

# COMUNE DI SANTA MARINA SALINA

(MESSINA)

## FATTIBILITA', AGGIORNAMENTO E MODIFICA DEL PIANO REGOLATORE DEL PORTO

È copia conforme a quello adottato con delibera  
consigliare n. 46 del 19-4-1985 approvata dalla  
C.P.C. nella seduta del 24-6-1985 n. 44164/43569  
gr. 8 - S. MARINA SALINA del 25-3-1986

IL SINDACO



IL SEGRETARIO COMUNALE

All. 1.2 - Studio idraulico-marittimo. Figure

Palermo, 26 FEB 1986 REGIONE SICILIANA  
ASSESSORATO DEL TERRITORIO E DELL'AMBIENTE  
CONSIGLIO REGIONALE DELL'URBANISTICA

VISTO: CON RIFERIMENTO AL PROPRIO VOTO  
N. 821 del 28-11-86

IL SEGRETARIO

Redatto da:

Ing. M. Napolitano



IL SINDACO



REGIONE SICILIANA  
Assessorato del Territorio e dell'Ambiente  
NEL PRESENTE DOCUMENTO COSTITUISCE ALLEGATO  
AL D. A. N. 606/84 DEL 17/4/87  
L'ASSESSORE





F I G U R E

IL SINDACO

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IL SEGRETARIO COMUNALE

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IL SINDACO



IL SEGRETARIO COMUNALE





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**IL SINDACO**



**IL SEGRETARIO COMUNALE**

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IL SINDACO



IL SEGRETARIO COMUNALE





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" 3.3.1	-	Ortogonalì da NE per T = 6 s
" 3.3.2	-	" " " " " = 8 "
" 3.3.3	-	" " " " " = 10 "
" 3.3.4	-	" " " " " = 12 "
" 3.3.5	-	" " 67,5° " " = 6 "
" 3.3.6	-	" " " " " = 8 "
" 3.3.7	-	" " " " " = 10 "
" 3.3.8	-	" " " " " = 12 "
" 3.3.9	-	" " E " " = 6 "
" 3.3.10	-	" " " " " = 8 "
" 3.3.11	-	" " " " " = 10 "
" 3.3.12	-	" " " " " = 12 "
" 3.3.13	-	" " S " " = 6 "
" 3.3.14	-	" " " " " = 8 "
" 3.3.15	-	" " " " " = 10 "
" 3.3.16	-	" " " " " = 12 "
" 3.4.1	-	Diagramma di rifrazione
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IL SEGRETARIO COMUNALE

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## CAPITOLO 4

Fig. 4.2.1	-	Frangimento tipo Spilling
" 4.2.2	-	" " Plunging
" 4.2.3	-	" " Surging
" 4.2.4	-	" " Collapsing
" 4.2.5	-	limiti del tipo di frangente (Patrick e Wiegel)
" 4.2.6	"	" " " " " (n, Ho/Lo)
" 4.2.7	"	" " " " " (Ho/Lo, Hb/Ho)
" 4.3.1	-	condizioni di stabilità in funzione di H/h
" 4.3.2	-	" " " " " " H/T <sup>2</sup>
" 4.5.1	-	frangimento da NE per t = 5 anni
" 4.5.2	-	" " 67,5° " "r = " "
" 4.5.3	-	" " E " " = " "
" 4.5.4	-	" " 112,5° " " = " "
" 4.5.5	-	" " NE " " = 10 "
" 4.5.6	-	" " 67,5° " " = " "
" 4.5.7	-	" " E " " = " "
" 4.5.8	-	" " 112,5° " " = " "
" 4.5.9	-	" " NE " " = 20 "
" 4.5.10	-	" " 67,5° " " = " "
" 4.5.11	-	" " E " " = " "
" 4.5.12	-	" " 112,5° " " = " "
" 4.5.13	-	" " NE " " = 50 "
" 4.5.14	-	" " 67,5° " " = " "
" 4.5.15	-	" " E " " = " "
" 4.5.16	-	" " 112,5° " " = " "

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IL SEGRETARIO COMUNALE

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FIGURE DEL CAPITOLO 1

IL SINDACO



IL SEGRETARIO COMUNALE



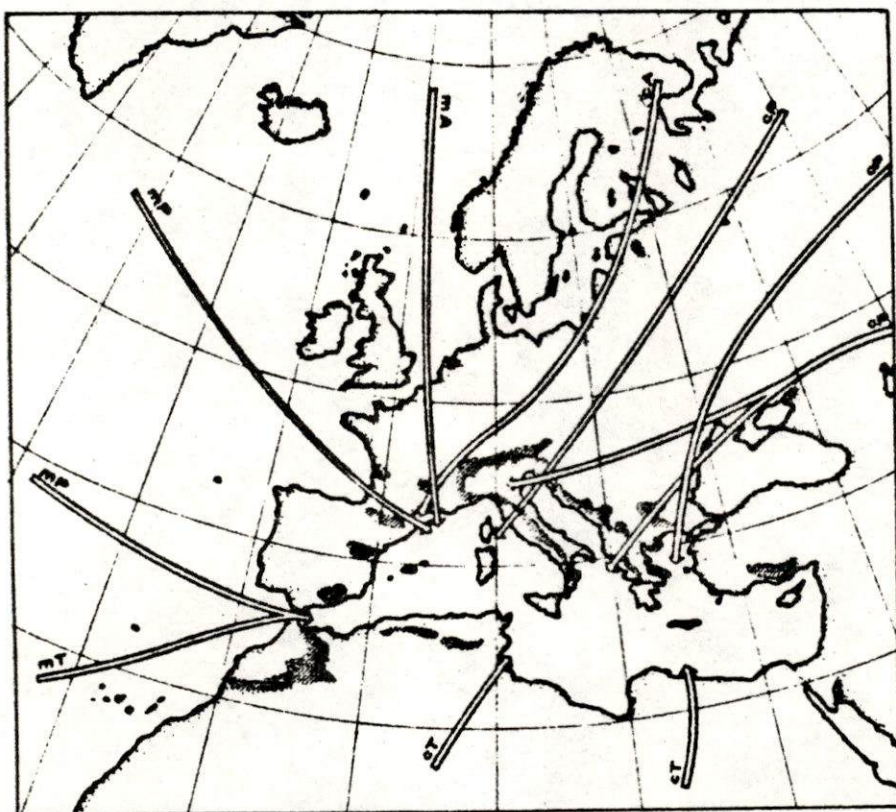


Fig. 1.1.1

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IL SEGRETARIO COMUNALE

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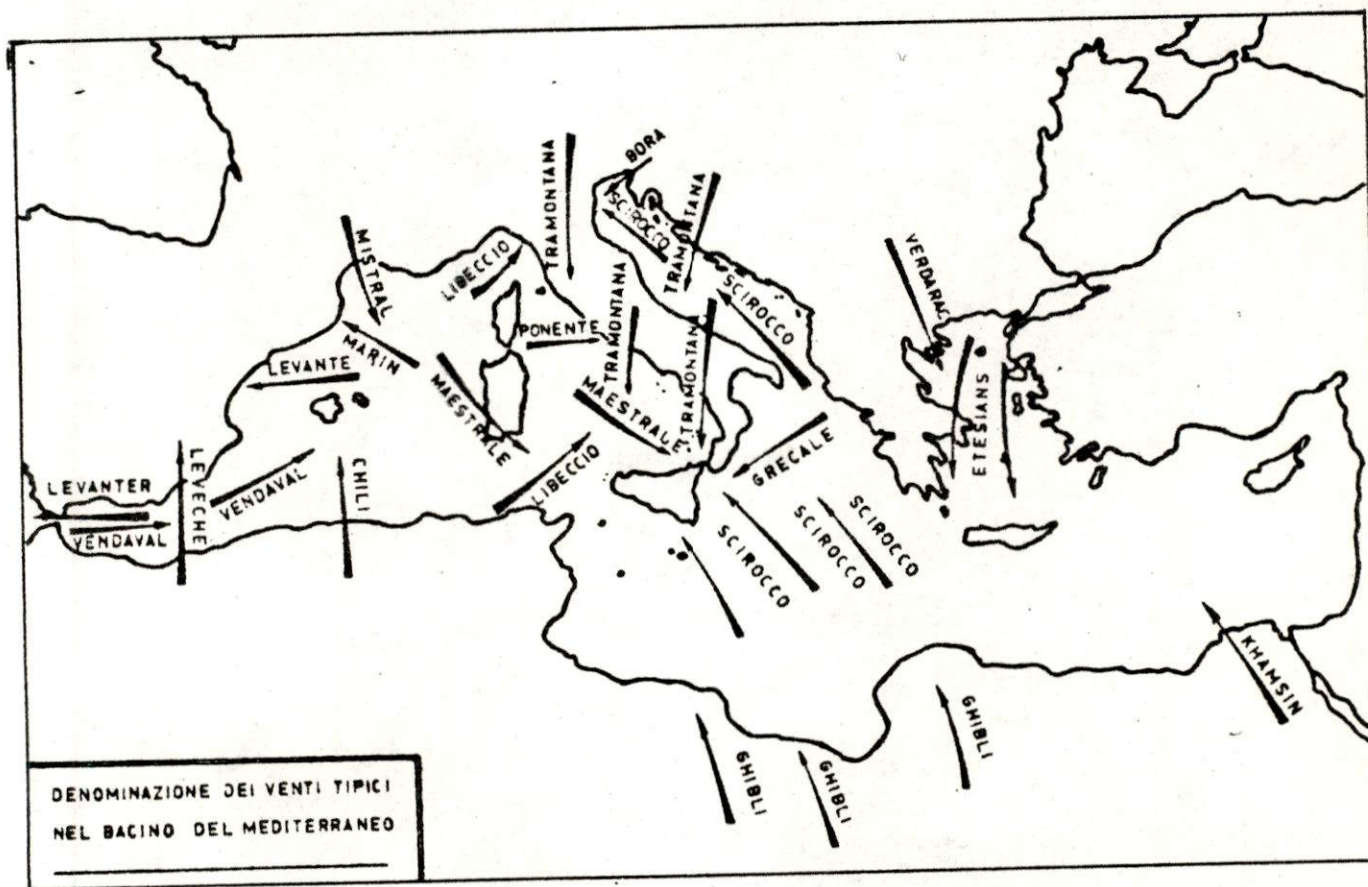


Fig. 1.1.2

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IL SEGRETARIO COMUNALE

IL SINDACO



IL SEGRETARIO COMUNALE

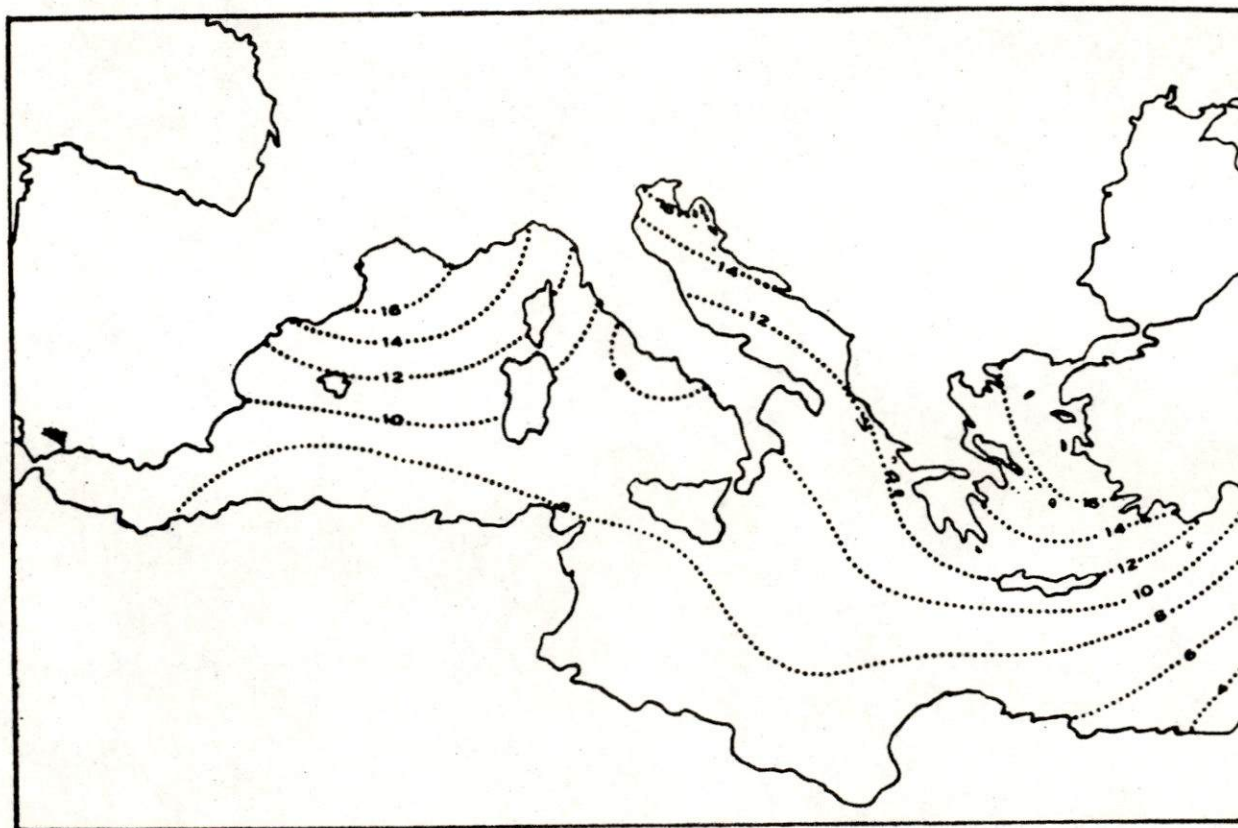


Fig. 1.1.3

Percentuali medie annue dei venti forti (Scala Beaufort > 6)





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IL SEGRETARIO COMUNALE

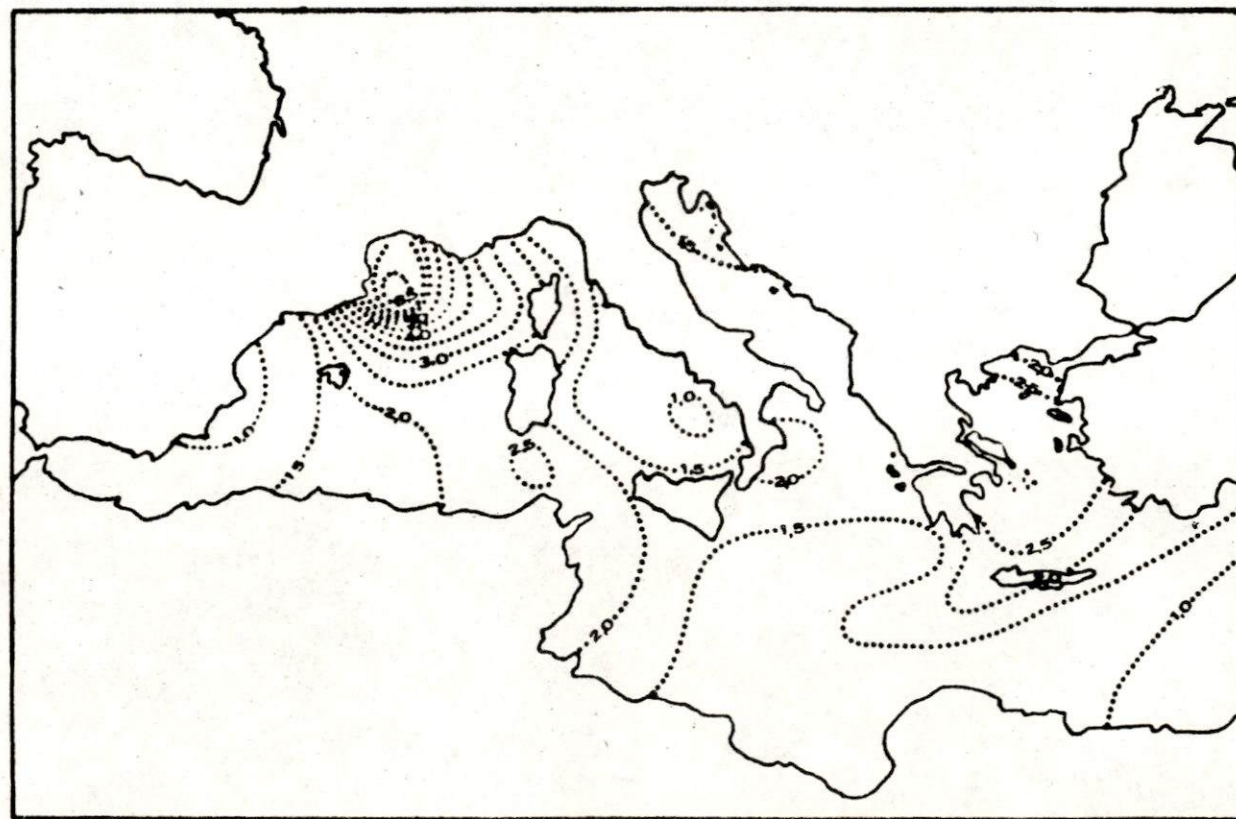


Fig. 1.1.4

Percentuali medie annue delle burrasche di vento (Scala Beaufort > 8)

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**IL SEGRETARIO COMUNALE**  
**DIAGRAMMA POLARE DELLE FREQUENZE DEL VENTO**

