

Company **RED OAK ENERGY, INC.**
Well **MATHERS #1-2**
Field **WILDCAT**
County **LOGAN**
State **KANSAS**

RECON

**COMPENSATED NEUTRON
LITHOLOGY DENSITY
GAMMA RAY X-Y CALIPER
MICROLOG**

OTHER SERVICES:		
DIL		
SEC	TWP	RGE
02	12S	32W
Location. 2073' FNL & 1257' FEL		
SURF. SAME	AP#.	NE SE SW NE 15-109-21385-00-00
Permanent Datum	Ground Level	Elev
Log Measured From	Kelly Bushing	2989
Drilling Measured From	Kelly Bushing	
ELEVATIONS		K.B. 3000
		G.L. 2989
		D.F. 2999

Date	29-JAN-2015		
Run No.	ONE		
TD Driller	4832	ft	ft
TD RECON	4834	ft	ft
Bot Logged Interval	4833	ft	ft
Top Logged Interval	2600	ft	ft
Casing Depth Driller	8 5/8	in.	@ 225
Casing Depth RECON	8 5/8	in.	@ 224
Bit Size	7 7/8	in.	in.
Drilling Fluid Type	WBM		
Density	Viscosity	9.4 ppq	60 sec/qt
Fluid Loss	PH	6.8 cc/30min	11.0 strip
Source Of Sample	Flowline		
RM @ Measured Temp	1.102	Ohmm	@ 75
RMF @ Measured Temp	0.826	Ohmm	@ 75
RMC @ Measured Temp	1.377	Ohmm	@ 75
RM @ MRT	0.679	Ohmm	@ 126
Max Recorded Temp	126	DegF	Ohmm DegF
Time Drilling Stopped	28-JAN-2015	23:00	
Time Circulation Stopped	29-JAN-2015	00:00	
Time Logger On Bottom	29-JAN-2015	03:21	
Unit Num	Location	S409	OKLAHOMA CITY, OK
Recorded By	H. GARCIA		
Witnessed By	MR. S. DEENIHAN		

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.

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# MURFIN DRLG. #22

GENERAL REMARKS SECTION

FIRST RUN IN THE HOLE
CNL AND LDT LOGGED IN A LIMESTONE MATRIX
TOP MARK - 364, BOTTOM MARK - 4768.4
CNL/LDT LOGGED MATRIX: 2.71 g/cc.

CHLORIDES: 1900 ppm
LCM: 4 ppb

THANK YOU FOR USING RECON PETROTECHNOLOGIES LTD.

AHV CALCULATED ON 5.5" PROD. CASING

CREW: J. ROSE, B. THOMAS

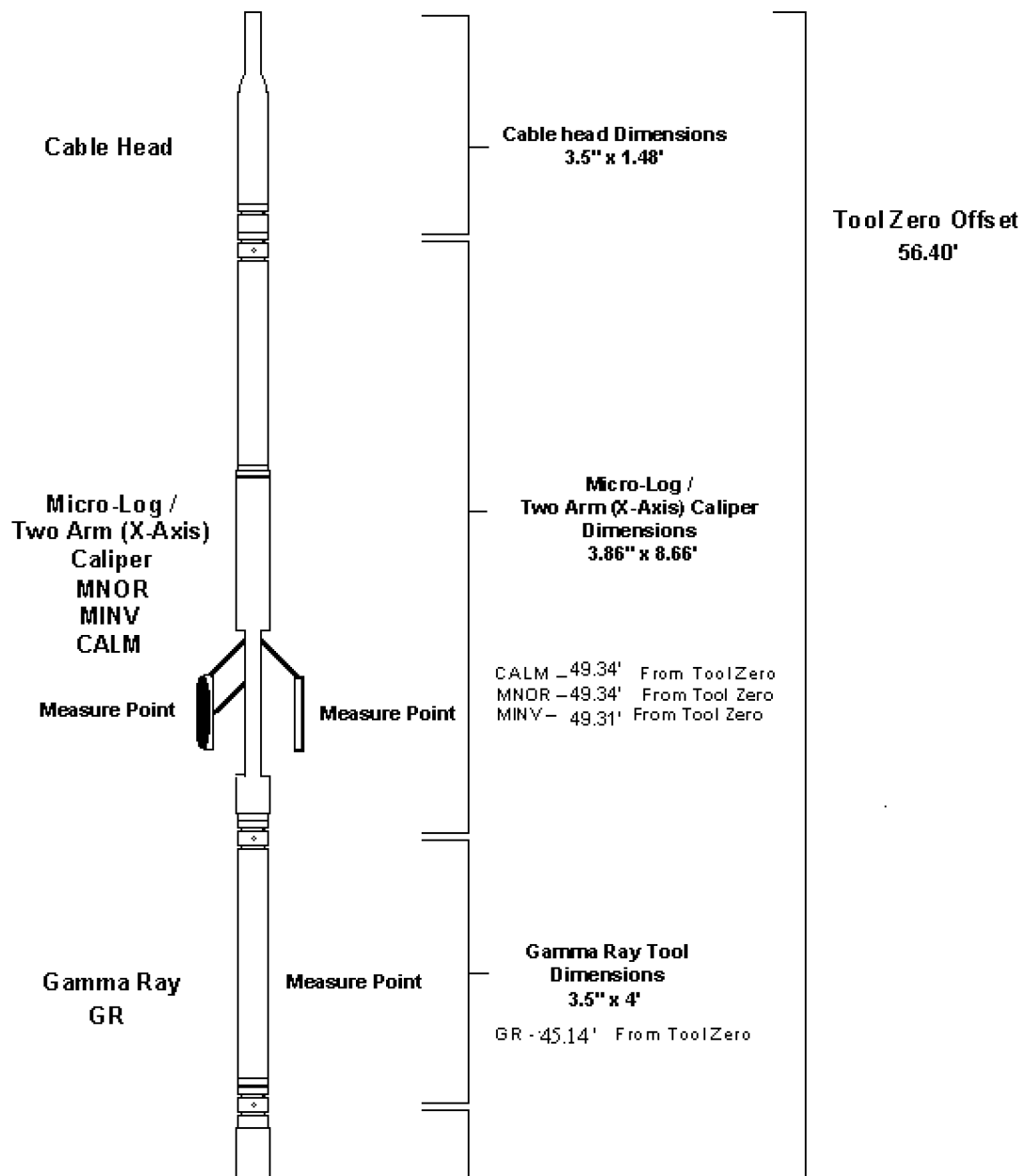
CEMENT VOLUME CALCULATIONS SUMMARY

Tool Type	LDT-CNT	Caliper Type		
Tool Serial #	RN2016 / RL4112			
	Borehole Total	Annular Volume with Casing	From Depth (MKb)	To Depth (MKb)
VOLUMES	1788.512 Cubic Feet	1024.452 Cubic Feet	SCG 224	TD 4834

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	224
INTERMEDIATE CASING	N/A	N/A	N/A	N/A	Surface	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'

Measure Point

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'

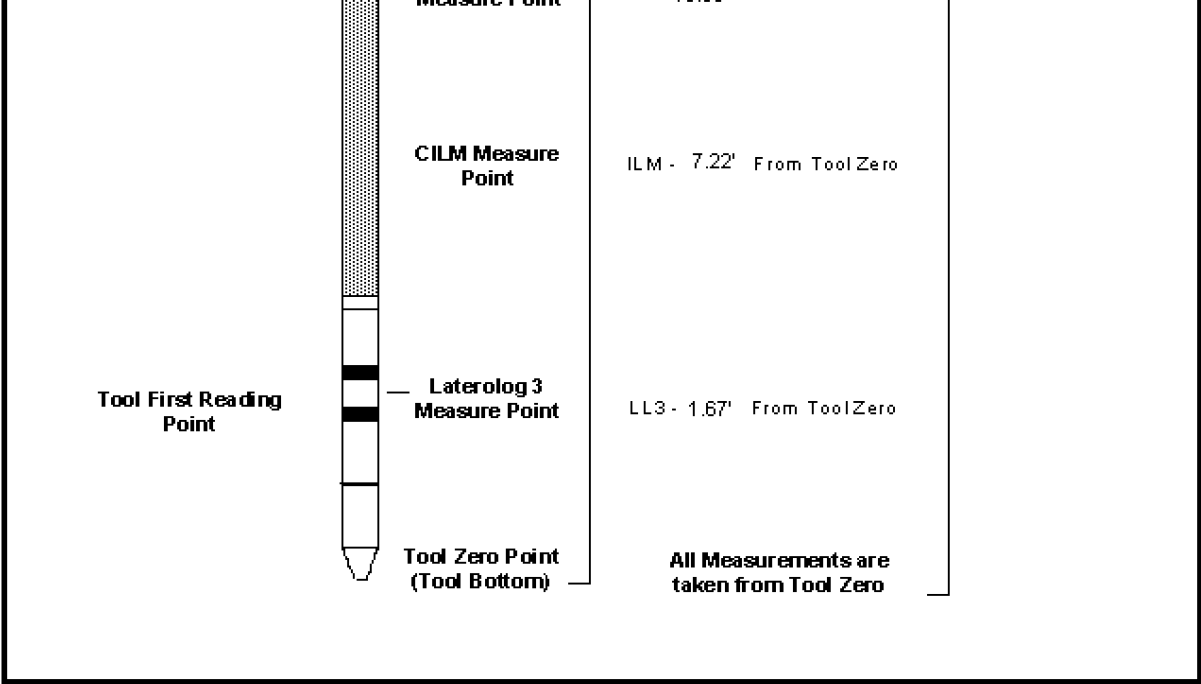
CALX - 23.20' From ToolZero
LDT w1 -
LDT w2 -
LDT w3 - 22.93' From ToolZero
LDT w4 -
LDT SS - 22.44' From ToolZero

Dual Induction
SP
ILD
ILM
LL3

Dual Induction Tool
Dimensions
3.62" x 21'

S.P. / CILD
Measure Point

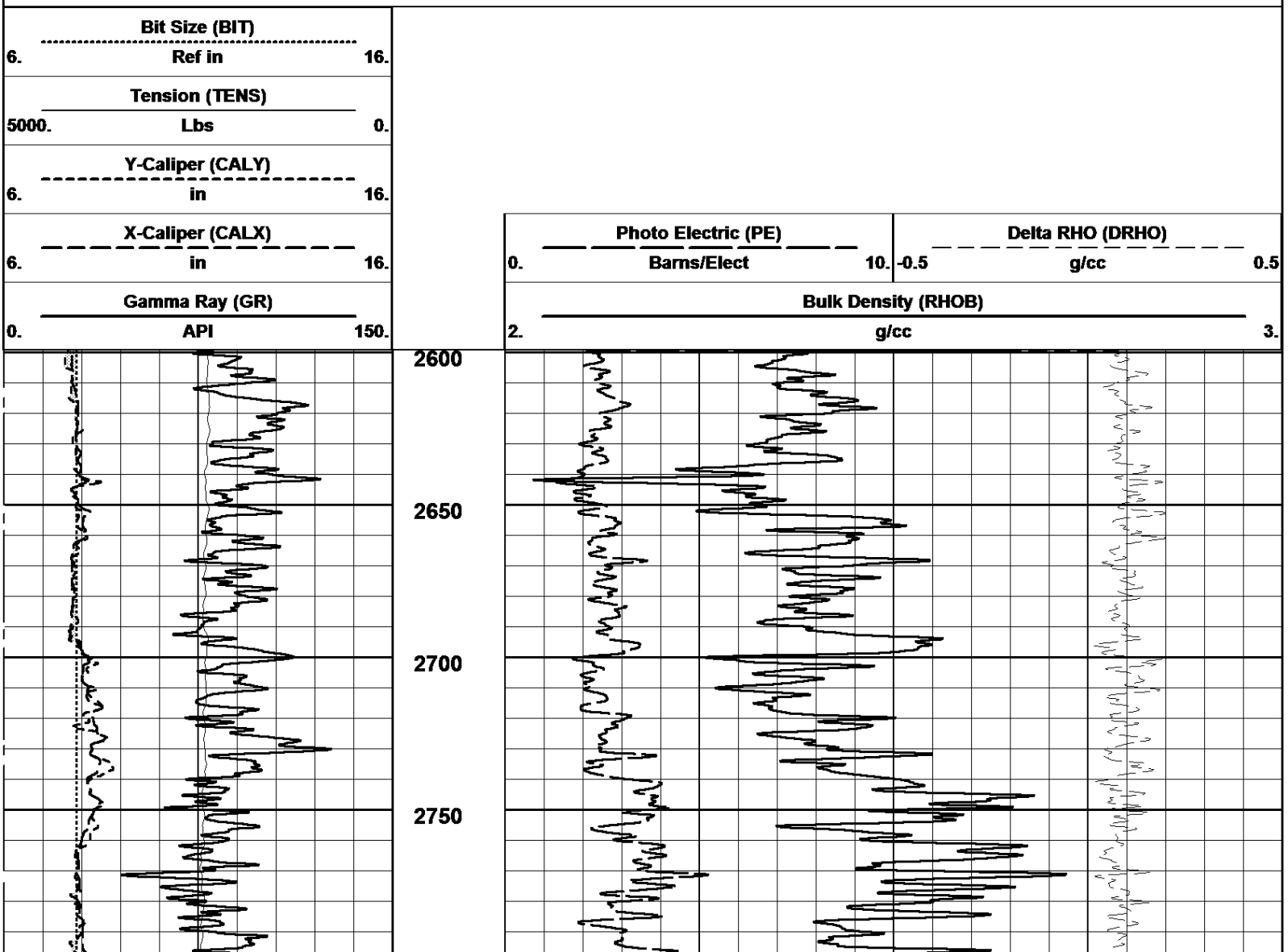
SP - 10.96' From ToolZero
ILD - 10.96' From ToolZero

