

PHASED INDUCTION SHALLOW FOCUS SP LOG

Company Well Field County State Country API No.		BEREXCO, LLC CHRISLER #2 CHRISLER ELLIS KANSAS USA 15-051-26982-00-00	
File No : HAYS-70400 Company : BEREXCO, LLC Well : CHRISLER #2 Field : CHRISLER County : ELLIS State : KANSAS Country : USA API No : 15-051-26982-00-00		Location : 1240' FSL & 930' FWL NW NE SW SW	
LSD :		Sect : 22	Twp : 11s
		Rge : 16w	
Permanent Datum: Drilling Measured From: Log Measured From: Above Permanent Datum:	GL KB KB 0.00 Ft	Elevations: KB 1826.00 DF 1825.00 GL 1819.00	Services: GRT NDT CNT
Date	2020-02-13		
Run Number	1		
Depth--Driller	3500.0 Ft		
Depth--Logger	3500.0 Ft		
First Reading	3499.0 Ft		
Last Reading	982.0 Ft		
Casing--Driller	982.0 Ft		
Casing--Logger	982.0 Ft		
Bit Size	7.875 In		
Casing Size	8.625 In		
Hole Fluid Type	CHEMICAL		
Density	9.1		
Fluid Loss	9.2		
PH/Viscosity	10.0	60.0	
Sample Source	MEASURED		
RM@Measured Temp.	0.600 @ 69 F		
RMF@Measured Temp	0.510 @ 69 F		
RMG@Measured Temp.	0.690 @ 69 F		
Source RMF/RMG	CALCULATED CALCULATED		
RM@BHT	0.340 @ 95 F		
Time Circulation Stopped	2020-02-13 00:00		
Max Recorded Temp.	95	F	
Equipment/Base	TRK137	HAYS	
Recorded By	B.BAILEY		
Witnessed By	J.SMITH		

The customer is hereby warned that by providing the log data herein, STEP Energy Services does not agree to provide any interpretation of log data, conversion of log data to physical rock parameters or recommendations. STEP Energy Services 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 STEP Energy Services 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 STEP Energy Services 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)
7.875	3500.00	8.625	17.00	982.00	0.00

Run Number	1		
Date	2020-02-13		
Date/Time On Bottom	2020-02-13 02:59		
Depth to Fluid	0.0 Ft		
Salinity	5000.000		
RMF@BHT	0.290 @ 95 F		
RMC@BHT	0.390 @ 95 F		

ALL PRESENTATIONS AS PER CUSTOMER REQUEST.

GRT, CNT, LDT, MLT, AND PIT RUN IN COMBINATION.

2.71 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY.

5.5" PRODUCTION CASING USED TO CALCULATE ANNULAR HOLE VOLUME.

CALIPERS ORIENTED ON X-Y AXIS.

PHIN IS CALIPER CORRECTED

DETAIL TO 2500 FT AS PER CLIENT REQUESTED

GRT: GRP

CNT: PHIN, PHINDOL, CLCNIN

LDT: PORL, PORLDOL, LCORN, LDENN, PECLN, CLLDIN

MLT: MSFI, MSFN, CLMRIN.

PIT: ILD, ILM, SFLAEC, SPU, CIRD

OPERATORS:

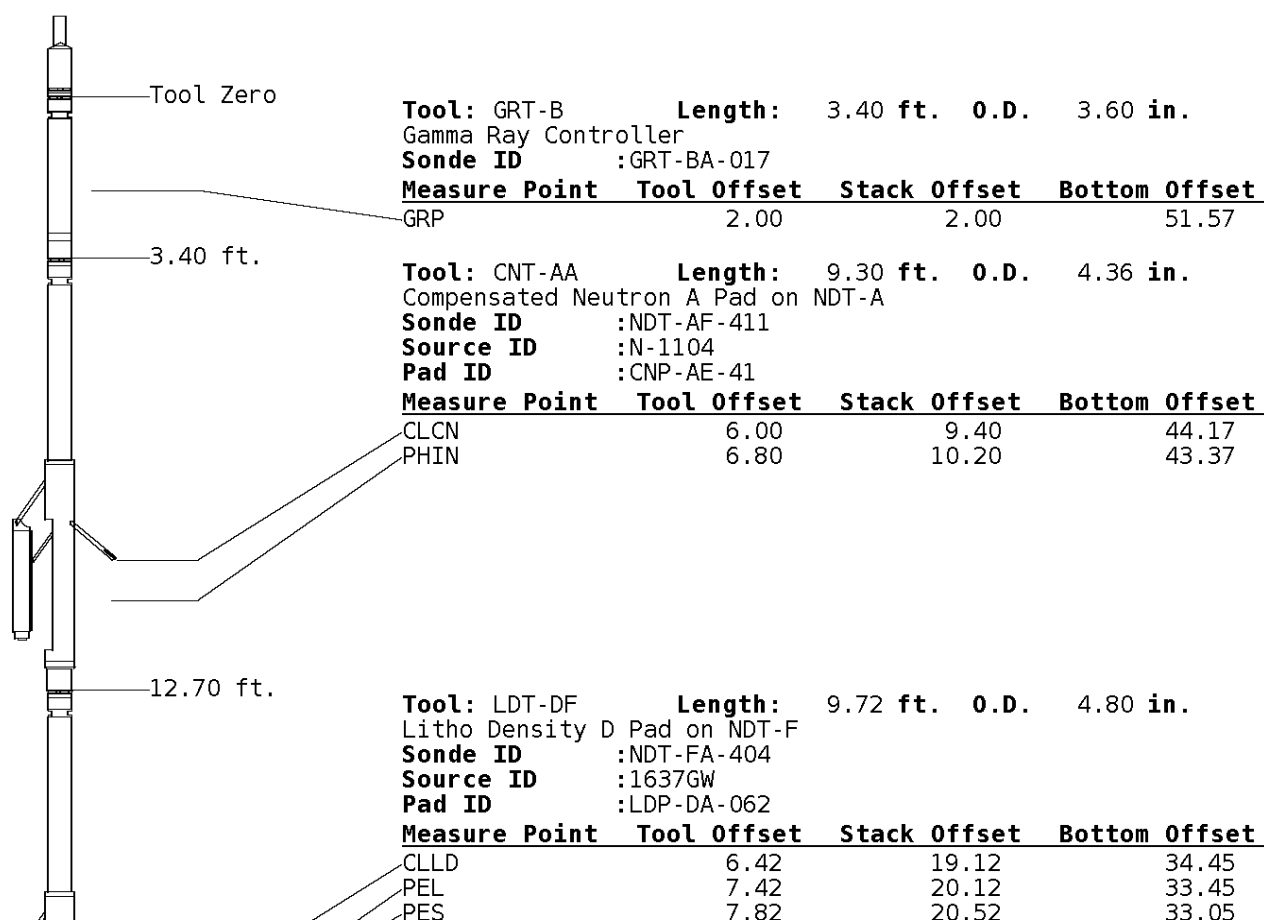
D.LEGLEGITER

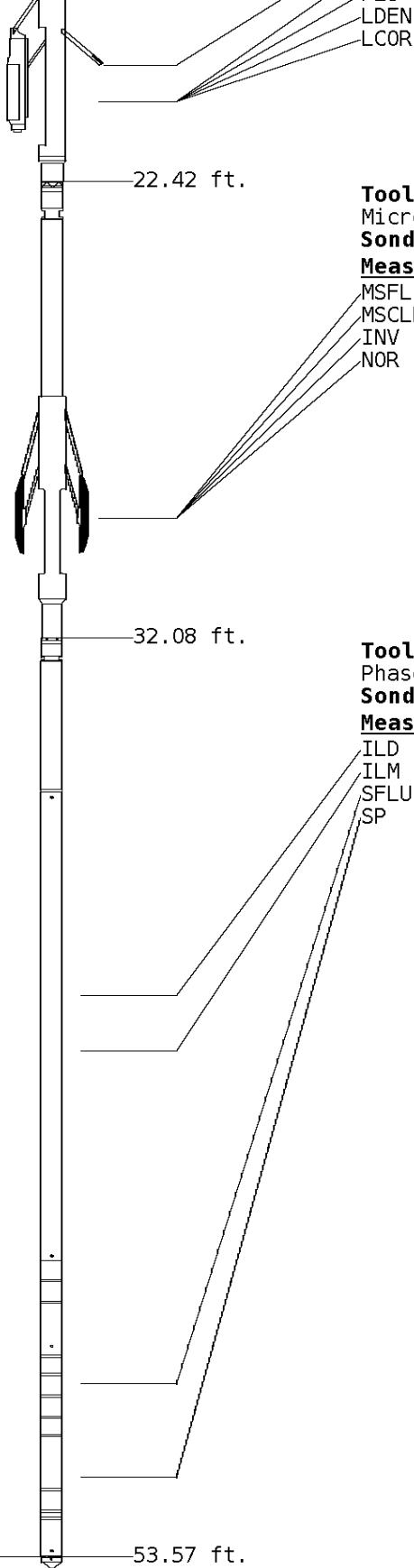
D.RAGSDALE

J.VAUGHN

Tool String Schematic

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





Tool: MST-DA Length: 9.66 ft. O.D. 6.00 in.
 Micro Spherically Focused (IC)
 Sonde ID :MST-DA-13

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-AC-043

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: BEREXCO CHRISLER 2 FEB-13 MSTK

Scale: 1:600 Format: DIL-600

Segment: V1.D1.S7 Reprocess MAIN

Acquired: 2020-02/13 02:58 3.4.1-13972

Reference: 0

Processed: 2020-02/13 04:20 3.4.1-13972

TENSION
LBS

10000

0

DEEP INDUCTION
OHMM

0.0

500.0

0.0

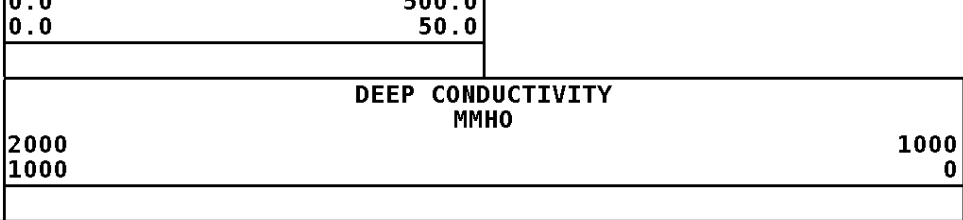
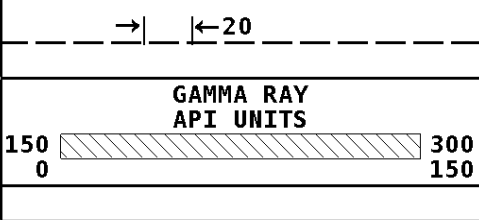
50.0

