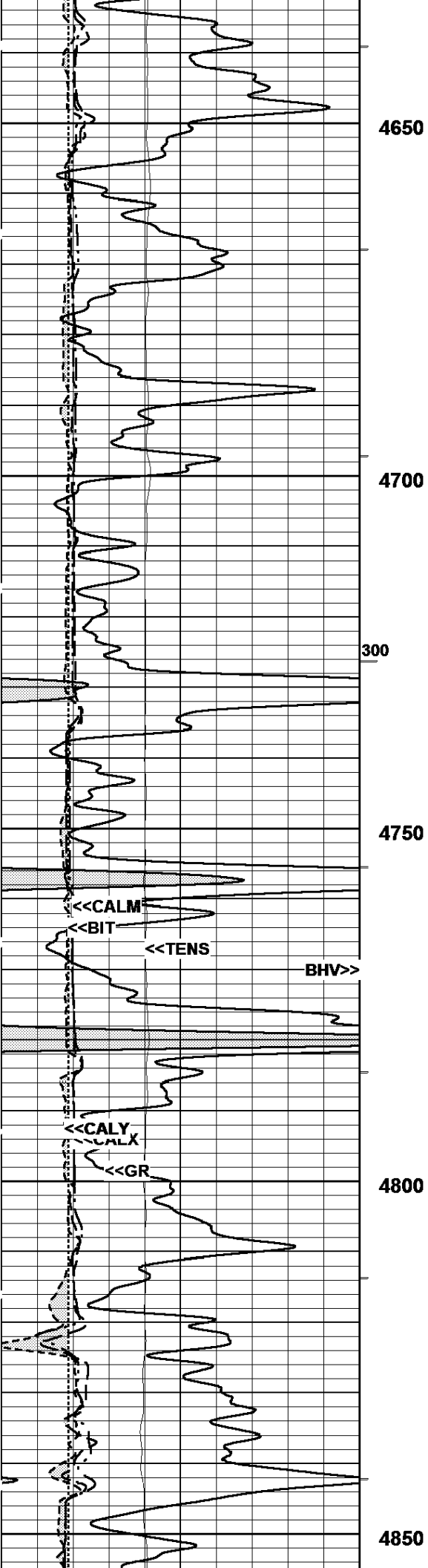
Log UP - (VER 11.14a)
End Depth=> 3999.90 Feet

