

Schlumberger  
CEMENT BOND LOG  
VARIABLE DENSITY

COUNTY WASHINGTON  
Field or LOCATION WILDCAT  
WELL 41X-6 JOLLY  
COMPANY KEBA OIL & GAS  
COMPANY KEBA OIL & GAS COMPANY  
WELL 41X-6 JOLLY  
FIELD WILDCAT  
COUNTY WASHINGTON STATE COLORADO  
LOCATION N API Serial No. Other Services:  
NE NE HJ11  
Sec. 6 Twp. 35 Rge. 55W

Permanent Datum: GROUND LEVEL, Elev. 4634  
Log Measured From KB 8 Ft. Above Perm. Datum  
Drilling Measured From KB

Date	7-28-82	Casing Fluid	WATER			
Run No.	ONE	Fluid Level	FULL			
Depth — Driller	4975	Max. Rec. Temp.	143 ° F OH			
Depth — logger	4953	Est. Cement Top	3000'			
Btm. Log Interval	4944	Unit District	5790 4803-1			
Top Log Interval	2800	Recorded By	M. WRIGHT			
Open Hole Size	7-7/8"	Witnessed By	DAVIS/BECKLEY			
CASING REC.	Size	Wt./Ft	Grade	Type Joint	Top	Bottom
Surface String	8-5/8				SURFACE	128
Prot. String						
Prod. String	5 1/2	14 #			SURFACE	4975
Liner						
PRIMARY CEMENTING DATA						
STRING	Surface	Protection	Production	Liner		
Vol. of cement			300 BBL			
Type of cement			CLASS G			
Additive			A 10			
Retarder						
Wt. of slurry			14.27 #			
Water loss						
Type fluid in csg.			2%KCL W/1500' MUD TOP			

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

PRIMARY CEMENTING DATA		REMARKS
<input type="checkbox"/> Actual <input type="checkbox"/> Estimated	Hour - Date	CEMENT BOND LOG & REPEAT RUN WITH 0 PSI.
Started pumping cement	1900-7/25	CASING COLLAR AT 4937 PUT ON FILM AT CUSTOMER'S REQUEST
Release pressure	2030/7-25	FURING PERFORATING RUN.
Start Cement Bond Log	1600-7/28	
Finish Cement Bond Log	1800-7/28	
		Service Order Number 201891
		Casing Collar Memory Distance 17.5 ft.
		Radiation Log Memory Distance 12.5 ft.

Preceding fluid \_\_\_\_\_ Volume \_\_\_\_\_ bbls. Pipe reciprocated during Pumping: Yes \_\_\_\_\_ No \_\_\_\_\_  
Cement pumped \_\_\_\_\_ bbls./minute Pipe reciprocated after plug down: Yes \_\_\_\_\_ min, No \_\_\_\_\_

SQUEEZE JOB DETAIL			DOWNHOLE EQUIPMENT		SURFACE EQUIPMENT		
Squeeze number	1	2			TYPE	MOD	
Date					Sonic Panel	SMP	JC
Depth interval					Memorizer	ILP	CA
Type cement					CRP	SLO	EA
Volume of cement					CRP	CRP	BB
Additive					OWE		
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:							
from	to	from	to				

SURFACE EQUIPMENT		
CRP Intensity		8
R9G Intensity		6
Logging Speed		1
Time Constant		2
Sweep Time μ-sec		1
Amplitude mv/cm		
Casing Centralizer Pattern		
/Joint from		to
/Joint from		to
/Joint from		to
Casing Scratcher Pattern		
/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 sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our General Terms and Conditions as set out in our current Price Schedule.

TRANSIT TIME		DEPTH	CASING BOND		VARIABLE DENSITY	
MICROSECONDS	3' SPACING		MILLIVOLTS	MICROSECONDS	5' SPACING	
400	200	0	100	200	12	
CAMMADAV		AMPLIFIER CASING BOND				

