SCHLUMBERGER

FOUR — ARM
HIGH RESOLUTION
CONTINUOUS DIPMETER
(COMPUTED)

COUNTY LEWIS
FIELD or LOCATION JACKSON PRAIRIE
WELL 17-12N-1W STORAGE UNIT #901
COMPANY JACKSON PRAIRIE

COMPANY JACKSON PRAIRIE GAS STORAGE COMPANY

WELL STORAGE UNIT #901

FIELD JACKSON PRAIRIE

COUNTY LEWIS STATE WASHINGTON

LOCATION 274'S & 834'E FROM THE N/4 CORNER OF:

Sec. 17 Twp. 12N Rge. 1W

Other Services:

Permanent Datum: GL, Elev. 525
Log Measured From KB, 12 Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B. 537
D.F. -
G.L. 525

Date	4/25/72			
Run No.	ONE			
Depth—Driller	3144			
Depth—Logger	3144			
Btm. Log Interval	3143			
Top Log Interval	618			
Casing—Driller	13-3/8@618	@	@	@
Casing—Logger	618			
Bit Size	12-1/4 TO 2088, 9-7/8 TO 3144			
Type Fluid in Hole	FRESH			
Dens. | Visc.	10.6 | 40			
pH | Fluid Loss	9 | 6.5ml	ml	ml	ml
Source of Sample	CIRC.			
R_m @ Meas. Temp.	3.67 @ 53 °F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	2.91 @ 50 °F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	5.0 @ 50 °F	@ °F	@ °F	@ °F
Source: R_{mf} R_{mc}	M | C			
R_m @ BHT	1.86 @ 100 °F	@ °F	@ °F	@ °F
Time Since Circ.	3 HRS.			
Max. Rec. Temp.	100 °F	°F	°F	°F
Equip. | Location	5106 | 4401			
Recorded By	ANDERSEN			
Witnessed By	WURDEN			

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				
Depth—Driller	HDM No.				
Type Fluid in Hole	Magnetic Declination				
	Analog Panel No.				
Dens. | Visc.	Digital Panel No.				
ph | Fluid Loss ml	Correlated By				
Source of Sample	Computed By				
R_m @ Meas. Temp. @ °F	Plotted By				
R_{mf} @ Meas. Temp. @ °F	Remarks —				
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."

SWS—1854

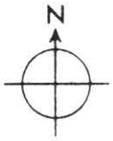
TABLE OF VERTICAL DISPLACEMENT IN FEET CORRESPONDING TO VARIOUS HORIZONTAL DISTANCES AND ANGLES OF DIP

DIP ANGLES (degrees)	VERTICAL DISPLACEMENT FOR HORIZONTAL DISTANCES OF 100′	1000′	1 mile (5280′)
1	1.75	17.5	92.2
2	3.5	35.	184.
3	5.2	52.	277.
4	7.0	70.	369.
5	8.8	88.	462.
6	10.5	105.	555.
7	12.3	123.	648.
8	14.1	141.	742.
9	15.8	158.	836.
10	17.6	176.	931.
11	19.4	194.	1026.
12	21.3	213.	1122.
13	23.1	231.	1219.
14	24.9	249.	1316.
15	26.8	268.	1415.
16	28.7	287.	1514.
17	30.6	306.	1614.
18	32.5	325.	1716.

DIP ANGLES (degrees)	VERTICAL DISPLACEMENT FOR HORIZONTAL DISTANCES OF 100′	1000′	1 mile (5280′)
19	34.4	344.	1818.
20	36.4	364.	1922.
21	38.4	384.	2027.
22	40.4	404.	2133.
23	42.5	425.	2241.
24	44.5	445.	2351.
25	46.6	466.	2462.
30	57.7	577.	3048.
35	70.0	700.	3697.
40	83.9	839.	4430.
45	100.0	1000.	5280.
50	119.2	1192.	6293.
55	142.8	1428.	7540.
60	173.2	1732.	9145.
65	214.4	2144.	11323.
70	274.8	2748.	14507.
75	373.2	3732.	19705.
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

CORRELATION CURVE	DEPTHS	TRUE DIP ANGLE AND DIRECTION	DRIFT & DIRECTION OF SONDE
		0° 10° 20° 30° 40° 50° 60° 70° 80° 90°	0° 10

REFERENCE 7390.00

CORRELATION INTERVAL 4 FT.

STEP LENGTH 4 FT.

