

COMPENSATED NEUTRON
LITHOLOGY DENSITY
GAMMA RAY X-Y CALIPER
MICROLOG

RECON

COMPENSATED NEUTRON
LITHOLOGY DENSITY
GAMMA RAY X-Y CALIPER
MICROLOG

				OTHER SERVICES:	
				DIL	
SEC 18		TWP 13S	RGE 14W		
Location, 1780' FNL & 790' FEL					
SURF. SAME		API#.	SE/NW/SE/NE 015-167-24029-00-00		
Permanent Datum	Ground Level	Elev	1674		
Log Measured From	Kelly Bushing				
Drilling Measured From	Kelly Bushing				
ELEVATIONS			K.B.	1687	
			G.L.	1674	
			D.F.	1685	

Date	11-APR-2015			
Run No.	ONE			
TD Driller	3120	ft.		ft.
TD RECON	3122	ft.		ft.
Bot Logged Interval	3121	ft.		ft.
Top Logged Interval	250	ft.		ft.
Casing Depth Driller	8 5/8	in.	264	in.
Casing Depth RECON	8 5/8	in.	264	in.
Bit Size	7 7/8	in.		in.
Drilling Fluid Type	WBM			
Density	8.7	Viscosity	45	
Fluid Loss	10	PH	10.8	
Source Of Sample	Flowline			
RM @ Measured Temp	1.57	Ohmm	75	Ohmm
RMF @ Measured Temp	1.18	Ohmm	75	Ohmm
RMC @ Measured Temp	1.96	Ohmm	75	Ohmm
RM @ MRT	1.23	Ohmm	98	Ohmm
Max Recorded Temp	98	DegF		DegF
Time Drilling Stopped	11-APR-2015	14:40		
Time Circulation Stopped	11-APR-2015	15:35		
Time Logger On Bottom	12-APR-2015	01:40		
Unit Num	Location	OKLAHOMA CITY, OK		
Recorded By	K.HELDERMON			
Witnessed By	K.LEBLANC			D.MCGINNNESS

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

RIG INFORMATION

Drill Contr/Rig#	BLUE LINE #3

GENERAL REMARKS SECTION

AHV CALCULATED ON 5.5" PROD. CASING

CREW: J.ROSE, J.THOMAS

THANK YOU FOR USING RECON PETROTECHNOLOGIES LTD.

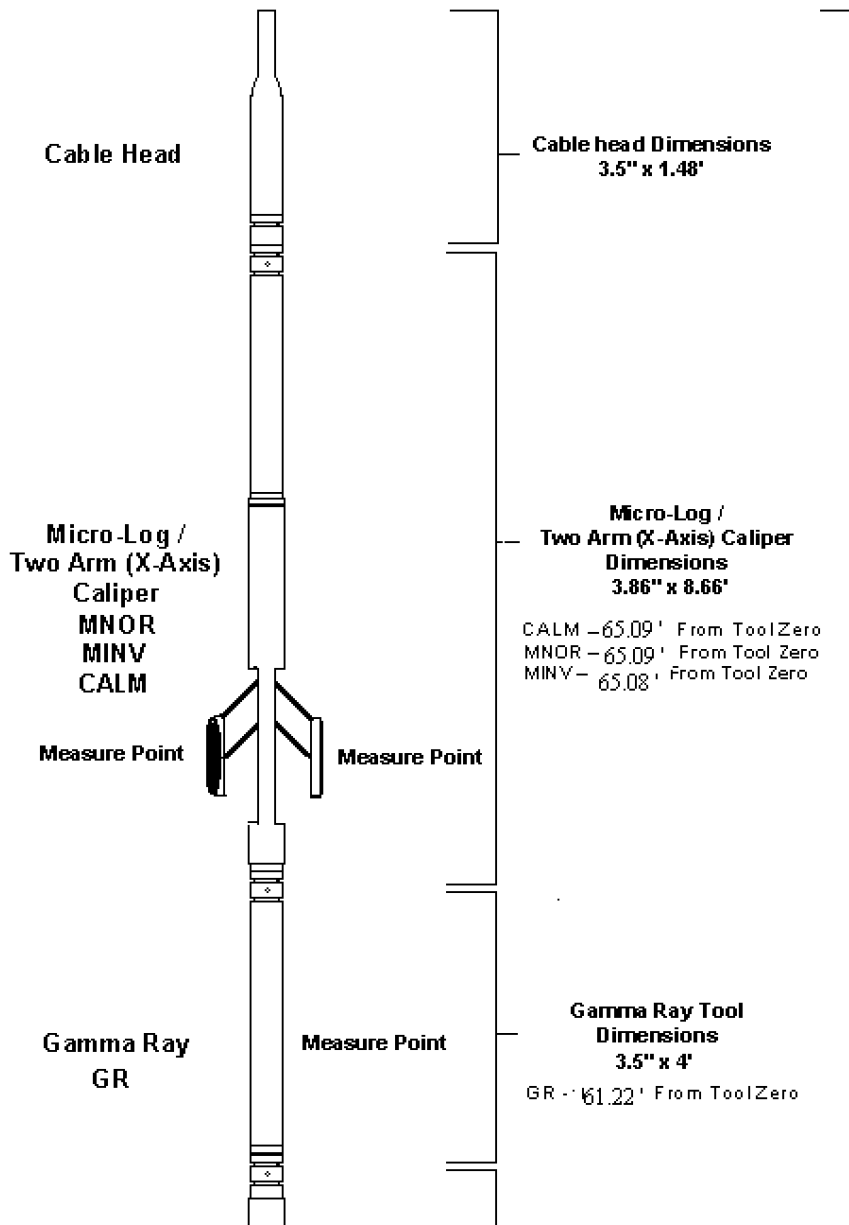
CEMENT VOLUME CALCULATIONS SUMMARY

Tool Type	LDT-CNT	Caliper Type		
Tool Serial #	RN2008 / RL4103			
	Borehole Total	Annular Volume with Casing	From Depth (MKb)	To Depth (MKb)
VOLUMES	1423 Cubic Feet	949 Cubic Feet	250	3121

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	264
INTERMEDIATE CASING	N/A	N/A	N/A	N/A	Surface	N/A
PRODUCION CASING	5 1/2	N/A	N/A	N/A	Surface	3121

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

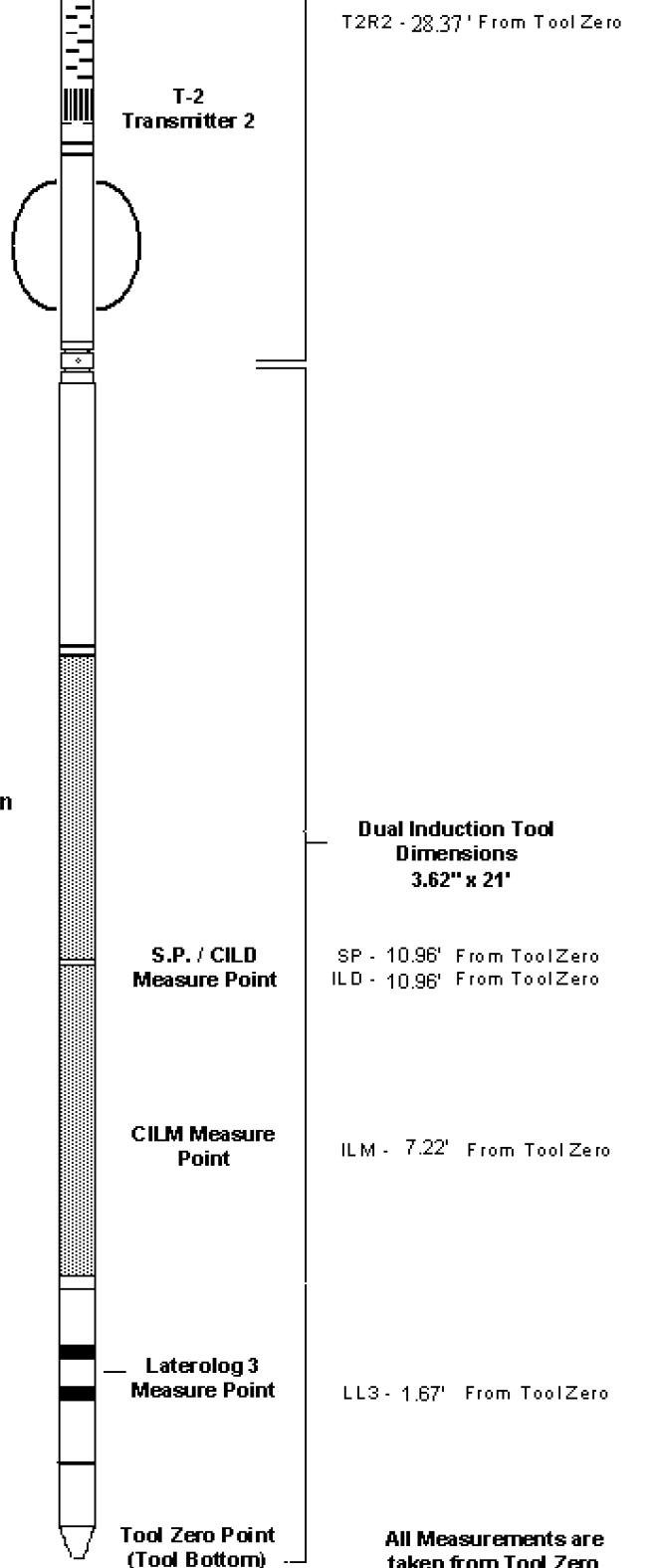
T1R1 - 33.35' From ToolZero
T1R2 - 31.35' From ToolZero

Measure Point
Tool First Reading
Point

R-1
Receiver 1

R-2
Receiver 2

T2R1 - 28.54' From ToolZero

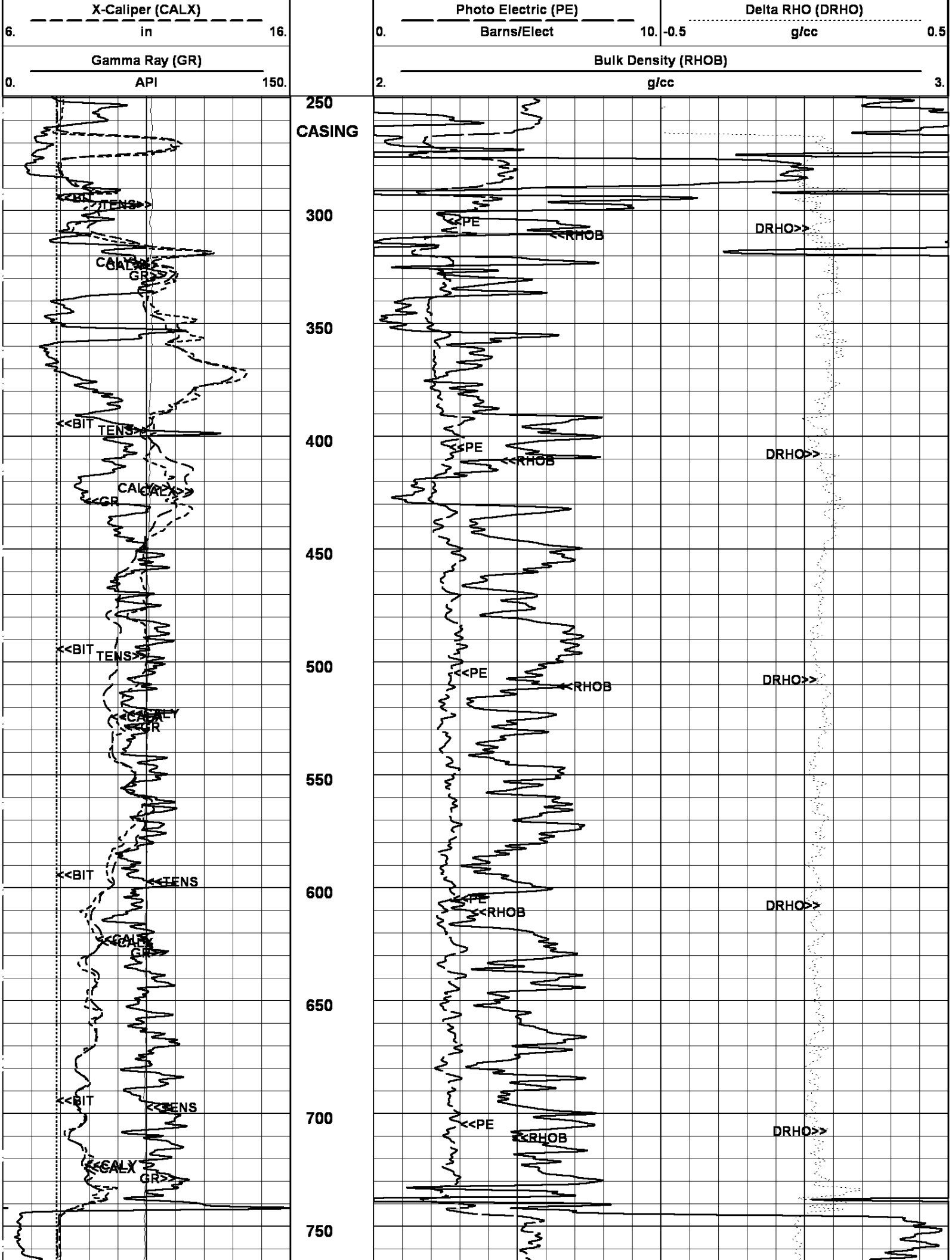


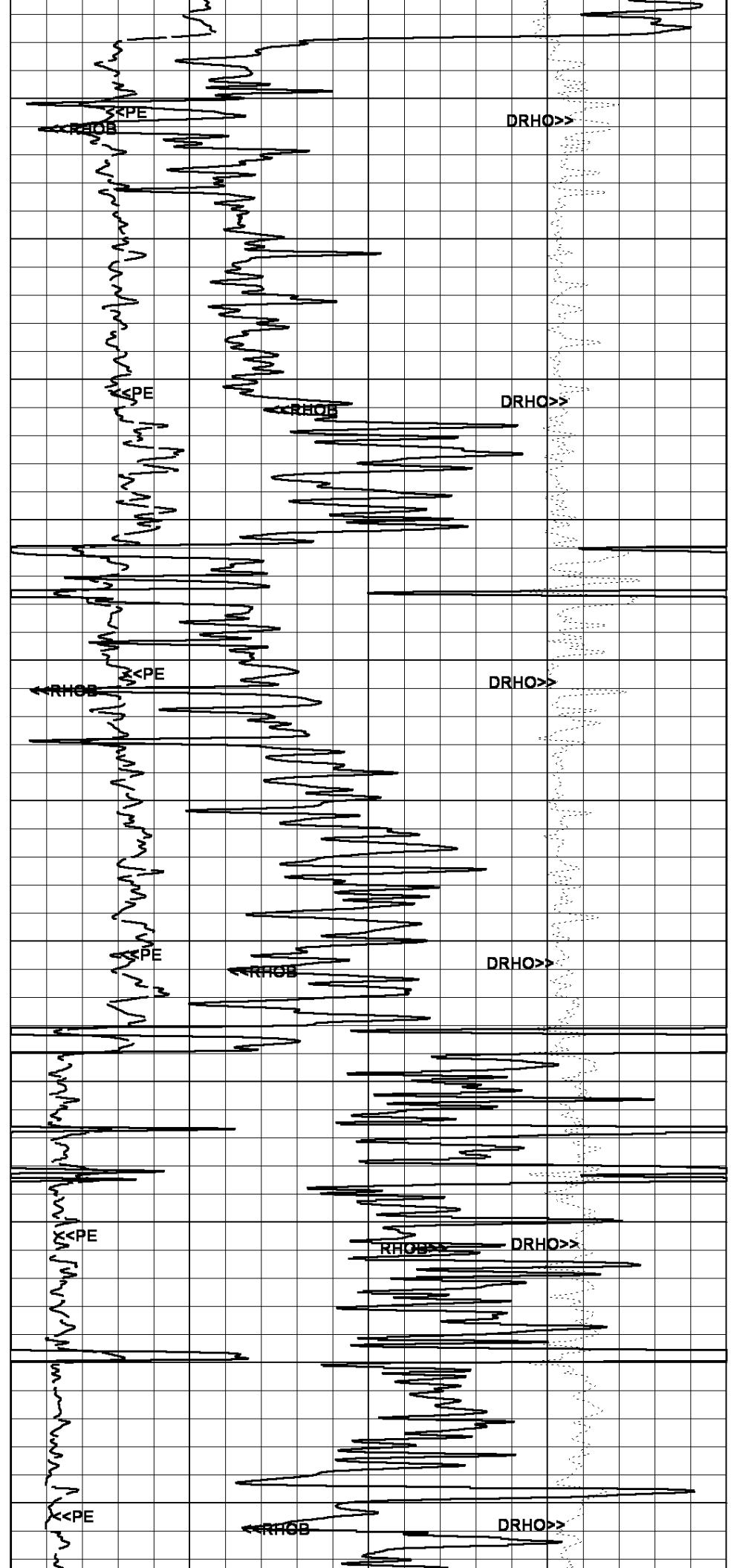
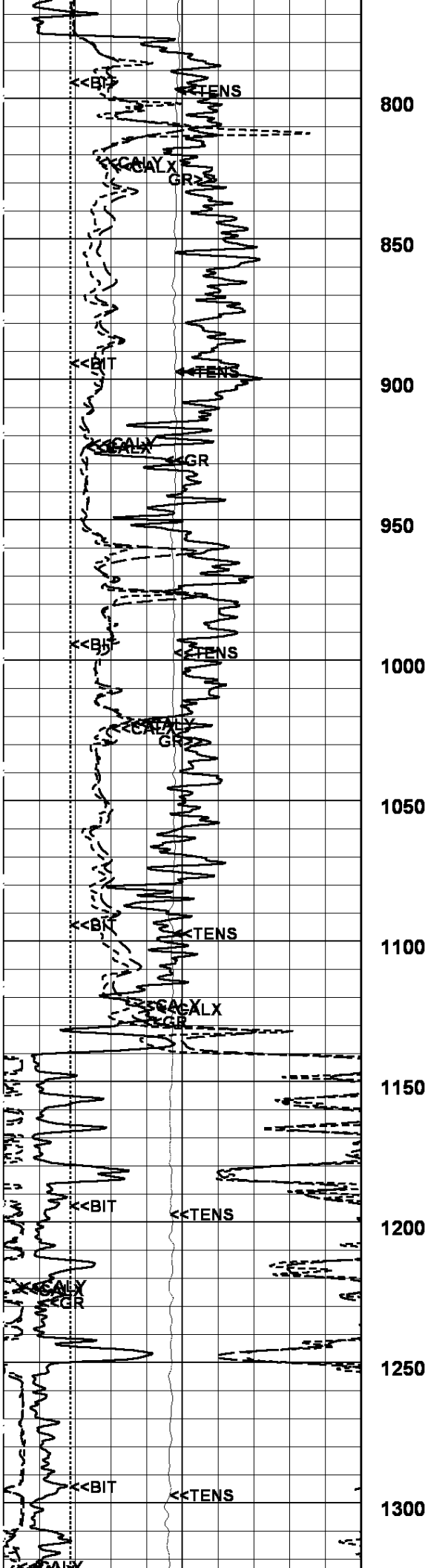
04/12/2015
04:56:17 => End Time