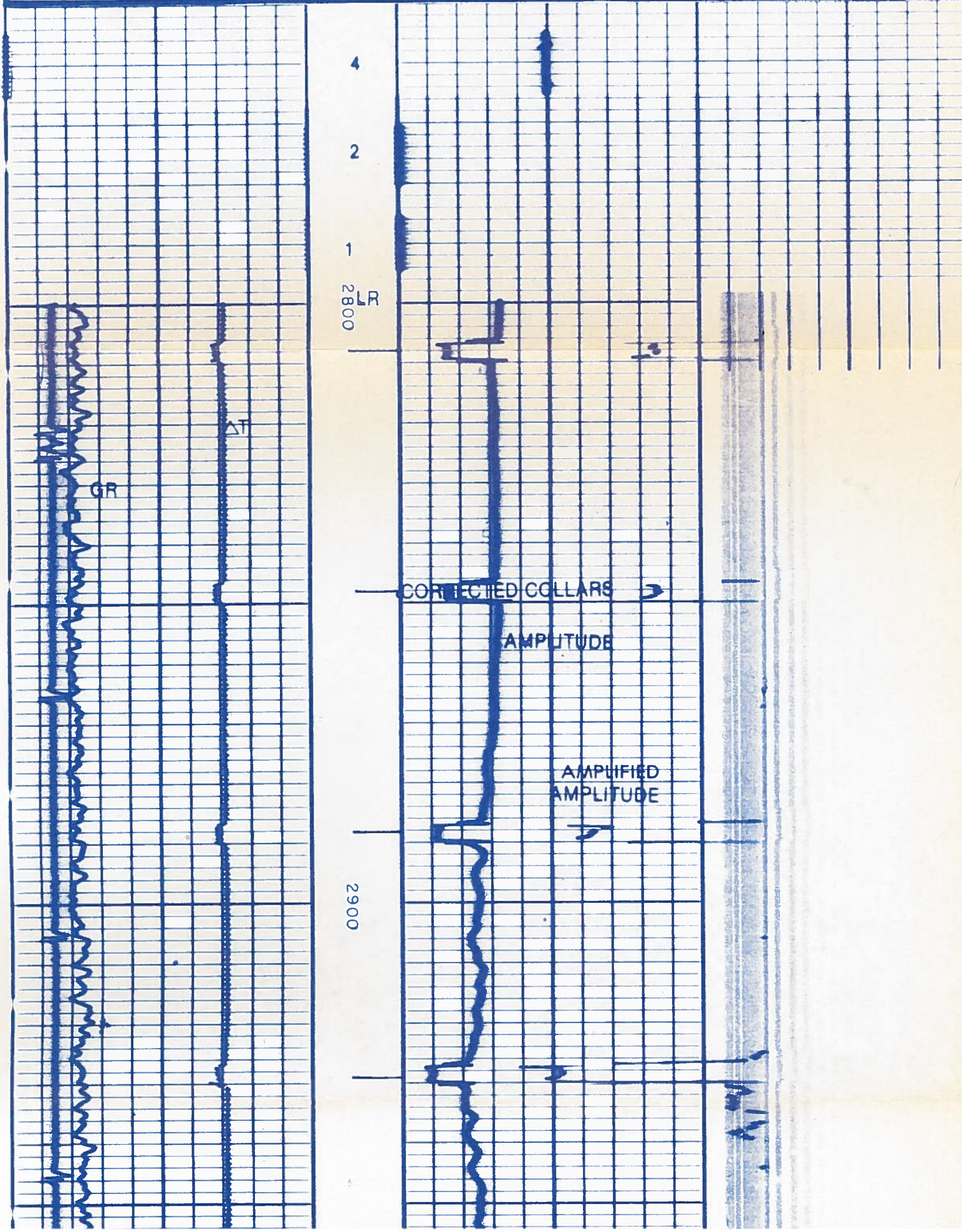


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<b>TRANSIT TIME</b> MICROSECONDS <u>3'</u> SPACING 400 200	DEPTH	<b>CASING BOND</b> MILLIVOLTS 0 100	<b>VARIABLE DENSITY</b> MICROSECONDS <u>5'</u> SPACING 200 12
<b>GAMMA RAY</b> API UNITS INCREASING RADIATION		<b>AMPLIFIED CASING BOND</b> MILLIVOLTS 0 20	
CASING COLLARS RECORDED 17½' DEEP		Casing Collars Corrected Depth	

**CALIBRATION AFTER SURVEY**





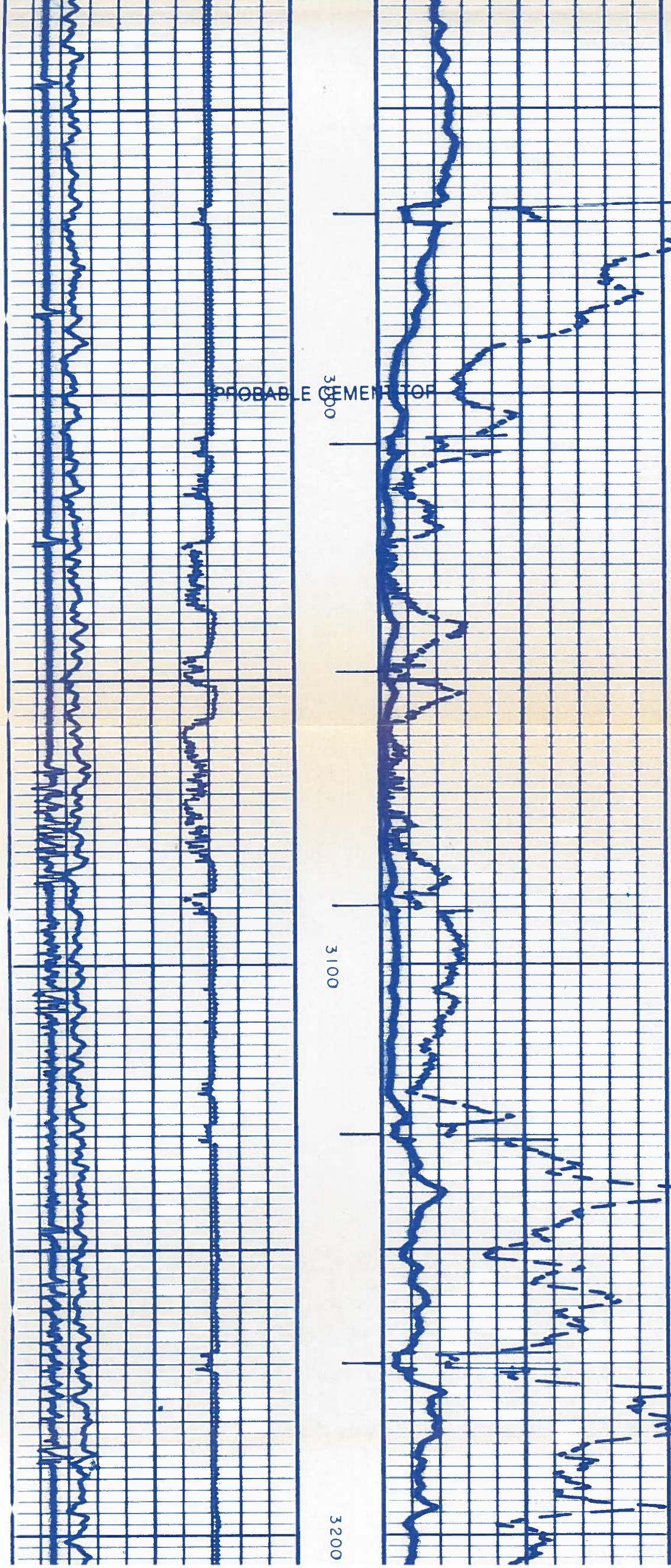
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3000