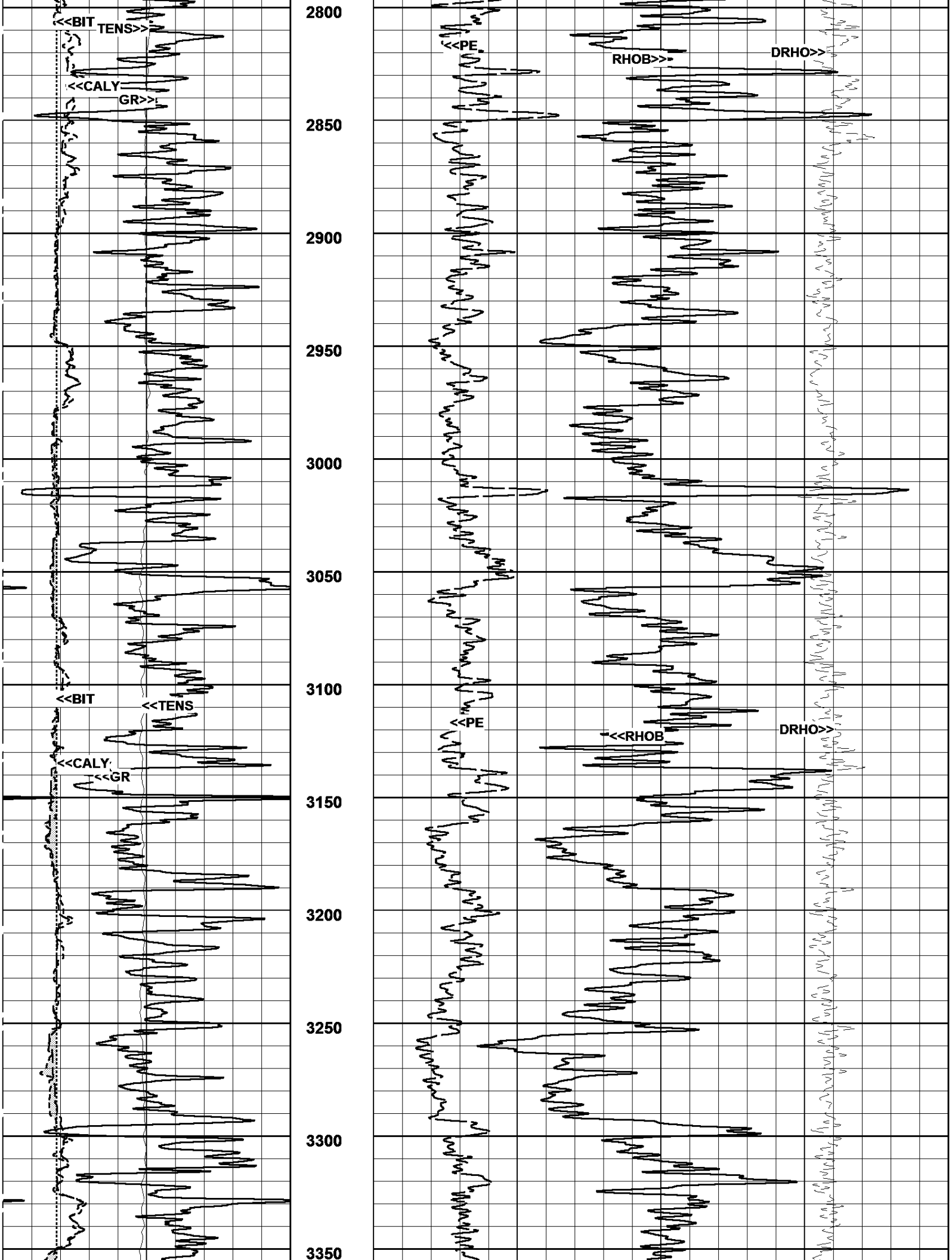


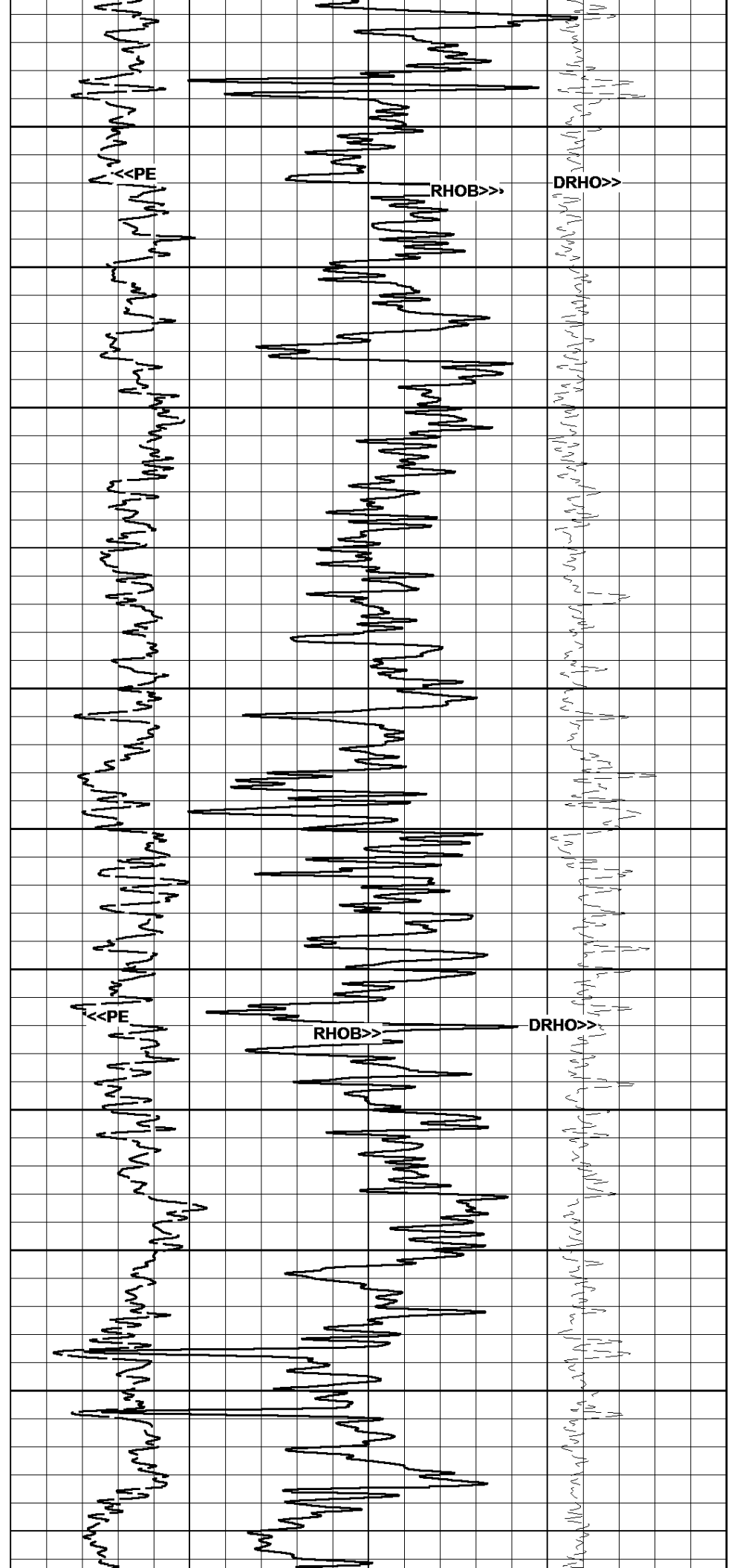
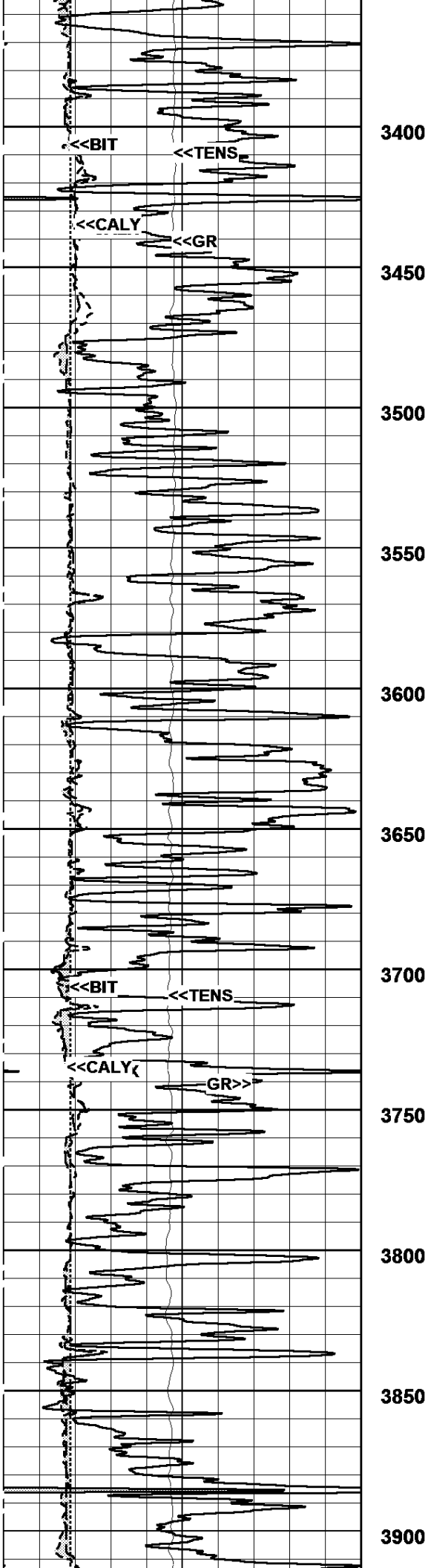
01/29/2015
05:43:59 => End Time

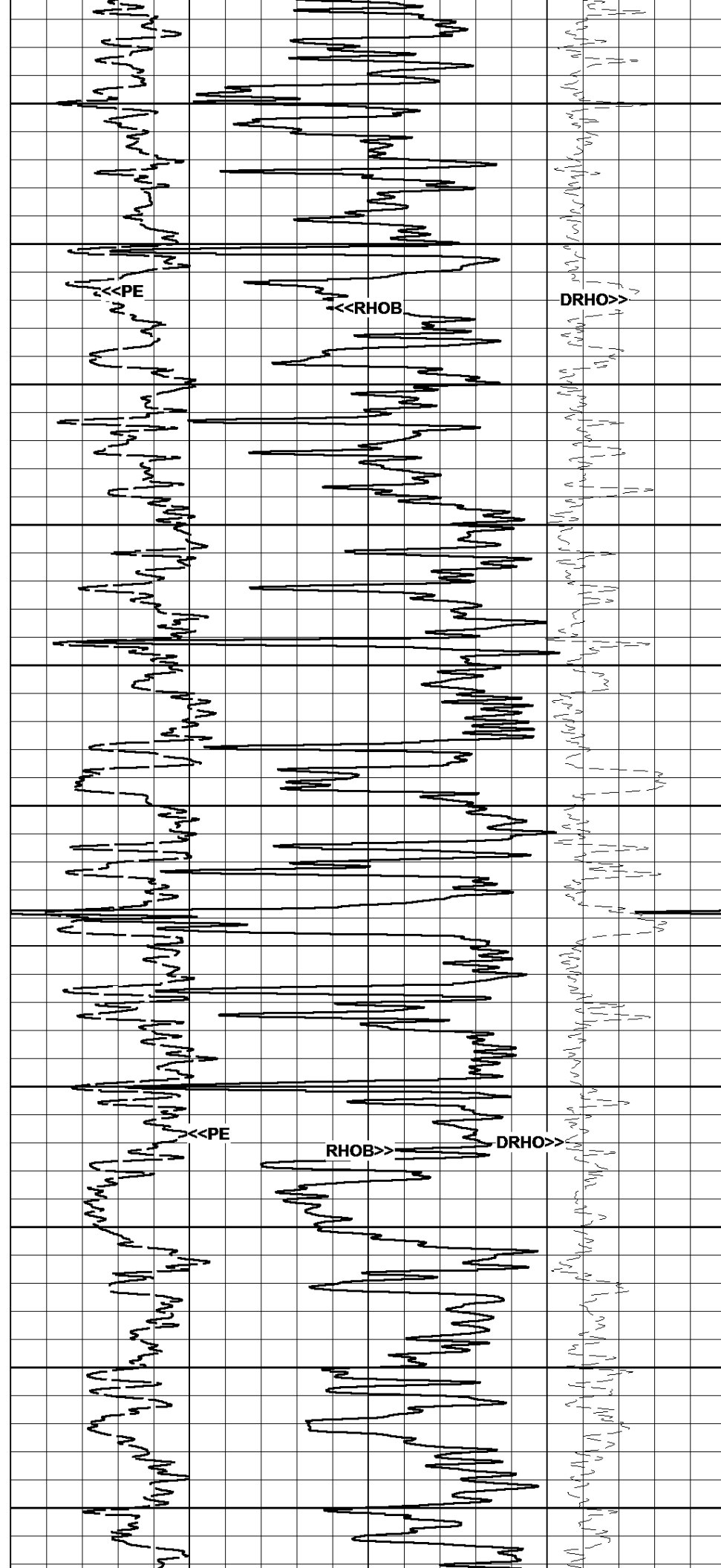
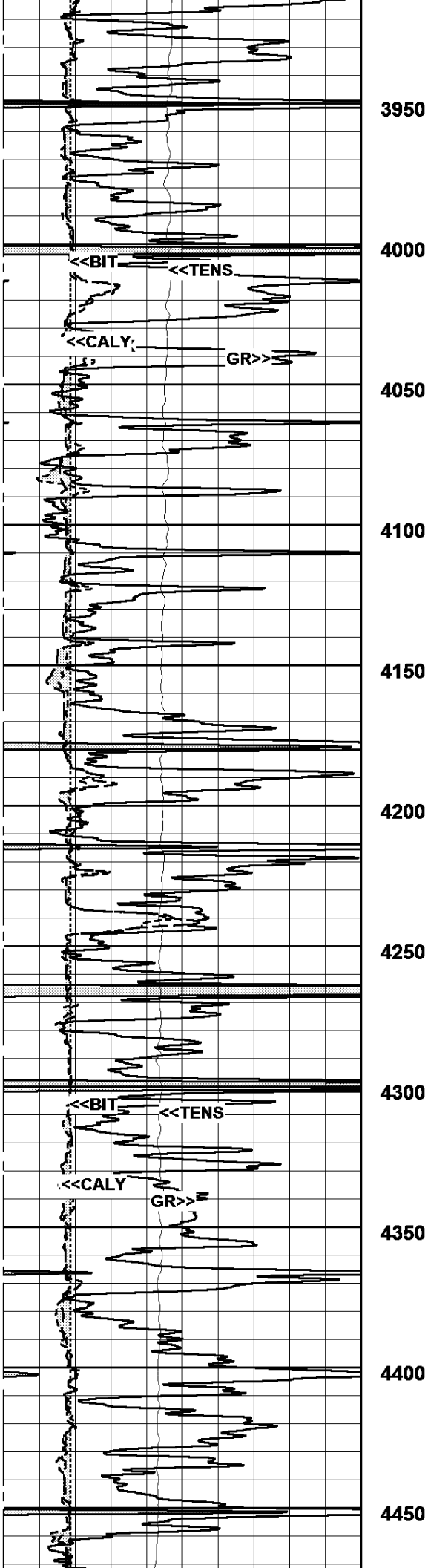
MAIN PASS - RHOB (2"/100Ft)

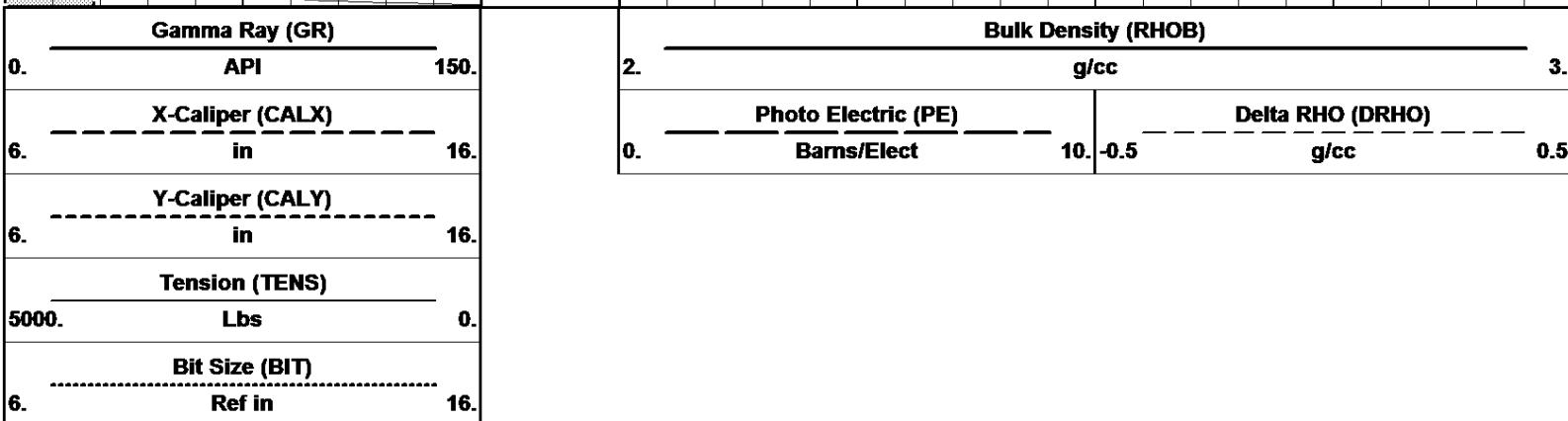
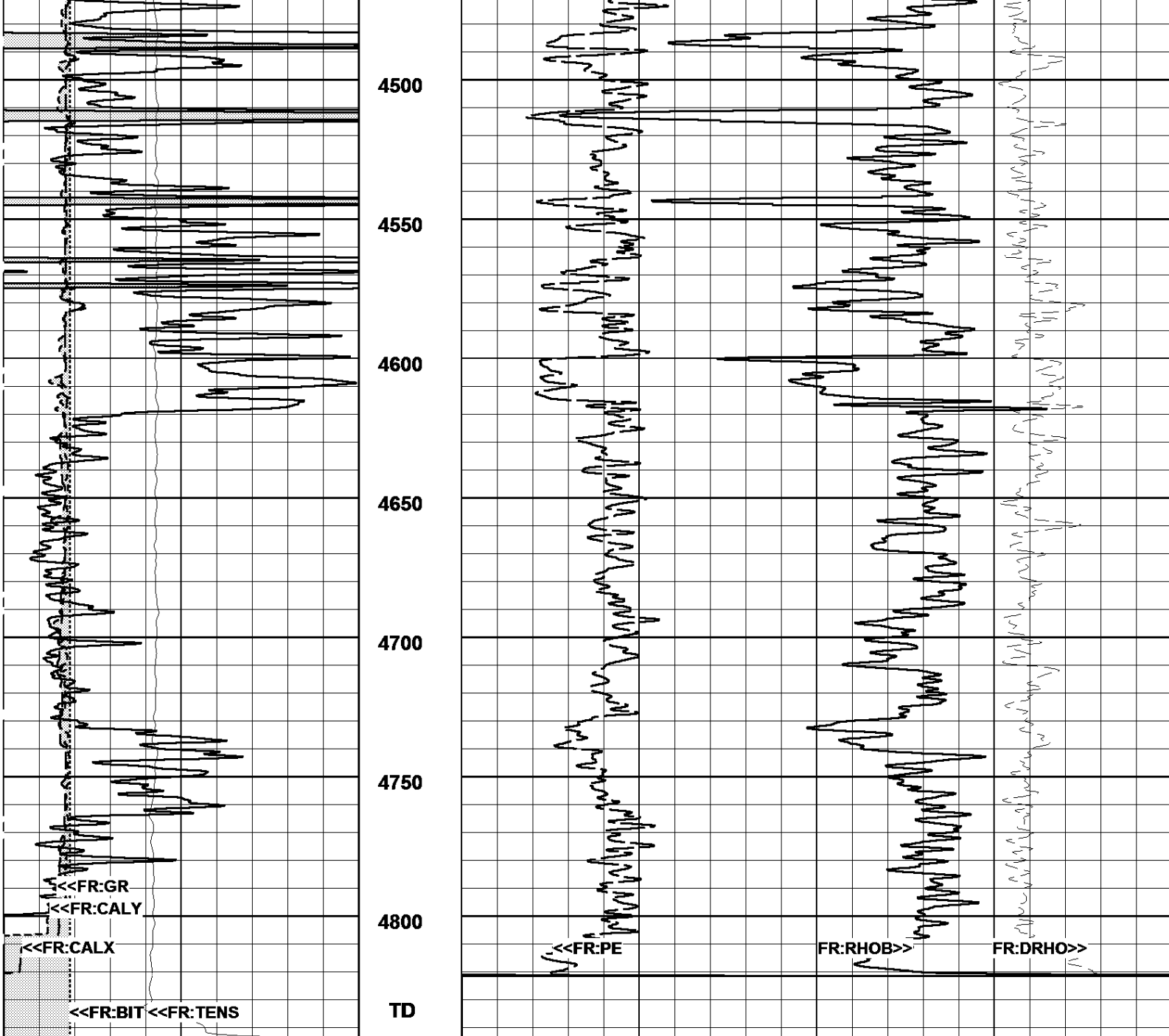
Log UP - (VER 11.19)
End Depth=> 2599.75 Feet











