

Schlumberger

FOUR - ARM
HIGH RESOLUTION
CONTINUOUS DIPMETER
(COMPUTED)

COUNTY MILLARD		WELL COVE FORT #31-33	
COMPANY UNION OIL COMPANY OF CALIFORNIA		STATE UTAH	
WELL	COVE FORT #31-33	FIELD	COVE FORT
COUNTY	MILLARD	STATE	UTAH
LOCATION			
Sec. 33	Twp. 255	Rge. 6W	
Permanent Datum: GL	Elev. 6481	Other Services: DIL, TEMP. BHC-GR FDC/CNL-GR	
Log Measured From KB	20 Ft. Above Perm. Datum	Elev. K.B. 6501	D.F. ---
Drilling Measured From KB		G.I. 6481	
Date	7-18-78		
Run No.	ONE		
Depth—Driller	5221	(4 X 2 X 30 X 2)	
Depth—Logger	5208		
Btm. Log Interval	5207		
Top Log Interval	1735		
Casing—Driller	13-3/8 @ 1735		
Casing—Logger	1735		
Bit Size	12-1/4		
Type Fluid in Hole	WATER		
Dens. Visc.			
PH Fluid Loss		ml	ml
Source of Sample	RETURNS		
R _m @ Meas. Temp.	@	°F	@
R _{mf} @ Meas. Temp.	@	°F	@
R _{mc} @ Meas. Temp.	@	°F	@
Source: R _{mf} R _{mc}			
R _m @ BHT	@	°F	@
R _{mf} @ BHT	@	°F	@
R _{mc} @ BHT	@	°F	@
Time Since Circ.	NA		
Max. Rec. Temp.	NA		
Equip. Location	7711 FARM.		
Recorded By	BRUCE-BECK		
Witnessed By	MOSS-IRVINE		

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

Changes in Mud Type or Additional Samples		Run No.	1	2	3	4
Date	Sample No.	Tool Type	HDT-C			
Depth—Driller		HDM No.	F-933			
Type Fluid in Hole		Magnetic Declination	NA			
		Analog Panel No.	839			
		Digital Panel No.	----			
Dens. Visc.		Correlated By	4 X 2 X 30 X 2			
ph Fluid Loss	ml	Computed By	DEC 10			
Source of Sample		Plotted By	CAL COMP			
R _m @ Meas. Temp.	@ °F	Remarks —	SO #16922			
R _{mf} @ Meas. Temp.	@ °F		JOB #4447			
R _{mc} @ Meas. Temp.	@ °F					
Source: R _{mf} R _{mc}						
R _m @ BHT	@ °F					
R _{mf} @ BHT	@ °F					
R _{mc} @ BHT	@ °F					

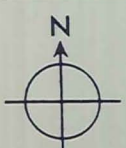
"Any directional computations made from the dipmeter log must be regarded as approximate only. This is because the dipmeter log indicates the orientation of the instrument itself, rather than the direction and amount of the wall drift. Therefore, we do not and cannot guarantee the accuracy of such directional computations, and we shall not, except in the case of willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained that may result from any such computations."

TABLE OF VERTICAL DISPLACEMENT IN FEET CORRESPONDING TO VARIOUS HORIZONTAL DISTANCES AND ANGLES OF DIP

DIP ANGLES (degrees)	VERTICAL DISPLACEMENT FOR HORIZONTAL DISTANCES OF			DIP ANGLES (degrees)	VERTICAL DISPLACEMENT FOR HORIZONTAL DISTANCES OF		
	100'	1000'	1 mile (5280')		100'	1000'	1 mile (5280')
1	1.75	17.5	92.2	19	34.4	344.	1818.
2	3.5	35.	184.	20	36.4	364.	1922.
3	5.2	52.	277.	21	38.4	384.	2027.
4	7.0	70.	369.	22	40.4	404.	2133.
5	8.8	88.	462.	23	42.5	425.	2241.
6	10.5	105.	555.	24	44.5	445.	2351.
7	12.3	123.	648.	25	46.6	466.	2462.
8	14.1	141.	742.	30	57.7	577.	3048.
9	15.8	158.	836.	35	70.0	700.	3697.
10	17.6	176.	931.	40	83.9	839.	4430.
11	19.4	194.	1026.	45	100.0	1000.	5280.
12	21.3	213.	1122.	50	119.2	1192.	6293.
13	23.1	231.	1219.	55	142.8	1428.	7540.
14	24.9	249.	1316.	60	173.2	1732.	9145.
15	26.8	268.	1415.	65	214.4	2144.	11323.
16	28.7	287.	1514.	70	274.8	2748.	14507.
17	30.6	306.	1614.	75	373.2	3732.	19705.
18	32.5	325.	1716.	80	567.1	5671.	29945.

To obtain vertical displacements corresponding to multiples of hundreds feet, thousands of feet or miles, multiply the number found in the table by the number of hundreds, thousands or miles.

Example: The formation dip is 16 degrees. The vertical displacement occurring at a spot 660 feet away from the well is desired. The table shows 28.7 feet per 100 feet for 16° dip. Therefore 28.7 x 6.60 = 189.42, or 189. feet.



GRAPHIC PRESENTATION

GRAPHIC PRESENTATION

CORRELATION CURVE

DEPTHS

TRUE DIP ANGLE AND DIRECTION

DRIFT & DIRECTION OF SONDE

0° 10° 20° 30° 40° 50° 60° 70° 80° 90° 0°

CORRELATION CURVE

DEPTHS

DIP ANGLE AND DIRECTION

BENCHMARK DRIFT

0 10 20 30 40 50 60 70 80 90 0 10

POOLED ARROW PLOT

2 LEVELS POOLED WHEN WITHIN

3.5 DEGREES SOLID ANGLE

BLACK ARROWS ARE POOLED RESULTS

CORRELATION LENGTH 4 FT.

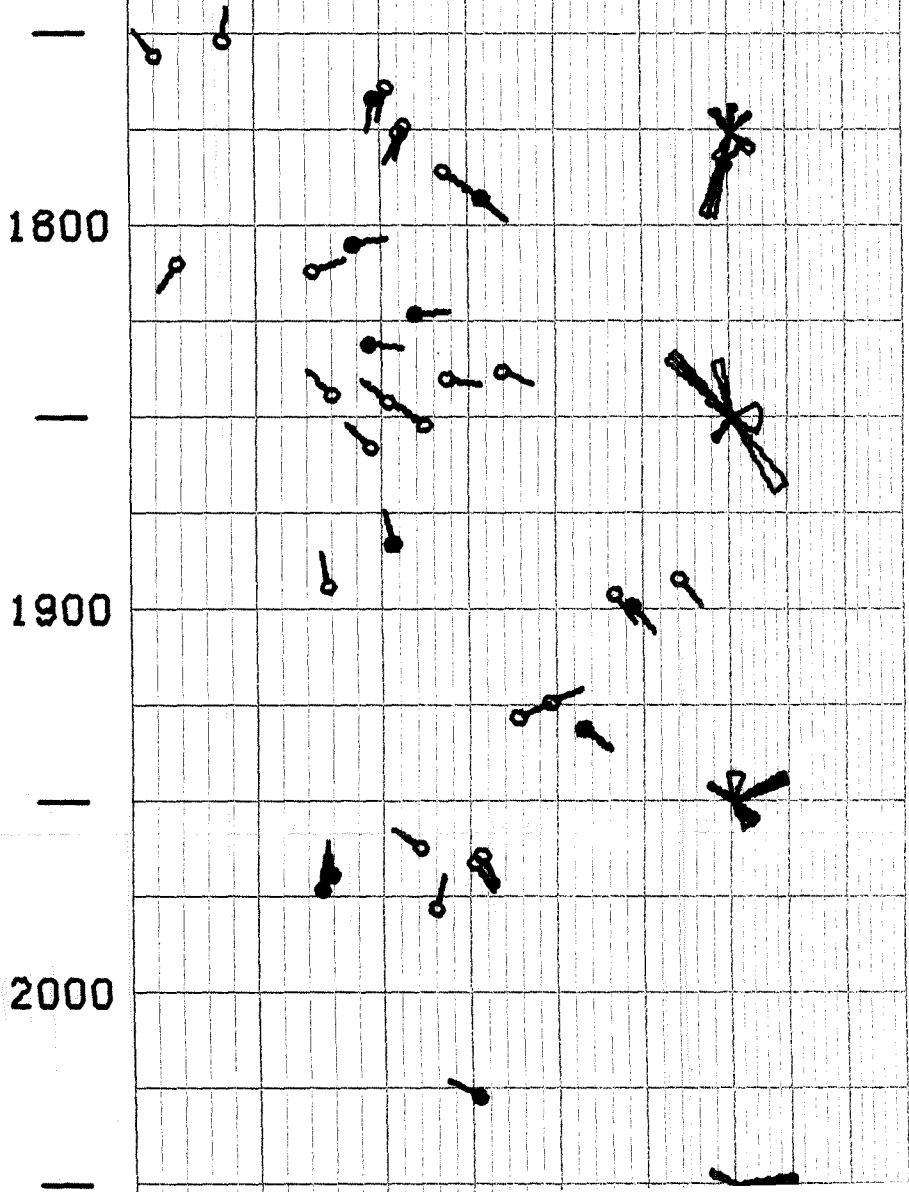
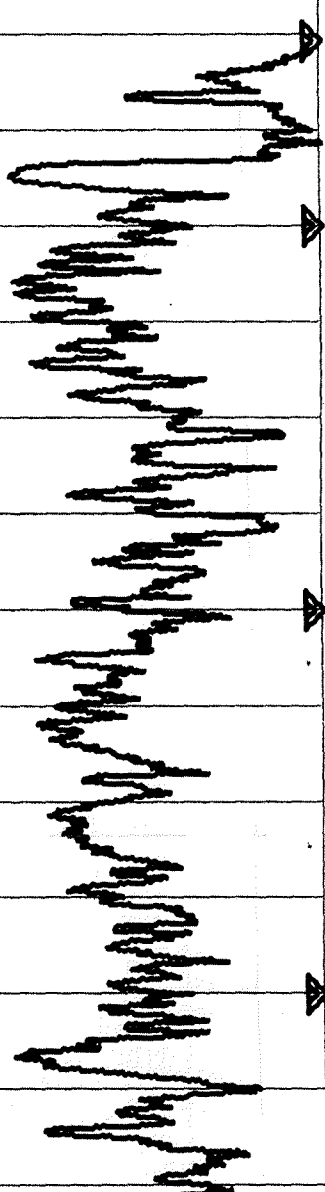
STEP LENGTH 2 FT.