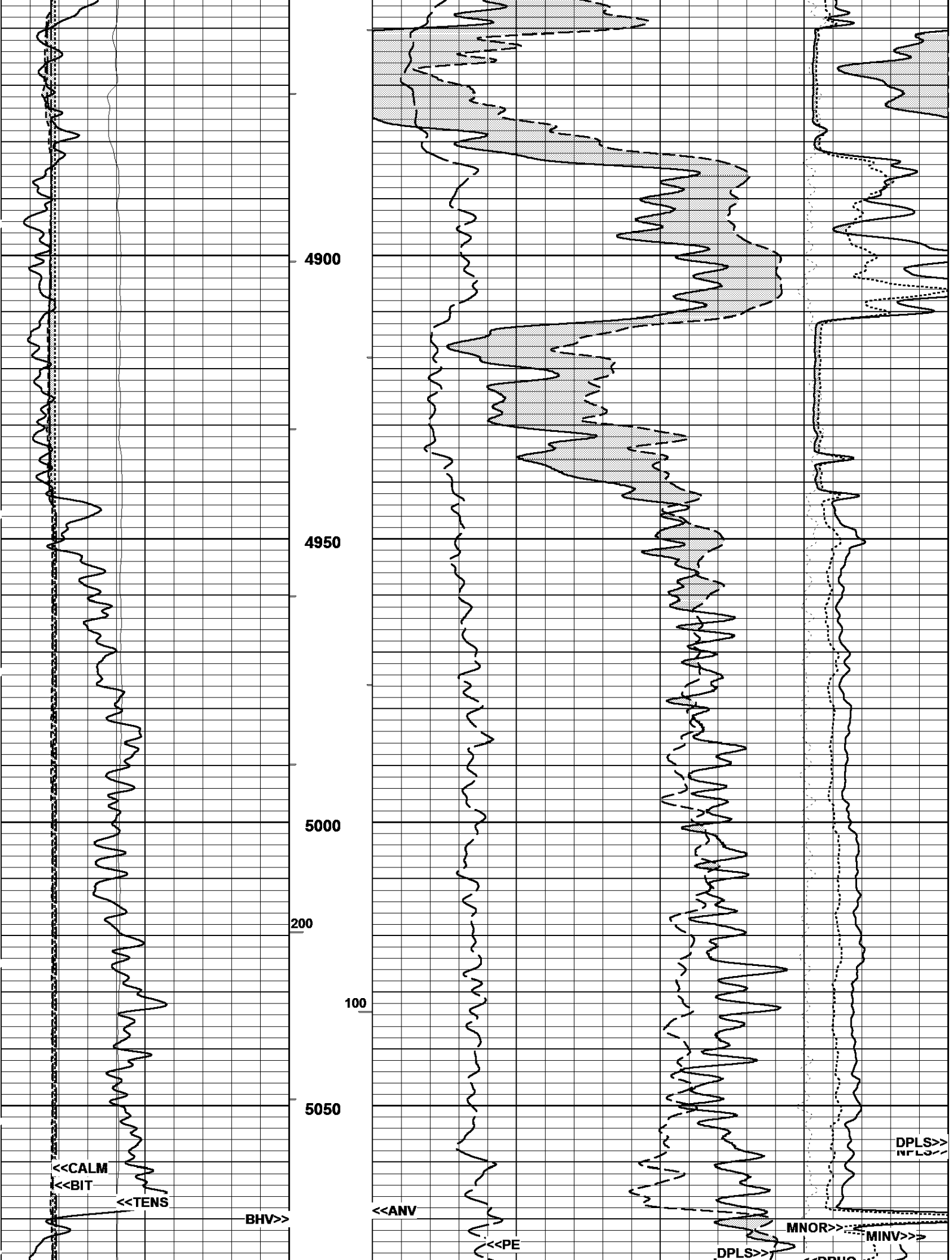


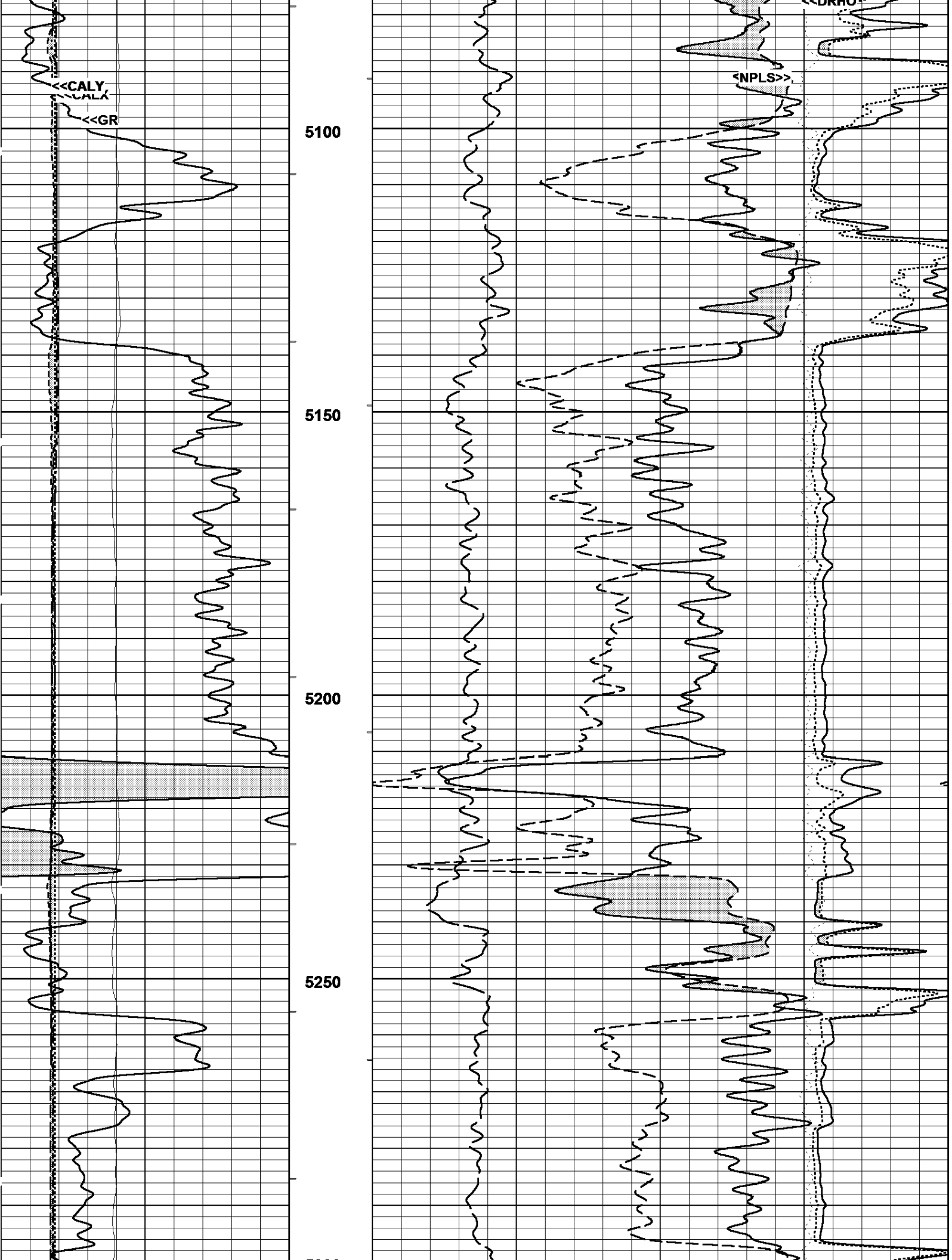