SEARCH ANGLE 60 DEGREES

AL .500 IN. GRID

DIRECTED ARROW PLOT

ZONE FROM 632 TO 3140

CORRELATION WITH RESISTIVITY TYPE DATA

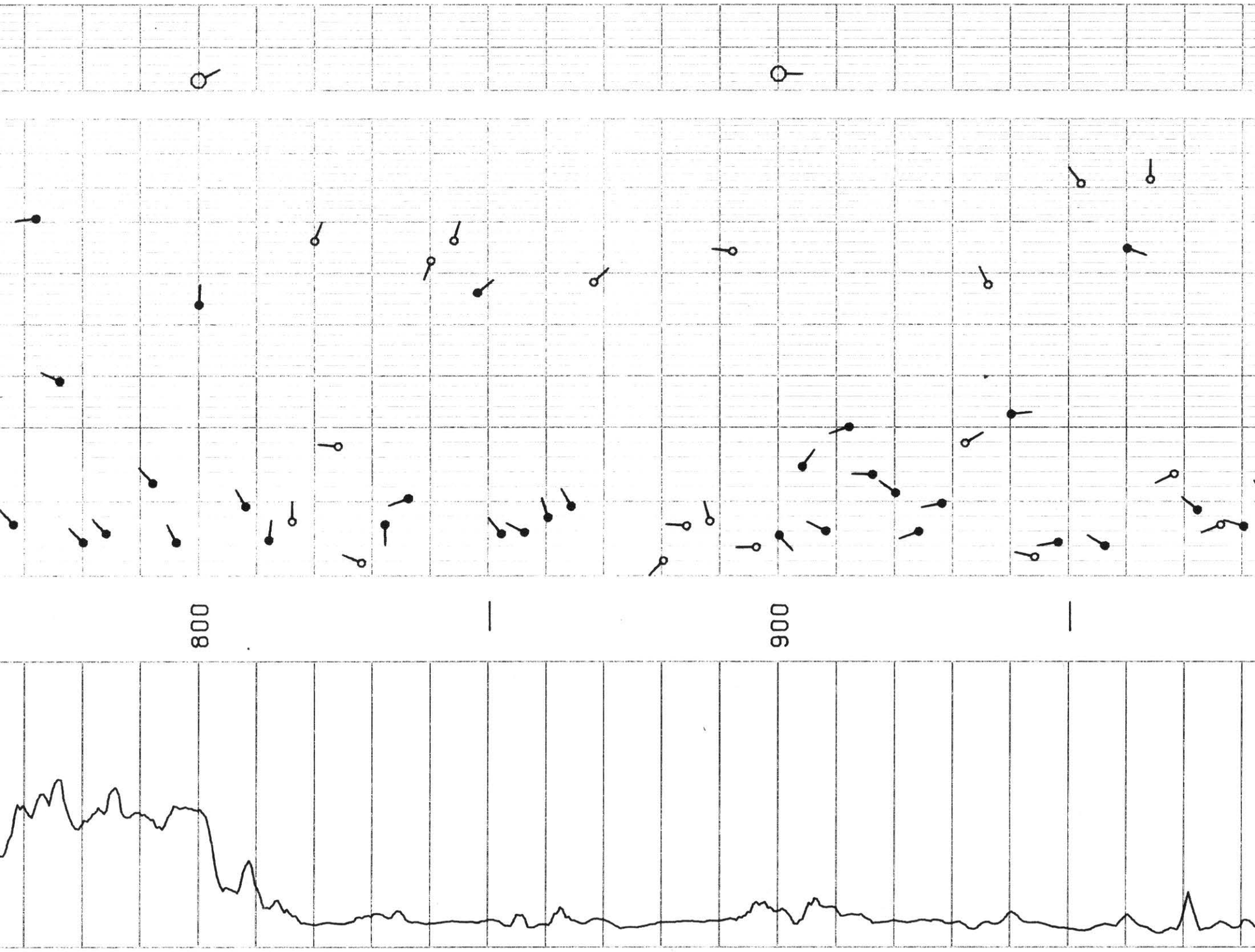
600

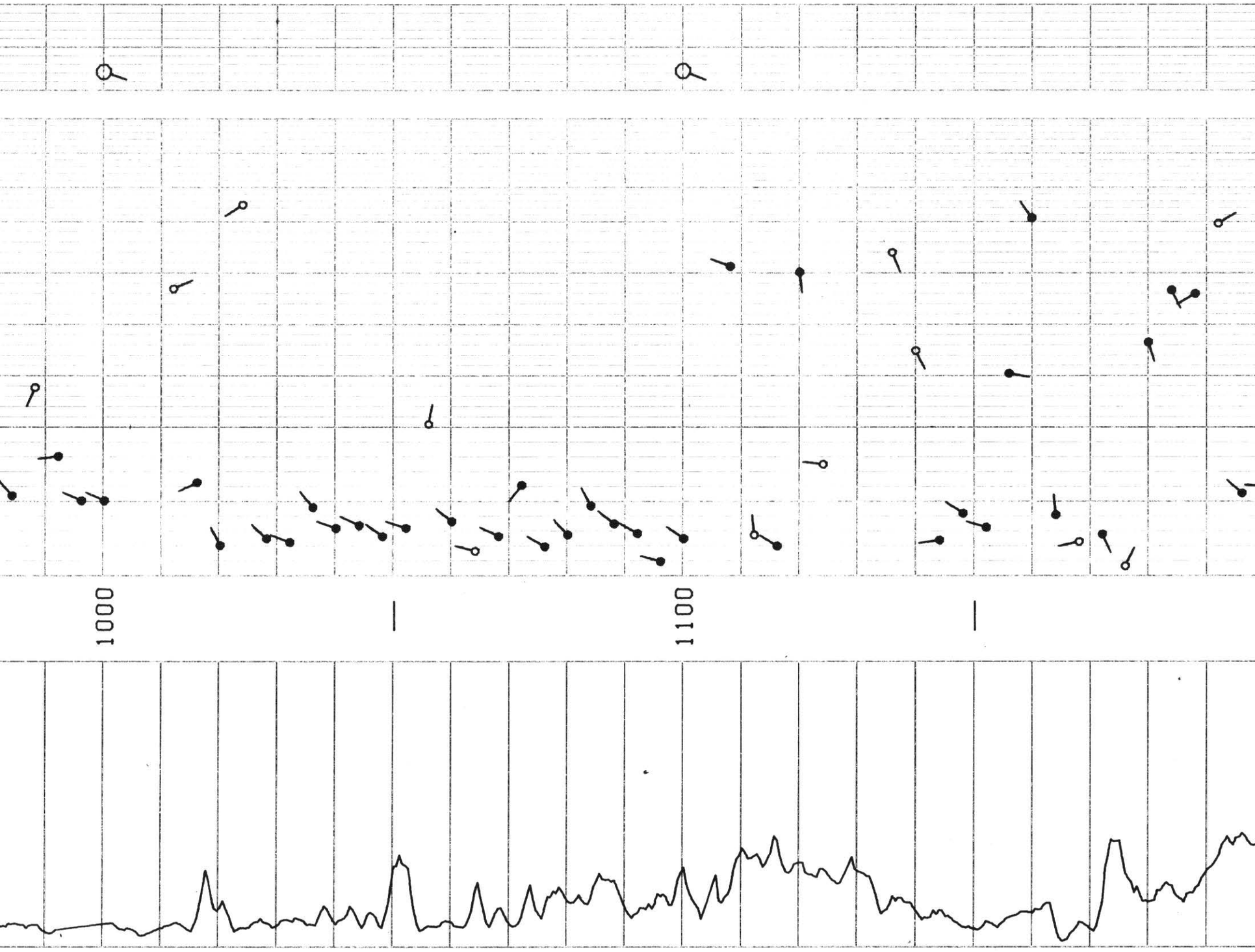
0 10

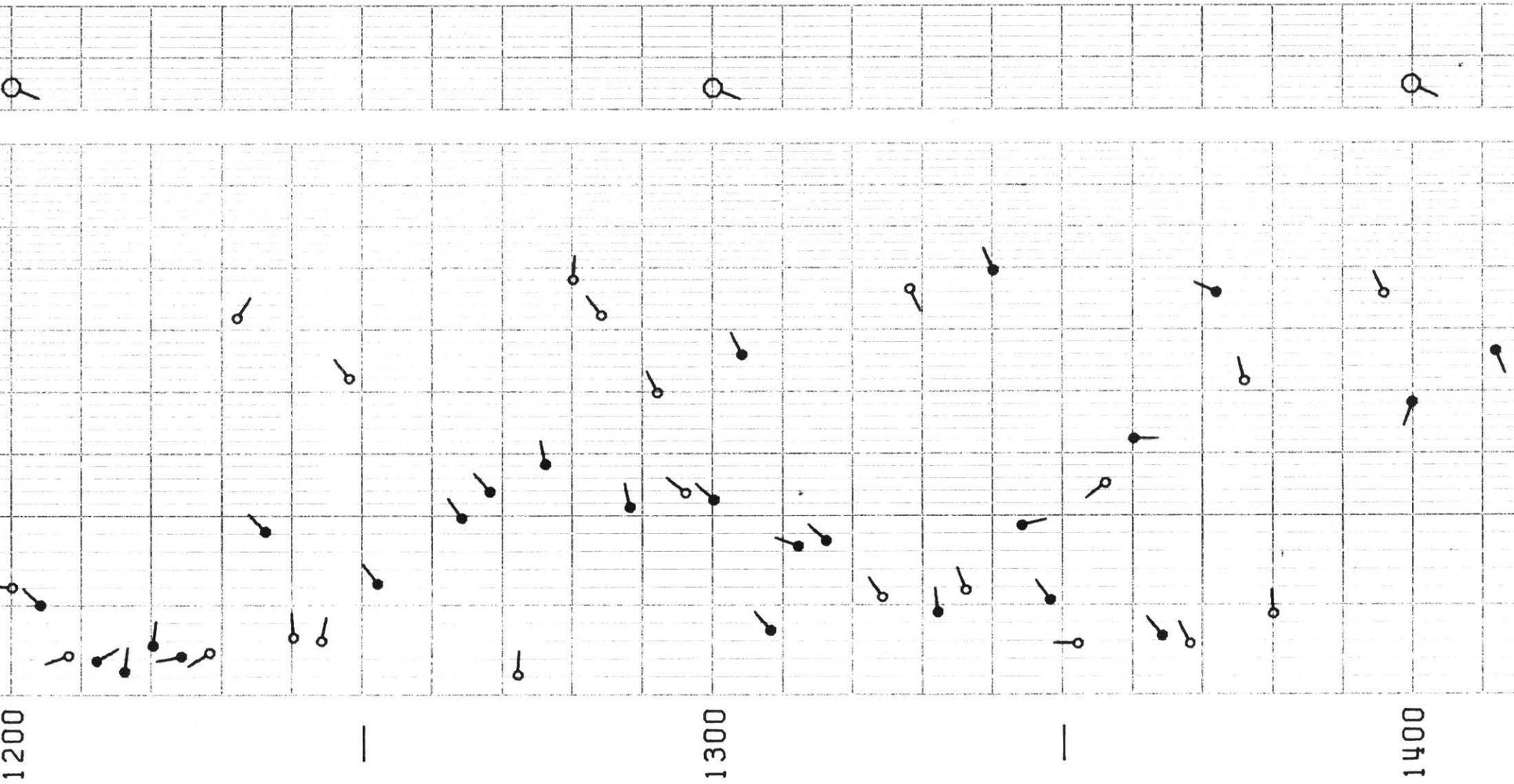
700

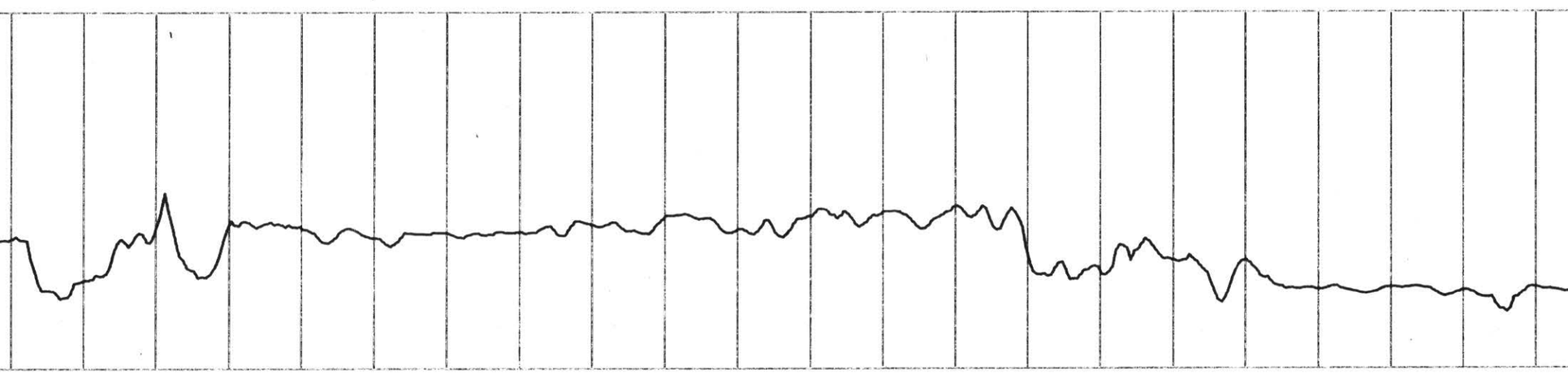
SCHLUMBERGER · DIPMETER ARROW PLOT

