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Canadian Pacific Coast Ichthyoplankton Survey. 1980. Hydrography. Part One. Horizontal Contours of Temperature, Salinity, and Sigma-T, at Selected Depths, by Monthly Cruise

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Canadian Data Report of Fisheries
and Aquatic Sciences No. 279

August 1981

CANADIAN PACIFIC COAST ICHTHYOPLANKTON SURVEY, 1980. HYDROGRAPHY.

PART ONE. HORIZONTAL CONTOURS OF TEMPERATURE,
SALINITY, AND SIGMA-T, AT SELECTED DEPTHS, BY
MONTHLY CRUISE

by

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ABSTRACT

Mason, J. C.; O. D. Kennedy, and T. H. Mullin. 1981. Canadian Pacific Coast Ichthyoplankton Survey, 1980. Hydrography. Part One. Horizontal Contours of Temperature, Salinity, and Sigma-t, at Selected Depths, by Monthly Cruise. Can. Data Rep. Fish. Aquat. Sci. 279: 110 p.

This report contains time-series graphs illustrating horizontal contouring of temperature, salinity, and sigma-t at 0m, 10m, 20m, 50m, 100m, 200m, 300m, and 500m. It is one of three such reports concerning the physical-chemical data base collected on the survey. This survey involved four monthly cruises of some nine days duration conducted on the G. B. REED (January 15-22, February 13-20, March 12-20, and April 15-23).

The survey encompassed the entire length of the Canadian outer coast and also included Dixon Entrance, Hecate Strait, and Queen Charlotte Sound.

The physical-chemical data base was digitized and corrected, then sent to the Marine Environmental Data Service (Ottawa) for computer processing, including interpolation and horizontal contouring of temperature, salinity, and sigma-t. The present report (Part One) is a compilation of the horizontal contouring output from MEDS.

Key words: Hydrography, Canadian Pacific outer shelf, Dixon Entrance, Hecate Strait, Queen Charlotte Sound.

RESUME

Mason, J. C., O. D. Kennedy, and T. H. Mullin. 1981. Canadian Pacific Coast Ichthyoplankton Survey, 1980. Hydrography. Part One. Horizontal Contours of Temperature, Salinity, and Sigma-t, at Selected Depths, by Monthly Cruise. Can. Data Rep. Fish. Aquat. Sci. 279: 110 p.

Le présent rapport contient une série chronologique de graphiques montrant des courbes horizontales de température, de salinité et de sigma-t à 0 m, 10 m, 20 m, 50 m, 100 m, 200 m, 300 m, et 500 m. Il s'agit de l'un des trois rapports concernant la base de données physico-chimiques constituée lors des levés. Les levés ont été effectués à partir du G. B. REED lors de quatre expéditions mensuelles d'une durée de neuf jours environ (du 15 au 22 janvier, du 13 au 20 février, du 12 au 20 mars et du 15 au 23 avril).

Les levés ont porté sur toute la longueur de la côte du Canada la plus à l'ouest ainsi que sur l'entrée Dixon, le détroit d'Hécate et le bassin Reine-Charlotte.

La base de données physico-chimiques a été convertie en données numériques, corrigée, puis envoyée au Service de données sur le milieu marin à Ottawa pour traitement à l'ordinateur, ce qui comprenait l'interpolation et le tracé des courbes horizontales de température, de salinité et de sigma-t. Le présent rapport (première partie) est une compilation des courbes horizontales fournies par le SDMM.

Mots clés: Hydrographie, plateau continental du Pacifique le plus à l'ouest, entrée Dixon, détroit d'Hécate, bassin Reine-Charlotte.

ORIENTATION AND METHODOLOGY

The Pacific Coast Ichthyoplankton Survey was conducted by staff of the Groundfish Program at the Pacific Biological Station, Nanaimo (Resource Services Branch). The survey involved four monthly cruises of some nine days duration each made on the G. B. REED (January 15-22, February 13-20, March 12-20, and April 15-23, 1980).

The survey encompassed the entire length of the Canadian outer coast and also included Dixon Entrance, Hecate Strait, and Queen Charlotte Sound. A total of 77 stations on 18 transect lines were occupied routinely (Fig. 1). The stations are listed by number, location (latitude and longitude), and depth in Table 1.

On station, following oblique tows for ichthyoplankton, an STD cast (Bissett Berman) was made, supplemented irregularly by XBT casts, and by Nansen casts, with salinometry done ashore.

The physical-chemical data base was digitized and corrected, then sent to the Marine Environmental Data Service (Ottawa) for computer processing, including interpolation and horizontal contouring of temperature, salinity, and sigma-t. The following depths were selected for contouring: surface, 10m, 20m, 50m, 100m, 200m, 300m, and 500m. The present report is a compilation of the horizontal contouring output produced by MEDS. The contour maps are presented by cruise, starting with the January cruise, with temperature, salinity, and sigma-t following in that sequence of order. The corrected data base is available from MEDS as Accession No. A8019801.

ACKNOWLEDGEMENTS

The assistance of Wolfgang Carolsfeld and Antan Phillips in data collection is gratefully acknowledged, as is the cooperation and support of the Marine Resource Branch (Provincial Ministry of Environment) in providing their salaries. The Master and crew of the G. B. REED are duly thanked for their enthusiastic and efficient support at sea. Finally, we are particularly grateful for the cooperation and support of John Garrett and his staff at the Institute of Ocean Sciences, Sidney, British Columbia who provided the Bissett Berman STD equipment and technical assistance in the installation and calibration of same.

TABLE 1. Tracklines and their associated stations, station locations, and station depths for the West Coast Ichthyoplankton Survey, January through April, 1980.

Trackline no.	Station no.	Latitude	Longitude to nearest min.	Station depth (m)
1	1	48° 30'	124° 23'	91
	2		124° 33'	182
	3		124° 52'	182
	4		125° 18'	182
	5		125° 43'	100
	6		126° 05'	182
	7		126° 24'	910
2	8	49° 00'	126° 56'	910
	9		126° 33'	182
	10		126° 14'	100
	11		126° 04'	55
3	12	49° 30'	126° 44'	55
	13		126° 54'	100
	14		127° 14'	182
	15		127° 34'	910
4	16	50° 00'	127° 59'	910
	17		127° 52'	100
	18		127° 43'	182
	19		127° 35'	55
5	20	50° 30'	128° 14'	55
	21		128° 19'	100
	22		128° 26'	182
	23		128° 40'	910
6	24	51° 00'	129° 48'	910
	25		129° 21'	182
	26		128° 56'	76
	27		128° 31'	100
	28		128° 06'	100
7	29	51° 30'	128° 31'	164
	30		128° 56'	100
	31		129° 21'	100
	32		129° 51'	182
	33		130° 24'	910

TABLE 1 (contd).

Trackline no.	Station no.	Latitude	Longitude to nearest min.	Station depth (m)
8	34	52° 00'	131° 09'	100
	35		131° 12'	182
	36		131° 23'	910
9	37	52° 30'	131° 56'	910
	38		131° 47'	182
10	39	53° 00'	132° 26'	182
	40		132° 40'	910
	41		132° 53'	910
11	42	53° 20'	133° 19'	910
	43b		133° 09'	637
	43a		133° 05'	218
	43		133° 01'	182
	44		132° 57'	100
12	45	54° 00'	133° 13'	55
	46		133° 27'	64
	47		133° 31'	182
	48		133° 48'	910
13	49	54° 30'	134° 06'	910
	50		133° 49'	182
	51		133° 22'	364
	52		132° 55'	365
	53		132° 27'	364
	54		132° 00'	246
	55		131° 34'	282
	56		131° 07'	146
14	57	54° 00'	131° 25'	18
	58		131° 08'	55
	59		130° 50'	100
15	60	53° 30'	130° 42'	100
	61		131° 05'	55
	62		131° 02'	22
16	63	53° 00'	131° 06'	55
	64		130° 40'	100
	65		130° 13'	228
	66		129° 47'	55
17	67	52° 30'	129° 48'	182
	68		130° 13'	273
	69		130° 40'	100
	70		131° 07'	55

TABLE 1 (contd).

Trackline no.	Station no.	Latitude	Longitude to nearest min.	Station depth (m)
18	71	52° 00'	130° 41'	228
	72		130° 14'	100
	73		129° 48'	100
	74		129° 21'	182
	75		128° 56'	100

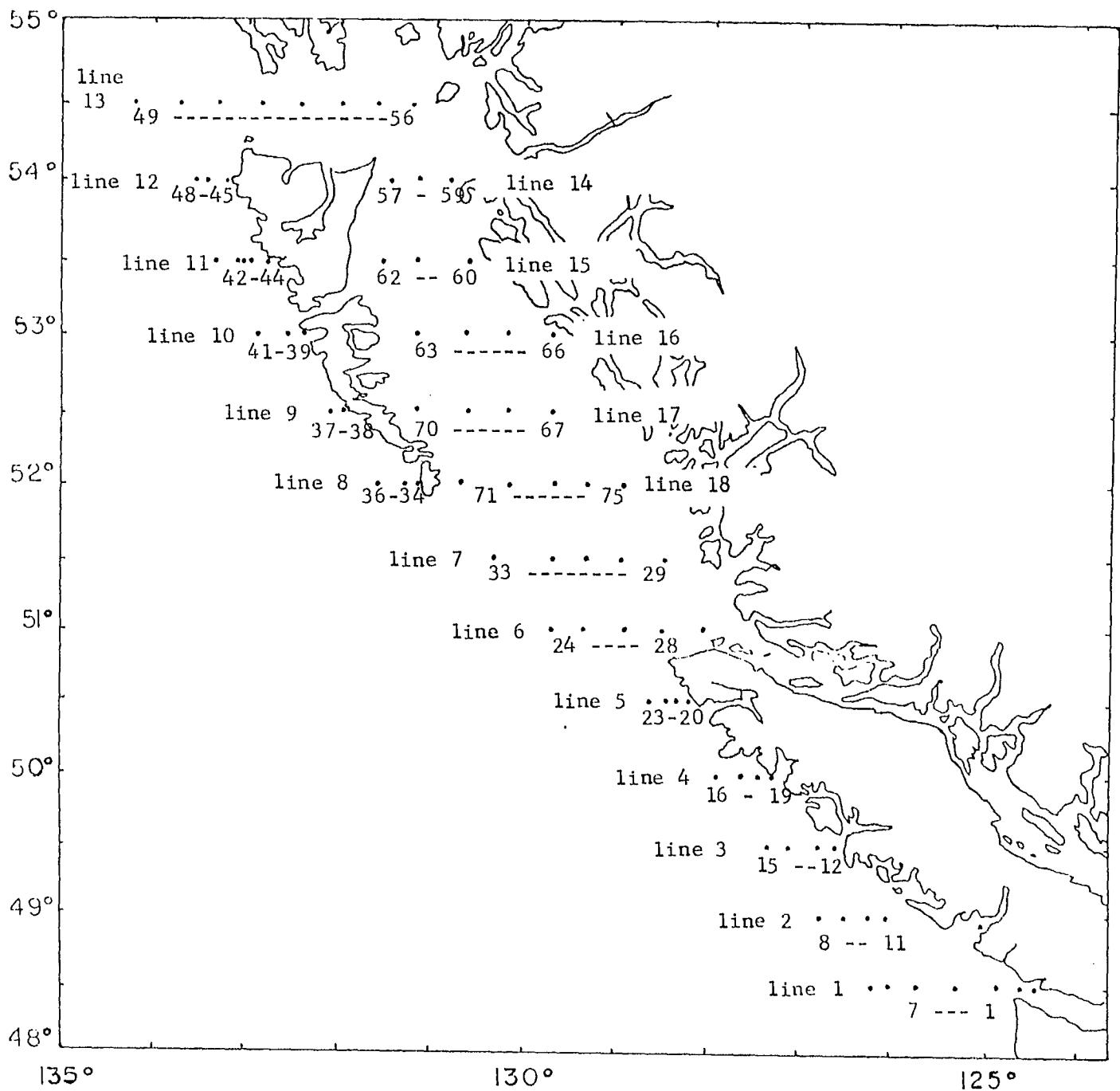
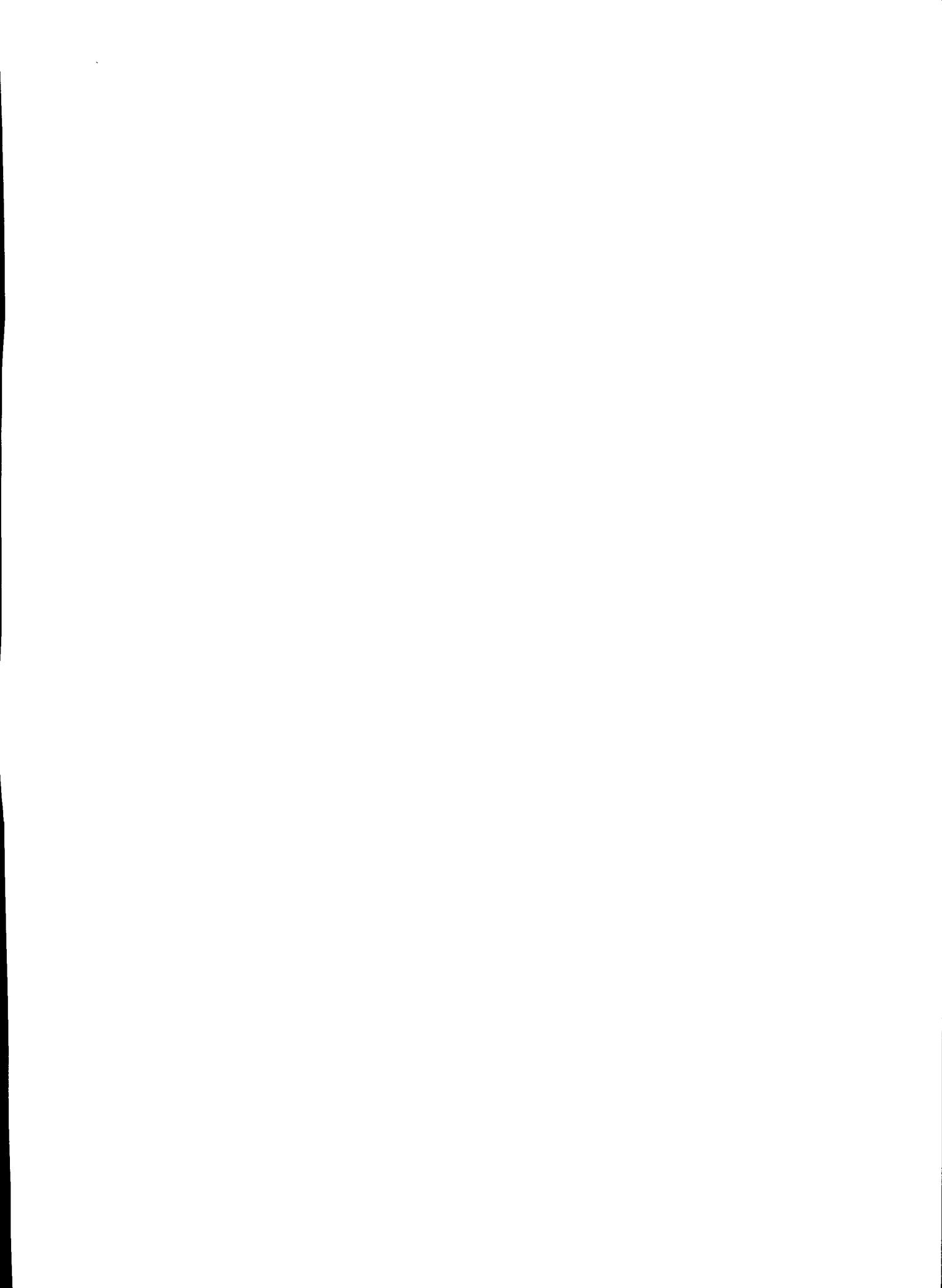
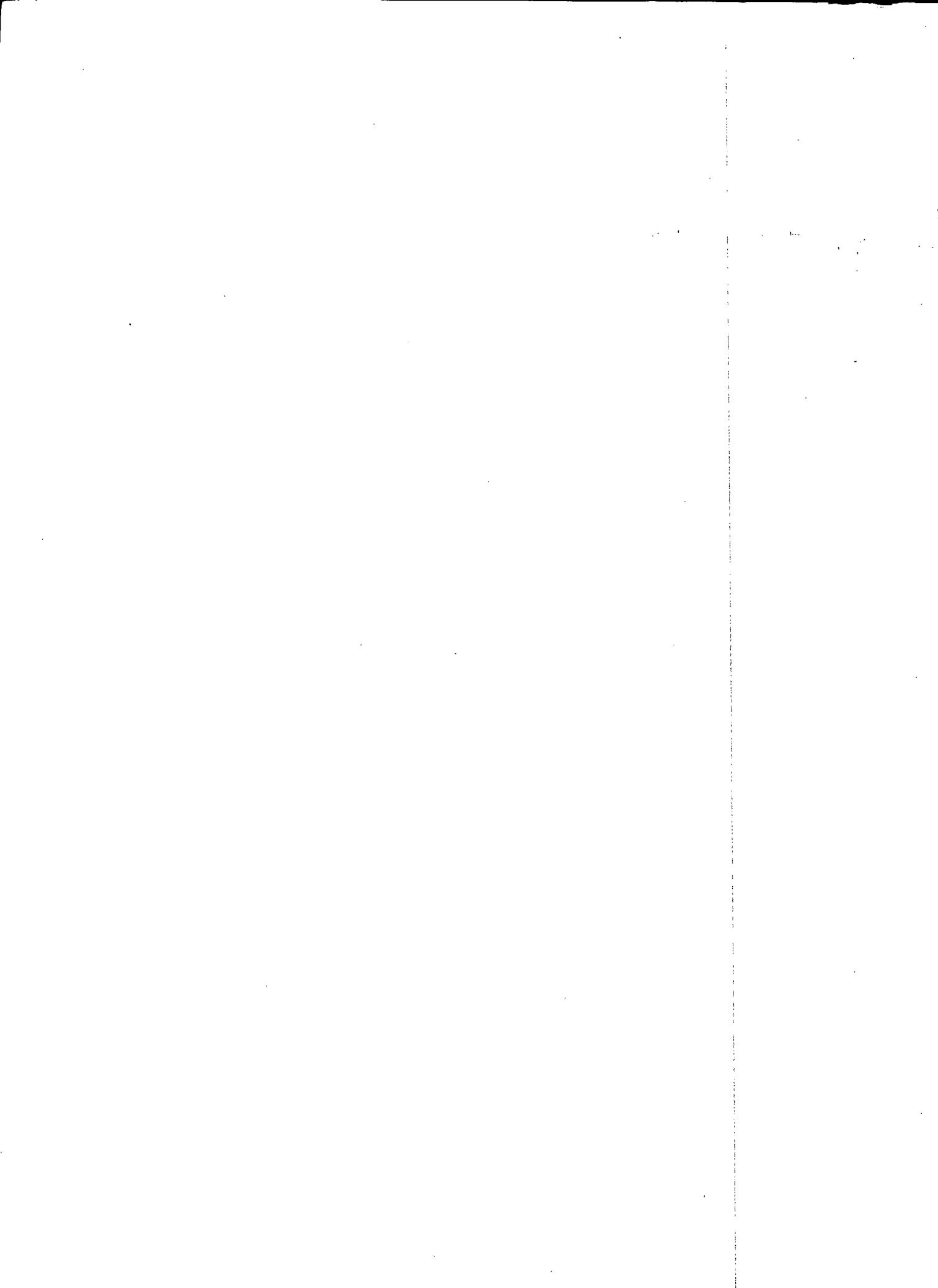
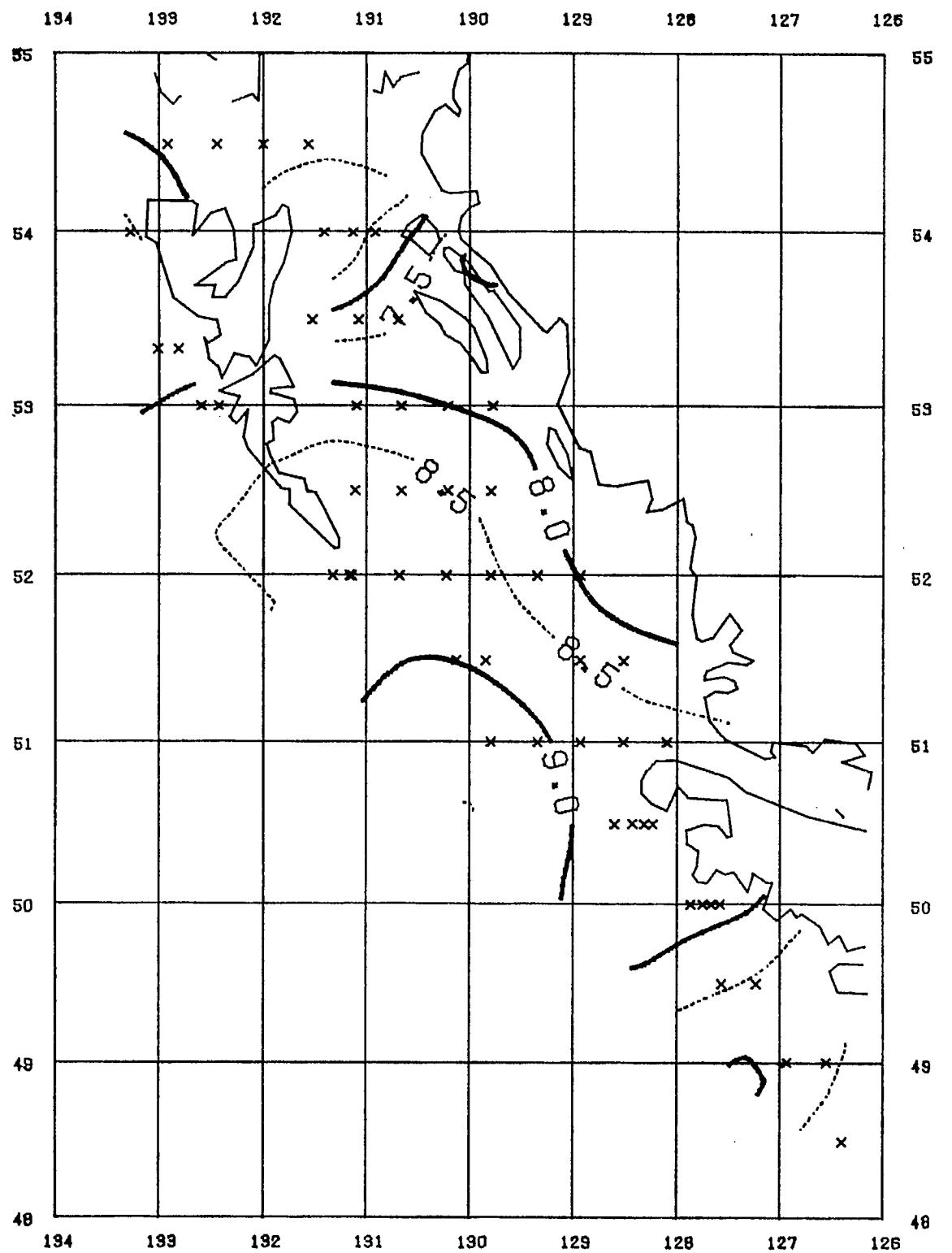


FIGURE 1. Tracklines and associated stations in numbered sampling sequence for the West Coast Ichthyoplankton Survey, January through April, 1980.



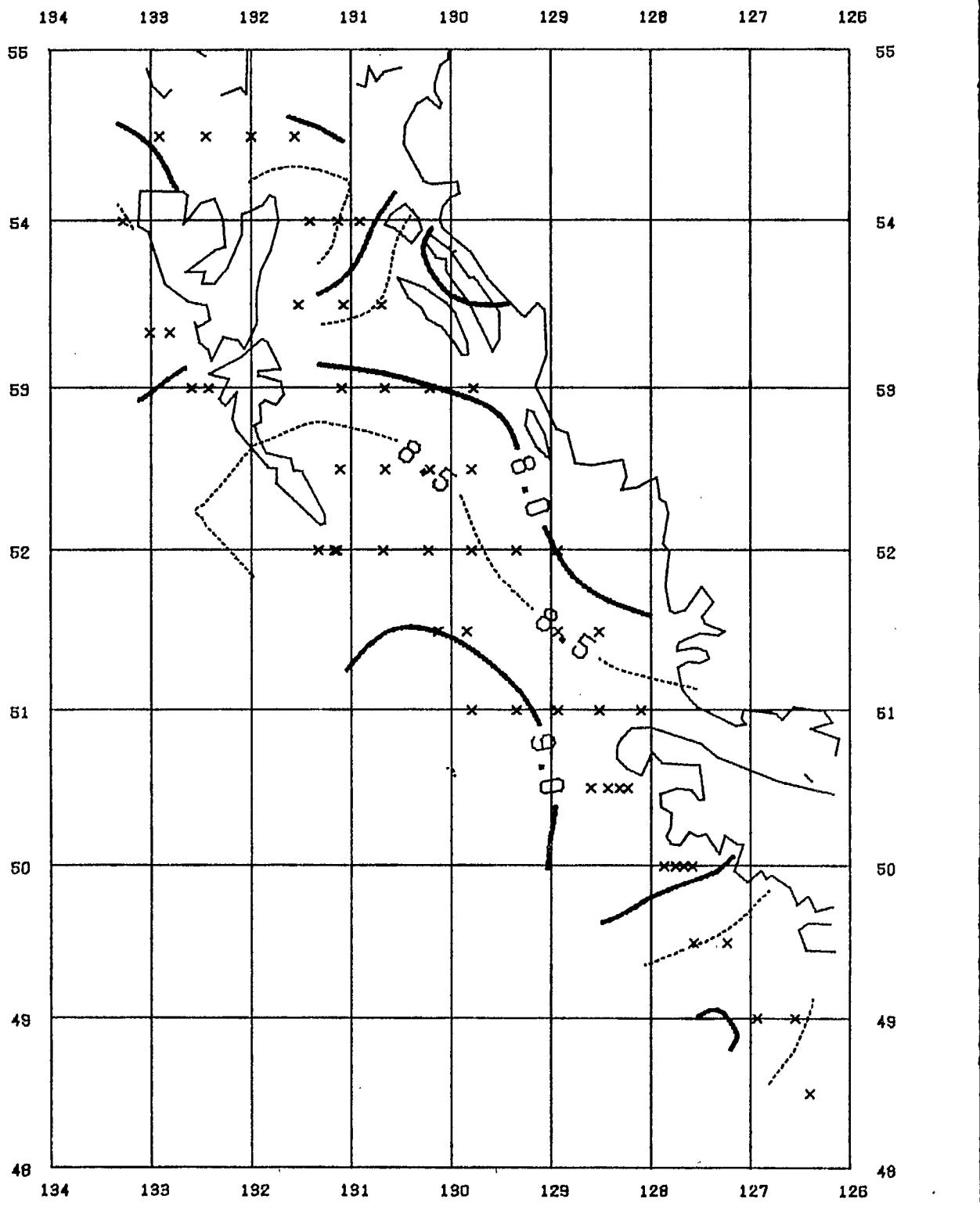
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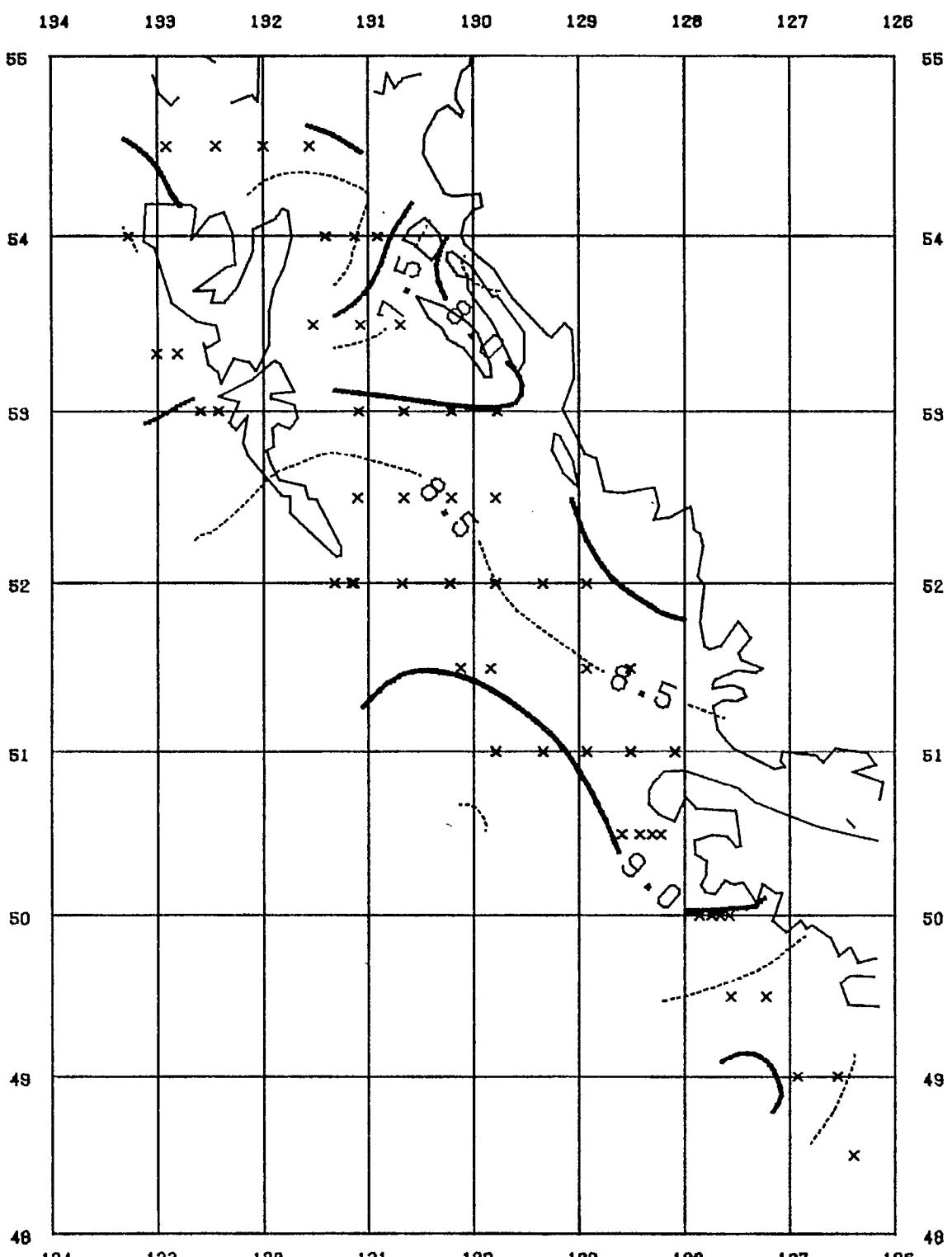


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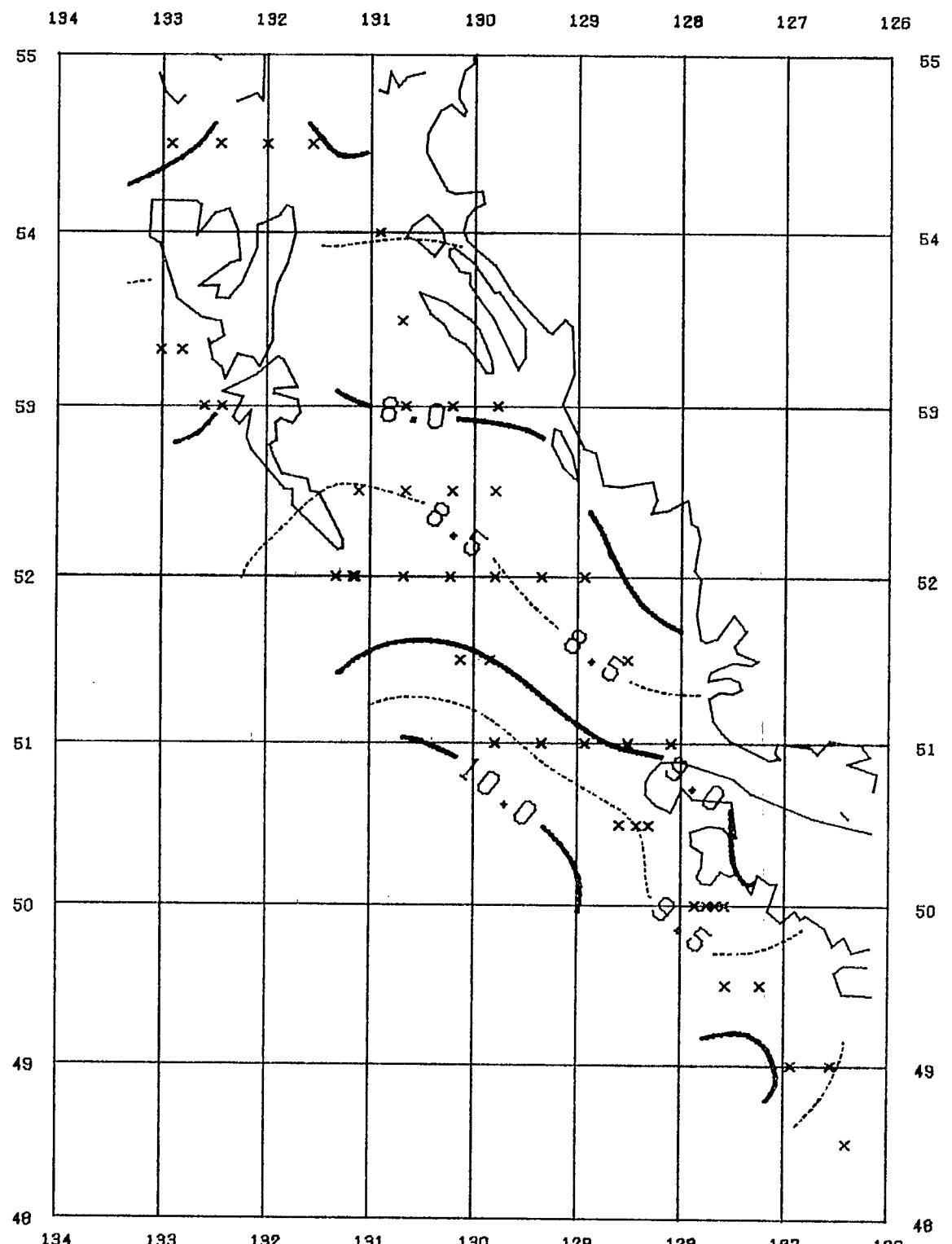
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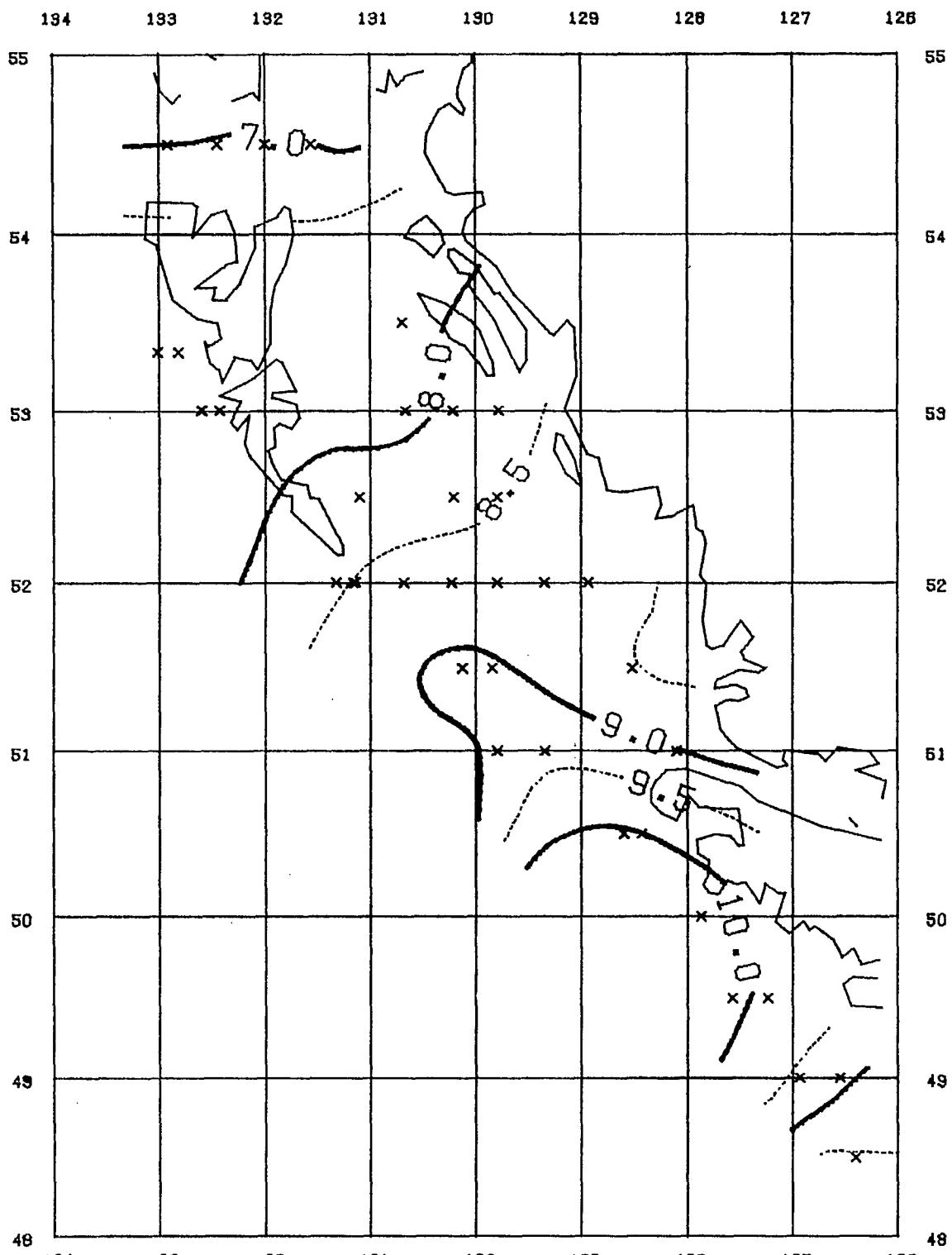
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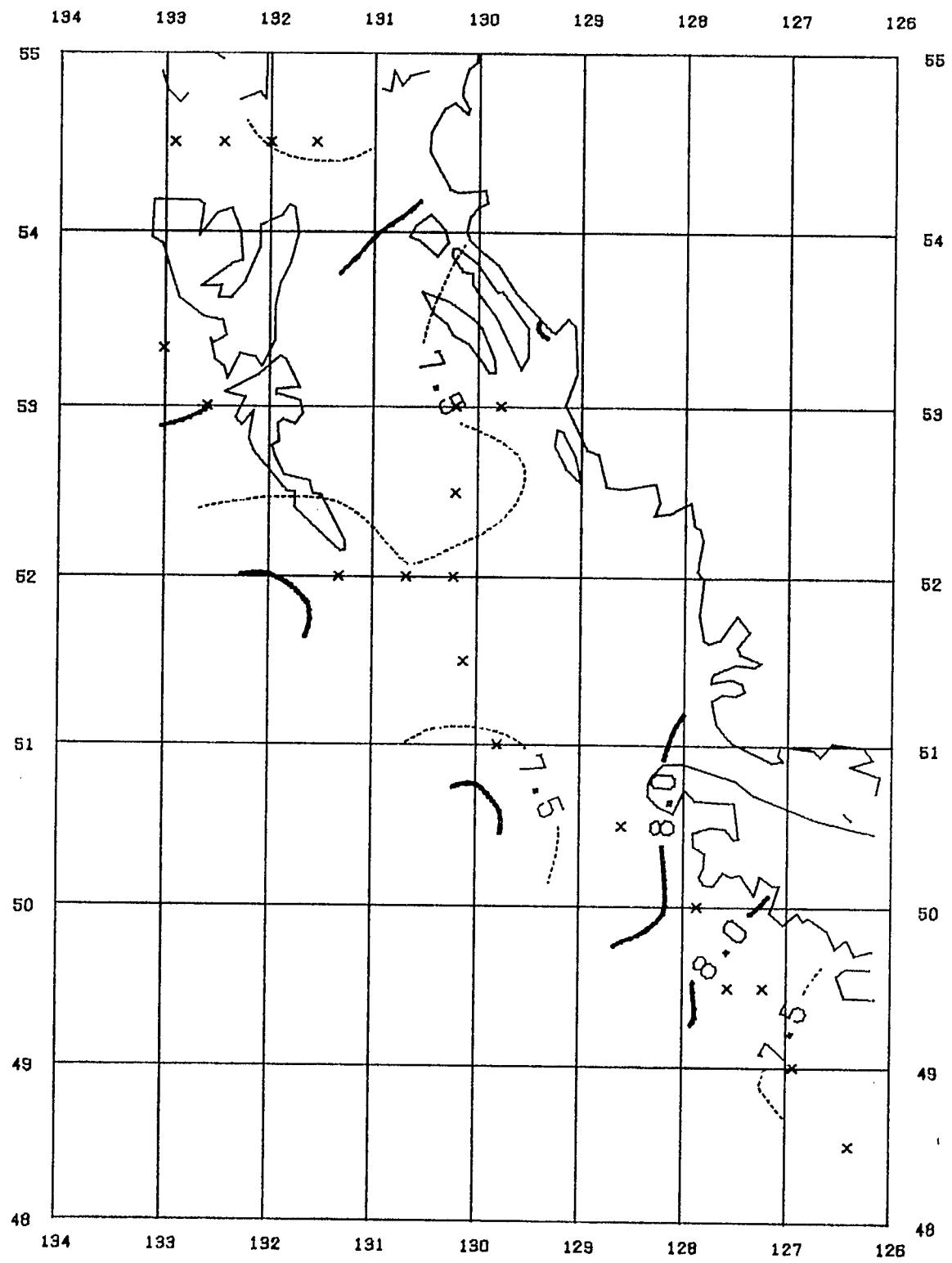
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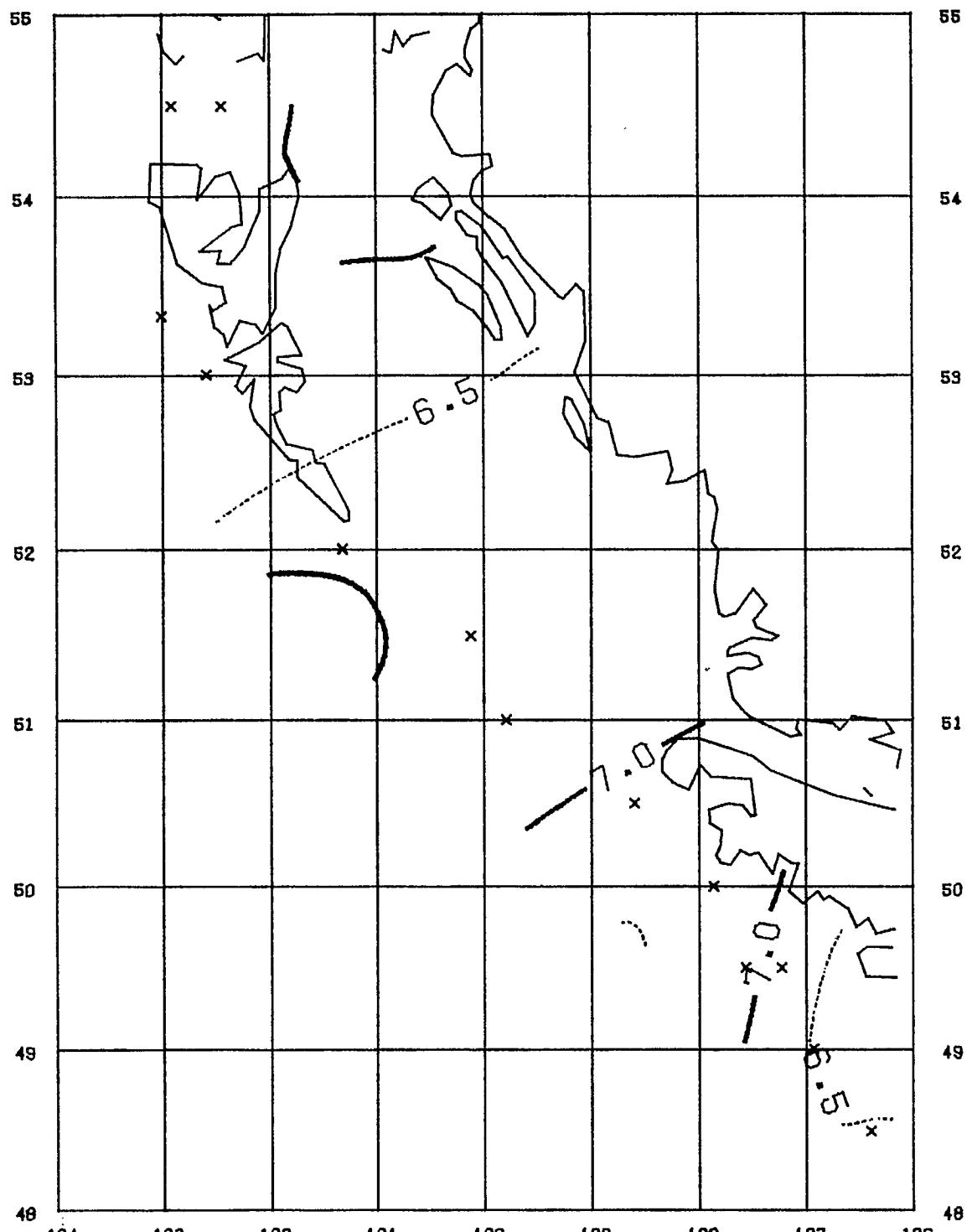
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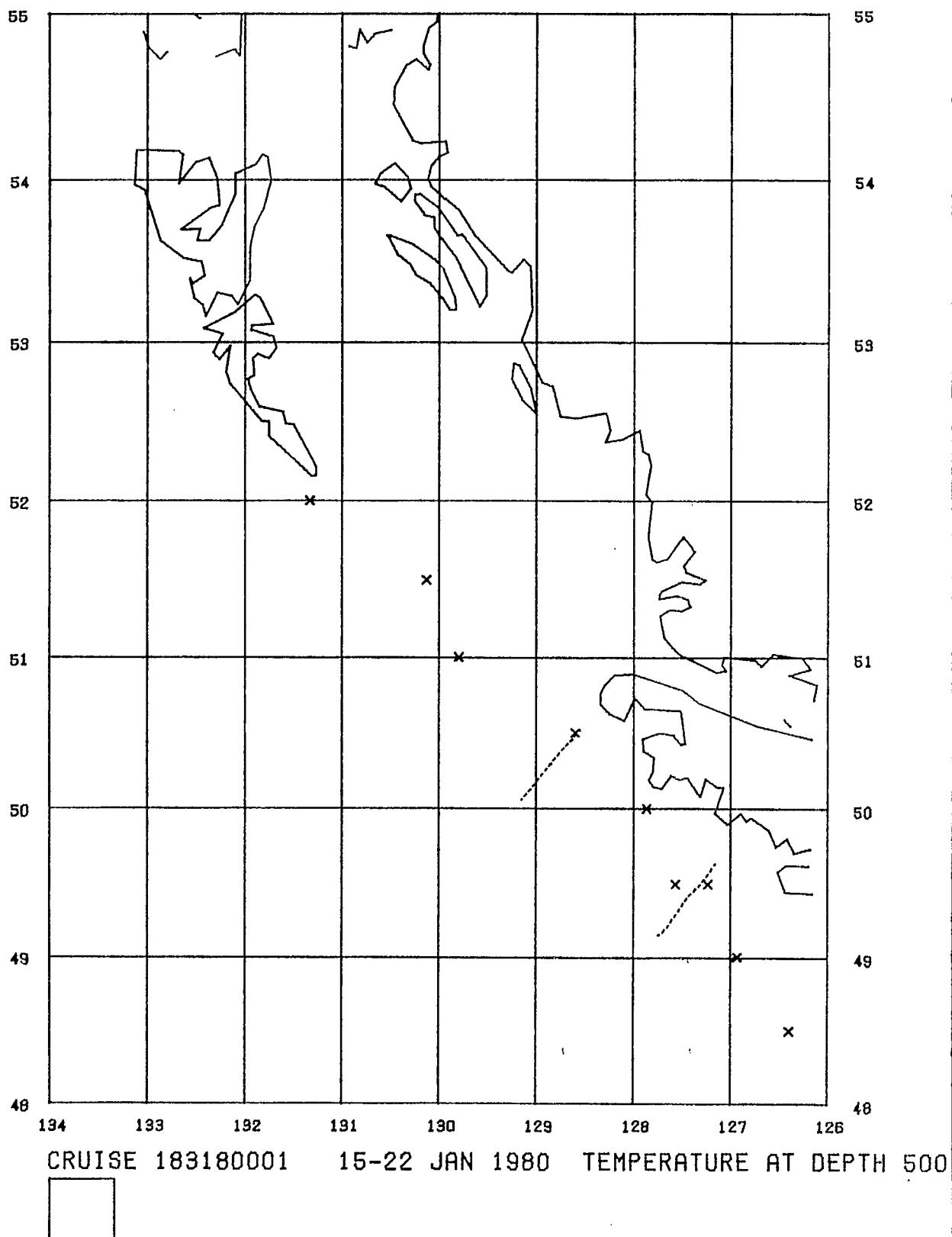