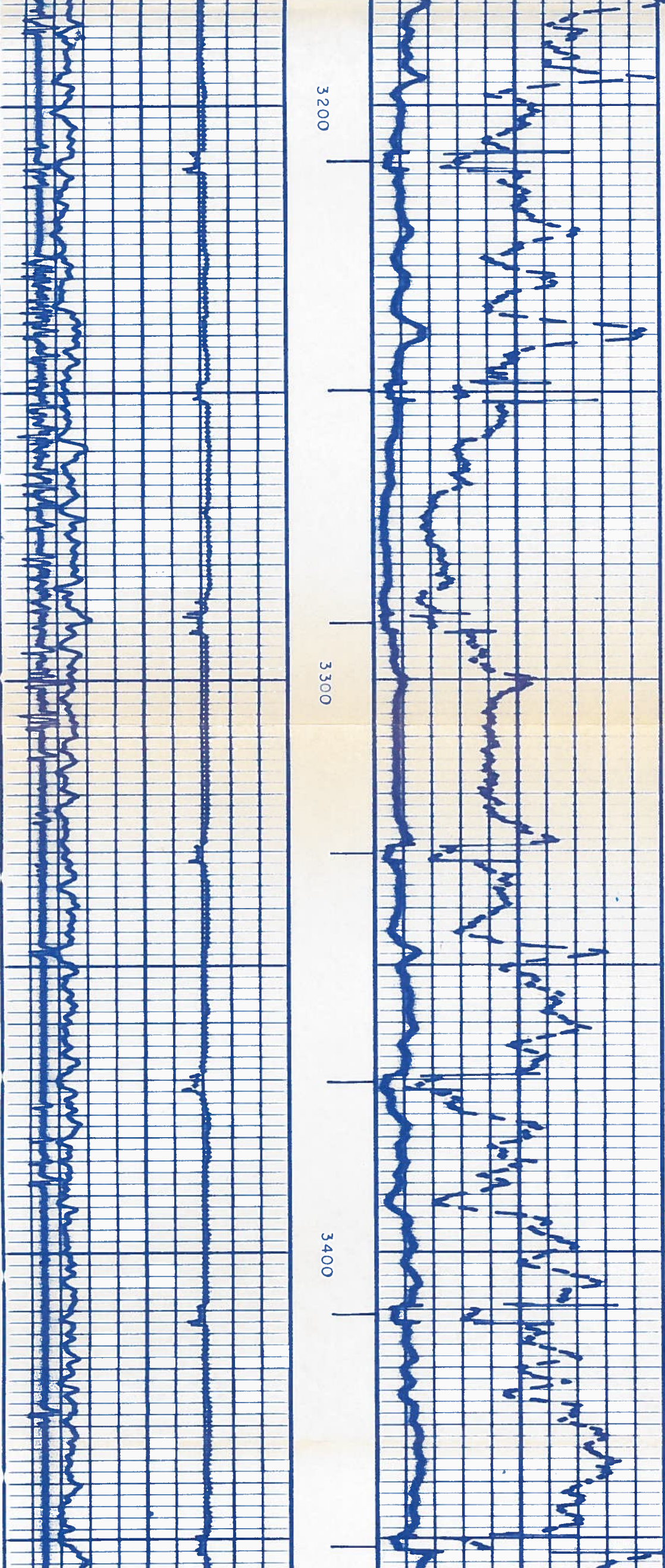
3100

3200

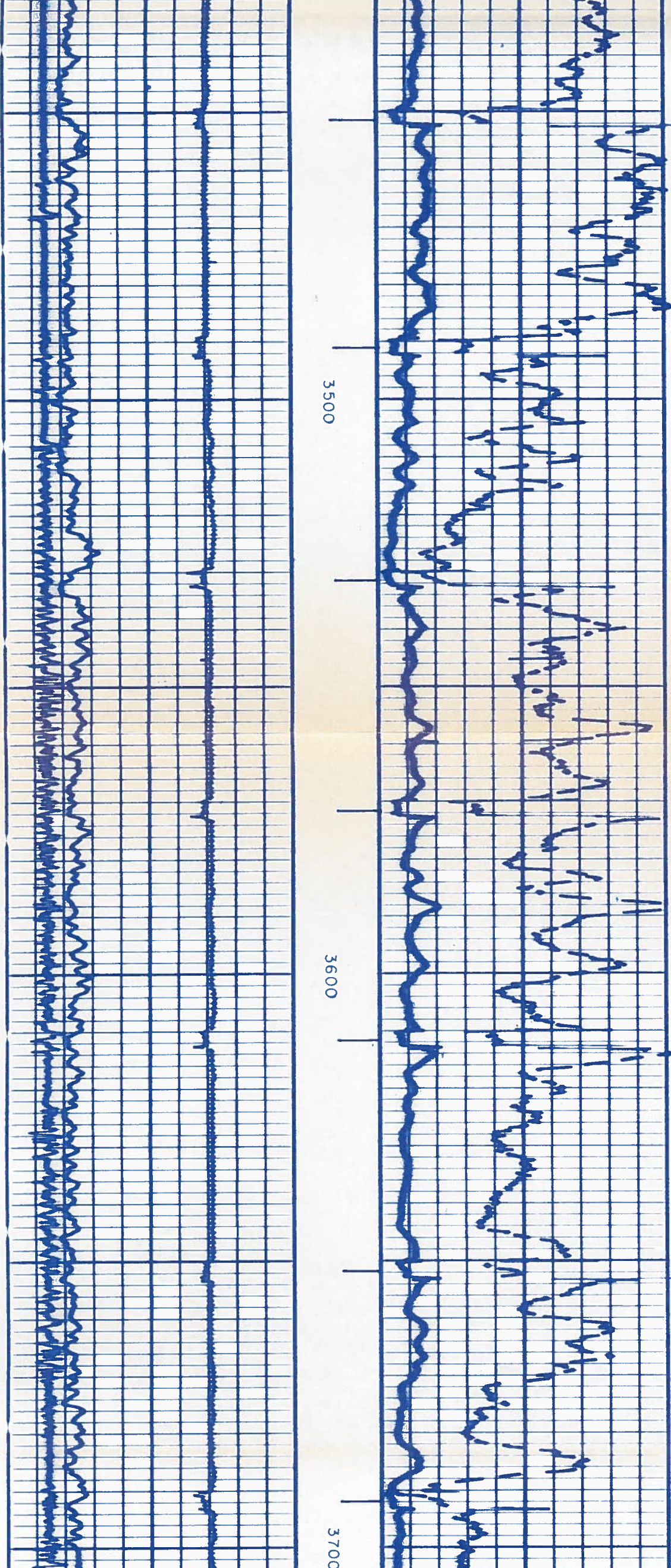
