

Schlumberger

# CEMENT BOND LOG

COUNTY	GARFIELD	COMPANY	AMER RESOURCES
Field or LOCATION	BEARGULCH		
WELL	B.G. 26-2		
COMPANY		AMER RESOURCES	
COMPANY			
AMERICAN RESOURCES MANAGEMENT			
WELL B.G. 26-2			
FIELD BEAR GULCH			
COUNTY GARFIELD STATE COLORADO			
LOCATION		API Serial No.	
Sec. 26	Tw. 5S	Rge. 101W	Other Services: CNL
Permanent Datum: GL		Elev. 8791	
Log Measured From KB		12 Ft. Above Perm. Datum	
Drilling Measured From KB		Elev.: K.B. 8803 D.F. G.L. 8791	
Date	12/3/80	12/4/80	Casing Fluid 2% KCL
Run No.	ONE	TWO	Fluid Level 1863
Depth - Driller	5100	5100	Max. Rec. Temp. °F
Depth - Logger	4869 1/2	4869	Est. Cement Top 3896 3112
Btm. Log Interval	4858	4853	Unit District 59.75 G.J.
Top Log Interval	3896	2940	Recorded By WALLACE OLSON
Open Hole Size	8 3/4	8 3/4	Witnessed By DAVIS
CASING REC.	Size	Wt/Ft	Grade
Surface String			Type Joint
Prot. String			Top
String	7 5/8	29.4	K55
Liner			N80
			SURF 4500
			SURF 4500
PRIMARY CEMENTING DATA			
STRING	Surface	Protection	Production
Vol. of cement		250 BBL/GAL	Liner
Type of cement		IDAHO	
Additive			
Retarder			
Wt. of slurry			
Water loss			
Type fluid in csg.		2% KCL	
Fluid wt.			

FOLD HERE The well name, location and borehole reference data were furnished by the customer.

REMARKS:	
RUN 2 GR SCALE 0-200 TD TO 3350	
0-150 3350 TO 2940 TO MATCH PREVIOUS RUN	
FILM JAM ON REPEAT SECTION	
Service Order Number	RUN 1
Casing Collar Memory Distance ft.	24.5' DEEP
Radiation Log Memory Distance ft.	20' DEEP
Preceding fluid	Volume 250 bbls.
Cement pumped	12 bbls./minute
Pipe reciprocated during Pumping:	Yes X No
Pipe reciprocated after plug down:	Yes X min, No

SQUEEZE JOB DETAIL	
Squeeze number	1 2
Date	N/A
Depth interval	
Type cement	
Volume of cement	
Additive	
Retarder	
Weight of slurry	
Preceding fluid	
Breakdown pressure	
Max. pressure-stage 1	
" " 2	
" " 3	
Final maximum pressure	
Started pumping cement	
Released pressure	
Start CBL	
Finish CBL	
AVERAGE WELL DRIFT:	to ; ° from to

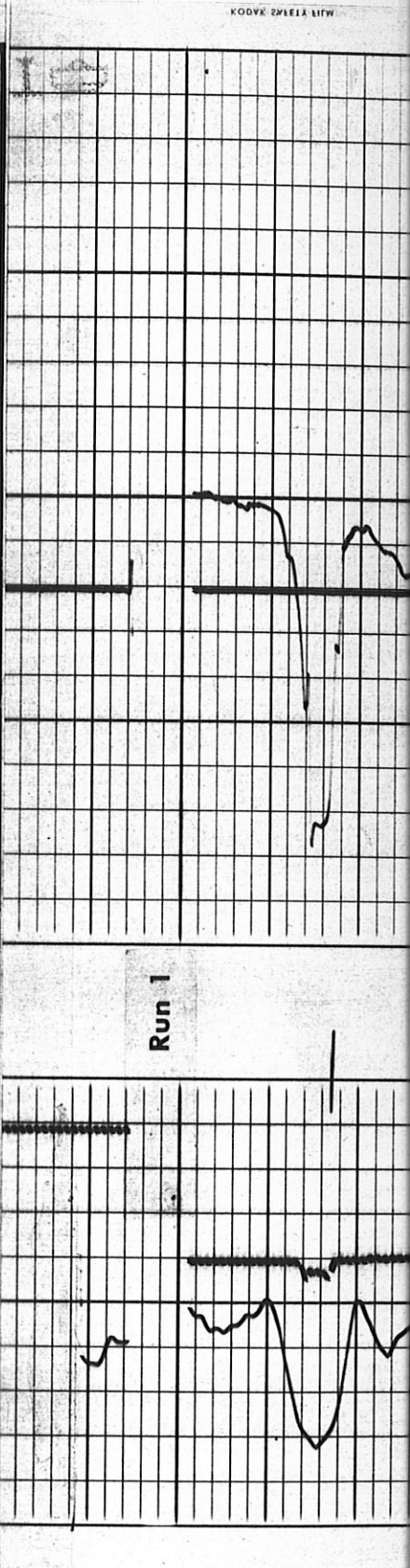
DOWNHOLE EQUIPMENT	
CCL	RUN 2
SGT	JAA 1153
NLT	
CNT	
CCL	
CME	
SLC	FA 1378
CME	
CME	
SLS	RC 300
CME	
CME	3 5/8
O.D.	

SURFACE EQUIPMENT	
TYPE	MOD.
Sonic Panel	SLP JH 303
Memorizer	ILP CA 235
GNP	
CRP	RUN 2 THE
OWE	SAME
CRP Intensity	RUN 2 RUN 1
R9G Intensity	7 3/4 8
Logging Speed	30 FPH 1800/HR
Time Constant	2 2
Sweep Time	μ-sec
Amplitude	mv/cm
Casing Centralizer Pattern	to
/Joint from	to
/Joint from	to
/Joint from	to
Casing Scratcher Pattern	to
/Joint from	to
/Joint from	to
/Joint from	to

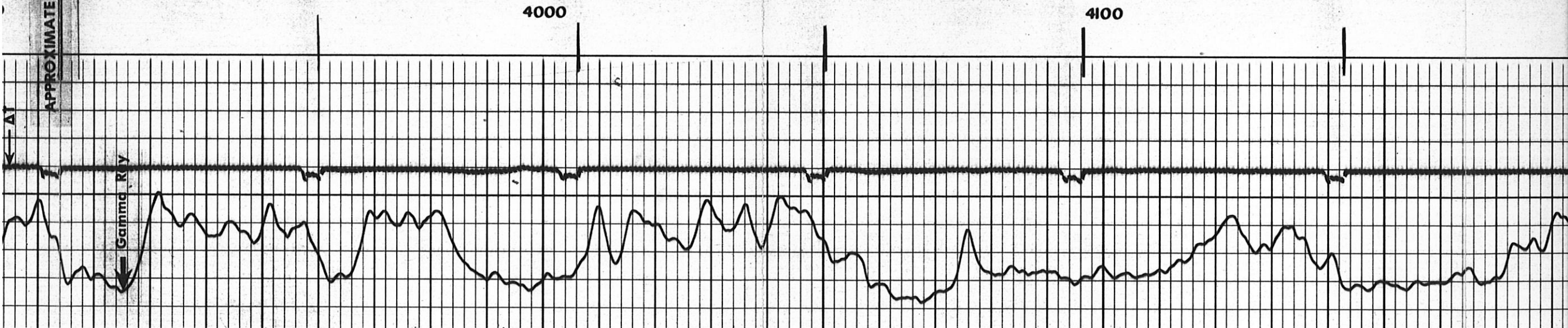
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