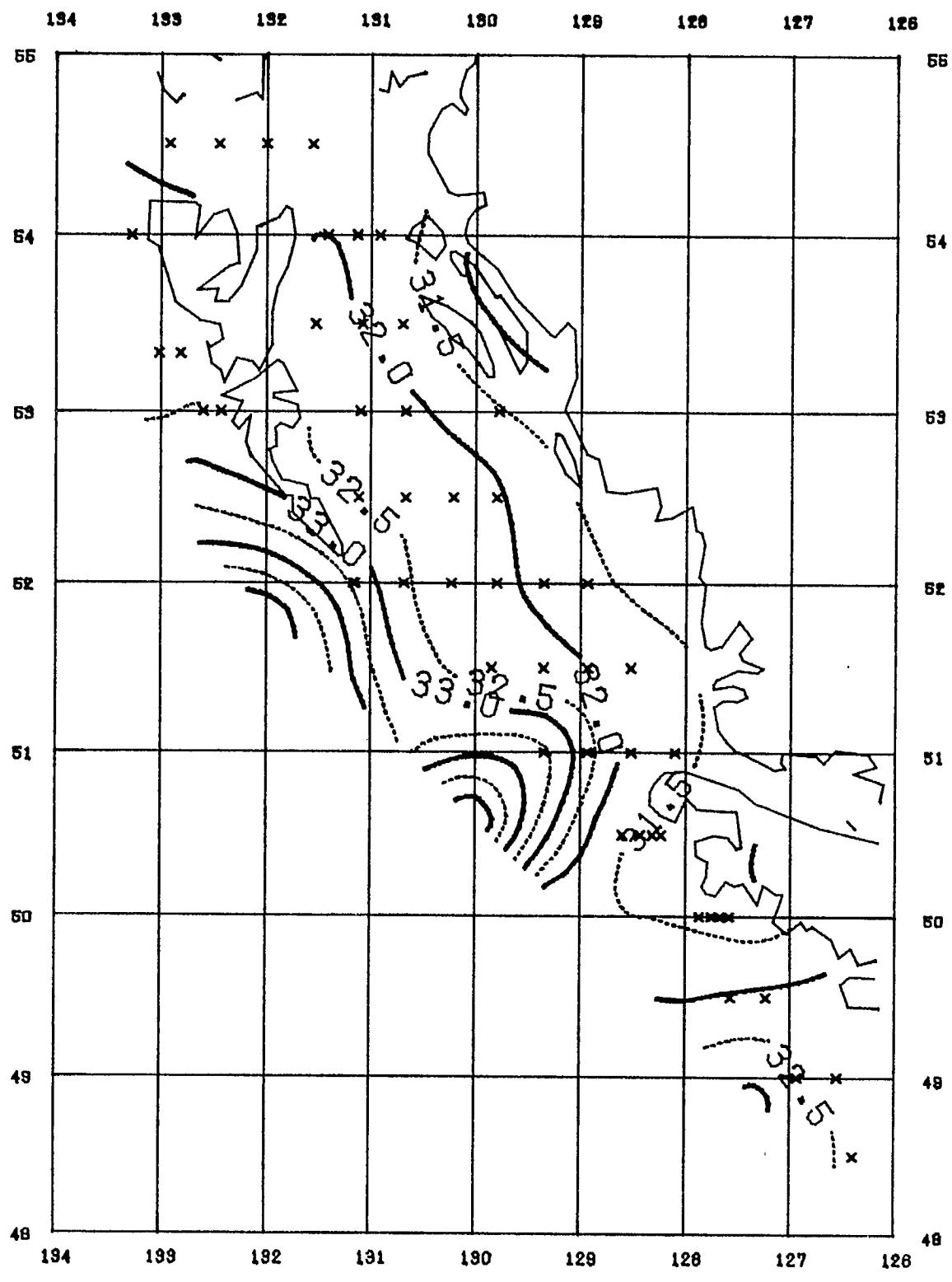
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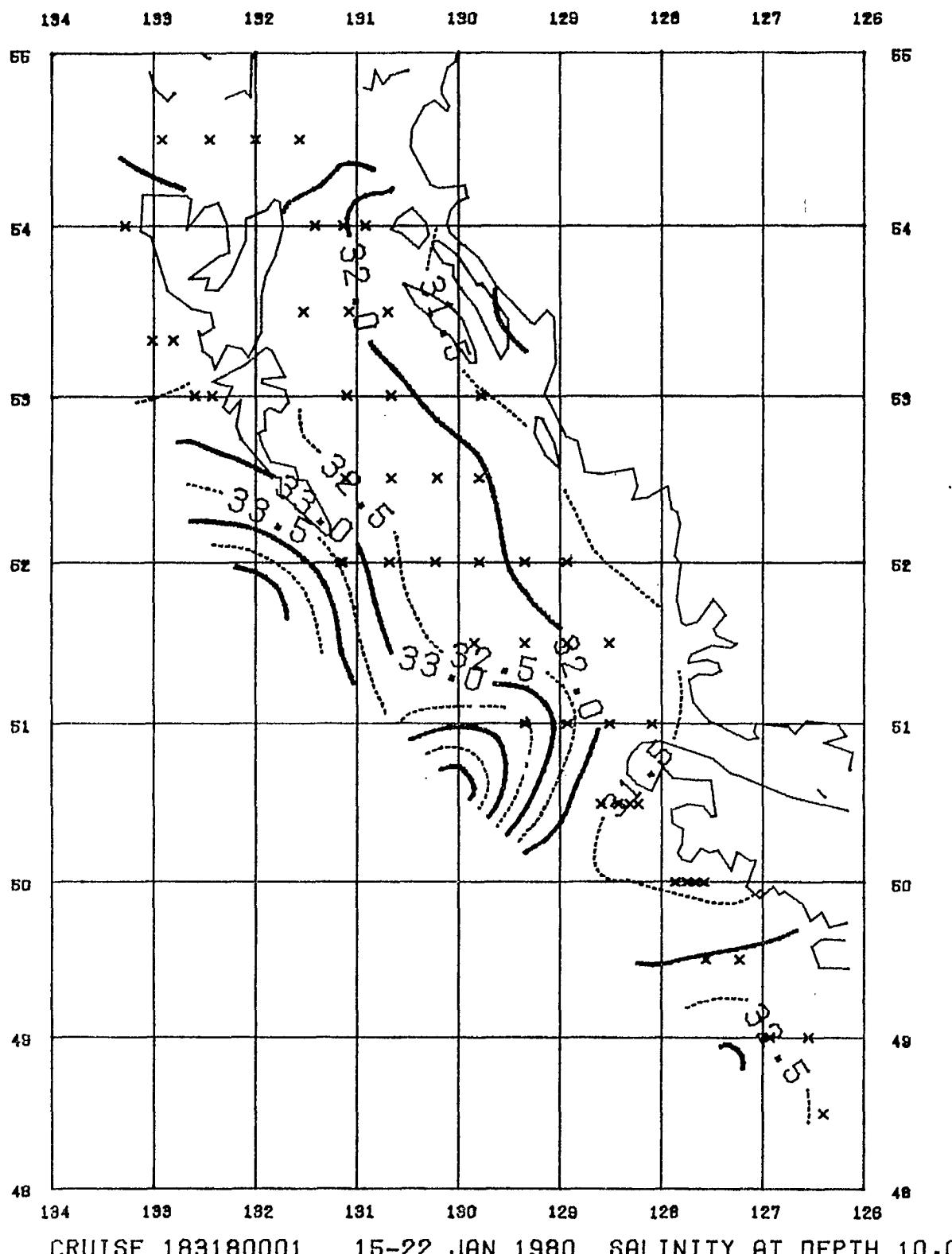
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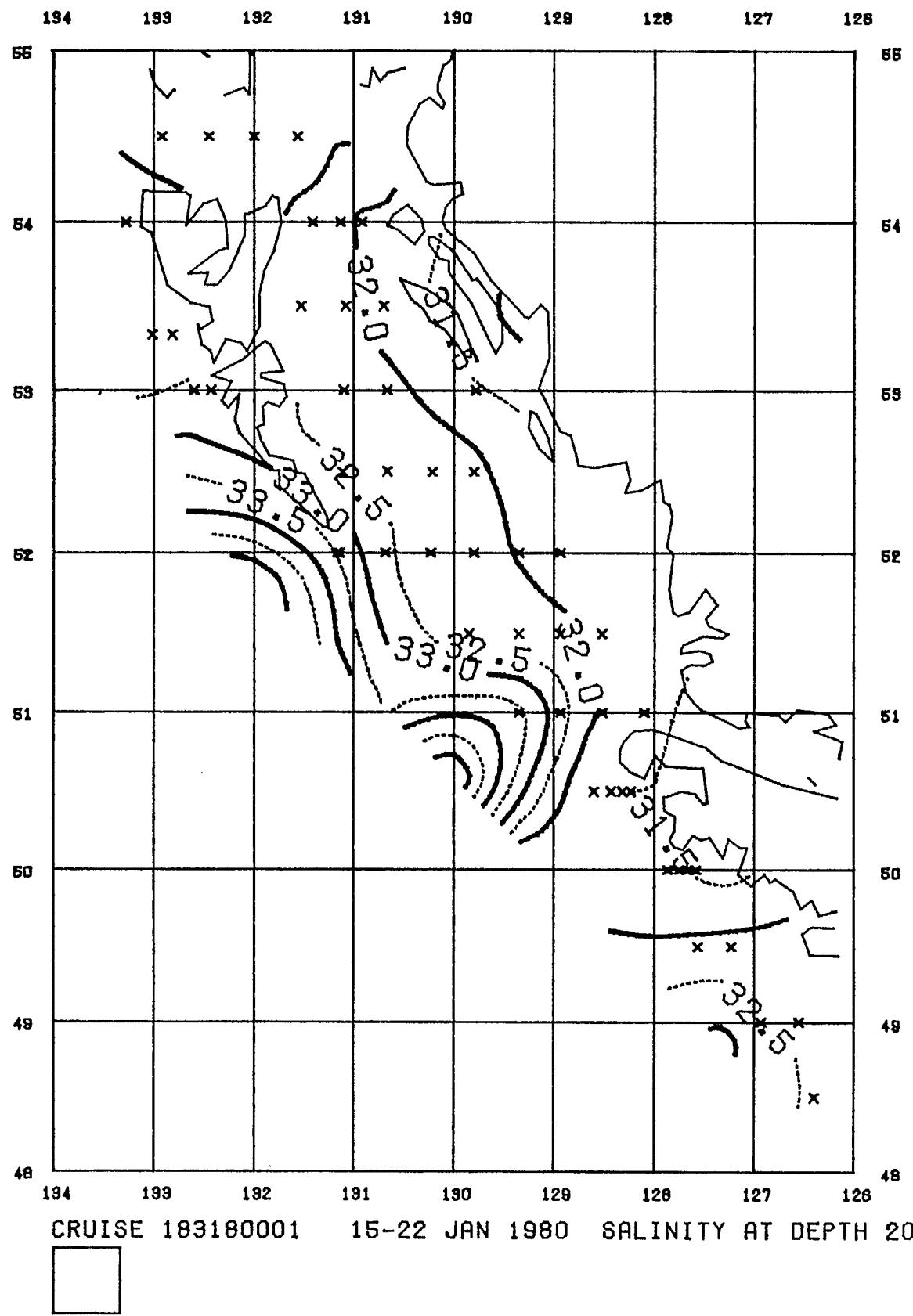




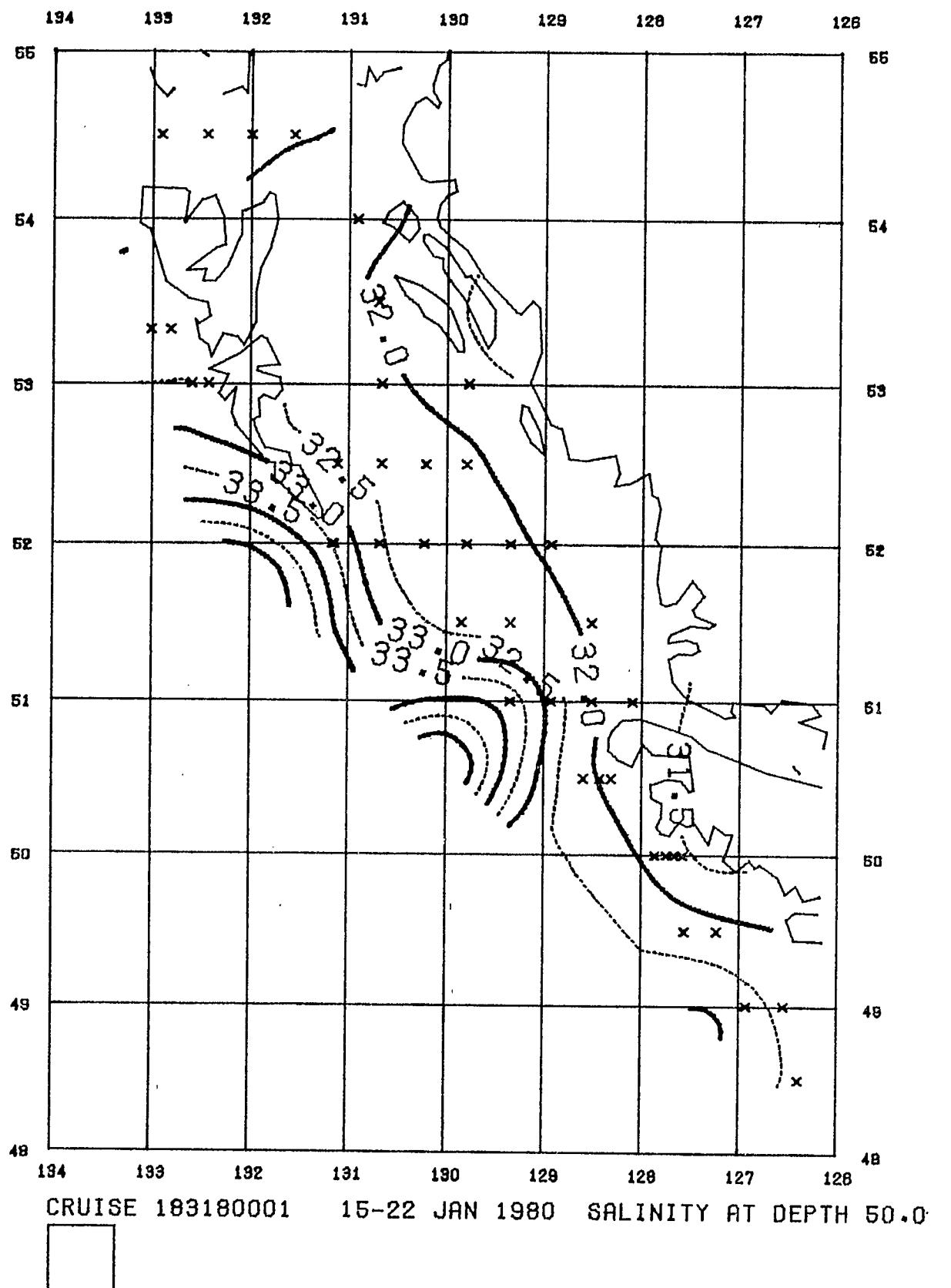
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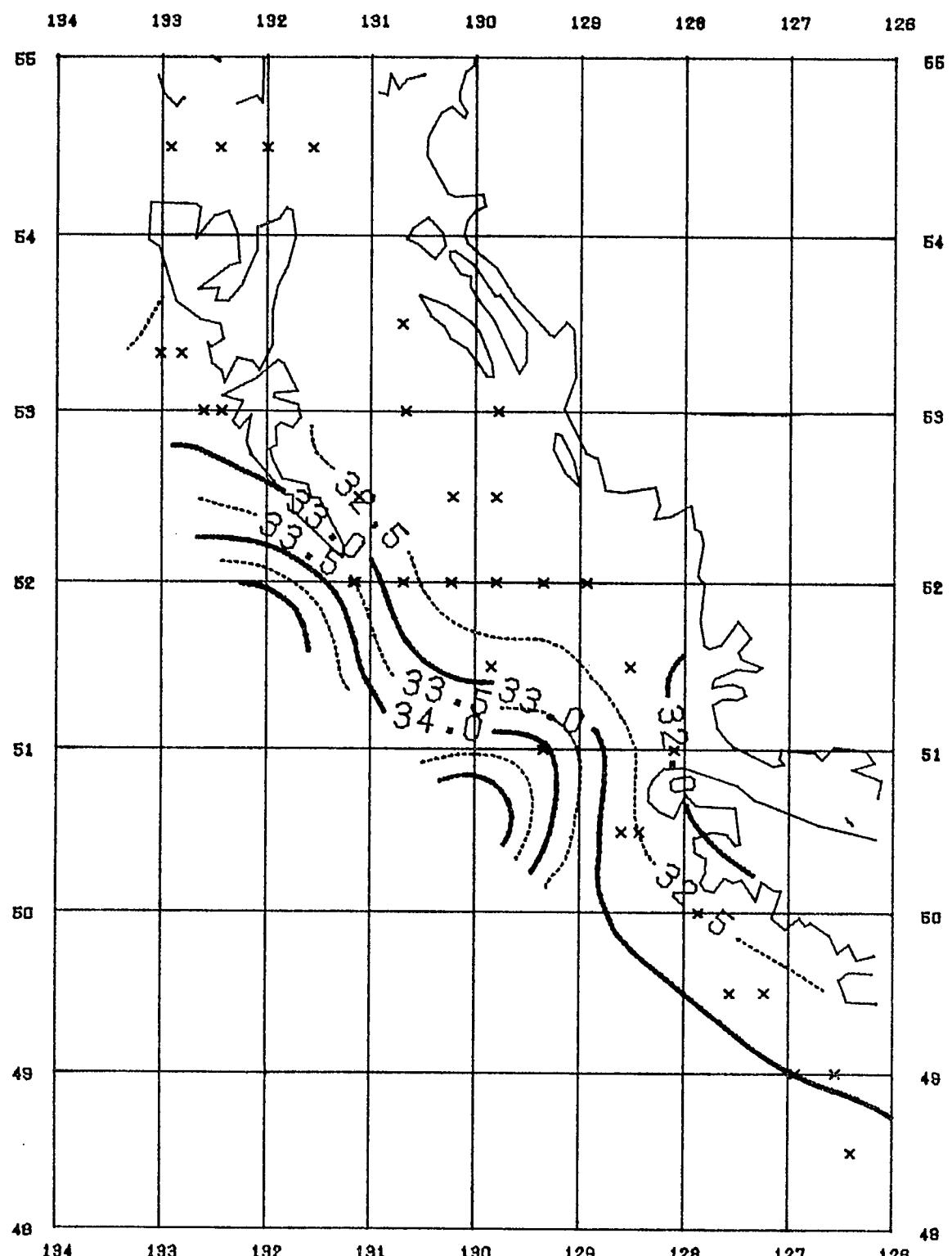


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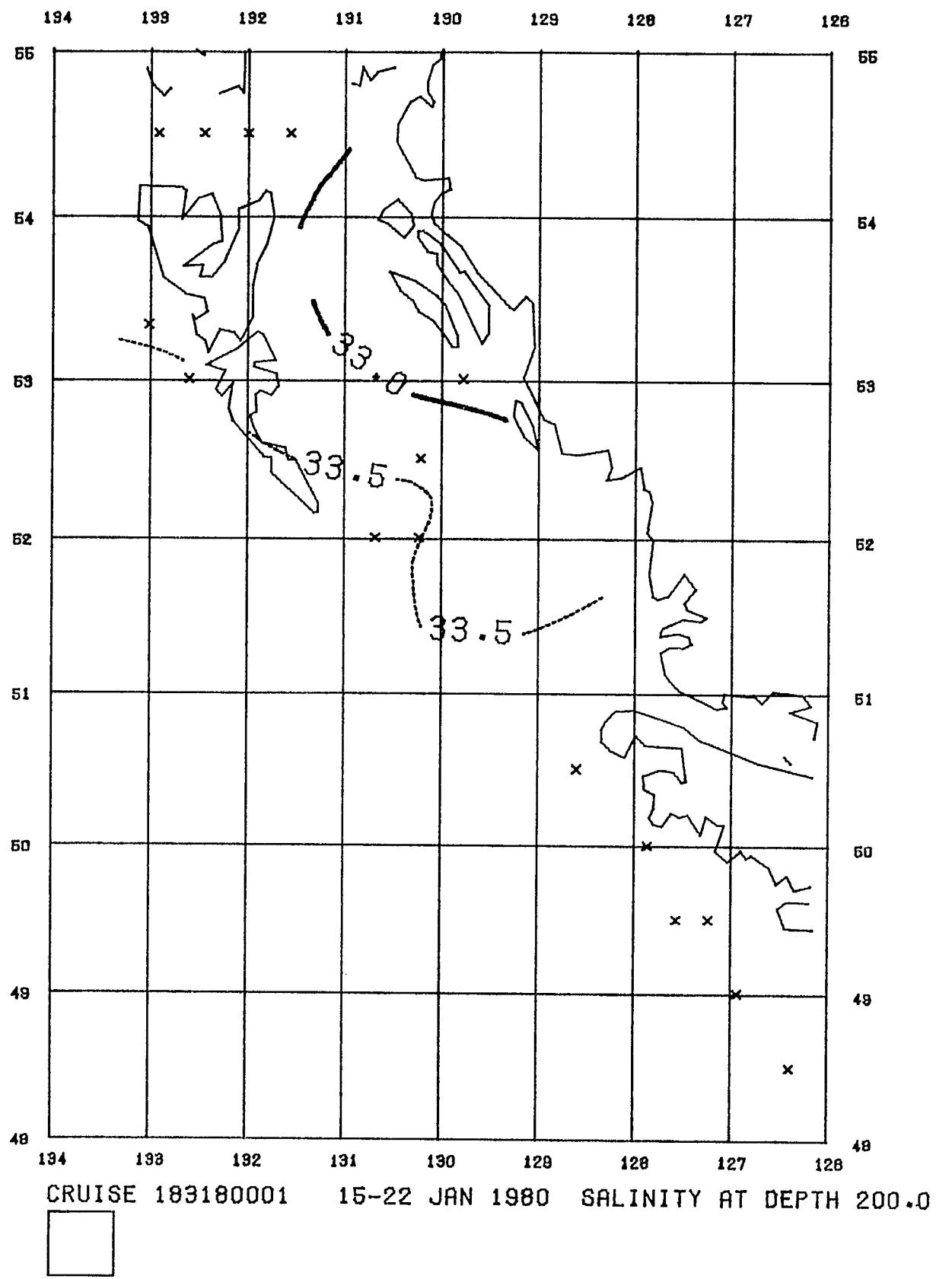
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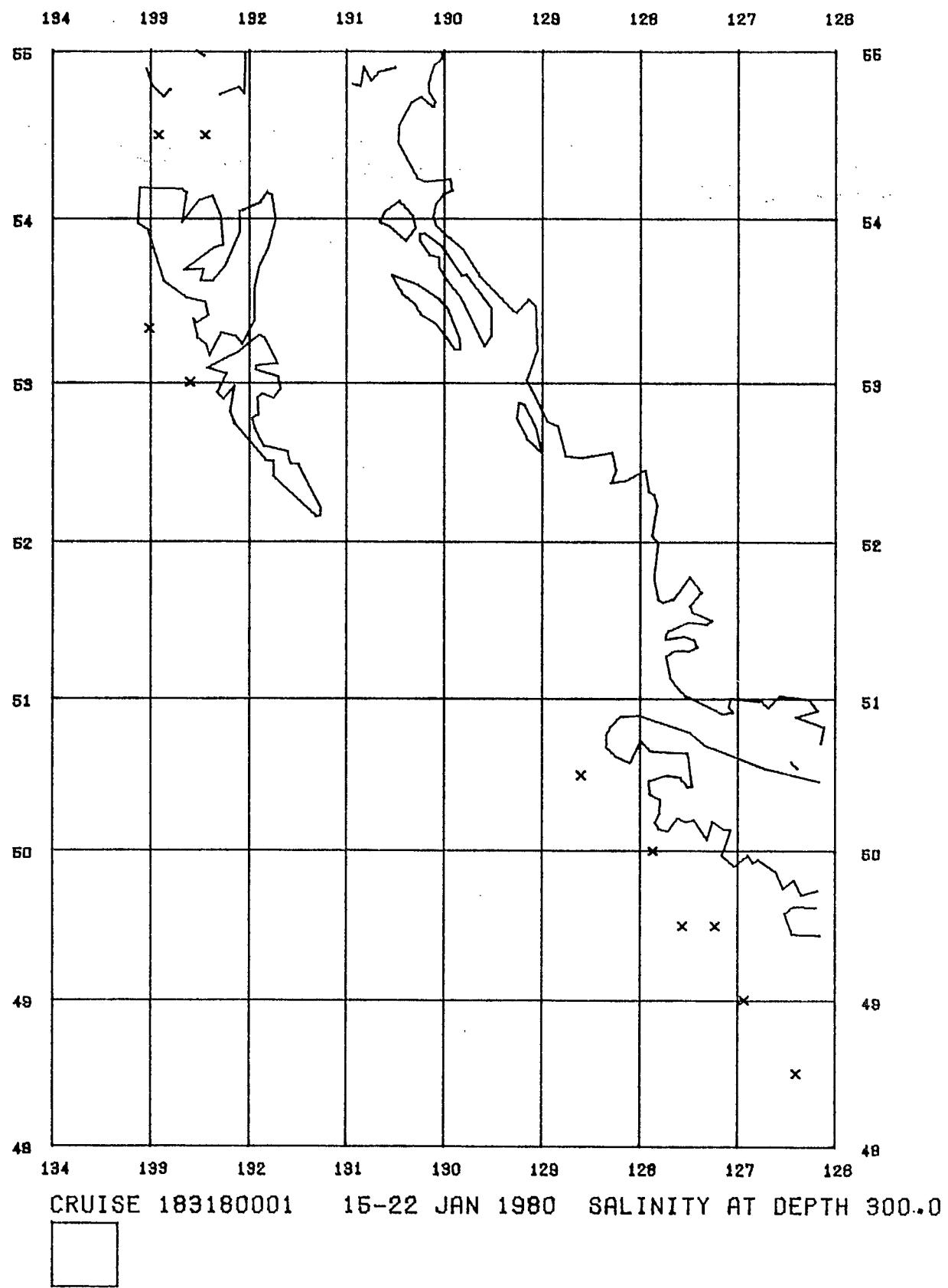


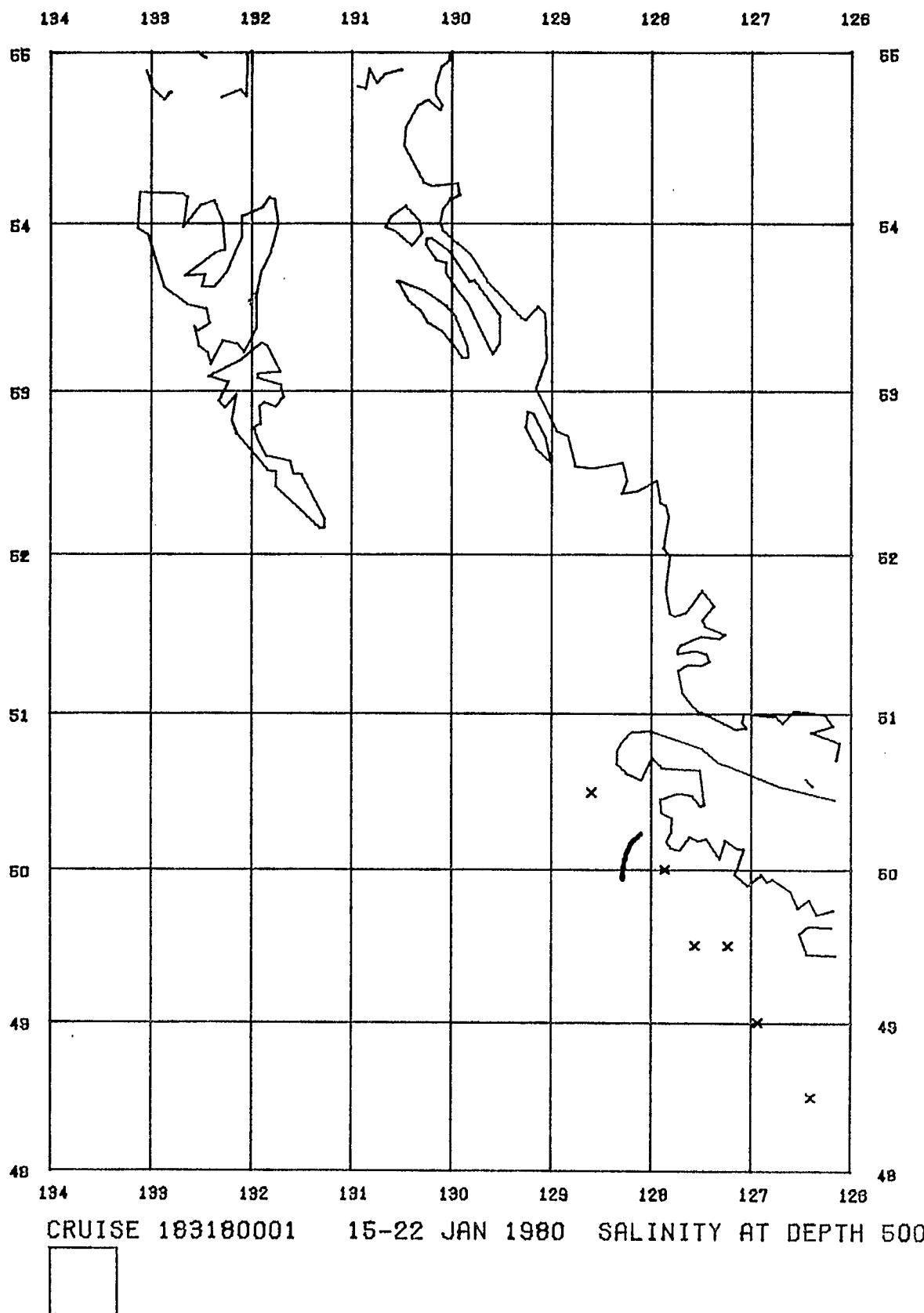
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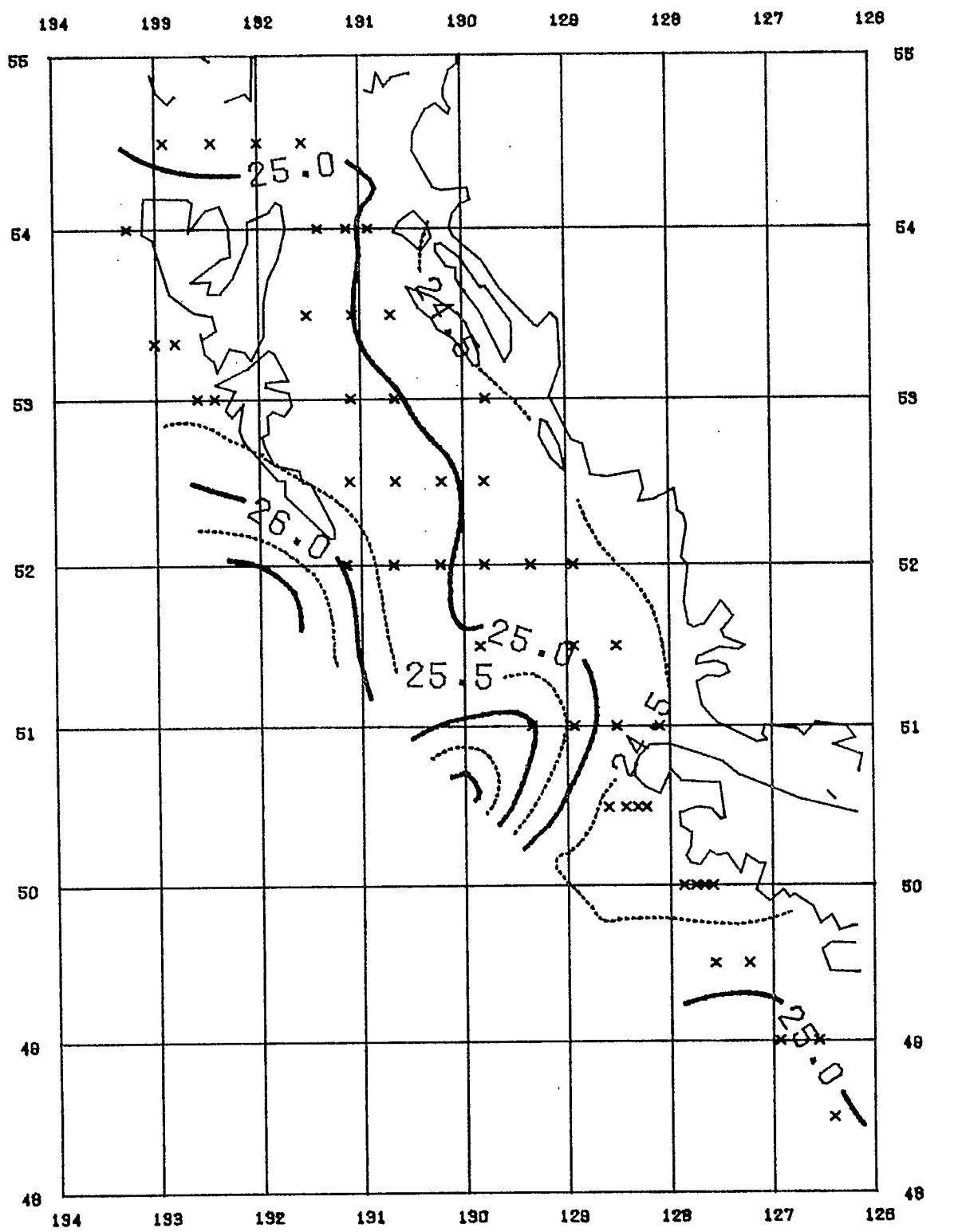


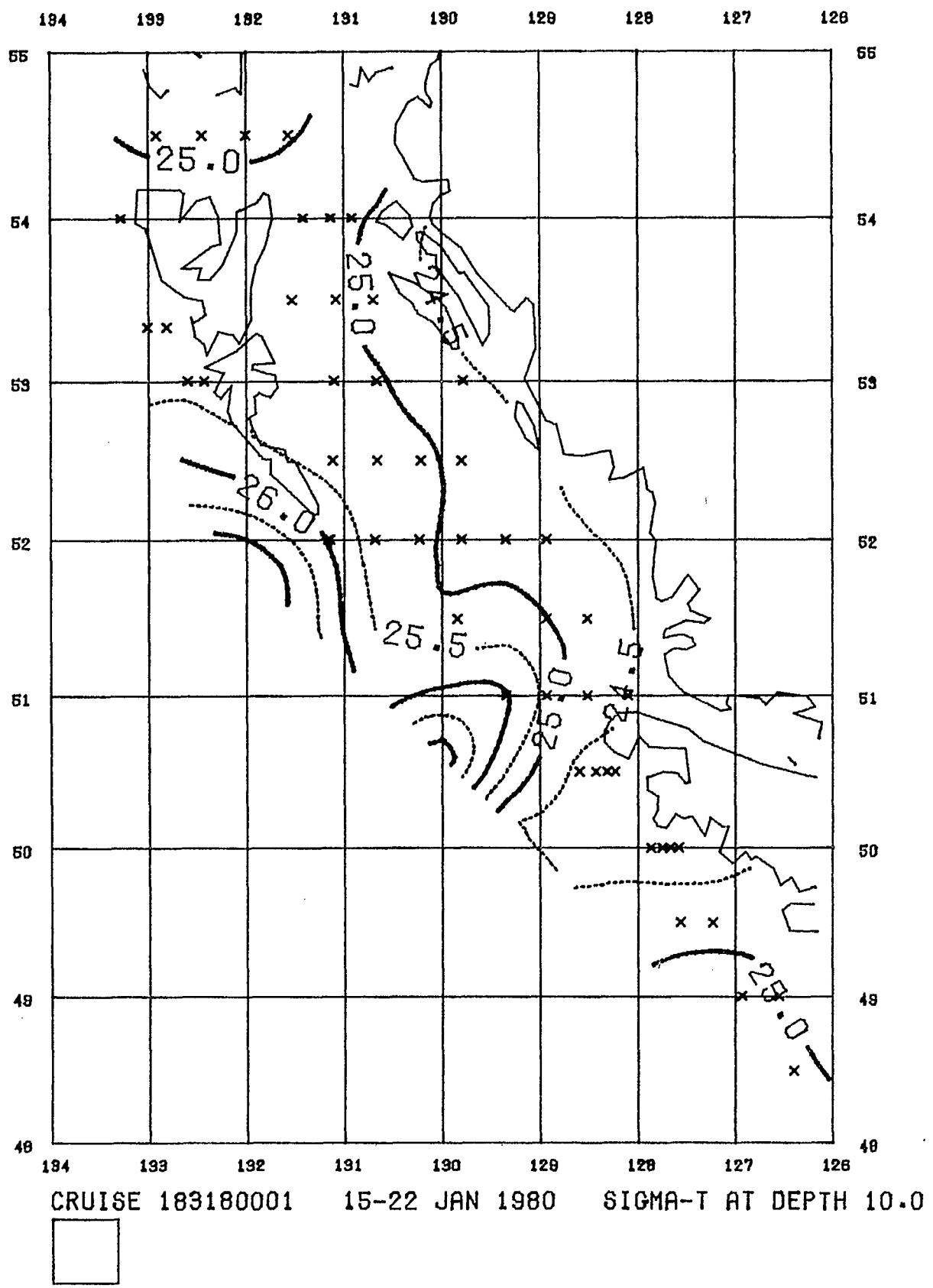


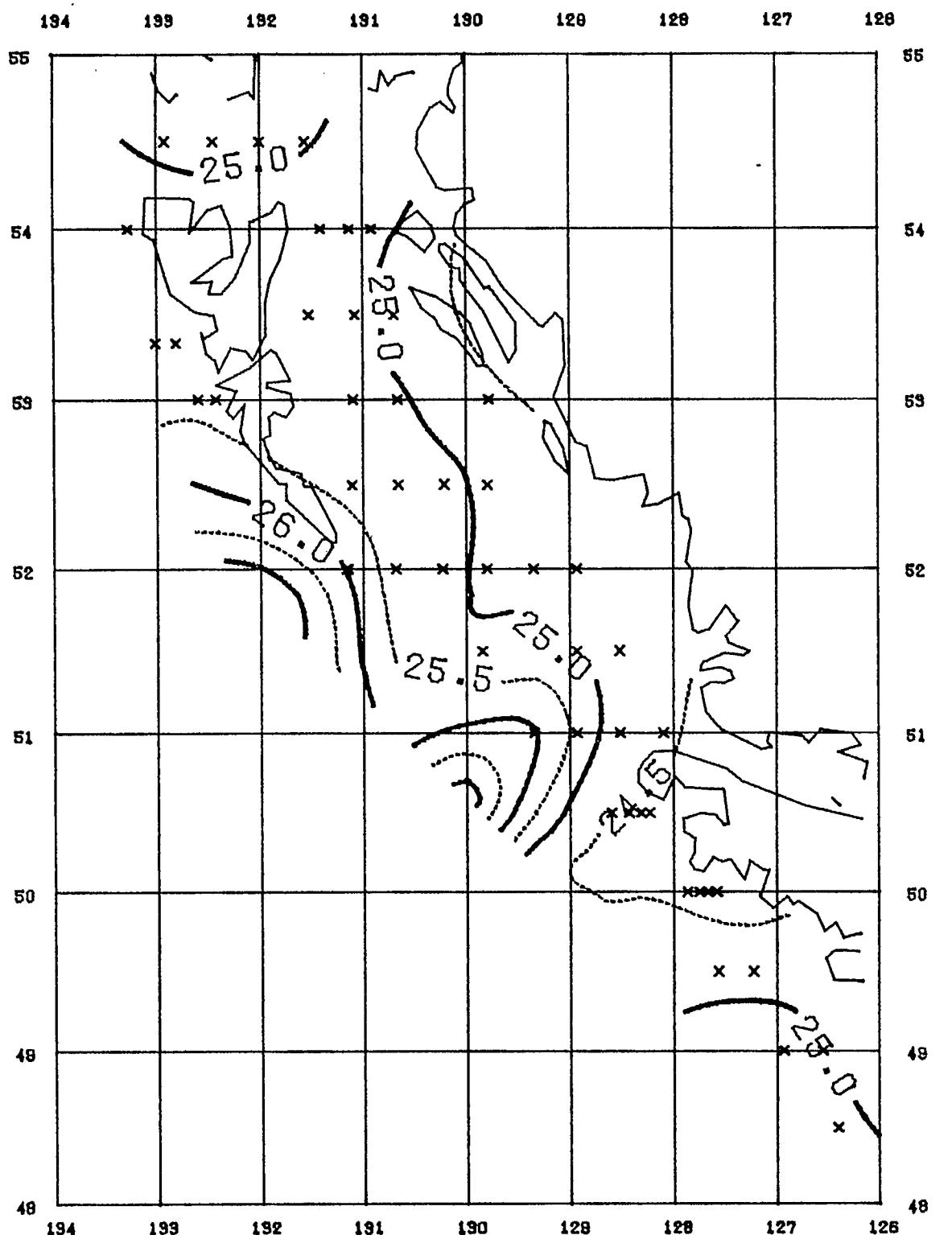
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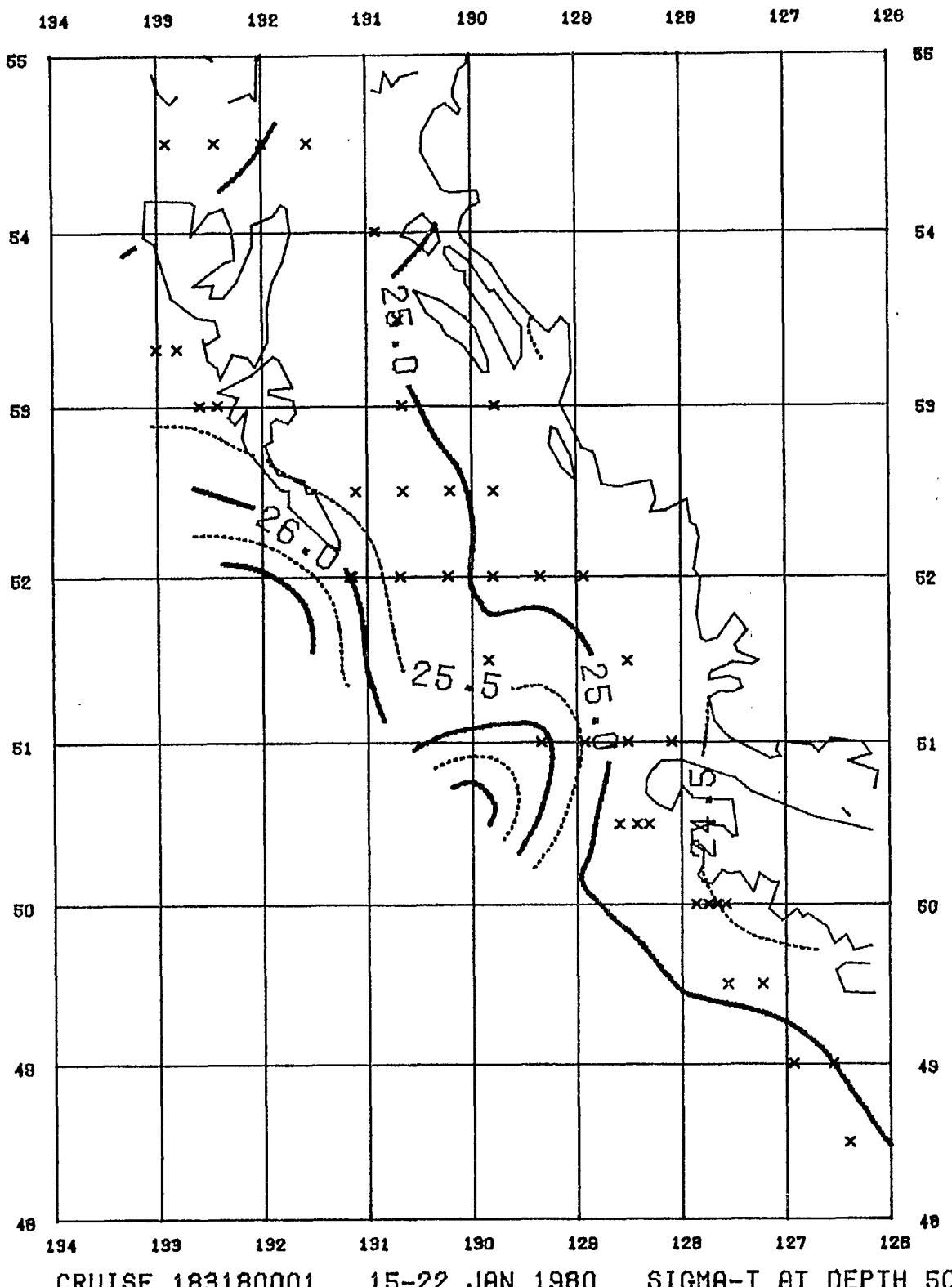


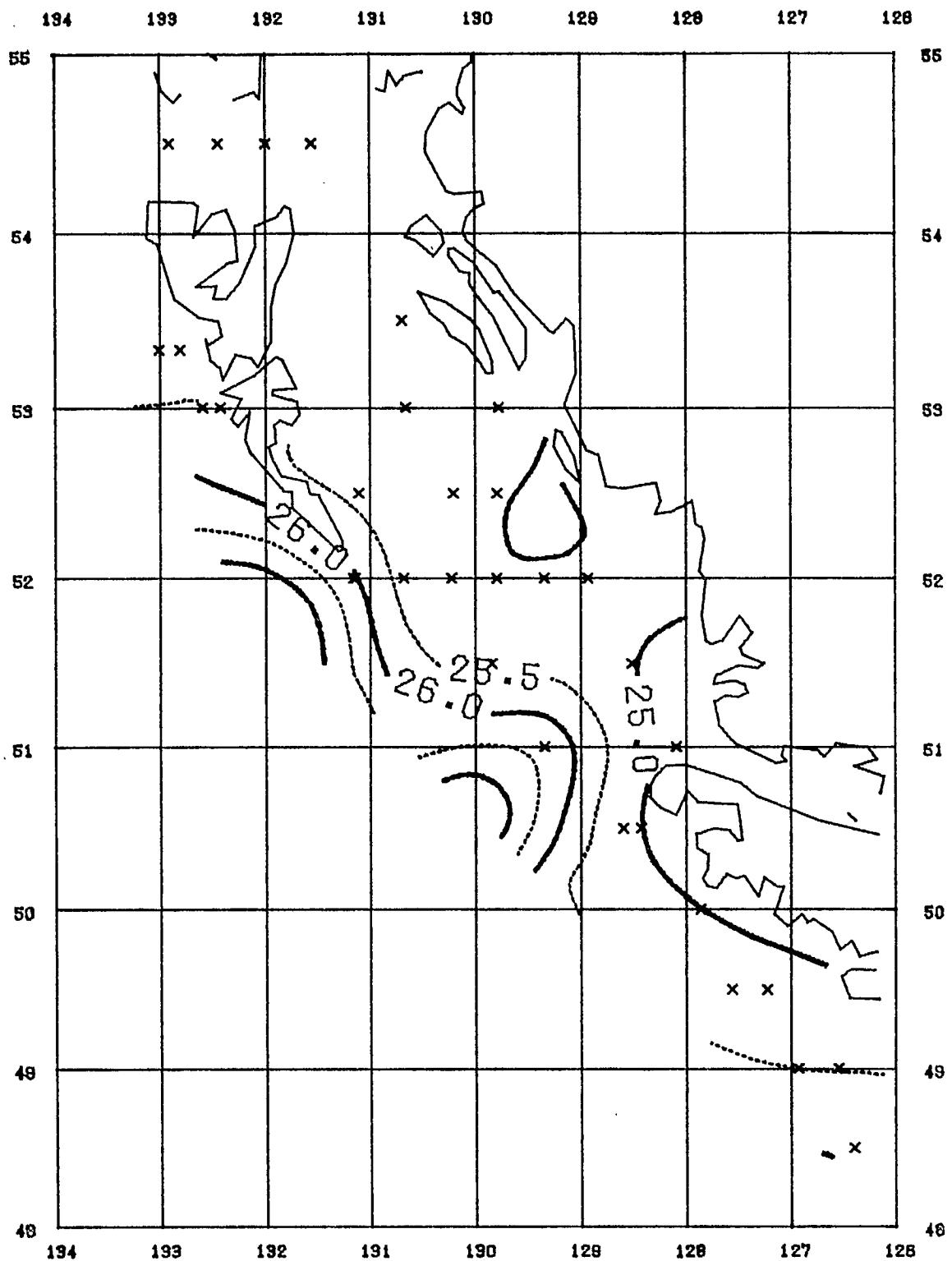
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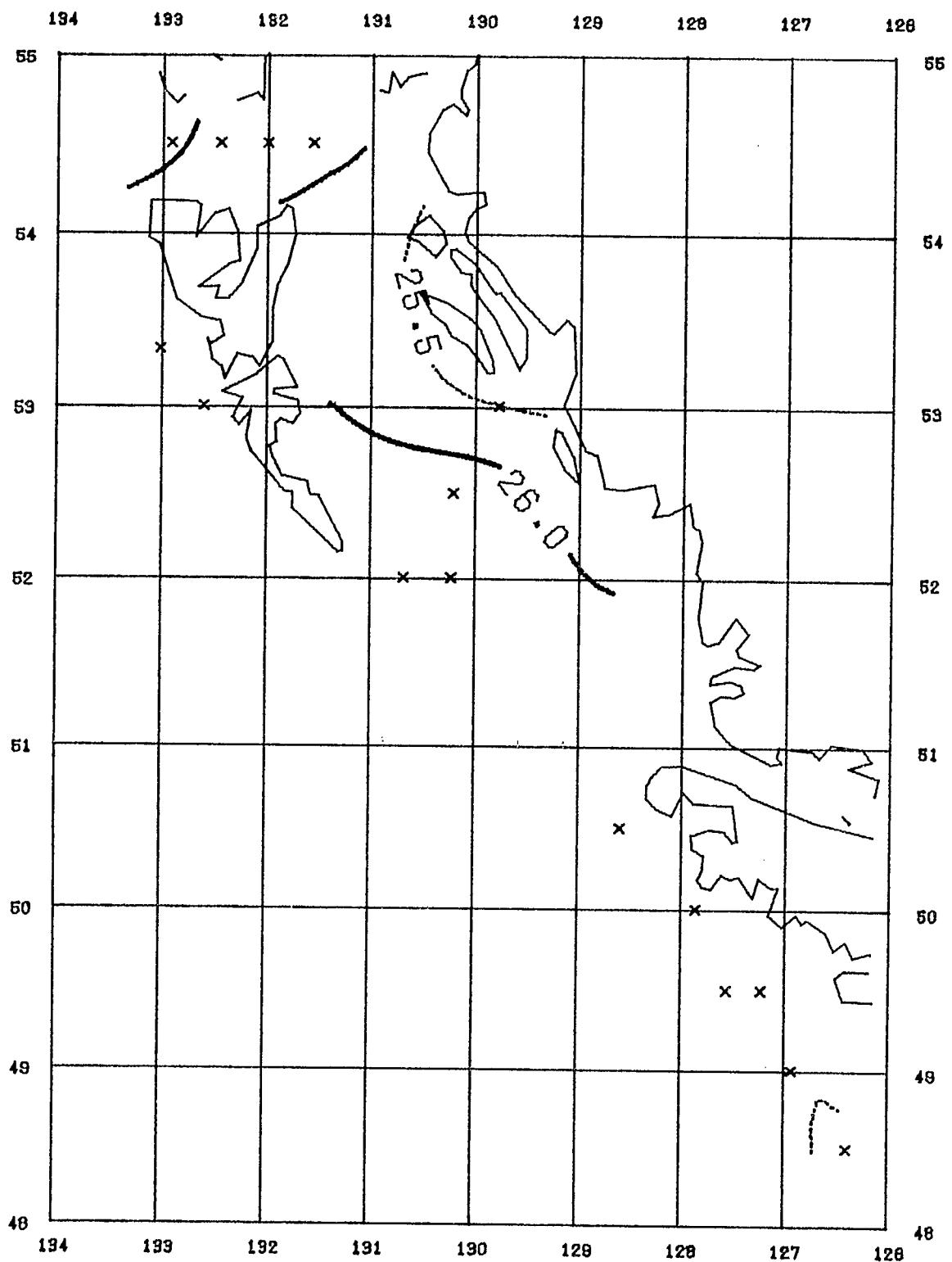


