

Tucker

ENERGY SERVICES

PHASED INDUCTION

SHALLOW FOCUS SP LOG

Company CASTLE RESOURCES LLC Well RICE TANNER #1 Field EL DORADO County BUTLER State KANSAS Country USA API No. 15-015-24025		File No : TUL-59589 Company : CASTLE RESOURCES LLC Well : RICE TANNER #1 Field : EL DORADO County : BUTLER State : KANSAS Country : USA API No : 15-015-24025			
Location : E2 SW SW 660' FSL & 990' FWL		LSD : Sect : 35 Twp : 25S Rge : 4E			
Permanent Datum:	GL	Elevations:	KB 0.00 DF 0.00 GL 1344.00	Services:	CNT LDT MLT
Drilling Measured From:	GL				
Log Measured From:	GL				
Above Permanent Datum:	0.00 Ft				
Date	05-04-2014				
Run Number	1				
Depth--Driller	2470.0 Ft				
Depth--Logger	2467.0 Ft				
First Reading	2467.0 Ft				
Last Reading	211.0 Ft				
Casing--Driller	211.0 Ft				
Casing--Logger	211.0 Ft				
Bit Size	6.750 In				
Casing Size	8.625 In				
Hole Fluid Type	WBM				
Density	9.2				
Fluid Loss	0.0				
PH/Viscosity	11.0 36.0				
Sample Source	MEASURED				
RMF@Measured Temp.	1.900 @ 70 F				
RMF@Measured Temp	1.620 @ 70 F				
RMF@Measured Temp.	2.190 @ 70 F				
Source RMF/RMC	CALCULATED/CALCULATED				
RM@BHT	1.330 @ 103 F				
Time Circulation Stopped					
Max Recorded Temp.	104 F				
Equipment/Base	T-123 TULSA				
Recorded By	S. DAVIS				
Witnessed By	W. JACKSON / J. GREEN				

The customer is hereby warned that by providing the log data herein, T. E. S. does not agree to provide any interpretation of log data, conversion of log data to physical rock parameters or recommendations. T. E. S. does not guarantee or warrant either expressly or impliedly, the accuracy of any interpretation of log data, conversion of log data to physical rock parameters or recommendations which may be given by T. E. S. personnel. Any interpretation, conversion or recommendation is not part of the consideration for the agreement between the parties and is not part of any part of the charge by T. E. S. for its services. Any user of the log data is warned that said user is not entitled to rely on interpretations, conversions or recommendations as aforesaid.

Bitsize Intervals		Casing Strings			
Size (In)	Bottom (Ft)	Size (In)	Weight (Lbs)	Bottom (Ft)	Top (Ft)
6.750	2467.00	8.625	24.00	211.00	0.00

Run Number	1	
Date	05-04-2014	
Date/Time On Bottom	05-04-2014 7:45 pm	
Depth to Fluid	0.0 Ft	
Salinity	0.000	
RMF@BHT	1.130 @ 103 F	
RMC@BHT	1.530 @ 103 F	

Run Number 1

Comments

ALL PRESENTATION PER CUSTOMER REQUEST
 GRT,CNT,LDT,PIT RUN IN COMBINATION
 CALIPERS ORIENTED ON X-Y AXIS
 2.71 G/CC USED TO CALCULATE POROSITY
 ANNULAR & BOREHOLE VOLUME CALCULATED USING 4.5 PRODUCTION CASING
 PHIN IS CALIPER CORRECTED
 NO REPEAT PER CUSTOMER REQUEST

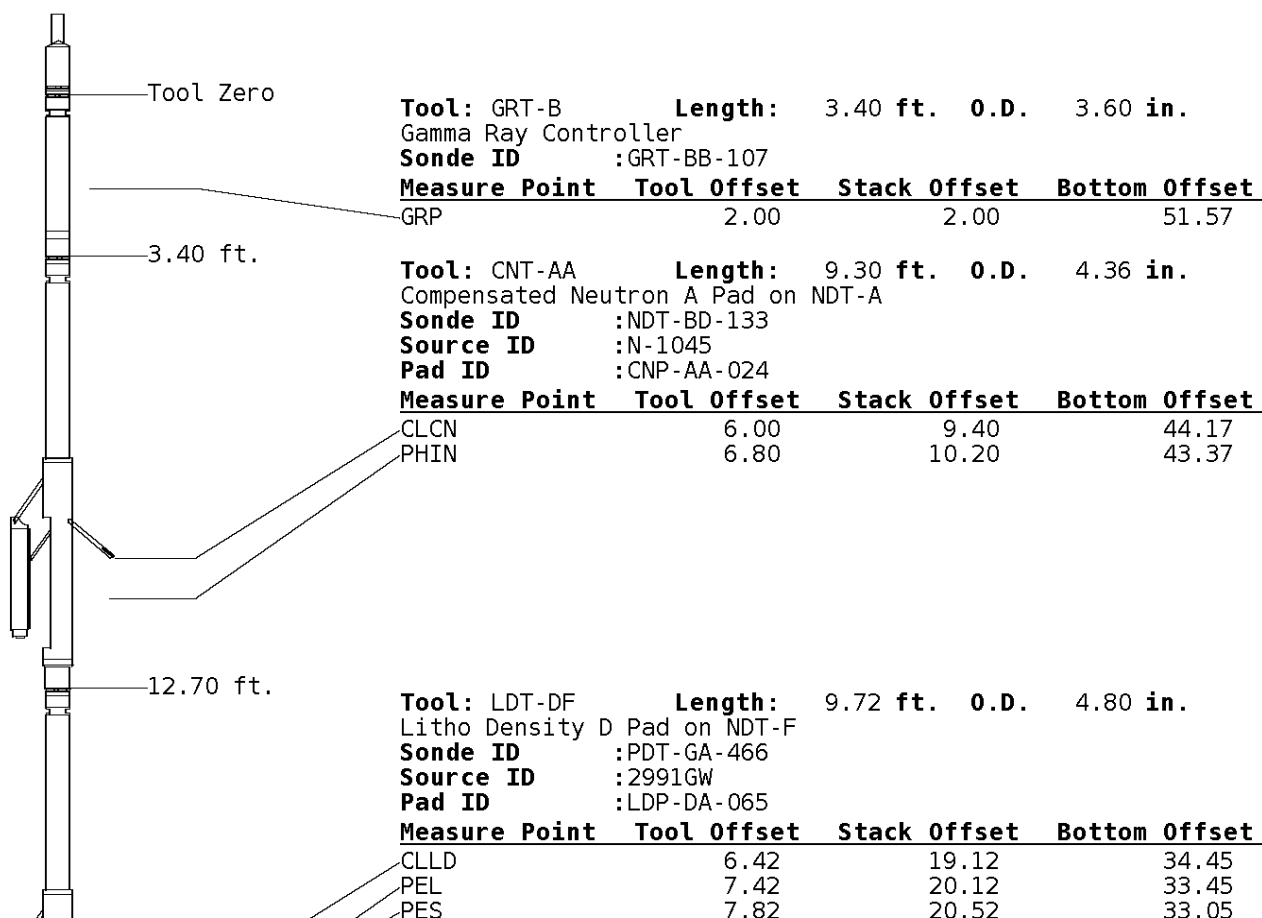
GRT; GRP,
 CNT; PHIN, CLCNIN
 LDT; PORL, LCORN, PECLN, LDENN, CLLDIN
 MLT; NOR.RF, INV.RF, MSCLPIN.
 PIT; ILD, ILM, SPU, SFLAEC, CIRD

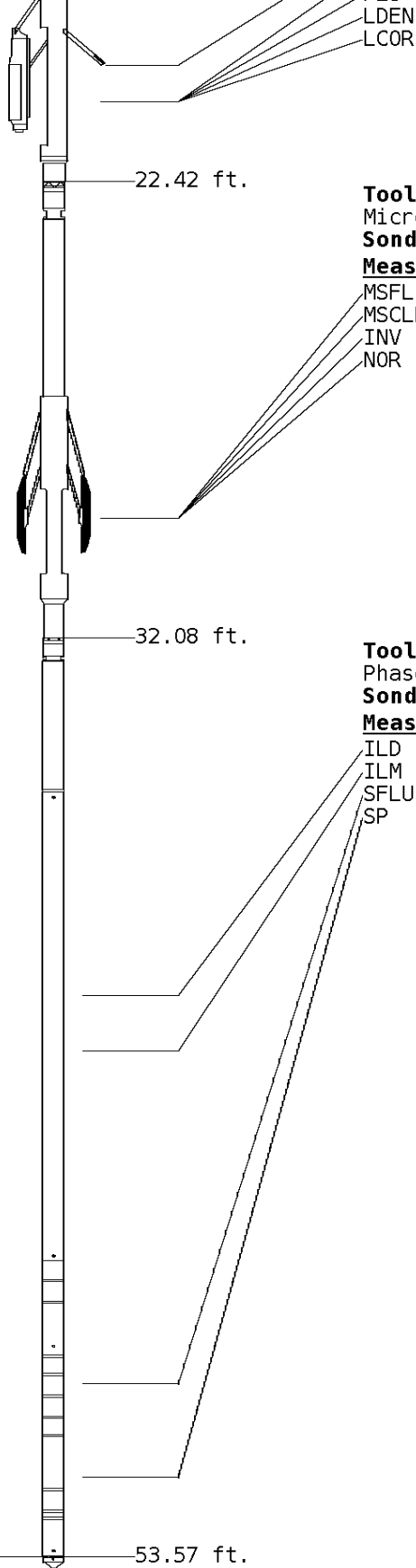
OPERATORS;

C. GONZALES
 J. THOMAS

Tool String Schematic

Total Tool Length - 53.57 ft.
Maximum Outside diameter - 6.00 in.
Net Weight in Air - 943.00 lbs.





LDEN 7.62 20.32 33.25
LCOR 7.62 20.32 33.25

Tool: MST-DA **Length:** 9.66 ft. **O.D.** 6.00 in.
Micro Spherically Focused (IC)
Sonde ID :MST-DA-30

Measure Point	Tool Offset	Stack Offset	Bottom Offset
MSFL	7.60	30.02	23.55
MSCLP	7.60	30.02	23.55
INV	7.60	30.02	23.55
NOR	7.60	30.02	23.55

Tool: PIT-CA **Length:** 21.49 ft. **O.D.** 3.62 in.
Phased Dual Induction w/ RM & D
Sonde ID :PIT-AB-005

Measure Point	Tool Offset	Stack Offset	Bottom Offset
ILD	8.92	41.00	12.56
ILM	10.10	42.18	11.39
SFLU	17.49	49.57	4.00
SP	20.60	52.68	0.88

Well File: cast-rice-1-mstk-may-4

Scale: 1:600 **Format:** DIL-600

Segment: V1.D1.S3 MN

Acquired: 2014-05/04 19:38 3.3.0-12594

Reference: 0

Processed: 2014-05/04 20:39 3.3.0-12594

TENSION
LBS

10000

0

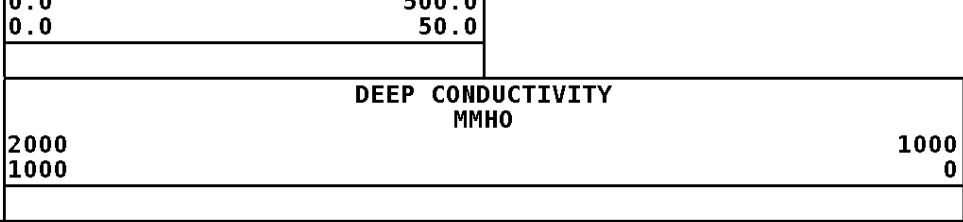
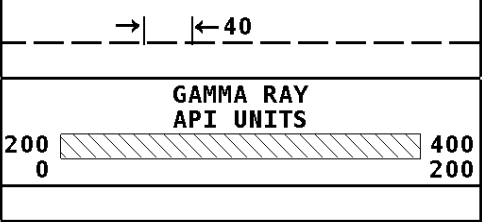
DEEP INDUCTION
OHMM