TRANSIT TIME	
MICROSECONDS	3
SPACING	200
GAMMA RAY API UNITS	
0	150
150	300

CASING BOND	
MILLIVOLTS	50
CASING COLLARS	
CORRECT DEPTH	

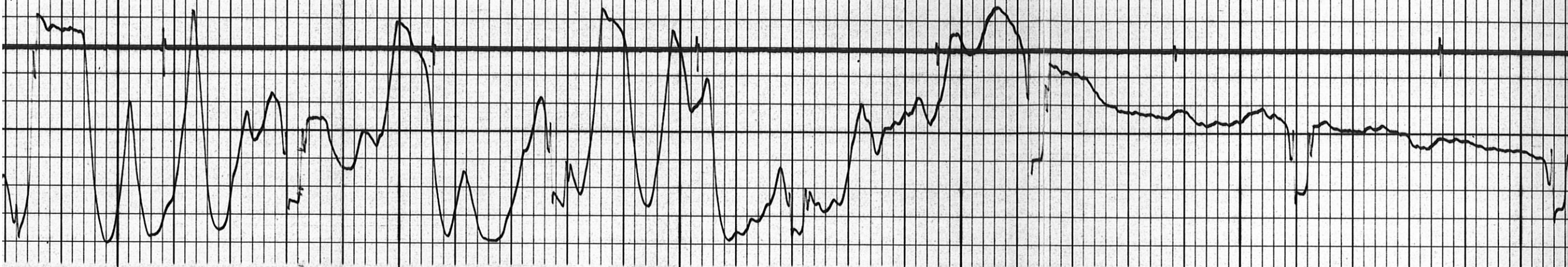






APPROXIMATE CEMENT TOP

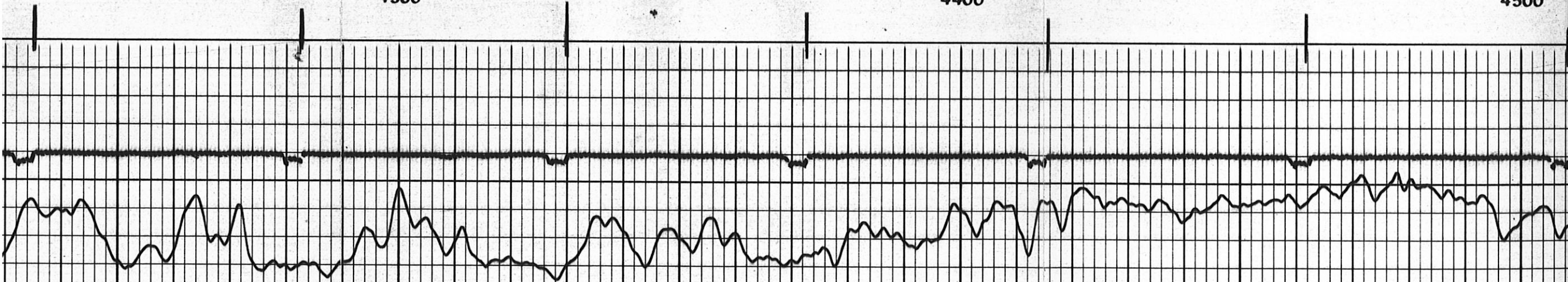