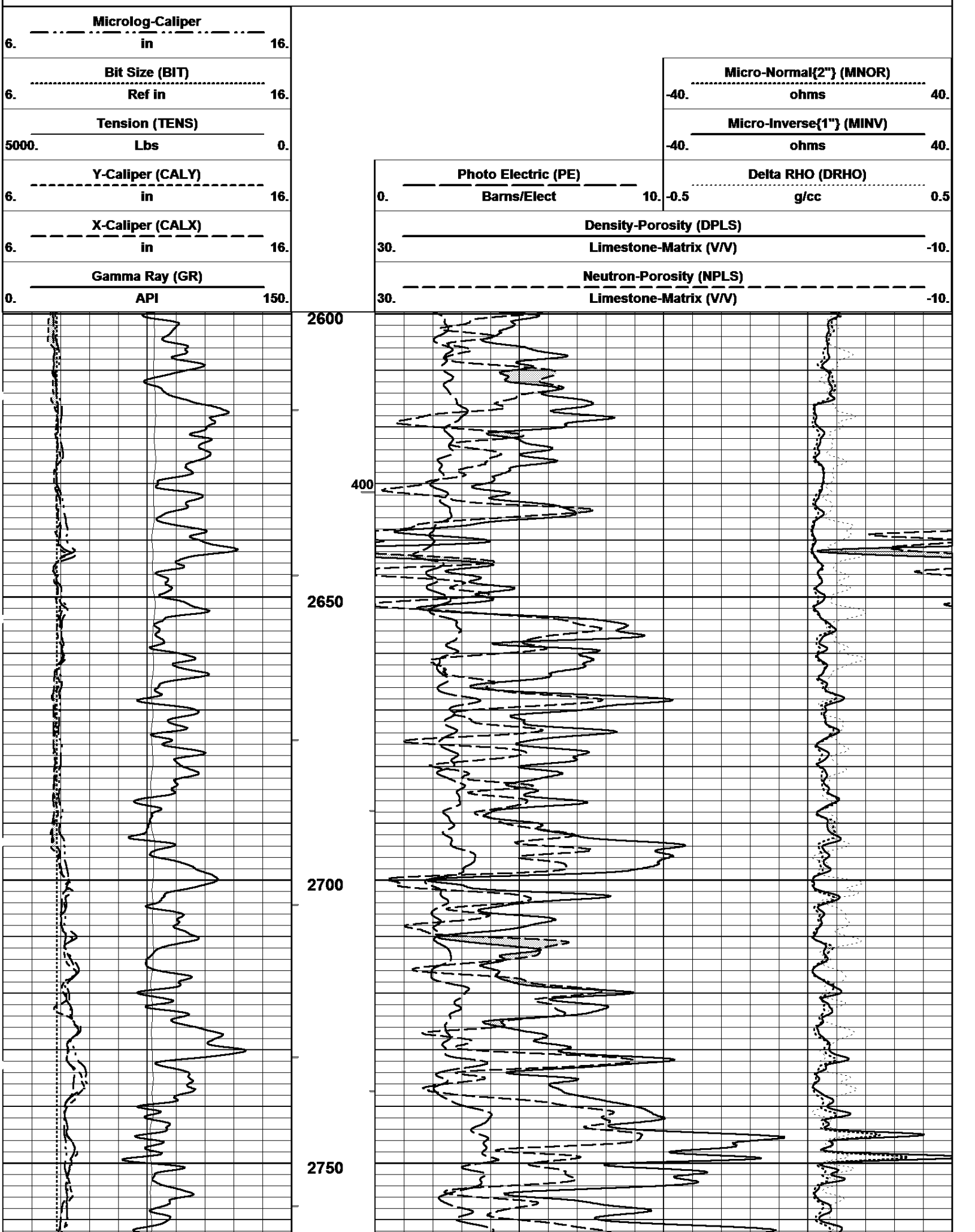
01/29/2015
03:47:55 => Start Time

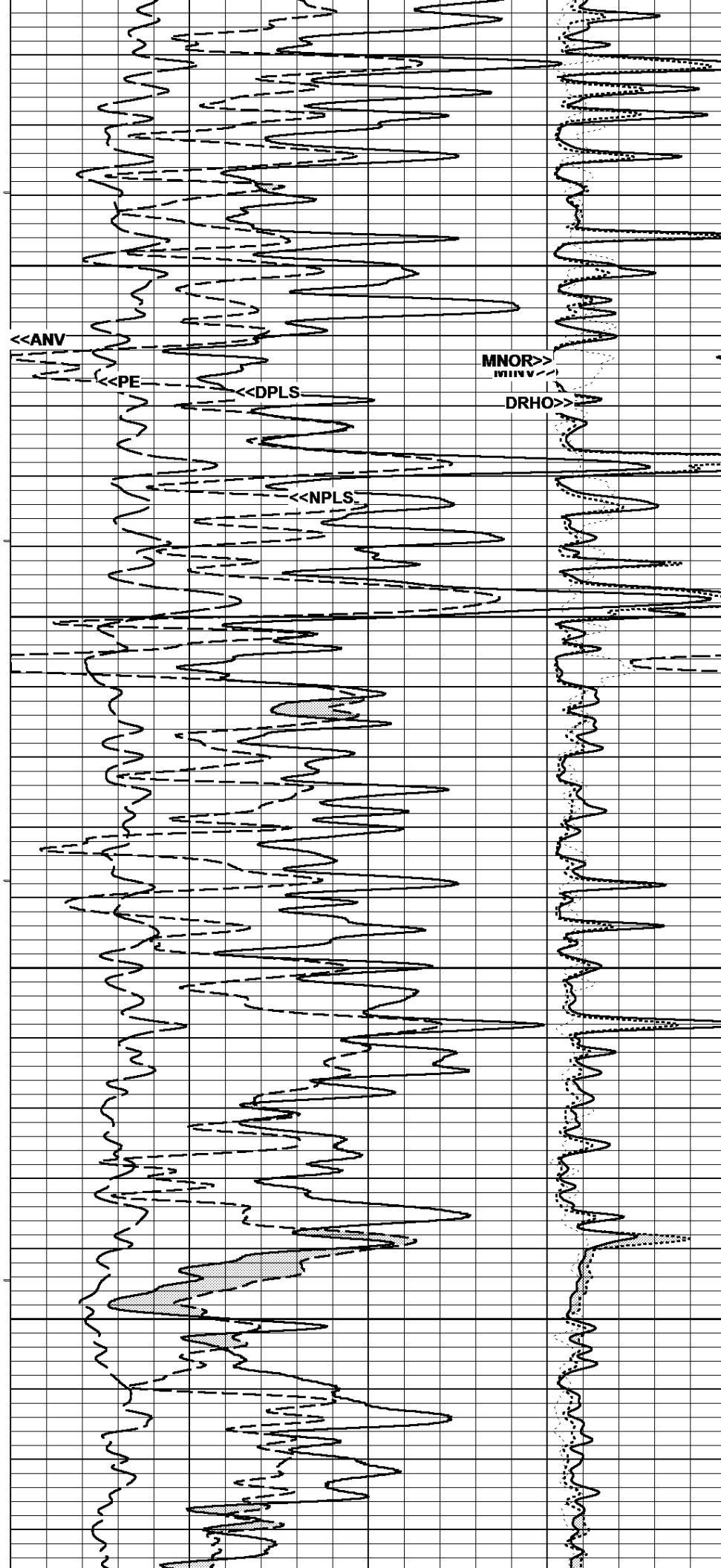
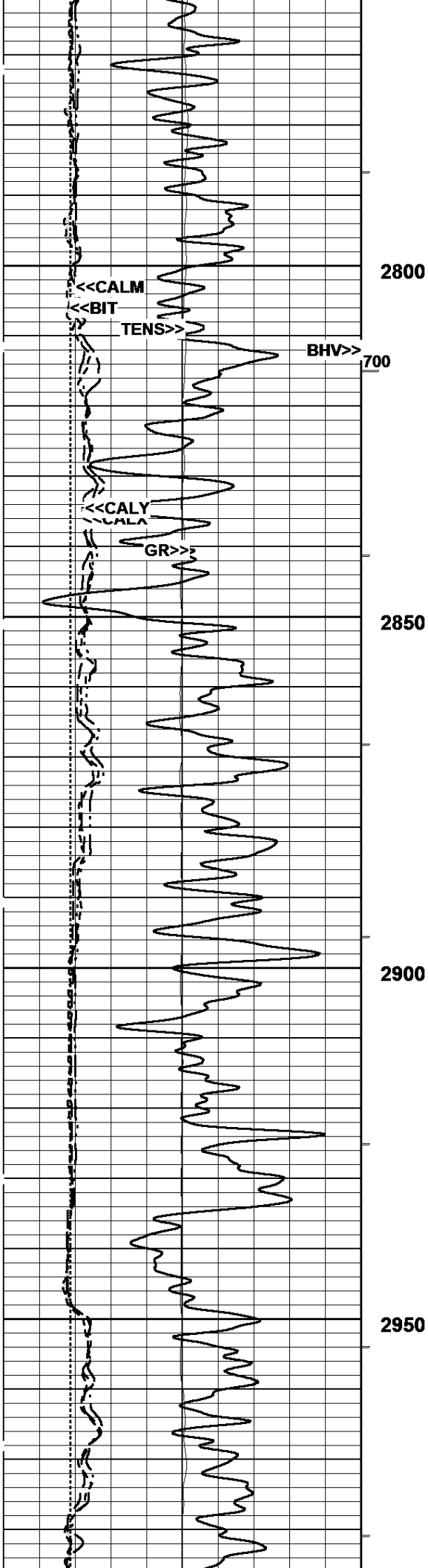
MAIN PASS - RHOB (2"/100Ft)

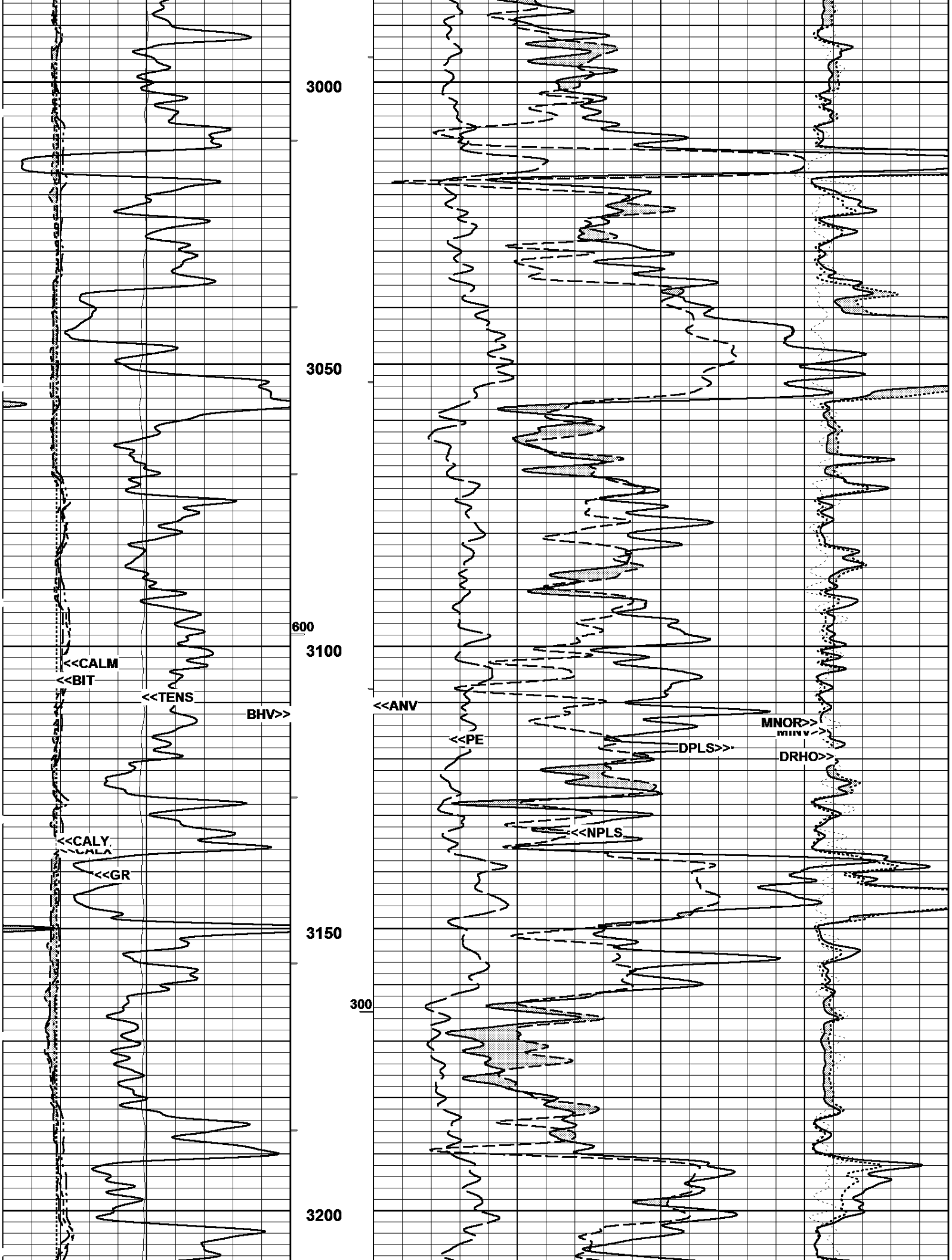
Log UP - (VER 11.19)
Start Depth=> 4844.25 Feet

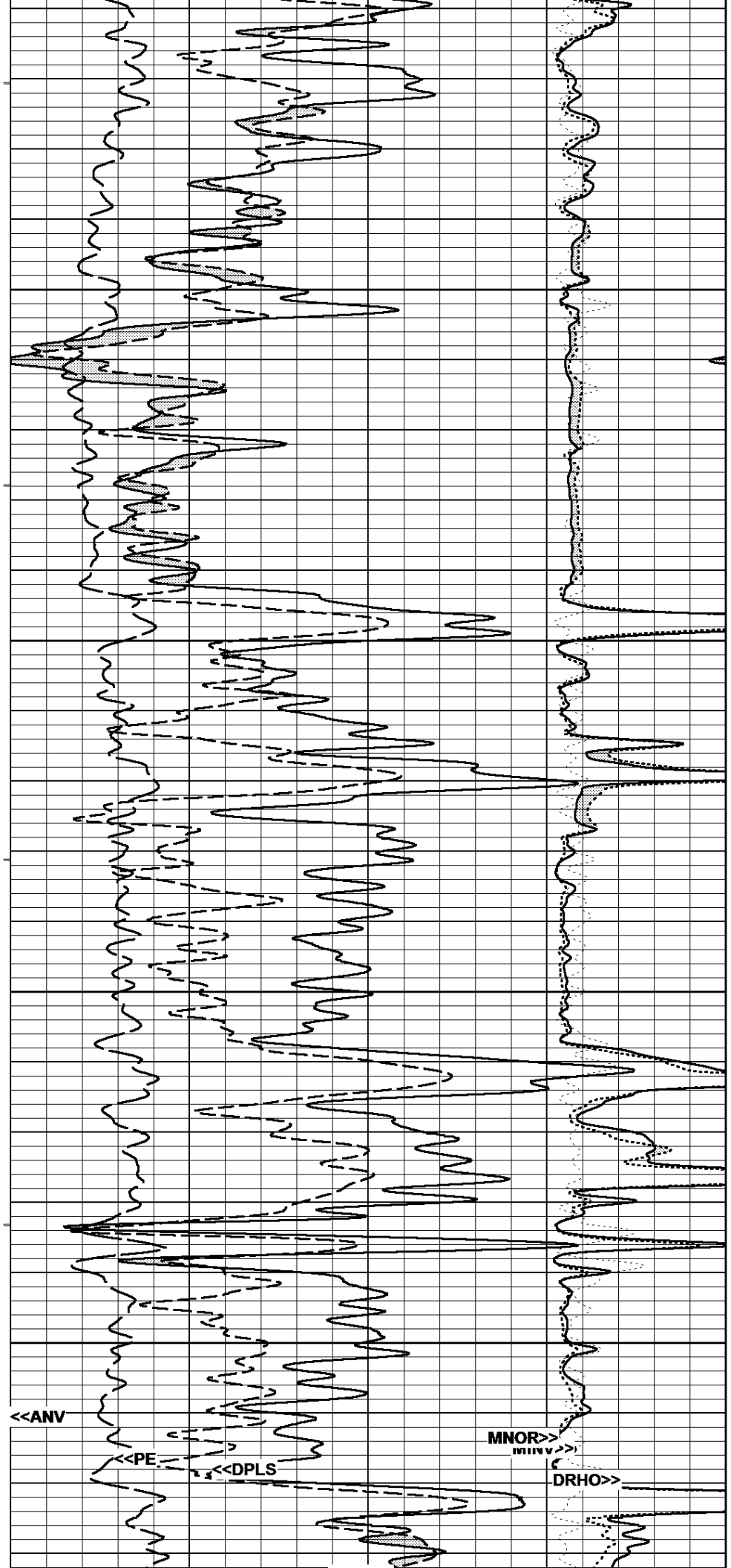
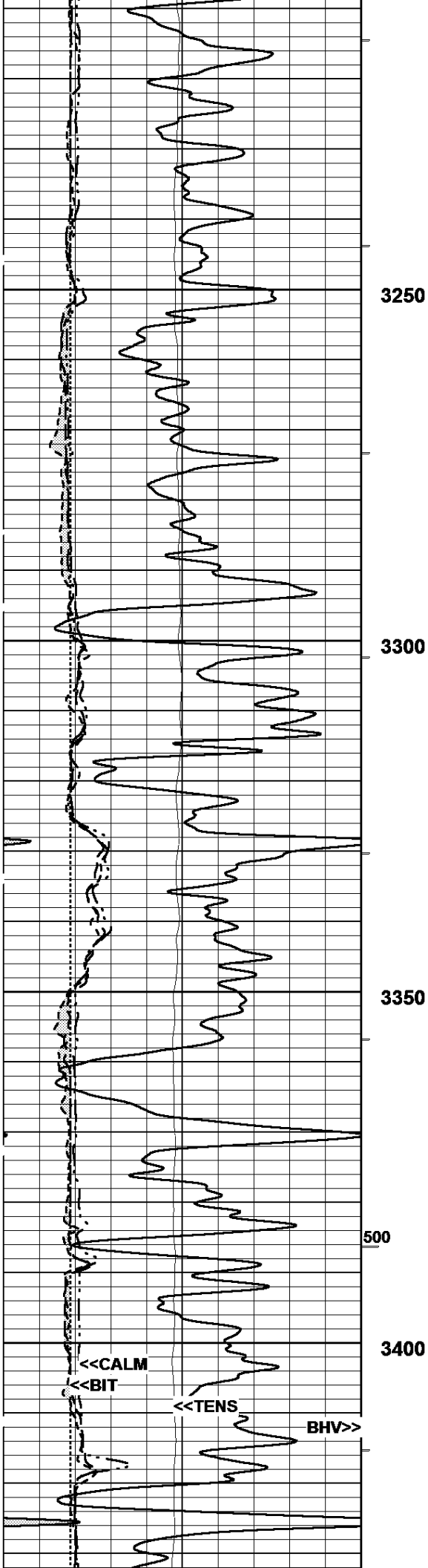
05:43:59 => End Time