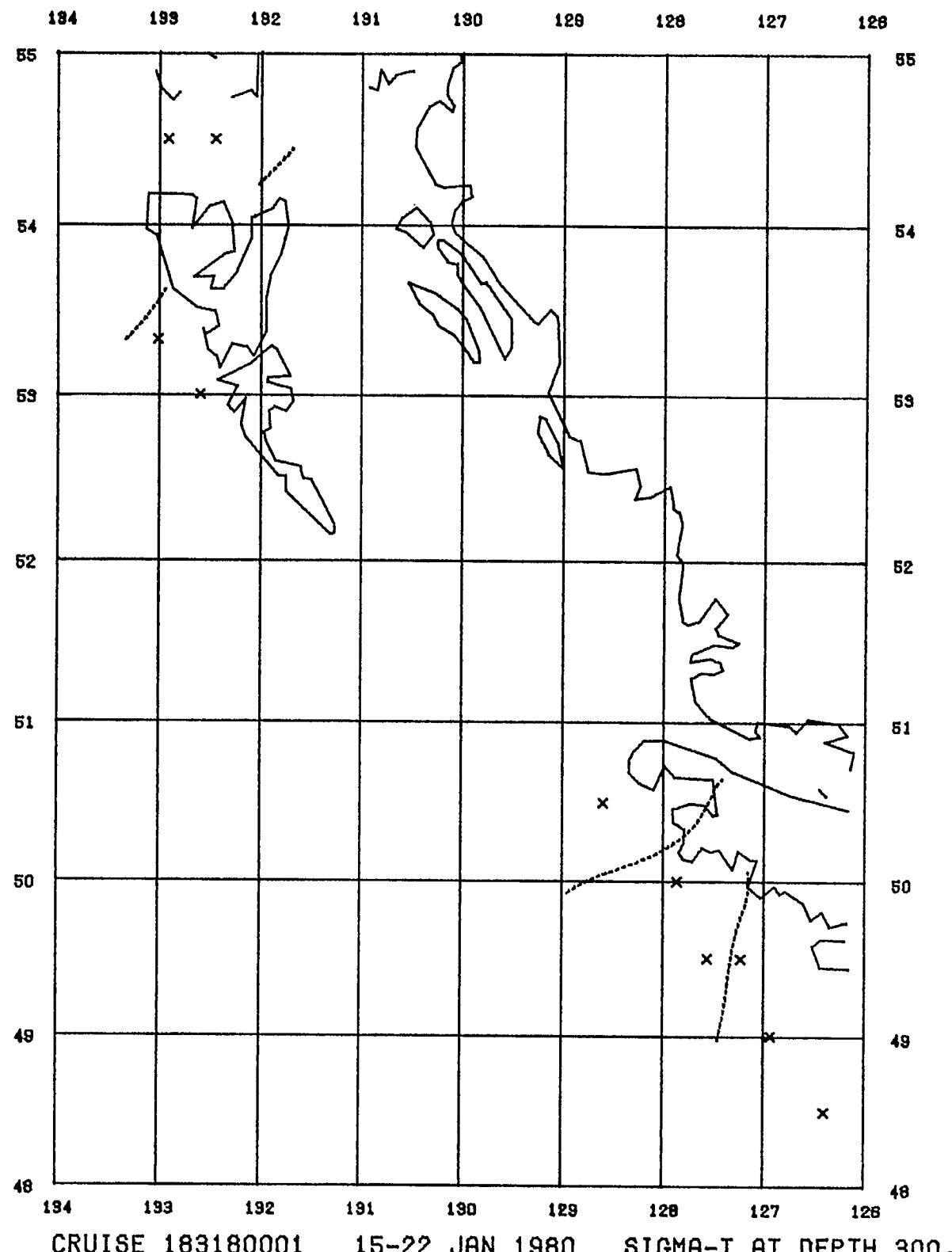
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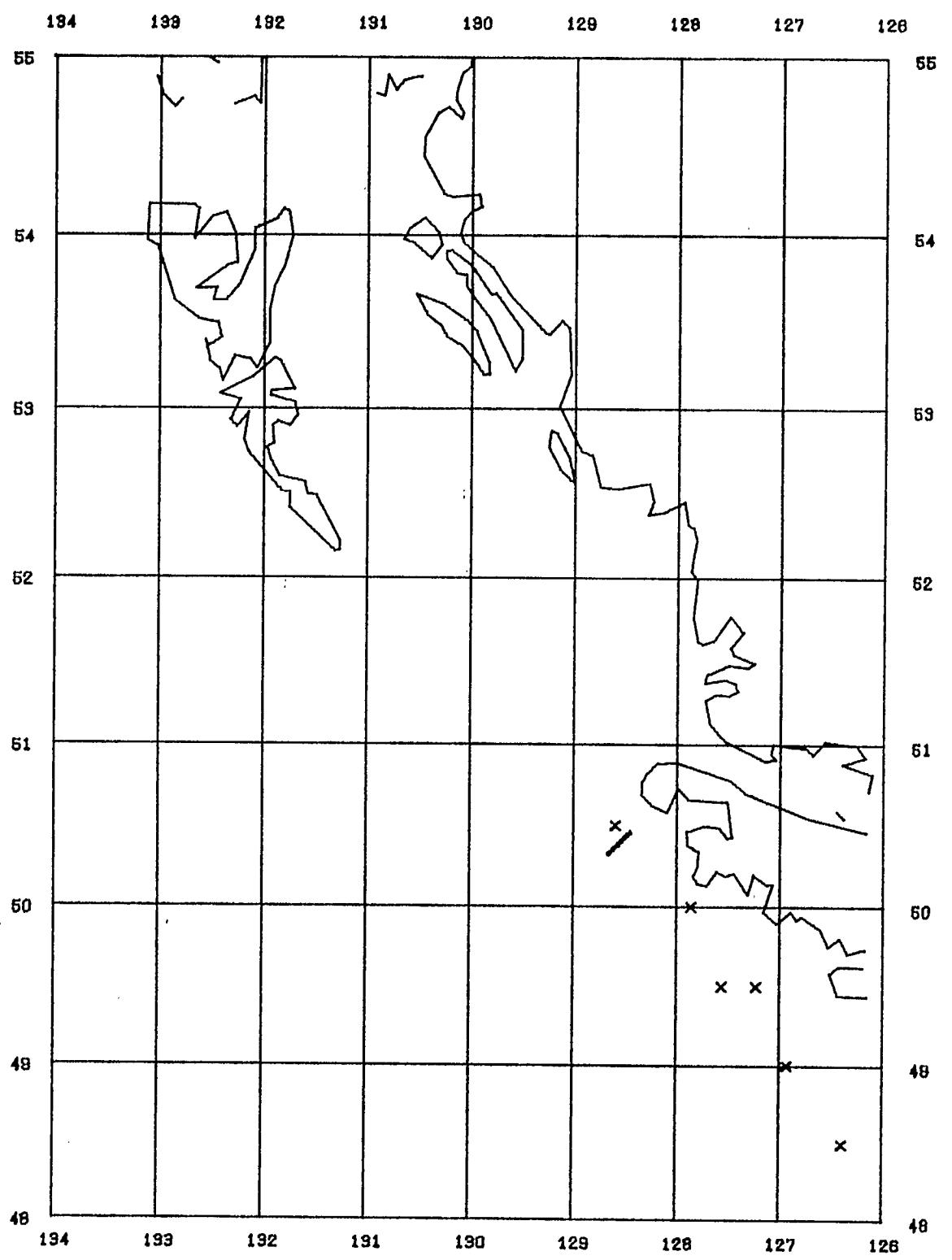
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SIGMA-T AT DEPTH 100.0









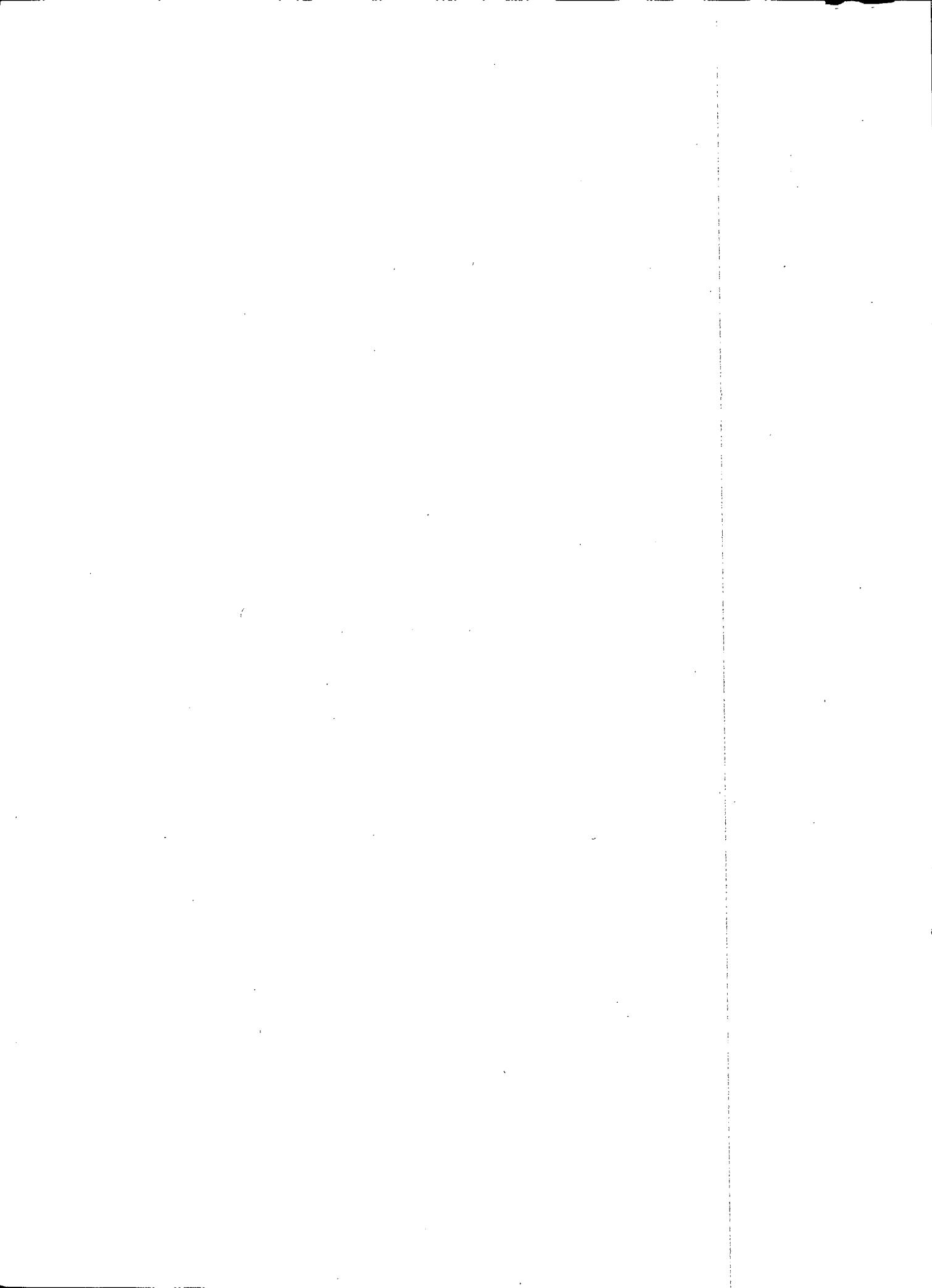
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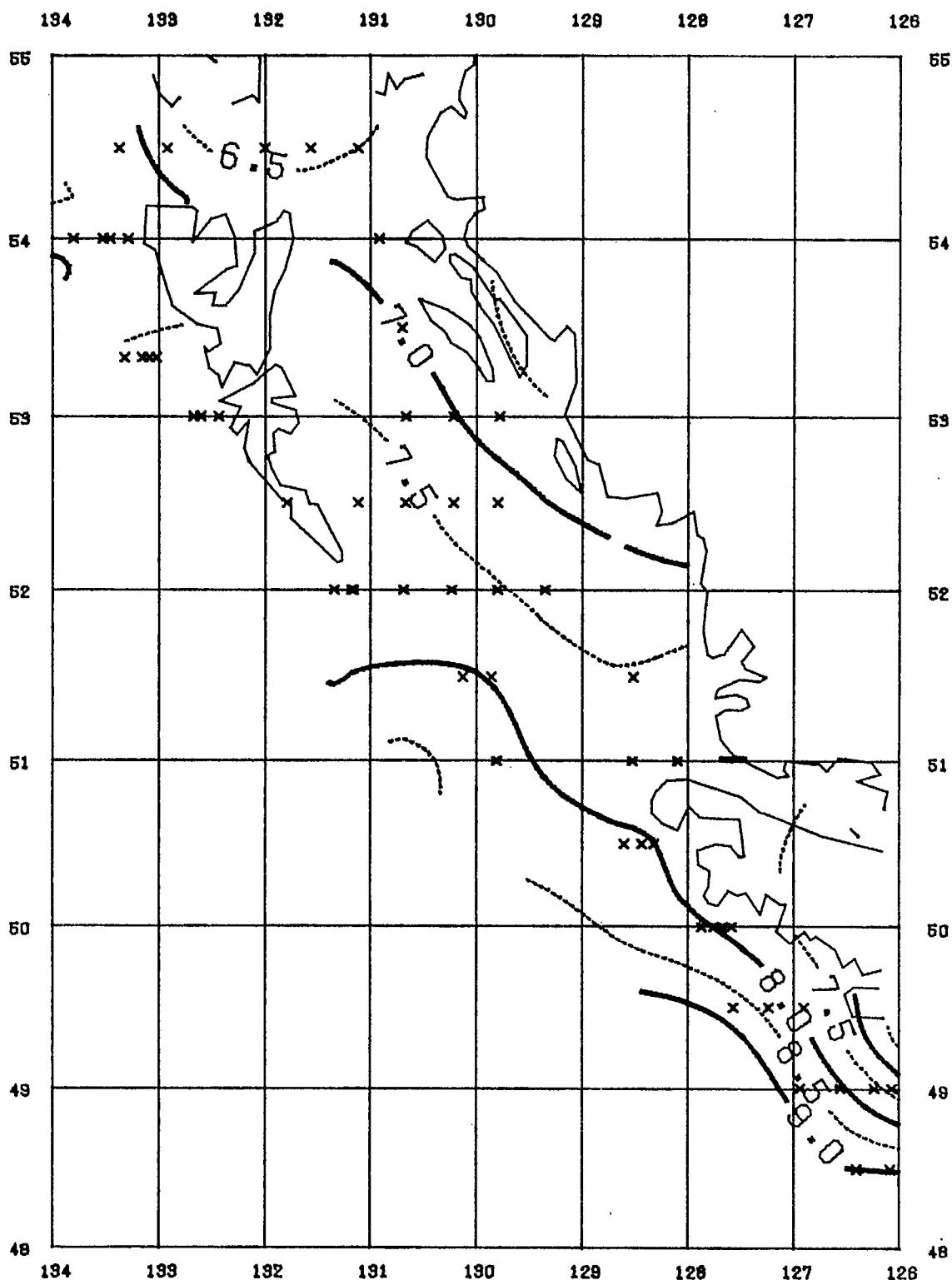
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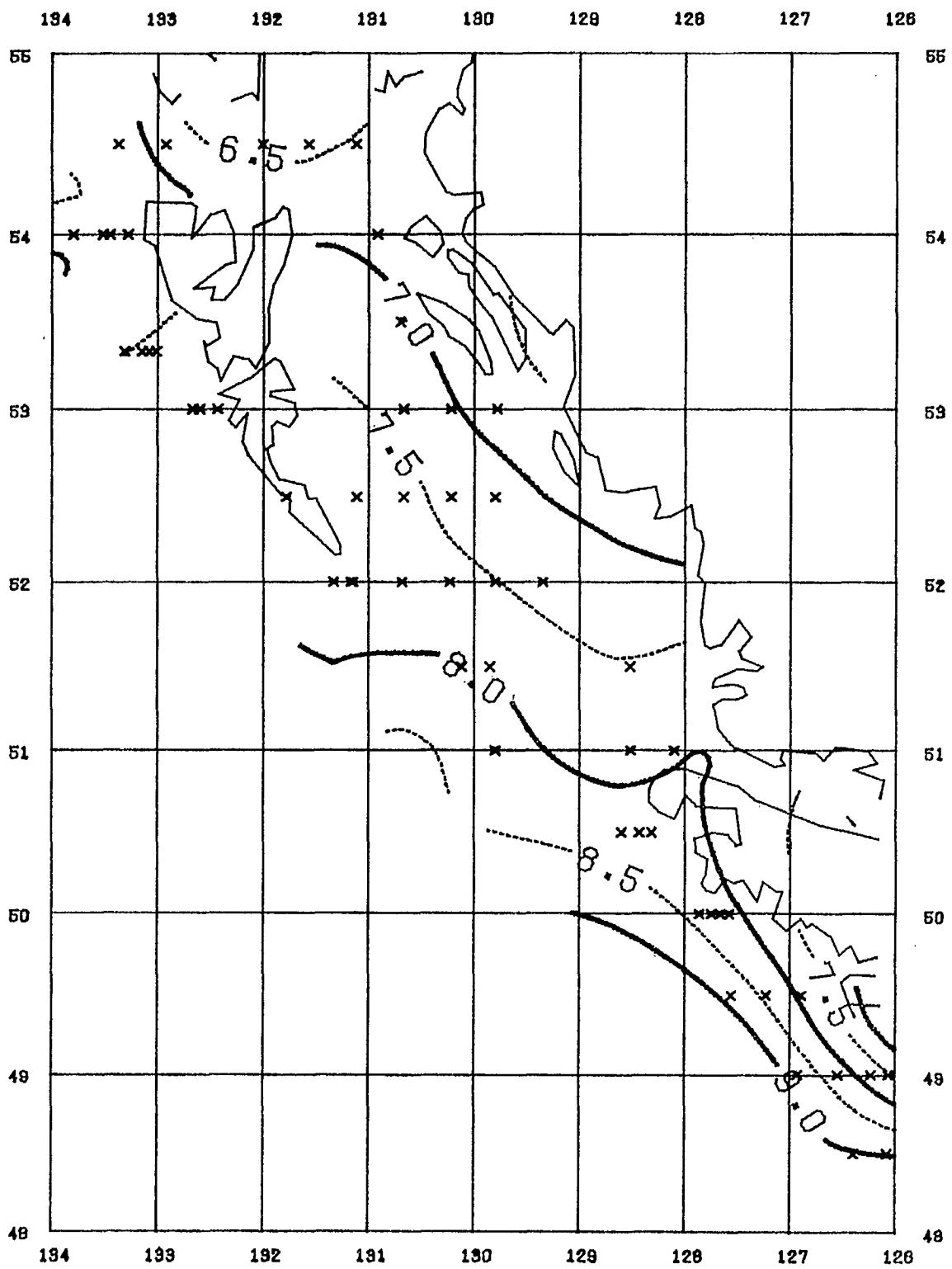
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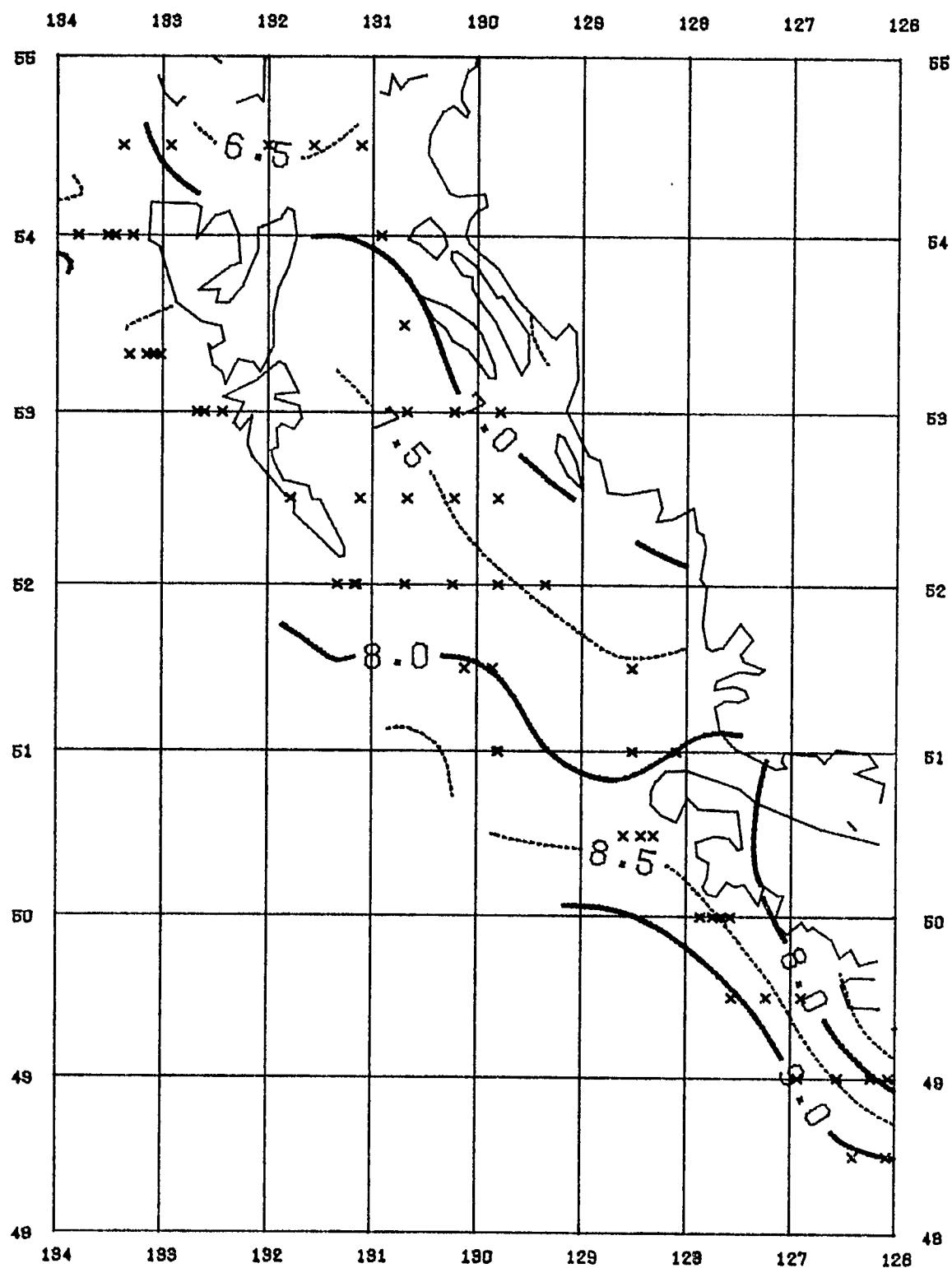
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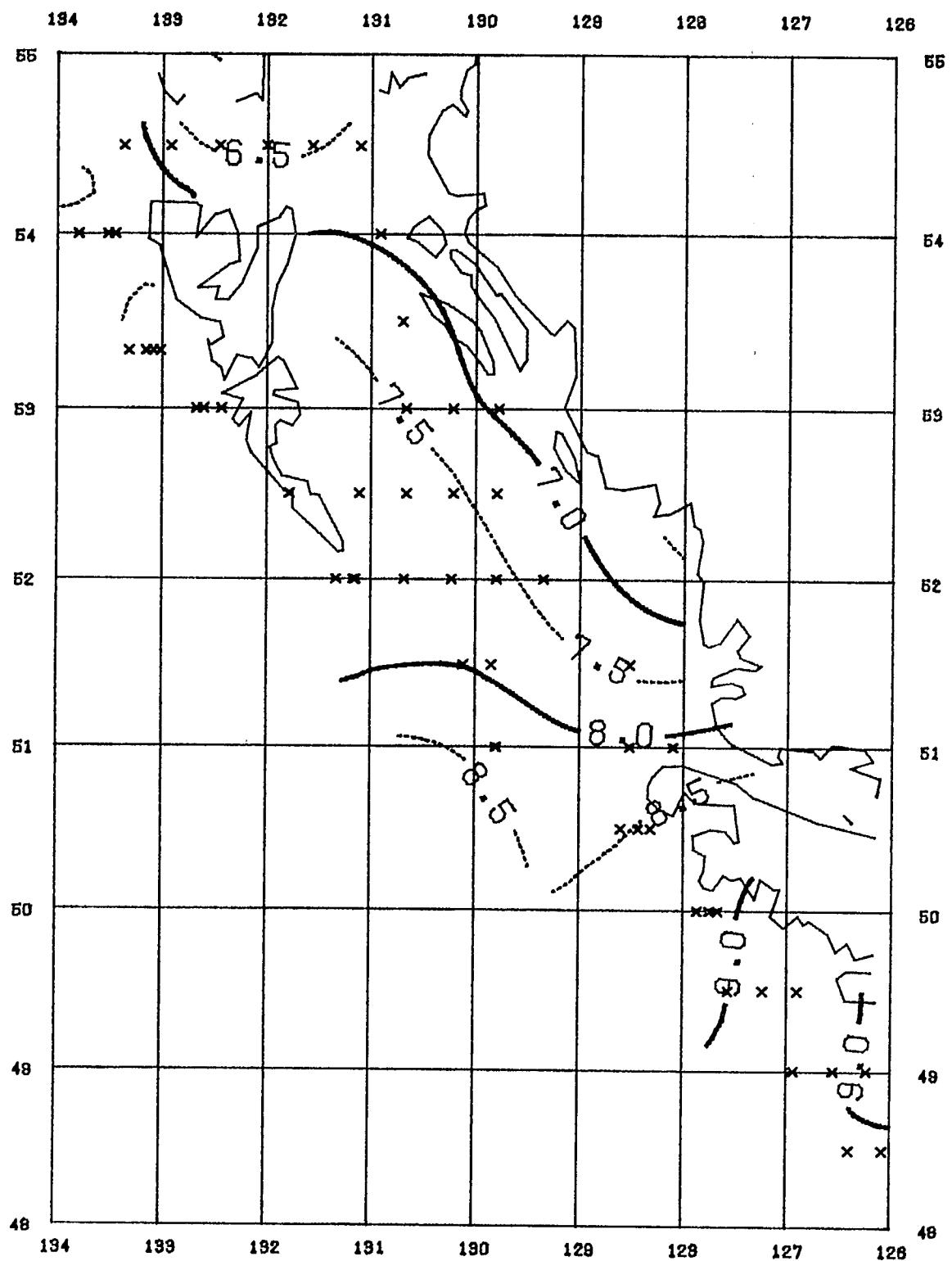
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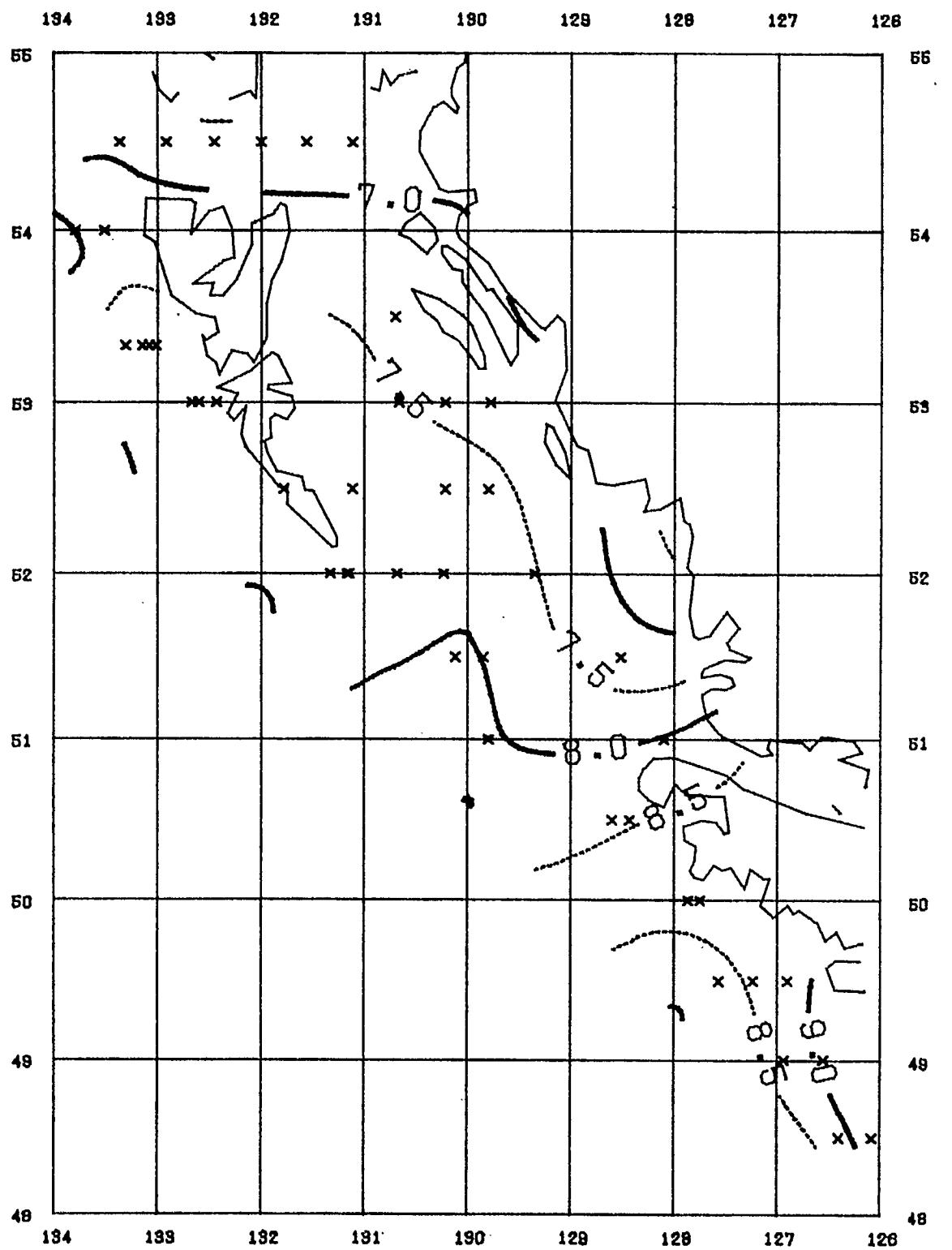
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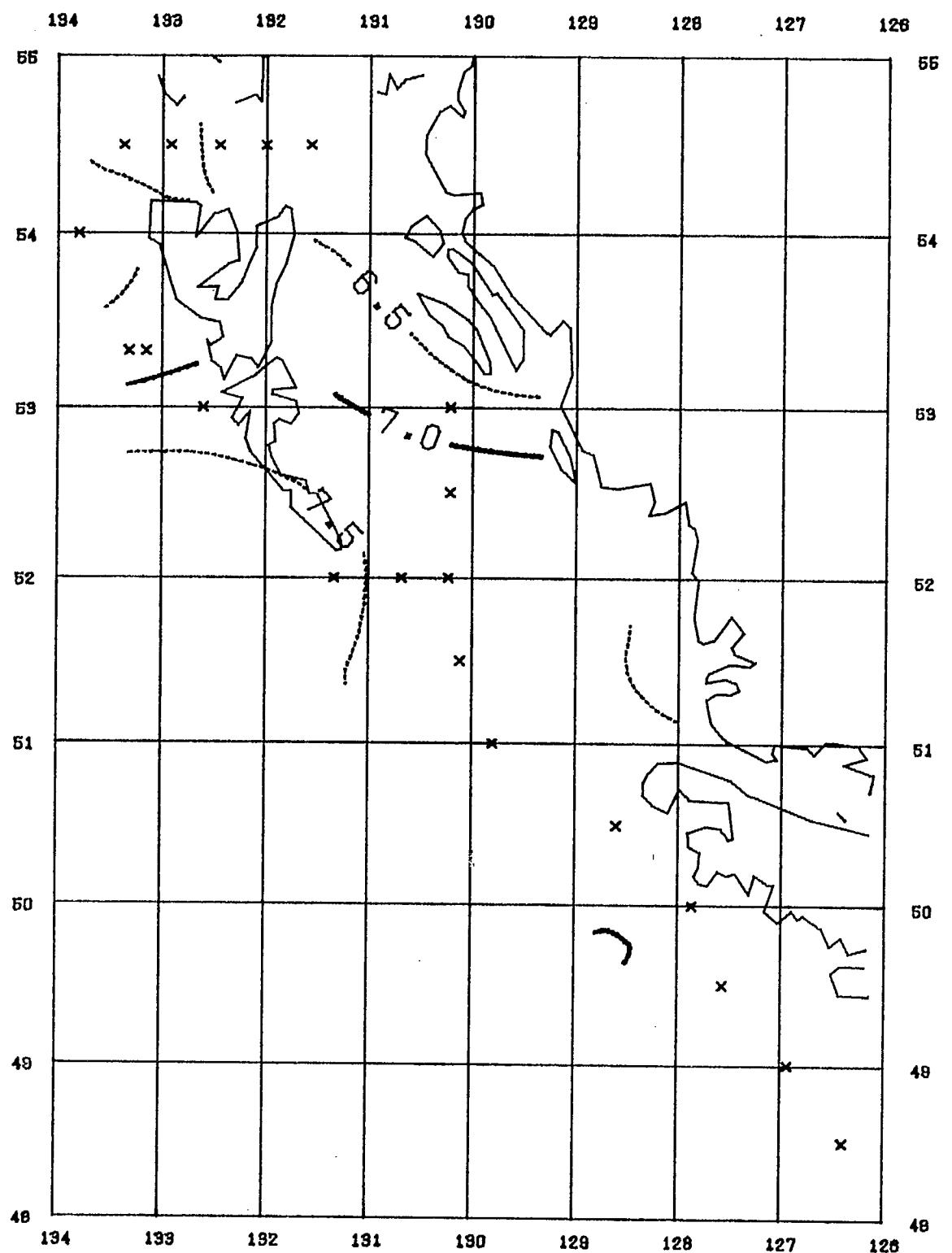
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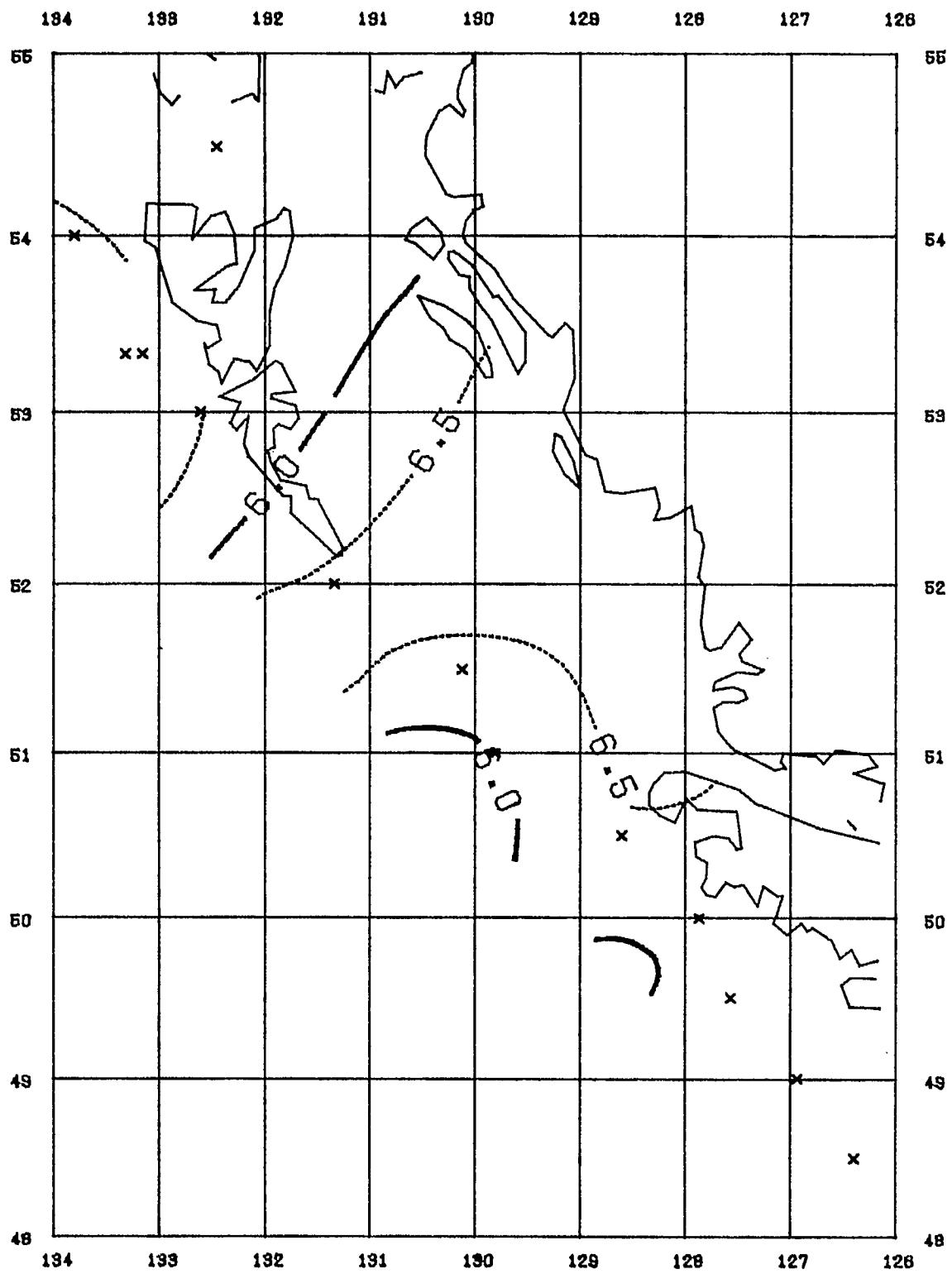
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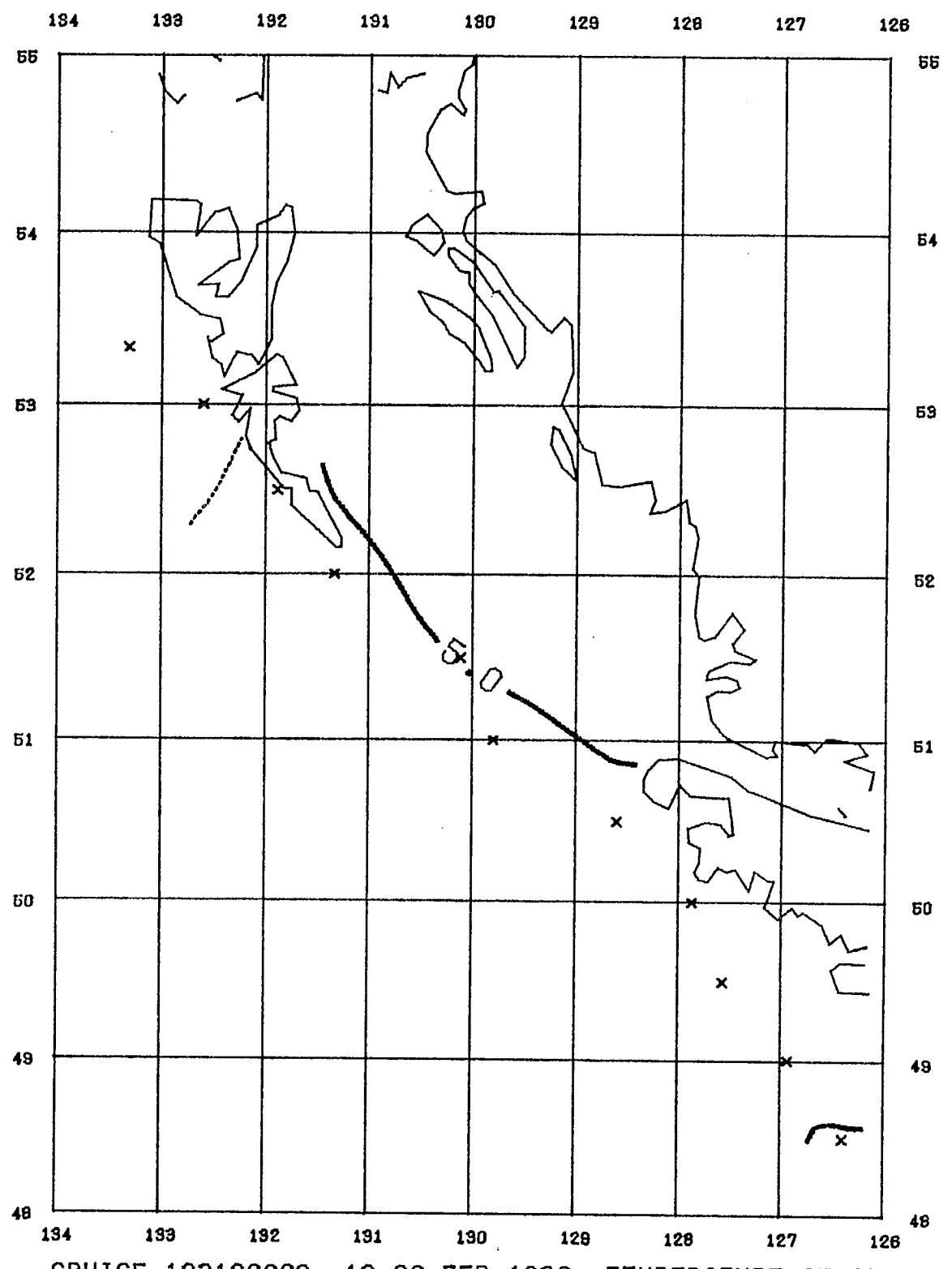
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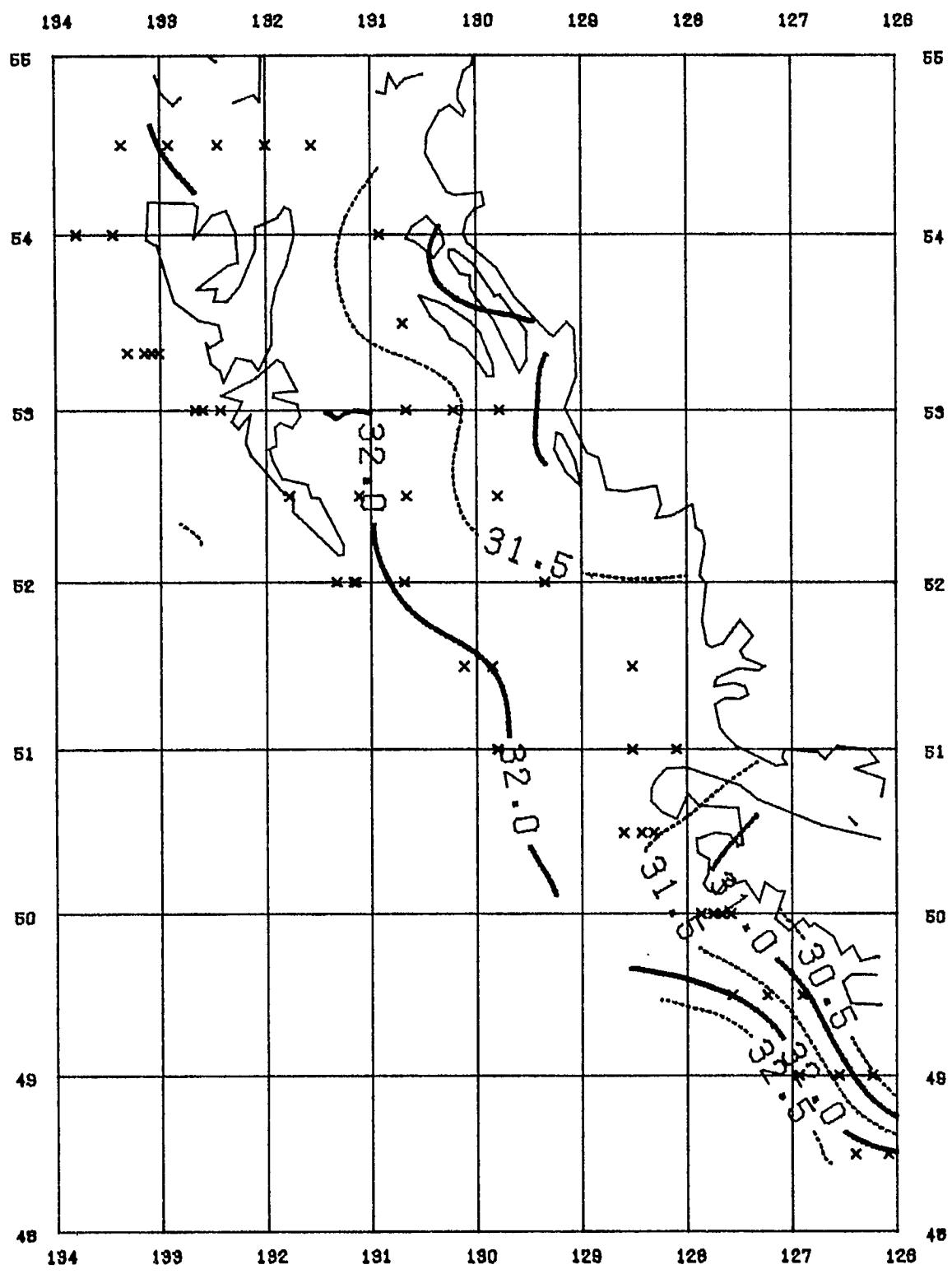
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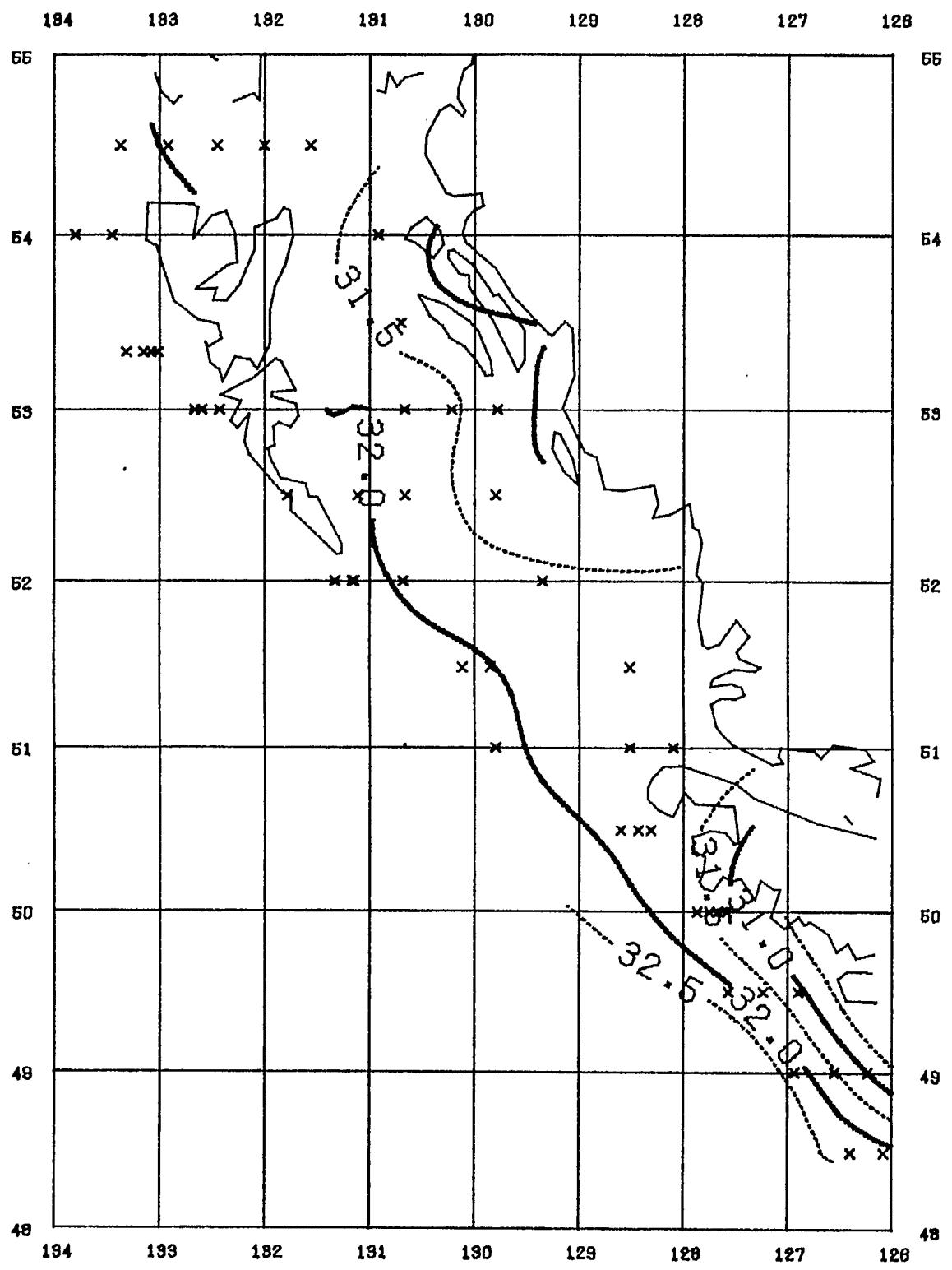