SEARCH ANGLE 30 DEGREES X2

PC0130043518307001020420

ZONE FROM 1752 TO 5206

RESISTIVITY INCREASES

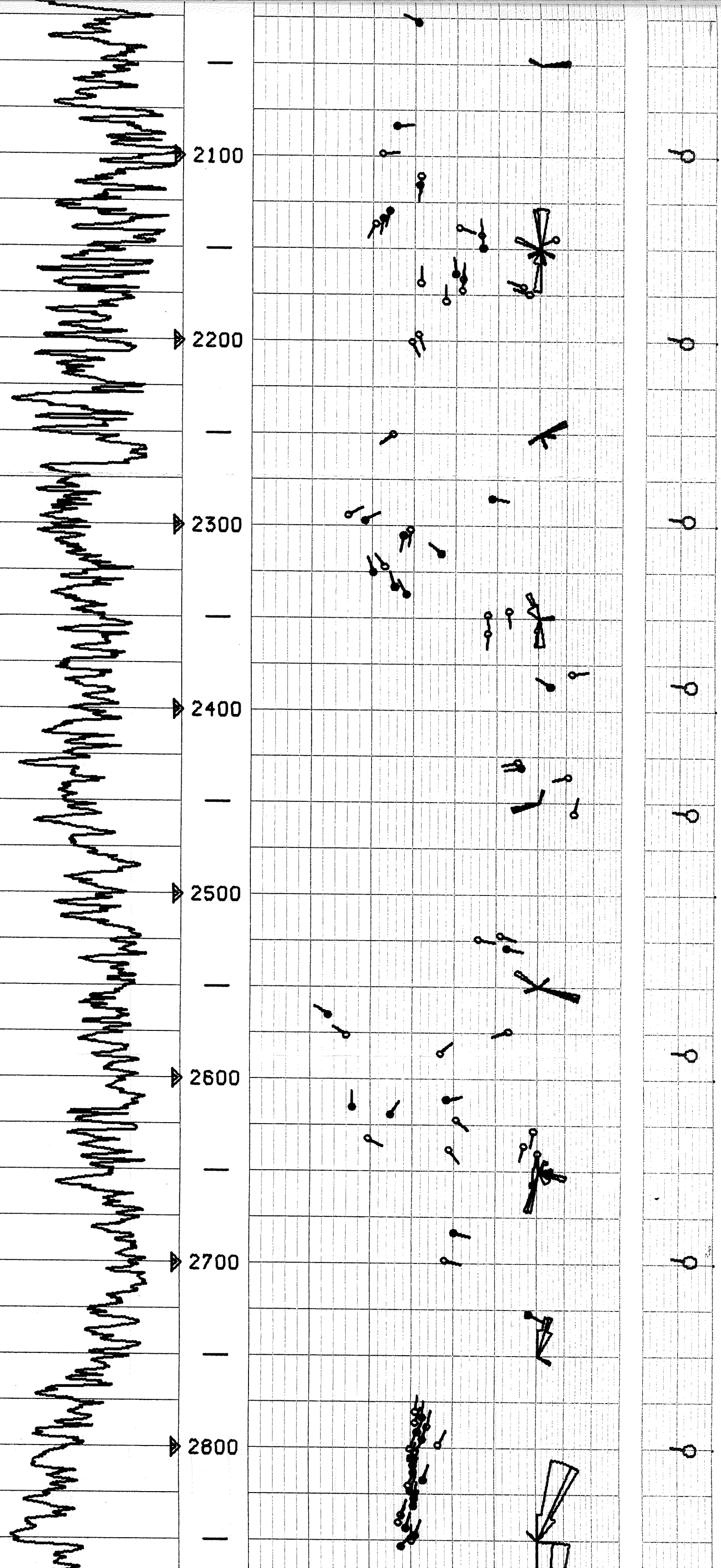


1800

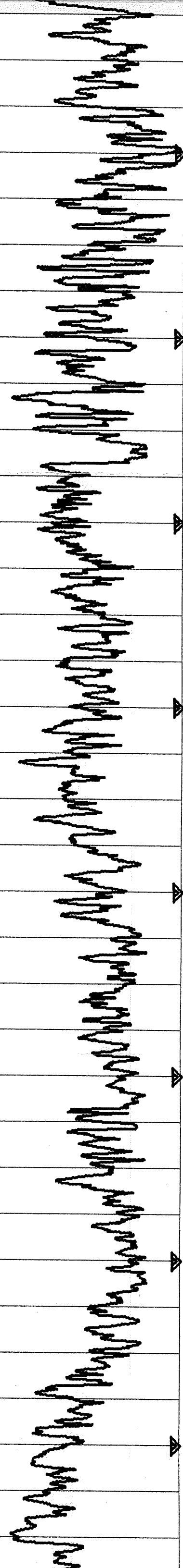
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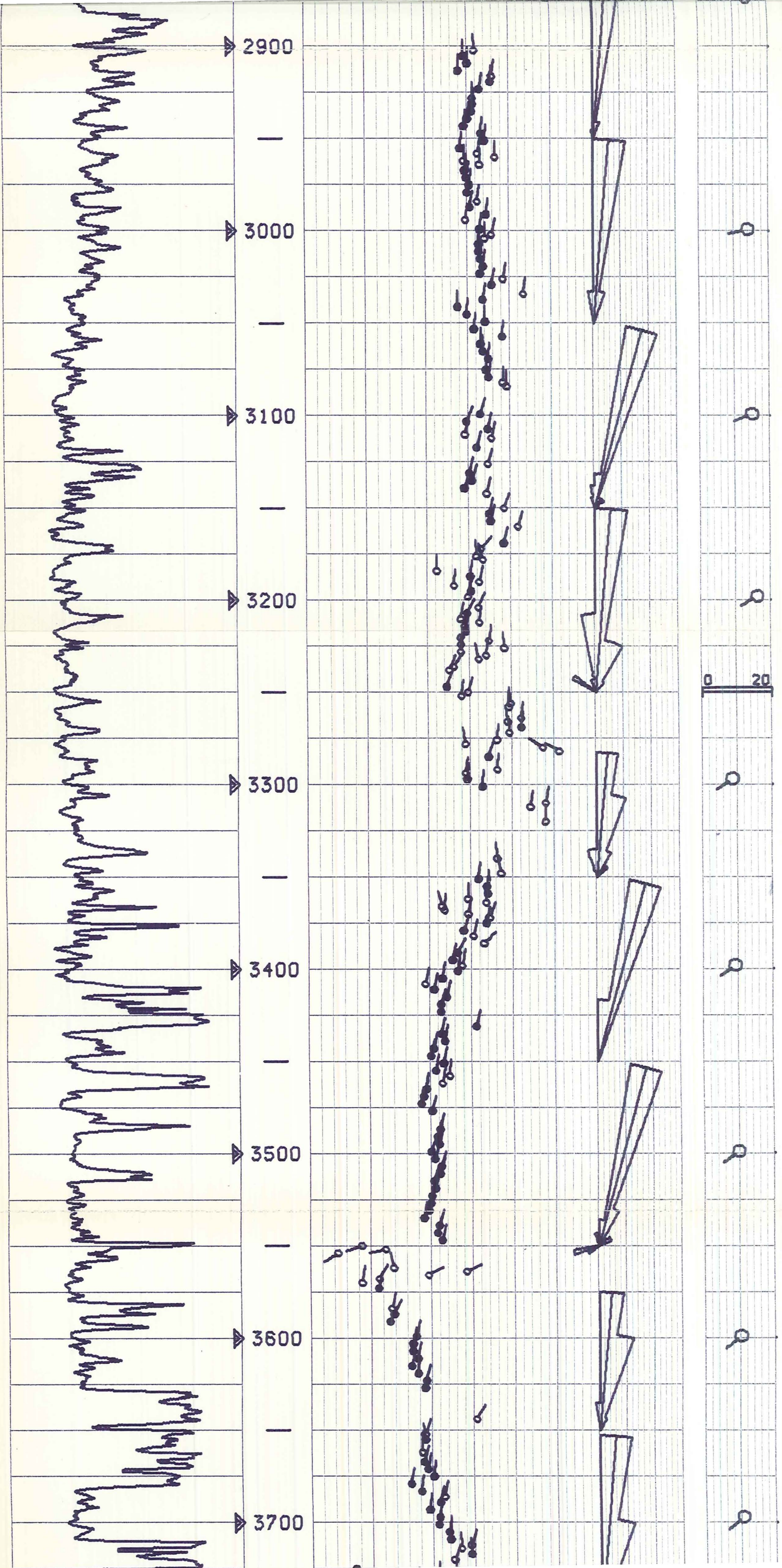
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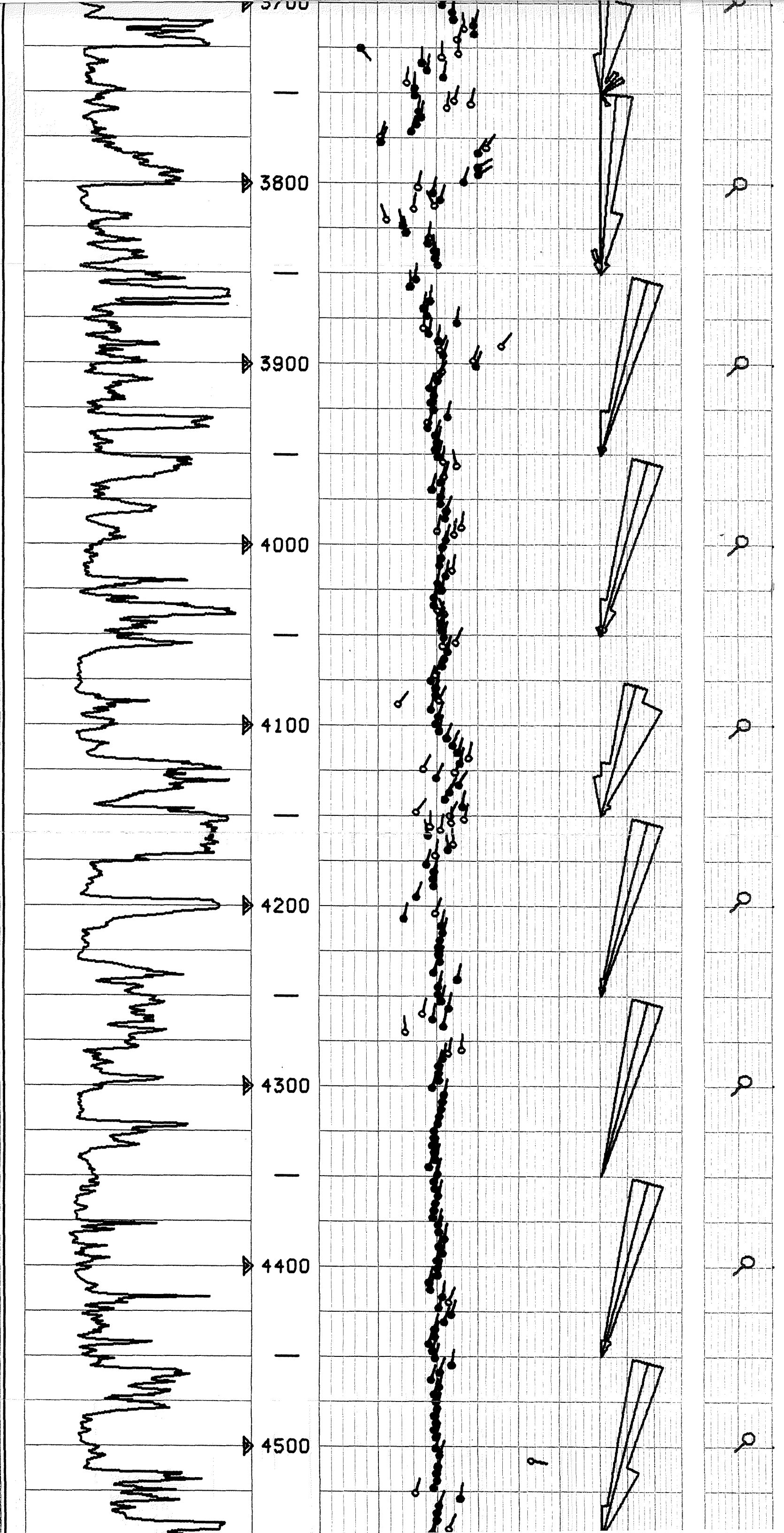
SIVILNITRA DIVIZEN ARNOV PLOU