PROBABLE CEMENT FOR











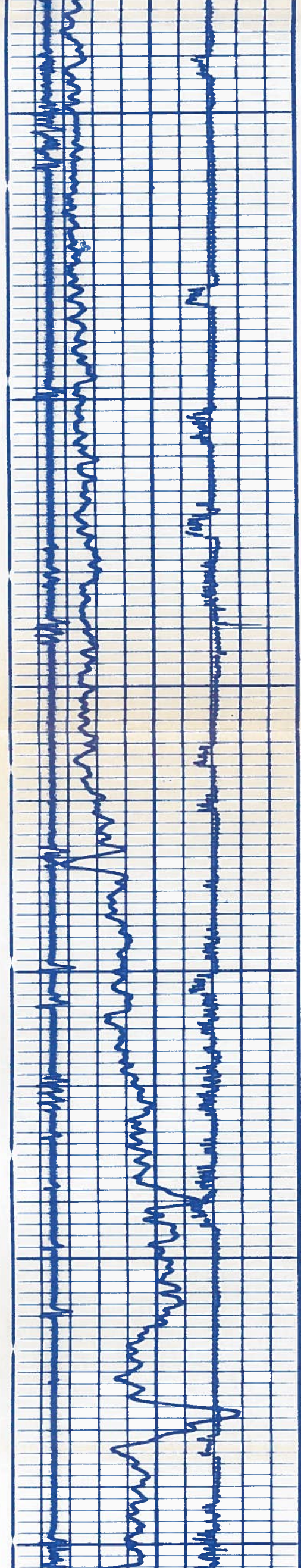
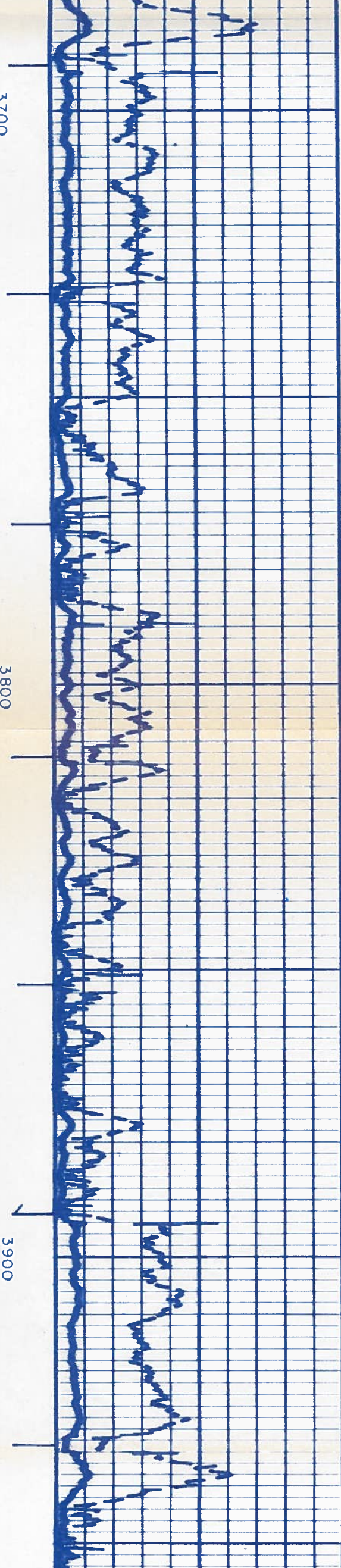
3500