4300

4400

4500



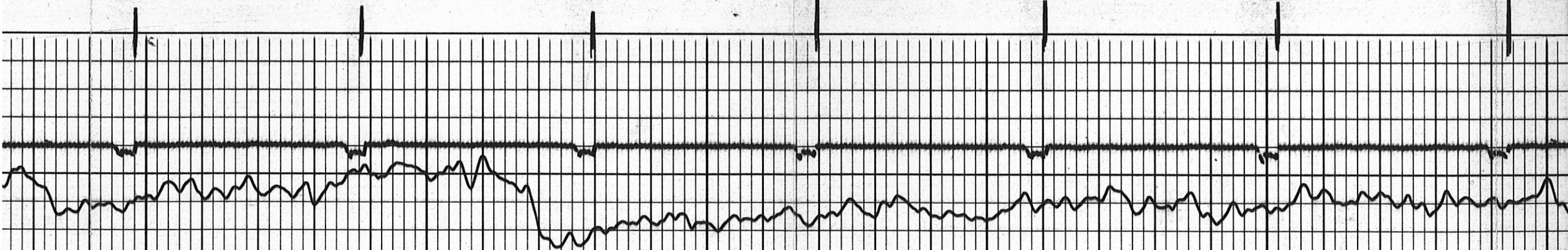




4600

4700

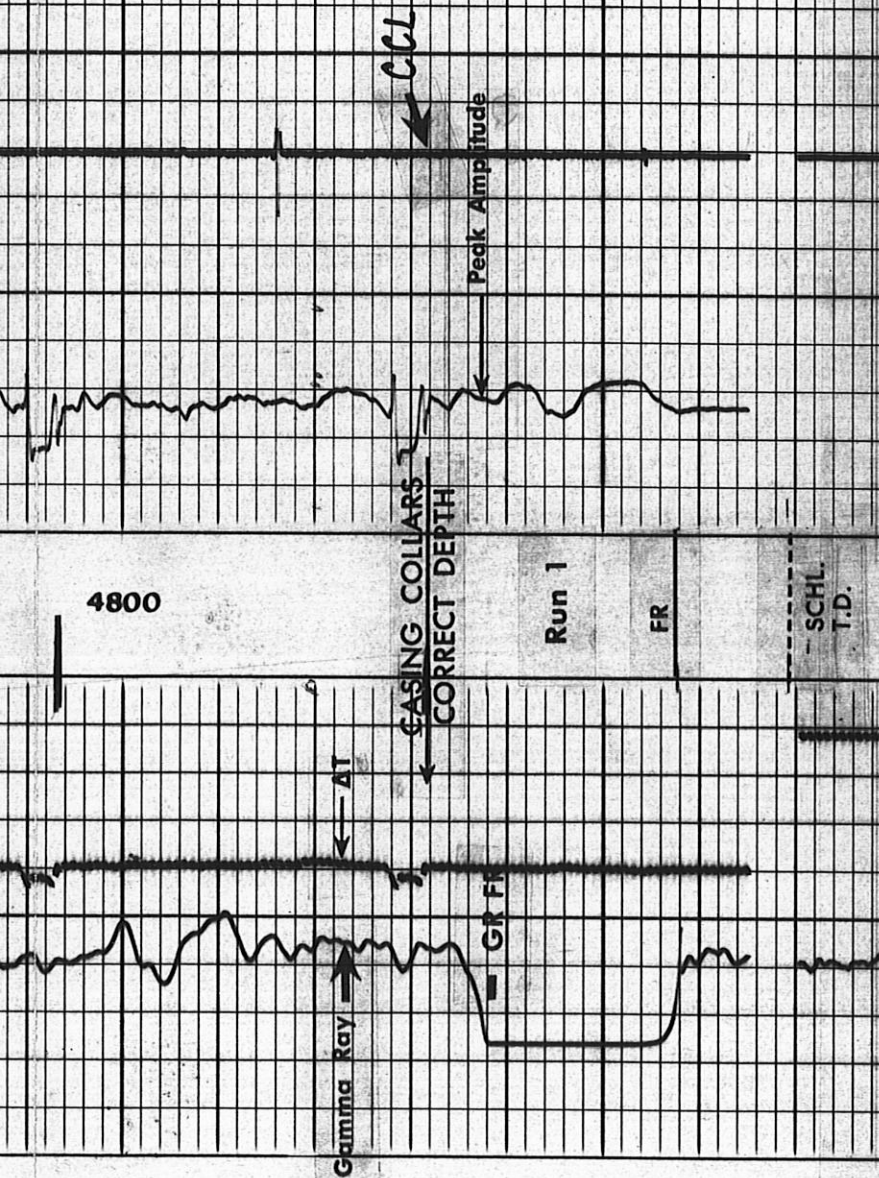
4800



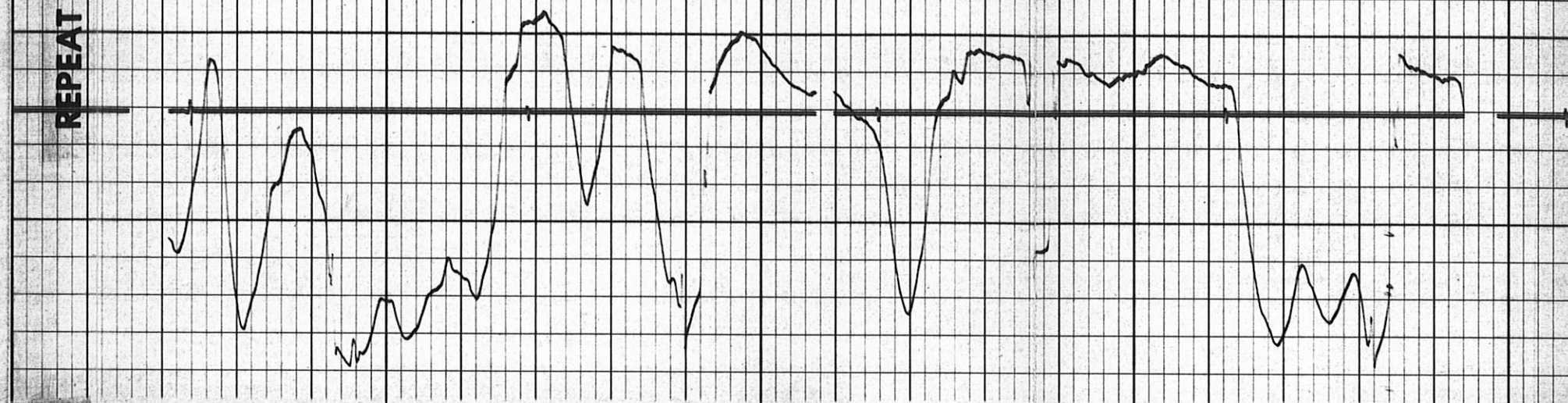


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REPEAT SECTION