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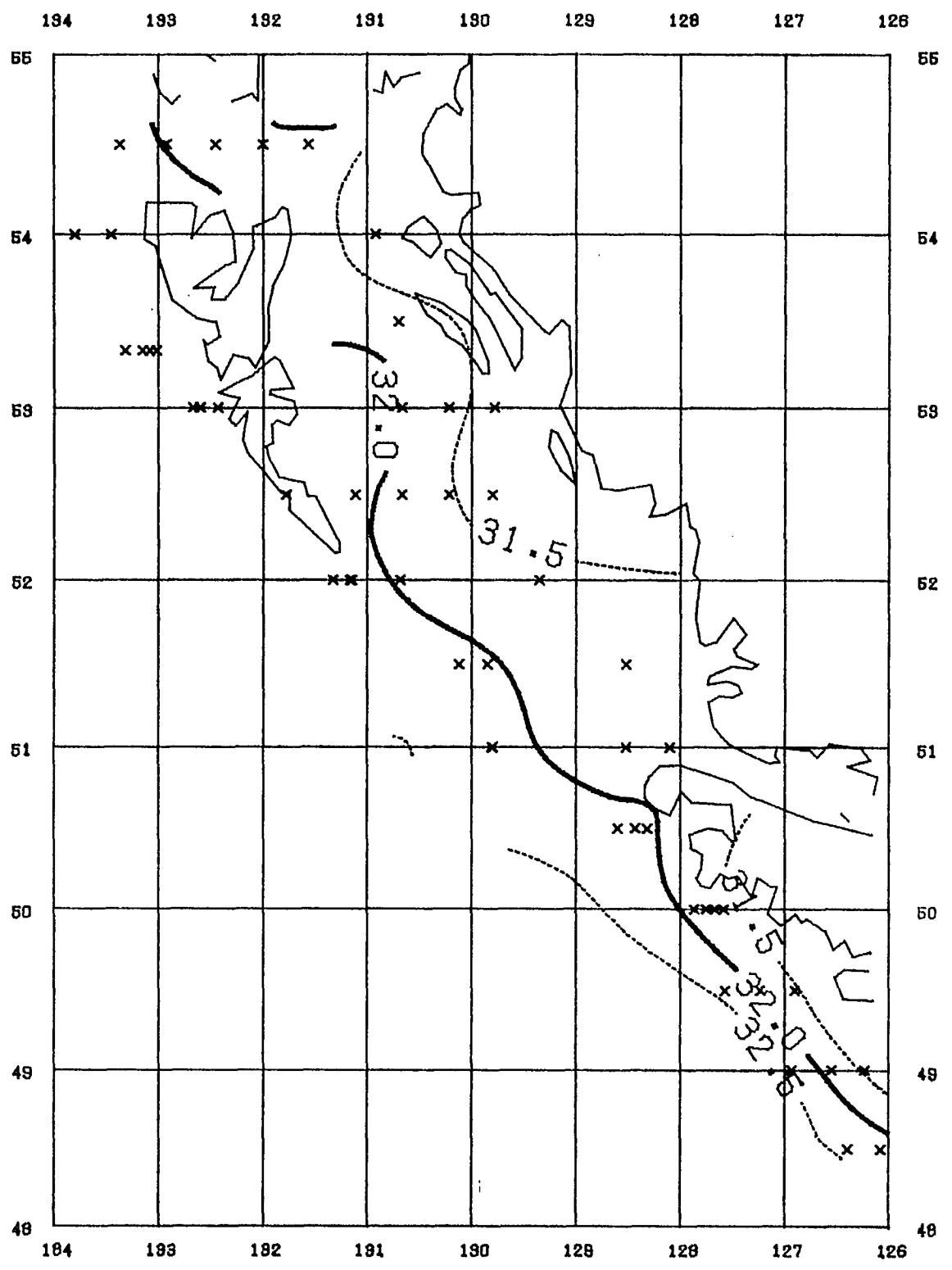


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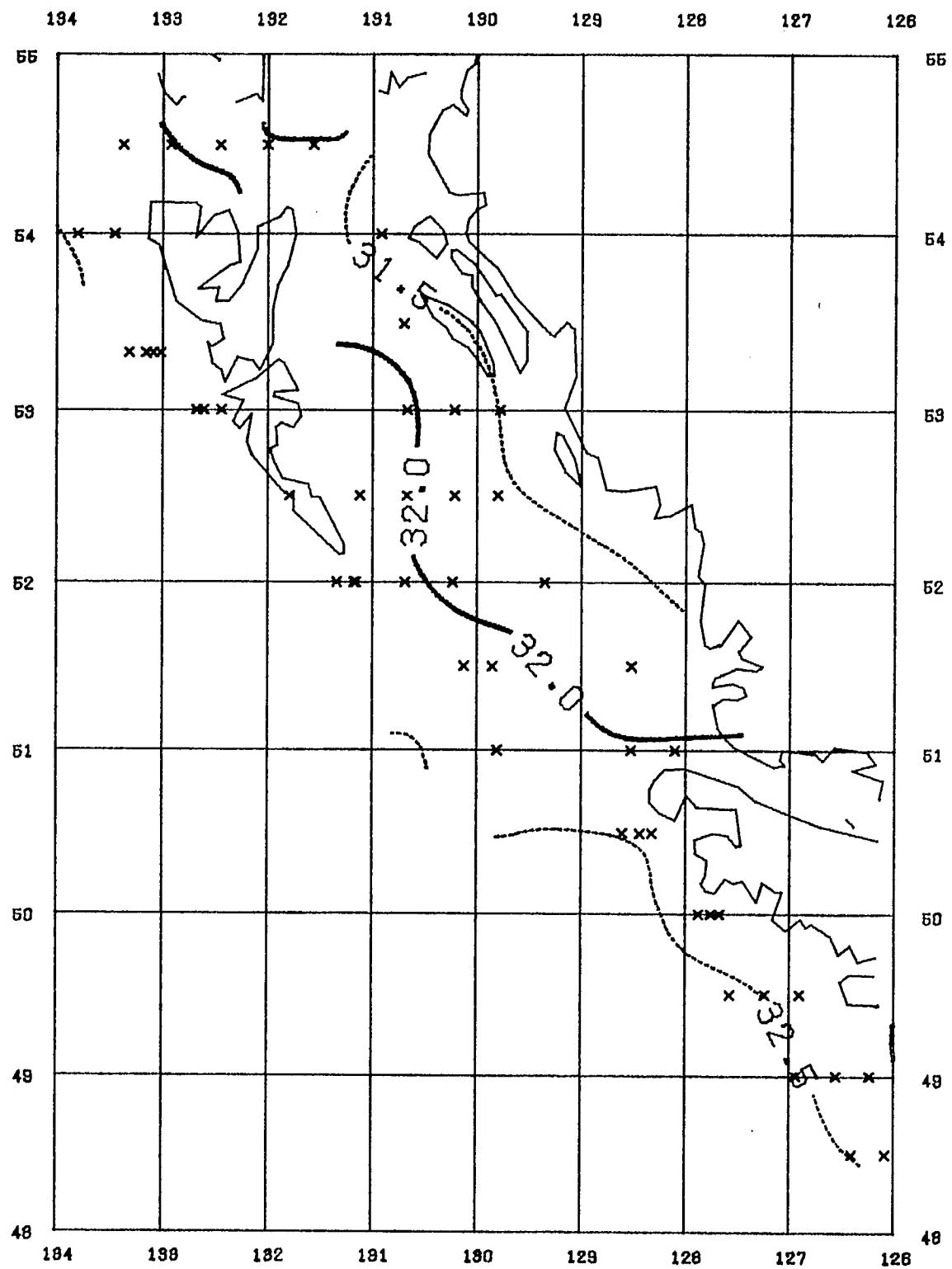
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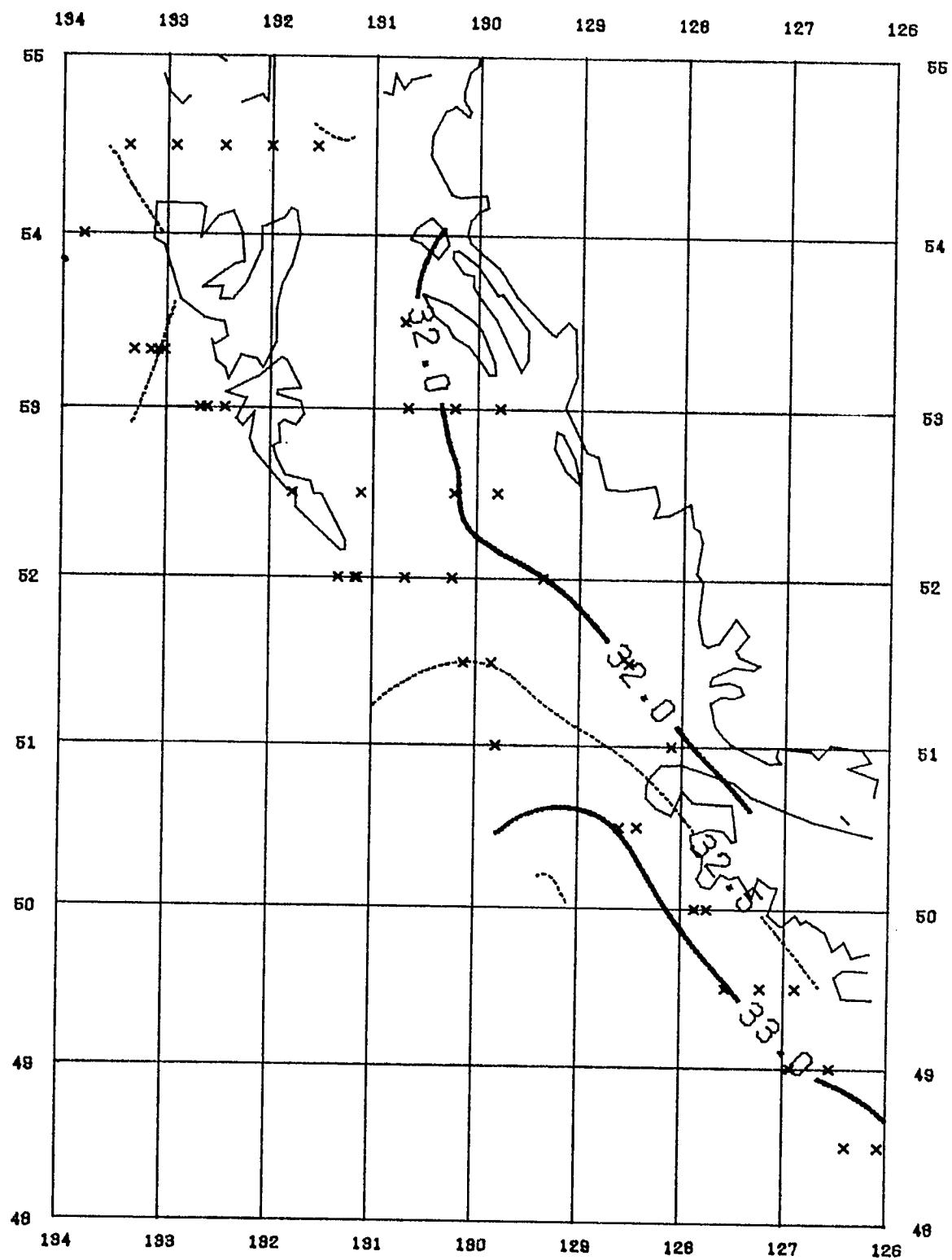
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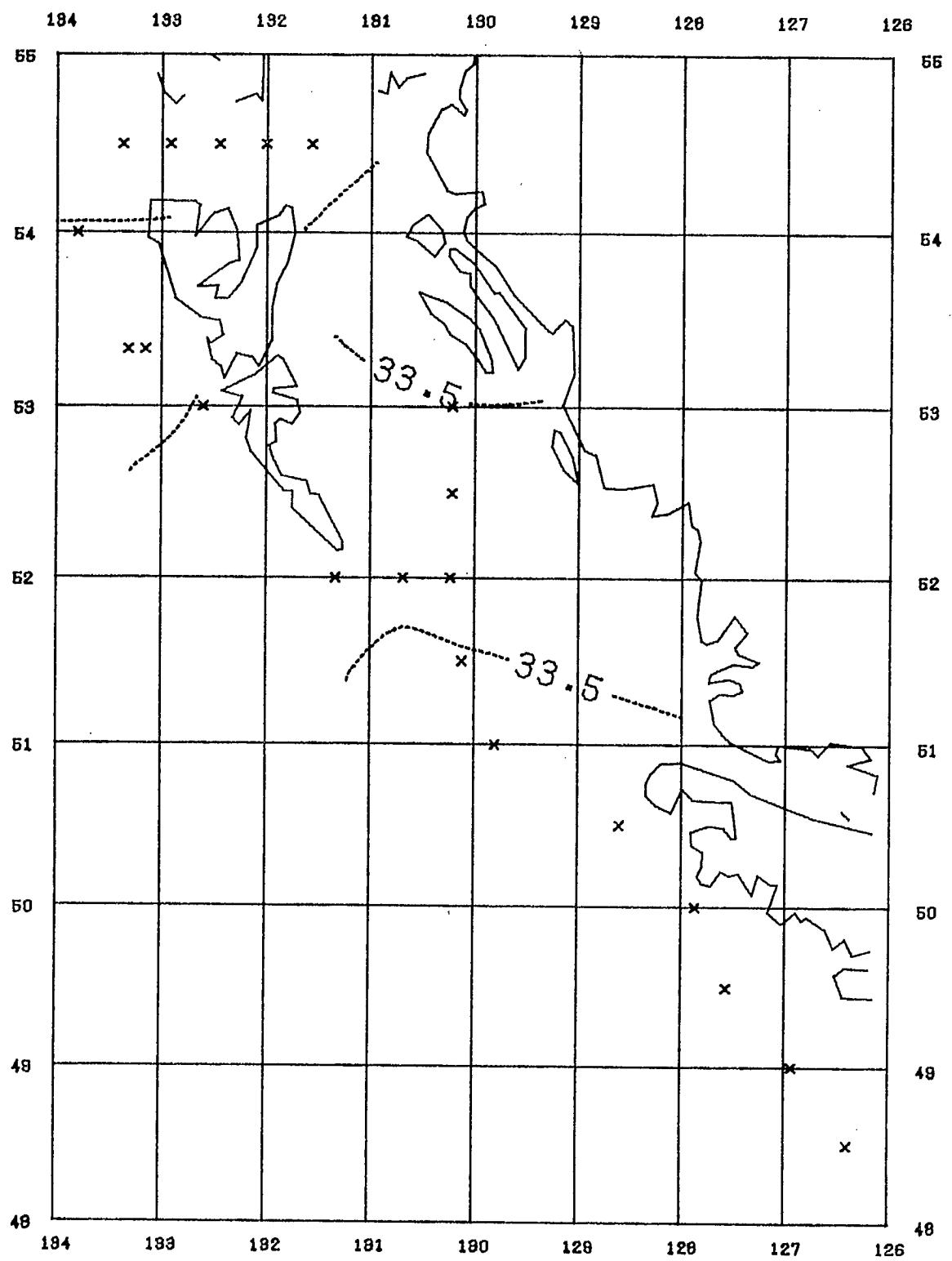
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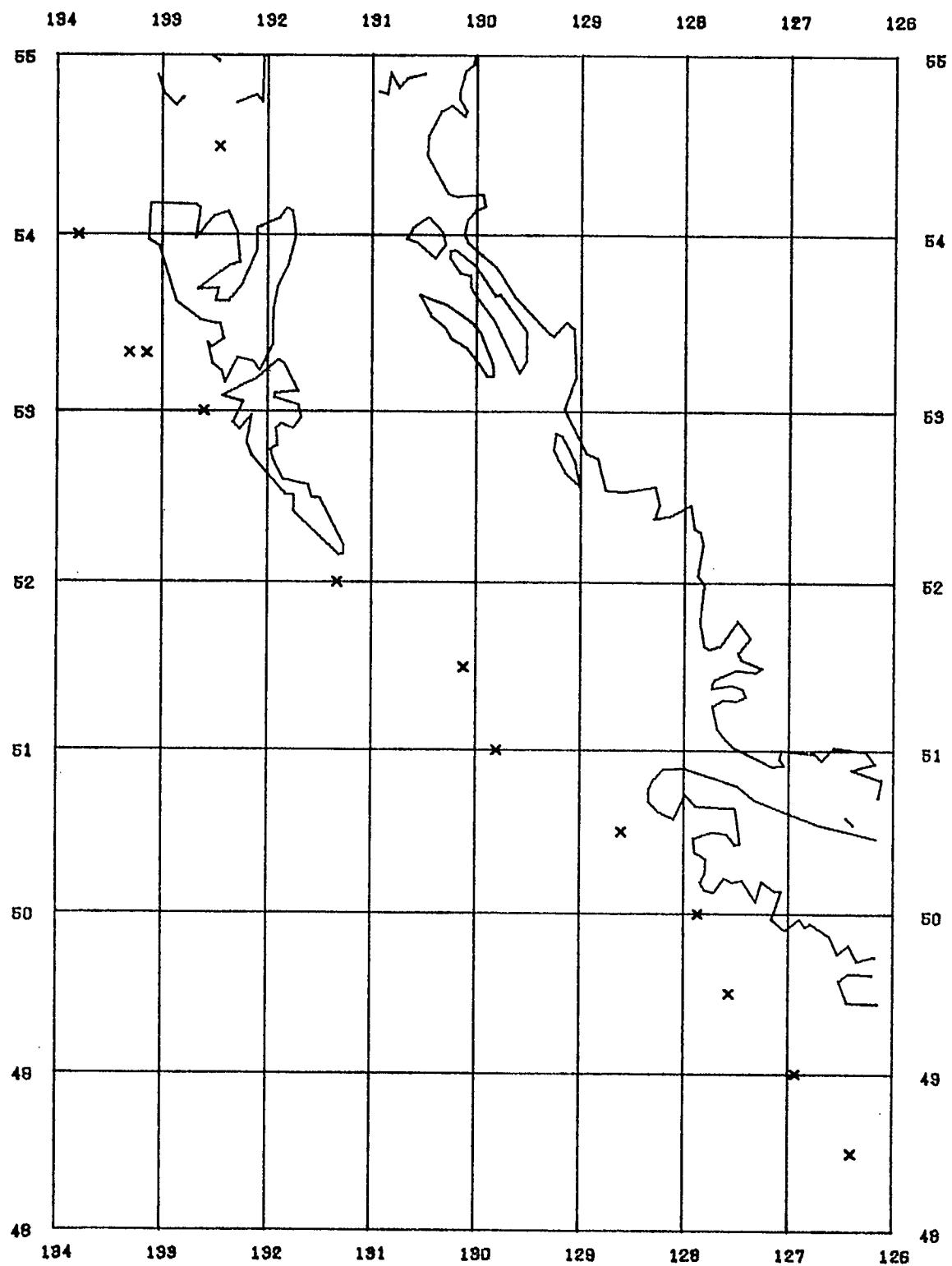
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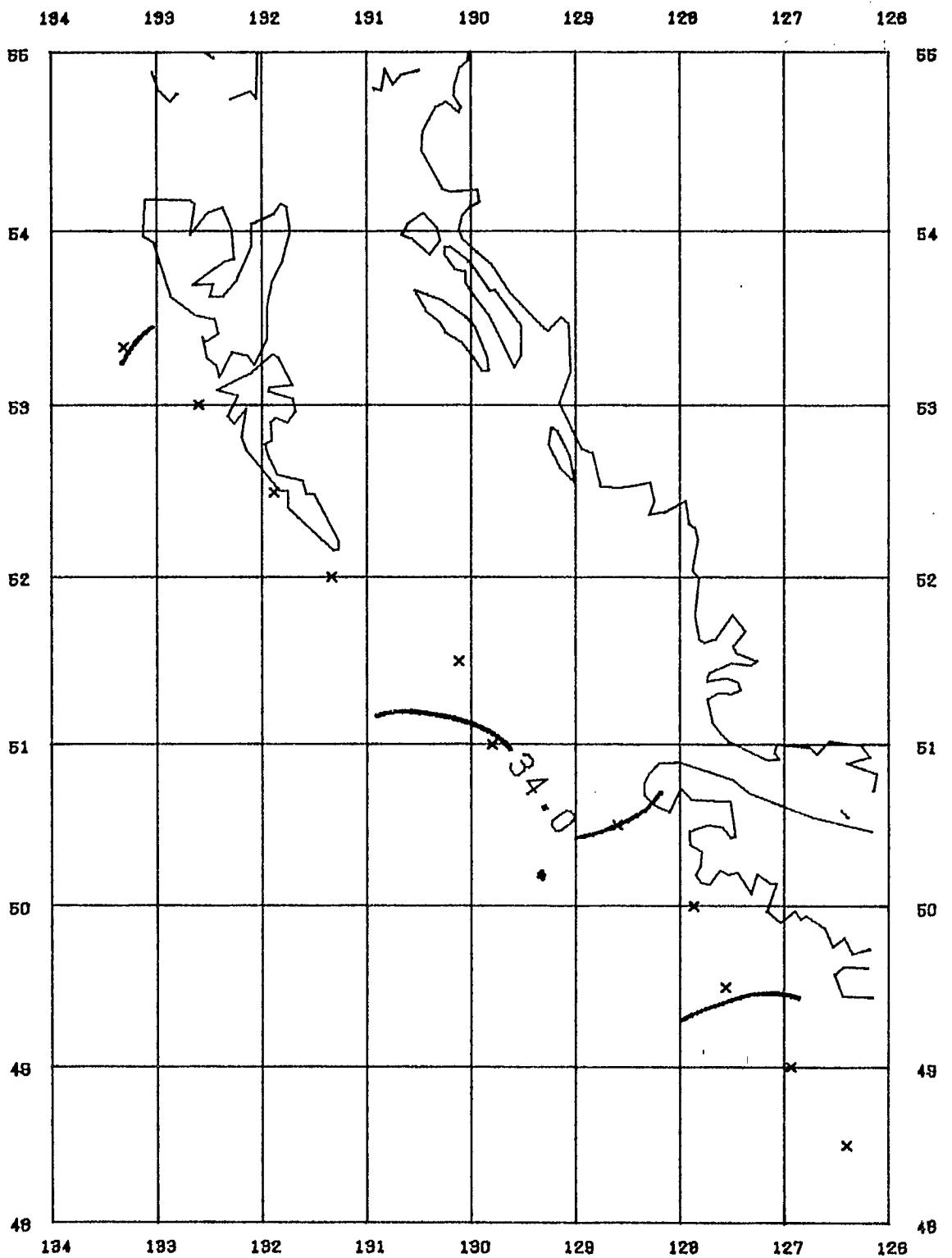
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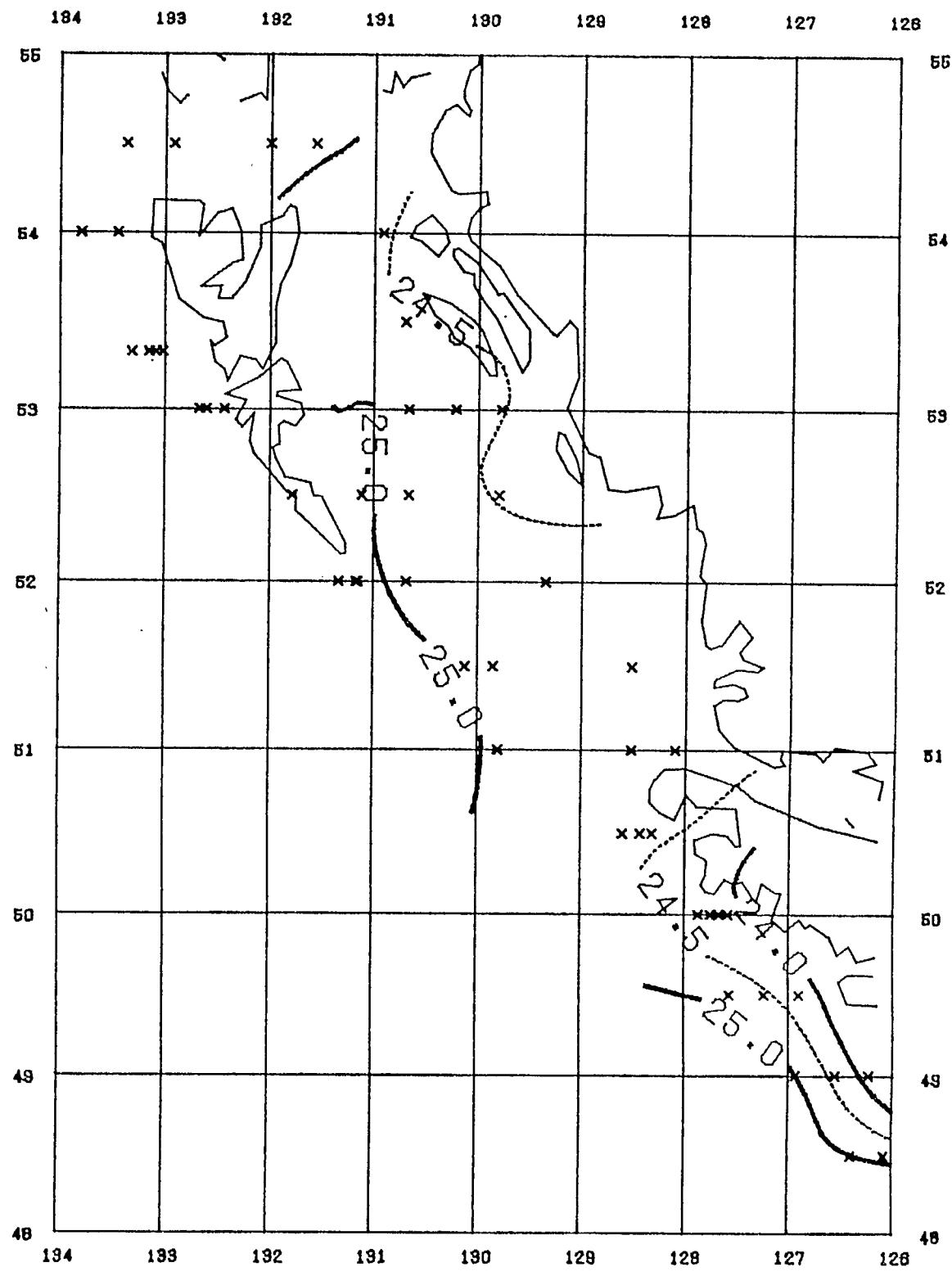
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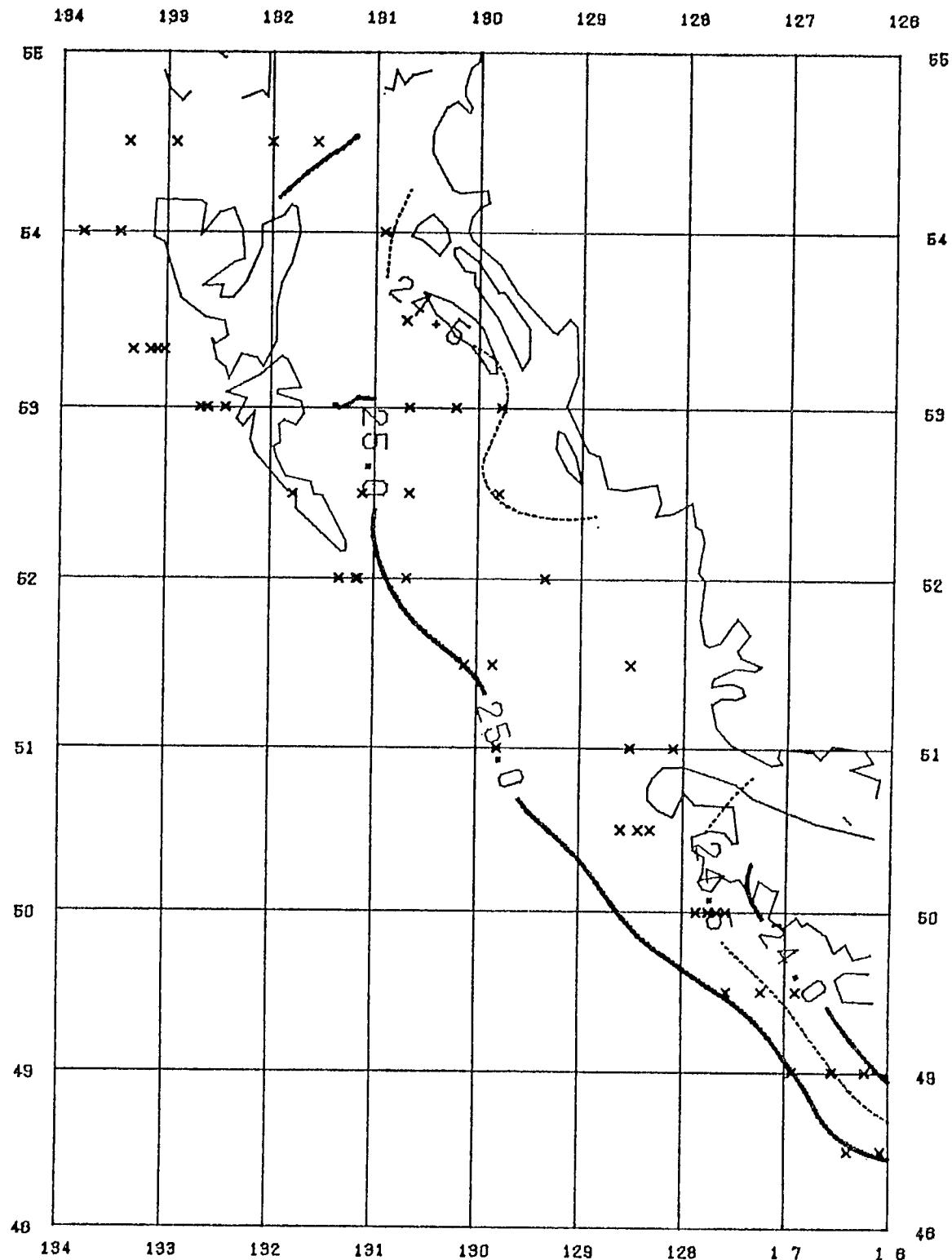
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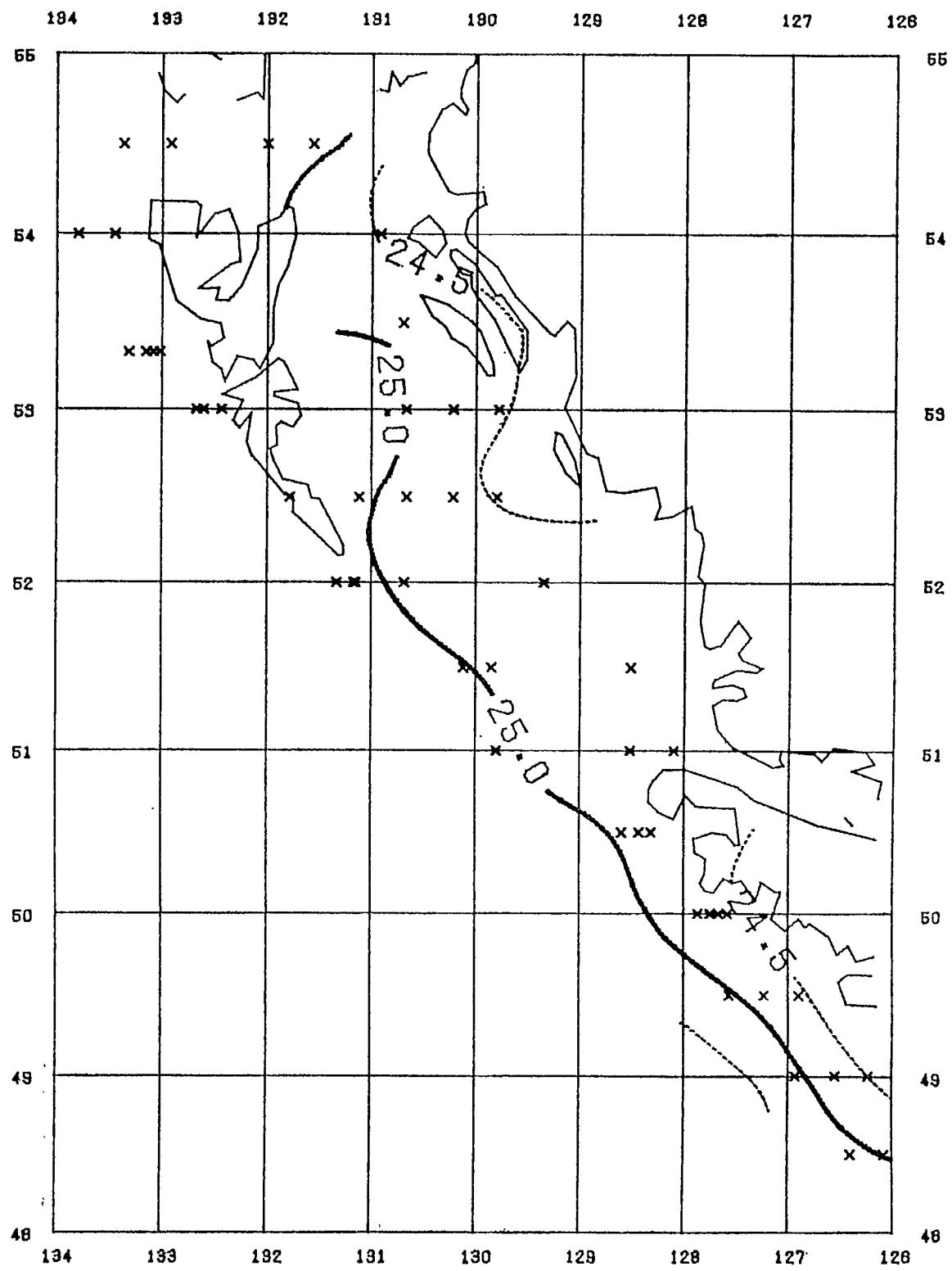
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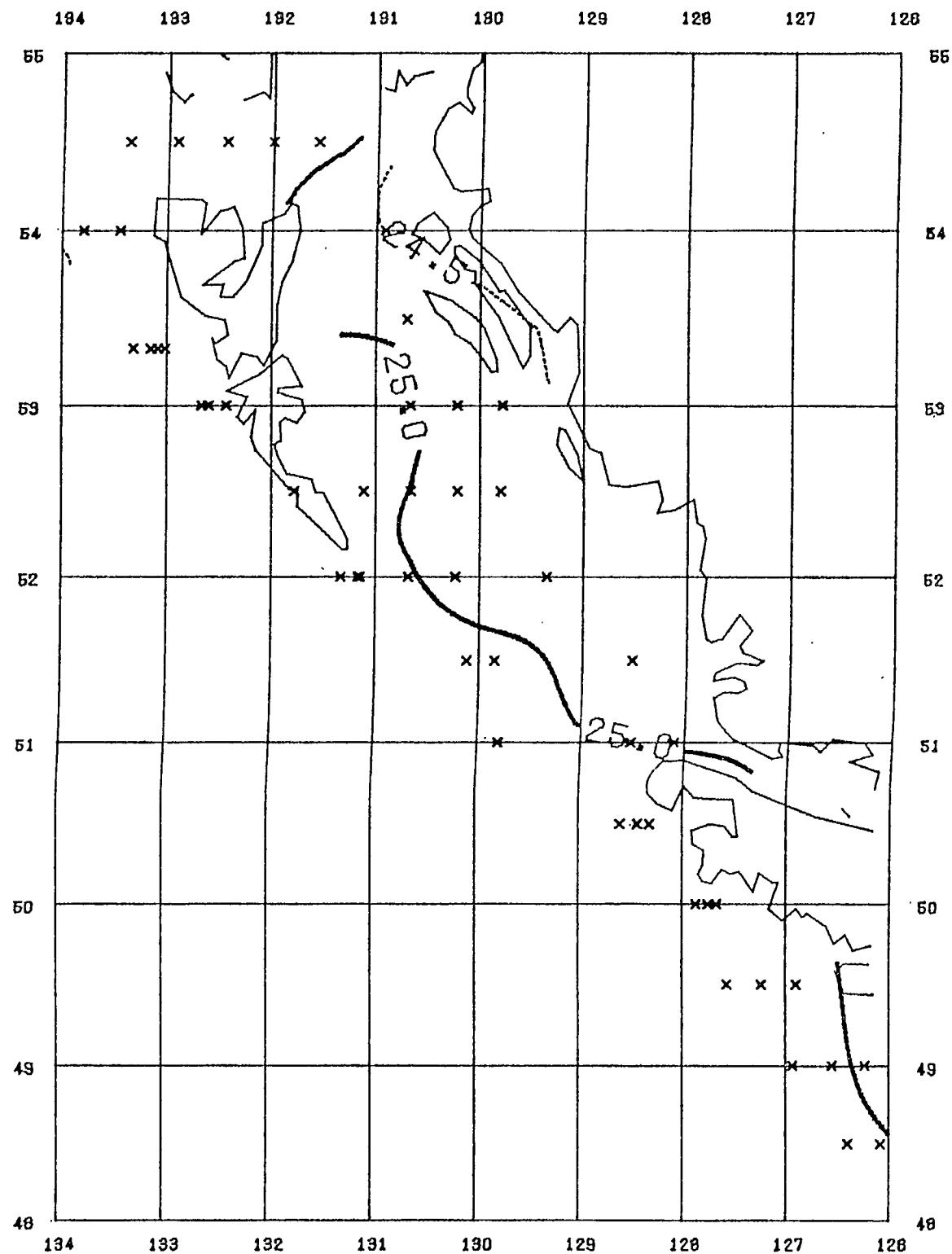
CRUISE 183180002 13-20 FEB 1980 SIGMA-T AT DEPTH 10.0





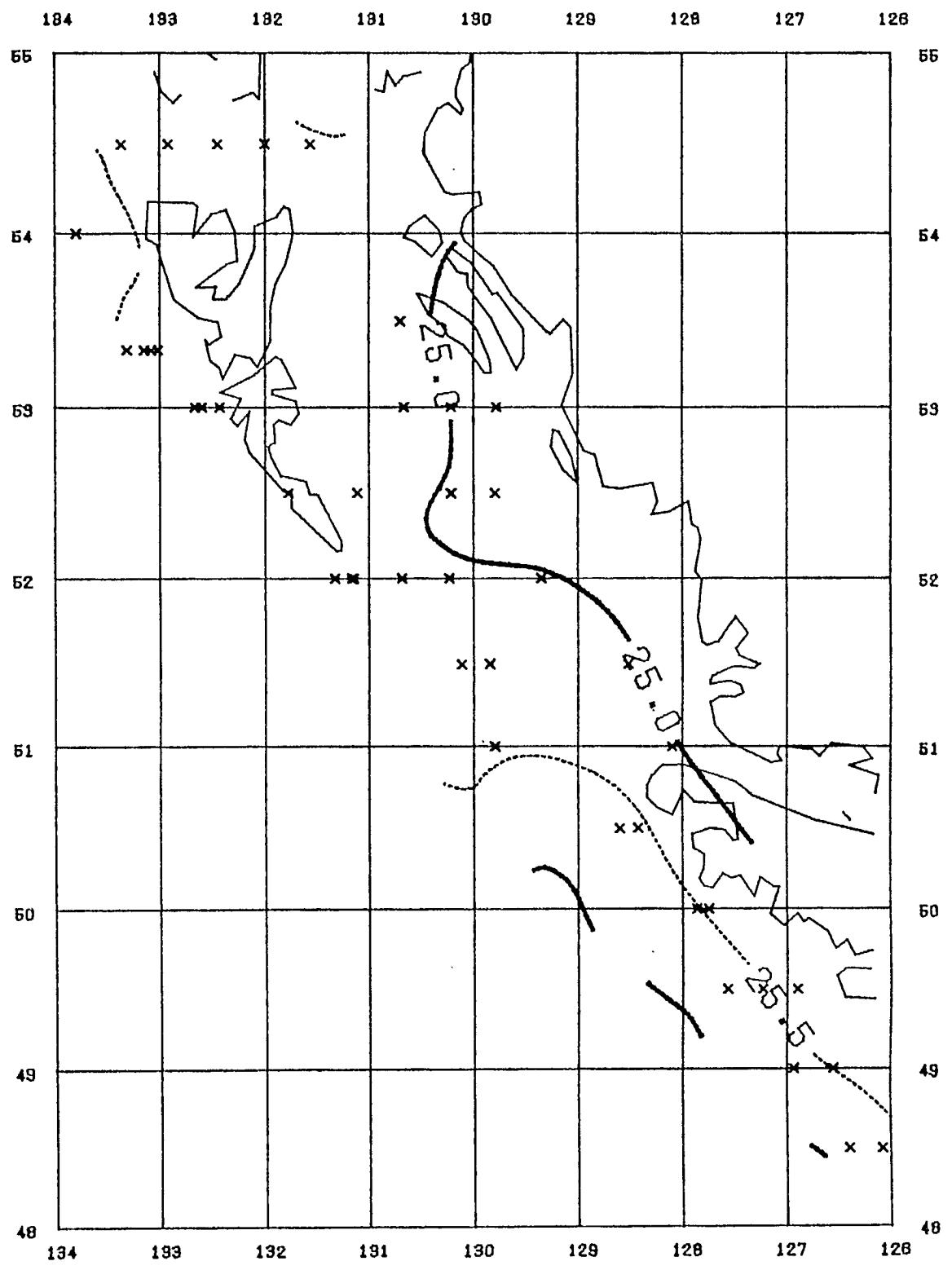
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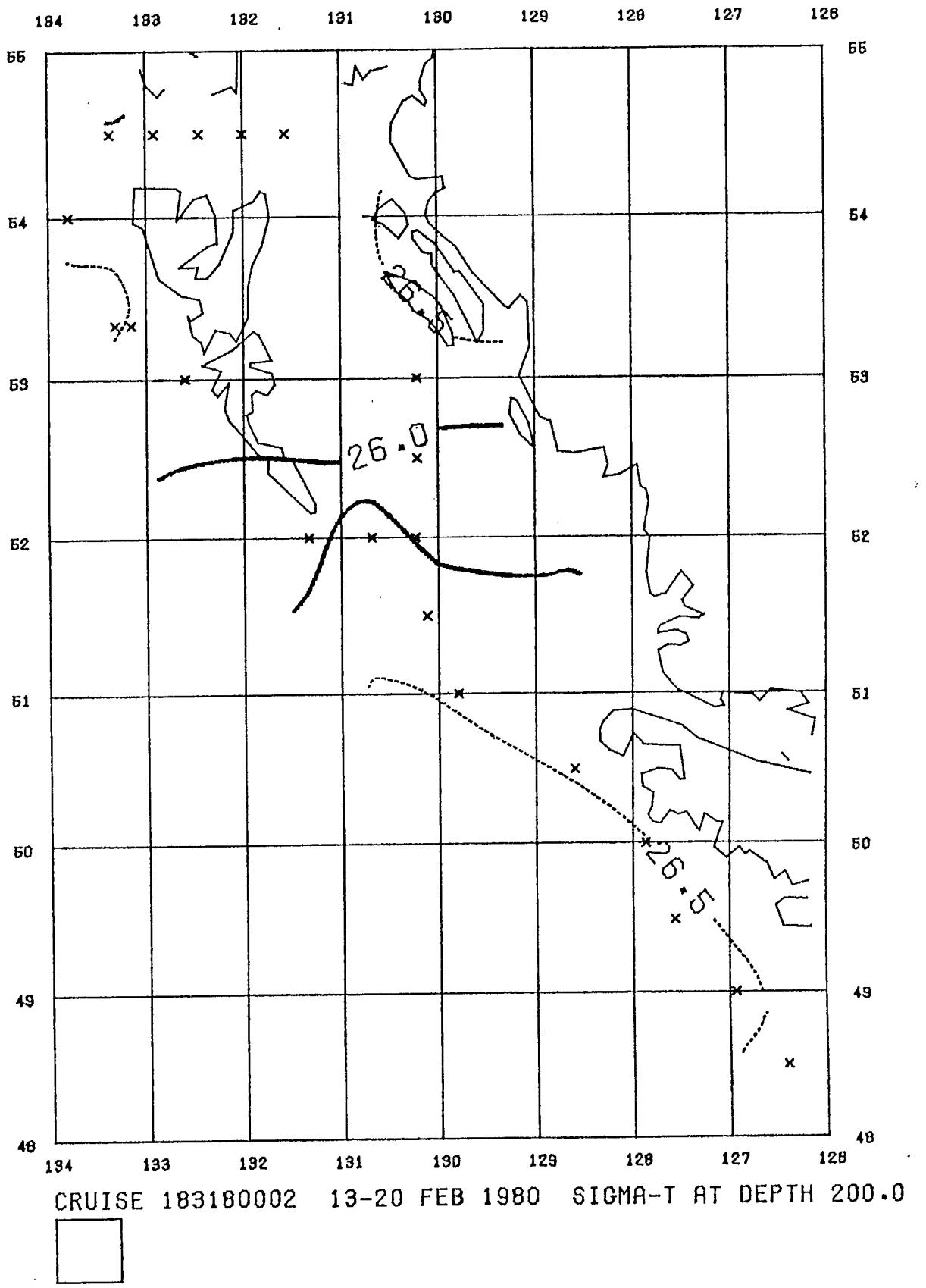
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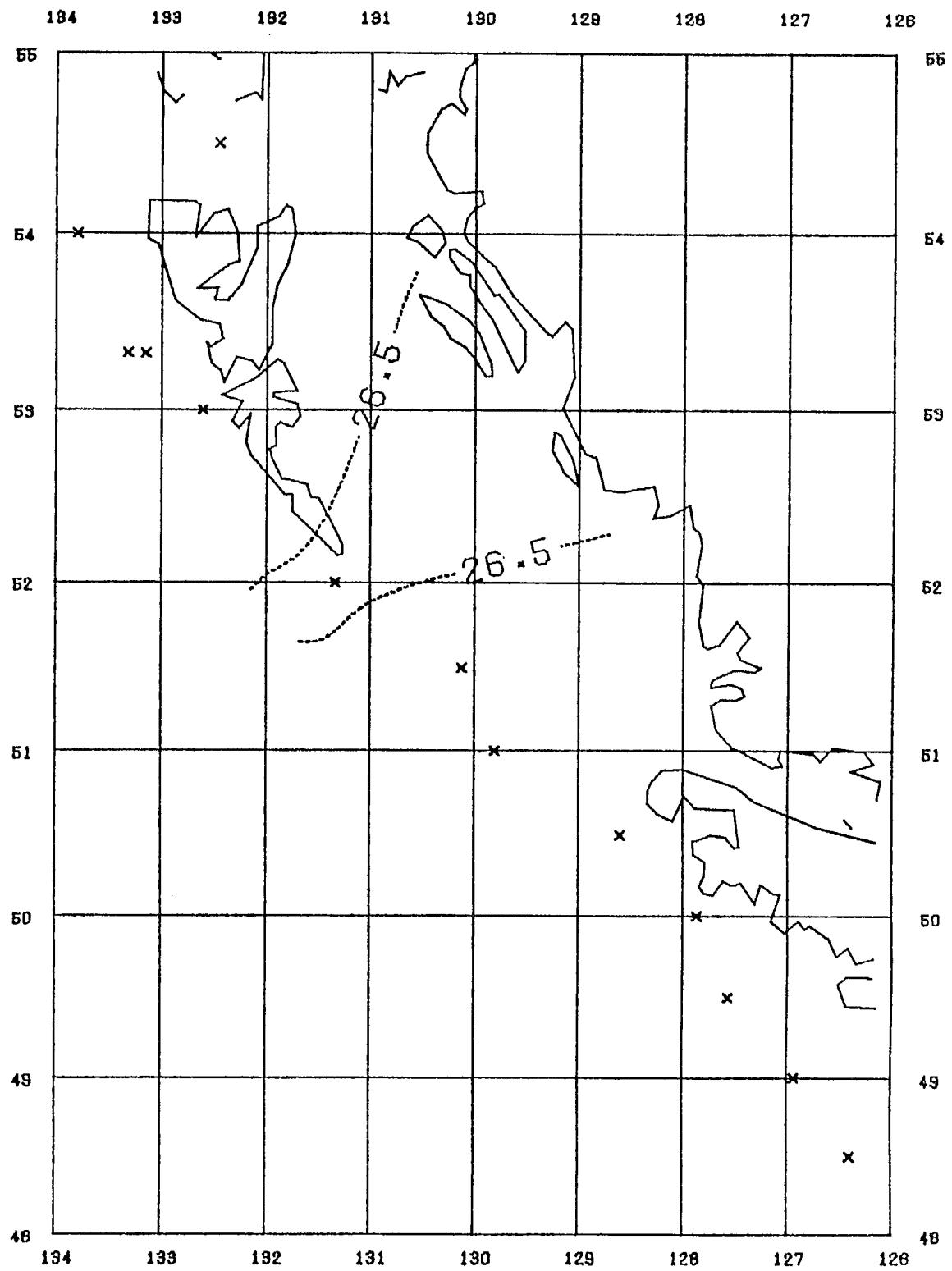