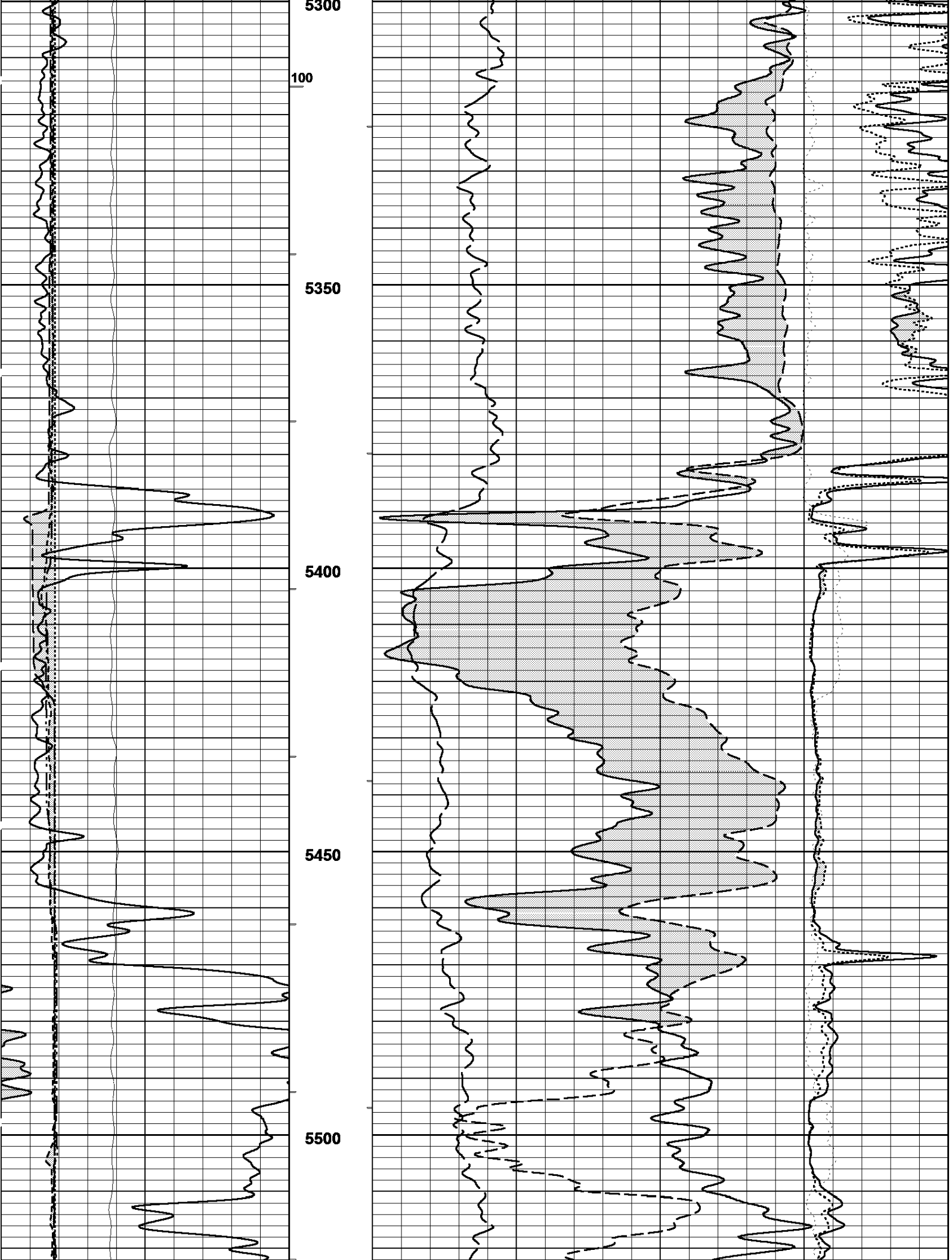