Stazione di Stromboli

Mese di Gennaio

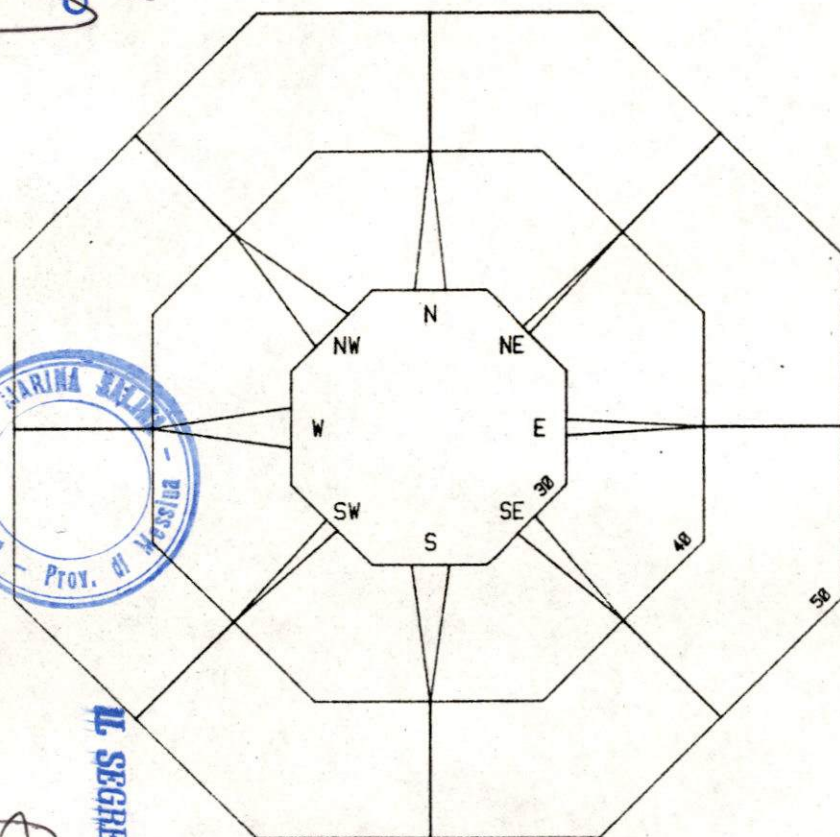


Fig. 1.2.1

**DIAGRAMMA POLARE DELLE FREQUENZE DEL VENTO**

Stazione di Stromboli

Mese di Febbraio

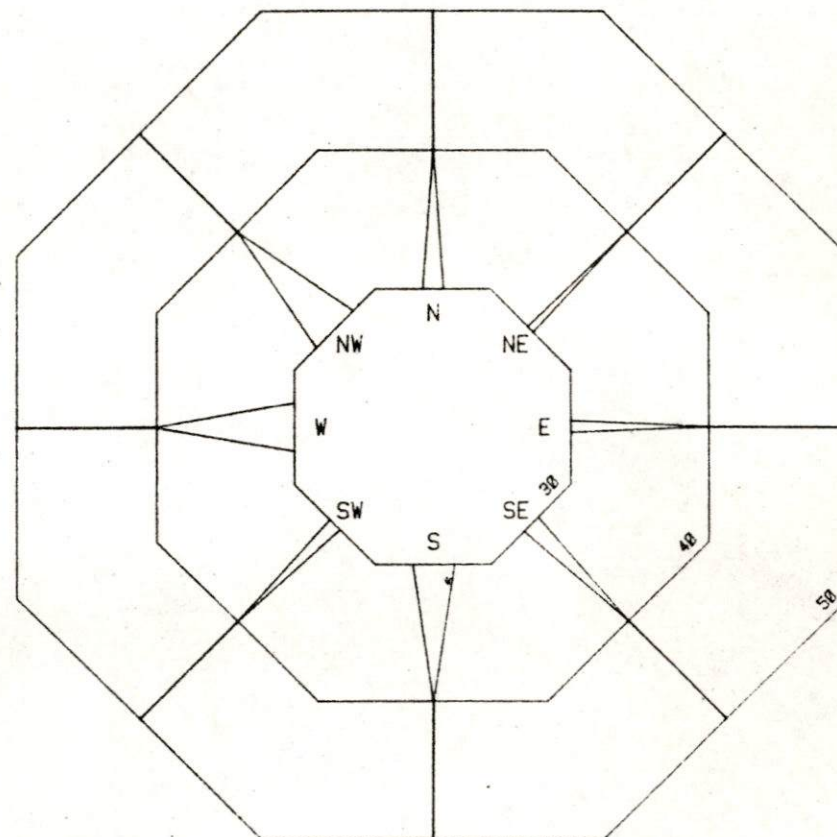


Fig. 1.2.2

0 20 40%



IL SINDACO  
DIAGRAMMA POLARE DELLE FREQUENZE DEL VENTO

Stazione di Stromboli

Mese di Marzo

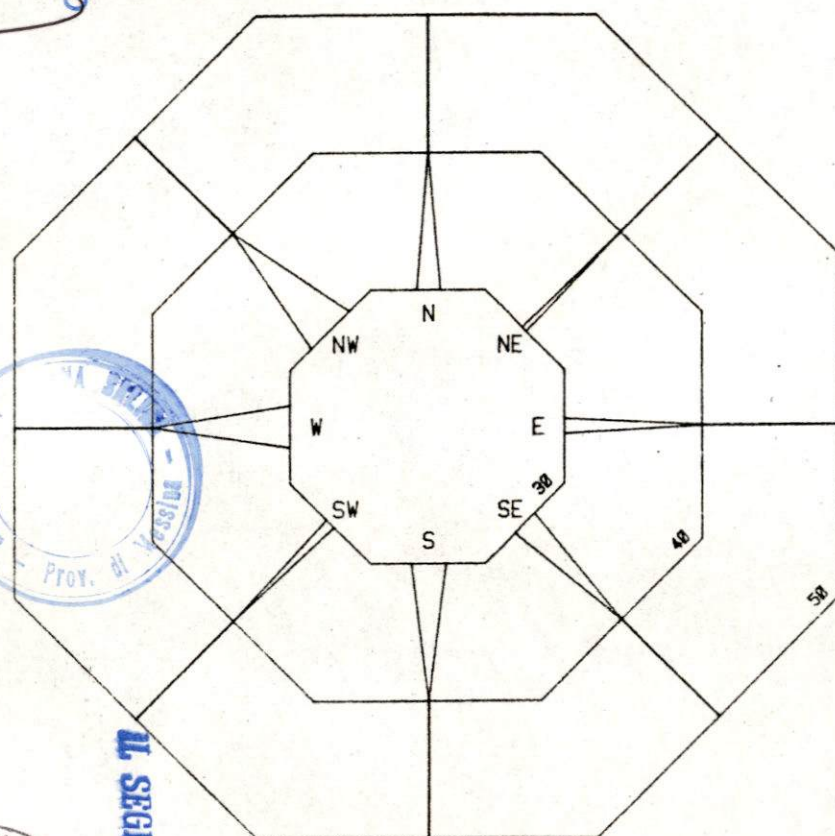


Fig. 1.2.3

DIAGRAMMA POLARE DELLE FREQUENZE DEL VENTO

Stazione di Stromboli

Mese di Aprile

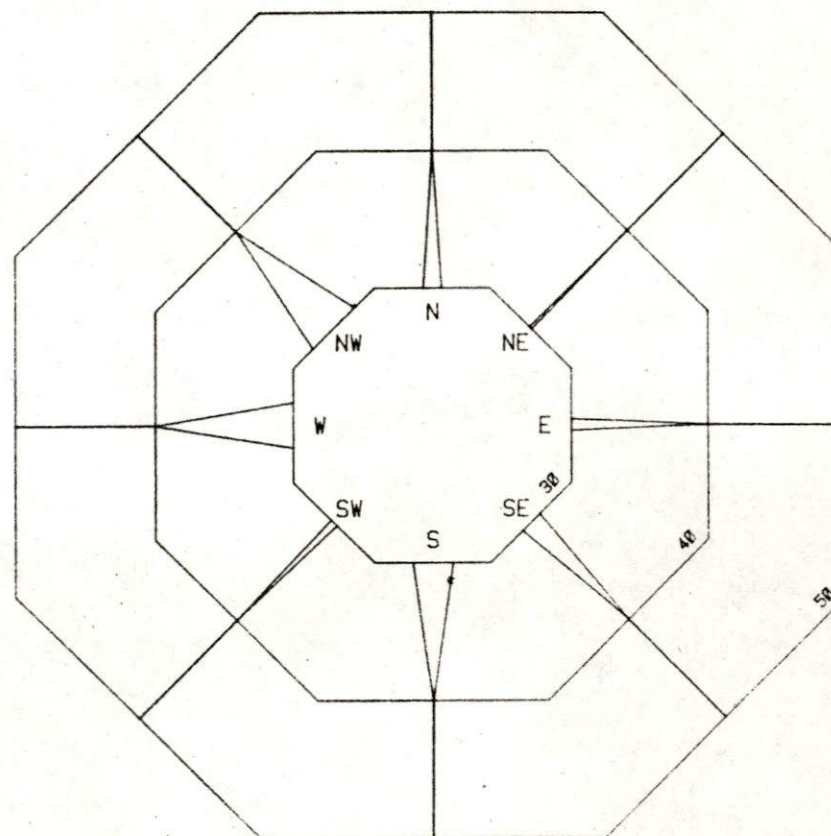


Fig. 1.2.4

0 20 40%

# DIAGRAMMA POLARE DELLE FREQUENZE DEL VENTO

Stazione di Stromboli

Mese di Maggio

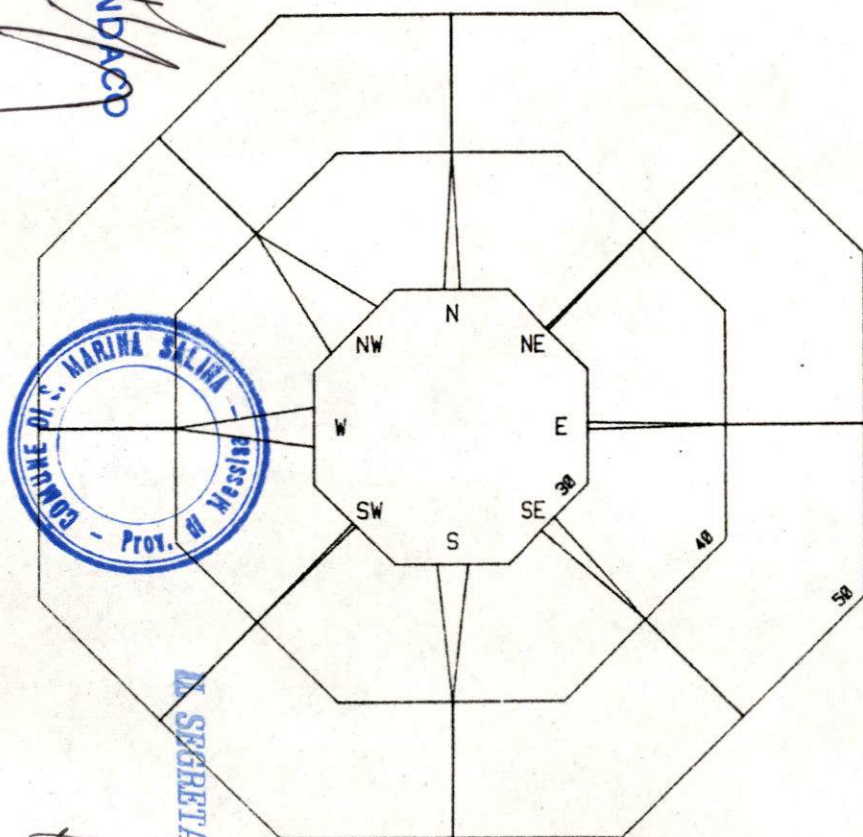


Fig. 1.2.5

# DIAGRAMMA POLARE DELLE FREQUENZE DEL VENTO

Stazione di Stromboli

Mese di Giugno

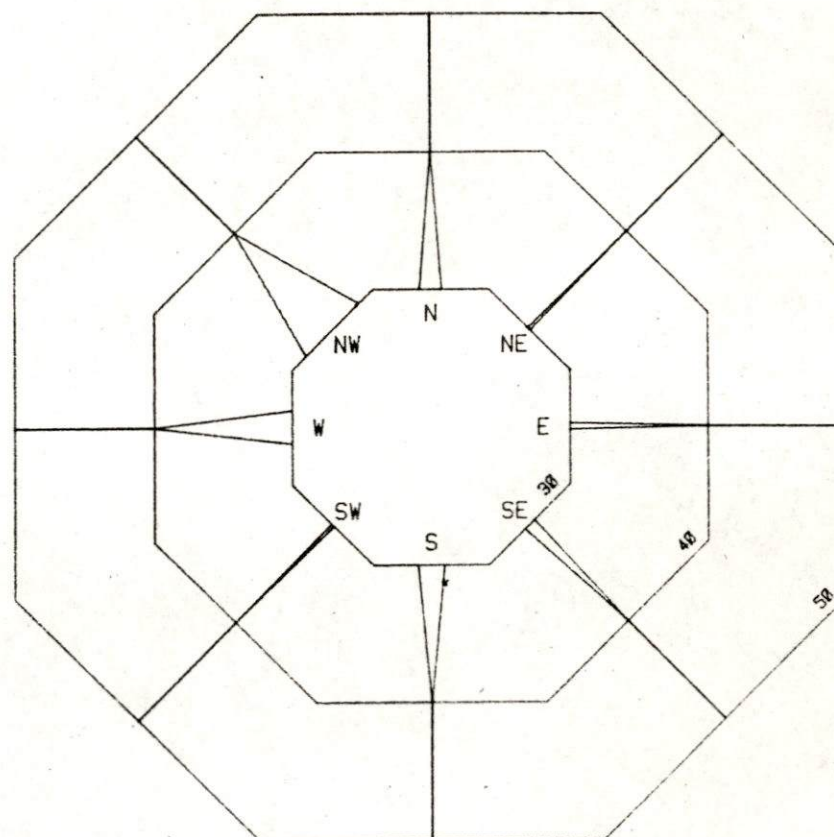


Fig. 1.2.6



# DIAGRAMMA POLARE DELLE FREQUENZE DEL VENTO

Stazione di Stromboli

Mese di Luglio

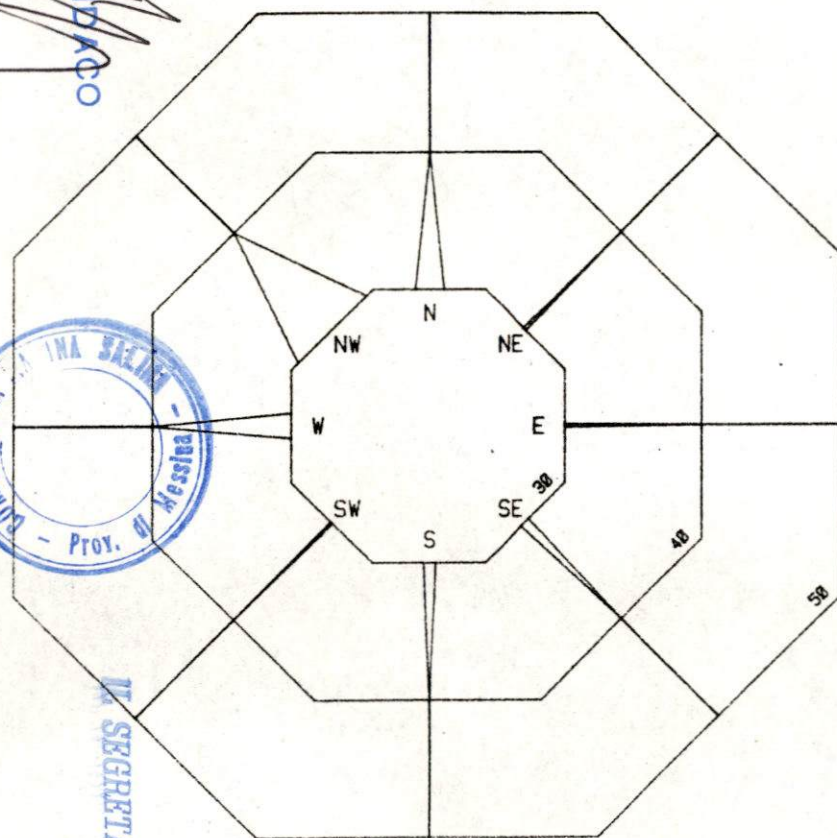


Fig. 1.2.7

# DIAGRAMMA POLARE DELLE FREQUENZE DEL VENTO

Stazione di Stromboli

Mese di Agosto

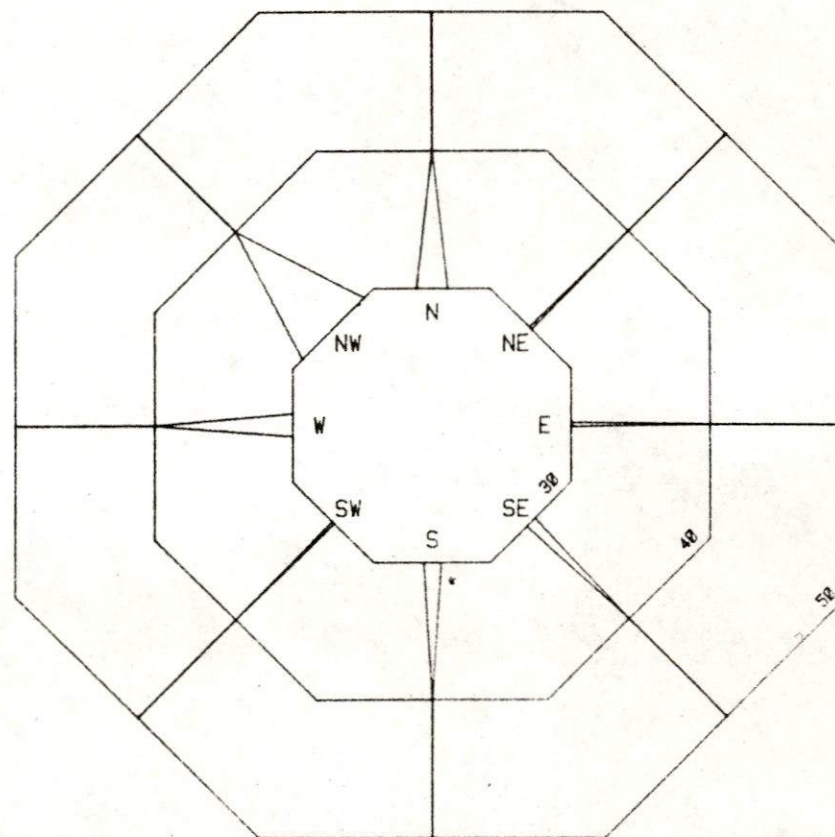
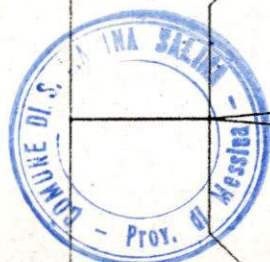
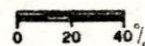


Fig. 1.2.8



IL SINDACO

IL SEGRETARIO COMUNALE

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# DIAGRAMMA POLARE DELLE FREQUENZE DEL VENTO

Stazione di Stromboli

Mese di Settembre

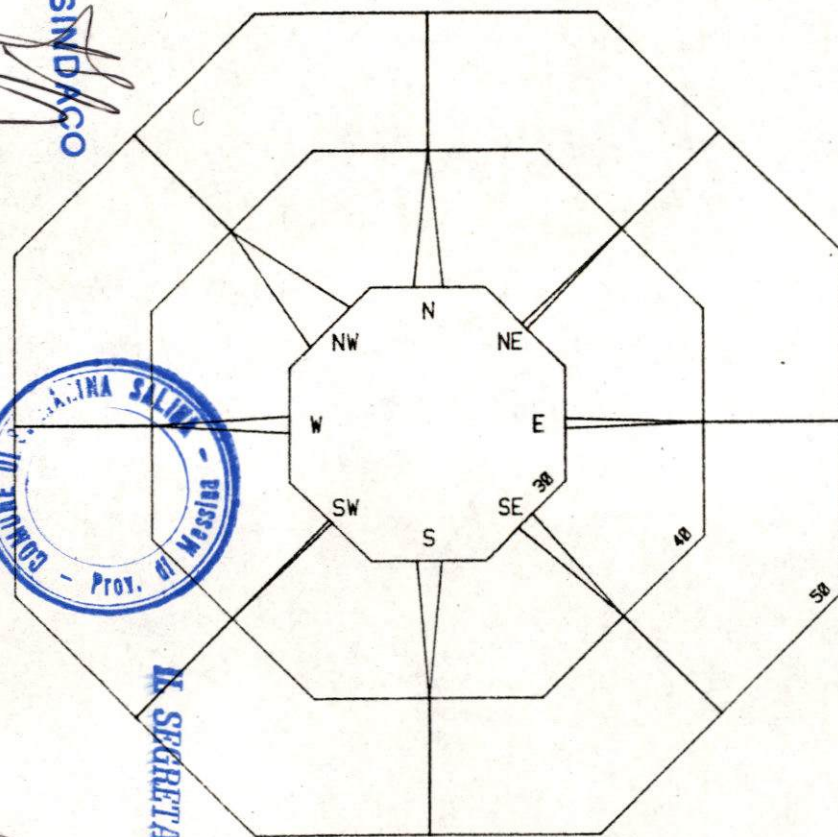


Fig. 1.2.9

# DIAGRAMMA POLARE DELLE FREQUENZE DEL VENTO

Stazione di Stromboli

Mese di Ottobre

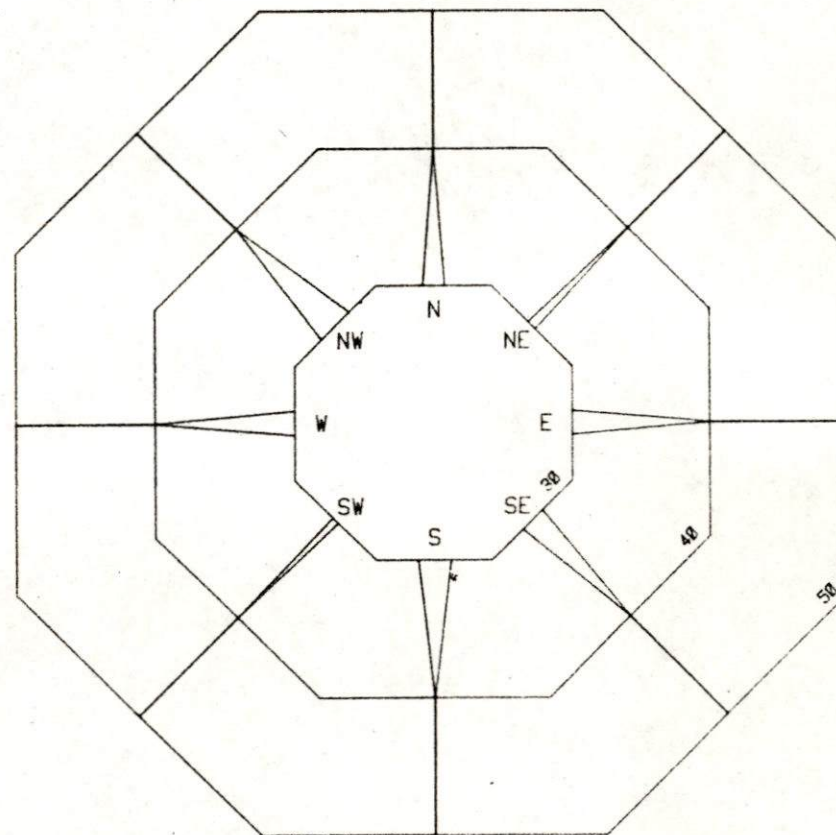
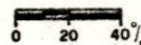


Fig. 1.2.10





# DIAGRAMMA POLARE DELLE FREQUENZE DEL VENTO

Stazione di Stromboli

Mese di Novembre

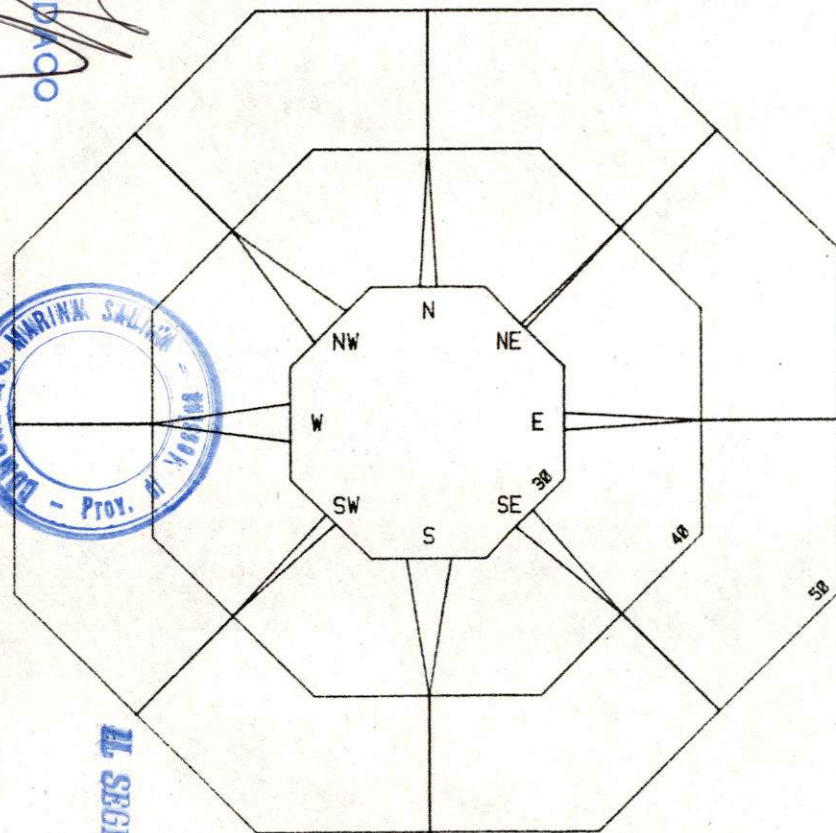


Fig. 1.2.11

# DIAGRAMMA POLARE DELLE FREQUENZE DEL VENTO

Stazione di Stromboli

Mese di Dicembre

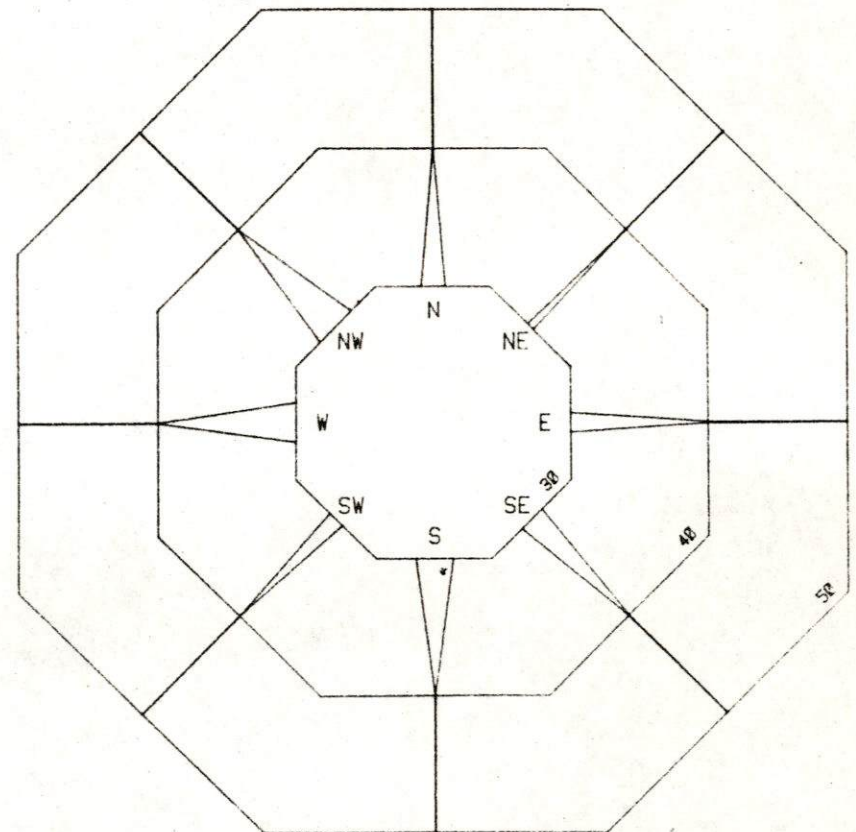


Fig. 1.2.12



IL SINDACO



IL SEGRETARIO COMUNALE

# DIAGRAMMA POLARE DELLE FREQUENZE DEL VENTO

Stazione di Stromboli

Medie Annuali

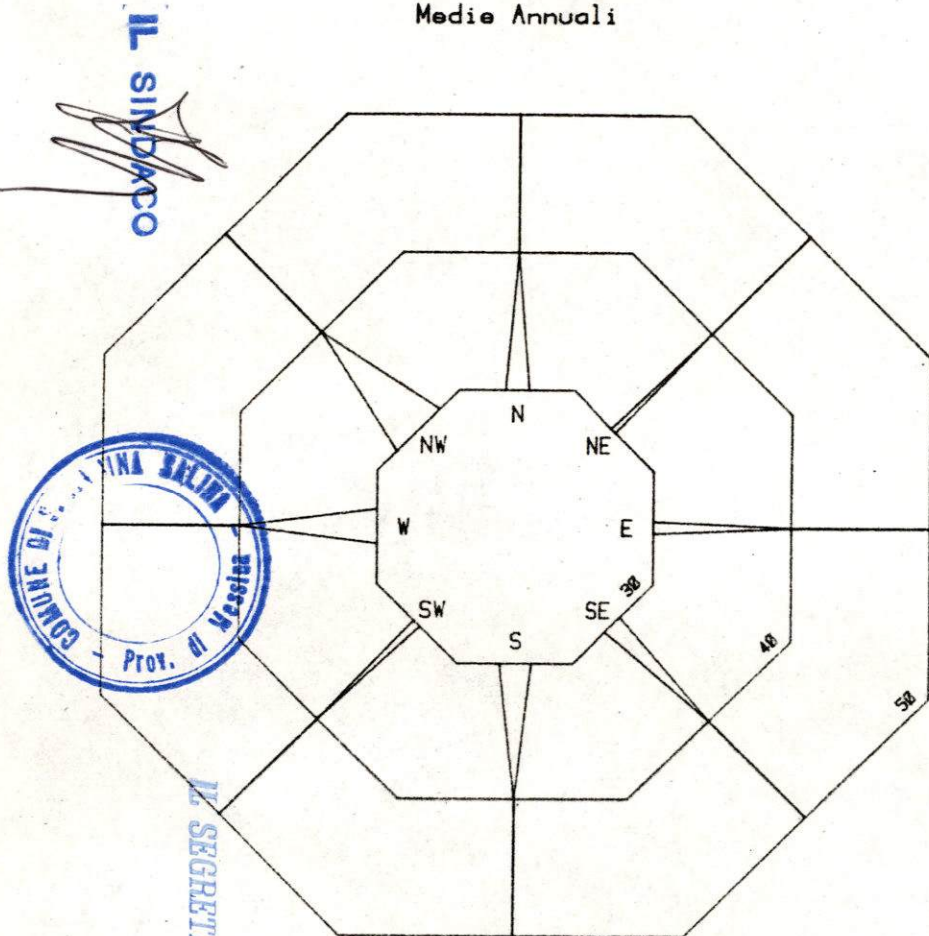
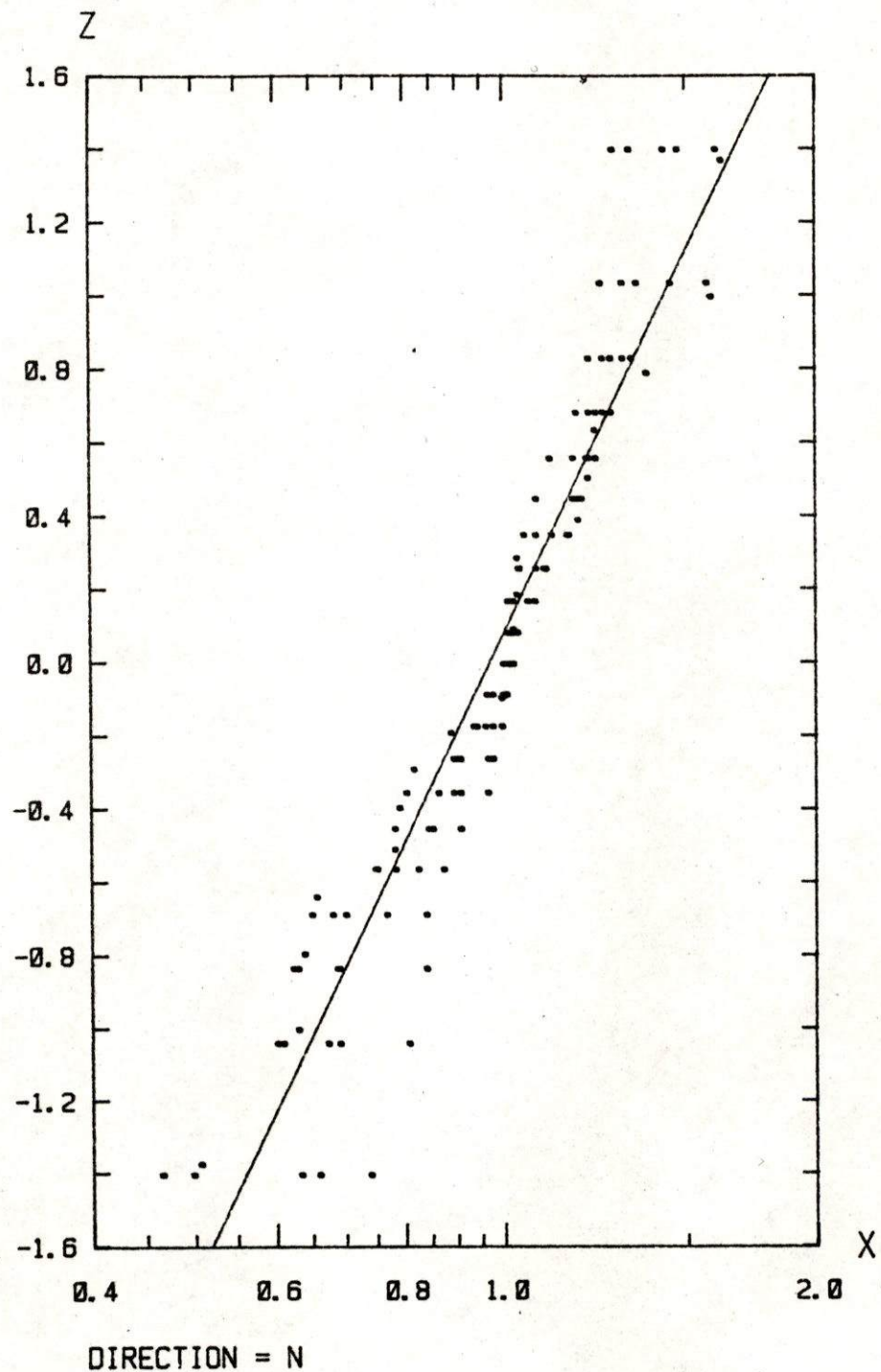


Fig. 1.2.13



# REGULARIZATION OF WIND SPEEDS

STATION OF STROMBOLI (S/I)



IL SINDACO



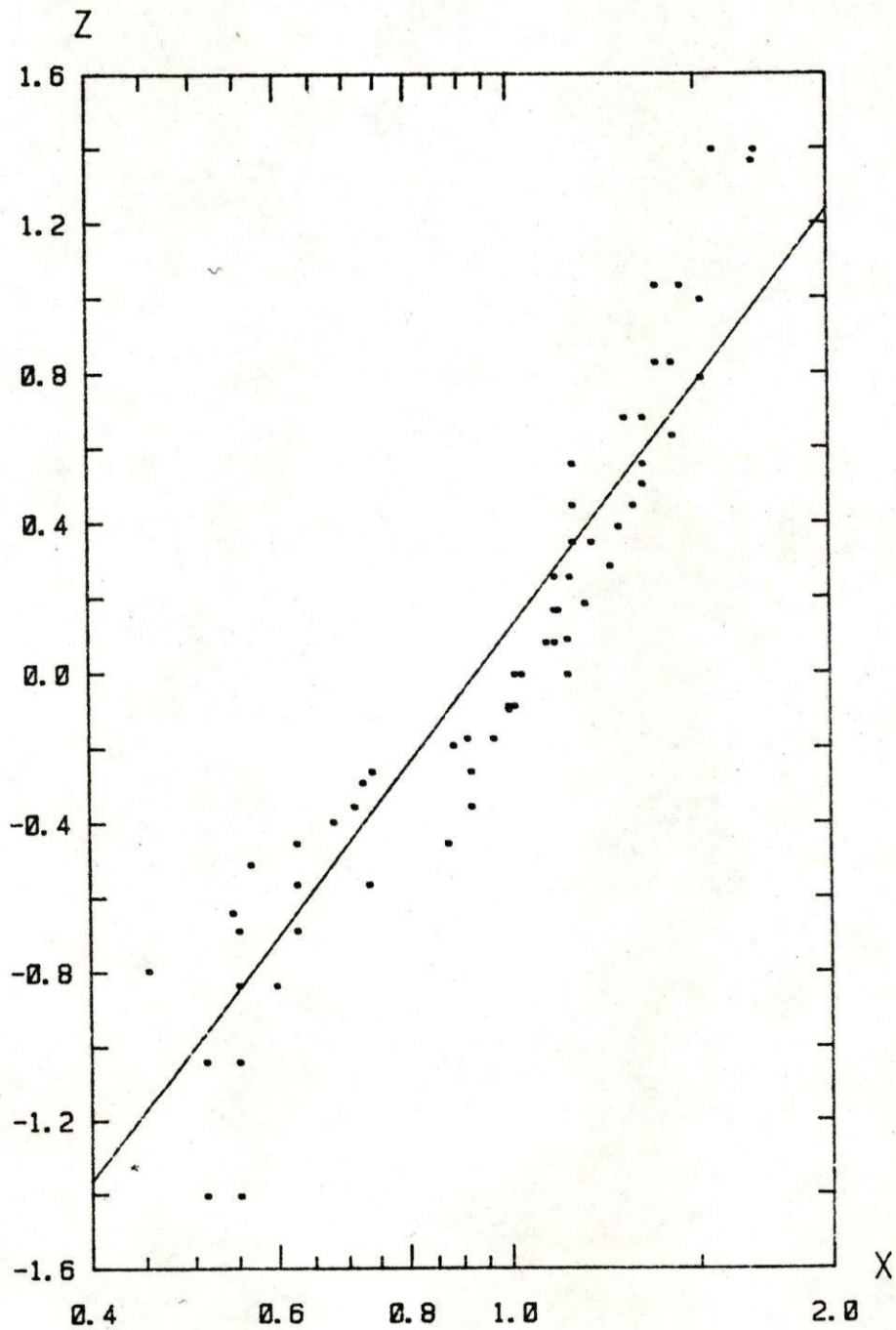
Fig. 1.4.1

IL SEGRETARIO COMUNALE

R

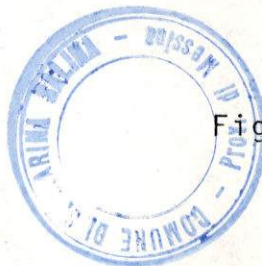
REGULARIZATION OF WIND SPEEDS

STATION OF STROMBOLI (5/I)




DIRECTION = NE

  
IL SINDACO



IL SEGRETARIO COMUNALE

Fig. 1.4.2

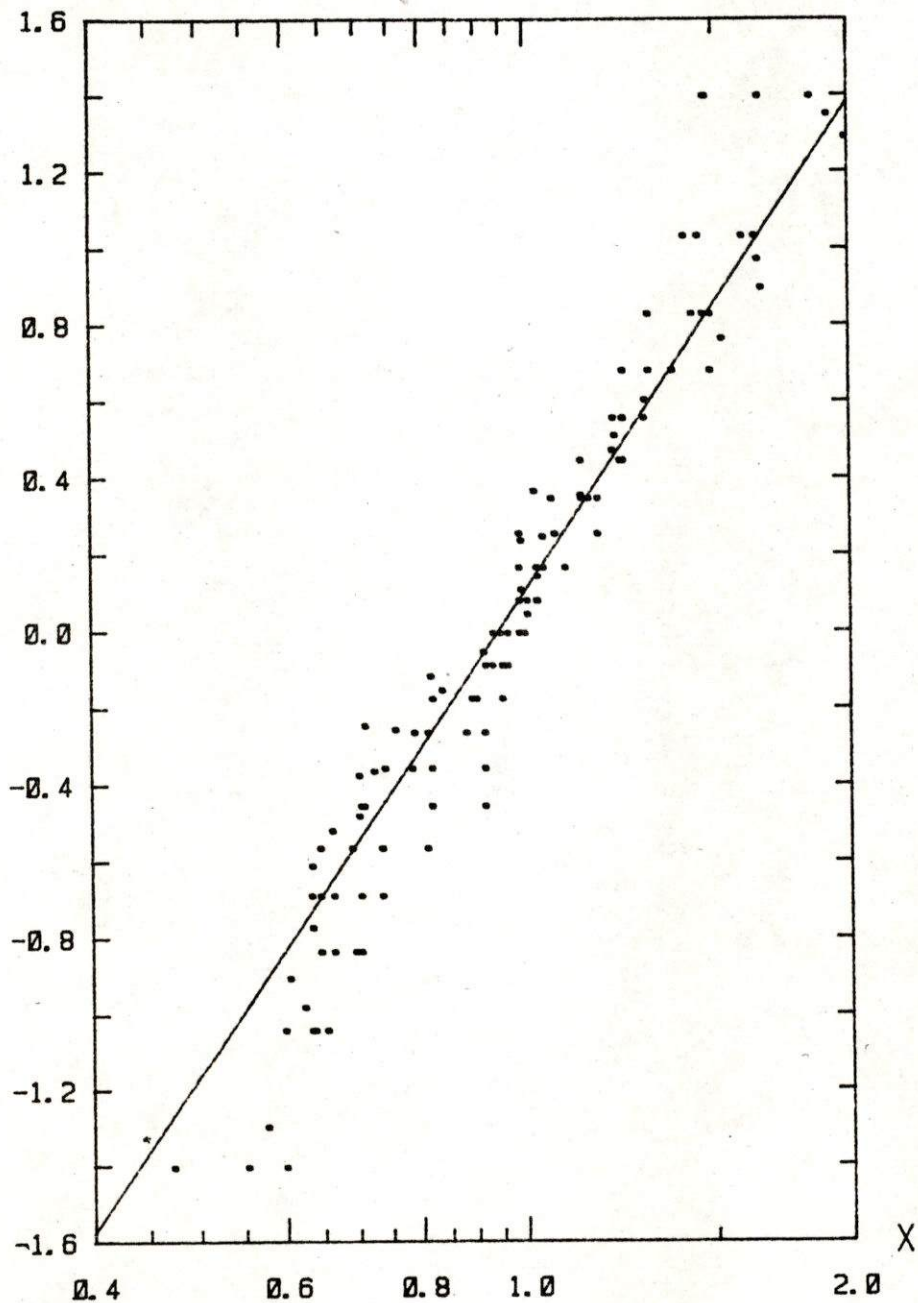




# REGULARIZATION OF WIND SPEEDS

STATION OF STROMBOLI (5/I)