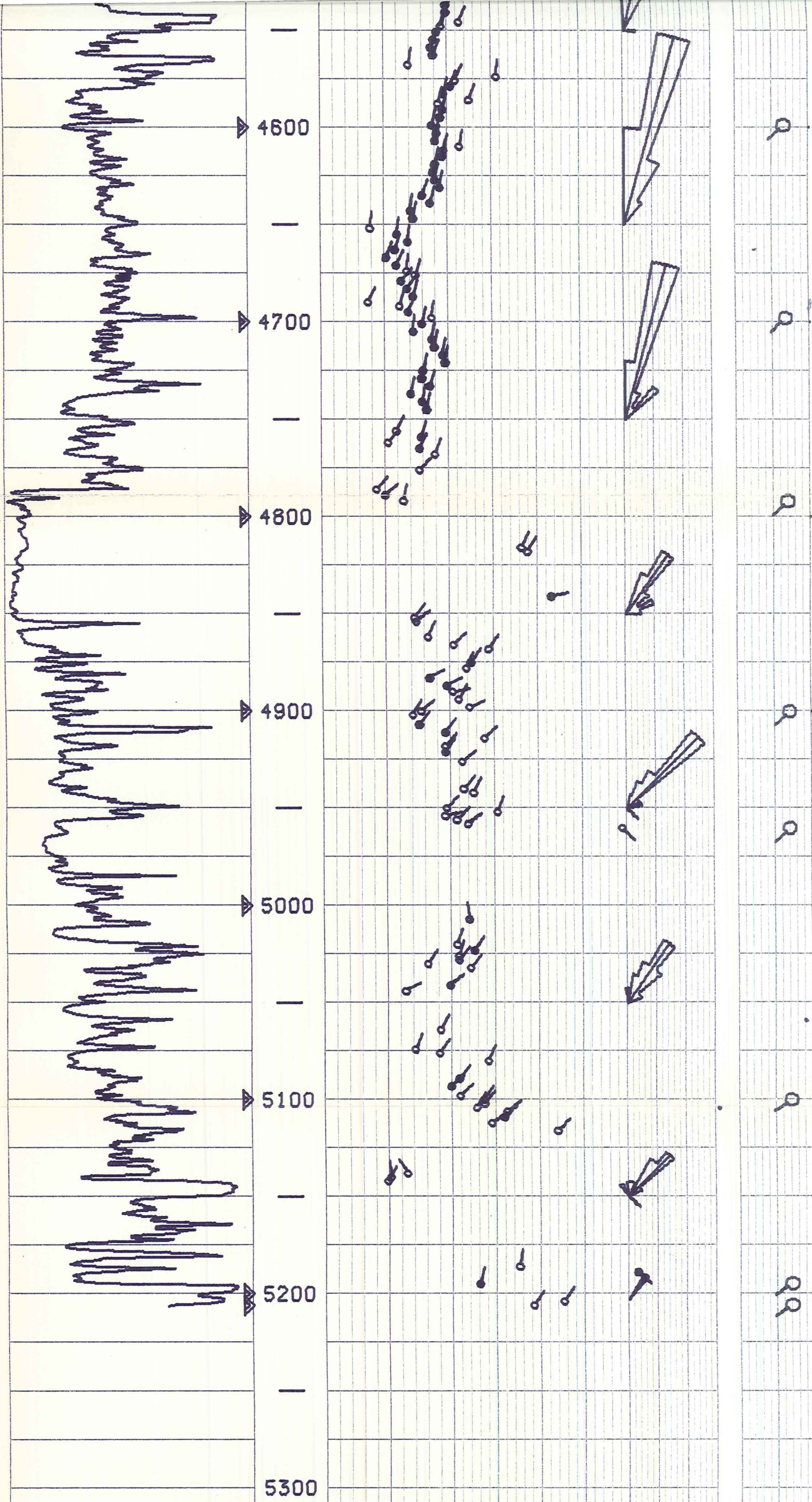


2100
2200
2300
2400
2500
2600
2700
2800

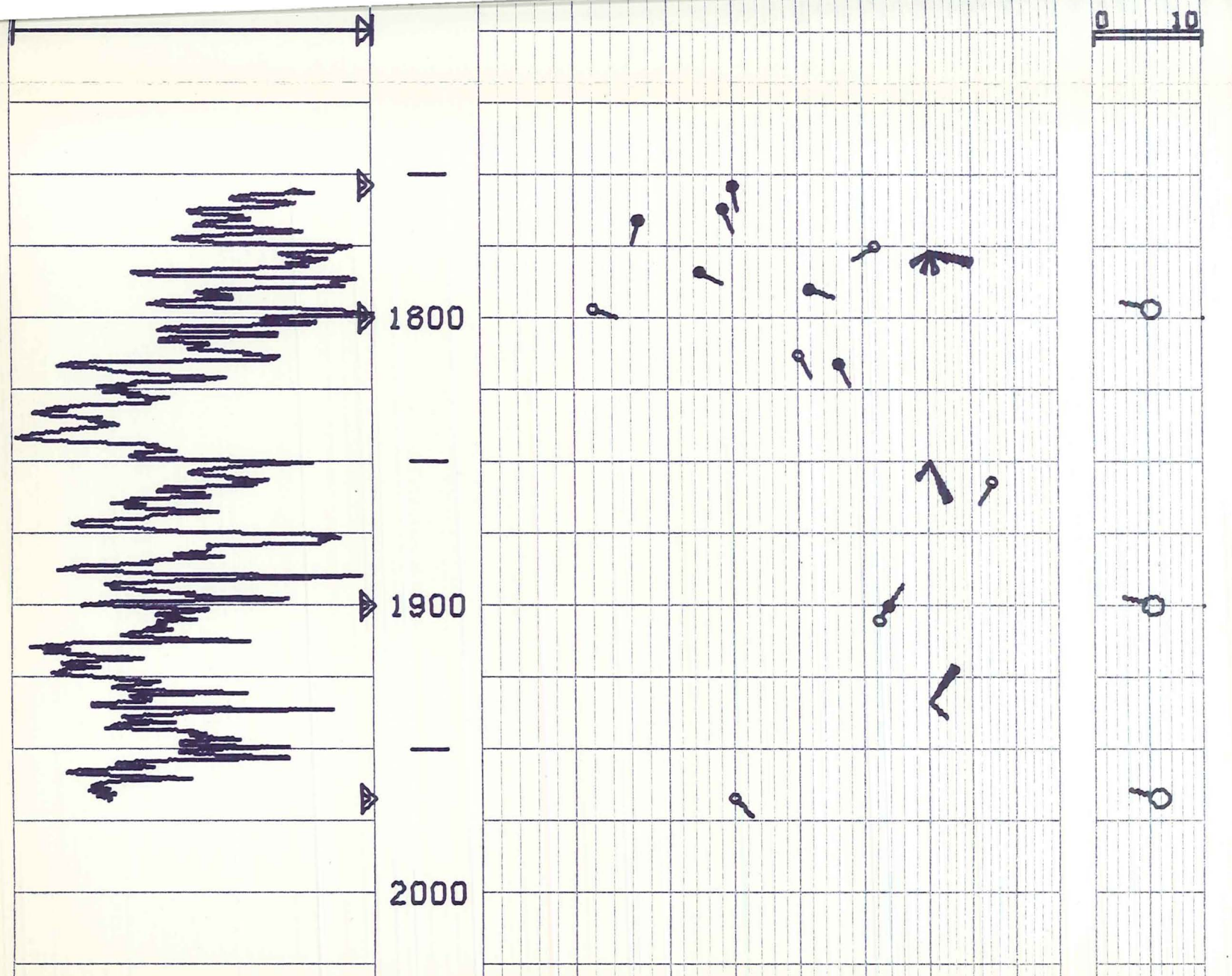




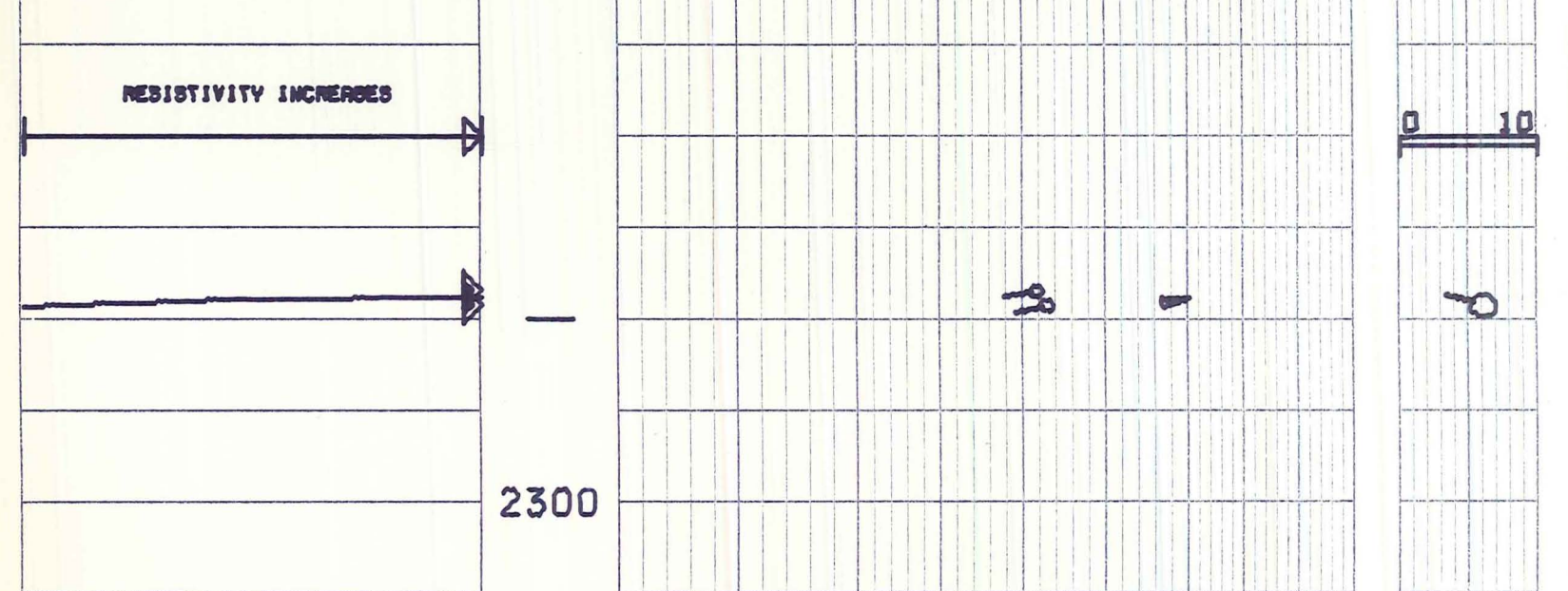




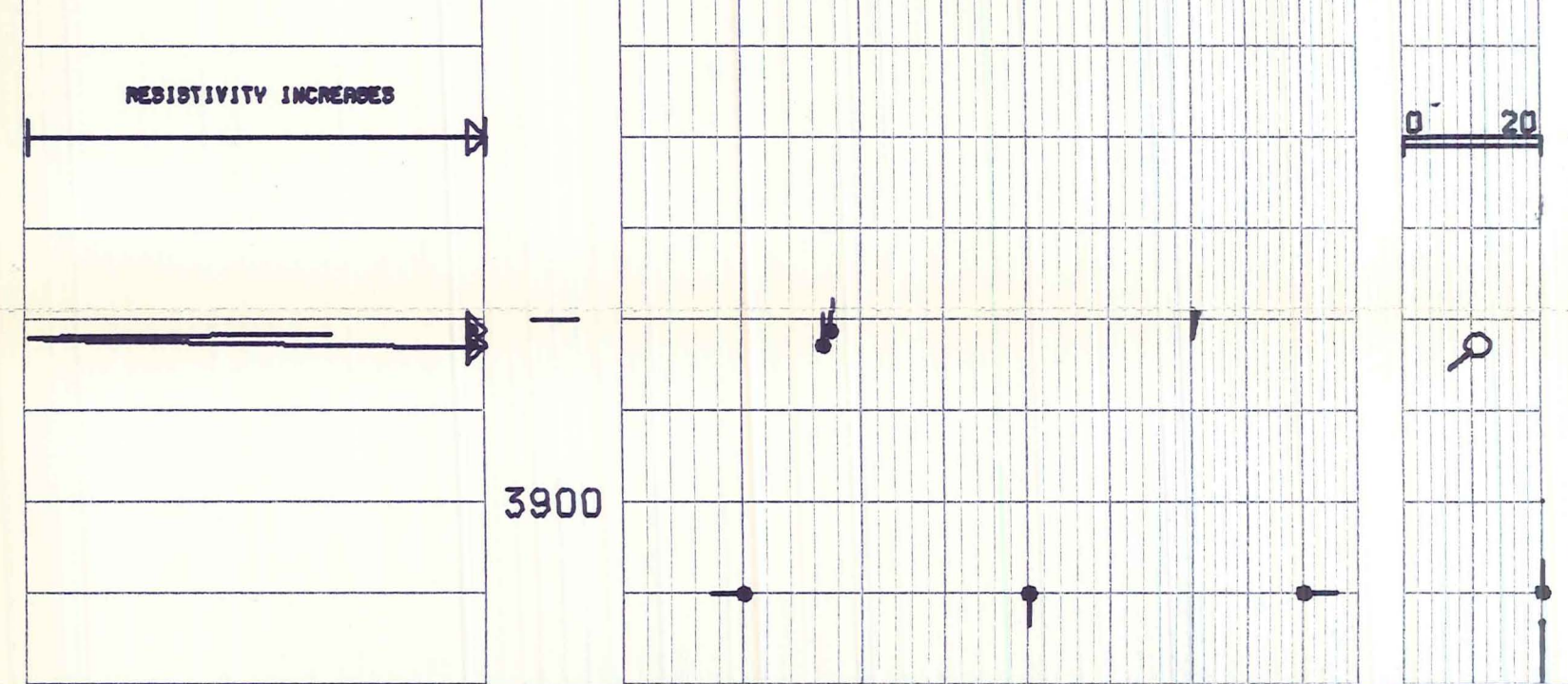
ZONE FROM 1754 TO 1967



ZONE FROM 2242 TO 2246



ZONE FROM 3853 TO 3857



CORRELATION	UNION OIL
STEP LENG	COVE FORT
SEARCH RN	COVE FORT
HOT-D TTR	MILLARD,
	RUN NO. 0
	R.M.C.C.
	ARRON PLO

OIL OF CALIFORNIA

QRT #31-33

QRT

CO, UTAH

ONE 18-JUL-78

C.

