19-187

SWS-722-D

SCHLUMBERGER

POTECLINOMETER
CONTINUOUS DIPMETER
COMPUTED

COMPANY SHELL OIL COMPANY

CONFIDENTIAL

WELL SHELL MINARD 1-34 (STRAT TEST 3A)

FIELD OCEAN CITY AREA

COUNTY GRAYS HARBOR STATE WASHINGTON

LOCATION Sec. 34 Twp. 18N Rge. 12W

Other Services:

Elev.: K.B. ____ D.F. ____ G.L. ____

Permanent Datum: ____ Elev. ____
Log Measured From ____ Ft. Above Perm. Datum
Drilling Measured From ____

COUNTY GRAYS HARBOR
FIELD or LOCATION OCEAN CITY AREA
WELL (3A) SHELL MINARD 1-34 (STRAT TEST
COMPANY SHELL OIL CO.

Date	5-18-70			
Run No.	ONE			
Depth—Driller	4600			
Depth—Logger	4598			
Btm. Log Interval	4597			
Top Log Interval	517			
Casing—Driller	517 @	@	@	
Casing—Logger	517			
Bit Size	8¾			
Type Fluid in Hole	FRESH LIGNO			
Dens. | Visc.	8.4 | 57			
pH | Fluid Loss	10.2 | 6.2ml	ml	ml	ml
Source of Sample	-			
R_m @ Meas. Temp.	1.96@67 °F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	- @ °F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	- @ °F	@ °F	@ °F	@ °F
Source: R_{mf} R_{mc}	- -			
R_m @ BHT	@ 108°F	@ °F	@ °F	@ °F
Time Since Circ.	-			
Max. Rec. Temp.	108°F °F	°F	°F	°F
Equip. Location	3716 SAC			
Recorded By	ANDERSEN			
Witnessed By	HASTINGS			

FOLD HERE

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

Changes in Mud Type or Additional Samples		
Date | Sample No.		
Depth—Driller		
Type Fluid in Hole		
Dens. | Visc.		
ph | Fluid Loss	ml	
Source of Sample		
R_m @ Meas. Temp.	@ °F	@ °F
R_{mf} @ Meas. Temp.	@ °F	@ °F
R_{mc} @ Meas. Temp.	@ °F	@ °F
Source: R_{mf} | R_{mc}		
R_m @ BHT	@ °F	@ °F
R_{mf} @ BHT	@ °F	@ °F
R_{mc} @ BHT	@ °F	@ °F

Run No.	1	2	3	4
Tool Type	4ARMHDT			
DCM No.	HDM-D-752E			
Magnetic Declination	22°E			
Analog Panel No.				
Digital Panel No.	DDR-C-713			
Correlated By	UNIV1108			
Computed By	UNIV1108			
Plotted By	CALCOMP			

Correlation Interval 4 Step Length 4 Search Angle 60°

Digital Computation No. LA05110

Remarks: QUALITY INDICATIONS ARE AS FOLLOWS:
CIRCLE-EXCELLENT SQUARE-GOOD DIAMOND-FAIR

"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 computa-

CONT. DIPMETER (HDT) RETENTION 1 YR

tions, 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."

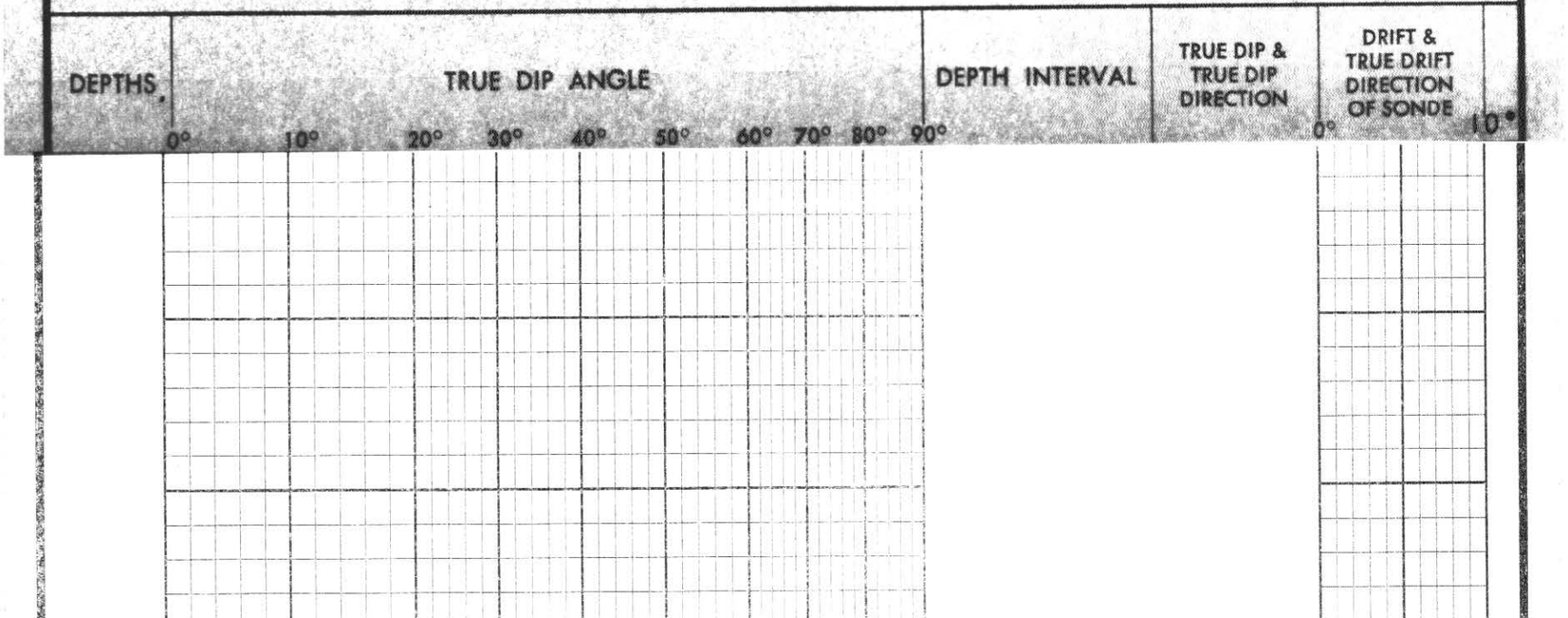
TABLE OF VERTICAL DISPLACEMENT IN FEET CORRESPONDING TO VARIOUS HORIZONTAL DISTANCES AND ANGLES OF DIP