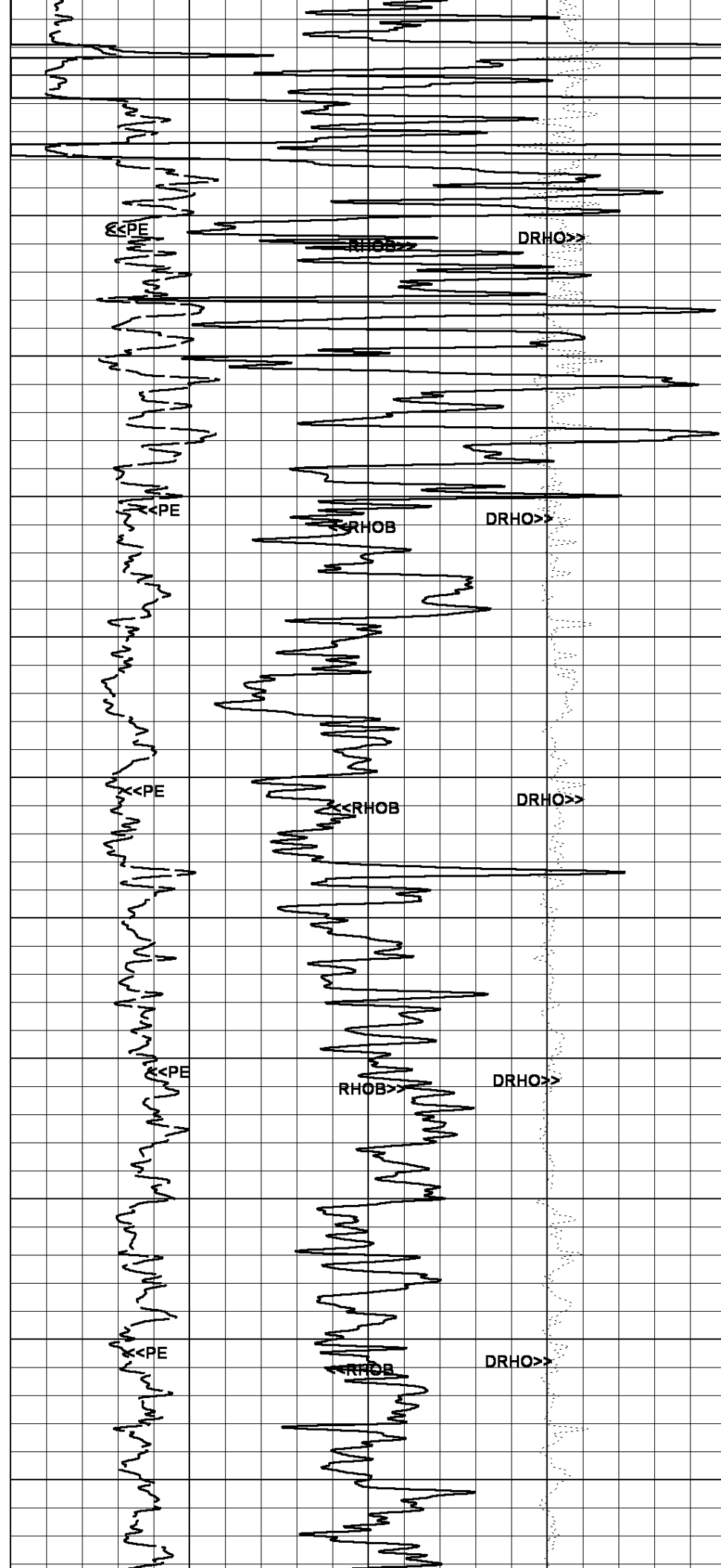
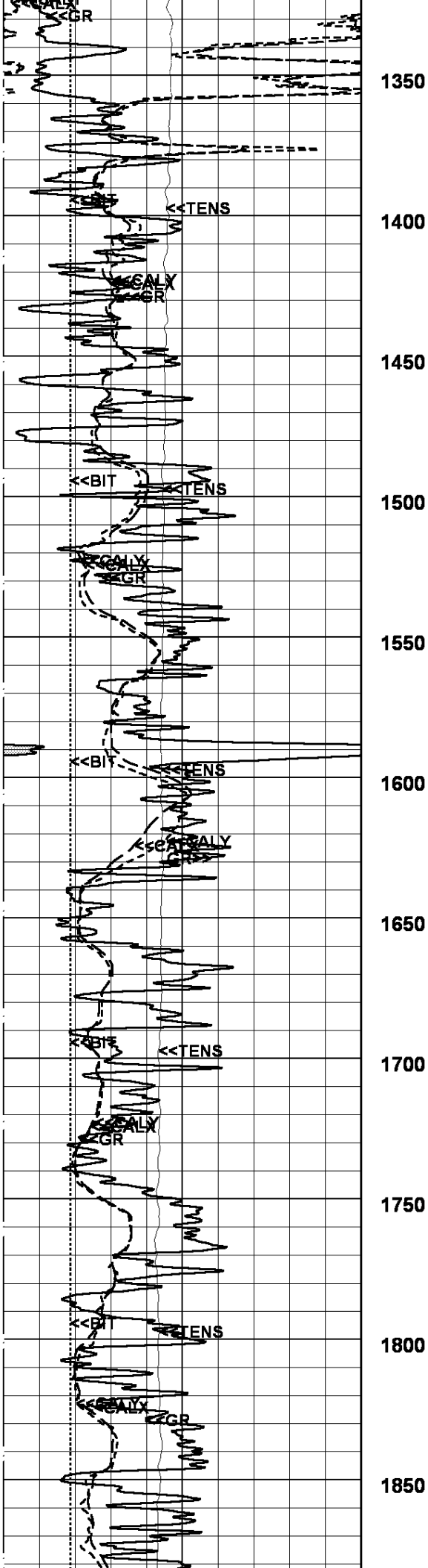
MAIN PASS - RHOB (2"/100Ft)

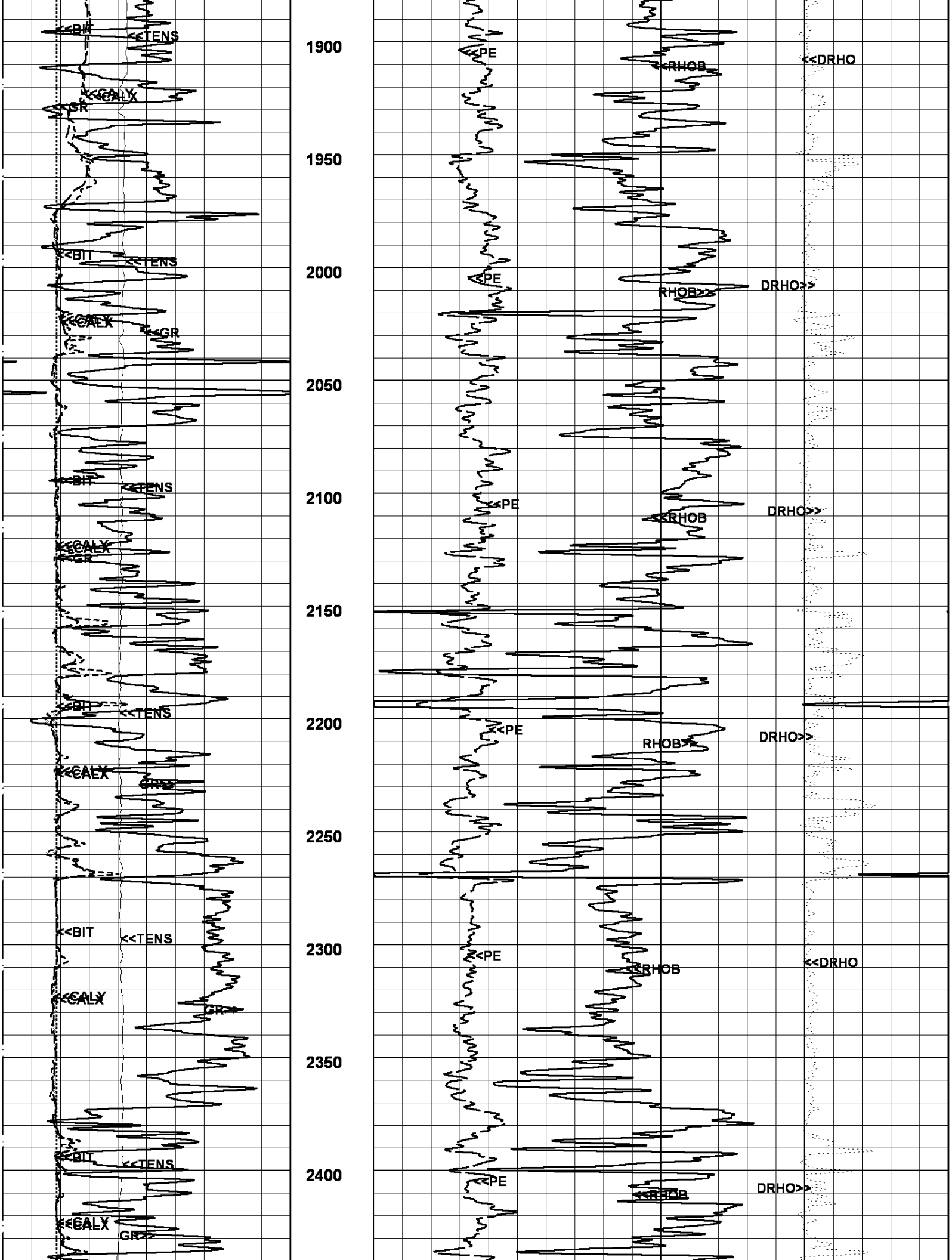
Log UP - (VER 11.19)
End Depth=> 249.75 Feet

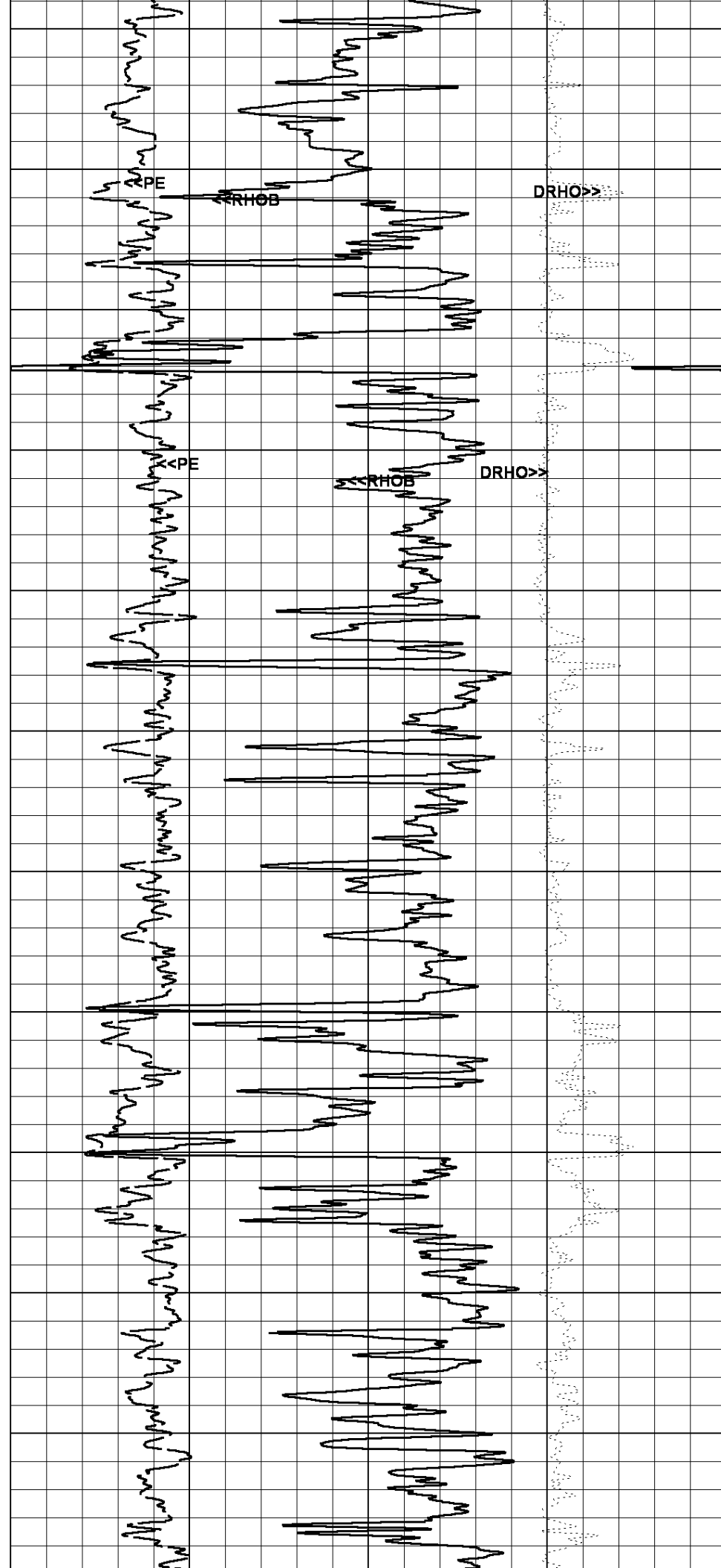
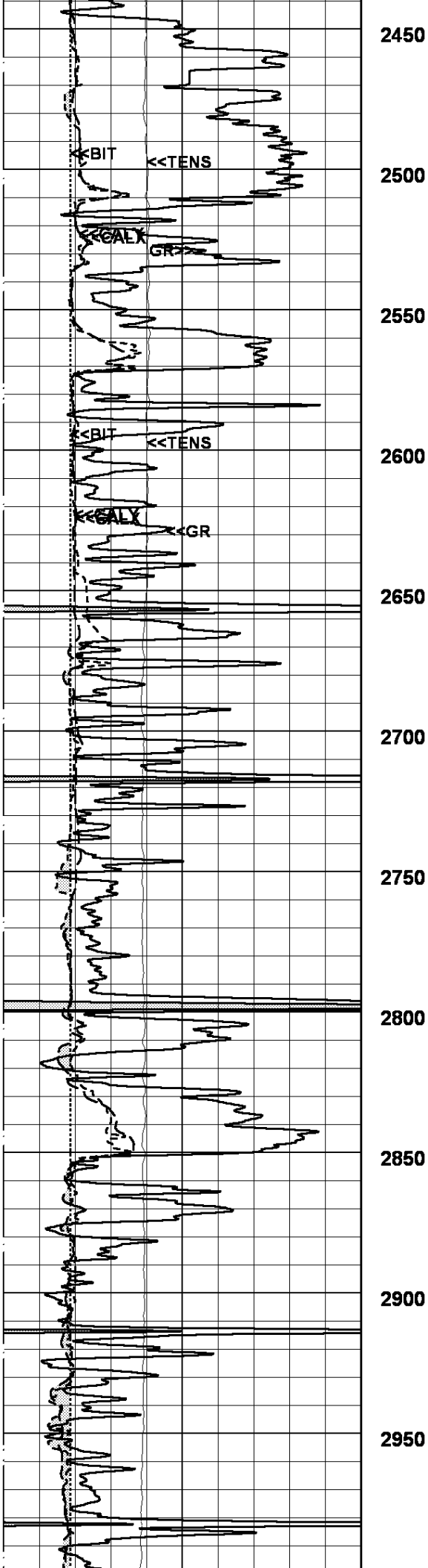
Bit Size (BIT)		
6.	Ref in	16.
Tension (TENS)		
5000.	Lbs	0.
Y-Caliper (CALY)		
6.	in	16.

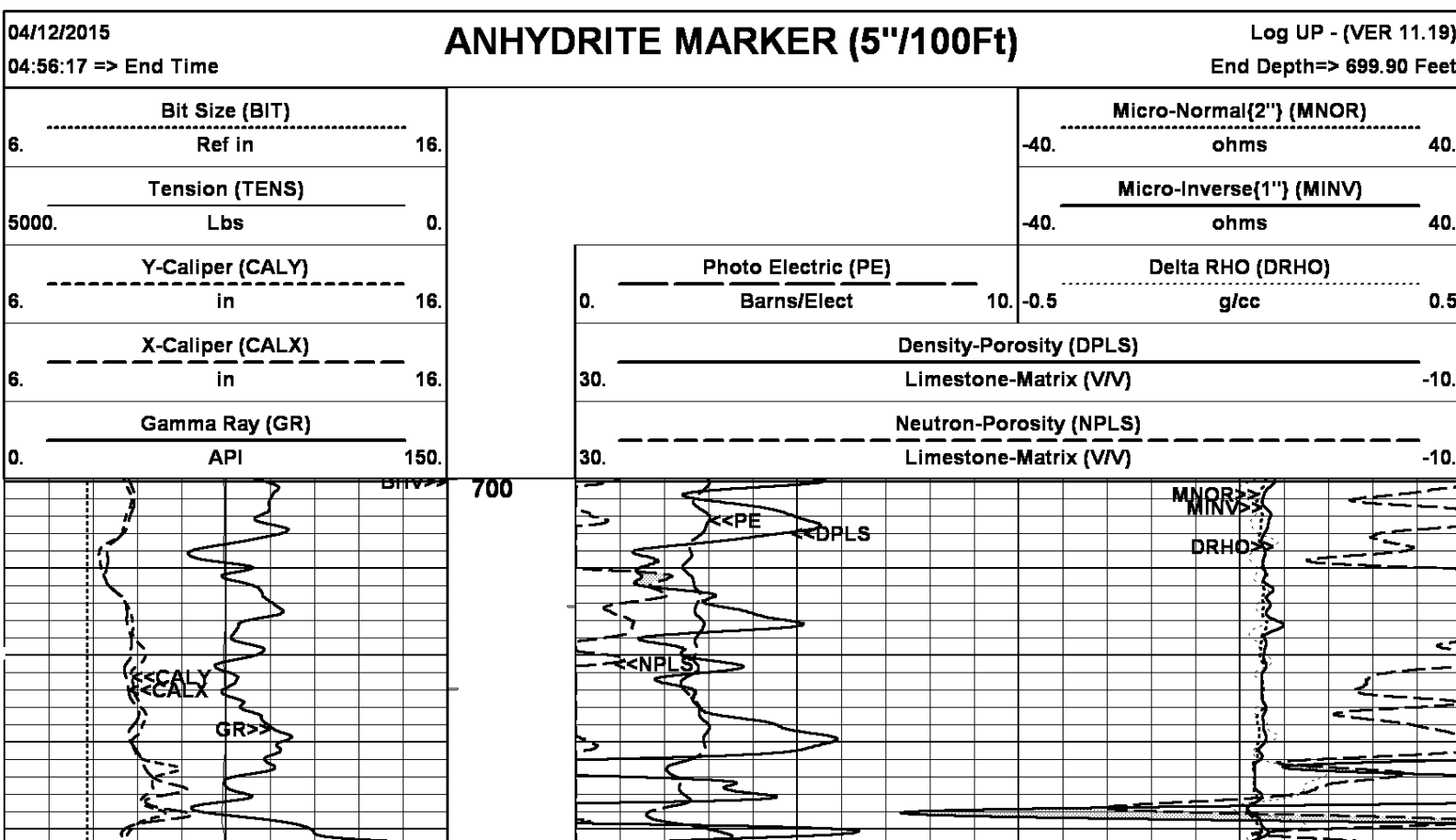
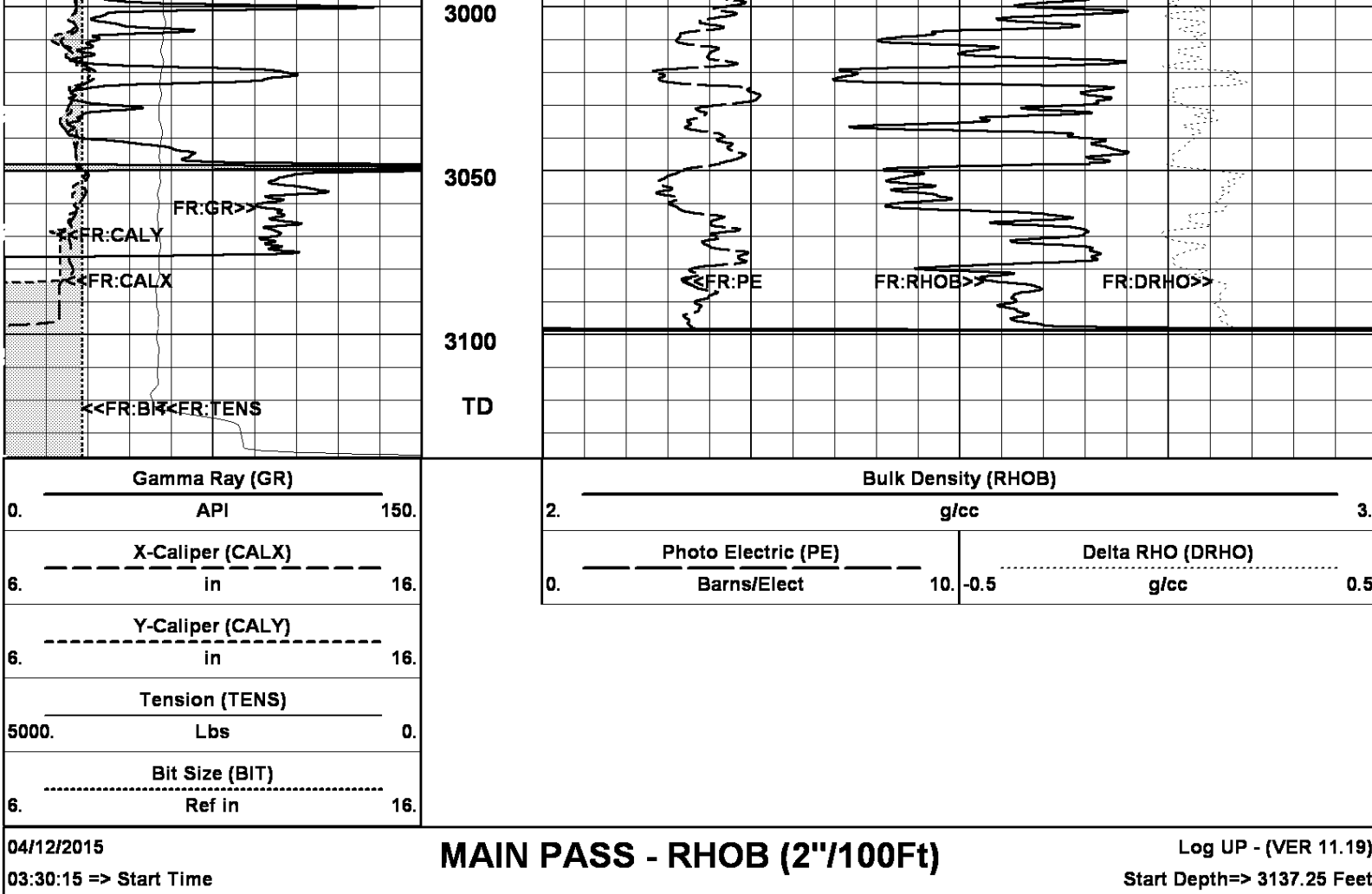