CRUISE 183180002 13-20 FEB 1980 SIGMA-T AT DEPTH 100.0

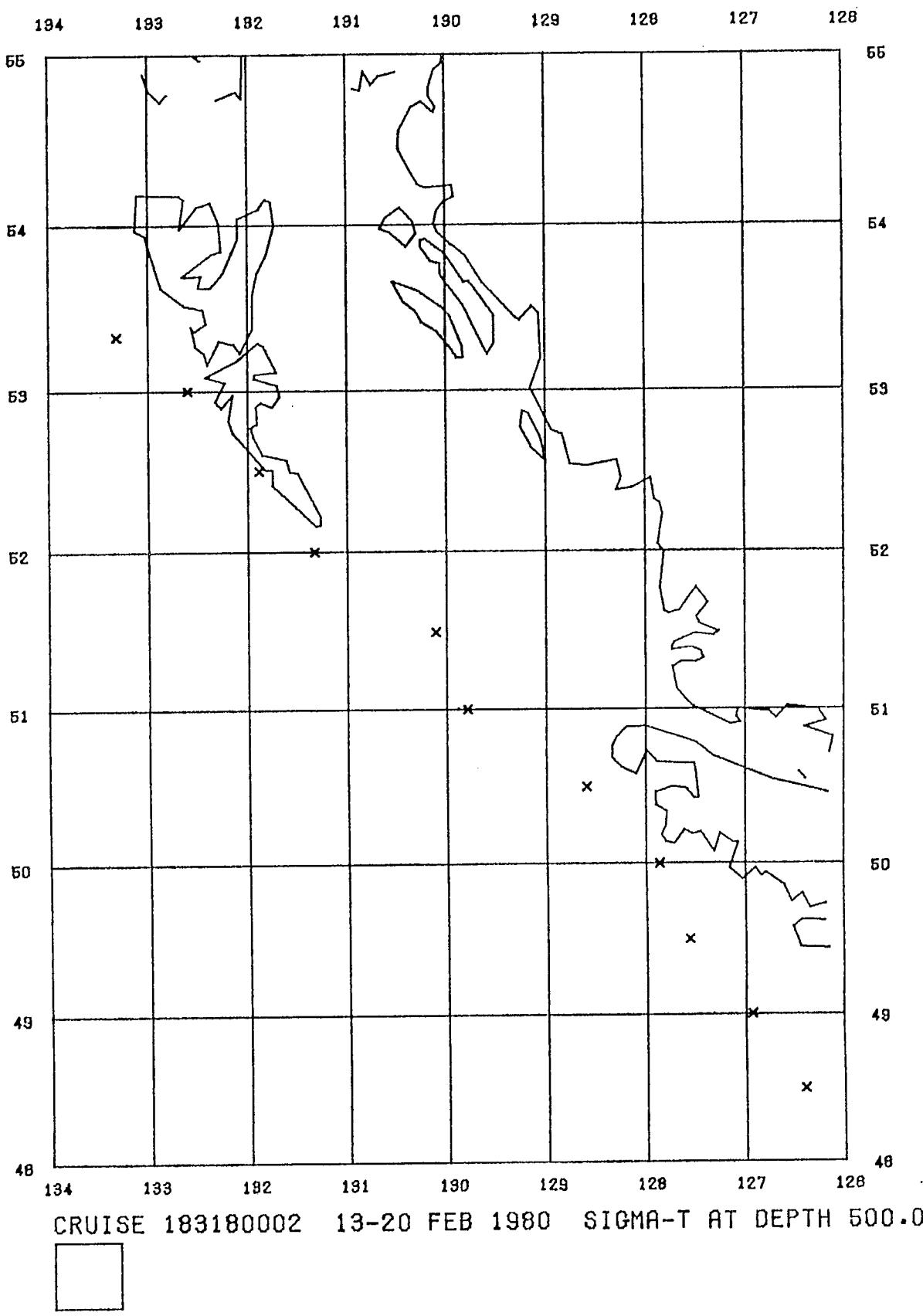




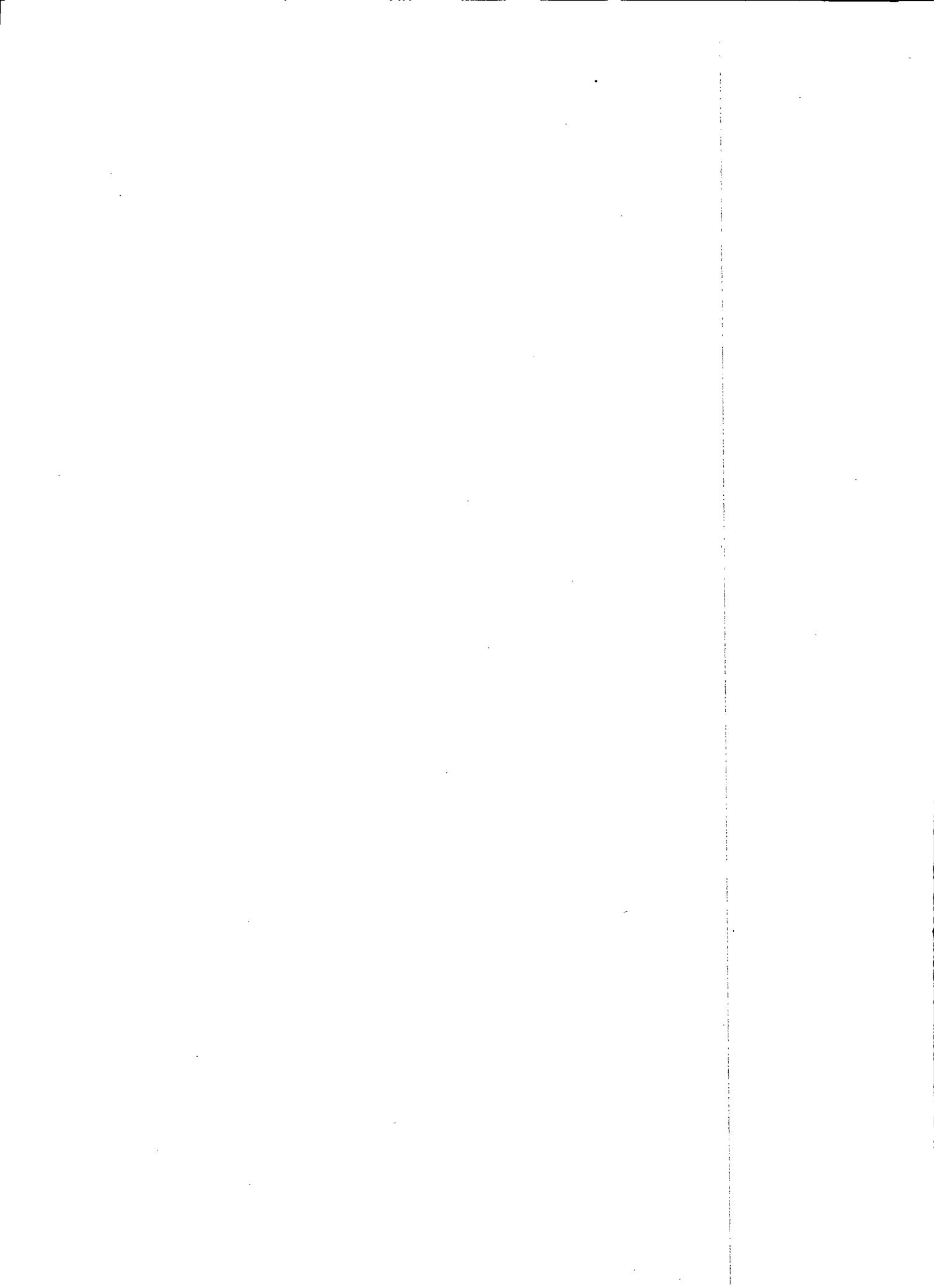


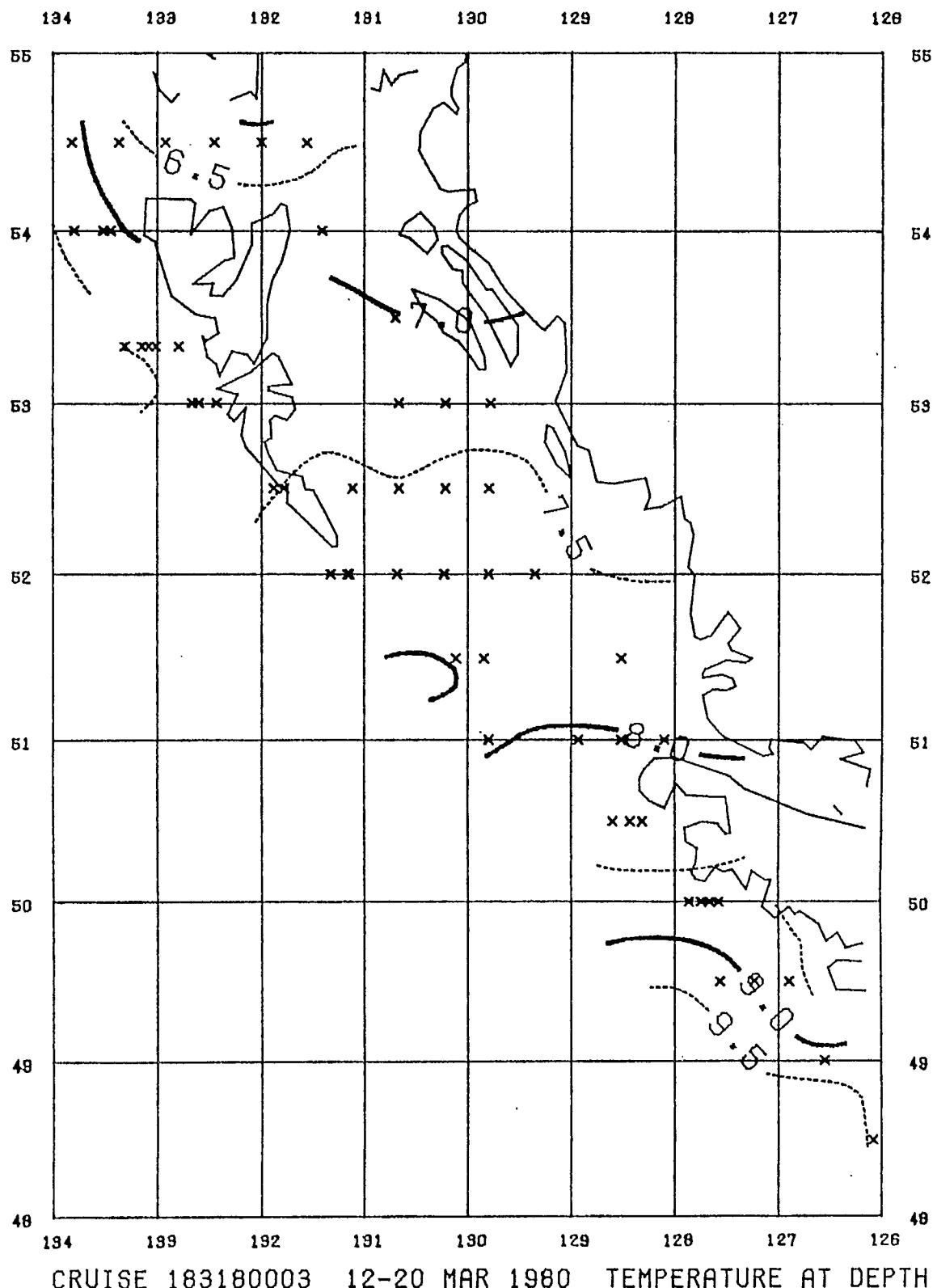
CRUISE 183180002 13-20 FEB 1980 SIGMA-T AT DEPTH 300.0





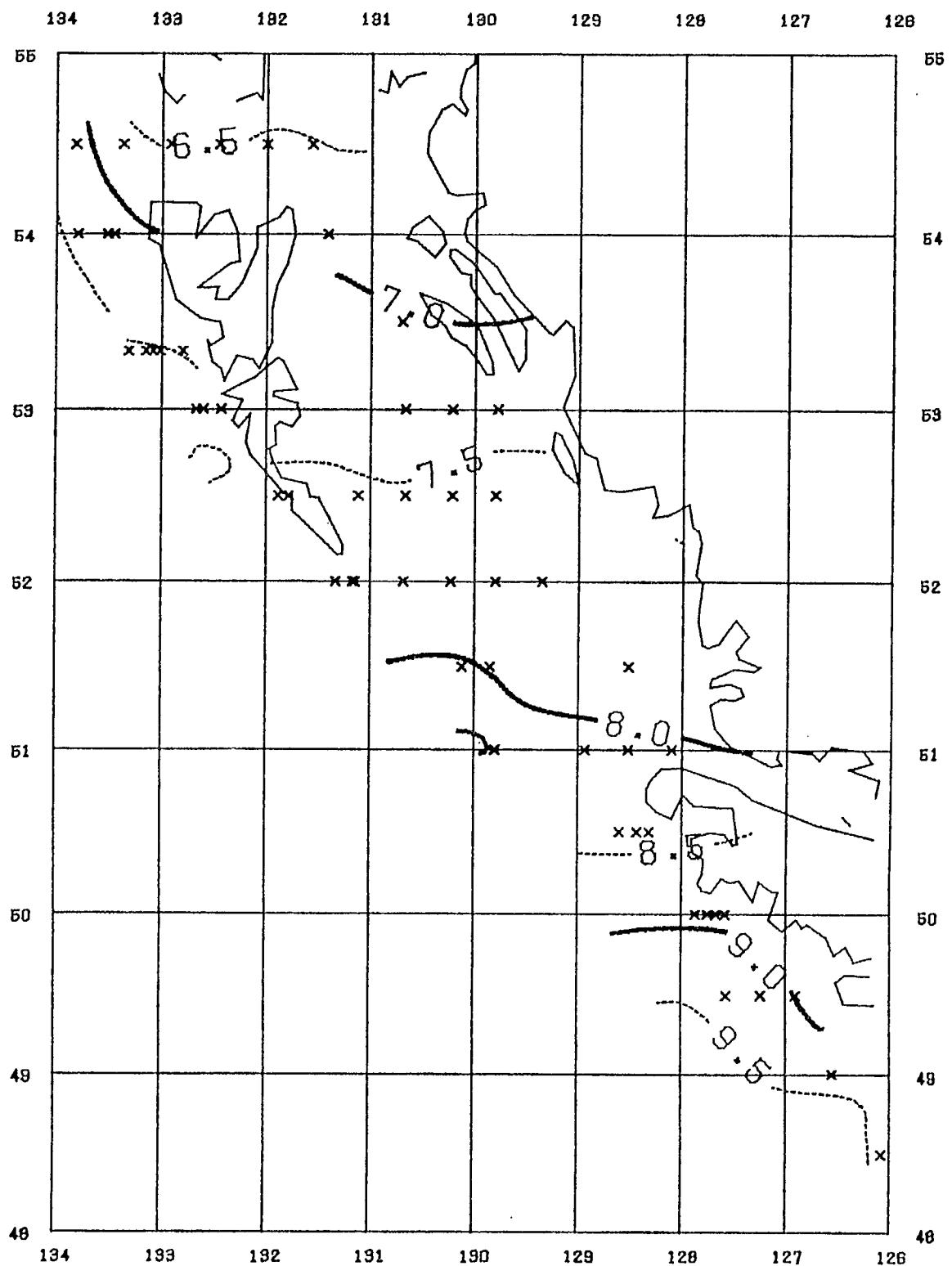
CRUISE THREE MARCH 12-20, 1980





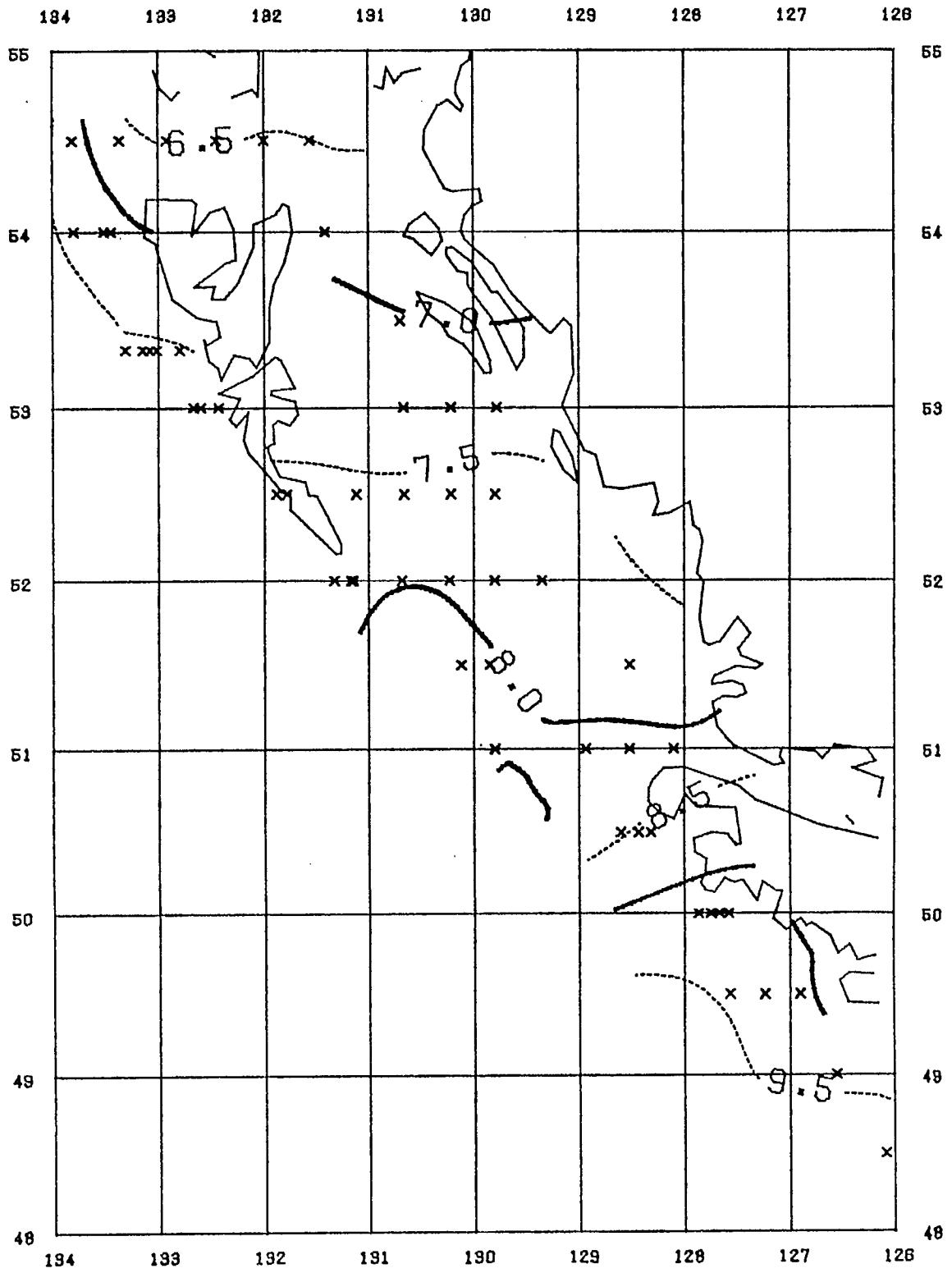
CRUISE 1831B0003 12-20 MAR 1980 TEMPERATURE AT DEPTH 0.0





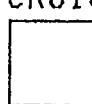
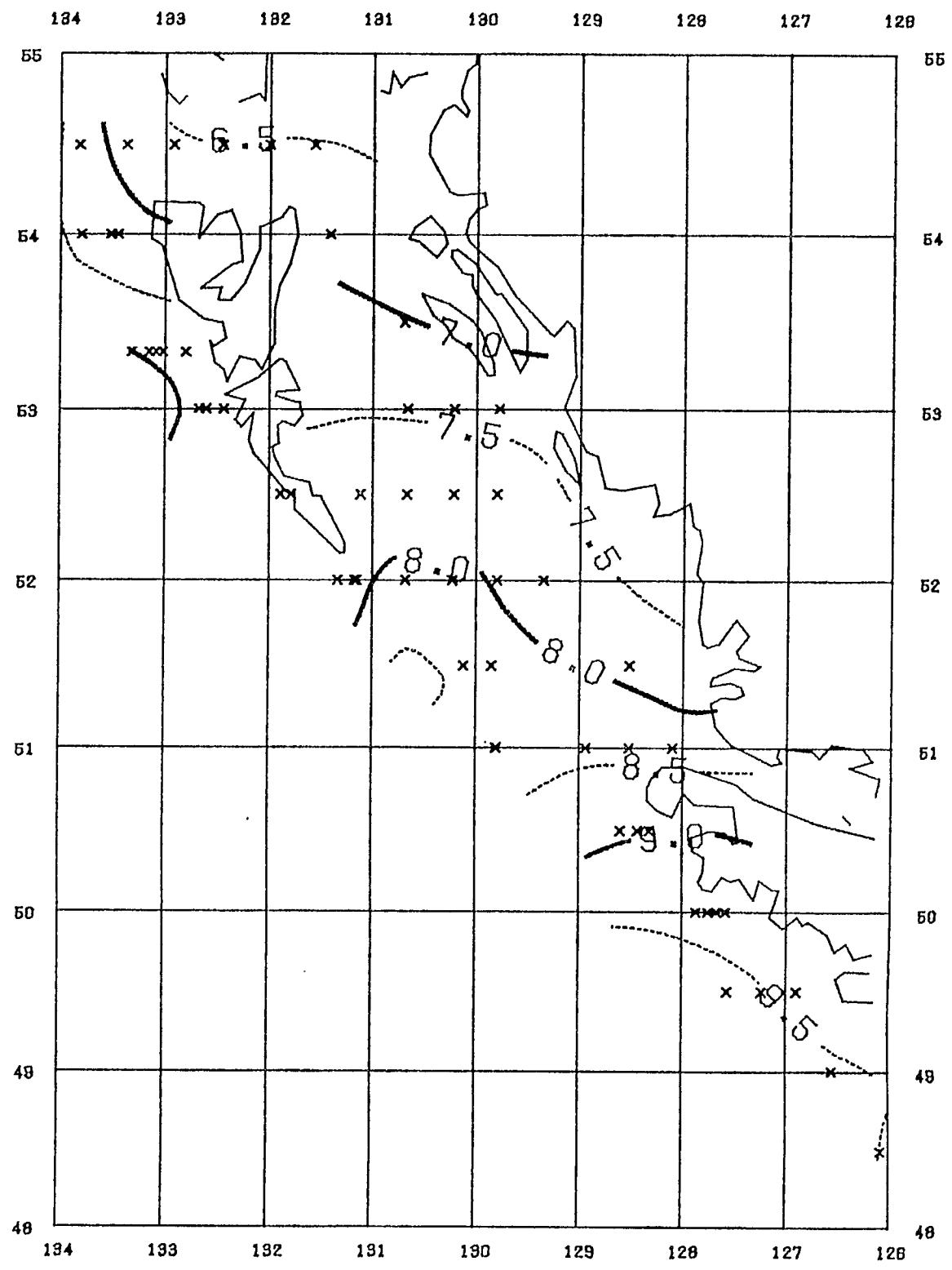
CRUISE 183180003 12-20 MAR 1980 TEMPERATURE AT DEPTH 10.0

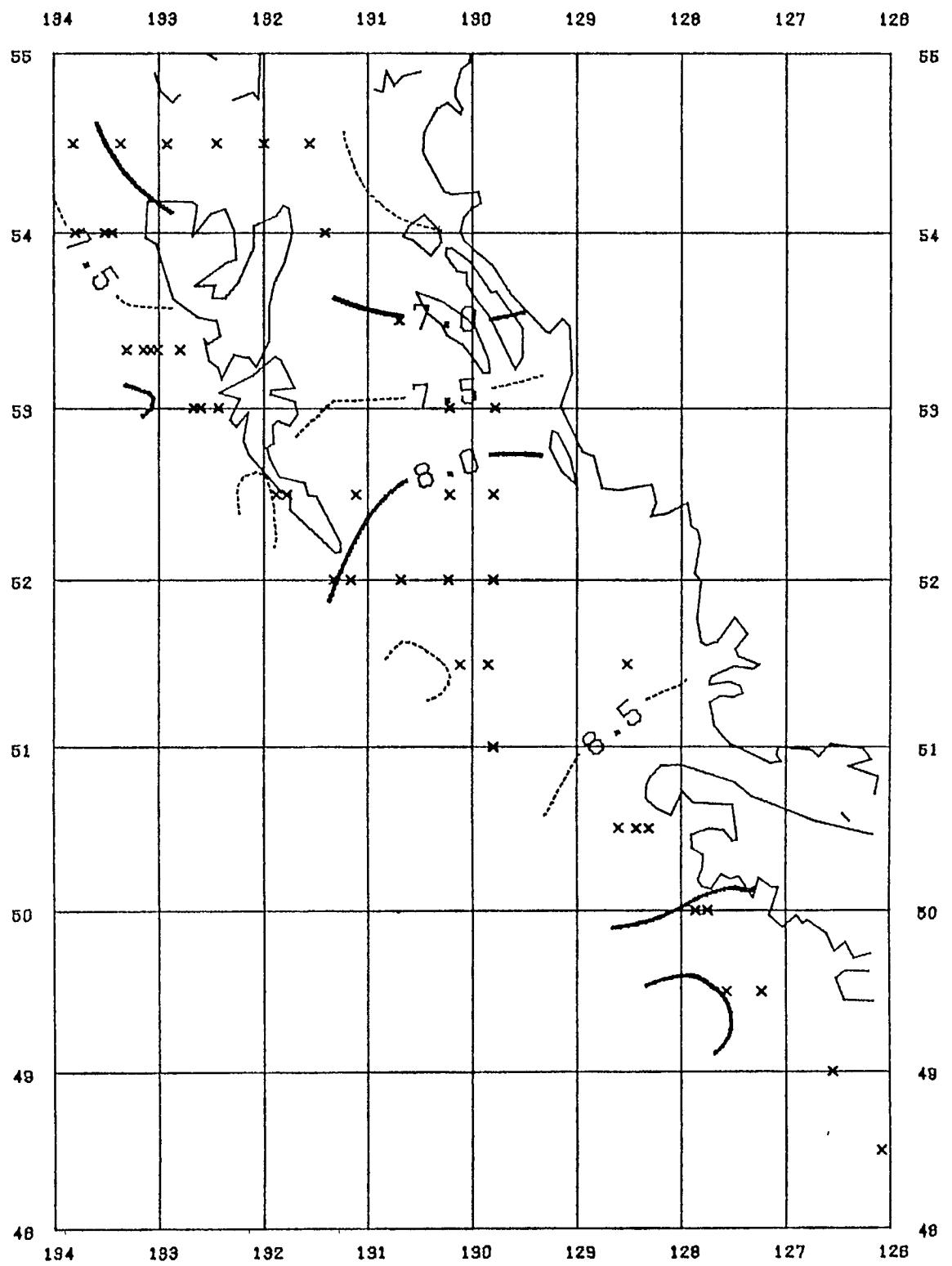




CRUISE 183180003 12-20 MAR 1980 TEMPERATURE AT DEPTH 20.0

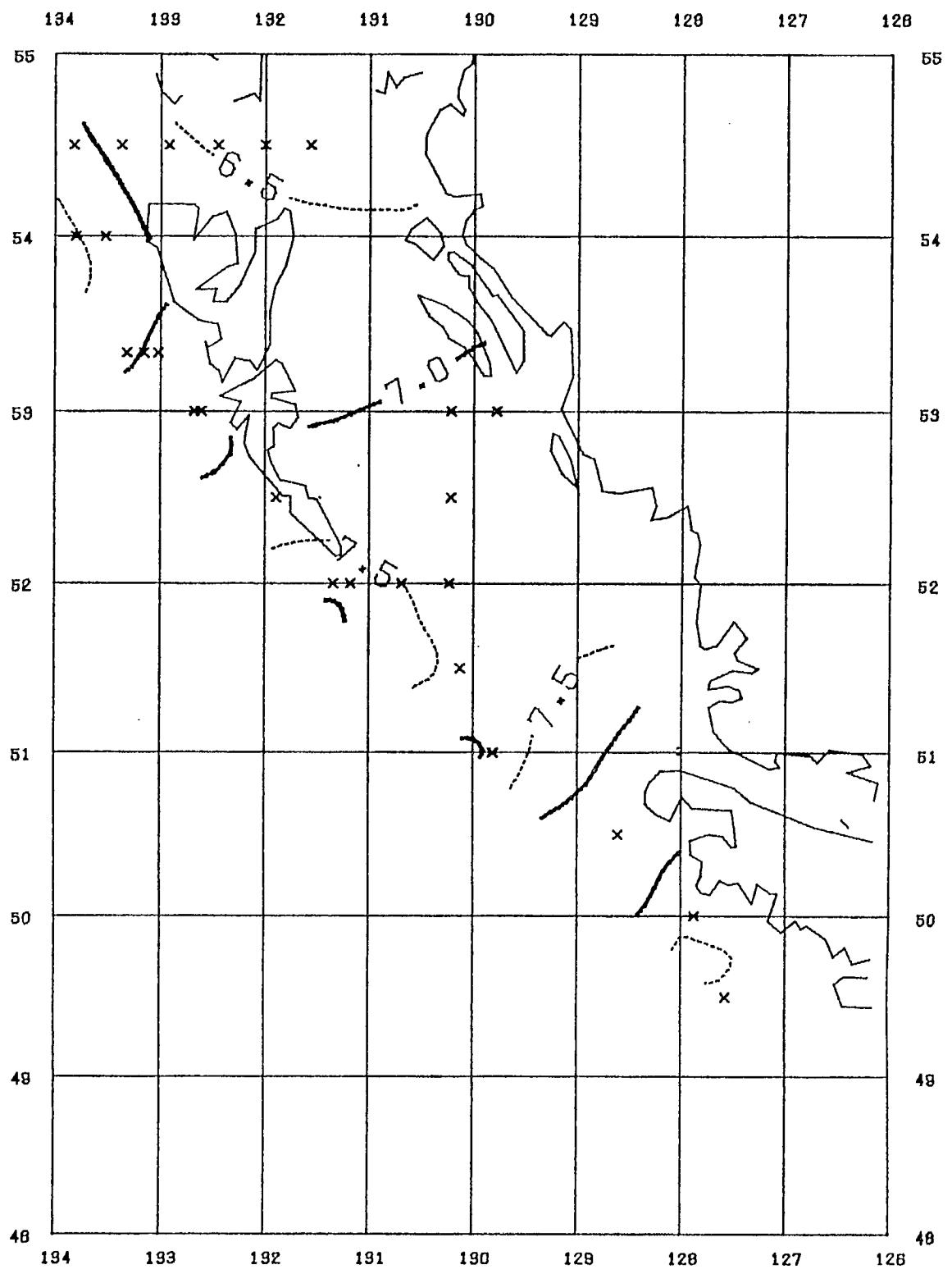






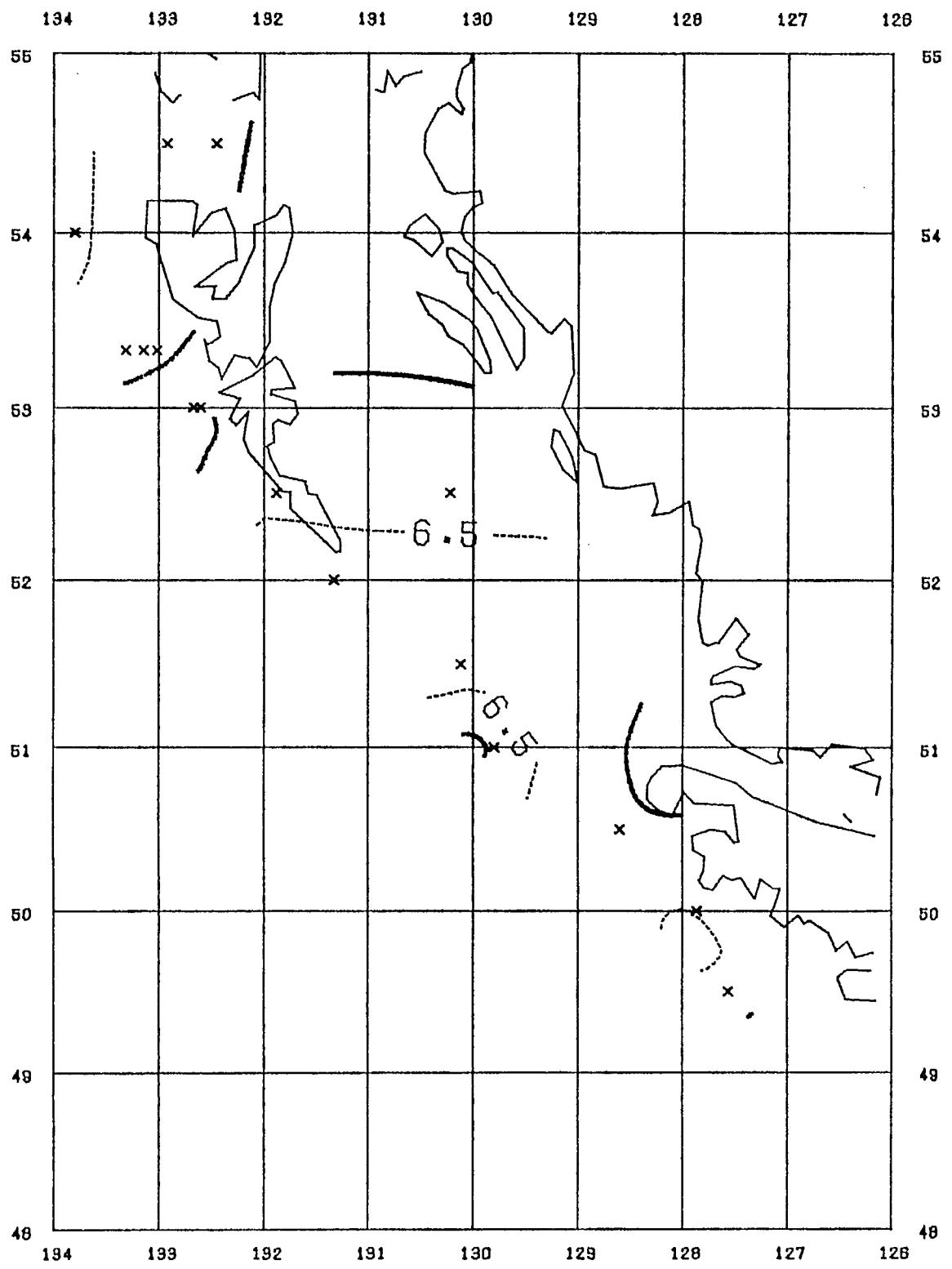
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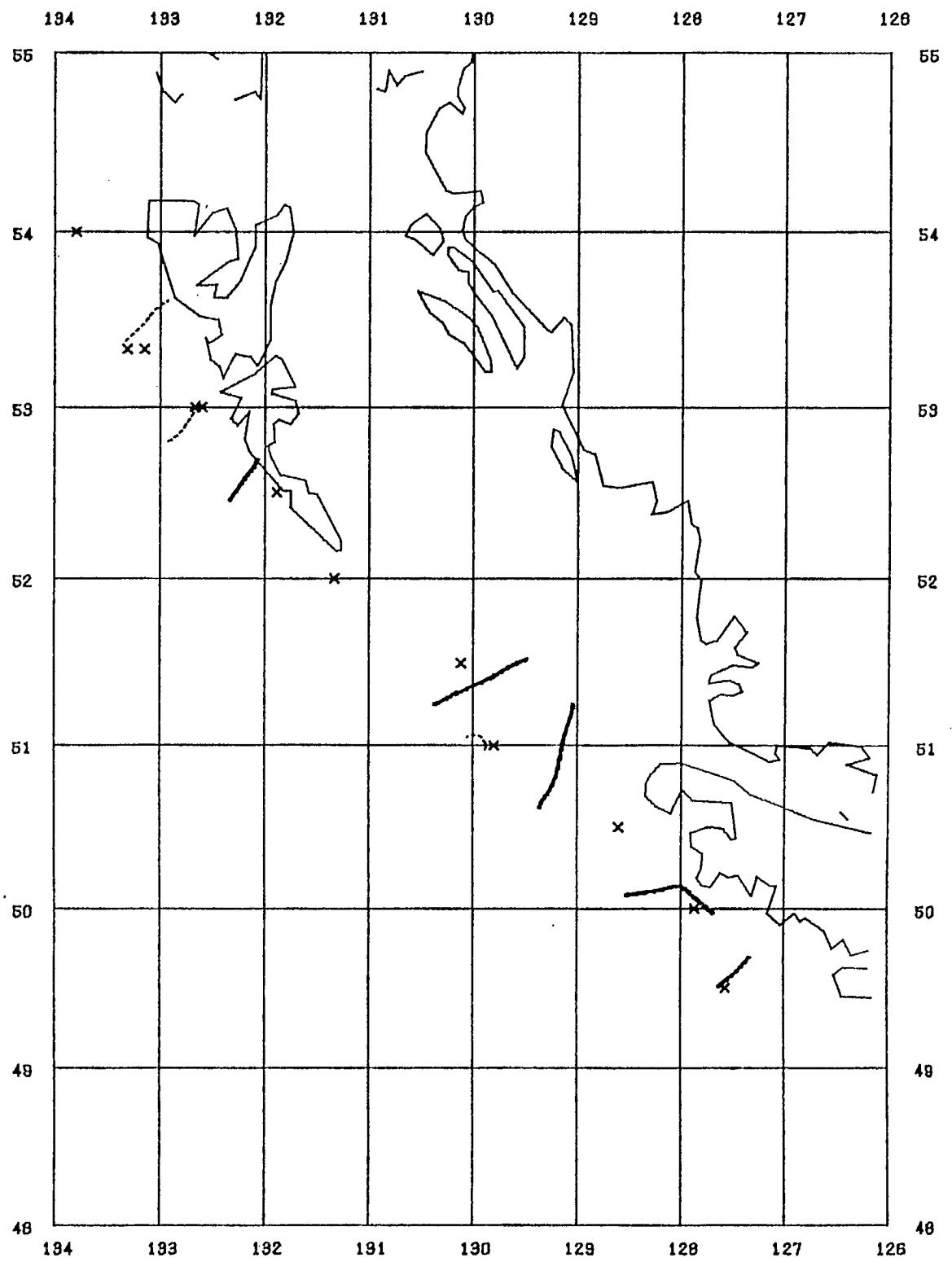
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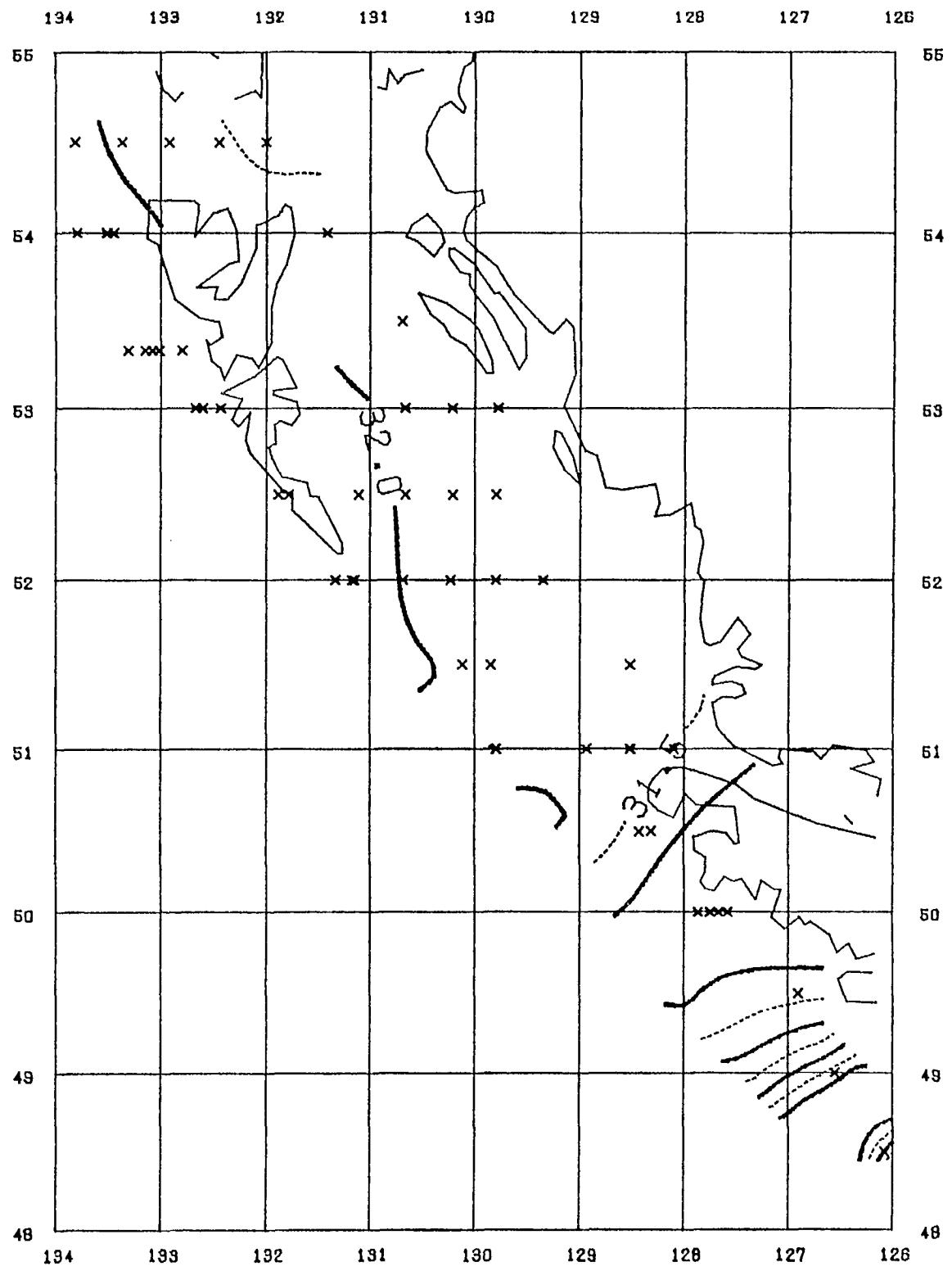
CRUISE 183180003 12-20 MAR 1980 TEMPERATURE AT DEPTH 300.0





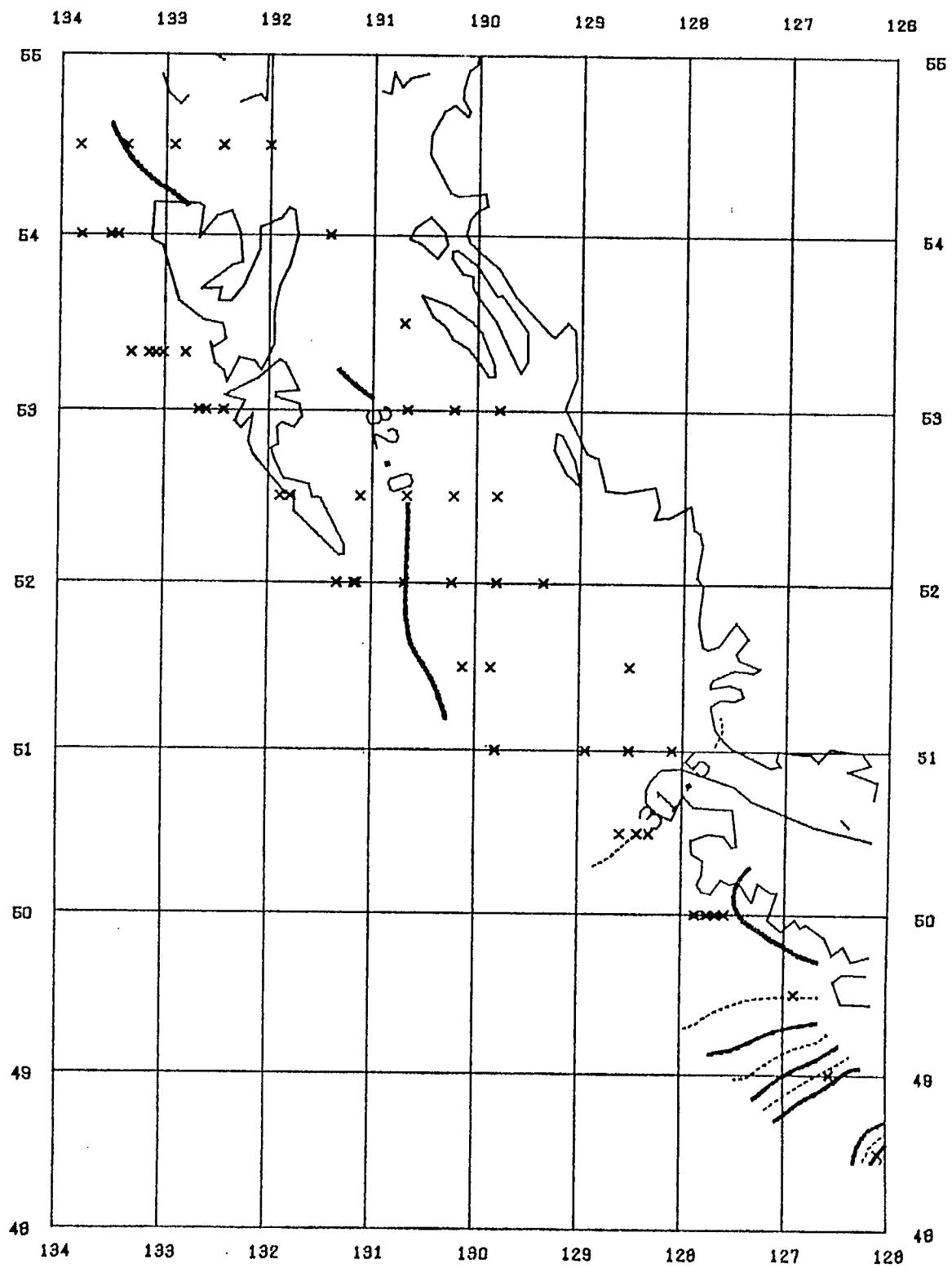
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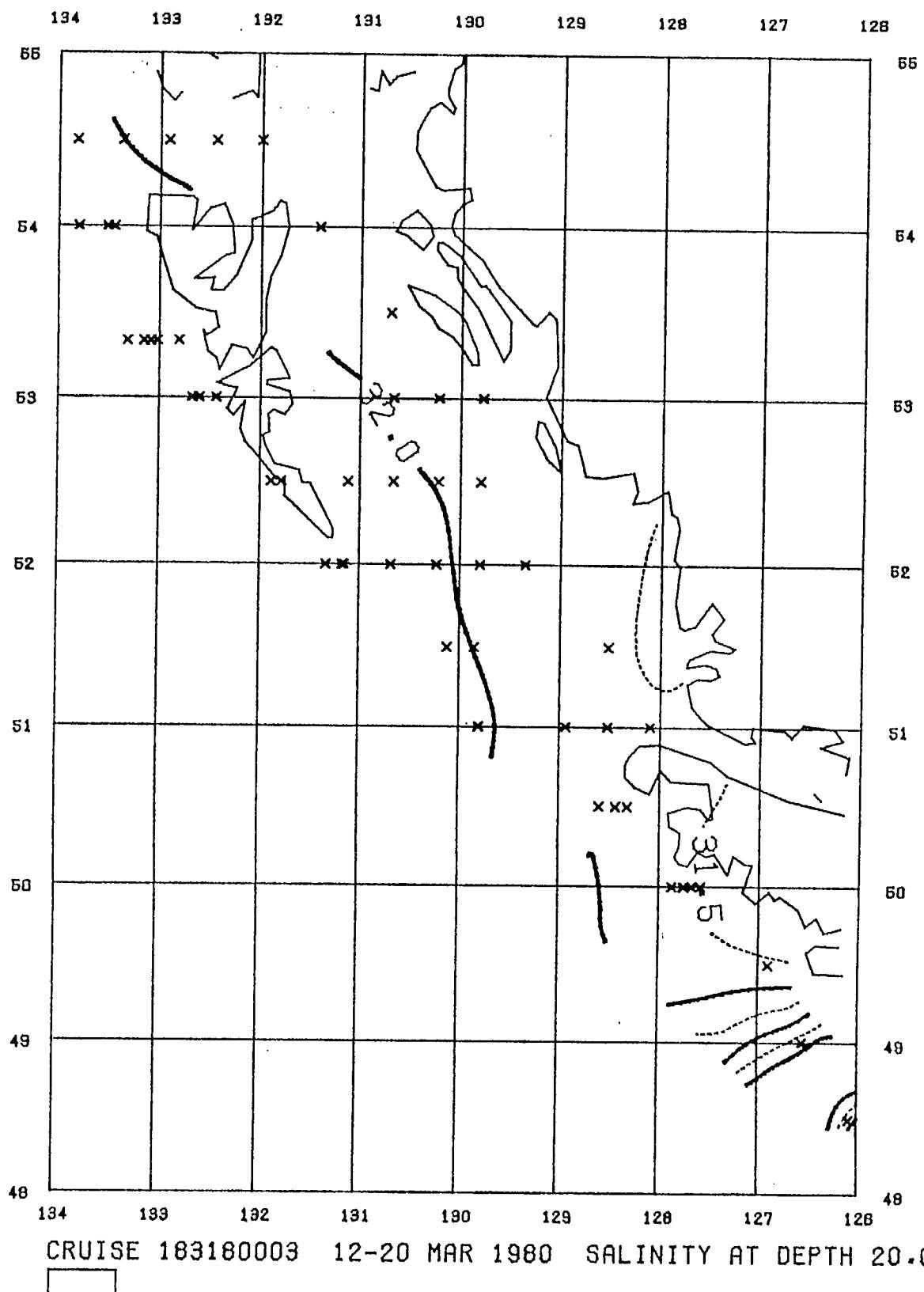
CRUISE 183180003 12-20 MAR 1980 SALINITY AT DEPTH 0.0

