

**WEST COAST DATA INVENTORY AND
APPRAISAL**

VOLUME 2 (PART 1)

**Waters West of Vancouver Island and the
Queen Charlotte Islands out to the
200-Mile Fishery Limit:
Physical Oceanography – Temperature,
Salinity, Currents, Water Levels and Waves
1905 through 1984**

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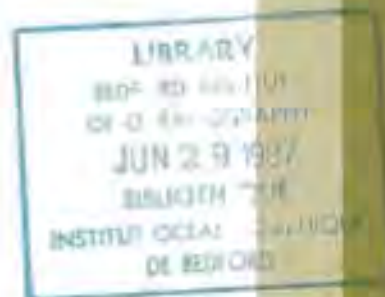
1986

**CANADIAN DATA REPORT OF
HYDROGRAPHY AND OCEAN SCIENCES
NO. 37**

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Canadian Data Report Of Hydrography and Ocean Sciences

These reports provide a medium for the documentation and dissemination of data in a form directly useable by the scientific and engineering communities.

Generally, the reports will contain raw and/or analyzed data but will not contain interpretations of the data. Such compilations will commonly have been prepared in support of work related to the programs and interests of the Ocean Science and Surveys (OSS) sector of the Department of Fisheries and Oceans.

Data Reports are produced regionally but are numbered and indexed nationally. Requests for individual reports will be fulfilled by the issuing establishment listed on the front cover and title page. Out of stock reports will be supplied for a fee by commercial agents.

Regional and headquarters establishments of Ocean Science and Surveys ceased publication of their various report series as of December 1981. A complete listing of these publications and the last number issued under each title are published in the *Canadian Journal of Fisheries and Aquatic Sciences*, Volume 38: Index to Publications 1981. The current series began with Report Number 1 in January 1982.

Rapport statistique canadien sur l'hydrographie et les sciences océaniques

Ces rapports servent de véhicule pour la compilation et la diffusion des données sous une forme directement utilisable par les scientifiques et les techniciens.

En général, les rapports contiennent des données brutes ou analysées mais ne fournissent pas d'interprétations des données. Ces compilations sont préparées le plus souvent à l'appui de travaux reliés aux programmes et intérêts du service des Sciences et Levés océaniques (SLO) du ministère des Pêches et des Océans.

Les rapports statistiques sont produits à l'échelon régional mais sont numérotés et placés dans l'index à l'échelon national. Les demandes de rapports seront satisfaites par l'établissement auteur dont le nom figure sur la couverture et la page de titre. Les rapports épuisés seront fournis contre rétribution par des agents commerciaux.

Les établissements des Sciences et Levés océaniques dans les régions et à l'administration centrale ont cessé de publier leurs diverses séries de rapports depuis décembre 1981. Vous trouverez dans l'index des publications du volume 38 du *Journal canadien des sciences halieutiques et aquatiques*, la liste de ces publications ainsi que le dernier numéro paru dans chaque catégorie. La nouvelle série a commencé avec la publication du Rapport n° 1 en janvier 1982.

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VOLUME 2 (PART 1)
Waters West of Vancouver Island and the Queen Charlotte Islands
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Physical Oceanography - Temperature, Salinity,
Currents, Water Levels and Waves
1905 through 1984

by

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PREFACE

To manage Canadian West Coast waters competently, there is a fundamental requirement to review the sufficiency and suitability of the available scientific data for many purposes - such as engineering design, regulation, assessment, planning, research and monitoring. We consider this review to consist of three phases: (i) the cataloguing, mapping and methods-appraisal of all existing data sets; (ii) the actual scrutiny of the data themselves and the judgement of their utility for answering management questions; and (iii) the analysis and interpretation of the best of these data.

This inventory, which indexes the physical-oceanographic data of the waters off Vancouver Island and the Queen Charlotte Islands out to the 200-mile fishery limit, is considered a major contribution to phase (i). It has been produced by the Ocean Information Division at the Institute of Ocean Sciences, Department of Fisheries and Oceans, as part of a Data Inventory and Appraisal Program. Contract projects, supervised by government scientists and funded by numerous federal agencies, have examined all known marine-data sets which contain oceanographic information obtained in the areas in question. Evaluation of the data-set quality has been carried out by careful examination of the documentation for methodologies used in sampling and in data storage and analysis.

It is our hope that this inventory will assist you, both in establishing the usefulness of existing data for whatever particular purpose contemplated, and in assessing the confidence to be placed in the interpretations. In addition, it should aid in setting priorities for archiving large quantities of data into the Department's Marine Environmental Data Service (MEDS) in Ottawa.

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Scientific Coordinator
Canadian West Coast Compilation
and Appraisal Series

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CONTENTS

	<u>Page</u>
ABSTRACT	iv
ACKNOWLEDGEMENTS	v
VOLUME ABSTRACT	1
 <u>CONTENTS: VOLUME 2, PART 1</u>	
1. INTRODUCTION	1
2. STUDY AREA	1
3. HISTORICAL DATA	4
3.1 SURFACE TEMPERATURE AND SALINITY FROM SHORE STATIONS	4
4. GENERAL REPORT LAYOUT AND USER INSTRUCTIONS	8
4.1 DATA SETS	8
4.2 INVENTORY ORGANIZATION	9
4.3 SAMPLE USE OF THE INVENTORY	9
5. DATA RATING AND APPRAISAL	10
5.1 TYPES OF DATA	10
5.2 DATA RATING SCALE	13
6. SUMMARY OF DATA COVERAGE	16
6.1 SPATIAL COVERAGE, INCLUDING DATA DISTRIBUTION MAPS	16
6.2 SEASONAL COVERAGE, INCLUDING BI-MONTHLY MAPS	16
6.3 CONCLUSIONS	17
7. REFERENCES	48
8. DATA INVENTORY TABLE	70
9. MAPS	123
 <u>CONTENTS: VOLUME 2, PART 2</u>	
10. INDEXES	1
10.1 GEOGRAPHICAL	4
10.2 MEASUREMENT TYPE	6
10.3 REFERENCES BY DATA-SET NUMBER	7
11. LISTING OF MEASUREMENT LOCATIONS AND OTHER PARAMETERS, BY YEAR	71
11.1 TEMPERATURE-SALINITY DATA	72
11.2 CURRENT-METER DATA	270
11.3 WATER-LEVEL DATA	291
11.4 WAVE DATA	307
APPENDIX 1 - SIGNIFICANT DATES IN THE HISTORY OF WEST COAST OCEANOGRAPHY	309
APPENDIX 2 - REMARKS - METHODS, PROBLEMS AND ERRORS BY DATA-SET NUMBER	310
APPENDIX 3 - ADDRESSES OF INFORMATION SOURCES	321
APPENDIX 4 - ABBREVIATIONS USED IN THIS REPORT	324

ABSTRACT

Birch, J. R., L.F. Giovando and D.B. Fissel, 1986. West Coast Data Inventory and Appraisal. Volume 2. Waters West of Vancouver Island and the Queen Charlotte Islands out to the 200-Mile Fishery Limit: Physical Oceanography - Temperature, Salinity, Currents, Water Levels and Waves, 1905 through 1984. Can. Data Rep. Hydrogr. Ocean Sci. 37:(Vol. 2, Part 1, 502 p., Part 2, 324 p.)

This volume is one of a group of catalogues designed to inventory and appraise marine-data sets collected in waters off the west coast of Canada. For user convenience, the group has been organized with its subject matter divided into three general disciplines: physics, chemistry and biology. The format throughout has been structured to facilitate comparison among subjects and regions. With such a large undertaking it is not possible to provide all catalogues at once; the present volume deals with physics only.

Data collection is a continuing process and further updates of these inventories are planned. Readers are requested to submit corrections and additions by writing the issuing establishment. Such corrections and additions will be incorporated in on-line computerized data set listings and will be continuously available upon request.

Key words: British Columbia, Queen Charlotte Islands, Vancouver Island, inventory, salinities, temperatures, currents, water levels, waves.

SOMMAIRE

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Le présent volume fait partie d'un groupe de catalogues destinés à faire l'inventaire de et à évaluer les séries de données marines sur la côte ouest du Canada. Pour plus de commodité, la question traitée est structurée en trois grandes disciplines: physique, chimie et biologie. Les catalogues sont présentés de façon à faciliter la comparaison entre les sujets et les régions. Le domaine est si vaste qu'il est impossible de fournir tous les catalogues en une seule fois; le présent volume traite seulement la physique.

La collecte des données est un processus permanent et il est prévu de mettre à jour ces inventaires par la suite. Les lecteurs sont invités à soumettre par écrit les corrections et les additions à l'établissement auteur. Ces corrections et additions seront traitées en direct sur ordinateur et incorporées aux listages qui pourront être obtenus sur demande.

Mots-clés: Colombie-Britannique, Queen Charlotte Islands, Vancouver Island, inventaire, salinités, températures, courants, niveaux de la mer, ondes.

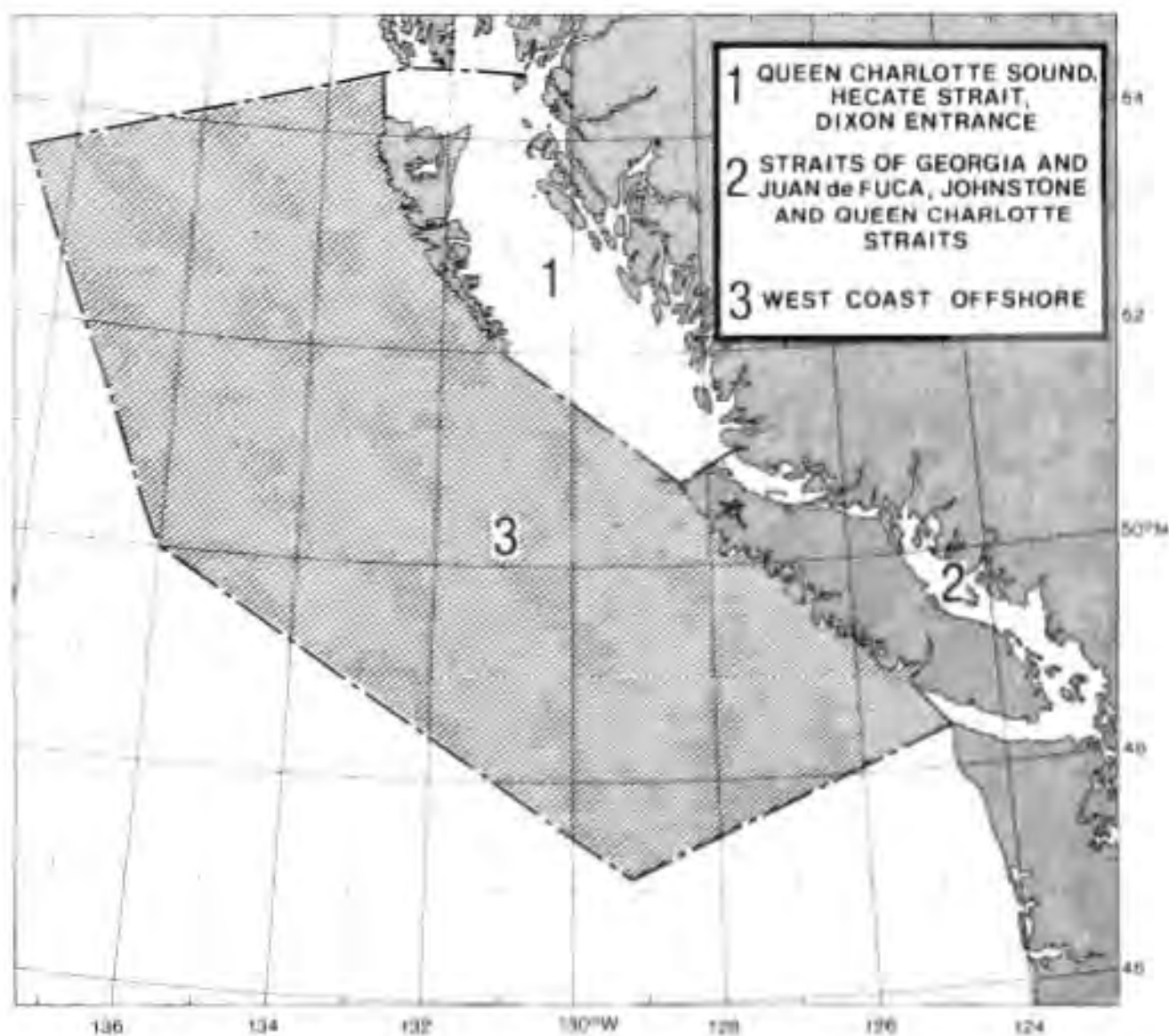
ACKNOWLEDGEMENTS

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WEST COAST DATA INVENTORY AND APPRAISAL

VOLUME 2 (PART 1)

Waters West of Vancouver Island and the Queen Charlotte Islands
out to the 200-Mile Fishery Limit: Physical Oceanography



The study area, 3 shown shaded above, is bounded offshore by the 200-mile fishery limit.

VOLUME 2: Waters West of Vancouver Island and the Queen Charlotte Islands out to the 200-Mile Fishery Limit: Physical Oceanography - Temperature, Salinity, Currents, Water Levels and Waves, 1905 through 1984.

VOLUME ABSTRACT

This inventory represents a catalogue of physical-oceanographic data collected in waters west of Vancouver Island and the Queen Charlotte Islands out to and including the 200-mile fishery limit. Times and locations of measurements are listed and displayed graphically for temperature, salinity, current-meter, water-level, wave and drifter data. Yearly plots showing the locations of all measurements are included, as is an index of references by data-set number. References and sources are listed for all data included in the inventory.

Key words: British Columbia, Queen Charlotte Islands, Vancouver Island, inventory, salinities, temperatures, currents, water levels, waves.

1. INTRODUCTION

In this report, the physical-oceanographic data collected in waters west of Vancouver Island and the Queen Charlotte Islands out to and including the 200-mile fishery limit are catalogued. The information provided includes the time and location of measurements, the parameters measured, and the type of instrumentation used. The data themselves are not included, but a source for, and any reports or references utilizing them, are cited wherever possible. This will enable potential users of the data to determine what is available in their area of interest, what data were collected using a specific measurement technique, and whether those data may be of value.

About 500 data sets collected from 1905 through 1984 are summarized in Table 2.

The station header information is to be added to the ongoing data base at the Institute of Ocean Sciences (IOS), Sidney, B.C. As new data and/or previously-inaccessible data become available, they will be added to a computerized data base maintained by the Ocean Information Division. Information concerning new data sets, older data sets which have not been included, or errors in this catalogue, should be submitted to the Ocean Information Division of the Institute of Ocean Sciences (phone 604-656-8268 or 604-656-8335).

2. STUDY AREA

The study area includes the 200-mile offshore fishery limit as well as the inlets and sounds along the west coast of Vancouver Island and the Queen Charlotte Islands (Figure 1a,b).

The B.C. continental shelf narrows from a width of approximately 80 km off southern Vancouver Island to about 30 km off the Queen Charlotte Islands. Most of the area is considered deep sea, with depths on the order of 2,000-

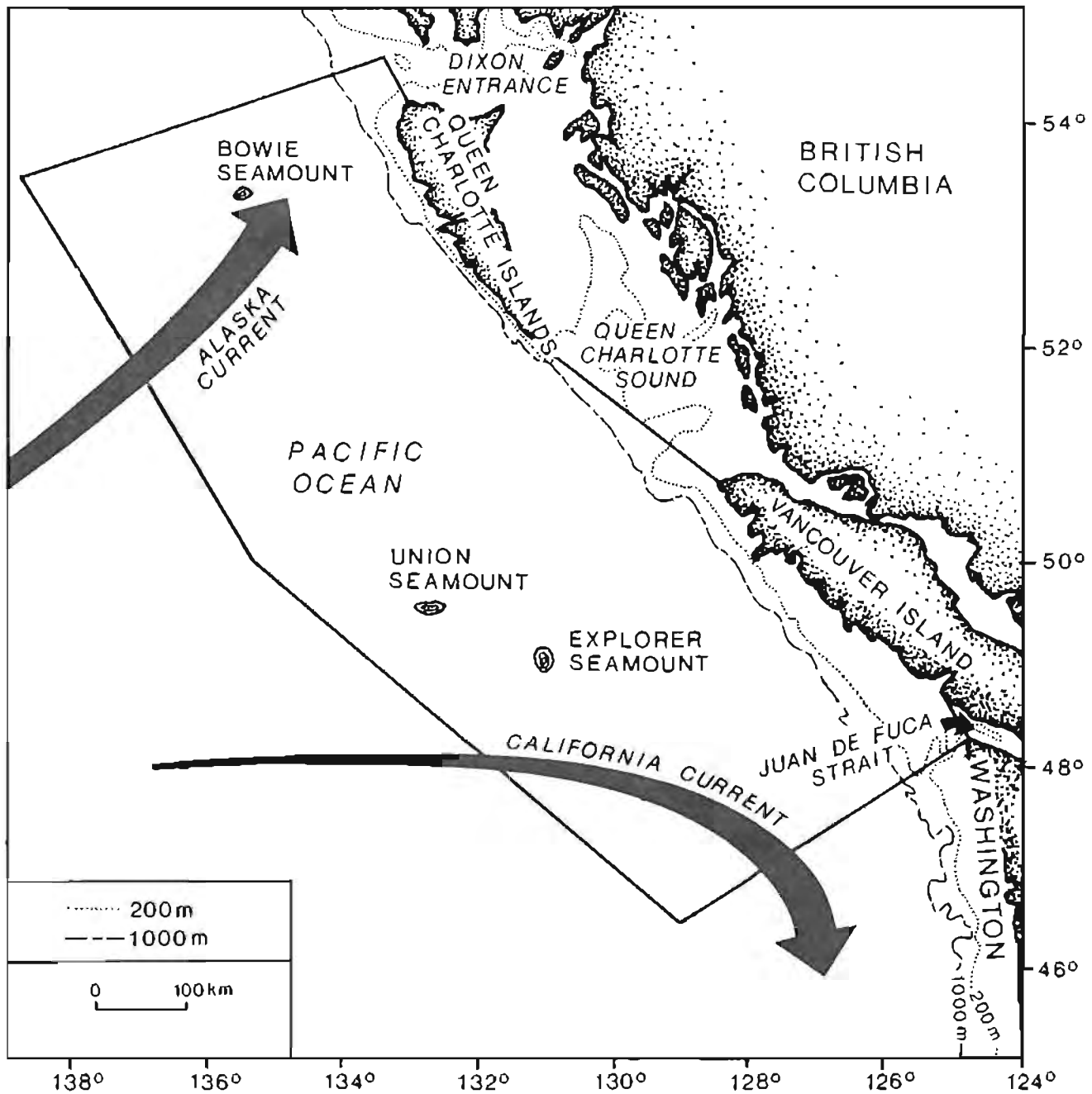


Figure 1a: Major current and bathymetric features offshore British Columbia.

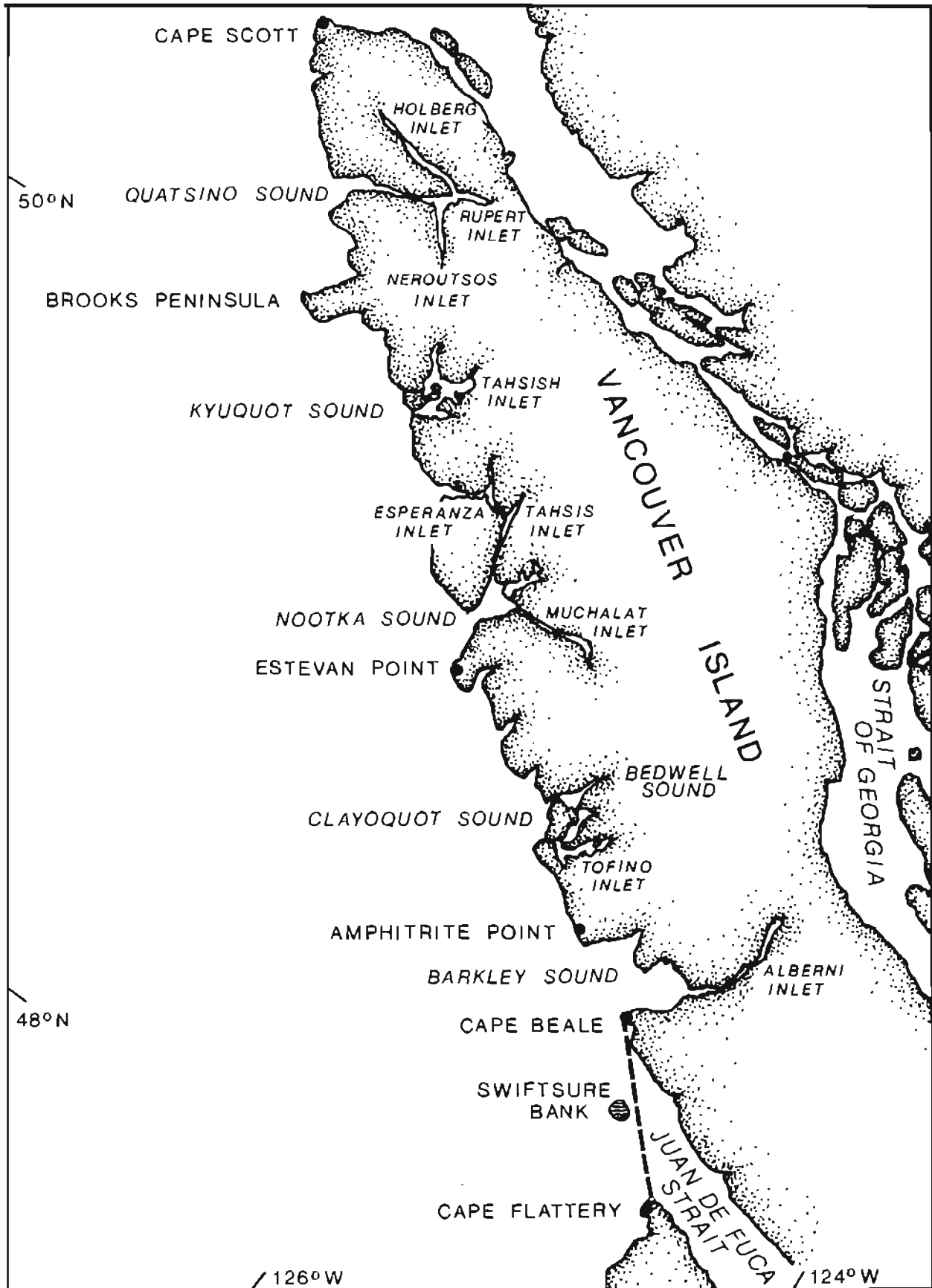


Figure 1b: Placenames for the west coast of Vancouver Island.

3,000 m. A series of seamounts parallels the coast. Although the surrounding water depths are typically 3,000 m, the peaks of these underwater volcanoes rise to within a relatively short distance of the surface (100 m in the case of Bowie Seamount).

Even though the area is bathymetrically a deep-sea region, most surface waters are influenced by coastal runoff. An area of upwelling, most pronounced in summer, extends along the Vancouver Island coast and to the south. The major currents in the area are the Alaska and California currents, which result from a splitting of the Subarctic Current due to a divergence in the prevailing winds. Surface flow along the coast is generally northerly in winter (Davidson Current) and variable in summer. Further information regarding the climatology and oceanography of this area may be found in Thomson (1981a).

3. HISTORICAL DATA

The early oceanographic data consist mainly of water-level measurements. These data commenced in 1905 when a permanent water-level station was established near Tofino.

In 1934, a program was begun which involved the collection of surface temperature and salinity data at shore stations, mainly at lightstations maintained by the Ministry of Transport (MOT) or its organizational predecessors. Since then, nine such sampling stations have been operated in this area for varying periods of time (Section 3.1).

The first oceanographic survey in the area was conducted by the University of Washington in 1932 and consisted of several hydrographic stations offshore of Vancouver Island. In the 1930's, the Pacific Biological Station (PBS) at Nanaimo began cruises in this area. The Pacific Oceanographic Group (POG) was formed in 1946 specifically to study the oceanographic conditions of B.C. waters. The Institute of Oceanography at the University of British Columbia (IOUBC), formed in 1949, has obtained large amounts of data primarily in the Strait of Georgia and the adjoining inlets, but also in some of the inlets along the west coast of Vancouver Island.

The Pacific Oceanographic Group and the University of Washington dominated the oceanographic activity in this area until the mid-1970's when the Institute of Ocean Sciences (IOS), Patricia Bay, was established. Since then, IOS has been largely responsible for oceanographic data collection on the west coast. Independent consulting firms also began conducting oceanographic surveys in the late 1970's. Consultants have carried out studies for both government agencies and commercial companies.

Figure 2 summarizes the level of oceanographic effort, based on the number of bottle/CTD stations per year. Appendix 1 contains a summary of significant dates in the history of west coast oceanography.

3.1 SURFACE TEMPERATURE AND SALINITY FROM SHORE-STATIONS

Daily observations of sea-surface salinity and/or temperature have been made at various west coast locations since 1934. The stations in this study area are summarized in Table 1 and plotted in Figure 3. Most are lightstations presently operated by the Canadian Coast Guard. Cape St. James

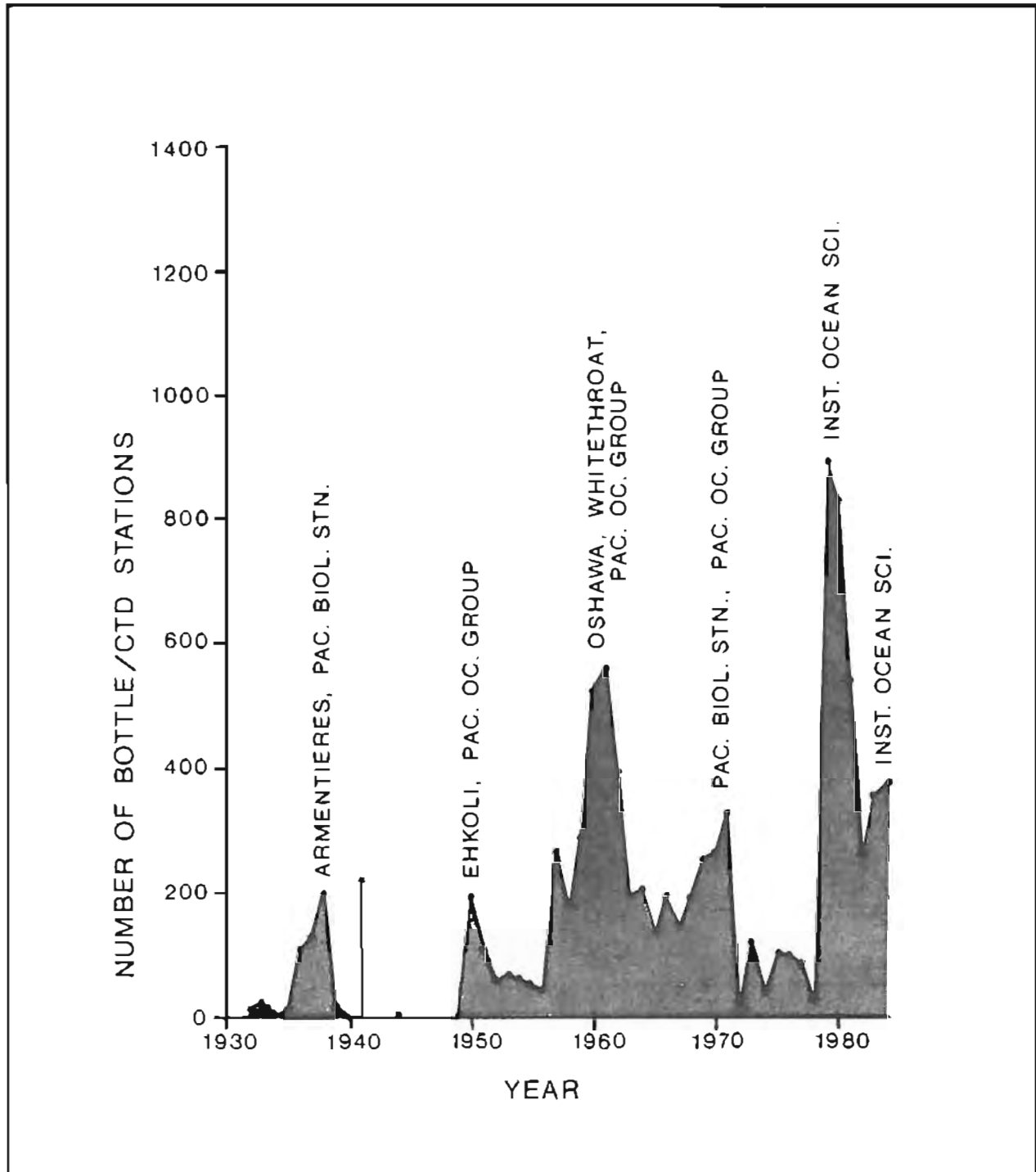


Figure 2: Level of oceanographic effort, based on the number of bottle/CTD stations per year (vessel, agency).

Table 1: B.C. shore stations--West coast Vancouver Island and Queen Charlotte Islands--surface temperature and salinity.

Station	Data Set I.D.	Latitude	Longitude	Period of Operation	Date of Conversion from Salinometer to Hydrometer
Langara Island	36-0004	54°15'	133°03'	Oct. 22/36- Aug. 28/37	N/A
	40-0004	54°15'	133°03'	Mar. 2/40- present, (intermittent 1938-1942)	Sept. 23/69
Cape St. James	34-0002	51°56'	131°01'	July 27/34- present ¹	Jan. 1/71
Kains Island	35-0008	50°27'	128°02'	Jan./35- present	Feb. 1/70
Nootka	34-0006	49°36'	126°37'	Sept./34- June/53	Salinometer used exclusively
Amphitrite Point	34-0007	48°55'	125°32'	Sept./34- present	Feb. 23/70
Swiftsure Bank Lightship	54-0024	48°32'	125°00'	June 18/54 June 30/61	Salinometer used exclusively?
Bamfield	69-0064	48°50'	125°08'	July 12/69- Oct./80 ²	Salinometer used exclusively
Cape Beale	71-0104	48°47'	125°13'	Jan. 9/71- present	Salinometer used exclusively
Port Alberni	41-0008	49°14'	124°49'	May/41- Sept./42	Salinometer used exclusively

¹ Intermittent data from 1938-1942. Temperature readings for Jan. 1939-Dec. 1942 are considered unreliable. Salinity observations were discontinued May 31, 1971.

² For the period July 1969-Dec. 1977, temperatures were recorded to the nearest 0.5°C only.

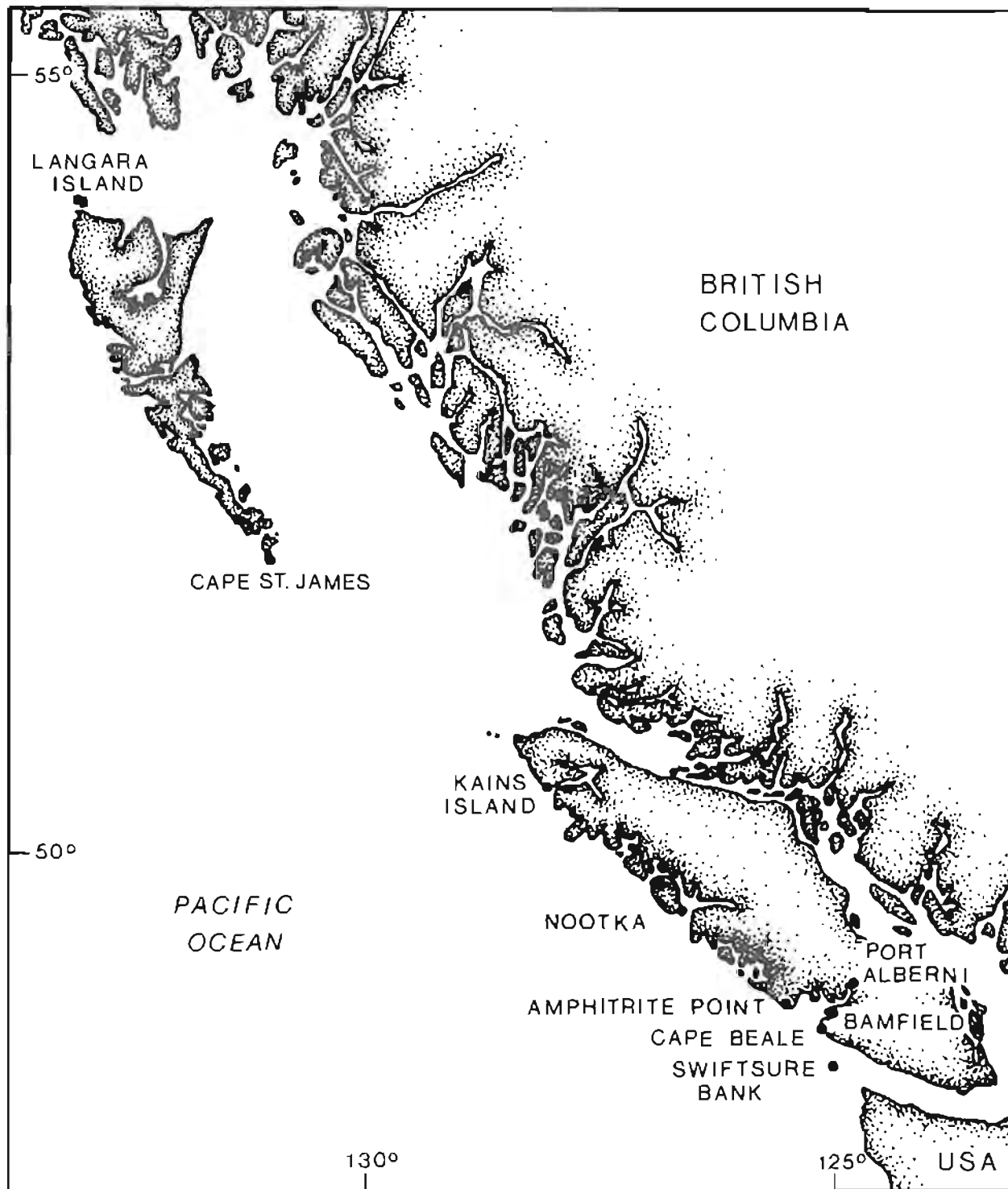


Figure 3: Locations of shore and lightship stations where surface seawater observations have been made. Only those within the limits of this data inventory are shown.

is a meteorological station operated by the Atmospheric Environment Service (AES) and Bamfield is an oceanographic research station. The data have been published in various government reports (e.g.: Hollister, 1960; Hollister and Sandnes, 1972; Wickett and Ballantyne, 1978; Giovando, 1983a, b).

Normally, observations are made within an hour of daytime high tide. Temperature and salinity are measured near surface, at approximately 1 m depth. The water sample for salinity determination is collected using either a bucket or a sampling bottle. The temperature is obtained by "immediate" immersion of a thermometer into the water thus collected.

Following are the estimated accuracies of the various methods used to determine temperature and salinity.

A. Temperature

1.	1934-1936	Mercury thermometer	$\pm 0.5^{\circ}\text{F}$, $\pm 0.3^{\circ}\text{C}$
2.	1937-1939	Red-liquid thermometer	$\pm 0.5^{\circ}\text{F}$, $\pm 0.3^{\circ}\text{C}$
3.	1940-present	Mercury thermometer	$\pm 0.3^{\circ}\text{F}$, $\pm 0.2^{\circ}\text{C}$

B. Salinity

1.	1934-1958	Titration	$\pm 0.06^{\circ}/\text{oo}$
2.	1959-1969 (approx.)	Conductivity salinometer	$\pm 0.03^{\circ}/\text{oo}$
3.	Approx. 1969-present	Hydrometer (except as below)	$\pm 0.3^{\circ}/\text{oo}$
4.	Bamfield & Cape Beale	Inductive Salinometer	$\pm 0.02^{\circ}/\text{oo}$

The actual dates of conversion from salinometer to hydrometer are given in Table 1.

4. GENERAL REPORT LAYOUT AND USER INSTRUCTIONS

4.1 DATA SETS

The data are organized in sets, where each set consists of data of a common type taken on a single expedition or cruise¹, usually by a single institution or organization. Thus, unless otherwise noted, all the data within a single set is assumed to have been collected in a uniform manner and should conform to a common standard of measurement.

Each data set has been assigned an identification number of the form yy-nnnn, where yy = last 2 digits of the year in which the data were collected and nnnn = order of identification for that particular data set for that year. The data-set number is a unique identifier which applies throughout the entire series of inventories; any set identified, for example, as 72-0009 is the same data set no matter where reference to it is made. Gaps may appear in the sequence of data set numbers in this inventory for a particular year, because each data set will not appear in every discipline or geographical area.

¹In some cases, where similar sampling techniques were used, several cruises have been grouped into one data set. This was done prior to the commencement of this study. In these cases, letter suffixes have been used to differentiate different cruises.

4.2 INVENTORY ORGANIZATION

Table 2 (Section 8) lists all the data sets in the inventory in order of data-set number. It provides a summary description of each set, including the times, areas and methods of measurements. Table 2 also gives a listing of concurrent measurements from other disciplines.

Geographical and measurement-type indexes are in Section 10. The sub-areas in the geographic index are shown on the map in Figure 21. Section 10 also contains an index of references, ordered by data-set number. This index consists primarily of original data reports, although ancillary papers analyzing or discussing the data are listed if they came to our attention.

Measurement locations are plotted in a series of maps in Section 9. Four different maps, all in Lambert Conformal Conic projection, have been used to plot stations. In most cases, the overall map of the entire study area is used, along with one or more of the larger-scale maps. The coastlines have been smoothed, and small islands removed, to avoid clutter. In order to avoid overlap, a displacement of 0.1 inches was required before successive stations were plotted. Map specifications and a key to the symbols on the maps are presented at the beginning of Section 9.

Detailed listings of the times and locations of individual measurements are given in Section 11. There is a separate listing for each data type. The format of the listings is explained at the beginning of Section 11.

Data sets were rated according to the criteria in Section 5. The ratings are listed in Table 2. Appendix 2 contains comments explaining the reasons for low ratings, a list of any errors found in each data set, and any other pertinent remarks concerning the data. The comments are ordered by data-set number.

Section 6 contains a general description of the extent of the data available in this area. Sections 6.1 and 6.2 describe their geographical and seasonal distribution.

4.3 SAMPLE USE OF THE INVENTORY

A typical use of the inventory might be as follows:

1. Examine the maps in Section 9 for measurements during the year(s) of interest, and note the data-set numbers of interest.
2. Refer to Table 2 to find the range of measurement dates, the measurement methods, and accuracies, and data sources.
3. If more specific information is required concerning the timing or location of individual measurements in the set, refer to the listings in Section 11.
4. Consult the reference index in Section 10 for works referring to or using the data.

5. DATA RATING AND APPRAISAL

5.1 TYPES OF DATA

5.1.1 BOTTLE CAST DATA

These data consist of temperature and salinity measurements obtained at discrete depths (ideally the international standard depths) by means of reversing thermometers and sampling bottles. Temperature accuracies of $\pm 0.01^{\circ}\text{C}$ may be achieved by averaging two or more carefully-read, well-calibrated thermometers. Some investigators have used hydrometers ($\pm 0.2^{\circ}/\text{oo}$) and refractometers ($\pm 0.5^{\circ}/\text{oo}$) for the determination of salinity, but up to 1960 salinity was usually obtained by titrating water samples drawn from the bottles; replicate titrations in the hands of a good operator could yield results precise to $\pm 0.01^{\circ}/\text{oo}$. In the 1960's, salinometers measuring salinity via the conductivity of the sample replaced titrations. A precision of $\pm 0.003^{\circ}/\text{oo}$ can be obtained with the better instruments, although in the past, systematic errors of $\pm 0.02^{\circ}/\text{oo}$ or more could be introduced by variations in the standard water used to calibrate the instruments. New international standards for salinity should eliminate the latter source of error (Lewis and Perkin, 1978).

5.1.2 CTD DATA

CTD data are produced by in-situ profiling instruments variously called STD (salinity-temperature-depth), STP (salinity-temperature-pressure), CTD (conductivity-temperature-depth) or CTP (conductivity-temperature-pressure) profilers. Fundamentally, all are CTP devices; the variations in output and name depend solely upon the degree of internal data processing. All instruments perform the same basic function of measuring (more or less continuously) temperature and conductivity as a function of pressure. The precision achievable with such devices depends upon the individual instrument. The best are capable of a precision of $\pm 0.005^{\circ}\text{C}$ and $\pm 0.005^{\circ}/\text{oo}$, although accuracy in salinity, until recently, was limited to approximately $\pm 0.02^{\circ}/\text{oo}$ because of the inconsistencies in salinity standards and definitions (Walker and Chapman, 1973).

5.1.3 BATHYTHERMOGRAPH

The bathythermograph (BT) is a thermo-mechanical device which measures water temperature as a function of pressure. Its information is recorded as a trace, on a smoked-glass or gold-coated slide, which can be read to an accuracy of $\pm 0.2^{\circ}\text{C}$ and ± 2 m depth if the instrument is well calibrated. The BT was widely used in conjunction with bottle casts but has largely been superseded by the CTD. XBT's are the expendable variety. BT data have not generally been compiled, unless they were accompanied by other physical oceanographic measurements. The Pacific Biological Station (PBS), Nanaimo, collected large amounts of BT data beginning in the 1950's and most of these data are on file with the Marine Environmental Data Services Branch of the Department of Fisheries and Oceans (MEDS). The 1977-1981 BT data are published in Dodimead et al. (1979a, b) and Dodimead and Ballantyne (1980, 1984). Earlier BT data have been reported by various authors, including Partlo (1950), Manzer and Neave (1958), Ballantyne (1978) and Douglas and Wickett (1978).

5.1.4 SELF-RECORDING CURRENT METERS

By the 1970's oceanographers could practically and reliably place and recover self-recording current meters in the water column. Meters of this type generally record internally on magnetic tape (in some models photographic film or paper charts are used), or telemeter data to a ship or to a shore receiving station. They generally provide time series of current speed and direction, and may have other sensors (for measuring temperature, pressure or conductivity) mounted as well. Current speed and direction are usually measured by one of two methods: either by a propeller or rotor for measuring speed and a vane for direction sensing, or by measurement of two orthogonal components of the current speed. Component speeds may be measured by propellers, or by electromagnetic or acoustic speed sensors. Directional reference is usually provided by a magnetic compass. Commonly used instruments employing the propeller/rotor and vane system are the Aanderaa, Hydroproducts, Endeco and AMF (vector-averaging) current meters; those employing the component-measuring system include the Cushing and Marsh-McBirney instruments (electromagnetic), the Neil Brown (acoustic), and the Davis-Weller (orthogonal-propeller) instruments.

The precision and accuracy of current meters depend to a great degree both on the design of the instrument, and on the environment in which it is used. Serious problems may be encountered if rotor-type meters are used in the wave zone. Calibration drift and sensor fouling can interfere with satisfactory operation of electromagnetic and acoustic sensors. The sampling frequency and integration period selected for the meter can also affect the accuracy of the record.

5.1.5 PROFILING CURRENT METERS

These current meters provide a series of point measurements of current speed and direction at several depths throughout the water column. Meters used for this purpose are generally of the propeller or rotor and vane design, the oldest common example being the Ekman-Merz meter. Measurements usually are taken from an anchored ship in shallow water. In water too deep for anchoring, a very good positioning system is required to correct for ship movements. Unless repeated profiles were taken so as to form a time series, this type of data was not generally catalogued. Recently Cyclesondes have been used for profiling. This instrument can be fitted to measure currents as well as other parameters, and oscillates vertically up and down a tether, unattended.

5.1.6 CURRENT DRAGS

This method of current determination was employed primarily in the 1950's and early 1960's. A tethered drogue was allowed to drift away from the anchored vessel. The time for a measured length of line to pay out provided a measure of current speed. The direction of flow was estimated from the course of the drogue. The drogues were typically crossed metal vanes, having slight positive buoyancy. Accuracy of speed and direction were seldom discussed. It is believed that speed measurements should be accurate to ± 5 cm/s or better. The accuracy of the direction measurement would vary depending on what method was used. For example, a compass reading should provide a reading to $\pm 5^\circ$ or so, whereas an estimate based on land features and chart would generally not possess such accuracy.

5.1.7 RADAR OR AIRCRAFT-TRACKED DRIFTERS

This type of drifter usually consists of a float (with or without a drogue) and a radar reflector or visual marker. These devices can be tracked visually or by radar from shore or from a ship or aircraft. The accuracies achievable depend upon the tracking system used, and can be very good if a sophisticated system is available. Data of this type are often limited in their coverage in space and time, and may have gaps resulting from bad weather. (Drift card and bottle releases have not been inventoried. See for example Dodimead and Hollister, 1962; Waldichuk 1963; and Pashinski and Charnell, 1979.)

5.1.8 SATELLITE-TRACKED DRIFTERS

Satellite-tracked drifters are a comparatively recent invention, dating from the early 1970's. Widespread use of these devices began after the launch of the Nimbus VI satellite carrying the Random Access Measurement System (RAMS) in 1975. In early 1979, the TIROS-N satellite was launched activating Service ARGOS which is now used to track all such devices.

Both RAMS and System ARGOS compute position from the Doppler shift of a signal transmitted from the buoy to the satellite. On each pass of the satellite the position (and any other data being measured) is received and sent to a ground facility where the data are processed. Both the RAMS and ARGOS systems produce positional accuracies of approximately ± 2 km.

Recently it has become possible to use the LORAN-C system to track drifters.

5.1.9 WATER LEVEL GAUGES

Water-level data are produced mainly by visual observation of tide staffs, by mechanical shore-mounted float-type gauges, or by bottom-mounted pressure gauges. Some early data consist only of observations of the times of high and low water levels. The pressure gauges may be self-contained, or they may consist of a pressure sensor connected to a shore-mounted recording device. The mechanical gauges record by means of a pen on chart paper. The data are usually digitized at hourly intervals, resulting in a record with a resolution of approximately ± 1 cm, and an accuracy of the order of ± 5 to 10 cm. Most pressure gauges use Paroscientific digiquartz sensors with stated resolution/accuracy of 0.001/0.01% full-scale range. The Aanderaa gauges have ranges of 45, 100, 200, 300, 400, 900 and 5,000 psi. The 400 psi is the most common, with the claimed resolution/accuracy being equivalent to $\pm 0.27/2.7$ cm. Sampling intervals generally vary between 5 and 60 minutes. Bottom pressure gauges generally record total pressure (atmospheric plus hydrostatic). In order to extract the water level fluctuations due to changing atmospheric pressure (i.e. the inverted barometer effect), the atmospheric pressure must also be recorded. The Canadian Hydrographic Service (CHS) has collected most of the water-level data; such information was first recorded in 1905.

5.1.10 WAVE RECORDERS

There are three basic types of wave-measuring devices for measurement from a single point:

- a) Surface-piercing instruments. These are fixed relative to the water level and measure surface motion using various methods such as the change in capacitance of a vertical wire.
- b) Pressure-measuring devices. Ocean waves produce measurable pressure fluctuations beneath them which, under proper conditions, can be related to wave height.
- c) Instruments which measure the vertical acceleration of the water surface. When integrated twice in time, the vertical acceleration yields sea-surface elevation relative to the mean.

In shallow water, types a) and b) are generally used, whereas type c) is more suited to deeper waters. Generally, Waverider accelerometer-type buoys have been used in most studies off the Canadian west coast.

5.2 DATA RATING SCALE

5.2.1 RATING CRITERIA

The data appraisal in this inventory is intended to provide the reader with an indication of the quality of each data set and its suitability for comparison with other data sets. The appraisal was based primarily on documentation describing the methods used in collecting and processing the data and on the investigator's estimate of their precision, accuracy and utility. Subsequent analyses of the data were also taken into account, e.g. if errors were found in a particular data set during a subsequent analysis, and the results were published, these results were used in the assessment. Note that a thorough appraisal, requiring investigation of the data and comparisons with other data sets, is beyond the scope of this report.

The information from the sources above was used to assign a numerical rating to each set. The rating system has five levels, defined as follows:

- 0: Data are found to be wrong.
- 1: Data are suspect because of ill-defined doubts.
- 2: Data quality could not be determined due to insufficient support documentation.
- 3: Data are internally consistent - patterns or trends within the data themselves are probably real, but comparison with other data sets may pose problems.
- 4: Data are internally consistent and exhibit sufficient standardization that comparison with other 4-rated data should be possible.

If a single rating has been assigned, this number applies to all the data acquired during that cruise. If data sets were of different quality, for example the CTD and current-meter data, then more than one number will be indicated.

5.2.2 ASSIGNMENT OF RATINGS

0 RATING

A data set received a 0 rating if serious deficiencies in technique, or significant systematic errors, occurred. A 0 rating was also assigned if the documentation of the data set lacked essential information (e.g. the positions and times of measurements) which no longer exists.

1 RATING

A data set received a 1 rating if, either as part of a data report or in subsequent analysis and examination, the original or other investigators questioned the validity of the data without pinpointing specific errors. In general, a 1 rating was assigned if a data set exhibited an atypical distribution of values, or indicated unlikely physical processes, but contained no obvious errors. Such data sets require careful examination before use.

2 RATING

Ratings of 2 were given to data sets for which it was not possible to carry out an appraisal. Such cases include:

- (i) Proprietary data, whose existence is known, but about which no details are available.
- (ii) Data sets for which we were unable to obtain documentation but know that data were collected.

3 RATING

Data received a 3 rating if they were internally consistent within the precision of the methods used to collect the data. Precision refers to the degree of random fluctuation experienced when a measurement is repeated many times, while accuracy is the departure of the measurement (or the mean of a series made under controlled conditions) from the true value. Because oceanographic data are normally taken without replication and under uncontrolled conditions, data taken with instruments of a certain precision will have the same (or poorer) level of accuracy. An exception is the case of a series of temperature-salinity measurements taken within a water body of stable, well-defined characteristics, in which case the mean of the series could provide a measurement more accurate than the precision.

Ratings of 3 were given to all data sets for which no evidence of errors beyond the precision given in Table 2 was found, but which did not satisfy each of the criteria required for a rating of 4 (see below). This is based on data reports and other publications; the actual data were not checked further by the authors of this inventory. In some

instances, the instrument and/or precision and accuracy were unknown, but the collecting agency used standardized methods; these data sets were generally awarded a 3 rating when there was no evidence suggesting deficiencies in the data.

Caution should be exercised when comparing two sets of 3-rated data, as their levels of precision may be quite different. The reader should consult both Table 2 and Appendix 2 for precision and error information.

4 RATING

Data received a rating of 4 if: they were measured to the precision available with modern methods described in Section 5.1; they had no evidence of systematic or other errors recorded in the documentation; and they were obtained using measurement instrumentation, methodology and techniques which provide data that can be related to national or international standards.

Since standards tend to change, ratings of 4 were only grudgingly awarded. In many cases, ratings of 3 were assigned because of lack of time and/or sufficient documentation to be certain that a rating of 4 was warranted. Some of these ratings may merit an increase to 4 after further study of the data has been made.

Of all the physical-oceanographic data that were inventoried, the bulk consists of temperature/salinity measurements. Until the early 1960's, water samples were collected by bottle cast and salinities were determined by titration. During most of the 1960's, salinities were generally determined using conductivity bridges. From the late 1960's on, instruments which measured conductivity and temperature in situ (CTDs) became the standard. Salinity was then computed from the temperature, conductivity and pressure values.

CTDs with increased resolution have revealed gradations in salinity where previous chemical analyses indicated homogeneous water. Since both bottle and CTD data may have ratings of 3, caution must be used in any comparison.

Salinity determination depends on a standard. In the past this was 35⁰/oo Copenhagen water. However, variability in the standard, and in the calibration of the instrumentation, often resulted in systematic errors of 0.02⁰/oo or more.

A new, practical salinity scale has recently been adopted (Lewis and Perkin, 1978). A conductivity ratio is measured (the conductivity of the unknown to that of a standard laboratory-produced sample). Waters of the same conductivity ratio at a given temperature and pressure are then defined to have the same salinity. This reduces systematic errors in salinity. However, most of the historical data remains subject to a ±0.02⁰/oo accuracy limitation.

Current-meter data were judged by the instrument characteristics, response, and the deployment methods. The main causes of low ratings are directional errors and contamination by mooring motion and by wave-orbital velocities.

6. SUMMARY OF DATA COVERAGE

6.1 SPATIAL COVERAGE, INCLUDING DATA DISTRIBUTION MAPS

The locations of all measurements inventoried to date are summarized for bottle/CTD (Figure 4), current-meter (Figure 5), water-level (Figure 6), and wave data (Figure 7).

The location maps of all temperature-salinity data have been split into pre-1970 and 1970 through 1984. Prior to 1970, most temperature-salinity data were obtained using bottle casts. Standard depths at which data were collected were 0, 10, 20, 30, 50, 75, 100, 150, 200, 300, 400, 500 and 600 m. Most of the 1970 through 1984 data were obtained using in-situ profiling instruments having vertical resolution on the order of centimetres. Temperature-salinity stations are most concentrated nearshore, over the continental shelf and slope. After 1969, fewer stations were occupied in water depths of greater than 2000 m. The waters adjoining Vancouver Island, particularly off the entrance to Juan de Fuca Strait, have been heavily sampled. The coastal inlets and fjords which have received the most attention are Barkley Sound/Alberni Inlet, Tofino Inlet/Bedwell Sound, Muchalat Inlet, Tahsis Inlet/Zeballos Inlet, and the Quatsino Sound-Rupert/Holberg inlet system.

Most of the current-meter data have been collected since 1970, along the continental shelf and slope (Figure 5). Alberni Inlet and the Quatsino Sound area have been sampled fairly frequently.

The distribution of water-level measurement locations is dominated by coastal and nearshore sites (Figure 6). Some data have been obtained in the shelf/slope region, mainly off Vancouver Island. Data from well offshore have been limited to two sites: Bowie and Union seamounts.

Wave data have been restricted to the continental shelf region off Vancouver Island, except for one site offshore which has been maintained by NOAA since 1976.

6.2 SEASONAL COVERAGE, INCLUDING BI-MONTHLY MAPS

Bi-monthly station maps have been produced for temperature-salinity data (Figures 8-13), and for current and water-level data (Figures 14-19). In each figure the locations of available measurements are plotted according to the two-month period in which the data were obtained, beginning in January-February, and continuing through to November-December. Separate plots are produced for pre-1970 and 1970 through 1984. In general, more data were collected during spring, summer and fall than in winter.

Temperature/Salinity

The waters off Vancouver Island have been sampled during all seasons, as have Alberni Inlet, Muchalat Inlet and the Rupert/Holberg inlet system. Data to the west of the Queen Charlotte Islands are not as plentiful during winter months as they are during the remainder of the year.

Current

Currents over the continental shelf and slope region have been monitored during each bi-monthly period (Figures 14-19). These data were collected recently by IOS. Measurements of currents further offshore have been far less frequent. Currents in Alberni Inlet and the Rupert/Holberg inlet system have also been measured during all seasons.

Water-Level

The seasonal distribution of offshore water-level data is much the same as for current data, since the gauges generally share the same mooring (Figures 14-19). Water levels have been monitored over the continental shelf and slope during each bi-monthly period, both off Vancouver Island and off the Queen Charlottes. Nearshore stations, particularly along the west coast of Vancouver Island and (less frequently) the Queen Charlottes, have resulted in a large data base covering all months.

6.3 CONCLUSIONS

This catalogue of physical-oceanographic data for the waters off British Columbia allows scientists and others to determine the coverage and quality of data in any given area. This report shows that the continental shelf and slope have been heavily sampled, whereas the offshore abyssal waters have received less attention. Coastal studies have generally been site-specific with Alberni Inlet, Muchalat Inlet and the Rupert/Holberg inlet system receiving the most scrutiny.

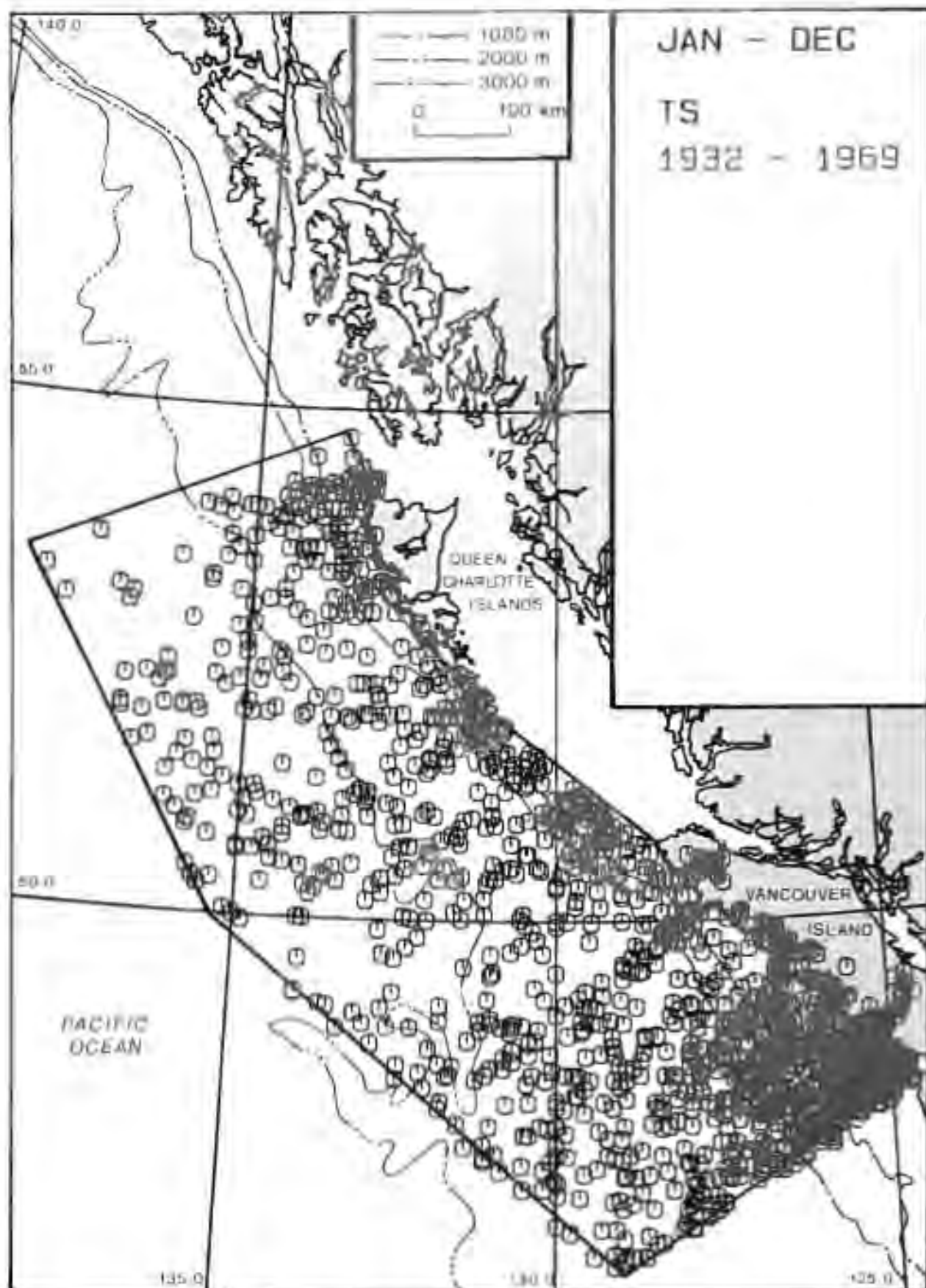


Figure 4a: Locations of all temperature-salinity measurements (4801 stations) made during 1932-1969, entire area.

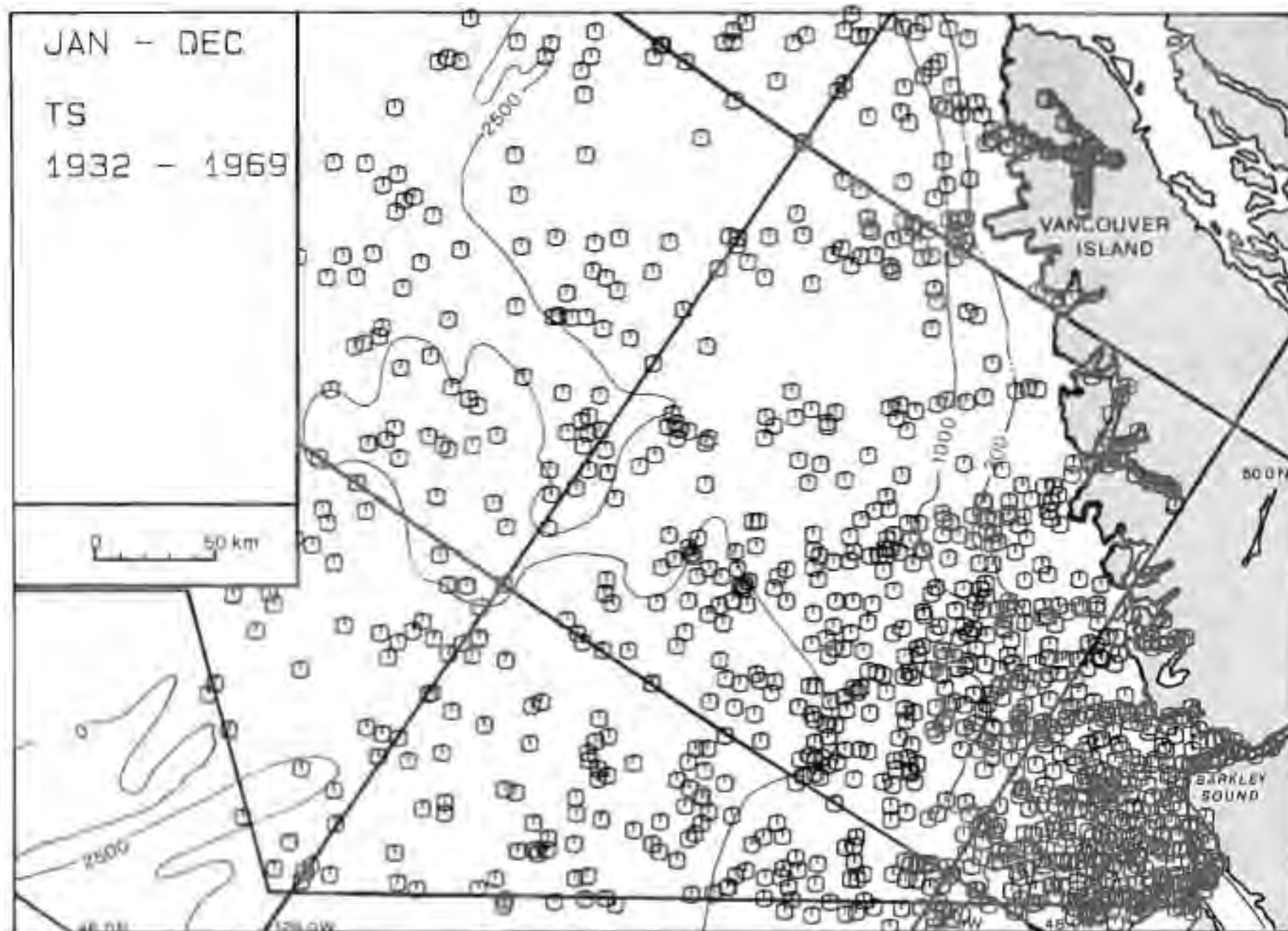


Figure 4b: Locations of all temperature-salinity measurements (2926 stations) made during 1932-1969, offshore Vancouver Island.

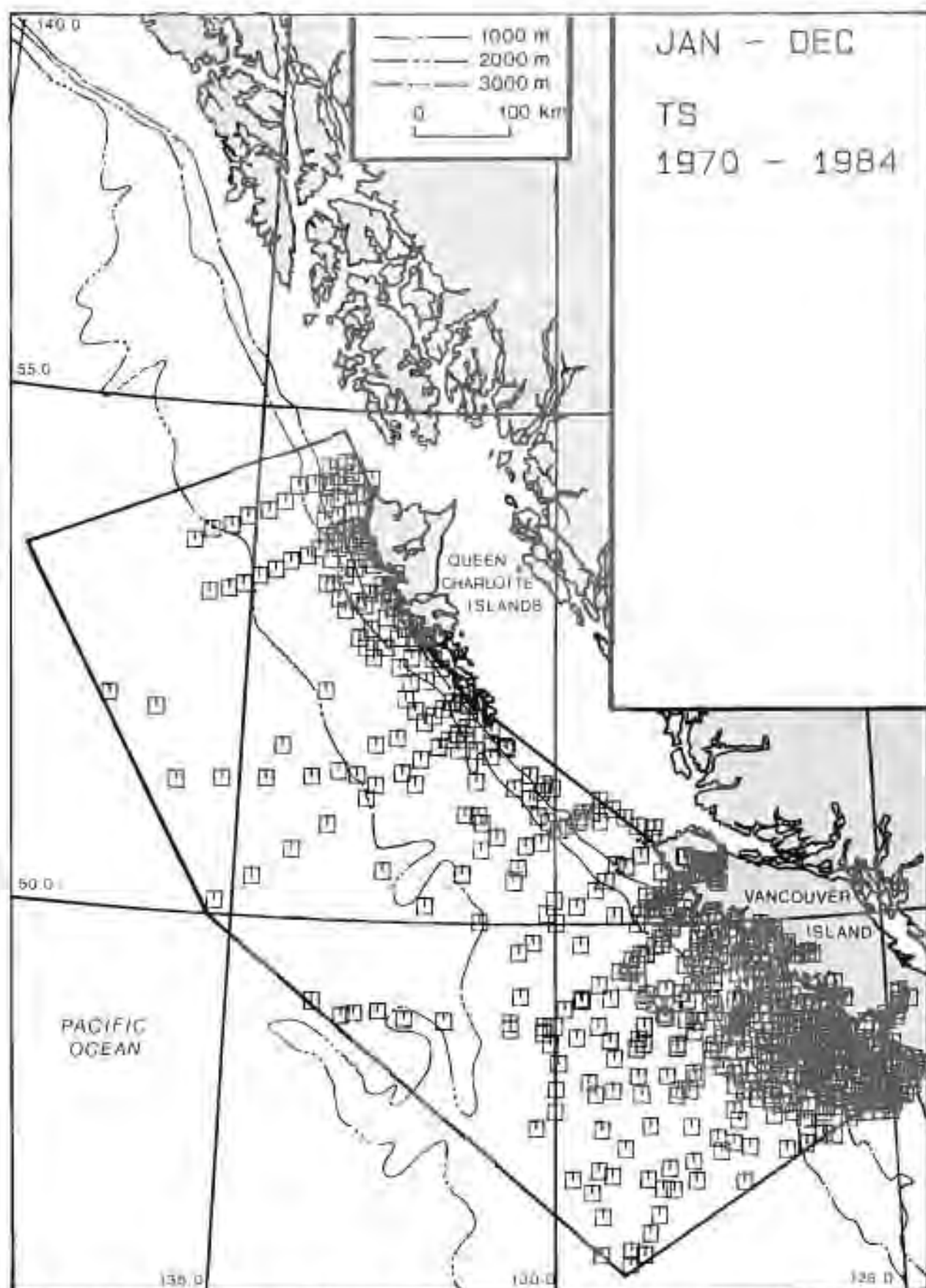


Figure 4c: Locations of all temperature-salinity measurements (4415 stations) made during 1970-1984, entire area.

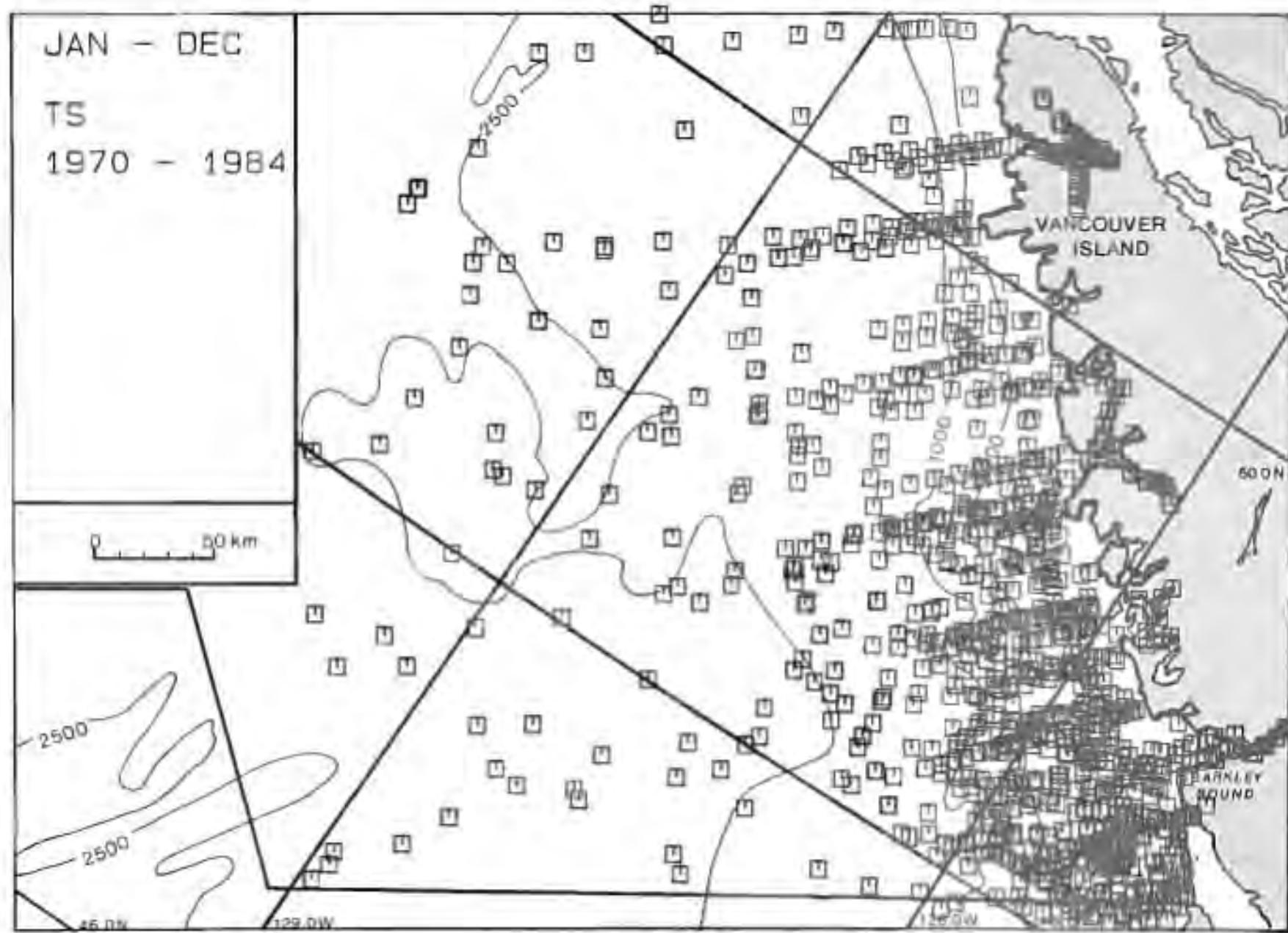


Figure 4d: Locations of all temperature-salinity measurements (3495 stations) made during 1970-1984, offshore Vancouver Island.

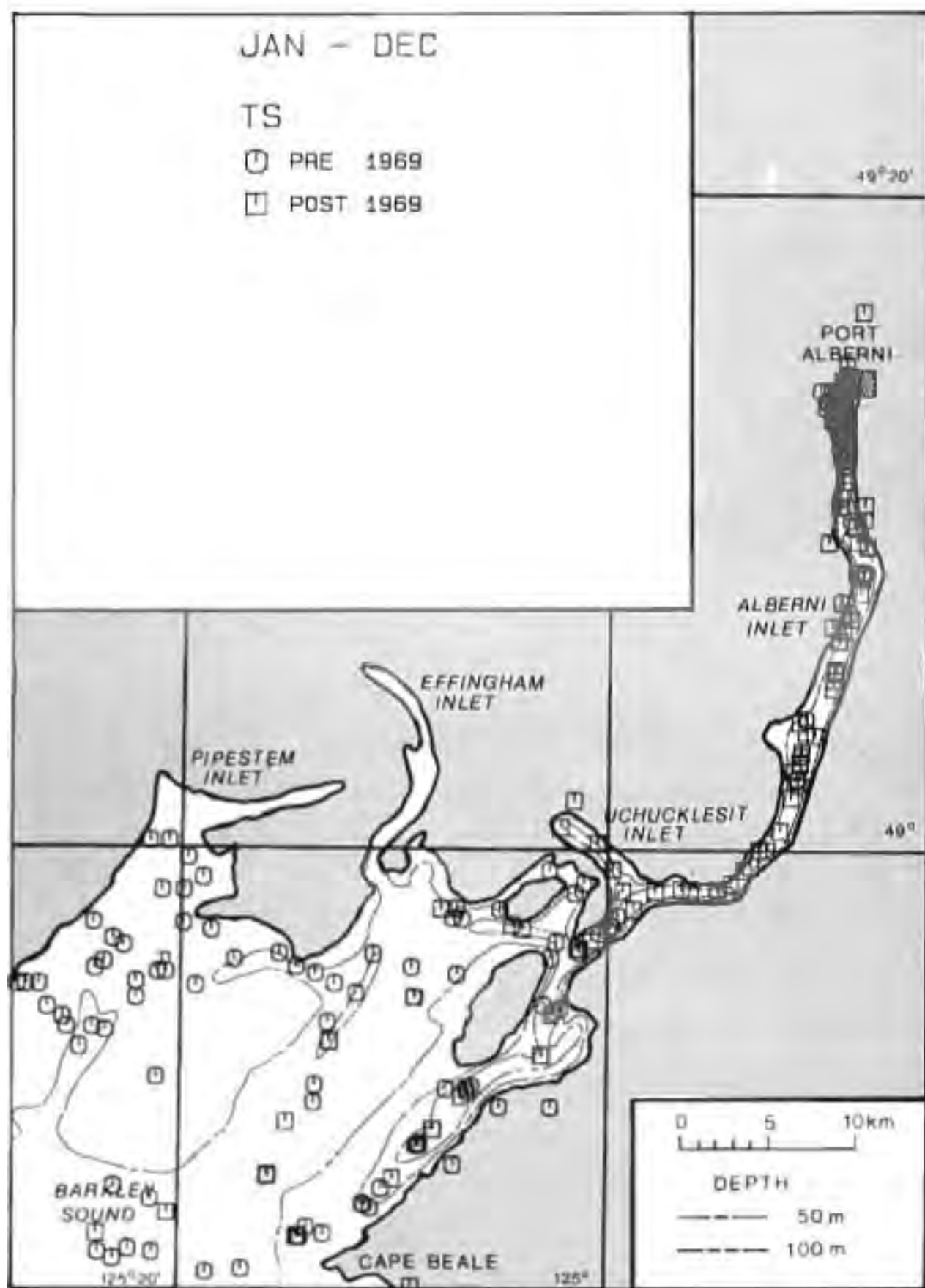


Figure 4e: Locations of all temperature-salinity measurements (1843 stations) made during 1932-1984, Barkley Sound and Alberni Inlet.

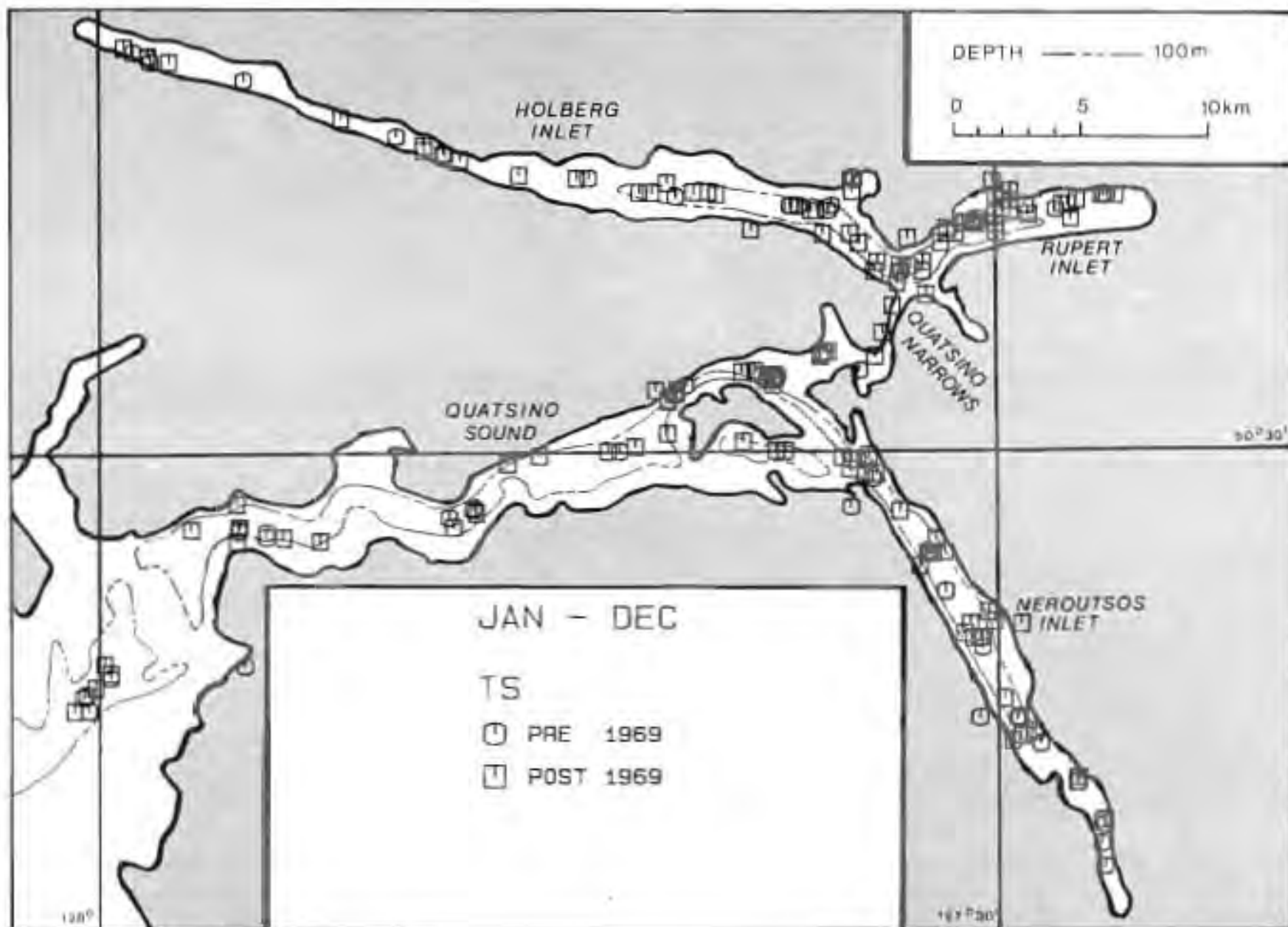


Figure 4f: Locations of all temperature-salinity measurements (803 stations) made during 1932-1984, Quatsino Sound and adjoining inlets.

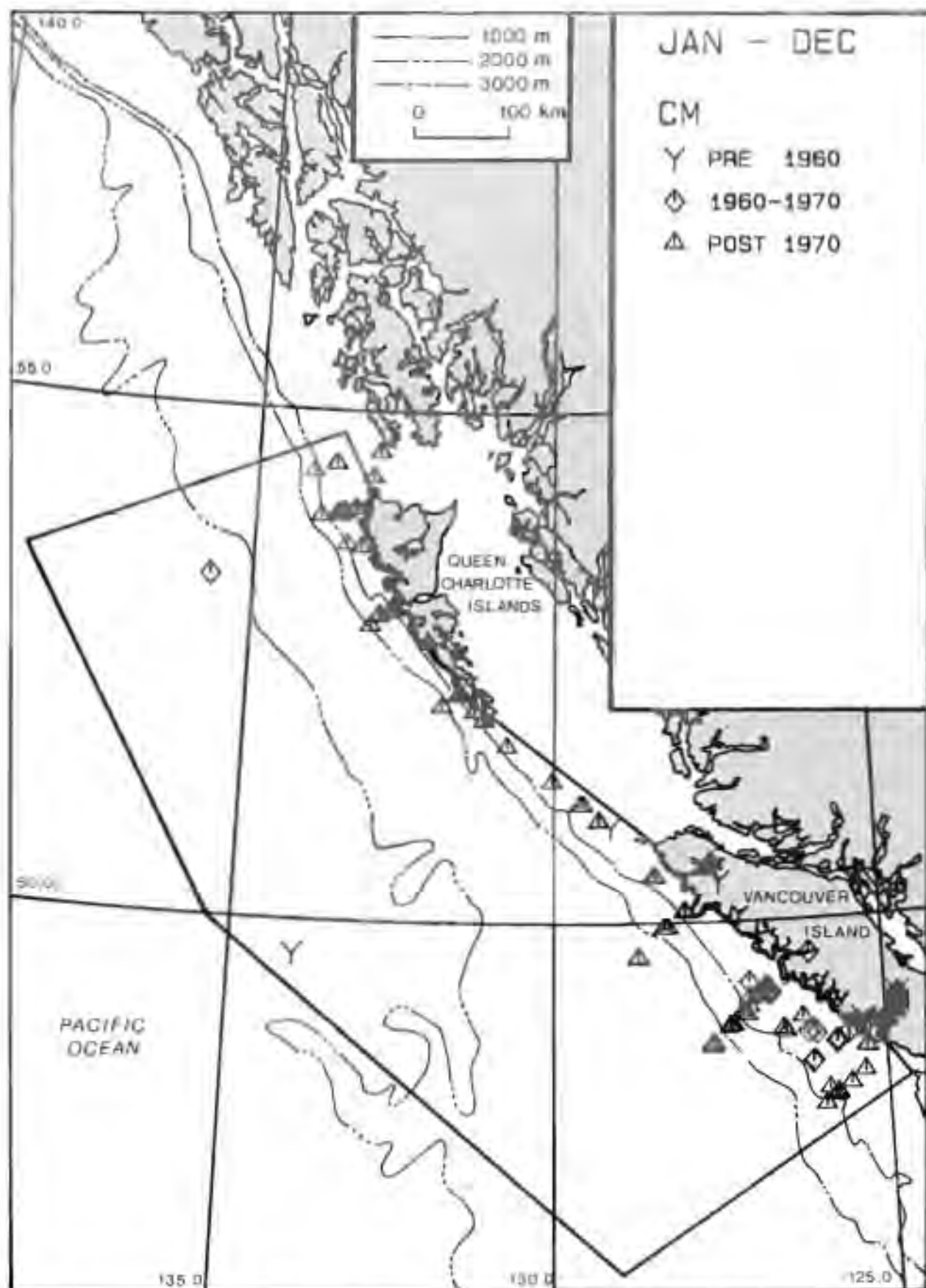


Figure 5a: Locations of all current-meter measurements (526 records) made during 1932-1984, entire area.

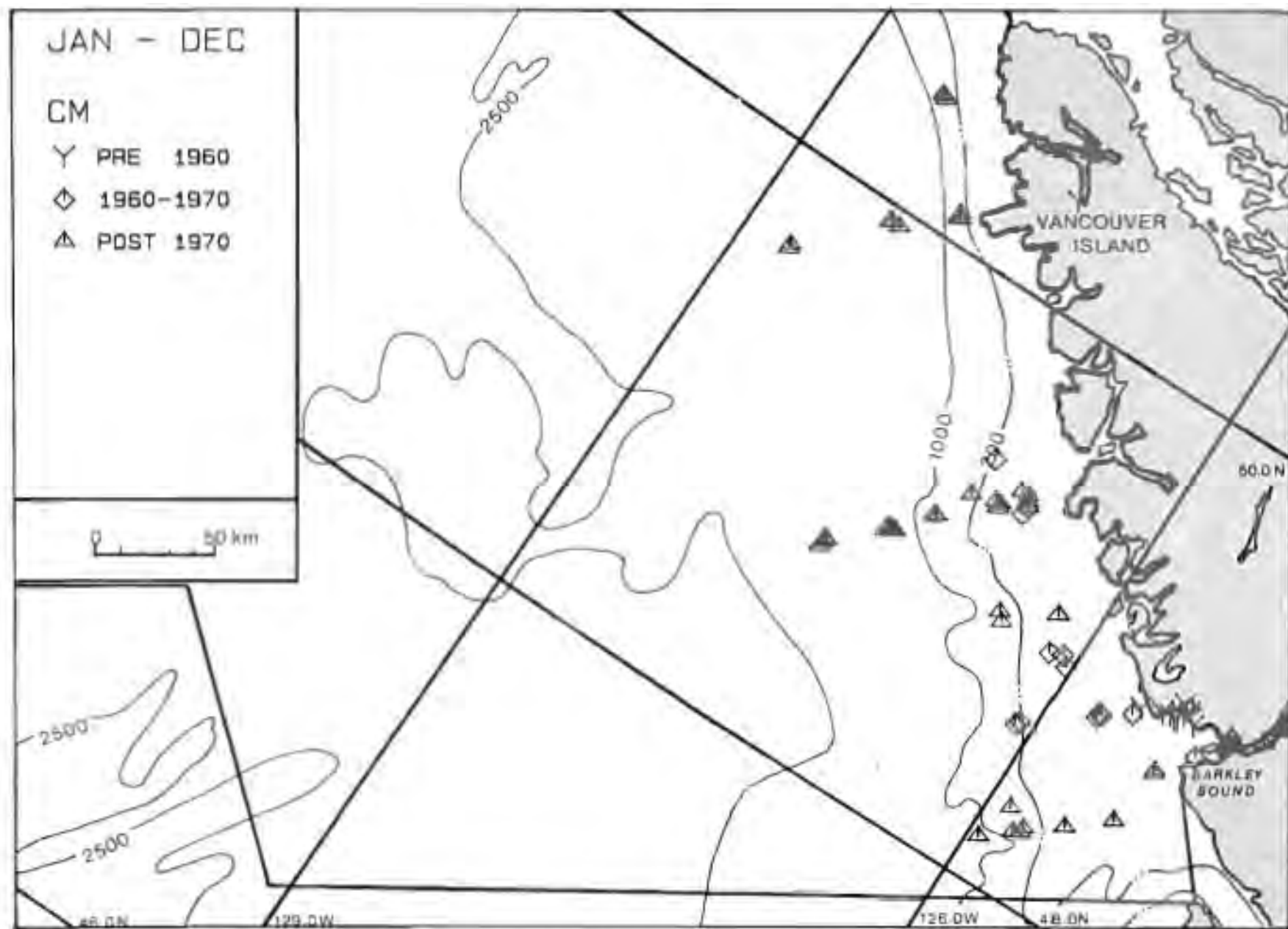


Figure 5b: Locations of all current-meter measurements (369 records) made during 1932-1984, offshore Vancouver Island.

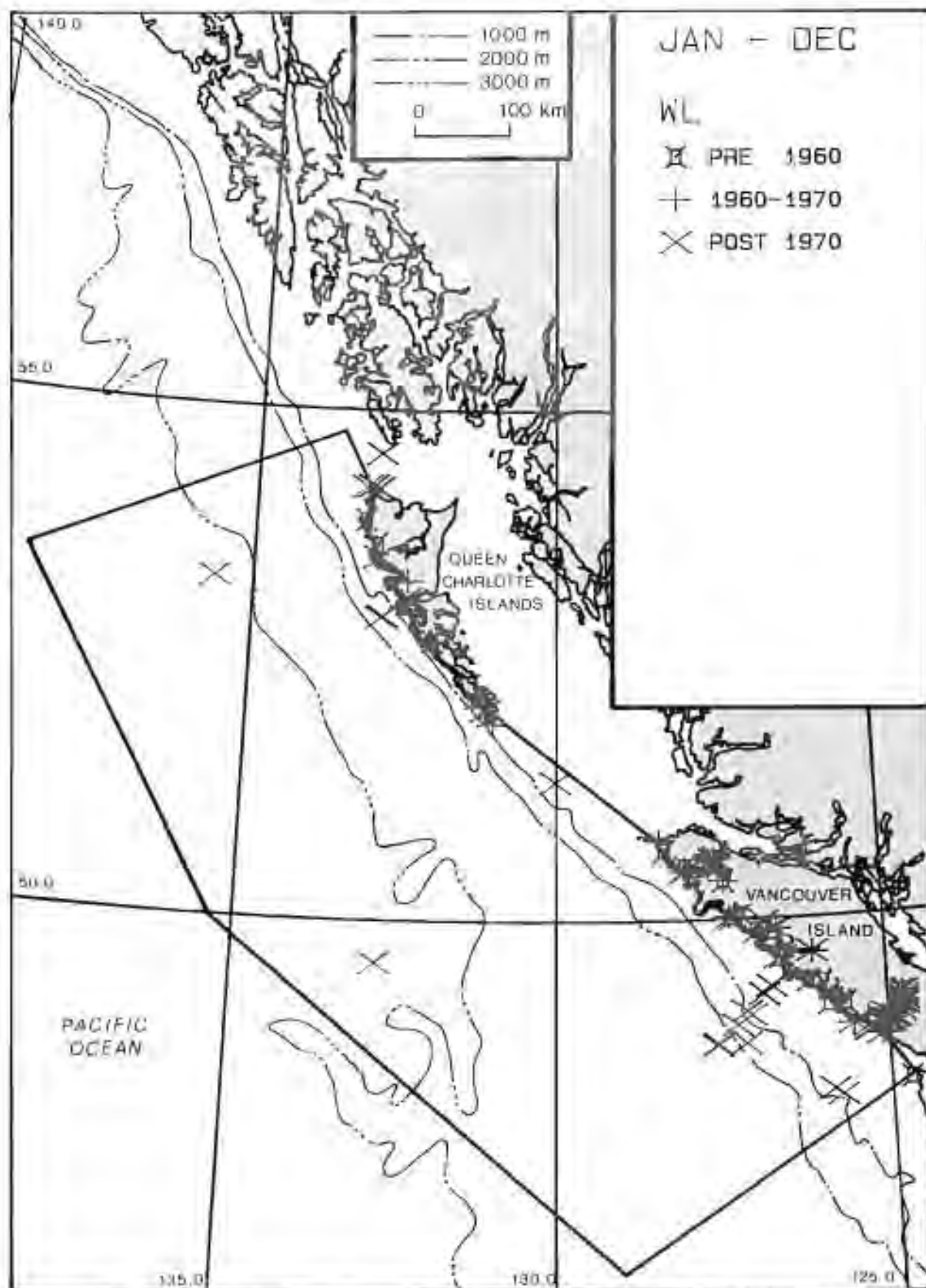


Figure 6a: Locations of all water-level measurements (157 stations) made during 1932-1984, entire area.

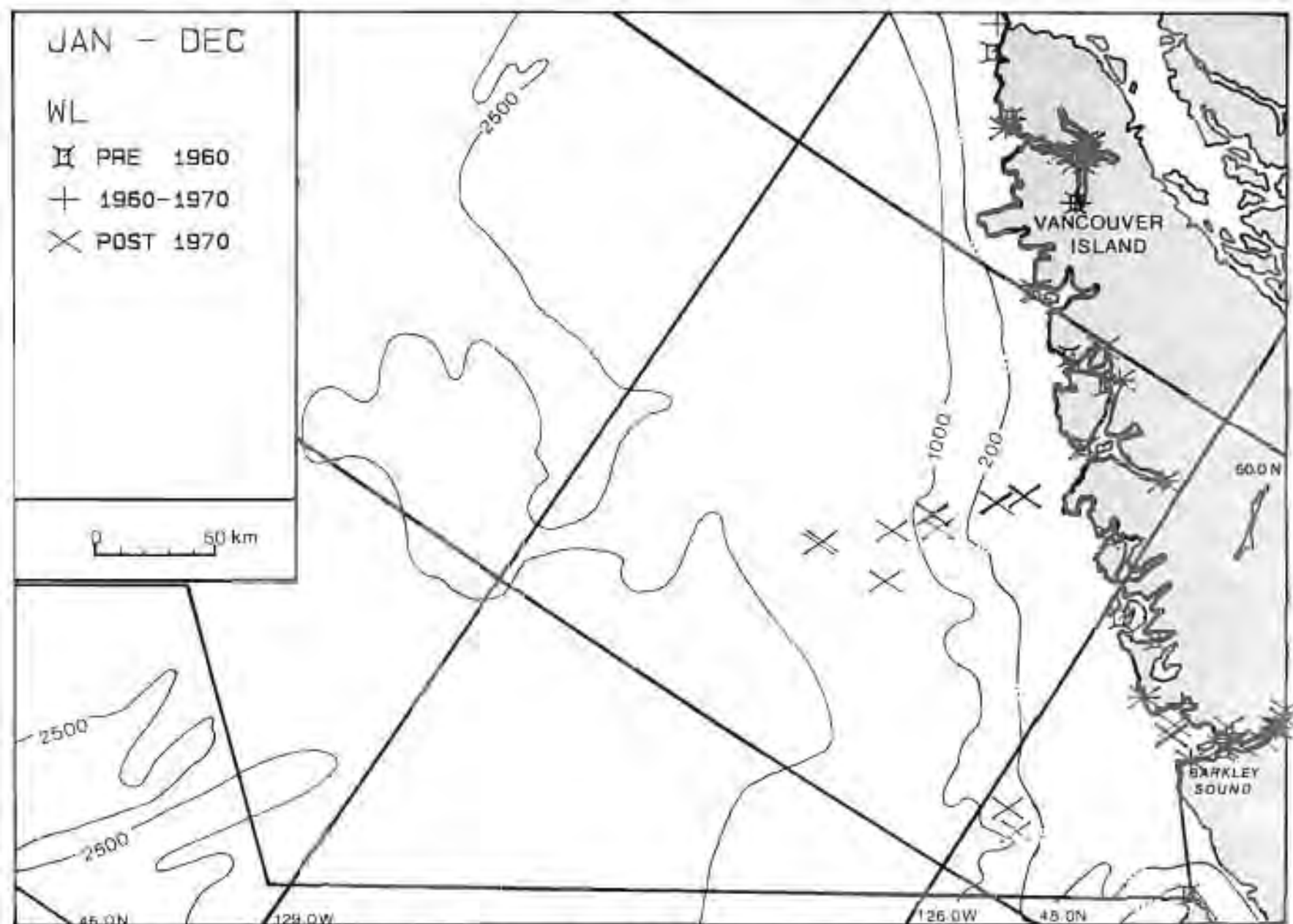


Figure 6b: Locations of all water-level measurements (97 stations) made during 1932-1984, offshore Vancouver Island.

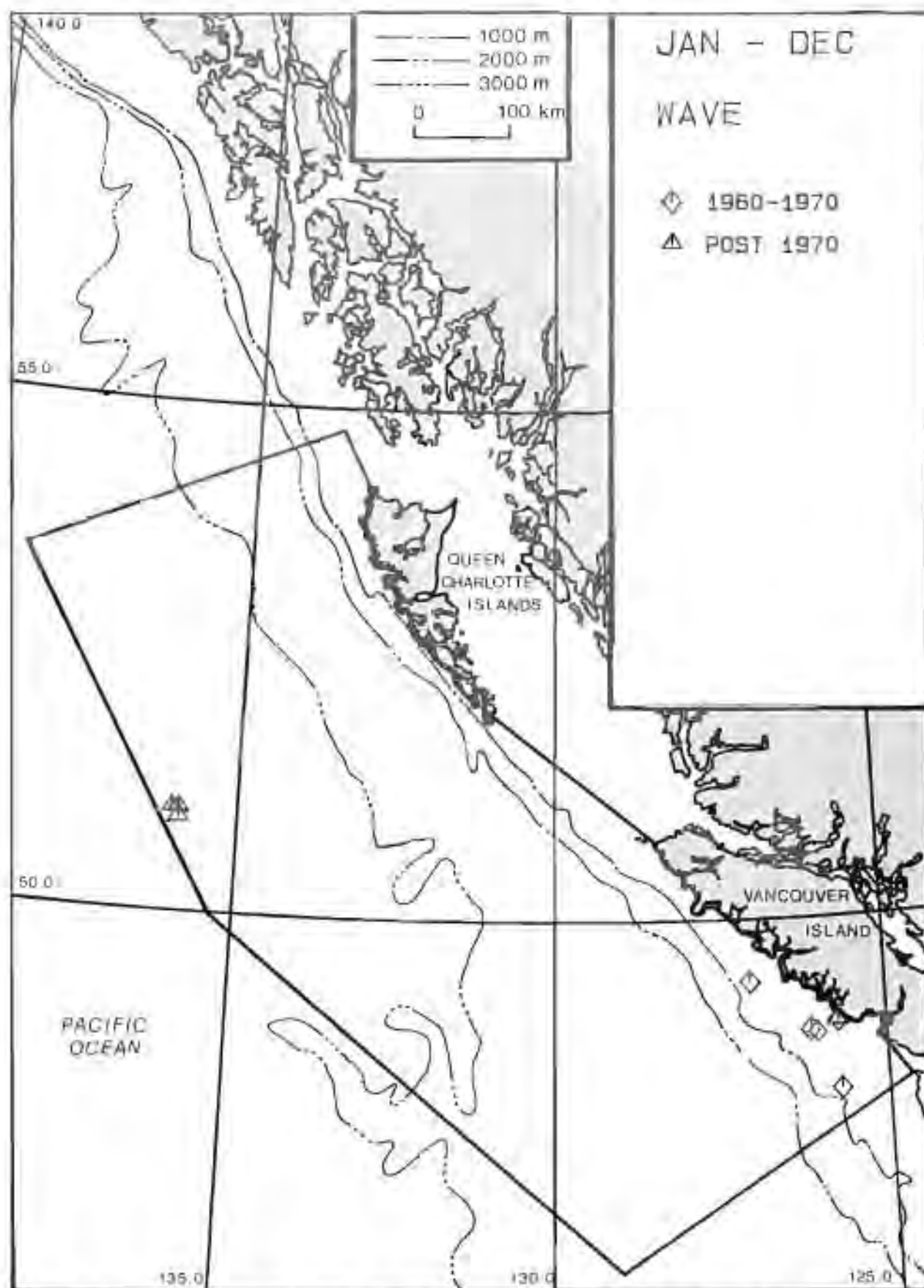


Figure 7a: Locations of all wave measurements (7 stations) made during 1932-1984, entire area.



Figure 7b: Locations of all wave measurements (6 stations) made during 1932-1984, offshore Vancouver Island.

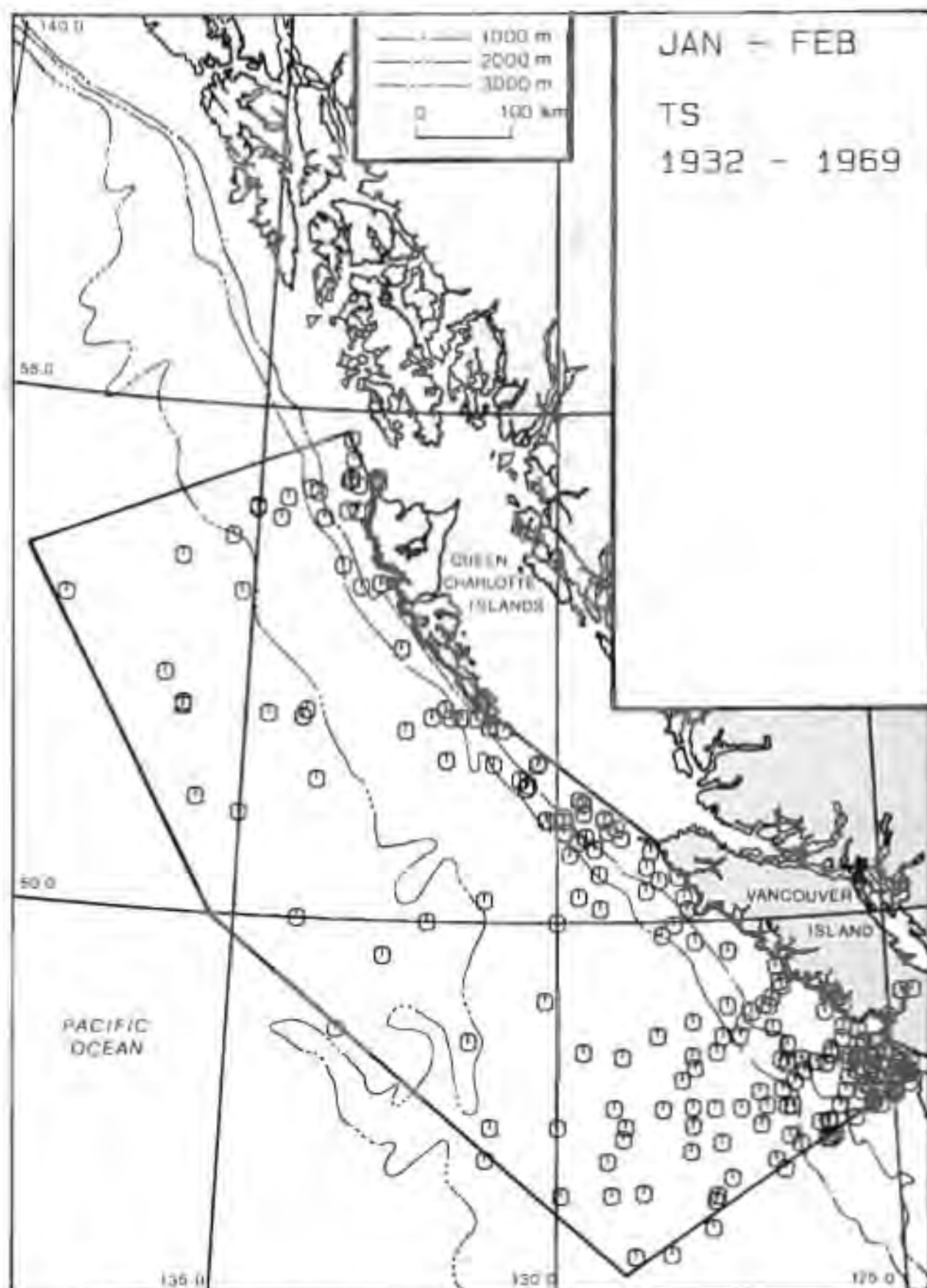


Figure 8a: locations of all temperature-salinity data (515 stations) collected during 1932-1969, January-February.

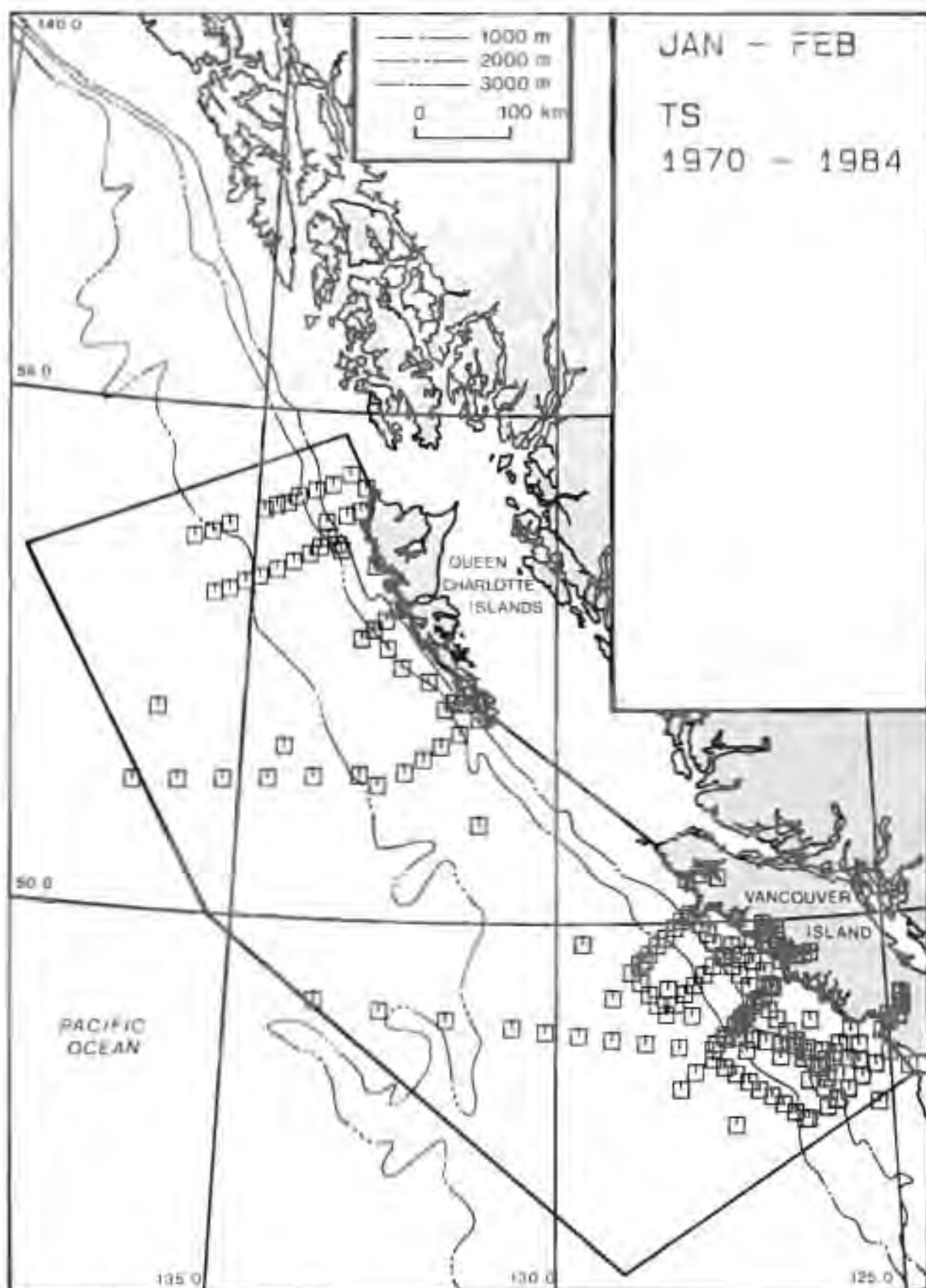


Figure 8b: Locations of all temperature-salinity data (577 stations) collected during 1970-1984, January-February.

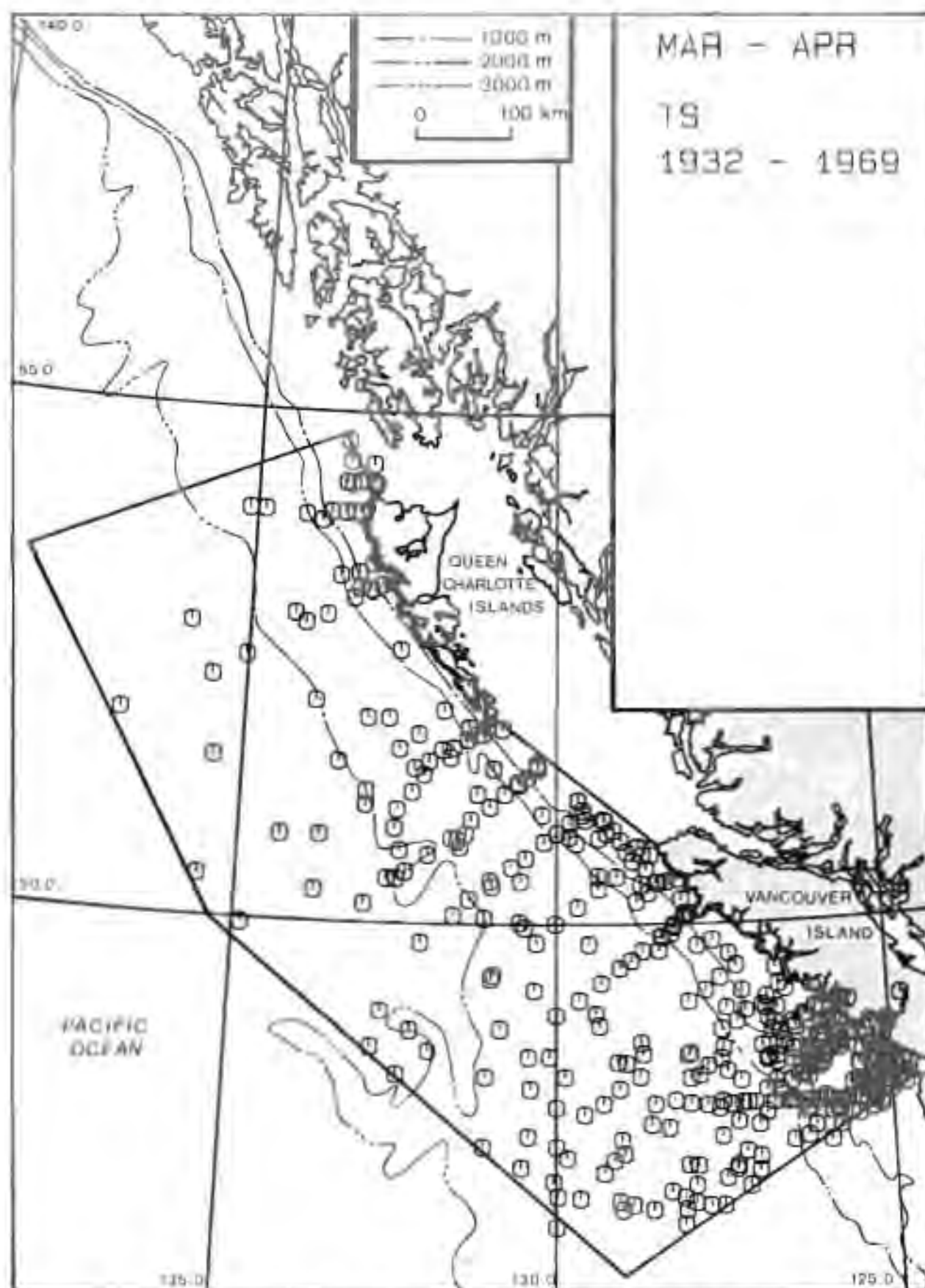


Figure 9a: Locations of all temperature-salinity data (848 stations) collected during 1932-1969, March-April.

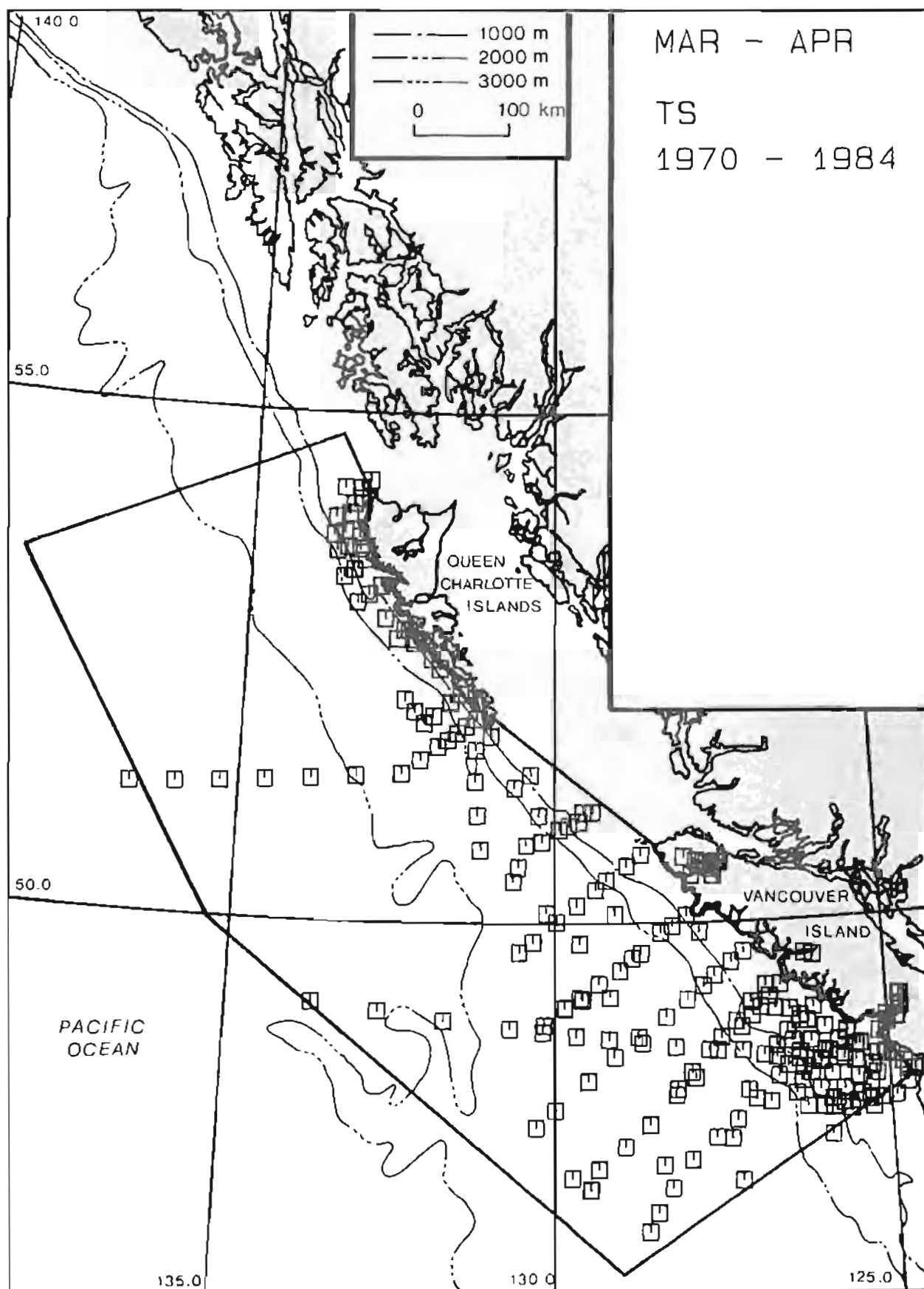


Figure 9b: Locations of all temperature-salinity data (628 stations) collected during 1970-1984, March-April.

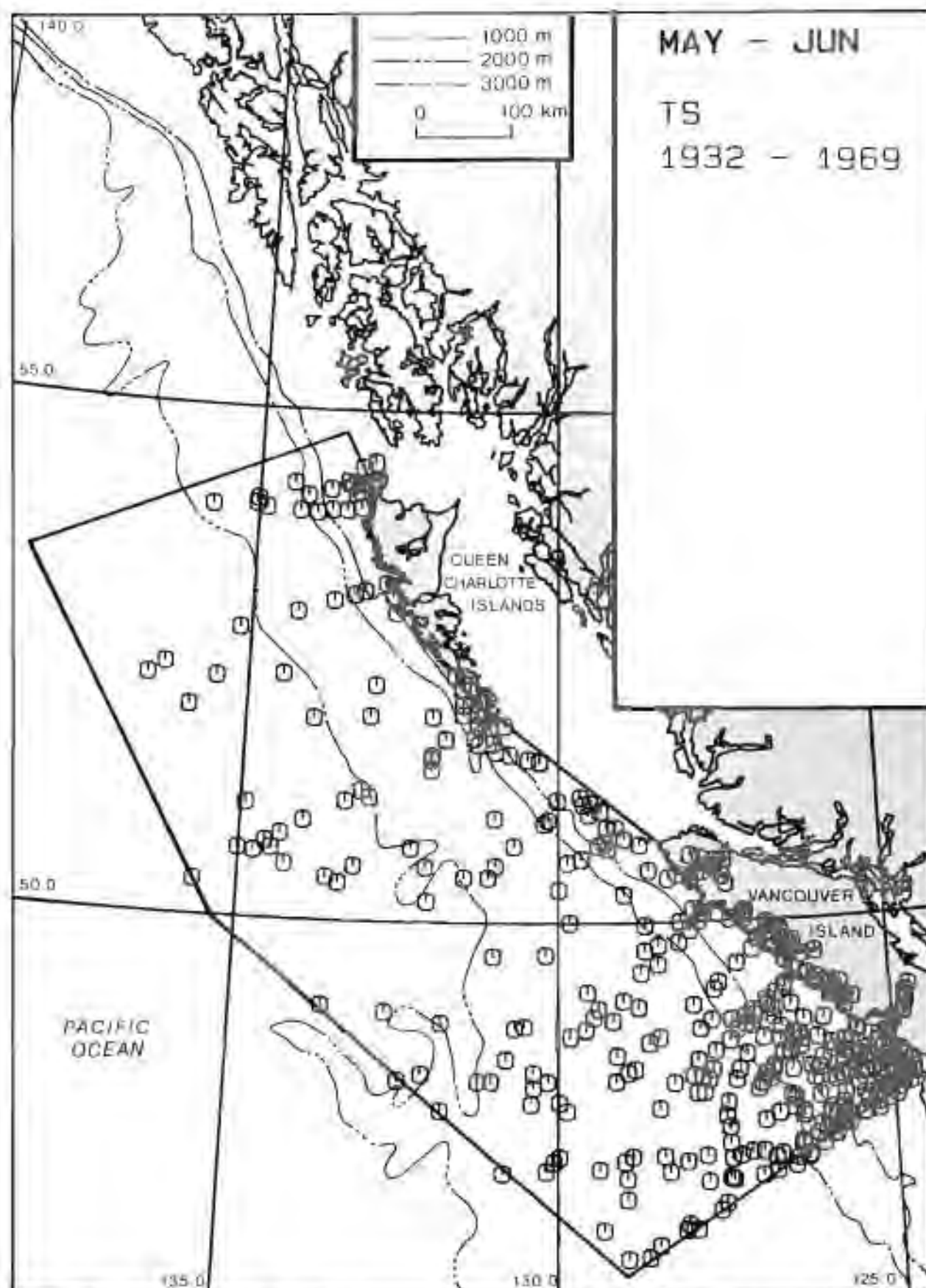


Figure 10a: Locations of all temperature-salinity data (1071 stations) collected during 1932-1969, May-June.

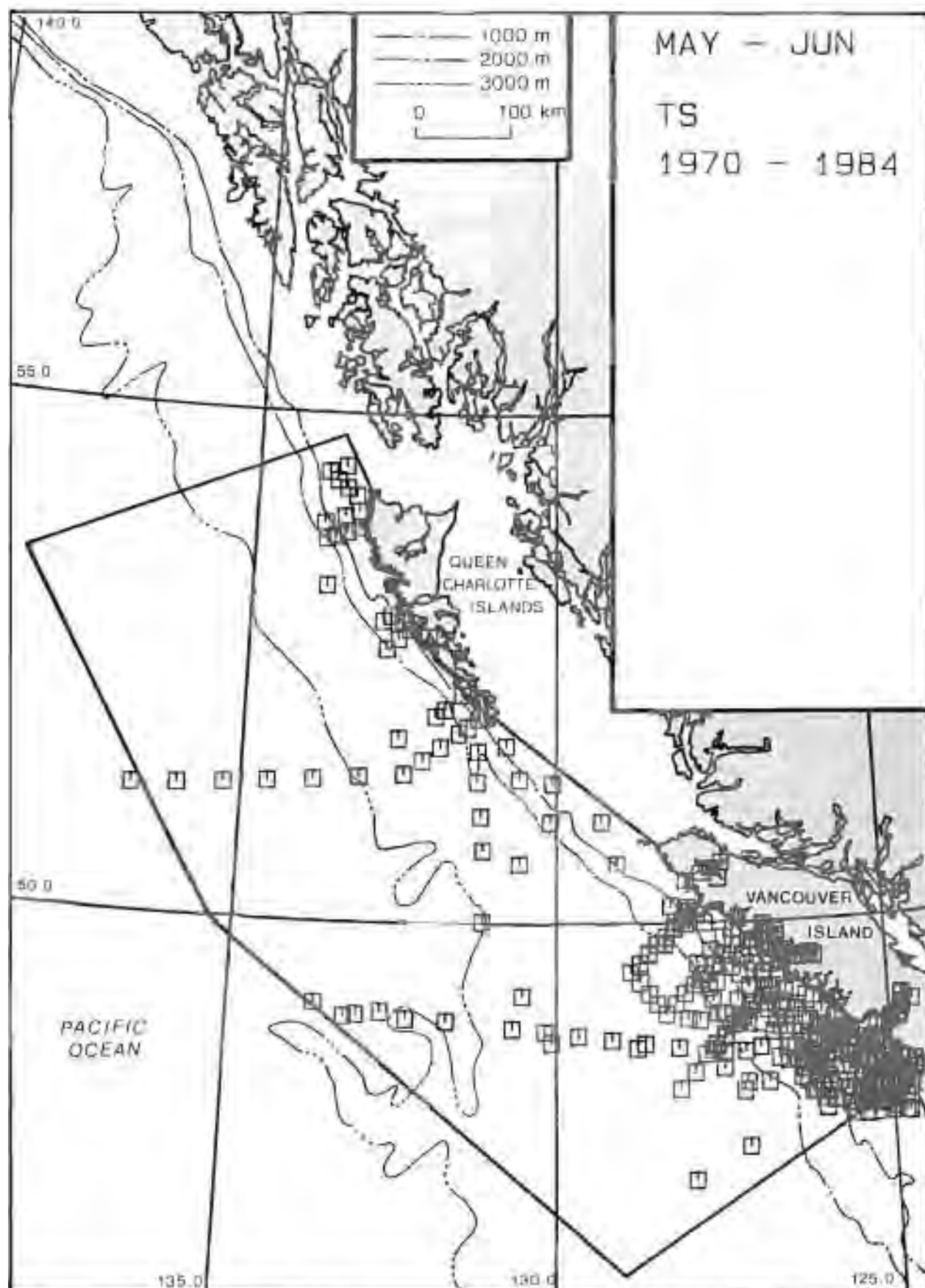


Figure 10b: Locations of all temperature-salinity data (1006 stations) collected during 1970-1984, May-June.

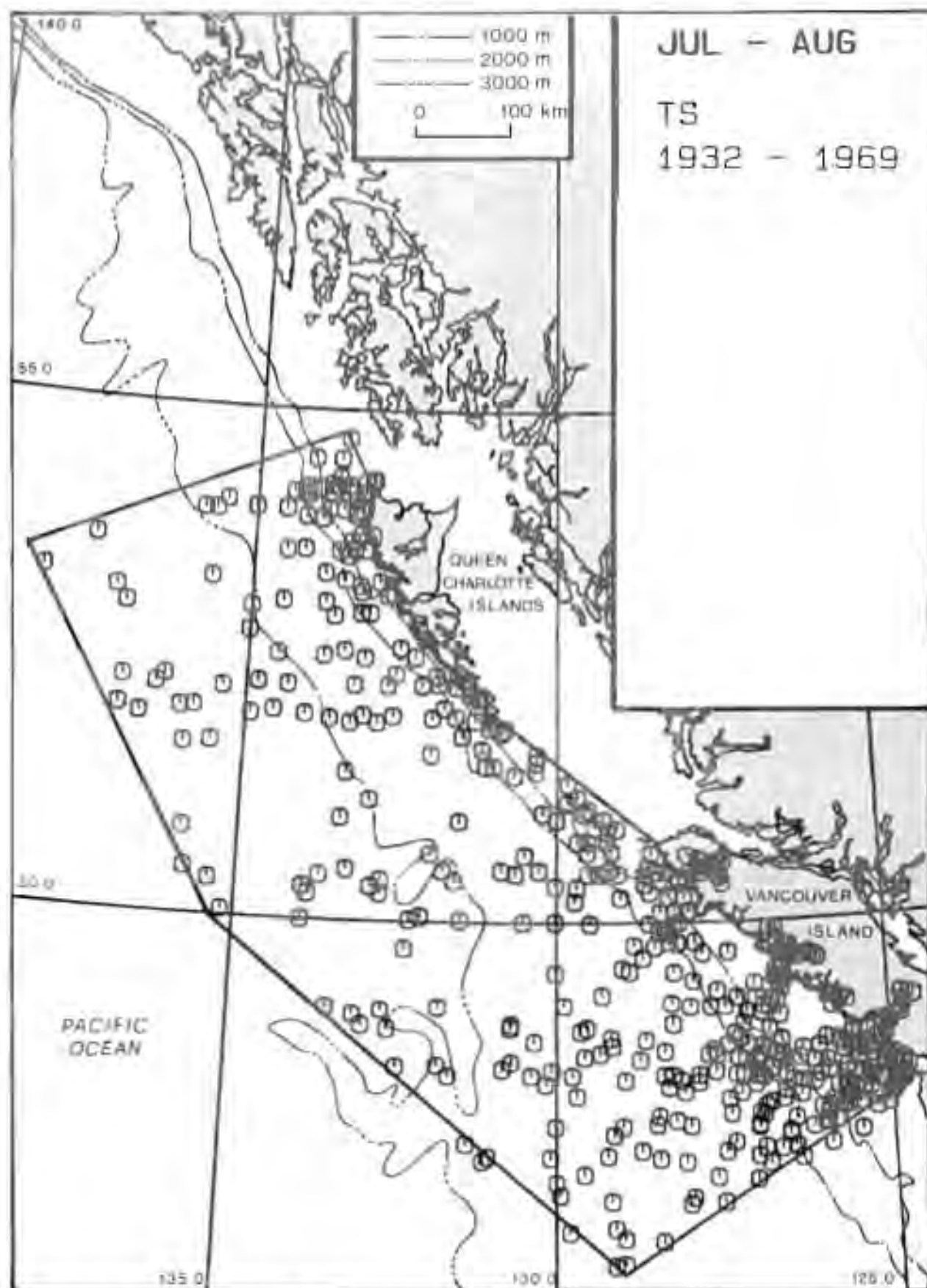


Figure 11a: Locations of all temperature-salinity data (969 stations) collected during 1932-1969, July-August.

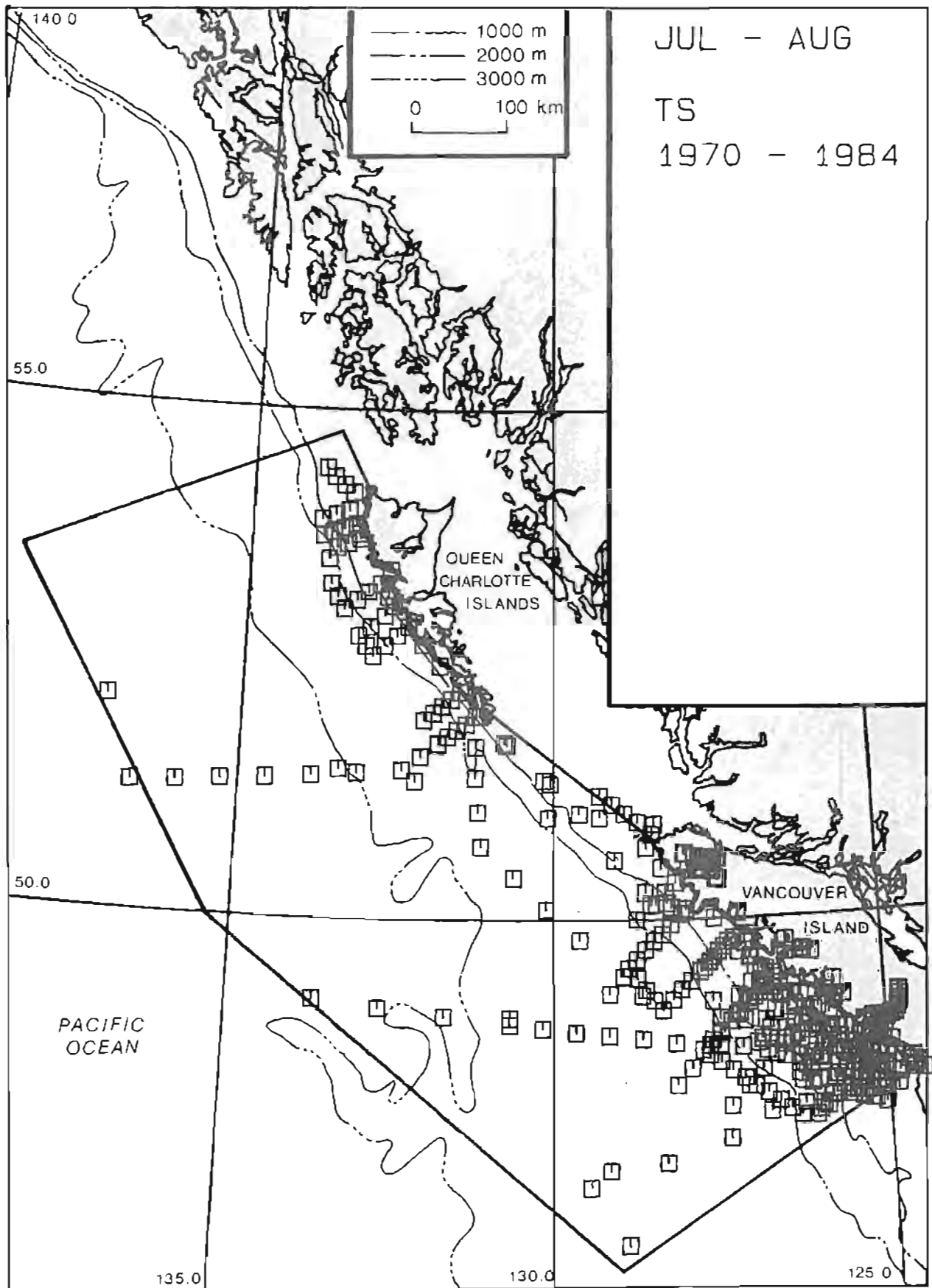


Figure 11b: Locations of all temperature-salinity data (1066 stations) collected during 1970-1984, July-August.

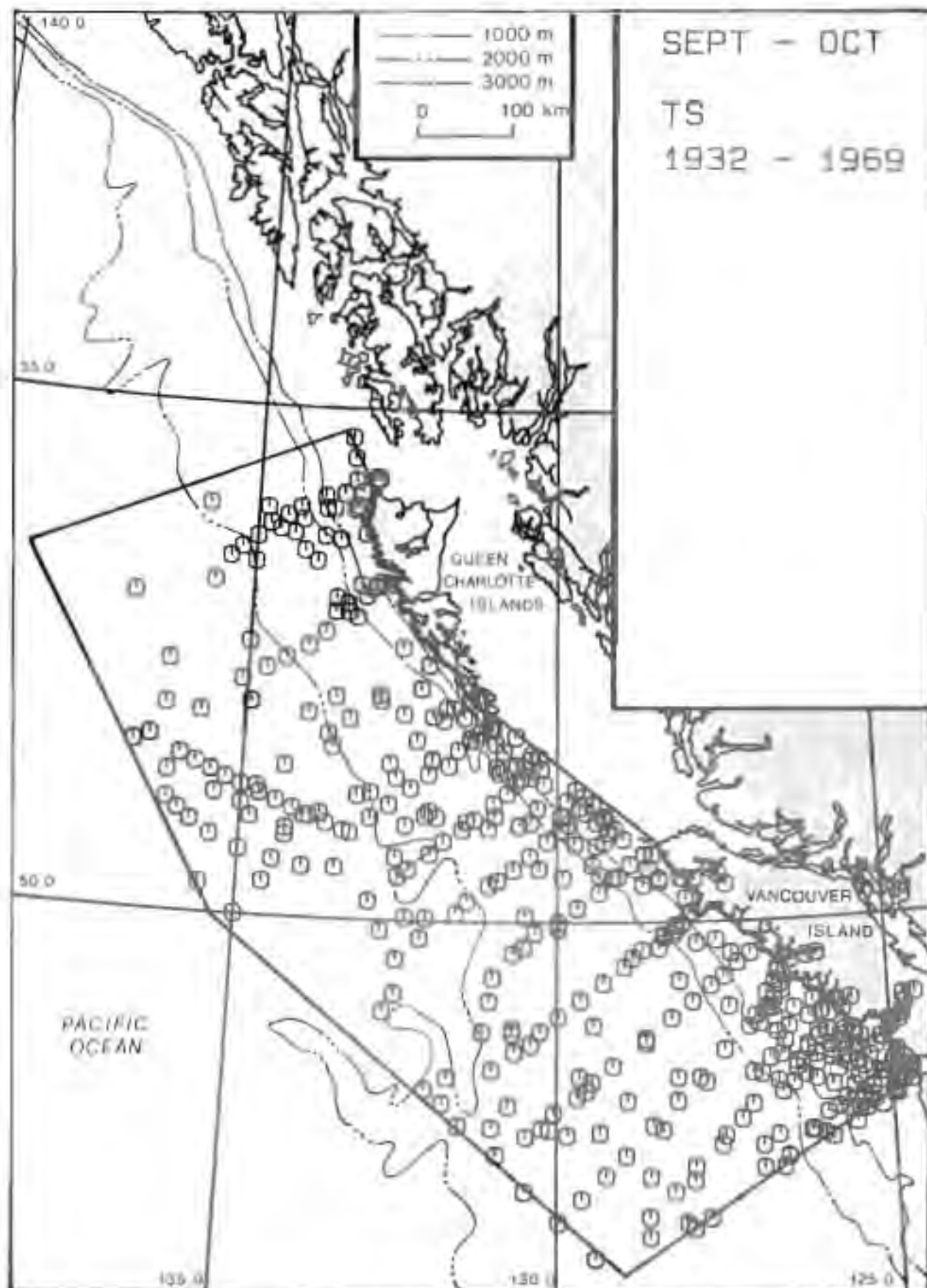
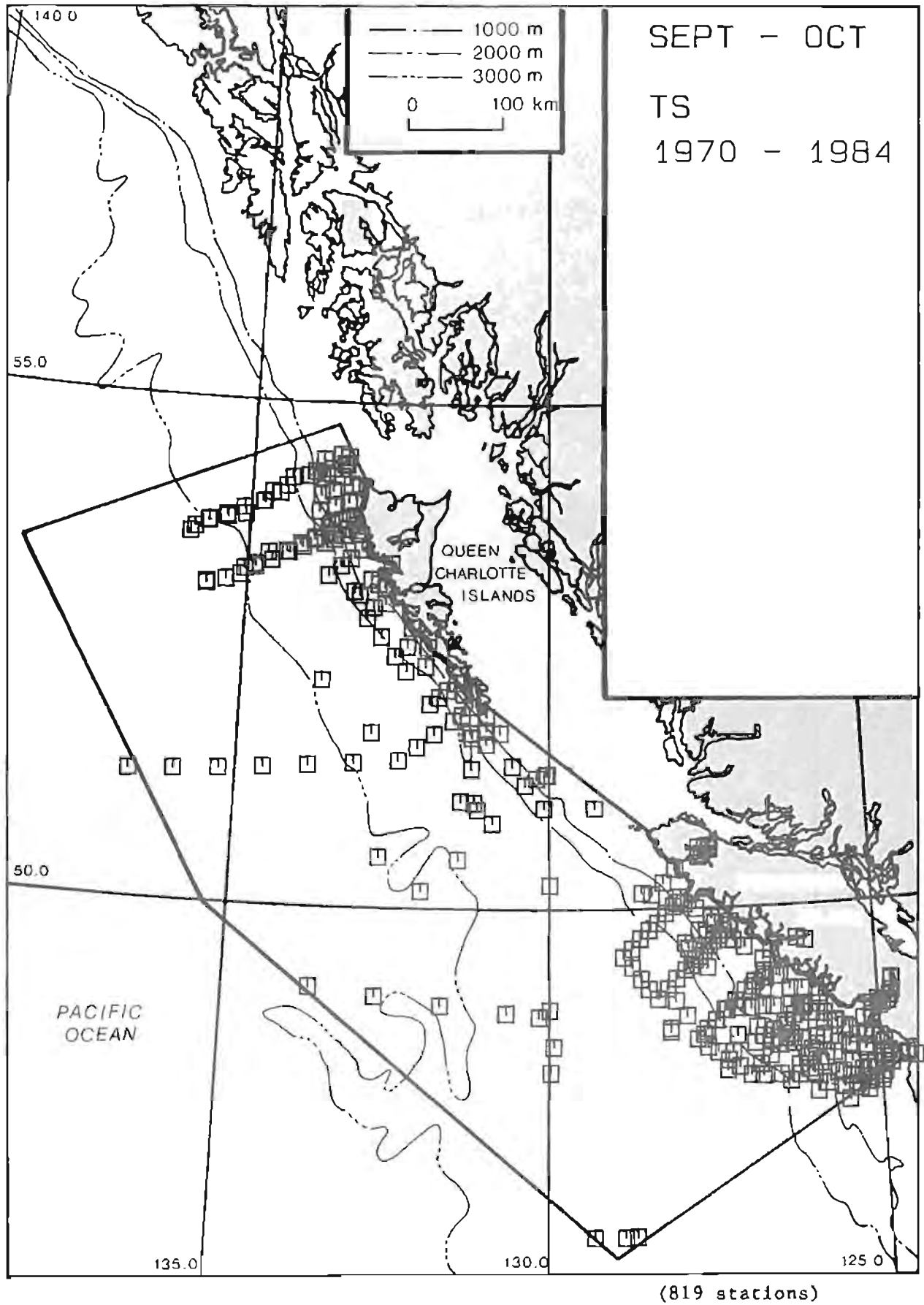


Figure 12a: Locations of all temperature-salinity data (933 stations) collected during 1932-1969, September-October.



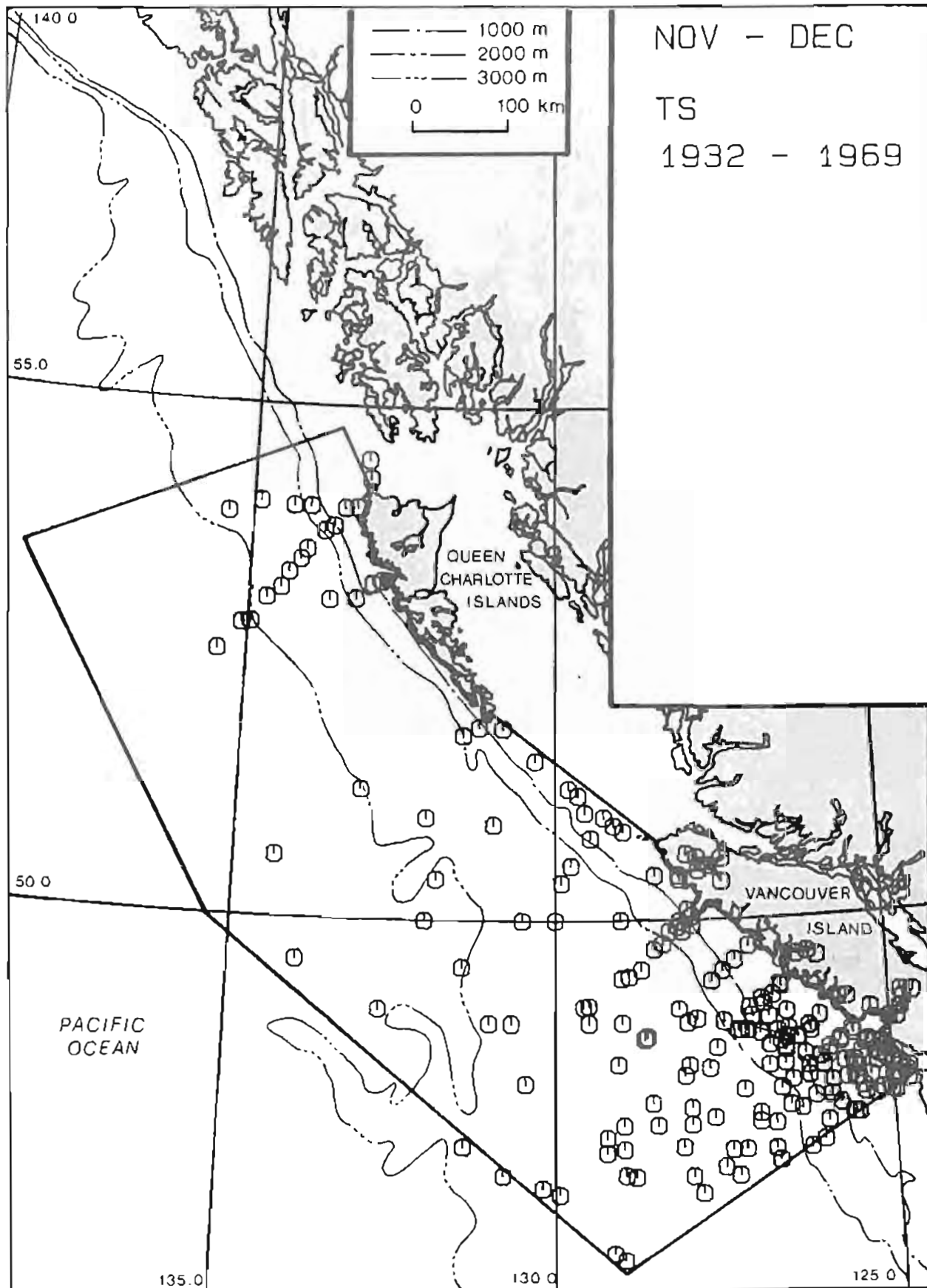


Figure 13a: Locations of all temperature-salinity data (465 stations) collected during 1932-1969, November-December.

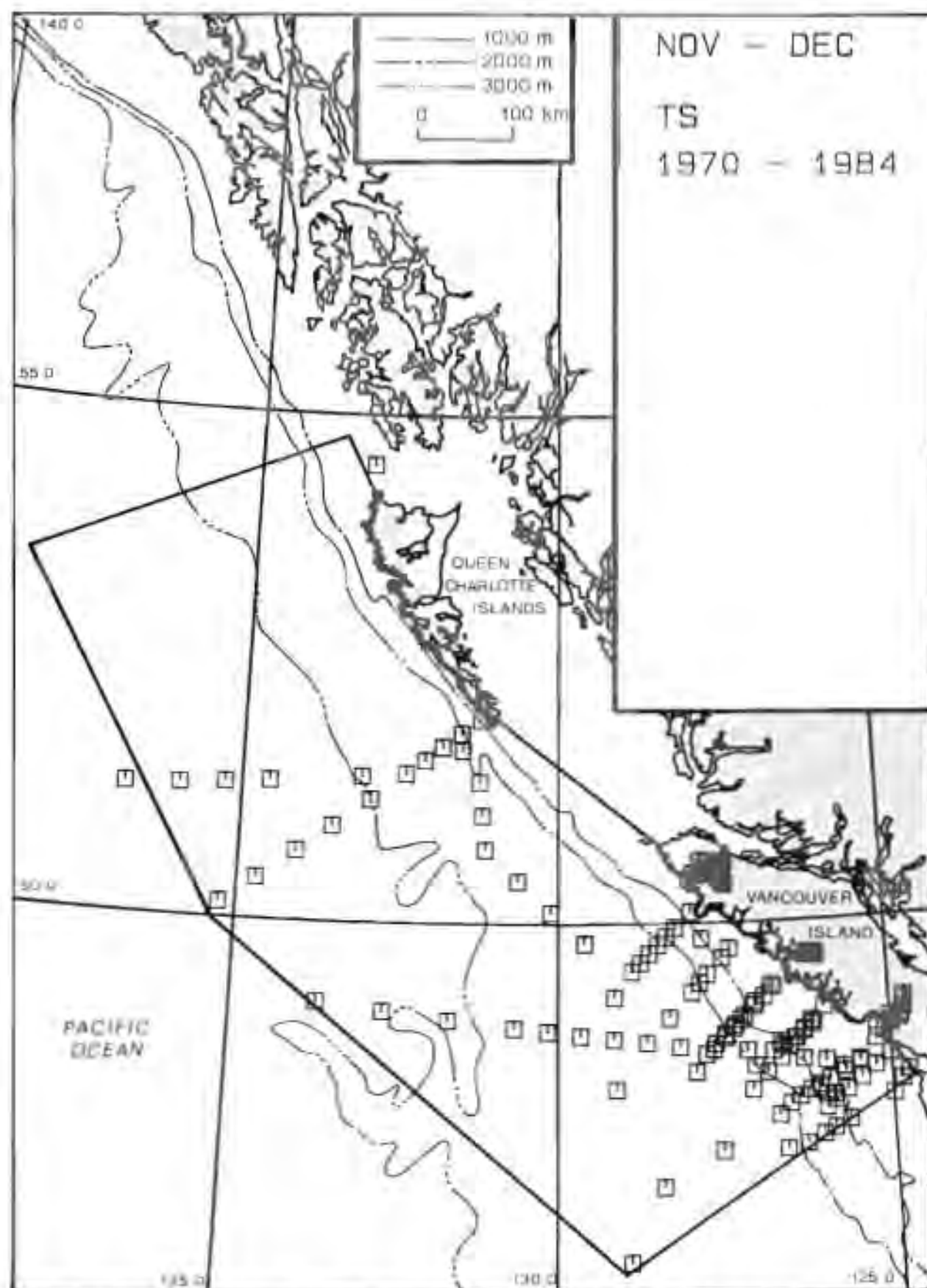


Figure 13b: Locations of all temperature-salinity data (319 stations) collected during 1970-1984, November-December.

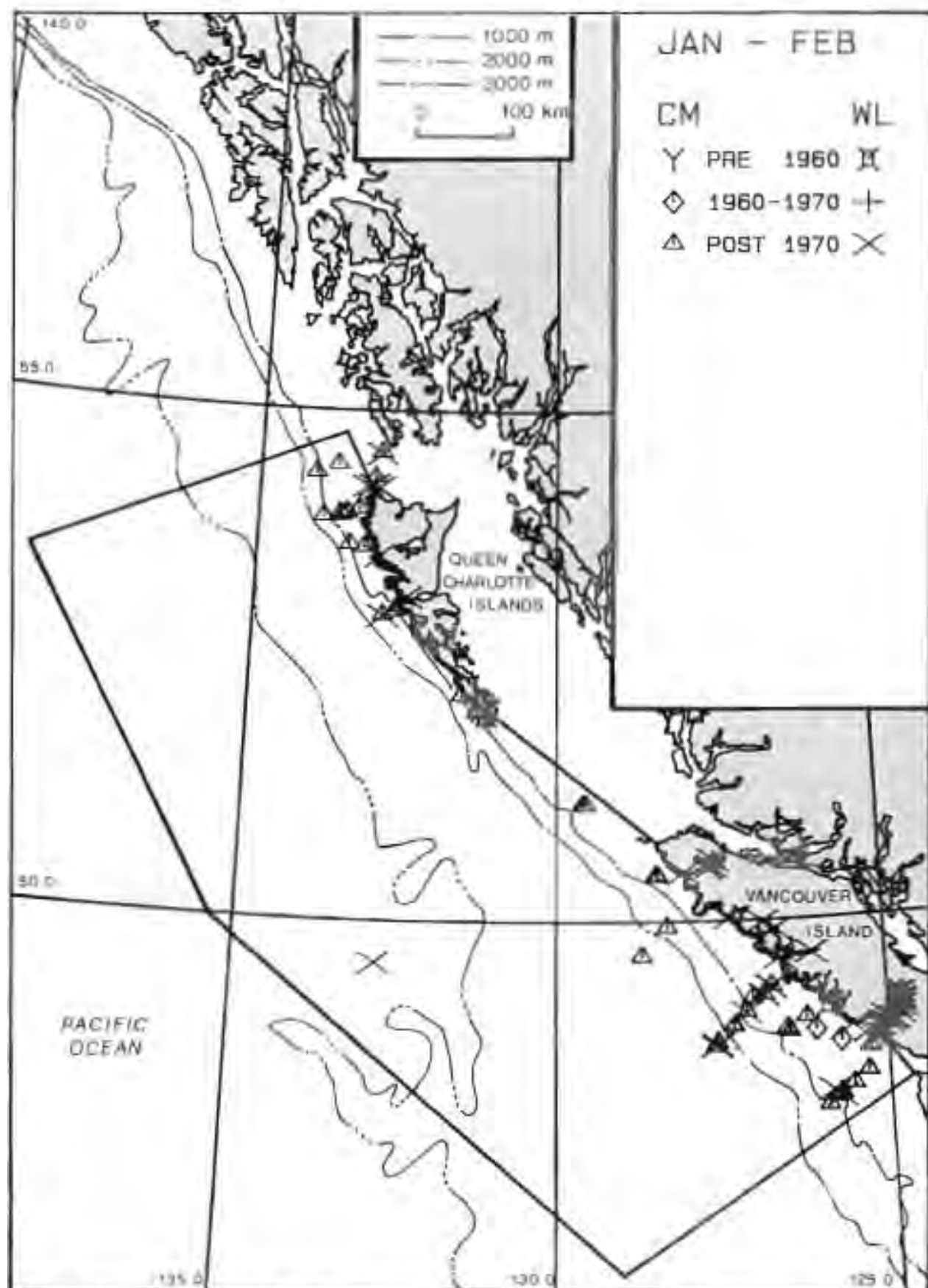


Figure 14: Locations of all current-meter and water-level stations (210 current-meter, 68 water-level records) in place during the January-February period, 1932-1984.

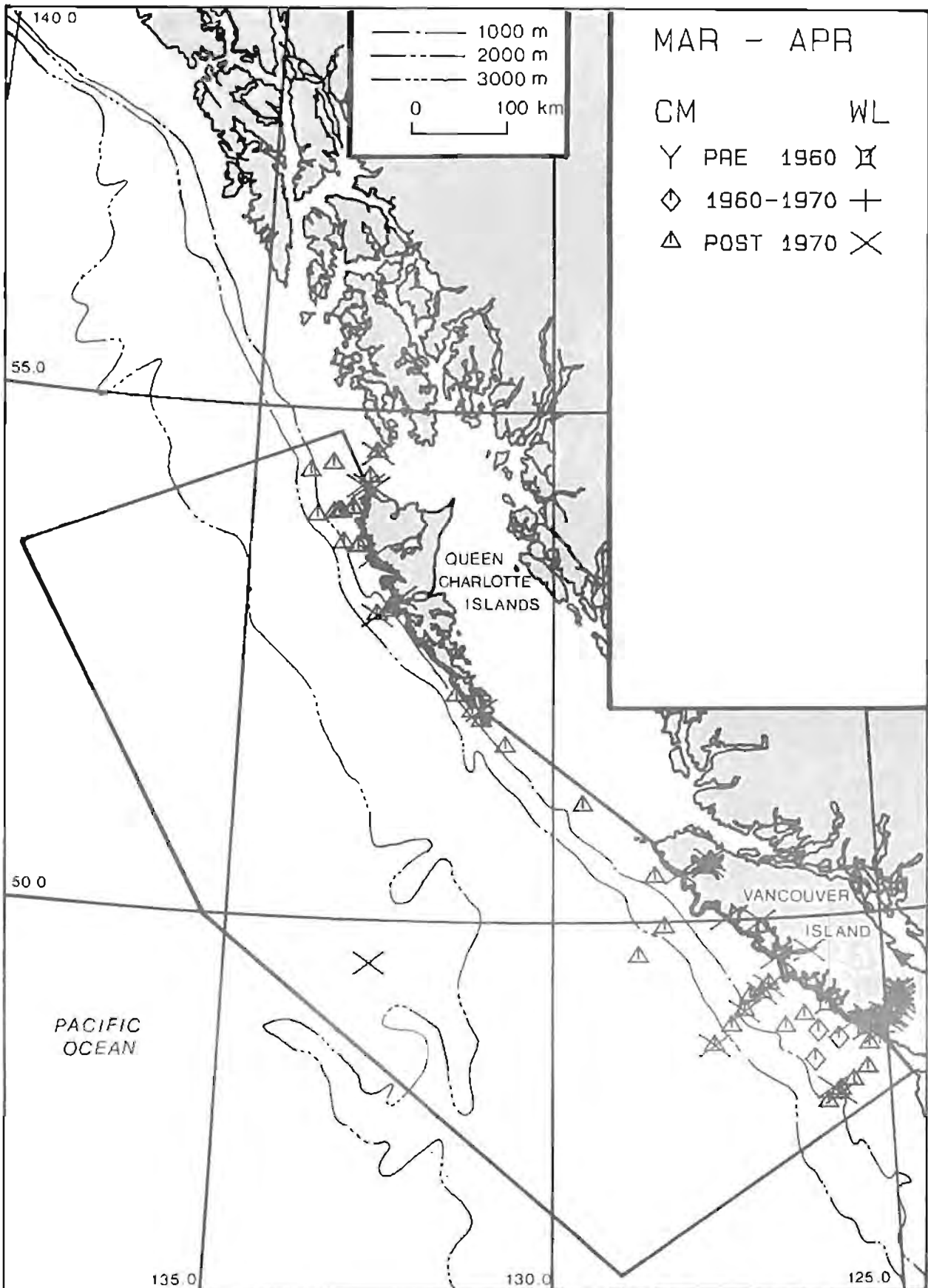


Figure 15: Locations of all current-meter and water-level stations (211 current-meter, 70 water-level records) in place during the March-April period, 1932-1984.

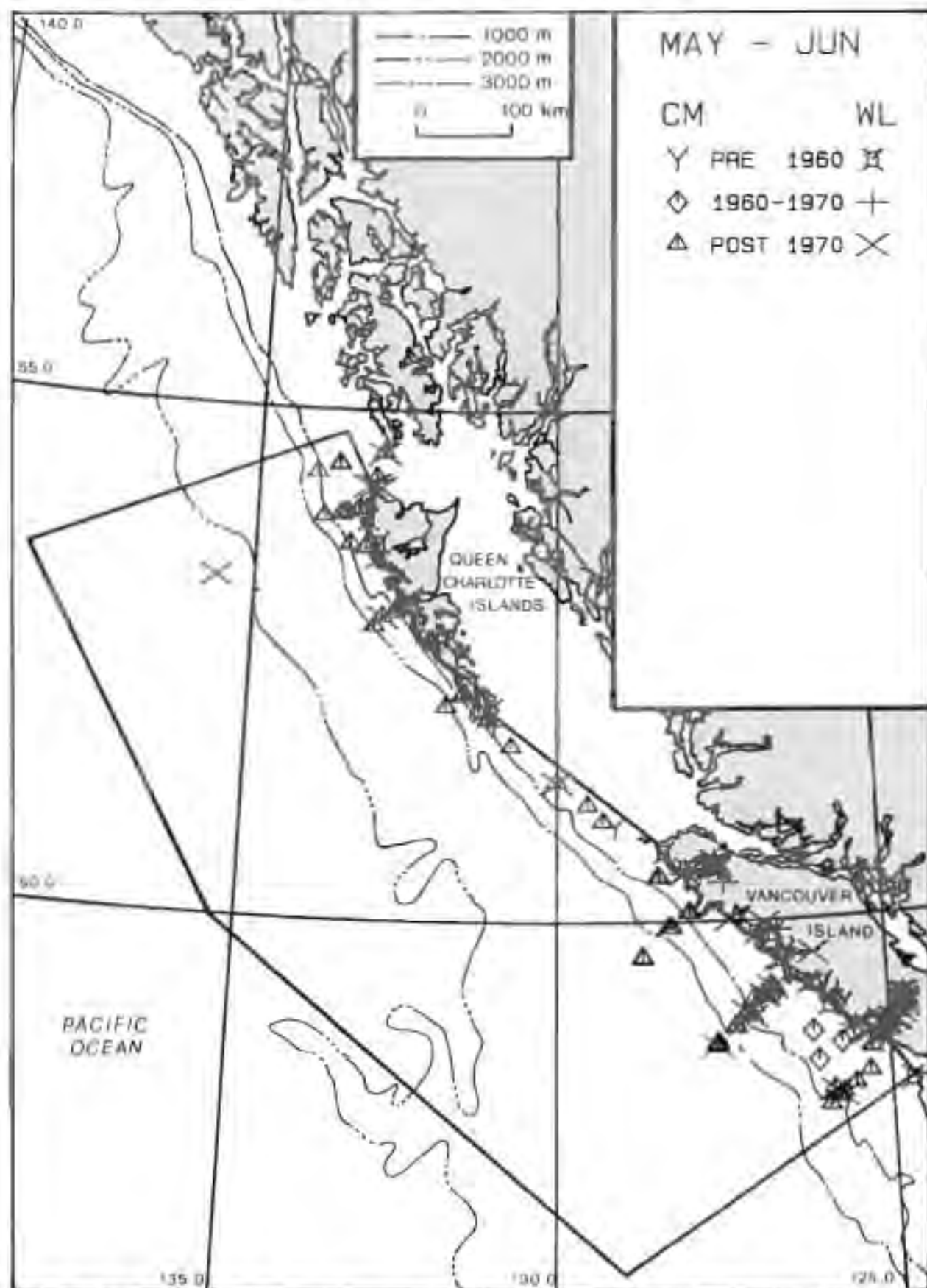


Figure 16: Locations of all current-meter and water-level stations (317 current-meter, 106 water-level records) in place during the May-June period, 1932-1984.

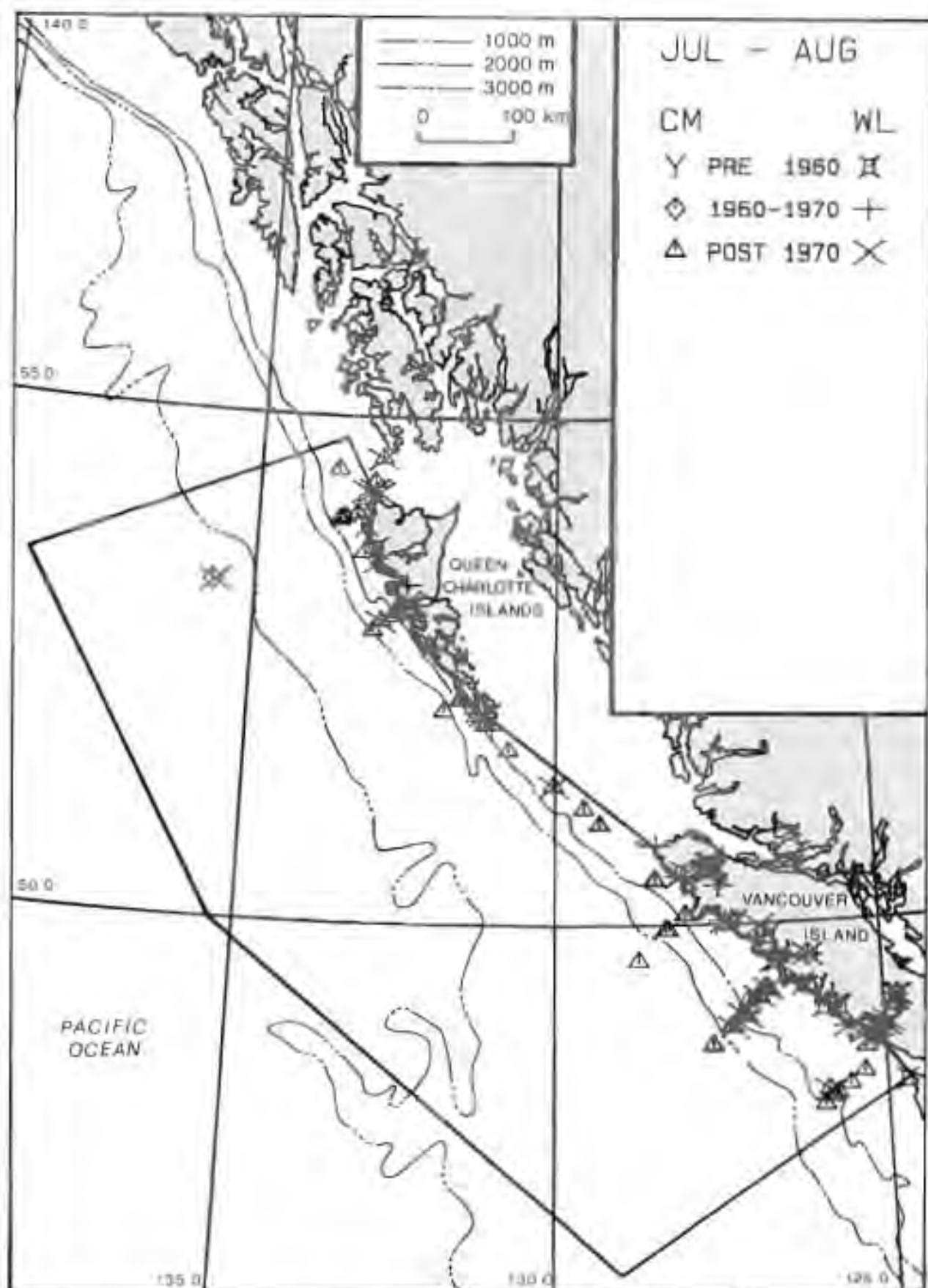


Figure 17: Locations of all current-meter and water-level stations (226 current-meter, 85 water-level records) in place during the July-August period, 1932-1984.

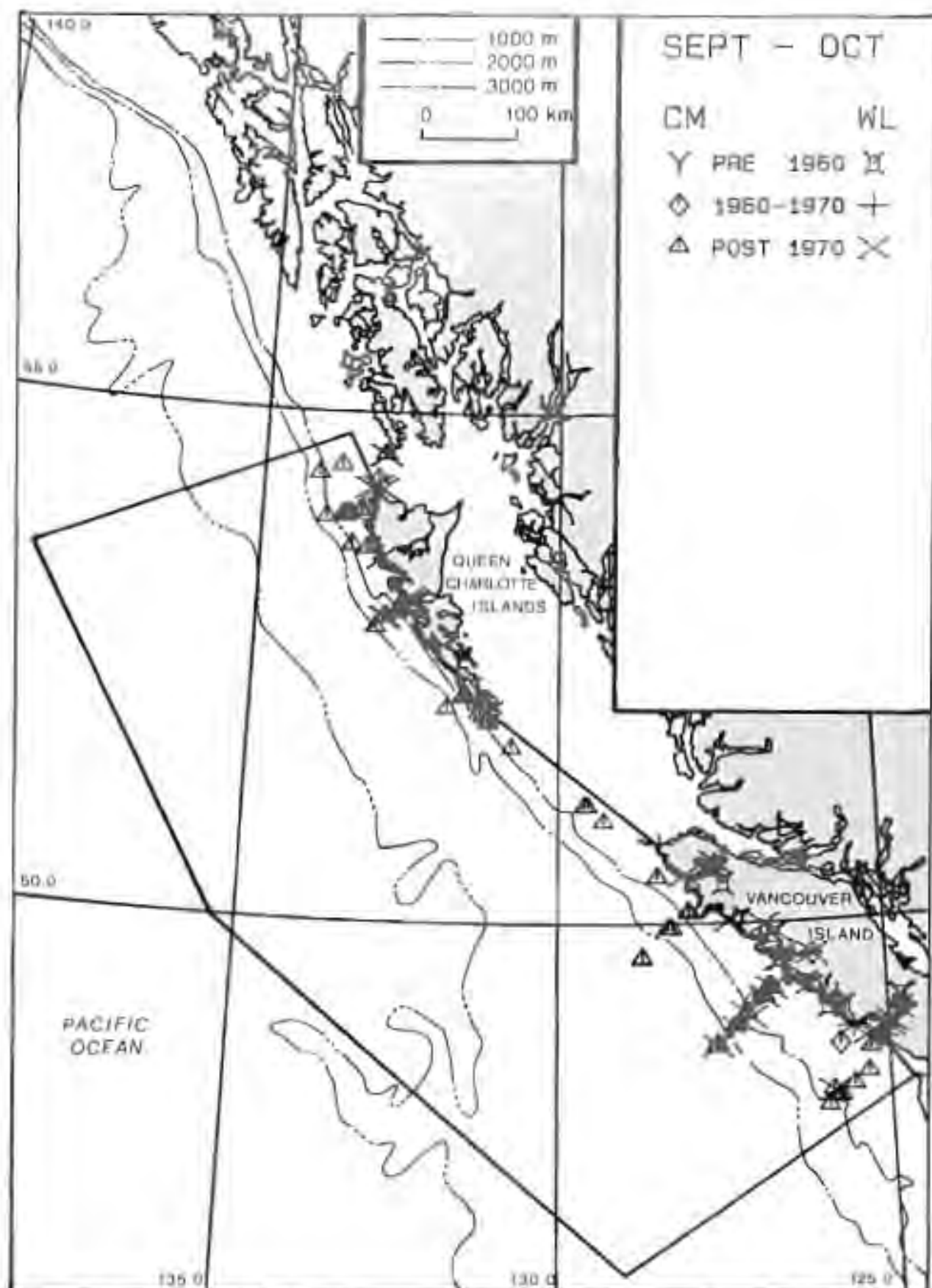


Figure 18: Locations of all current-meter and water-level stations (280 current-meter, 87 water-level records) in place during the September-October period, 1932-1984.

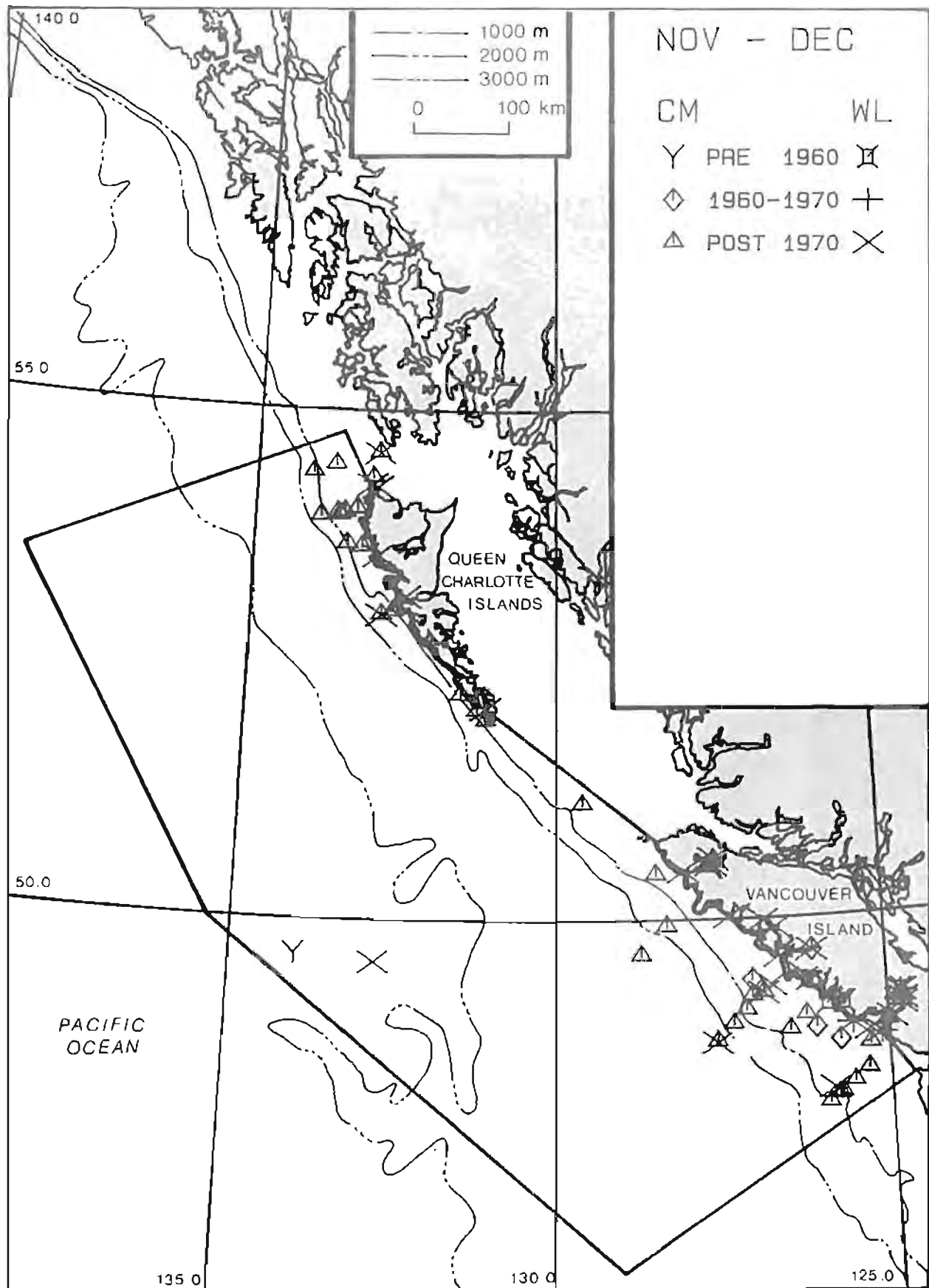


Figure 19: Locations of all current-meter and water-level stations (155 current-meter, 59 water-level records) in place during the November-December period, 1932-1984.

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8. DATA INVENTORY TABLE

Table 2 presents a summary listing of the data sets included in this inventory. The table lists all the data contained in the inventory sequentially by data set number. Water-property, moored current-meter, surface-drift, water-level and wave data are completely catalogued. BT data are not fully catalogued. However their existence has been noted in Table 2, and their general distribution may be deduced from the pattern of stations for a particular cruise, as they were usually collected at and along the track between stations. Over-the-side current measurements of short duration made with fixed-depth or profiling current meters have not been fully inventoried; however, attempts were made to include all such data covering one tidal cycle or more.

Each column of the table contains the following information (symbols and abbreviations used in each column are explained as well):

Column 1 - Data Set I.D.

- contains the data set identifier number, which is of the form yy-nnnn, where yy are the last two digits of the year in which the data set was collected, and nnnn is the sequential number of the data set for that particular year. (The series of data set numbers applies to the whole set of inventories; gaps may appear in the sequence in any one inventory where data sets exist only in other areas or disciplines. A data set which appears in two or more areas or disciplines will have the same number in every case.) Data sets may be sub-divided by the addition of a letter at the end of the number. Sub-divisions have been used when different cruises have been grouped under one I.D. number, or when different programs were conducted on the same cruise. In the case of water-level stations, where data were collected at the same location intermittently or continuously over more than one year, one I.D. number has been used to represent the entire data set.

Column 2 - Ship or collecting agency

- contains the name of the ship (underlined), platform and/or agency.

Column 3 - Dates of measurements

- gives the dates spanning the period during which measurements were taken in the area covered by the inventory. The year is given by the first two digits of the data set number in column 1, unless the measurement period spans more than one year, in which case it is given explicitly. Question marks signify that the dates could not be confirmed, generally due to poor, or lack of, documentation.

Column 4 - Quantity measured

- lists the physical parameters measured in the data set. A quantity followed by a ? means that reference to such a measurement was made but that no supporting details were available. Measurements identified as "Current" are Eulerian current measurements (made at a fixed location); "Current drift" refers to Lagrangian measurements. "Current profile" refers to spot measurements at certain depths at one location.

Column 5 - Instruments or methods used

- lists the instruments and methods used to make the measurements. The entries appear opposite the names of the quantities they measure. A question mark after the entry denotes an assumption, i.e. that the method used was not explicitly stated and that an assumption was made from standard practice at the time. A question mark alone means that the instrument used is unknown.

Column 6 - Estimate of data precision and accuracy

- lists the estimates of the precision (repeatability) and accuracy for each instrument opposite the entry for that instrument in column 5. For instruments of a digital nature, the precision specified is based on the resolution of the instrument. Where possible, estimates made by the original investigators are used. They are entered as two numbers of the form $\pm n_1, \pm n_2$ where n_1 is the precision and n_2 the accuracy. Where investigator's estimates were not available, the following special symbols and entries have been used:

$[\pm n_1, \pm n_2]$: standard oceanographic methods were used, which would normally result in these values. The techniques and precision/accuracy used in this context are:

BT	$[0.2C^{\circ}, 0.2C^{\circ}]$
Reversing thermometer	$[0.02C^{\circ}, 0.03C^{\circ}]$
Salinity - Hydrometer	$[0.2^{\circ}/\text{oo}, 0.2^{\circ}/\text{oo}]$
Salinity - Refractometer	$[0.5^{\circ}/\text{oo}, 0.5^{\circ}/\text{oo}]$
Salinity - Titration	$[0.02^{\circ}/\text{oo}, 0.04^{\circ}/\text{oo}]$
Salinity - Bench salinometer	$[0.01^{\circ}/\text{oo}, 0.02^{\circ}/\text{oo}]$ [The make/model of salinometer is often unknown, but may be specified in Appendix 2]
High Quality CTD/STD	$[\pm 0.005, 0.01C^{\circ}], [\pm 0.005, 0.02^{\circ}/\text{oo}]$

$\pm n_1$ @: manufacturer's specifications for that instrument.

$\pm n_1$?: an estimate has been given which is questionable for reasons detailed in Appendix 2.

A blank in the column signifies that no information was available and that no reasonable assumption could be made.

Column 7 - Data rating number

- carries the data rating number assigned, as explained in Section 5.

Column 8 - Area

- lists the areas in which the majority of the measurements in the data set were taken. (The areas are defined in Figure 1.)

Column 9 - Concurrent measurements

- lists known measurements in other disciplines taken as part of the data set. Further measurements may have been taken, but were not discovered while cataloguing the physical-oceanographic data, and therefore cannot be listed.

Column 10 - Source or reference

- lists a primary source or reference for the data sets. Data sets held in the data banks at the Marine Environmental Data Service, Ottawa or at the National Oceanographic Data Center, Washington D.C. are identified by, respectively, the entries MEDS# and NODC#, followed by the data bank's identity number. A MEDS number alone does not necessarily mean that the data are not stored at NODC. If MEDS does not have the data, a NODC number is given if they are stored there.

Table 2: Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
05-0005	CHS	Aug. 1905-present	Water level	Lege, Ott	$\pm .01$ m	3	Tofino		MEDS WL Stn. #8615
13-0002	CHS	July 17-Aug. 15	Water level	Staff	$\pm .003, .03$ m	3	West Coast Queen Charlottes		MEDS WL Stn. #9671
14-0003	CHS	June 19-Aug. 10	Water level	Staff	$\pm .003, .03$ m	3	West Coast Queen Charlottes		MEDS WL Stn. #9671
15-0003	CHS	June 10-July 2	Water level	Staff	$\pm .003, .03$ m	3	West Coast Queen Charlottes		MEDS WL Stn. #9671
15-0004	U.S. COAST & GEODETIC SURVEY	Apr. 22-Oct. 31	Drift	Log line	?	3	Swiftsure Bank		Marmer (1926)
16-0003	CHS	June 21-July 3	Water level	Lege	$\pm .015$ m	3	West Coast Queen Charlottes		MEDS WL Stn. #9685
18-0001	U.S. COAST & GEODETIC SURVEY	Dec. 6, 1918-Dec. 31, 1920	Drift	Log line	?	3	Swiftsure Bank		Marmer (1926)
20-0001	CHS	May 17-Oct. 9	Water level	?	$\{ \pm .03 \text{ m} \}$	3	Quatsino Sound, Neroutsos Inlet		MEDS WL Stn. #8750, 8754
24-0002	CHS	May 5-10	Water level	Lege	$\pm .015$ m	3	Barkley Sound		MEDS WL Stn. #8555
25-0002	CHS	May 8-July 31	Water level	Lege	$\pm .015$ m	3	Quatsino Narrows, Esperanza Inlet		MEDS WL Stn. #8685, 8756
27-0005	CHS	June 6-Oct. 31	Water level	?	$\{ \pm .03 \text{ m} \}$	3	Nootka Sound		MEDS WL Stn. #8645, 8664
31-0003	CHS	Aug. 13-Nov. 2	Water level	Staff	$\pm .003, .03$ m	3	Tofino Inlet		MEDS WL Stn. #8623
31-0008	U.S. COAST & GEODETIC SURVEY	June 1-July 12	Water level	?	?	3	Cape Flattery		National Ocean Service
32-0004	CATALYST, U. Washington	July 18-28	Temperature Salinity	Rev. therm. Titration	$\{ \pm .02, .03^{\circ} \}$ $\{ \pm .02, .04^{\circ}/\text{oo} \}$	3	Offshore Vancouver Island	O ₂ , NO ₂ , PO ₄ , SiO ₃ , pH, alkalinity	Scripps (1961)

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
32-0006	CHS	June 8-Nov. 30	Water level	?	[$\pm$?, .03 m]	3	Clayoquot Sound		MEDS WL Stn. #8637
33-0001	CATALYST, U. Washington	July 7-8	Temperature Salinity	Rev. therm. Titration	[$\pm$.02, .03C°] [$\pm$.02, .04°/oo]	3	Cape Flattery	O ₂ , PO ₄ , SiO ₃ , NO ₂ , pH	Scripps (1961)
33-0002	W.J. STEWART, Pac. Biol. Stn.	July 25-27	Temperature Salinity	Rev. therm.? Titration?	[$\pm$.02, .03C°] [$\pm$.02, .04°/oo]	3	Nootka Sound, Muchalat Inlet, Tahsis Inlet	O ₂ , PO ₄ , SiO ₃ , pH, bottom sample	Tully (1937d)
34-0002	AES Meteorological Station at Cape St. James	July 27, 1934-present	Temperature (surface) Salinity (surface)	Thermometer, 1934-39 Thermometer, 1940-present Titration, 1934-58 Salinometer, 1959-70 Hydrometer, 1971-present	? , $\pm$.3C° ? , $\pm$.2C° ? , $\pm$.06°/oo ? , $\pm$.02°/oo ? , $\pm$.3°/oo	3	Southern tip of Queen Charlottes		Hollister & Sandnes (1972)
34-0003	W.J. STEWART, Pac. Biol. Stn.	May 5-June 5	Temperature Salinity	? Titration	$\pm$?, .2C° ?	2	West Coast Vancouver Island	pH, SiO ₃ , PO ₄ , NO ₂ , plankton, benthos	NODC# 189950191
34-0004	CHELAN, USCG?	?	Temperature (surface) Salinity (surface)	?	?	2	?	PO ₄ , SiO ₃	Barnea & Thompson (1938)
34-0006	DOT Lightstation at Nootka	Aug. 1934-June 1953	Temperature (surface) Salinity (surface)	Thermometer, 1934-1939 1940-1953 Salinometer, 1934-1953	? , $\pm$.3C° ? , $\pm$.2C° ? , $\pm$.06°/oo	3	West Coast Vancouver Island		Hollister & Sandnes (1972)
34-0007	DOT Lightstation at Amphitrite Point	Aug. 1934-present	Temperature (surface) Salinity (surface)	Thermometer, 1935-1939 1940-present Titration, 1934-1958 Salinometer, 1959-1970 Hydrometer, 1970-present	? , $\pm$.3C° ? , $\pm$.2C° ? , $\pm$.06°/oo ? , $\pm$.02°/oo ? , $\pm$.3°/oo	3	West Coast Vancouver Island		Hollister & Sandnes (1972)

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? - Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
35-0003	CHS	May 18- Sept. 10	Water level	Logg. Scale	$\pm 1, .01$ m $\pm 1, .03$ m	3	Kynquot Sound, U. Queen Charlottes		MEDS WL Stn. #8713, 9570, 9605
35-0005	CATALYST, Ti. Washington	July 26- Aug. 3	Temperature Salinity	Rev. therm. Titration	$[+ .02, .03^{\circ}]$ $[\pm .02, .04^{\circ}/\text{oo}]$	3	Offshore Vancouver Island	O_2 , PO_4 , SiO_3 , NO_2 , pH, alkalinity	Scripps (1961)
35-0006	OGLALA, (US)	Aug. 4-10	Temperature Salinity	Rev. therm. Titration?	$[+ .02, .03^{\circ}]$ $[\pm .02, .04^{\circ}/\text{oo}]$	3	B.C. Offshore		Goodman & Thompson (1940) MEDS #311003560 NODC #310030356
35-0007	W.J. STEWART, Pac. Biol. Stn.	May 14- June 26	Temperature Salinity	Rev. therm. Titration?	$[+ .02, .03^{\circ}]$ $[\pm .02, .04^{\circ}/\text{oo}]$	3	Offshore Queen Charlottes	O_2 , pH, PO_4 , SiO_3 , NO_2	MEDS #180233607 NODC #189950191
35-0008	DOT Lightstation at Kains Island	Jan. 1935- present	Temperature (surface) Salinity (surface)	Thermometer, 1935-1939 1940-present Titration, 1935-1958 Salinometer, 1959-1970 Hydrometer, 1970-Present	$\pm .30^{\circ}$ $\pm .20^{\circ}$ $\pm .06^{\circ}/\text{oo}$ $\pm .02^{\circ}/\text{oo}$ $\pm .30^{\circ}/\text{oo}$	3	West Coast Vancouver Island		Hollister & Sandnes (1972)
36-0003A	ARMENTIERES, Pac. Biol. Stn.	June 8-14	Temperature Salinity	Rev. therm. Titration	$[+ .02, .03^{\circ}]$ $[\pm .02, .04^{\circ}/\text{oo}]$	3	Offshore Vancouver Island	pH, weather	POG (1952a) MEDS #180236610 NODC #18AR50282, 189950191
36-0003B	ARMENTIERES, Pac. Biol. Stn.	July 30- Aug. 7	Temperature Salinity	Rev. therm. Titration	$[+ .02, .03^{\circ}]$ $[\pm .02, .04^{\circ}/\text{oo}]$	3	Offshore Vancouver Island	pH, weather	POG (1952a) MEDS #180236610 NODC #18AR50282, 189950191
36-0003C	ARMENTIERES, Pac. Biol. Stn.	Sept. 4-5	Temperature Salinity	Rev. therm. Titration	$[+ .02, .03^{\circ}]$ $[\pm .02, .04^{\circ}/\text{oo}]$	3	Queen Charlotte Sound, B.C. Offshore	pH, weather	POG (1952a) MEDS #180236610 NODC #18AR50282, 189950191
36-0004	DOT Lightstation at Langara Island	Oct. 22, 1936- Aug. 28, 1937	Temperature (surface) Salinity (surface)	Thermometer Titration	$\pm .2, .50^{\circ}$ $\pm 1, .06^{\circ}/\text{oo}$	3	Langara Island (Dixon Entrance)		Hollister & Sandnes (1972)
36-0005	CATALYST, U. Washington	July 27- Aug. 28	Temperature Salinity	Rev. therm. Titration	$[+ .02, .03^{\circ}]$ $[\pm .02, .04^{\circ}/\text{oo}]$	3	Offshore Queen Charlottes & Vancouver Island	O_2 , PO_4 , SiO_3 , NO_2 , pH, alkalinity	Scripps (1961)

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? = Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
36-0006	ARMENTIERES, Pac. Biol. Stn.	Feb. 14-26	Temperature Salinity	Rev. therm. Titration	[+.02,.03C°] [+.02,.04°/oo]	3	Offshore Vancouver Island	pH, weather	POG (1956a) MEDS #180236609 NODC #18AR50293
36-0008	CHS	May 30-June 19	Water level	Scale readings	±.015 m	3	Quatsino Sound		MZDS WL Stn. #8759
37-0004	CATALYST, Pac. Biol. Stn.	July 28-29	Temperature Salinity	Rev. therm. Titration?	[+.02,.03C°] [+.02,.04°/oo]	2	Dixon Entrance and Offshore	O ₂	POG (1956c) MEDS #180237613
37-0010	CATALYST, U. Washington	Aug. 25-27	Temperature Salinity	Rev. therm. Titration	[+.02,.03C°] [+.02,.04°/oo]	3	Offshore Vancouver Island	O ₂ , PO ₄ , SiO ₃	Scrpps (1961)
37-0011	ARMENTIERES, Pac. Biol. Stn.	Sept. 8-23	Temperature Salinity	Rev. therm. Titration	[+.02,.03C°] [+.02,.04°/oo]	3	Offshore Vancouver Island	O ₂	POG (1956a) MEDS #180237614
37-0012	ARMENTIERES, Pac. Biol. Stn.	Feb. 25-26	Temperature Salinity	Rev. therm. Titration	[+.02,.03C°] [+.02,.04°/oo]	3	Offshore Vancouver Island		POG (1956a) MEDS #180237611 NODC #18AR50293
37-0013	ARMENTIERES, Pac. Biol. Stn.	June 16-25	Temperature Salinity	Rev. therm. Titration	[+.02,.03C°] [+.02,.04°/oo]	3	Offshore Vancouver Island		POG (1956a) MEDS #180237612 NODC #189950191
37-0014	ARMENTIERES, Pac. Biol. Stn.	Oct. 14-22	Temperature Salinity	Rev. therm. Titration	[+.02,.03C°] [+.02,.04°/oo]	3	Offshore Vancouver Island	O ₂	POG (1956a) MEDS #180237615
38-0002	AMLAC, Pac. Biol. Stn.	May 29-30	Temperature Salinity	Rev. therm. Titration	[+.02,.03C°] [+.02,.04°/oo]	3	Dixon Entrance, B.C. Offshore	O ₂ , weather	POG (1956c) MEDS #180238620 NODC #18995019
38-0004A	ARMENTIERES, Pac. Biol. Stn.	Apr. 26-May 6	Temperature Salinity	Rev. therm. Titration	[+.02,.03C°] [+.02,.04°/oo]	3	Offshore Vancouver Island	O ₂	POG (1956a) MEDS #180238619
38-0004B	ARMENTIERES, Pac. Biol. Stn.	June 15-17	Temperature Salinity	Rev. therm. Titration	[+.02,.03C°] [+.02,.04°/oo]	3	Offshore Vancouver Island	O ₂	POG (1956a) MEDS #180238621
38-0004C	ARMENTIERES, Pac. Biol. Stn.	July 19-22	Temperature Salinity	Rev. therm. Titration	[+.02,.03C°] [+.02,.04°/oo]	3	Offshore Vancouver Island	O ₂	POG (1956a) MEDS #180238622

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?-Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
38-0004D	ARMENTIERES, Pac. Biol. Stn.	Nov. 20-23	Temperature Salinity	Rev. therm. Titration	[$\pm 0.02, .03^{\circ}$] [$\pm 0.02, .04^{\circ}/\text{oo}$]	3	Offshore Vancouver Island	O ₂	POG (1956a) MEDS #180238623
38-0005	CATALYST, U. Washington	May 29	Temperature Salinity	Rev. therm. Titration	[$\pm 0.02, .03^{\circ}$] [$\pm 0.02, .04^{\circ}/\text{oo}$]	3	Offshore Vancouver Island	O ₂ , PO ₄ , SiO ₃	Scripps (1961)
38-0006	CATALYST, U. Washington	Aug. 12-13	Temperature Salinity	Rev. therm. Titration	[$\pm 0.02, .03^{\circ}$] [$\pm 0.02, .04^{\circ}/\text{oo}$]	3	Offshore Vancouver Island	O ₂ , PO ₄ , SiO ₃ , NO ₂ , pH, alkalinity	Scripps (1961)
38-0007	ARMENTIERES, Pac. Biol. Stn.	Jan. 20-28	Temperature Salinity	Rev. therm. Titration	[$\pm 0.02, .03^{\circ}$] [$\pm 0.02, .04^{\circ}/\text{oo}$]	3	Offshore Vancouver Island	O ₂ , weather	POG (1956a) MEDS #180238617 NODC #18AR50293
38-0008	ARMENTIERES, Pac. Biol. Stn.	Feb. 16-24	Temperature Salinity	Rev. therm. Titration	[$\pm 0.02, .03^{\circ}$] [$\pm 0.02, .04^{\circ}/\text{oo}$]	3	Offshore Vancouver Island	O ₂ , weather	POG (1956a) MEDS #180238618
38-0010	CATALYST, U. Washington	Sept. 24	Temperature (surface) Salinity (surface)	? ?	? ?	2	B.C. Offshore		Thompson & Korpi (1942)
38-0011	CHS	June 20-July 16	Water level	Scale readings	$\pm .015$ m	3	Quatsino Sound, W. Vancouver Island		MEDS WL Stn. #8735, 8786
39-0002	A.P. KNIGHT, Pac. Biol. Stn.	Oct. 29-Nov. 1	Temperature Salinity	Rev. therm. Titration	[$\pm 0.02, .03^{\circ}$] [$\pm 0.02, .04^{\circ}/\text{oo}$]	3	Barkley Sound, Alberni Inlet	O ₂ , plankton	POG (1957d) MEDS #180239625
40-0004	DOT Lightstation at Langara Island	Mar. 2, 1940-present	Temperature (surface) Salinity (surface)	Thermometer Titration, 1940-1958 Salinometer, 1959-1969 Hydrometer, Sept. 23, 1969-present	? $\pm .2^{\circ}$? ? $\pm .06^{\circ}/\text{oo}$? $\pm .02^{\circ}/\text{oo}$? $\pm .3^{\circ}/\text{oo}$	3	Dixon Entrance		Hollister & Sandnes (1972)

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? = Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
41-0003A	CATALYST, U. Washington	July 21	Temperature Salinity	Rev. therm. Titration	$[+.02, .03^{\circ}]$ $[+.02, .04^{\circ}/\text{oo}]$	3	Offshore Vancouver Island (Cape Flattery)	O ₂ , PO ₄ , NO ₂	Scripps (1961)
41-0003B	CATALYST, U. Washington	Aug. 9	Temperature Salinity	Rev. therm. Titration	$[+.02, .03^{\circ}]$ $[+.02, .04^{\circ}/\text{oo}]$	3	Offshore Vancouver Island (Cape Flattery)	O ₂ , PO ₄ , NO ₂	Scripps (1961)
41-0005A	A.P. KNIGHT, Pac. Biol. Stn.	Apr. 23- Sept. 14	Temperature Salinity	Rev. therm. Titration	$[+.02, .03^{\circ}]$ $[+.02, .04^{\circ}/\text{oo}]$	3	Alberni Inlet	O ₂ , pH	POG (1957d) MEDS #180241627
41-0005B	A.P. KNIGHT, Pac. Biol. Stn.	May 18- Aug. 21	Temperature Salinity	Rev. therm. Titration	$[+.02, .03^{\circ}]$ $[+.02, .04^{\circ}/\text{oo}]$	3	Alberni Inlet	O ₂ , pH	POG (1957d) MEDS #180241628
41-0005C	A.P. KNIGHT, Pac. Biol. Stn.	June 26-27	Temperature Salinity	Rev. therm. Titration	$[+.02, .03^{\circ}]$ $[+.02, .04^{\circ}/\text{oo}]$	3	Barkley Sound	O ₂ , pH	POG (1957d) MEDS #180241629
41-0005D	A.P. KNIGHT, Pac. Biol. Stn.	Oct. 13- Nov. 27	Temperature Salinity Water level	Rev. therm. Titration ?	$[+.02, .03^{\circ}]$ $[+.02, .04^{\circ}/\text{oo}]$?	3	Offshore Vancouver Island	O ₂ , pH	POG (1957d)
41-0006	CHS	July 25-28	Water level	Scale readings	$+.015 \text{ m}$	3	Holberg Inlet		MEDS WL Stn. #8765
41-0008	Pac. Biol. Stn.?	May 1941- Sept. 1942	Temperature (surface) Salinity (surface)	Thermometer Titration	$?, +.2^{\circ}$ $?, +.06^{\circ}/\text{oo}$	3	Port Alberni		Hollister (1960)
42-0004	Pac. Biol. Stn.	Apr. 15-20	Drift	Floats	?	2	Alberni Inlet		Tully (1949)
44-0001	EKKOLI, Pac. Biol. Stn.	May 29	Temperature Salinity	BT, Rev. therm.? Titration	$[+.2, .2^{\circ}]$ $[+.02, .03^{\circ}]$ $[+.02, .04^{\circ}/\text{oo}]$	3	B.C. Coastal (Cape Flattery)		NODC #189950191
47-0003	CHS	Aug. 1947- May 1950	Water level	Lege	$+.015 \text{ m}$	3	Alberni Inlet		MEDS WL Stn. #8575
47-0004	EKKOLI, POG	Oct. 21-30	Temperature Salinity	BT, Rev. therm.? Titration	$[+.2, .2^{\circ}]$ $[+.02, .03^{\circ}]$ $[+.02, .04^{\circ}/\text{oo}]$	3	Barkley Sound, Nootka Sound, Alberni Inlet	O ₂	POG (on file)
49-0008	SERRANO, US Navy Electronics Laboratory	Mar. 10	Temperature Salinity	BT, Rev. therm. Titration	$[+.2, .2^{\circ}]$ $[+.02, .03^{\circ}]$ $[+.02, .04^{\circ}/\text{oo}]$	3	B.C. Offshore, N.E. Pacific		Scripps (1957) MEDS #31SR01010 NODC #31SR50101

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Date of measurements	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
49-0009	CEDARWOOD, POG	Dec. 5	Temperature Salinity	Rev. therm.? Titration	[+.02,.03C°] [+.02,.04°/oo]	3	Barkley Sound		MEDS #180249633 NODC #189950479
50-0006	CEDARWOOD, POG	Sept. 17-19	Temperature Salinity	Rev. therm.? Titration?	[+.02,.03C°] [+.02,.04°/oo]	3	B.C. Offshore	O ₂	Scripps (1960) MEDS #180250667 NODC #18CE50424
50-0011	CEDARWOOD, POG	July 29- Aug. 25	Temperature Salinity Current	Rev. therm.? Titration? ?	[+.02,.03C°] [+.02,.04°/oo] ?	3	B.C. Offshore	O ₂	Scripps (1960) MEDS #180250655 NODC #18CE50423
50-0012	EHKOLI, POG	Apr. 4-26	Temperature Salinity Current	BT, Rev. therm. Titration Drift pole, drag, free floats	[+.2,.2C°] [+.02,.03C°] [+.02],.05°/oo ?	3	Barkley Sound		Doe (1950, 1952) POG (1955a) MEDS #180250641
50-0013	?, POG	Aug. 1	Temperature Salinity Current	Rev. therm. Titration? ?	[+.02,.03C°] [+.02,.04°/oo] ?	3	Barkley Sound	Chemical	MEDS #180250650
50-0014	W.J. STEWART, POG	Sept. 12-19, Oct. 2	Temperature Salinity Current Water level	Rev. therm. Titration? ? ?	[+.02,.03C°] [+.02,.04°/oo] ? ?	3	Offshore Vancouver Island	O ₂	Scripps (1960) MEDS WL Stn. #8565 MEDS #180250678 NODC #18WS50425
50-0015	?, POG?	June 24	Temperature Salinity	Rev. therm. Titration	[+.02,.03C°] [+.02,.04°/oo]	2	Alberni Inlet?		MEDS #180250647 Note: this may actually be a Strait of Georgia Station.
51-0012	CEDARWOOD, POG	May 5-19	Temperature Salinity	Rev. therm. Titration	[+.02,.03C°] [+.02,.04°/oo]	3	B.C. Offshore		POG (1956c) MEDS #180251660, 180251685
51-0016	CEDARWOOD, POG	July 18-27	Temperature Salinity	Rev. therm. Titration	[+.02,.03C°] [+.02,.04°/oo]	3	B.C. Offshore	Secchi, O ₂ , wind, sea state, humidity, atmospheric pressure, turbidity	POG (1956c) MEDS #180251661, 180251687 NODC #189950421

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?-Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
51-0017	CEDARWOOD, POG	Aug. 1-14	Temperature Salinity	Rev. therm. Titration?	$[+0.02, .03C^{\circ}]$ $[\pm 0.02, .04^{\circ}/\text{oo}]$	3	B.C. Offshore		POG (1952b) MEDS #180251662 NODC #18CE50296
51-0018	?, POG?	Oct. 12	Temperature Salinity	Rev. therm. Titration?	$[+0.02, .03C^{\circ}]$ $[\pm 0.02, .04^{\circ}/\text{oo}]$	2	Offshore Vancouver Island	O ₂	MEDS #180251663
52-0014	SAULTE ST-MARIE, POG	Mar. 6-17	Temperature Salinity	Rev. therm. Titration?	$[+0.02, .03C^{\circ}]$ $[\pm 0.02, .04^{\circ}/\text{oo}]$	3	B.C. Offshore	O ₂	Doe (1955) MEDS #180252693 NODC #18SM50422
52-0015A	BROWN BEAR, U. Washington	Mar. 14-15	Temperature Salinity	Rev. therm. Titration?	$[+0.02, .03C^{\circ}]$ $[\pm 0.02, .04^{\circ}/\text{oo}]$	3	Offshore Vancouver Island	O ₂	Paquette, Collins & Love (1954a) MEDS #31BB04390 NODC #31BB50439
52-0015B	BROWN BEAR, U. Washington	Apr. 29- May 6	Temperature Salinity	Rev. therm. Titration?	$[+0.02, .03C^{\circ}]$ $[\pm 0.02, .04^{\circ}/\text{oo}]$	3	Offshore Vancouver Island	O ₂	Paquette, Collins & Love (1954a) MEDS #31BB04260 NODC #31BB50426
52-0015C	BROWN BEAR, U. Washington	July 4-13	Temperature Salinity	Rev. therm. Titration?	$[+0.02, .03C^{\circ}]$ $[\pm 0.02, .04^{\circ}/\text{oo}]$	3	B.C. Offshore	O ₂ , PO ₄	Paquette, Collins & Love (1954a) MEDS #31BB04260 NODC #31BB50426
52-0015D	BROWN BEAR, U. Washington	Aug. 19-25	Temperature Salinity	Rev. therm. Titration?	$[+0.02, .03C^{\circ}]$ $[\pm 0.02, .04^{\circ}/\text{oo}]$	3	B.C. Offshore	O ₂	Paquette, Collins & Love (1954a) MEDS #31BB04390
52-0017	?, POG?	Oct. 15	Temperature Salinity	Rev. therm. Titration?	$[+0.02, .03C^{\circ}]$ $[\pm 0.02, .04^{\circ}/\text{oo}]$	2	Offshore Vancouver Island	O ₂	MEDS #180252684
52-0018	?, POG?	July 6	Temperature Salinity	Rev. therm. Titration?	$[+0.02, .03C^{\circ}]$ $[\pm 0.02, .04^{\circ}/\text{oo}]$	2	Offshore Vancouver Island	Chemical	MEDS #180252675
53-0015B	CANCOLIM II, UBC	July 16- Aug. 9	Temperature Salinity	BT, Rev. therm. Titration	$[+0.2, .2C^{\circ}]$ $[\pm 0.02, .03C^{\circ}]$ $[\pm 0.02, .04^{\circ}/\text{oo}]$	3	B.C. Offshore	Secchi, O ₂ , benthos, plankton	IOUBC (1955) MEDS #181353813 NODC #18CAS0521

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?-Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
53-0019A	BROWN BEAR, U. Washington	Aug. 1-13	Temperature Salinity	Rev. therm. Titration?	[+0.02, .03C°] [+0.02, .04‰/oo]	3	B.C. Offshore	O ₂	Paquette, Collias & Love (1954b) MEDS #318B08940 NODC #318B50894
53-0019B	BROWN BEAR, U. Washington	Sept. 3-13	Temperature Salinity	Rev. therm. Titration?	[+0.02, .03C°] [+0.02, .04‰/oo]	3	Offshore Vancouver Island	O ₂	Paquette, Collias & Love (1954b) MEDS #318B08950 NODC #318B50895
53-0020A	BROWN BEAR, U. Washington	Apr. 30-May 11	Temperature Salinity	Rev. therm. Titration?	[+0.02, .03C°] [+0.02, .04‰/oo]	3	Offshore Vancouver Island	O ₂ , PO ₄	Paquette, Collias & Love (1954c) MEDS #318B04400 NODC #318B50440
53-0020B	BROWN BEAR, U. Washington	June 4-15	Temperature Salinity	Rev. therm. Titration?	[+0.02, .03C°] [+0.02, .04‰/oo]	3	Offshore Vancouver Island	O ₂ , PO ₄	Paquette, Collias & Love (1954c) MEDS #318B04400 NODC #318B50440
54-0012A	CEDARWOOD, POC	May 7-13	Temperature Salinity	BT, Rev. therm. Titration	[+0.2, .2C°] [+0.02, .03C°] [+0.02, .04‰/oo]	3	B.C. Offshore	Secchi, wind, O ₂ , sediment	Barber & Groll (1955) POC (1955c,d) MEDS #180254688 NODC #18CE50515
54-0012B	EHYOLI, POC	July 1-15	Temperature Salinity	BT, Rev. therm. Titration	[+0.2, .2C°] [+0.02, .03C°] [+0.02, .04‰/oo]	3	B.C. Offshore	Secchi, O ₂ , sediment	Barber & Groll (1955) POC (1955c,d) MEDS #180254689 NODC #18CE50515
54-0012C	CEDARWOOD, POC	Aug. 18-24	Temperature Salinity	BT, Rev. therm. Titration	[+0.2, .2C°] [+0.02, .03C°] [+0.02, .04‰/oo]	3	B.C. Offshore	Secchi, wind, O ₂ , sediment	Barber & Groll (1955) POC (1955c,d) MEDS #180254690 NODC #18CE50515
54-0012D	CEDARWOOD, POC	Dec. 1-2	Temperature Salinity	BT, Rev. therm. Titration	[+0.2, .2C°] [+0.02, .03C°] [+0.02, .04‰/oo]	3	B.C. Offshore	Secchi, O ₂ , sediment	POC (1955a) MEDS #180254691 NODC #18CE50515
54-0019	EHYOLI, POC	Sept. 8-10	Temperature Salinity	BT, Rev. therm. Salinometer	[+0.2, .2C°] [+0.02, .03C°] [+0.01, .02‰/oo]	3	Alberni Inlet	O ₂ , PO ₄ , pH	Waldichuk (1956a,b) Waldichuk, Melkie & Hyslop (1968)

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
54-0020	BROWN BEAR, U. Washington	June 23-24	Temperature Salinity Current	BT, Rev. therm. Titration GEK	[$\pm 0.2, .2C^{\circ}$] [$\pm 0.02, .03C^{\circ}$] [$\pm 0.02, .04^{\circ}/\text{oo}$] ?	3	Offshore Vancouver Island	O ₂	Scripps (1965a) MEDS #31BB04930
54-0020? 23?	BROWN BEAR, U. Washington	June 16	Temperature Salinity	Rev. therm. Titration?	[$\pm 0.02, .03C^{\circ}$] [$\pm 0.02, .04^{\circ}/\text{oo}$]	2	Entrance to Strait of Juan de Fuca	Chemical	MEDS #31BB07730 NODC #31BB50773
54-0021	BROWN BEAR, U. Washington	Aug. 5-9	Temperature Salinity Current	Rev. therm. Titration? GEK	[$\pm 0.02, .03C^{\circ}$] [$\pm 0.02, .04^{\circ}/\text{oo}$]	3	B.C. Offshore	O ₂ , PO ₄ , plankton tows, bottom cores	Scripps (1965a) MEDS #31BB04930
54-0022	BROWN BEAR, U. Washington	Oct. 16	Temperature Salinity	Rev. therm. Titration?	[$\pm 0.02, .03C^{\circ}$] [$\pm 0.02, .04^{\circ}/\text{oo}$]	3	Offshore Vancouver Island	O ₂ , PO ₄ , bottom cores	Scripps (1965a) MEDS #31BB04930
54-0023	BROWN BEAR, U. Washington	Apr. 29- May 3	Temperature Salinity	Rev. therm. Titration?	[$\pm 0.02, .03C^{\circ}$] [$\pm 0.02, .04^{\circ}/\text{oo}$]	3	Offshore Vancouver Island	O ₂	Scripps (1965a) MEDS #31BB04930 NODC #31BB50493
54-0024	USCG Lightship, POG	June 18/54- June 30/61	Temperature Salinity (surface)	BT Salinometer?	[$\pm 0.2, .2C^{\circ}$] ?	3	Swiftsure Bank		Hollister (1966)
55-0013	CEDARWOOD, POG	June 17-23 June 1-3	Temperature Salinity Current	BT, Rev. therm. Titration Drag, Ekman	[$\pm 0.2, .2C^{\circ}$] [$\pm 0.02, .03C^{\circ}$] [$\pm 0.02, .04^{\circ}/\text{oo}$]	3	B.C. Offshore	O ₂ , weather	POG (1955b) MEDS #180255699 NODC #18CE808
55-0020	JONQUIERE, POG	Feb. 7-14	Temperature Salinity	Rev. therm. Titration	[$\pm 0.02, .03C^{\circ}$] [$\pm 0.02, .04^{\circ}/\text{oo}$]	3	B.C. Offshore		POG (1955b) MEDS #180255694 NODC #18JO808
55-0021	JONQUIERE, POG	Apr. 14-18	Temperature Salinity	Rev. therm. Titration	[$\pm 0.02, .03C^{\circ}$] [$\pm 0.02, .04^{\circ}/\text{oo}$]	2	B.C. Offshore		POG (1955b) MEDS #180255695 NODC #18JO808
55-0023	HORIZON, (US) POG?	Sept. 1-2	Temperature Salinity	Rev. therm. Titration?	[$\pm 0.02, .03C^{\circ}$] [$\pm 0.02, .04^{\circ}/\text{oo}$]	3	B.C. Offshore	O ₂	MEDS #31H003460 NODC #31H050346
55-0024	ST. THERESE, POG	July 27- Sept. 1	Temperature Salinity Current	BT, Rev. therm. Titration GEK	[$\pm 0.2, .2C^{\circ}$] [$\pm 0.02, .03C^{\circ}$] [$\pm 0.02, .04^{\circ}/\text{oo}$] ?	3	B.C. Offshore, N.E. Pacific	O ₂ , PO ₄ , plankton, pH	POG (1956b) MEDS #180255700 NODC #18ST50540

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? = Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
55-0026	BROWN BEAR, U. Washington	June 14- July 2	Temperature Salinity	Rev. therm. Titration	$[+0.02, .03C^{\circ}]$ $[+0.02, .04^{\circ}/\text{‰}]$	3	B.C. Offshore, N.E. Pacific	O ₂ , PO ₄	Love (1957a) MEDS #318807550 NODC #318850755
55-0027	BROWN BEAR, U. Washington	Sept. 11-13	Temperature Salinity	Rev. therm. Titration	$[+0.02, .03C^{\circ}]$ $[+0.02, .04^{\circ}/\text{‰}]$	3	B.C. Offshore	O ₂ , PO ₄ , plankton	Fleming (1956) MEDS #318807480 NODC #318850748
55-0030	MITKOF, U. Washington/ U.S. Fish. & Wildlife	Oct. 2-4	Temperature Salinity	Rev. therm. Titration?	$[+0.02, .03C^{\circ}]$ $[+0.02, .04^{\circ}/\text{‰}]$	3	B.C. Offshore, N.E. Pacific		Favorite & Love (1957) MEDS #318107570 NODC #318150757
56-0018	NEW GLASGOW, POG	July 31- Sept. 2	Temperature Salinity	BT, Rev. therm. Titration	$[+0.2, .2C^{\circ}]$ $[+0.02, .03C^{\circ}]$ $[+0.02, .04^{\circ}/\text{‰}]$	3	B.C. Offshore	O ₂ , PO ₄ , NO ₂ , secchi, SiO ₃ , pH, drift bottles, zoo- plankton	POG (1957a) MEDS #180256703 NODC #18850549
56-0020	BROWN BEAR, U. Washington	May 4- June 9	Temperature Salinity	Rev. therm. Titration?	$[+0.02, .03C^{\circ}]$ $[+0.02, .04^{\circ}/\text{‰}]$	3	B.C. Offshore	O ₂ , PO ₄	Love (1957b) MEDS #318807960 NODC #318850796
56-0021	BROWN BEAR, U. Washington	July 12	Temperature Salinity	Rev. therm. Titration?	$[+0.02, .03C^{\circ}]$ $[+0.02, .04^{\circ}/\text{‰}]$	3	B.C. Offshore	O ₂ , PO ₄	Love (1957b) MEDS #318807960 NODC #318850796
56-0022	BROWN BEAR, U. Washington	July 19- Aug. 30	Temperature Salinity	Rev. therm. Titration?	$[+0.02, .03C^{\circ}]$ $[+0.02, .04^{\circ}/\text{‰}]$	3	B.C. Offshore	O ₂ , PO ₄	Love (1957a) MEDS #318807550 NODC #318850755
56-0023	BROWN BEAR, U. Washington	Dec. 6-8	Temperature Salinity	Rev. therm. Titration	$[+0.02, .03C^{\circ}]$ $[+0.02, .04^{\circ}/\text{‰}]$	3	B.C. Offshore	O ₂ , PO ₄	Love (1960) MEDS #318805840 NODC #318850584
56-0025	PARAGON, U.S. Fish & Wildlife/ U. Washington	Sept. 24	Temperature Salinity	Rev. therm. Titration	$[+0.02, .03C^{\circ}]$ $[+0.02, .04^{\circ}/\text{‰}]$	3	B.C. Offshore, N.E. Pacific		Love (1959) MEDS #31PG01770 NODC #31PG50177

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used (?Unknown)	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
56-0026	REHOBOTH, (US)	Oct. 31-Nov. 9	Temperature Salinity	Rev. therm. ?	[+.02, .03C°] ?	3	B.C. Offshore		MEDS #31RH00630
57-0007A	OSHAHA, POC	Sept. 20-Oct. 2	Temperature Salinity	BT, Rev. therm. Salinometer	[+.2, .2C°] [+.02, .03C°] [+.01, .02°/oo]	3	B.C. Offshore	Secchi, O ₂ , PO ₄ , plankton (species/ abundance)	POG (1958b) MEDS #180257712 NODC #180550764
57-0007B	OSHAHA, POC	Nov. 25-Dec. 18	Temperature Salinity	BT, Rev. therm. Salinometer	[+.2, .2C°] [+.02, .03C°] [+.01, .02°/oo]	3	B.C. Offshore	Secchi, O ₂ , plankton (species/ abundance)	POG (1958b) MEDS #180257716 NODC #180550764
57-0008	OSHAHA, POC	Jan. 23-24, Feb. 20, Mar. 4	Temperature Salinity	BT, Rev. therm. Titration	[+.2, .2C°] [+.02, .03C°] [+.02, .04°/oo]	3	B.C. Offshore, N.E. Pacific	O ₂ , PO ₄ , SiO ₃ , NO ₂ , pH, zooplankton	POG (1957c) Dodimead (1958) MEDS #180257705 NODC #180550564
57-0009	HORIZON, Scripps, Exp. Mukluk	Aug. 15-16	Temperature Salinity	BT, Rev. therm. Titration	[+.2, .2C°] [+.02, .03C°] [+.02, .04°/oo]	3	B.C. Offshore, N.E. Pacific	O ₂ , PO ₄ , SiO ₃ , pH	Scripps (1965b) MEDS #31RH008020, 31SB08020 NODC #31SB50802
57-0016	OSHAHA, POC	Apr. 24-May 15	Temperature Salinity	BT, Rev. therm. Titration	[+.2, .2C°] [+.02, .03C°] [+.02, .04°/oo]	3	B.C. Offshore	O ₂ , PO ₄ , NO ₃ , plankton (species/ abundance) weather	POG (1958b) MEDS #180257708 NODC #180550764
57-0021A	BROWN BEAR, U. Washington	Feb. 5-11	Temperature Salinity	Rev. therm. Titration	[+.02, .03C°] [+.02, .04°/oo]	3	B.C. Offshore	O ₂ , PO ₄	Love (1960) MEDS #31BB05840 NODC #31BB50584
57-0021B	BROWN BEAR, U. Washington	May 14-15	Temperature Salinity	Rev. therm. Titration	[+.02, .03C°] [+.02, .04°/oo]	3	Offshore Vancouver Island	O ₂ , PO ₄	Love (1960) MEDS #31BB05840 NODC #31BB50584
57-0021C	BROWN BEAR, U. Washington	July 11	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] [+.01, .02°/oo]	3	Offshore, Strait of Juan de Fuca	O ₂	Love (1960) MEDS #31BB05840 NODC #31BB50584
57-0021D	BROWN BEAR, U. Washington	Nov. 5-11	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] [+.01, .02°/oo]	3	Offshore Vancouver Island	O ₂ , PO ₄	Love (1960) MEDS #31BB05840 NODC #31BB50584

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.U.	Ship or collecting agency	Date of measurements	Quantity measured	Instruments or methods used ?-Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
57-0022	BROWN BEAR, U. Washington?	July 25-26	Temperature Salinity	Rev. therm. Salinometer	$\{+.02, .03C^{\circ}\}$ $\pm .005, \{+.02\}^{\circ}/\text{oo}$	3	B.C. Offshore, N.E. Pacific	O ₂ , PO ₄ , SiO ₃	Fleming (1958) Scripps (1965b) MEDS #318805760 NODC #318850576
57-0023	PARAGON, U.S. Fish & Wildlife	Sept. 10-12	Temperature Salinity	BT, Rev. therm. ?	$\{+.2, .2C^{\circ}\}$ $\{+.02, .03C^{\circ}\}$?	3	B.C. Offshore	O ₂	Favorite & Pederson (1959) MEDS #31PG00940 NODC #31PG50094
57-0025	R.M. SMITH, Bur. Comm. Fish (Honolulu) N.E. Pacific Albacore Survey	July 24	Temperature Salinity	BT, Rev. therm. Titration	$\{+.2, .2C^{\circ}\}$ $\{+.02, .03C^{\circ}\}$ $\{+.02, .04^{\circ}/\text{oo}\}$	3	B.C. Offshore, N.E. Pacific	O ₂ , PO ₄ , plankton	Scripps (1965b)
57-0026	EHKOLI, POG	Aug. 15-19	Temperature Salinity Current	BT, Rev. therm. Salinometer, Titration (low sal. samples) Drag, Ekman-Merz meter	$\{+.2, .2C^{\circ}\}$ $\{+.02, .03C^{\circ}\}$ $\{+.01, .02^{\circ}/\text{oo}\}$ $\{+.02, .05^{\circ}/\text{oo}\}$? ?	3	Quatsino Sound, Nacoutsoa Inlet, Holberg Inlet, Rupert Inlet	pH, O ₂ , alkalinity, secchi	Waldichuk, Markert & Meikle (1968)
57-0027	EHKOLI, POG	Aug. 20-21	Temperature Salinity Current	BT, Rev. therm. Salinometer Drag, Ekman meter	$\{+.2, .2C^{\circ}\}$ $\{+.02, .03C^{\circ}\}$ $\{+.01, .02^{\circ}/\text{oo}\}$? ?	3	Alberni Inlet, Barkley Sound	O ₂ ~ secchi, KRE	Waldichuk, Meikle & Hyslop (1968)
57-0028	OSHAWA, POG	July 4-12	Temperature Salinity	BT, Rev. therm. Titration	$\{+.2, .2C^{\circ}\}$ $\{+.02, .03C^{\circ}\}$ $\{+.02, .04^{\circ}/\text{oo}\}$	3	B.C. Offshore	Plankton, O ₂ , sec 1, PO ₄	POG (1958b) MEDS #180257709 NODC #180550764
57-0029	OSHAWA, POG	July 23-24, Aug. 20-25	Temperature Salinity	BT, Rev. therm. Salinometer	$\{+.2, .2C^{\circ}\}$ $\{+.02, .03C^{\circ}\}$ $\{+.01, .02^{\circ}/\text{oo}\}$	3	B.C. Offshore	O ₂ , PO ₄ , SiO ₃ , NO ₂ , secchi, zooplankton, (species/abundance)	POG (1957b) Dodimead (1958) MEDS #180257711 NODC #180550718
57-0030	REHOBOTH, (US)	July 3-24	Temperature Salinity	Rev. therm.? ?	$\{+.02, .03C^{\circ}\}$?	3	B.C. Offshore		MEDS #31RH00690