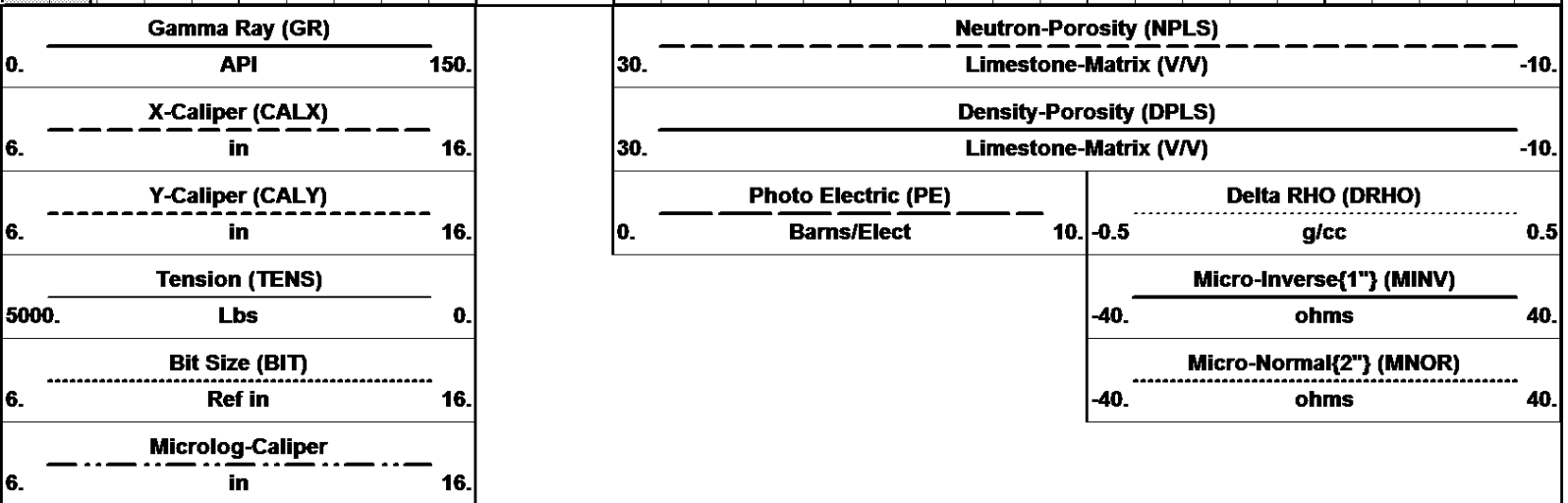
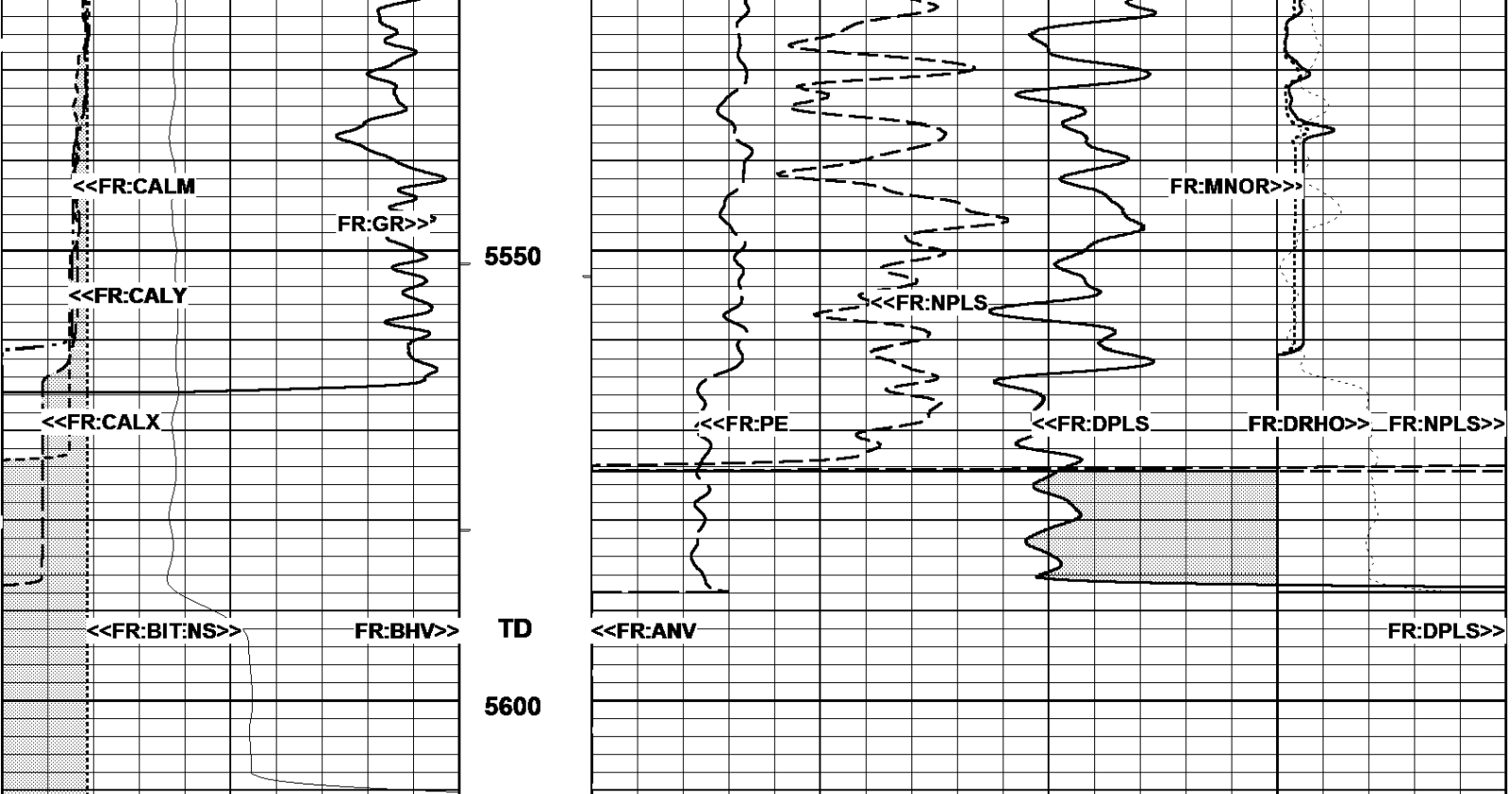