Z



DIRECTION = E

TL SINDACO



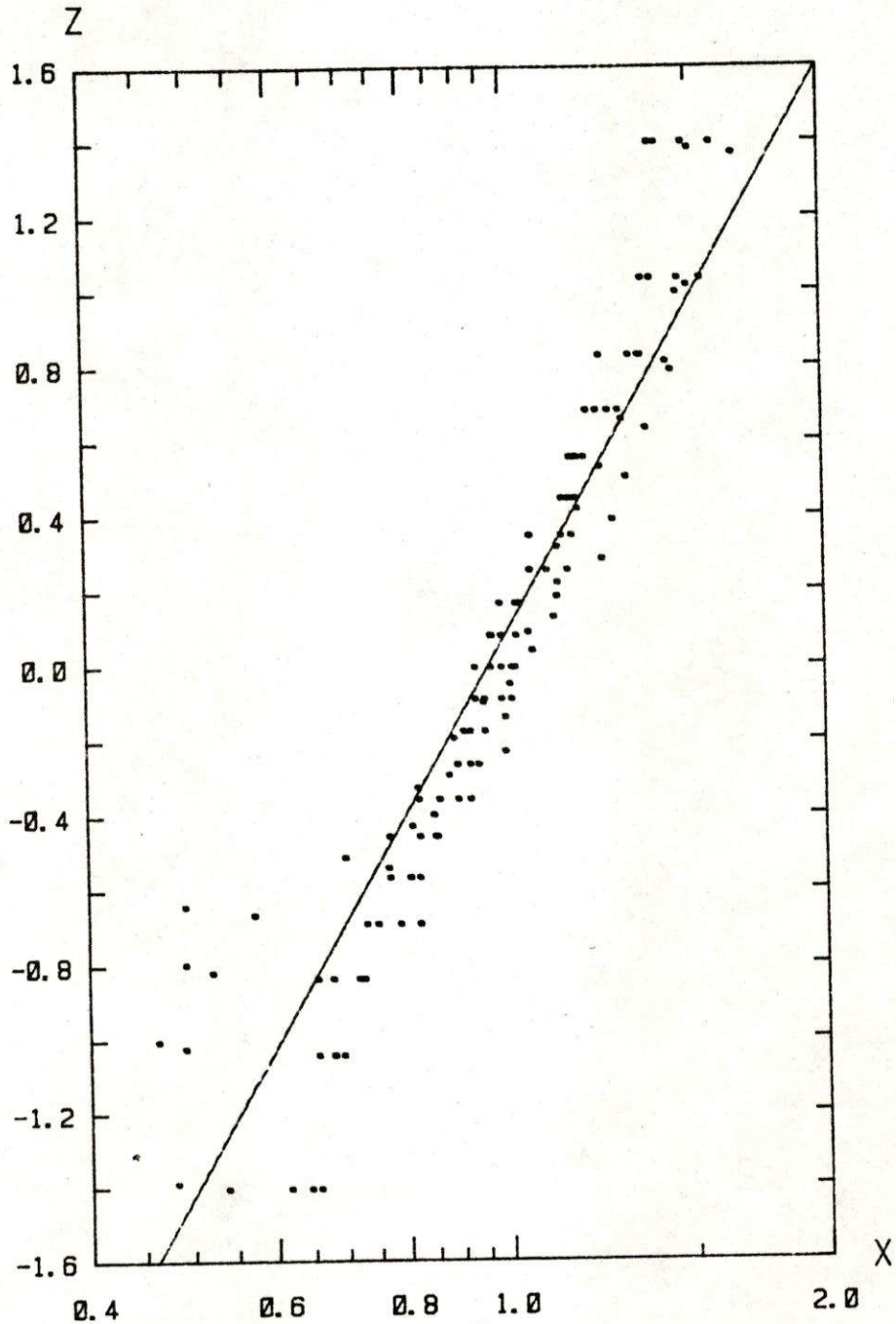
Fig. 1.4.3

IL SEGRETARIO COMUNALE

R

# REGULARIZATION OF WIND SPEEDS

STATION OF STROMBOLI (5/I)



DIRECTION = SE

IL SINDACO



Fig. 1454 SEGRETARIO COMUNALE

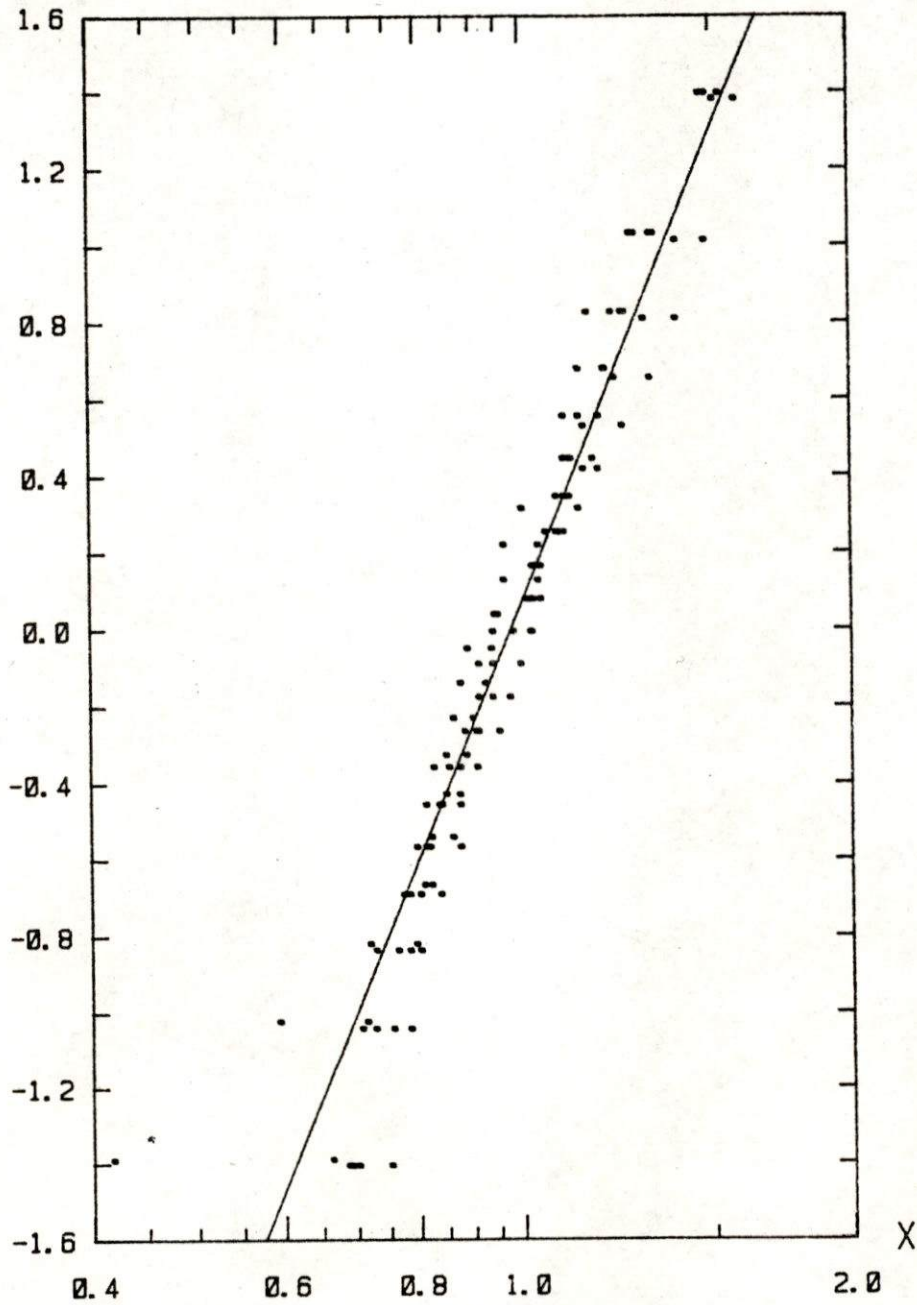
R



REGULARIZATION OF WIND SPEEDS

STATION OF STROMBOLI (5/1)

Z



DIRECTION = S

IL SINDACO



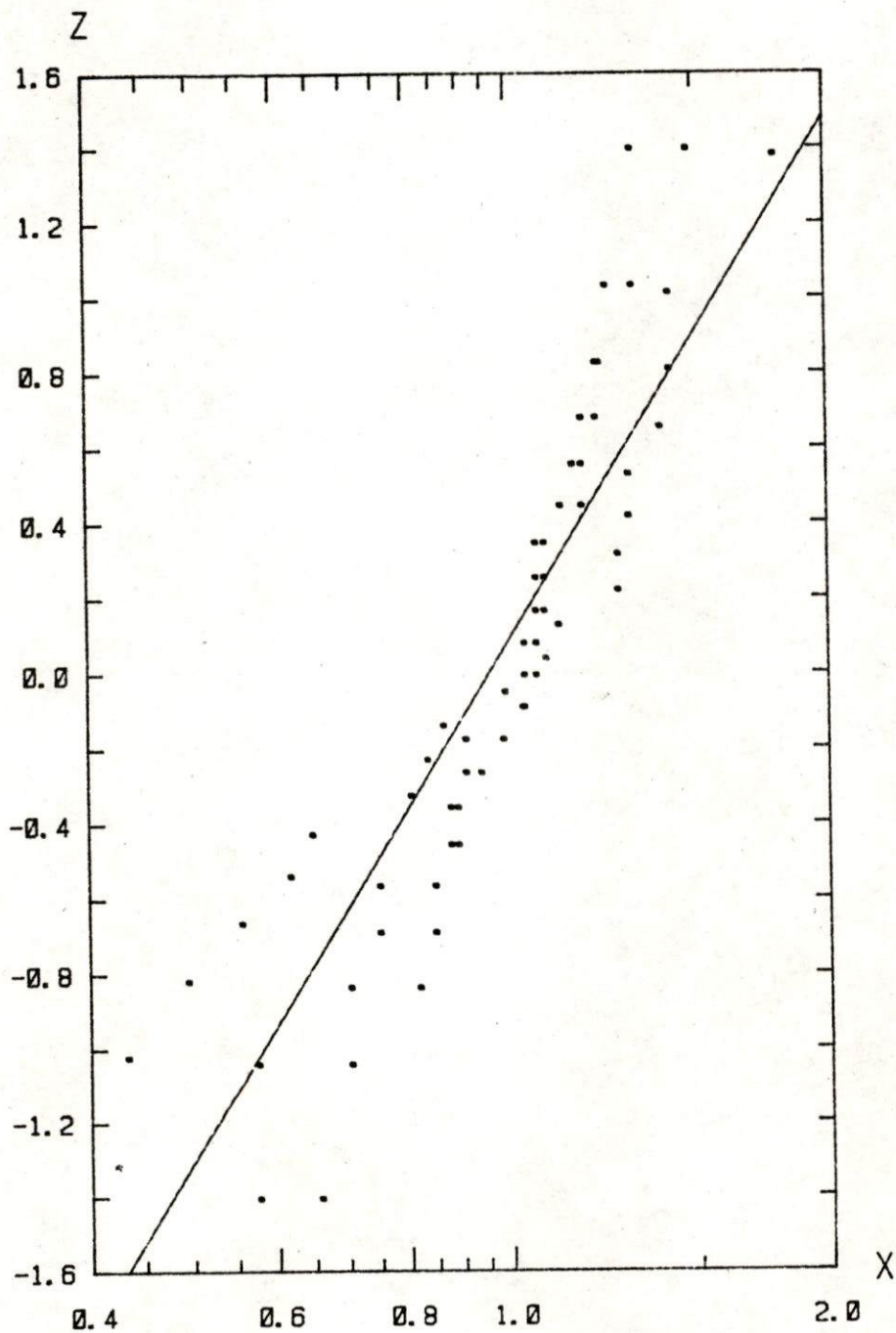
IL SEGRETARIO COMUNALE

Fig. 1.4.5

R

# REGULARIZATION OF WIND SPEEDS

STATION OF STROMBOLI (5/1)



DIRECTION = SW

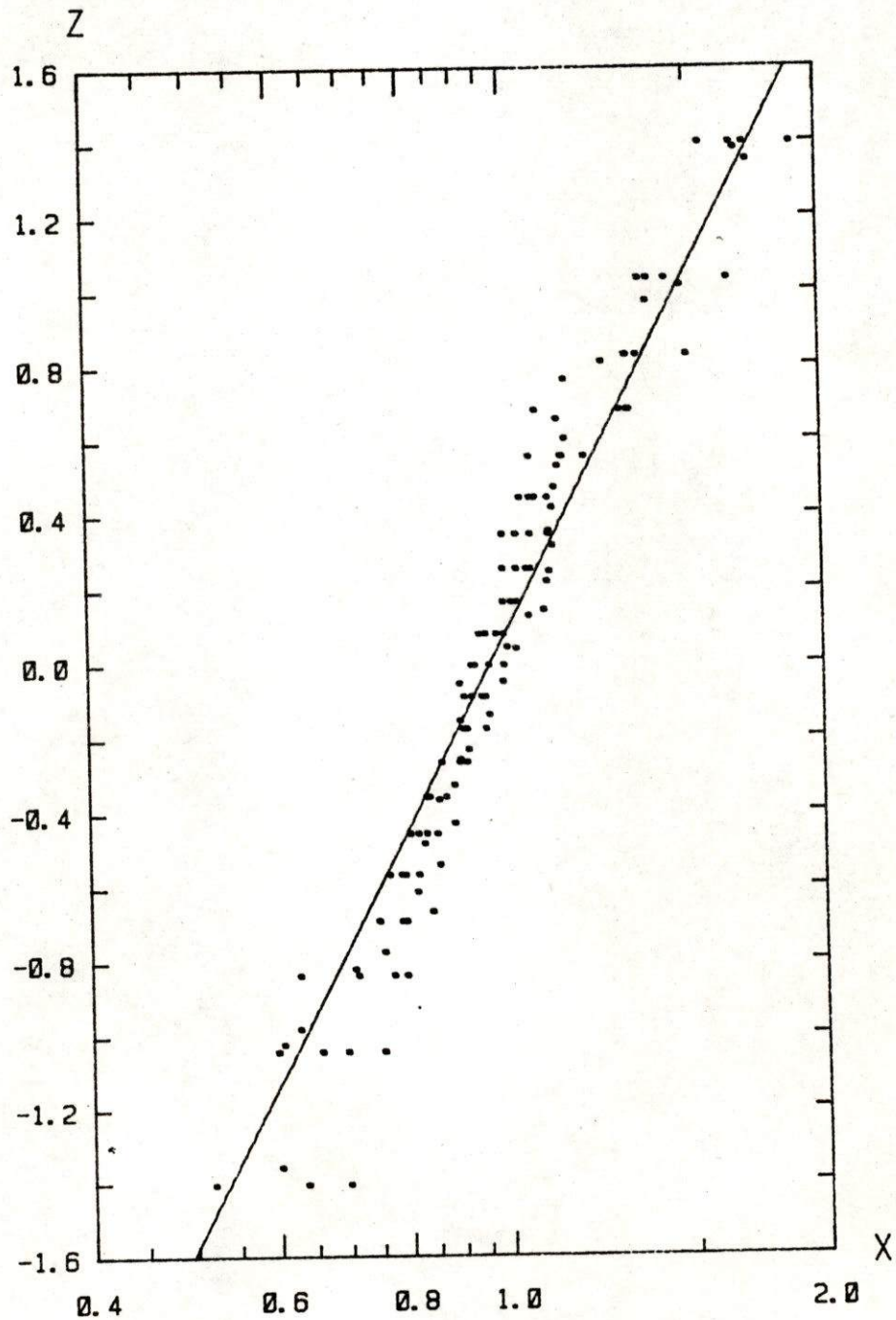
IL SINDACO



Fig. 1.4.6 IL SEGRETARIO COMUNALE



REGULARIZATION OF WIND SPEEDS  
STATION OF STROMBOLI (5/I)



DIRECTION = W

IL SINDACO

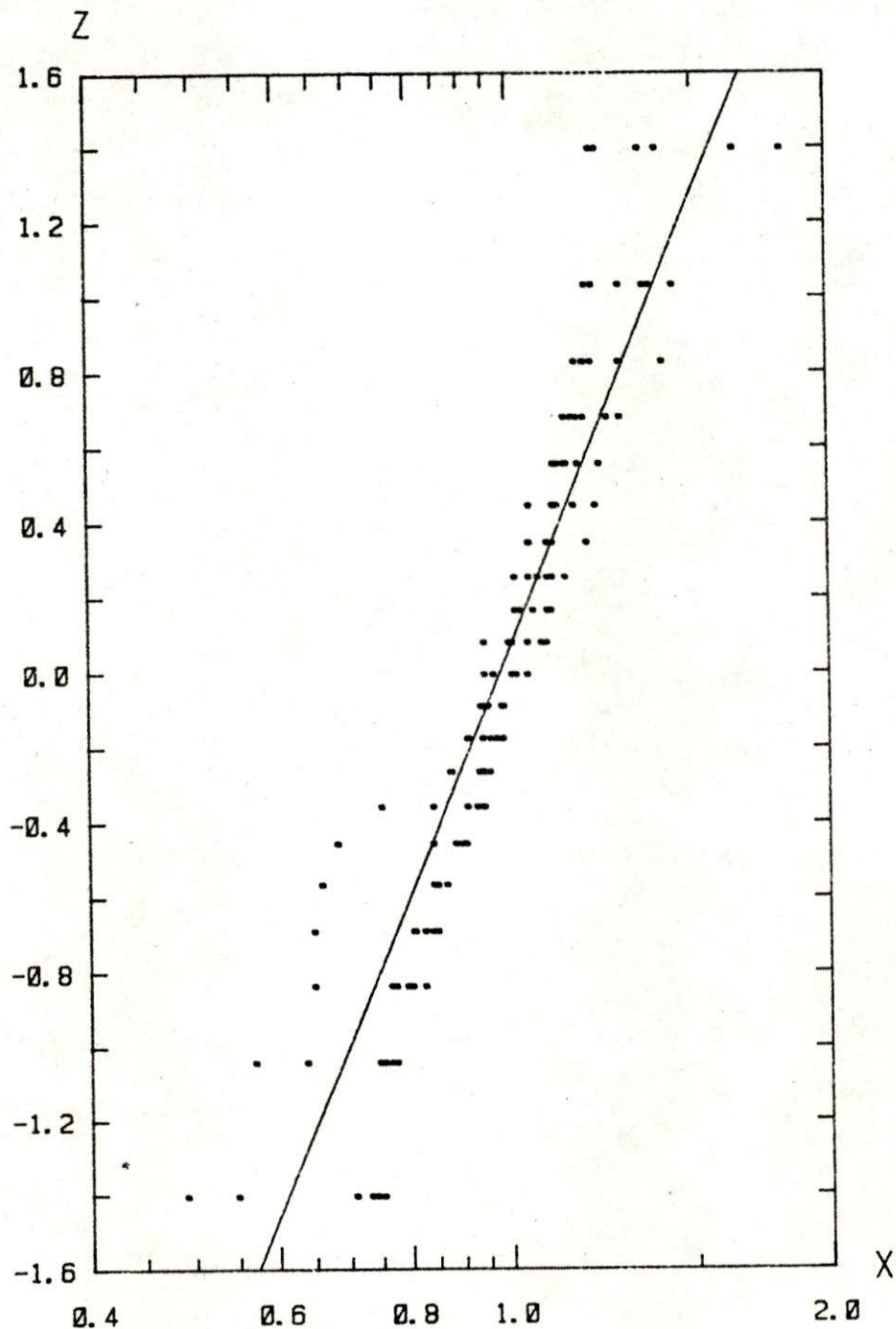


Fig. 1.4 IL SEGRETARIO COMUNALE

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# REGULARIZATION OF WIND SPEEDS

STATION OF STROMBOLI (5/I)



DIRECTION = NW

IL SINDACO



Fig. 1.4.8 IL SEGRETARIO COMUNALE

R



FIGURE DEL CAPITOLO 2

IL SINDACO



IL SEGRETARIO COMUNALE



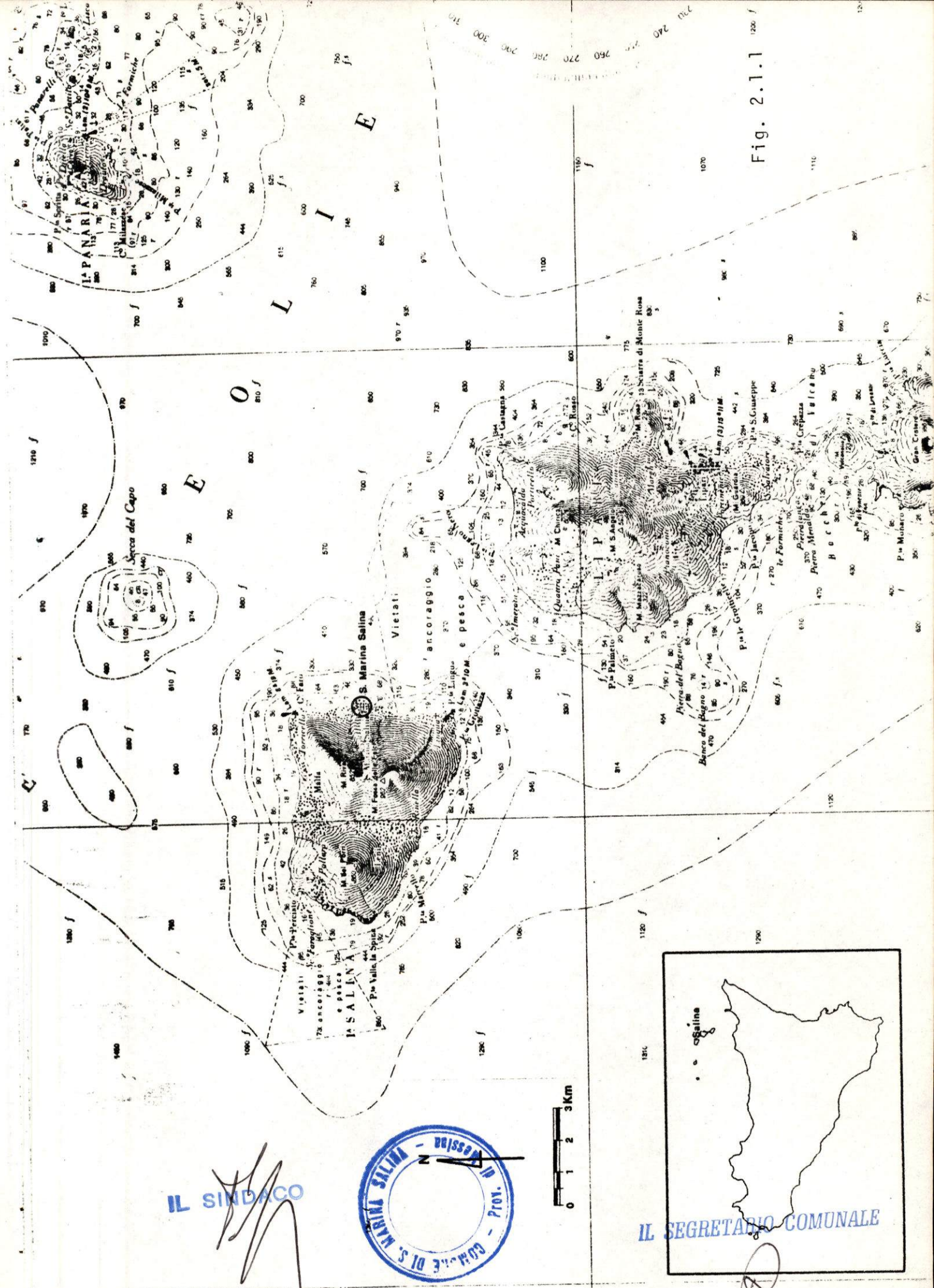
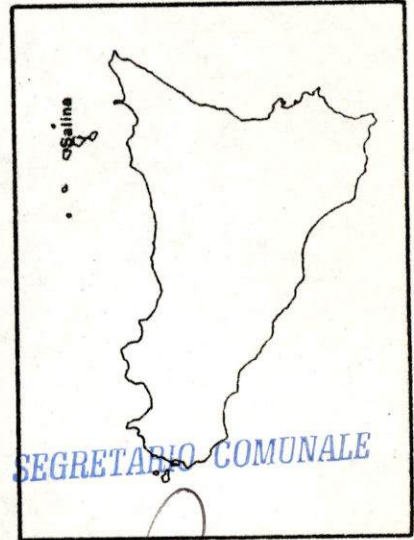


Fig. 2.1.1





# DISTANZE DI MARE LIBERO A S. MARINA DI SALINA

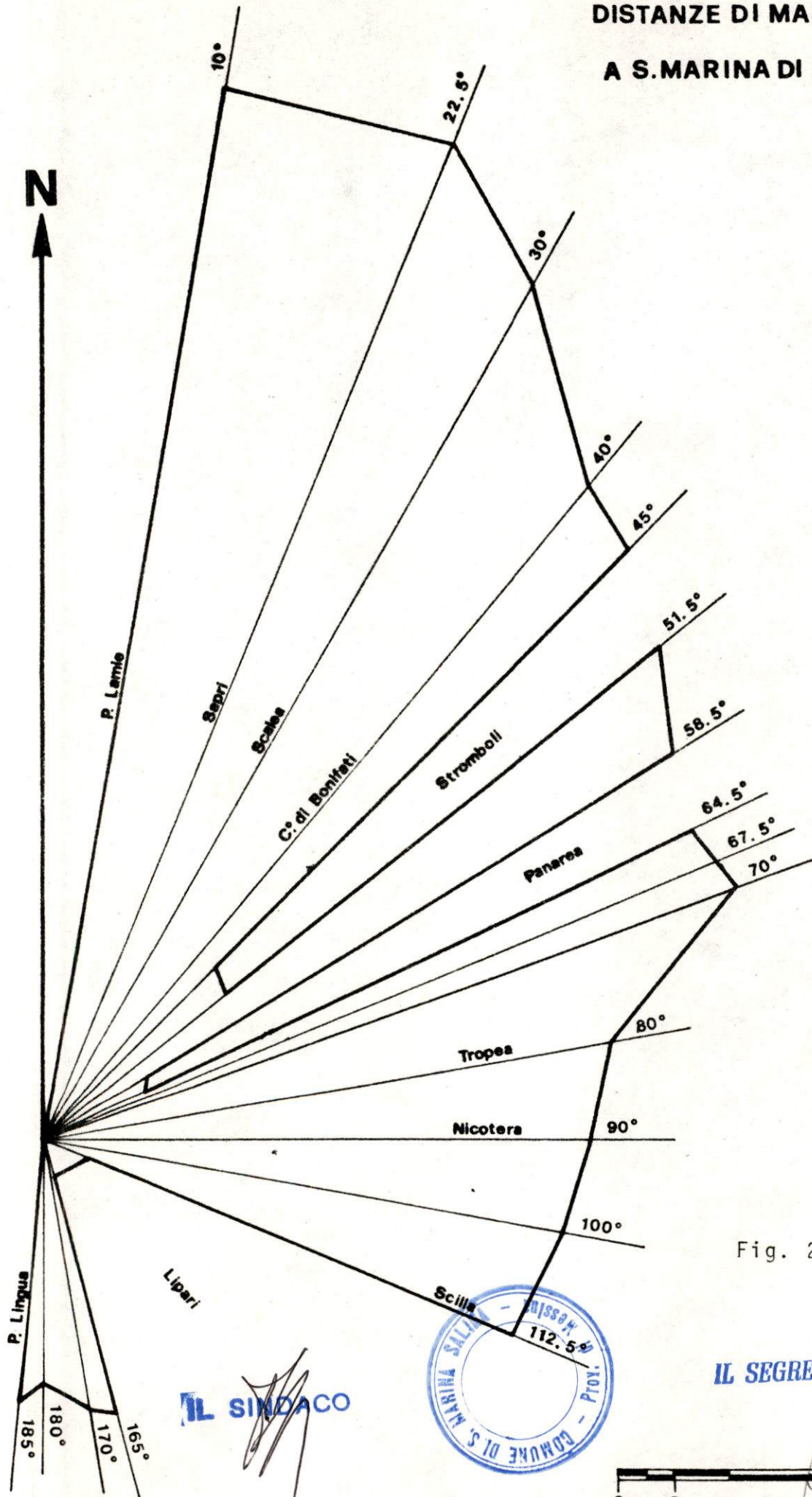
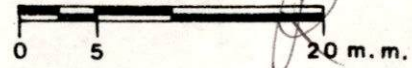


Fig. 2.1.2

IL SEGRETARIO COMUNALE

IL SINDACO



FETCHES EFFETTIVI A

S. MARINA DI SALINA

IL SINDACO

IL SEGRETARIO COMUNALE

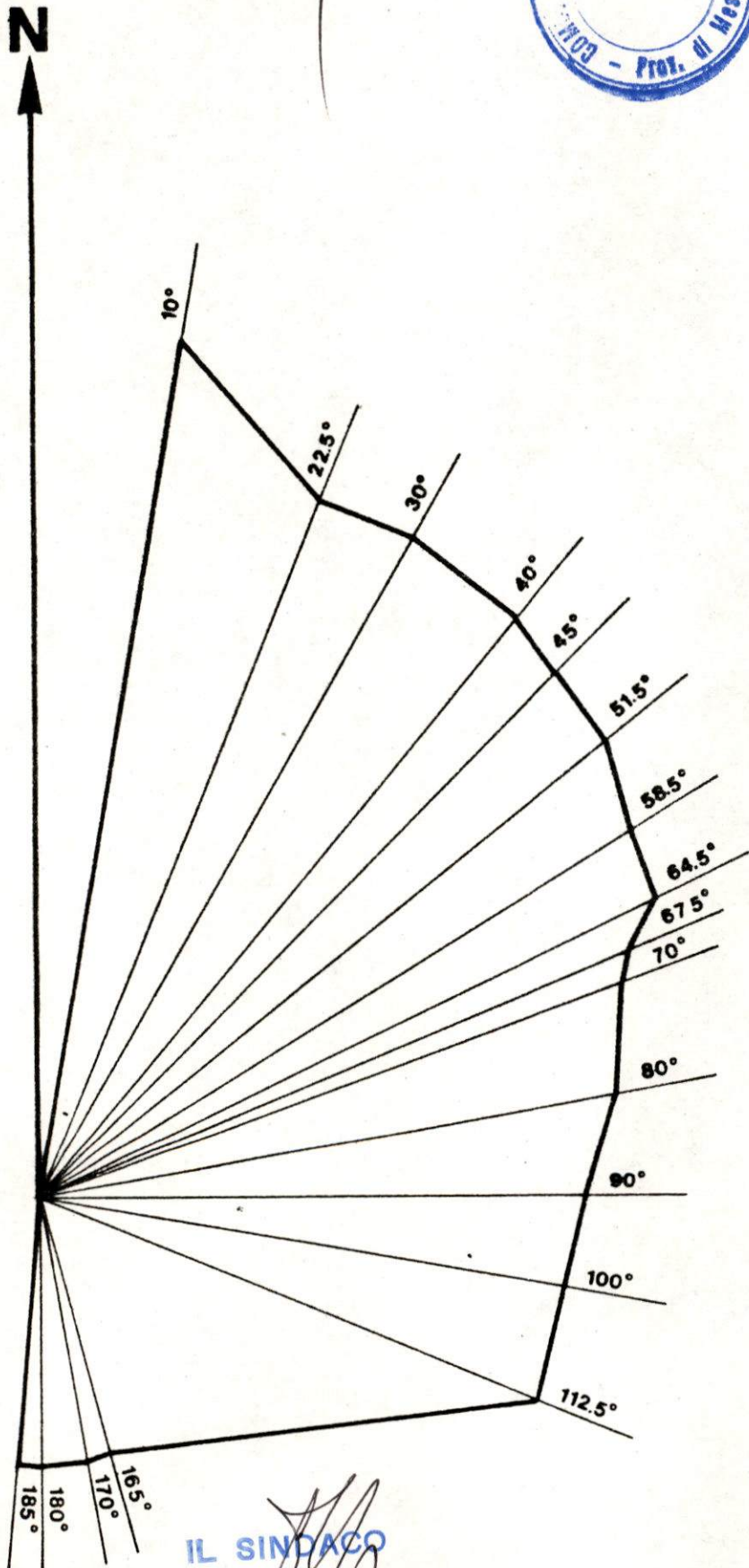
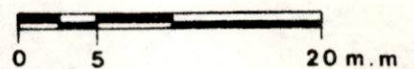