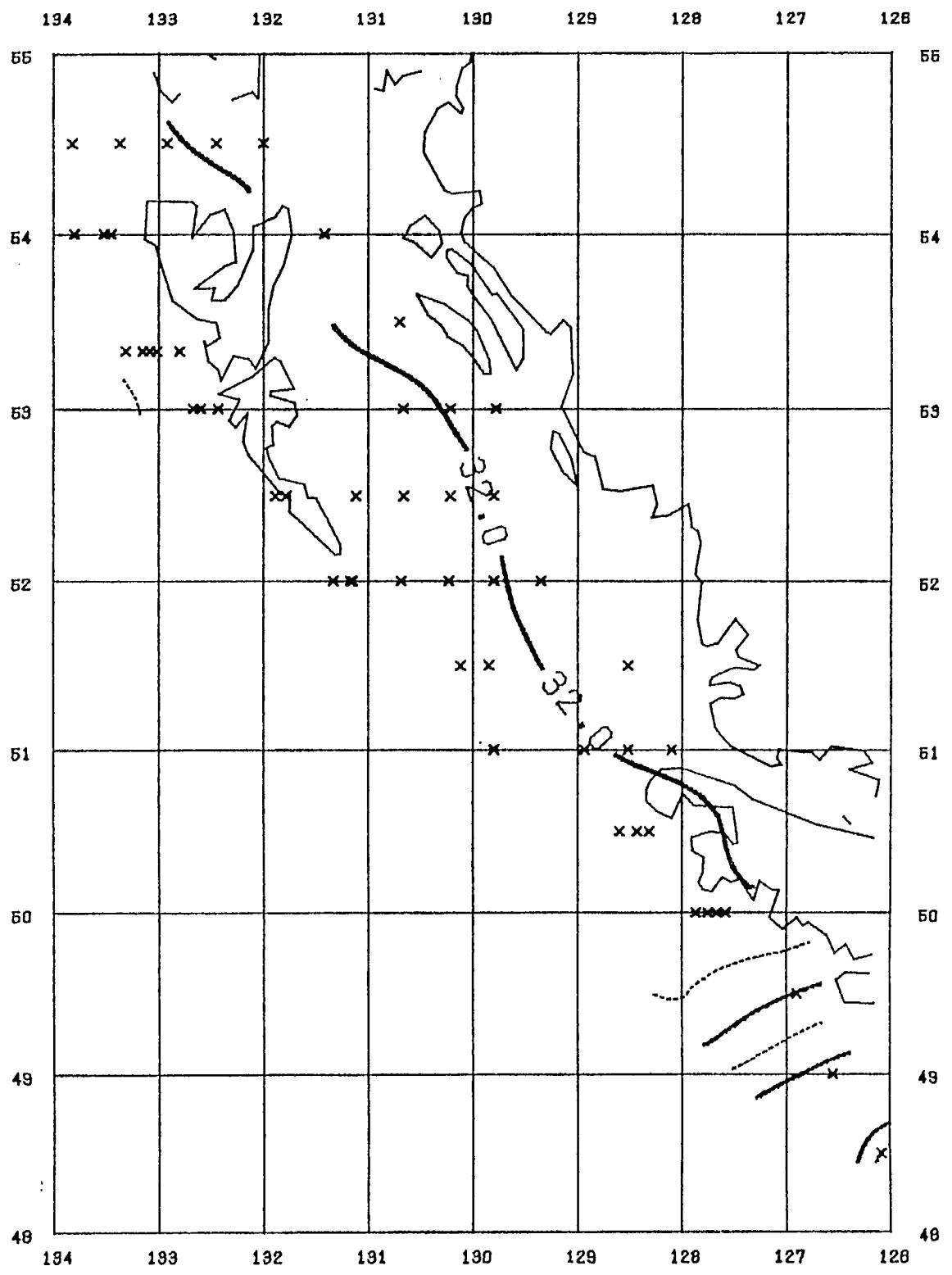


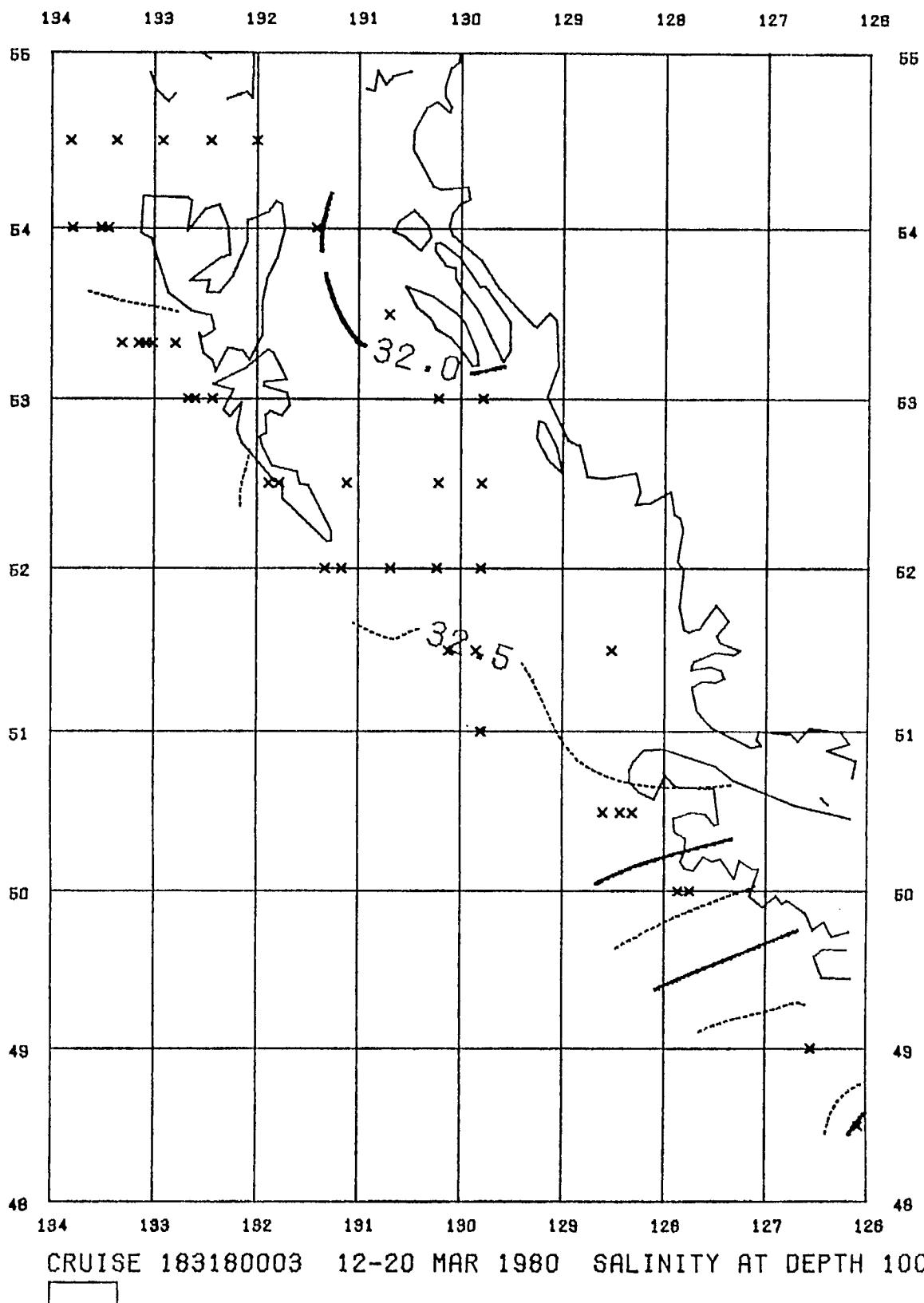


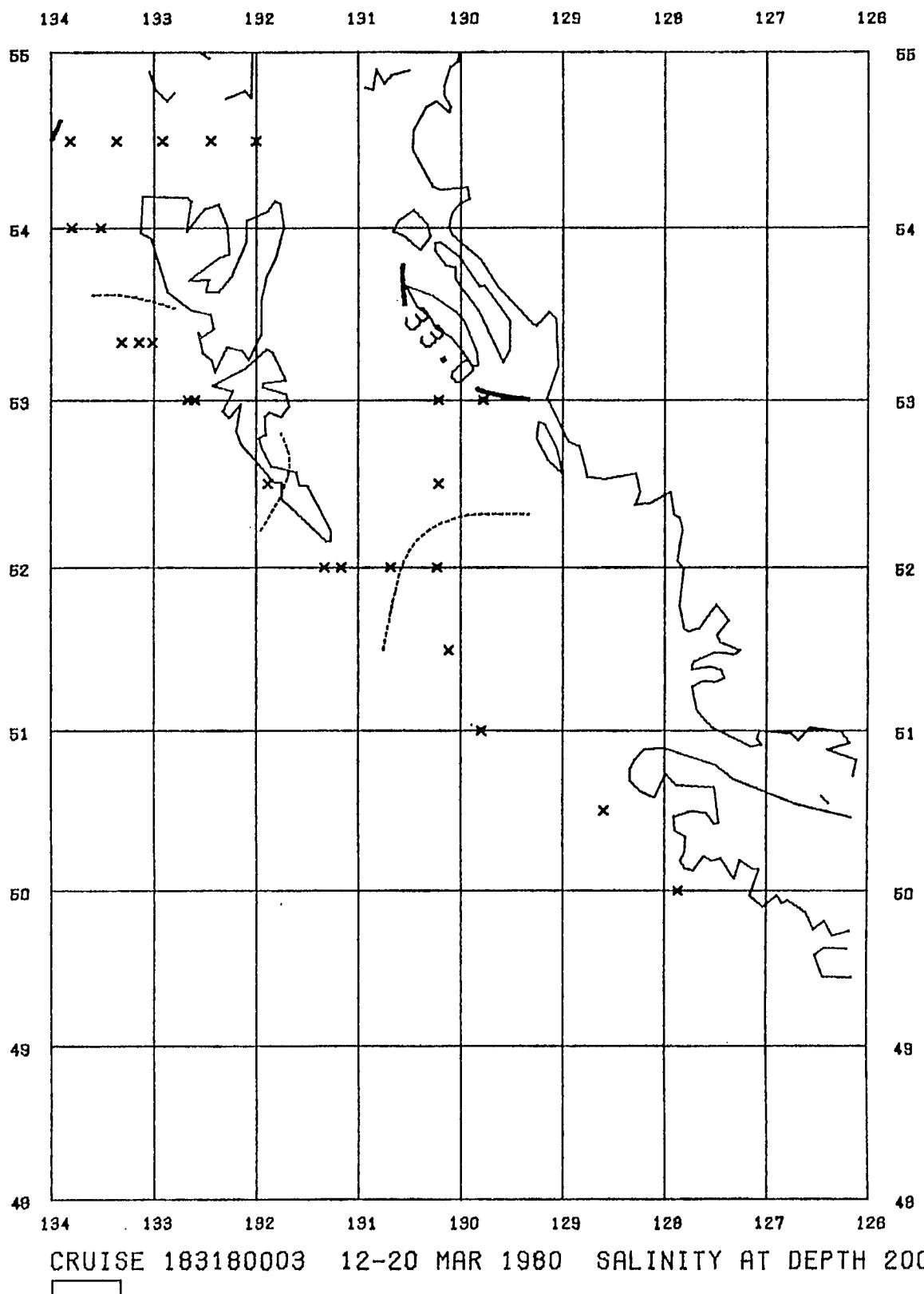
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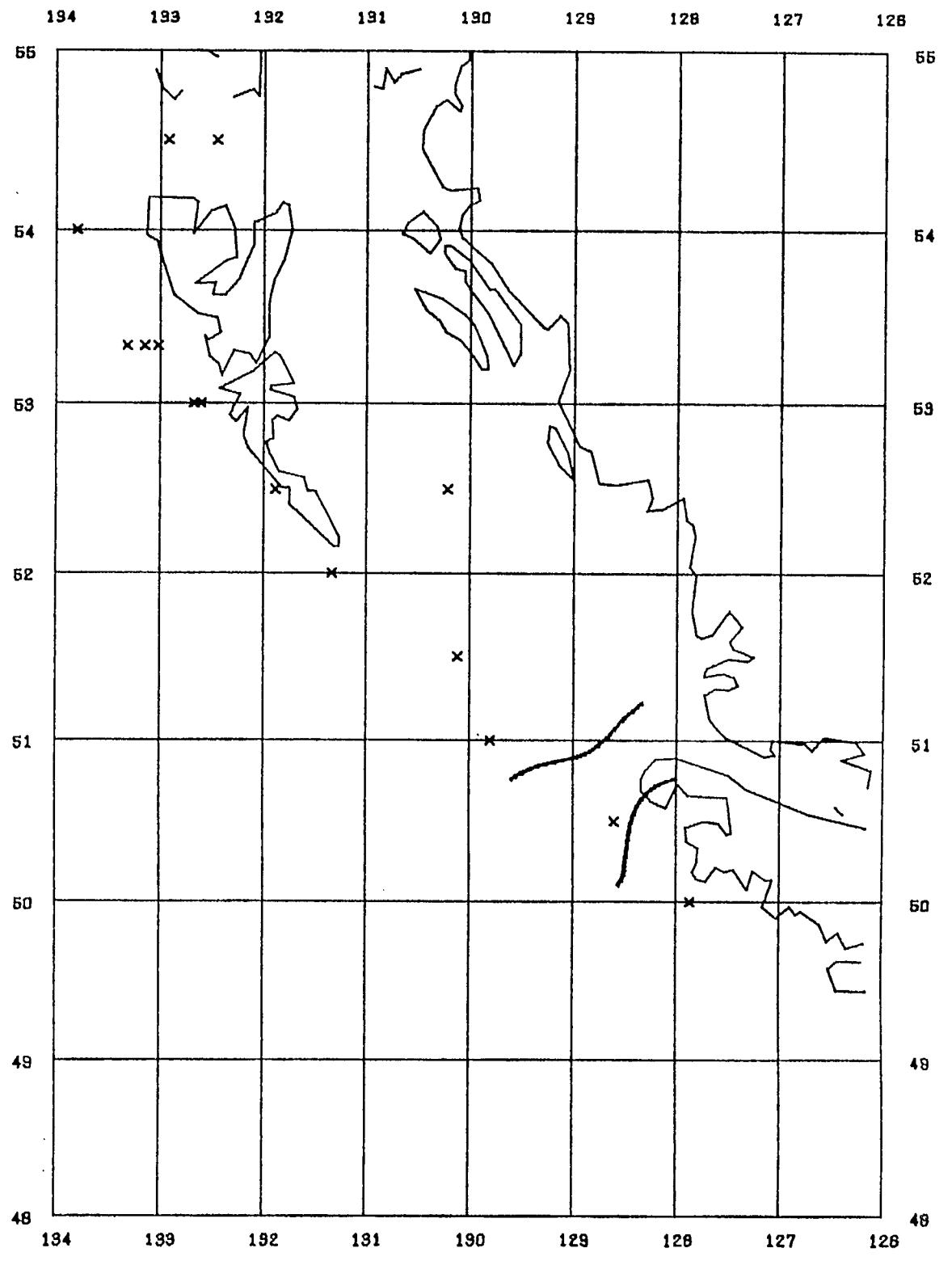






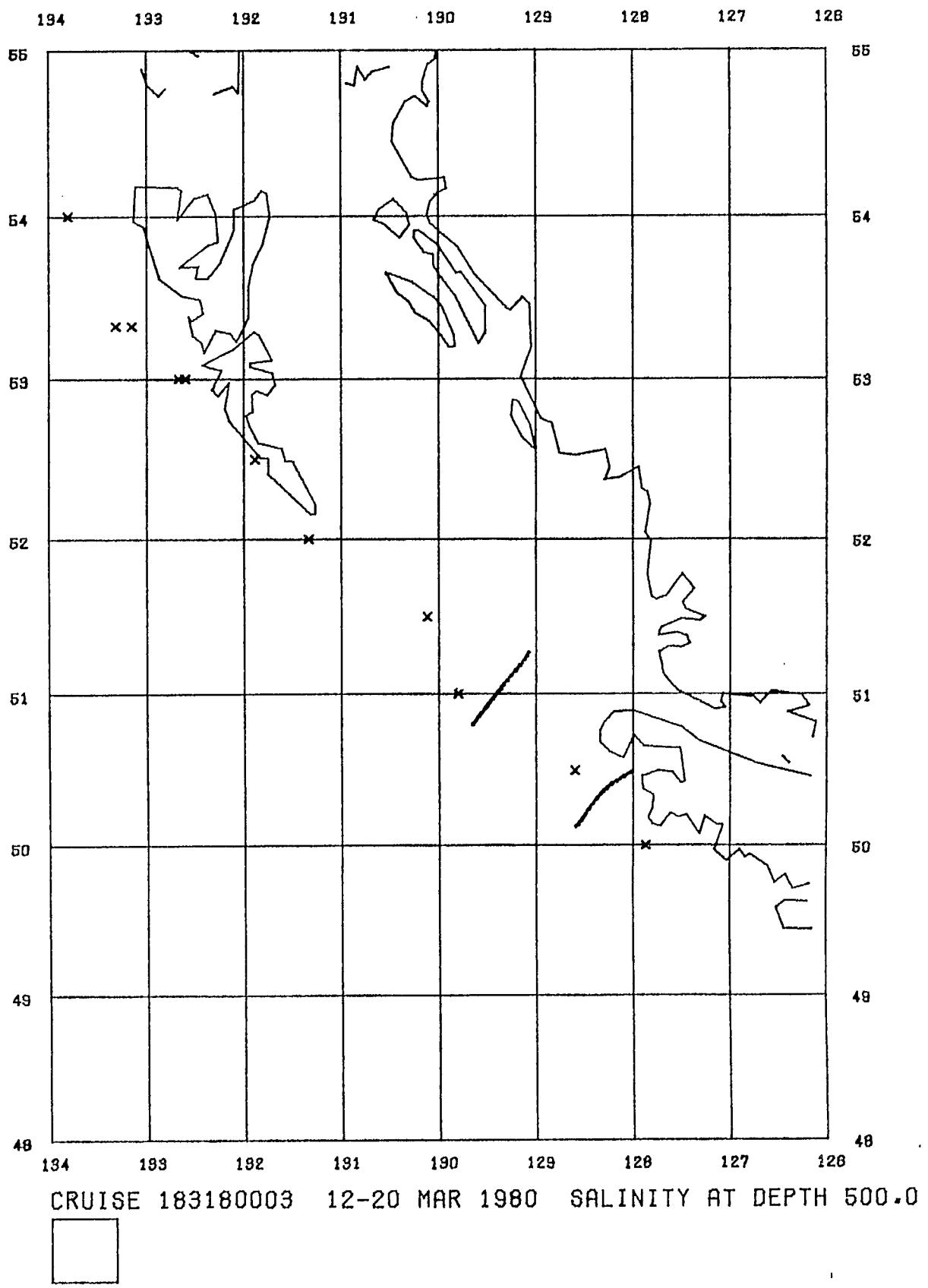


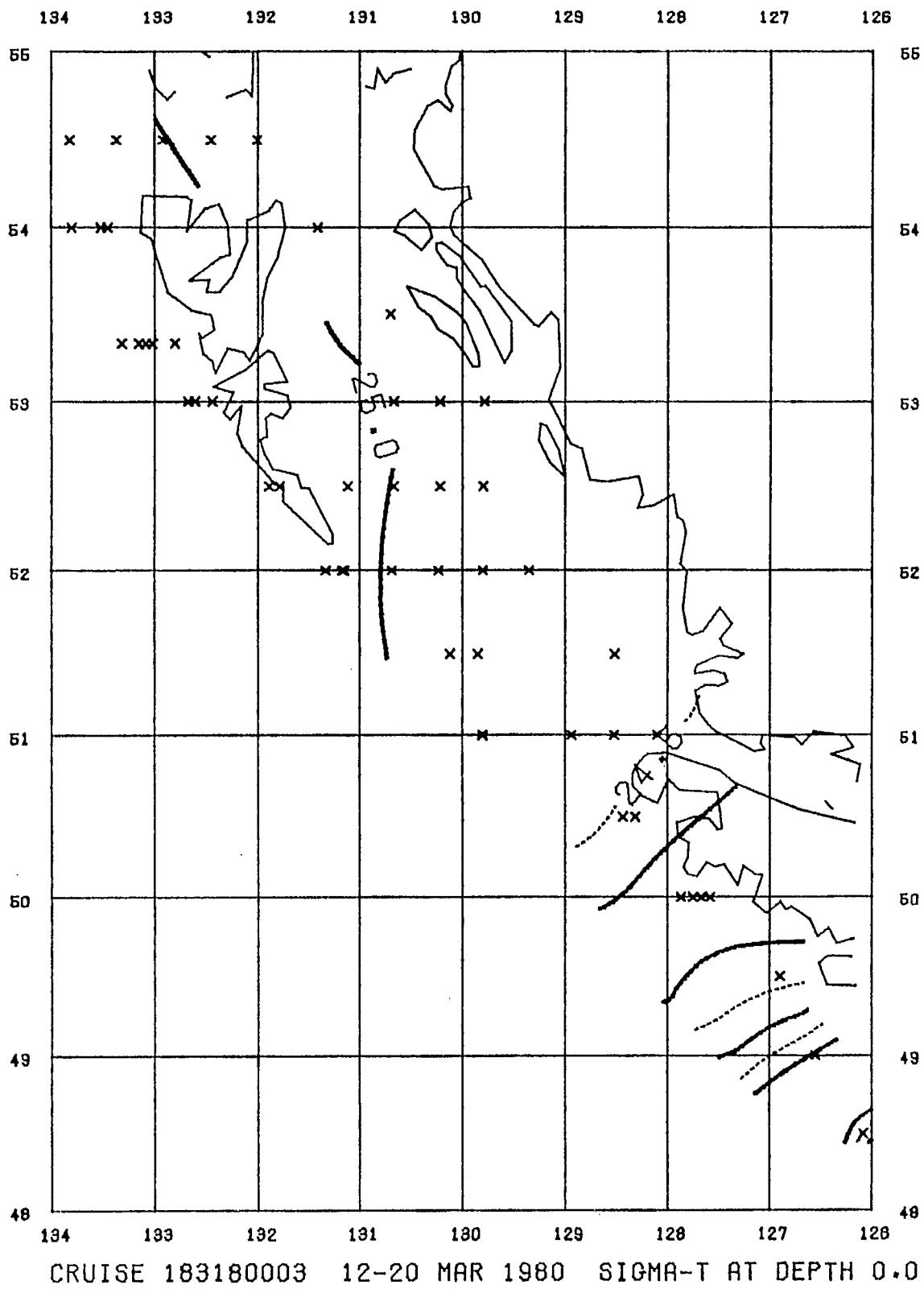


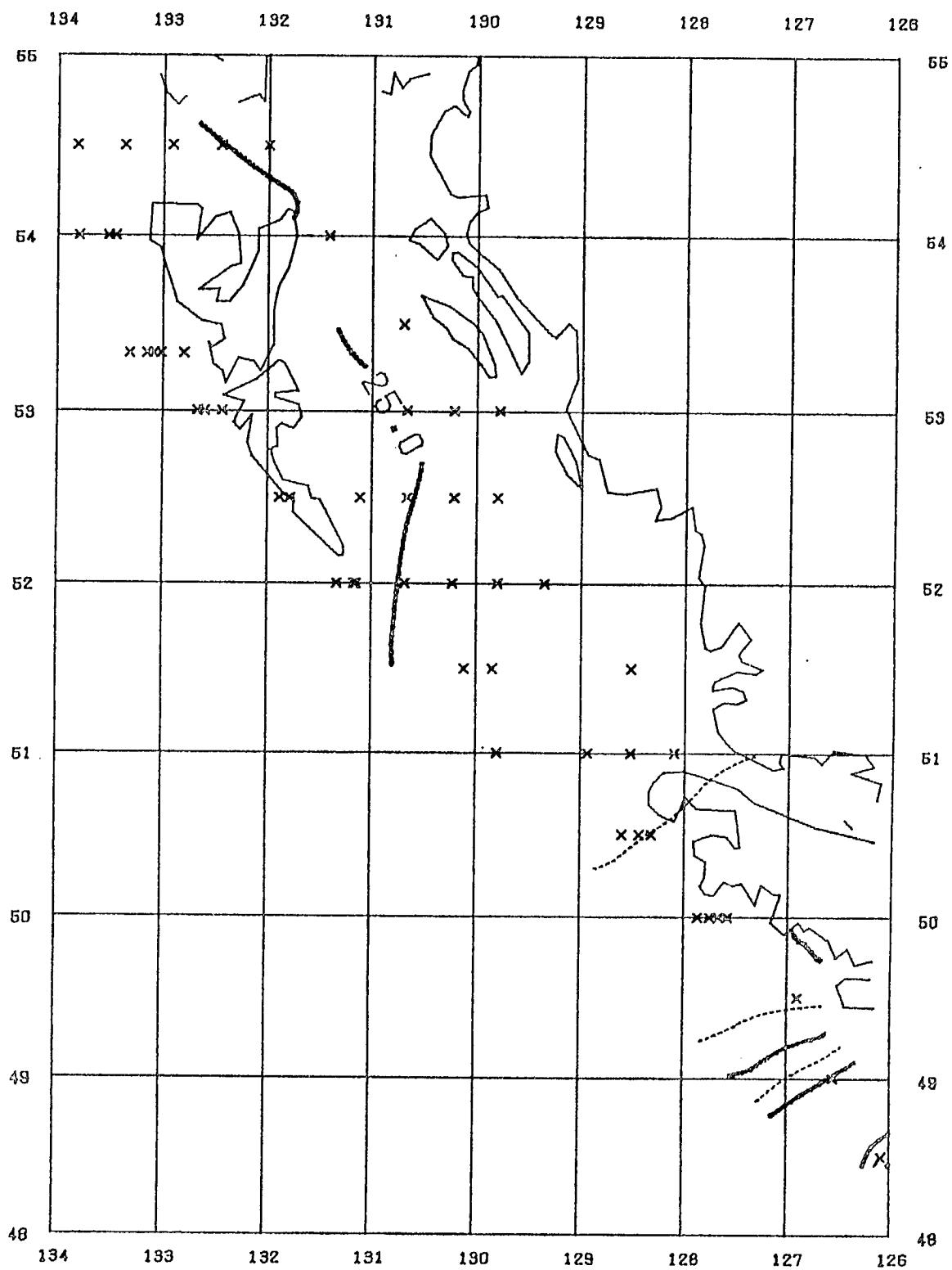


CRUISE 183180003 12-20 MAR 1980 SALINITY AT DEPTH 300.0



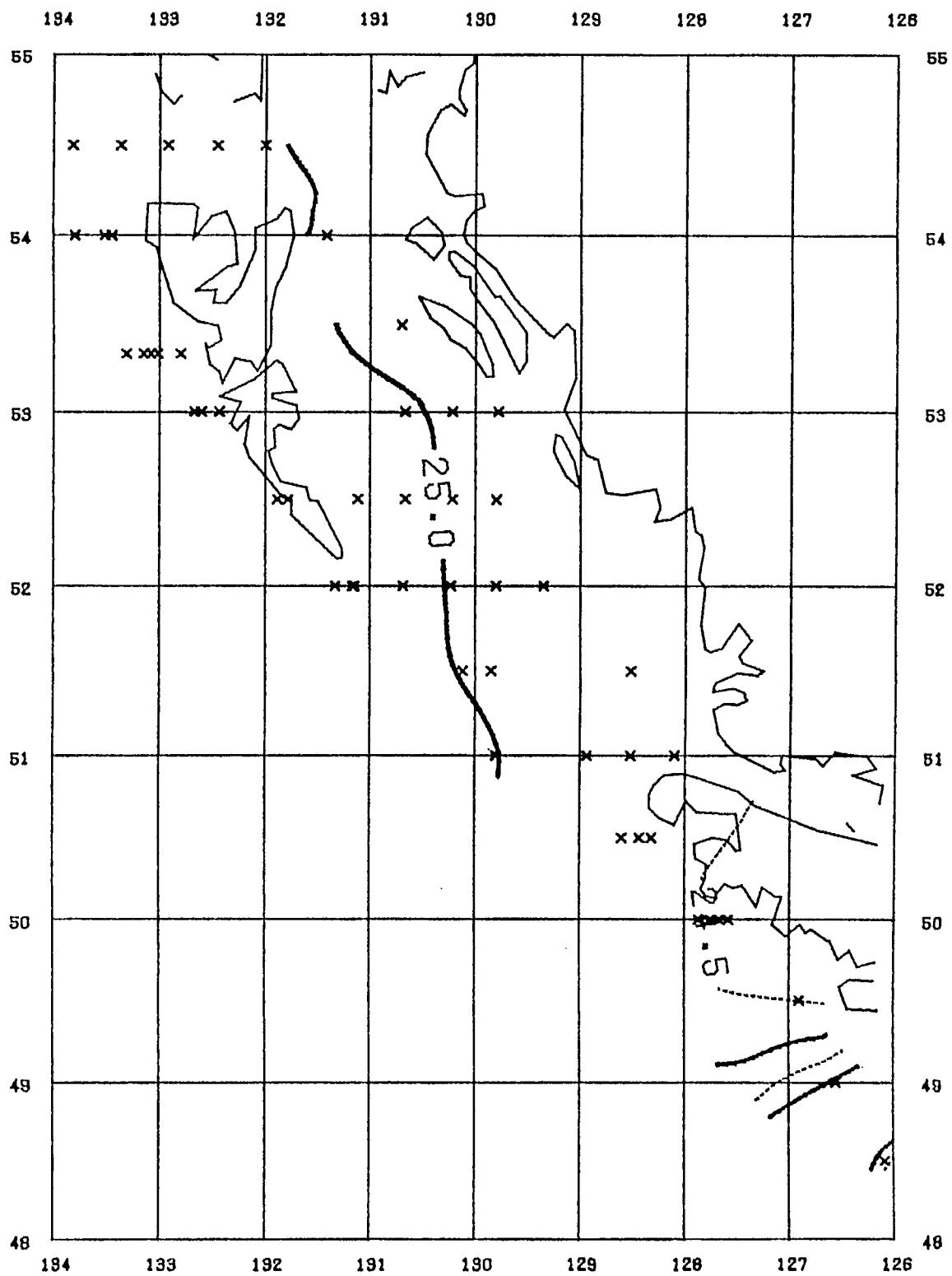






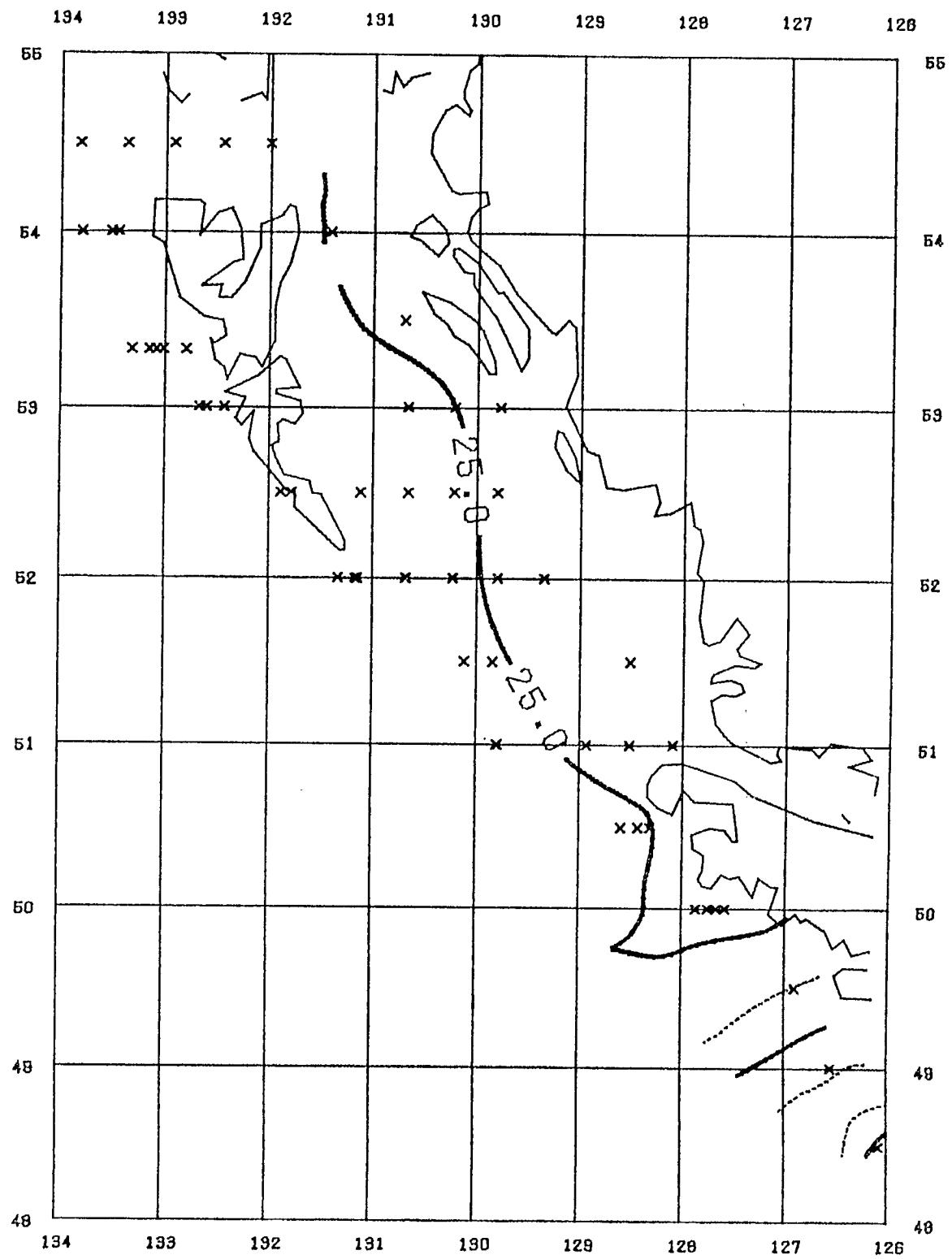
CRUISE 183180003 12-20 MAR 1980 SIGMA-T AT DEPTH 10.0





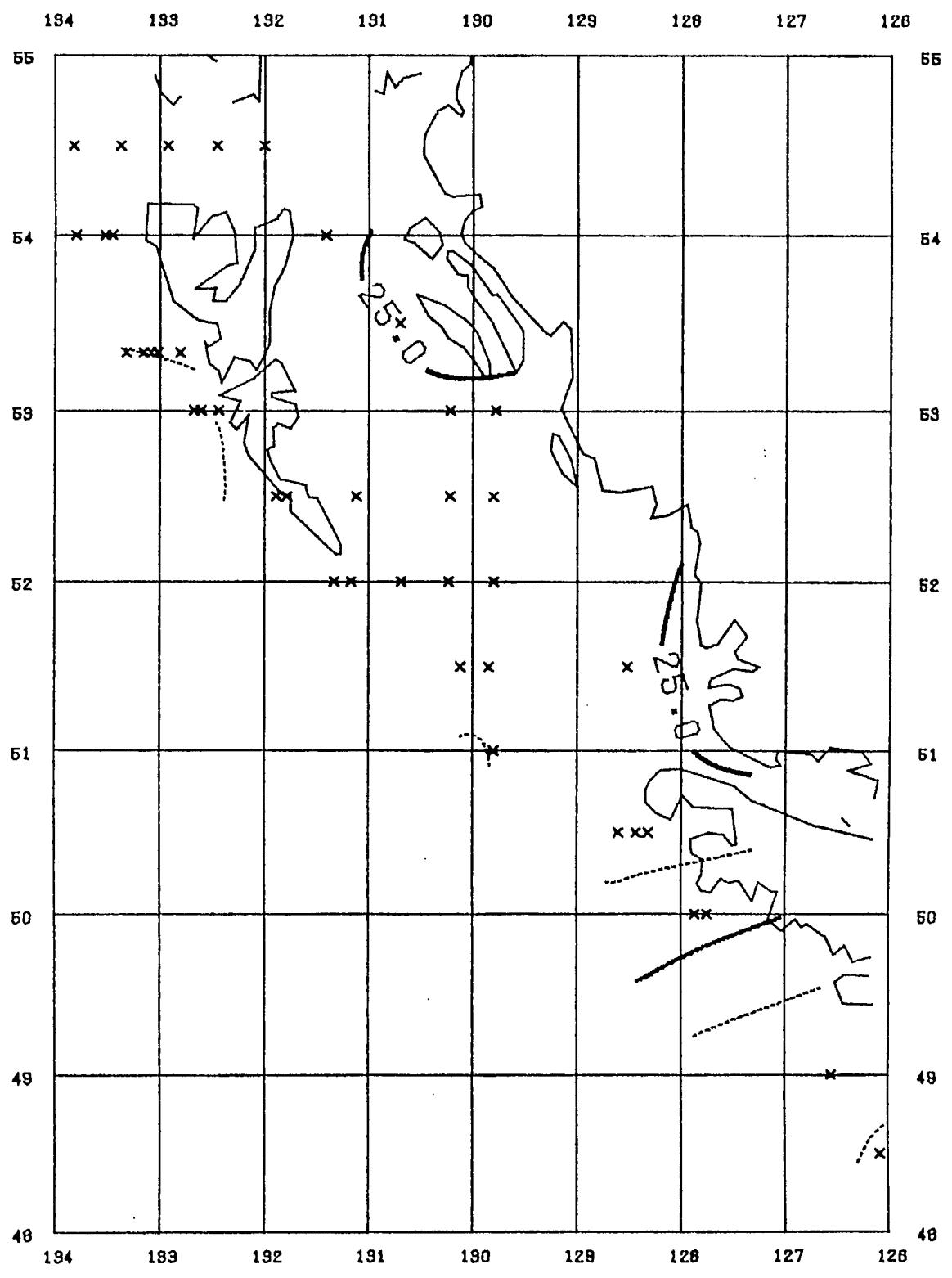
CRUISE 183180008 12-20 MAR 1980 SIGMA-T AT DEPTH 20.0





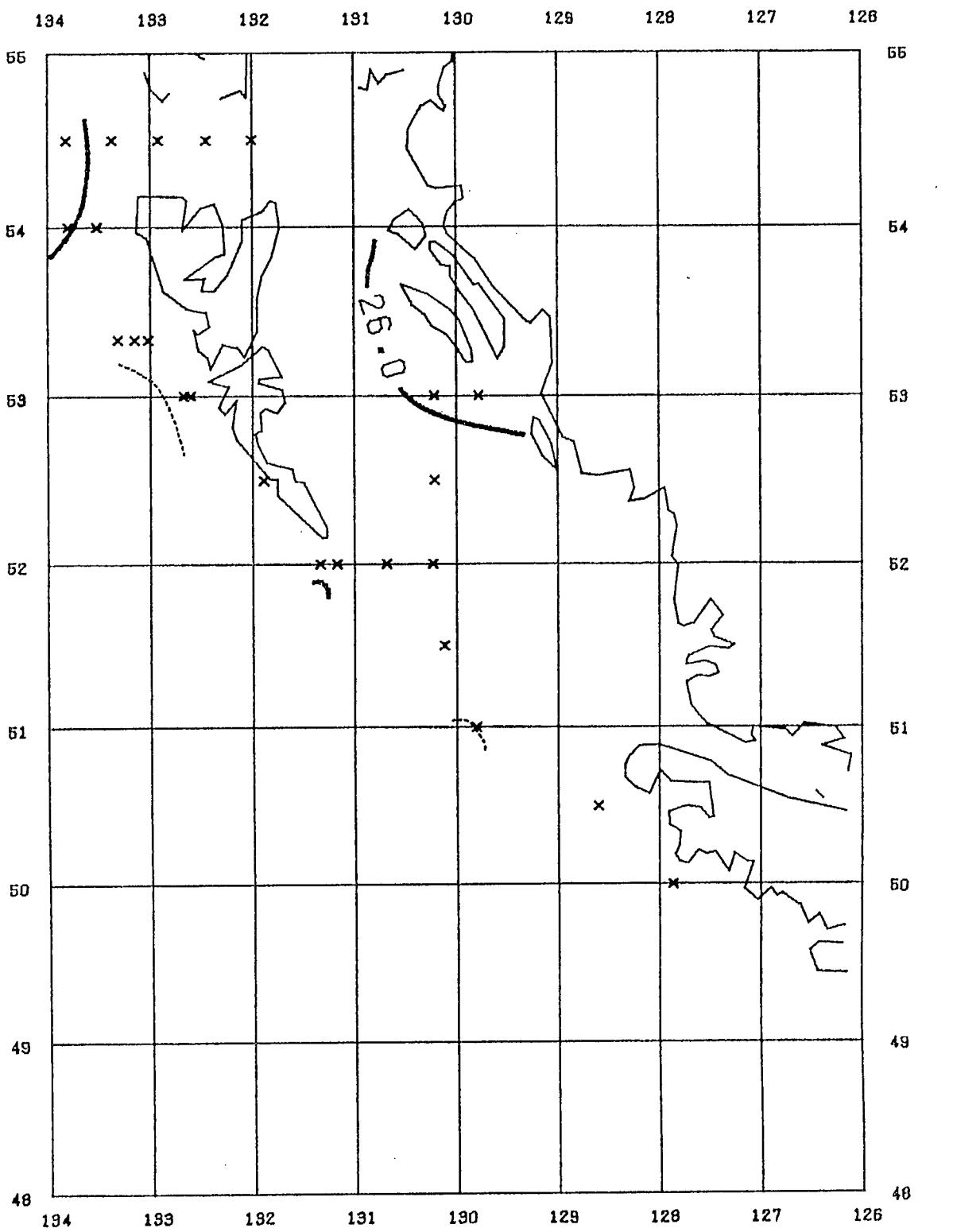
CRUISE 183180003 12-20 MAR 1980 SIGMA-T AT DEPTH 50.0





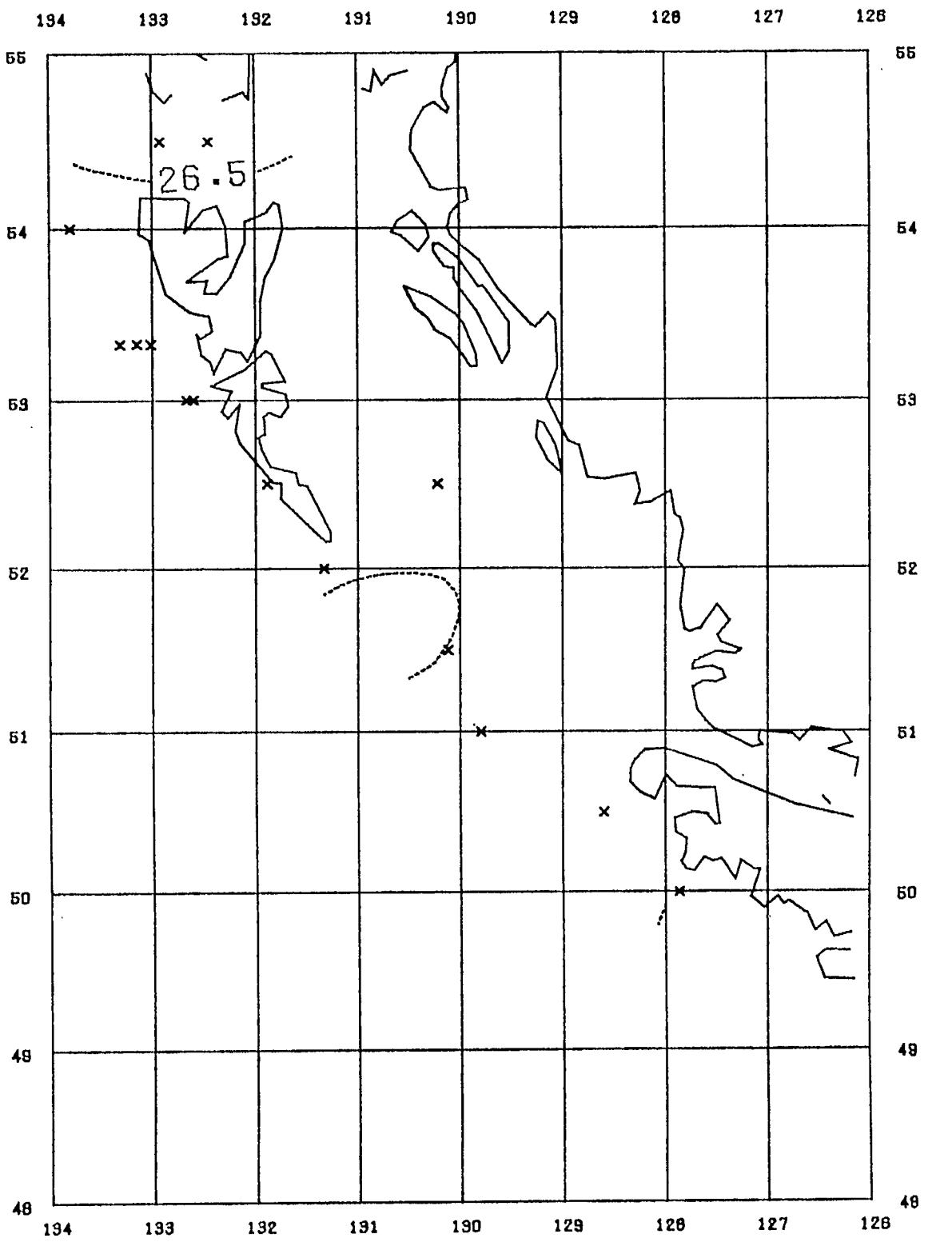
CRUISE 183180003 12-20 MAR 1980 SIGMA-T AT DEPTH 100.0