SPONTANEOUS POTENTIAL
mV

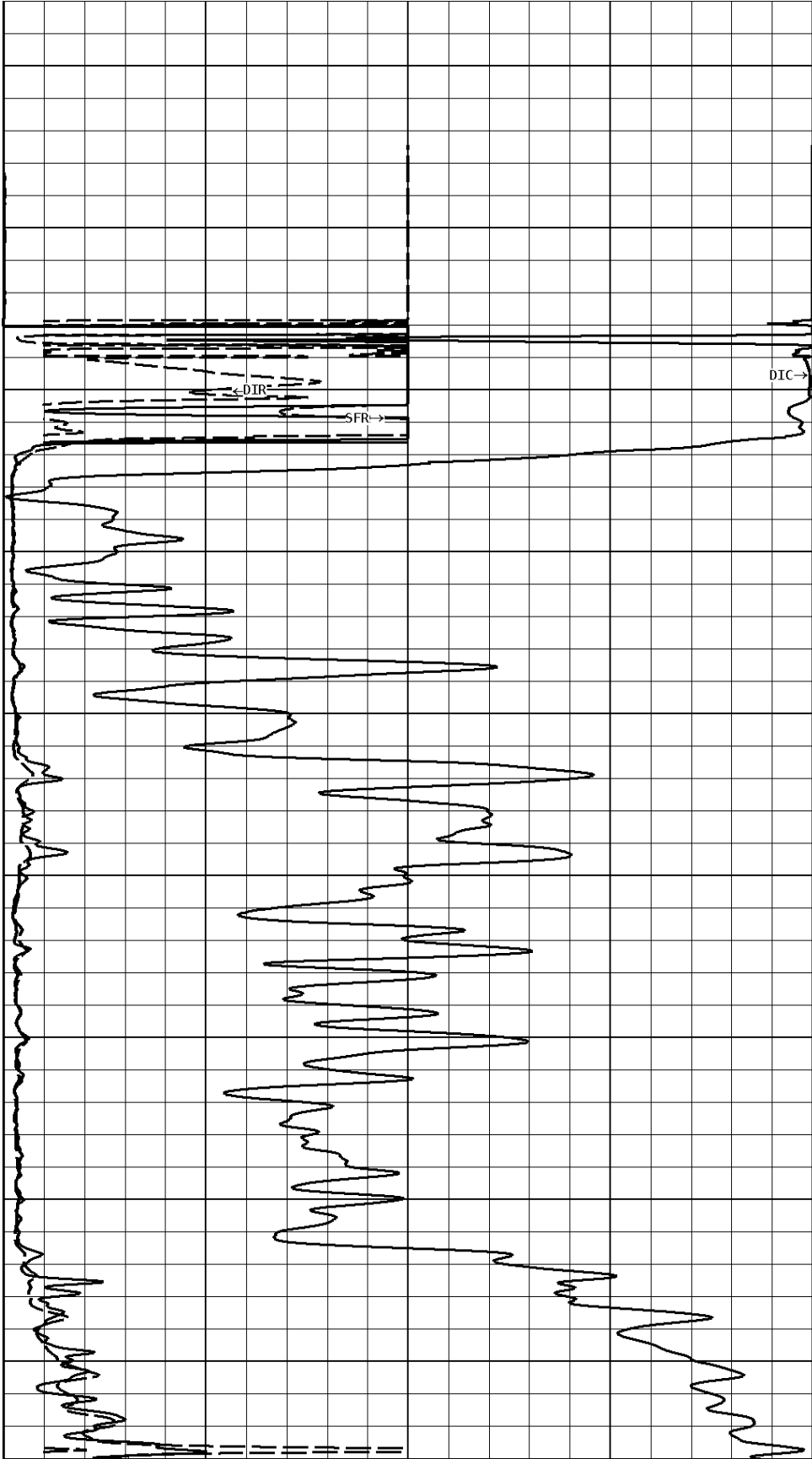
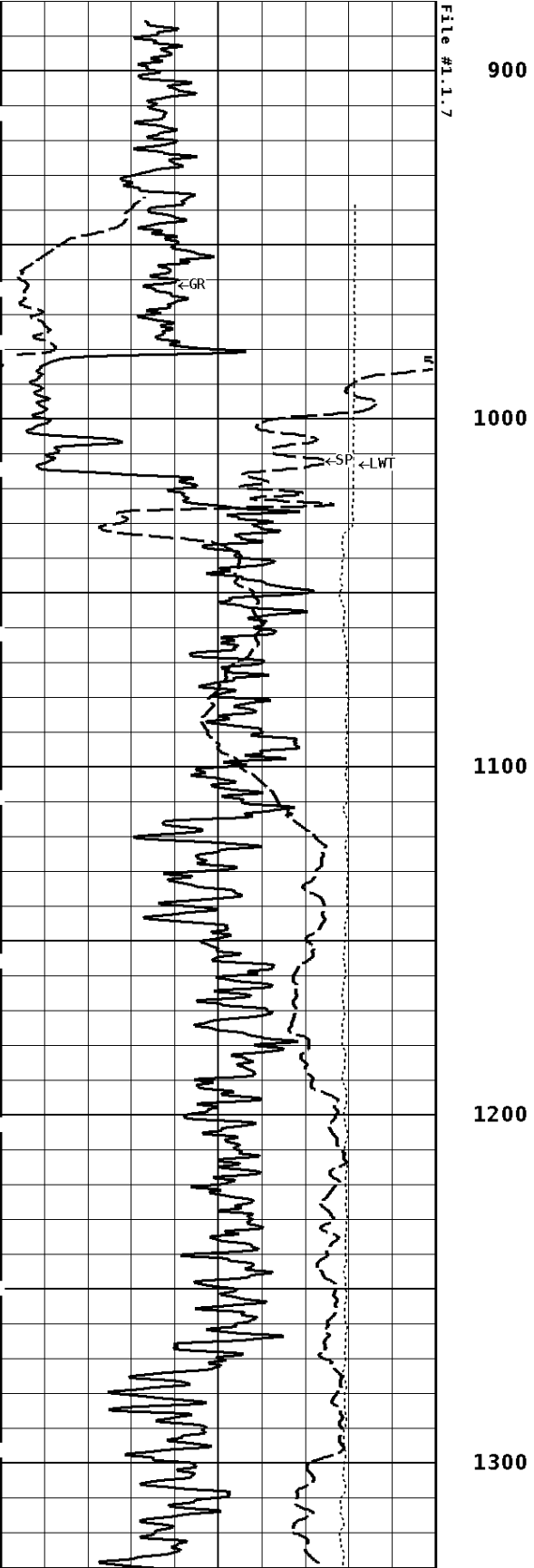
SHALLOW FOCUSED RESISTIVITY
OHMM

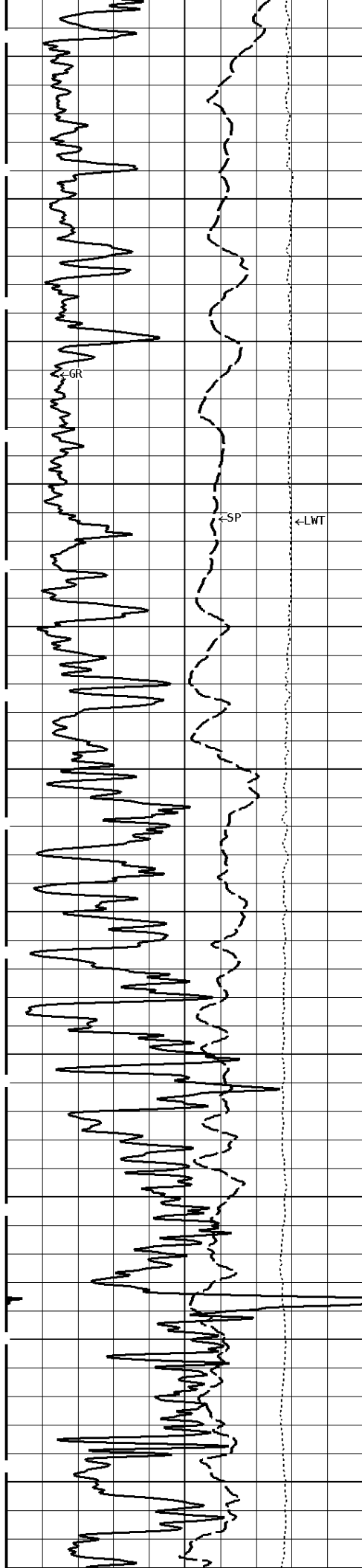
0.0

500.0



1:600 MAIN SECTION





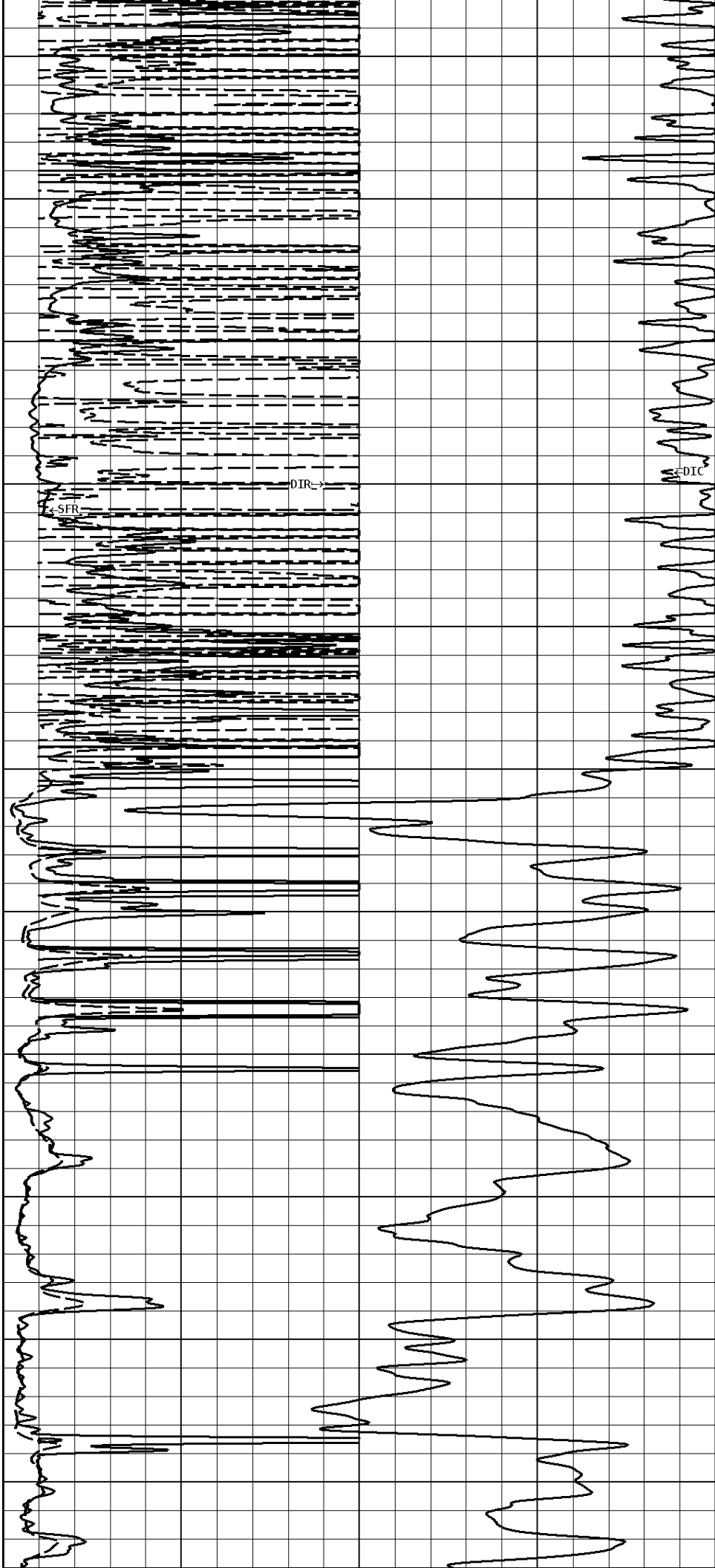
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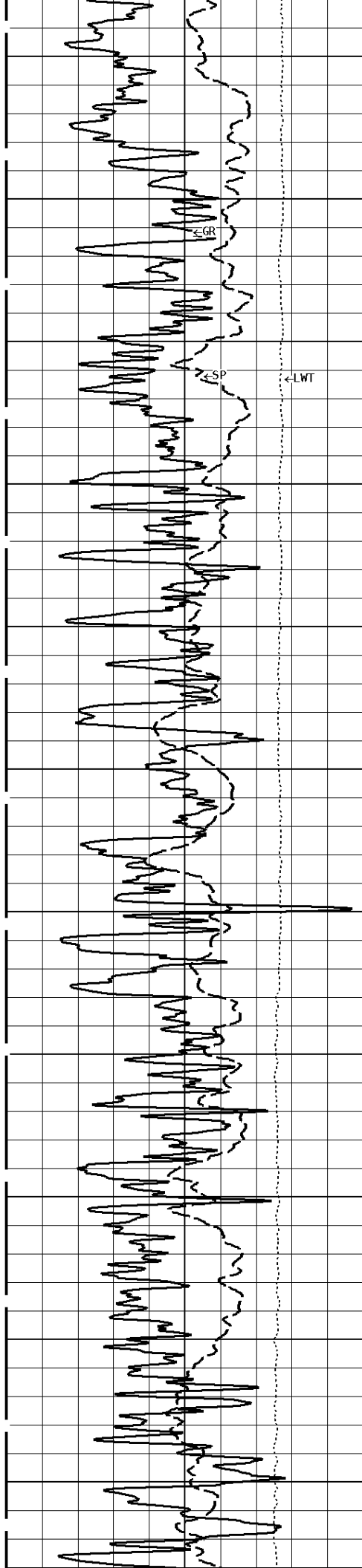
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1600

1700

1800





1900

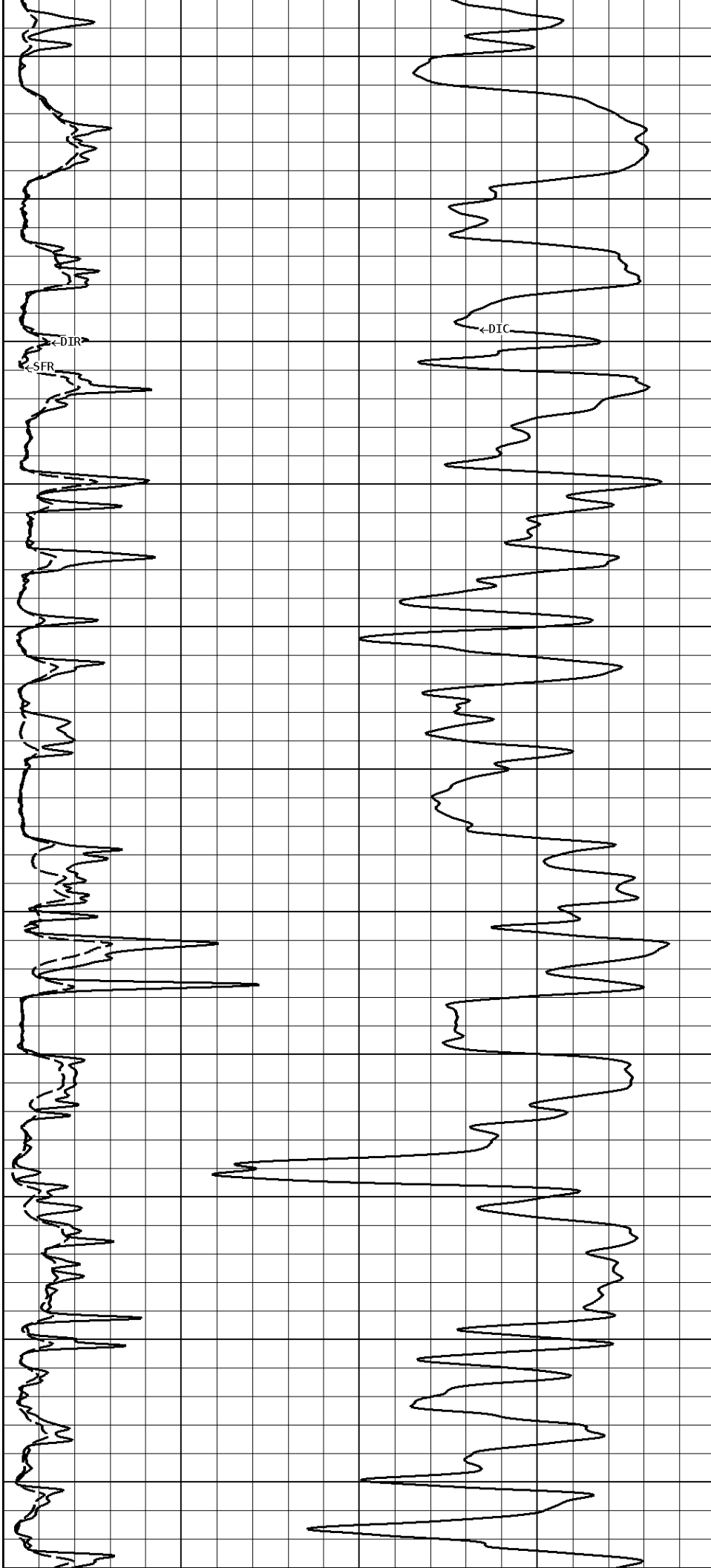
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2100