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?-Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
57-0033	STE. THERESE, POG	Nov. 12-13	Temperature Salinity	Rev. therm. Salinometer?	[+0.02, .03C°] [+0.01, .02°/oo]	3	B.C. Offshore, N.E. Pacific		POG (1958b) MEDS #180257715
58-0007	OSHAWA, POG	Mar. 12-Apr. 11	Temperature Salinity	BT, Rev. therm. Salinometer	[+0.2, .2C°] [+0.02, .03C°] [+0.01, .02°/oo]	3	B.C. Offshore, N.E. Pacific	Secchi, O ₂ , fish, plankton, (species/abundance)	POG (1958a) MEDS #180258719 NODC #180S50749
58-0008	OSHAWA, POG	June 27-July 4	Temperature Salinity	BT, Rev. therm. Salinometer	[+0.2, .2C°] [+0.02, .03C°] [+0.01, .02°/oo]	3	B.C. Offshore & Coastal	Secchi, pH, O ₂ , SiO ₃ , NO ₃ , NO ₂ , NH ₃ , P, light attenuation, weather	Strickland (1958) MEDS #180258723
58-0009	WHITETHROAT, POG	Nov. 19-Dec. 5	Temperature Salinity	BT, Rev. therm. Salinometer	[+0.2, .2C°] [+0.02, .03C°] [+0.01, .02°/oo]	3	B.C. Coastal & Offshore	Secchi, O ₂ , SiO ₃ , NO ₃ , plankton, weather	POG (1959a) MEDS #180258730 NODC #18WH50722
58-0014	OSHAWA, POG	July 22-Aug. 16	Temperature Salinity	BT, Rev. therm. Salinometer	[+0.2, .2C°] [+0.02, .03C°] [+0.01, .02°/oo]	3	B.C. Offshore, N.E. Pacific	Plankton, O ₂ , secchi	POG (1958c) MEDS #180258725 NODC #180S50719
58-0016	WHITETHROAT, POG	June 27, Aug. 13-14	Temperature Salinity	BT, Rev. therm. Salinometer	[+0.2, .2C°] [+0.02, .03C°] [+0.01, .02°/oo]	3	B.C. Offshore, N.E. Pacific	O ₂ , plankton, drift bottle releases	POG (1958d) MEDS #180258724 NODC #18WH50717
58-0017A	BROWN BEAR, U. Washington	Feb. 20-28	Temperature Salinity	Rev. therm. Titration	[+0.02, .03C°] [+0.02, .04°/oo]	3	Offshore Vancouver Island	O ₂ , PO ₄	Love (1960) MEDS #31BB05840 NODC #31BB50584
58-0017B	BROWN BEAR, U. Washington	Apr. 16-17	Temperature Salinity	Rev. therm. Titration	[+0.02, .03C°] [+0.02, .04°/oo]	3	Offshore Vancouver Island	O ₂	Love (1960) MEDS #31BB05840 NODC #31BB50584
58-0018	BROWN BEAR, U. Washington	July 2-4, Aug. 18-19	Temperature Salinity	BT, Rev. therm. Titration?	[+0.2, .2C°] [+0.02, .03C°] [+0.02, .04°/oo]	3	Offshore Vancouver Island	pH, alkalinity, O ₂ , PO ₄ , SiO ₃ , secchi	Fleming (1959) Scripps (1965c) MEDS #31BB05580 NODC #31BB50558
58-0019	BROWN BEAR, U. Washington	Sept. 22-Oct. 2	Temperature Salinity	BT, Rev. therm. Titration?	[+0.2, .2C°] [+0.02, .03C°] [+0.02, .04°/oo]	3	B.C. Offshore	O ₂ , PO ₄	Scripps (1965c) MEDS #31BB09830 NODC #31BB50983
58-0021	OSHAWA, POG?	May 17-27	Temperature Salinity	BT, Rev. therm. Salinometer	[+0.2, .2C°] [+0.02, .03C°] [+0.01, .02°/oo]	3	Offshore Vancouver Island		POG (1959f) MEDS #180958721

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
58-0022	REQUISITE, (US)	Jan. 27-Feb. 26	Temperature Salinity	Rev. therm.? ?	[+.02, .03C°] ?	2	B.C. Offshore		MEOS #31RQ00720
58-0023	REQUISITE, (US)	Aug. 3	Temperature Salinity	Rev. therm.? ?	[+.02, .03C°] ?	2	Offshore Vancouver Island		MEOS #31RQ00750
58-0024	TERITU, (US)	Aug. 29	Temperature Salinity	Rev. therm.? ?	[+.02, .03C°] ?	2	B.C. Offshore	Chemical (O ₂ ?)	MEOS #31T000930 NODC #31PN50093
58-0025	PIONEER, Bureau of Commercial Fisheries (US)	Aug. 29-30	Temperature Salinity	Rev. therm.? ?	[+.02, .03C°] ?	2	B.C. Offshore	Chemical (O ₂ ?)	MEOS #31PN00930 NODC #31PN50093
58-0026	OSHAWA, POC	Sept. 5-7	Temperature Salinity	BT, Rev. therm. Salinometer	[+.2, .2C°] [+.02, .03C°] [+.01, .02°/oo]	3	B.C. Offshore		POC (1959f) MEOS #180958727
58-0027	OSHAWA, WHITETHROAT, POC	Sept. 25-29	Temperature Salinity	BT, Rev. therm. Salinometer	[+.2, .2C°] [+.02, .03C°] [+.01, .02°/oo]	3	B.C. Offshore		POC (1959f) MEOS #180958728
58-0028	VITYAZ, (USSR)	Nov. 13-23	Temperature Salinity Current	Rev. therm.? ? ?	[+.02, .03C°] ? ?	2	B.C. Offshore	O ₂ , PO ₄ , NO ₂ , SiO ₃ , pH	Inst. Ocean. (USSR, 1961) MEOS #90V105890 NODC #90V150589
59-0011A	OSHAWA, POC	June 11-29	Temperature Salinity Current	BT, Rev. therm. Salinometer Ekman meter, drift pole	[+.2, .2C°] [+.02, .03C°] [+.01, .02°/oo] ? ?	3	B.C. Coastal & Offshore	Secchi, O ₂ , NO ₃ , plankton, weather	POC (1959c) MEOS #180259735 NODC #180550900
59-0011B	OSHAWA, POC	Nov. 19-Dec. 3	Temperature Salinity	BT, Rev. therm. Salinometer	[+.2, .2C°] [+.02, .03C°] [+.01, .02°/oo]	3	B.C. Coastal & Offshore	Secchi, O ₂ , NO ₃ , plankton	Herlinveaux, Kennedy & Hollister (1960) Herlinveaux (1959b) MEOS #180259740
59-0011C	OSHAWA, POC	Apr. 2-21	Temperature Salinity	BT, Rev. therm. Salinometer	[+.2, .2C°] [+.02, .03C°] [+.01, .02°/oo]	3	B.C. Coastal & Offshore	Secchi, O ₂ , NO ₃ , plankton	POC (1959b) Herlinveaux (1959c) MEOS #180259733 NODC #180550787

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? = Unknown	Estimate of data precision and accuracy	Data rating number	Area	Cocurrent measurements	Source or reference
59-0018	OSHAWA, POC	Jan. 20- Feb. 15	Temperature Salinity	BT, Rev. therm. Salinometer	[+2, .2C°] [+0.02, .03C°] [+0.01, .02°/oo]	3	B.C. Offshore, N.E. Pacific	O ₂ , zooplankton	POC (1959d) MEDS #180259731 NODC #180550788, 189951315
59-0019	OSHAWA, POC	Aug. 5- Sept. 1	Temperature Salinity	BT, Rev. therm. Salinometer	[+2, .2C°] [+0.02, .03C°] [+0.01, .02°/oo]	3	B.C. Offshore, N.E. Pacific	O ₂ , secchi, zooplankton	POC (1959e) MEDS #180259738 NODC #180551200
59-0023	WHITETHROAT, UBC	May 19-31	Temperature Salinity	BT, Rev. therm. Titration	[+2, .2C°] [+0.02, .03C°] [+0.02, .04°/oo]	3	Vancouver Island Coastal	O ₂ , pH, secchi	IOUBC (1959) MEDS #181359873
59-0024	WHITETHROAT, POC	Aug. 4-29	Temperature Salinity	BT, Rev. therm. Salinometer	[+2, .2C°] [+0.02, .03C°] [+0.01, .02°/oo]	3	B.C. Offshore	O ₂ , secchi, zooplankton, drift bottles	POC (1959e) MEDS #180259737
59-0025	A.P. KNIGHT, POC	Aug. 12-15	Temperature Salinity	BT, Rev. therm. Salinometer, Titration (used for samples of very low sal.)	[+2, .2C°] [+0.02, .03C°] [+0.01, .02°/oo] [+0.02, .05°/oo]	3	Nootka Sound- Micalat Inlet, Alberni Inlet	O ₂ , pH, alkalinity, KME	Waldichuk, Markert & Meikle (1968) Waldichuk, Meikle & Hyslop (1968)
59-0026	TORDENSEKJOLD, Bureau of Commercial Fisheries (US)	Sept. 2-3	Temperature Salinity	Rev. therm.? ?	[+0.02, .03C°] ?	3	B.C. Offshore	O ₂	Scripps (1965d) MEDS #31TX00290
59-0027	PIONEER, Bureau of Commercial Fisheries (US)	Aug. 27-28	Temperature Salinity	Rev. therm.? ?	[+0.02, .03C°] ?	3	B.C. Offshore	O ₂	Scripps (1965d) MEDS #31PN00290
59-0028	BROWN BEAR, U. Washington	June 19-29	Temperature Salinity	Rev. therm. Titration?	[+0.02, .03C°] [+0.02, .04°/oo]	3	B.C. Offshore, N.E. Pacific	O ₂ , PO ₄ , Chl. a	Scripps (1965d) MEDS #31BB09830 NODC #31BB50983
59-0029	BROWN BEAR, U. Washington	July 16-19	Temperature Salinity	Rev. therm. Titration?	[+0.02, .03C°] [+0.02, .04°/oo]	3	B.C. Offshore, N.E. Pacific	O ₂ , PO ₄ , Chl. a	Scripps (1965d) Scripps (1964) MEDS #31BB09830 NODC #31BB50983
60-0011	OSHAWA, POC	Aug. 8- Sept. 6	Temperature Salinity	BT, Rev. therm. Salinometer	[+2, .2C°] [+0.02, .03C°] [+0.01, .02°/oo]	3	B.C. Offshore, N.E. Pacific	Secchi, O ₂ , plankton	Dodimead et al. (1960) MEDS #180260752 NODC #180250506

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
60-0012	OSHAWA, POG	Oct. 24-26	Temperature Salinity	BT, Rev. therm. Salinometer	[+2,.2C°] [+.02,.03C°] [+.01,.02°/oo]	3	B.C. Coastal & Offshore	O ₂ , weather, plankton, secchi	Lane et al. (1960) MEDS #180260754 NODC #180550510
60-0017	CHS	May 2, 1960- Aug. 19, 1961	Water level	Lege, Foxboro	+?, .015 m	3	Barkley Sound, Cape St. James, W. Queen Charlottes		MEDS WL Stn. #8588, 9502, 9650
60-0021	MacMillan Bloedel, POG	May-Dec.	Temperature Salinity	Rev. therm. Salinometer	[+.02,.03C°] [+.01,.02°/oo]	3	Alberni Inlet	O ₂ , BOD	Waldichuk, Markert & Meikle (1969)
60-0022	LAURIER, UBC	Dec. 12	Temperature Salinity	Rev. therm. Titration	[+.02,.03C°] [+.02,.04°/oo]	3	Tofino Inlet	O ₂	IOUBC (1961) MEDS #181360896 NODC #18LR50614
60-0023	BEACON HILL, POG	Jan. 12- Feb. 10	Temperature Salinity	BT, Rev. therm. Salinometer	[+2,.2C°] [+.02,.03C°] [+.01,.02°/oo]	3	B.C. Offshore, N.E. Pacific	O ₂ , secchi, zooplankton	Dodimead, Abbott-Smith & Holliater (1960) MEDS #180260742 NODC #189951321, 18BH50505
60-0024	WHITETHROAT, UBC	Sept. 19-29	Temperature Salinity	Rev. therm. Titration	[+.02,.03C°] [+.02,.04°/oo]	3	Tofino Inlet	pH, O ₂ , PO ₄ , alkalinity, SiO ₃ , SiO ₄	IOUBC (1961) MEDS #181360893
60-0025	WHITETHROAT, UBC	June 5-11	Temperature Salinity	Rev. therm. Titration	[+.02,.03C°] [+.02,.04°/oo]	3	Tofino Inlet	pH, secchi, PO ₄ , O ₂ , SiO ₃ , NO ₂	IOUBC (1961) MEDS #181360889 NODC #18WH50614
60-0026	OSHAWA, POG	June 7-16	Temperature Salinity Current	BT, Rev. therm. Salinometer Ekman meter, Drift pole	[+2,.2C°] [+.02,.03C°] [+.01,.02°/oo] ? ?	3	Offshore Vancouver Island	O ₂ , secchi, plankton	Lane, Meikle & Holliater (1960b) MEDS #180260748 NODC #180550530
60-0027	OSHAWA, POG	Nov. 27- Dec. 9	Temperature Salinity Current	BT, Rev. therm. Salinometer Drift pole, Ekman meter	[+2,.2C°] [+.02,.03C°] [+.01,.02°/oo] ? ?	3	Offshore Vancouver Island	O ₂ , secchi, plankton, bottom samples	Lane, Harling & Holliater (1961) MEDS #180260756
60-0028	BROWN BEAR, U. Washington	Mar. 23	Temperature Salinity	Rev. therm. Titration?	[+.02,.03C°] [+.02,.04°/oo]	3	B.C. Offshore	Chemical	MEDS #31BB10510 NODC #31BB51051

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? = Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
60-0029	BROWN BEAR, U. Washington	June 11-20	Temperature Salinity	Rev. therm. Titration?	[+.02, .03C°] [+.02, .04°/oo]	3	Offshore Vancouver Island	Chemical	MEDS #318B10520 NODC #318B51052
60-0033	KAT, UBC	Mar. 14-16	Temperature Salinity	Rev. therm. Titration	[+.02, .03C°] [+.02, .04°/oo]	3	Tofino Inlet		IOUBC (1961) MEDS #181360885 NODC #18KA50614
60-0034	WHITETHROAT, POG	May 4-14	Temperature Salinity Current	BT, Rev. therm. Salinometer Ekman meter, Drift pole	[+.2, .2C°] [+.02, .03C°] [+.01, .02°/oo] ? ?	3	Offshore Vancouver Island	O ₂ , secchi, plankton	Lane, Meikle & Hollister (1960a) MEDS #180260744 NODC #18WH50509
60-0035	KEY WEST II, POG	May 22- July 11	Temperature Salinity	Rev. therm.? ?	[+.02, .03C°] ?	3	B.C. Offshore		MEDS #180260746 NODC #18KY50606
60-0037	WHITETHROAT, POG	Aug. 8,9	Temperature Salinity	BT, Rev. therm. Salinometer	[+.2, .2C°] [+.02, .03C°] [+.01, .02°/oo]	3	B.C. Offshore	Secchi, O ₂ , plankton	Dodimead et al. (1960) MEDS #180260750 NODC #18WH50541
60-0039	OSHAWA, POG	Oct. 4-10	Temperature Salinity Current	BT, Rev. therm. Salinometer Ekman meter, Drift pole	[+.2, .2C°] [+.02, .03C°] [+.01, .02°/oo] ? ?	3	Offshore Vancouver Island	O ₂ , secchi, plankton	Lane et al. (1960) MEDS #180260753 NODC #180S50507
61-0016	OSHAWA, POG	Apr. 5-12	Temperature Salinity Current	BT, Rev. therm. Salinometer Ekman meter, Drift pole	[+.2, .2C°] [+.02, .03C°] [+.01, .02°/oo] ? ?	3	Offshore Vancouver Island	O ₂ , turbidity, weather, plankton	Lane et al. (1961a) MEDS #180261762 NODC #180S50621
61-0017A	WHITETHROAT, POG	July 24- Aug. 8	Temperature Salinity	BT, Rev. therm. Salinometer	[+.2, .2C°] [+.02, .03C°] [+.01, .02°/oo]	3	B.C. Coastal & Offshore	Secchi, O ₂ , plankton	Cresn et al. (1962a) MEDS #180261769 NODC #18WH50533
61-0017B	OSHAWA, POG	Sept. 21- Oct. 17	Temperature Salinity	BT, Rev. therm. Salinometer	[+.2, .2C°] [+.02, .03C°] [+.01, .02°/oo]	3	B.C. Offshore & Coastal	Secchi, O ₂	Cresn et al. (1962a) MEDS #180261774 NODC #180S50592
61-0017C	WHITETHROAT, POG	Oct. 24- Nov. 9	Temperature Salinity	BT, Rev. therm. Salinometer	[+.2, .2C°] [+.02, .03C°] [+.01, .02°/oo]	3	Offshore Vancouver Island	Secchi, O ₂	Cresn et al. (1962a) MEDS #180261775 NODC #18WH50514

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? = Unknown	Estimate of data precision and accuracy	Date rating number	Area	Concurrent measurements	Source or reference
61-0018	OSHAWA, POG	Feb. 11-15	Temperature Salinity	BT, Rev. therm. Salinometer	($\pm 0.2, .20^\circ$) ($\pm 0.02, .030^\circ$) ($\pm 0.01, .020/00$)	3	B.C. Coastal & Offshore	Secchi, O ₂ , plankton	Lane et al. (1961b) MEDS #180261759 NODC #180550532
61-0019	OSHAWA, POG	May 16- June 16	Temperature Salinity	BT, Rev. therm. Salinometer	($\pm 0.2, .20^\circ$) ($\pm 0.02, .030^\circ$) ($\pm 0.01, .020/00$)	3	B.C. Offshore, N.E. Pacific	O ₂ , secchi, plankton	Dodimead et al. (1961a) MEDS #180261765 NODC #180550512
61-0020	OSHAWA, WHITETHROAT, STRANGER, HUGH M. SMITH, Operation Leapfrog; POG/ Scripps/ U.S. Navy	Sept. 6-10	Temperature Salinity	BT, Rev. therm. Salinometer	($\pm 0.2, .20^\circ$) ($\pm 0.02, .030^\circ$) ($\pm 0.01, .020/00$)	3	B.C. Coastal & Offshore	O ₂	Herlinveaux (1961) MEDS #180961771 NODC #189950563
61-0021	OSHAWA, POG	July 4, 9	Temperature Salinity	Rev. therm. Salinometer	($\pm 0.02, .030^\circ$) ($\pm 0.01, .020/00$)	3	B.C. Offshore & Coastal	O ₂ , SiO ₃ , NO ₃ , plankton	Antia et al. (1962) Stephens (1964) NODC #180551058
61-0023	CHS	May 27- June 2	Water level	Foxboro	± 0.015 m	3	Vancouver Island Coastal		MEDS WL Stn. #8658
61-0028	ST. ANTHONY, POG	May 28- July 1	Temperature Salinity	BT, Rev. therm. Salinometer	($\pm 0.2, .20^\circ$) ($\pm 0.02, .030^\circ$) ($\pm 0.01, .020/00$)	3	B.C. Offshore, N.E. Pacific	O ₂ , secchi, plankton	Dodimead et al. (1961a) MEDS #180261766 NODC #185A50520
61-0029	ATOLLA, UBC	Aug. 15-16	Temperature Salinity	Rev. therm. Titration	($\pm 0.02, .030^\circ$) ($\pm 0.02, .040/00$)	3	Vancouver Island Coastal (Tofino Inlet)	O ₂	IOUBC (1962) MEDS #181361914 NODC #18AL50090
61-0030	ATOLLA, UBC	Aug. 30-31	Temperature Salinity	Rev. therm. Titration	($\pm 0.02, .030^\circ$) ($\pm 0.02, .040/00$)	3	Vancouver Island Coastal (Tofino Inlet)	O ₂	IOUBC (1962) MEDS #181361915 NODC #18AL50090
61-0031	WHITETHROAT, UBC	Feb. 14-17	Temperature Salinity	Rev. therm. Titration	($\pm 0.02, .030^\circ$) ($\pm 0.02, .040/00$)	3	Vancouver Island Coastal (Tofino Inlet)	O ₂ , PO ₄ , NO ₃ , SiO ₃	IOUBC (1962) MEDS #181361902 NODC #18WH50090
61-0032	WHITETHROAT, UBC	Apr. 6-7	Temperature Salinity	Rev. therm. Titration	($\pm 0.02, .030^\circ$) ($\pm 0.02, .040/00$)	3	Vancouver Island Coastal (Tofino Inlet)	O ₂	IOUBC (1962) MEDS #181361906 NODC #18WH50090

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? = unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
61-0033	OSHANA, POC	Mar. 20-28	Temperature Salinity	BT, Rev. therm. Salinometer	[$\pm 0.2, .20^\circ$] [$\pm 0.02, .03^\circ$] [$\pm 0.01, .02^\circ/\text{oo}$]	3	B.C. Coastal & Offshore	Zooplankton, O ₂ , secchi	Lane et al. (1961a) MENS #180261761 NODC #180550621
61-0034	WHITETHROAT, POC	Oct. 3-11	Temperature Salinity Current	BT, Rev. therm. Salinometer Titration (low salinity samples) CBI Drag, Ekman-Herz meter	[$\pm 0.2, .20^\circ$] [$\pm 0.02, .03^\circ$] [$\pm 0.01, .02^\circ/\text{oo}$] [$\pm 0.02, .05^\circ/\text{oo}$] ? ?	3	Vancouver Inland Coastal (Nootka Sound- Michalet Inlet, Quatsino Sound, Alberni Inlet)	O ₂ , pH, alkalinity, secchi	Waldichuk, Markert & Meikle (1968) Waldichuk, Meikle & Hyslop (1968)
61-0035	MacMillan Bloodel, POC	Jan. 19- Dec. 7	Temperature Salinity	Rev. therm. Salinometer	[$\pm 0.02, .03^\circ$] [$\pm 0.01, .02^\circ/\text{oo}$]	3	Alberni Inlet	O ₂ , BOD	Waldichuk, Markert & Meikle (1969)
61-0036A	BROWN BEAR, U. Washington	July 7-8	Temperature Salinity	Rev. therm. ?	[$\pm 0.02, .03^\circ$] ?	3	Offshore Vancouver Island	O ₂ , Chl. a, PO ₄ , secchi	Love (1964a) MENS #318807100 NODC #318850710
61-0036B	BROWN BEAR, U. Washington	July 29-30	Temperature Salinity	Rev. therm. ?	[$\pm 0.02, .03^\circ$] ?	3	Offshore Vancouver Island	O ₂ , Chl. a, secchi	Love (1964a) MENS #318807100 NODC #318850710
61-0037A	BROWN BEAR, U. Washington	Sept. 15-16	Temperature Salinity	Rev. therm. ?	[$\pm 0.02, .03^\circ$] ?	3	B.C. Offshore	NO ₃ , SiO ₃ , secchi, O ₂ , Chl. a, PO ₄	Love (1964b) MENS #318807100 NODC #318850710
61-0037B	BROWN BEAR, U. Washington	Nov. 29- Dec. 1	Temperature Salinity	Rev. therm. ?	[$\pm 0.02, .03^\circ$] ?	3	B.C. Offshore	NO ₃ , SiO ₃ , secchi, O ₂ , Chl. a, PO ₄	Love (1964b) MENS #318807100 NODC #318850710
61-0038	BROWN BEAR, U. Washington	Jan. 11-27	Temperature Salinity	Rev. therm. ?	[$\pm 0.02, .03^\circ$] ?	3	B.C. Offshore	O ₂ , SiO ₃ , NO ₃ , Chl. a	Love (1961) Stephens (1964) MENS #318801690 NODC #318850169
61-0039	BROWN BEAR, U. Washington	Mar. 8- Apr. 7	Temperature Salinity	Rev. therm. ?	[$\pm 0.02, .03^\circ$] ?	3	B.C. Offshore	O ₂ , SiO ₃ , NO ₃ , Chl. a	Love (1961) Stephens (1964) MENS #318801690 NODC #318850169
61-0040	BROWN BEAR, U. Washington	May 9- June 11	Temperature Salinity	Rev. therm. ?	[$\pm 0.02, .03^\circ$] ?	3	B.C. Offshore	O ₂ , SiO ₃ , NO ₃ , PO ₄ , Chl. a	Love (1961) Stephens (1964) MENS #318801690 NODC #318850169

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
61-0042	OSHAWA, POC	Feb. 21-Mar. 1	Temperature Salinity Current	BT, Rev. therm. Salinometer Ekman meter, Drift pole	$[+2, -2C^{\circ}]$ $[+0.02, -0.03C^{\circ}]$ $[+0.01, -0.02^{\circ}/\text{oo}]$?	3	B.C. Offshore	Plankton, O_2	Lane et al. (1961b) MEDS #180261760
61-0045	J. N. COBB, Bureau of Commercial Fisheries Lab., San Diego	July 12	Temperature Salinity	Rev. therm.? ?	$[+0.02, -0.03C^{\circ}]$?	3	Offshore Vancouver Island	O_2	U.S. Fish. & Wildl. (1963) MEDS #31JC19540 NODC #31JC51954
61-0046	HORIZON (U.S.)	Sept. 8-11	Temperature Salinity	Rev. therm.? ?	$[+0.02, -0.03C^{\circ}]$?	3	B.C. Offshore	O_2	MEDS #31H000820 NODC #31H050082
61-0050	WHITETIROAT, Submarine GRILSE, POC, Pacific Naval Lab.	Nov. 22-25	Temperature Salinity	BT, Rev. therm. Salinometer	$[+2, -2C^{\circ}]$ $[+0.02, -0.03C^{\circ}]$ $[+0.01, -0.02^{\circ}/\text{oo}]$	3	Offshore Vancouver Island	O_2	MEDS #180961776 NODC #18WH50609
62-0015A	OSHAWA, POC	Jan. 16-26	Temperature Salinity	BT, Rev. therm. Salinometer	$[+2, -2C^{\circ}]$ $[+0.02, -0.03C^{\circ}]$ $[+0.01, -0.02^{\circ}/\text{oo}]$	3	B.C. Coastal & Offshore	Secchi, O_2	Crean, Tripp & Hollister (1962b) MEDS #180262778 NODC #180S50531
62-0015B	OSHAWA, POC	Jan. 29-Feb. 5	Temperature Salinity	BT, Rev. therm. Salinometer	$[+2, -2C^{\circ}]$ $[+0.02, -0.03C^{\circ}]$ $[+0.01, -0.02^{\circ}/\text{oo}]$	3	B.C. Coastal & Offshore	Secchi, O_2	Crean, Tripp & Hollister (1962b) MEDS #180262778 NODC #180S50531
62-0016	OSHAWA, POC	May 23-June 23	Temperature Salinity	BT, Rev. therm. Salinometer	$[+2, -2C^{\circ}]$ $[+0.02, -0.03C^{\circ}]$ $[+0.01, -0.02^{\circ}/\text{oo}]$	3	Dixon Entrance, B.C. Offshore, N.E. Pacific	Secchi, O_2 , plankton	Dodimead et al. (1962) MEDS #180262785 NODC #180S50516, 189951340
62-0018	OSHAWA, POC	Sept. 19-Oct. 1	Temperature Salinity	BT, Rev. therm. Salinometer	$[+2, -2C^{\circ}]$ $[+0.02, -0.03C^{\circ}]$ $[+0.01, -0.02^{\circ}/\text{oo}]$	3	Dixon Entrance, B.C. Offshore	Meteorological observations including wind velocity, O_2	Crean et al. (1963) Crean (1967) MEDS #180262790 NODC #180S50544
62-0025	OSHAWA, POC	Mar. 12-Apr. 5	Temperature Salinity	BT, Rev. therm. Salinometer	$[+2, -2C^{\circ}]$ $[+0.02, -0.03C^{\circ}]$ $[+0.01, -0.02^{\circ}/\text{oo}]$	3	Dixon Entrance, B.C. Offshore	Secchi, O_2	Crean et al. (1962c) MEDS #180262781 NODC #180S50500

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? = Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
62-0027	CHS	May 7-Sept. 30	Water level	Foxboro	$\pm .015$ m	3	W. Vancouver Island & Queen Charlottes		MEDS WL Stn. #8790, 9570
62-0030A	OSHAWA, POC	Oct. 30-Nov. 1	Temperature Salinity	BT, Rev. therm. Salinometer	$[+2, .2C^{\circ}]$ $[+.02, .03C^{\circ}]$ $[+.01, .02^{\circ}/\text{oo}]$	3	Alberni Inlet	O ₂ , pH, secchi, alkalinity	Waldichuk, Meikle & Hyslop (1968)
62-0030B	OSHAWA, POC	Nov. 1-5	Temperature Salinity Current	BT, Rev. therm. Salinometer, Titration (low sal. samples) CBI Drag, Ekman-Merz meter	$[+2, .2C^{\circ}]$ $[+.02, .03C^{\circ}]$ $[+.01, .02^{\circ}/\text{oo}]$ $[+.02], .05^{\circ}/\text{oo}]$? ?	3	Nootka Sound, Muchalat Inlet, Quataino Sound, Rupert Inlet, Holberg Inlet	O ₂ , pH, secchi, alkalinity	Waldichuk, Markert & Meikle (1968)
62-0031	WHITETHROAT, UBC	Mar. 28-29	Temperature Salinity	Rev. therm. Titration	$[+.02, .03C^{\circ}]$ $[+.02, .04^{\circ}/\text{oo}]$	3	B.C. Offshore, N.E. Pacific	O ₂	IOUBC (1963) MEDS #181362929 NODC #18WH50940
62-0032	WHITETHROAT, POC	May 23-June 5	Temperature Salinity	BT, Rev. therm. Salinometer	$[+2, .2C^{\circ}]$ $[+.02, .03C^{\circ}]$ $[+.01, .02^{\circ}/\text{oo}]$	3	B.C. Offshore, N.E. Pacific	O ₂ , secchi	Dodimead et al. (1962) MEDS #180262786
62-0033	OSHAWA, UBC	July 13-14	Temperature Salinity	Rev. therm. Titration	$[+.02, .03C^{\circ}]$ $[+.02, .04^{\circ}/\text{oo}]$	3	Offshore Vancouver Island	O ₂ , Fe	IOUBC (1963) MEDS #181362935
62-0034A	BROWN BEAR, U. Washington	Jan. 24-27, Feb. 6-7	Temperature Salinity	Rev. therm. Salinometer	$[+.02, .03C^{\circ}]$ $\pm .004, .02^{\circ}/\text{oo}$	3	Offshore Vancouver Island	O ₂ , Chl.a, PO ₄ , NO ₃ , SiO ₃ , secchi, zooplankton	Love (1965a) MEDS #31BB04790 NODC #31BB50479
62-0034B	BROWN BEAR, U. Washington	Mar. 28-29, Apr. 10-11	Temperature Salinity	Rev. therm. Salinometer	$[+.02, .03C^{\circ}]$ $\pm .004, .02^{\circ}/\text{oo}$	3	Offshore Vancouver Island	O ₂ , Chl.a, PO ₄ , NO ₃ , SiO ₃ , zooplankton	Love (1965b) MEDS #31BB04790 NODC #31BB50479
62-0035A	BROWN BEAR, U. Washington	June 8-9	Temperature Salinity	Rev. therm. Salinometer	$[+.02, .03C^{\circ}]$ $\pm .004, .02^{\circ}/\text{oo}$	3	Offshore Vancouver Island	O ₂ , Chl.a, PO ₄	Love (1965c) MEDS #31BB04790 NODC #31BB50479
62-0035B	BROWN BEAR, U. Washington	Aug. 12	Temperature Salinity	Rev. therm. Salinometer	$[+.02, .03C^{\circ}]$ $\pm .004, .02^{\circ}/\text{oo}$	3	B.C. Offshore	O ₂ , Chl.a, PO ₄ , SiO ₃	Love (1965c) MEDS #31BB04790 NODC #31BB50479

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?-Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
62-0035C	BROWN AFAR, U. Washington	Sept. 15-16	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] [+.004, .020/oo]	3	Offshore Vancouver Island	O ₂ , Chl. a, PO ₄ , SiO ₃ , NO ₃ , secchi, zooplankton	Love (1965d) MEDS #318804790 NODC #318850479
62-0036	MacMillan Bloedel, POC	Jan. 4- Dec. 12	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] [±.01, .020/oo]	3	Alberni Inlet	O ₂ , BOD	Waldichuk, Markert & Melkie (1969)
62-0037	BERTHA ANN, (US)	Apr. 10	Temperature Salinity	Rev. therm.? ?	[+.02, .03C°] ?	3	Offshore Vancouver Island	O ₂	MEDS #318N07140 NODC #318N50714
62-0038	WHITETHROAT, GRILSE, POG, PNL	Apr. 15-19	Temperature Salinity	BT, Rev. therm. Salinometer	[+.2, .2C°] [+.02, .03C°] [±.01, .020/oo]	3	Offshore Vancouver Island	O ₂	Herlinveaux (1963) MEDS #180962782 NODC #18W150574
62-0039	ACONA, (US)	April 4	Temperature Salinity	Rev. therm.? ?	[+.02, .03C°] ?	3	Offshore Vancouver Island	O ₂ , PO ₄	MEDS #31AC11580
62-0041	OSHAWA, GRILSE, POG, PNL	Nov. 19-23	Temperature Salinity	BT, Rev. therm. Salinometer	[+.2, .2C°] [+.02, .03C°] [±.01, .020/oo]	3	Offshore Vancouver Island	O ₂	Herlinveaux (1963) MEDS #180962792 NODC #18OS50575
63-00118	WHITETHROAT, URC	June 3-6	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] [±.01, .020/oo]	3	Tofino Inlet, Muchalat Inlet, Tahsis Inlet, Neroutas Inlet, Holberg Inlet	O ₂	IOUBC (1964) MEDS #181363020
63-0017	GHS	Aug. 1-16	Water level	?	?	3	Nicolaye Channel		MEDS WL Stn. #8710
63-0022	MacMillan Bloedel, POC	Jan. 9- Dec. 19	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] [±.01, .020/oo]	3	Alberni Inlet	O ₂ , BOD	Waldichuk, Markert & Melkie (1969)
63-0023A	OSHAWA, U. Washington	Mar. 13-26	Temperature Salinity	Rev. therm.? ?	[+.02, .03C°] ?	3	B.C. Offshore	O ₂ , Chl. a, NO ₃ , PO ₄ , SiO ₃	Love (1966b) NODC #180550163
63-0024A	OSHAWA, UBC	Feb. 28- Mar. 3	Temperature Salinity	Rev. therm. Titration	[+.02, .03C°] [±.02, .040/oo]	3	Offshore Vancouver Island	O ₂ , secchi	IOUBC (1964) MEDS #181363010 NODC #180550951

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.R.	Ship or collecting agency	Date of seawater sample	Quantity measured	Instrument or method used	Mathematical data correction and accuracy	Salinity rating number	Area	Chemical measurements	Source or reference
61-00146	OSIAMA, UBC	May 8-11	Temperature Salinity	Rev. therm. Titrator	$\pm .02, .03^{\circ}\text{C}$ $\pm .02, .04^{\circ}/\text{‰}$	3	Offshore Vancouver Island	O_2 , weight	LOWE (1966a); HDS #181201016 NODC #18030954
61-00164	BROWN BEAR, U. Washington	Feb. 28- Mar. 18	Temperature Salinity	Rev. therm. Salinometer?	$\pm .02, .03^{\circ}\text{C}$ $\pm .004, .02^{\circ}/\text{‰}$	3	Offshore Vancouver Island	O_2 , Chl. a , NO_2 , PO_4 , SiO_2	LOWE (1966a); HDS #318811107 NODC #318851119
61-00166	BROWN BEAR, U. Washington	Mar. 19-30	Temperature Salinity	Rev. therm. Salinometer?	$\pm .02, .03^{\circ}\text{C}$ $\pm .004, .02^{\circ}/\text{‰}$	3	Offshore Vancouver Island	O_2 , Chl. a , NO_2 , PO_4 , SiO_2	LOWE (1966a); HDS #318811107 NODC #318851119
61-00168	BROWN BEAR, U. Washington	April 17-20	Temperature Salinity	Rev. therm. Salinometer?	$\pm .02, .03^{\circ}\text{C}$ $\pm .004, .02^{\circ}/\text{‰}$	3	Offshore Vancouver Island	O_2 , Chl. a , NO_2 , PO_4 , SiO_2	LOWE (1966a); HDS #318811107 NODC #318851117
61-00168	BROWN BEAR, U. Washington	May 14-15	Temperature Salinity	Rev. therm. Salinometer?	$\pm .02, .03^{\circ}\text{C}$ $\pm .004, .02^{\circ}/\text{‰}$	3	Offshore Vancouver Island	O_2 , Chl. a , NO_2 , PO_4 , SiO_2	LOWE (1966a); HDS #318811107 NODC #318851119
61-00168	BROWN BEAR, U. Washington	June 3-4	Temperature Salinity	Rev. therm. Salinometer?	$\pm .02, .03^{\circ}\text{C}$ $\pm .004, .02^{\circ}/\text{‰}$	3	Offshore Vancouver Island	Sacchar., O_2 , PO_4 , NO_2 , SiO_2	LOWE (1966a, d); HDS #318811107 NODC #318851118
61-00168	BROWN BEAR, U. Washington	June 14	Temperature Salinity	Rev. therm. Salinometer?	$\pm .02, .03^{\circ}\text{C}$ $\pm .004, .02^{\circ}/\text{‰}$	3	Offshore Vancouver Island	Sacchar., O_2 , PO_4	HDS #318811130 NODC #318851115
61-00168	BROWN BEAR, U. Washington	Oct. 23	Temperature Salinity	Rev. therm. Salinometer?	$\pm .02, .03^{\circ}\text{C}$ $\pm .004, .02^{\circ}/\text{‰}$	3	Offshore Vancouver Island	Chl. a , O_2 , weight	U. Washington (1966a); HDS #318811120 NODC #318851112
61-0017	C.S. FLEET, (US)	May 7-23	Temperature Salinity	Rev. therm., ?	$\pm .02, .03^{\circ}\text{C}$?	3	Offshore Vancouver Island	O_2	HDS #318209590 NODC #31820959
61-0018	C.S. FLEET, (US)	Nov. 2-23	Temperature Salinity	Rev. therm., ?	$\pm .02, .03^{\circ}\text{C}$?	3	Offshore Vancouver Island	O_2	HDS #318209370 NODC #318209567
61-0030	OSPIRE, U. Washington	June 10-12	Temperature Salinity	Rev. therm. Salinometer?	$\pm .02, .03^{\circ}\text{C}$ $\pm .01, .02^{\circ}/\text{‰}$	3	N.E. Pacific, Offshore Vancouver Island	O_2	LOWE (1966a); NODC #180610163

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?-Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
63-0032	OSHAWA, U. Washington	Dec. 12	Temperature Salinity	Rev. therm.? ?	[$\pm 0.02, .03^{\circ}$] ?	3	B.C. Offshore	O ₂ , NO ₃ , PO ₄ , SiO ₃	U. Washington (1966b) NODC #180550163
64-0010	ACONA, (US)	Sept. 23-26	Temperature Salinity	Rev. therm.? ?	[$\pm 0.02, .03^{\circ}$] ?	3	B.C. Offshore & Coastal	O ₂ , NO ₂ , NO ₃	MEDS #31AC51766 NODC #31AC51176
64-0020	CHS	May 12- Oct. 10	Water level	Ottoboro, ?	$\pm .015$ m	3	Quatsino Sound, West Queen Charlottes		MENS WL Stn. #8735, 8736, 8765, 9512
64-0026A	BROWN BEAR, U. Washington	Feb. 12	Temperature Salinity	Rev. therm. Salinometer?	[$\pm 0.02, .03^{\circ}$] $\pm .004, .02^{\circ}/\text{oo}$	3	Offshore Vancouver Island	Chl. a, O ₂ , NO ₂ , PO ₄ , SiO ₃ , secchi	U. Washington (1966c) MENS #31BB11100 NODC #31BB51110
64-0026B	BROWN BEAR, U. Washington	May 20-21	Temperature Salinity	Rev. therm. Salinometer?	[$\pm 0.02, .03^{\circ}$] $\pm .004, .02^{\circ}/\text{oo}$	3	Offshore Vancouver Island	Chl. a, O ₂ , NO ₂ , PO ₄ , SiO ₃ , secchi	U. Washington (1966d) MENS #31BB11090 NODC #31BB51109
64-0026C	BROWN BEAR, U. Washington	Aug. 9-10	Temperature Salinity	Rev. therm. Salinometer?	[$\pm 0.02, .03^{\circ}$] $\pm .004, .02^{\circ}/\text{oo}$	3	Offshore Vancouver Island	Chl. a, O ₂ , NO ₂ , PO ₄ , SiO ₃ , secchi	U. Washington (1966d) MENS #31BB11060 NODC #31BB51106
64-0027A	OSHAWA, U. Washington/POG	Feb. 15-21	Temperature Salinity	Rev. therm. Salinometer	[$\pm 0.02, .03^{\circ}$] $\pm .004, [.02]^{\circ}/\text{oo}$	3	B.C. Offshore	O ₂ , PO ₄ , NO ₃ , SiO ₃	U. Washington (1966c)
64-0027B	OSHAWA, U. Washington	Oct. 17-18	Temperature Salinity	Rev. therm. Salinometer	[$\pm 0.02, .03^{\circ}$] $\pm .004, [.02]^{\circ}/\text{oo}$	3	B.C. Offshore	O ₂	U. Washington (1966d) NODC #180550163
64-0028	POG	Aug. 26, 1964- Oct. 7, 1965 Jan. 14-15, 1966	Temperature Salinity Water level	BT, Rev. therm. Salinometer ?	[$\pm .2, .2^{\circ}$] [$\pm 0.02, .03^{\circ}$] [$\pm .01, .02^{\circ}/\text{oo}$] ?	3	Barkley Sound (Fatty Basin)	O ₂	Herlinveaux (1966)
64-0029	MacMillan Bloedel, POG	Mar. 26- Dec. 10	Temperature Salinity	Rev. therm. Salinometer	[$\pm 0.02, .03^{\circ}$] [$\pm .01, .02^{\circ}/\text{oo}$]	3	Alberni Inlet	O ₂ , BOD	Waldichuk, Markert & Meikle (1969)
64-0030	C.B. KELEZ, (US)	Apr. 26-28, July 24-26, Nov. 14-17	Temperature Salinity	Rev. therm.? ?	[$\pm 0.02, .03^{\circ}$] ?	3	Offshore Vancouver Island	O ₂	MENS #31KE09550 NODC #31KE50955
64-0031	OSHAWA, POG?	Mar. 23	Temperature Salinity	Rev. therm.? ?	[$\pm 0.02, .03^{\circ}$] ?	3	Offshore Vancouver Island		MENS #180264002 NODC #180550055

Set I.D.	collecting agency	measure- ments	measured	methods used ?-Unknown	precision and accuracy	rating number		measurements	reference
64-0032	OSHAWA, URC	May 13	Temperature Salinity	Rev. therm. Salinometer	$[+.02, .03C^{\circ}]$ $\pm .003, [-.02]^{\circ}/\text{oo}$	3	Offshore Vancouver Island	O ₂	IOURC (1965) MEDS #181364004 NODC #180550965
64-0033	OSHAWA, POG?	June 26- July 1	Temperature Salinity	Rev. therm.? ?	$[+.02, .03C^{\circ}]$?	3	R.C. Offshore	Plankton	MEDS #180264005 NODC #180550067
64-0034	OSHAWA, POG?	July 29- Aug. 6	Temperature Salinity	Rev. therm.? ?	$[+.02, .03C^{\circ}]$?	3	Offshore Vancouver Island		MEDS #180264006 NODC #180550067
64-0036	OSHAWA, POG?	Oct. 2-6	Temperature Salinity	Rev. therm.? ?	$[+.02, .03C^{\circ}]$?	3	B.C. Offshore		MEDS #180264009
64-0037	WHITETHROAT, URC	Oct. 26	Temperature Salinity	Rev. therm. Salinometer	$[+.02, .03C^{\circ}]$ $\pm .003, [-.02]^{\circ}/\text{oo}$	3	Offshore Vancouver Island	O ₂	IOURC (1965) MEDS #181364007 NODC #180550094
64-0039	G.B. REED, POG	Jan. 7-13	Temperature Salinity	Rev. therm. Salinometer	$[+.02, .03C^{\circ}]$ $[+.01, .02]^{\circ}/\text{oo}$	3	B.C. Offshore, N.E. Pacific	Secchi, Chl.a, plankton	Stephens (1964)
65-0012	ENDEAVOUR, PNL	July 20-24	Temperature Salinity	BT, Rev. therm. Salinometer	$[+.2, .2C^{\circ}]$ $[+.02, .03C^{\circ}]$?, ± 0.02	3	B.C. Offshore	Secchi, O ₂	MEDS #180265007 NODC #180550618
65-0025	G.B. KELEZ, (US)	Jan. 17-19	Temperature Salinity	Rev. therm.? ?	$[+.02, .03C^{\circ}]$?	3	B.C. Offshore	O ₂	MEDS #31KE09550 NODC #31KE50955
65-0026	BROWN BEAR, U. Washington	Jan. 12-14	Temperature Salinity	Rev. therm. Salinometer	$[+.02, .03C^{\circ}]$ $\pm .004, .02^{\circ}/\text{oo}$	3	Offshore Vancouver Island	O ₂ , PO ₄ , NO ₃ , SiO ₃ , Chl.a	U. Washington (1967a) MEDS #31BB11040 NODC #31BB51104
65-0027	BROWN BEAR, U. Washington	Apr. 26	Temperature Salinity	Rev. therm. Salinometer	$[+.02, .03C^{\circ}]$ $\pm .004, .02^{\circ}/\text{oo}$	3	Offshore Vancouver Island	O ₂ , PO ₄ , NO ₃ , SiO ₃ , Chl.a	U. Washington (1967a) MEDS #31BB11020 NODC #31BB51102
65-0028	BROWN BEAR, U. Washington	July 3, 7	Temperature Salinity	Rev. therm. Salinometer	$[+.02, .03C^{\circ}]$ $\pm .004, .02^{\circ}/\text{oo}$	3	Offshore Vancouver Island	O ₂	U. Washington (1967b) MEDS #31BB11010 NODC #31BB51101
65-0029	BROWN BEAR, U. Washington	Aug. 20-21	Temperature Salinity	Rev. therm. Salinometer	$[+.02, .03C^{\circ}]$ $\pm .004, .02^{\circ}/\text{oo}$	3	Offshore Vancouver Island	O ₂ , PO ₄ , NO ₃ , SiO ₃ , Chl.a	U. Washington (1967a) MEDS #31BB11000 NODC #31BB51100
65-0030	BROWN BEAR, U. Washington	Nov. 5-6	Temperature Salinity	Rev. therm. Salinometer	$[+.02, .03C^{\circ}]$ $\pm .004, .02^{\circ}/\text{oo}$	3	Offshore Vancouver Island	O ₂ , PO ₄ , NO ₃ , SiO ₃ , Chl.a	U. Washington (1967a) MEDS #31BB10980 NODC #31BB51098

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? = Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
65-0031	VICTORY VI, POG	June 15- Dec. 14	Temperature Rev. therm. Salinity	BT, [+.02, .03C°] Salinometer	[+.2, .2C°] [+.02, .03C°] [+.01, .02°/oo]	3	Alberni Inlet	O ₂ , pH, alkalinity	Waldichuk, Meikle & Hyalop (1968)
65-0032	ENDEAVOUR, POG?	May 12-15	Temperature Salinity	BT, Rev. therm. Salinometer?	[+.2, .2C°] [+.02, .03C°] [+.01, .02°/oo]	3	Offshore Vancouver Island		MEDS #180265005 NODC #18EN50601
65-0034	MacMillan Bloodel, POG	Jan. 14- Dec. 9	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] [+.01, .02°/oo]	3	Alberni Inlet	O ₂ , ROD	Waldichuk, Markert & Meikle (1969)
65-0060	ENDEAVOUR, UBC	Aug. 14-15	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] +.003, [.02]°/oo	3	B.C. Offshore	O ₂	IOUBC (1966) MEDS #181365007
66-0021	MARABELL, CHS	May 5- July 2	Water level	Ottboro, Foxboro	±.015 m	3	Neroutsos Inlet, Uchucklesit Inlet		MEDS WL Stn. #8557, 8750
66-0025	ENDEAVOUR, UBC	Feb. 1	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] +.003, [.02]°/oo	3	Offshore Vancouver Island	O ₂	IOUBC (1967) MEDS #181366001 NODC #18EN50974
66-0026	YAQUINA, (US)	July 21	Temperature Salinity	Rev. therm.? ?	[+.02, .03C°] ?	3	Offshore Queen Charlottes	O ₂ , PO ₄ , pH	MEDS #31YQ13300
66-0027A	LAYMORE, POG	Aug. 16-18	Temperature Salinity Current	BT, Rev. therm. Salinometer, Titration (low sal. samples) Drag, Ekman-Merz meter	[+.2, .2C°] [+.02, .03C°] [+.01, .02°/oo] [+.02], .05°/oo ? ?	3	Alberni Inlet	O ₂ , pH, alkalinity, secchi	Waldichuk, Meikle & Hyalop (1968)
66-0027B	LAYMORE, POG	Aug. 19-23	Temperature Salinity Current	BT, Rev. therm. Salinometer, Titration (low sal. samples) Drag, Ekman-Merz meter	[+.2, .2C°] [+.02, .03C°] [+.01, .02°/oo] [+.02], .05°/oo ? ?	3	Nootka Sound- Muchalat Inlet, Quatsino Sound, Rupert Inlet, Holberg Inlet, Neroutsos Inlet	O ₂ , pH, alkalinity, secchi	Waldichuk, Markert & Meikle (1968)
66-0029	T.G. THOMPSON, U. Washington	Dec. 1	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] +.004, [.02]°/oo	3	Offshore Strait of Juan de Fuca	O ₂	U. Washington (1967c) MEDS #31TT10560 NODC #31TT51056

Table 2 (Cont'd): Secondary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? = Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
66-0030	MacMillan Bloedel, POC	Mar. 23-Dec. 30	Temperature Salinity	Rev. therm. Salinometer	[+0.2, .03C°] [±0.1, .02‰/‰]	3	Alberni Inlet	O ₂ , BOD	Waldichuk, Mackert & Meikle (1969)
66-0031	VICTORY VI, POC	Jan.-Dec. (monthly)	Temperature Salinity	RT, Rev. therm. Salinometer	[+2, .2C°] [+0.2, .03C°] [±0.1, .02‰/‰]	3	Alberni Harbour	O ₂ , pH, alkalinity	Waldichuk, Meikle & Hyslop (1968)
66-0060	Mar. Sc. Dir., Pac. Region.	Sept. 8-23	Drift	Drogue	?	3	Fatty Basin (Barkley Sound)		Herlinveaux (1973)
67-0022	ENDEAVOUR, POC	Sept. 12-Oct. 5	Temperature Salinity	Bissett-Berman 9006 STD	+0.2, .04C° ±0.2, .04‰/‰	3	B.C. Offshore	NO ₃ , O ₂ , SiO ₃ , PO ₄ , plankton	Dodimead (1984) MENS #180267008 NODC #18EN50190
67-0024	MARABELL, CHS	Aug. 10-26	Water level	Foxboro	±7, .015 m	3	Muchalat Inlet		MENS WL Stn. #8650
67-0026	T.G. THOMPSON, U. Washington	Feb. 5-15	Temperature Salinity	Rev. therm. ?	[+0.2, .03C°] ?	3	B.C. Offshore	O ₂ , PO ₄ , NO ₃ , SiO ₃	MENS #31TT1191D NODC #31TT51191
67-0029	SEDCO 135F (drilling rig), POC	Nov. 5-Dec. 16	Current Waves	? Pressure	? ?	3	Offshore Vancouver Island		Herlinveaux (pers. comm.) Mafer (1970)
67-0030	MacMillan Bloedel, POC	Jan. 24-Dec. 15	Temperature Salinity	Rev. therm. Salinometer	[+0.2, .03C°] [±0.1, .02‰/‰]	3	Alberni Inlet	O ₂ , BOD	Waldichuk, Mackert & Meikle (1969)
67-0031	VICTORY VI, POC	Jan., Sept., Dec.	Temperature Salinity	RT, Rev. therm. Salinometer	[+2, .2C°] [+0.2, .03C°] [±0.1, .02‰/‰]	3	Alberni Harbour	O ₂ , pH, alkalinity	Waldichuk, Meikle & Hyslop (1968)
68-00118	VECTOR, UBC Cruise 68/22	July 15	Temperature Salinity	Rev. therm. Salinometer	[+0.2, .03C°] ±0.03, [.02]‰/‰	3	B.C. Offshore	O ₂ , secchi	IOUBC (1969) MENS #181368017 NODC #18VT51001
68-0022	ENDEAVOUR, POC	Apr. 17-28	Temperature Salinity	Bissett-Berman 9006 STD	+0.2, .04C° ±0.2, .04‰/‰	3	B.C. Offshore		Dodimead (1984) MENS #180268006 NODC #18EN50197
68-0024	ENDEAVOUR, POC	Oct. 1-16	Temperature Salinity	Bissett-Berman 9006 STD	+0.2, .04C° ±0.2, .04‰/‰	3	B.C. Offshore		Dodimead (1984) MENS #180268008 NODC #18EN50198

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?-Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
68-0026	SEDCO 135P, DREP	Jan. 1968- Feb. 1969	Waves Current	Pressure ?	? ?	3	Offshore Vancouver Island		Herlinveaux (pers. comm.) Hafer (1970)
68-0033	YAQUINA, (US)	Feb. 1	Temperature Salinity	Rev. therm. ?	[+.02, .03C°] ?	3	Offshore Vancouver Island	O ₂ , PO ₄ , NO ₃ , SiO ₃ , pH	MEDS #31YQ15030 NODC #31YQ51503
68-0034	T.G. THOMPSON, U. Washington	Mar. 27	Temperature Salinity	Rev. therm. ?	[+.02, .03C°] ?	3	Offshore Vancouver Island	O ₂	MEDS #31TT13750 NODC #18TT51375
68-0036A	LAYMORE, UBC	Apr. 23	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] +.003, [.02]°/oo	3	Offshore Vancouver Island		IOUBC (1969) MEDS #181368010
68-0039	ENDEAVOUR, UBC	Sept. 17-18	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] +.003, [.02]°/oo	3	Offshore Vancouver Island	O ₂	IOUBC (1969) MEDS #181368020 NODC #18EN51004
68-0040	VECTOR, UBC	Nov. 19	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] +.003, [.02]°/oo	3	Offshore Vancouver Island		IOUBC (1969) MEDS #181368024 NODC #18VT51007
68-0042	MacMillan Bloedel, POG	Jan. 26- Dec. 4	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] [+.01, .02°/oo]	3	Alberni Inlet	O ₂ , BOD	Waldichuk, Markert & Meikle (1969)
69-0030	LAYMORE, POG	Apr. 15-30	Temperature Salinity	Bisset-Berman 9006 STD	+.02, .04C° +.02, .04°/oo	3	B.C. Offshore		Dodimead (1984) MEDS #180269020 NODC #18LY50200
69-0031	ENDEAVOUR, POG	Sept. 30- Oct. 16	Temperature Salinity	Bisset-Berman 9006 STD	+.02, .04C° +.02, .04°/oo	3	B.C. Offshore		Dodimead (pers. comm.) MEDS #180269021
69-0034	G.B. REED, POG	Mar. 6-10	Temperature Salinity	Rev. therm. ?	[+.02, .03C°] ?	3	Offshore Vancouver Island	O ₂	Dodimead (1984)
69-0038	VECTOR, UBC	Jan. 21	Temperature Salinity	BT, Rev. therm. Salinometer	[+.2, .2C°] [+.02, .03C°] +.003, [.02]°/oo	3	Offshore Vancouver Island		IOUBC (1970) MEDS #181369002 NODC #189951372
69-0039	AKADEMIK SHIRSHOV, (USSR)	Feb. 24- Mar. 2	Temperature Salinity	Rev. therm.? ?	[+.02, .03C°] ?	2	Offshore Vancouver Island	PO ₄ , NO ₂ , O ₂ , SiO ₃ , pH	MEDS #90SC13320 NODC #90SC51332

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
69-0041	LAYMORE, UBC	Mar. 4-6	Temperature Salinity	Rev. therm. Salinometer	$[+.02, .03C^{\circ}]$ $[-.003, (.02)^{\circ}/\text{oo}]$	3	B.C. Offshore	O ₂	IOURC (1970) MEDS #181369006
69-0043	T.G. THOMPSON, U. Washington	June 1	Temperature Salinity	Rev. therm.? ?	$[+.02, .03C^{\circ}]$?	3	Offshore Vancouver Island	O ₂ , PO ₄ , NO ₃ , SiO ₃	MEDS #31TT16730 NODC #31TT51673
69-0044	LAYMORE, UBC	June 27-29	Temperature Salinity	Rev. therm. Salinometer	$[+.02, .03C^{\circ}]$ $[-.003, (.02)^{\circ}/\text{oo}]$	3	B.C. Offshore	O ₂	IOURC (1970) MEDS #181369014 NODC #181Y50738
69-0045	VECTOR, UBC	July 16	Temperature Salinity	Rev. therm. Salinometer	$[+.02, .03C^{\circ}]$ $[-.003, .02^{\circ}/\text{oo}]$	3	Offshore Vancouver Island		IOURC (1970) MEDS #181369015 NODC #18VT51018
69-0046	PARIZEAU, DREP/Pacific Environ. Inst., W. Vancouver	Aug. 14-15	Temperature Salinity Current	BT, Rev. therm. Salinometer Hytech	$[+.2, .2C^{\circ}]$ $[+.02, .03C^{\circ}]$ $[+.01, .02^{\circ}/\text{oo}]$?	3	B.C. Offshore (Bowle Seamount)	SiO ₃ , NO ₃ , PO ₄	Herlinveaux (1971) MEDS #181369014 NODC #18PZ50887
69-0047	YAQUINA, (US)	Aug. 24	Temperature Salinity	Rev. therm.? ?	$[+.02, .03C^{\circ}]$?	3	B.C. Offshore	O ₂ , PO ₄ , pH	MEDS #31YQ16570 NODC #31YQ51657
69-0048	T.G. THOMPSON, U. Washington	Nov. 3-4	Temperature Salinity	Rev. therm.? ?	$[+.02, .03C^{\circ}]$?	3	B.C. Offshore		MEDS #31TT15700 NODC #31TT51570
69-0049	MacMillan Bloedel, POG	Jan. 22- Apr. 18	Temperature Salinity	Rev. therm. Salinometer	$[+.02, .03C^{\circ}]$ $[+.01, .02^{\circ}/\text{oo}]$	3	Alberni Inlet	O ₂ , BOD	Waldichuk, Markert & Meikle (1969)
69-0051A	Mar. Sc. Dir., Pac. Region	May 6-7, June 7- July 7 May 21- July 2	Current	HydroProducts, Geodyne	?	3	Barkley Sound (Fatty Basin)	Turbidity	Herlinveaux (1973) CAMDI #C81077HM2
			Temperature	Ryan recorder	?				
			Temperature, Salinity	Beckman meter	?				
69-0051B	DECIBAR, POG	May 23- July 3	Temperature Salinity	Industrial Instruments CTD	? ?	3	Fatty Basin (Barkley Sound)	O ₂ , secchi, plankton	Hardon (1969)
69-0061	CHS	Mar. 18-26	Water level	Foxboro	$\pm .015 \text{ m}$	3	Barkley Sound		MEDS WL Sen. #8552, #8553

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? = Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
69-0062	CHS	Oct. 1- Dec. 4	Water level	Ott, Ottboro	$\pm 1, .015$ m	3	Alberni Inlet, Barkley Sound, W. Vancouver Island		MEDS WL Stn. #8545, 8565, 8595
69-0064	Ramfield Marine Station	July 12/69- Oct. 1980	Temperature (surface) Salinity (surface)	Thermometer Salinometer	$?, \pm .2C^{\circ}$ $?, \pm .02^{\circ}/\text{oo}$	3	Barkley Sound		Giovando (1981)
70-0020A	VECTOR, UBC	May 27-29	Temperature Salinity	BT, Rev. therm. Salinometer	$[+ .2, .2C^{\circ}]$ $[+ .02, .03C^{\circ}]$ $\pm .003, [.02]^{\circ}/\text{oo}$	3	Offshore Vancouver Island	Secchi, O_2	IOUBC (1971) MEDS #181370010 NODC #18VT51028
70-0020C	VECTOR, UBC	July 25-30	Temperature Salinity	BT, Rev. therm. Salinometer	$[+ .2, .2C^{\circ}]$ $[+ .02, .03C^{\circ}]$ $\pm .003, [.02]^{\circ}/\text{oo}$	3	Muchalat Inlet, O_2 Alberni Inlet, Kashuth Inlet, Offshore Vancouver Island		IOUBC (1971) MEDS #181370014 NODC #18VT51030
70-0031	LAYMORE, POG	Mar. 5-17	Temperature Salinity	Blaett-Berman 9006 STD	$\pm .02, .04C^{\circ}$ $\pm .02, .04^{\circ}/\text{oo}$	3	B.C. Offshore		Dodimead (pers. comm.) MEDS #180270012
70-0032	CHS	June 12/70- Sept. 30/73 June 4, 1970- continuing	Water level Water level	Ottboro Ott	$\pm 7, .03$ m $\pm 1, .01$ m	3	Barkley Sound, West Vancouver Island		MEDS WL Stn. #8545, 8595
70-0039	ENDEAVOUR, UBC	Apr. 14-16	Temperature Salinity	BT, Rev. therm. Salinometer	$[+ .2, .2C^{\circ}]$ $[+ .02, .03C^{\circ}]$ $\pm .003, [.02]^{\circ}/\text{oo}$	3	Offshore Vancouver Island		IOUBC (1971) MEDS #181370008 NODC #18EN51027
70-0041	T. G. THOMPSON, U. Washington	May 23-26	Temperature Salinity	Rev. therm.? ?	$[+ .02, .03C^{\circ}]$?	3	B.C. Offshore	O_2 , PO_4 , NO_3 , SiO_3	MEDS #31TT18680 NODC #31TT51868
70-0042	HAKUHO-MARU, (Japan)	May 25	Temperature Salinity	Rev. therm.? ?	$[+ .02, .03C^{\circ}]$?	3	B.C. Offshore	O_2 , PO_4 , NO_2 , NO_3 , SiO_3 , pH	MEDS #49HHO7850 NODC #49UHS1827
70-0044	LAYMORE, UBC	Aug. 5-6	Temperature Salinity	BT, Rev. therm. Salinometer	$[+ .2, .2C^{\circ}]$ $[+ .02, .03C^{\circ}]$ $\pm .003, [.02]^{\circ}/\text{oo}$	3	Offshore Vancouver Island	O_2	IOUBC (1971) MEDS #181370015 NODC #18LY51031
70-0046	PROTEUS, (US)	Aug. 22	Temperature Salinity	Rev. therm.? ?	$[+ .02, .03C^{\circ}]$?	3	B.C. Offshore	O_2 , PO_4 , NO_2 , NO_3	MEDS #314T24270 NODC #314T52427

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?-Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
70-0047	E. P. ALBERNI, Pac. Biol. Stn.	Jan. 20-Nov. 4	Temperature Salinity Current	Beckman RS5-3 ?	? , [+ .10°] ? , [- .10°/oo] ?	3	Alberni Inlet	Fluorescence, NO ₃ , PO ₄ , SiO ₃ , Chl.a, plankton (species & abundance), fish (species, stomach contents, etc.), secchi, O ₂	Kask & Parker (1971)
70-0065	CHS	Dec. 3, 1970-continuing	Water level	Ort	+? , .01 m	3	Alberni Inlet		MEDS WL Stn. #8575
71-0066	MEDS	1970-continuing	Waves	Waverider	Amplitude +3% for .065-.03 Hz	3	West coast Vancouver Island		MEDS
71-0037	ENDEAVOUR, PBS	Mar. 5-21	Temperature Salinity	Bissett-Rerman 9006 STD	+ .02 , .04C° + .02 , .04°/oo	3	B.C. Offshore		Dodimaad (pers. comm.) MEDS #180271015
71-0038	H.J. STEWART, CHS	June 4-July 8	Water level Drift	Ottoboro, Foxboro Drogues	+? , .015 m ?	3	Quatsino Sound		CHS (1972) McIntosh (1971) MEDS WL STN. #8754, 8755, 8756
71-0048	AKADEMIK, KOROLEV, (USSR)	Jan. 25, 30	Temperature Salinity	Rev. therm.? ?	[+ .02 , .03C°] ?	2	Offshore Vancouver Island	O ₂ ?	MEDS #90AM03030
71-0049	VECTOR, UBC	Feb. 9	Temperature Salinity	Rev. therm. Salinometer	[+ .02 , .03C°] [+ .01 , .02°/oo]	3	Alberni Inlet		IOUBC (1972) MEDS #181371004 NODC #18VT51083
71-0050	VECTOR, UBC	March 6-7	Temperature Salinity	Rev. therm. Salinometer	[+ .02 , .03C°] [+ .01 , .02°/oo]	3	Rupert Inlet, Holberg Inlet	O ₂	IOUBC (1972) MEDS #181371008 NODC #18VT51087
71-0051	VECTOR, UBC	Apr. 21-22	Temperature Salinity	Rev. therm. Salinometer	[+ .02 , .03C°; [+ .01 , .02°/oo]	3	Rupert Inlet, Holberg Inlet		IOUBC (1972) MEDS #181371012 NODC #18VT51091
71-0052	AKADEMIK BERG, (USSR)	Aug. 30-Nov. 10	Temperature Salinity	Rev. therm.? ?	[+ .02 , .03C°] ?	2	B.C. Offshore		NODC #90AJ50500
71-0053	VECTOR, UBC	Sept. 21	Temperature Salinity	Rev. therm. Salinometer	[+ .02 , .03C°] [+ .01 , .02°/oo]	3	Alberni Inlet	O ₂	IOUBC (1972) MEDS #181371026 NODC #18VT51105

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.O.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Date rating number	Area	Concurrent measurements	Source or reference
71-0054	PARIZEAU, UBC	Oct. 27	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] [±.01, .02‰/‰]	3	Offshore Vancouver Island	O ₂	IOURC (1972) MEDS #181371029 NODC #18PZ51108
71-0055	ENDEAVOUR, UBC	Feb. 22-25	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] [±.01, .02‰/‰]	3	Offshore Vancouver Island	O ₂	IOURC (1972) MEDS #181371007 NODC #18EN51086
71-0056	T. G. THOMPSON, U. Washington	Mar. 2	Temperature Salinity	Rev. therm.? ?	[+.02, .03C°] ?	3	Off Cape Flattery	Chemical	MEDS #31TT18690 NODC #31TT51869
71-0057	ENDEAVOUR, UBC	May 11-19	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] [±.01, .02‰/‰]	3	B.C. Offshore	O ₂	IOURC (1972) MEDS #181371013 NODC #18EN51092
71-0058	T. G. THOMPSON, U. Washington	June 9-14	Temperature Salinity	Rev. therm.? ?	[+.02, .03C°] ?	3	Offshore Vancouver Island	O ₂ , PO ₄ , NO ₃ , SiO ₃	MEDS #31TT18480 NODC #31TT51848
71-0059	VECTOR, UBC	July 20-22	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] [±.01, .02‰/‰]	3	Offshore Vancouver Island	O ₂	IOURC (1972) MEDS #181371020 NODC #18VT51099
71-0060	G. B. KELEZ, (US)	Oct. 22- Nov. 3	Temperature Salinity	CTD	?	2	B.C. Offshore		MEDS #31KE84130 NODC #31KE58413
71-0061	OCEANOGRAPHER, (US)	Oct. 14- Nov. 19	Temperature Salinity	CTD	?	2	Offshore Vancouver Island		MEDS #31OC85160 NODC #31OC58516
71-0062A	Pac. Biol. Station, Nanaimo	Feb. 17- Mar. 11	Current profiles	?	?	2	Alberni Inlet	Ecological study	CAMDI #C81076Y01
71-0062B	Pac. Biol. Station, Nanaimo	July 21-22	Current profiles Conductivity	Chesapeake Bay drogue ?	? ?	3	Alberni Inlet		Parker, Sibert & Terhune (1972)
71-0065A	Pac. Biol. Station, Nanaimo	June 24	Conductivity	CM ² meter	?, [±.1‰/‰]	3	Alberni Inlet	O ₂ , Chl.a, NO ₃ , NO ₂ , PO ₄ , secchi	Parker, Mackenzie-Grieve & Kask (1974)
71-0065B	Pac. Biol. Station, Nanaimo	Aug. 9-18	Temperature Salinity	Beckman meter, CM ² meter	?, [±.1C°] ?, [±.1‰/‰]	3	Alberni Inlet	O ₂ , Chl.a, NO ₃ , NO ₂ , PO ₄ , secchi	Parker, Mackenzie-Grieve & Kask (1974)

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? = Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
71-0065C	E.P. ALBERNI, Pac. Biol. Station, Nanaimo	Apr. 29	Temperature Salinity	Beckman meter	?,[$\pm .1^{\circ}\text{C}$] ?,[$\pm .1^{\circ}/\text{oo}$]	3	Alberni Inlet	Secchi, plankton	Parker, Kask & Windecker (1976)
71-0065D	E.P. ALBERNI, Pac. Biol. Station, Nanaimo	June 9-10	Conductivity	CH ² meter	?,[$\pm .1^{\circ}/\text{oo}$]	3	Alberni Inlet	Secchi, plankton	Parker, Kask & Windecker (1976)
71-0097	Utah Mines Ltd.	March 1971 -continuing	Temperature Salinity	Rev. therm. Titration	[$\pm .02, .03^{\circ}\text{C}$] [$\pm .01, .02^{\circ}/\text{oo}$]	3	Rupert Inlet, Holberg Inlet, Quatsino Sound	O ₂ , pH, metal concentrates, alkalinity, benthos, sus- pended solids, turbidity, sedi- ment, plankton	Utah Mines Ltd. quarterly reports Evans & Polling (1975) Pelletier (1977)
71-0099A	PARIZEAU, CHS	Feb. 2- May 13	Water level Current	Ottboro, Foxboro Neyrpic, Drift pole	$\pm ? , .015 \text{ m}$? ?	2	Alberni Inlet, Uchucklesit Inlet		MEDS WL Stn. #8556, 8558, 8559, 8560, 8562, 8564, 8565, 8570
71-0099B	UBC	Feb. 12- May 20	Conductivity	In-situ 'chain'	$\pm 1, 2 \text{ mmhos/cm}$	3	Alberni Inlet	Wind	Farmer (1972)
71-0104	DOT Lightstation at Cape Reale	Jan. 1971- present	Temperature (surface) Salinity (surface)	Thermometer Salinometer	?,[$\pm .2^{\circ}\text{C}$] ?,[$\pm .02^{\circ}/\text{oo}$]	3	Barkley Sound		Giovando (1981)
72-0050	OGON, (USSR)	July 15-17, Sept. 6-16, Nov. 3-4	Temperature Salinity	Rev. therm.? ?	[$\pm .02, .03^{\circ}\text{C}$] ?	2	Offshore Vancouver Island	PO ₄ , O ₂	MEDS #900P04900 NODC #900P50490
72-0051	BARTLETT, (US)	Aug. 2-4	Temperature Salinity	Rev. therm.? ?	[$\pm .02, .03^{\circ}\text{C}$] ?	3	B.C. Offshore		MEDS #314U83080 NODC #314U58308
72-0052	LAYMORE, UBC	Oct. 24	Temperature Salinity	Rev. therm. Salinometer	[$\pm .02, .03^{\circ}\text{C}$] $\pm .003, [.02]^{\circ}/\text{oo}$	3	Offshore Vancouver Island	O ₂	IOURC (1973) MEDS #181372028
73-0040	CHS	Feb. 23- Dec. 31	Water level	Hagenuk, Ottthoro	$\pm ? , .1 \text{ m}$	3	Langara Point		MEDS WL Stn. #9964

Table 2 (Cont'd): Summary listing of data sets.

Date Set No.	Ship or collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used + unknown	Estimate of data precision and accuracy	Data set number	Area	Concurrent measurements	Source or reference
73-0050	<u>PARTICULAR,</u> <u>UNC.</u>	Mar. 6-8	Temperature Salinity	Sea, shore Salinometer	$\pm .02, .03^{\circ}\text{C}$ $\pm .002, .01^{\circ}/\text{‰}$	3	Entrance to Strait of Juan de Fuca		IMBC (1974) WDS 841373007
73-0051	<u>VECTOR,</u> <u>UNC.</u>	Sept. 13	Temperature Salinity	Sea, shore Salinometer	$\pm .02, .03^{\circ}\text{C}$ $\pm .002, .01^{\circ}/\text{‰}$	3	Alberni Inlet	O_2	IMBC (1974) WDS 4181373030
73-0053	<u>CALIOUS,</u> <u>PAC. Biol.</u> <u>Stn.</u>	Mar. 20	Temperature Salinity	Beckman meter	$\pm .1, .1^{\circ}\text{C}$ $\pm .1, .1^{\circ}/\text{‰}$	1	Alberni Inlet	$\text{O}_2, \text{PO}_4, \text{NO}_3, \text{NH}_4, \text{CHL-a}$	Parker et al. (1973b)
73-0054	<u>CALIOUS,</u> <u>PAC. Biol.</u> <u>Station</u>	Apr. 13	Temperature Salinity	Beckman meter	$\pm .1, .1^{\circ}\text{C}$ $\pm .1, .1^{\circ}/\text{‰}$	3	Alberni Inlet	$\text{O}_2, \text{PO}_4, \text{NO}_3, \text{NH}_4, \text{CHL-a}$	Parker et al. (1973b)
73-0056a	<u>VECTOR, or</u> <u>LAYDENE,</u> <u>Pac. Env. Inst.</u>	May 3-4	Temperature	Sea, shore	$\pm .01, .02^{\circ}\text{C}$	2	Quatsino Sound, Nanaimo Inlet	pH, O_2	Barry, Shum & Christie (1977)
73-0056b	<u>VECTOR, or</u> <u>LAYDENE,</u> <u>Pac. Env. Inst.</u>	July 14-23	Temperature Salinity	Sea, shore Hydrometer	$\pm .01, .02^{\circ}\text{C}$ $\pm .2, .2^{\circ}/\text{‰}$	1	Quatsino Sound, Nanaimo Inlet	pH, O_2	Barry, Shum & Christie (1977)
73-0119	<u>OCEANOGRAPHER,</u> <u>NOAA</u>	Aug. 22- Sept. 20	Water level Current Temperature Salinity	Tidal gauge Dredge Pipette NOM CT5	$\pm .0005^{\circ}\text{C}$ $\pm .02^{\circ}/\text{‰}$	3	Offshore Vancouver Island		Patterson (1975) Hobbs (1975)
73-0128	<u>CALIOUS,</u> <u>Pac. Biol.</u> <u>Stn.</u>	Apr. 4-12	Temperature Salinity	Beckman meter	$\pm .1, .1^{\circ}\text{C}$ $\pm .1, .1^{\circ}/\text{‰}$	3	Alberni Inlet	Sechi, zooplankton	Parker & Nash (1976)
73-0128	<u>CALIOUS,</u> <u>Pac. Biol.</u> <u>Stn.</u>	May 1-4	Temperature Salinity	Beckman meter	$\pm .1, .1^{\circ}\text{C}$ $\pm .1, .1^{\circ}/\text{‰}$	3	Alberni Inlet	Sechi, zooplankton	Parker & Nash (1976)
73-0124c	<u>CALIOUS,</u> <u>Pac. Biol.</u> <u>Stn.</u>	May 22-23	Temperature Salinity	Beckman meter	$\pm .1, .1^{\circ}\text{C}$ $\pm .1, .1^{\circ}/\text{‰}$	3	Alberni Inlet	Sechi, zooplankton	Parker & Nash (1976)
73-0124d	<u>CALIOUS,</u> <u>Pac. Biol.</u> <u>Stn.</u>	July 13-15	Temperature Salinity	Beckman meter	$\pm .1, .1^{\circ}\text{C}$ $\pm .1, .1^{\circ}/\text{‰}$	3	Alberni Inlet	Sechi, zooplankton	Parker & Nash (1976)

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	SRIC or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used (Unknown)	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
74-0055	PRIBBY, (USNR)	Feb. 9	Temperature Salinity	Rec. therm-7 T	$\pm .02, \pm .016^\circ$ T	2	B.C. Offshore	O_2	HEBS #90945370
74-0056	HINGST, (US)	Aug. 29-30	Temperature Salinity	Rev. therm-7 T	$\pm .02, \pm .03^\circ$ T	3	B.C. Offshore		HEBS #119126530 NOBC #119152653
74-0057	PARIZEAU, HEBS/TOS	Nov. 28, 1974- Apr. 8, 1975	Temperature Salinity Current Water level	Bissett-Berman CTD Aanderaa NCHC TGIA	T $\pm 1\text{cm/s}$ or $\pm 2\%$ speed $\bar{P}$ $\pm .004, \pm .04$ psi $\bar{P}$	3	Offshore Vancouver Island, Union Seamount		Huyer, Gagnon & Ruggitt (1976) Crawford, Rapatz & Ruggitt (1981)
74-0058	EPS	May 30- Sept. 24	Temperature Salinity	Thermometer Hydrometer-T	$\pm .1, \pm .3^\circ$ $\pm .2, \pm .5^\circ/\text{oo}$	1	Hupert Inlet, Holberg Inlet	Turbidity, O_2 , pH, CO_2 , NO_3 , NO_2 , NO_2 , SiO_2 , Chl. a, plankton	Goyette & Nelson (1977) Sullivan (1979a)
74-0059	MacMillan Blondel Ltd.	May 1-2, June 12-16, Aug. 14-16, Oct. 22-29	Temperature Salinity	Beckman 855-2	$T_1 \pm 0.10^\circ$ $T_2 \pm 0.10^\circ/\text{oo}$	1	Alberni Inlet	O_2 , pH, susp. solids, SO_2 , NO_3 , PO_4 , B , Zn , Chl. a, secchi	Kerckhof (1975)
74-0105	CHS	Feb. 20- Dec. 31	Water level	RTG	$\pm .01 \text{ m}$	1	Barkley Sound		HEBS WL Sta. #8343
74-0106	CHS	May 11, 1974- July 2, 1975	Water level	TGIA	$\pm .006, \pm .04$ psi $\bar{P}$	3	Howe Seamount		Crawford, Rapatz & Ruggitt (1981)
74-0107	CHS	Aug. 22- Sept. 12	Water level	Forkbord	$\pm .015 \text{ m}$	3	Alberni Inlet		HEBS WL Sta. #8356
74-0112	Mar. 1, TOS (Coastal Group)	Apr. 20- May 7	Current	Aanderaa BCHC	$\pm 1\text{cm/s}$ or $\pm 2\%$ speed $\bar{P}$	1	Quatsino Sound		Sturck & Farmer (1976)
75-0070	CHS	May 20- Aug. 7 Mar. 11- continuing	Water level Water level	Forkbord Hagenok/Olson	$\pm .015 \text{ m}$ $\pm .1 \text{ m}$	1	Barkley Sound, Langate Point		HEBS WL Sta. #8385, 8966
75-0079	SOUTWELL, (US)	Mar. 79-80	Temperature Salinity	CTD	T	2	B.C. Offshore		HEBS #110064330 NOBC #110058453
75-0080	ENDEAVOUR, TOS (Offshore Group)	Aug. 20, Sept. 7	Temperature Salinity	Outillage BT00 CTD	$\pm .1, \pm .01^\circ$ $\pm .2, \pm .02^\circ/\text{oo}$	3	B.C. Offshore	O_2	EOS (1970) HEBS #181575010

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?-Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
75-0081	EPS	May 6- Nov. 28	Temperature Salinity	Thermometer Hydrometer?	[+.3C°] [+.2, .20/oo]	3	Rupert Inlet, Holberg Inlet	O ₂ , pH, CO ₃ , NO ₃ , NO ₂ , NH ₃ , SiO ₃ , Chl.a	Sullivan (1979a)
75-0084A	LAYMORE, or VECTOR, Pac. Env. Inst.	July 29-31	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] [+.01, .020/oo]	3	Quatsino Sound, Neroutas Inlet	O ₂	Davis, Shand & Christie (1977)
75-0084B	LAYMORE, or VECTOR, Pac. Env. Inst.	Nov. 25-26	Temperature Salinity	Rev. therm.? ?	[+.02, .03C°] ?	3	Quatsino Sound, Neroutas Inlet	O ₂	Davis, Shand & Christie (1977)
75-0121	Charter Boat, IOS (Coastal Group)	May 14- Aug. 21	Current	Aanderaa RCM4	+1cm/s or 2% speed @	3	Rupert Inlet, Holberg Inlet, Quatsino Sound		Stucchi (pers. comm.)
75-0122	Penny Sue, IOS (Coastal Group)	Aug. 7- Dec. 9	Current Temperature Salinity	Aanderaa RCM4 Guildline 8700 Analog CTD	+1cm/s or 2% speed @ +?, .02C° +?, .050/oo	3	Rupert Inlet, Holberg Inlet, Quatsino Sound, Neroutas Inlet		Stucchi (pers. comm.)
75-0123	Charter Boat, IOS (Coastal Group)	Dec. 5, 1975- Apr. 12, 1976	Current	Aanderaa RCM4	+1cm/s or 2% speed @	3	Rupert Inlet, Holberg Inlet, Quatsino Sound		Stucchi (pers. comm.)
75-0128	Charter Boat, IOS (Coastal Group)	Mar. 14- May 13	Current	Aanderaa RCM4	+1cm/s or 2% speed @	3	Quatsino Sound, Rupert Inlet, Holberg Inlet		Stucchi & Farmer (1976)
76-0067	CAMPBELL, (US)	Sept. 1-4	Temperature Salinity	Rev. therm.? ?	[+.02, .03C°] ?	3	Offshore Queen Charlottes		MEDS #31CM85090 NODC #31CM58509
76-0068	EPS	May 30- Oct. 3	Temperature Salinity	Thermometer Salinometer	?, [+.3C°] [+.01, .020/oo]	3	Rupert Inlet, Holberg Inlet	O ₂ , pH, CO ₃ , NO ₃ , NO ₂ , NH ₃ , SiO ₃ , Chl.a, turbidity	Goyette & Nelson (1977) Sullivan (1979a)
76-0069A	LAYMORE, or VECTOR, Pac. Env. Inst.	Jan. 13-14	Temperature Salinity	? ?	? ?	2	Quatsino Sound, Neroutas Inlet	O ₂	Davis, Shand & Christie (1977)
76-0069B	LAYMORE, or VECTOR, Pac. Env. Inst.	June 8-9	Temperature Salinity	? ?	? ?	2	Quatsino Sound, Neroutas Inlet	O ₂	Davis, Shand & Christie (1977)

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?-Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
76-0071A	EPS	Nov. 16	Temperature Salinity	Thermometer Salinometer	? , {+.3C°} [+-.01, .02°/oo]	3	Muchalat Inlet	O ₂ , pH, CO ₃ , NO ₃ , NO ₂ , NH ₃ , SiO ₃ , Chl.a, transmissivity	Sullivan (1979b)
76-0071B	EPS	Mar.12, 1977	Temperature Salinity	Thermometer Salinometer	? , {+.3C°} [+-.01, .02°/oo]	3	Muchalat Inlet	O ₂ , benthos	Sullivan (1979b)
76-0071C	EPS	May 26, 1977	Temperature Salinity	Thermometer Salinometer	? , {+.3C°} [+-.01, .02°/oo]	3	Muchalat Inlet	O ₂ , pH, CO ₃ , NO ₃ , NO ₂ , NH ₃ , SiO ₃ , Chl.a, transmissivity	Sullivan (1979b)
76-0071D	EPS	Aug.17, 1977	Temperature Salinity	Thermometer Salinometer	? , {+.3C°} [+-.01, .02°/oo]	3	Muchalat Inlet	O ₂ , pH, CO ₃ , NO ₃ , NO ₂ , NH ₃ , SiO ₃ , Chl.a, transmissivity	Sullivan (1979b)
76-0071E	EPS	Sept.28,1977	Temperature Salinity	Thermometer Salinometer	? , {+.3C°} [+-.01, .02°/oo]	3	Muchalat Inlet	O ₂ , pH, CO ₃ , NO ₃ , NO ₂ , NH ₃ , SiO ₃ , Chl.a, transmissivity	Sullivan (1979b)
76-0072	VECTOR, UBC	Aug. 25-26	Temperature Salinity	Rev. therm. Salinometer	{+.02, .03C°} [+-.003, .02°/oo]	3	Rupert Inlet	O ₂	IOUBC (1977)
76-0073	VECTOR, UBC	Nov. 23-24	Temperature Salinity	Rev. therm. Salinometer	{+.02, .03C°} [+-.003, .02°/oo]	3	Rupert Inlet		IOUBC (1977)
76-0074	VECTOR, UBC	July 12-16	Temperature Salinity	Rev. therm. Salinometer	{+.02, .03C°} [+-.003, .02°/oo]	3	Alberni Inlet, Muchalat Inlet,	O ₂	IOUBC (1977)
76-0101	NOAA	Aug. 1976- continuing	Wave	Magnavox, General Dynamics; UHF/HF	?	3	B.C. Offshore		NOAA, on file
76-0102	CHS	Jan. 1- continuing	Water level	Ott	+?, .01 m	3	Darkley Sound		MEDS WL Stn. #8545
76-0103	Charter Boat, IOS (Coastal Group)	Apr. 7- May 27	Current	Aanderaa RCM4	+1cm/s or 2% speed @	3	Rupert Inlet, Holberg Inlet, Quatsino Sound		Stucchi (pers. comm.)

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? = Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
77-0057A	PARIZEAU, IOS	May 17-22	Temperature	Guildline 8100, 8700 CTD	$7, \pm 0.03^\circ$	3	Queen Charlotte Sound	O_2 , NO_3 , PO_4 , SiO_3 , bottom sediments	Huggett et al. (1981) Thomson, Huggett & Kuwahara (1981)
			Salinity	Guildline 8100, 8700 CTD	$7, \pm 0.05^\circ/oo$				
			Current	Salinometer	$\{ \pm 0.1, \pm 0.2^\circ/oo \}$				
			Water level	Aanderaa RCM4 750A	$\pm 1cm/s, \pm 5^\circ @$ $\{ \pm 0.001, \pm 0.1X$ full scale range]				
77-0057B	ENDEAVOUR, IOS	July 14-22	Temperature	Guildline 8100, 8700 CTD	$7, \pm 0.03^\circ$	3	Queen Charlotte Sound	O_2 , NO_3 , PO_4 , SiO_3	Huggett et al. (1981) Thomson, Huggett & Kuwahara (1981)
			Salinity	Rev. therm. Guildline 8100, 8700 CTD	$\{ \pm 0.2, \pm 0.3^\circ \}$ $7, \pm 0.05^\circ/oo$				
			Current	Salinometer Aanderaa RCM4	$\{ \pm 0.1, \pm 0.2^\circ/oo \}$ $\pm 1cm/s, \pm 5^\circ @$				
77-0057C	PARIZEAU, IOS	Sept. 20-27	Temperature	Guildline 8100, 8700 CTD	$\pm 7, \pm 0.03^\circ$	3	Queen Charlotte Sound	O_2	Thomson, Huggett & Kuwahara (1981)
			Salinity		$\pm 7, \pm 0.05^\circ/oo$				
77-0081	CAMPBELL, (US)	Jan. 29-31	Temperature	7CTD		2	Offshore Queen Charlottes		MEDS #31CM85290 NODC #31CM8529
			Salinity						
77-0082	CAMPBELL, (US)	Sept. 5-6	Temperature	7CTD		2	Offshore Queen Charlottes		MEDS #31CM85350 NODC #31CM8535
			Salinity						
77-0083	IOS, Dobrocky Seatech Ltd.	Nov. 18-22	Temperature	Rev. therm.	$\{ \pm 0.2, \pm 0.3^\circ \}$	3	Alberni Inlet	O_2	Buckingham (1980)
			Salinity	?	?				
			Current	Aanderaa	$\pm 1cm/s$ or 2% speed @				
77-0084	VECTOR, EPS	June 18	Temperature	?		3	Offshore Queen Charlottes, Tsau Sound	O_2 , NO_3 , PO_4 , SiO_3 , C , pH, $Chl.a$, bottom sediment, CO_2 , transmissivity, benthos	Brothers (1978)
			Salinity						
77-0085	PARIZEAU, Chemex Labs Ltd., IOS (Ocean Chemistry)	Nov. 7-11	Temperature	Rev. therm.	$\{ \pm 0.2, \pm 0.3^\circ \}$	3	Offshore Vancouver Island	O_2 , bottom sediment	Twaites, Doyle & Armanini (1978)
			Salinity	Salinometer	$\{ \pm 0.1, \pm 0.2^\circ/oo \}$				

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
78-0028A	IMPERIAL TOFINO, UBC	Mar. 14	Salinity (surface)	Salinometer	$\pm .003, ?^{\circ}/\text{oo}$	3	B.C. Offshore	Chl. a, plankton (species/ abundance)	Dilke, McKinnell & Perry (1979)
78-0028C	IMPERIAL TOFINO, UBC	Aug. 12-20	Temperature (surface) Salinity (surface)	Engine intake thermometer Salinometer	? $\pm .003, ?^{\circ}/\text{oo}$	3	B.C. Offshore	Chl. a, plankton (species/ abundance)	Dilke, McKinnell & Perry (1979)
78-0028D	IMPERIAL TOFINO, UBC	Sept. 11-27	Temperature (surface) Salinity (surface)	Engine intake thermometer Salinometer	? $\pm .003, ?^{\circ}/\text{oo}$	3	B.C. Offshore	Chl. a, plankton (species/ abundance)	Dilke, McKinnell & Perry (1979)
78-0028E	IMPERIAL TOFINO, UBC	Oct. 18-26	Temperature (surface) Salinity (surface)	Engine intake thermometer Salinometer	? $\pm .003, ?^{\circ}/\text{oo}$	3	B.C. Offshore	Chl. a, plankton (species/ abundance)	Dilke, McKinnell & Perry (1979)
78-0028F	IMPERIAL TOFINO, UBC	Jan. 2-7, 1979	Temperature (surface) Salinity (surface)	Engine intake thermometer Salinometer	? $\pm .003, ?^{\circ}/\text{oo}$	3	B.C. Offshore	Chl. a, plankton (species/ abundance)	Dilke, McKinnell & Perry (1979)
78-0064	CAMPBELL, (US)	Feb. 9	Temperature Salinity	CTD	? ?	2	B.C. Offshore (off Dixon Entrance)		MEOS #31CM5340 NODC #31CM58534
78-0066	PARIZEAU, Chemex Labs Ltd. & IOS (Ocean Chemistry)	Feb. 6-10	Temperature Salinity	Rev. therm. Salinometer	$[+ .02, -.03^{\circ}]$ $[+ .01, -.02^{\circ}/\text{oo}]$	3	Alberni Inlet	O ₂ , bottom sediment	Twiltes, Doyle & Armanini (1978)
78-0067	VECTOR, UBC	Sept. 5-22	Temperature Salinity	Rev. therm. Salinometer	$[+ .02, -.03^{\circ}]$ $\pm .003, [.02]^{\circ}/\text{oo}$	3	Rupert Inlet	O ₂	IOUBC (1979)
78-0101	IOS (Coastal Zone)	Sept. 13/78- Jan. 17/79	Water level	AML 750A	$[+ .001, .01\%$ full scale range]	3	Rupert Inlet, Holberg Inlet		Stucchi (pers. comm.)
79-0032	RIVTOW VIKING, Seaken, Ship- of-Opportunity	July 7-12	Temperature (3 m) Salinity (3 m)	Engine intake thermometer Salinometer	? $[+ .01, -.02^{\circ}/\text{oo}]$	3	Offshore Vancouver Island	NO ₂ , NO ₃ , PO ₄ , Chl. a, fluorescence	Borstad, Louttit & Gale (1979)

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?-Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
79-0036C	IMPERIAL TOFINO Ship-of-Opportunity	July 13-19	Temperature (surface) Salinity (surface)	Engine Intake thermometer Salinometer	7 [$\pm .01, .02^{\circ}/\text{‰}$]	3	Offshore Queen Charlotte	NO_3 , NO_2 , PO_4 , SiO_3 , Chl-a	Perry et al. (1981)
79-0036E	IMPERIAL TOFINO Ship-of-Opportunity	Apr. 10-19 1980	Temperature (surface) Salinity (surface)	Engine Intake thermometer Salinometer	7 [$\pm .01, .02^{\circ}/\text{‰}$]	3	Offshore Queen Charlotte	NO_3 , NO_2 , PO_4 , SiO_3 , Chl-a	Perry et al. (1981)
79-0039	PANDORA II, IOS (Tides & Currents, Off-shore Oceanography), CODE	Aug. 3-11	Temperature Salinity	Guildline 8701 CTD	[$\pm .005, .01^{\circ}$] [$\pm .005, .02^{\circ}/\text{‰}$]	3	Offshore Vancouver Island	O_2	Thomson, Crawford & Huggett (1984a)
79-0065	OCEAN KING, IOS (Tides & Currents)	Apr. 18, 1979- Jan. 26, 1980	Water level	750A	[$\pm .001, .01\%$ full scale range]	3	West coast Vancouver Island		Woodward (pers. comm.)
79-0068	VECTOR, IOS (Coastal Zone), CODE	Apr. 18-19 Apr. 19, 1979- Dec. 31, 1980	Temperature Salinity Current	Guildline 8700 MK II CTD Aanderaa RCM4, Neil Brown	[$\pm .005, .01^{\circ}$] [$\pm .005, .02^{\circ}/\text{‰}$] +1cm/s or 2% speed @ ?	3	Alberni Inlet, Offshore Vancouver Island	O_2	Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)
79-0069	PARIZEAU, IOS (Tides & Currents, Off-shore Oceanography), CODE	May 6-12 May 6- Oct. 10 May 9- Sept. 12	Temperature Salinity Current Wave Water level	Guildline 8701 CTD Aanderaa RCM4 Waverider 750A	[$\pm .005, .01^{\circ}$] [$\pm .005, .02^{\circ}/\text{‰}$] +1cm/s or 2% speed @ Amplitude $\pm 3\%$, .065-.03 Hz [$\pm .001, .01\%$ full scale range]	-	Offshore Vancouver Island	O_2	Thomson, Crawford & Huggett (1984a)
79-0070	ENDEAVOUR, IOS (Ocean Ecology)	May 22-28	Temperature Salinity	Guildline 8701 CTD	$\pm .003, .01^{\circ}$ [$\pm .005, .01^{\circ}/\text{‰}$]	3	Offshore Vancouver Island	Fluorescence, plankton, NO_3 , PO_4 , O_2 , SiO_3 , Chl-a , benthos	Hill et al. (1982a)
79-0071A	PARIZEAU, IOS (Tides & Currents, Off-shore Oceanography), CODE	Sept. 10-27 Sept. 14/79- May 10/80	Temperature Salinity Current Water level	Guildline 8701 CTD Aanderaa RCM4, CHDR 750A, TC2A AM12	[$\pm .005, .01^{\circ}$] [$\pm .005, .02^{\circ}/\text{‰}$] +1cm/s or 2% speed @ [$\pm .001, .01\%$ full scale range]	3	Offshore Vancouver Island	O_2	Thomson, Crawford & Huggett (1984a)

Data Set Y-D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?-Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
79-0071C	PARIZEAU, IOS (Coastal Zone), CODE	Oct. 4-13 Oct. 3, 1979- Feb. 9, 1980	Temperature Salinity Current	Guildline 8700 MK II CTD Aanderaa RCM4	$\{\pm .005, .01^{\circ}\}$ $\{\pm .005, .02^{\circ}/\text{oo}\}$ $\pm 1\text{cm/s}$ or 2% speed @	3	Alberni Inlet, O_2 Offshore Vancouver Island		Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)
79-0072	PARIZEAU, IOS (Coastal Zone)	Nov. 26- Dec. 6 Nov. 19, 1979- Feb. 9, 1980	Temperature Salinity Current Water Level	Guildline 8701 CTD Aanderaa RCM4 AML 750A	$\{\pm .005, .01^{\circ}\}$ $\{\pm .005, .02^{\circ}/\text{oo}\}$ $\pm 1\text{cm/s}$ or 2% speed @ $\{\pm .001, .01\}$ Full scale range]	3	Alberni Inlet, O_2 Offshore Vancouver Island		Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)
79-0073	PARIZEAU, IOS (Coastal Zone), CODE	May 20, 1979- Apr. 22, 1980 May 18-24	Current Temperature Salinity	Aanderaa RCM4 Guildline 8700 MK II CTD	$\pm 1\text{cm/s}$ or 2% speed @ $\{\pm .005, .01^{\circ}\}$ $\{\pm .005, .02^{\circ}/\text{oo}\}$	3	Alberni Inlet, Offshore Vancouver Island		Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)
79-0074	ENDEAVOUR, IOS (Coastal Zone), CODE	Jan. 30- Feb. 4 Jan. 18- Apr. 21	Temperature Salinity Water level	Guidline 8700 MK II CTD AML 750A	$\{\pm .005, .01^{\circ}\}$ $\{\pm .005, .02^{\circ}/\text{oo}\}$ $\{\pm .001, .01\}$ full scale range]	3	Alberni Inlet, O_2 Micalat Inlet, Offshore Vancouver Island		Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)
79-0075	PANDORA II, IOS (Coastal Zone), CODE	Mar. 8-9	Temperature Salinity	Guidline 8700 MK II CTD	$\{\pm .005, .01^{\circ}\}$ $\{\pm .005, .02^{\circ}/\text{oo}\}$	3	Alberni Inlet, O_2 Offshore Vancouver Island		Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)
79-0076	PANDORA II, IOS (Coastal Zone), CODE	June 21-22	Temperature Salinity	Guidline 8700 MK II CTD	$\{\pm .005, .01^{\circ}\}$ $\{\pm .005, .02^{\circ}/\text{oo}\}$	3	Alberni Inlet, O_2 Offshore Vancouver Island		Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)
79-0077	VECTOR, IOS (Coastal Zone)	Aug. 22-23 Aug. 23- Oct. 11	Temperature Salinity Current	Guidline 8701 CTD Aanderaa RCM4	$\{\pm .005, .01^{\circ}\}$ $\{\pm .005, .02^{\circ}/\text{oo}\}$ $\pm 1\text{cm/s}$ or 2% speed @	3	Alberni Inlet O_2		Lee & Stucchi (1983)
79-0078	VECTOR, IOS (Ocean Ecology)	July 4-11	Temperature Salinity	Guidline 8701 CTD	$\pm .003, .01^{\circ}$ $\pm .005, .01^{\circ}/\text{oo}$	3	Offshore Vancouver Island	Fluorescence, plankton, NO_3 , PO_4 , O_2 , SiO_4 , Chl. a, benthos	Hill et al. (1982a)

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? = Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
79-0079	VECTOR, IOS (Ocean Ecology)	Aug. 22-29	Temperature Salinity	CuIdline 8701 CTD	+0.003, .01C° +0.005, .01°/oo	3	Alberni Inlet, Offshore Vancouver Island	Fluorescence, plankton, NO ₃ , PO ₄ , O ₂ , SiO ₃ , Chl.a, benthos	Hill et al. (1982a)
79-0080	VECTOR, UBC	Feb. 17- Mar. 7	Temperature Salinity	Rev. therm. Salinometer	[+0.02, .03C°] +0.003, (.02)°/oo	3	Rupert Inlet	O ₂	IOUSC (1980)
79-0081A	RIVTOW VIKING, Seakem Ocean. for IOS	Apr. 29- May 3	Temperature (surface) Salinity (surface)	Engine intake thermometer Salinometer	? [+0.01, .02°/oo]	3	Offshore Vancouver Island	NO ₃ , NO ₂ , PO ₄ , Chl.a, plankton	Borstad et al. (1980)
79-0081B	RIVTOW VIKING, Seakem Ocean. for IOS	May 25-29	Temperature (surface) Salinity (surface)	Engine intake thermometer Salinometer	? [+0.01, .02°/oo]	3	Offshore Vancouver Island	NO ₃ , NO ₂ , PO ₄ , Chl.a, plankton	Borstad et al. (1980)
79-0081C	RIVTOW VIKING, Seakem Ocean. for IOS	July 9-12	Temperature (surface) Salinity (surface)	Engine intake thermometer Salinometer	? [+0.01, .02°/oo]	3	Offshore Vancouver Island	NO ₃ , NO ₂ , PO ₄ , Chl.a, plankton	Borstad et al. (1980)
79-0081D	RIVTOW VIKING, Seakem Ocean. for IOS	Aug. 10-17	Temperature (surface) Salinity (surface)	Engine intake thermometer Salinometer	? [+0.01, .02°/oo]	3	Offshore Vancouver Island	NO ₃ , NO ₂ , PO ₄ , Chl.a, plankton	Borstad et al. (1980)
79-0081E	RIVTOW VIKING, Seakem Ocean. for IOS	Sept. 8-11	Temperature (surface) Salinity (surface)	Engine intake thermometer Salinometer	? [+0.01, .02°/oo]	3	Offshore Vancouver Island	NO ₃ , NO ₂ , PO ₄ , Chl.a, plankton	Borstad et al. (1980)
79-0081F	RIVTOW VIKING, Seakem Ocean. for IOS	Oct. 20-30	Temperature (surface) Salinity (surface)	Engine intake thermometer Salinometer	? [+0.01, .02°/oo]	3	Offshore Vancouver Island	NO ₃ , NO ₂ , PO ₄ , Chl.a, plankton	Borstad et al. (1979)
80-0056	PARIZEAU, IOS (Tides & Currents, Offshore Oceanography), CODE	Jan. 14-27 Jan. 22-May 2 Jan. 19- Sept. 15	Temperature Salinity Current Water level	CuIdline 8701 CTD Aanderaas RCM4 CMOR Geodyne 750A, AM12 TG2A	[+0.005, .01C°] [+0.005, .02°/oo] +1cm/s or 2% speed @ ? ? [+0.001, .01% full scale range]	3	Offshore Vancouver Island	O ₂	Thomson, Crawford & Huggett (1984b)

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
80-0057	PARIZEAU, IOS (Coastal Zone), CODE	Feb. 8-13 Feb. 10- July 26	Temperature Salinity Current	Guildline 8700 MK II CTD Aanderaa RCM4	[+.005, .01C°] [±.005, .02°/oo] +1cm/s or 2% speed @	3	Alberni Inlet, Nootka Sound, Offshore Vancouver Island	O ₂	Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)
80-0058	PARIZEAU, IOS (Coastal Zone), CODE	Apr. 21-25 Apr. 25- July 26	Temperature Salinity Current	Guildline 8700 MK II CTD Aanderaa RCM4	[+.005, .01C°] [±.005, .02°/oo] +1cm/s or 2% speed @	3	Alberni Inlet, Offshore Vancouver Island	O ₂ ?	Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)
80-0059	PARIZEAU, IOS (Offshore Oceanography, Tides & Currents), CODE	Apr. 30- May 16 May 7- Sept. 15 May 7- Sept. 15	Temperature Salinity Current Water level Micro-structure (temperature, velocity)	Guildline 8701 CTD Aanderaa RCM4 CMDR, Geodyne AM12, 750A TG2A, Oct Camel II	[+.005, .01C°] [±.005, .02°/oo] +1cm/s or 2% speed @ ? [+.001, .1% full scale range] +?, .1C°	3	Offshore Vancouver Island	O ₂ , SiO ₄ , NO ₃ , PO ₄ , (Ocean Ecology), biological wood borers (POG)	Thomson, Crawford & Huggett (1984b) Lueck, Crawford & Osborn (1983)
80-0060	PARIZEAU, IOS (Coastal Zone), CODE	June 12-14 June 13- Oct. 22 June- Sept. 20	Temperature Salinity Current	Guildline 8700 MK II CTD Aanderaa RCM4 Cyclesonde (UBC) Kaiko profiling CM ?	[+.005, .01C°] [±.005, .02°/oo] +1cm/s or 2% speed @ ? ?	3	Alberni Inlet, Offshore Vancouver Island	O ₂	Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)
80-0061	VECTOR, IOS (Ocean Ecology)	June 4-8	Temperature Salinity	Guildline 8701 CTD	+ .003, .01C° ±.005, .02°/oo	3	Offshore Vancouver Island	O ₂ , plankton, Chl.a, NO ₃ , PO ₄ , SiO ₃	Hill et al. (1982b)
80-0062	VECTOR, IOS (Ocean Ecology)	July 29- Aug. 7	Temperature Salinity Drift	Guildline 8701 CTD Drogues	+ .003, .01C° ±.005, .02°/oo	3	Offshore Vancouver Island	O ₂ , plankton, Chl.a, NO ₃ , PO ₄ , SiO ₃	Hill et al. (1982b)
80-0063	PARIZEAU, IOS (Coastal Zone), CODE	Sept. 18-25 Sept. 19/80- Feb. 4/81 Sept. 1- continuing	Temperature Salinity Current Water level?	Guildline 8700 MK II CTD Aanderaa RCM4 AM12, Oct	[+.005, .01C°] [±.005, .02°/oo] +1cm/s or 2% speed @ [+.001, .01% full scale range]	3	Alberni Inlet, Offshore Vancouver Island	O ₂	Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? = Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
80-0064	VECTOR, IOS (Coastal Zone), CODE	Oct. 22-24 Oct. 22, 1980- Feb. 9, 1981	Temperature Salinity Current	Guildline 8700 MK II CTD Aanderaa RCM4	[+.005, .01C°] [±.005, .02°/oo] +1cm/s or 2% speed @	3	Alberni Inlet, O ₂ Offshore Vancouver Island		Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)
80-0065A	ENDEAVOUR, IOS (Coastal Zone), CODE	July 25-27 July 24- Nov. 25	Temperature Salinity Current	Guildline 8700 MK II CTD Aanderaa RCM4	[+.005, .01C°] [±.005, .02°/oo] +1cm/s or 2% speed @	3	Alberni Inlet, O ₂ Offshore Vancouver Island		Lee & Stucchi (1983)
80-0065B	ENDEAVOUR, IOS (Tides & Currents, Offshore Oceanography), CODE	July 22-30	Temperature Salinity	Guildline 8701 CTD	[+.005, .01C°] [±.005, .02°/oo]	3	Offshore Vancouver Island	O ₂	Thomson, Crawford & Huggert (1984c)
80-0066	VECTOR, IOS (Coastal Zone)	Aug. 12	Temperature Salinity	Guildline 8700 MK II CTD	[+.005, .01C°] [±.005, .02°/oo]	3	Alberni Inlet	O ₂	Lee & Stucchi (1983)
80-0067	VECTOR, IOS (Coastal Zone), CODE	Nov. 24-27 Nov. 26, 1980- Mar. 12, 1981 Nov. 26, 1980- May 27, 1981	Temperature Salinity Current Water level	Guildline 8700 MK II CTD Aanderaa RCM4 AML 750A	[+.005, .01C°] [±.005, .02°/oo] +1cm/s or 2% speed @ [+.001, .01% full scale range]	3	Alberni Inlet, O ₂ Offshore Vancouver Island		Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)
80-0068	Oobrocky Seatech, IOS	Nov. 21-26 Nov. 19-28 Nov. 19-28	Temperature Salinity Current Water level	Guildline 8705 CTD Marah-McBirney 515M EM Aanderaa RCM4 TG3A, TG4A	[+.005, .01C°] [±.005, .02°/oo] +2% speed +1cm/s or 2% speed @ [+.001, .01% full scale range]	0 3 3	Alberni Inlet		Narayanan (1981)
80-0070	PARIZEAU, IOS (Tides & Currents, Offshore Oceanography), CODE	Sept. 3-18	Temperature Salinity Water level	Guildline 8701 CTD 750A	[+.005, .01C°] [±.005, .02°/oo] [±.001, .01% full scale range]	3	Offshore Vancouver Island, Barkley Sound	O ₂	Thomson, Crawford & Huggert (1984c)
80-0072	VECTOR, URC	July 5-7	Temperature Salinity	Rev. therm. Salinometer	[+.02, .03C°] ±.003, [.02]°/oo	3	Rupert Inlet, Holberg Inlet, Meroutsos Inlet	O ₂	IOUBC (1981)

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? = Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
80-0088A	RPS	June	Temperature Salinity	Rev. therm. Salinometer	[$\pm .02, .03^{\circ}\text{C}$] [$\pm .01, .02^{\circ}/\text{oo}$]	3	Alberni Inlet	O ₂ , bottom sediment, benthos	Sullivan (1981)
80-0092	PANDORA II, TOS (Coastal Zone), CODE	Mar. 25-26	Temperature Salinity	Guildline 8700 MK II CTD	[$\pm .005, .01^{\circ}\text{C}$] [$\pm .005, .02^{\circ}/\text{oo}$]	3	Alberni Inlet, Offshore Vancouver Island	O ₂	Lee, Stucchi, & Freeland (1984)
80-0093	VECTOR, TOS (Coastal Zone), CODE	Aug. 13-14	Temperature Salinity	Guildline 8700 MK II CTD	[$\pm .005, .01^{\circ}\text{C}$] [$\pm .005, .02^{\circ}/\text{oo}$]	3	Alberni Inlet, Offshore Vancouver Island	O ₂	Lee, Stucchi, & Freeland (1984)
80-0094	CHS	July 1/80- Aug. 31/84	Water level	Ott	$\pm .01$ m	3	Muchalat Inlet		MEOS WL Stn. #8650
80-0102	CHS	Sept. 18- Dec. 31	Water level	Ott Ottoboro	$\pm .01$ m $\pm .03$ m	3	Zeballos Inlet, Tahsis Inlet		MEOS WL stn. #8658, 8670
81-0035	ENDEAVOUR, TOS (Tides & Currents)	Feb. 5- Sept. 12	Water level	TC3A	[$\pm .001, .01\%$ full scale range]	3	Langara Island (Dixon Entrance)		Stephenson (pers. comm.)
81-0069	PARIZEAU, TOS (Coastal Zone, Tides & Currents) SUPERCODE	Sept. 4-7 Sept. 4, 1981- Feb. 3, 1982	Temperature Salinity Current Water level	Guildline 8700 MK II CTD Aanderaa RCM4 750A	[$\pm .005, .01^{\circ}\text{C}$] [$\pm .005, .02^{\circ}/\text{oo}$] +1cm/s or 2% speed @ [$\pm .001, .01\%$ full scale range]	3	Alberni Inlet, Offshore Vancouver Island & Queen Charlottes		Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)
81-0070	PARIZEAU, TOS (Coastal Zone), CODE	Feb. 2-13 Feb. 10- June 7 Feb. 7- June 14	Temperature Salinity Current Water level	Guildline 8700 MK II CTD Aanderaa RCM4 TC4A	[$\pm .005, .01^{\circ}\text{C}$] [$\pm .005, .02^{\circ}/\text{oo}$] +1cm/s or 2% speed @ [$\pm .001, .01\%$ full scale range]	3	Alberni Inlet, Offshore Vancouver Island	O ₂	Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)
81-0071	VECTOR, TOS (Ocean Chemistry)	Apr. 27- May 1	Temperature Salinity	Rev. therm. Salinometer	[$\pm .02, .03^{\circ}\text{C}$] [$\pm .01, .02^{\circ}/\text{oo}$]	3	Rupert Inlet, Holberg Inlet, Quatsino Sound	O ₂ , nutrients, Chl.a, arsenic, sediment	Thompson (pers. comm.)
81-0072	PARIZEAU, TOS (Ocean Ecology)	Sept. 15-18	Temperature Salinity	Guildline 8701 CTD	$\pm .003, .01^{\circ}\text{C}$ $\pm .005, .01^{\circ}/\text{oo}$	3	Offshore Vancouver Island	Plankton, O ₂ , Chl.a, PO ₄ , NO ₃ , SiO ₃ , benthos	Rill et al. (1983)

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? = Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
81-0073	VECTOR, IOS (Coastal Zone), CODE	Jan. 6-7	Temperature Salinity	Guildline 8700 MK II CTD	[+0.005, .01C°] [±0.005, .02‰/‰]	3	Alberni Inlet, Offshore Vancouver Island	O ₂	Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)
81-0074	VECTOR, IOS (Coastal Zone), CODE	Mar. 10-11 Mar. 12- Aug. 13	Temperature Salinity Current	Guildline 8700 MK II CTD Aanderaa RCM4	[+0.005, .01C°] [±0.005, .02‰/‰] ±1 cm/s or 2% speed @	3	Alberni Inlet, Offshore Vancouver Island	O ₂	Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)
81-0075	PARIZEAU, IOS (Coastal Zone), CODE	Apr. 21-22	Temperature Salinity	Guildline 8700 MK II CTD	[+0.005, .01C°] [±0.005, .02‰/‰]	3	Alberni Inlet, Offshore Vancouver Island	O ₂	Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)
81-0076	PARIZEAU, IOS (Coastal Zone), CODE	June 2-10 June 10- Sept. 2	Temperature Salinity Water level Current	Guildline 8700 CTD AML2 Aanderaa RCM4	[+0.005, .01C°] [±0.005, .02‰/‰] [+0.001, .01% full scale range] ±1 cm/s or 2% speed @	3	Alberni Inlet, Offshore Vancouver Island	O ₂	Lee & Stucchi (1983) Lee, Stucchi & Freeland (1984)
81-0077	PARIZEAU, IOS (Ocean Ecology)	Apr. 29- May 8	Temperature Salinity	Guildline 8701 CTD	+0.003, .01C° ±0.005, .02‰/‰	3	Offshore Vancouver Island	Plankton, O ₂ , Chl. a, PO ₄ , NO ₃ , SiO ₃ , benthos	Hill et al. (1983)
81-0078	PARIZEAU, IOS	Aug. 18-28	Temperature Salinity	Guildline 8701 CTD	[+0.005, .01C°] [±0.005, .02‰/‰]	3	Offshore Vancouver Island	O ₂ ?	
81-0079	PARIZEAU, IOS	Oct. 20-27	Temperature Salinity	Guildline 8701 CTD	[+0.005, .01C°] [±0.005, .02‰/‰]	3	Offshore Vancouver Island	O ₂ ?	
81-0095	EPS	Sept. 21	Temperature Salinity	Plessey 9400 CTD	[+0.001, .02C°] [±0.001, .03‰/‰]	3	Rupert Inlet, Quatsino Sound	Transmissivity, Coyette (pers. comm.) trace metals, benthos, sediment	
81-0096	CHS	May 21, 1981- May 16, 1982	Water level	750A	[+0.001, .01% full scale range]	3	Effingham Bay		Stephenson (pers. comm.)

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ? = Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
82-0034	PARIZEAU, IOS, SUPERCODE	Jan. 18-July	Current	Aanderaa RCM4	$\pm 1\text{cm/s}$ or 2% speed @	3	B.C. Offshore		Freeland, Crawford & Thomson (1984)
82-0046	PARIZEAU, IOS, SUPERCODE	Apr. 21-Oct.	Current Water level	Aanderaa RCM4 ?	$\pm 1\text{cm/s}$ or 2% speed @ [$\pm .001, .01\%$ Full scale range]	3	B.C. Offshore		Freeland, Crawford & Thomson (1984)
82-0065	RPS	Apr. 25-26	Temperature Salinity	Plessey 9400 CTD	[$\pm .001, .02^\circ\text{C}$] [$\pm .001, .03^\circ\text{oo}$]	3	Tasu Sound	Transmissivity, trace metals, sediment, benthos	Coyette (pers. comm.)
82-0070	ENDEAVOUR, IOS (Offshore Oceanography)	Jan. 18-29	Temperature Salinity	Guildline 8701 CTD	[$\pm .005, .01^\circ\text{C}$] [$\pm .005, .02^\circ\text{oo}$]	3	B.C. Offshore	Plankton, Chl.a, nutrients	Thomson (pers. comm.)
82-0071	PARIZEAU, IOS (Offshore Oceanography)	May 3-14	Temperature Salinity	Guildline 8701 CTD	[$\pm .005, .01^\circ\text{C}$] [$\pm .005, .02^\circ\text{oo}$]	3	B.C. Offshore	Plankton, Chl.a, CO_2 , alkalinity, tritium	Thomson (pers. comm.)
82-0072	PARIZEAU, IOS (Offshore Oceanography)	July 12-22	Temperature Salinity	Guildline 8701 CTD	[$\pm .005, .01^\circ\text{C}$] [$\pm .005, .02^\circ\text{oo}$]	3	B.C. Offshore	O_2	Thomson (pers. comm.)
82-0073	PARIZEAU, IOS (Offshore Chemistry)	Sept. 16-30	Temperature Salinity	Guildline 8701 CTD	[$\pm .005, .01^\circ\text{C}$] [$\pm .005, .02^\circ\text{oo}$]	3	B.C. Offshore	O_2	Thomson (pers. comm.)
82-0074	ENDEAVOUR, IOS	Mar. 15-26	Temperature Salinity	Guildline 8701 CTD	[$\pm .005, .01^\circ\text{C}$] [$\pm .005, .02^\circ\text{oo}$]	3	B.C. Offshore	O_2 ?	Thomson (pers. comm.)
82-0075	ENDEAVOUR, IOS	Nov. 24-Dec. 5	Temperature Salinity	Guildline 8701 CTD	[$\pm .005, .01^\circ\text{C}$] [$\pm .005, .02^\circ\text{oo}$]	3	B.C. Offshore	O_2 ?	Thomson (pers. comm.)
82-0091	PEPPER, RICHARDSON, CHS	Aug. 17-Oct. 7	Water level	Ottoboro	$\pm .03\text{ m}$	3	Quatsino Sound, Holberg Inlet		Richardson (1982) Crowley (1982) MEDS WL Stn. #8752
83-0002A	ENDEAVOUR, IOS (Ocean Ecology)	June 30-July 3	Temperature Salinity	Guildline 8701 CTD	$\pm .003, .01^\circ\text{C}$ @ $\pm .005, .02^\circ\text{oo}$	3	Offshore Vancouver Island	Chl.a, C^{14} , NO_2 , PO_4 , pH, SiO_2 , NO_3 , plankton, light intensity	Denman et al. (1985) Forbes, Sefton & de Macedo (1983)

Table 2 (Cont'd): Summary listing of data sets.

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
83-00028	ENDEAVOUR, IOS (Offshore Oceanography)	July 10-16	Temperature Salinity	Guildline 8701 CTD	$\{+0.005, .01^{\circ}\}$ $\{\pm 0.005, .02^{\circ}/\text{‰}\}$	3	B.C. Offshore		Thomson (pers. comm.)
83-00038	VECTOR, EPS	July 5-7	Temperature Salinity	Plessey 9400 CTD	$\pm 0.001, .02^{\circ}\text{C}$ $\pm 0.001, .03^{\circ}/\text{‰}$	3	Rupert/Holberg inlet system	Benthos, transmissivity, NO_3 , PO_4 , biota, bottom sediments	Goyette (pers. comm.)
83-0035	PARIZEAU, IOS (Tides & Currents, Offshore Oceanography), NCODE I	May 4-20 May-Oct. May 5, 1983- Oct. 29, 1984	Temperature Salinity Current Water level	Guildline 8701 CTD Aanderaa, GeuM WLR5, 750A	$\{+0.005, .01^{\circ}\}$ $\{\pm 0.005, .02^{\circ}/\text{‰}\}$ $\pm 1\text{cm/s}$ or 2% speed @ $\{+0.001, .01\%$ full scale range]	3	Offshore Vancouver Island & the Queen Charlottes		Thomson (pers. comm.)
83-0036A	PARIZEAU, IOS (Offshore Oceanography), NCODE II	Sept. 8-16 Sept. 11/83- Sept. 12/84	Temperature Salinity Current Water level	Guildline 8701 CTD Aanderaa RCM4 WLR5	$\{+0.005, .01^{\circ}\}$ $\{\pm 0.005, .02^{\circ}/\text{‰}\}$ $\pm 1\text{cm/s}$ or 1% speed @ $\{+0.001, .01\%$ full scale range]	3	Offshore Queen Charlottes		Thomson (pers. comm.)
83-0040	ENDEAVOUR, IOS (Ocean-Chemistry)	Mar. 16-30	Temperature Salinity	?CTD ?CTD	$\{+0.005, .01^{\circ}\}$ $\{\pm 0.005, .02^{\circ}/\text{‰}\}$	3	B.C. Offshore	O_2	Thomson (pers. comm.)
83-0041	PARIZEAU, IOS (Offshore Oceanography)	Aug. 16-27 Aug. 24- Oct. 31	Temperature Salinity Drift	Guildline 8701 CTD Receives satellite drifters	$\{+0.005, .01^{\circ}\}$ $\{\pm 0.005, .02^{\circ}/\text{‰}\}$?	-	Offshore Vancouver Island	O_2 , plankton	Thomson (pers. comm.)
83-0043	EPS	June 2	Temperature Salinity	Plessey 9400 CTD	$\{+0.001, .02^{\circ}\}$ $\{\pm 0.001, .03^{\circ}/\text{‰}\}$	3	Port Alberni	Transmissivity, Benthos, trace metals	Goyette (pers. comm.)
83-0045	RICHARDSON, CRS	May 22- June 10	Water level	Ottoboro	$\pm 2, .03 \text{ m}$	3	Quatsino Sound		Crowley (1983) METS WL Stn. 08736
84-0001	PARIZEAU, IOS (Offshore Oceanography, Tides & Currents)	Jan. 22-24	Temperature Salinity Water level	Guildline 8701 CTD TGL2	$\{+0.005, .01^{\circ}\}$ $\{\pm 0.005, .02^{\circ}/\text{‰}\}$ $\{+0.001, .01\%$ full scale range]	3	Offshore Queen Charlottes		Thomson (pers. comm.)

Data Set I.D.	Ship or collecting agency	Dates of measurements	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
84-0002	PARIZEAU, IOS (Offshore Oceanography, Tides & Currents), NCODE III	Apr. 19-25 Apr. 19- Oct. 16	Temperature Salinity Water level Current	Gulldline 8701 CTD WLR5, TG3A, TG12 Aandaras RCM4	[+.005, .01C°] [+.005, .02°/oo] [+.001, .01%] full scale range] +1cm/s or 2% speed @	3	Offshore Queen Charlottes		Thomson (pers. comm.)
84-0007	PARIZEAU, IOS (Offshore Oceanography), NCODE IV	Oct. 14-31 Oct. 1984- May 1985	Temperature Salinity Water level Current	Gulldline 8701 CTD AAND, AML Aandaras RCM4	[+.005, .01C°] [+.005, .02°/oo] [+.001, .01%] full scale range] +1cm/s or 2% speed @	3	B.C. Offshore	O ₂	Thomson (pers. comm.)
84-0008	PARIZEAU, IOS (Ocean Chemistry)	Apr. 26- May 4	Temperature Salinity	Gulldline 8701 CTD	[+.005, .01C°] [+.005, .02°/oo]	3	Offshore Vancouver Island	O ₂	Tabata (pers. comm.)
84-0009	PANDORA, IOS	July 23-27	Temperature Salinity	?CTD ?CTD	[+.005, .01C°] [+.005, .02°/oo]	3	Offshore Vancouver Island		Thomson (pers. comm.)
84-0010	PARIZEAU, IOS	Nov. 7-22	Temperature Salinity	Gulldline 8701 CTD	[+.005, .01C°] [+.005, .02°/oo]	3	B.C. Offshore	O ₂ ?	Thomson (pers. comm.)
84-0011	PARIZEAU, IOS	June 19-28 June 20- Oct. 30	Temperature Salinity Water level	Gulldline 8701 CTD WLR5, TG3A	[+.005, .01C°] [+.005, .02°/oo] [+.001, .01%] full scale range]	3	Offshore Vancouver Island		Thomson (pers. comm.)
84-0012	CHS	Jan. 1- Mar. 31	Water level	Hogenuk	+?, .1 m	3	Langers Point (Dixon Entrance)		MEOS WL Stn. #9964
84-0013	RICHARDSON, CHS	Aug. 17- Sept. 28	Water level	Ottboro	+?, .03 m	3	W. Queen Charlottes (Skidegate Channel)		Crowley (1984) MEOS WL Stn. #9605, 9620
84-0022	BEADY, Coast Guard, IOS, Seaconsult	July 21- Aug. 28	Drift	Satellite- tracked drifters	?	3	Offshore Vancouver Island		Seaconsult (1984)
85-0001	Coast Guard, IOS, Seaconsult	Jan. 5- June 30	Drift	Satellite- tracked drifters	?	3	Offshore Vancouver Island		Thomson (pers. comm.)

9. MAPS

This section contains maps showing the yearly distribution of temperature, salinity, current, water-level, wave, and surface-drift measurements. One overall map and up to three additional sub-maps are used (Figure 20). All are Lambert Conformal Conic projection, with maps 1 through 4 having scales 1:6.085, :2.33, :0.315 and :0.22 million, respectively.

Generally, temperature-salinity and any water-level stations are plotted together. If there were also current-meter data, then the first map will have only temperature-salinity, and the current and water-level data will be displayed on a second map. Wave data have usually been plotted with current and/or water-level data. The overall map generally contains all the stations; the sub-maps provide more detail and several may be used to display station positions in one area.

For some data sets, exact locations are not known. A "?" on the first map is used to indicate the general area, if known.

Some stations plot on land. Wherever possible, the original data source was checked. In most cases, the location is as originally recorded. We have not attempted to guess where the station was actually located, since this may only compound the error.

The legend indicates the following data types:

CM - current-meter data
DRF - drifter data
TS - temperature-salinity data
WL - water-level data
WAVE - wave data

The coastlines have been smoothed and small islands removed. A minimum displacement of 0.05 inch is required for a new station to be plotted, to avoid overlap. Vessel/agencies in the legend are abbreviations. Note that cruise station symbols may be different on two different maps.

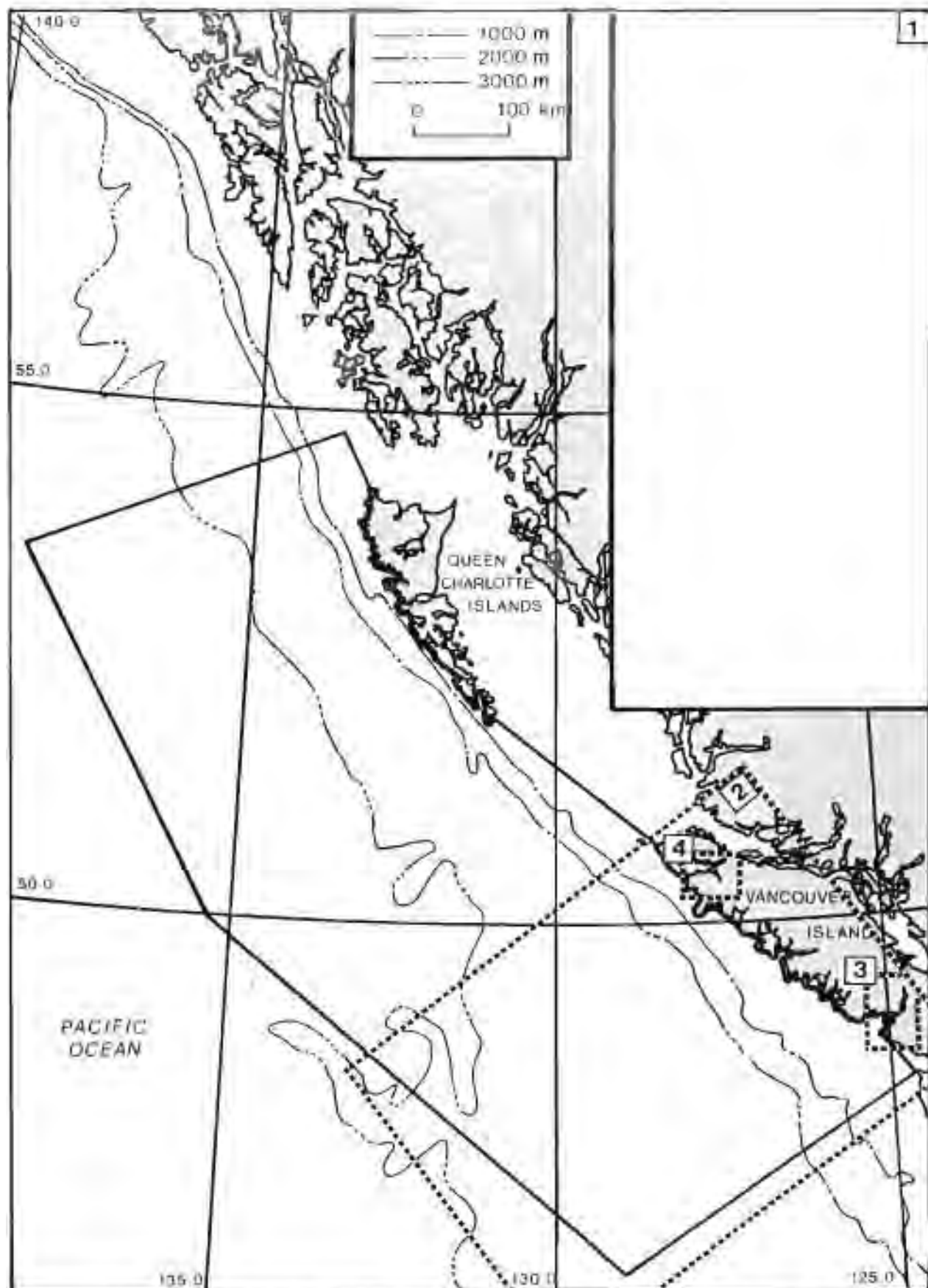
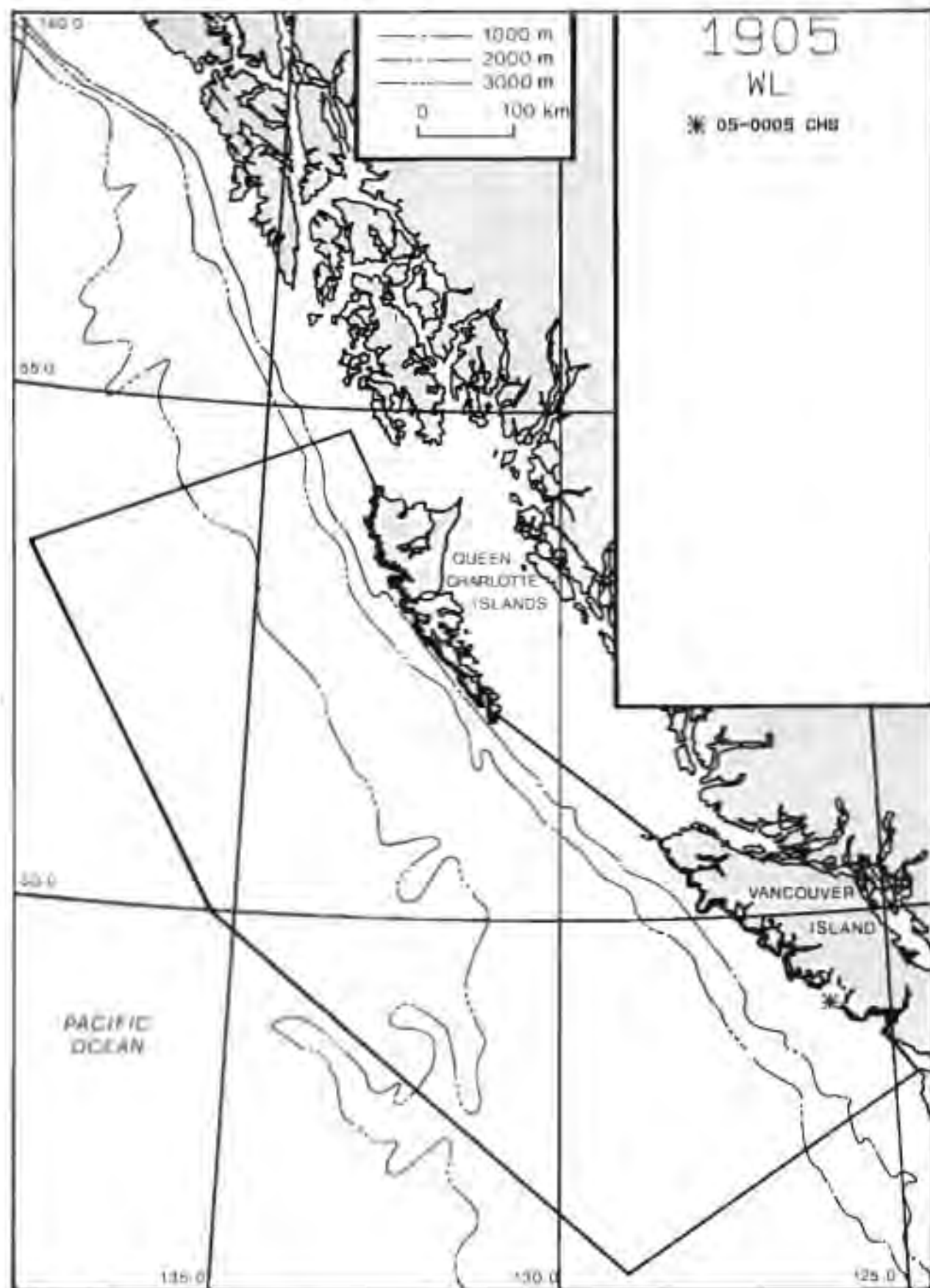
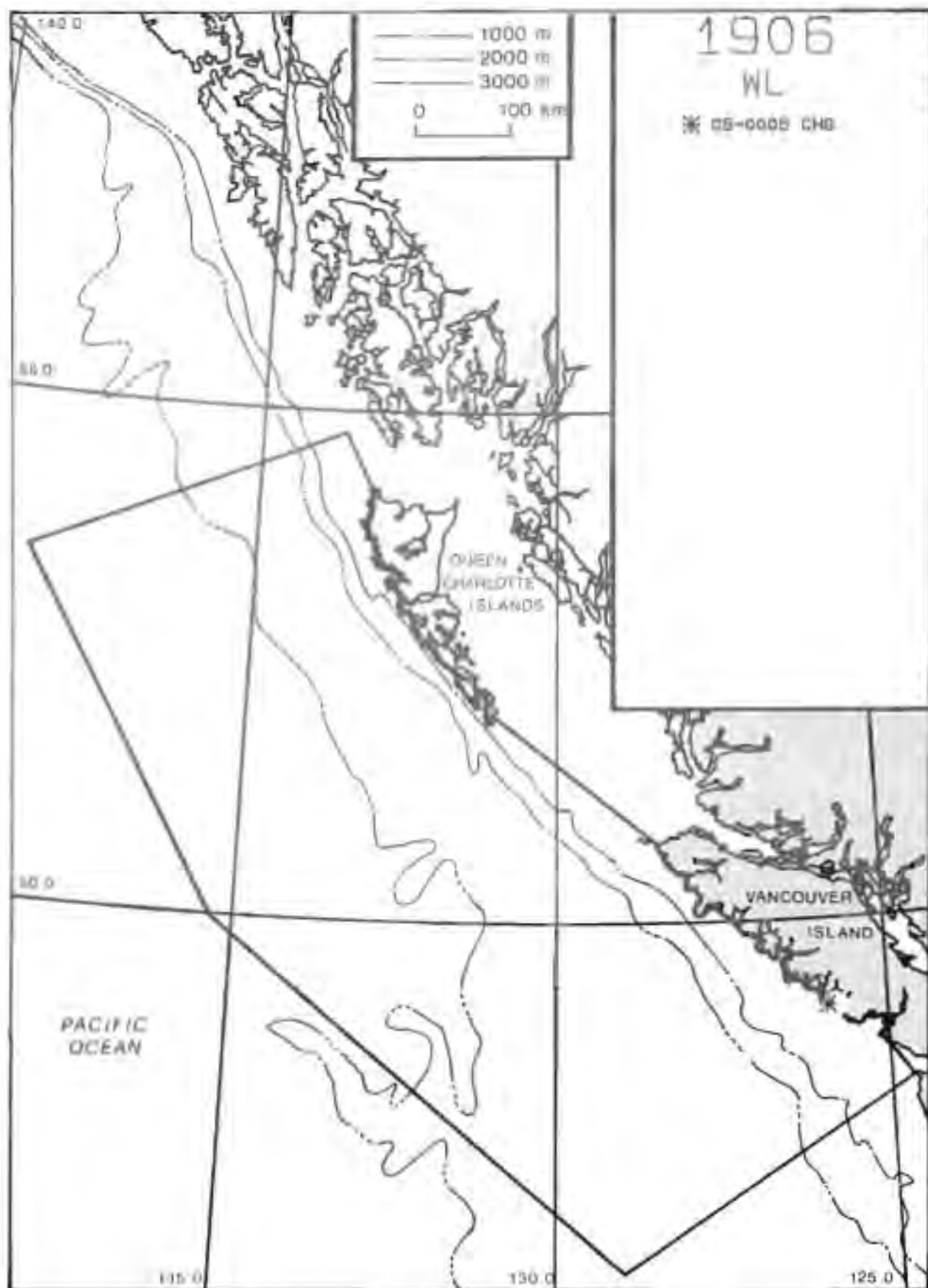
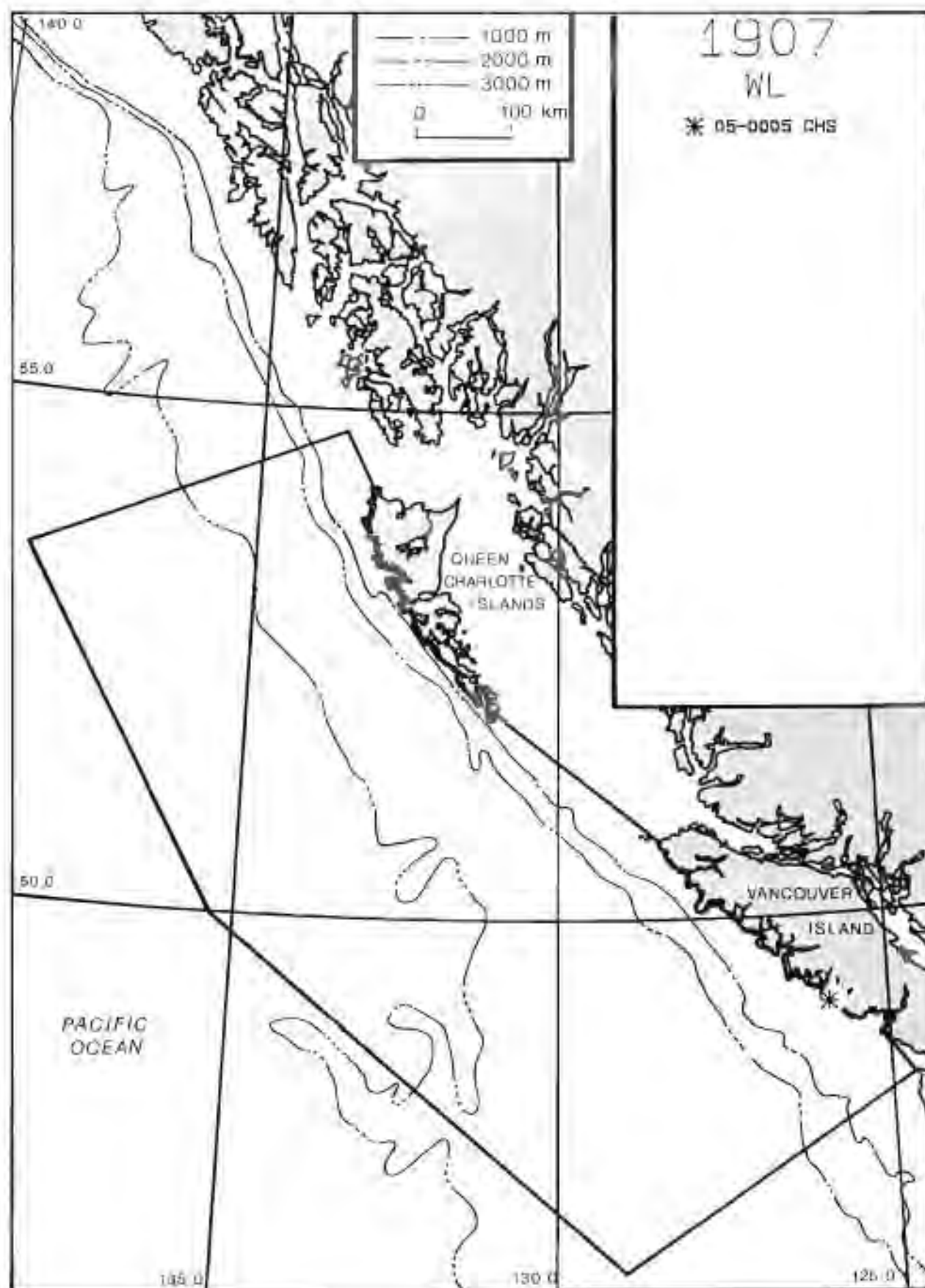
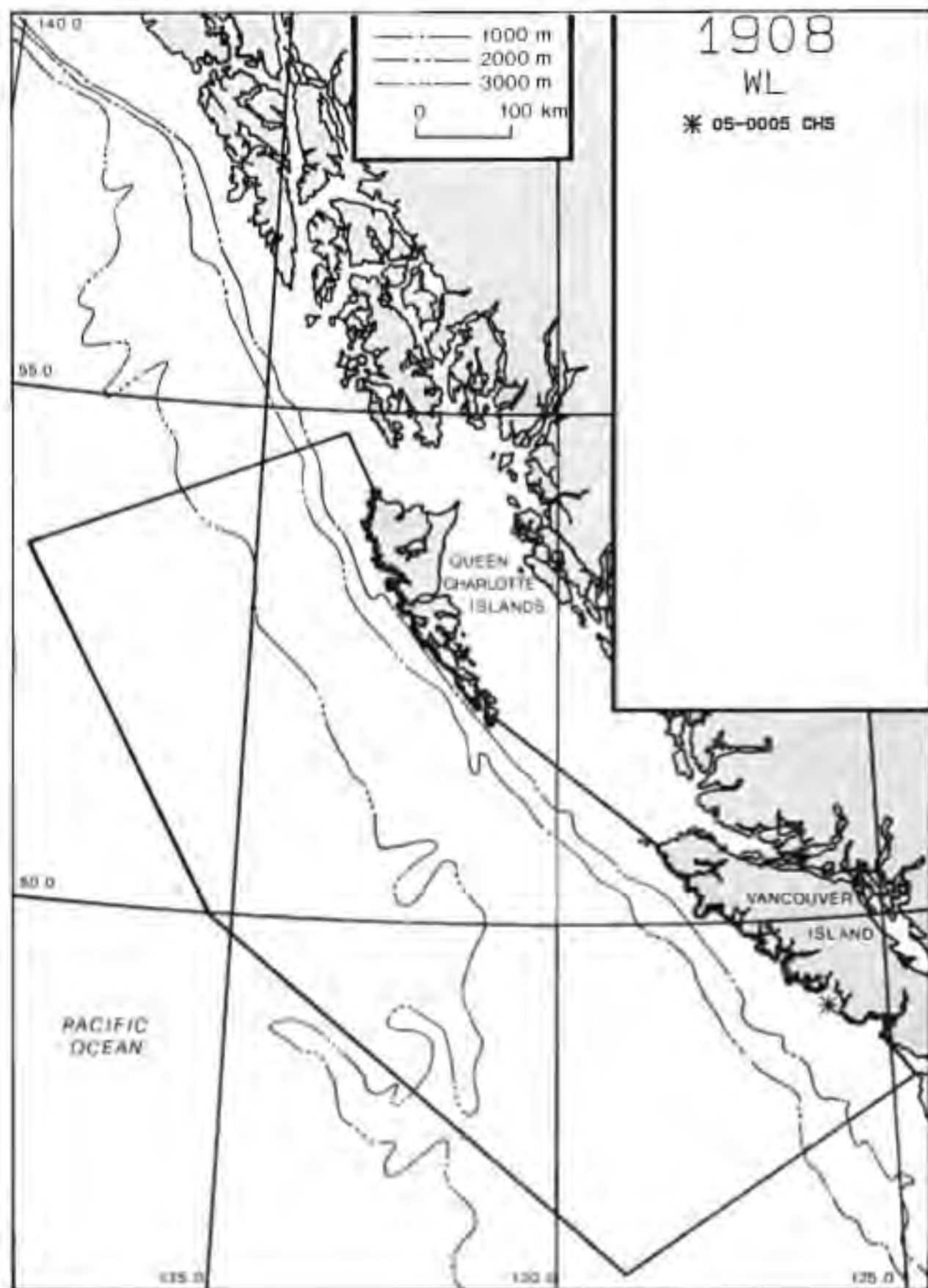


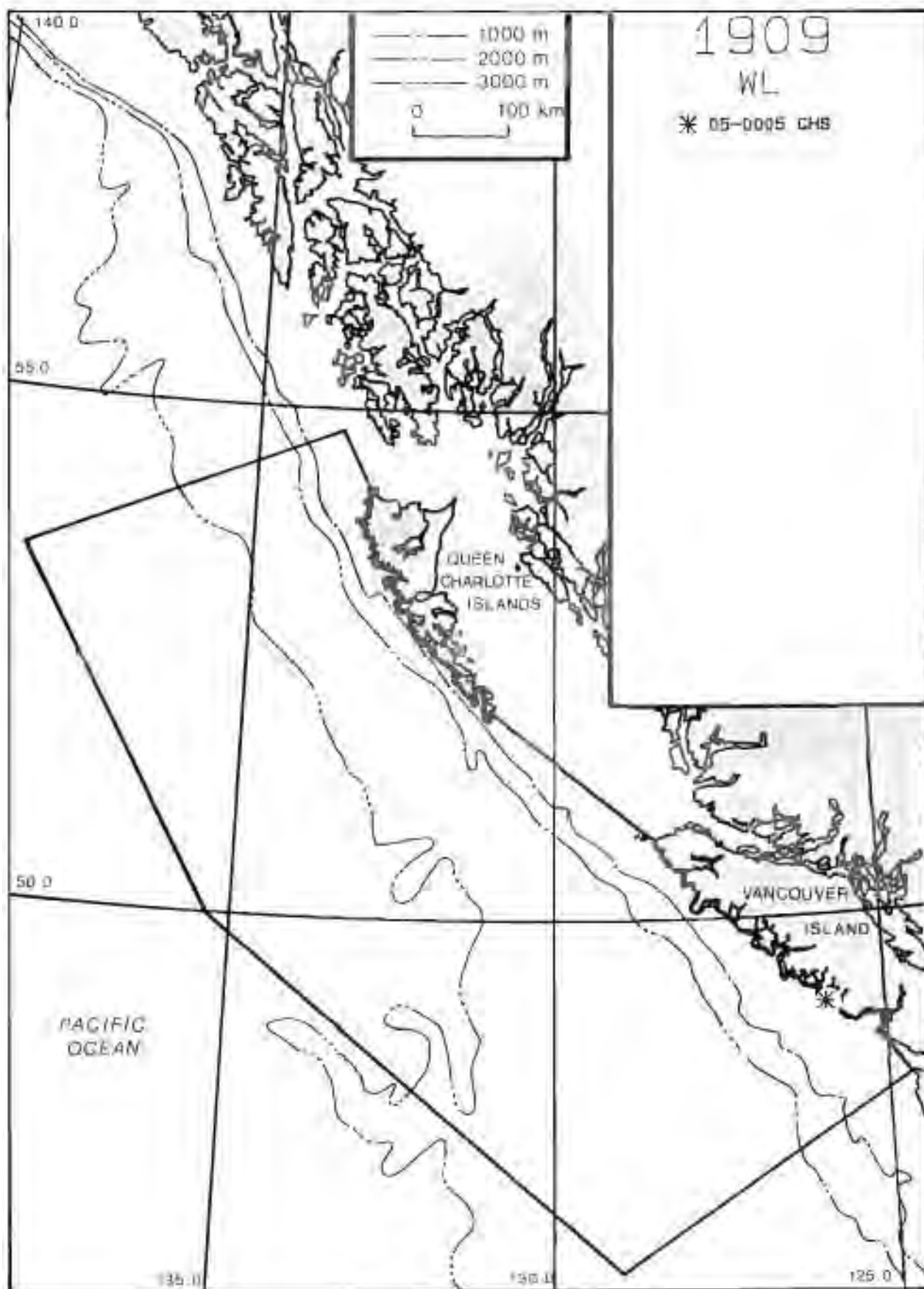
Figure 20: The four maps used to plot station locations are indicated above. All are Lambert Conformal Conic projection.

