

TABEL I.

DEININGMETER.

Datum	Zonnetijd		Wind		Water-stand m t.o.v. N.A.P.	Golven	
	uur	min	rich-ting	snel-heid m/sec		hoogte m	periode sec
13-12-1941	7	20	- 67°	14	+ 0,65	0,41	-
17-12-1941	20	55	+ 11°	7 - 4	+ 1,20	0,54	-
20-12-1941	11	00	+ 34°	6 - 5	+ 0,82	0,40	2,1
23-12-1941	0	25	- 45°	16	+ 1,61	0,78	-
24-12-1941	20	45	- 45°	11	- 0,20	0,38	-
25-12-1941	0	20	- 45°	10	+ 1,90	0,75	-
25-12-1941	9	00	- 34°	14	- 0,20	0,60	2,4
25-12-1941	10	10	- 18°	13	+ 0,30	0,88	2,8/3,3
25-12-1941	10	50	- 11°	14	+ 0,70	0,91	2,6
15- 4-1942	13	10	+ 34°	4	- 0,50	0,50	-
15- 4-1942	23	50	+ 45°	4	+ 0,15	0,60	-
16- 4-1942	13	10	+ 34°	5	- 0,40	0,47	-
17- 4-1942	15	00	+ 45°	8	- 0,60	0,50	-
21- 4-1942	15	50	+ 45°	5	0,00	0,34	-
24- 4-1942	3	20	+ 15°	7	+ 0,20	0,56	-
30- 4-1942	13	40	- 23°	7	- 0,50	0,74	-
1- 5-1942	14	20	- 30°	5	- 0,50	0,51	-
1- 5-1942	16	20	- 56°	6 a 7	- 1,20	0,25	-
4- 5-1942	12	20	- 34°	6	+ 0,85	0,56	-
7- 5-1942	17	00	+ 23°	7½	+ 0,30	0,60	-
7- 5-1942	22	50	+ 11°	6	- 0,70	0,28	-
8- 5-1942	5	20	+ 23°	4	0,00	0,40	-
8- 5-1942	11	10	0°	6	- 0,70	0,18	-
8- 5-1942	16	20	+ 23°	5	+ 0,50	0,50	-
21- 5-1942	4	40	+ 23°	3	- 0,35	0,45	-
22- 5-1942	2	20	+ 11°	3	+ 0,40	0,42	-
18- 6-1942	18	00	- 30°	6	- 0,70	0,53	-
18- 6-1942	20	10	- 11°	5½	- 0,45	0,21	-
19- 6-1942	15	00	- 23°	4	+ 0,20	0,42	-
24- 6-1942	6	00	0°	8	+ 0,35	0,60	-
24- 6-1942	18	00	- 11°	8	+ 0,70	0,64	-
25- 6-1942	0	30	- 23°	7	- 1,10	0,32	-
25- 6-1942	6	30	- 30°	7	+ 0,60	0,64	-
26- 6-1942	2	00	- 34°	8	- 0,80	0,30	-
1- 7-1942	17	00	+ 23°	7	- 0,70	0,42	-
11- 7-1942	8	20	- 23°	14	+ 1,50	0,80	-
11- 7-1942	12	30	- 56°	20	+ 0,60	0,57	-
11- 7-1942	15	40	- 60°	22	+ 0,20	0,66	-
11- 7-1942	20	45	- 60°	17	+ 1,50	0,76	-

TABEL II.

## ONDERZOCHE SITUATIES.

S	Noorderhavendam		Zuiderhavendam				Mond- wijd- te m	Middenhavendam		Oude Zuiderhavenhoofd				Kade tusschen N.W.H. en Dok		Diepte toe- gang m t.o.v. N.A.P.	Tersch. boot- stei- ger	S	Bijzonderheden
	recht of geb. m	plaats kop m	ver- kort m	verlengd wijze m	lengte m	paal- werk		ver- kort m	opening wijd m	aan- we- zig	ver- kort m	verplaatst afst. lengte m m		verbr. tot m	verkort m				
-1	-	-	-	-	-	-	60	Sit. vóór 1911	-	-	-	-	-	-	peiling '11	wel	-1	Glooiing aan- gebracht i/d hoek v/h O. Zuiderhaven- hoofd. Deze blijft bij al- le verdere sit. aanwezig.	
0	-	-	-	-	-	wel	70	-	-	-	-	-	-	" '39	"	0			
1	-	-	-	-	-	"	70	-	-	-	-	-	-	" '39	"	1			
2	recht	+ 25	-	-	-	"	140	-	-	-	-	-	-	" '39	"	2			
3	"	+ 25	-	-	-	niet	125	-	-	-	-	-	-	" '39	"	3			
4	"	+ 25	-	-	-	"	125	-	150	-	-	-	-	" '39	"	4			
5	zw. geb.	+ 25	-	-	-	"	125	80	100	-	-	-	-	" '39	niet	5			
6	"	- 35	-	-	-	"	125	280	-	-	-	-	-	" '39	"	6			
7	"	- 35	-	-	-	"	100	280	-	-	-	-	-	" '39	"	7			
8	"	- 35	-	geb.	150	"	100	280	-	-	-	-	75	" '39	"	8			
9	"	- 35	-	recht	75	"	100	280	-	-	-	-	75	" '39	"	9			
10	"	- 35	-	"	75	"	125	280	-	-	-	-	75	" '39	"	10			
11	"	- 35	-	"	75	"	125	280	-	knik	-	-	75	" '39	"	11			
12	"	- 35	-	"	75	"	125	280	-	-	225	62	75	" '39	"	12			
13	"	- 35	-	"	75	"	110	280	-	-	225	62	75	" '39	"	13			
14	"	- 35	-	"	75	"	110	280	-	wel	-	-	75	" '39	"	14			
15	st. geb.	- 35	-	"	75	"	110	280	-	"	-	-	75	" '39	"	15			
16	zw. geb.	- 35	-	"	75	"	110	280	-	"	35	-	75	" '39	"	16			
17	"	- 35	-	"	37	"	110	280	-	"	35	-	75	" '39	"	17			
18	"	- 35	-	"	55	"	110	280	-	"	35	-	75	" '39	"	18	Plan A		
19	"	- 35	-	"	55	wel	110	280	-	"	35	-	75	" '39	"	19	" "		
20	"	- 35	-	"	55	"	110	280	-	"	35	-	75	" '39	"	20	" "		
21	"	- 35	-	"	55	"	110	280	-	"	35	-	60	15	" '39	"	21	" "	
22	"	- 35	52	40°	95	"	110	280	-	"	35	-	60	15	" '39	"	22	" "	
23	"	- 35	52	40°	95	"	110	280	-	"	35	-	60	15	" '39	"	23	" "	
24	recht	+ 35	-	geb.	225	"	110	280	-	"	-	-	-	60	15	" '39	"	24	Plan B
25	"	+ 35	-	"	225	niet	110	280	-	"	-	-	-	60	15	- 5,4	"	25	" "
26	kop geb.	+ 10	-	"	225	"	110	280	-	"	-	-	-	60	15	- 5,4	"	26	" "
27	recht	+ 35	-	"	285	"	110	280	-	"	-	-	-	60	15	- 5,4	"	27	" "
28	"	+ 35	-	"	265	"	110	280	-	"	-	-	-	60	15	- 5,4	"	28	" "
29	"	+ 35	-	"	257	"	110	280	-	"	-	-	-	60	15	- 5,4	"	29	" "
30	"	+ 35	-	"	252	"	110	280	-	"	-	-	-	60	15	- 5,4	"	30	" "
31	"	+ 35	-	"	243	"	110	280	-	"	-	-	-	60	15	- 5,4	"	31	" "
32	"	+ 35	-	"	250	"	110	280	-	"	-	-	-	60	15	- 5,4	"	32	" "
33	zw. geb.	- 35	40	45°	180	wel	110	280	-	"	-	-	-	-	-	peiling '39	"	33	Plan C
34	"	- 35	40	45°	180	"	110	280	-	"	35	-	-	-	-	" '39	"	34	" "
35	"	- 35	40	45°	180	" <sup>1)</sup>	110	280	-	"	35	-	-	60	15	" '39	"	35	" "
36	-	-	-	-	-	"	100	30	-	"	-	-	-	60	15	- 5,4	"	36	Plan D
37	-	-	-	-	-	"	100	30	-	"	35	-	-	60	15	- 5,4	" <sup>2)</sup>	37	" "
38	-	-	-	-	-	"	100	30	-	"	35	-	-	60	15	- 5,4	"	38	" "

1) Bovendien 3 paaljukken.

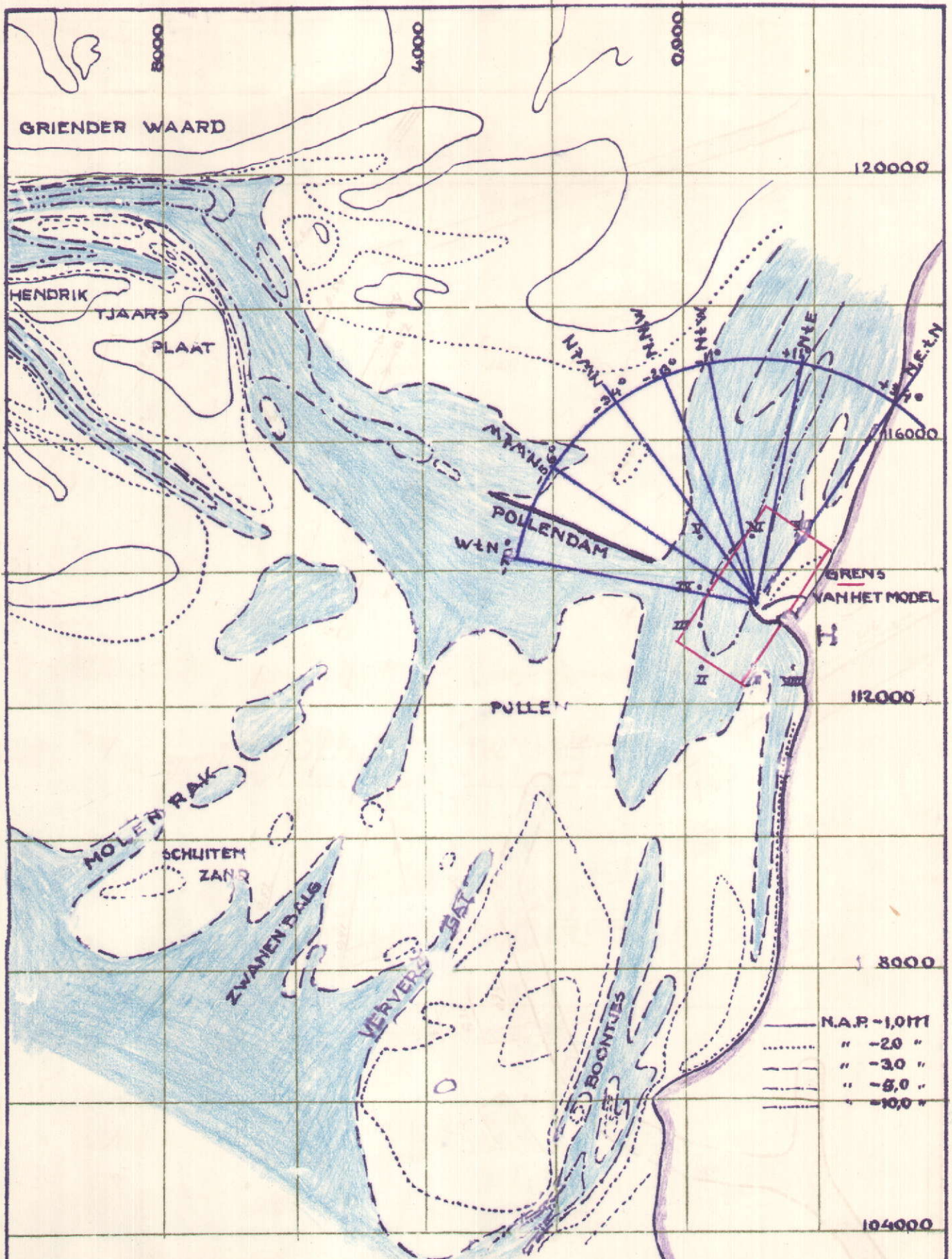
2) Steigers aan SW zijde N.W.H. dicht.

geb. = gebogen

zw. geb. = zwak gebogen.

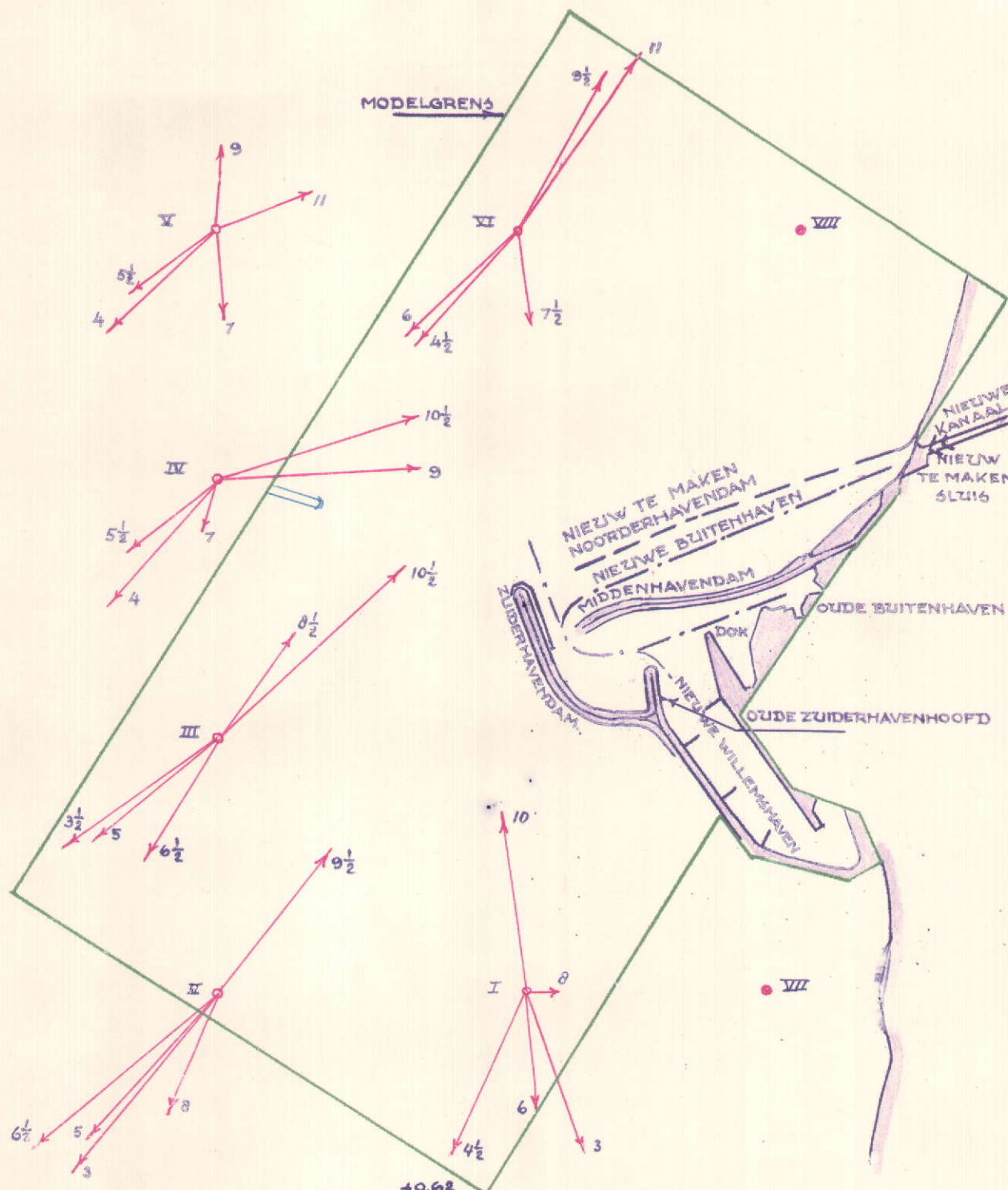
st. geb. = sterker "

De plaats van den kop van den Noorderhavendam is in kolom 3 aan-  
gegeven ten opzichte van den kop van den bestaanden Zuiderhaven-  
dam.



— windrichting waarbij gemeten is.

M.167.Fig.1. De Waddenzee in de omgeving van Harlingen.  
 schaal 1:80000.

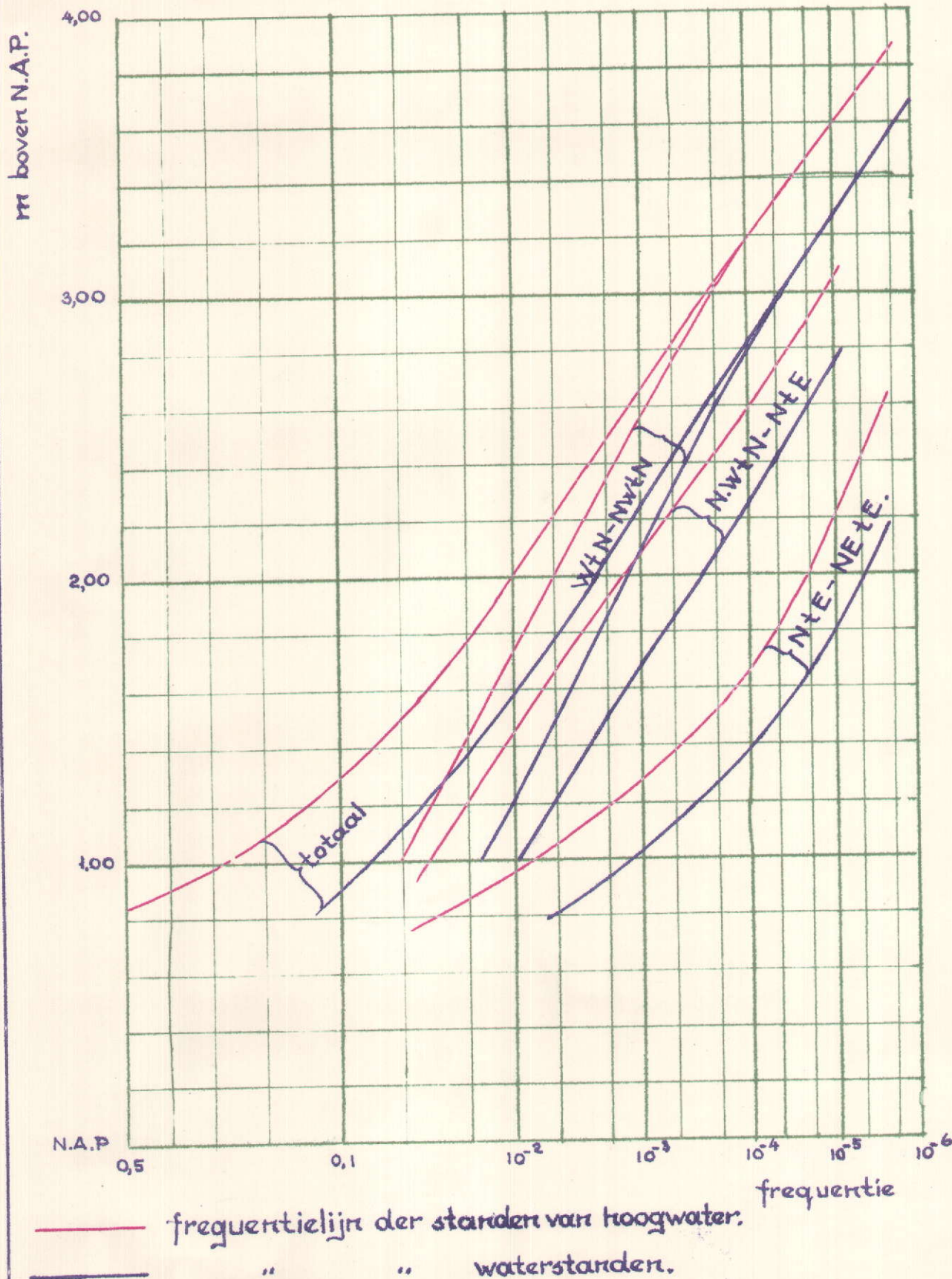


I ENZ. MEETPUNT VOOR STROOMMETING

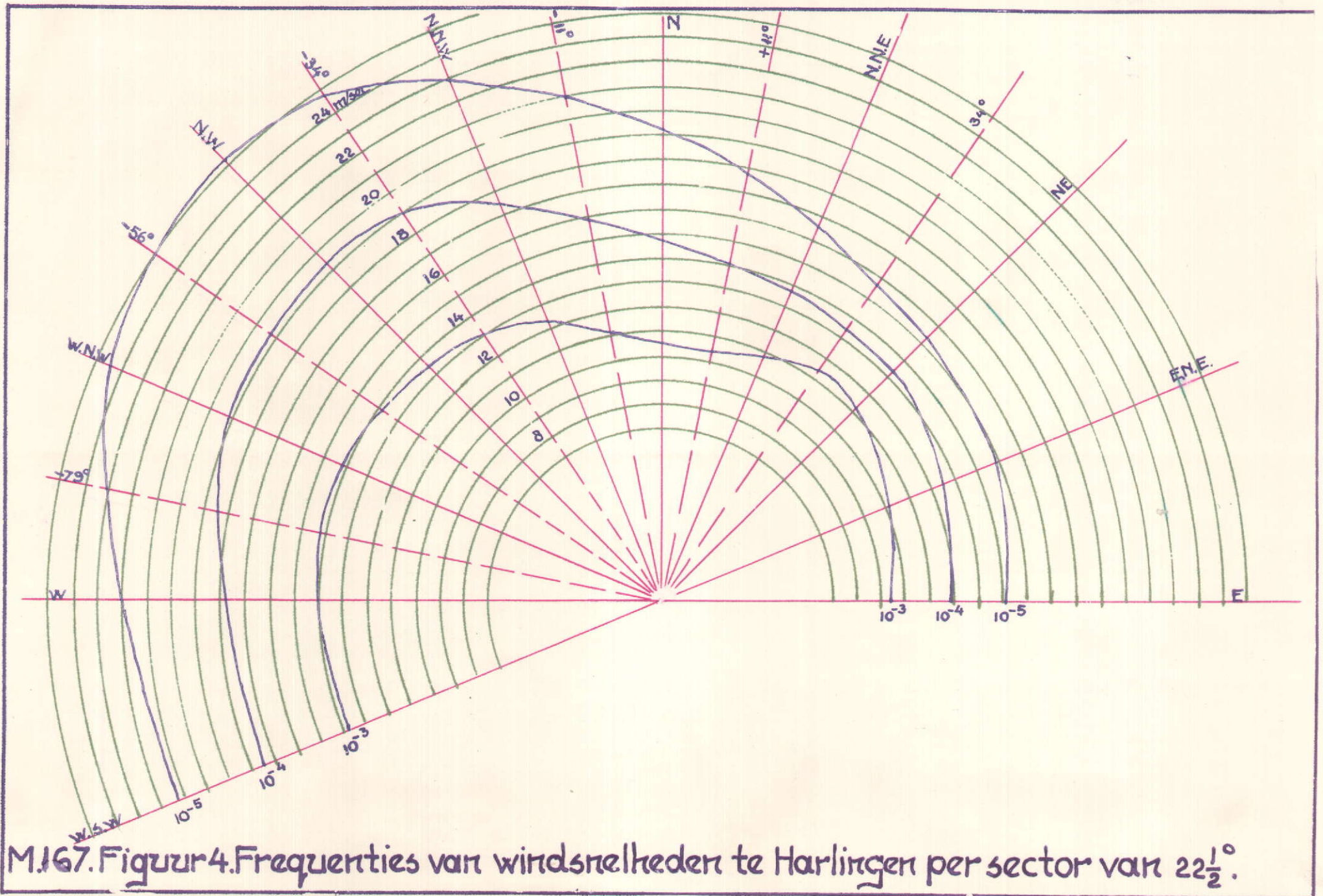
HET BUGEŠCHREVEN CUFER GEEFT HET AANTAL ZIEN NA H.W. AAN.