2200

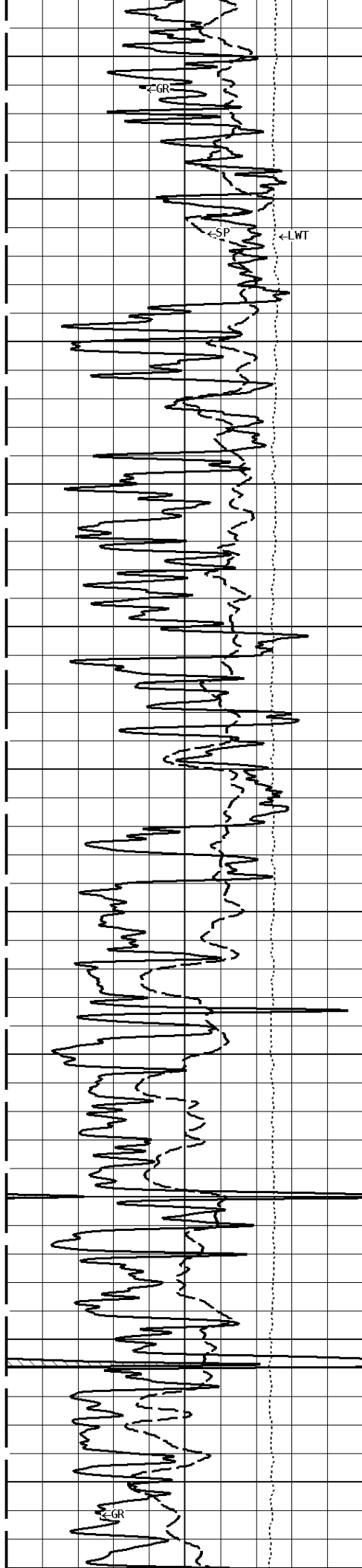
2300

2400



←DIR

←SFR



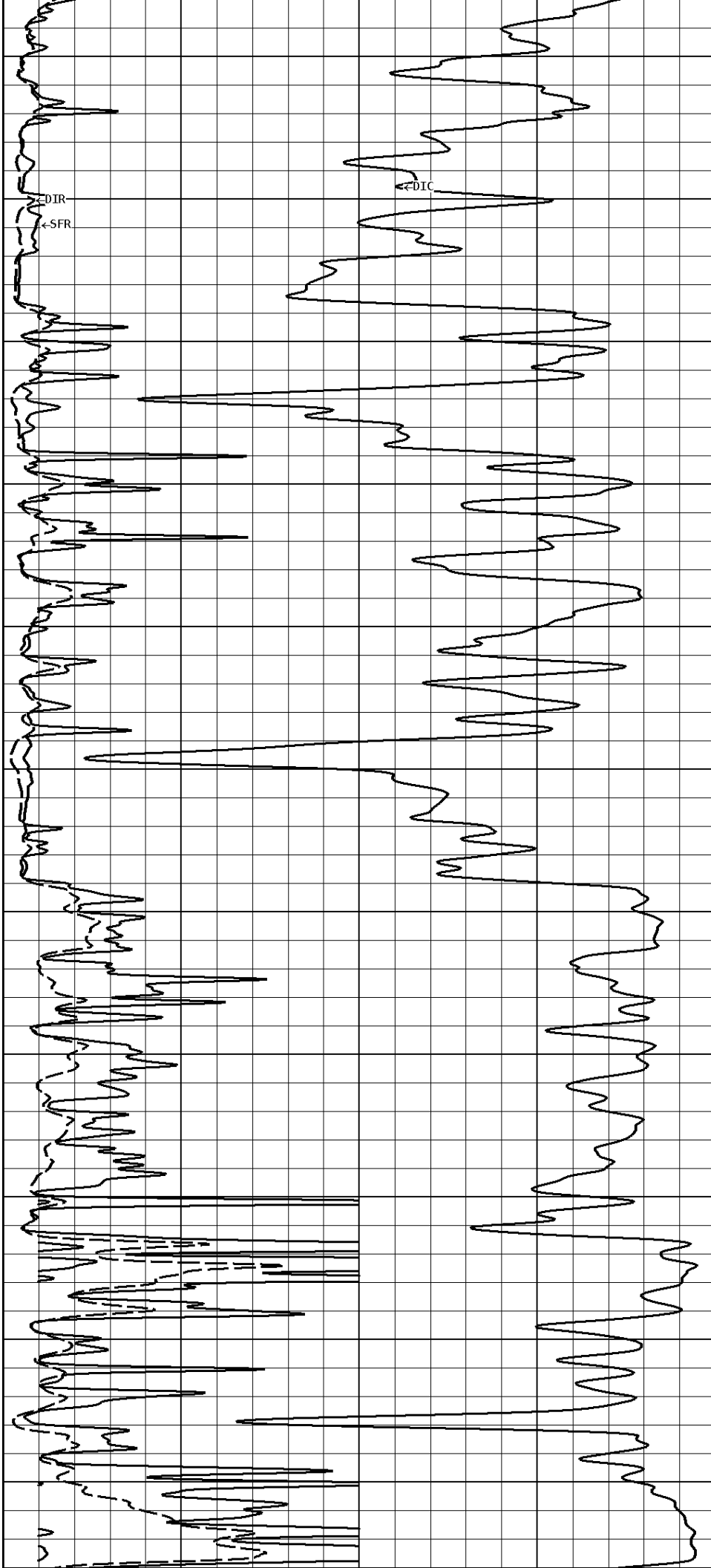
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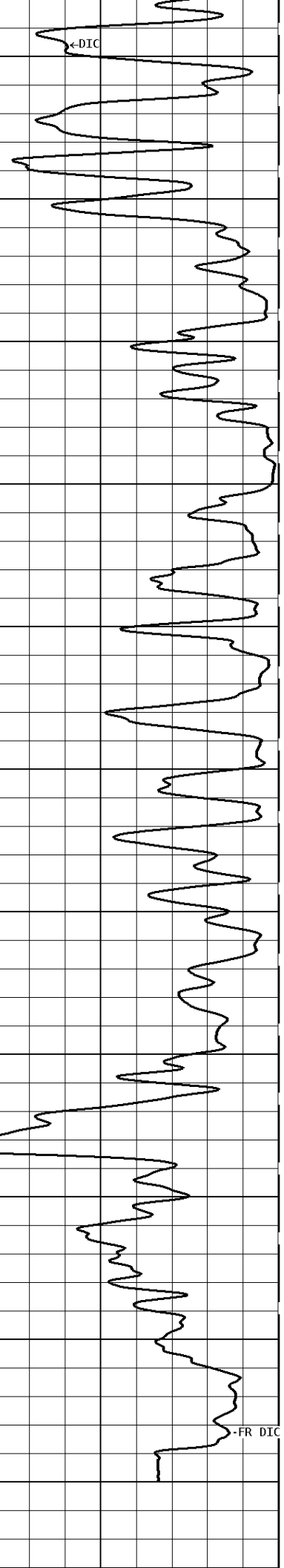
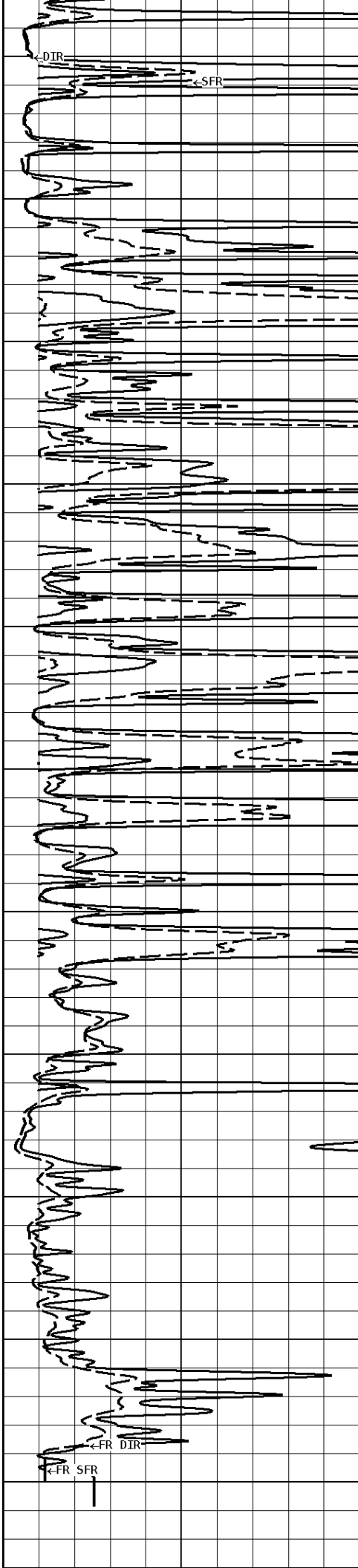
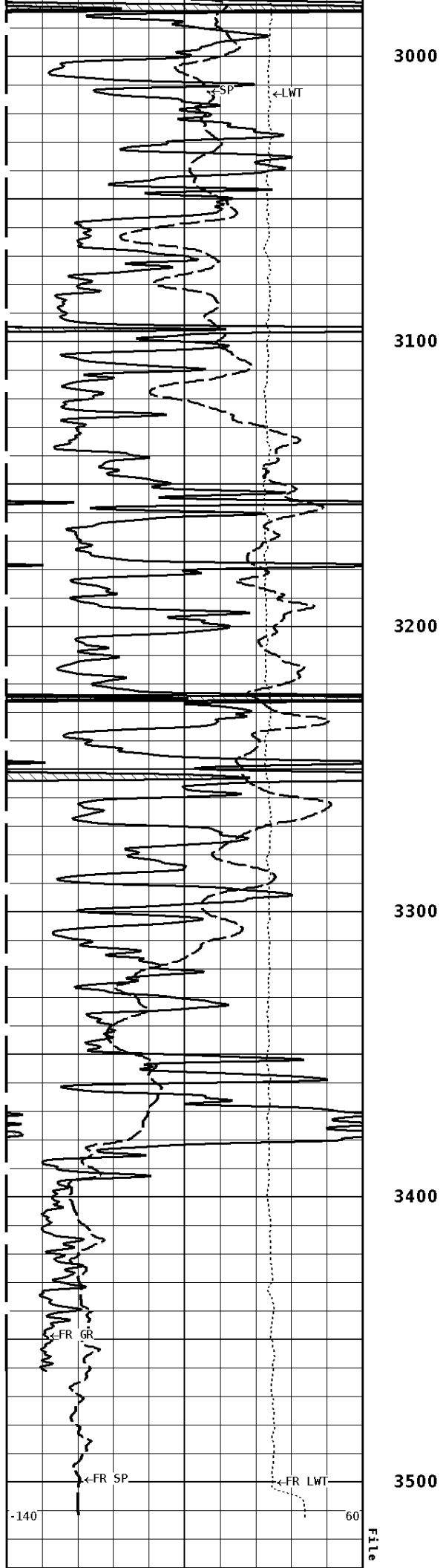
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2700

2800

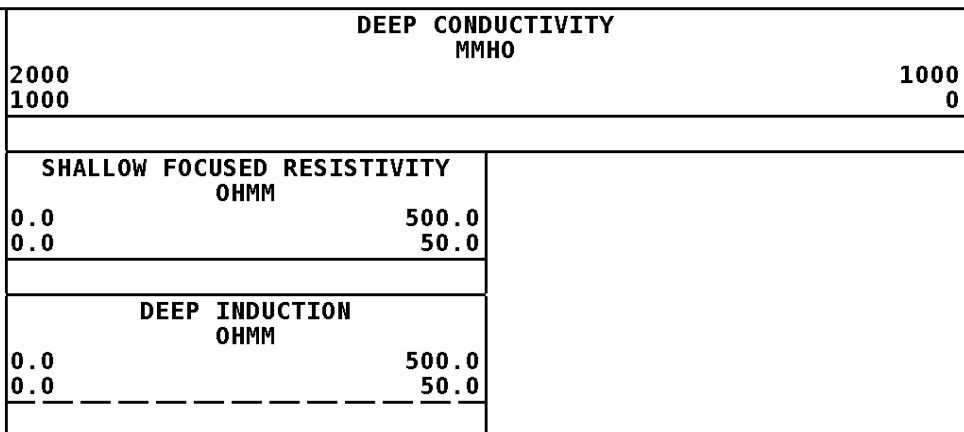
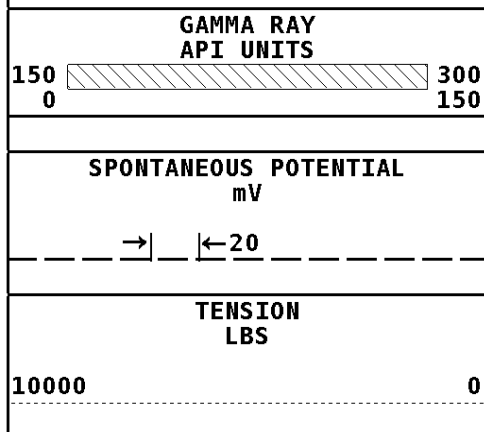
2900