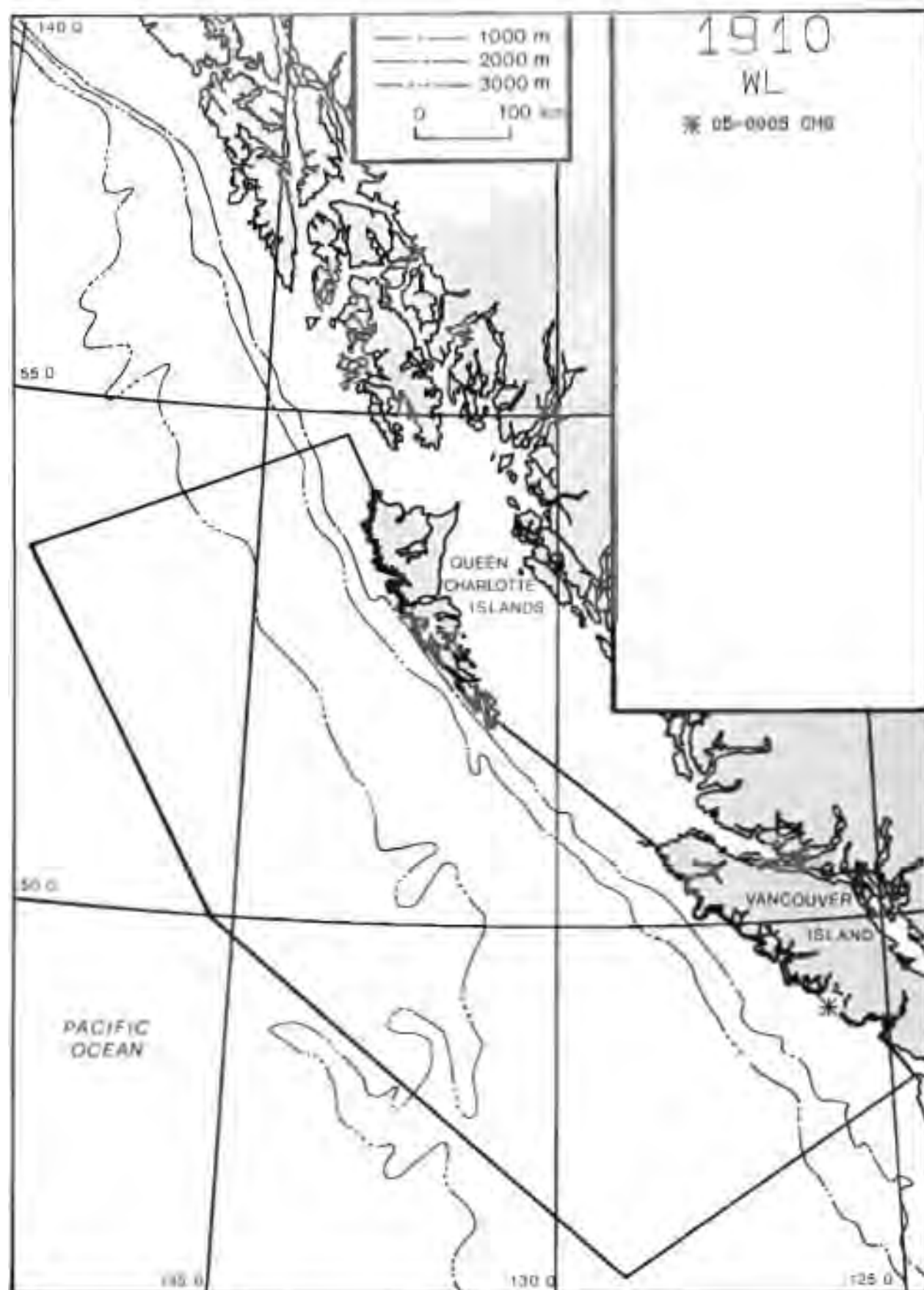


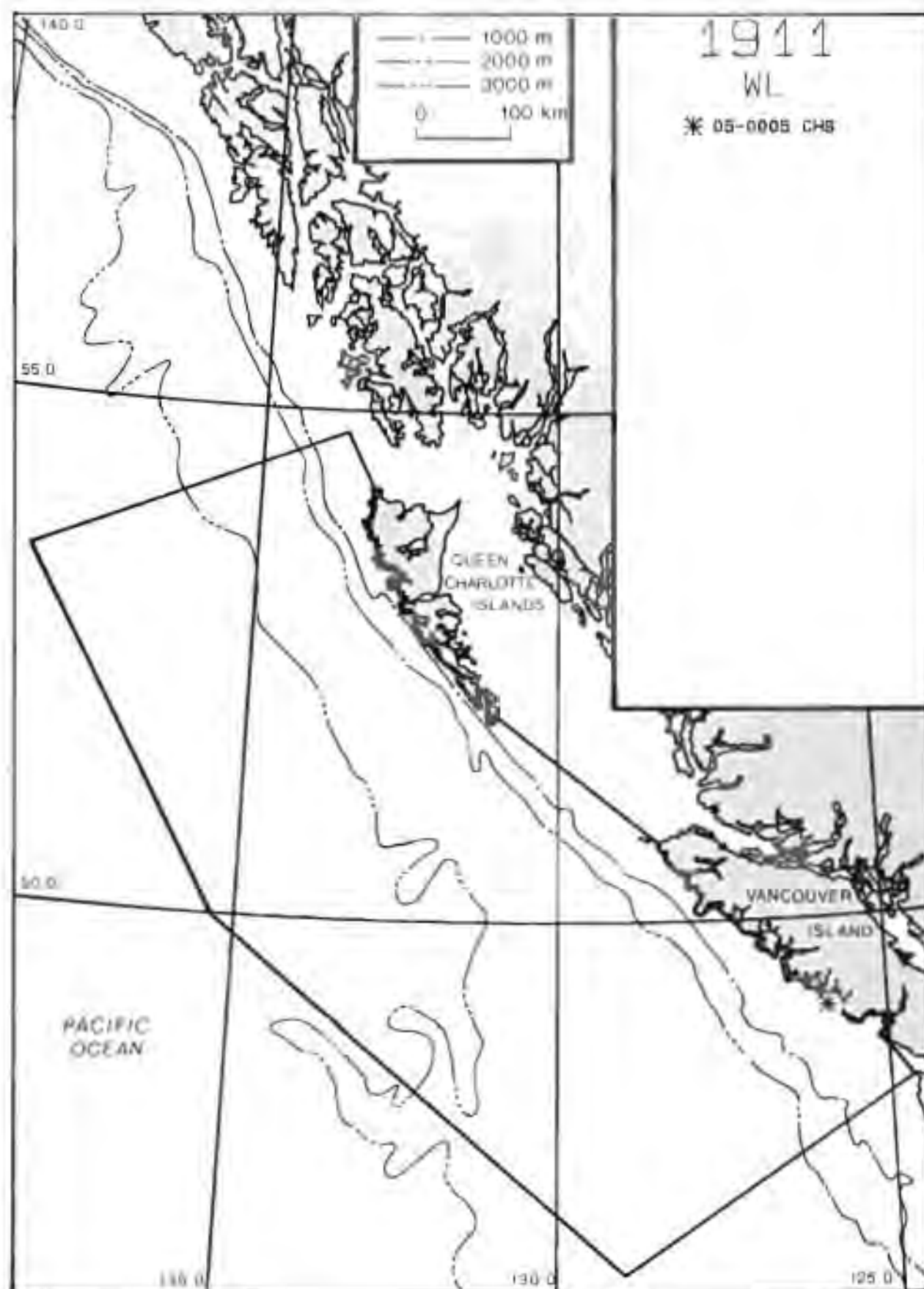


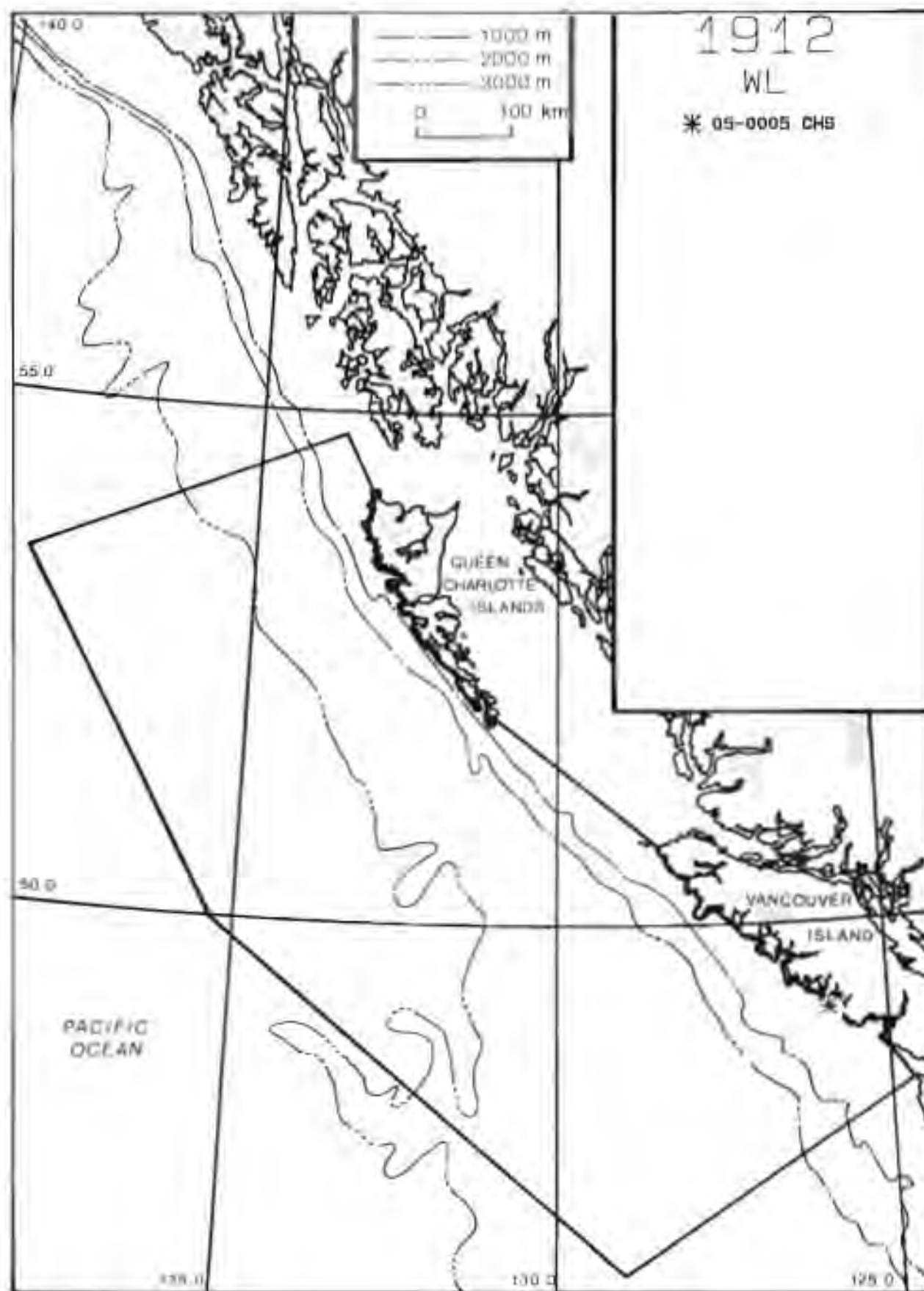


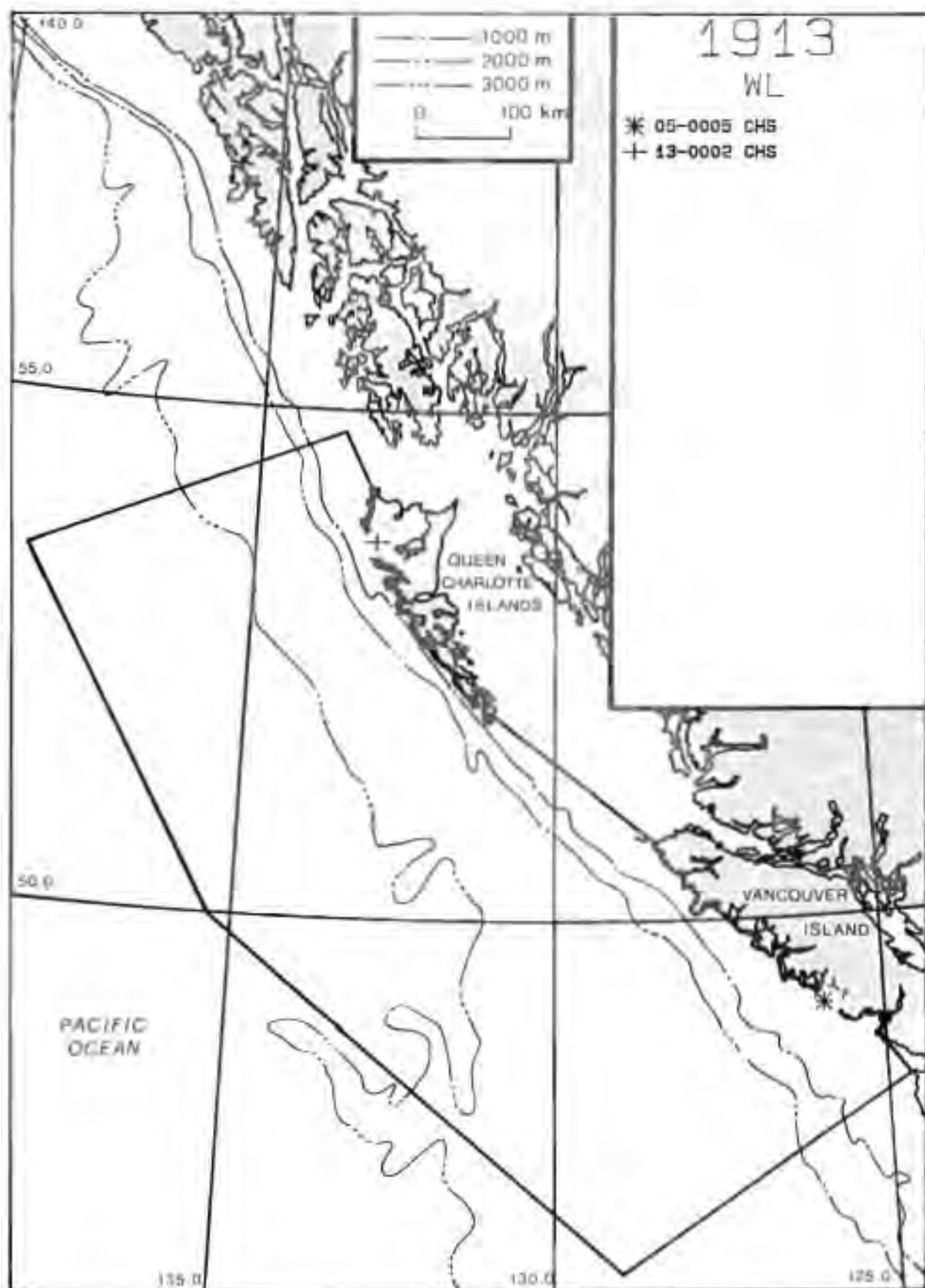


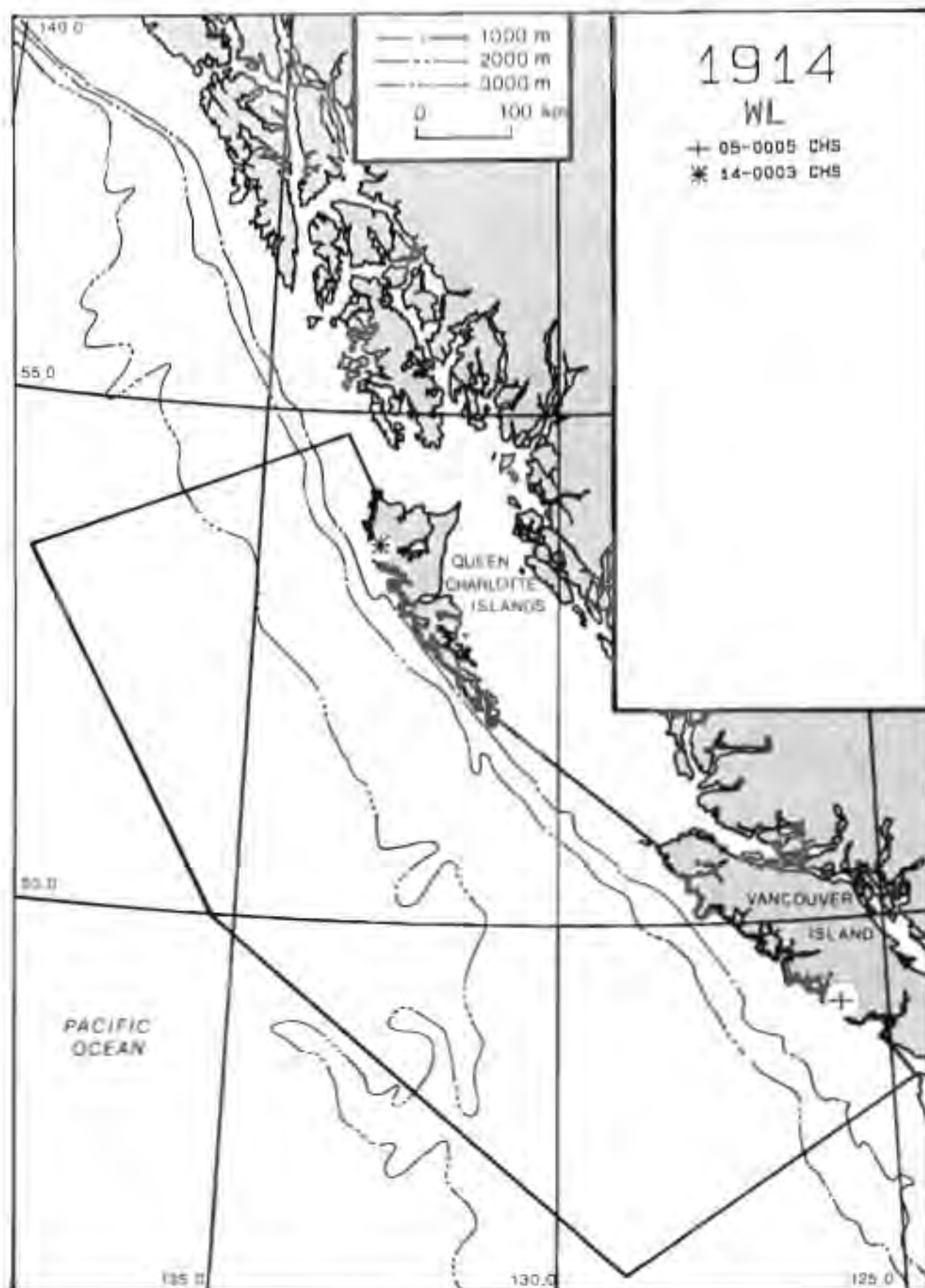


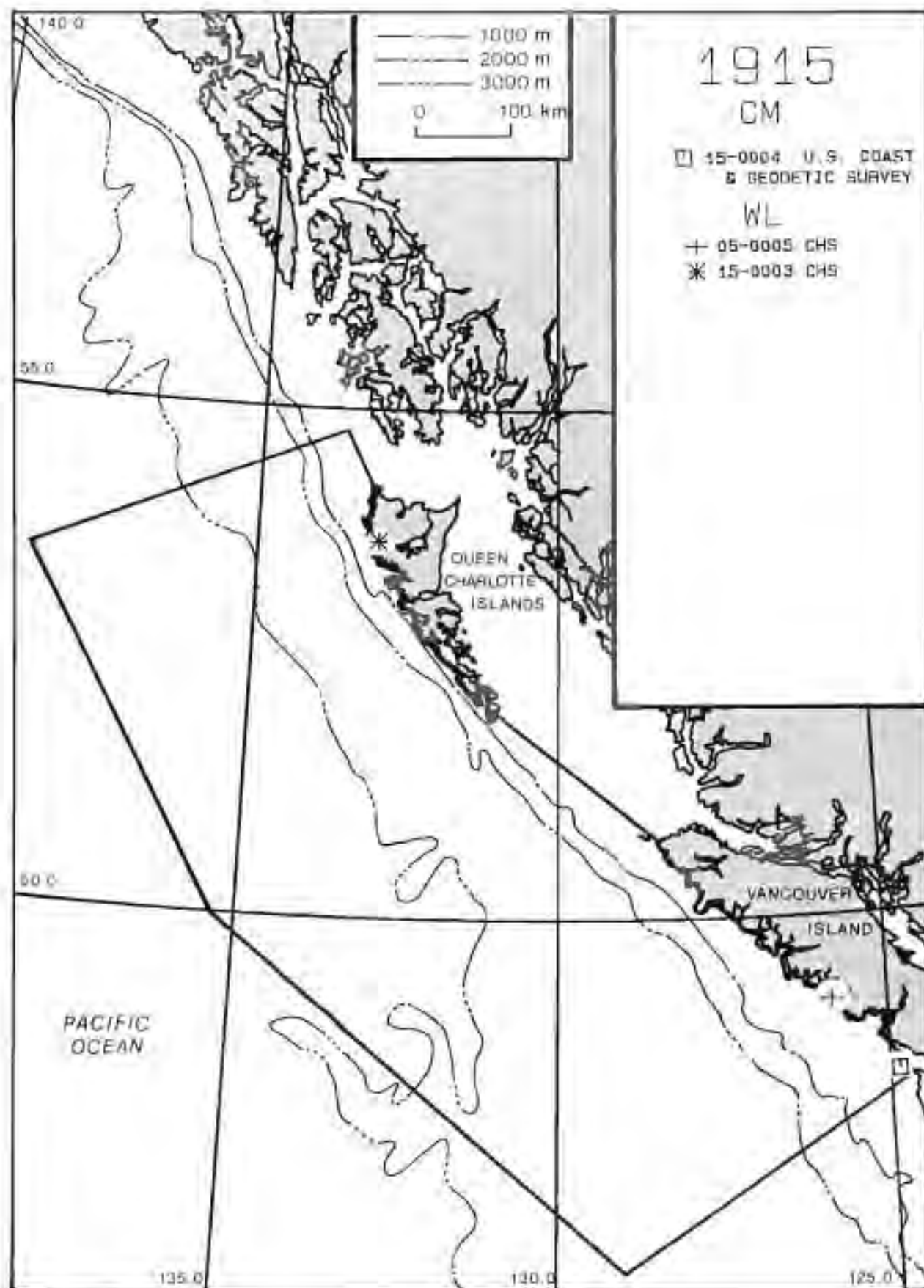


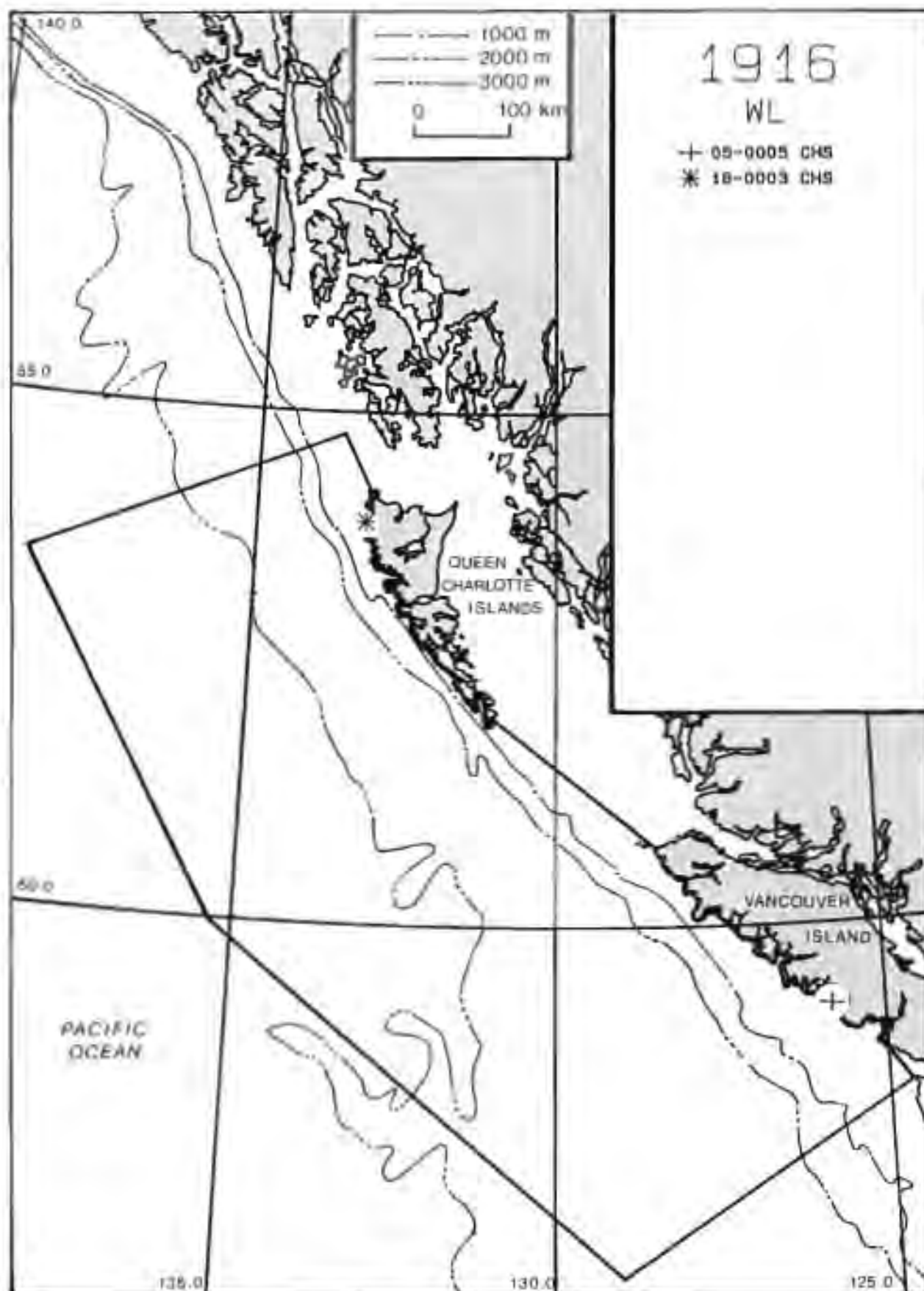


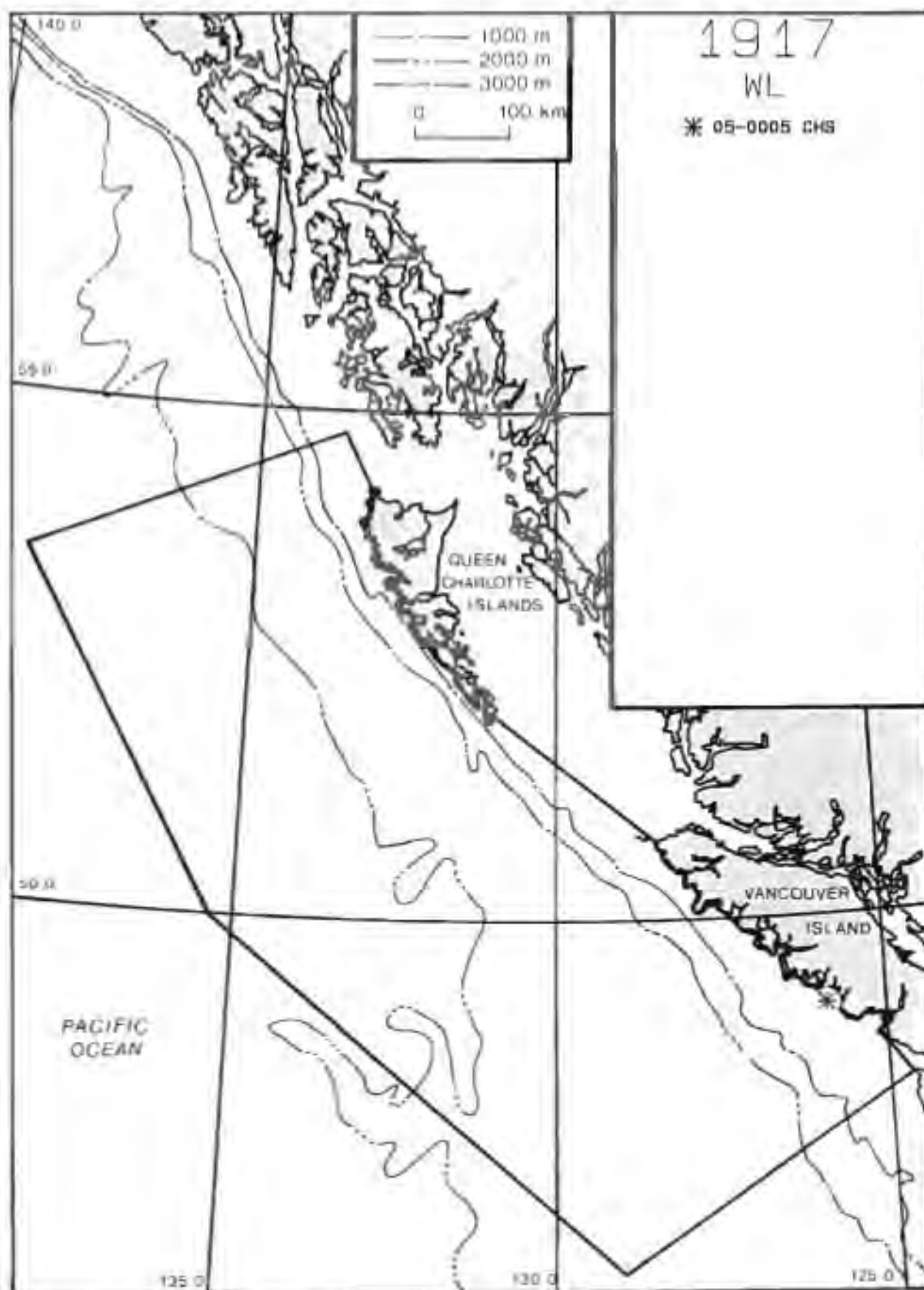


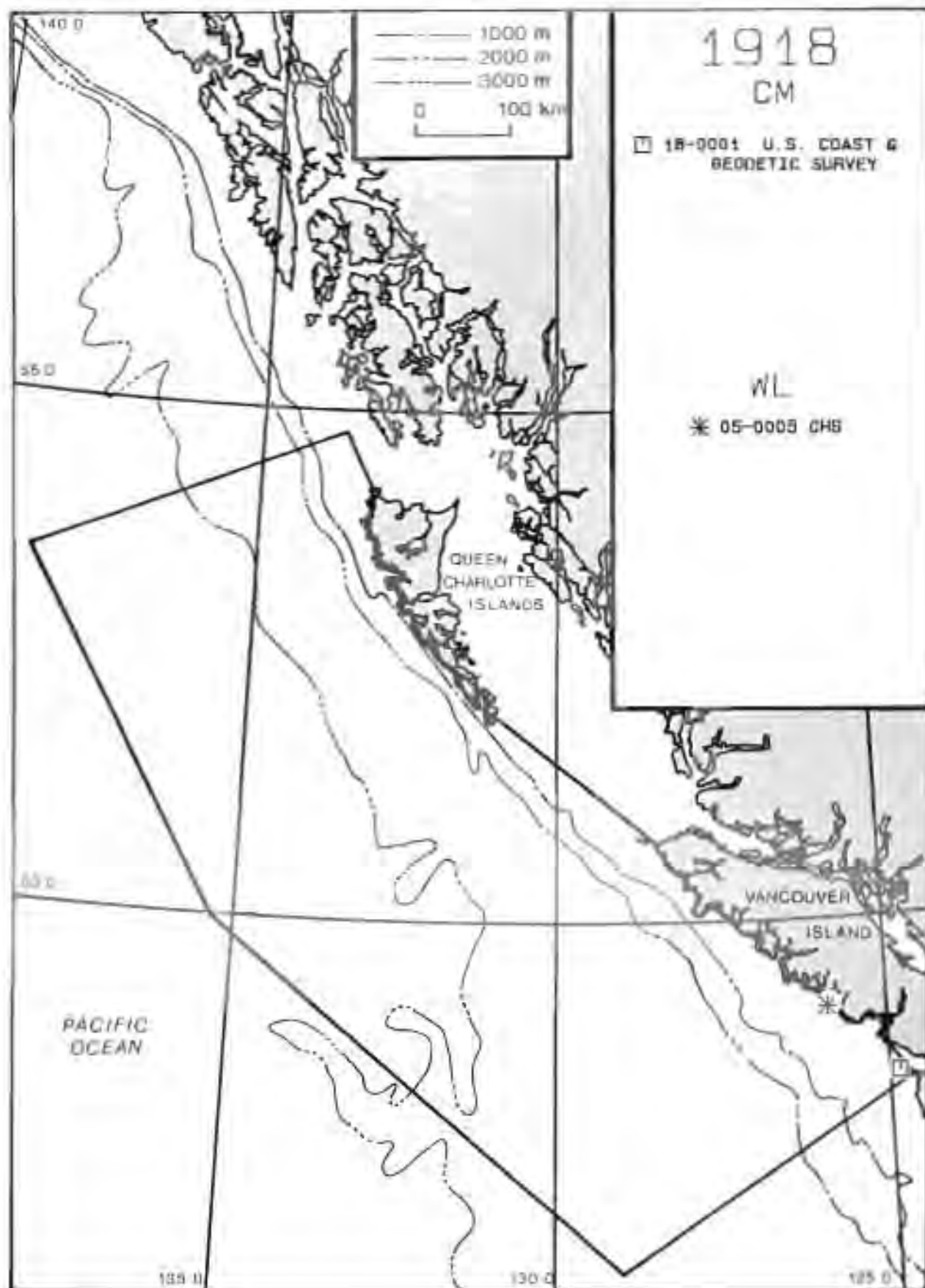


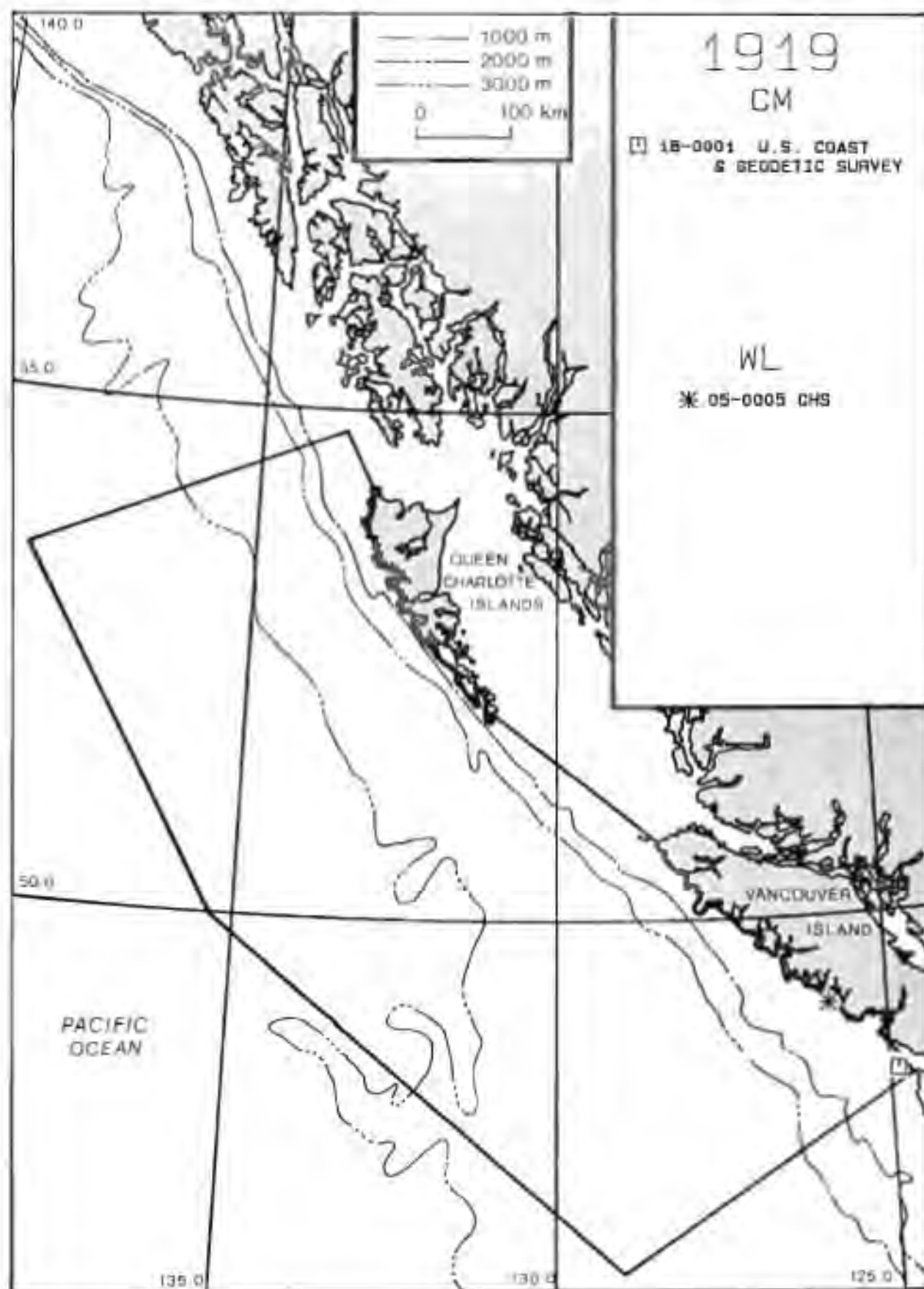


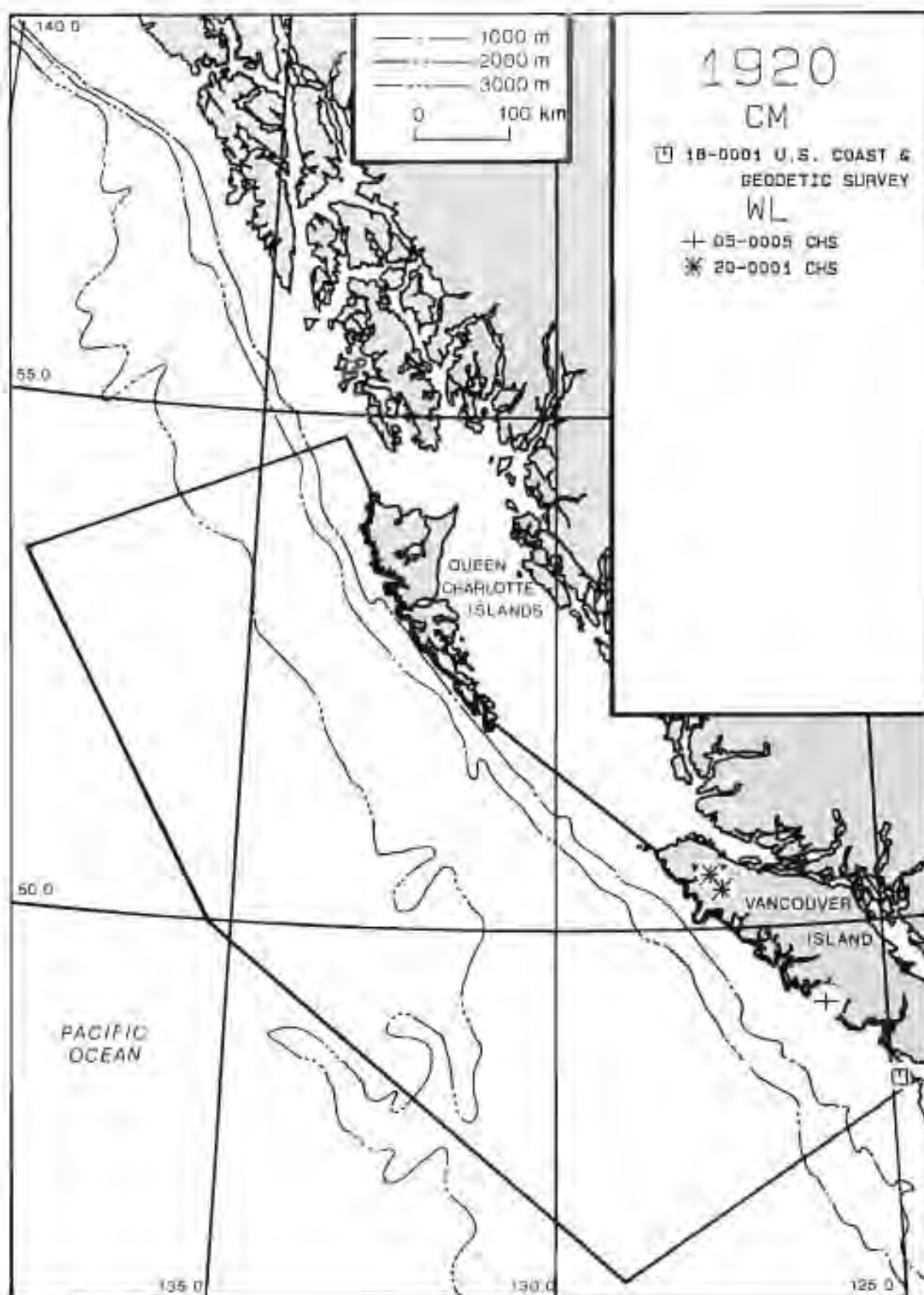


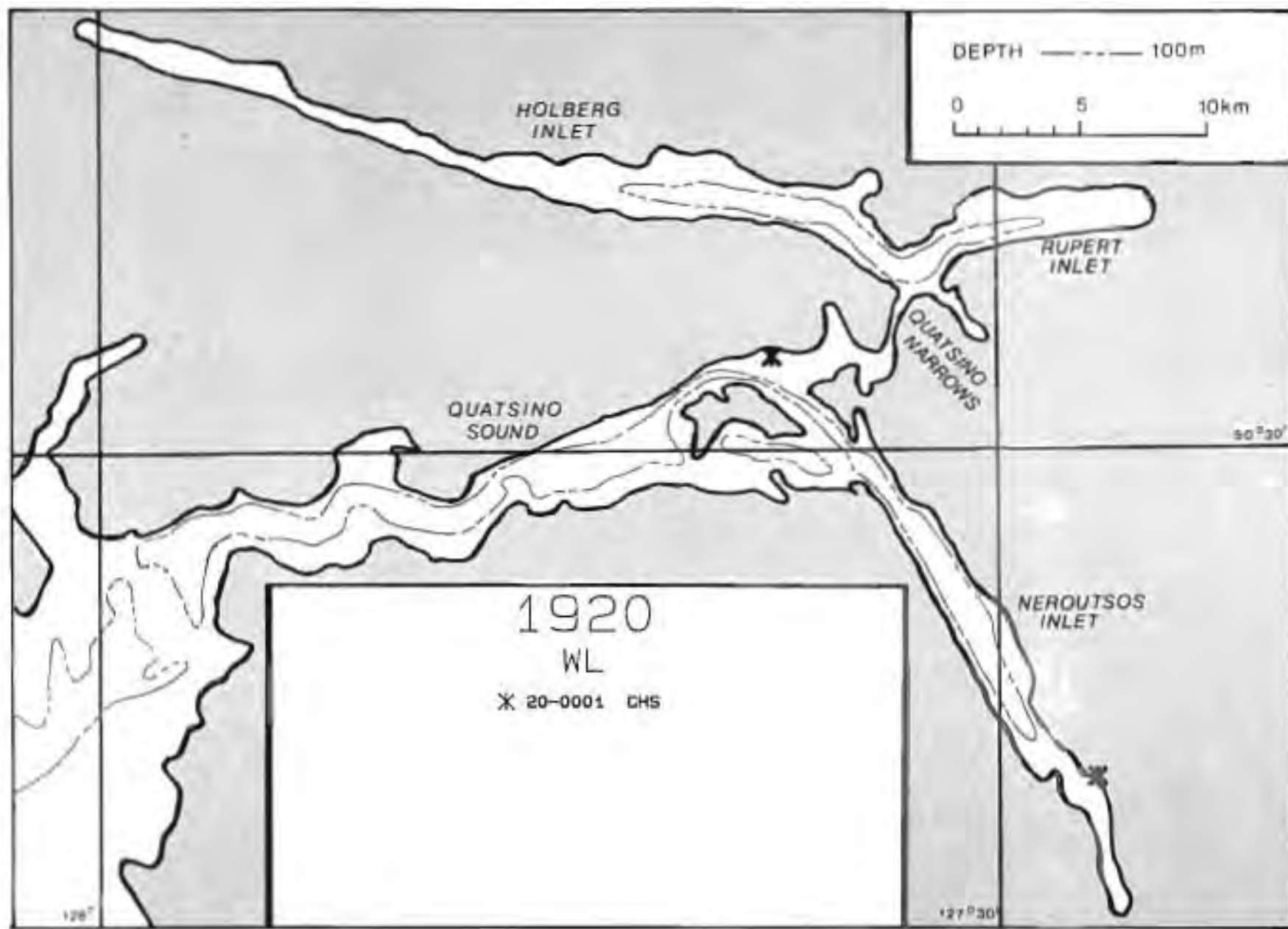


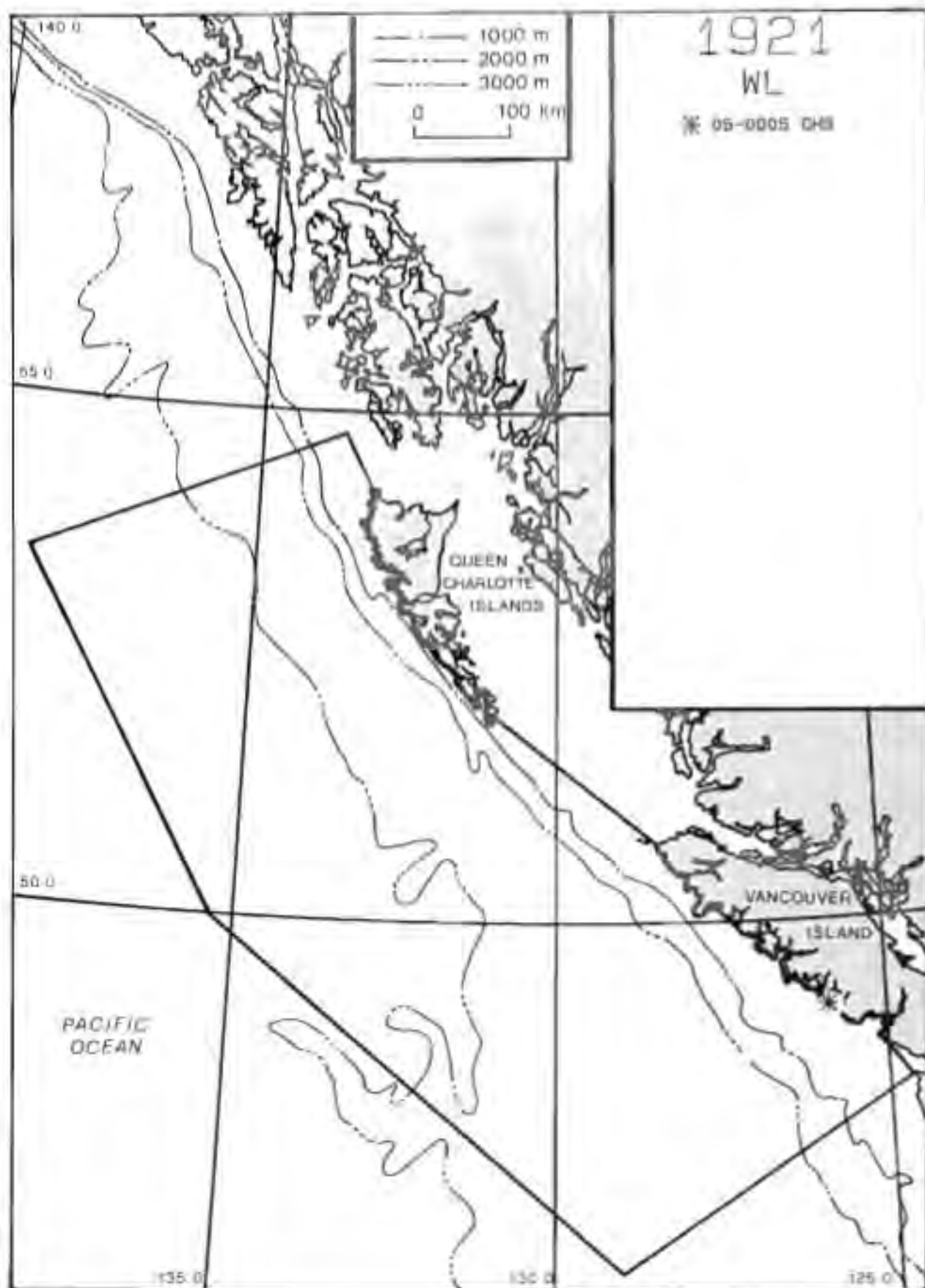


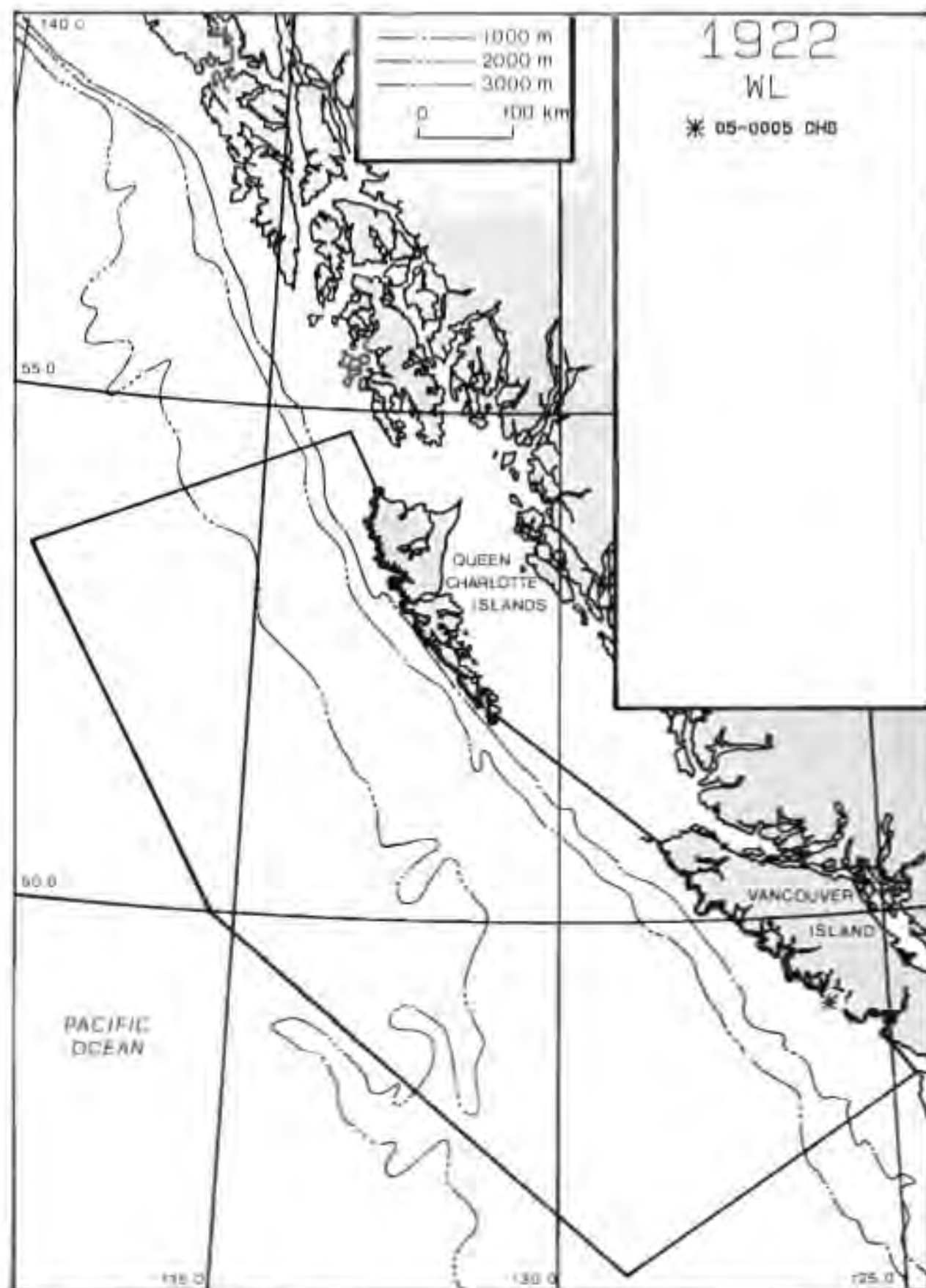


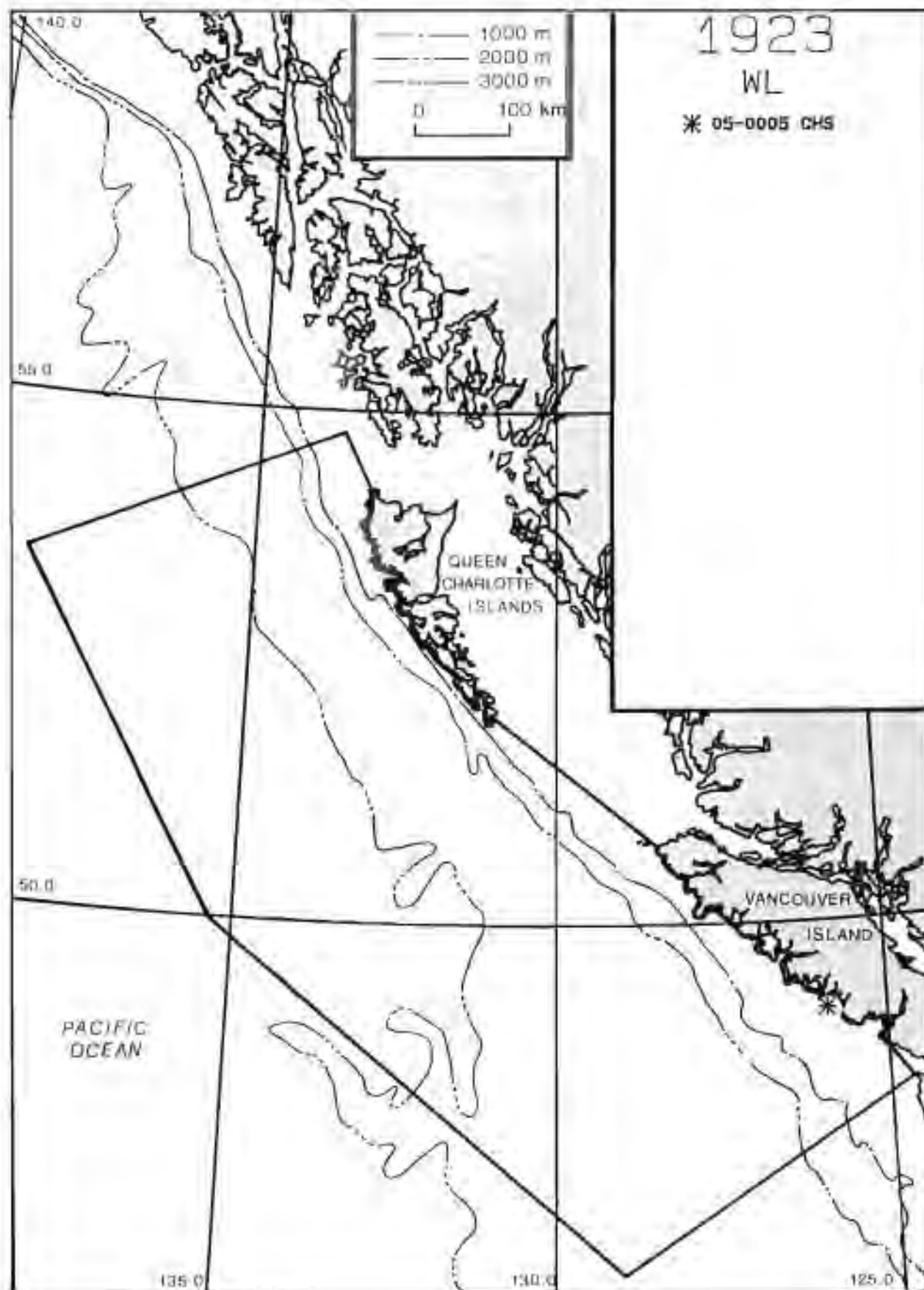


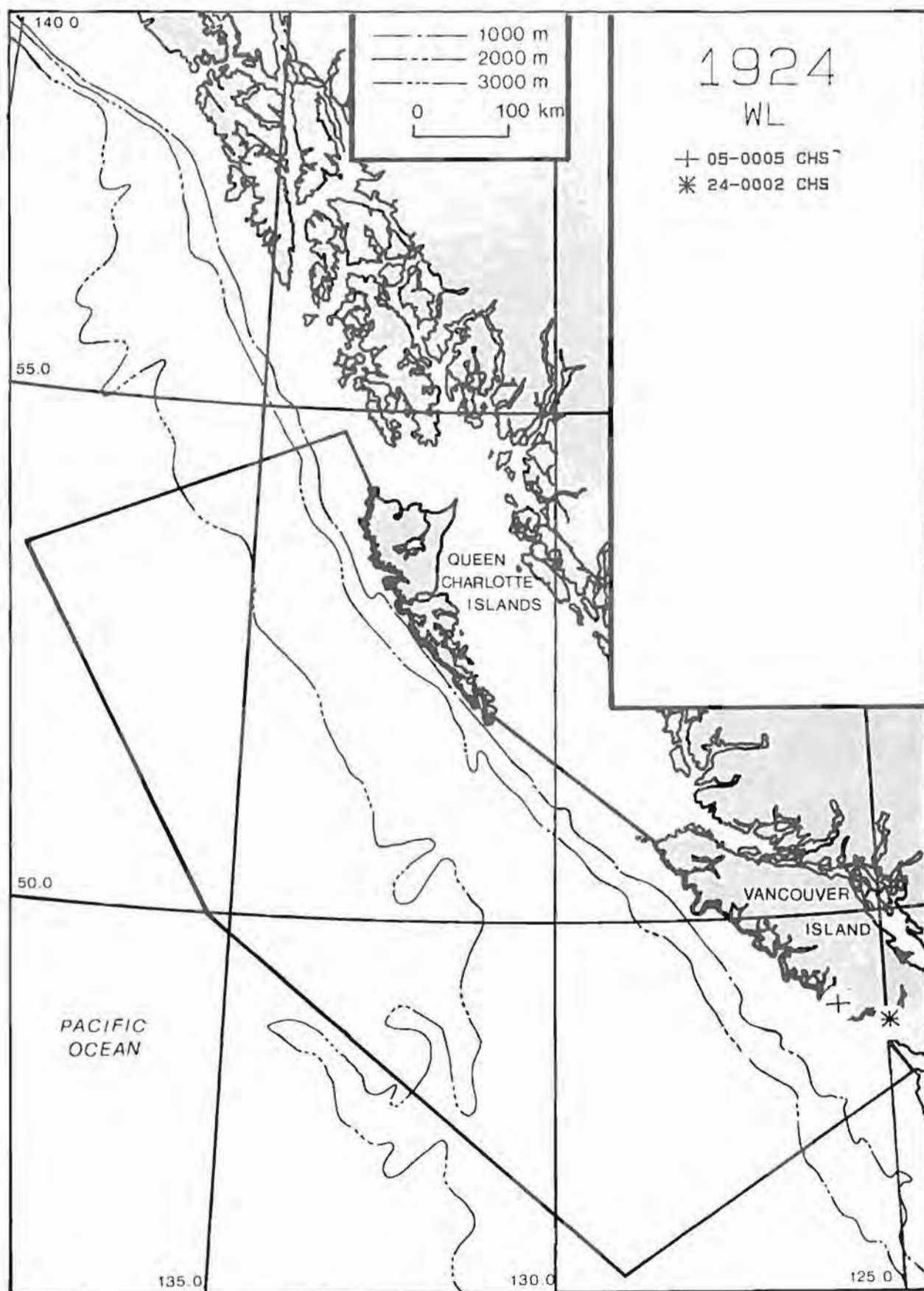


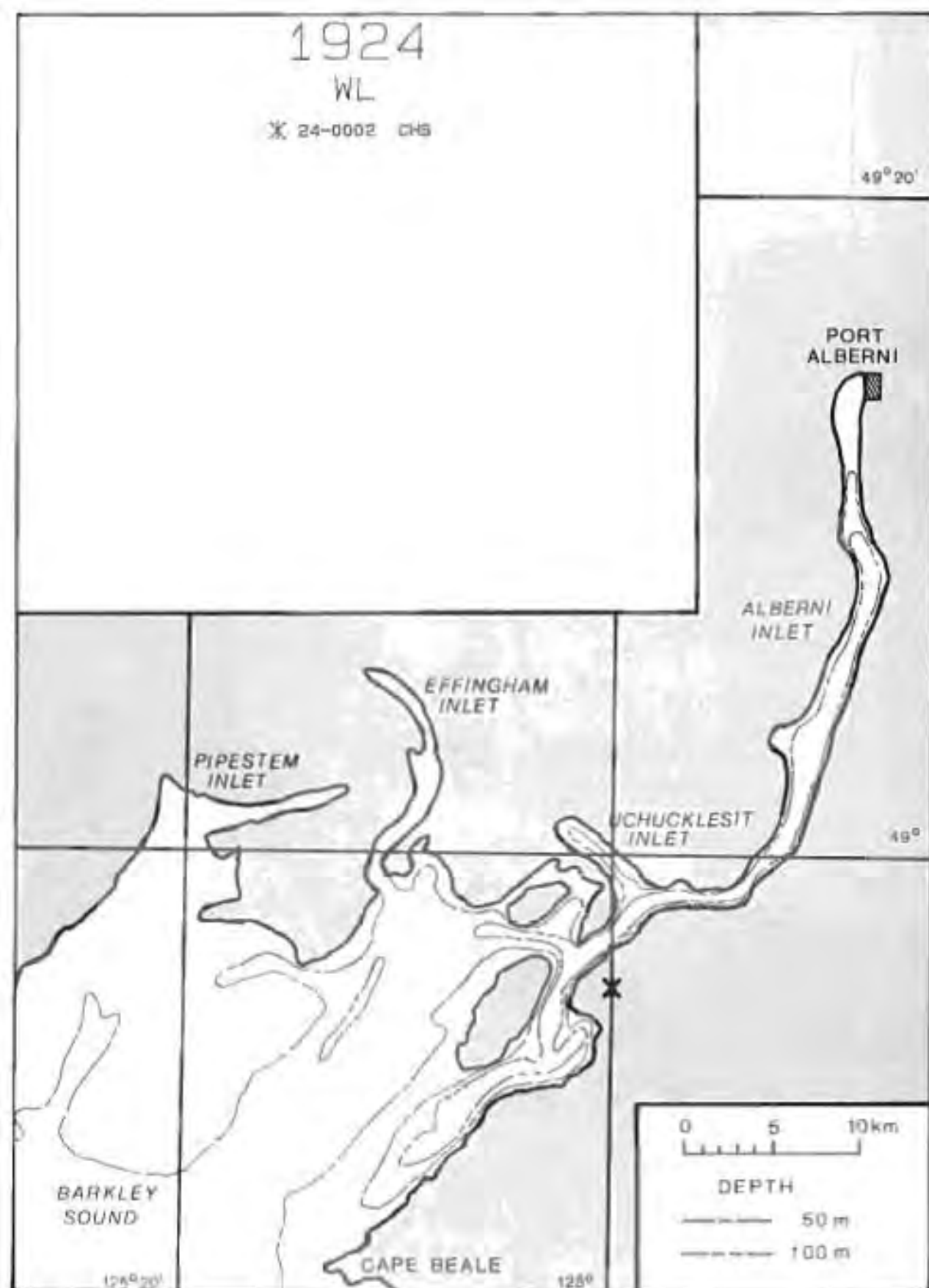


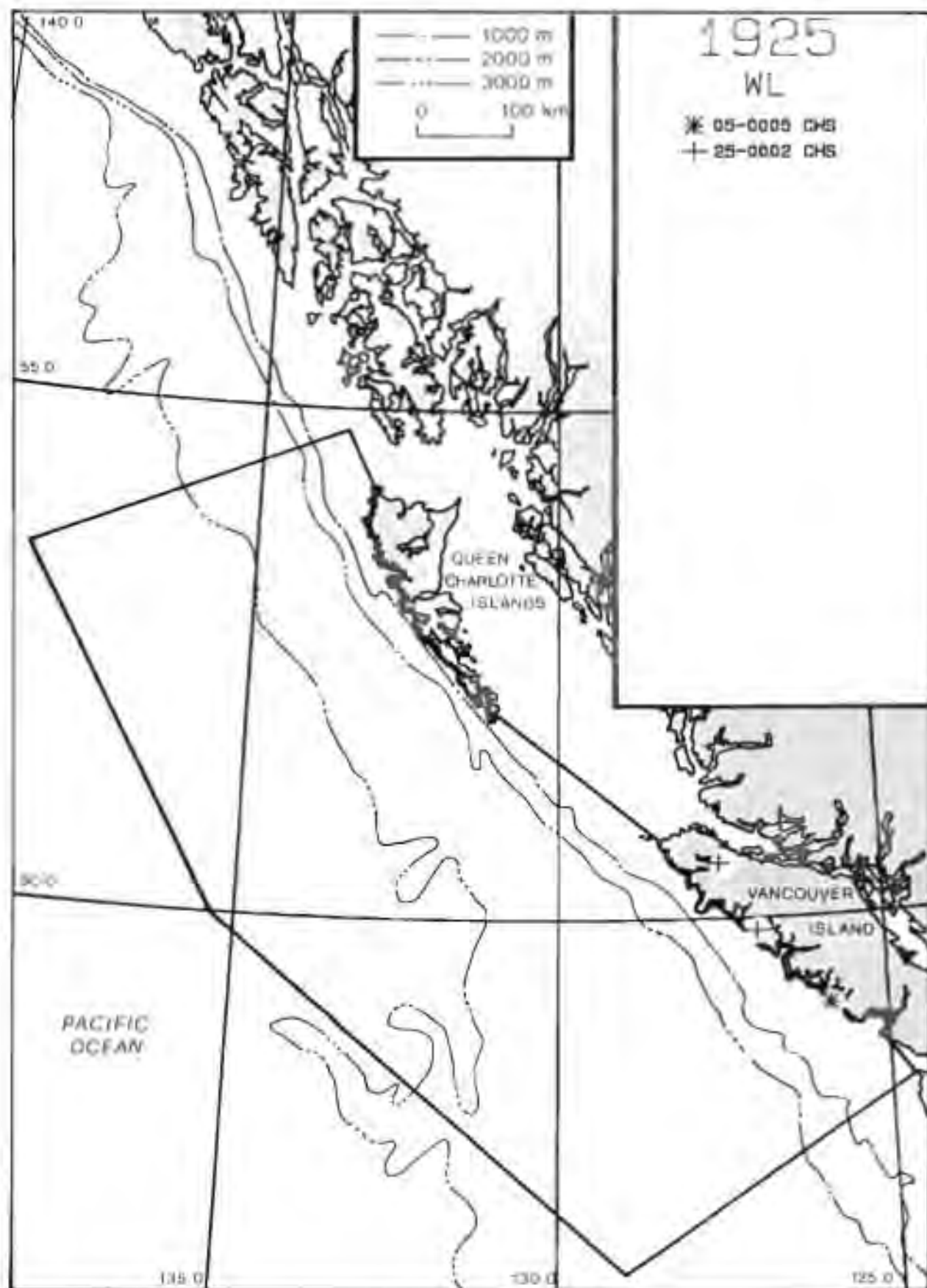


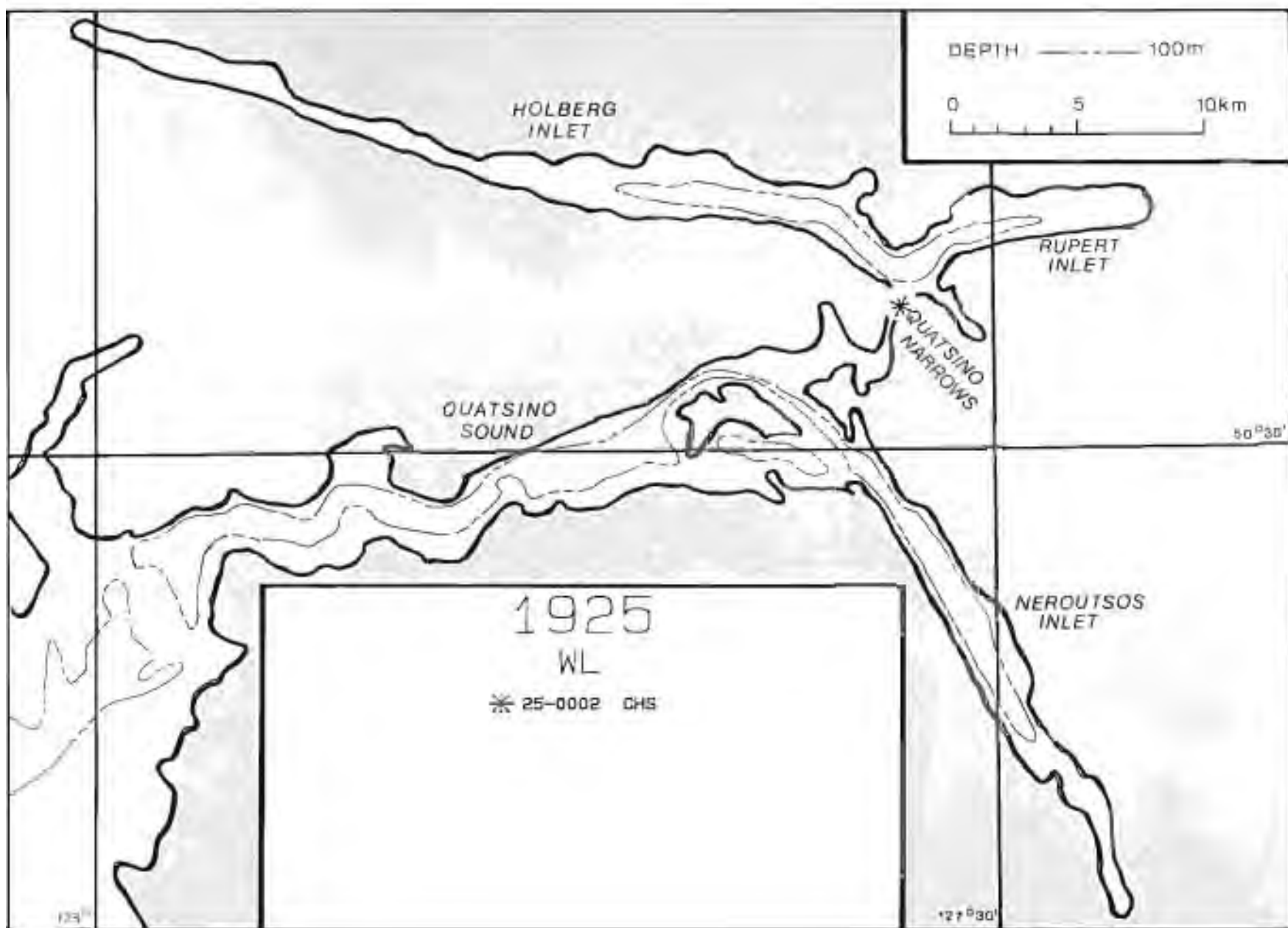


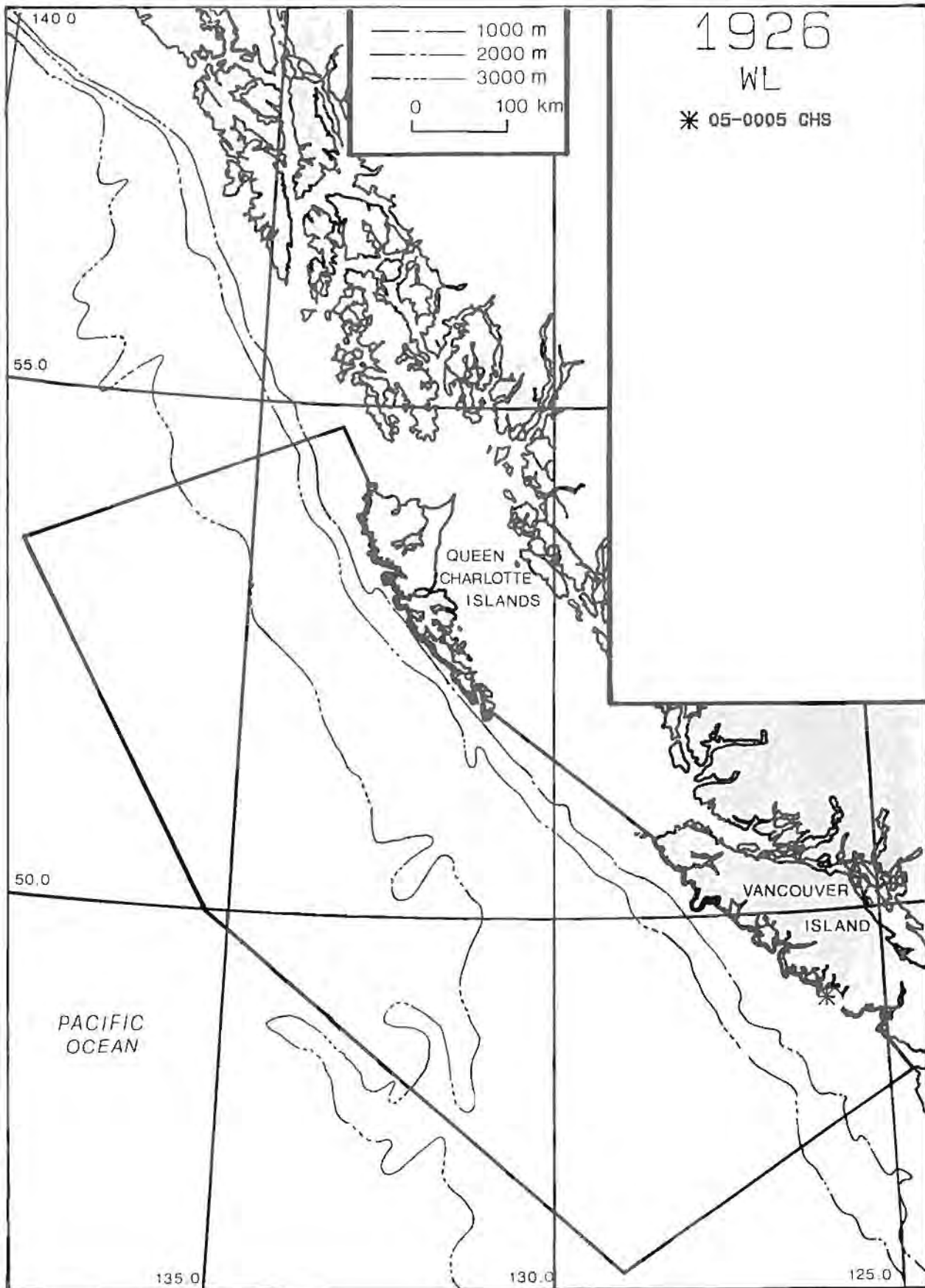


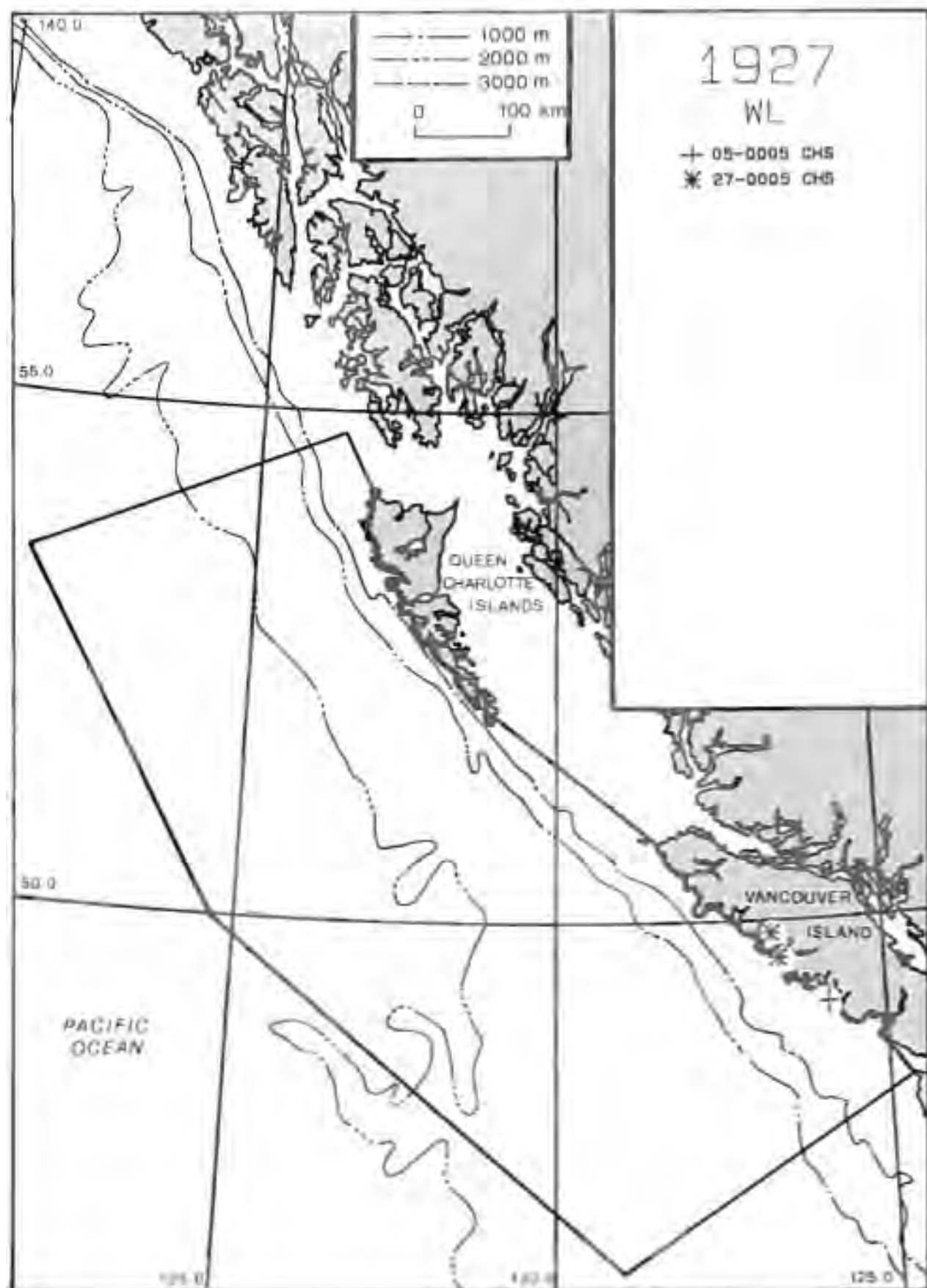


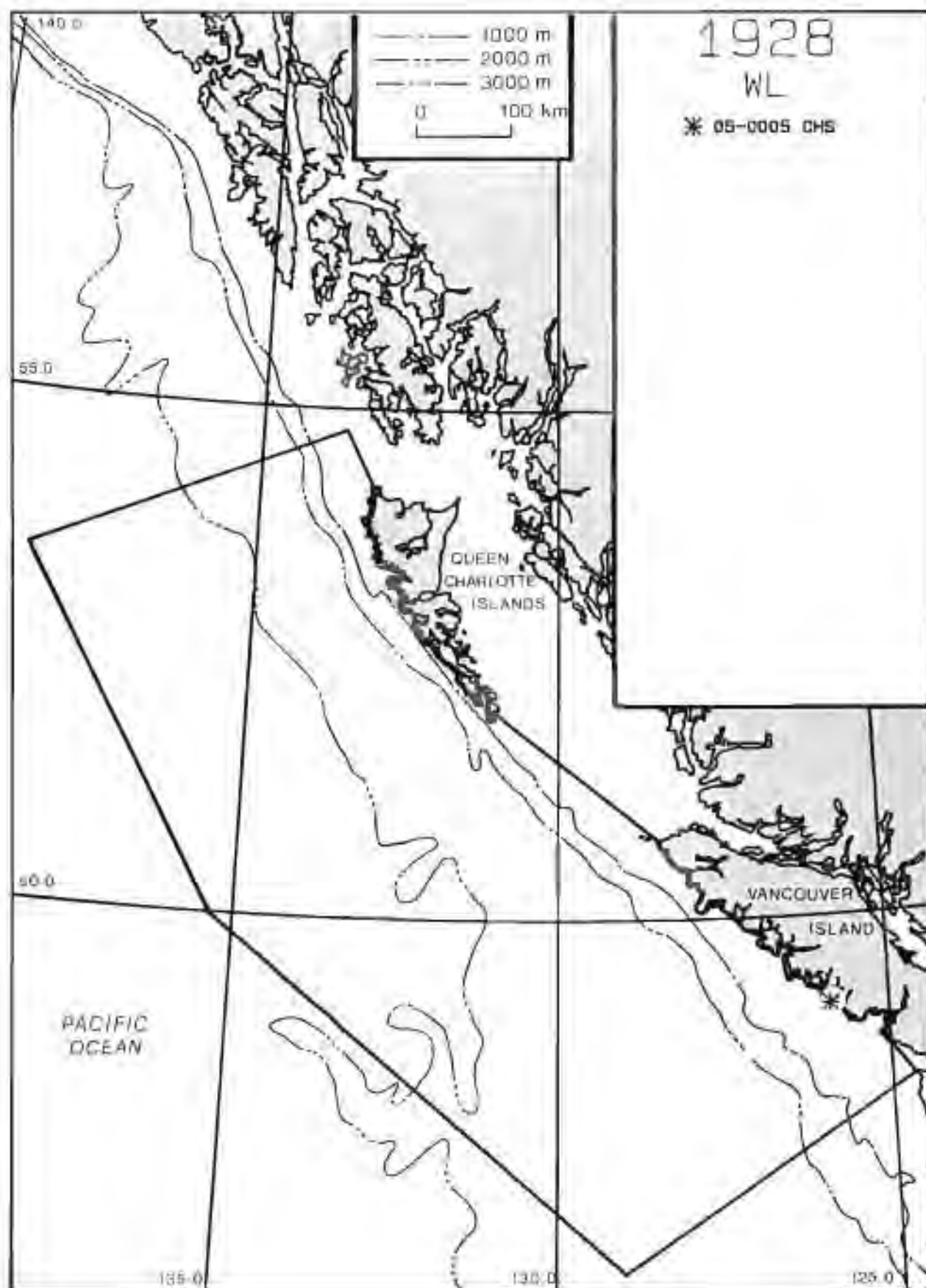


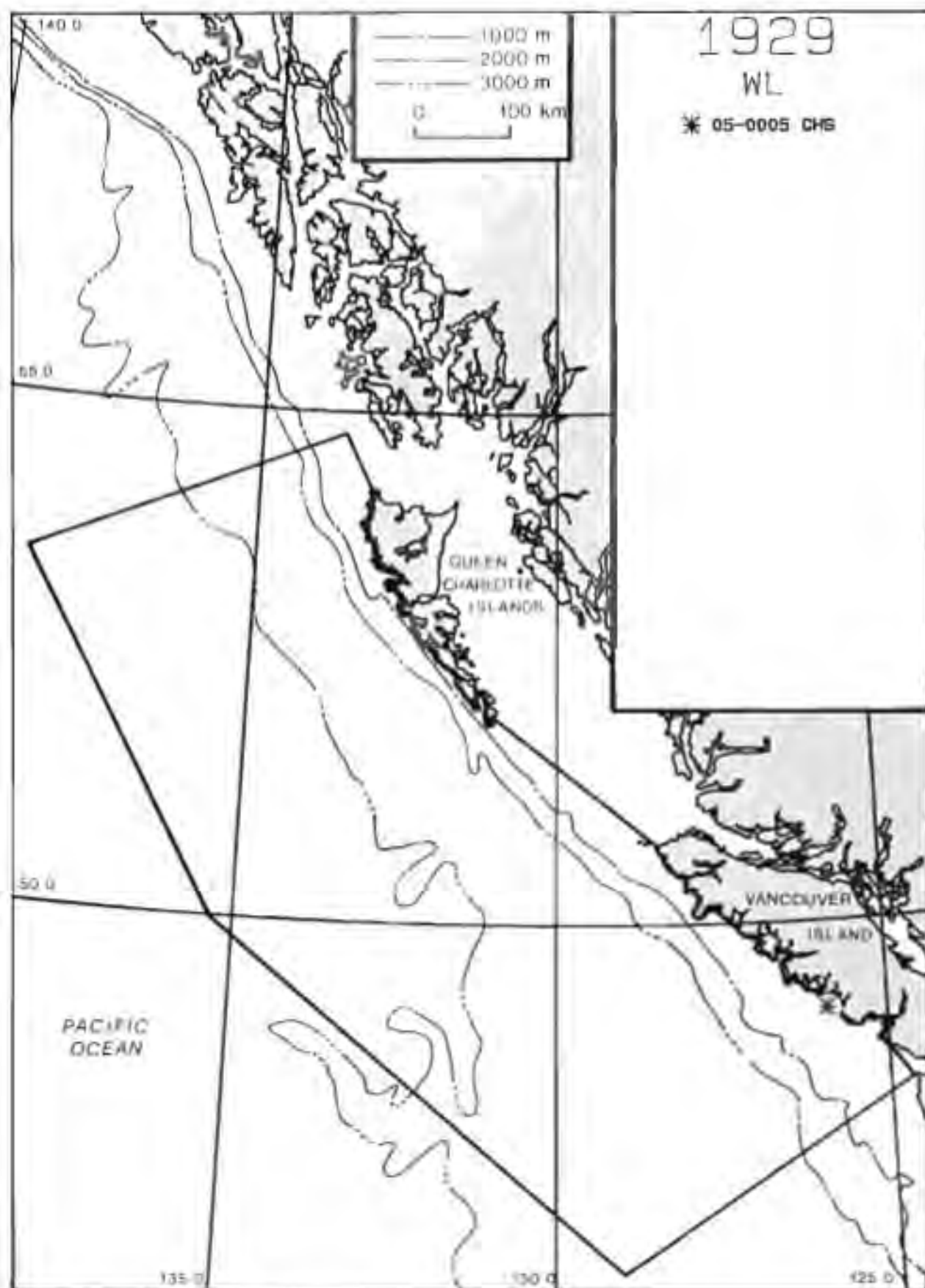


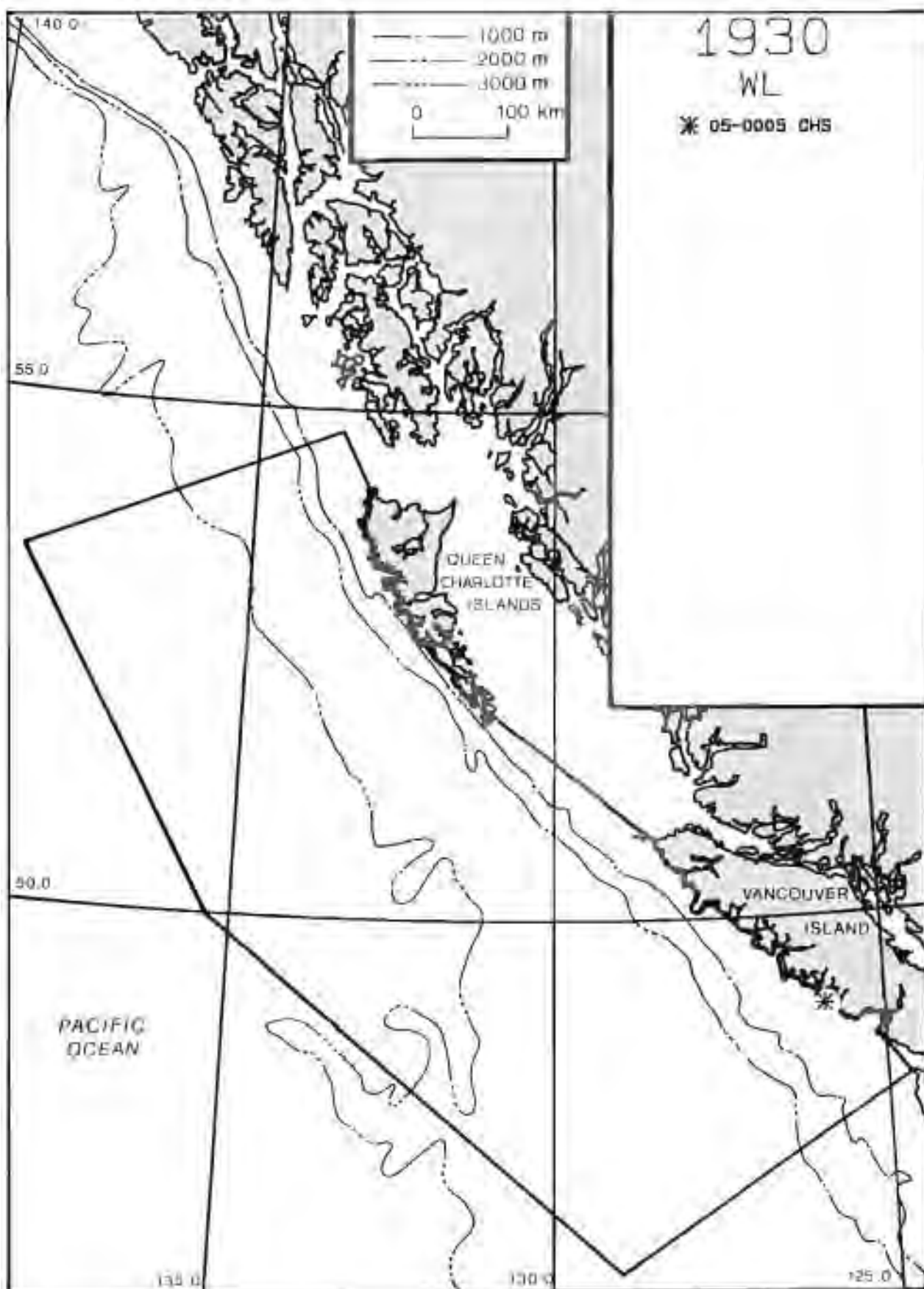


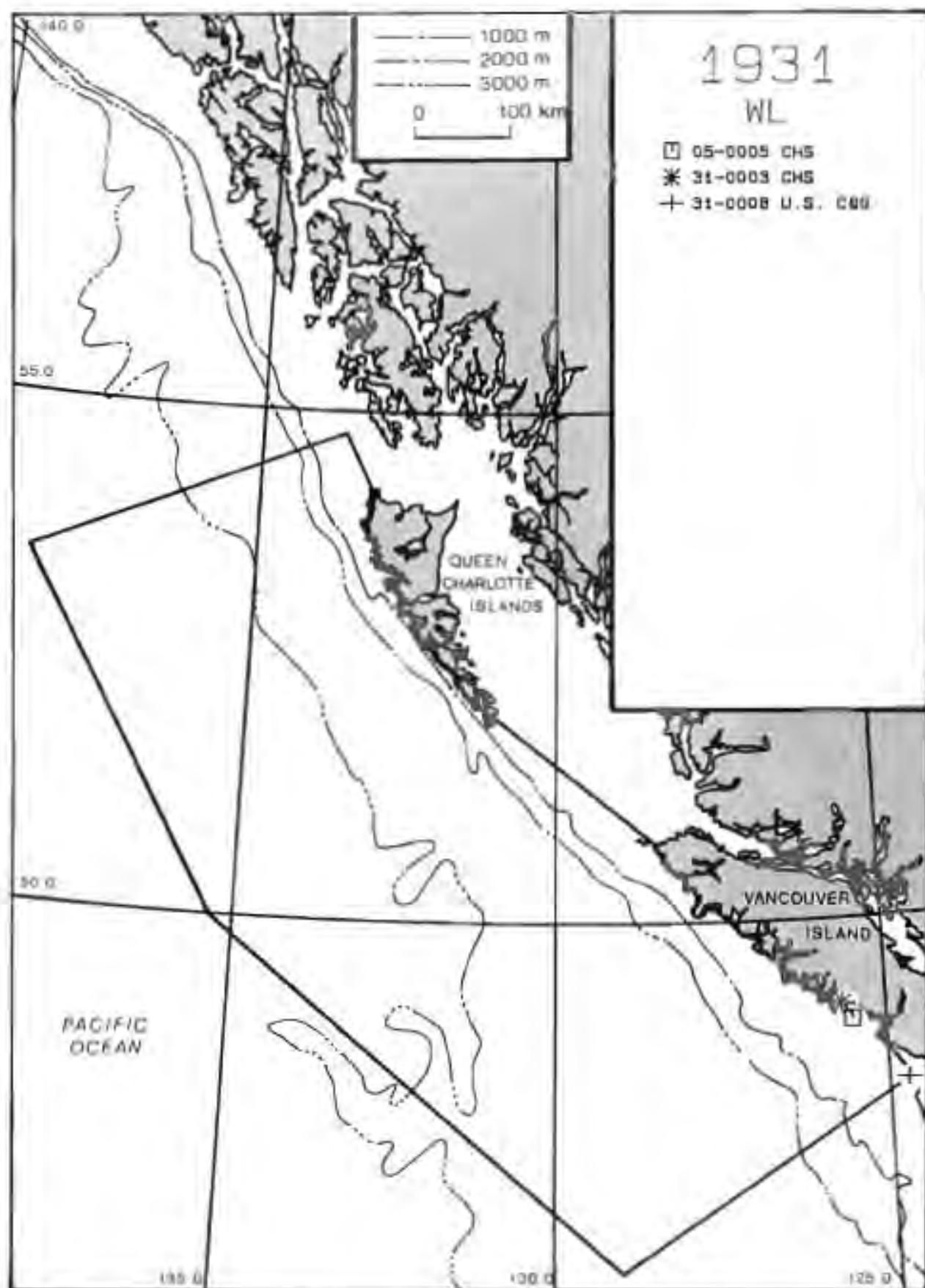


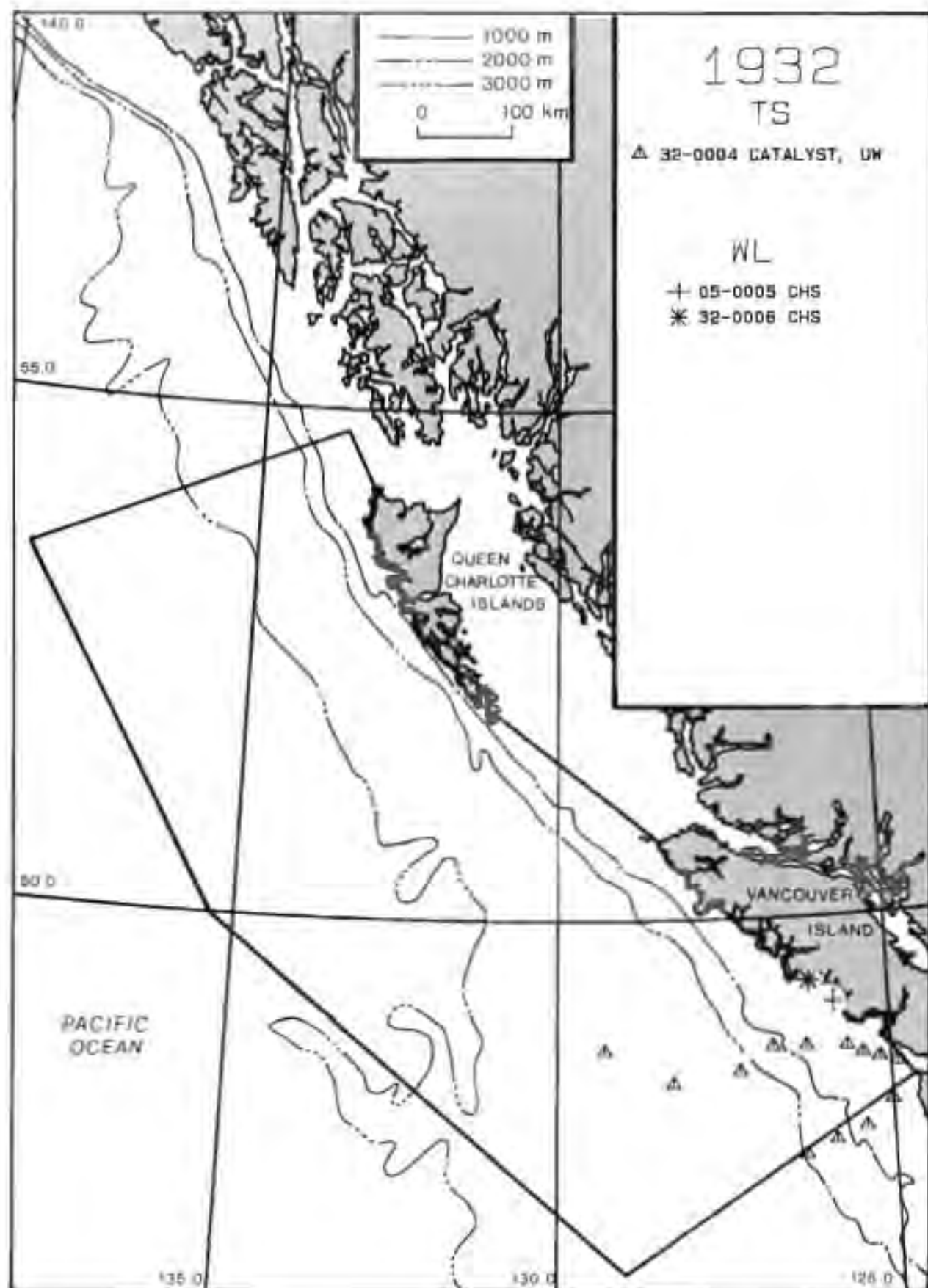


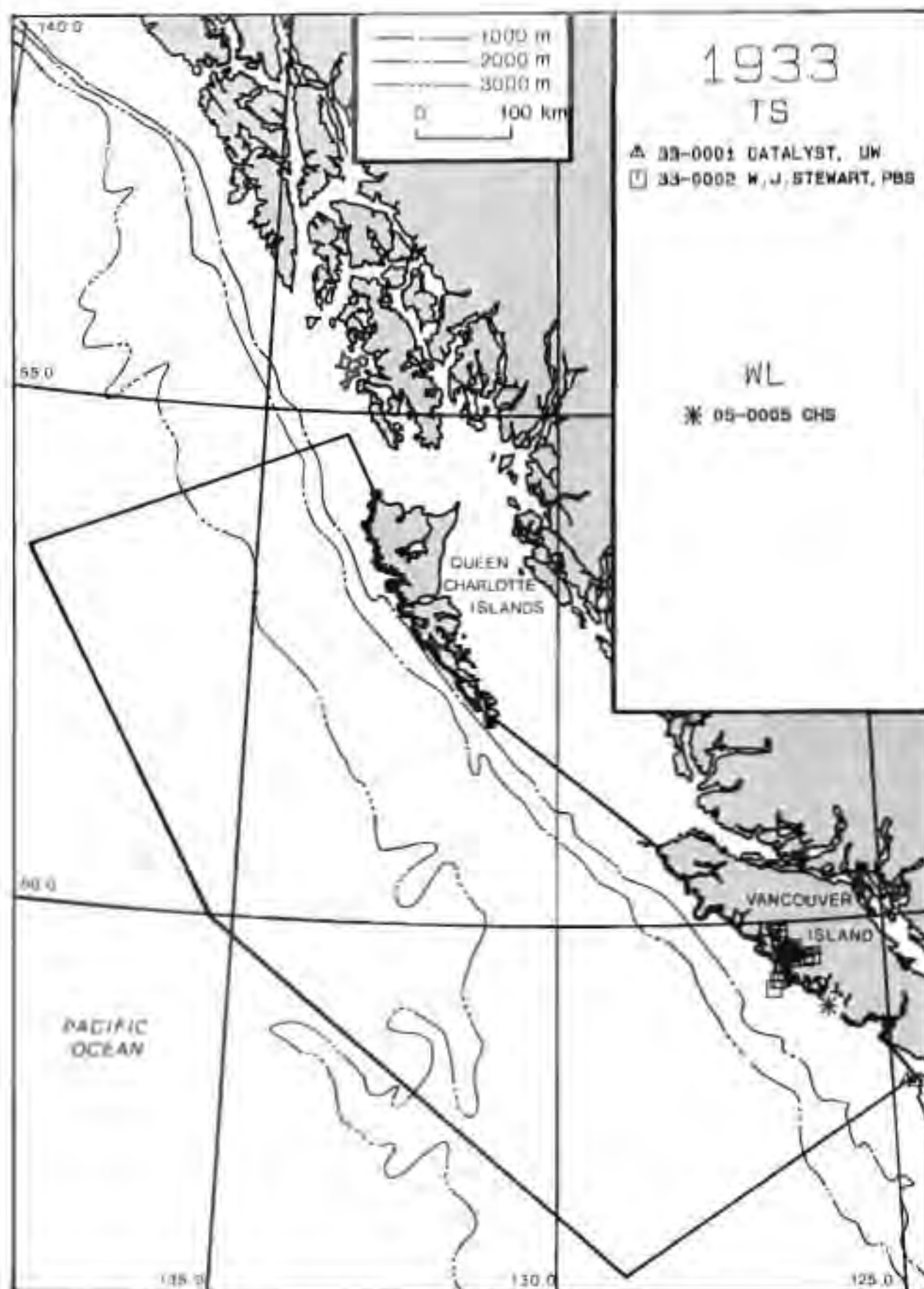












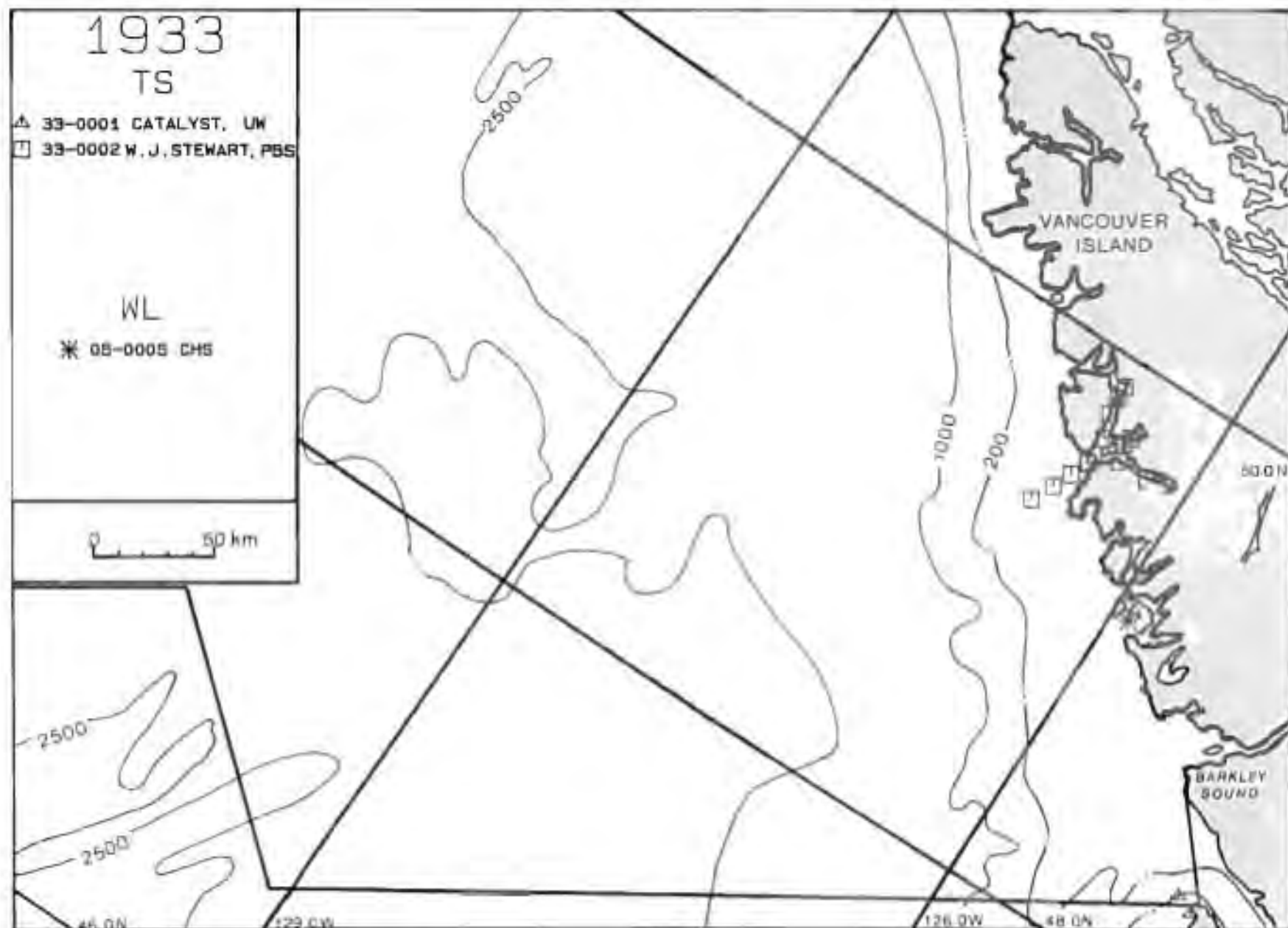
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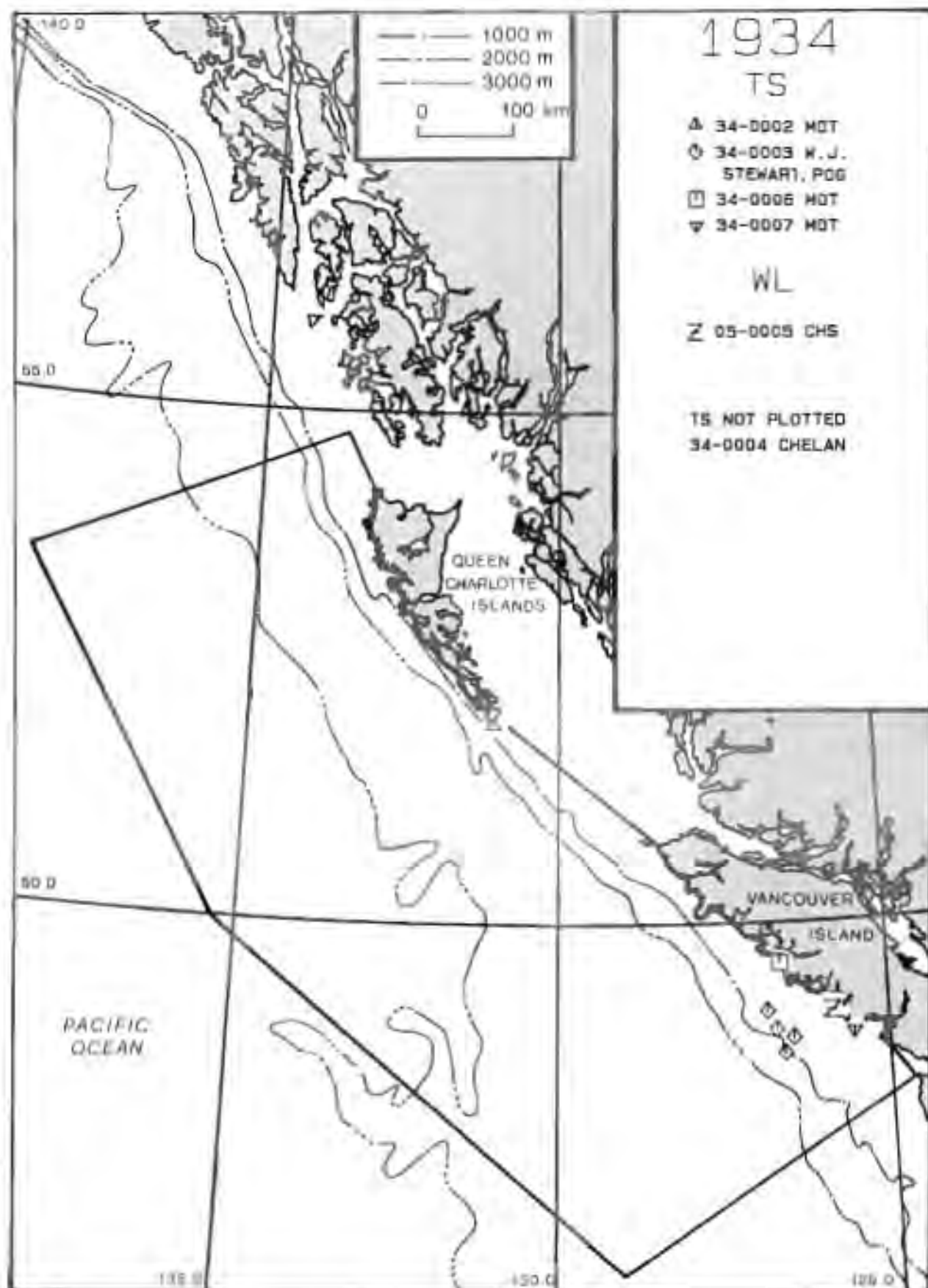
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□ 33-0002 W. J. STEWART, PSS

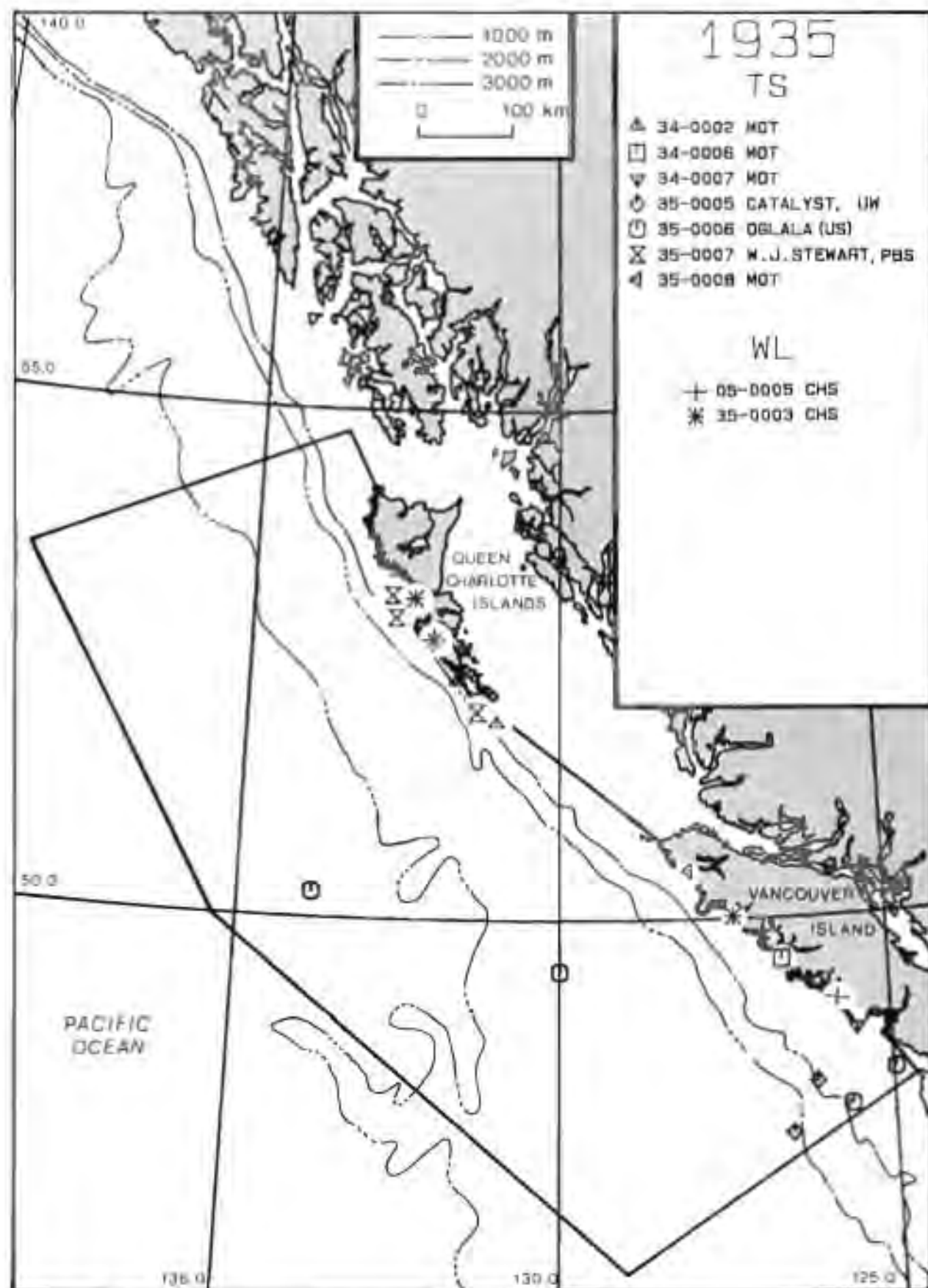
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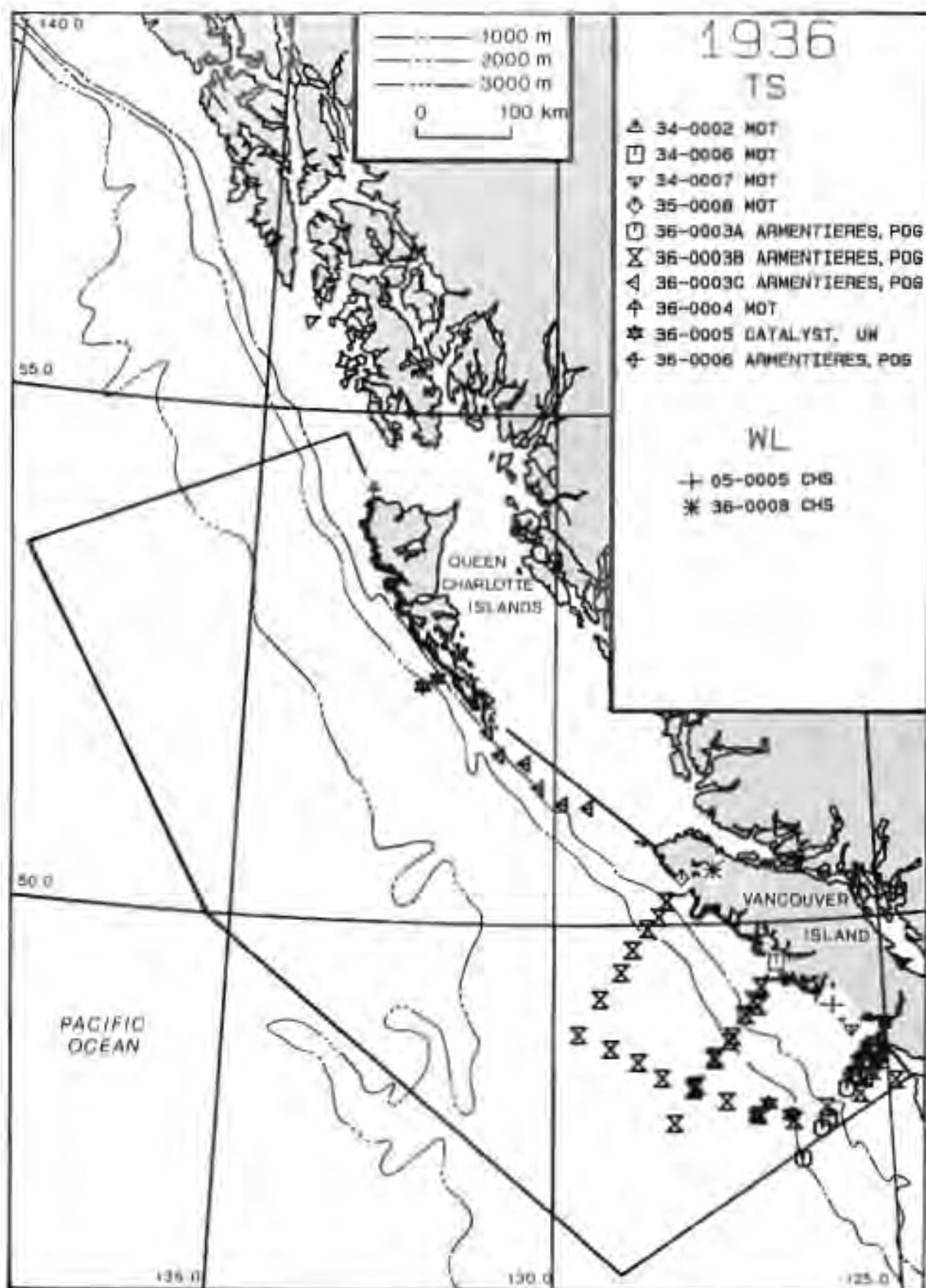
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0 50 km









1936

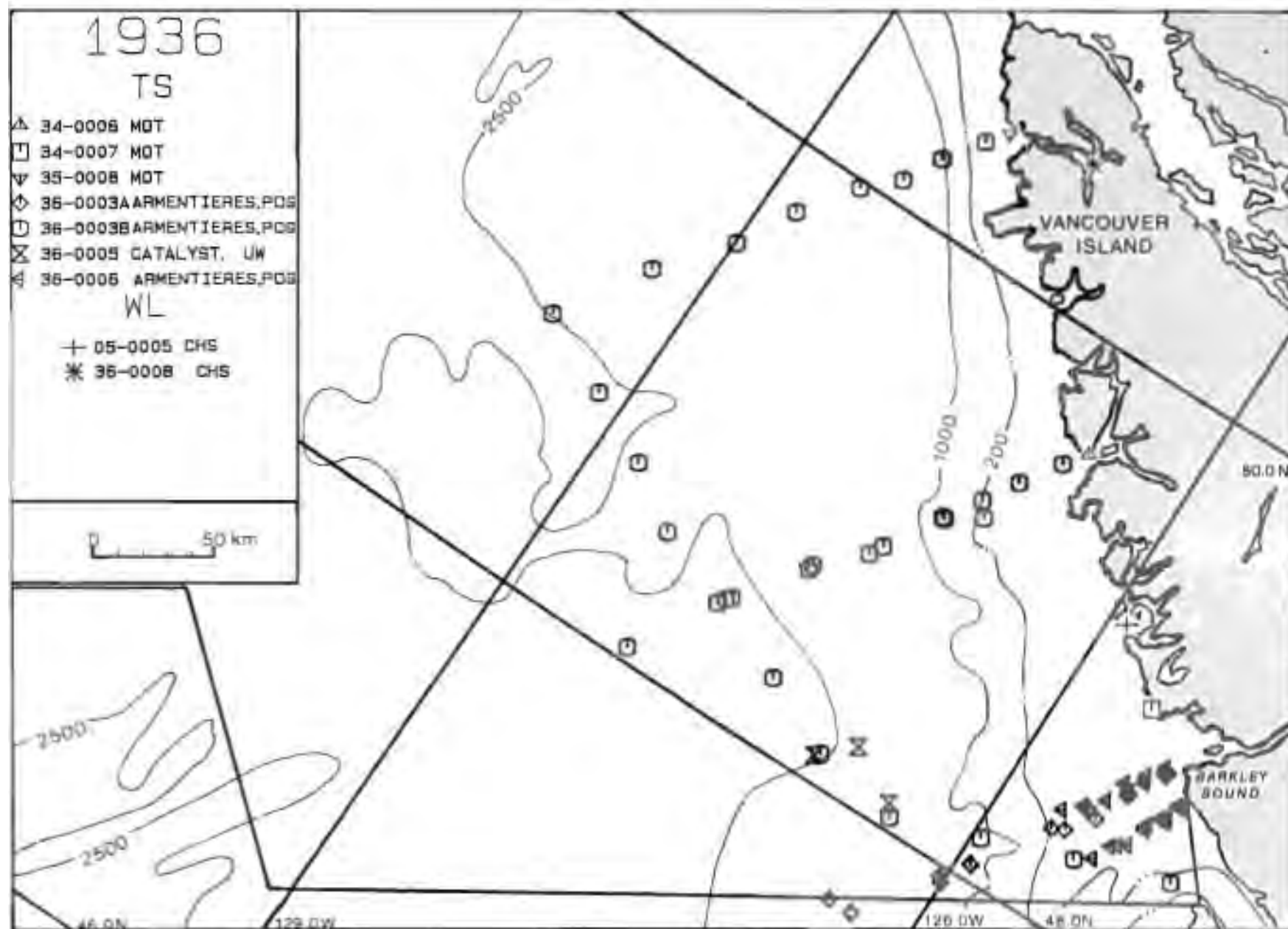
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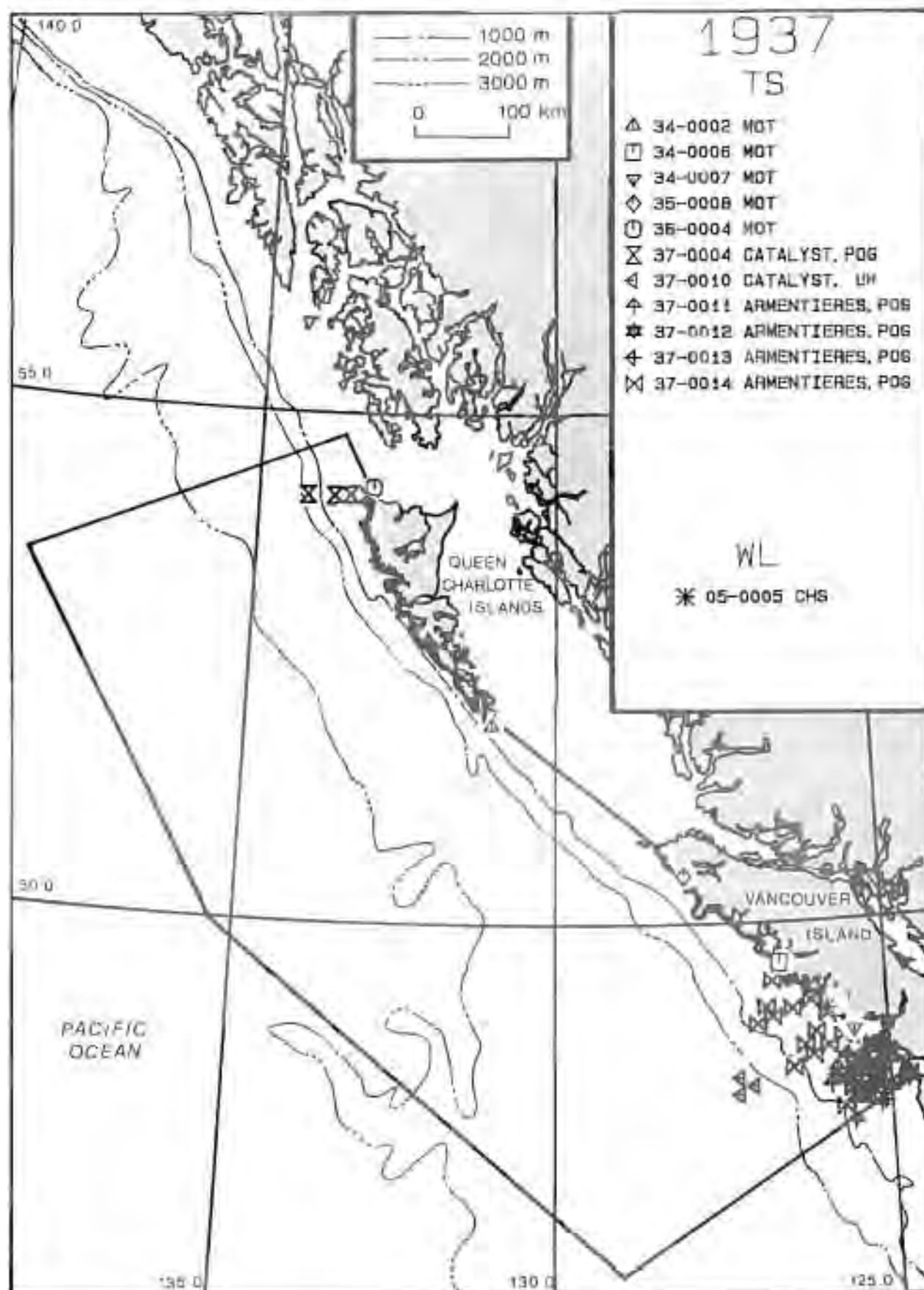
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- 34-0007 MGT
- ▽ 35-0008 MGT
- ◇ 36-0003A ARMENTIERES, POS
- ◻ 36-0003B ARMENTIERES, POS
- ⊗ 36-0005 CATALYST, UW
- ◀ 36-0006 ARMENTIERES, POS

WL

- + 05-0005 CHS
- * 35-0008 CHS

0 50 km





1937
TS

- ▲ 34-0006 MOT
- 34-0007 MOT
- ▼ 35-0008 MOT
- ◇ 37-0011 ARMENTIERES, POS
- 37-0014 ARMENTIERES, POS

0 50 km



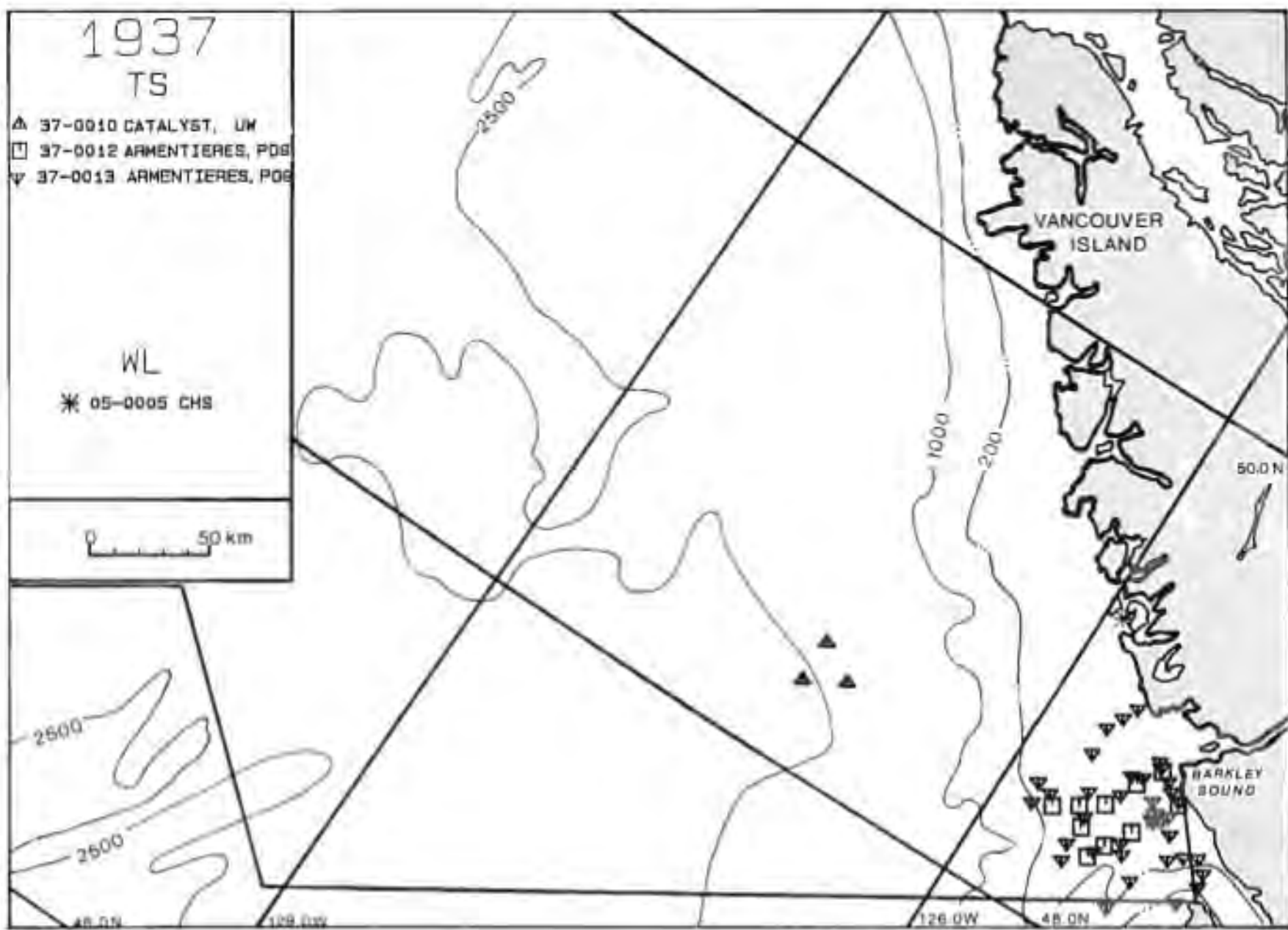
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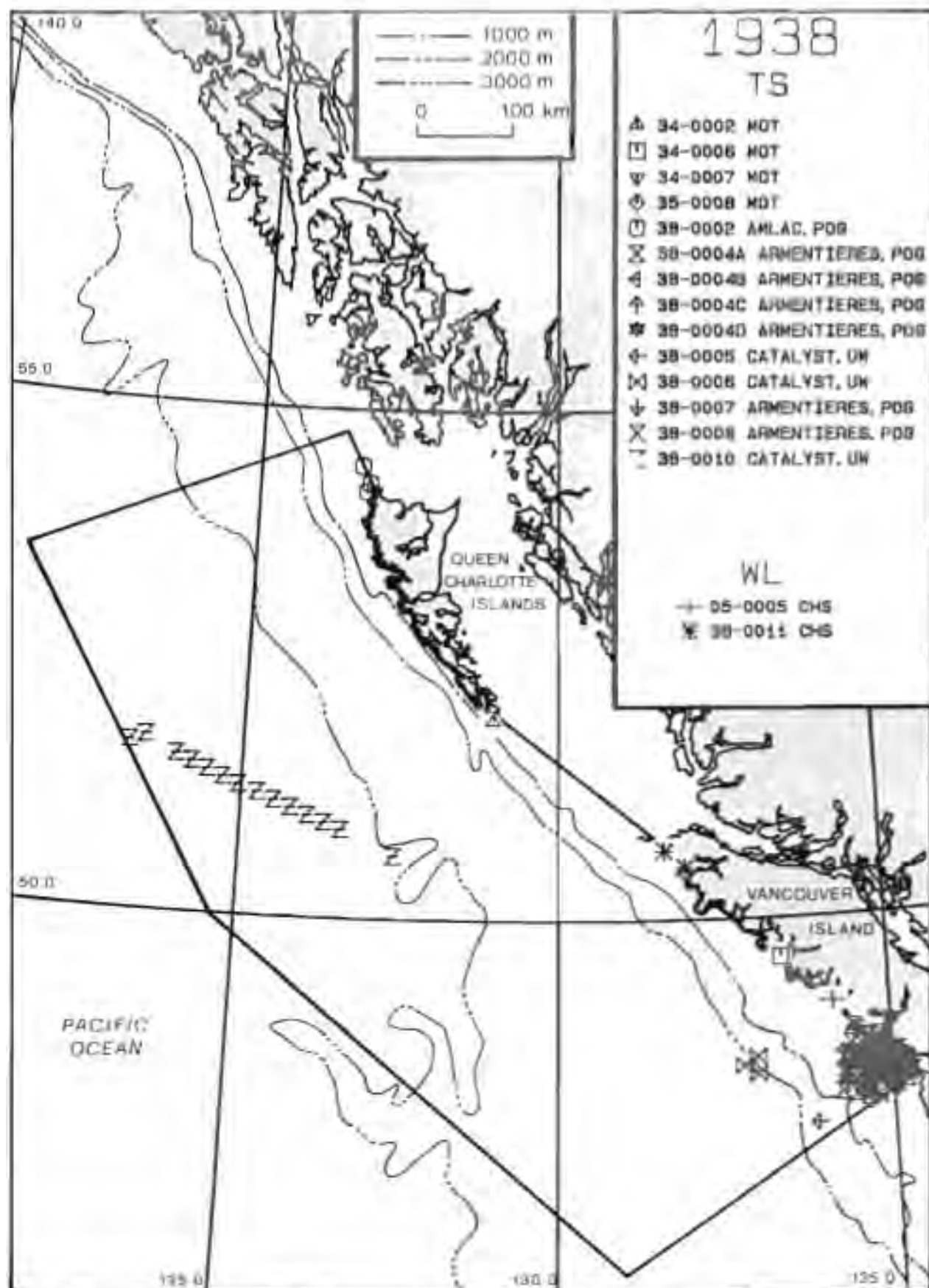
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- 37-0012 ARMENTIERES, PDS
- ▼ 37-0013 ARMENTIERES, PDS

WL

* 05-0005 CHS

0 50 km

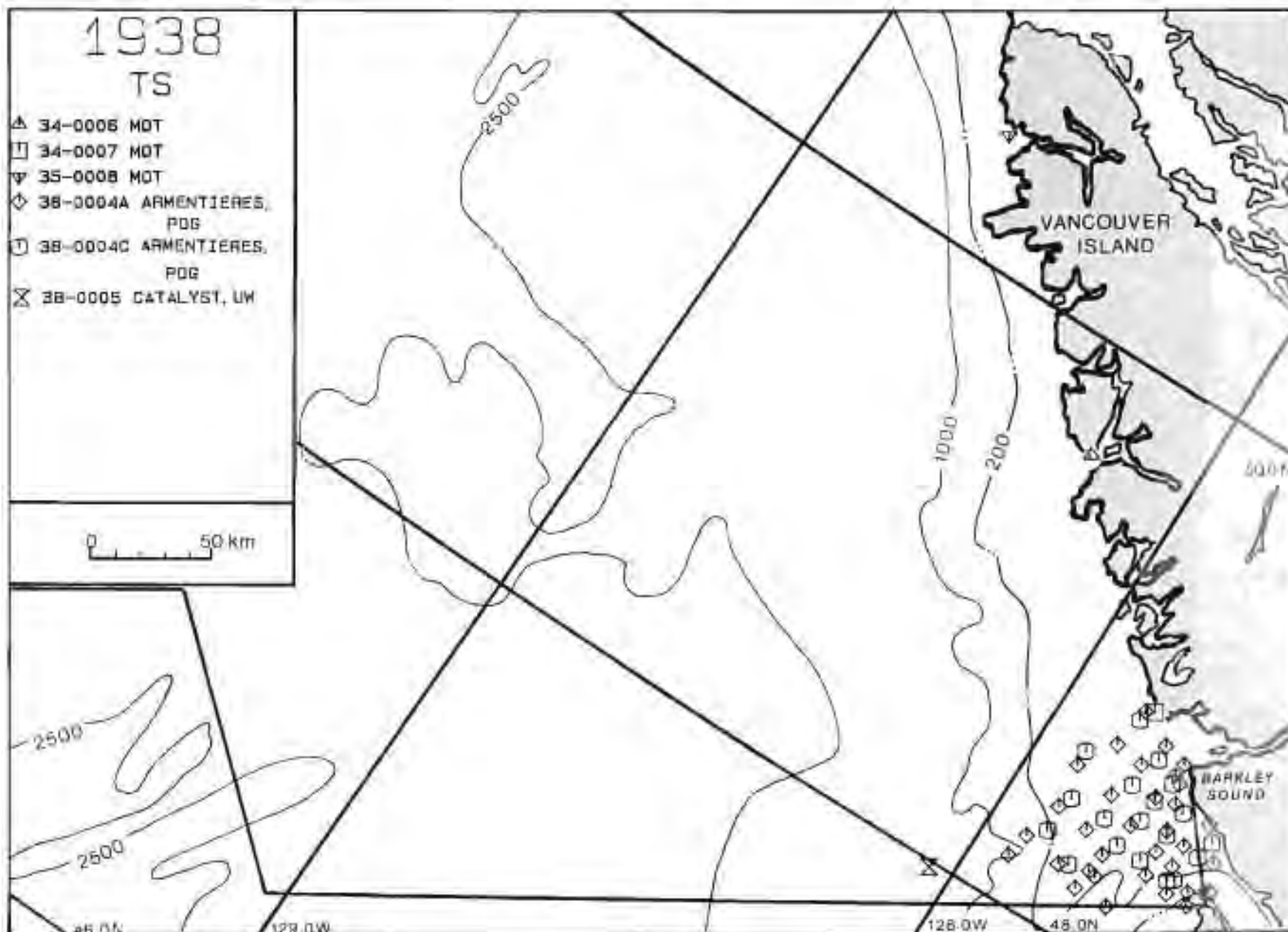




1938
TS

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- ▣ 34-0007 MDT
- ▼ 35-0008 MDT
- ◇ 36-0004A ARMENTIERES,
POG
- ① 36-0004C ARMENTIERES,
POG
- ⊗ 36-0005 CATALYST, UW

0 50 km



1938

TS

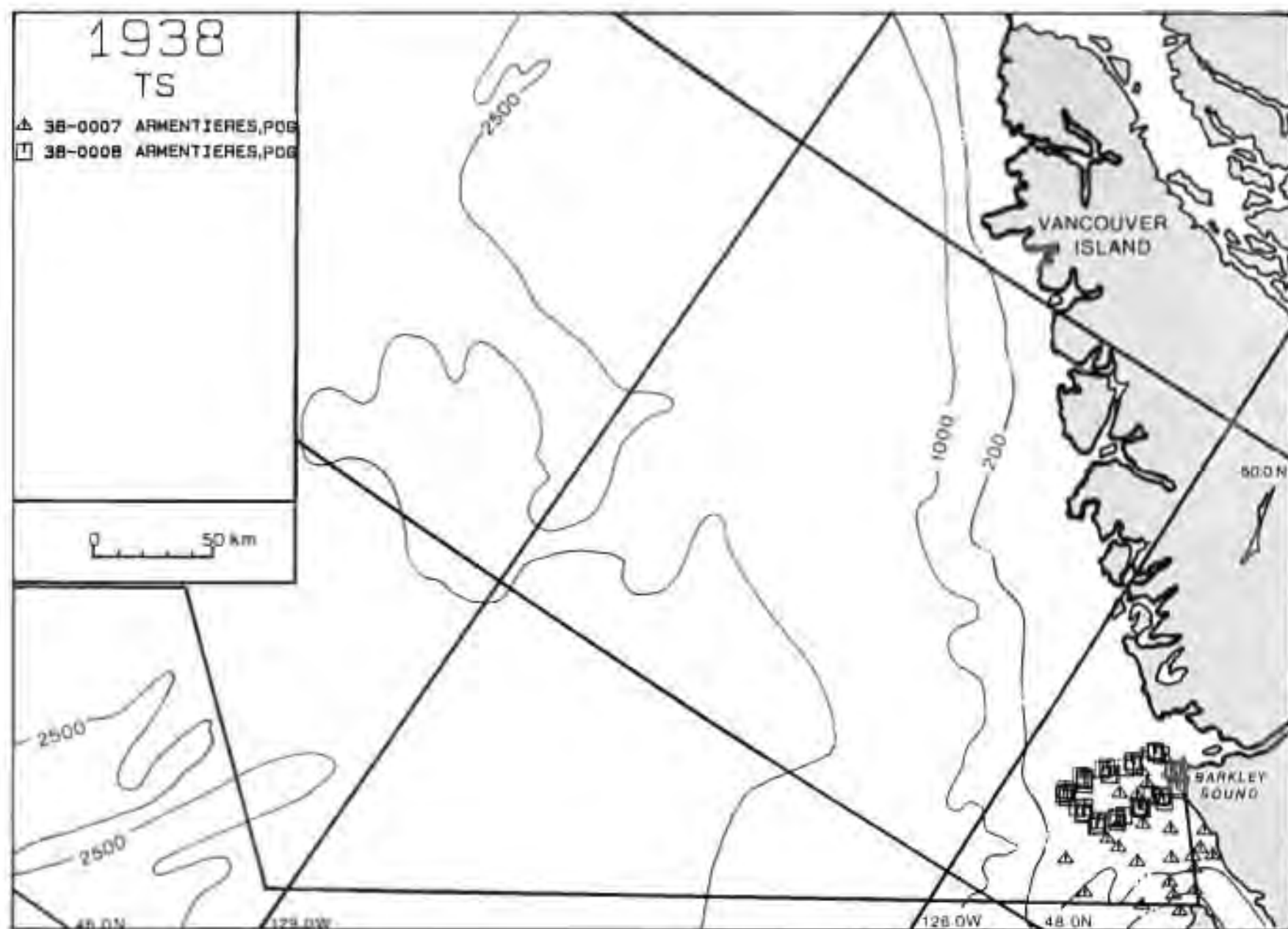
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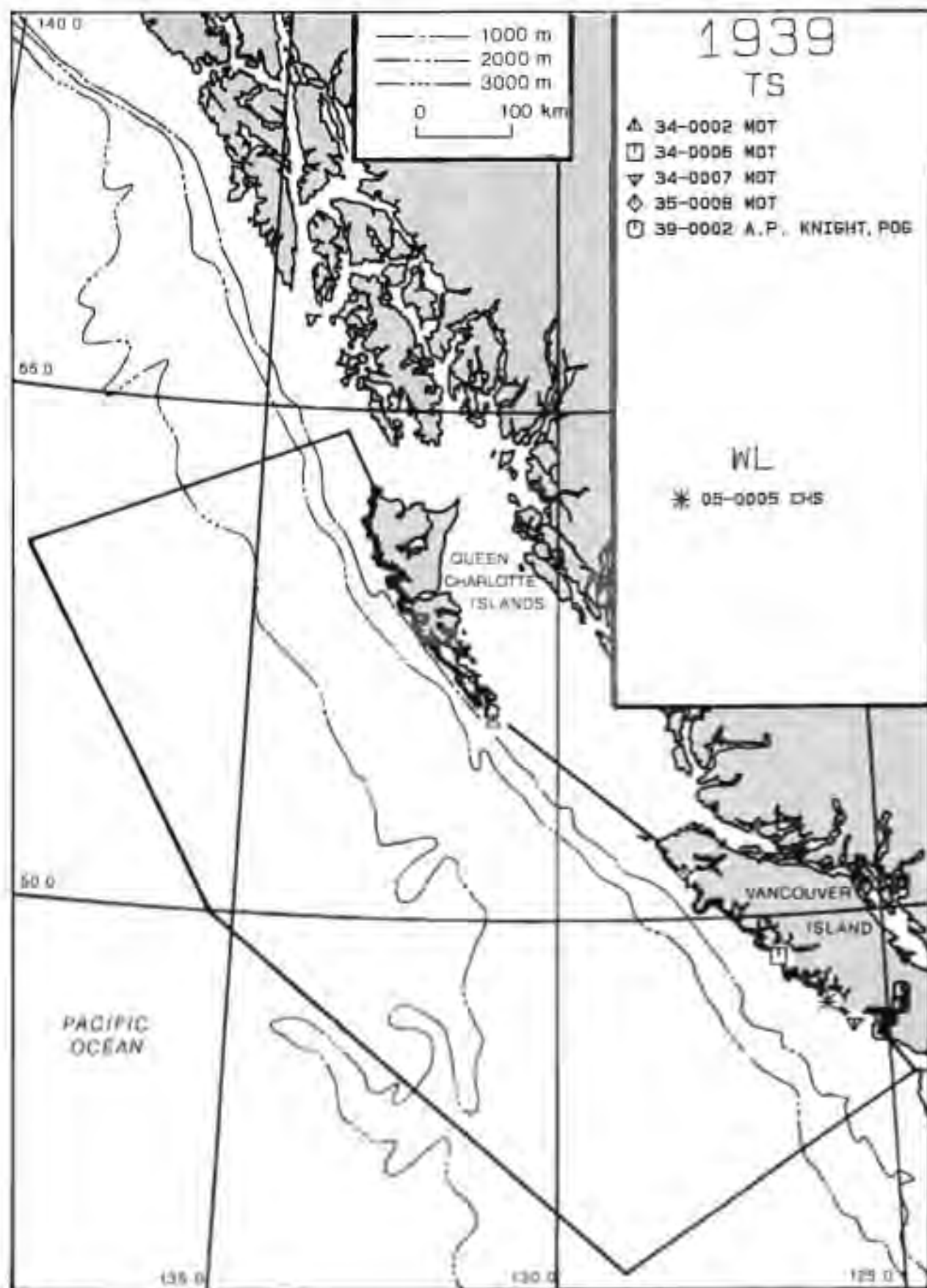
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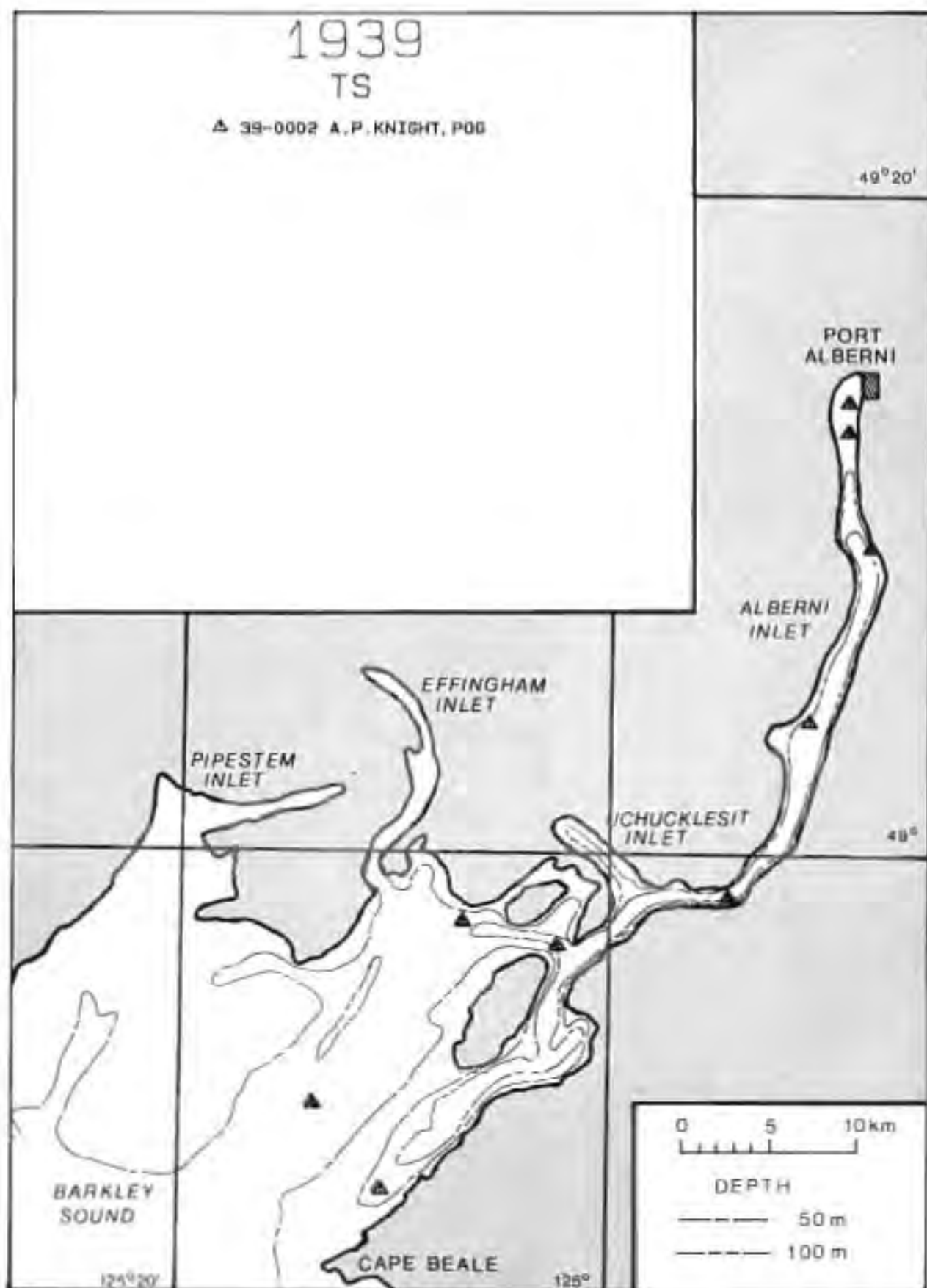
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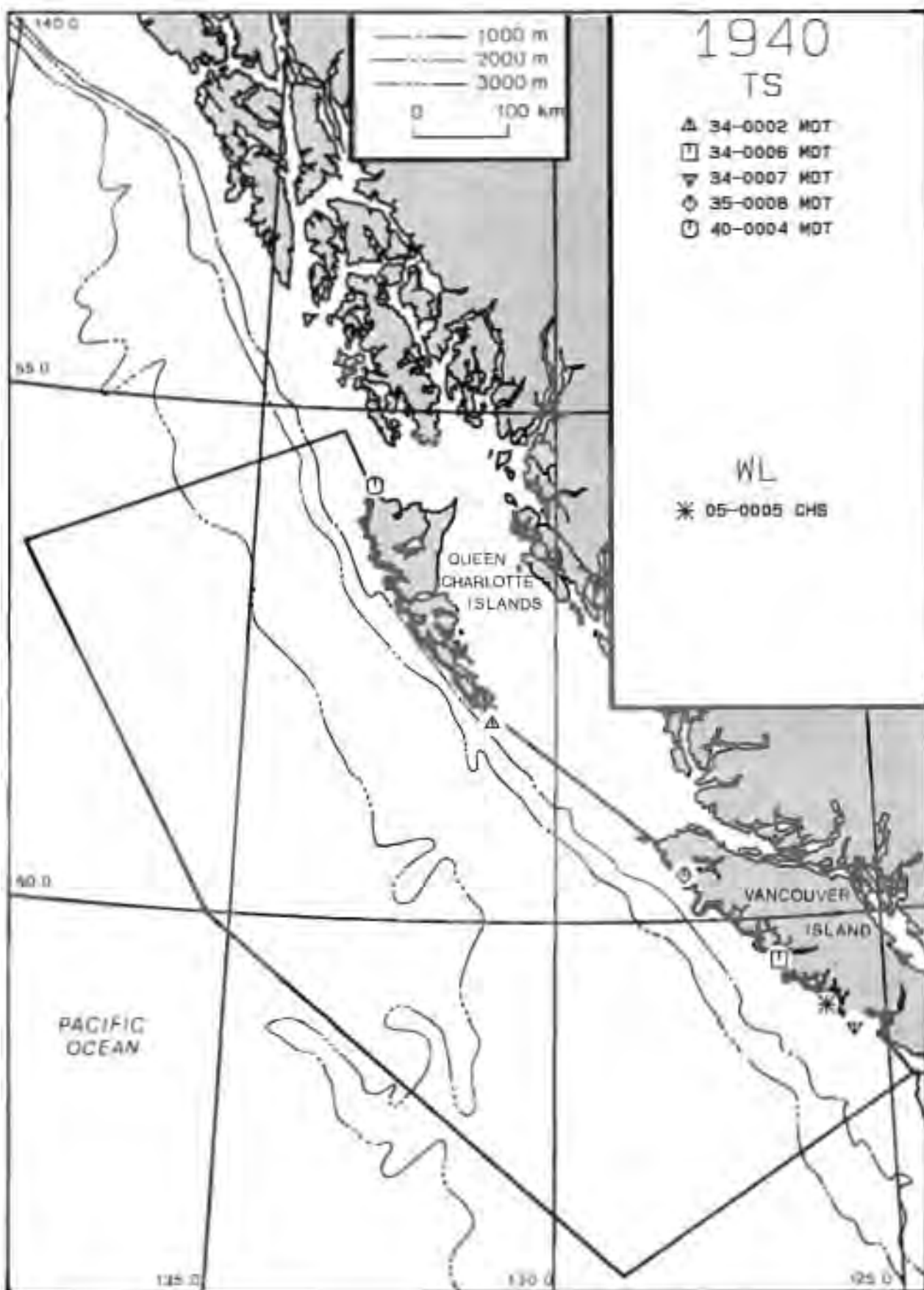
50 km

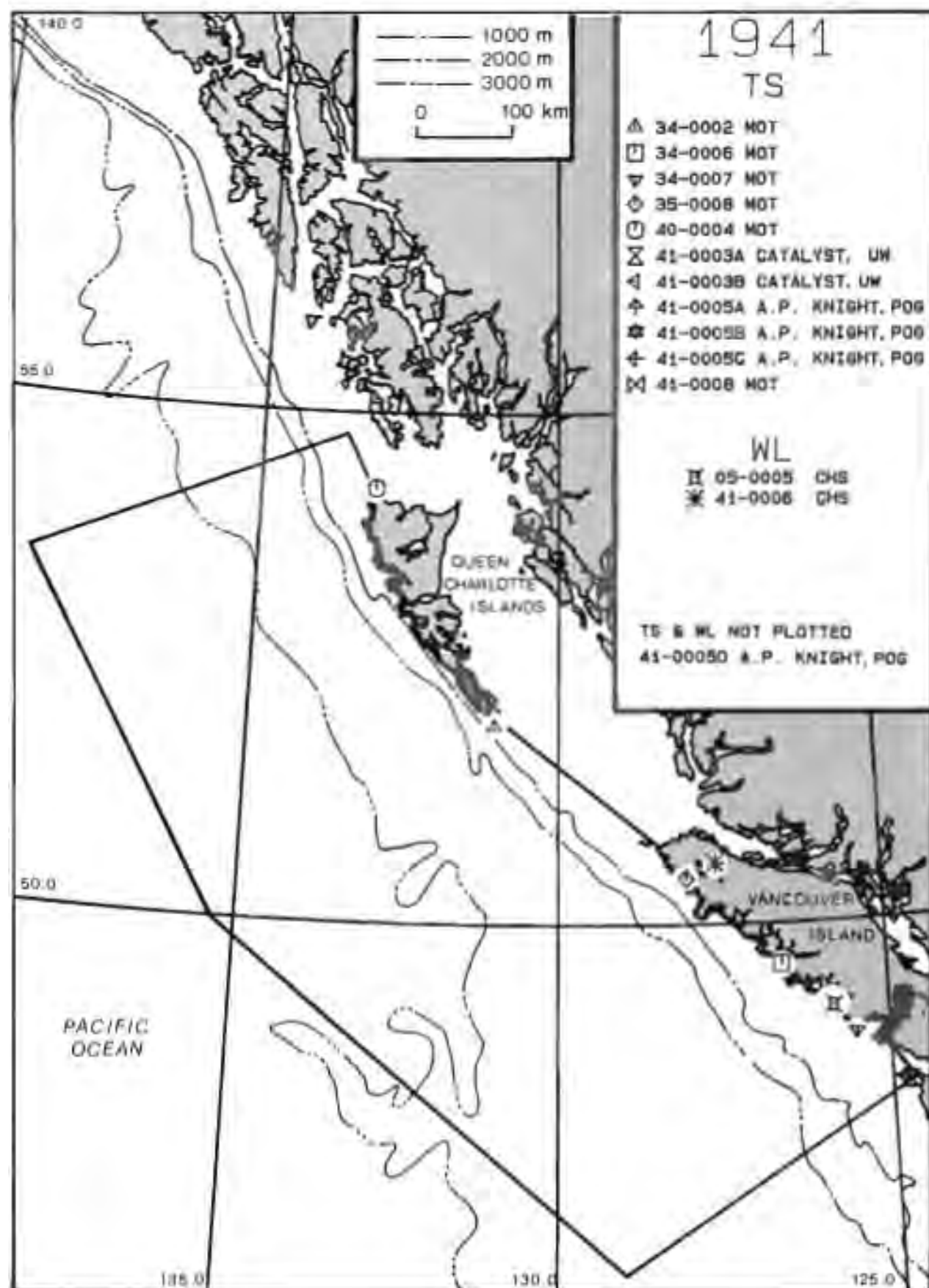


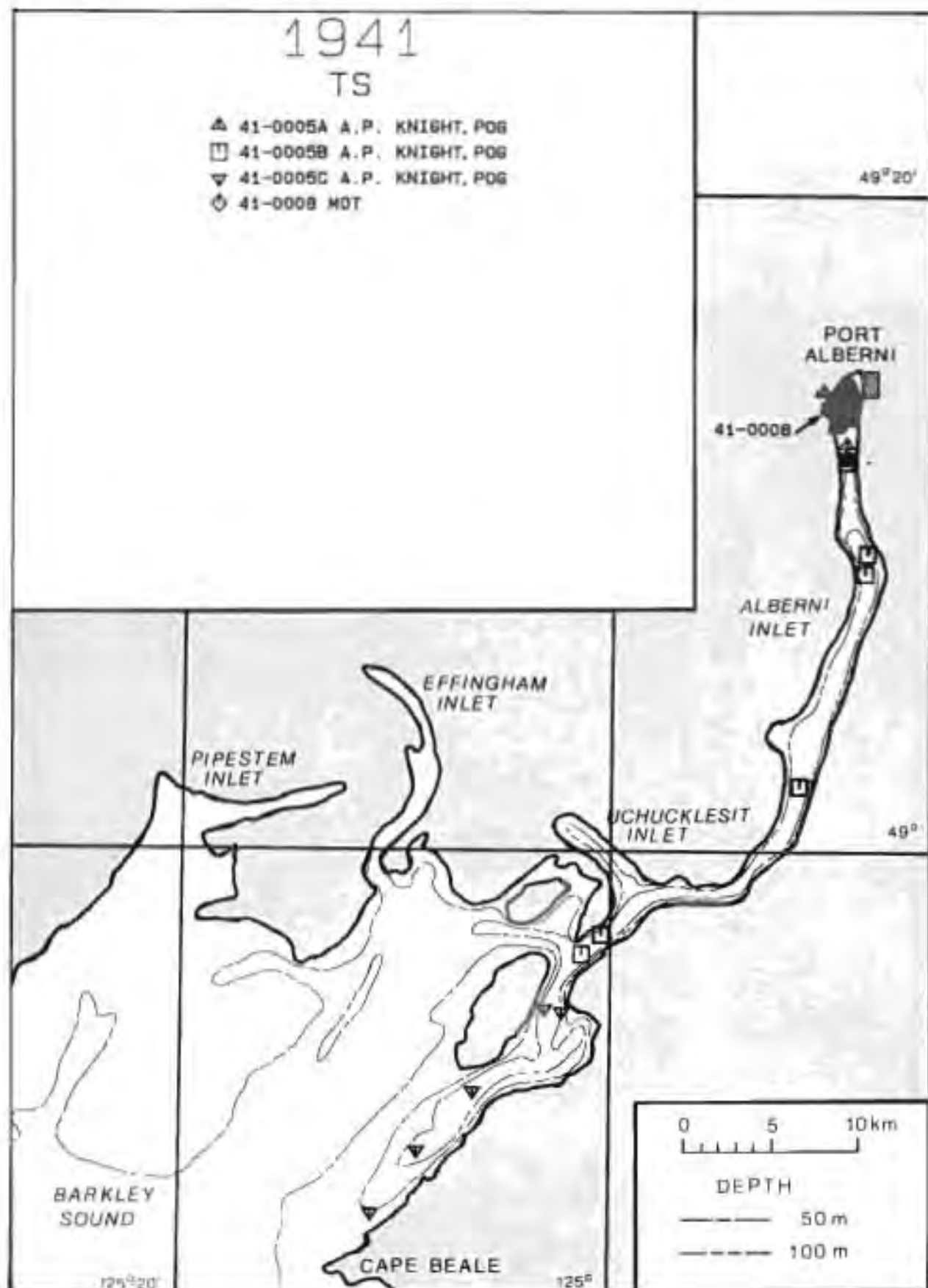


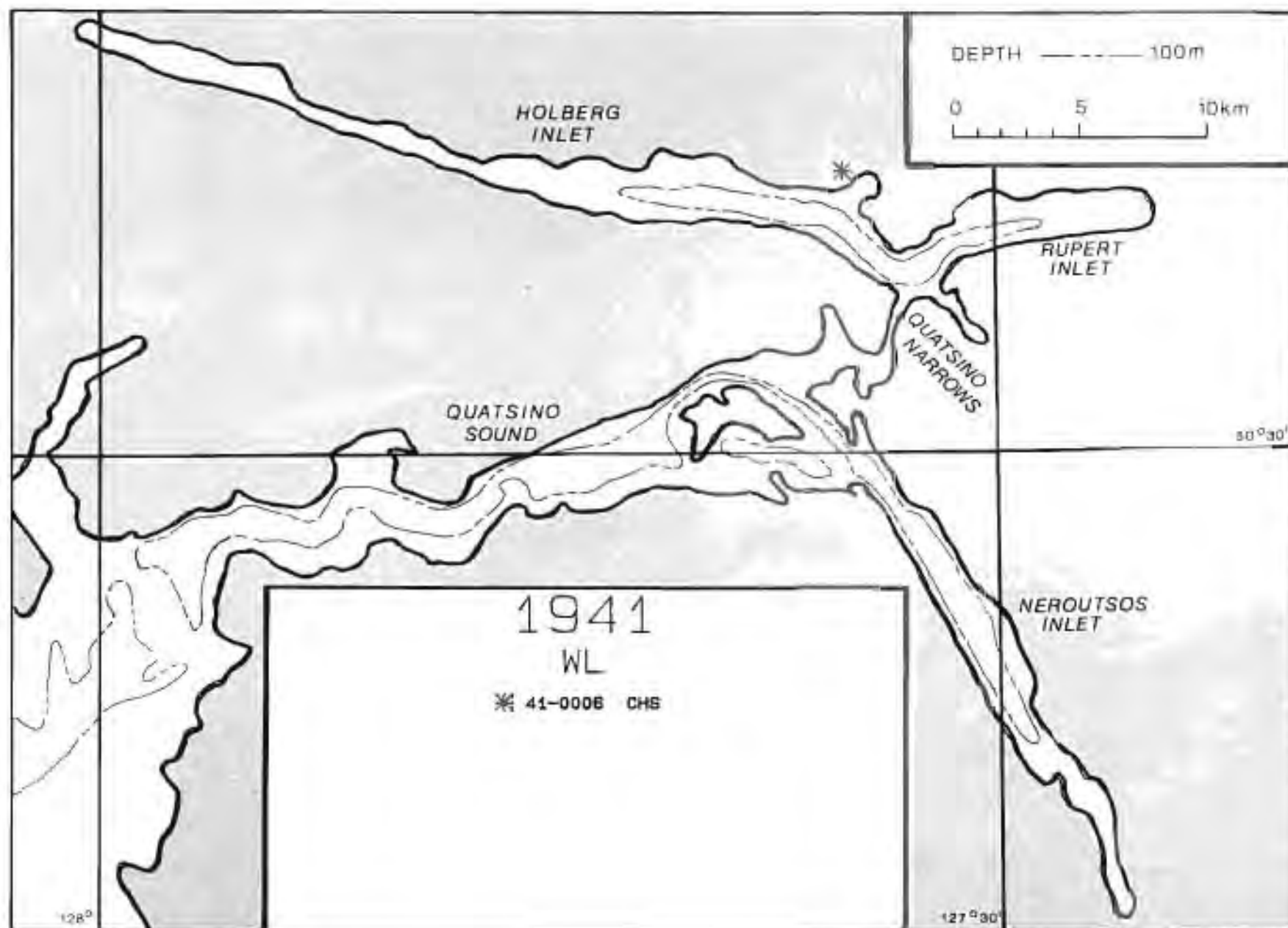


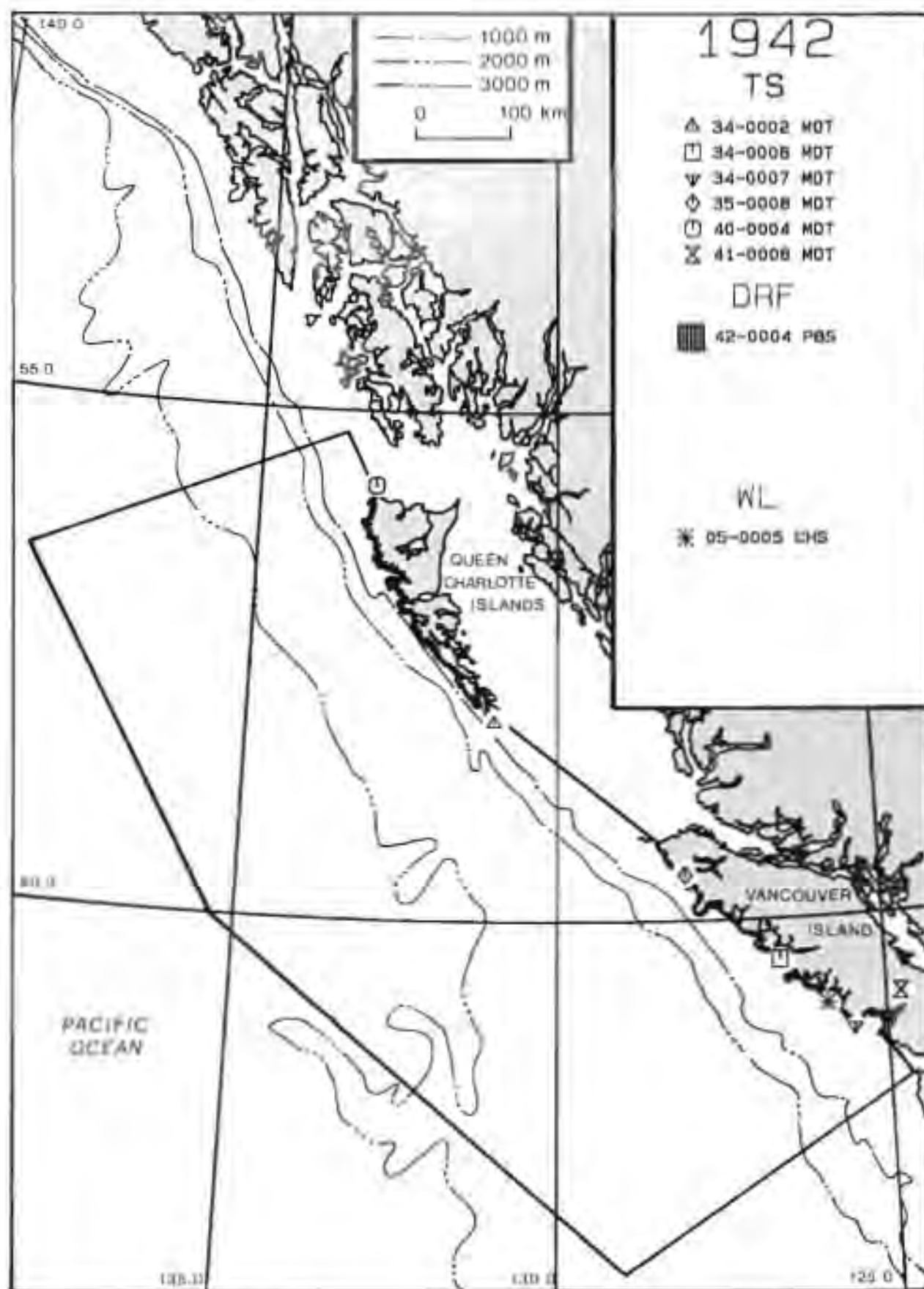


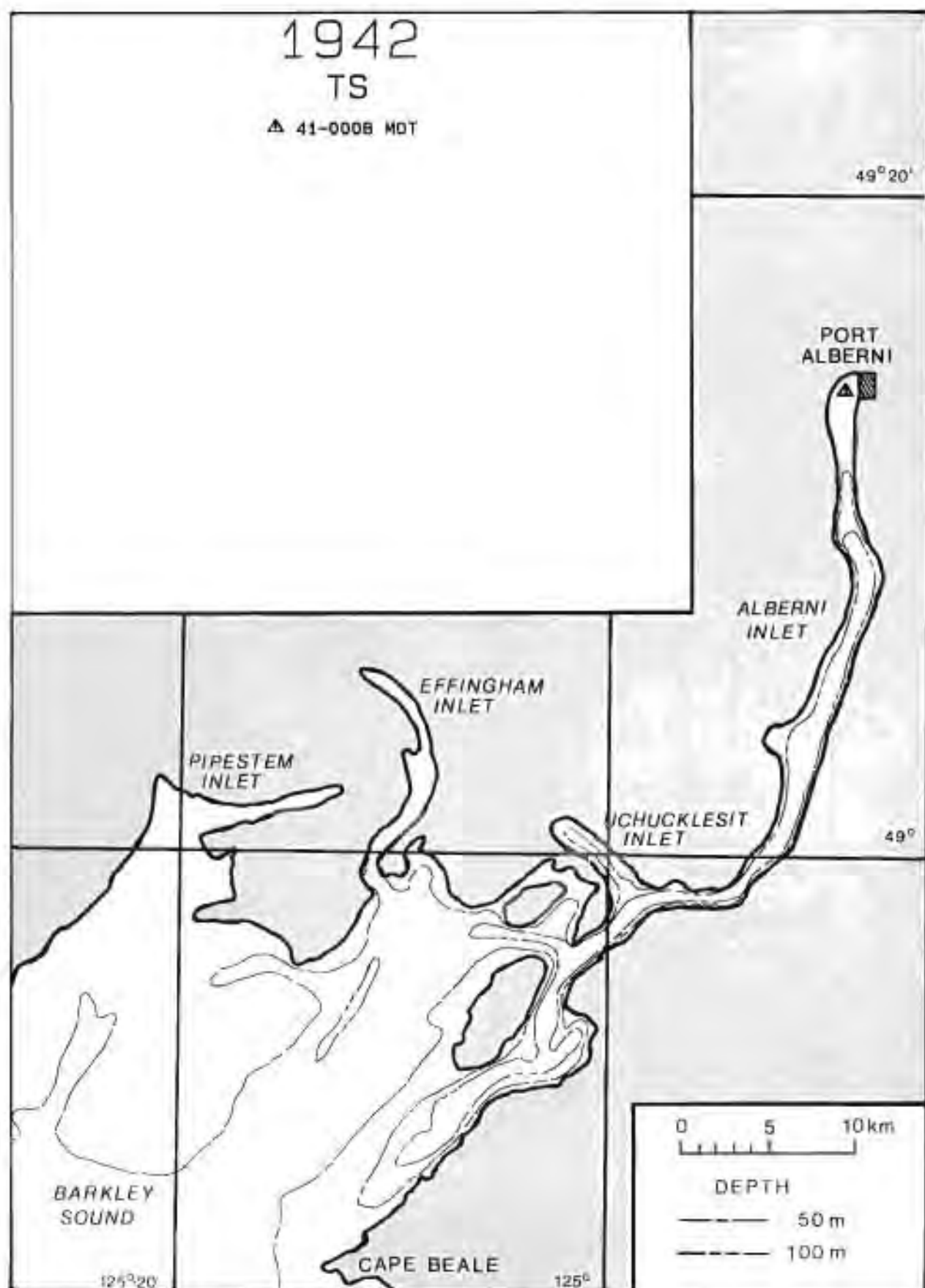


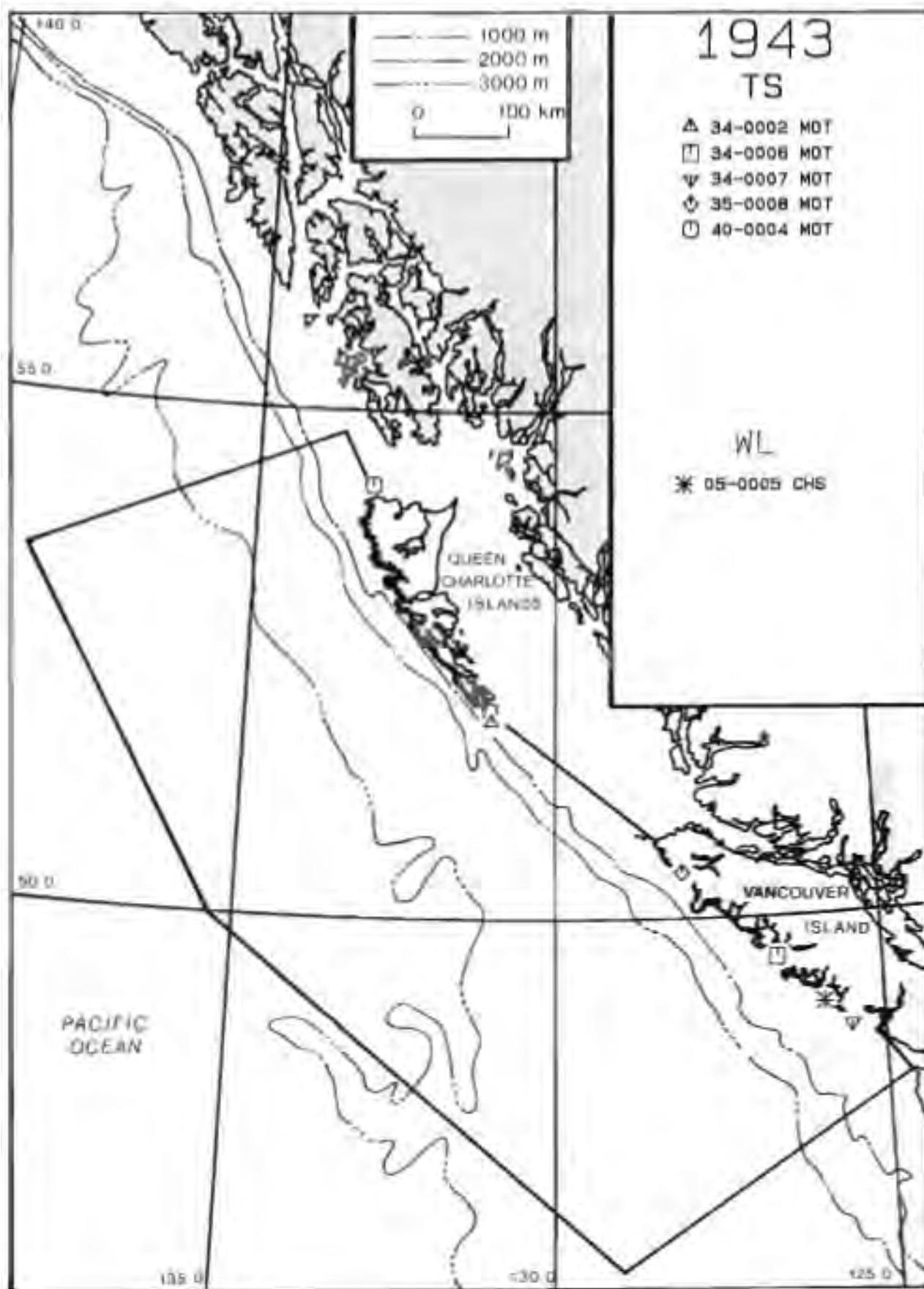


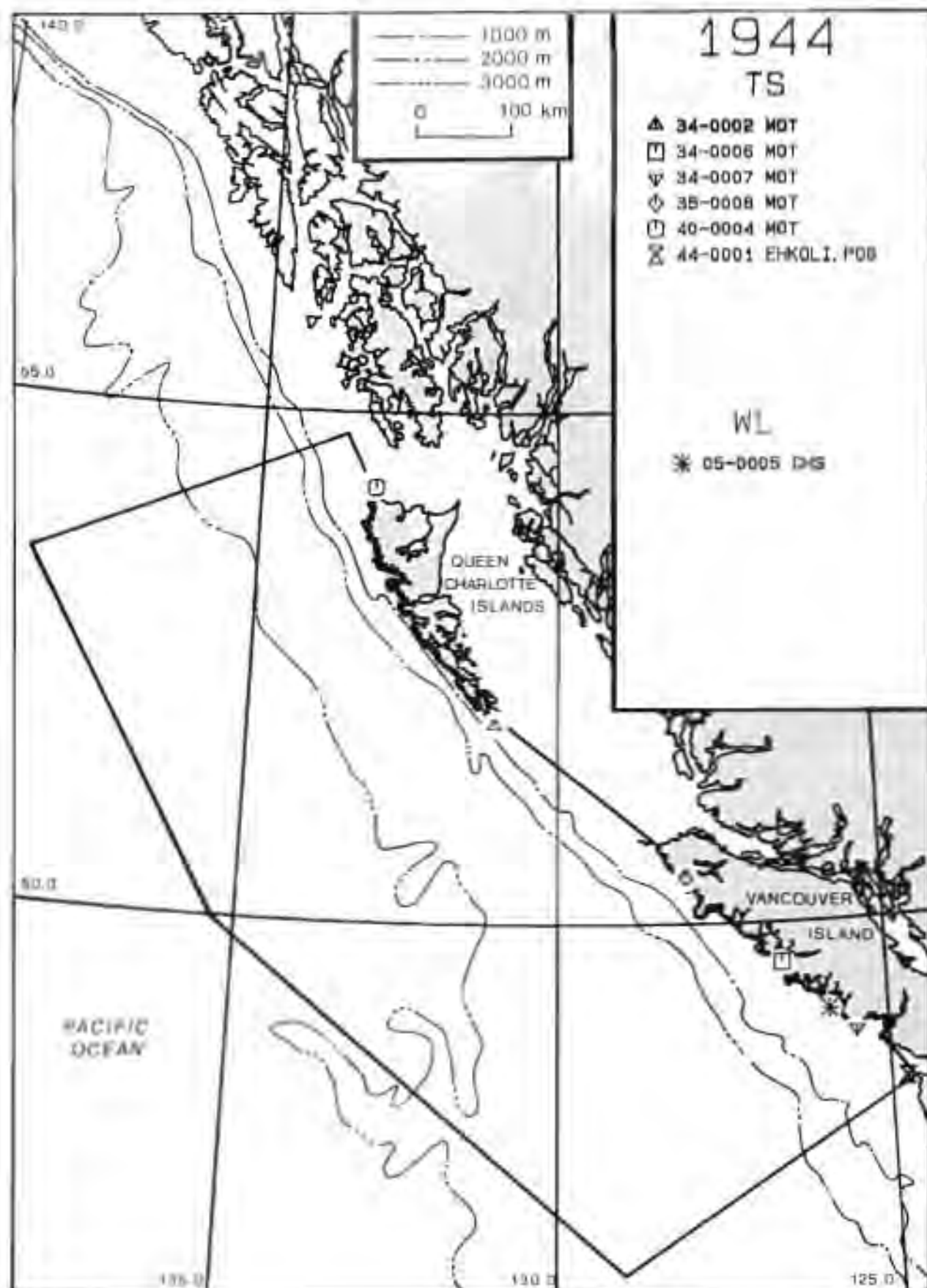


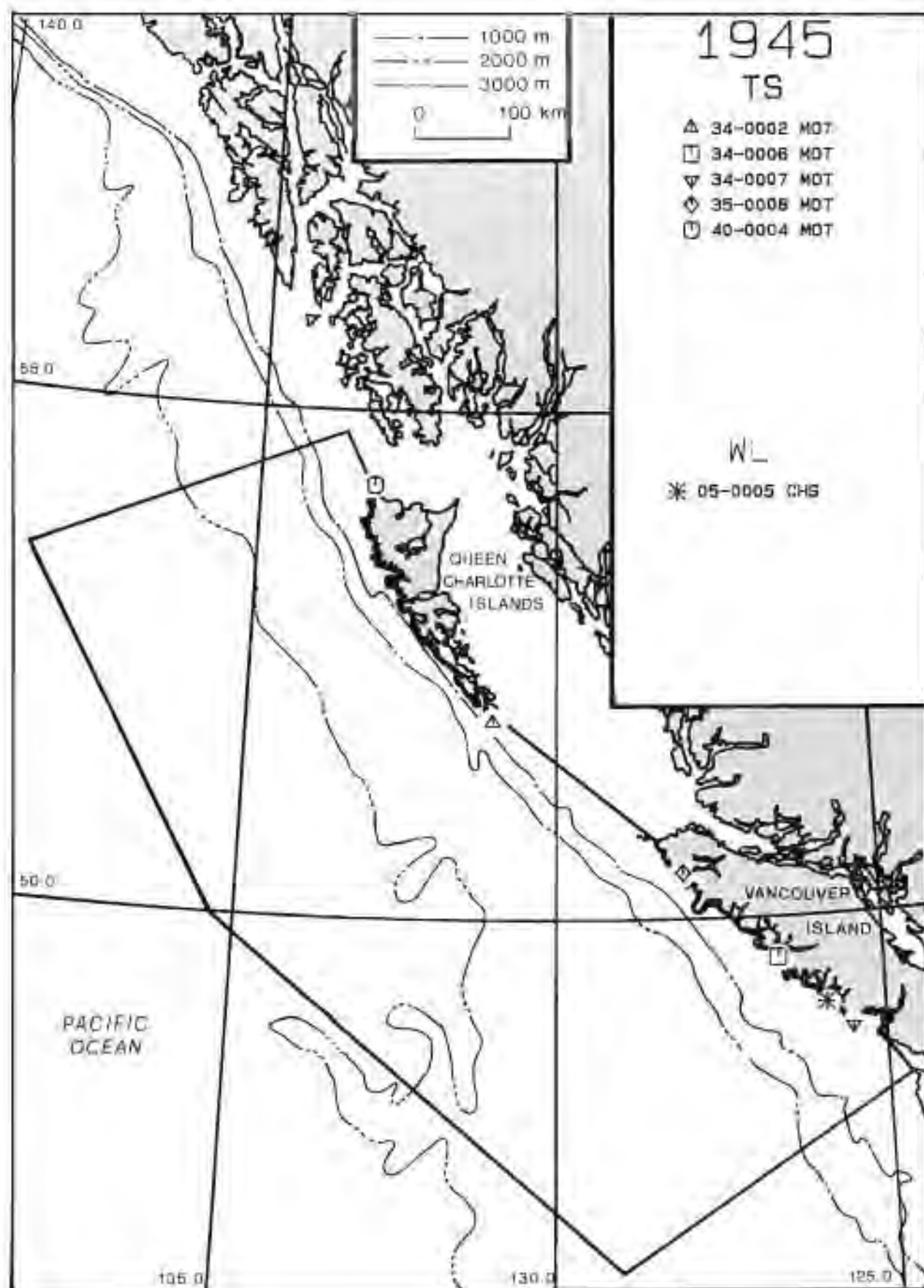


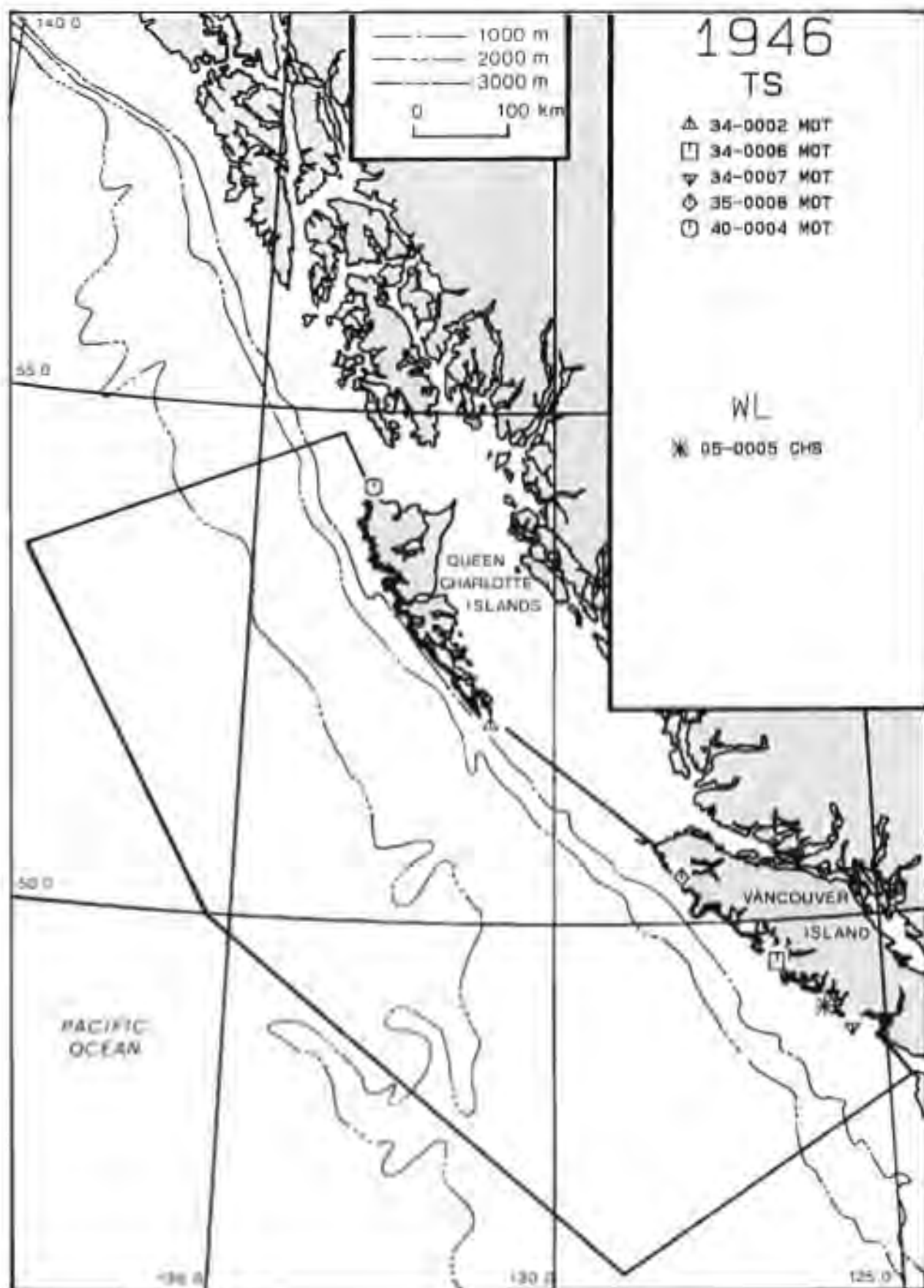


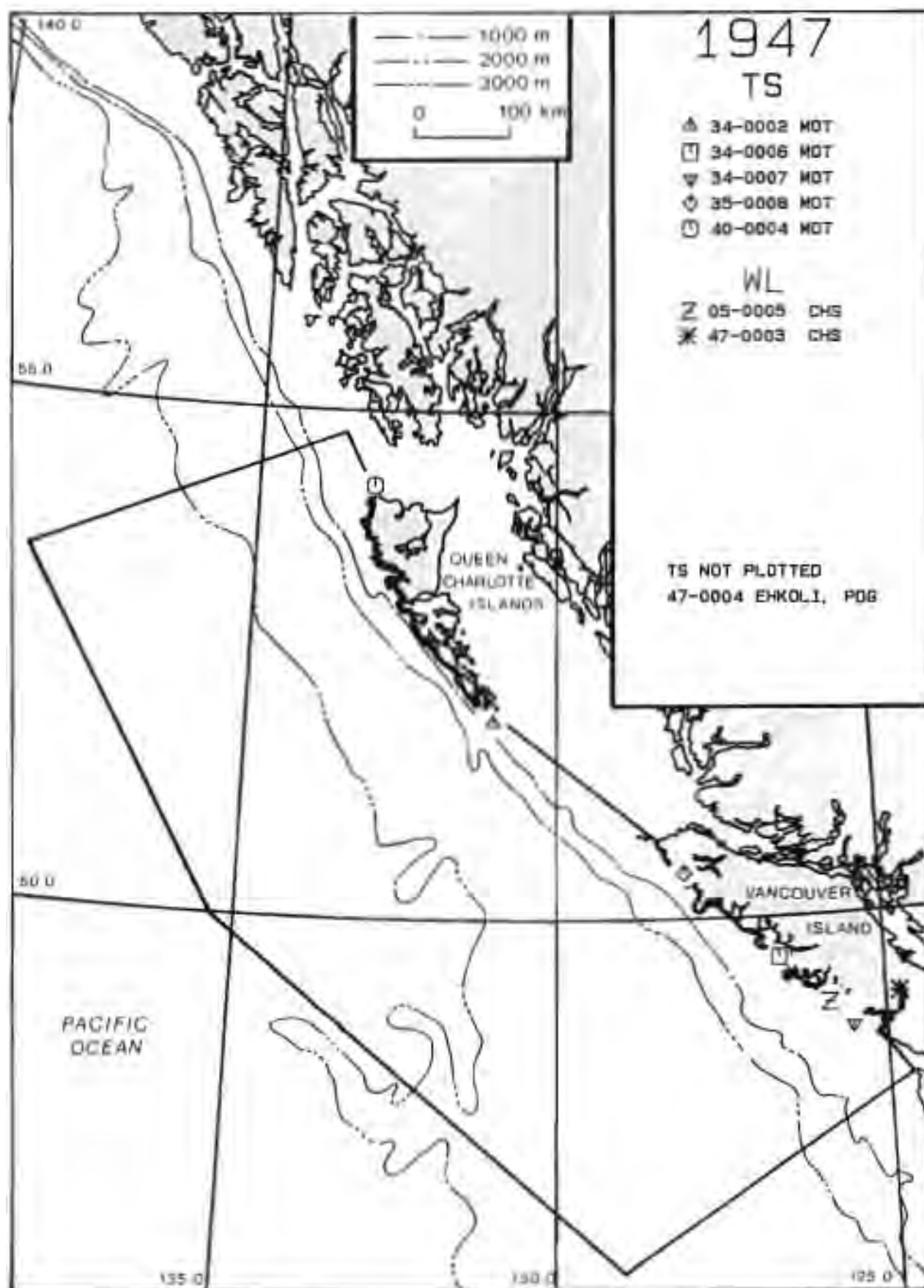


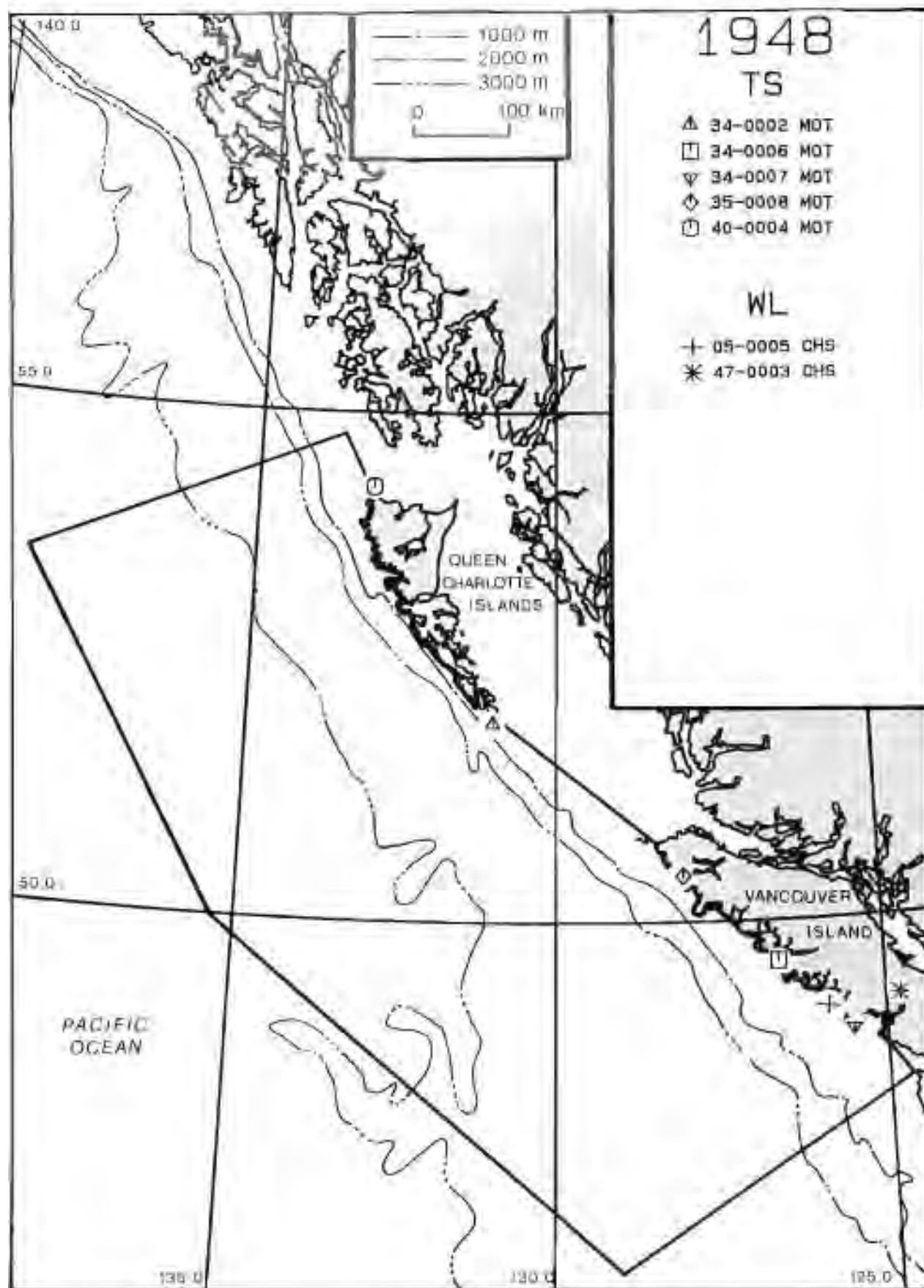


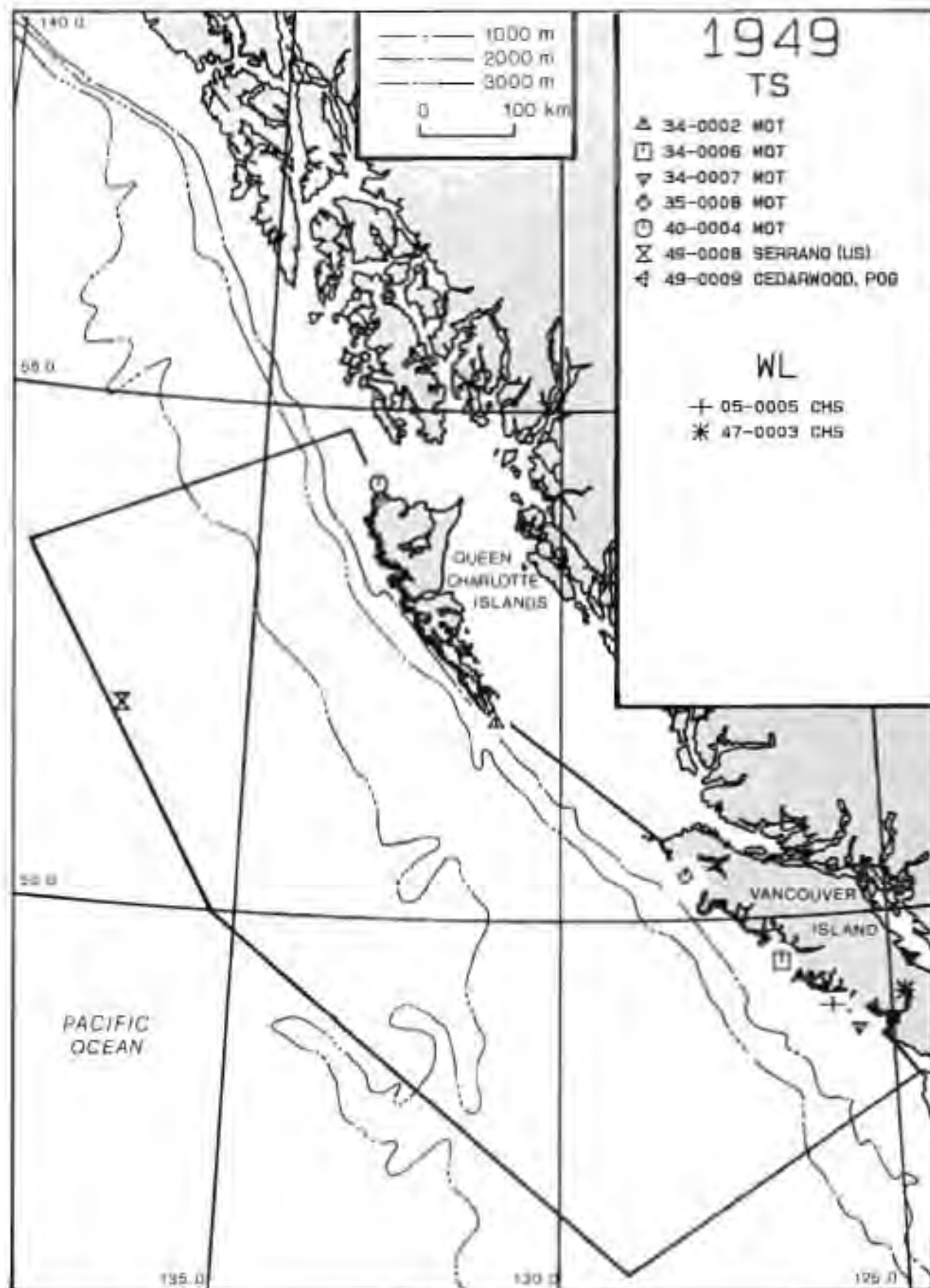


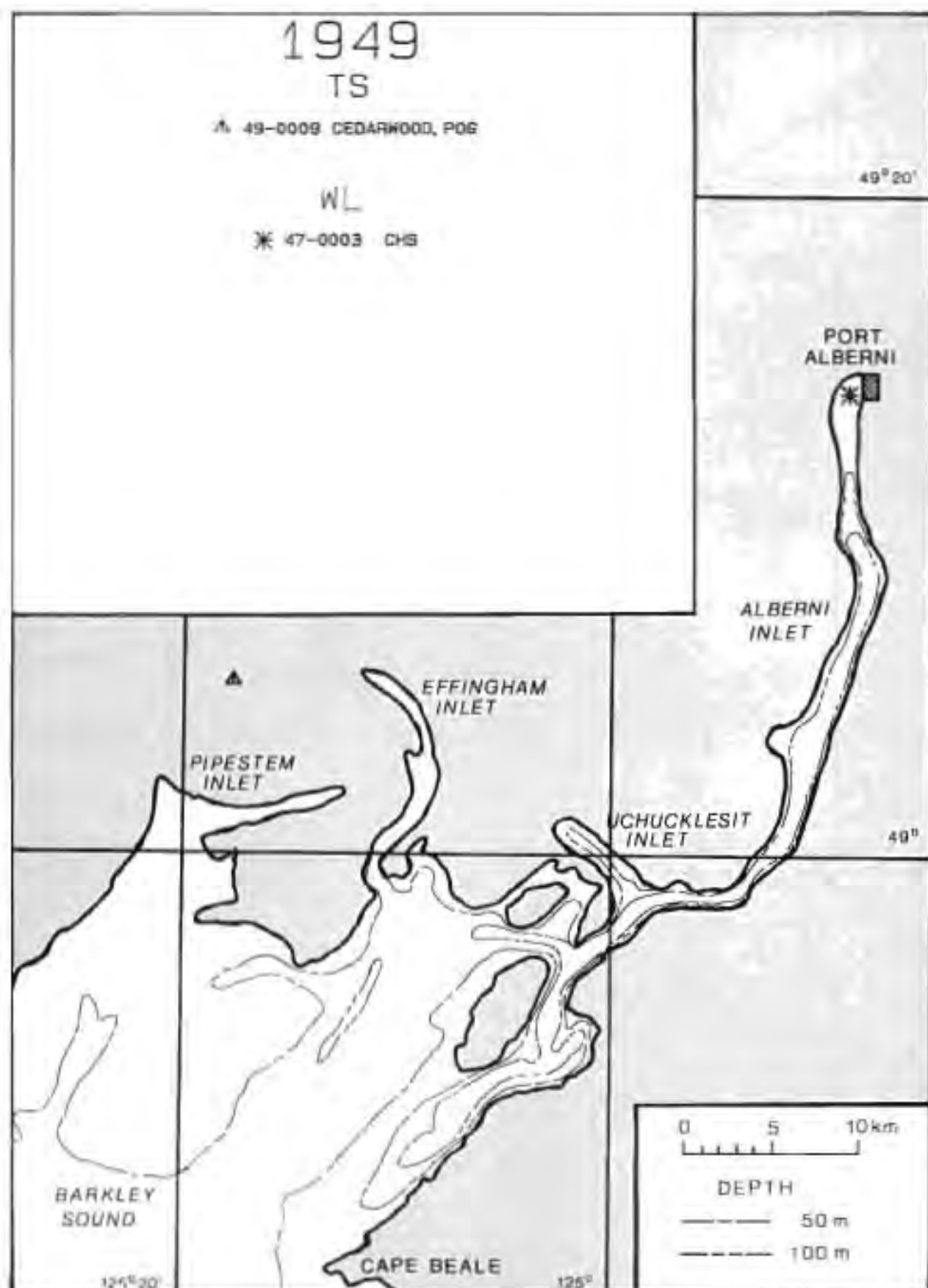


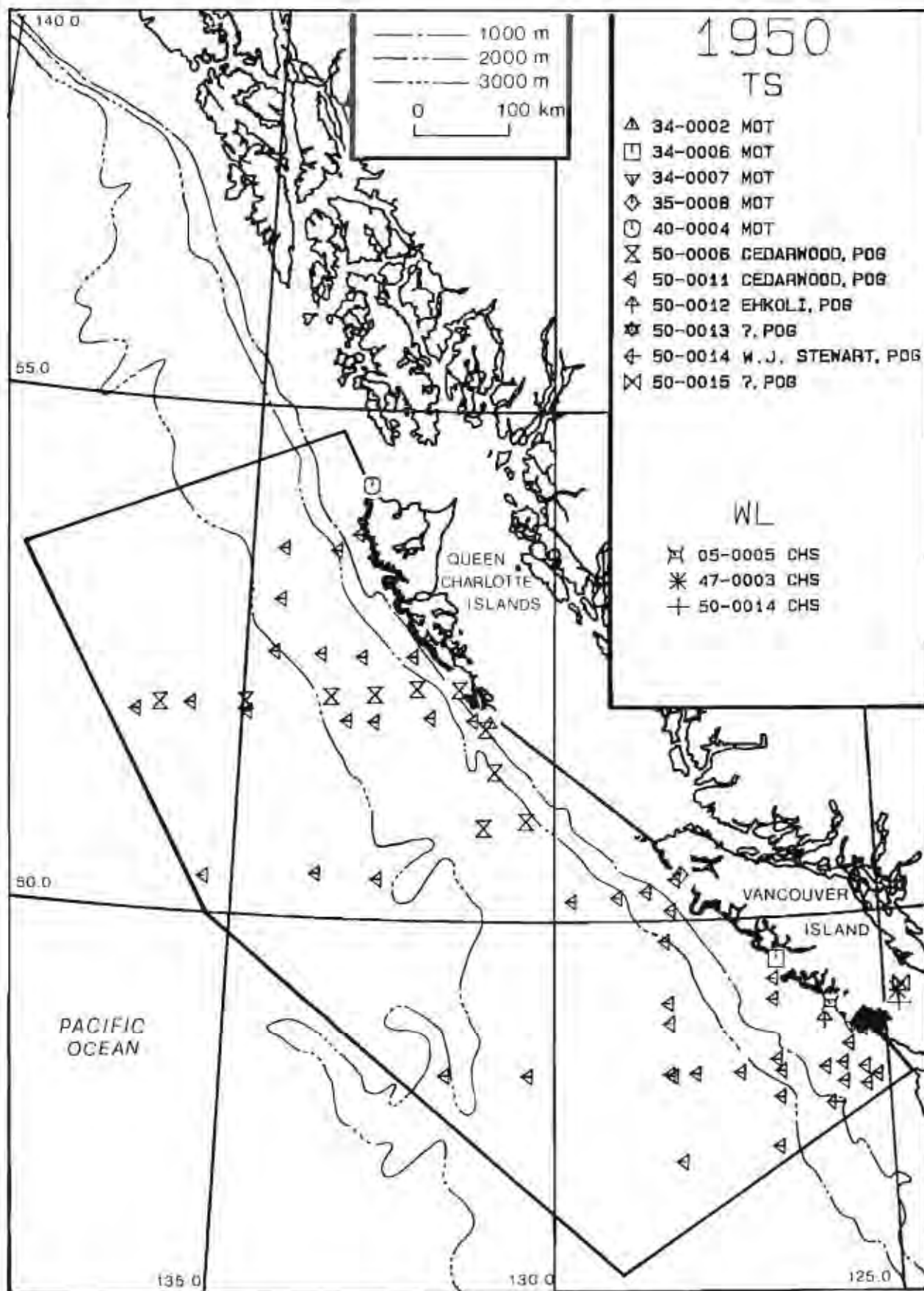








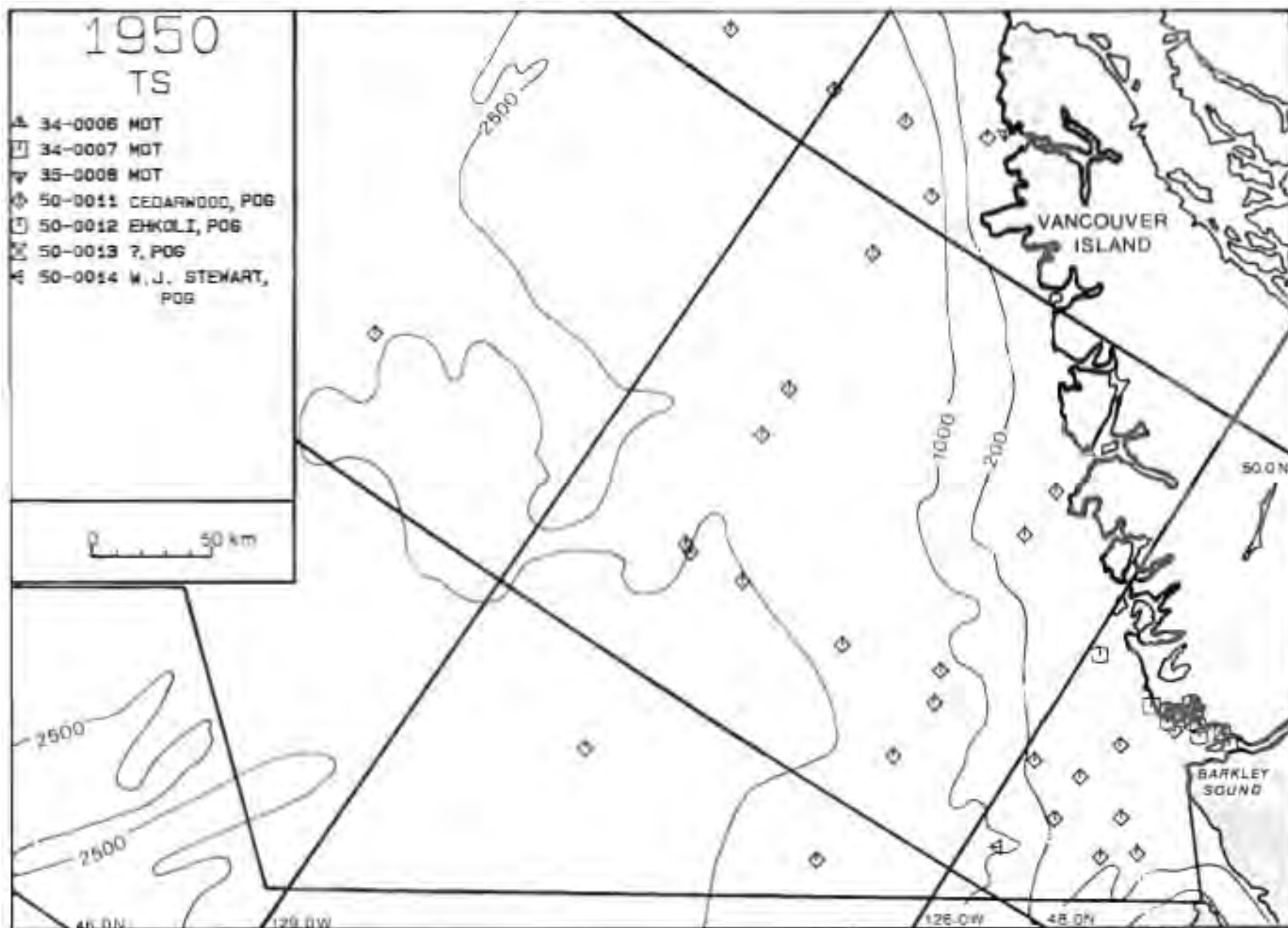


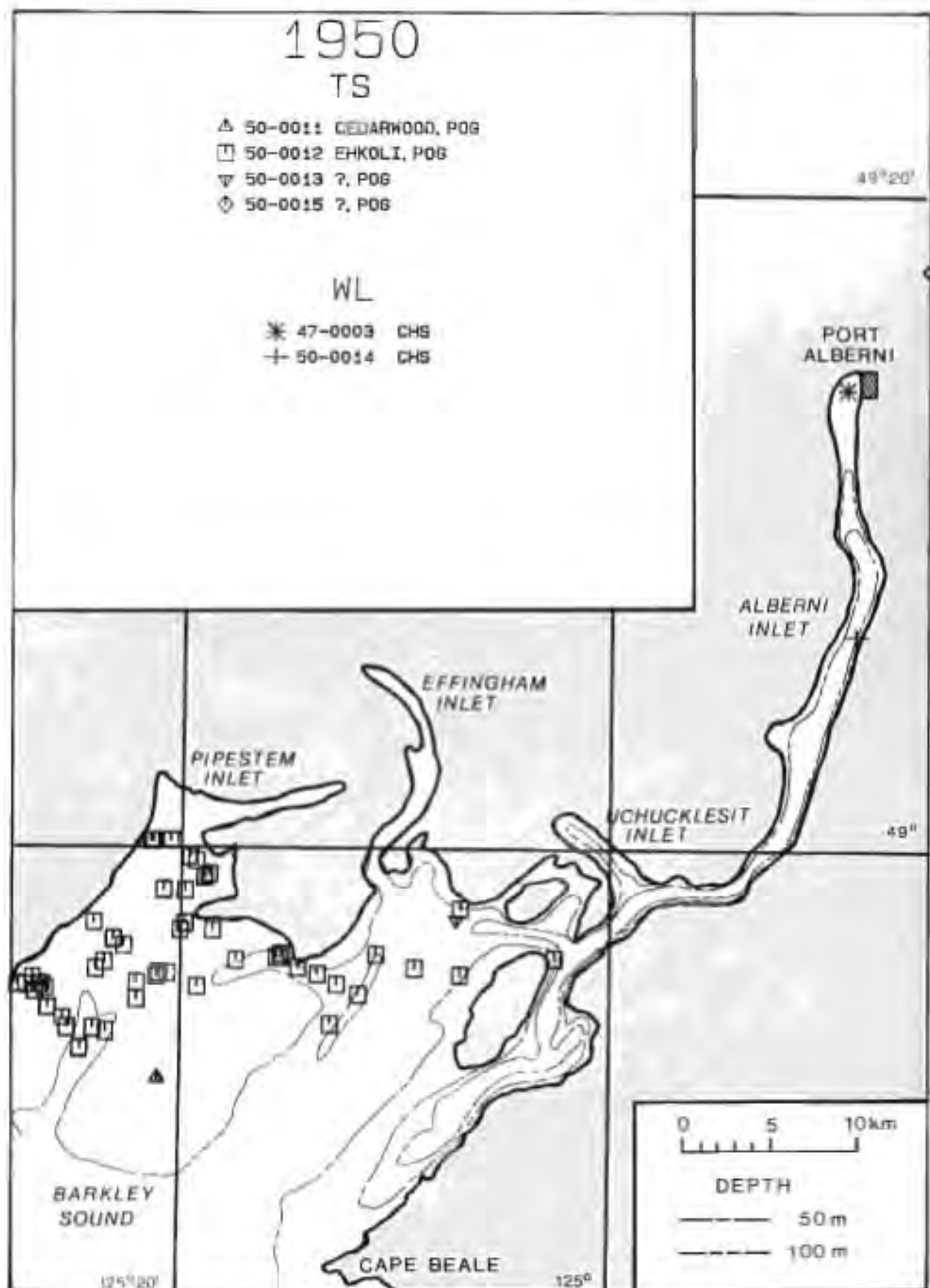


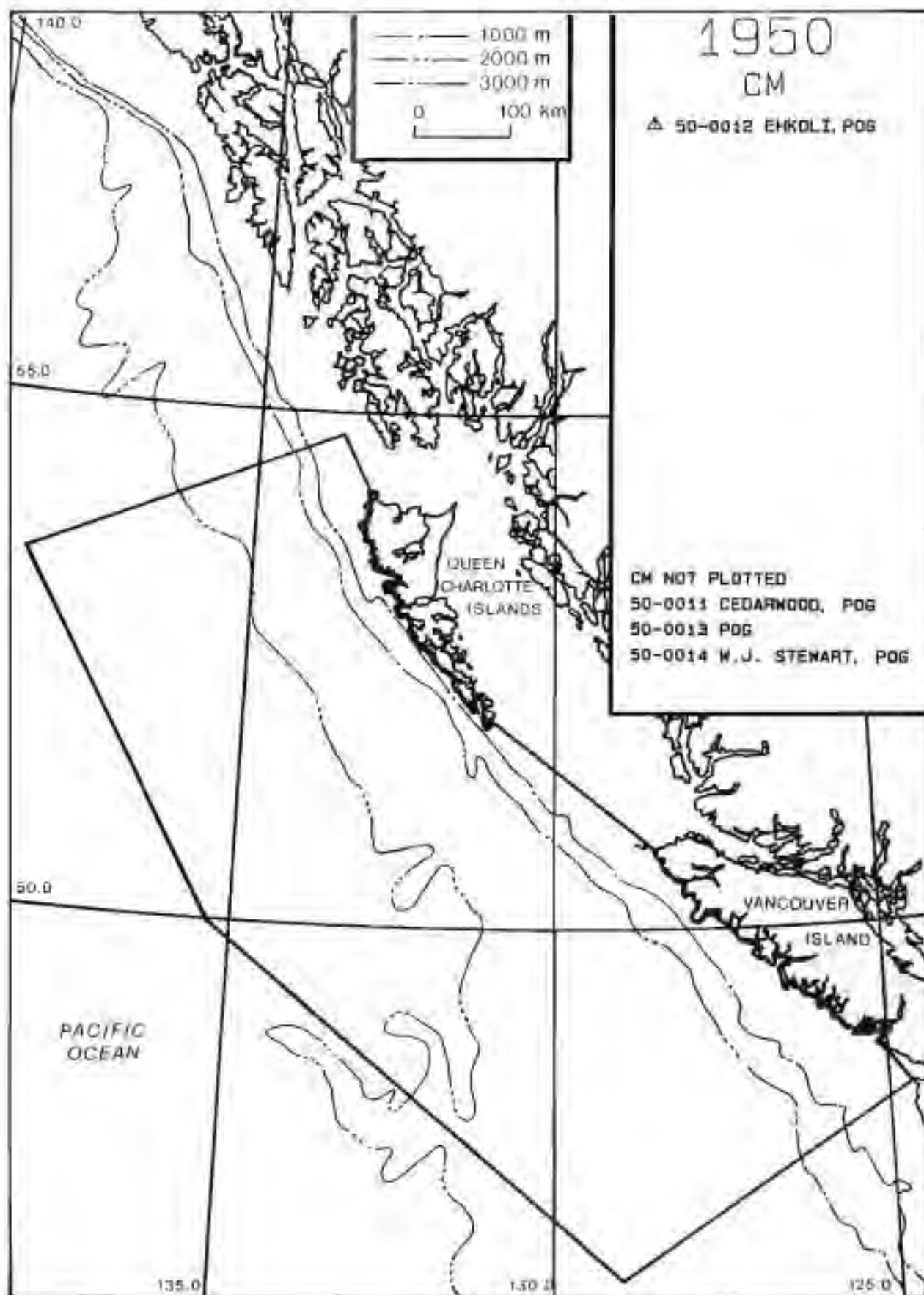
1950
TS

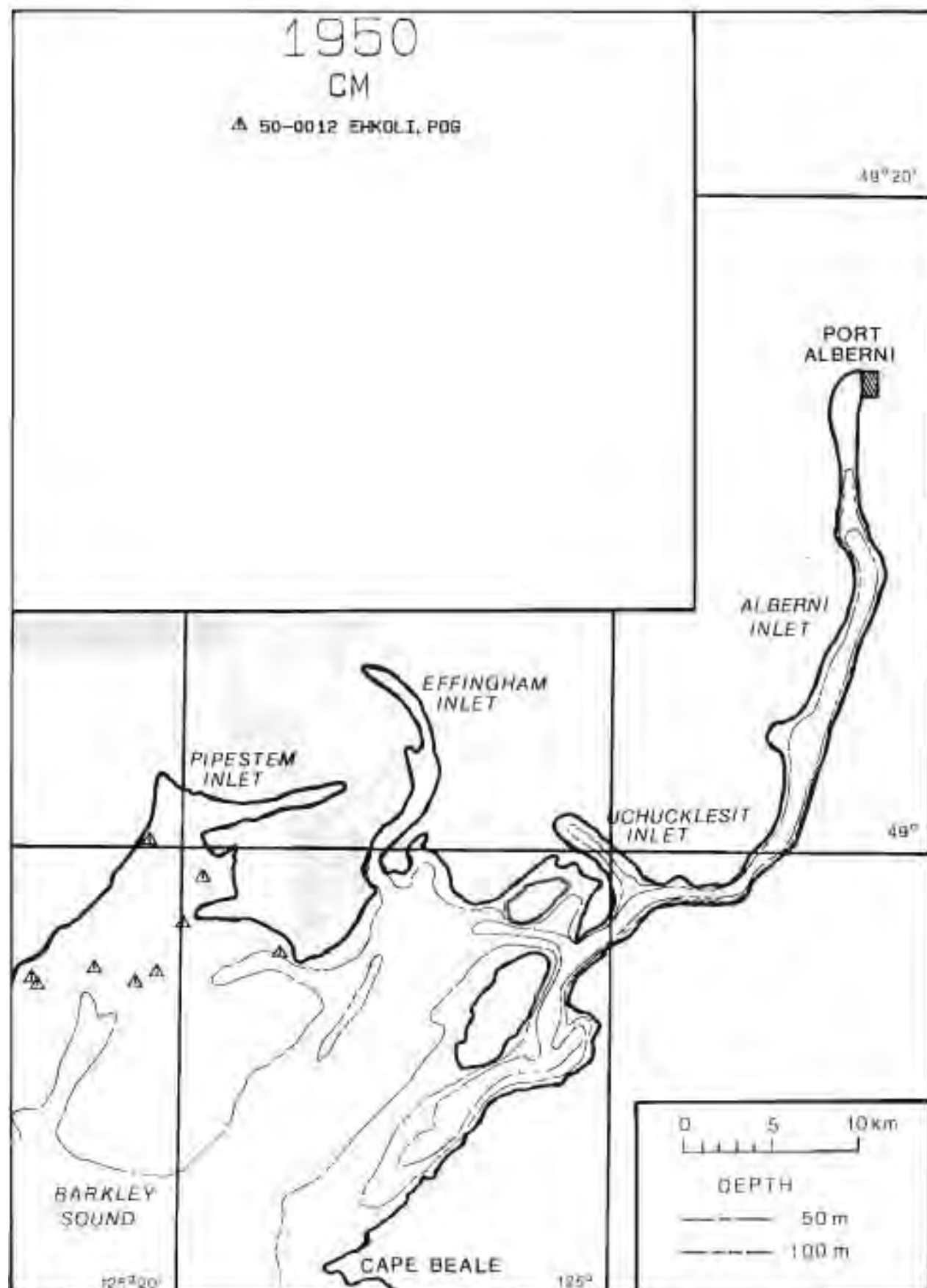
- ▲ 34-0006 MOT
- 34-0007 MOT
- ▼ 35-0008 MOT
- ◆ 50-0011 CEDARWOOD, POG
- 50-0012 EHKOLI, POG
- ⊠ 50-0013 ?, POG
- ⋈ 50-0014 M. J. STEWART, POG

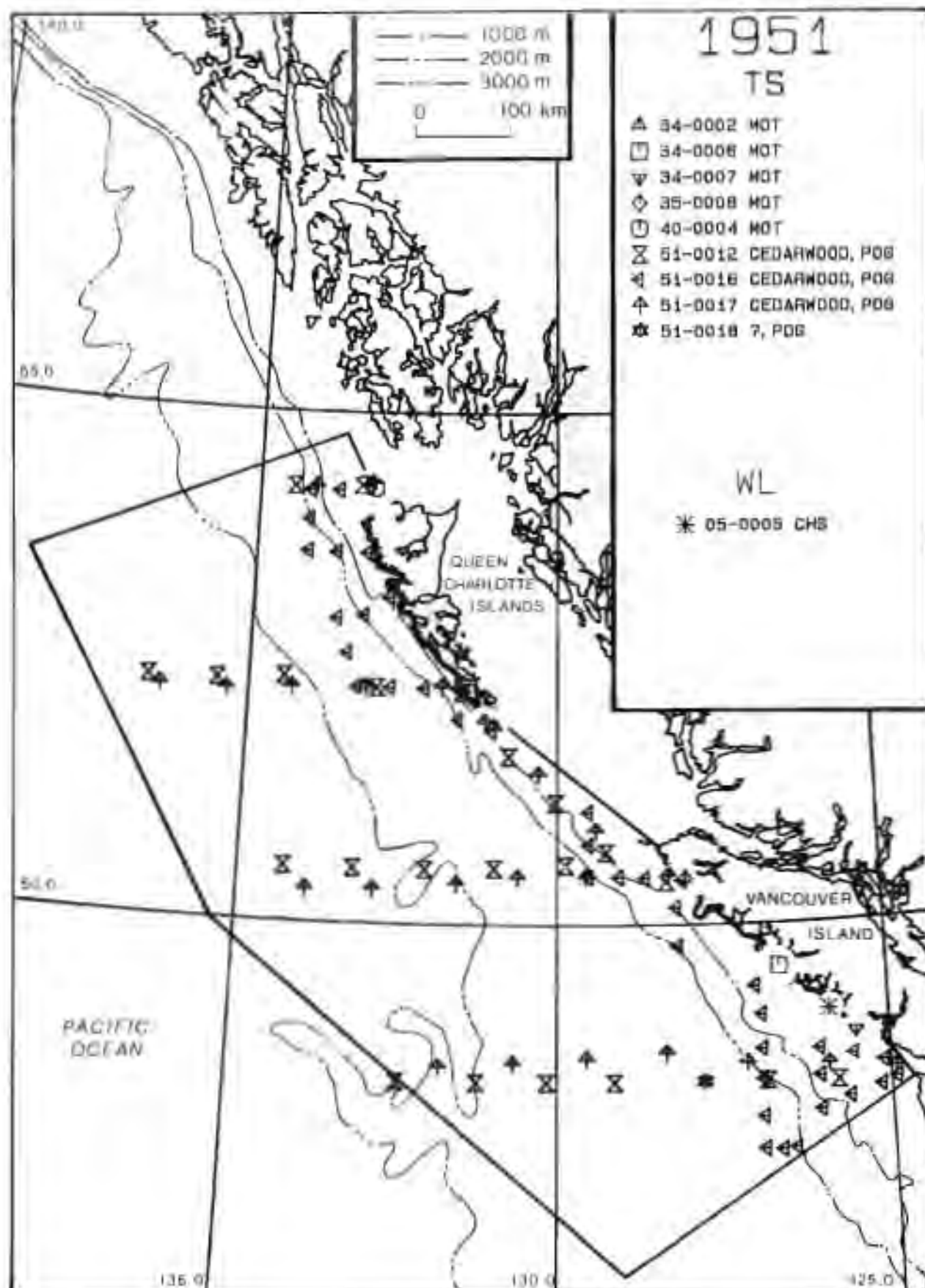
0 50 km

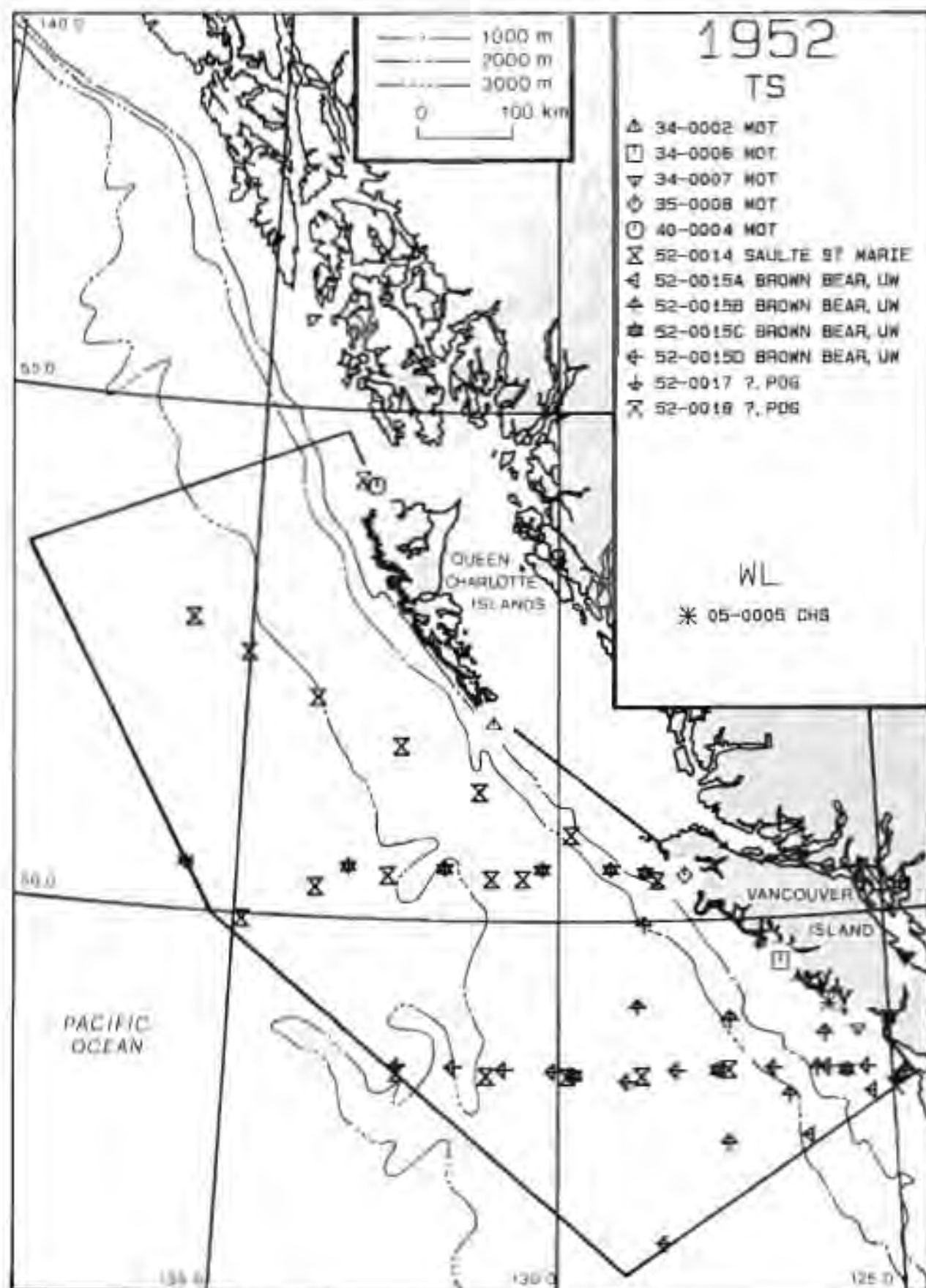








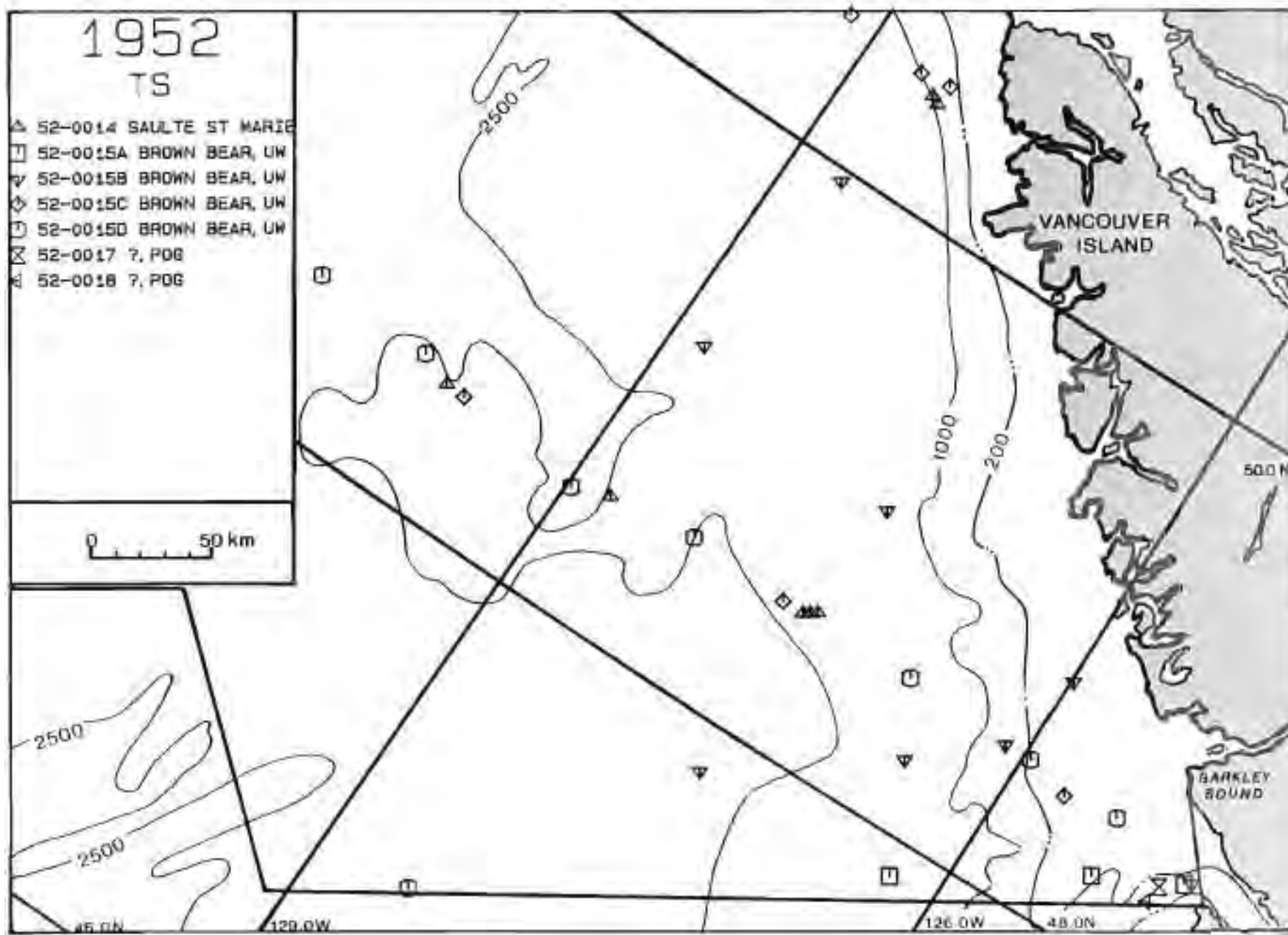


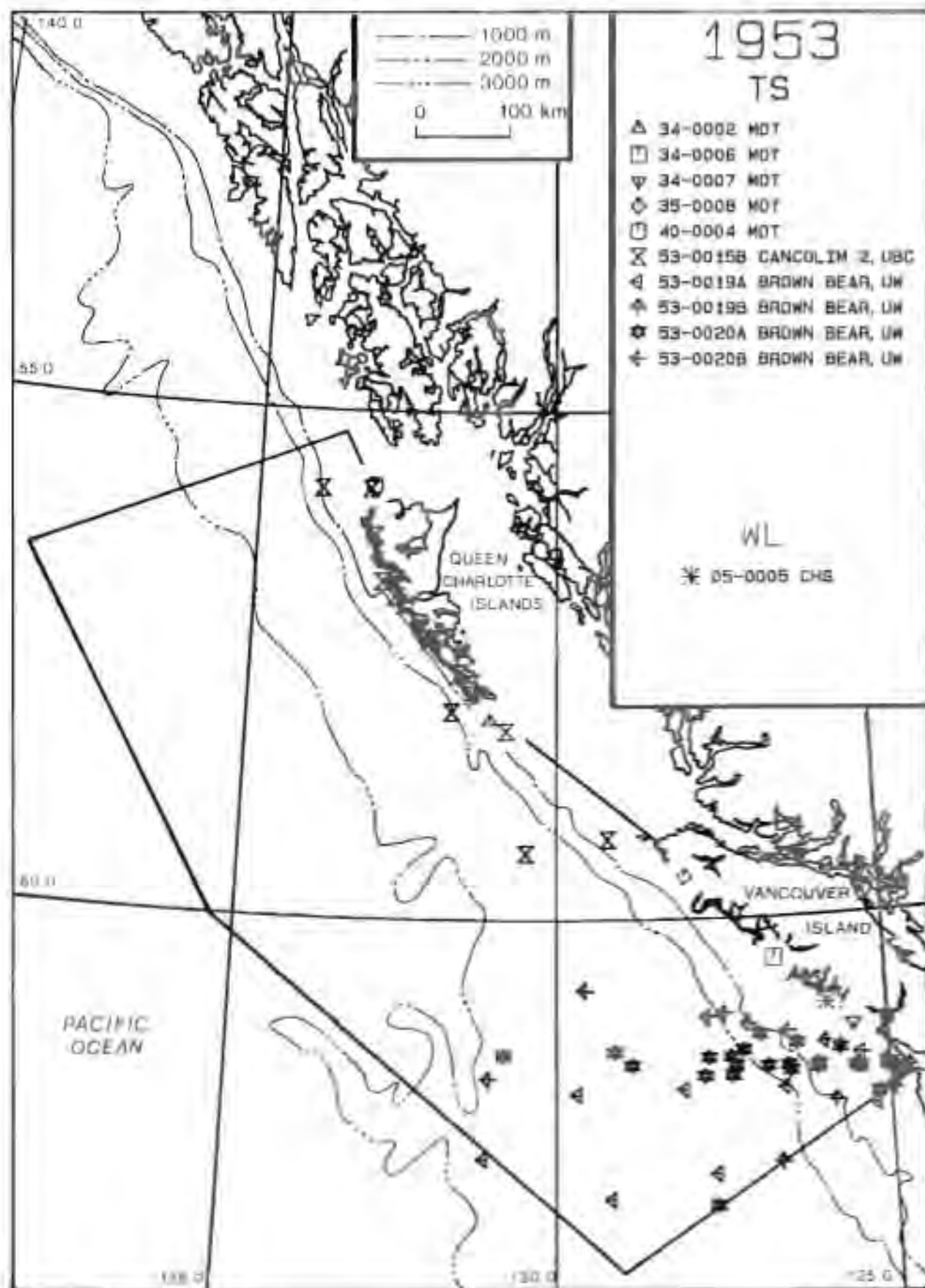


1952
TS

- △ 52-0014 SAULTE ST MARIE
- 52-0015A BROWN BEAR, UW
- ▽ 52-0015B BROWN BEAR, UW
- ◇ 52-0015C BROWN BEAR, UW
- ⊙ 52-0015D BROWN BEAR, UW
- ⊗ 52-0017 ?, POG
- ⊠ 52-0018 ?, POG

0 50 km

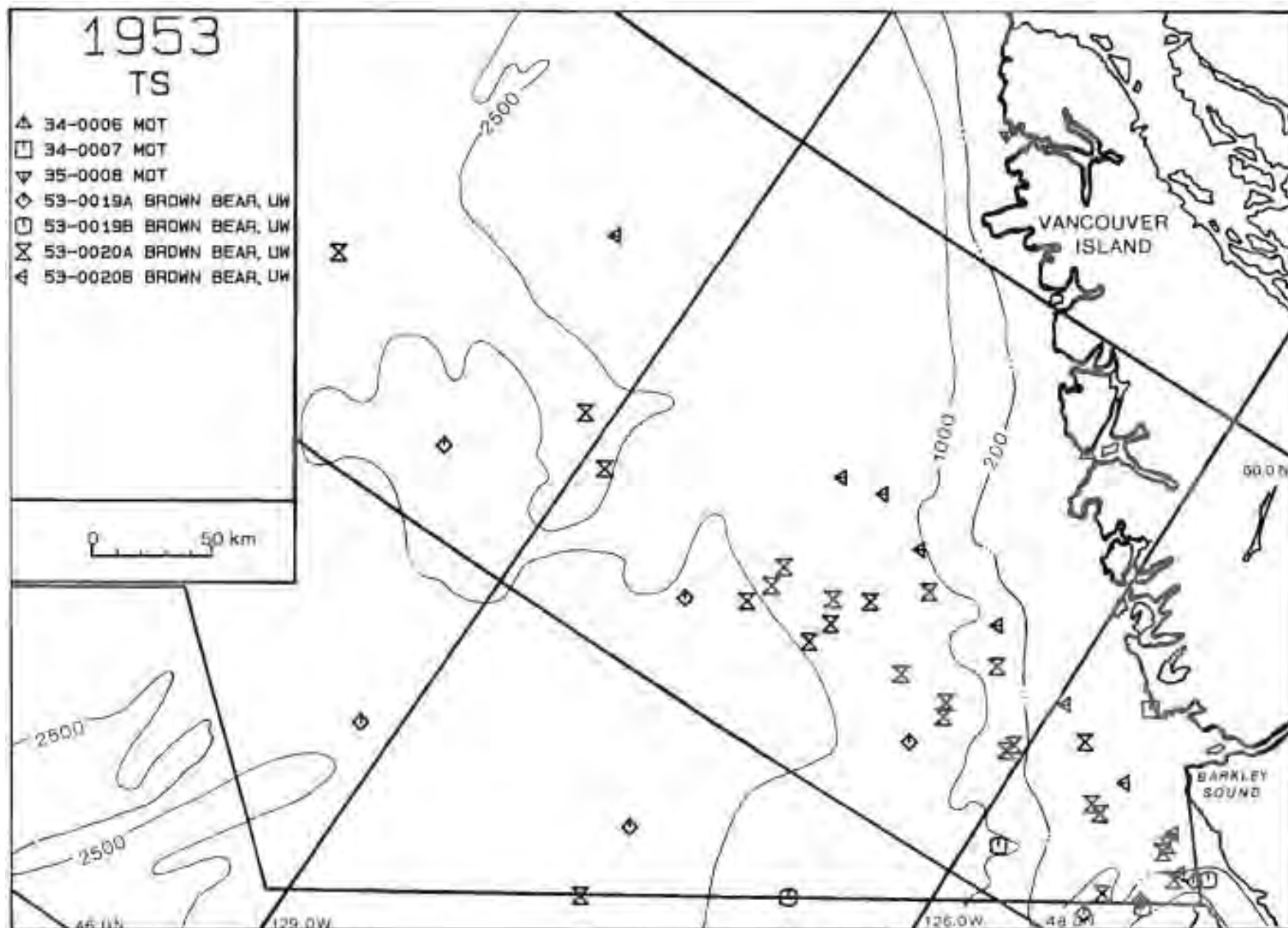


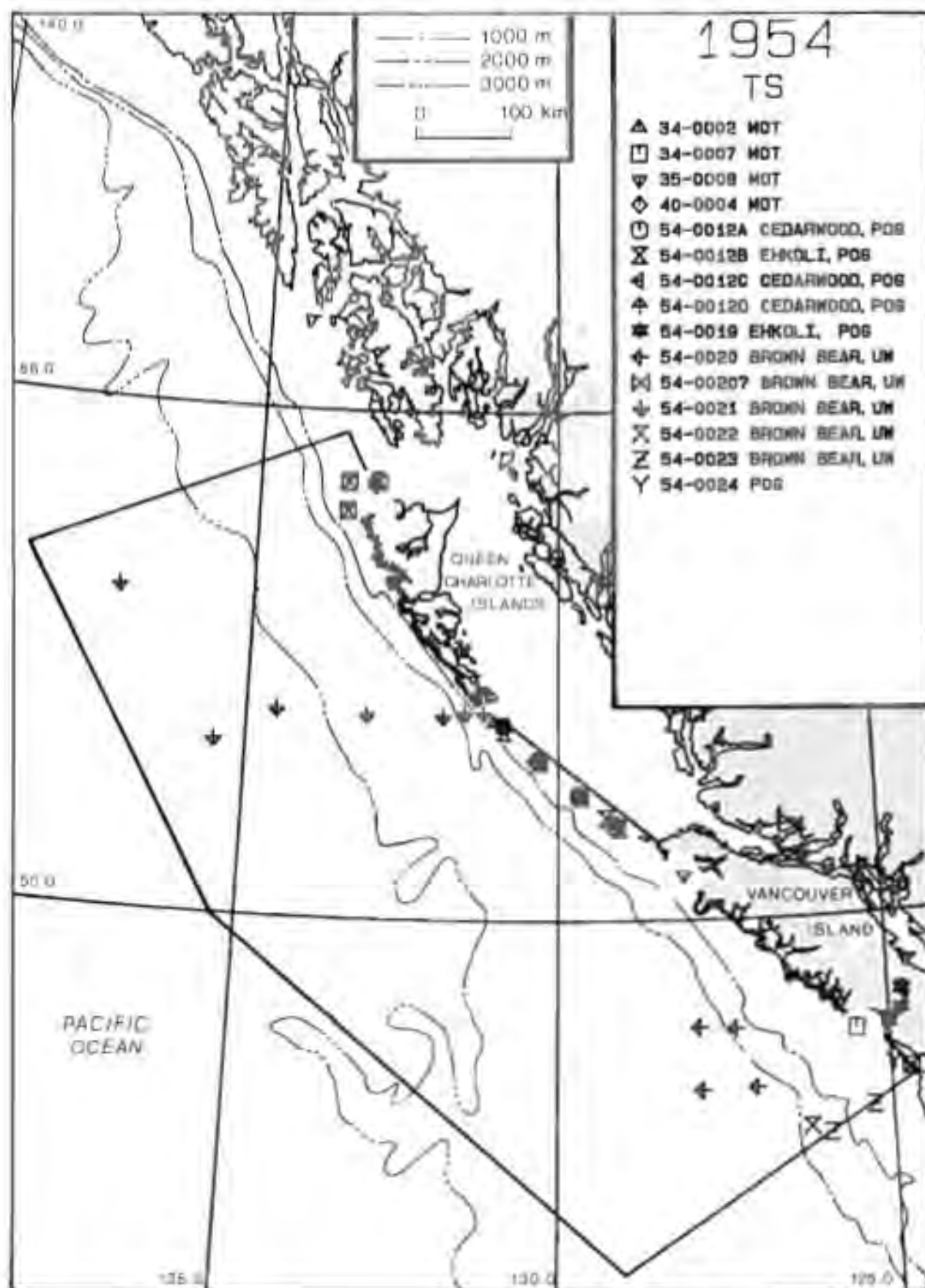


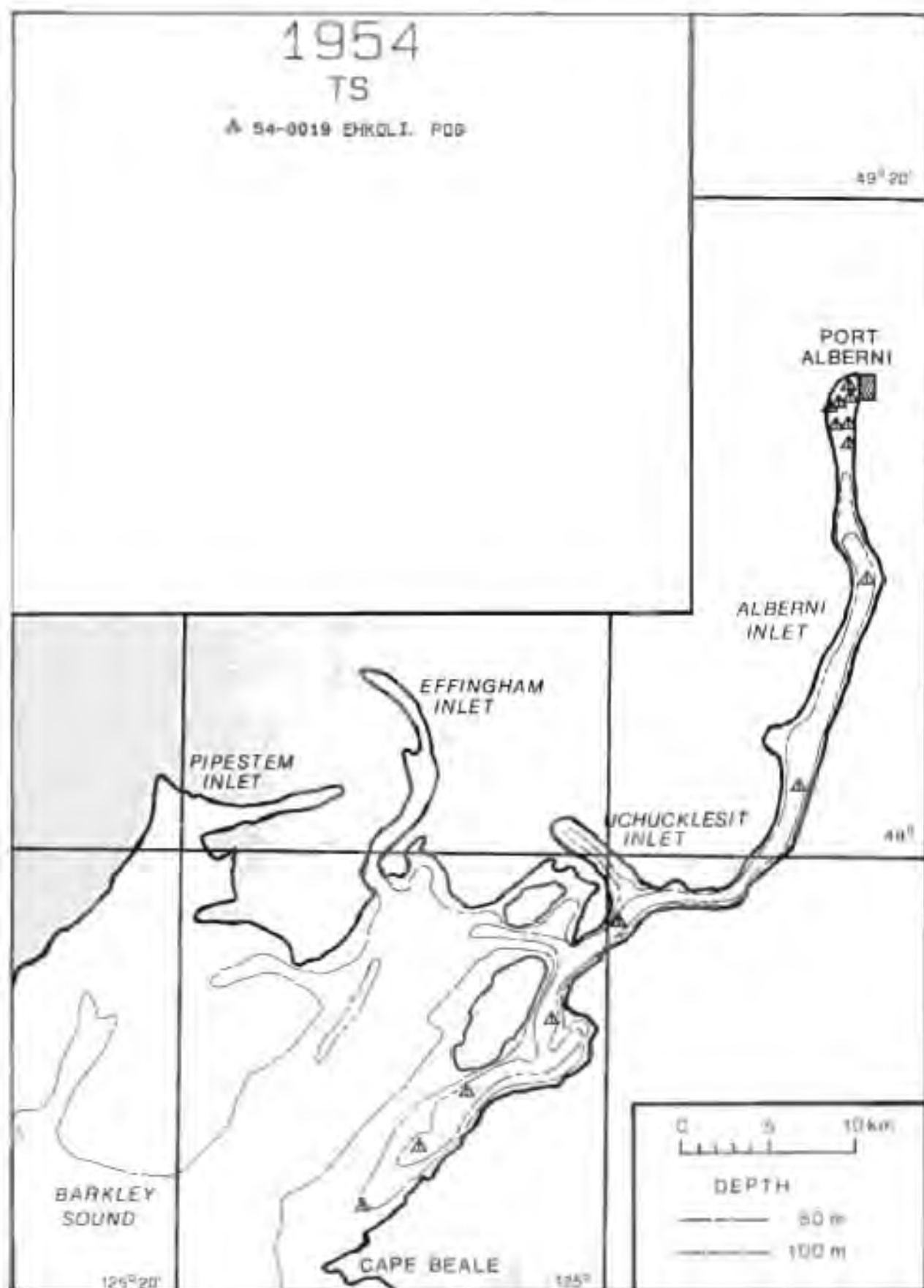
1953
TS

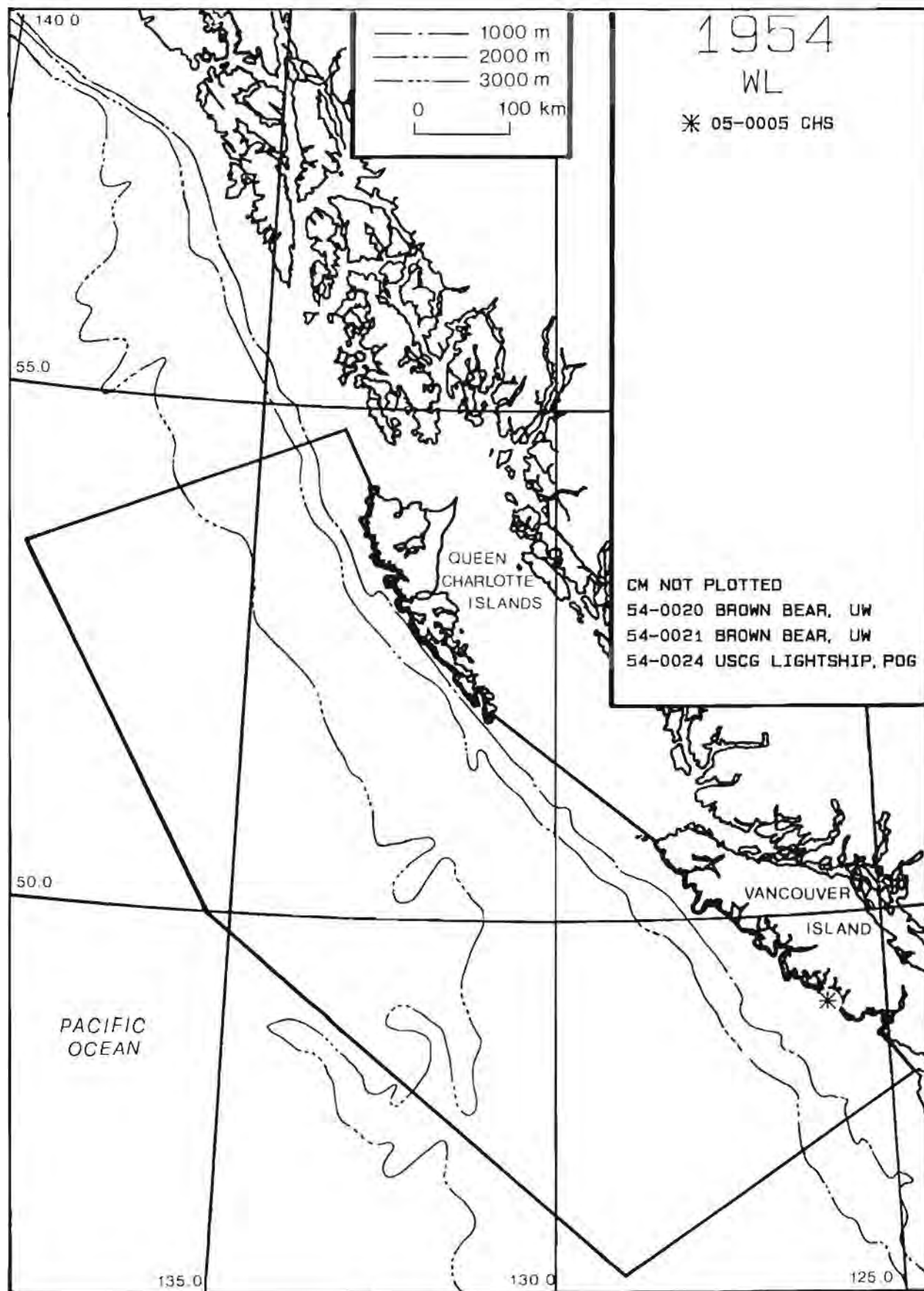
- ▲ 34-0006 MGT
- 34-0007 MGT
- ▼ 35-0008 MGT
- ◇ 53-0019A BROWN BEAR, UW
- ⊖ 53-0019B BROWN BEAR, UW
- ⊗ 53-0020A BROWN BEAR, UW
- △ 53-0020B BROWN BEAR, UW

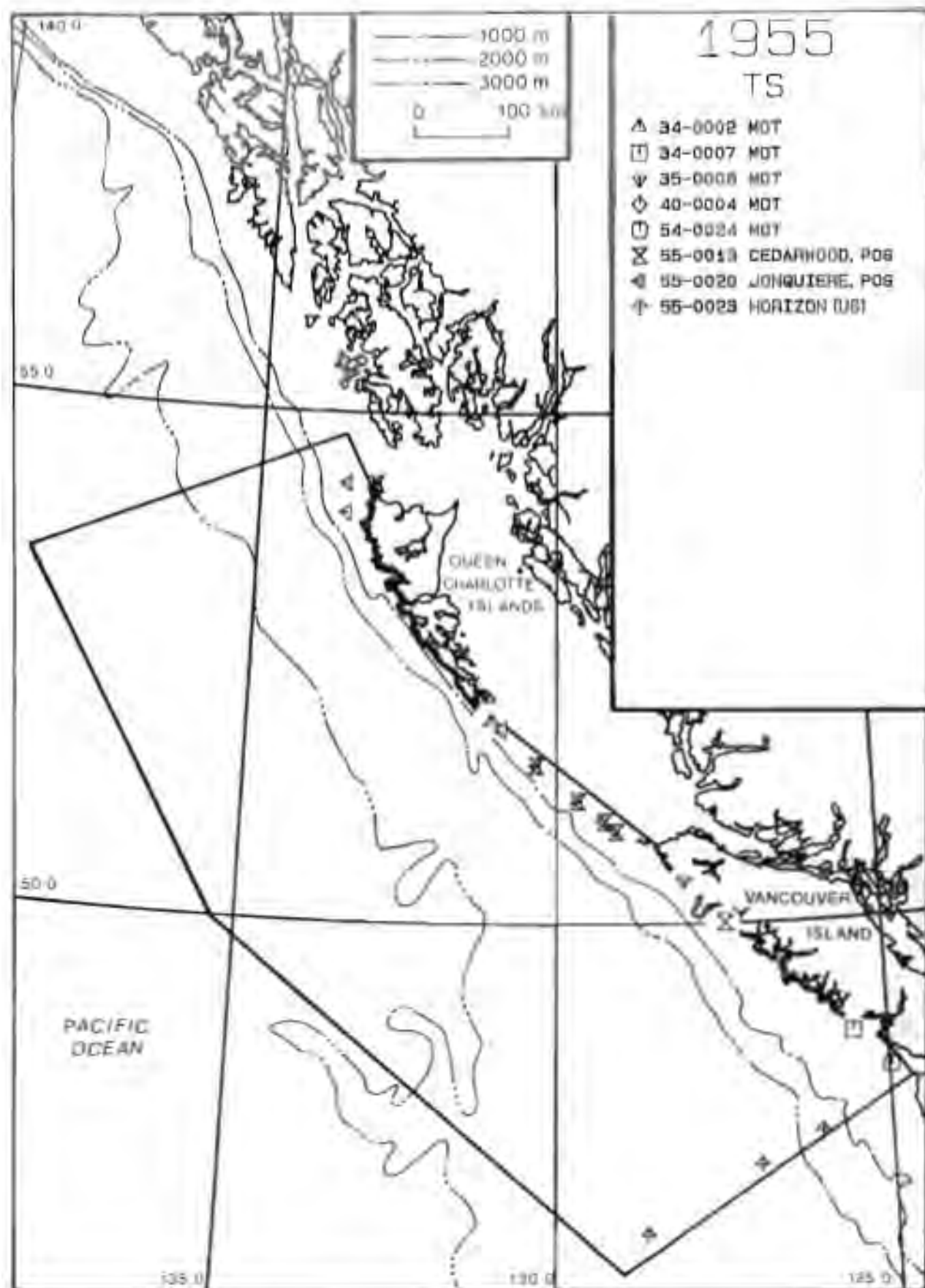
0 50 km

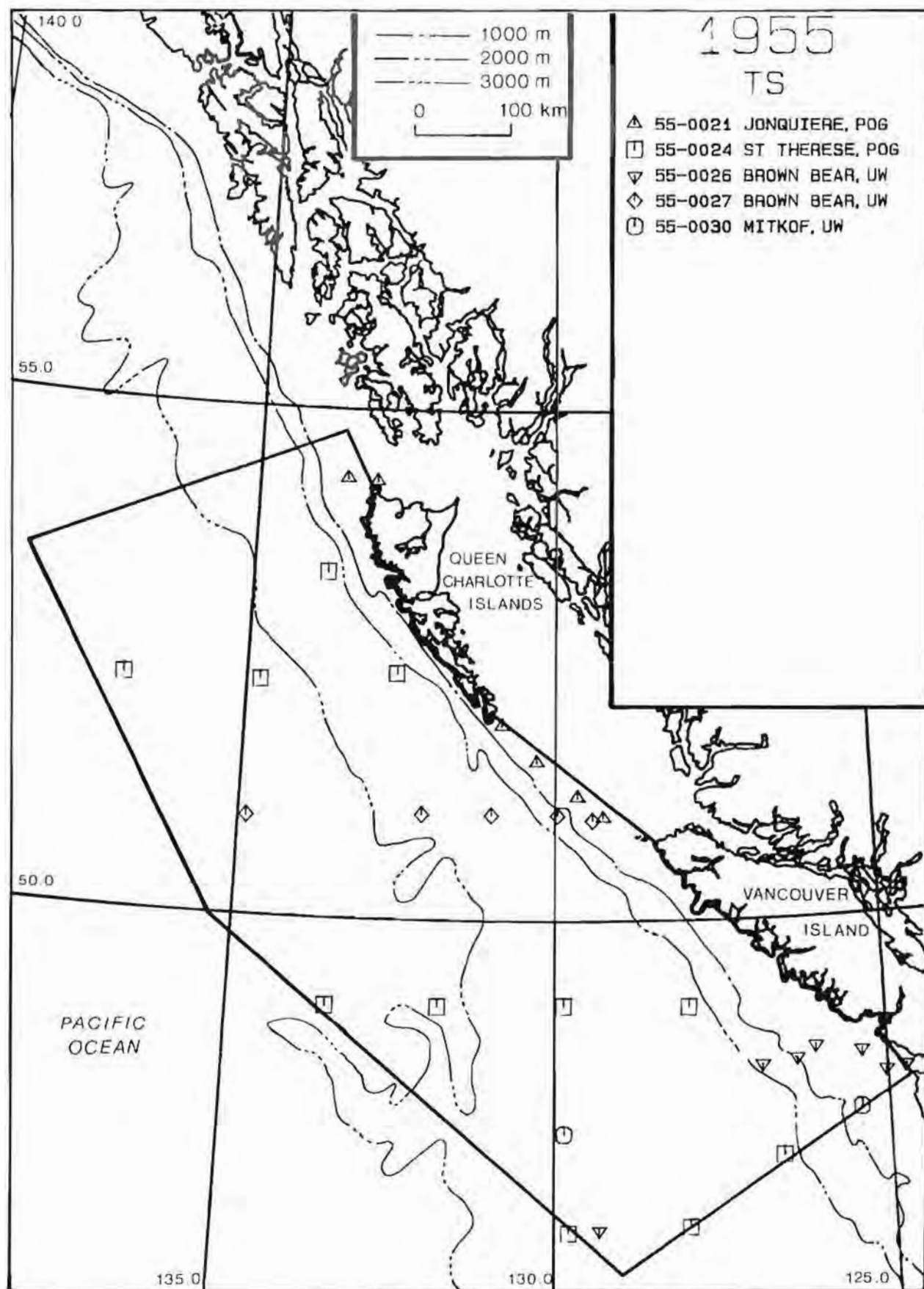








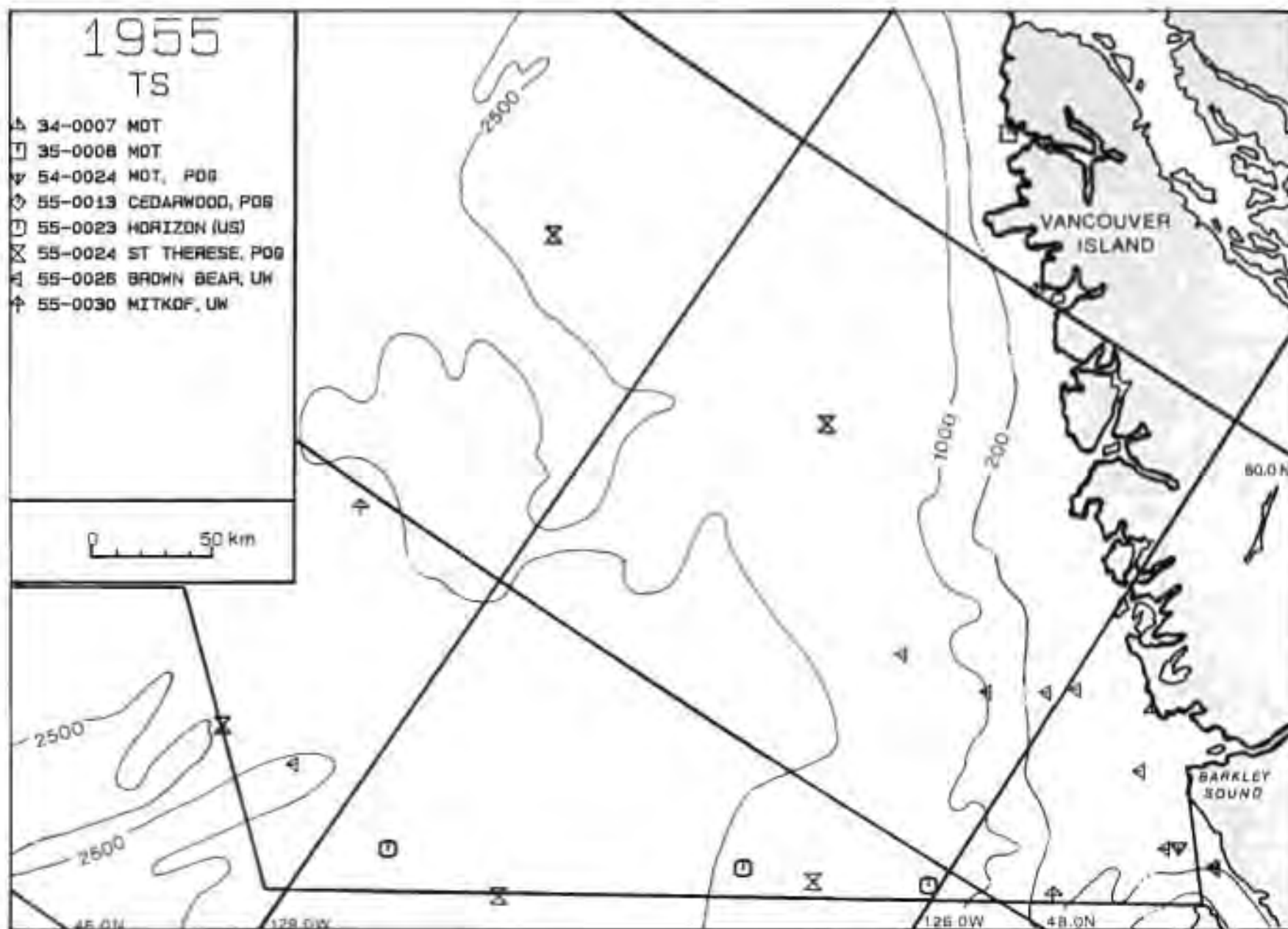


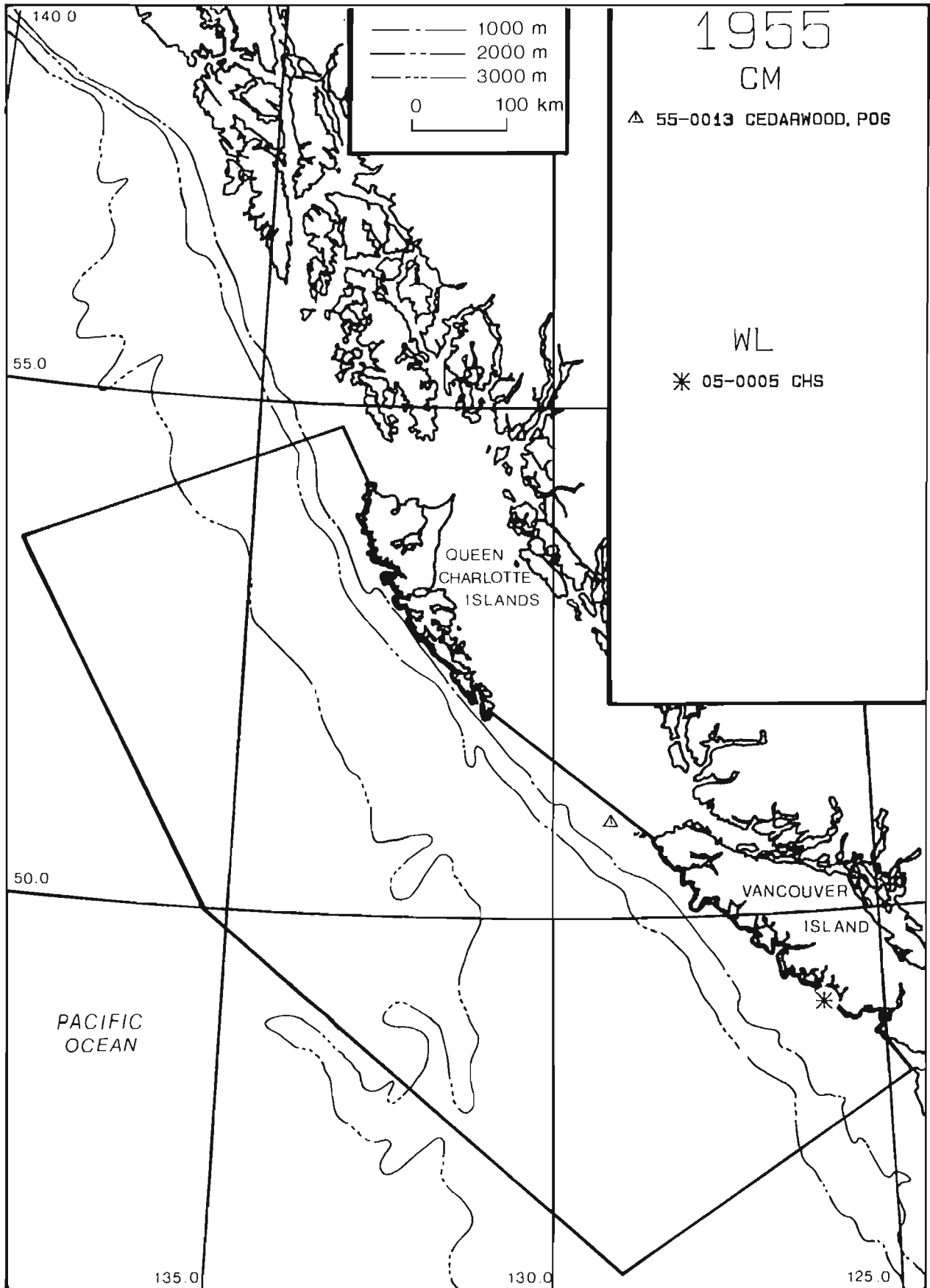


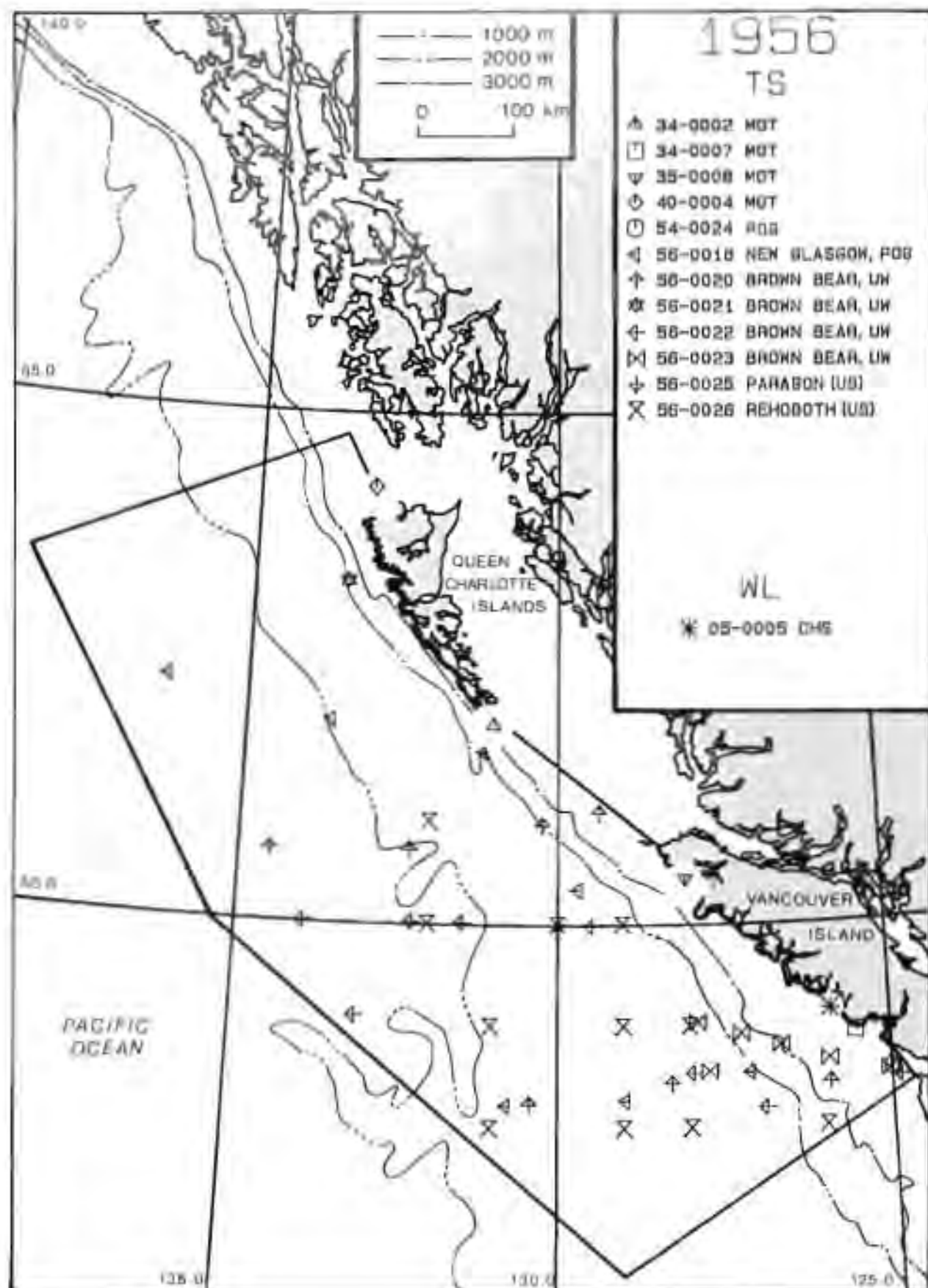
1955
TS

- ▲ 34-0007 MOT
- 35-0008 MOT
- ▼ 54-0024 MOT, POG
- ◇ 55-0013 CEDARWOOD, POG
- ▢ 55-0023 HORIZON (US)
- ⊗ 55-0024 ST THERESE, POG
- ▲ 55-0026 BROWN BEAR, UW
- ↑ 55-0030 MITKOF, UW

0 50 km



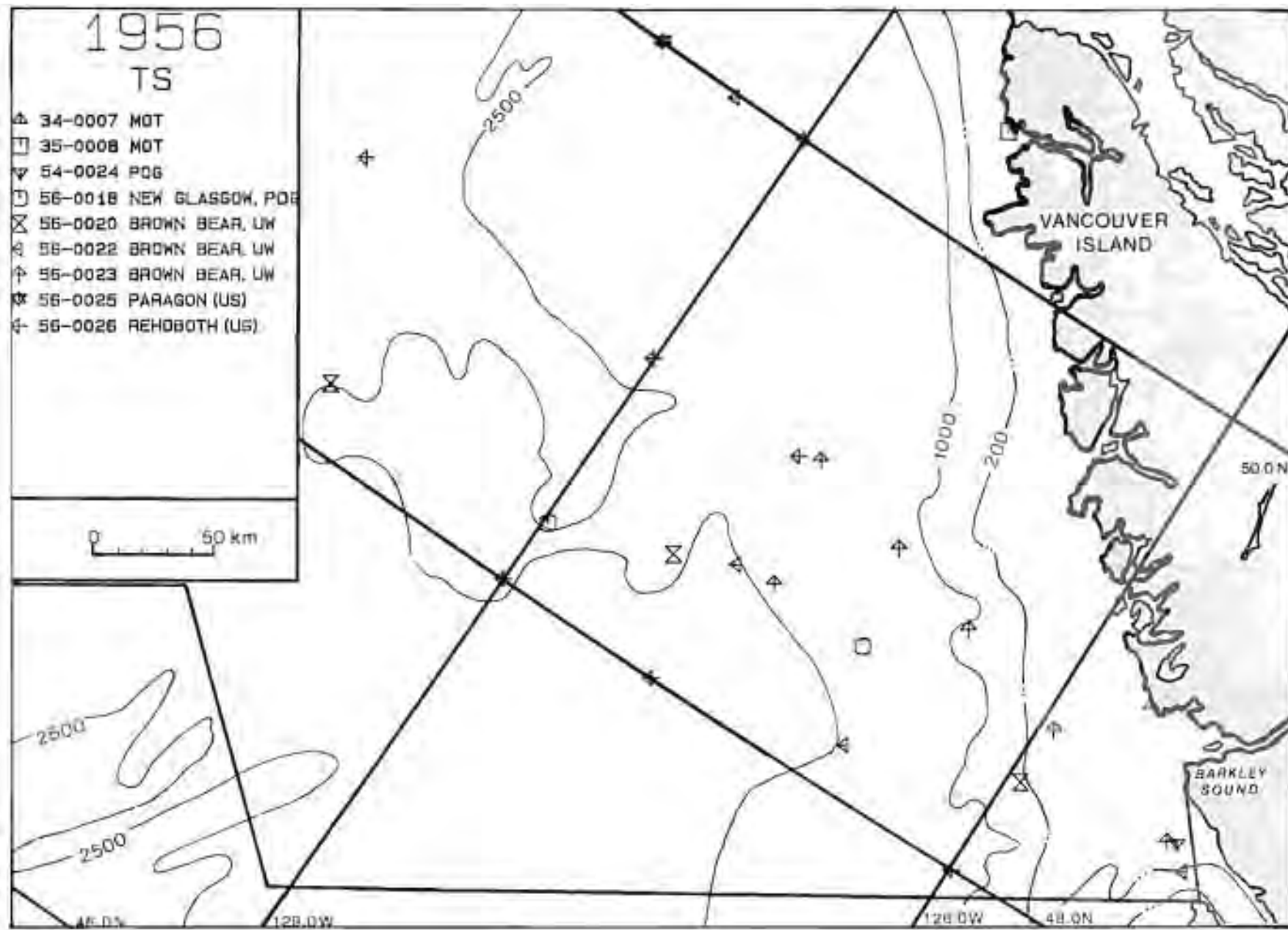


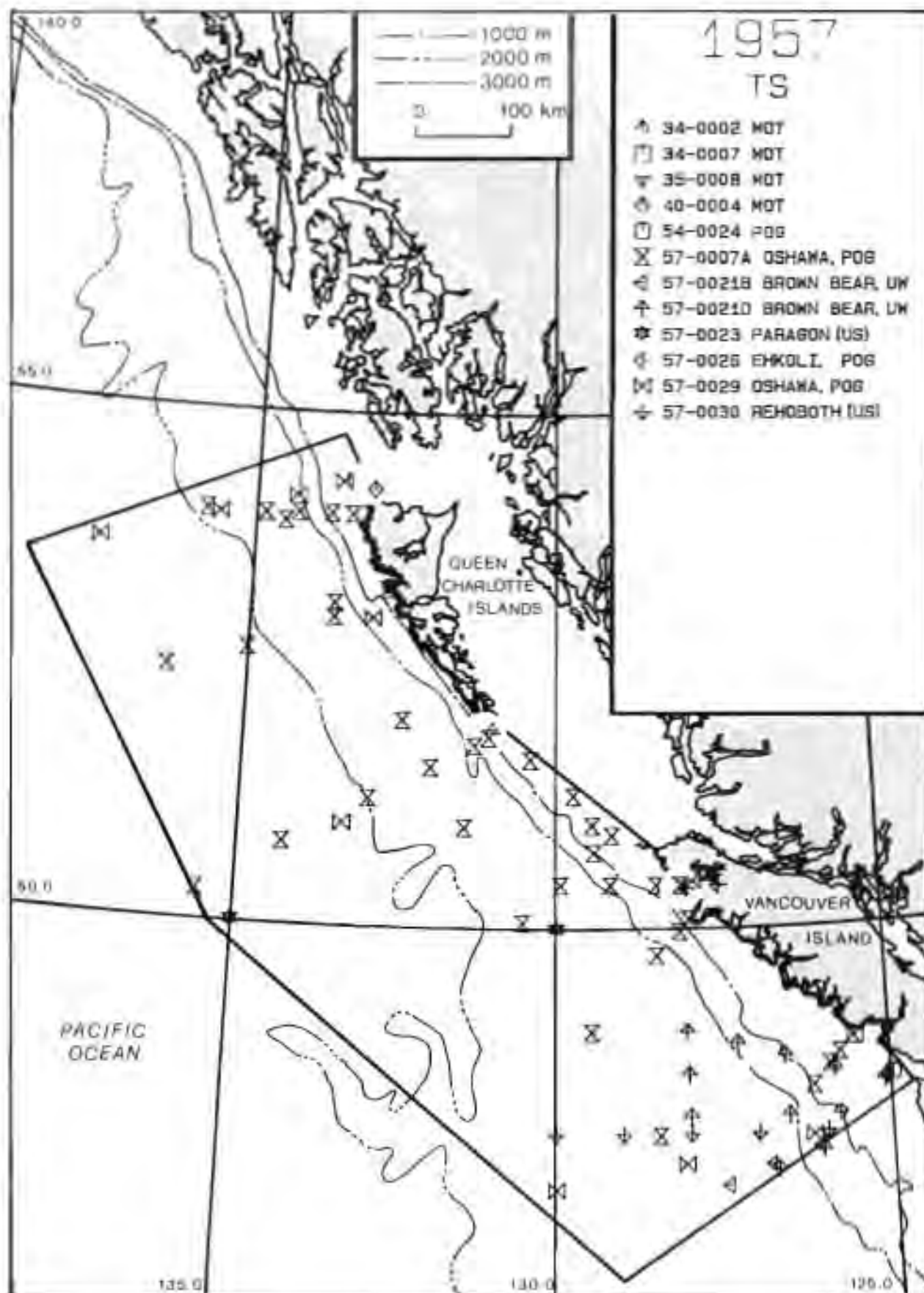


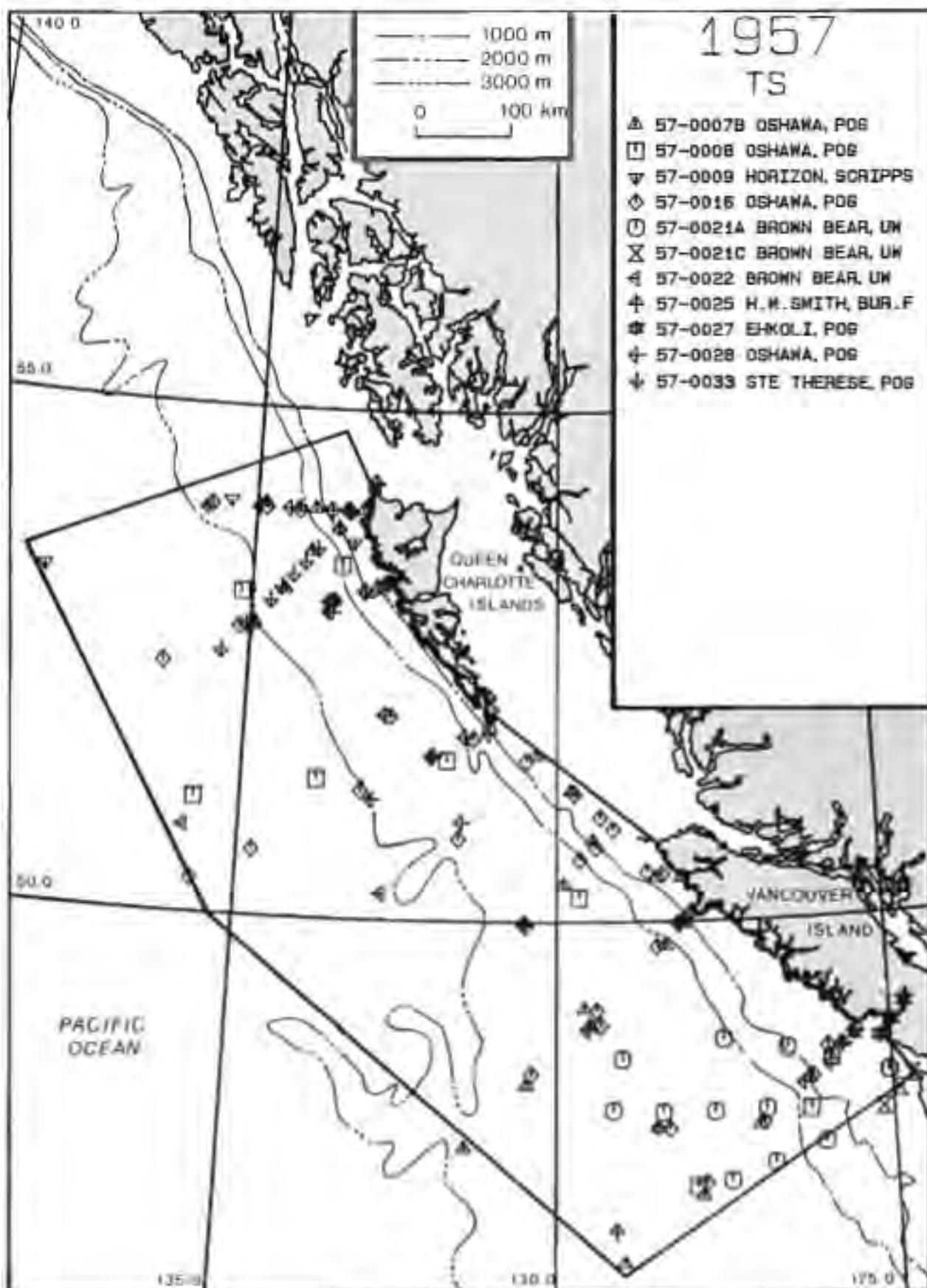
1956
TS

- ▲ 34-0007 MOT
- 35-0008 MOT
- ▼ 54-0024 POG
- 56-0018 NEW GLASSOW, POG
- ⊗ 56-0020 BROWN BEAR, UW
- △ 56-0022 BROWN BEAR, UW
- ↑ 56-0023 BROWN BEAR, UW
- ✱ 56-0025 PARAGON (US)
- ⚡ 56-0026 REHOBOTH (US)

0 50 km



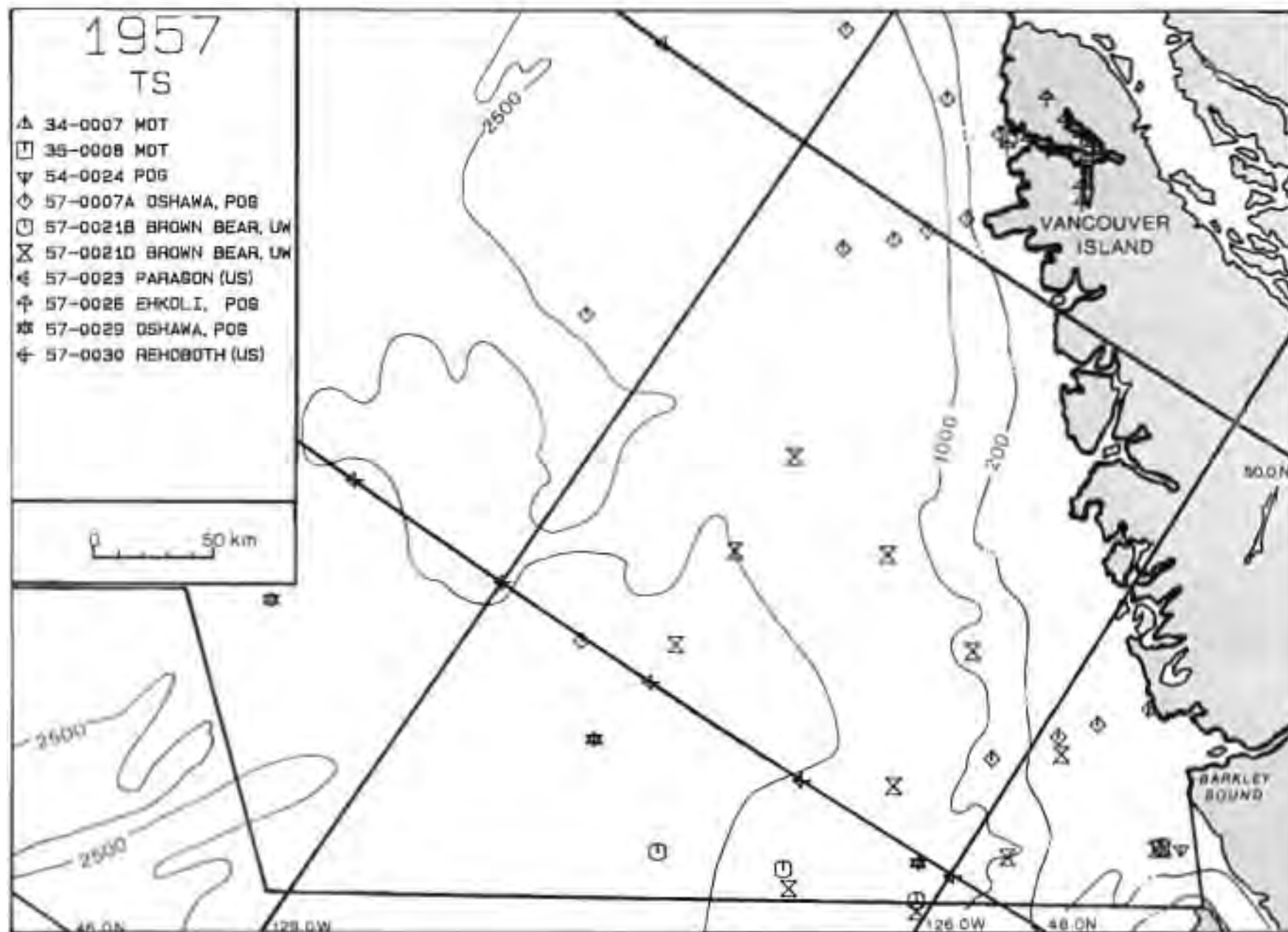




1957
TS

- ▲ 34-0007 MOT
- 35-0008 MOT
- ▽ 54-0024 POG
- ◇ 57-0007A OSHAWA, POG
- 57-0021B BROWN BEAR, UW
- ⊗ 57-0021D BROWN BEAR, UW
- ◄ 57-0023 PARAGON (US)
- ✦ 57-0025 EHKOLI, POG
- ✱ 57-0029 OSHAWA, POG
- ◄ 57-0030 REHOBOTH (US)