0.0 500.0
0.0 50.0

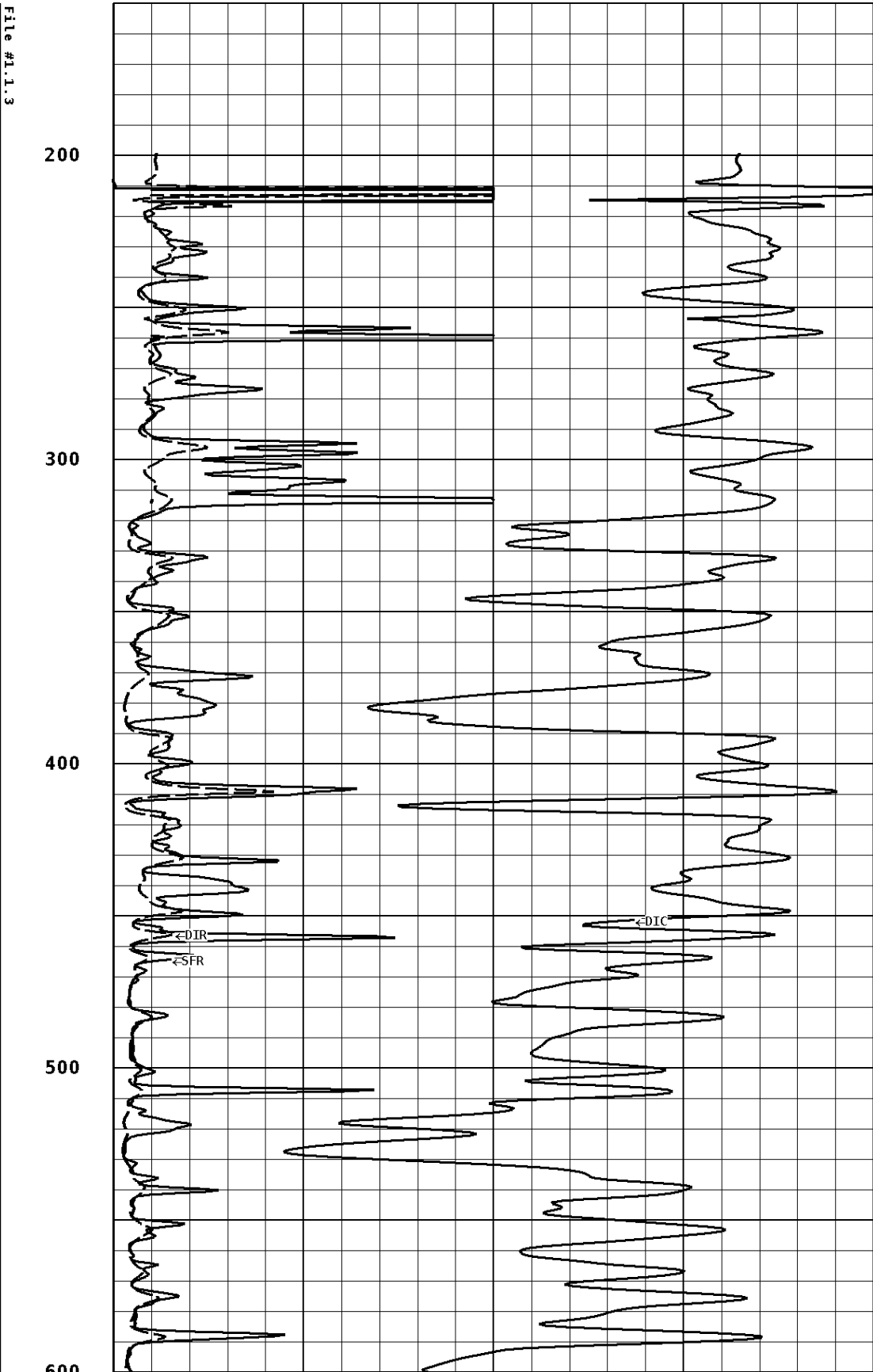
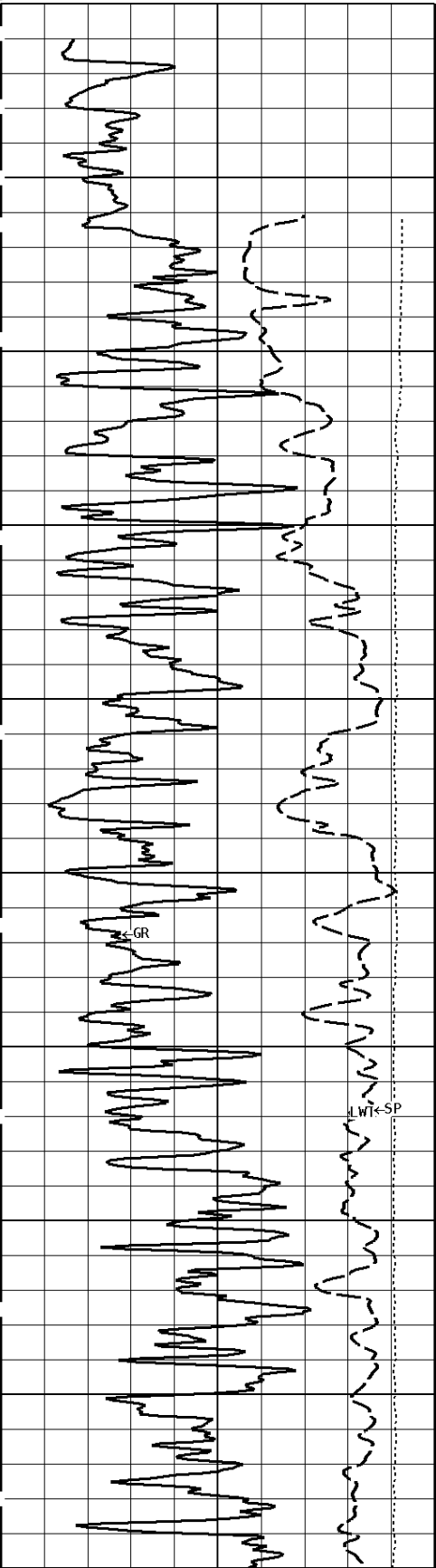
SPONTANEOUS POTENTIAL
mV

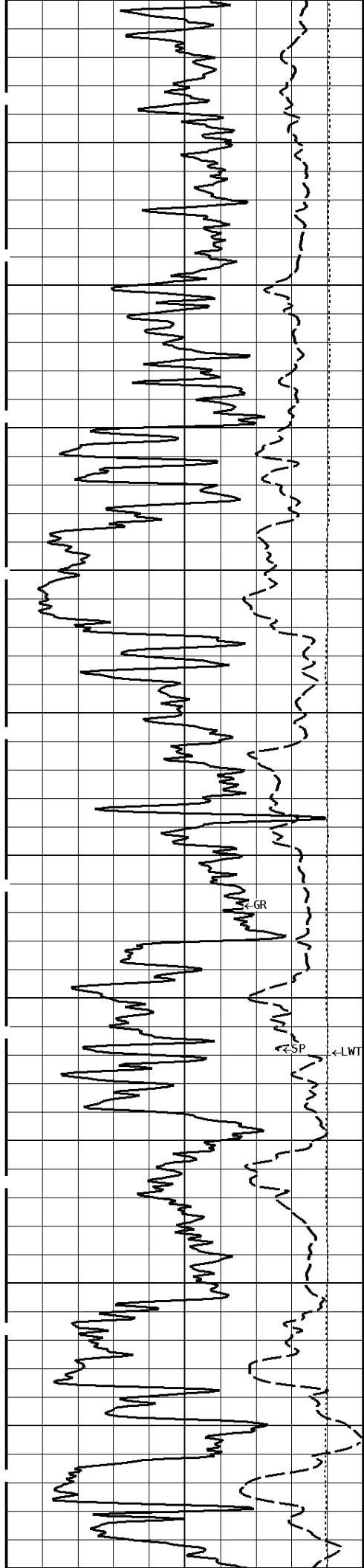
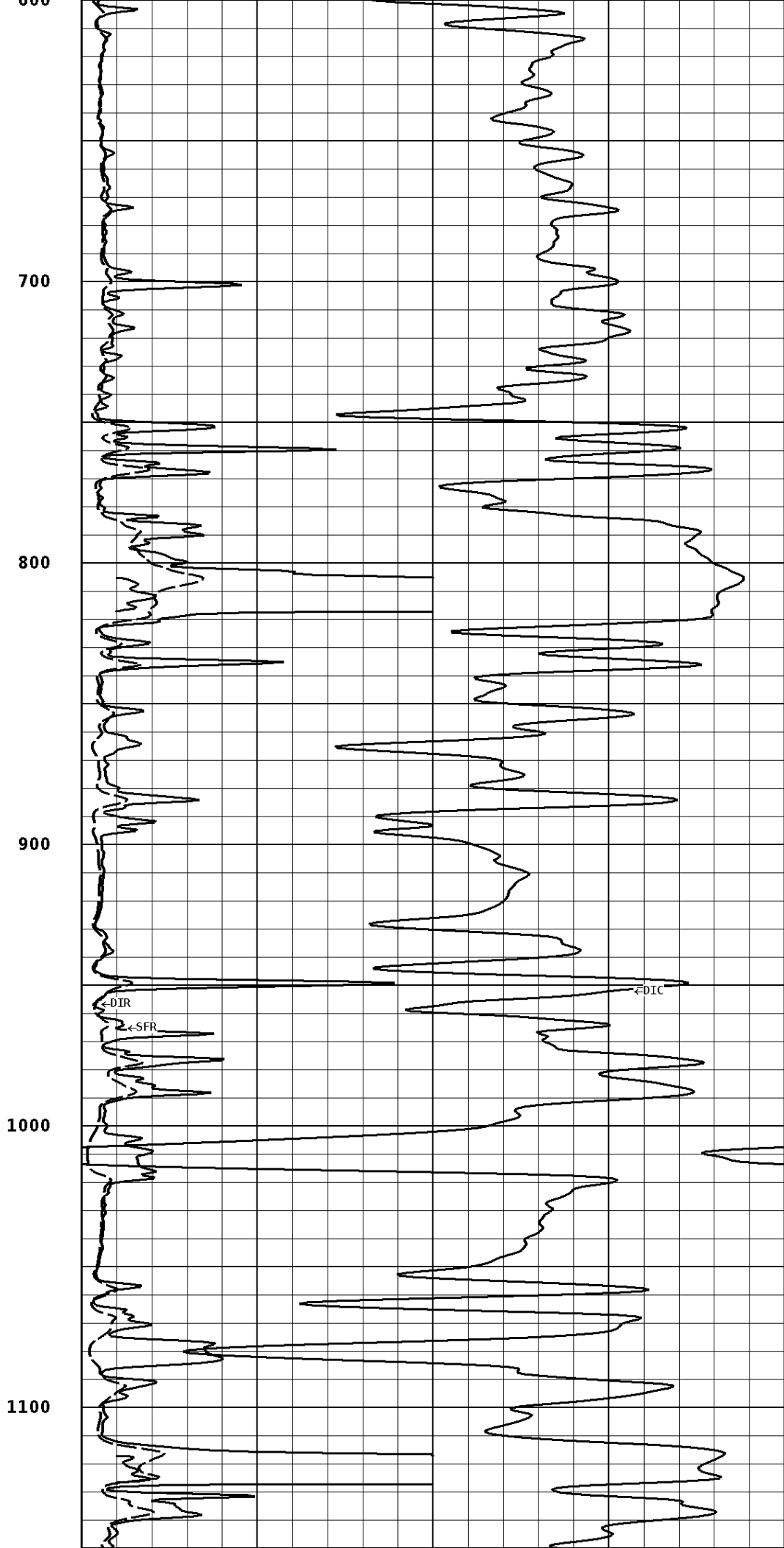
SHALLOW FOCUSED RESISTIVITY
OHMM