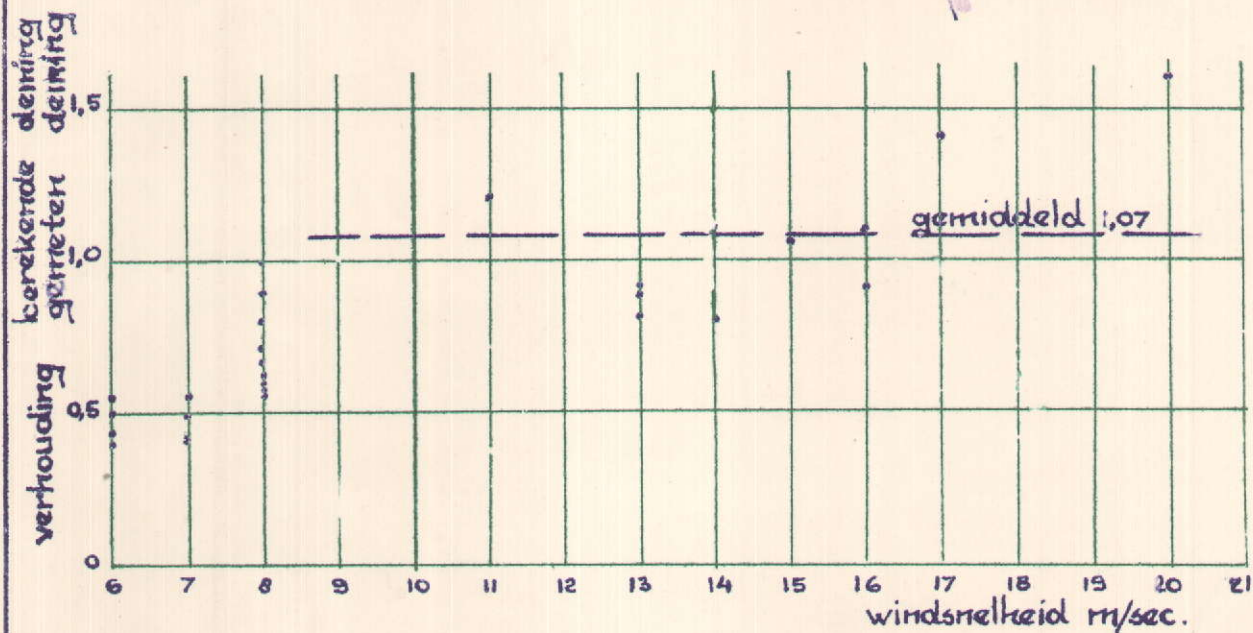
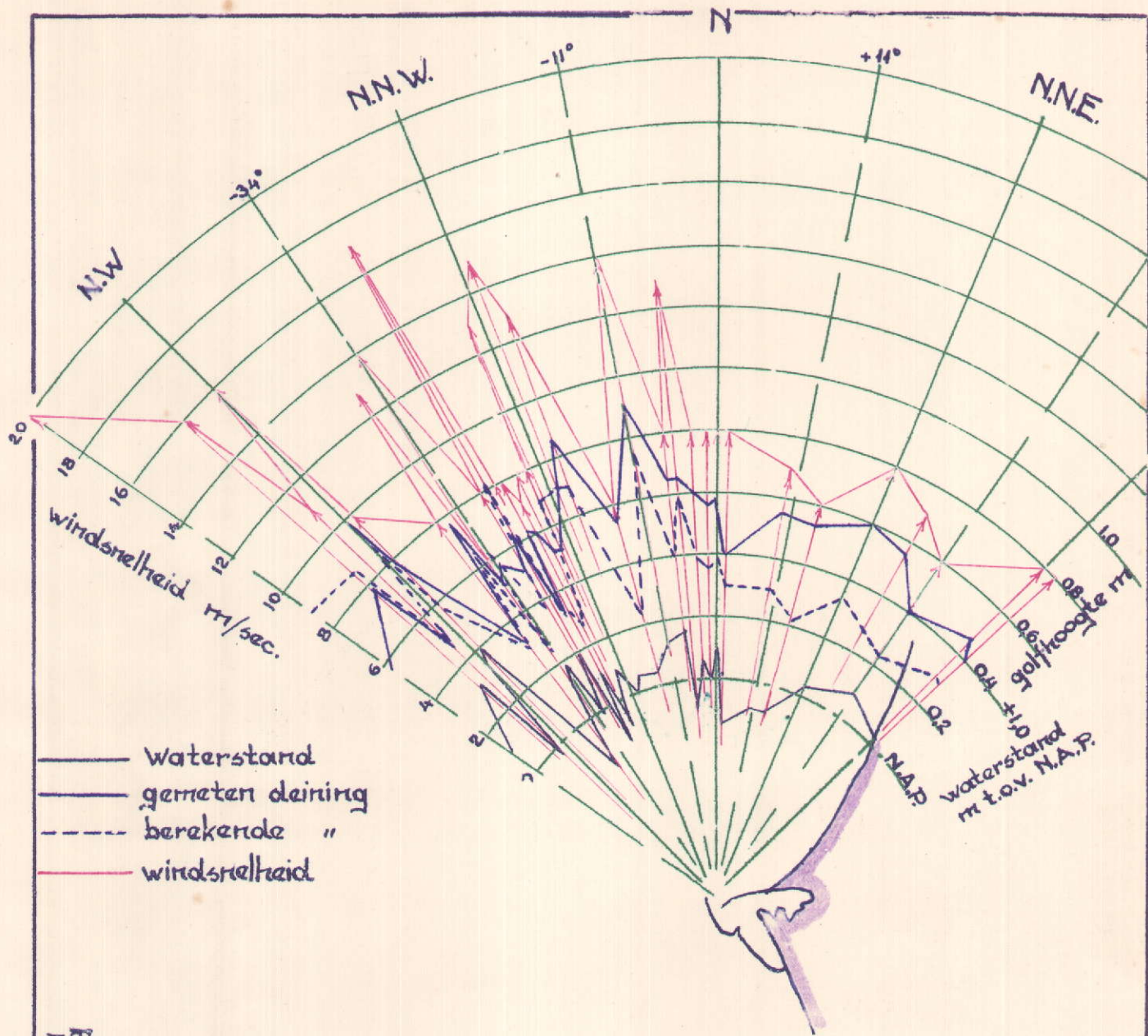
STROOMVECTOR SCHAAL 1 MM = 0,01 M/SEC.

M.167.FIGUUR 2.  
OVERZICHT VAN DE HAVEN VAN HARLINGEN. SCHAAL 1:5000



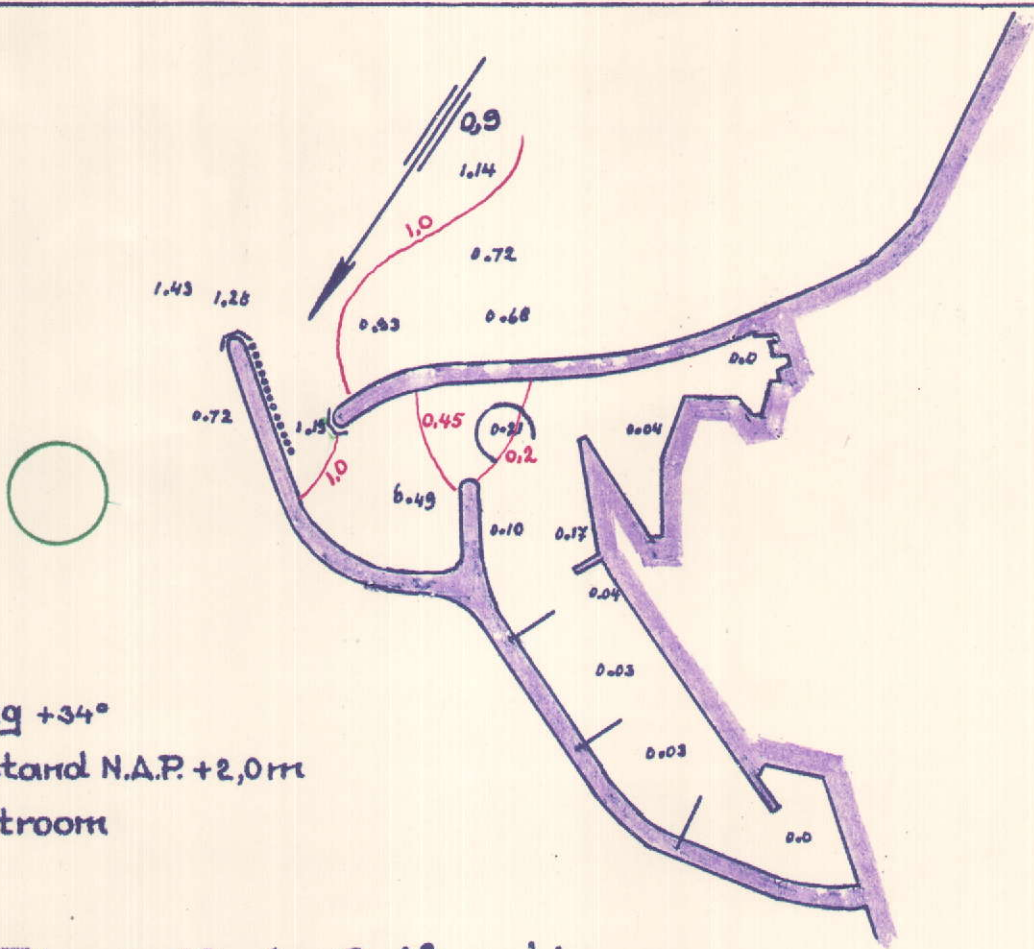
M.167. Fig. 3. Frequenties van de waterstanden te Harlingen.





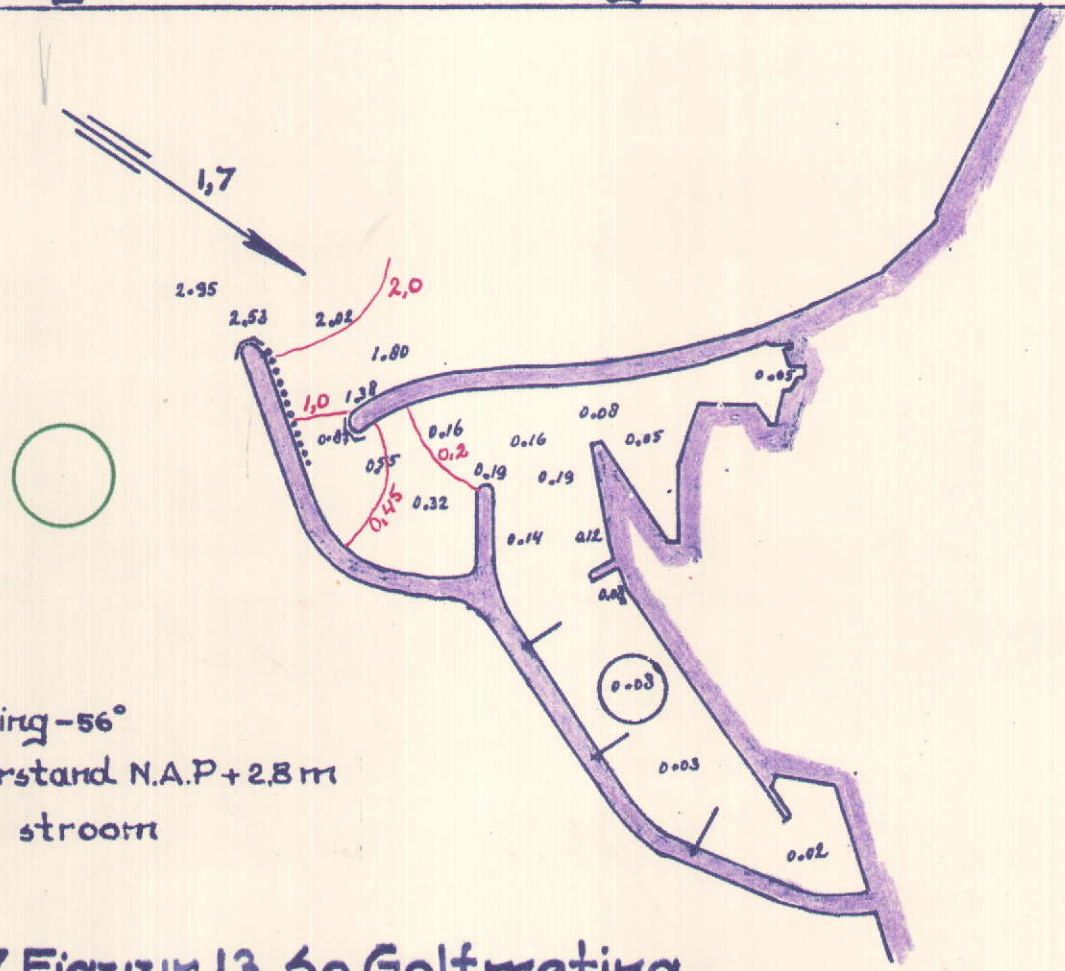
M.167. Figuur 10.

Vergelijking van gemeten en berekende deining.



richting +34°  
 waterstand N.A.P. +2,0m  
 geen stroom

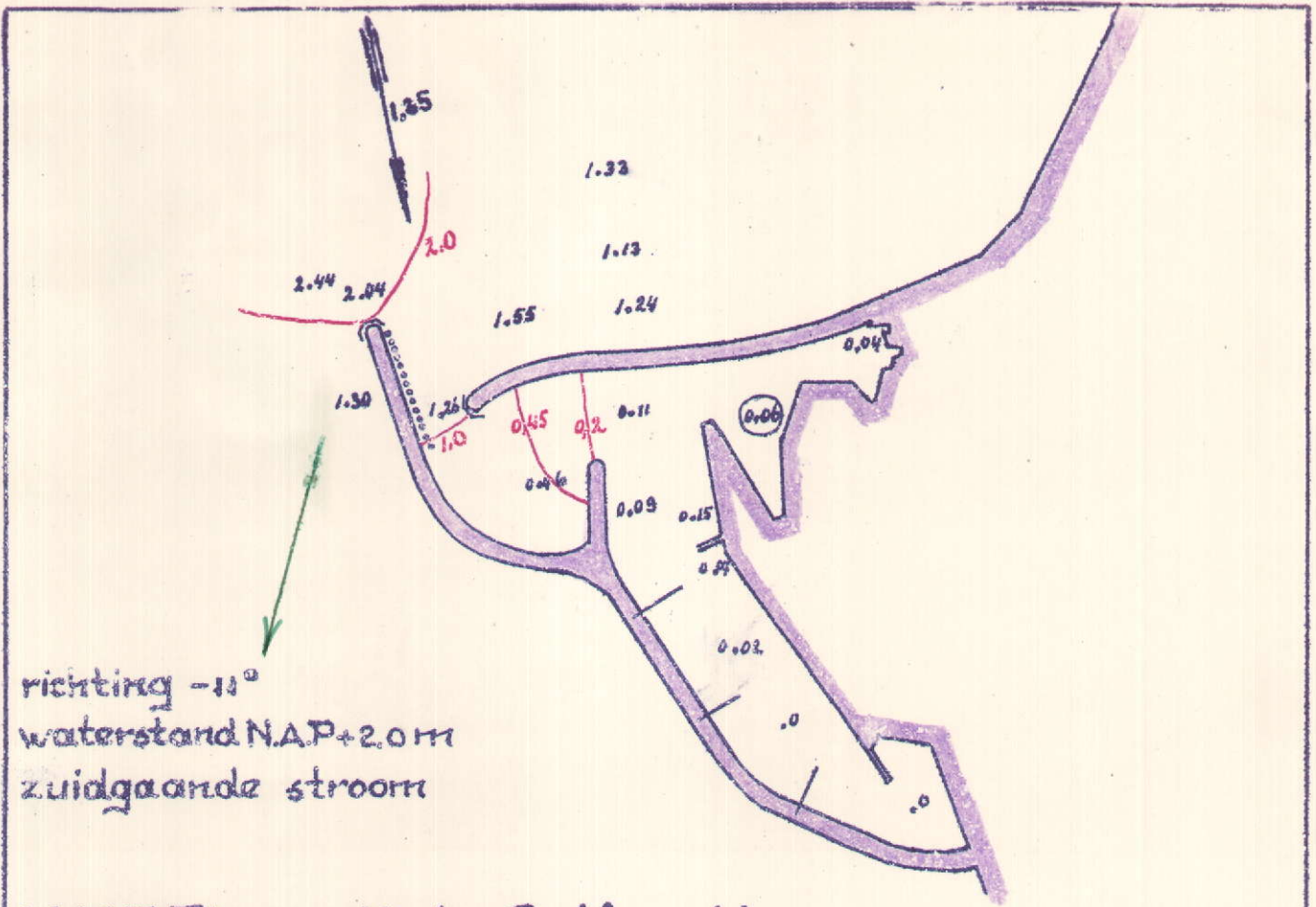
M.167. Figur 12. So Golfmeting.



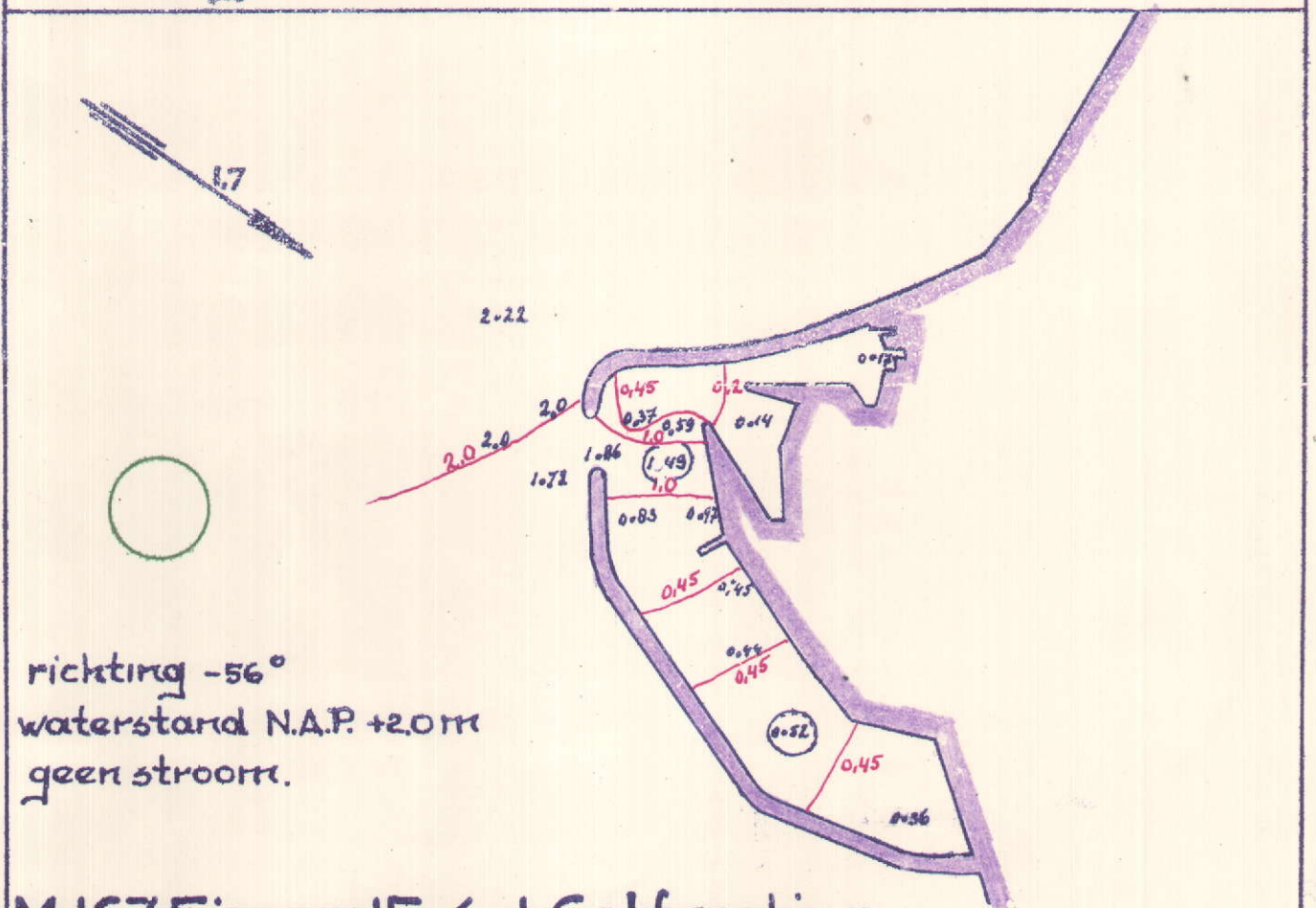
richting -56°  
 waterstand N.A.P. +2,8m  
 geen stroom

M.167. Figur 13. So Golfmeting.

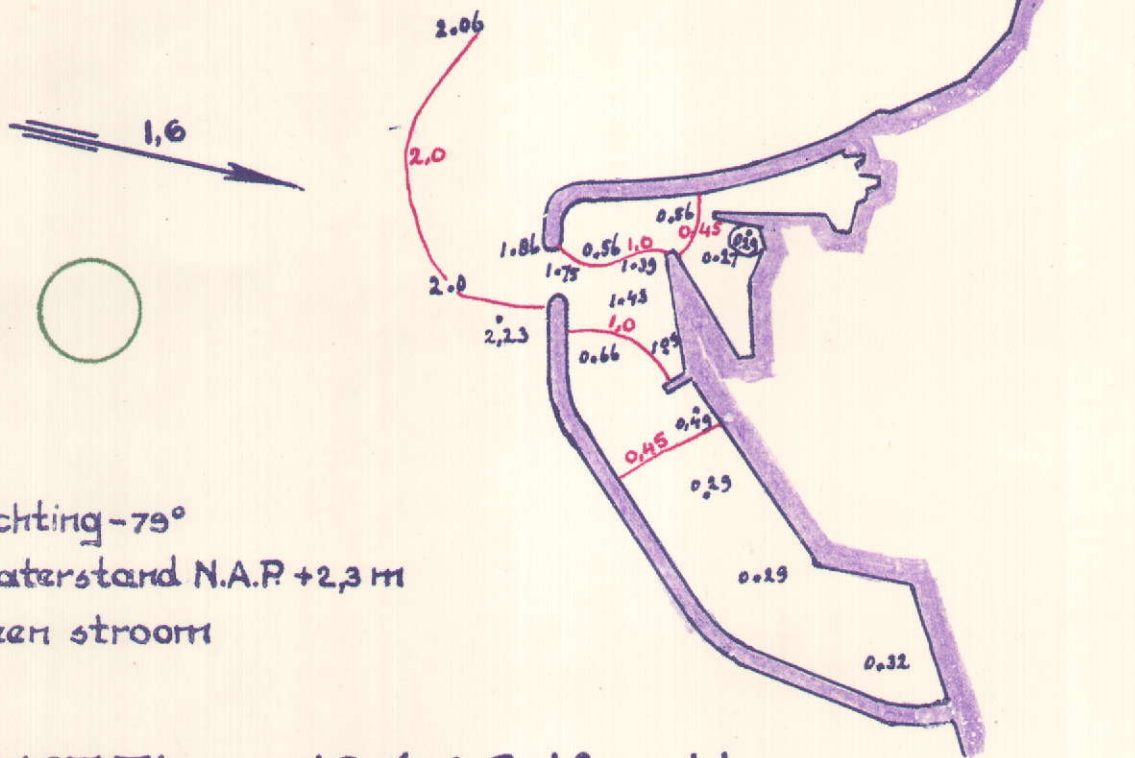




M.167. Figuur 14. 30. Golfmeting.

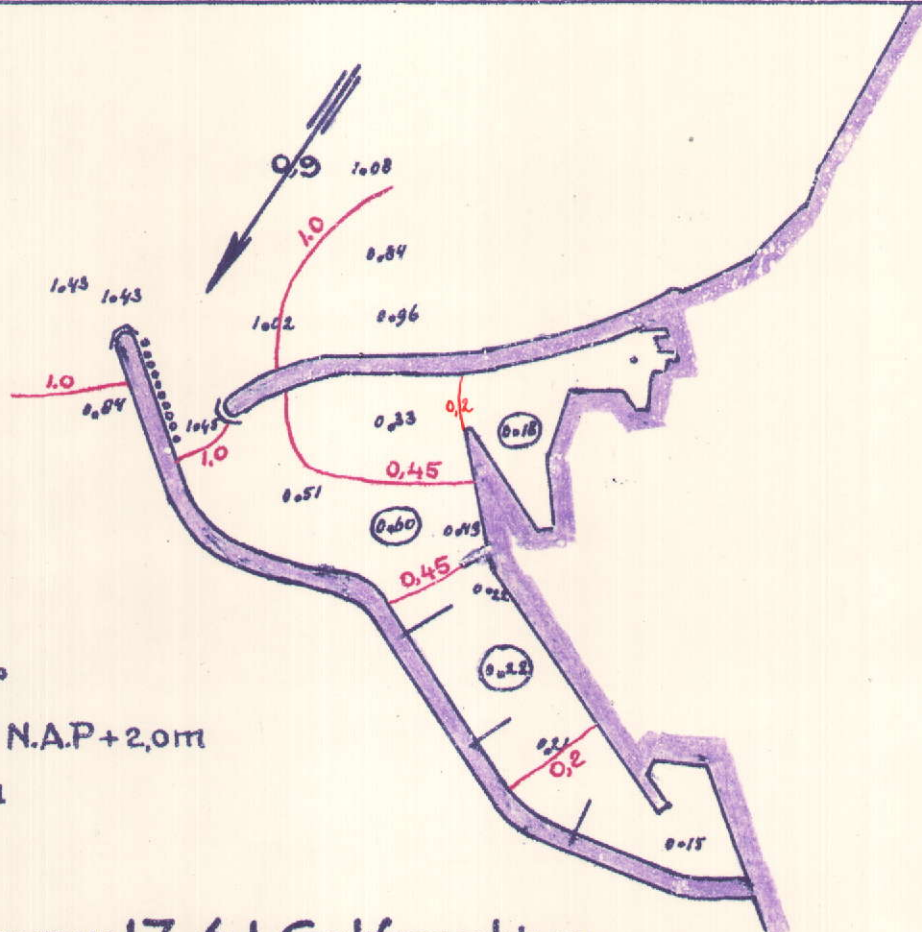


M.167. Figuur 15. 3-1. Golfmeting.



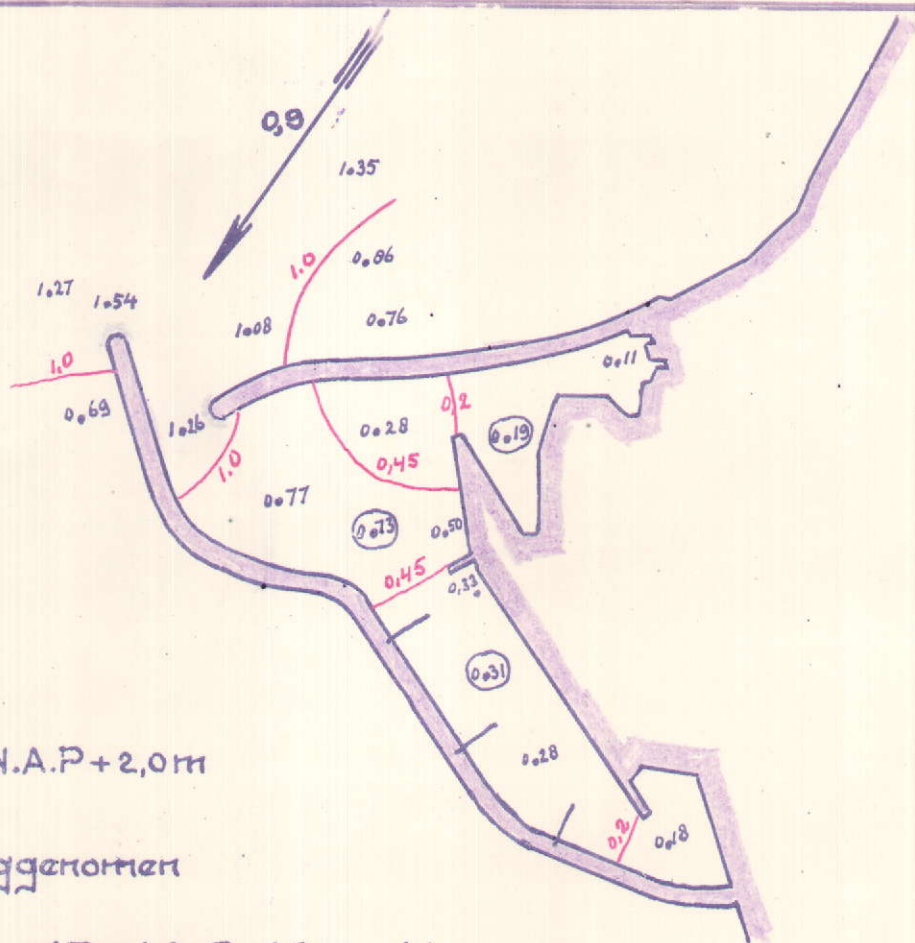
richting  $-79^\circ$   
 waterstand N.A.P. +2,3 m  
 geen stroom

M.167. Figuur 16.5-1. Golfmeting.