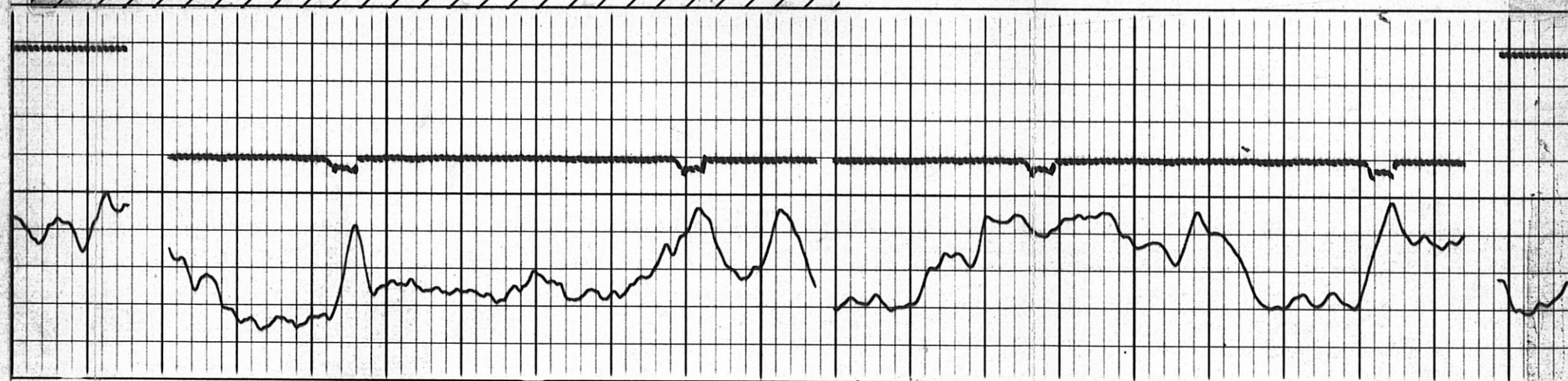


Run 1

MEMORIZER OUT—CURVES INVALID

4200

Run 1

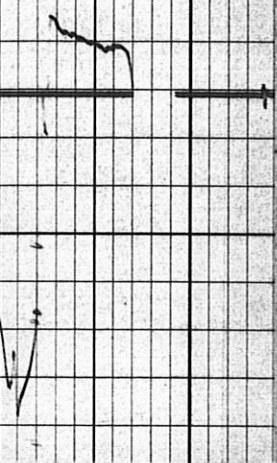




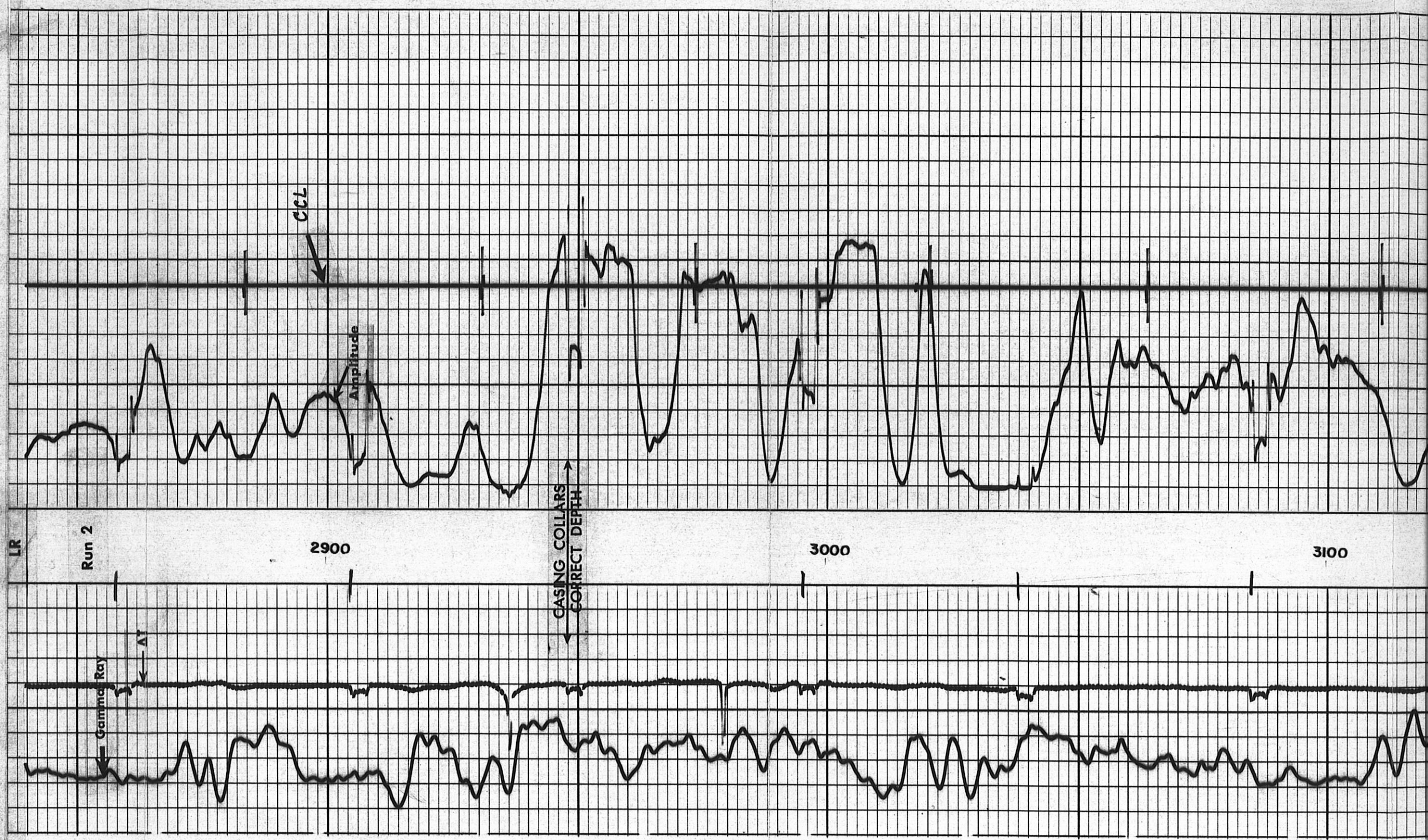
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KODAK SAFETY FILM