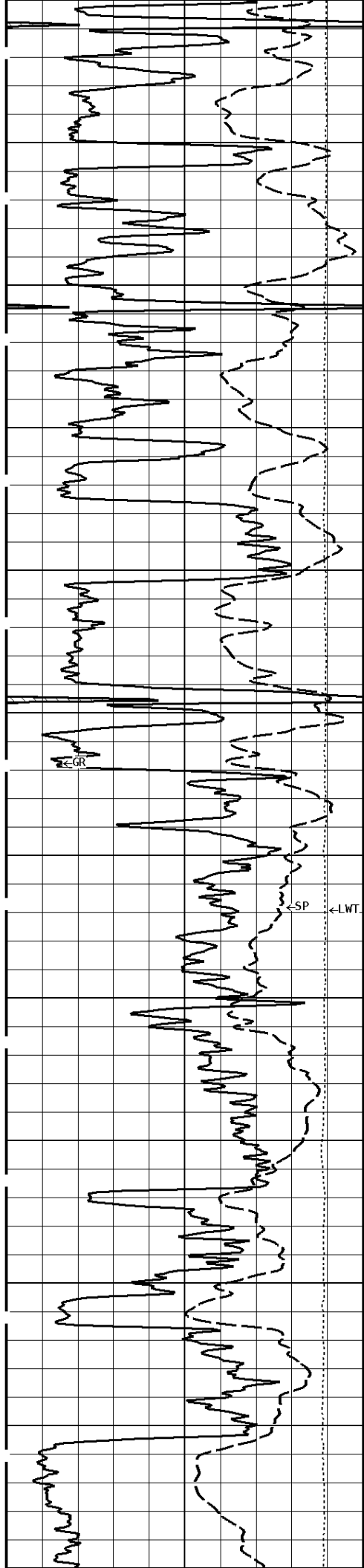
0.0 500.0



1:600 MAIN SECTION







1200

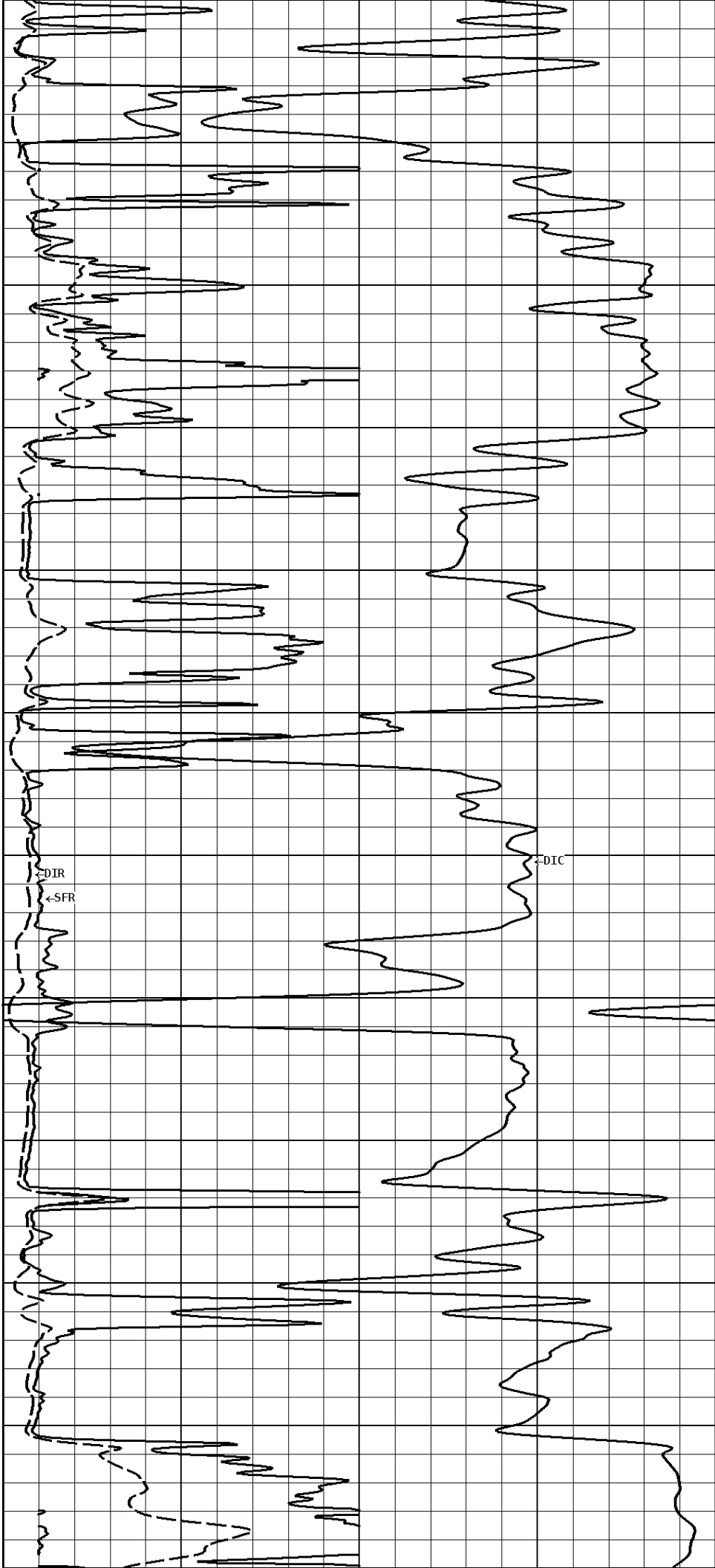
1300

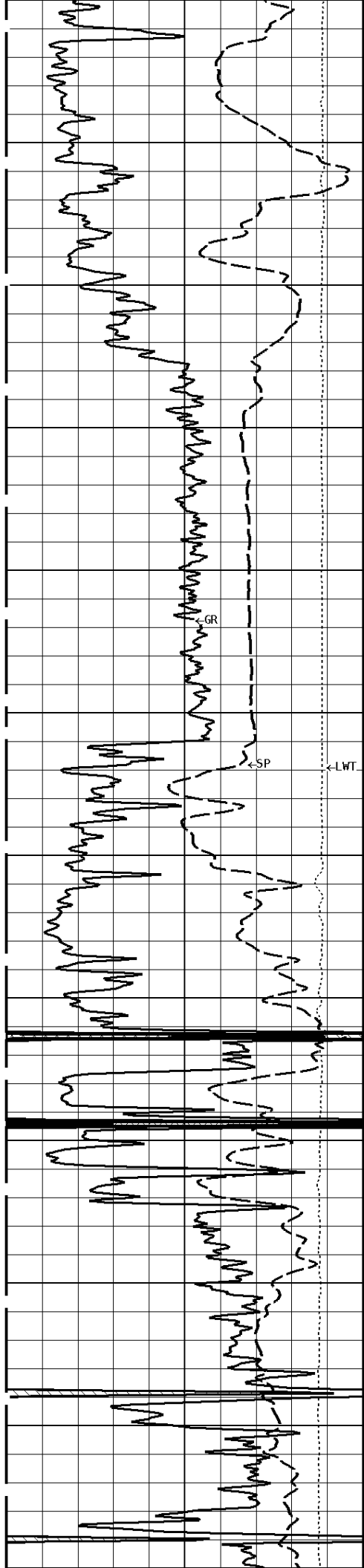
1400

1500

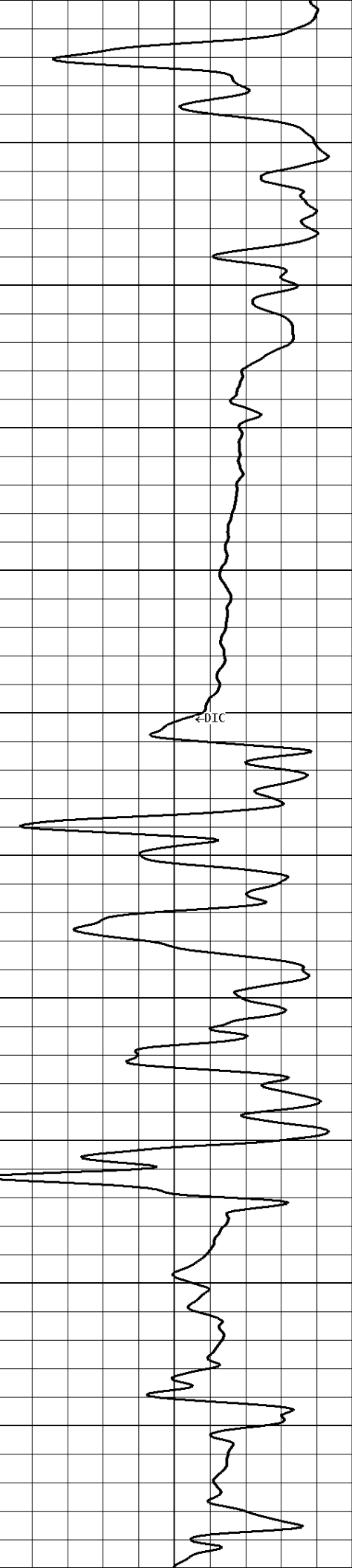
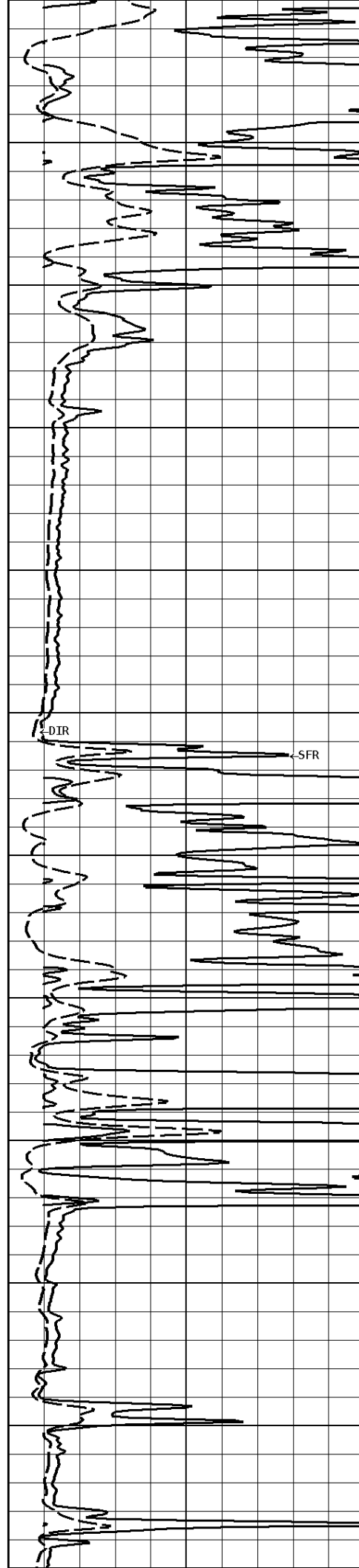
1600

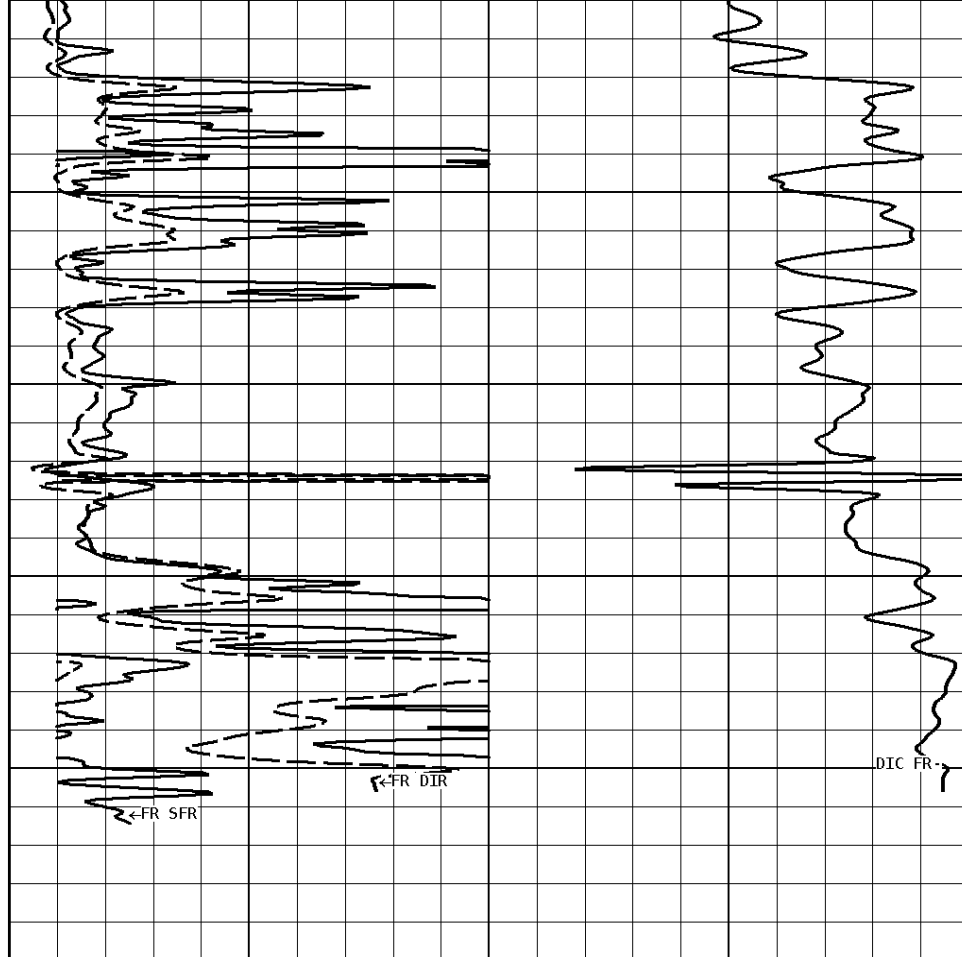
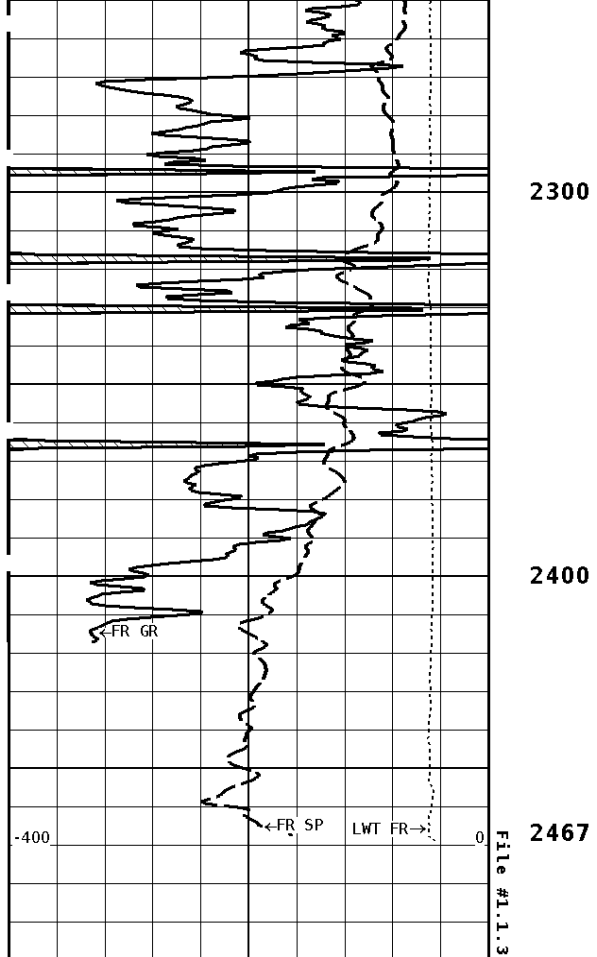
1700



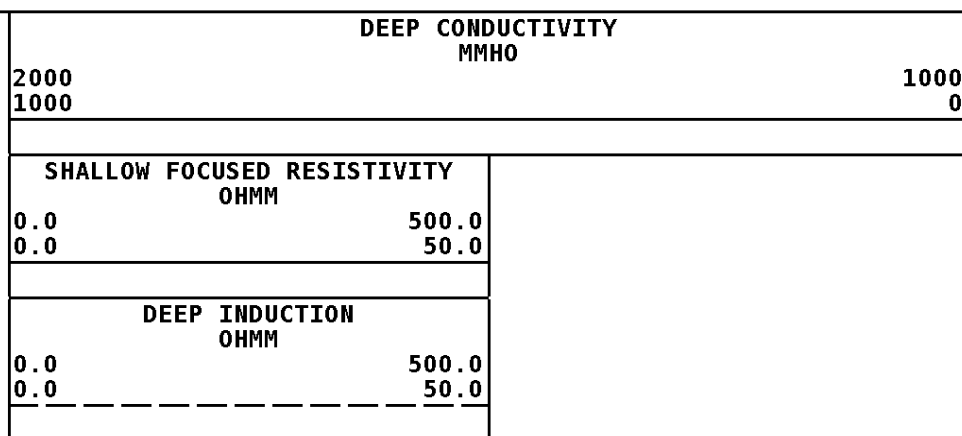
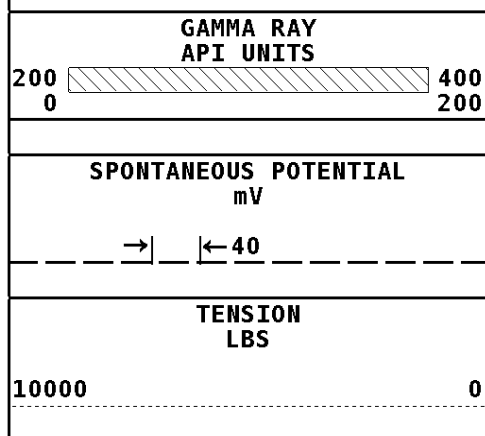