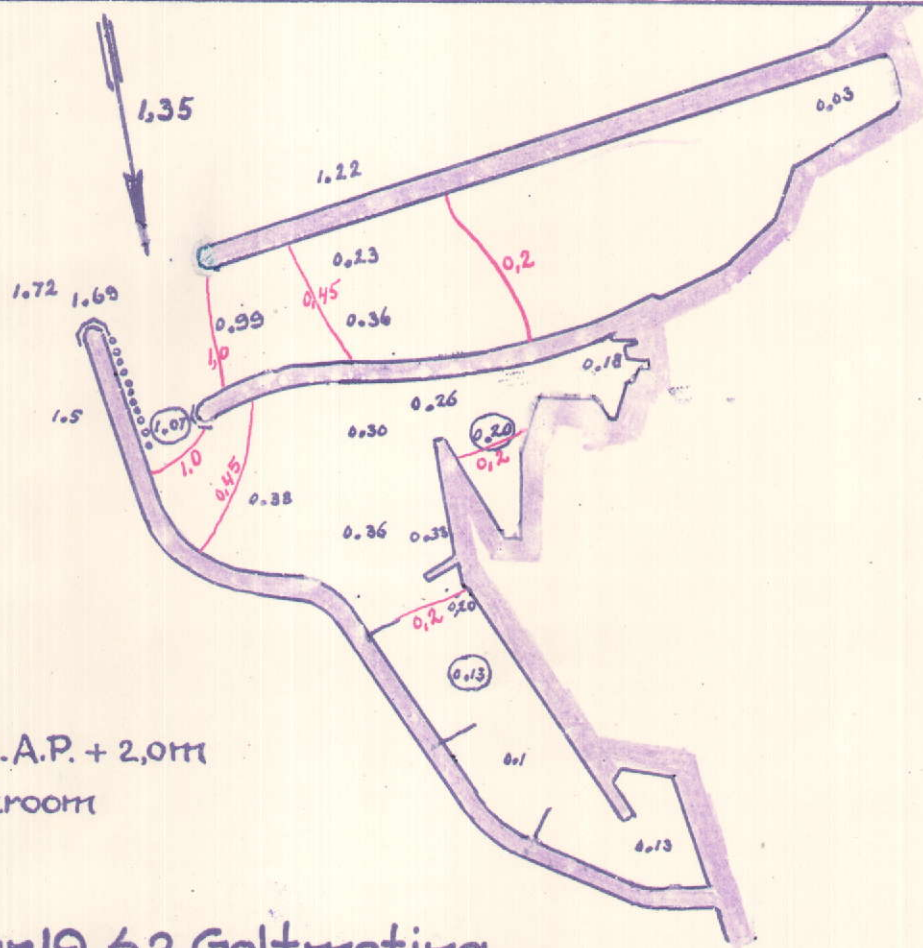
richting  $+34^\circ$   
 waterstand N.A.P. +2,0 m  
 geen stroom

M.167. Figuur 17.51. Golfmeting.



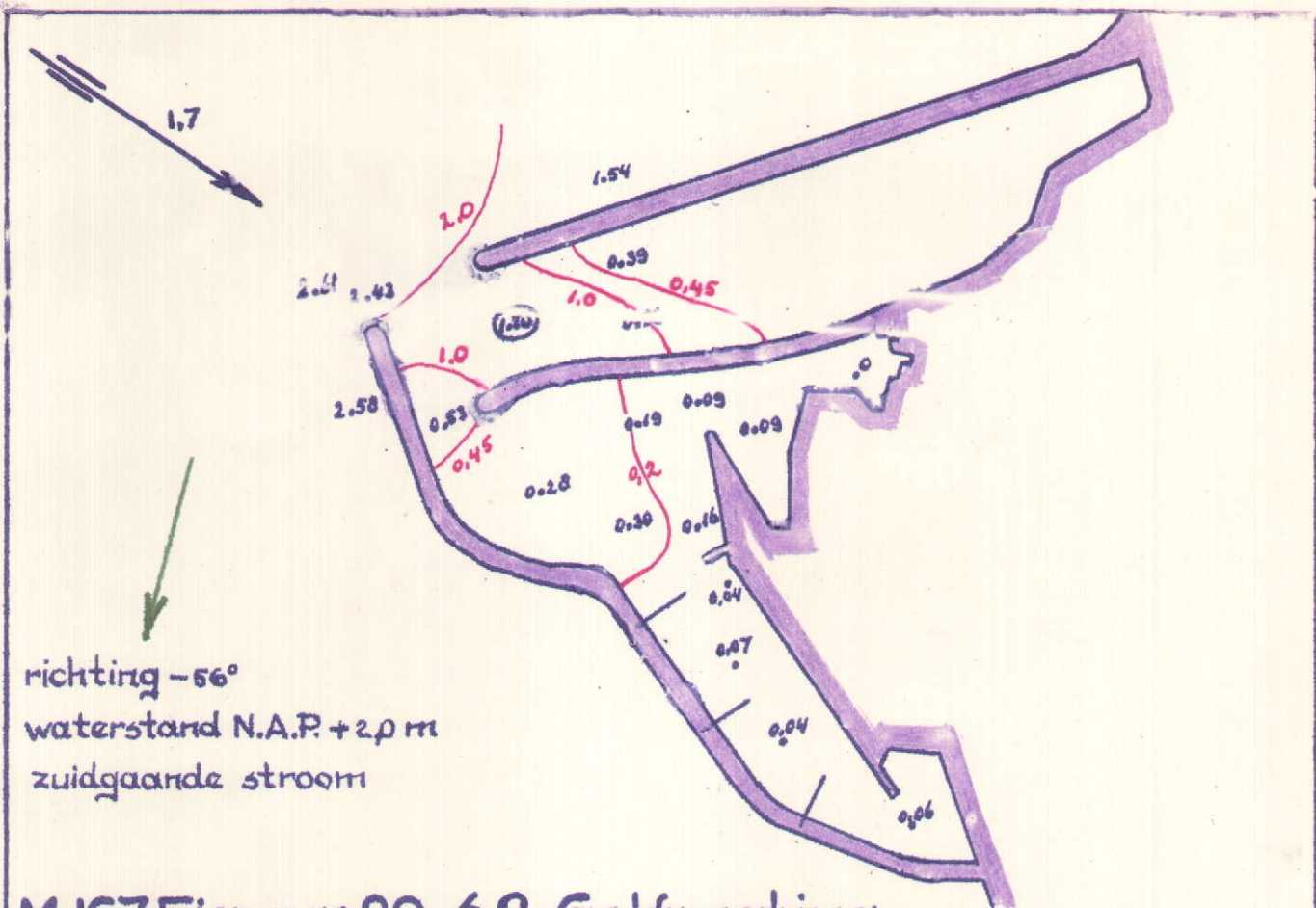
richting  $+34^\circ$   
 waterstand N.A.P. + 2,0m  
 geen stroom  
 paalwerk weggenomen

M.167. Figuur 18. 51. Golfmeting.

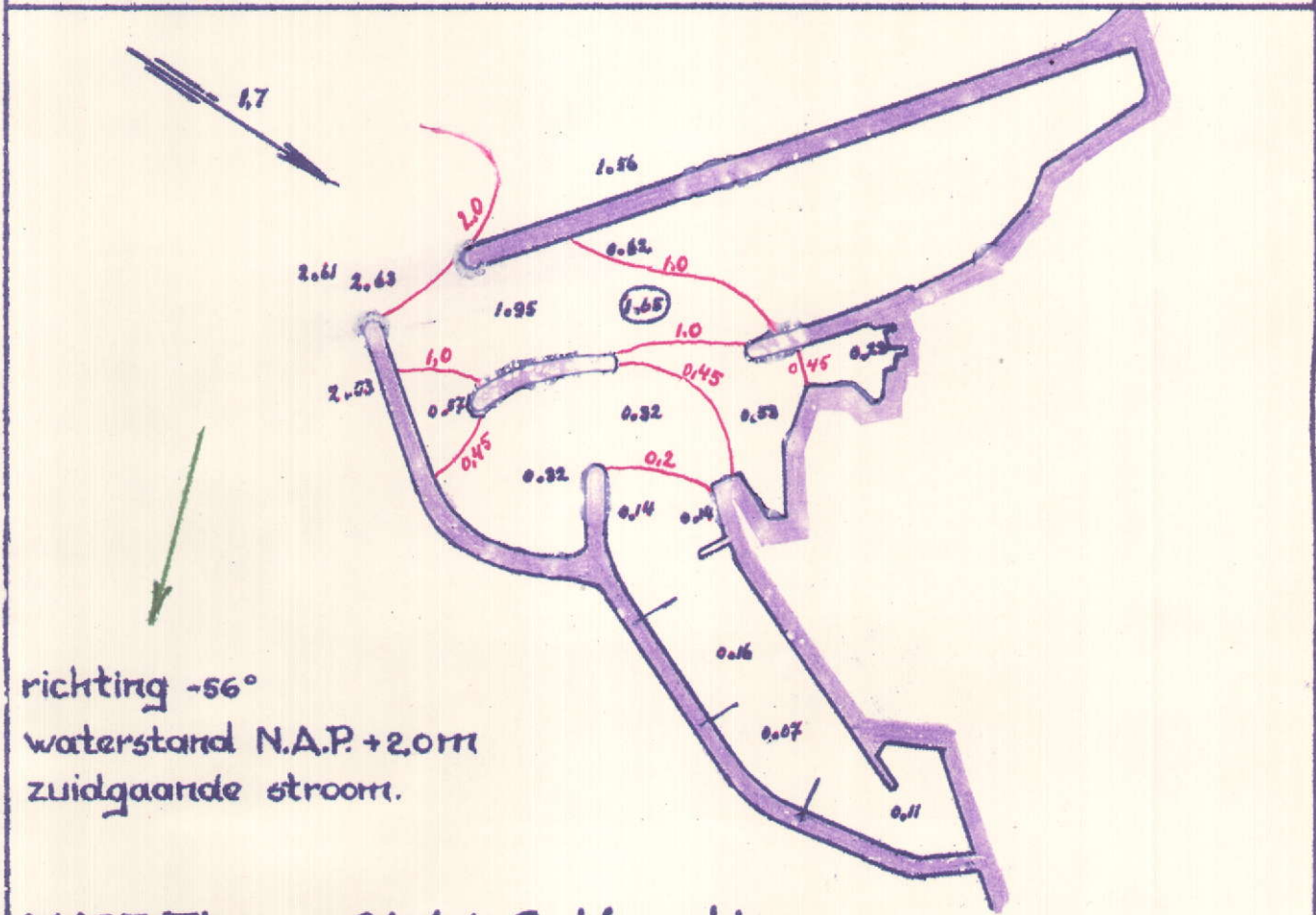


richting  $-11^\circ$   
 waterstand N.A.P. + 2,0m  
 zuidgaande stroom

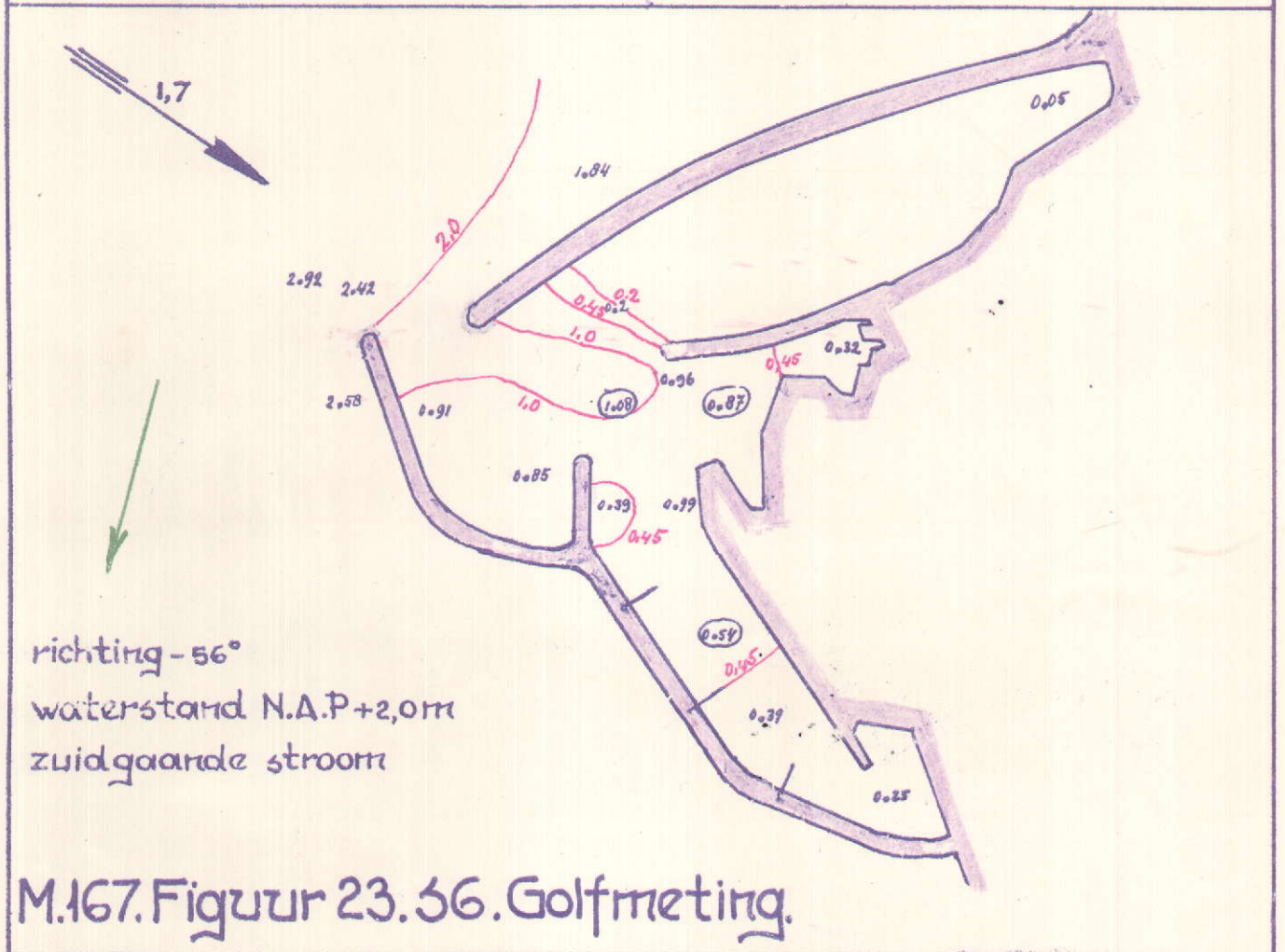
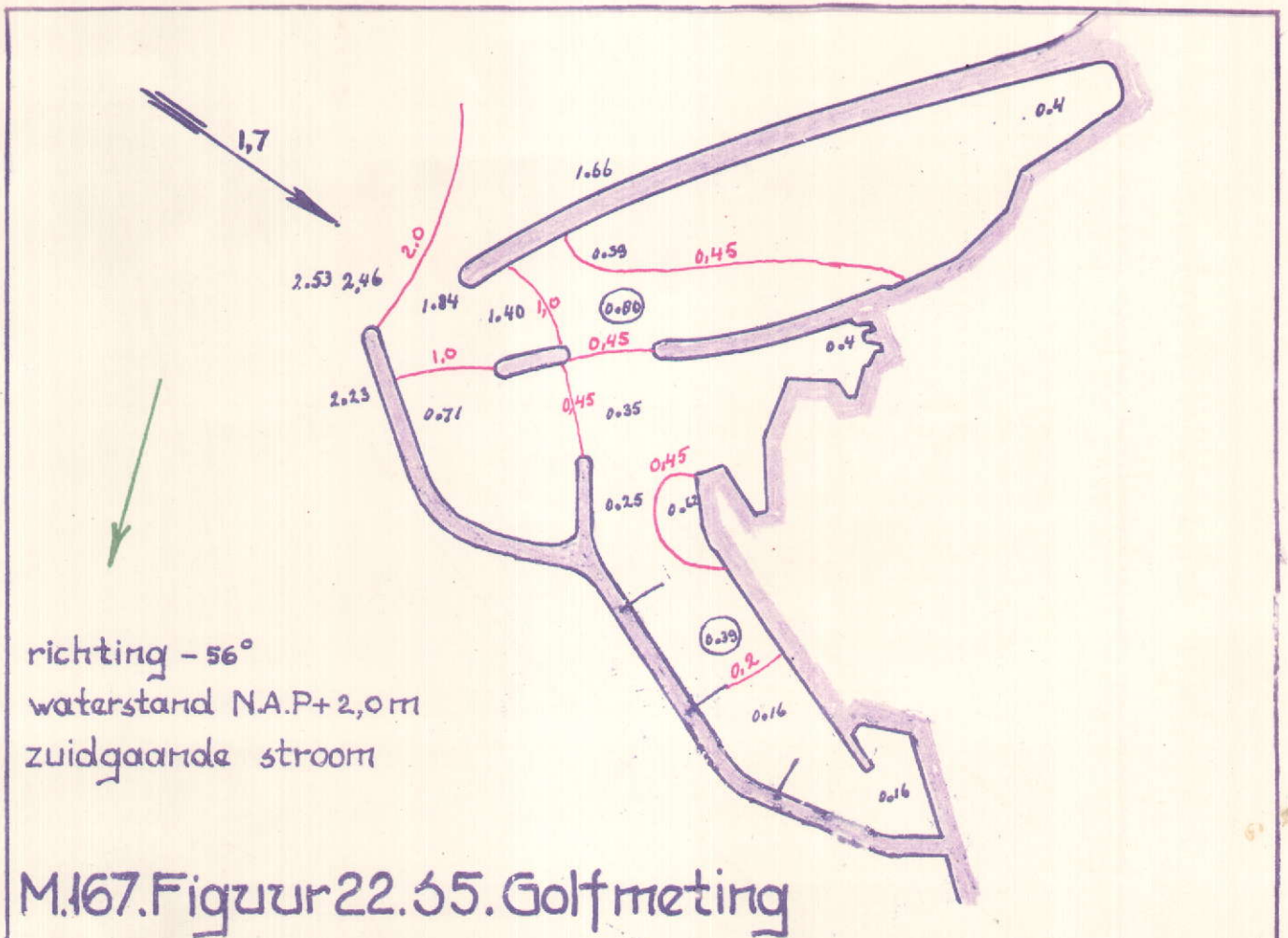
M.167. Figuur 19. 52. Golfmeting.

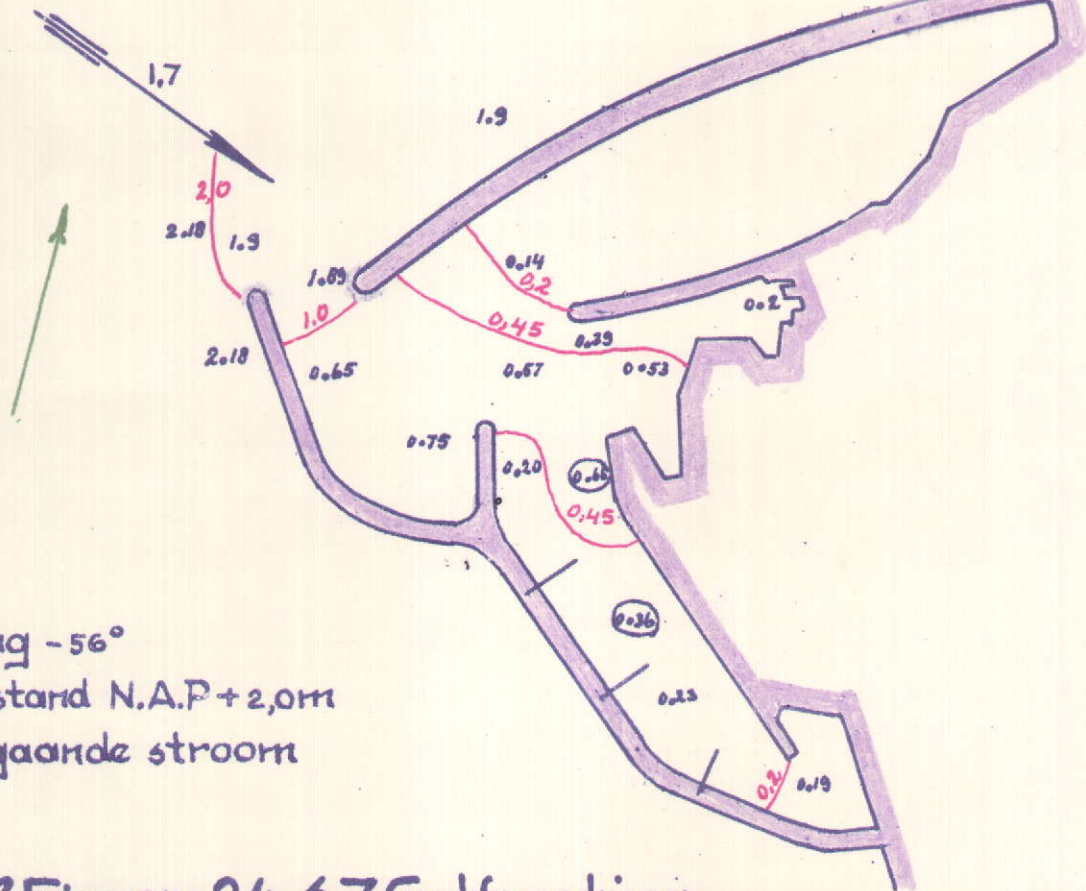


M.167. Figuur 20. 53. Golfmeting.



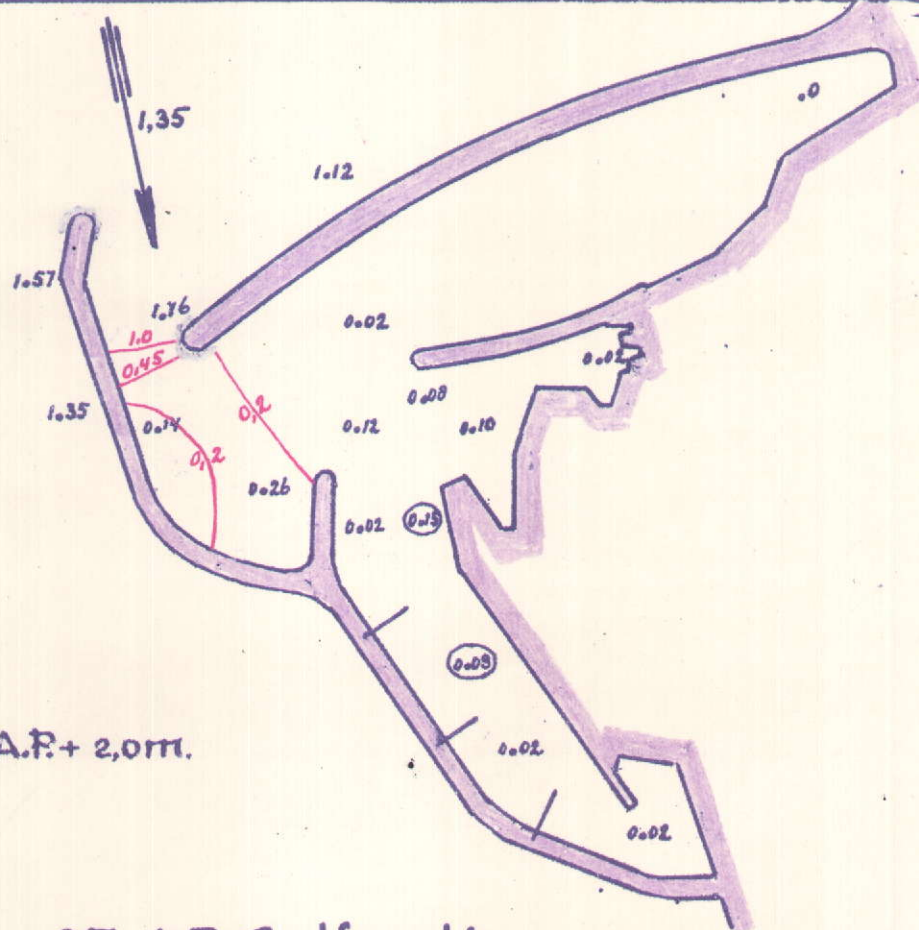
M.167. Figuur 21. 54. Golfmeting.





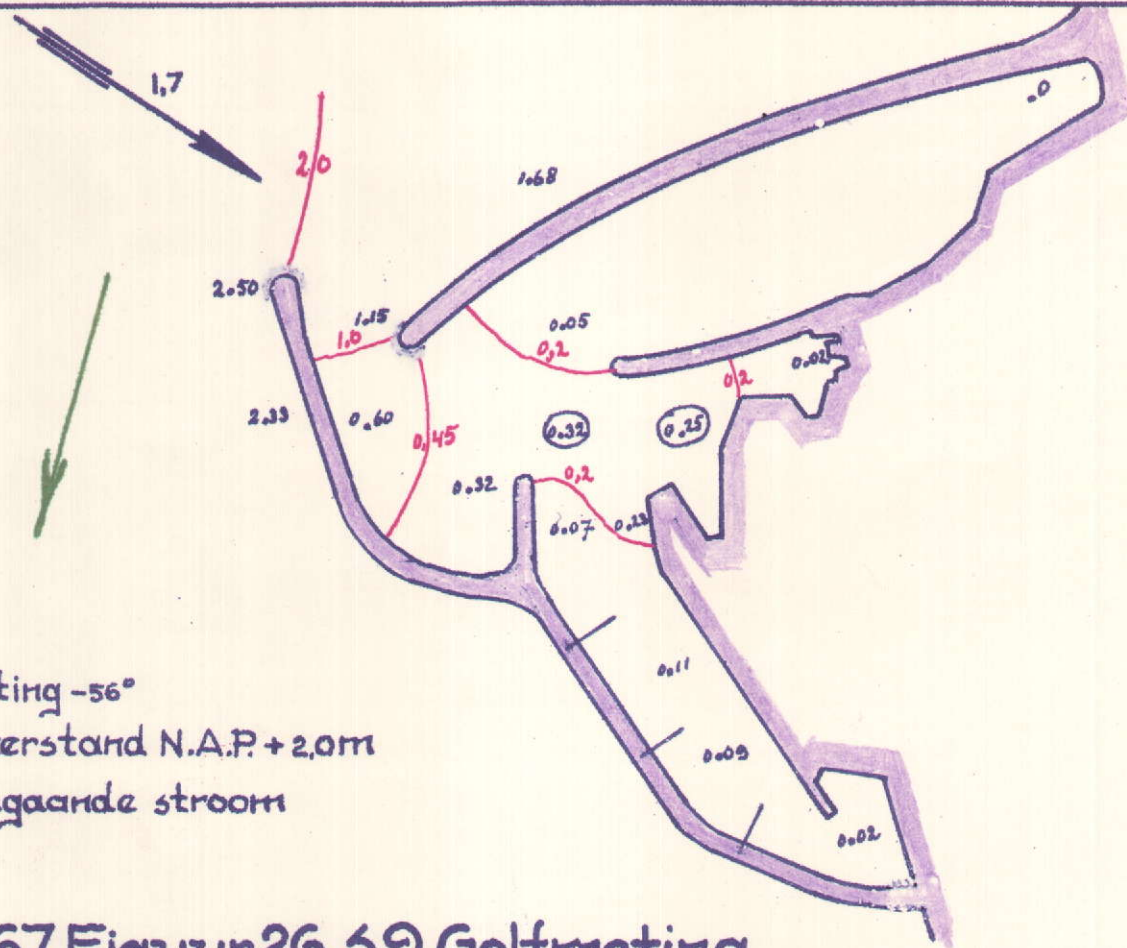
richting  $-56^\circ$   
 waterstand N.A.P. + 2,0m  
 noordgaande stroom

M.167.Figuur 24.57.Golfmeting.