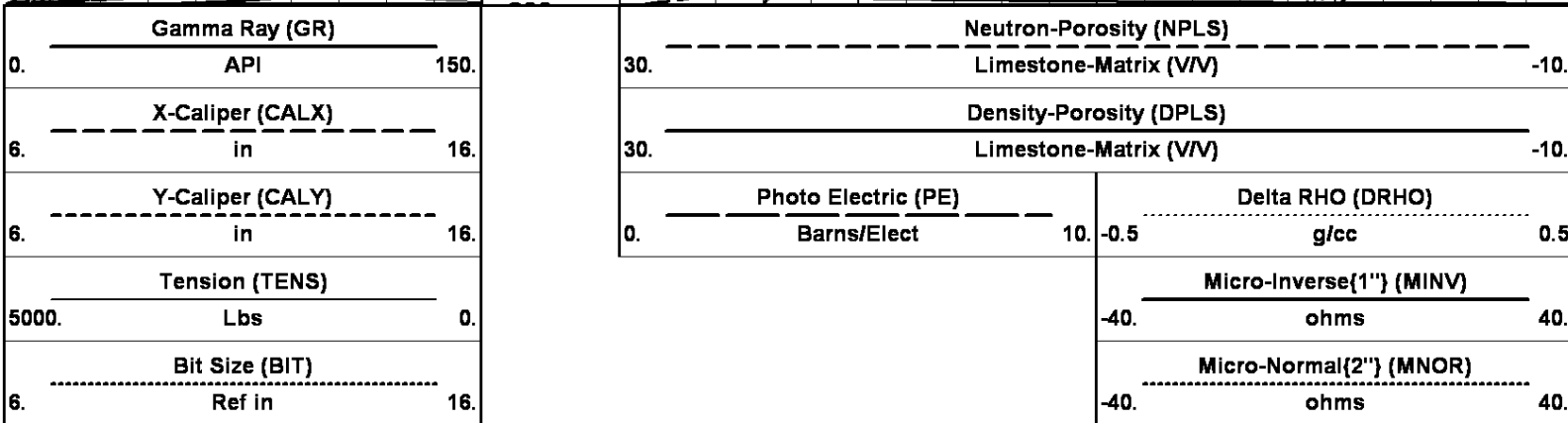
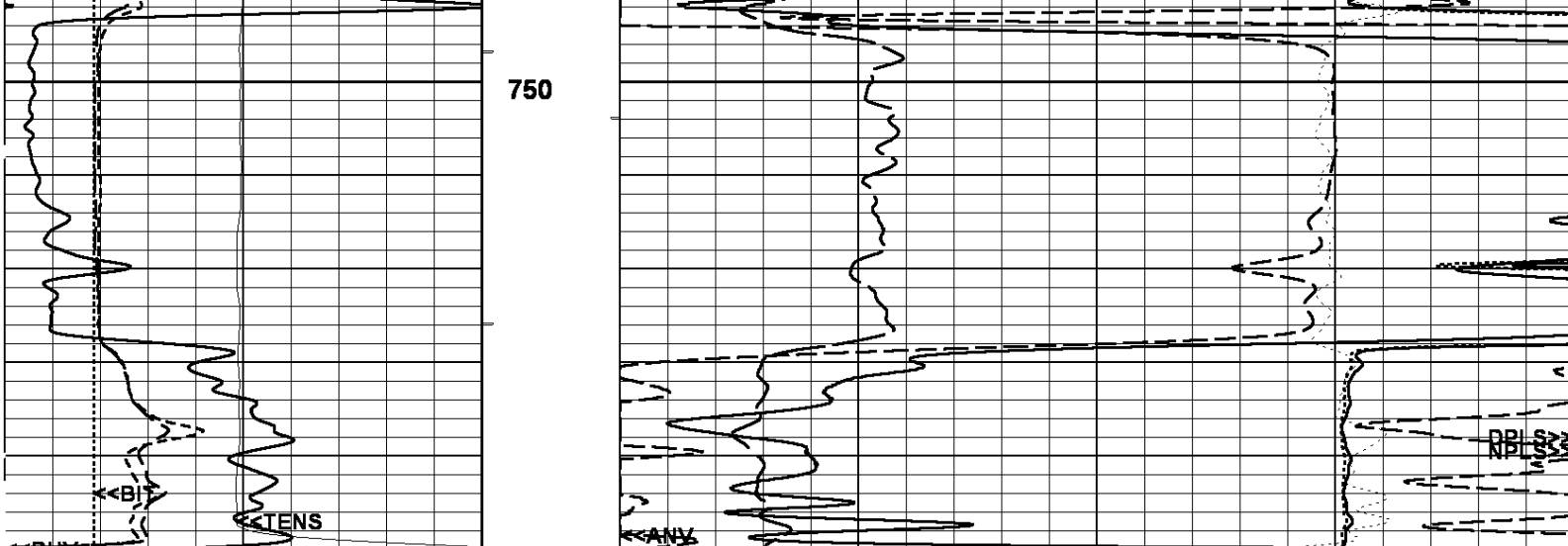






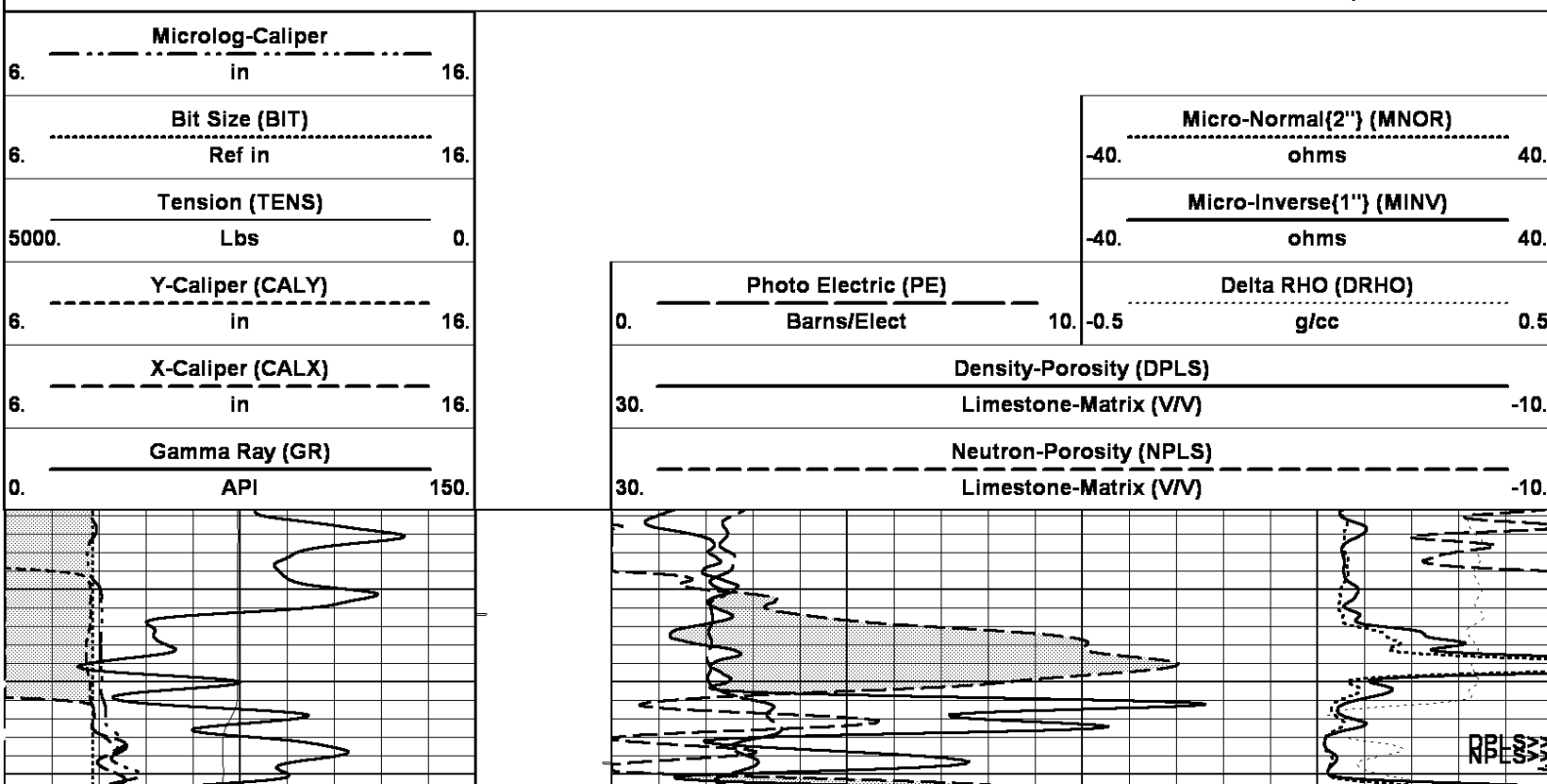


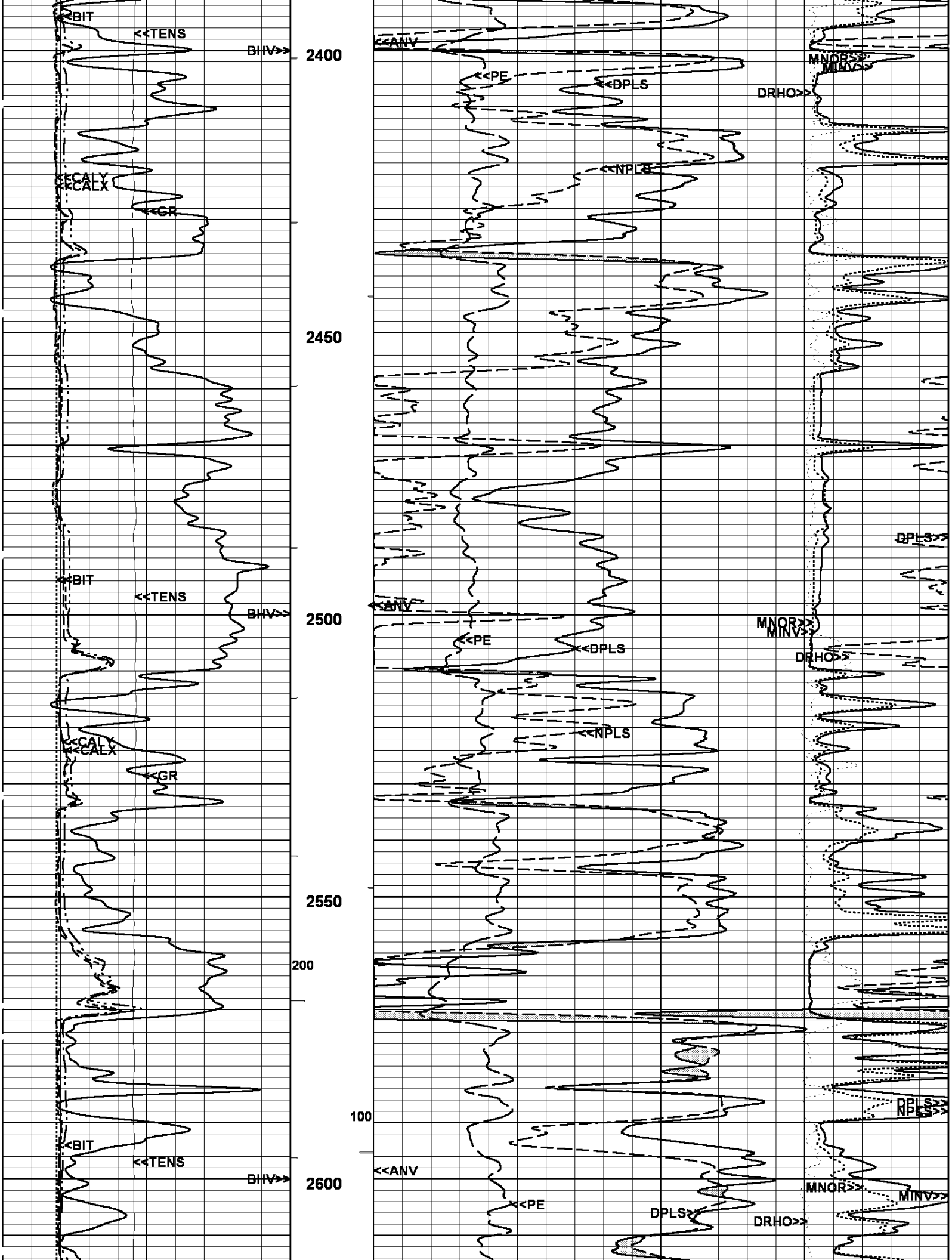


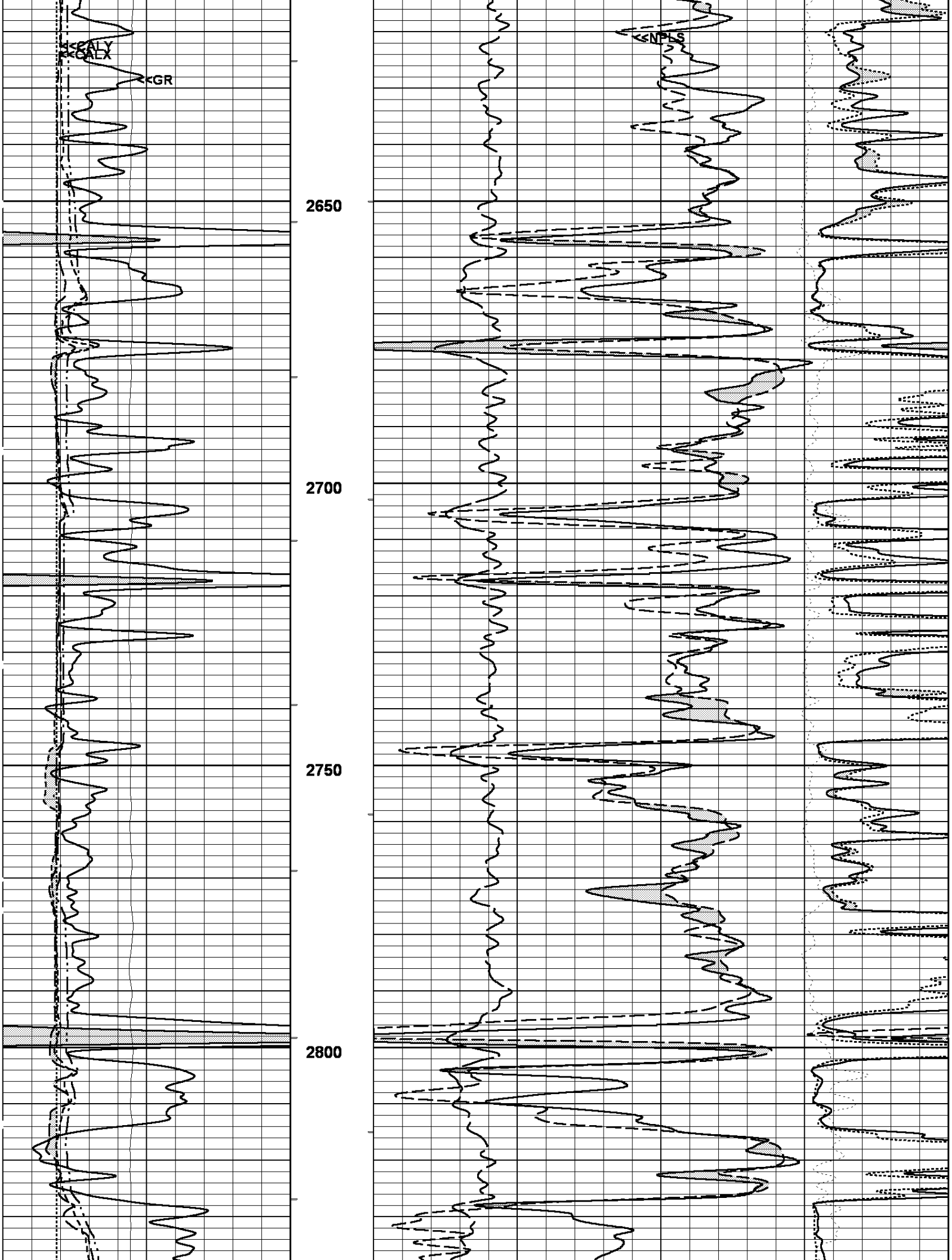


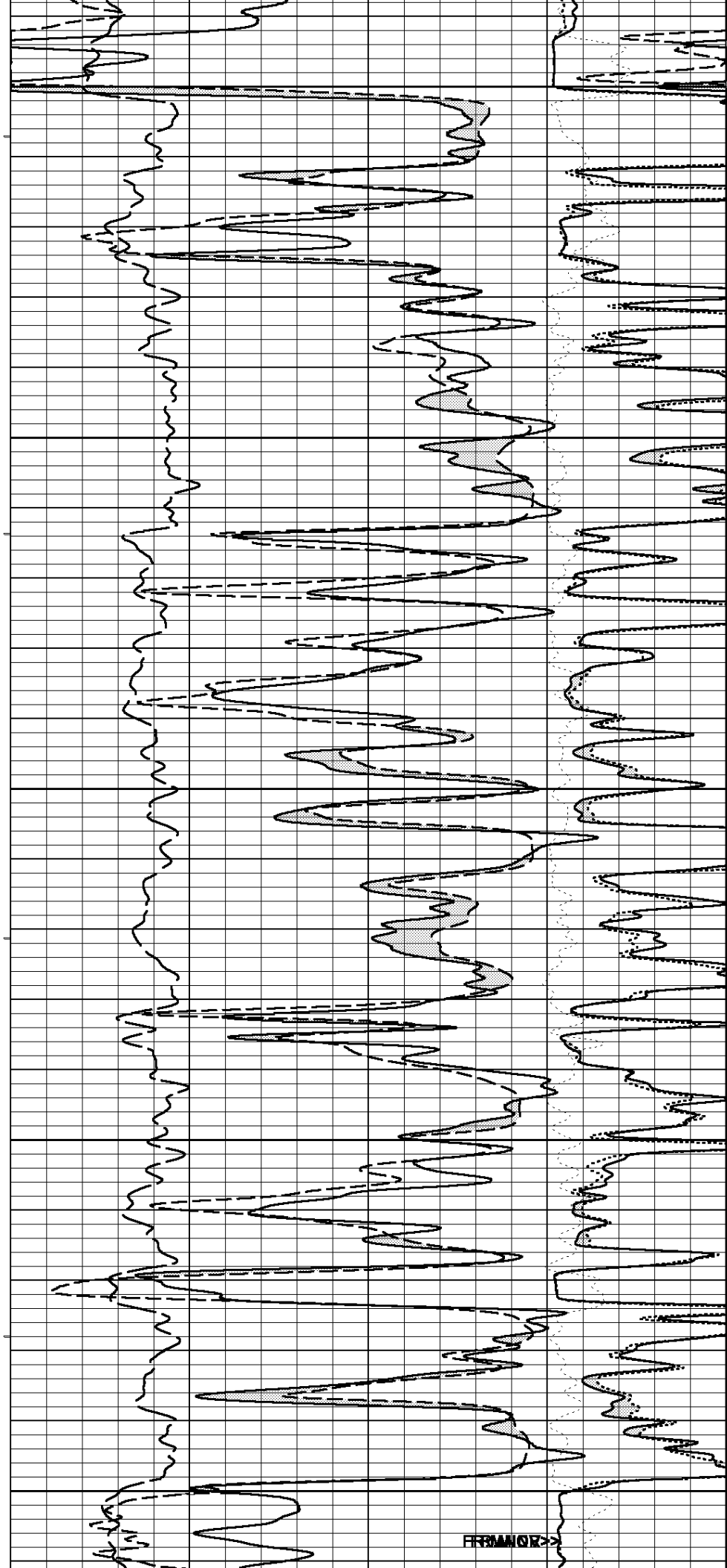
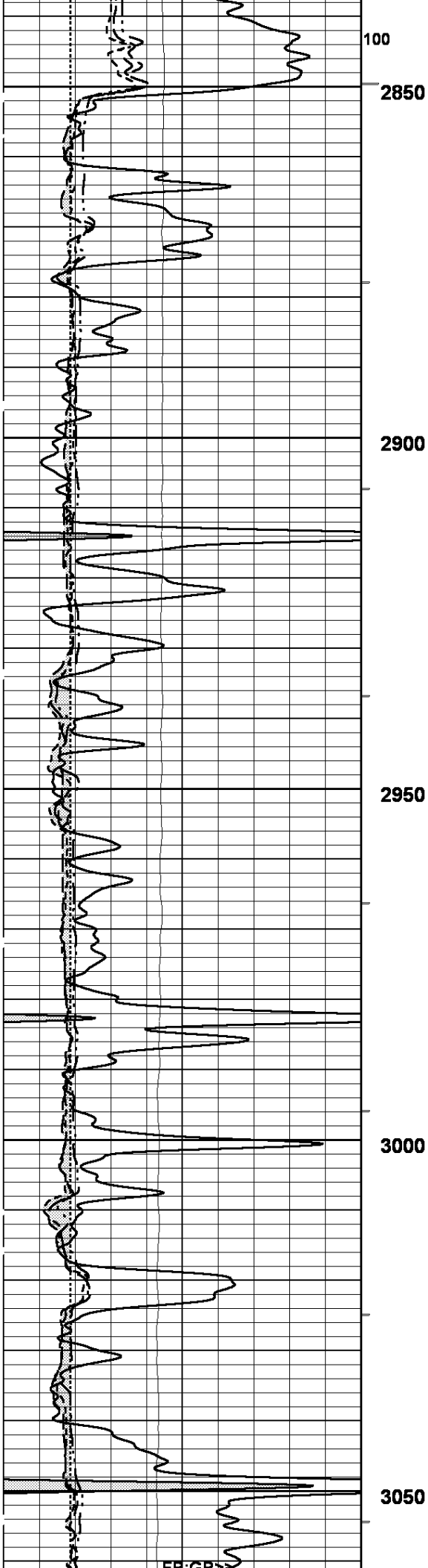
04/12/2015 **ANHYDRITE MARKER (5"/100Ft)** Log UP - (VER 11.19)
03:30:15 => Start Time Start Depth=> 799.90 Feet