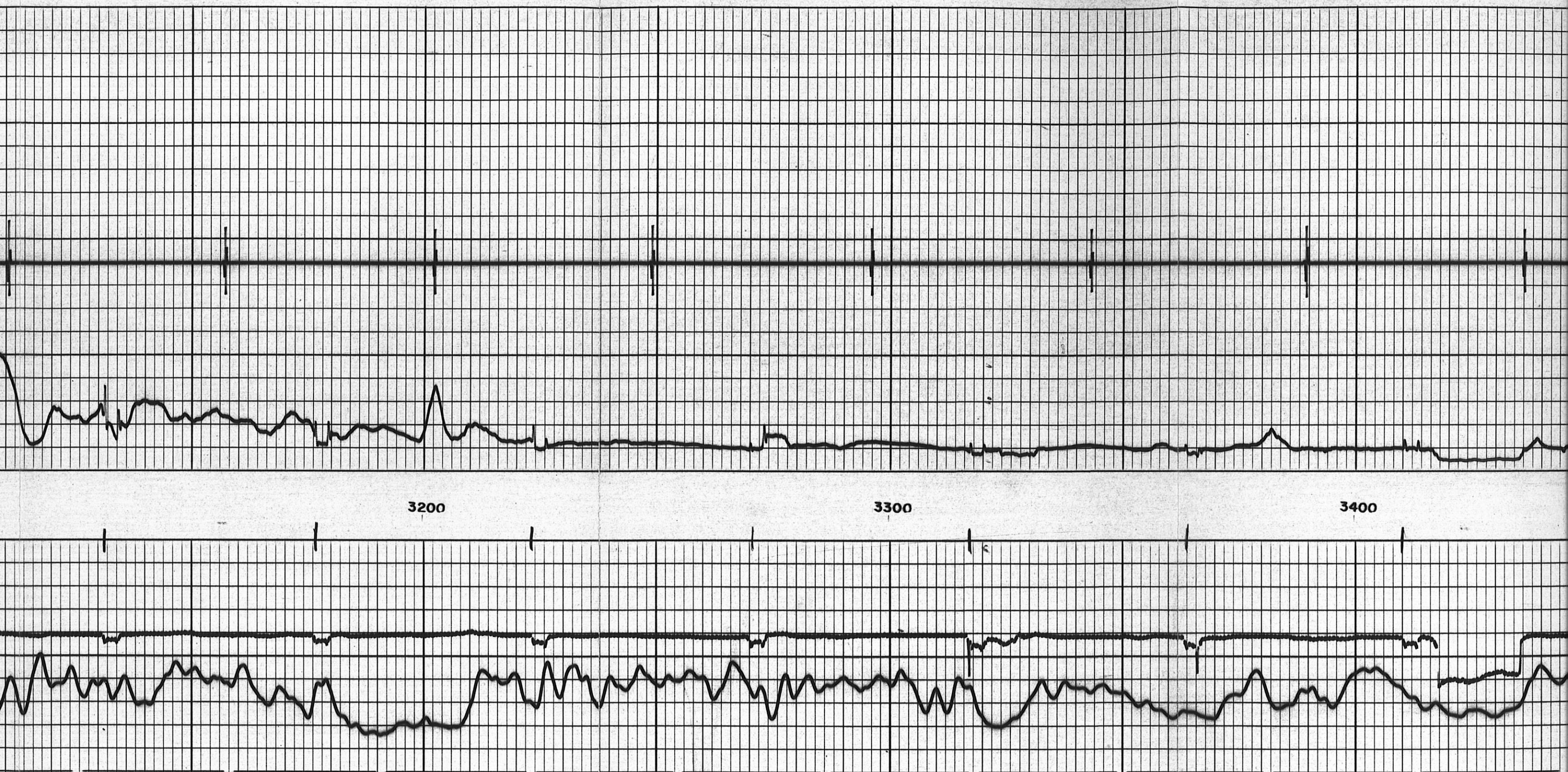
KODAK SAFETY FILM



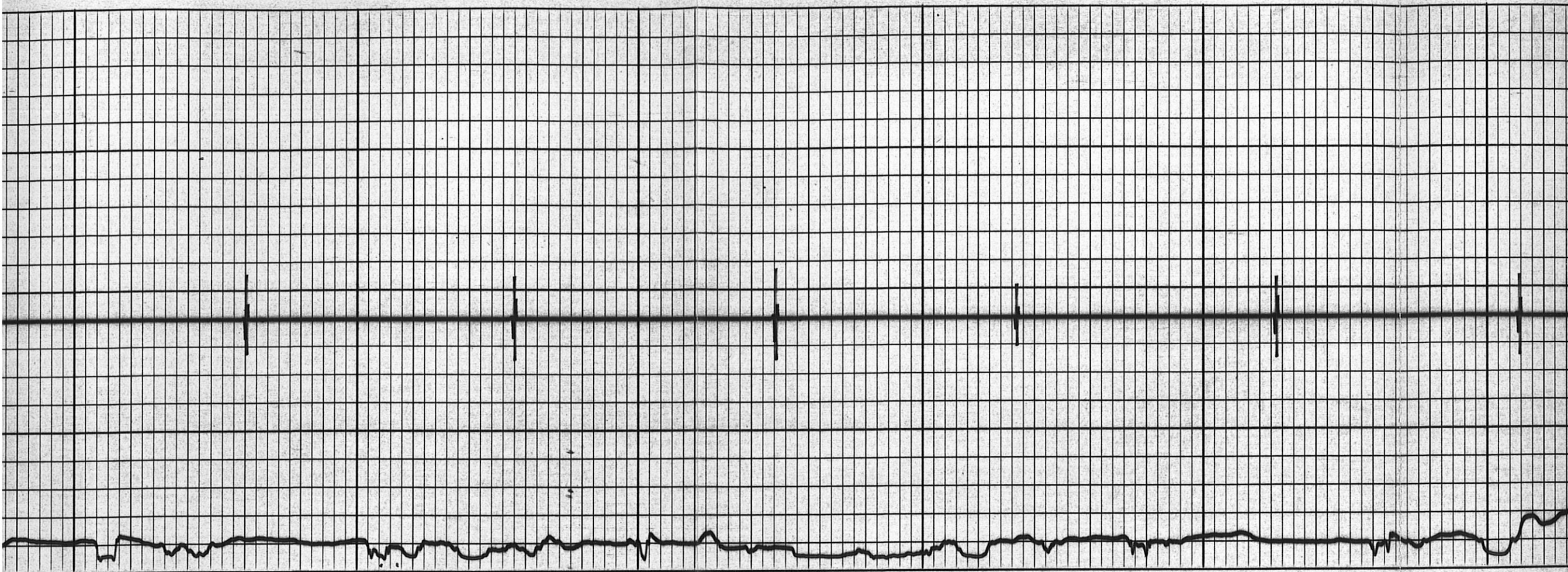
Run 1