1700 1800 1900 2000 2100 2200

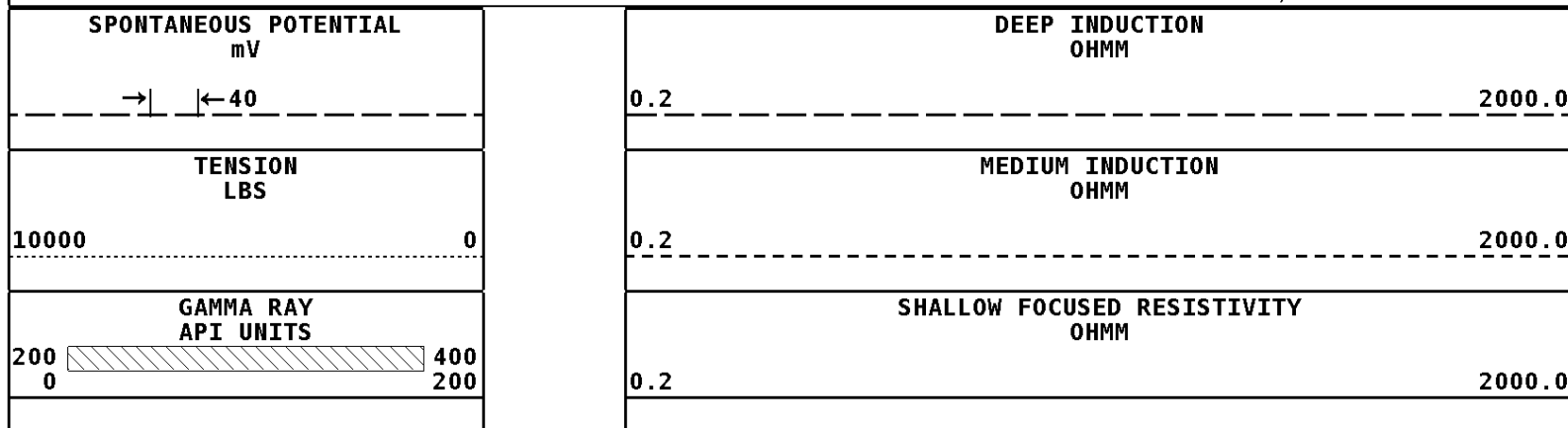




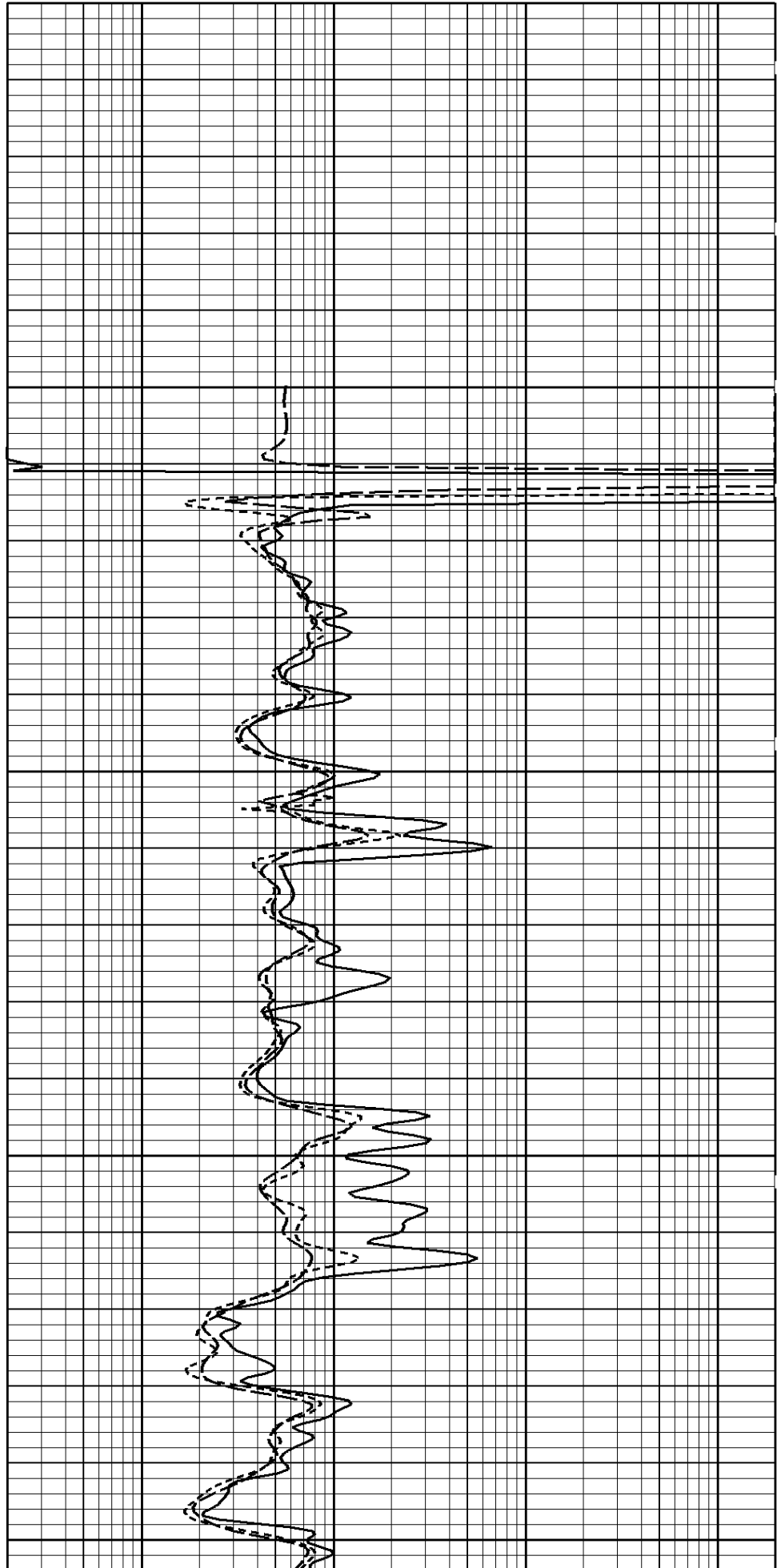
1:600 MAIN SECTION



Well File: cast-rice-1-mstk-may-4	Scale: 1:240	Format: DIL-240
Segment: V1.D1.S3 MN	Acquired: 2014-05/04 19:38 3.3.0-12594	
Reference: 0	Processed: 2014-05/04 20:39 3.3.0-12594	