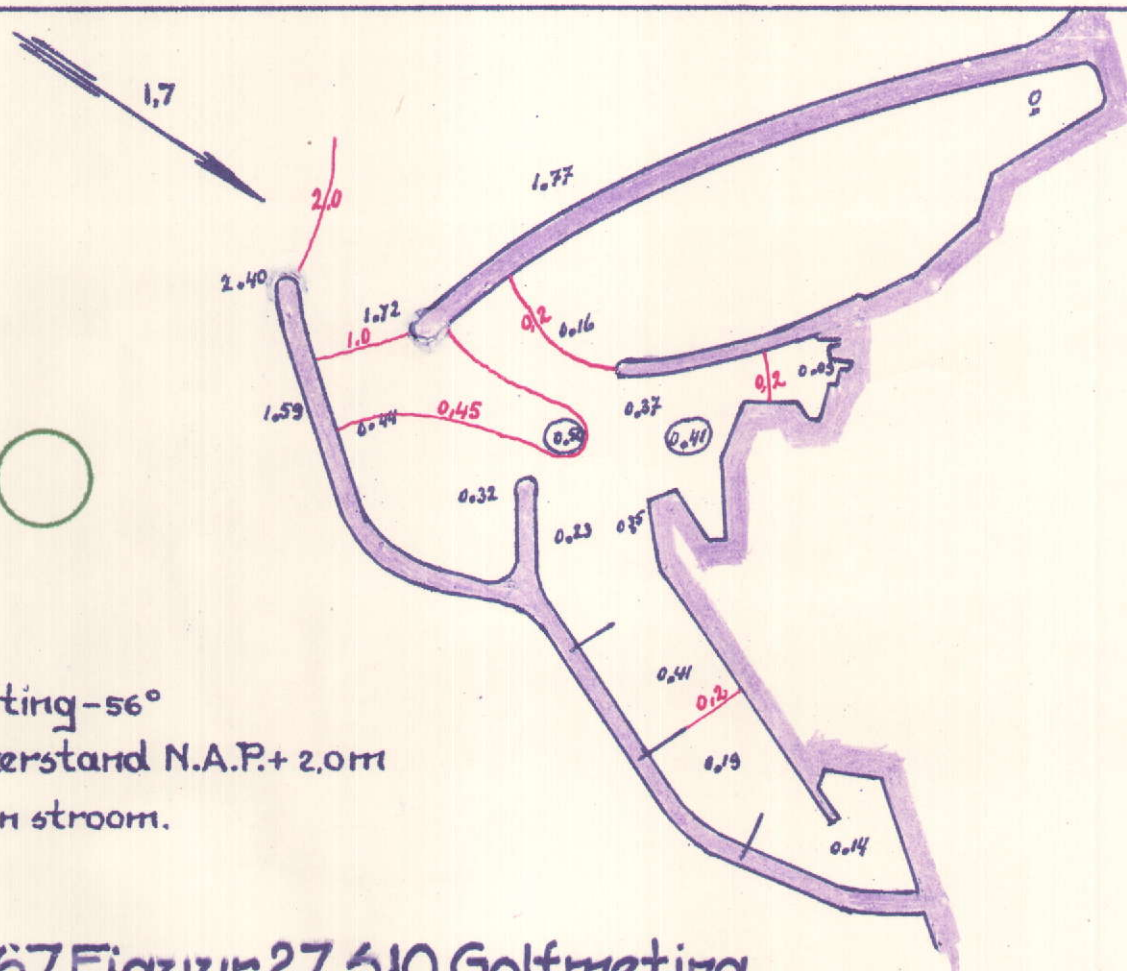
richting  $-11^\circ$   
 waterstand N.A.P. + 2,0m.  
 geen stroom

M.167.Figuur 25.58.Golfmeting.



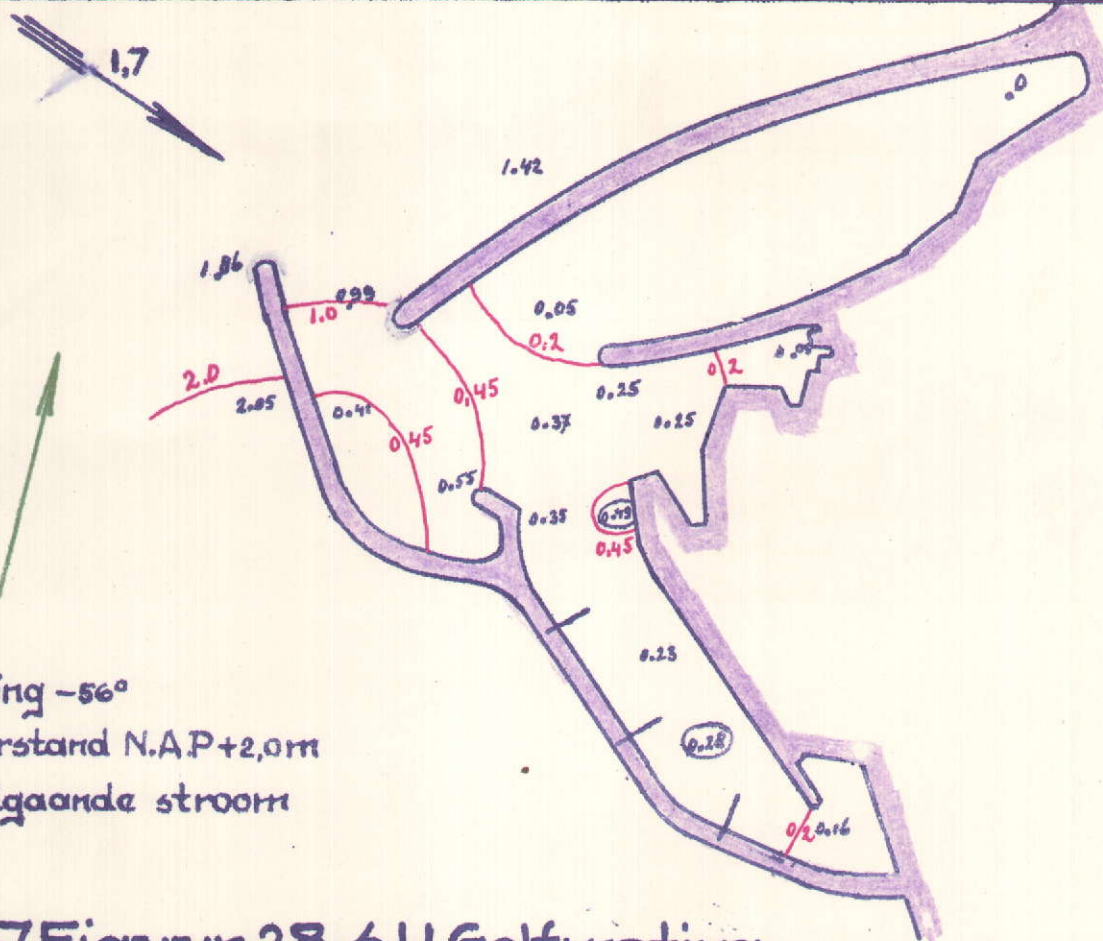
richting  $-56^\circ$   
 waterstand N.A.P. + 2.0m  
 zuidgaande stroom

M.167.Figuur 26.59.Golfmeting.



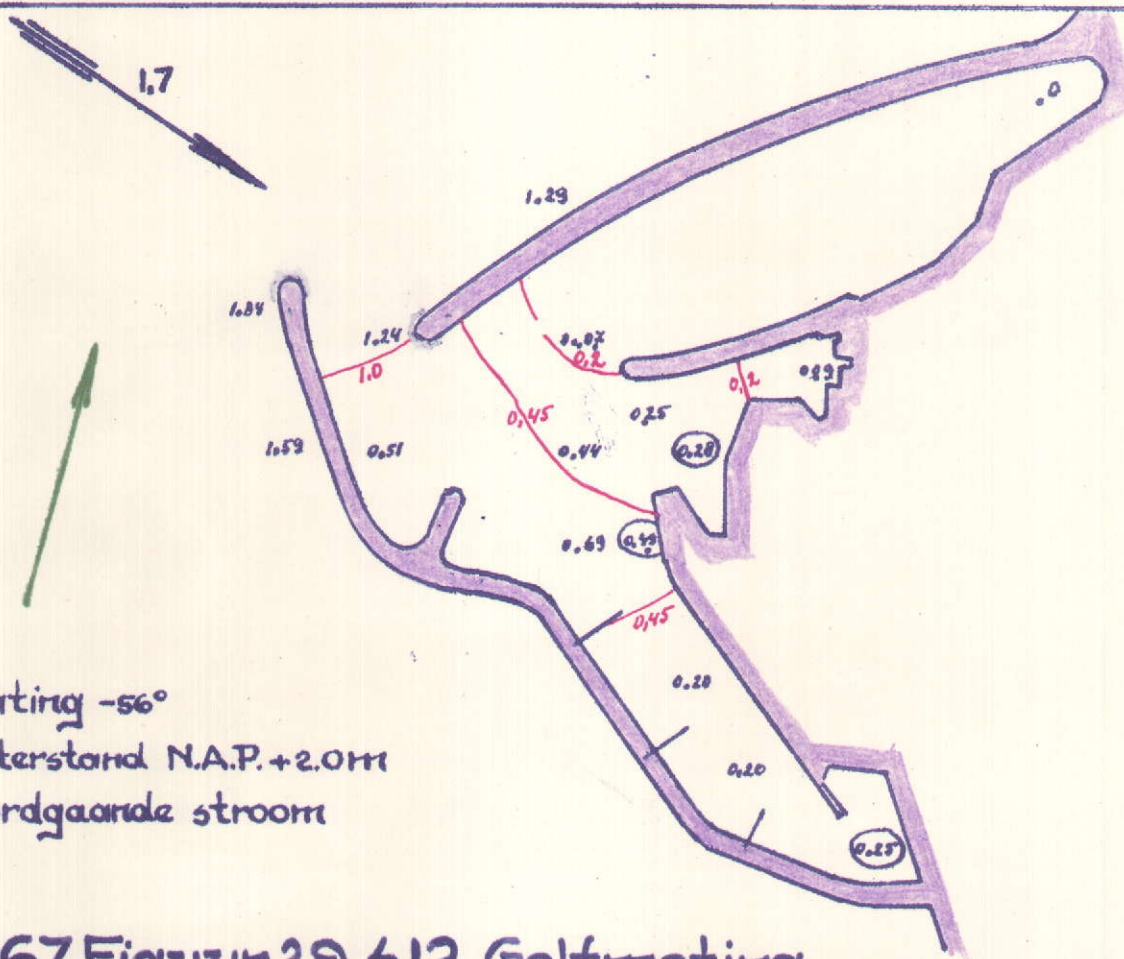
richting  $-56^\circ$   
 waterstand N.A.P. + 2.0m  
 geen stroom.

M.167.Figuur 27.510.Golfmeting.



richting  $-56^\circ$   
 waterstand N.A.P.+2,0m  
 noordgaande stroom

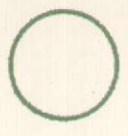
M.167.Figuur 28. 511.Golfmeting.



richting  $-56^\circ$   
 waterstand N.A.P.+2,0m  
 noordgaande stroom

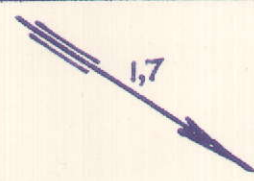
M.167.Figuur 29. 512.Golfmeting.





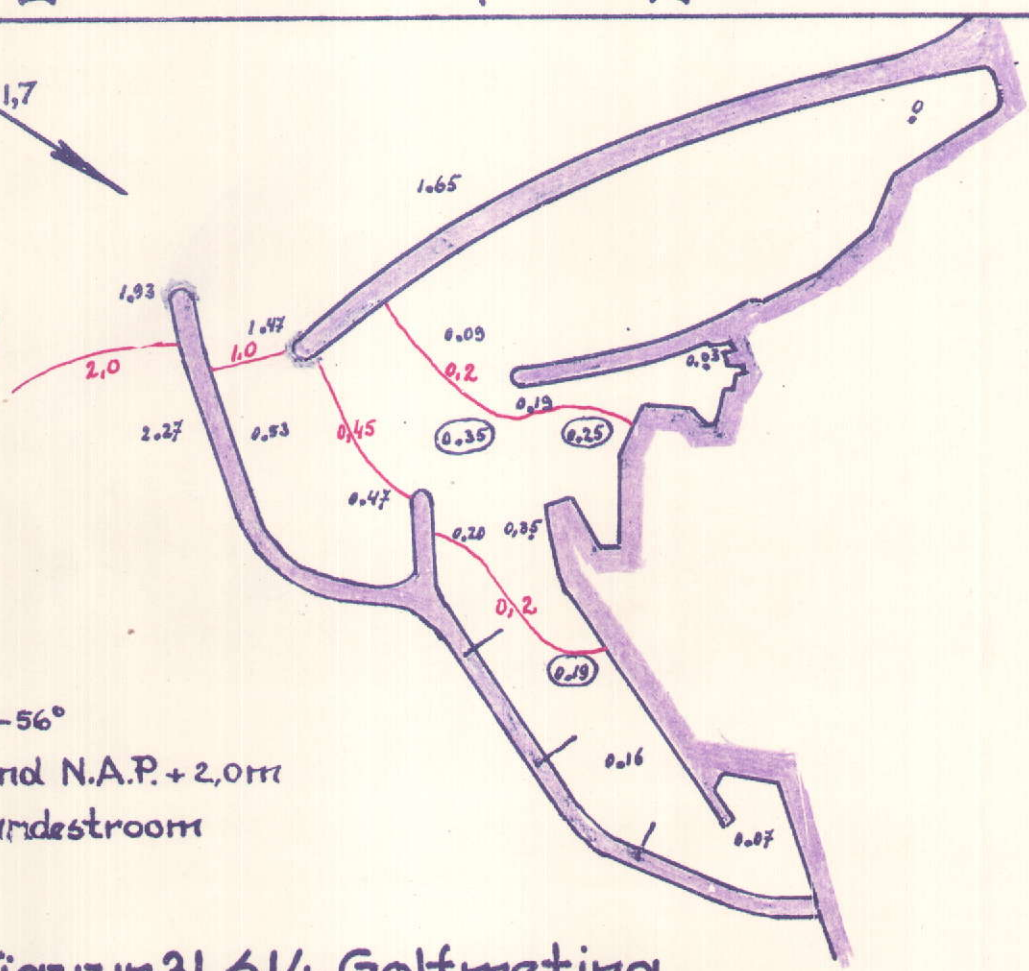
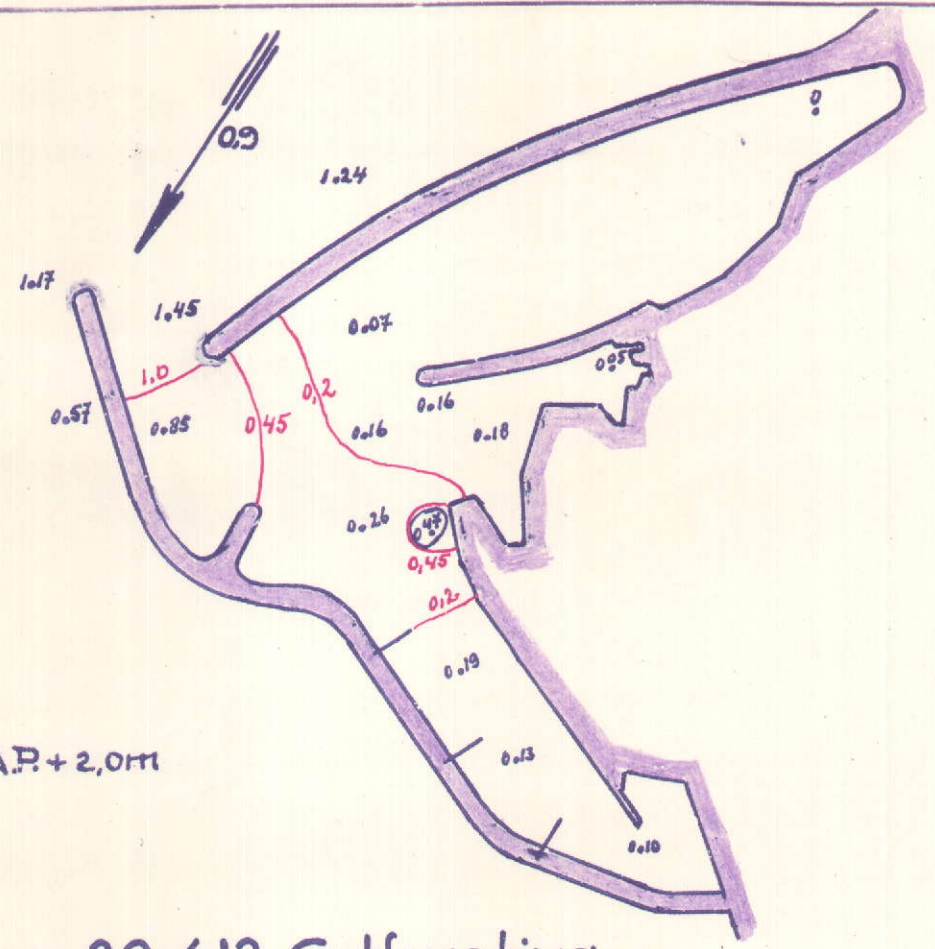
richting +34°  
 waterstand N.A.P. + 2,0m  
 geen stroom

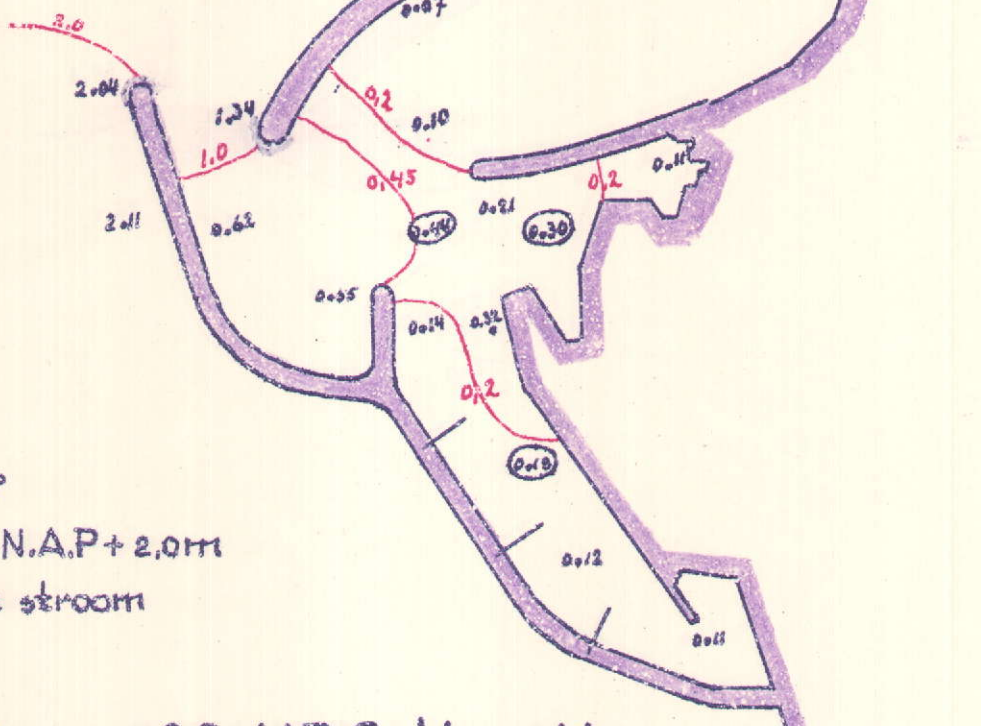
M.167.Figuur 30. 513. Golfmeting.



richting -56°  
 waterstand N.A.P. + 2,0m  
 noordgaandestroom

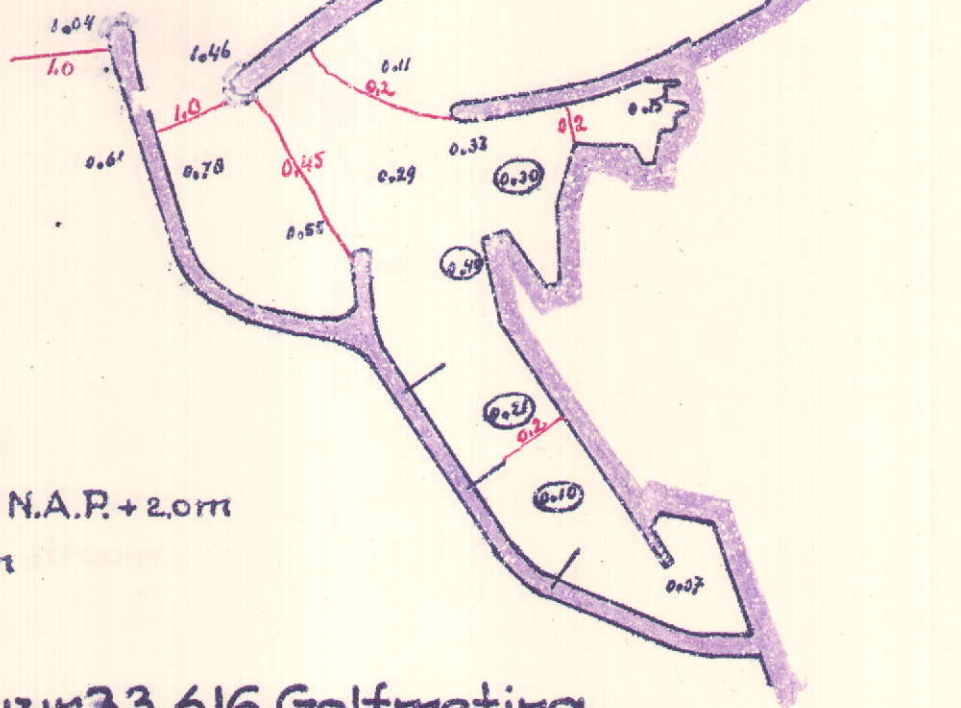
M.167.Figuur 31. 514. Golfmeting.





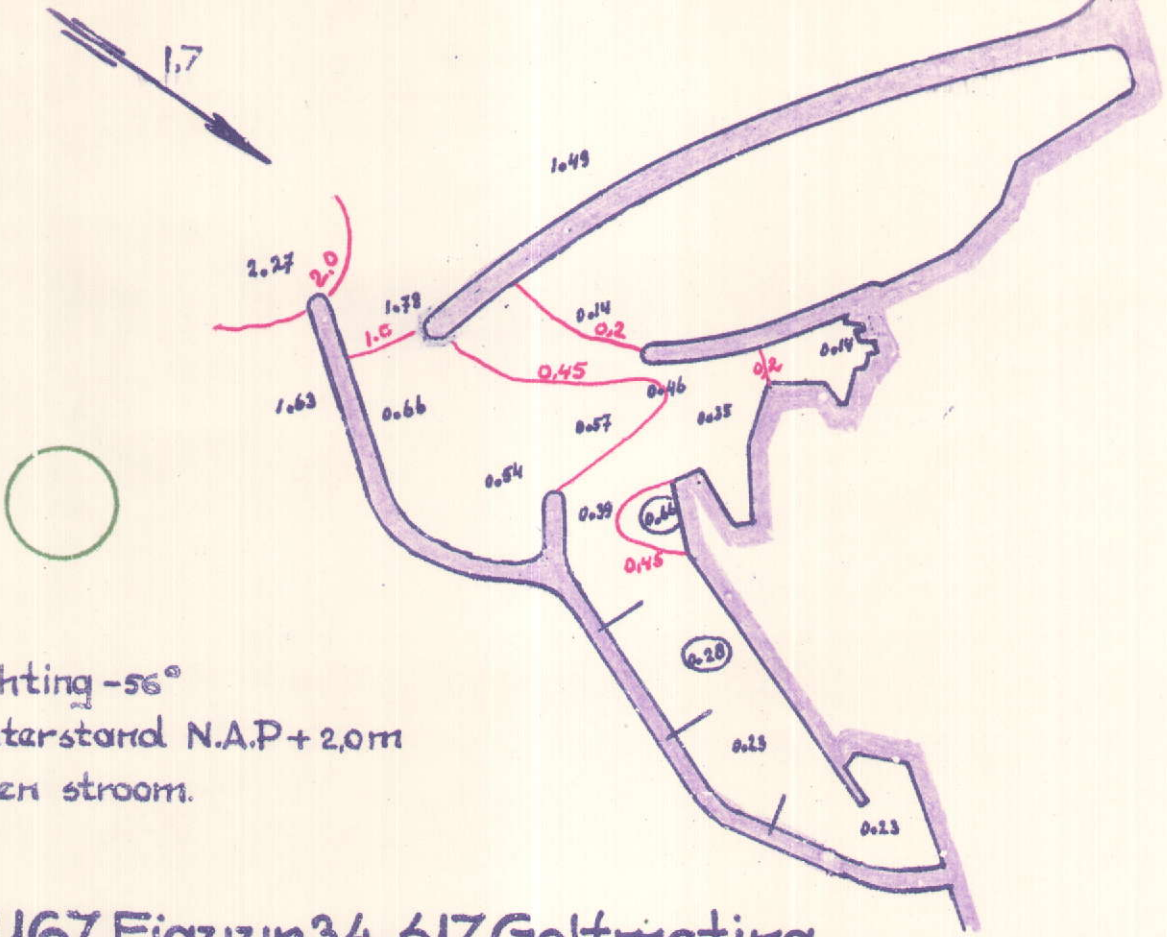
richting  $-56^\circ$   
 waterstand N.A.P. + 2.0m  
 zuidgaande stroom

M.167. Figuur 32.515. Golfmeting.