PLT FROM CLUSTER PROGRAM

ATION LENGTH 4 FT.
ENGTH 2 FT.
ANGLE 30 DEGREES X2
TR PDP-11/70

JOB 4447.00

SCREW
DRIFT

0 10 20 30 40 50 60 70 80 90 0 10

CORRELATION CURVE

DEPTH

DIP ANGLE AND DIRECTION

ALL QUALITY ARROW PLOT 04447
FROM THE CLUSTER PROGRAM
BLACK ARROWS ARE HIGHEST QUALITY

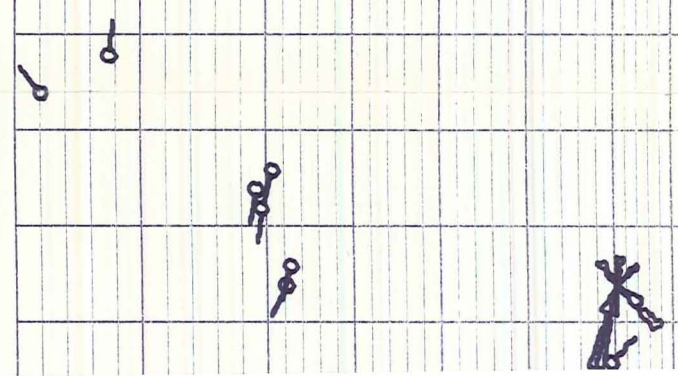
CORRELATION LENGTH 4 FT.
STEP LENGTH 2 FT.
SEARCH ANGLE 30 DEGREES X2

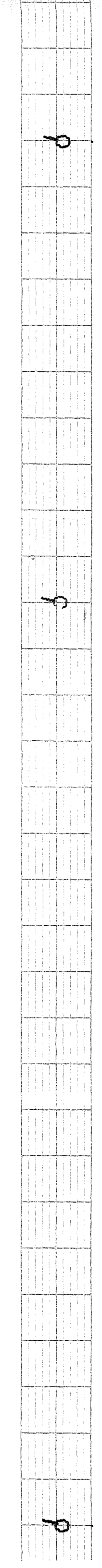
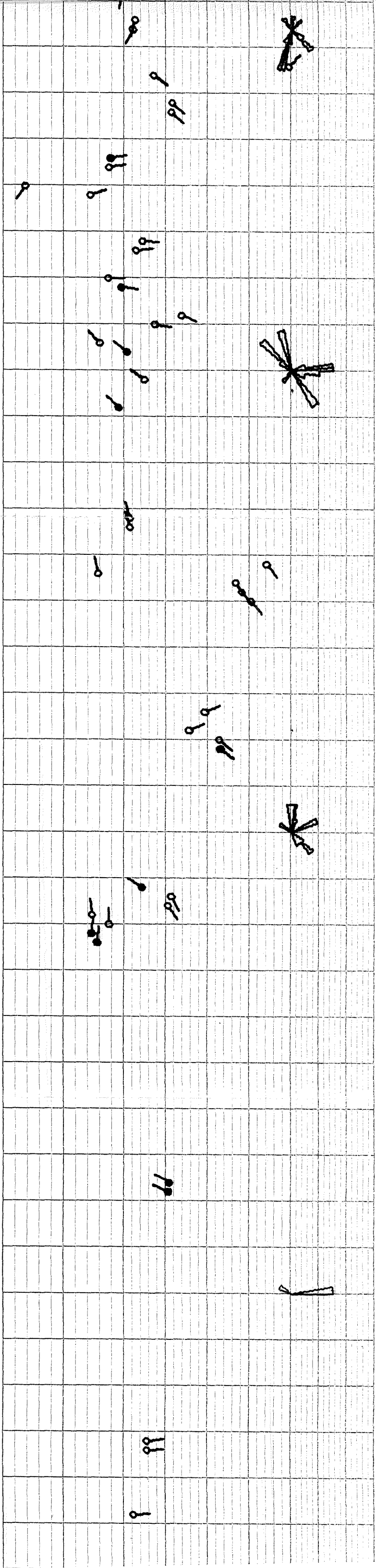
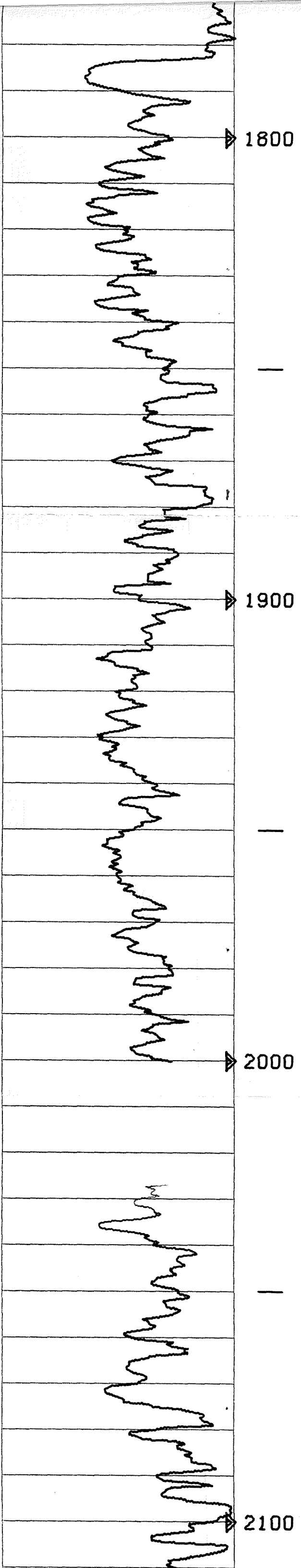
PC0130043518307001020420

ZONE FROM 1752 TO 5218

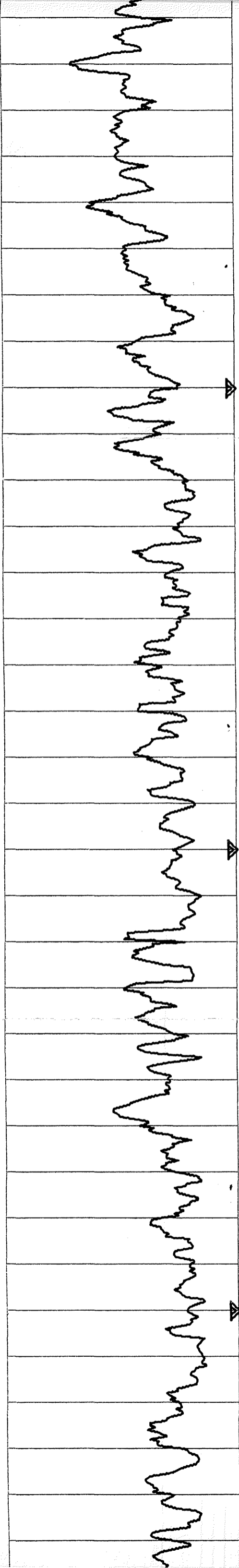
RESISTIVITY INCREASES

0 10





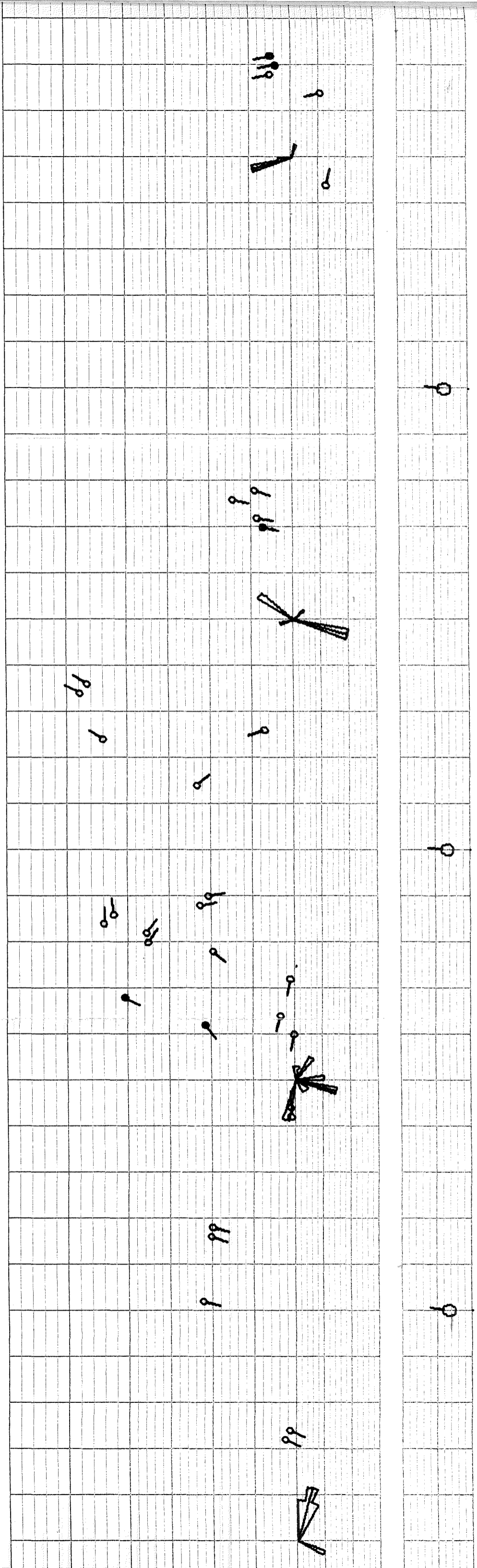
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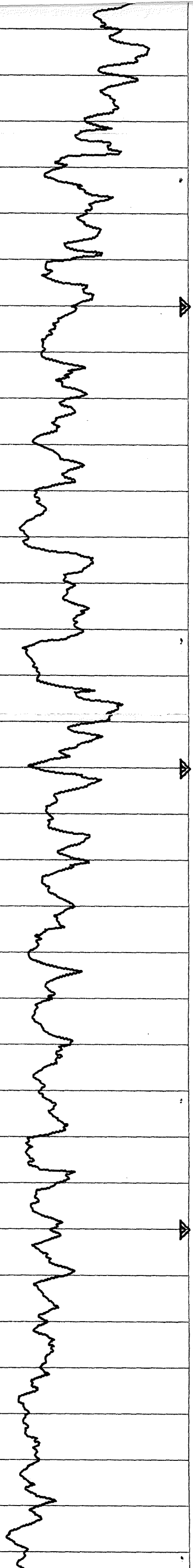
2500