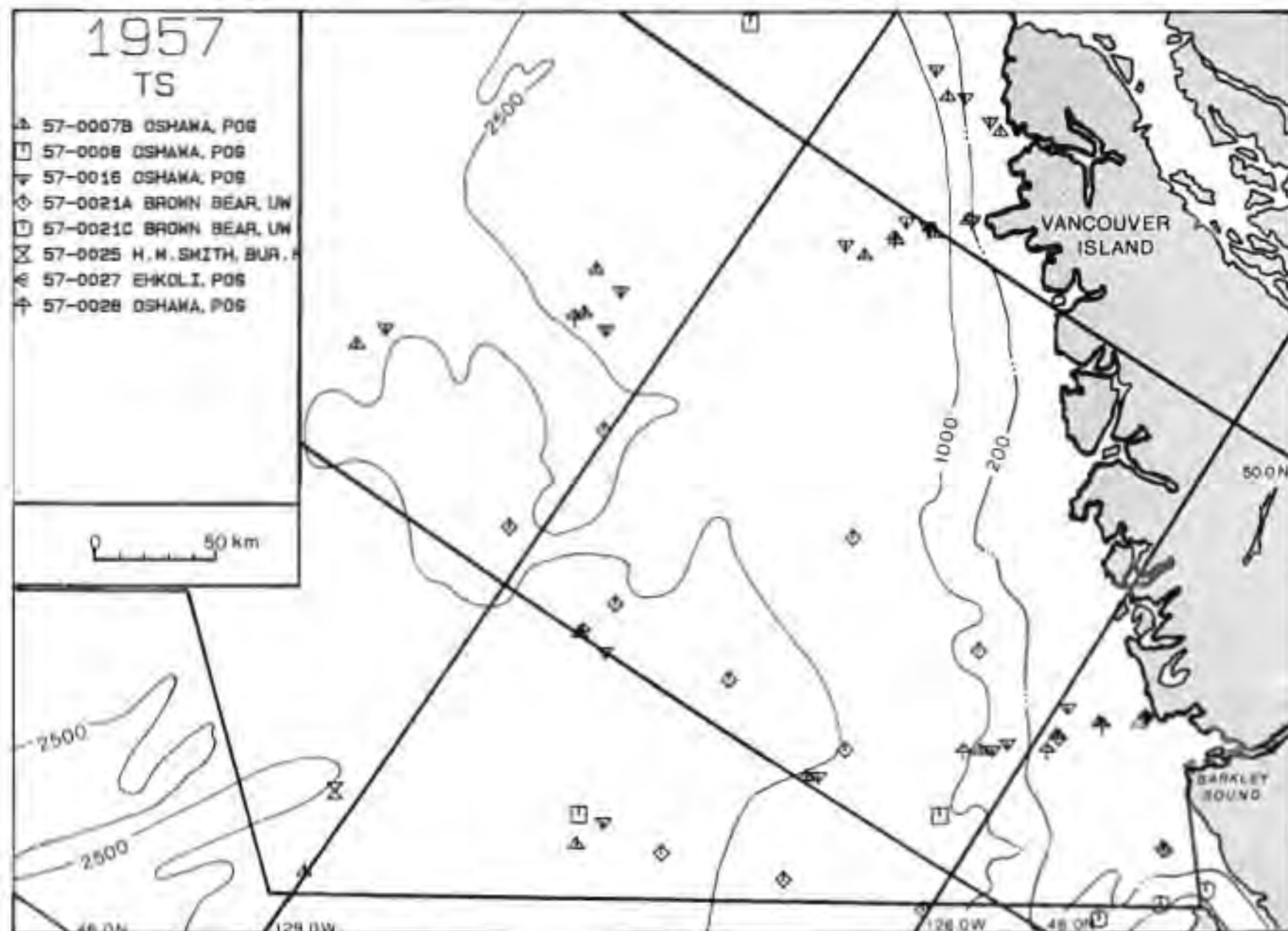
0 50 km

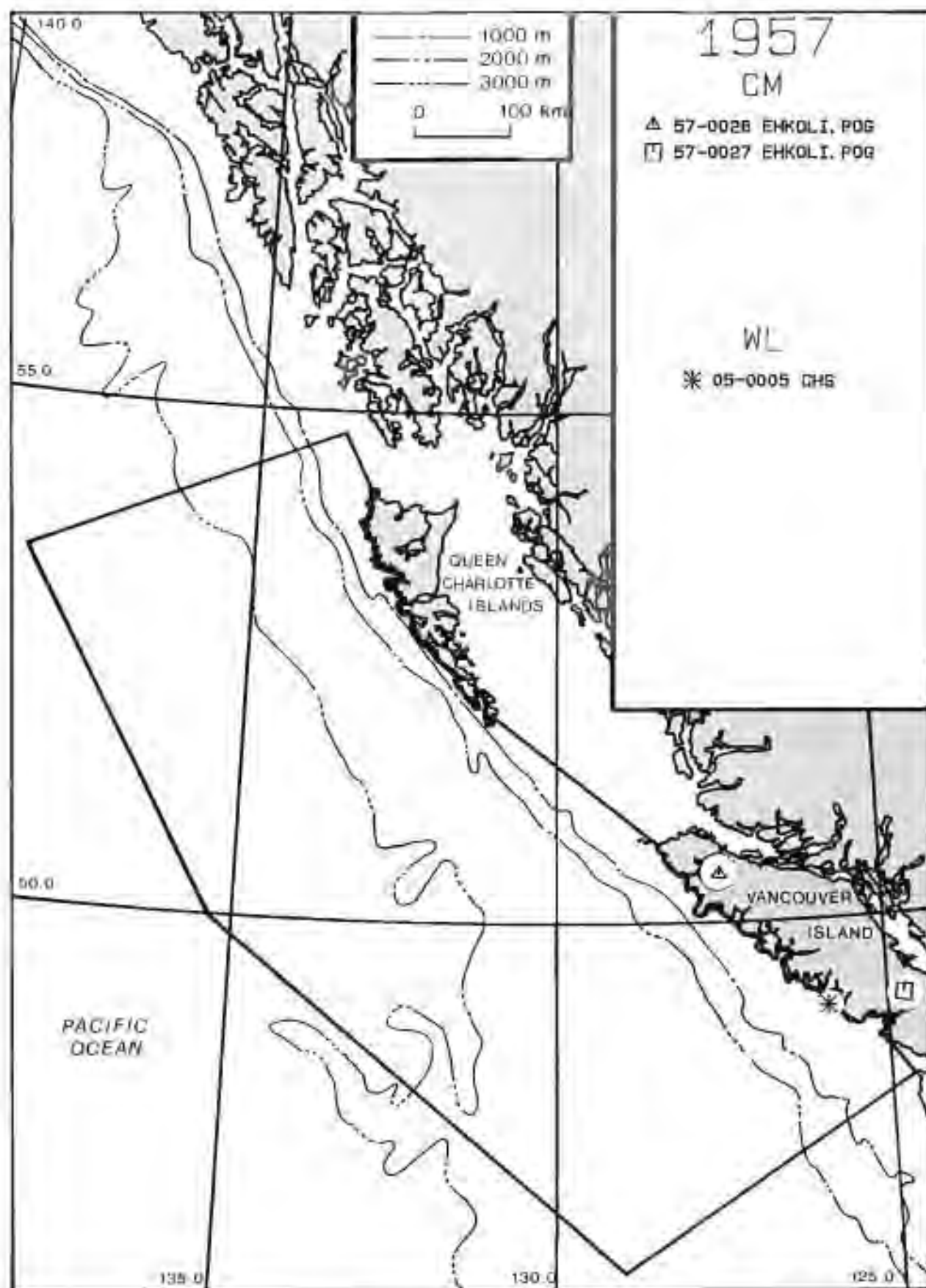


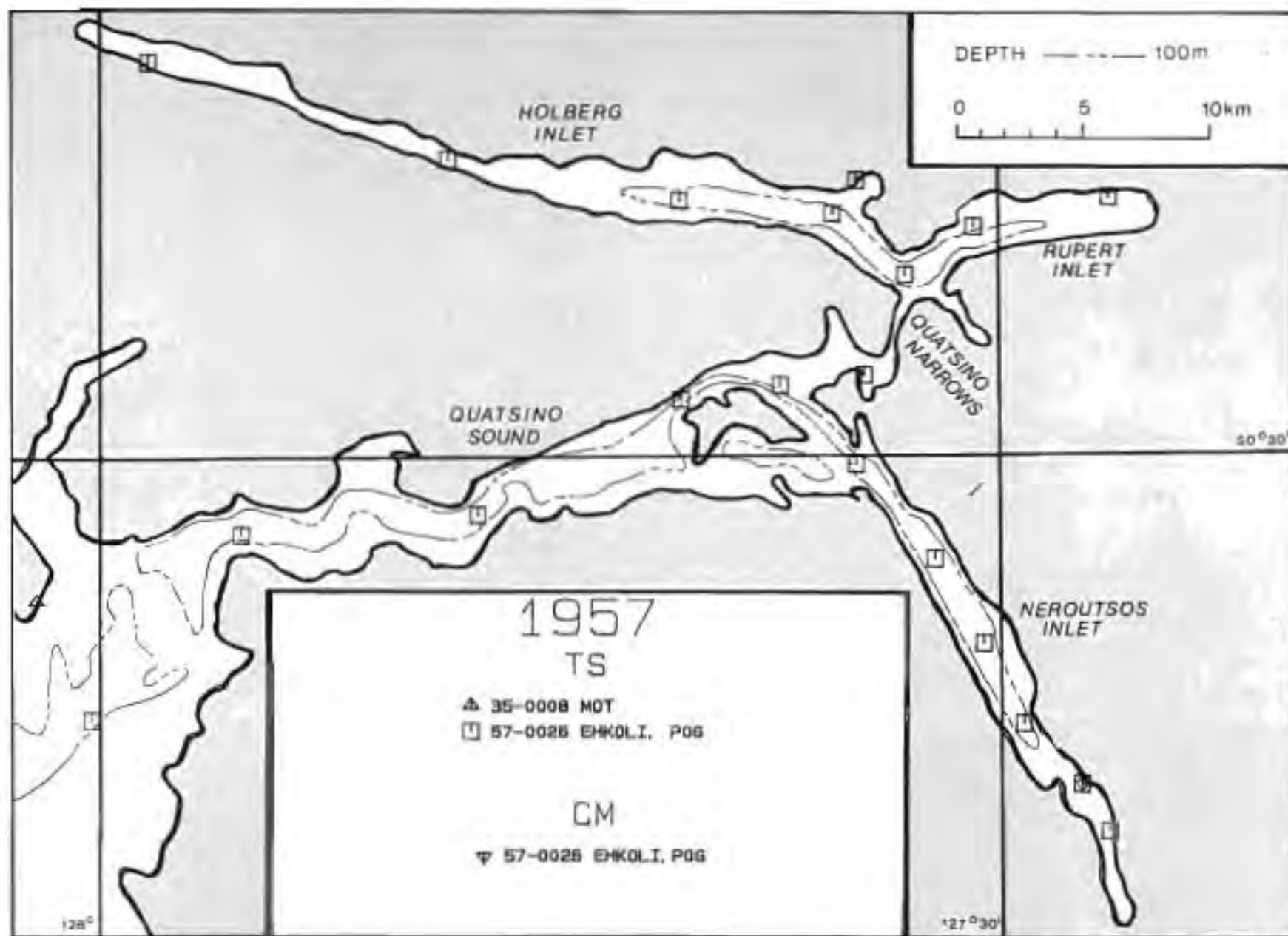
1957
TS

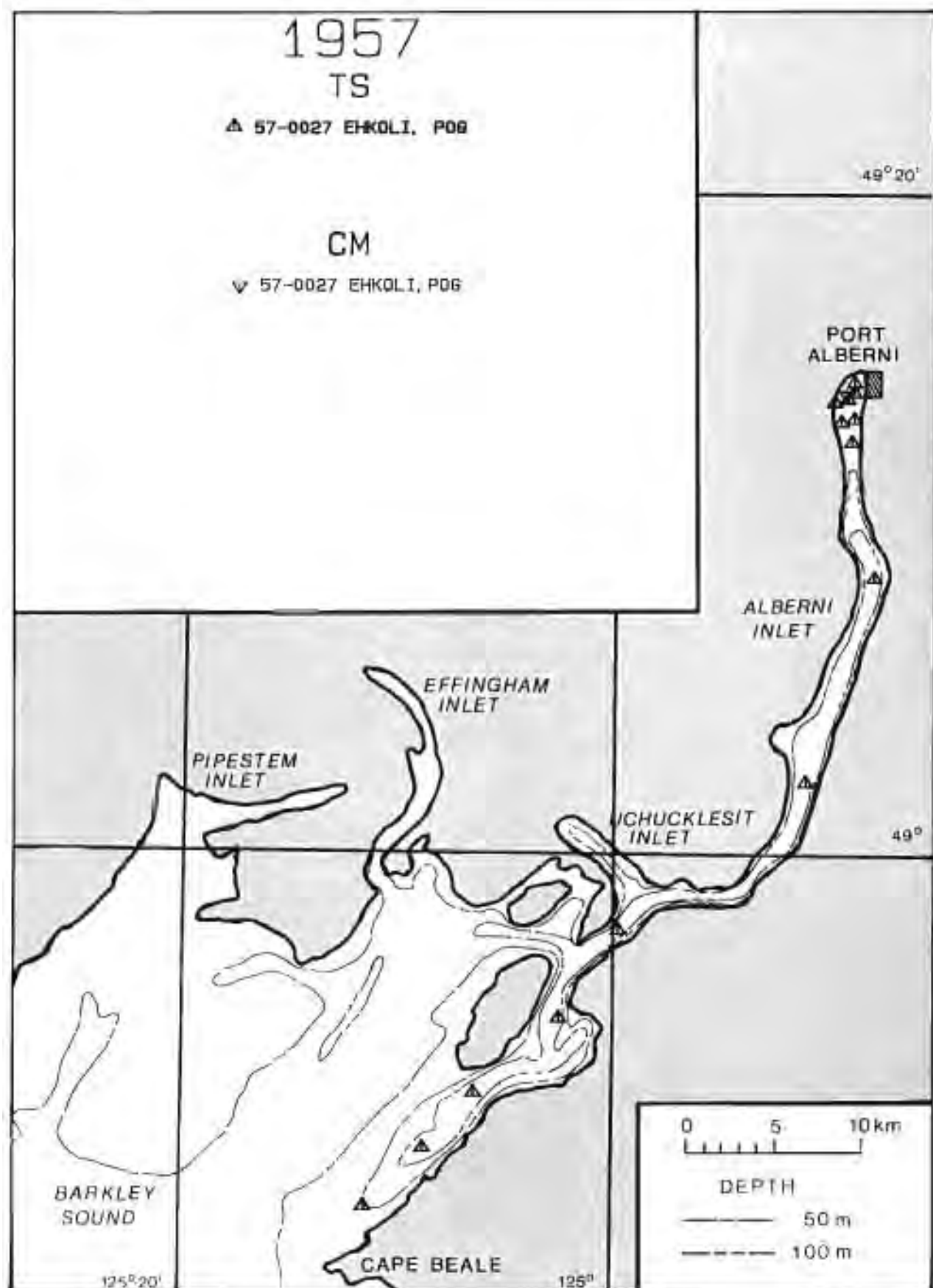
- ▲ 57-0007B OSHAWA, POS
- 57-0008 OSHAWA, POS
- ▽ 57-0016 OSHAWA, POS
- ◇ 57-0021A BROWN BEAR, LW
- ◇ 57-0021C BROWN BEAR, LW
- ⊗ 57-0025 H. M. SMITH, BUR. H
- ◀ 57-0027 EHKOLI, POS
- ↑ 57-0028 OSHAWA, POS

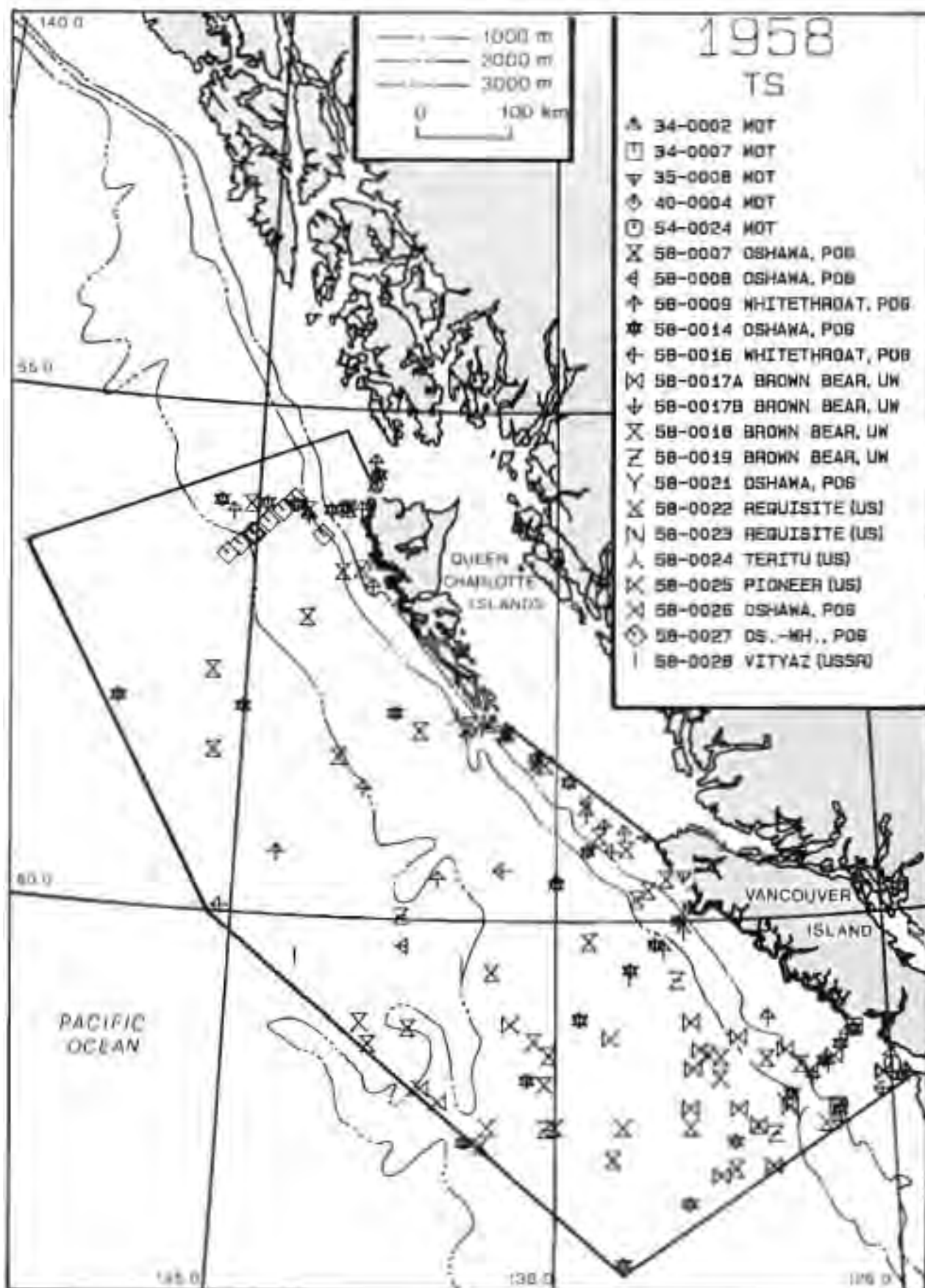
0 50 km







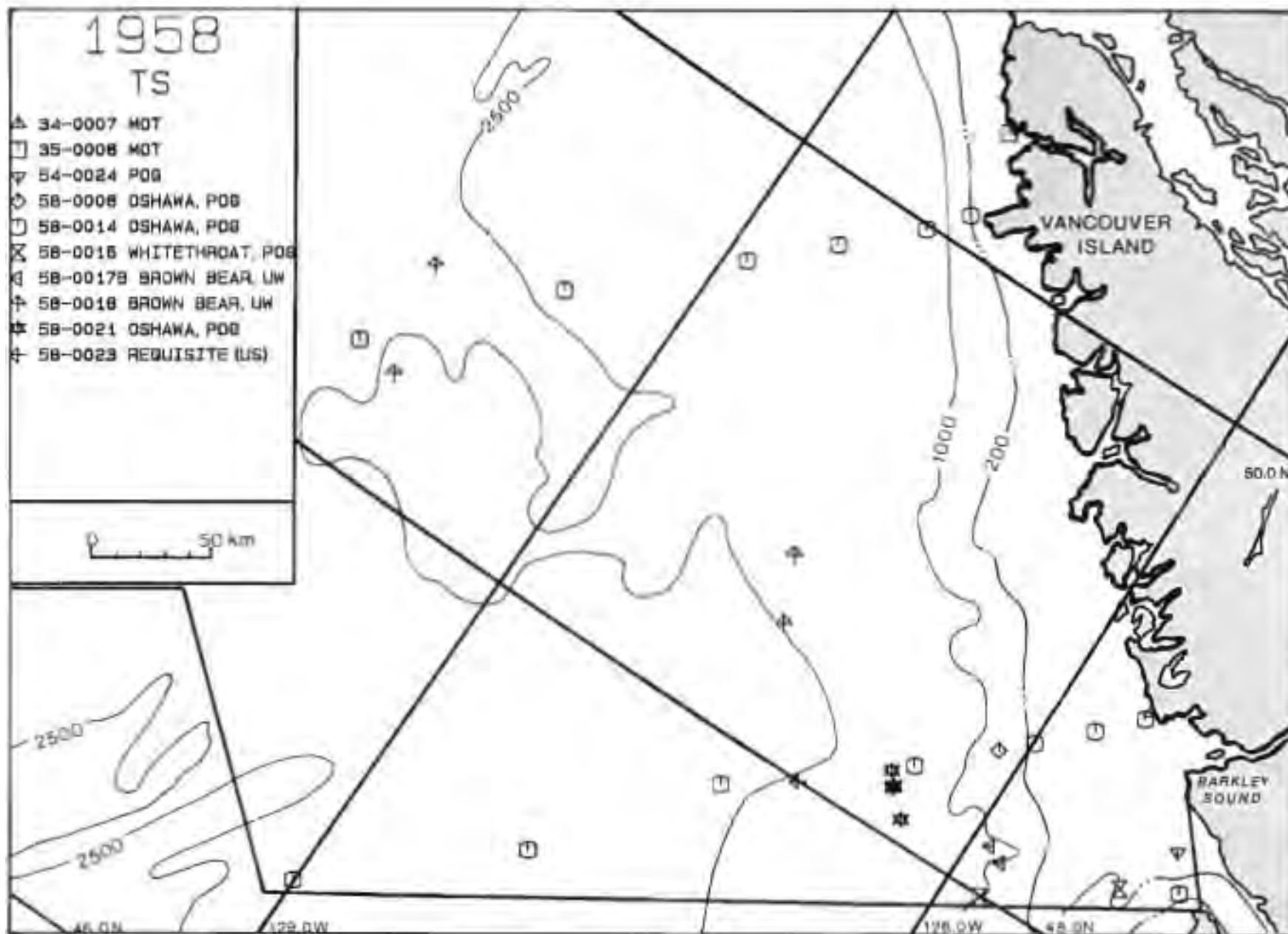




1958
TS

- ▲ 34-0007 MOT
- 35-0008 MOT
- ▽ 54-0024 POB
- ◇ 58-0008 OSHAWA, POB
- 58-0014 OSHAWA, POB
- ⊗ 58-0015 WHITETHROAT, POB
- ⊠ 58-00179 BROWN BEAR, UW
- ⊡ 58-0018 BROWN BEAR, UW
- ★ 58-0021 OSHAWA, POB
- ⊕ 58-0023 REQUISITE (US)

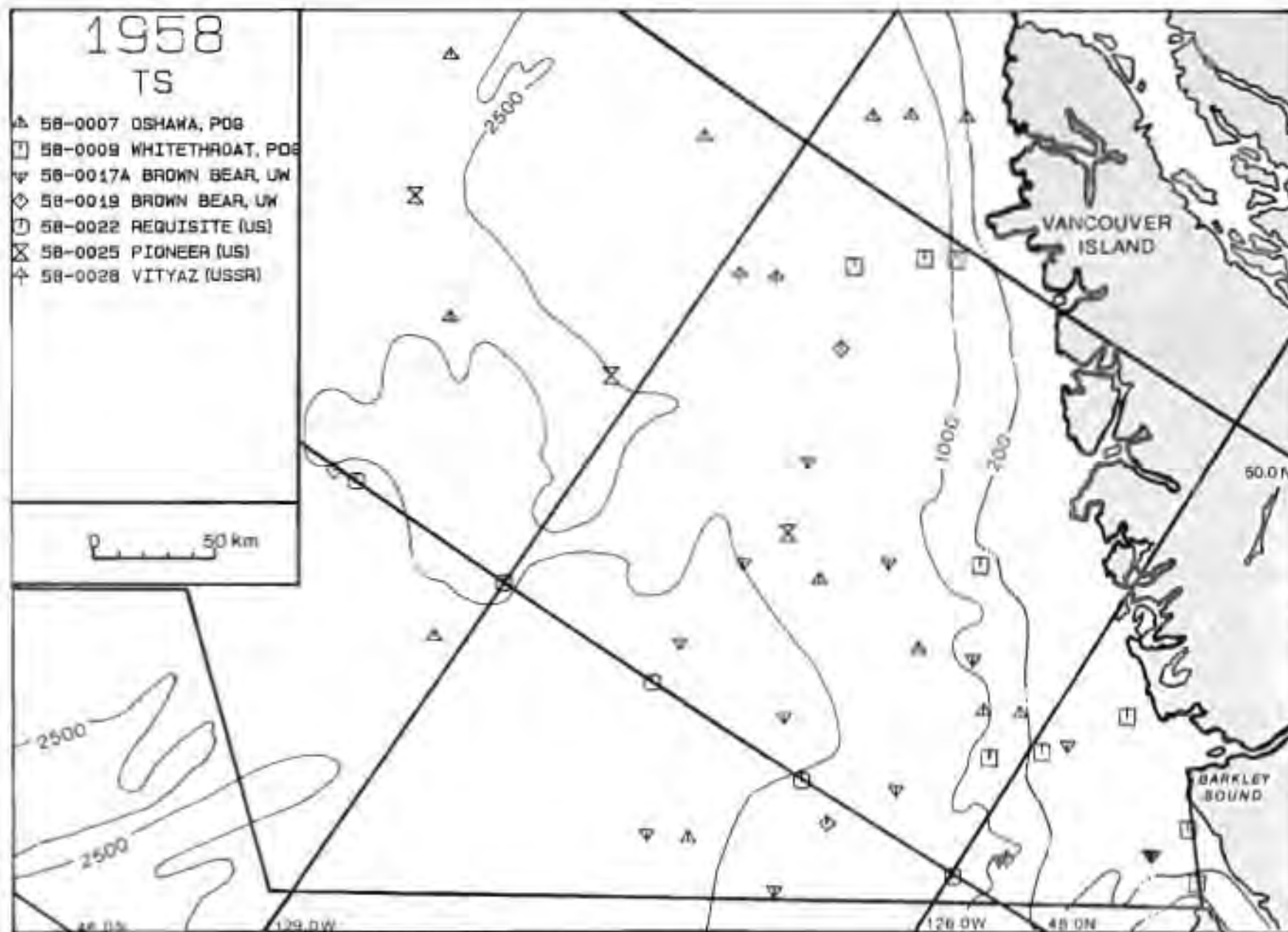
0 50 km

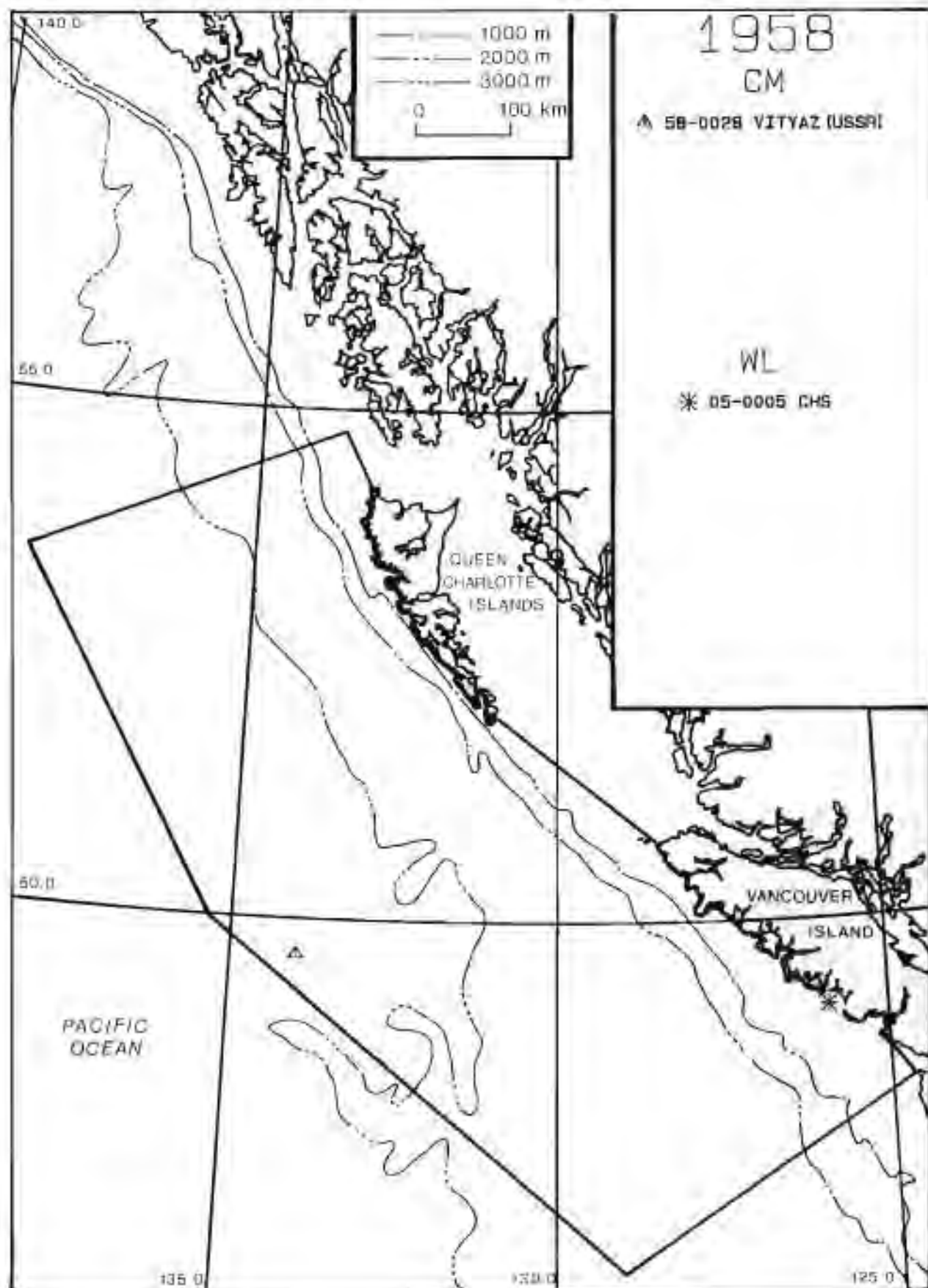


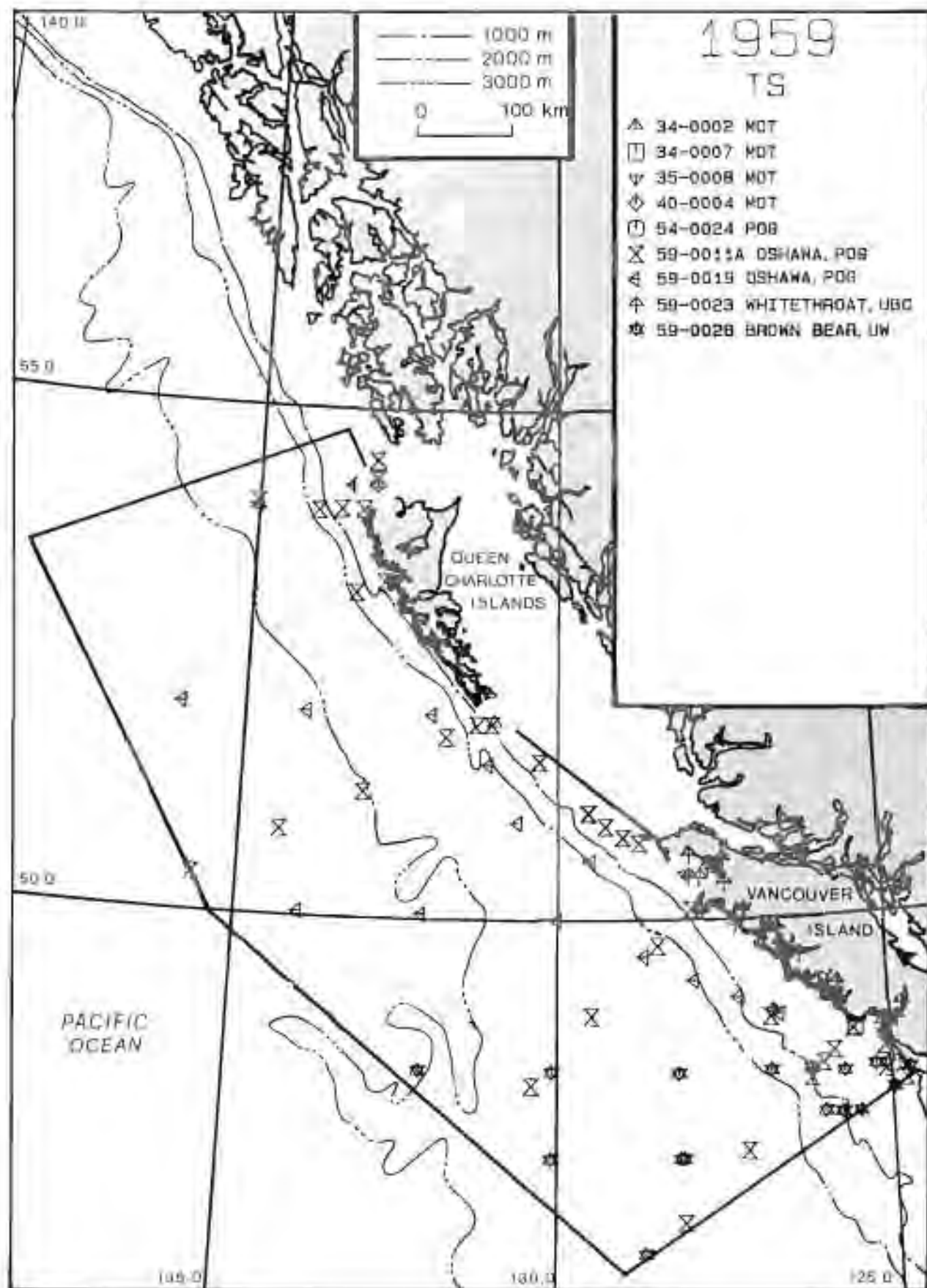
1958
TS

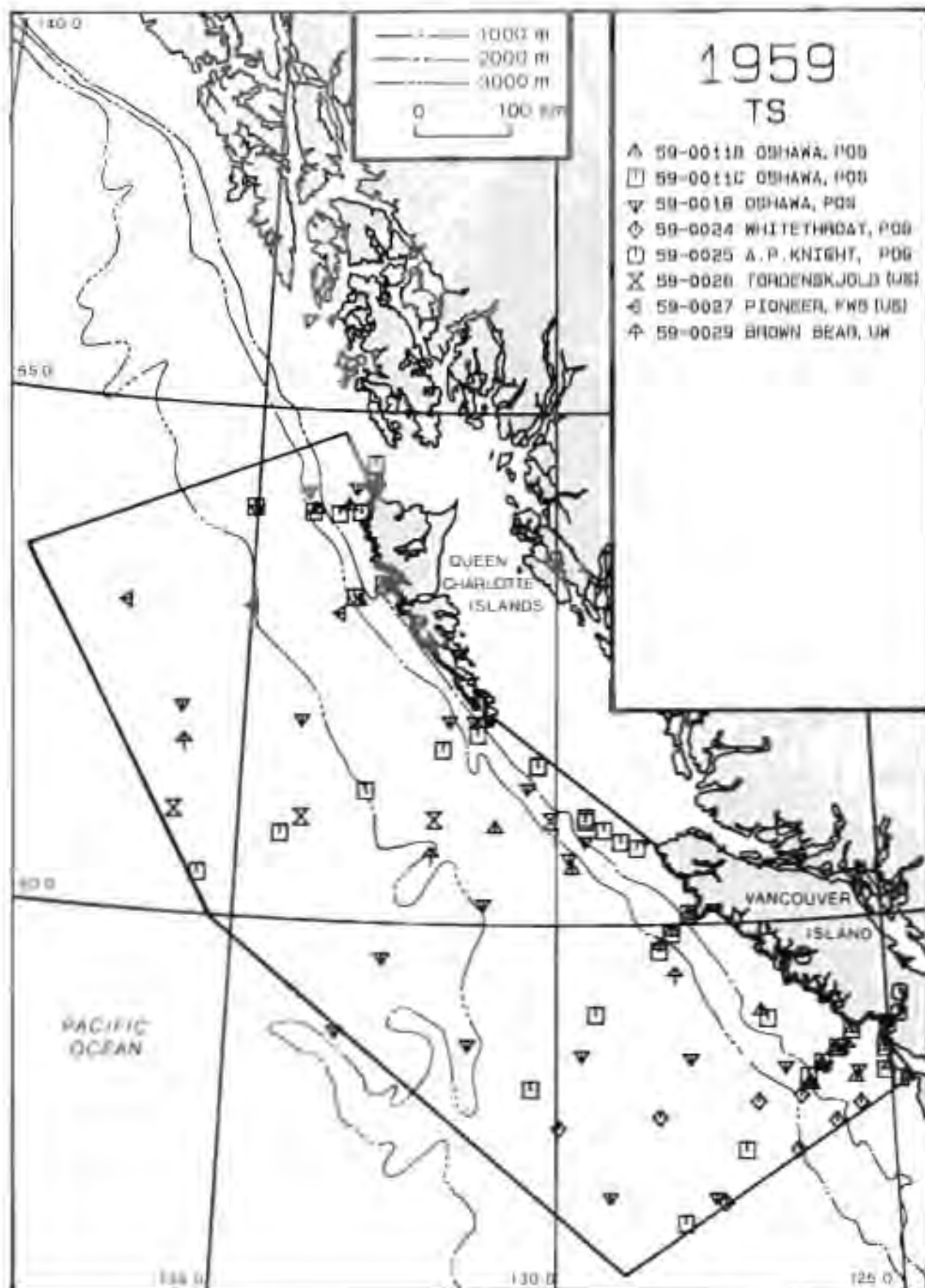
- ▲ 58-0007 OSHAWA, POS
- 58-0009 WHITETHROAT, POS
- ▽ 58-0017A BROWN BEAR, UW
- ◇ 58-0019 BROWN BEAR, UW
- 58-0022 REQUISITE (US)
- ⊗ 58-0025 PIONEER (US)
- ⊕ 58-0028 VITYAZ (USSR)

0 50 km







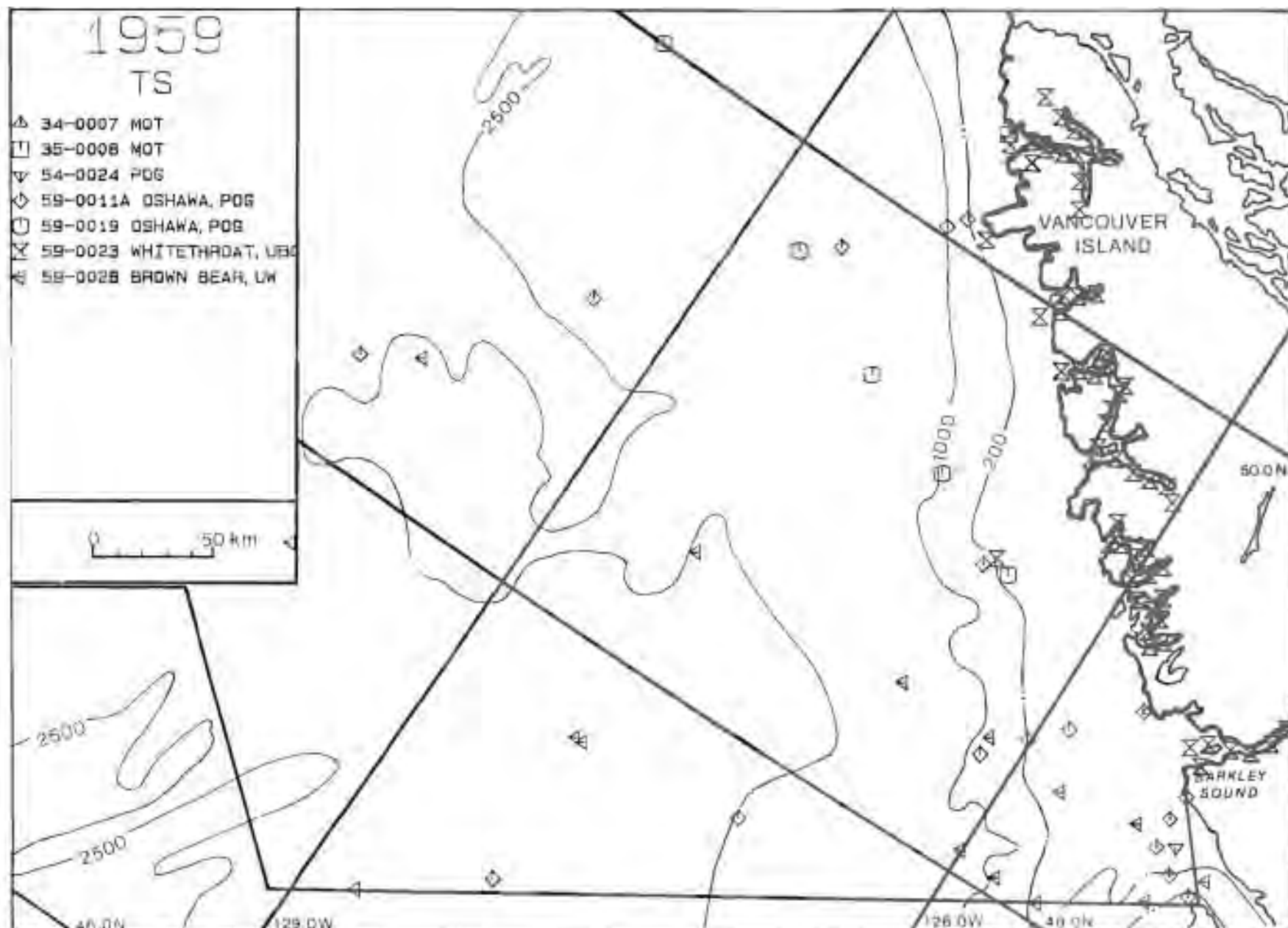


1959

TS

- △ 34-0007 MOT
- 35-0008 MOT
- ▽ 54-0024 POG
- ◇ 59-0011A OSHAWA, POG
- 59-0019 OSHAWA, POG
- ✕ 59-0023 WHITETHROAT, UBC
- ▲ 59-0025 BROWN BEAR, LW

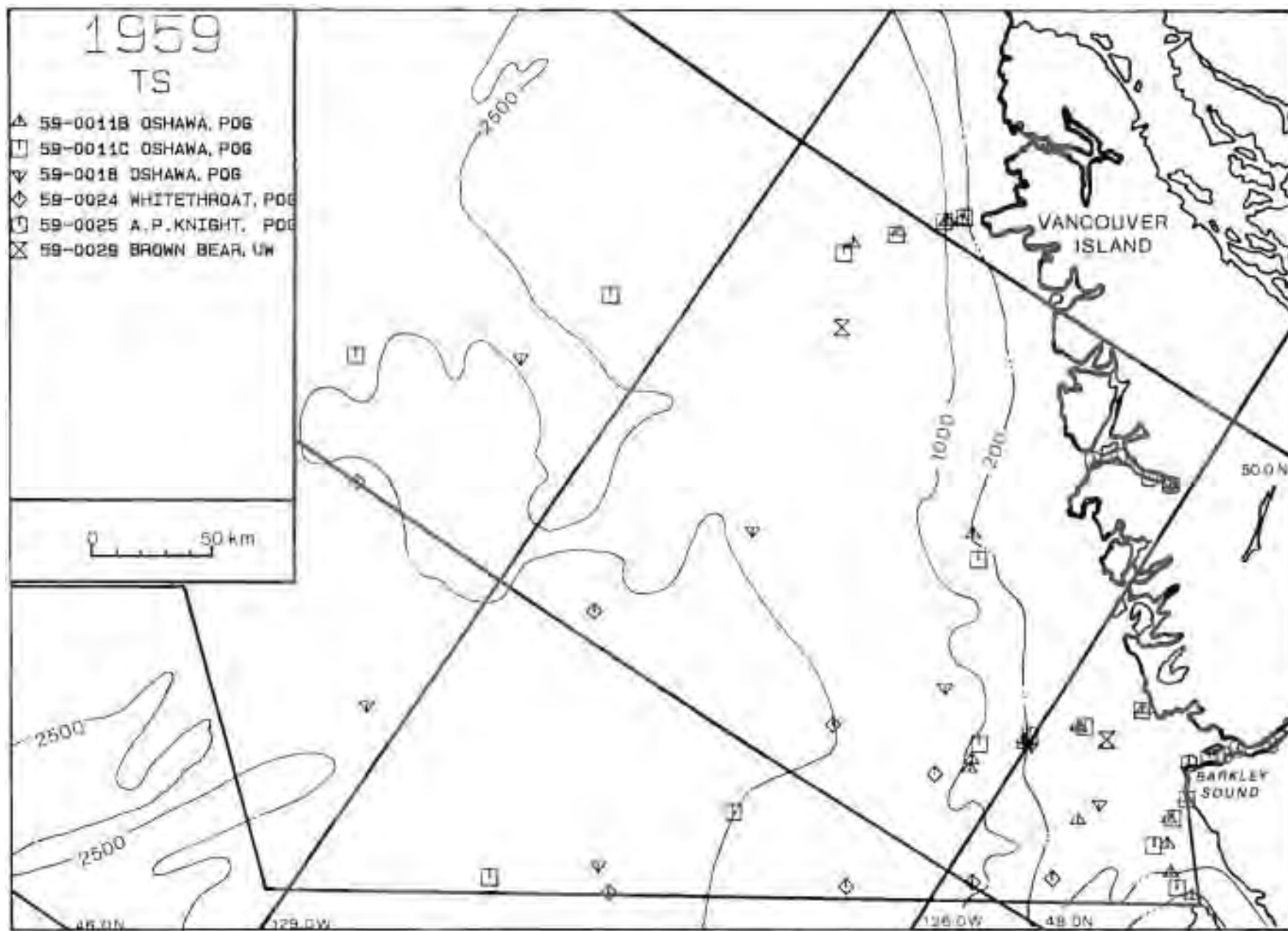
0 50 km

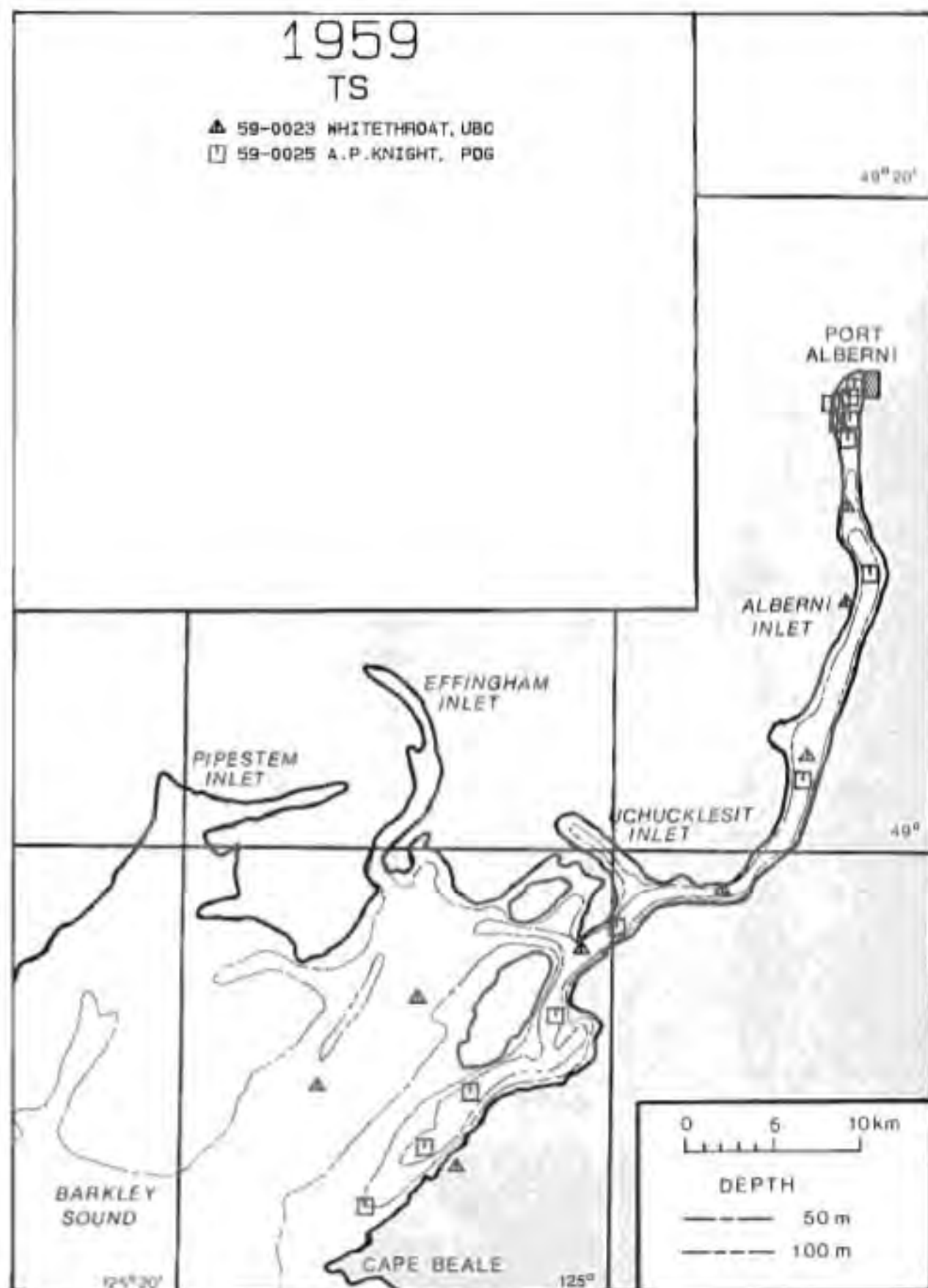


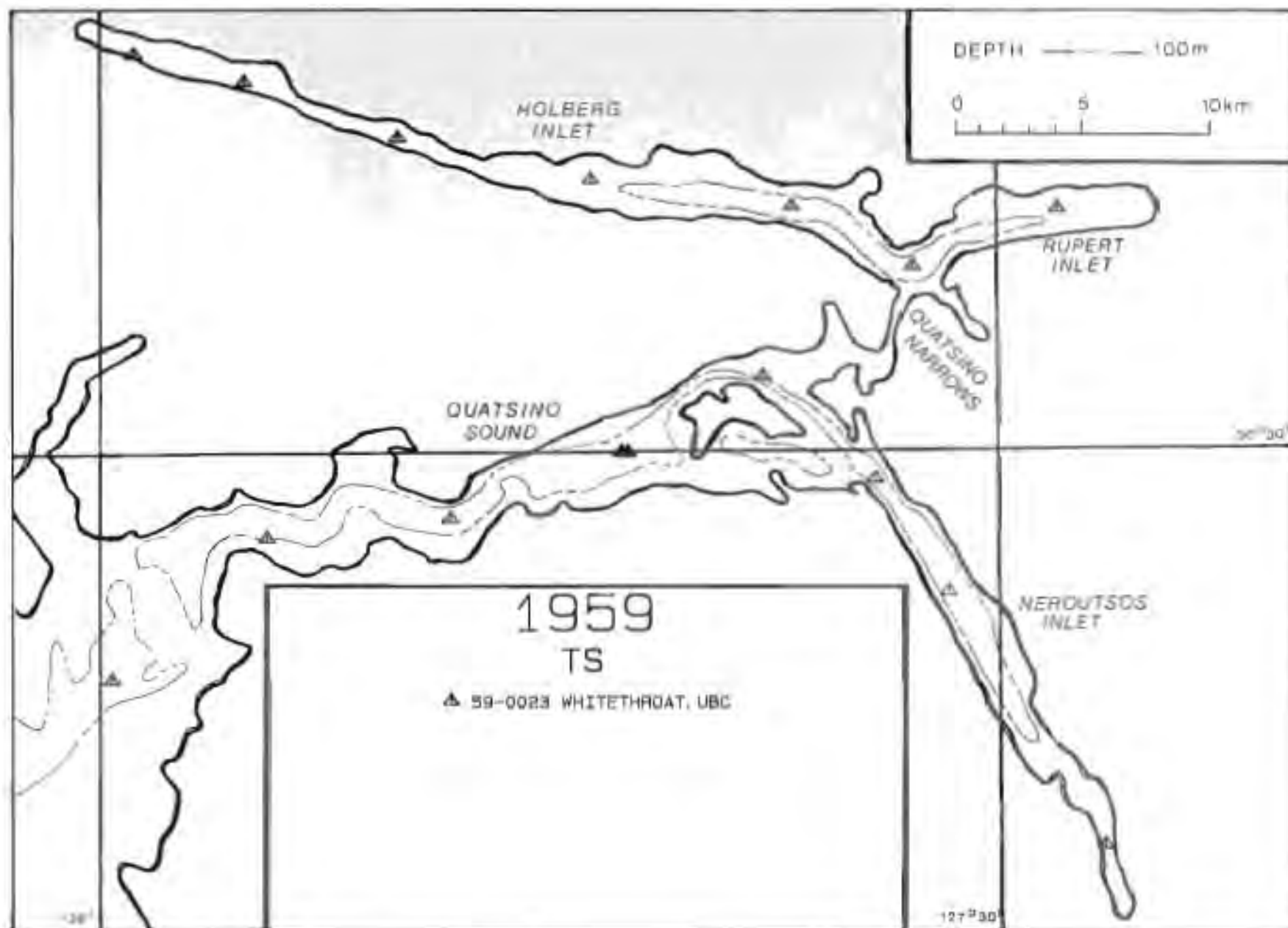
1959
TS

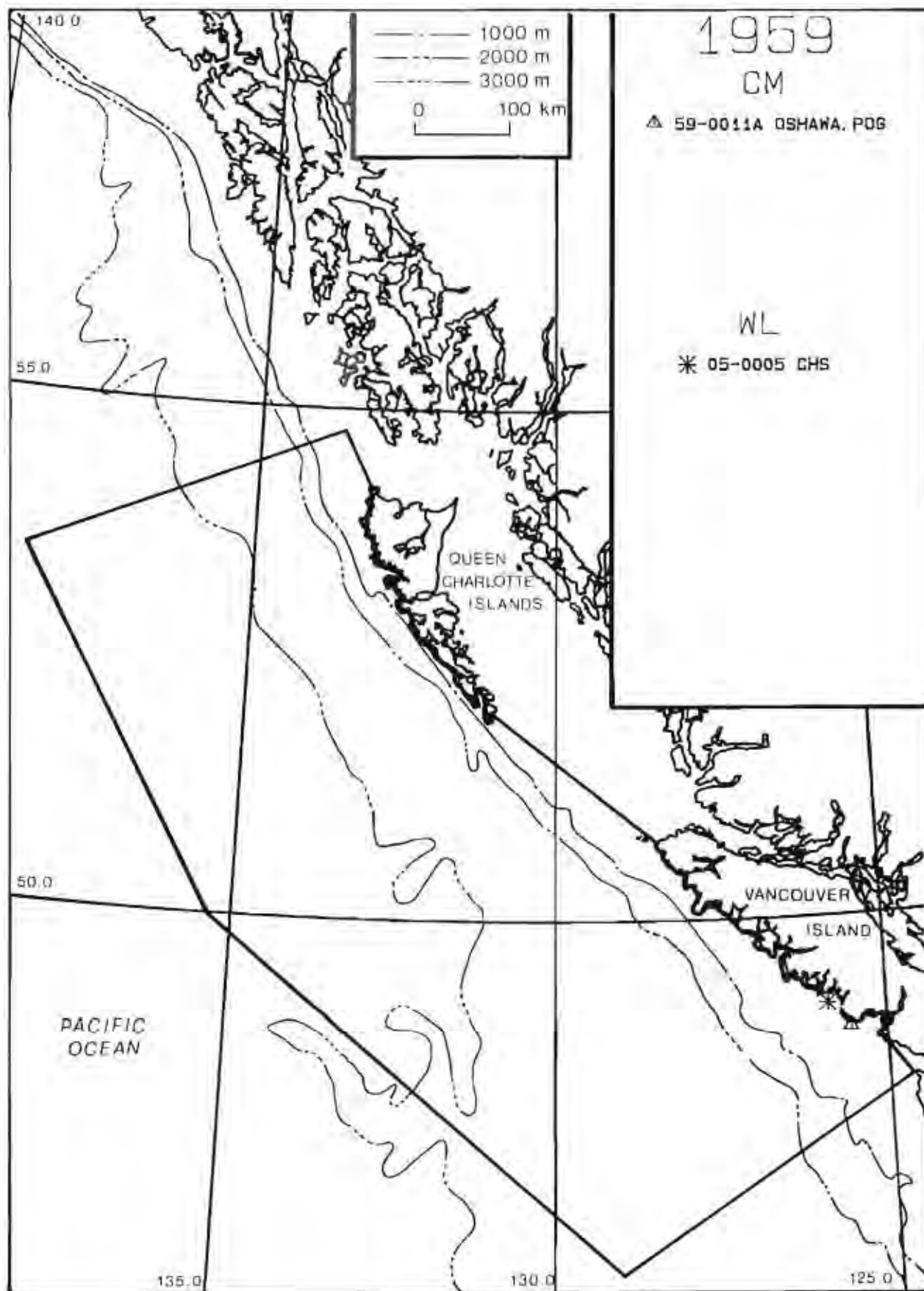
- △ 59-0011B OSHAWA, POG
- 59-0011C OSHAWA, POG
- ▽ 59-0018 OSHAWA, POG
- ◇ 59-0024 WHITETHROAT, POG
- ◻ 59-0025 A.P.KNIGHT, POG
- ⊗ 59-0029 BROWN BEAR, UW

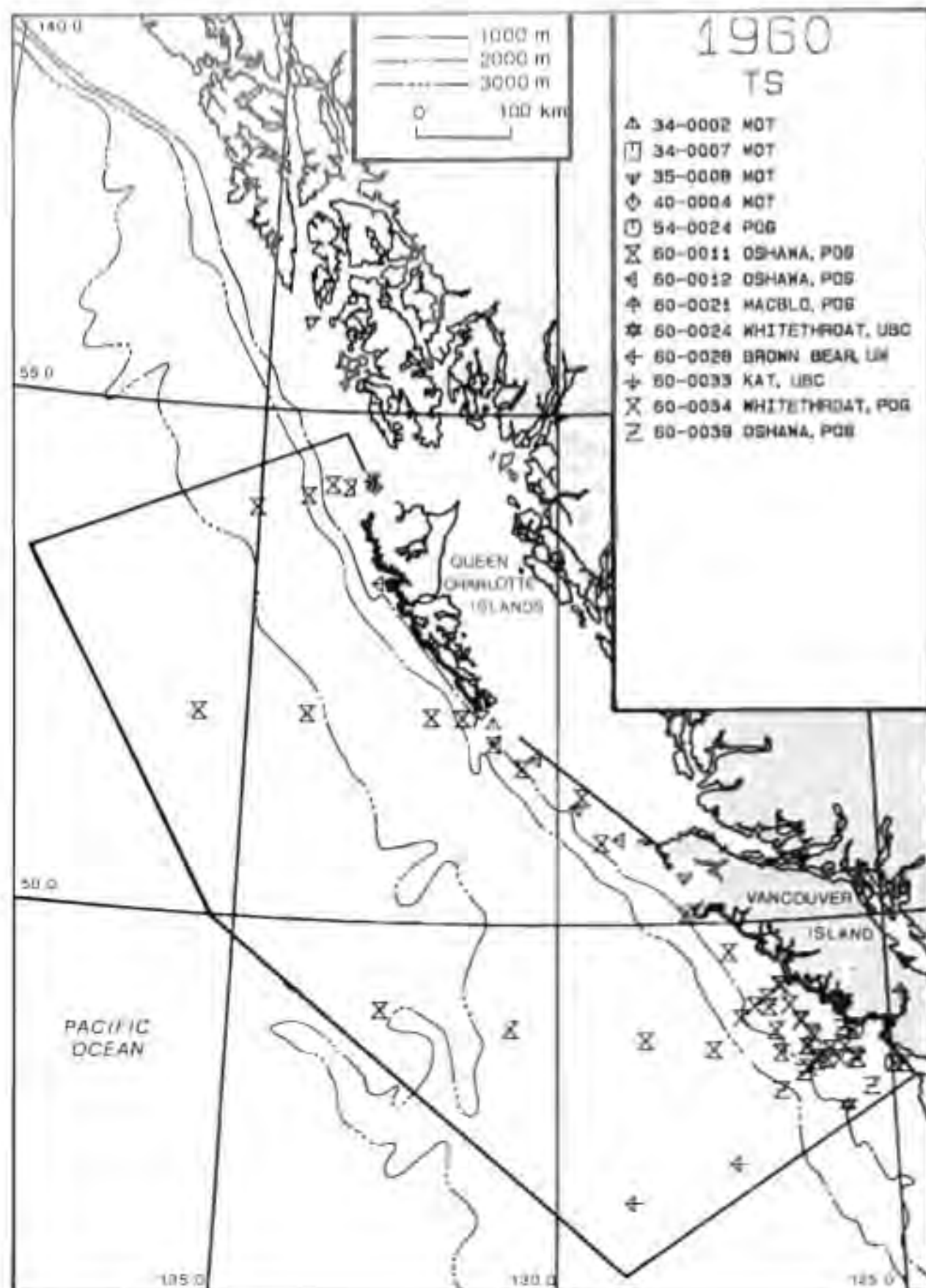
0 50 km

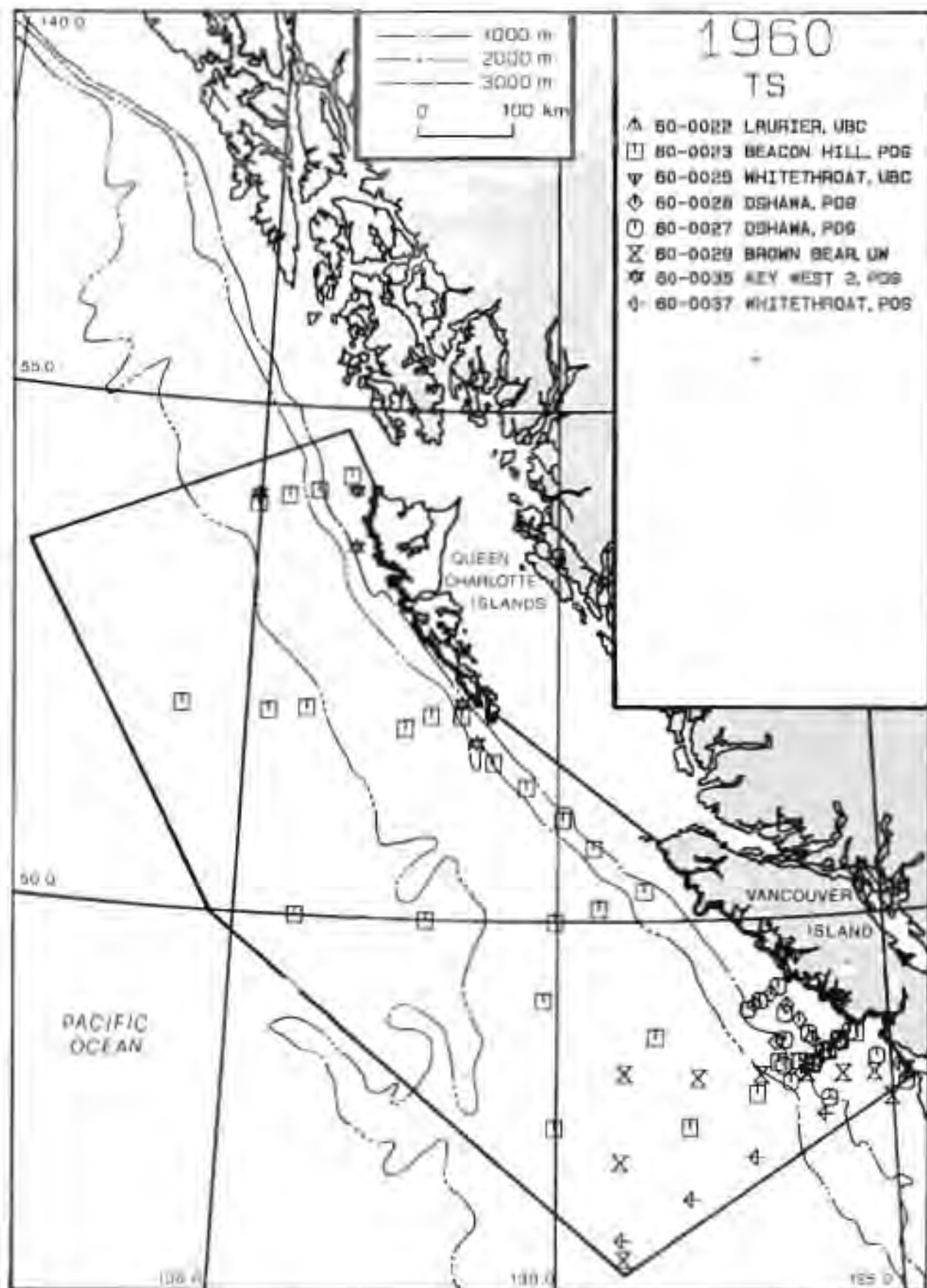








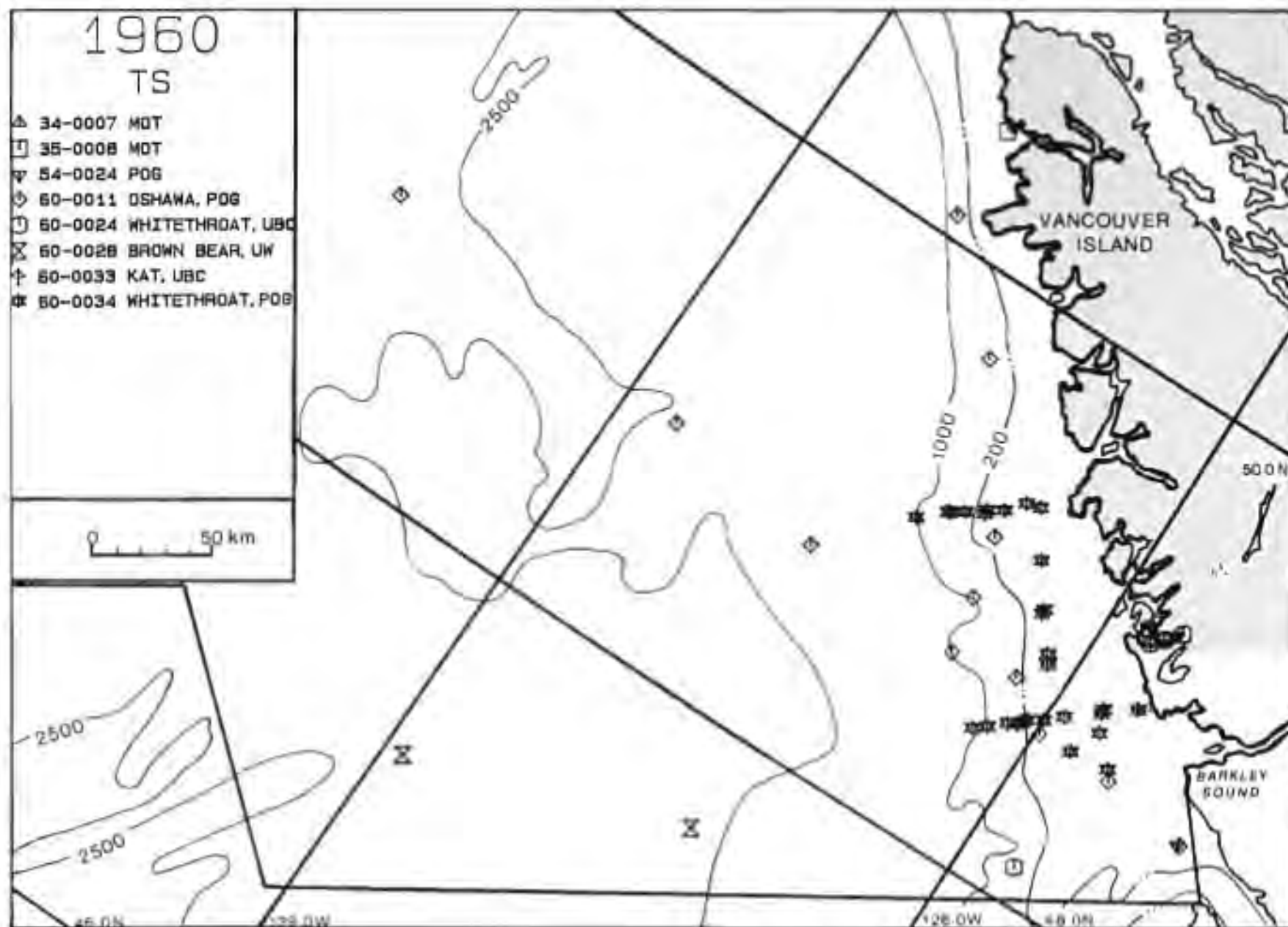




1960 TS

- ▲ 34-0007 MDT
- 35-0008 MDT
- ▽ 54-0024 POB
- ◇ 60-0011 OSHAWA, POB
- 60-0024 WHITETHROAT, UBC
- ⊗ 60-0028 BROWN BEAR, UW
- ↑ 60-0033 KAT, UBC
- ✱ 60-0034 WHITETHROAT, POB

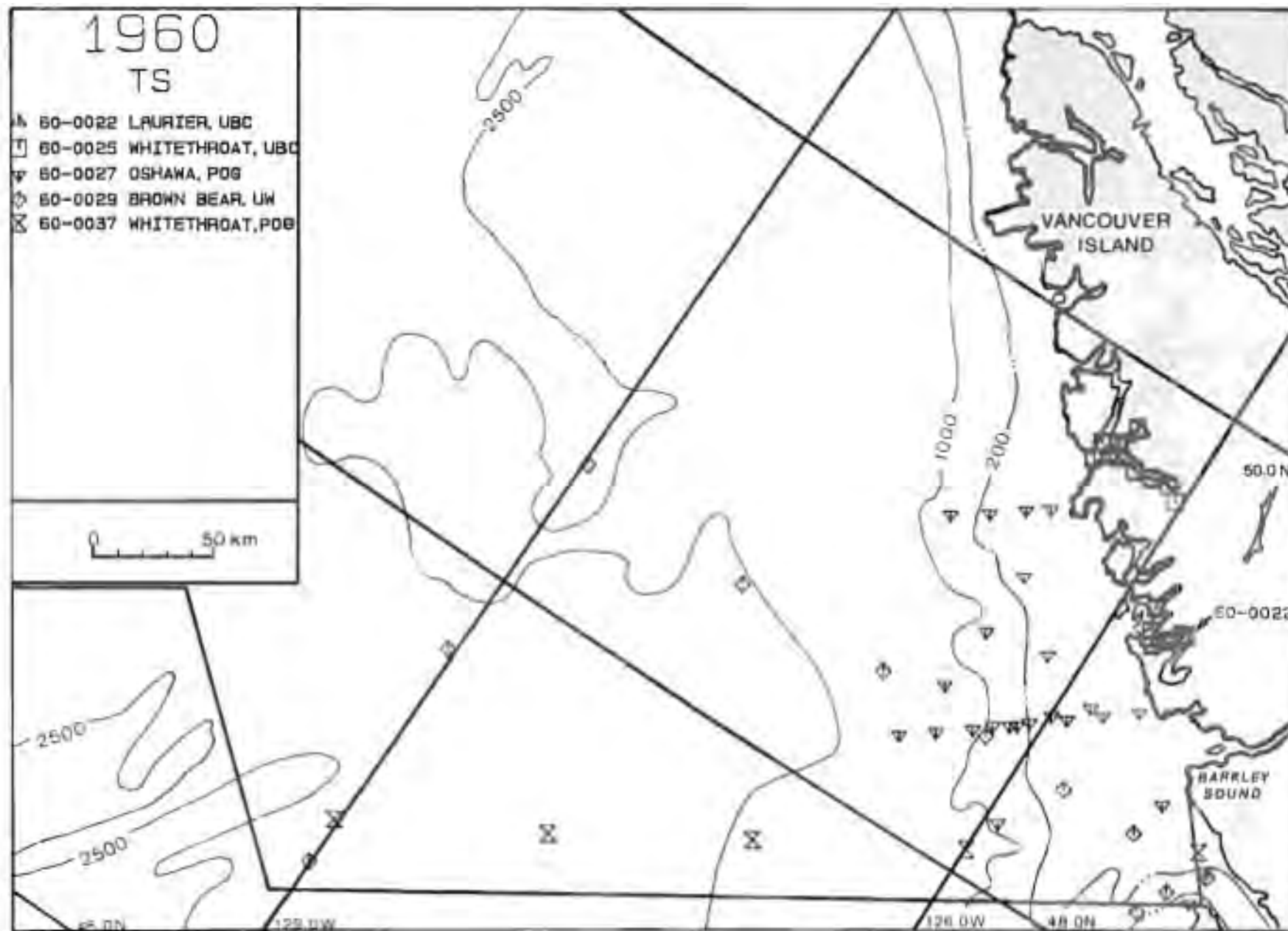
0 50 km



1960
TS

- ▲ 60-0022 LAURIER, UBC
- 60-0025 WHITETHROAT, UBC
- ▼ 60-0027 OSHAWA, POB
- ⊙ 60-0029 BROWN BEAR, UW
- ⊗ 60-0037 WHITETHROAT, POB

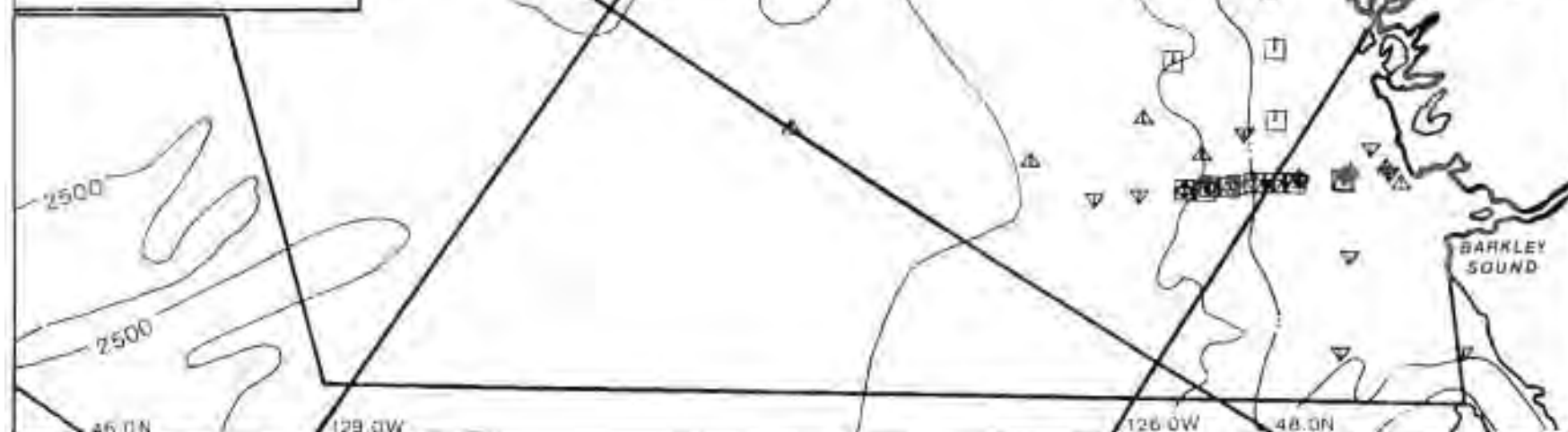
0 50 km

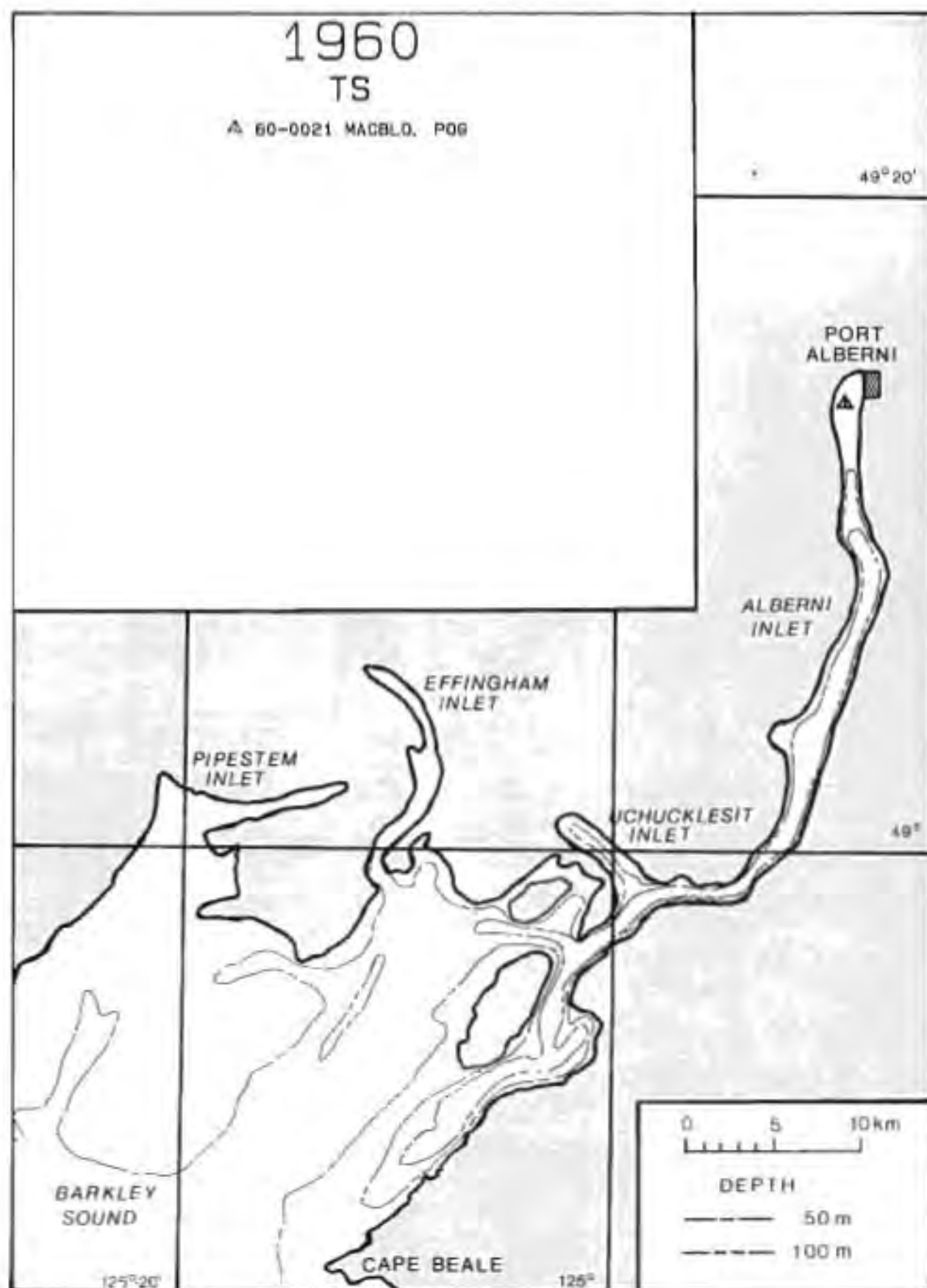


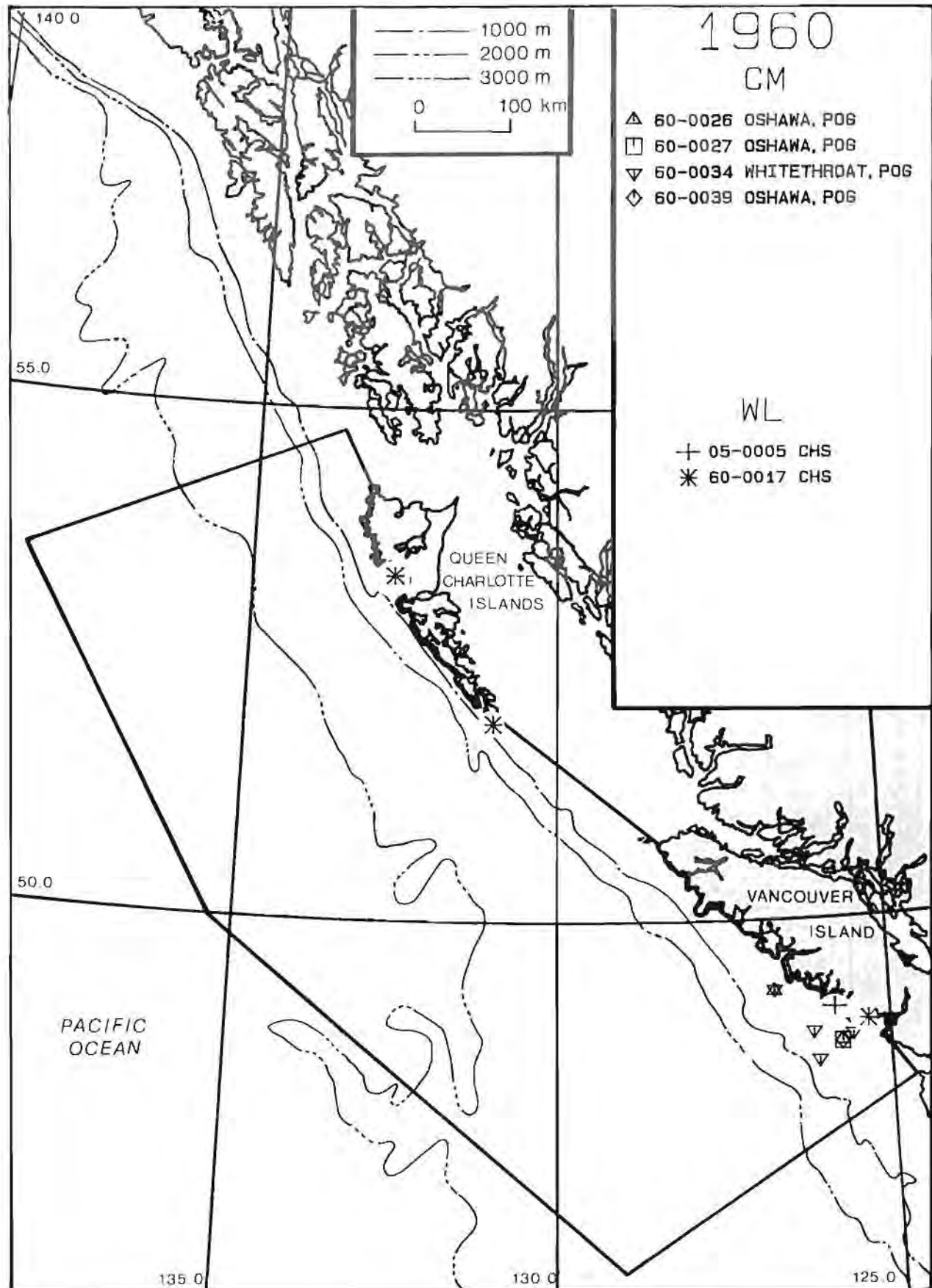
1960
TS

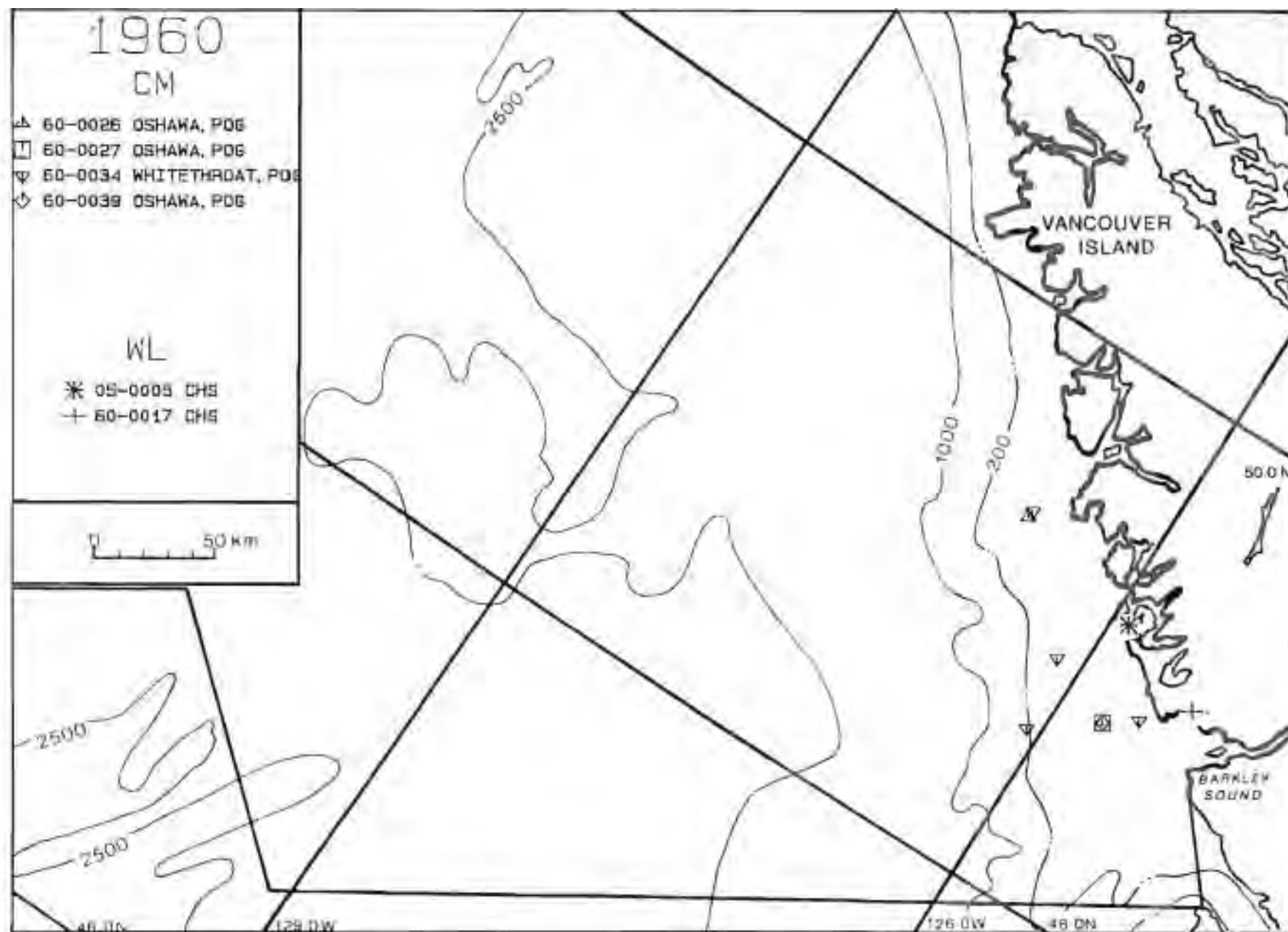
▲ 60-0023 BEACON HILL, POG
□ 60-0026 OSHAWA, POG
▽ 60-0039 OSHAWA, POG

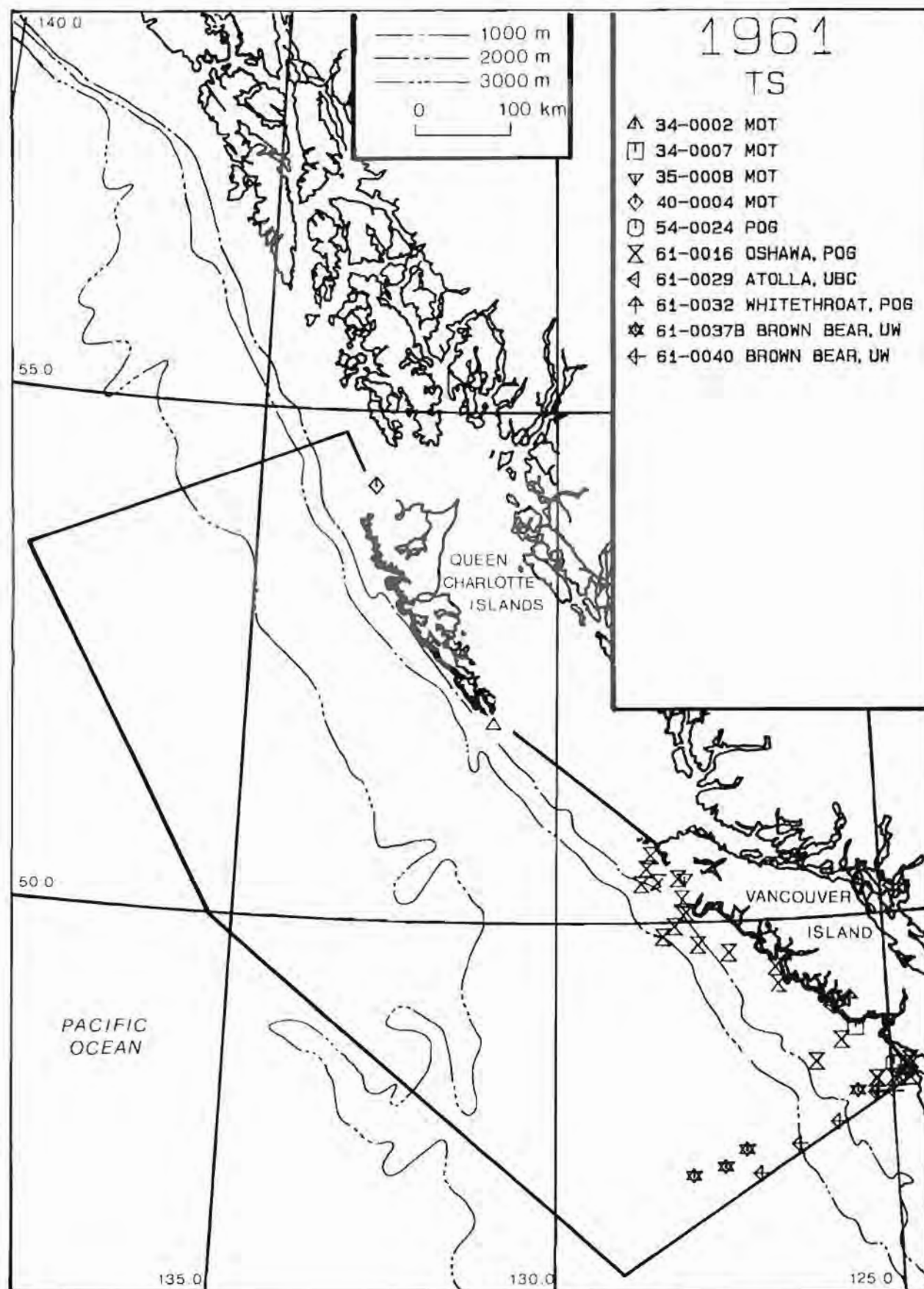
0 50 km

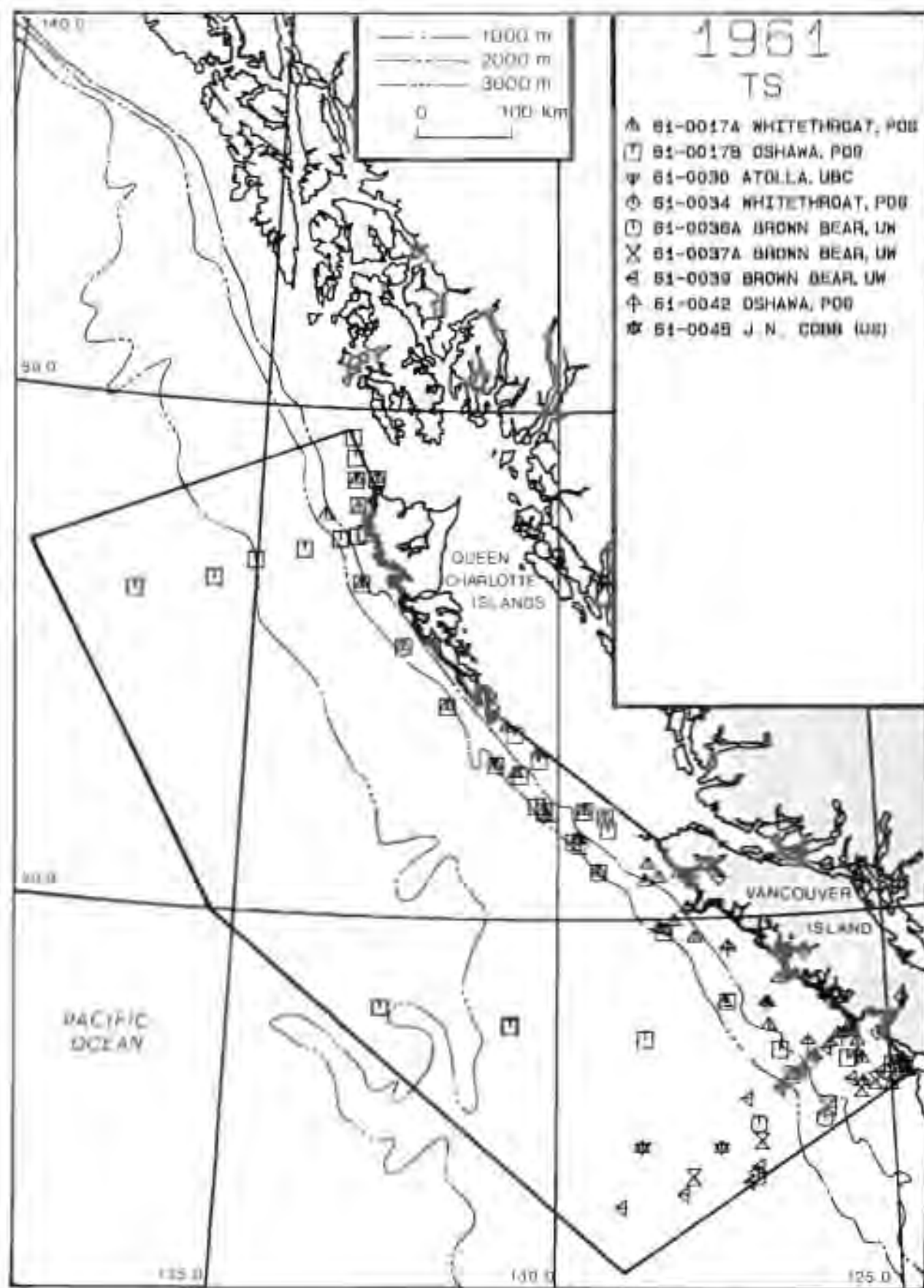


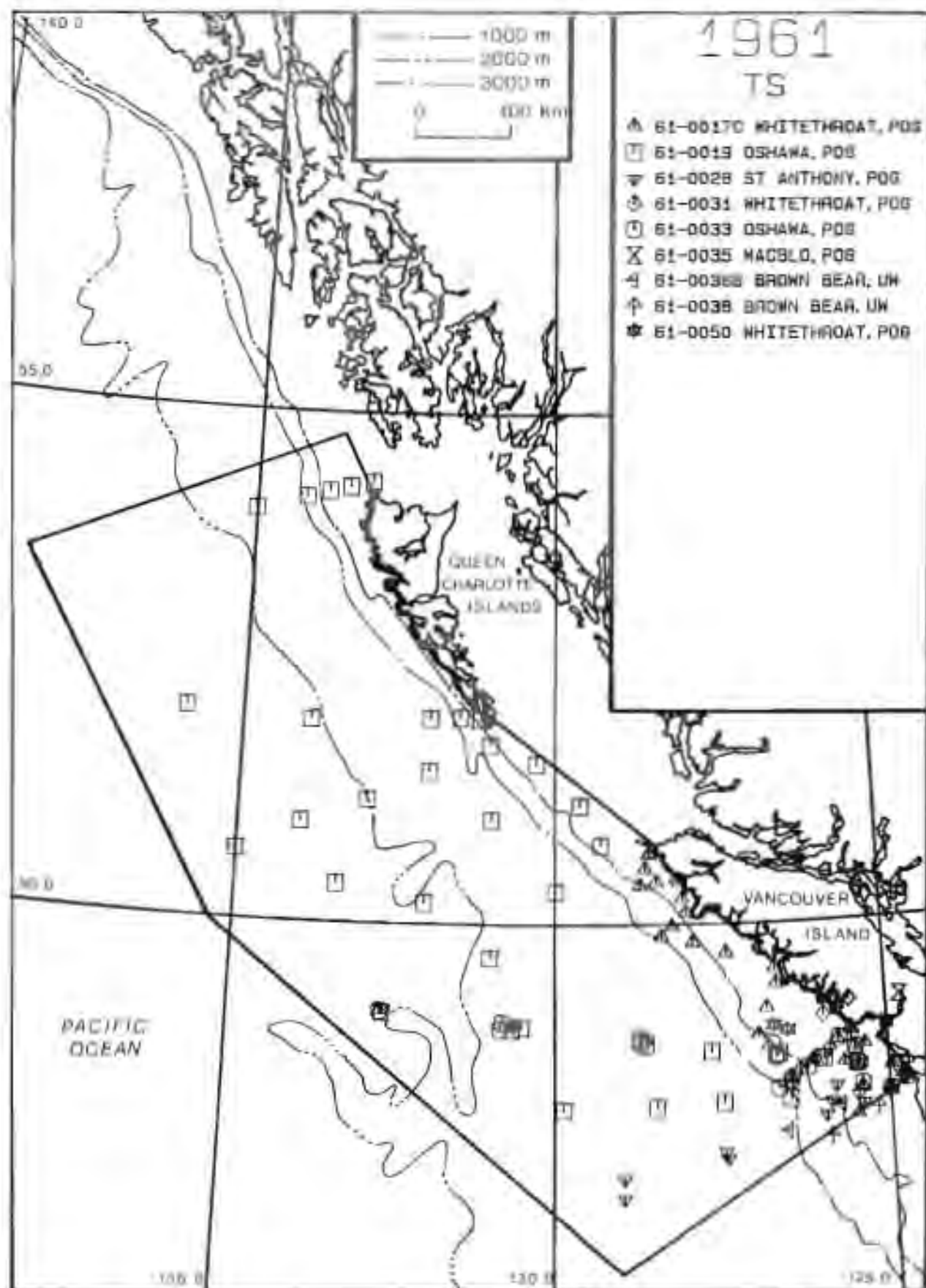


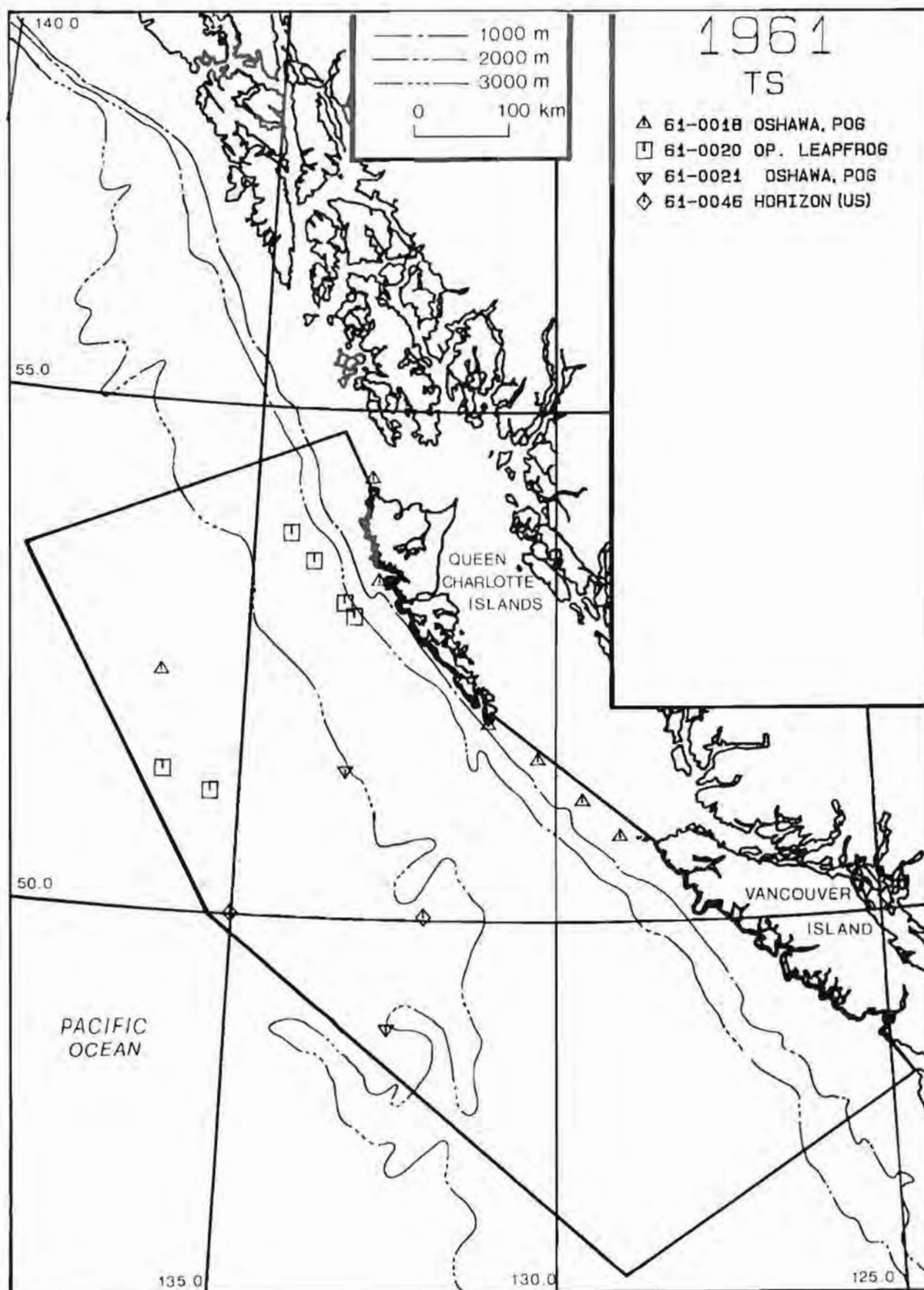








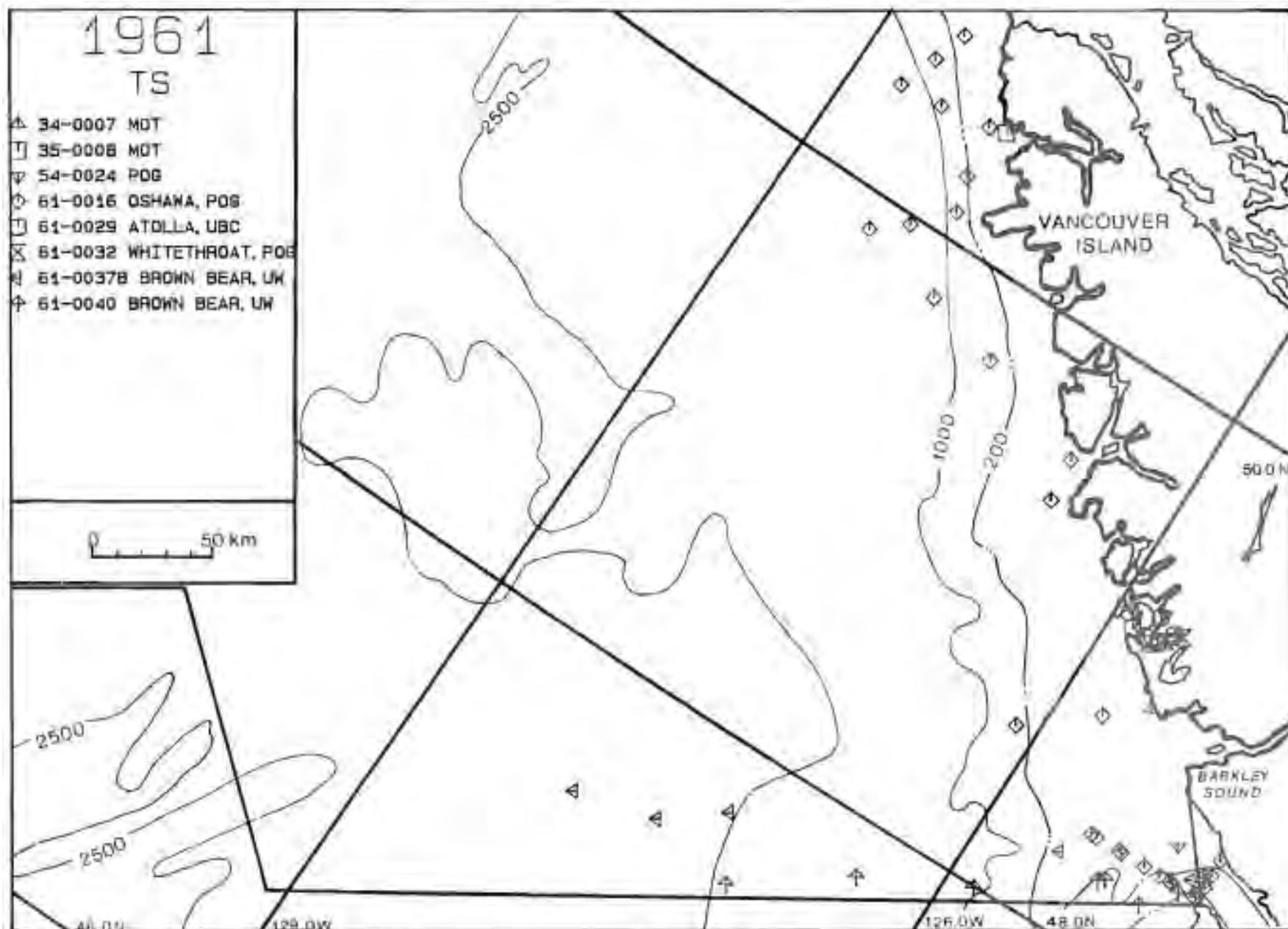




1961
TS

- ▲ 34-0007 MDT
- 35-0008 MDT
- ▽ 54-0024 POB
- ◇ 61-0016 OSHAWA, POB
- ▣ 61-0029 ATOLLA, UBC
- ⊠ 61-0032 WHITETHROAT, POB
- ✱ 61-0037B BROWN BEAR, UW
- ✱ 61-0040 BROWN BEAR, UW

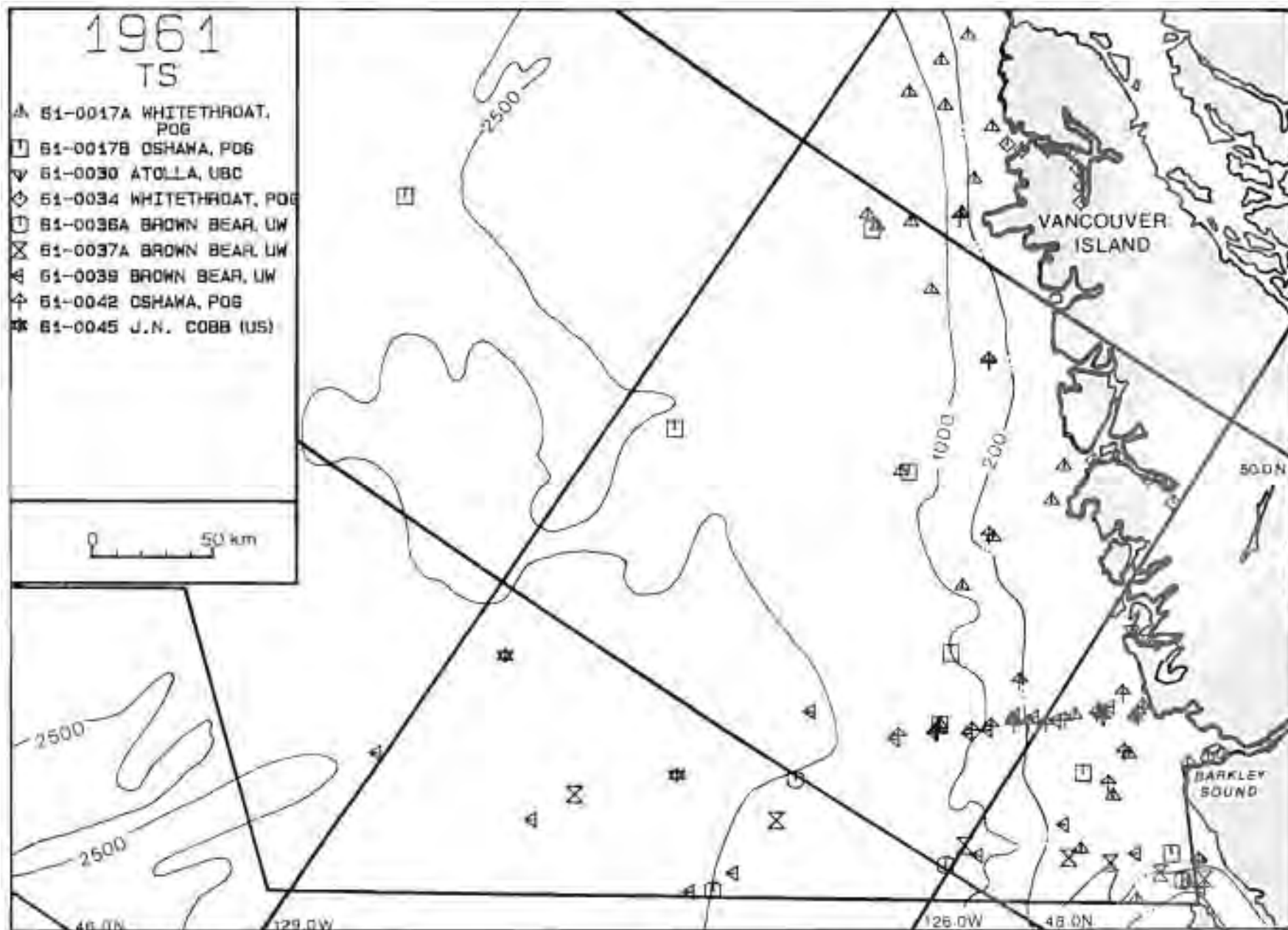
0 50 km



1961
TS

- ▲ 61-0017A WHITETHROAT, POG
- 61-0017B OSHAWA, POG
- ▼ 61-0030 ATOLLA, UBC
- ◇ 61-0034 WHITETHROAT, POG
- 61-0036A BROWN BEAR, UW
- ⊗ 61-0037A BROWN BEAR, UW
- ⋈ 61-0039 BROWN BEAR, UW
- ⋈ 61-0042 OSHAWA, POG
- ★ 61-0045 J.N. COBB (US)

0 50 km

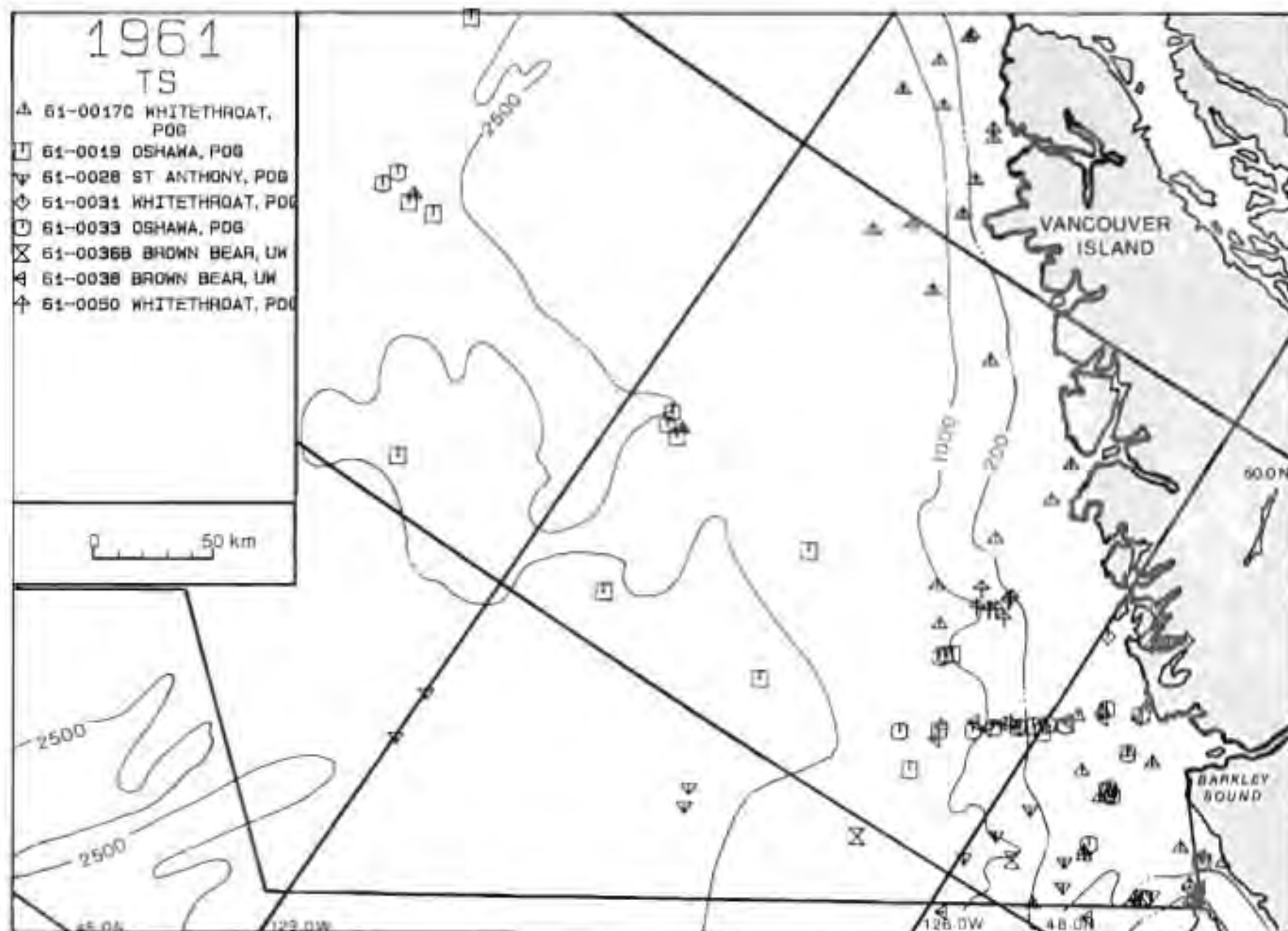


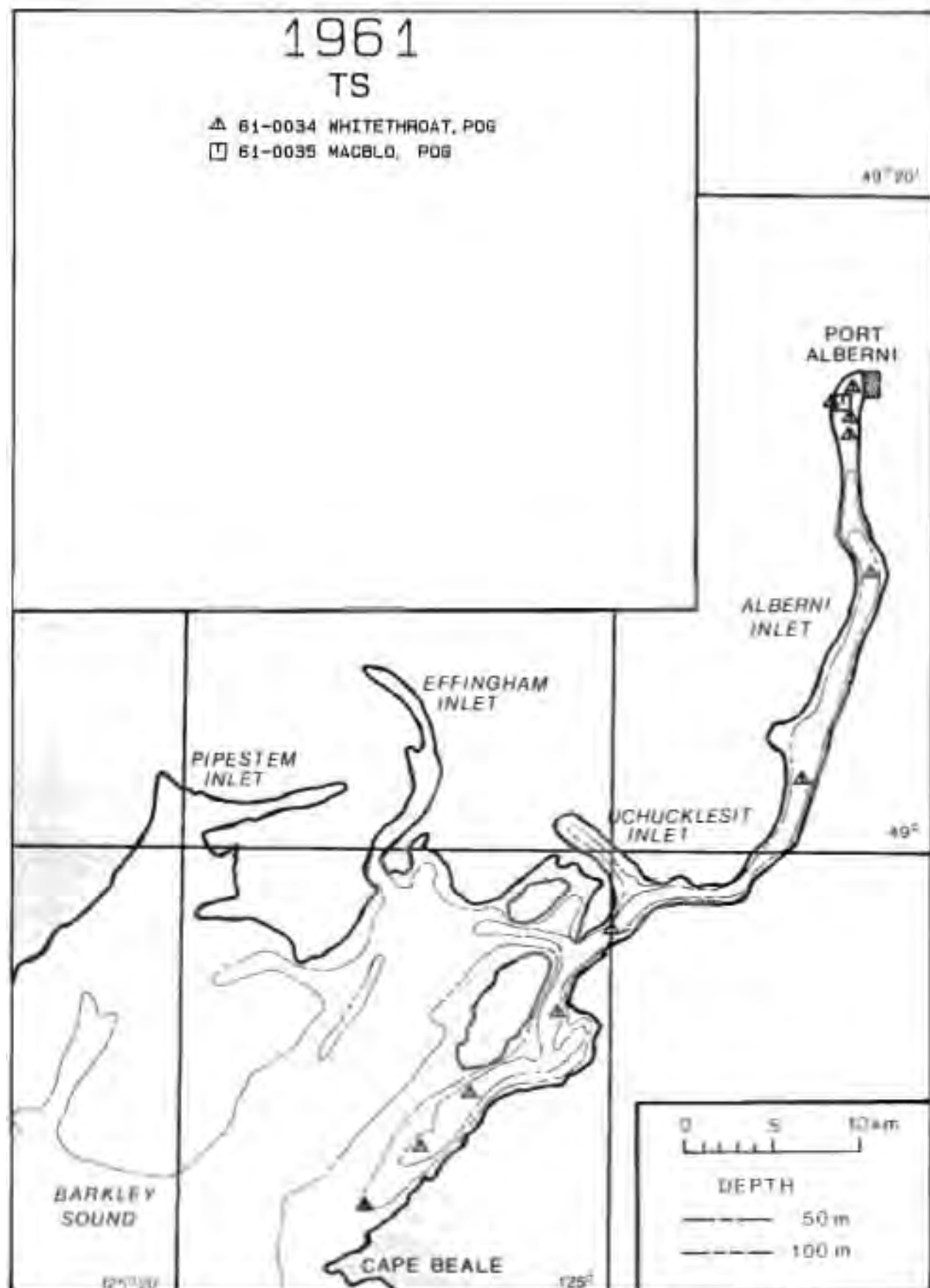
1961

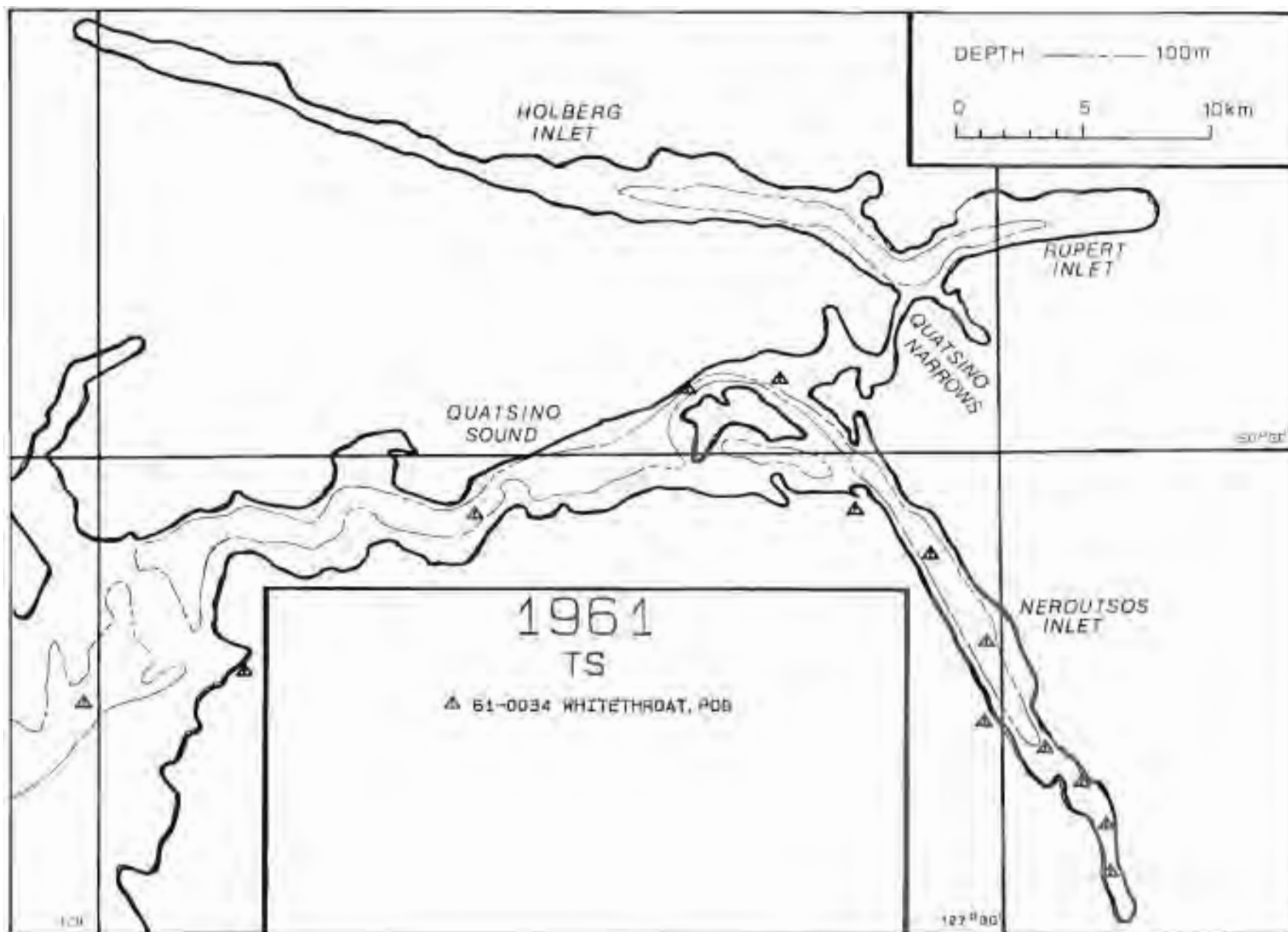
TS

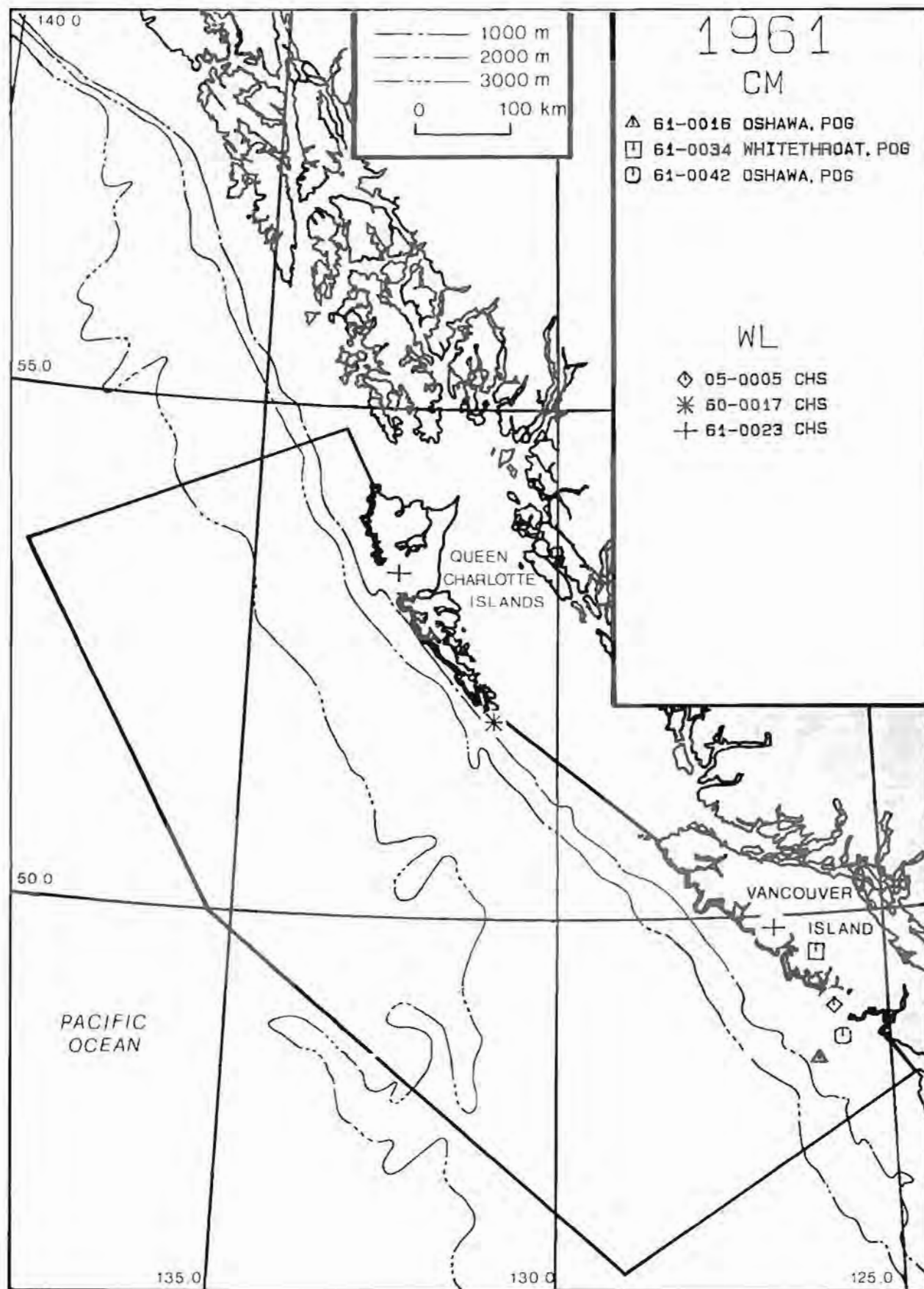
- △ 61-00170 WHITETHROAT, POG
- 61-0019 OSHAWA, POG
- ▽ 61-0028 ST ANTHONY, POG
- ◇ 61-0031 WHITETHROAT, POG
- 61-0033 OSHAWA, POG
- ⊗ 61-0036B BROWN BEAR, UW
- ◀ 61-0038 BROWN BEAR, UW
- ⋈ 61-0050 WHITETHROAT, POG

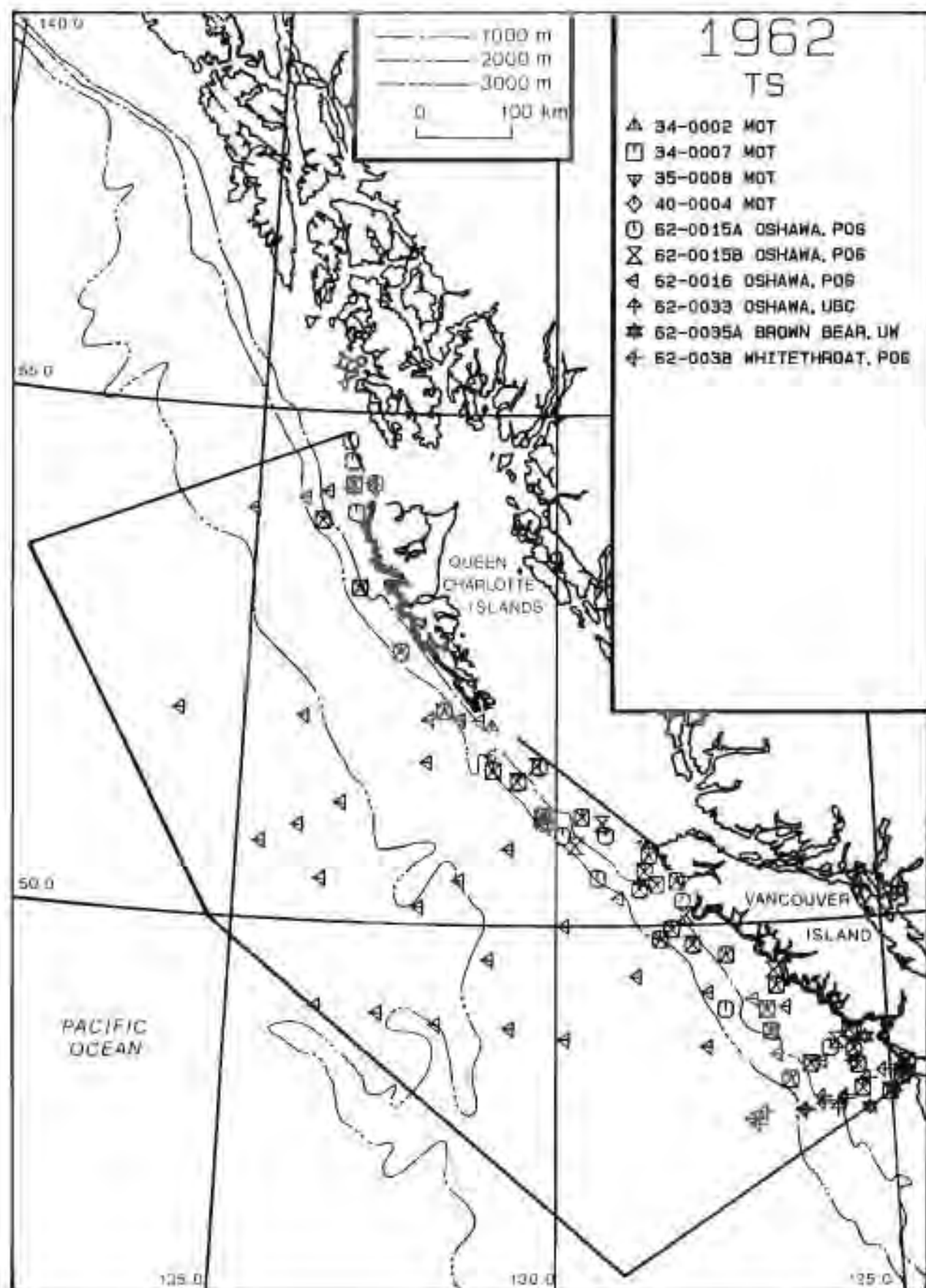
0 50 km

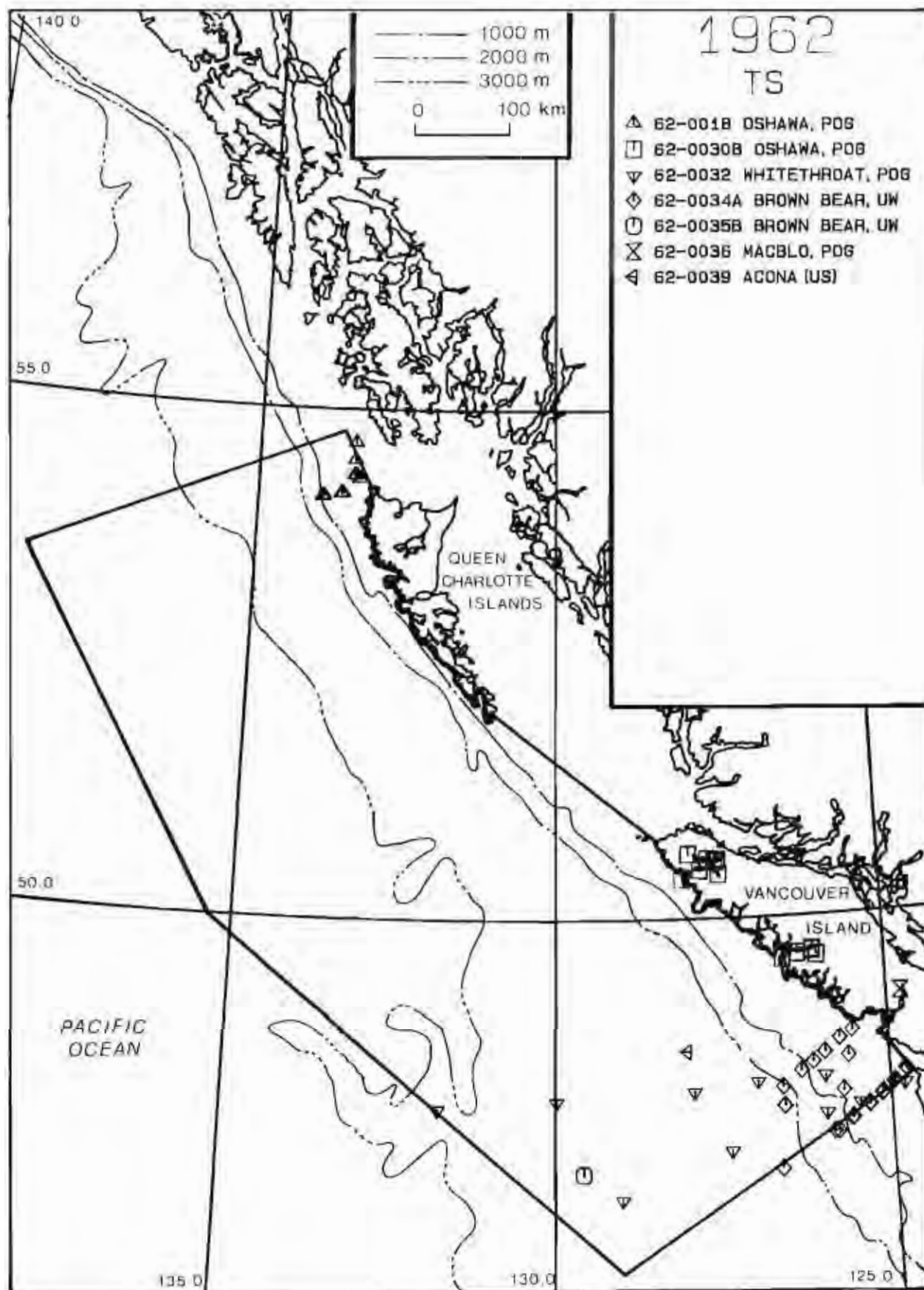


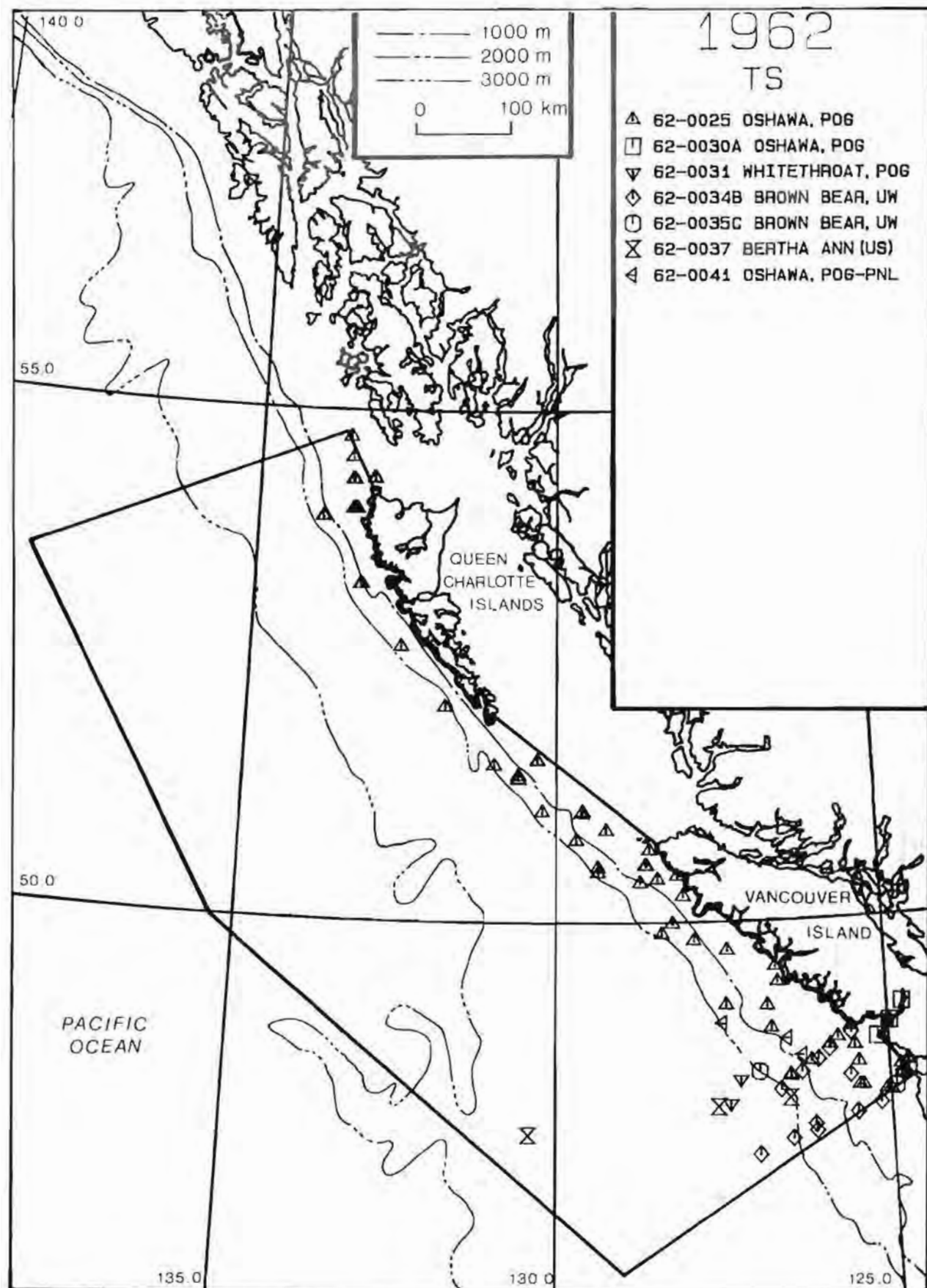








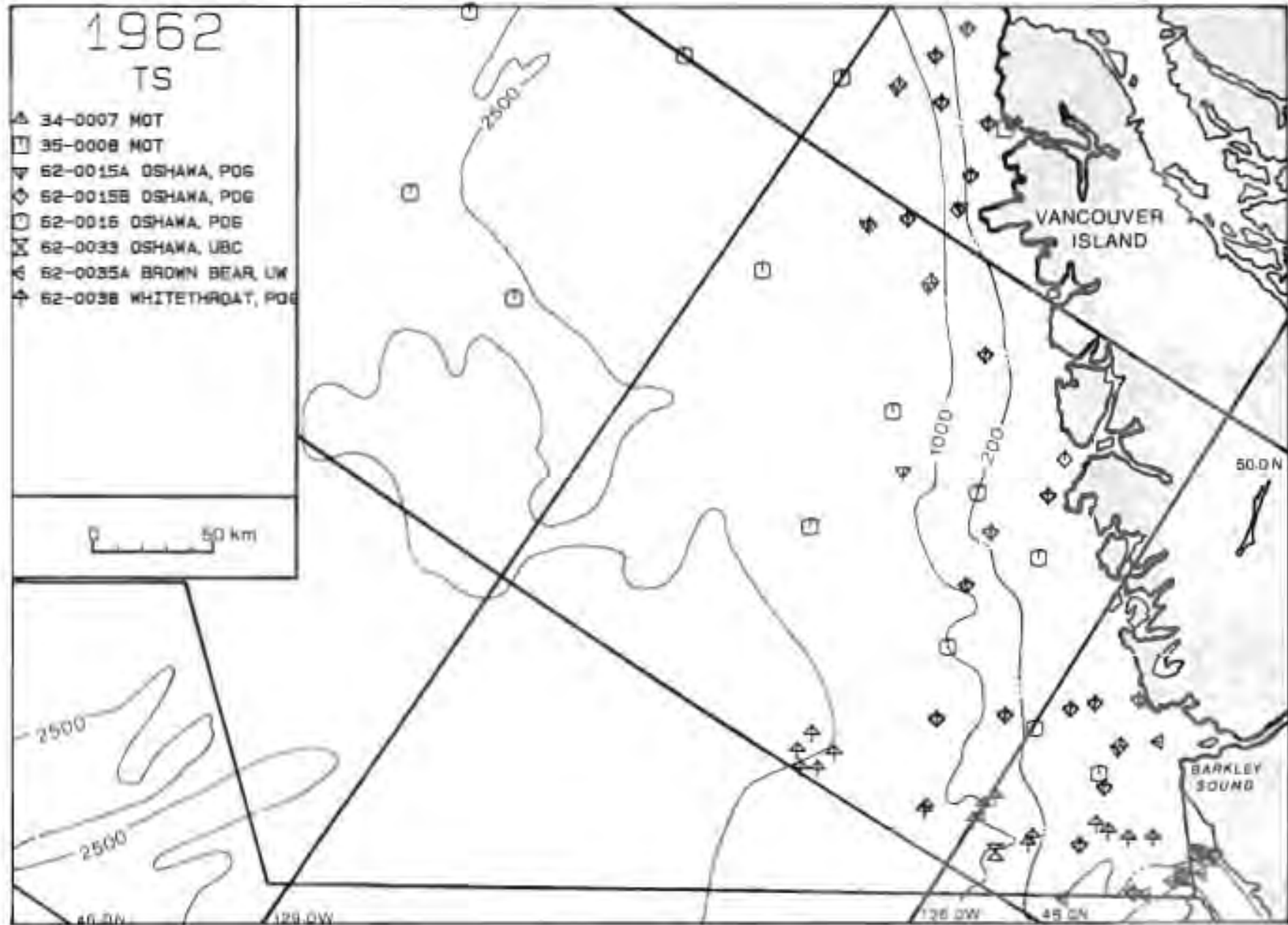




1962
TS

- ▲ 34-0007 MOT
- 35-0008 MOT
- ▼ 62-0015A OSHAWA, POG
- ◆ 62-0015B OSHAWA, POG
- ◻ 62-0016 OSHAWA, POG
- ⊠ 62-0033 OSHAWA, UBC
- ⚡ 62-0035A BROWN BEAR, UW
- 62-0038 WHITETHROAT, POG

0 50 km

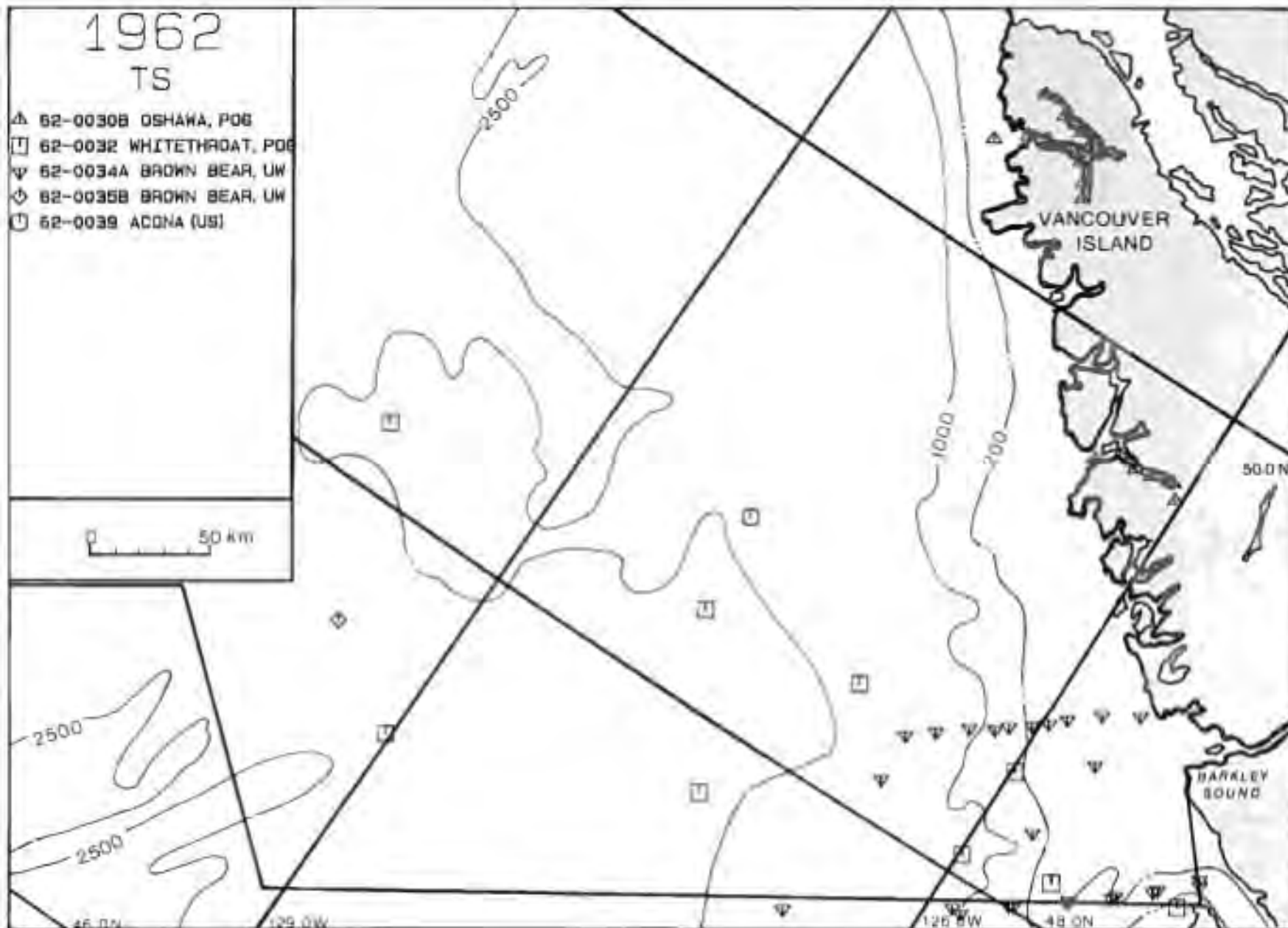


1962

TS

- ▲ 62-0030B OSHAWA, POB
- 62-0032 WHITETHROAT, POB
- ▼ 62-0034A BROWN BEAR, UW
- ◆ 62-0035B BROWN BEAR, UW
- ⊠ 62-0039 ACQNA (US)

50 km

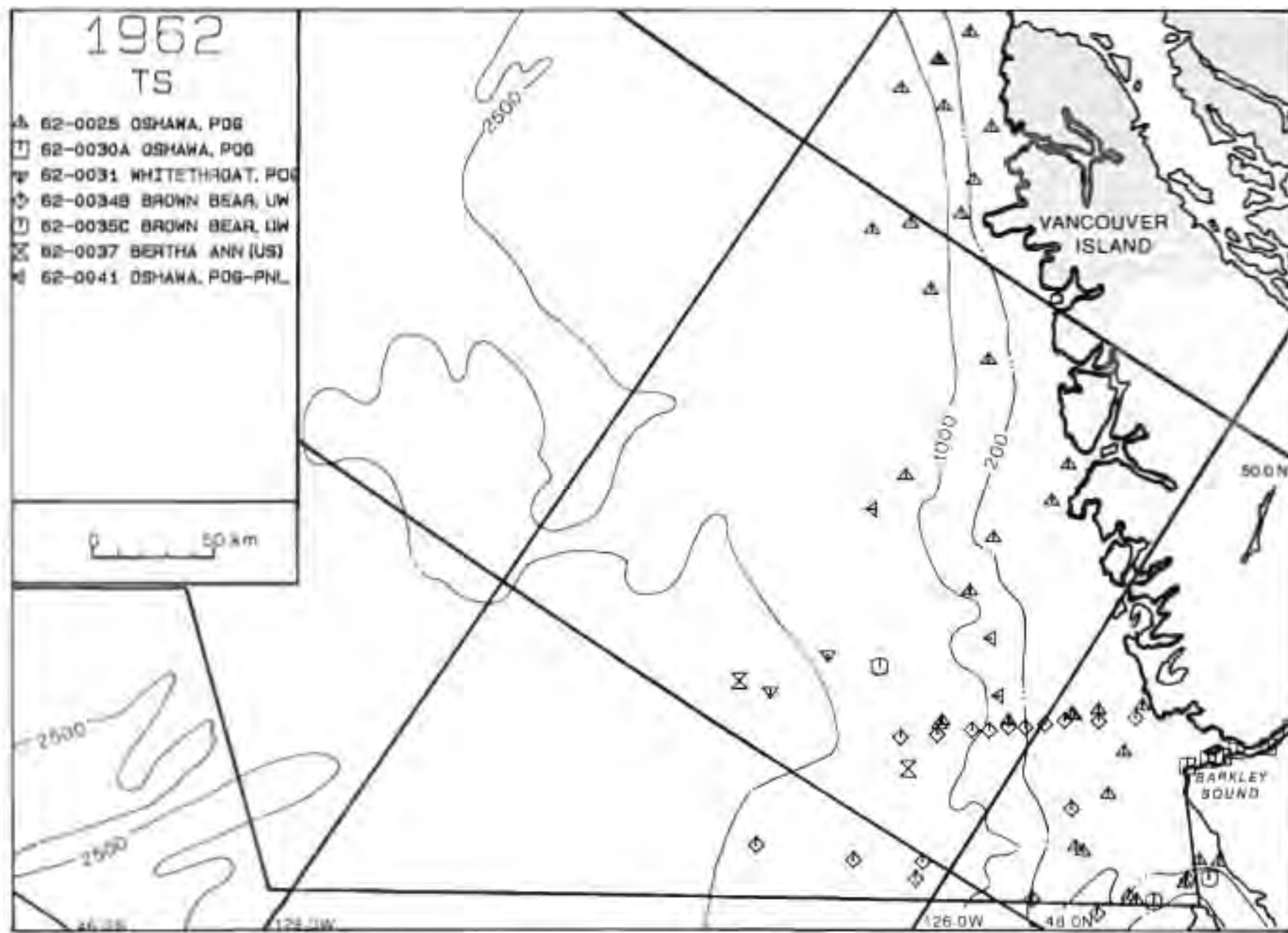


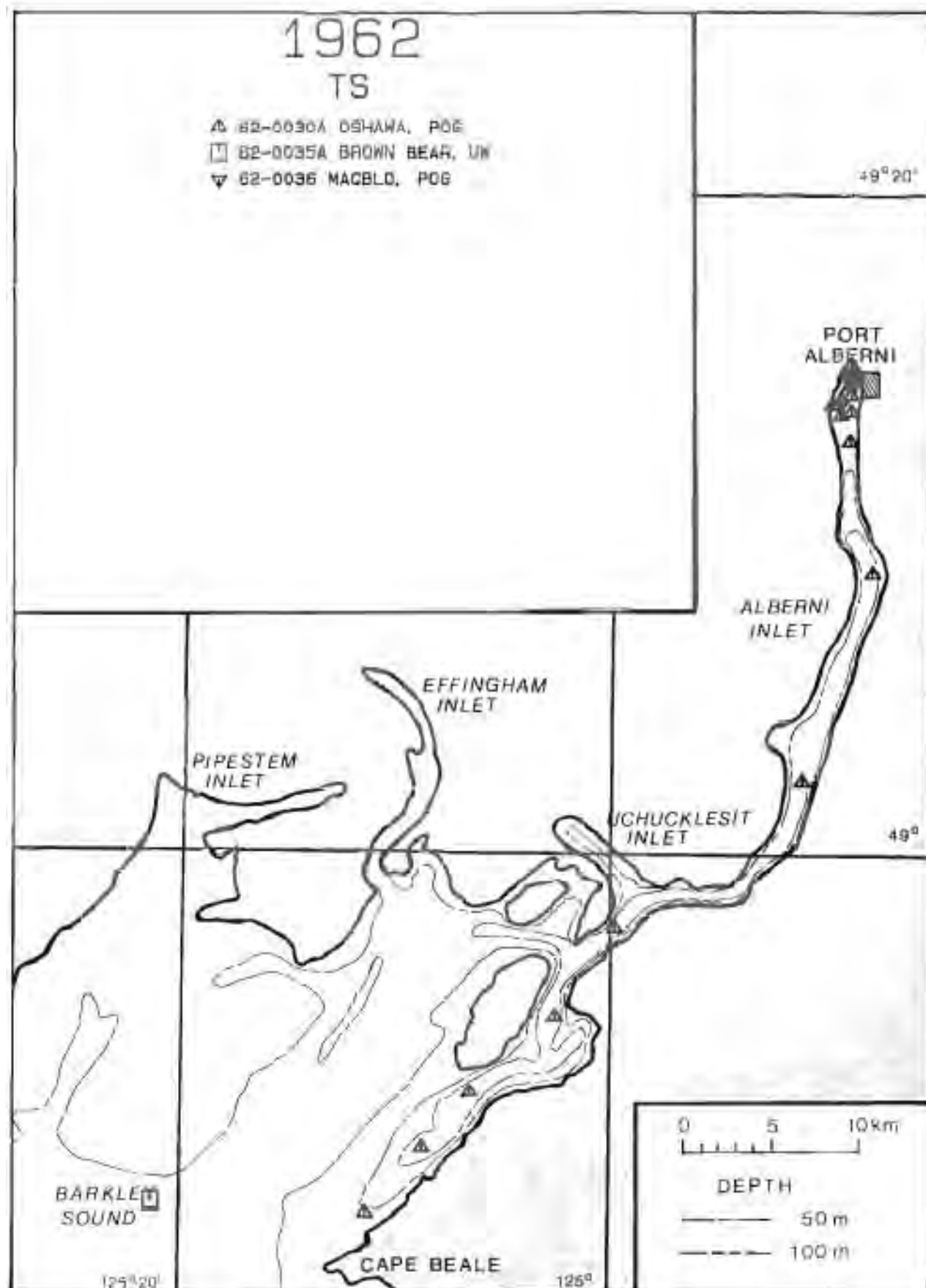
1962

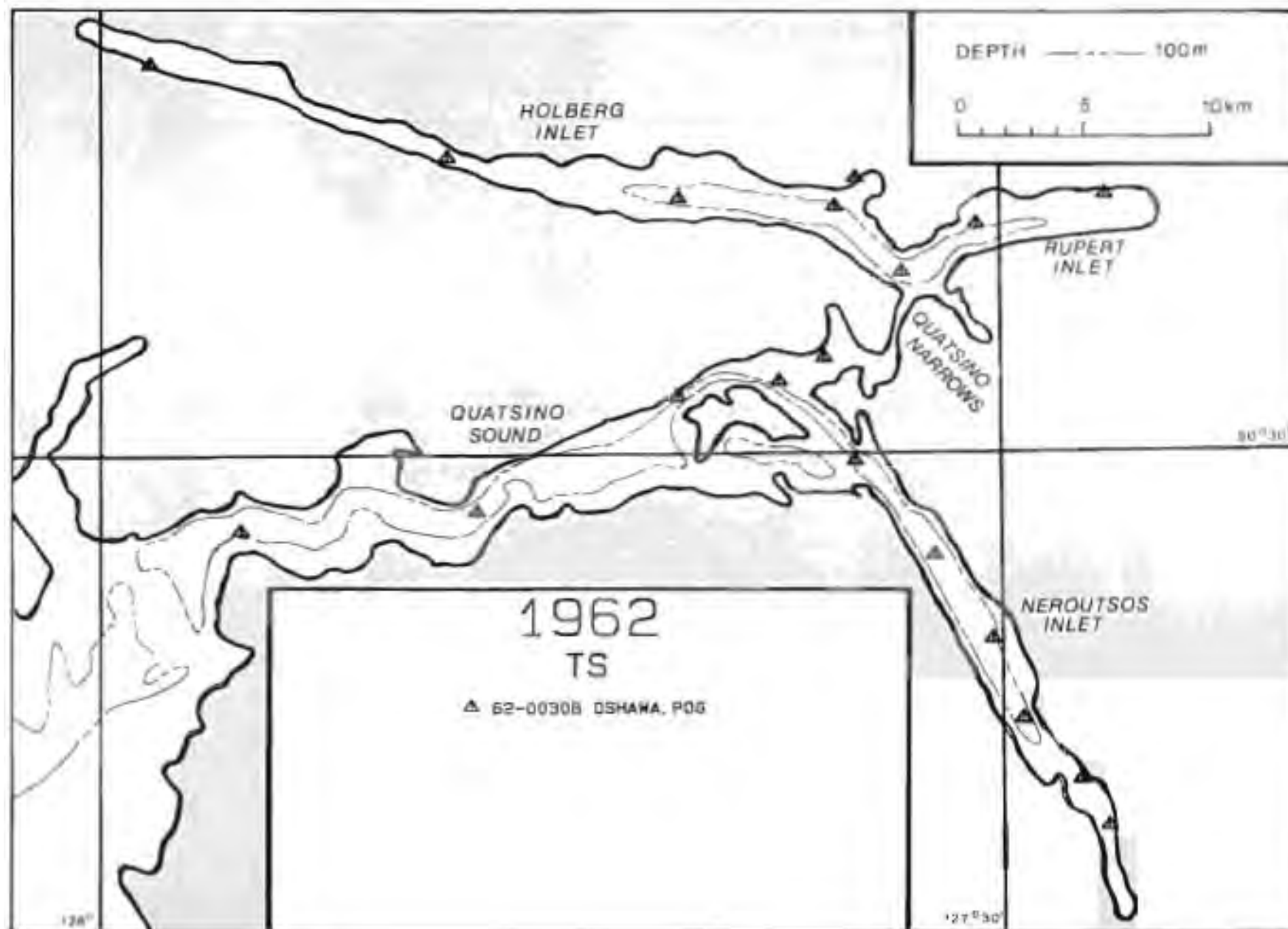
TS

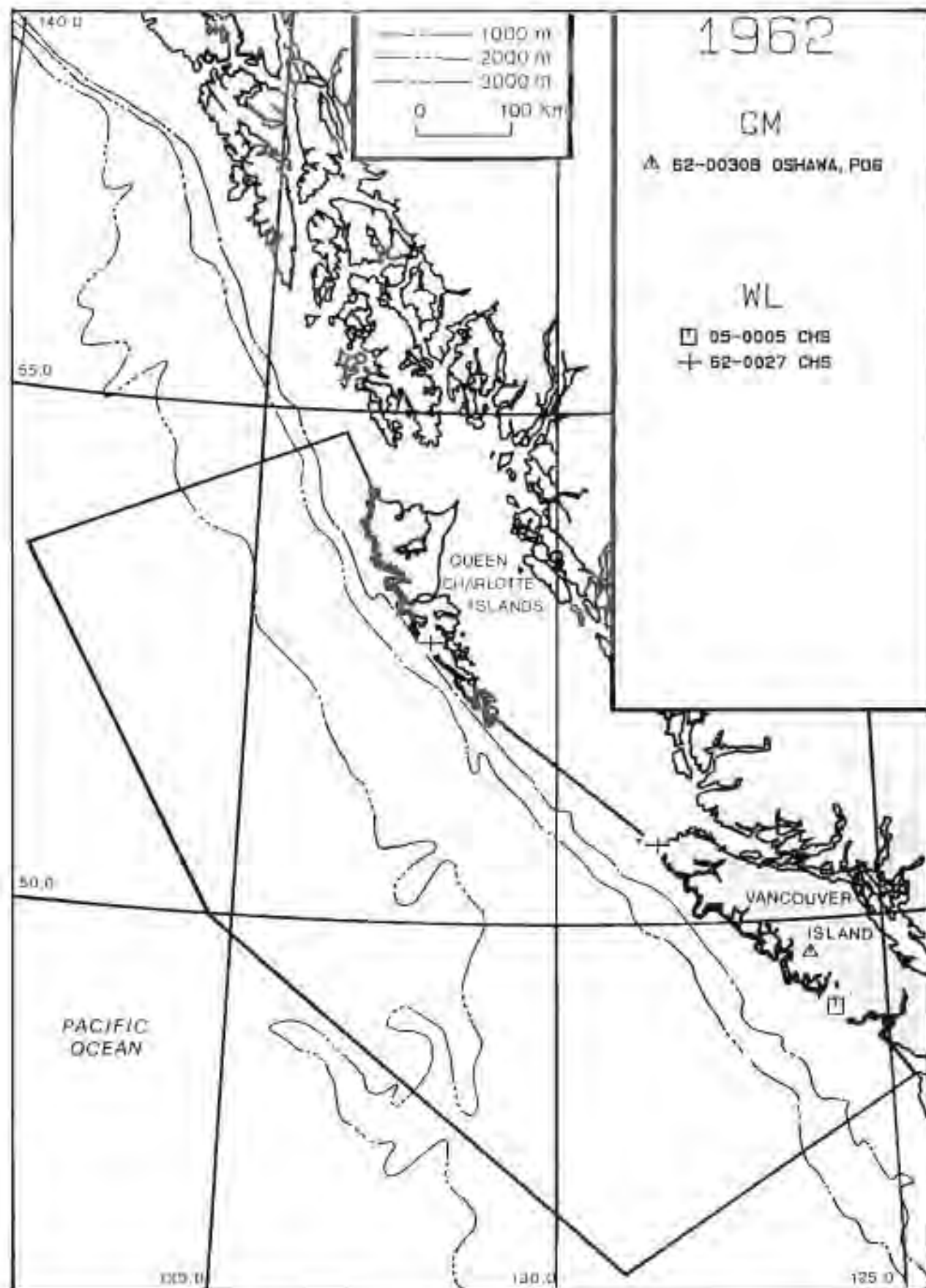
- ▲ 62-0025 OSHAWA, POG
- 62-0030A OSHAWA, POG
- ▽ 62-0031 WHITETHROAT, POG
- ◇ 62-0034B BROWN BEAR, UW
- ⊠ 62-0035C BROWN BEAR, UW
- ⊗ 62-0037 BERTHA ANN (US)
- ⊞ 62-0041 OSHAWA, POG-PNL

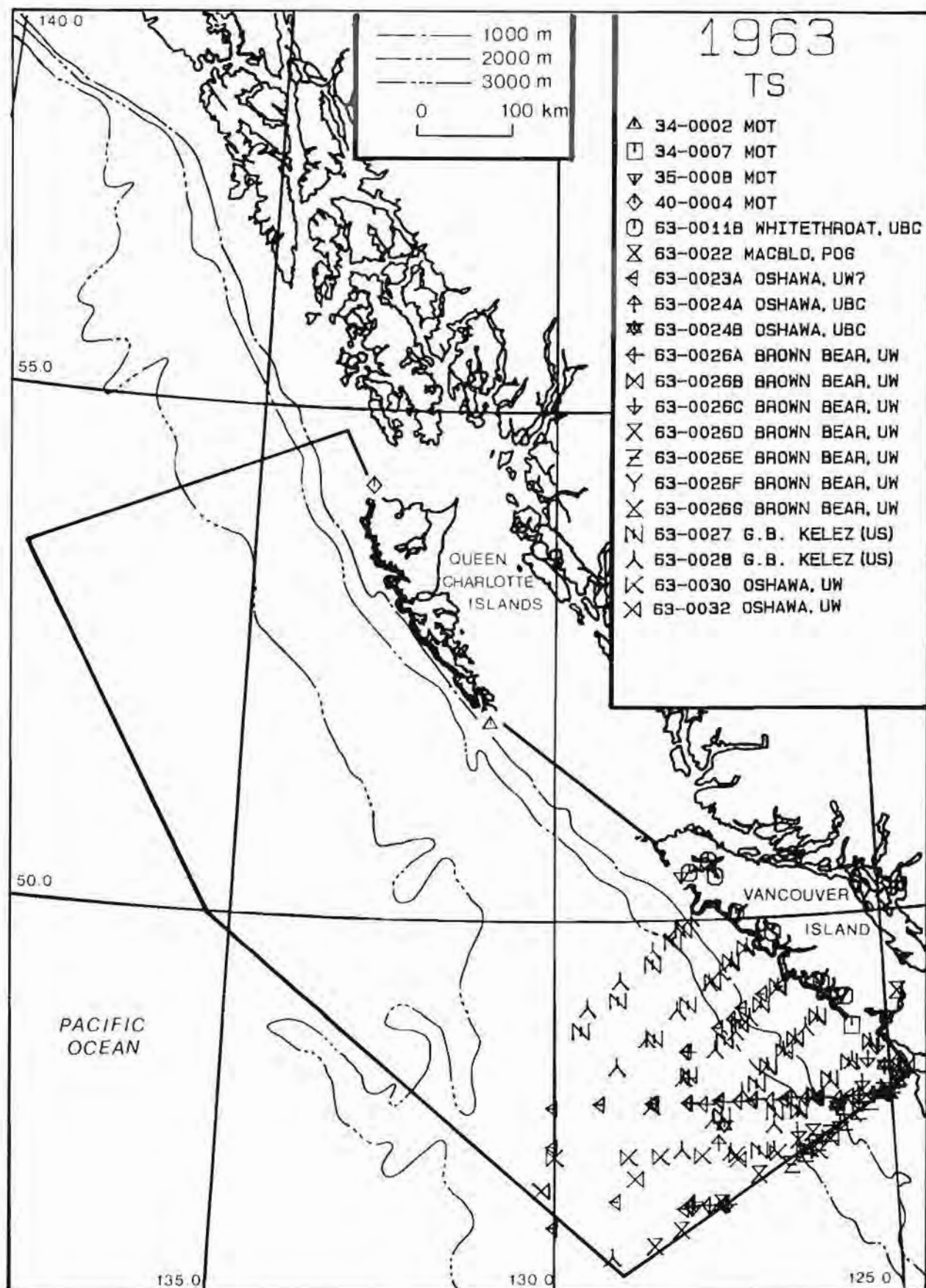
0 50 km







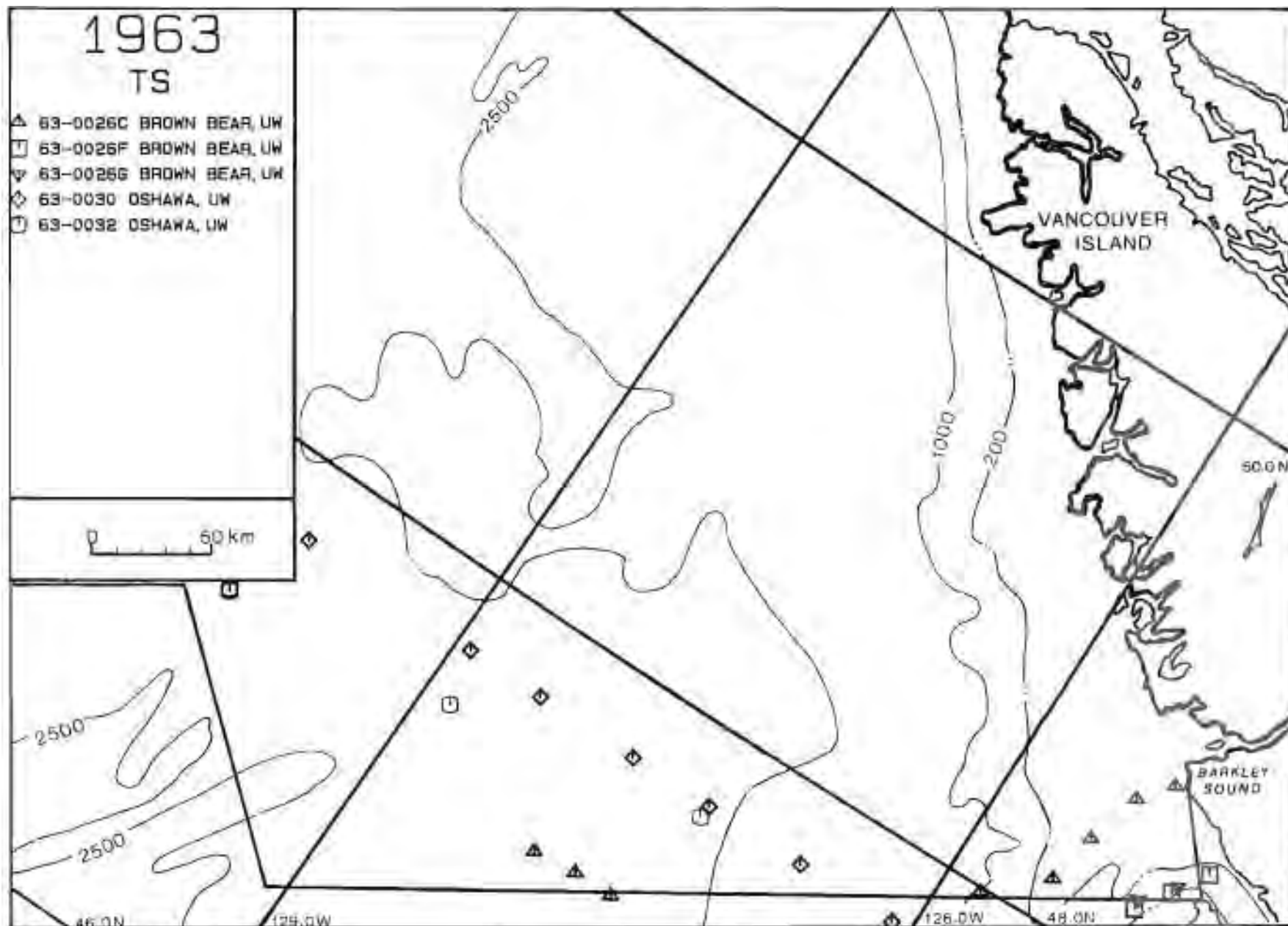




1963
TS

- ▲ 63-0026C BROWN BEAR, UW
- 63-0026F BROWN BEAR, UW
- ▽ 63-0026G BROWN BEAR, UW
- ◇ 63-0030 OSHAWA, UW
- ⊞ 63-0032 OSHAWA, UW

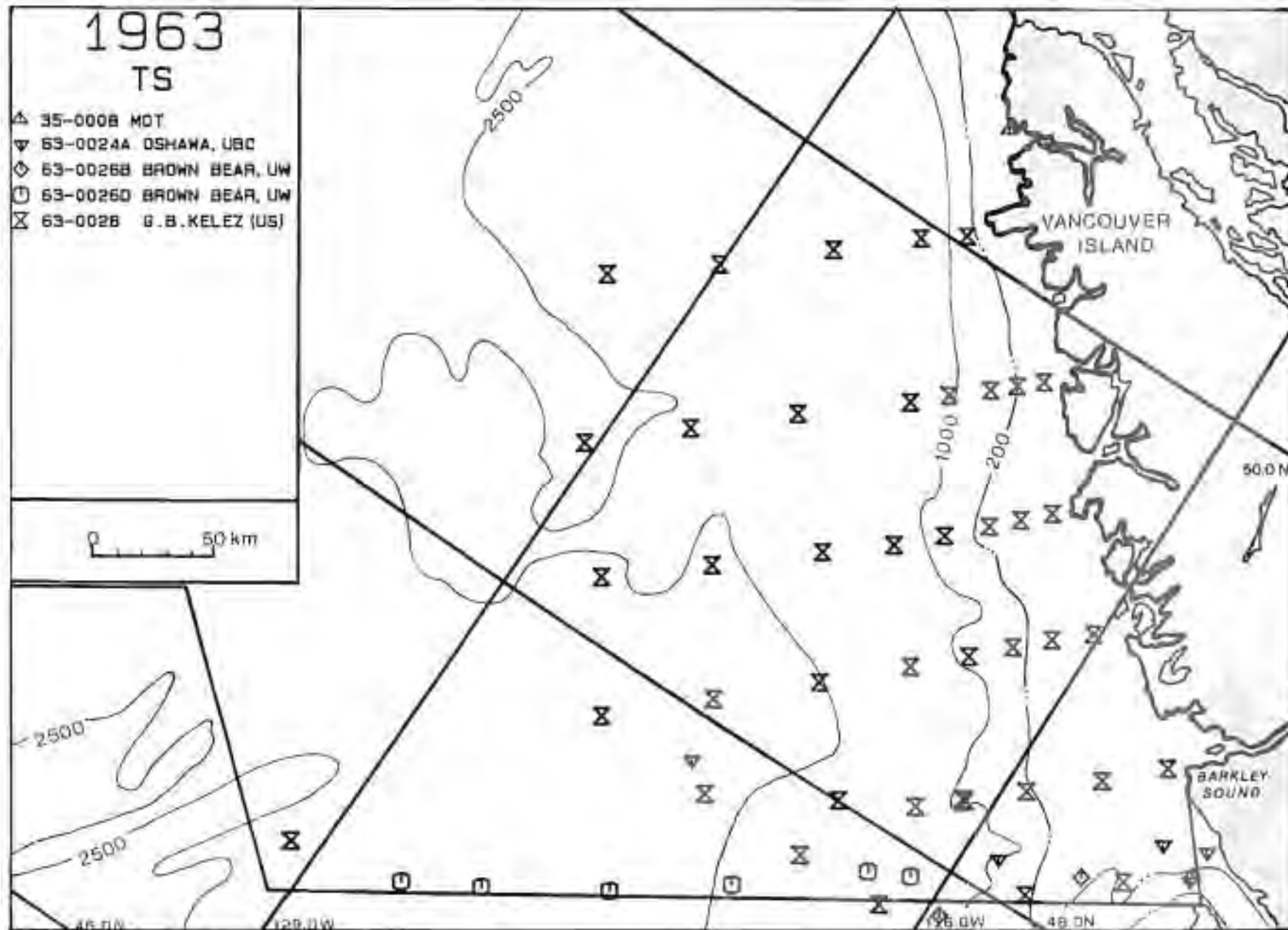
0 50 km



1963
TS

- △ 35-0008 MOT
- ▽ 63-0024A OSHAWA, UBC
- ◇ 63-0026B BROWN BEAR, UW
- 63-0026D BROWN BEAR, UW
- ⊗ 63-0028 G.B. KELEZ (US)

0 50 km

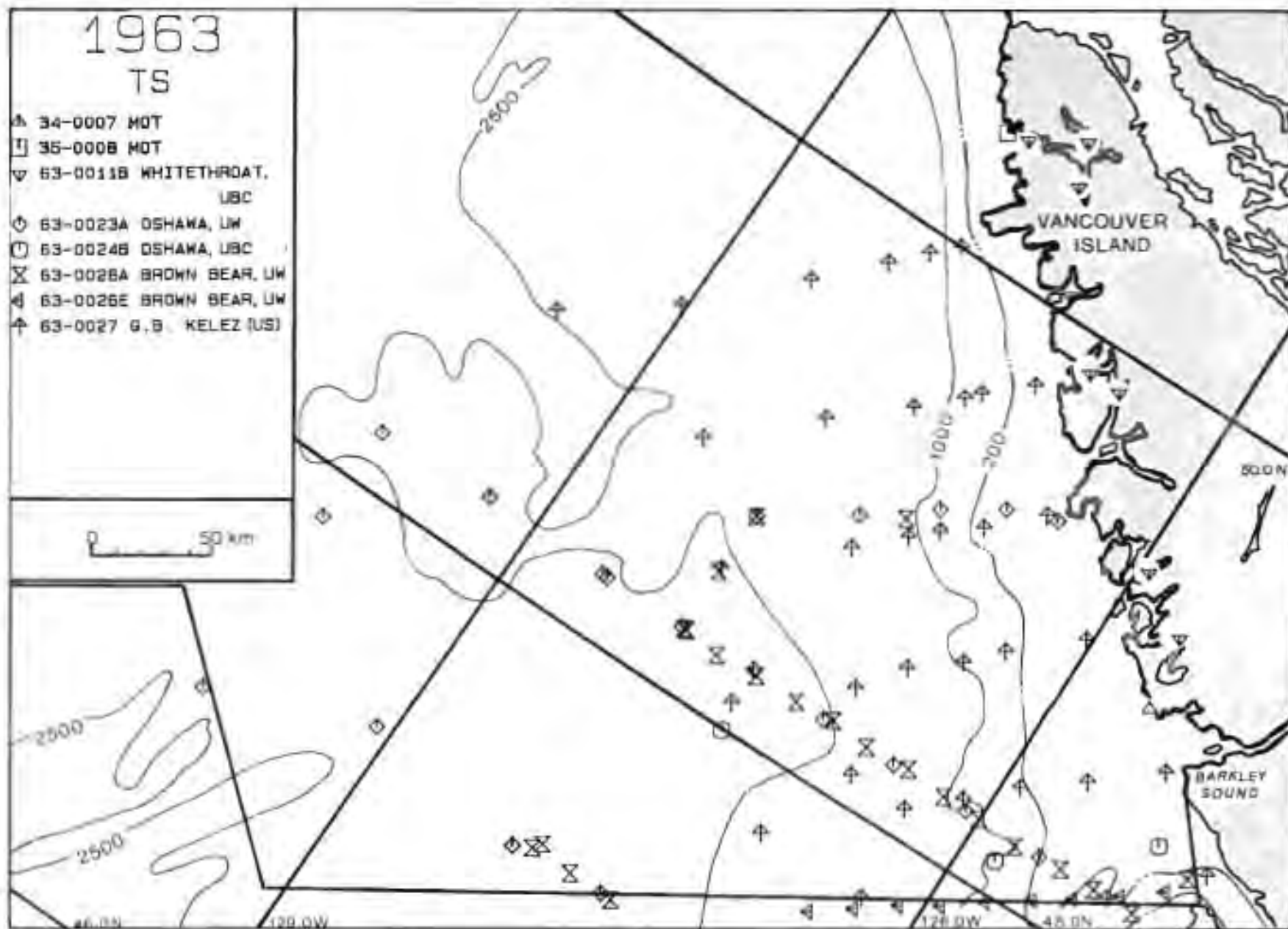


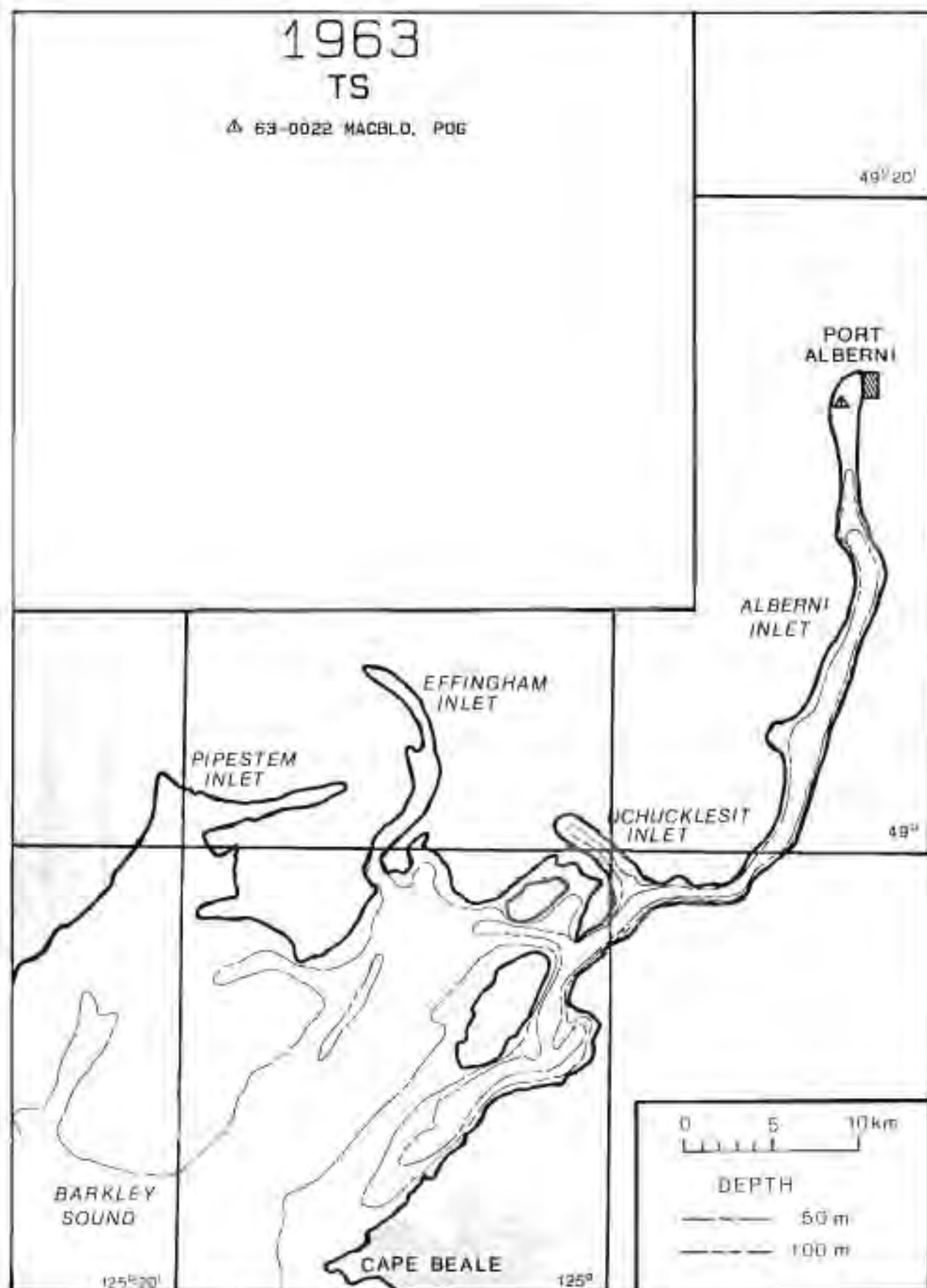
1963

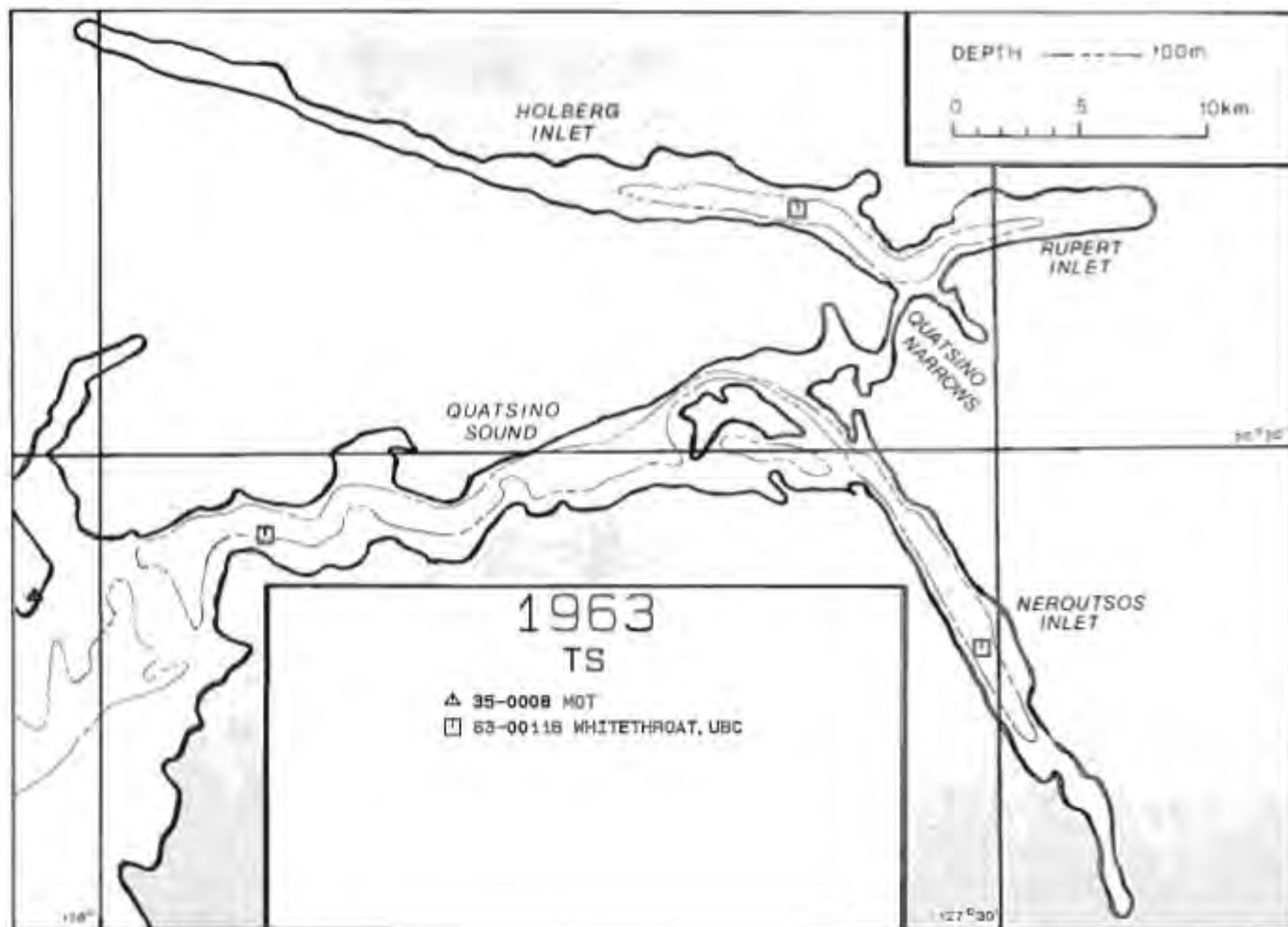
TS

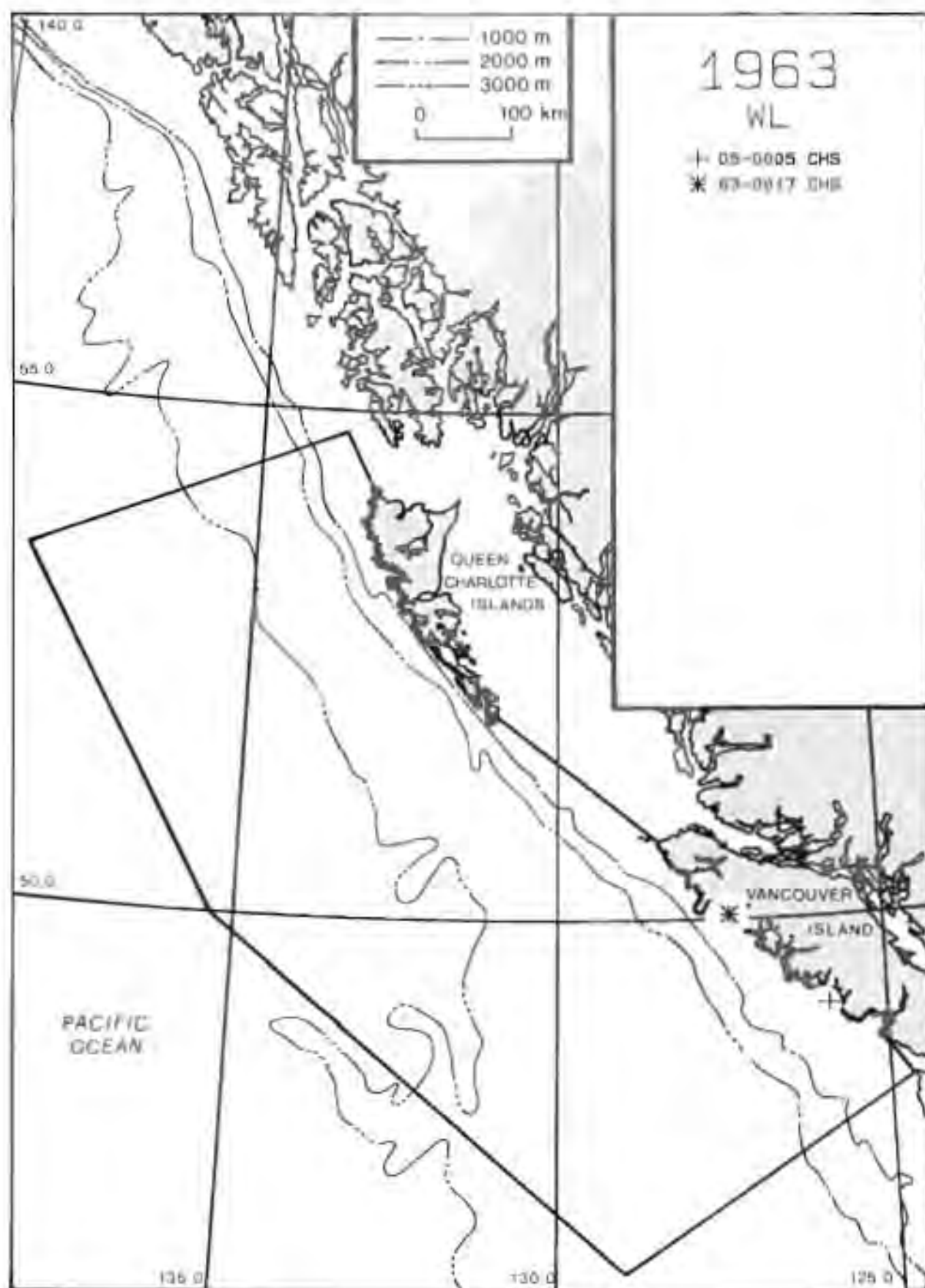
- ▲ 34-0007 MOT
- 35-0008 MOT
- ▽ 63-0011B WHITETHROAT,
UBC
- ◇ 63-0023A OSHAWA, UW
- 63-0024B OSHAWA, UBC
- ⊗ 63-0028A BROWN BEAR, UW
- ◄ 63-0026E BROWN BEAR, UW
- ↑ 63-0027 G.B. KELEZ (US)

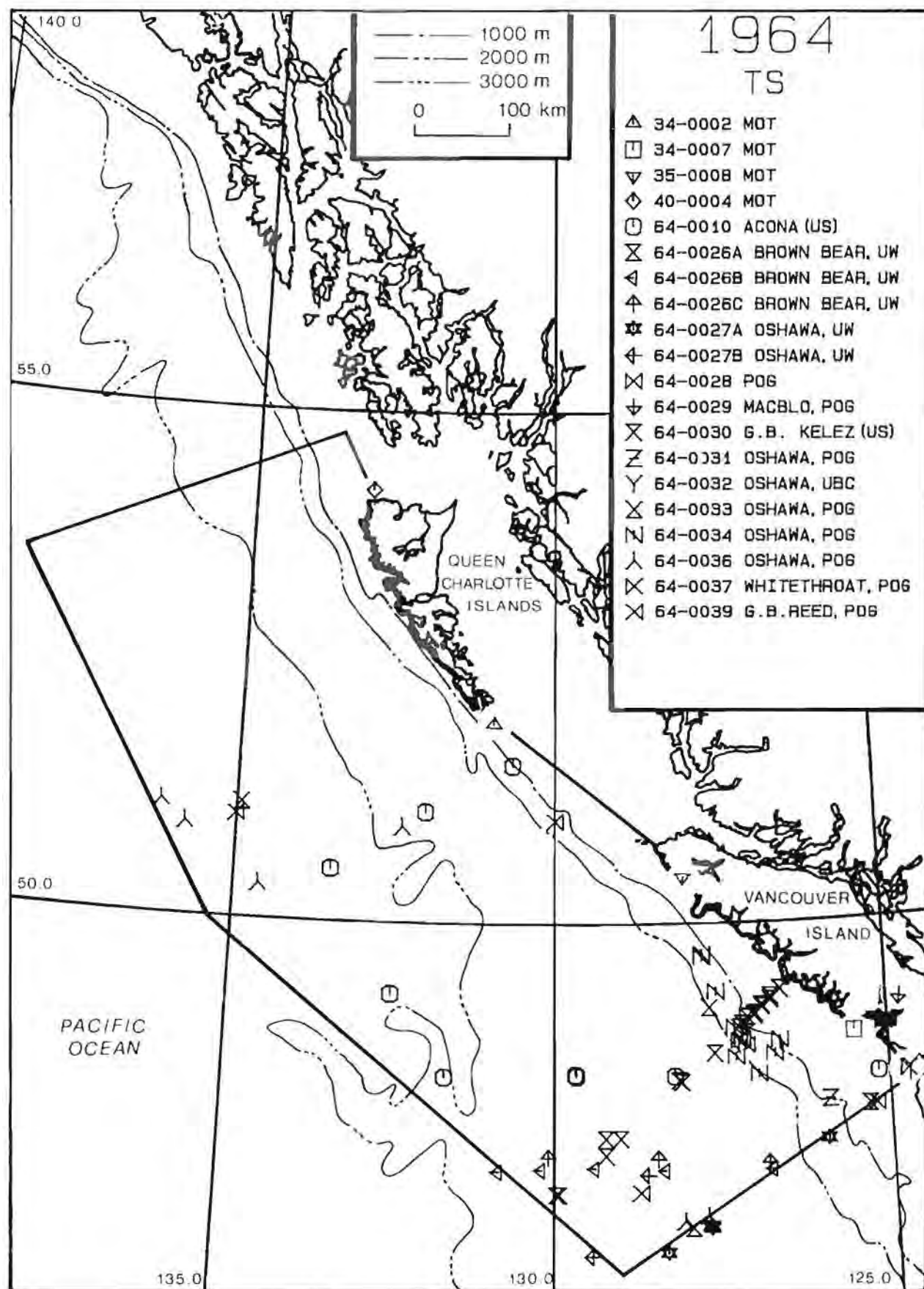
50 km









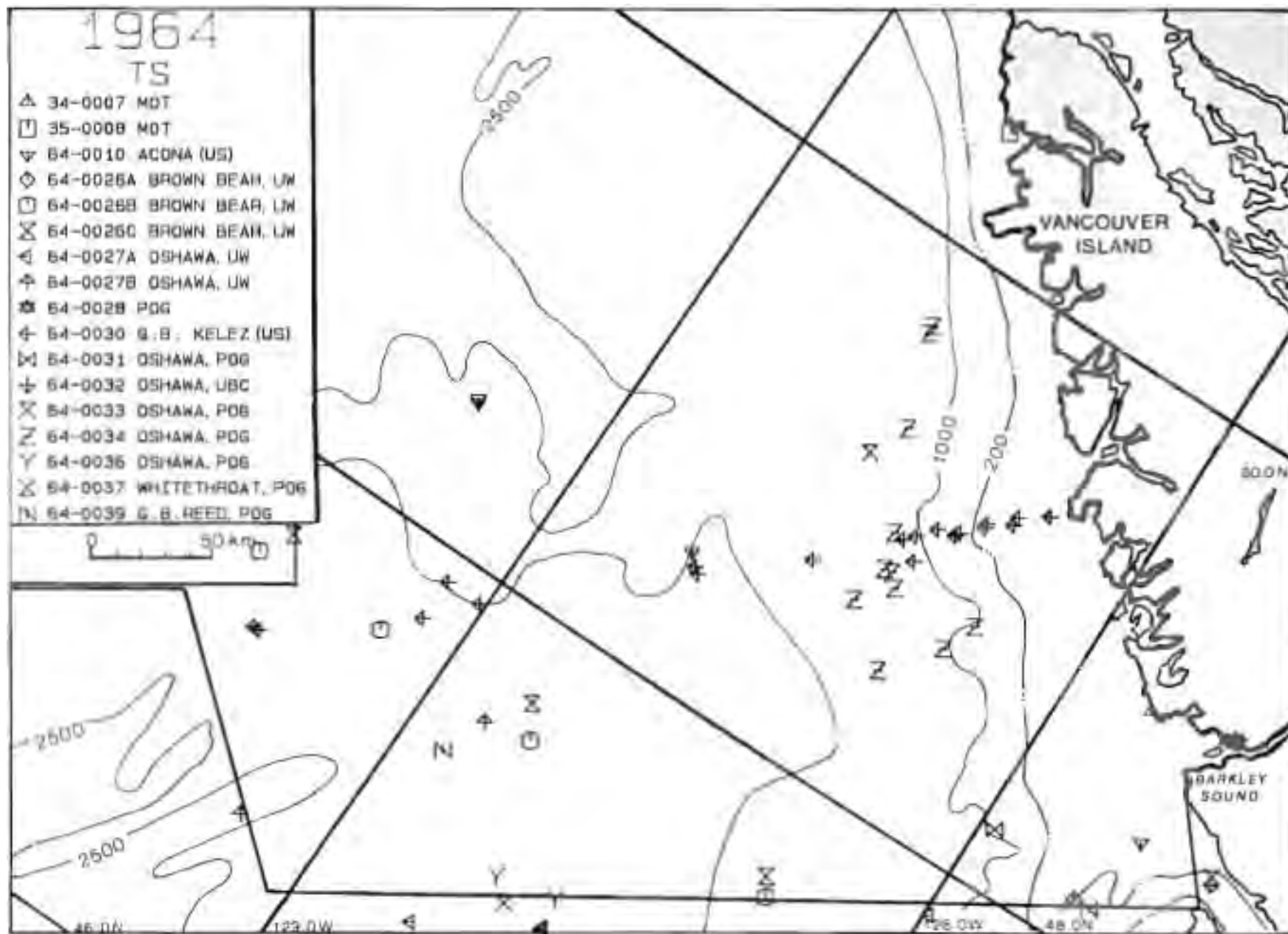


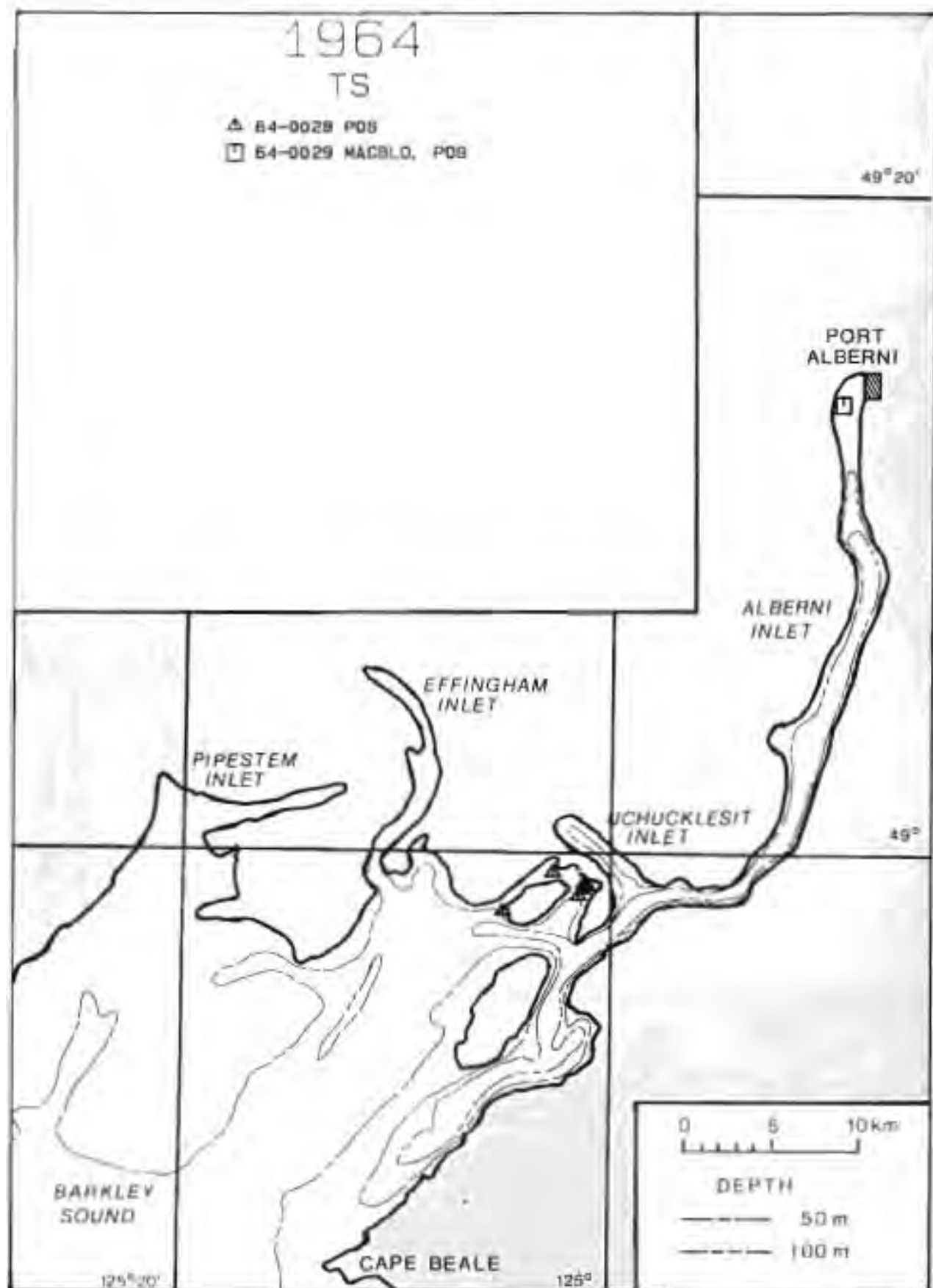
1964

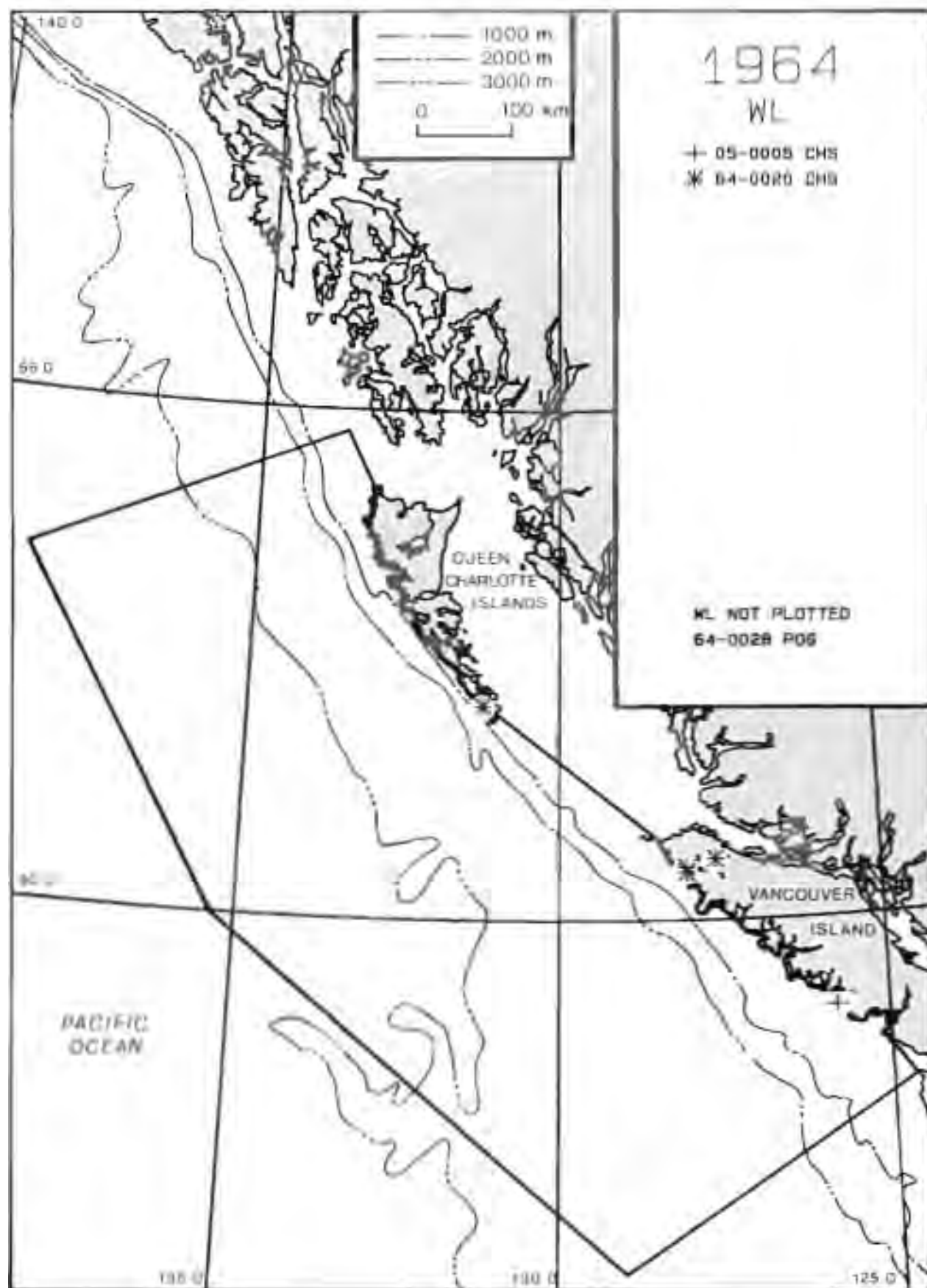
TS

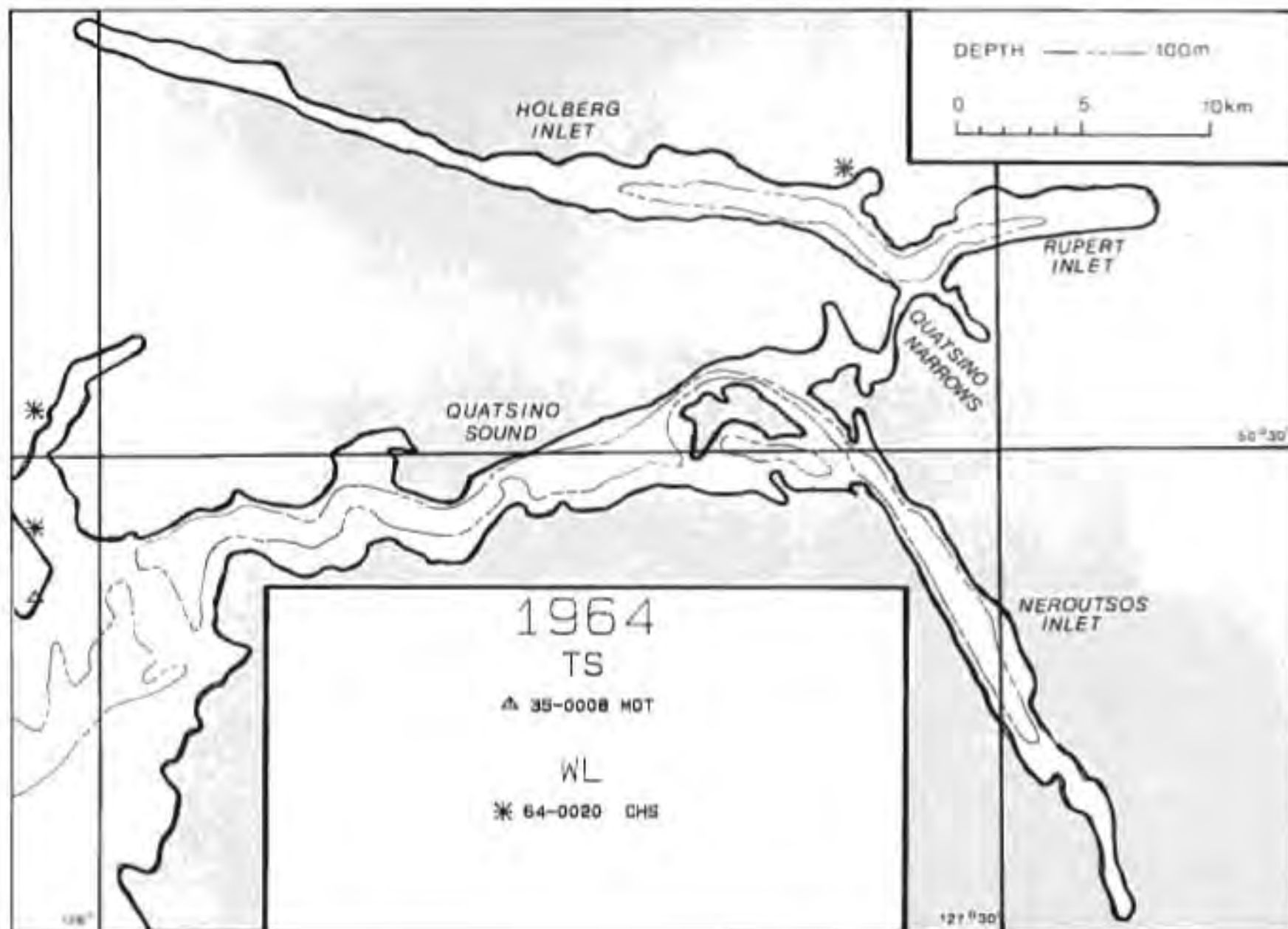
- △ 34-0007 MDT
- 35-0008 MDT
- ▽ 64-0010 ACONA (US)
- ◇ 64-0026A BROWN BEAR, UW
- 64-0026B BROWN BEAR, LW
- ⊗ 64-0026C BROWN BEAR, LW
- ◁ 64-0027A OSHAWA, UW
- ⊕ 64-0027B OSHAWA, UW
- ★ 64-0028 POG
- ⊕ 64-0030 G.B. KELEZ (US)
- ⊗ 64-0031 OSHAWA, POG
- ⊕ 64-0032 OSHAWA, UBC
- ⊗ 64-0033 OSHAWA, POG
- ⊗ 64-0034 OSHAWA, POG
- Y 64-0035 OSHAWA, POG
- ⊗ 64-0037 WHITETHROAT, POG
- IN 64-0039 G.B. REED, POG

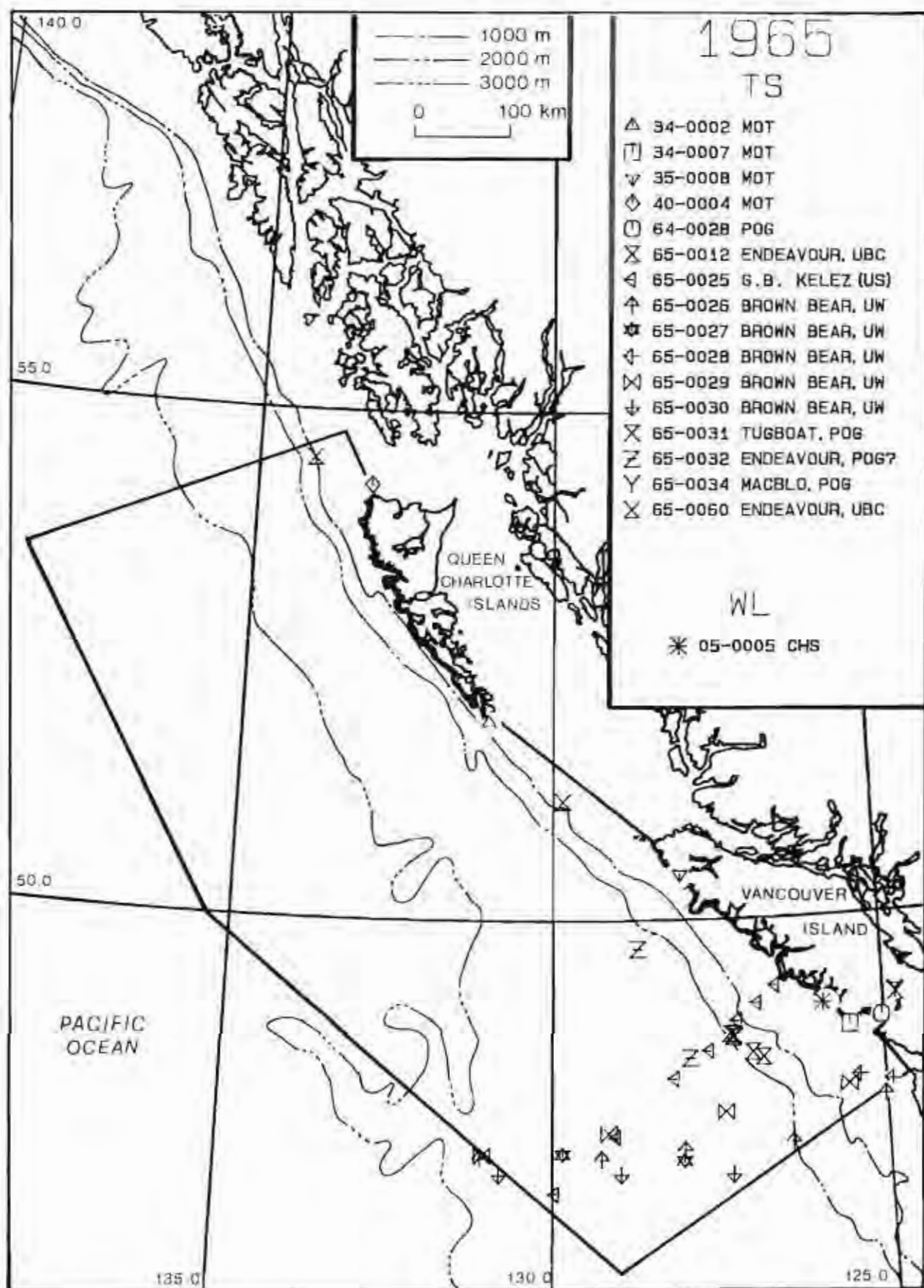
0 50 km









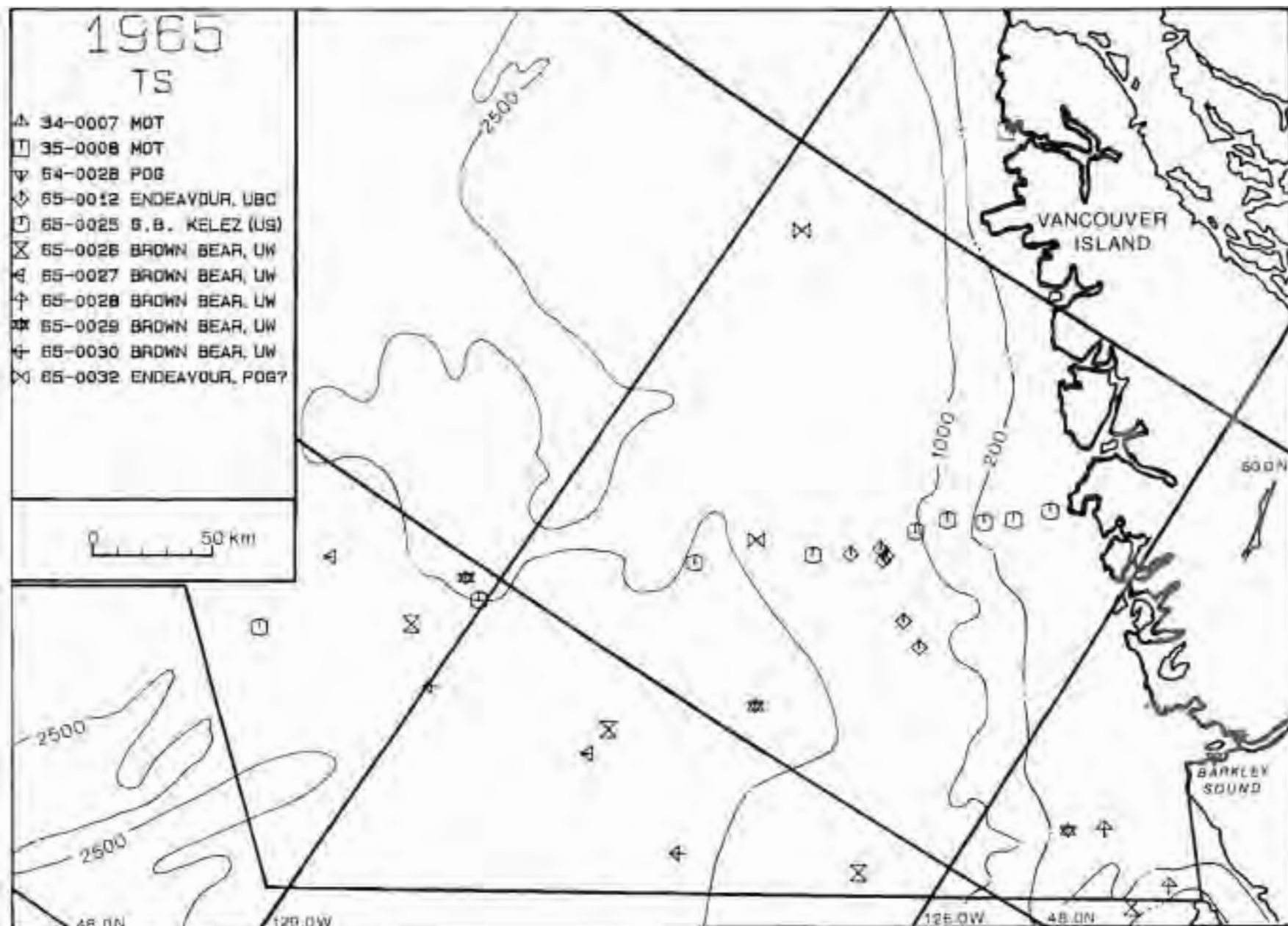


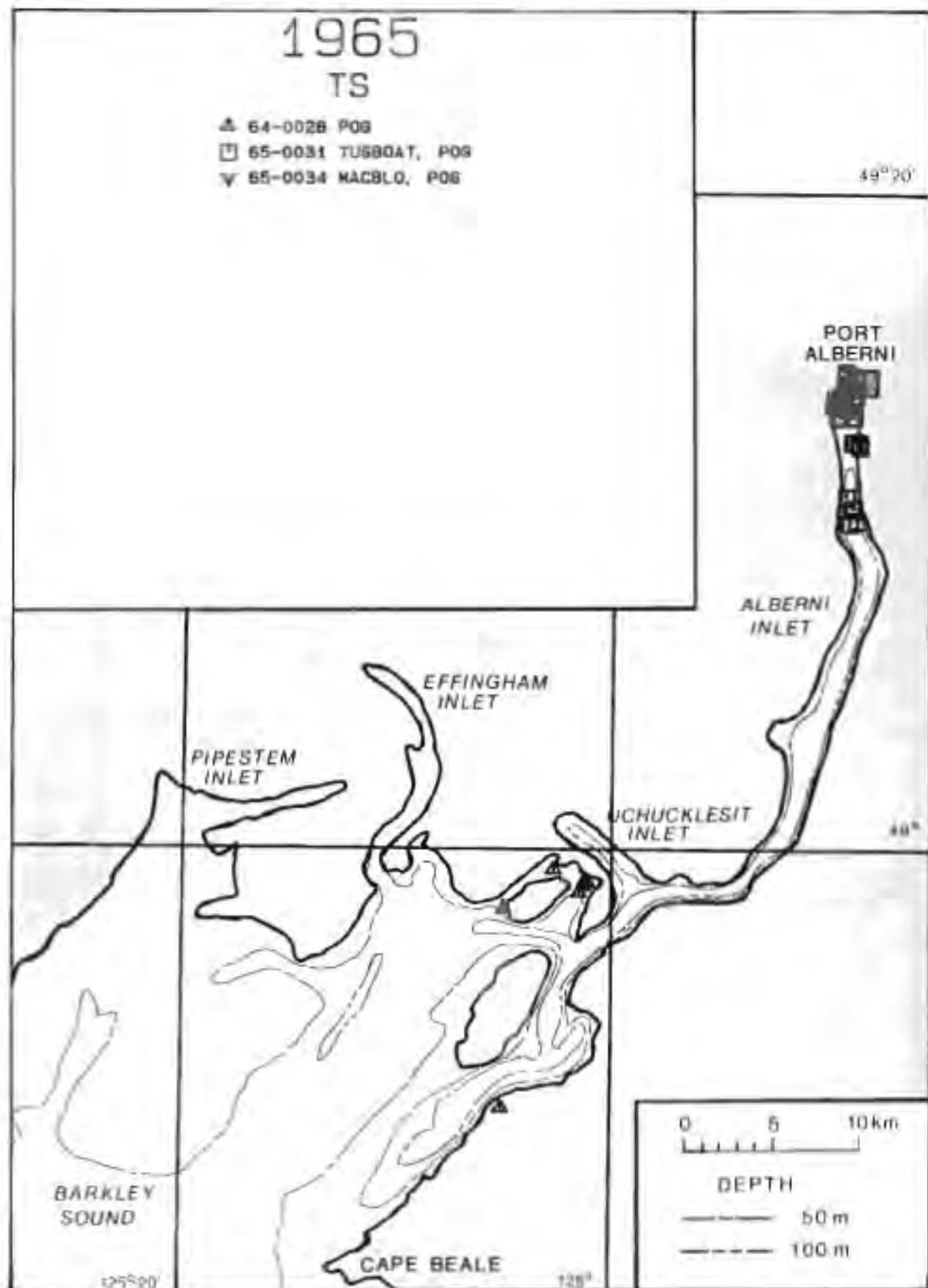
1965

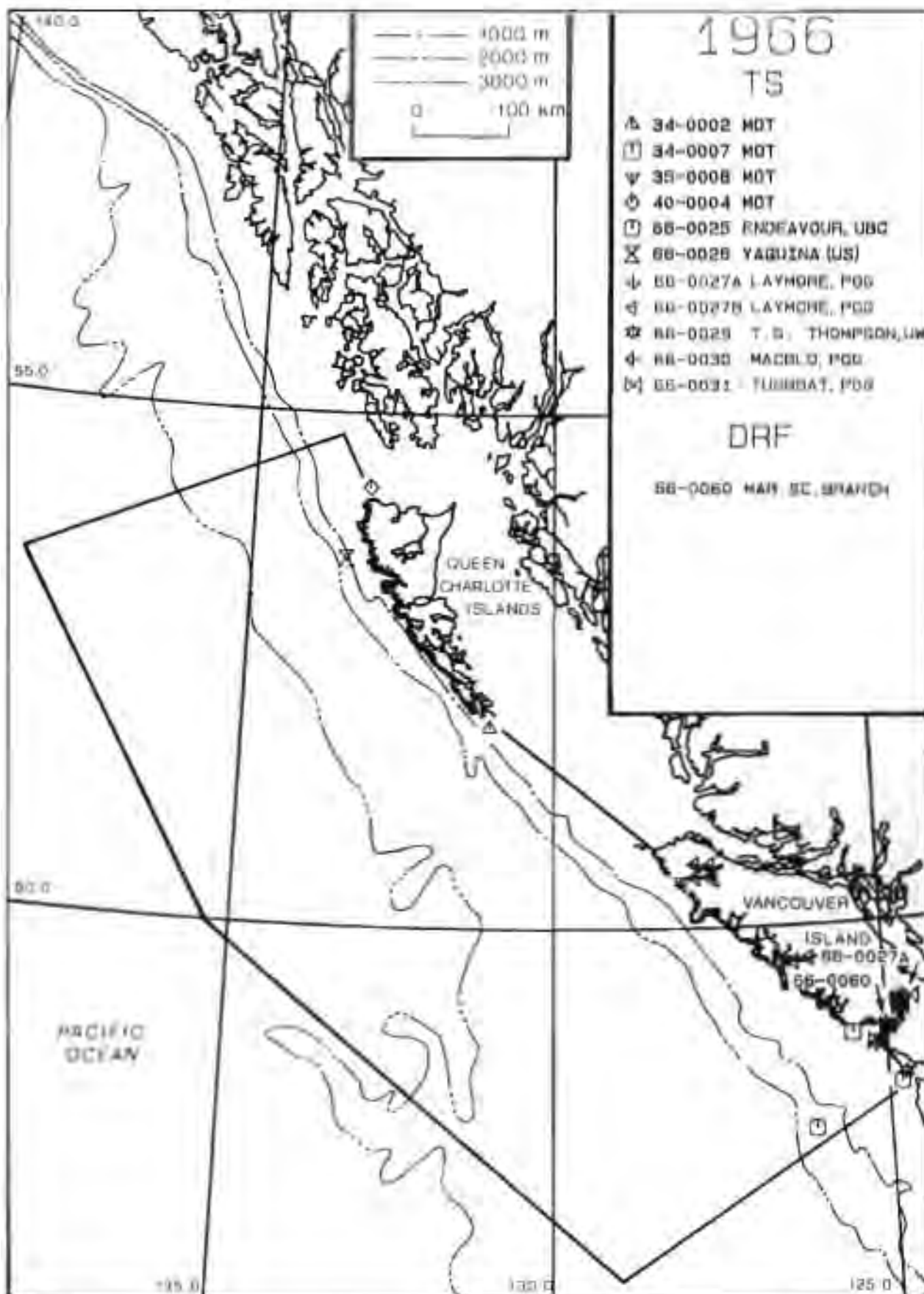
TS

- △ 34-0007 MOT
- 35-0008 MOT
- ▽ 54-0028 POG
- ◇ 55-0012 ENDEAVOUR, UBC
- 55-0025 S.B. KELEZ (US)
- ⊗ 55-0026 BROWN BEAR, UW
- ⊗ 55-0027 BROWN BEAR, UW
- ⊗ 55-0028 BROWN BEAR, UW
- ⊗ 55-0029 BROWN BEAR, UW
- ⊗ 55-0030 BROWN BEAR, UW
- ⊗ 55-0032 ENDEAVOUR, POG?