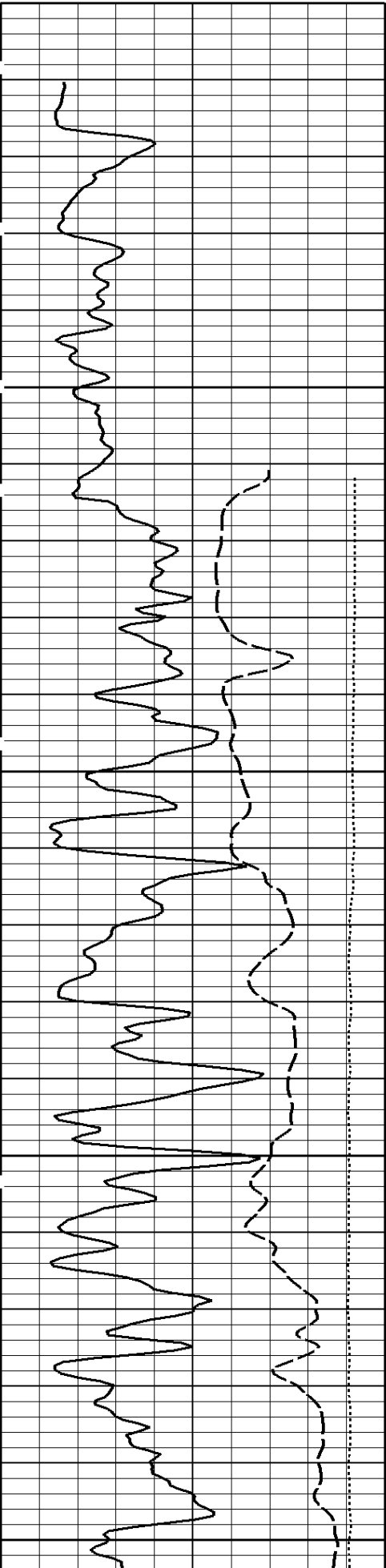
1:240 MAIN SECTION

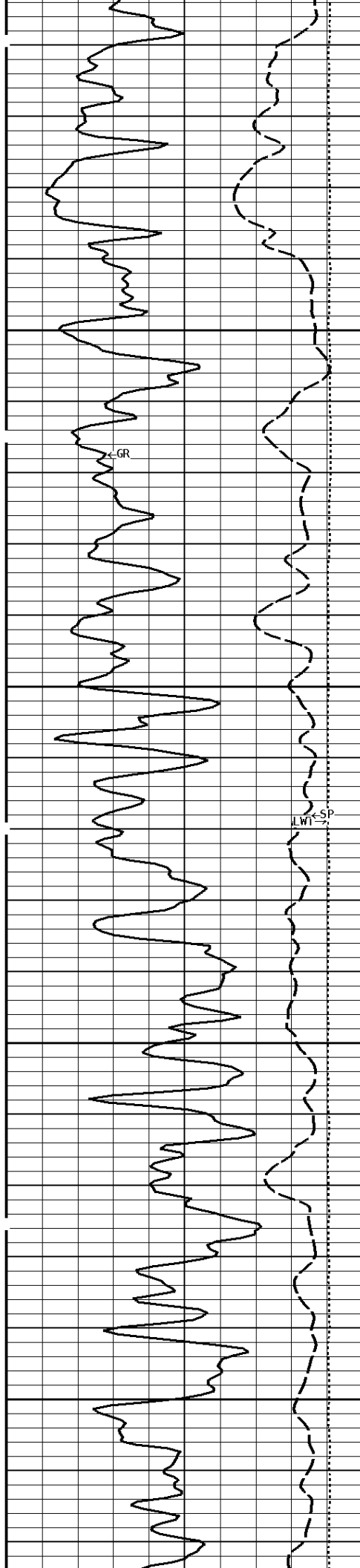


200

300

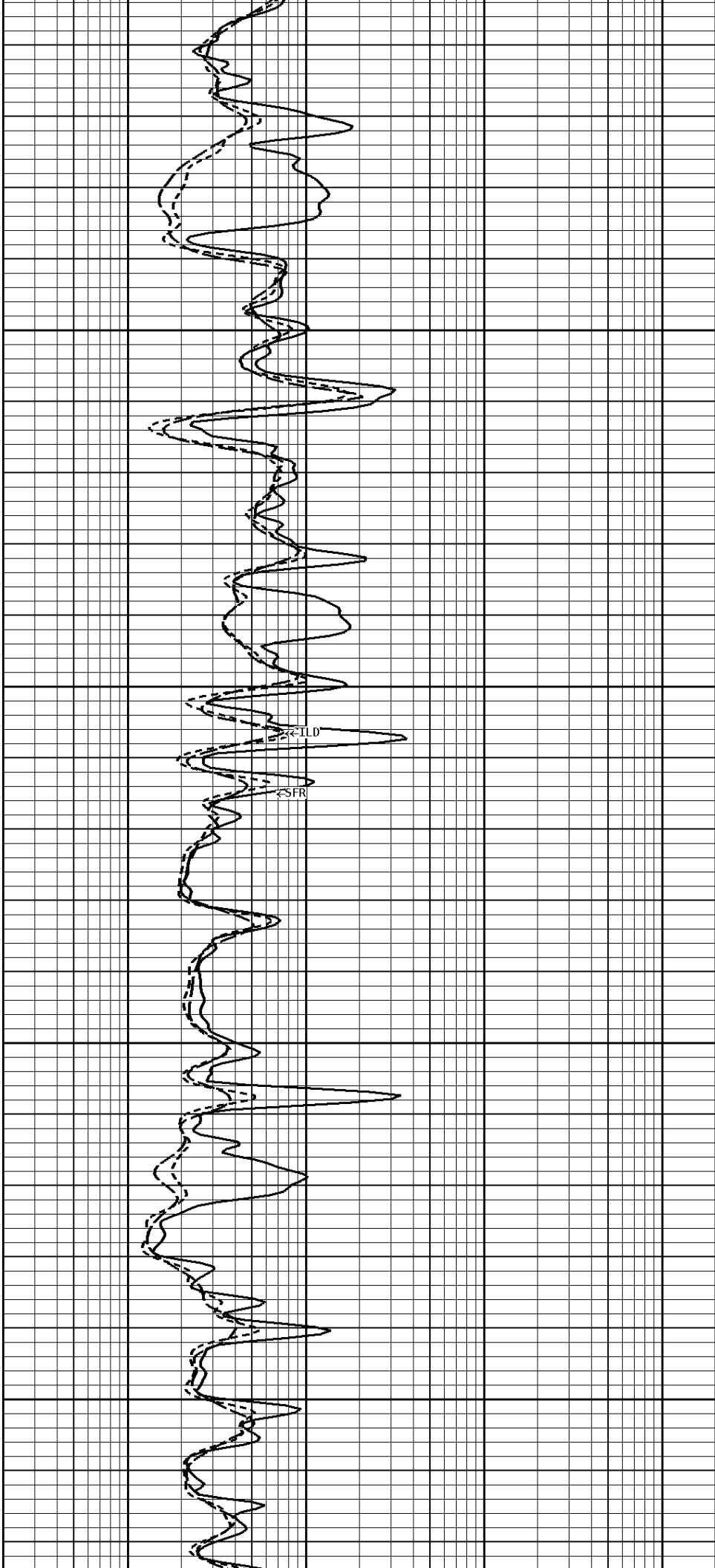
File #1.1.3

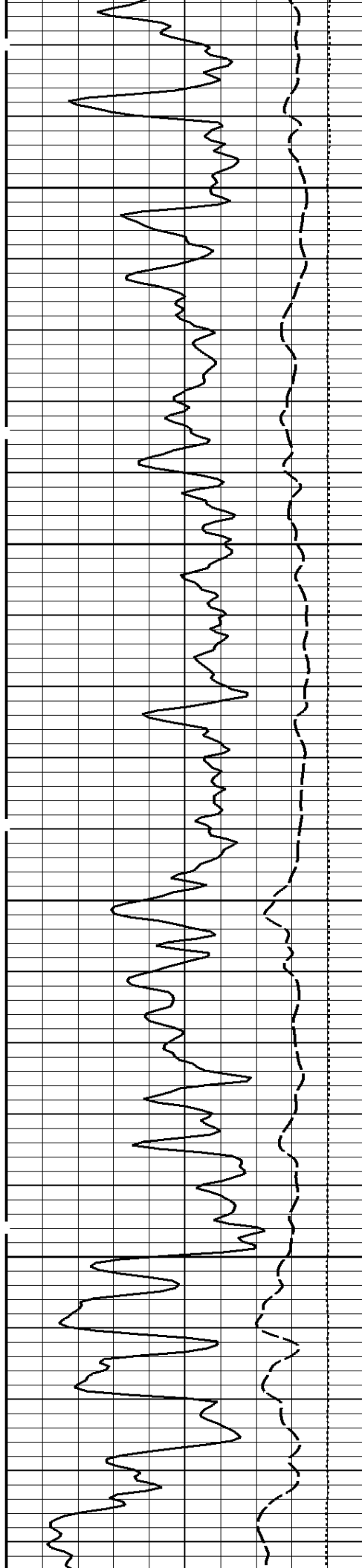




400

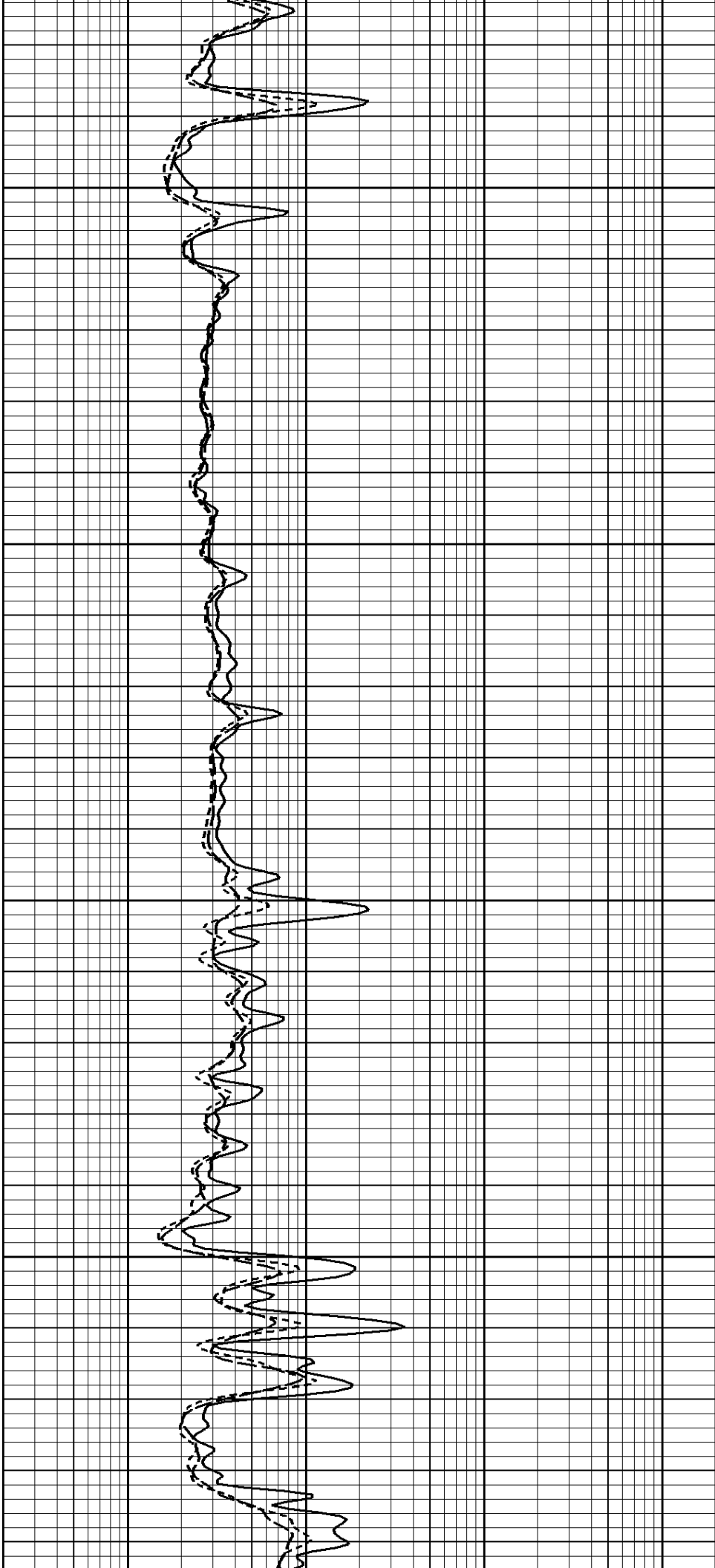
500

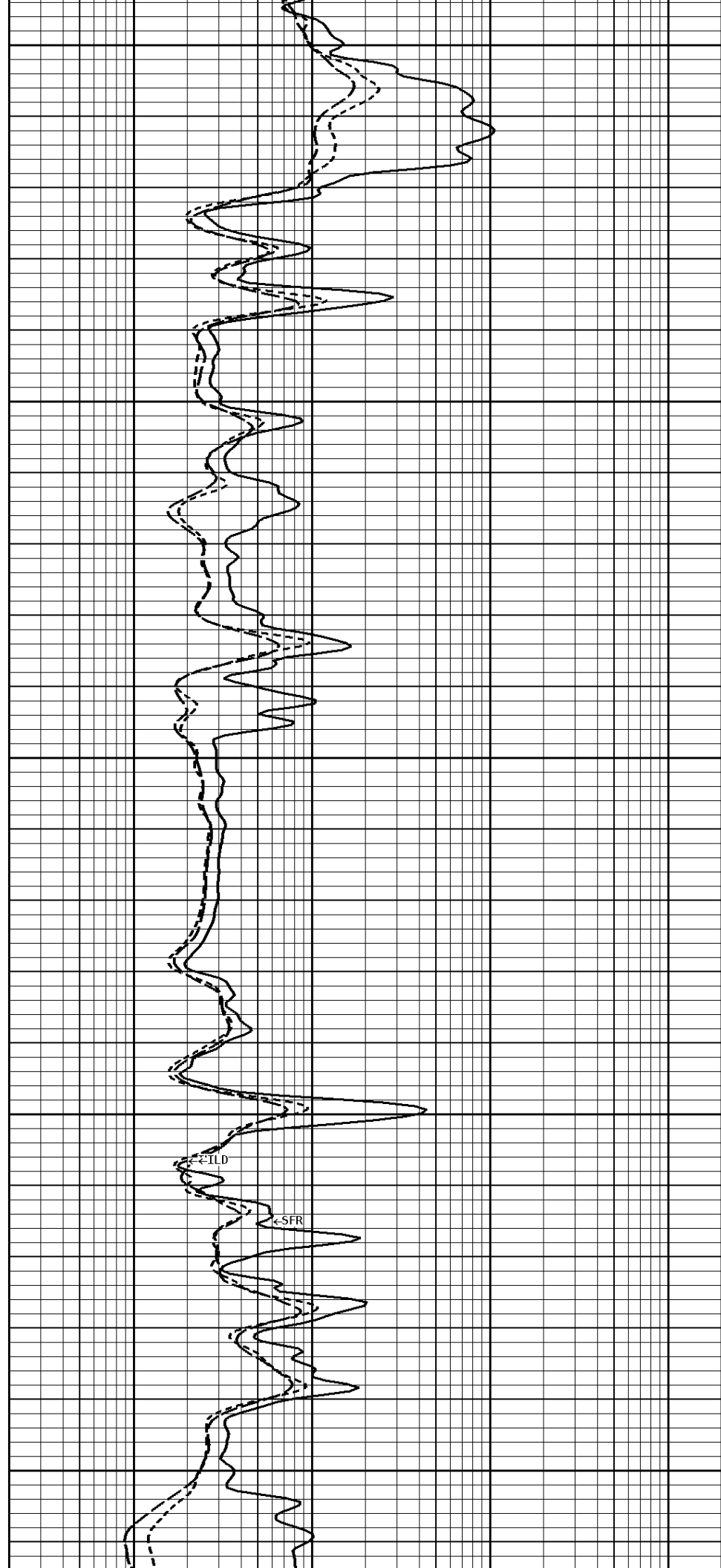
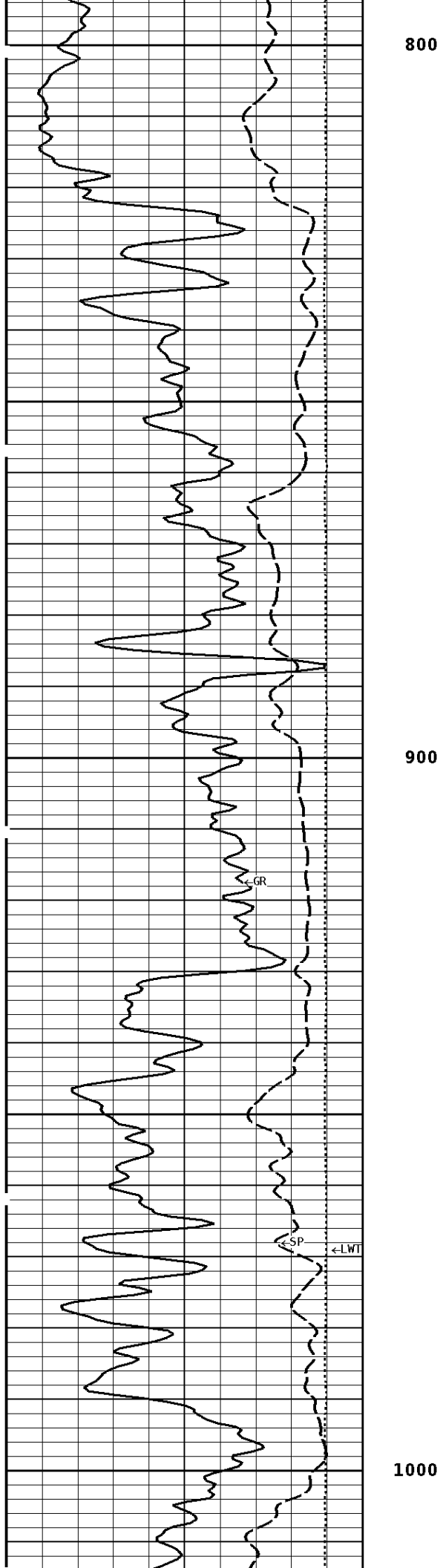