#1.1.7

1:600 MAIN SECTION



Well File: BEREXCO CHRISLER_2 FEB-13_MSTK

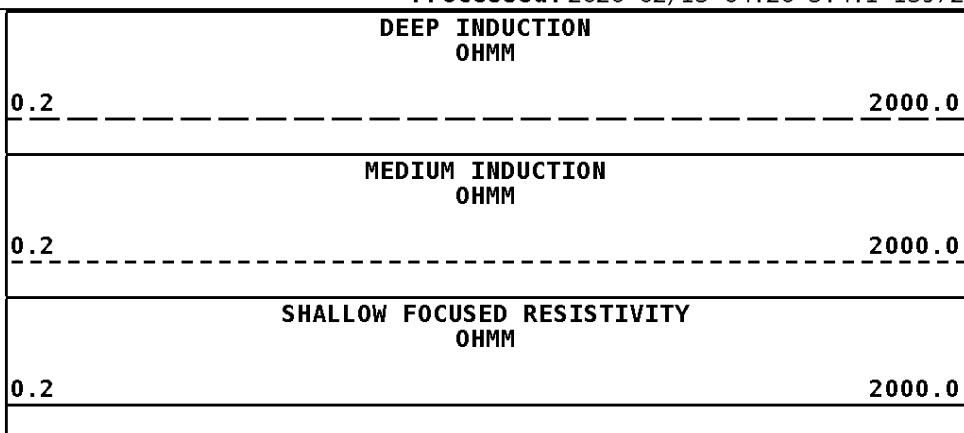
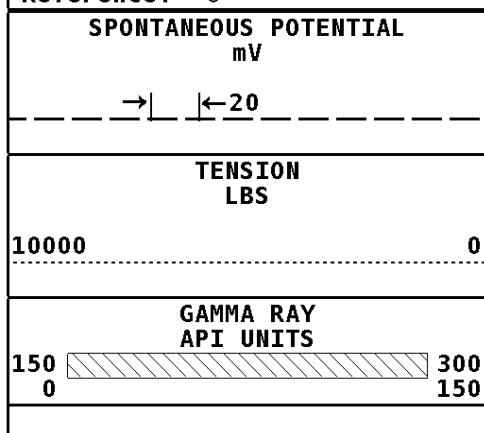
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Segment: V1.D1.S7 Reprocess MAIN

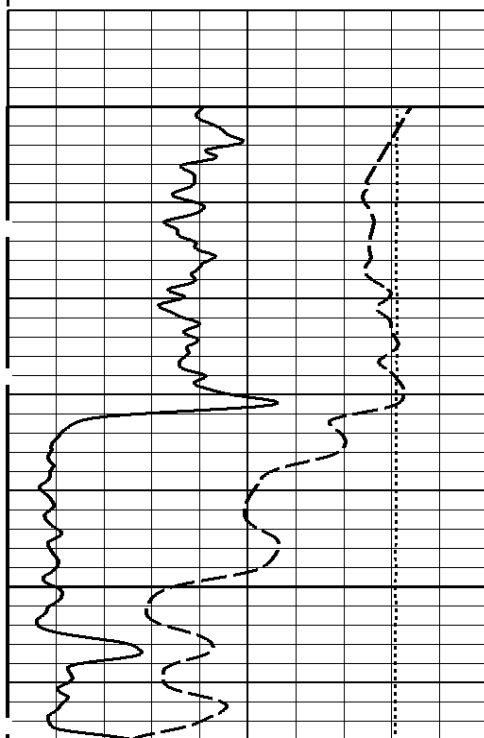
Acquired: 2020-02/13 02:58 3.4.1-13972

Reference: 0

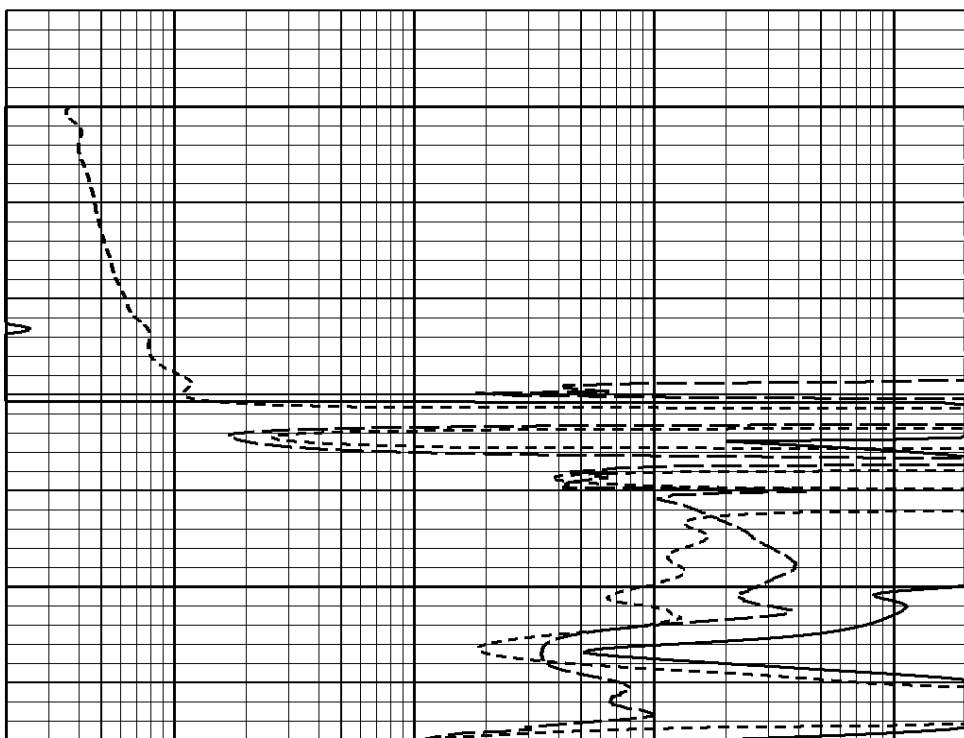
Processed: 2020-02/13 04:20 3.4.1-13972

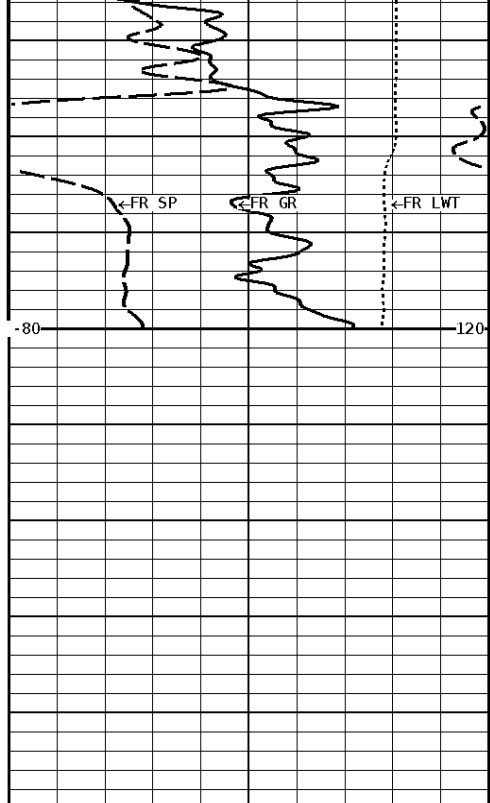


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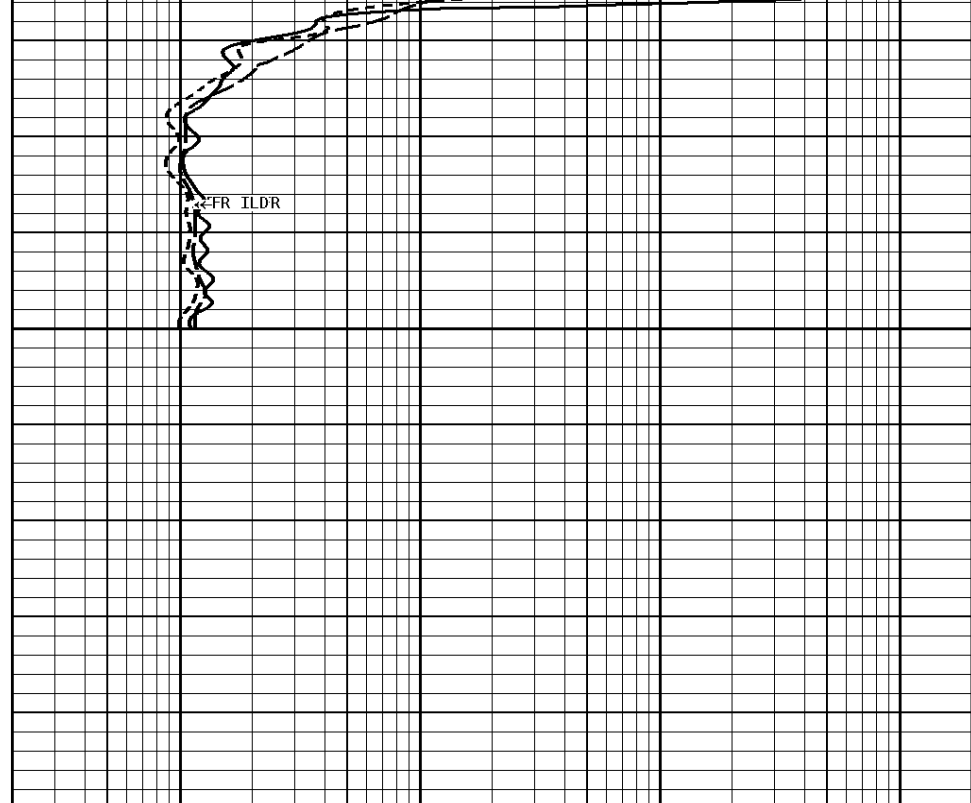


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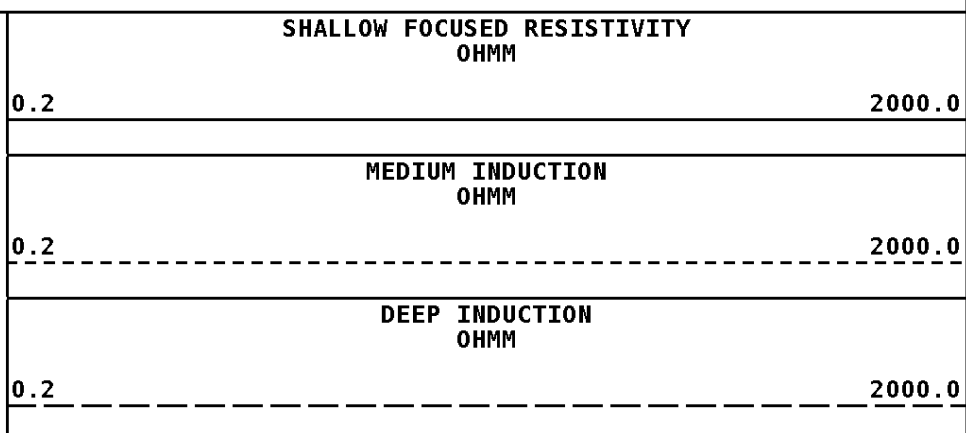
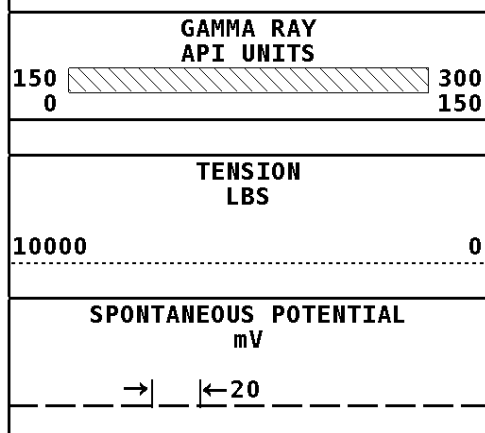




File #1.1.7



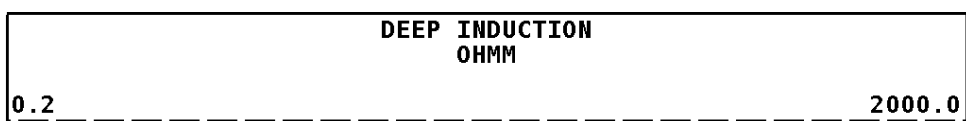
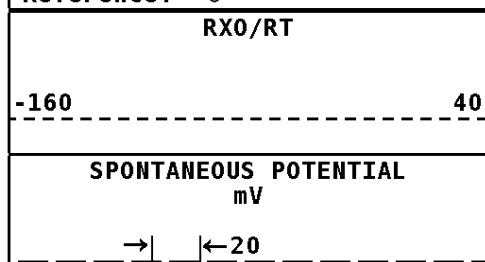
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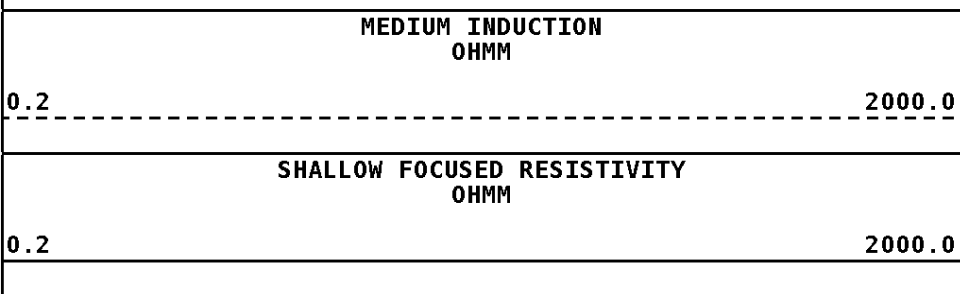
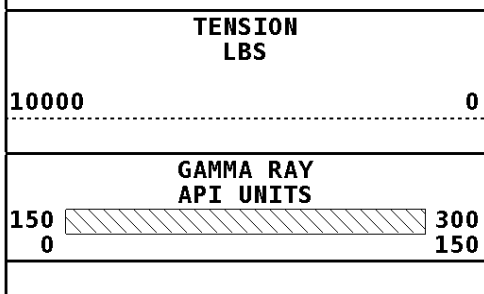