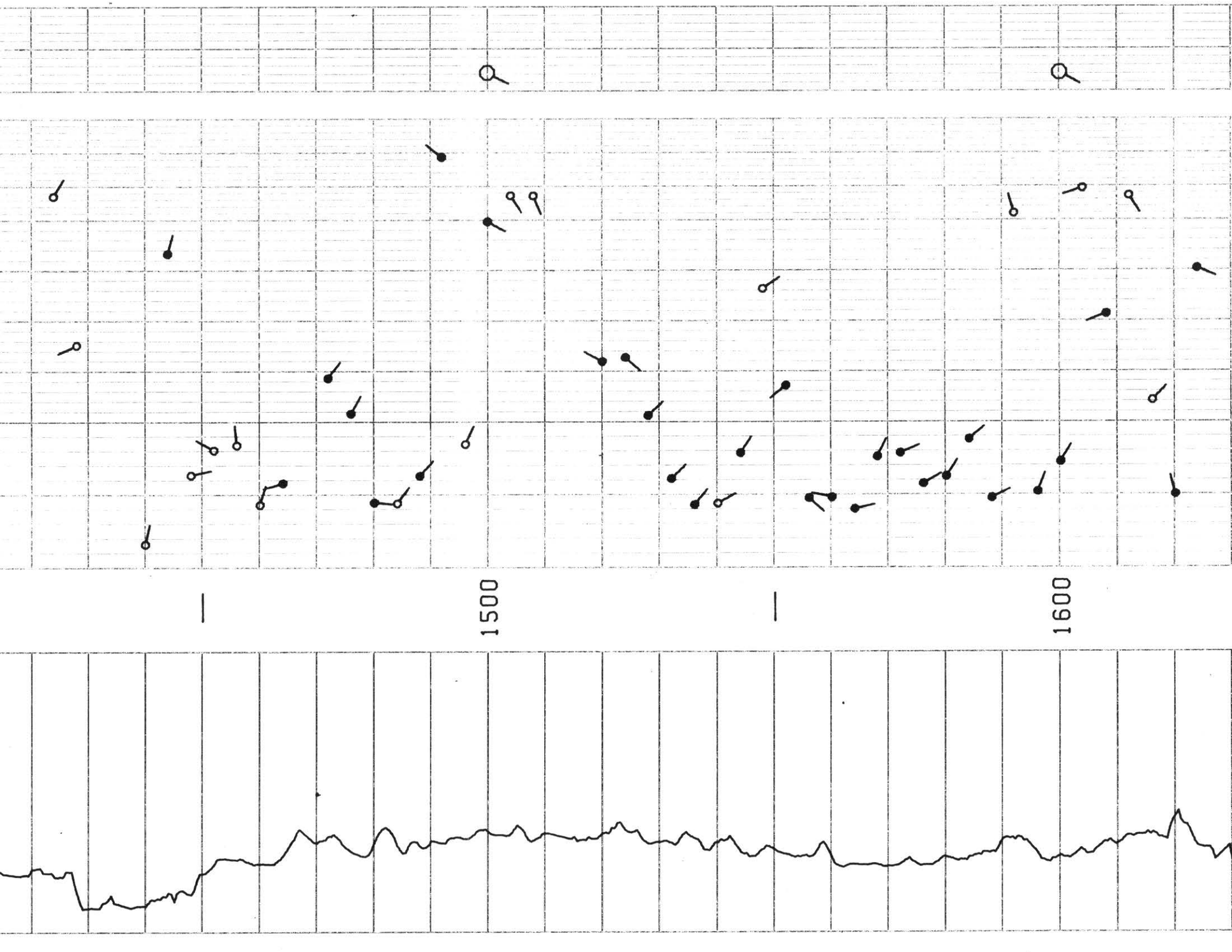
FOOT DUO-DECIMAL .500 IN. GRID


800
900

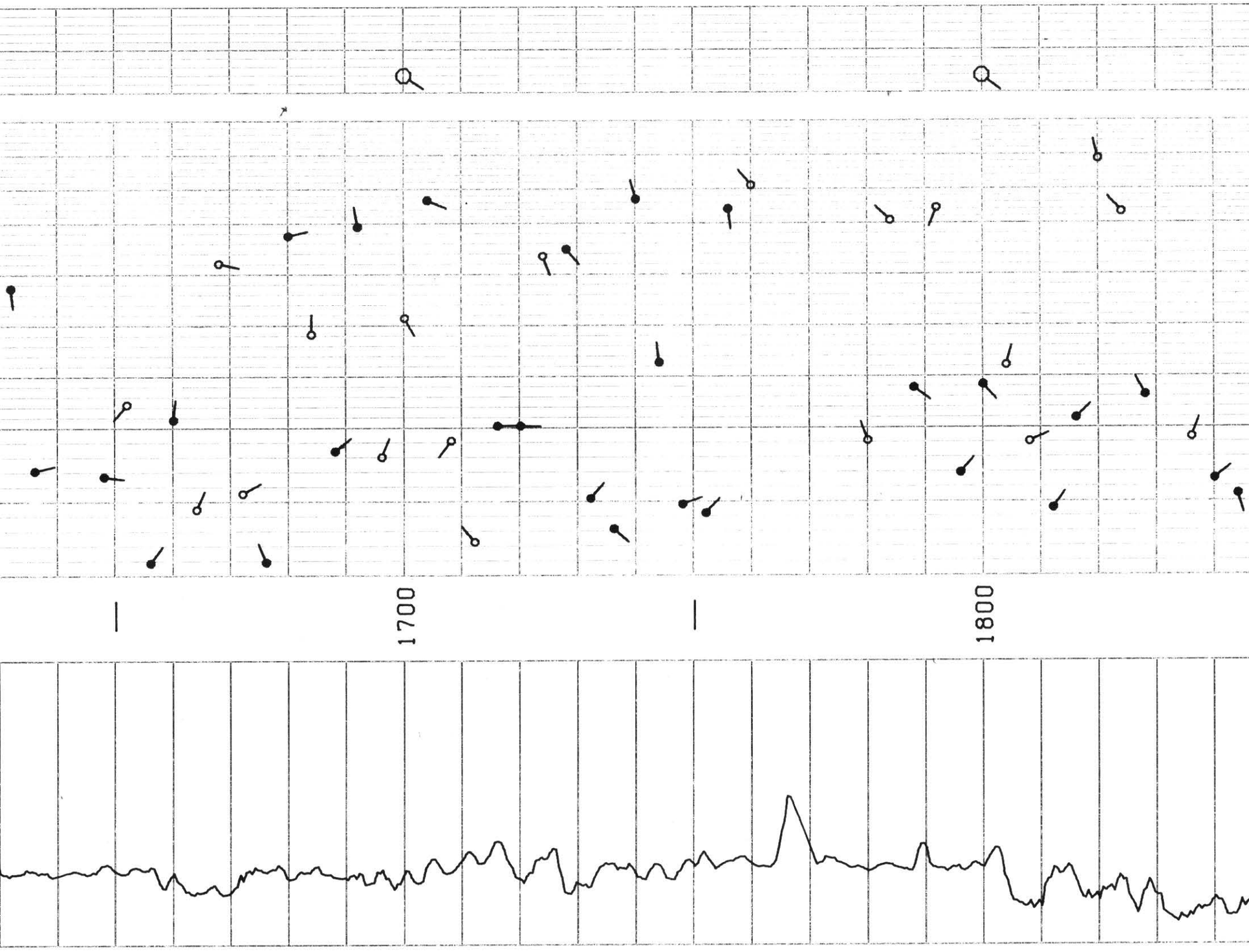

1000
1100


1200
1300
1400



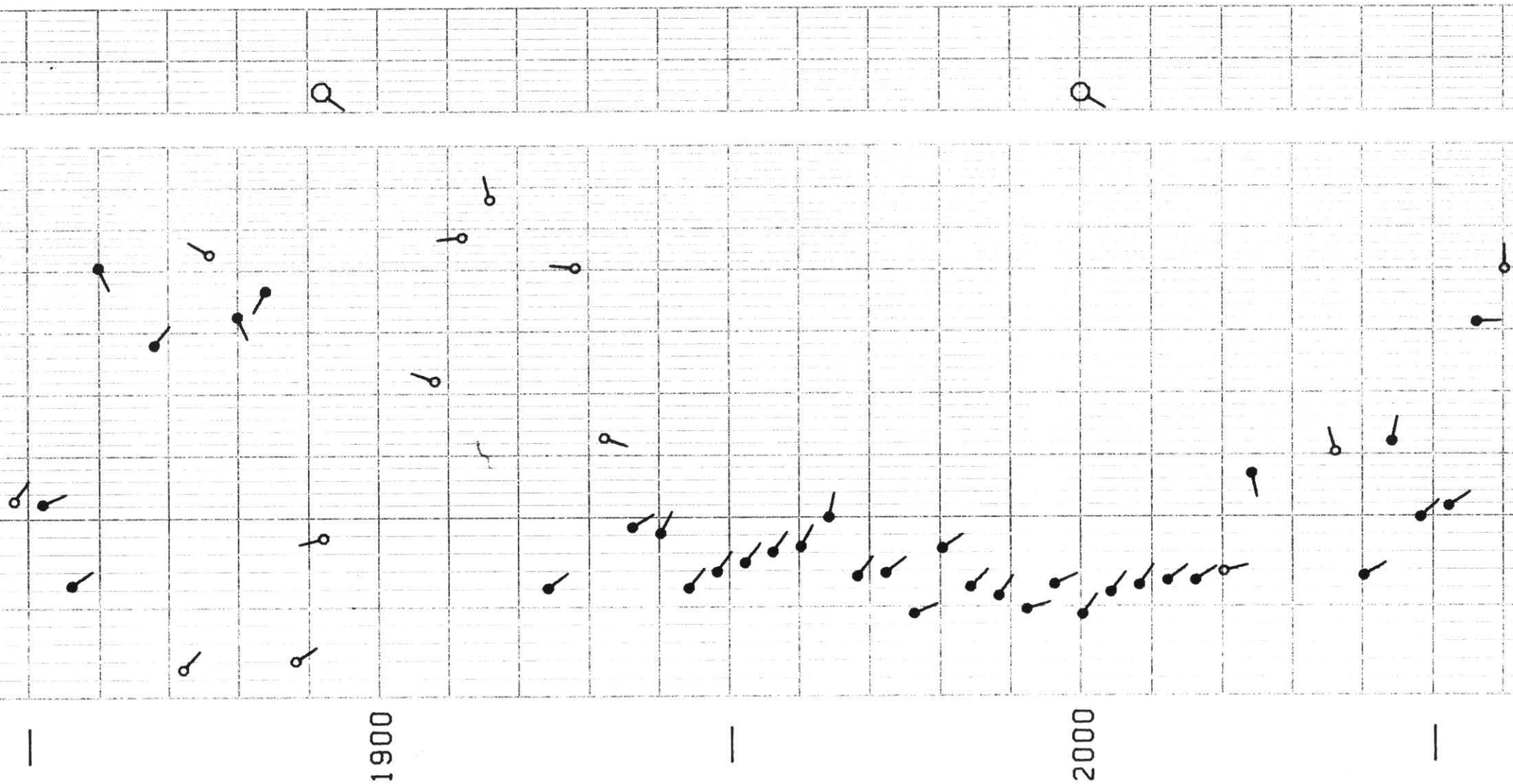

1500
1600

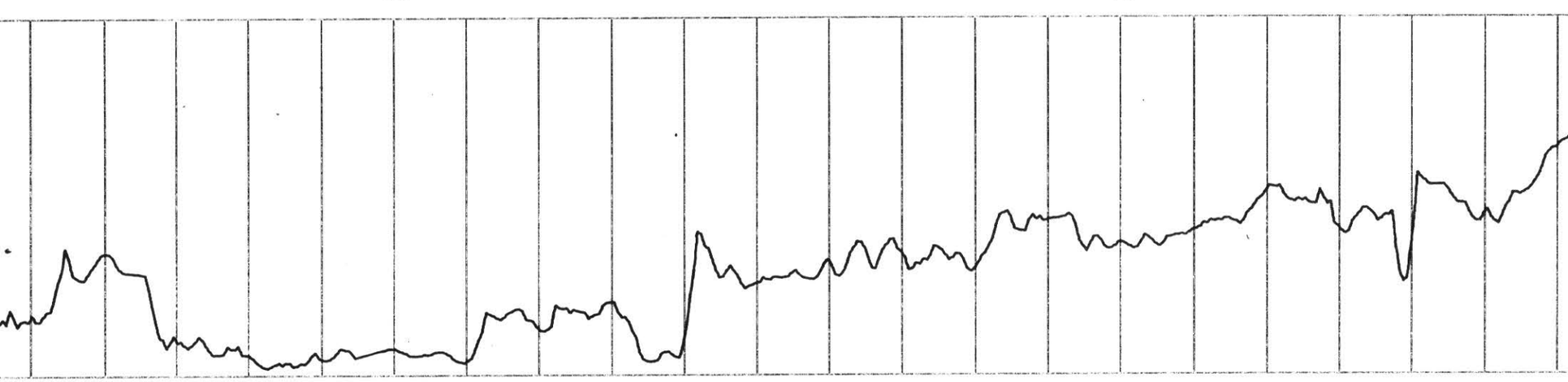
SCHLUMBERGER DIPMETER ARROW PLOT



FOOT DUO-DECIMAL .500 IN. GRID