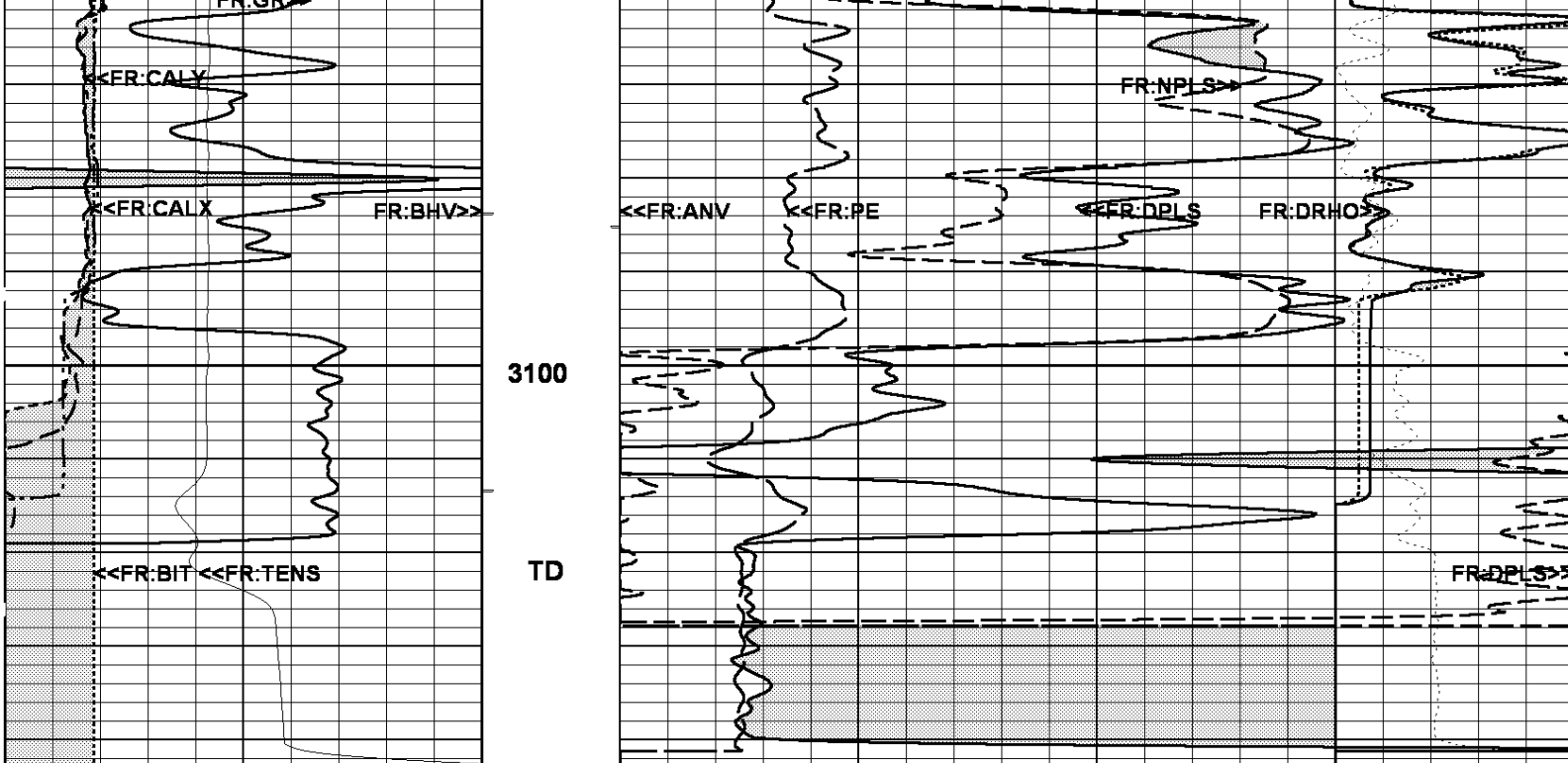
04/12/2015 **MAIN PASS - LIMESTONE (5"/100Ft)** Log UP - (VER 11.19)
07:36:35 => End Time End Depth=> 2356.60 Feet











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

04/12/2015
07:15:09 => Start Time

MAIN PASS - LIMESTONE (5"/100Ft)

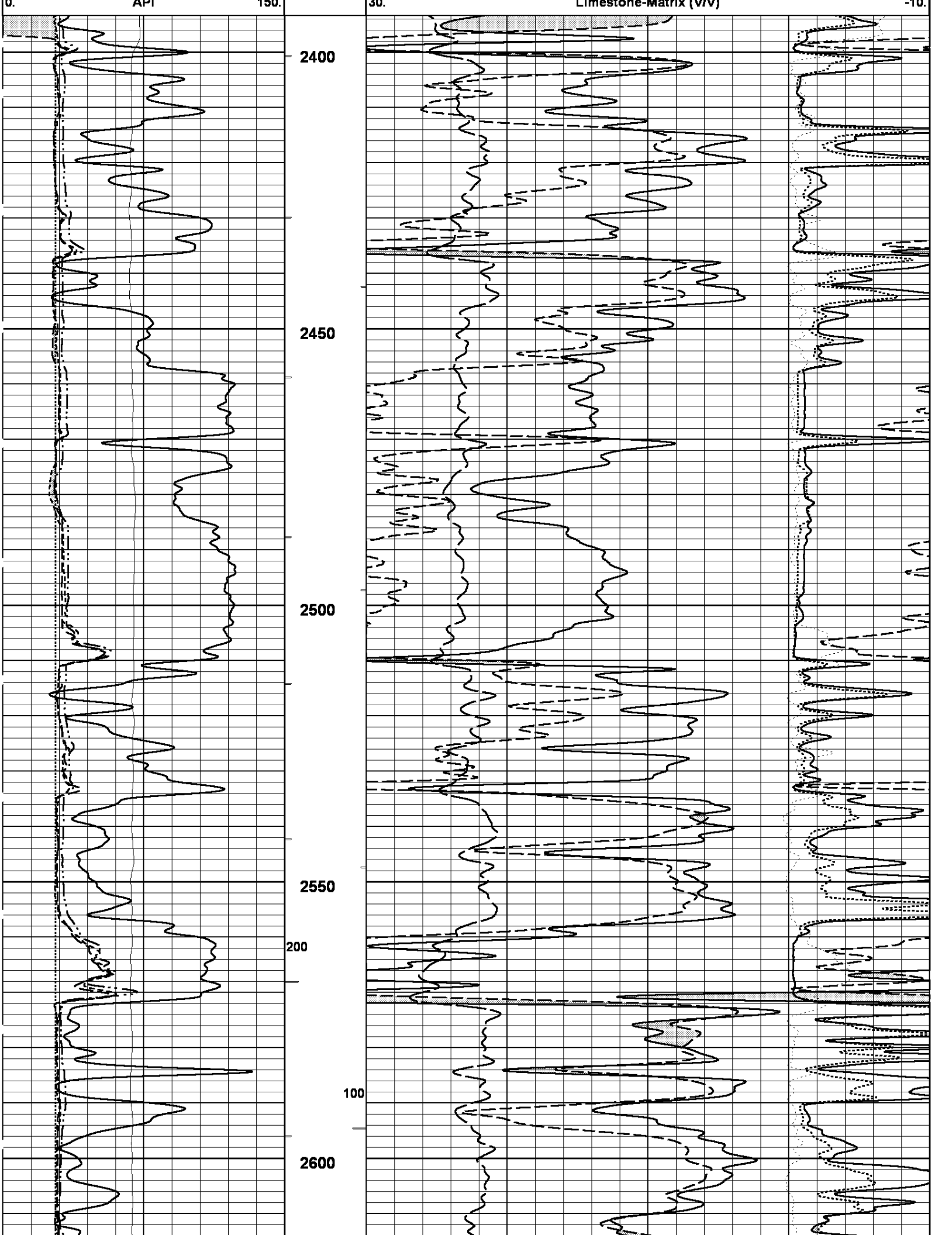
Log UP - (VER 11.19)
Start Depth=> 3138.10 Feet

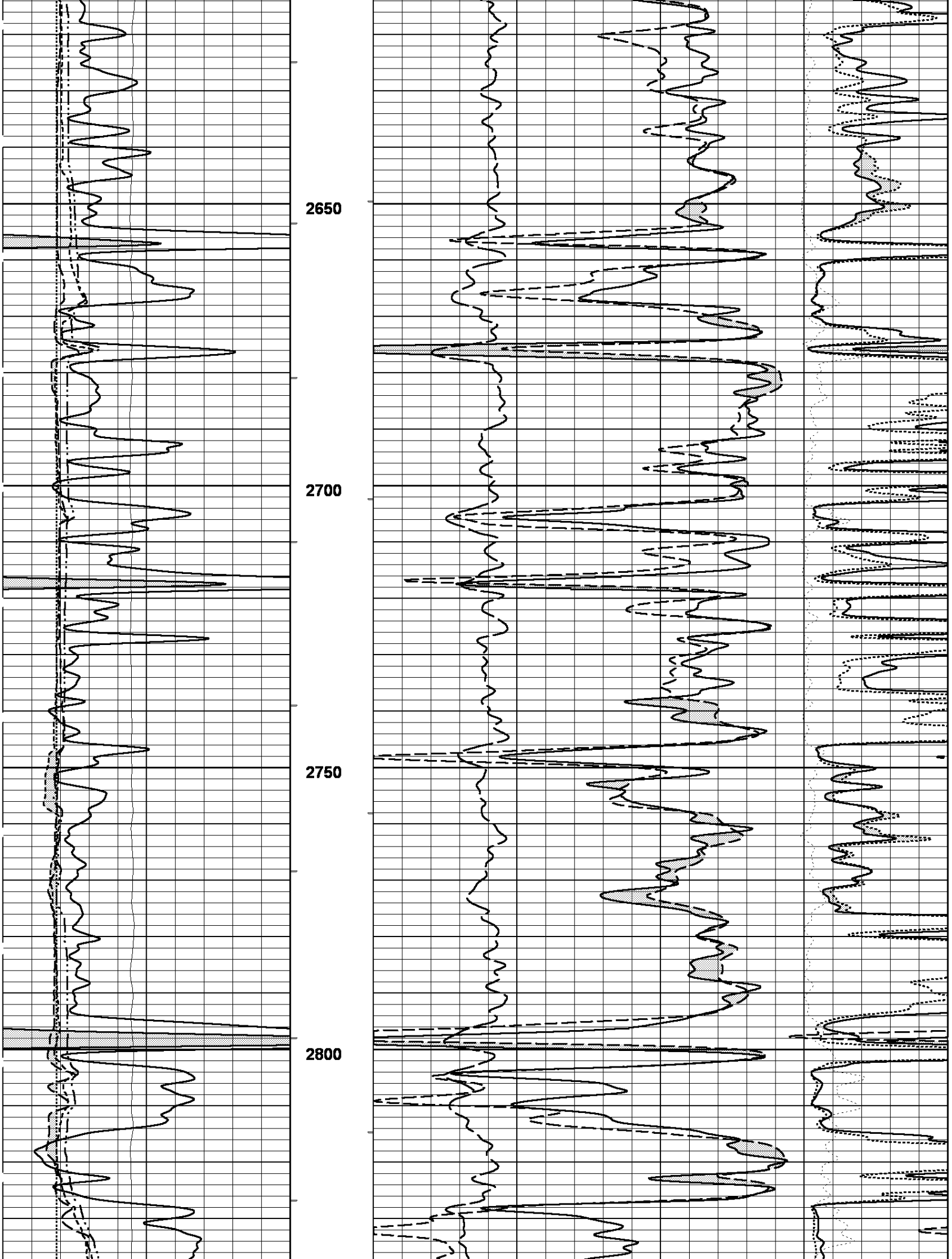
04/12/2015
07:09:39 => End Time

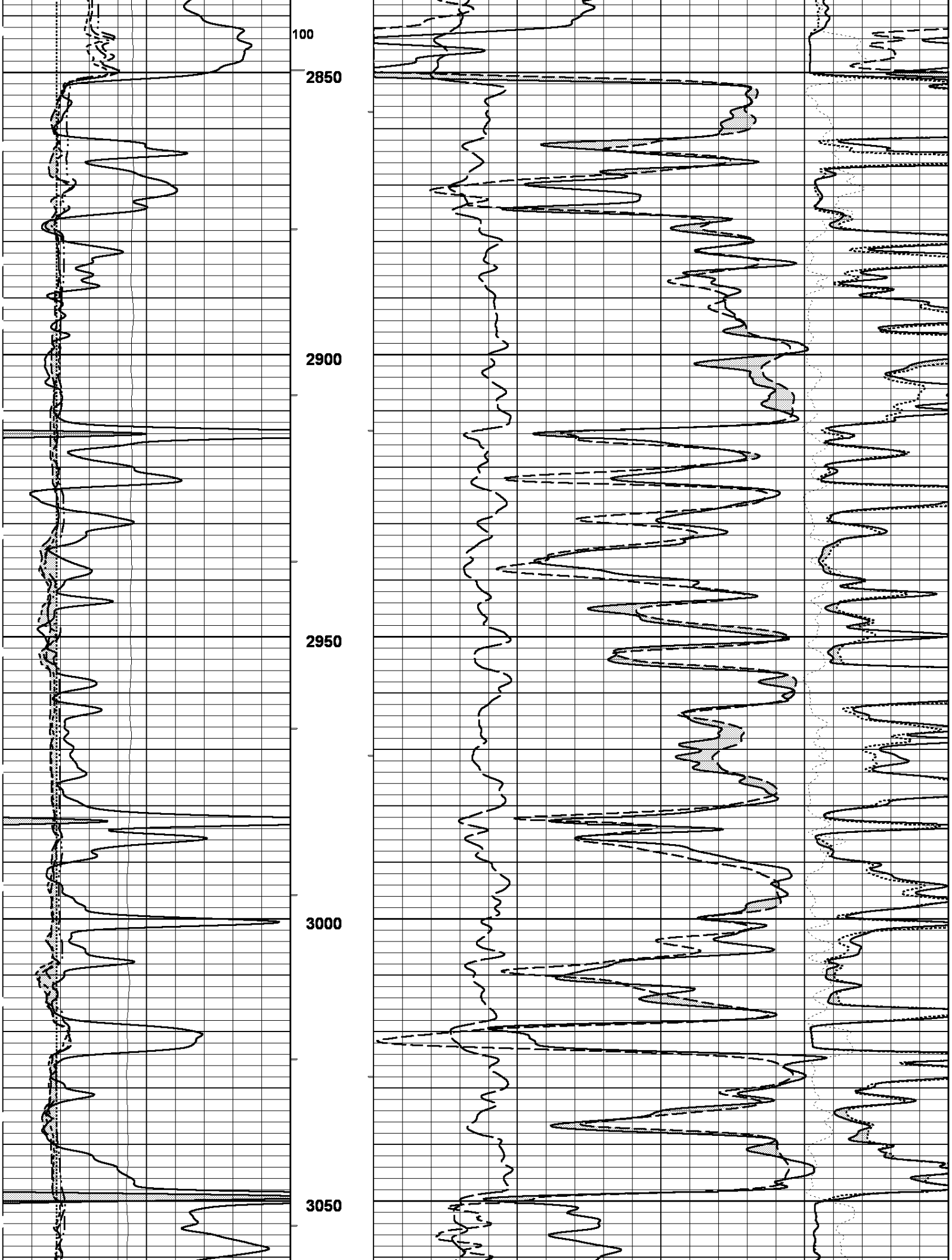
REPEAT PASS - LIMESTONE (5"/100Ft)