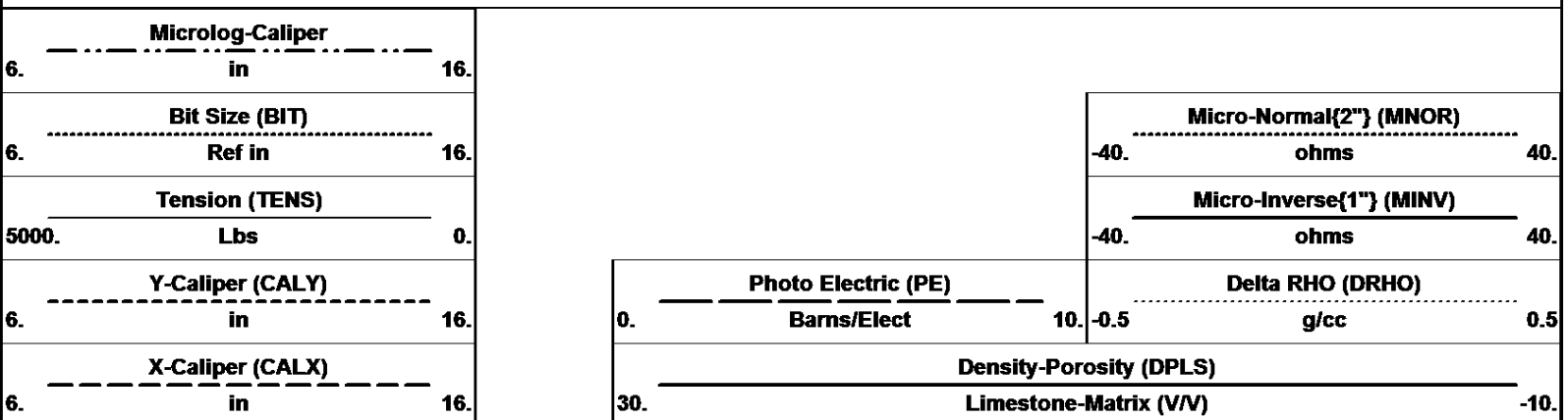


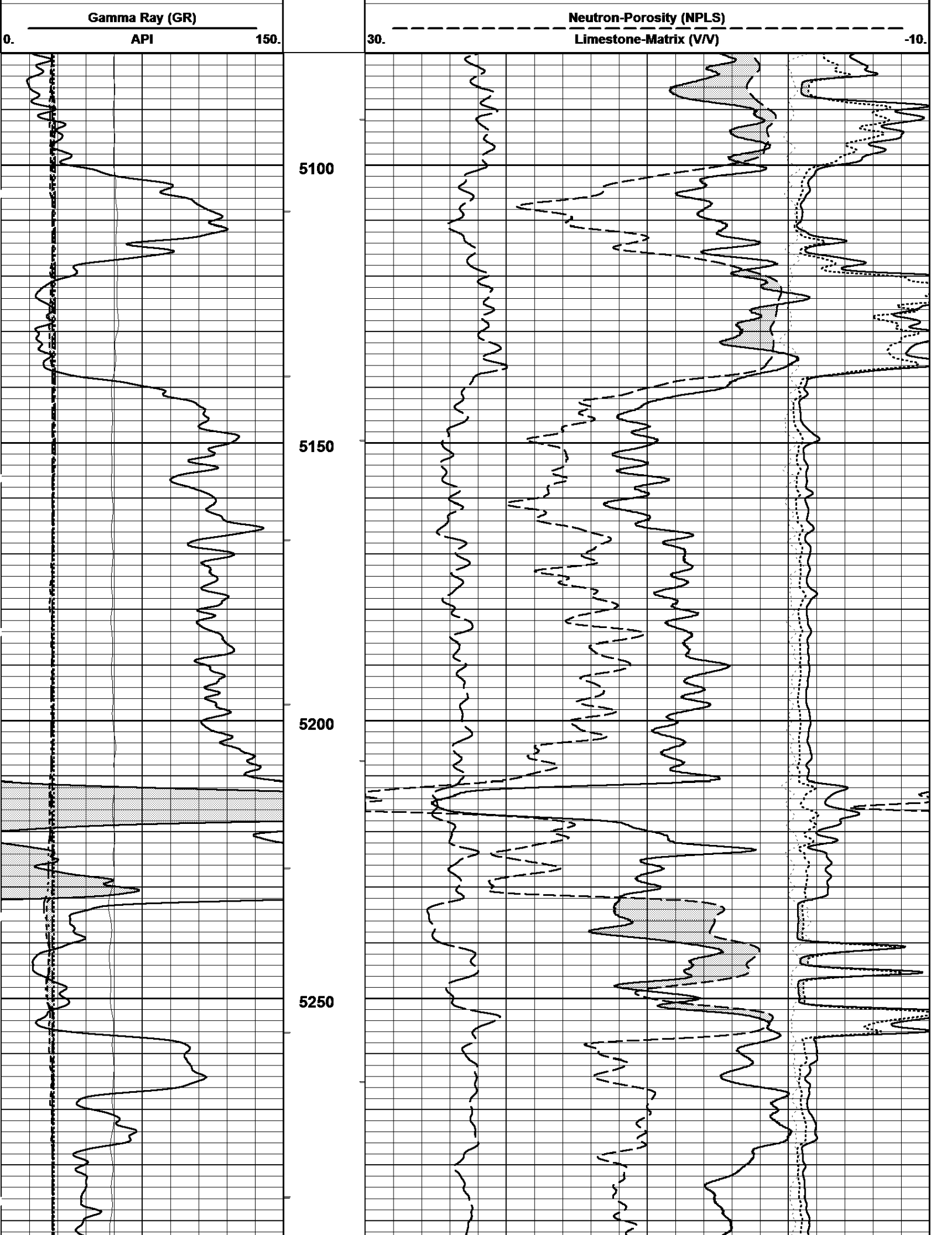