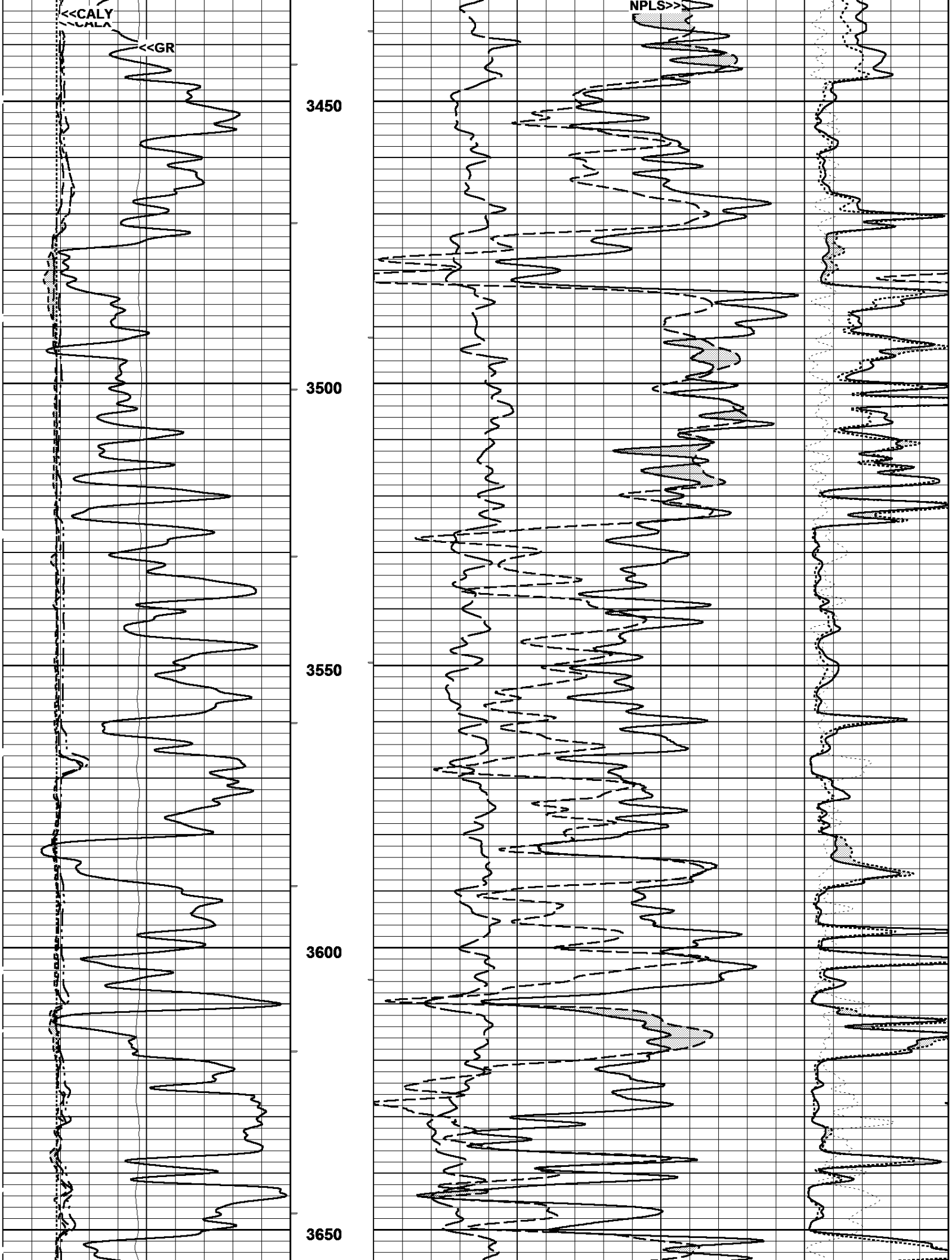
End Depth=> 2599.90 Feet

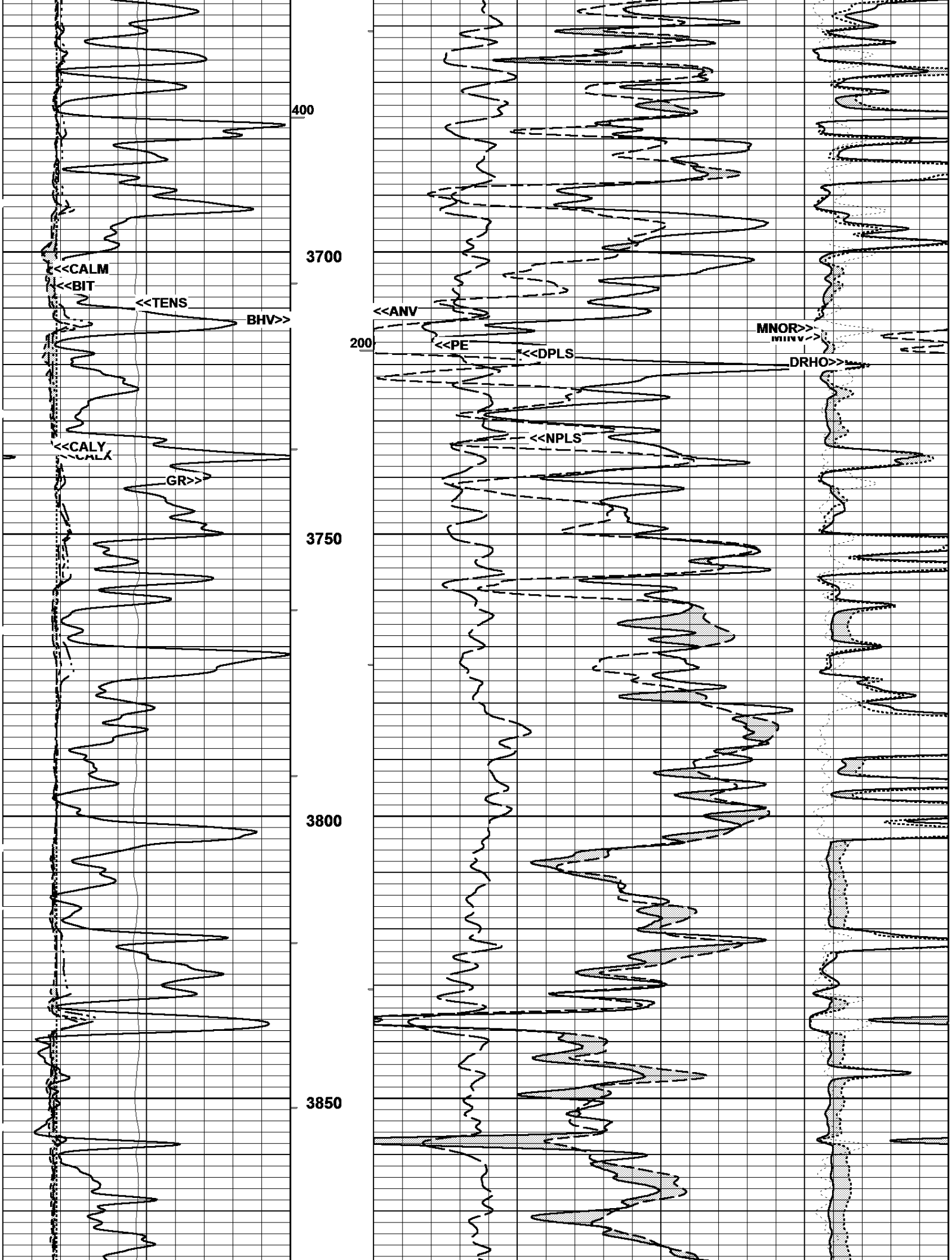


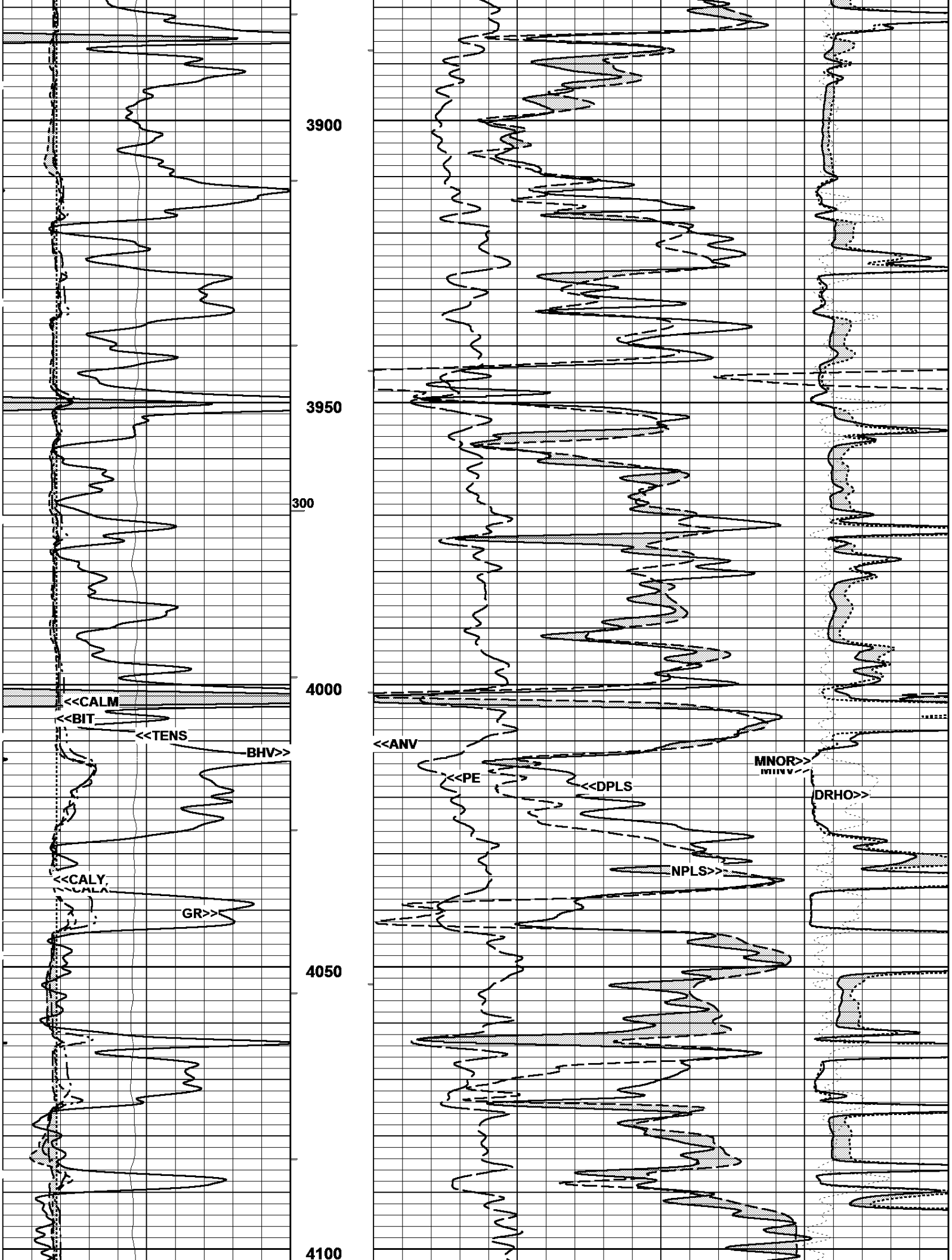


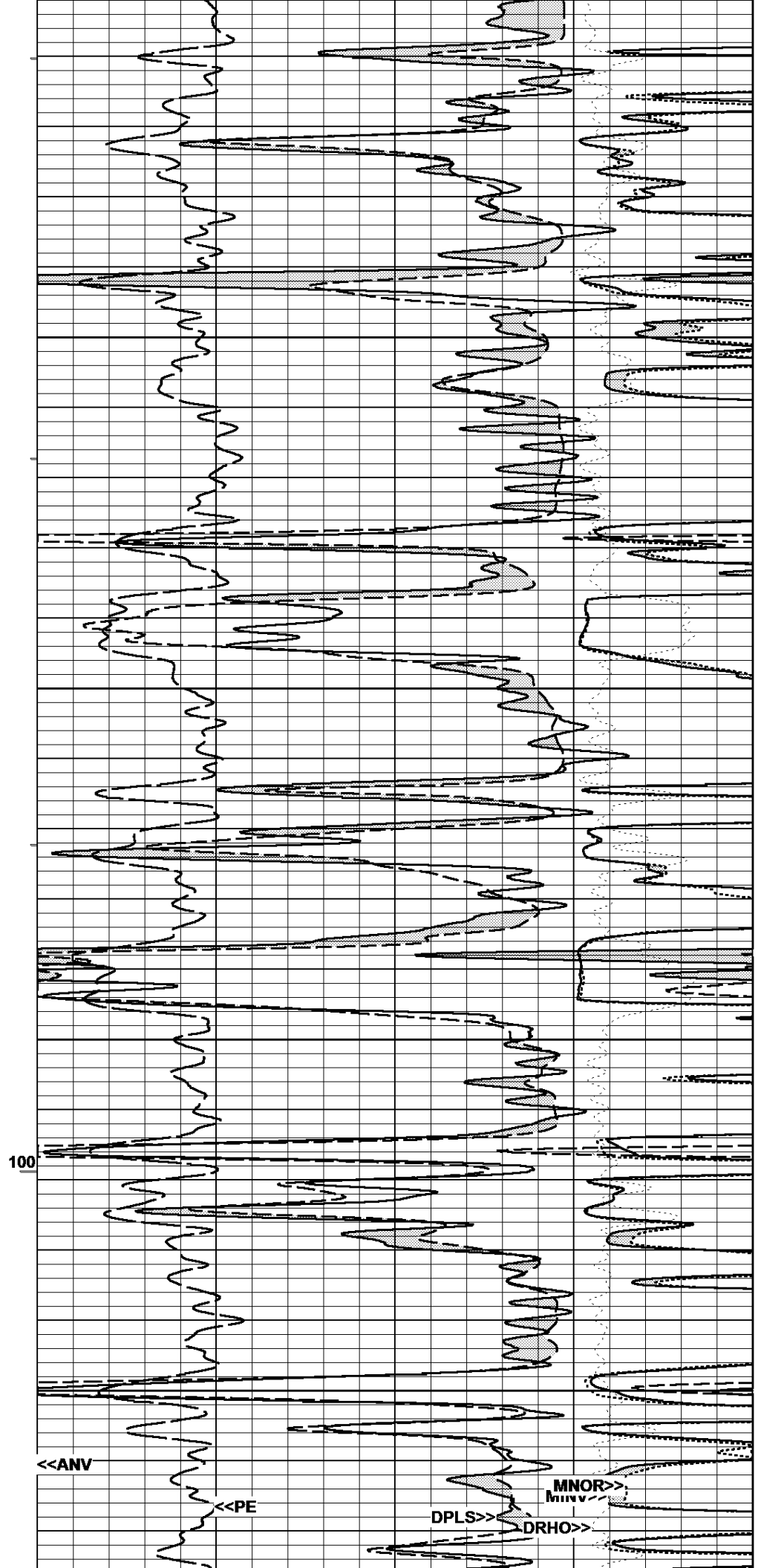
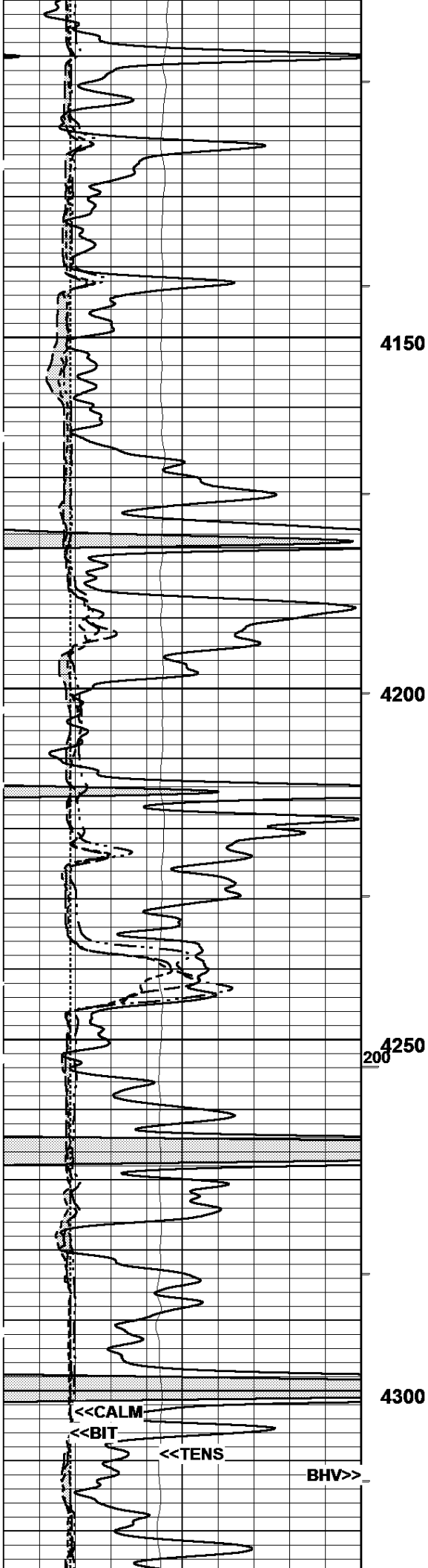