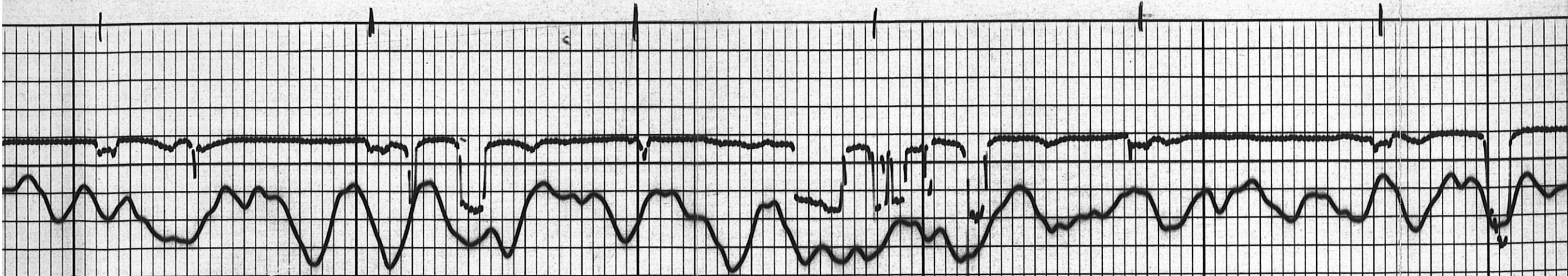




3500

3600

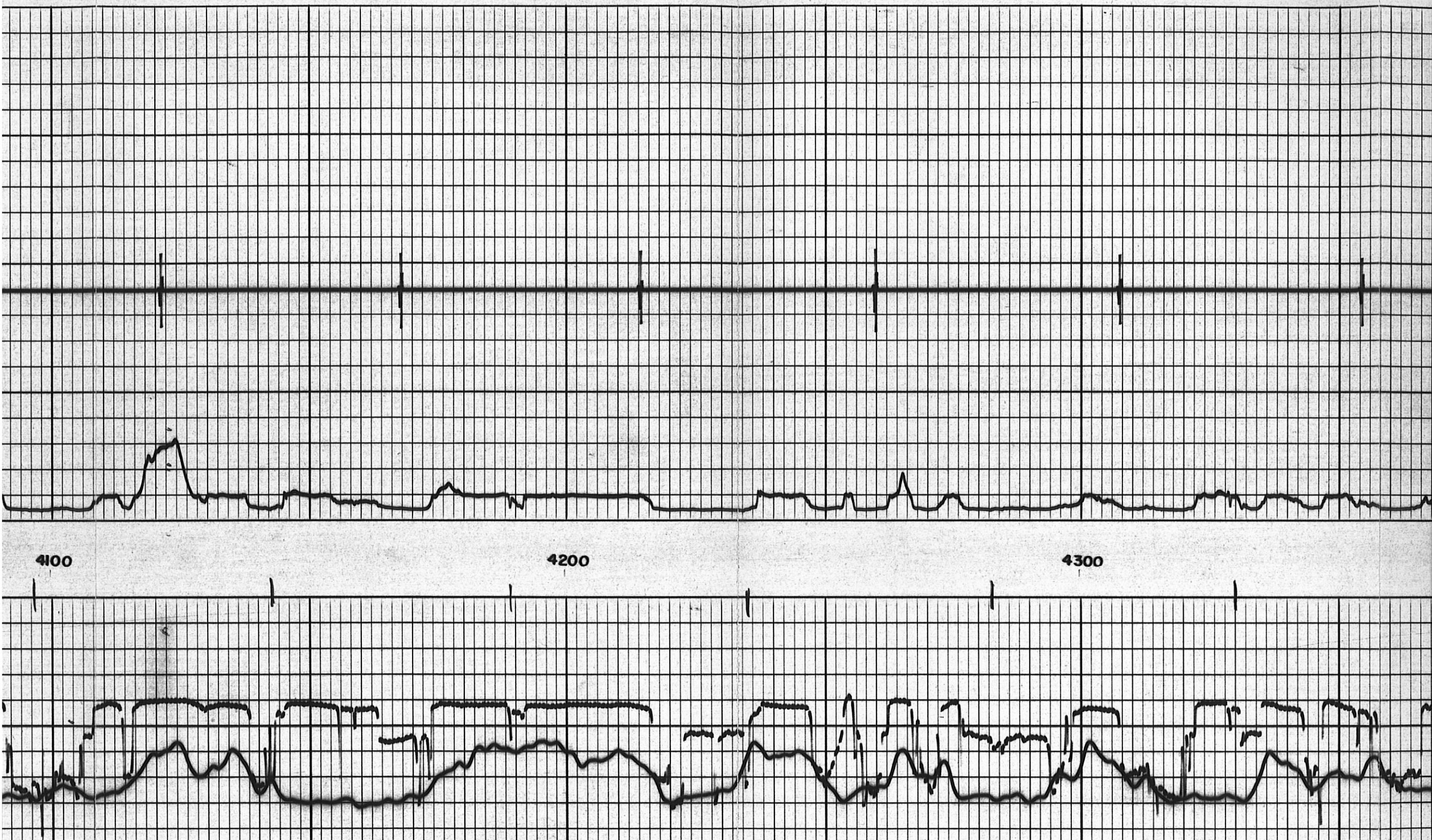
3700