0 50 km



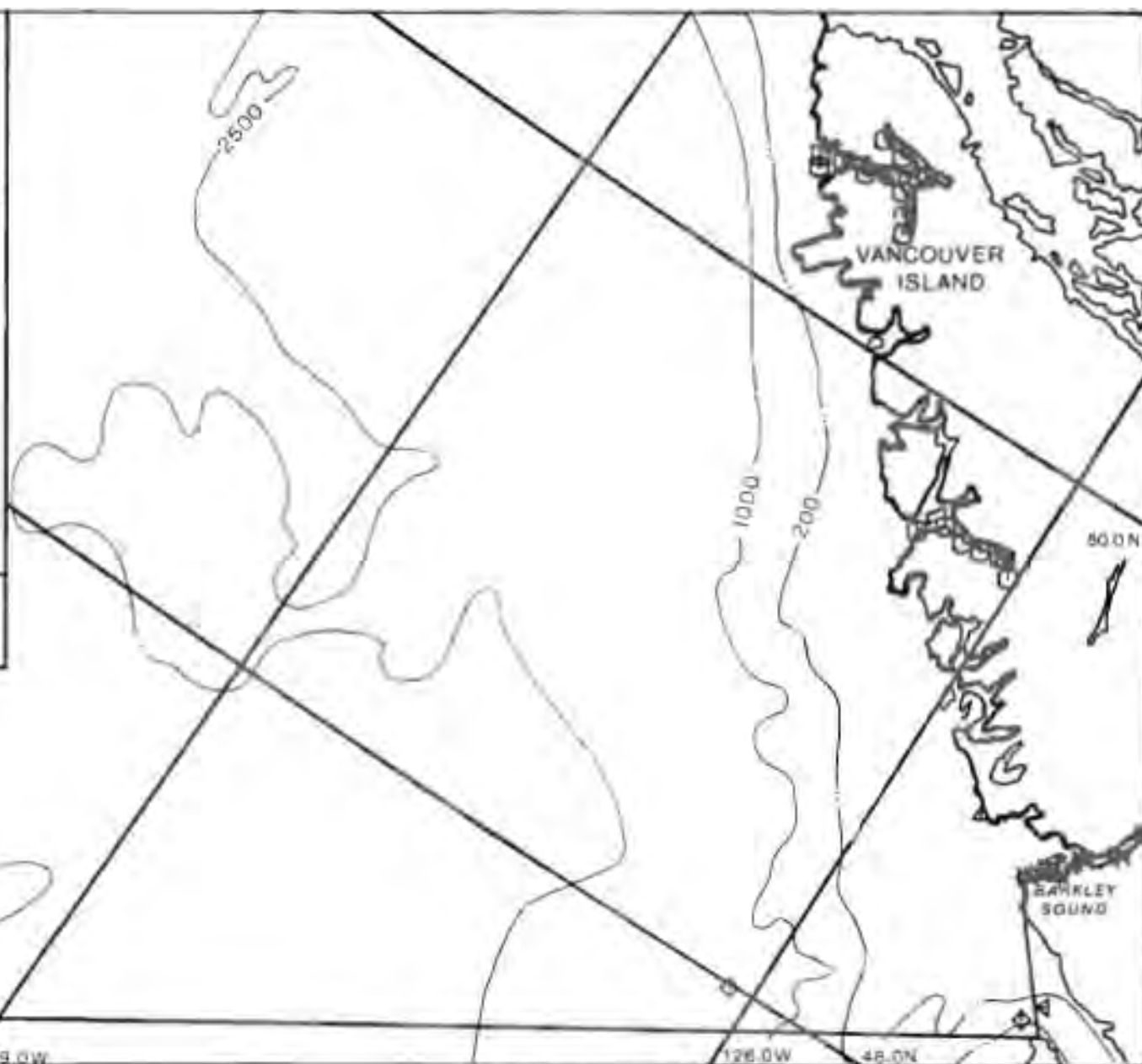
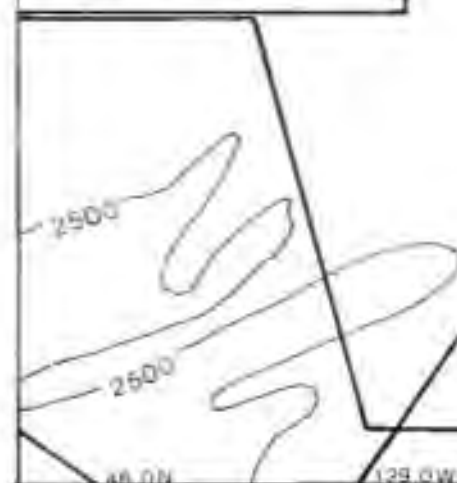


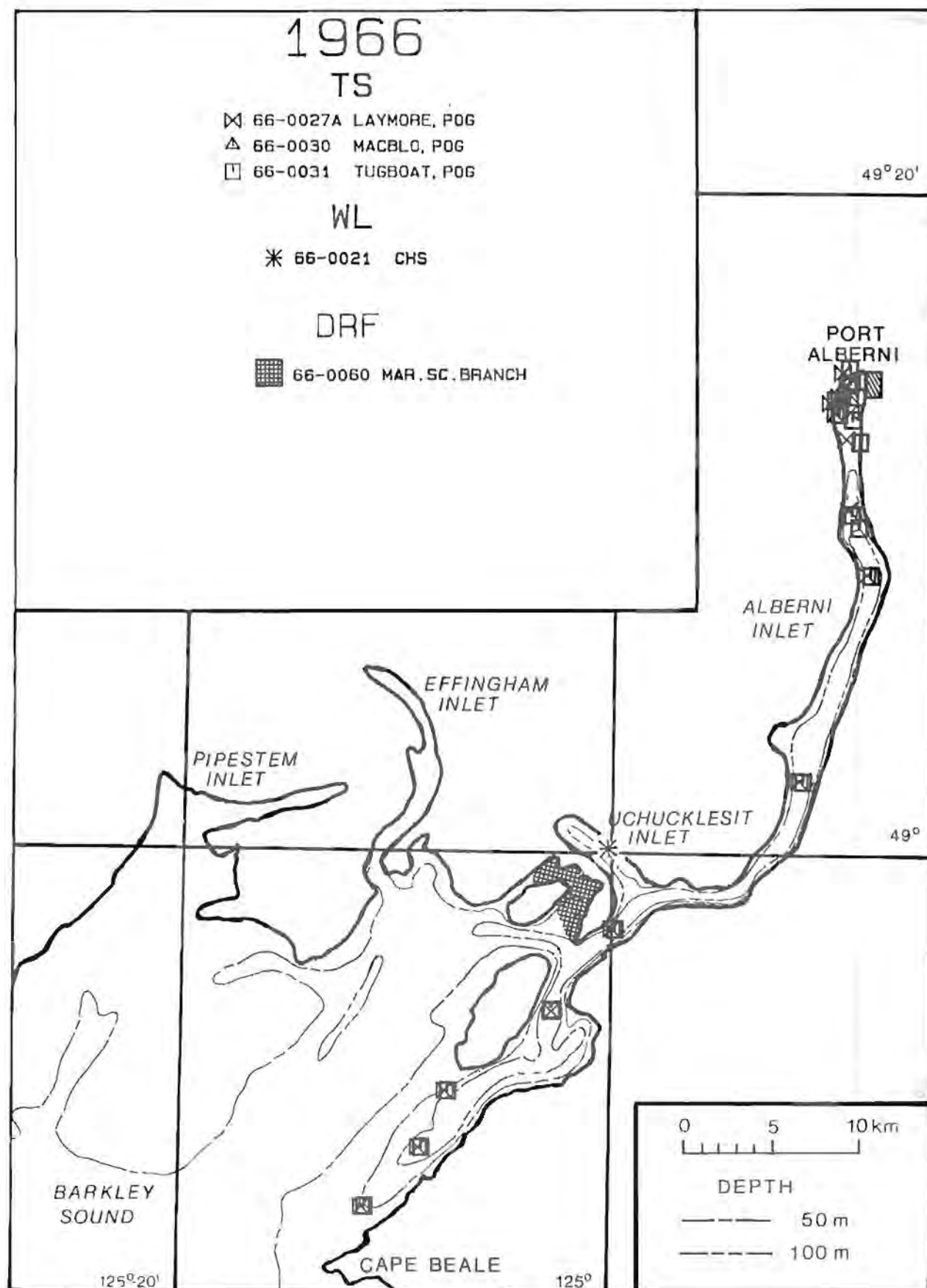


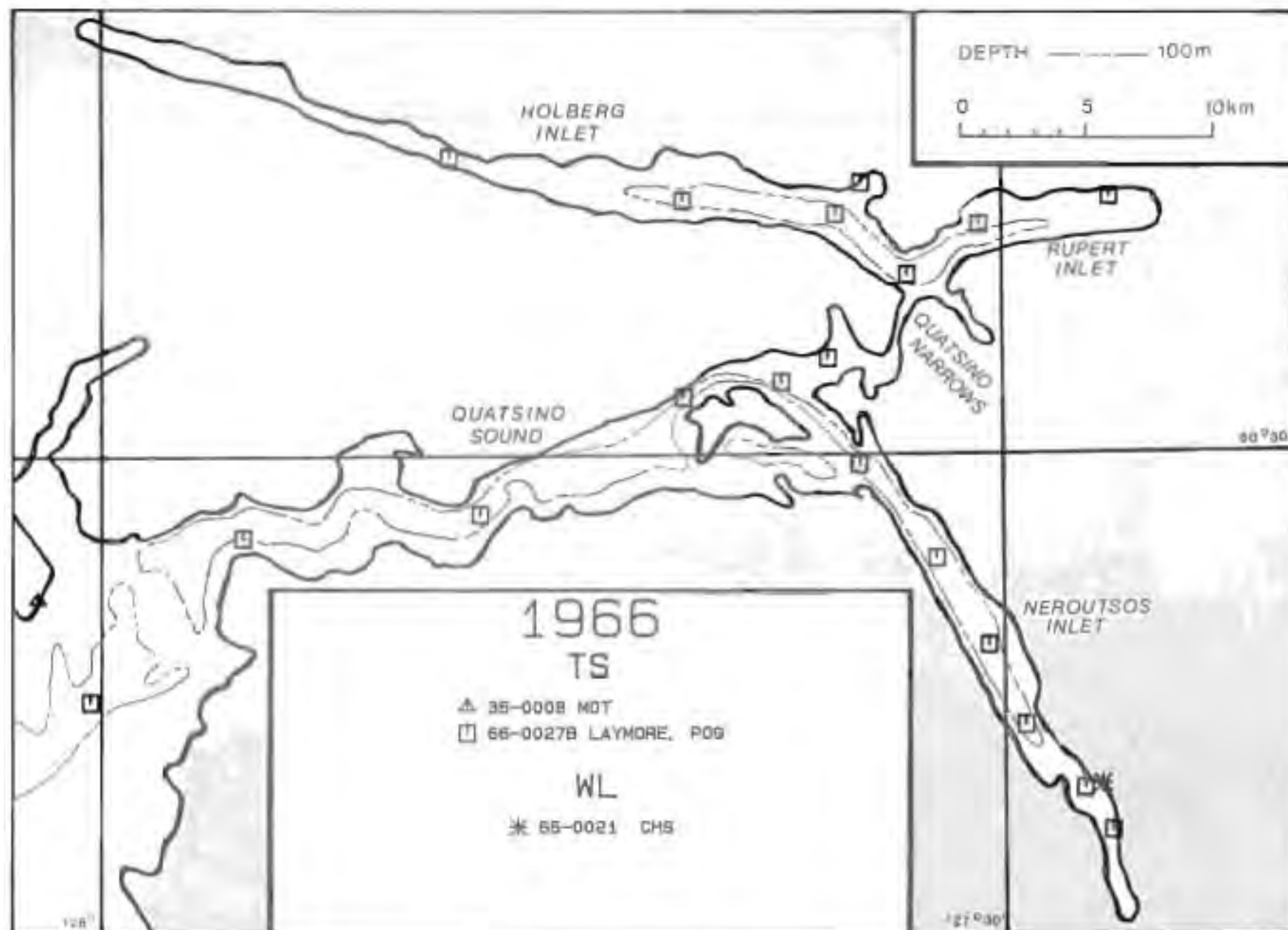
1966
TS

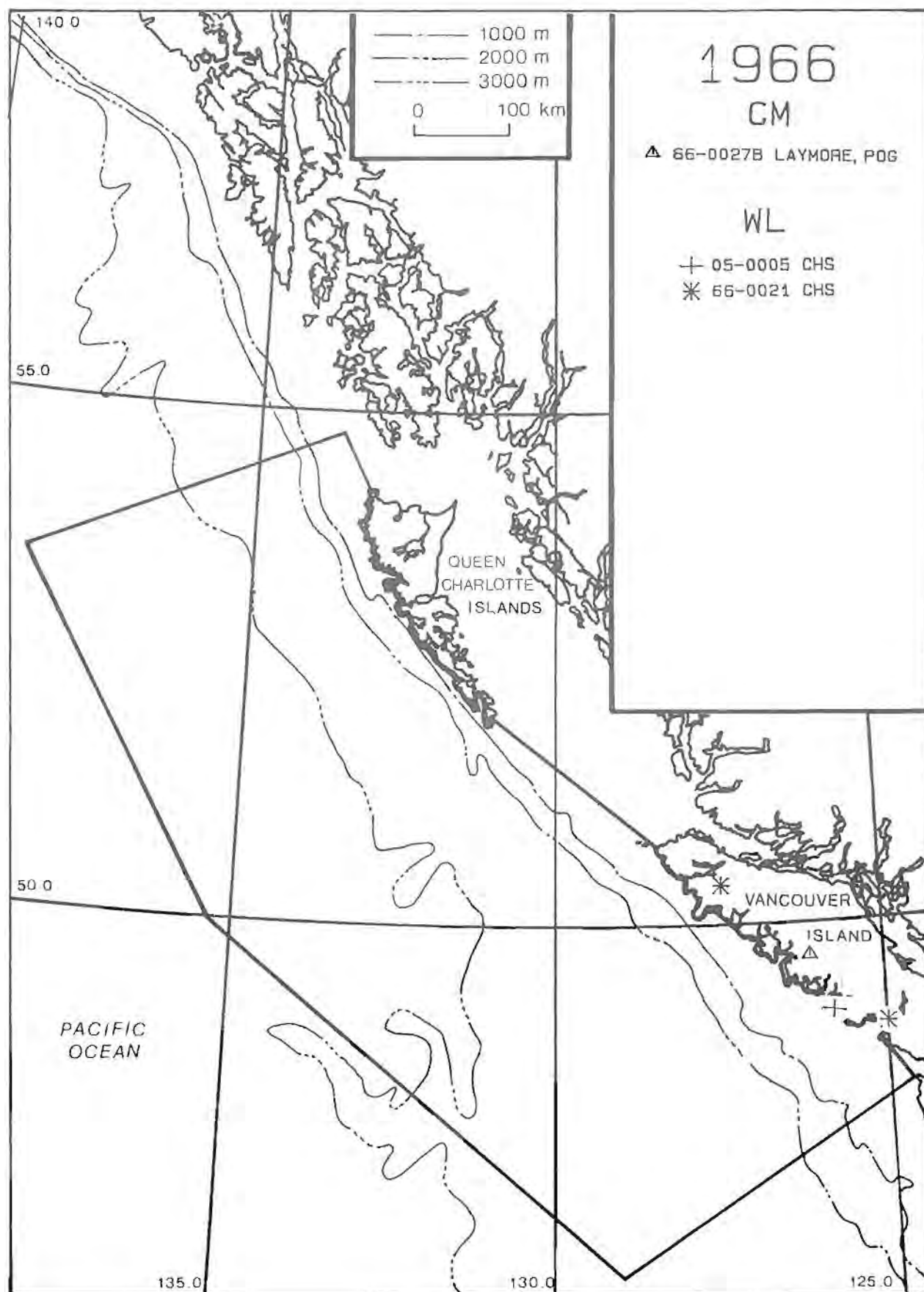
- ▲ 34-0007 MOT
- 35-0008 MOT
- ◇ 66-0025 ENDEAVOUR, UBC
- ⊠ 66-0027A LAYMORE, POG
- ▢ 66-0027B LAYMORE, POG
- ⊞ 66-0029 T.G. THOMPSON,
UW
- ⊕ 66-0031 TUGBOAT, POG

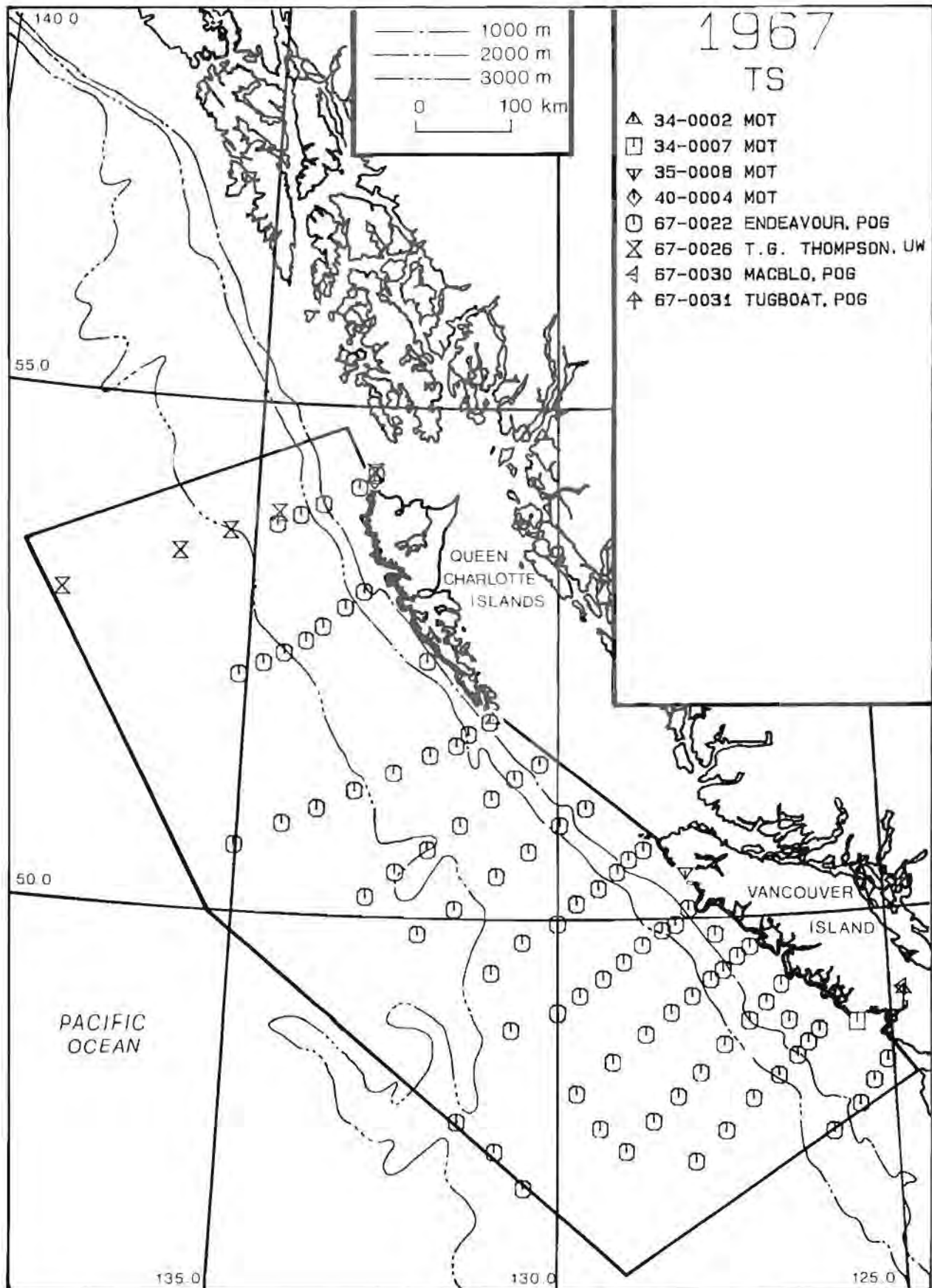
0 50 km

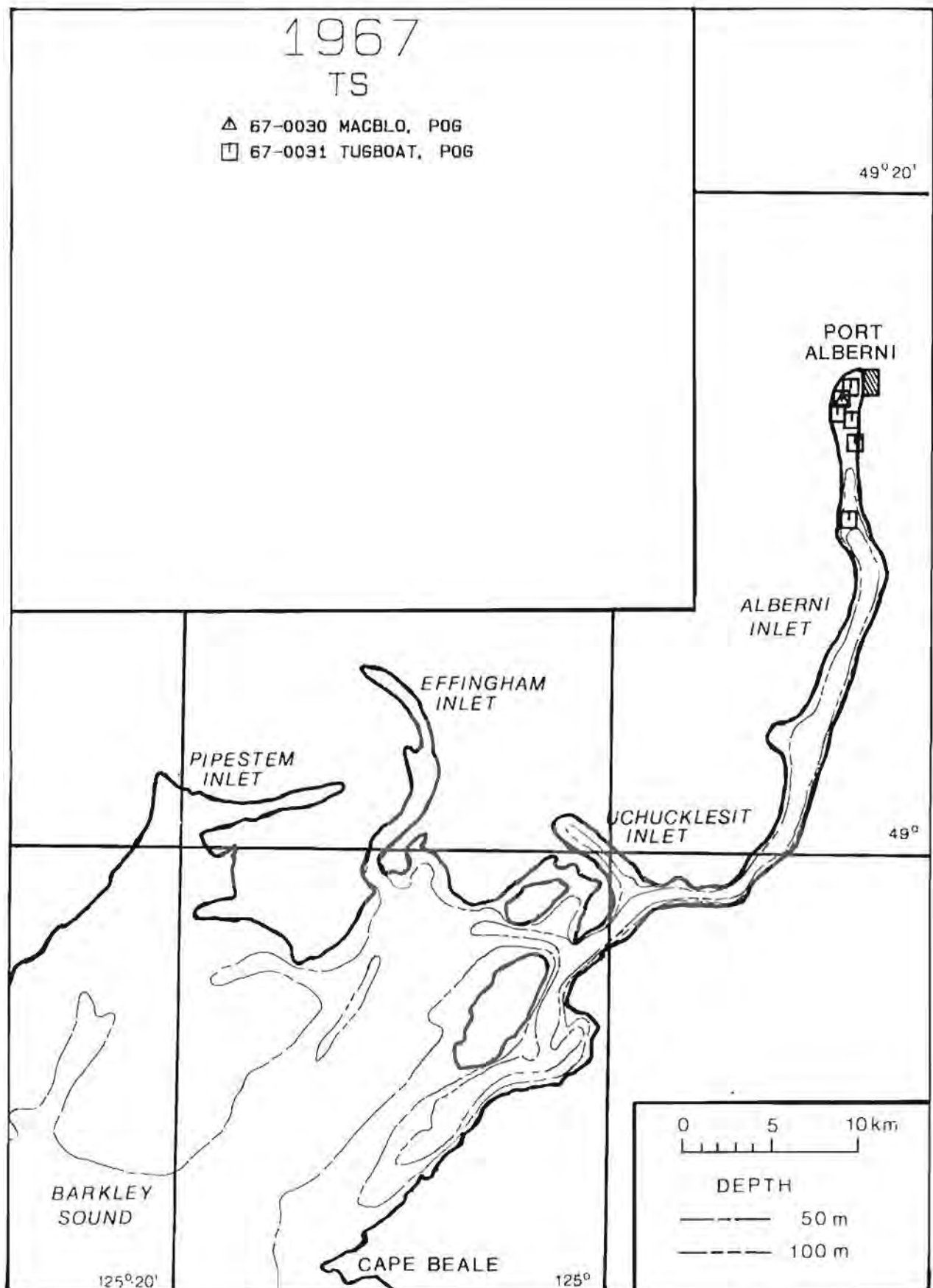


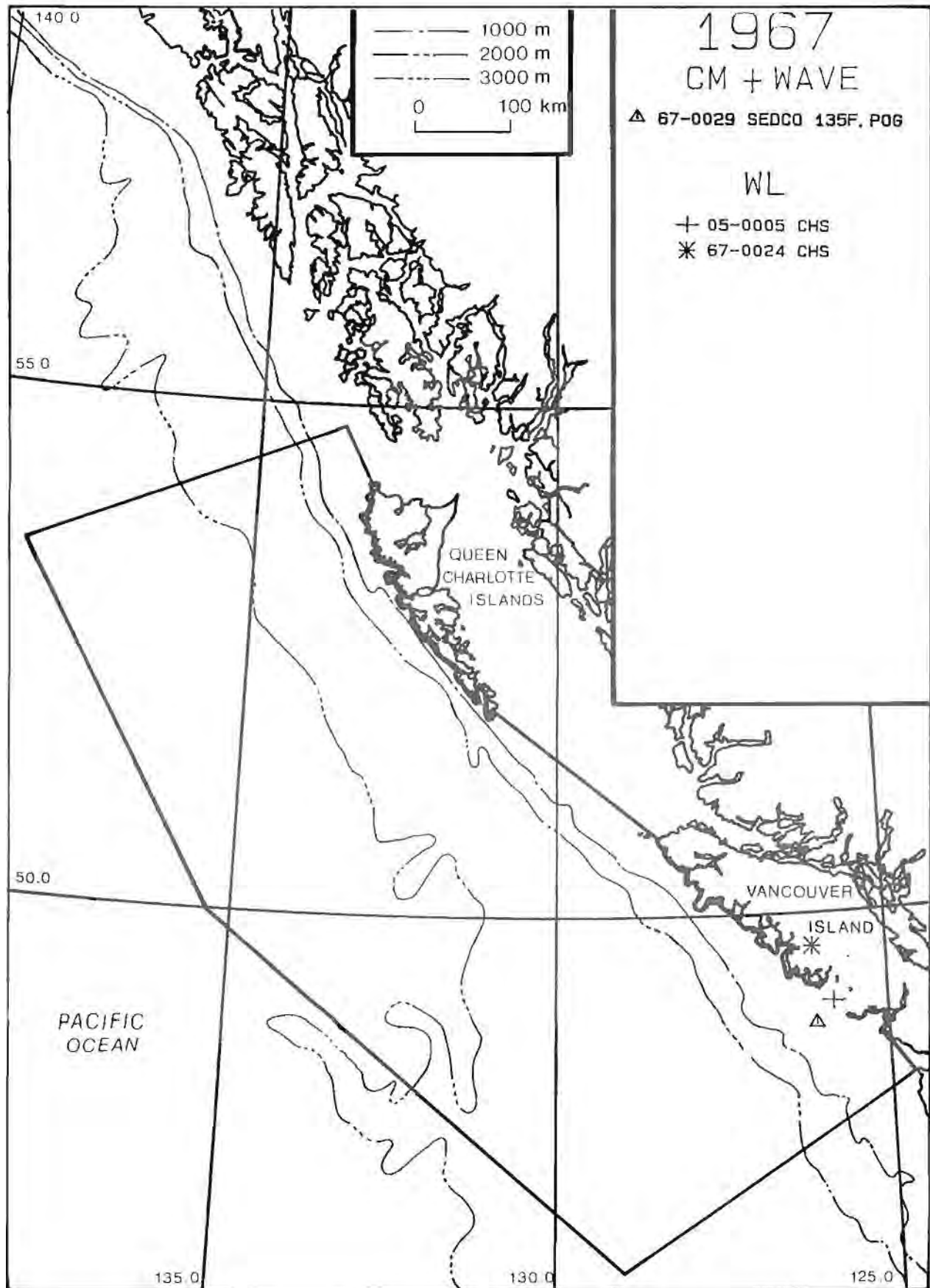


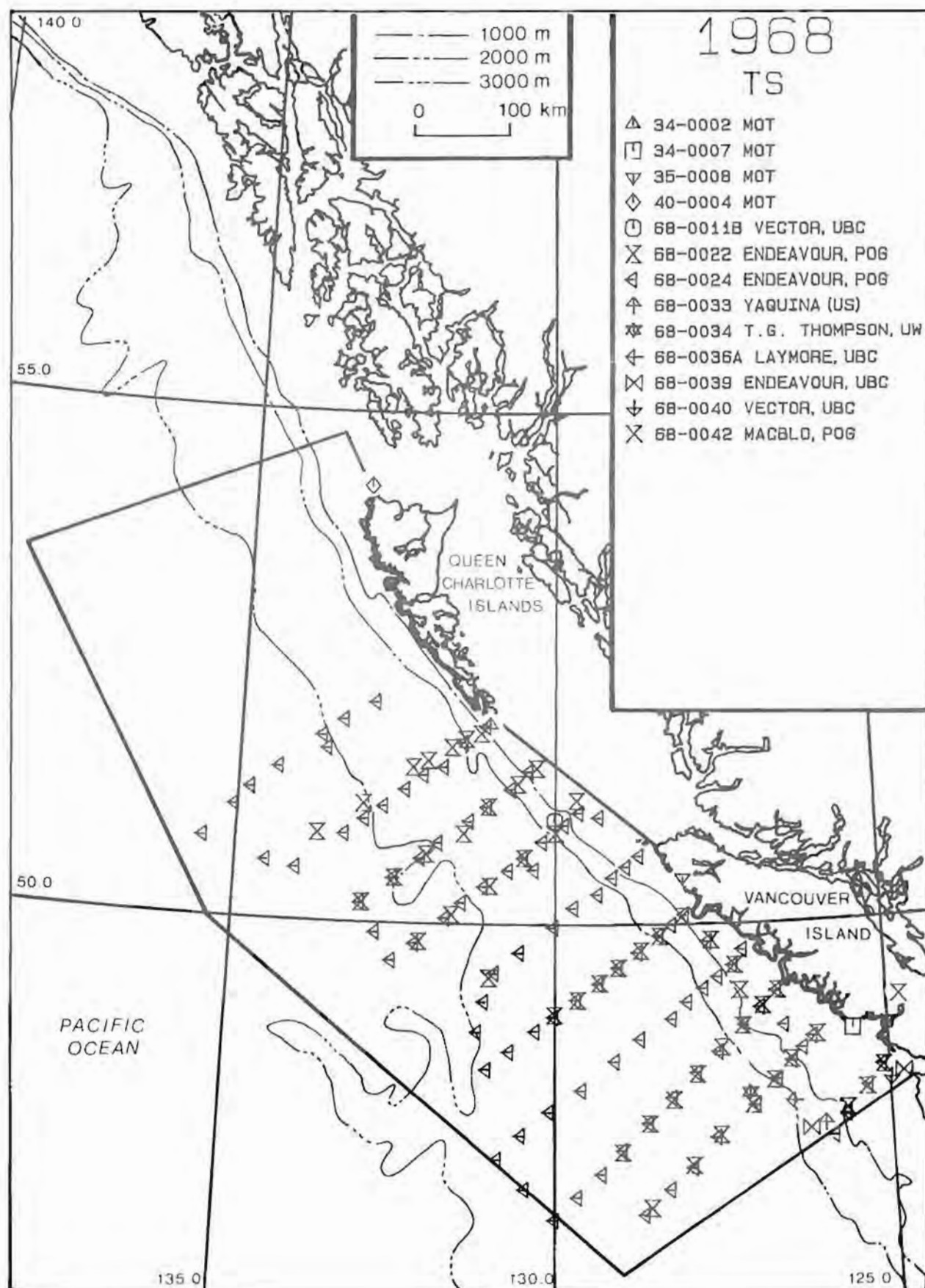








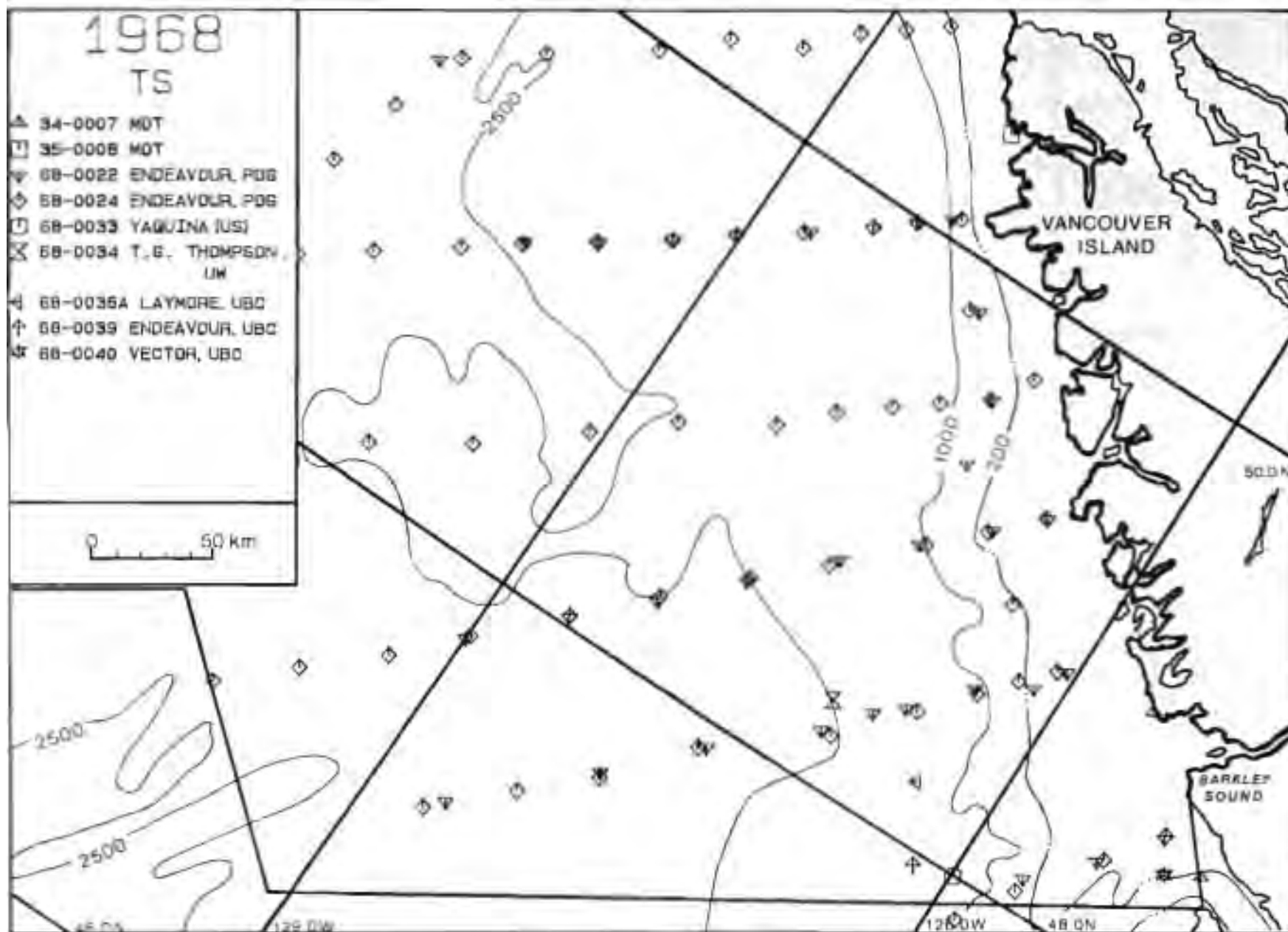


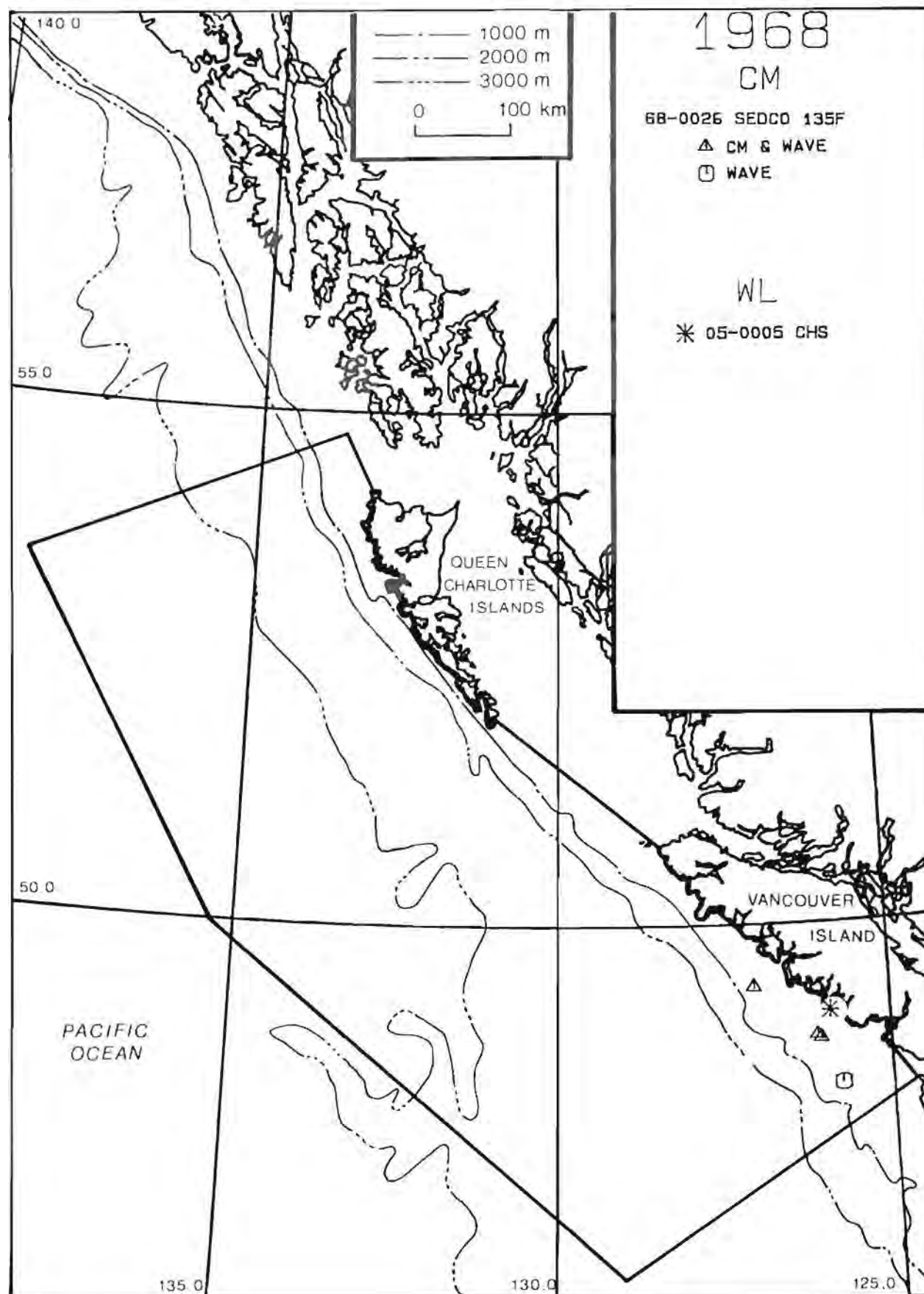


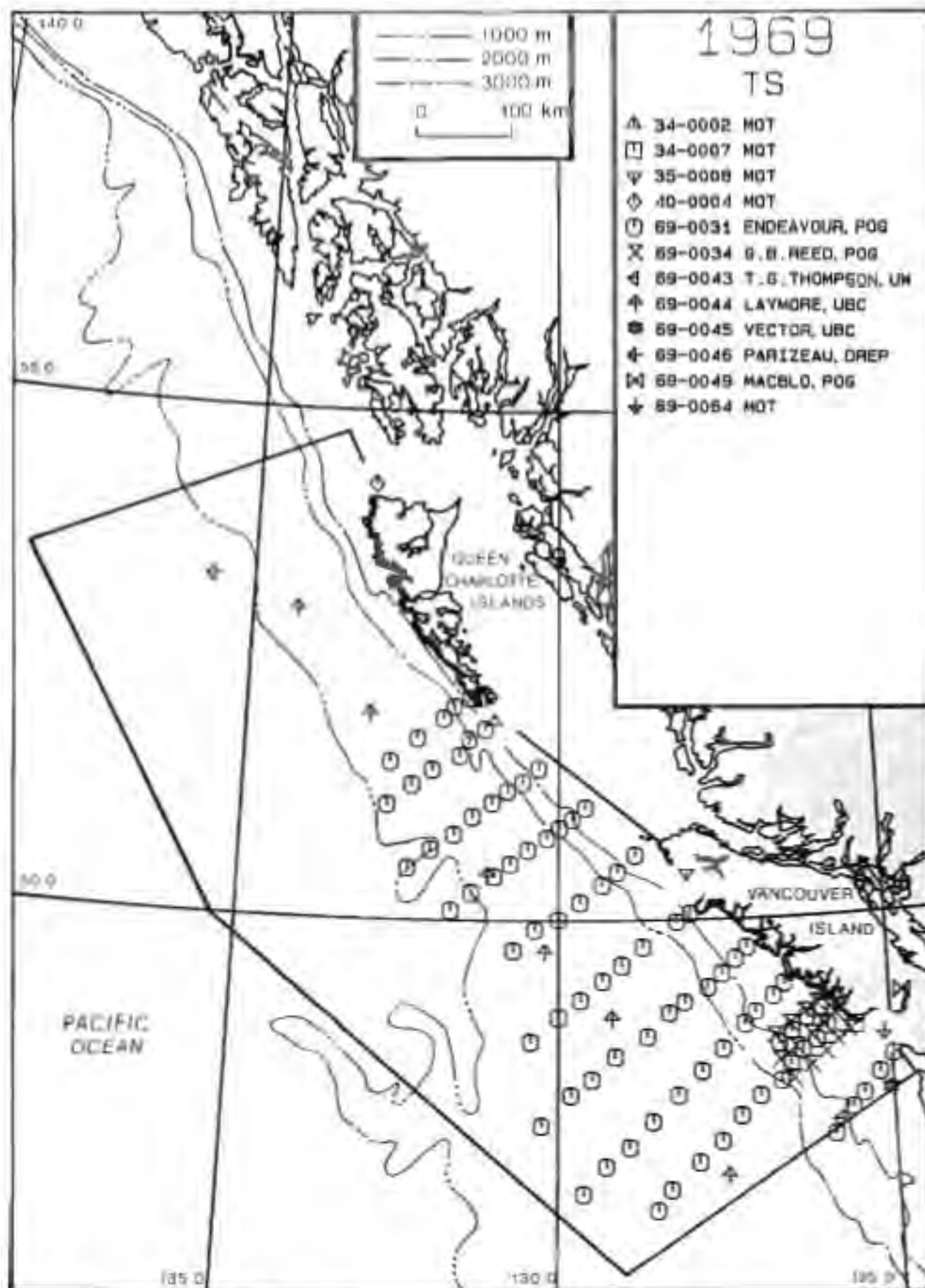
1968
TS

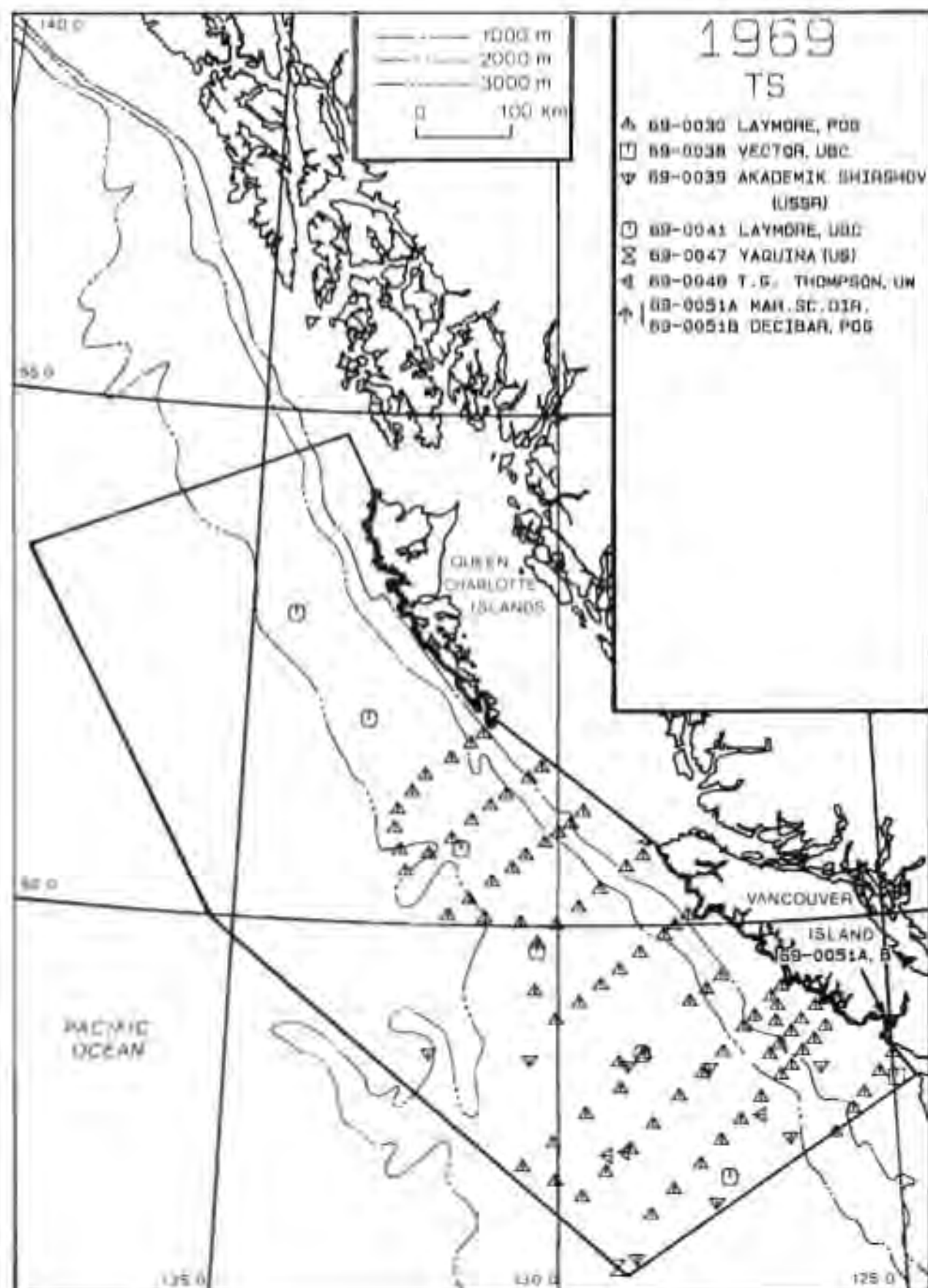
- ▲ 34-0007 MDT
- ◻ 35-0008 MDT
- ▼ 68-0022 ENDEAVOUR, PDS
- ◆ 68-0024 ENDEAVOUR, PDS
- ◻ 68-0033 YAGUINA (US)
- ⊗ 68-0034 T. E. THOMPSON, UW
- ⊕ 68-0035A LAYMORE, UBC
- ⊕ 68-0039 ENDEAVOUR, UBC
- ✱ 68-0040 VECTOR, UBC

0 50 km







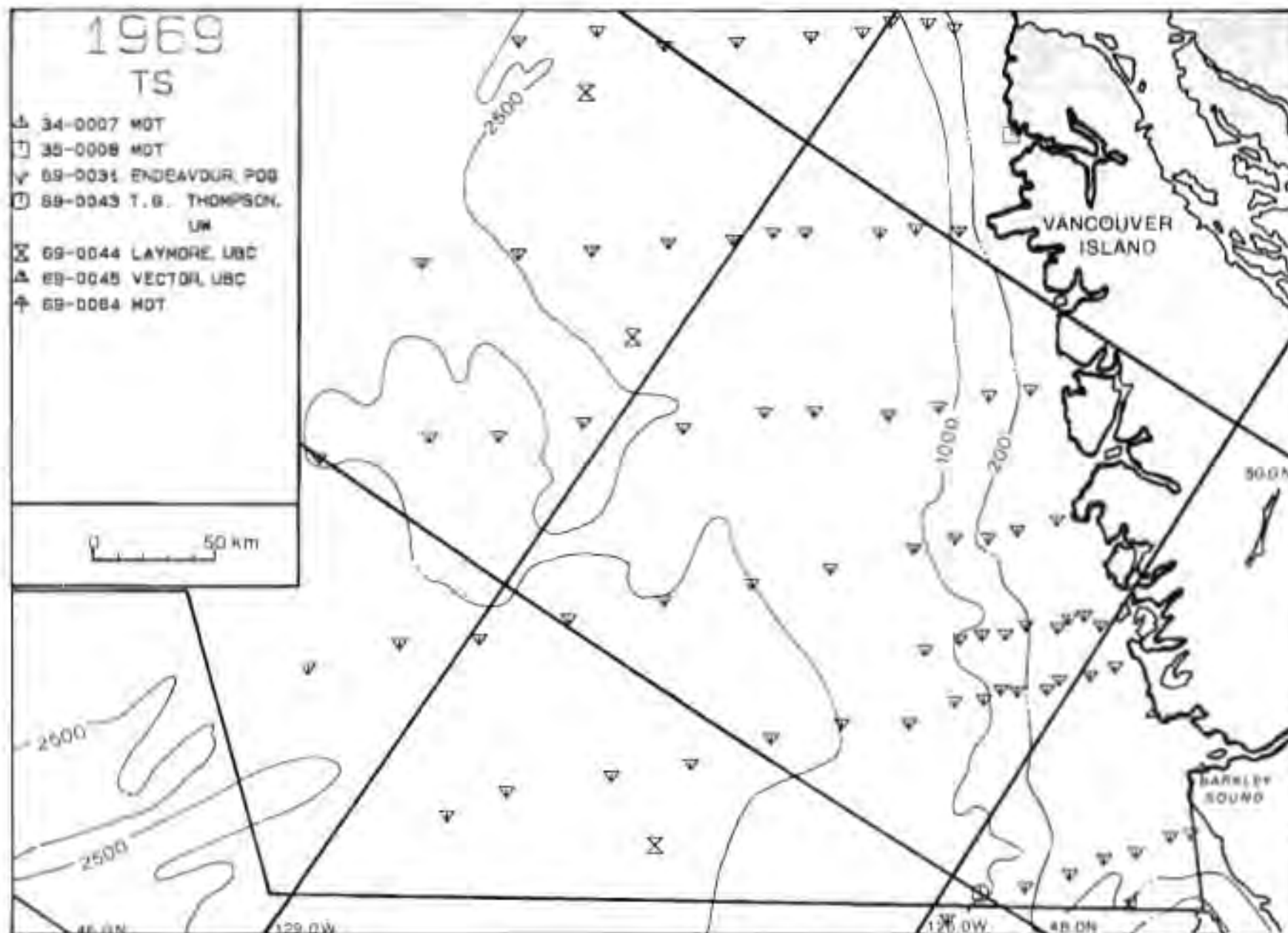


1969

TS

- ▲ 34-0007 MDT
- 35-0008 MDT
- ▽ 69-0031 ENDEAVOUR, POG
- ◻ 69-0043 T. B. THOMPSON, UBC
- ⊗ 69-0044 LAYMORE, UBC
- △ 69-0045 VECTOR, UBC
- ✚ 69-0064 MDT

0 50 km

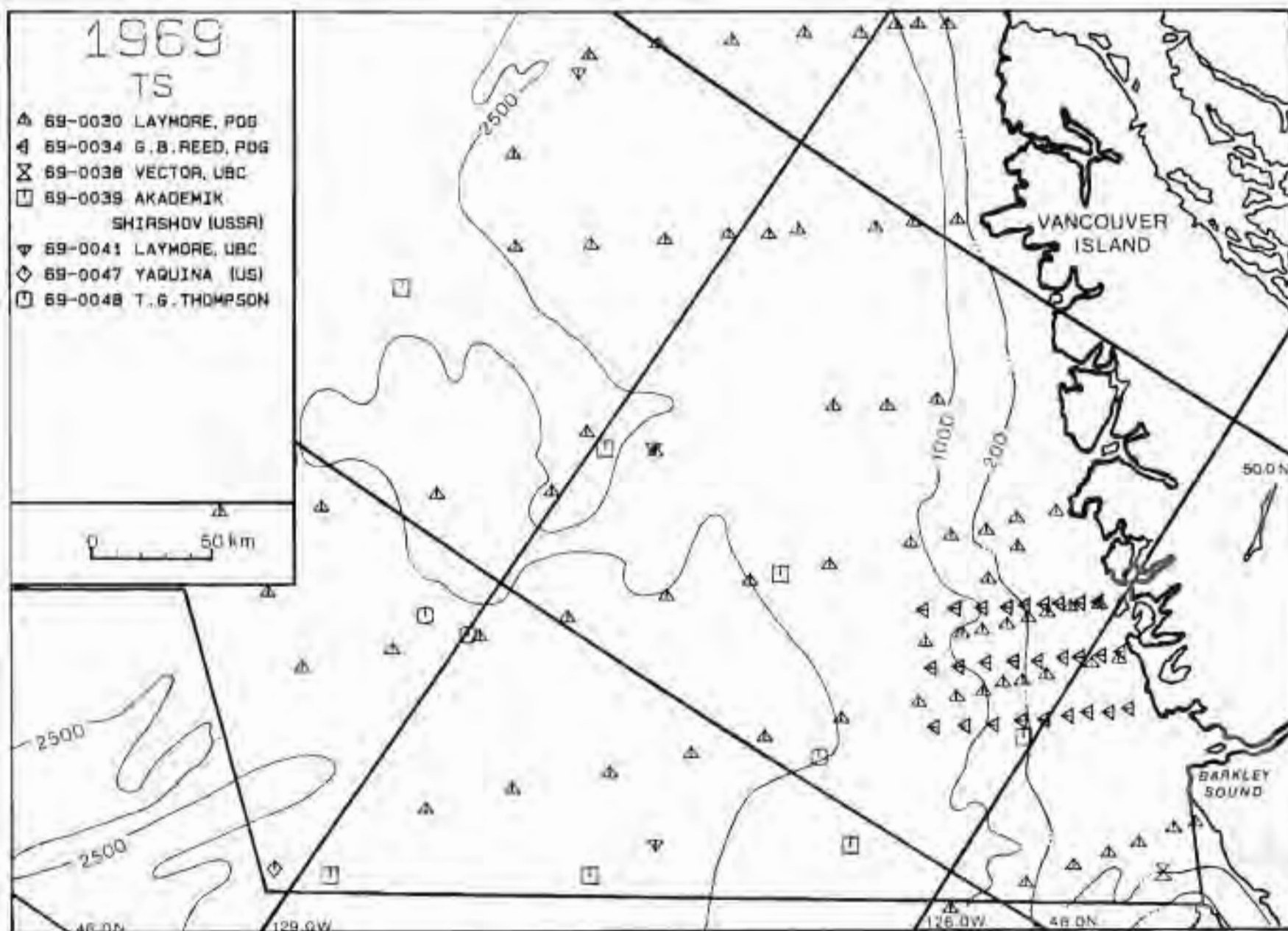


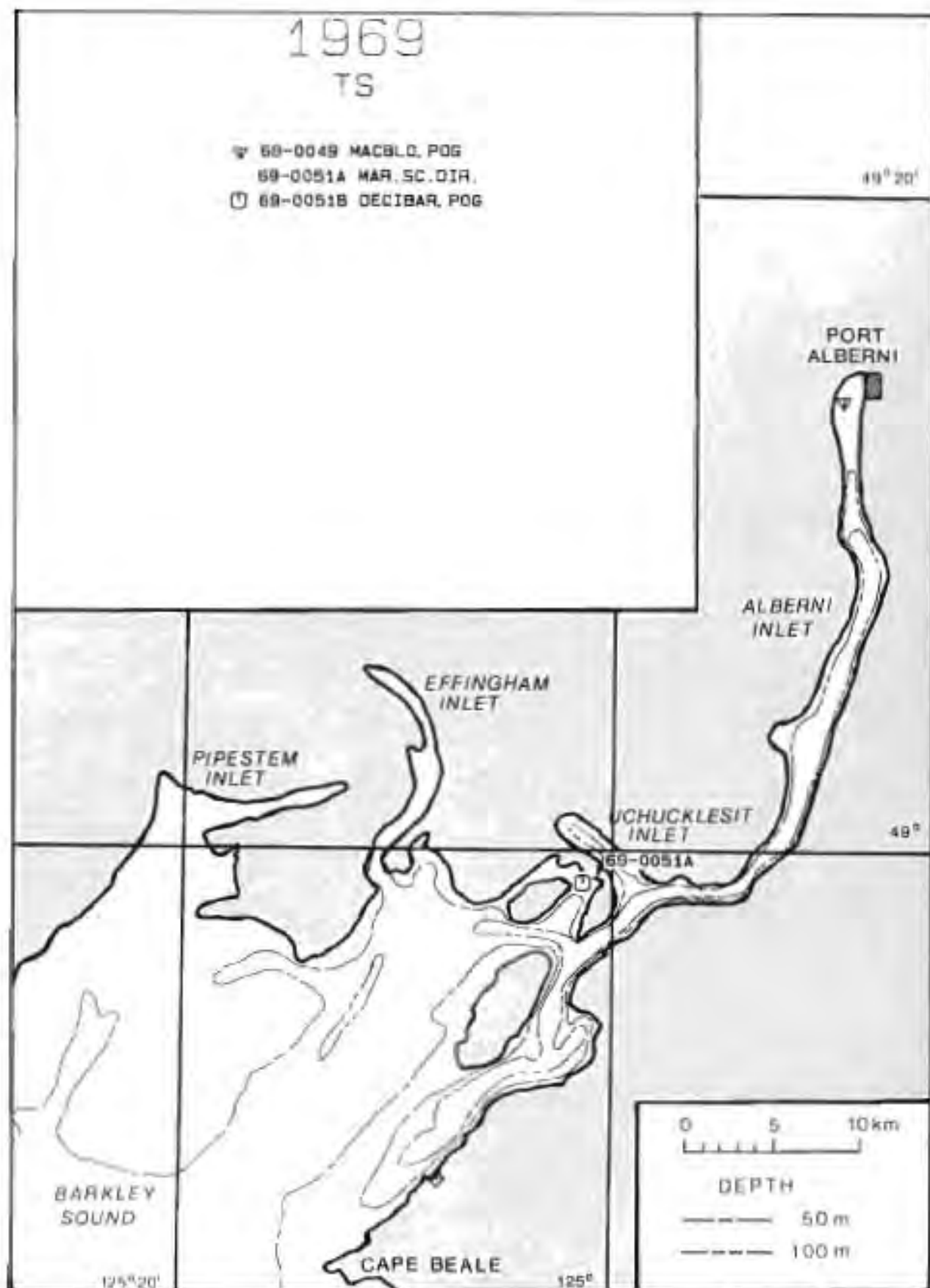
1969

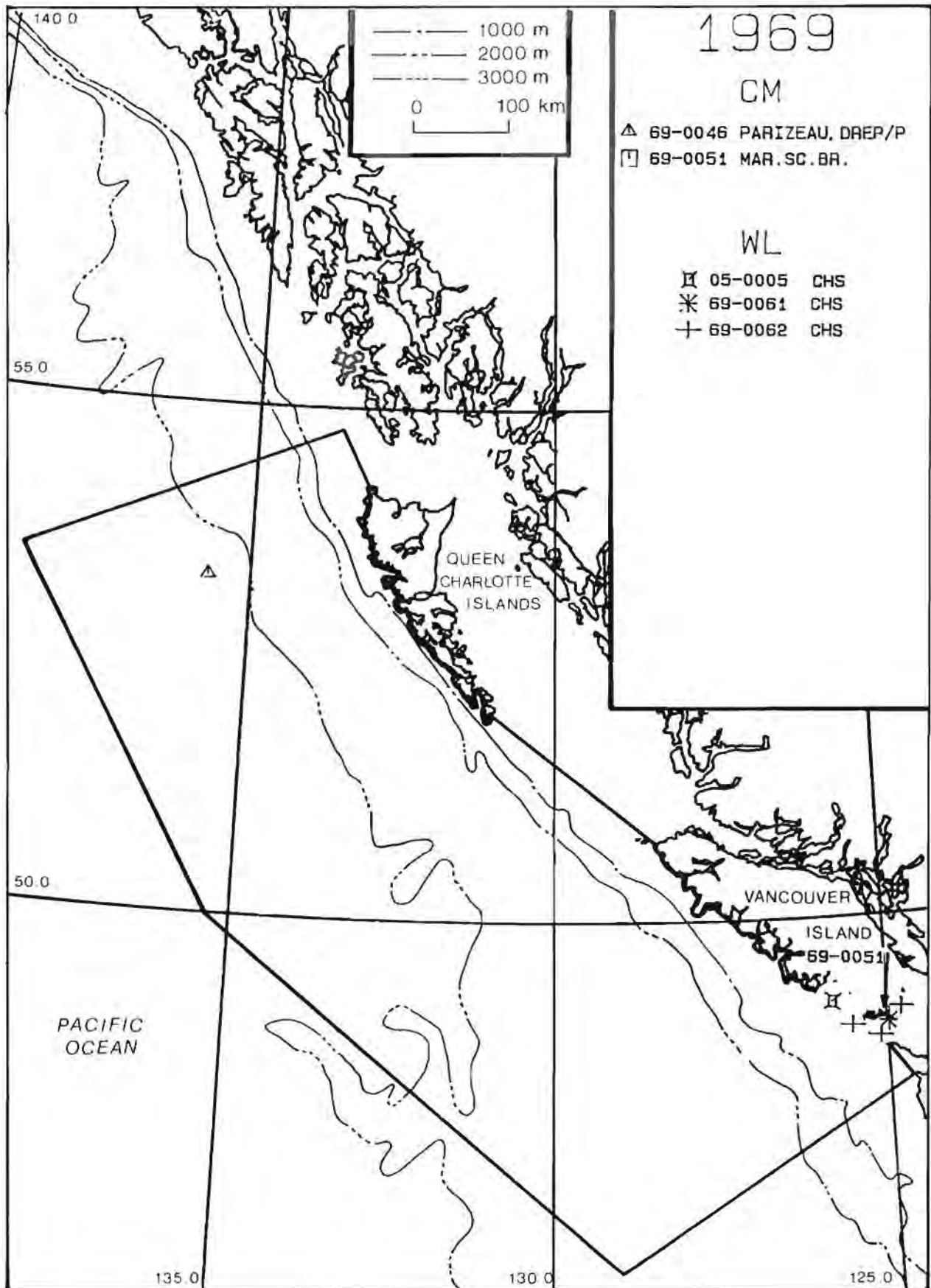
TS

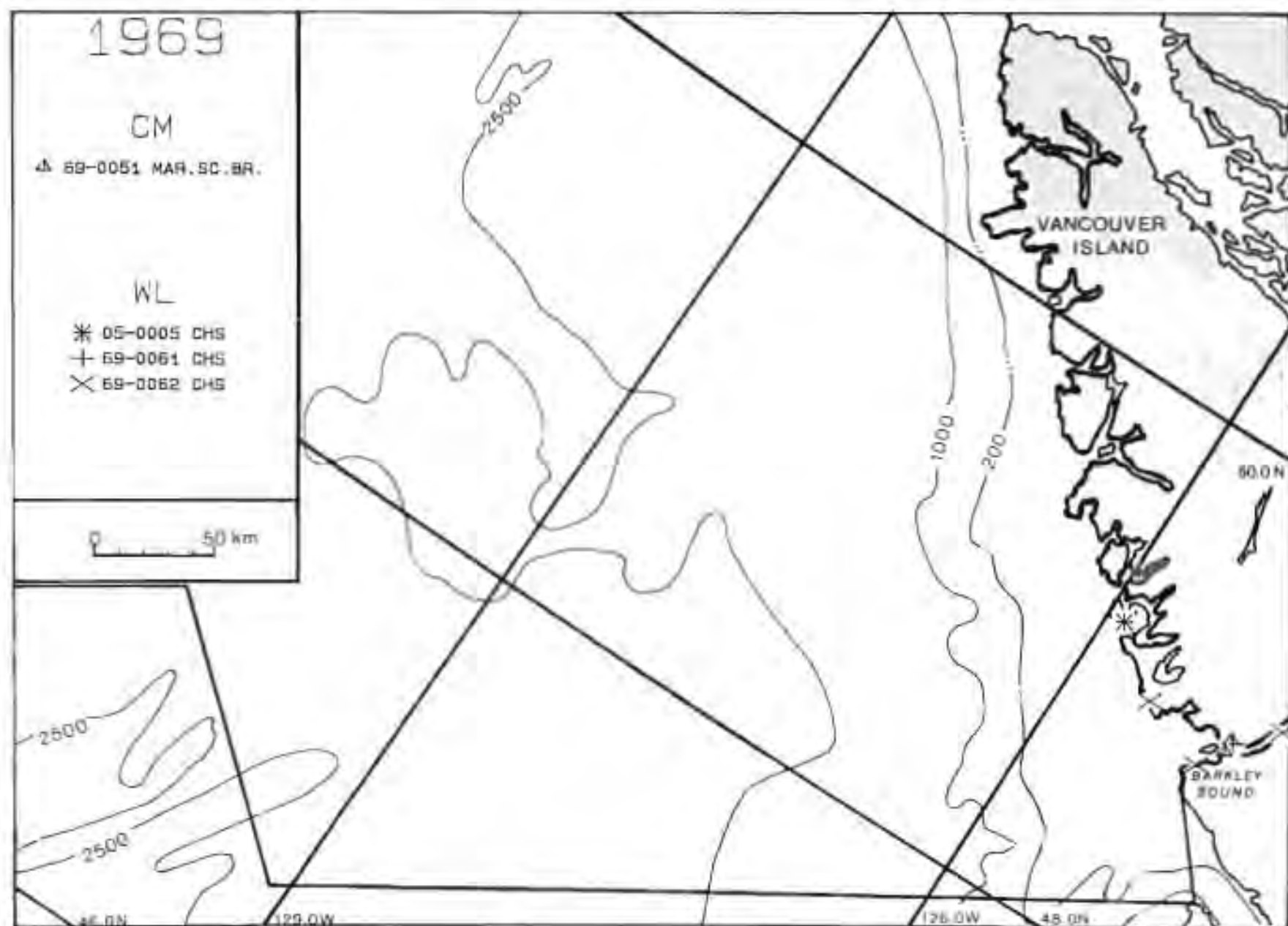
- △ 69-0030 LAYMORE, POG
- ◄ 69-0034 G.B. REED, POG
- ⊗ 69-0038 VECTOR, UBC
- 69-0039 AKADEMIK
SHIRSHOV (USSR)
- ▽ 69-0041 LAYMORE, UBC
- ◇ 69-0047 YAGUINA (US)
- ▢ 69-0048 T.G. THOMPSON

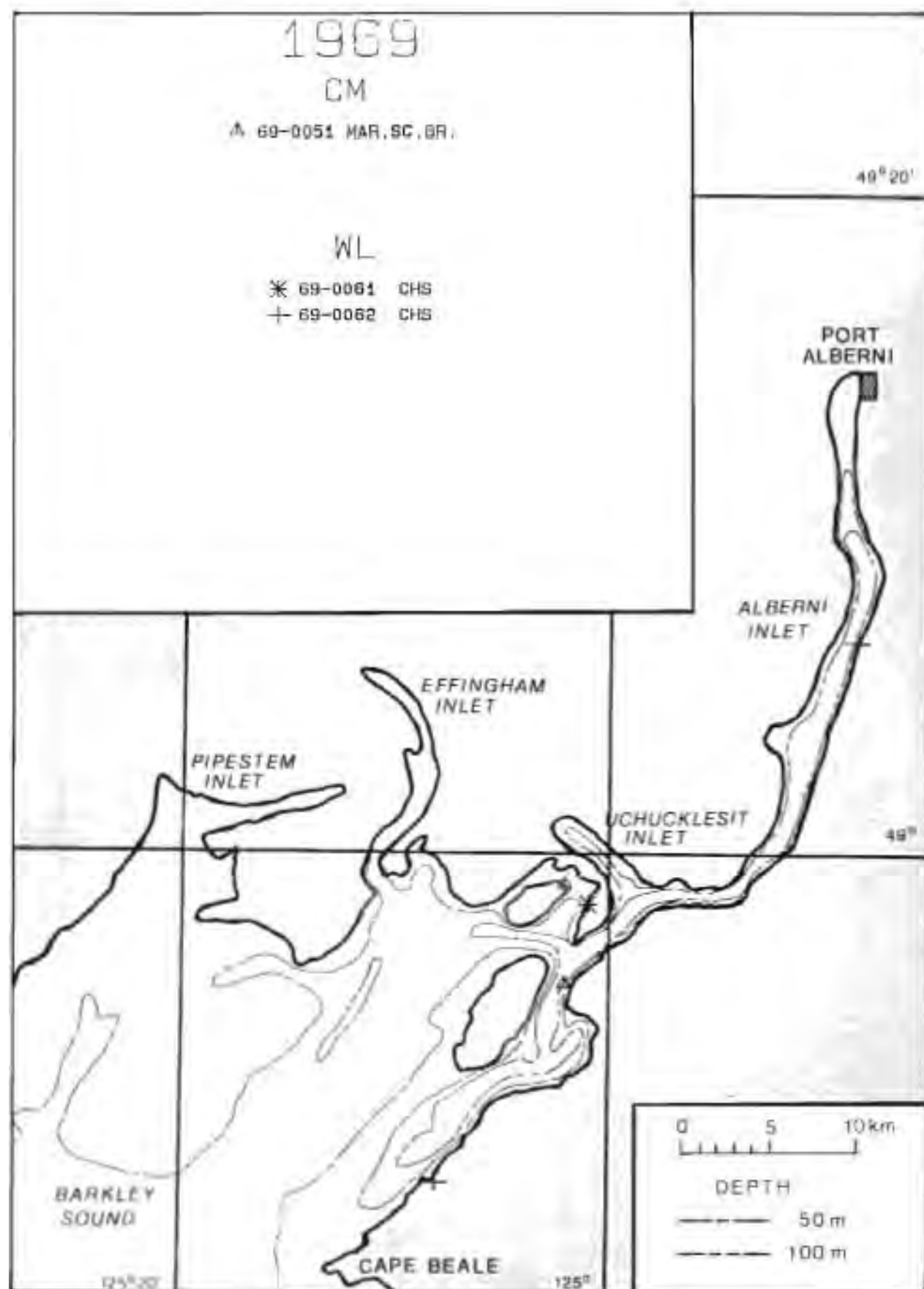
0 50 km

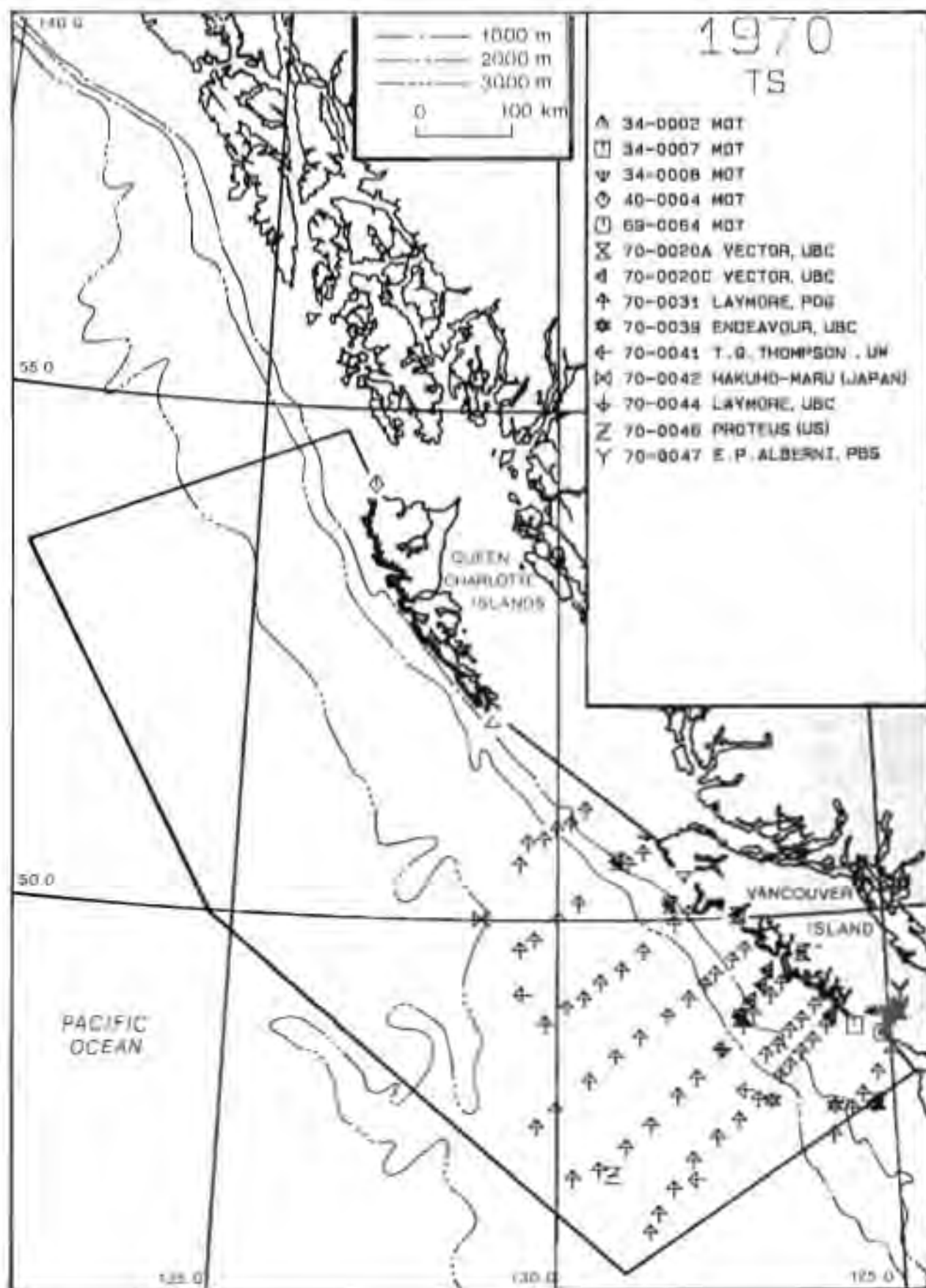


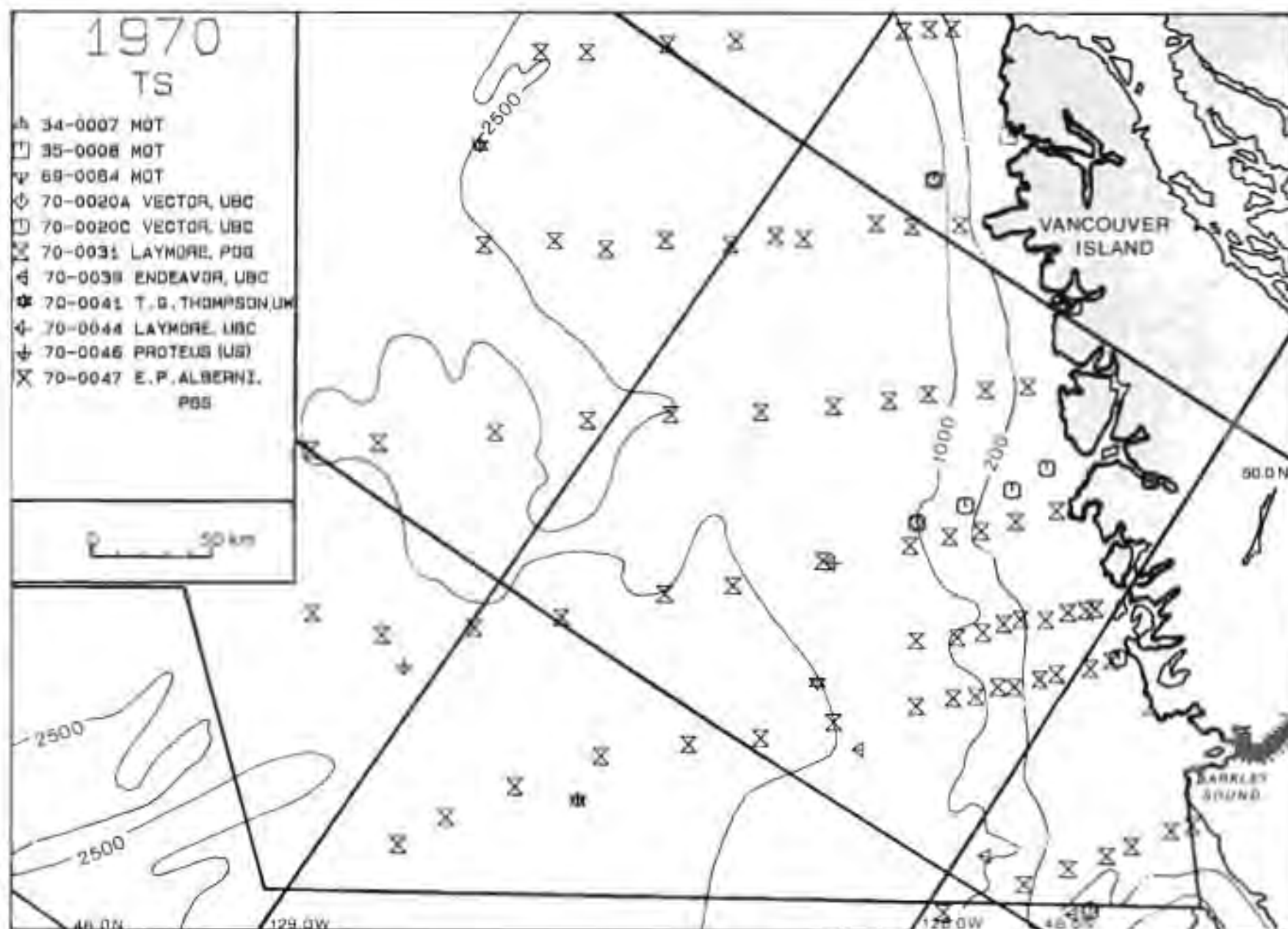


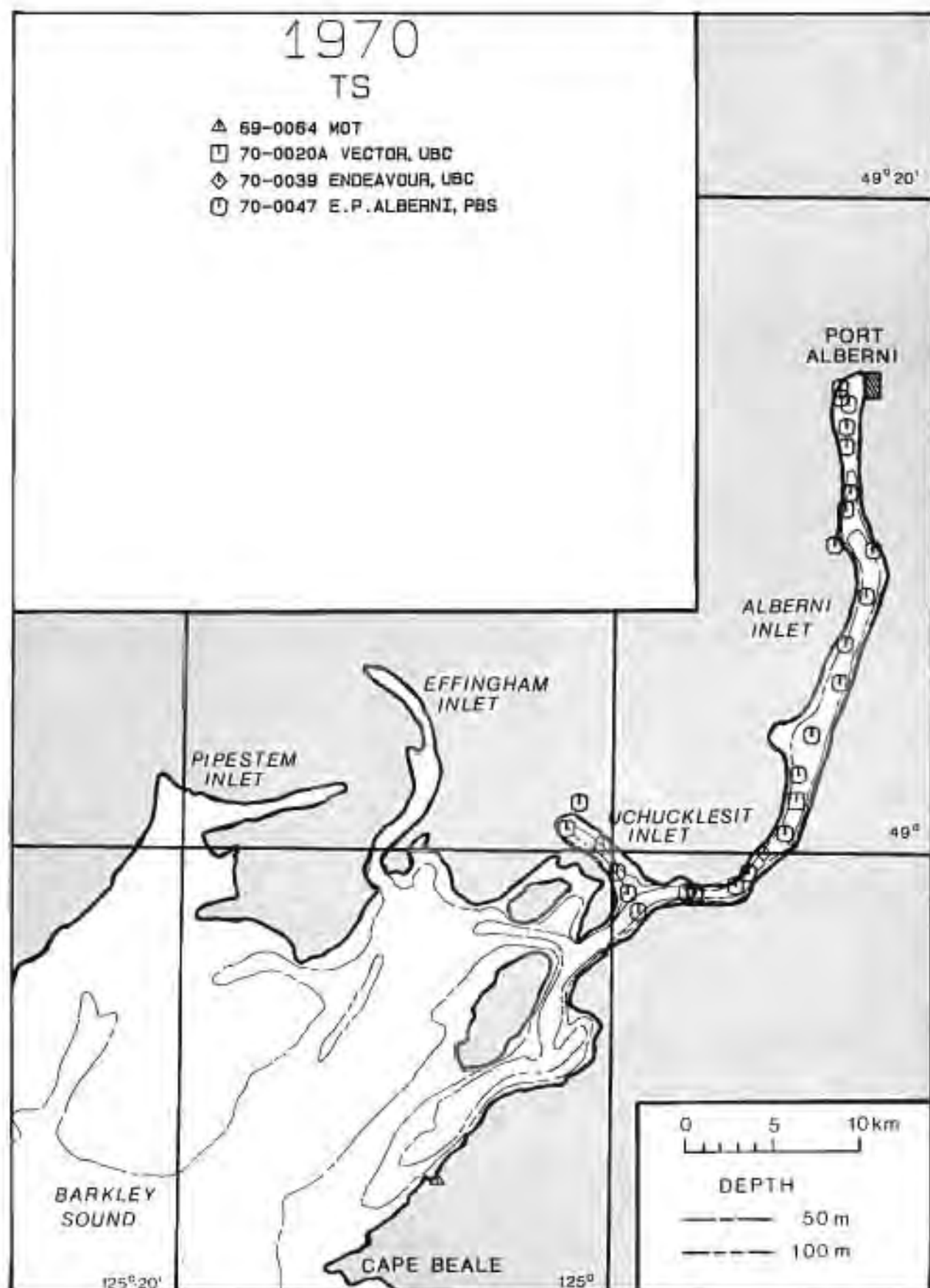


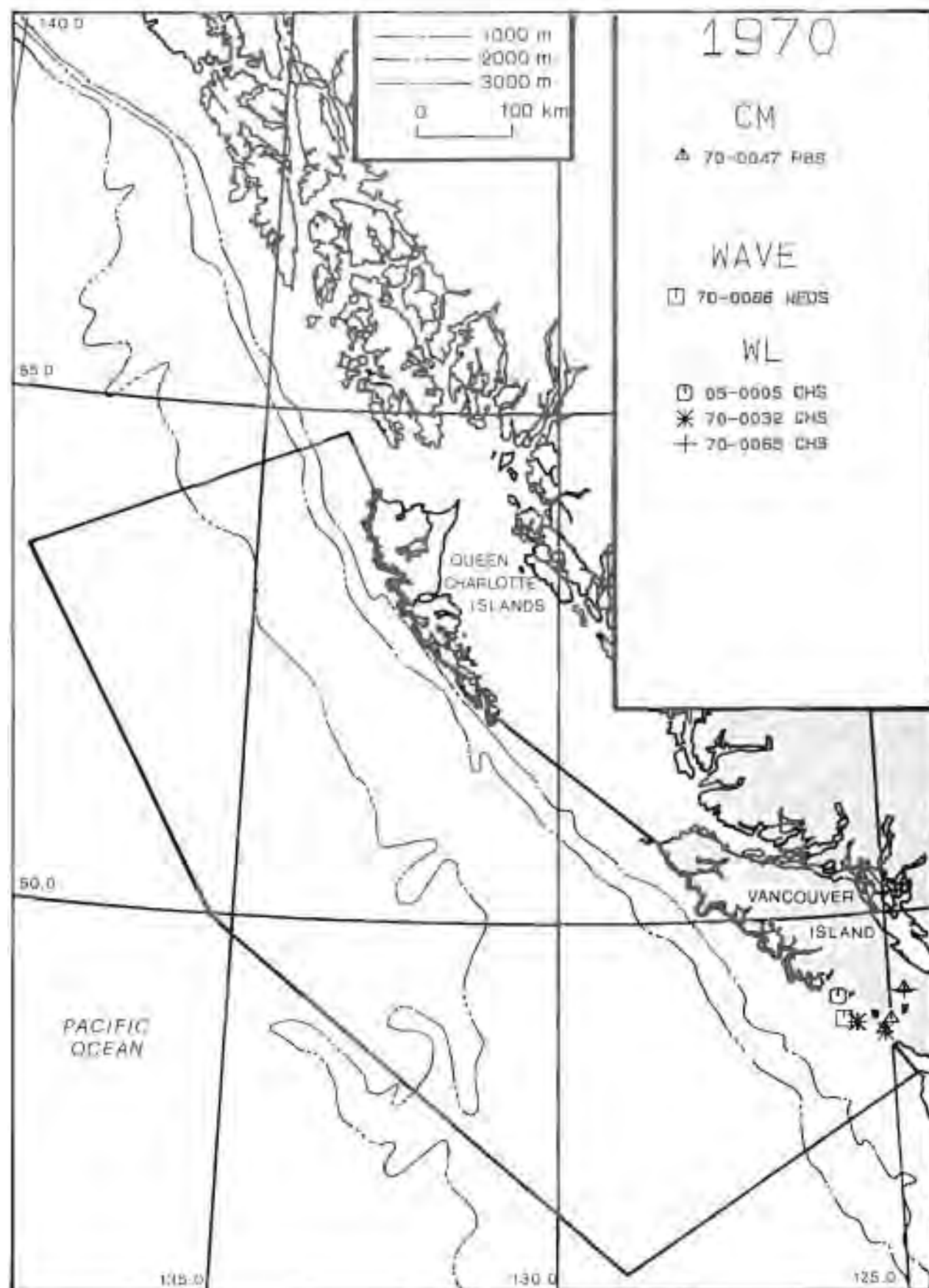


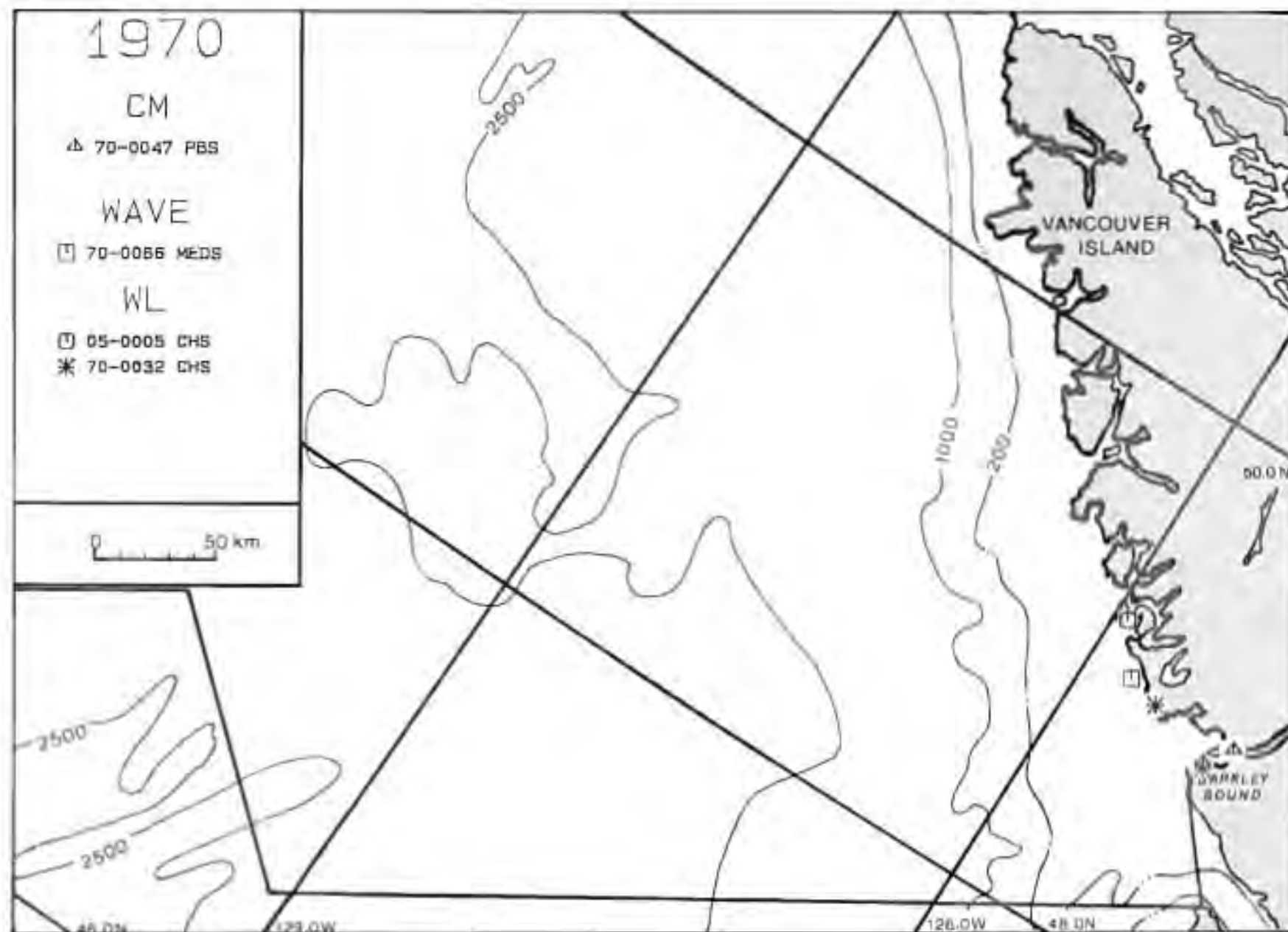


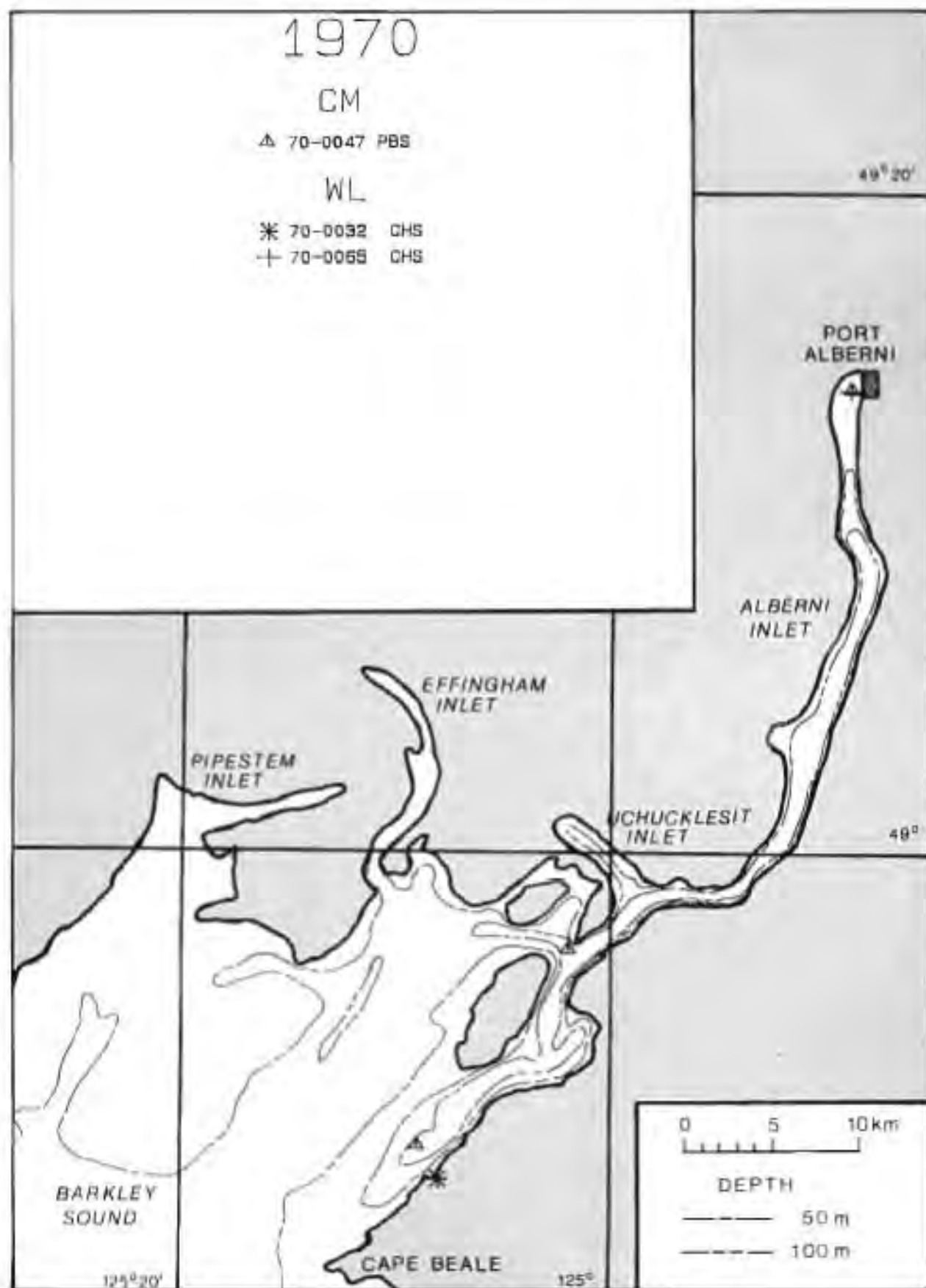


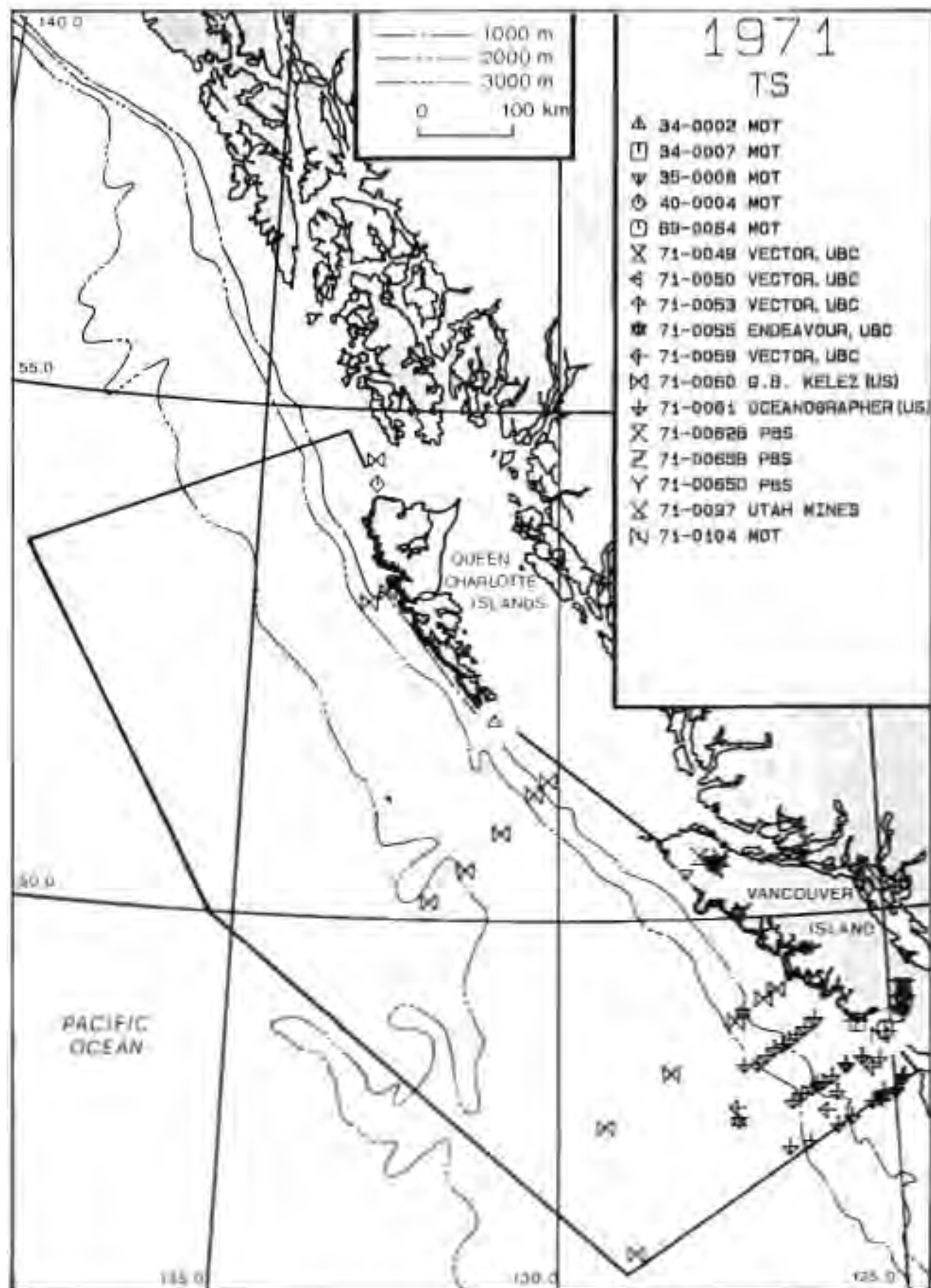


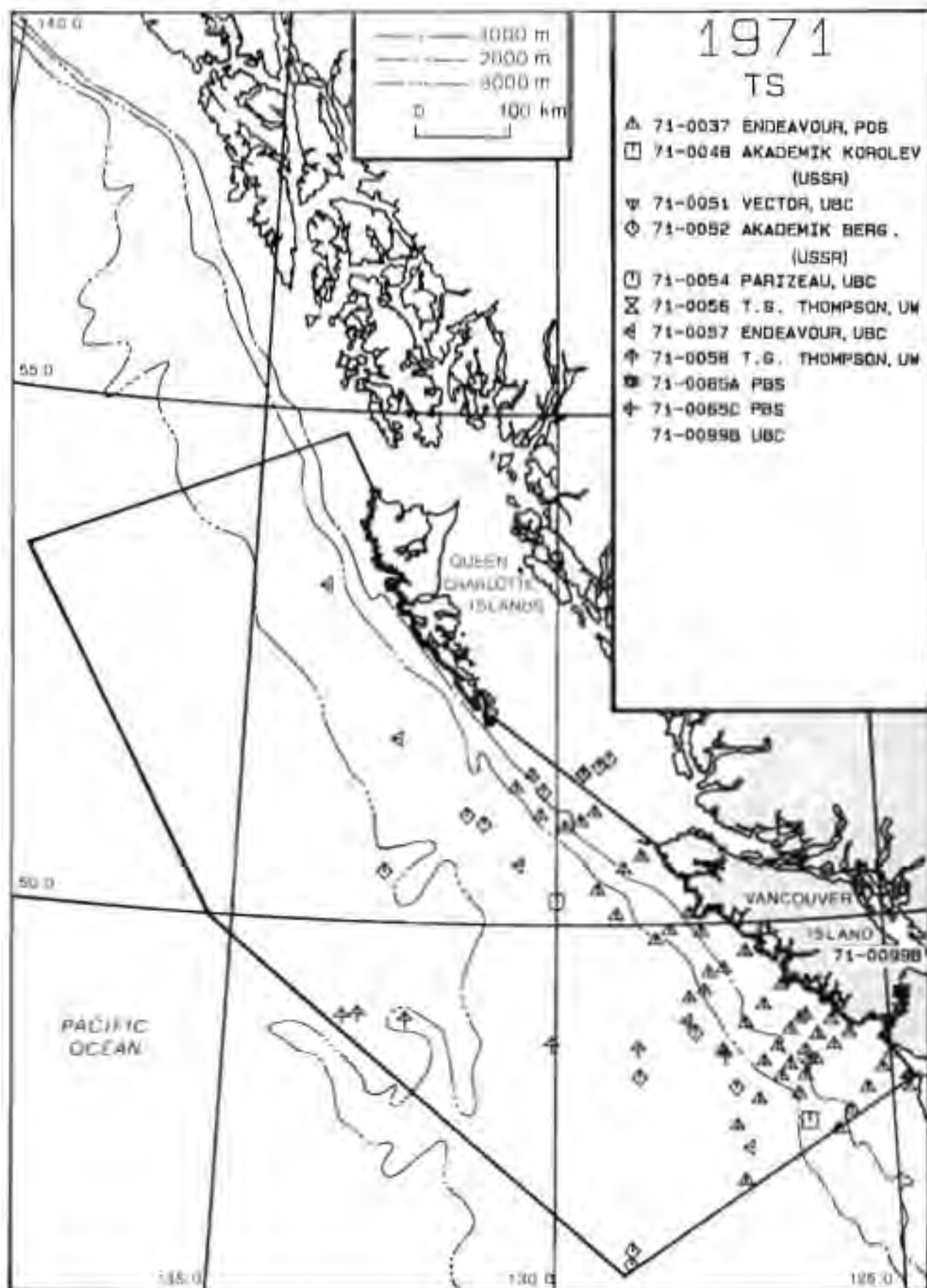








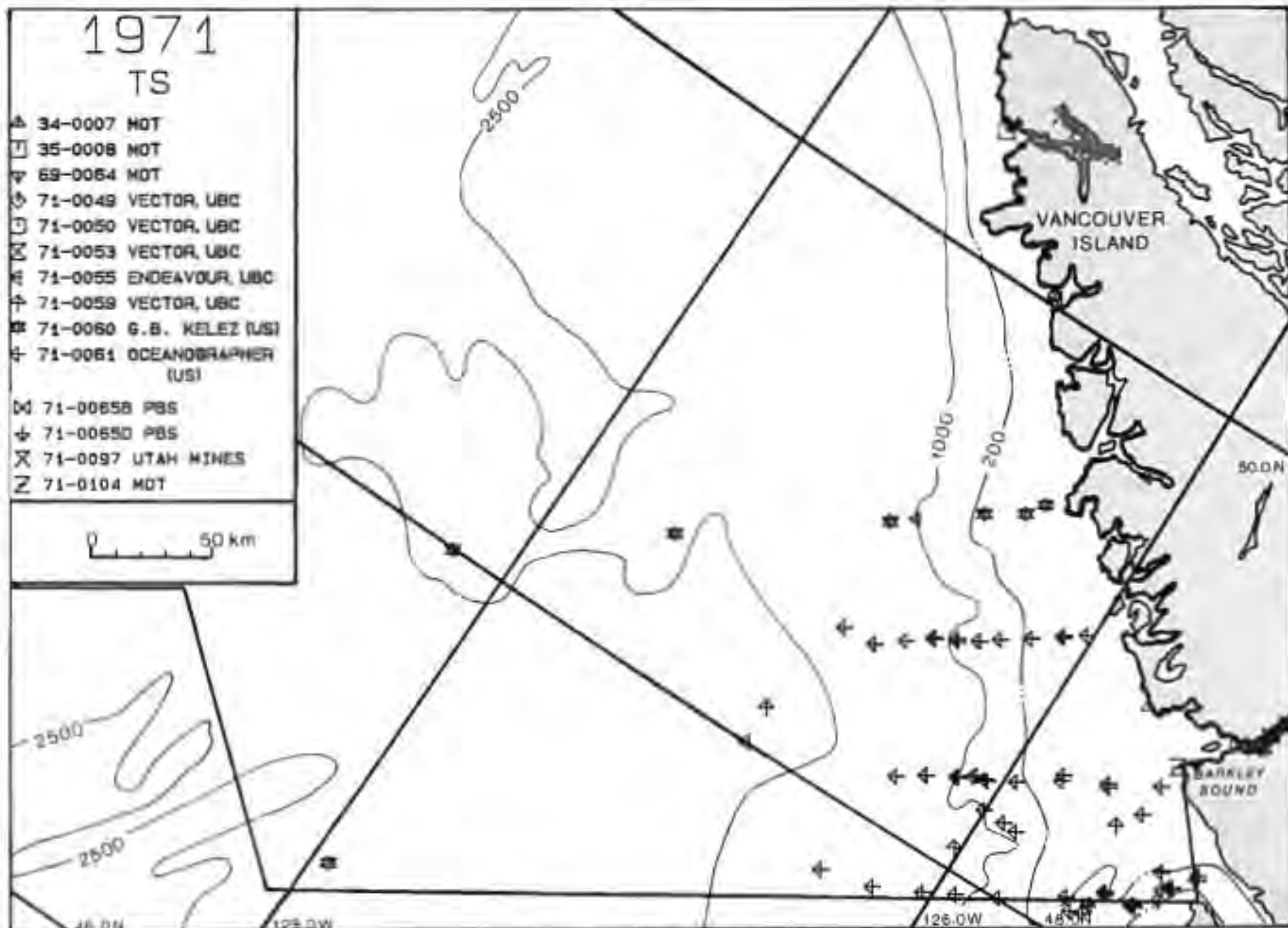




1971
TS

- ▲ 34-0007 MDT
- ▣ 35-0008 MDT
- ▼ 69-0064 MDT
- ⊙ 71-0049 VECTOR, UBC
- 71-0050 VECTOR, UBC
- ⊗ 71-0053 VECTOR, UBC
- ⊞ 71-0055 ENDEAVOUR, UBC
- ⊕ 71-0059 VECTOR, UBC
- ⊞ 71-0060 G.B. KELEZ (US)
- ⊕ 71-0061 OCEANOGRAPHER (US)
- ⊞ 71-0065B PBS
- ⊕ 71-0065D PBS
- ⊗ 71-0097 UTAH MINES
- ⊞ 71-0104 MDT

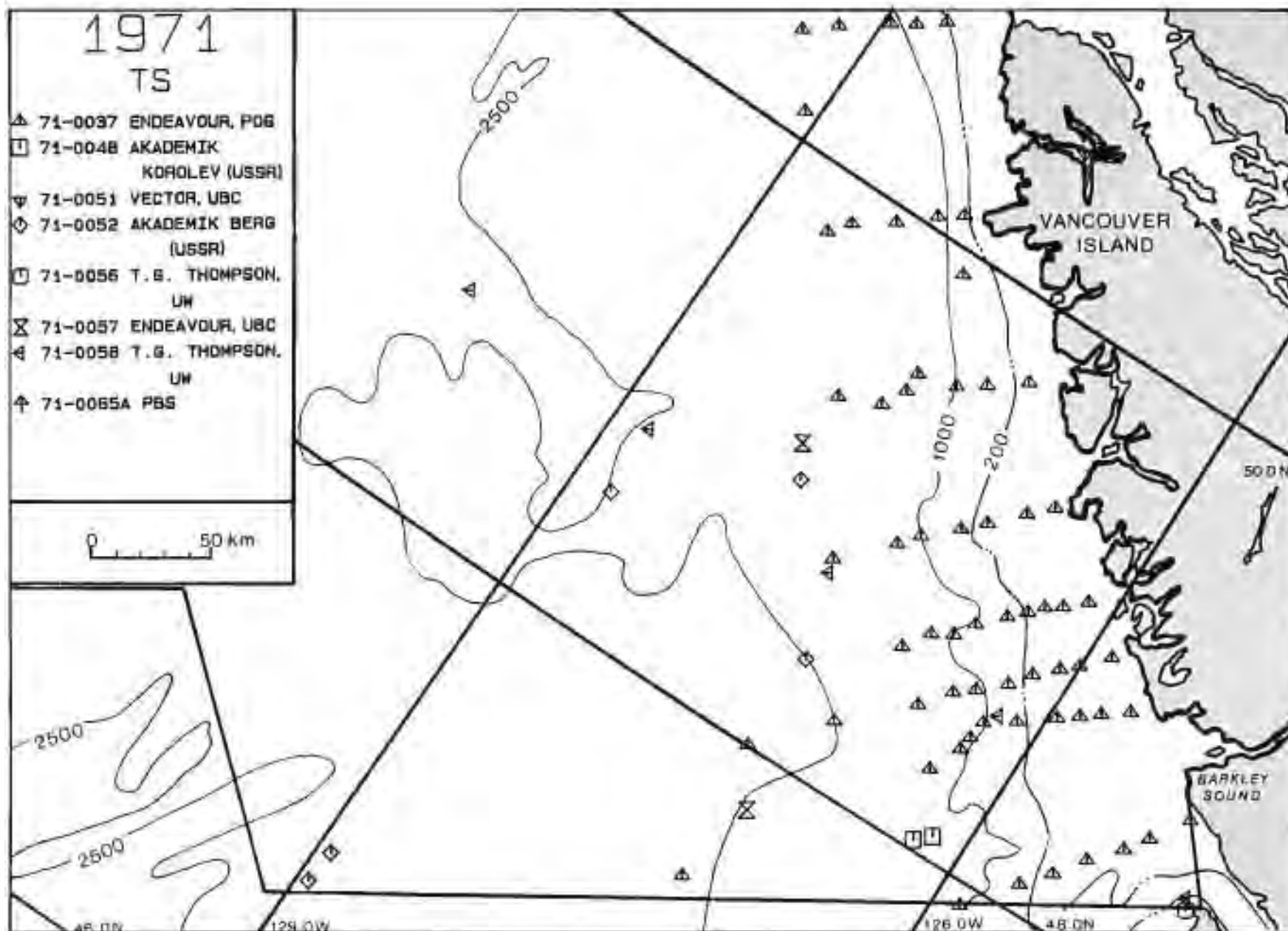
0 50 km

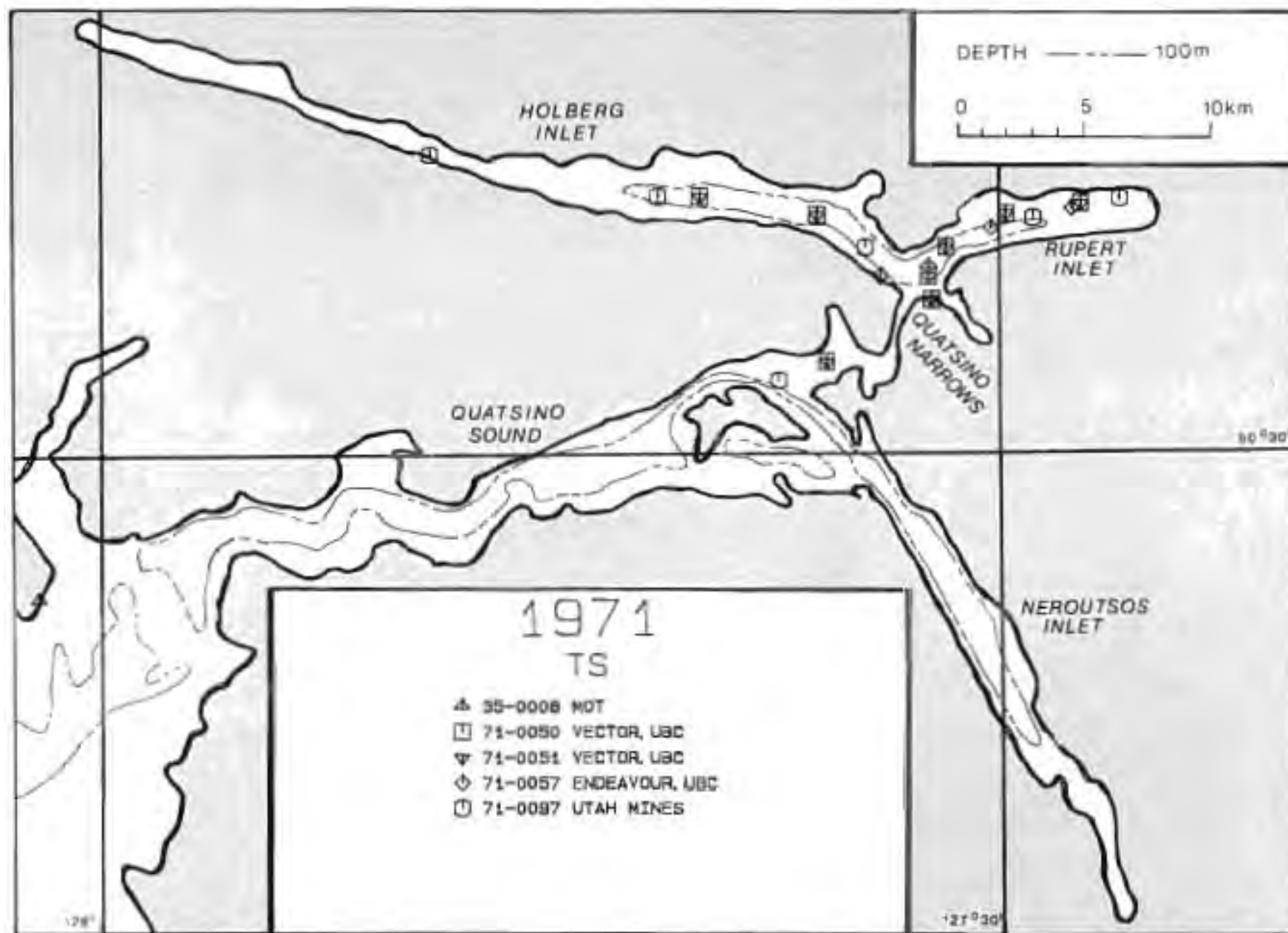


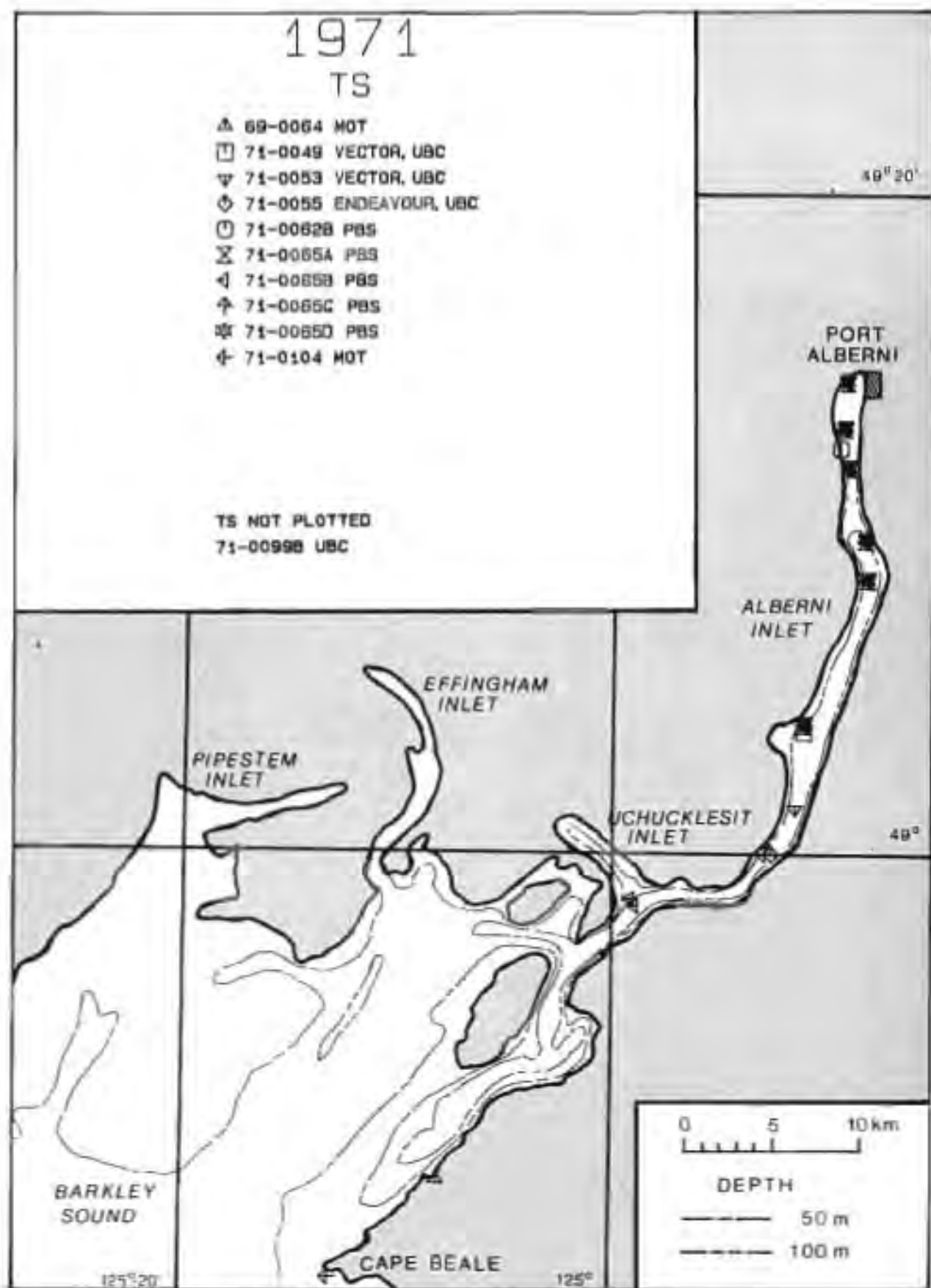
1971
TS

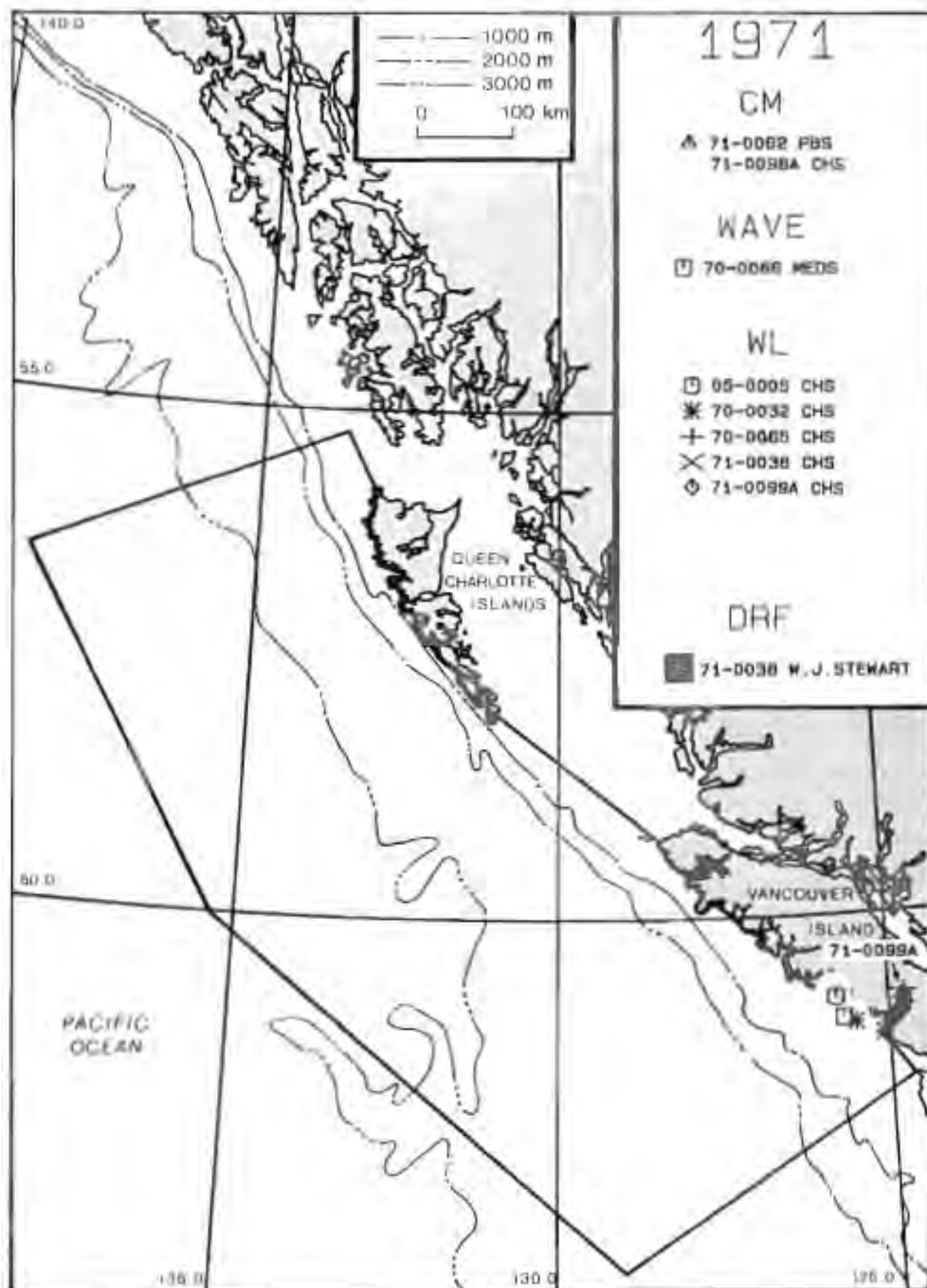
- ▲ 71-0037 ENDEAVOUR, POG
- 71-0048 AKADEMIK
KOROLEV (USSR)
- ▽ 71-0051 VECTOR, UBC
- ◇ 71-0052 AKADEMIK BERG
(USSR)
- ▢ 71-0056 T.G. THOMPSON,
UW
- ⊗ 71-0057 ENDEAVOUR, UBC
- ◀ 71-0058 T.G. THOMPSON,
UW
- ⬆ 71-0065A PBS

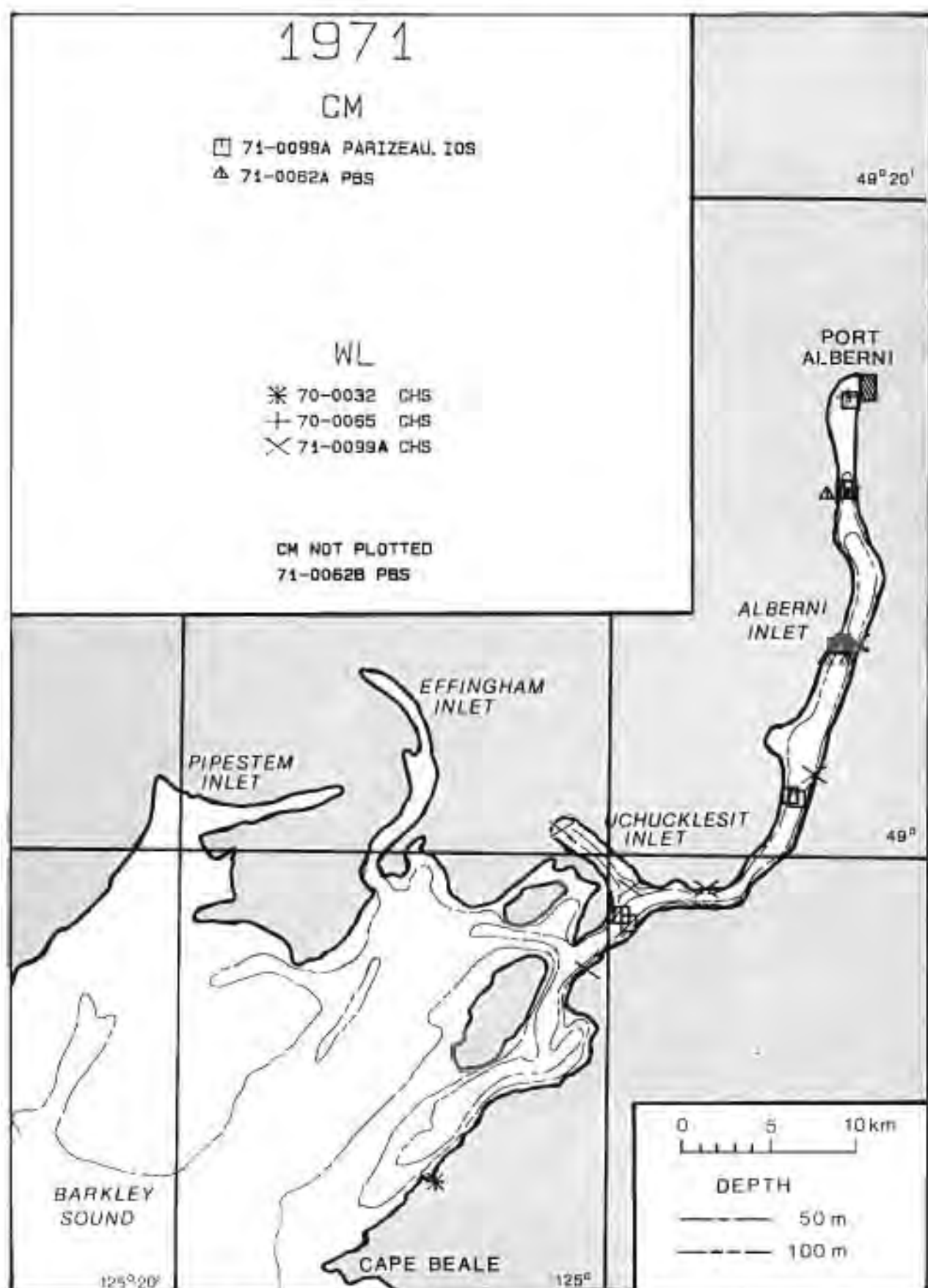
0 50 km

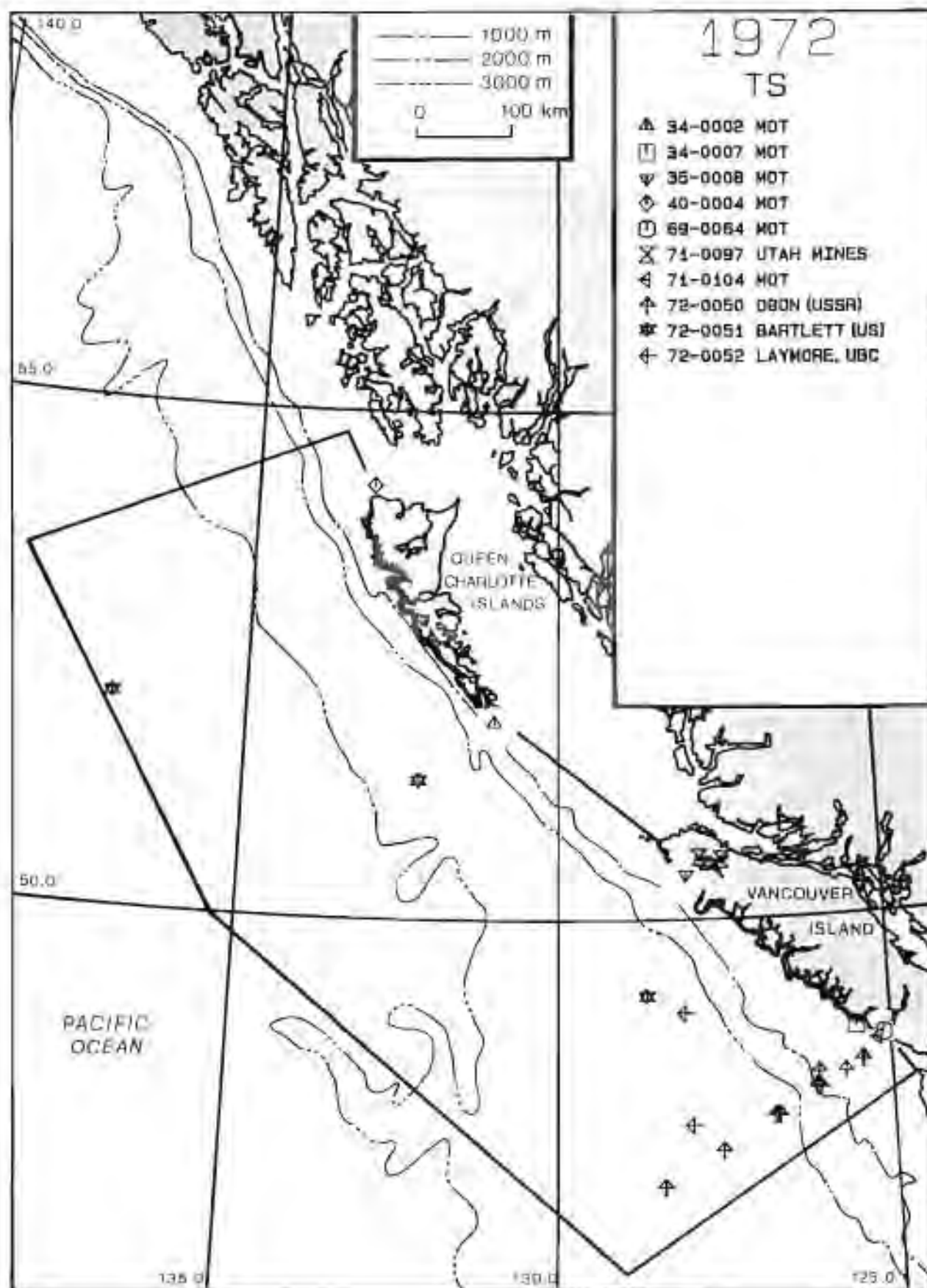










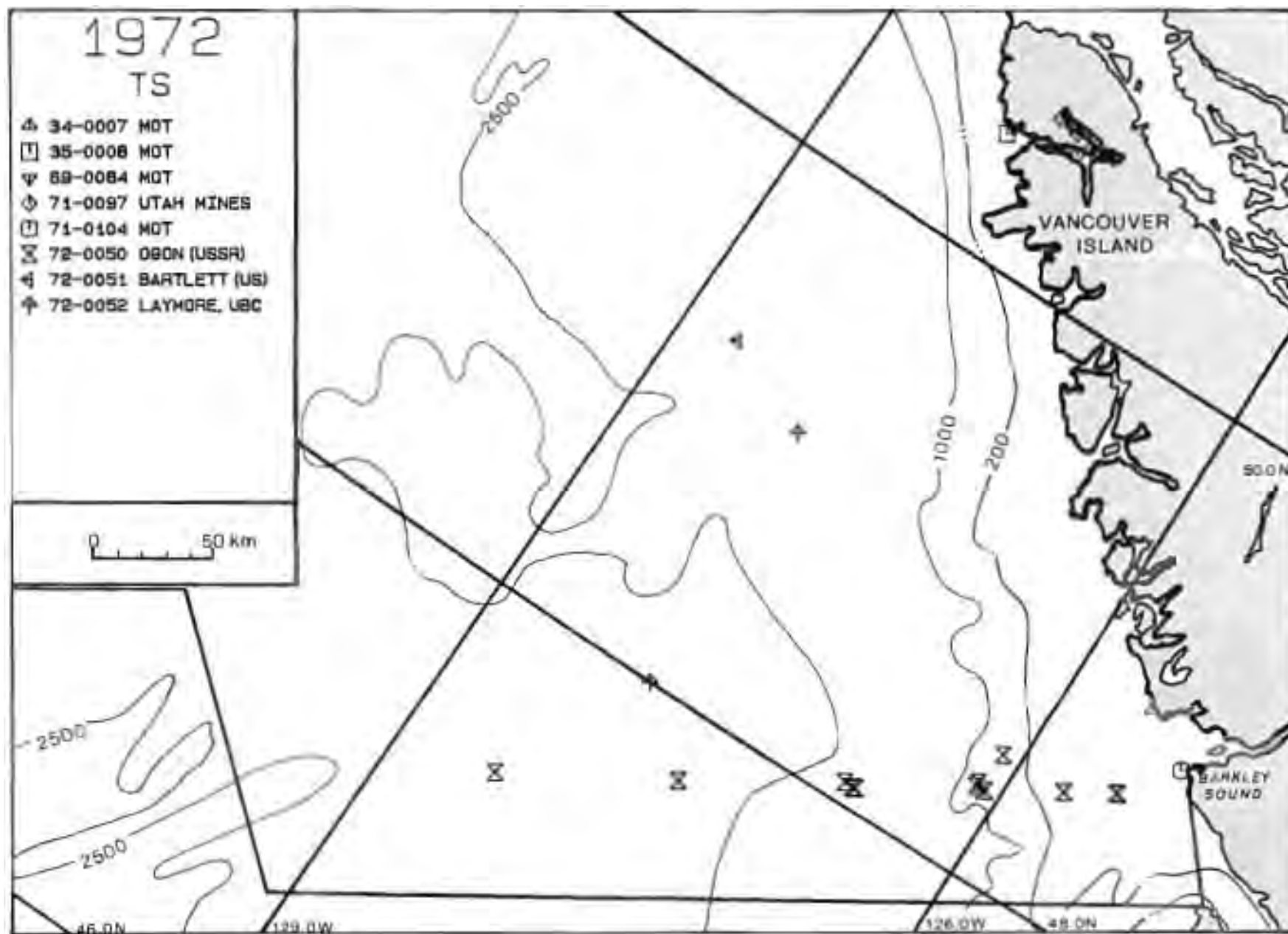


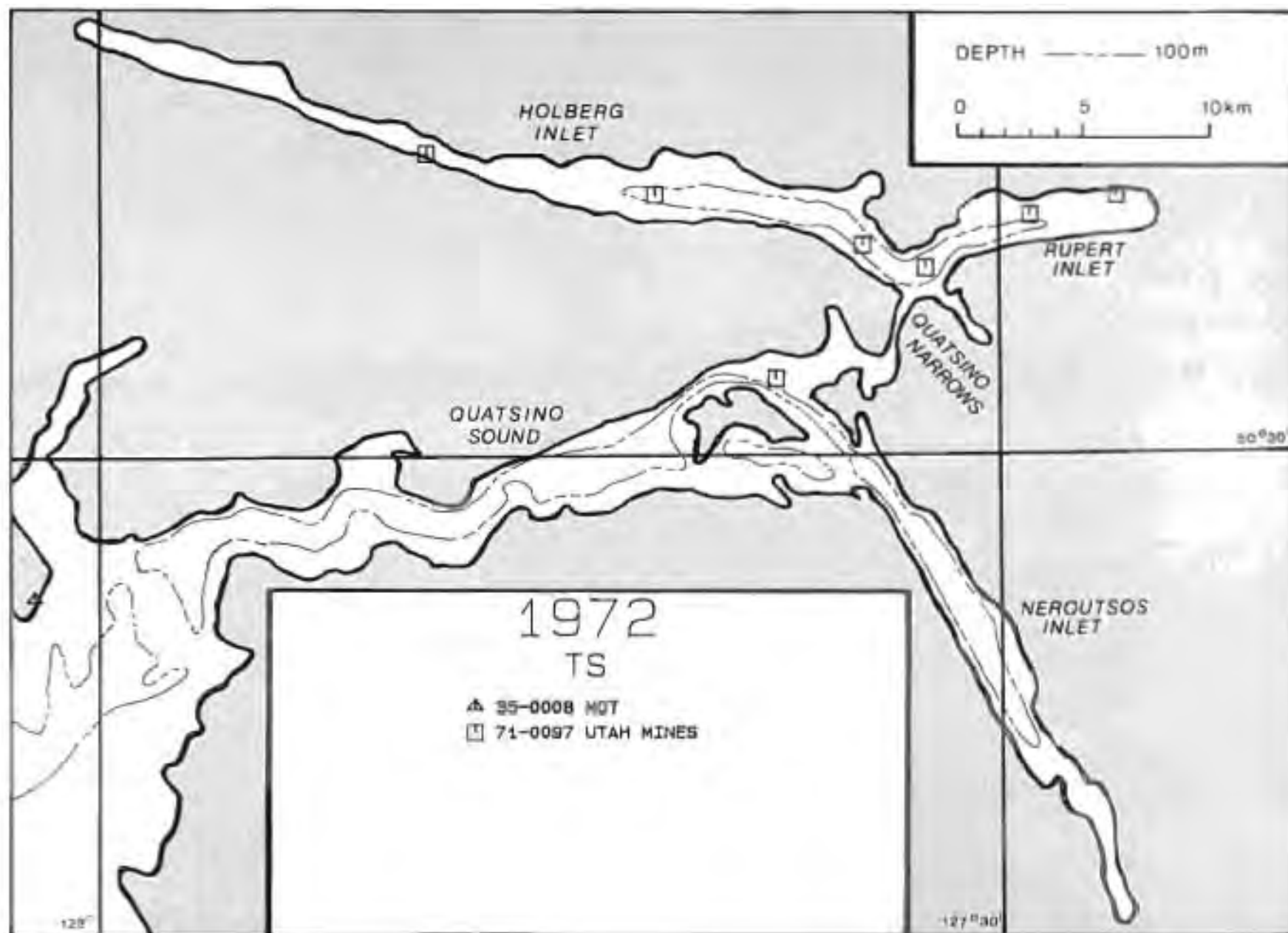
1972

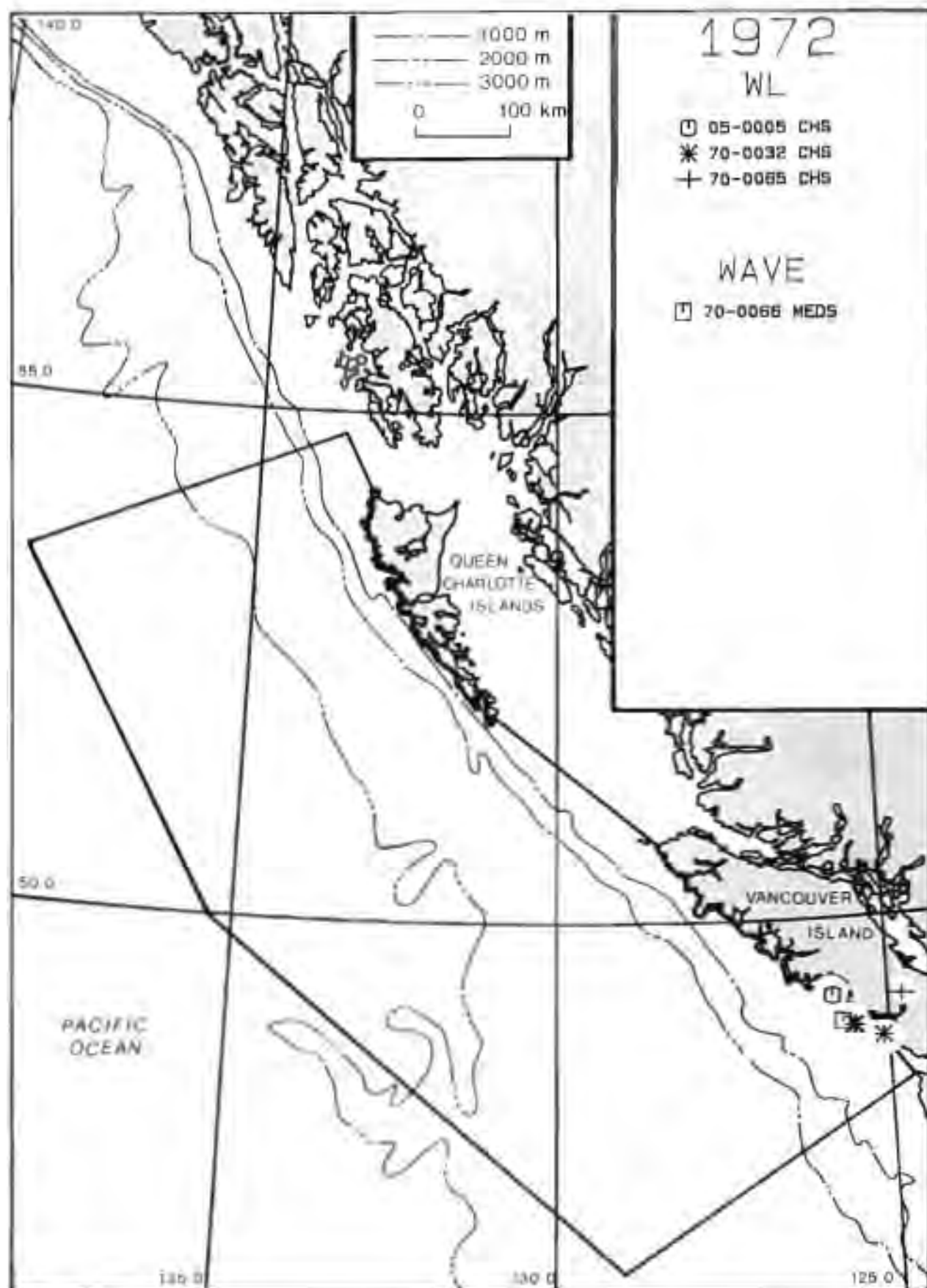
TS

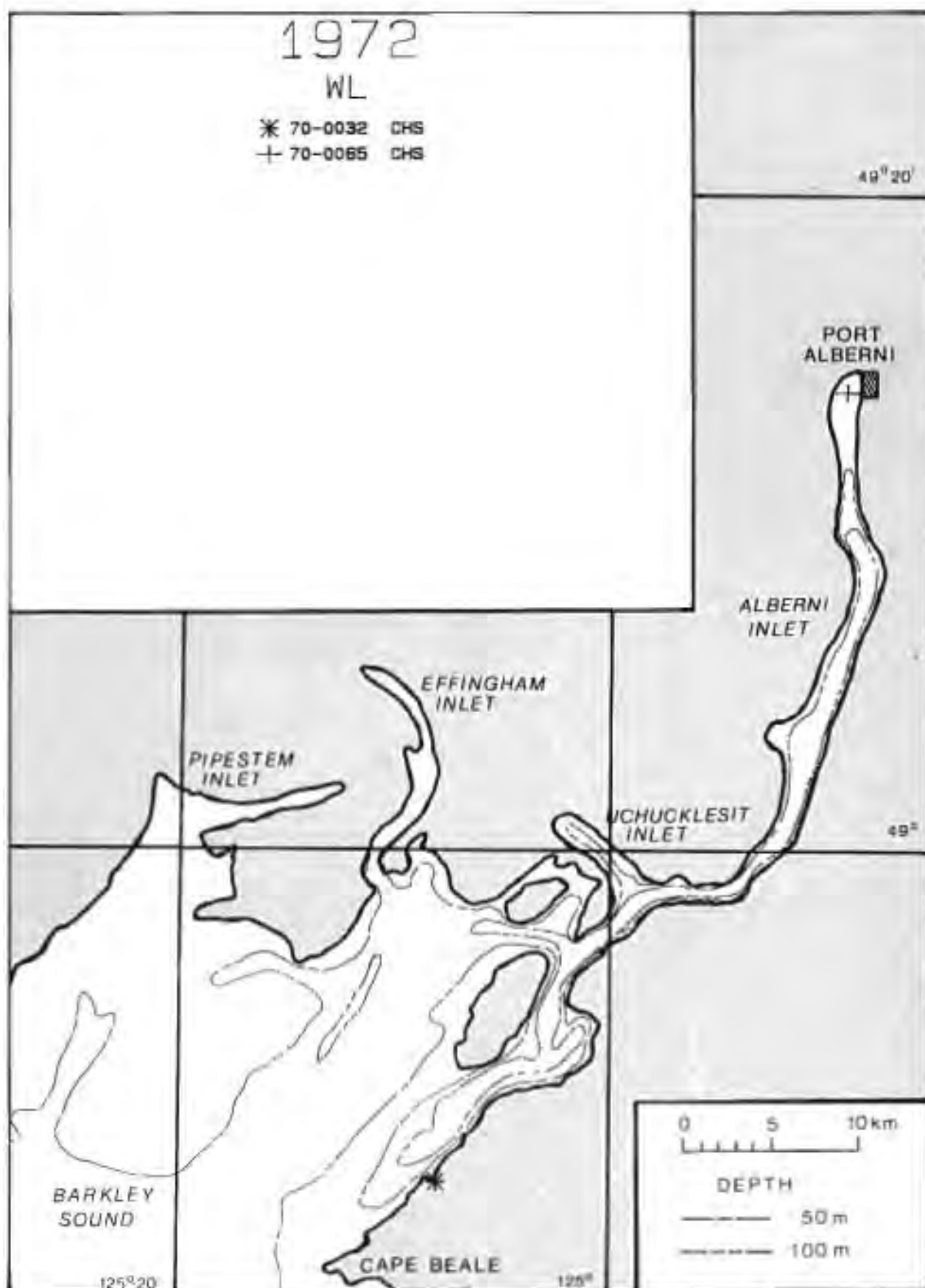
- △ 34-0007 MOT
- 35-0008 MOT
- ▽ 69-0084 MOT
- ◇ 71-0097 UTAH MINES
- ▢ 71-0104 MOT
- ⊗ 72-0050 OROON (USSR)
- ✦ 72-0051 BARTLETT (US)
- ✧ 72-0052 LAYMORE, UBC

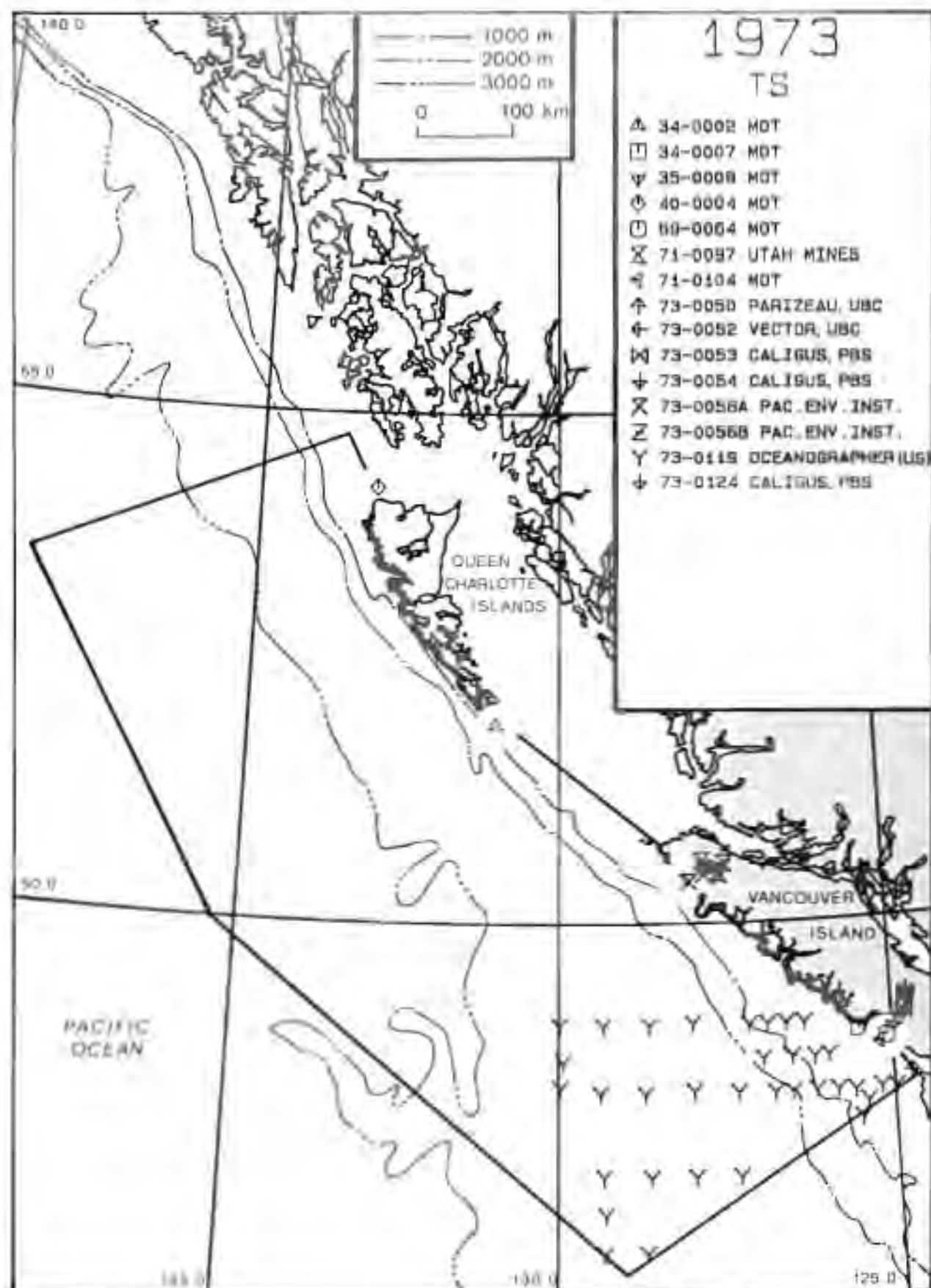
0 50 km









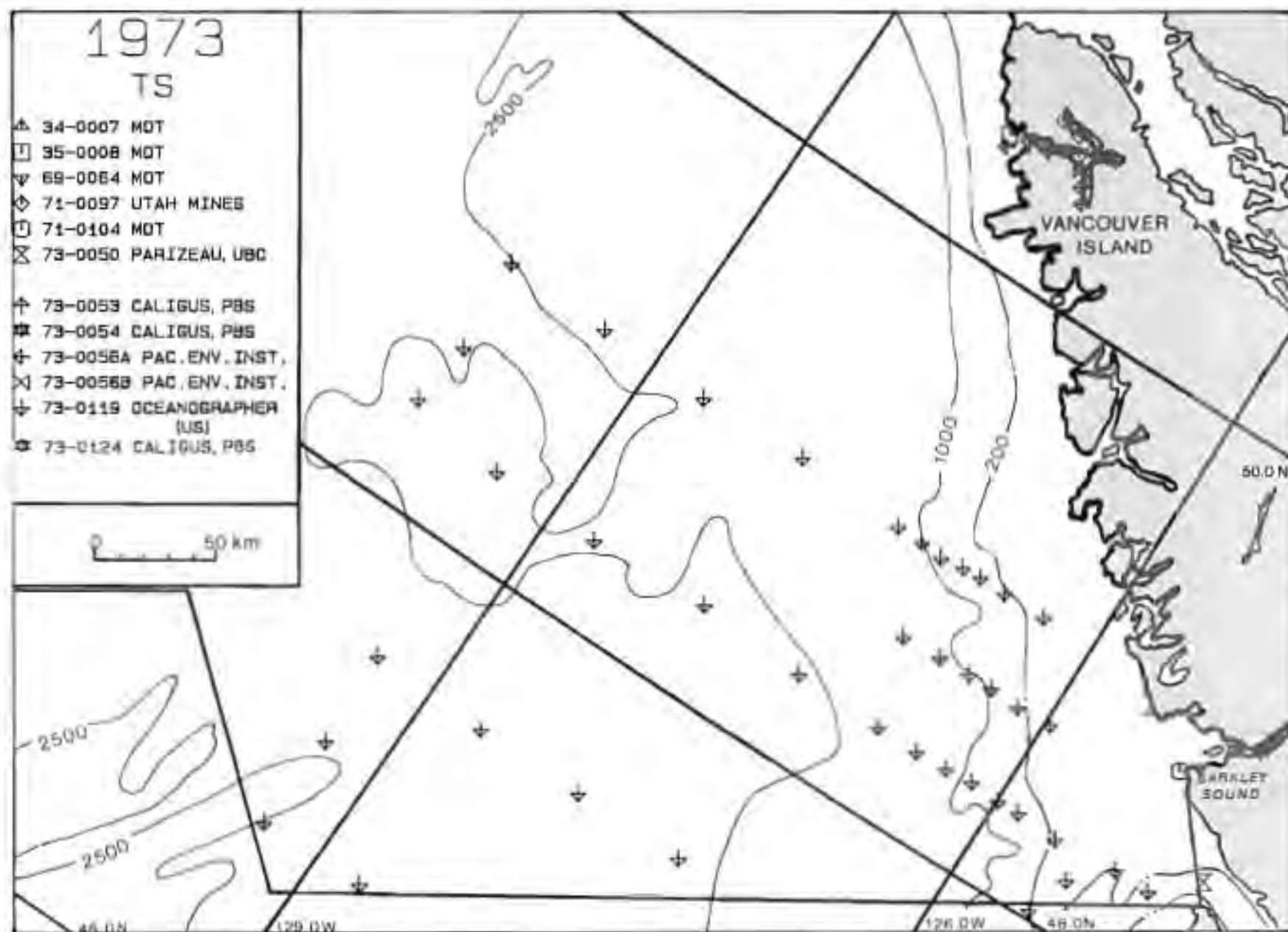


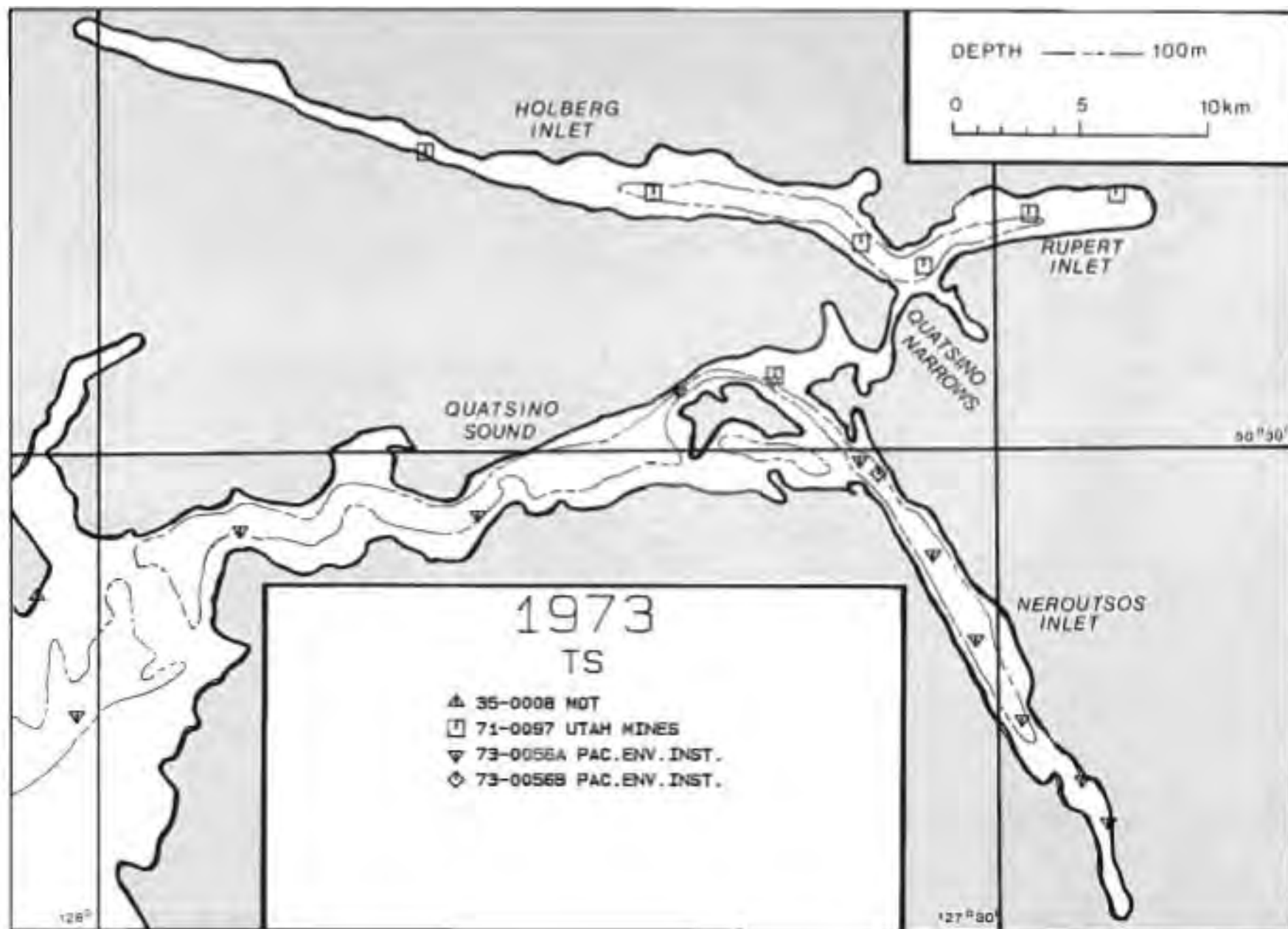
1973
TS

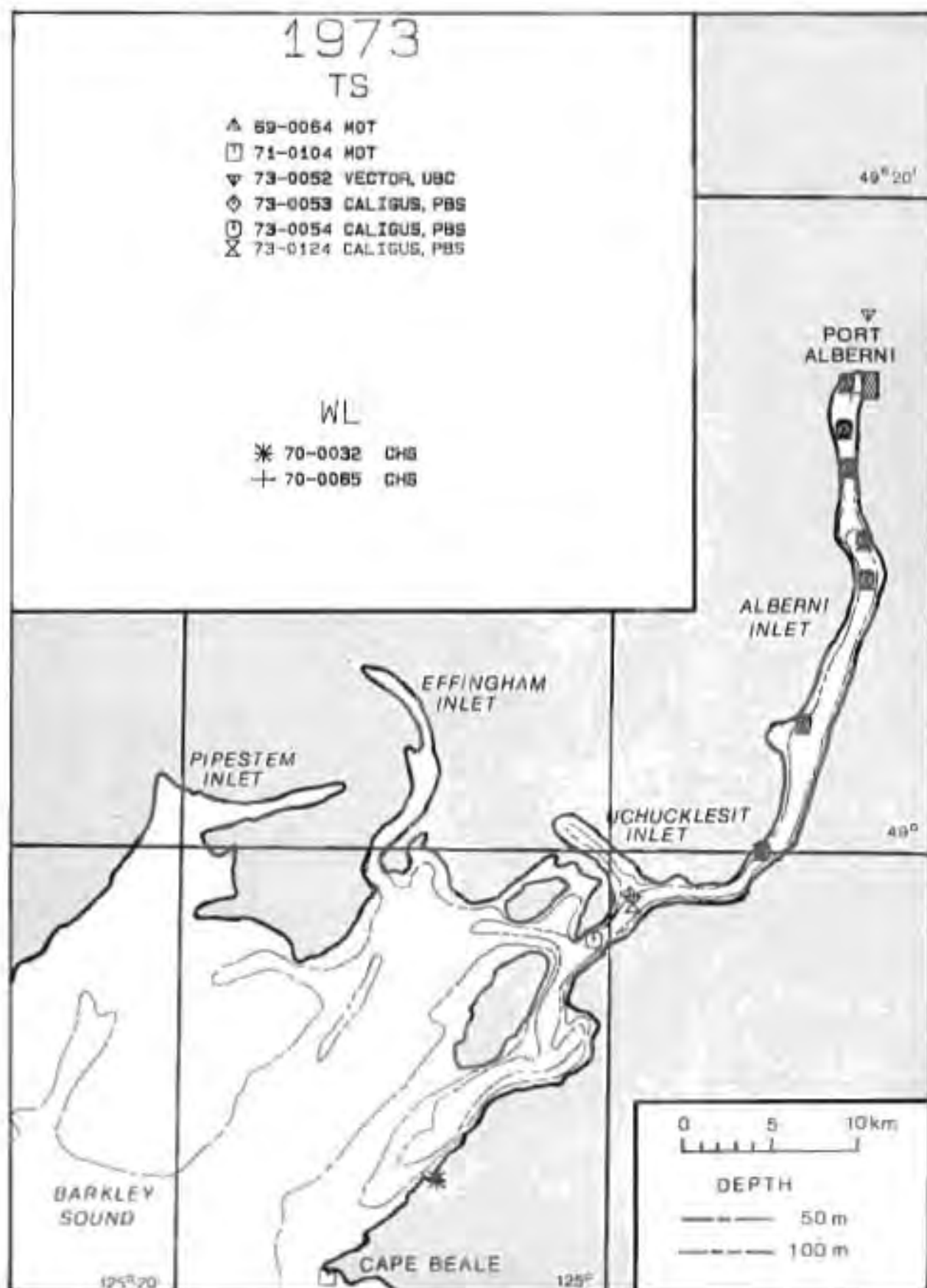
- ▲ 34-0007 MOT
- 35-0008 MOT
- ▼ 69-0064 MOT
- ◇ 71-0097 UTAH MINES
- 71-0104 MOT
- ⊗ 73-0050 PARIZEAU, UBC

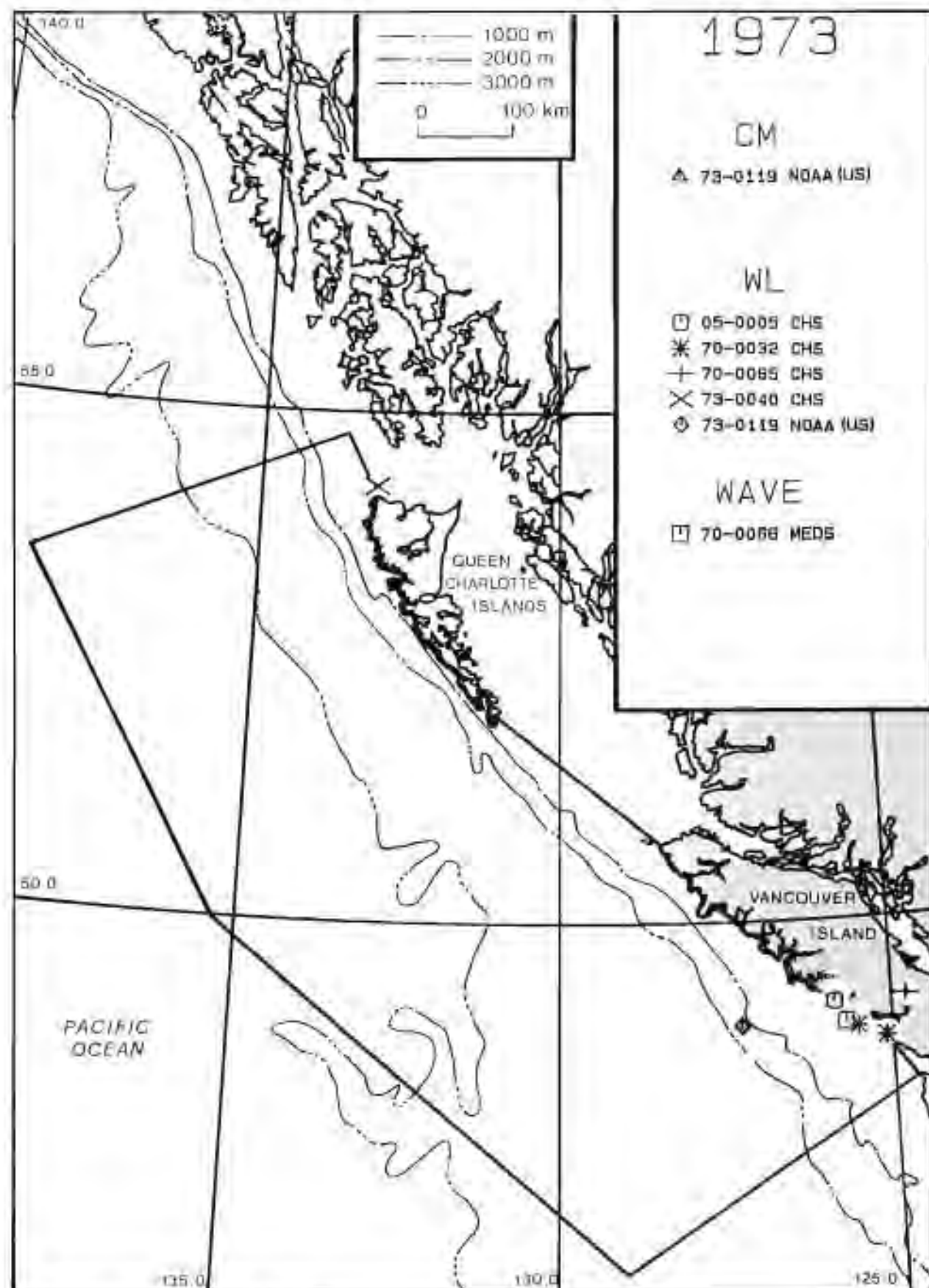
- ✚ 73-0053 CALIGUS, PBS
- ✚ 73-0054 CALIGUS, PBS
- ✚ 73-0056A PAC. ENV. INST.
- ✚ 73-0056B PAC. ENV. INST.
- ✚ 73-0119 OCEANOGRAPHER (US)
- ✚ 73-0124 CALIGUS, PBS

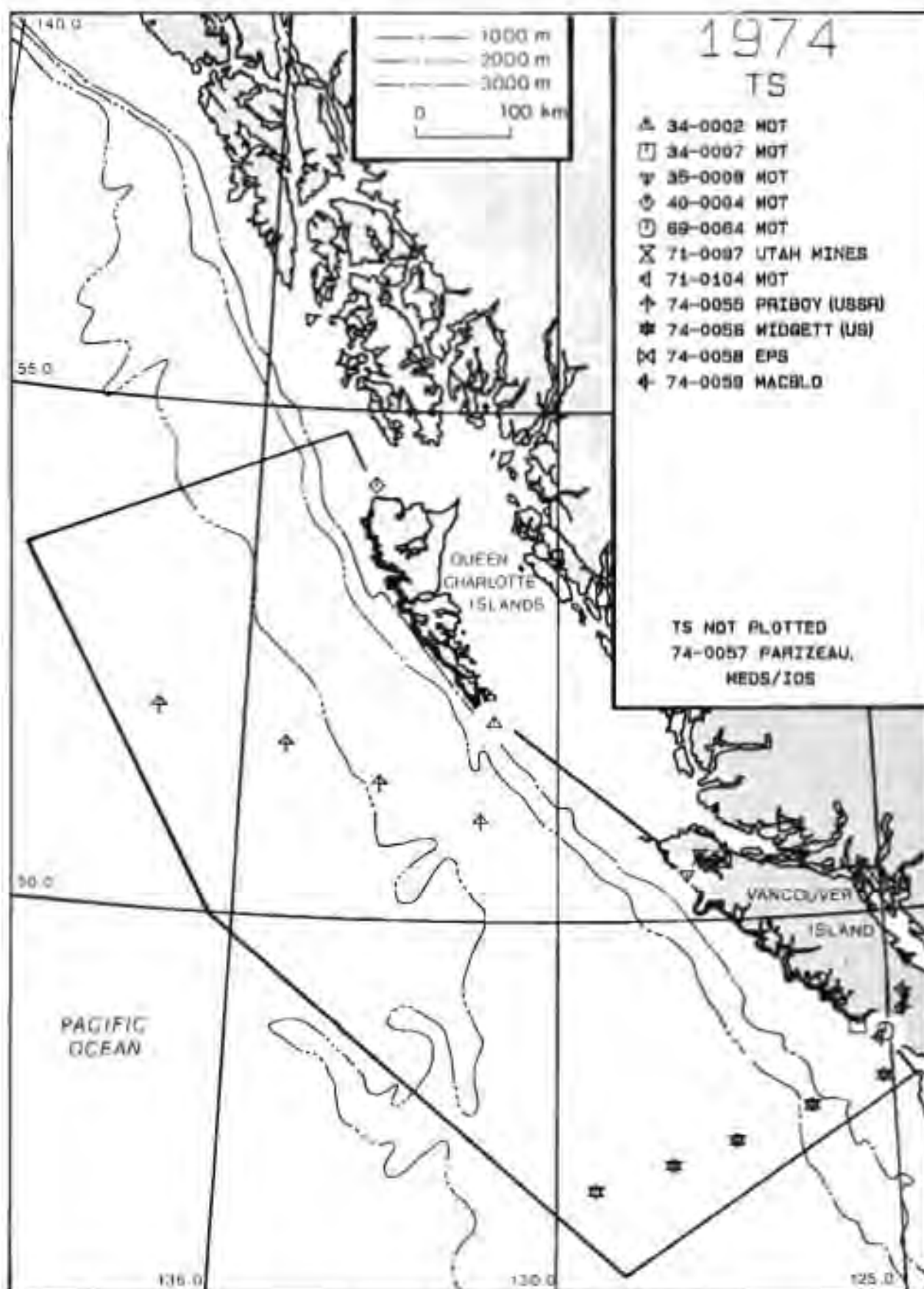
50 km







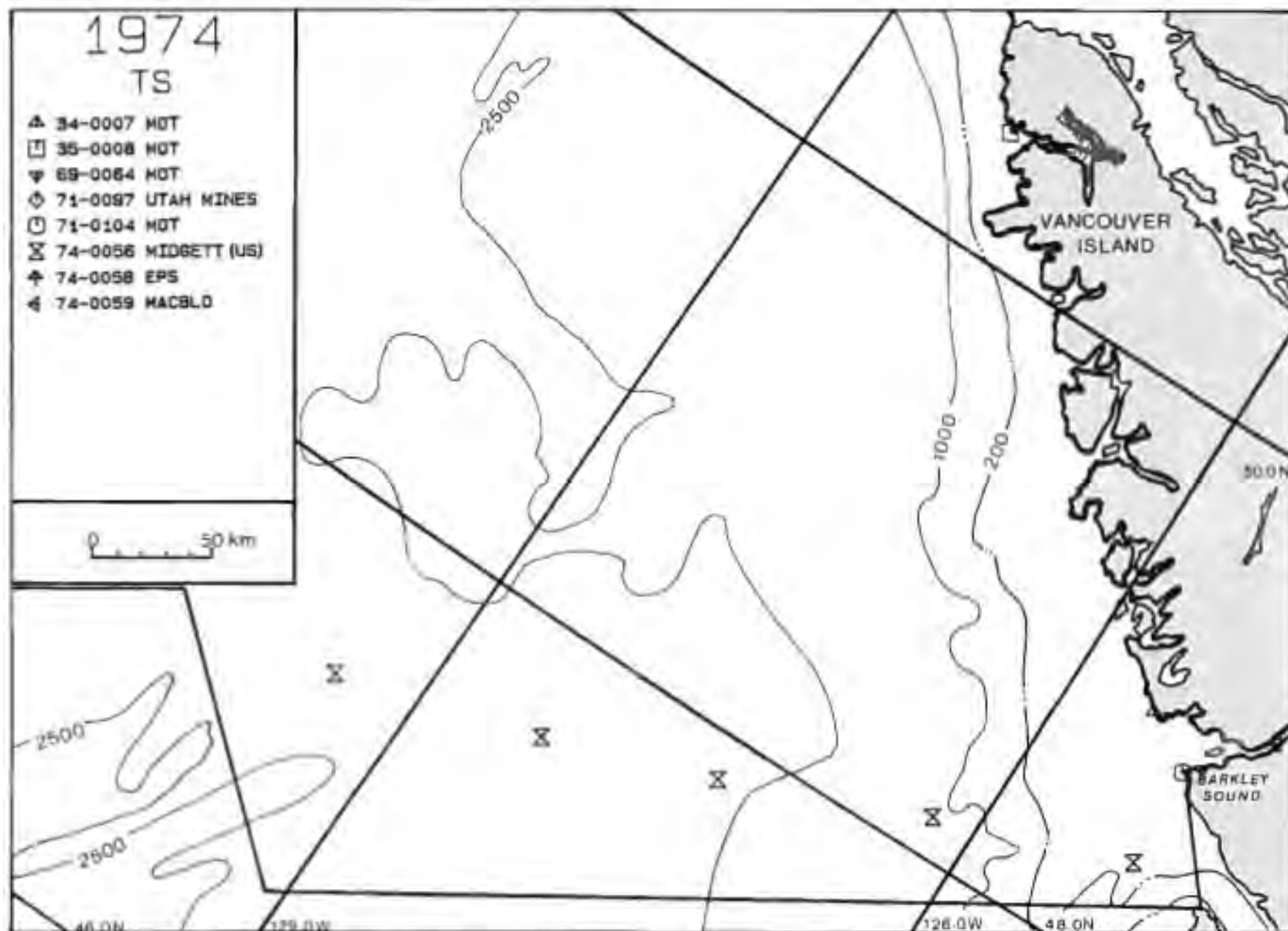


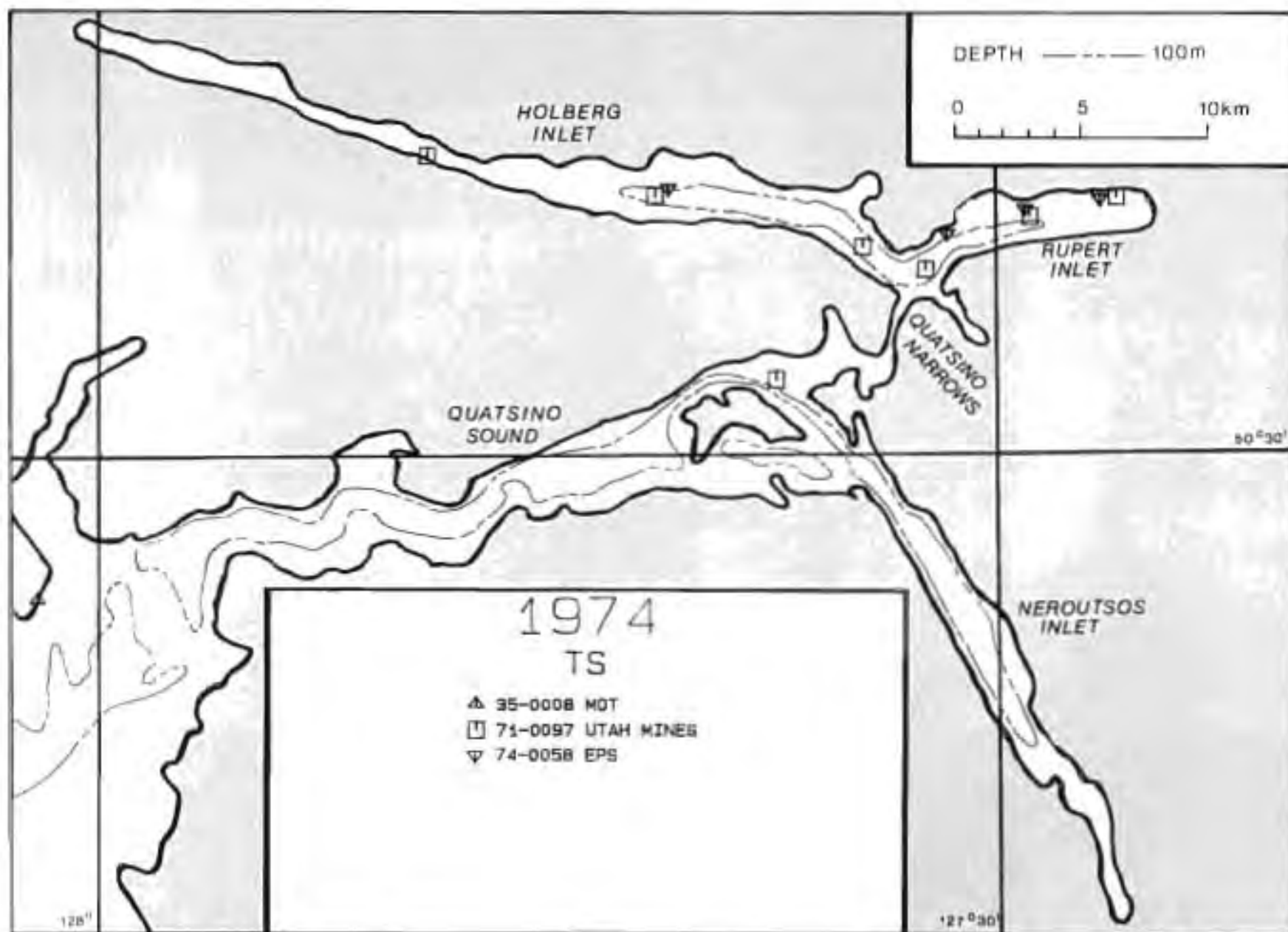


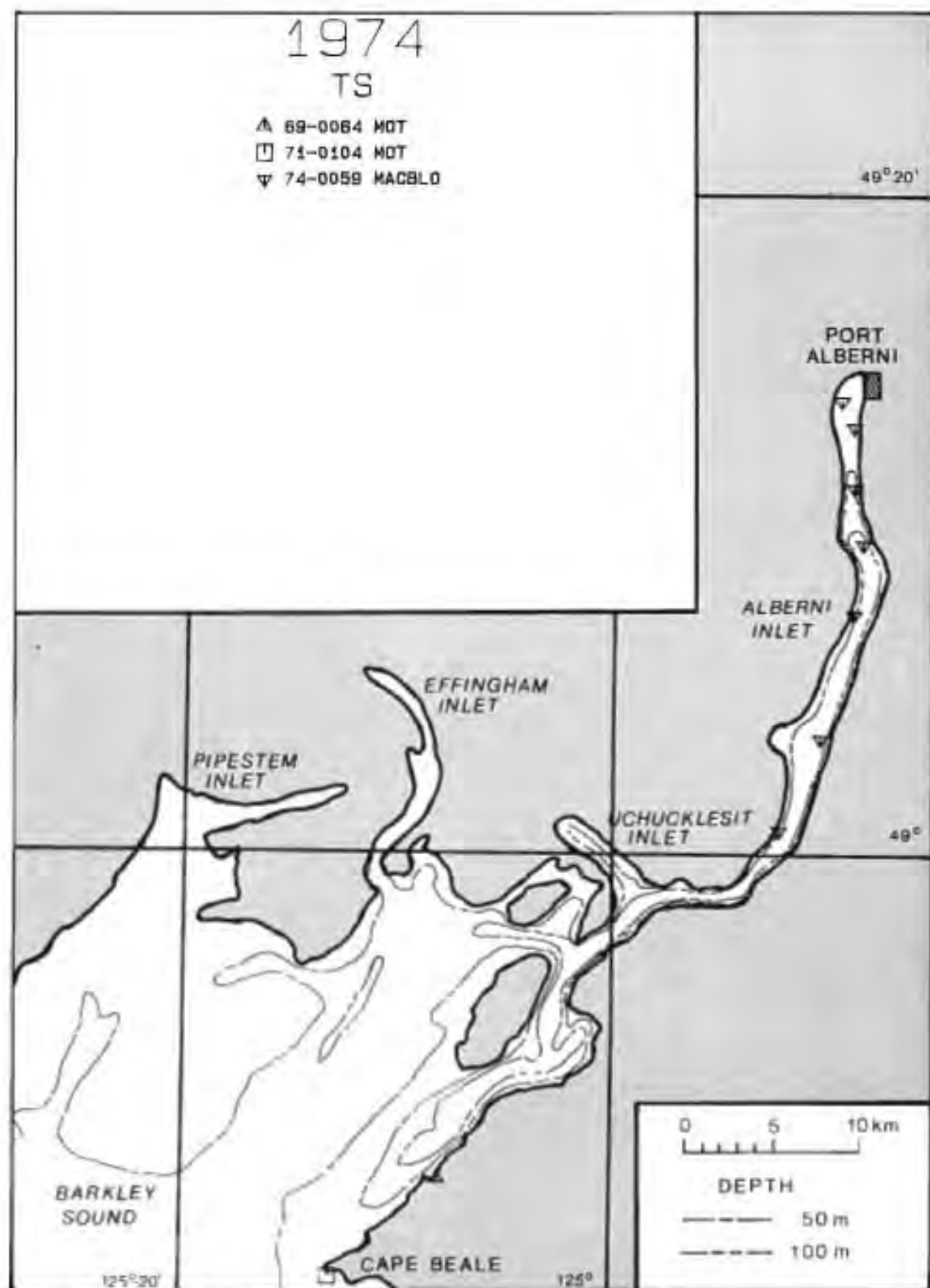
1974
TS

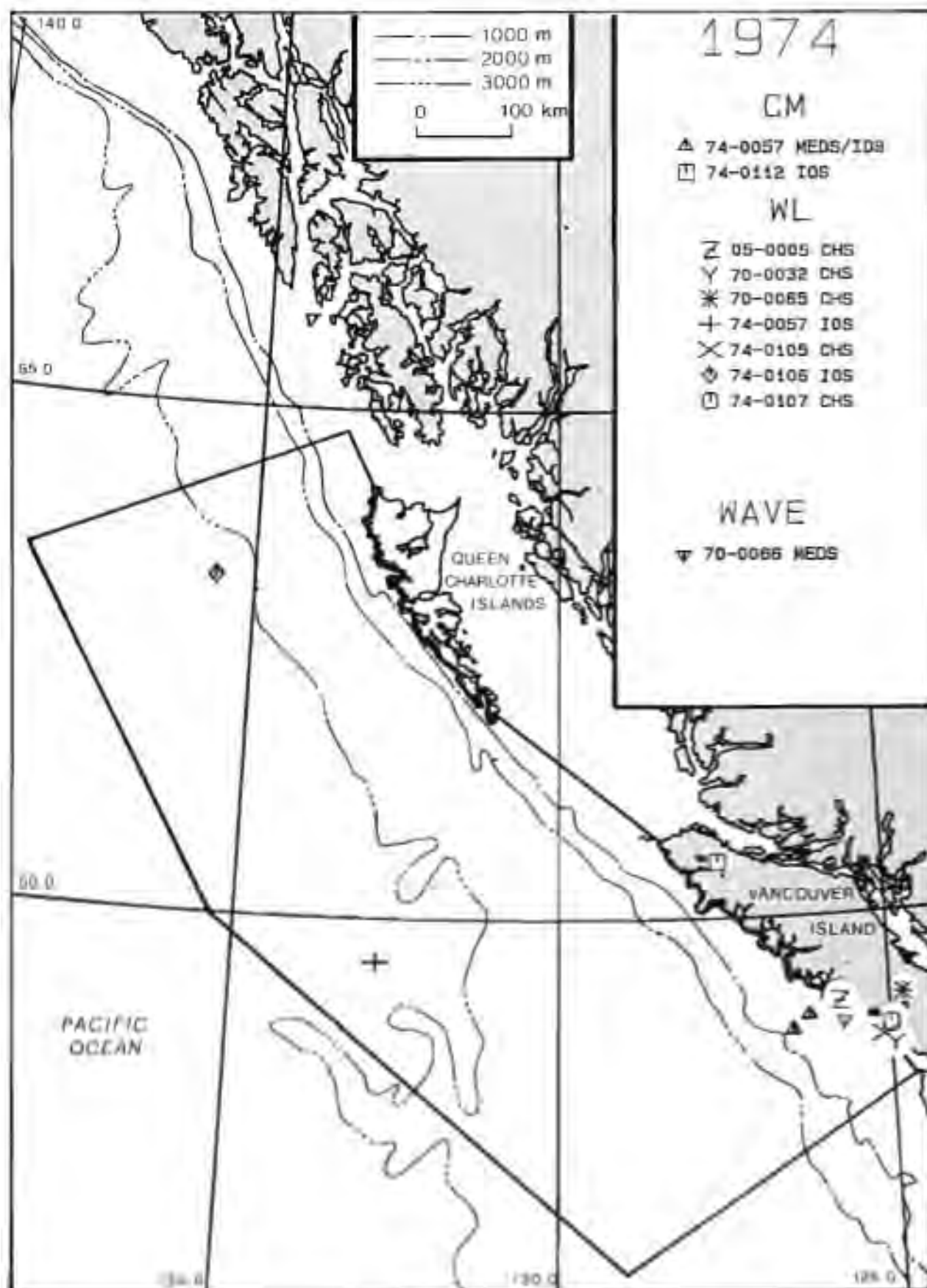
- ▲ 34-0007 MDT
- 35-0008 MDT
- ▼ 69-0064 MDT
- ◇ 71-0097 UTAH MINES
- 71-0104 MDT
- ⊗ 74-0056 MIDGETT (US)
- ✦ 74-0058 EPS
- ✧ 74-0059 MACBLD

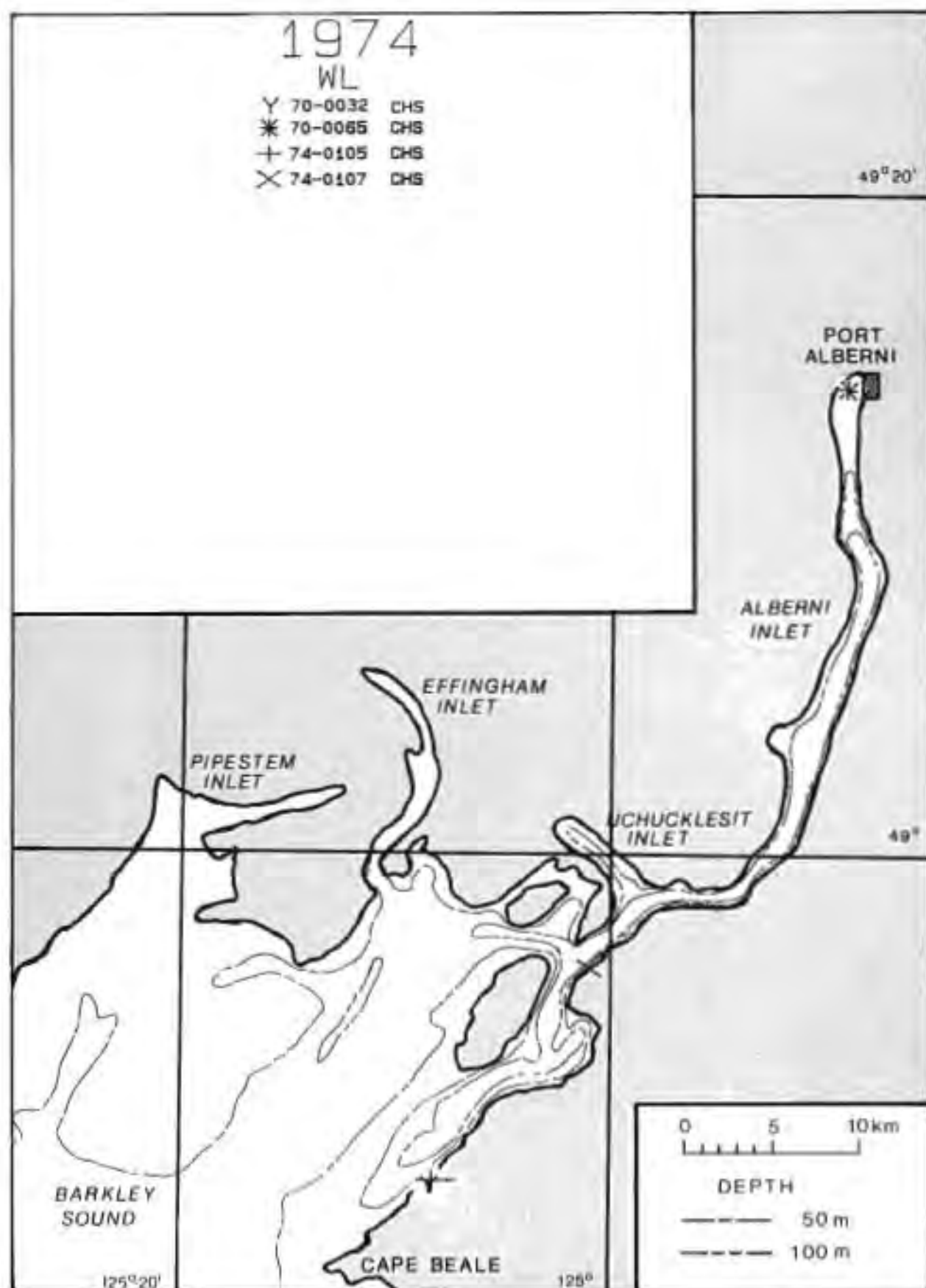
0 50 km

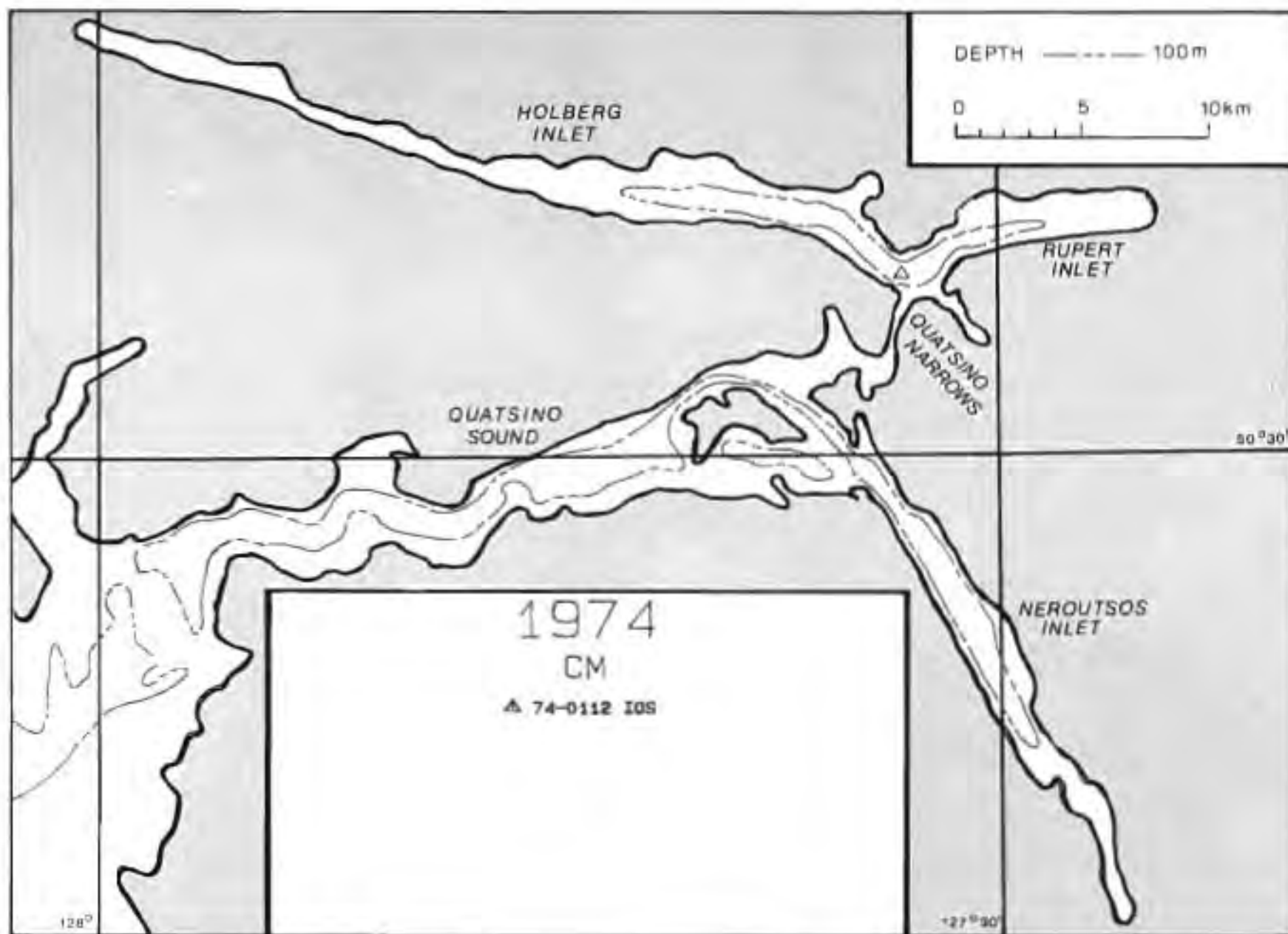


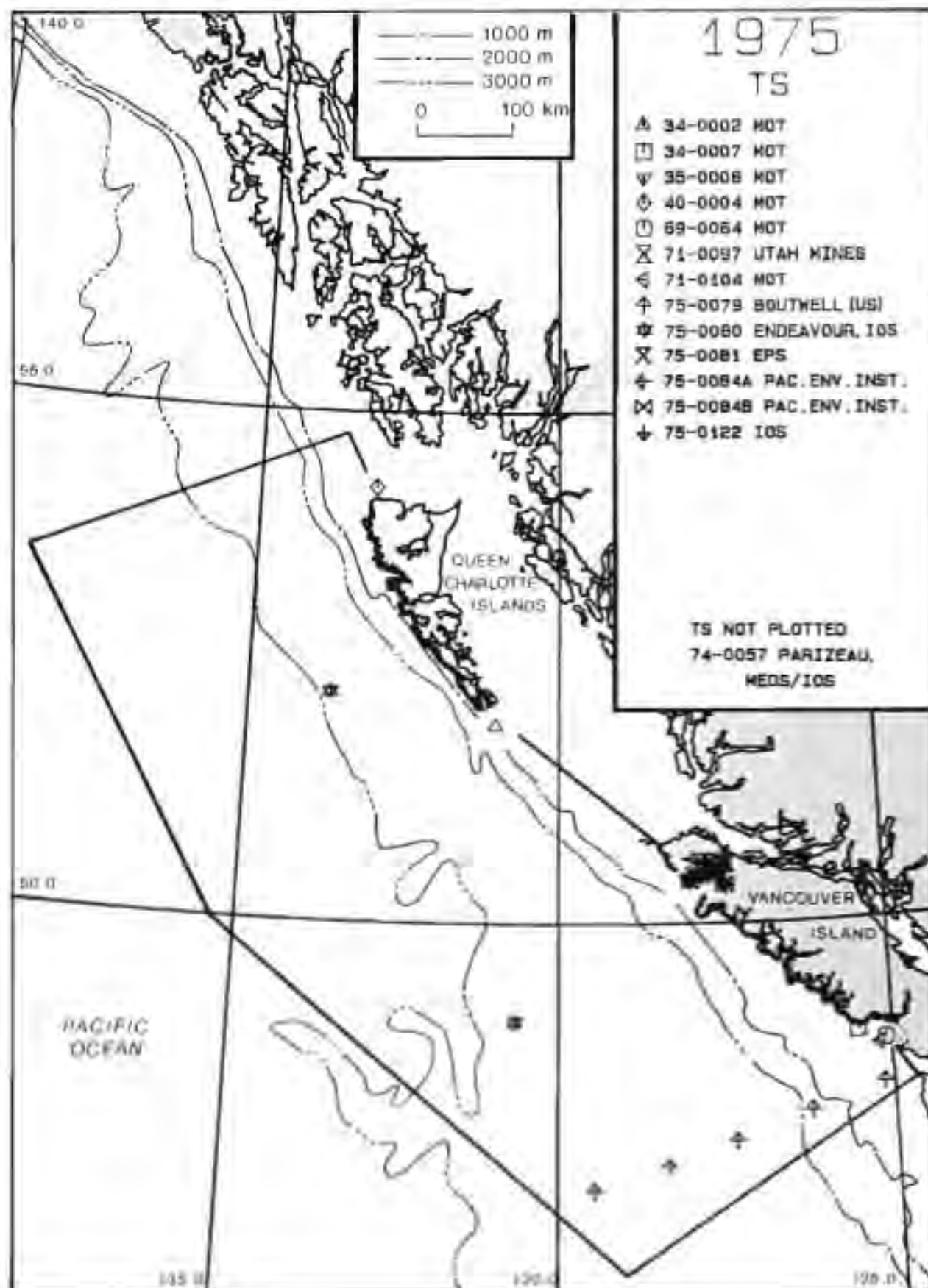


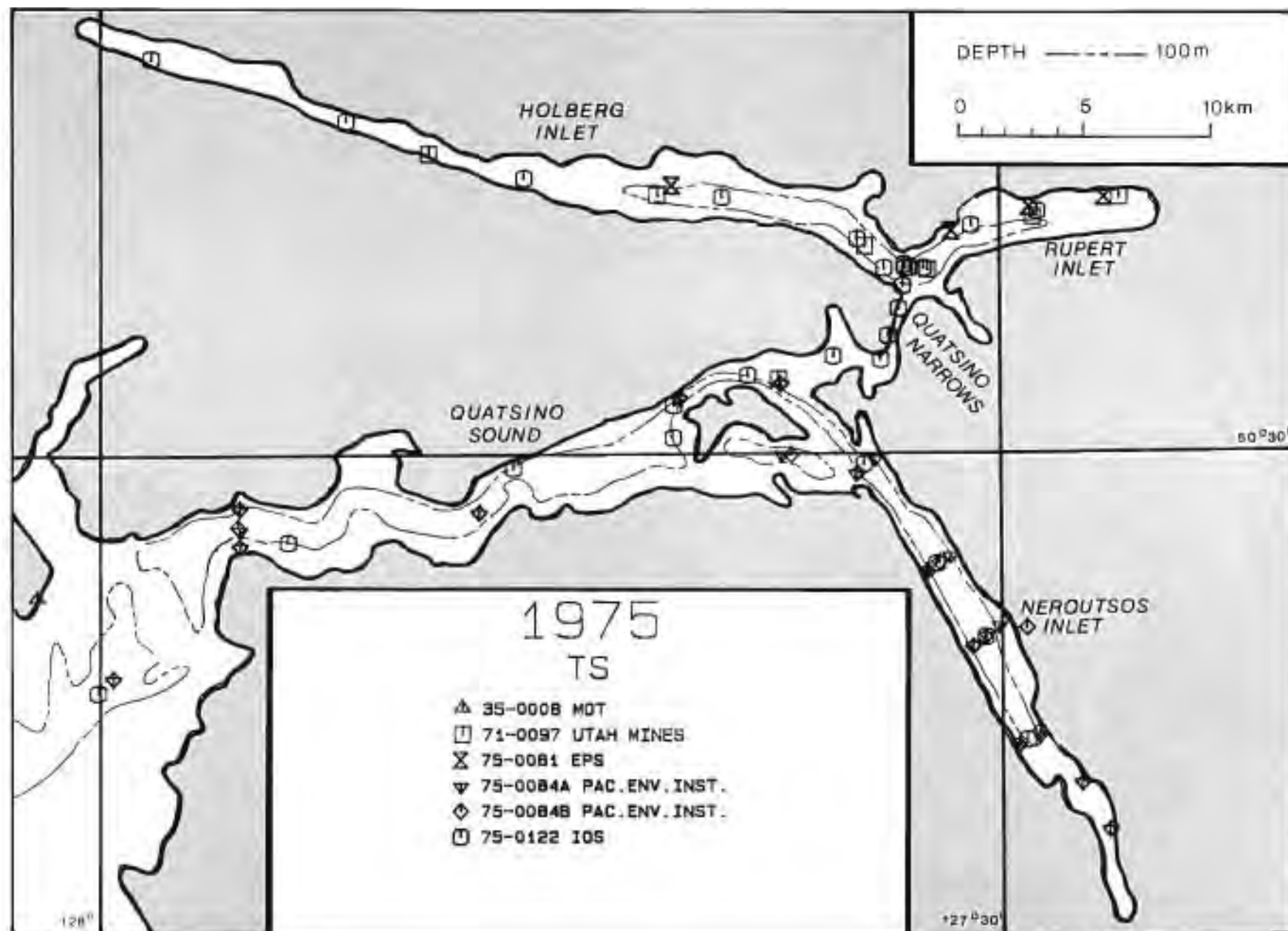


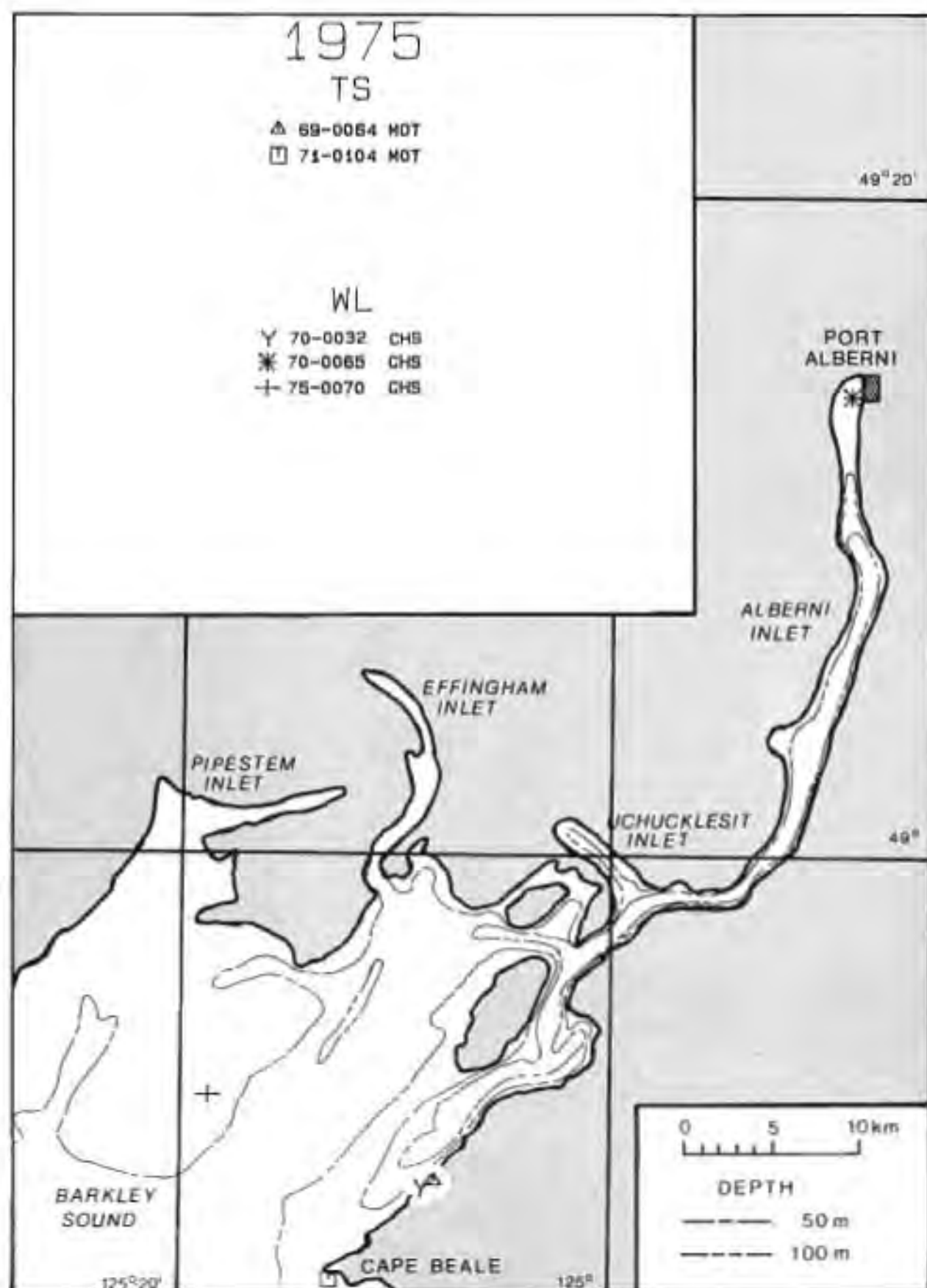


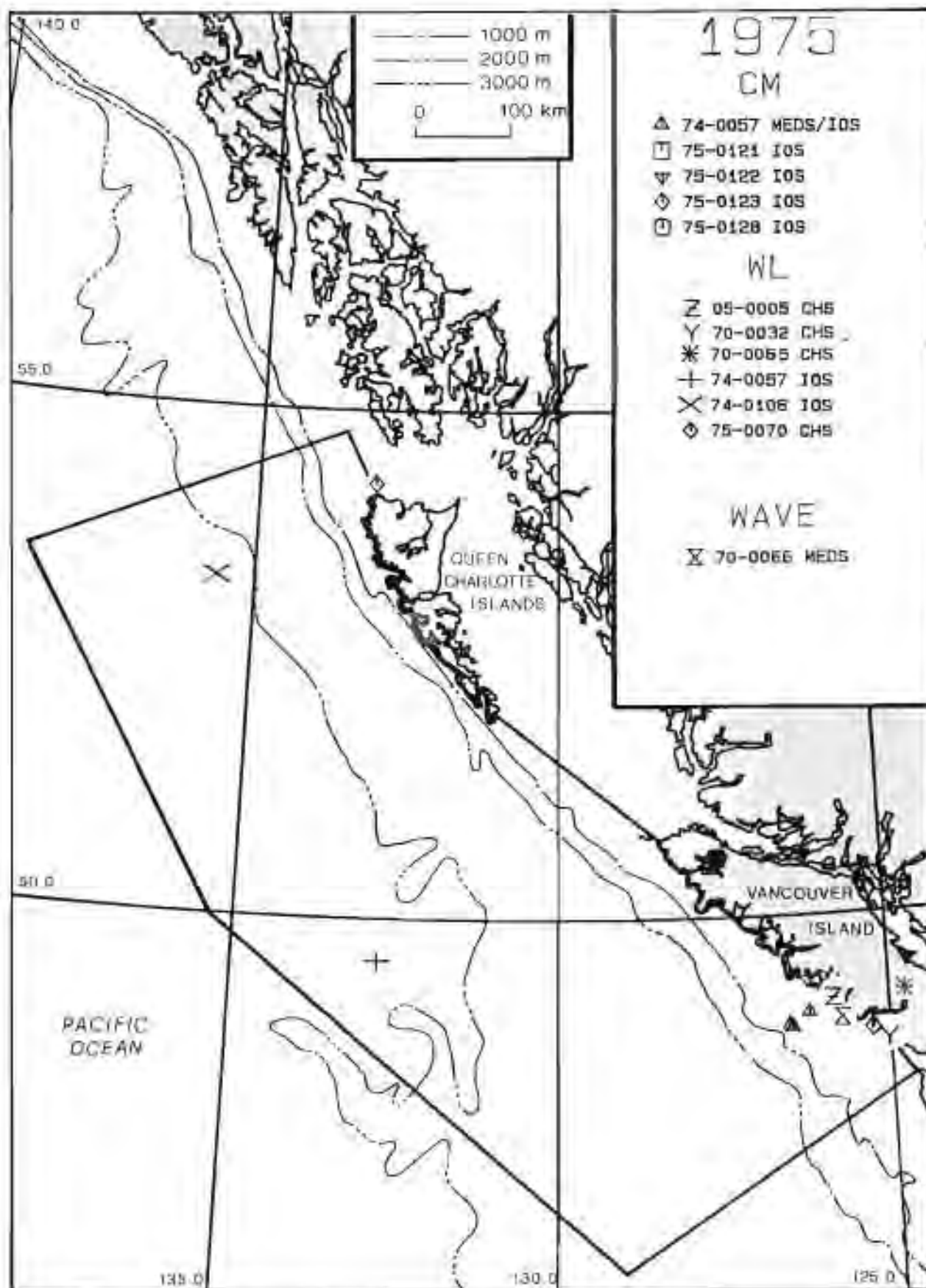


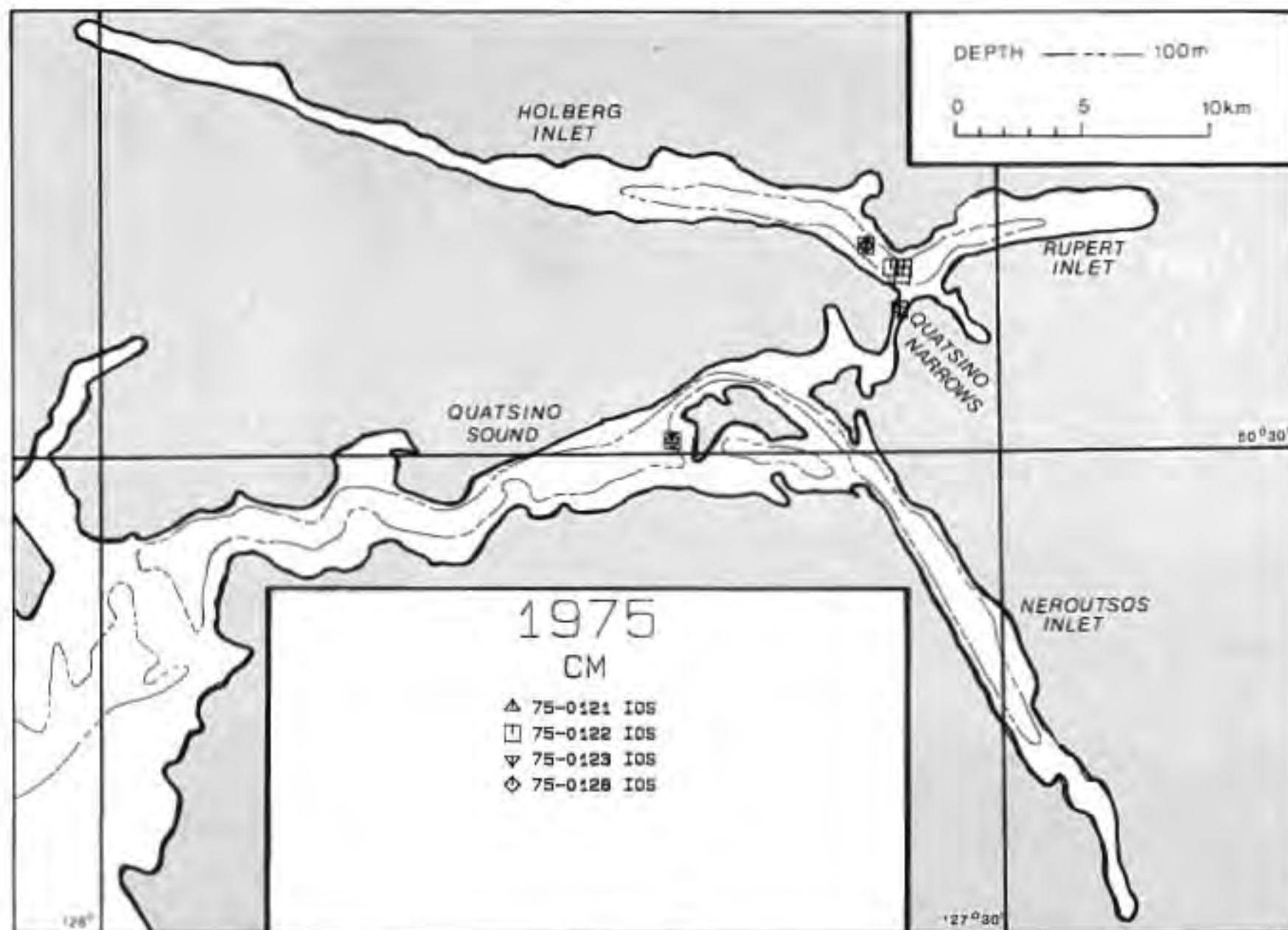


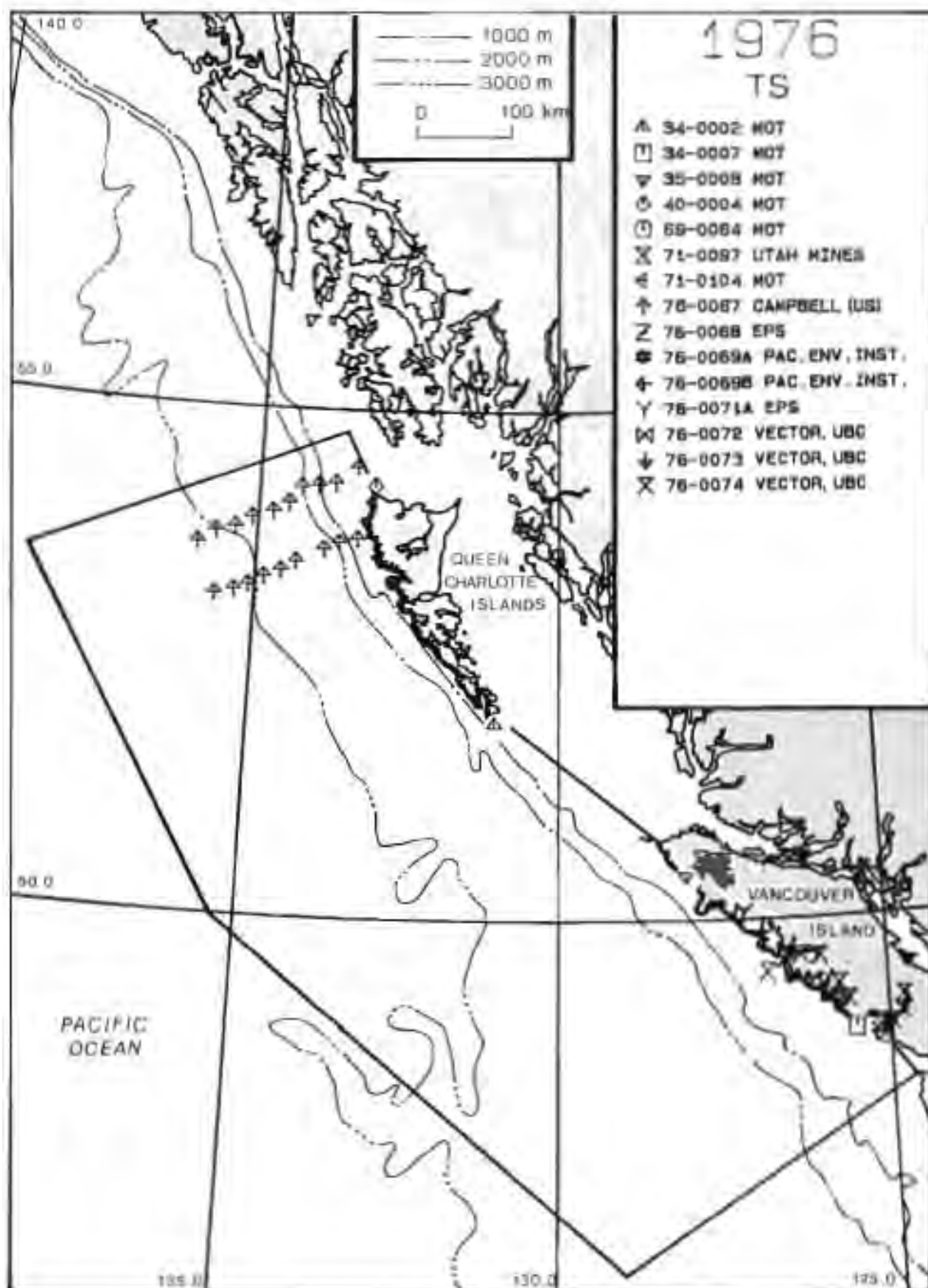










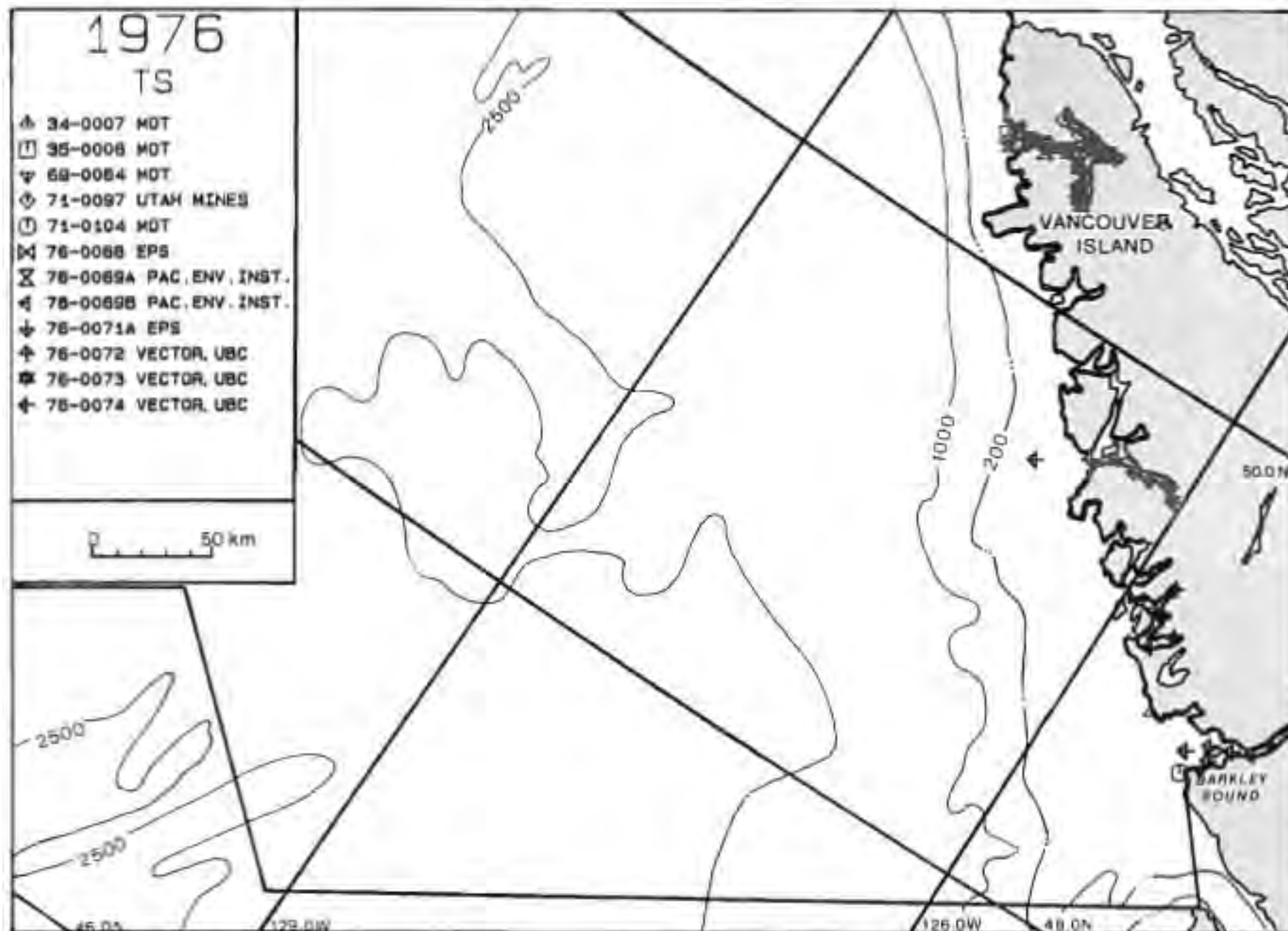


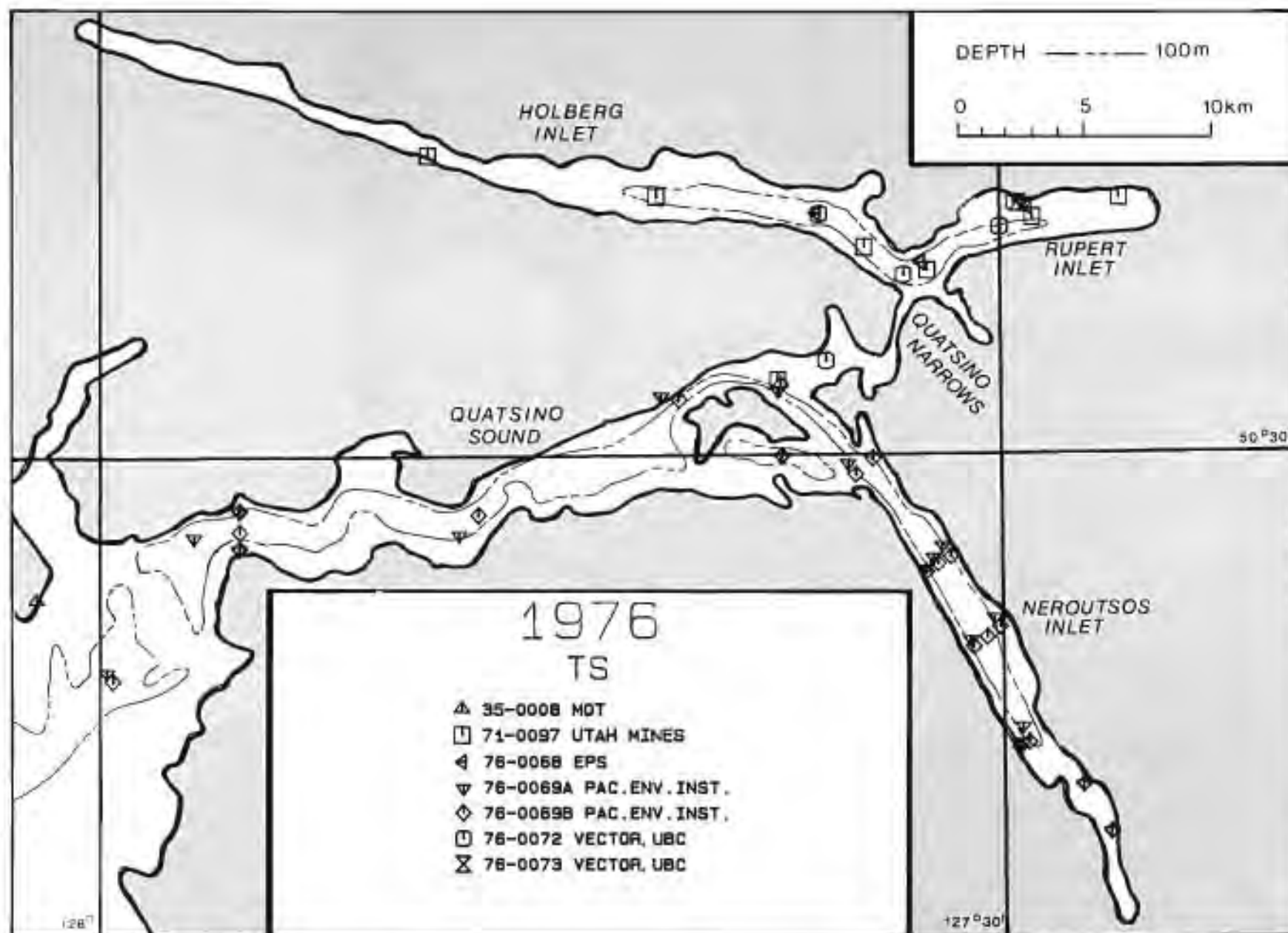
1976

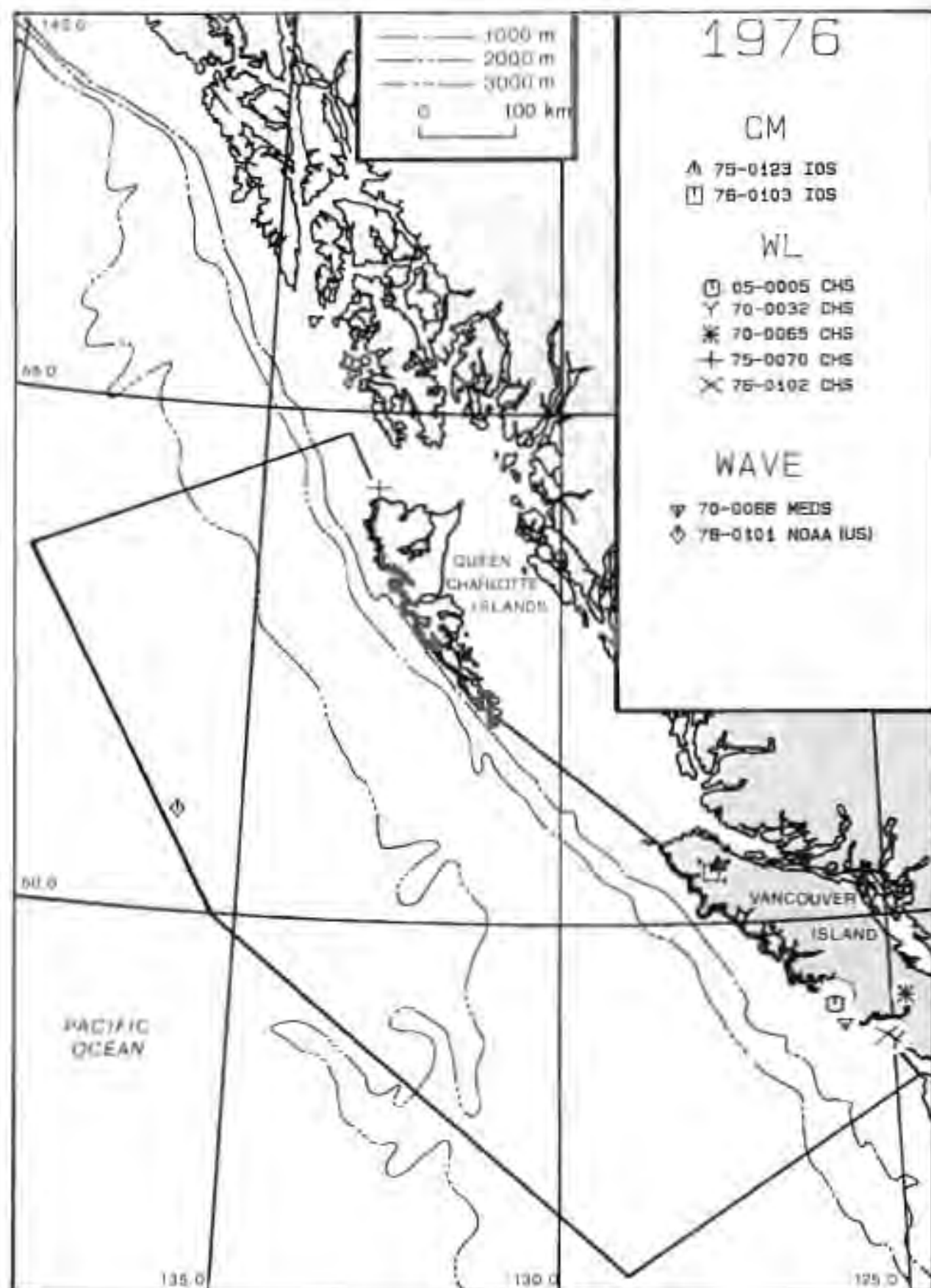
TS

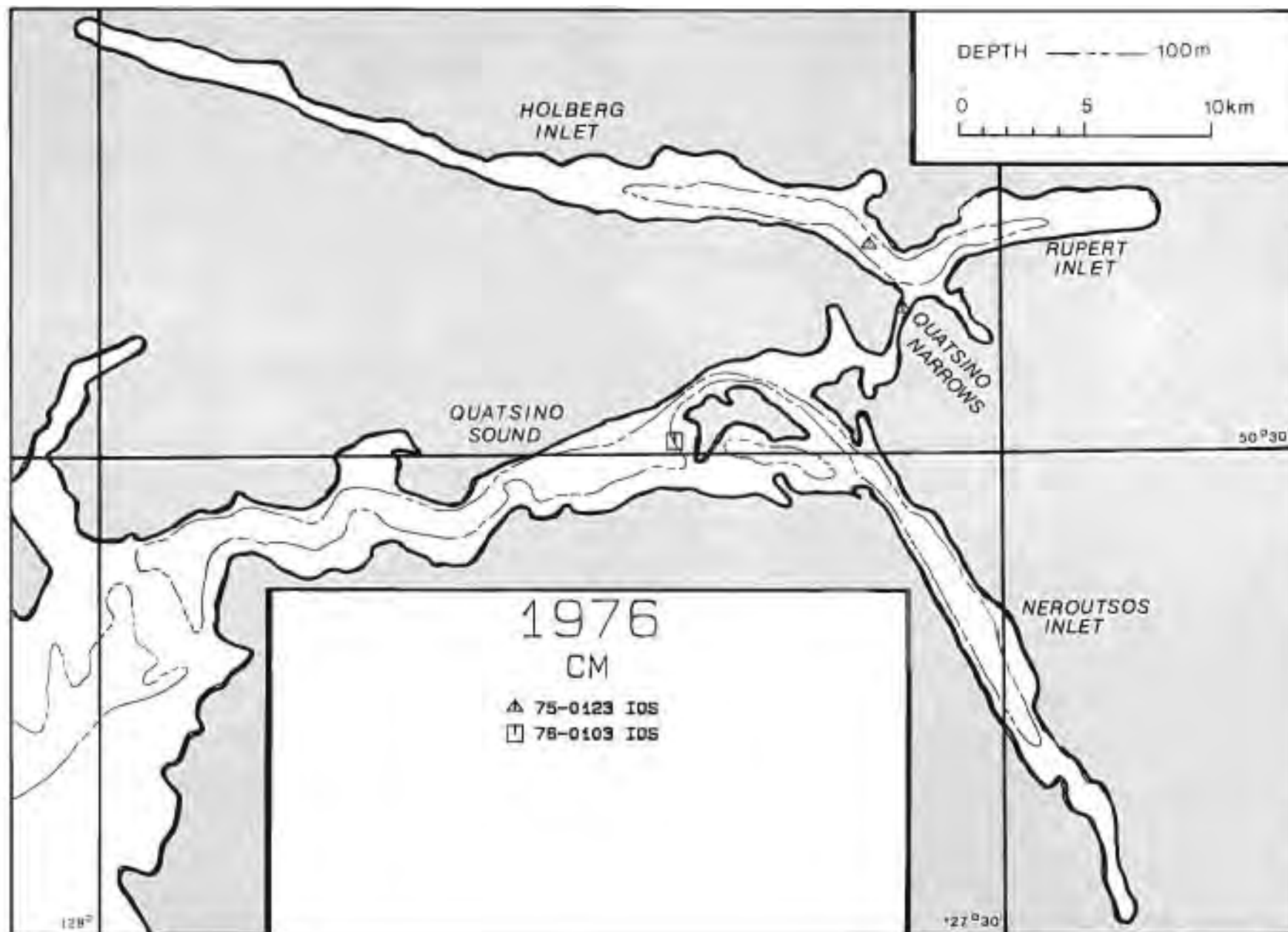
- ▲ 34-0007 MDT
- ▣ 35-0008 MDT
- ▼ 68-0084 MDT
- ◆ 71-0097 UTAH MINES
- ⊙ 71-0104 MDT
- ✕ 76-0068 EPS
- ⊗ 76-0069A PAC, ENV, INST.
- ⊗ 76-0069B PAC, ENV, INST.
- ⬇ 76-0071A EPS
- ⬆ 76-0072 VECTOR, UBC
- ⬆ 76-0073 VECTOR, UBC
- ⬆ 76-0074 VECTOR, UBC