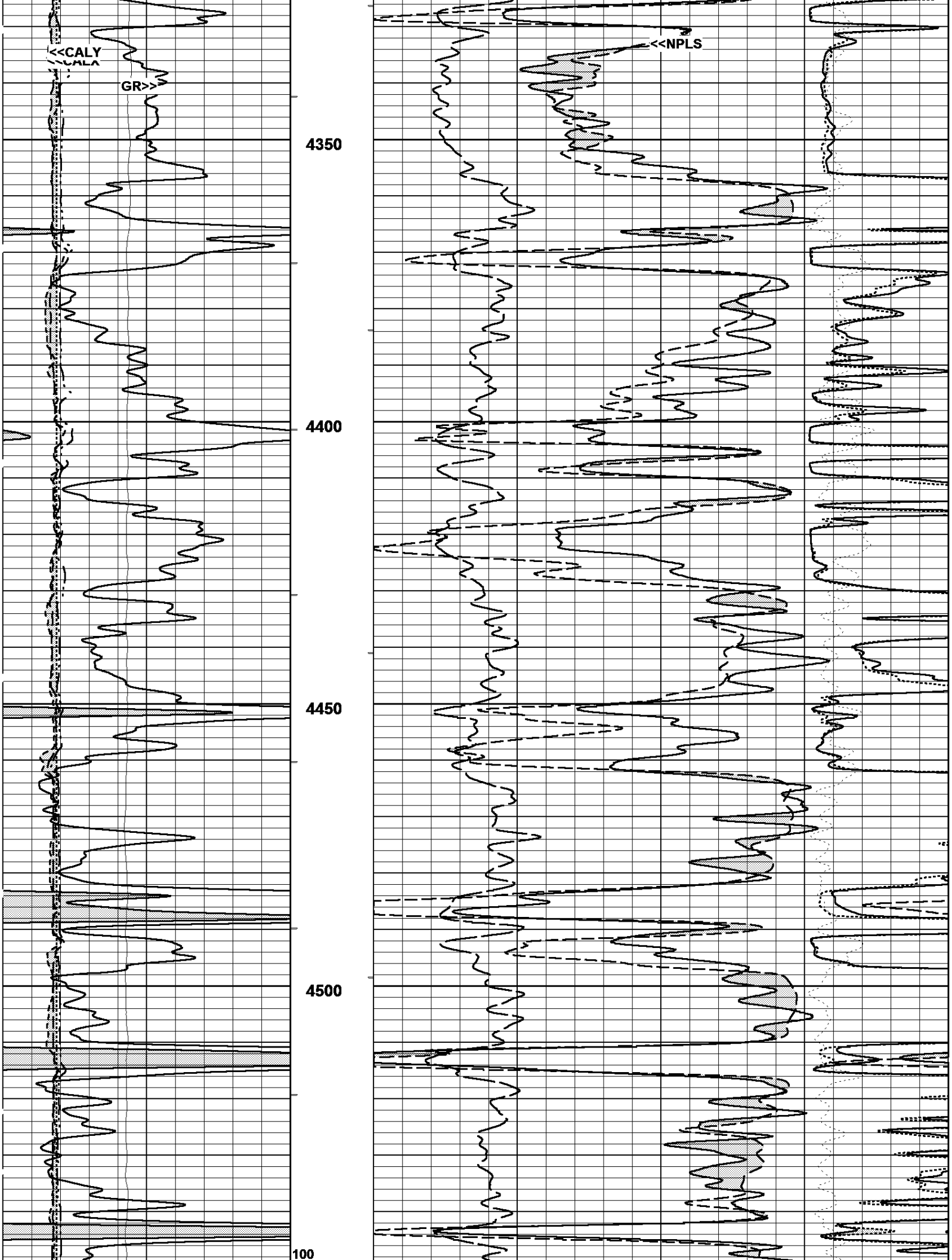


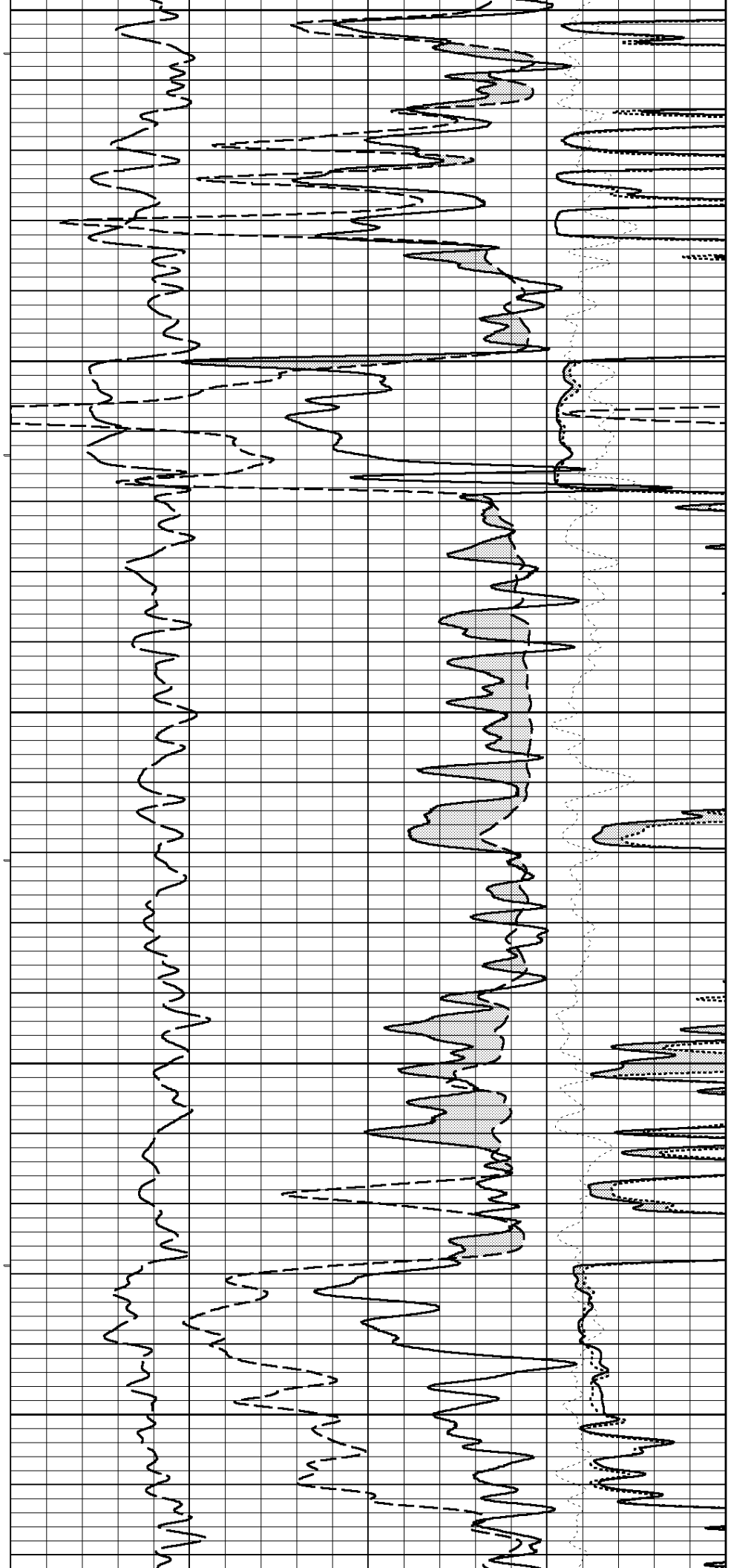
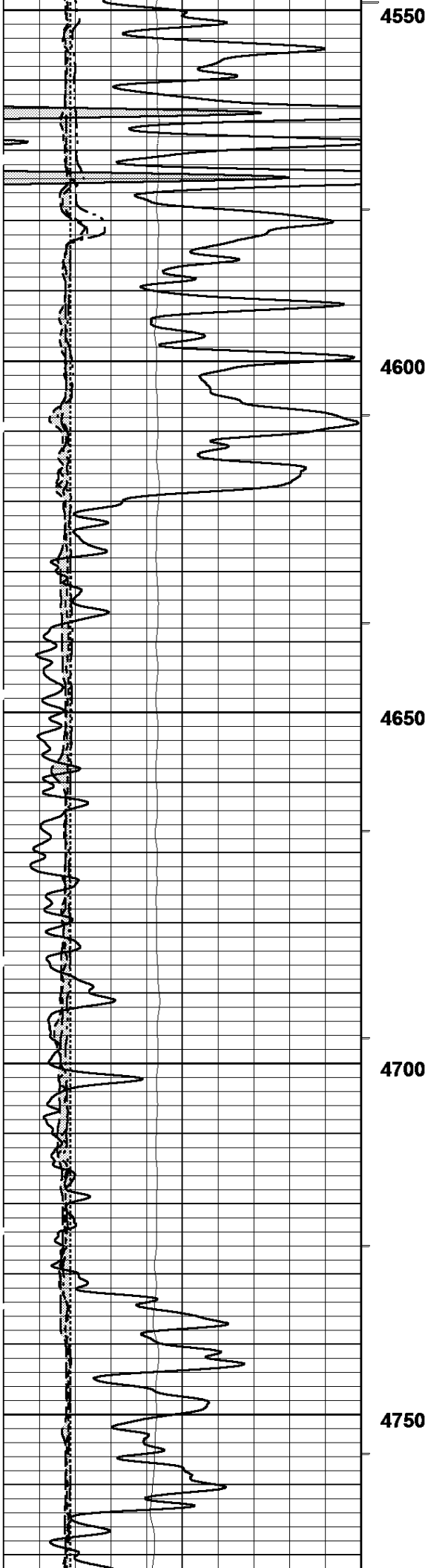


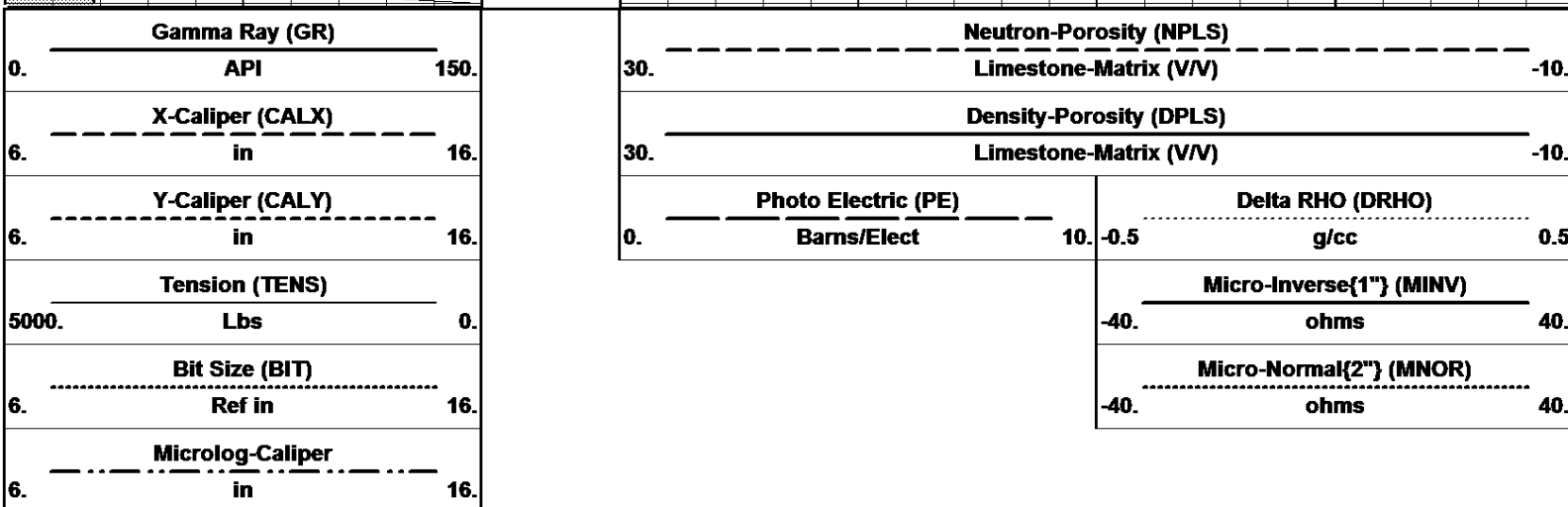
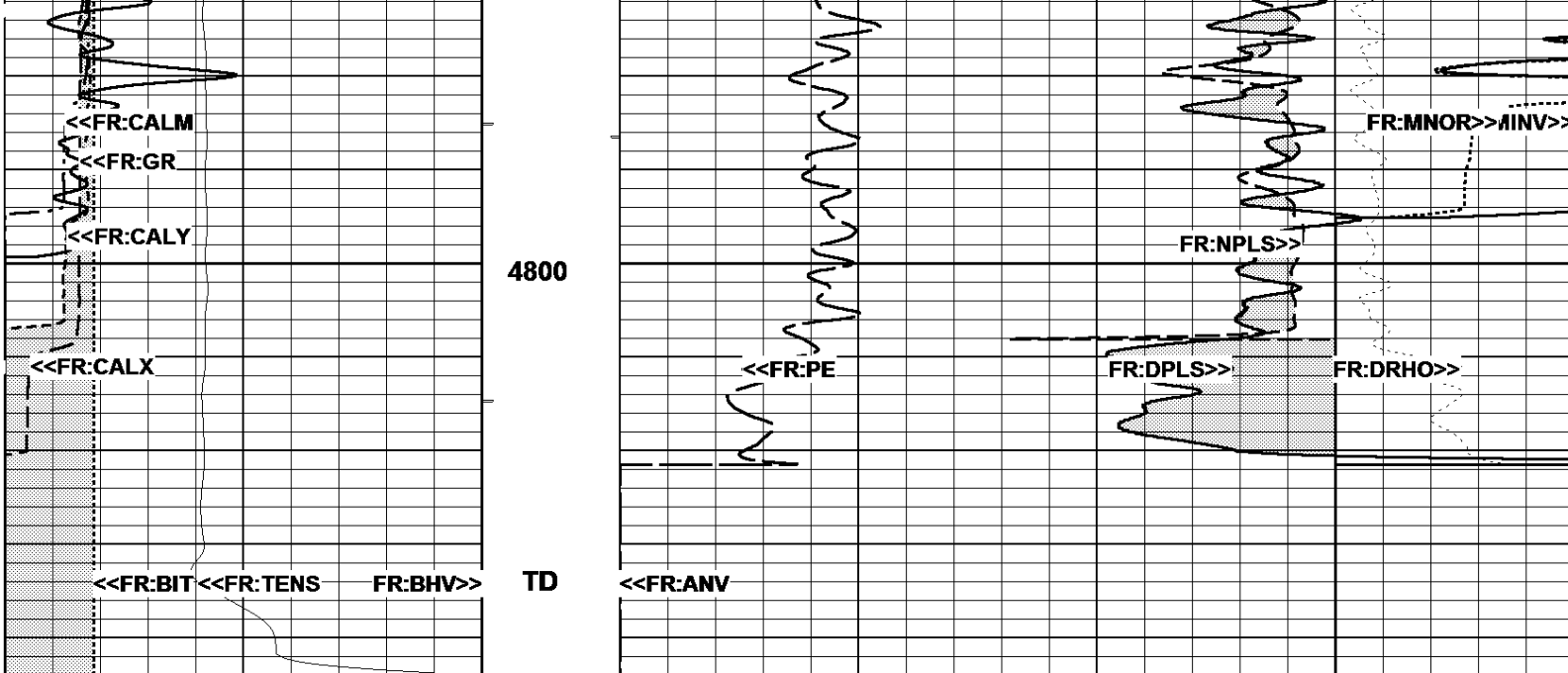






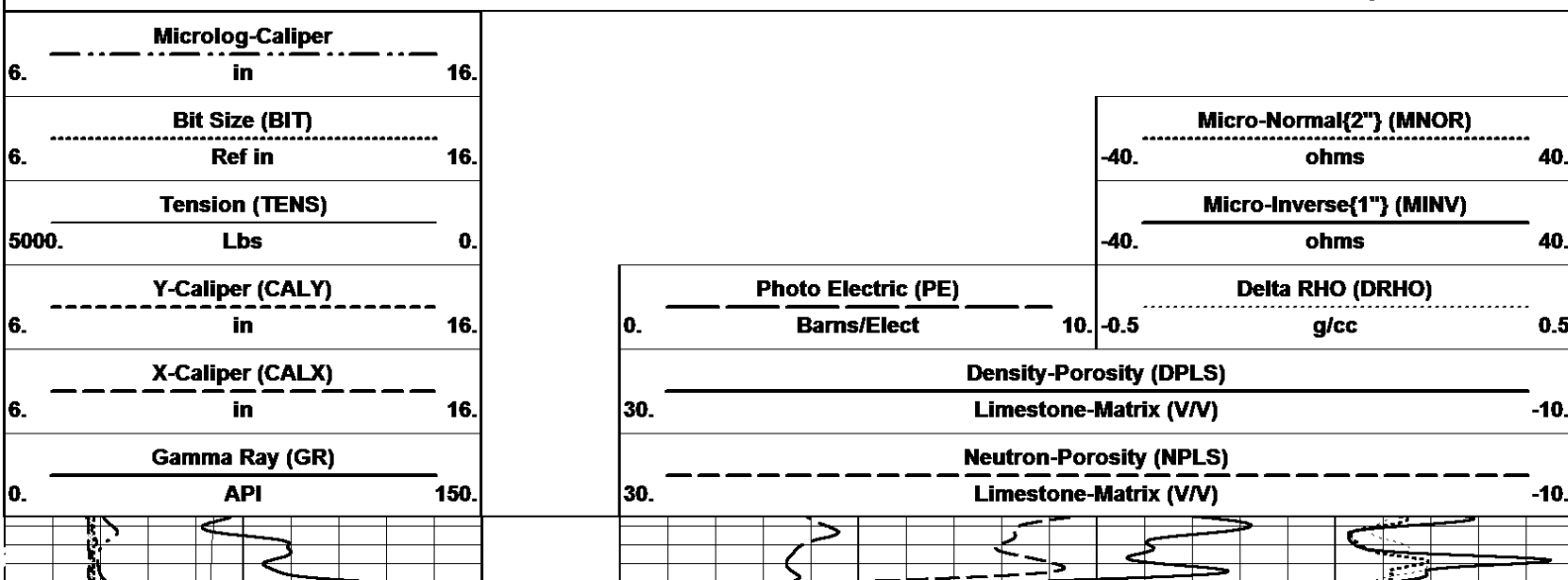


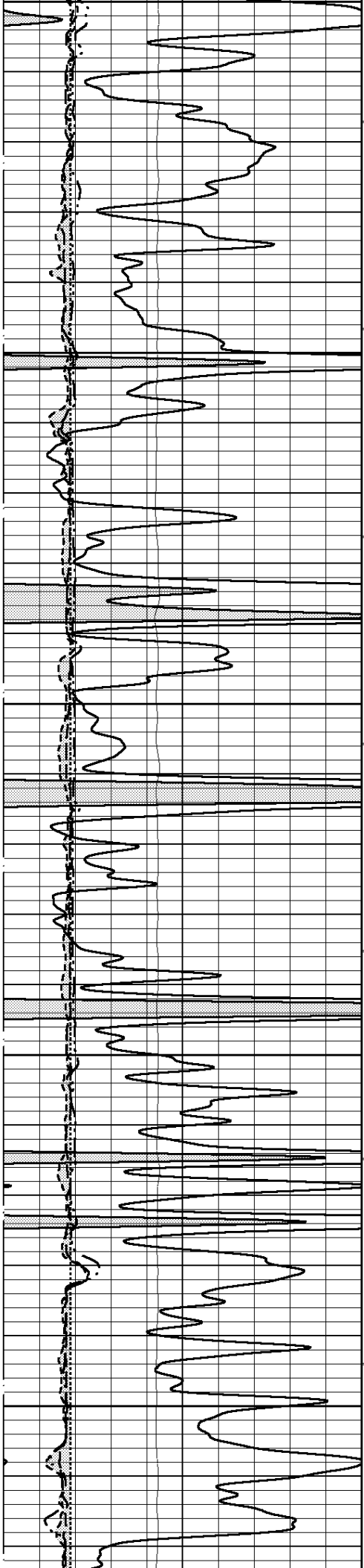




01/29/2015	MAIN PASS - LIMESTONE (5"/100ft)	Log UP - (VER 11.19)
03:47:55 => Start Time		Start Depth=> 4844.40 Feet

01/29/2015	REPEAT PASS - LIMESTONE (5"/100ft)	Log UP - (VER 11.19)
03:41:58 => End Time		End Depth=> 4405.20 Feet