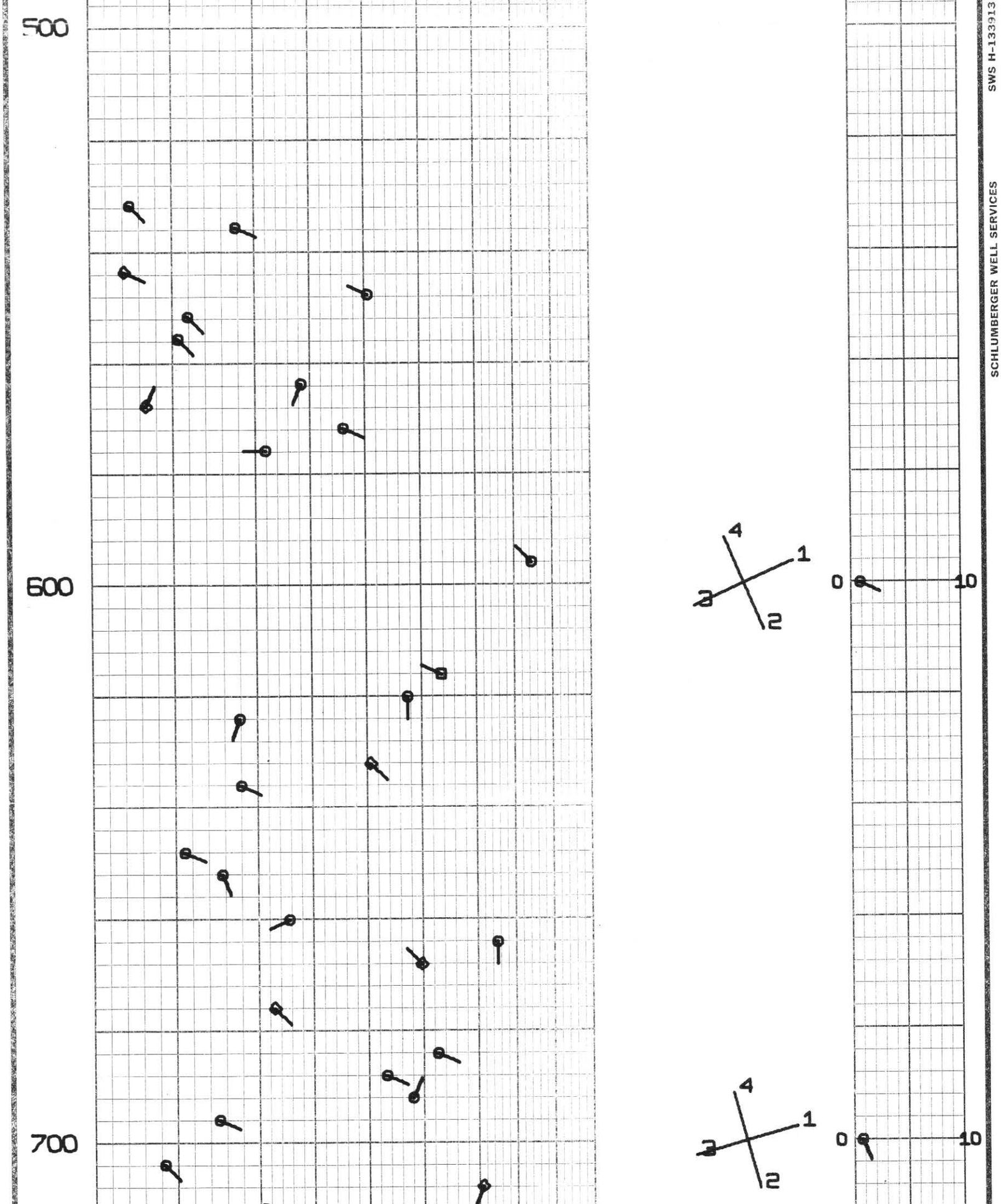
DIP ANGLES (degrees)	VERTICAL DISPLACEMENT FOR HORIZONTAL DISTANCES OF 100′	1000′	1 mile (5280′)	DIP ANGLES (degrees)	VERTICAL DISPLACEMENT FOR HORIZONTAL DISTANCES OF 100′	1000′	1 mile (5280′)
1	1.75	17.5	92.2	19	34.4	344.	1818.
2	3.5	35.	184.	20	36.4	364.	1922.
3	5.2	52.	277.	21	38.4	384.	2027.
4	7.0	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