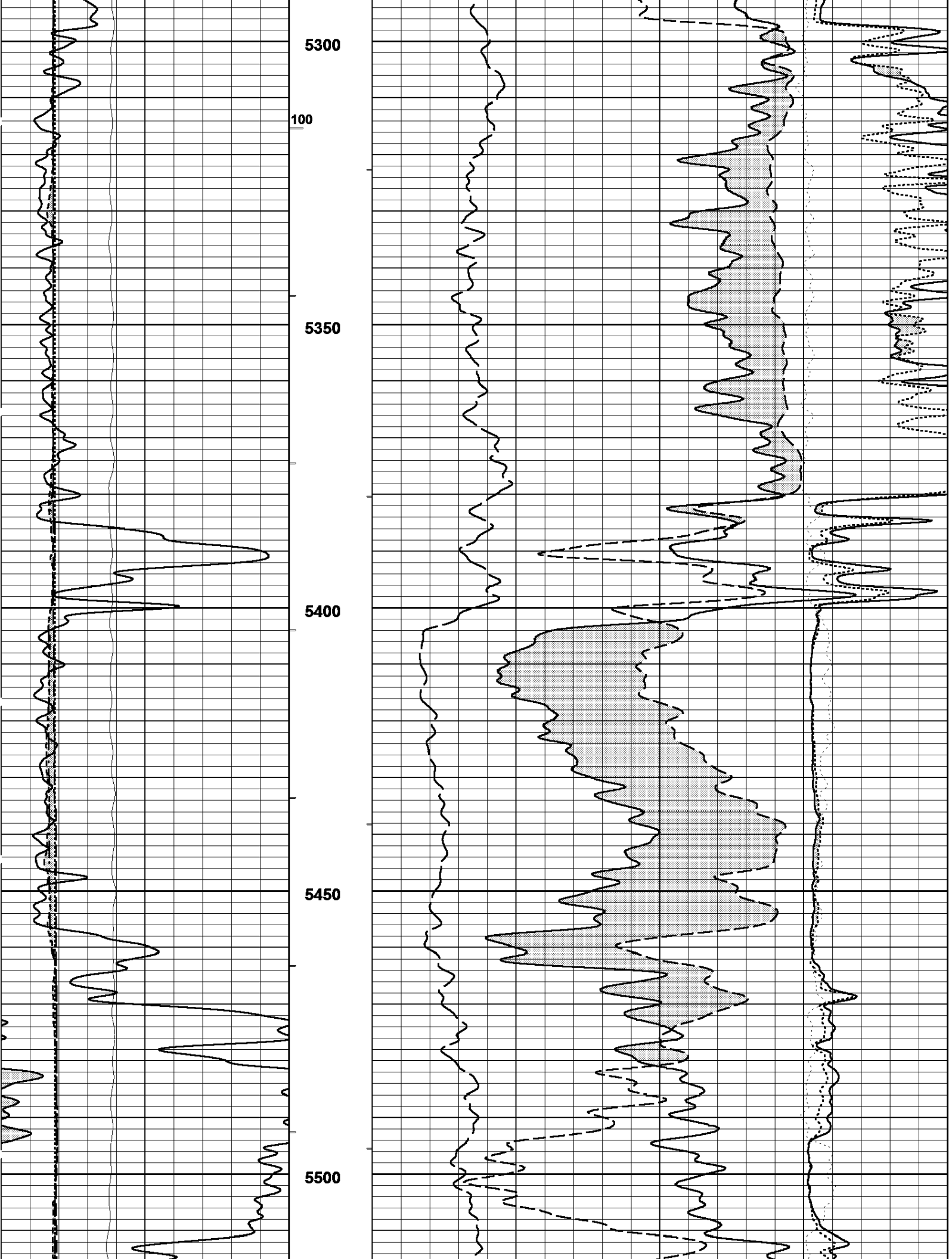


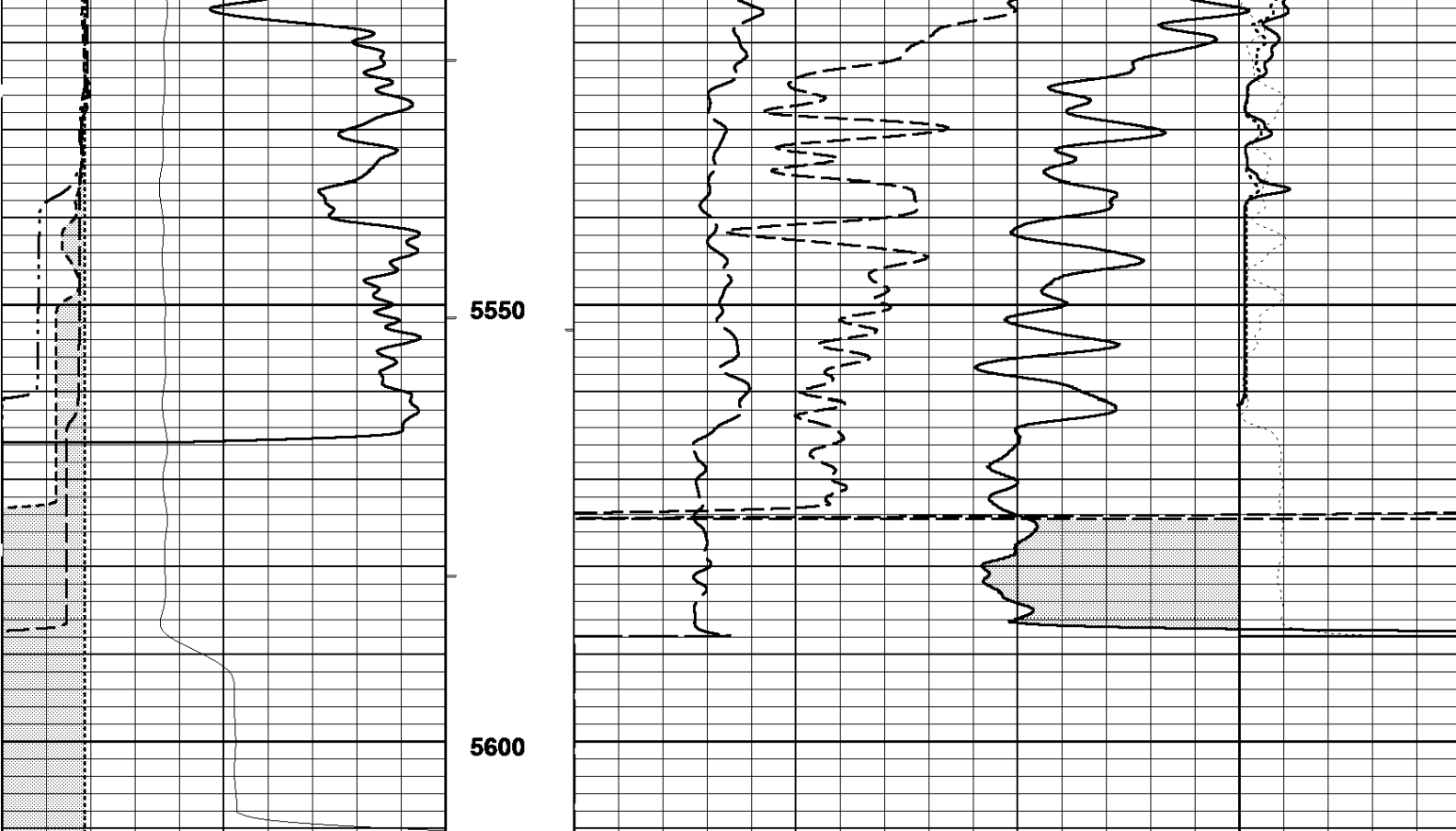
05/07/2013	MAIN PASS - LIMESTONE (5"/100Ft)	Log UP - (VER 11.14a)
08:31:17 => Start Time		Start Depth=> 5610.80 Feet