3600

3700



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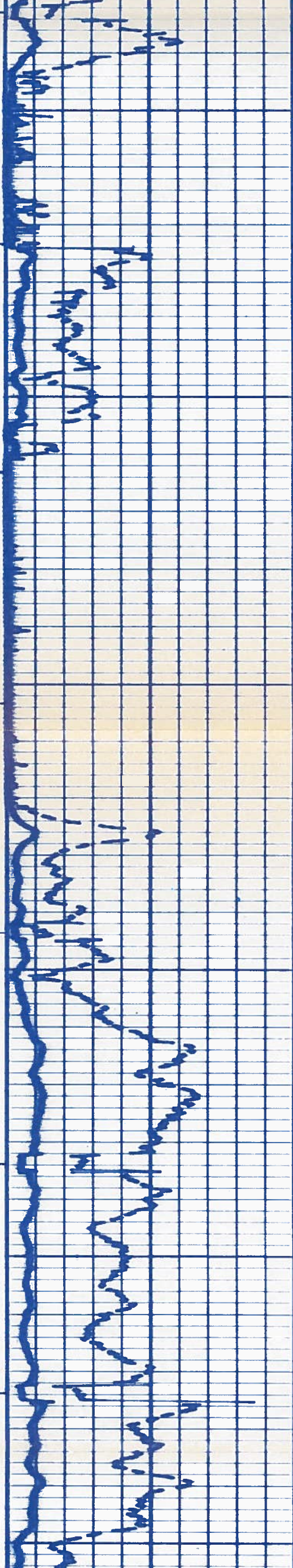
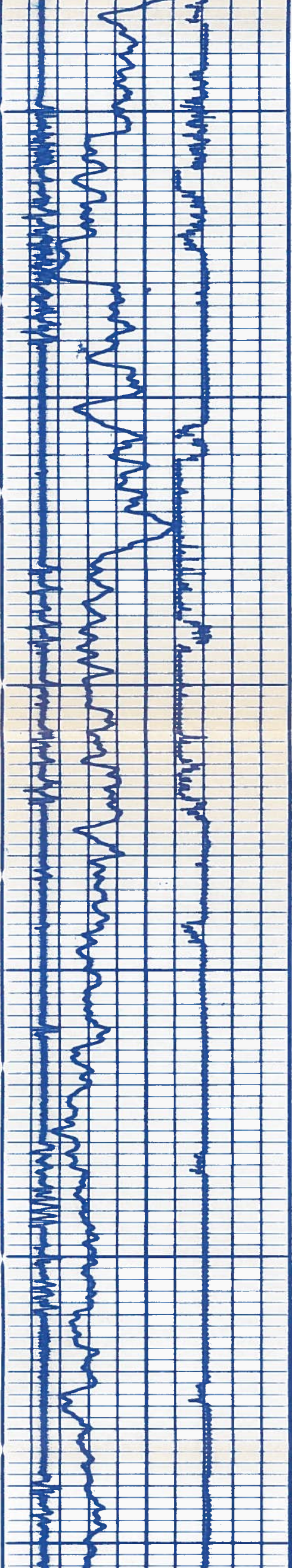




4000

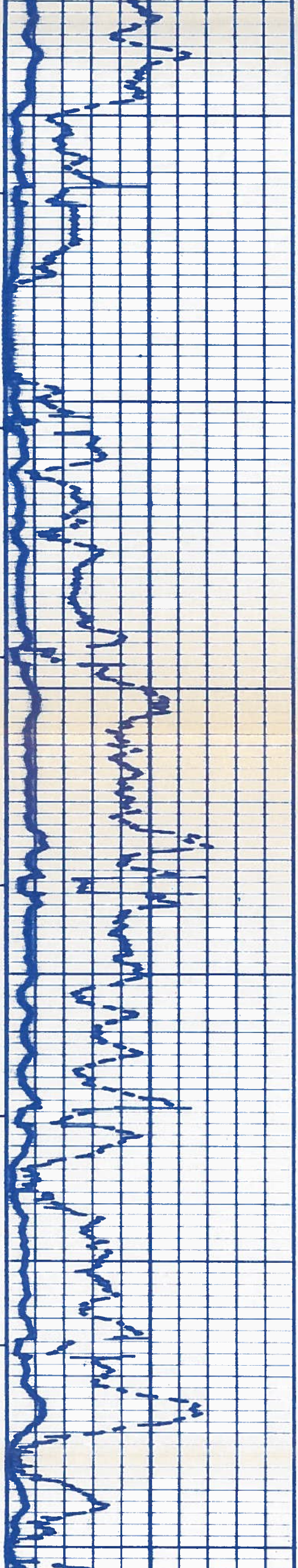
4100

4200





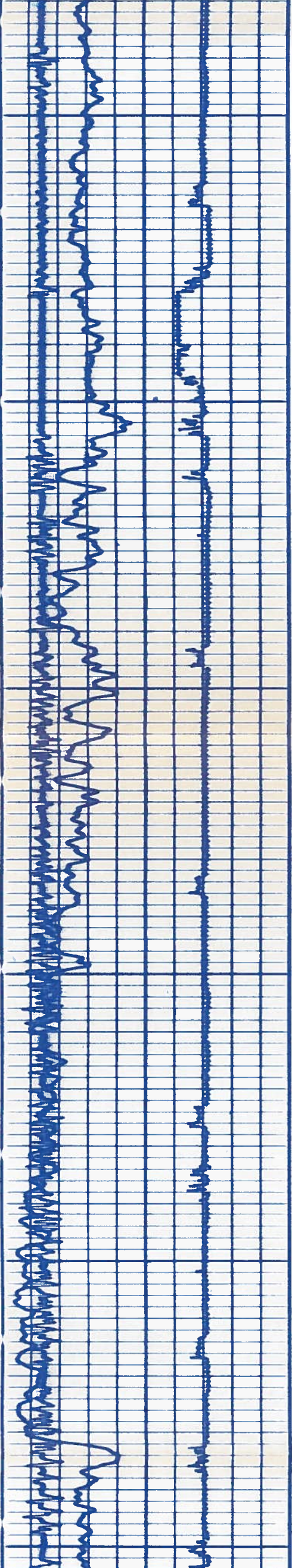
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4200