500
600
700
4
1
3
2
0
10
4
1
3
2
0
10
SCHLUMBERGER WELL SERVICES
SWS H-133913

800

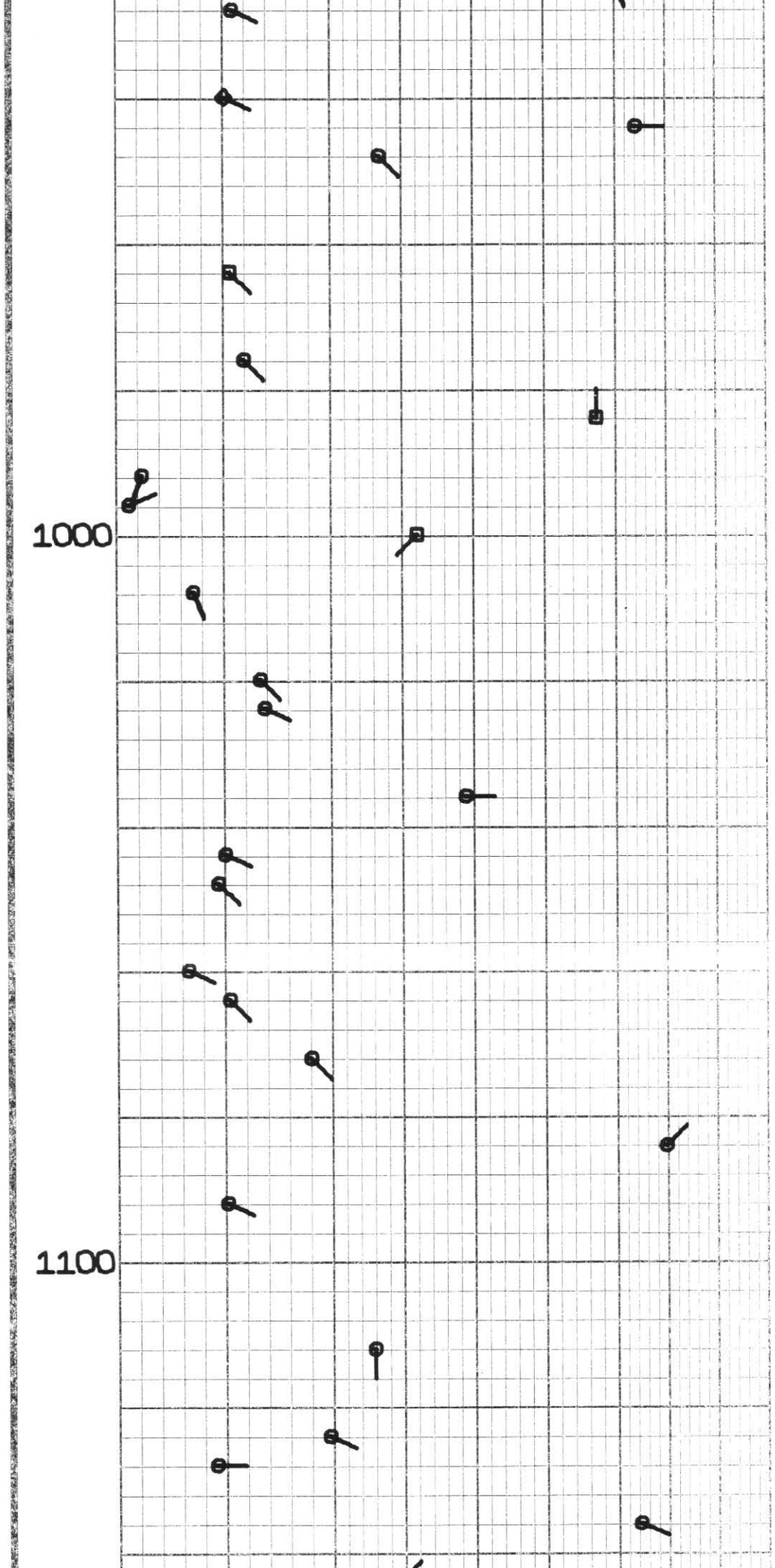
900

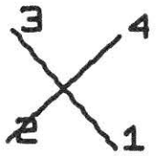
4
3
1
2
0
10

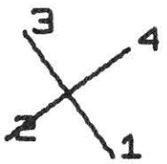
3
4
2
1
0
10

SCHLUMBERGER WELL SERVICES

SWS H-133913







SCHLUMBERGER WELL SERVICES

SWS H-133913