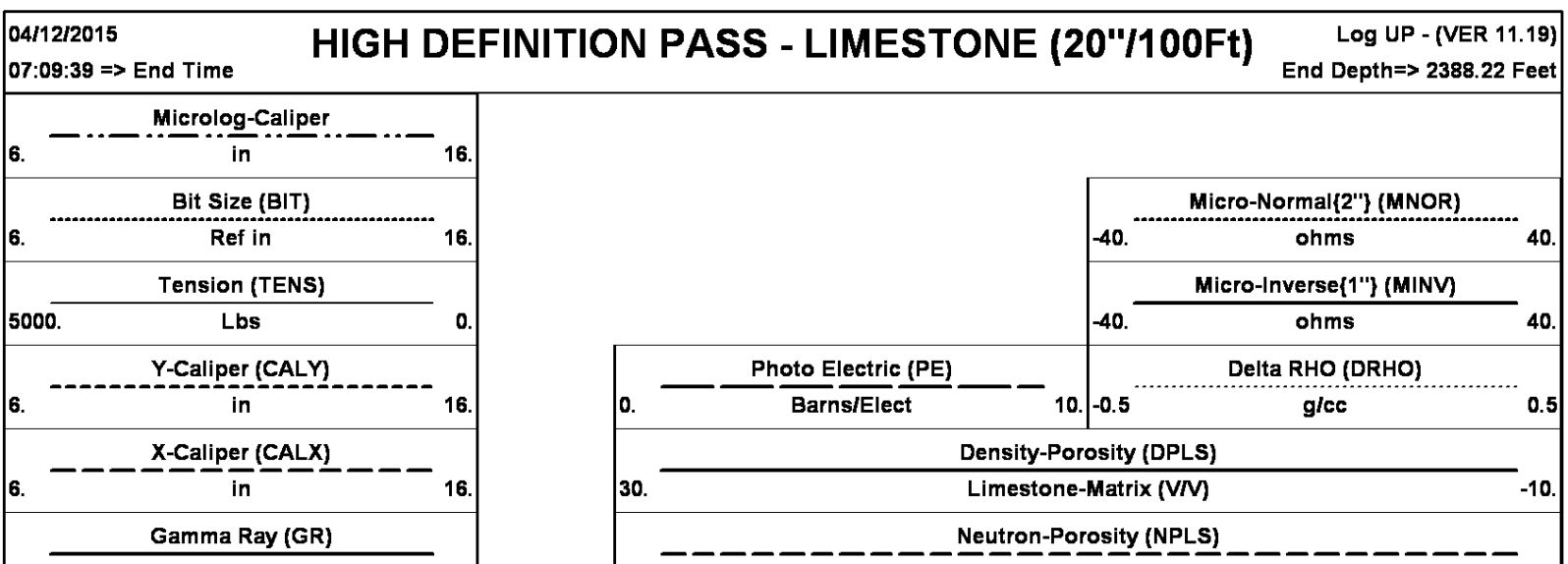
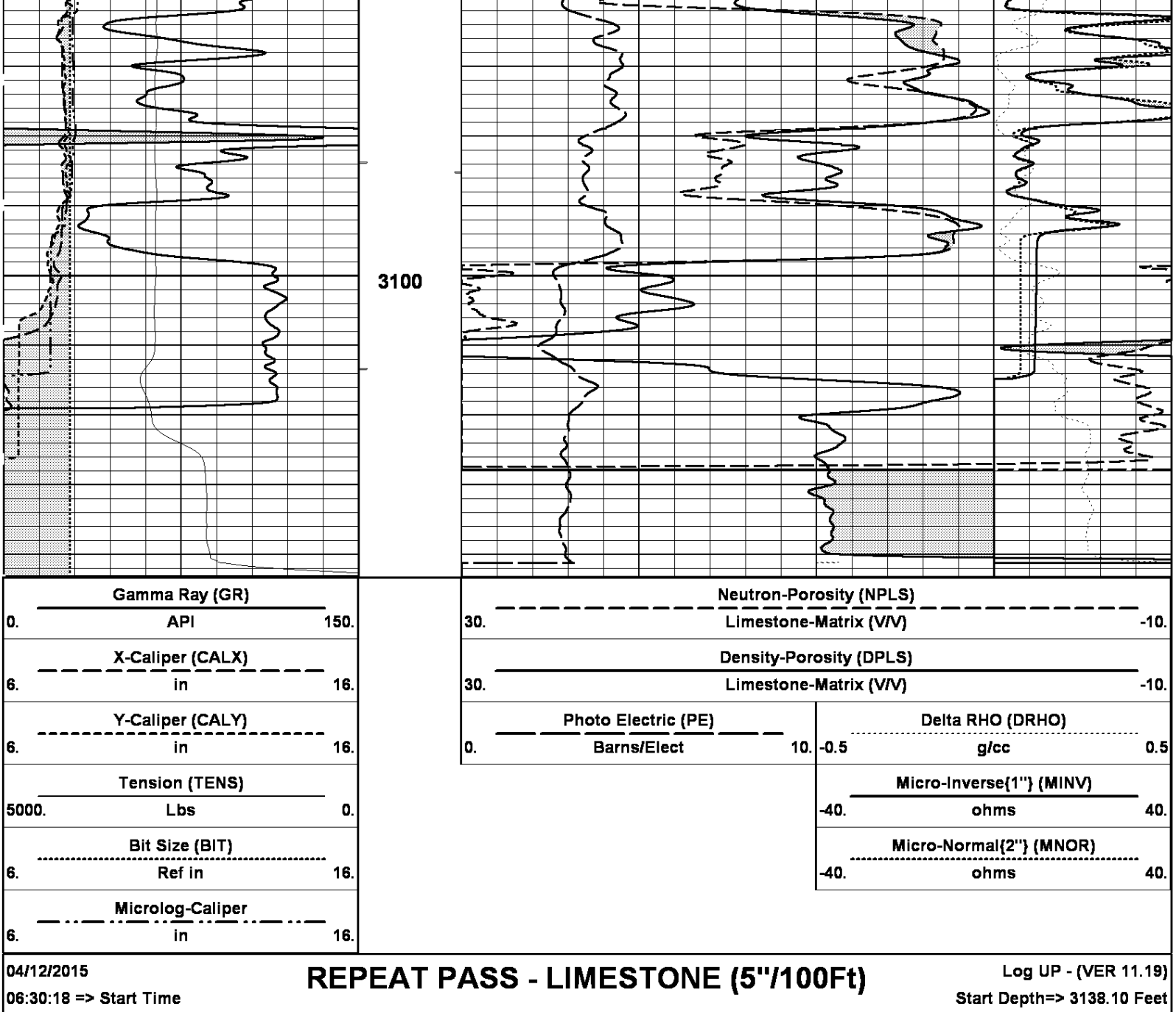
Log UP - (VER 11.19)
End Depth=> 2388.20 Feet

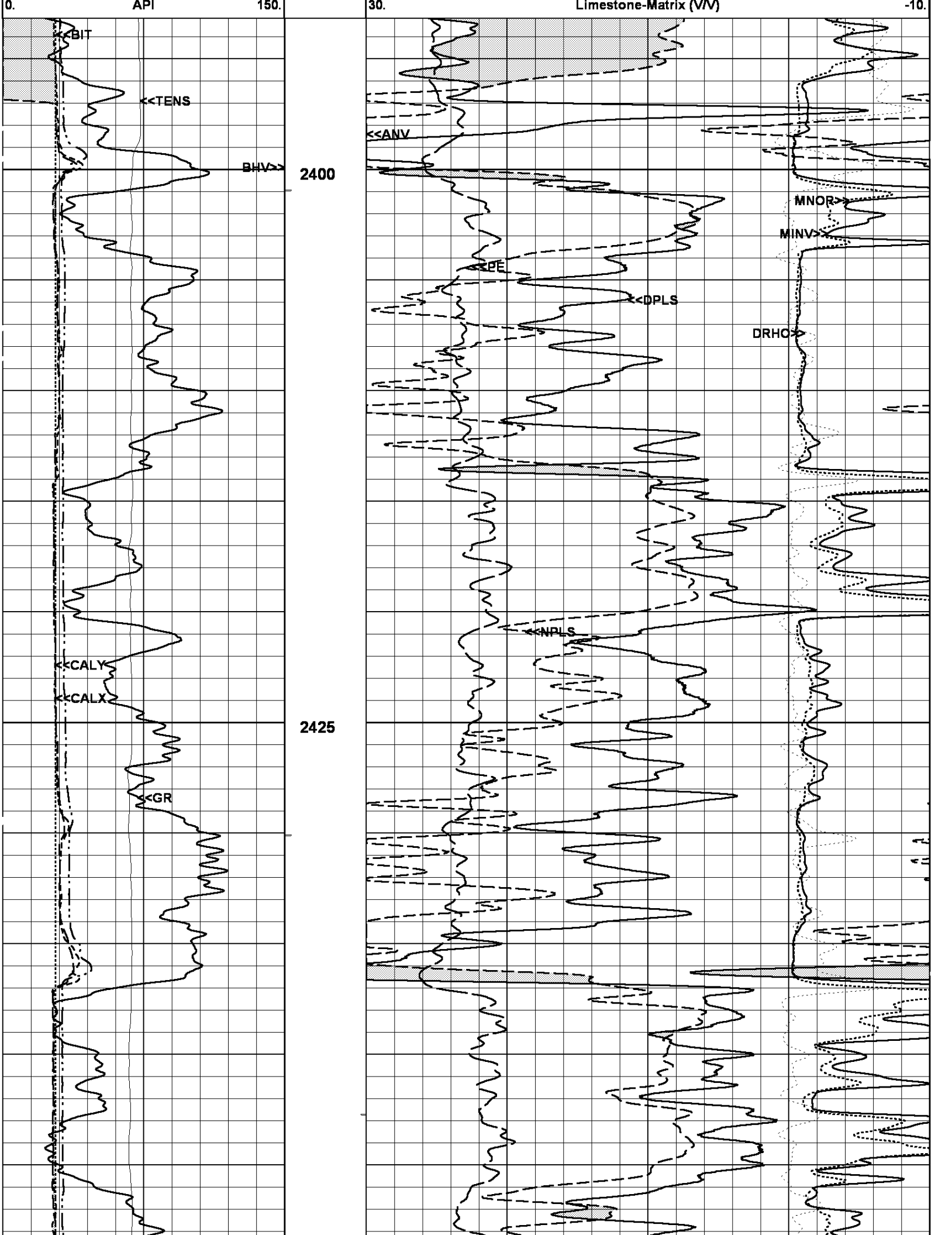
Microlog-Caliper		Micro-Normal{2"} (MNOR)	
6.	in	16.	-40.
Bit Size (BIT)		ohms	
6.	Ref in	16.	40.
Tension (TENS)		Micro-Inverse{1"} (MINV)	
5000.	Lbs	0.	-40.
Y-Caliper (CALY)		ohms	
6.	in	16.	40.
X-Caliper (CALX)		Photo Electric (PE)	
6.	in	16.	0.
Gamma Ray (GR)		Barns/Elect	
0.	API	150.	10.
		Delta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