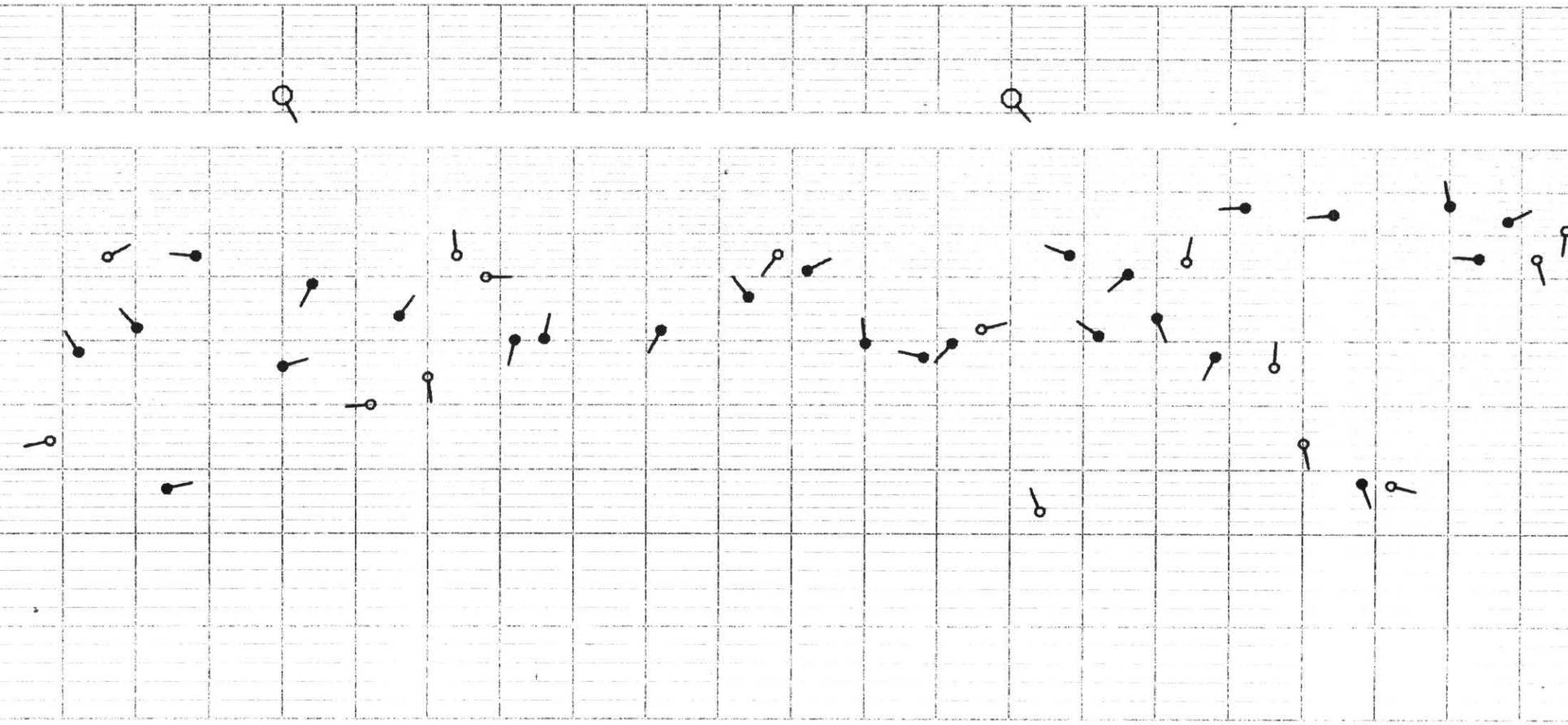
SCHLUMBERGER DIPMETER ARROW PLOT

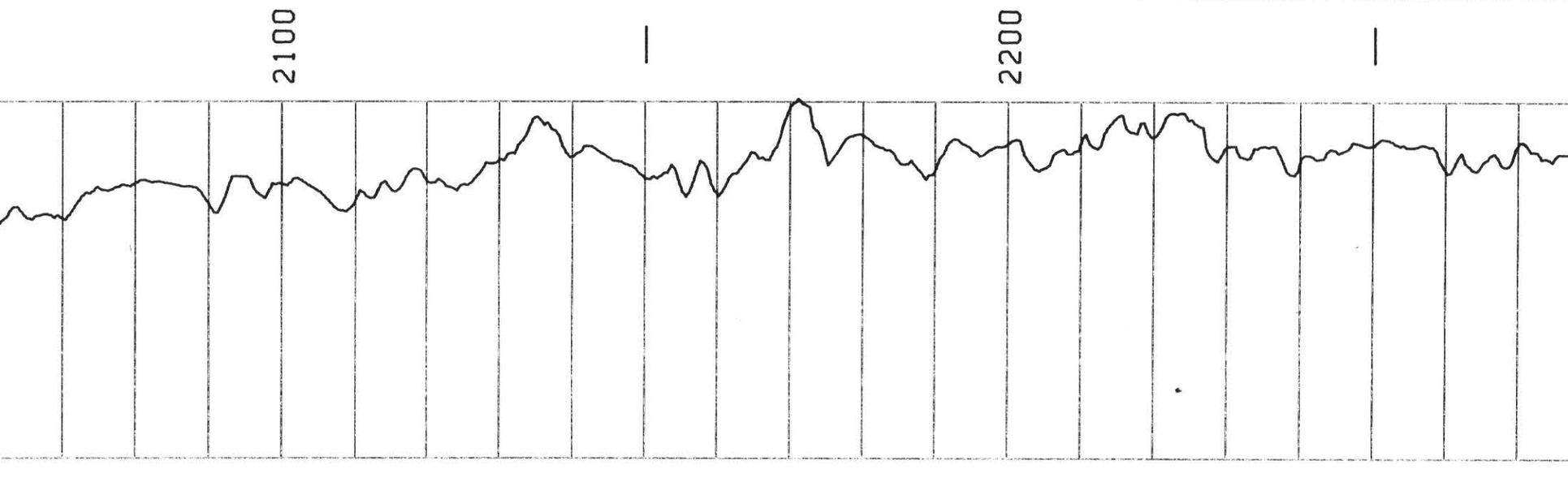




FOOT DUO-DECIMAL .500 IN. GRID

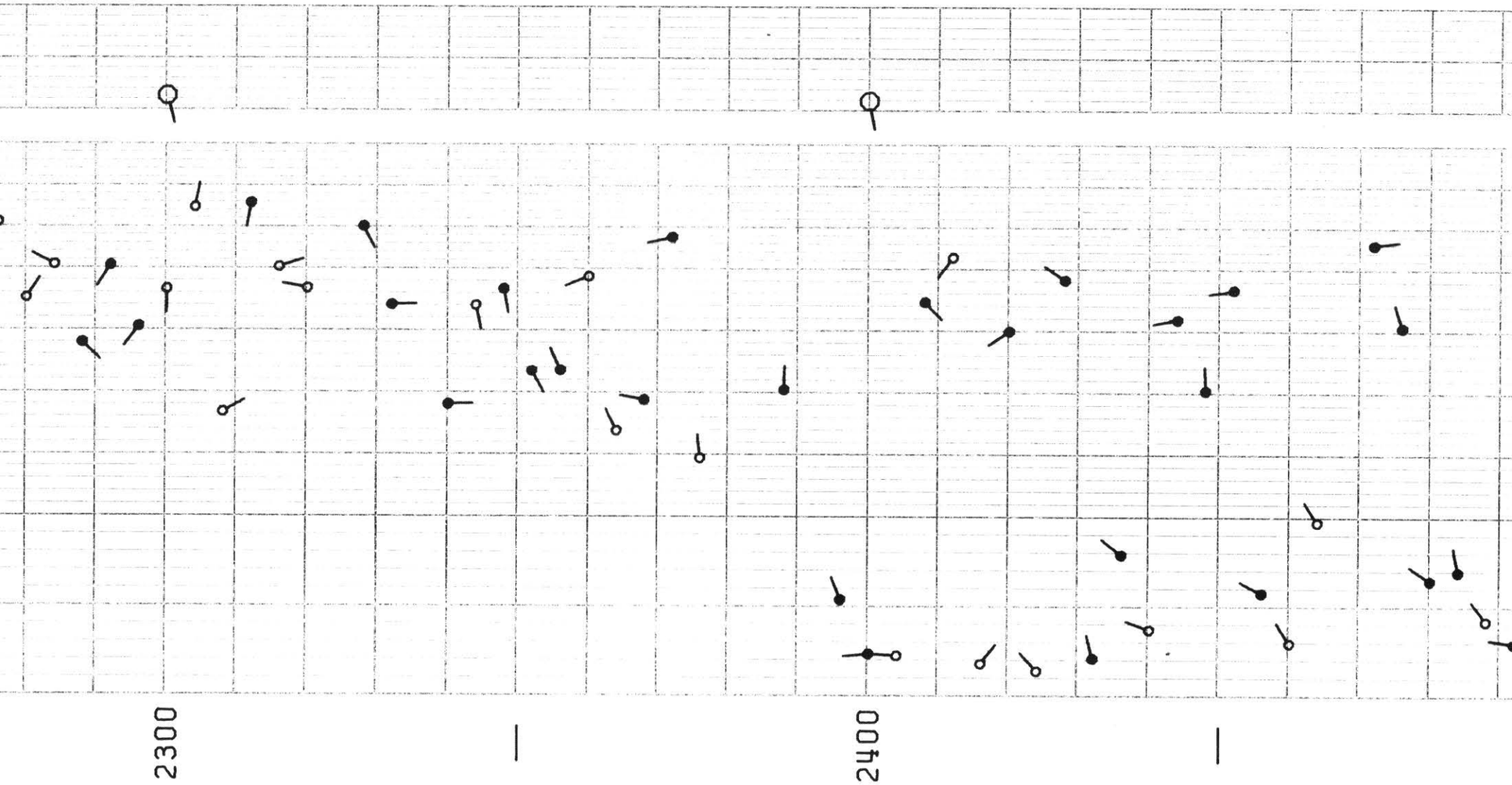
SCHLUMBERGER DIPMETER ARROW PLOT

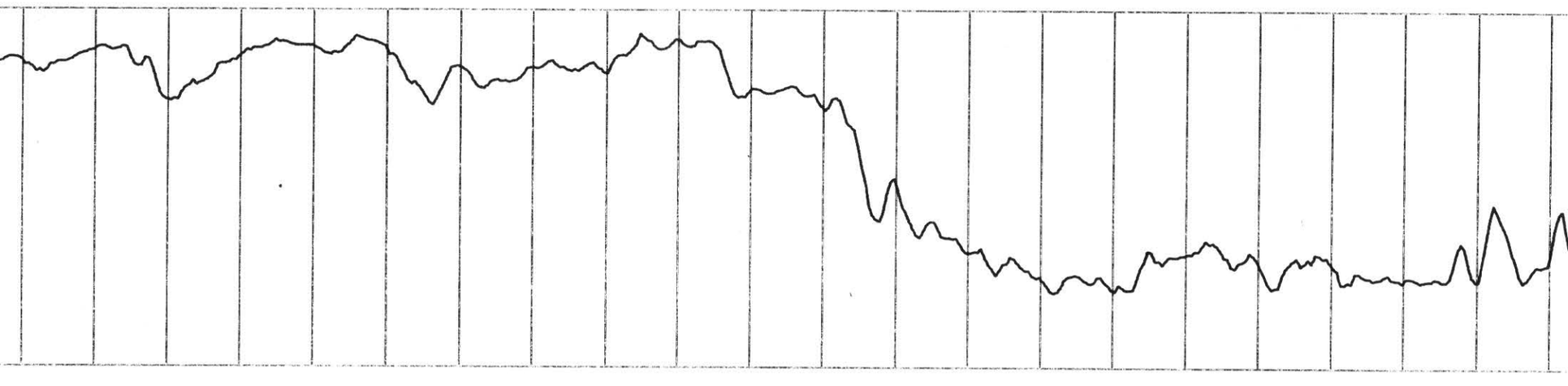




FOOT DUO-DECIMAL .500 IN. GRID