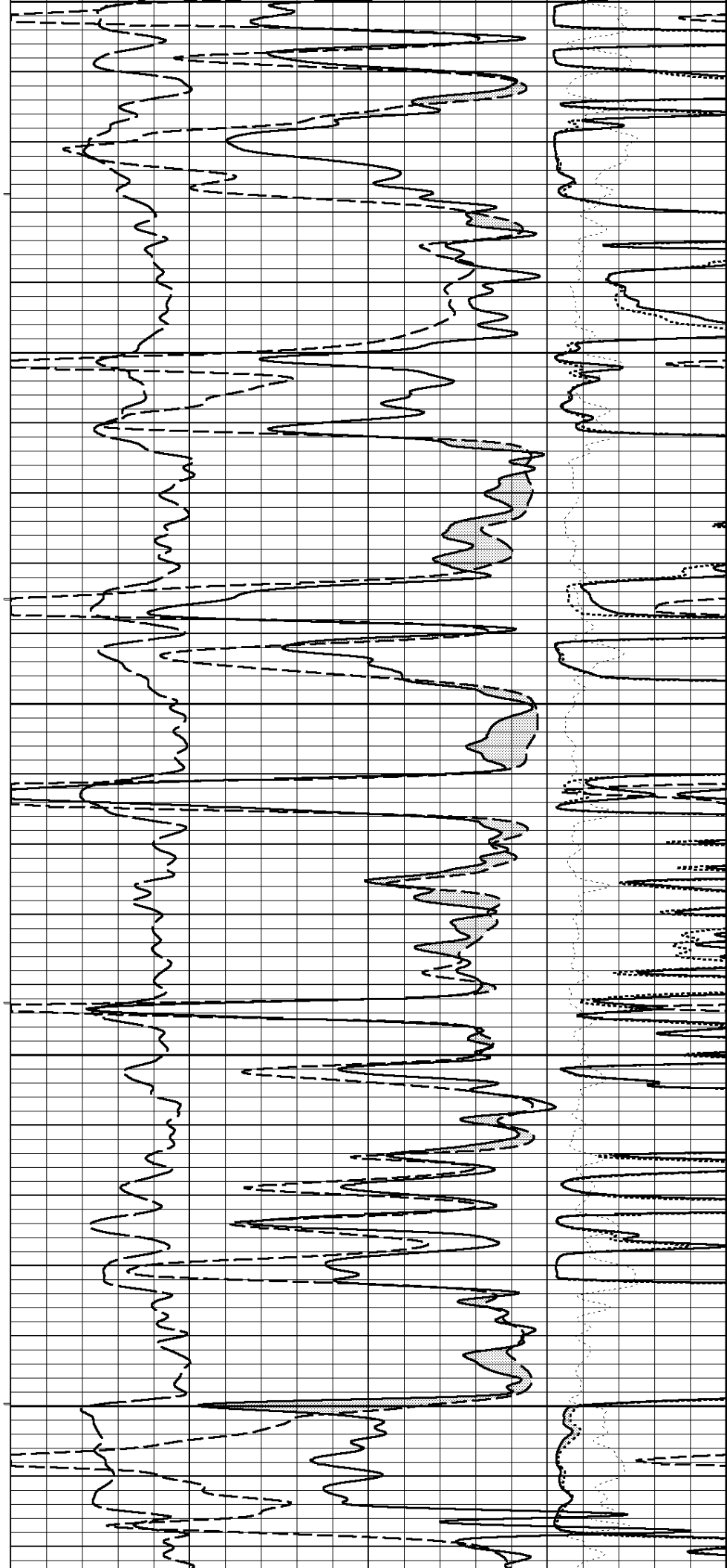
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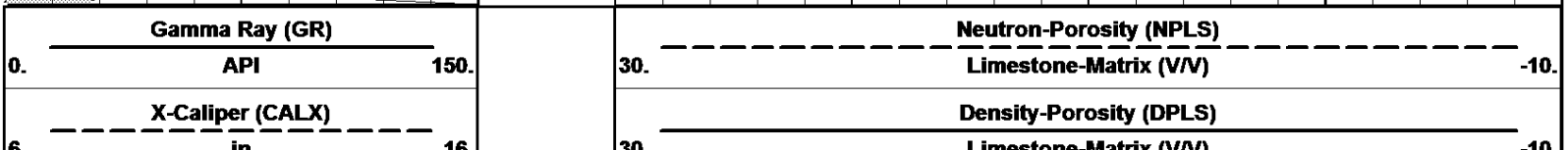
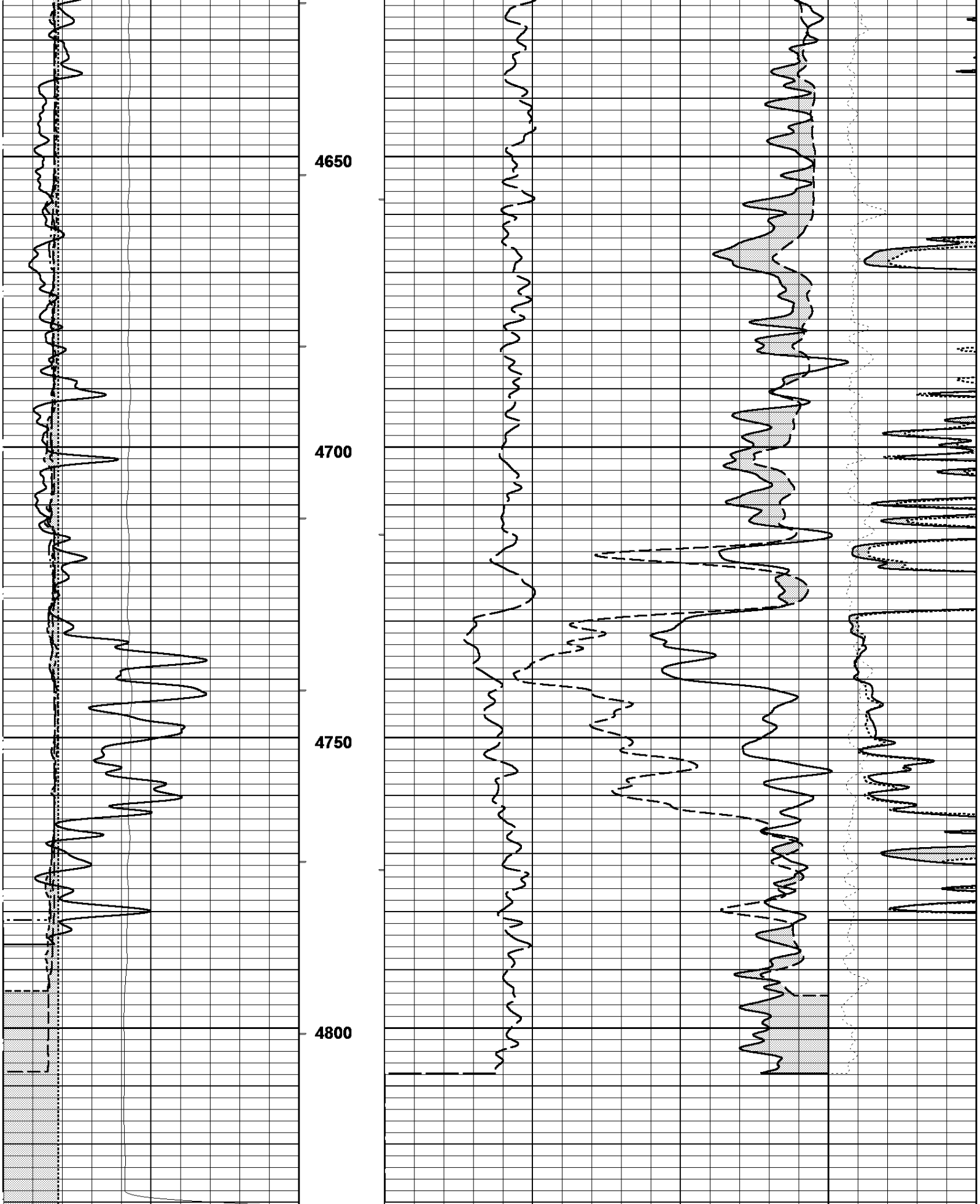
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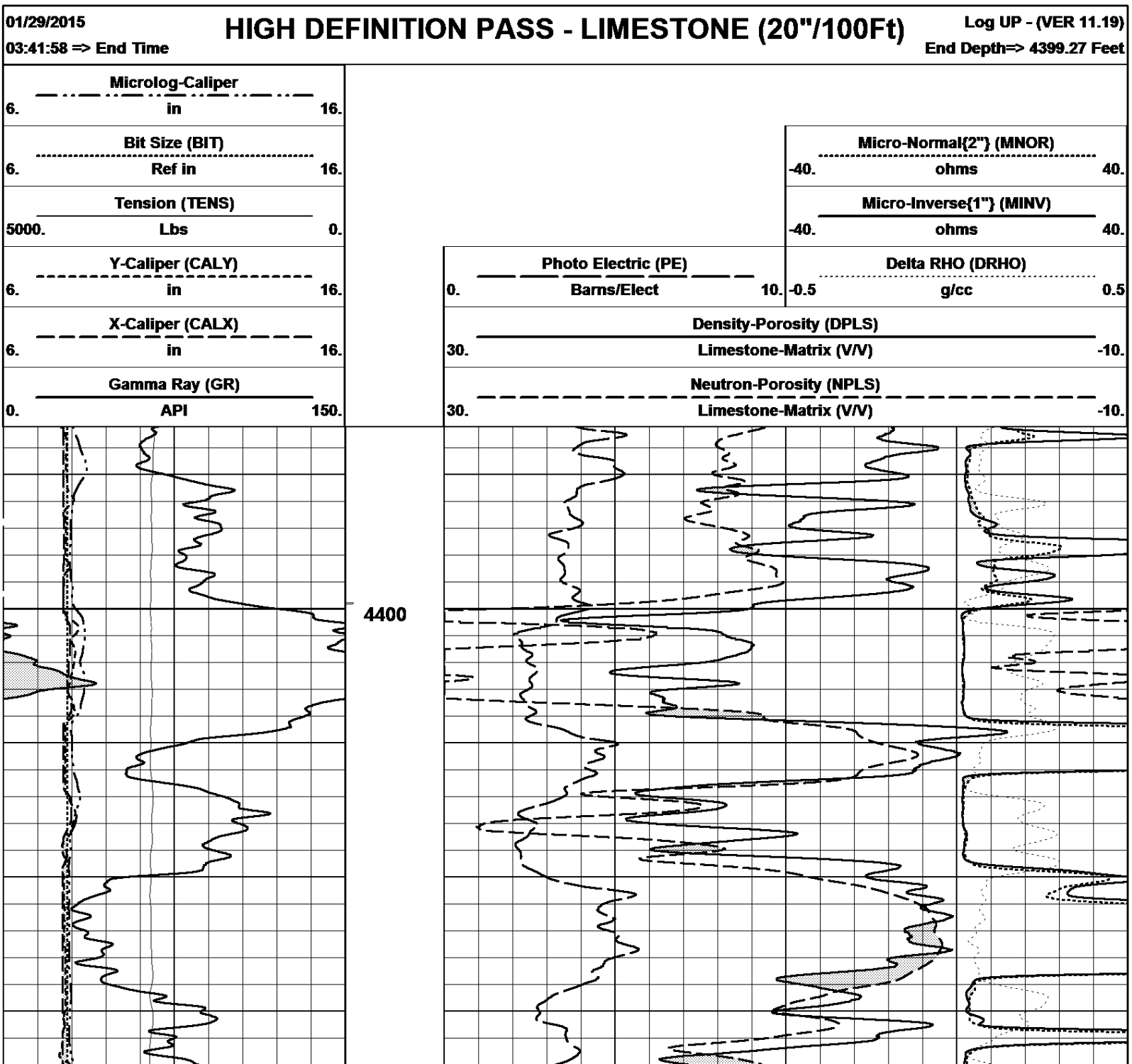
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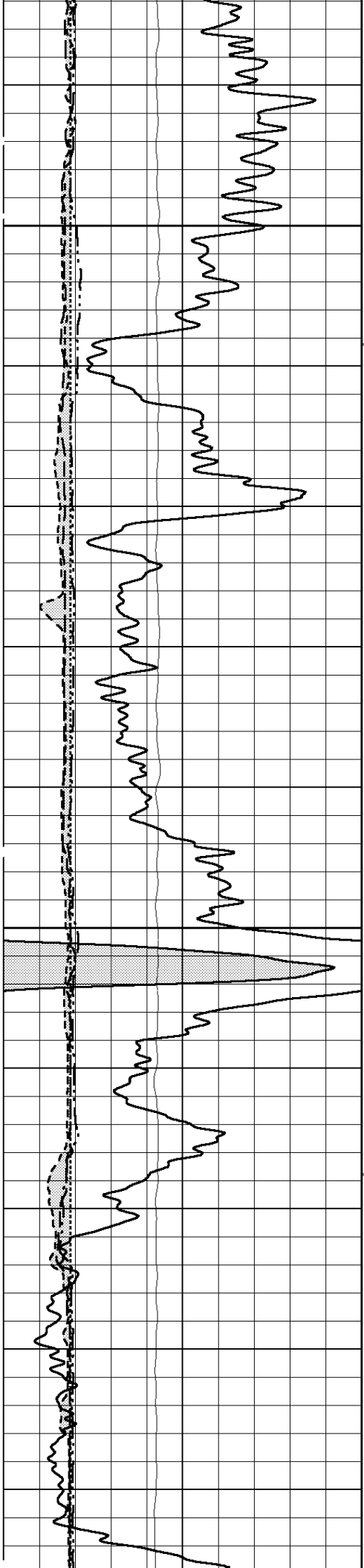
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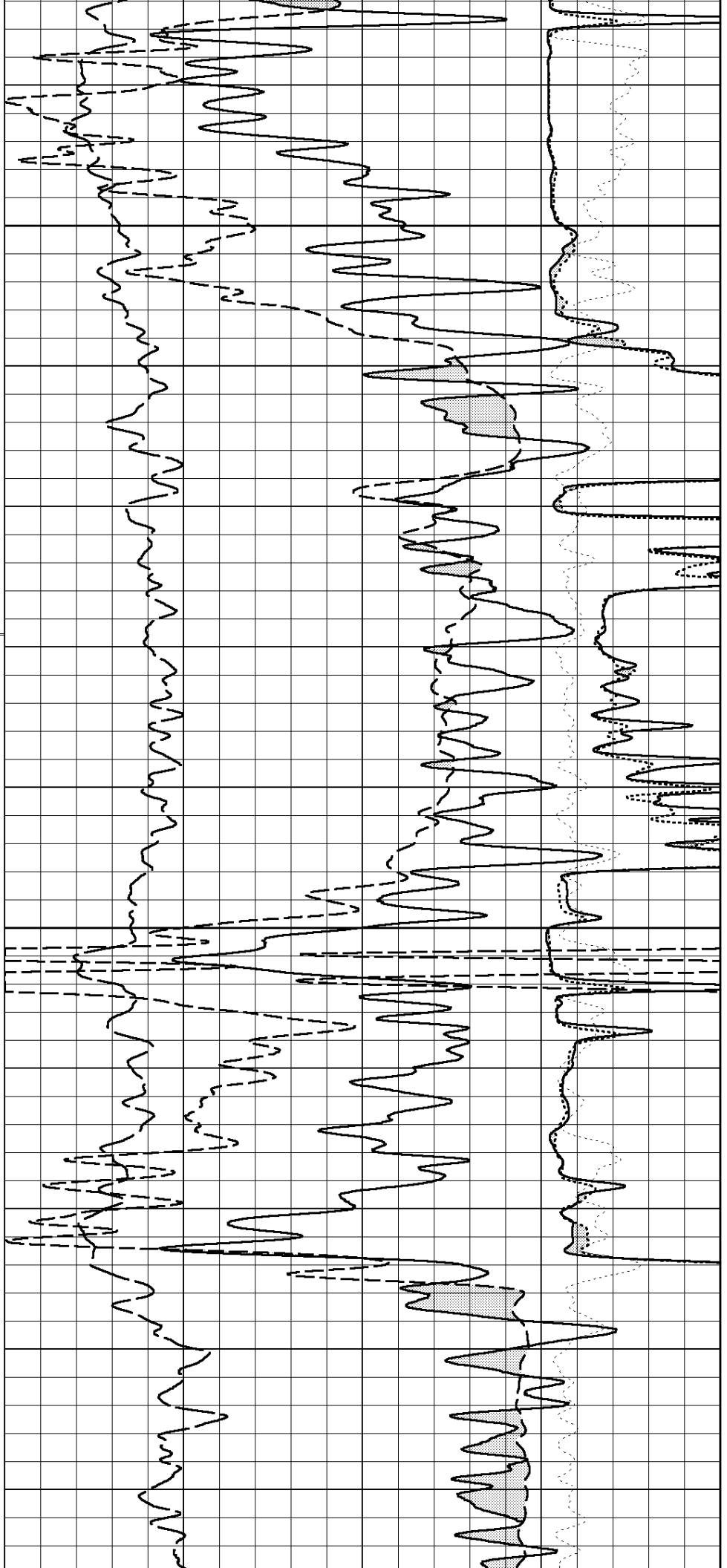
Y-Caliper (CALY) 6. in 16.			Photo Electric (PE) 0. Barns/Elect 10.			Delta RHO (DRHO) -0.5 g/cc 0.5		
Tension (TENS) 5000. Lbs 0.						Micro-Inverse{1"} (MINV) -40. ohms 40.		
Bit Size (BIT) 6. Ref in 16.						Micro-Normal{2"} (MNOR) -40. ohms 40.		
Microlog-Caliper 6. in 16.								
01/29/2015 03:23:27 => Start Time			REPEAT PASS - LIMESTONE (5"/100ft)			Log UP - (VER 11.19) Start Depth=> 4842.70 Feet		