Fig. 2.1.3





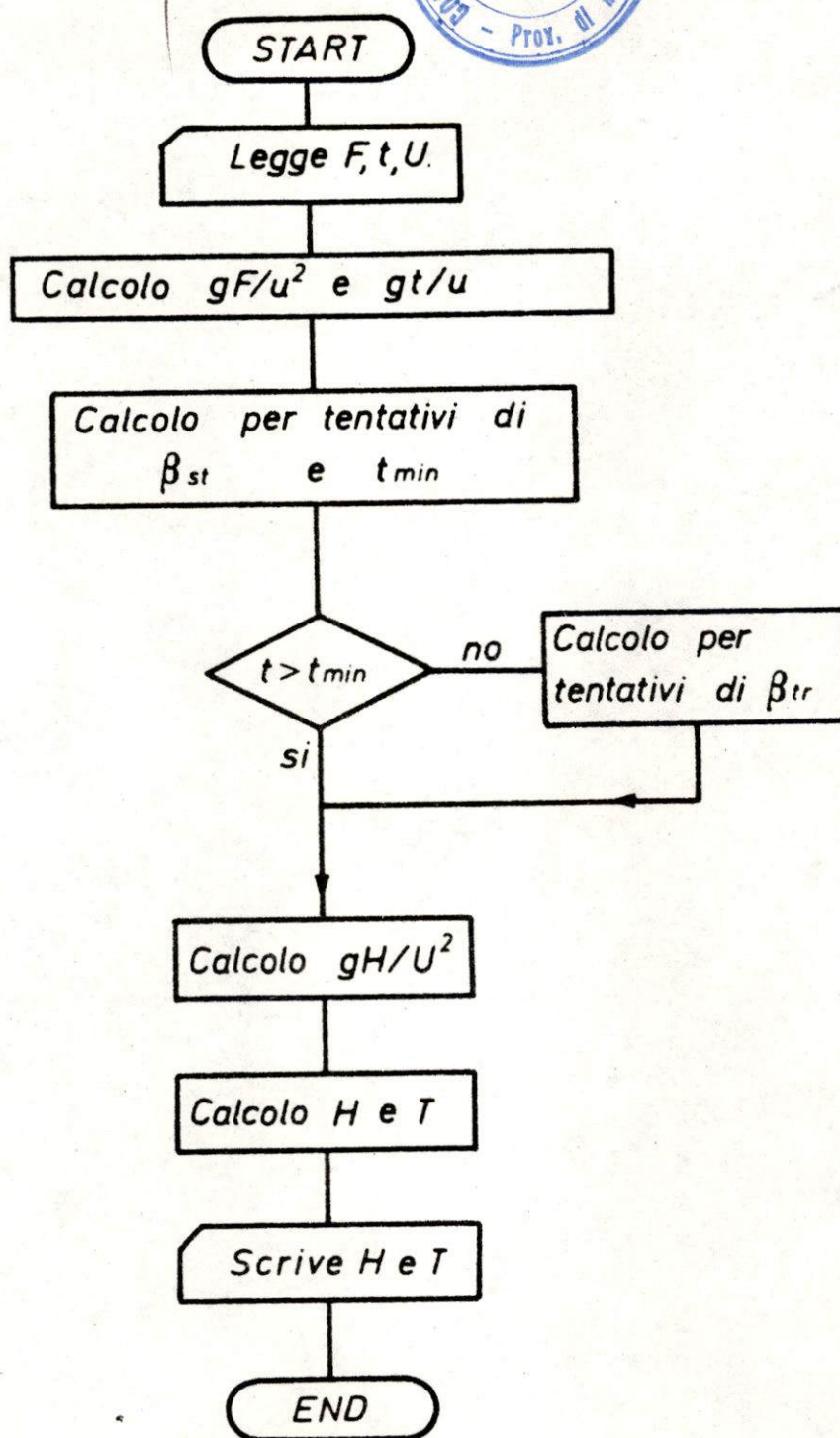


DIAGRAMMA A BLOCCHI DEL MODELLO MATEMATICO  
PER LA PREVISIONE DEL MOTO ONDOSO

IL SINDACO



IL SEGRETARIO COMUNALE



FIGURE DEL CAPITOLO 3



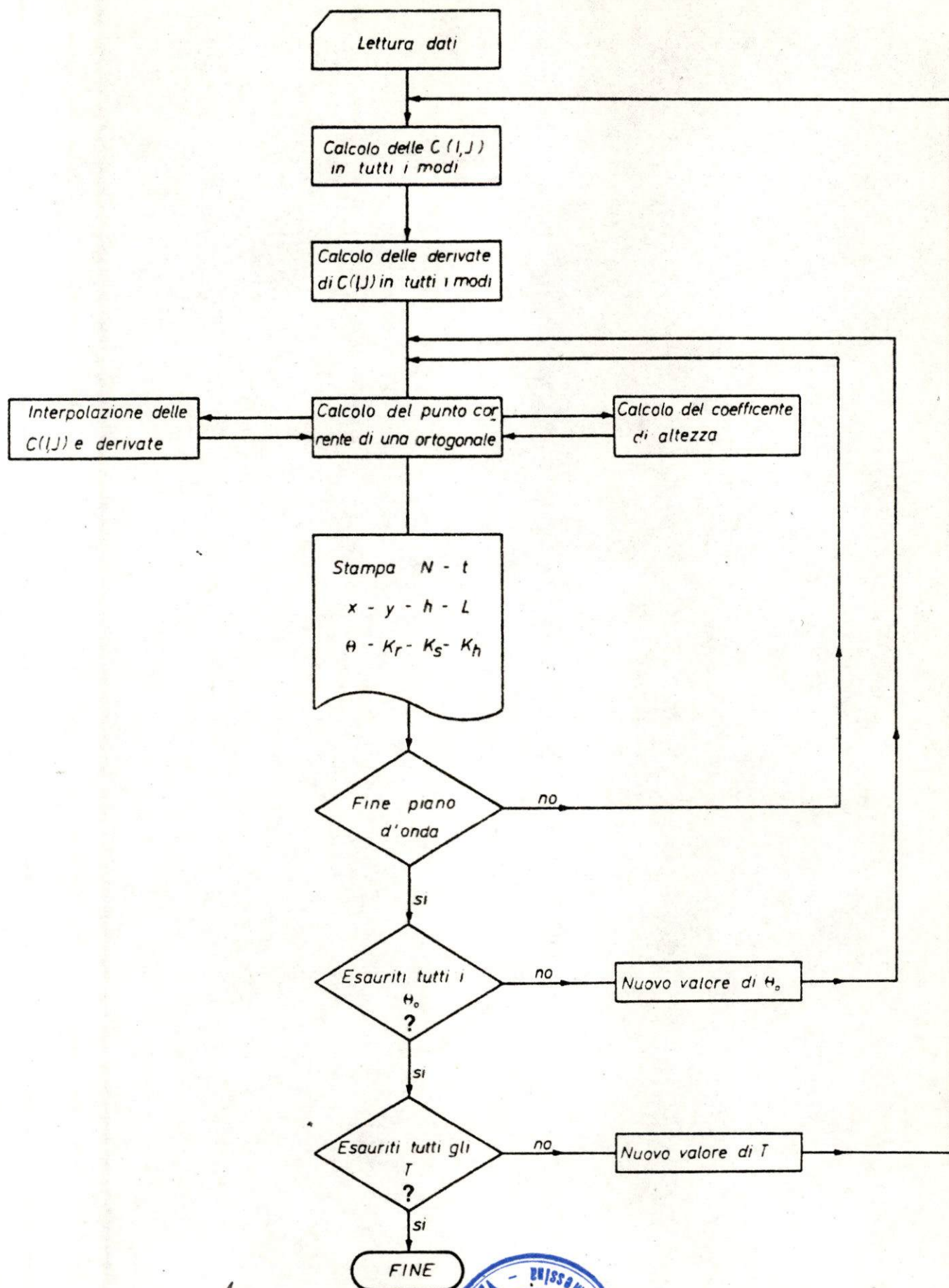


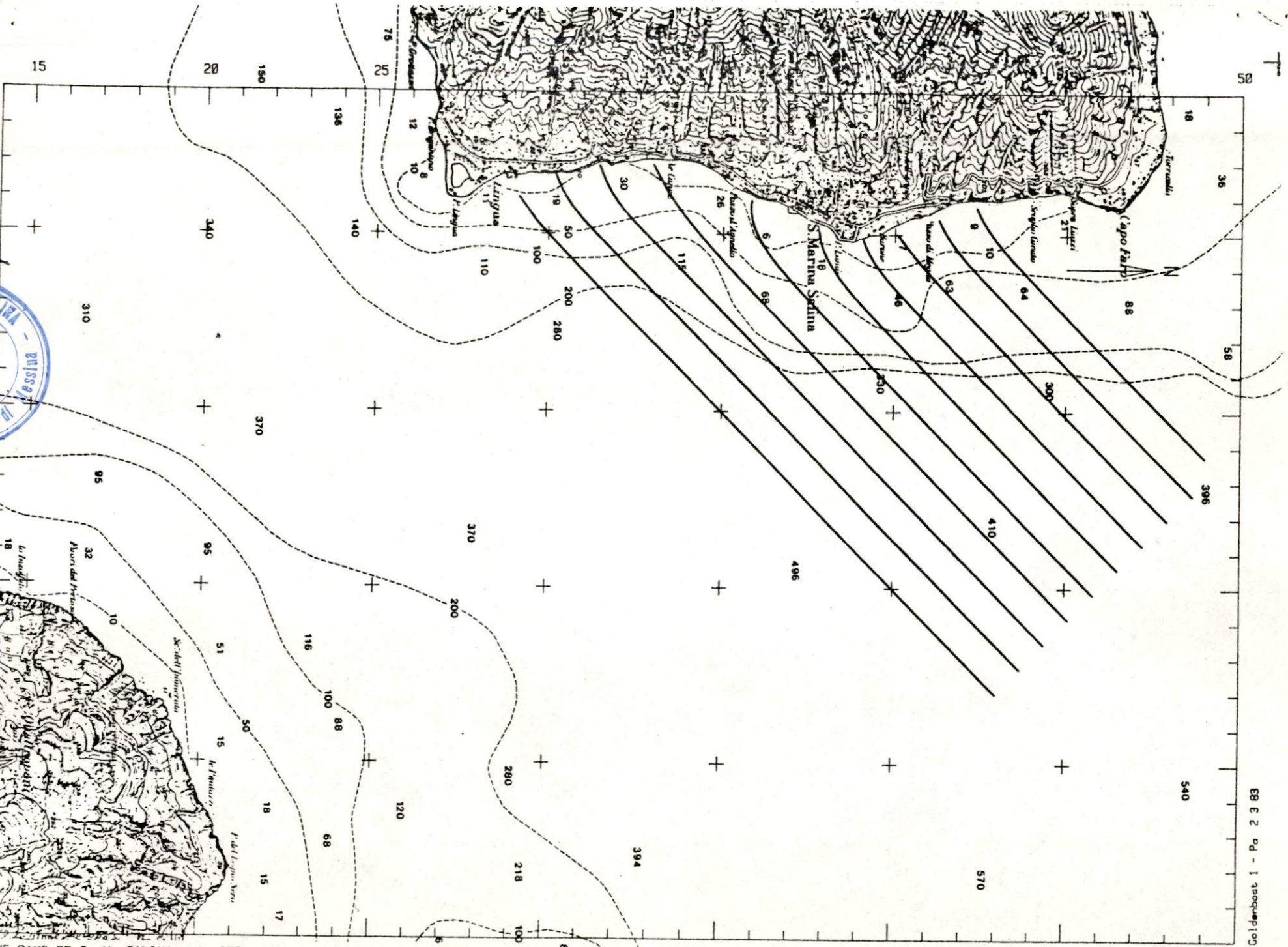
DIAGRAMMA A BLOCCHI DEL MODELLO MATEMATICO DELLA RIFRAZIONE

Fig. 3.2.1

IL SEGRETARIO COMUNALE



0 250 750



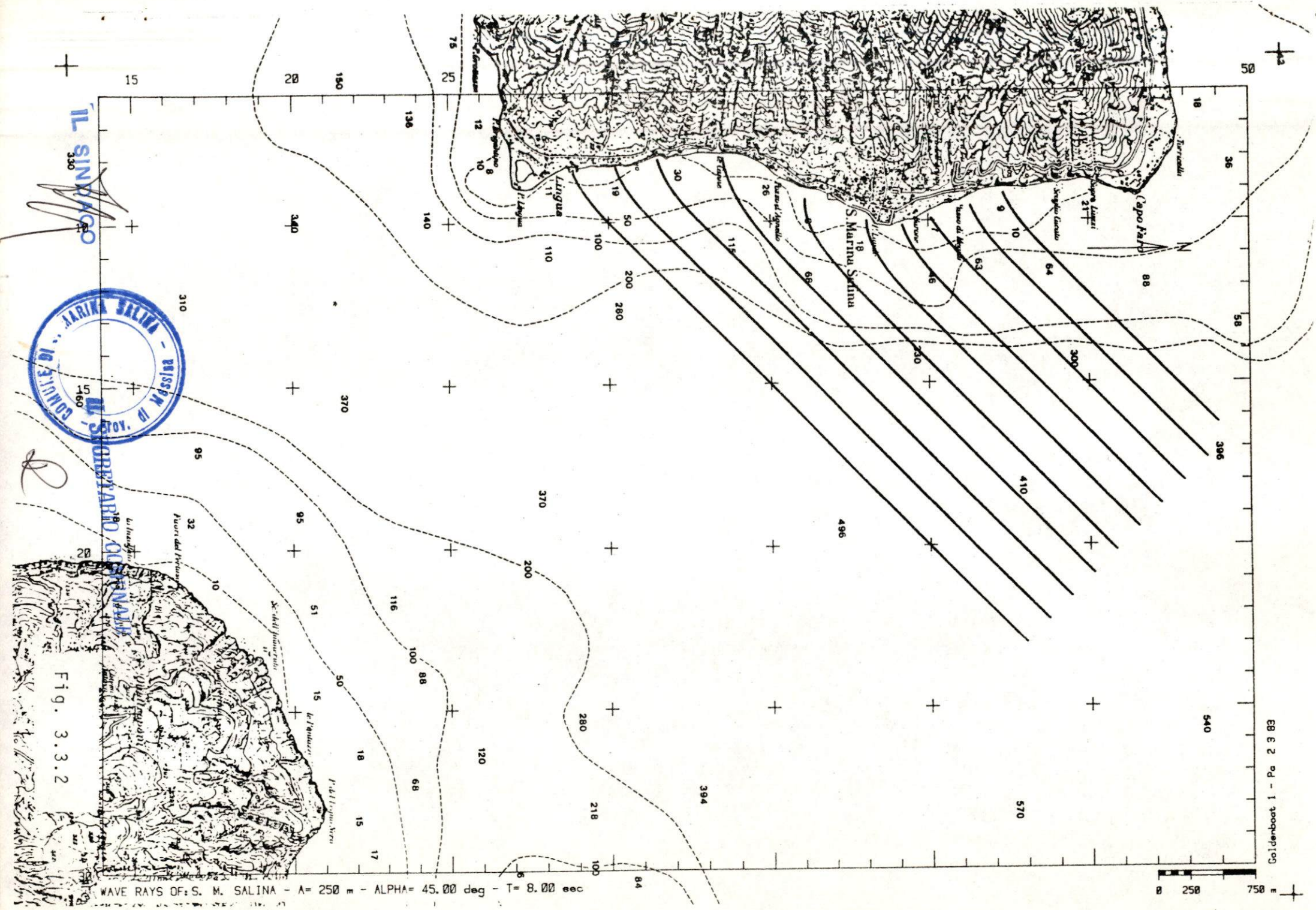
WAVE RAYS OF S. M. SALINA -  $A = 250$  m -  $\alpha = 45.00$  deg -  $T = 6.00$  sec

Fig. 3.3.1

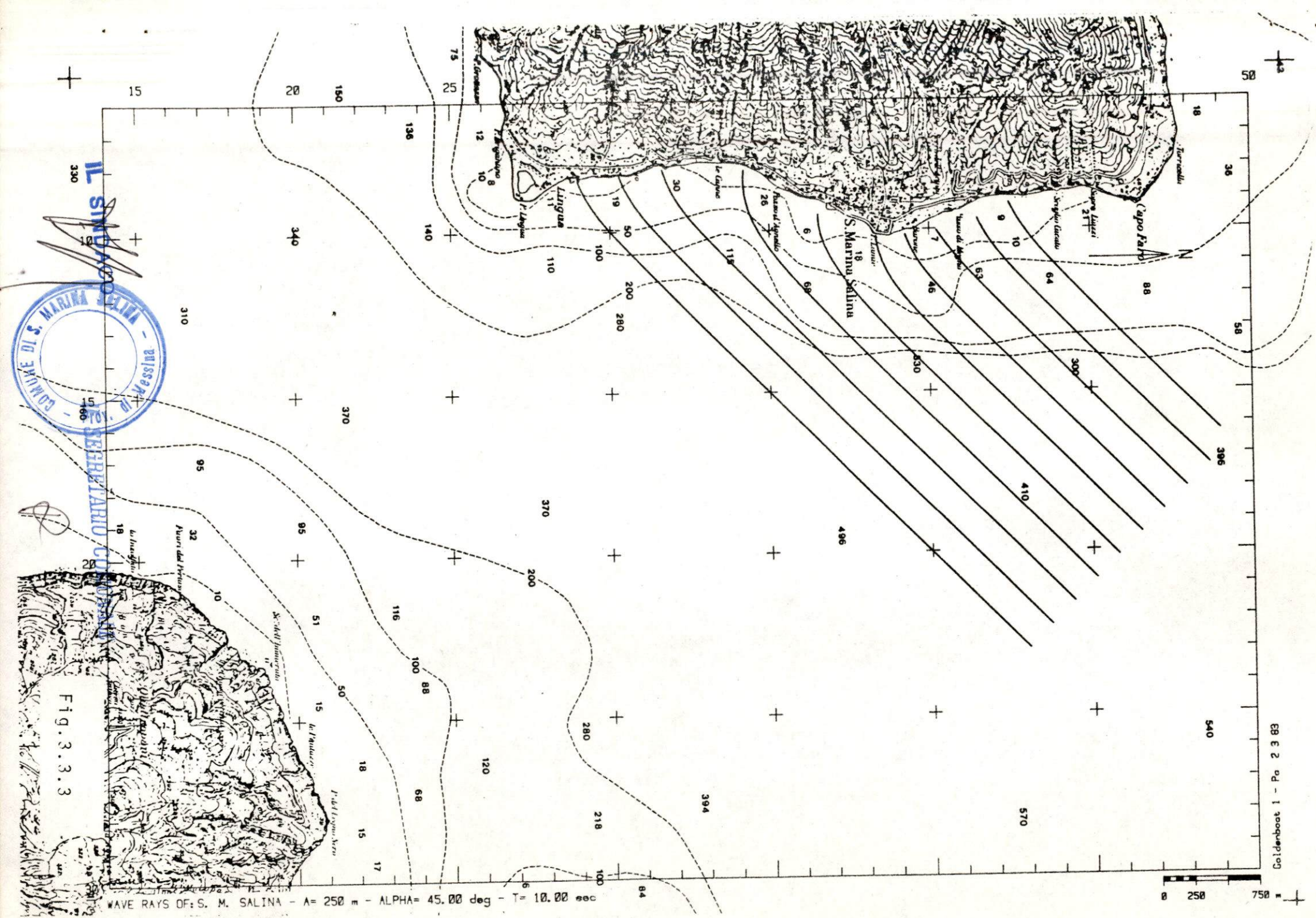


IL SINDACO



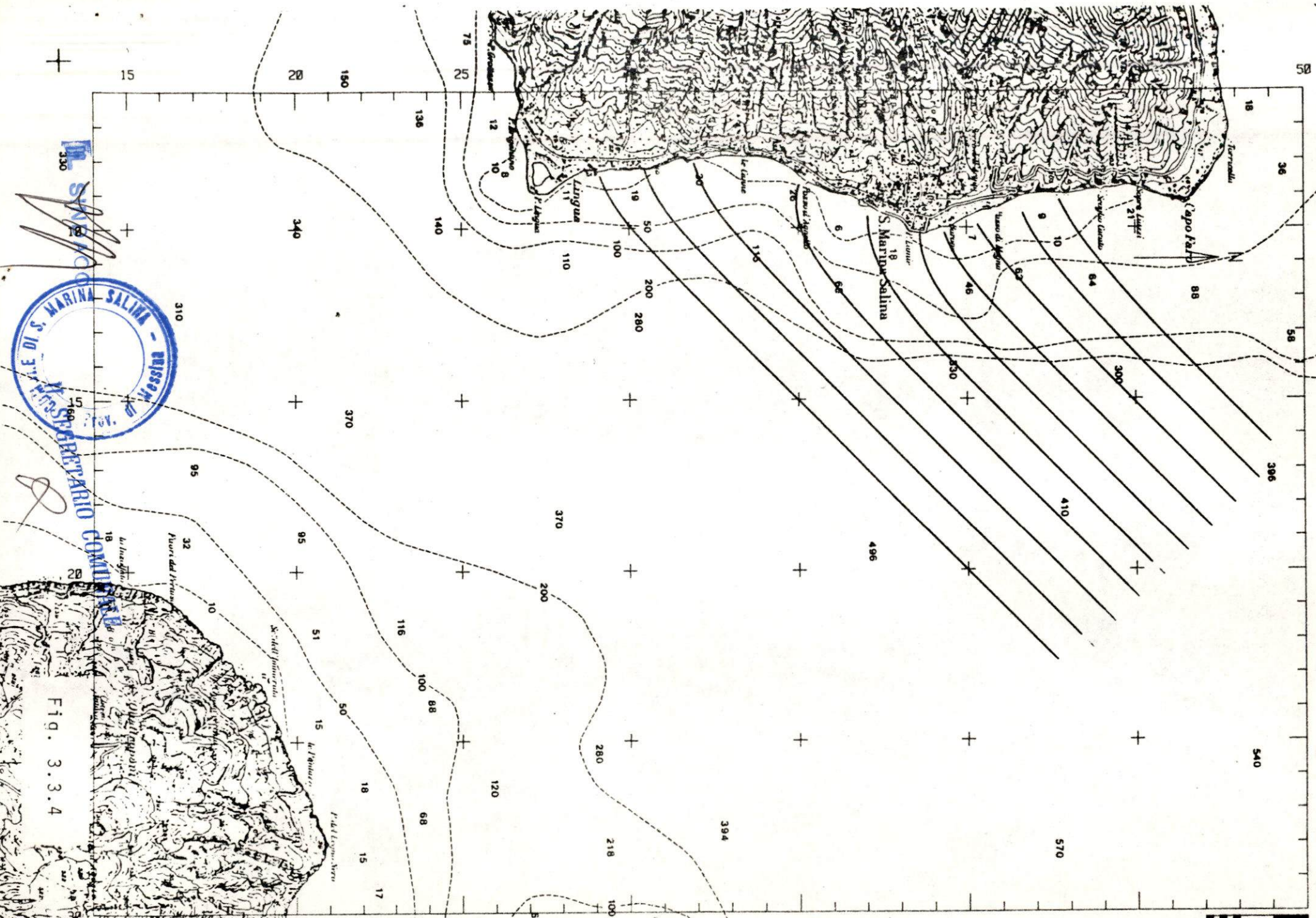








0 250 750



WAVE RAYS OF: S. M. SALINA -  $\lambda = 250 \text{ m}$  -  $\alpha = 45.00 \text{ deg}$  -  $T = 12.00 \text{ sec}$