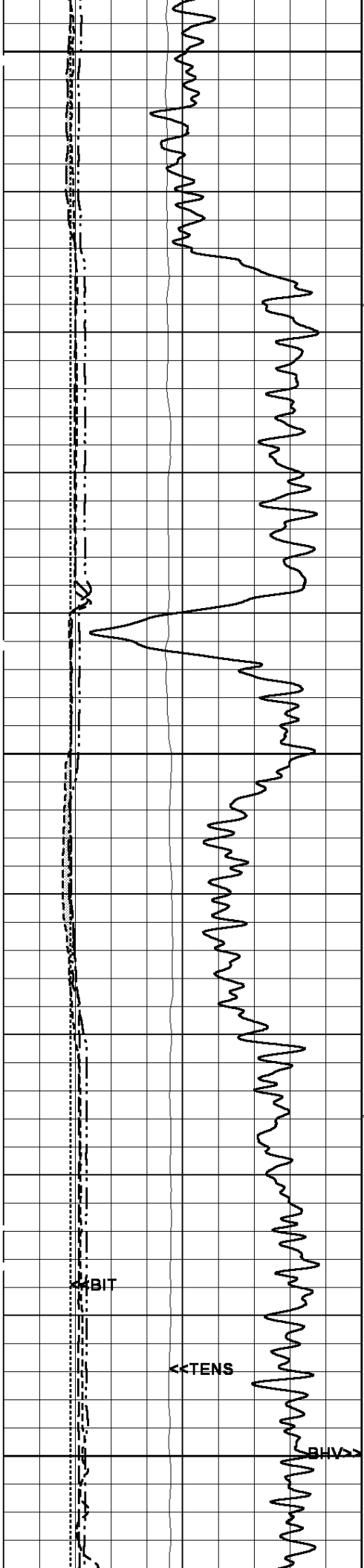








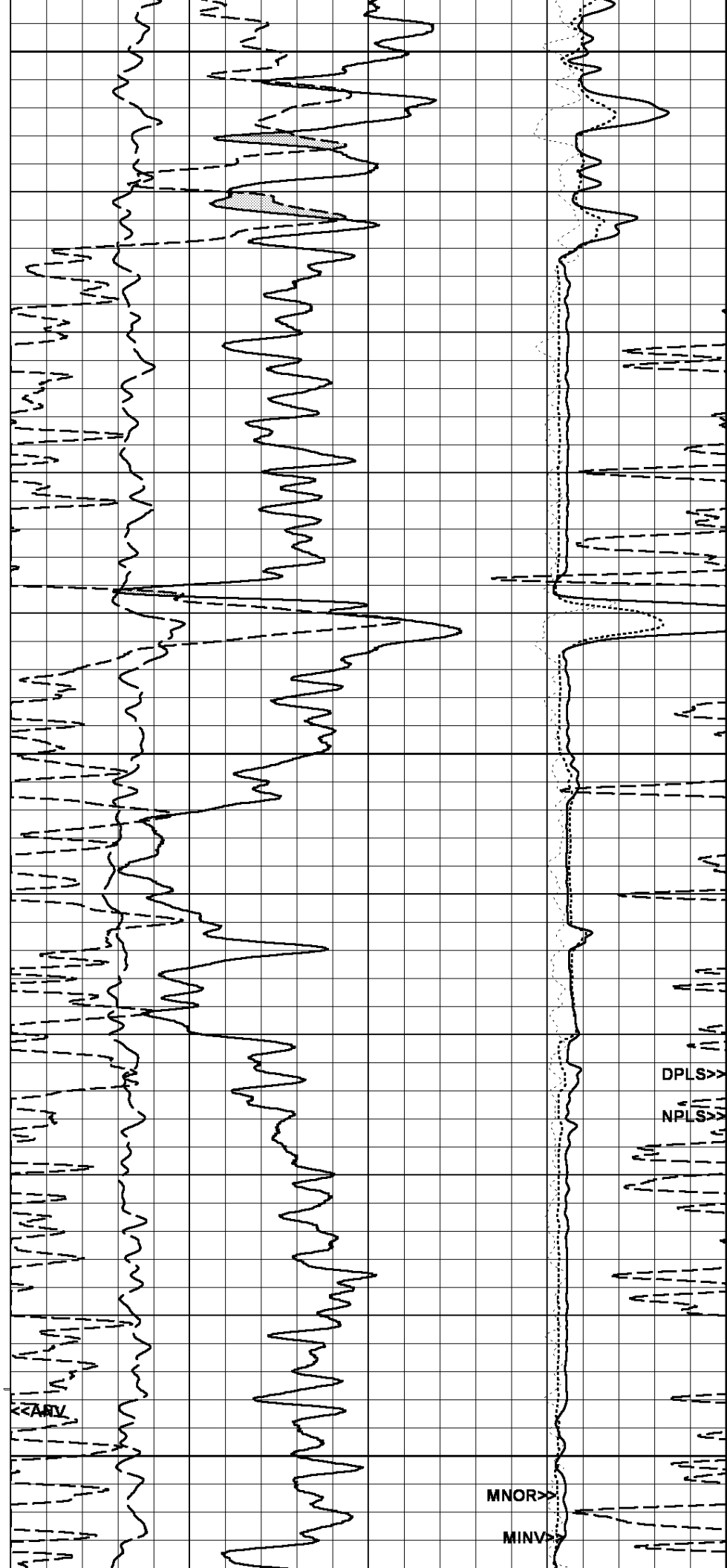




2450

2475

2500

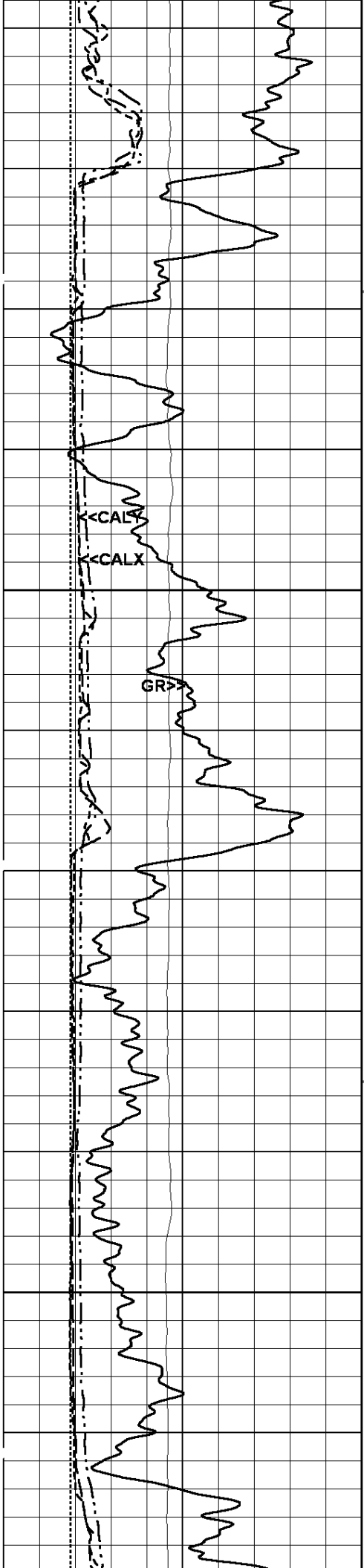


DPLS>>

NPLS>>

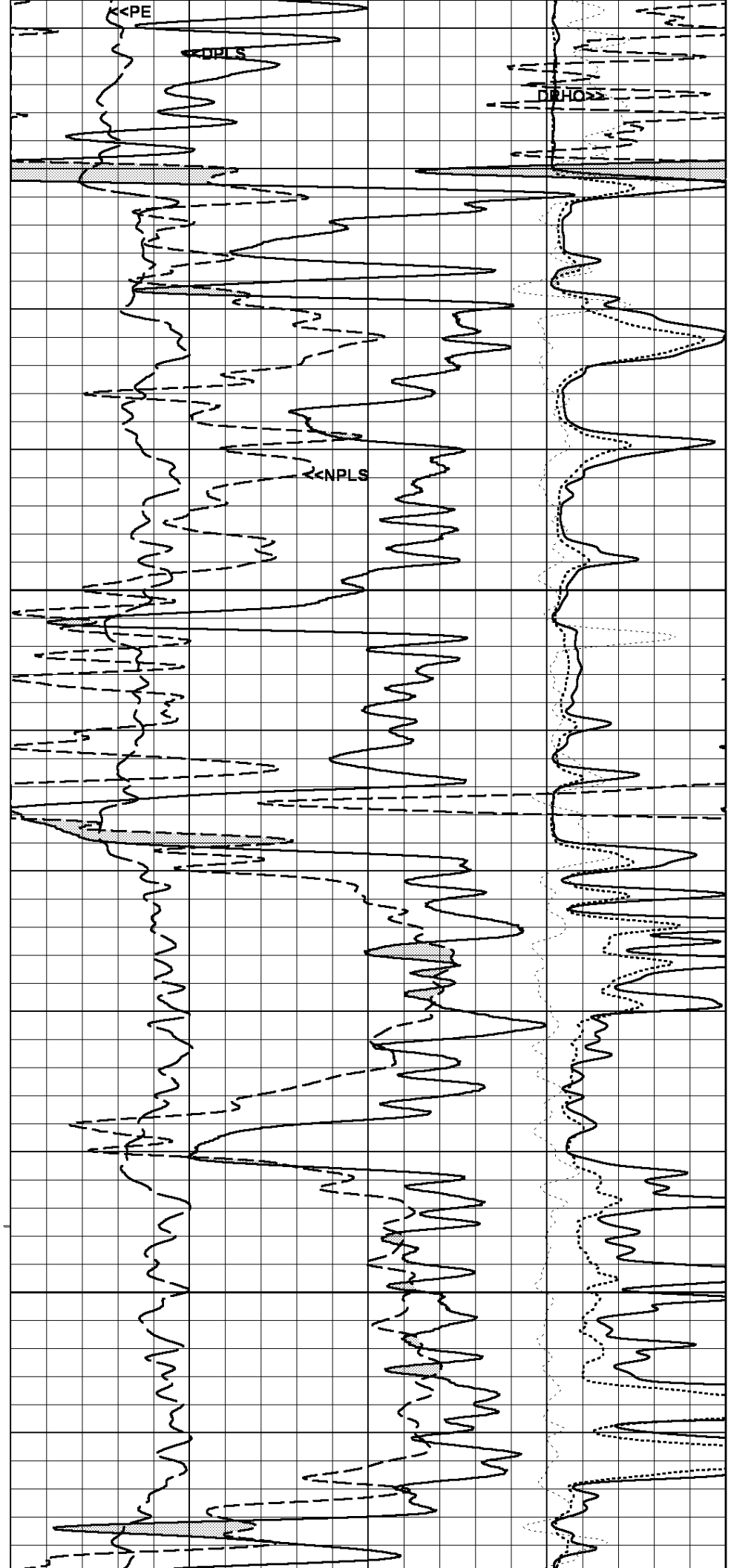
MNOR>>

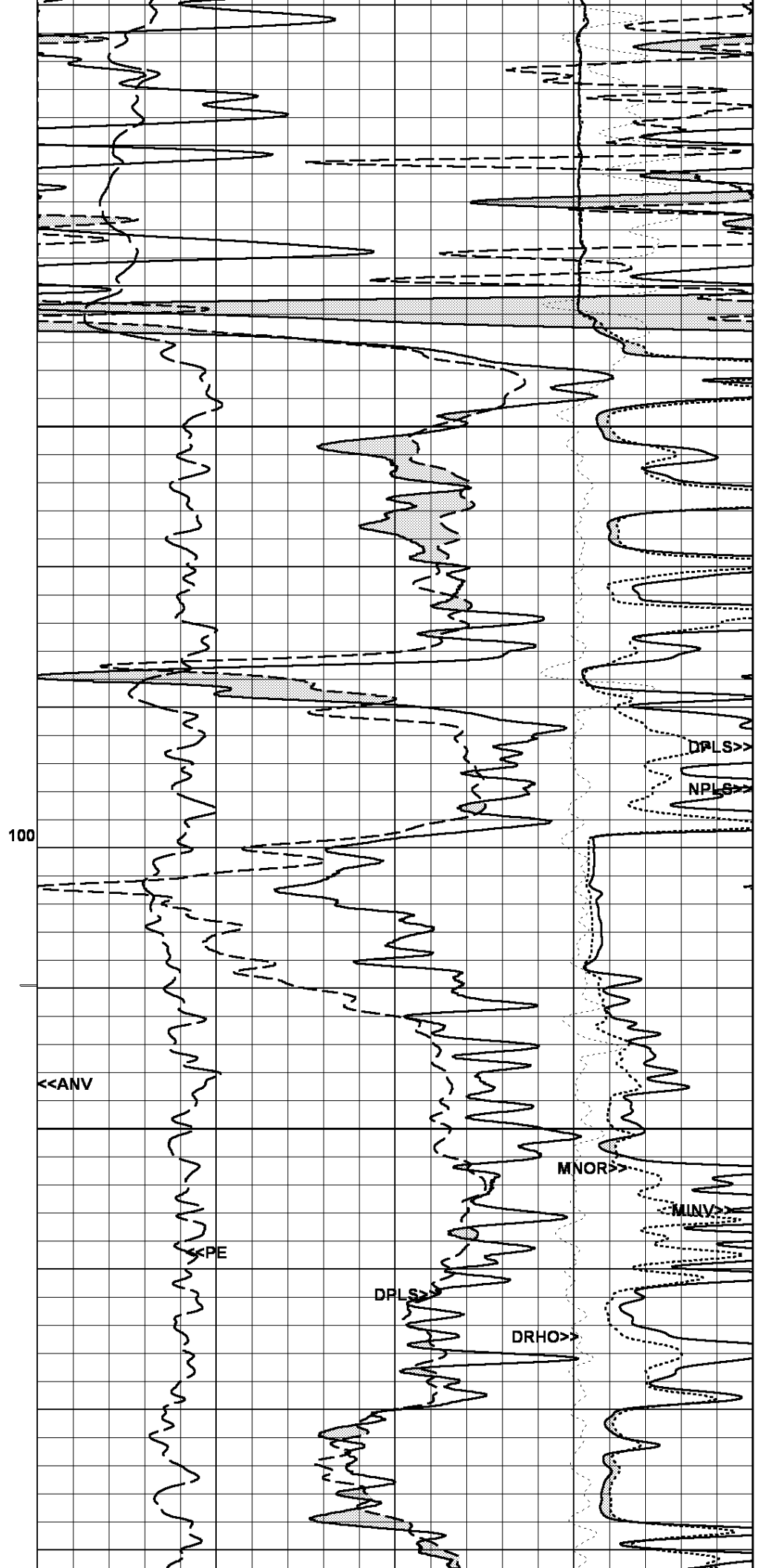
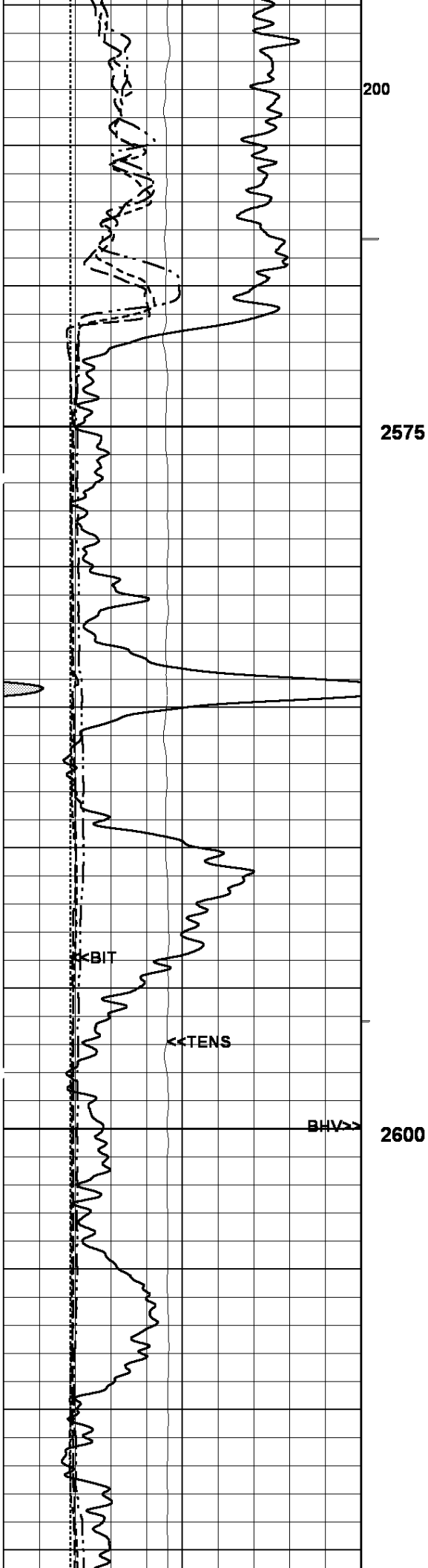
MINV>>

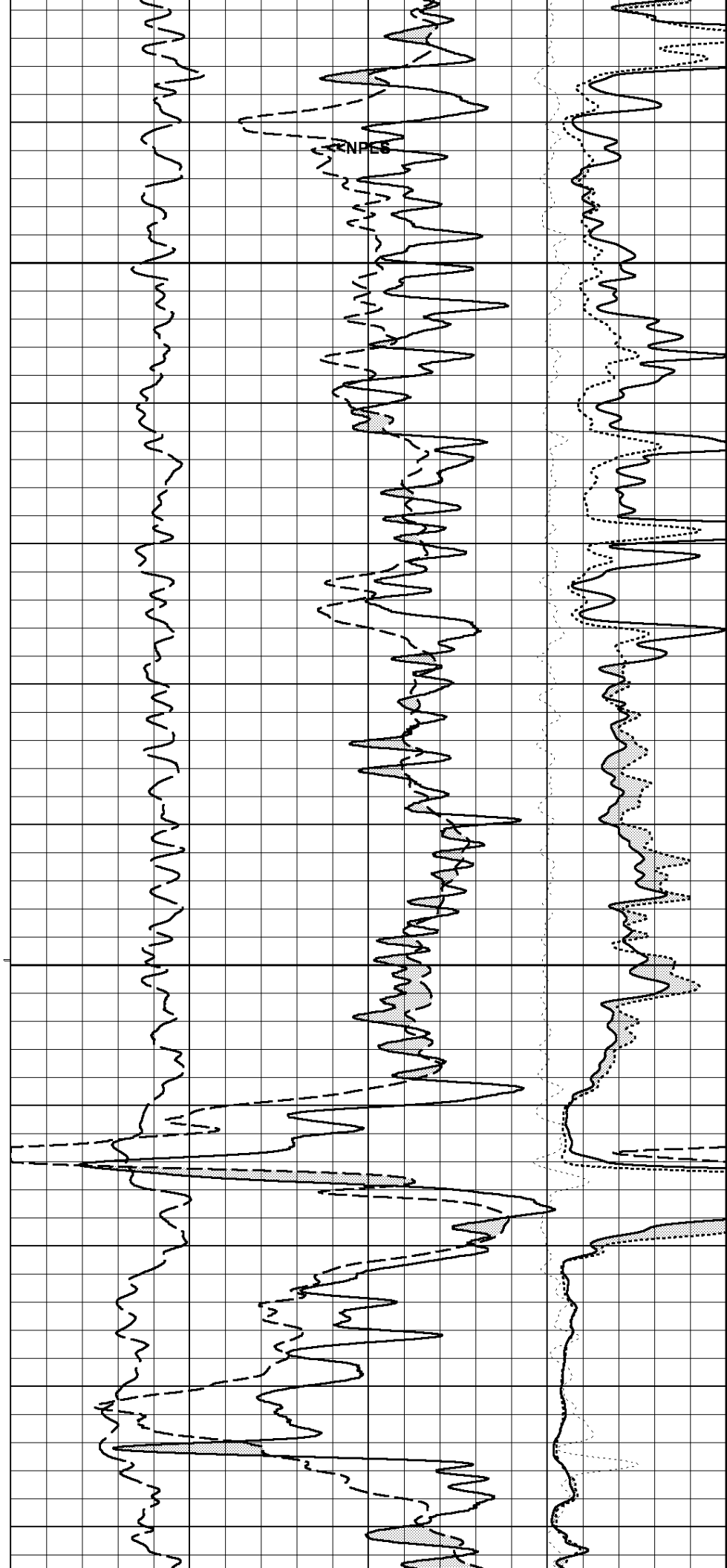
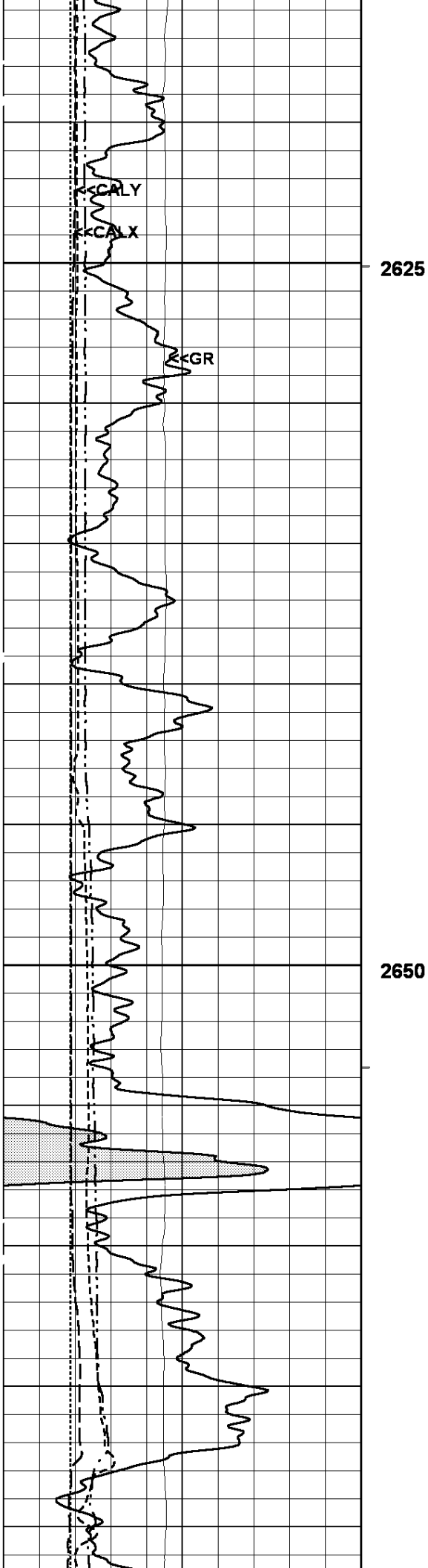


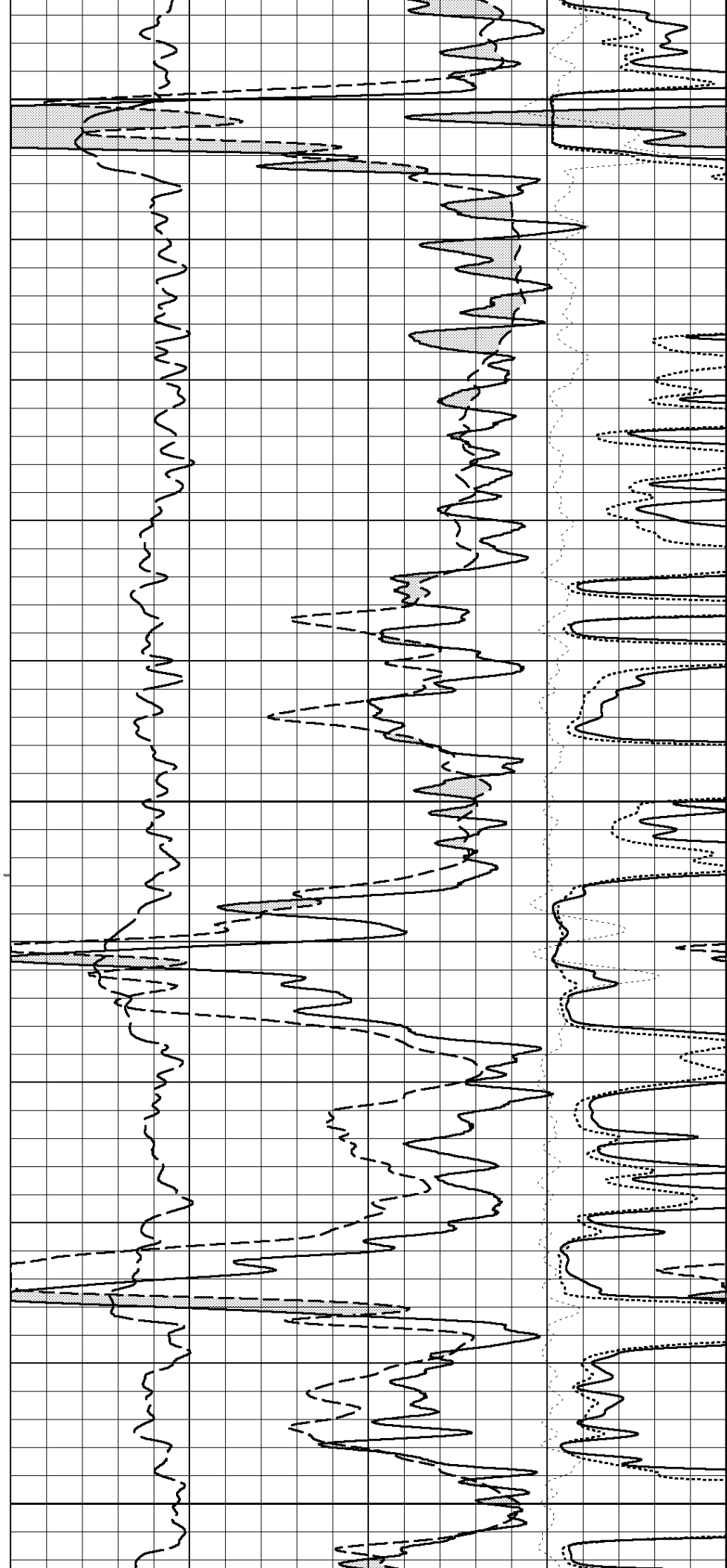
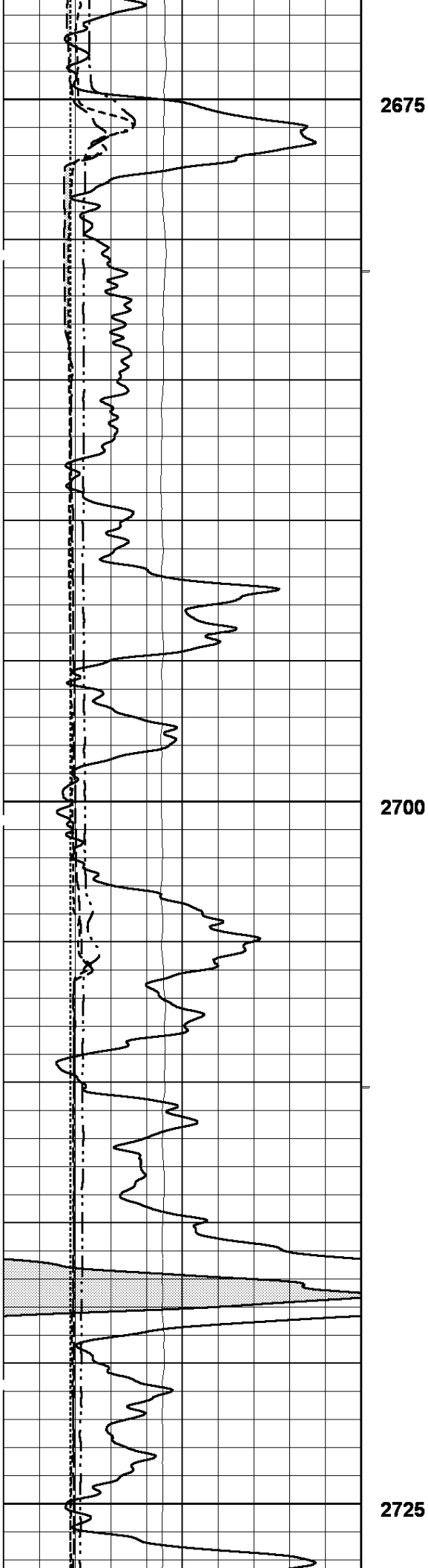
2525

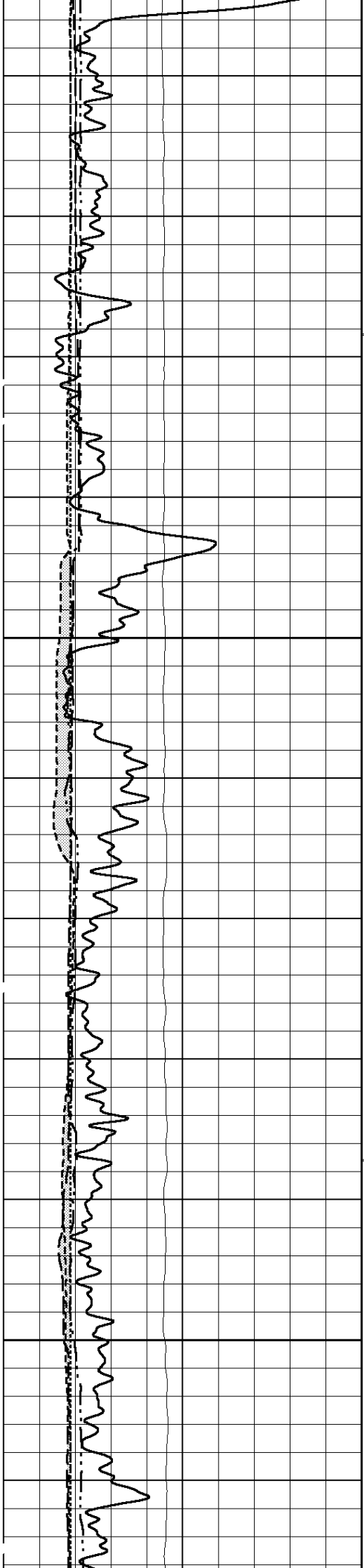
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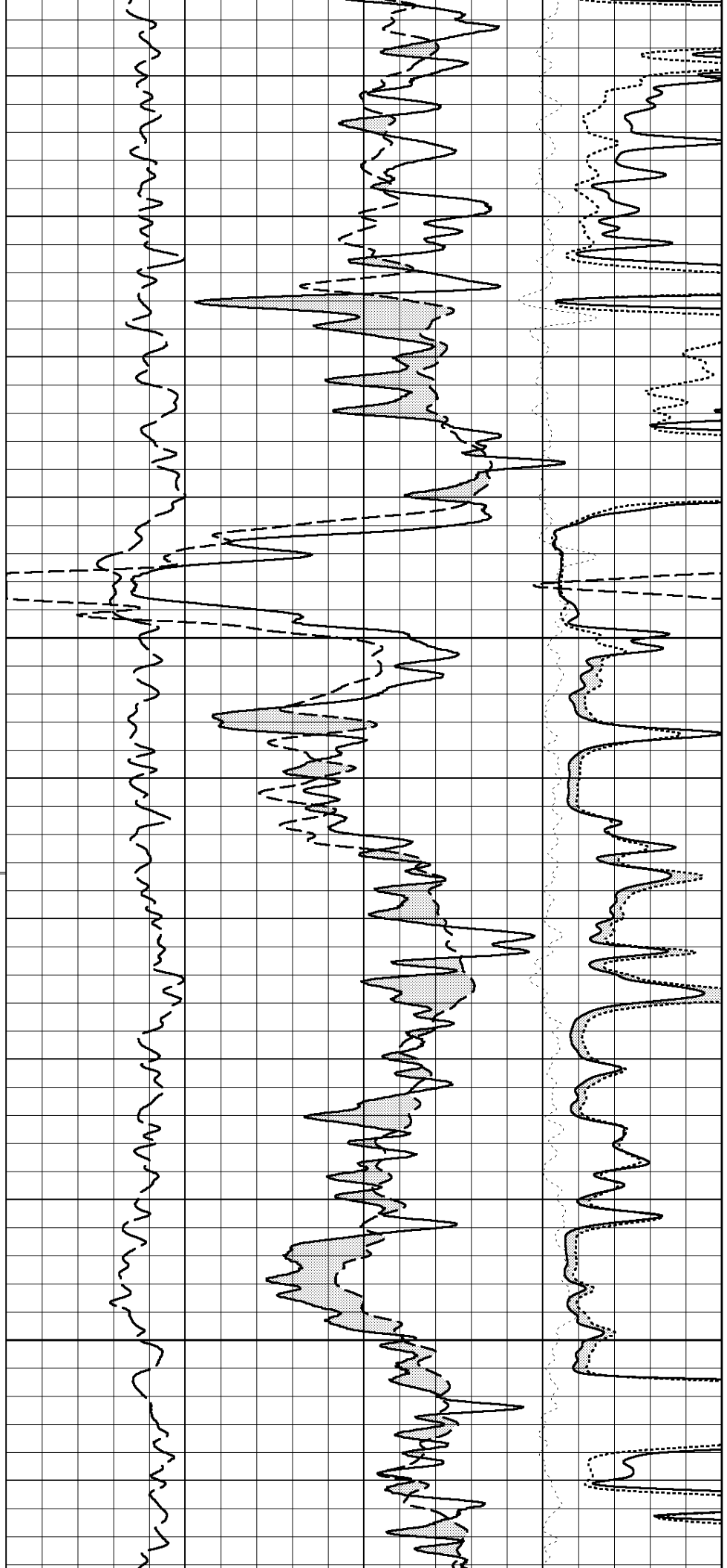