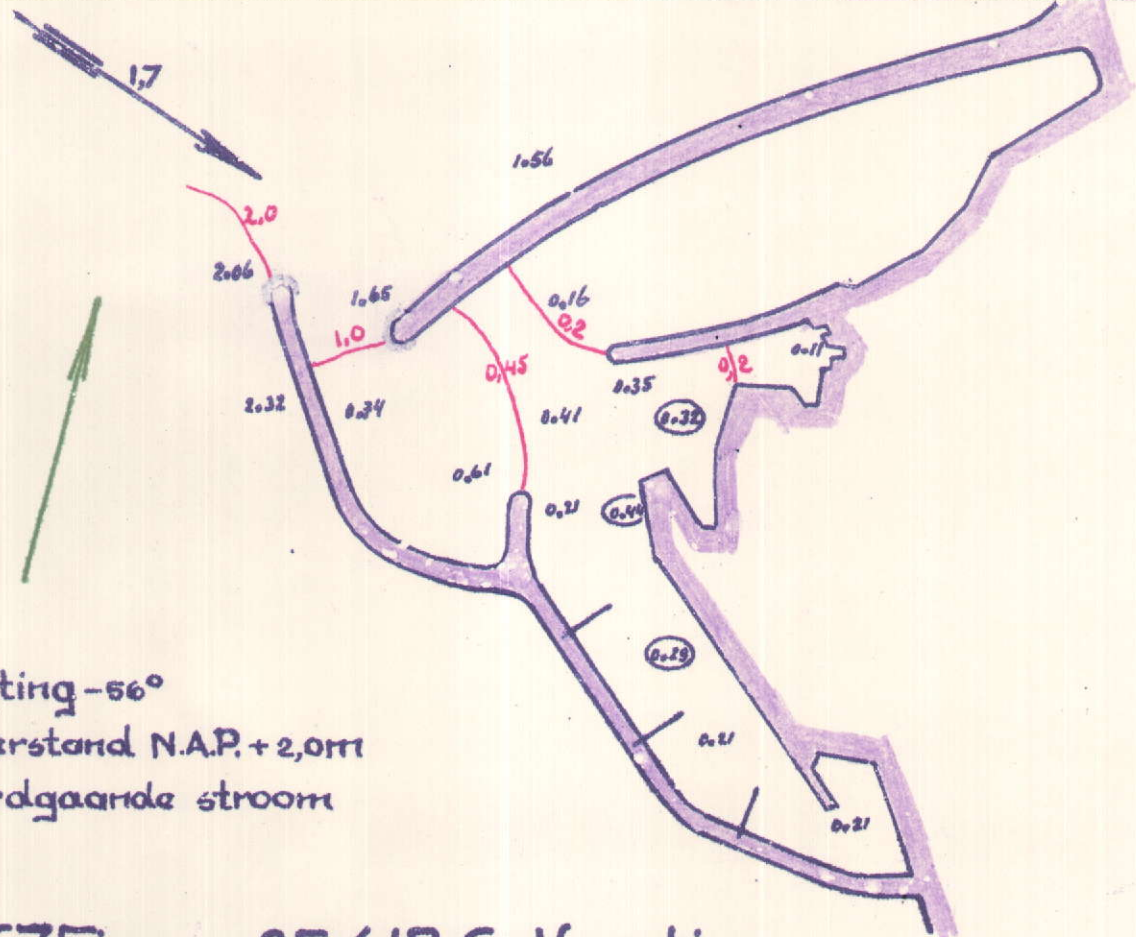
richting  $+34^\circ$   
 waterstand N.A.P. + 2.0m  
 geen stroom

M.167. Figuur 33.516. Golfmeting.



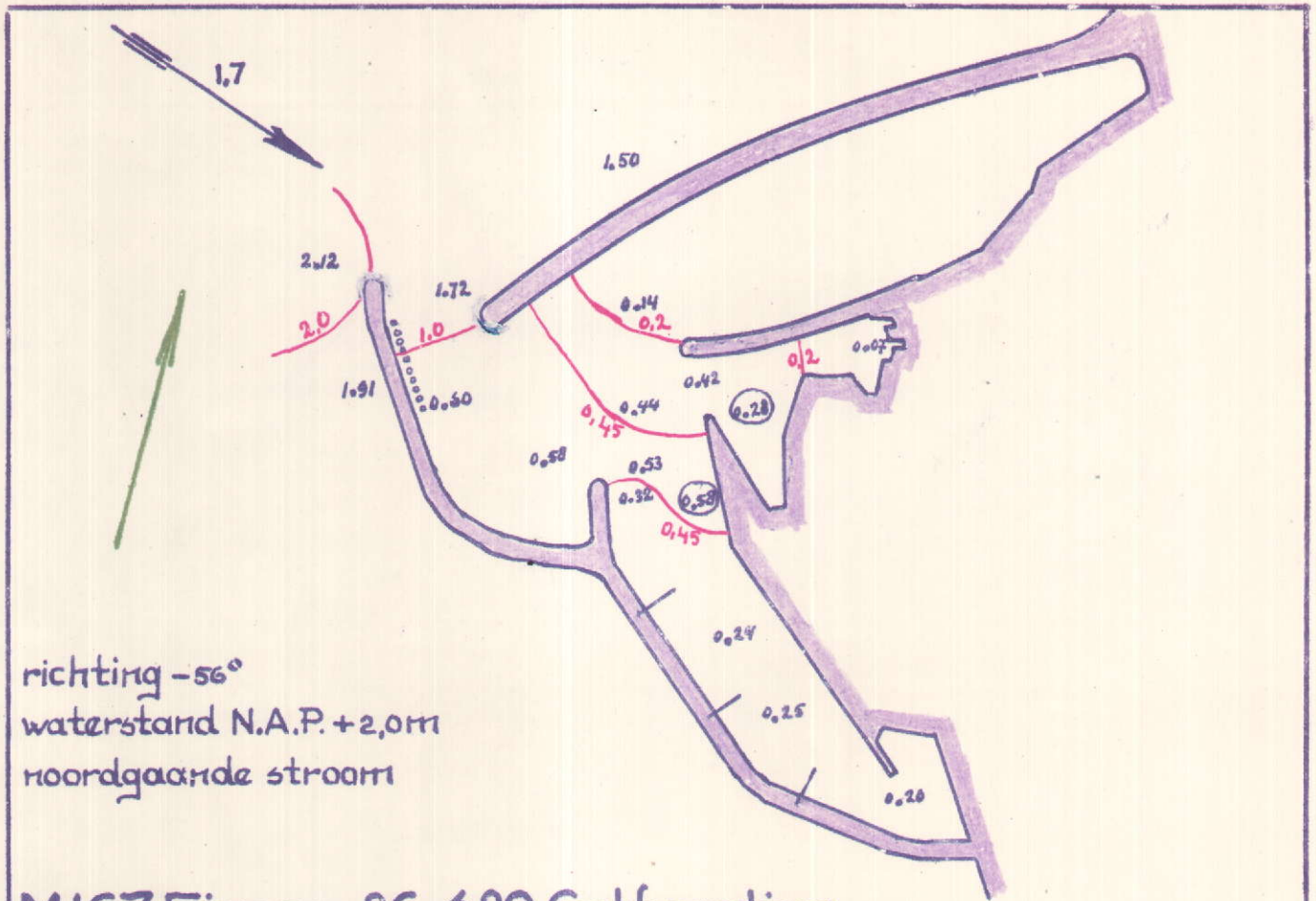
richting -56°  
 waterstand N.A.P.+2,0m  
 geen stroom.

M.167.Figuur 34. 517.Golfmeting.



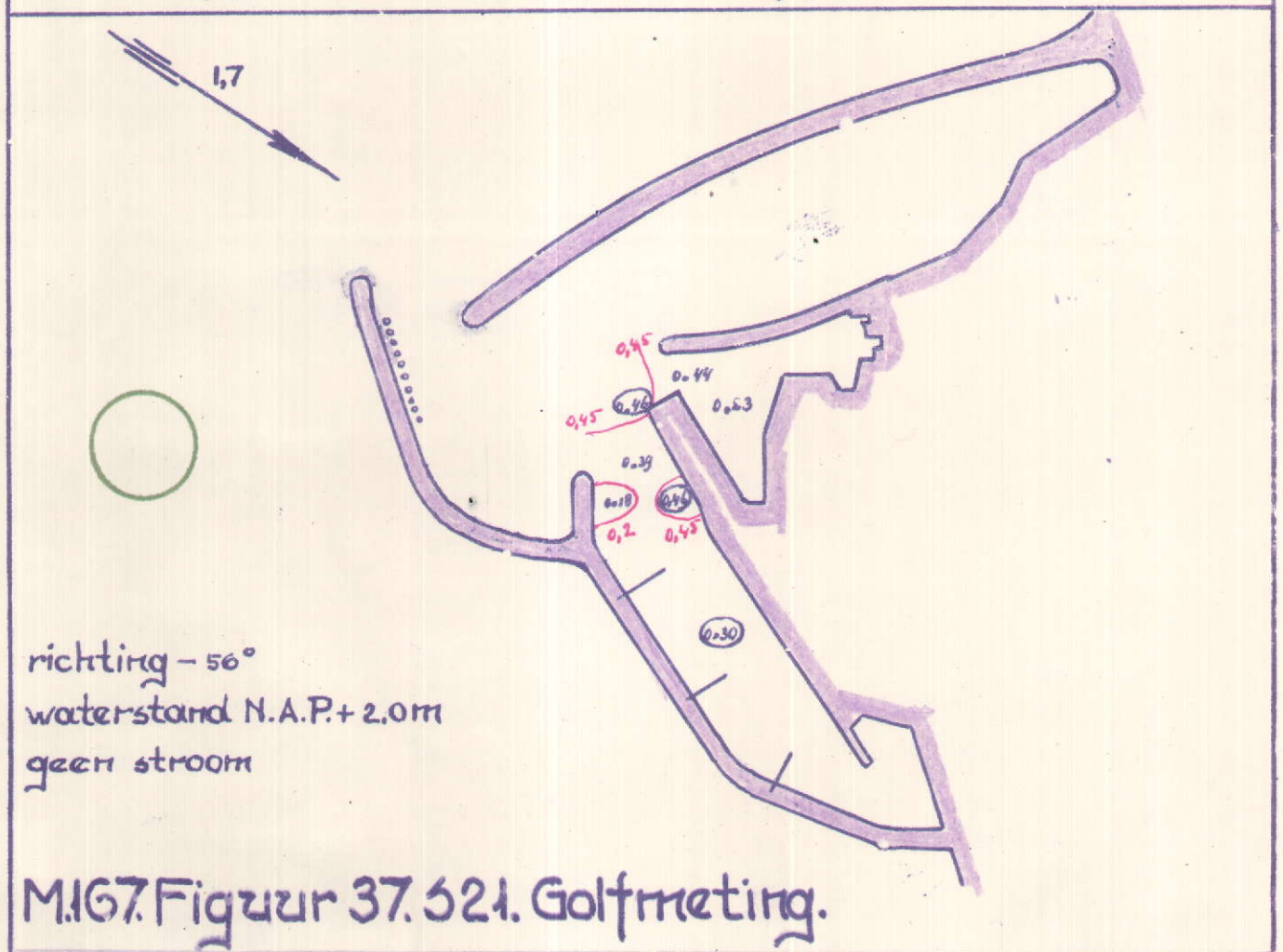
richting -56°  
 waterstand N.A.P.+2,0m  
 noordgaande stroom

M.167.Figuur 35. 518.Golfmeting.



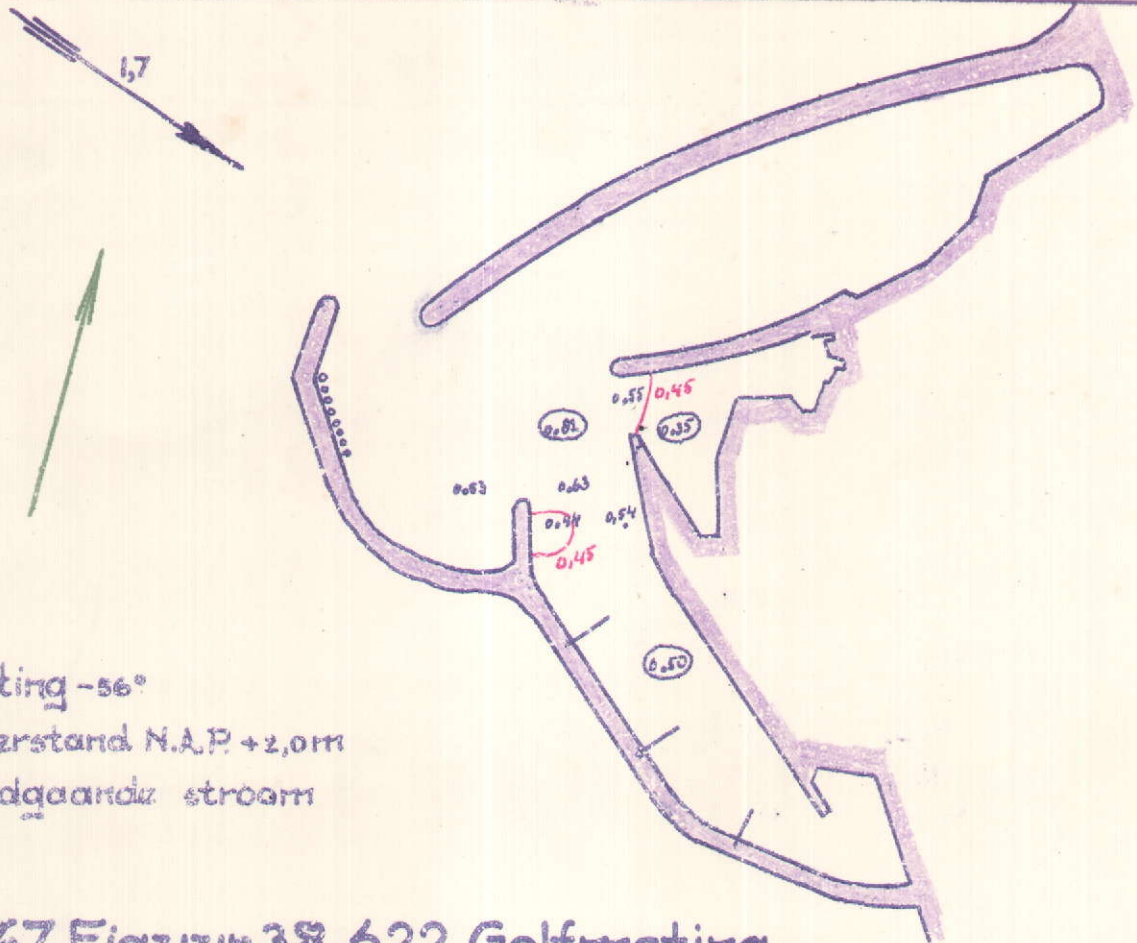
richting  $-56^\circ$   
 waterstand N.A.P. + 2,0m  
 noordgaande stroom

M.167. Figuur 36. 520. Golfmeting.

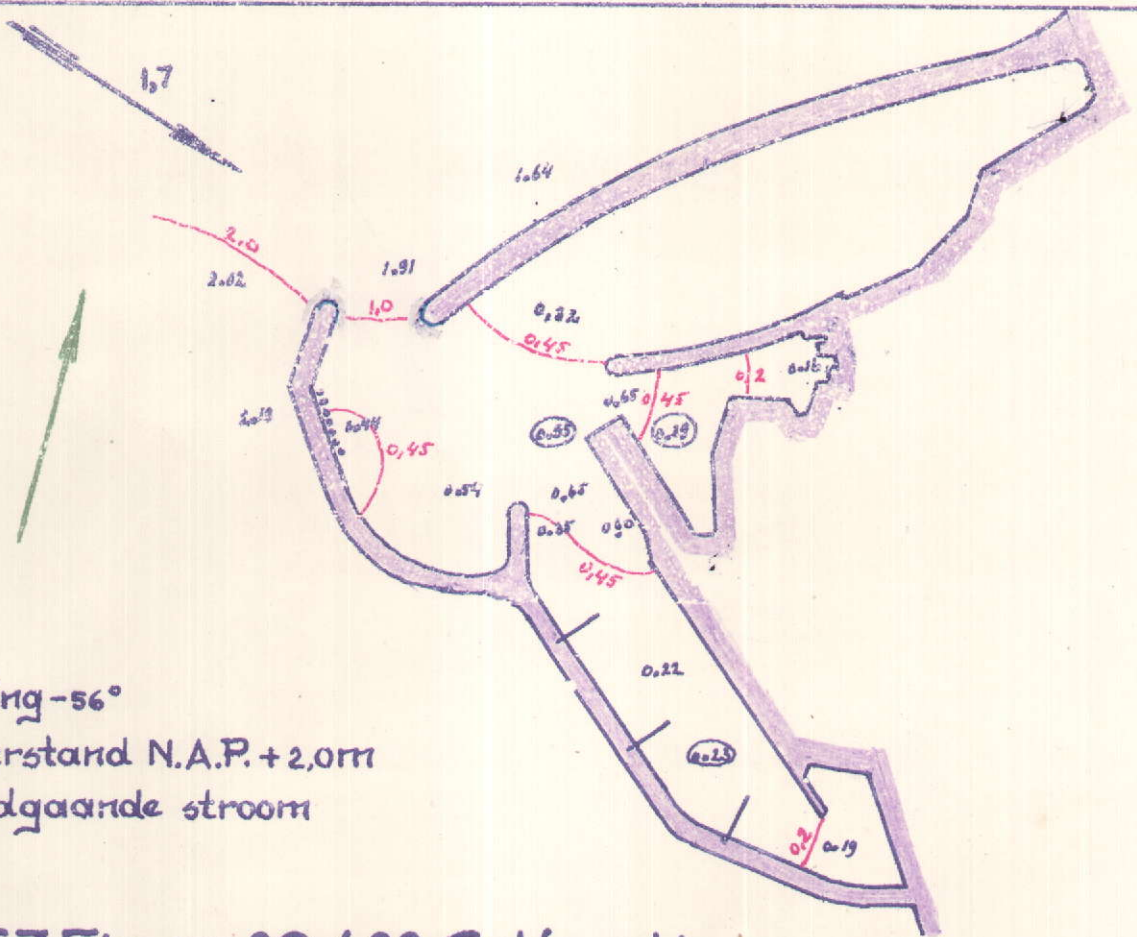


richting  $-56^\circ$   
 waterstand N.A.P. + 2,0m  
 geen stroom

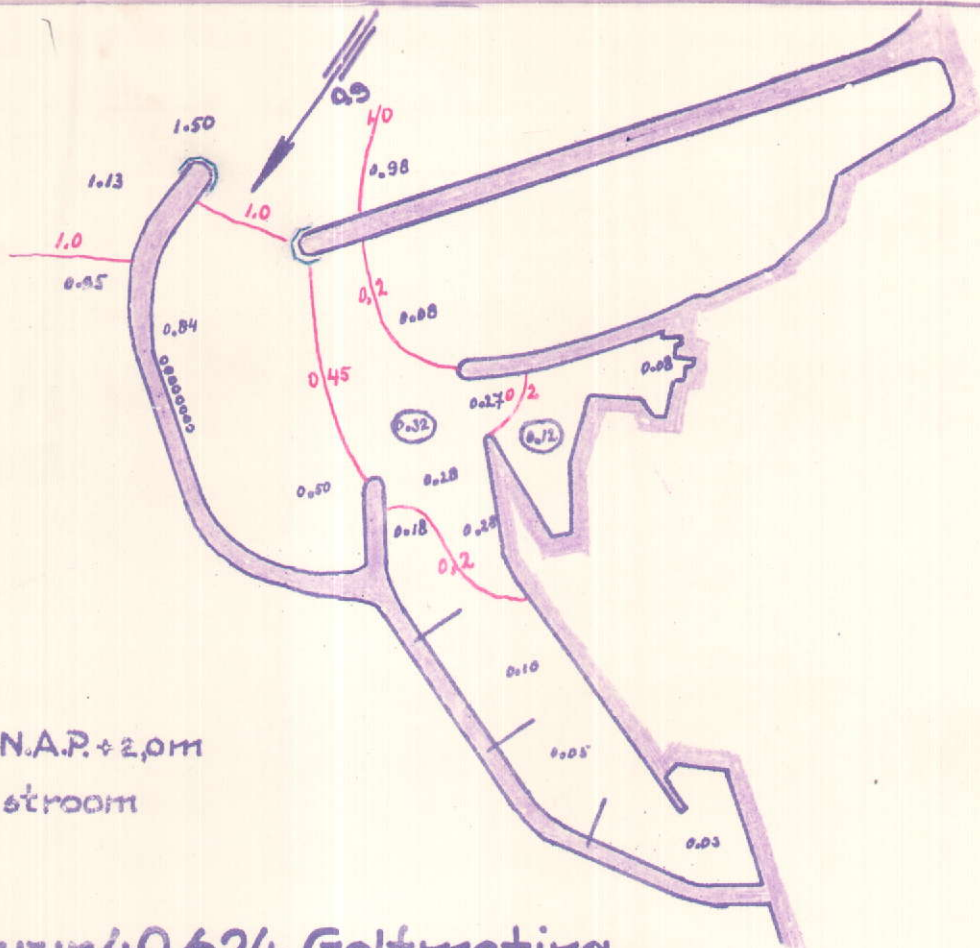
M.167. Figuur 37. 521. Golfmeting.



M.167. Figuur 38.522. Golfmeting.

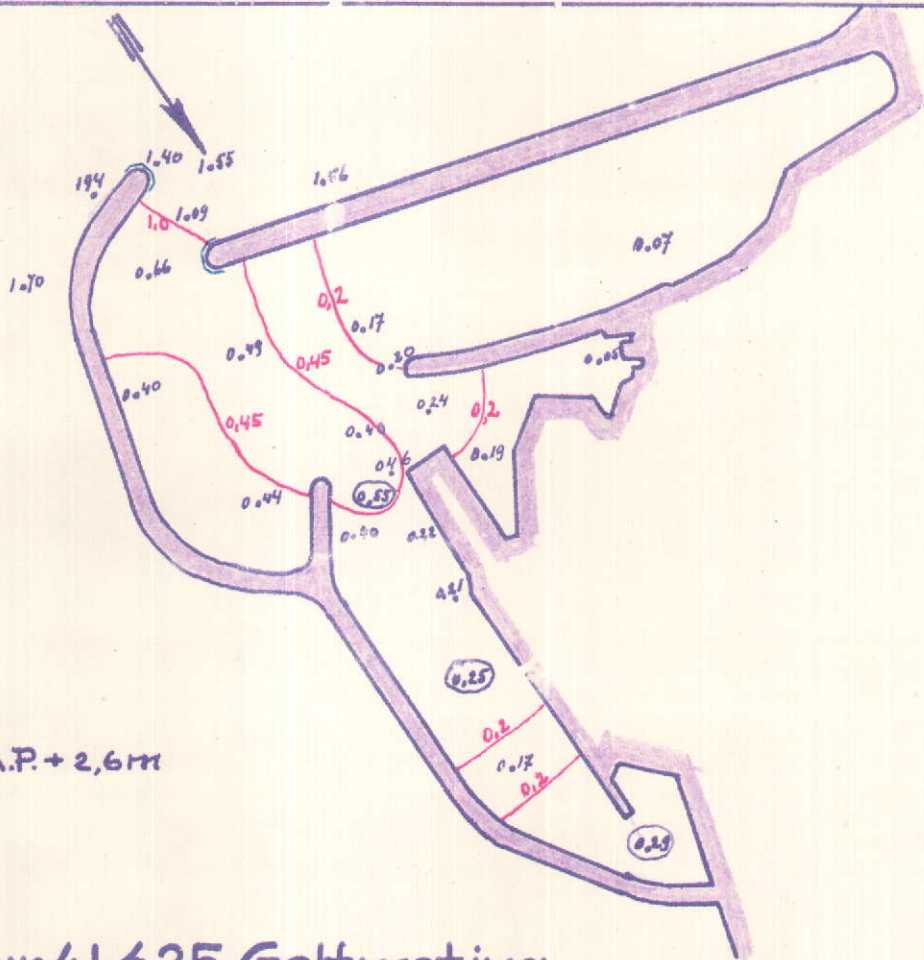


M.167. Figuur 39.523. Golfmeting.