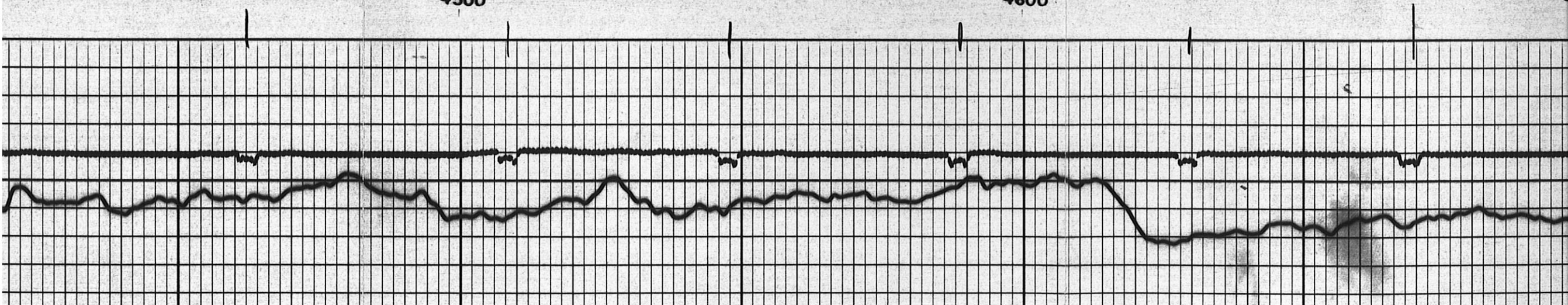




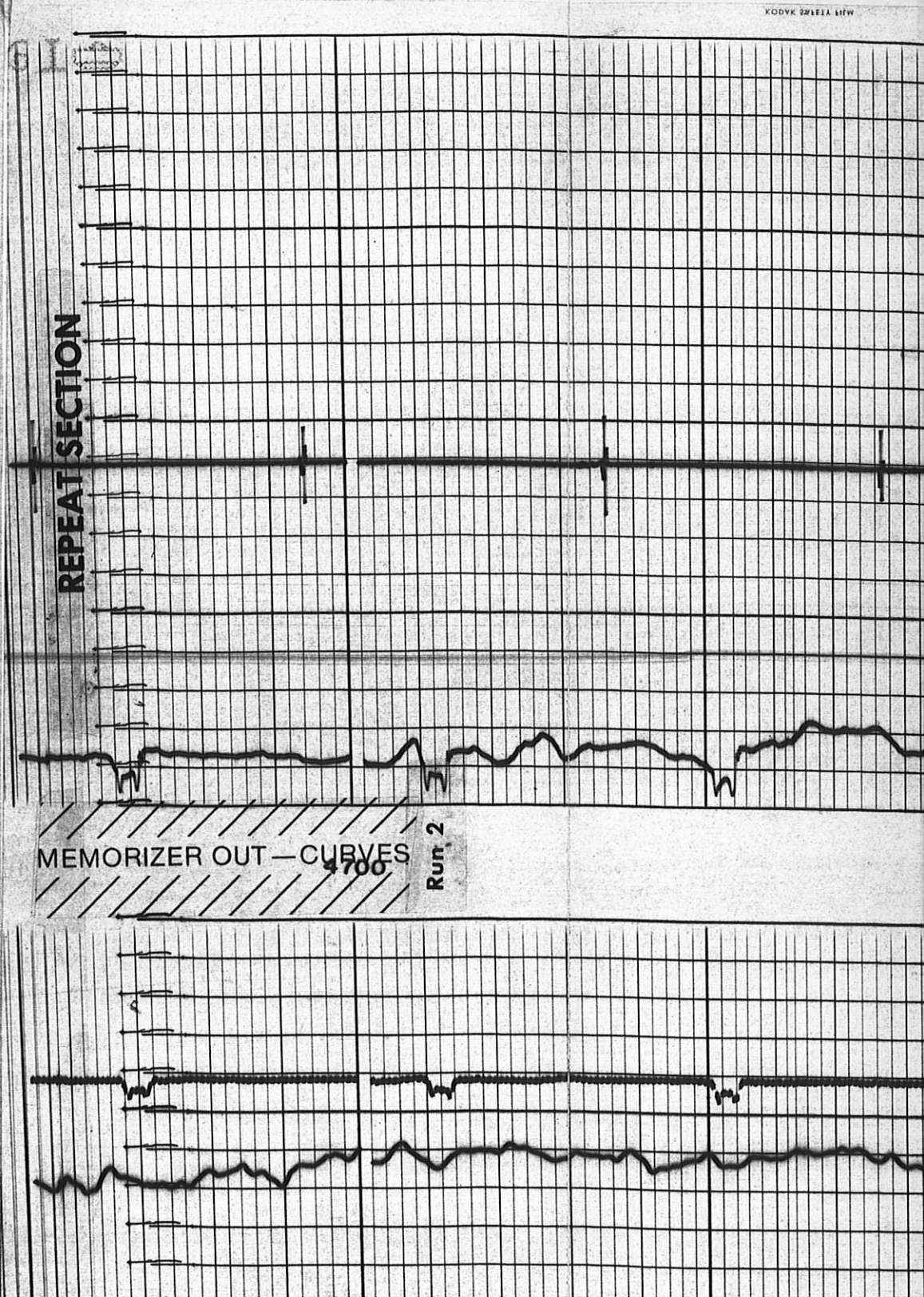
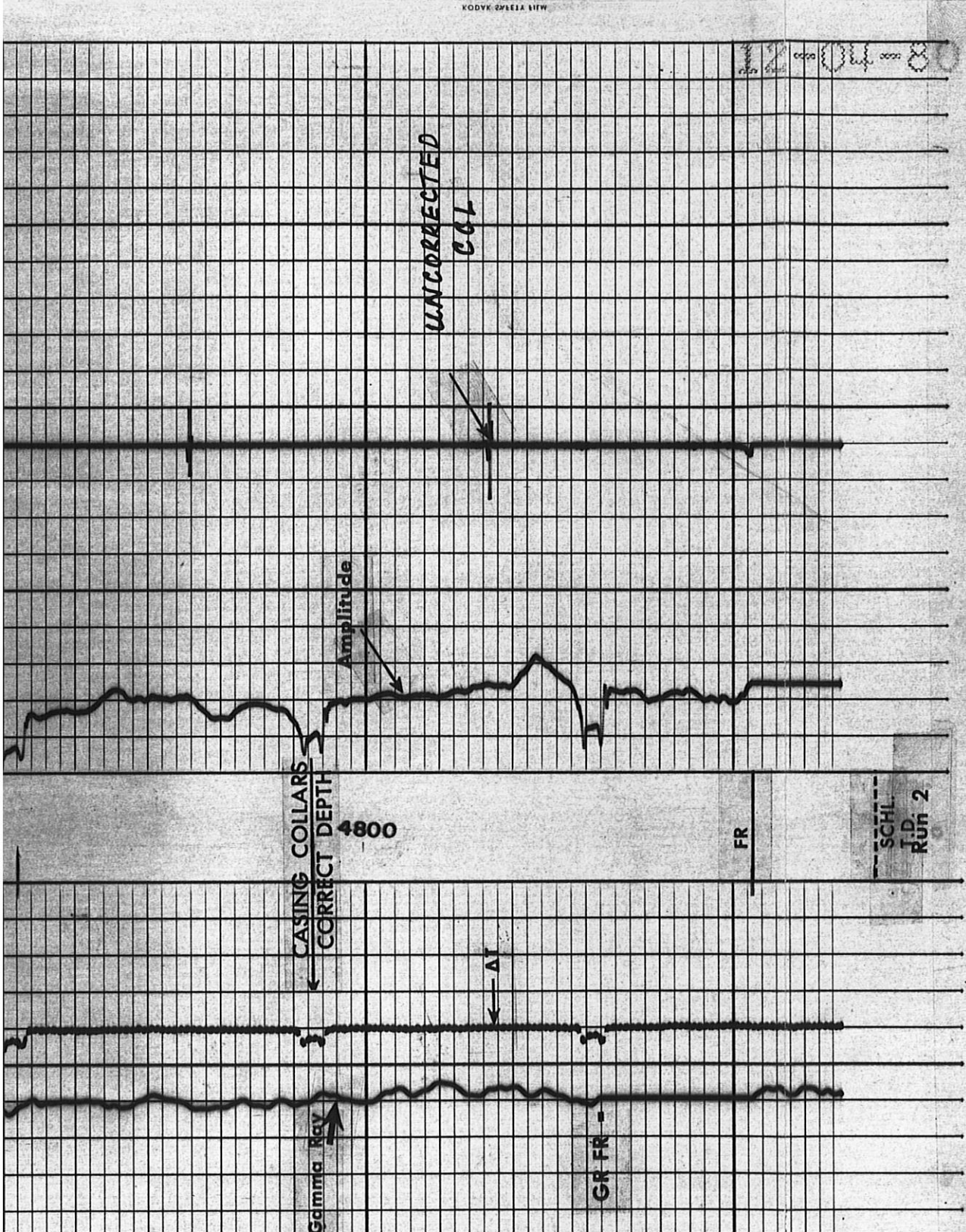