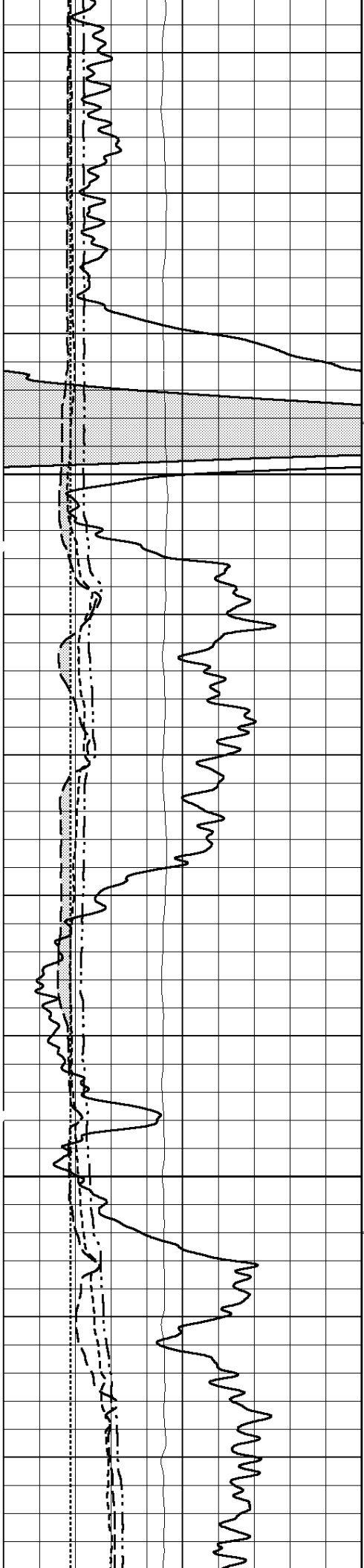




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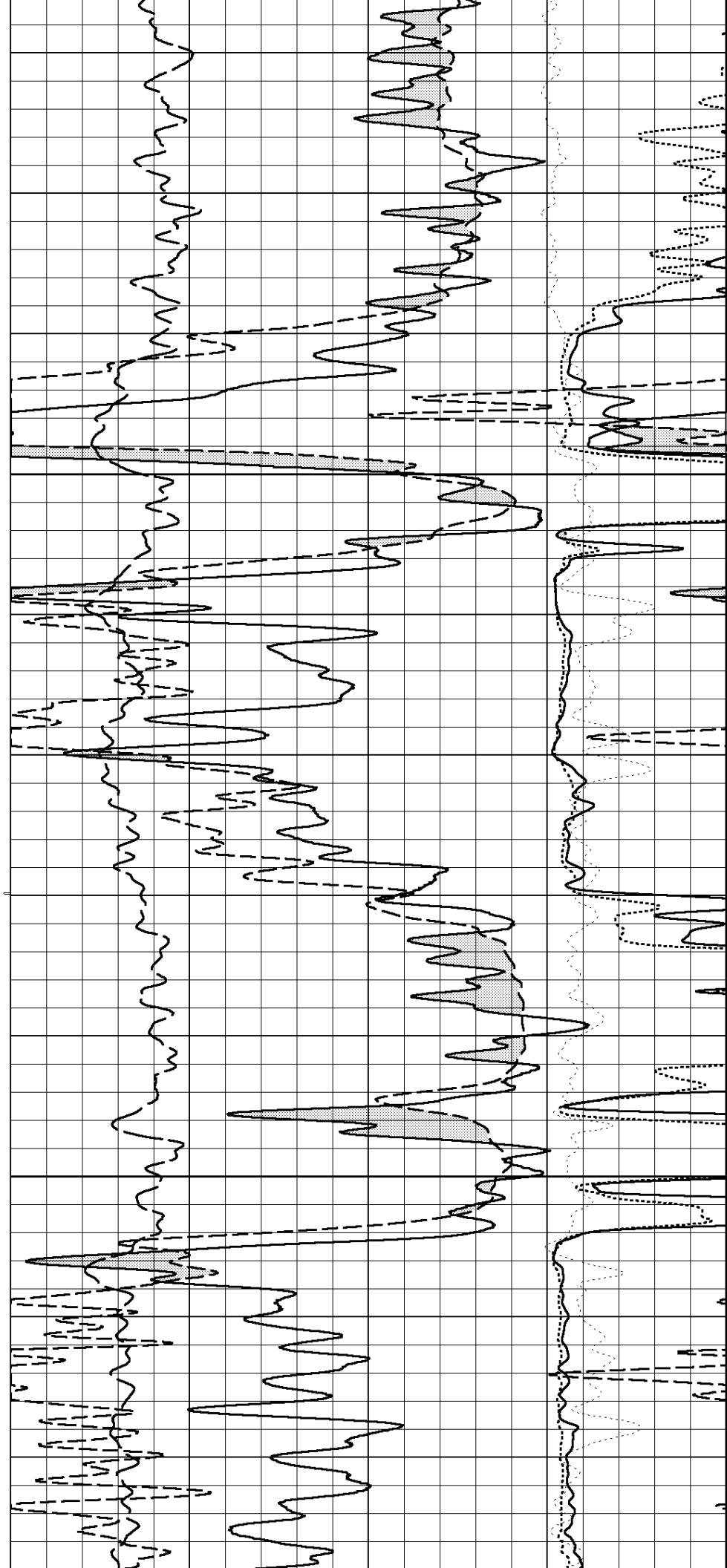
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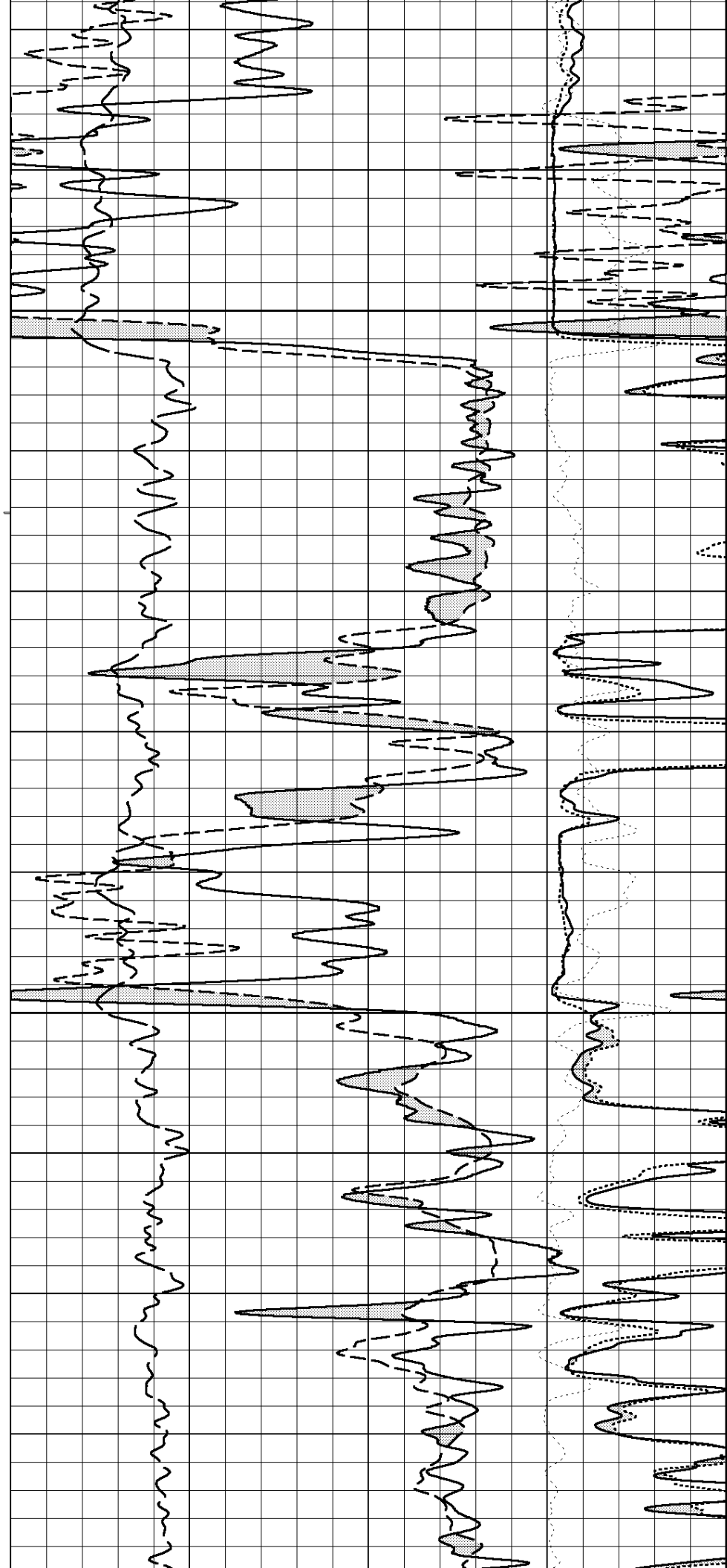
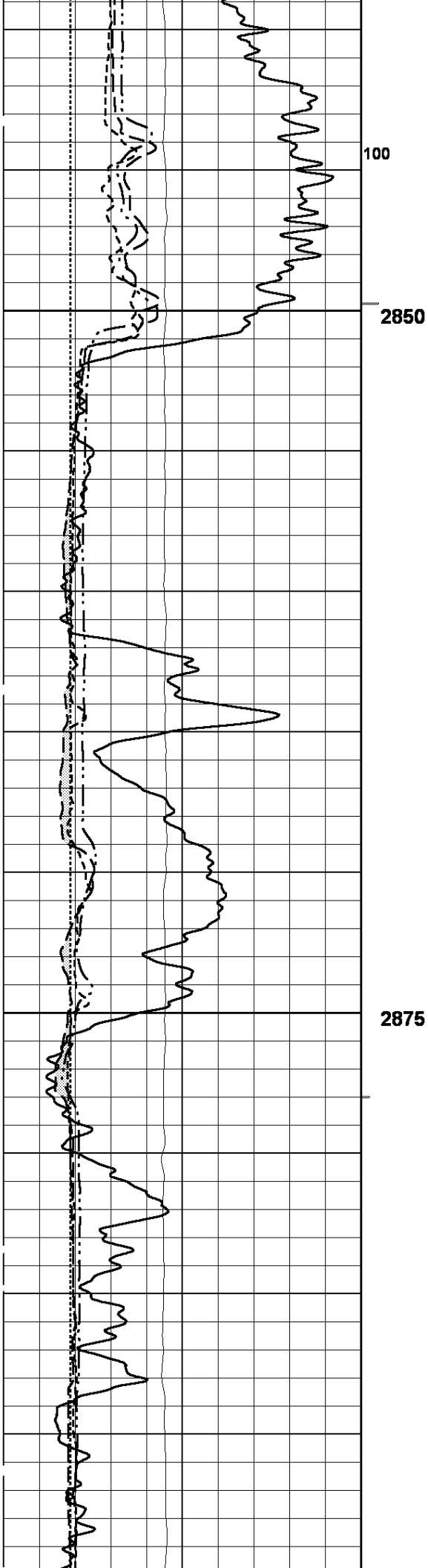


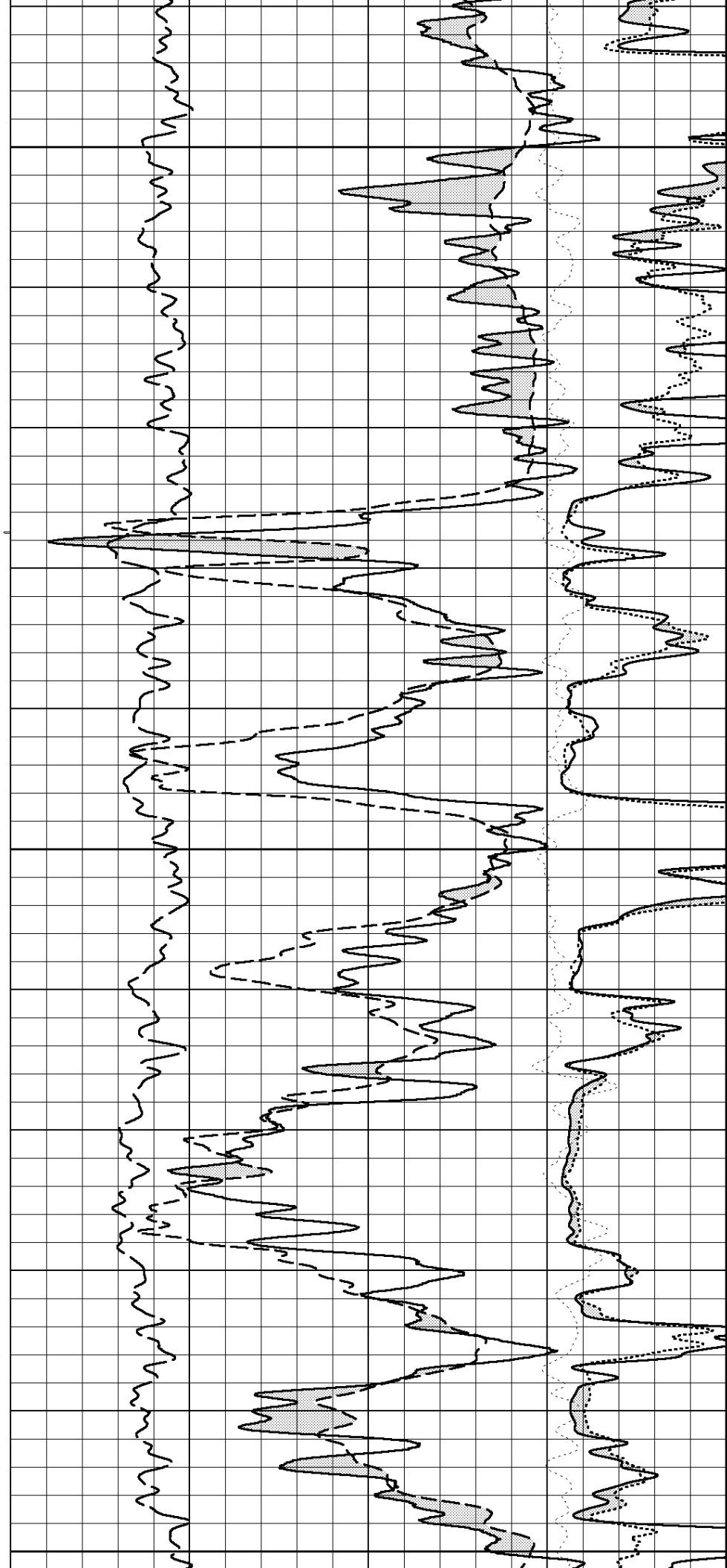
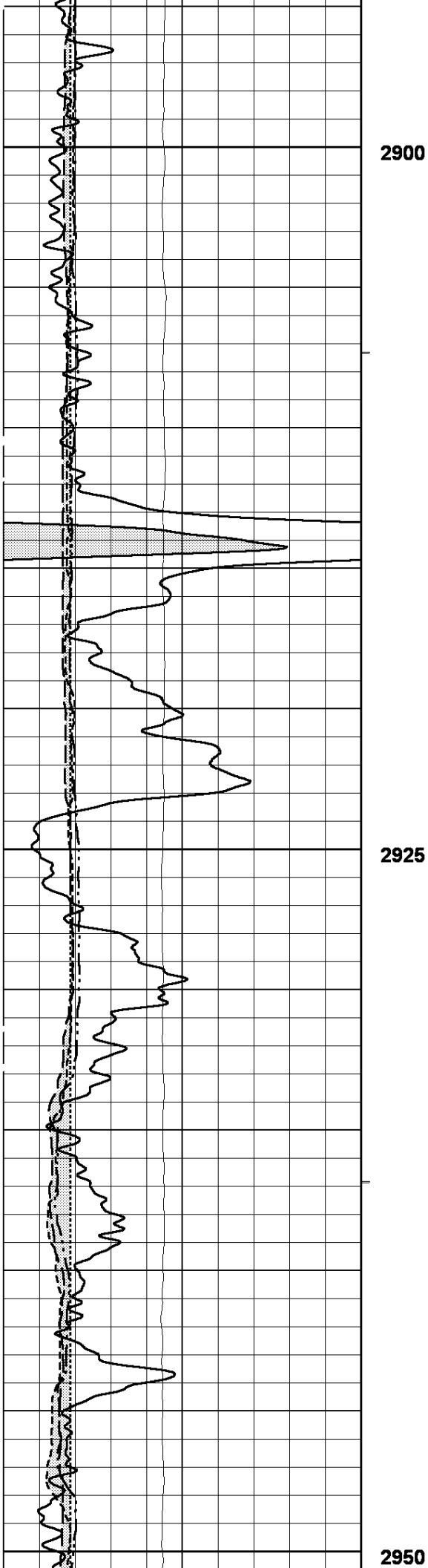