Fig. 3.3.4





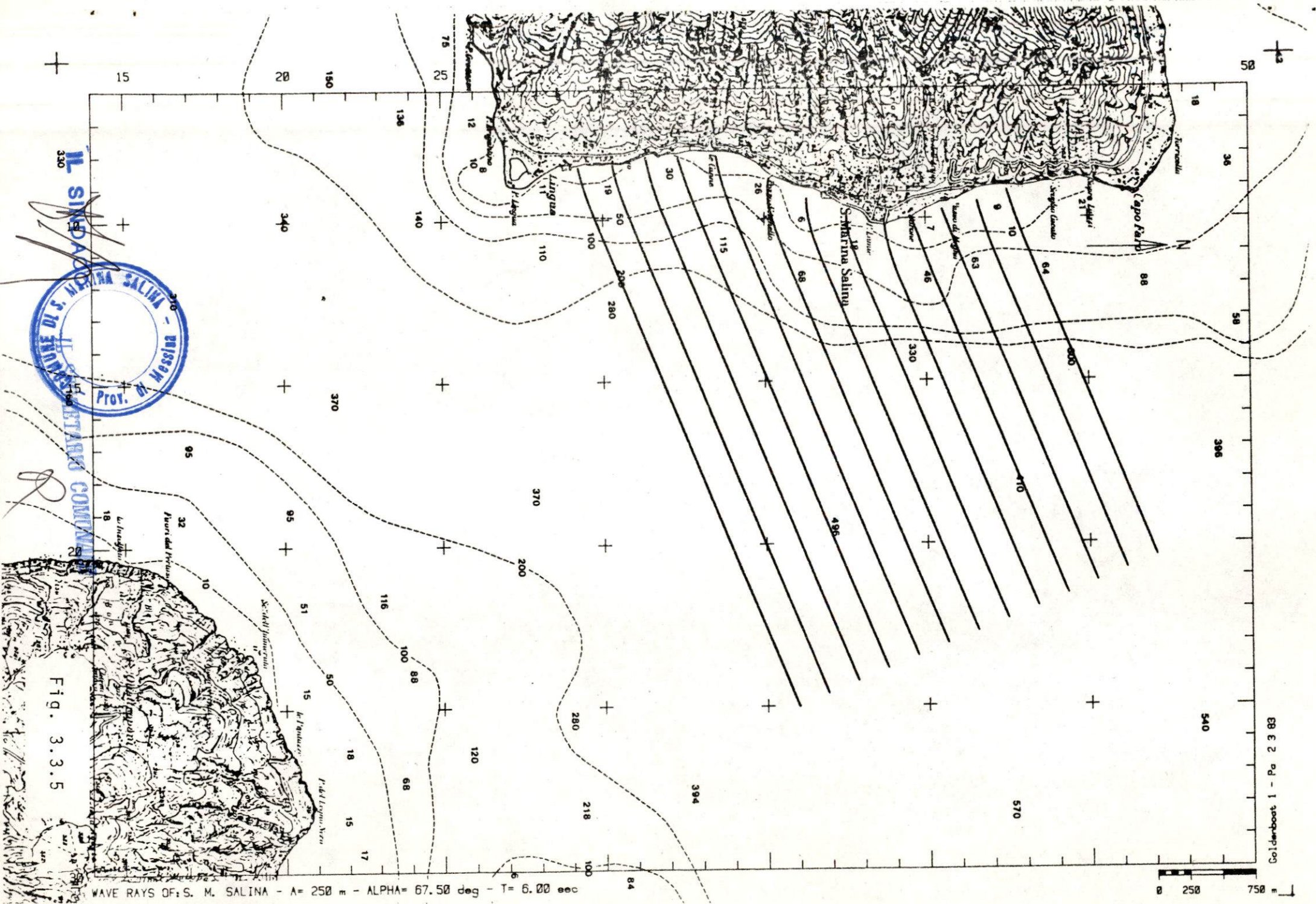
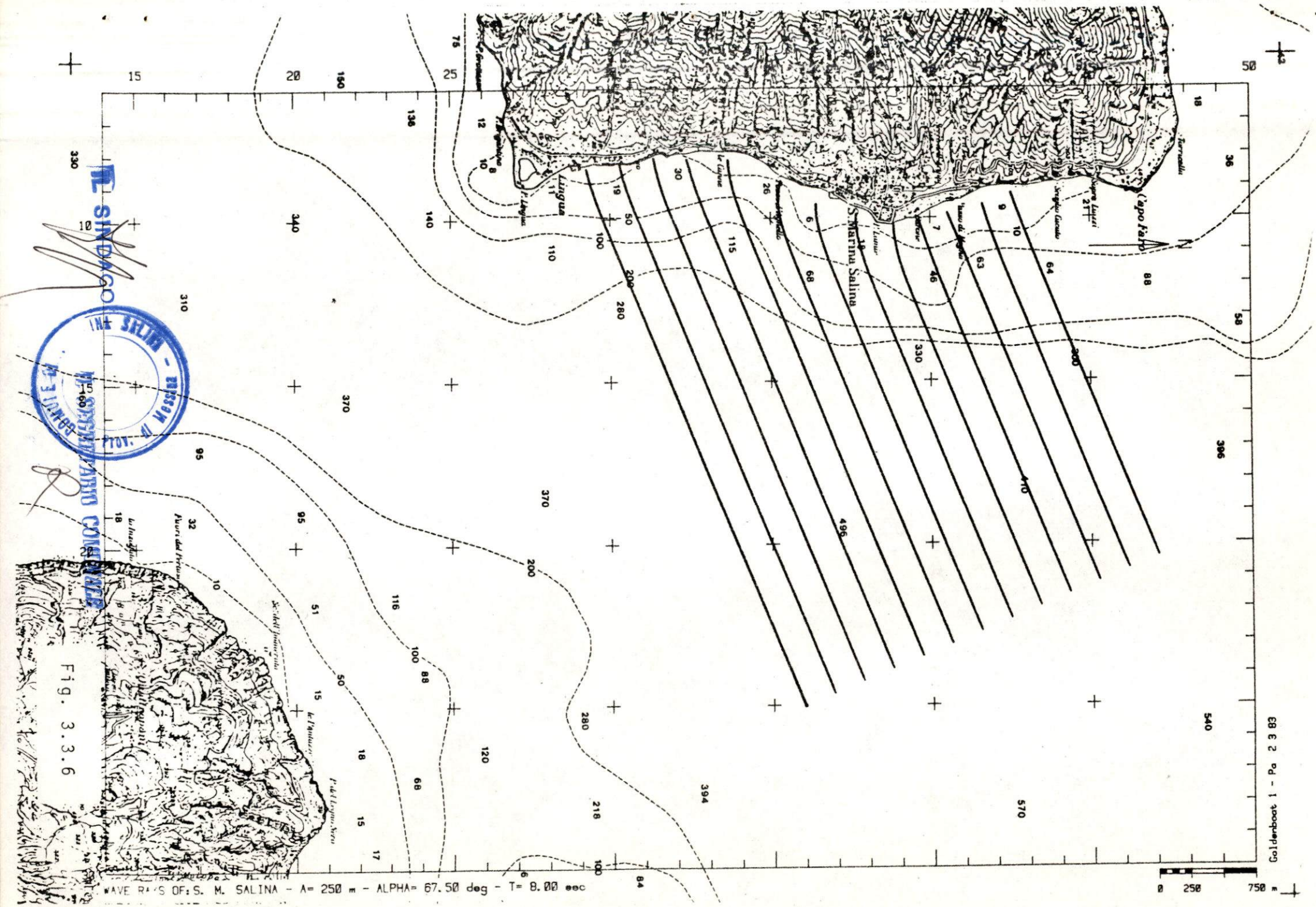
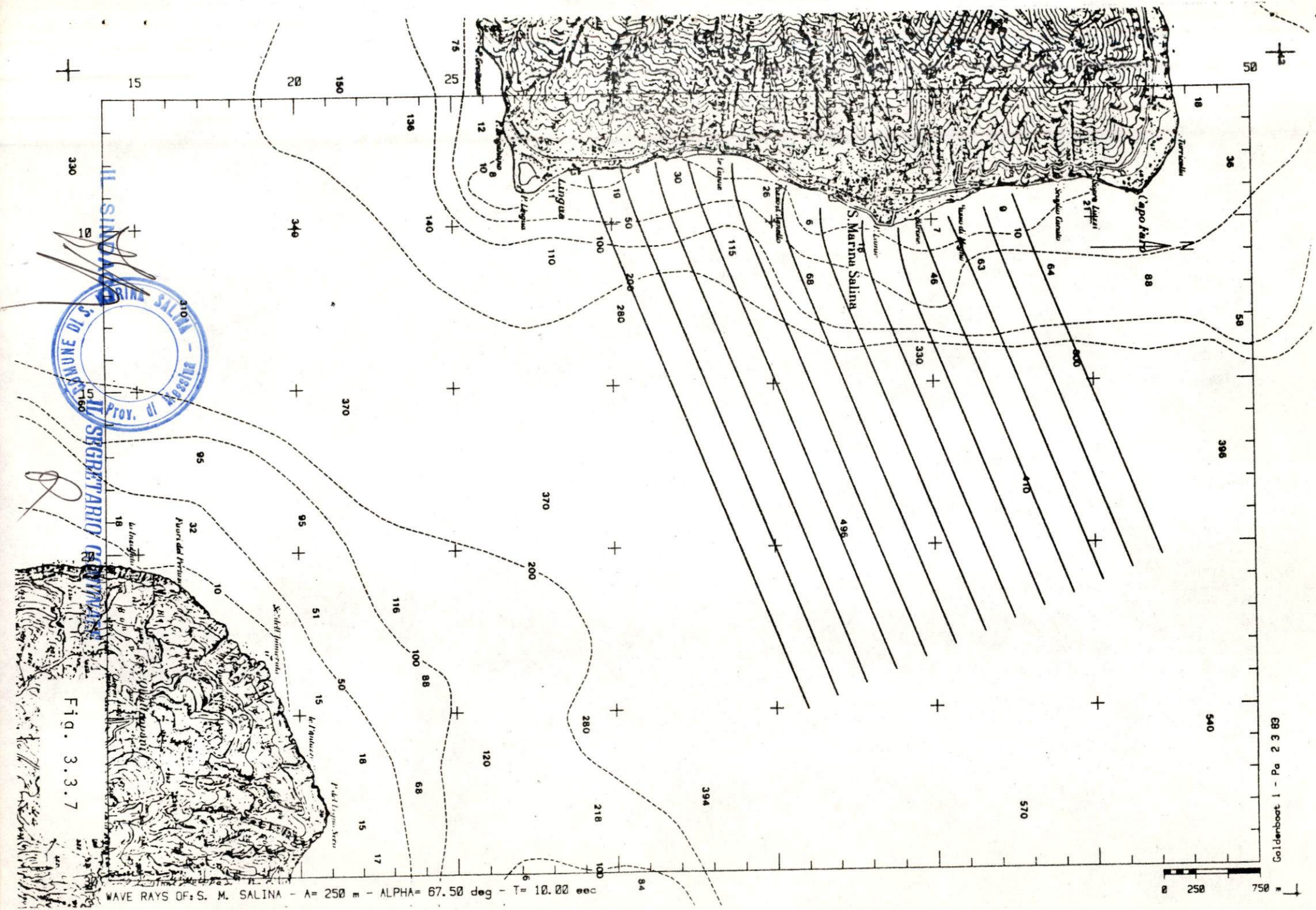