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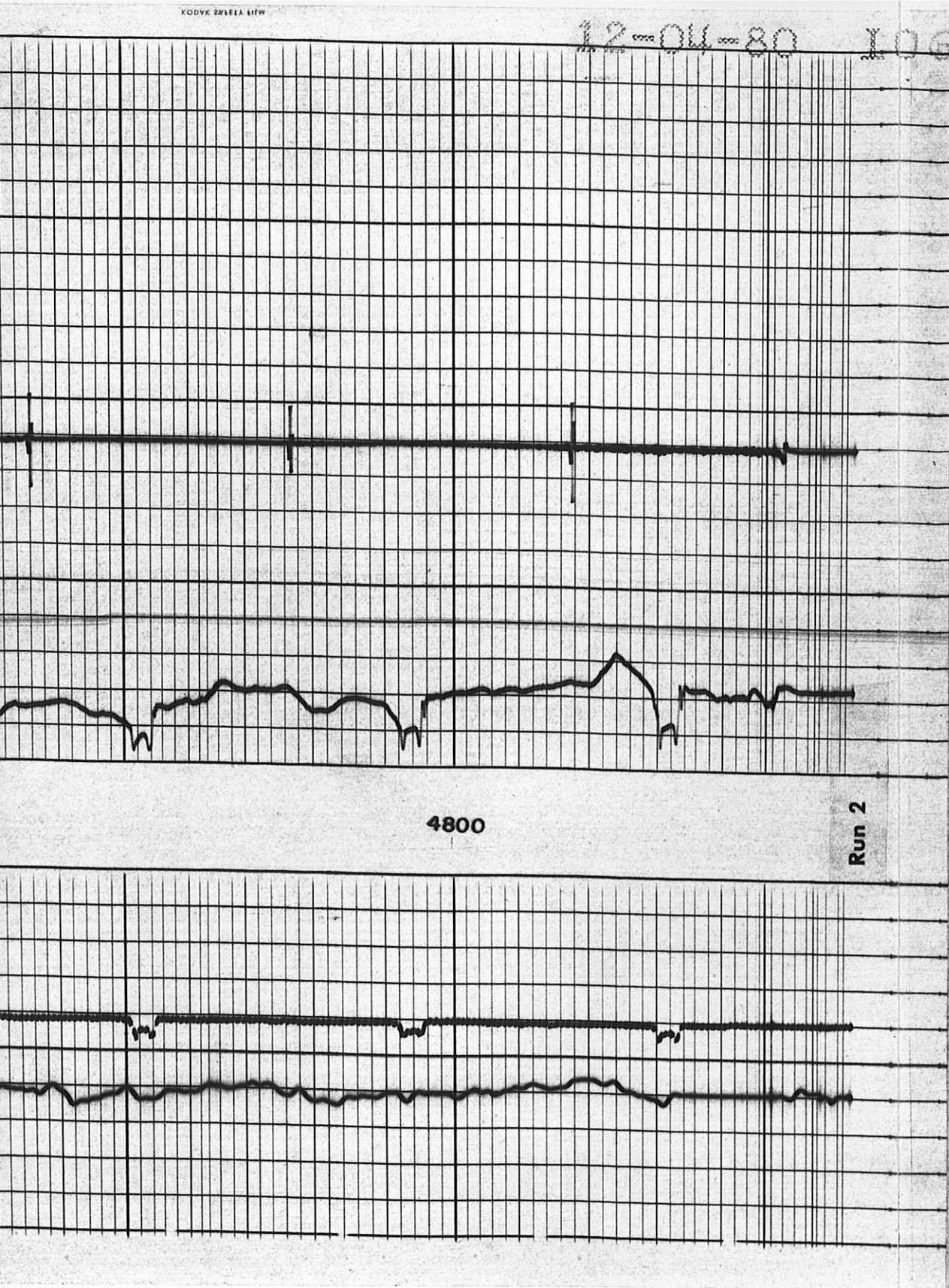
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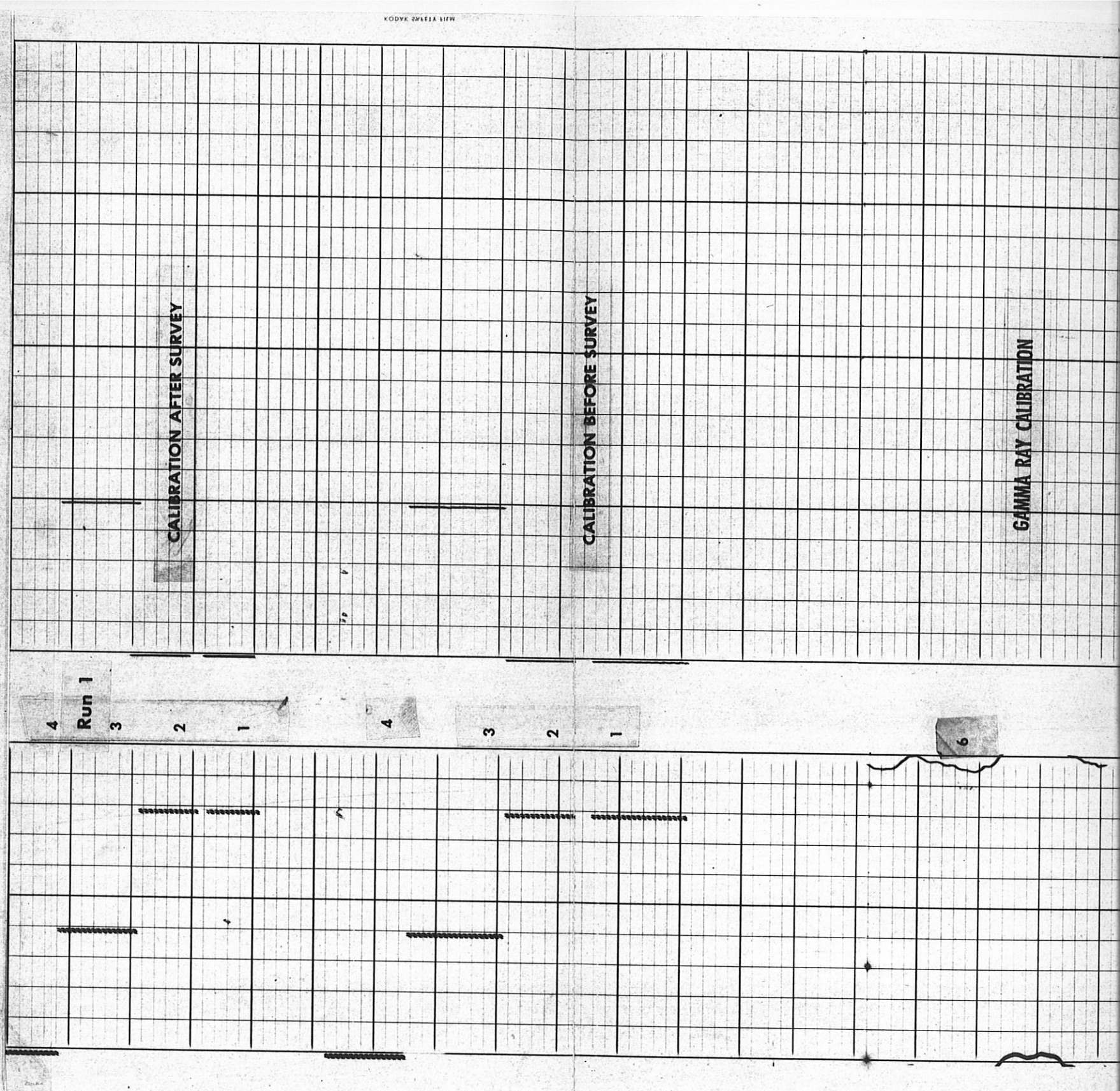








CALIBRATION





GAMMA RAY CALIBRATION

5  
4  
3  
2  
1  
Run 1

CALIBRATION  
AFTER SURVEY

Run 2  
4  
3  
2  
1

CALIBRATION  
BEFORE SURVEY

4  
3  
2  
1

GAMMA RAY CALIBRATION

6  
5  
3  
2  
1  
Run 2

12-04-80 10506



## TRANSIT TIME

MICROSECONDS 3 SPACING  
400 200

## GAMMA RAY

API UNITS

0 200 400  
200 400

DEPTH

Casing Collars

Corrected Depth

## CASING BOND

MILLIVOLTS

0

50

COMPANY

AMERICAN RESOURCES MANAGEMENT

WELL

B.G. 26-2

FIELD

BEARGULCH

COUNTY

GARFIELD

STATE

COLORADO

SCHL. FR

4853

SCHL. TD

4869

DRLR TD

5100

Elev:

KB 8803

DF

GL 8791

## CEMENT BOND CALIBRATION CODING

TRANSIT TIME	AMPLITUDE
1. MECHANICAL ZERO	MECHANICAL ZERO
2. 200 $\mu$ sec	ELECTRICAL ZERO
3. 320 $\mu$ sec	CALIBRATE 50 MV (SLP-J SERIES)
4. 400 $\mu$ sec	CALIBRATE 50 MV