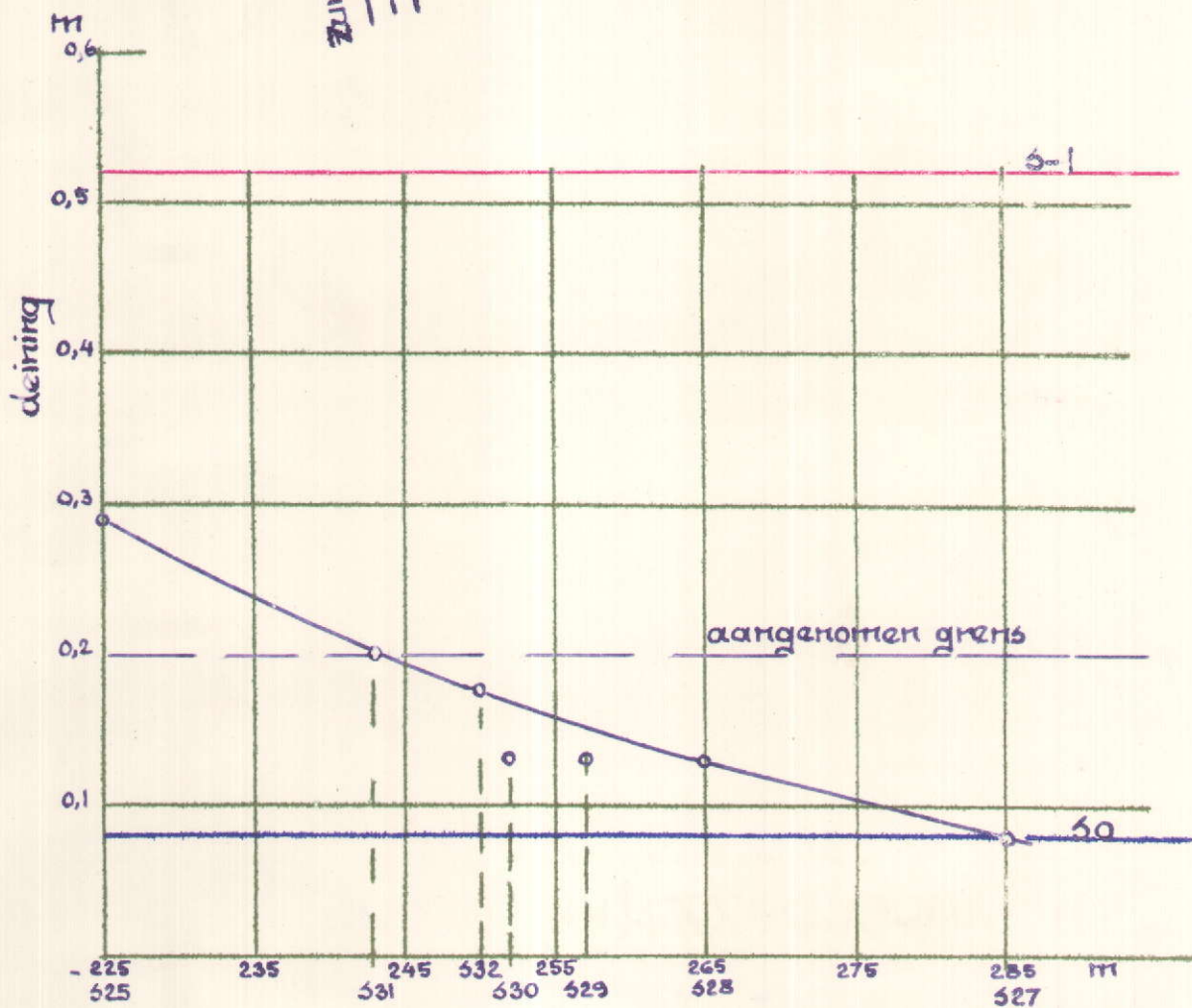
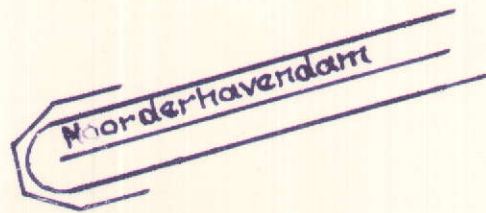
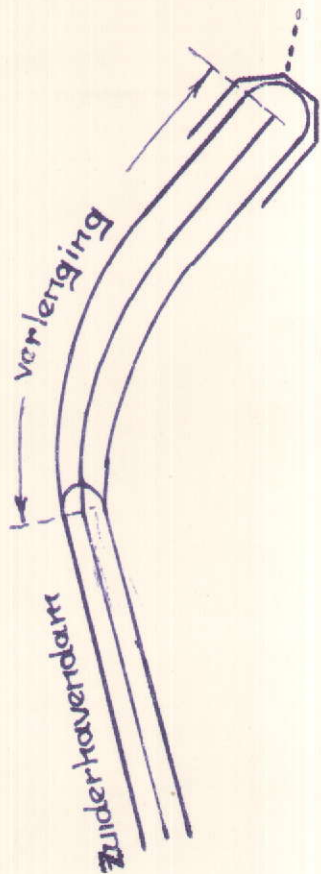
richting  $+34^\circ$   
 waterstand N.A.P. + 2,0m  
 zuidgaande stroom

M.167. Figuur 40.524. Golfmeting

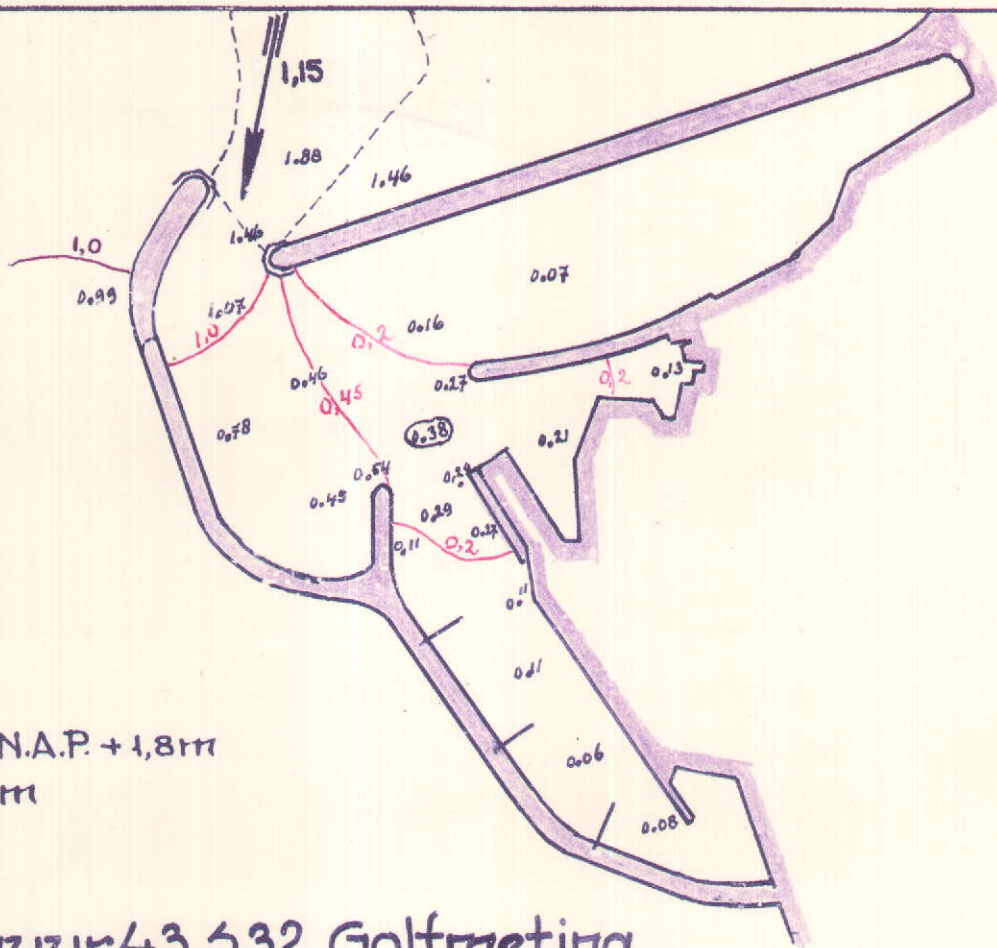


richting  $-34^\circ$   
 waterstand N.A.P. + 2,6m  
 geen stroom.

M.167. Figuur 41.525. Golfmeting.

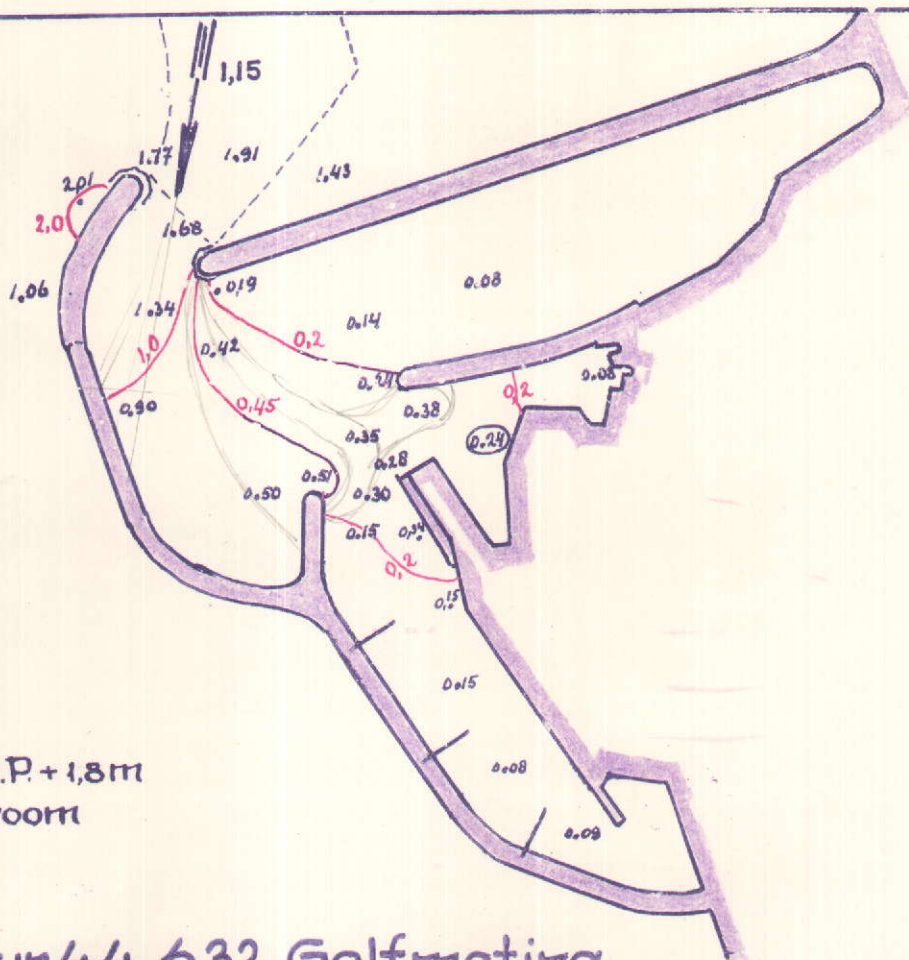


M.167. Fig. 42. Hoogtedergolven in de Nieuwe Willemskreeft bij verschillende lengten van den Zuiderhavendamm.



richting +11°  
waterstand N.A.P. + 1,8m  
geen stroom

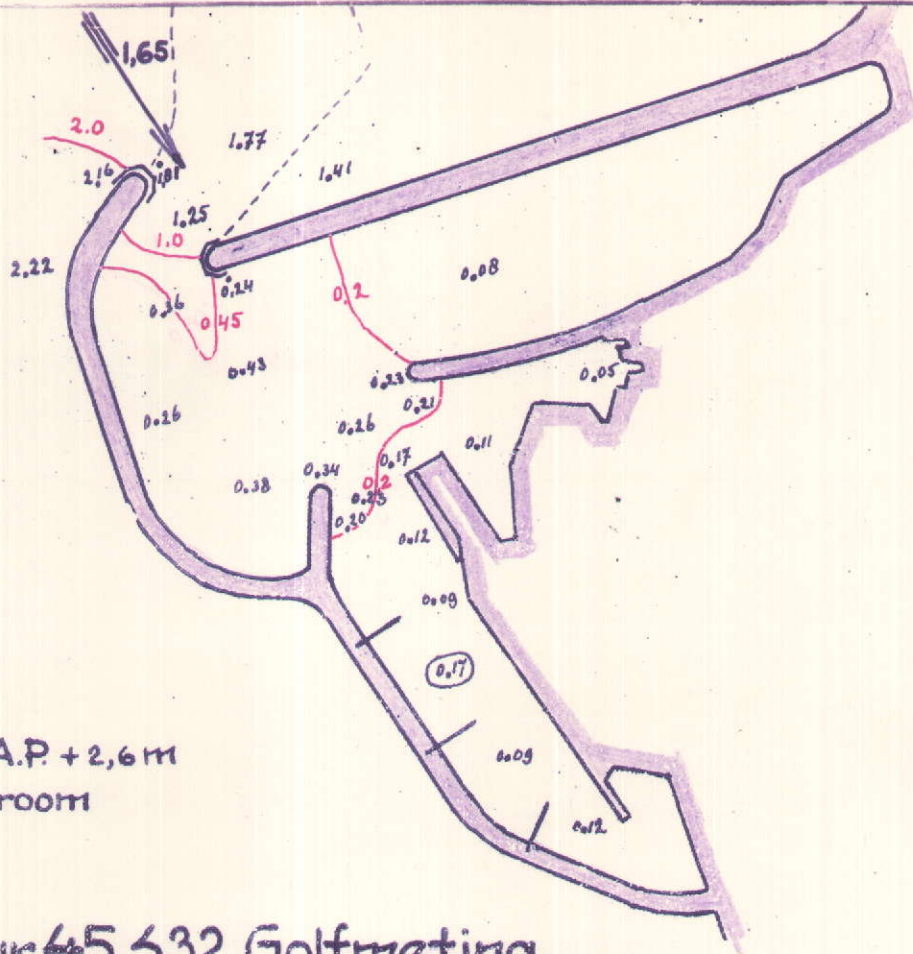
M.167 Figuur 43.532. Golfmeting



richting +11°  
waterstand N.A.P. + 1,8m  
zuidgaande stroom

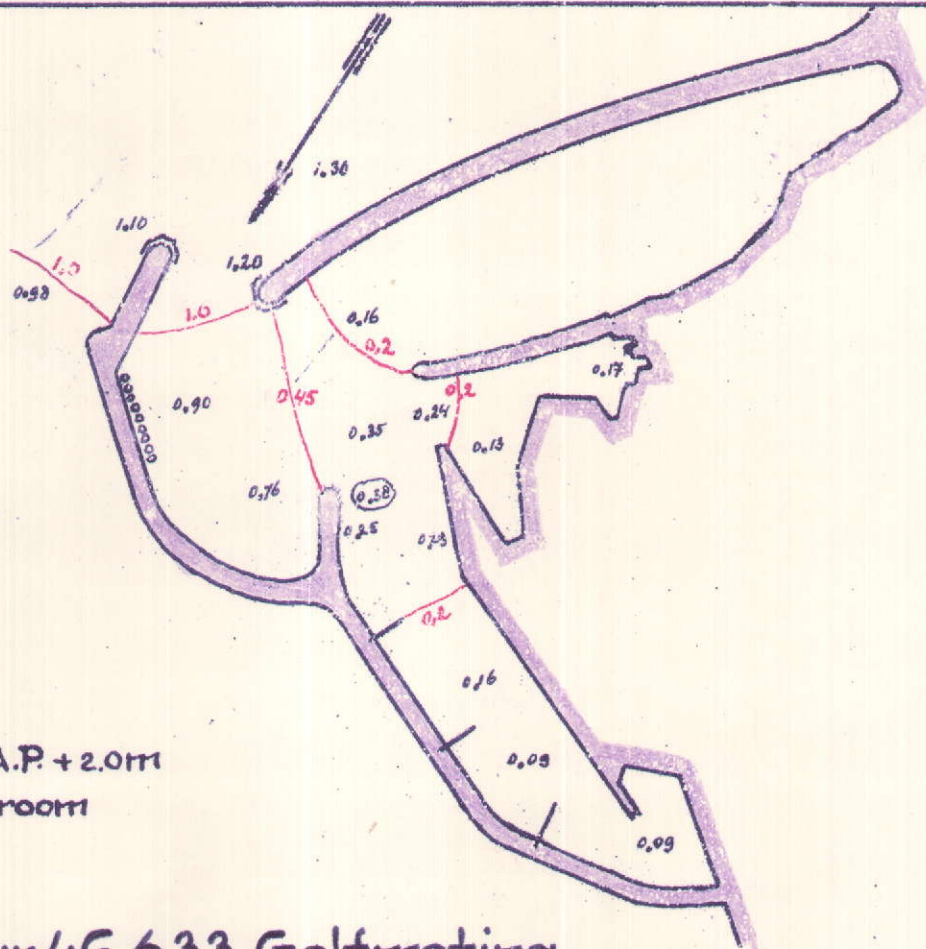
M.167 Figuur 44.532. Golfmeting.





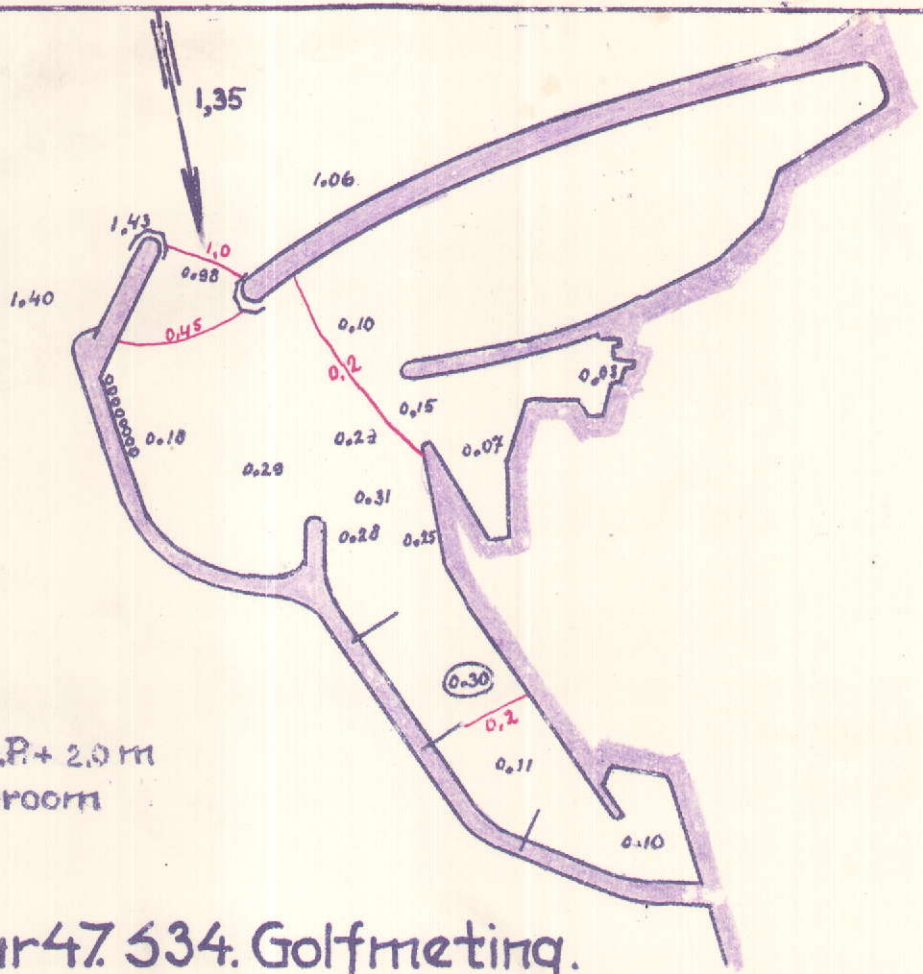
richting  $+34^\circ$   
 waterstand N.A.P. + 2,6 m  
 zuidgaande stroom

M.167.Figuur 45.532. Golfmeting



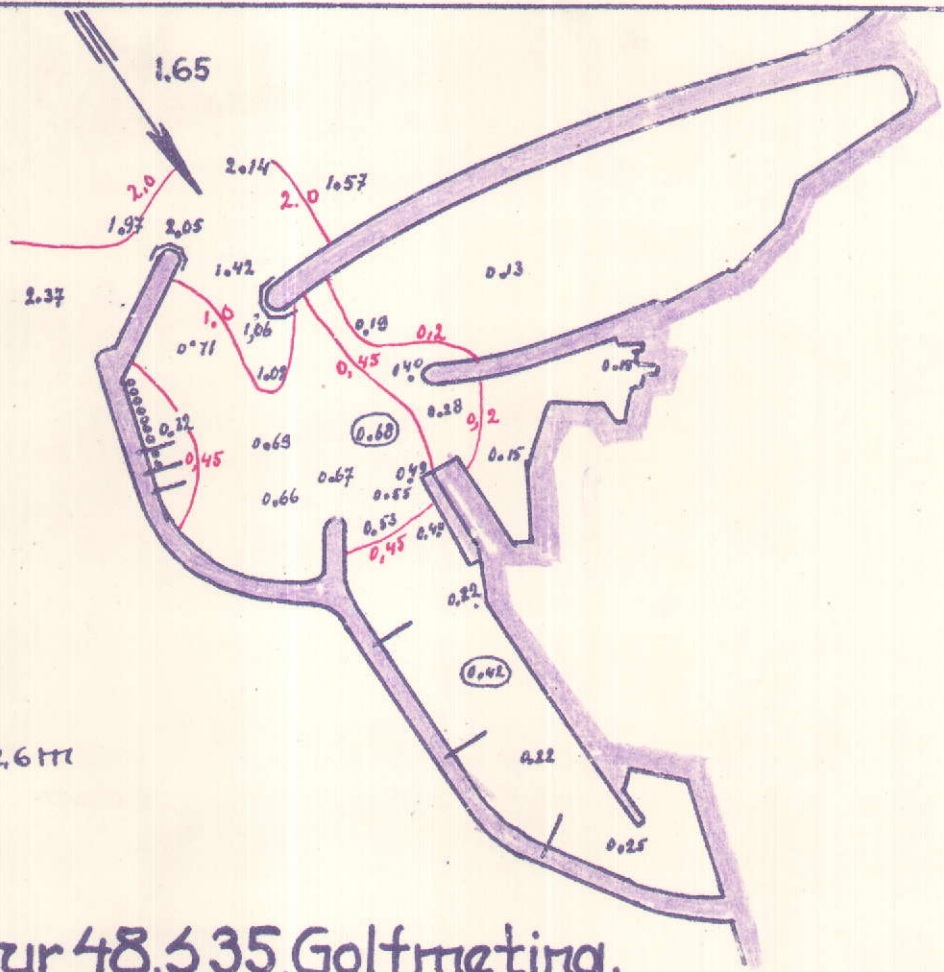
richting  $+34^\circ$   
 waterstand N.A.P. + 2,0 m  
 zuidgaande stroom

M.167.Figuur 46.533. Golfmeting.



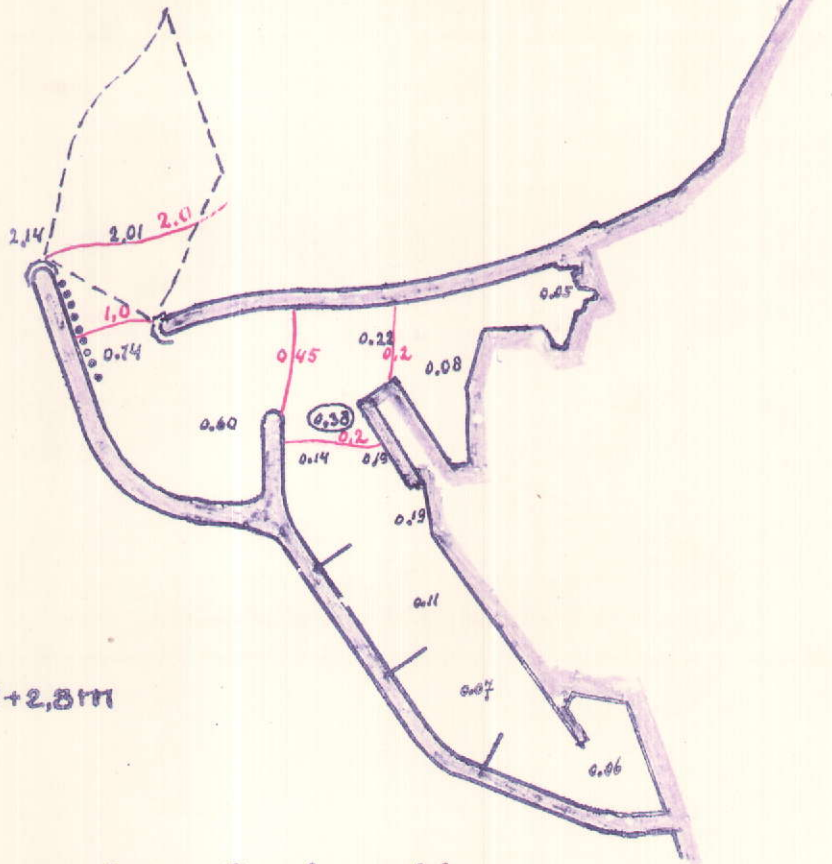
richting  $-11^\circ$   
 waterstand N.A.P. + 2.0 m  
 noordgaande stroom

M.167. Figuur 47. 534. Golfmeting.



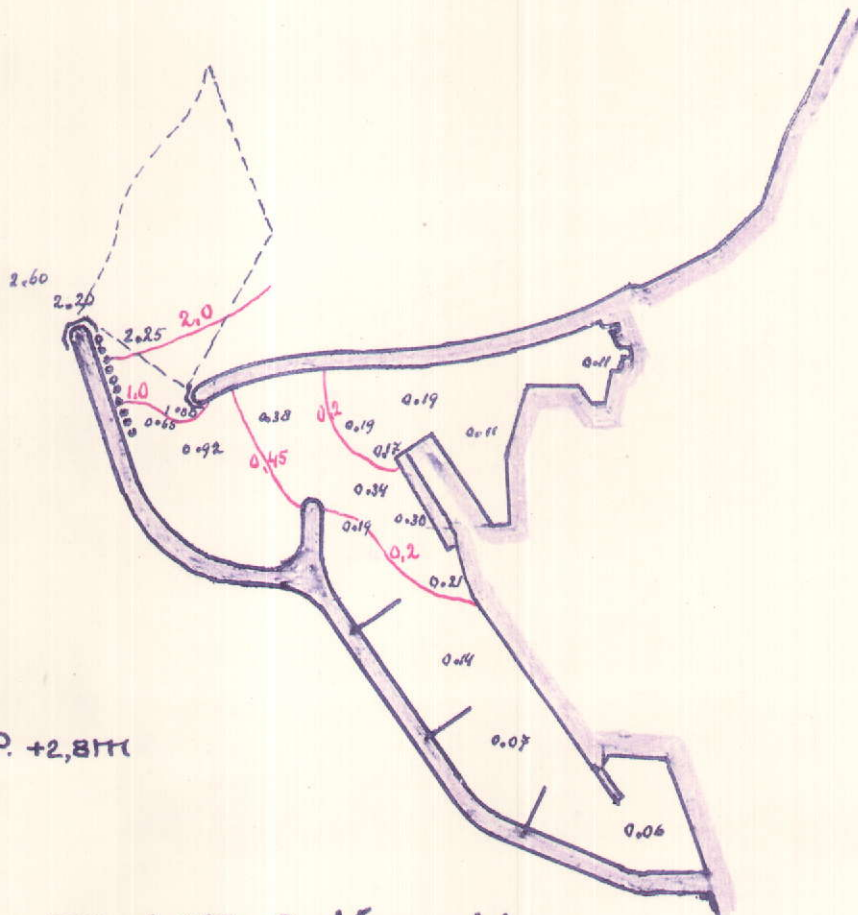
richting  $-34^\circ$   
 waterstand + 2.6 m  
 geen stroom.

M.167. Figuur 48. 535. Golfmeting.



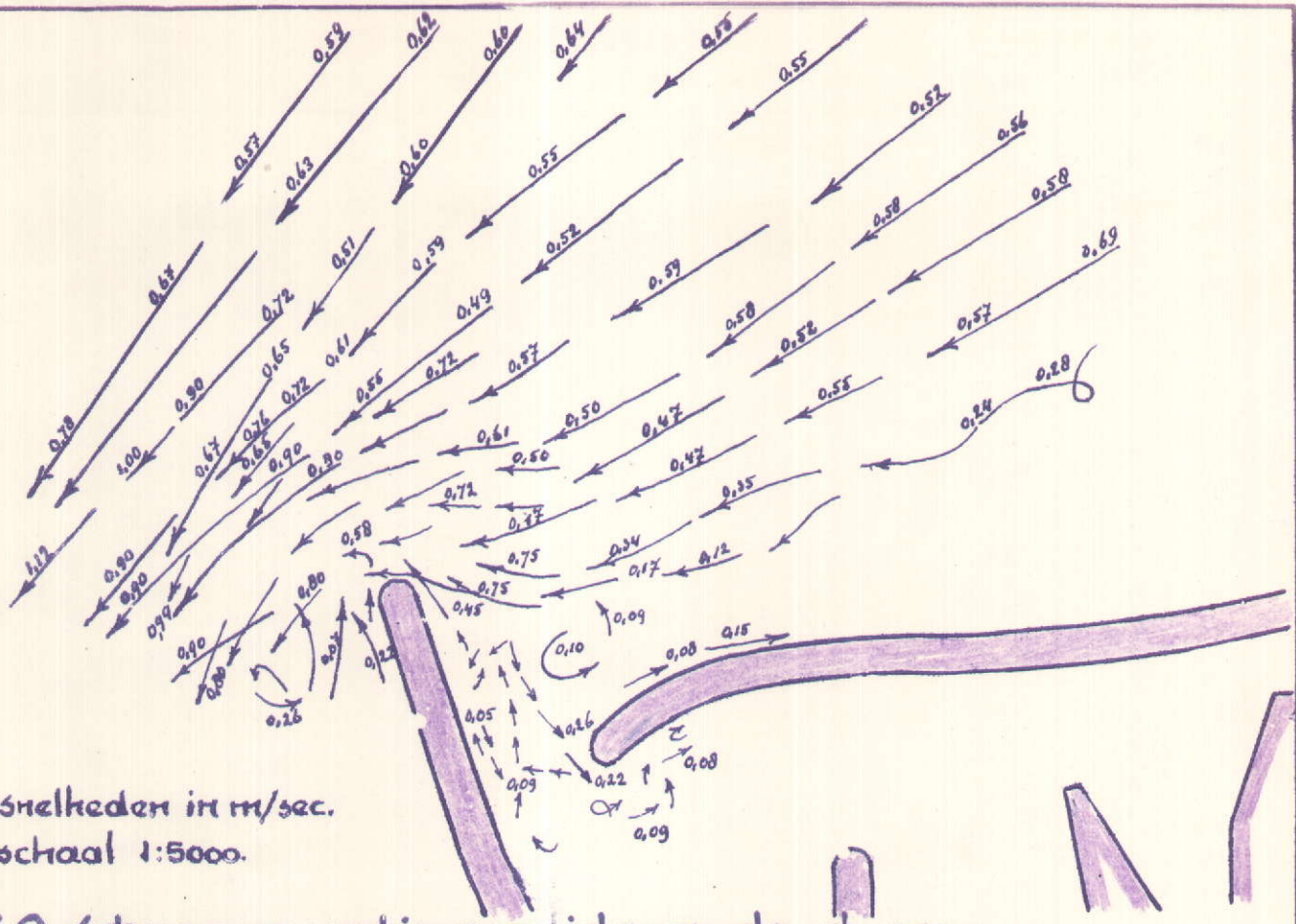
richting  $-56^\circ$   
waterstand N.A.P. +2,81m  
geen stroom

M.167. Figuur 49. 536. Golfmeting.