2600

2700



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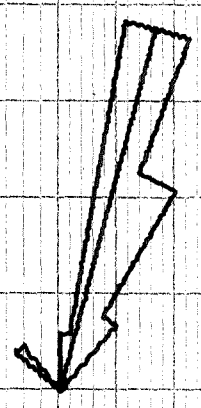
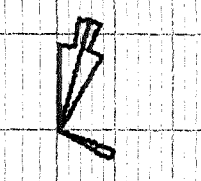
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2900

3000



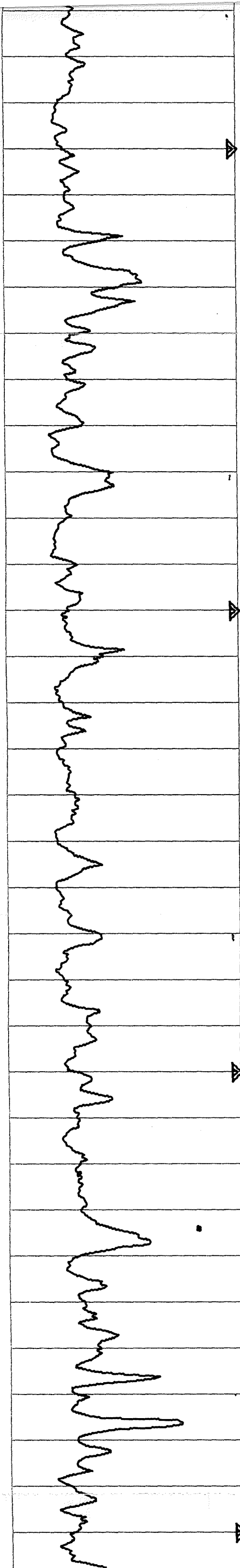
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0

0

0



3100

3200

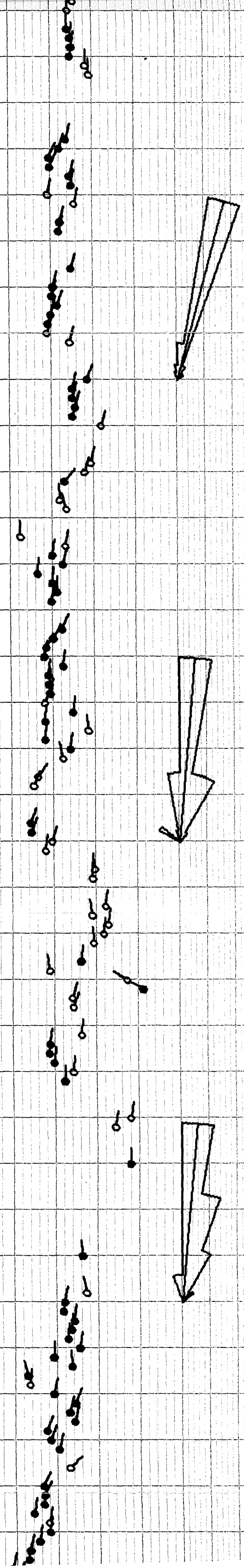
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3400

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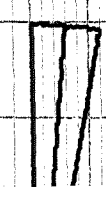
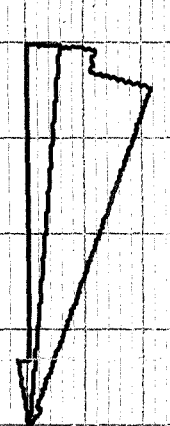
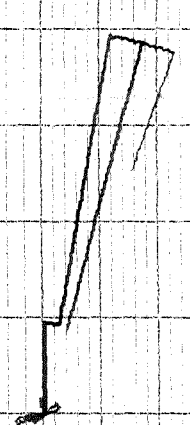
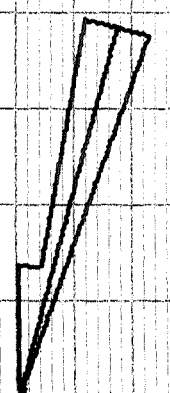
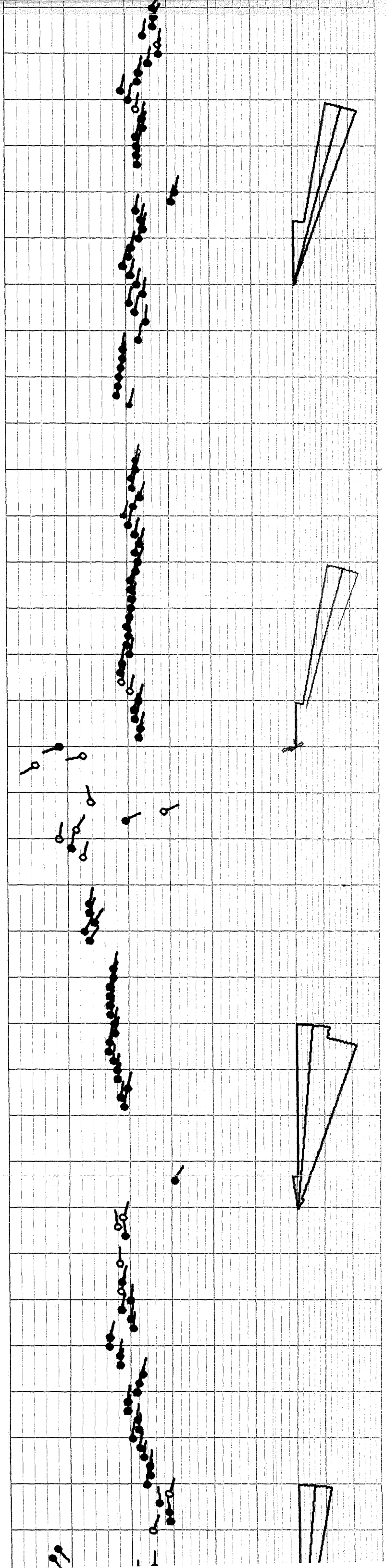
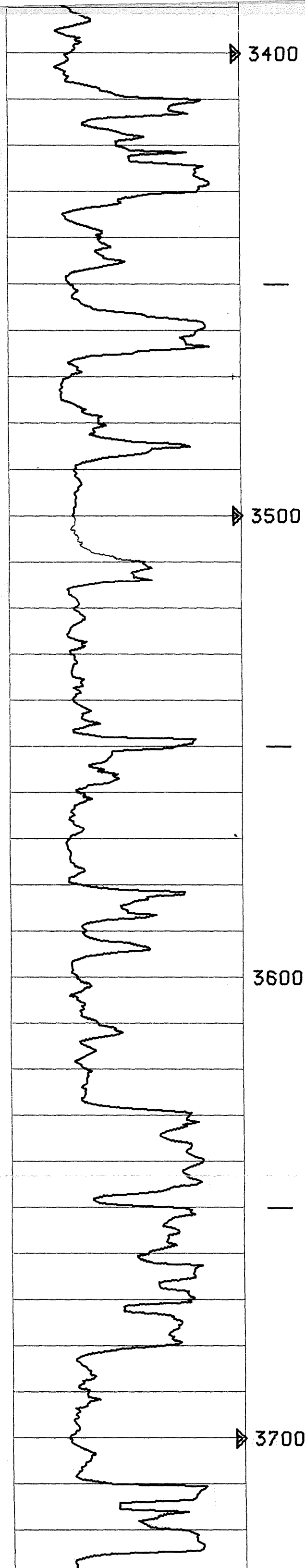
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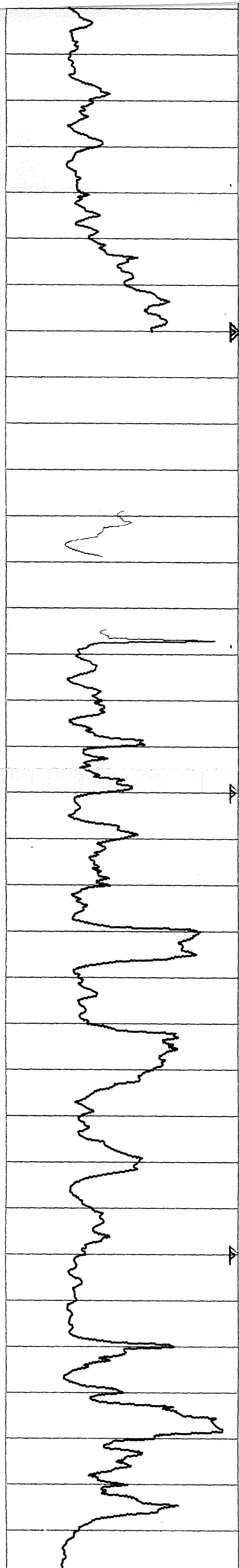
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Q