1200

1300

0 10

0 10

SCHLUMBERGER WELL SERVICES

SWS H-133913

1400

1500

4 1 2 3

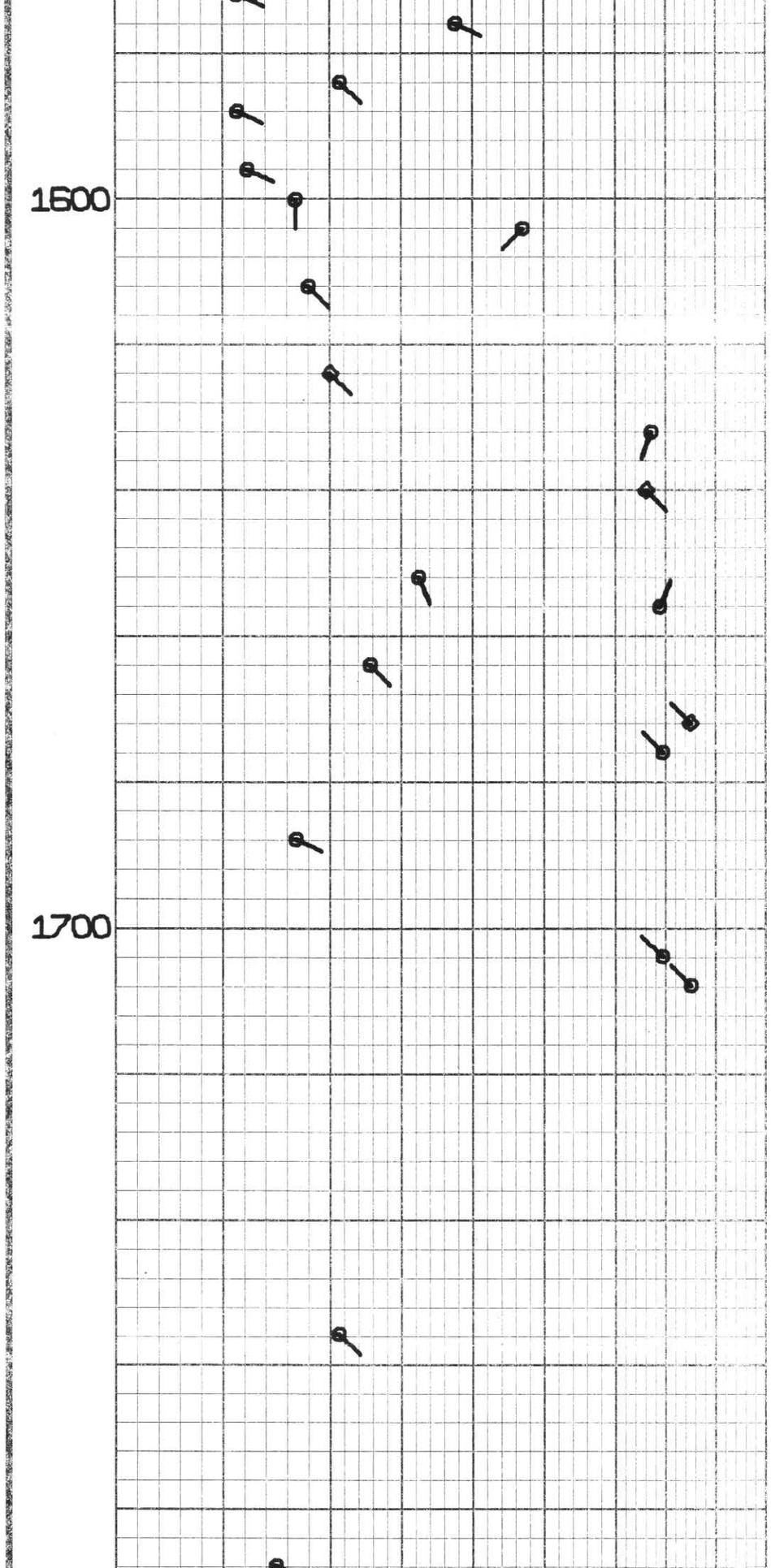
0 10

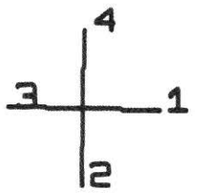
4 1 2 3

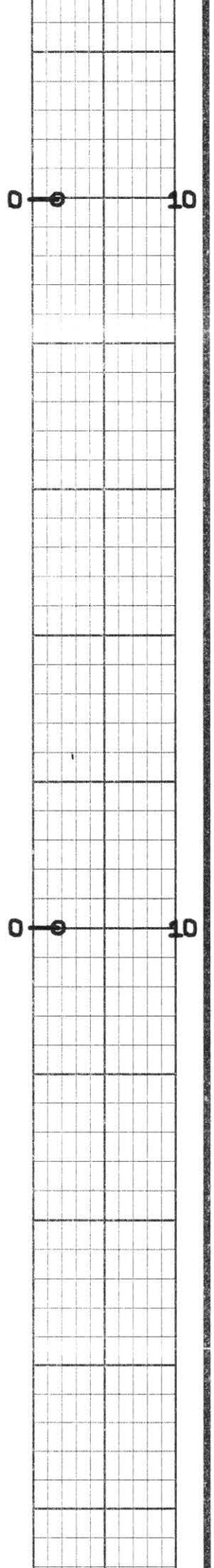
0 10

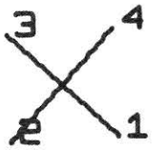
SCHLUMBERGER WELL SERVICES

SWS H-133913