4300

4400

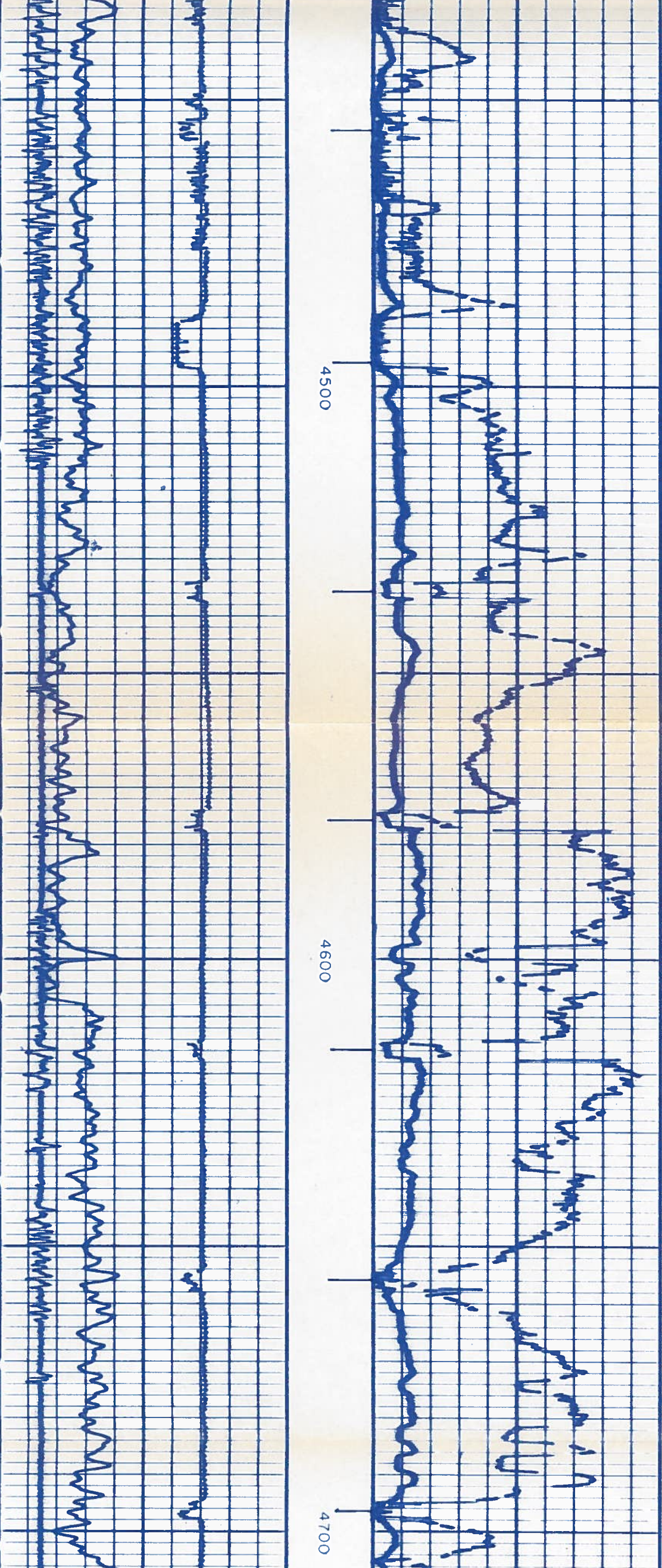




4500

4600

4700





44-1

4700

4800

4900

FR GR

TD

CORRECTED COLLARS

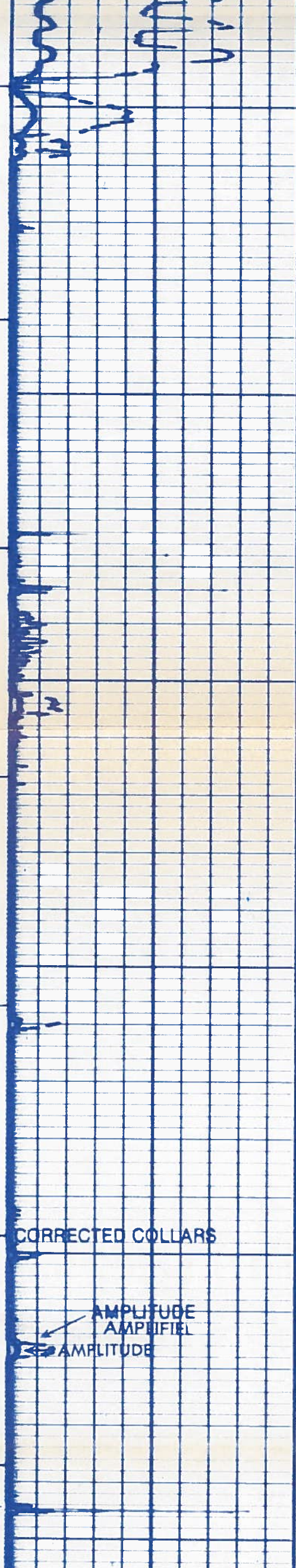
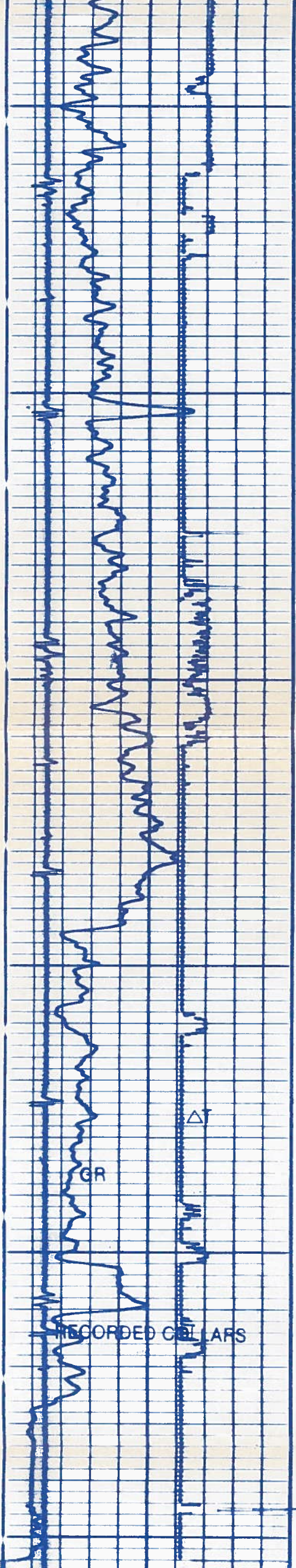
AMPLITUDE  
AMPLIFIED