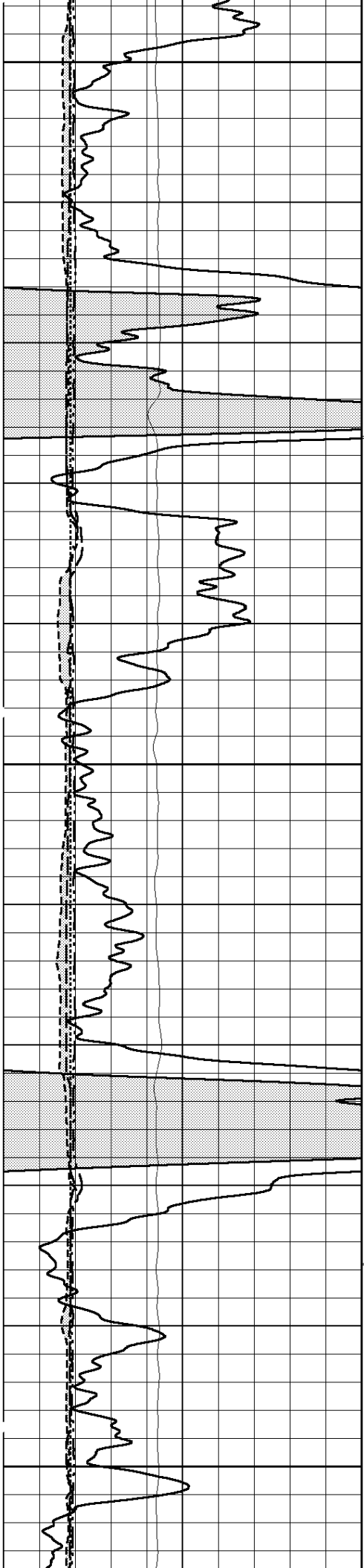




4425

4450

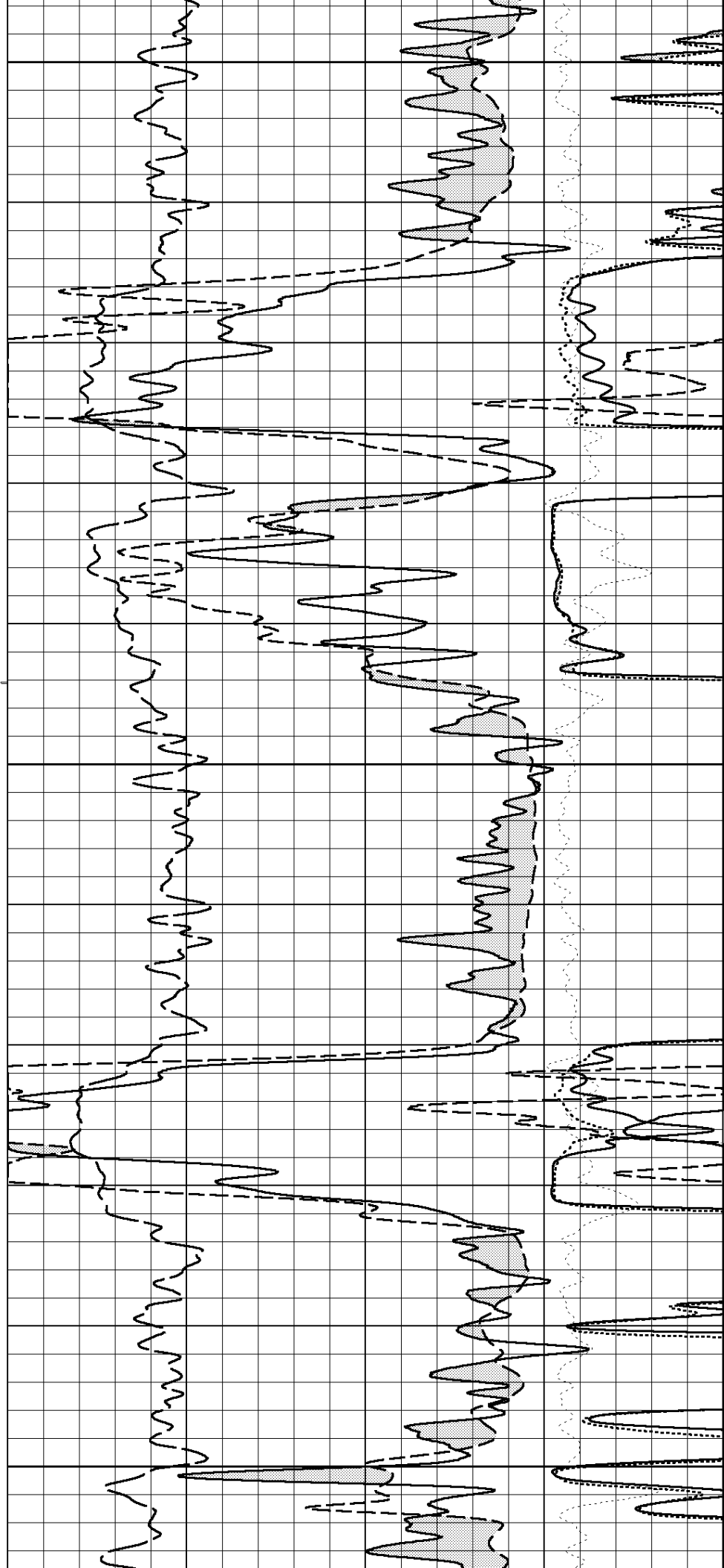


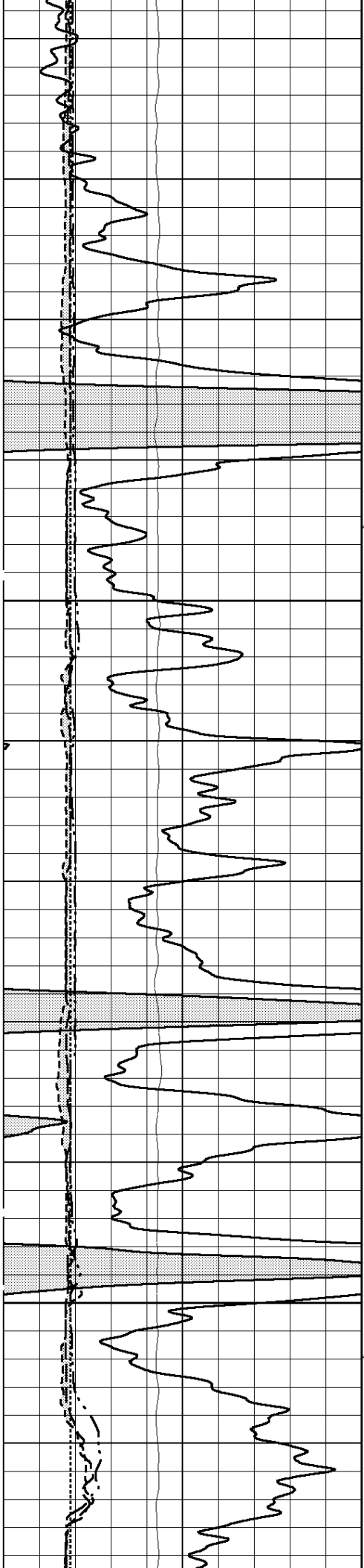


4475

4500

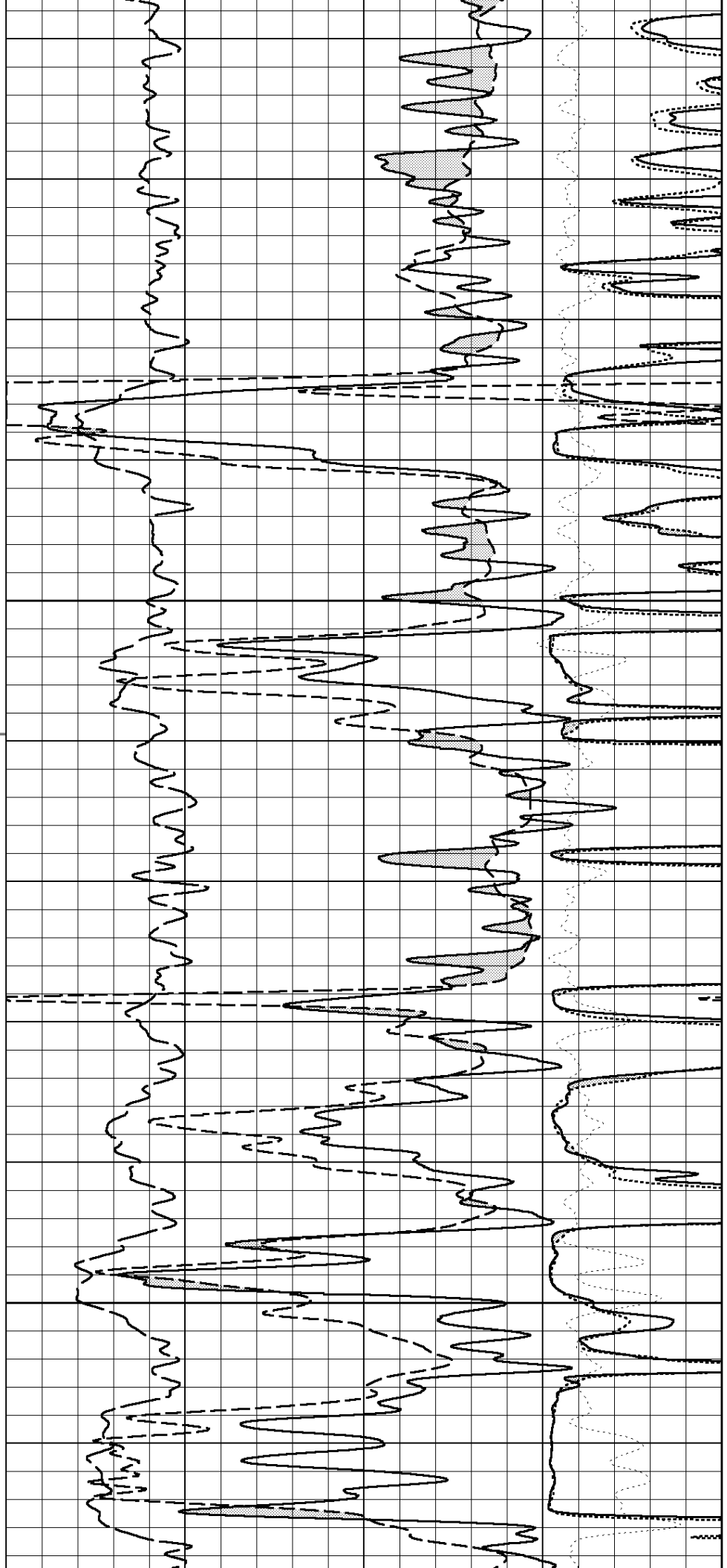
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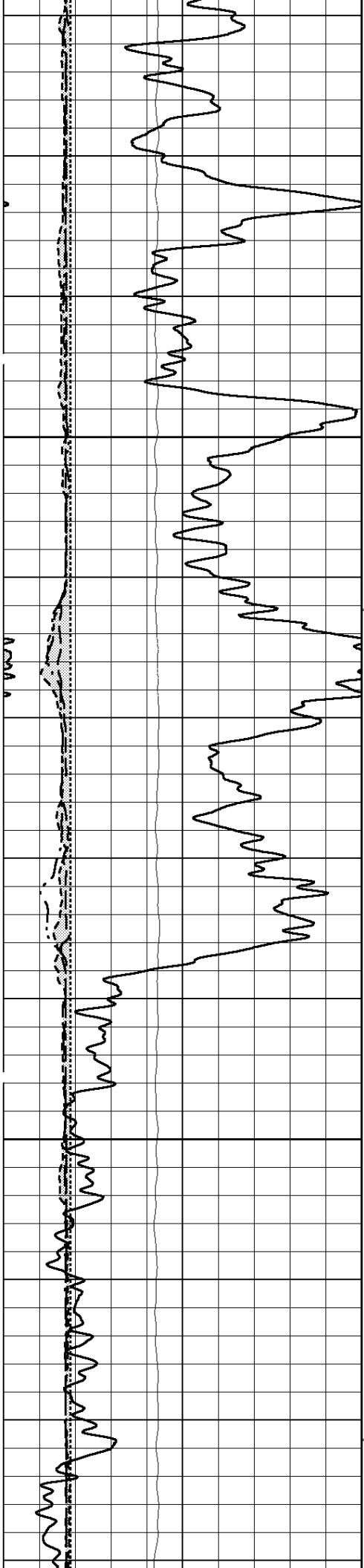




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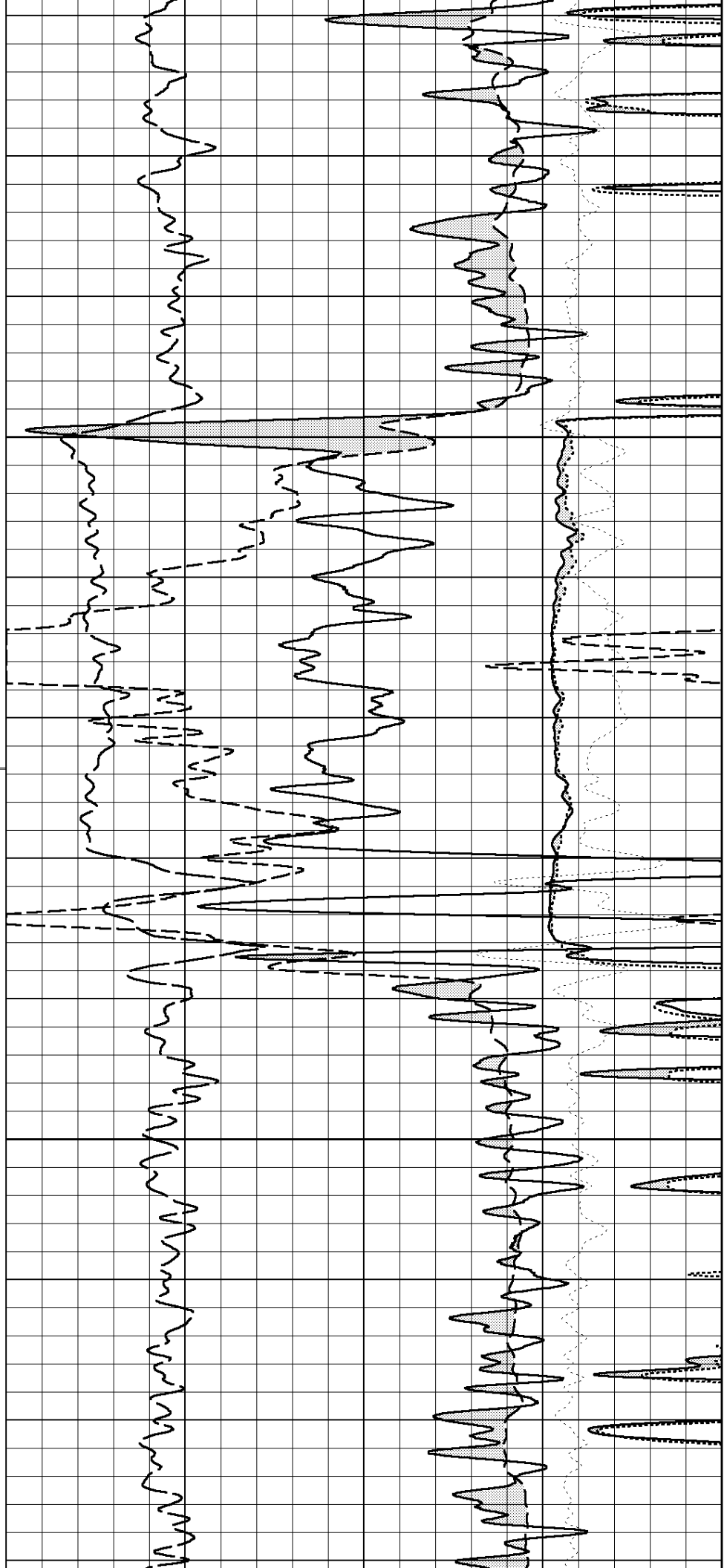
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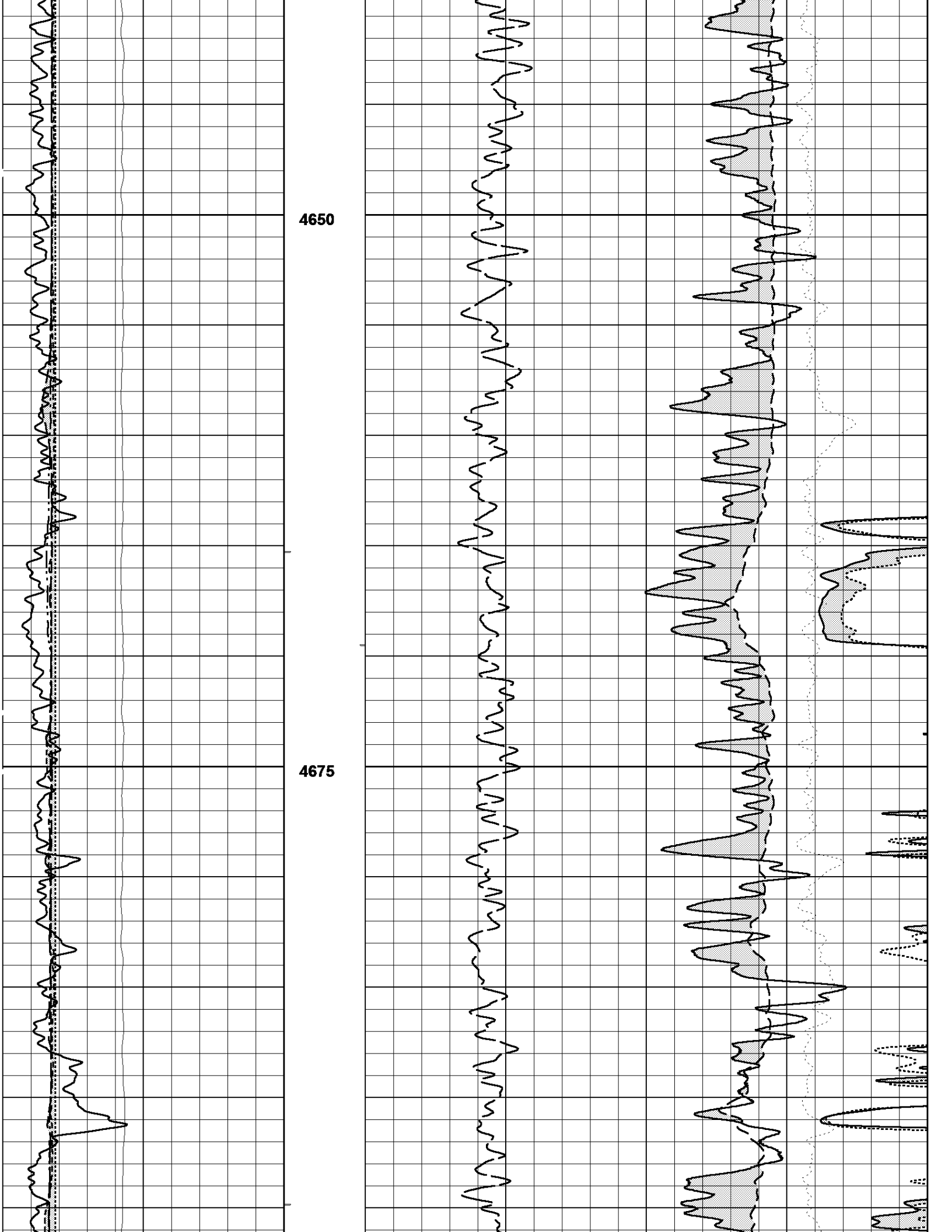