* Borehole Zone Factors *

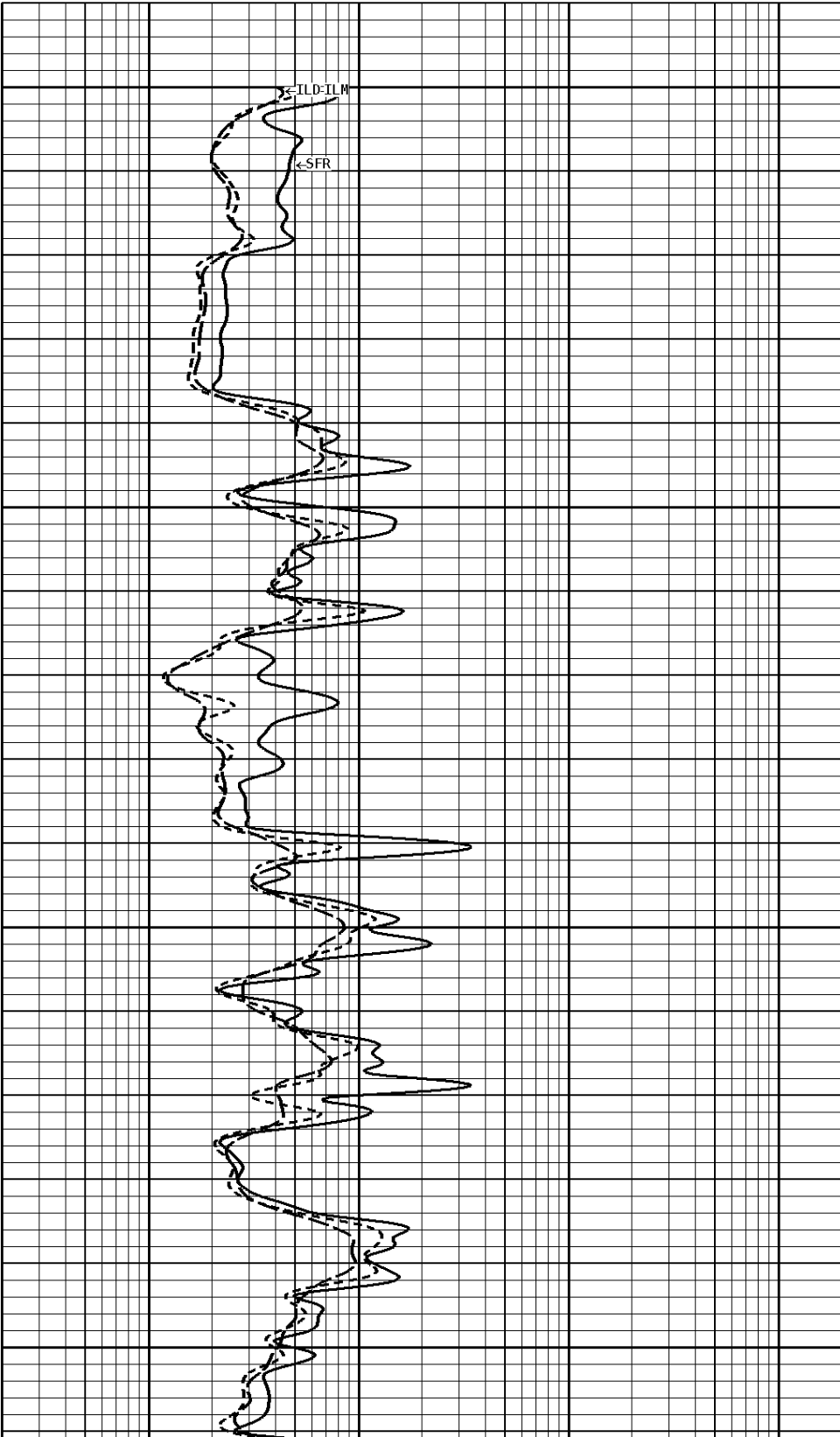
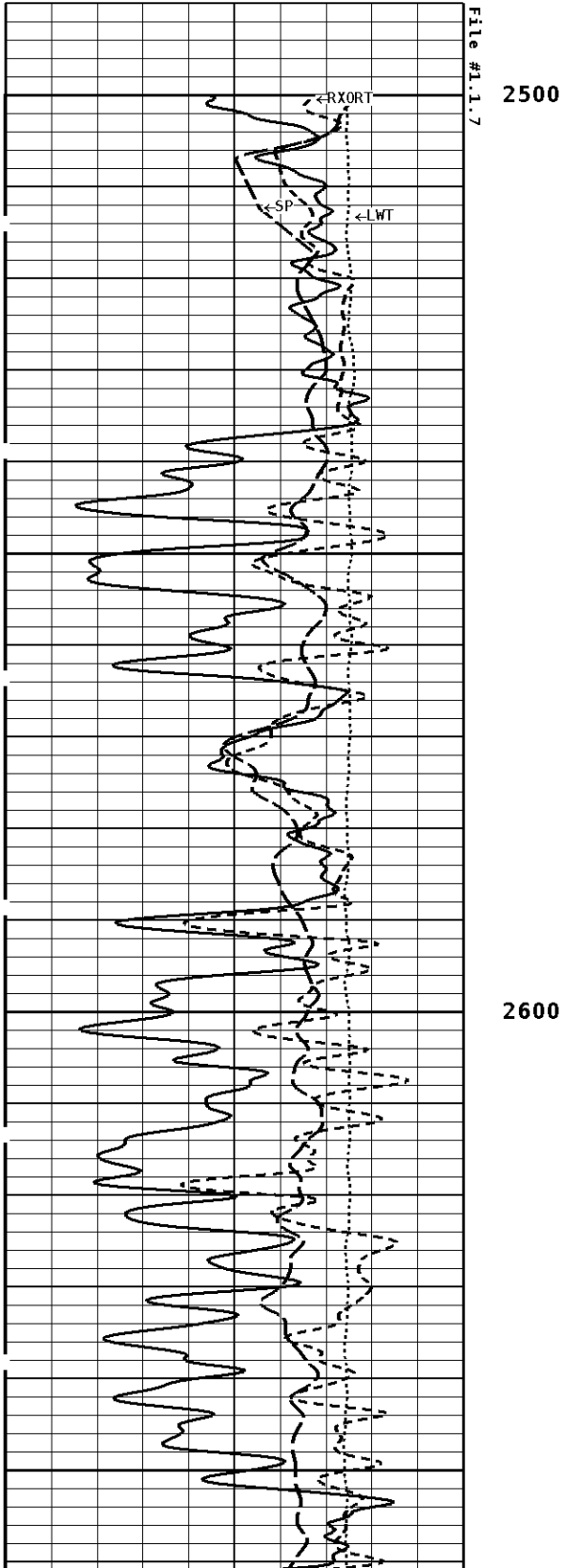
Zone 1 99999.0 to 0.0 Feet		
Drill Bit Size	7.875	in
Casing Diameter	4.500	in
BHT Depth	3500.000	ft
Borehole Temperature	95.0	degF
Temperature Gradient	1.00	DFHF
Resistivity Of Mud	0.600	ohmm
Resistivity Of Mud Temperature	69.00	degF

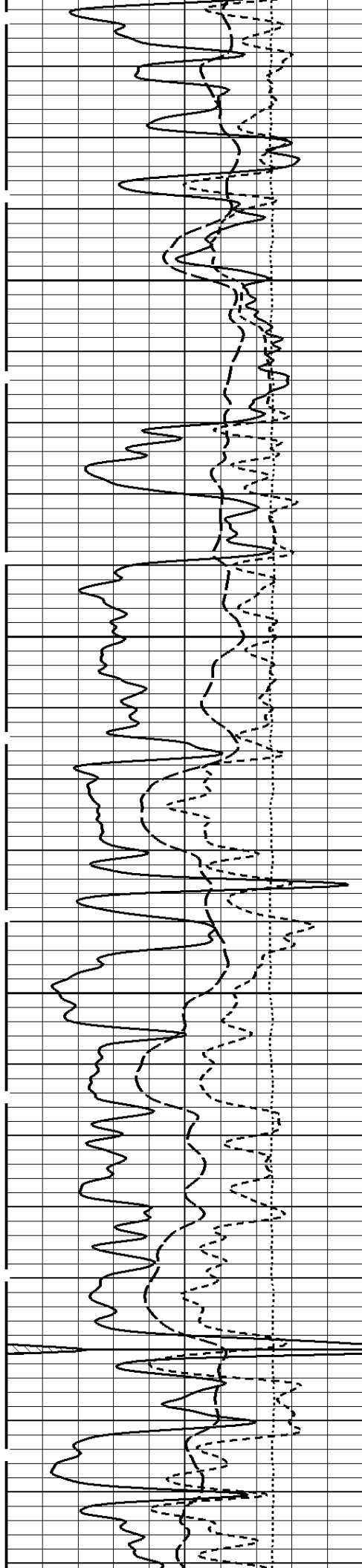
Well File: BEREXCO CHRISLER 2 FEB-13 MSTK	Scale: 1:240	Format: DIL-240
Segment: V1.D1.S7 Reprocess MAIN	Acquired: 2020-02/13 02:58 3.4.1-13972	
Reference: 0	Processed: 2020-02/13 04:20 3.4.1-13972	