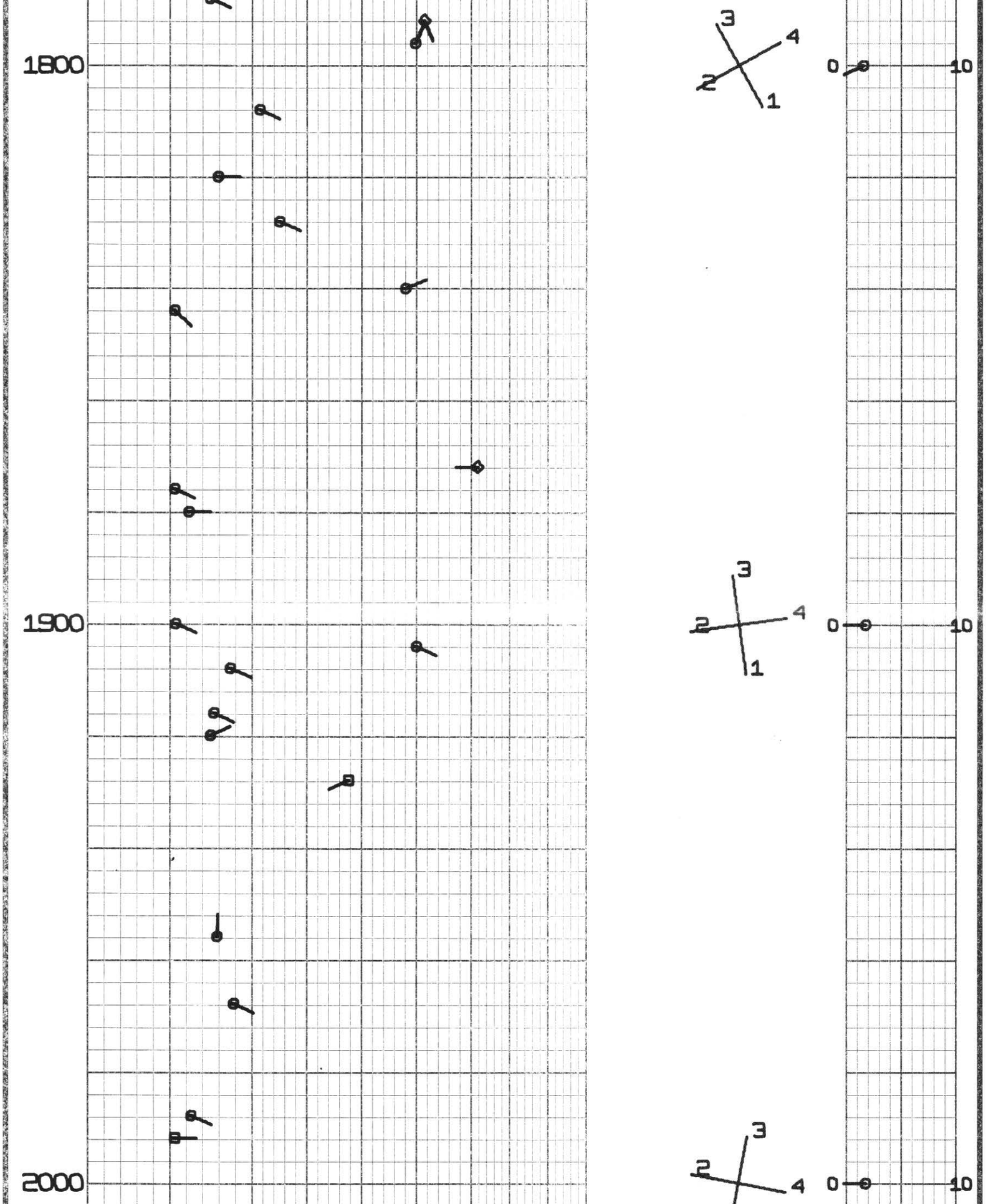






SCHLUMBERGER WELL SERVICES

SWS H-133913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1900
2000
3
4
2
1
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3
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4
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10
SCHLUMBERGER WELL SERVICES