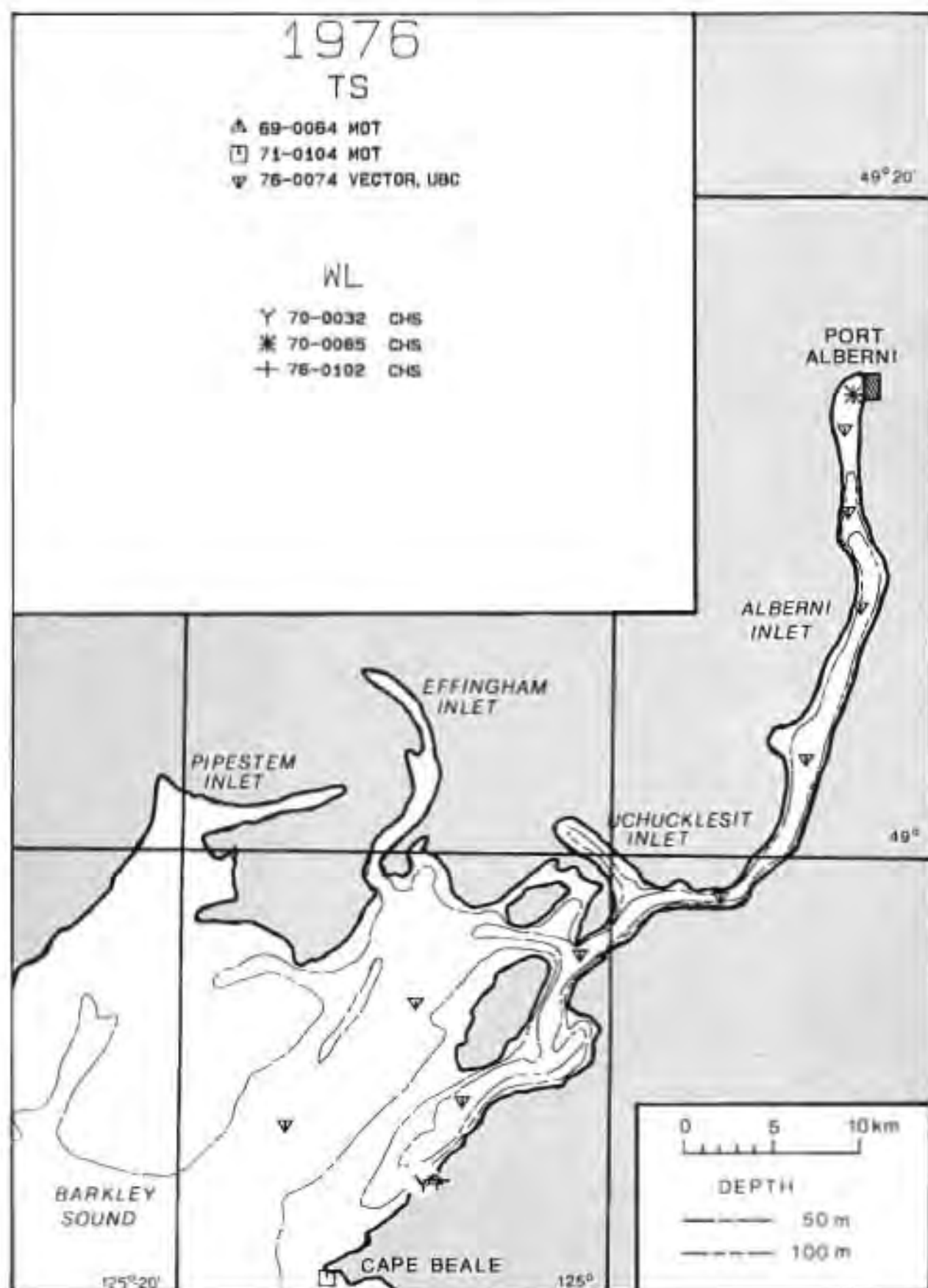
0 50 km

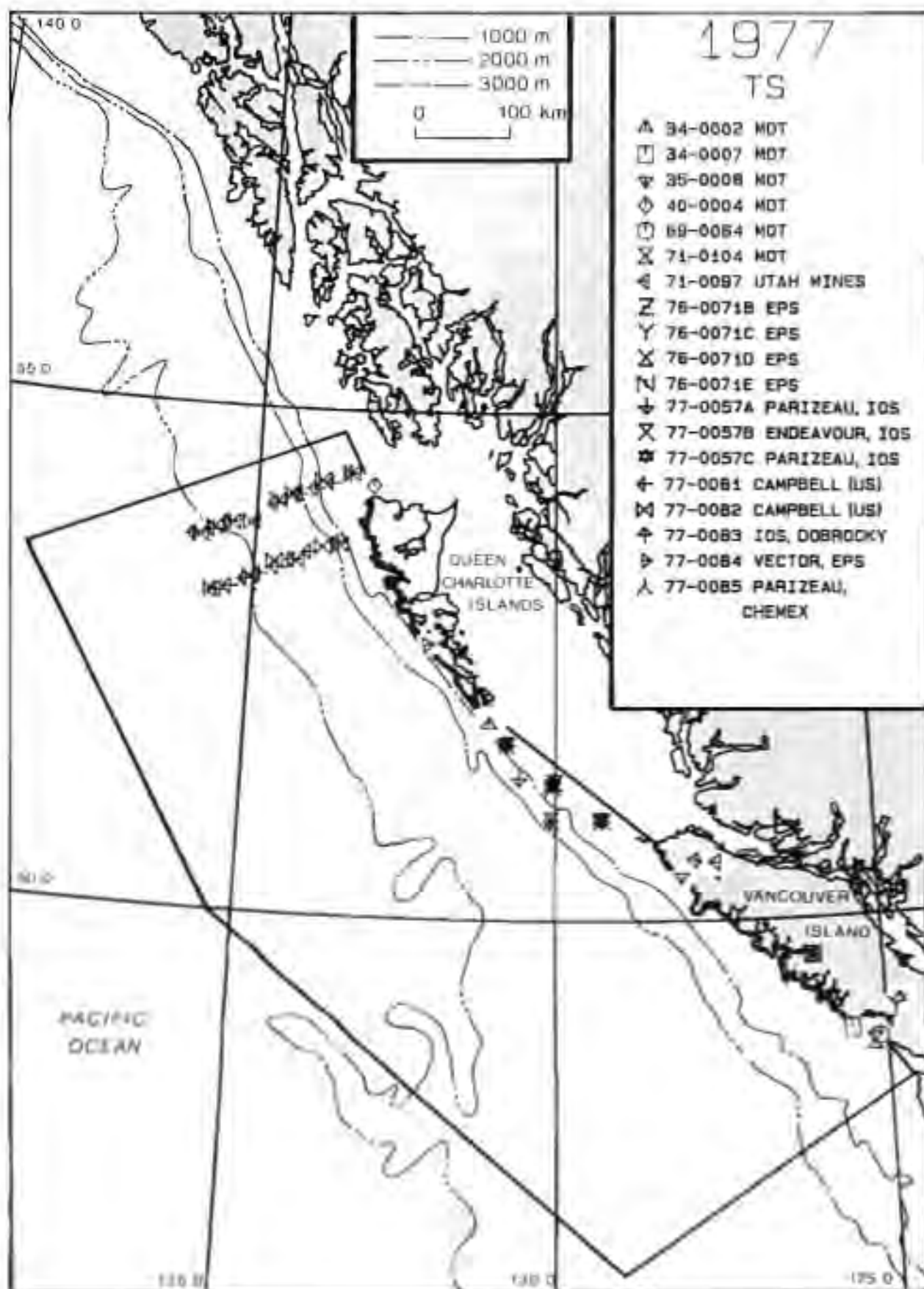


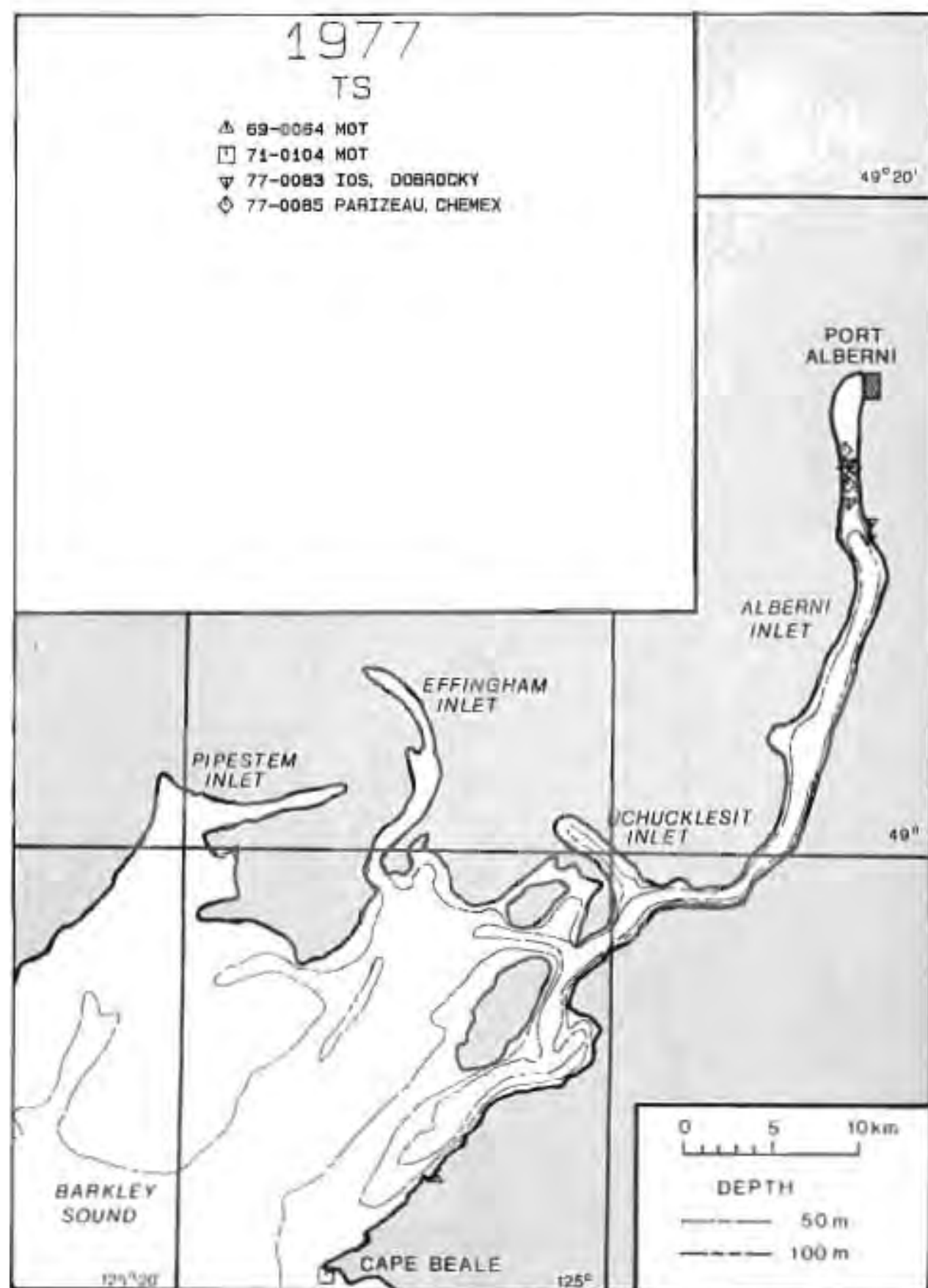


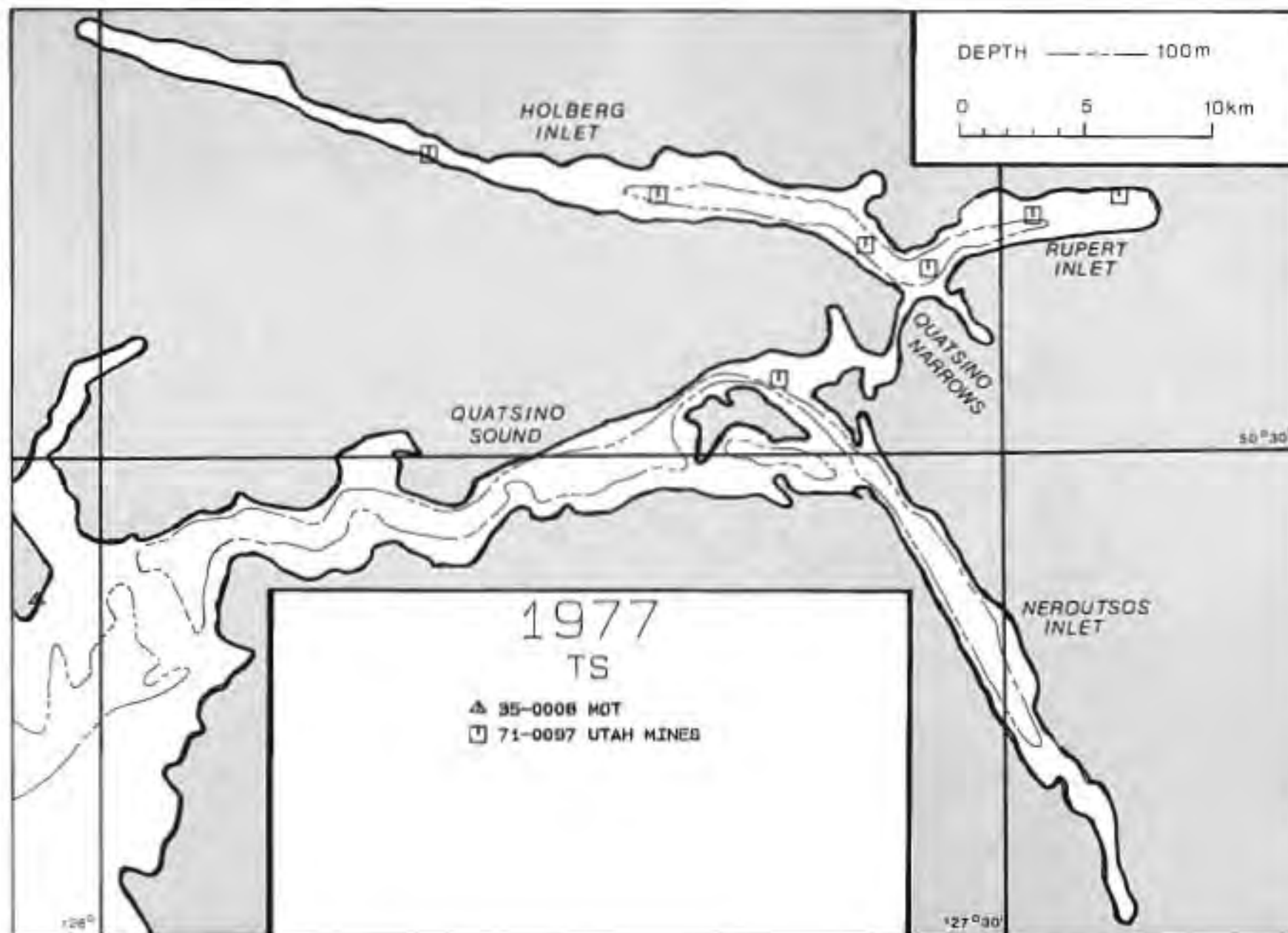


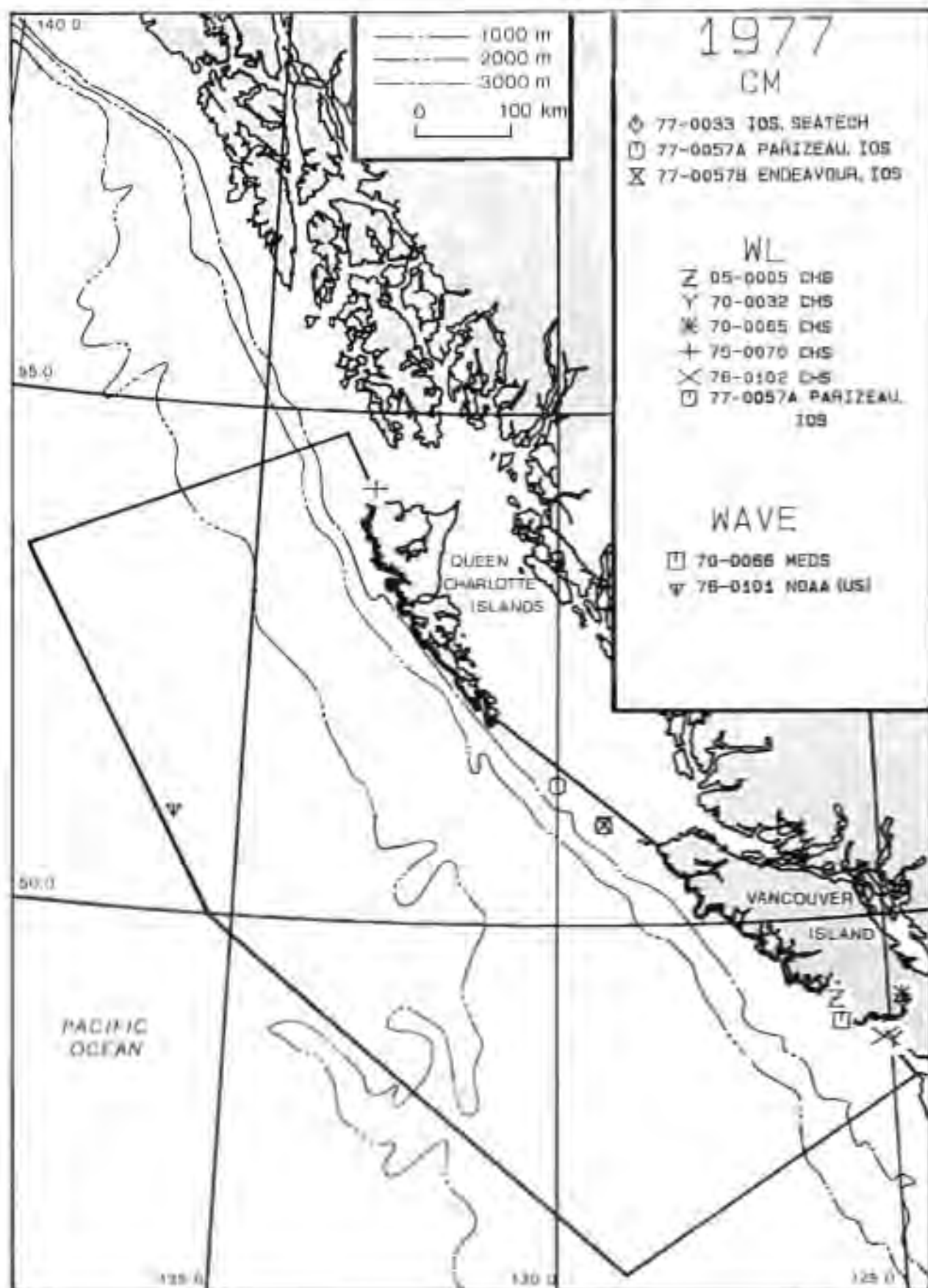


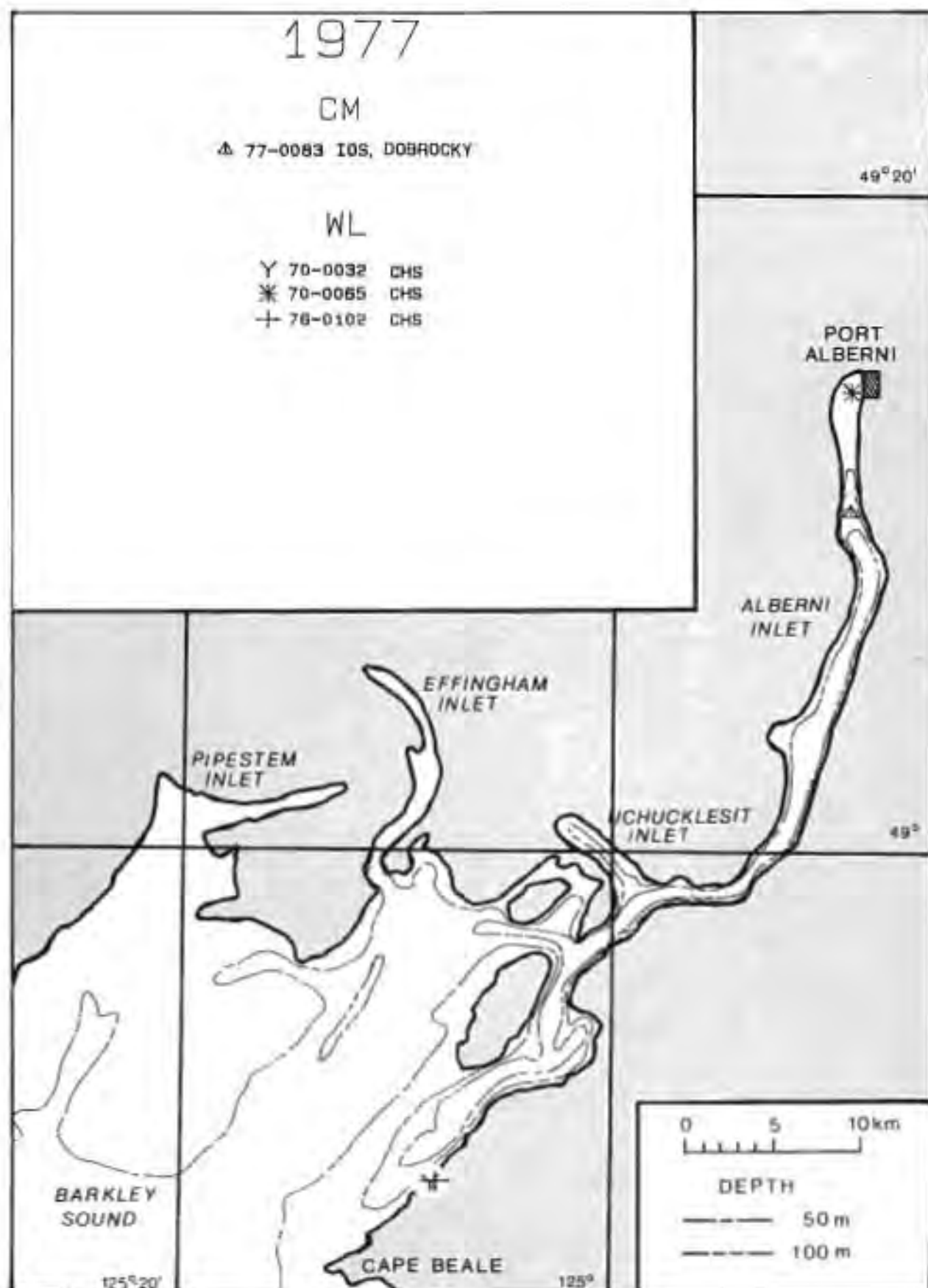


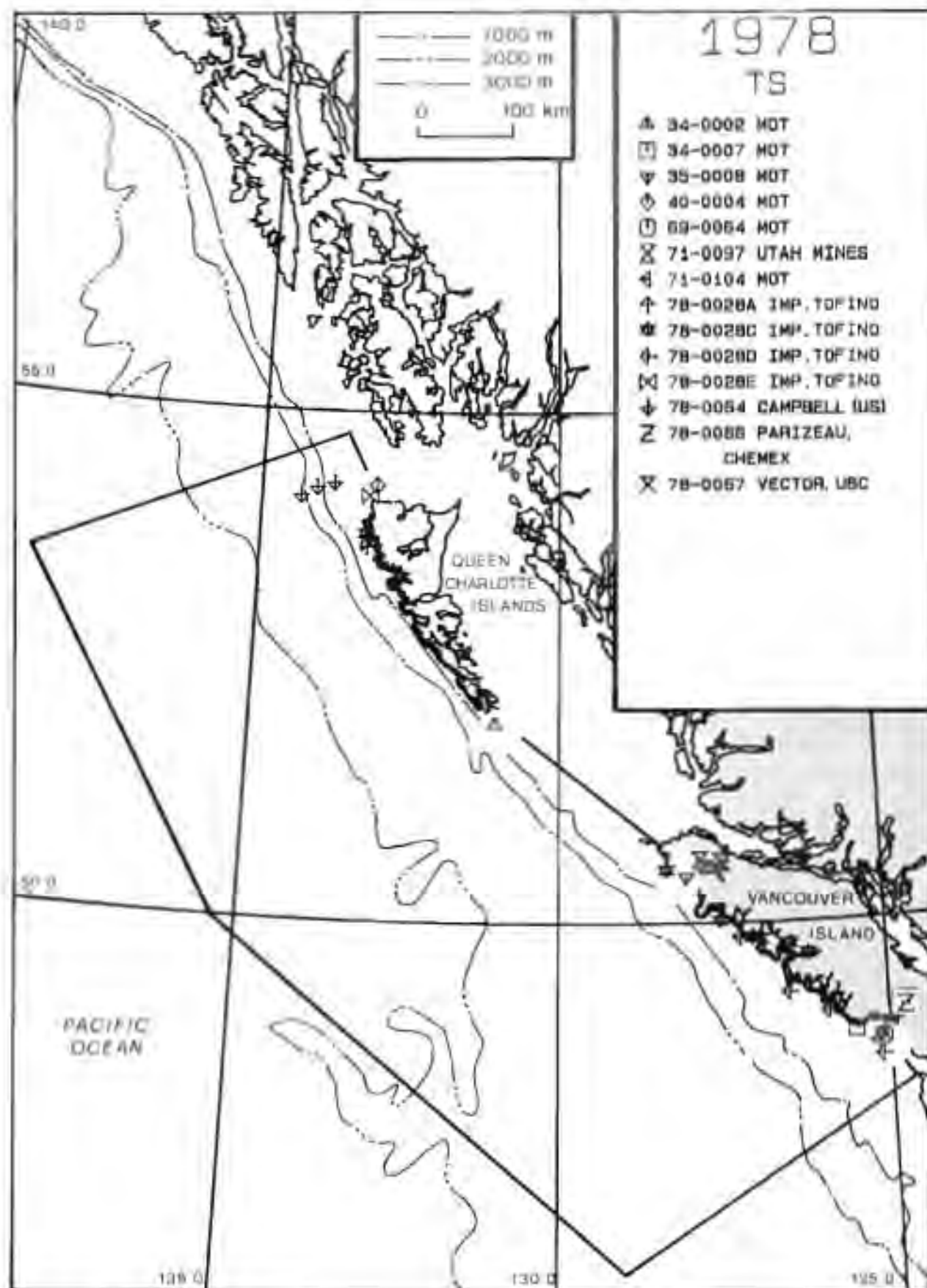


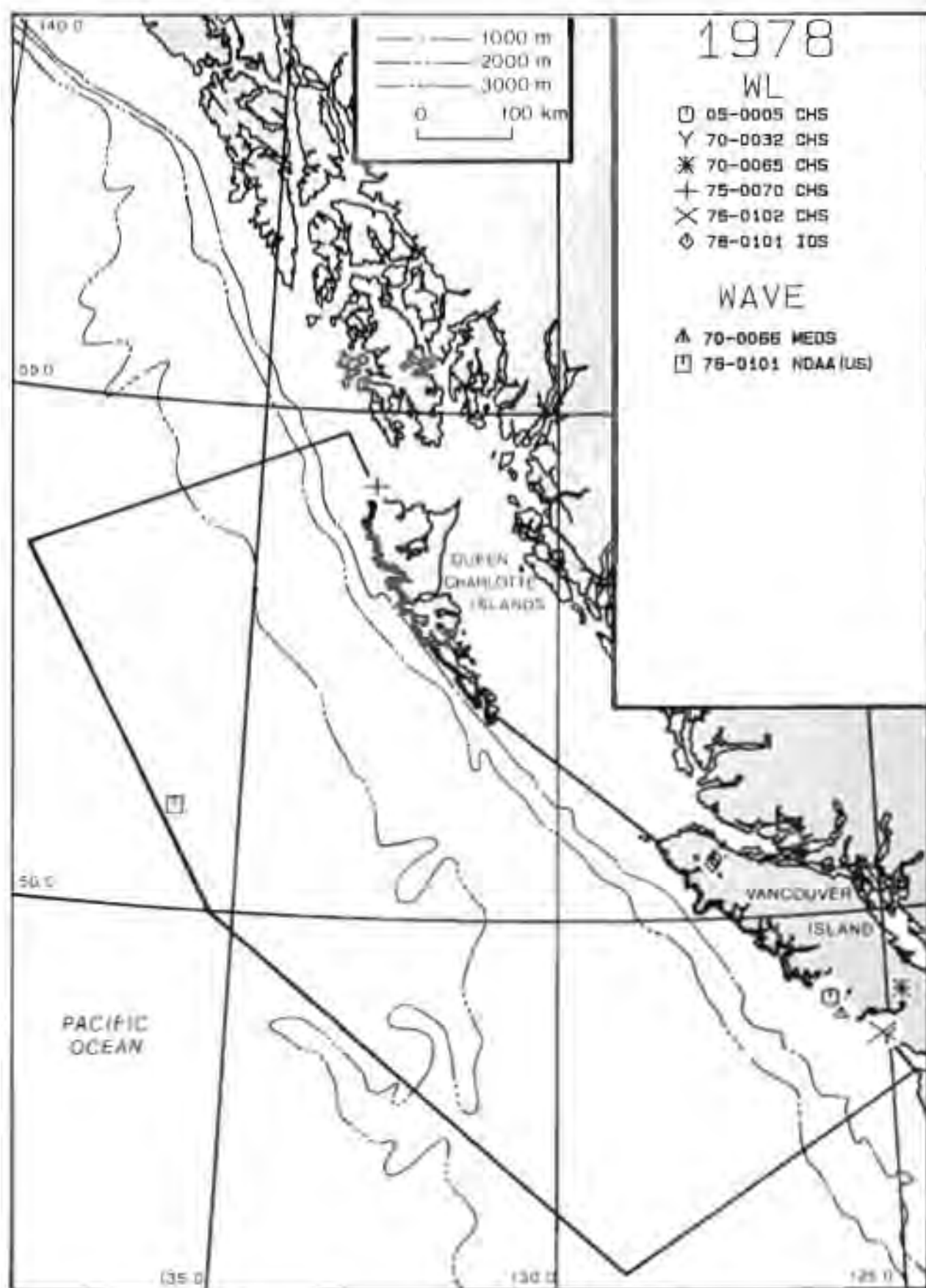


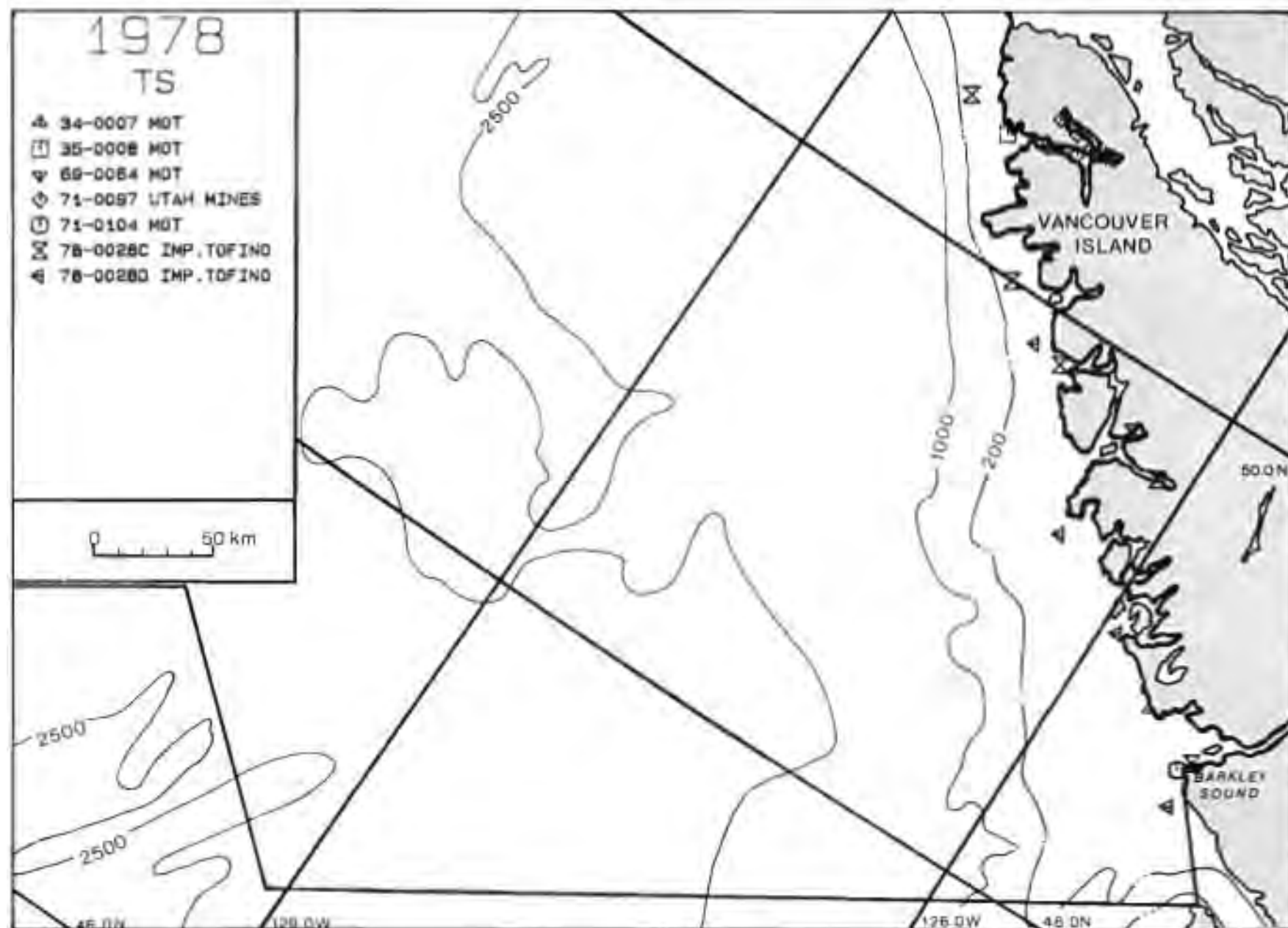


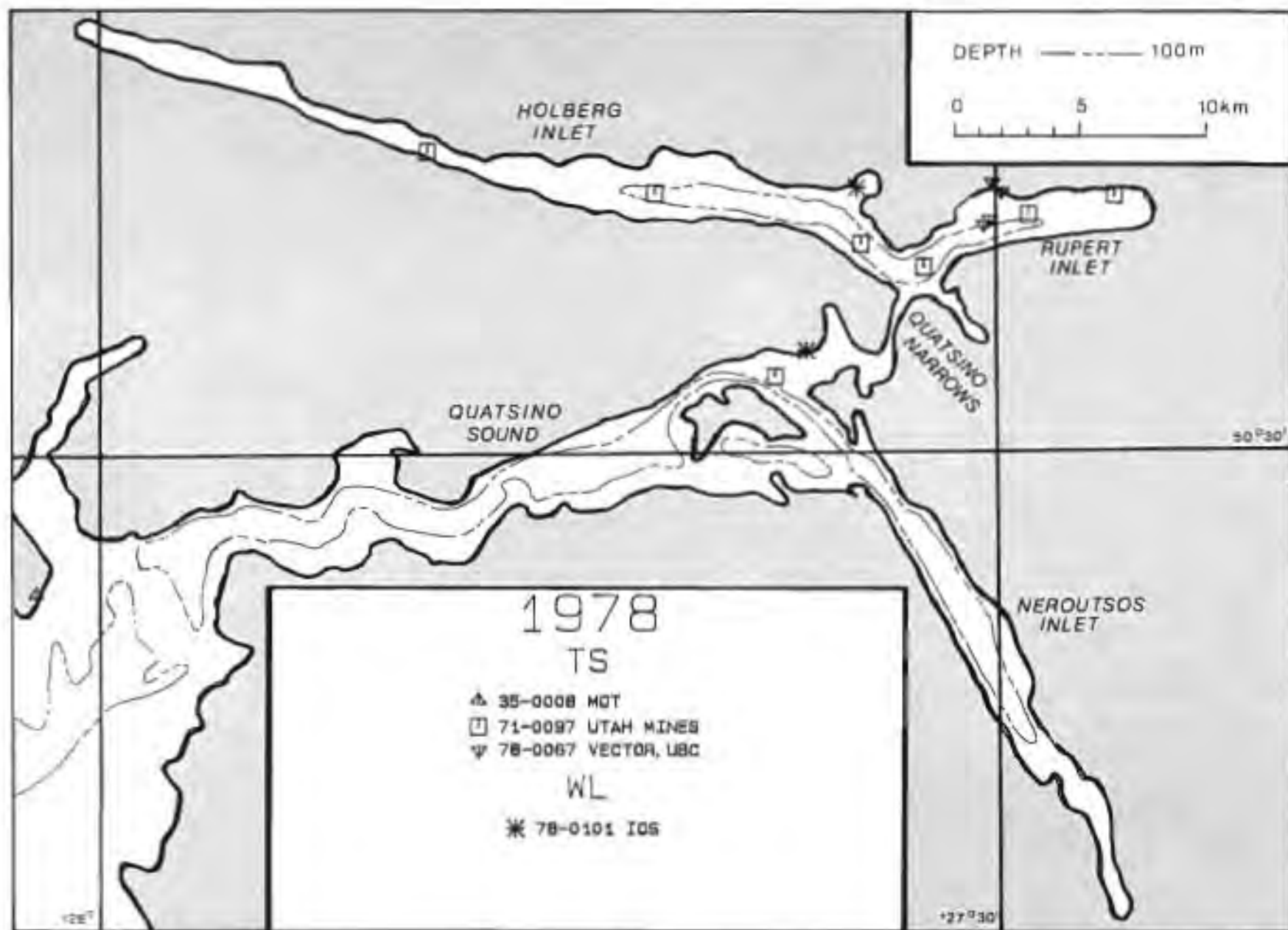


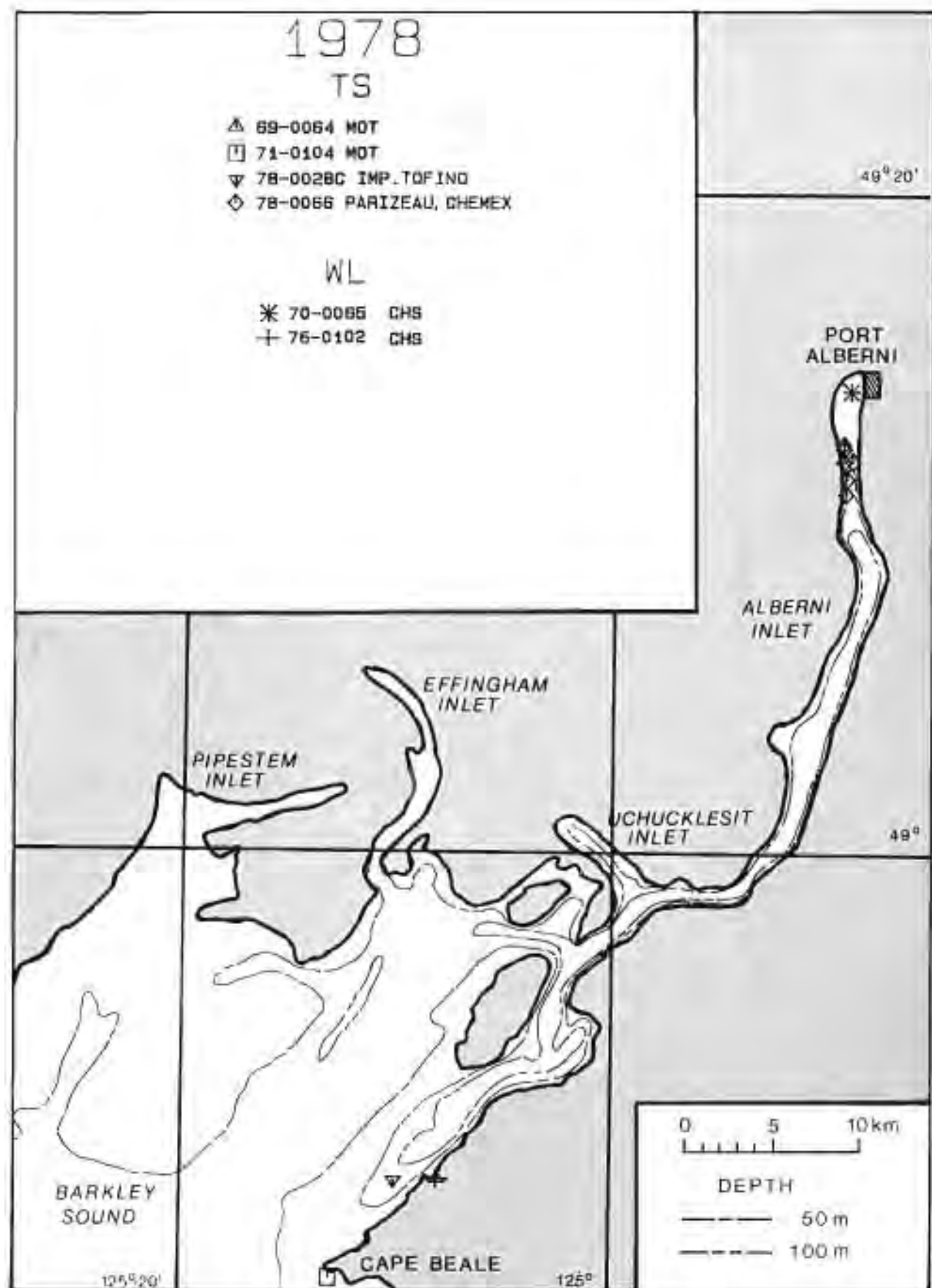


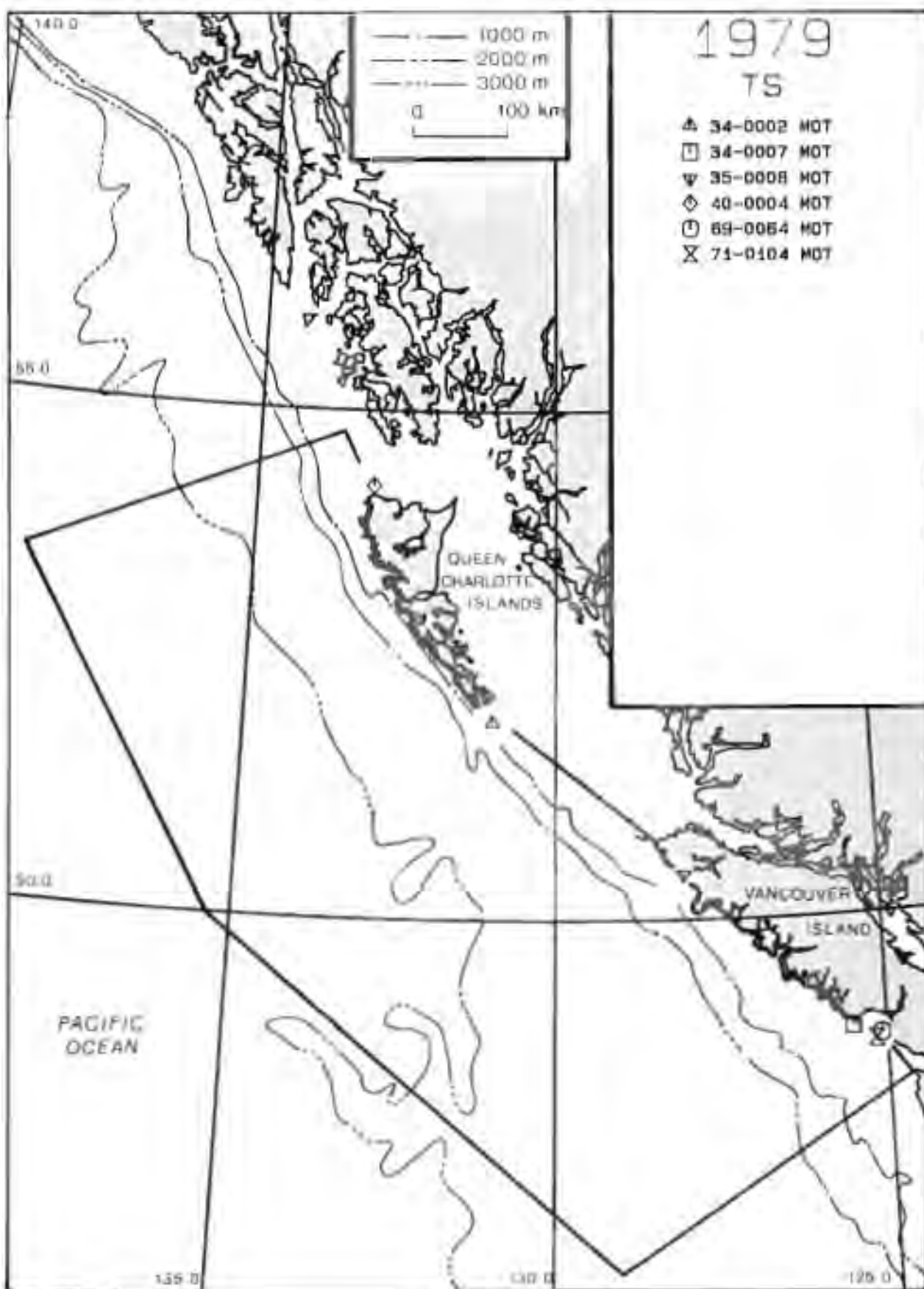


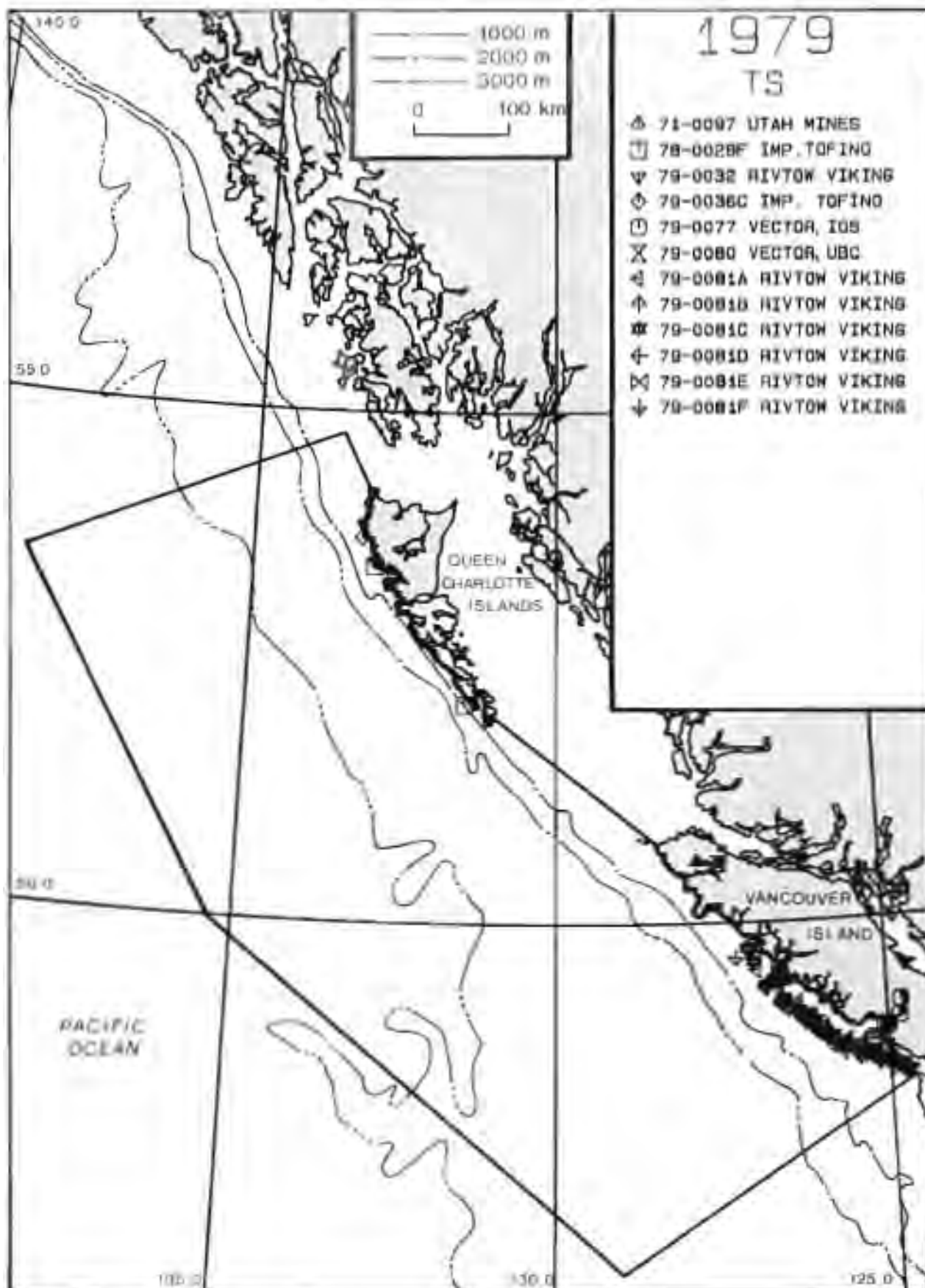








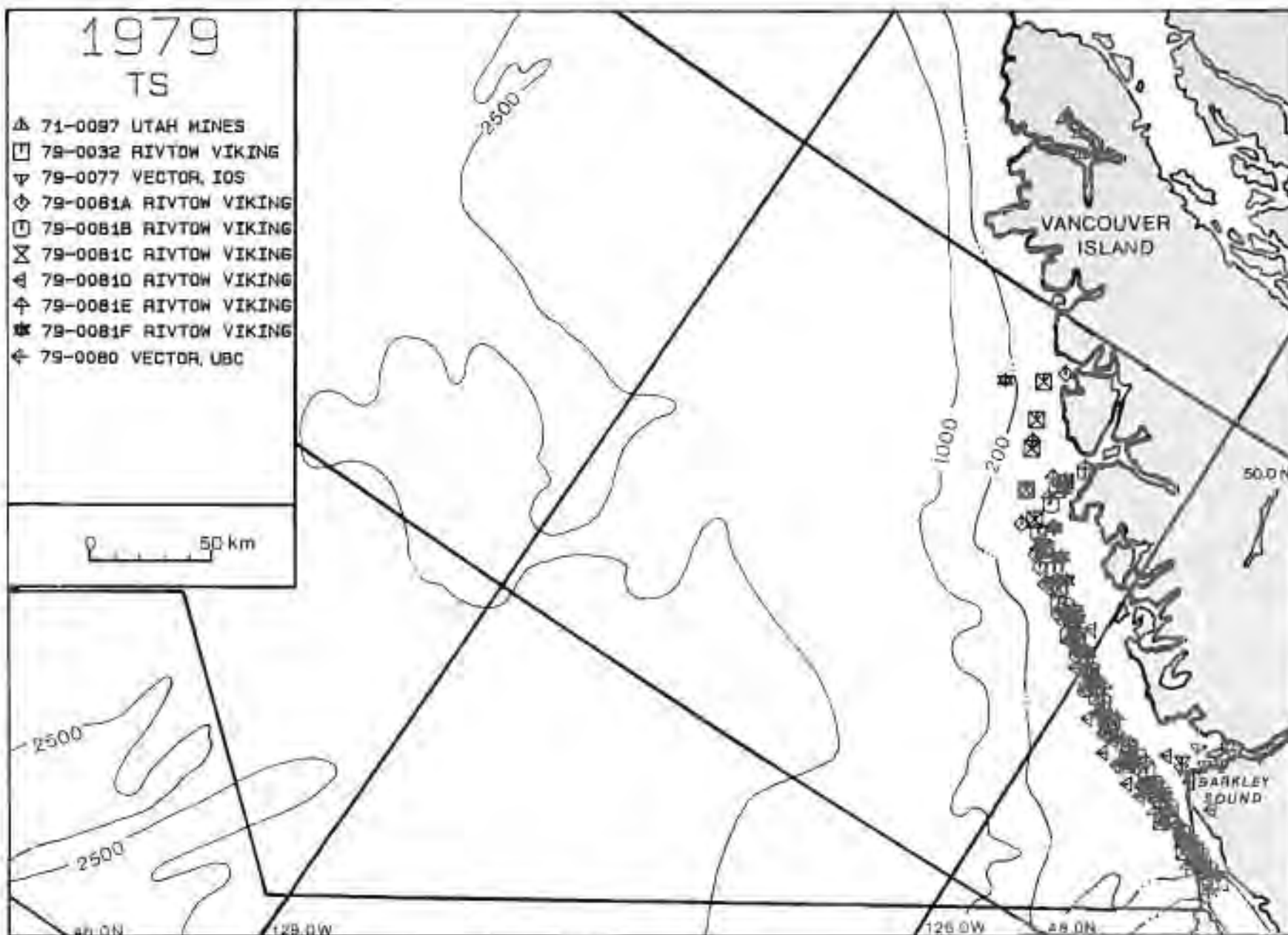


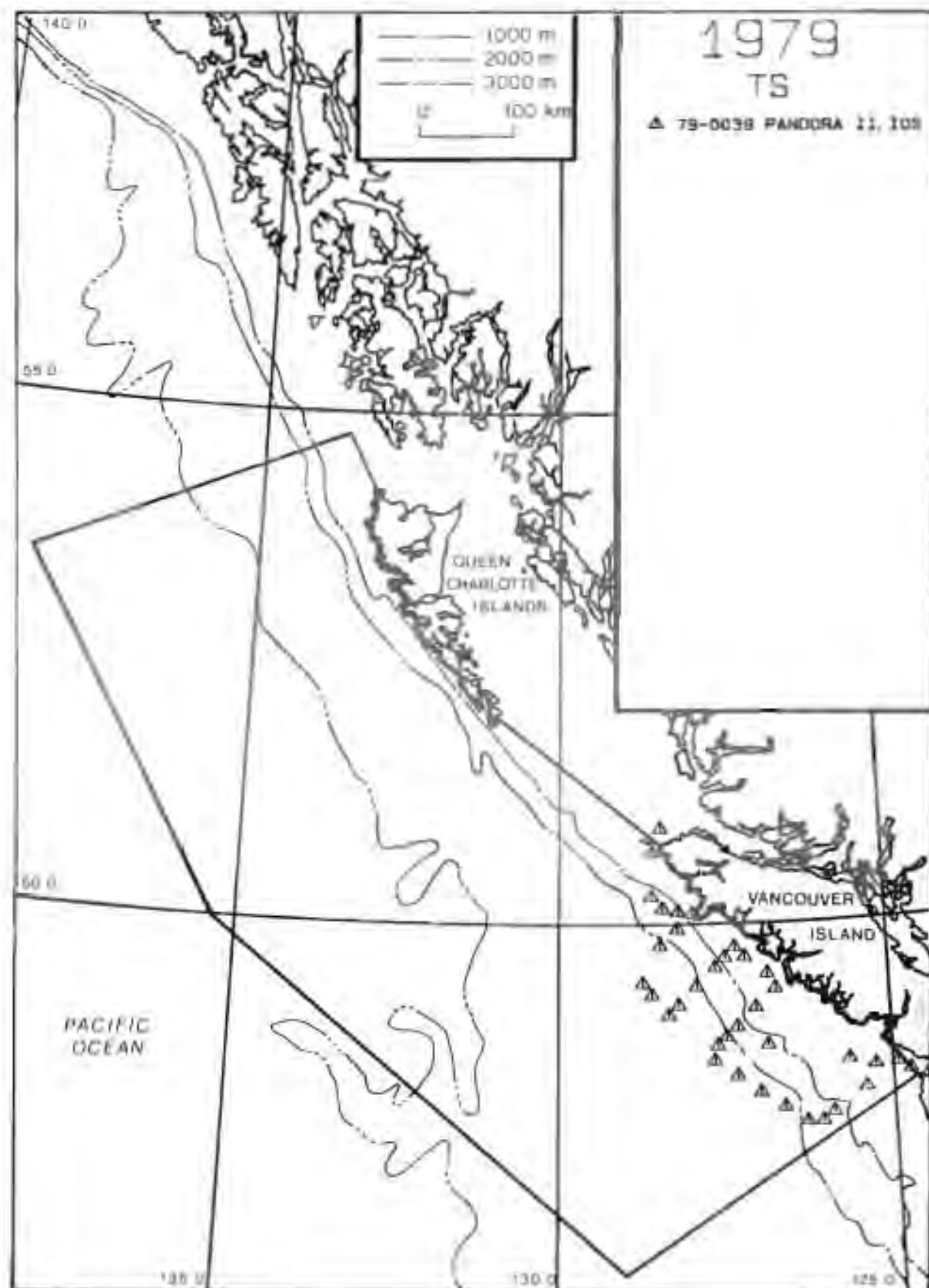


1979
TS

- △ 71-0097 UTAH MINES
- 79-0032 RIVTOW VIKING
- ▽ 79-0077 VECTOR, IOS
- ◇ 79-0081A RIVTOW VIKING
- ▢ 79-0081B RIVTOW VIKING
- ⊗ 79-0081C RIVTOW VIKING
- ◁ 79-0081D RIVTOW VIKING
- ⊕ 79-0081E RIVTOW VIKING
- ⊛ 79-0081F RIVTOW VIKING
- ← 79-0080 VECTOR, UBC

0 50 km

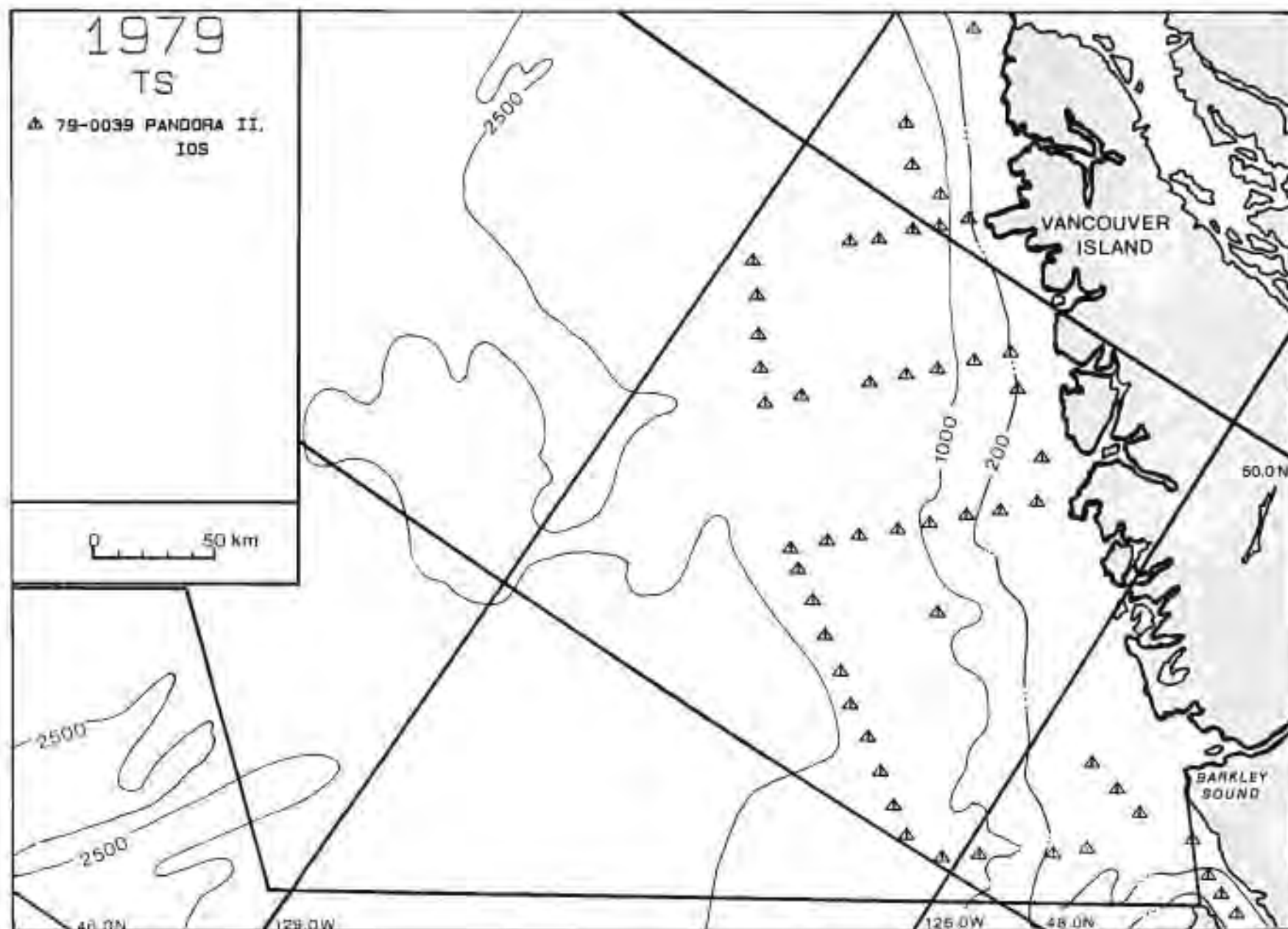


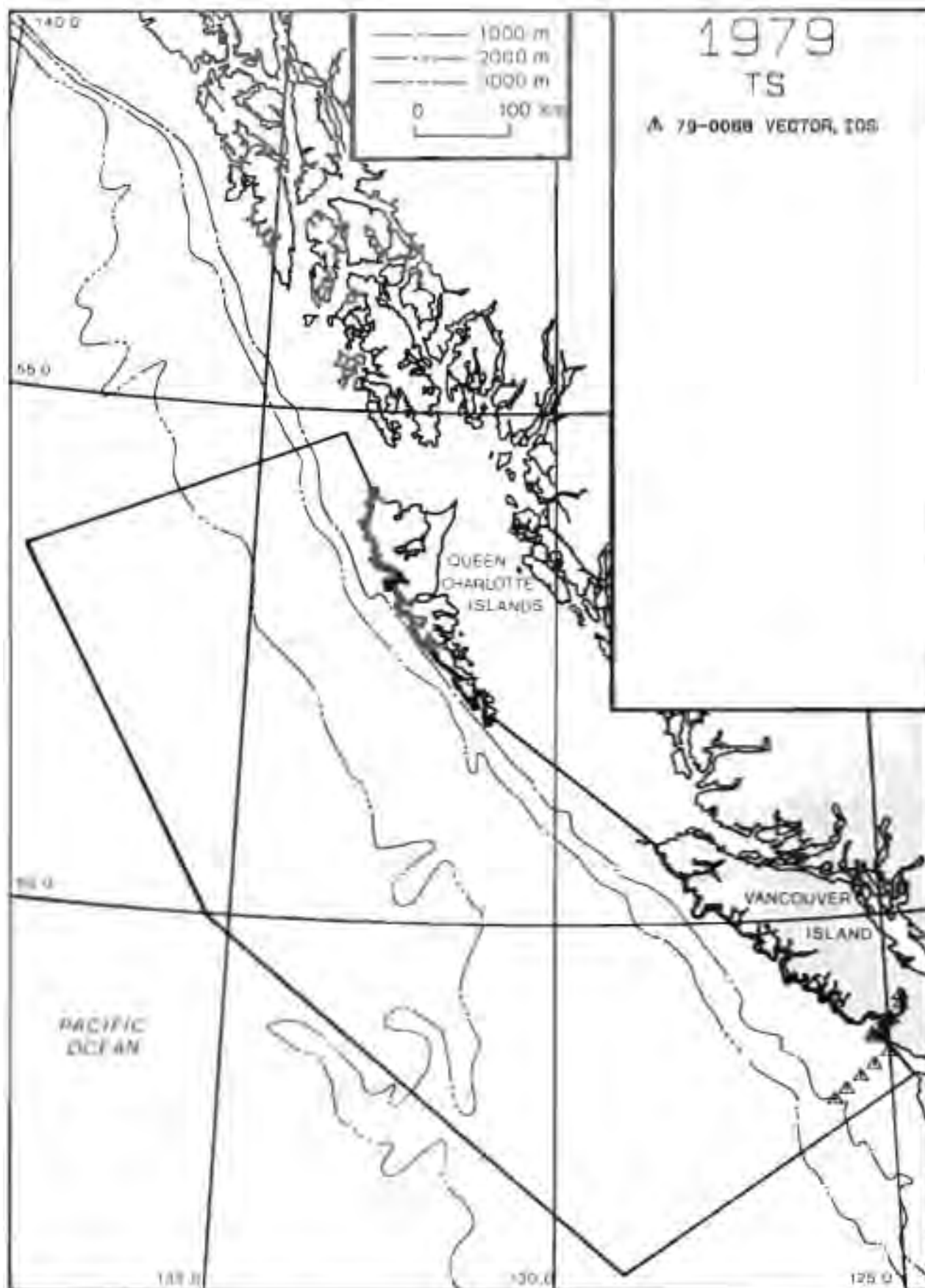


1979
TS

▲ 79-0039 PANDORA II.
IOS

0 50 km



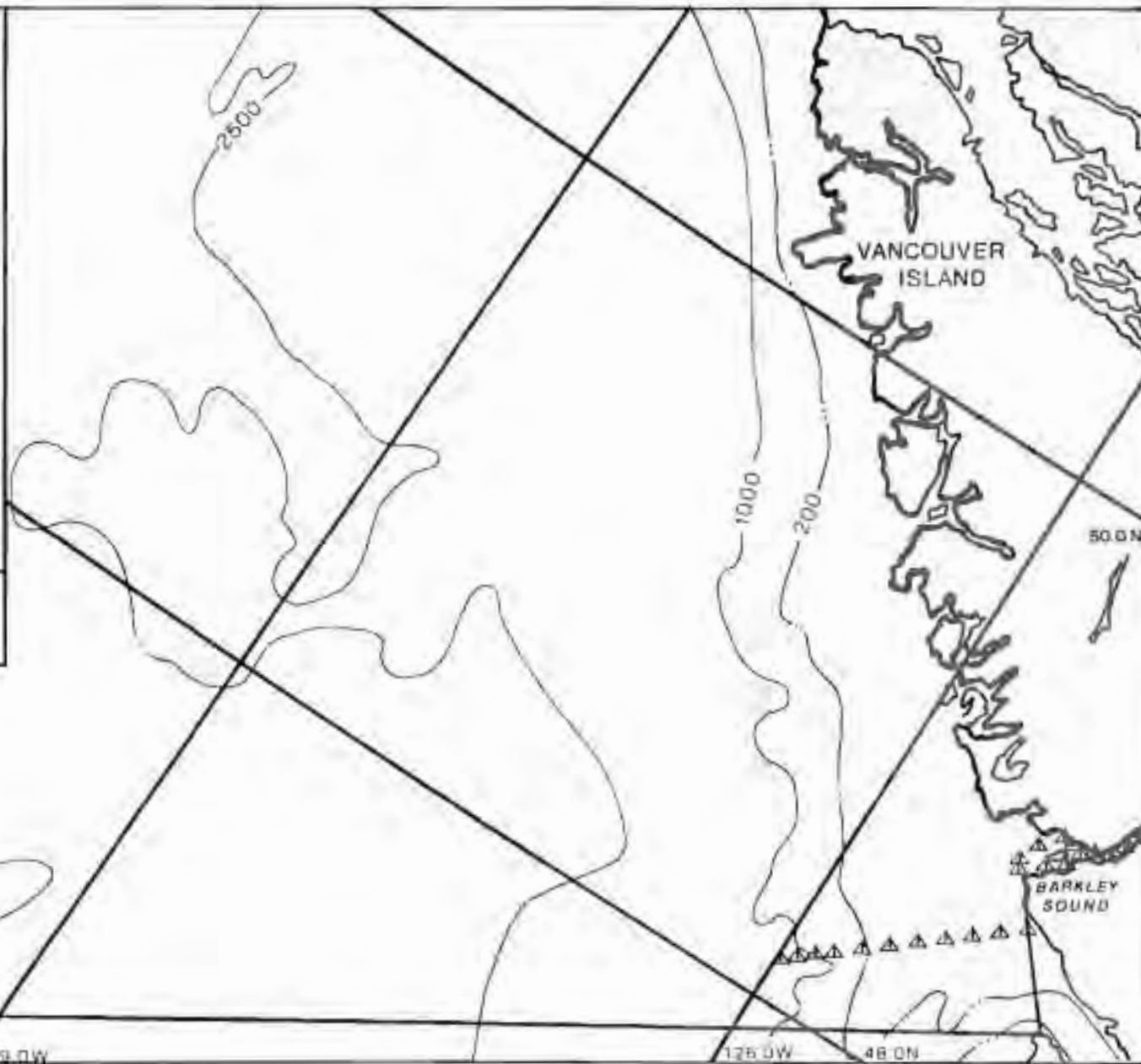
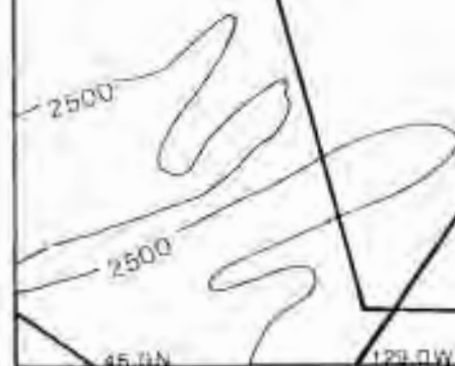


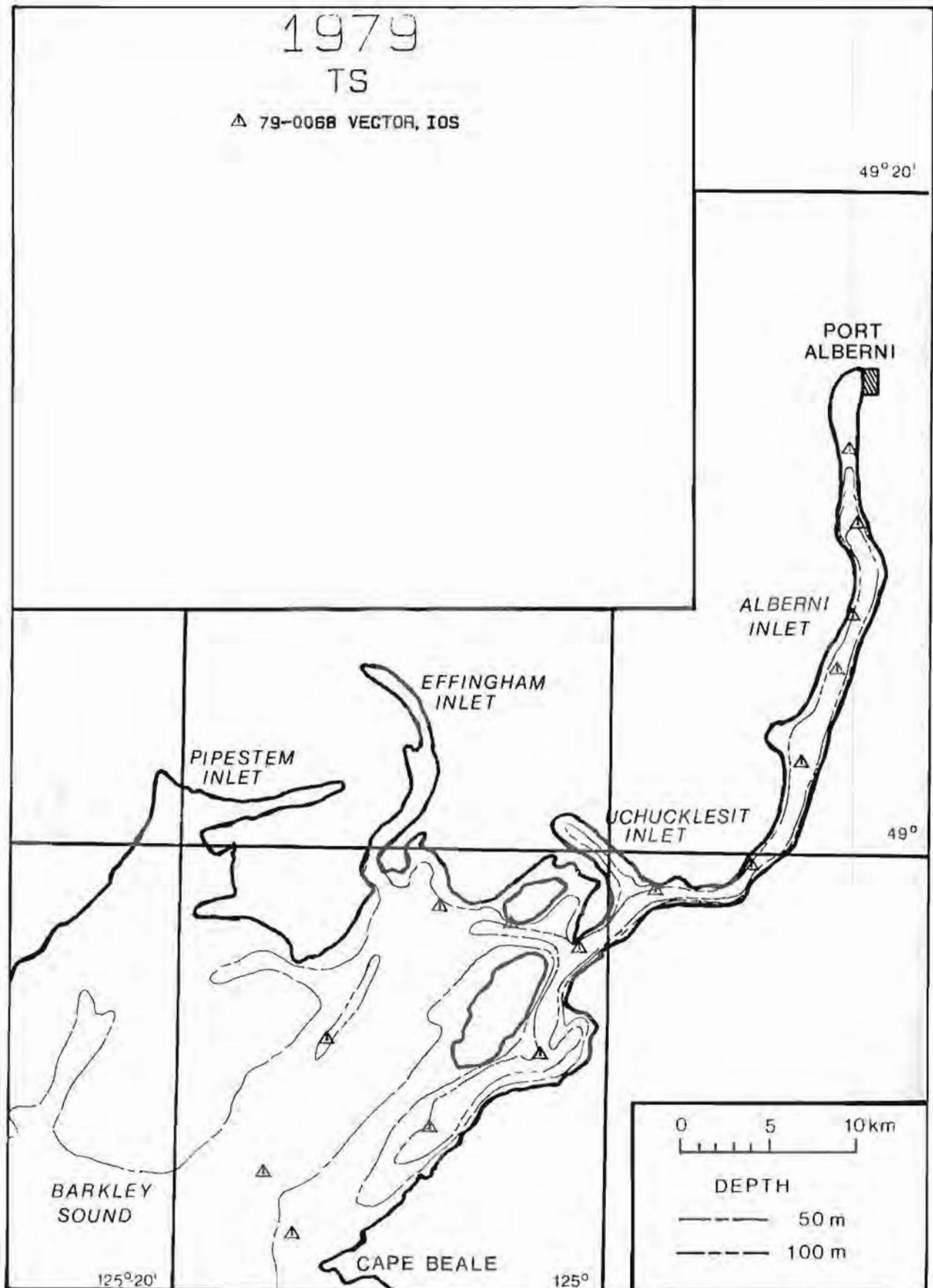
1979

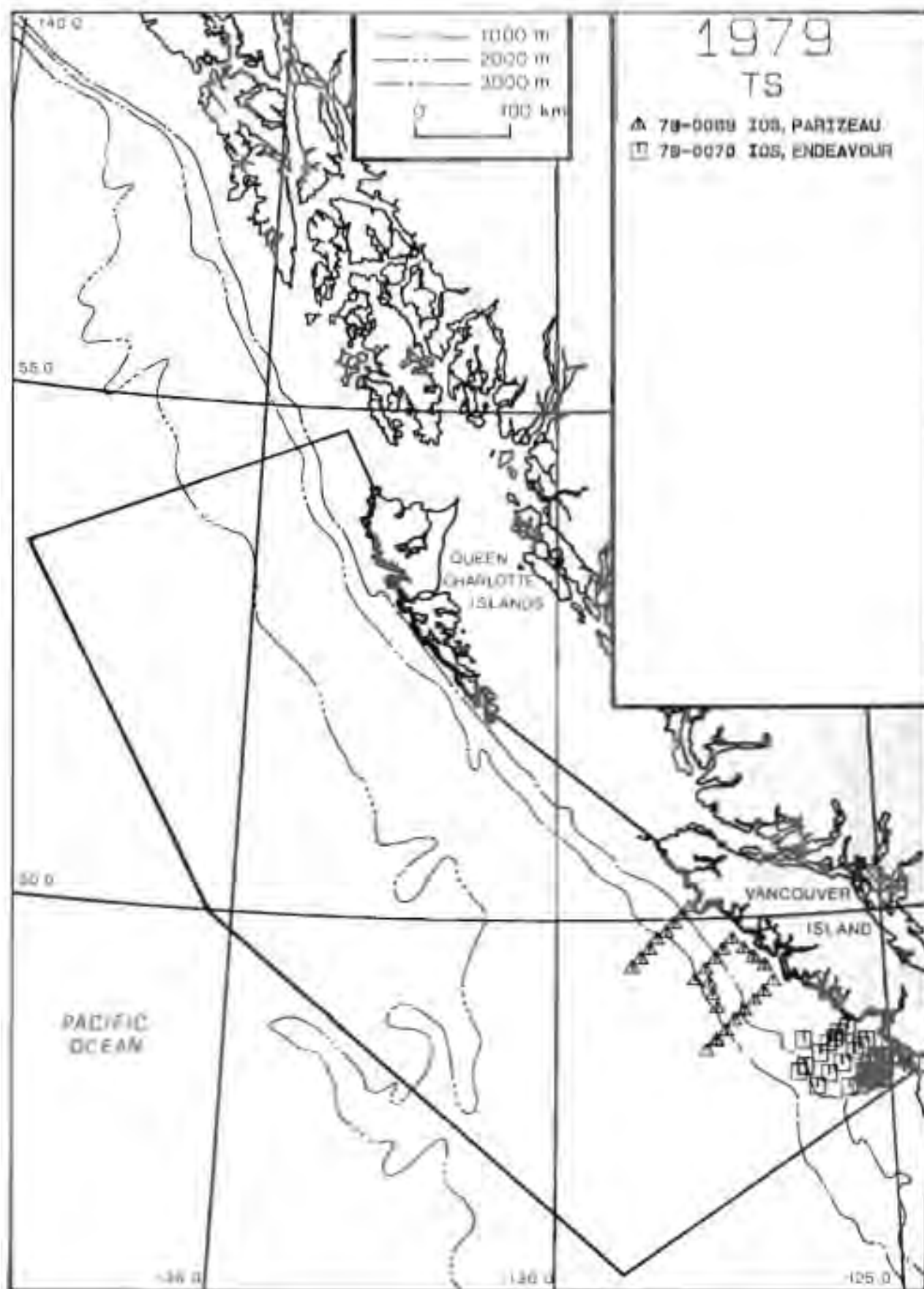
TS

▲ 79-0068 VECTOR. IQS

0 50 km





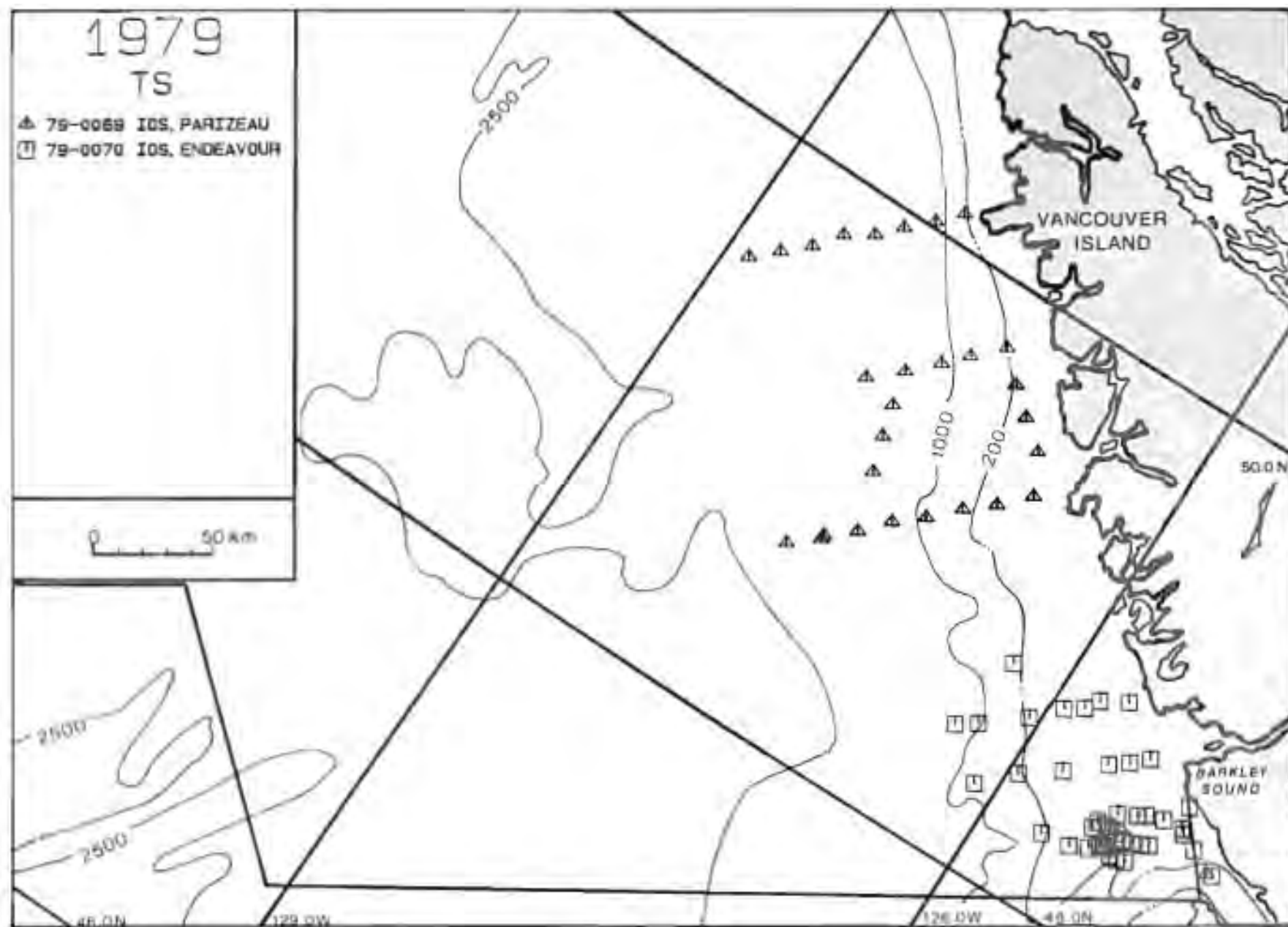


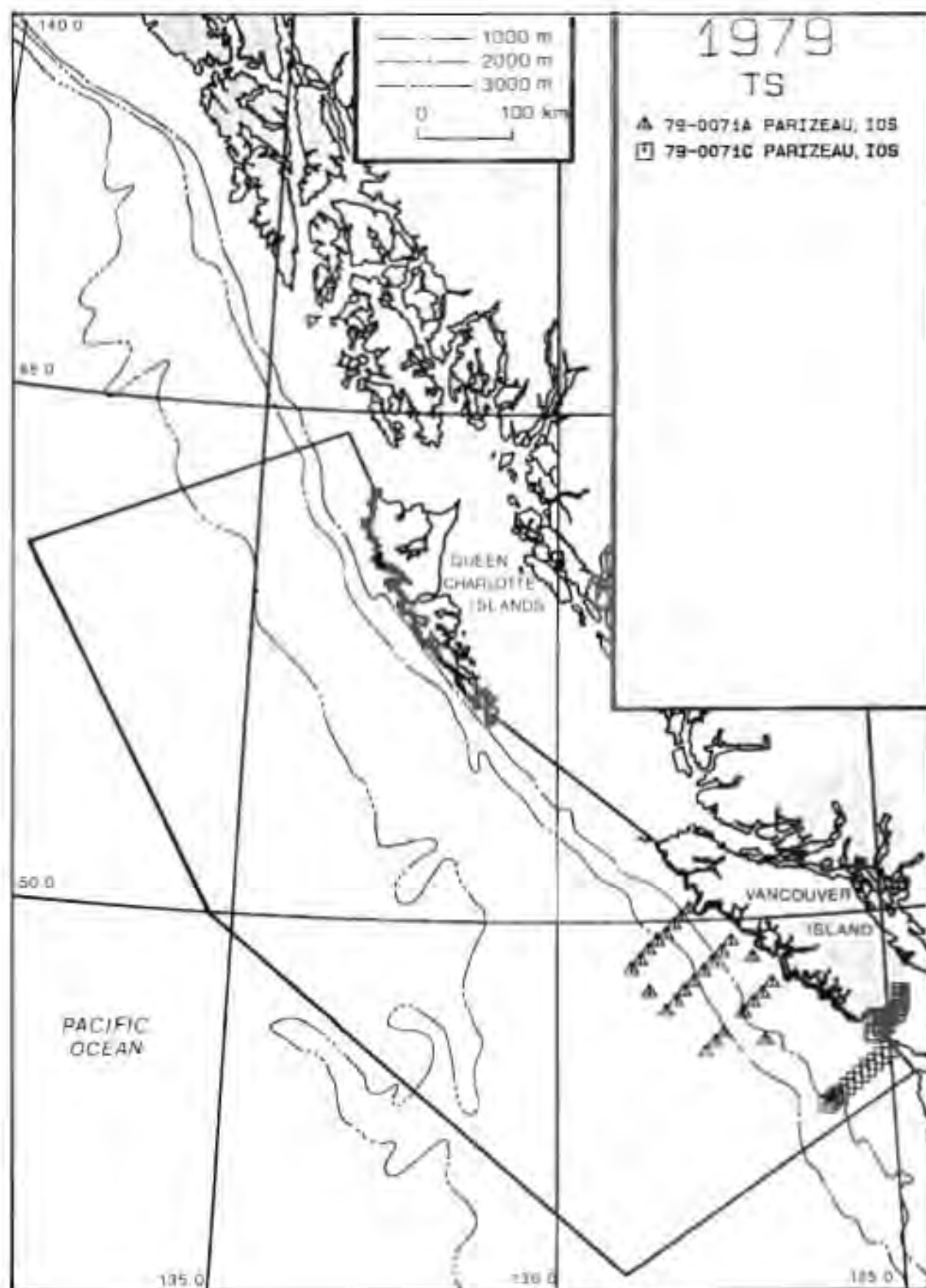
1979

TS

- ▲ 79-0069 IOS, PARIZEAU
□ 79-0070 IOS, ENDEAVOUR

0 50 km





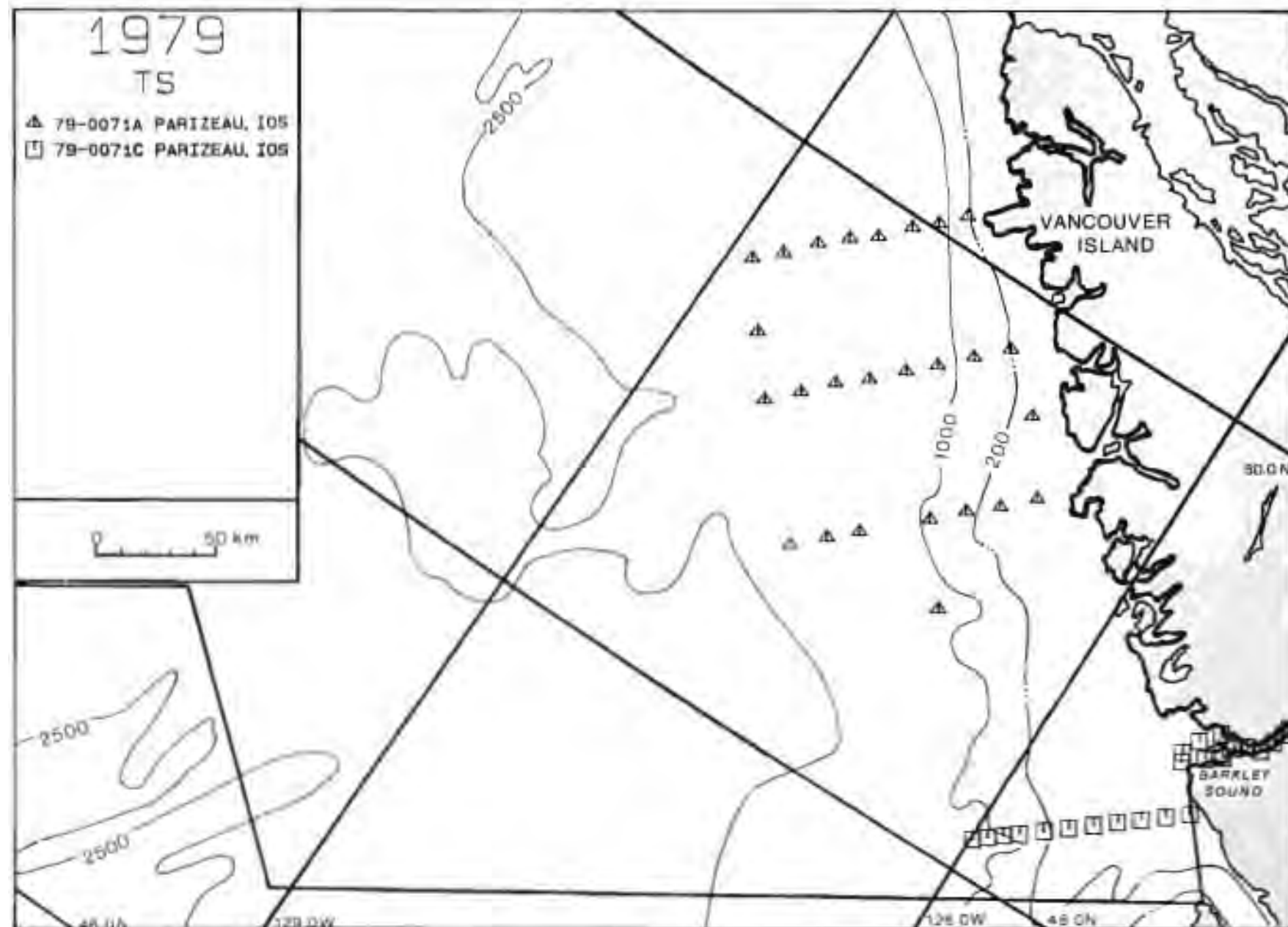
1979

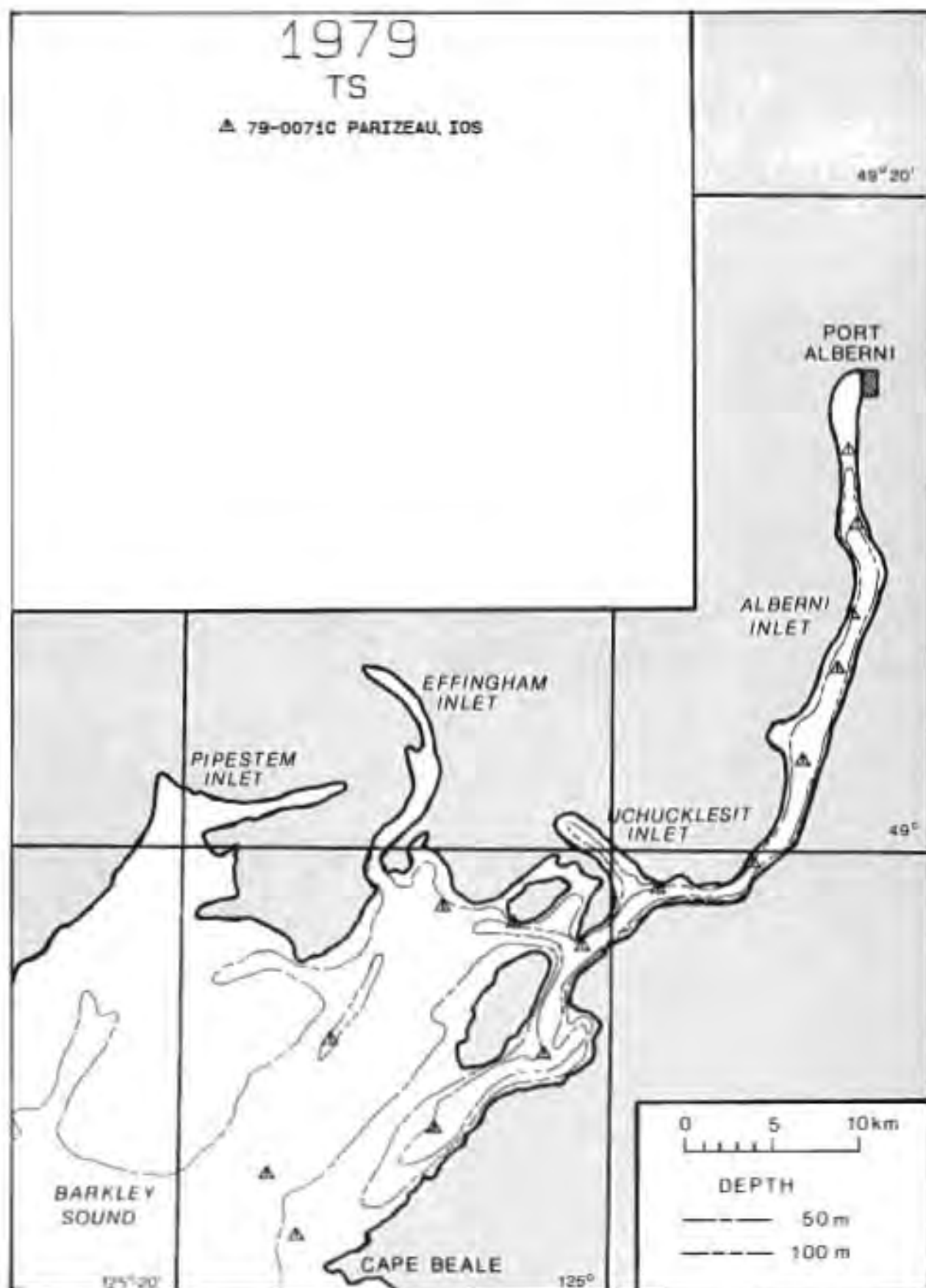
TS

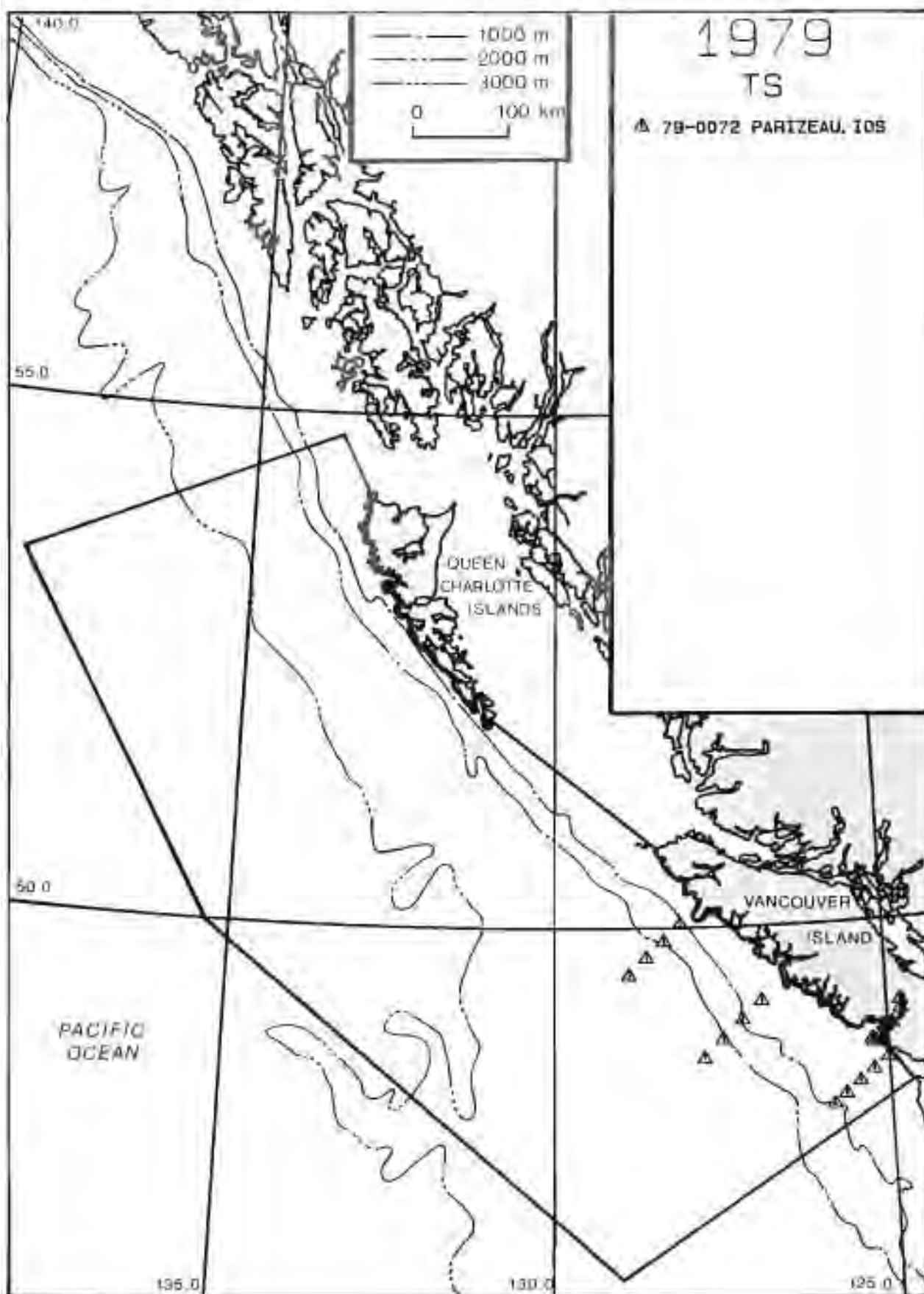
▲ 79-0071A PARIZEAU, IOS

□ 79-0071C PARIZEAU, IOS

0 50 km



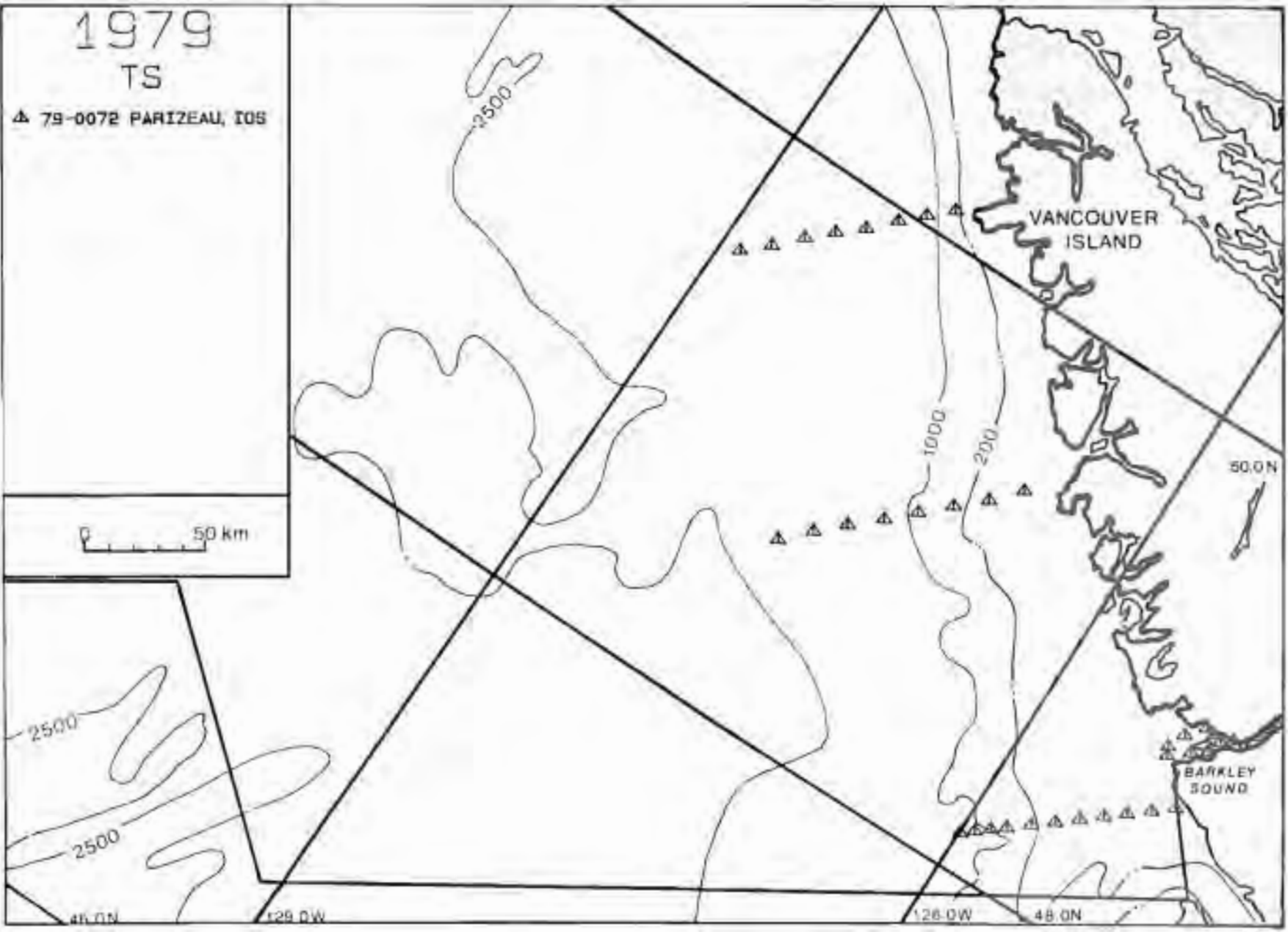




1979
TS

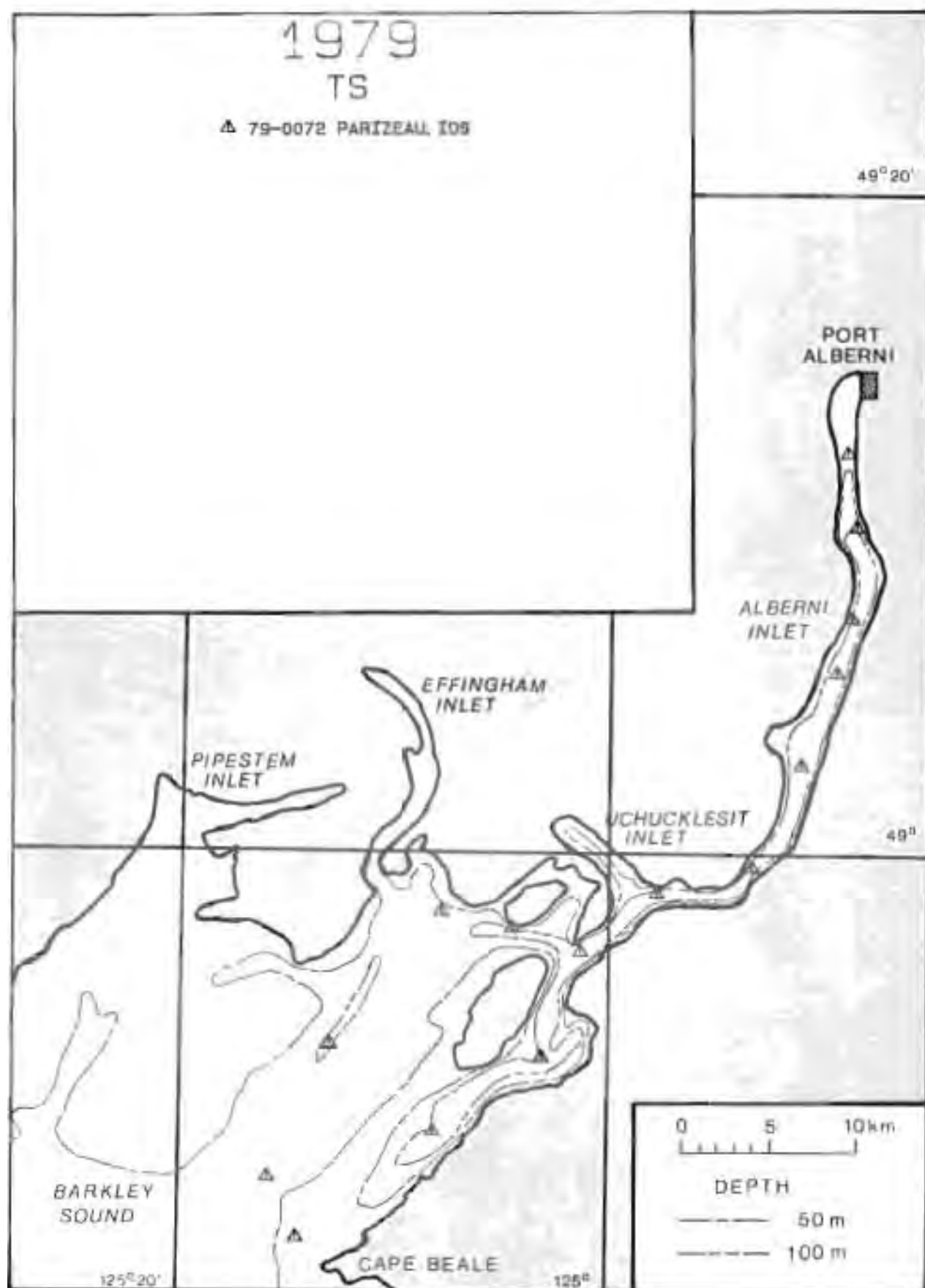
▲ 79-0072 PARIZEAU, IOS

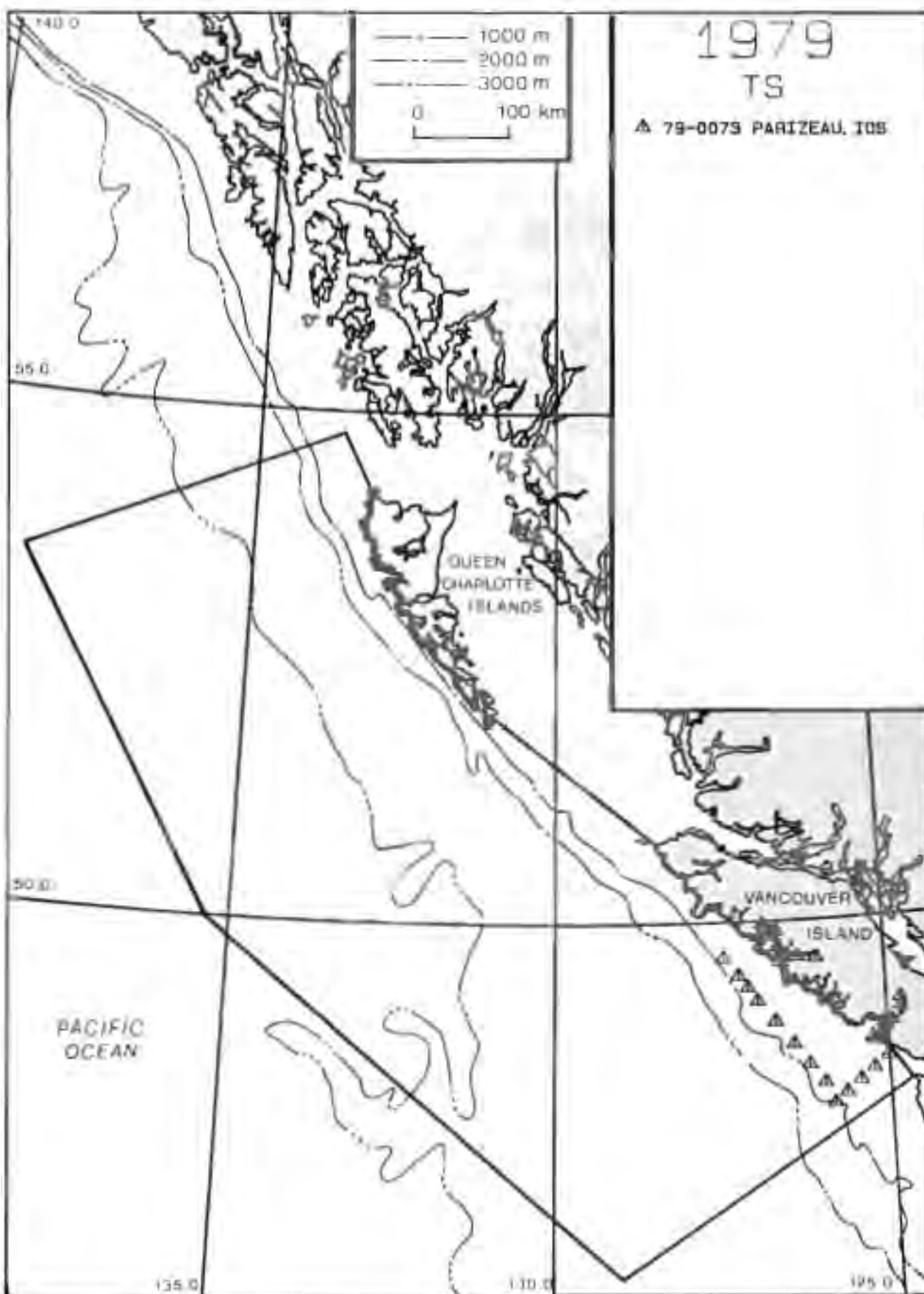
0 50 km



50.0N

BARKLEY SOUND

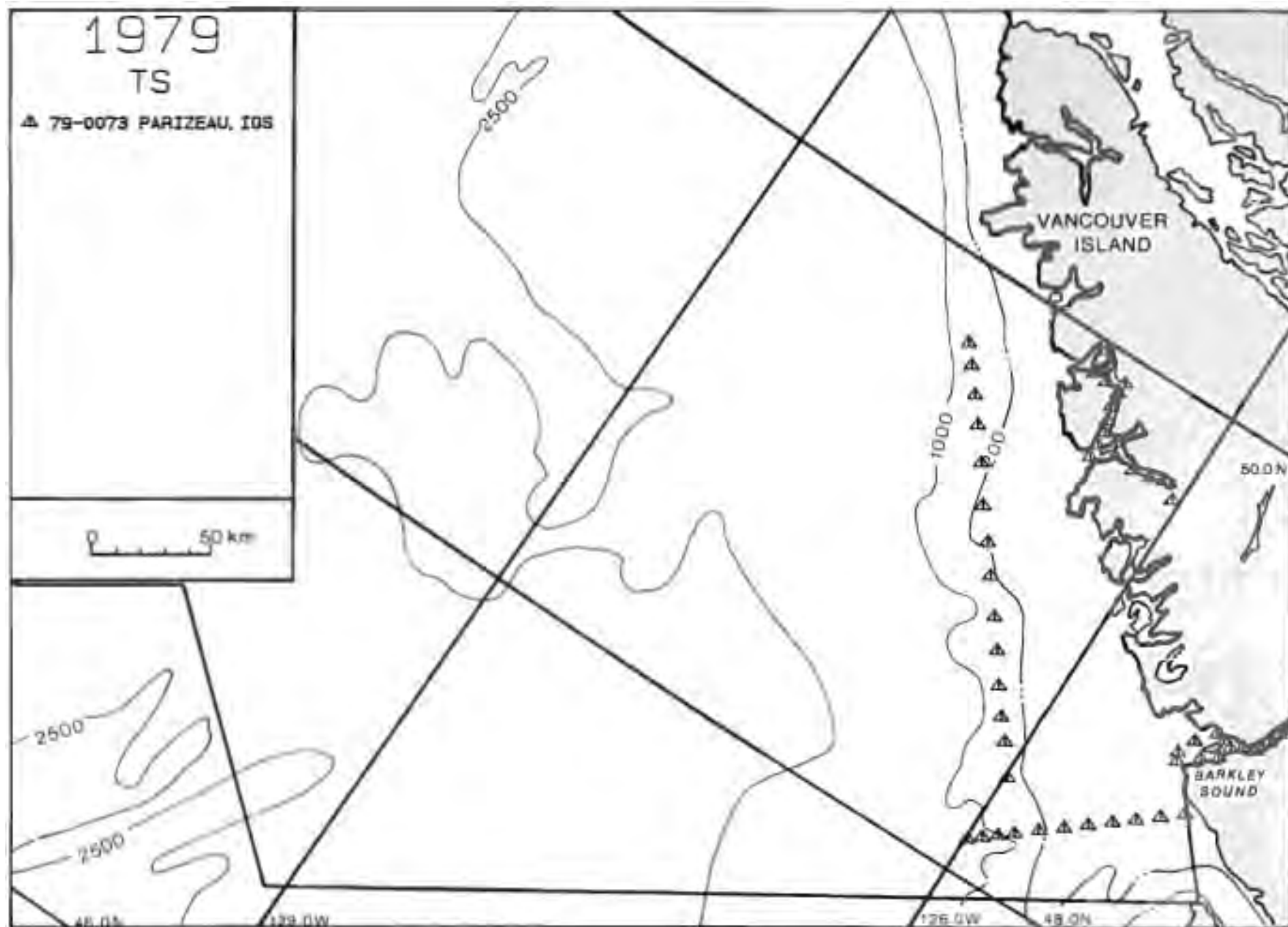


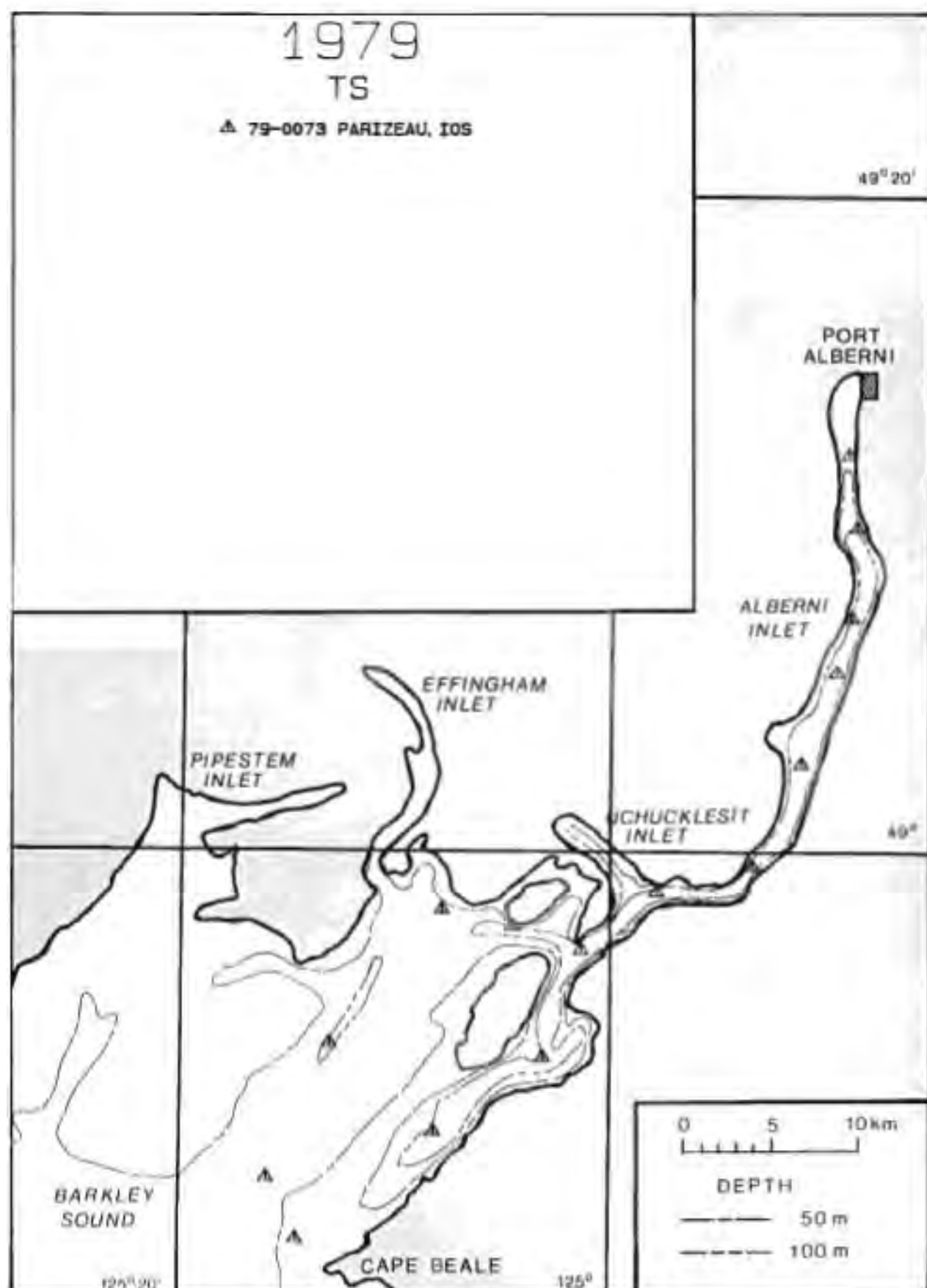


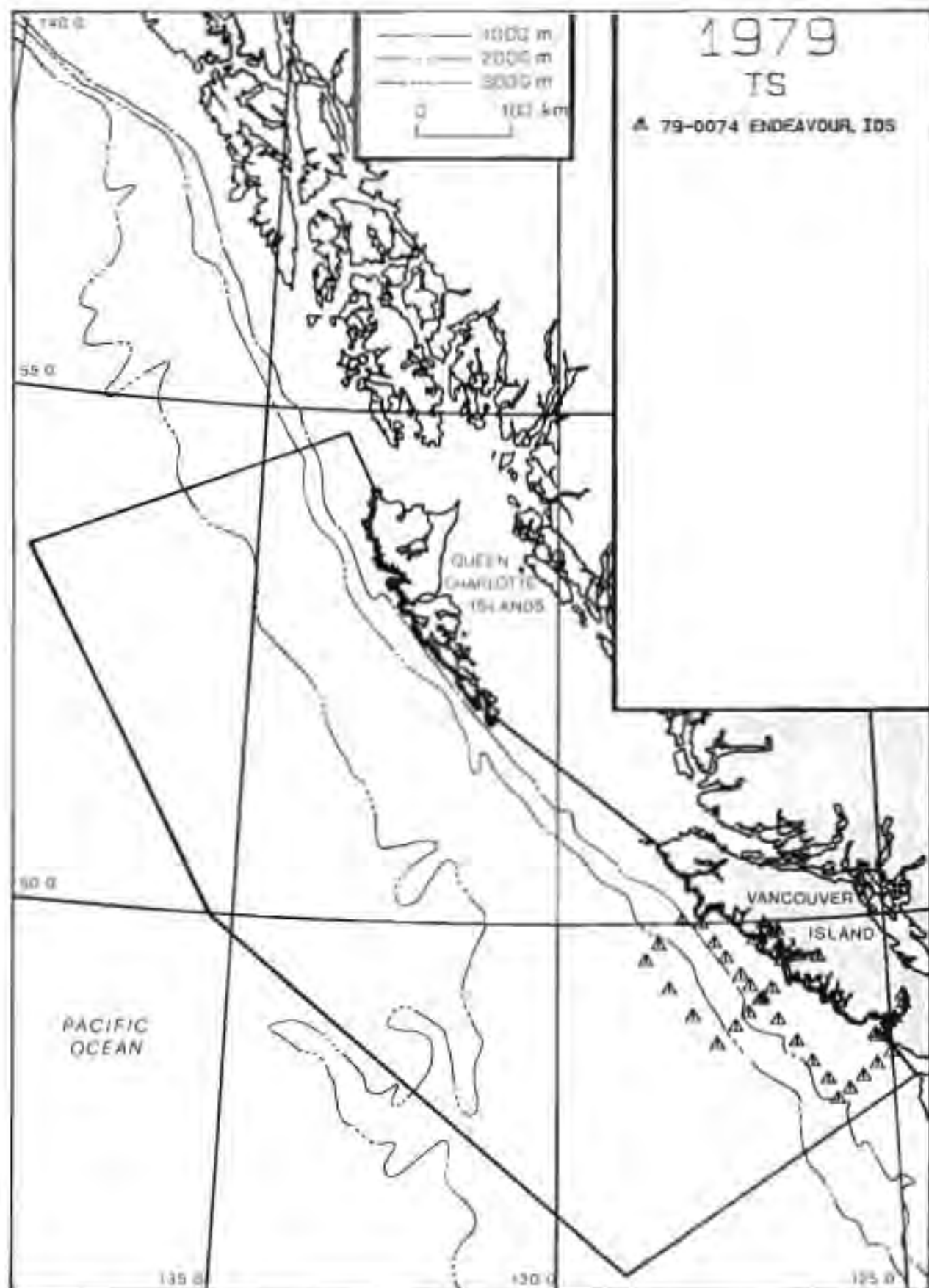
1979
TS

▲ 79-0073 PARIZEAU, IOS

0 50 km



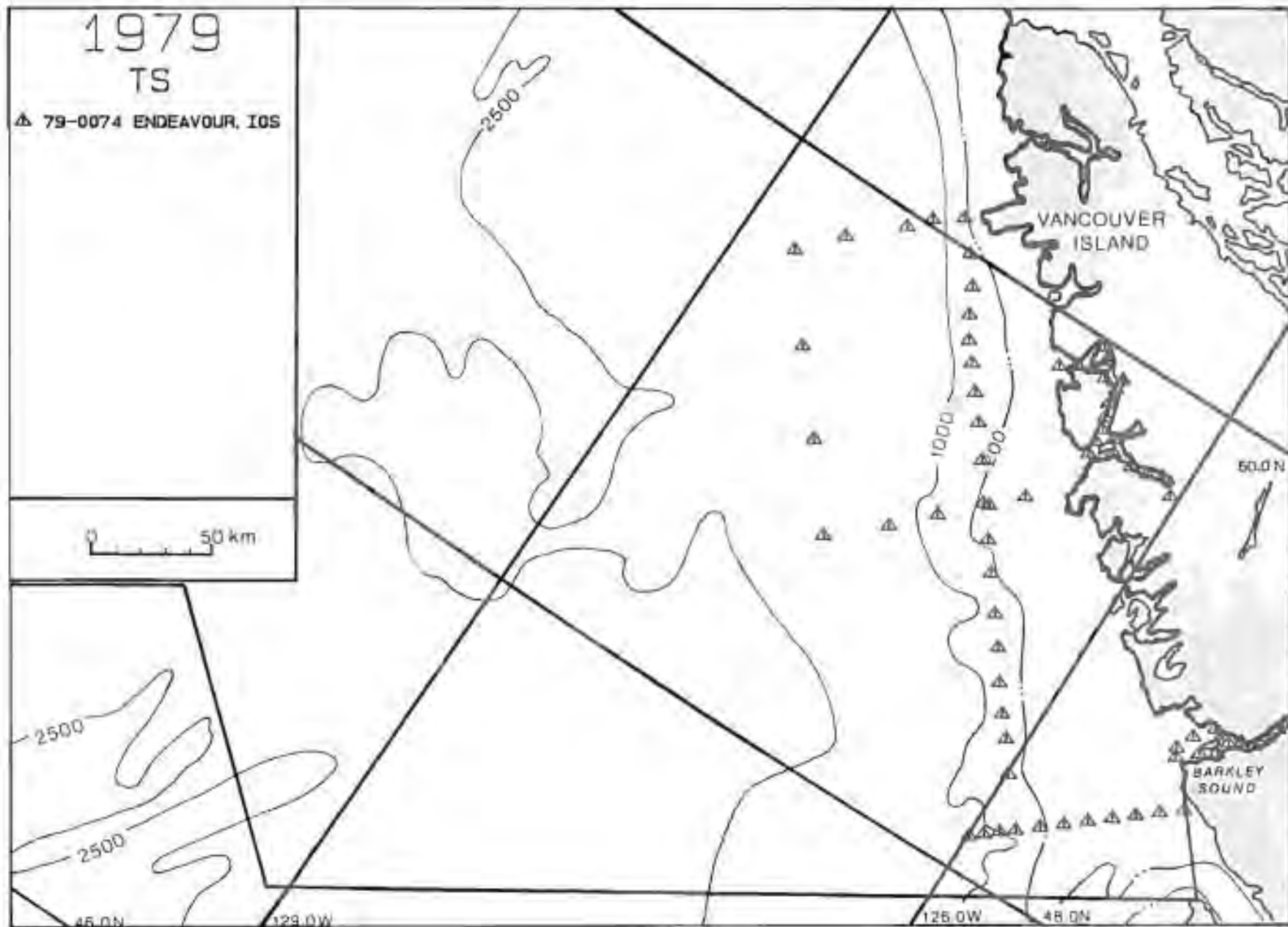


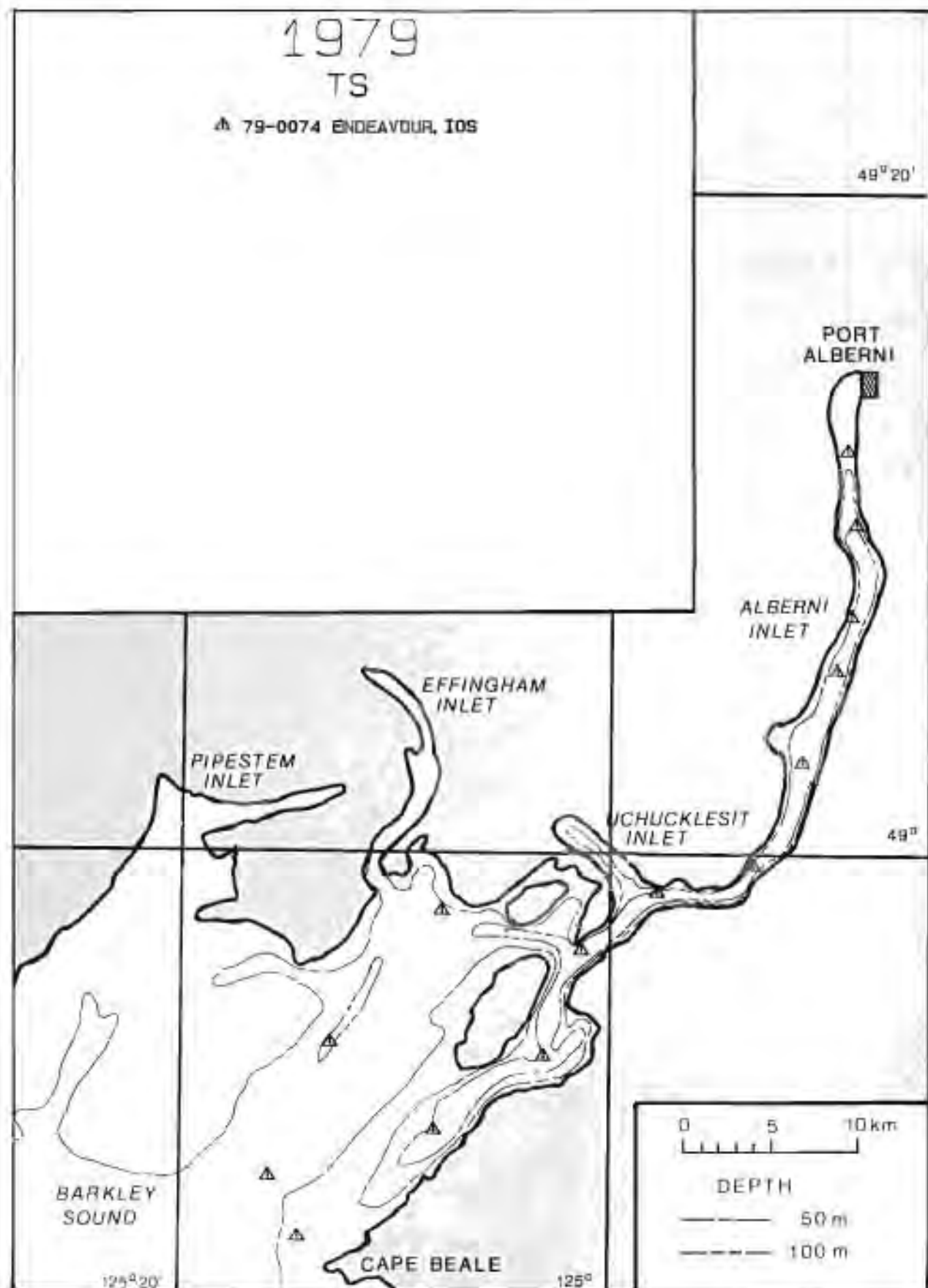


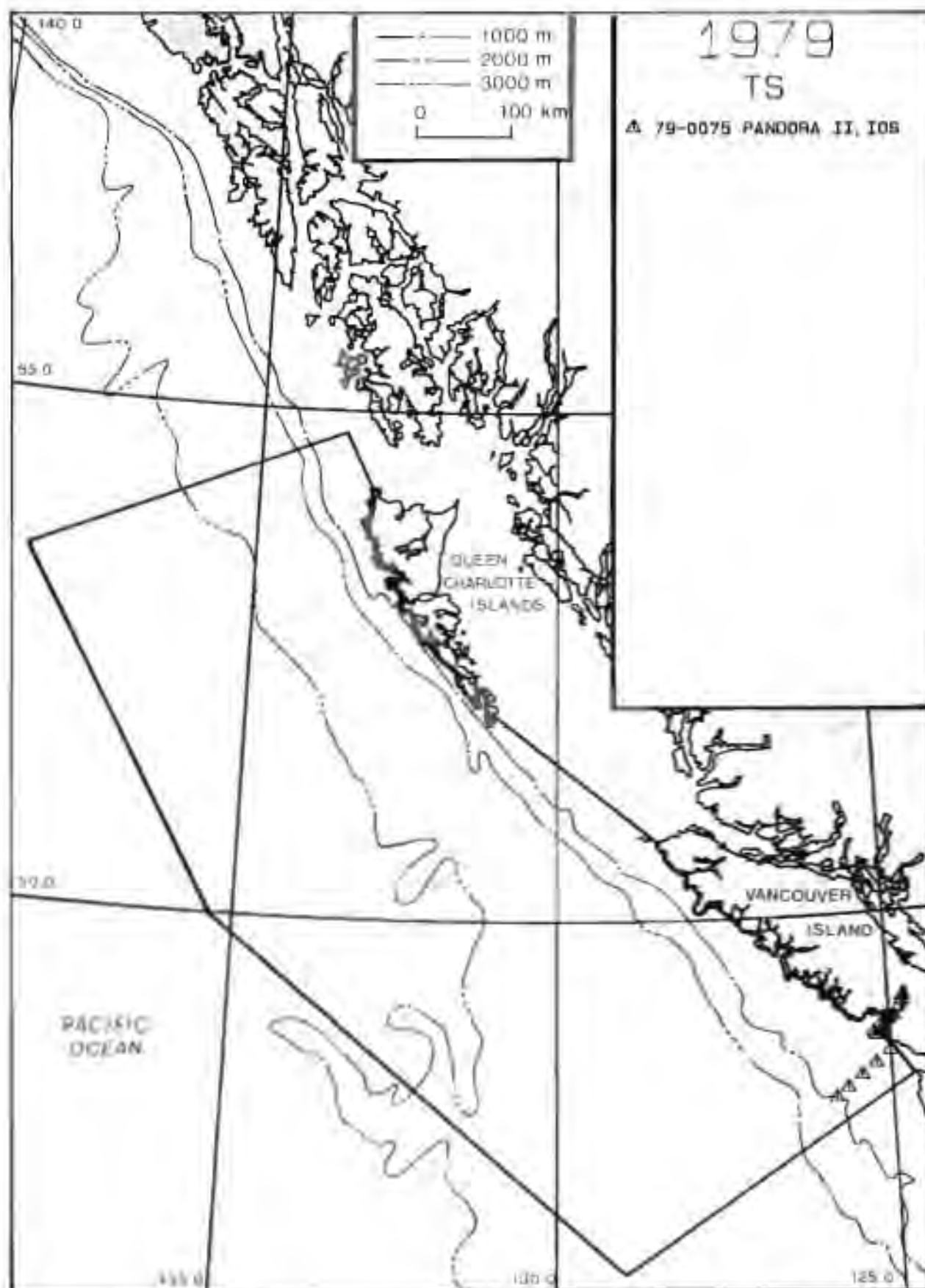
1979
TS

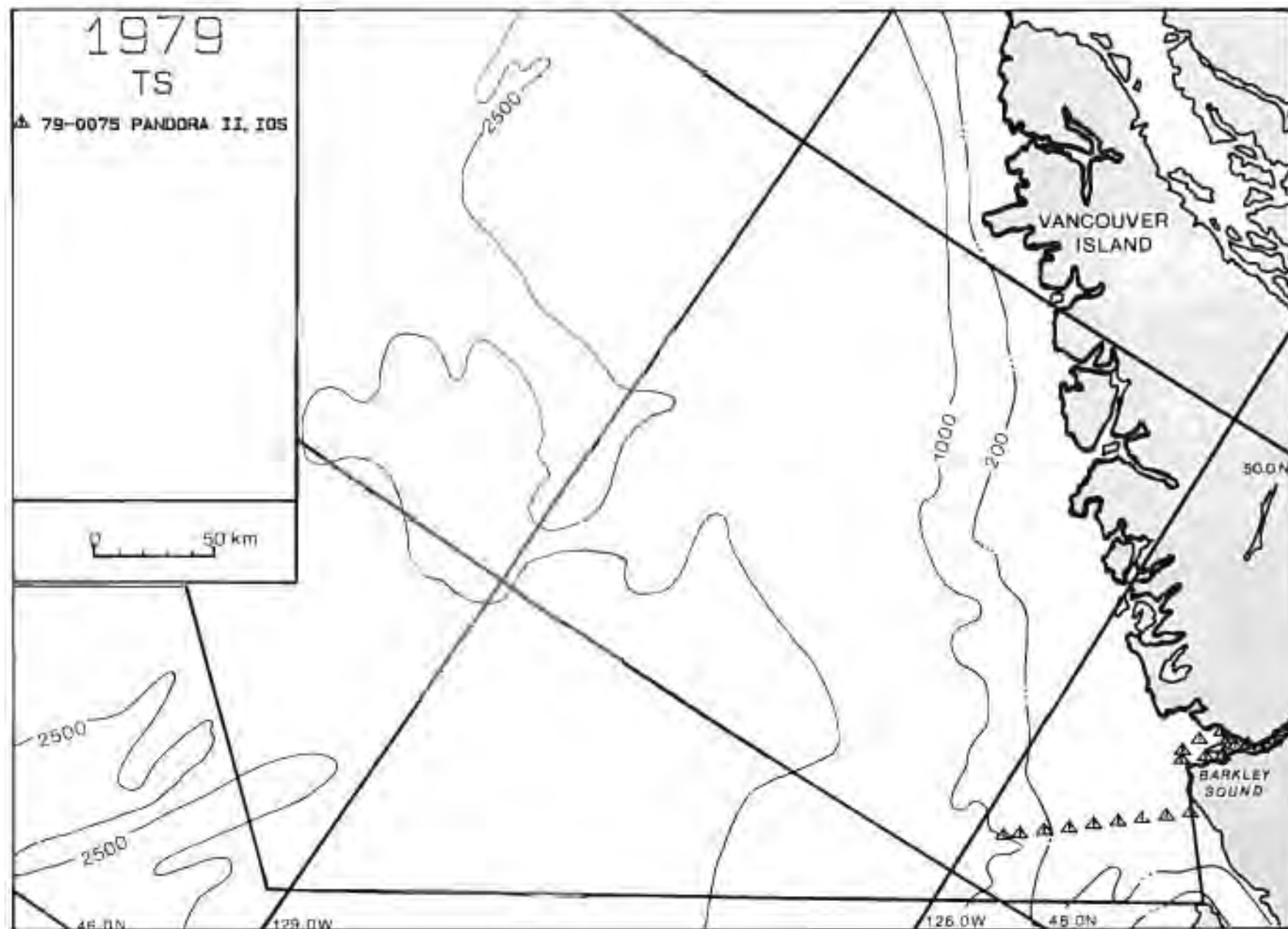
▲ 79-0074 ENDEAVOUR, IOS

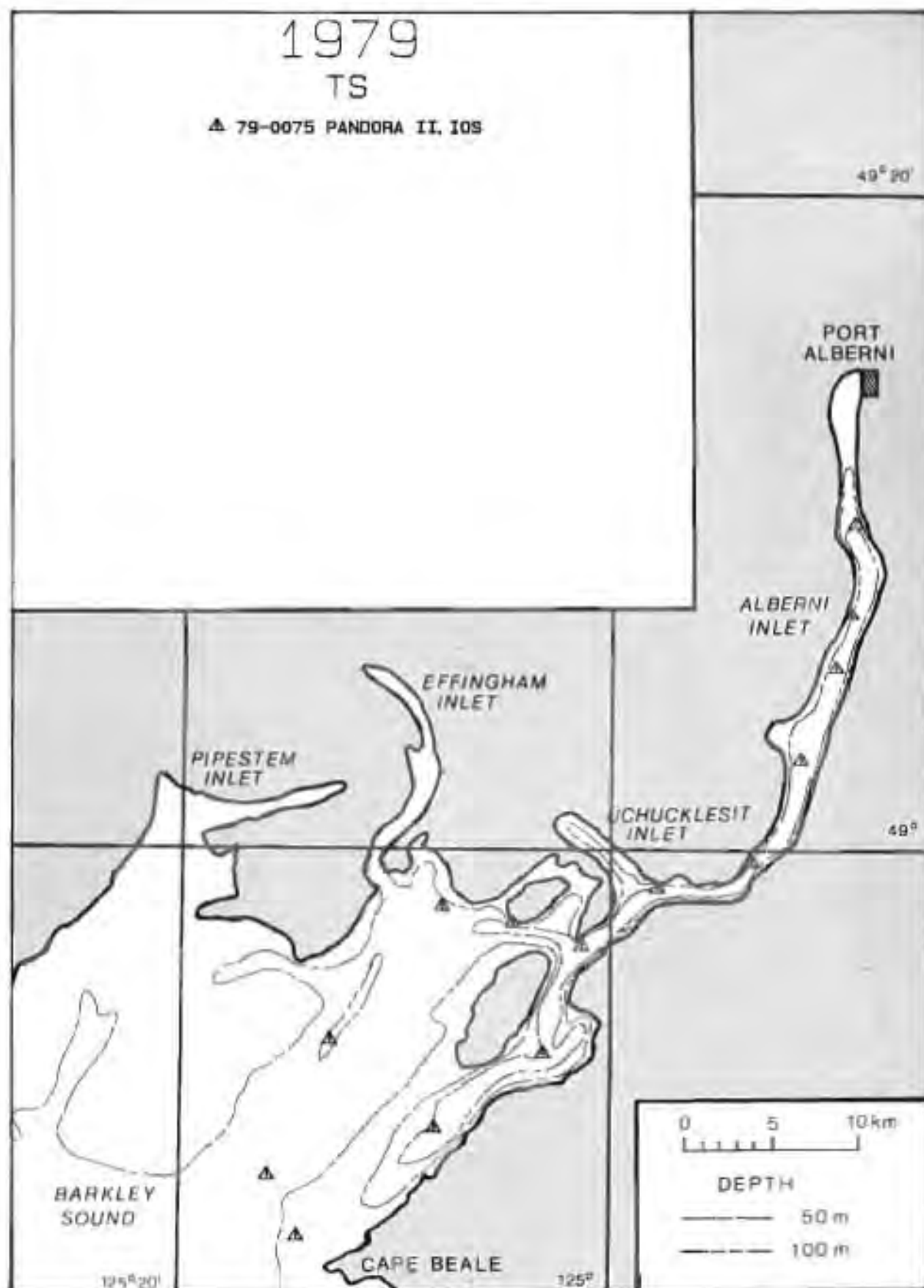
0 50 km

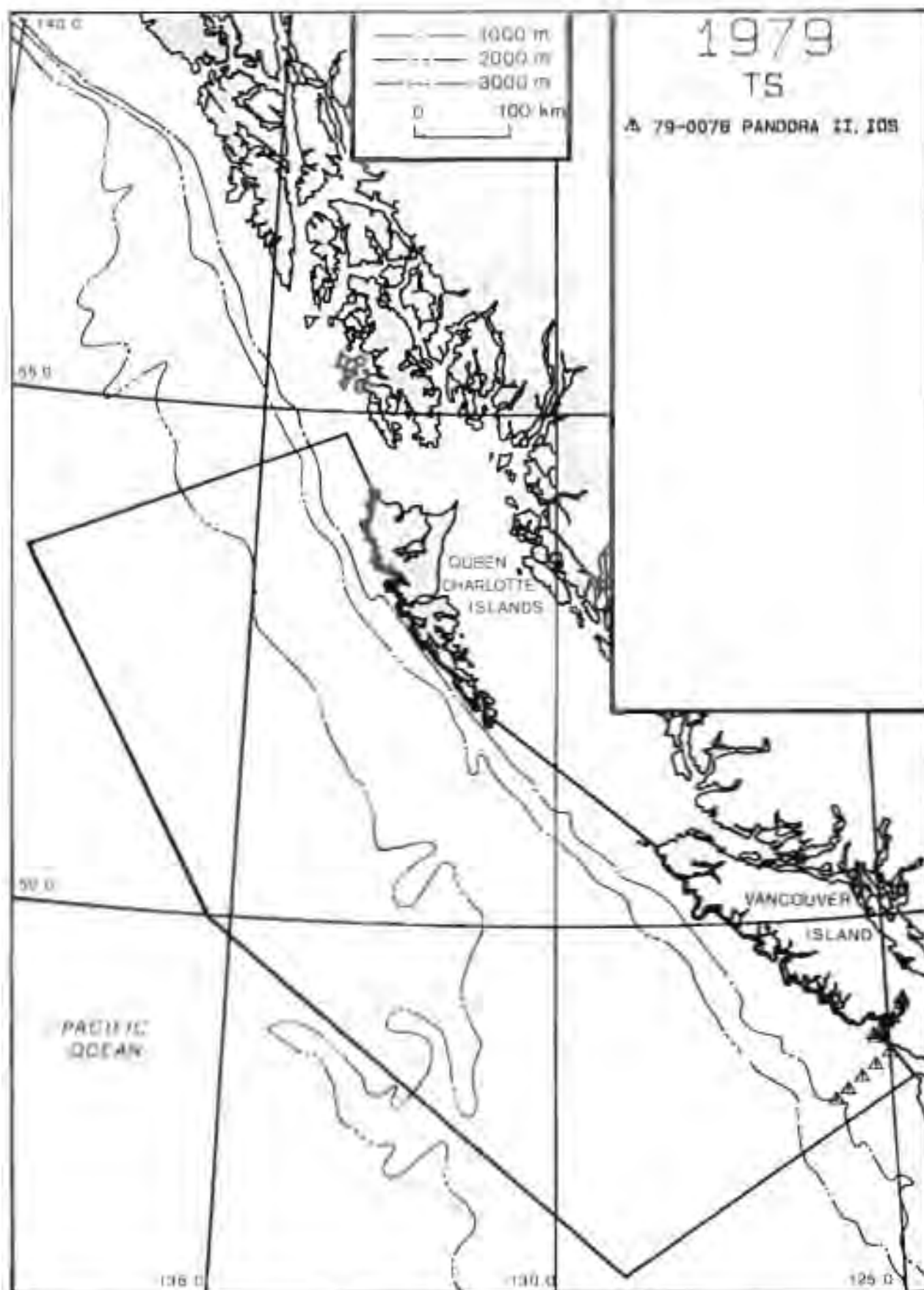


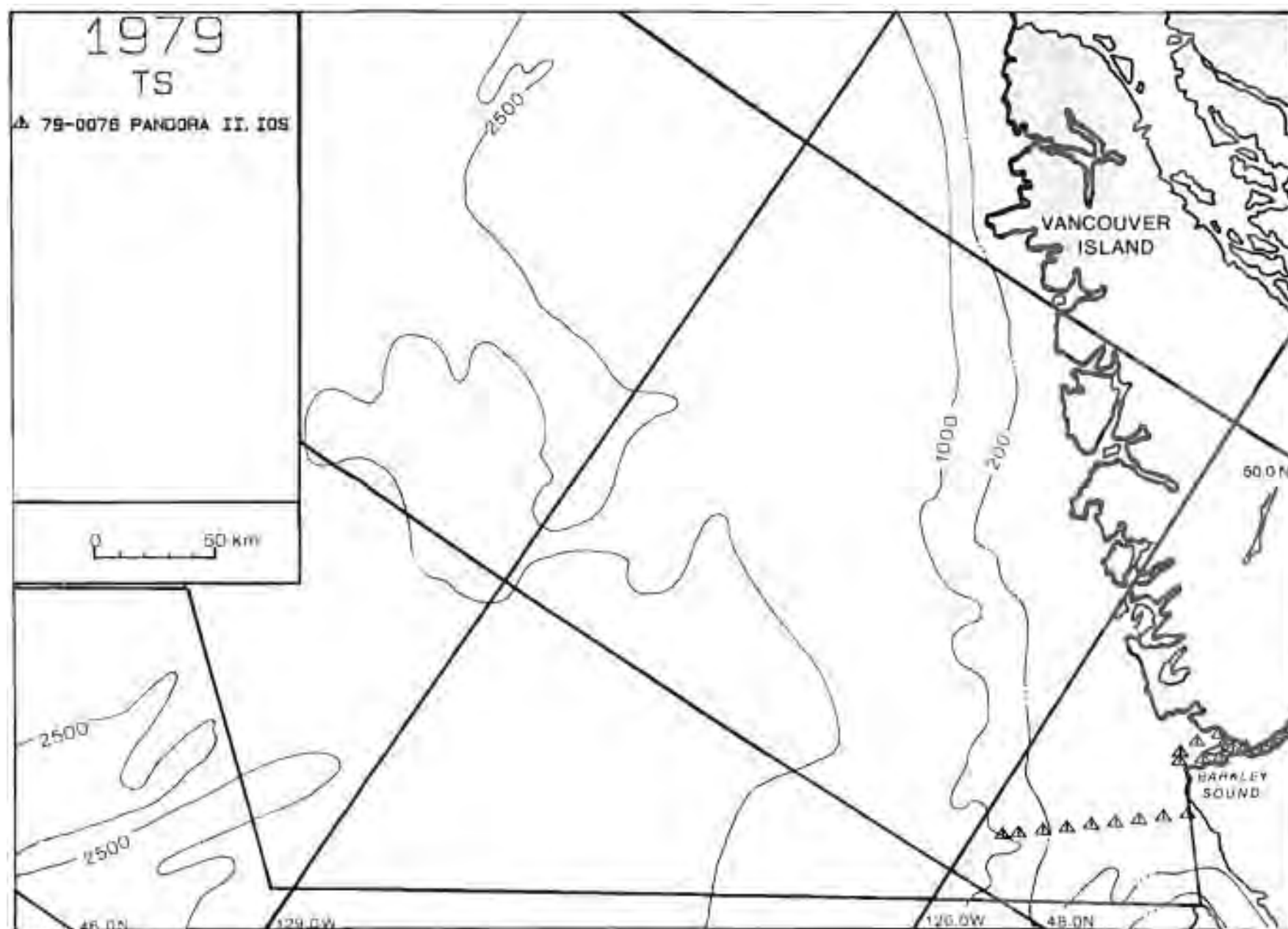


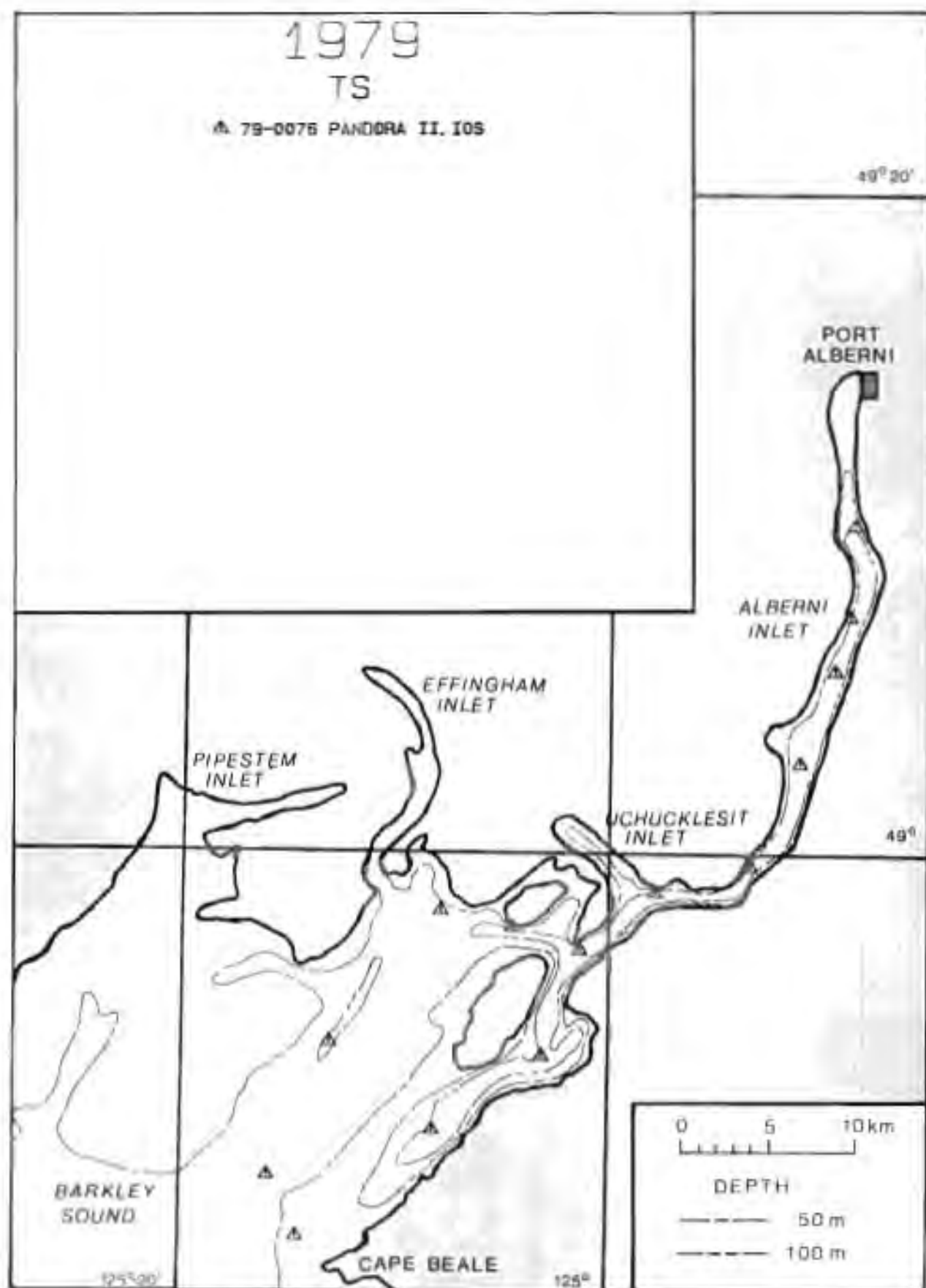


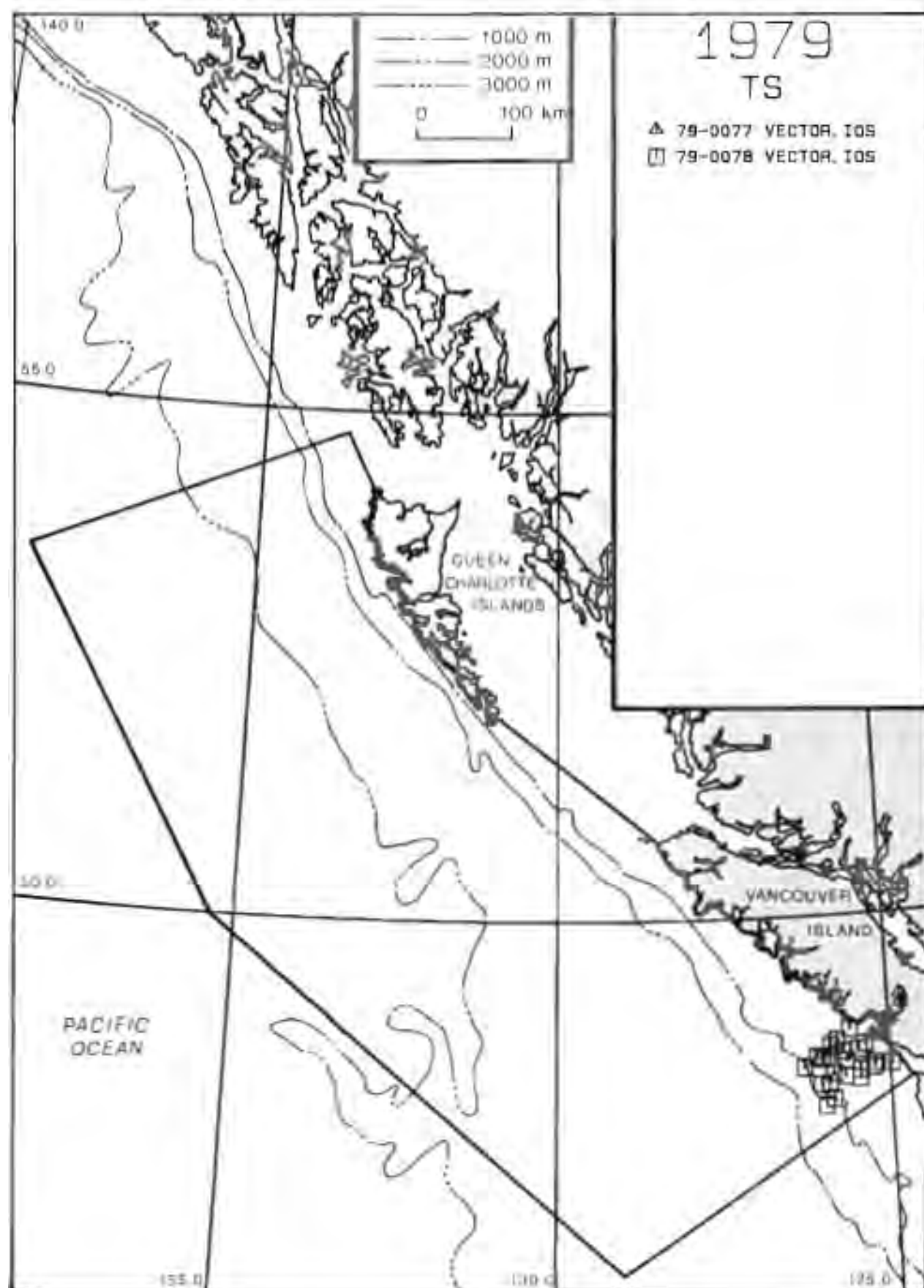


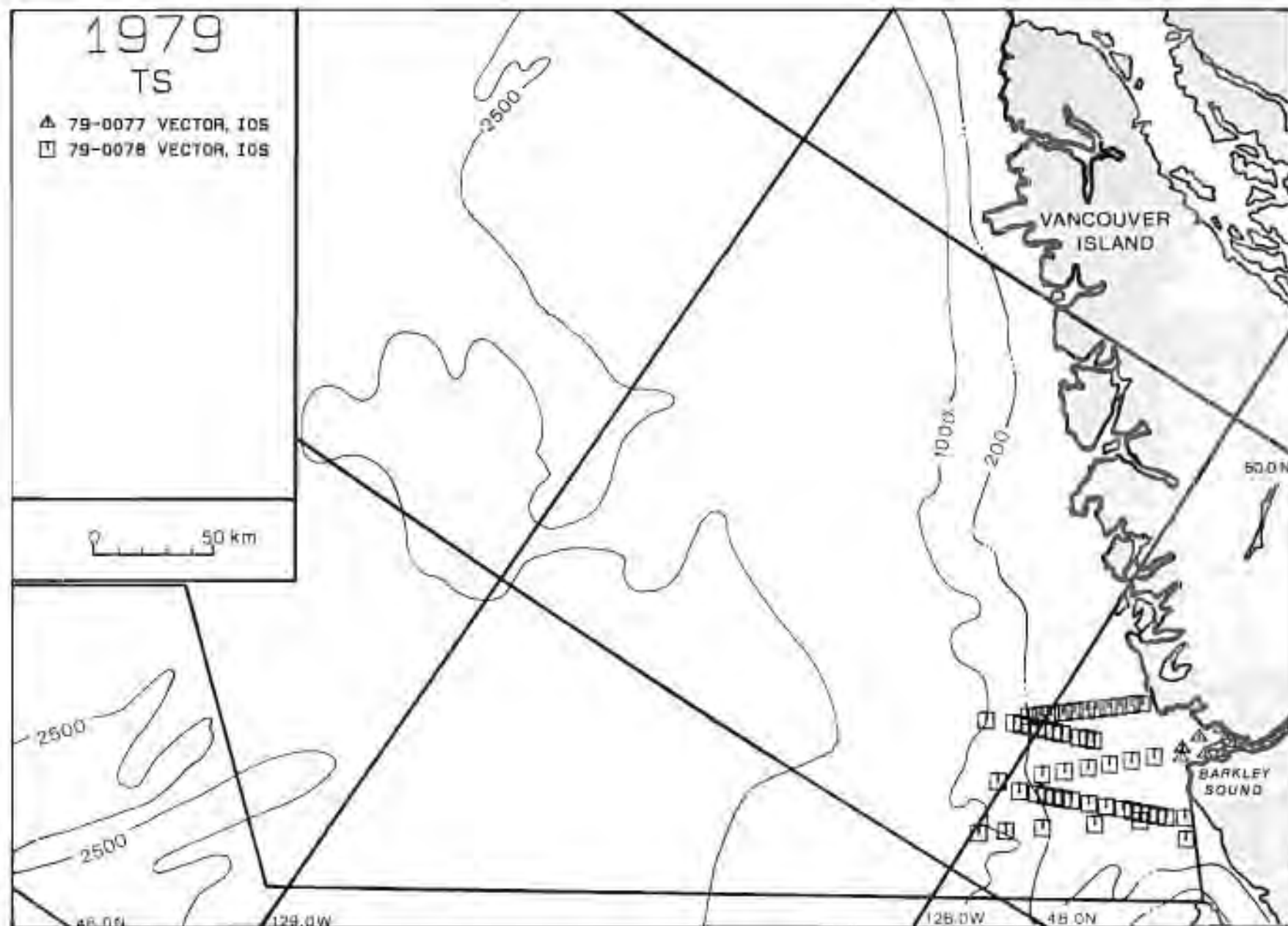


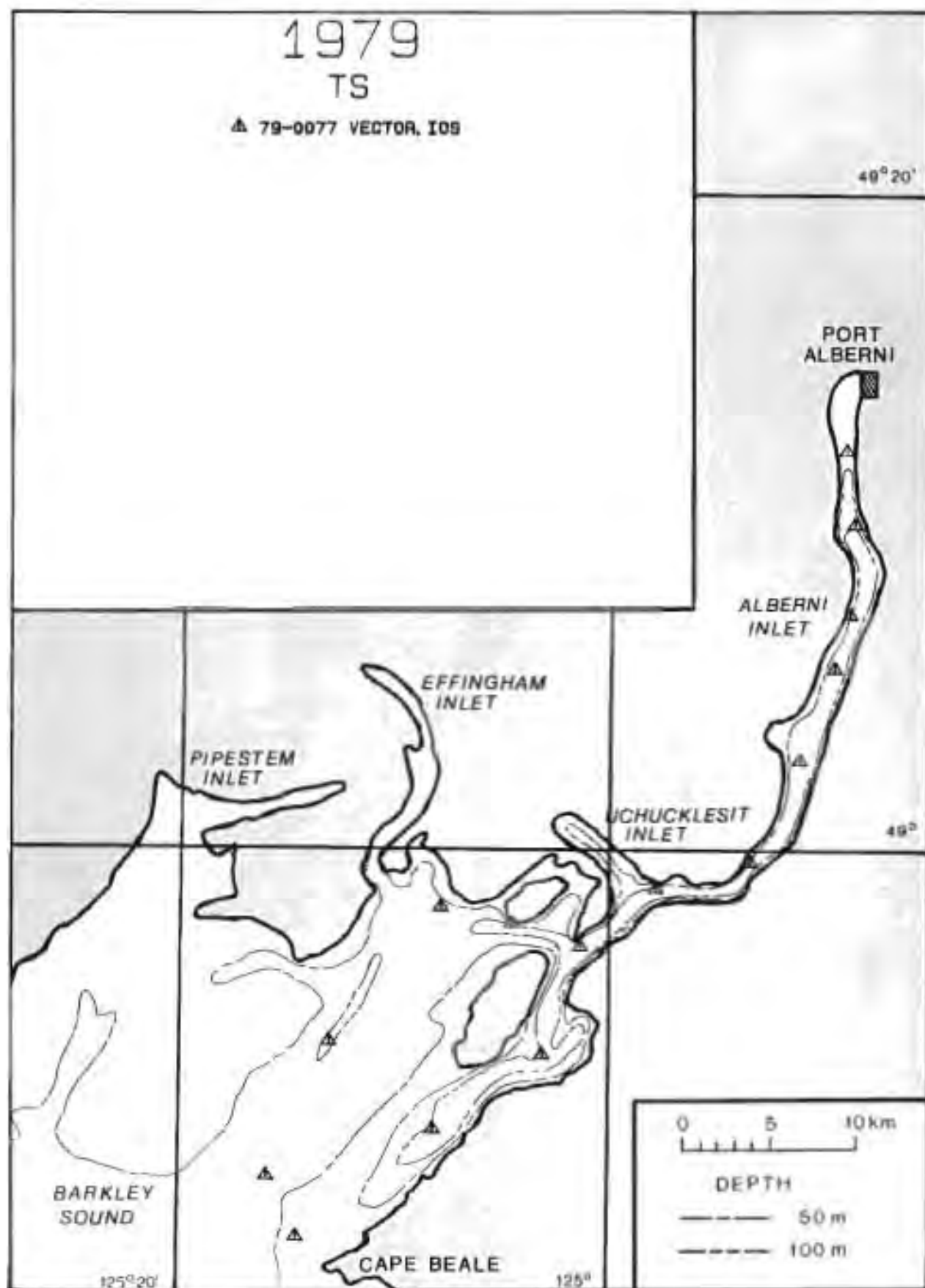


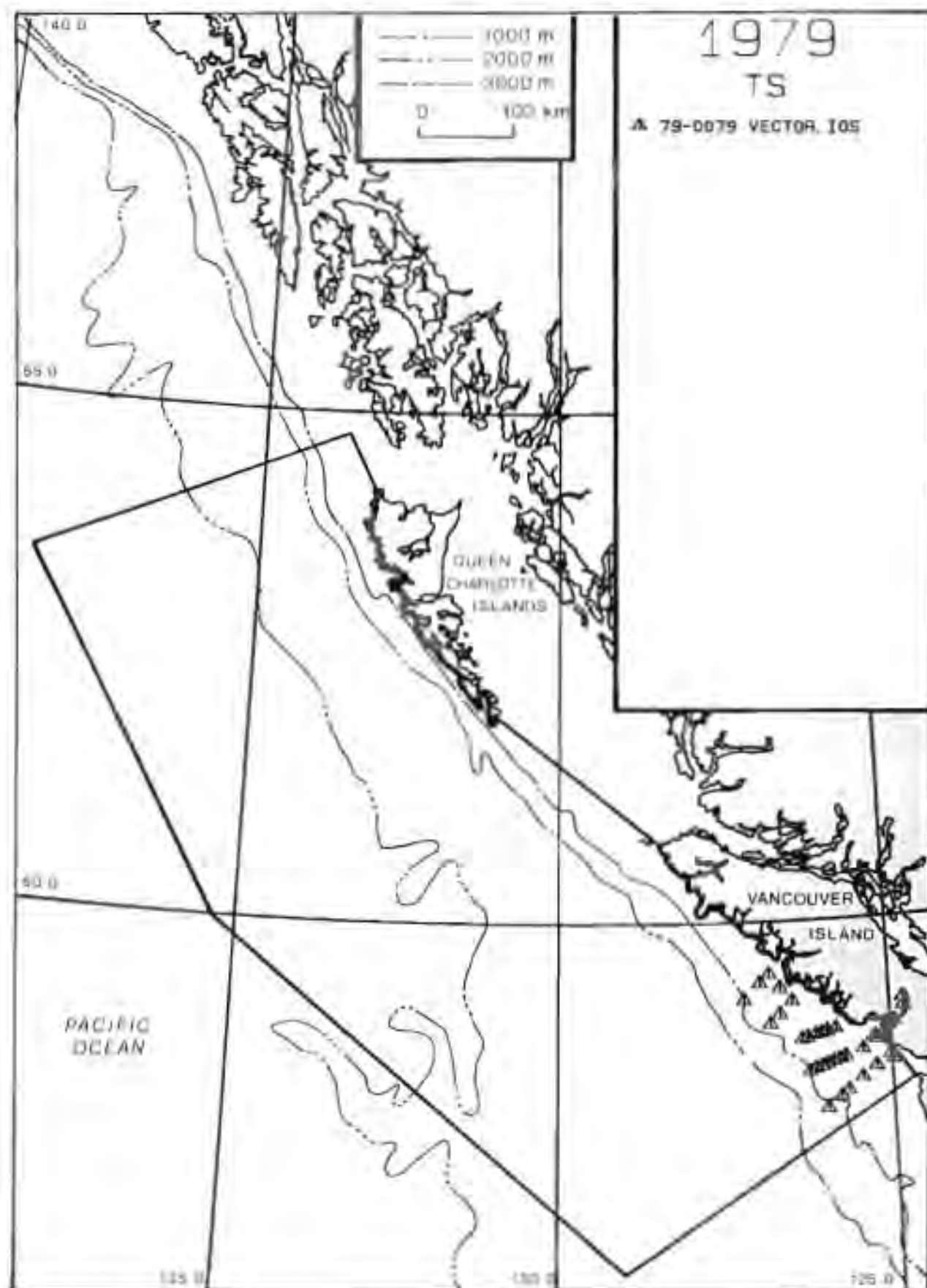


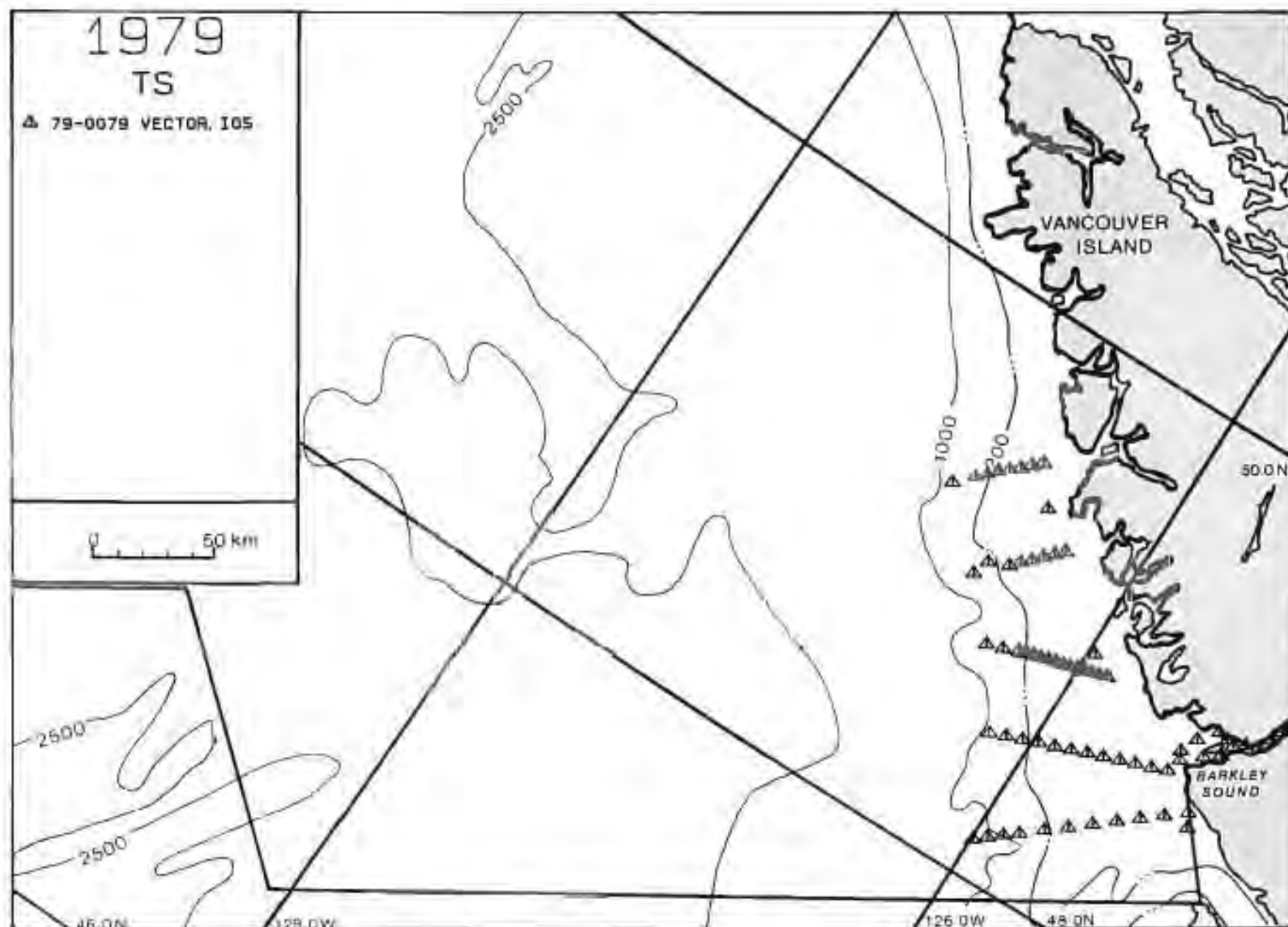


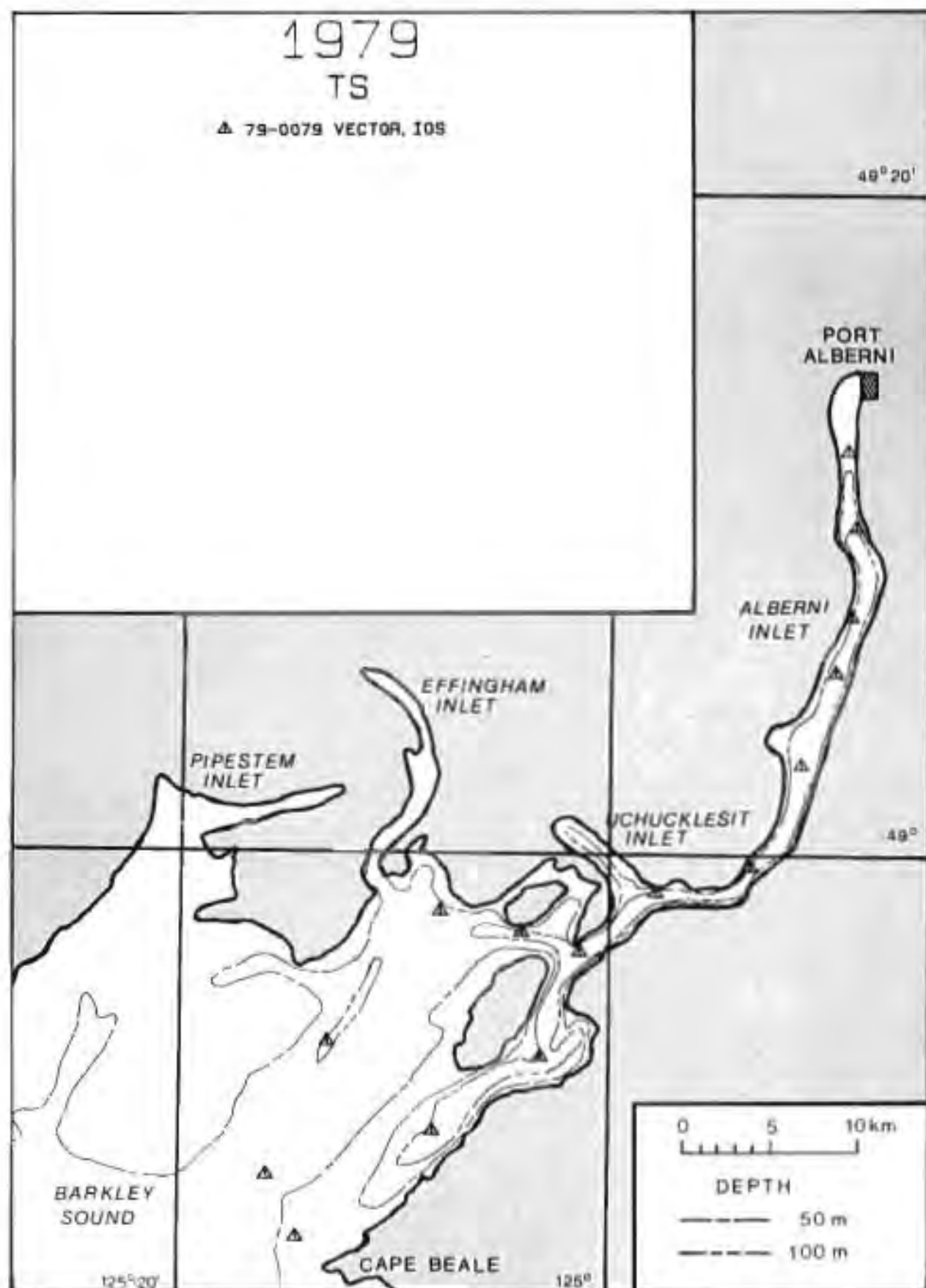


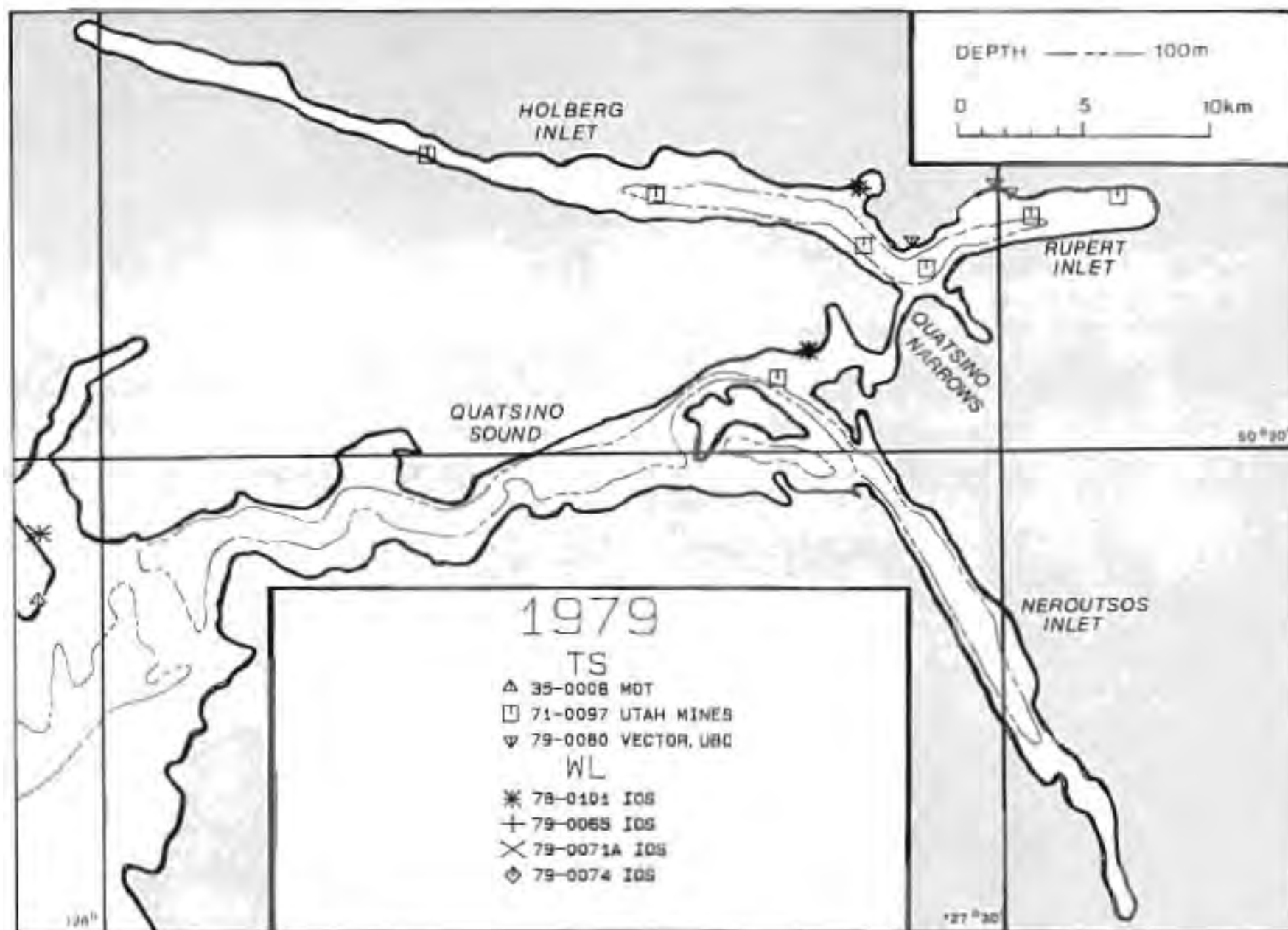


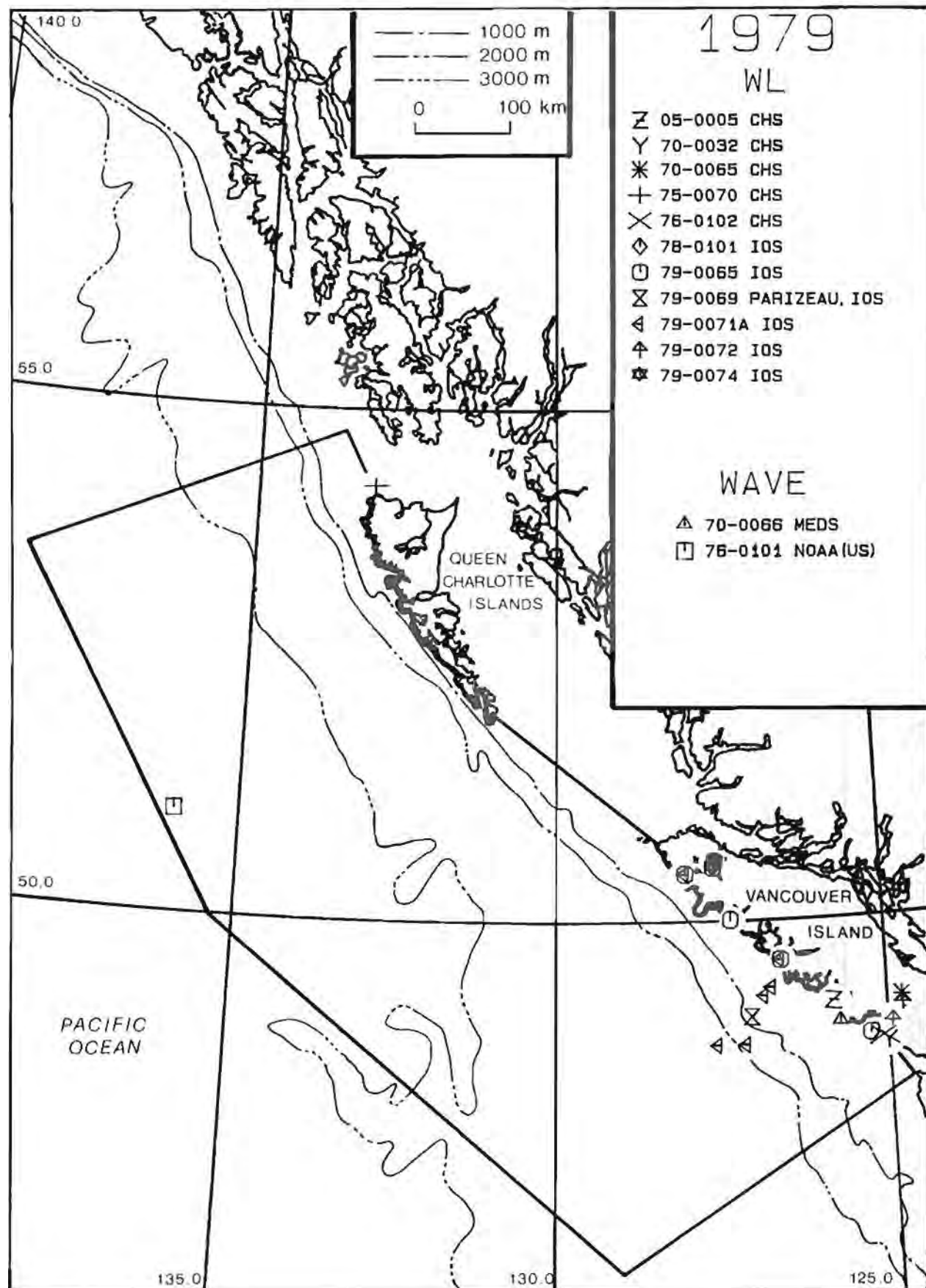


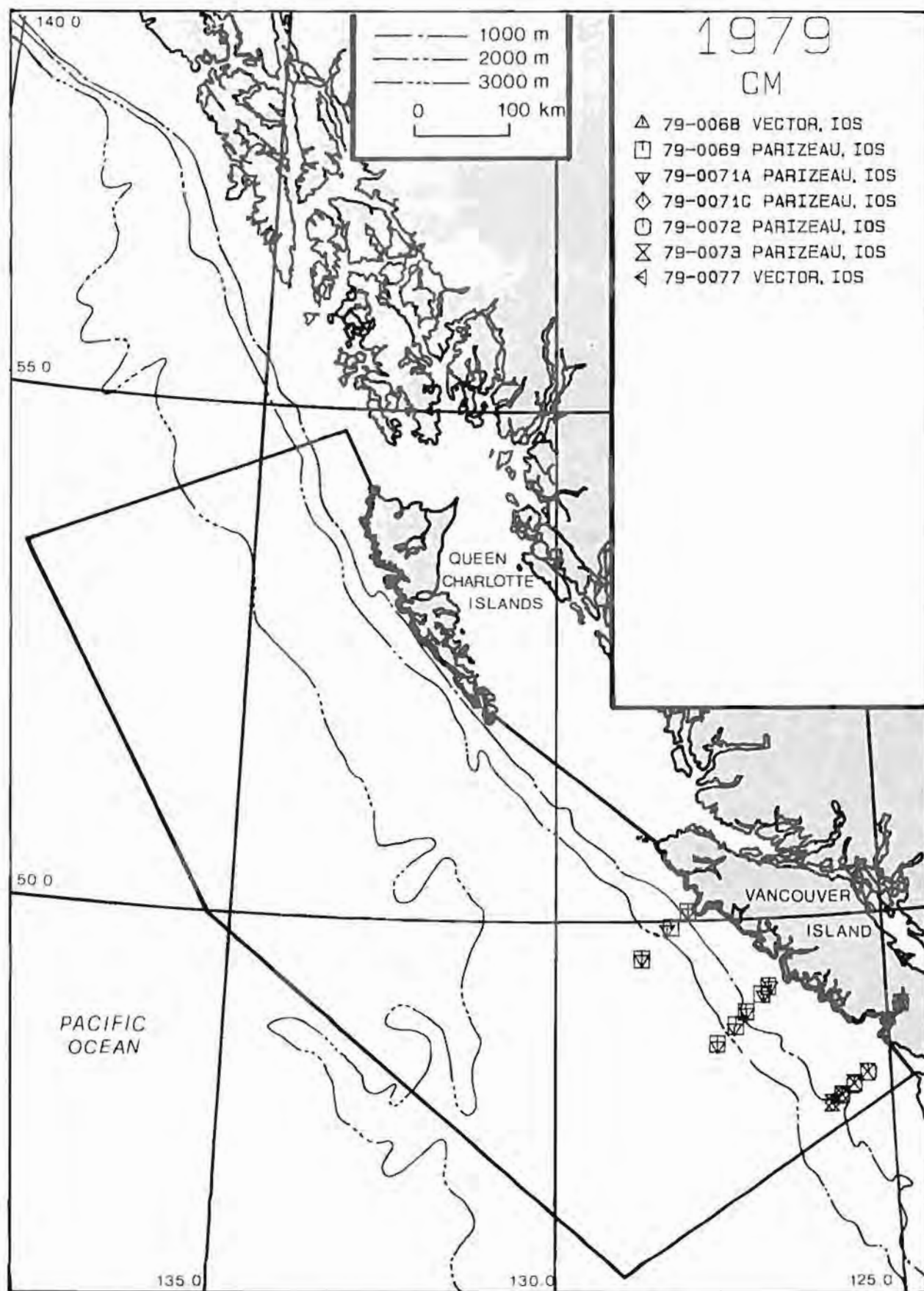








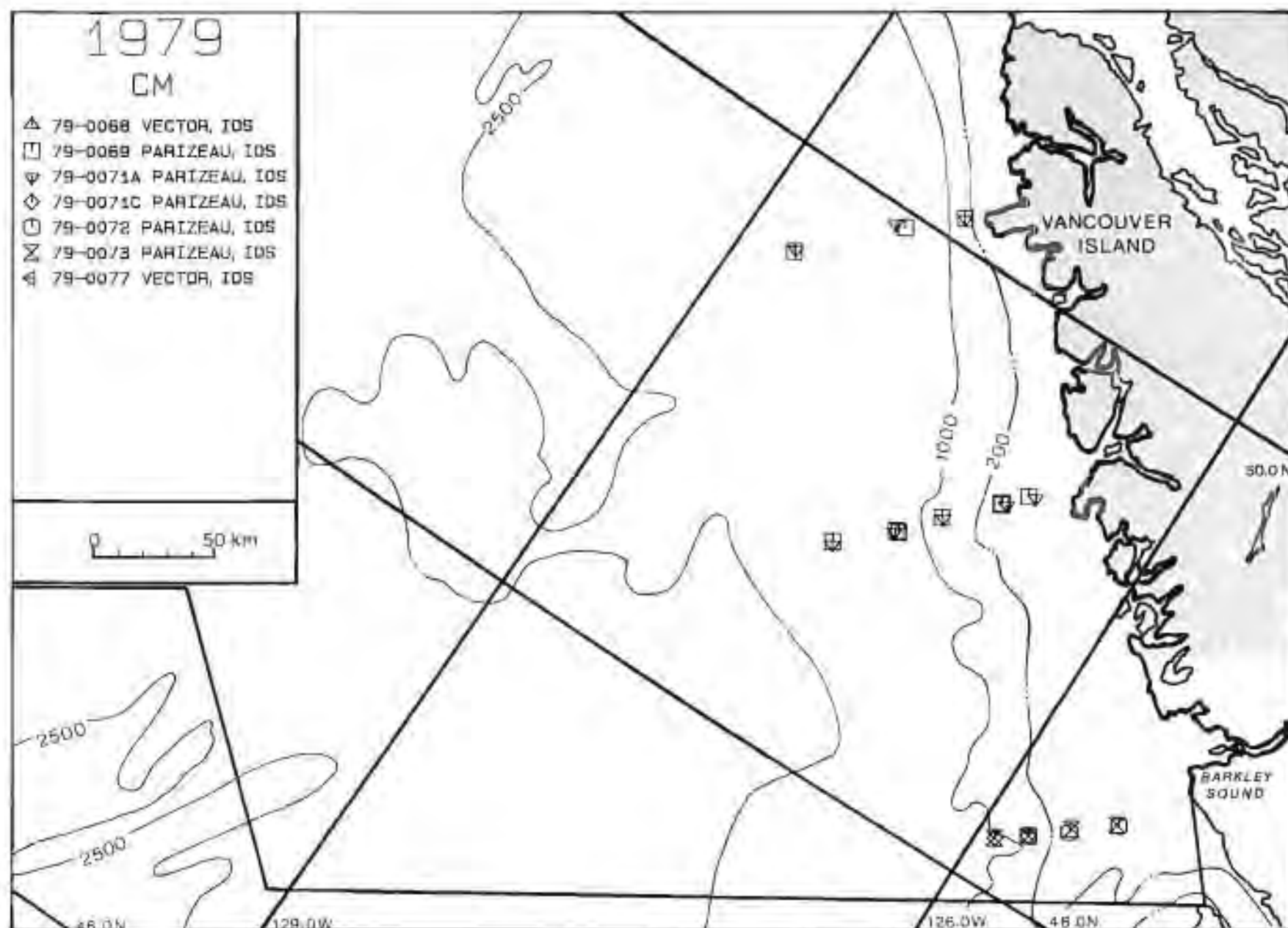


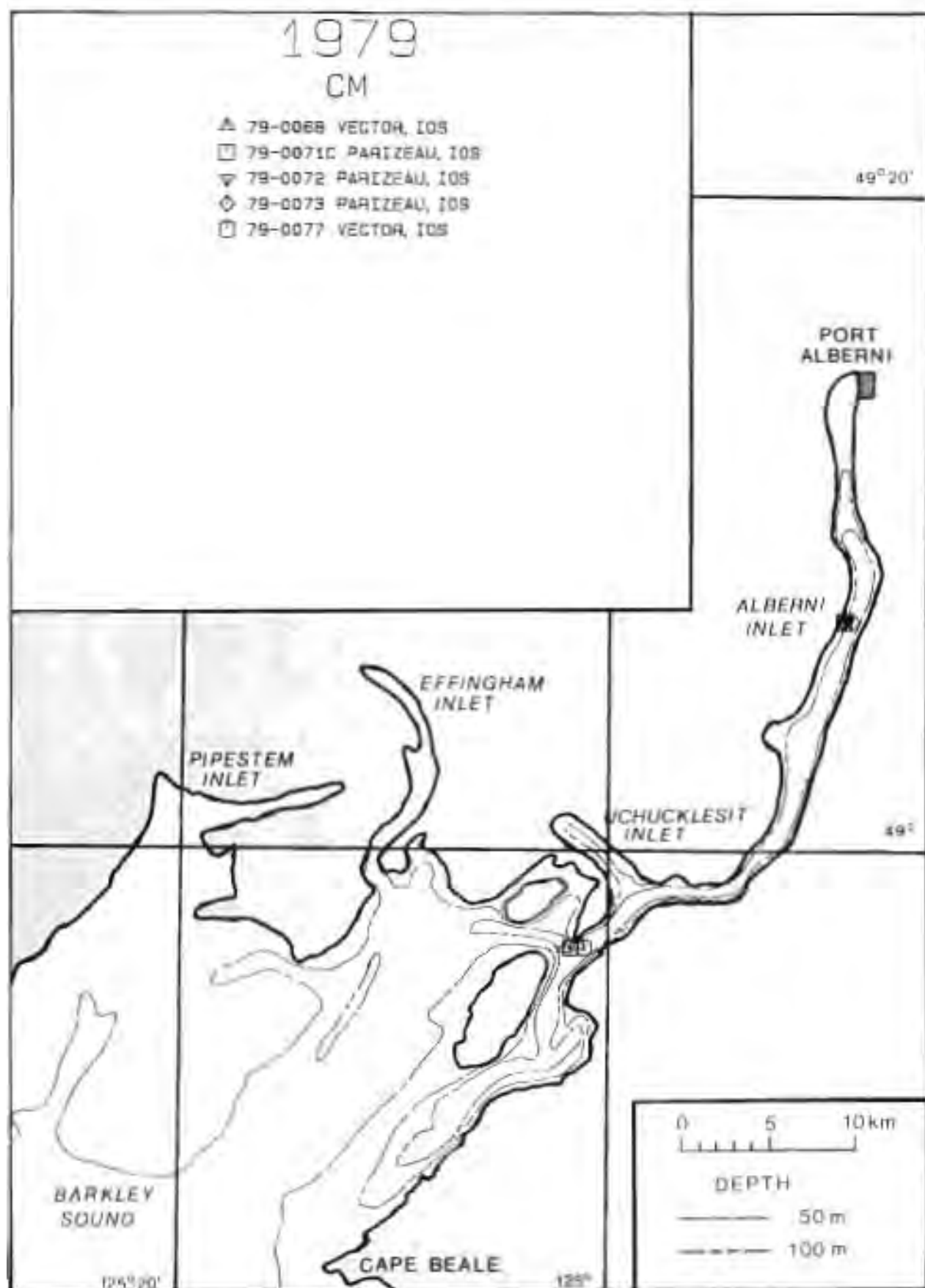


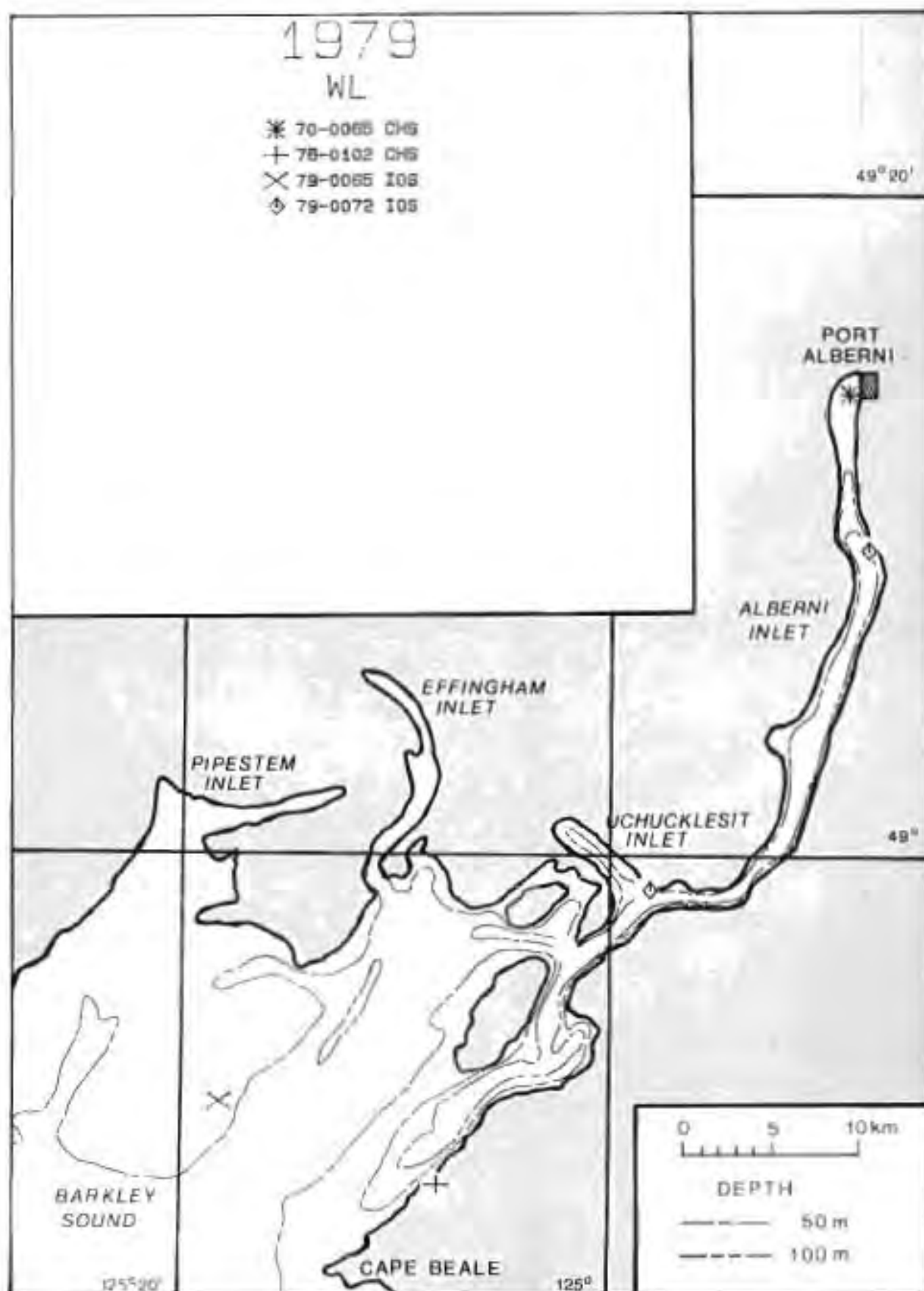
1979
CM

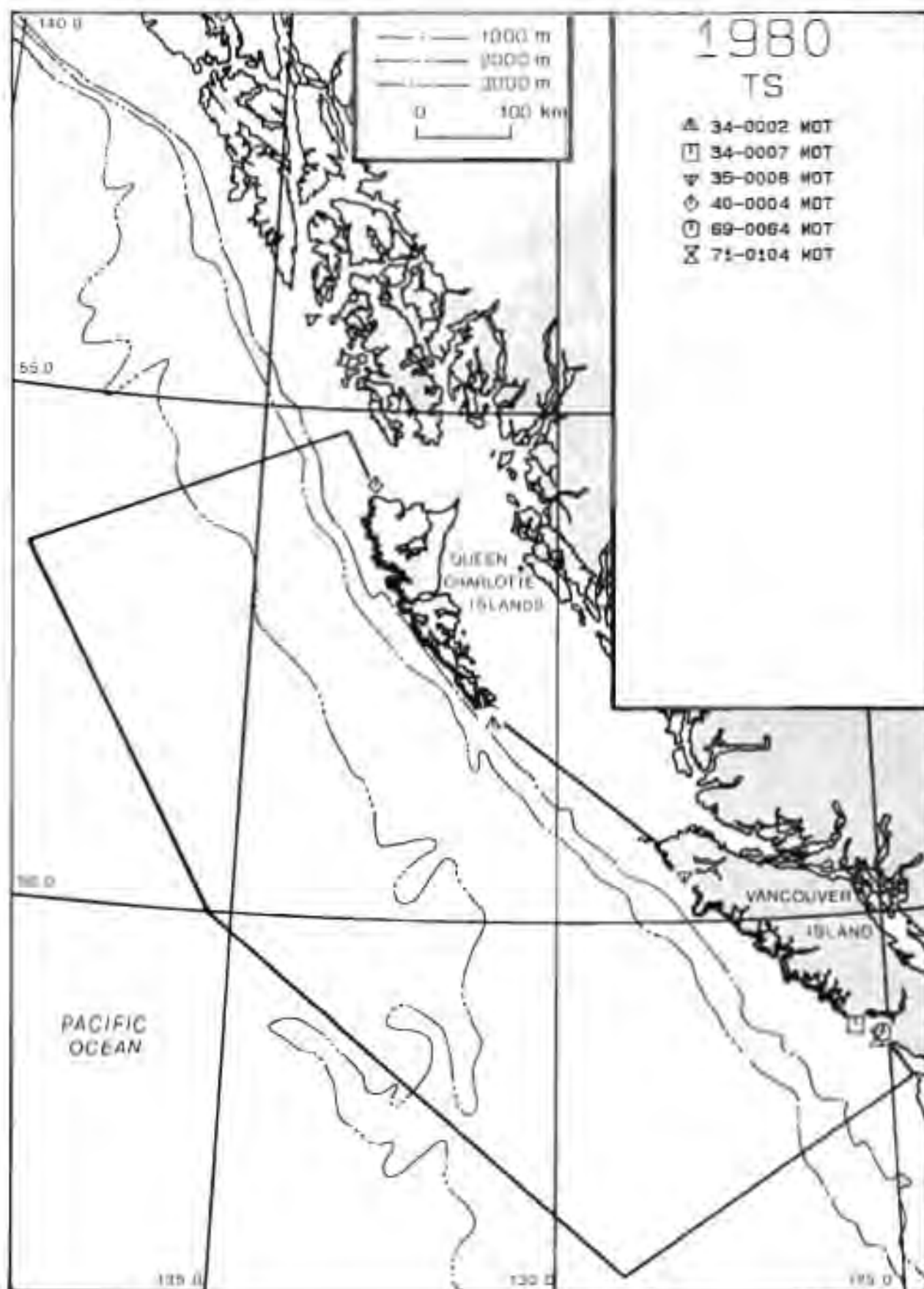
- △ 79-0068 VECTOR, IDS
- 79-0069 PARIZEAU, IDS
- ▽ 79-0071A PARIZEAU, IDS
- ◇ 79-0071C PARIZEAU, IDS
- 79-0072 PARIZEAU, IDS
- ⊗ 79-0073 PARIZEAU, IDS
- ◀ 79-0077 VECTOR, IDS