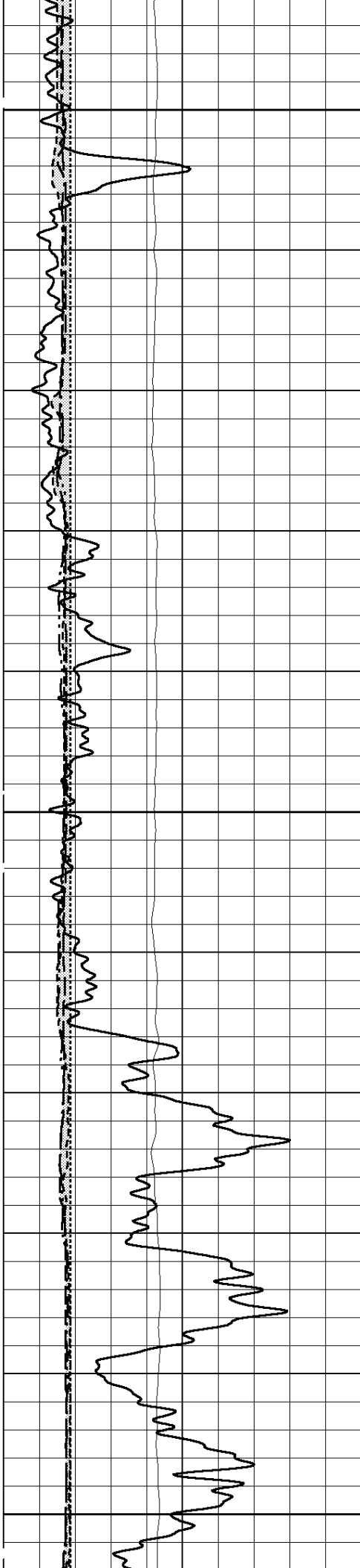


4600

4625



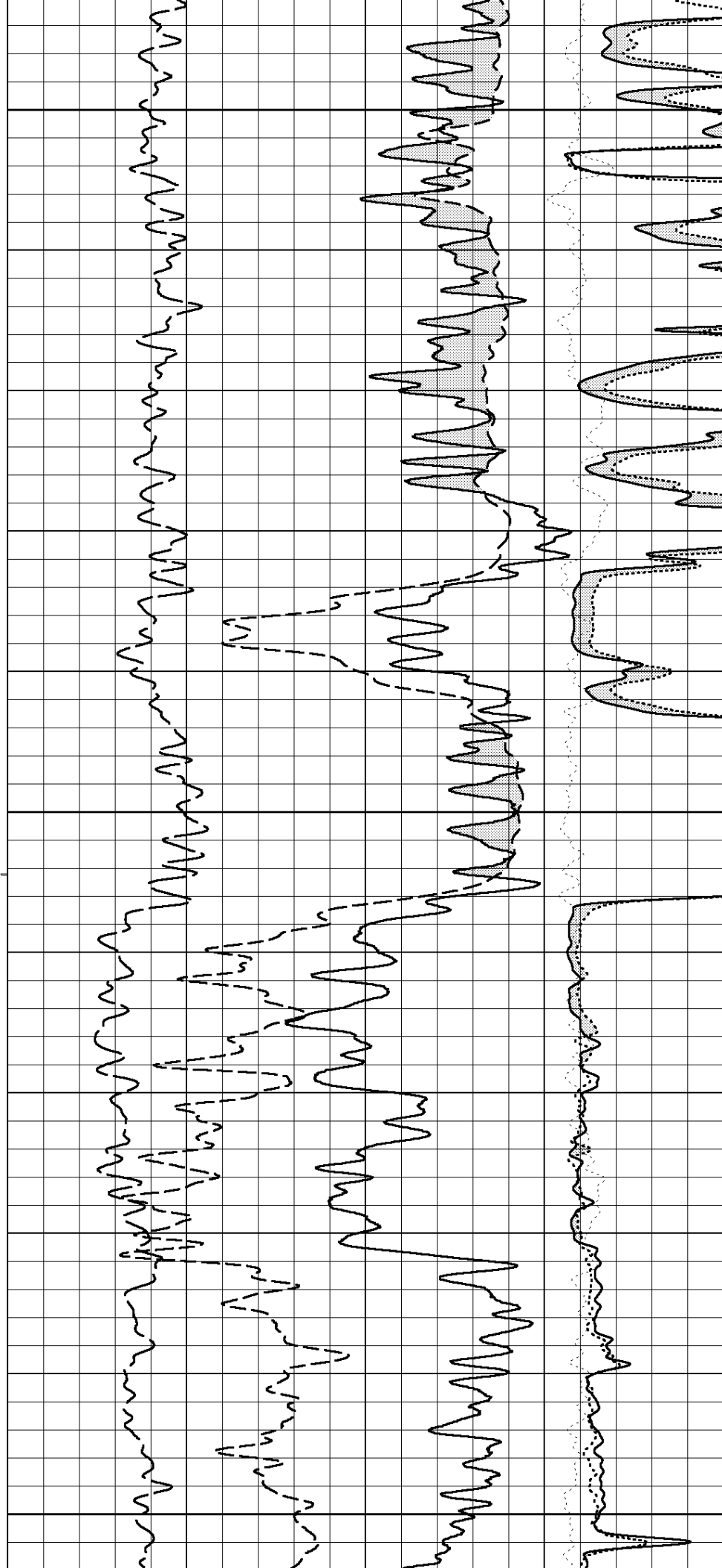


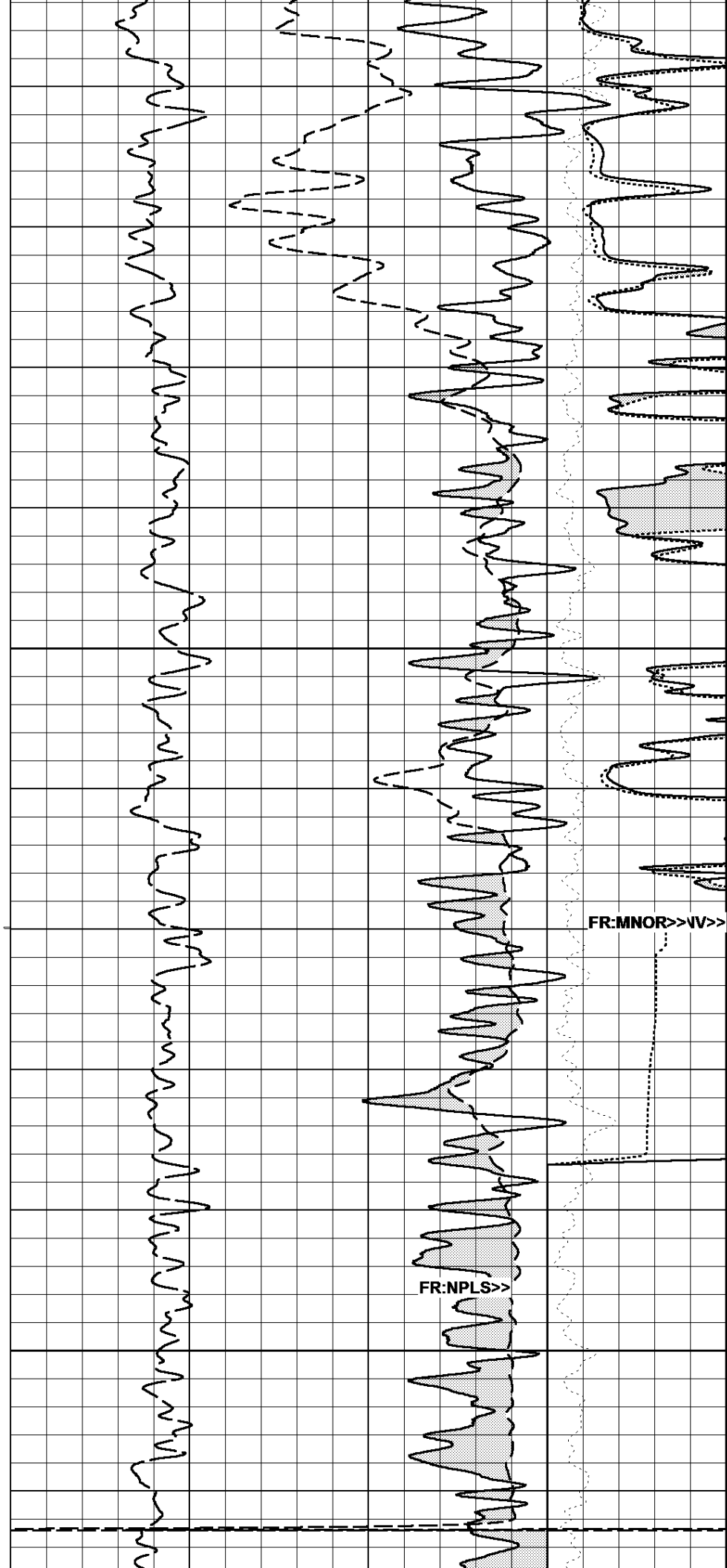
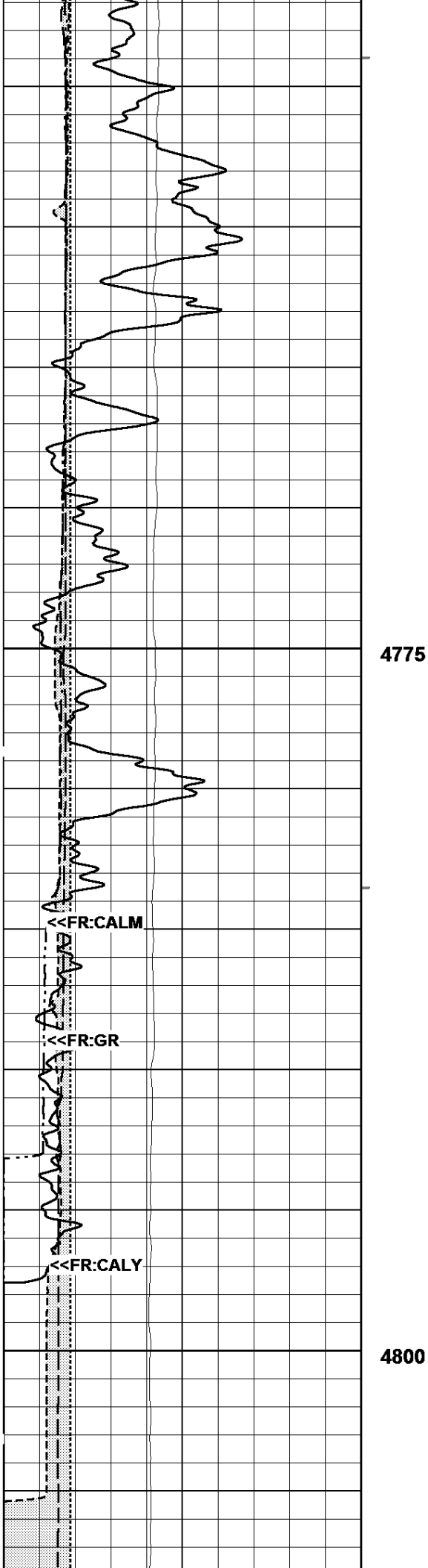


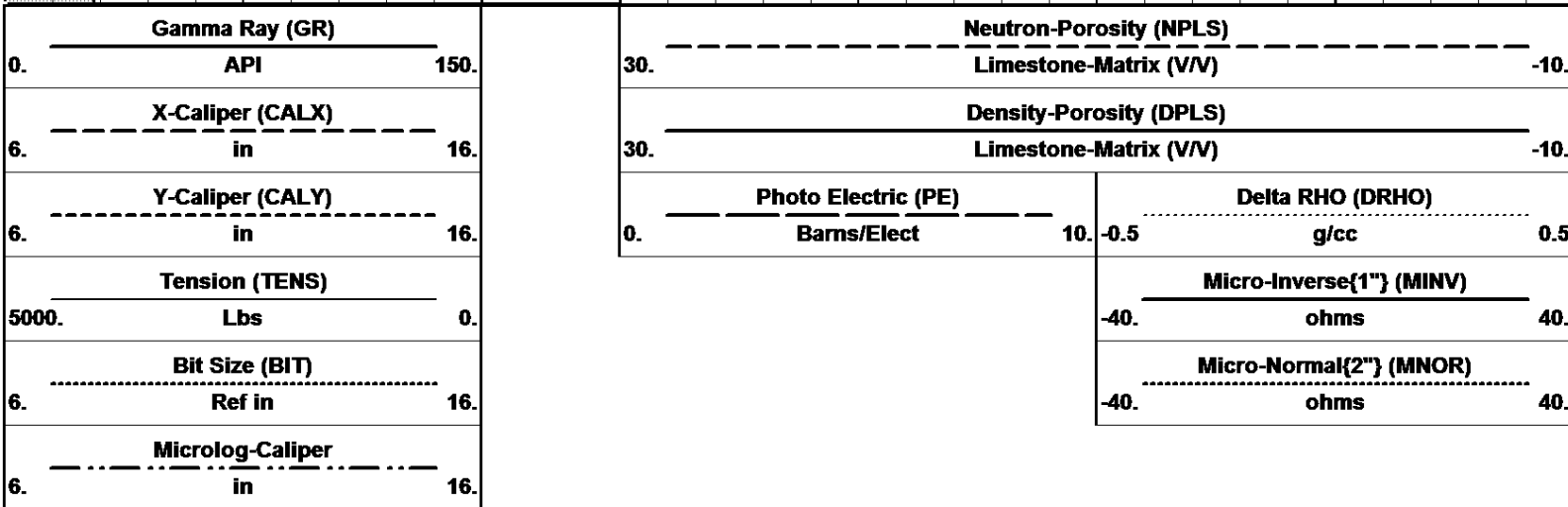
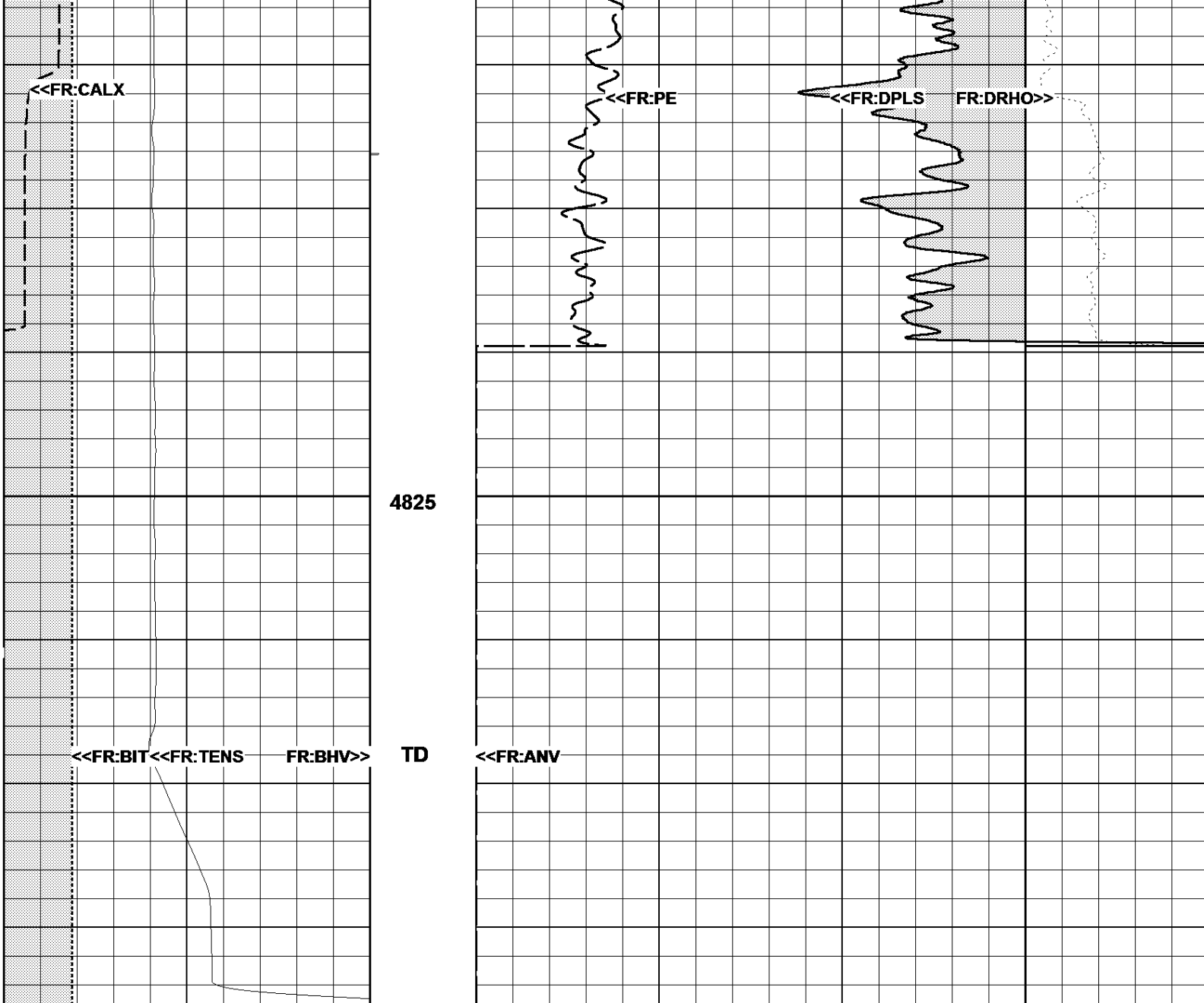
4700

4725

4750







01/29/2015	HIGH DEFINITION PASS - LIMESTONE (20"/100ft)	Log UP - (VER 11.19)
03:23:27 => Start Time		Start Depth=> 4848.70 Feet

Litho-Density/PE Calibrations

TOOL TYPE SERIAL NUM		LFDC/Pe		SOURCE TYPE SOURCE NUM		CESIUM 137		SOURCE STRGTH		2 CURIE		
		RL4112										
MASTER BLOCK CALIBRATIONS												
		W1(cps)	W2(cps)	W3(cps)	W4(cps)	SS	UNITS	CALIBRATION DATE	CALIBRATION TIME			
ALUMINUM		4694.374	3907.365	1906.878	3.828	2875.6994	2.523(g/cc)	M/D/Y> 1/9/2015	H:M:S> 15:38:45			
MAGNESIUM		14204.027	11505.477	4937.670	4.053	4193.3139	1.679(g/cc)					
BACKGROUND		1411.923	1245.364	848.506	3.814	4.6461						
SAND		12235.077	10164.250	4487.677	4.057		1.739(PE)					
IRON		4181.340	3548.797	1790.287	3.601		4.529(PE)					
FIELD VERIFIER(cps)		1477.493	1302.587	886.418	4.089	6.0800						
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		15 CURIE	
		RN2016									
MASTER TANK CALIBRATIONS											
		NEAR(cps)		FAR(cps)		RATIO	K VALUE	CALIBRATION DATE	CALIBRATION TIME		
LOW PHI	3.150					0.5920	0.9011	M/D/Y> 12/23/2014	H:M:S> 15:36:33		
MED PHI	19.130					1.0143	0.9011				
HIGH PHI	31.300					1.2158	0.9012				
FIELD VERIFIER(cps)		279.844		209.056		1.3386					
VER NUM											
WELL SITE CALIBRATIONS											
VER NUM	7430	NEAR(cps)		FAR(cps)		RATIO		CALIBRATION DATE	CALIBRATION TIME		

GAMMA RAY CALIBRATION											
SERIAL NUM BLANKET NUM		RG3015									
		1A									
MASTER CALIBRATIONS											
		BackGrnd		CalVal: 159.000 API		Gain/Offset		CALIBRATION DATE		CALIBRATION TIME	
BASE CALS		78.600 - raw		486.593 - raw		0.390 - gain 0.000 - off		M/D/Y> 12/23/2014		H:M:S> 16:0:12	
WELL SITE CALIBRATIONS											
		BackGrnd		CalVal: 100.000 Mkrphs		Gain/Offset		CALIBRATION DATE		CALIBRATION TIME	

PRE CAL	Backgnd -0.059 - raw	CalVal: 100.000 mmH ₂ O 26.967 - raw	Gain/Offset 3.700 - gain	CALIBRATION DATE M/D/Y> 11/12/2004	CALIBRATION TIME H:M:S> 12:40:27
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X-CALIPER CALIBRATION

SERIAL NUM					
	RL4112				
MASTER CALIBRATIONS					
	ZeroVal: 6.000 mm	CalVal: 10.000 mm	Gain/Offset	CALIBRATION DATE	CALIBRATION TIME
BASE CALS	3855.307 - raw	5902.570 - raw	0.002 - gain -1.533 - off	M/D/Y> 1/9/2015	H:M:S> 16:1:51

Y CALIPER CALIBRATIONS

SERIAL NUM	RN2016				
MASTER CALIBRATIONS					
	ZeroVal: 6.000 IN	CalVal: 10.000 IN	Gain/Offset	CALIBRATION DATE	CALIBRATION TIME
BASE CALS	605.241 - raw	1293.665 - raw	0.006 - gain 2.483 - off	M/D/Y> 12/23/2014	H:M:S> 15:46:1

MICRO NORMAL CALIBRATION

SERIAL NUM	RM8008				
MASTER CALIBRATIONS					
	ZeroVal: 0.010 CPS	CalVal: 10.000 CPS	Gain/Offset	CALIBRATION DATE	CALIBRATION TIME
BASE CALS	31.830 - raw	353.963 - raw	0.031 - gain -0.977 - off	M/D/Y> 12/23/2014	H:M:S> 15:0:43

MICRO INVERSE CALIBRATION

SERIAL NUM					
	RM8008				
MASTER CALIBRATIONS					
	ZeroVal: 0.010 CPS	CalVal: 10.000 CPS	Gain/Offset	CALIBRATION DATE	CALIBRATION TIME
BASE CALS	16.523 - raw	271.983 - raw	0.039 - gain -0.636 - off	M/D/Y> 12/23/2014	H:M:S> 14:50:32

Company	RED OAK ENERGY, INC.
Well	MATHERS #1-2
Field	WILDCAT
County	LOGAN
State	KANSAS

	COMPENSATED NEUTRON LITHOLOGY DENSITY
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RECON

LITHOLOGY DENSITY
GAMMA RAY X-Y CALIPER
MICROLOG