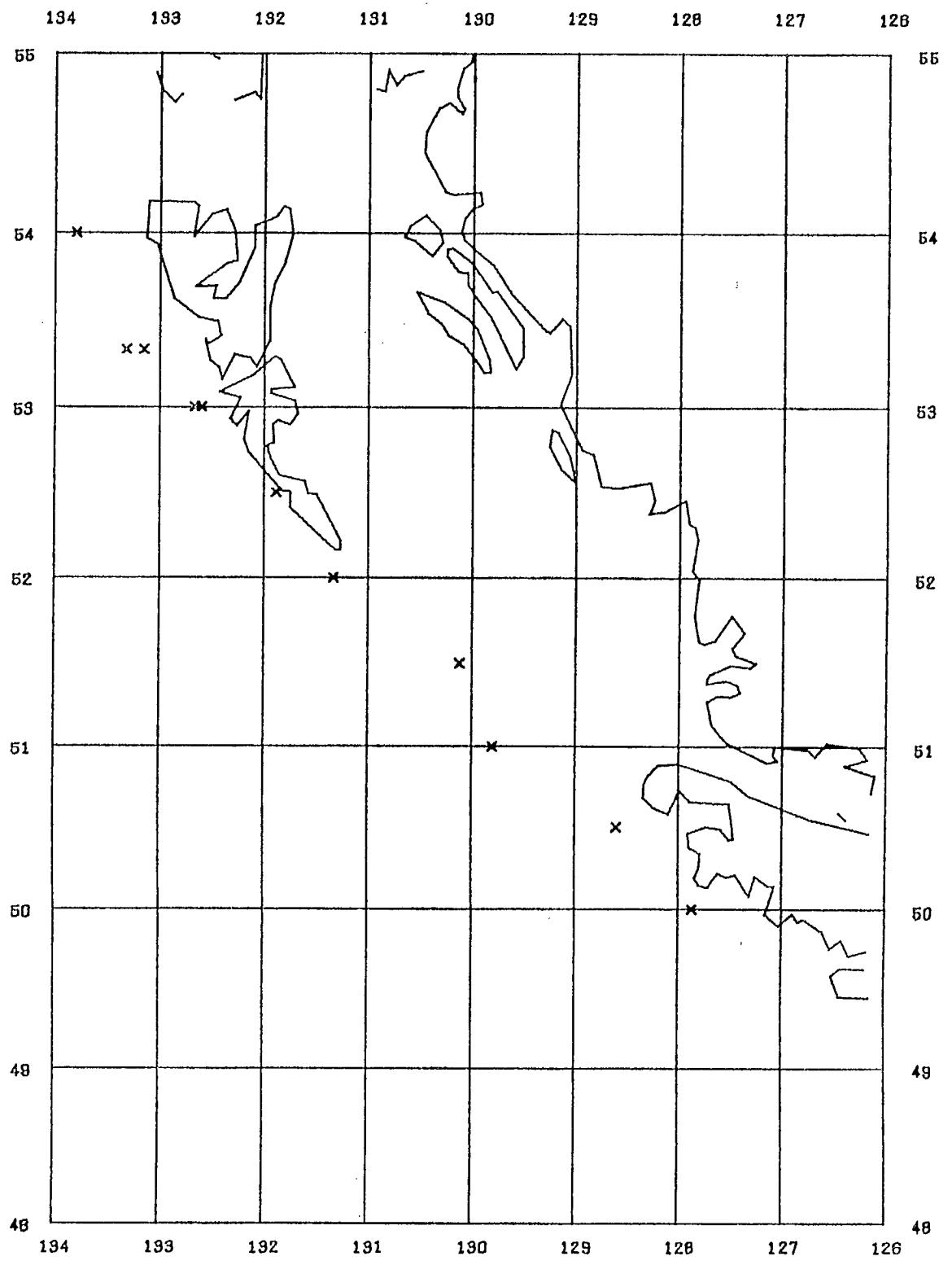




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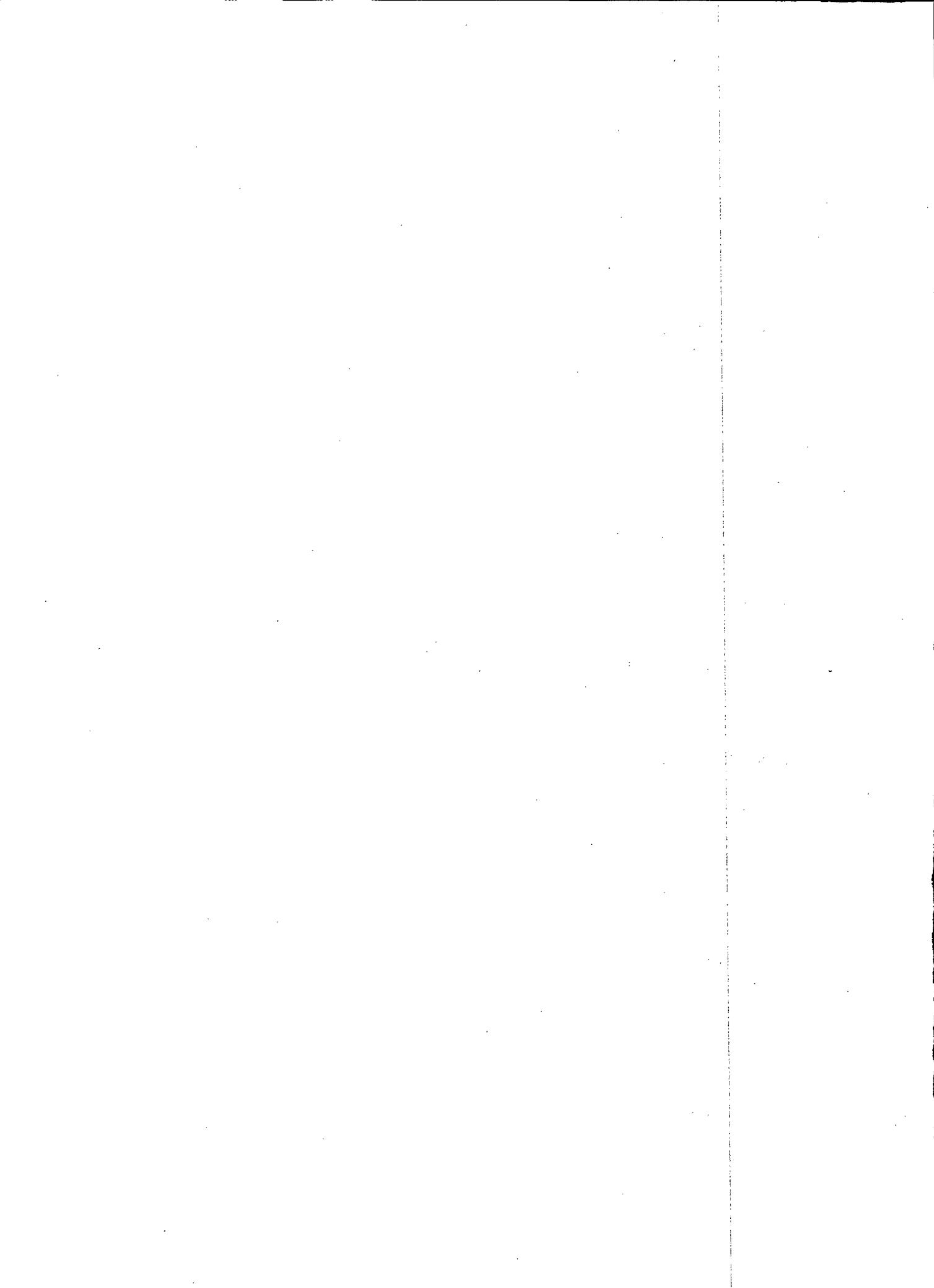


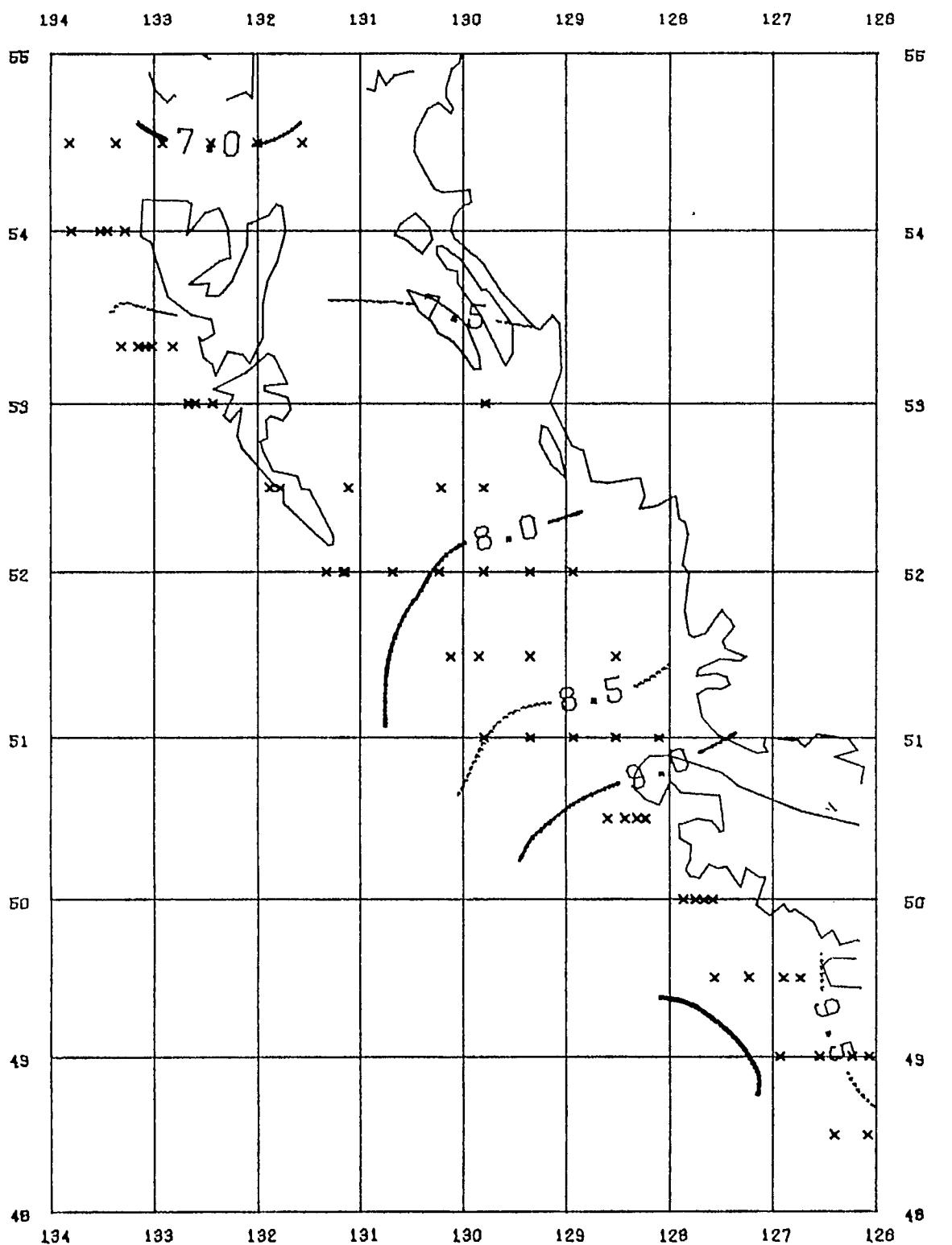


CRUISE 183180003 12-20 MAR 1980 SIGMA-T AT DEPTH 500.0



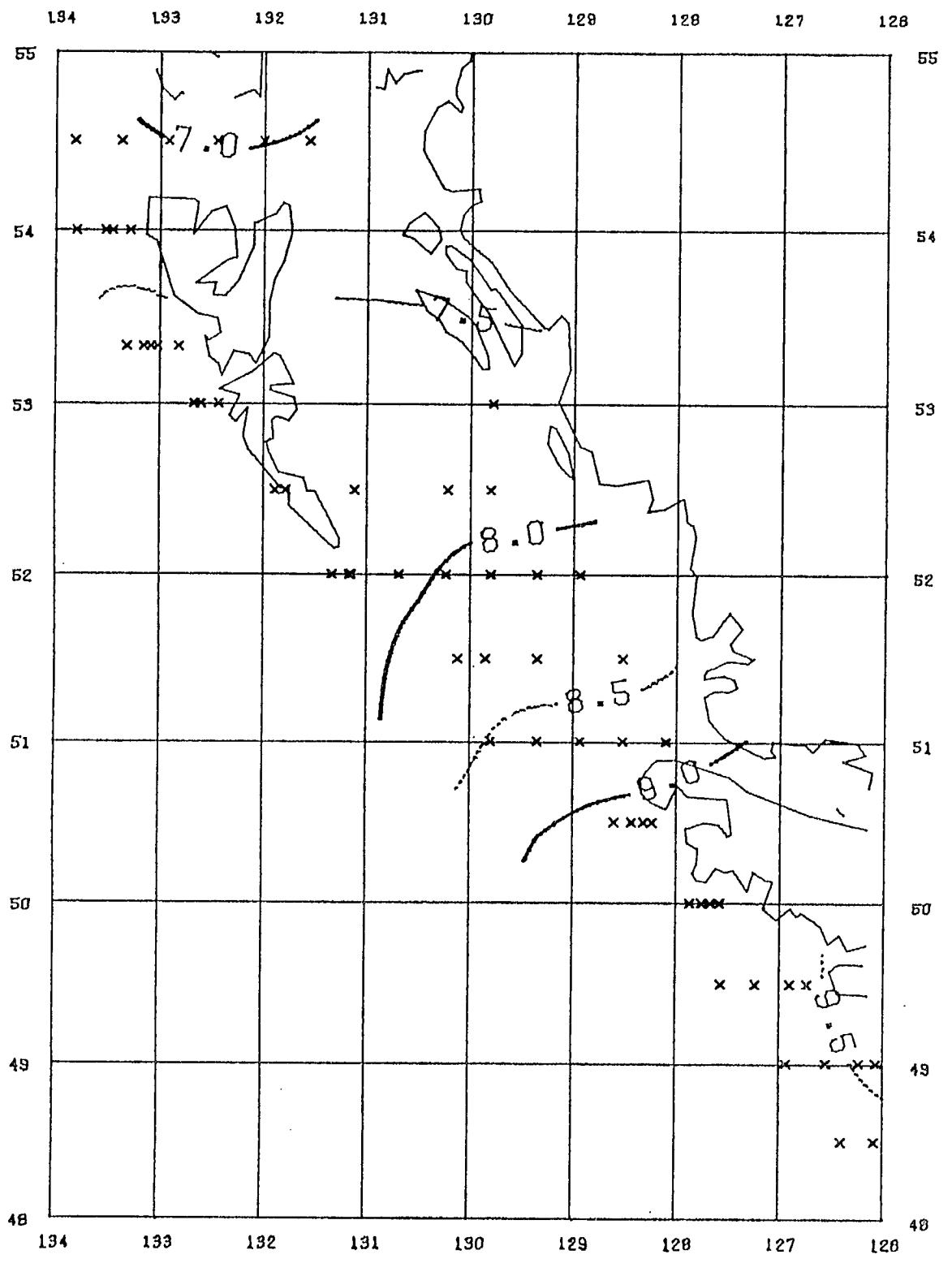
CRUISE FOUR APRIL 15-23, 1980





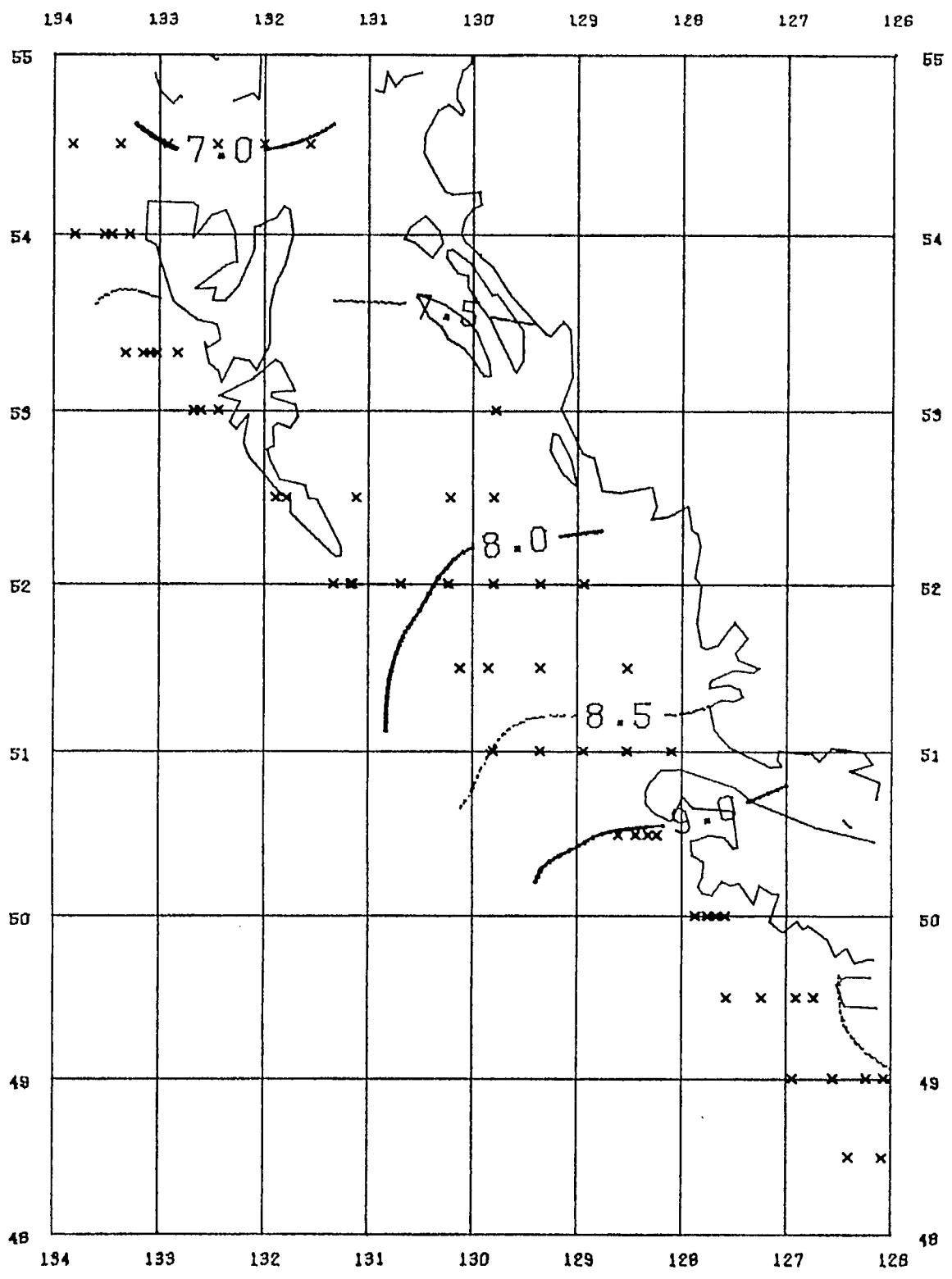
CRUISE 183180004 15-23 APR 1980 TEMPERATURE AT DEPTH 0.0





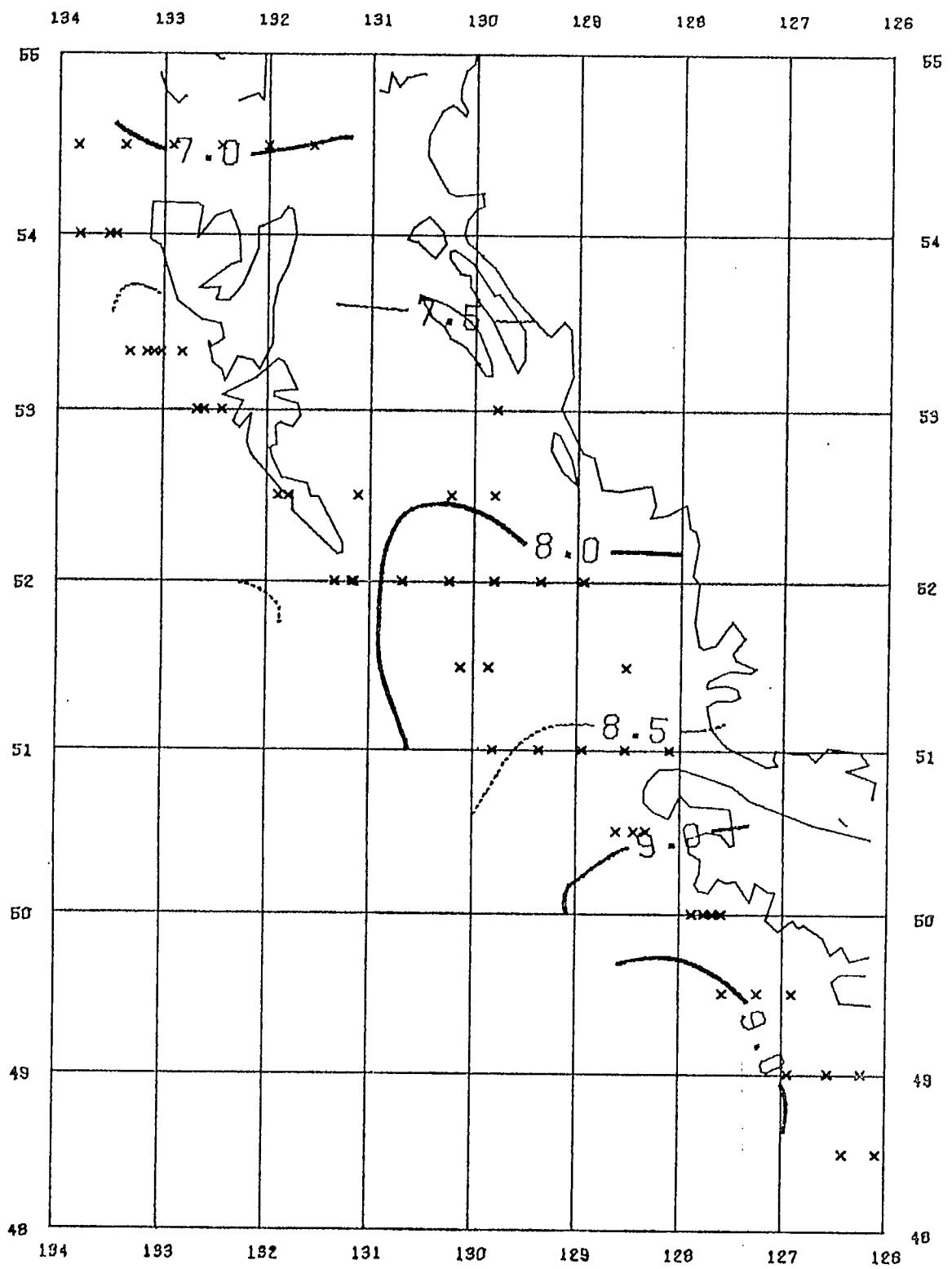
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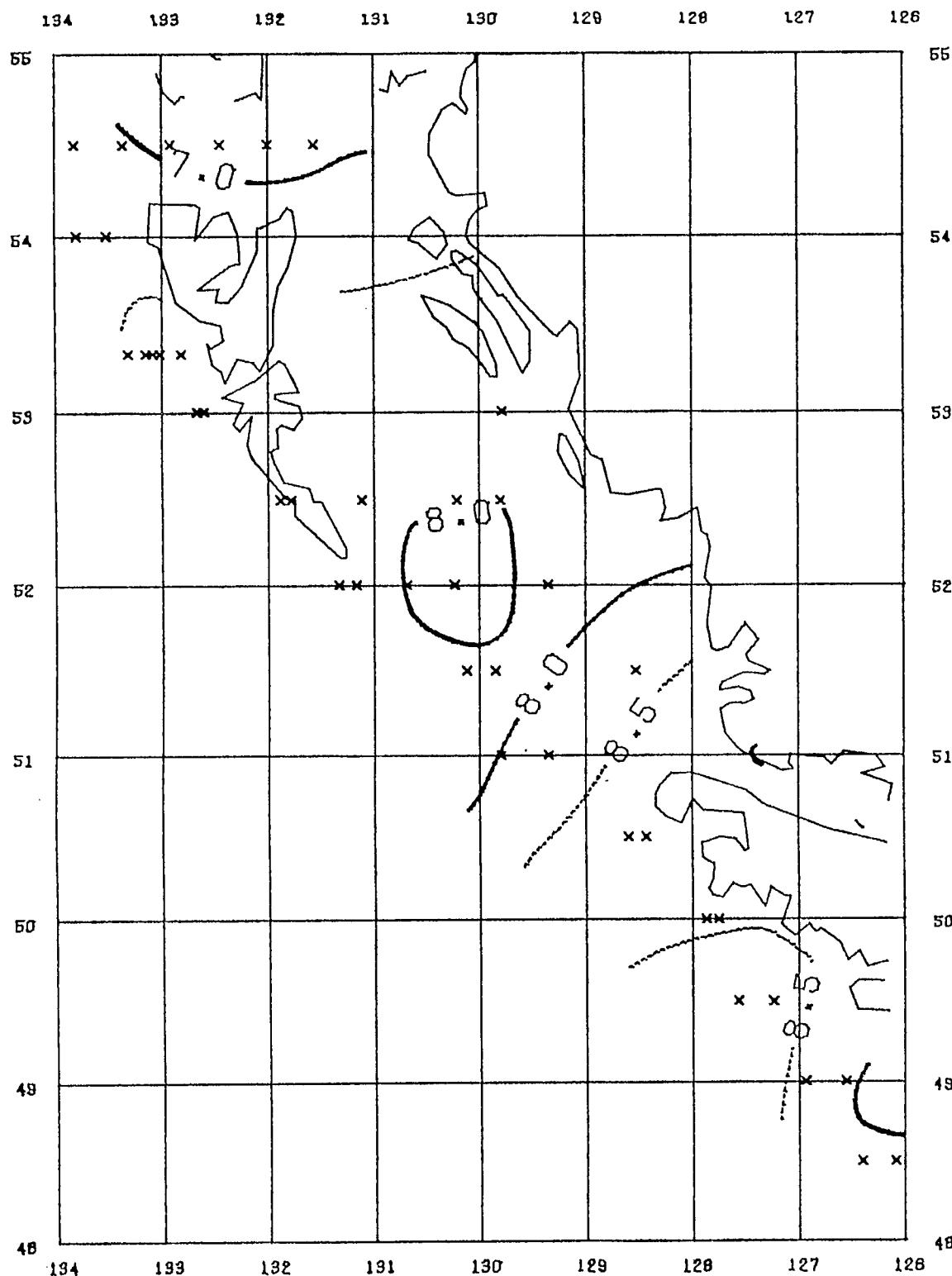
CRUISE 183180004 15-23 APR 1980 TEMPERATURE AT DEPTH 20.0





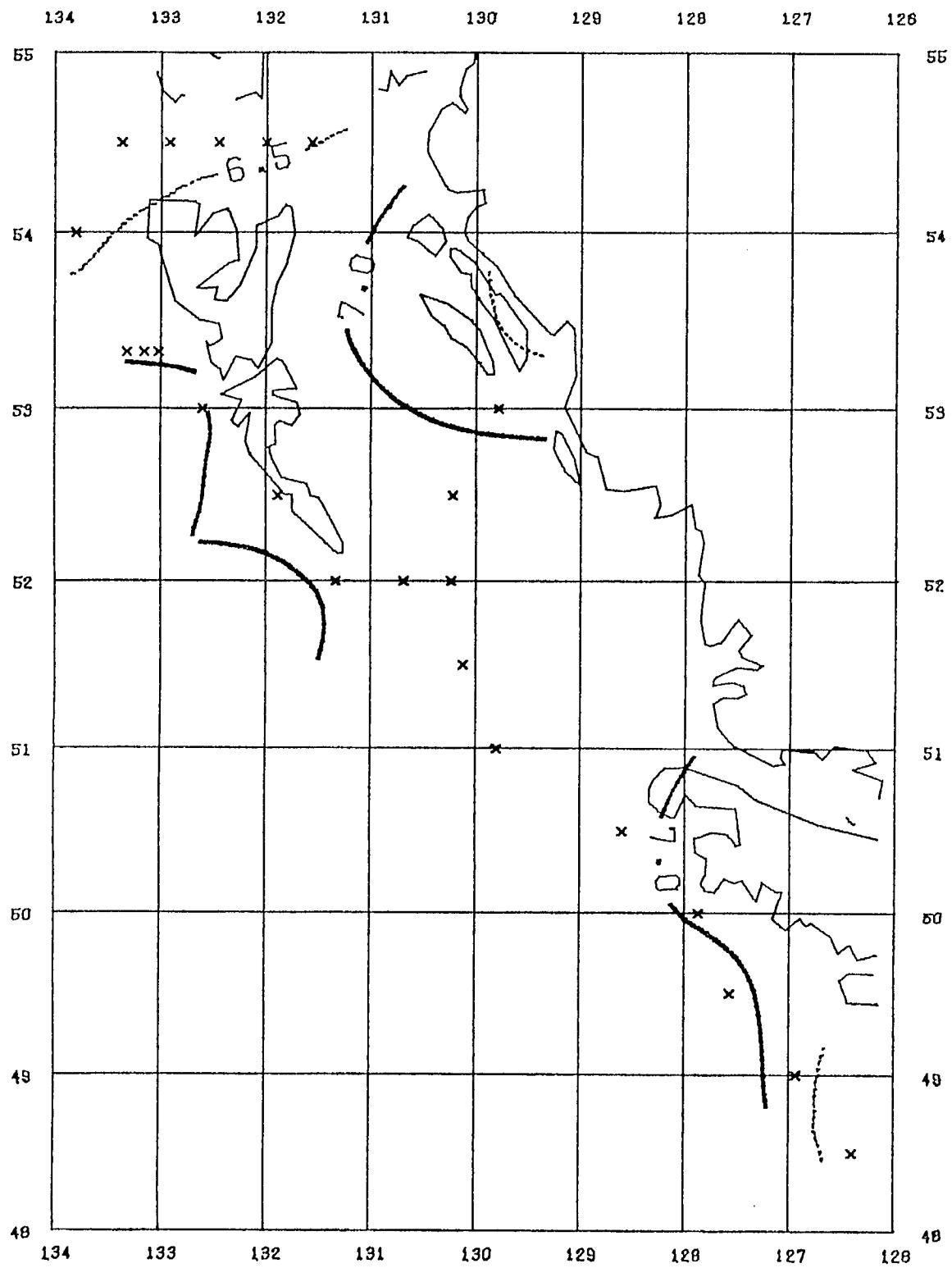
CRUISE 183180004 15-23 APR 1980 TEMPERATURE AT DEPTH 50.0





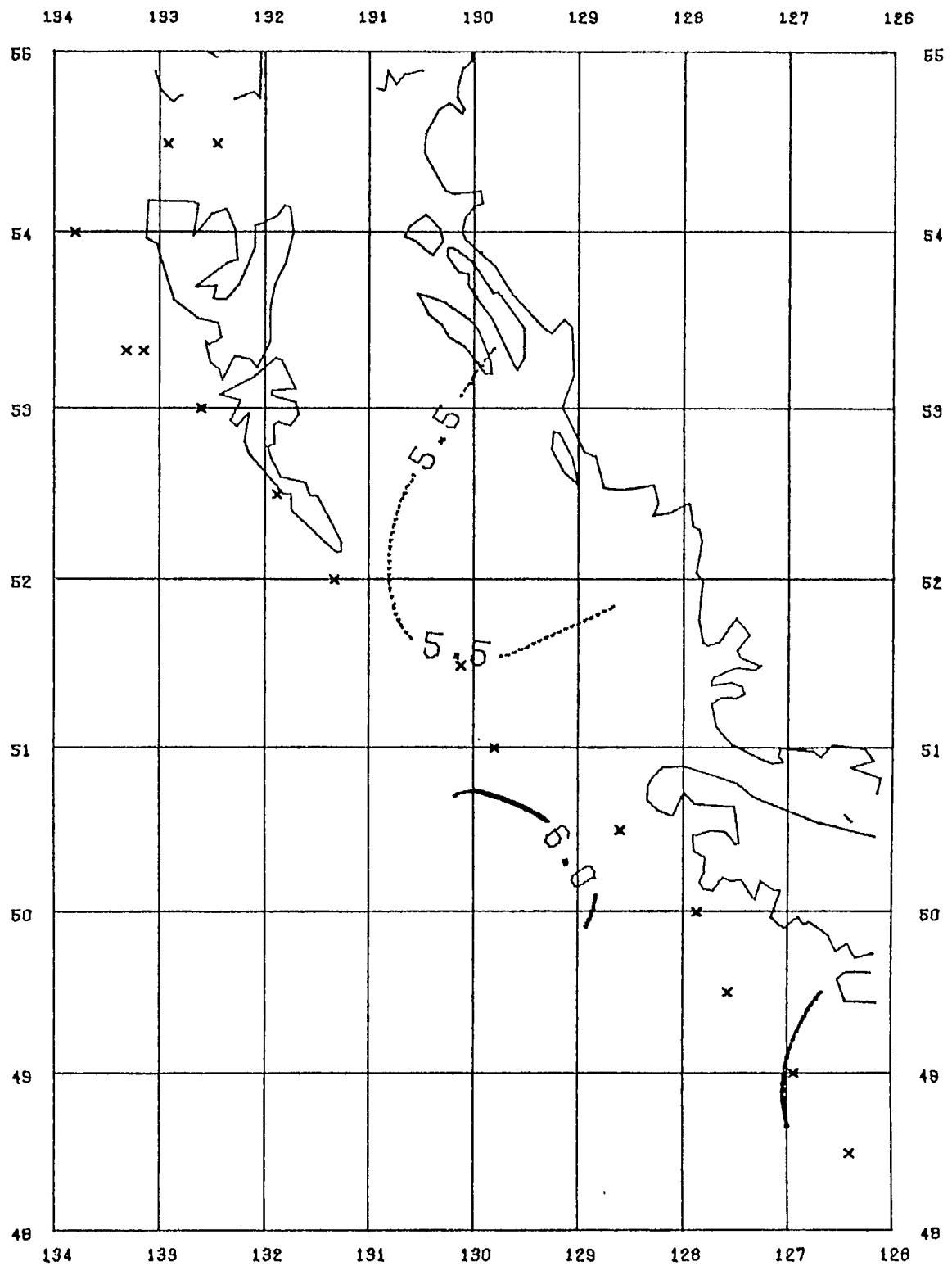
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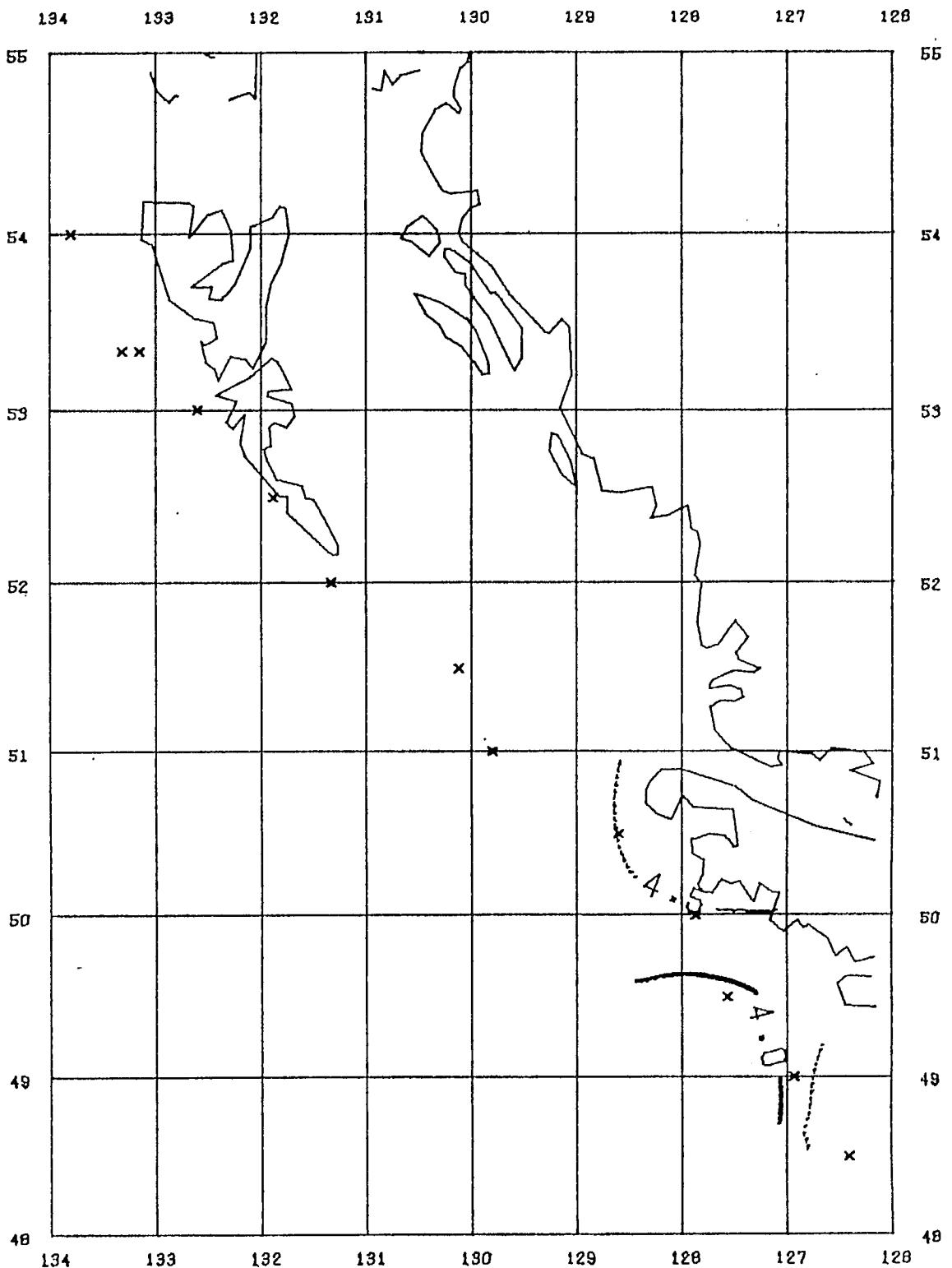




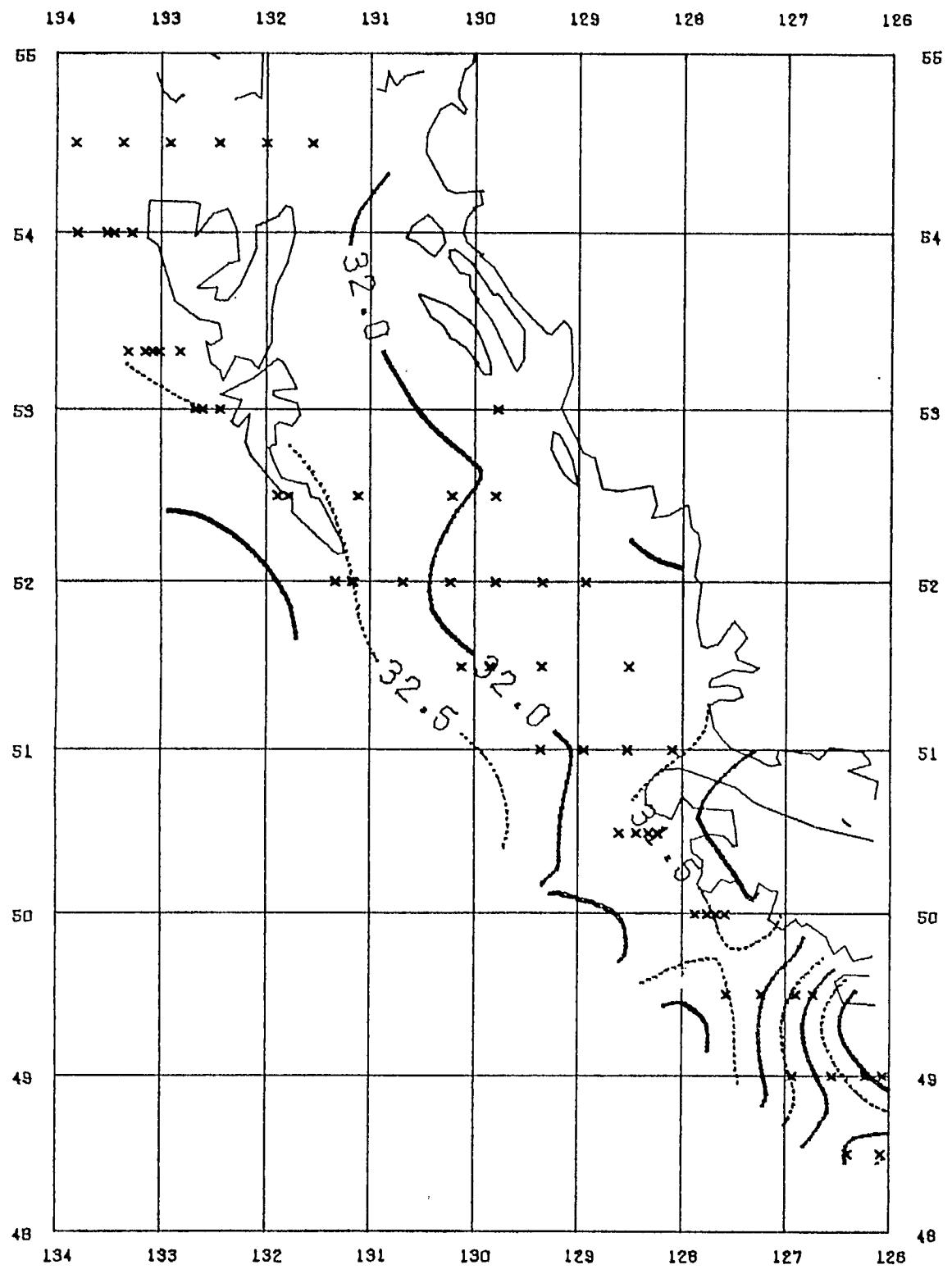
CRUISE 183180004 15-23 APR 1980 TEMPERATURE AT DEPTH 200

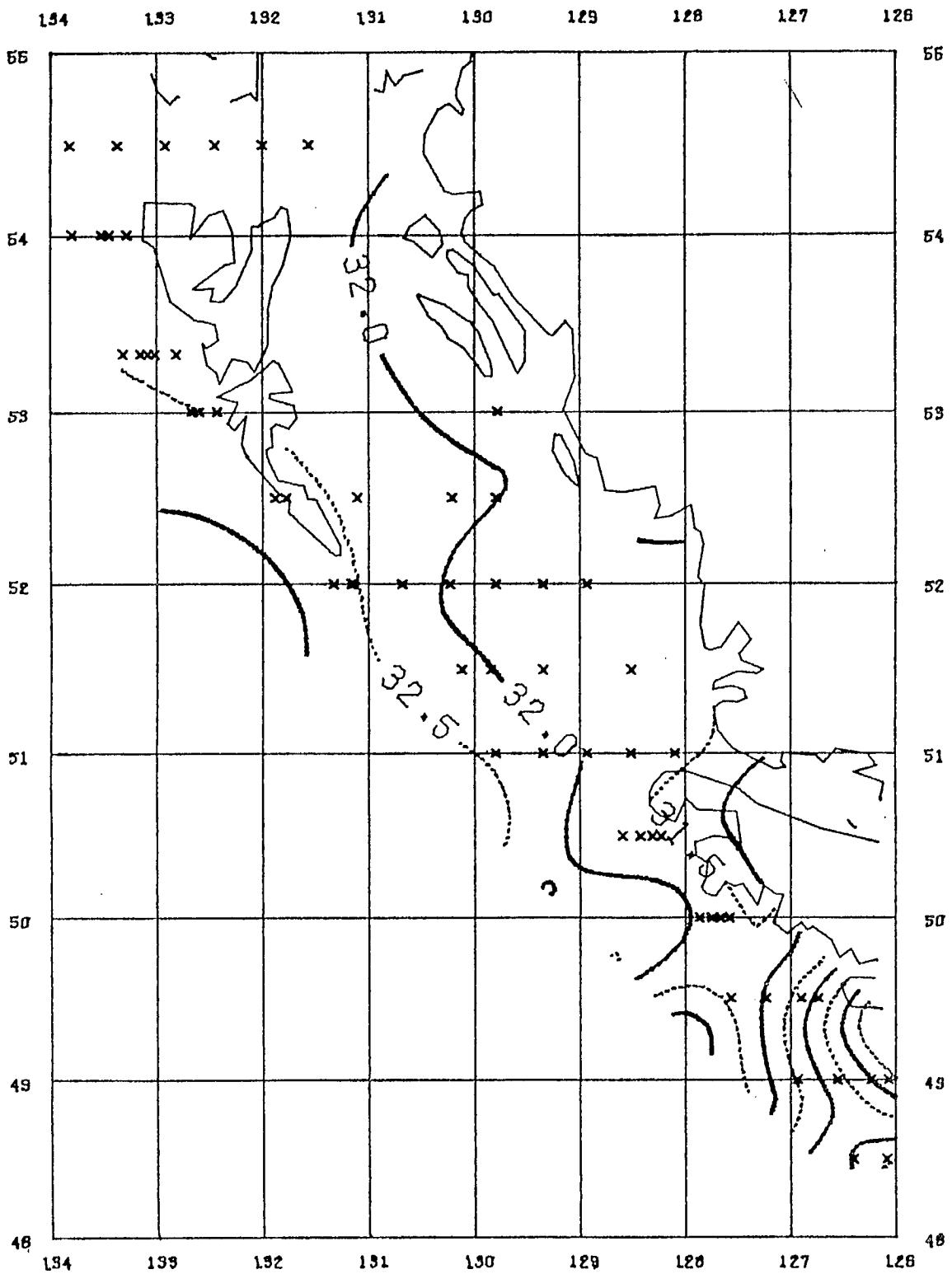






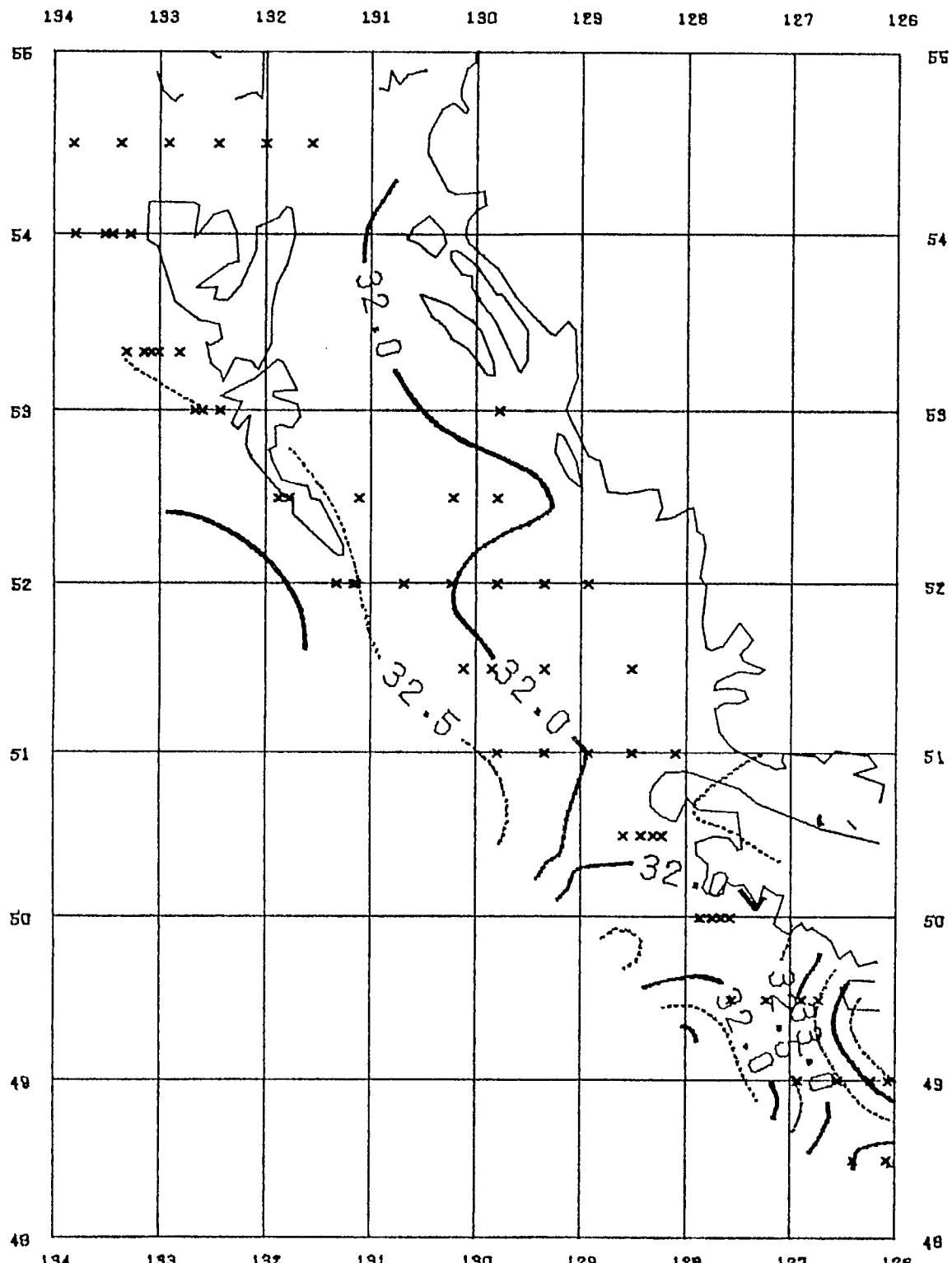
CRUISE 183180004 15-23 APR 1980 TEMPERATURE AT DEPTH 500