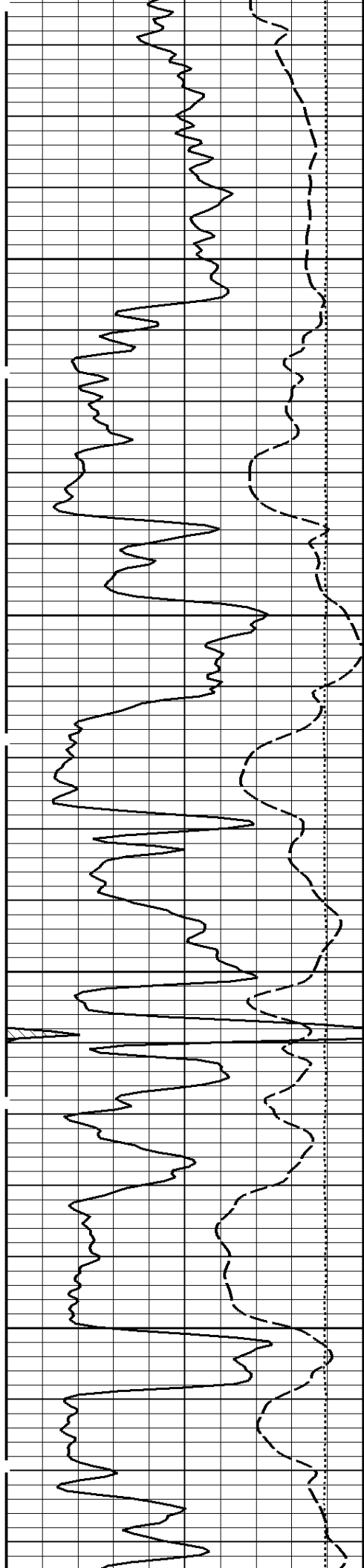


600

700

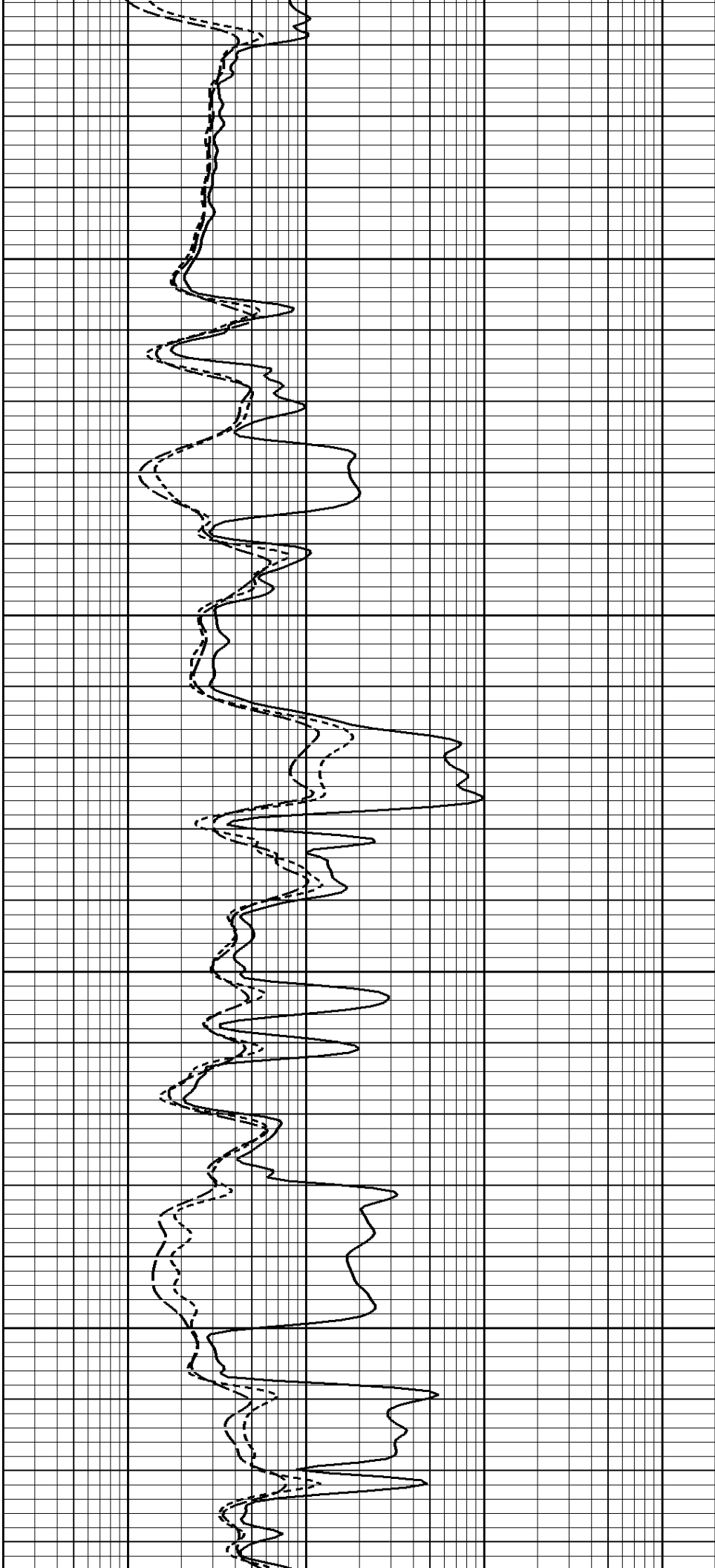


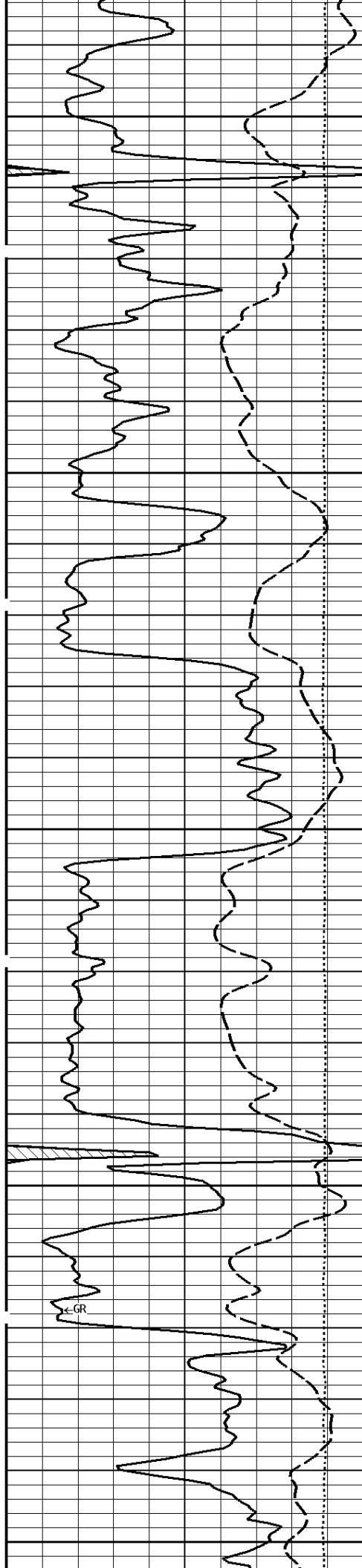




1100

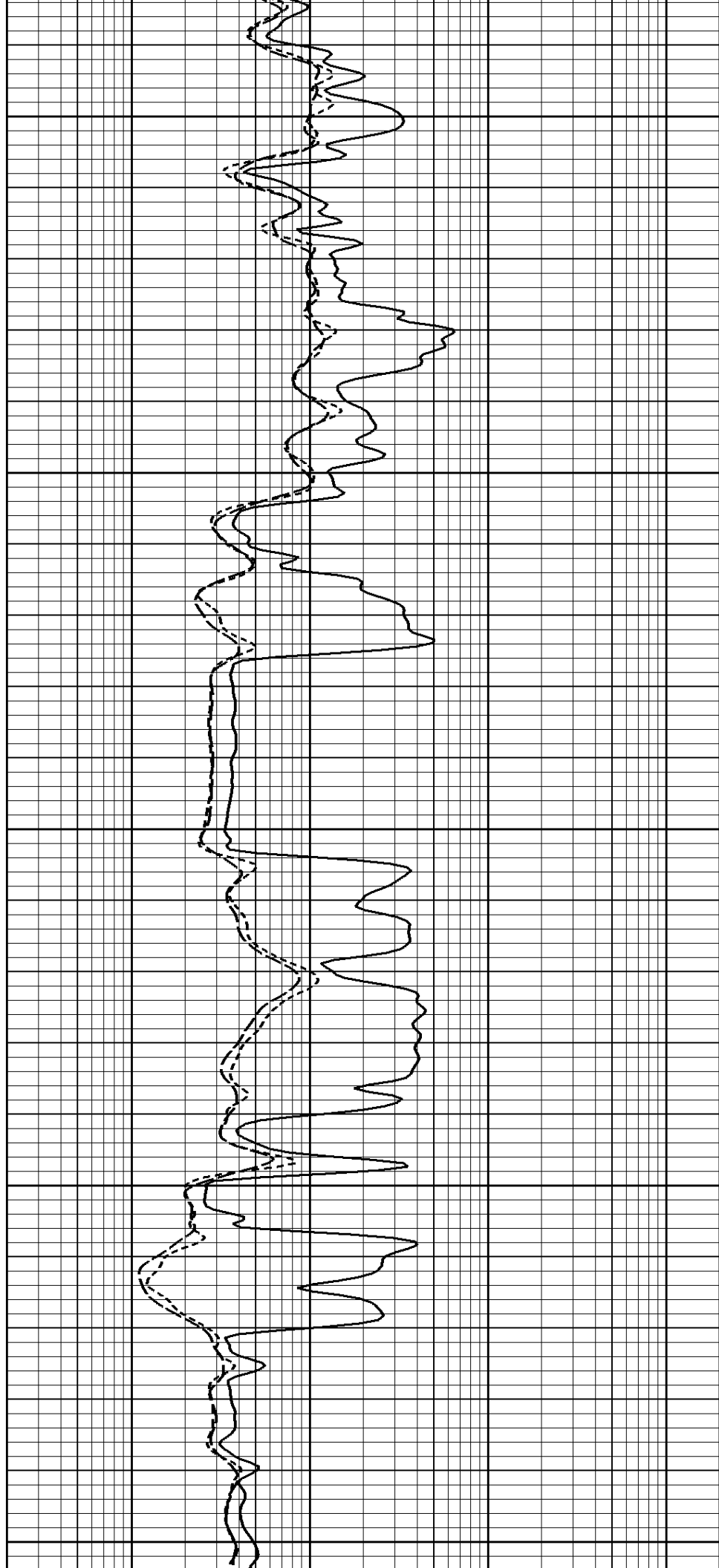
1200

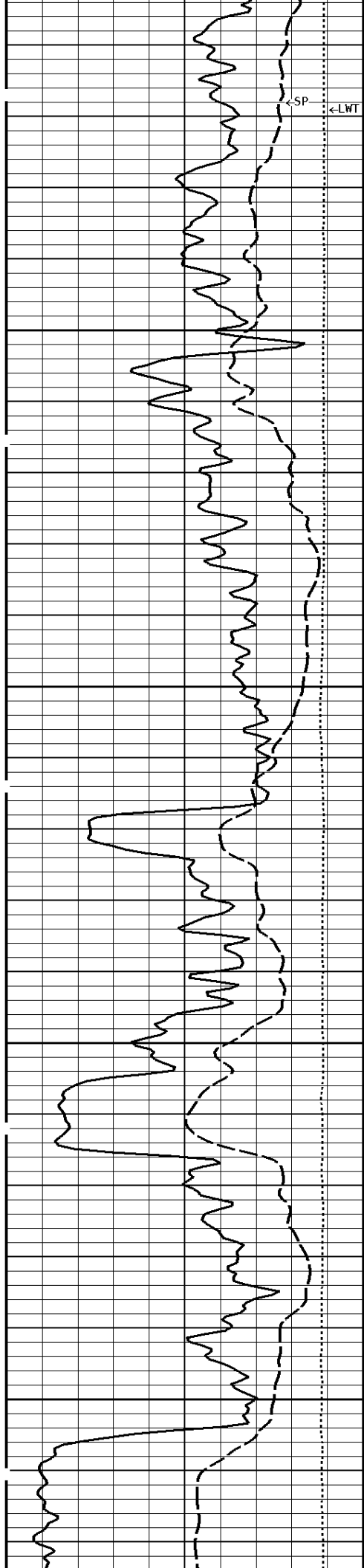




1300

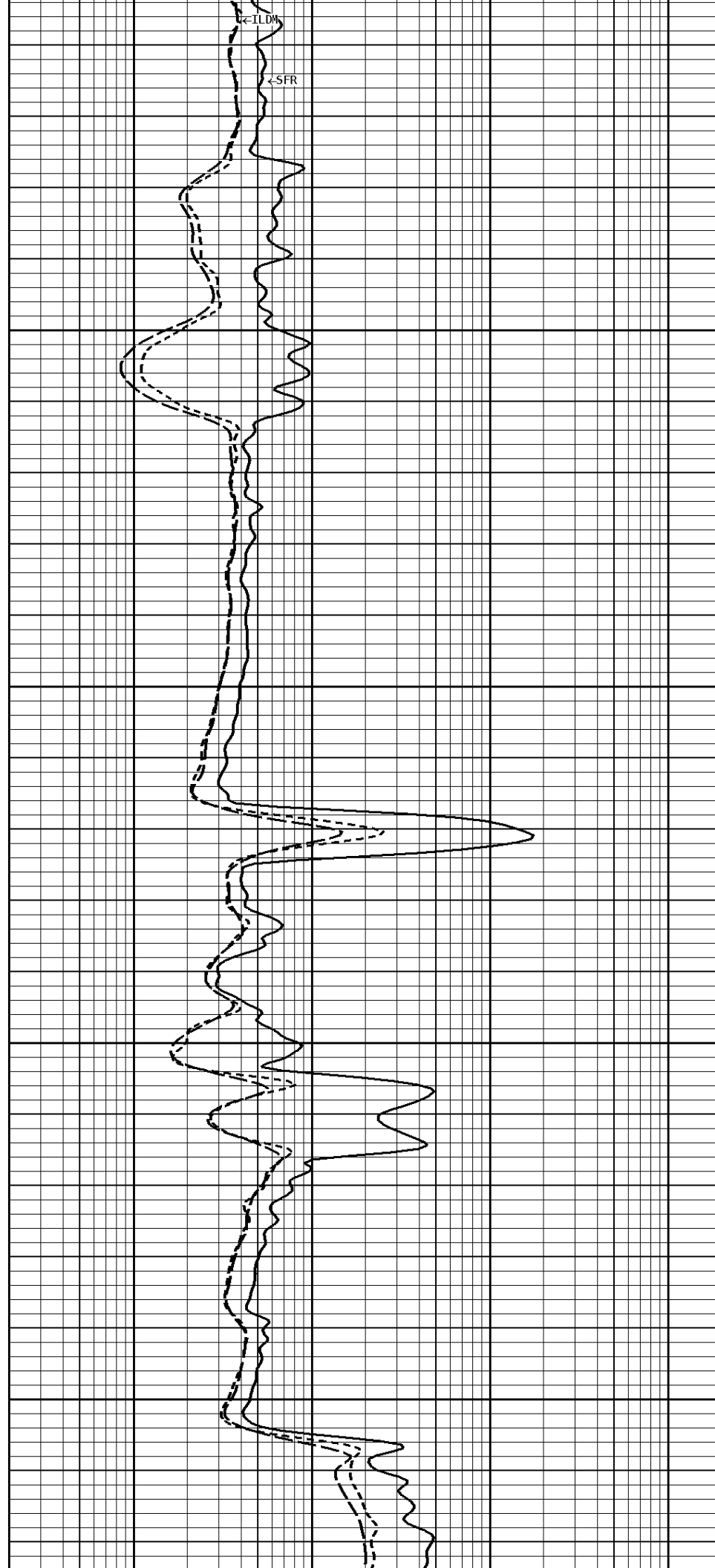
1400

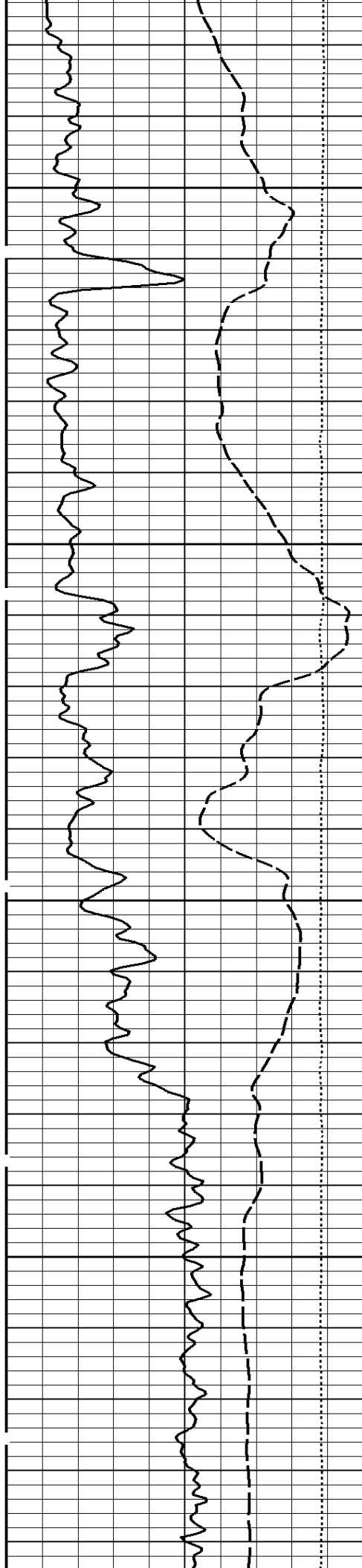