05/07/2013	REPEAT PASS - LIMESTONE (5"/100Ft)	Log UP - (VER 11.14a)
08:22:35 => End Time		End Depth=> 5080.00 Feet









Gamma Ray (GR)		Neutron-Porosity (NPLS)	
0.	API	30.	Limestone-Matrix (V/V)
150.		-10.	
X-Caliper (CALX)		Density-Porosity (DPLS)	
6.	in	30.	Limestone-Matrix (V/V)
16.		-10.	
Y-Caliper (CALY)		Photo Electric (PE)	
6.	in	0.	Barns/Elect
16.		10.	
Tension (TENS)		Delta RHO (DRHO)	
5000.	Lbs	-0.5	g/cc
0.		0.5	
Bit Size (BIT)		Micro-Inverse{1"} (MINV)	
6.	Ref in	-40.	ohms
16.		40.	
Microlog-Caliper		Micro-Normal{2"} (MNOR)	
6.	in	-40.	ohms
16.		40.	

05/07/2013
08:09:55 => Start Time

REPEAT PASS - LIMESTONE (5"/100ft)

Log UP - (VER 11.14a)
Start Depth=> 5610.80 Feet

Litho-Density/PE Calibrations

TOOL TYPE
SERIAL NUM

LFDC/Pe
RL4102

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	7001.103	5901.338	3077.821	7.234	6003.3655	2.523(g/cc)	M/D/Y> 4/15/2013	H:M:S> 11:36:58
MAGNESIUM	18814.234	15283.007	6874.690	7.483	8756.3034	1.679(g/cc)		
BACKGROUND	2816.000	2481.945	1699.517	6.703	6.0138			

SAND		16526.012	13720.966	6353.376	7.479		1.739(PE)		
IRON		6420.504	5485.178	2947.781	6.735		4.529(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

SERIAL NUM

RN2008

MASTER CALIBRATIONS

LowVal: 6.000 In

HighVal: 10.000 In

Gain/Offset

CALIBRATION DATE

CALIBRATION TIME

BASE CALS

962.880 - raw

1682.013 - raw

0.006 - gain
0.644 - off

M/D/Y> 2/7/2013

H:M:S> 13:58:42

MICRO NORMAL CALIBRATIONS

SERIAL NUM

RM8002

MASTER CALIBRATIONS

LowVal: 0.020 ohmm

HighVal: 10.000 ohmm

Gain/Offset

CALIBRATION DATE

CALIBRATION TIME

BASE CALS

35.220 - raw

400.924 - raw

0.027 - gain
-0.941 - off

M/D/Y> 4/16/2013

H:M:S> 10:15:15

MICRO INVERSE CALIBRATIONS

SERIAL NUM

RM8002

MASTER CALIBRATIONS

LowVal: 0.020 ohmm

HighVal: 10.000 ohmm

Gain/Offset

CALIBRATION DATE

CALIBRATION TIME

BASE CALS

25.851 - raw

264.987 - raw

0.042 - gain
-1.059 - off

M/D/Y> 4/16/2013

H:M:S> 10:9:34

Company

VAUGHN GOOD OIL COMPANY

Well

NUSSE #3-16

Field

S.E. HARDTNER

County

BARBER

State

KANSAS

RECON

COMPENSATED NEUTRON
LITHOLOGY DENSITY
GAMMA RAY XY-CALIPER
MICROLOG

RECON
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