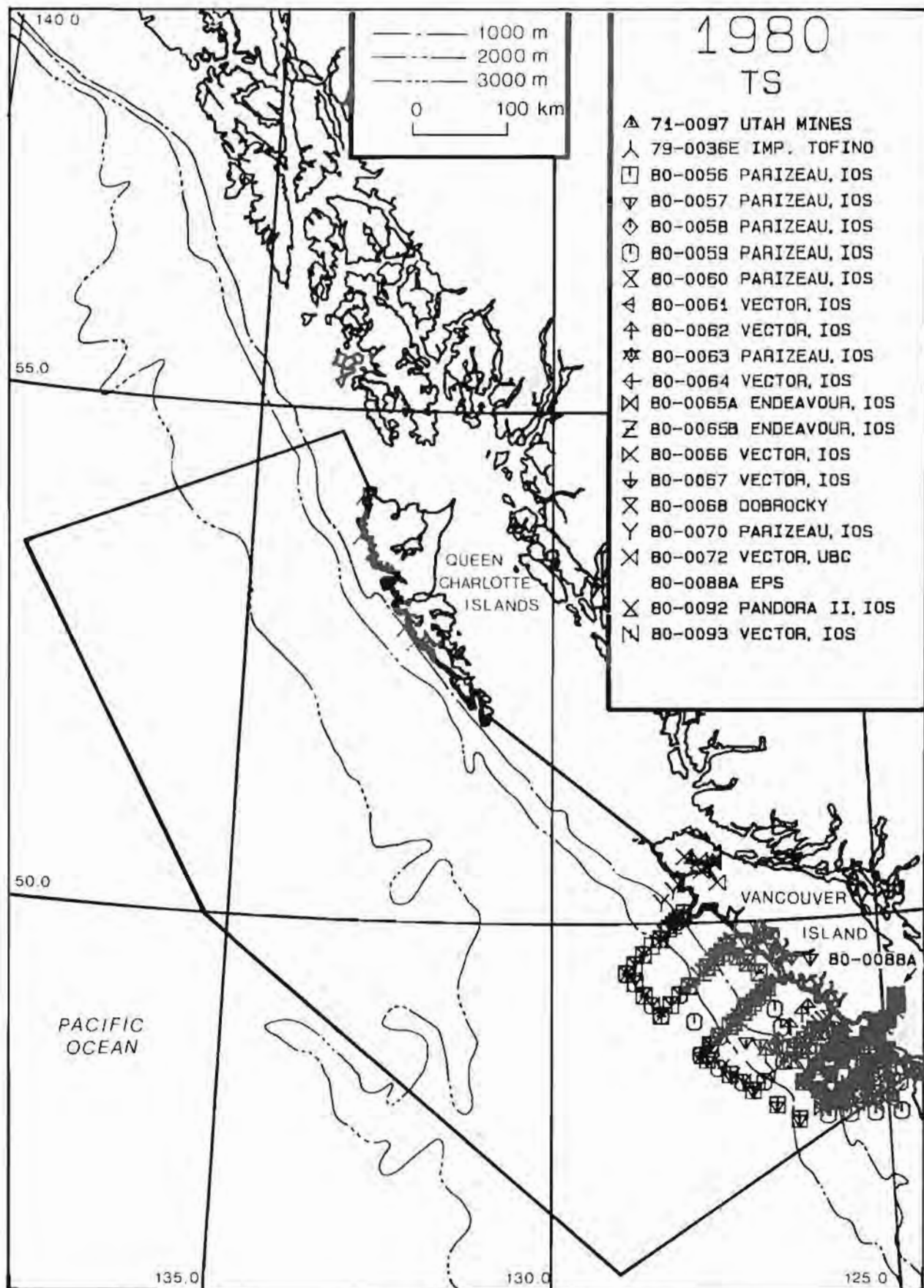
0 50 km

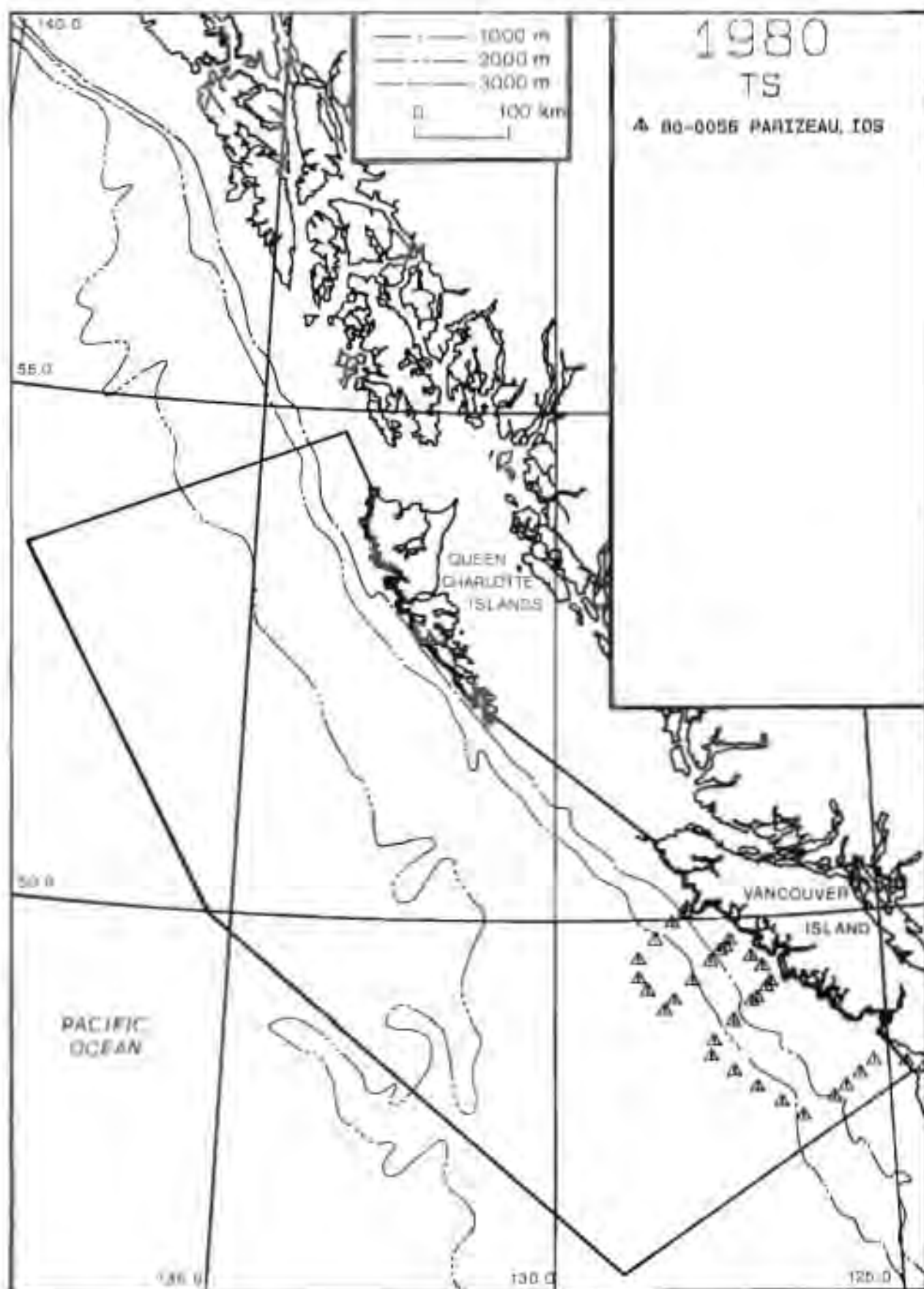








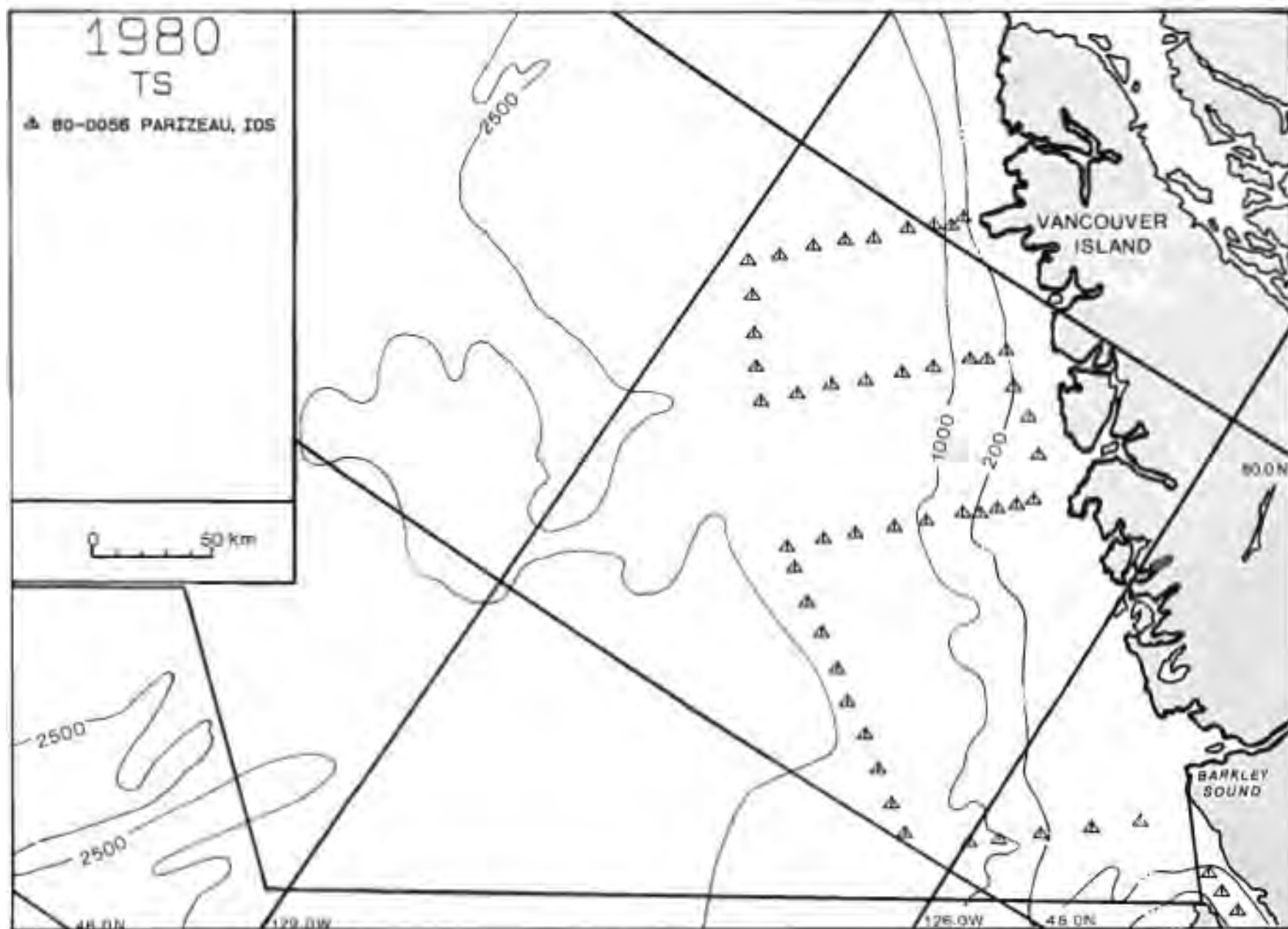


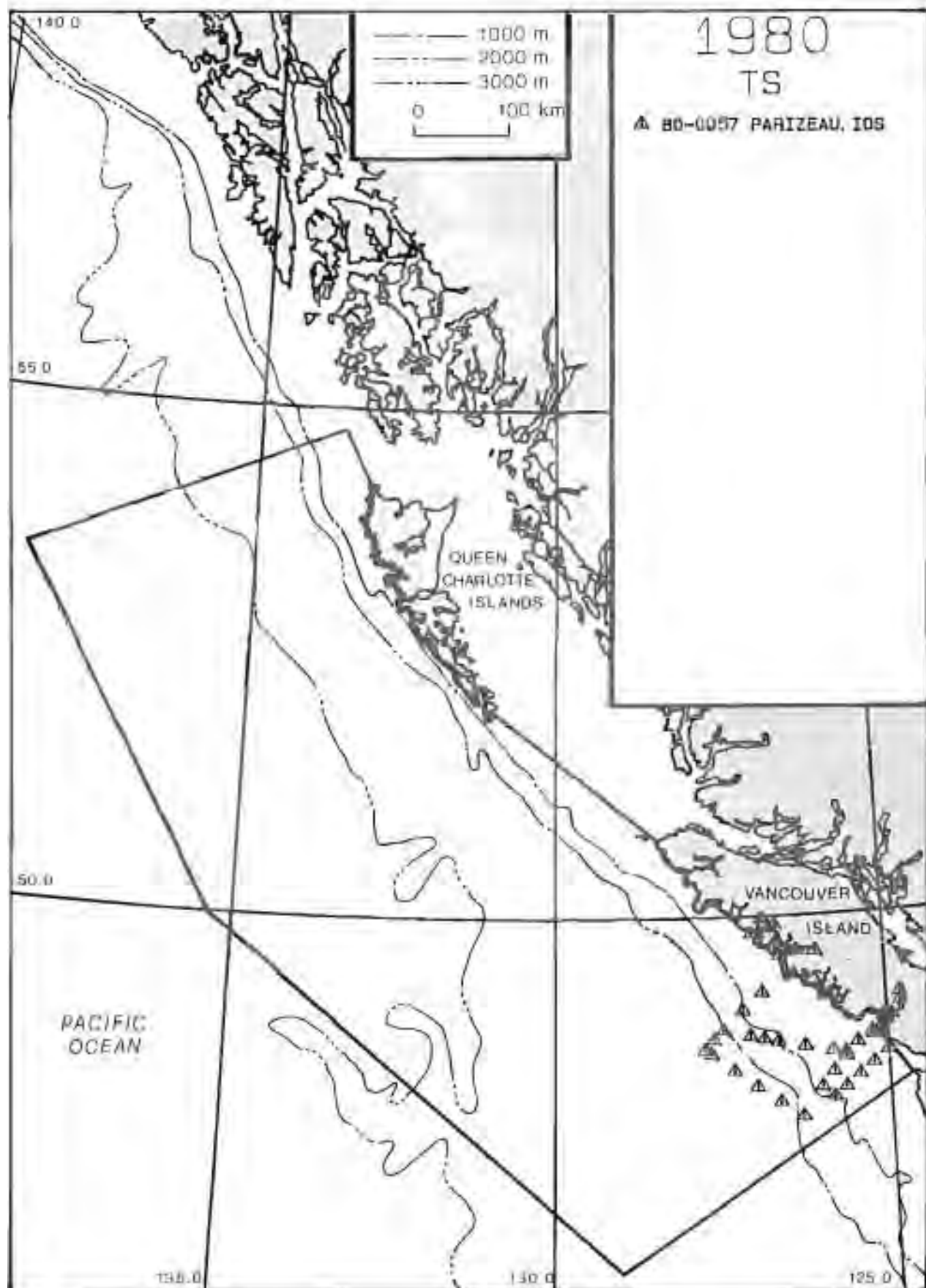


1980
TS

▲ 80-0056 PARIZEAU, IOS

0 50 km

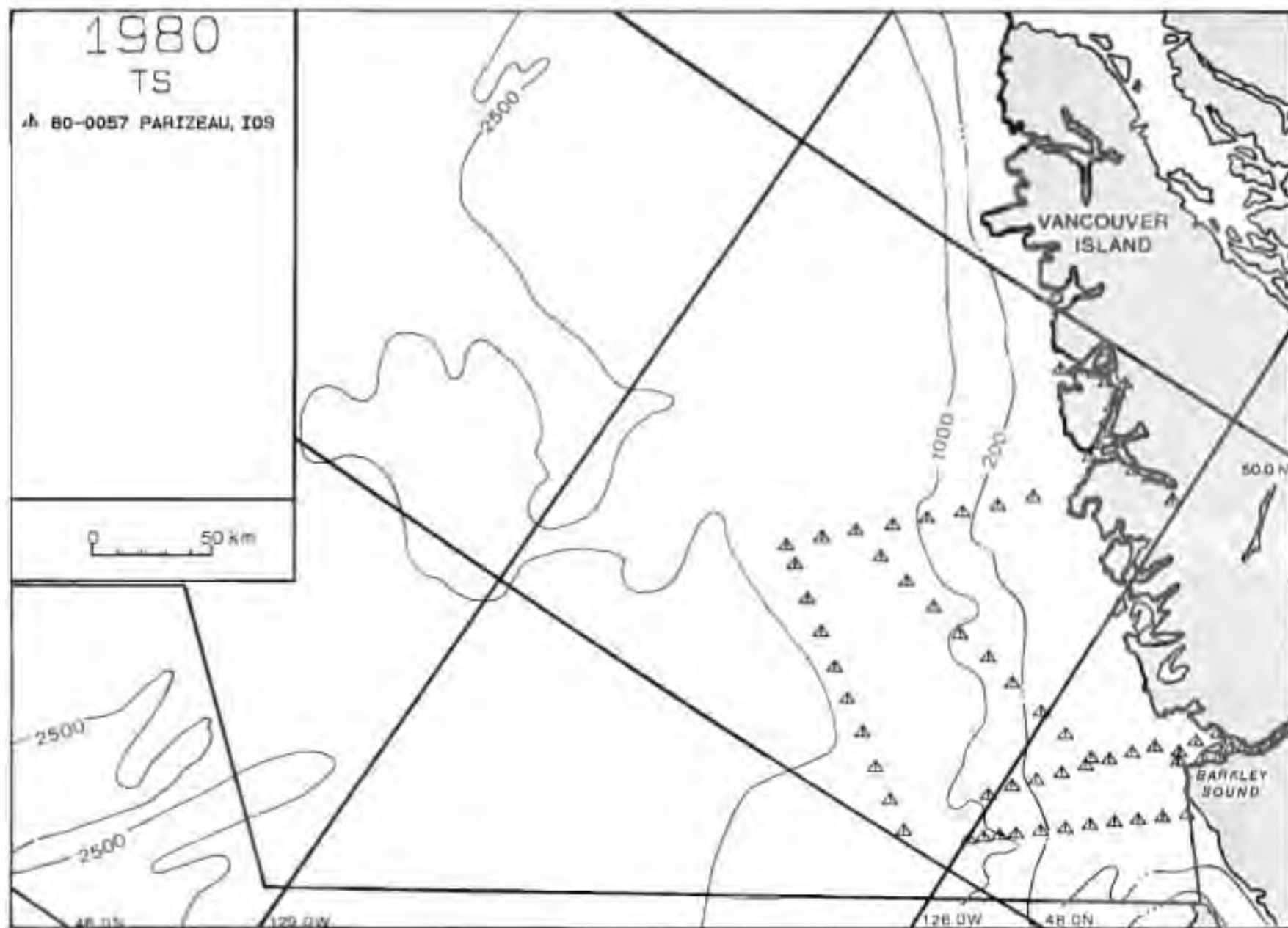


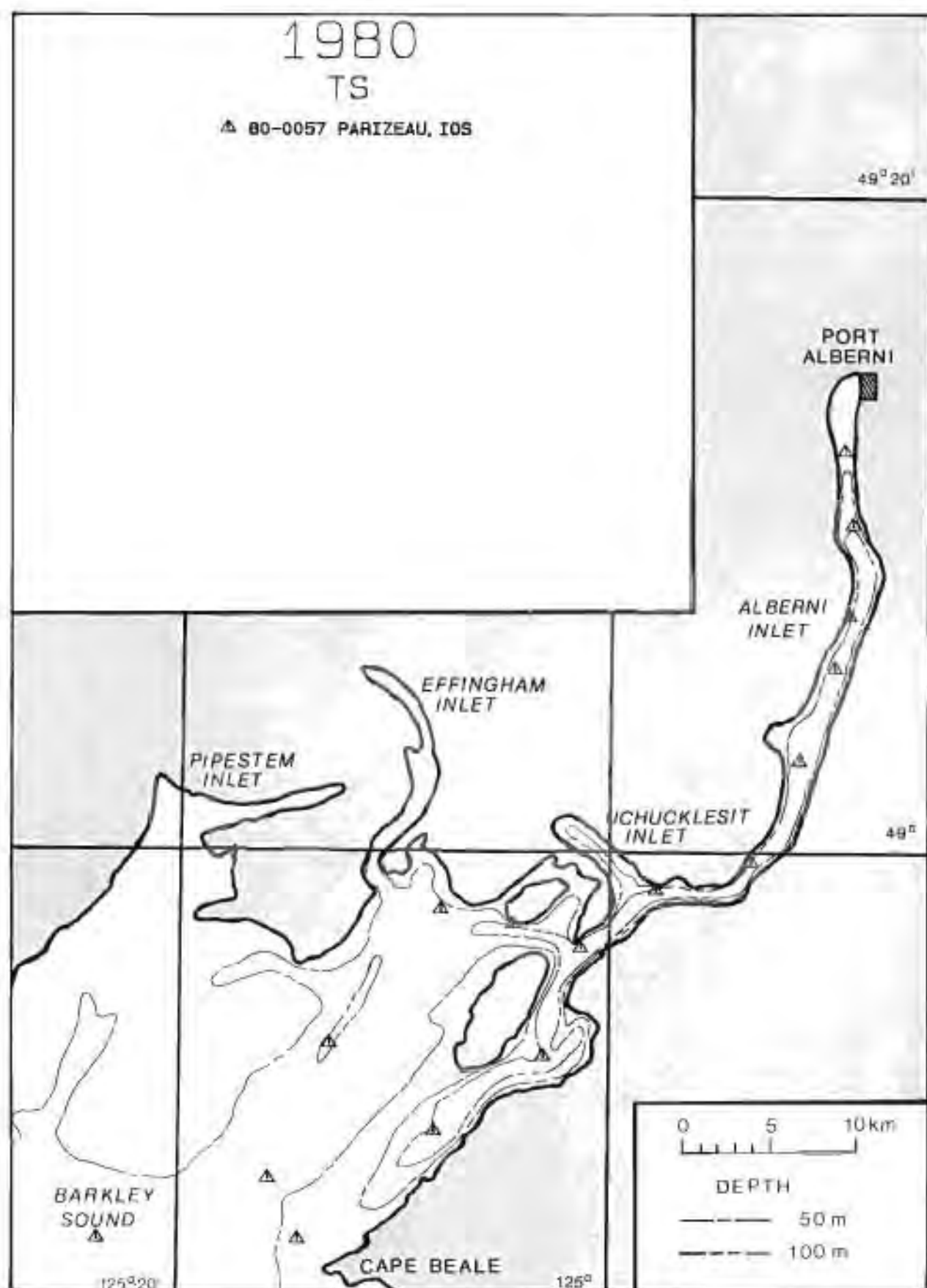


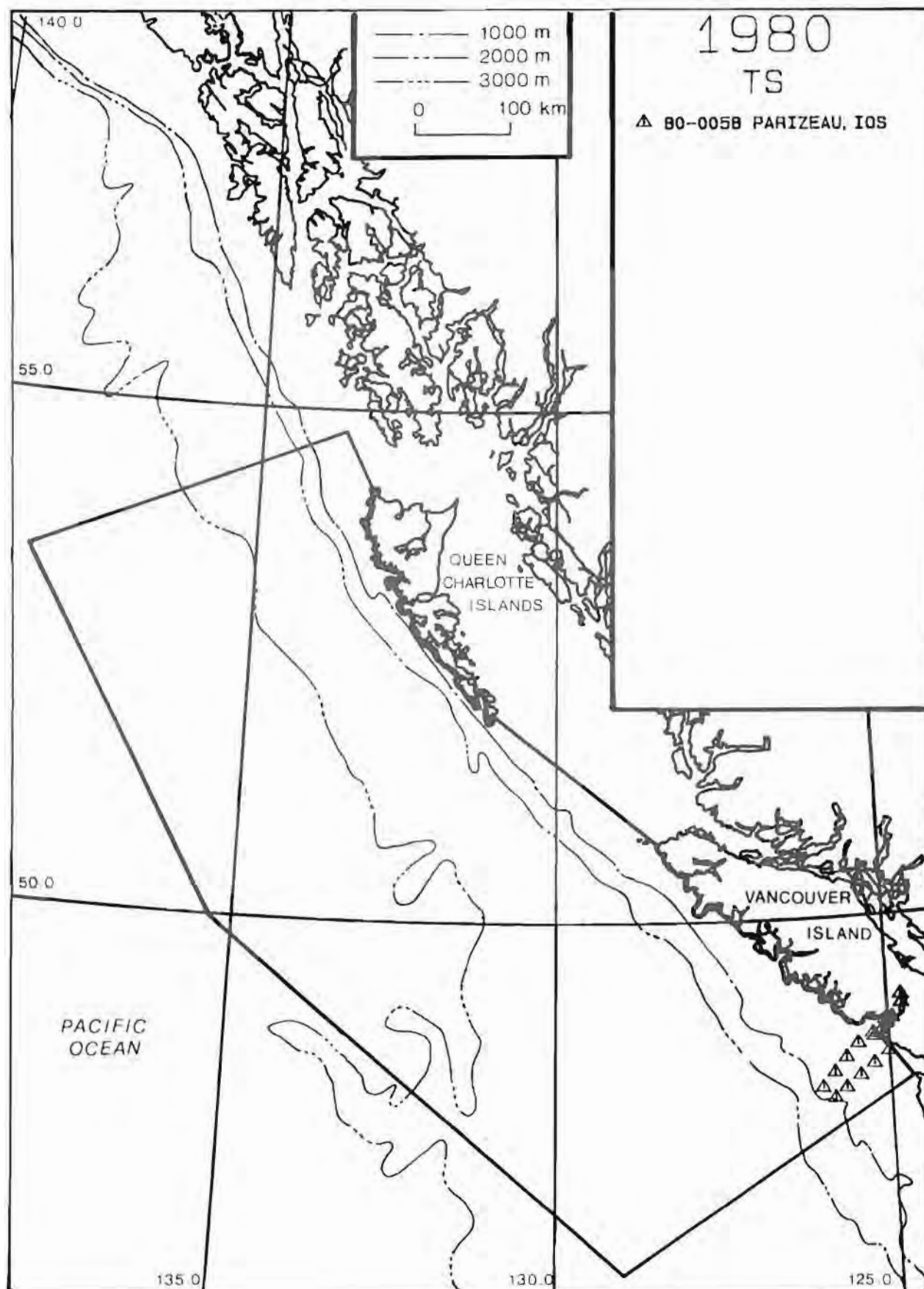
1980
TS

Δ 80-0057 PARIZEAU, I09

0 50 km



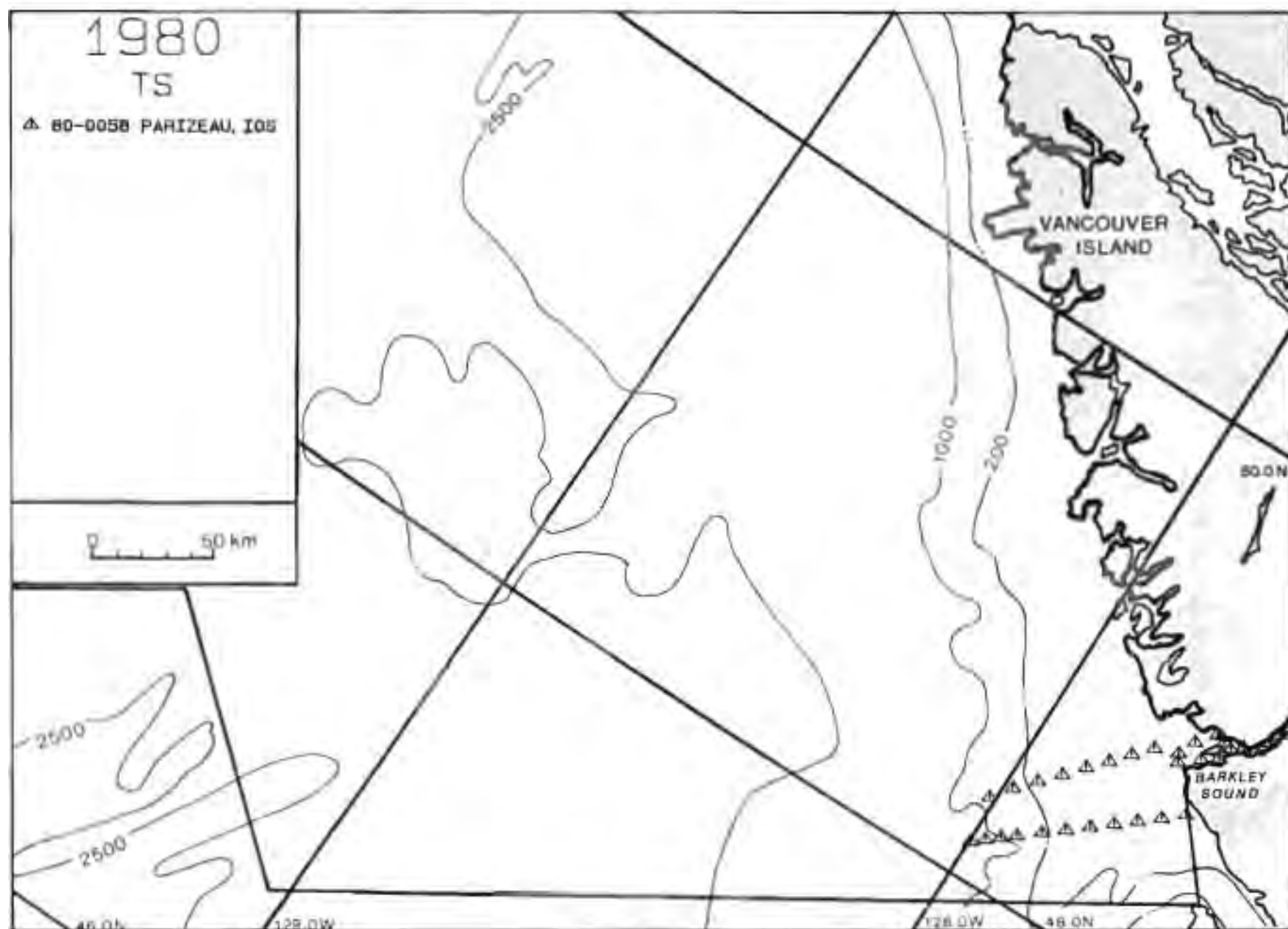


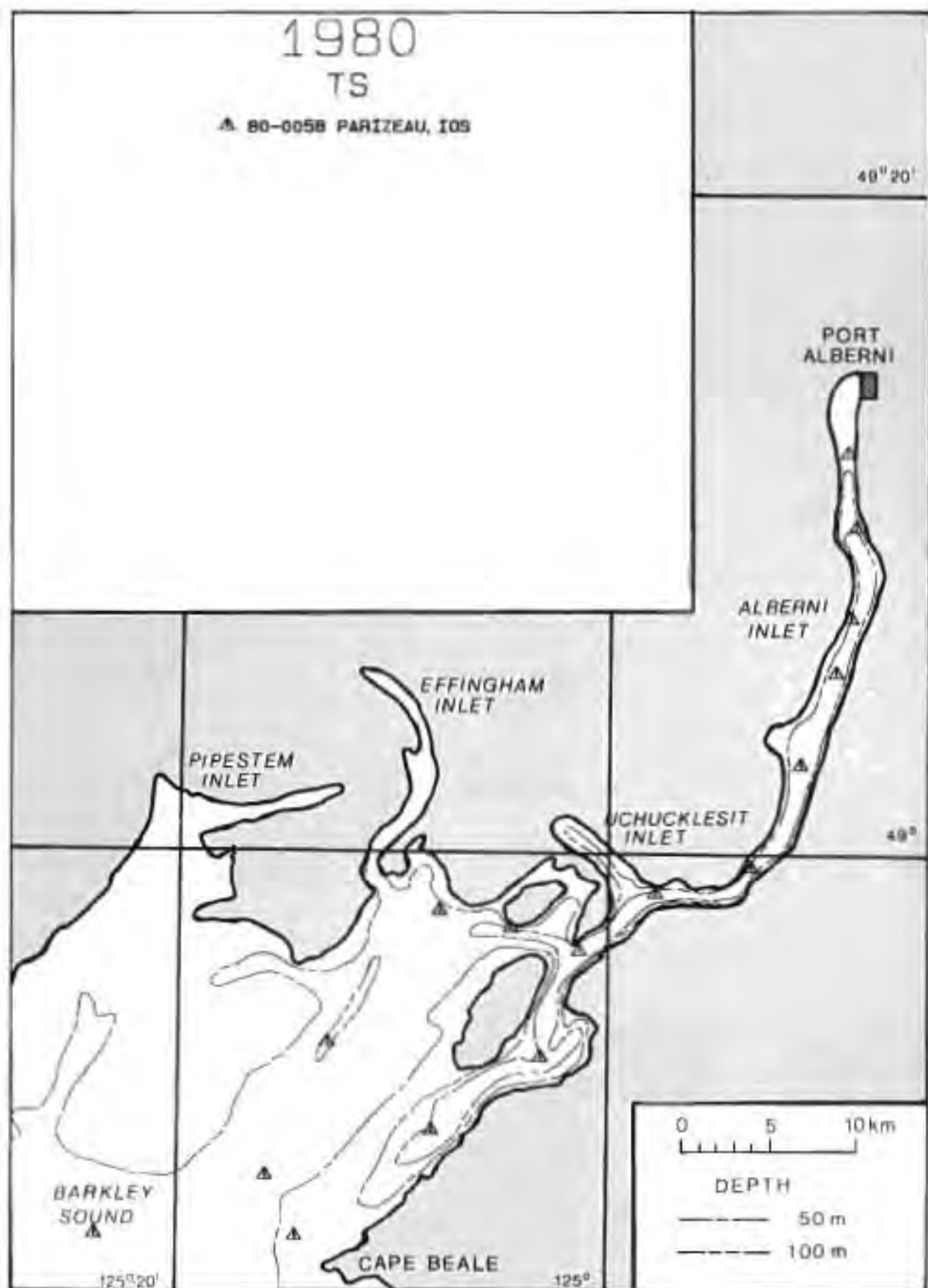


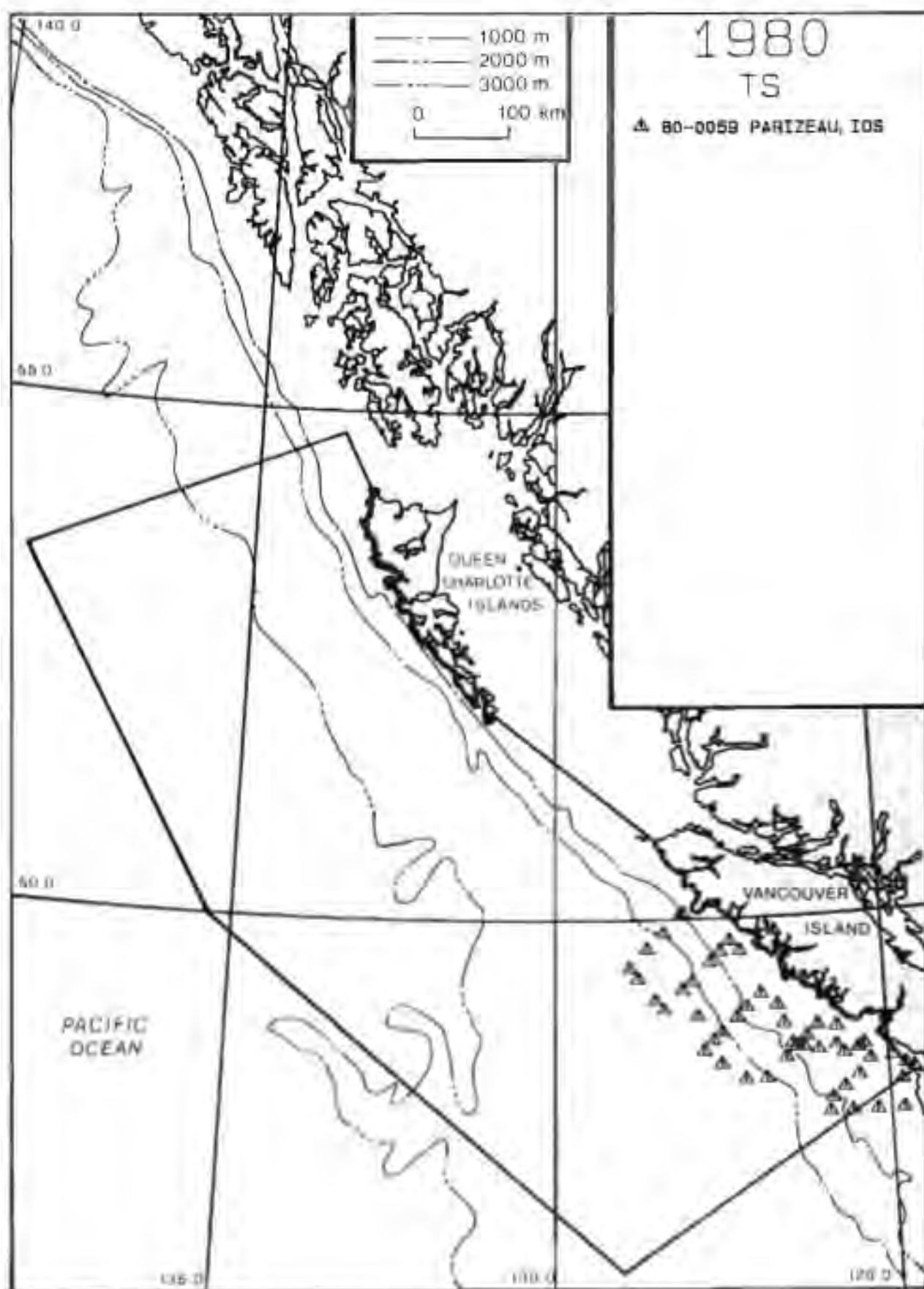
1980
TS

△ 80-0058 PARIZEAU, I05

0 50 km







1980
TS

▲ 80-0059 PARIZEAU IOS

0 50 km

VANCOUVER
ISLAND

50.0 N

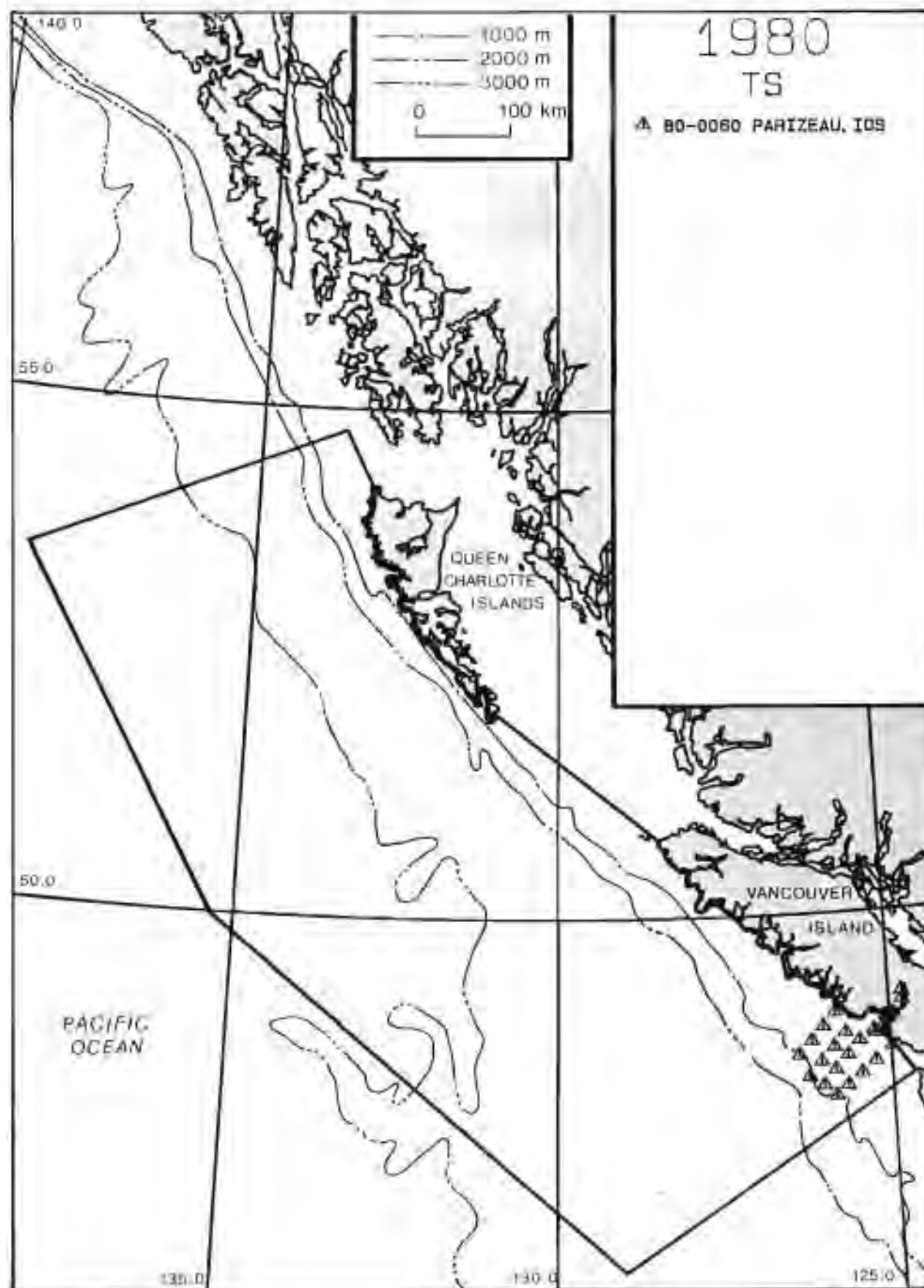
BARKLEY
SOUND

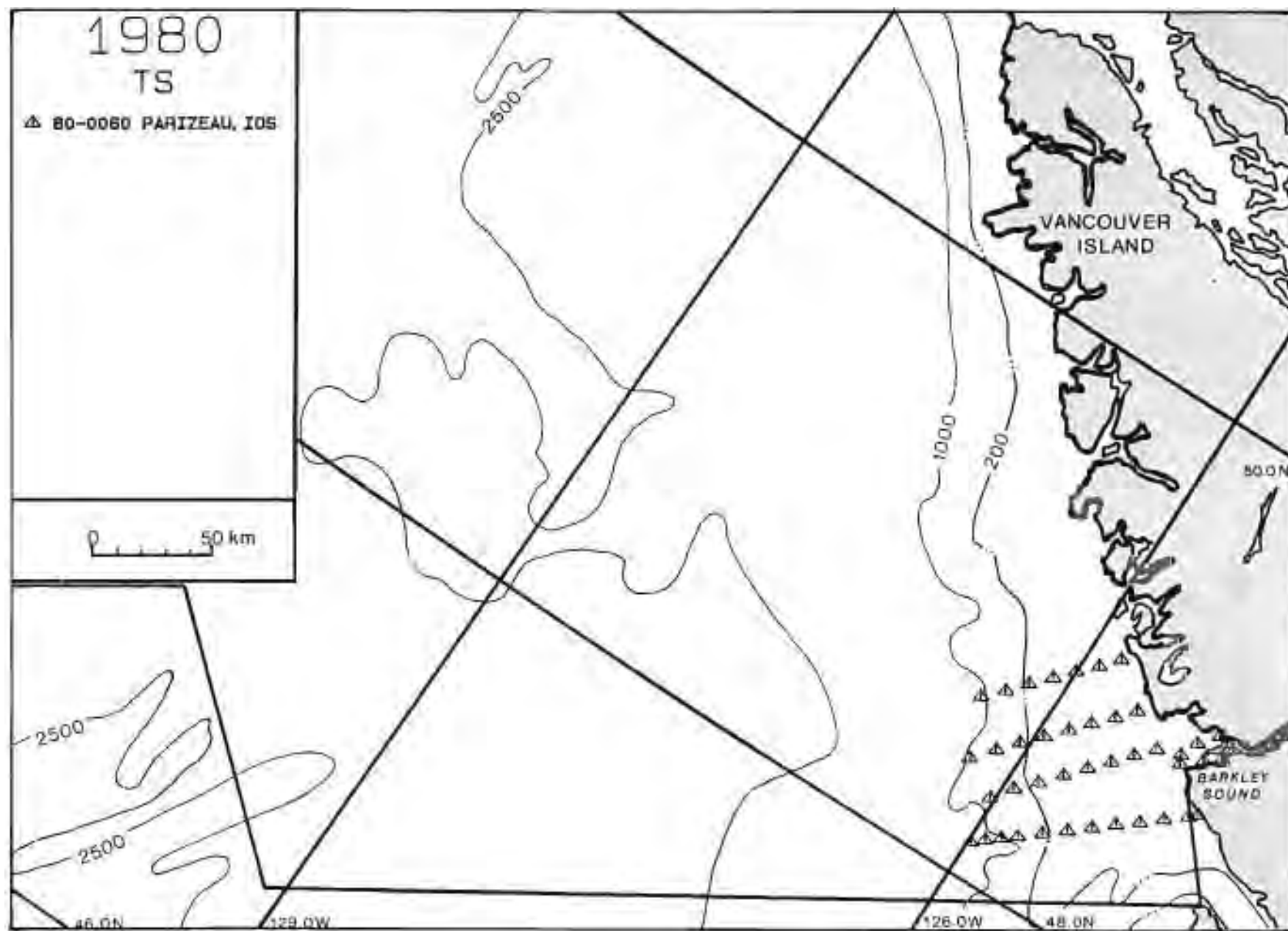
45.0 N

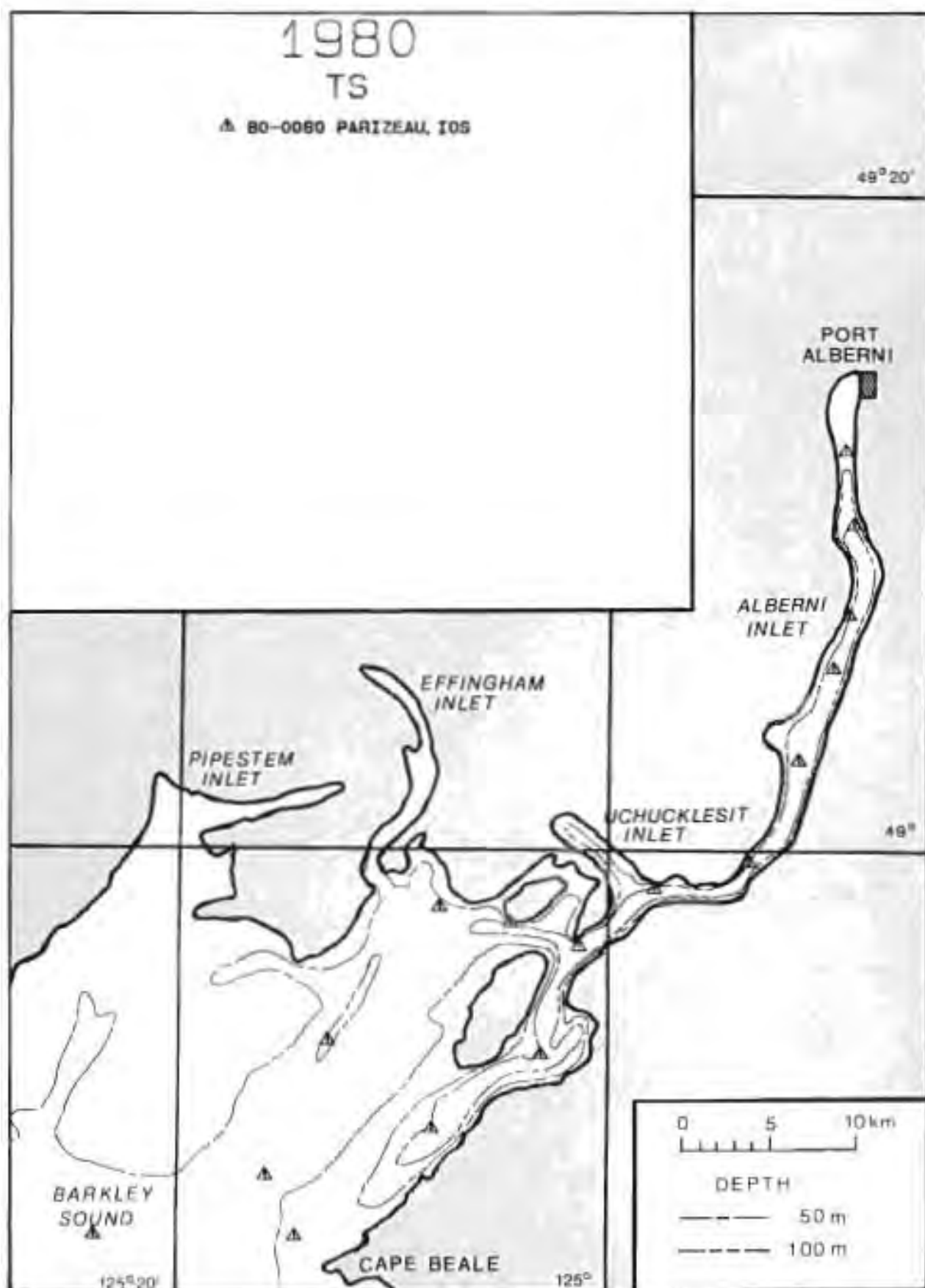
129.0 W

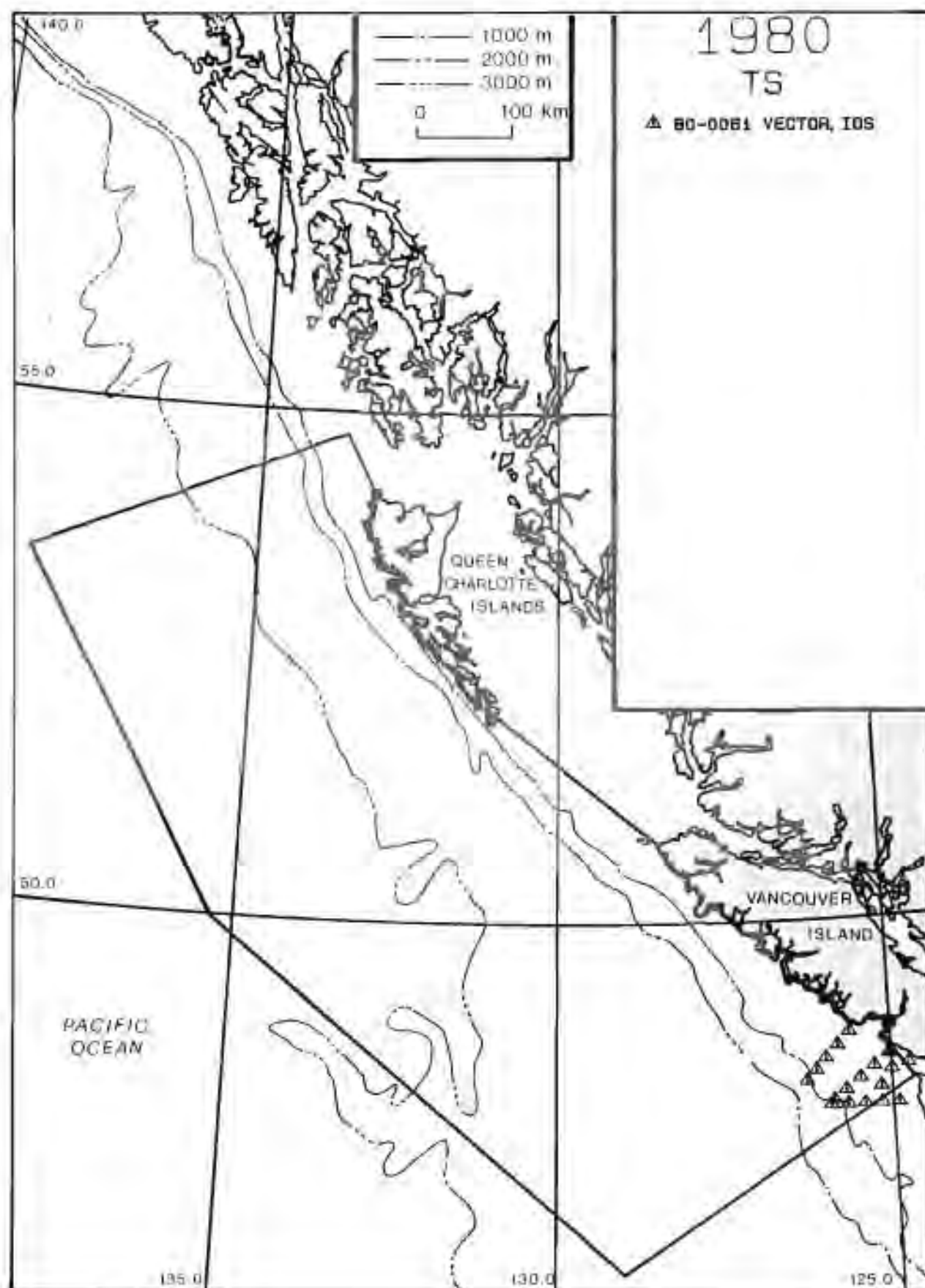
126.0 W

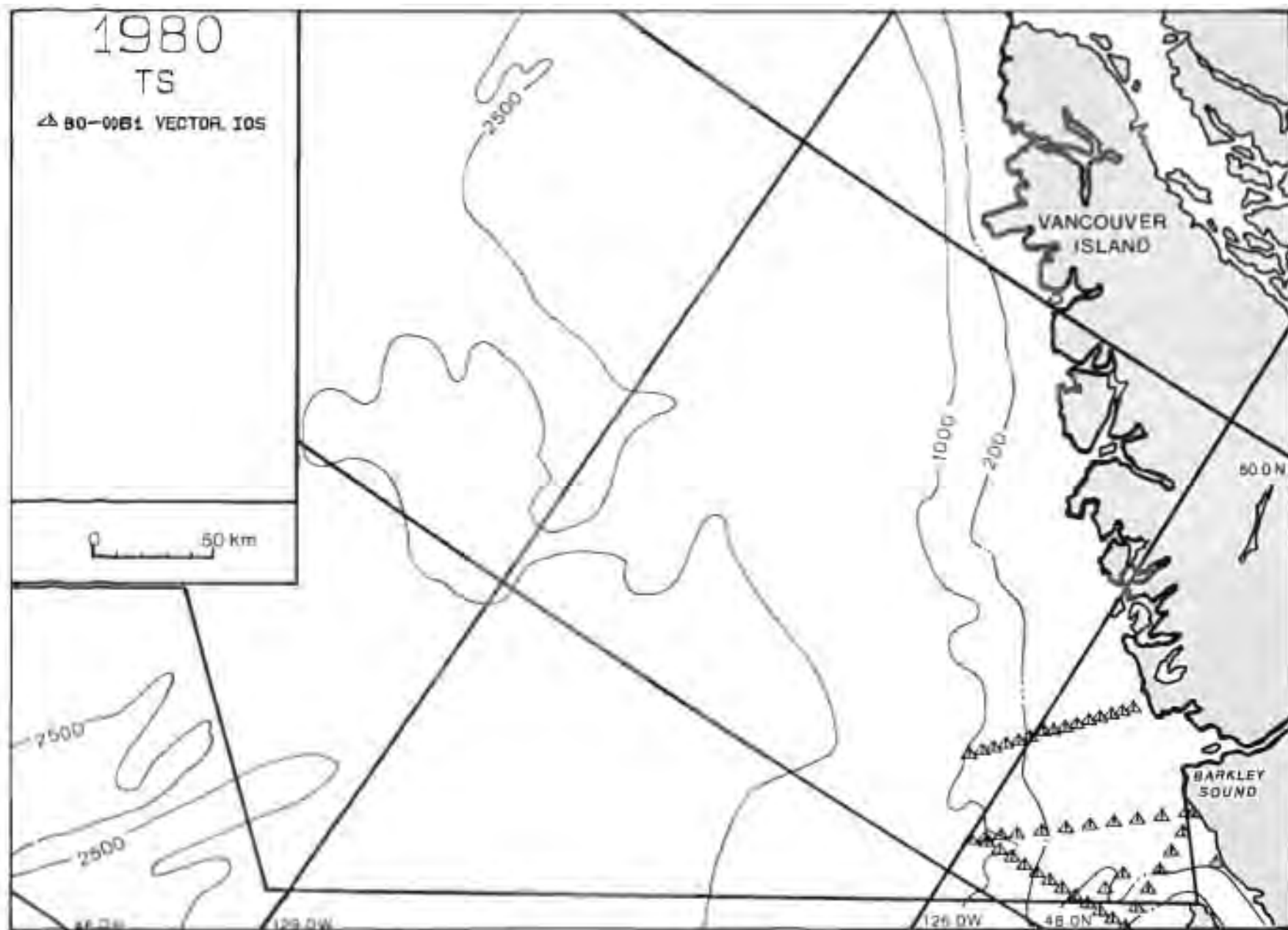
48.0 N

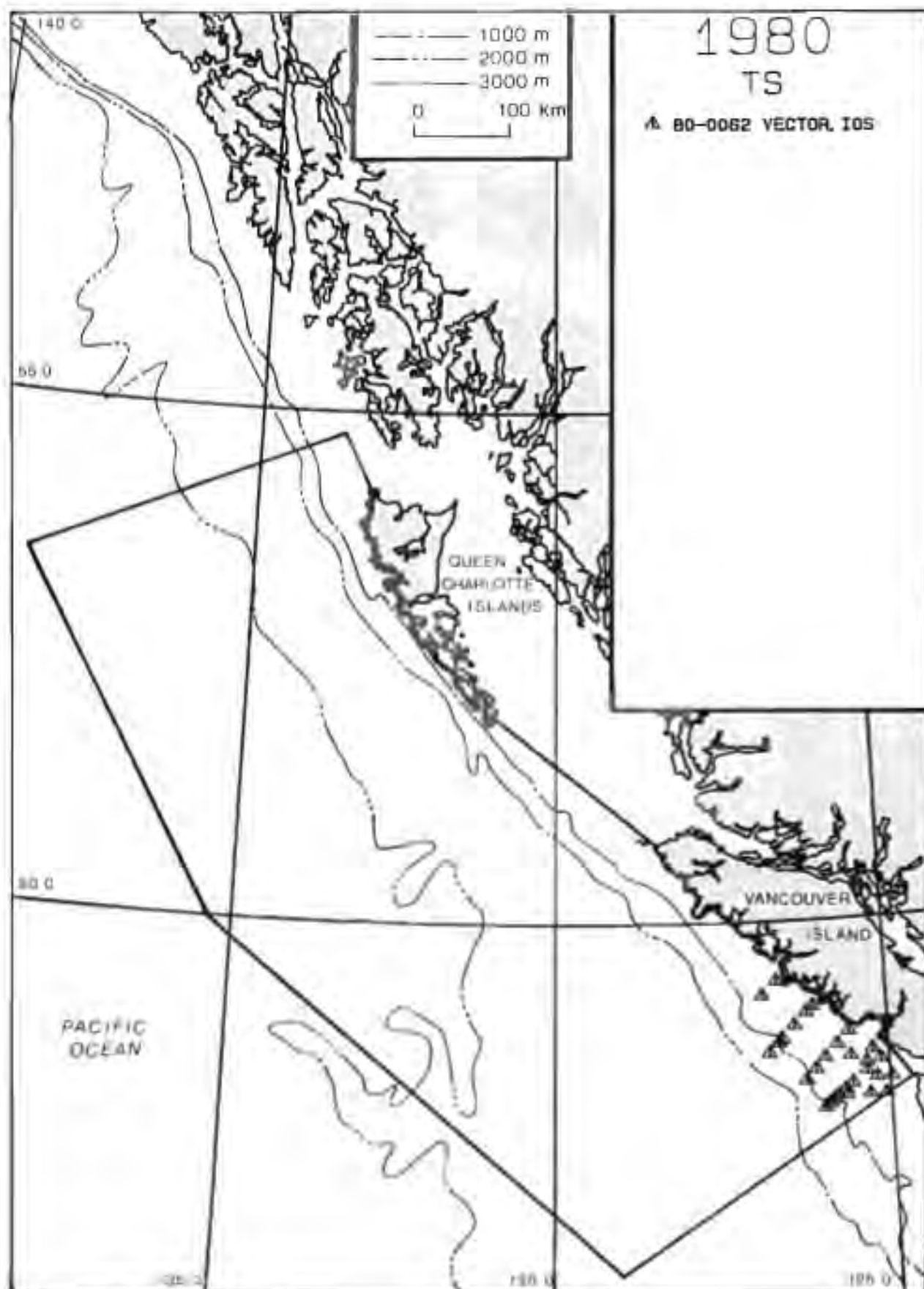


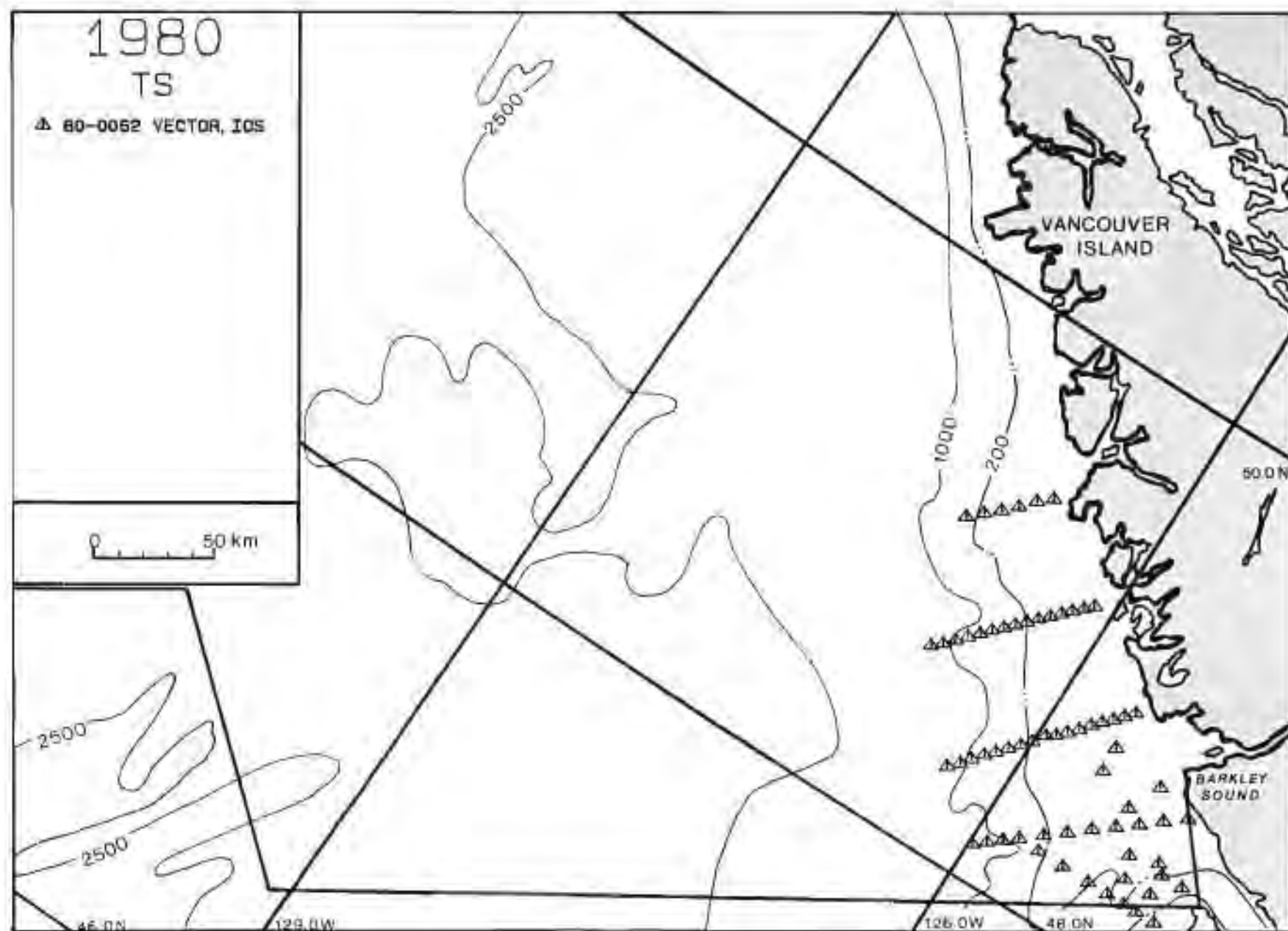


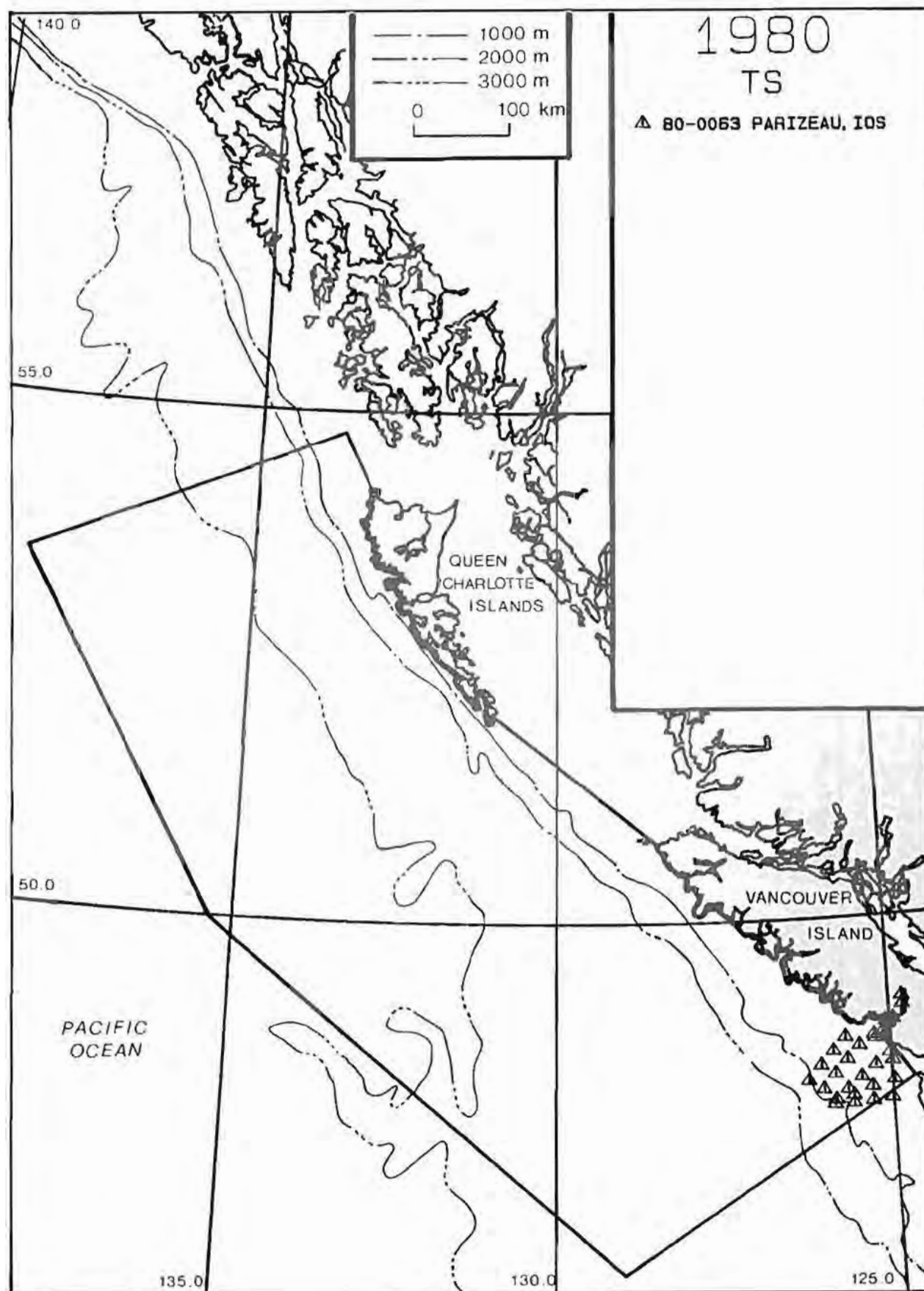


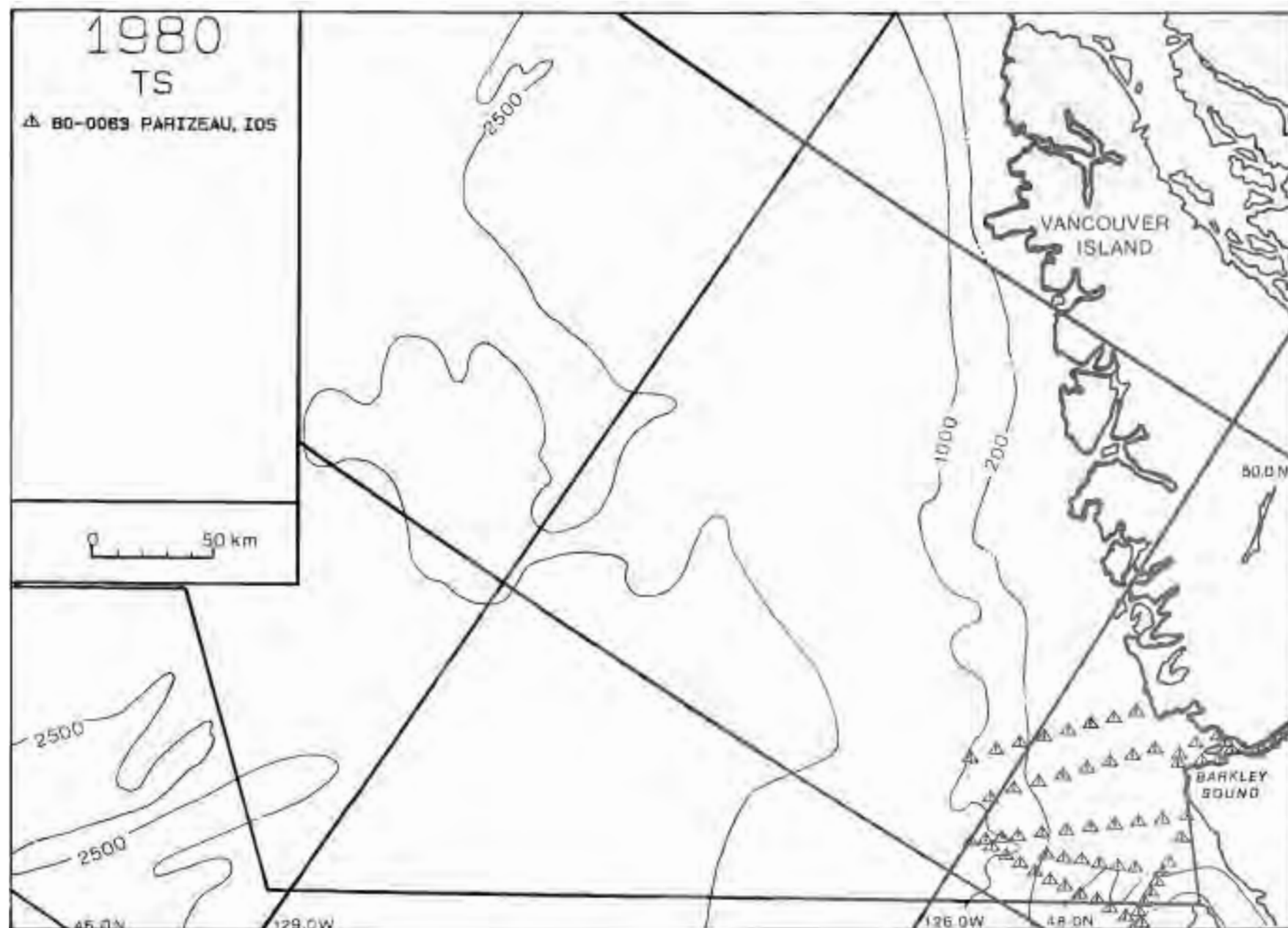


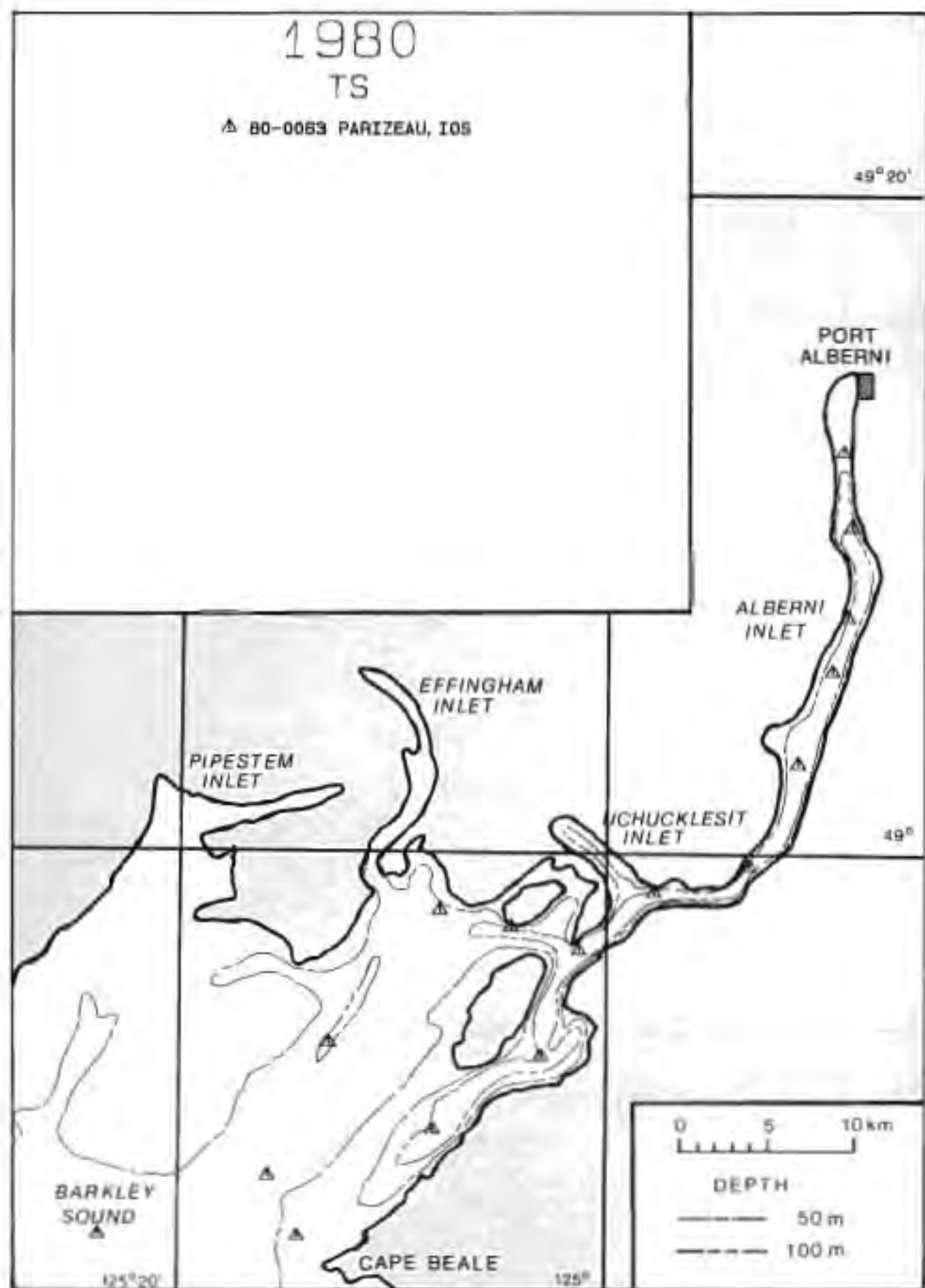


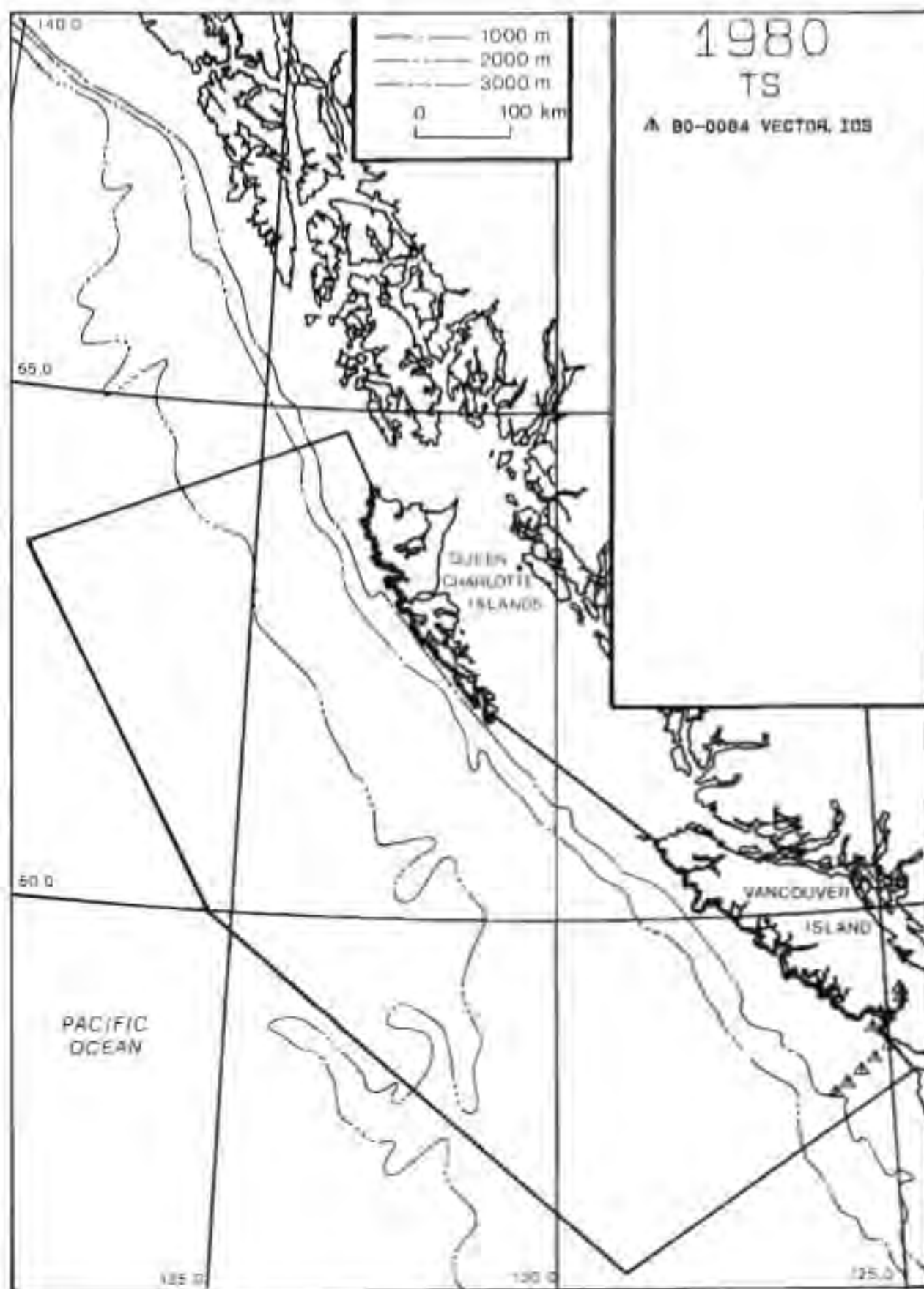


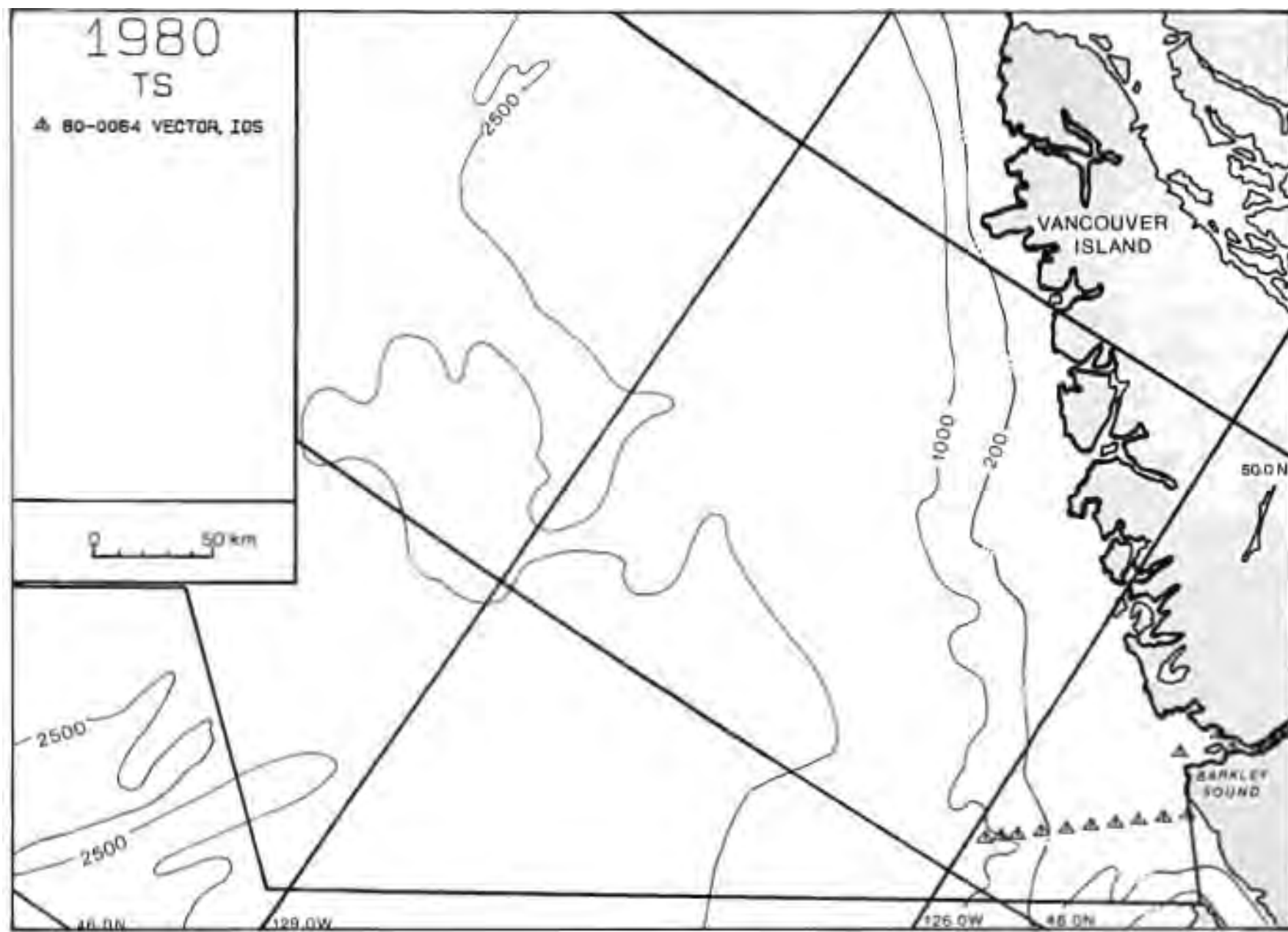


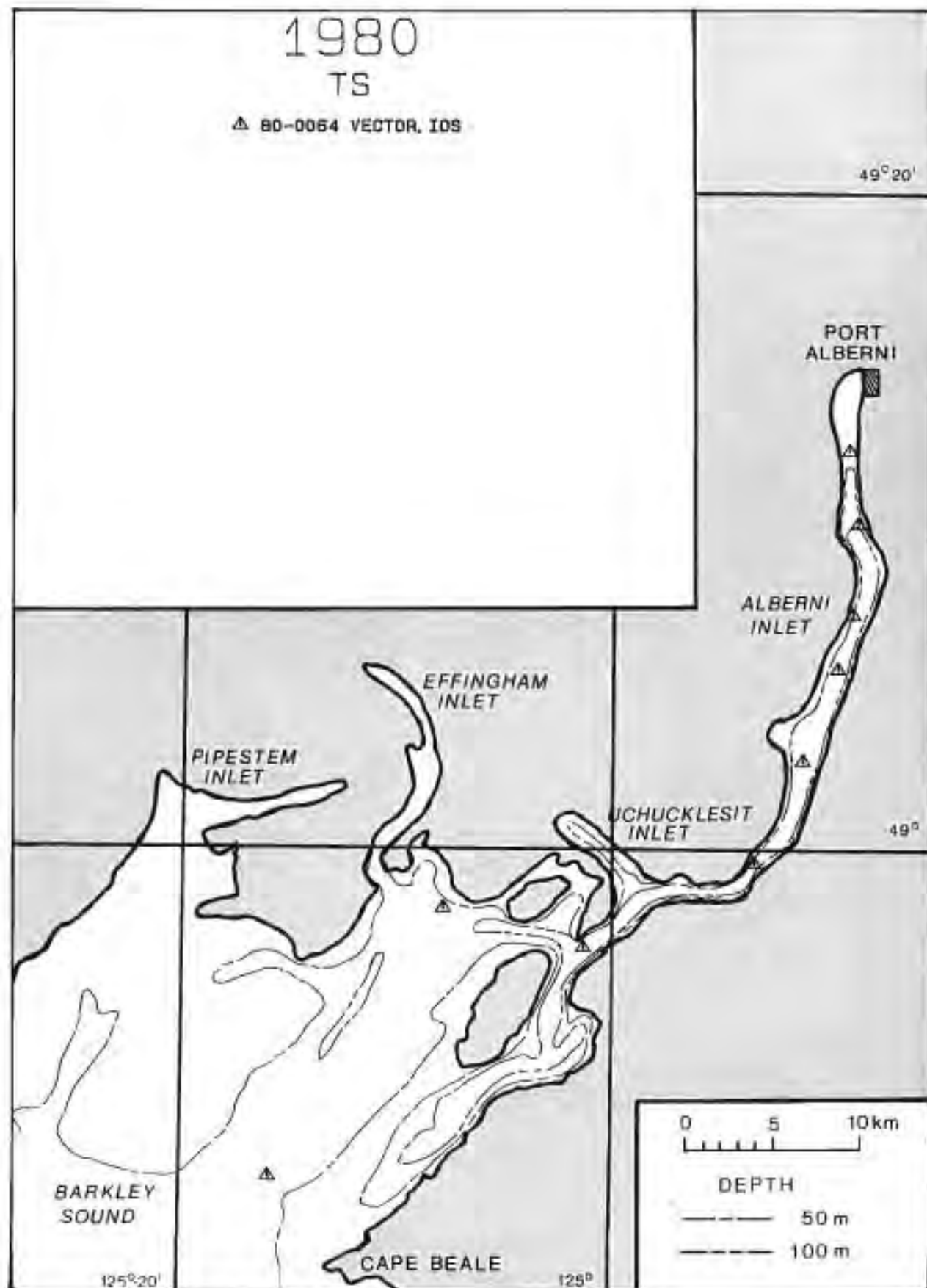


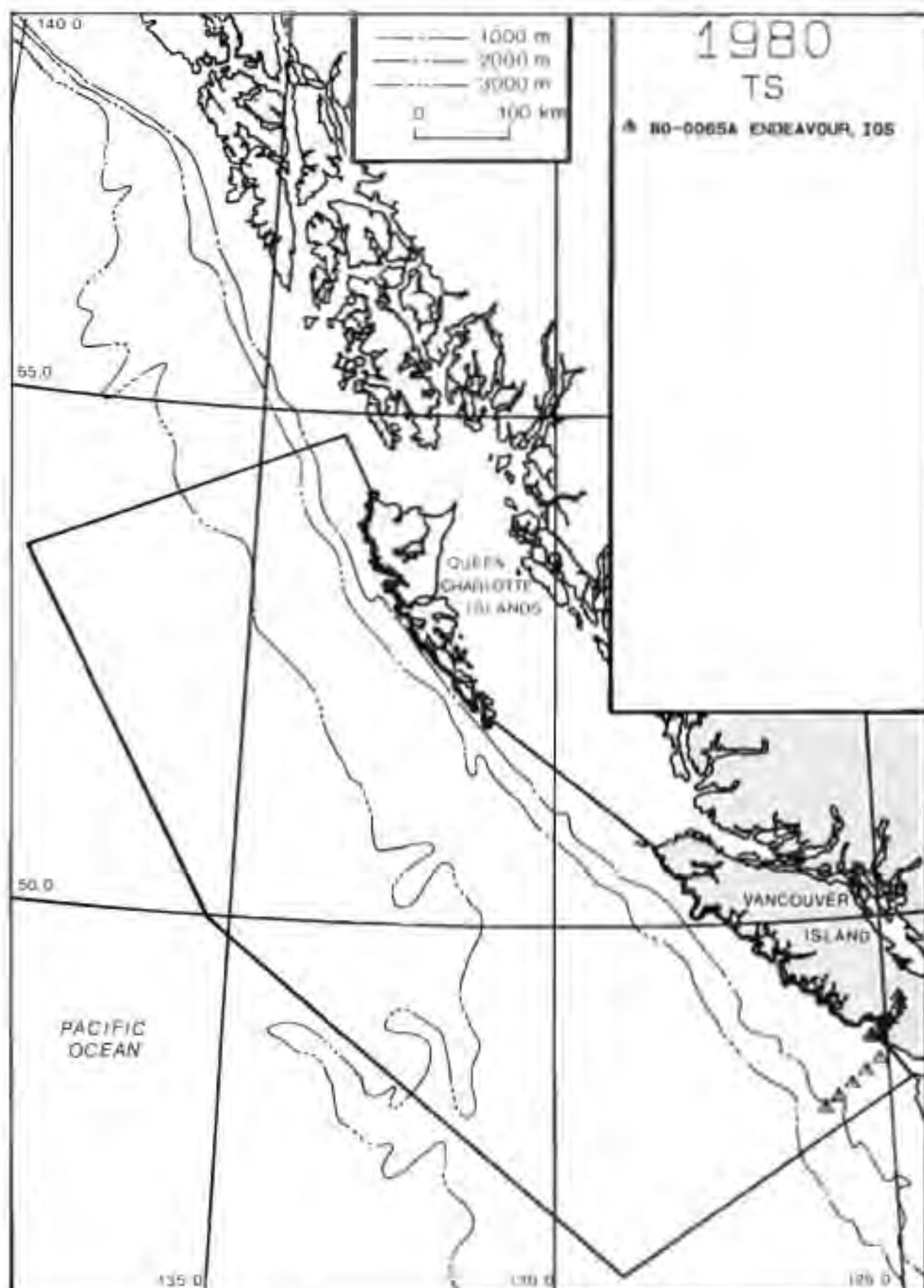


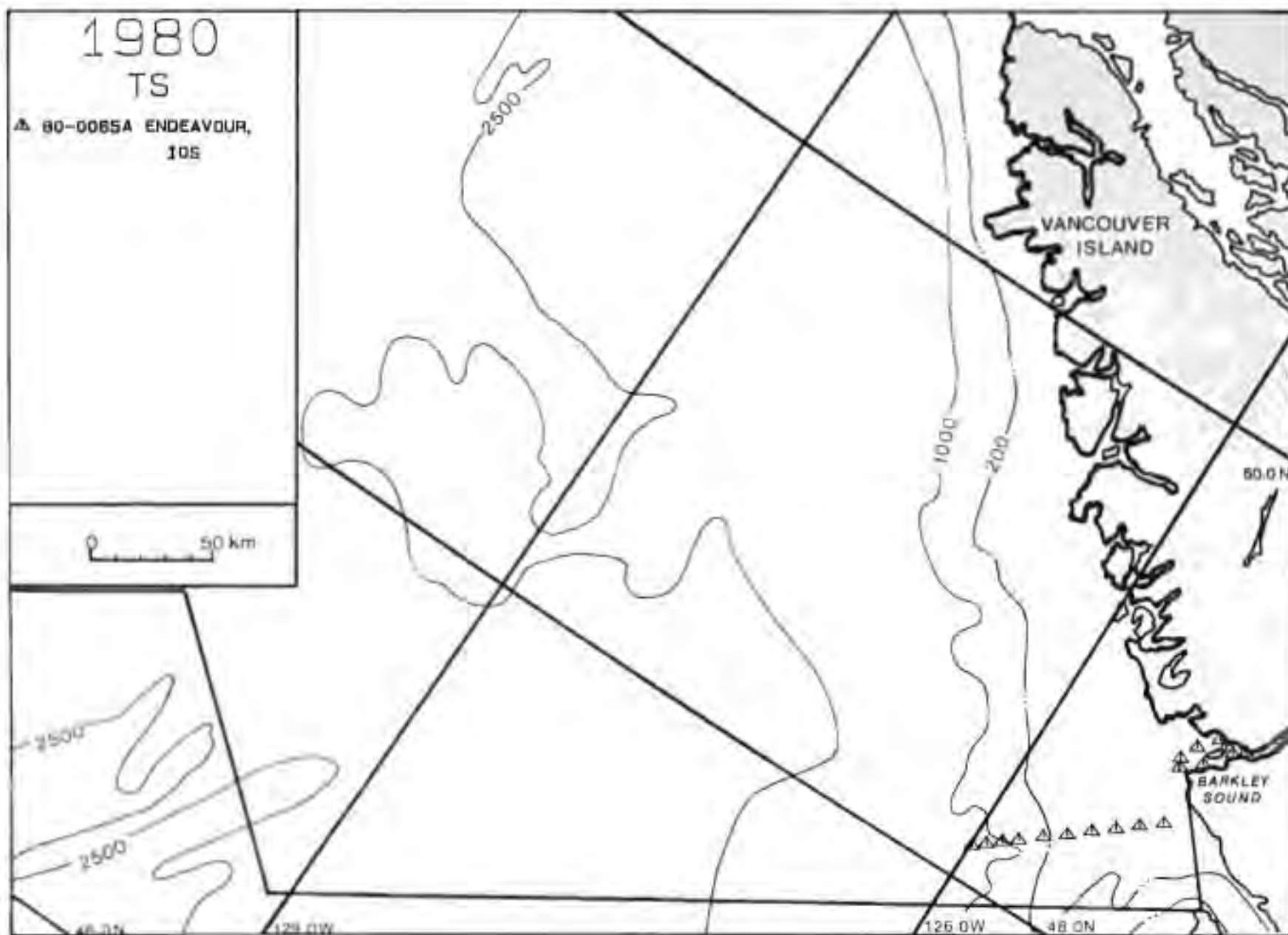


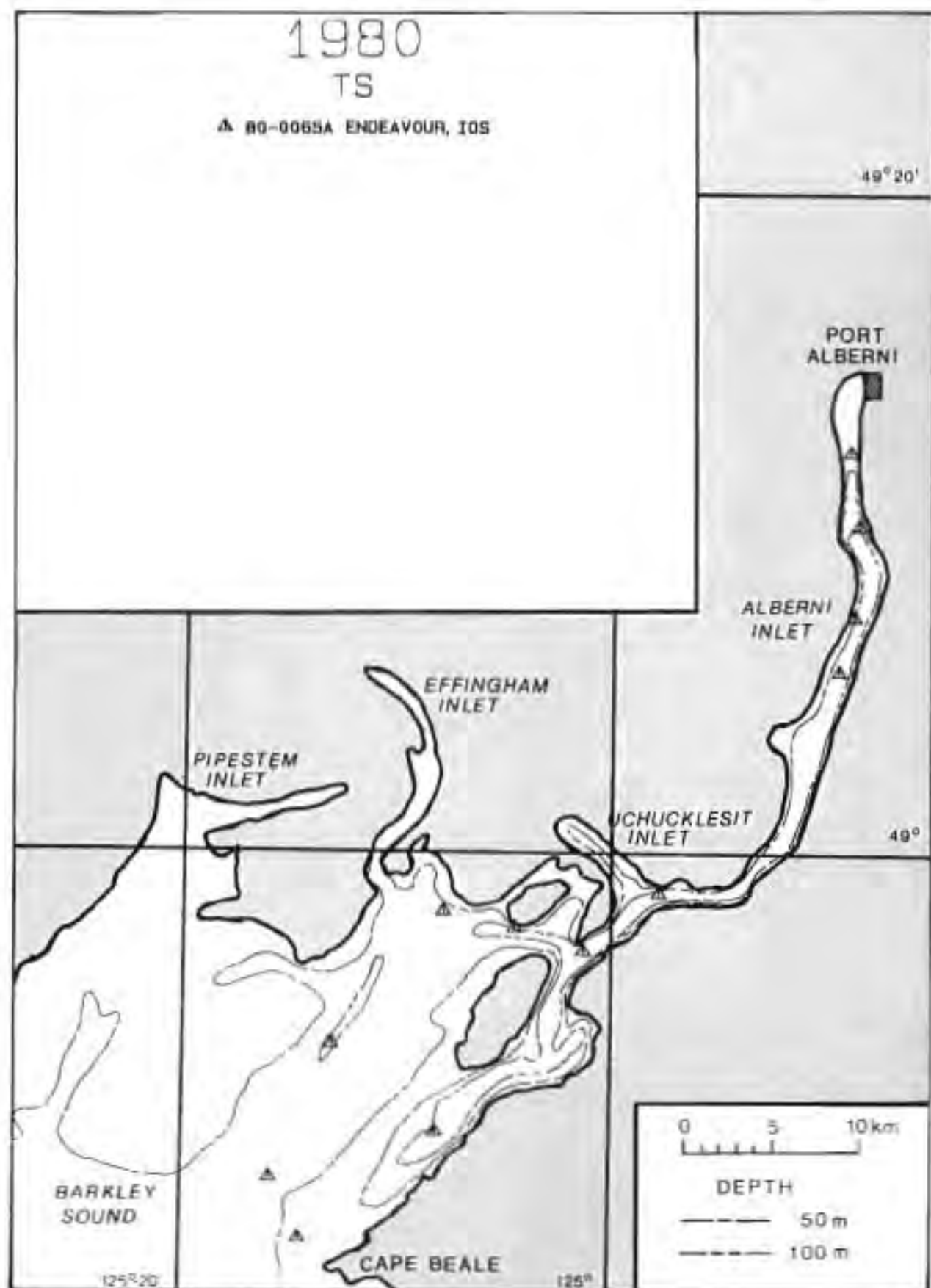


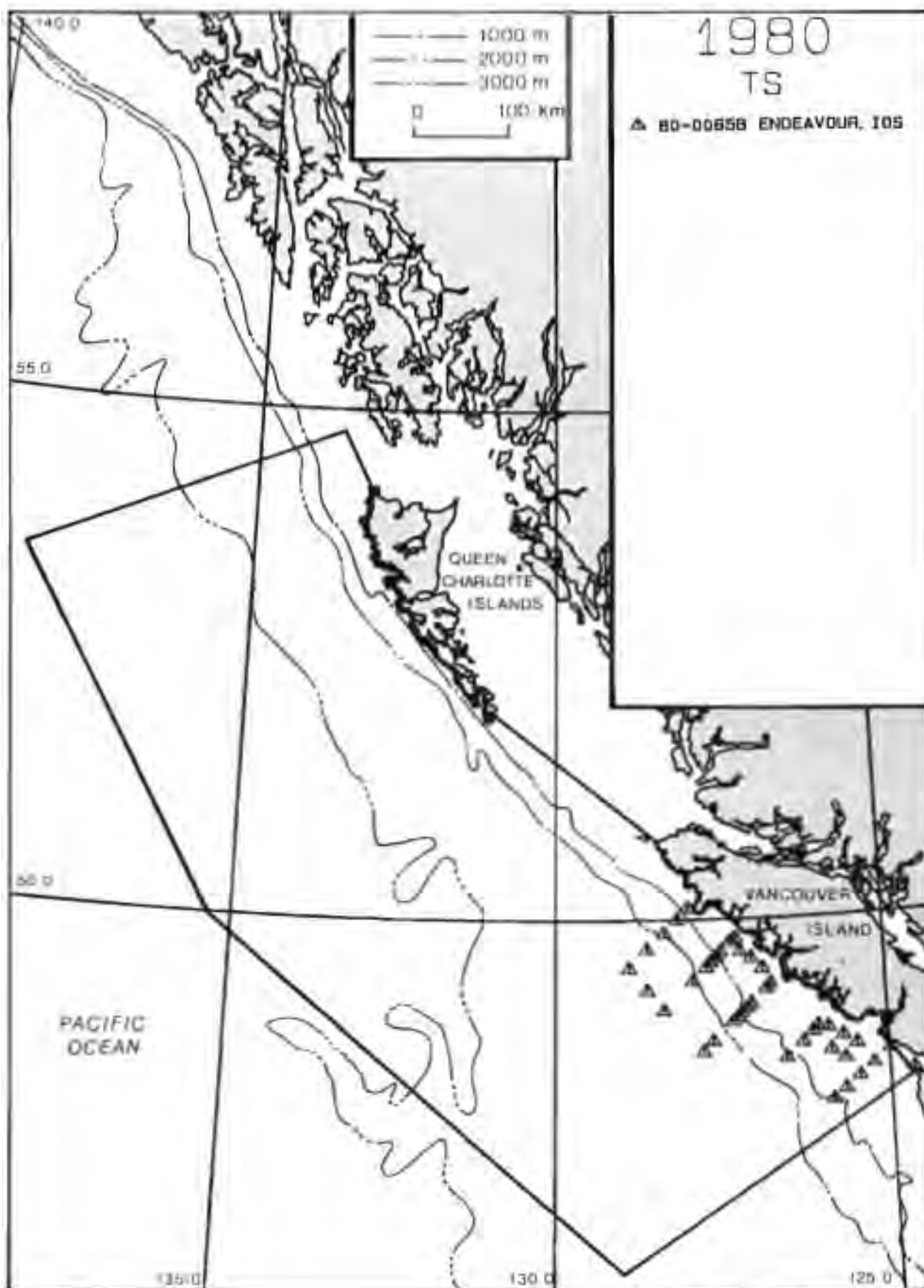








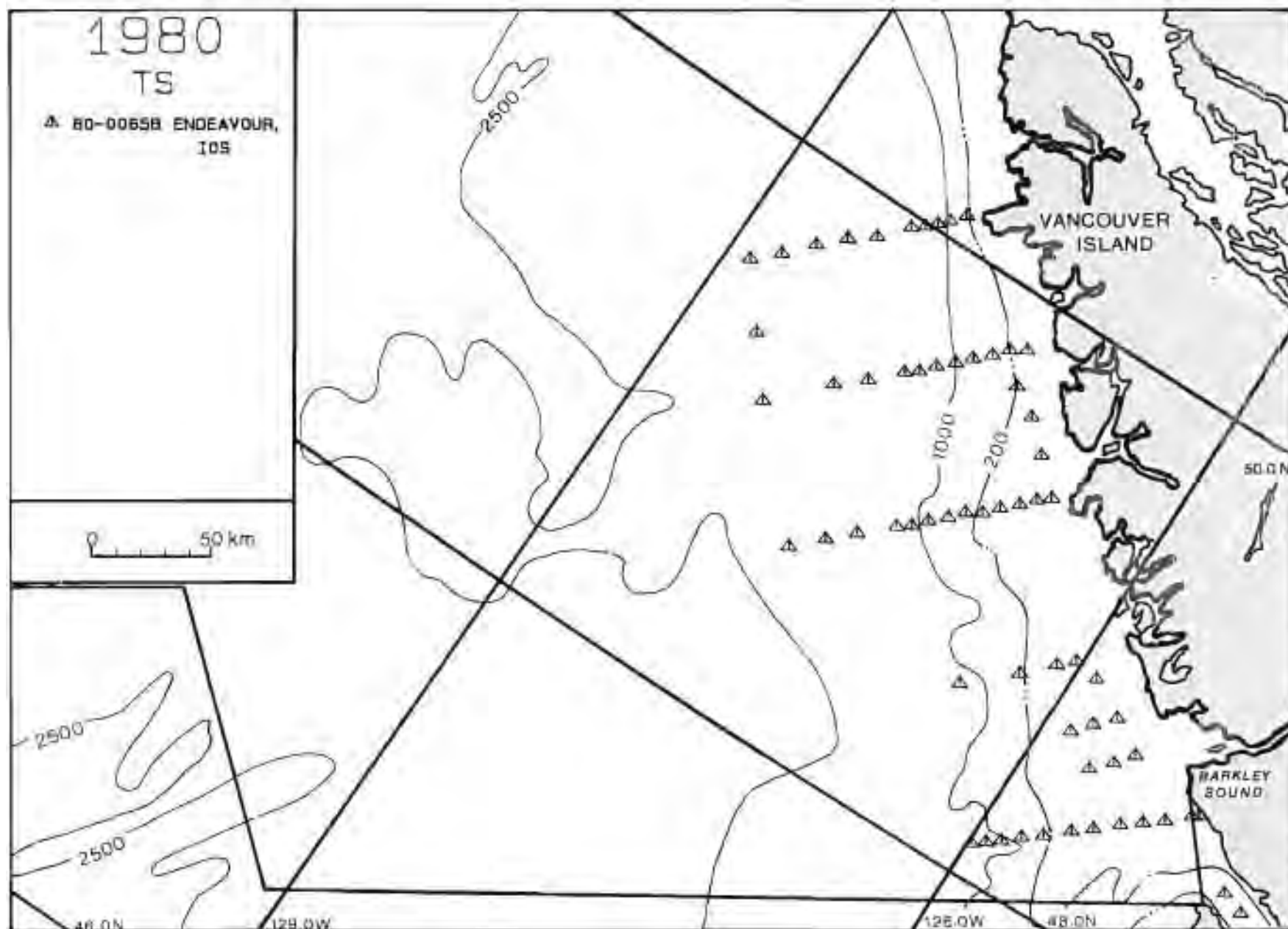


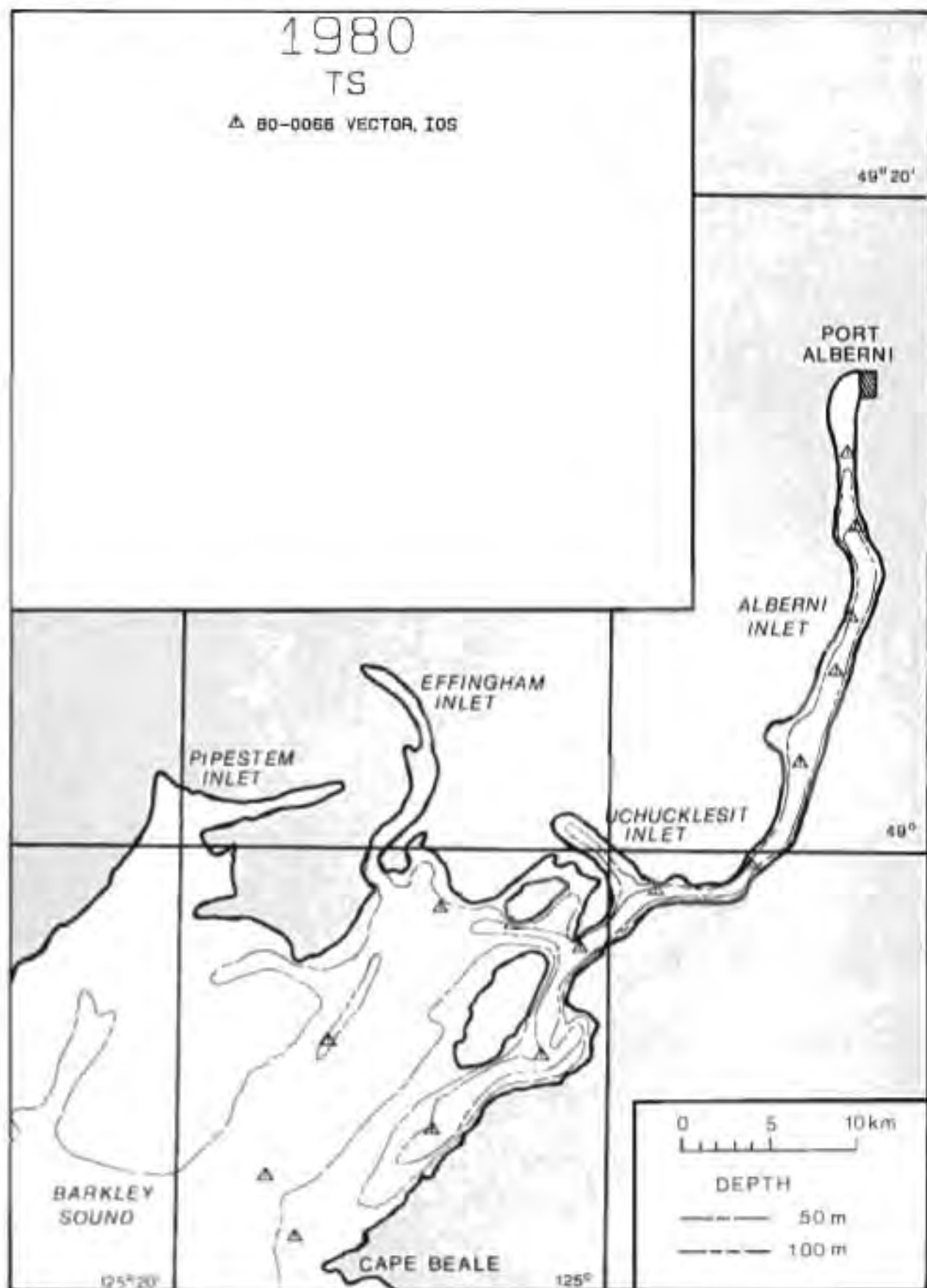


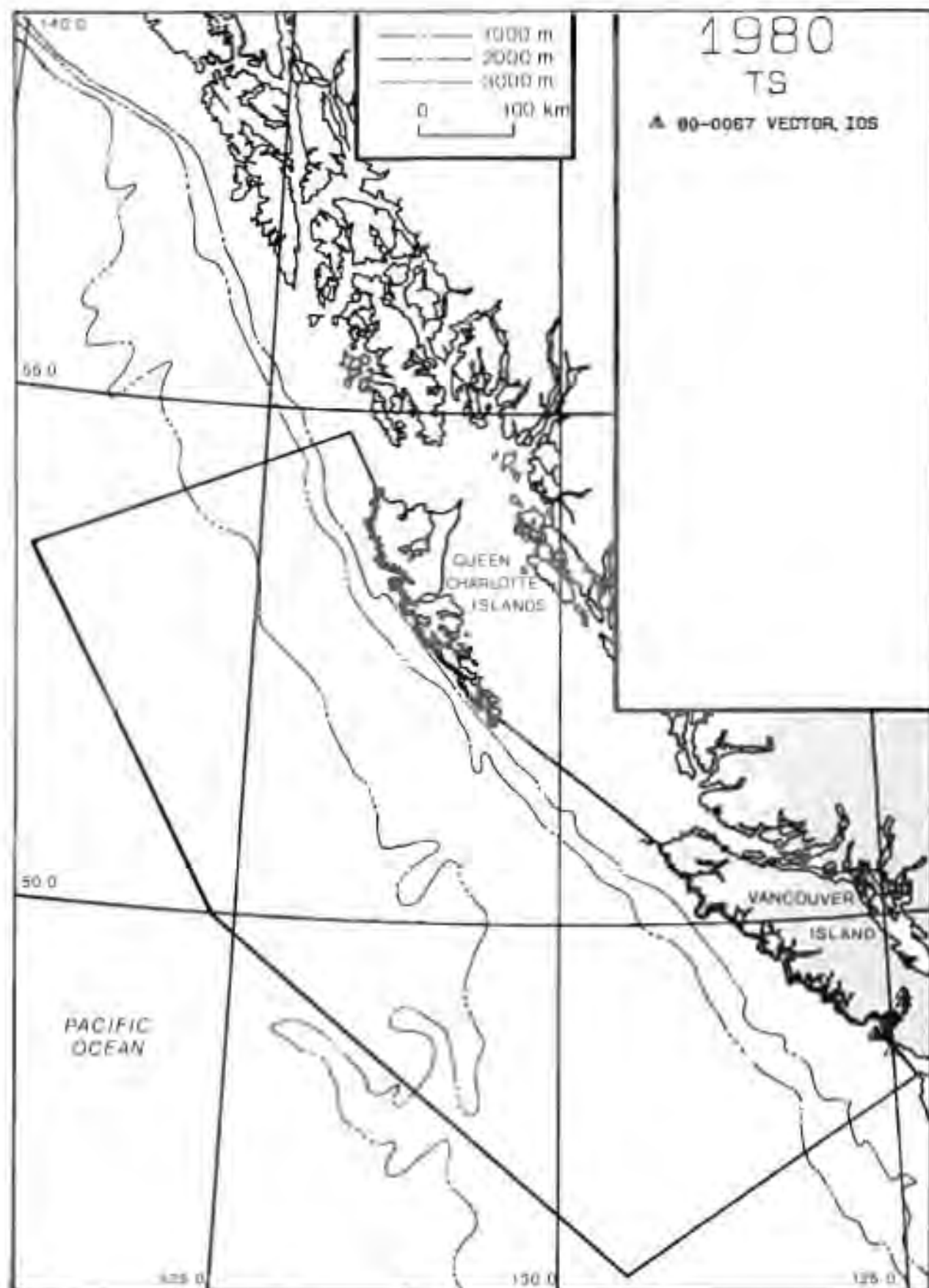
1980
TS

▲ 80-0065B ENDEAVOUR,
105

0 50 km



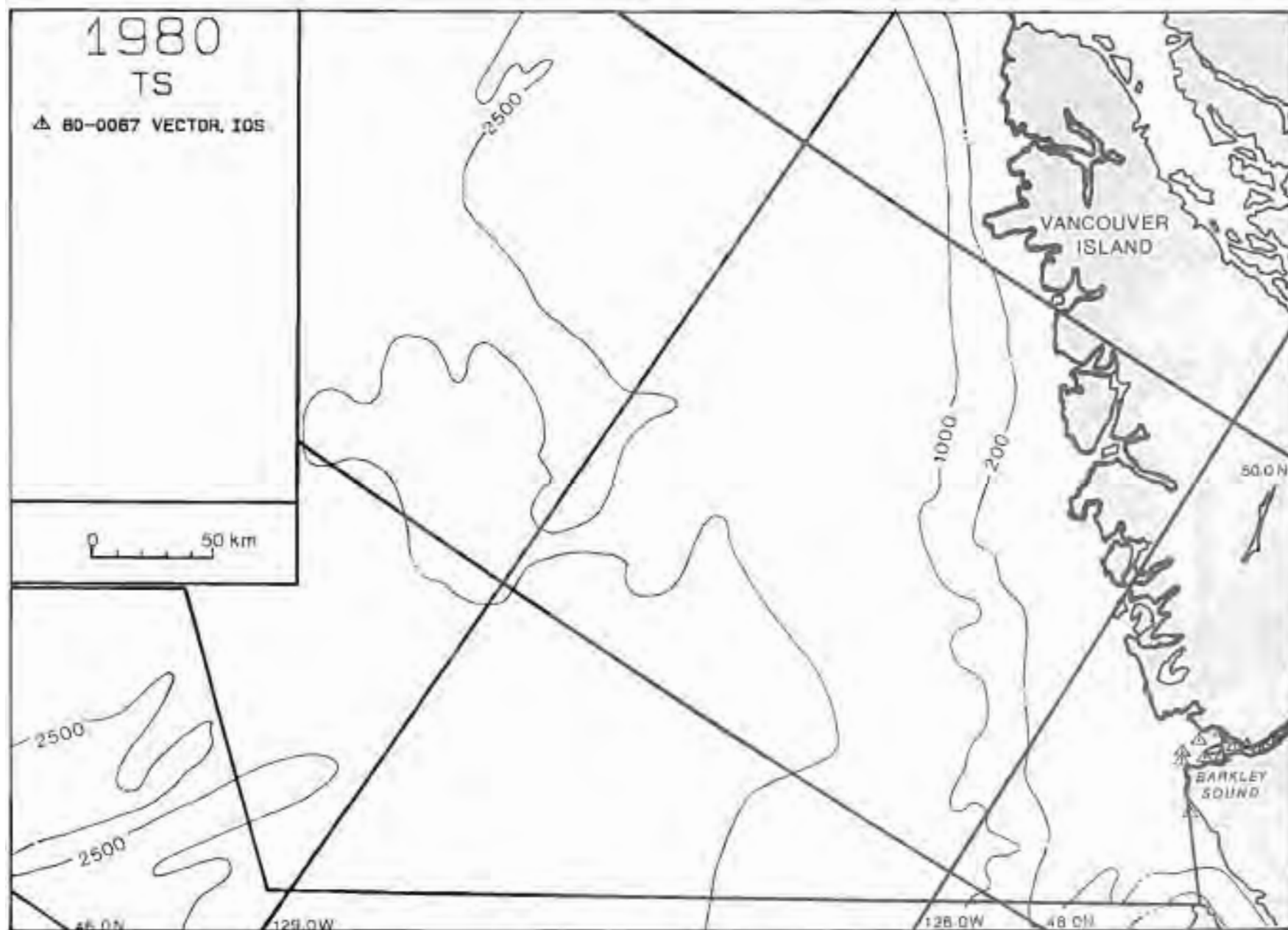


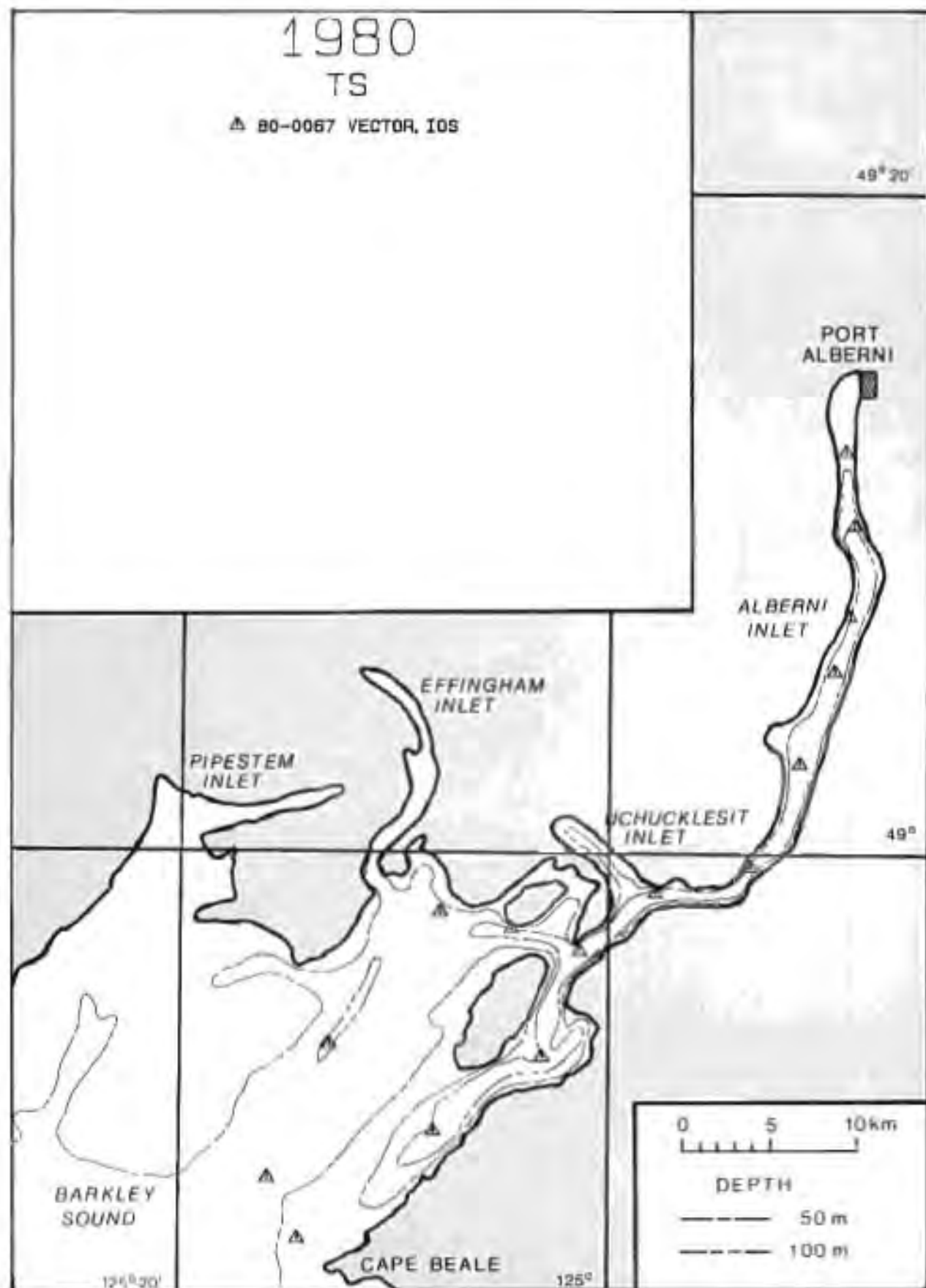


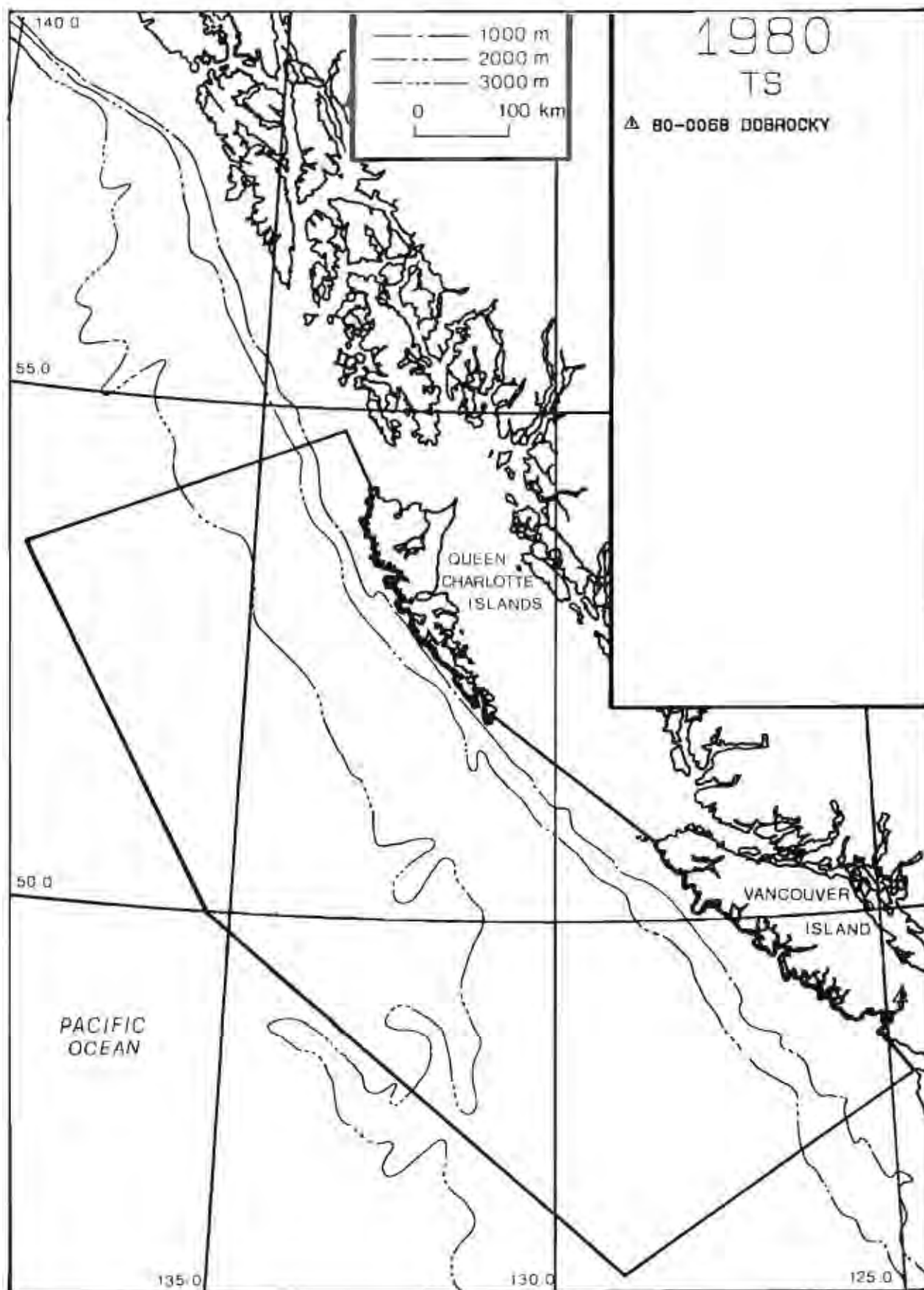
1980
TS

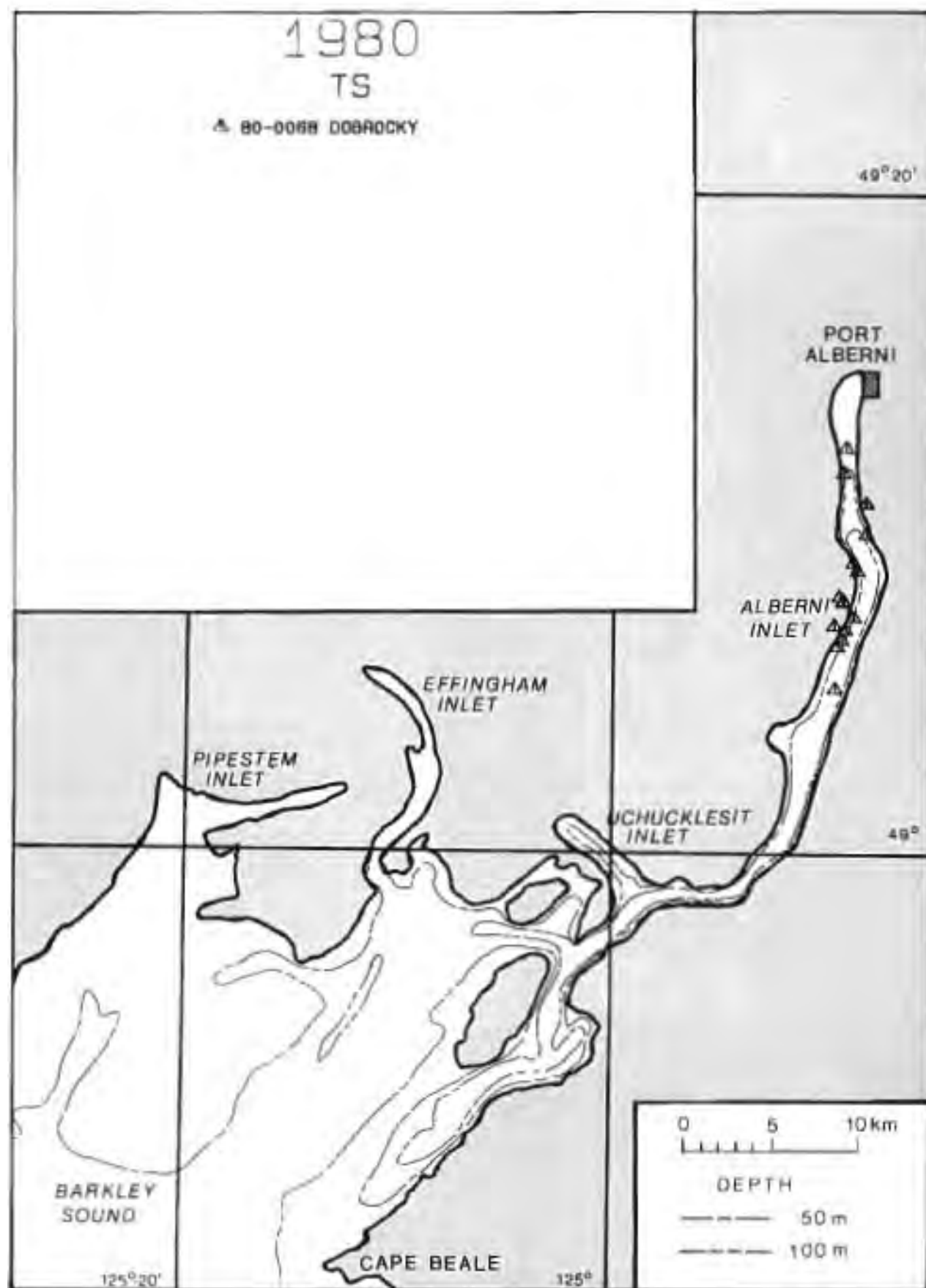
△ 80-0067 VECTOR, IOS

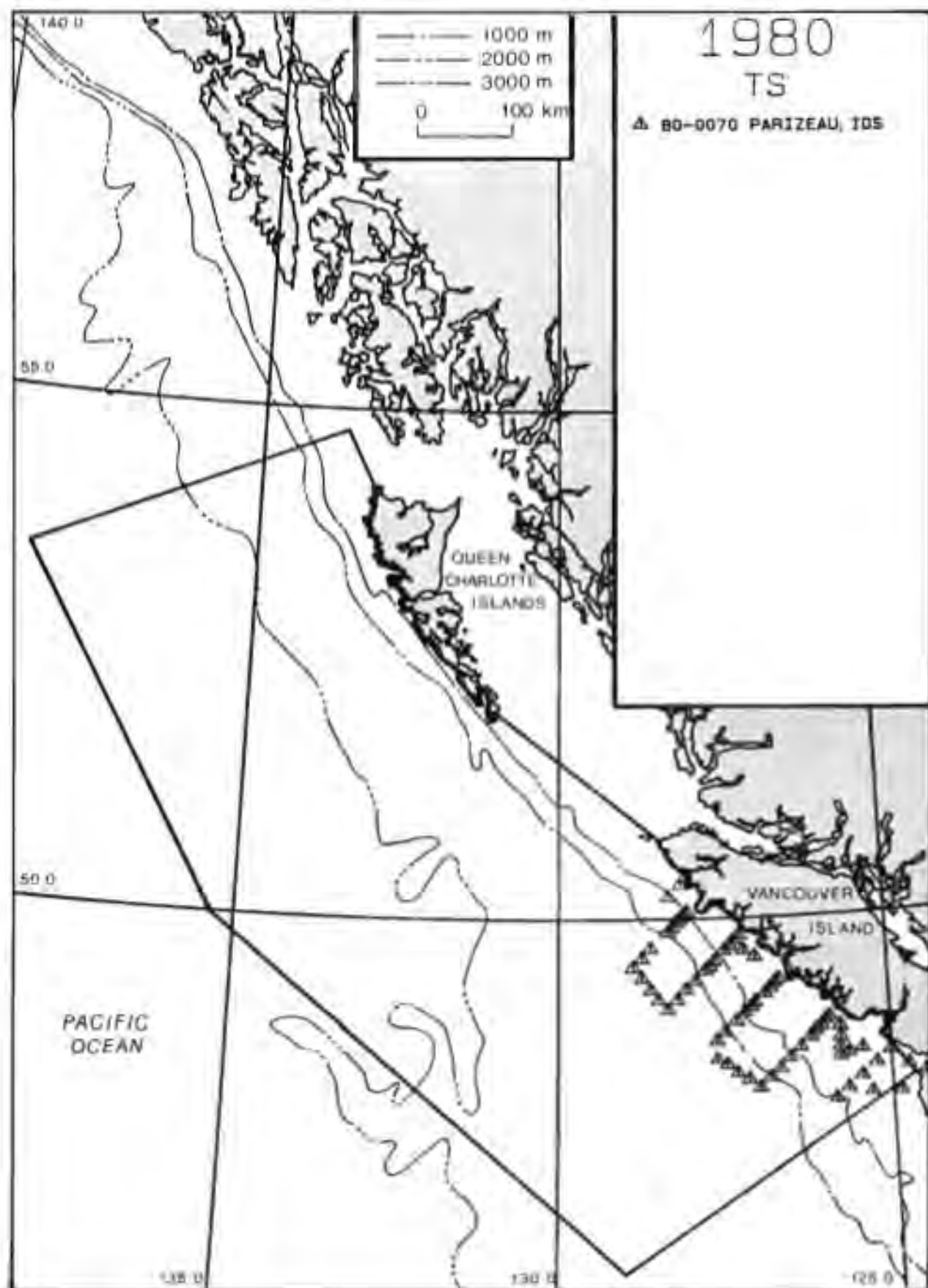
0 50 km

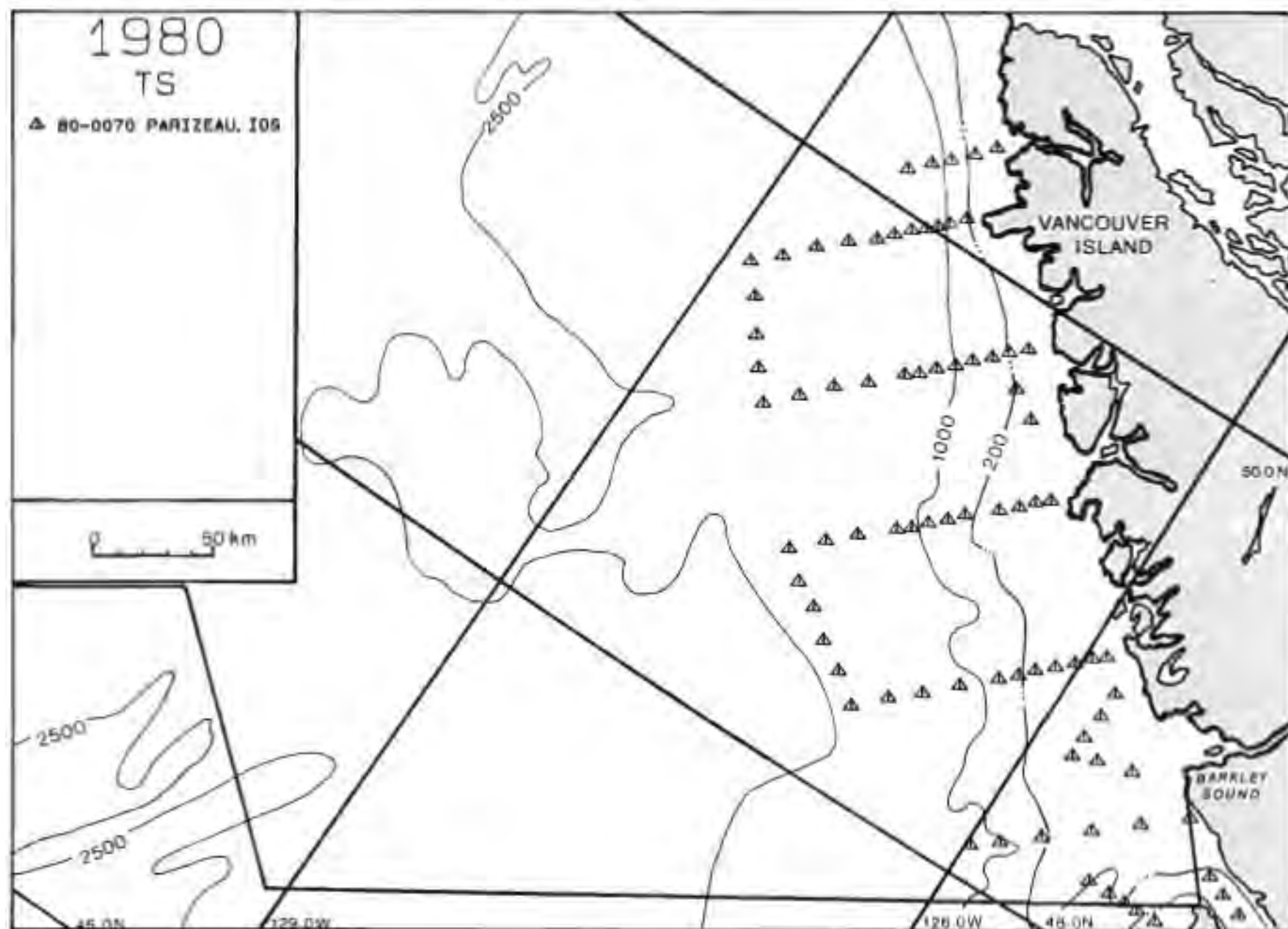


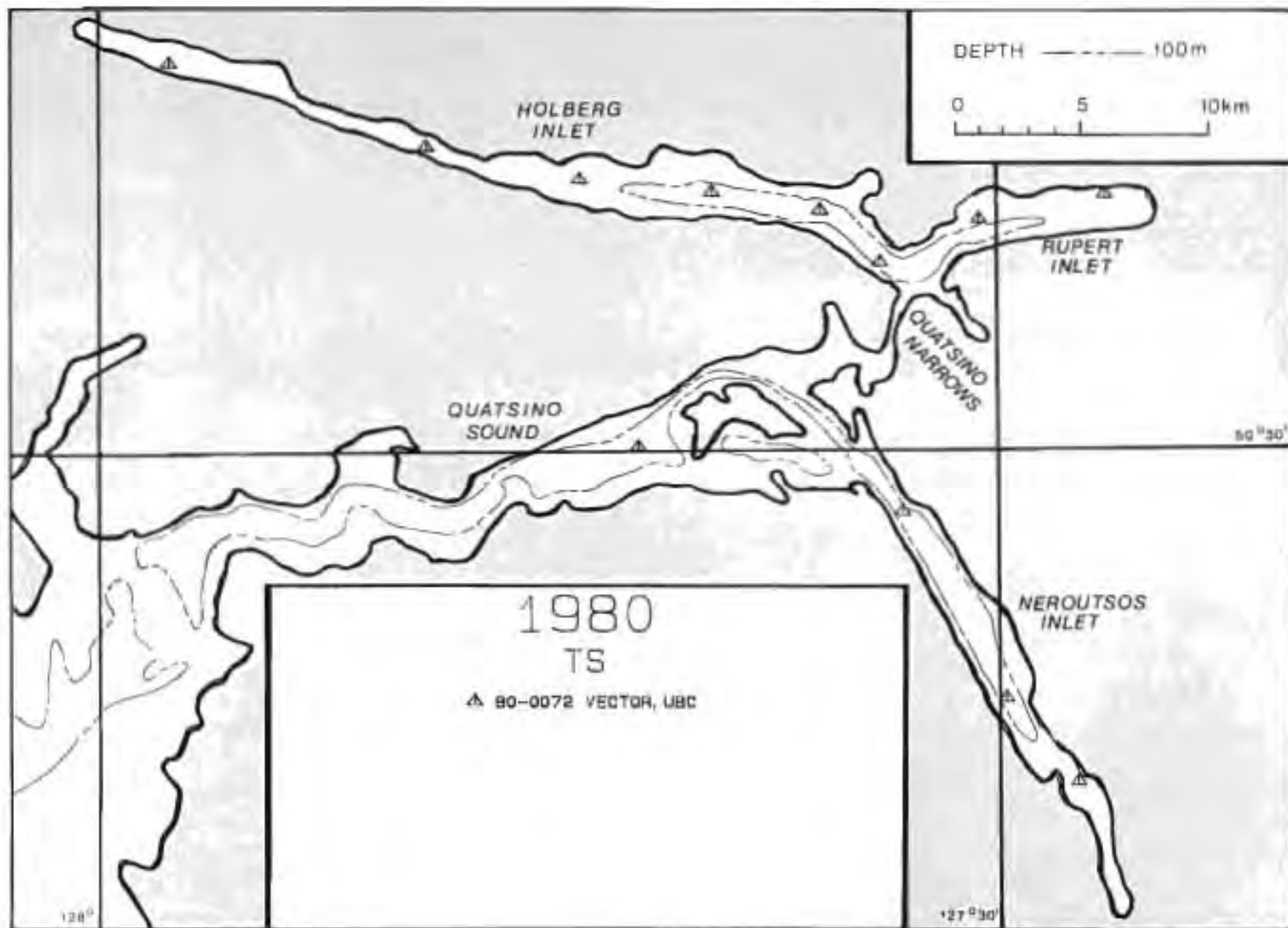


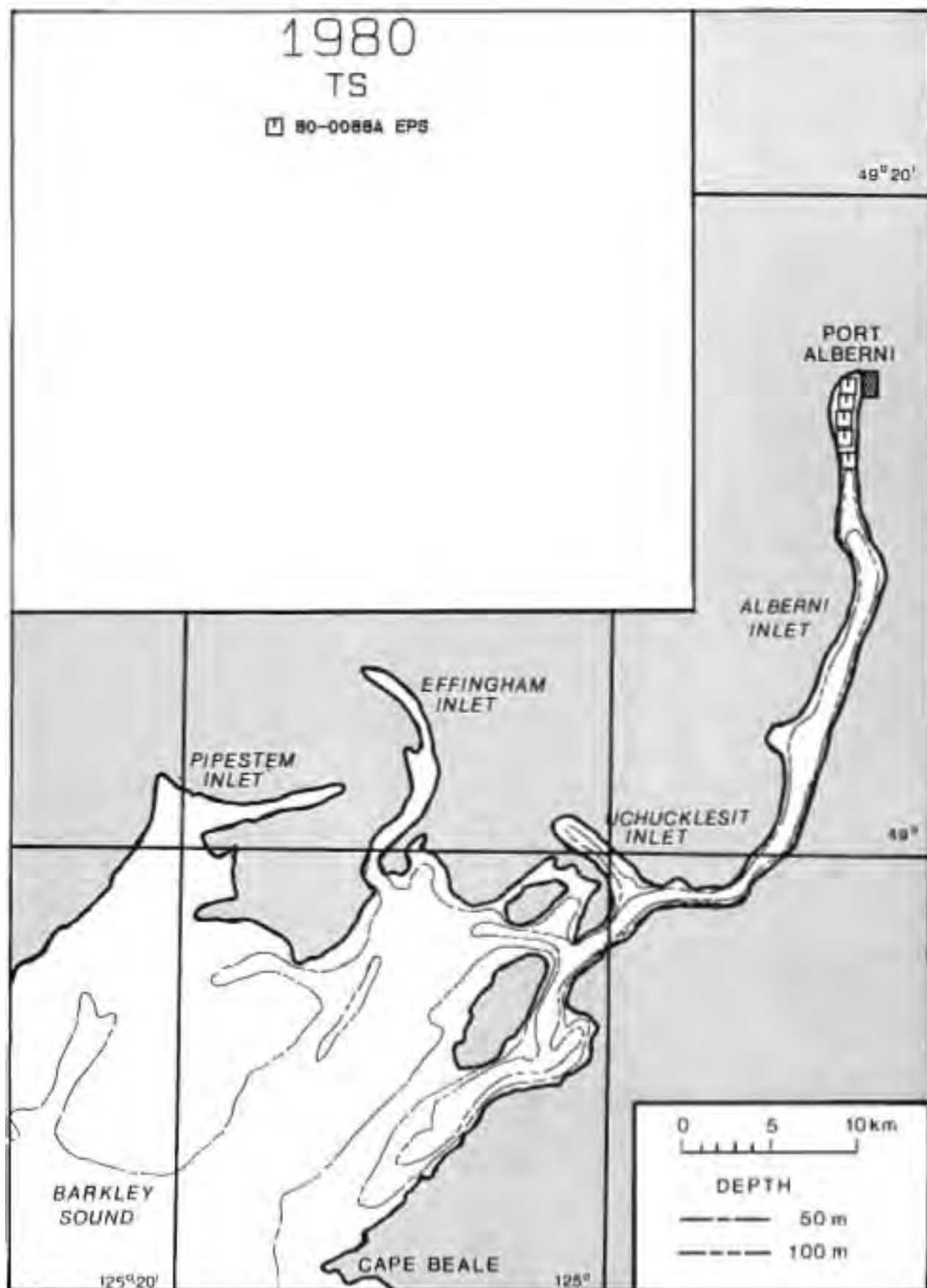


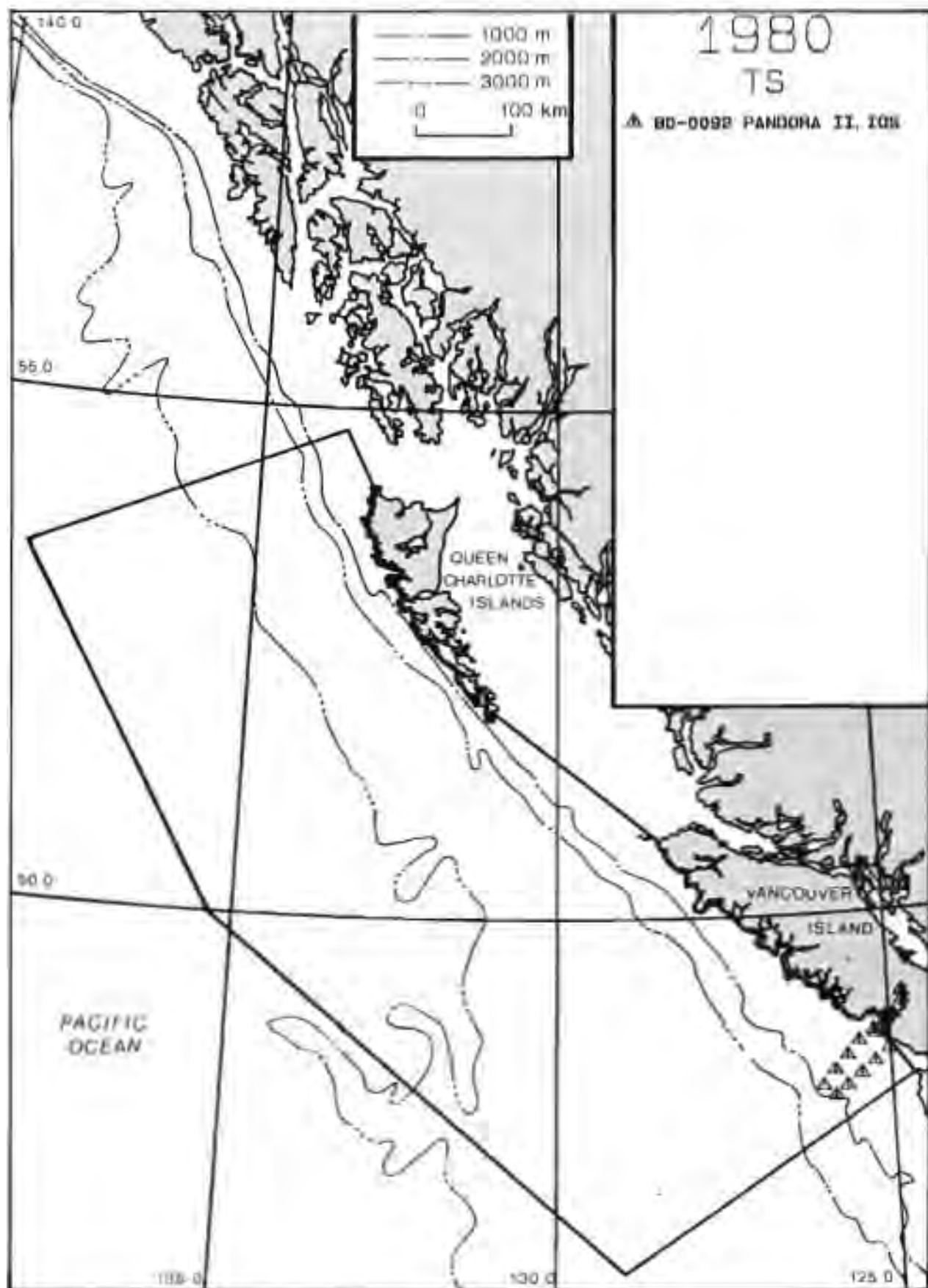


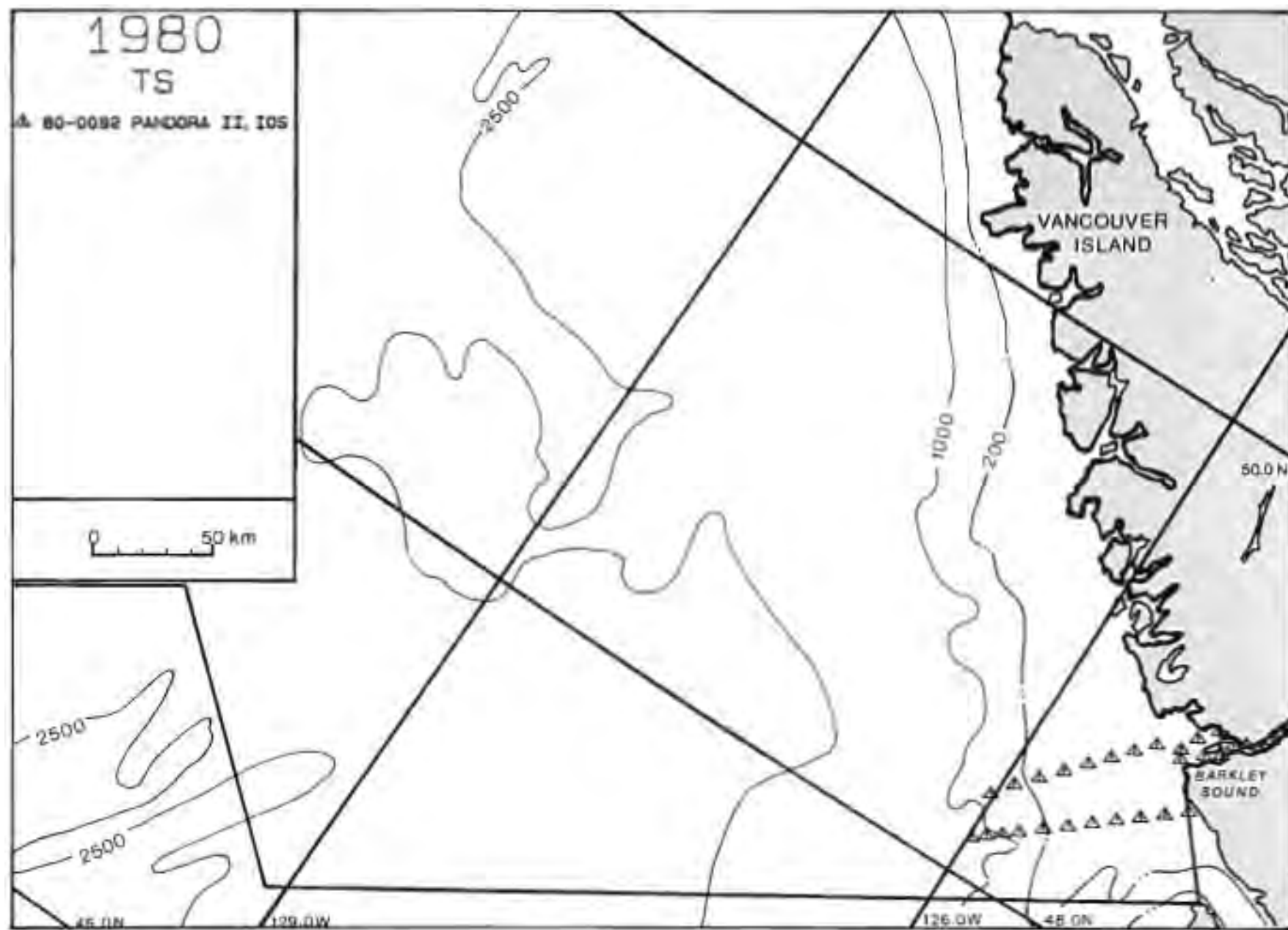


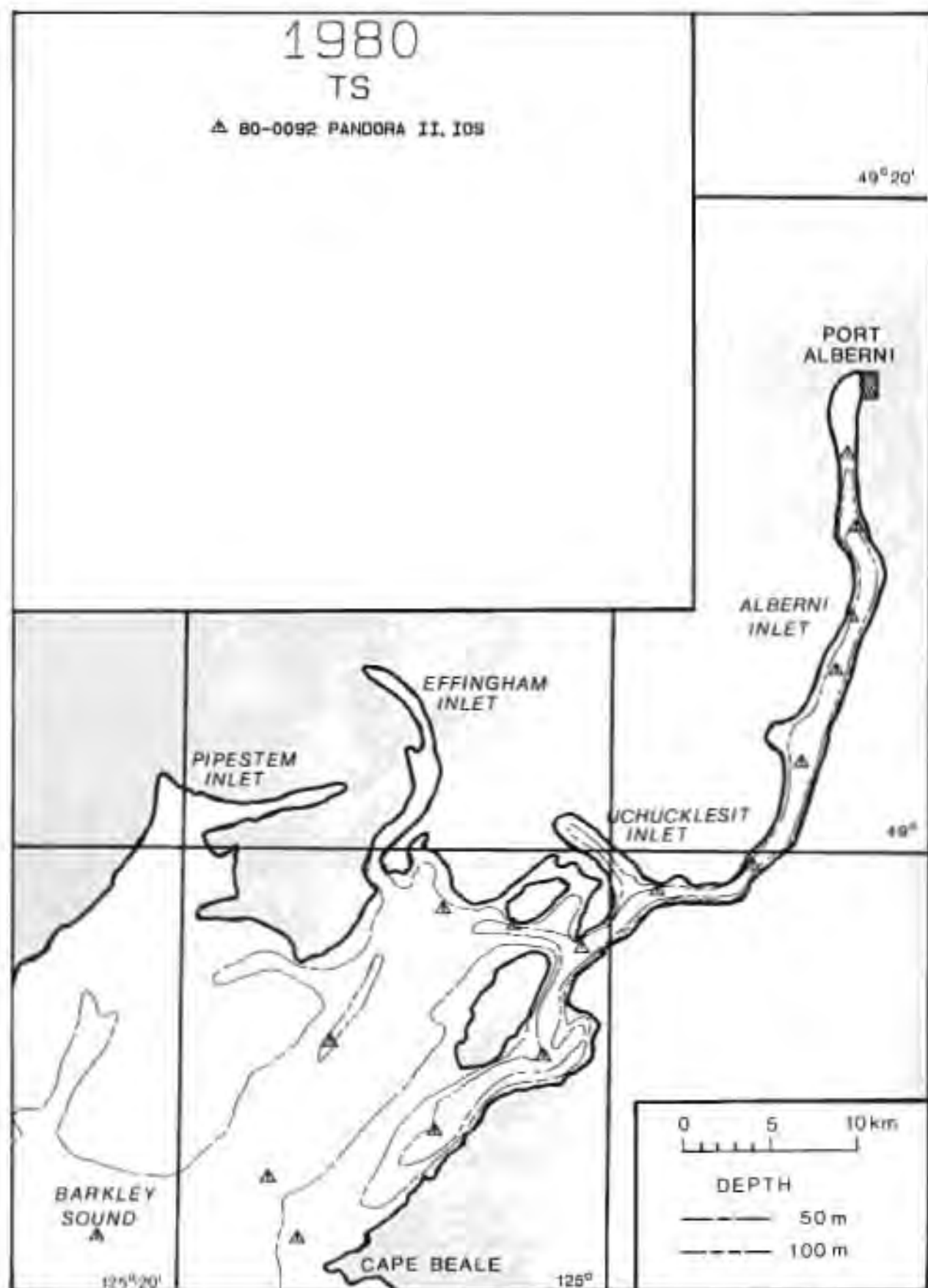


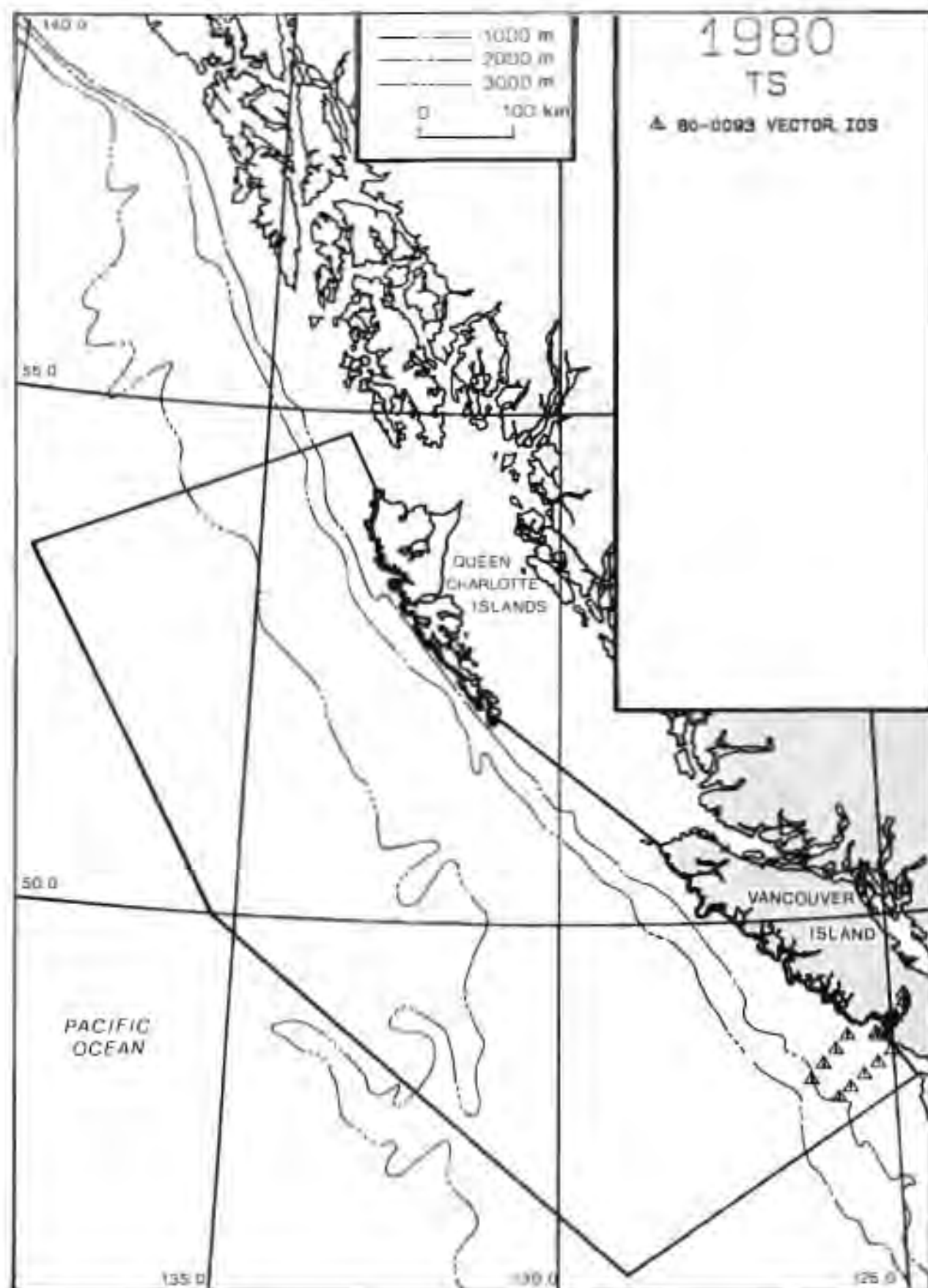


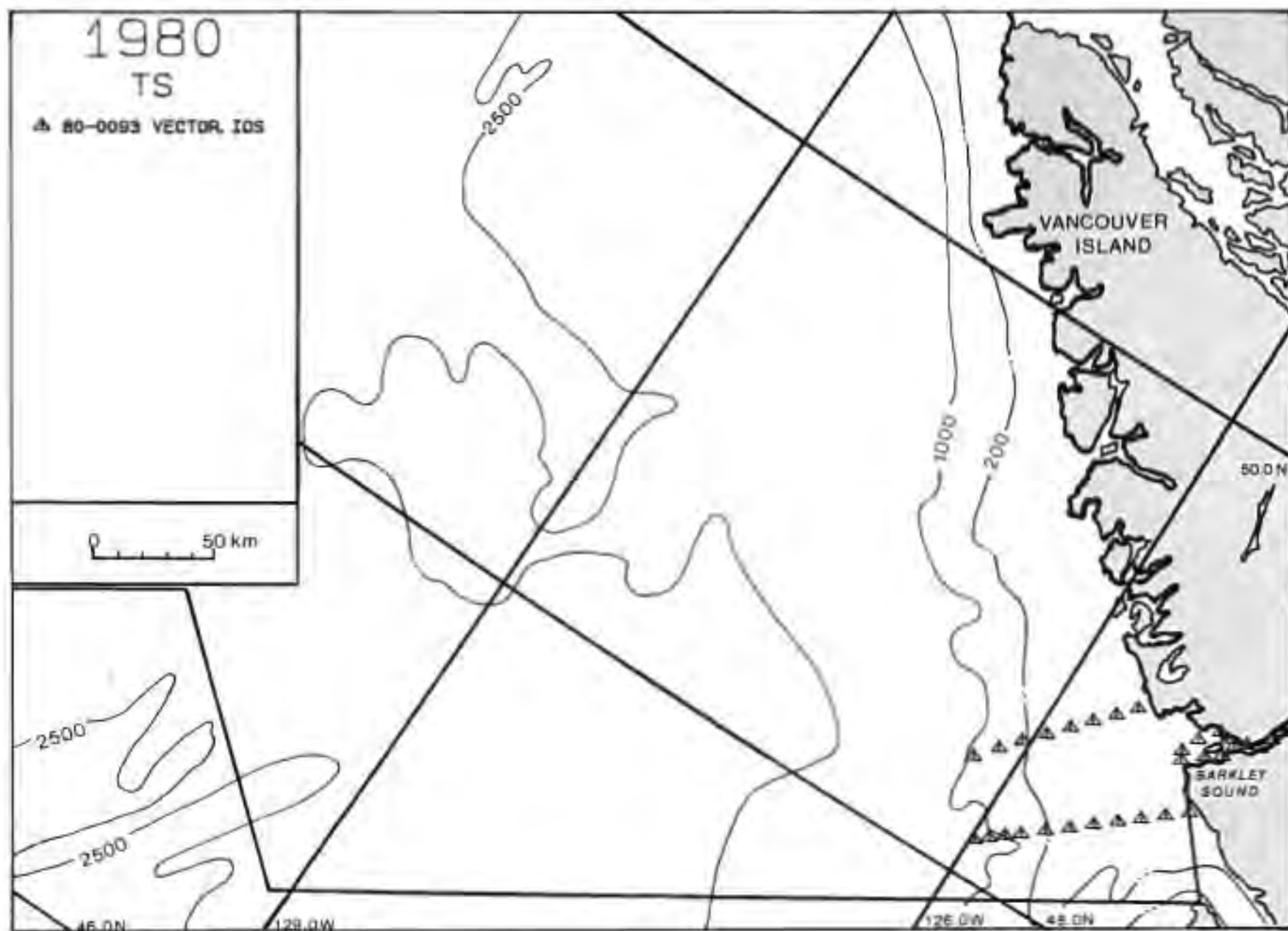


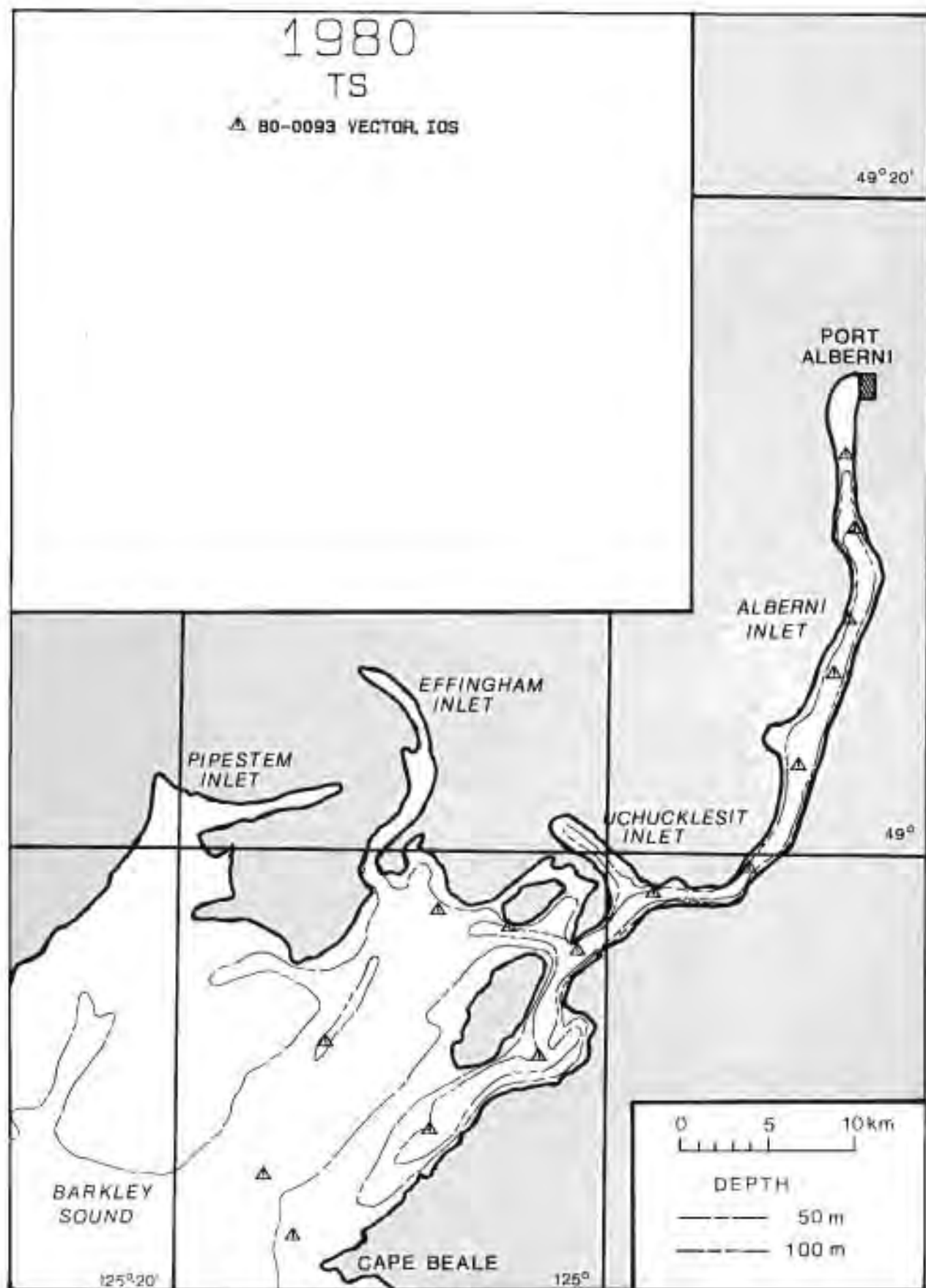


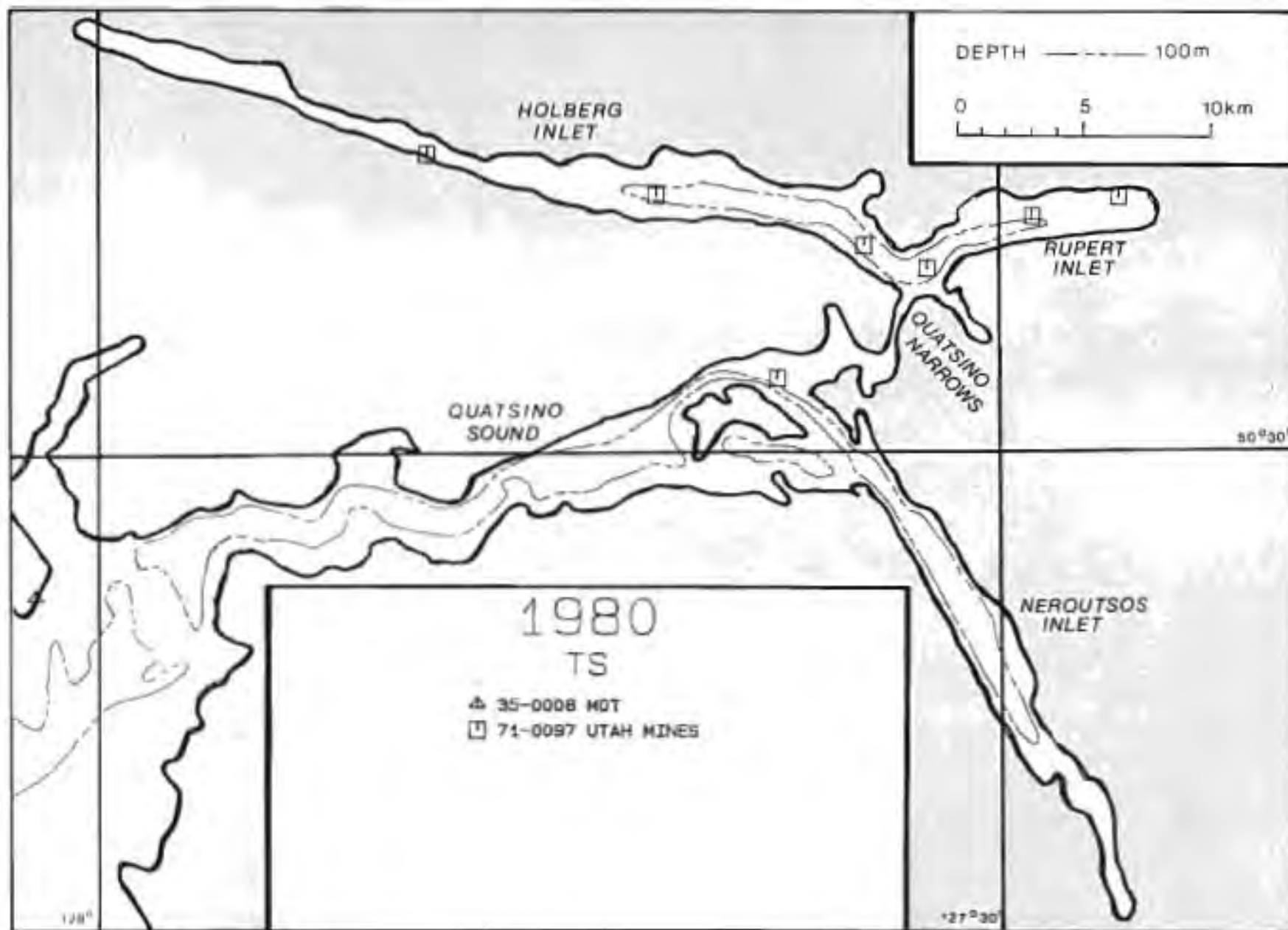


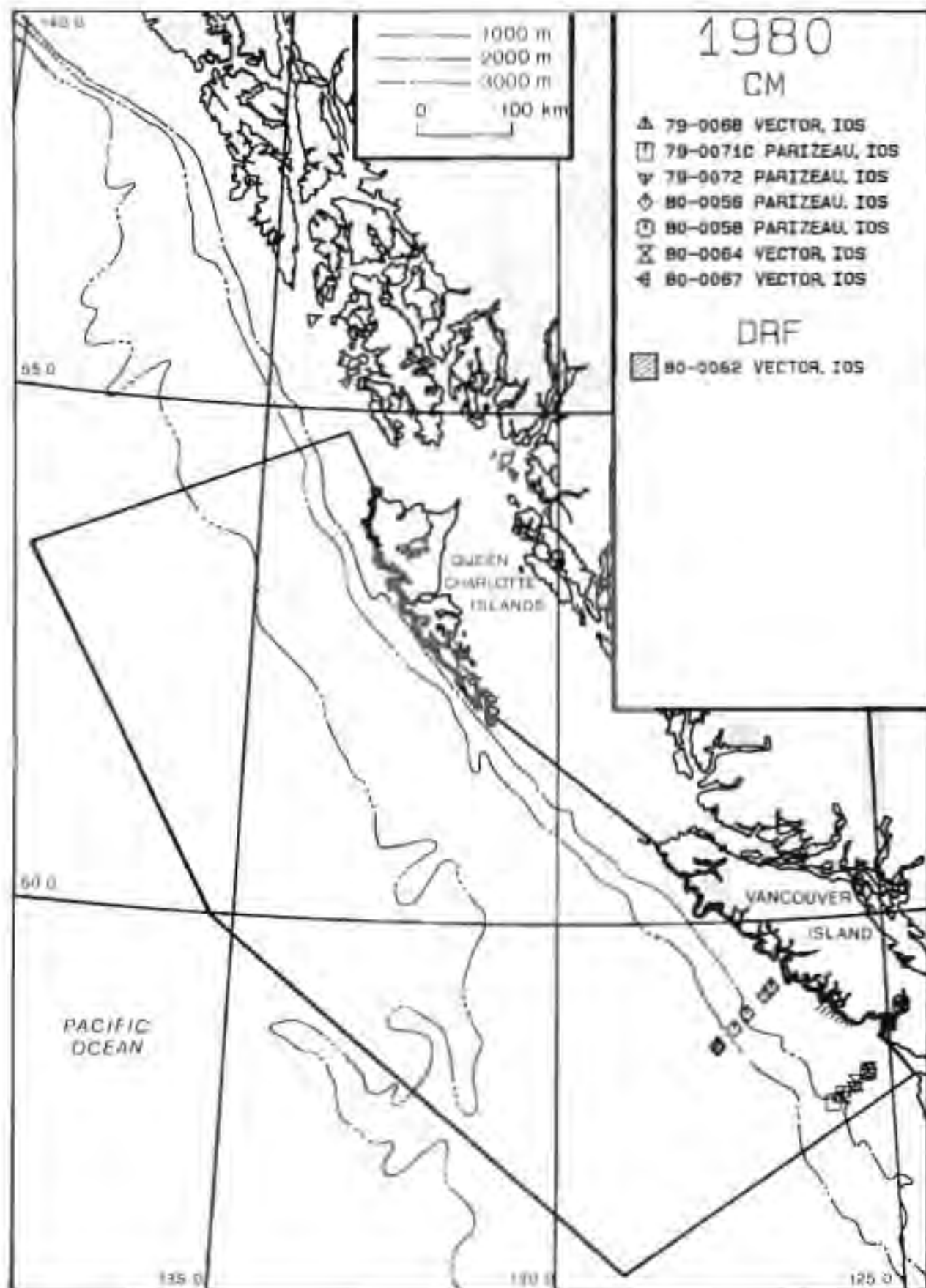


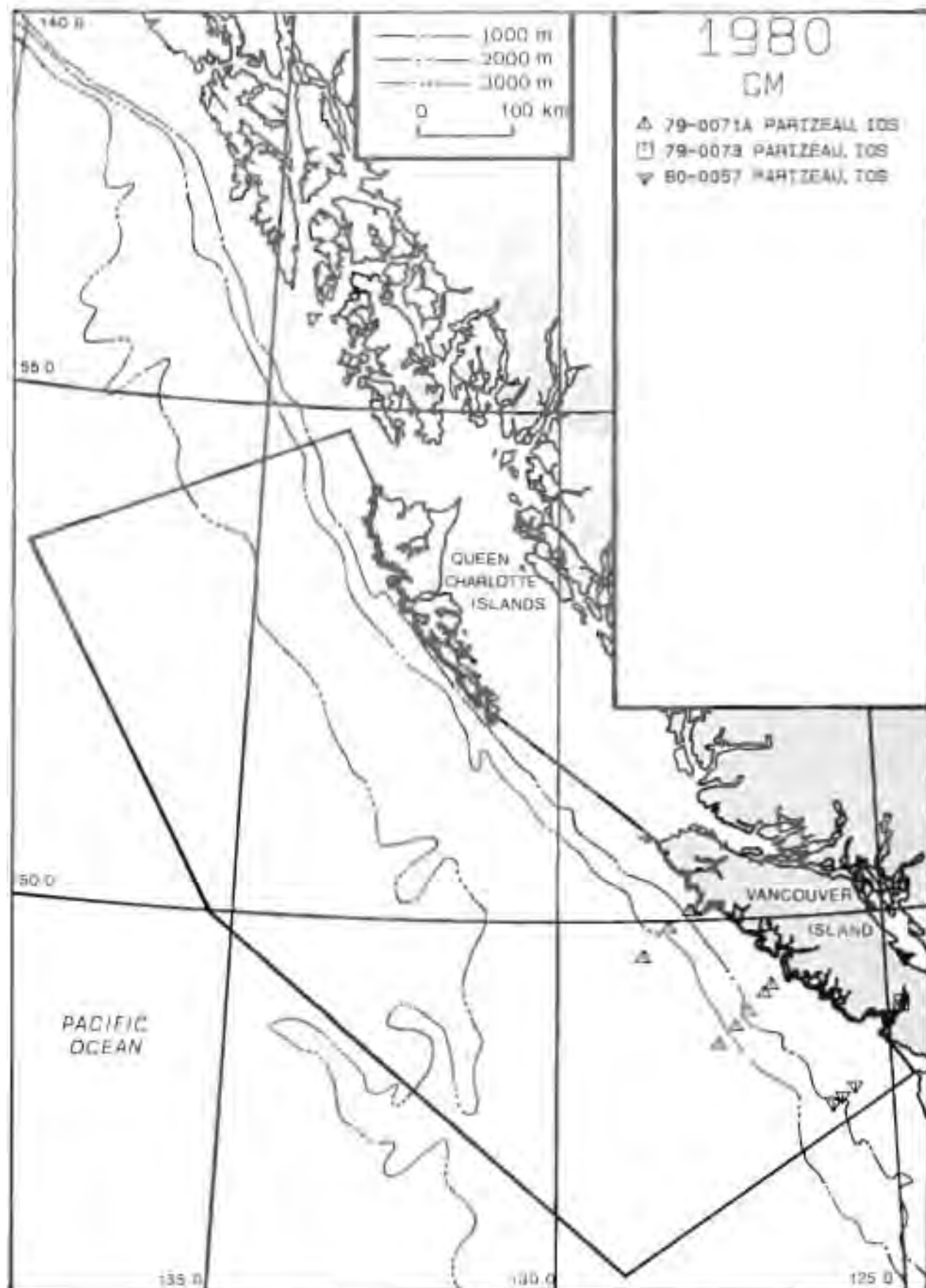


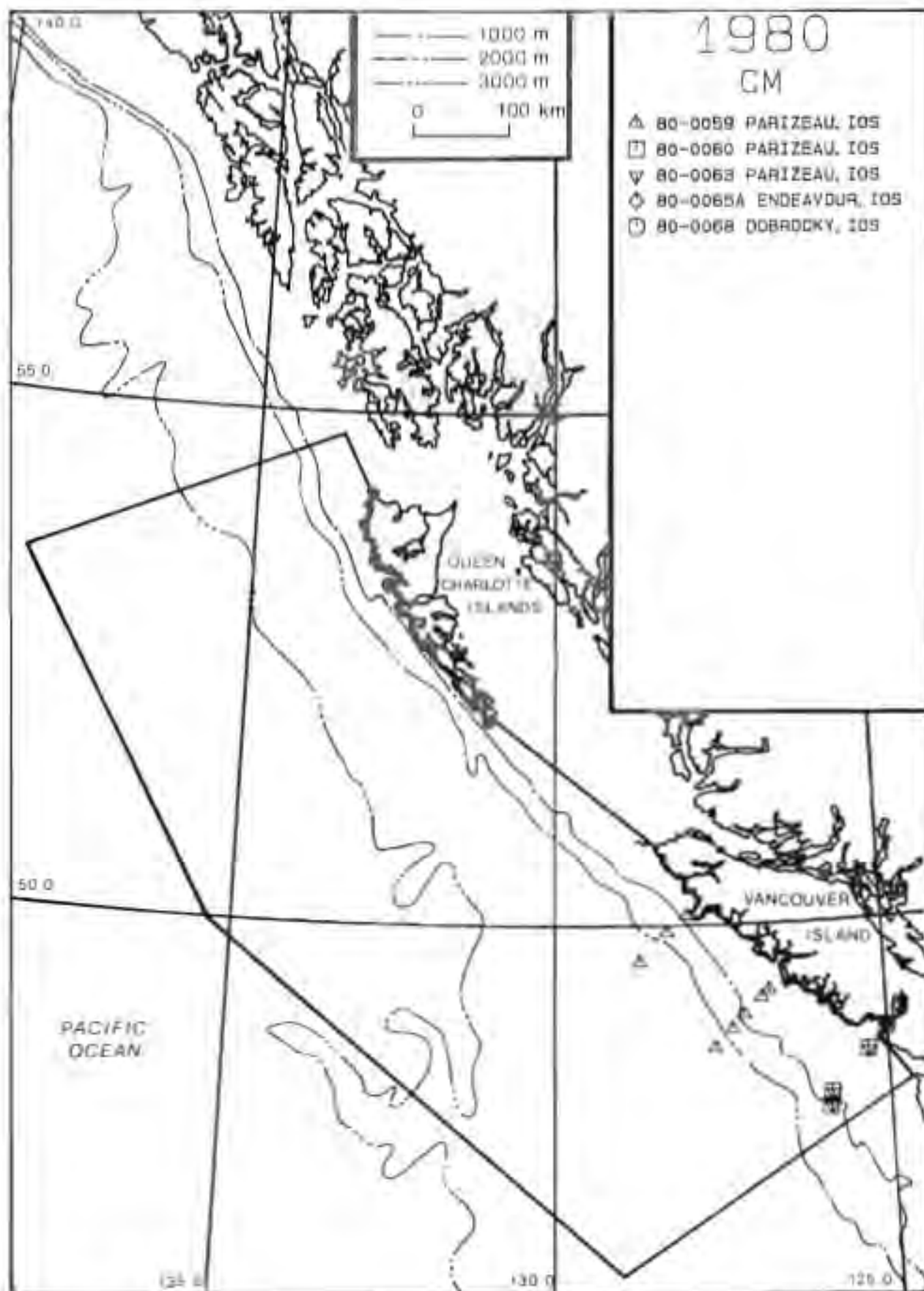








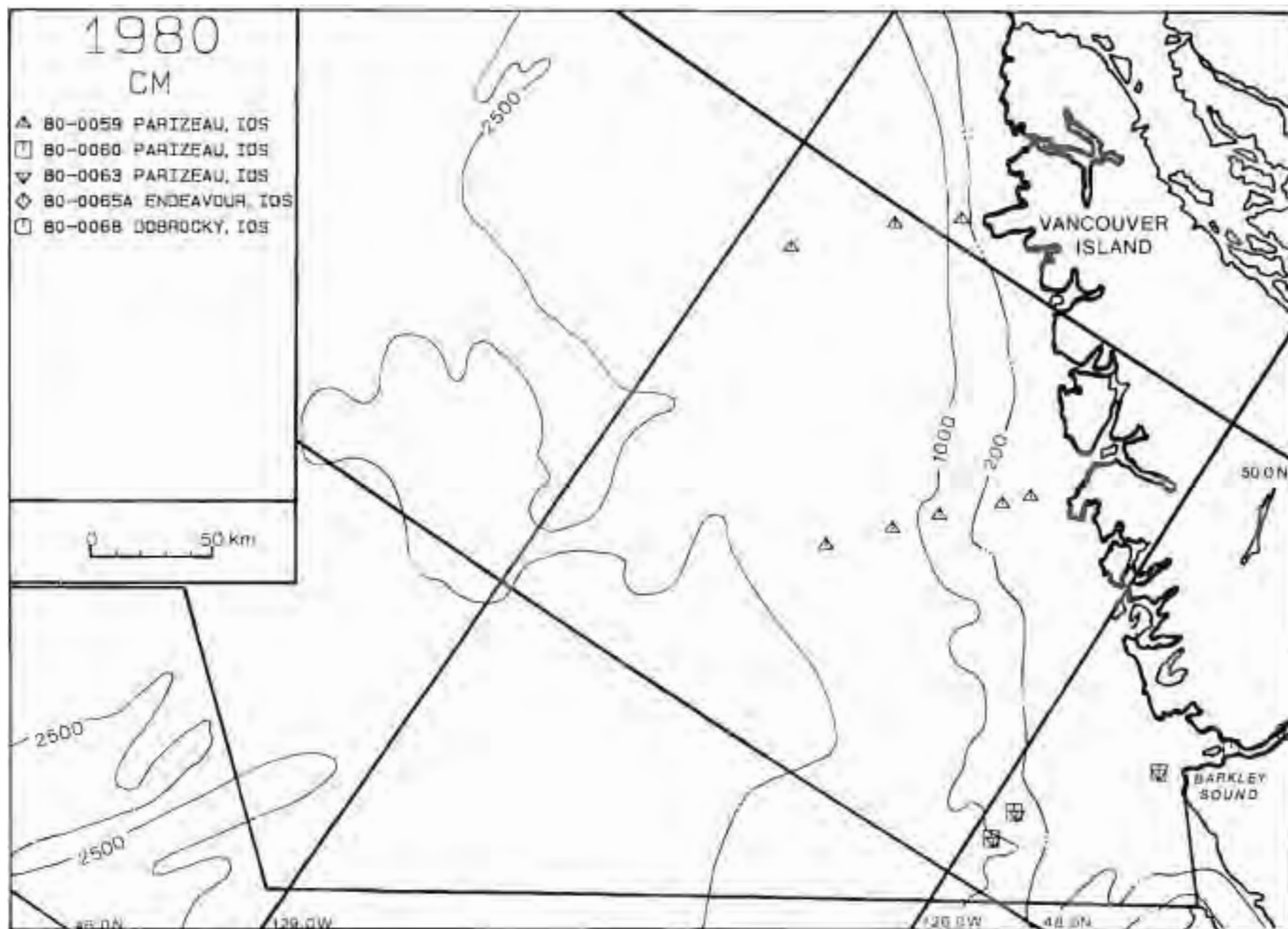




1980
CM

- ▲ 80-0059 PARIZEAU, IOS
- ◻ 80-0060 PARIZEAU, IOS
- ▼ 80-0063 PARIZEAU, IOS
- ◆ 80-0065A ENDEAVOUR, IOS
- ◻ 80-0068 DOBROCKY, IOS

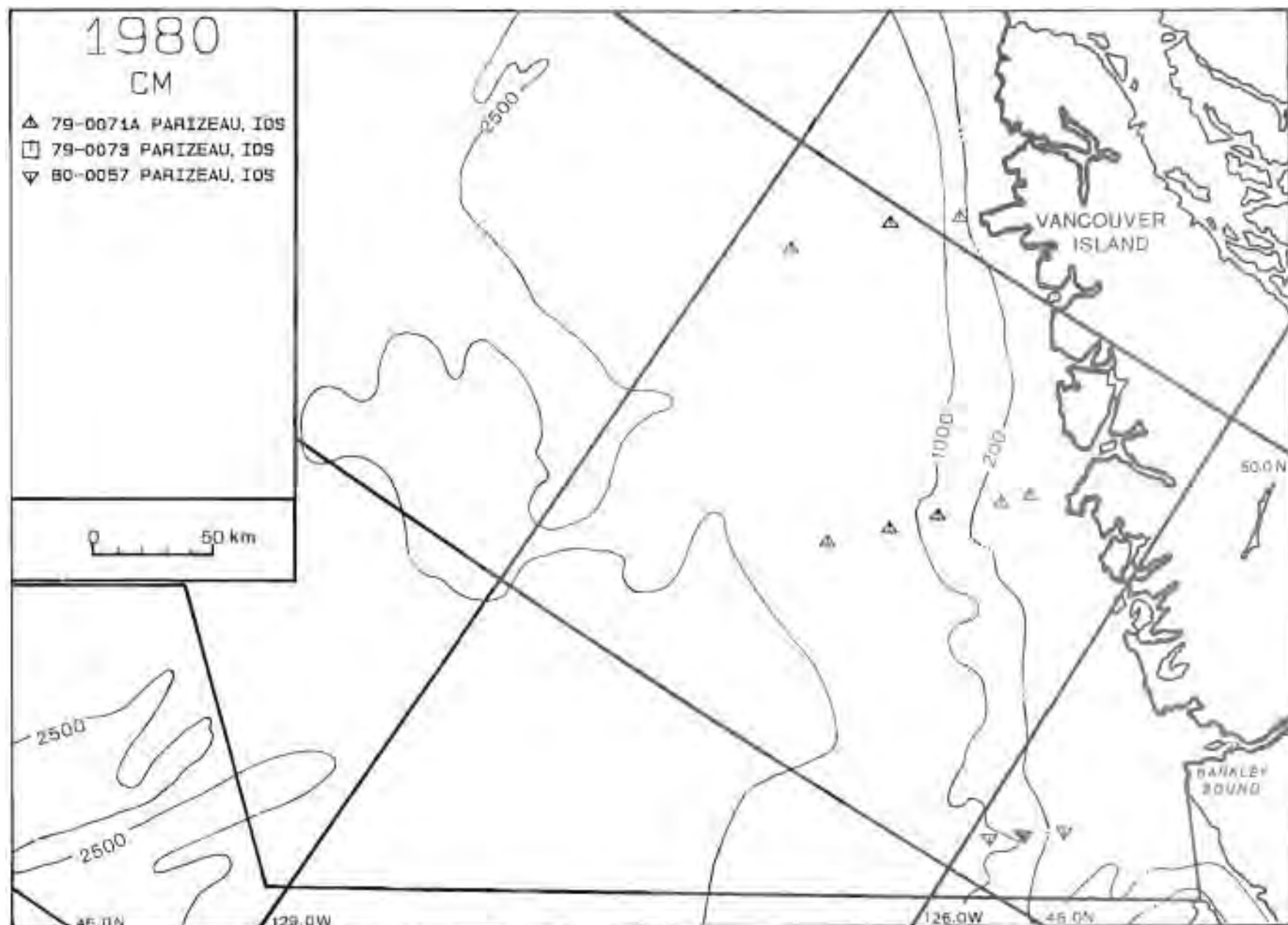
0 50 km



1980
CM

- ▲ 79-0071A PARIZEAU, IDS
- 79-0073 PARIZEAU, IDS
- ▼ 80-0057 PARIZEAU, IDS

0 50 km

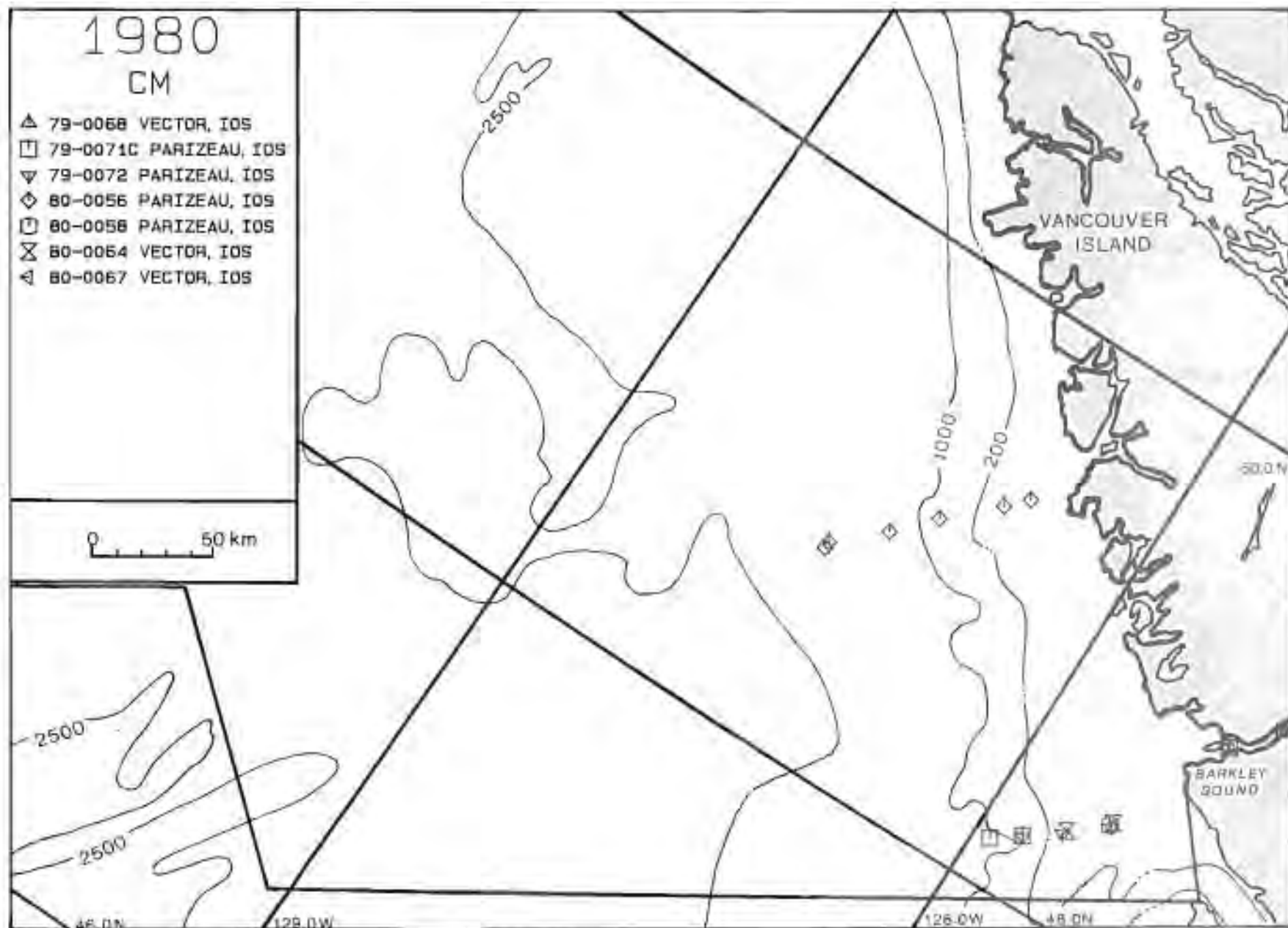


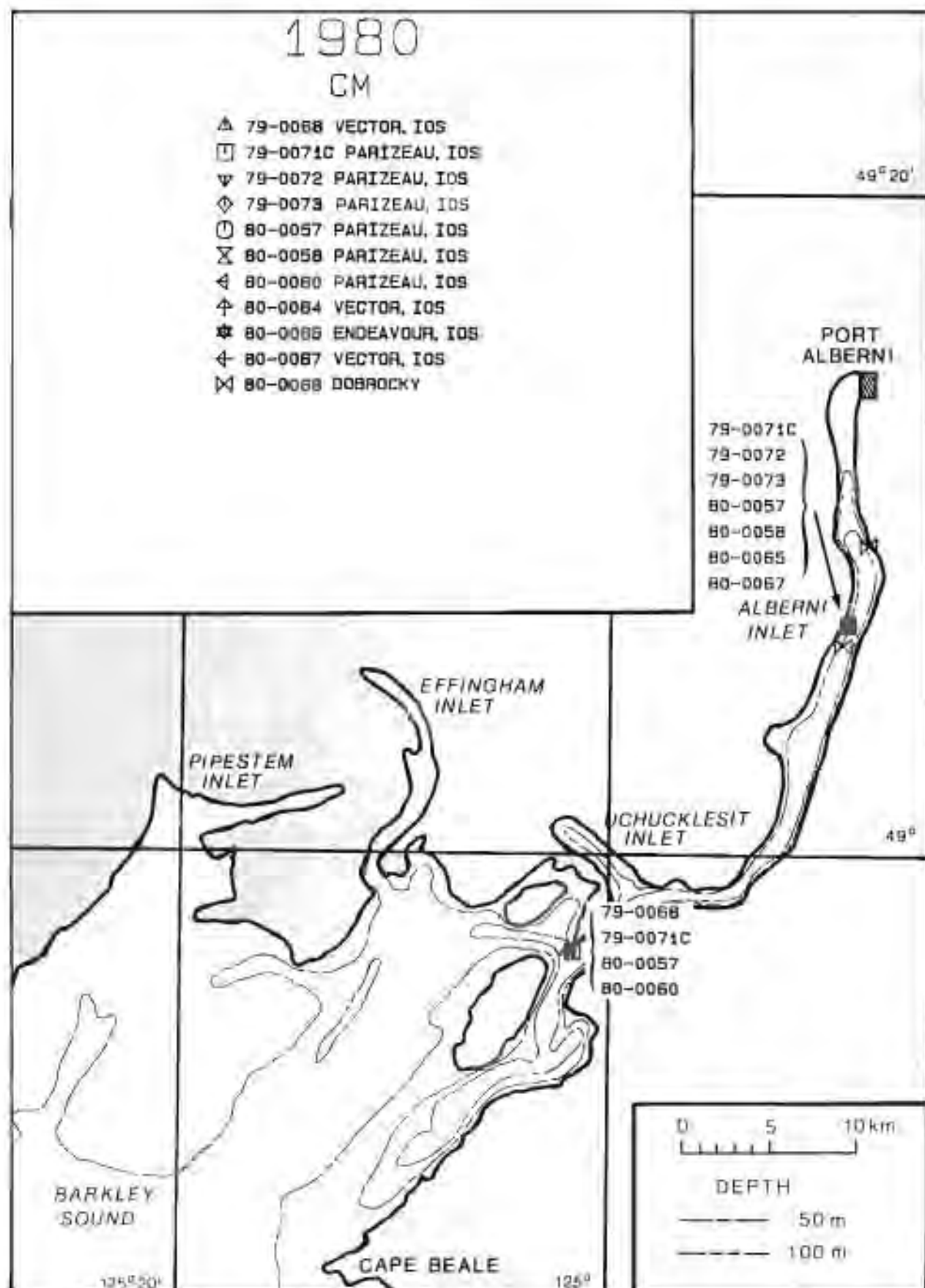
1980

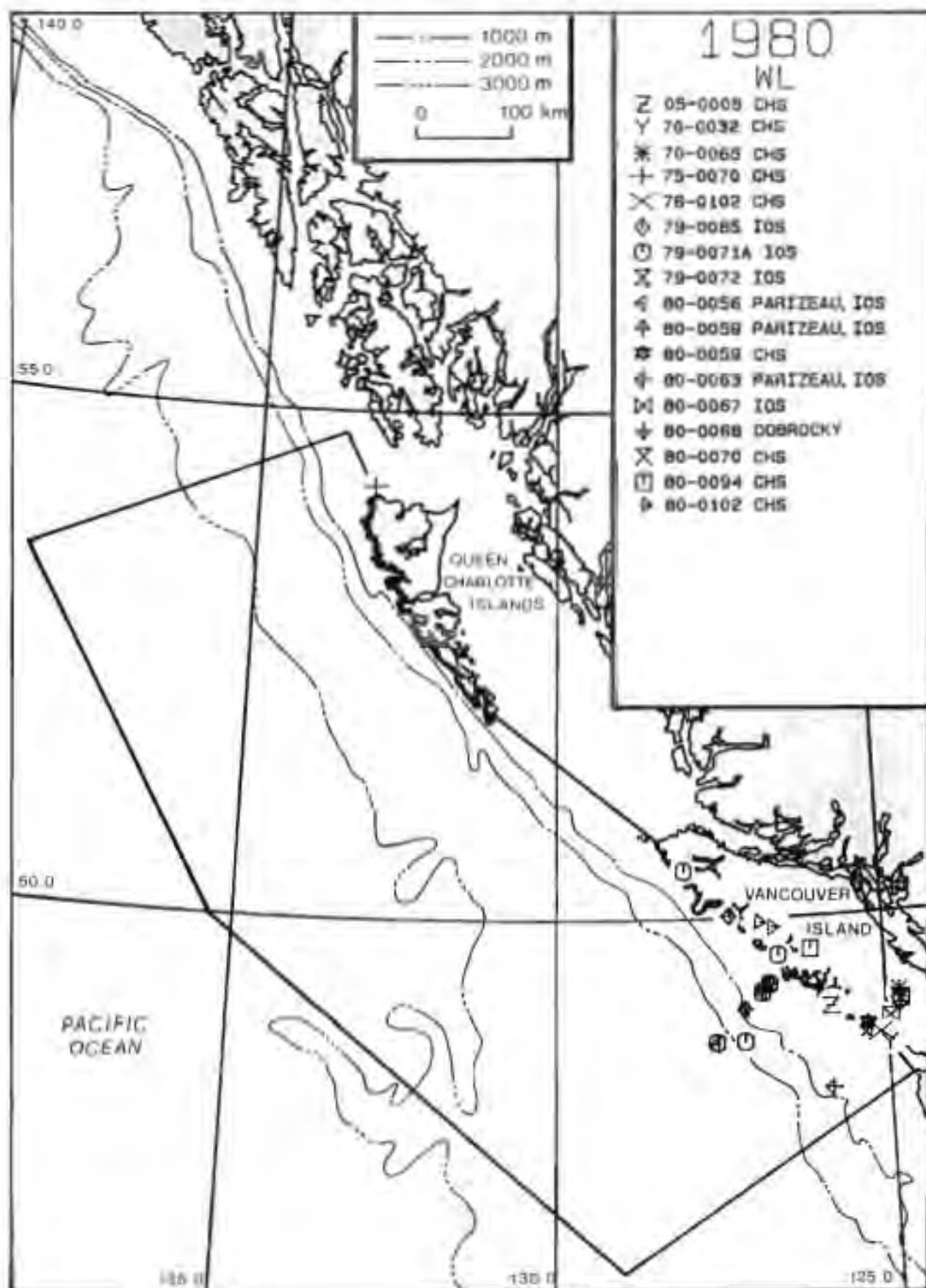
CM

- ▲ 79-0068 VECTOR, IOS
- ◻ 79-0071C PARIZEAU, IOS
- ▼ 79-0072 PARIZEAU, IOS
- ◆ 80-0056 PARIZEAU, IOS
- ◻ 80-0058 PARIZEAU, IOS
- ⊗ 80-0064 VECTOR, IOS
- ◀ 80-0067 VECTOR, IOS

0 50 km







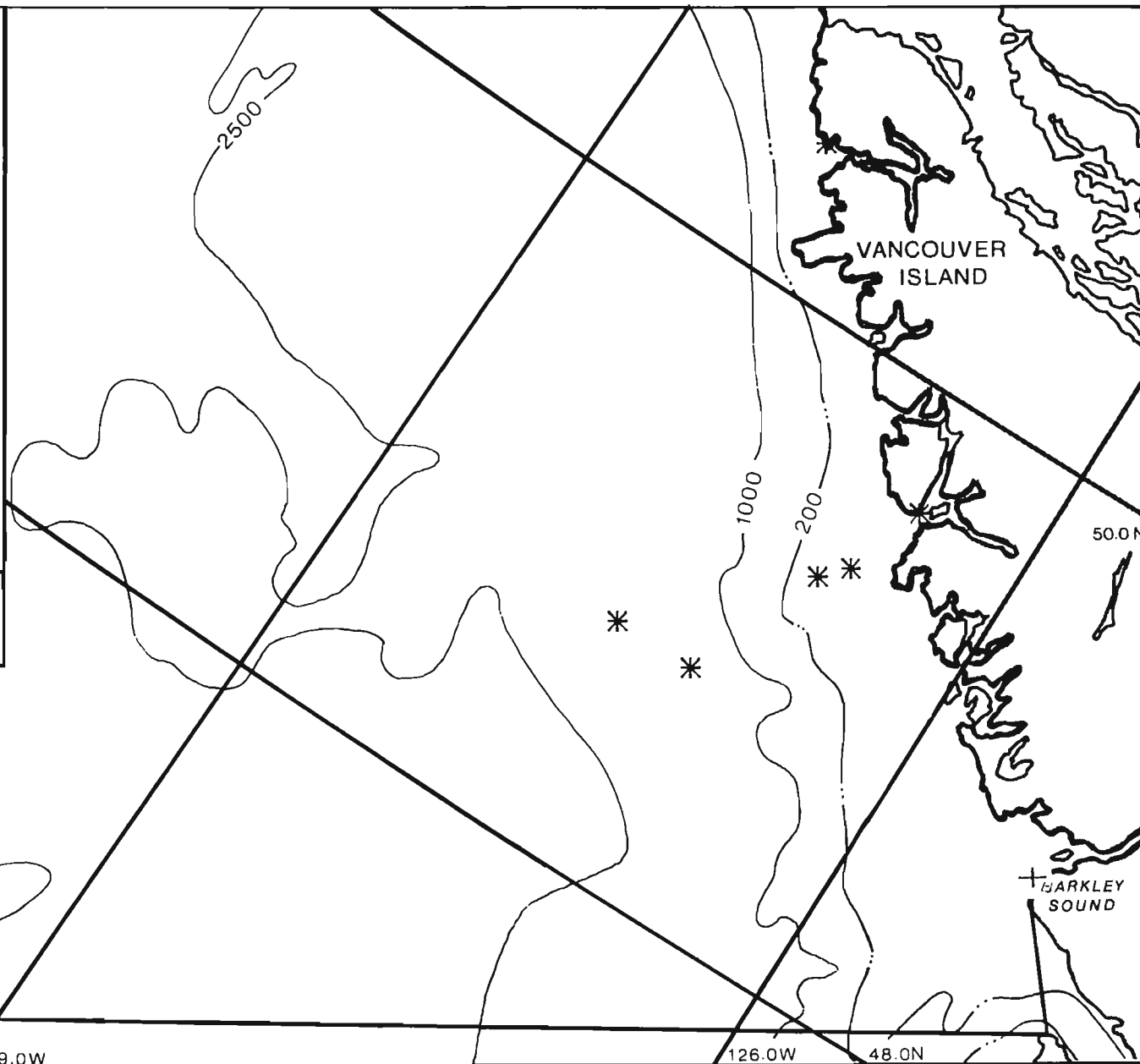
1980

WL

+ 70-0032 CHS

* 79-0071A PARIZEAU, IOS

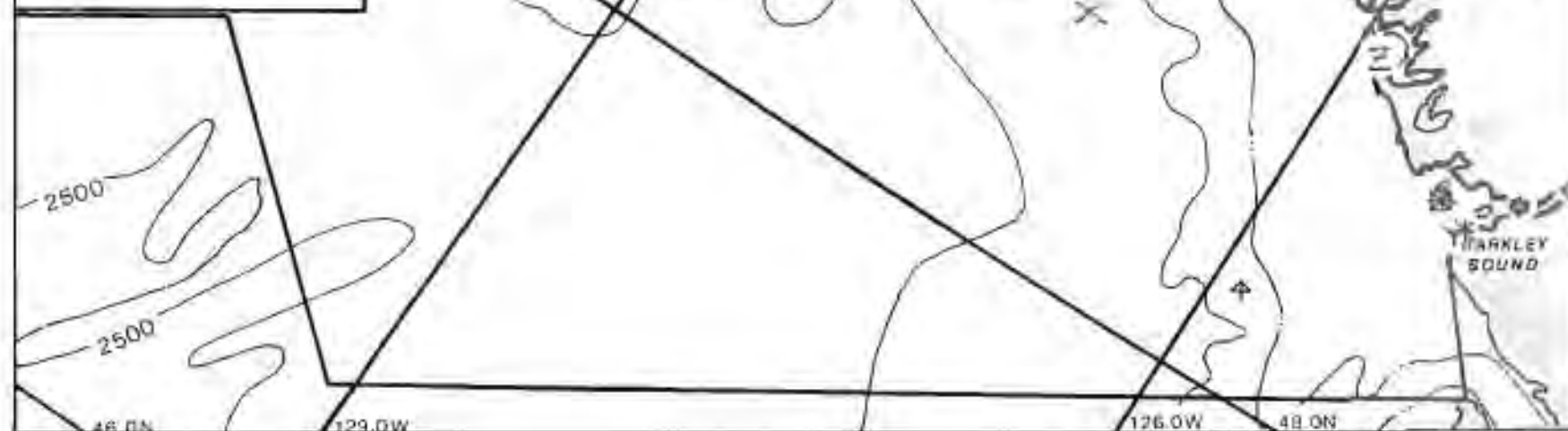
0 50 km

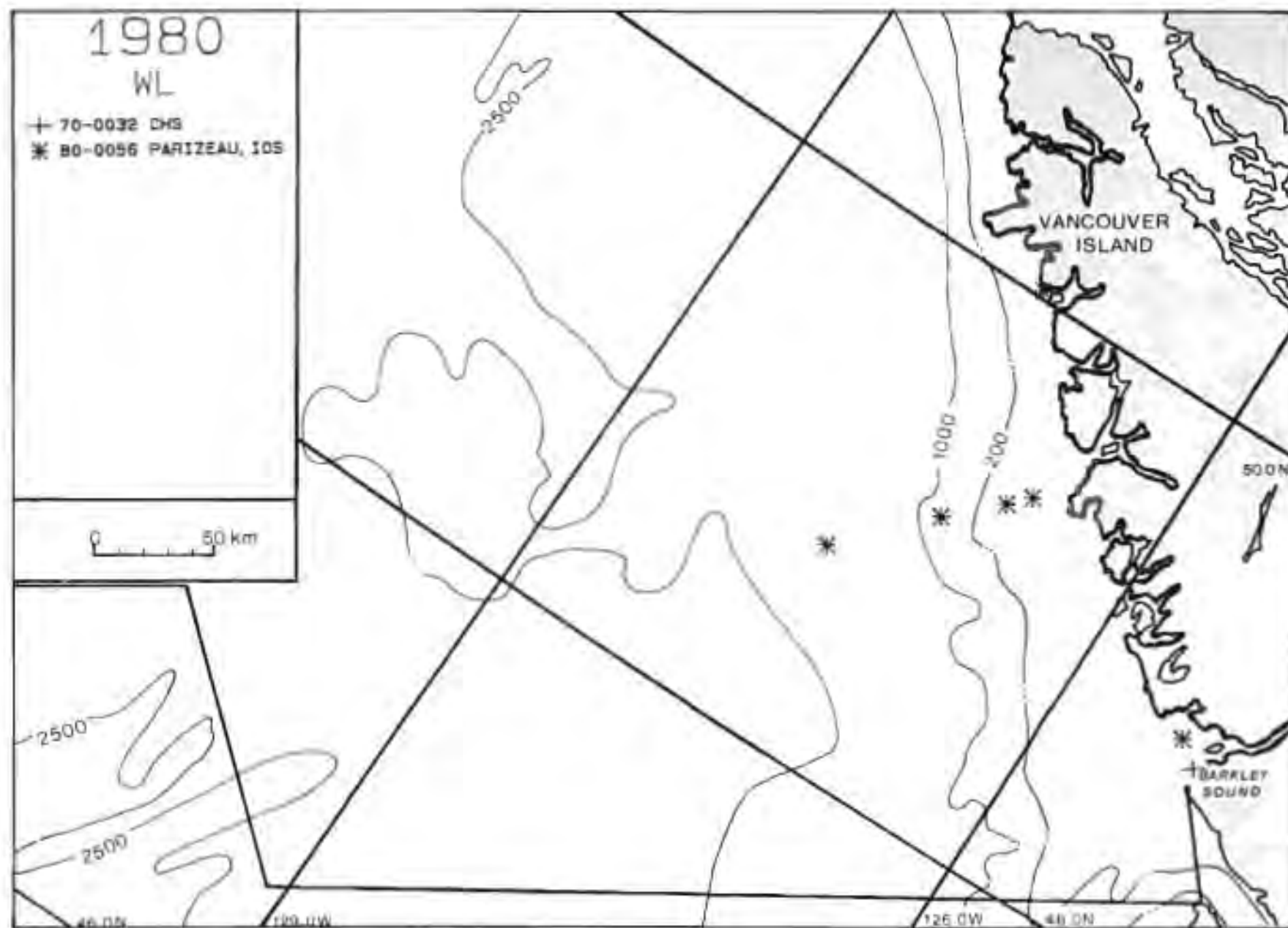


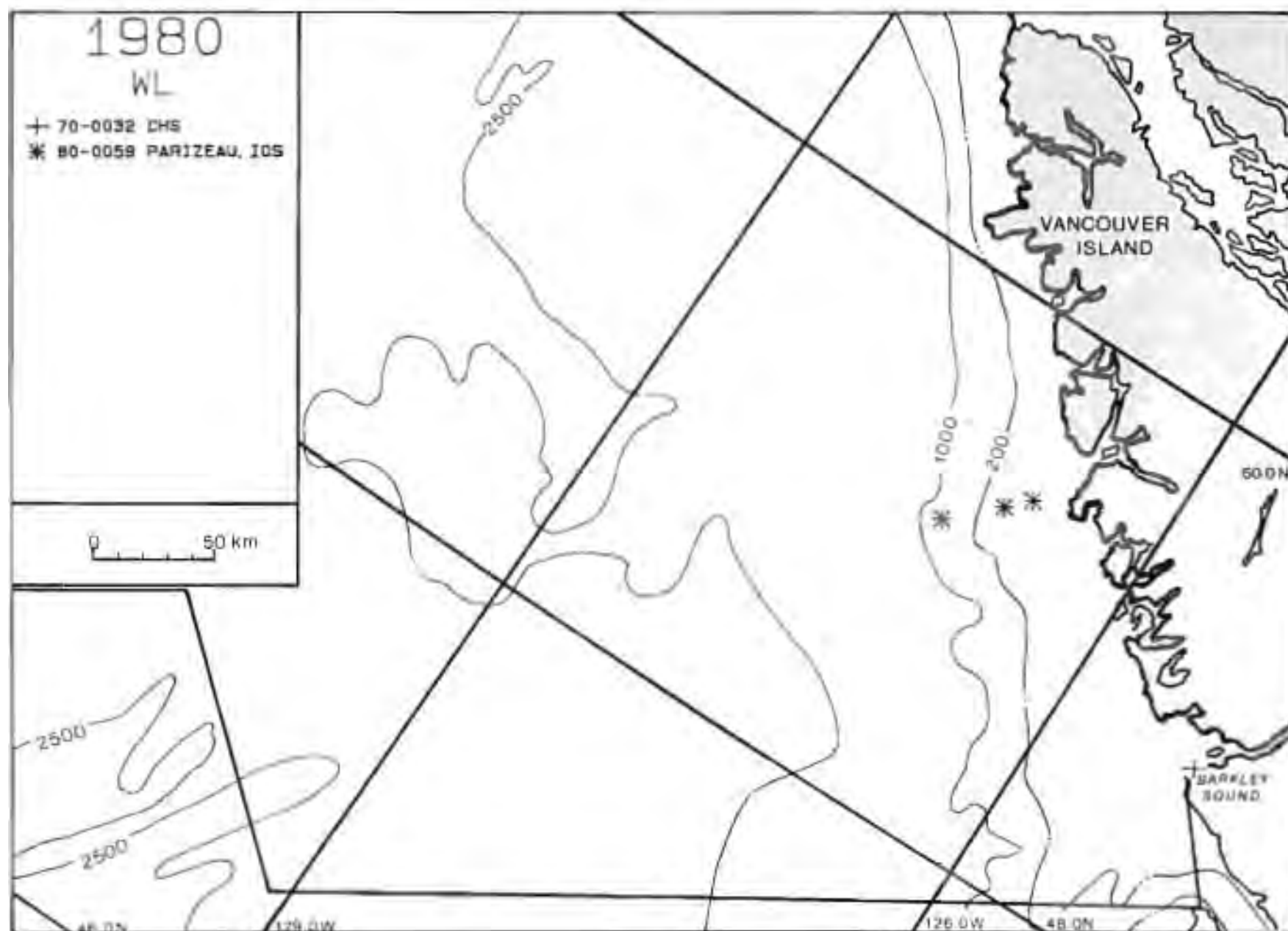
1980
WL

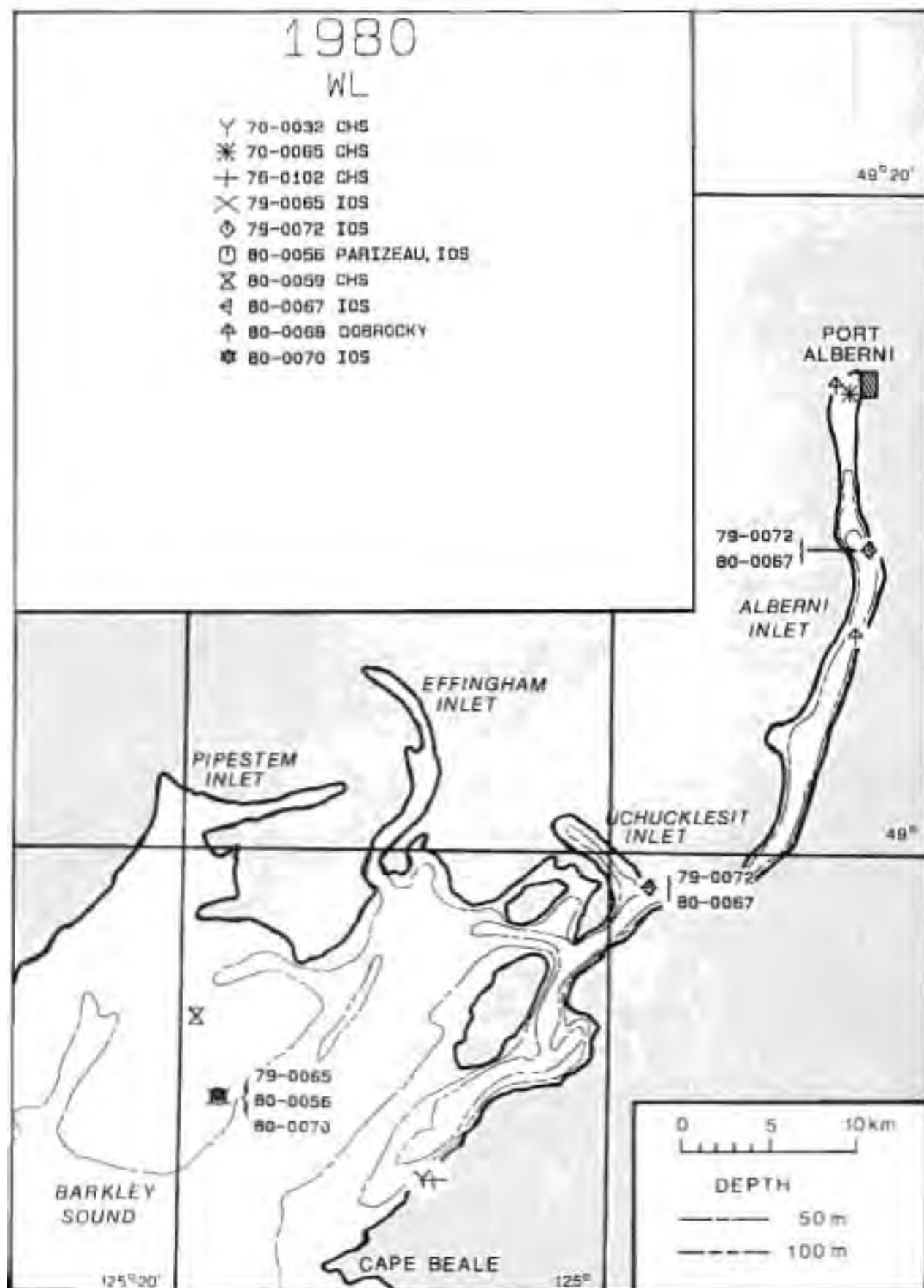
- Z 05-0005 CHS
- Y 70-0032 CHS
- * 76-0102 CHS
- + 79-0065 IOS
- X 79-0071A IOS
- ◇ 79-0072 IOS
- 80-0056 PARIZEAU, IOS
- ⊗ 80-0059 PARIZEAU, IOS
- ◁ 80-0059 CHS
- ⊕ 80-0063 PARIZEAU, IOS
- ⊛ 80-0067 IOS
- ⊖ 80-0068 DOBROCKY
- ⊗ 80-0070 CHS
- ⊕ 80-0094 CHS
- 80-0102 CHS