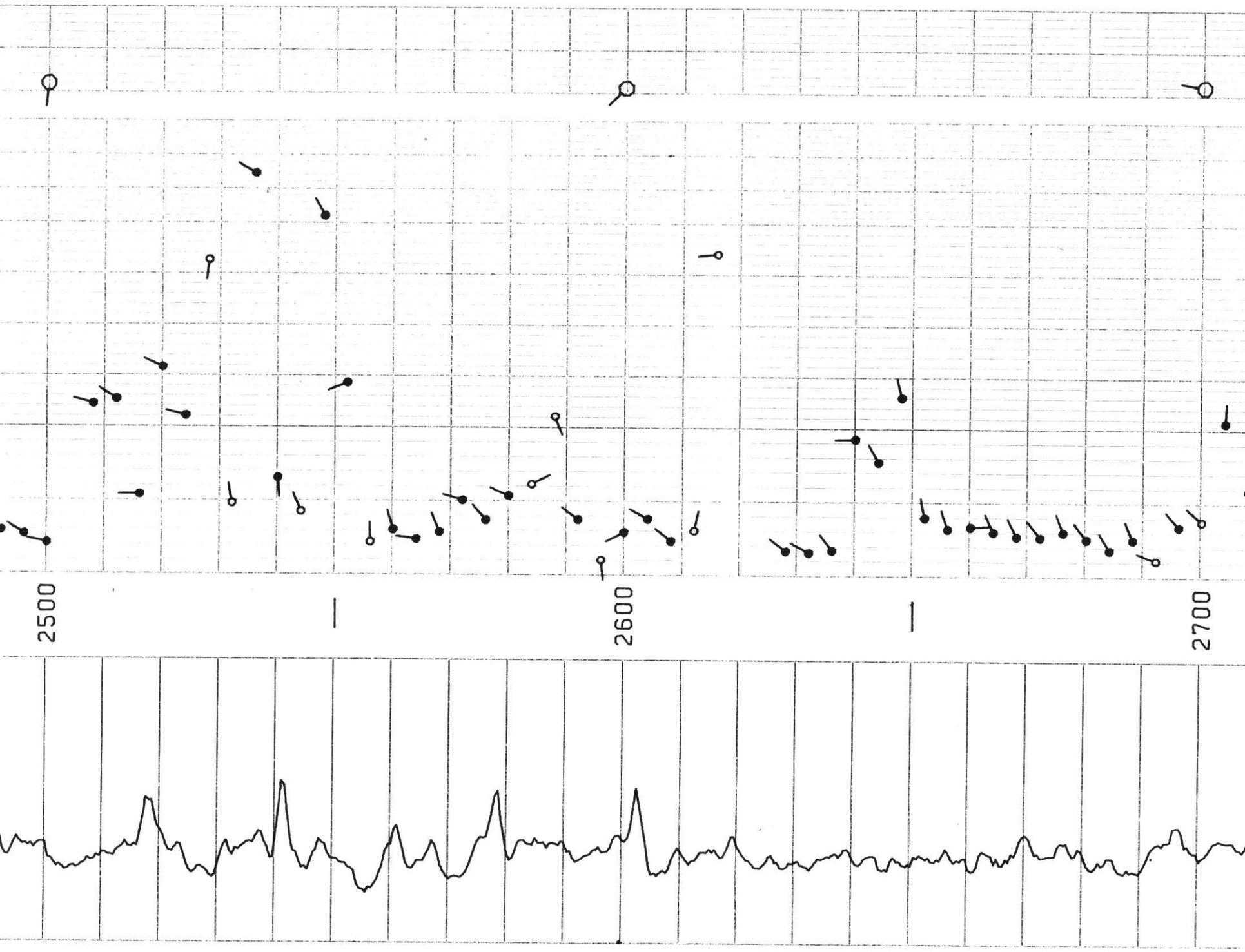
SCHLUMBERGER DIPMETER ARROW PLOT



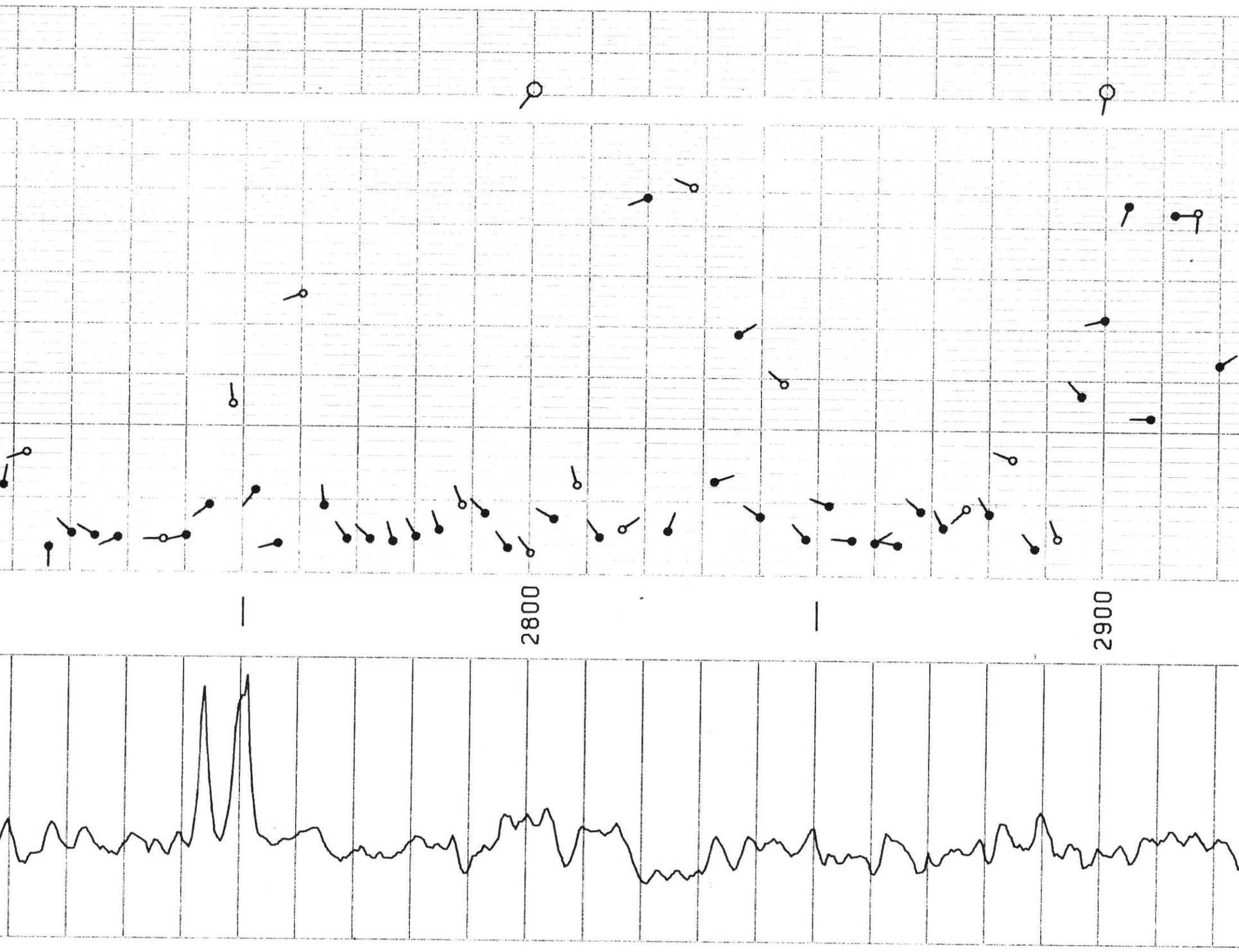


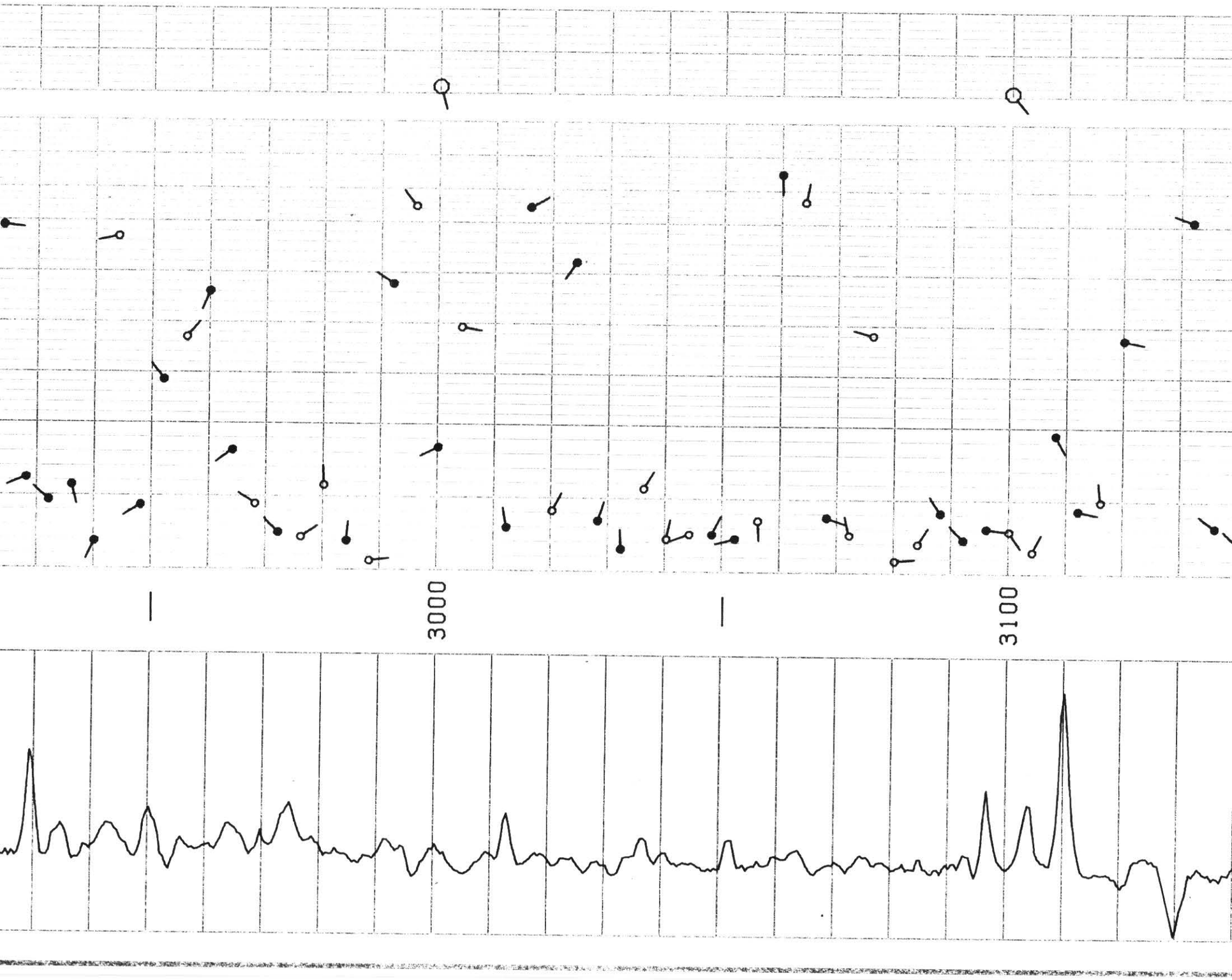
FOOT DUO-DECIMAL 500 IN. GRID

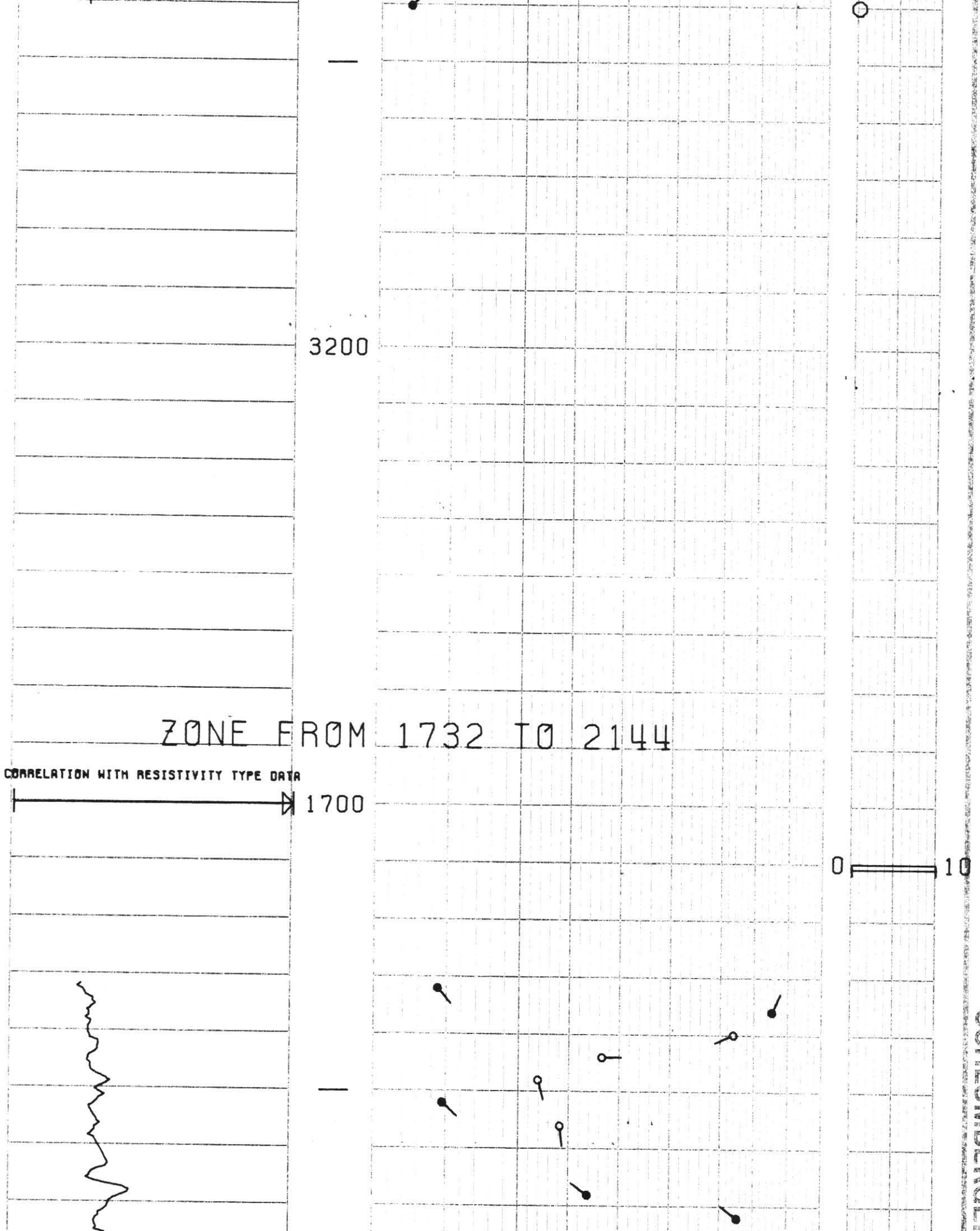
SCHLUMBERGER DIPMETER ARROW PLOT

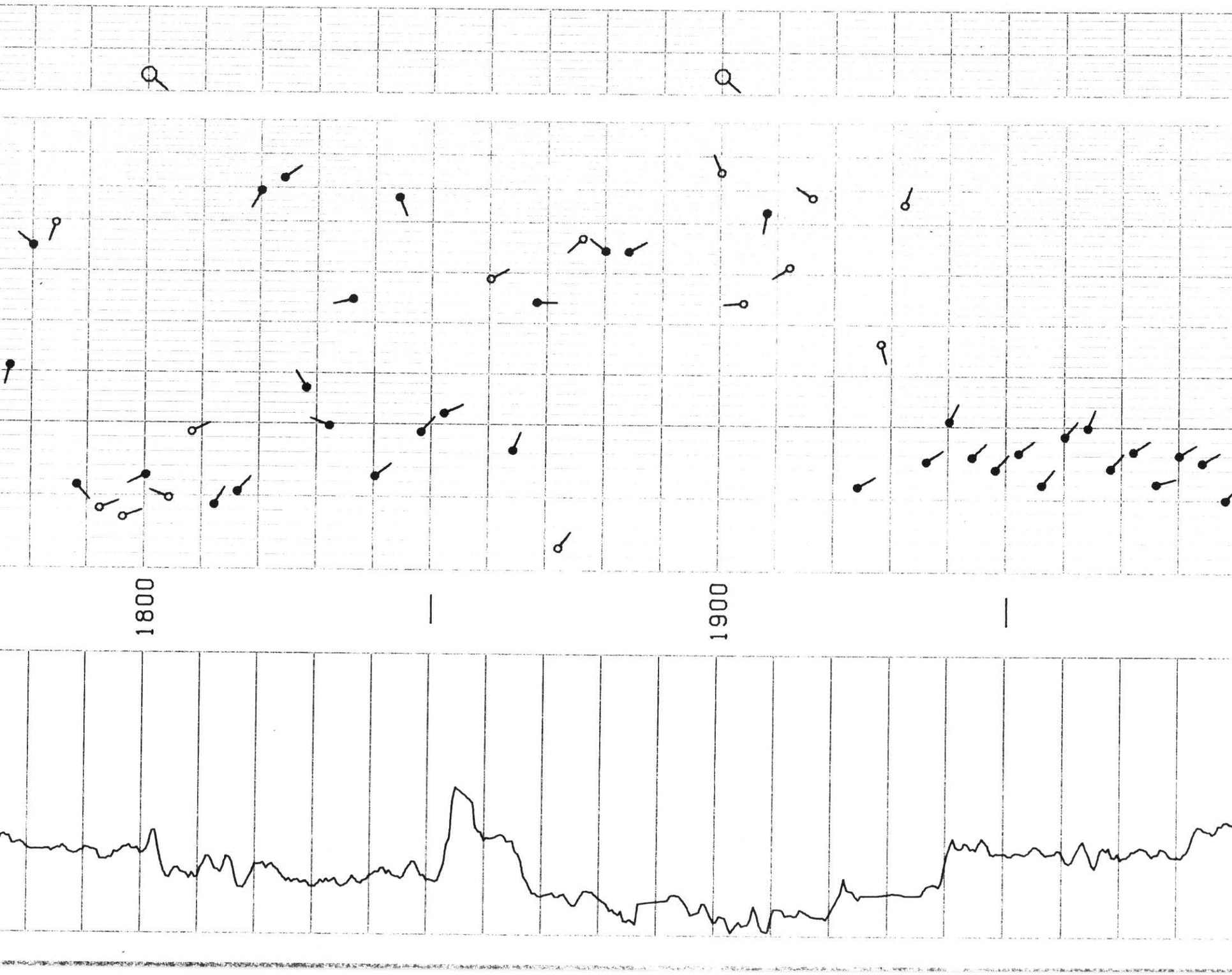


SCHLUMBERGER DIPMETER ARROW PLO