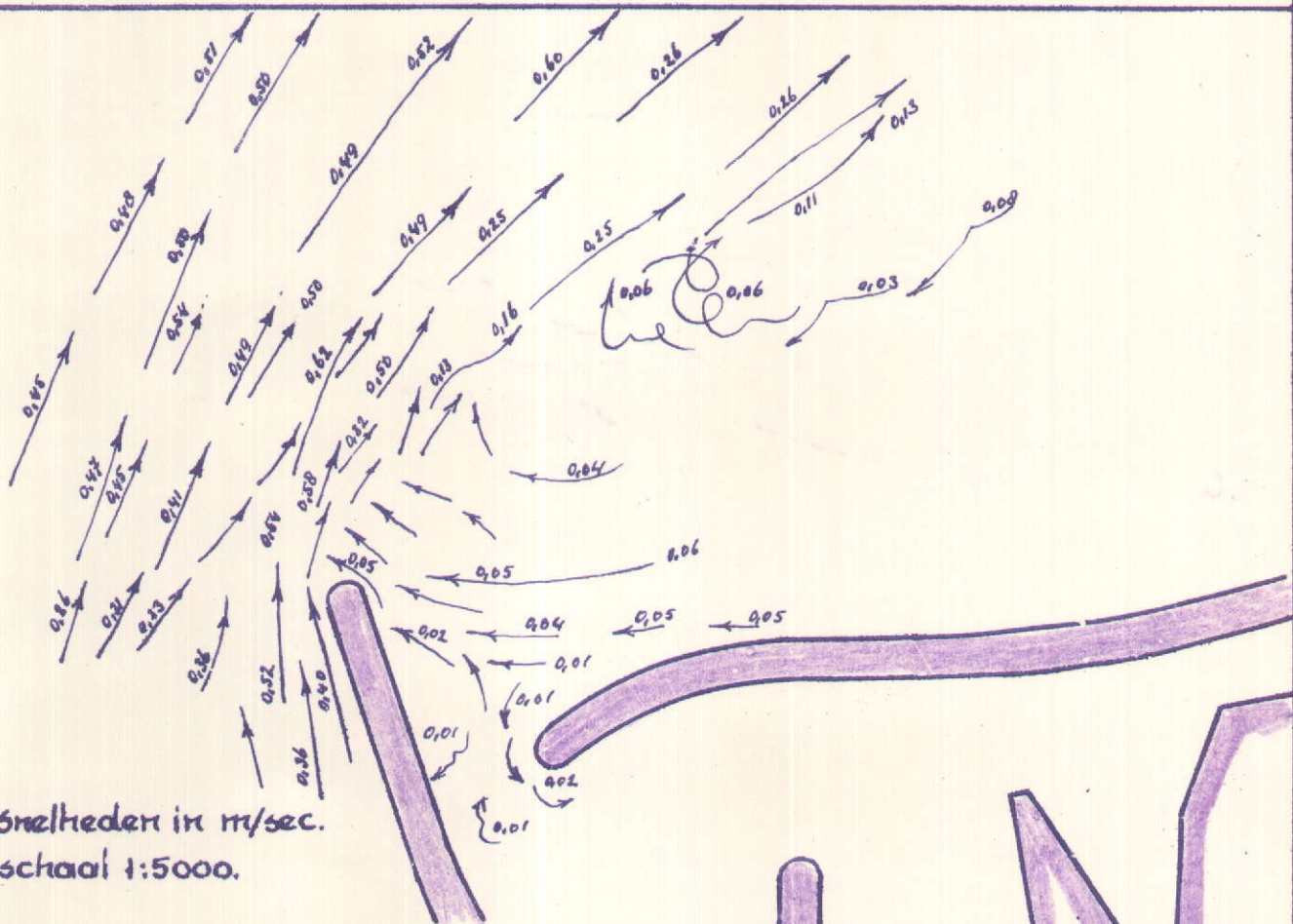
richting  $-56^\circ$   
waterstand N.A.P. +2,81m  
geen stroom

M.167. Figuur 50. 538. Golfmeting.



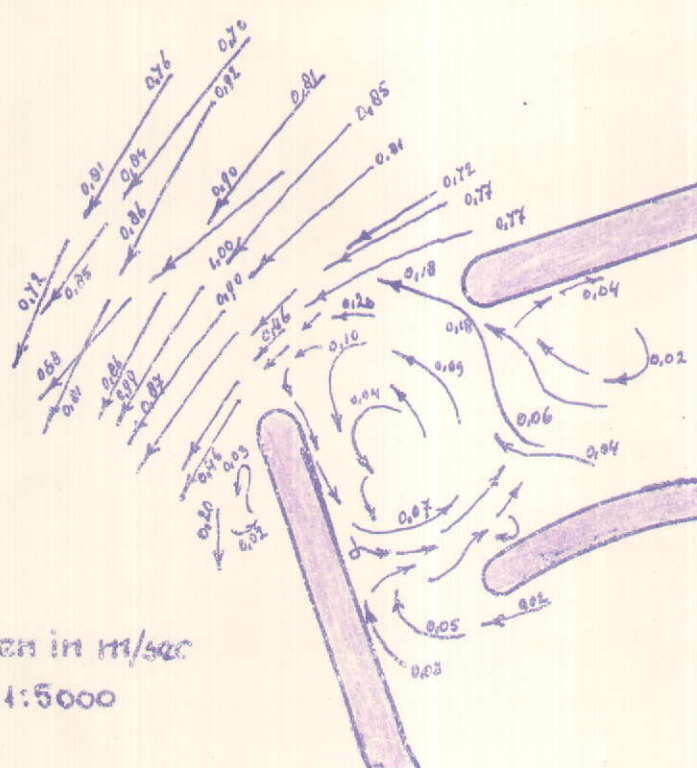
snelheden in m/sec.  
 schaal 1:5000.

50. Stroommeting zuidgaande stroom.



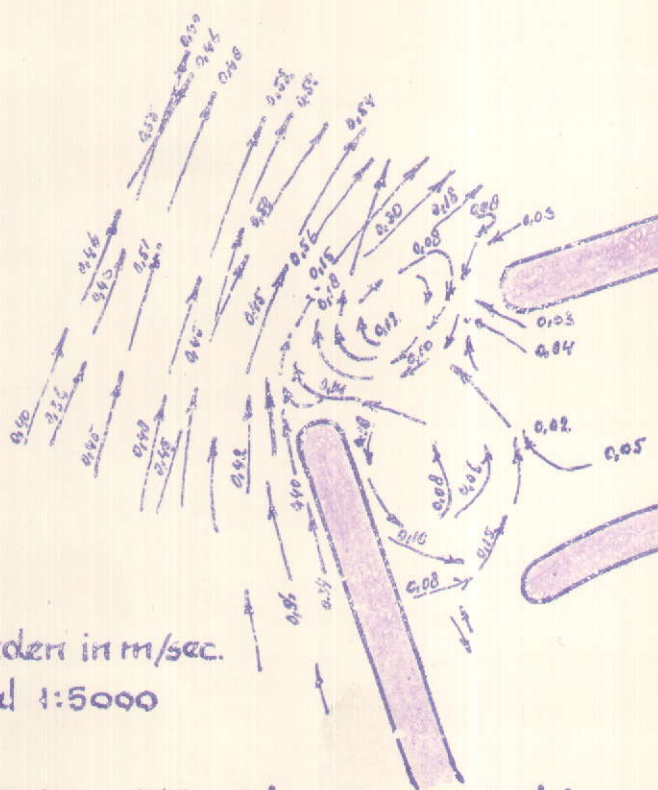
snelheden in m/sec.  
 schaal 1:5000.

M.167. Fig. 51. 50. Stroommeting noordgaande stroom.



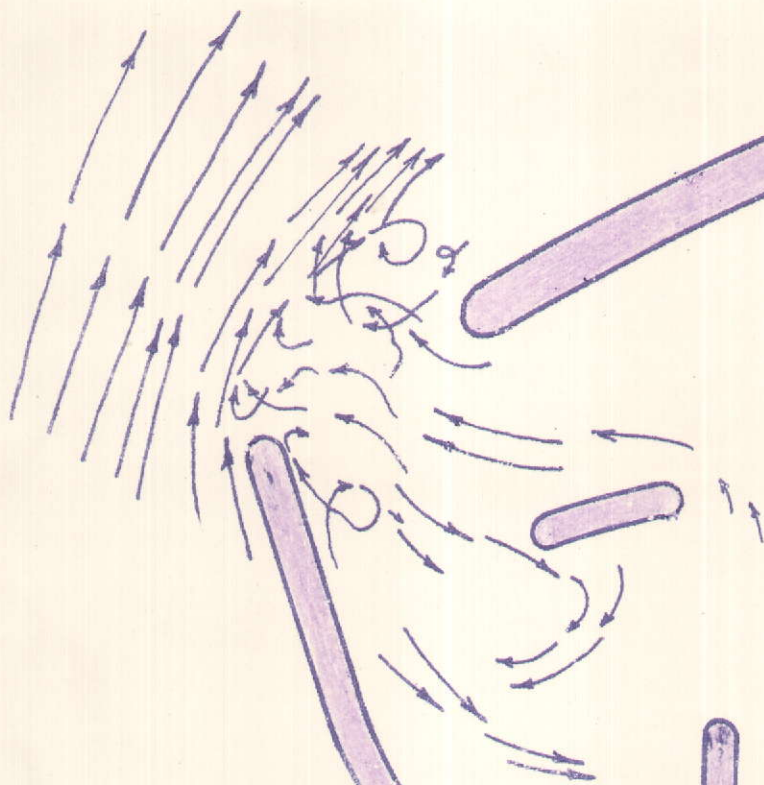
snelheden in m/sec  
 schaal 1:5000

53. Stroommeting zuidgaande stroom.



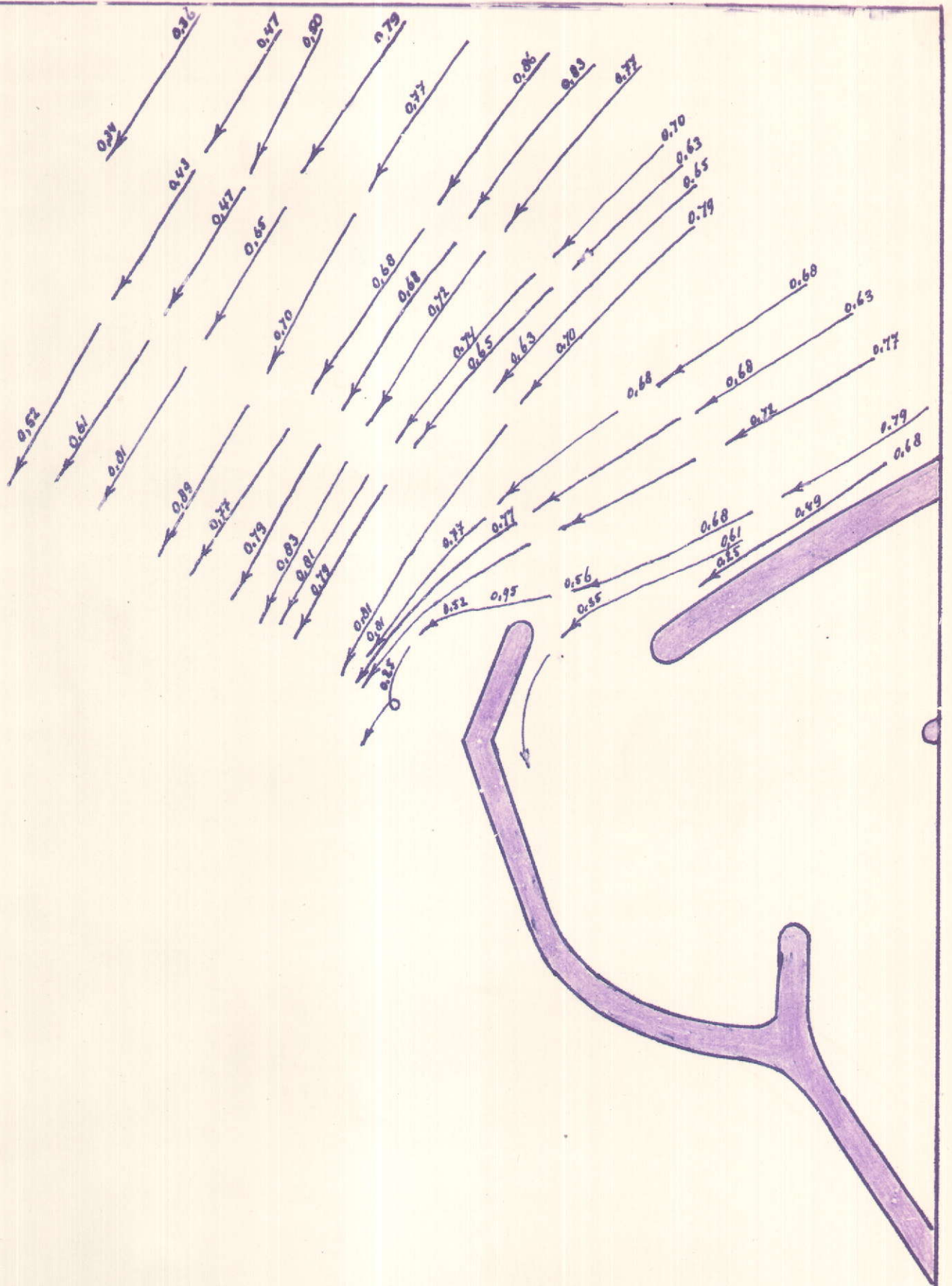
snelheden in m/sec.  
 schaal 1:5000

M.167. Fig. 52. Stroommeting noordgaande stroom.



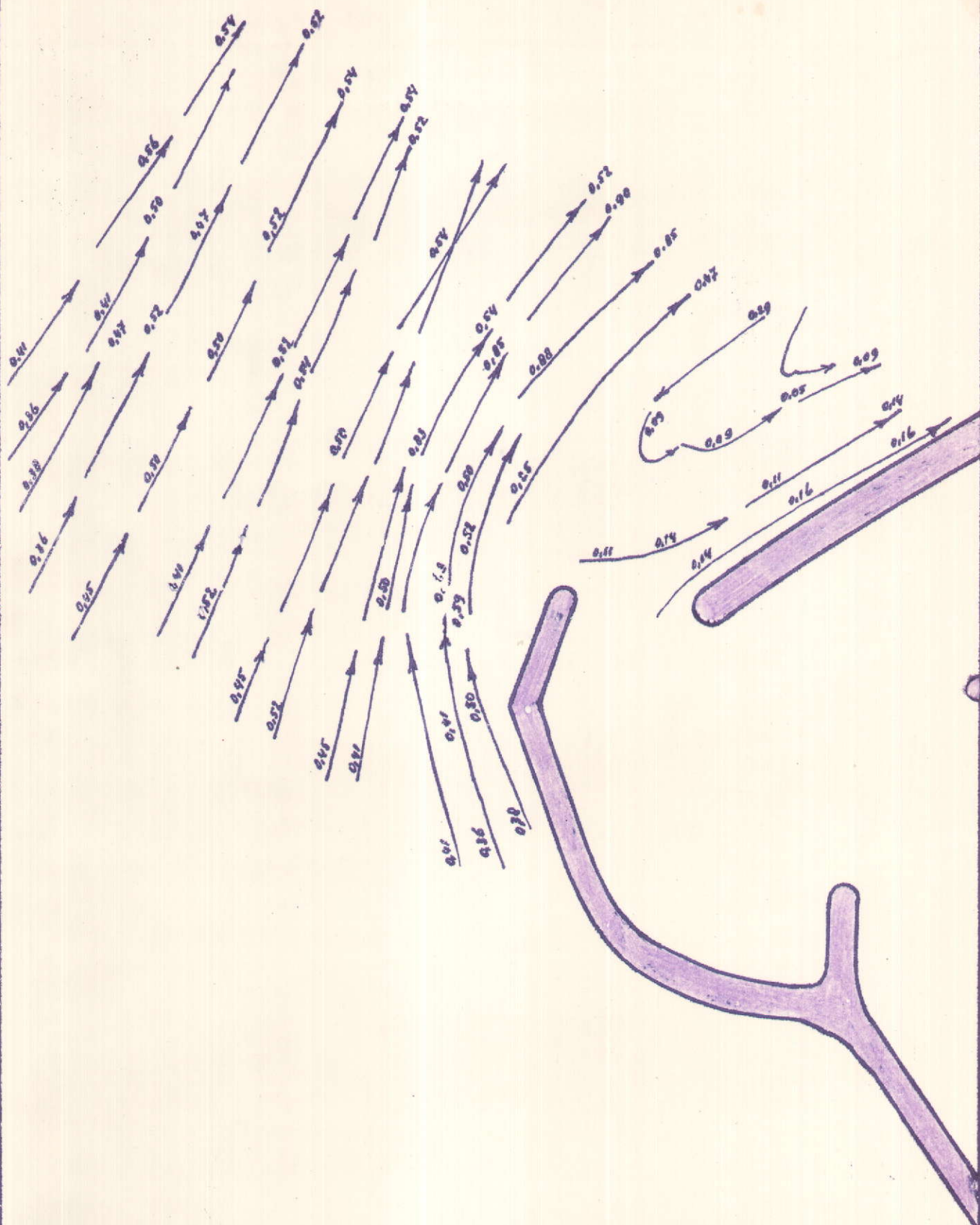
schaal 1:5000

M.167. Fig. 53. 55. Stroommeting noordgraandestroom



snelheden in m/sec.  
 schaal 1:5000

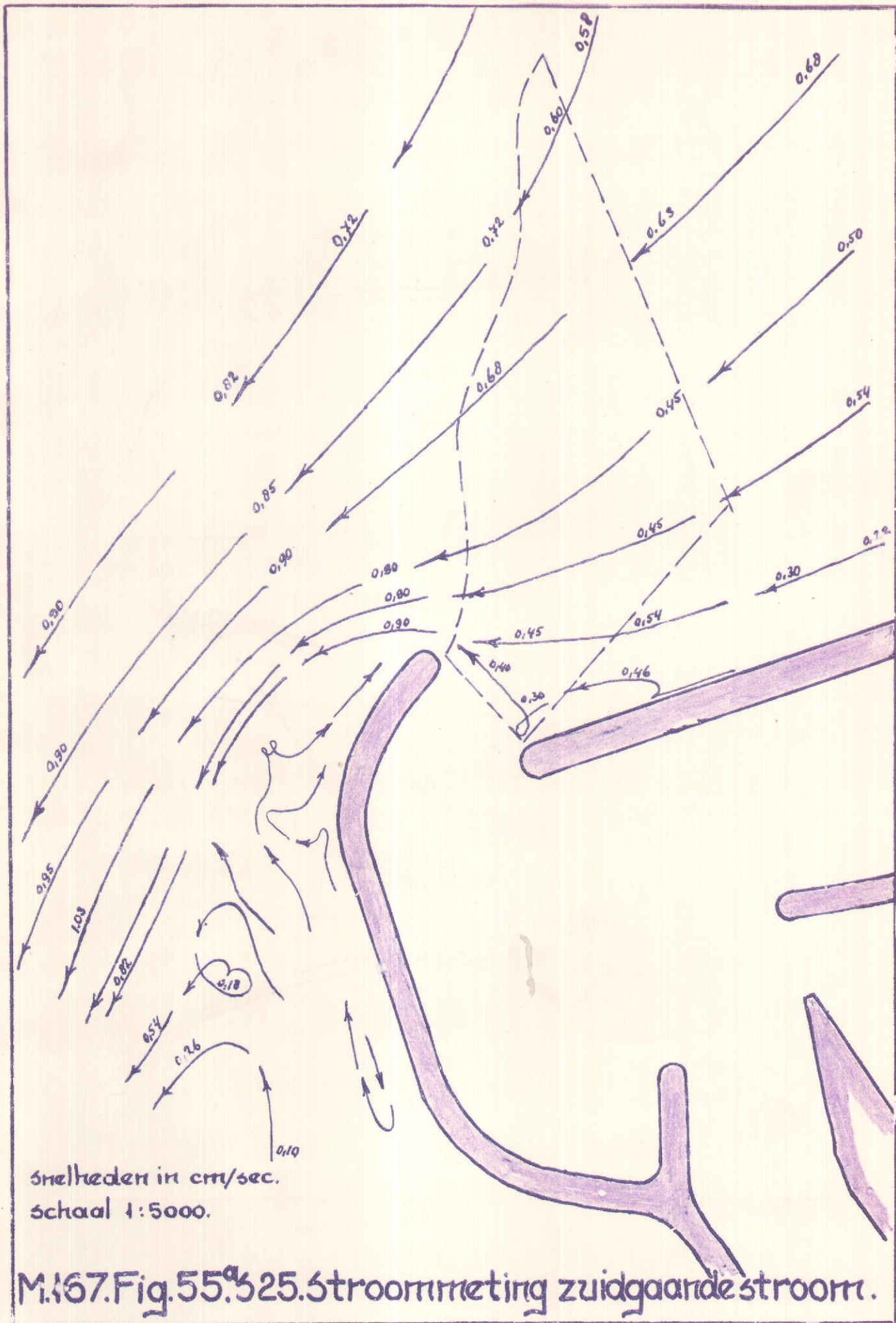
M.167. Fig. 54<sup>a</sup> 522. stroommeting zuidgaande stroom