1500

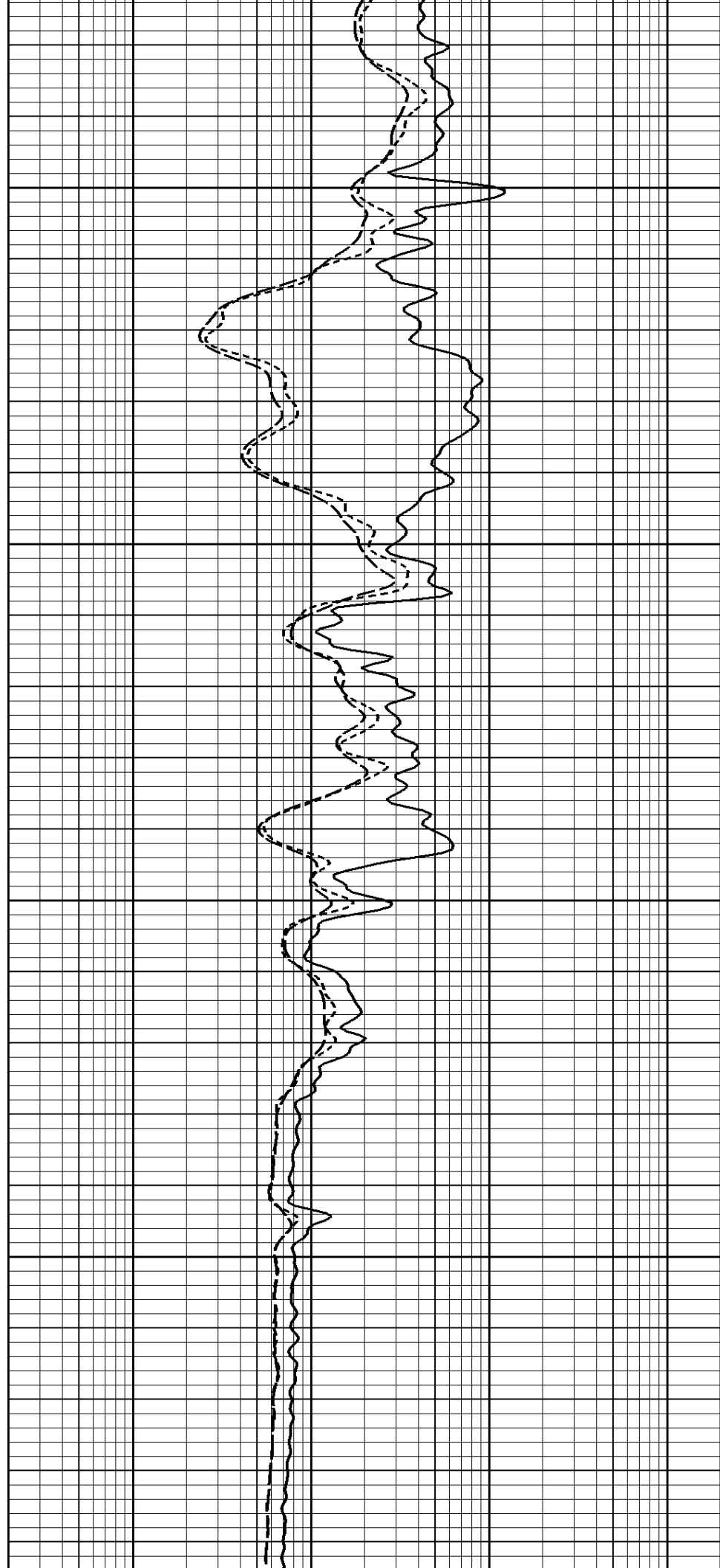
1600

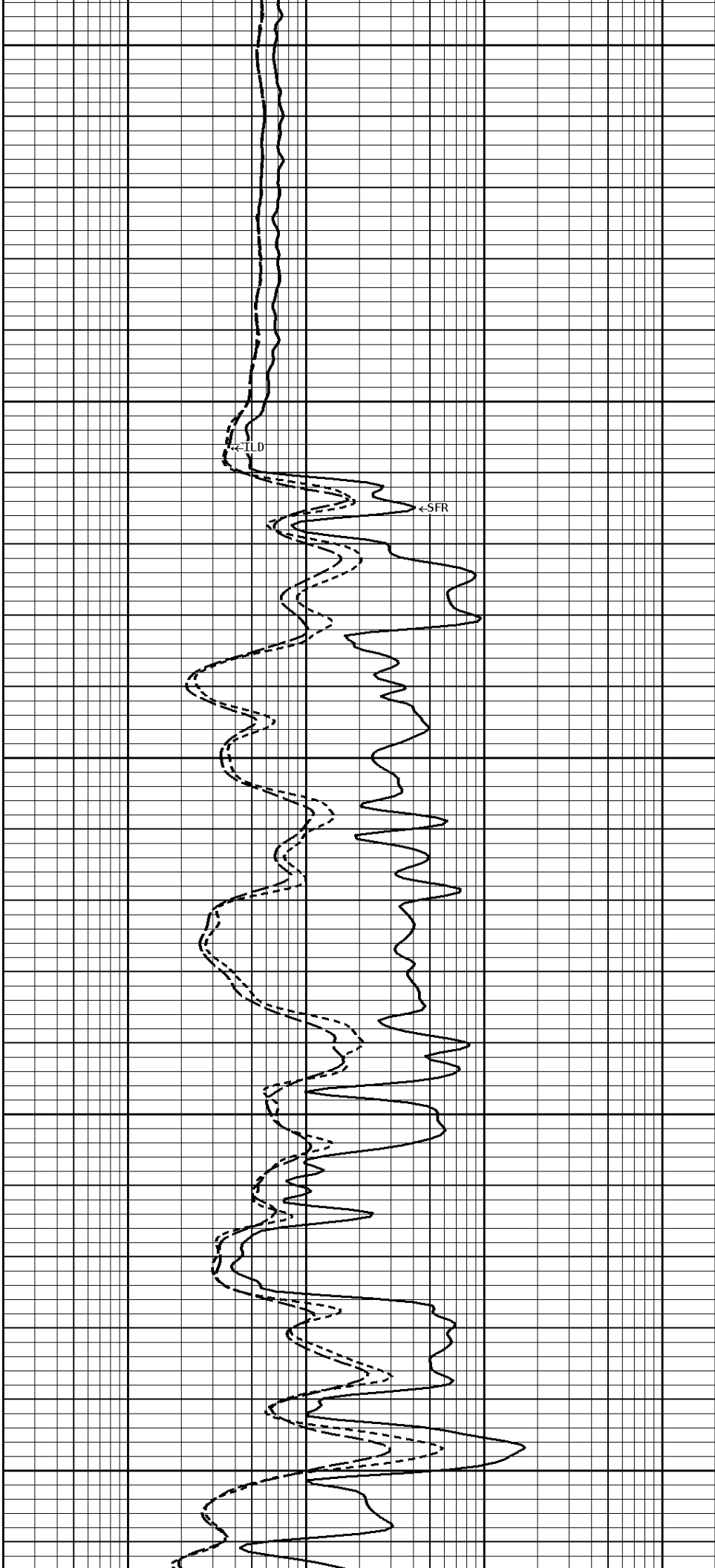
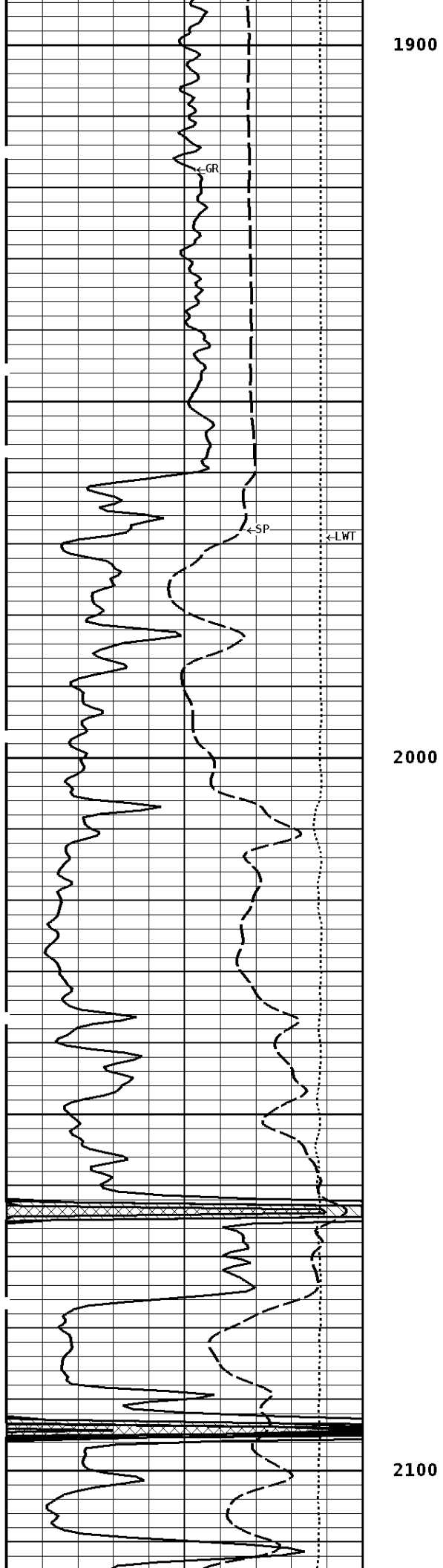


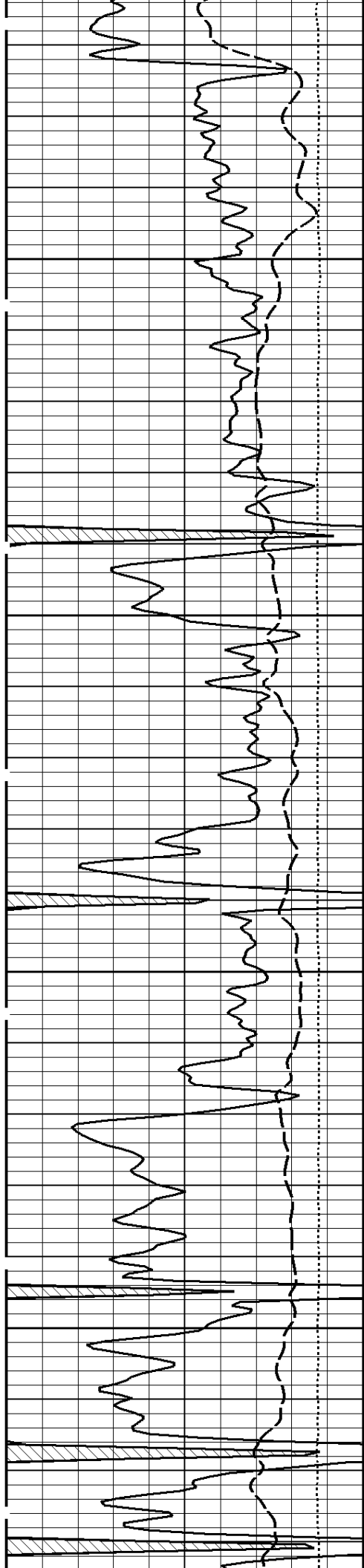


1700

1800

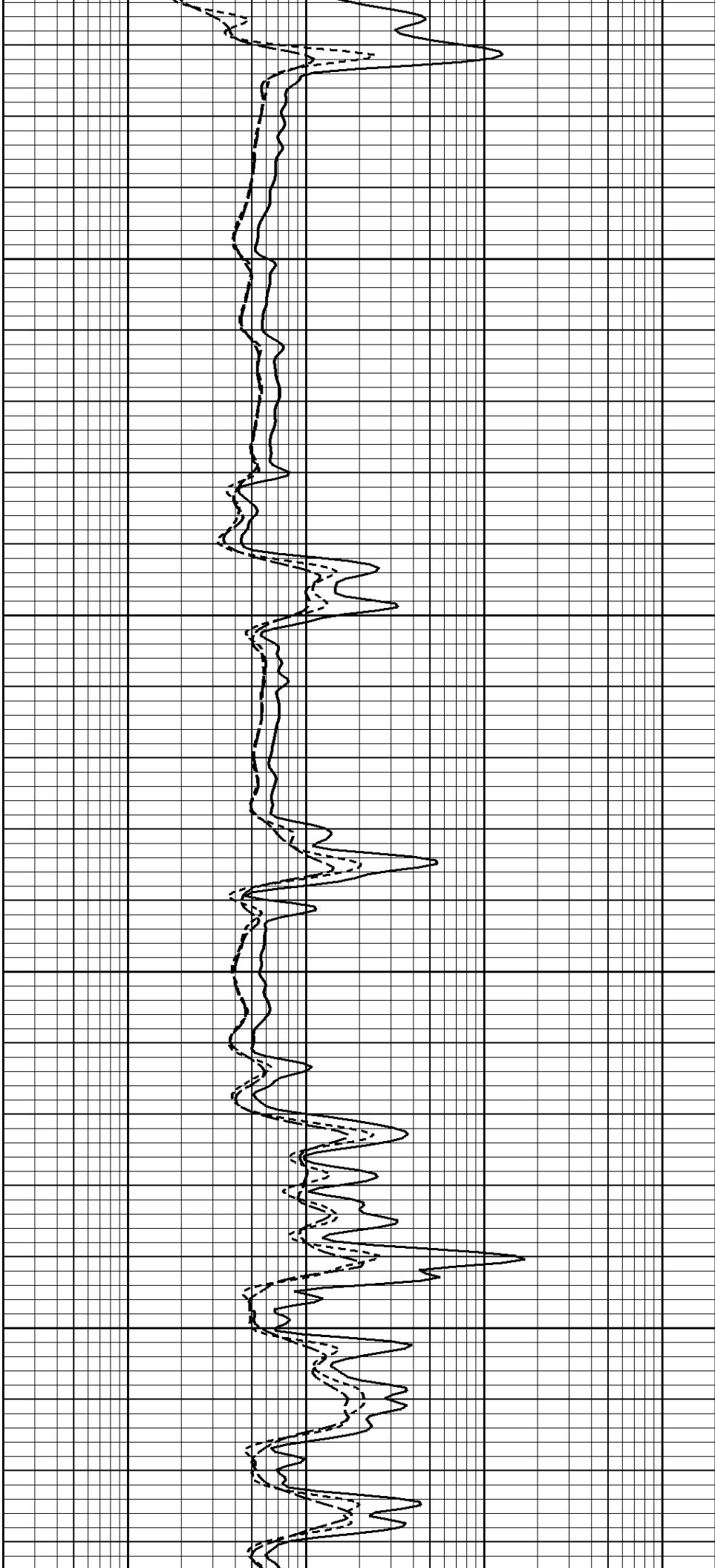


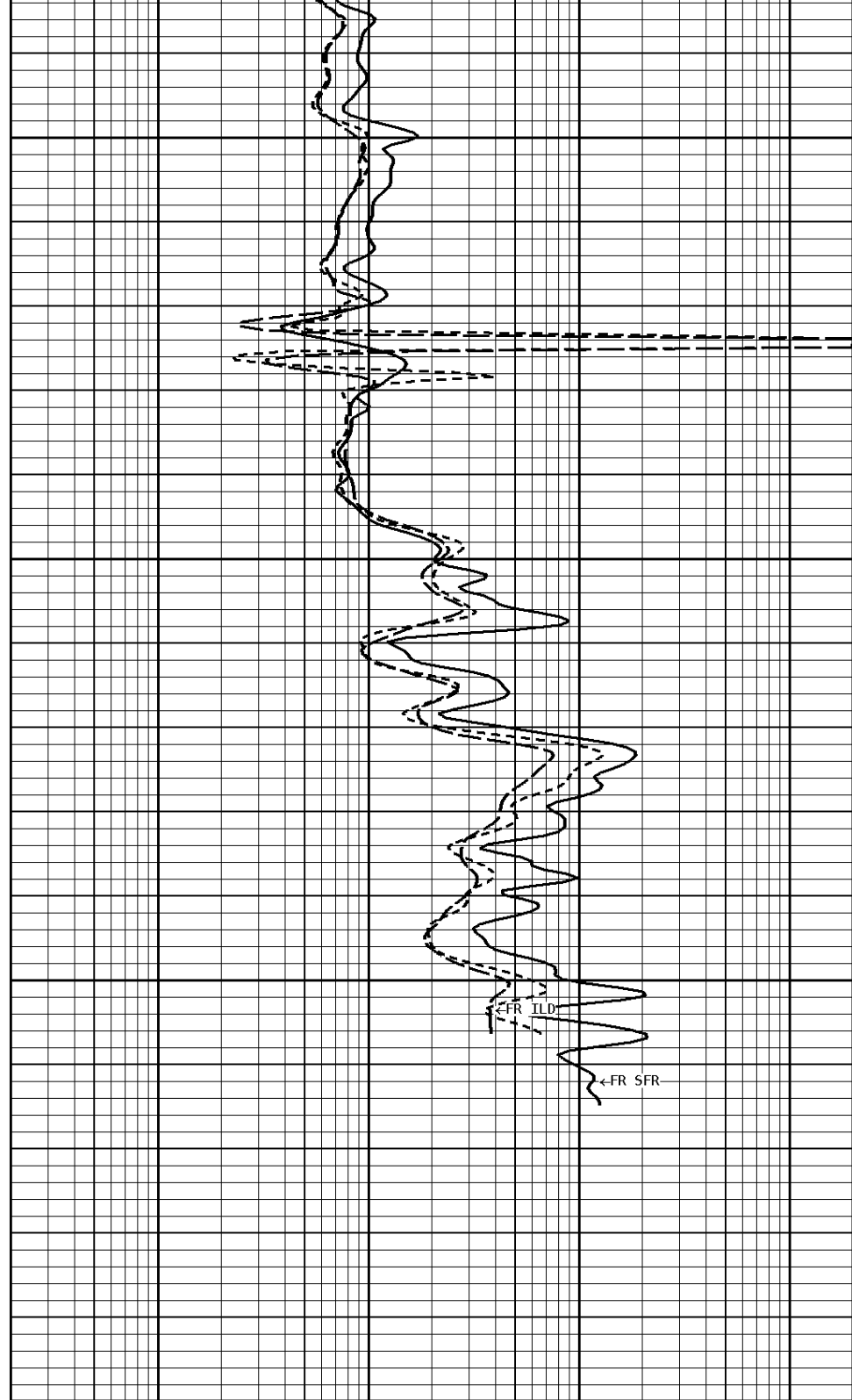
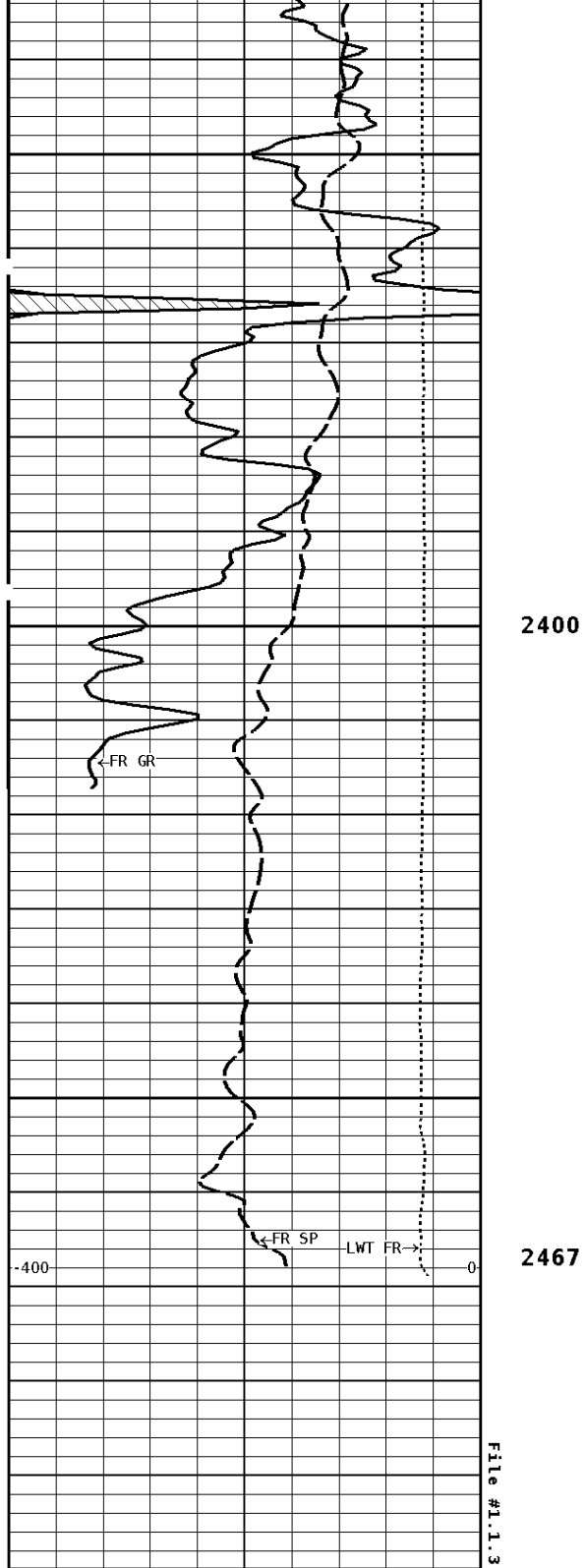