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2100

2200

3
2
4
1

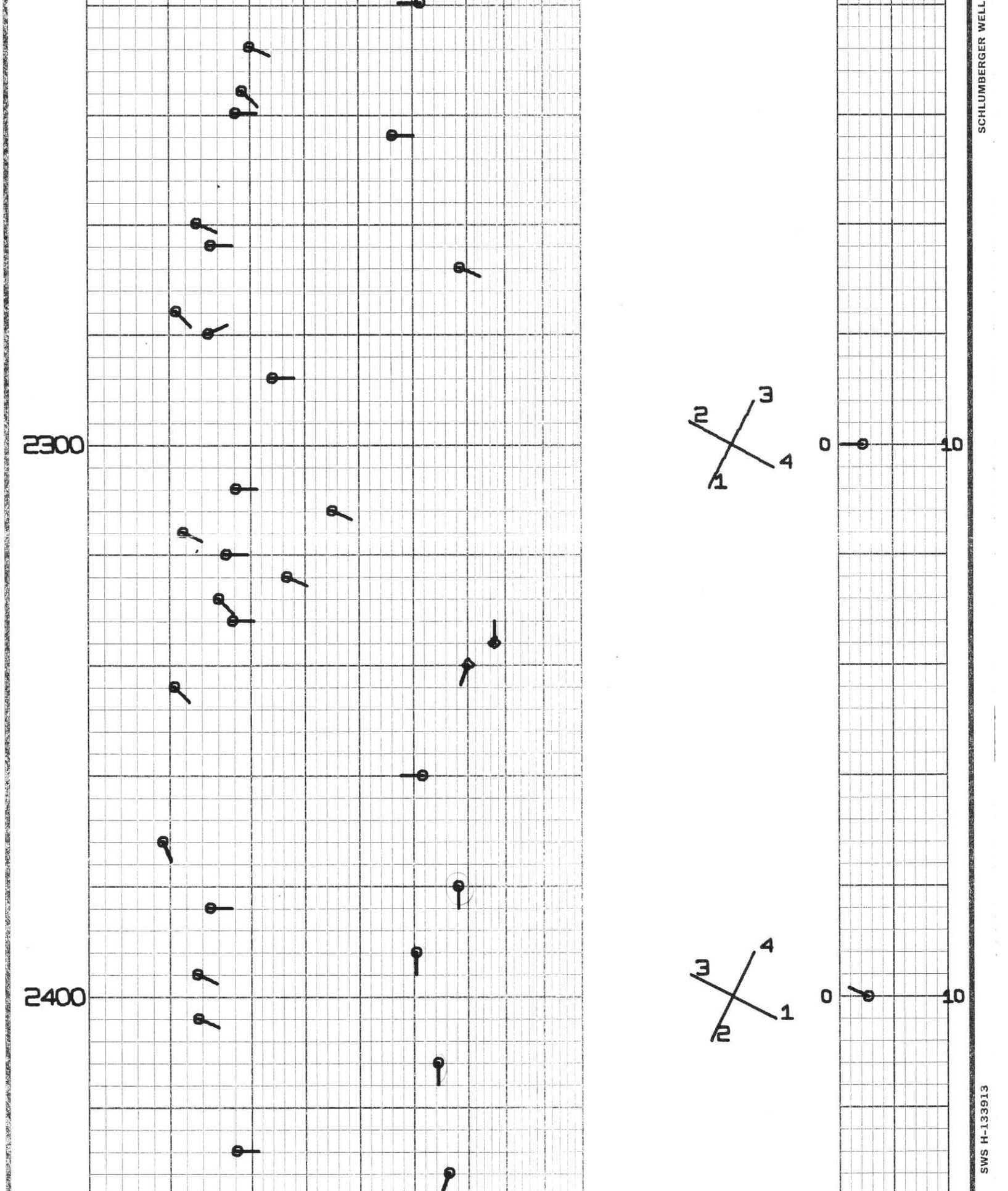
0
10

2
3
1
4

0
10

SERVICES

SWS H-133913


2300
2400
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4
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10
4
3
1
2
0
10
SCHLUMBERGER WELL
SWS H-133913