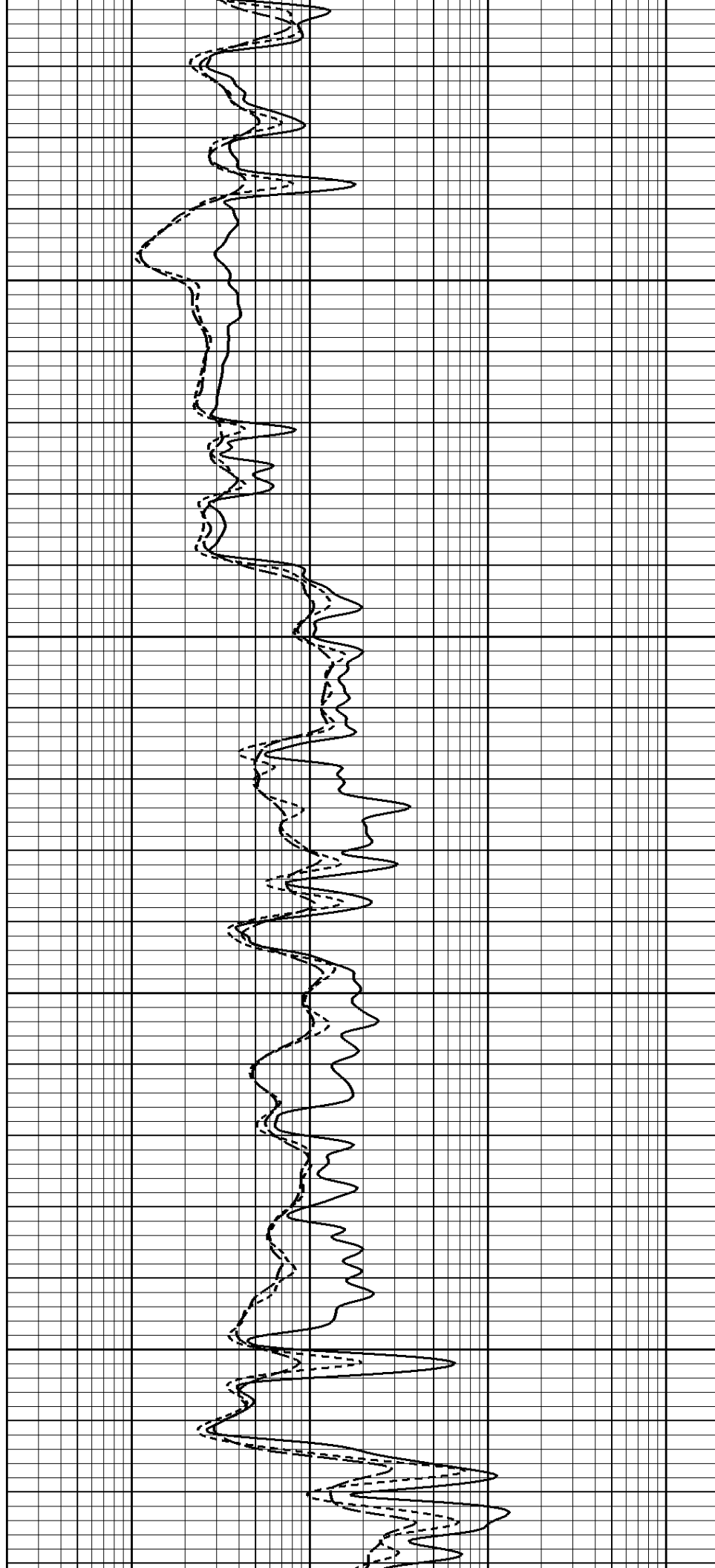
1:240 MAIN SECTION

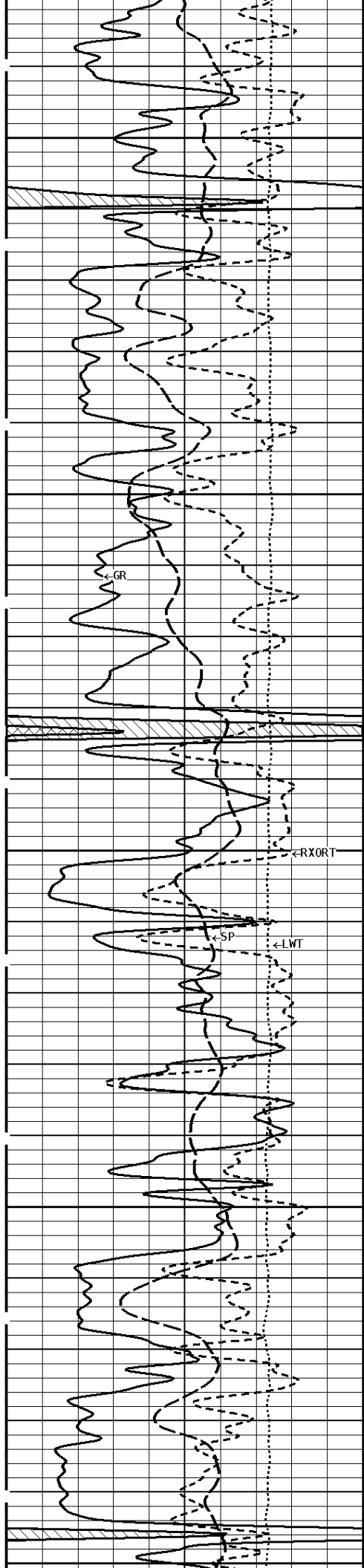




2700

2800

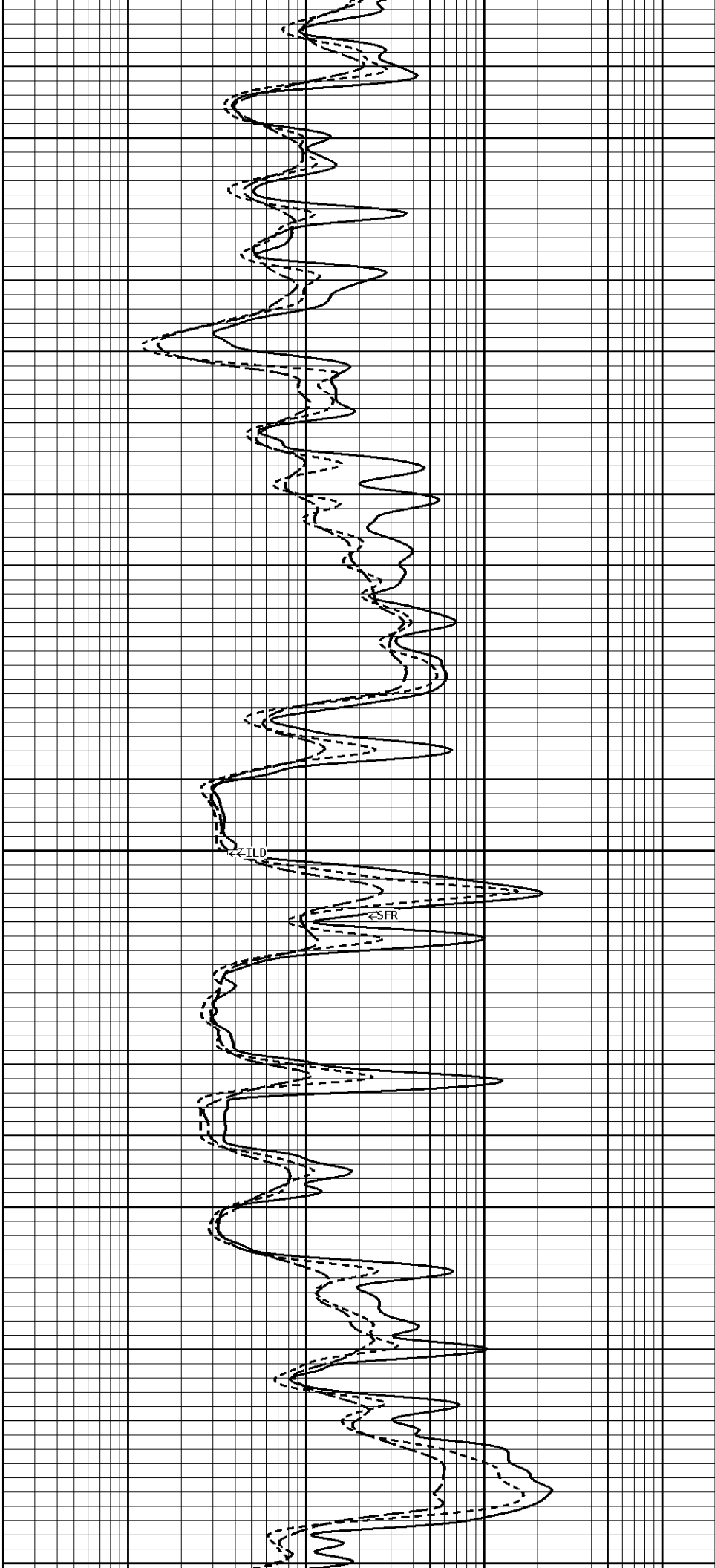


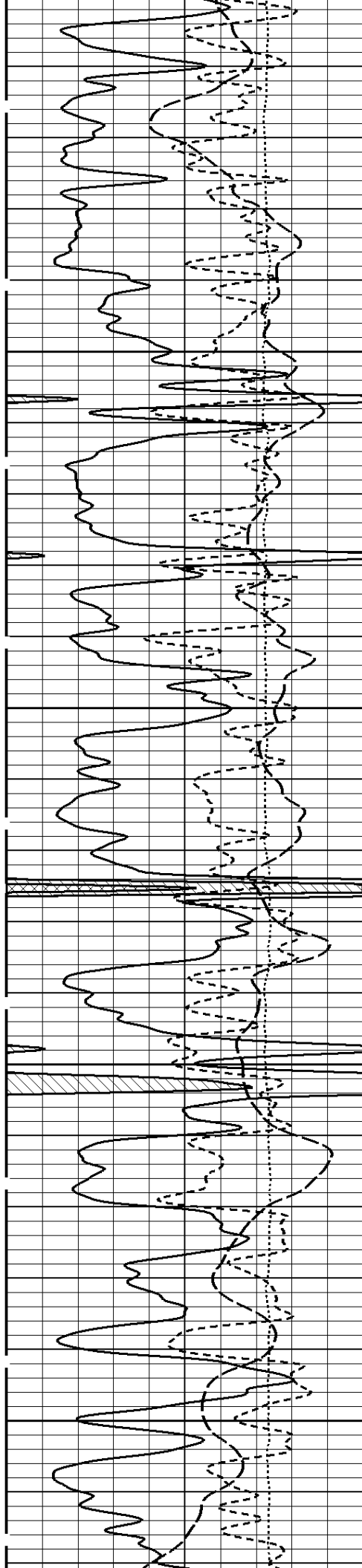


2900

3000

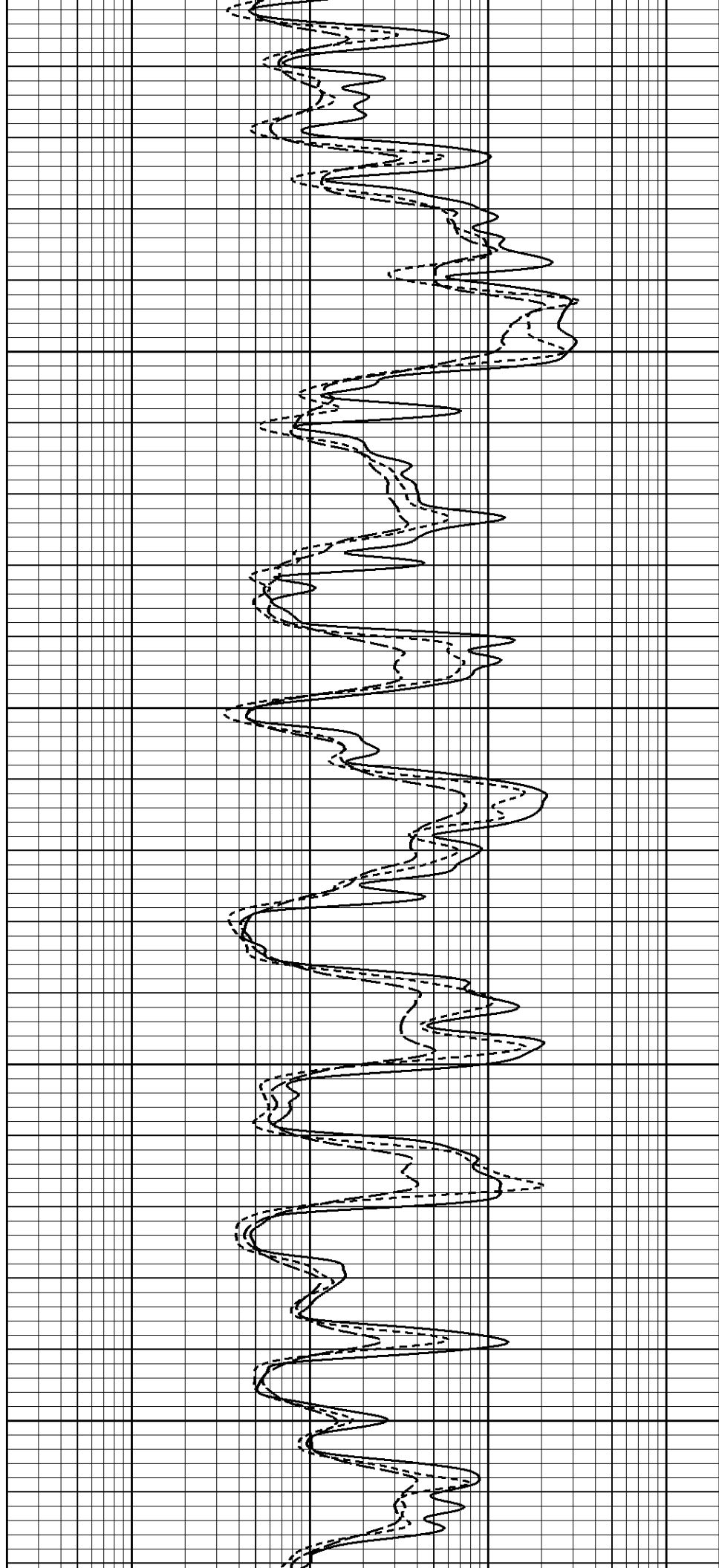
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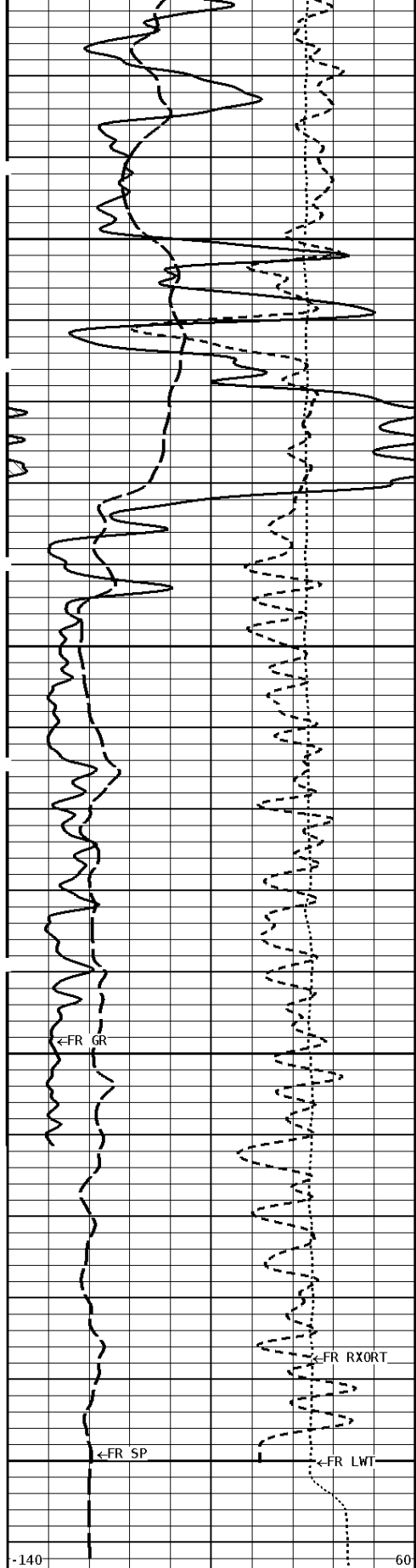




3200

3300

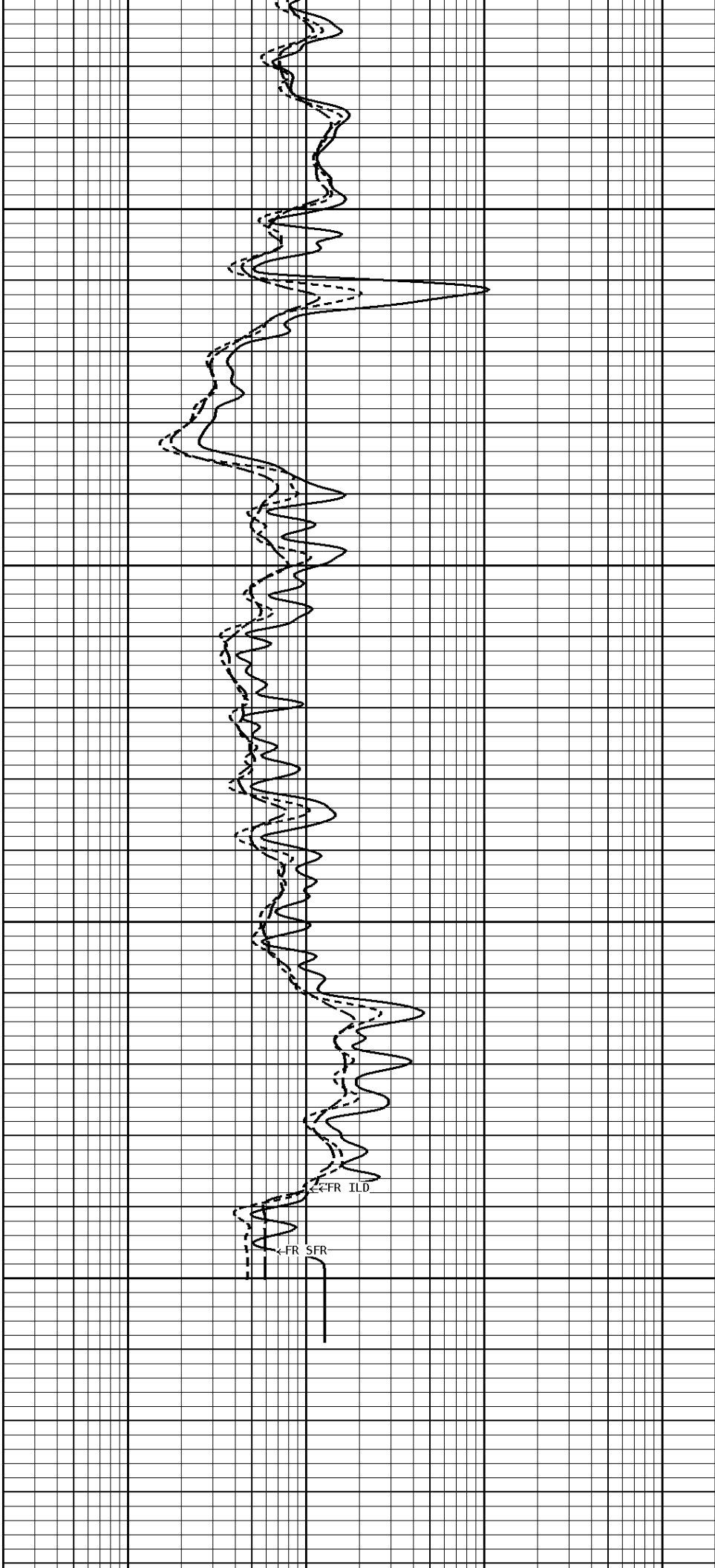




3400

3500

File



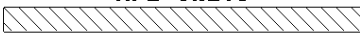
1:240 MAIN SECTION

GAMMA RAY API UNITS 150  300 0 150		SHALLOW FOCUSED RESISTIVITY OHMM 0.2 2000.0	
TENSION LBS 10000 0		MEDIUM INDUCTION OHMM 0.2 2000.0	
SPONTANEOUS POTENTIAL mV → ← 20		DEEP INDUCTION OHMM 0.2 2000.0	
RXO/RT -160 40			