Q

Q

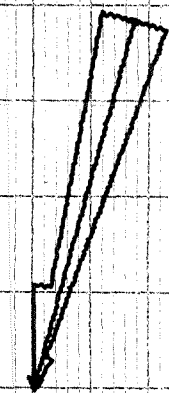
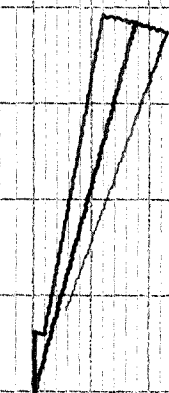
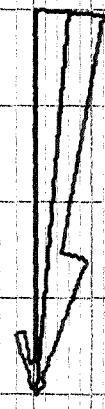
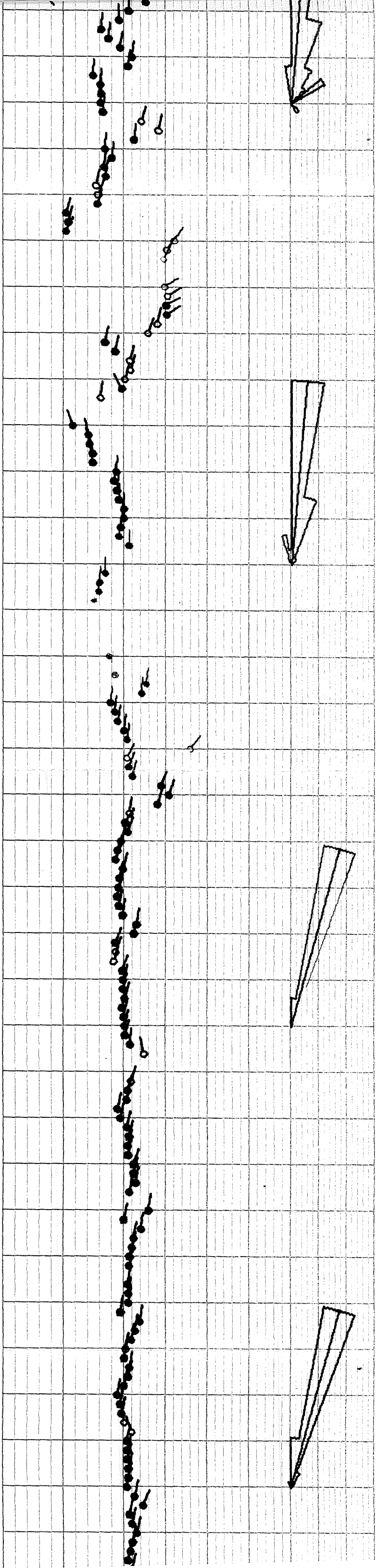




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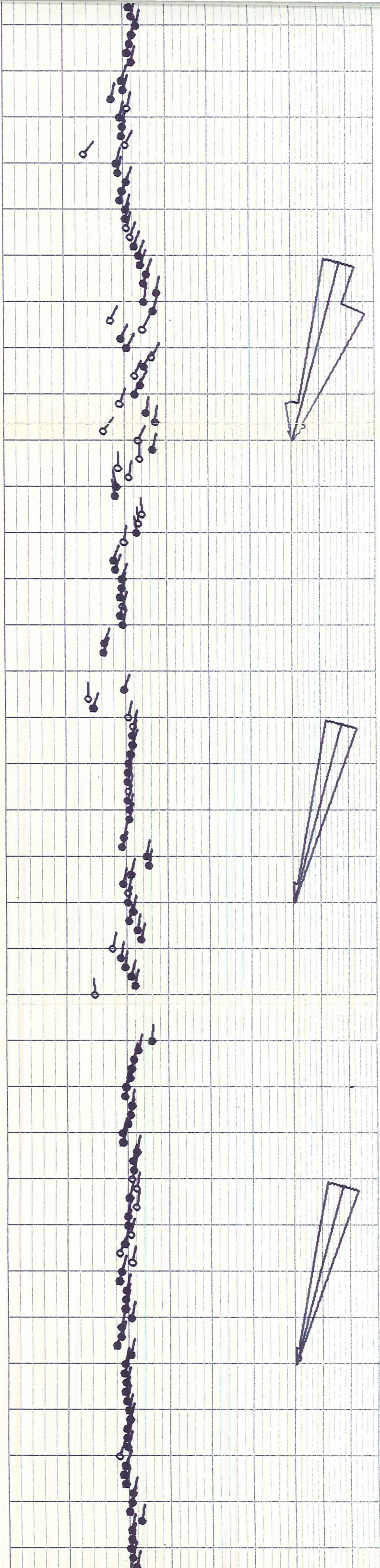
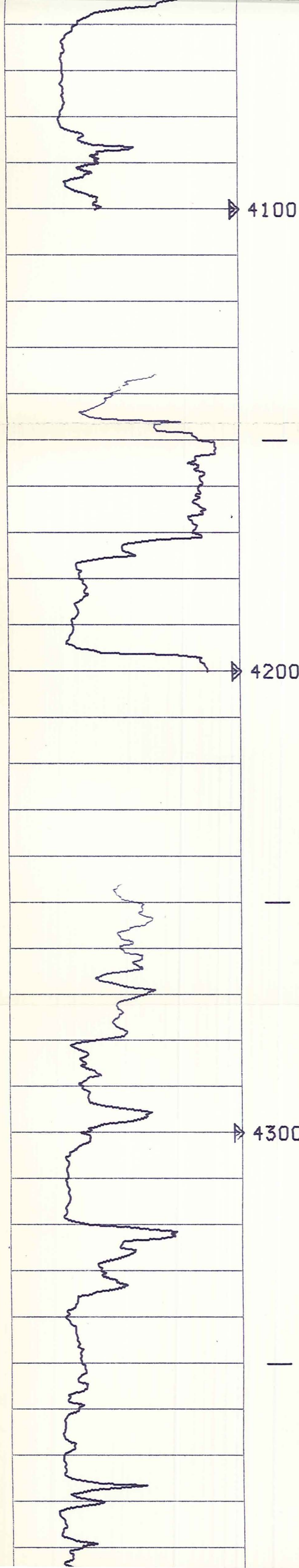
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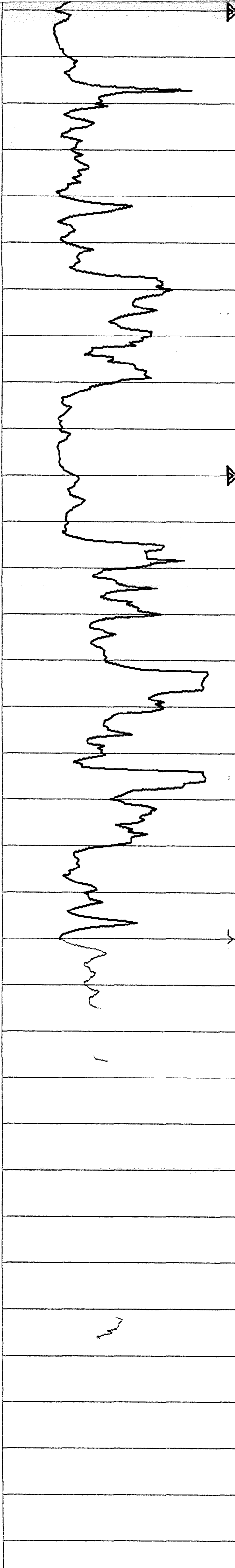
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Q

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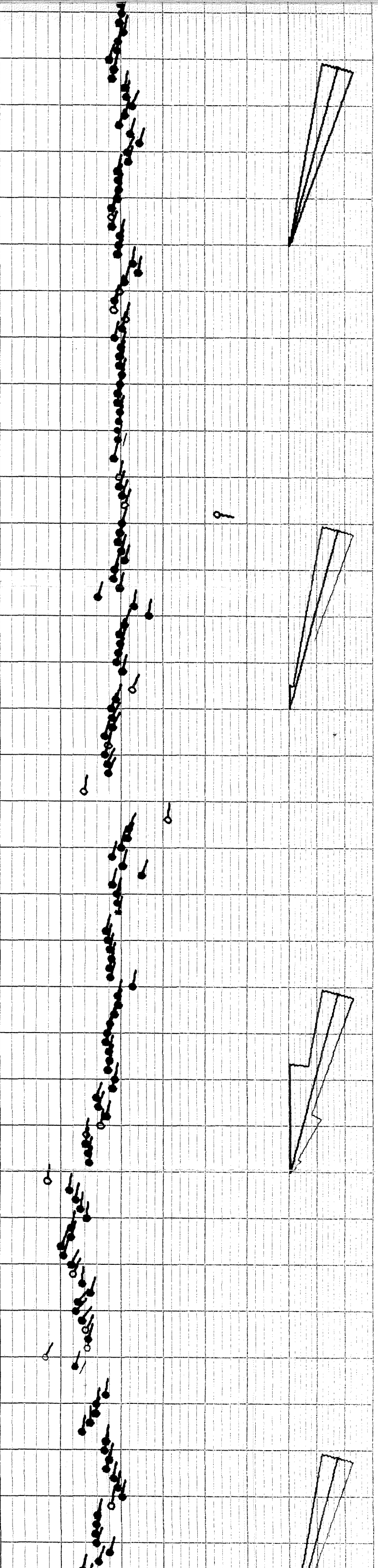


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4500

4600

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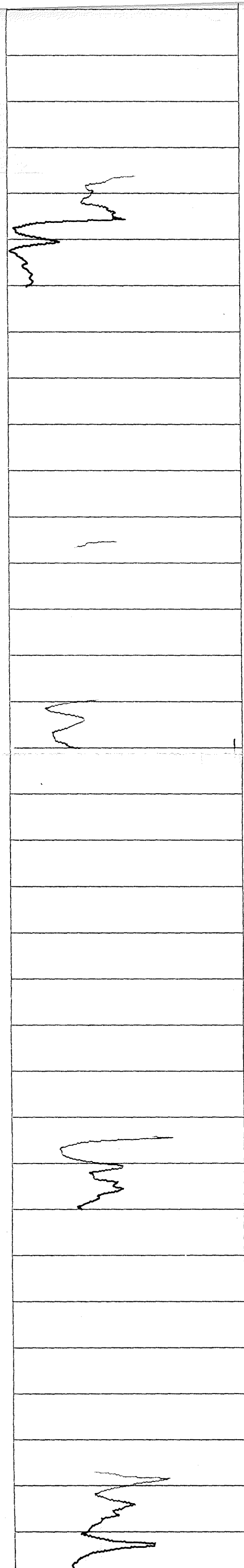