2500
2600
4
1
3
2
0
10
4
1
3
2
0
10
SCHLUMBERGER WELL SERVICES

2700

2800

4 1 3 2

0 10

4 1 3 2

0 10

SCHLUMBERGER WELL SERVICES

SWS H-133913

2900

3000

0 10

0 10

SCHLUMBERGER WELL SERVICES

SWS H-133913

3100

3200

0 10

0 10

SCHLUMBERGER WELL SERVICES

SWS H-133913

3300

3400

3500

0 10

0 10

2
1 3
4

SCHLUMBERGER WELL SERVICES

SWS H-133913

3600

3700

3
4
2
1

0

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4
3
1
2

0

10

SCHLUMBERGER WELL SERVICES

SWS H-133913

3800

3900

4
3
1
2

0
10

1
2
4
3

0
10

SCHLUMBERGER WELL SERVICES

SWS H-133913

4000

4100

3 4 2 1

0 10

3 4 2 1

0 10

SCHLUMBERGER WELL SERVICES

SWS H-133913

4200

4300

0 10

0 10

SWS H-133913

SCH

RVICES

4400

4500

3 4 1 2

0 10

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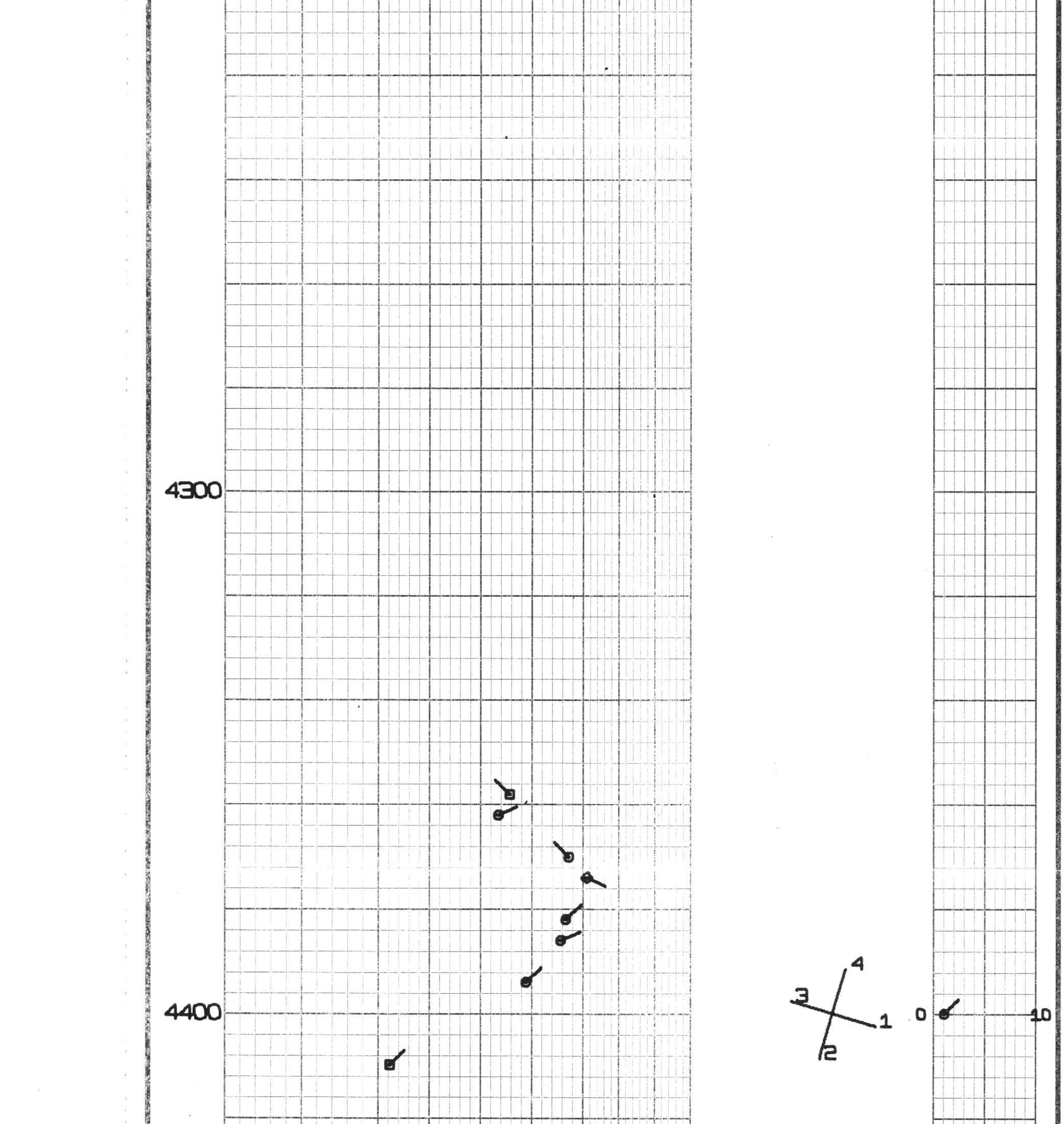
0 10