* Borehole Zone Factors *

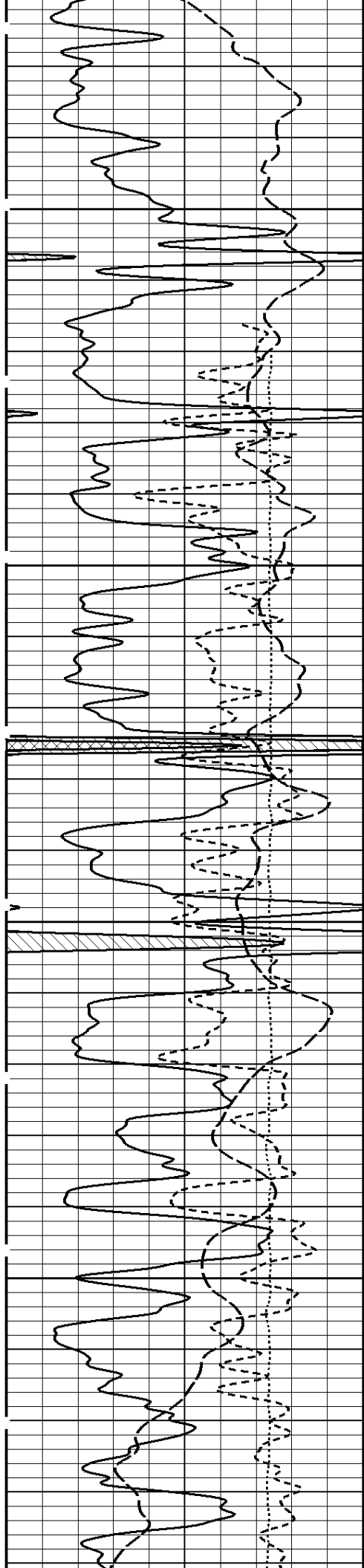
Zone 1 99999.0 to 0.0 Feet			
Drill Bit Size		7.875	in
Casing Diameter		4.500	in
BHT Depth		3500.000	ft
Borehole Temperature		95.0	degF
Temperature Gradient		1.00	DFHF
Resistivity Of Mud		0.600	ohmm
Resistivity Of Mud Temperature		69.00	degF

Well File: BEREXCO CHRISLER 2 FEB-13_MSTK	Scale: 1:240	Format: DIL-240
Segment: V1.D1.S9 REPEAT	Acquired: Not Available	
Reference: 0	Processed: Not Available	

RXO/RT -160 40		DEEP INDUCTION OHMM 0.2 2000.0	
SPONTANEOUS POTENTIAL mV → ← 20		MEDIUM INDUCTION OHMM 0.2 2000.0	
TENSION LBS 10000 0		SHALLOW FOCUSED RESISTIVITY OHMM 0.2 2000.0	
GAMMA RAY API UNITS 150  300 0 150			

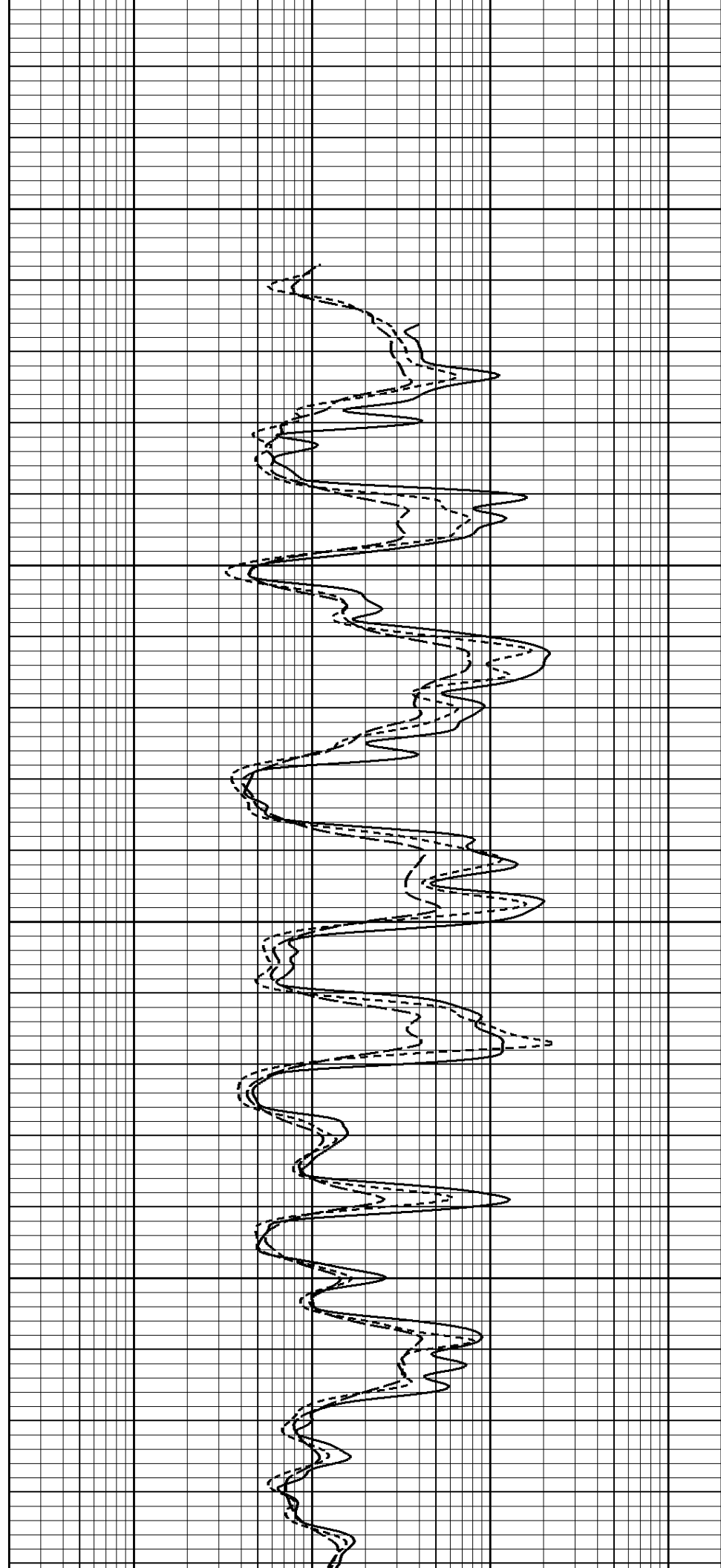
1:240 REPEAT SECTION

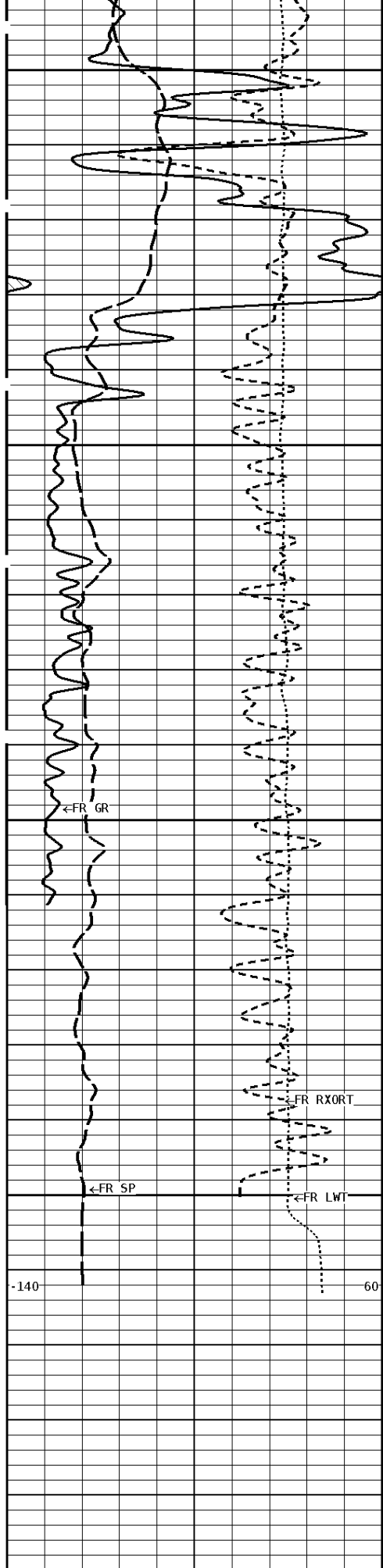
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3200

3300

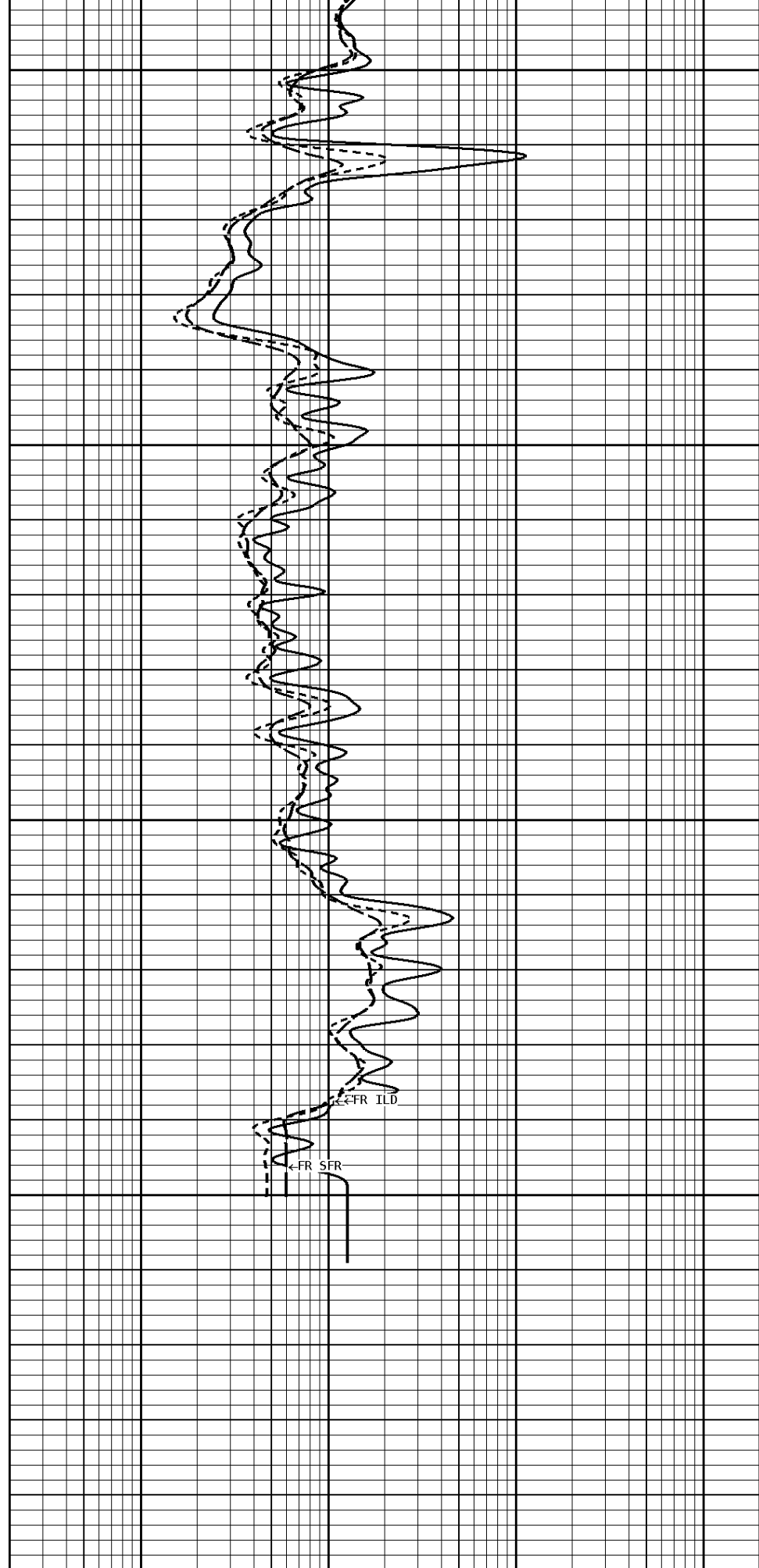




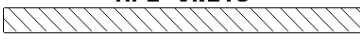
3400

3500

File #1.1.9



1:240 REPEAT SECTION

GAMMA RAY API UNITS 150  300 0 150		SHALLOW FOCUSED RESISTIVITY OHMM 0.2 2000.0
TENSION LBS 10000 0		MEDIUM INDUCTION OHMM 0.2 2000.0
SPONTANEOUS POTENTIAL mV → ← 20		DEEP INDUCTION OHMM 0.2 2000.0
RXO/RT -160 40		

*** Calibration Summary ***

Shop Calibration GRT-B						
Performed : 26-Nov-2018			Time : 11:34			
Sensor Suite : GR-GR5			ID : GRT-BA-017			
	Measured	Units	Calibrated	Units		
	Background Jig		Jig			
GR	45 321	CPS	160	GRAPI		