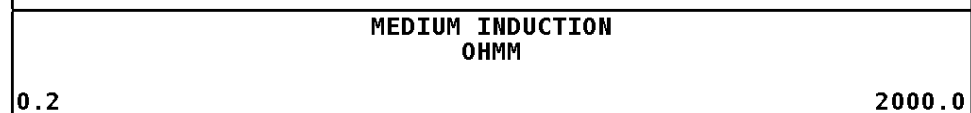
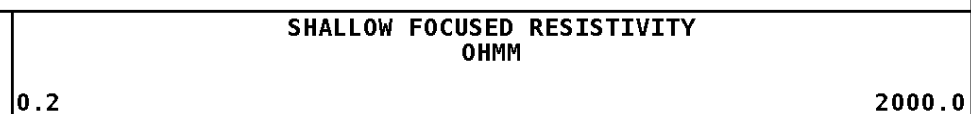
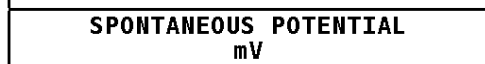
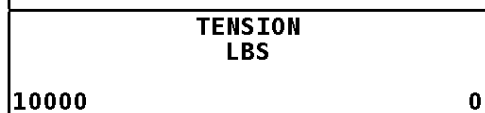
2200

2300





1:240 MAIN SECTION



* Borehole Zone Factors *

Zone 1	99999.0	to	0.0	Feet
Drill Bit Size			6.750	in
Casing Diameter			4.500	in
BHT Depth			2467.000	ft
Borehole Temperature			103.0	degF
Temperature Gradient			1.00	DFHF
Resistivity Of Mud			1.900	ohm/m
Standoff			1.5	
Resistivity Of Mud Temperature			70.00	degF

* Calibration Summary *

Shop Calibration GRT-B					
Performed : 21-APR-2014			Time : 11:21		
Sensor Suite : GR-GR5			ID : GRT-BB-107		
	Measured	Units	Calibrated	Units	
	Background Jig		Jig		
GR	75 381	CPS	175	GRAPI	

Shop Calibration PIT-CA					
Performed : 20-JAN-2014			Time : 12:16		
Sensor Suite : P-IND-T			ID : PIT-AB-005		
Medium					
	Measured		Calibrated		Units
	R X		R X		
Air	130436 130973		0.3 0.3		MMHOS
Zero	131064 131069		27.2 2.3		MMHOS
Reference	250278 251098		5142.2 4745.2		MMHOS
Loop	127822 217880		3591.7 3538.5		MMHOS
Sonde Error			-1.6 -2.1		MMHOS
Cond			5142.2 4745.2		MMHOS
Deep					
	Measured		Calibrated		Units
	R X		R X		
Air	128989 131106		-3.7 -3.9		MMHOS
Zero	131083 131072		40.1 -10.7		MMHOS
Reference	232597 234445		2030.7 1916.3		MMHOS
Loop	125792 219397		1633.8 1702.6		MMHOS
Sonde Error			-3.5 -9.0		MMHOS
Cond			2030.7 1916.3		MMHOS
Temperature					
	Measured		Calibrated		Units
	Low High		Low High		
	16980.0 56920.0		70.0 350.0		DEGF

Performed : 20-Jan-2014			Time : 12:07		
Sensor Suite : SFL			ID : PIT-AB-005		
Internal					
	Measured		Calibrated		Units
	Zero Reference		Zero Reference		
Im	32773.9 49477.8		0.0 7028.0		uA
Ib	32760.9 48718.2		0.0 1750.0		mA
MOM1	32720.3 56560.2		0.0 175.0		mV
Equivalent SFL			43.97		OHMM

Performed : 20-Jan-2014			Time : 12:05		
Sensor Suite : P-SP			ID : PIT-AB-005		
Internal					
	Measured		Calibrated		Units
	Zero Reference		Zero Reference		
	32770.1 58920.2		0.0 1000.0		mV

Well File: cast-rice-1-mstk-may-4

Scale: 1:1200

Format: DIL1200

Segment: V1.D1.S3 MN

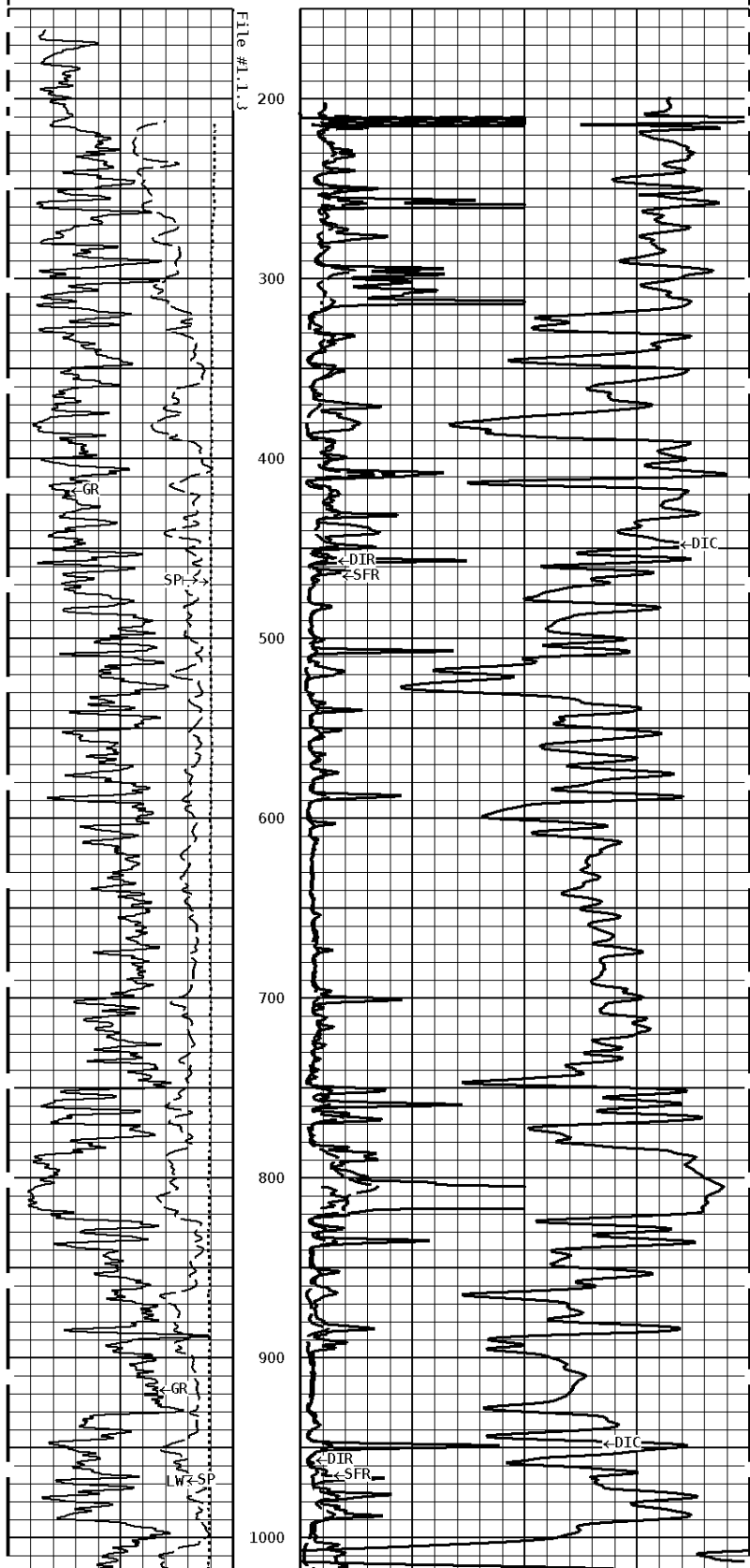
Acquired: 2014-05/04 19:38 3.3.0-12594

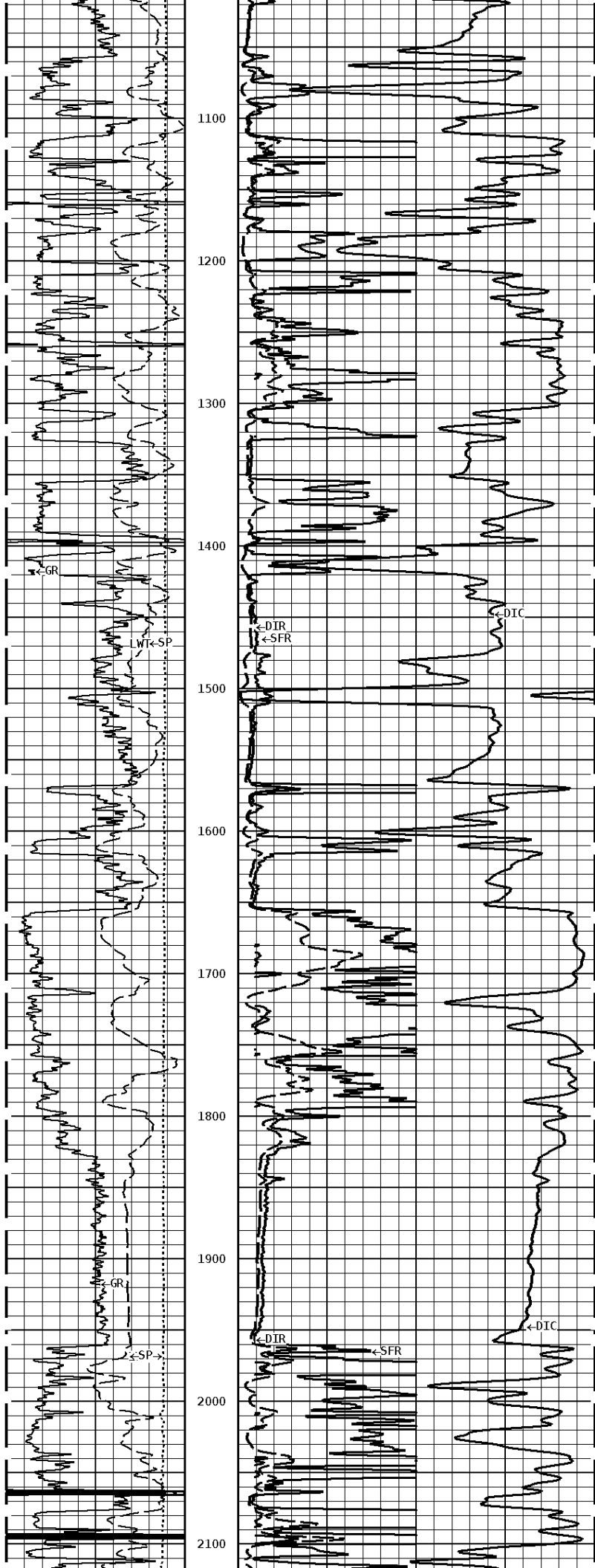
Reference: 0

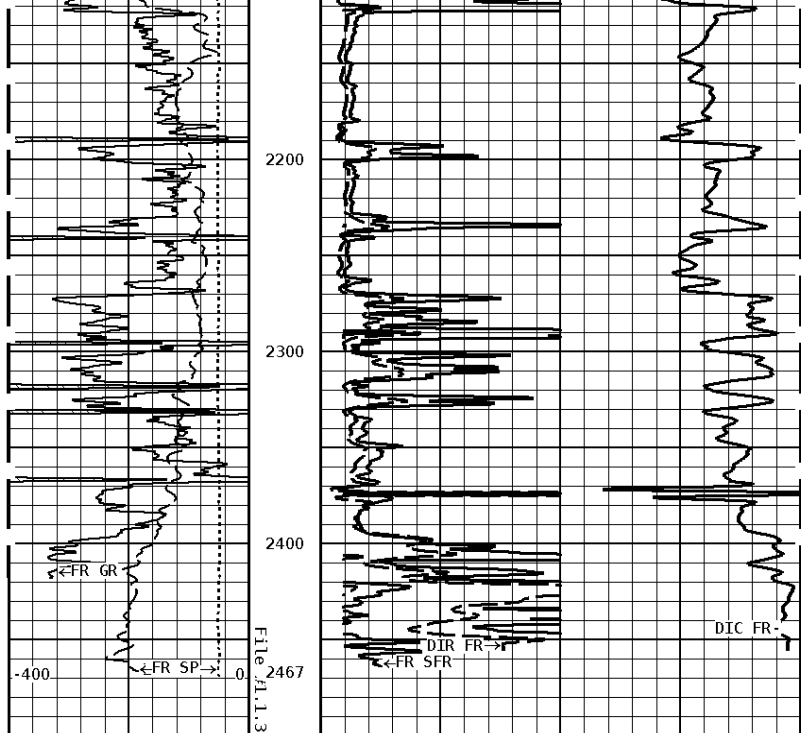
Processed: 2014-05/04 20:39 3.3.0-12594

TENSION LBS		DEEP INDUCTION OHMM	
10000	0	0.0	500.0
		0.0	50.0
SPONTANEOUS POTENTIAL mV		SHALLOW FOCUSED OHMM	
→ ← 40		0.0	500.0
		0.0	50.0
GAMMA RAY API UNITS		DEEP CONDUCTIVITY MHMO	
200	400	2000	1000
0	200	1000	0

1:1200 MAIN SECTION







1:1200 MAIN SECTION

GAMMA RAY
API UNITS
200 400
0 200

SPONTANEOUS POTENTIAL
mV
→ | ← 40

TENSION
LBS
10000 0

DEEP CONDUCTIVITY
MHMO
2000 1000
1000 0

SHALLOW FOCUSED
OHMM
0.0 500.0
0.0 50.0

DEEP INDUCTION
OHMM
0.0 500.0
0.0 50.0



Tucker
ENERGY SERVICES

Company: CASTLE RESOURCES LLC

Well: RICE TANNER #1

Location: E2 SW SW

Logged: 05-04-2014

K.B. Elev: 0.0 Ft