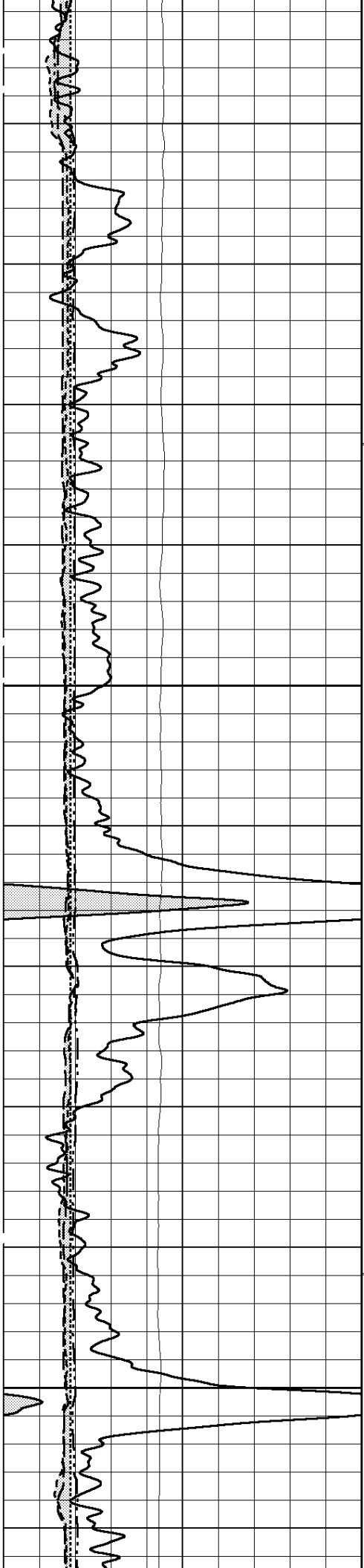
2800

2825



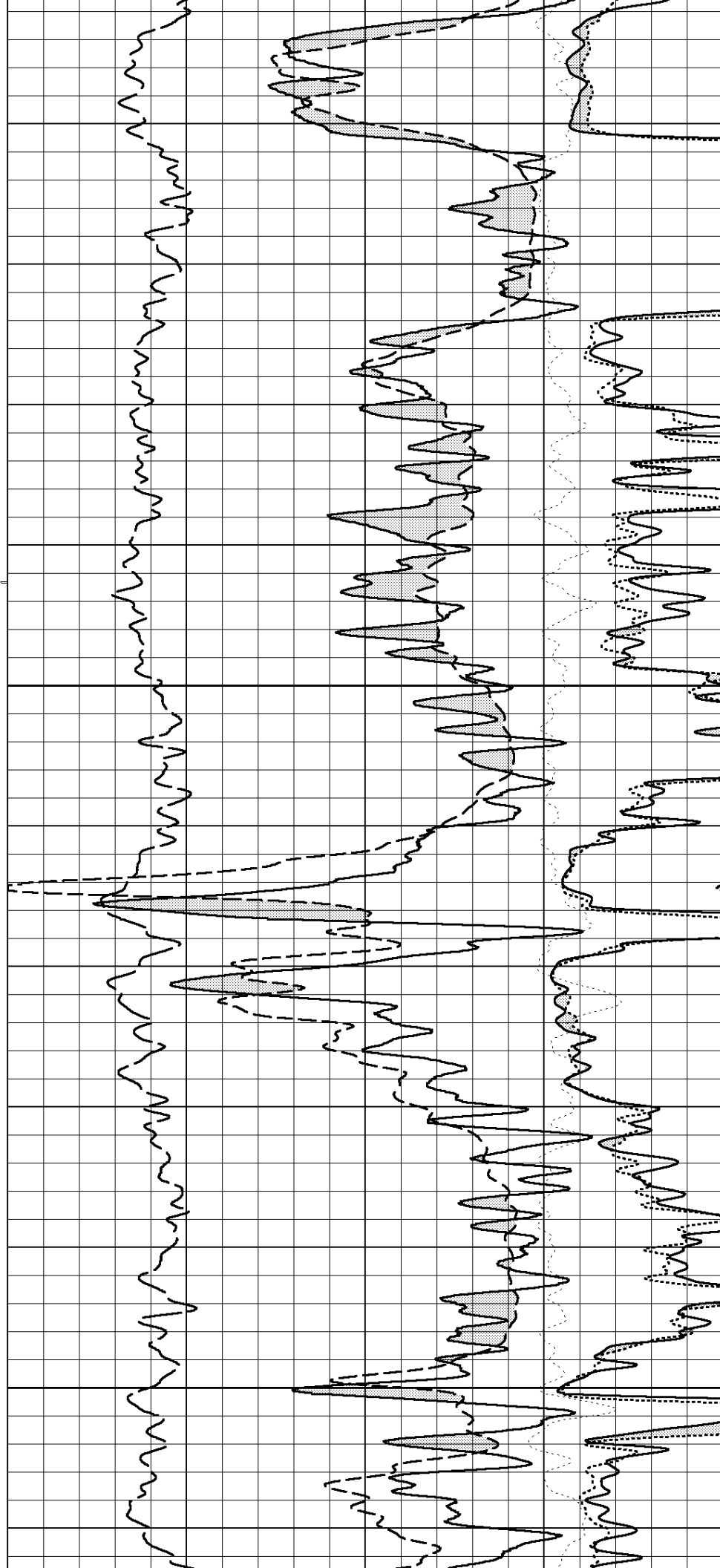


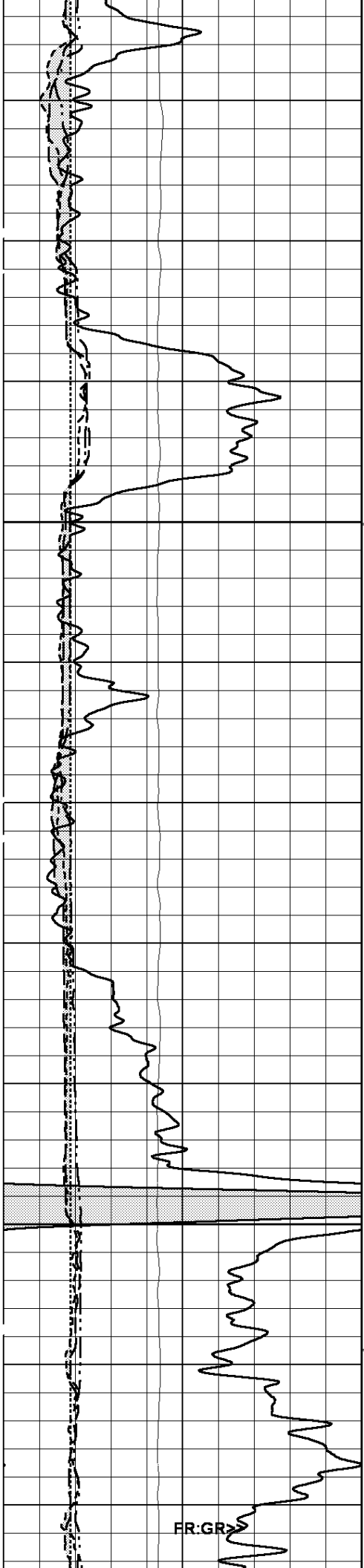




2975

3000

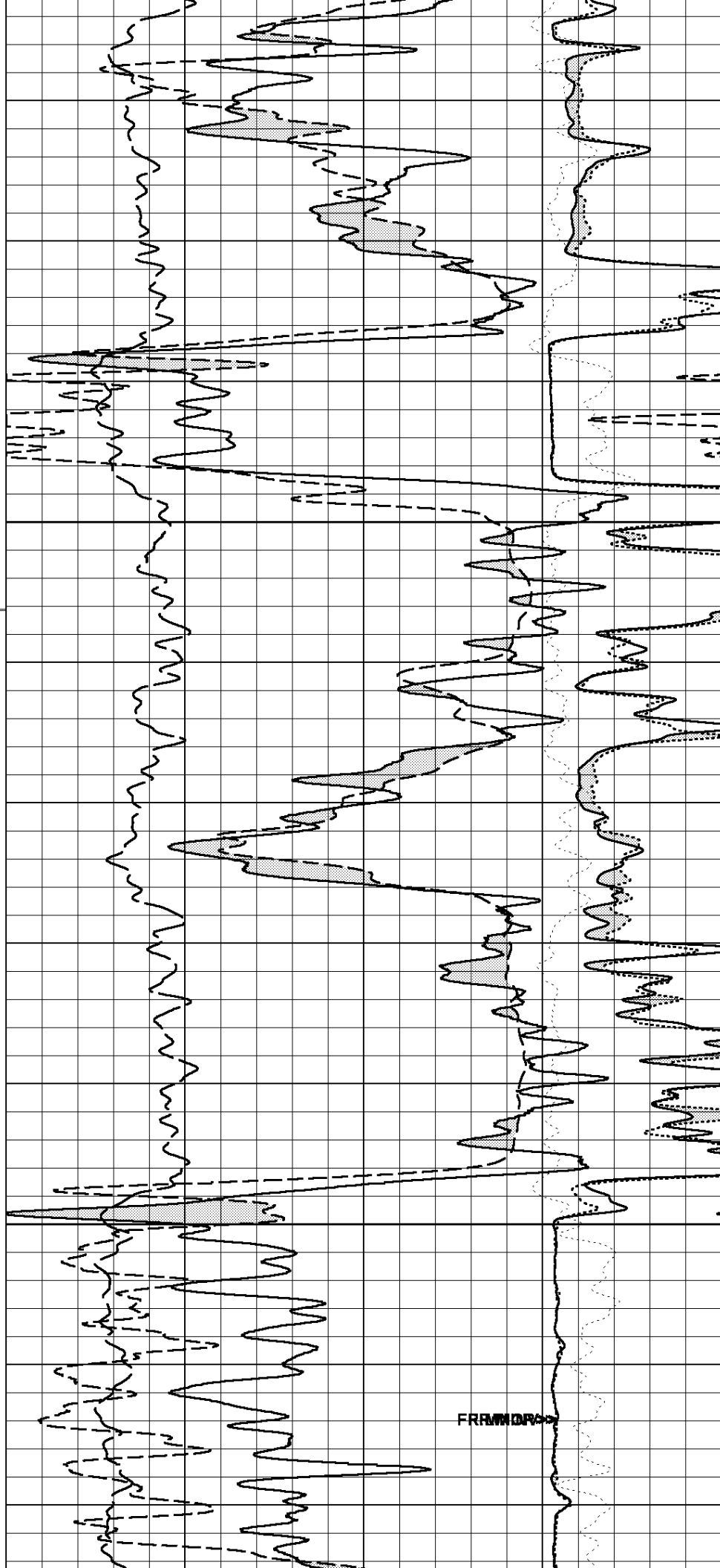




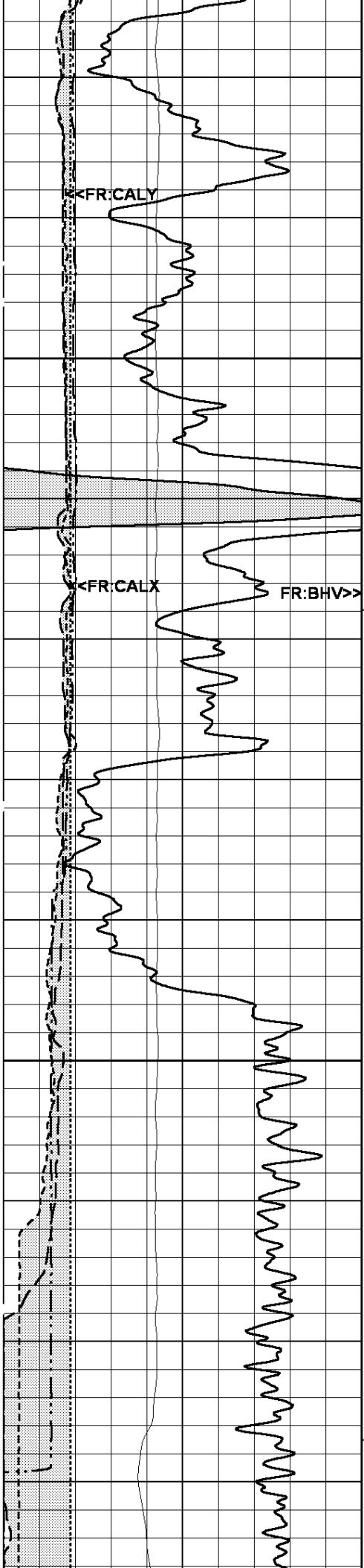
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3025

3050

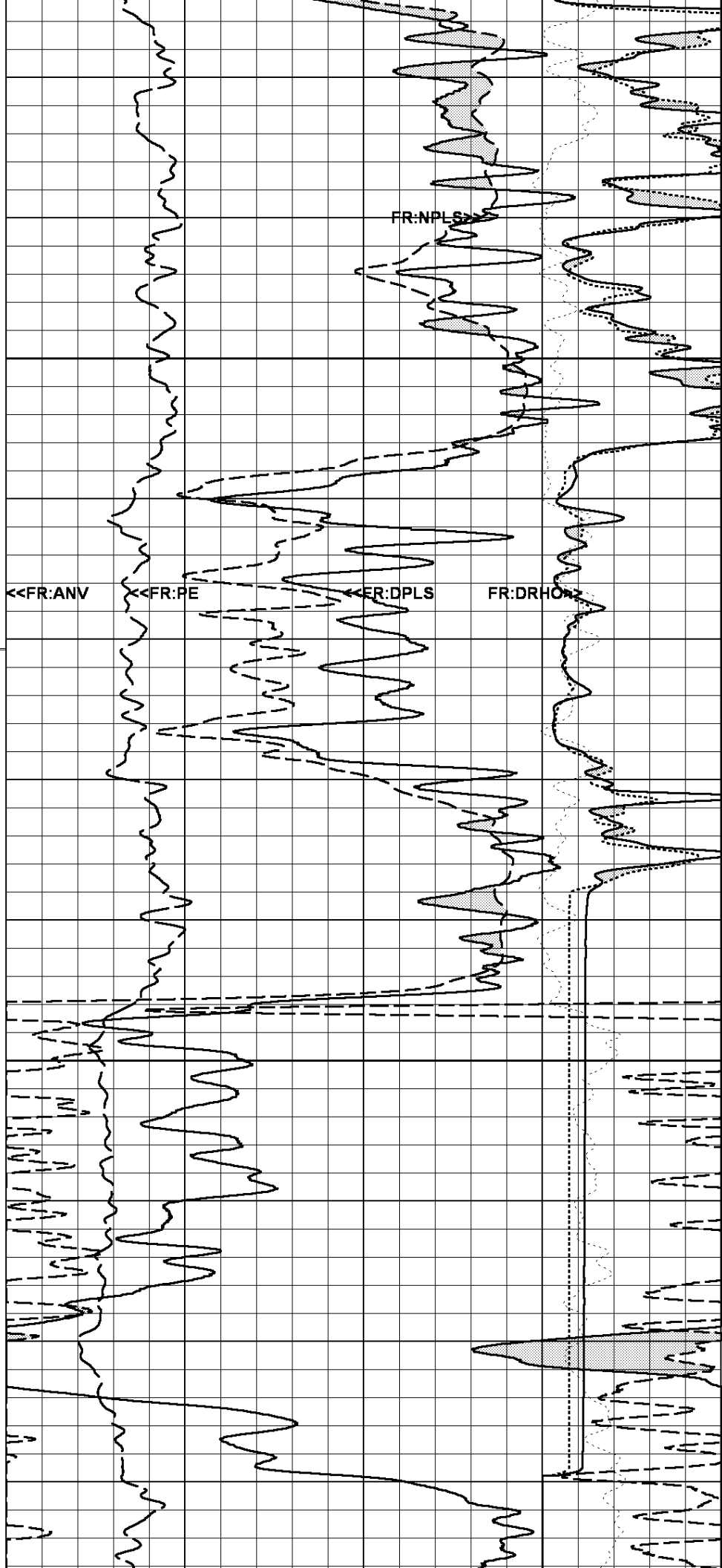


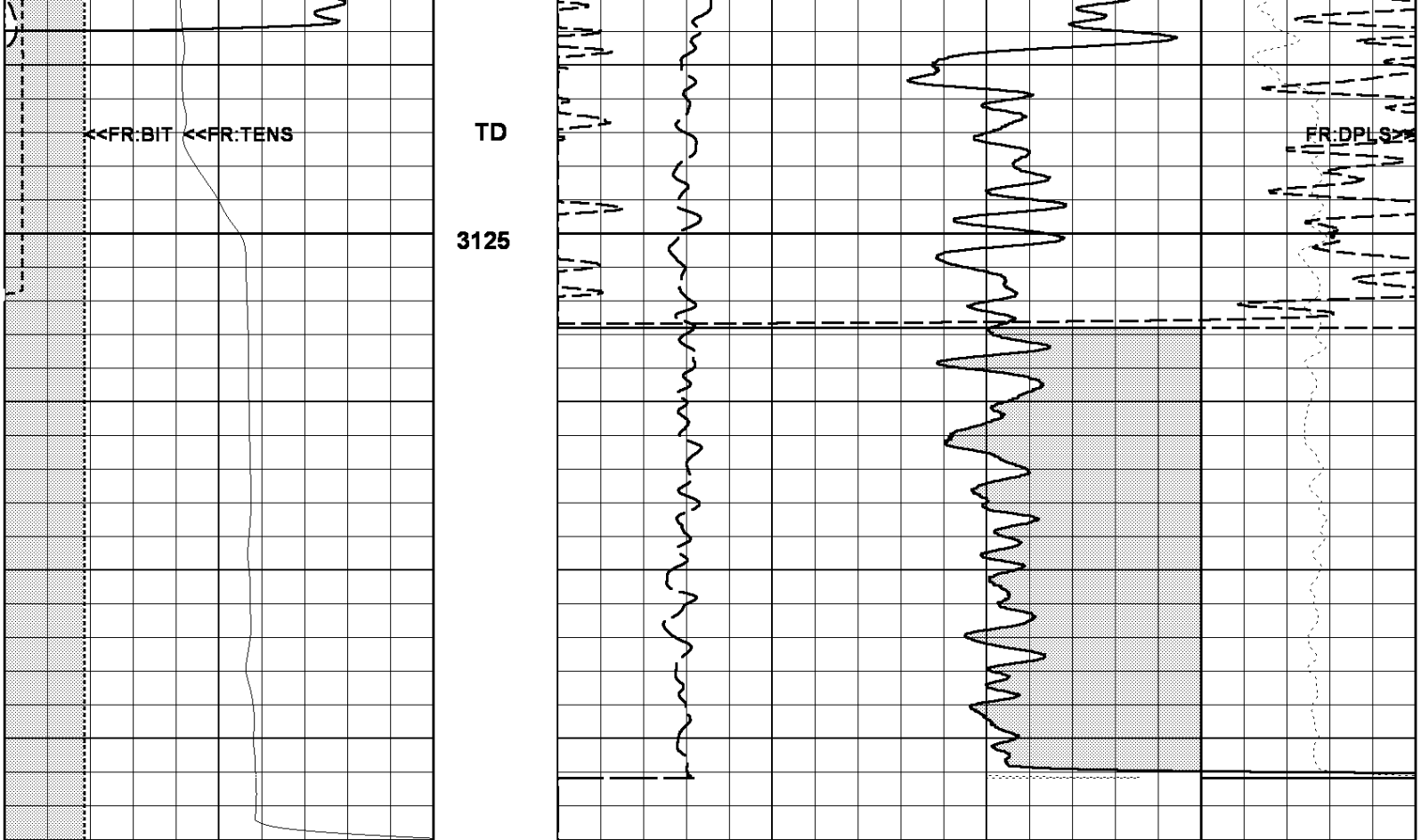
FR:MM:DR>



3075

3100





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

04/12/2015 HIGH DEFINITION PASS - LIMESTONE (20"/100ft) Log UP - (VER 11.19)
 06:30:18 => Start Time Start Depth=> 3138.10 Feet

Litho-Density/PE Calibrations

TOOL TYPE
SERIAL NUM

LFDC/Pe
RL4103

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	5782.529	4926.497	2679.521	6.569	4152.6447	2.523(g/cc)	MID/Y> 4/10/2015	H:M:S> 12:7:56
MAGNESIUM	14572.828	12036.584	5556.234	6.827	6022.9033	1.679(g/cc)		

BACKGROUND	2718.236	2401.649	1657.400	6.509	5.8898			
SAND	14564.489	12022.797	5543.545	6.889		1.739(PE)		
IRON	5302.958	4571.161	2559.157	6.616		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

Compensated Neutron Calibrations

TOOL TYPE	CNT-B	SOURCE TYPE	AM241BE	SOURCE STRGTH	20 CURIE
SERIAL NUM	RN2008a	SOURCE NUM			

MASTER TANK CALIBRATIONS

		NEAR(cps)	FAR(cps)	RATIO	K VALUE	CALIBRATION DATE	CALIBRATION TIME
LOW PHI	3.150			0.6281	0.9560	M/D/Y> 4/9/2015	H:M:S> 12:30:20
MED PHI	19.130			1.0761	0.9560		
HIGH PHI	31.300			1.2899	0.9561		
FIELD VERIFIER(cps)	7430	294.161	282.345	1.0418			
VER NUM							

WELL SITE CALIBRATIONS

VER NUM	7430	NEAR(cps)	FAR(cps)	RATIO		CALIBRATION DATE	CALIBRATION TIME

GAMMA RAY CALIBRATION

SERIAL NUM	RG3006
BLANKET NUM	1A

MASTER CALIBRATIONS

	BackGrnd	CalVal: 175.000 API	Gain/Offset	CALIBRATION DATE	CALIBRATION TIME
BASE CALS	95.407 - raw	651.300 - raw	0.315 - gain 0.000 - off	M/D/Y> 4/7/2015	H:M:S> 12:37:49

X CALIPER

SERIAL NUM	RL4103

MASTER CALIBRATIONS

	ZeroVal: 6.000 in	CalVal: 10.000 in	Gain/Offset	CALIBRATION DATE	CALIBRATION TIME
BASE CALS	3590.518 - raw	5692.096 - raw	0.002 - gain -0.834 - off	M/D/Y> 4/10/2015	H:M:S> 12:40:38

Y CALIPER CALIBRATIONS

SERIAL NUM

RN2008

MASTER CALIBRATIONS

ZeroVal: 6.000 in

CalVal: 10.000 in

Gain/Offset

CALIBRATION DATE

CALIBRATION TIME

BASE CALS

980.201 - raw

1665.613 - raw

0.006 - gain
0.280 - off

M/D/Y> 4/9/2015

H:M:S> 11:37:58

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

WOELK #1-18

Field

GORHAM

County

RUSSELL

State

KANSAS

RECON

COMPENSATED NEUTRON
LITHOLOGY DENSITY
GAMMA RAY X-Y CALIPER
MICROLOG