AMPLITUDE

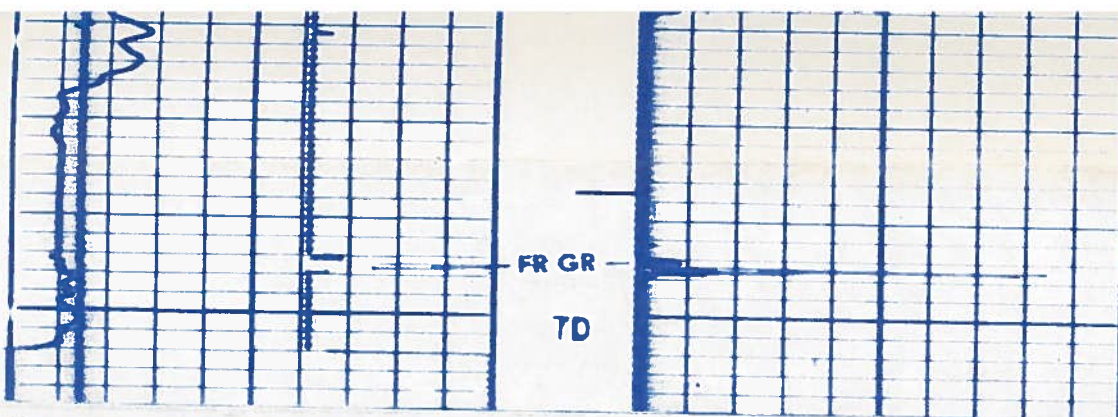
RECORDED COLLARS

GR

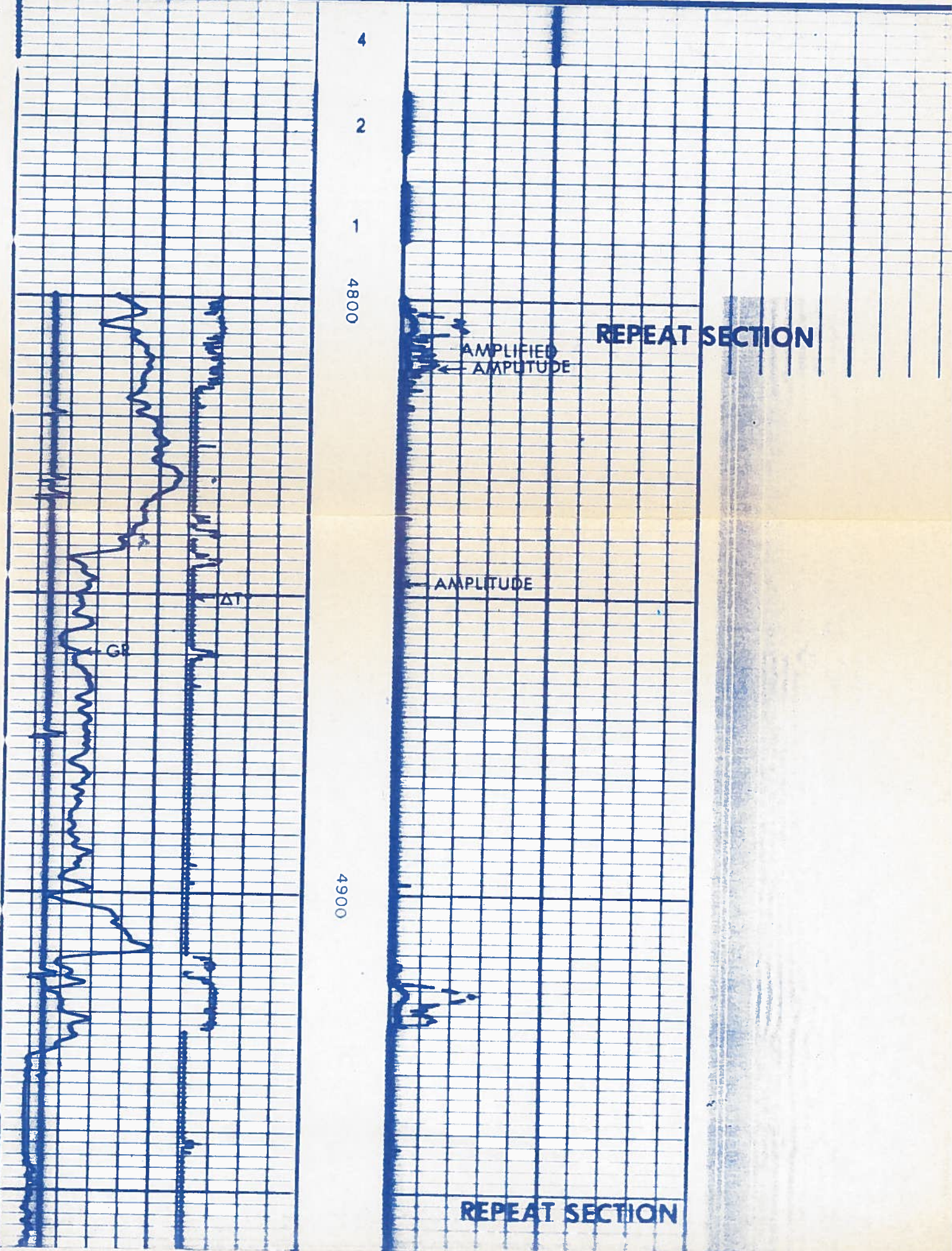
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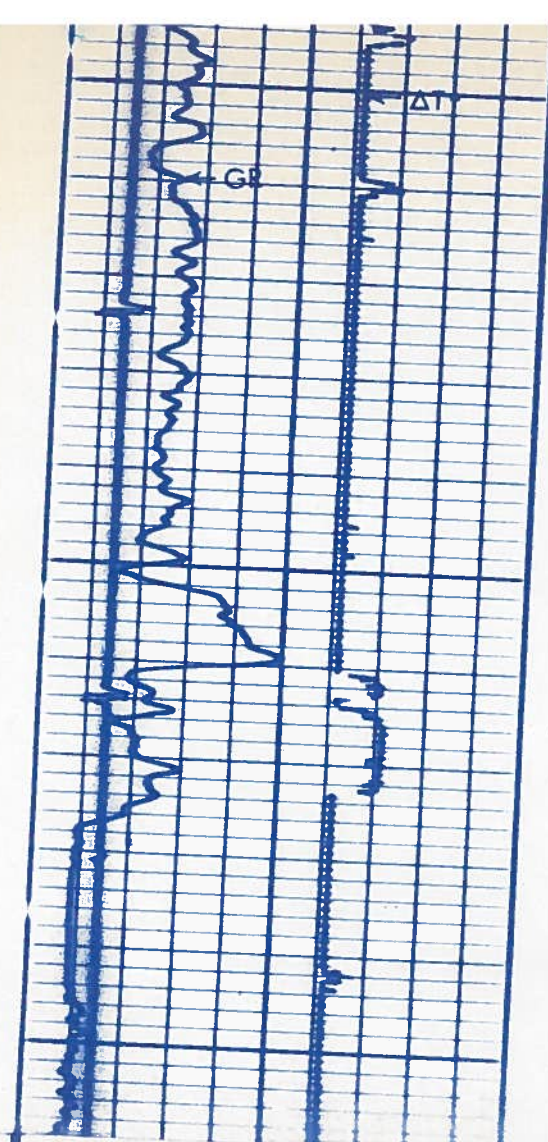