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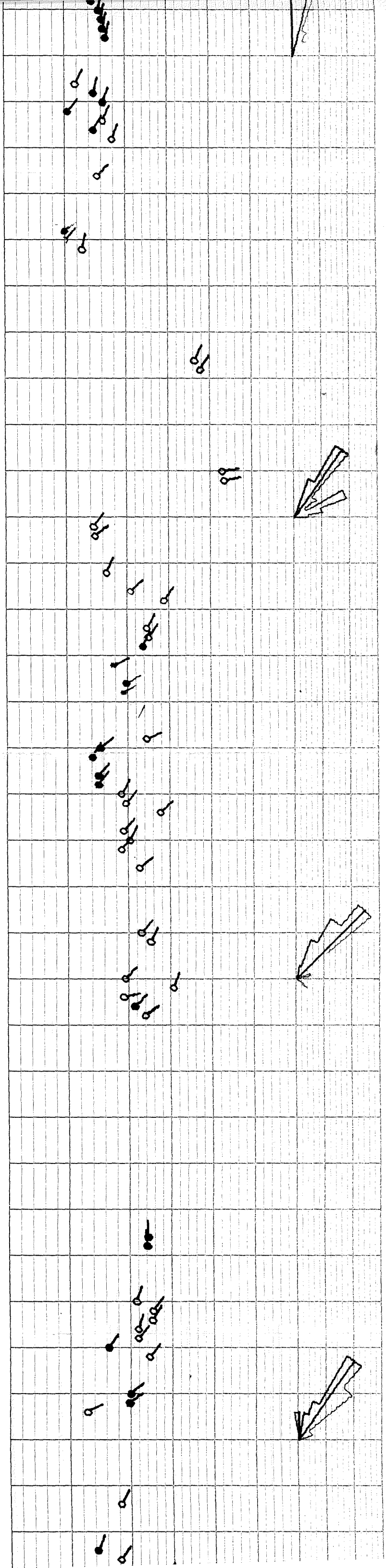
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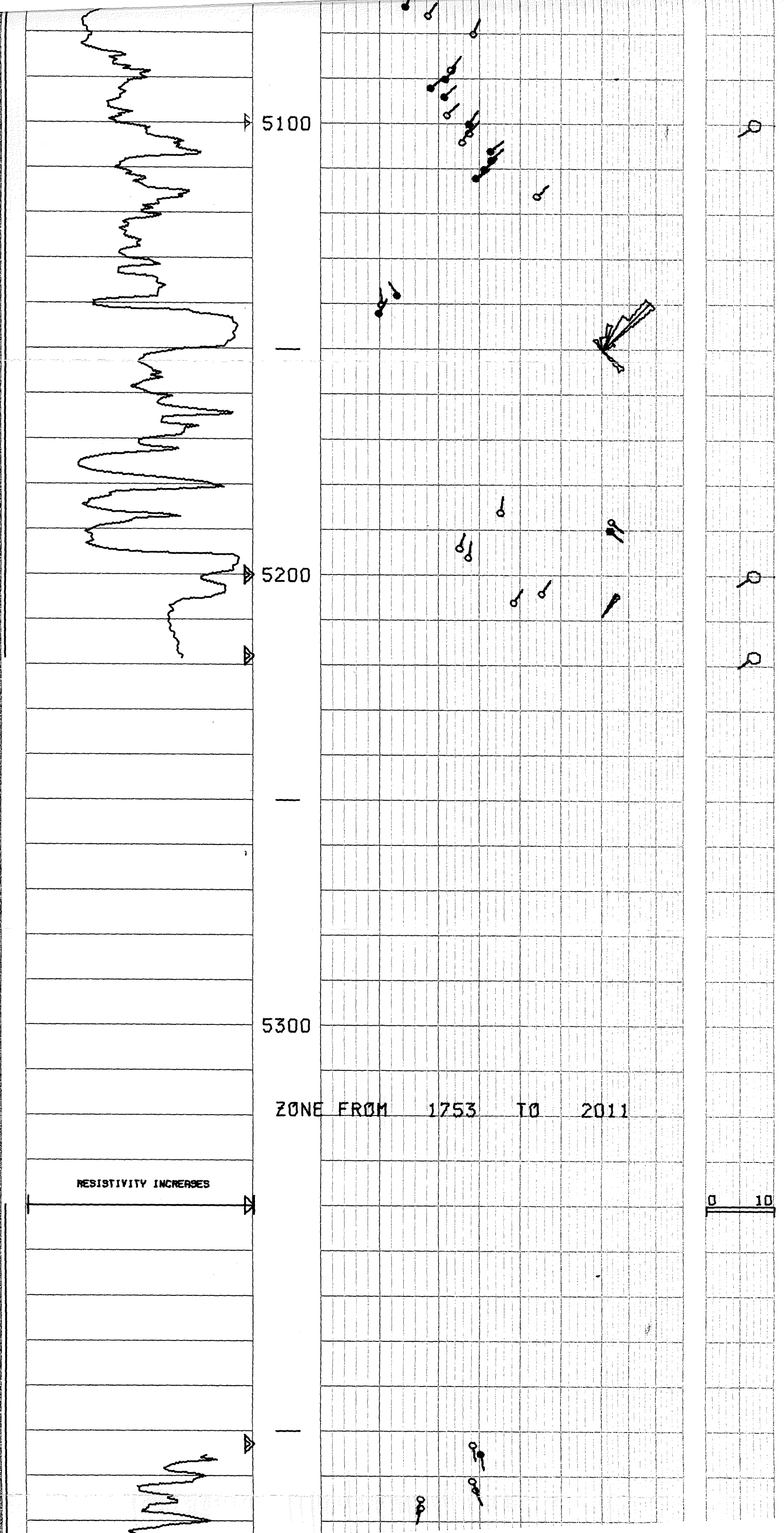


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4900

5000





5100

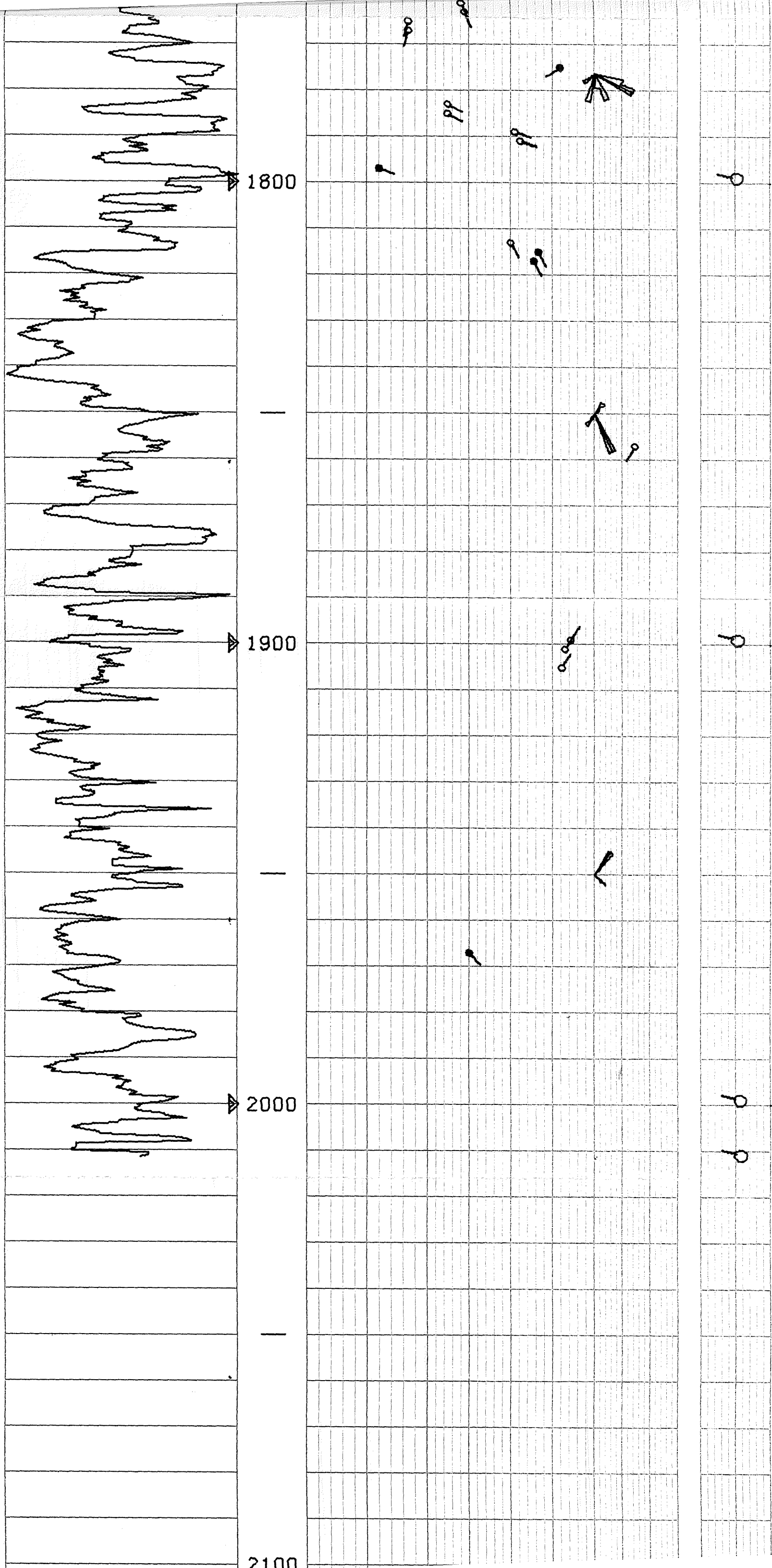
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ZONE FROM 1753 TO 2011

RESISTIVITY INCREASES

0 10



1800

1900

2000

2100

p

p

p

p

pp

pp

pp

pp

pp

pp

pp

pp

pp

pp