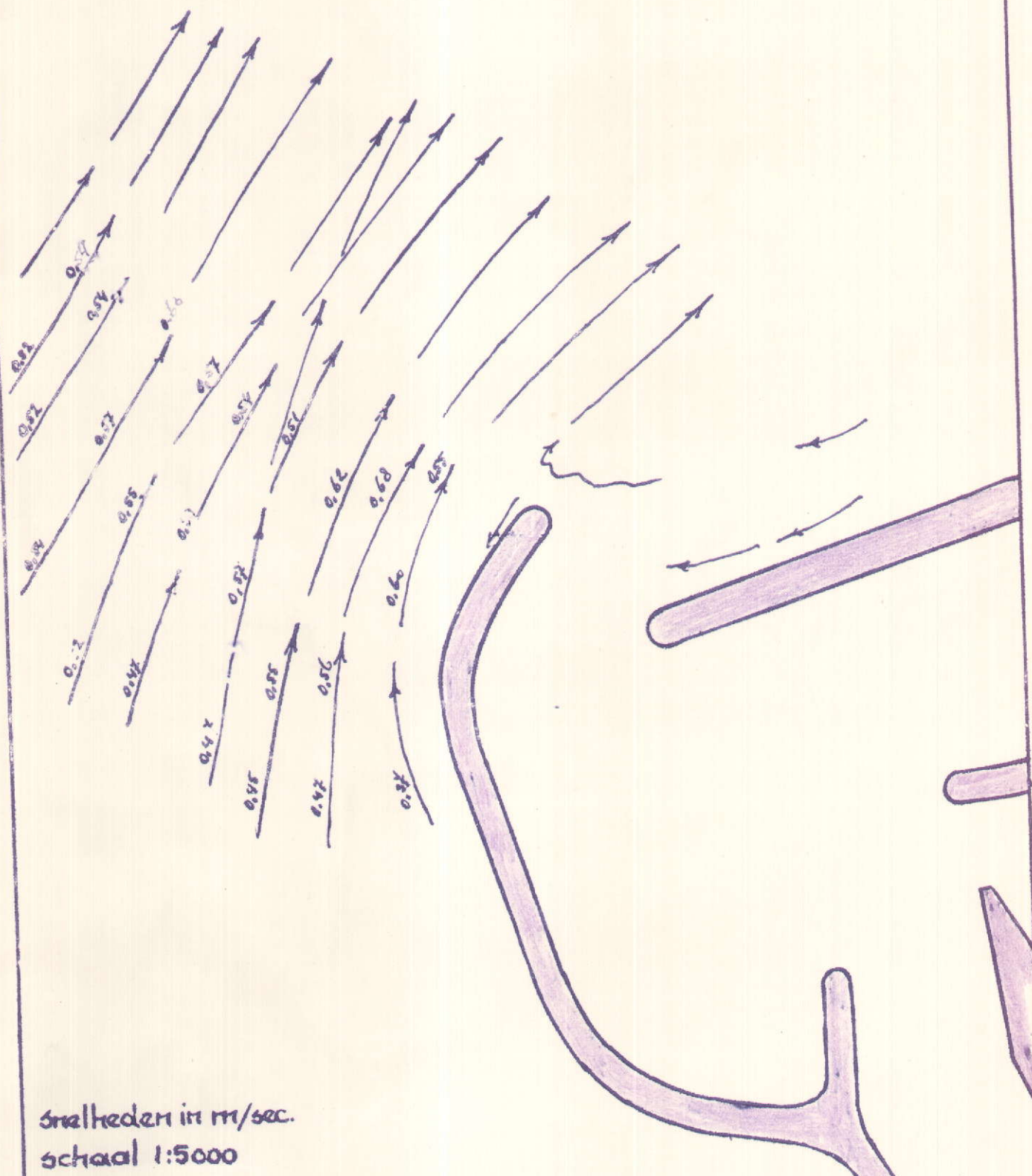


snelheden in m/sec.  
 schaal 1:5000

M.167. Fig. 54<sup>b</sup> 522.5 stroommeting noordgaande stroom

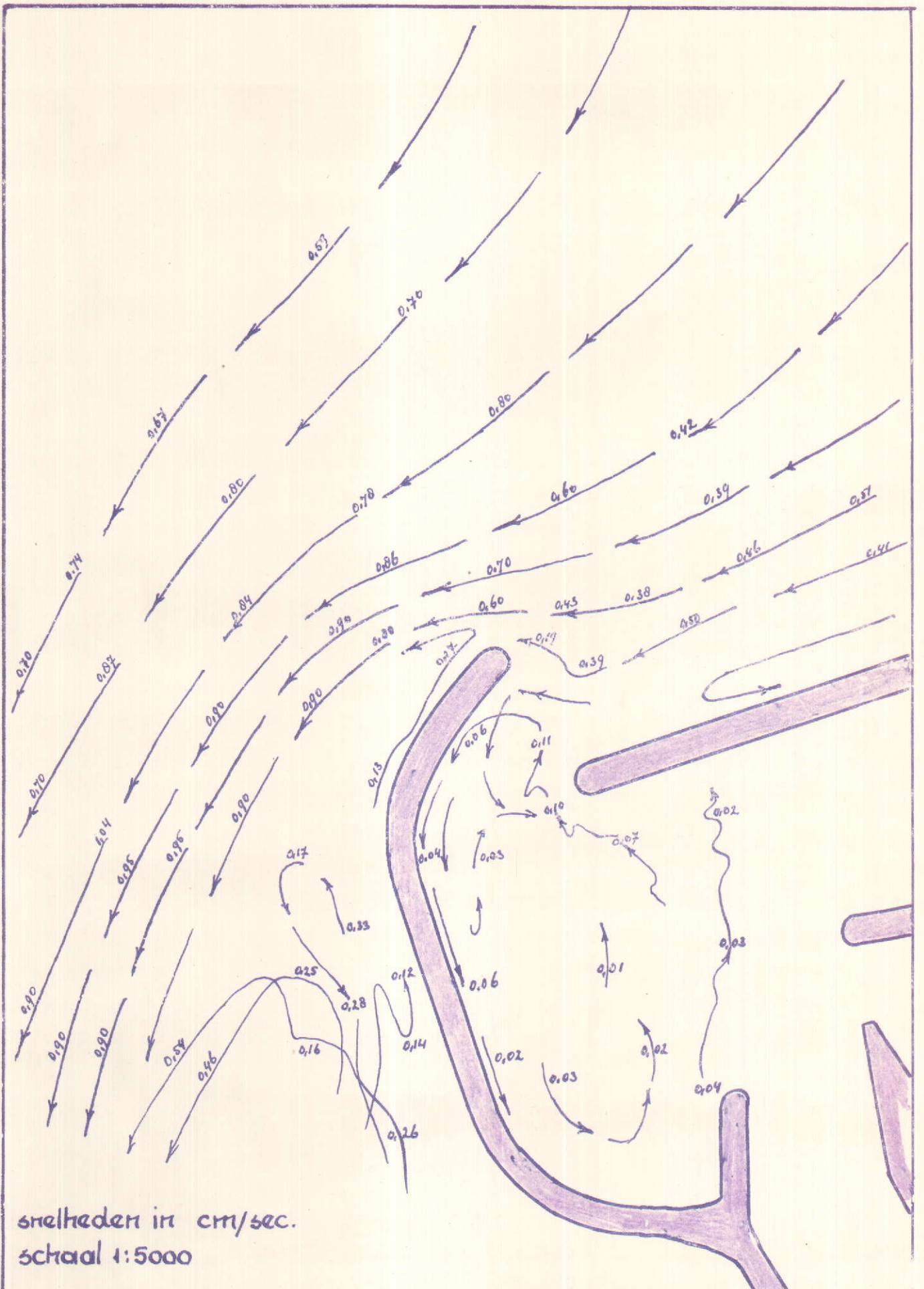






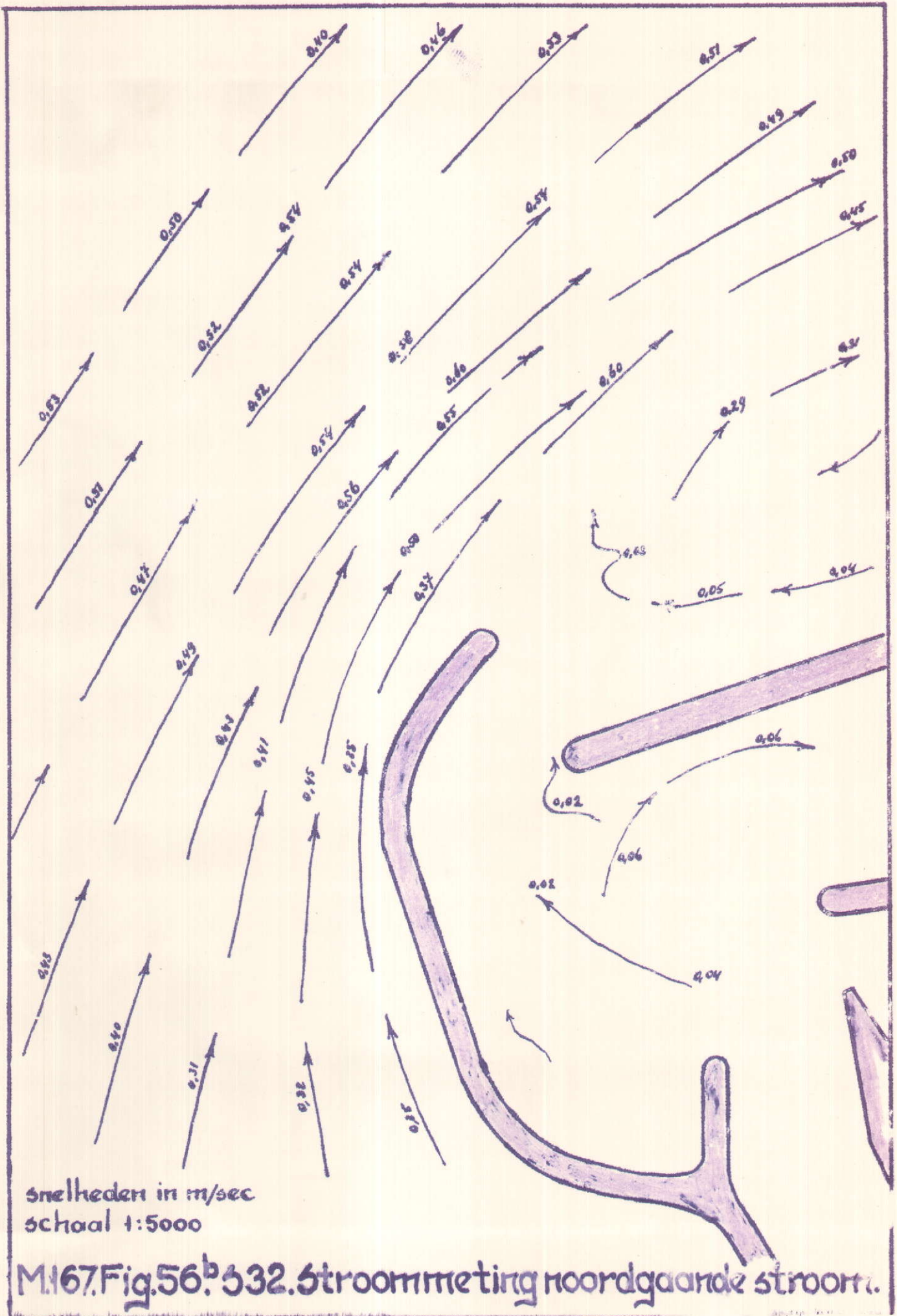
snelheden in m/sec.  
 schaal 1:5000

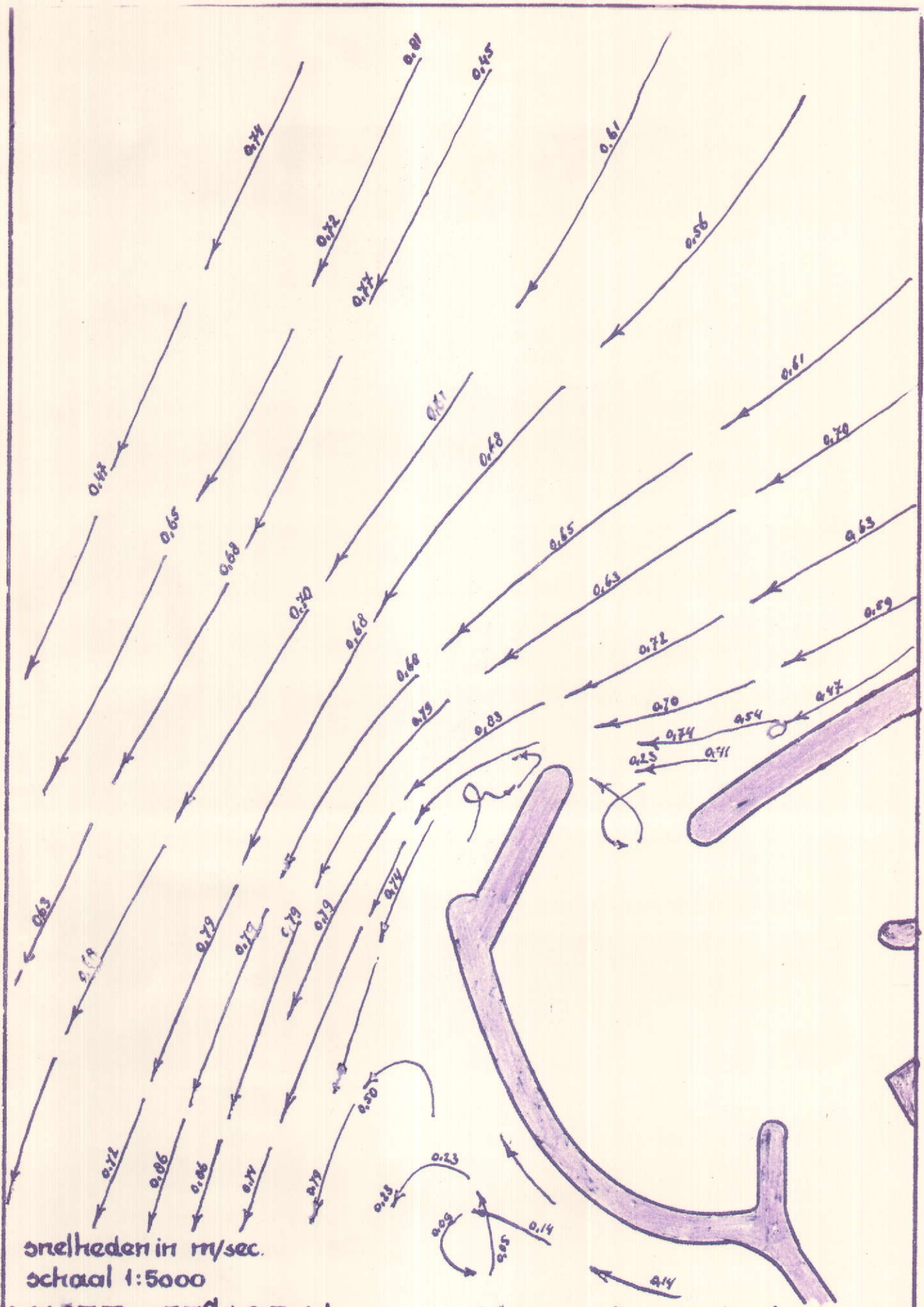
M.167.Fig.53<sup>b</sup>525. stroommeting noordgaande stroom



snelheden in cm/sec.  
 schaal 1:5000

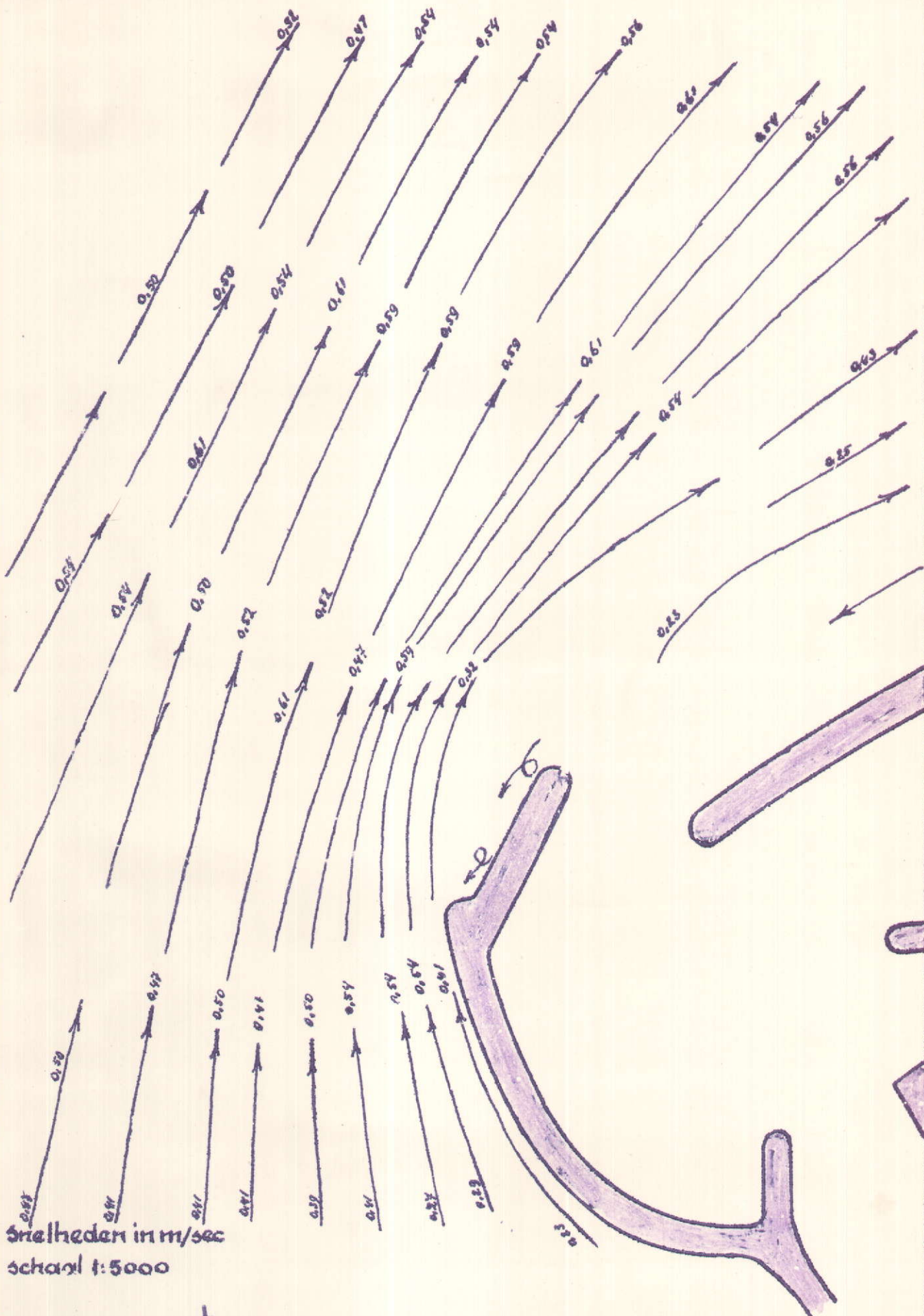
M.167.Fig.56<sup>a</sup>332.5 stroommeting zuidgaande stroom.





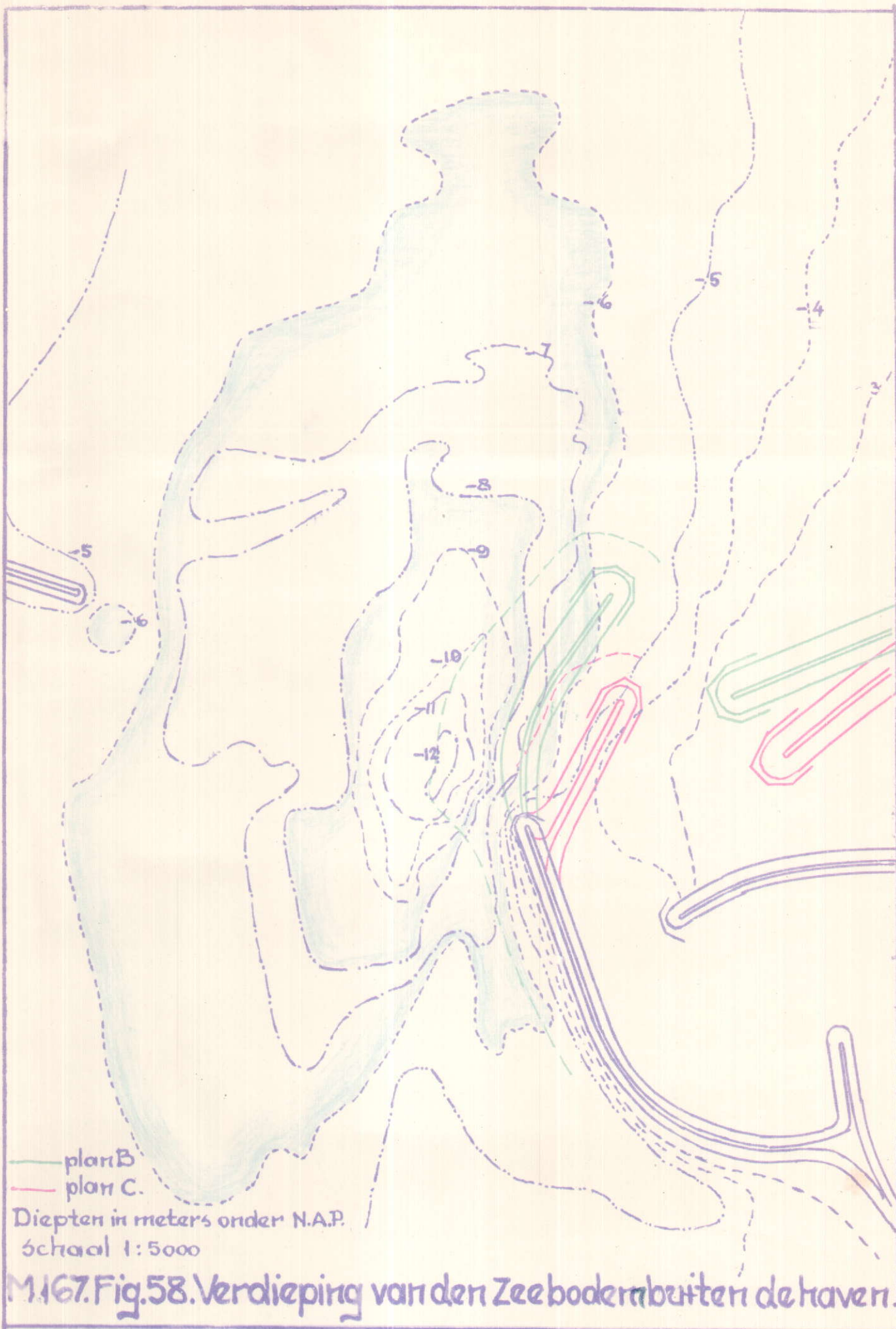
snelheden in m/sec.  
 schaal 1:5000

M.167.Fig.57<sup>a</sup>.535. stroommeting zuidgaande stroom.



snelheden in m/sec  
 schaal 1:5000

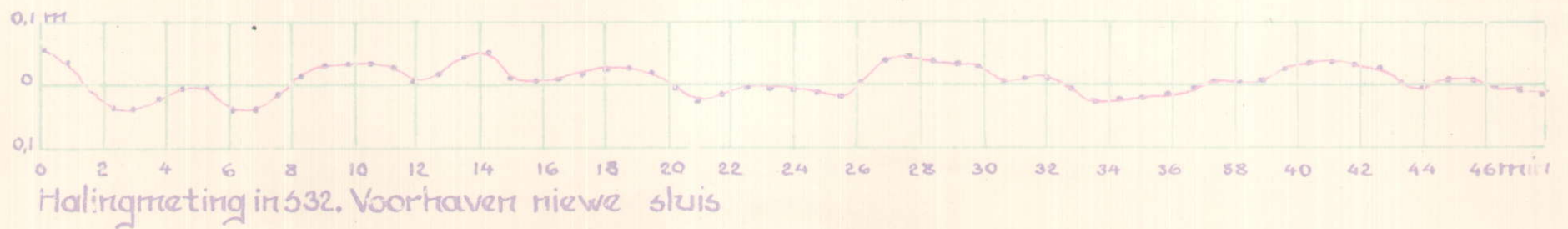
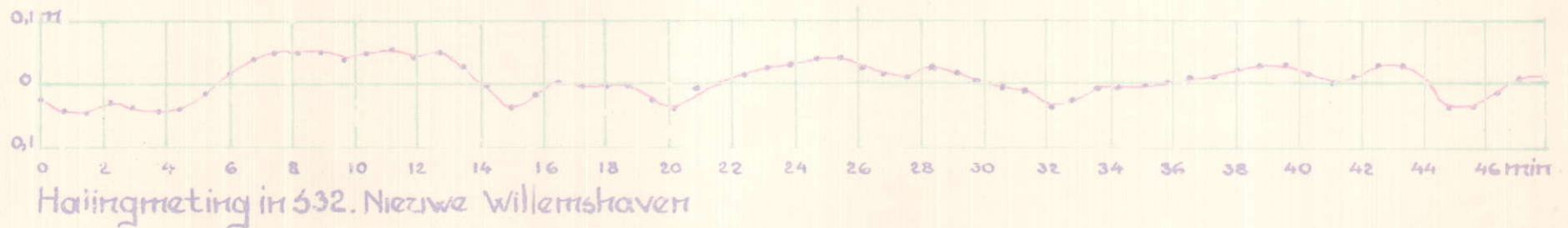
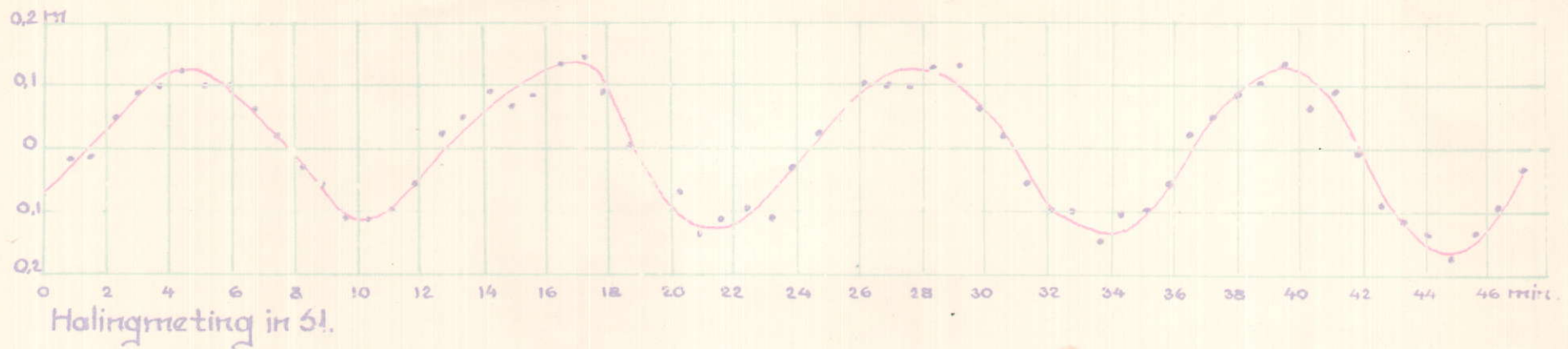
M.167.Fig.57<sup>b</sup>.335. Stroommeting noordgaande stroom.



— plan B  
— plan C.

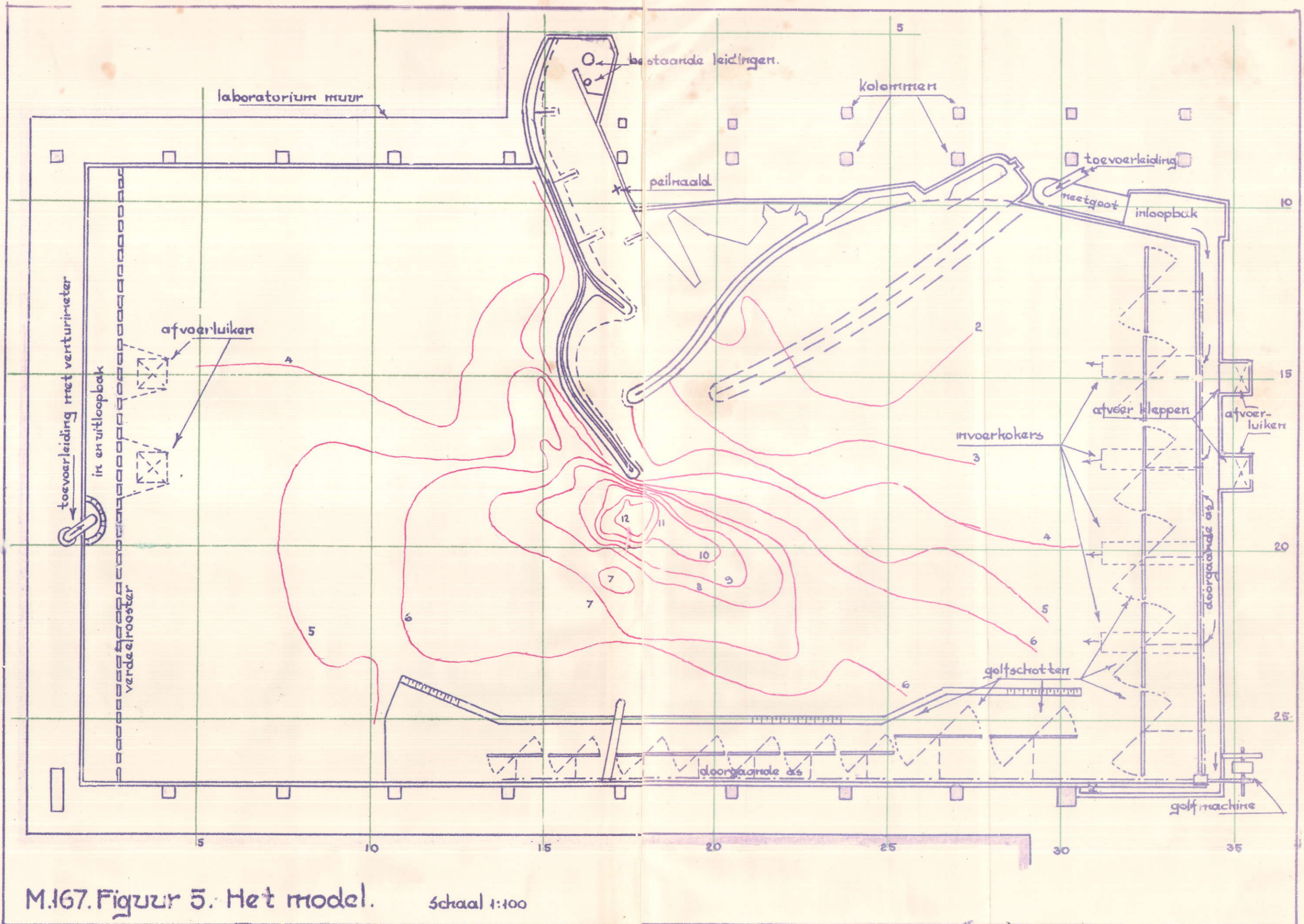
Diepten in meters onder N.A.P.  
Schaal 1:5000

M.167. Fig. 58. Verdieping van den Zeebodem buiten de haven.



M.167. Figuur 59. Halingmeting in 51 en 532.





M.167. Figuur 5. Het model.

Schaal 1:100