Fig. 3.3.5

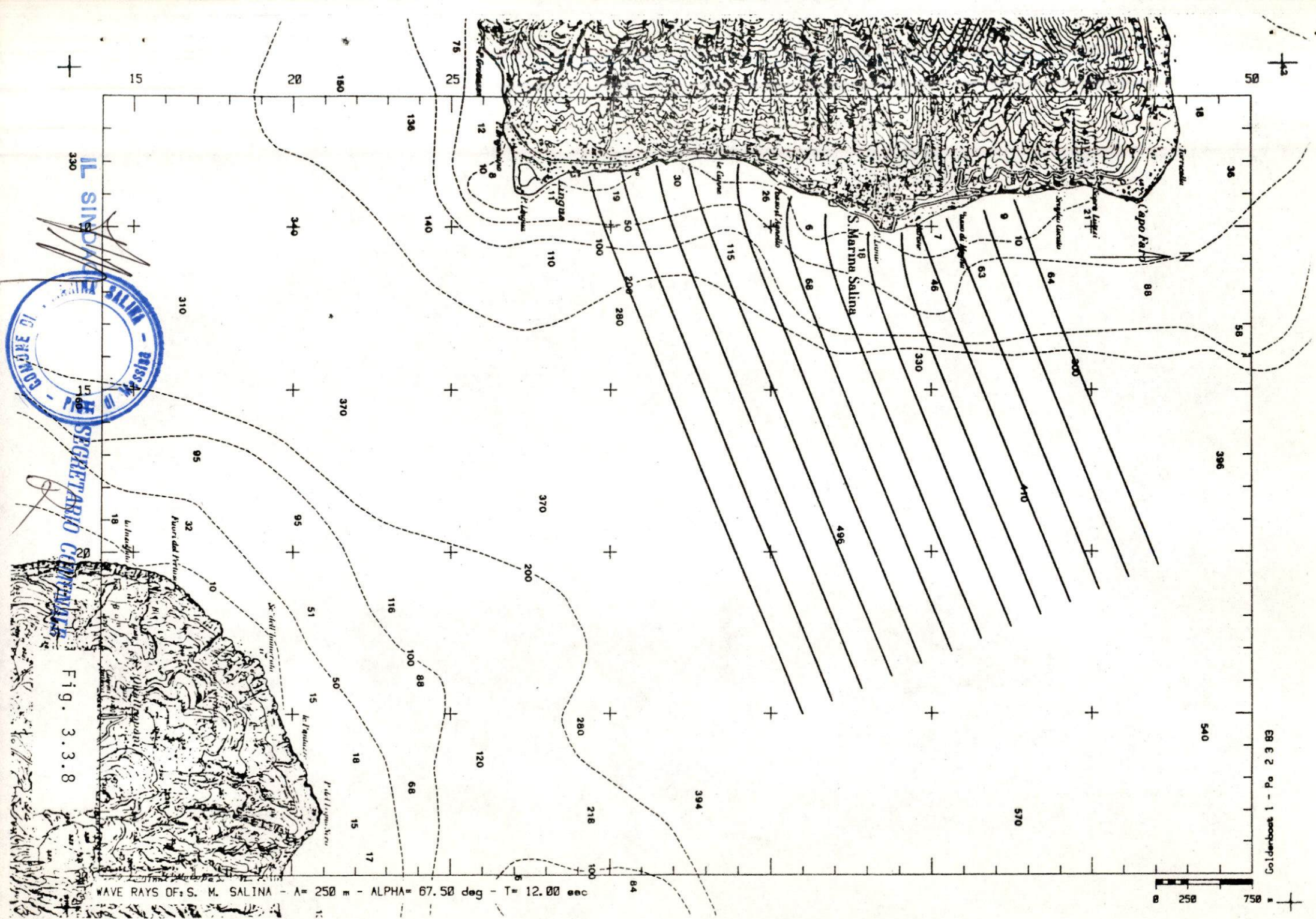




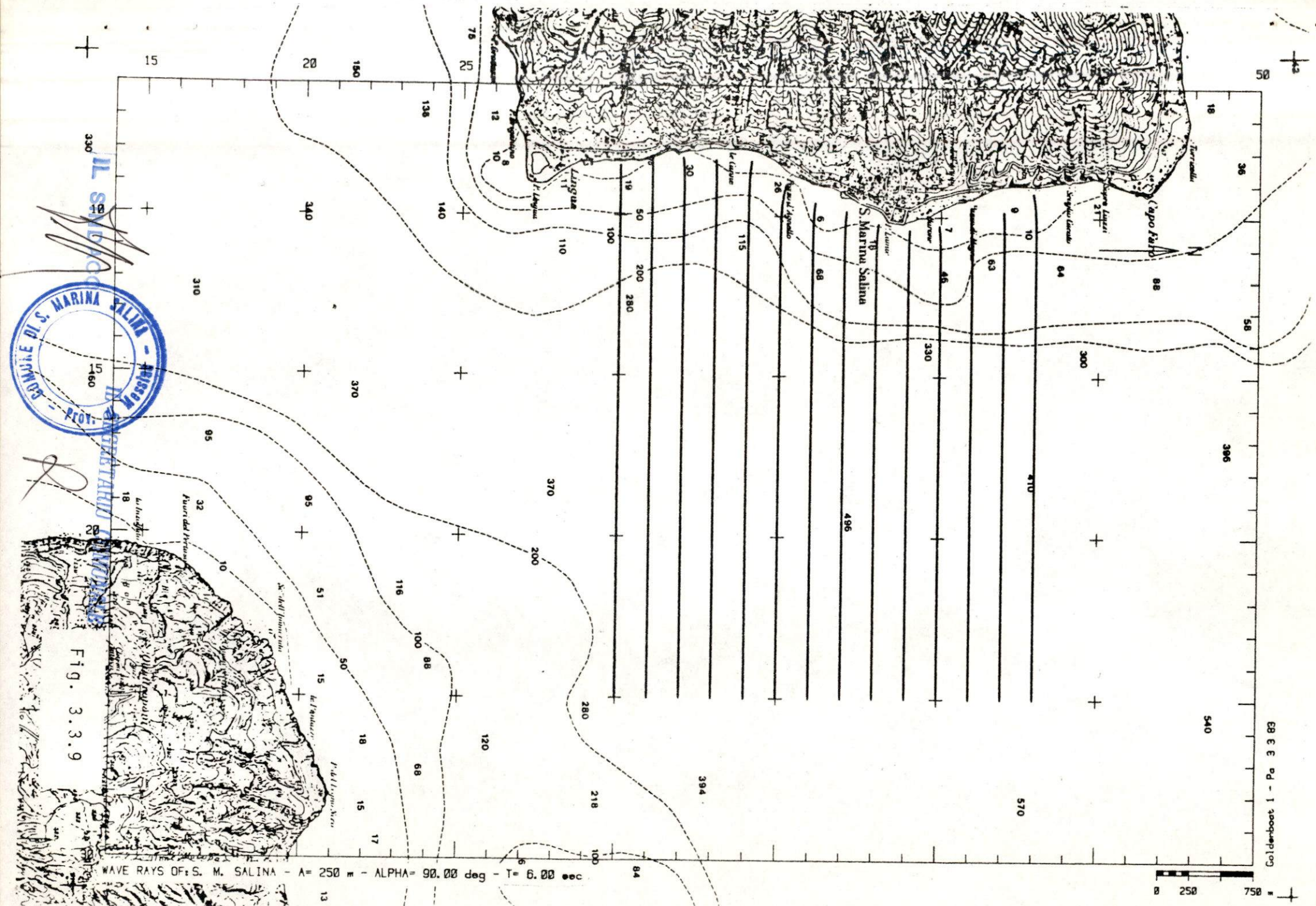




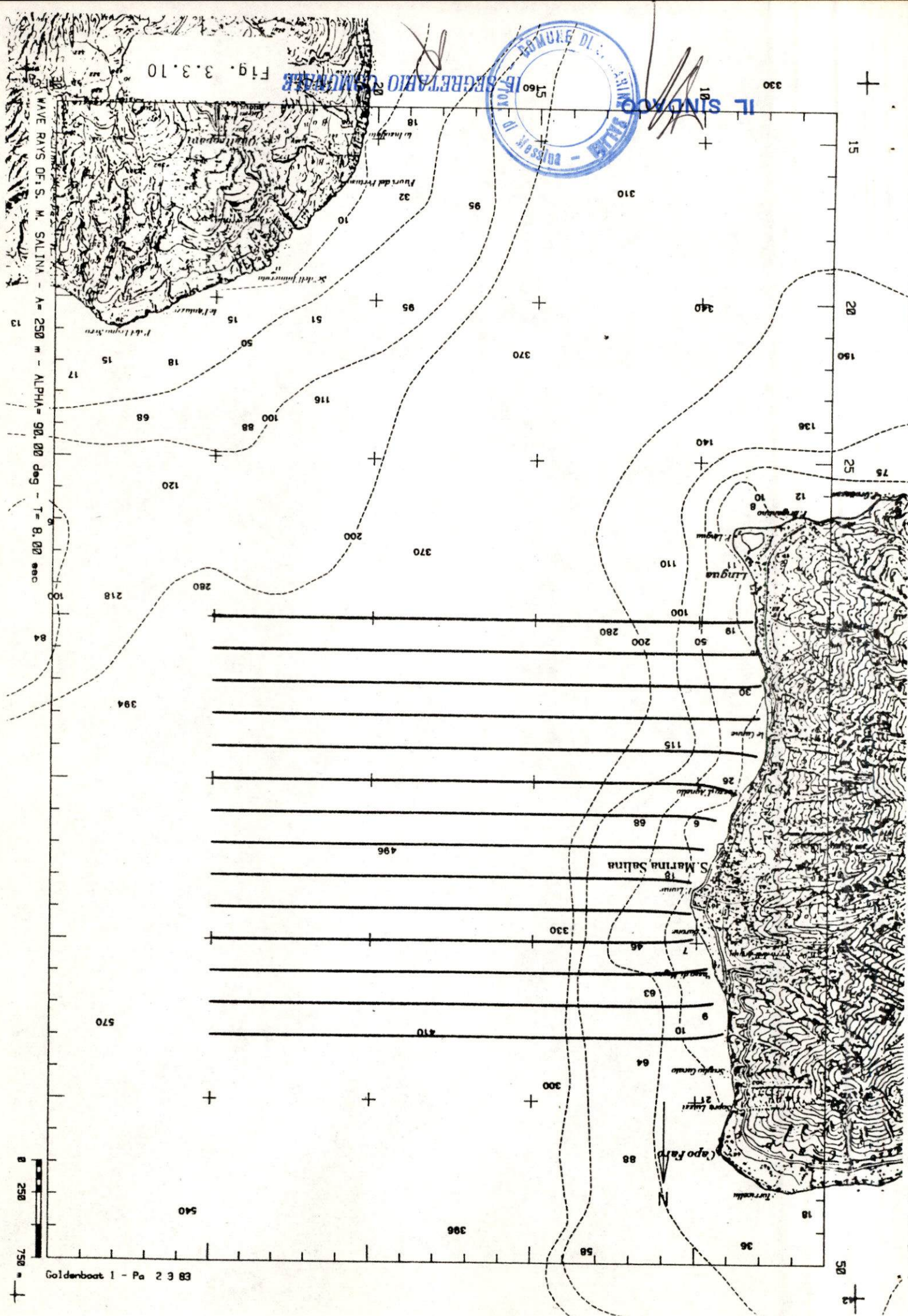




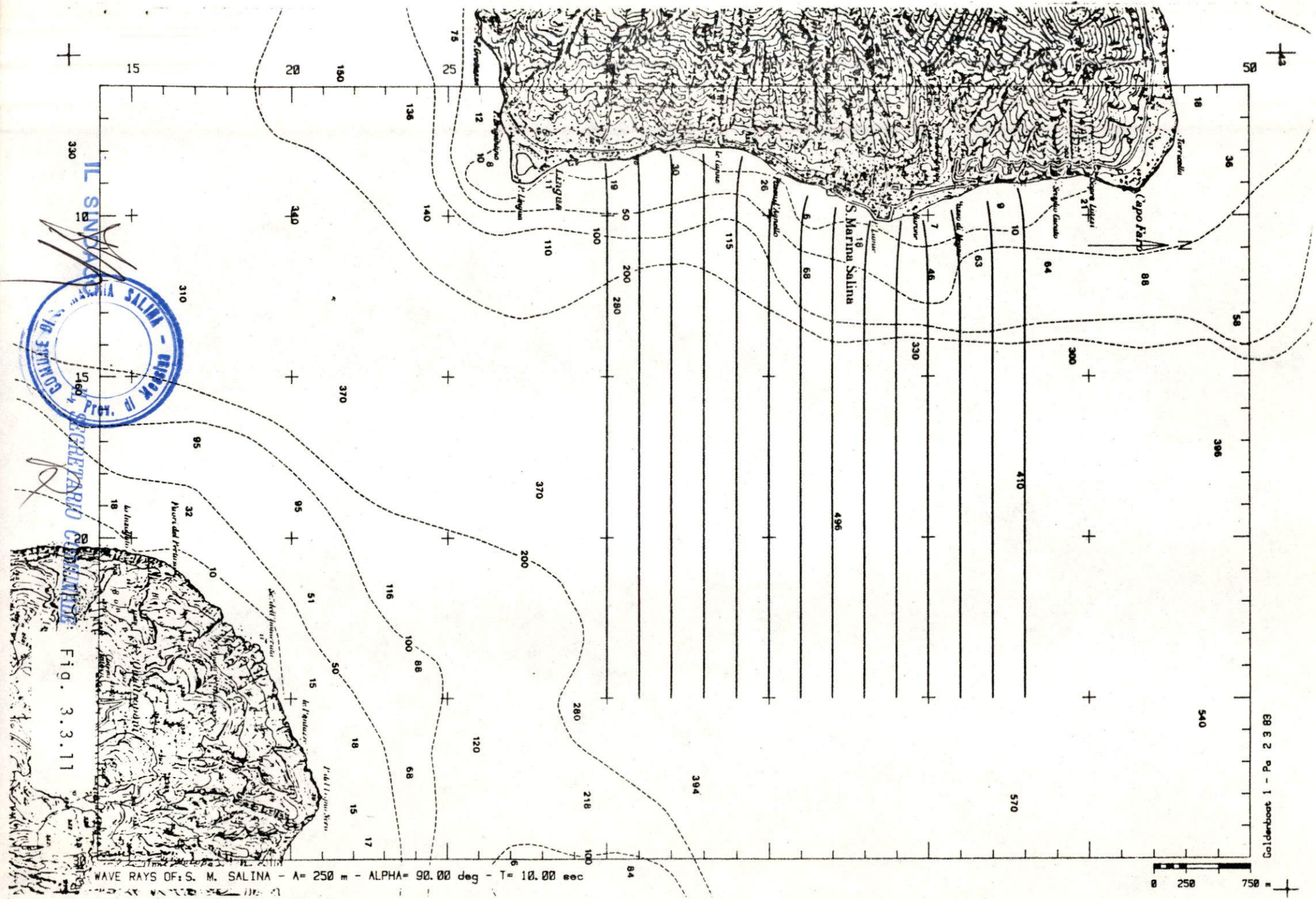




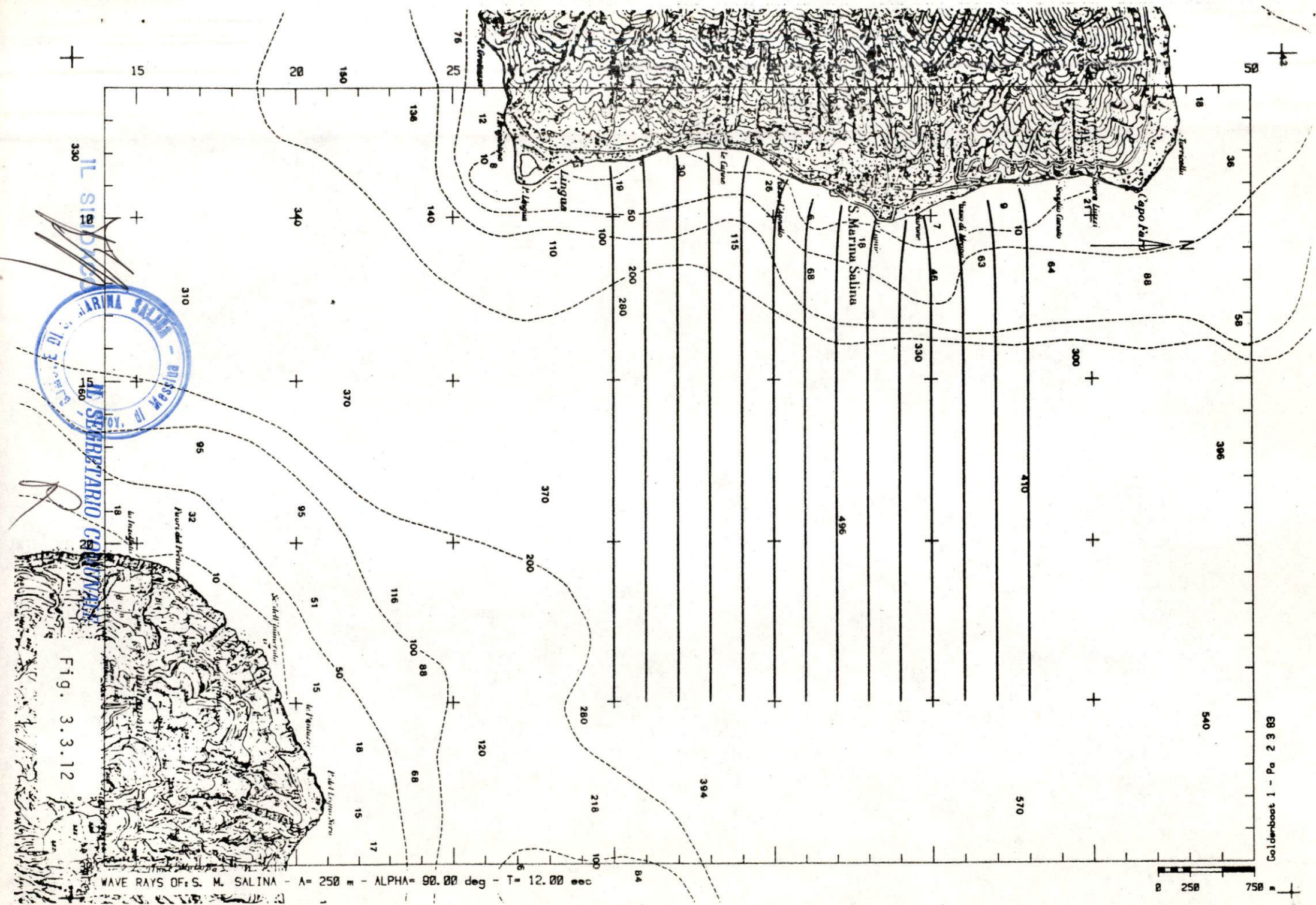




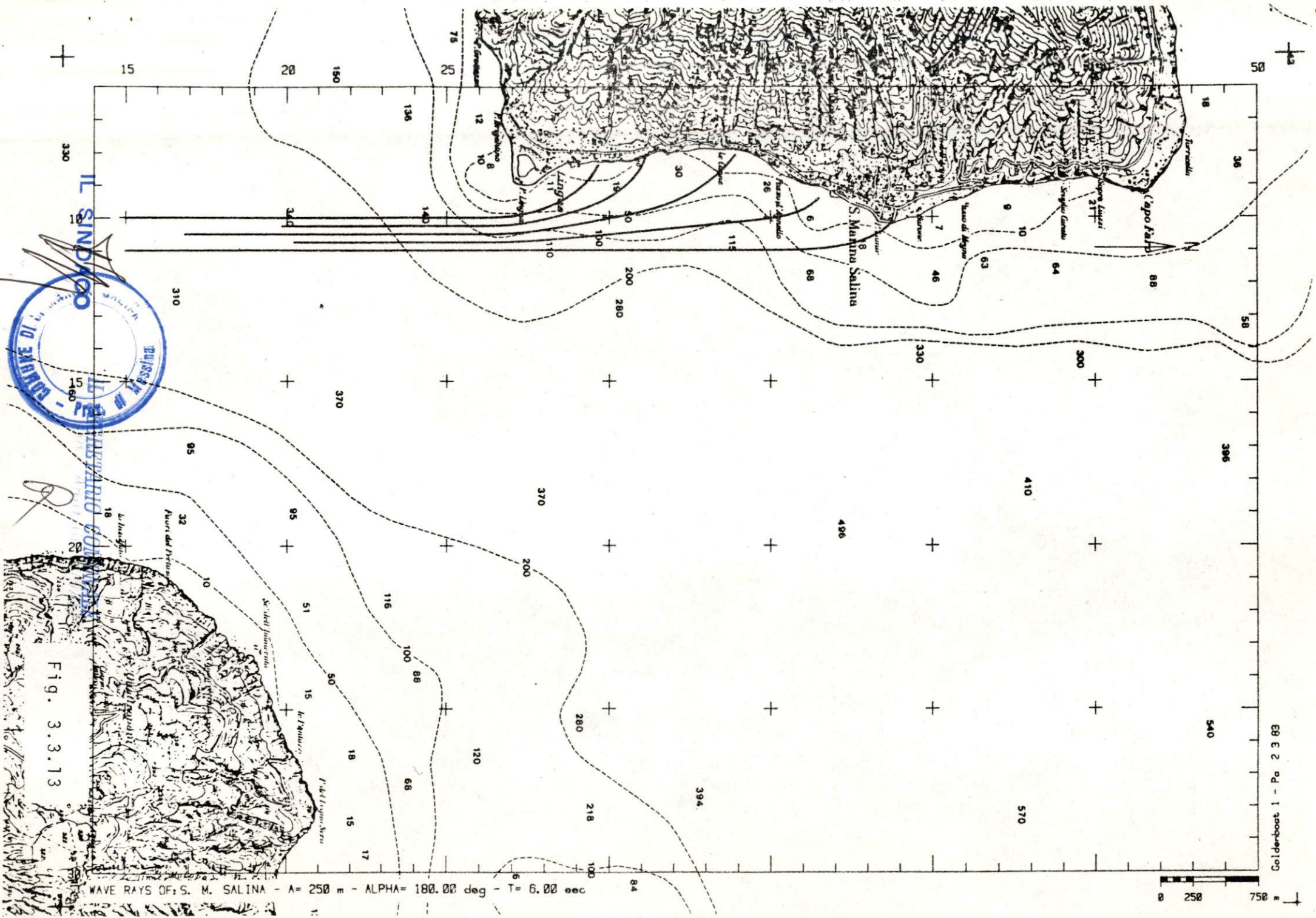




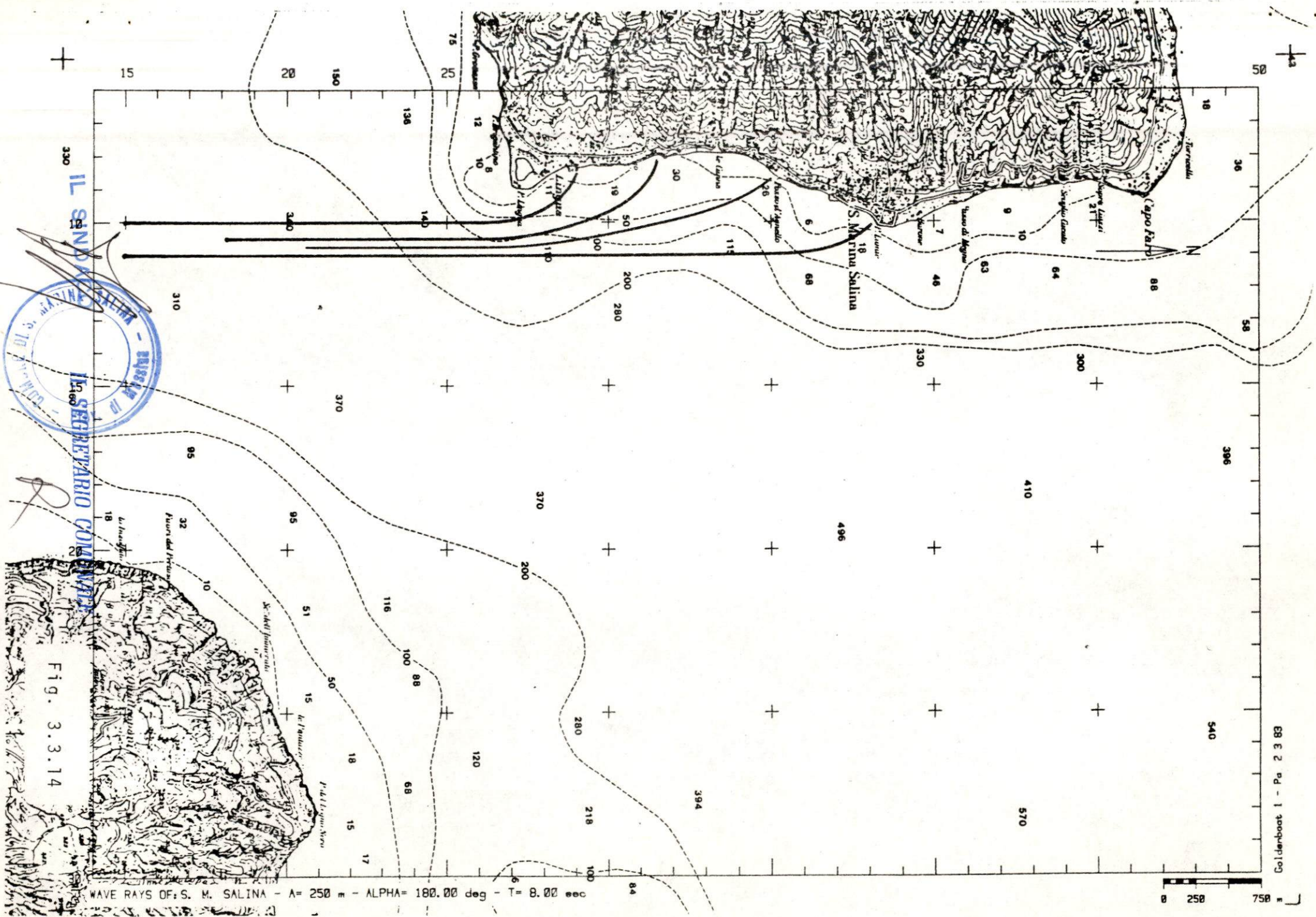




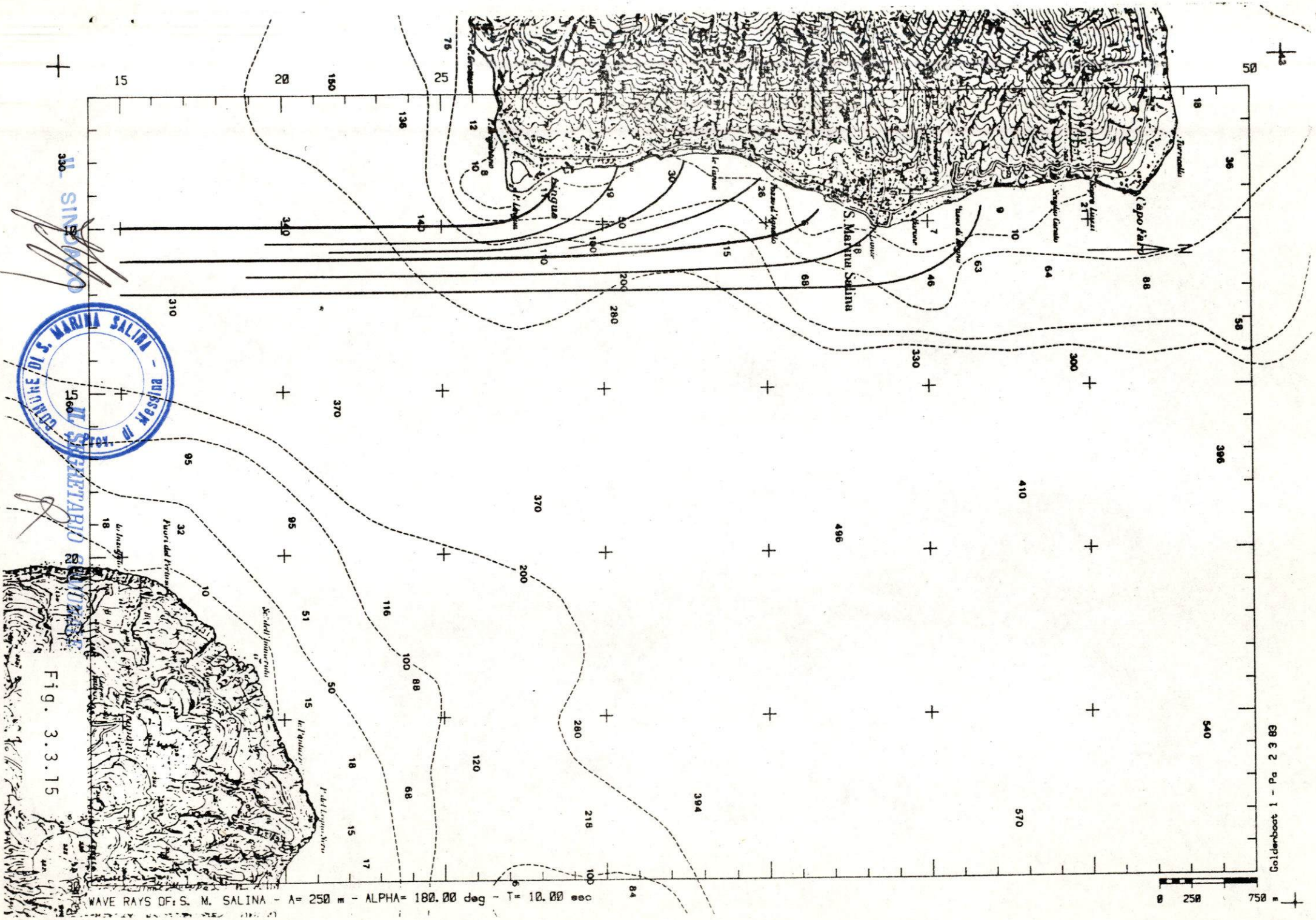




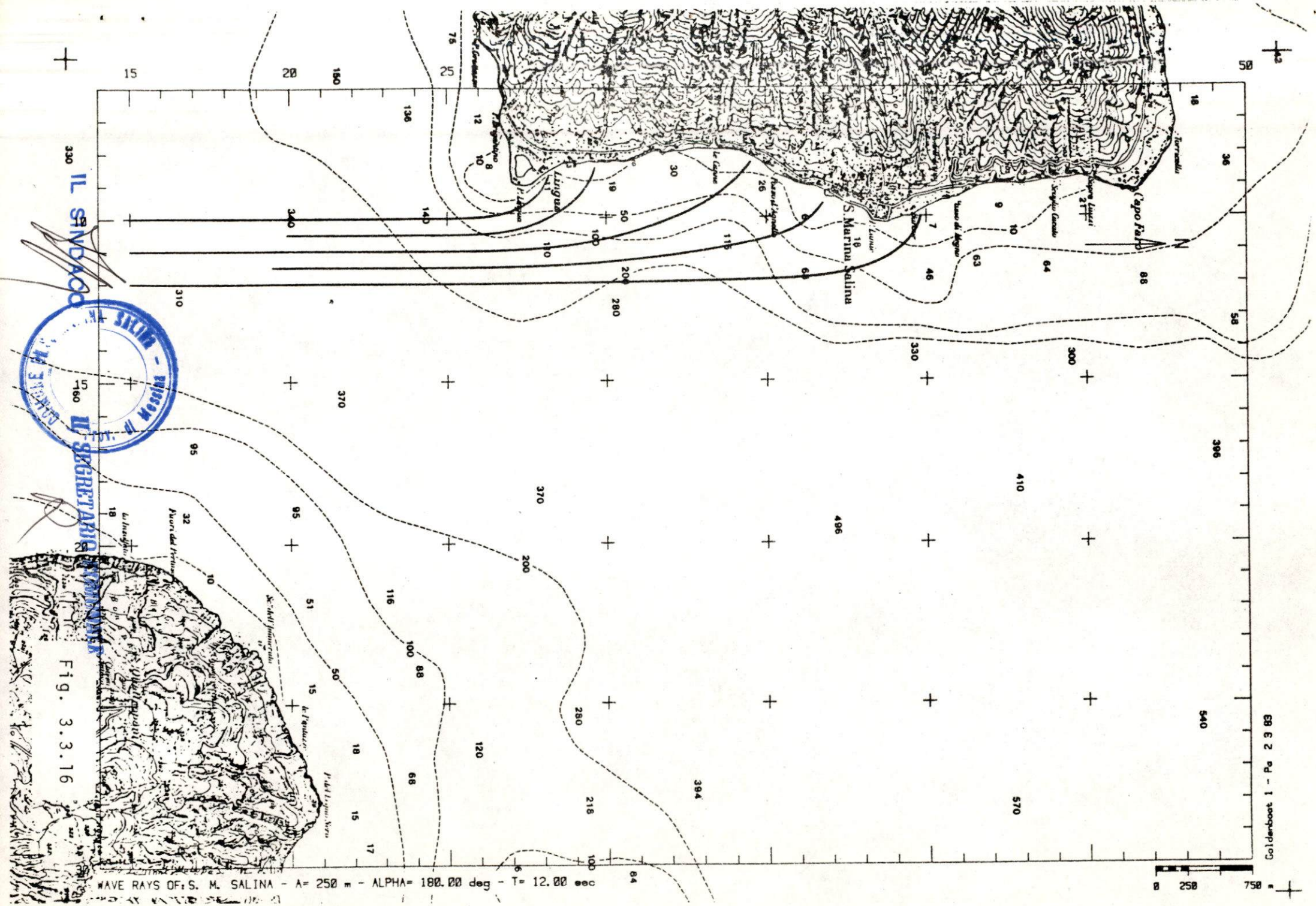














# REFRACTION DIAGRAM FOR S. M. SALINA

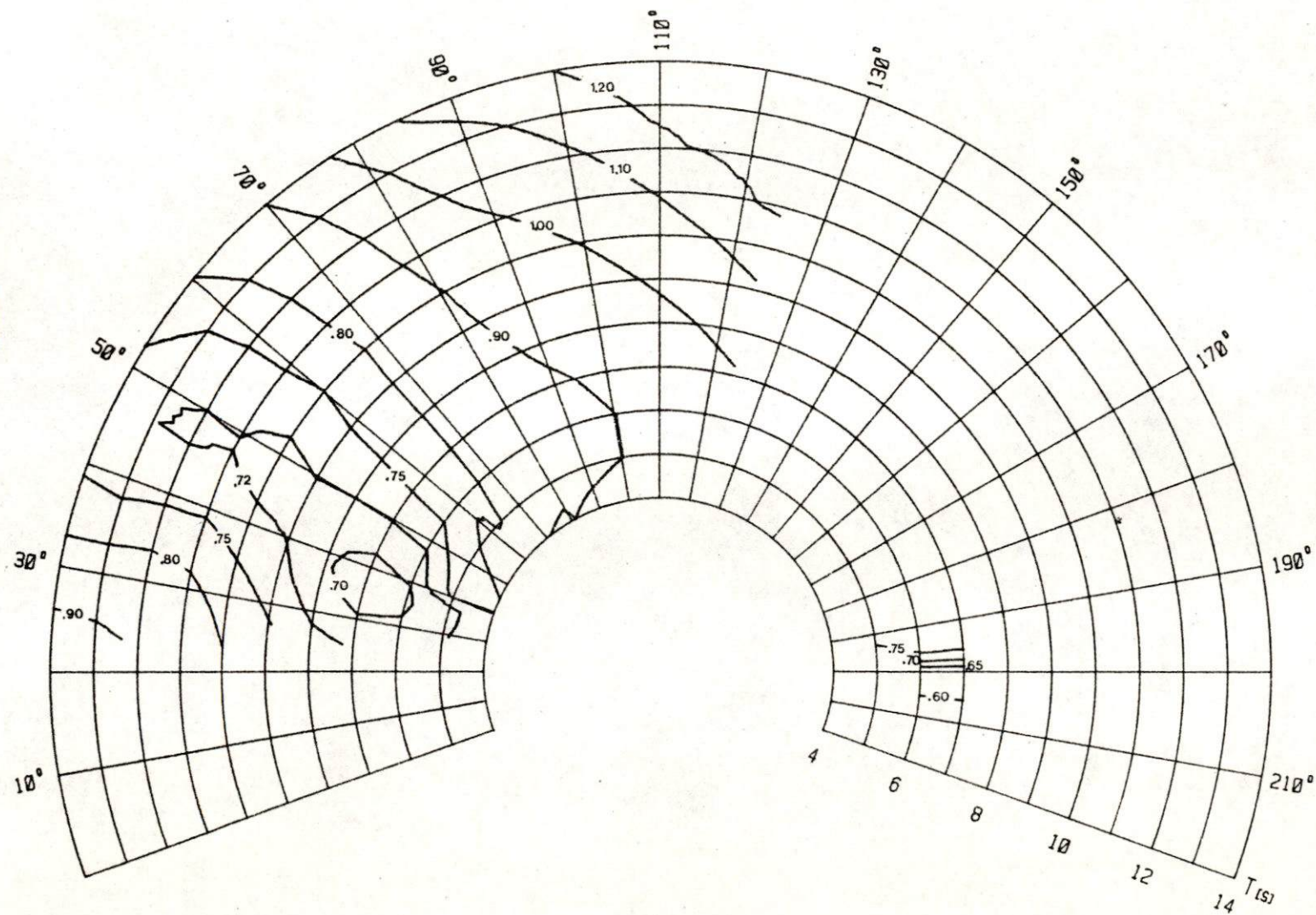


Fig. 3.4.1

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IL SEGRETARIO COMUNALE



IL SINDACO



IL SEGRETARIO COMUNALE

DIAGRAM OF ORTHOGONALS ROTATION FOR S. M. SALINA

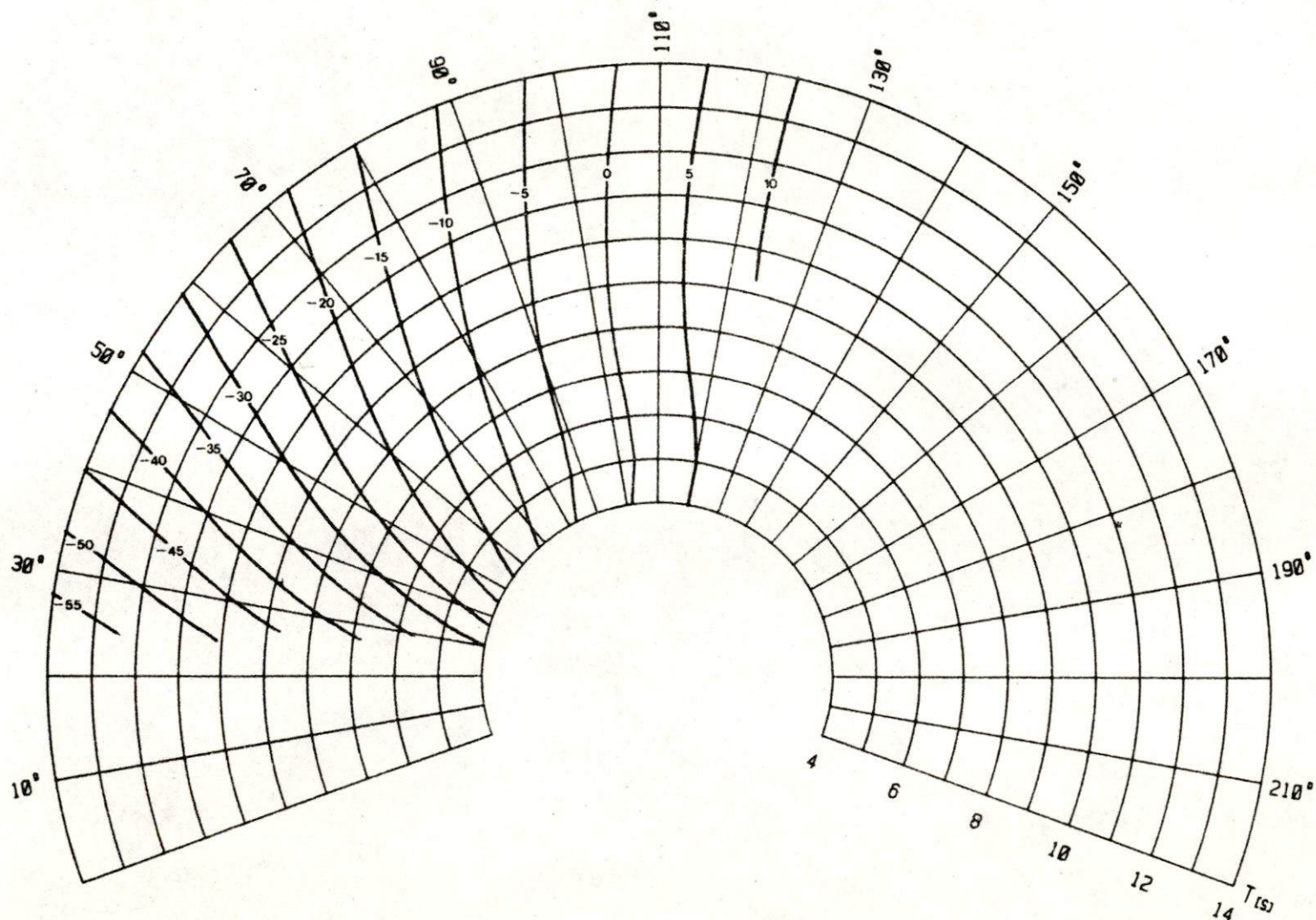


Fig. 3.4.2

FIGURE DEL CAPITULO 4

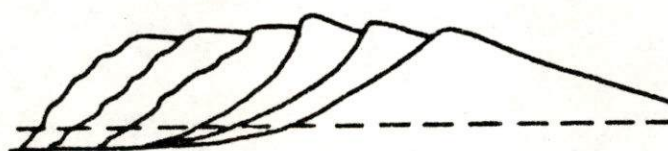
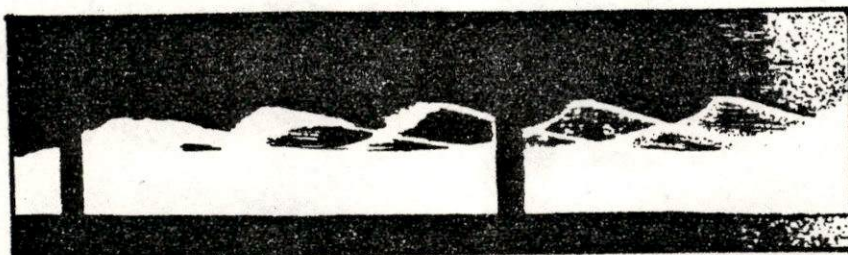
IL SINDACO



IL SEGRETARIO COMUNALE







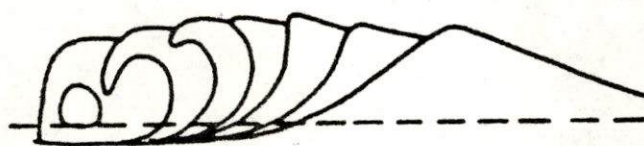
Spilling

Fig. 4.2.1

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Plunging

Fig. 4.2.2

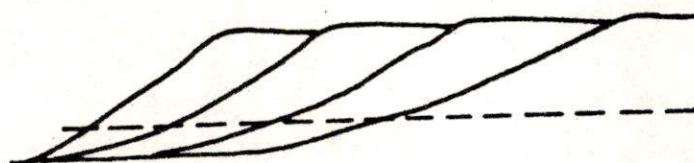
IL SINDACO



IL SEGRETARIO COMUNALE

R





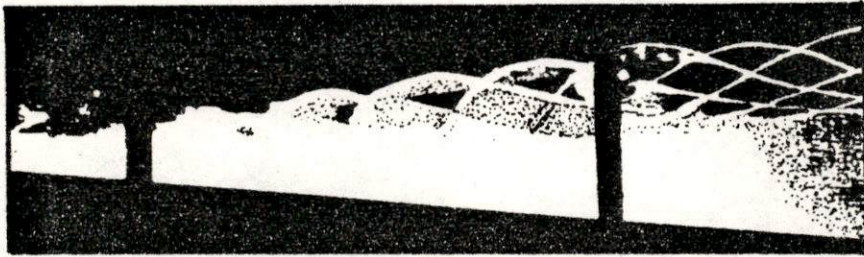
Surging

Fig. 4.2.3

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Collapsing

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Fig. 4.2.4

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R



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## Breaker type in relation to bed slope and initial wave steepness