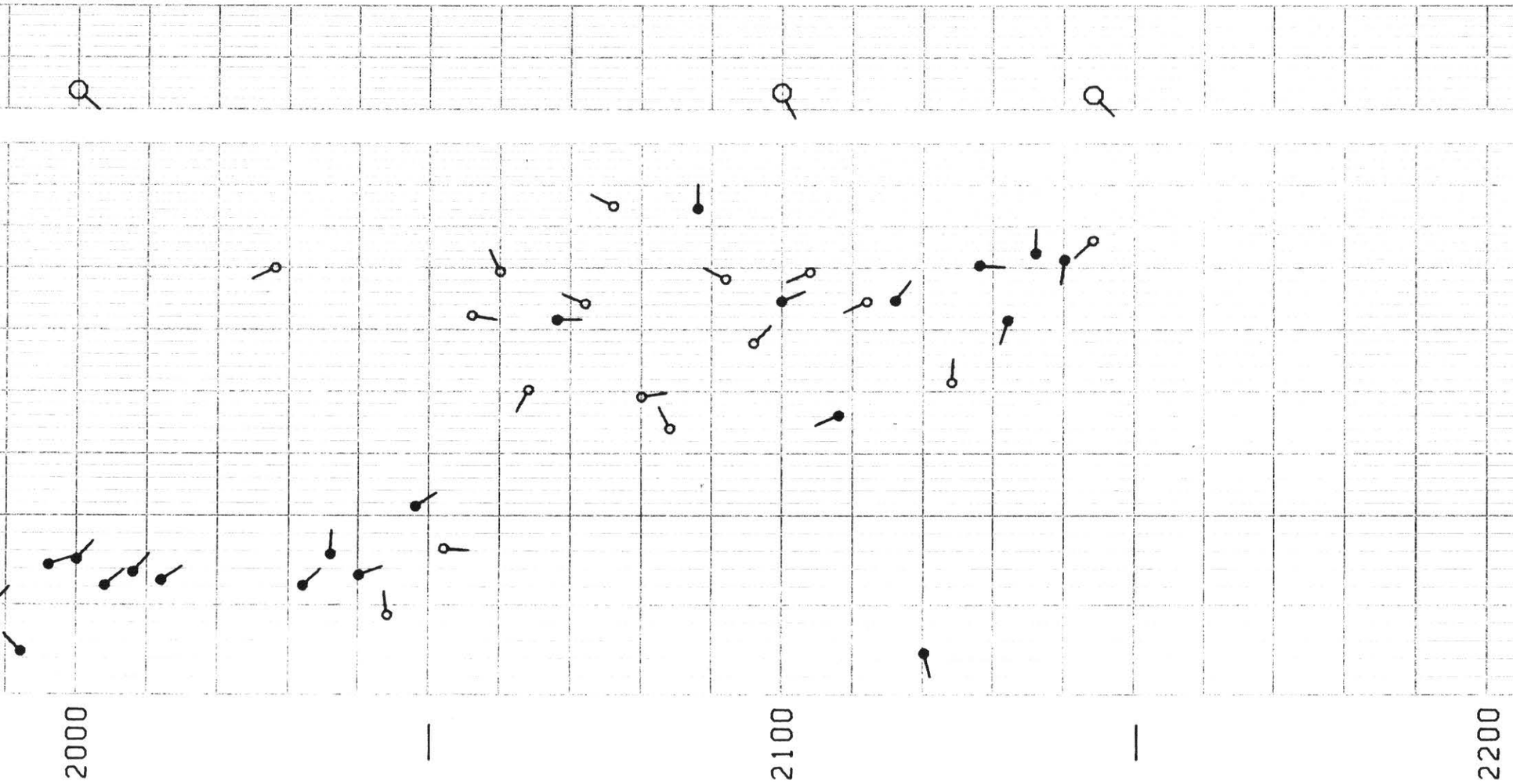


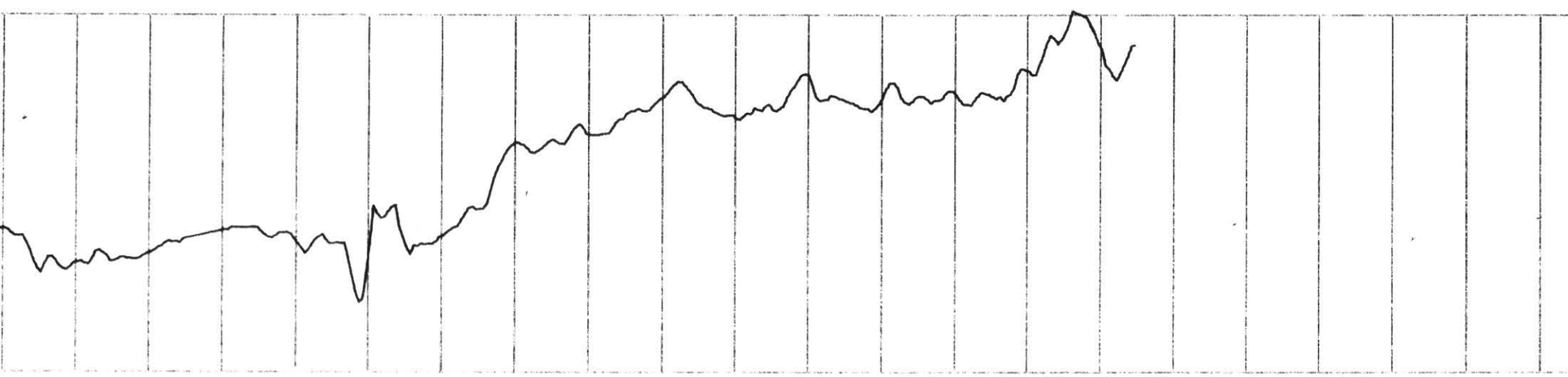

3000
3100


3200
ZONE FROM 1732 TO 2144
CORRELATION WITH RESISTIVITY TYPE DATA
1700
0
10
SCHLUMBERGER ARROW PLOT


1800
1900

UMBERGER DIPMETER ARROW PLOT





SCHLUMBERGER

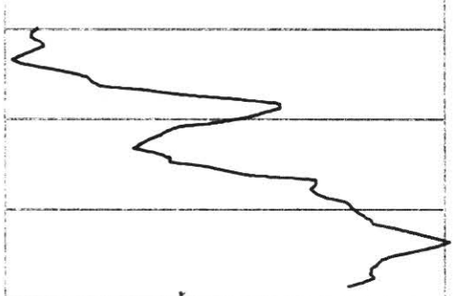
DIPMETER ARROW PLOT