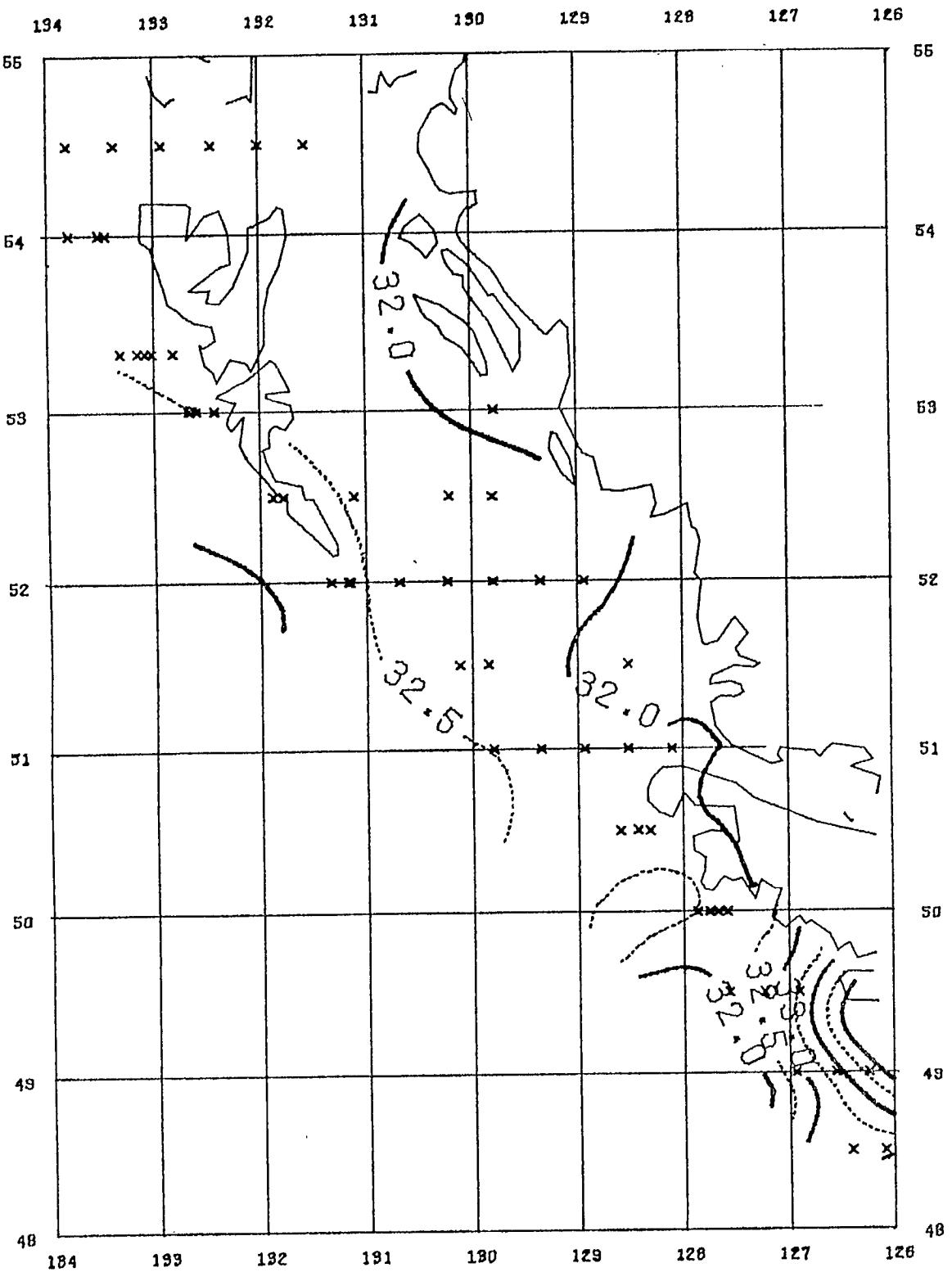
CRUISE 183180004 15-23 APR 1980 SALINITY AT DEPTH 10.0





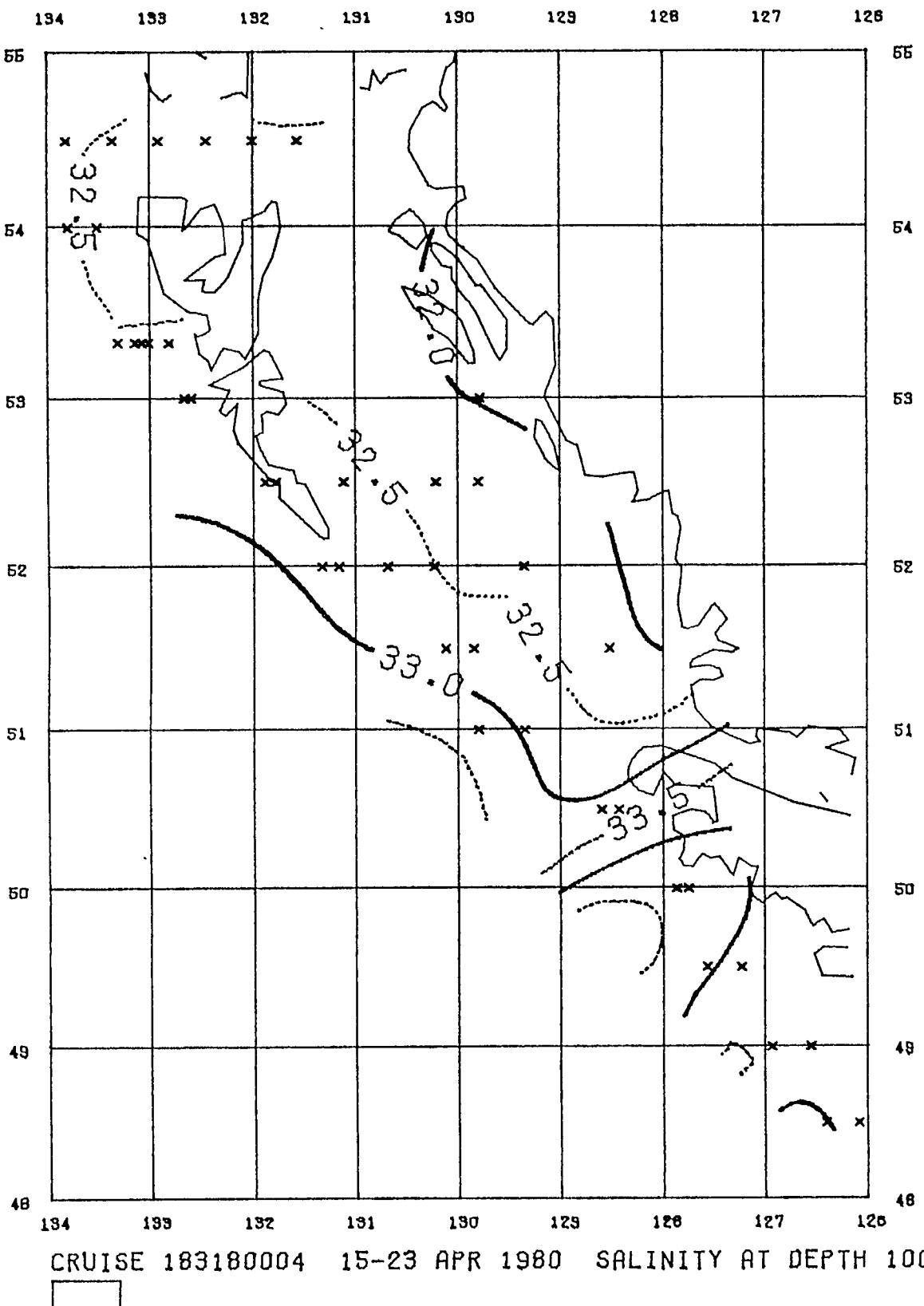
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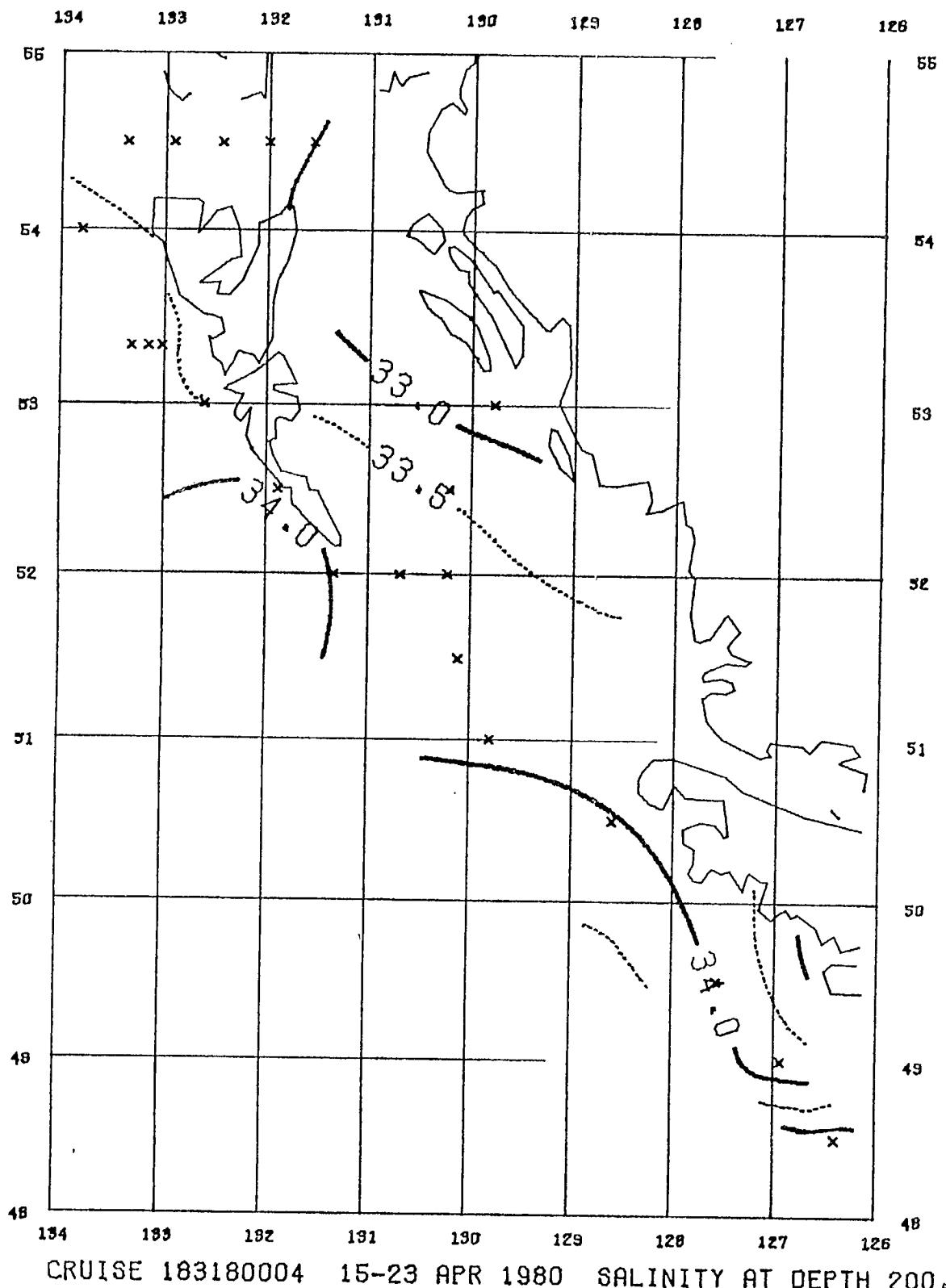




CRUISE 183180004 15-23 APR 1980 SALINITY AT DEPTH 50.0

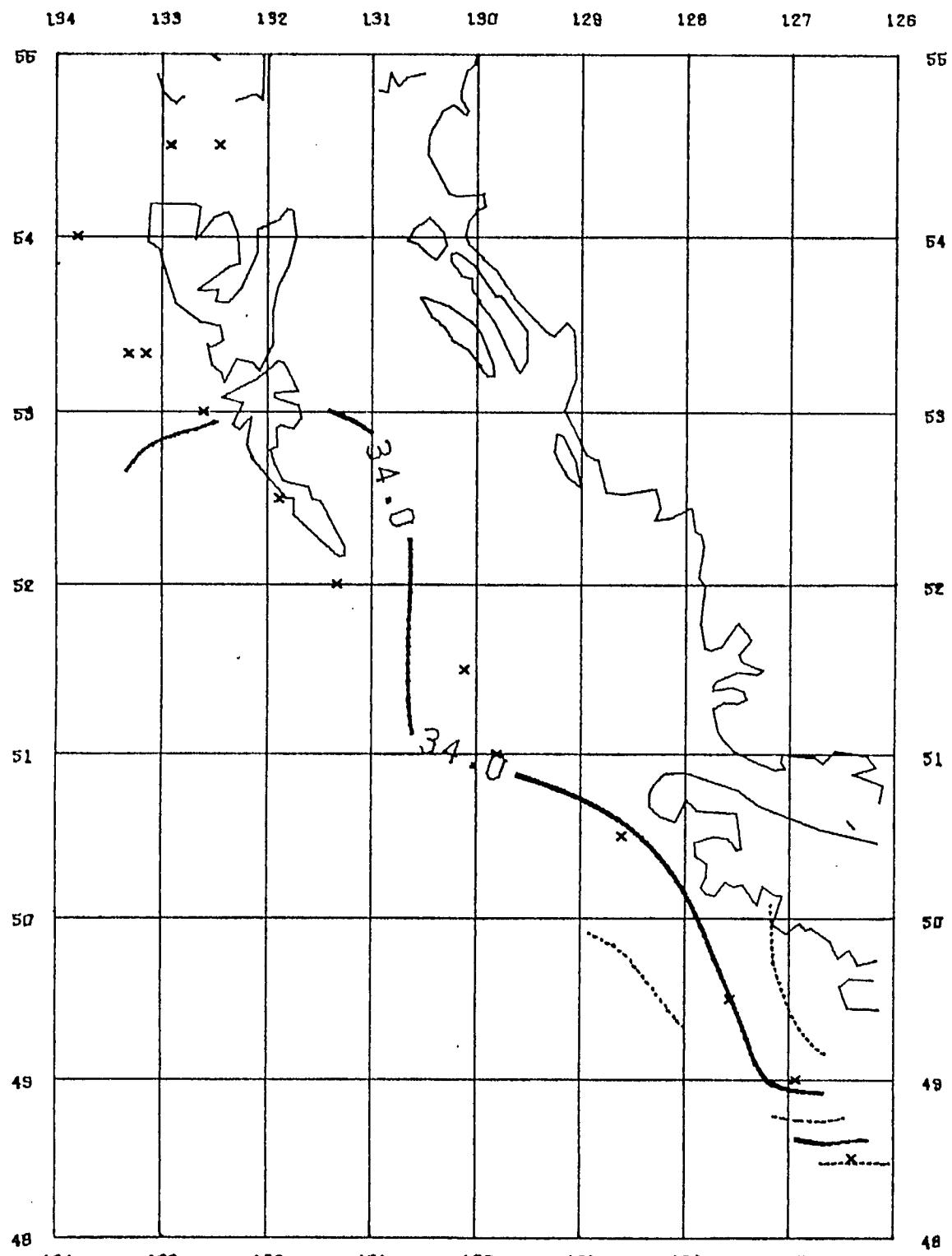






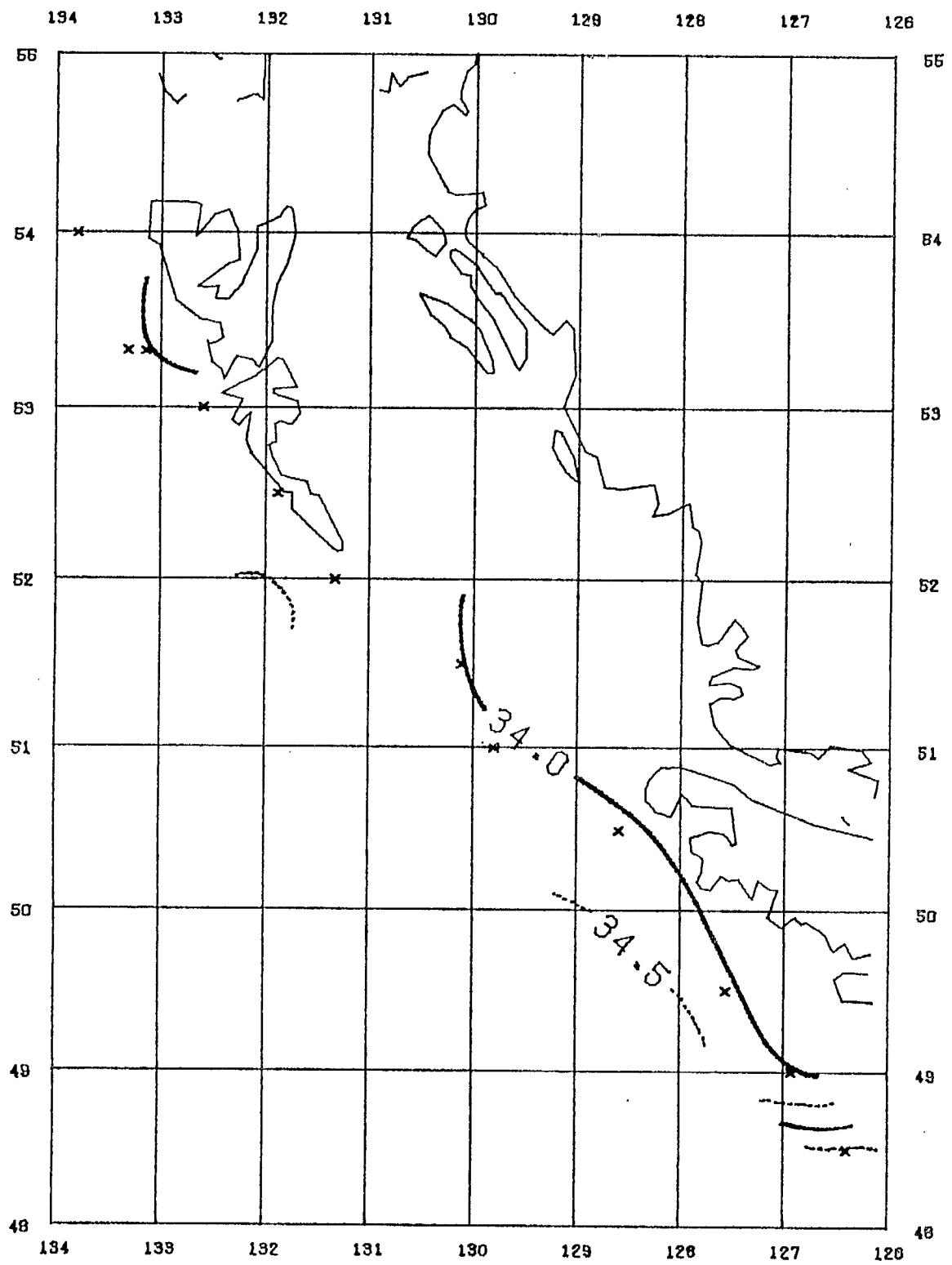
CRUISE 183180004 15-23 APR 1980 SALINITY AT DEPTH 200.0





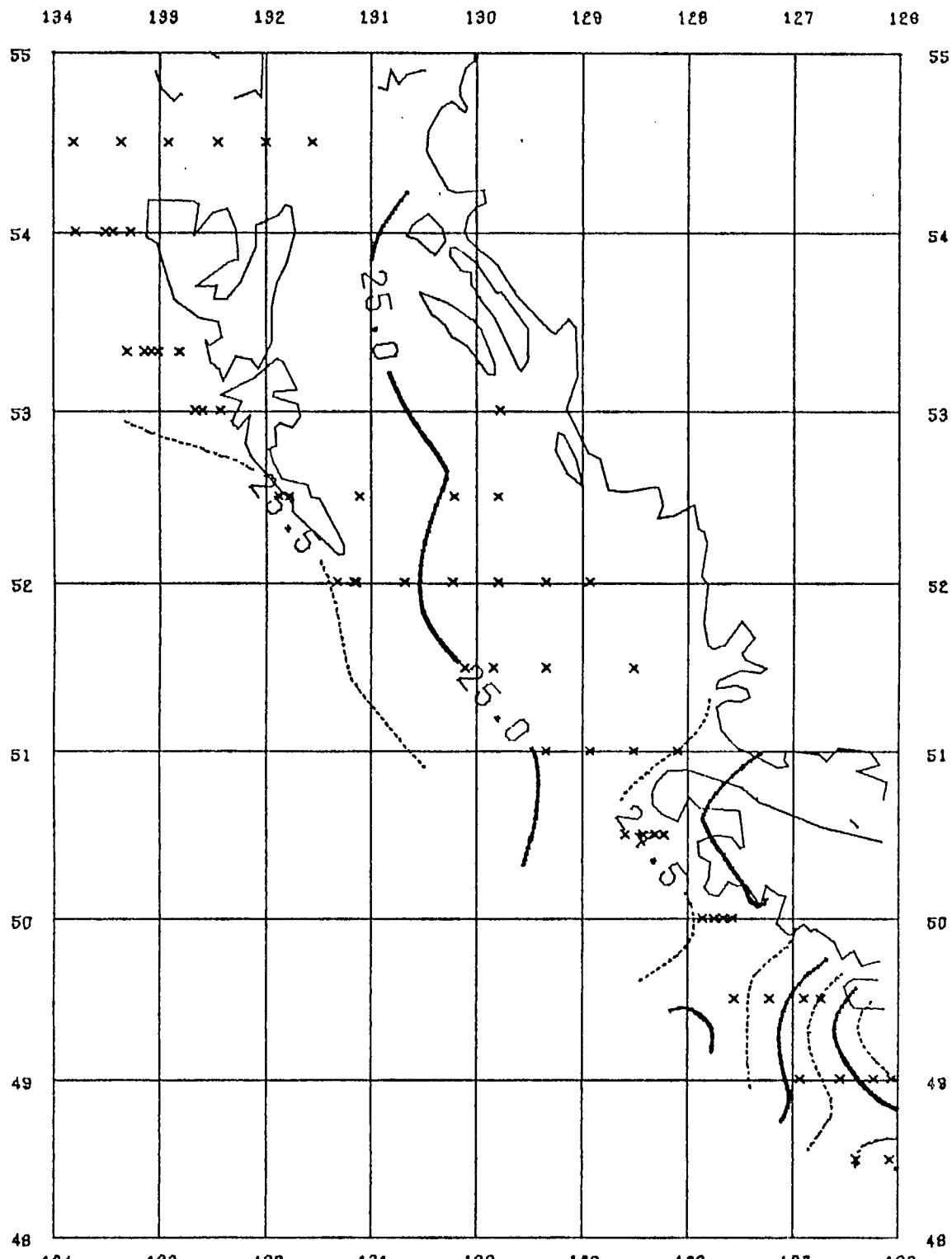
CRUISE 18318004 15-23 APR 1980 SALINITY AT DEPTH 300.0





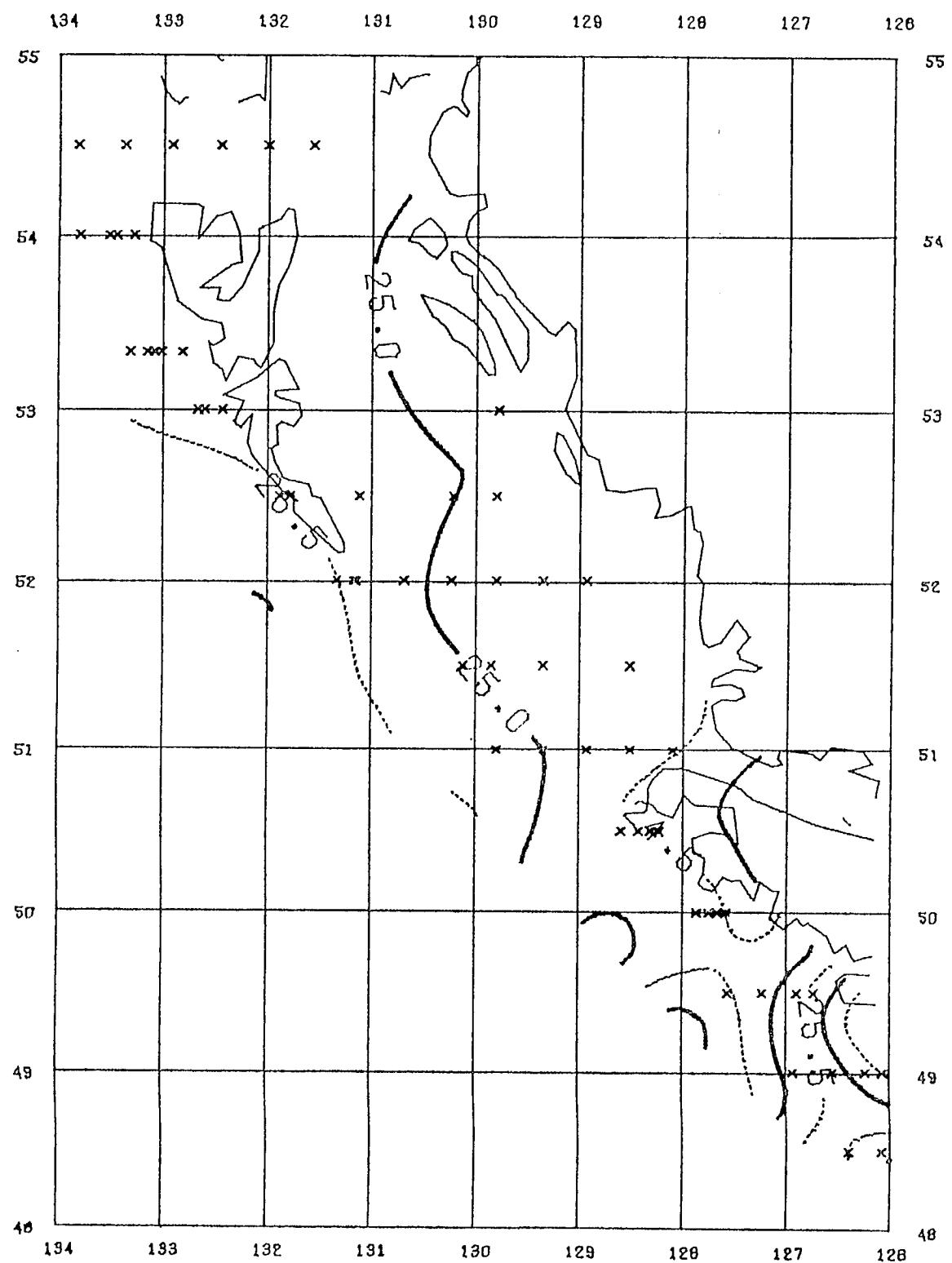
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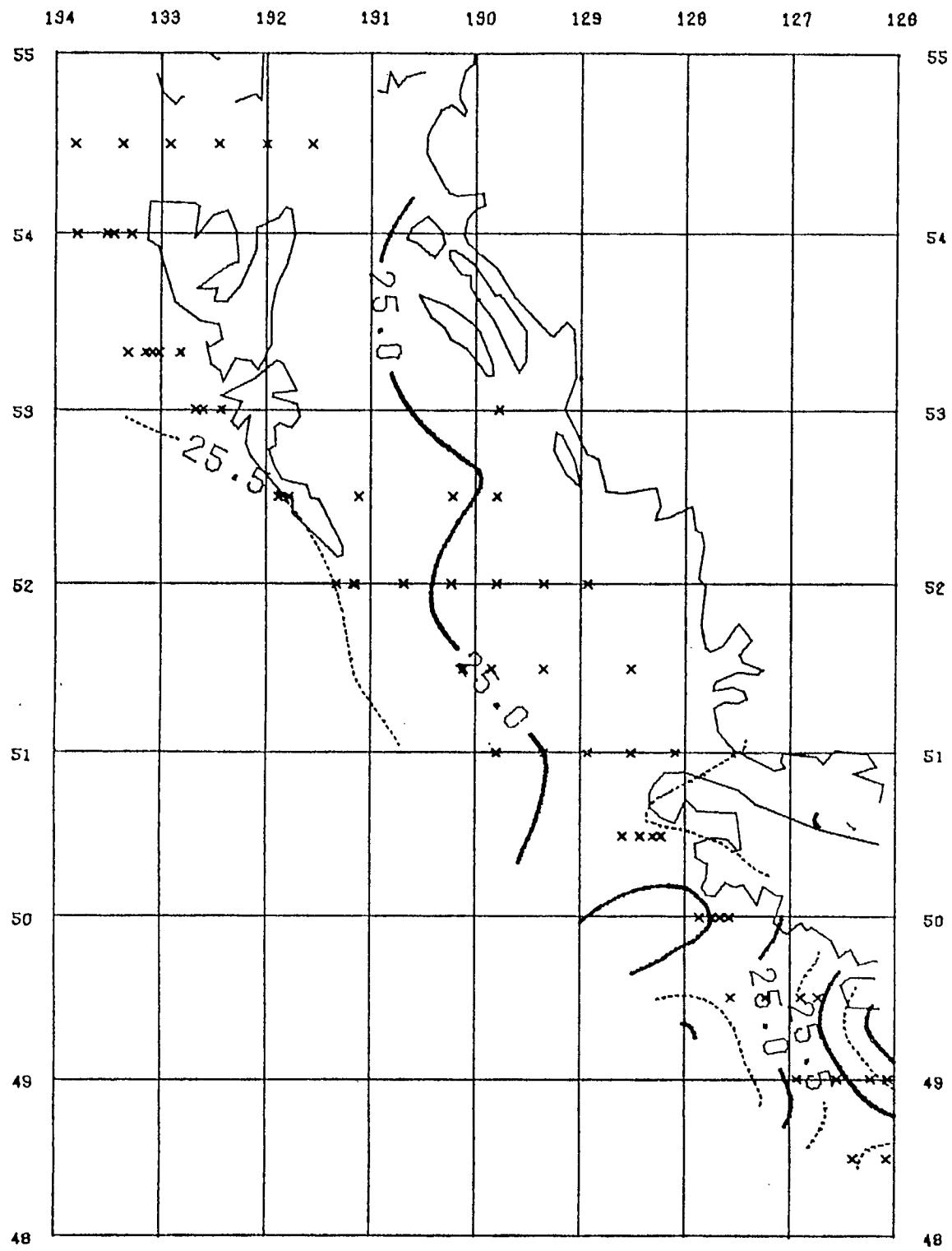
CRUISE 183180004 15-23 APR 1980 SIGMA-T AT DEPTH 0.0





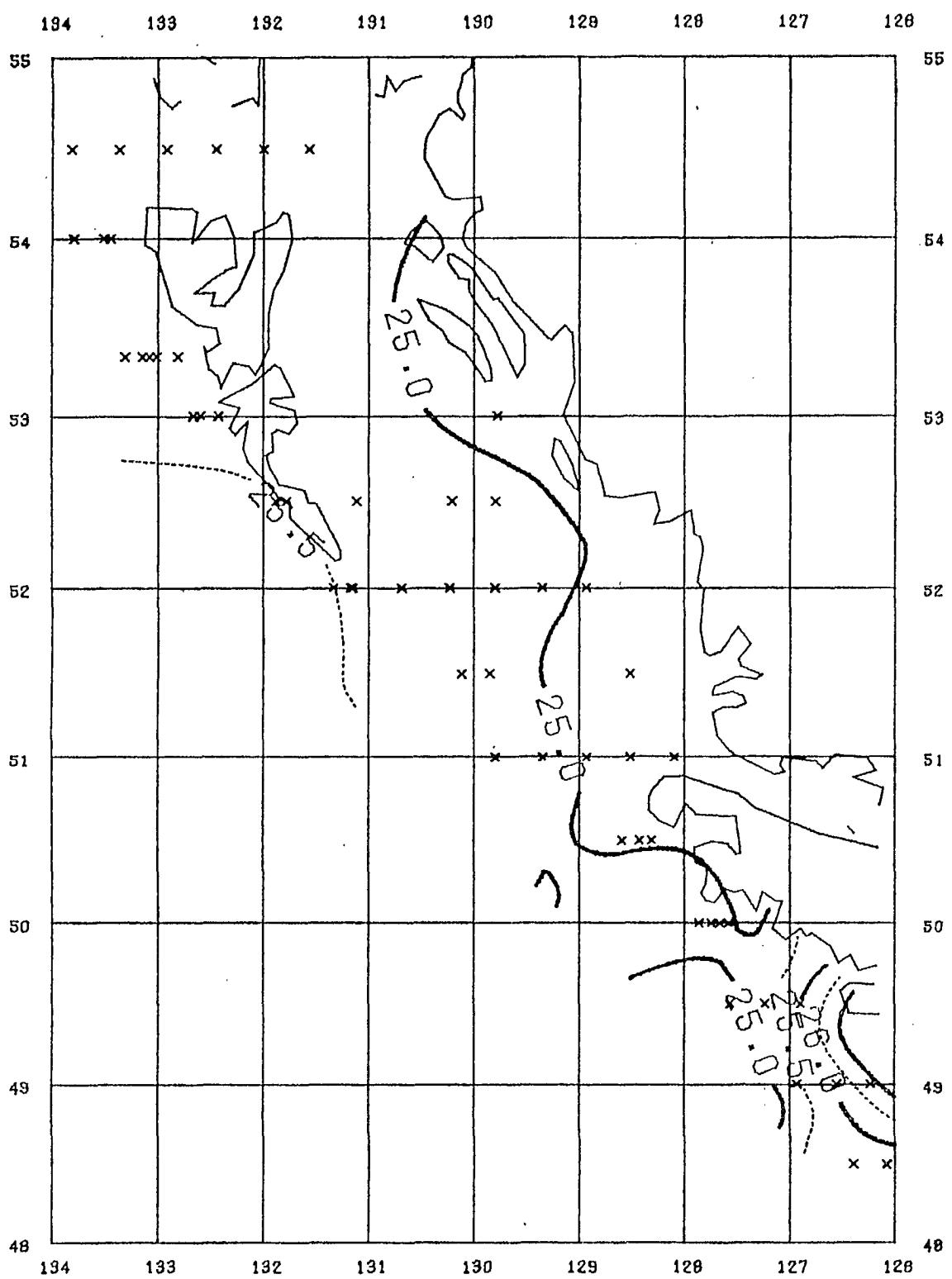
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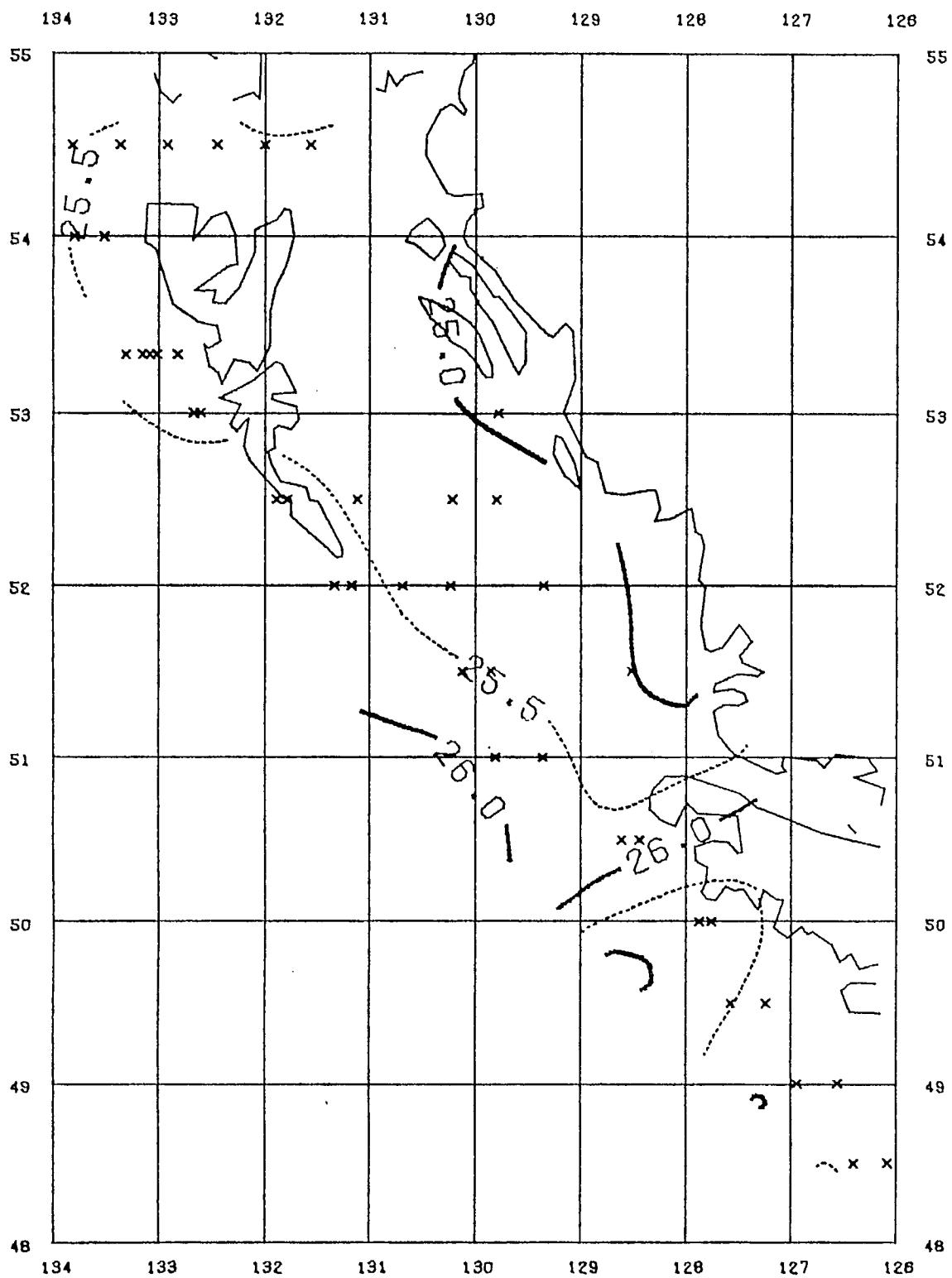
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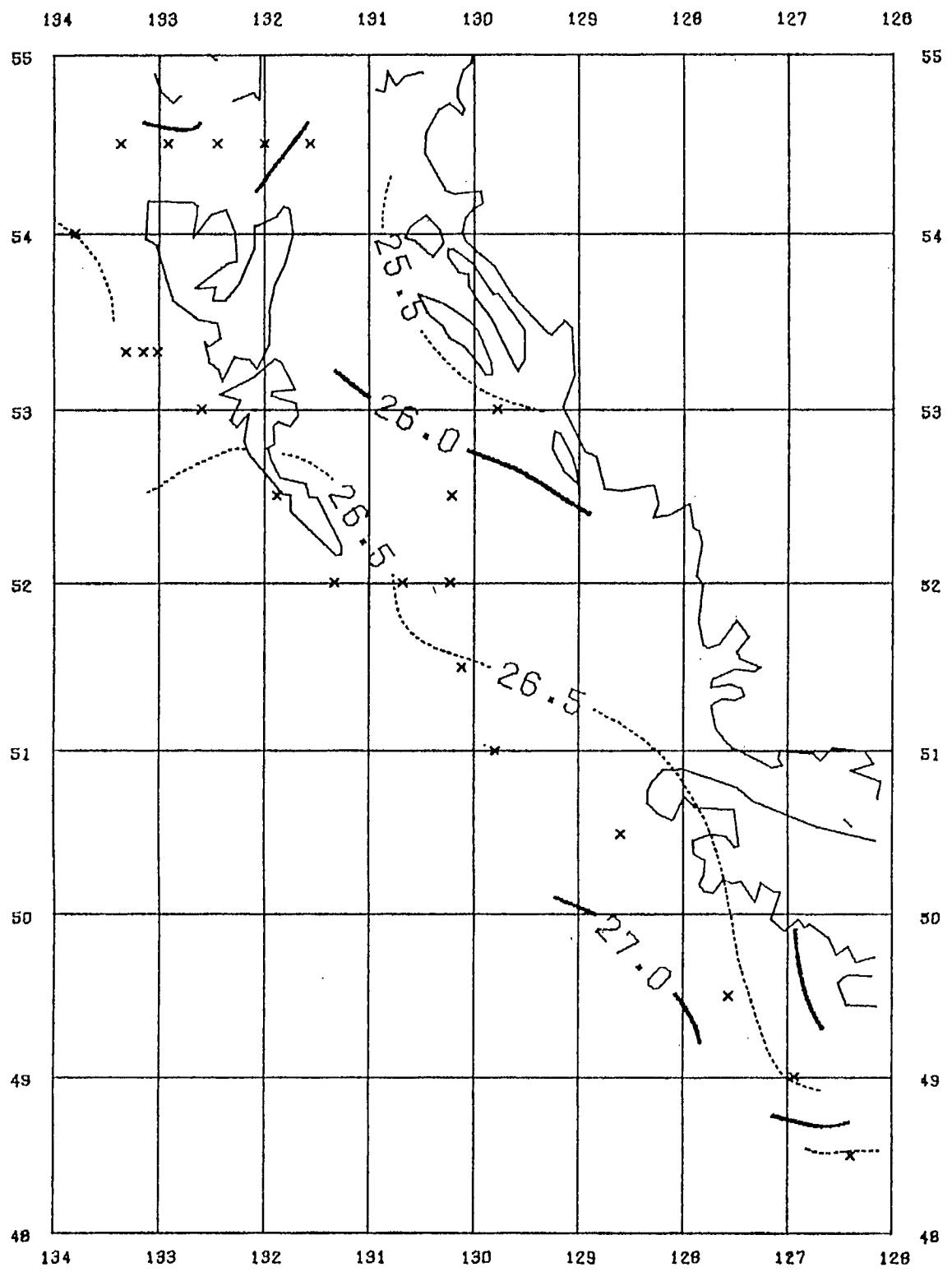
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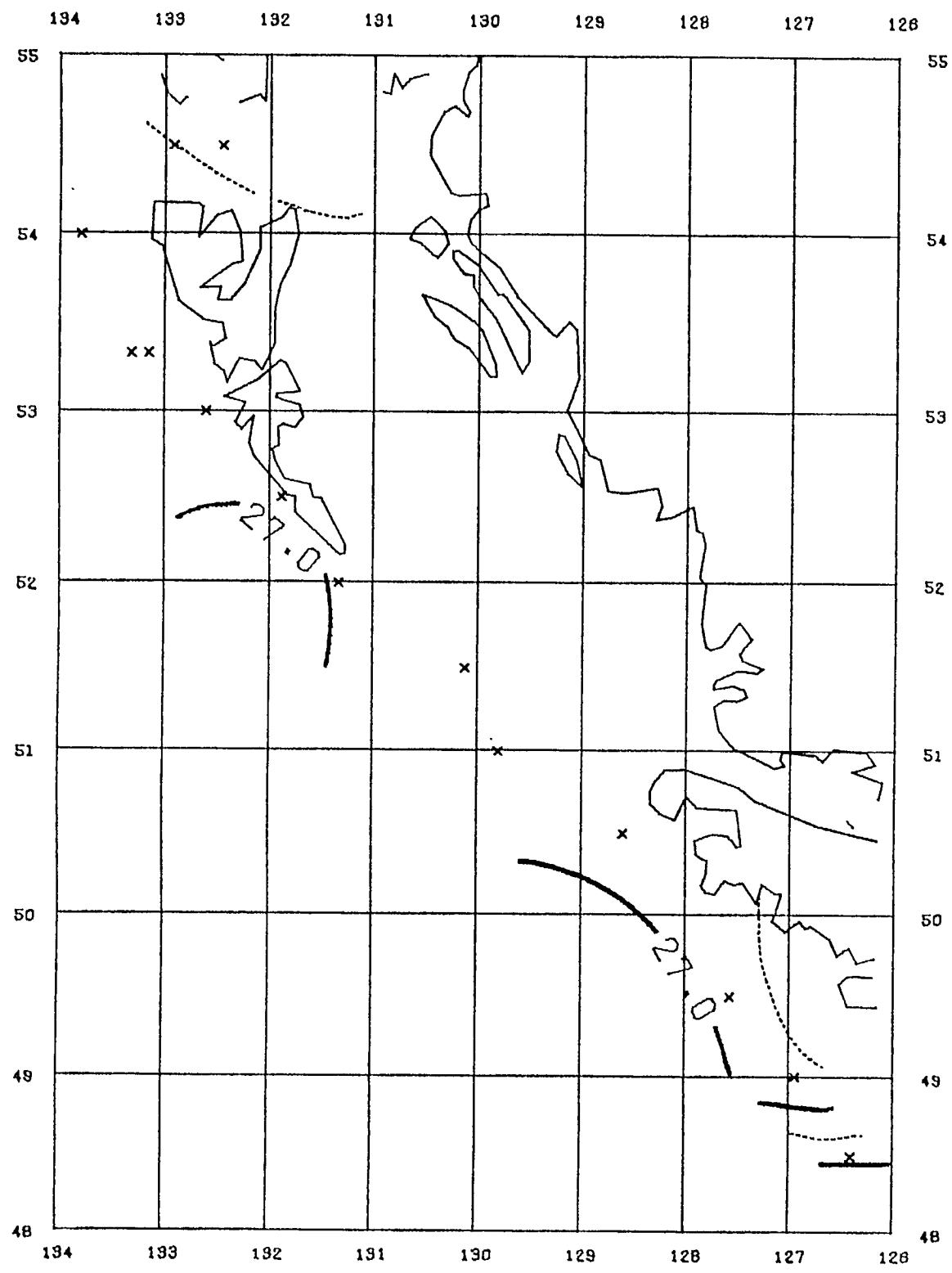
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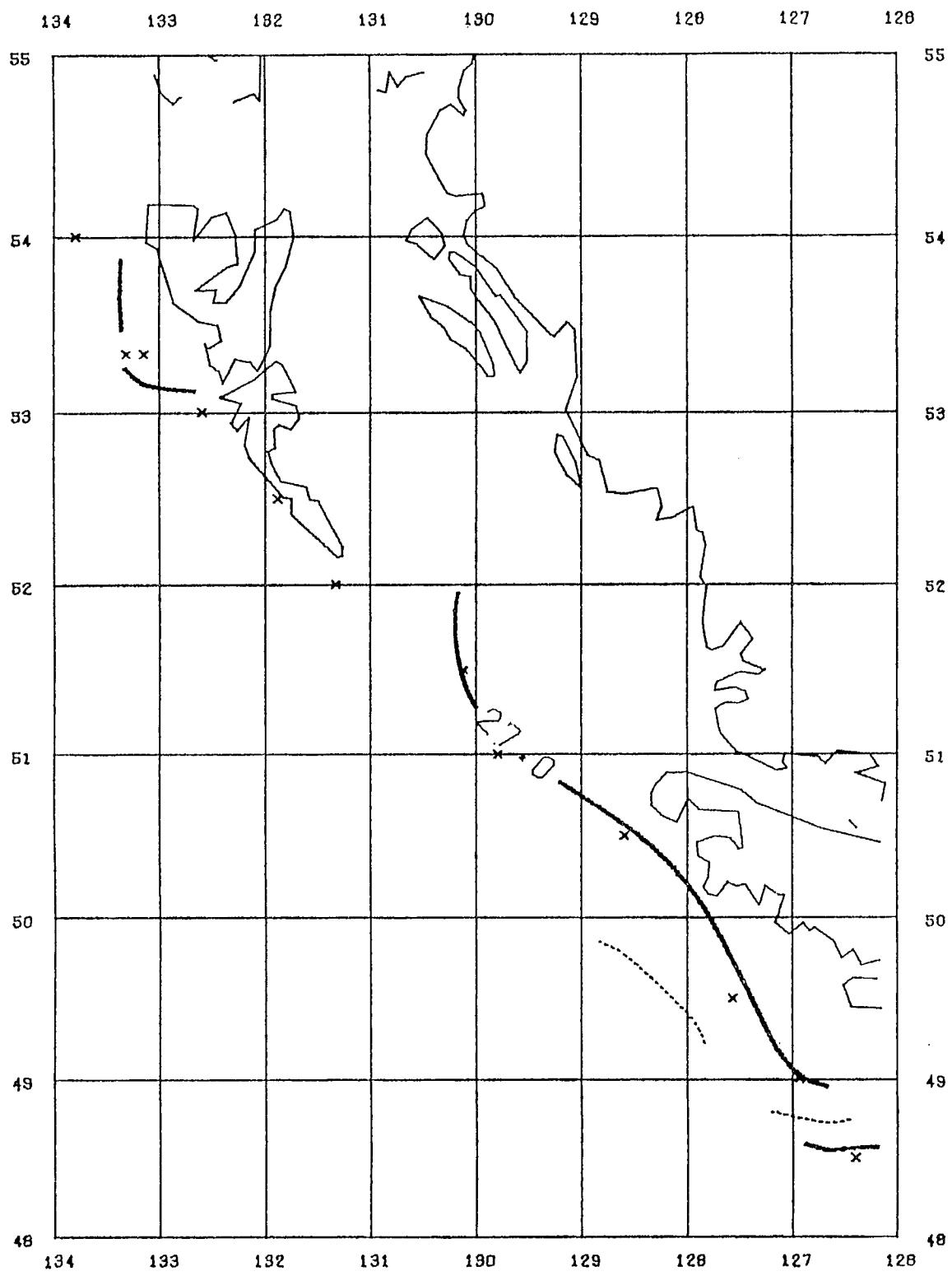


CRUISE 183180004 15-23 APR 1980 SIGMA-T AT DEPTH 200.0





CRUISE 183180004 15-23 APR 1980 SIGMA-T AT DEPTH 300.0



CRUISE 183180004 15-23 APR 1980 SIGMA-T AT DEPTH 500.0