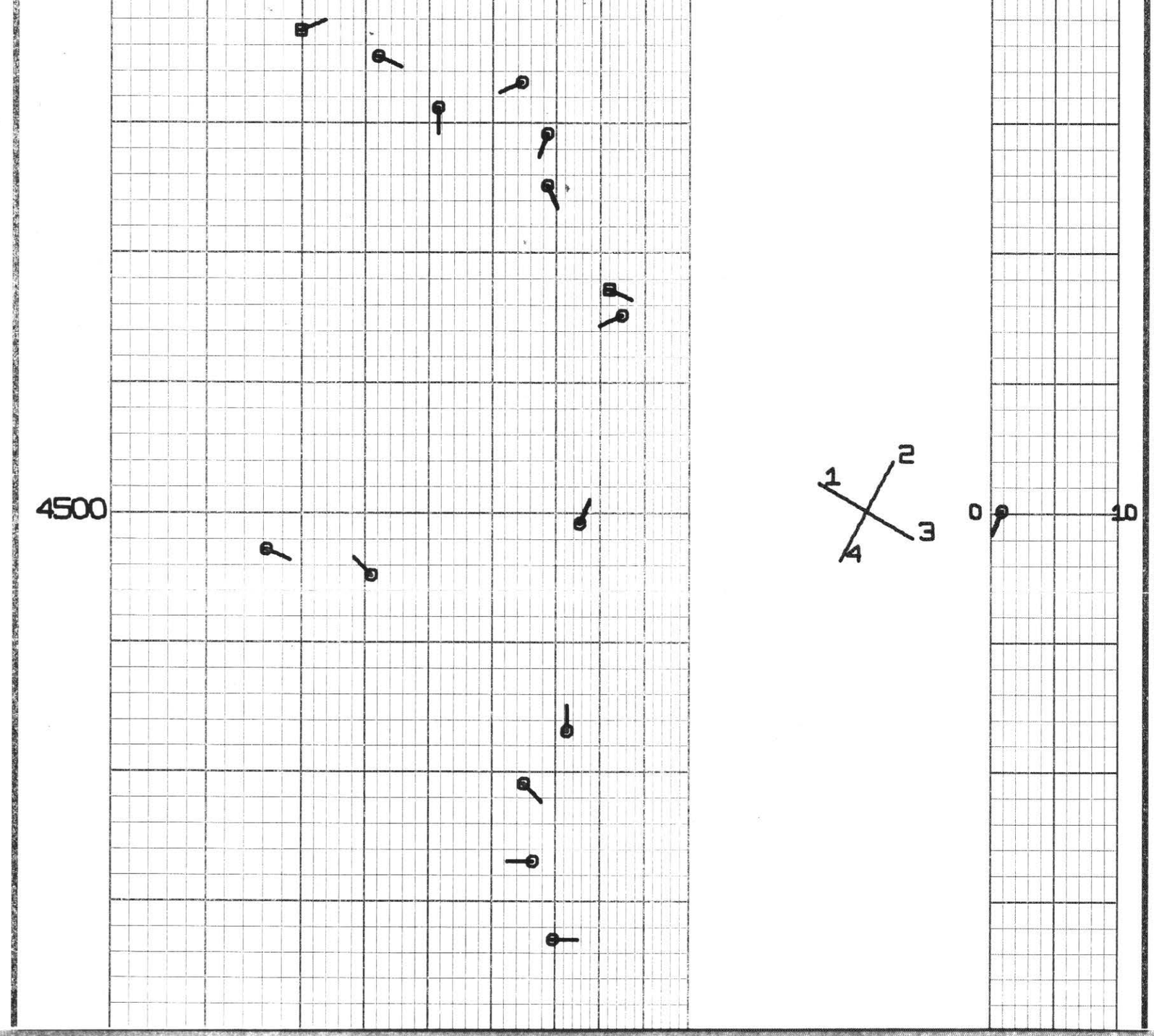
SCHLUMBERGER WELL SE

WS H-133913

2900

SCHLUMBERGER WELL SERVICES


4300
4400
4
3
1
2
0
10
SCHLUMBERGER WELL SERVICES
SWS H-133913



SCHLUMBERGER WELL SERVICES SWS H-133913

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

COMPANY SHELL OIL COMPANY

WELL SHELL MINARDI 1-34 (STRAT TEST 3A)

FIELD OCEAN CITY AREA

COUNTY GRAYS HARBOR STATE WASHINGTON

SCHL. FR 4597
SCHL. TD 4598
DRLR TD 4600
Elev:
KB
DF
GL