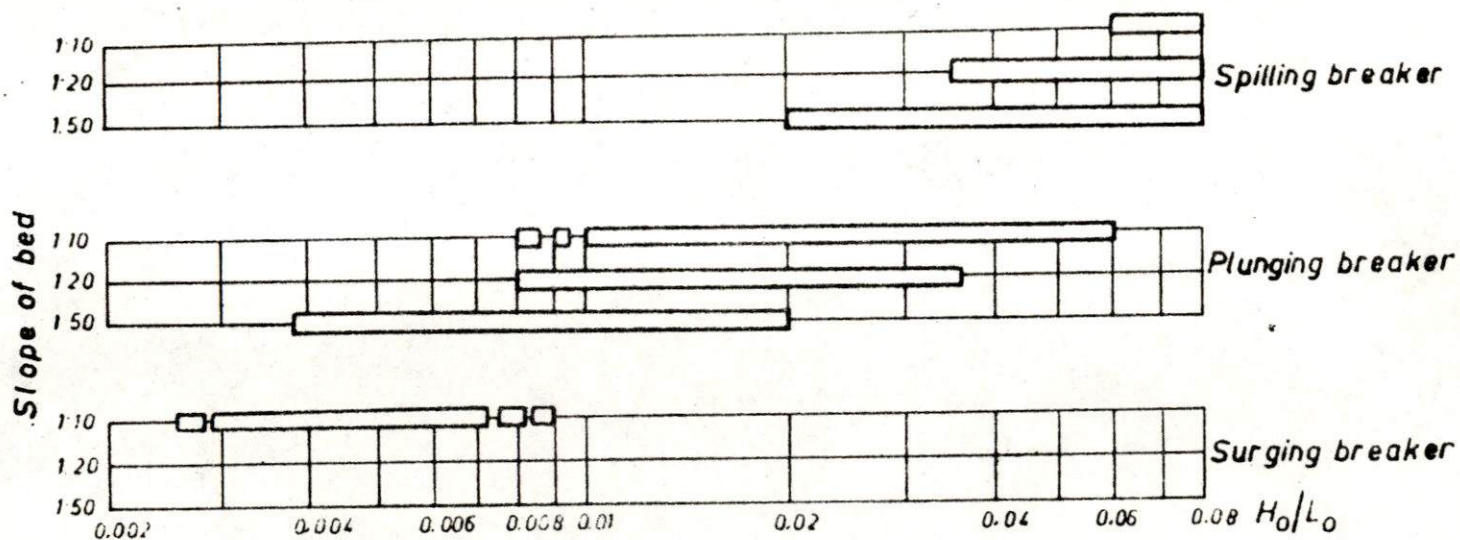


Fig. 4.2.5

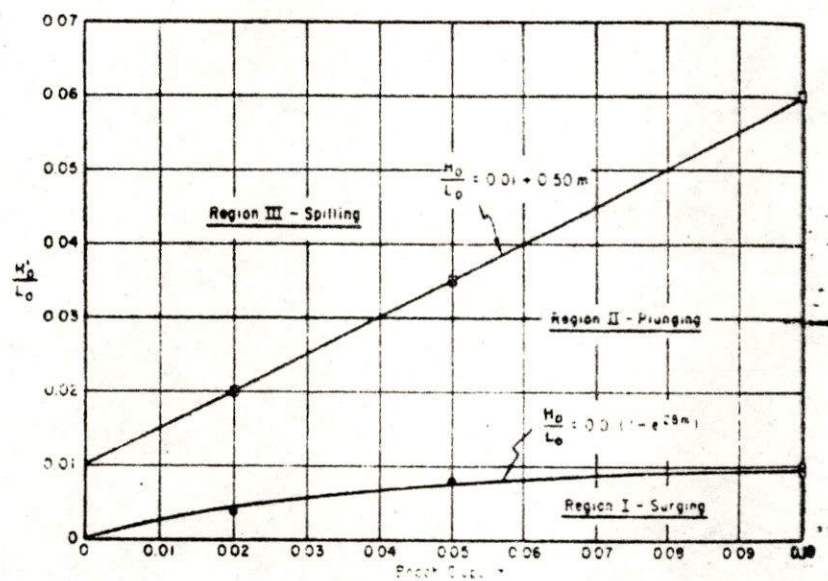


Fig. 4.2.6

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IL SEGRETARIO COMUNALE

R



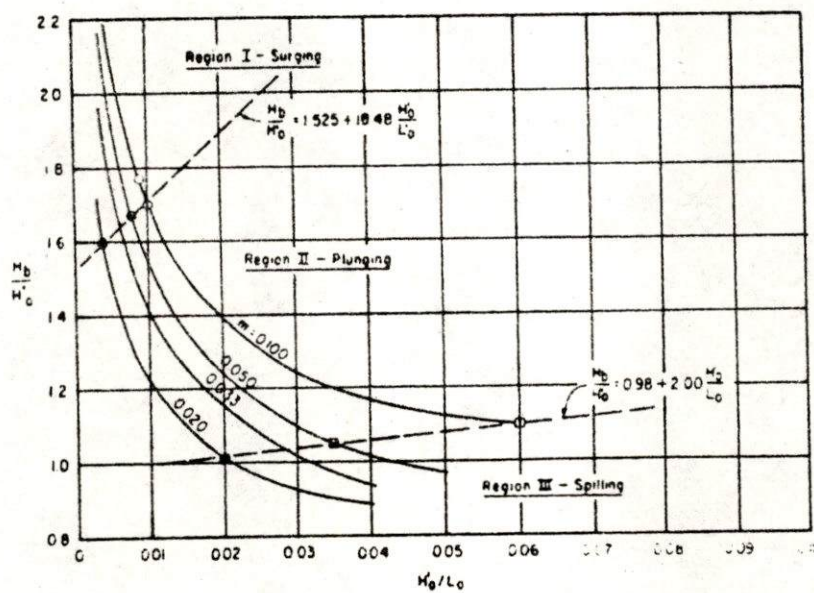


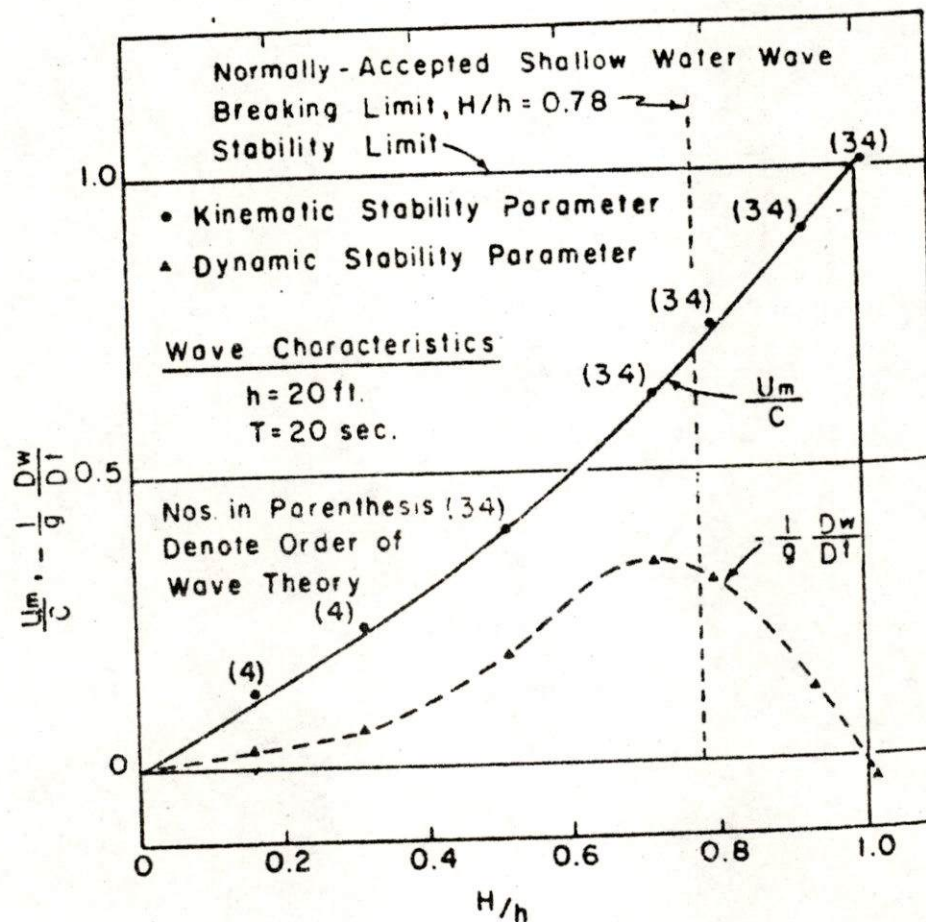
Fig. 4.2.7

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*[Handwritten signature]*



VARIATION OF STABILITY  
 PARAMETERS WITH  $H/h$ ;  
 SHALLOW WATER WAVE

Fig. 4.3.1

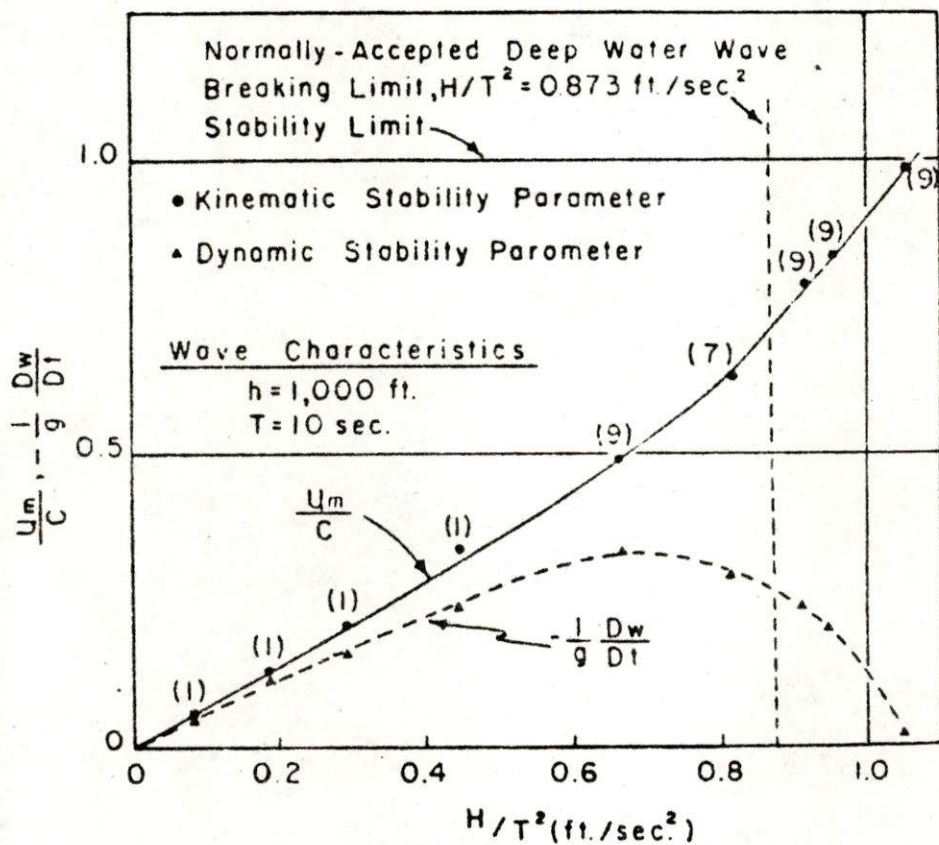
IL SINDACO



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R





VARIATION OF STABILITY  
PARAMETERS WITH  $H/T^2$ ;  
DEEP WATER WAVE

Fig. 4.3.2

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IL SEGRETARIO COMUNALE

R



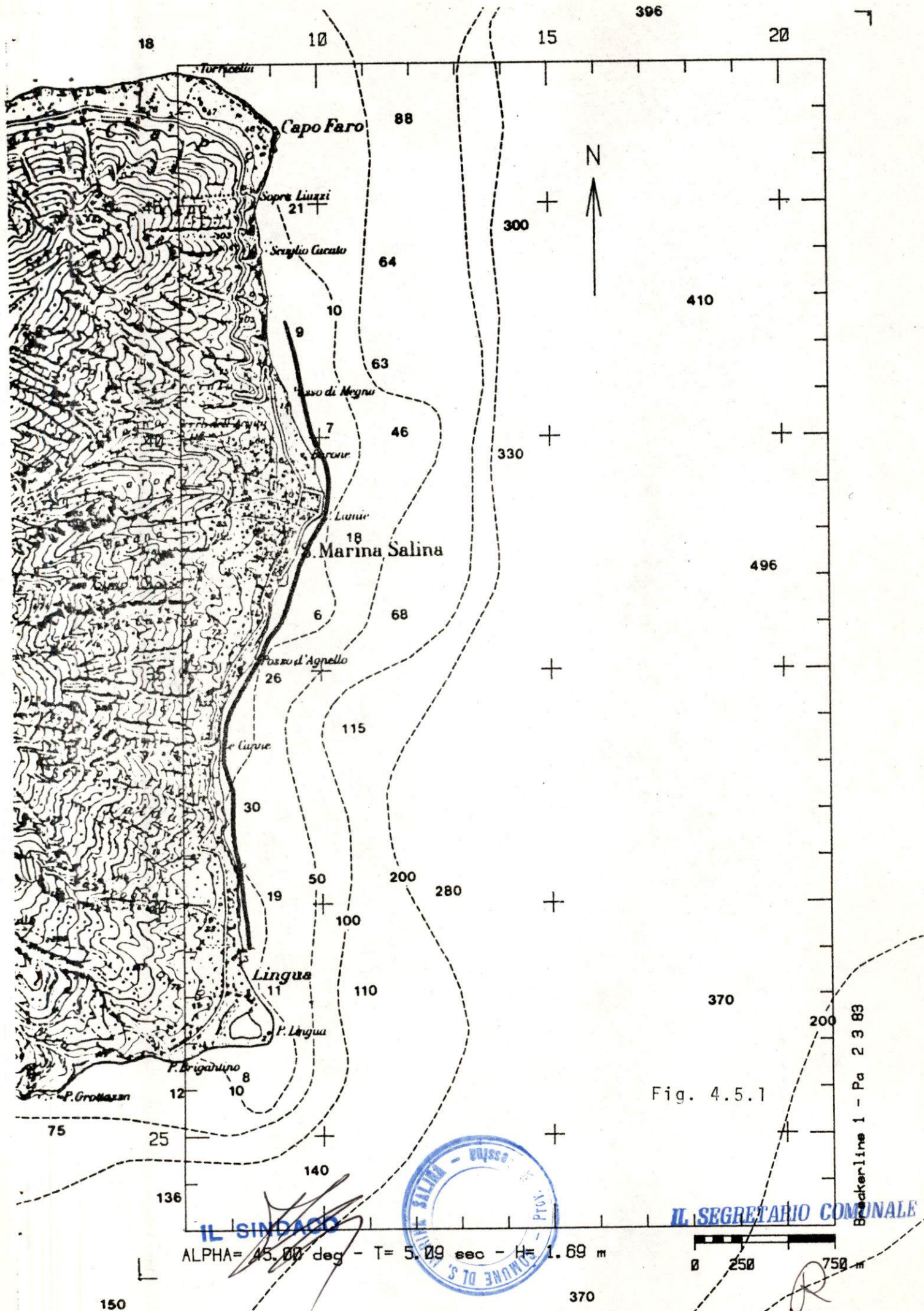


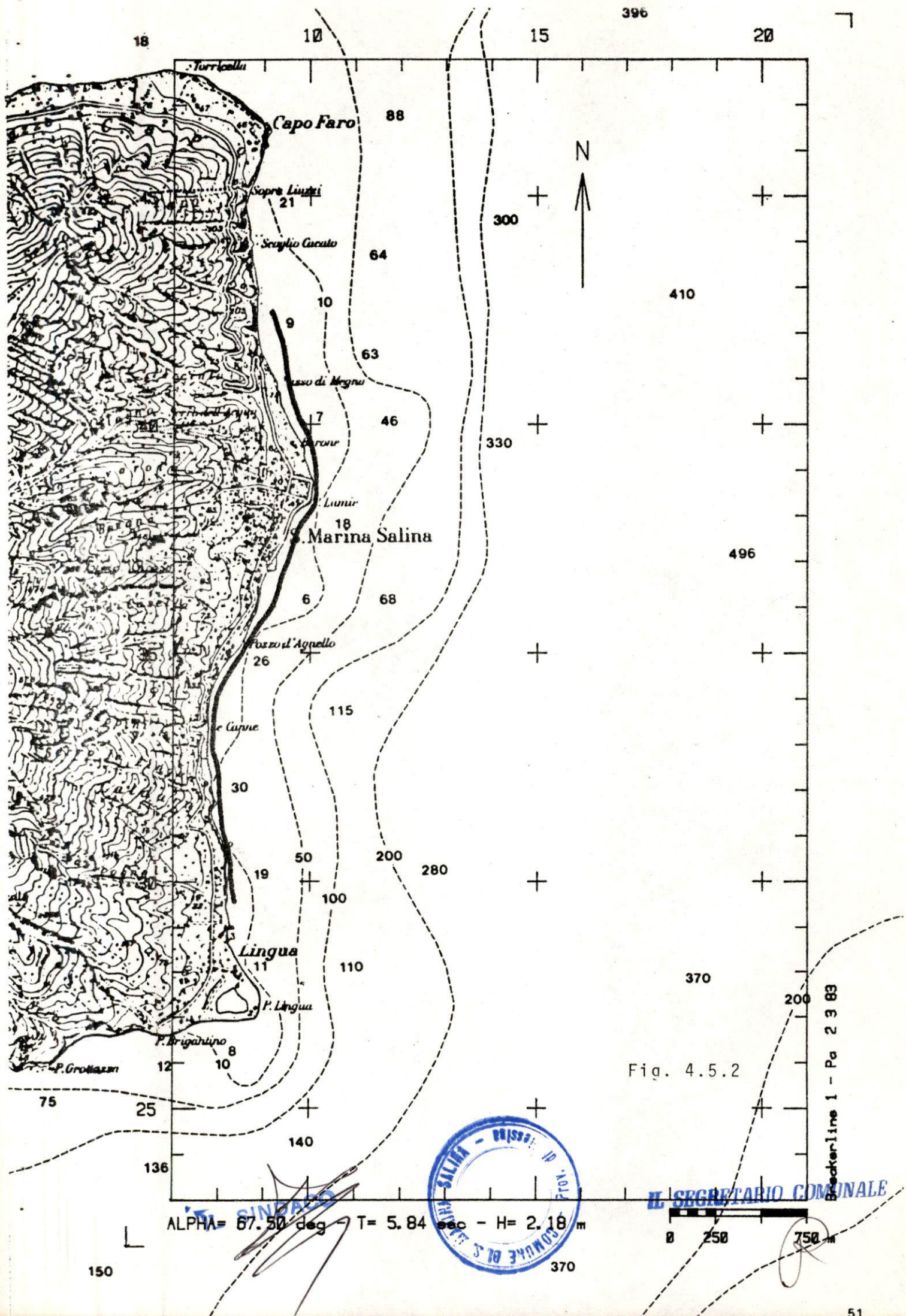
Fig. 4.5.1

ALPHA = 45.00 deg - T = 5.09 sec - H = 1.69 m

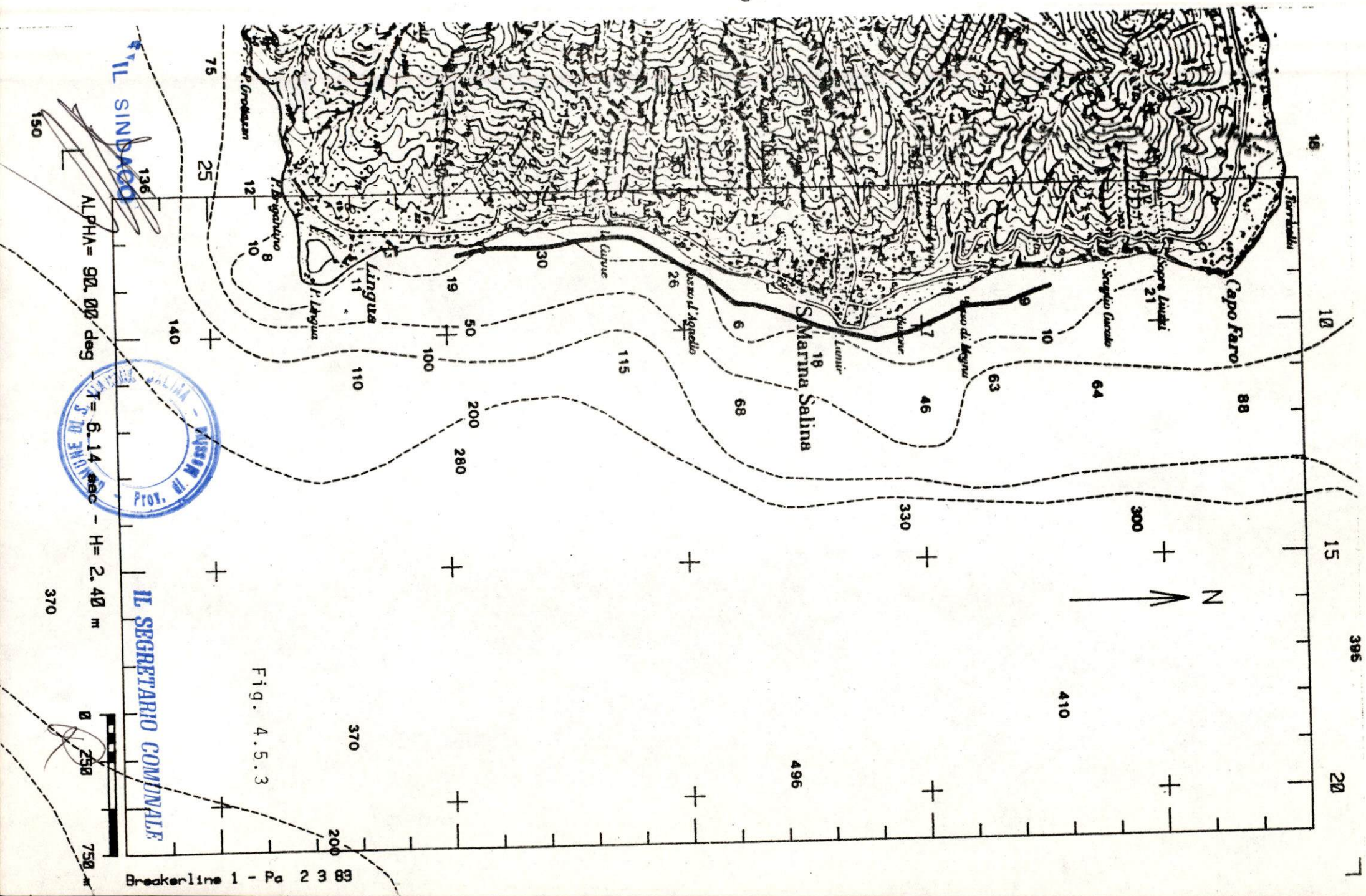
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Brackline 1 - Pa 2383