## CALIBRATION BEFORE SURVEY

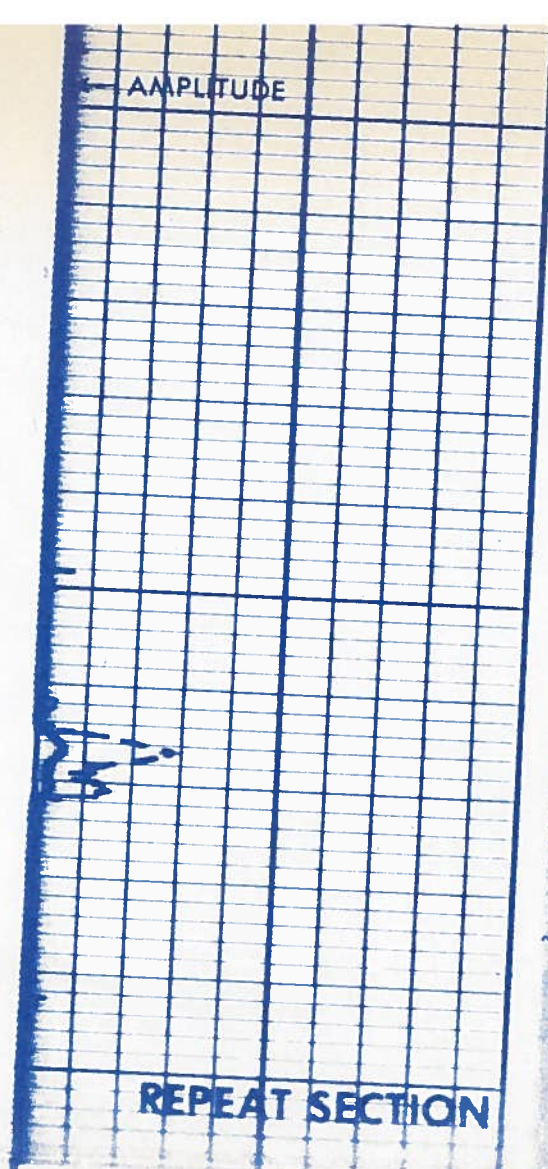


CASING COLLARS  
RECORDED 17.5' DEEP





4900



REPEAT SECTION

CASING COLLARS  
RECORDED 17.5' DEEP

**GAMMA RAY** API UNITS  
INCREASING RADIATION

**TRANSIT TIME**  
MICROSECONDS 3' SPACING 200  
400

Casing Collars  
Corrected Depth

**AMPLIFIED CASING BOND**  
MILLIVOLTS

0 20

**CASING BOND**  
MILLIVOLTS

0 100

**VARIABLE DENSITY**  
MICROSECONDS 5' SPA

COMPANY KEBA OIL & GAS COMPANY  
WELL 41X - 6 JOLLY  
FIELD WILDCAT  
COUNTY WASHINGTON STATE COLORADO

SCHL. FR 4944  
SCHL. TD 4953  
DRLR TD 4975  
Elev:  
KB 4642  
DF 4641  
GL 4634

**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	