Shop Calibration PIT-CA						
Performed : 21-DEC-2019			Time : 21:46			
Sensor Suite : P-IND-T			ID : PIT-AC-043			
Medium						
	Measured		Calibrated		Units	
	R X		R X			
Air	131492 129685		0.0 0.0		MMHOS	
Zero	131066 131062		-18.1 59.6		MMHOS	
Reference	244915 244454		4981.9 5059.6		MMHOS	
Loop	130404 210498		3515.7 3611.2		MMHOS	
Sonde Error			-0.5 -1.7		MMHOS	
Cond			4981.9 5059.6		MMHOS	
Deep						
	Measured		Calibrated		Units	
	R X		R X			
Air	131939 129230		0.0 -0.0		MMHOS	
Zero	131079 131067		-15.6 35.3		MMHOS	
Reference	220620 224092		1984.4 2035.3		MMHOS	
Loop	129308 206166		1595.4 1712.8		MMHOS	
Sonde Error			-0.6 -7.8		MMHOS	
Cond			1984.4 2035.3		MMHOS	
Temperature						
	Measured		Calibrated		Units	
	Low High		Low High			
	16980.0 56920.0		70.0 350.0		DEGF	

Performed : 21-DEC-2019			Time : 21:46			
Sensor Suite : SFL			ID : PIT-AC-043			
Internal						
	Measured		Calibrated		Units	
	Zero Reference		Zero Reference			
Im	32732.6 48929.1		0.0 7028.0		uA	
Ib	32768.6 49680.1		0.0 1750.0		mA	
MOM1	32722.0 56290.6		0.0 175.0		mV	
Equivalent SFL			43.97		OHMM	

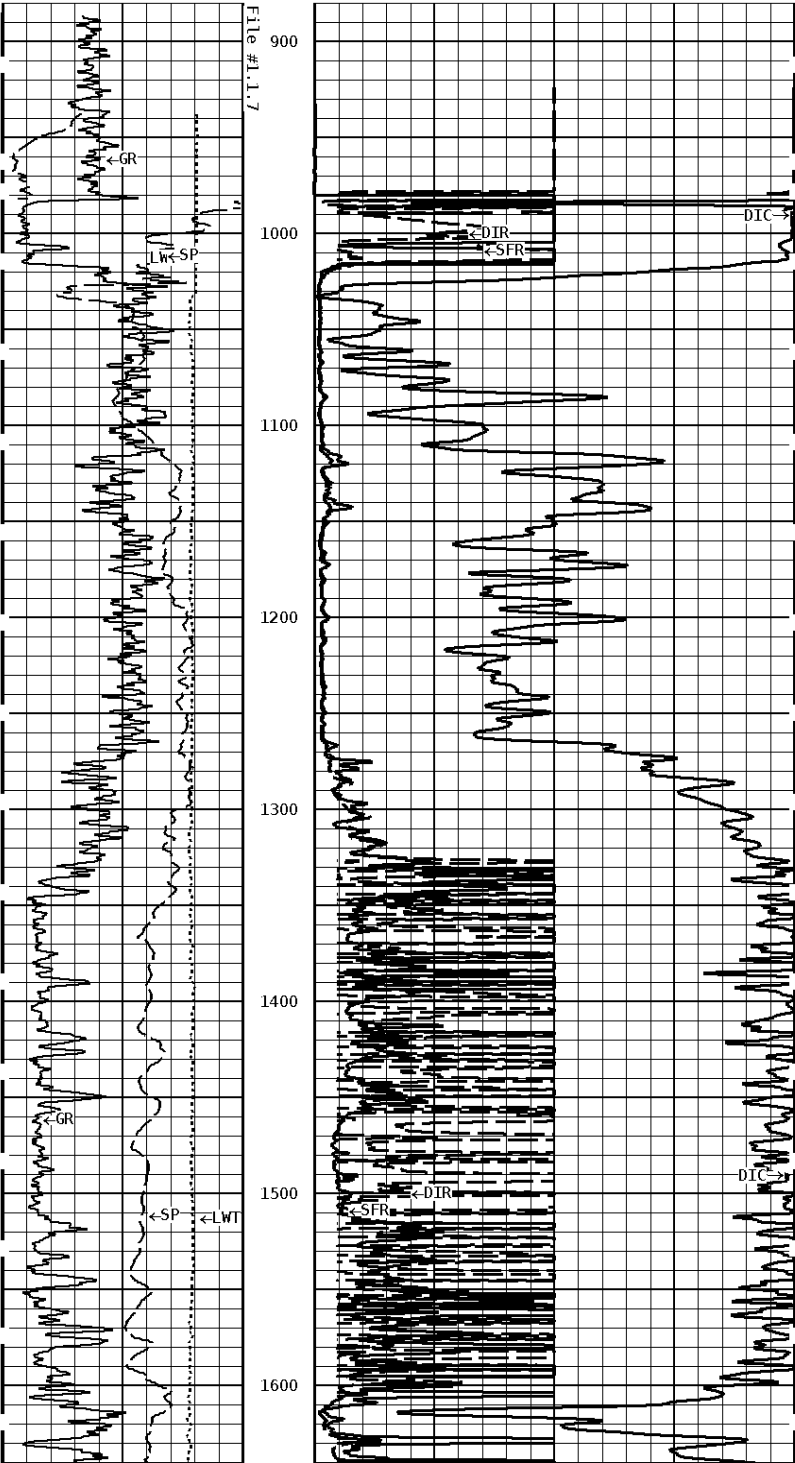
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Sensor Suite : P-SP			ID : PIT-AC-043			
Internal						
	Measured		Calibrated		Units	

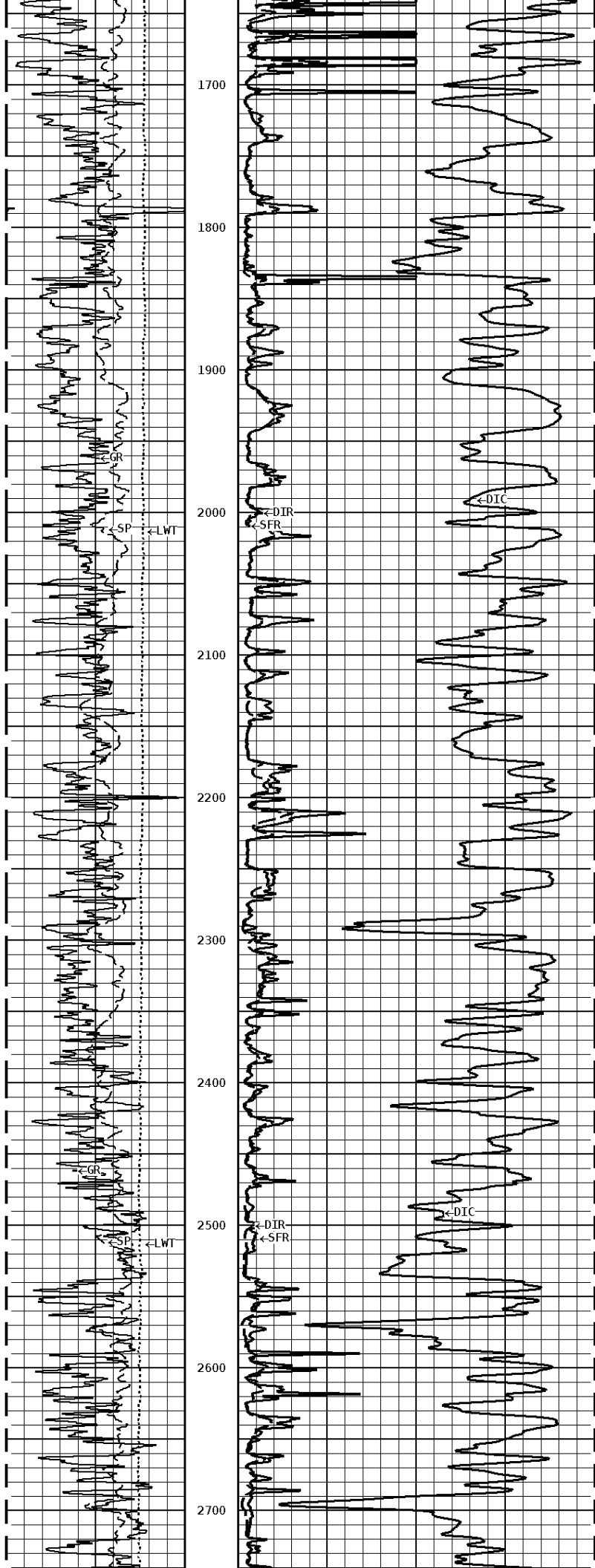
Zero	Reference	Zero	Reference	Units
32774.5	58935.9	0.0	1000.0	mV

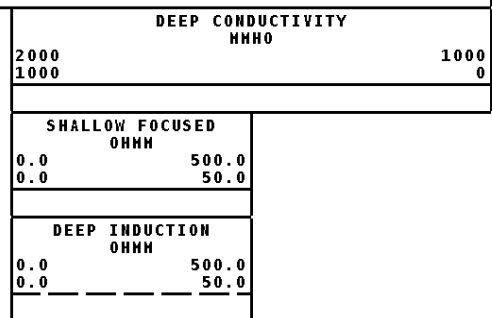
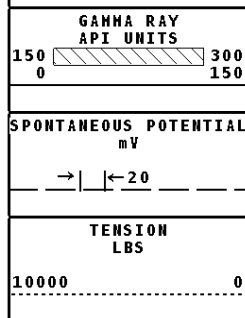
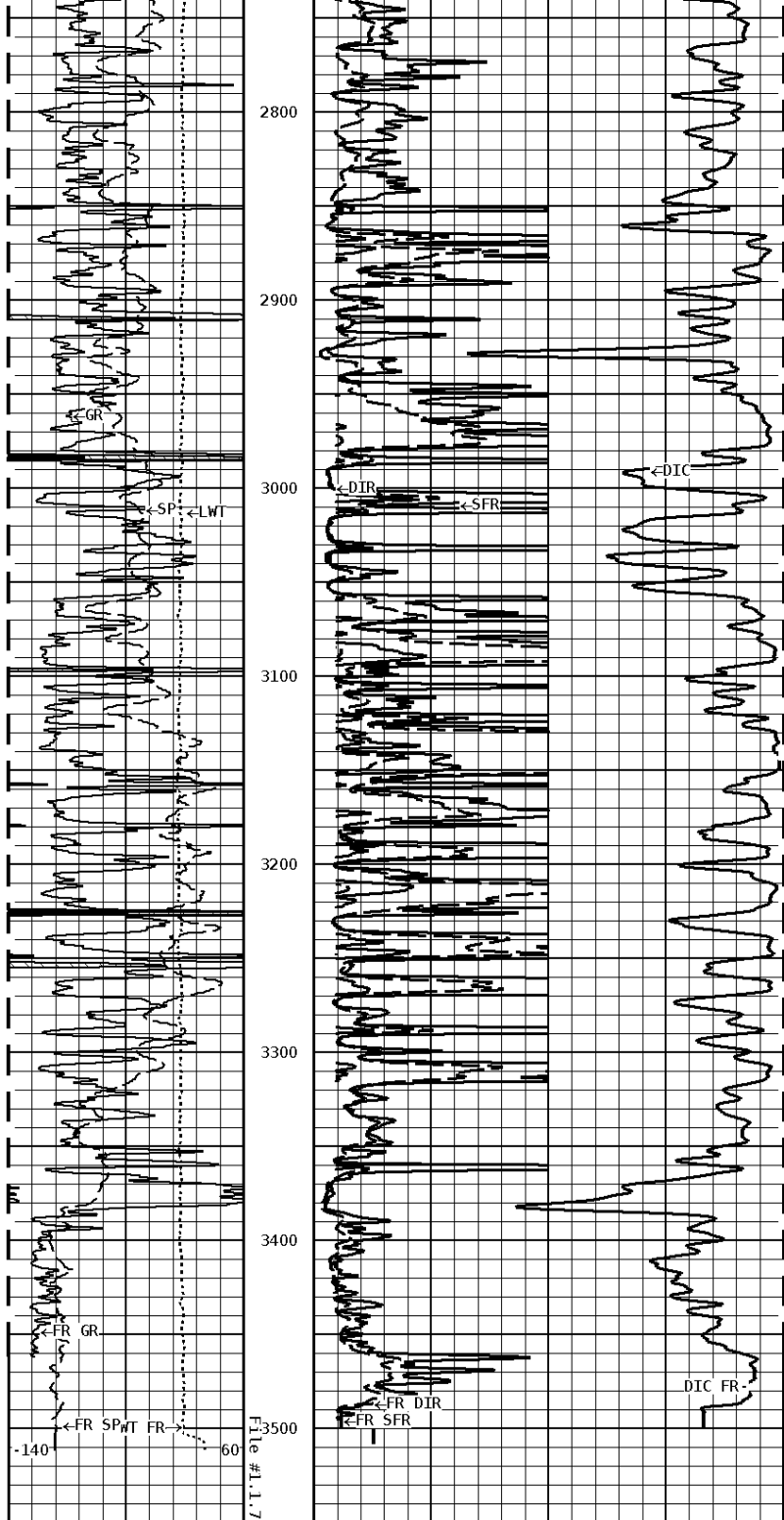
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Segment:	V1.D1.S7 Reprocess MAIN	Acquired:	2020-02/13 02:58 3.4.1-13972	Processed:	2020-02/13 04:20 3.4.1-13972
Reference:	0				

TENSION LBS 1000000	DEEP INDUCTION OHMM 0.0500.0 0.050.0
SPONTANEOUS POTENTIAL mV → ←20	SHALLOW FOCUSED OHMM 0.0500.0 0.050.0
GAMMA RAY API UNITS 1500300150	DEEP CONDUCTIVITY MHMO 20001000 10000

1:1200 MAIN SECTION









W0001: CHRISEEN #12
Location: 1240' FSL & 930' FWL
Logged: 2020-02-13
K.B. Elev: 1826.0 Ft