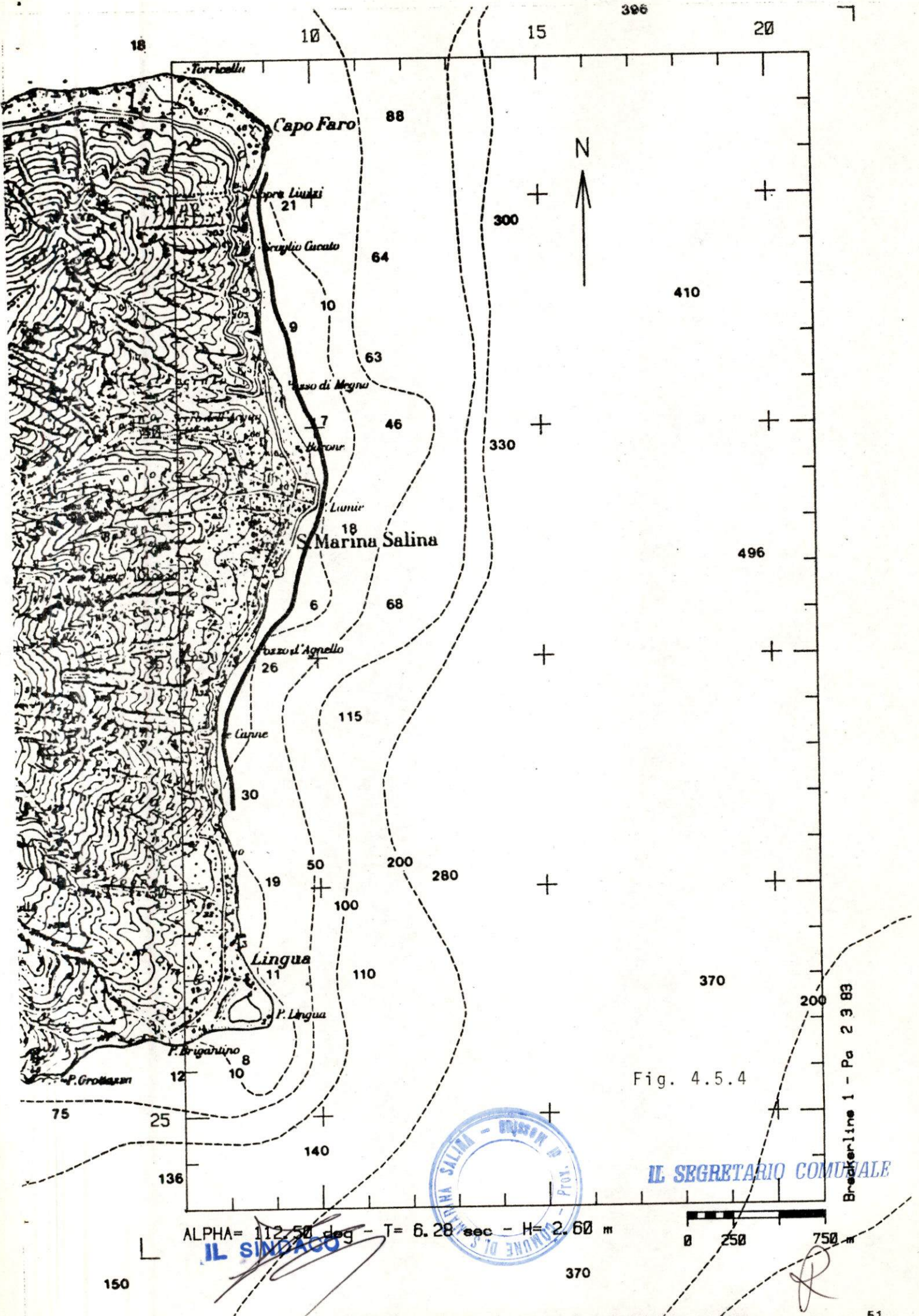




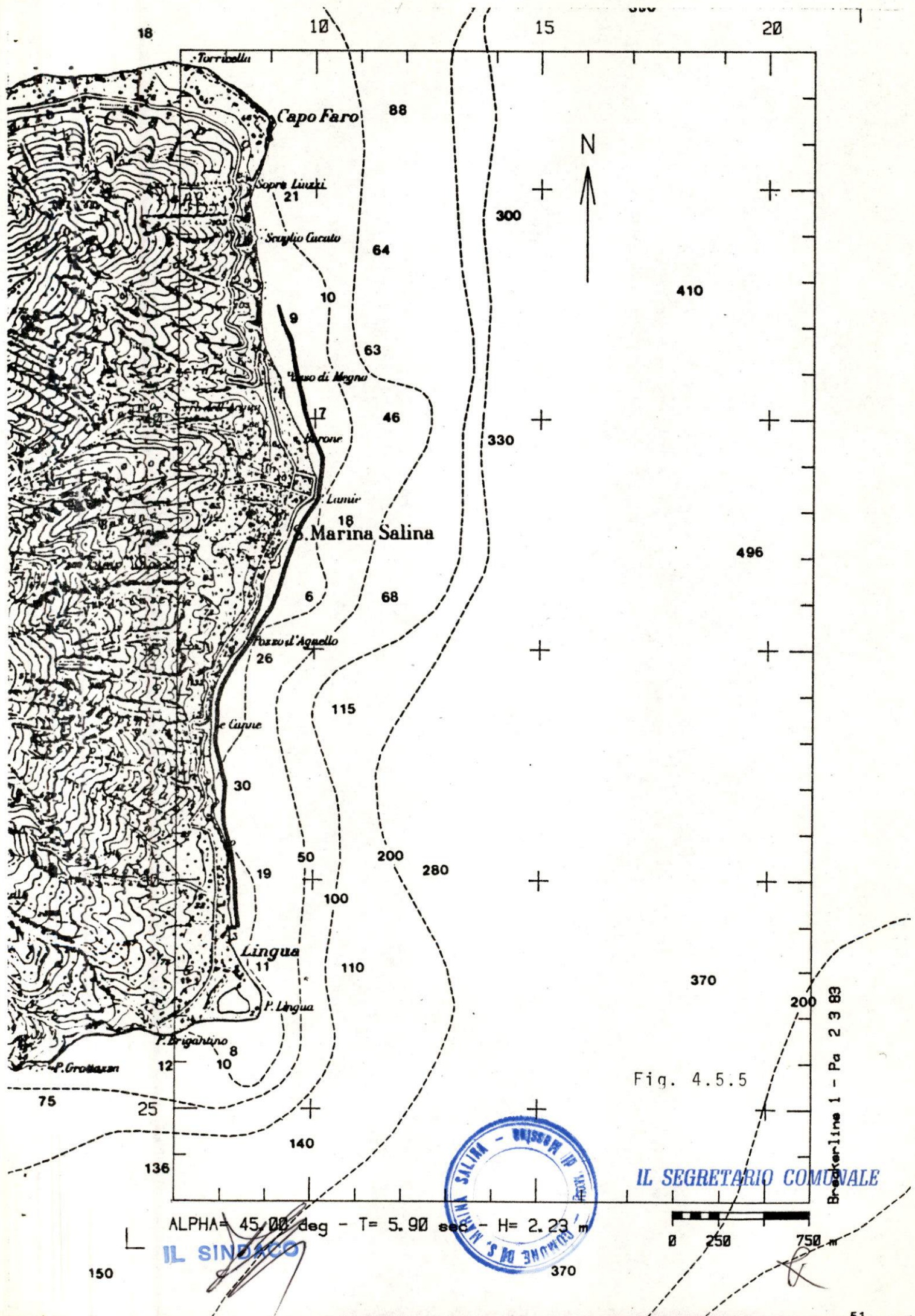












ALPHA = 45.00 deg - T = 5.90 sec - H = 2.23 m

Fig. 4.5.5

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Brigantine 1 - Pa 2 3 83



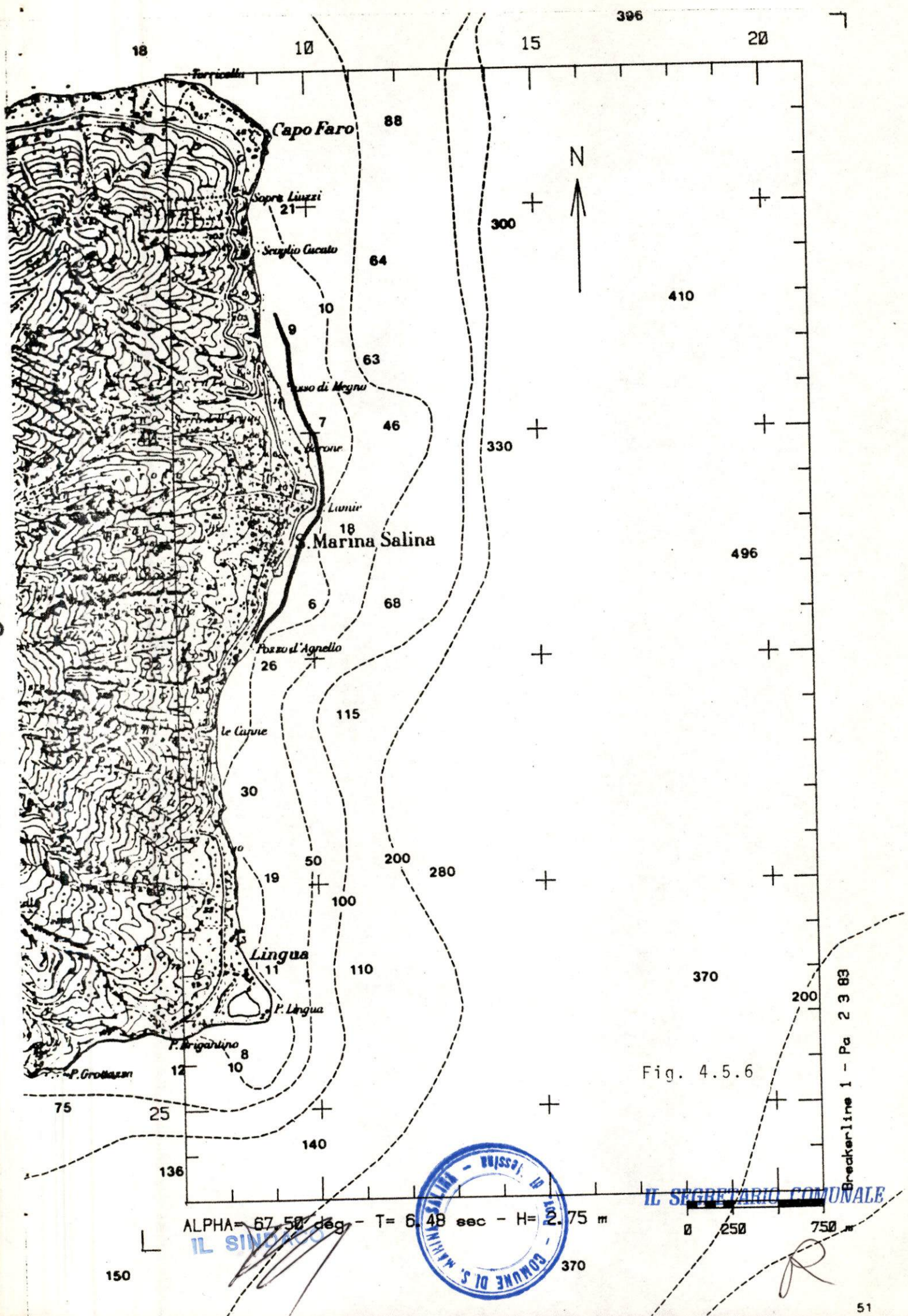


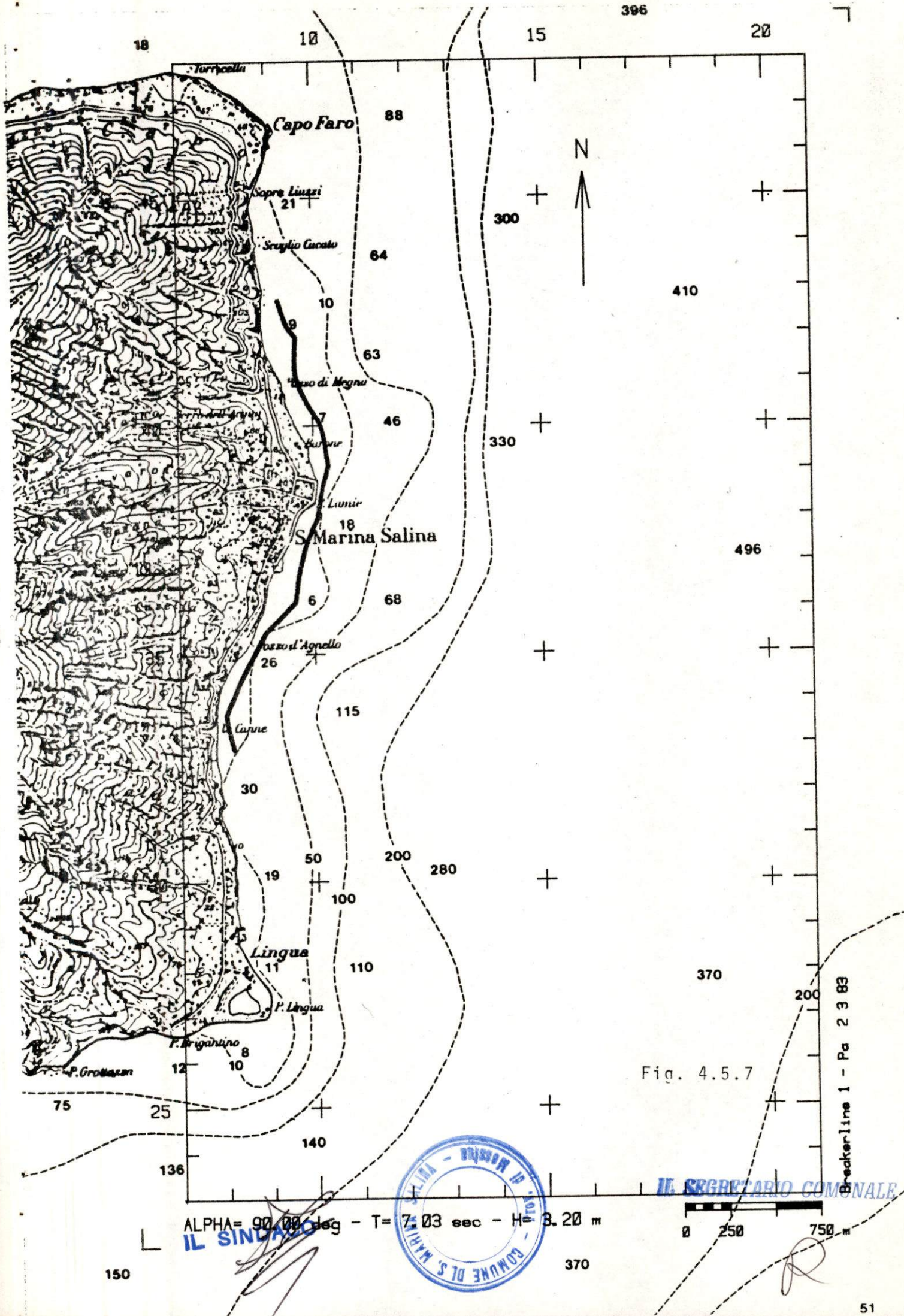
Fig. 4.5.6

ALPHA = 67.50 deg - T = 6.48 sec - H = 2.75 m

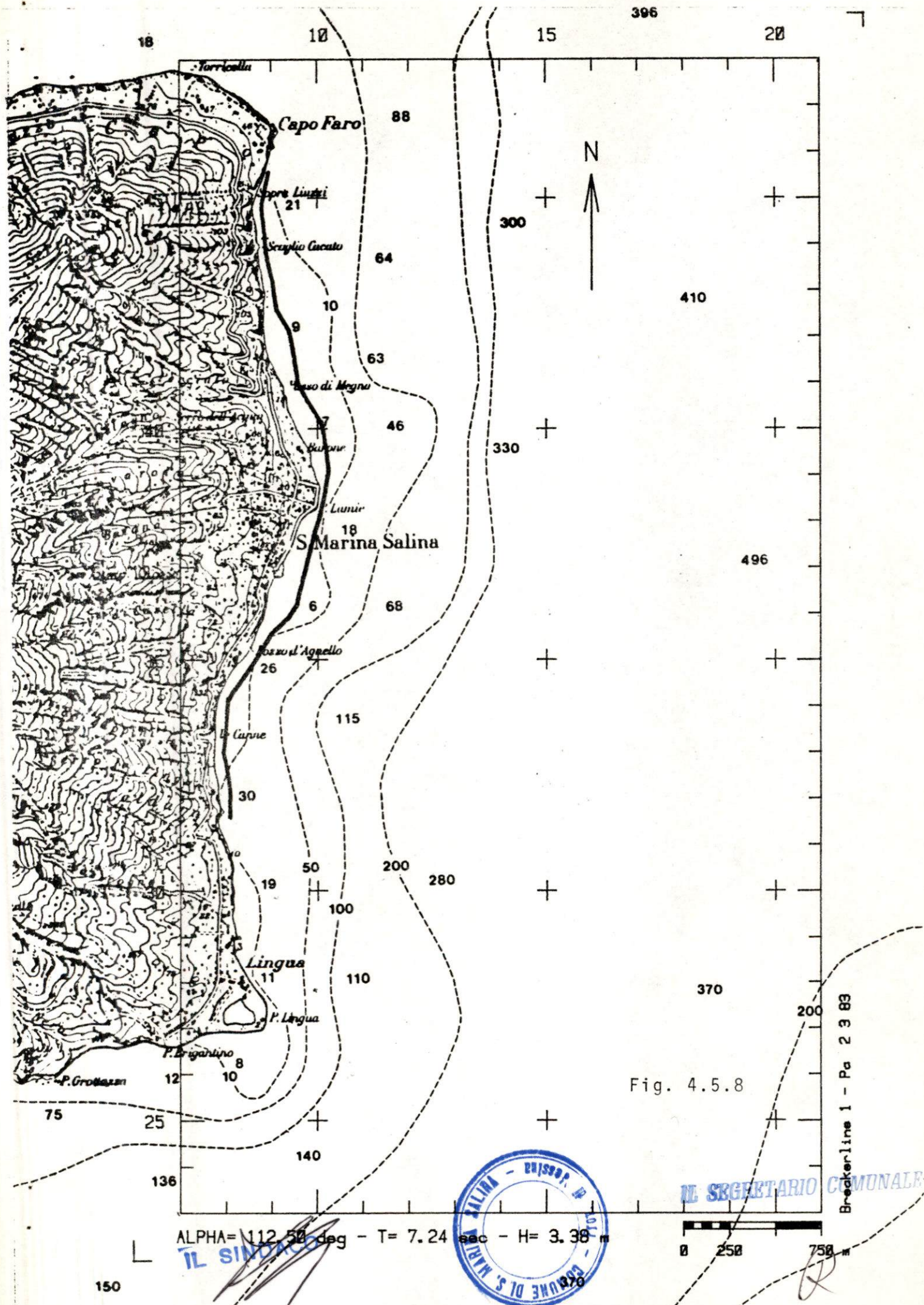
IL SEGRETARIO COMUNALE

Brackeline 1 - Pa 2 3 83







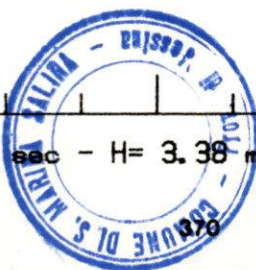


ALPHA= 112.50 deg - T= 7.24 sec - H= 3.38 m

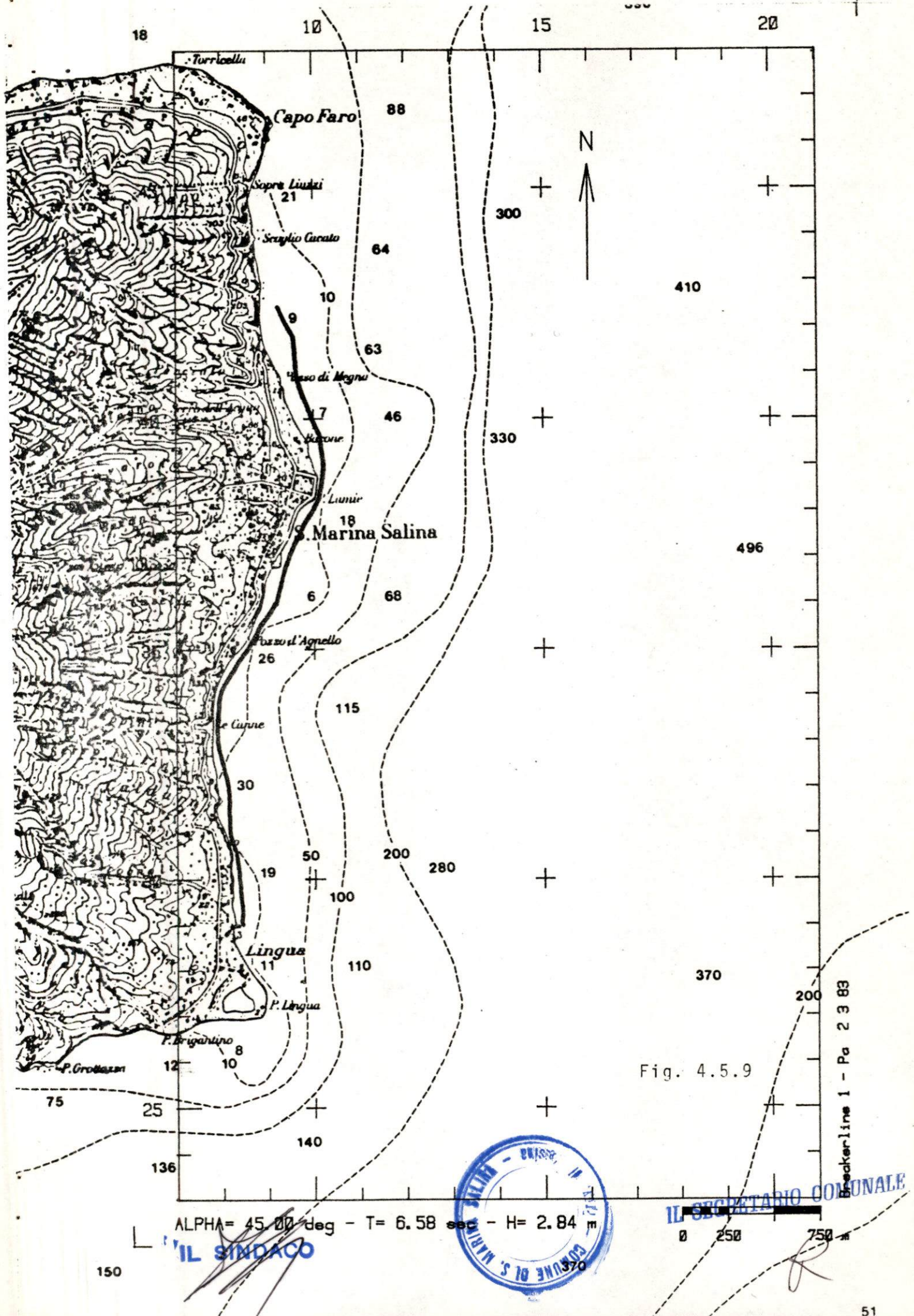
Fig. 4.5.8

Breakerline 1 - Pa 2 3 83

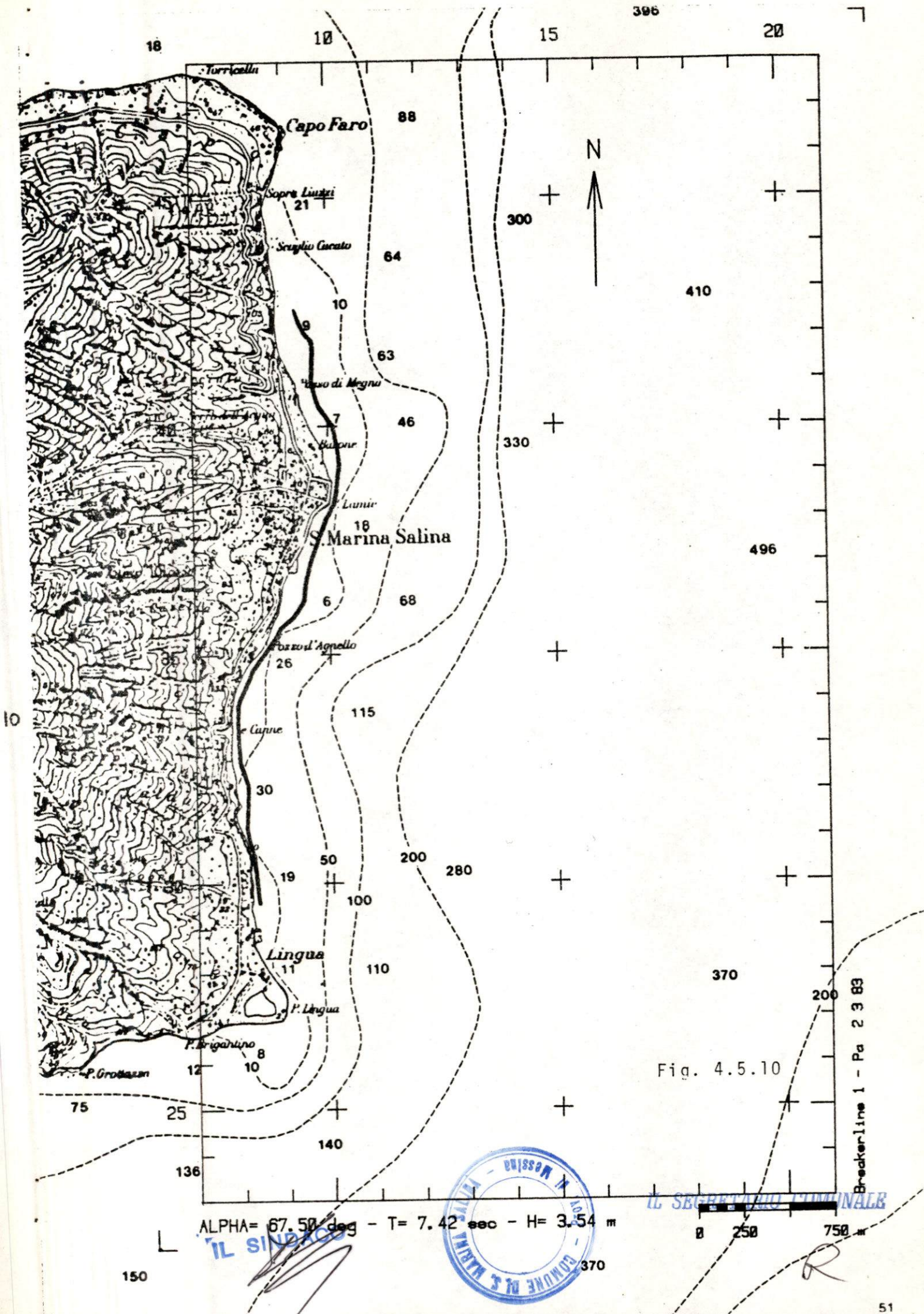
IL SEGRETARIO COMUNALE













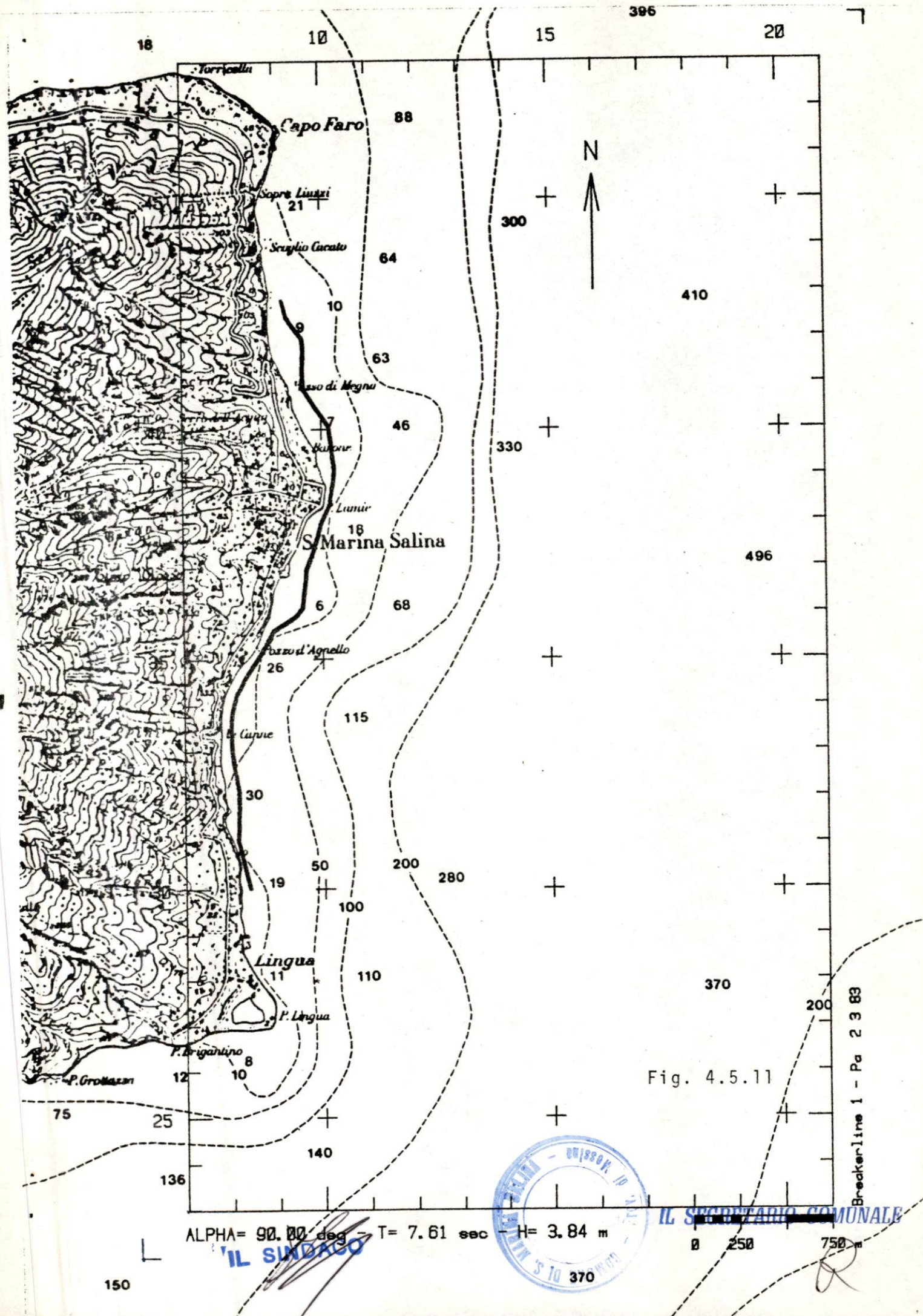


Fig. 4.5.11

ALPHA = 90.00 deg - T = 7.61 sec - H = 3.84 m

Brackeline 1 - Pa 2 3 83

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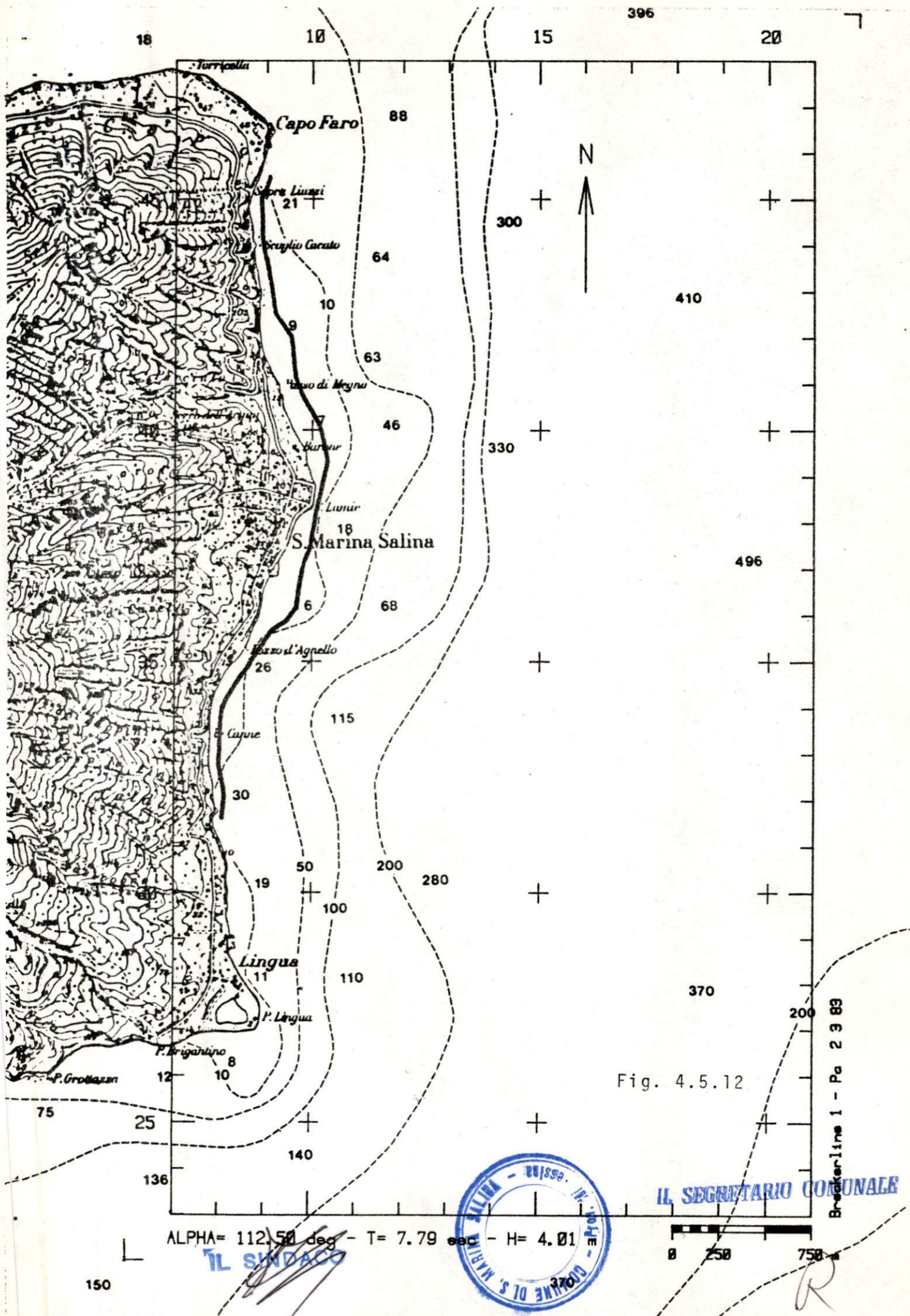


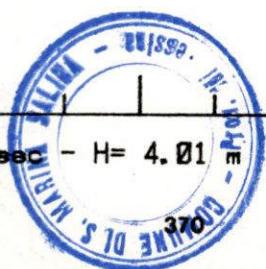
Fig. 4.5.12

ALPHA = 112.50 deg - T = 7.79 sec - H = 4.01 m

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Brackline 1 - Po 2389

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0 250 750

150



150

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ALPHA = 45.00 deg - T = 7.59 sec - H = 3.70 m

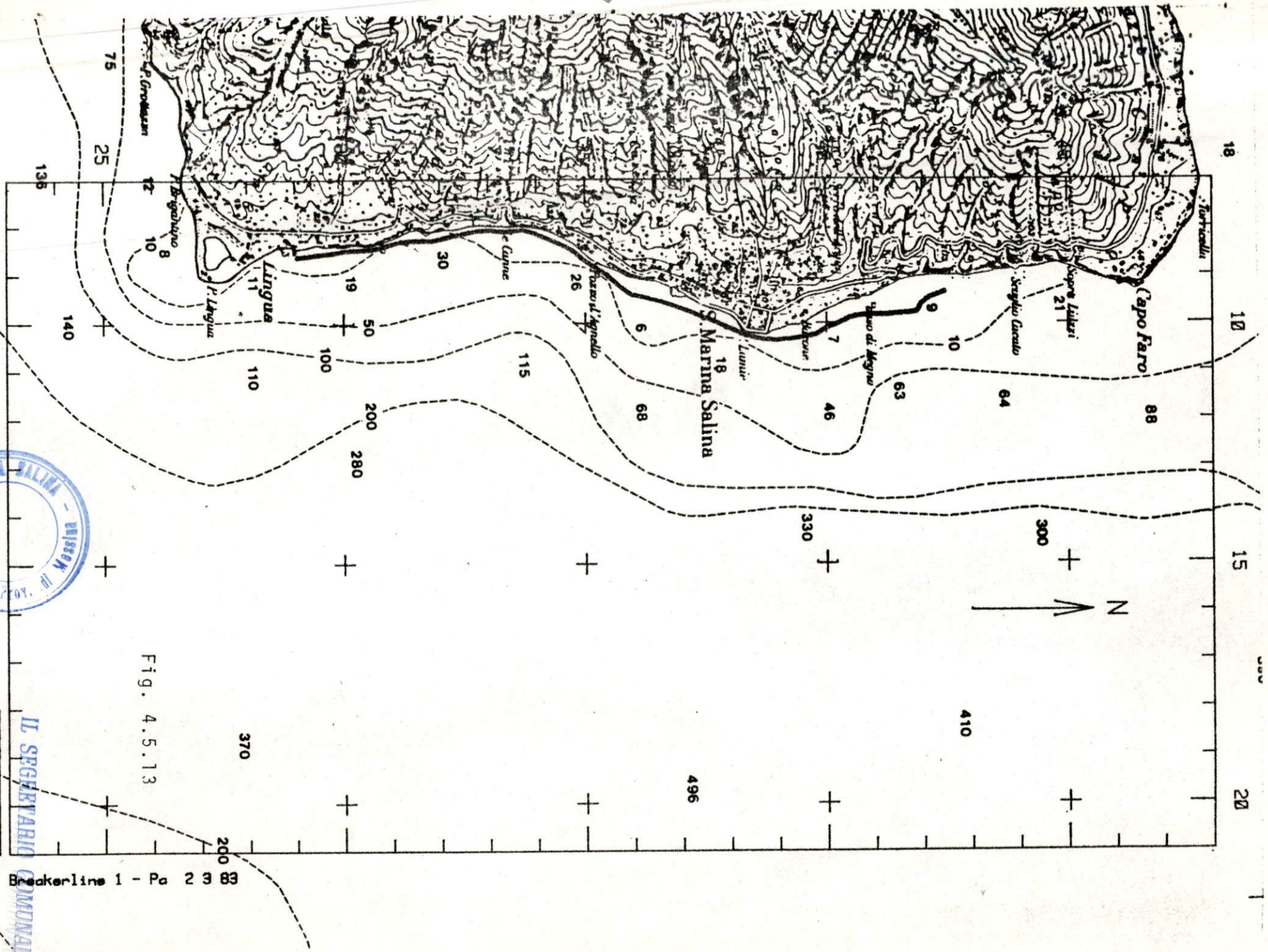


IL SEGRETARIO COMUNALE

Breakerline 1 - Pa 2 3 83

Fig. 4.5.13

0 200 750 m



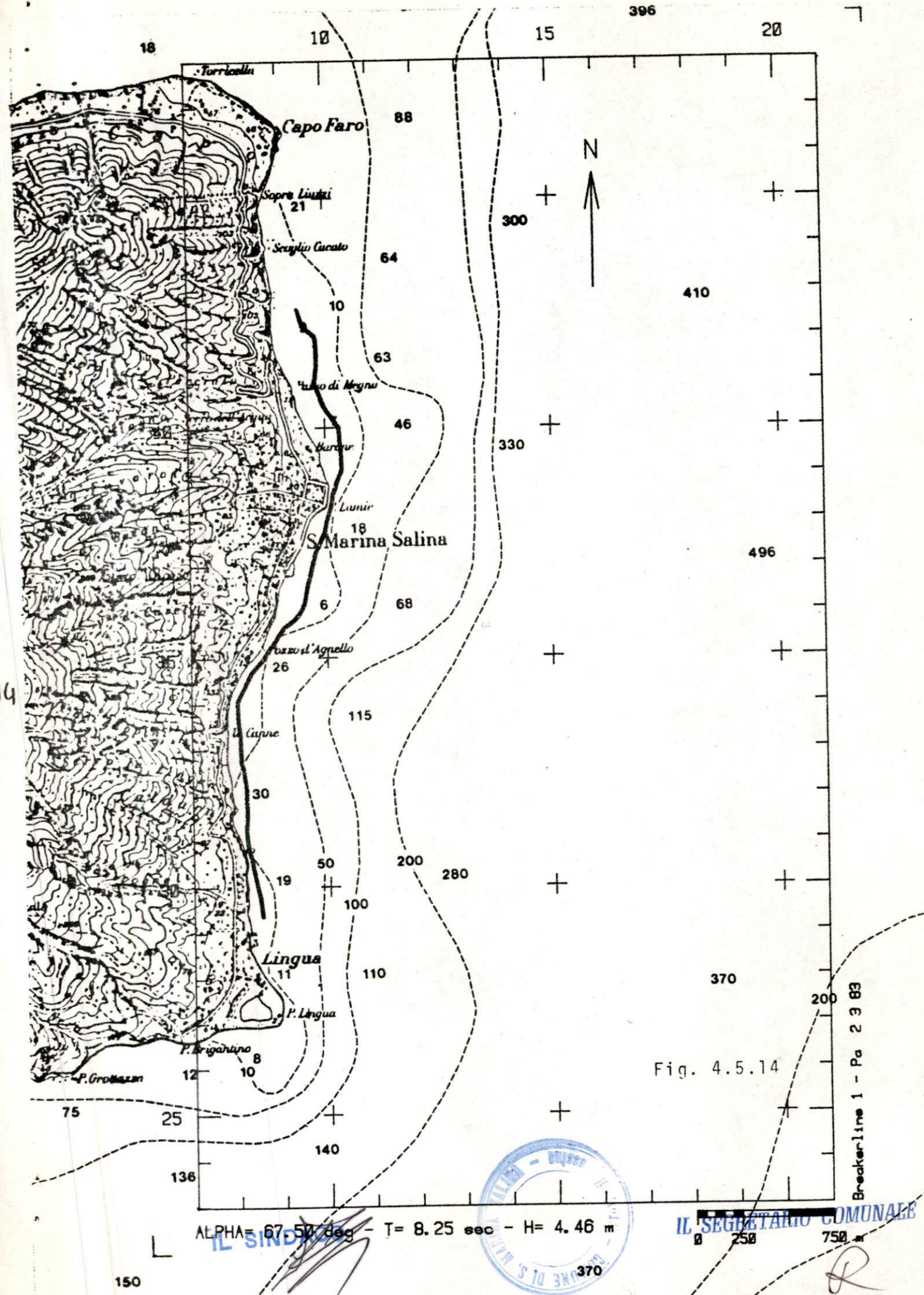
18

10

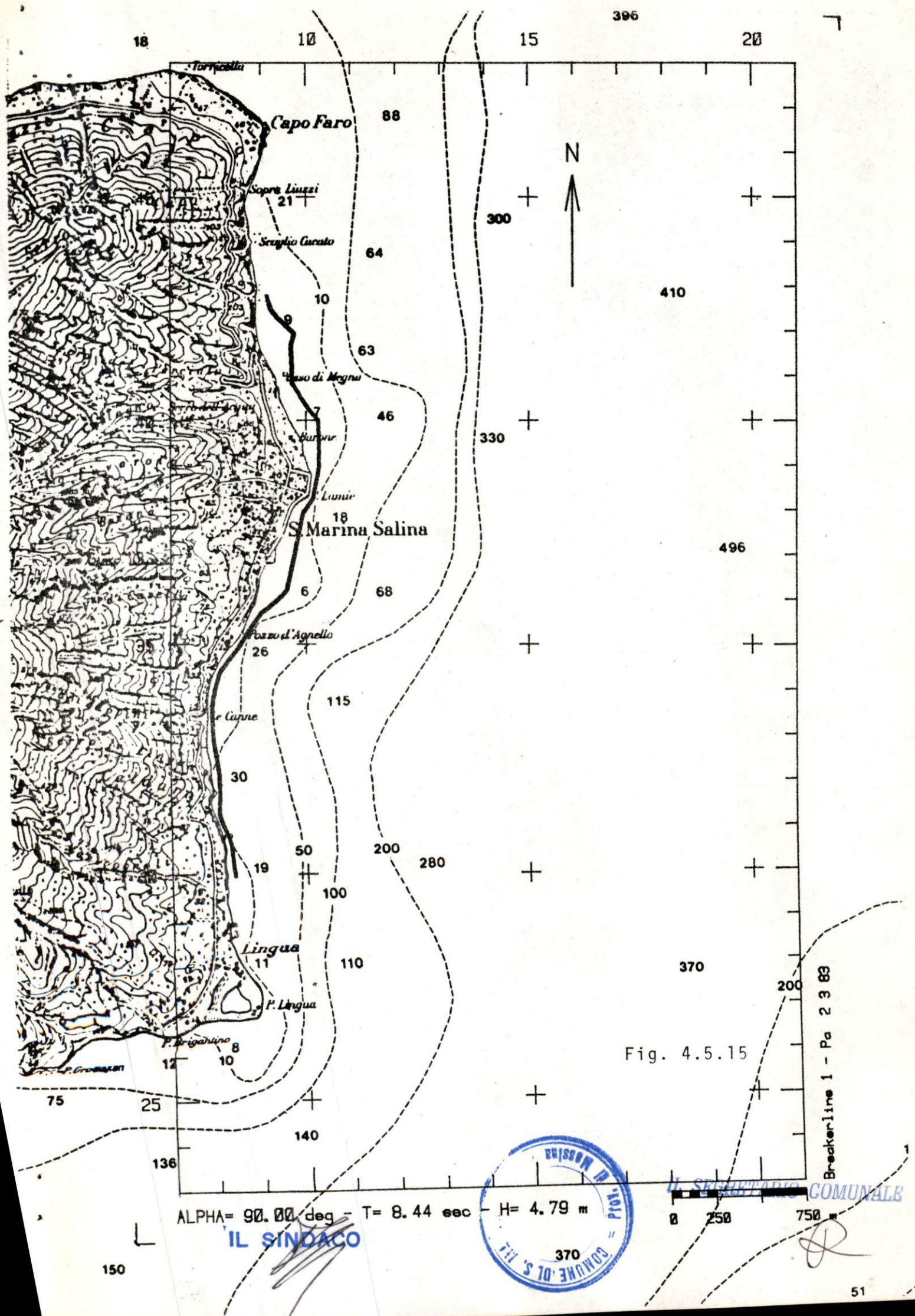
15

20









ALPHA= 90.00 deg - T= 8.44 sec - H= 4.79 m

Fig. 4.5.15

Bredkerline 1 - Pa 2 3 83



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## CAPITULO 4

Fig. 4.2.1	-	Frangimento tipo	Spilling			
" 4.2.2	-	"	"	Plunging		
" 4.2.3	-	"	"	Surging		
" 4.2.4	-	"	"	Collapsing		
" 4.2.5	-	limiti del tipo di frangente (Patrick e Wiegel)				
" 4.2.6		"	"	"	"	(n, Ho/Lo)
" 4.2.7		"	"	"	"	(Ho/Lo, Hb/Ho)
" 4.3.1	-	condizioni di stabilità in funzione di H/h				
" 4.3.2	-	"	"	"	"	H/T <sup>2</sup>
" 4.5.1	-	frangimento da	NE	per t <sub>r</sub>	=	5 anni
" 4.5.2	-	"	67,5°	"	"	"
" 4.5.3	-	"	E	"	"	"
" 4.5.4	-	"	112,5°	"	"	"
" 4.5.5	-	"	NE	"	"	10
" 4.5.6	-	"	67,5°	"	"	"
" 4.5.7	-	"	E	"	"	"
" 4.5.8	-	"	112,5°	"	"	"
" 4.5.9	-	"	NE	"	"	20
" 4.5.10	-	"	67,5°	"	"	"
" 4.5.11	-	"	E	"	"	"
" 4.5.12	-	"	112,5°	"	"	"
" 4.5.13	-	"	NE	"	"	50
" 4.5.14	-	"	67,5°	"	"	"
" 4.5.15	-	"	E	"	"	"
" 4.5.16	-	"	112,5°	"	"	"

**IL SINDACO**



IL SEGRETARIO COMUNALE

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