ZONE FROM 2060 TO 2088

CORRELATION WITH RESISTIVITY TYPE DATA

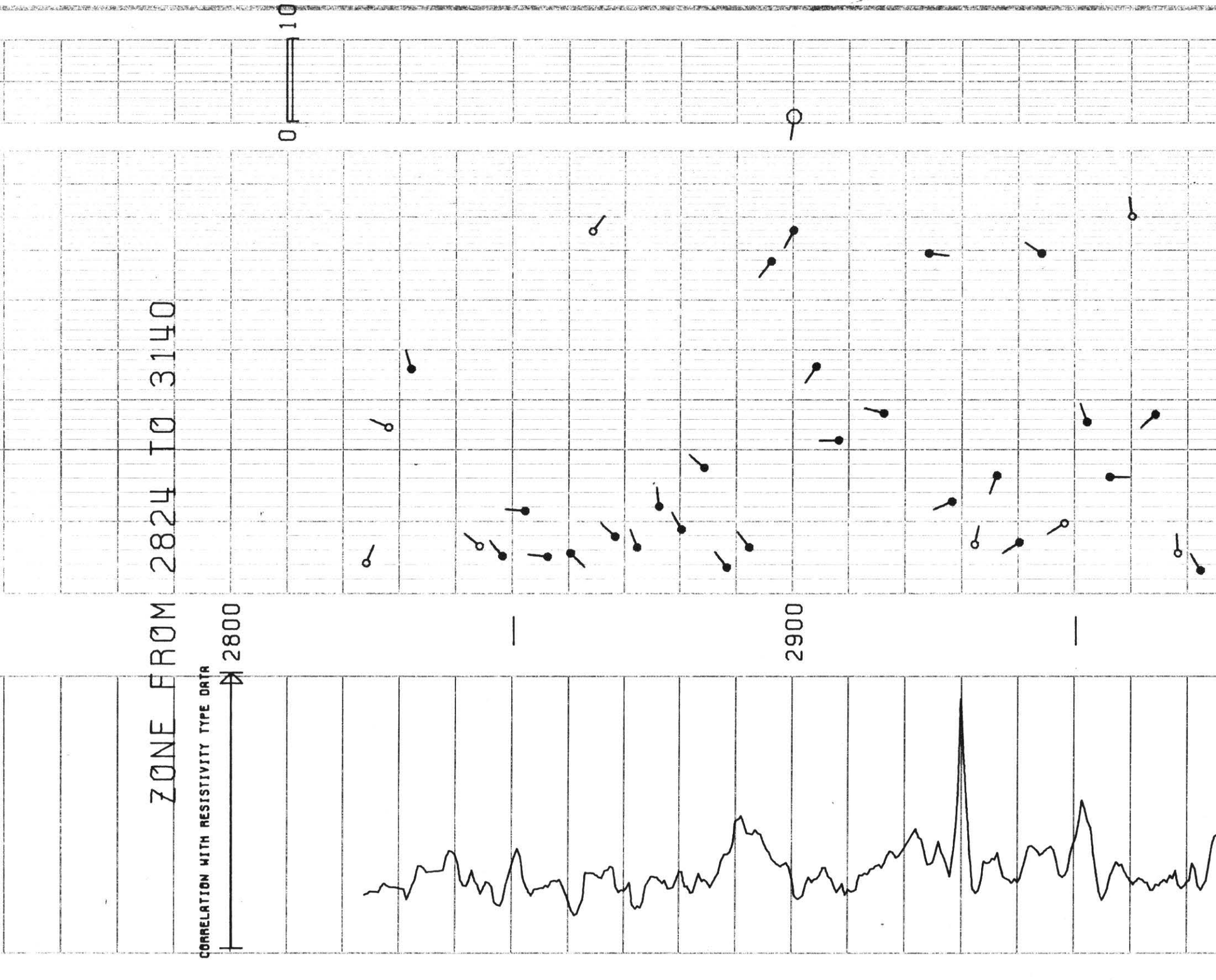
2000

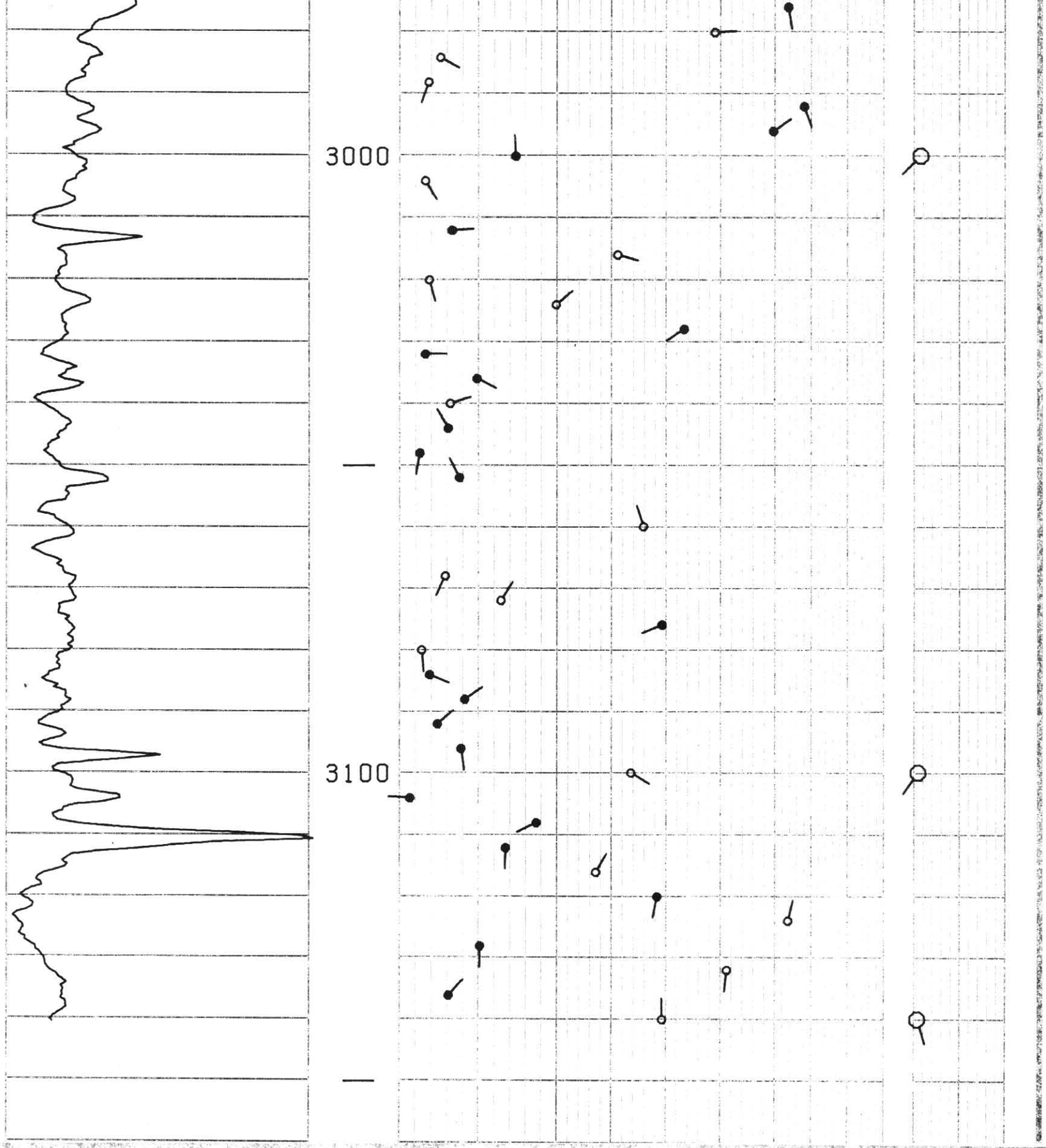
0 10



2100

SCHLUMBERGER DIPMETER ARROW PLOT





SCHLUMBERGER DIPMETER ARROW PLOT

CORRELATION CURVE	DEPTHS	0° 10° 20° 30° 40° 50° 60° 70° 80° 90° TRUE DIP ANGLE AND DIRECTION	0° 10 DRIFT & DIRECTION OF SONDE

COMPANY JACKSON PRAIRIE GAS STORAGE CO.

Rm 3.67 @ 53 °F SCHL. FR 3143

Rmf 2.91 @ 50 °F SCHL. TD 3144

WELL STORAGE UNIT #901

FIELD JACKSON PRAIRIE

COUNTY LEWIS STATE WASHINGTON

Rmf 2.91 @ 50 °F

Rmc 5.0 @ 50 °F

BHT 100 °F

SCHL. TD 3144

DRLR TD 3144

Elev:

KB 537

DF -

GL 525