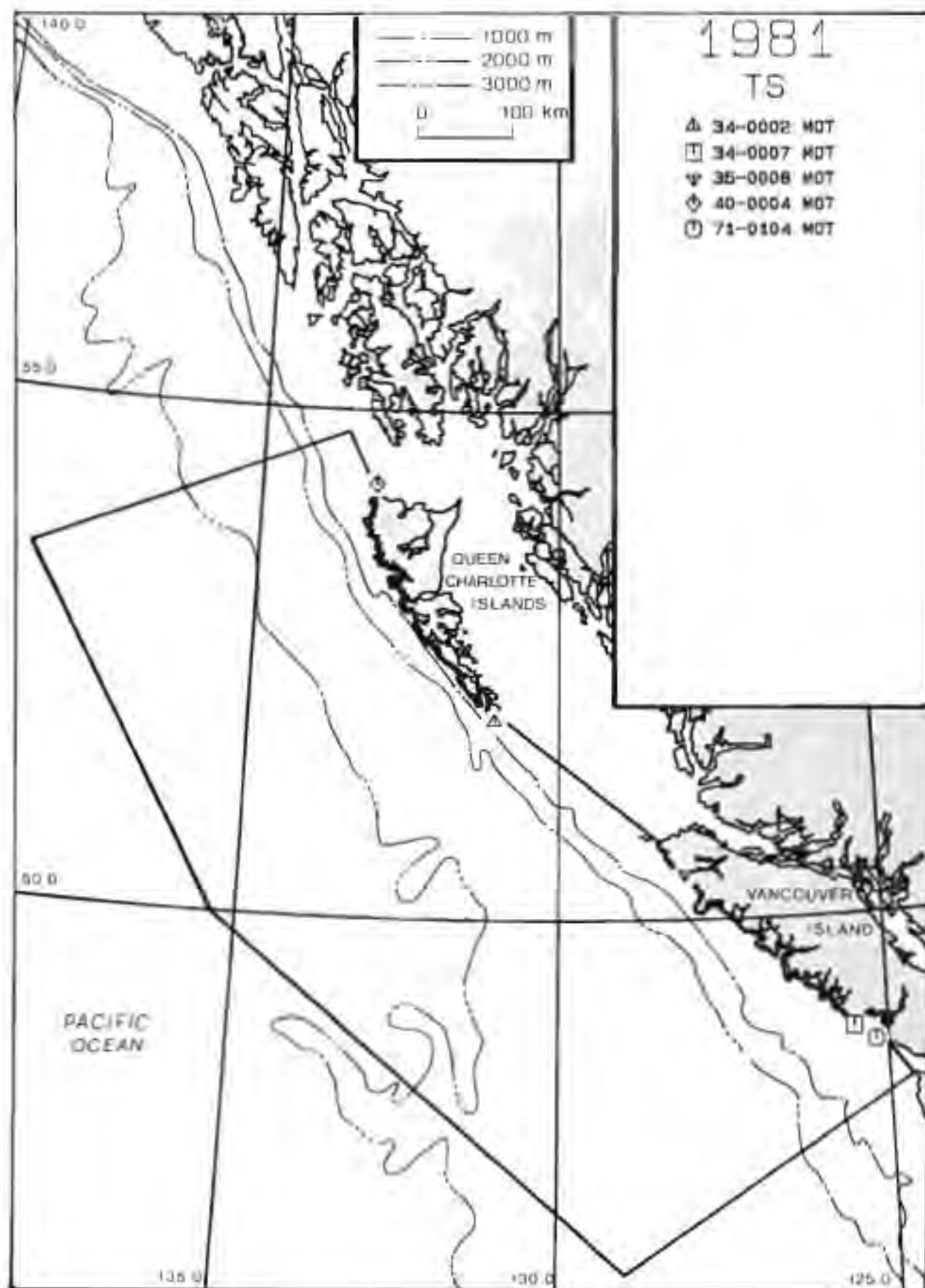
0 50 km

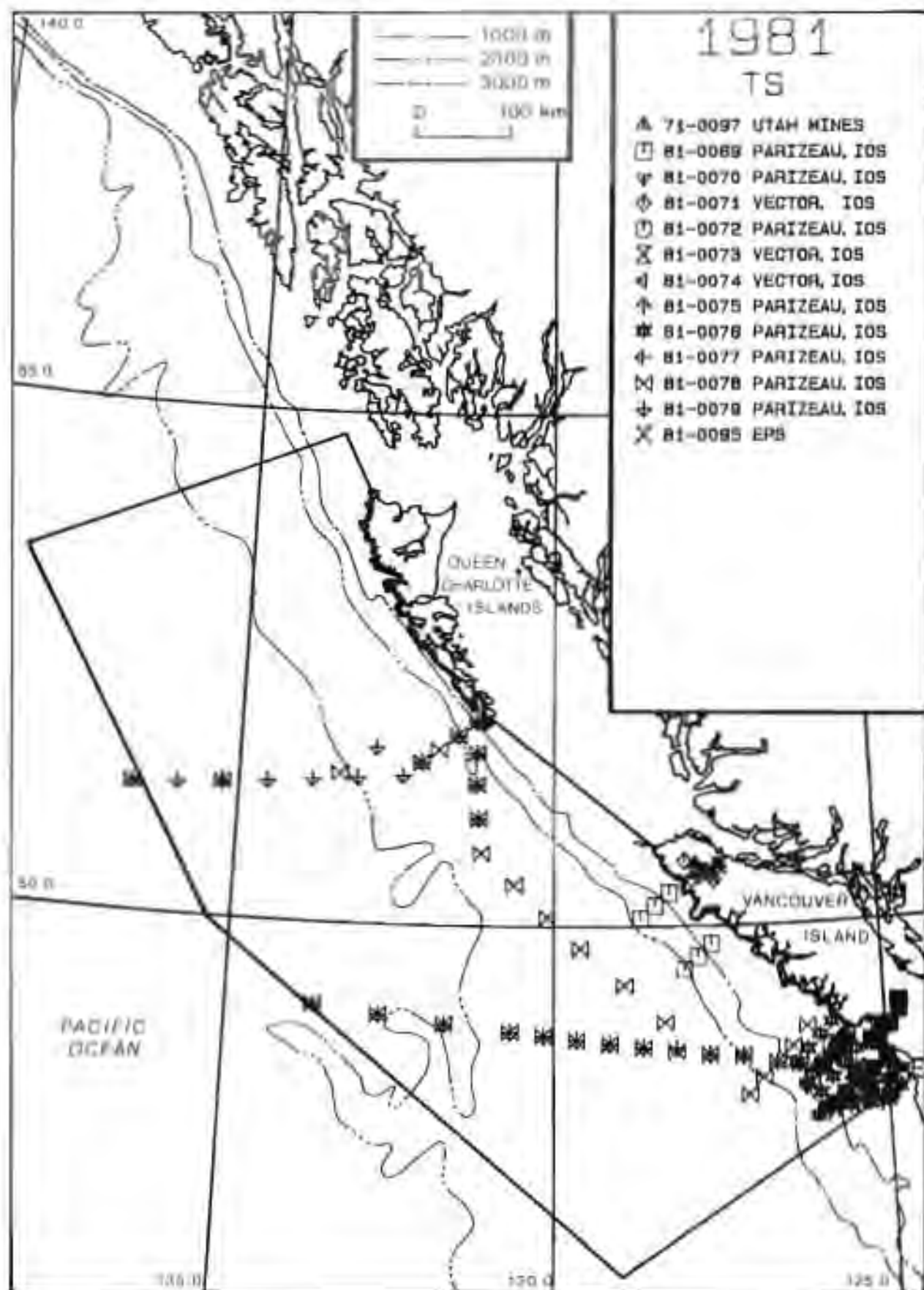


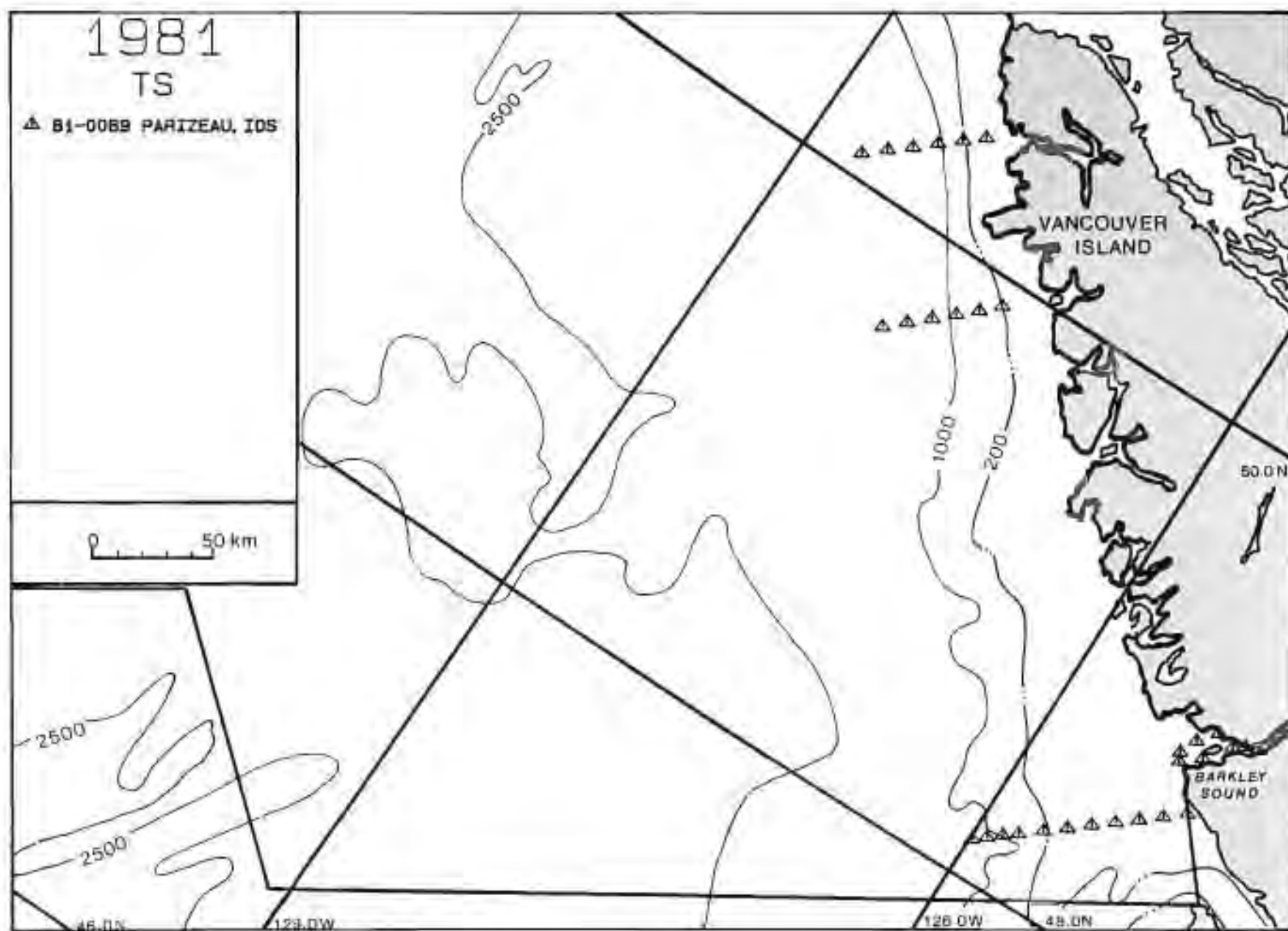


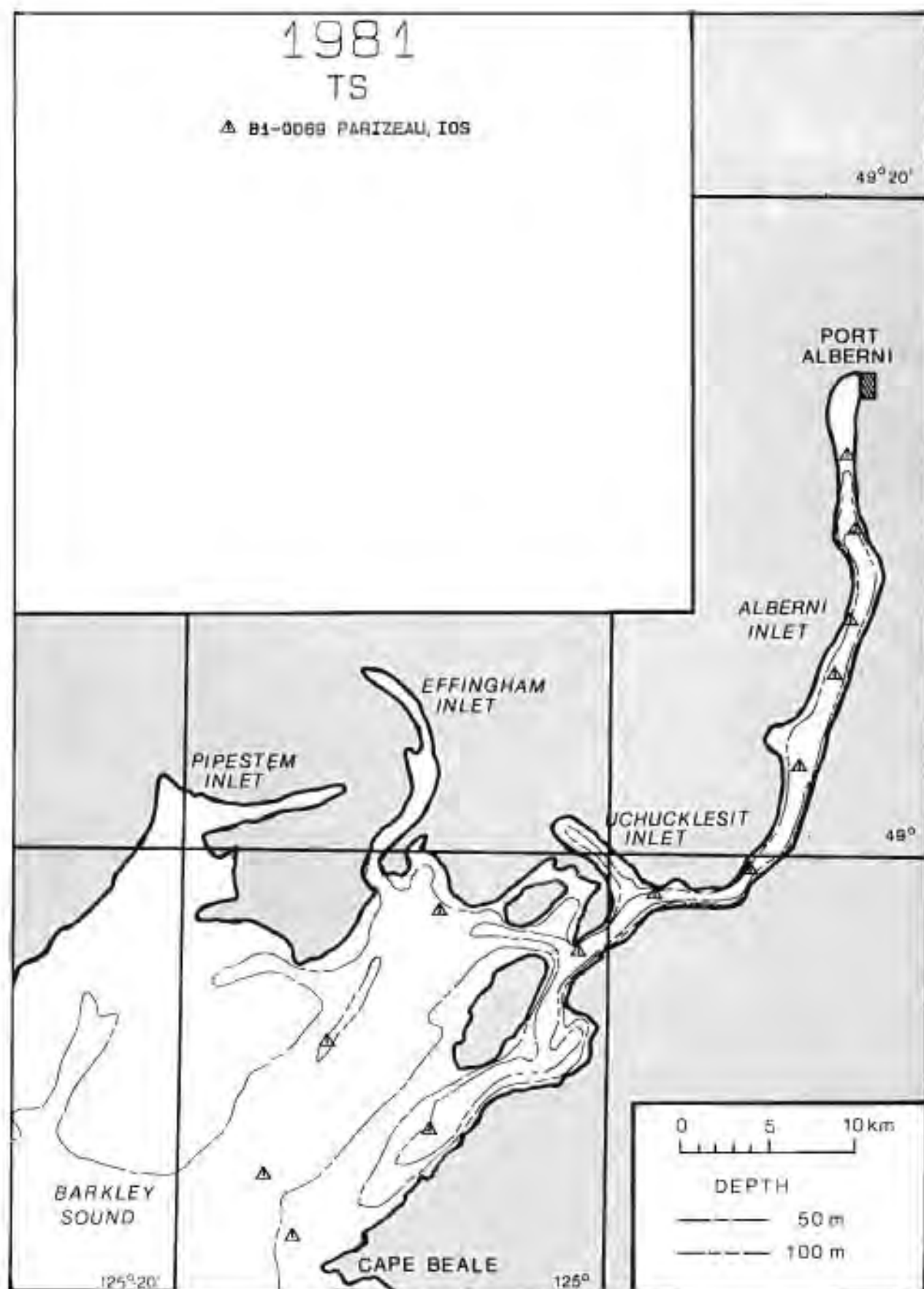


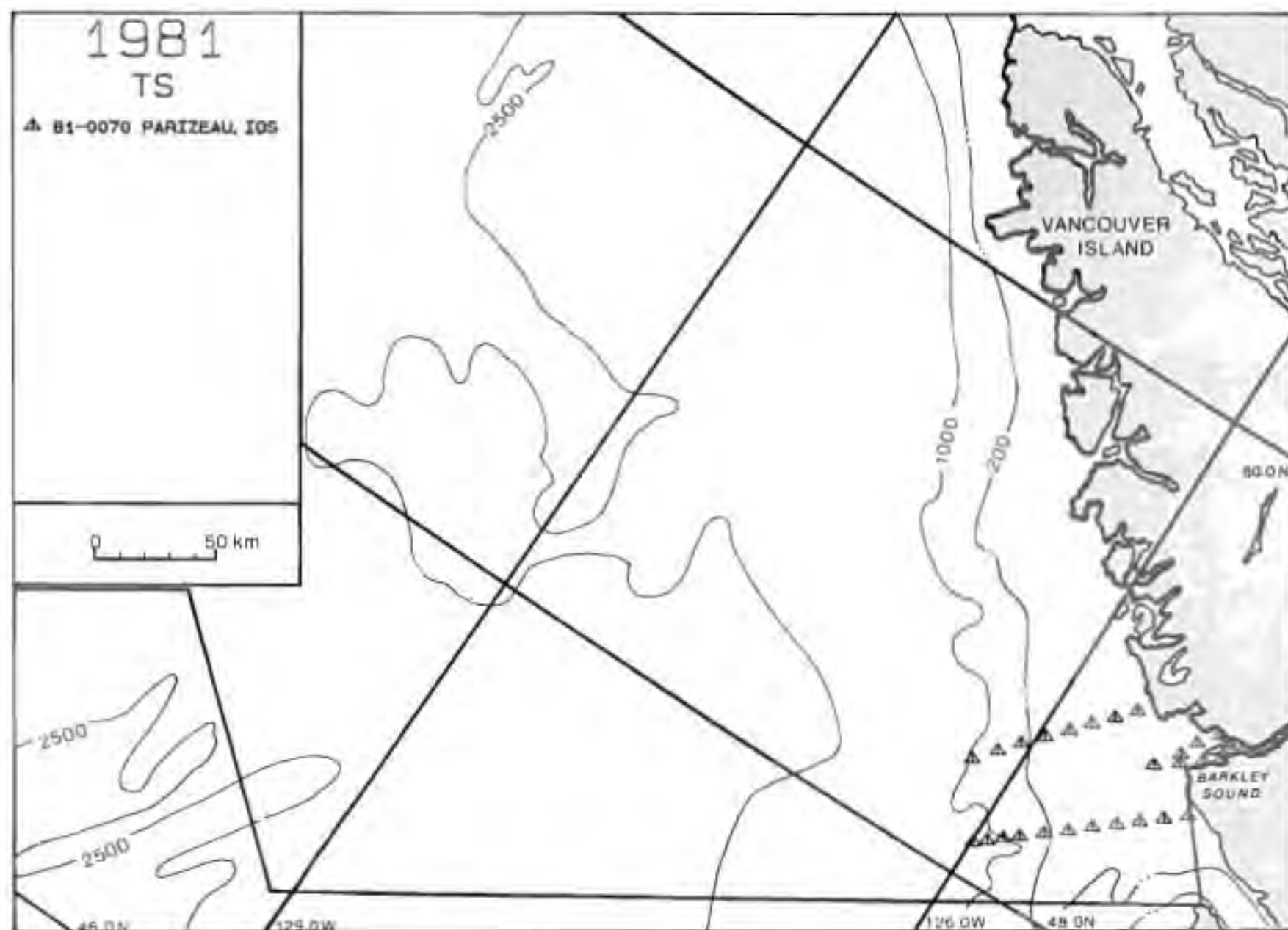


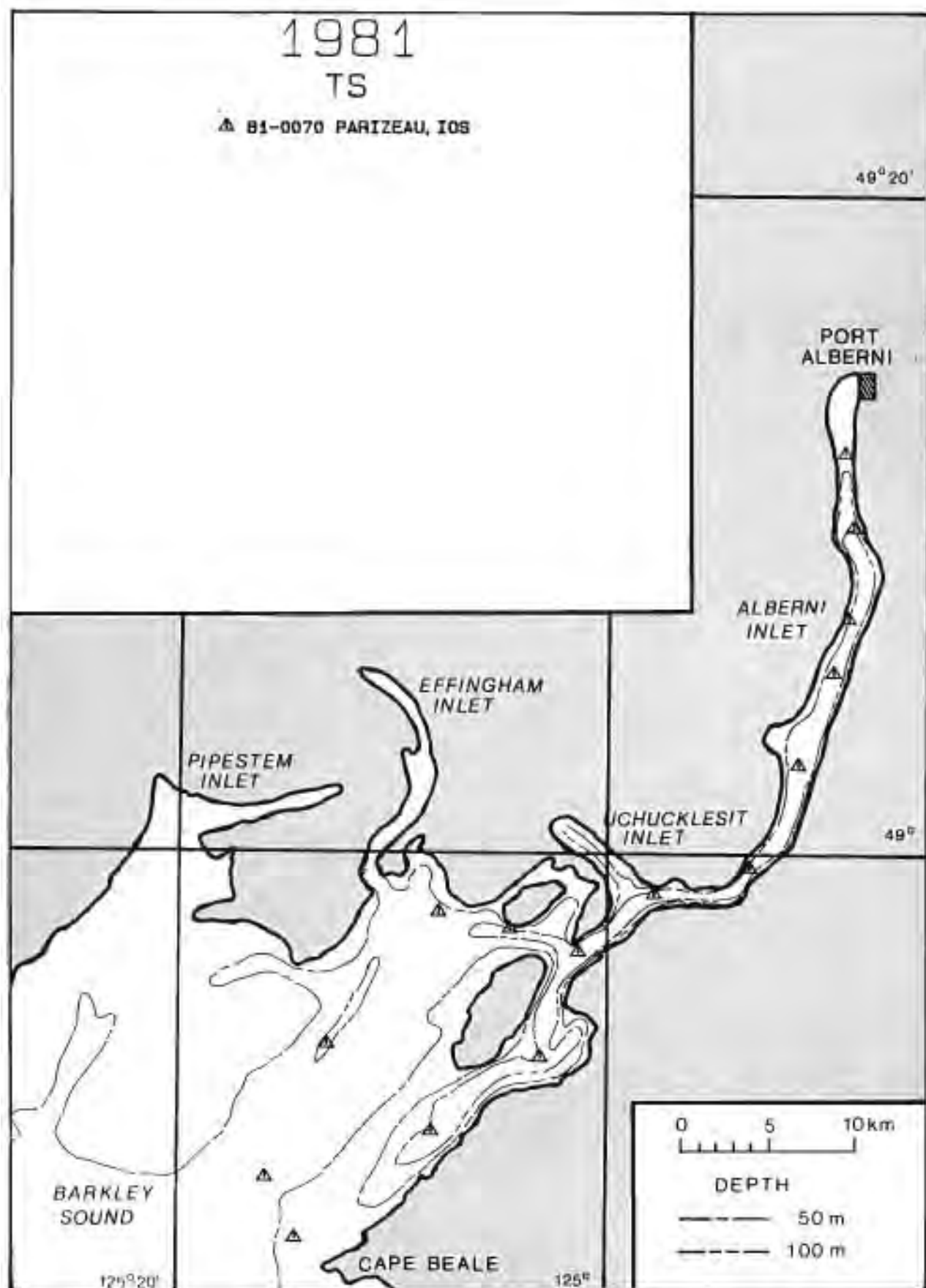








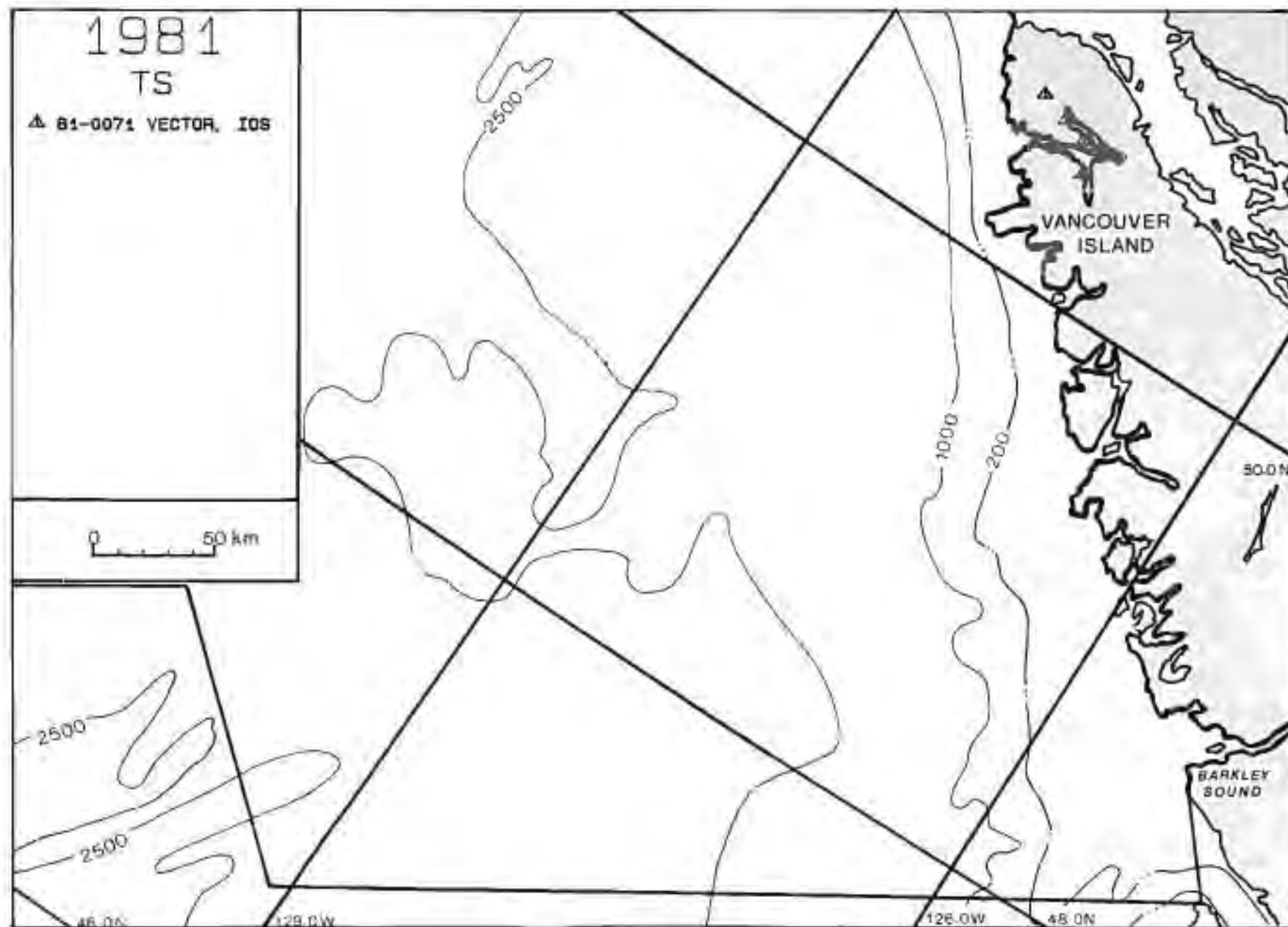




1981
TS

Δ 81-0071 VECTOR, IOS

0 50 km

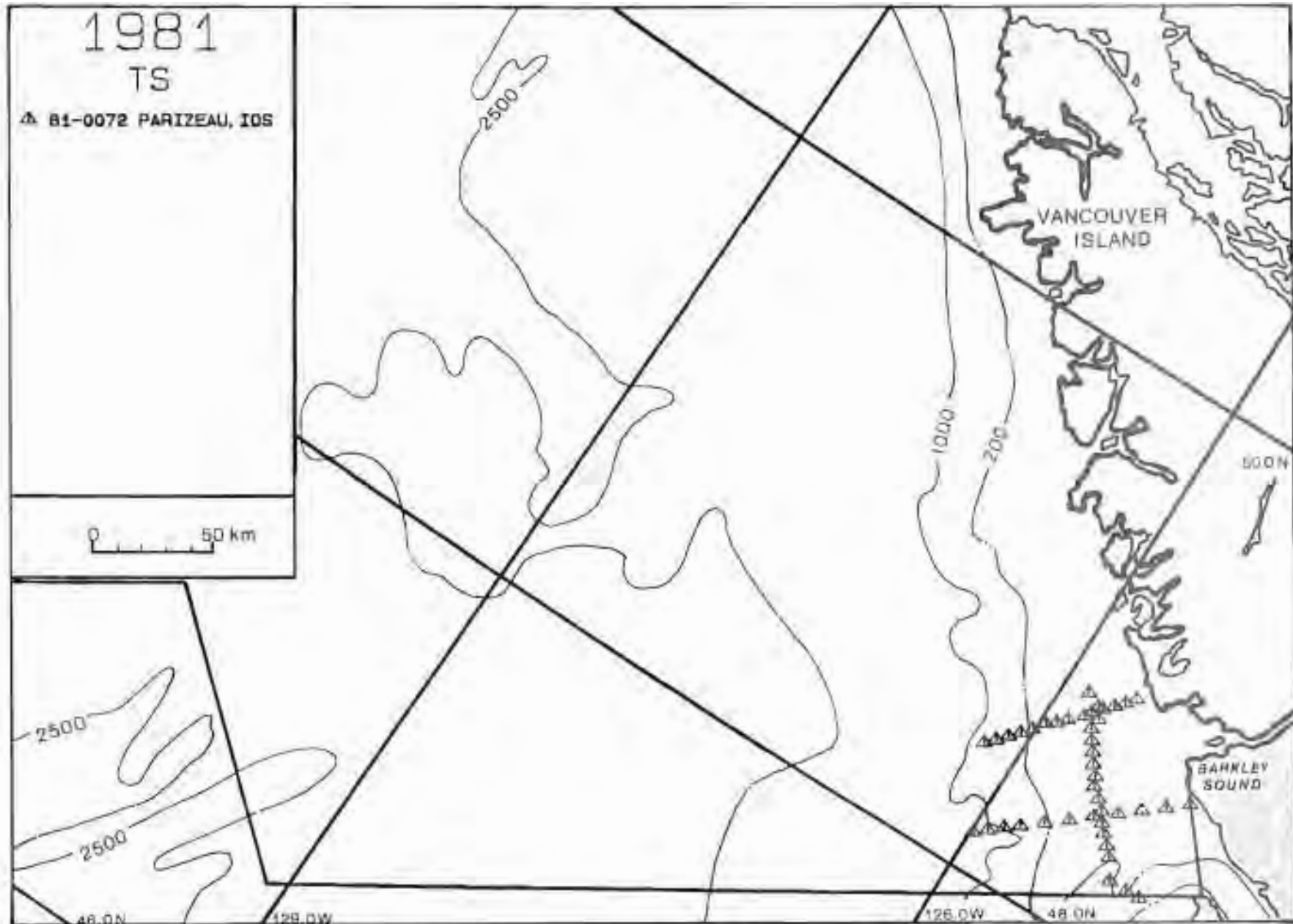


1981

TS

▲ B1-0072 PARIZEAU, IOS

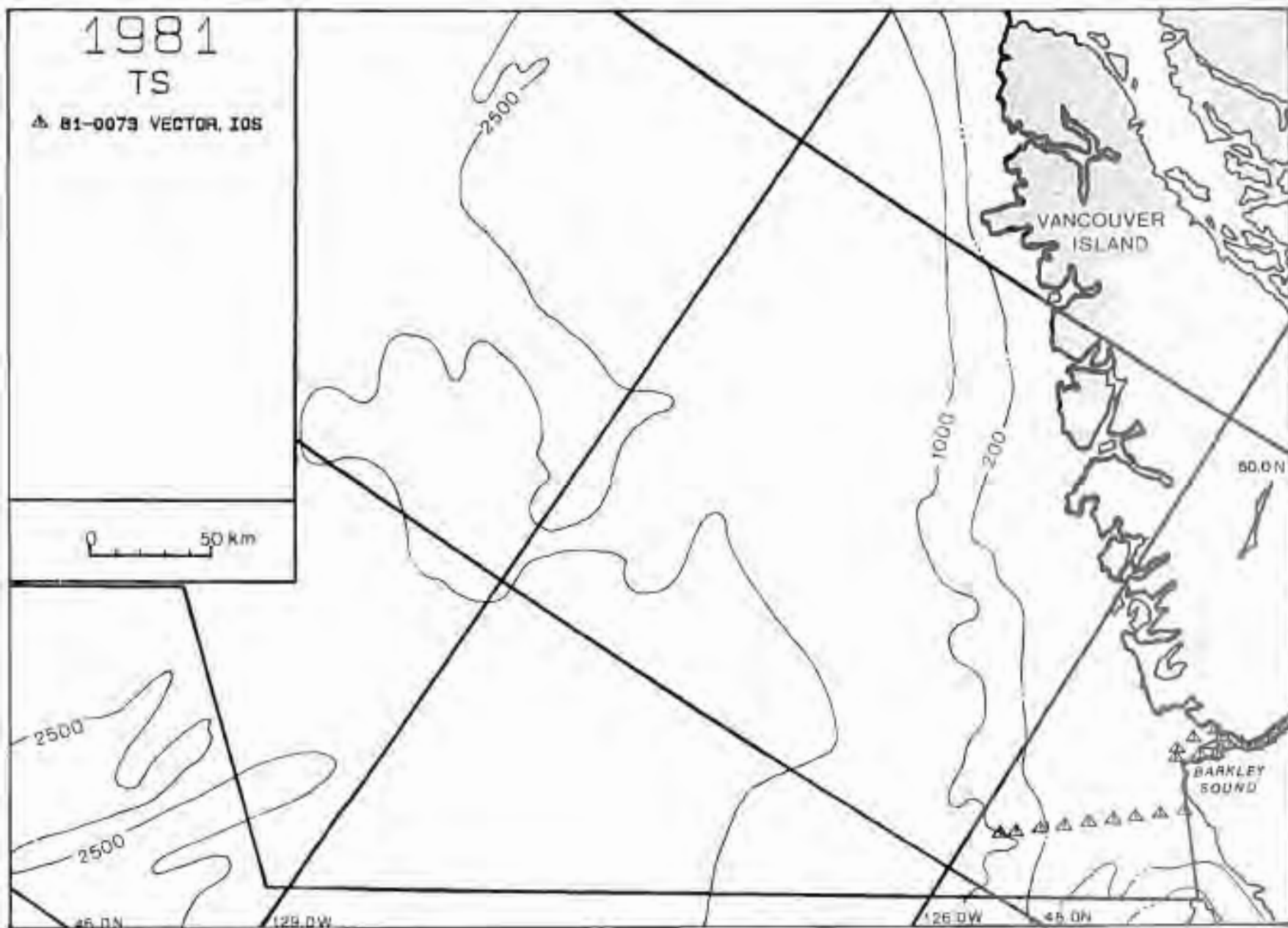
0 50 km

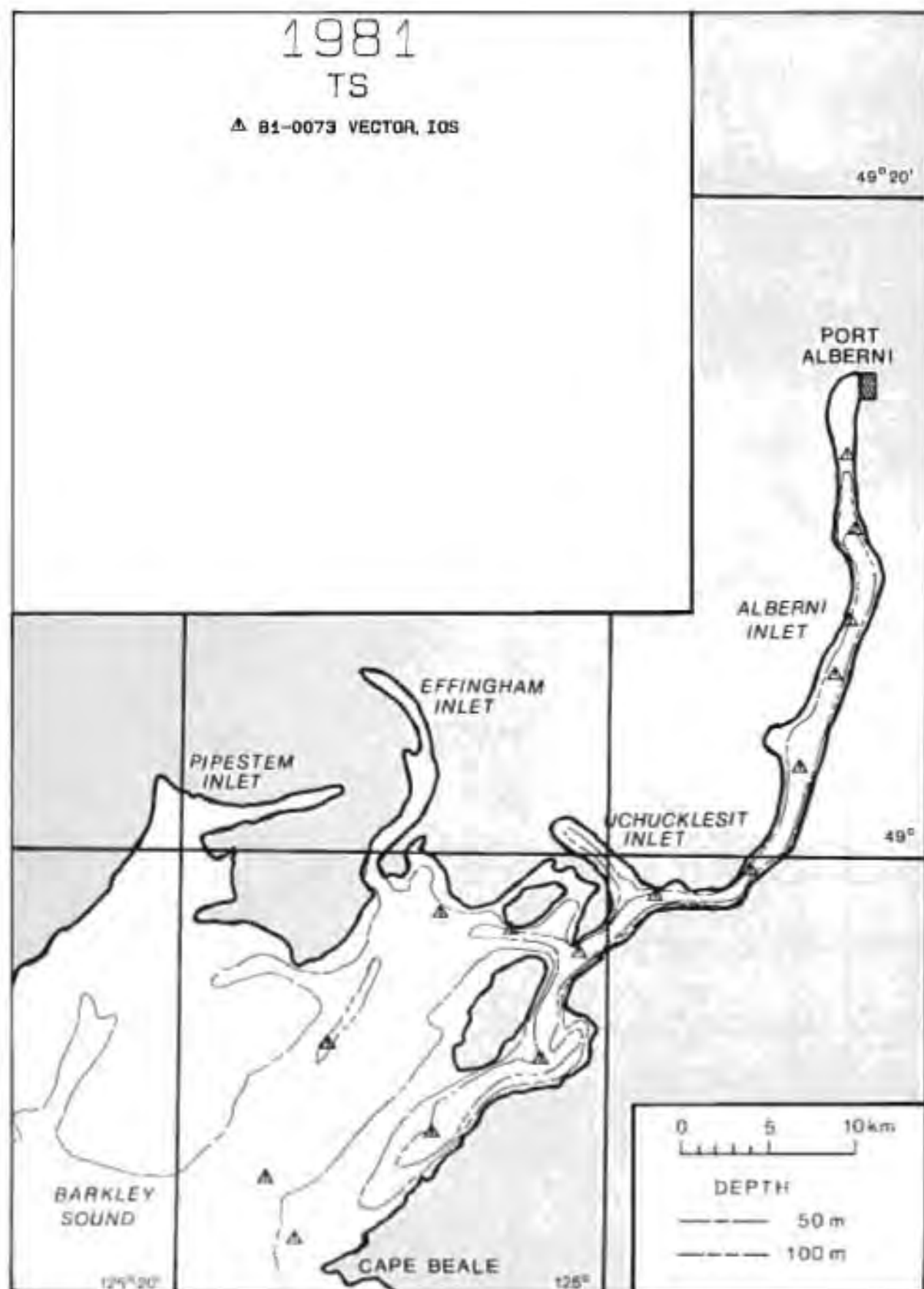


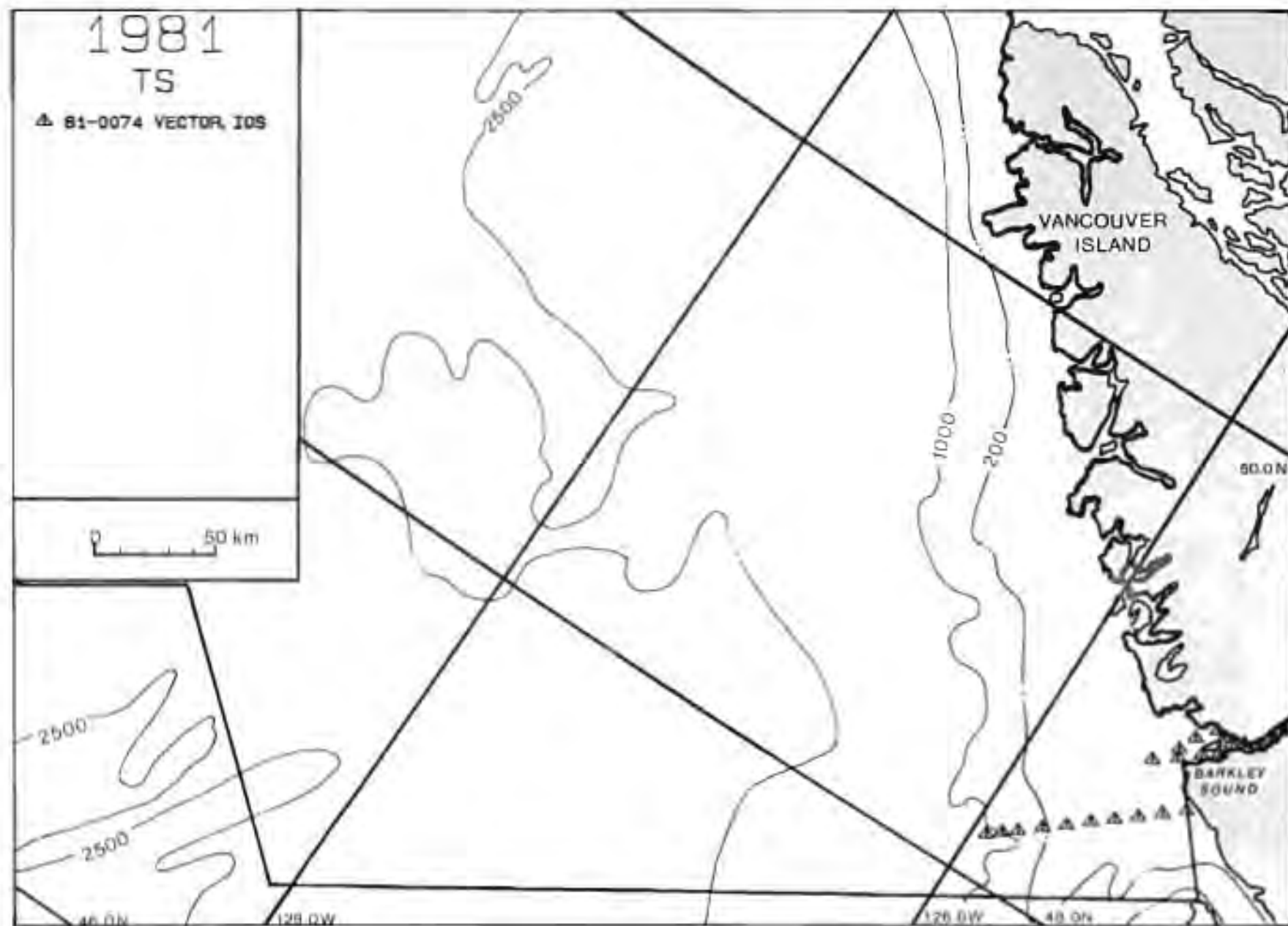
1981
TS

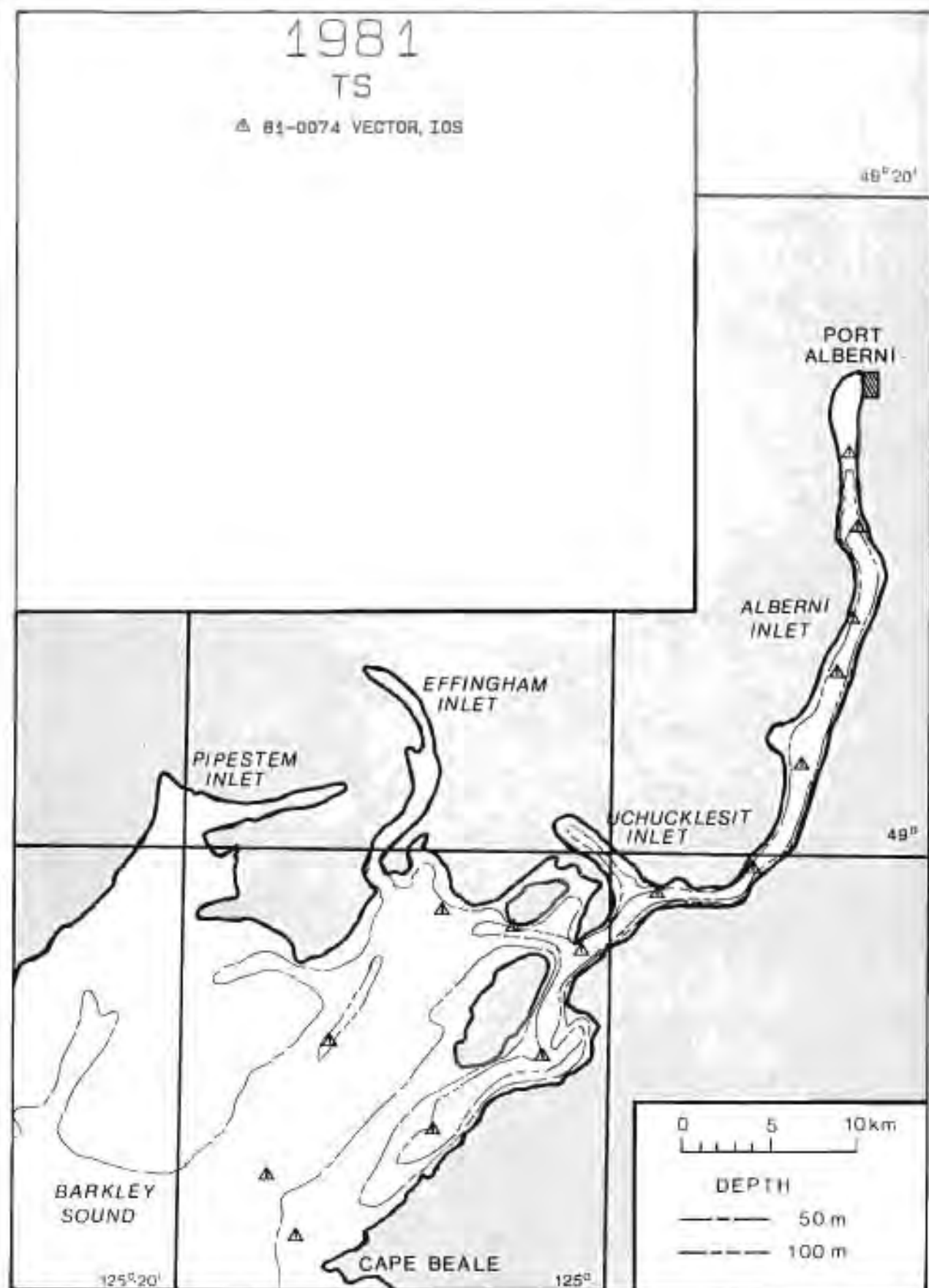
▲ 81-0073 VECTOR, IOS

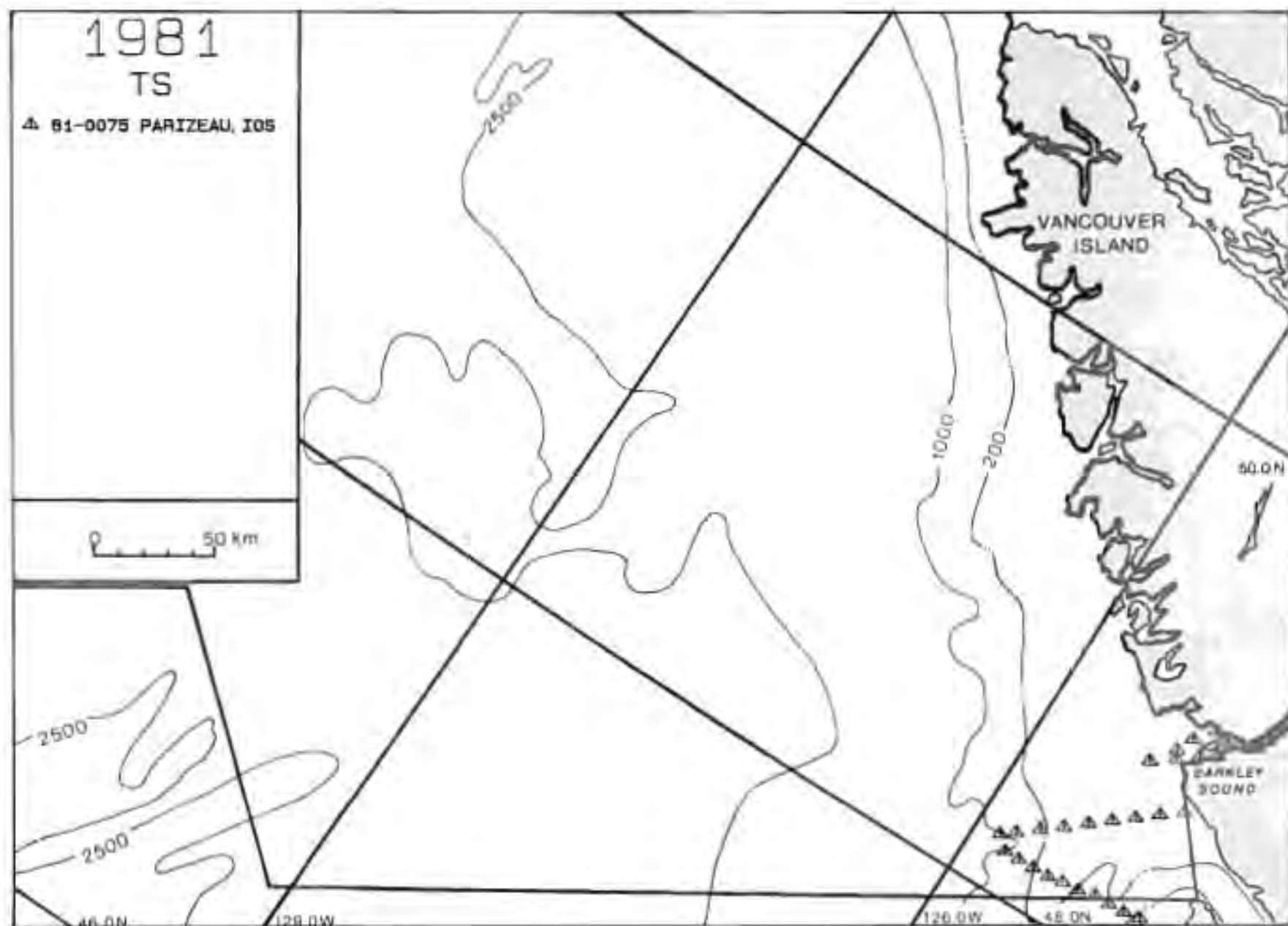
0 50 km

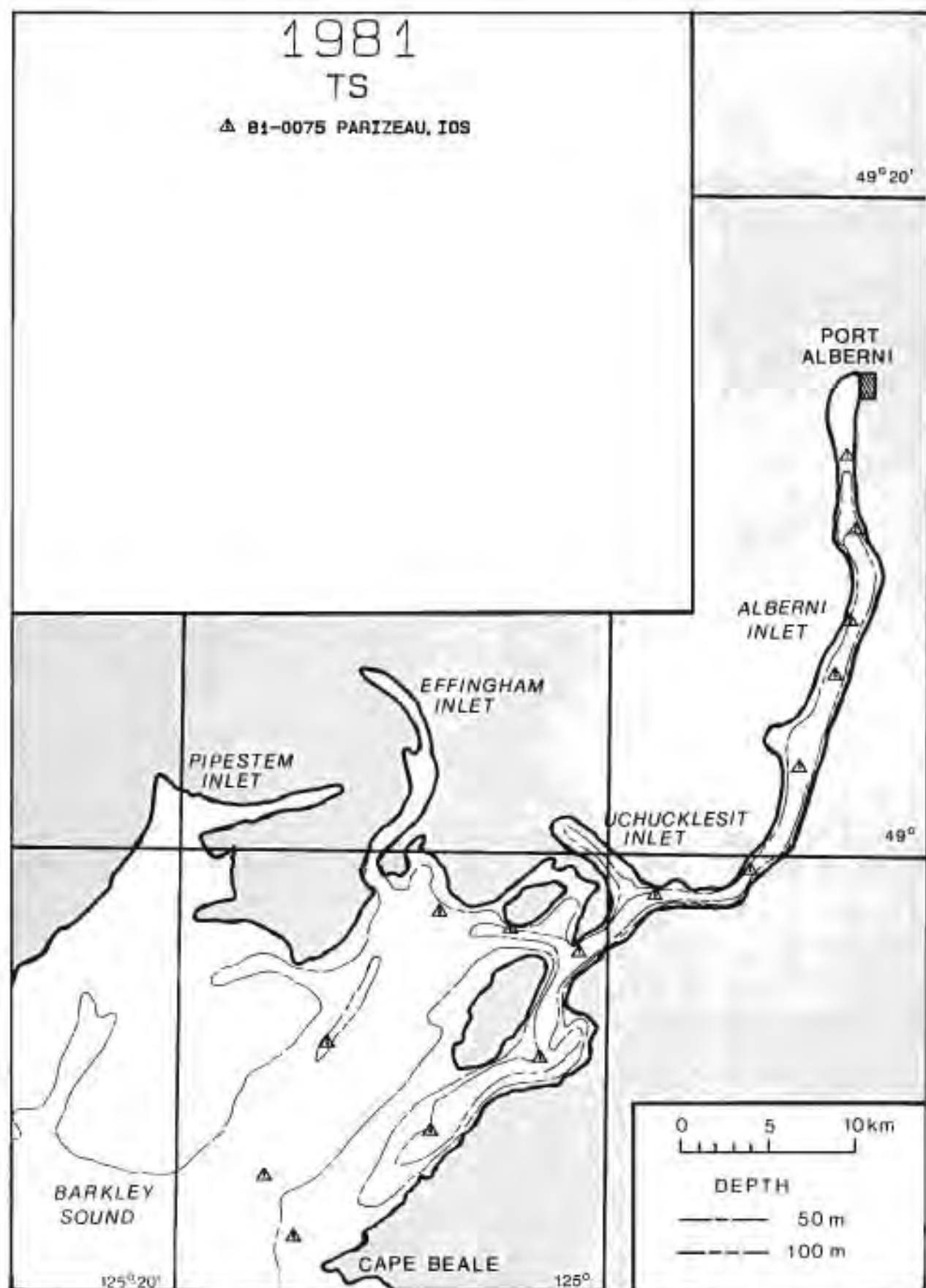








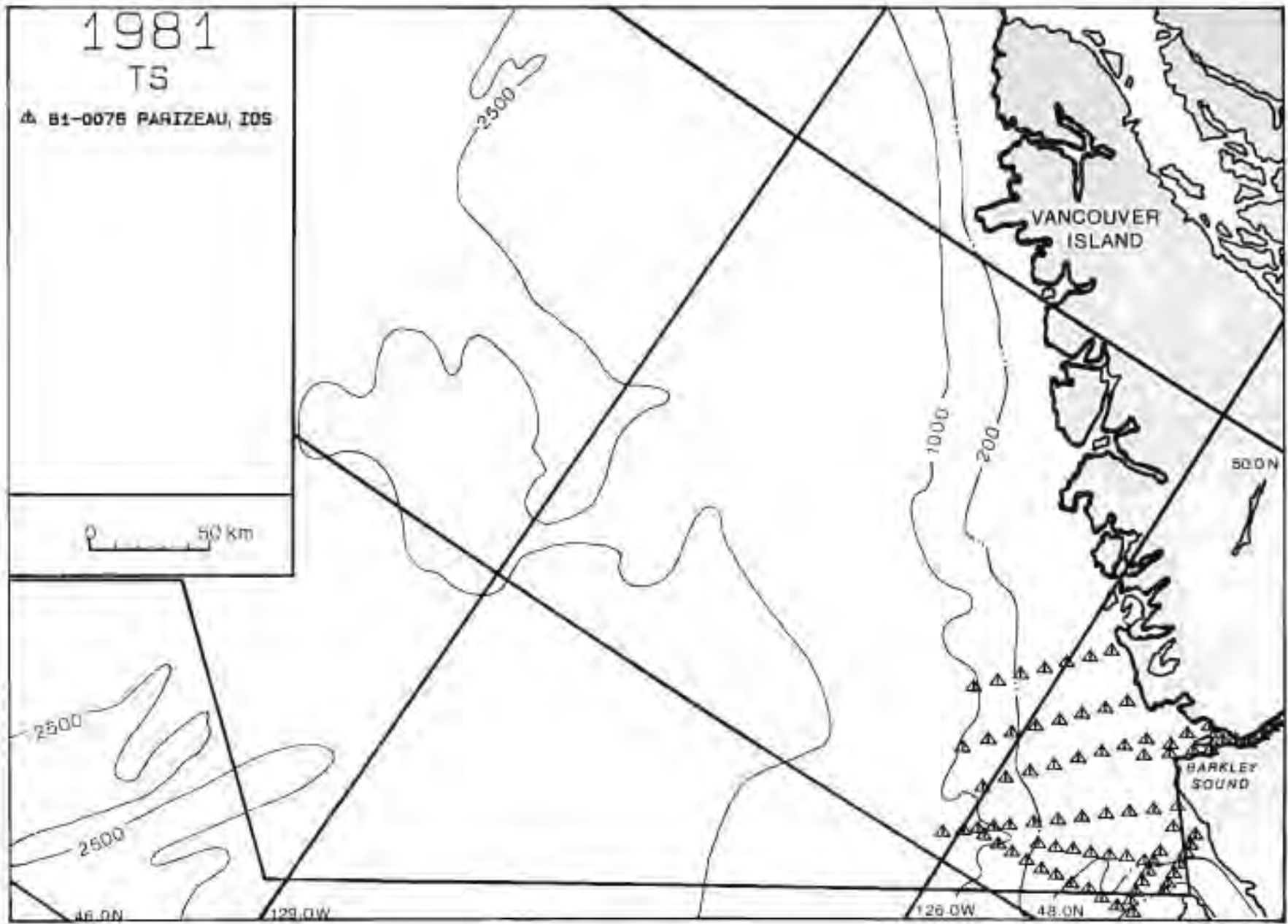


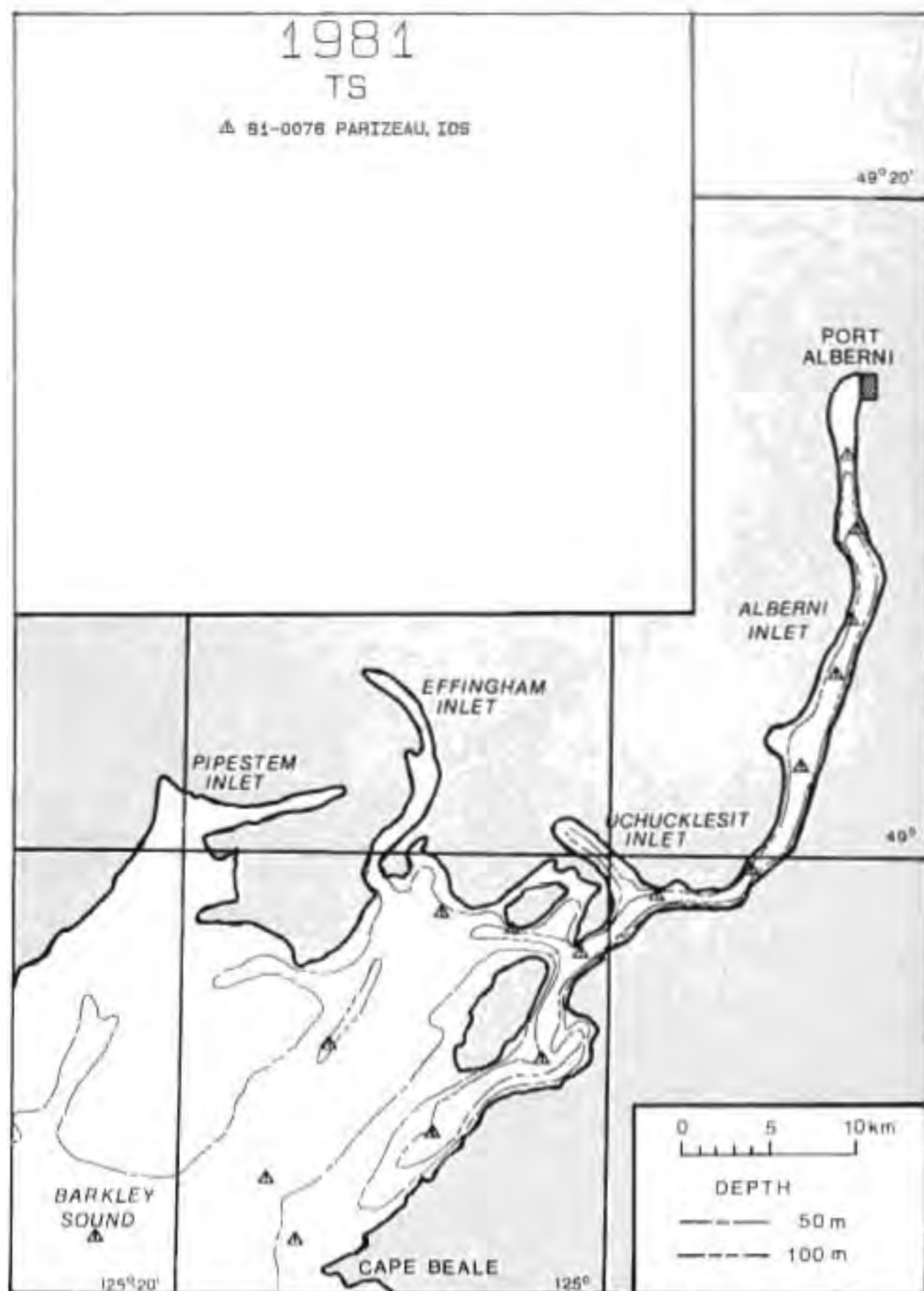


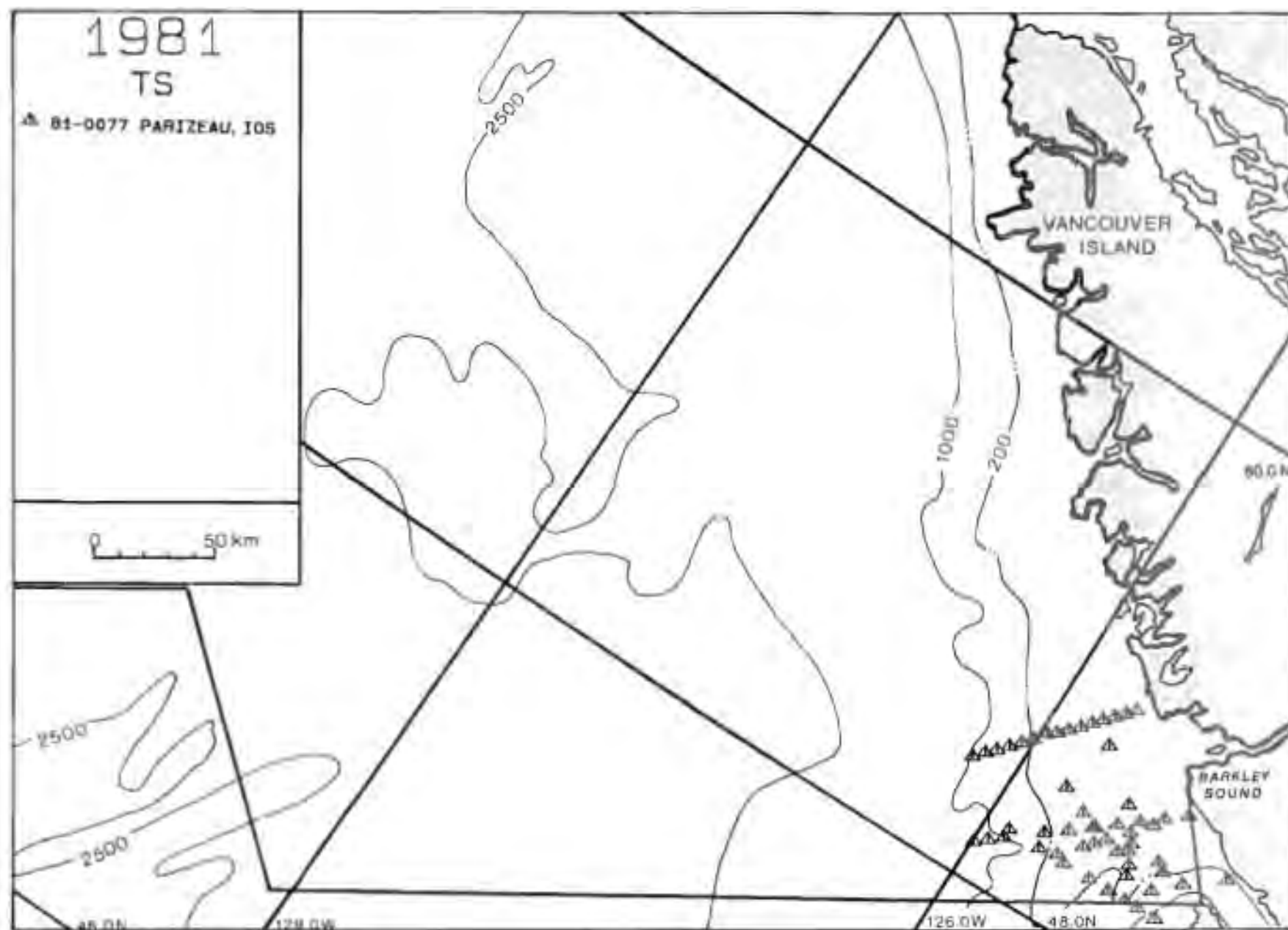
1981
TS

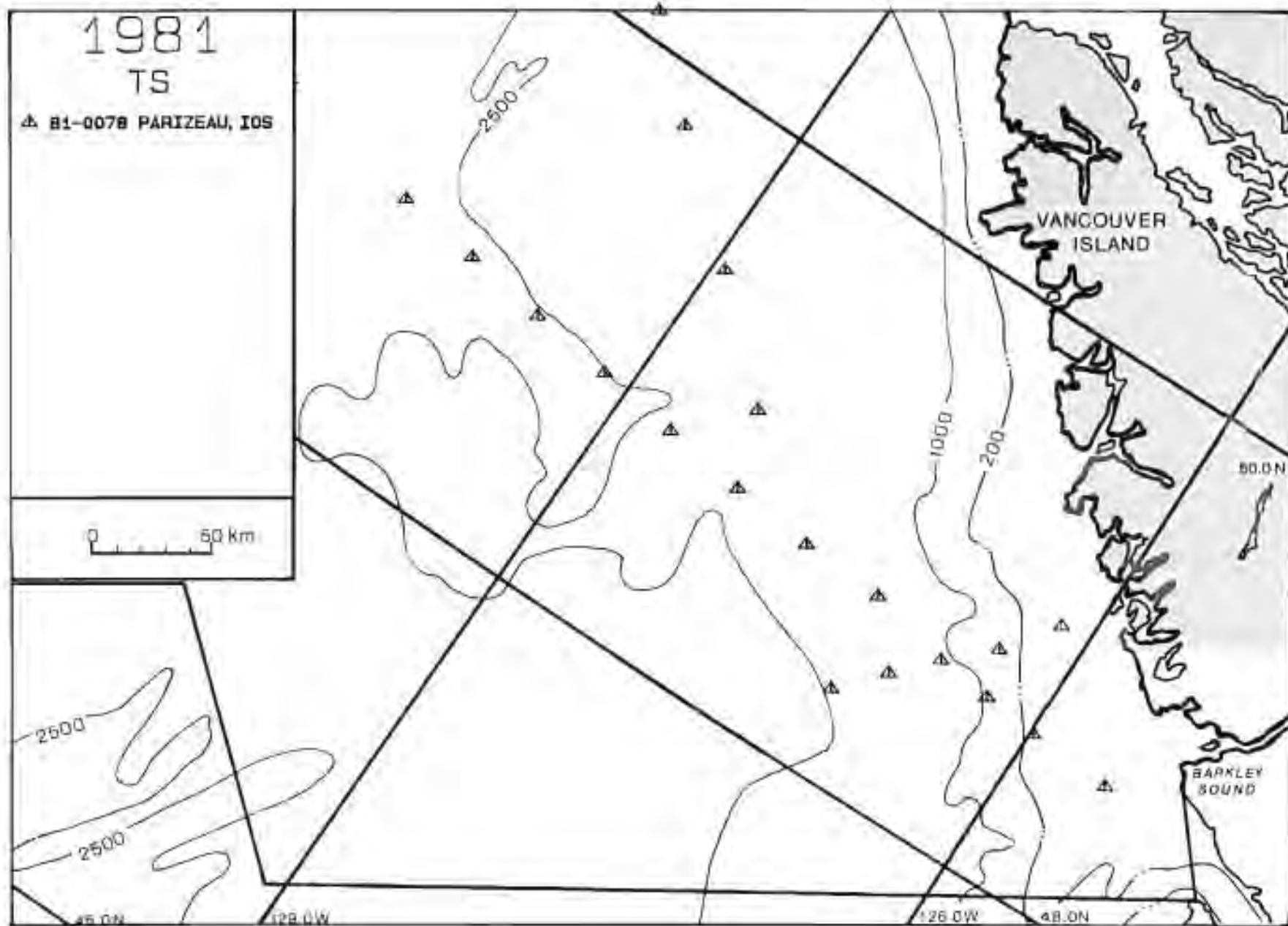
Δ B1-0076 PARIZEAU, IOS

0 50 km







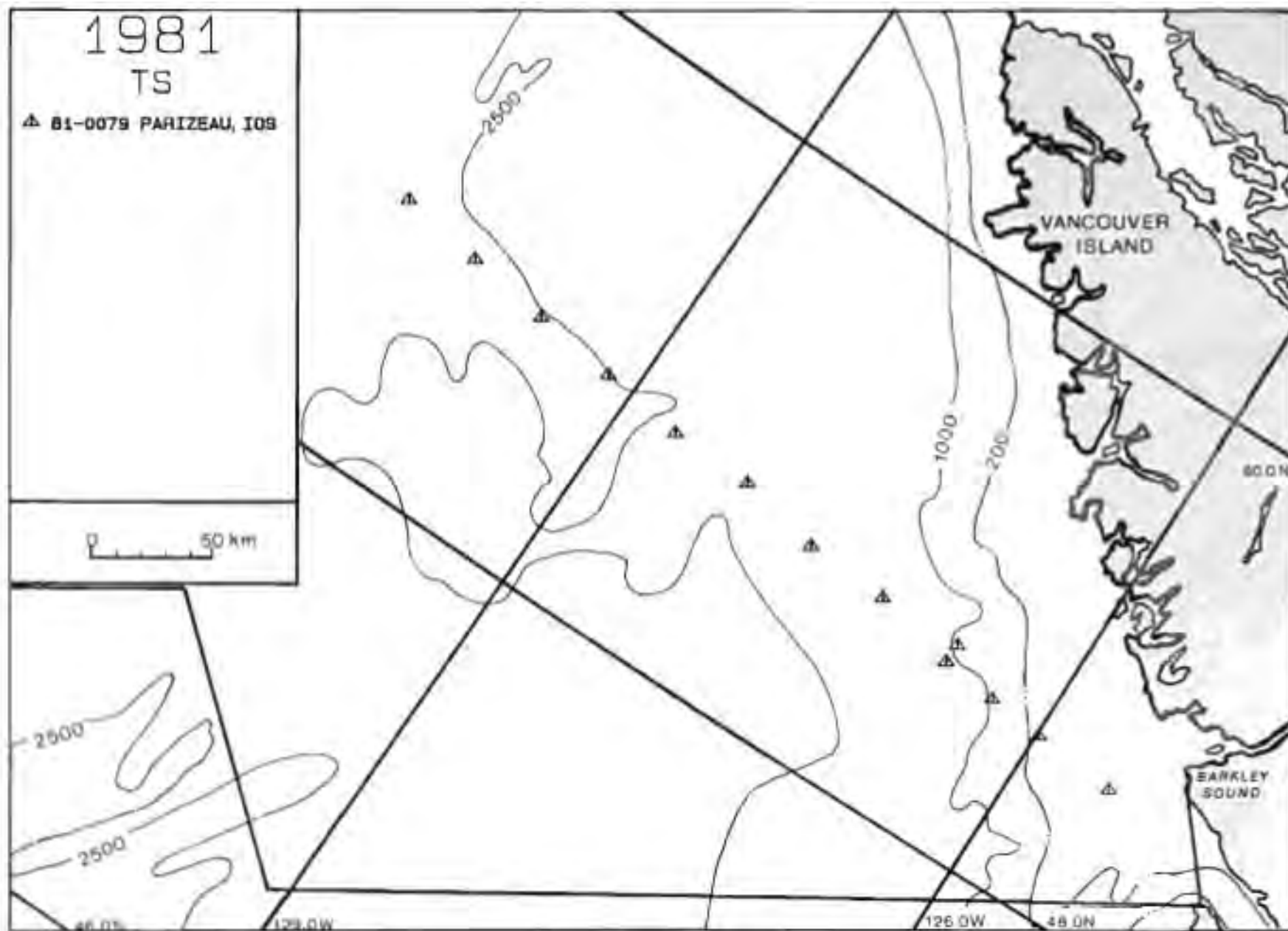


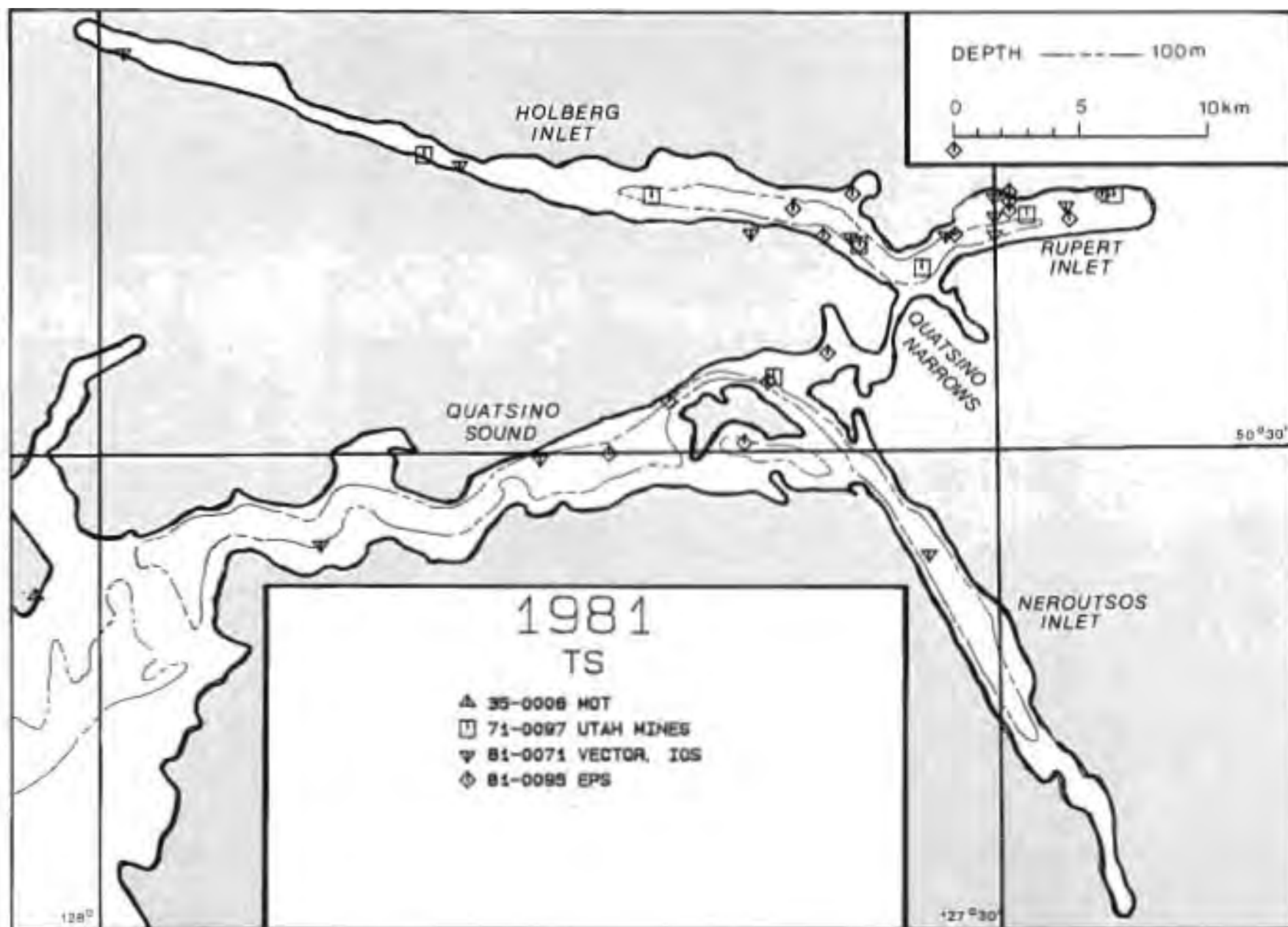
1981

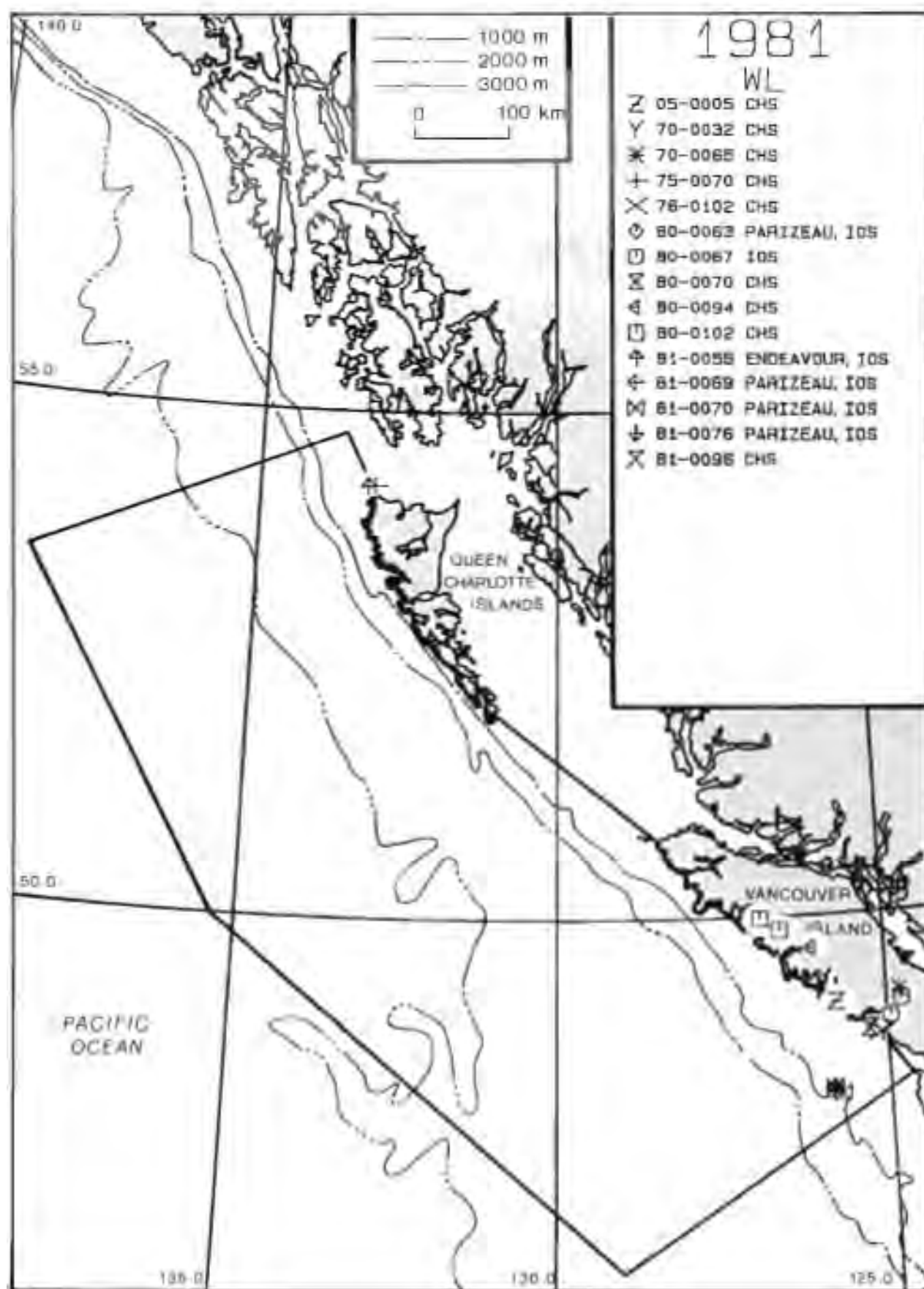
TS

▲ 81-0079 PARIZEAU, I09

0 50 km







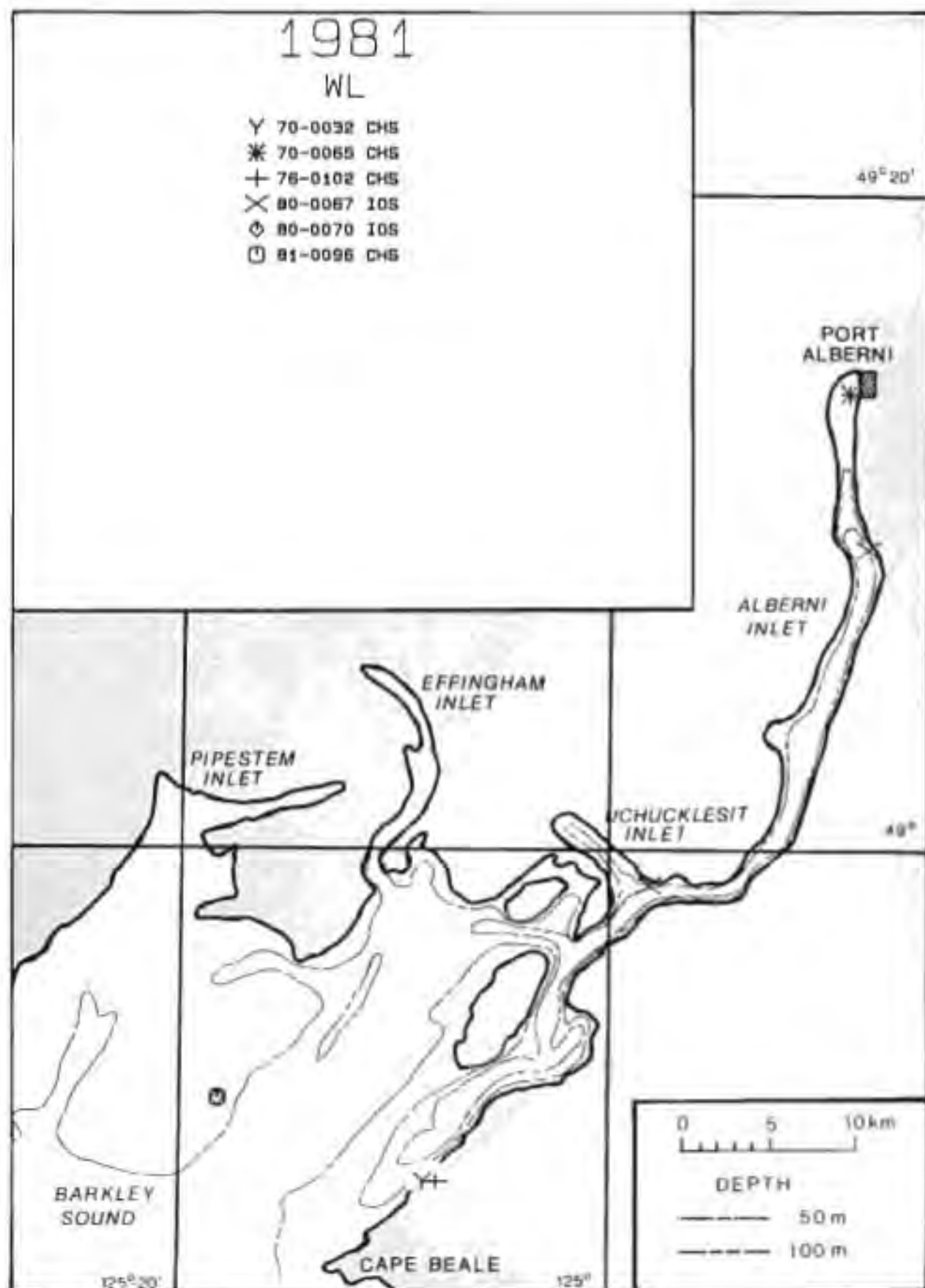
1981

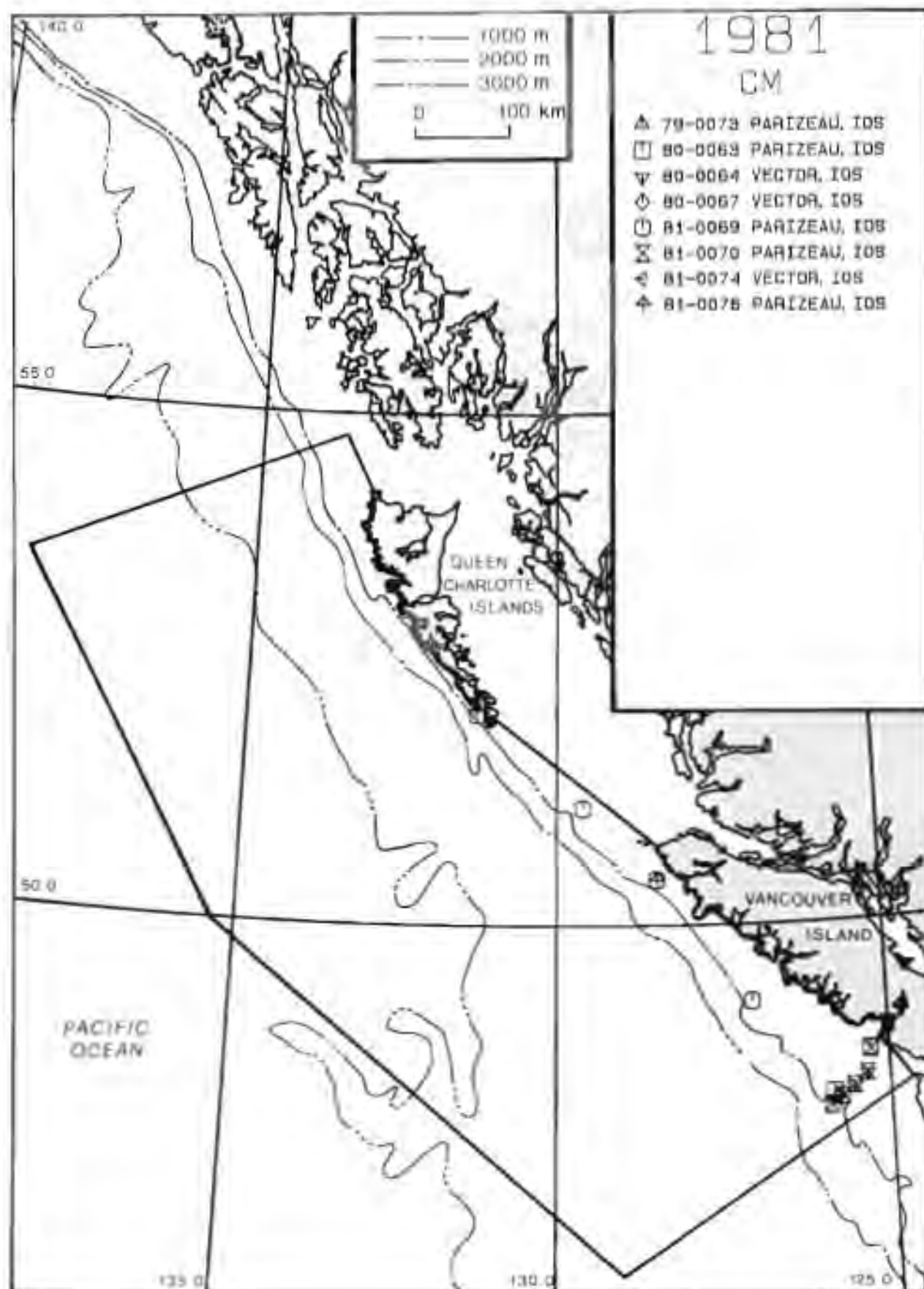
WL

- N 05-0005 CHS
- Y 70-0032 CHS
- * 76-0102 CHS
- + 80-0063 PARIZEAU, IOS
- X 80-0067 IOS
- ◇ 80-0070 CHS
- 80-0094 CHS
- ▢ 80-0102 CHS
- ⊠ 81-0056A ENDEAVOUR, IOS
- △ 81-0089 PARIZEAU, IOS
- ⊕ 81-0070 PARIZEAU, IOS
- ⊗ 81-0076 PARIZEAU, IOS
- ⊙ 81-0096 CHS

0 50 km



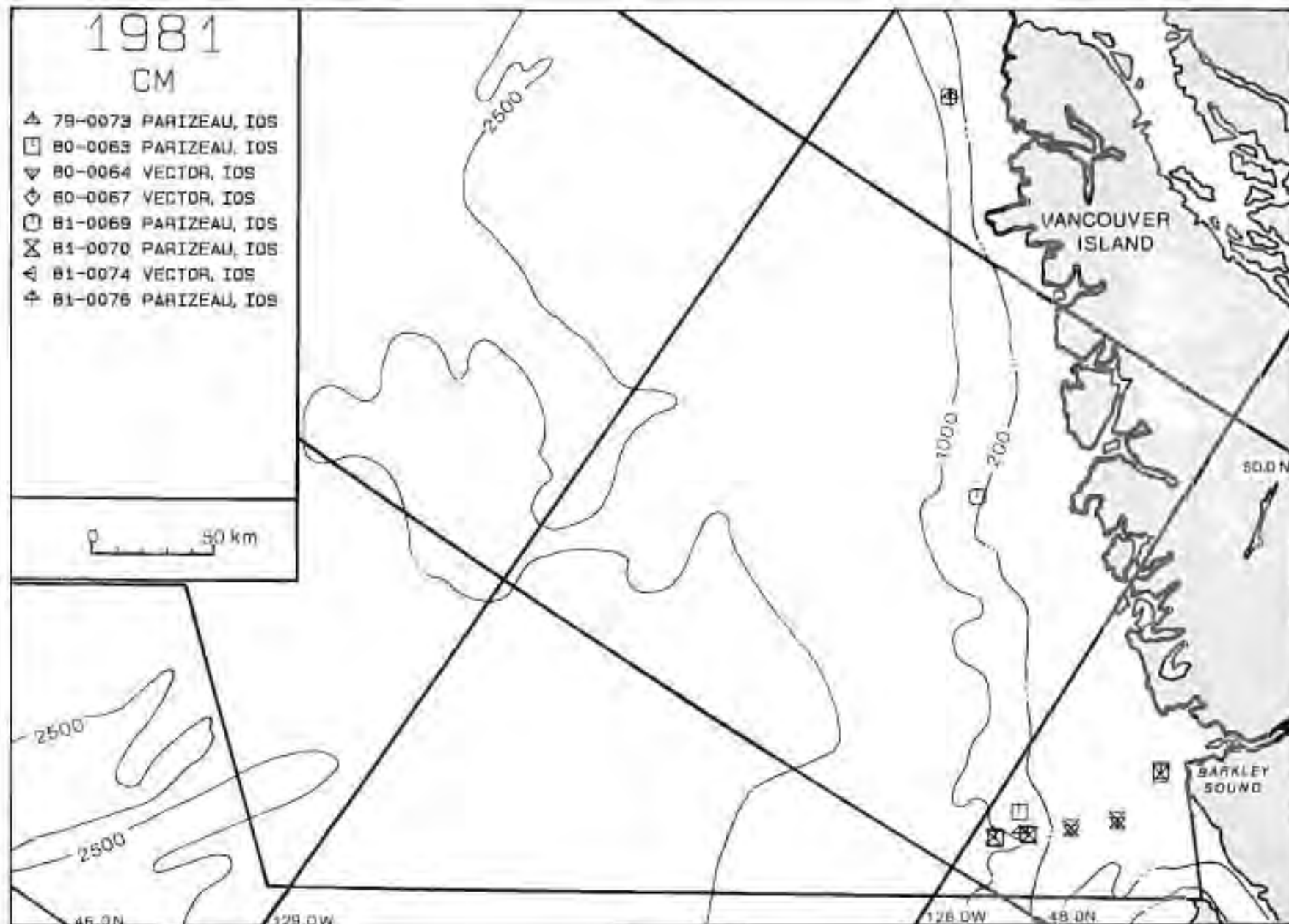


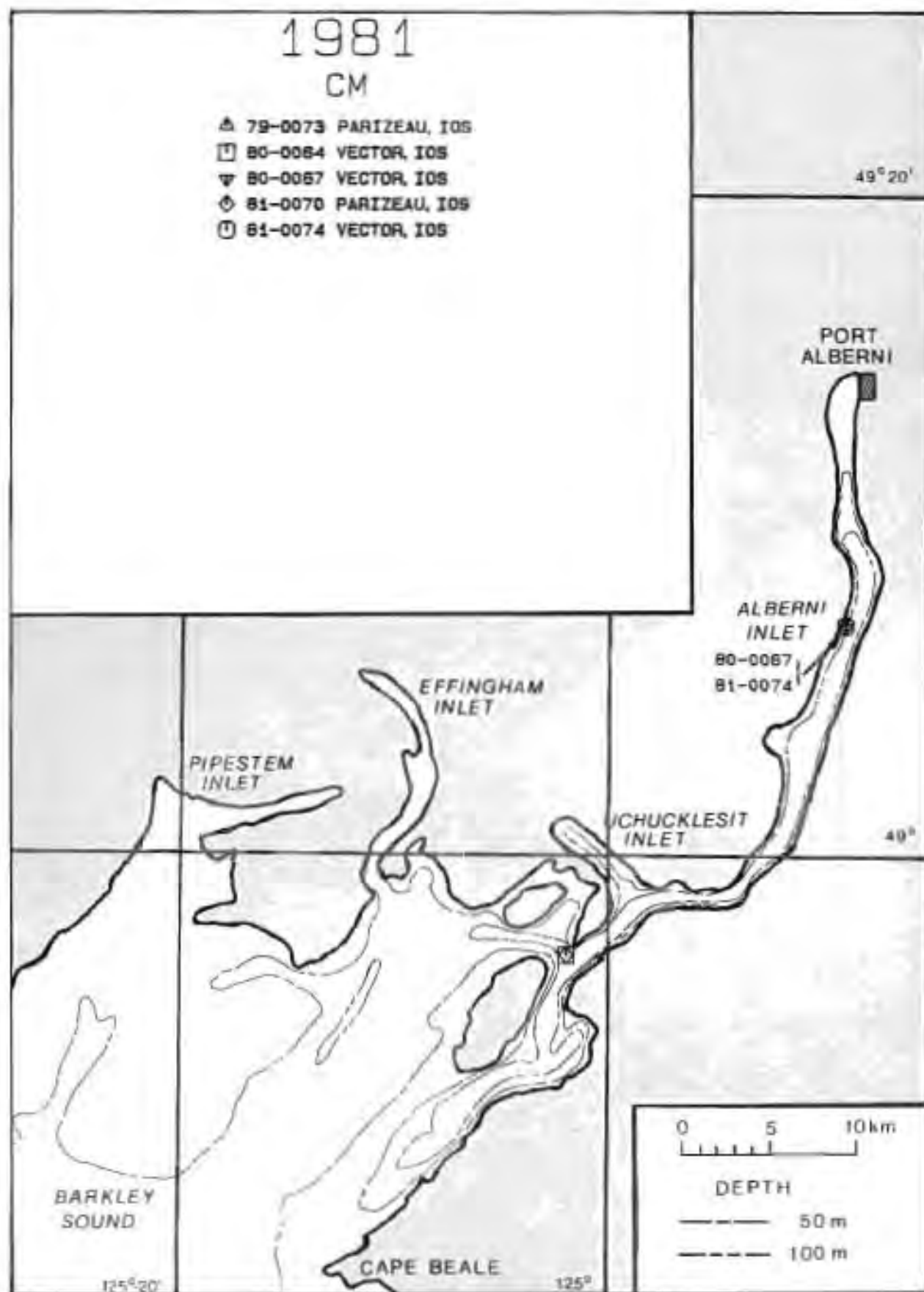


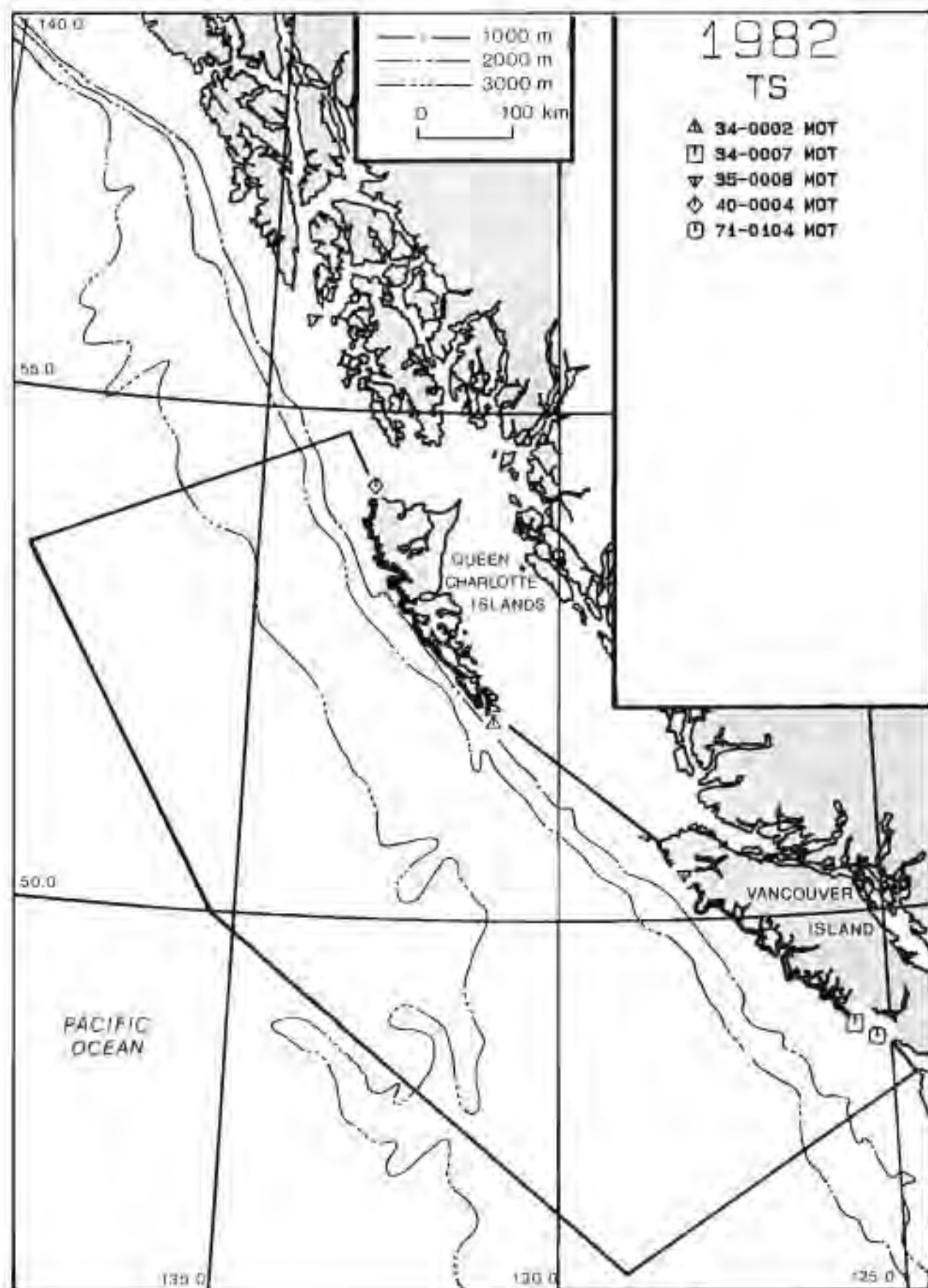
1981
CM

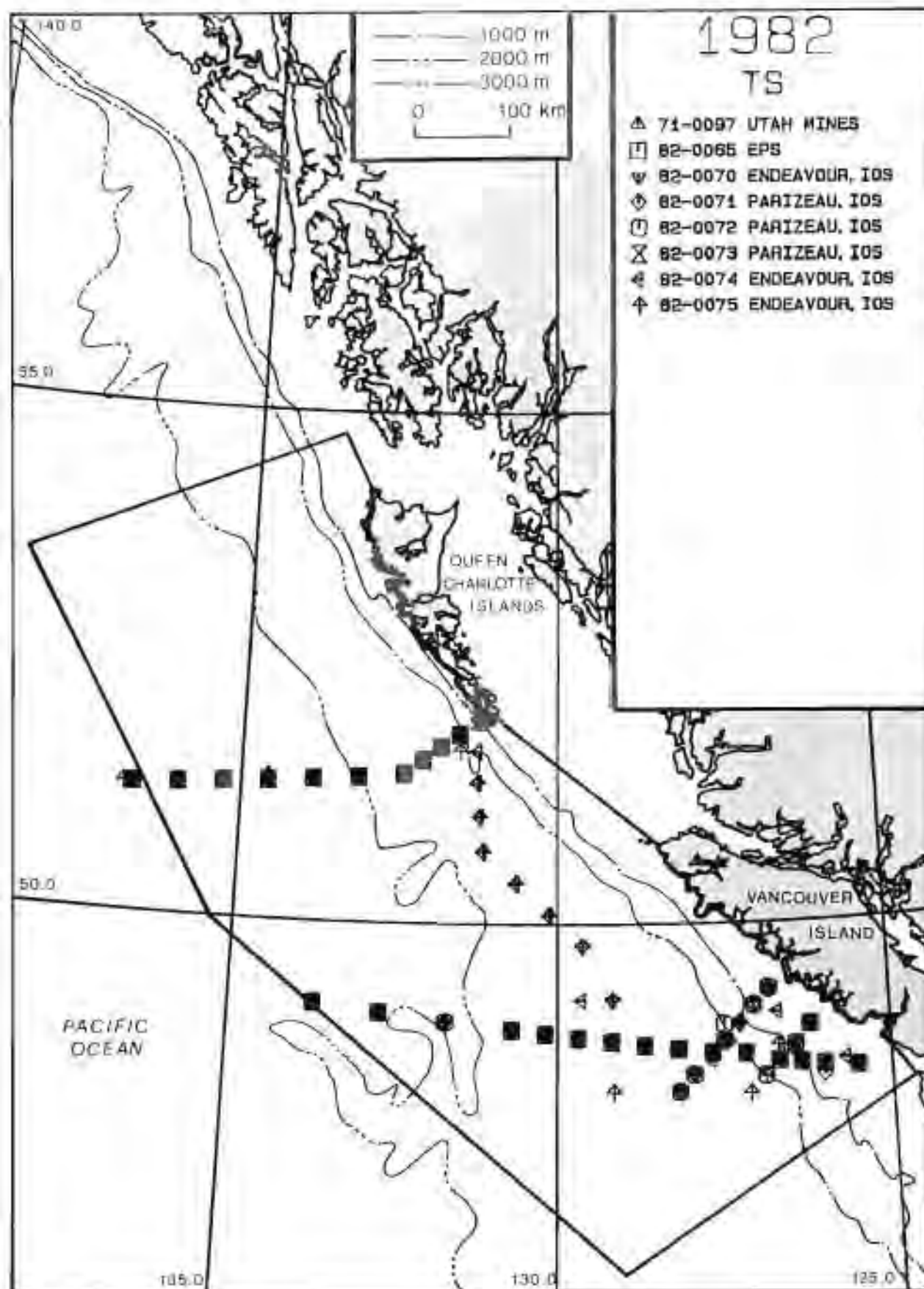
- ▲ 79-0073 PARIZEAU, IOS
- 80-0063 PARIZEAU, IOS
- ▼ 80-0064 VECTOR, IOS
- ◆ 80-0067 VECTOR, IOS
- ⊠ 81-0069 PARIZEAU, IOS
- ⊗ 81-0070 PARIZEAU, IOS
- ◀ 81-0074 VECTOR, IOS
- ⊕ 81-0076 PARIZEAU, IOS

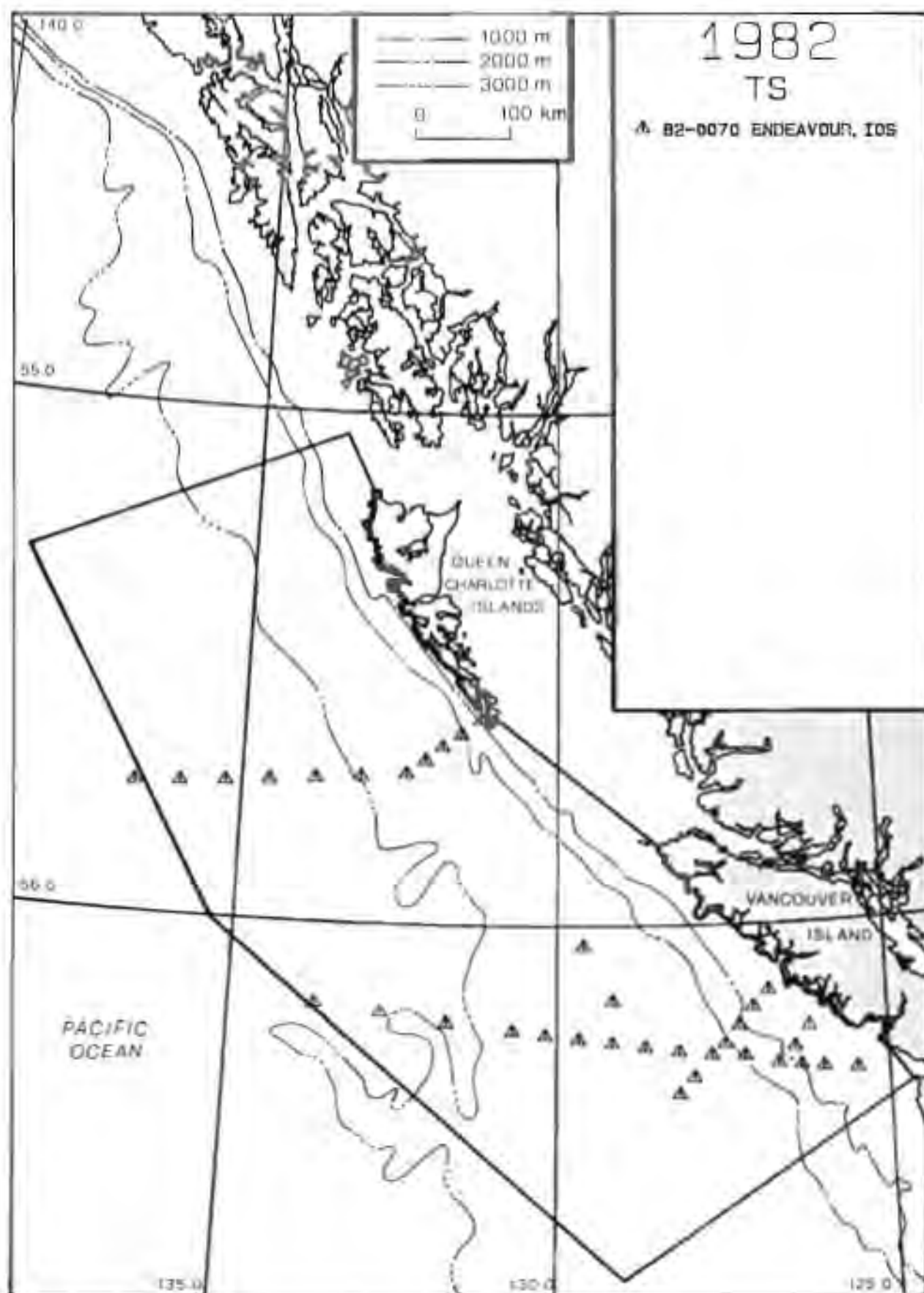
0 50 km

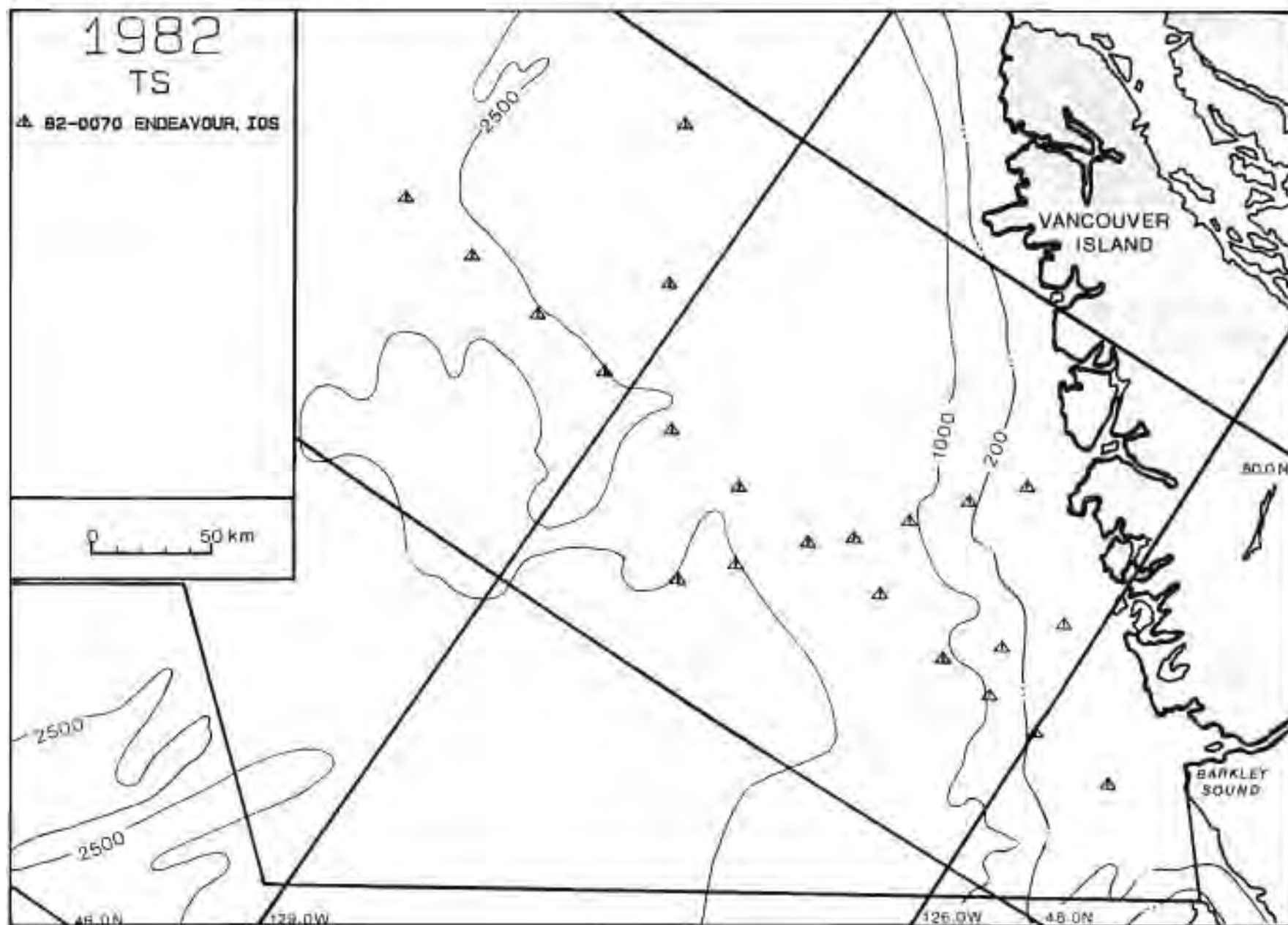


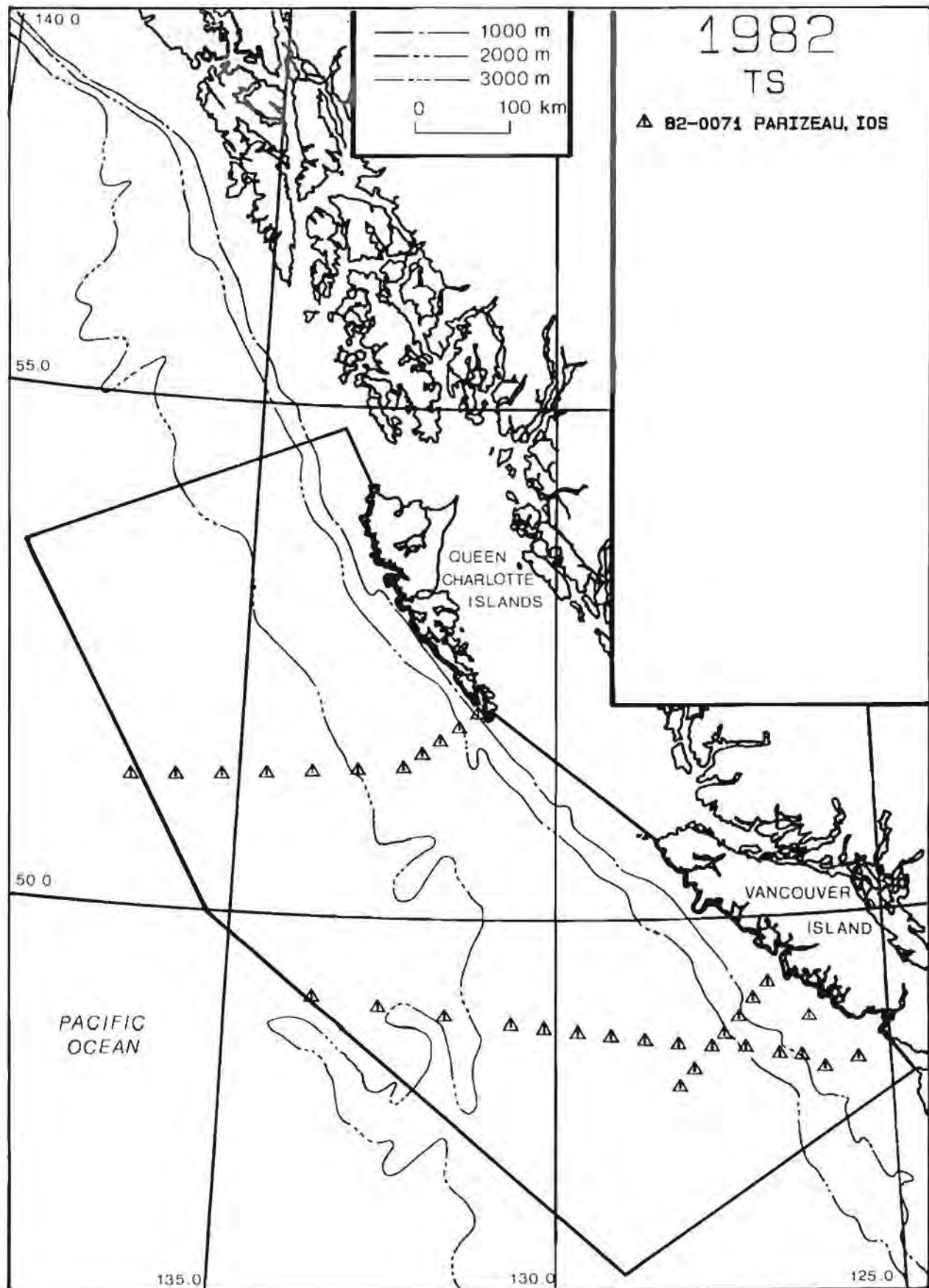


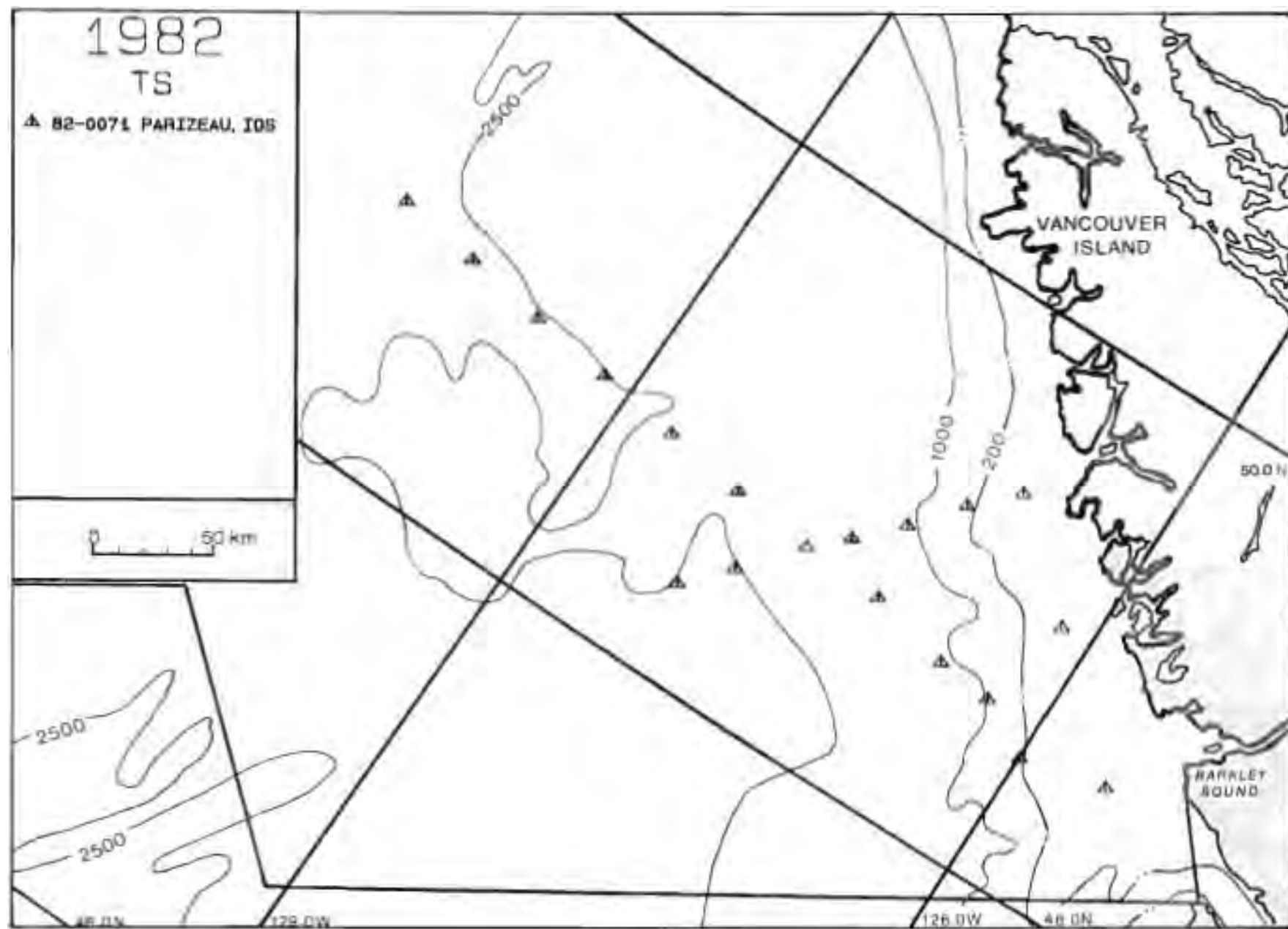


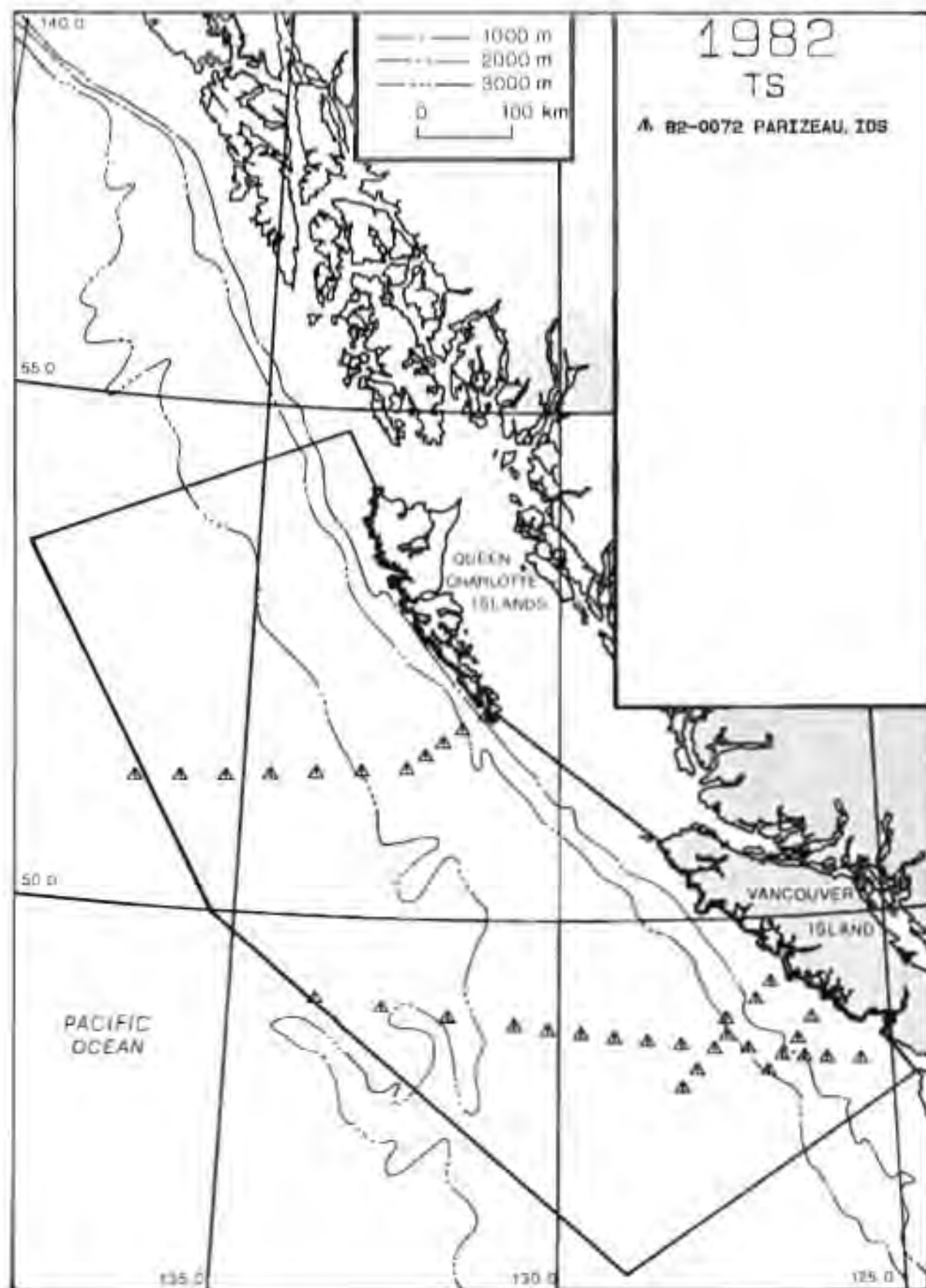


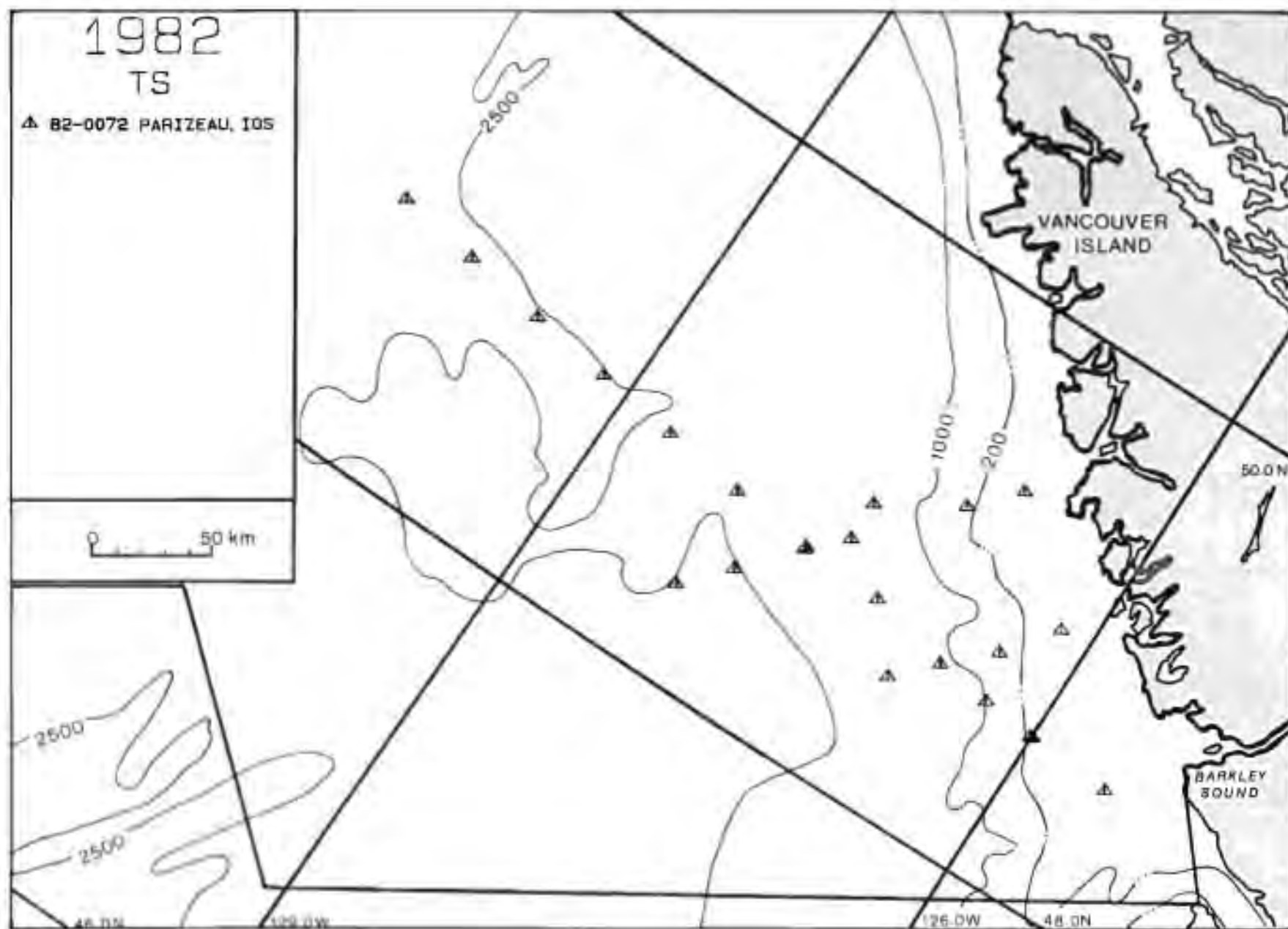


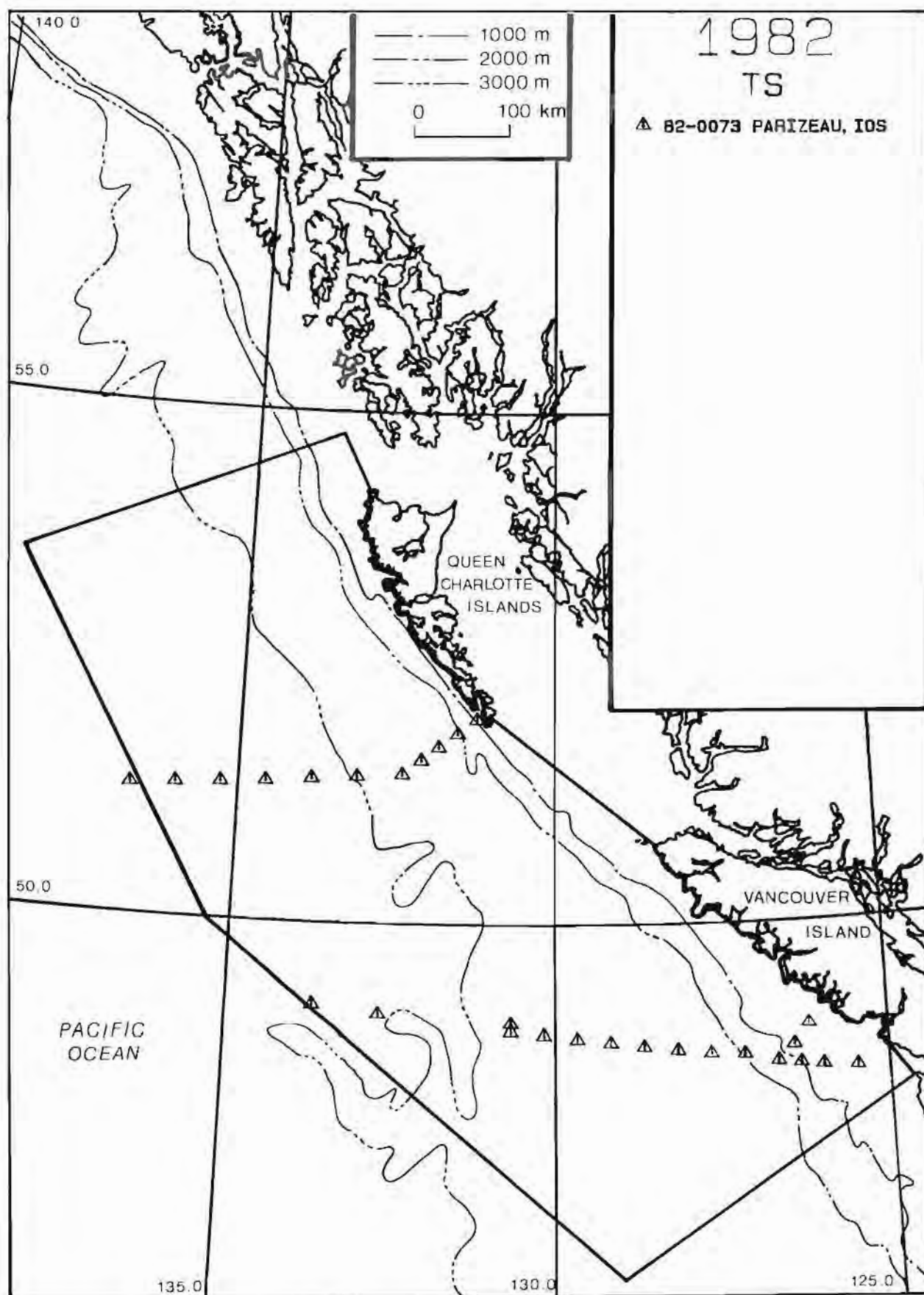


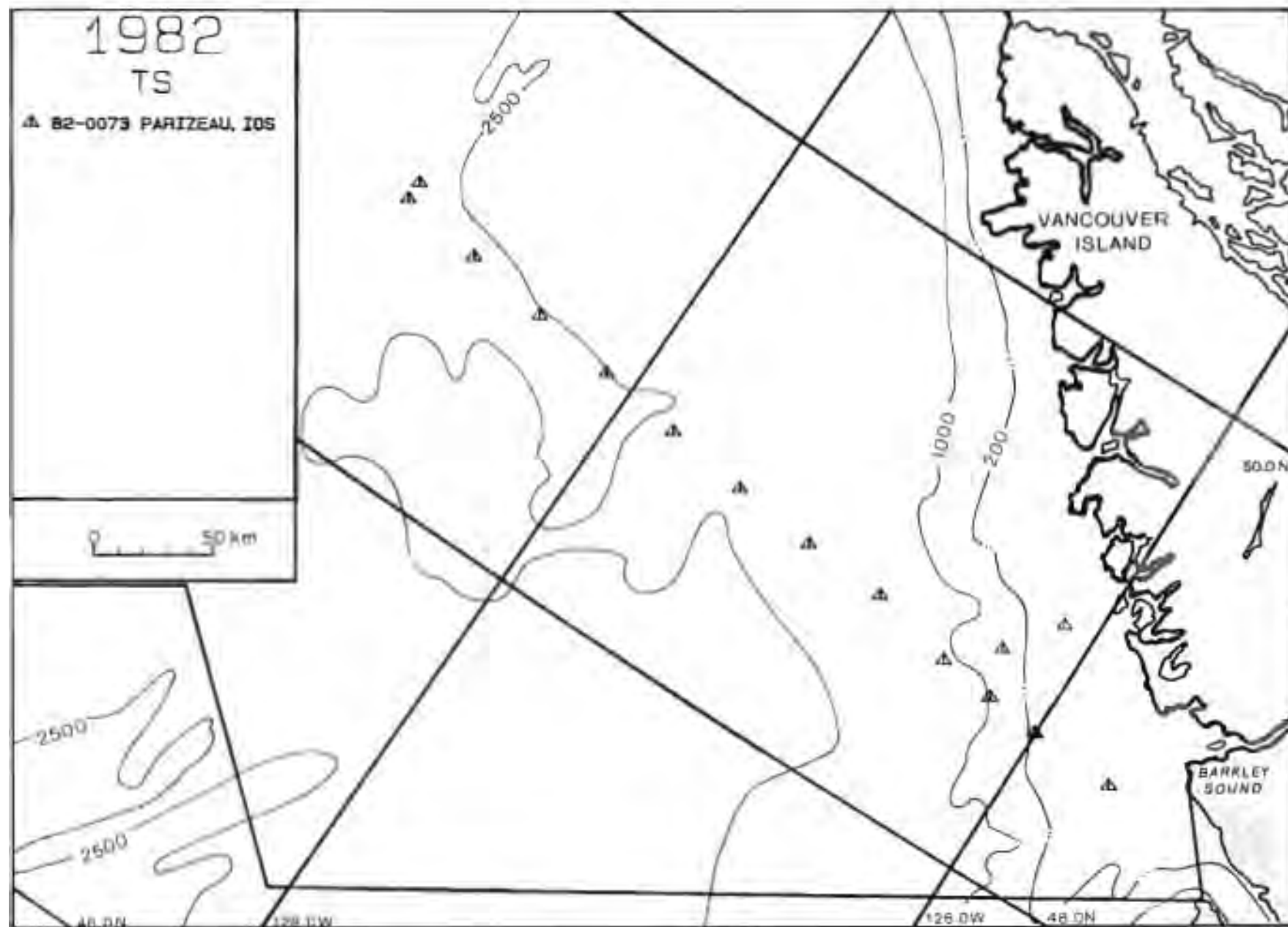


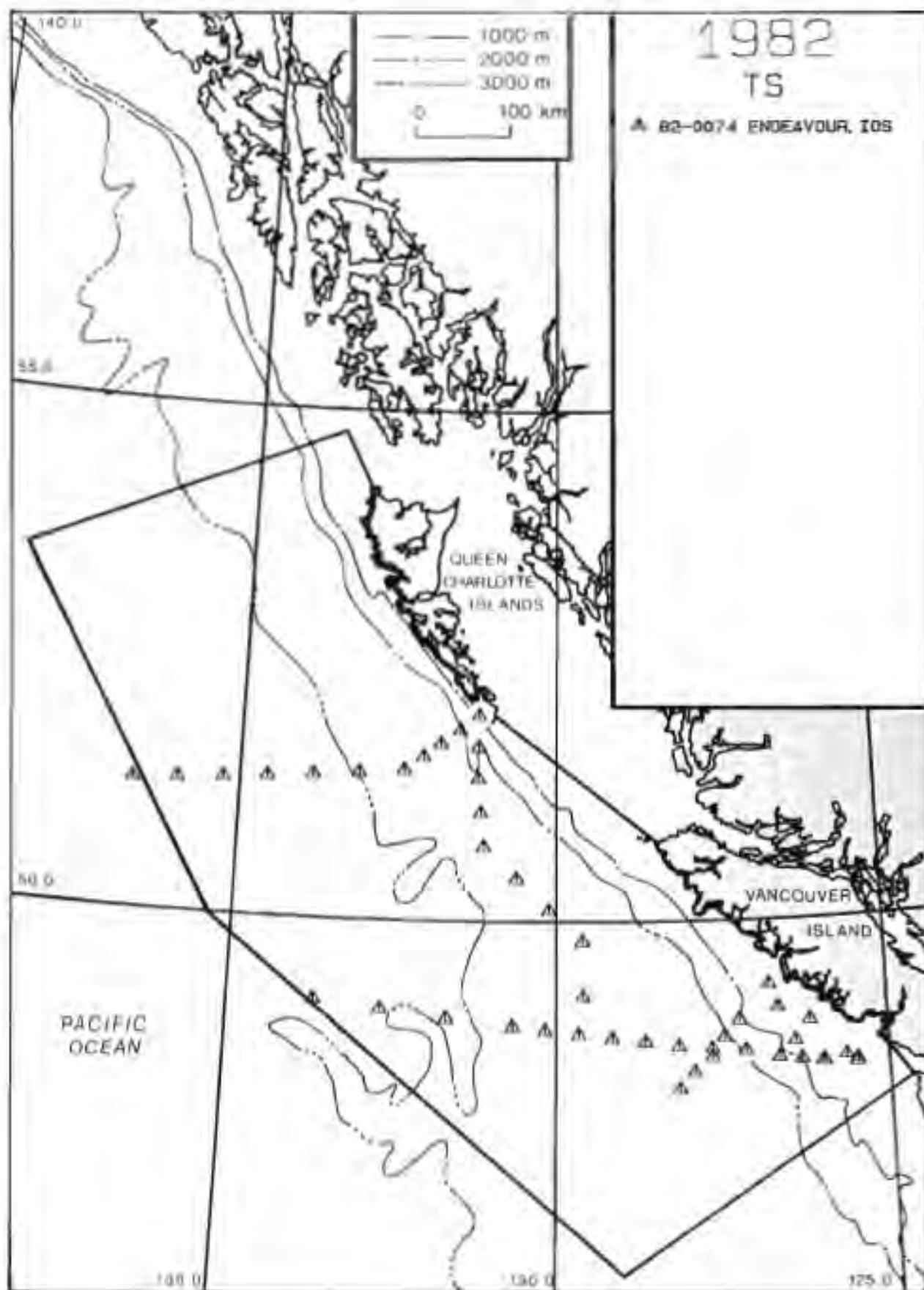


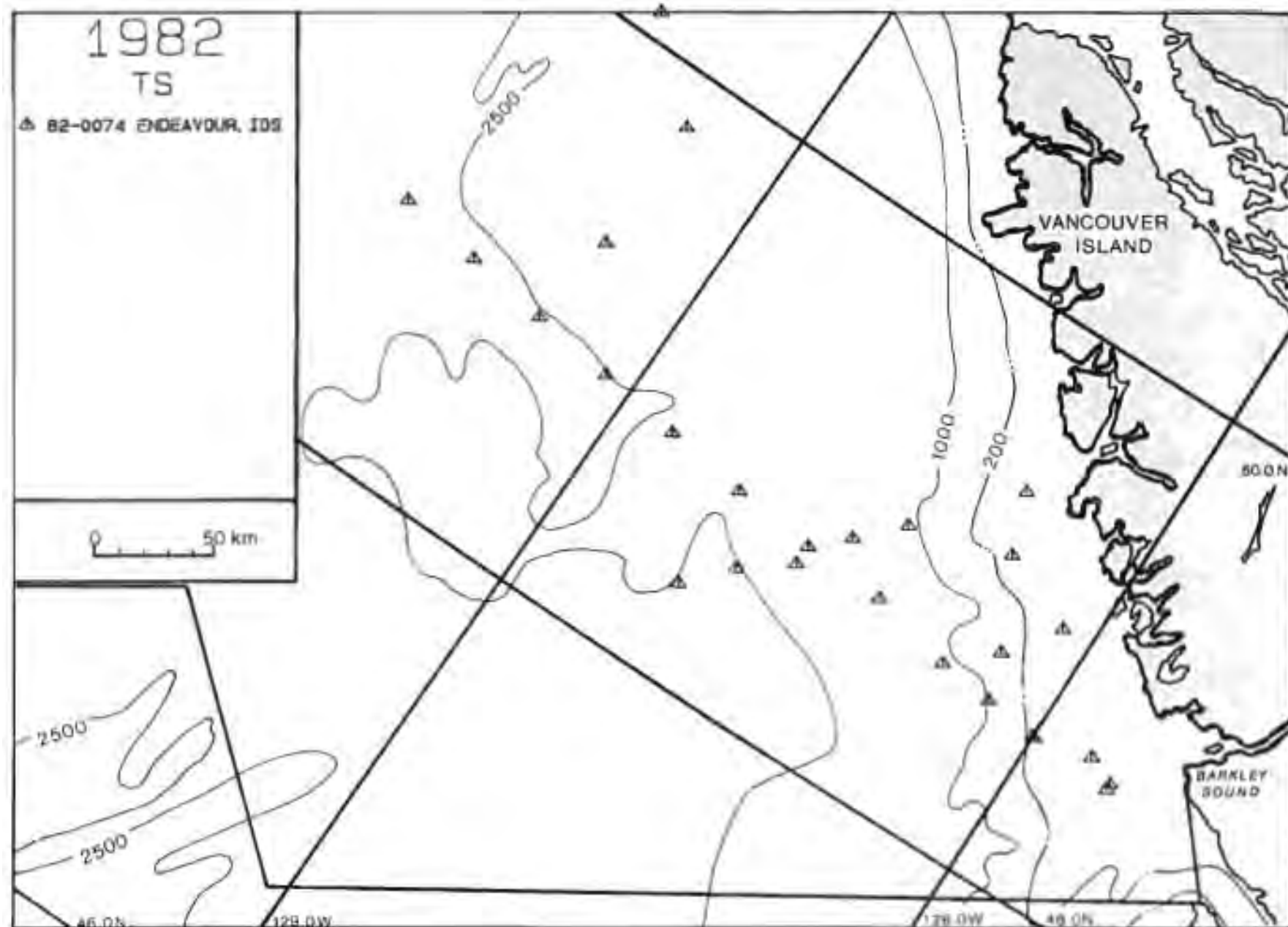


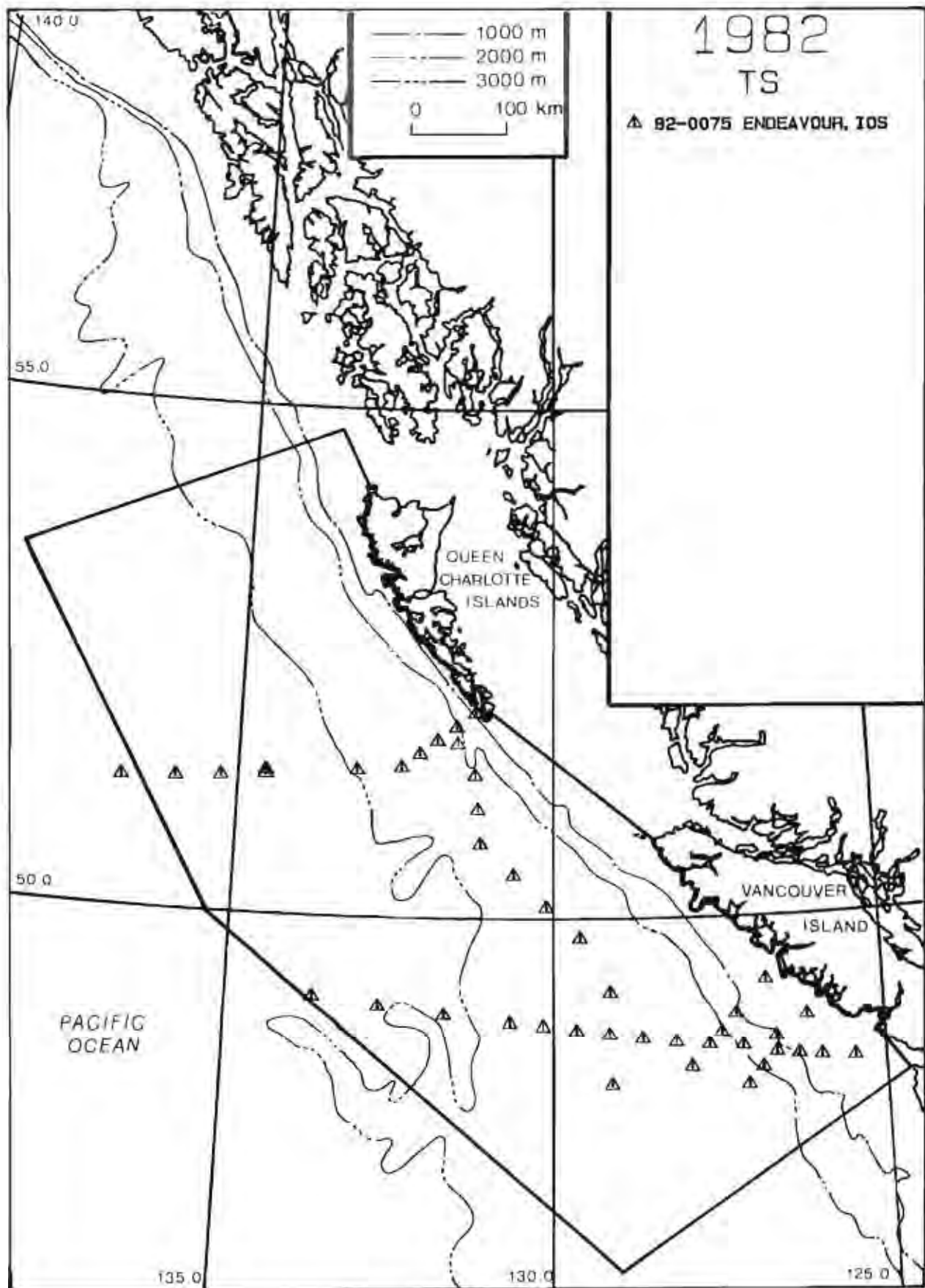








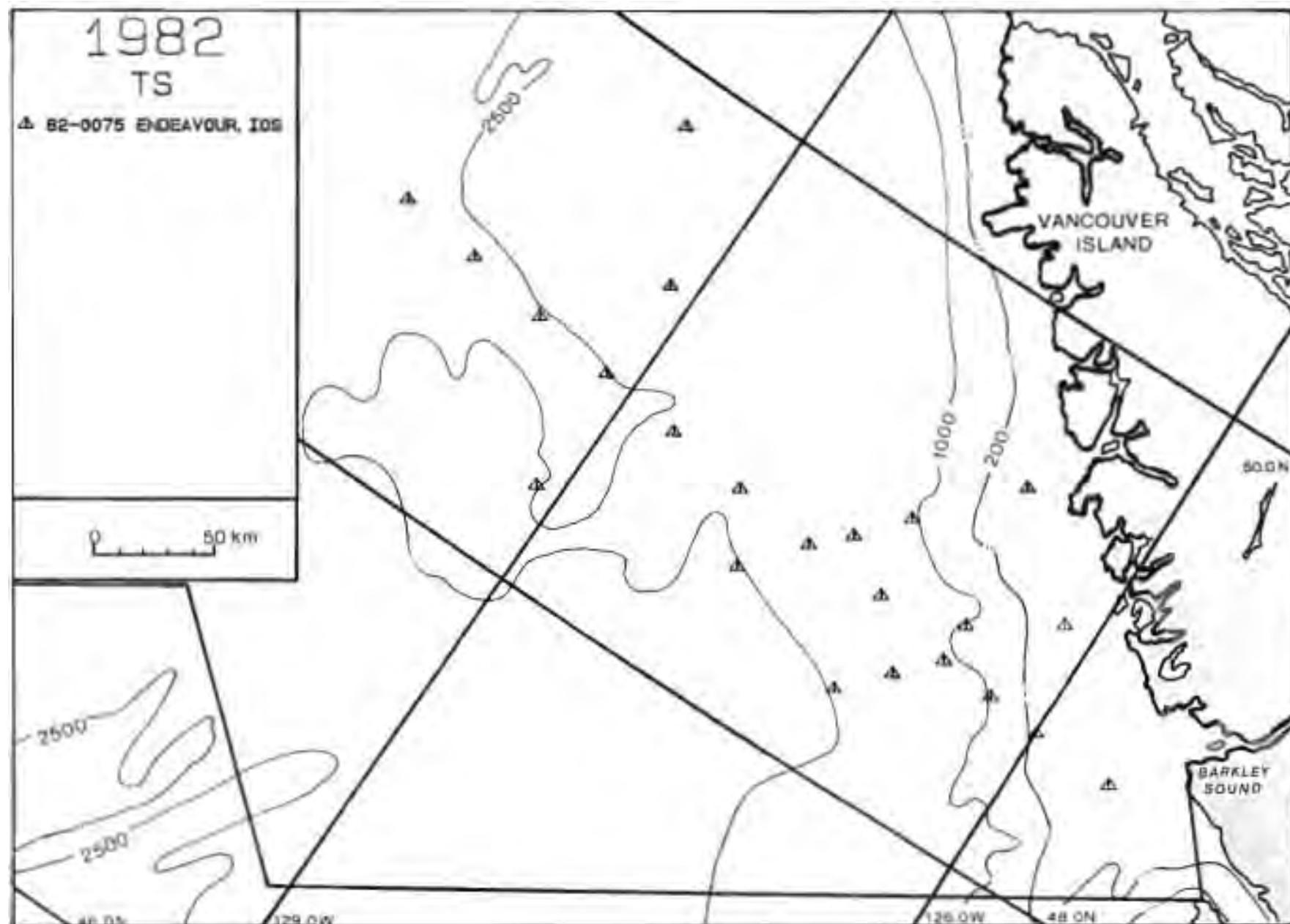


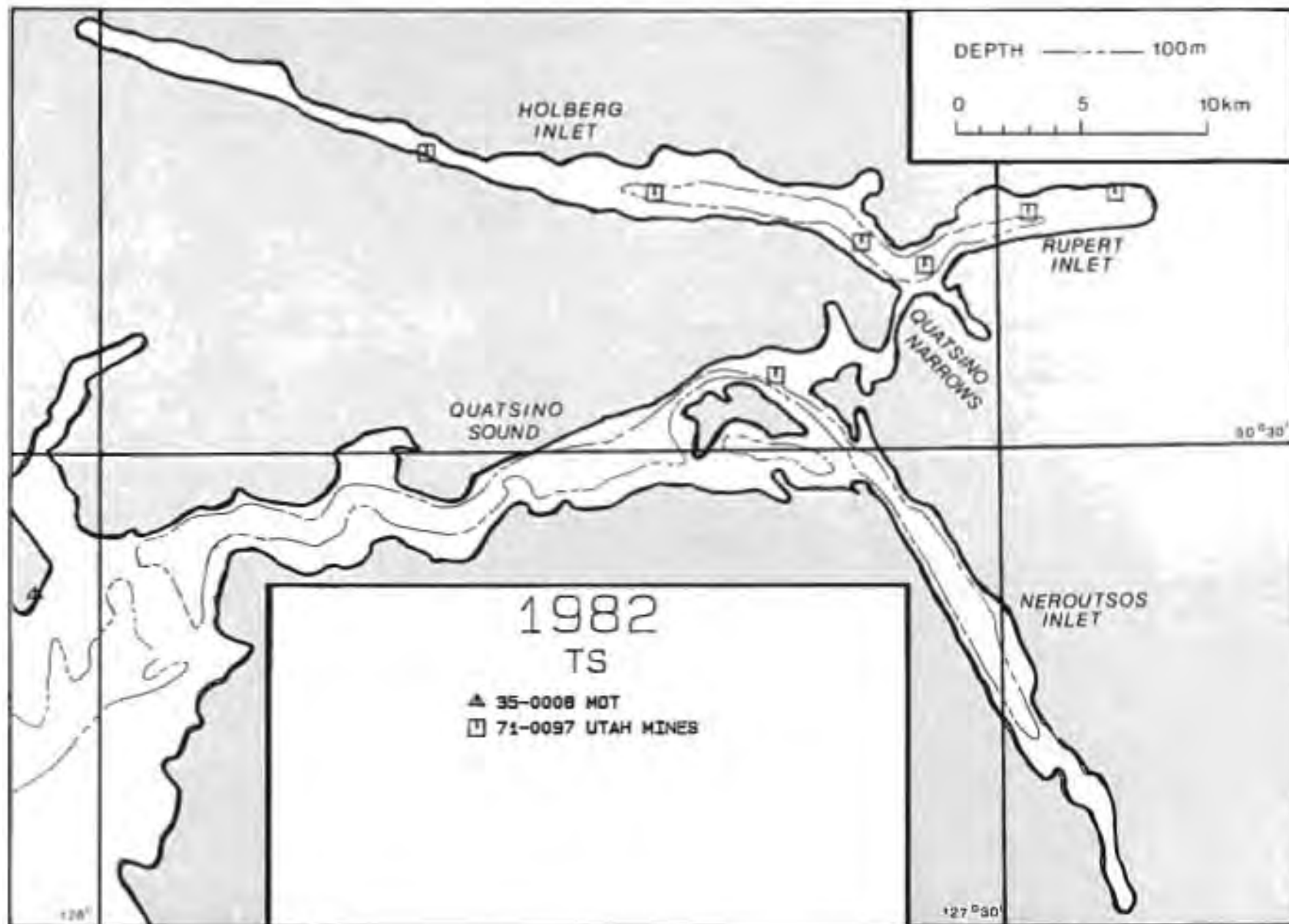


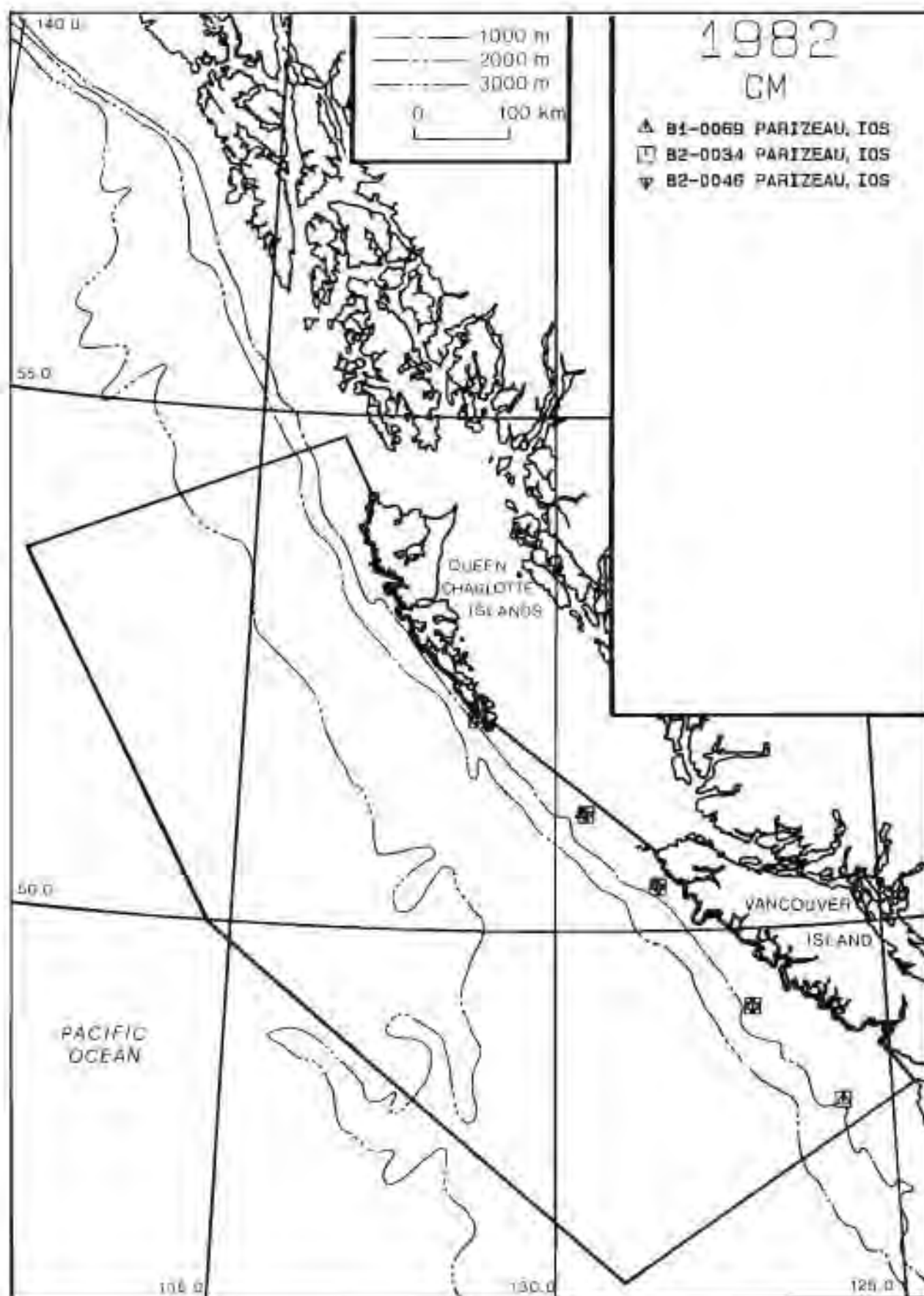
1982
TS

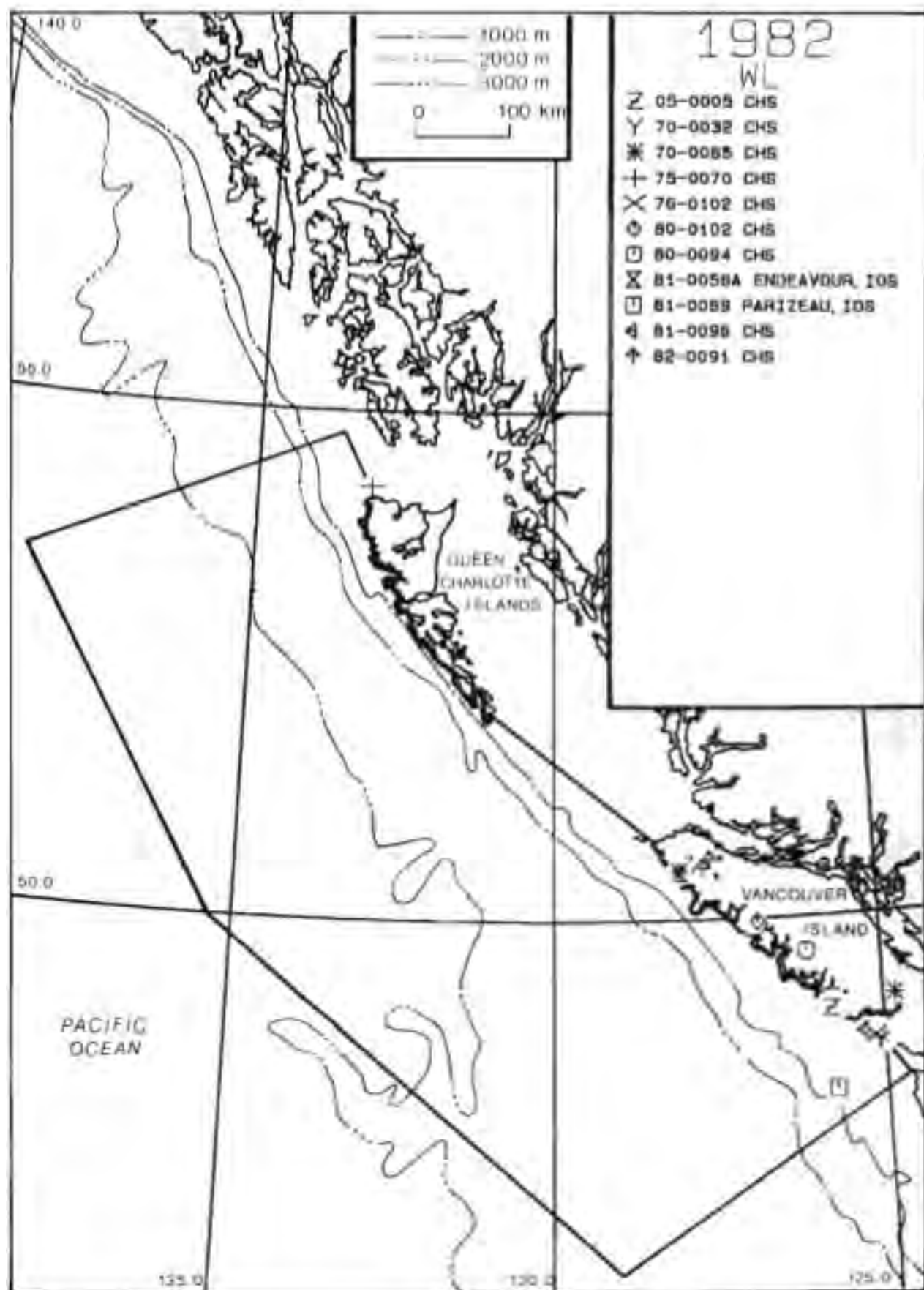
Δ 82-0075 ENDEAVOUR, IOS

0 50 km







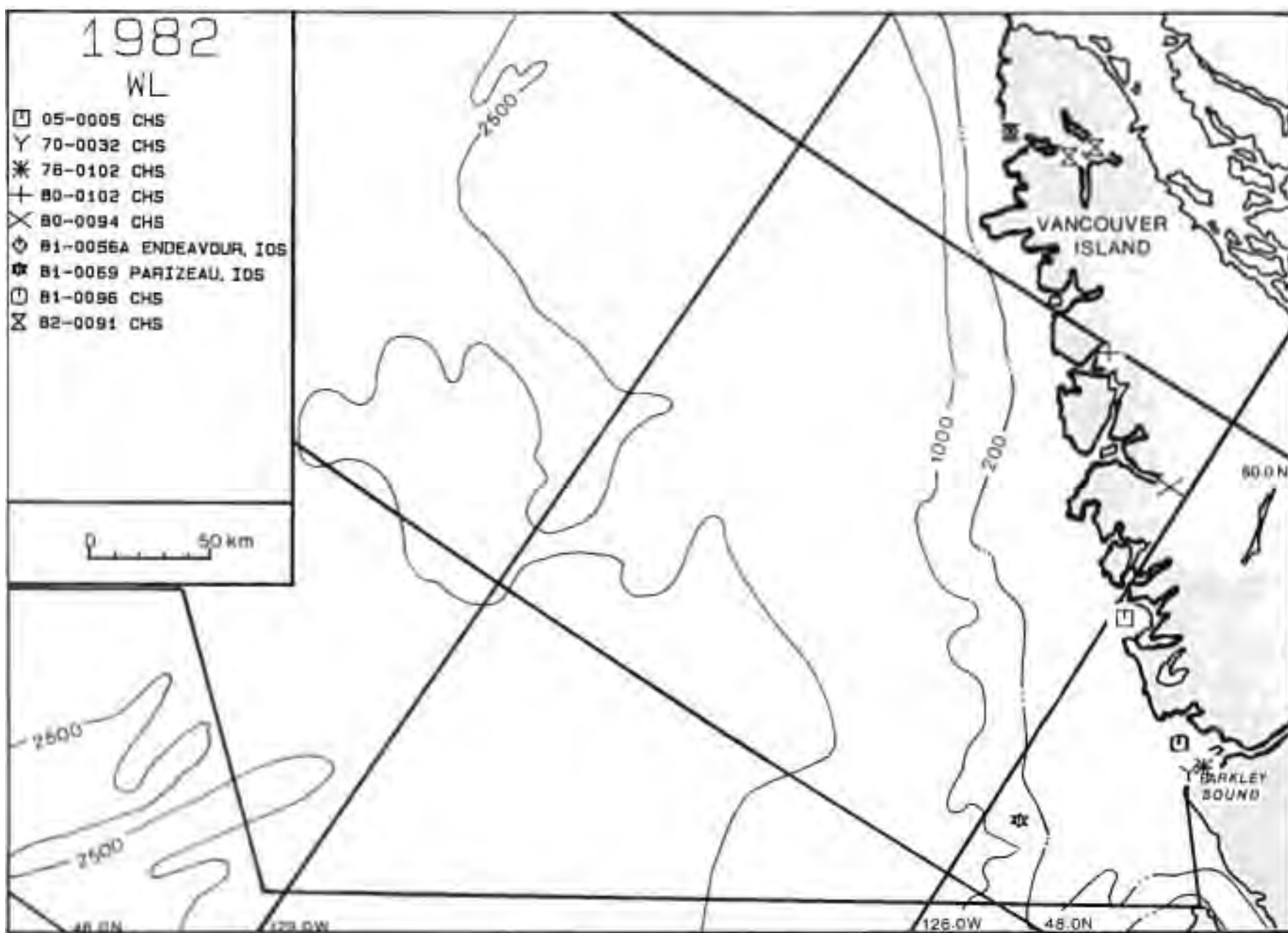


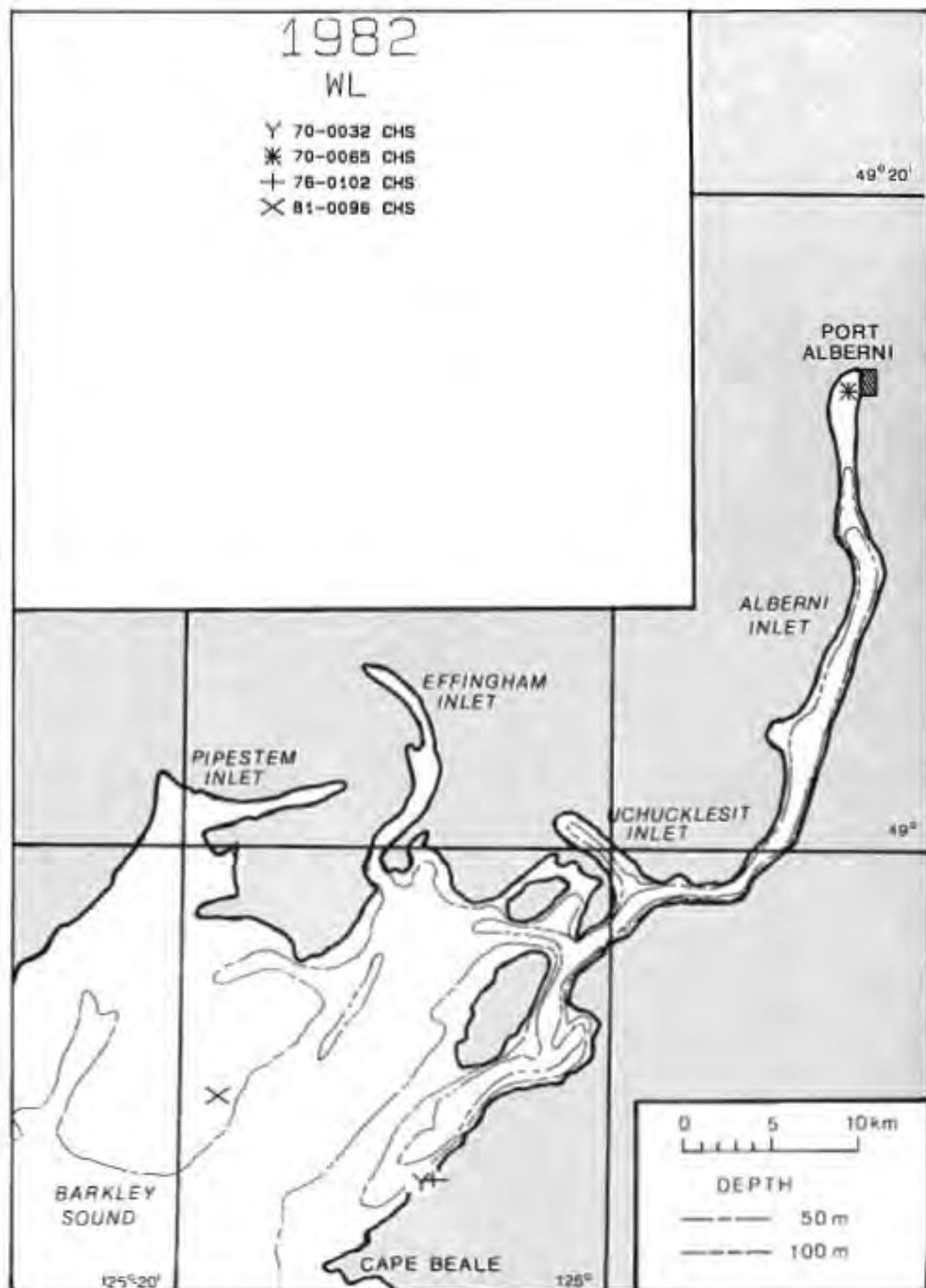
1982

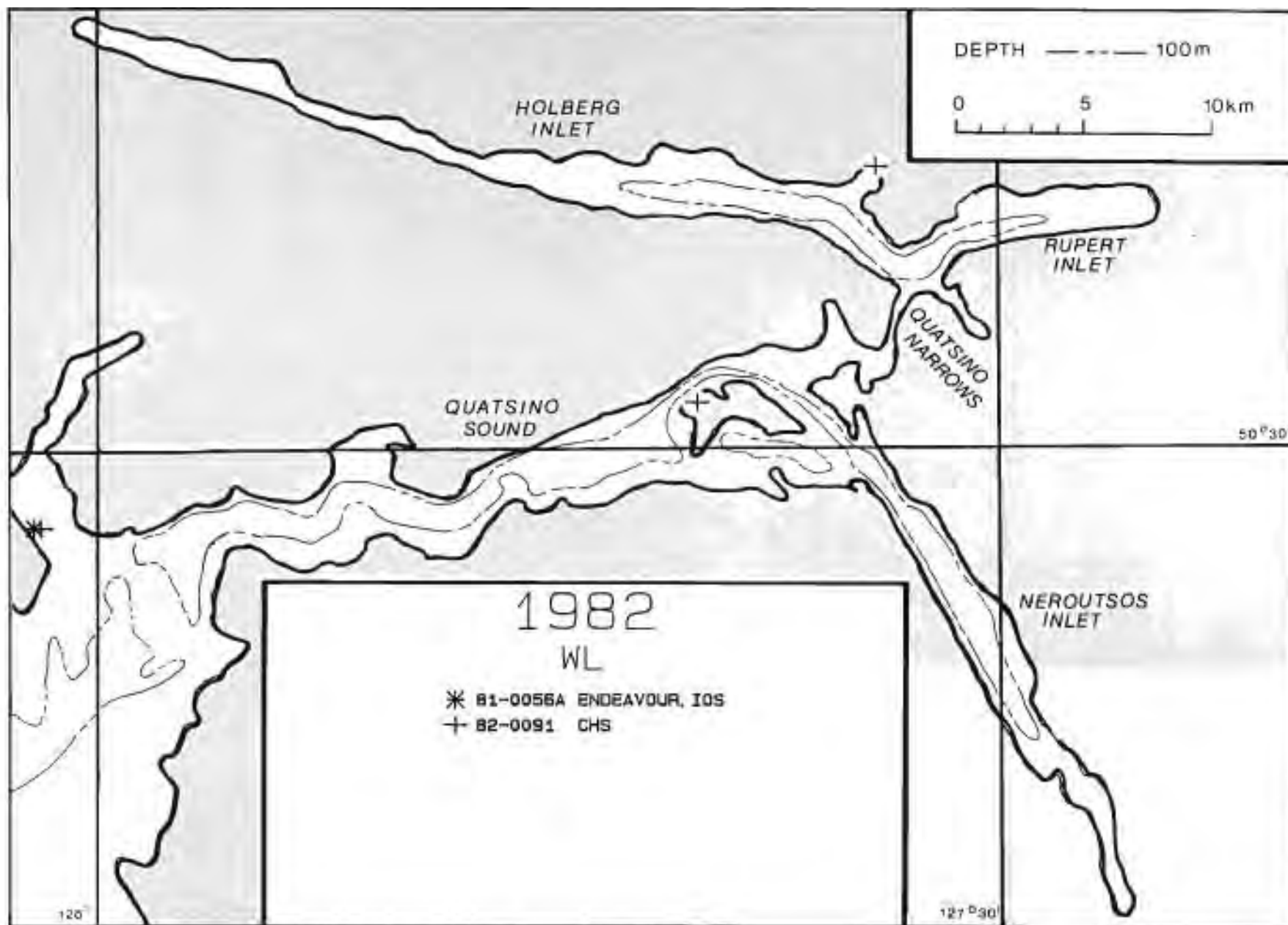
WL

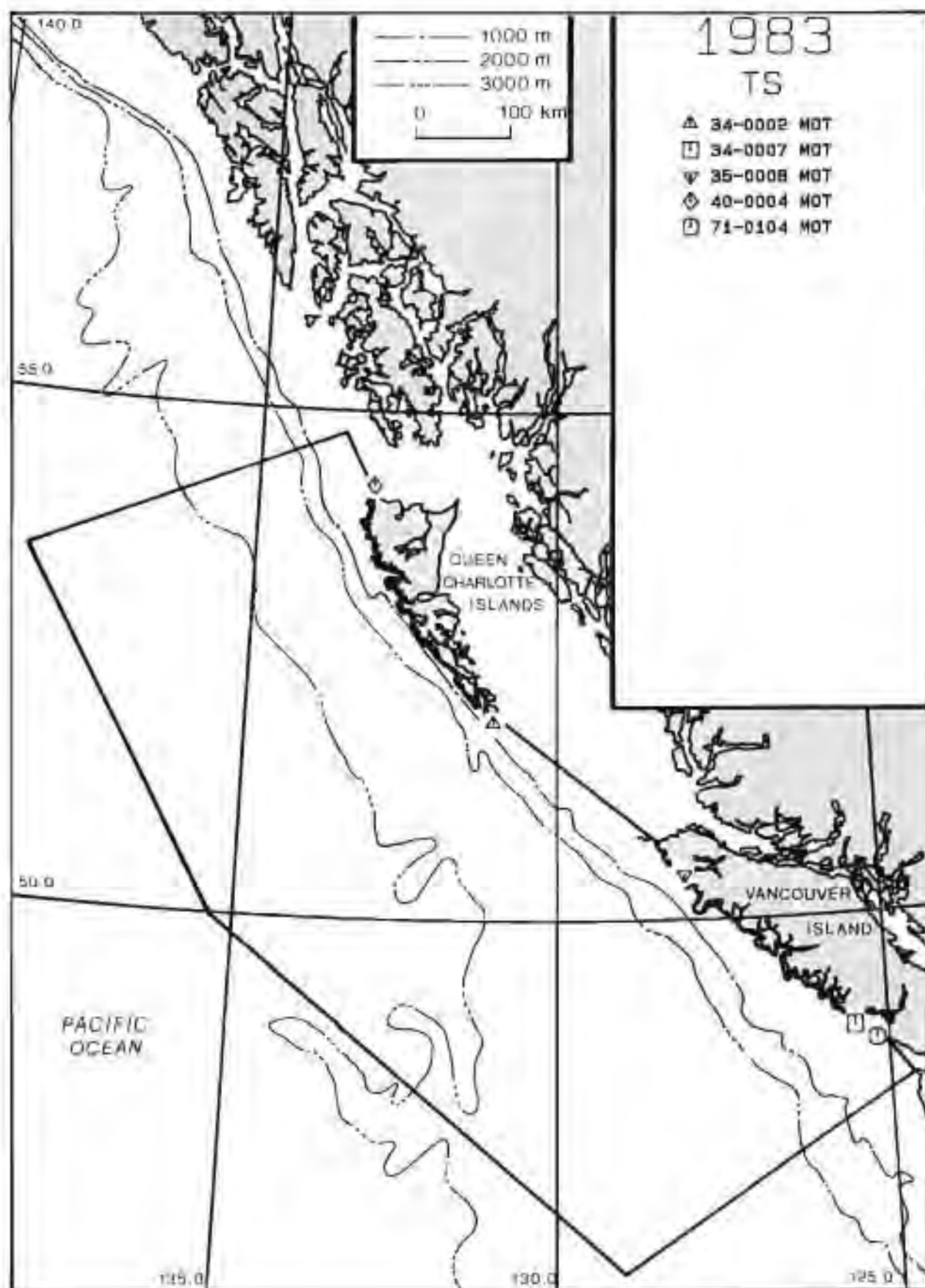
- 05-0005 CHS
- Y 70-0032 CHS
- * 76-0102 CHS
- + 80-0102 CHS
- X 80-0094 CHS
- ◇ 81-0056A ENDEAVOUR, IOS
- ★ 81-0059 PARIZEAU, IOS
- 81-0096 CHS
- ⊗ 82-0091 CHS

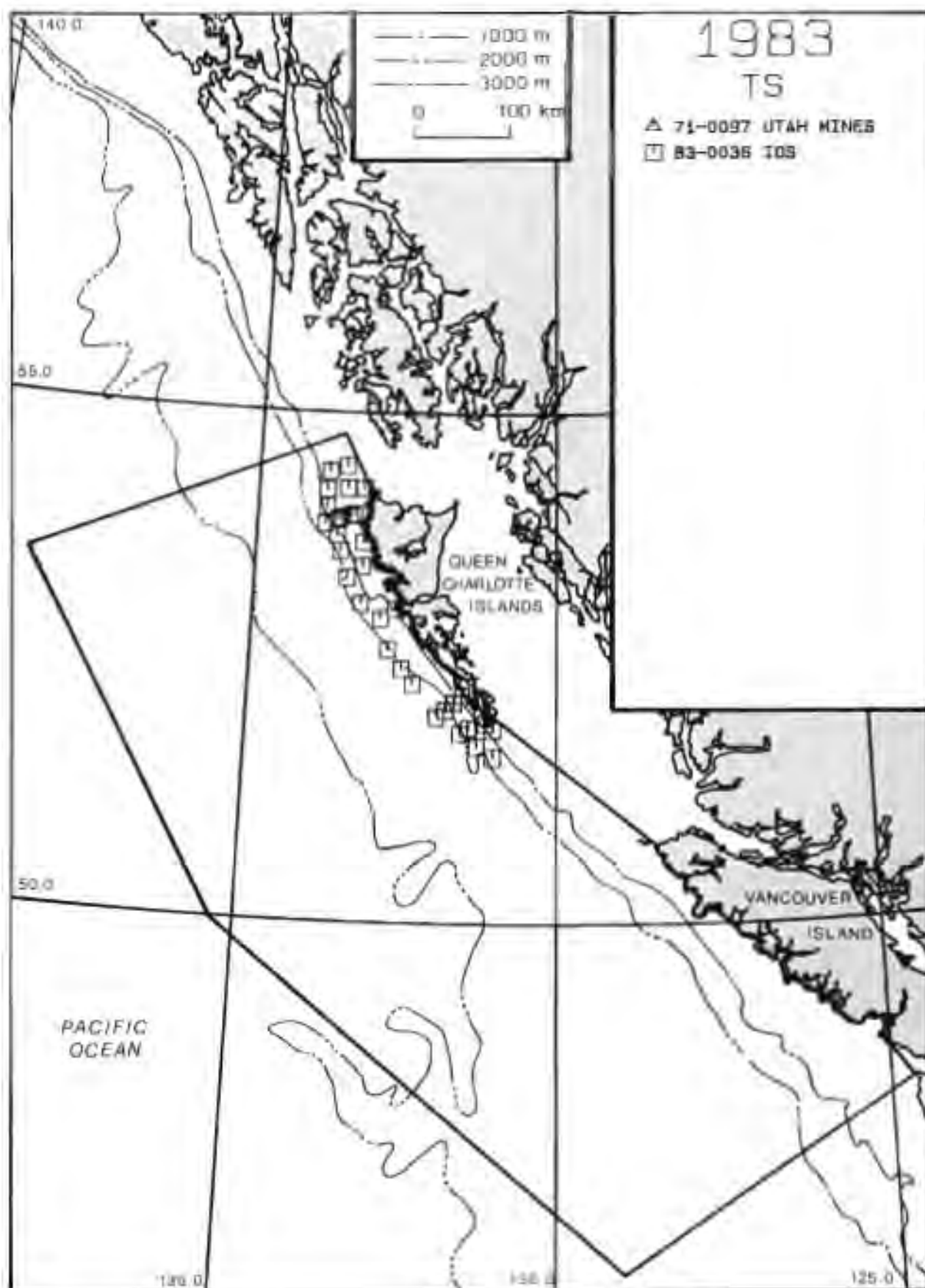
0 50 km

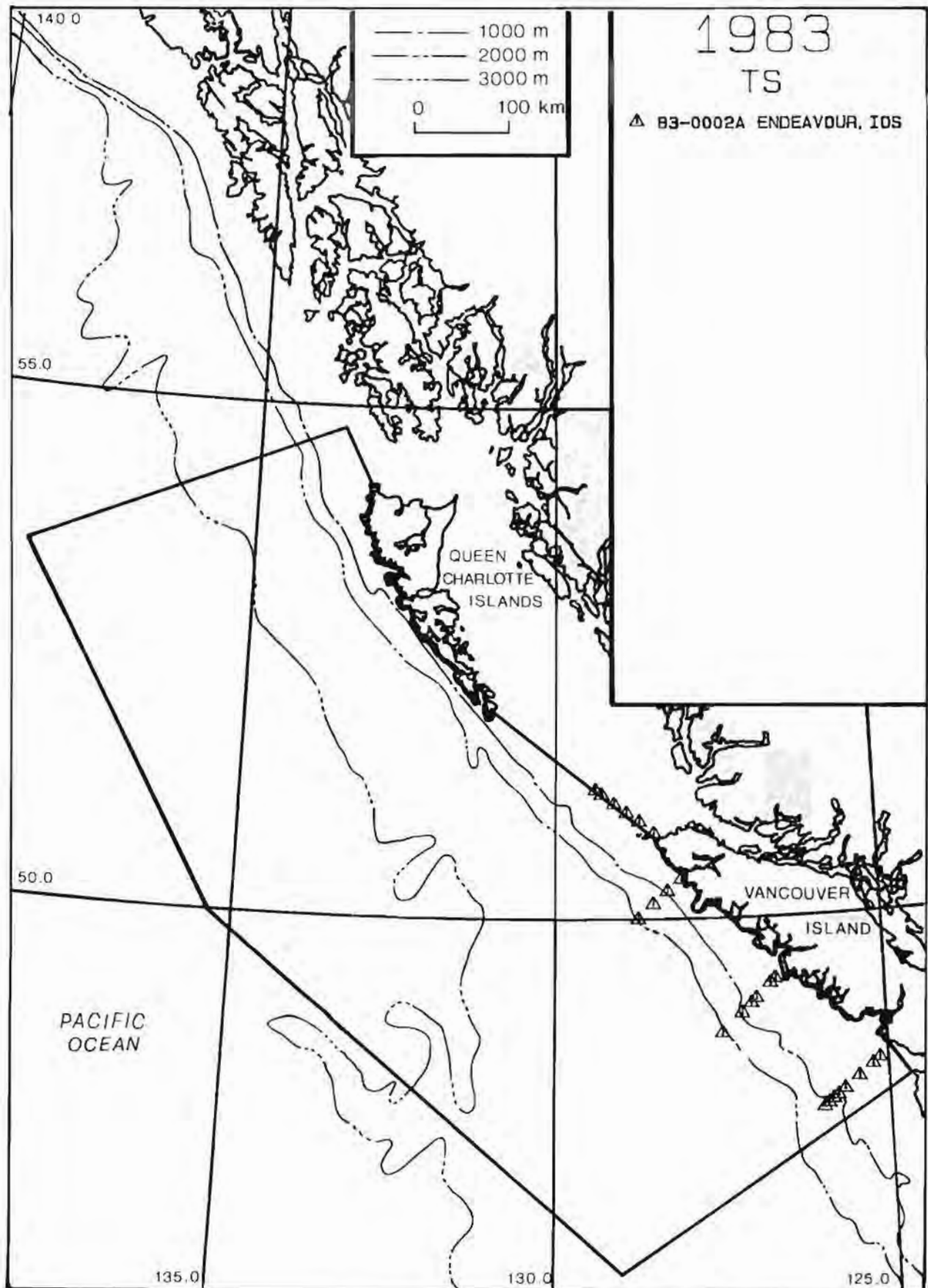


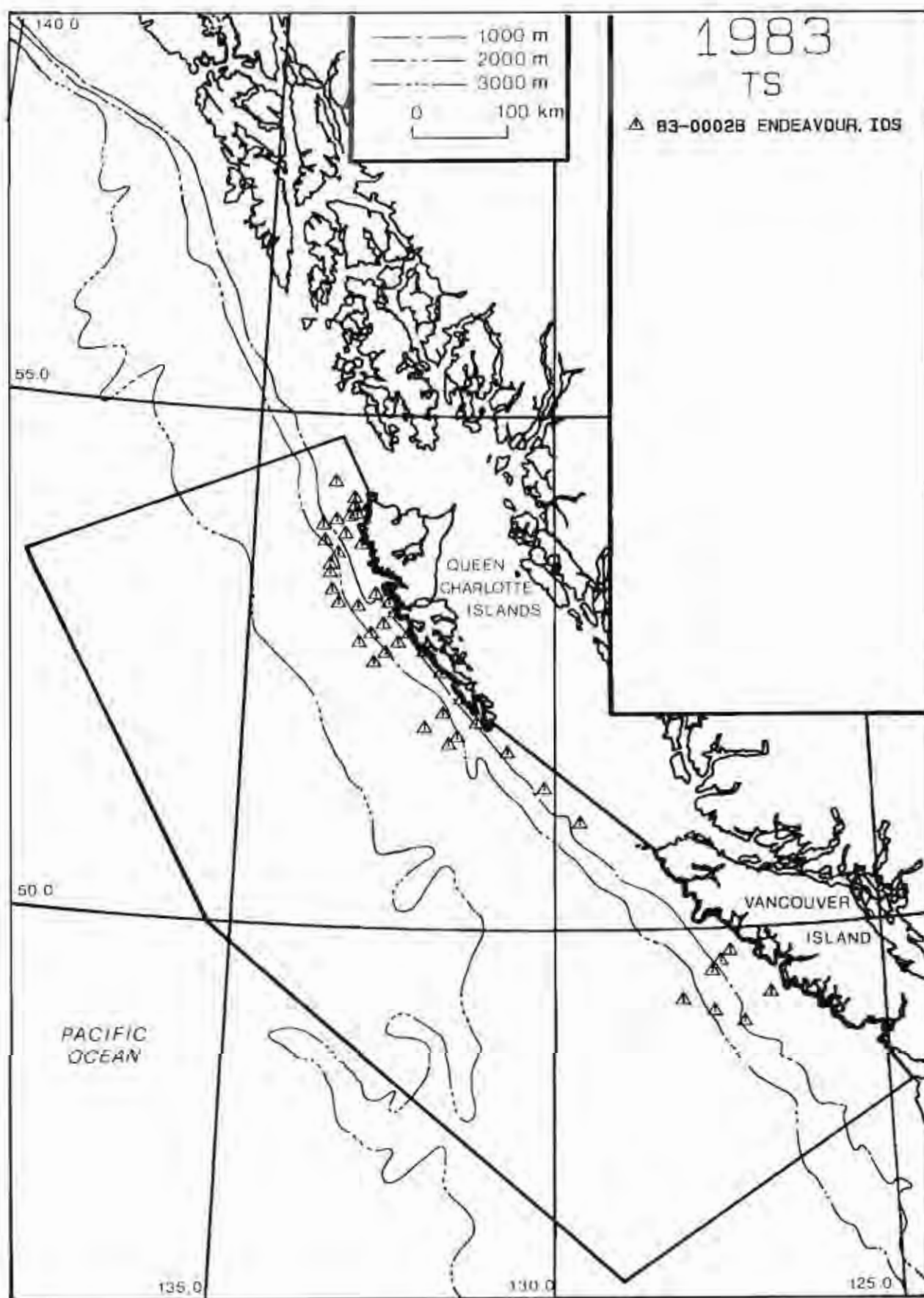


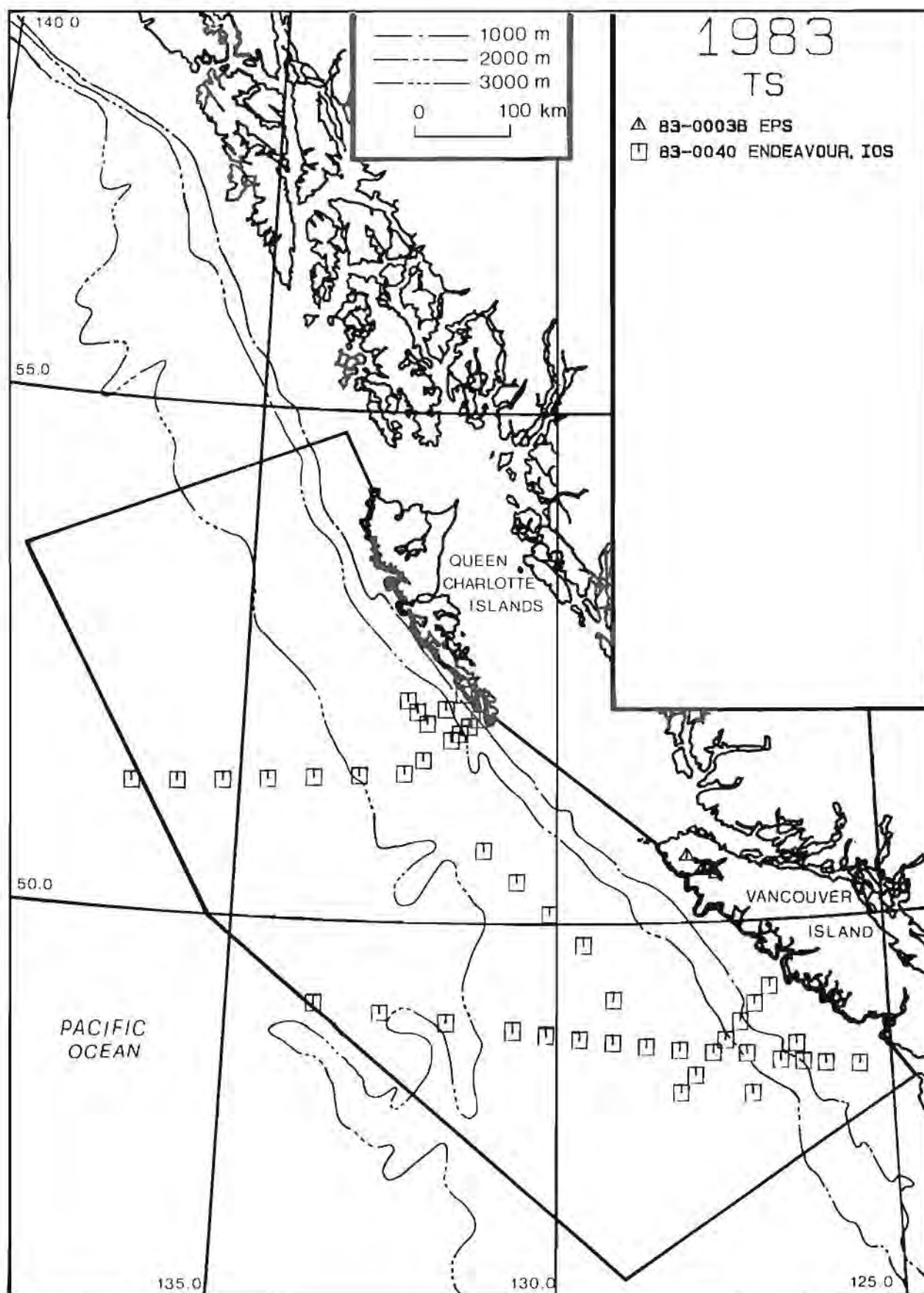


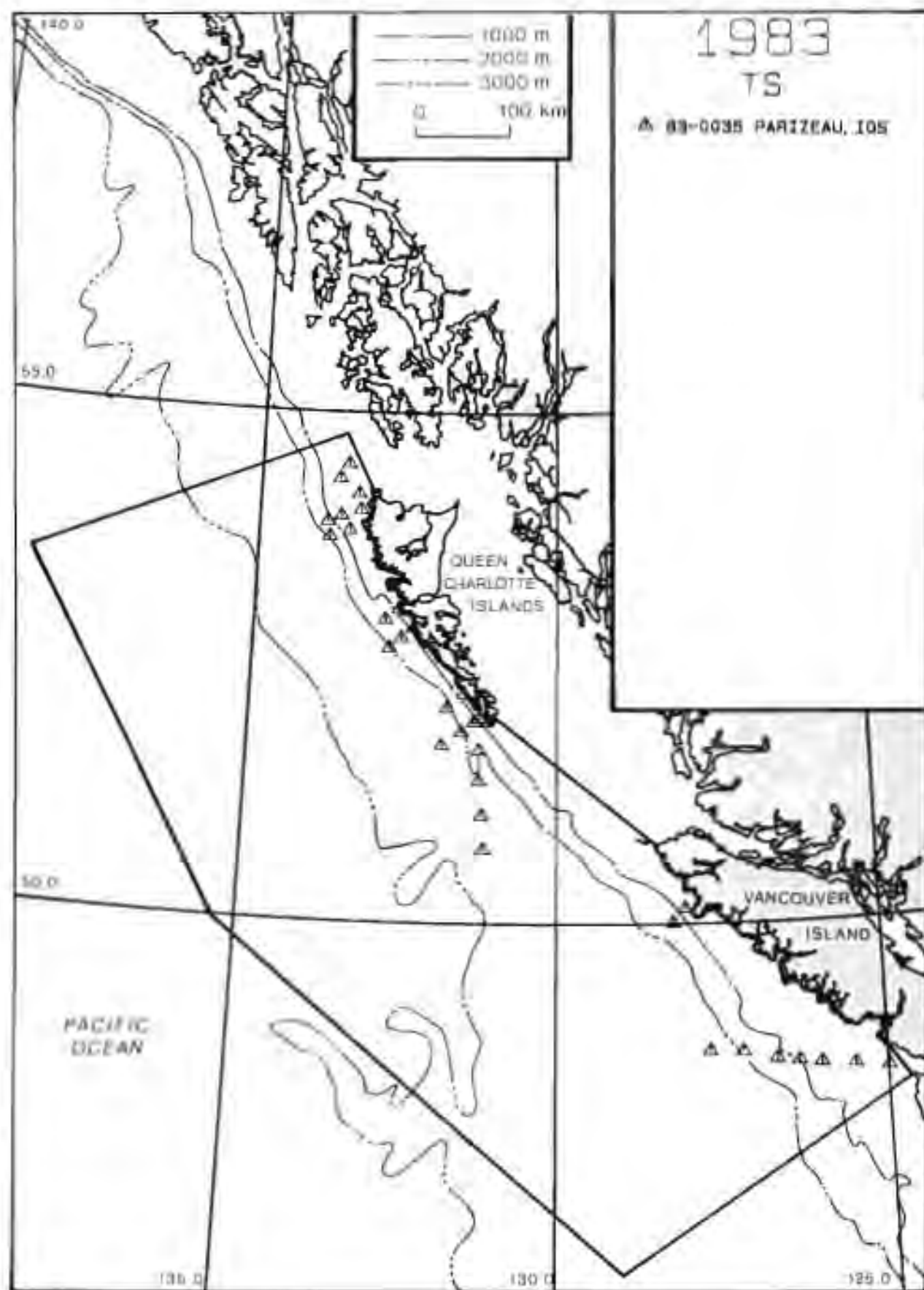


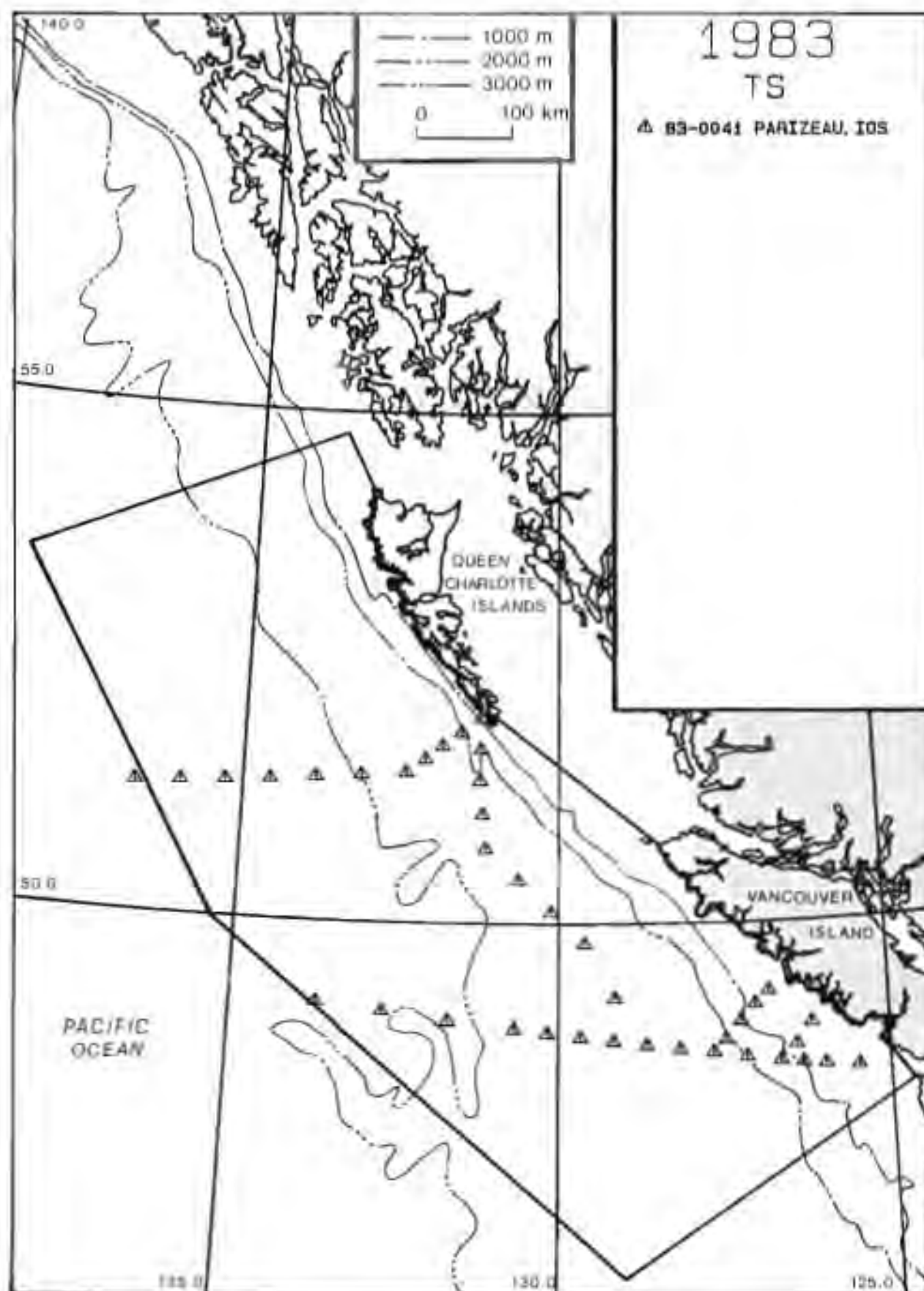








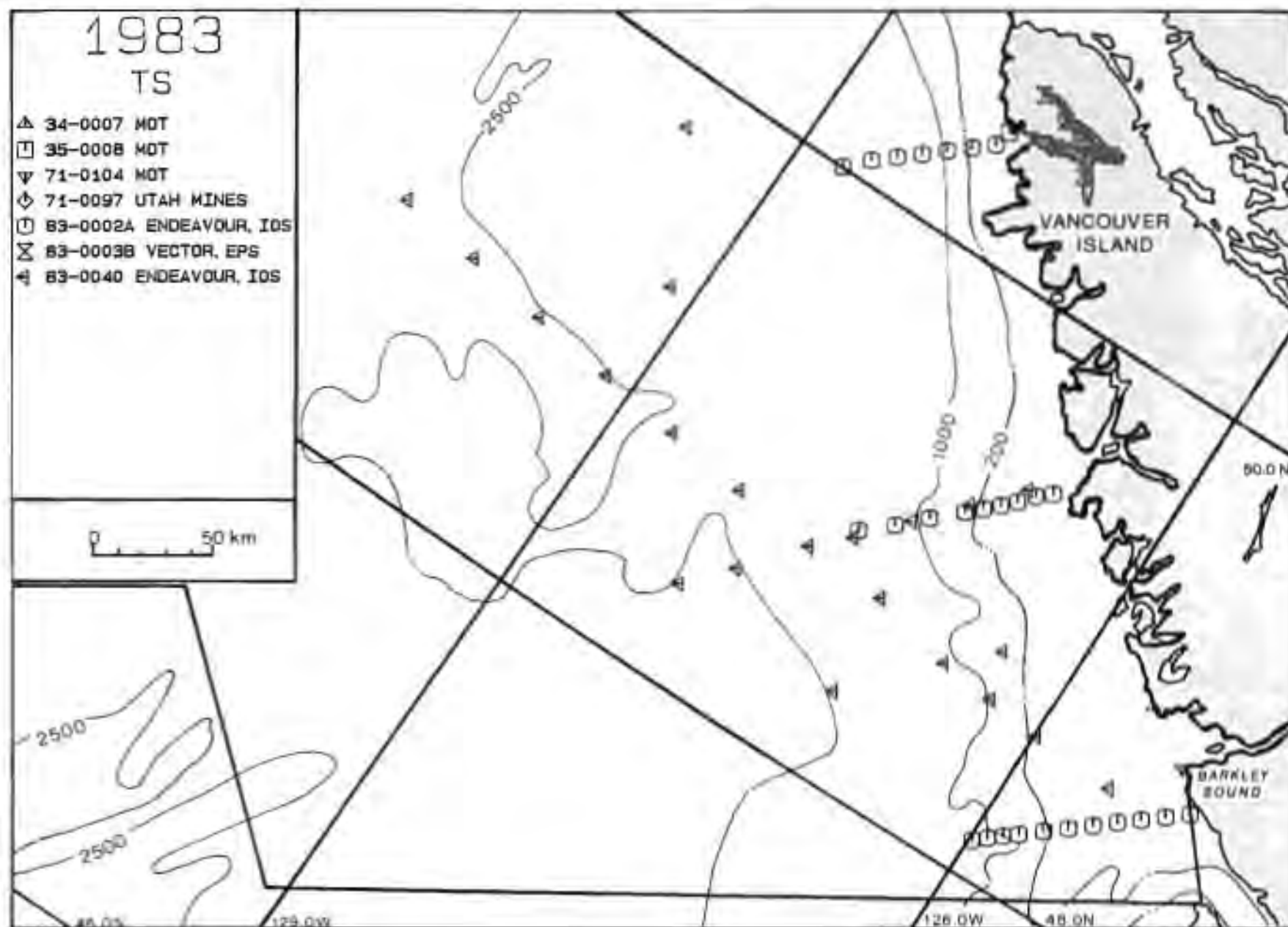




1983
TS

- ▲ 34-0007 MOT
- 35-0008 MOT
- ▼ 71-0104 MOT
- ◆ 71-0097 UTAH MINES
- 83-0002A ENDEAVOUR, IOS
- ⊗ 83-0003B VECTOR, EPS
- ⚡ 83-0040 ENDEAVOUR, IOS

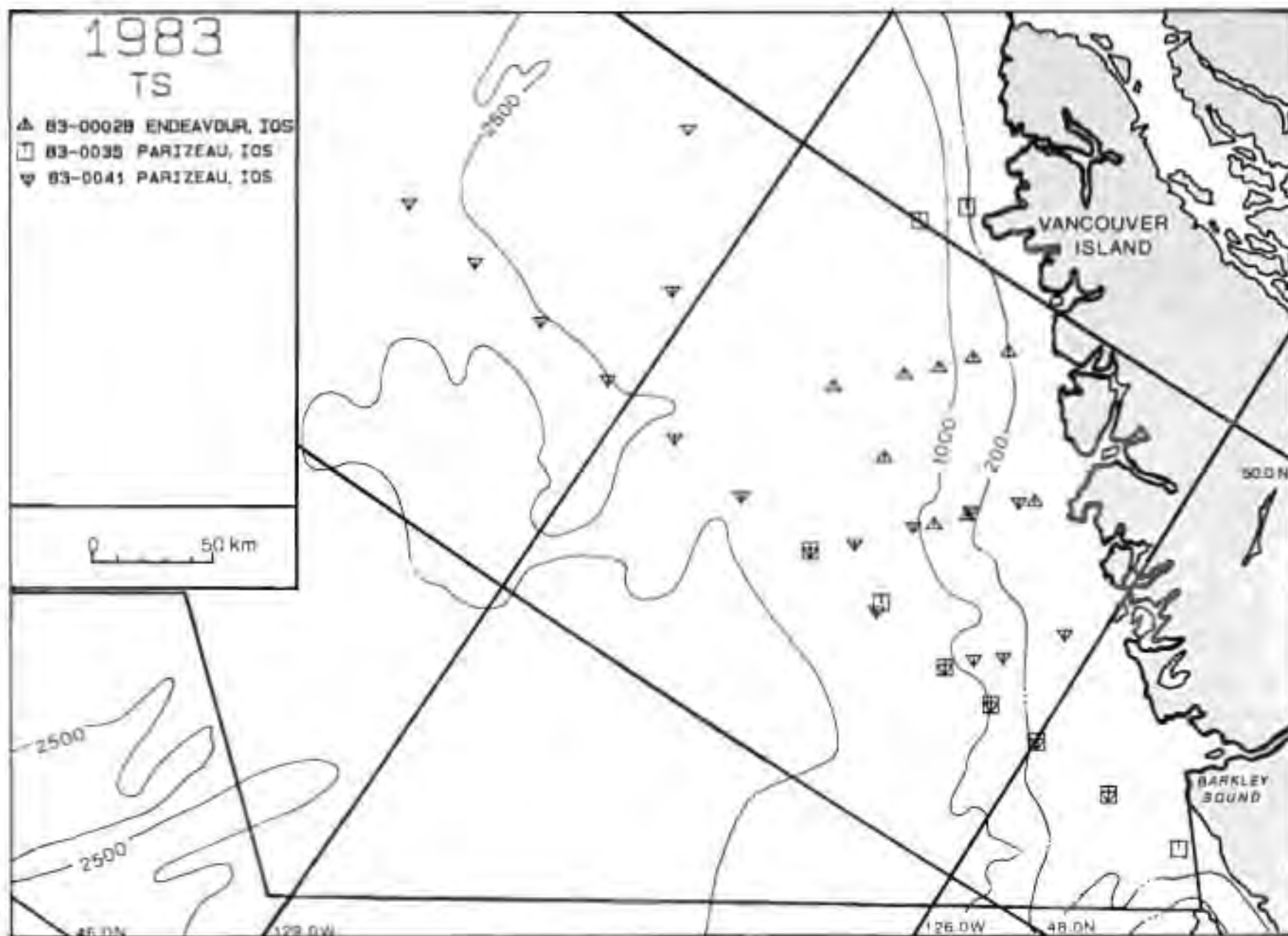
0 50 km

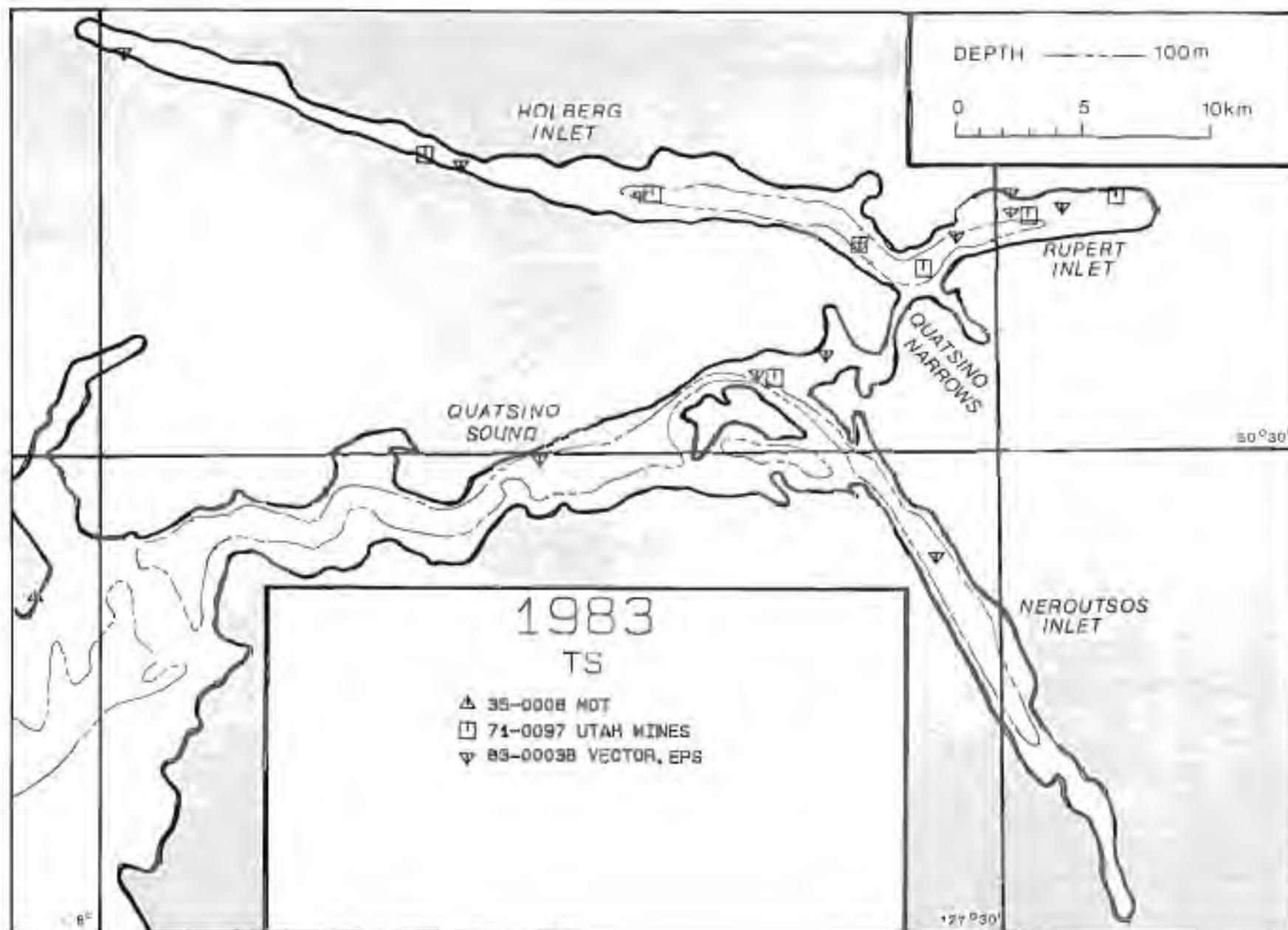


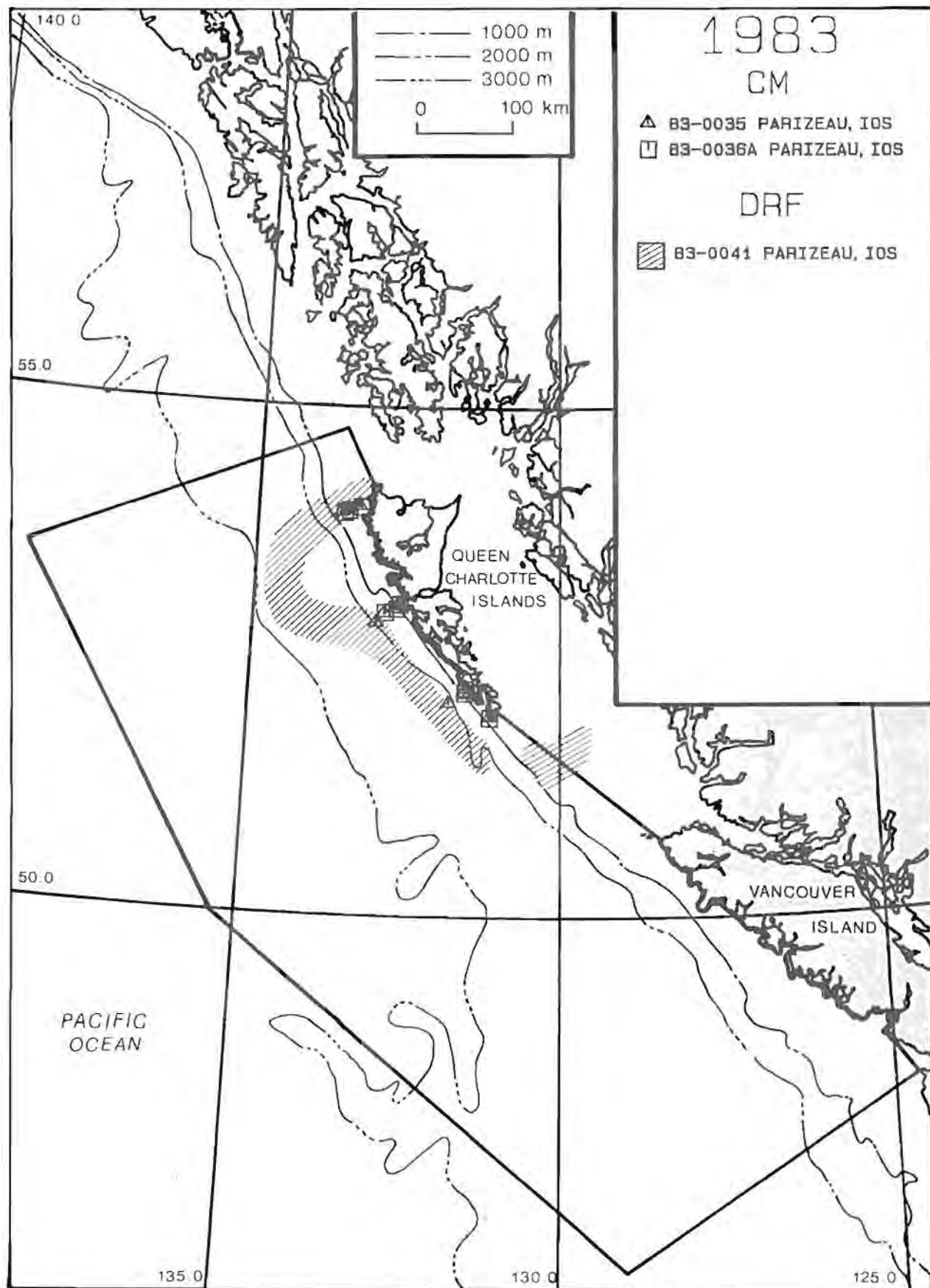
1983
TS

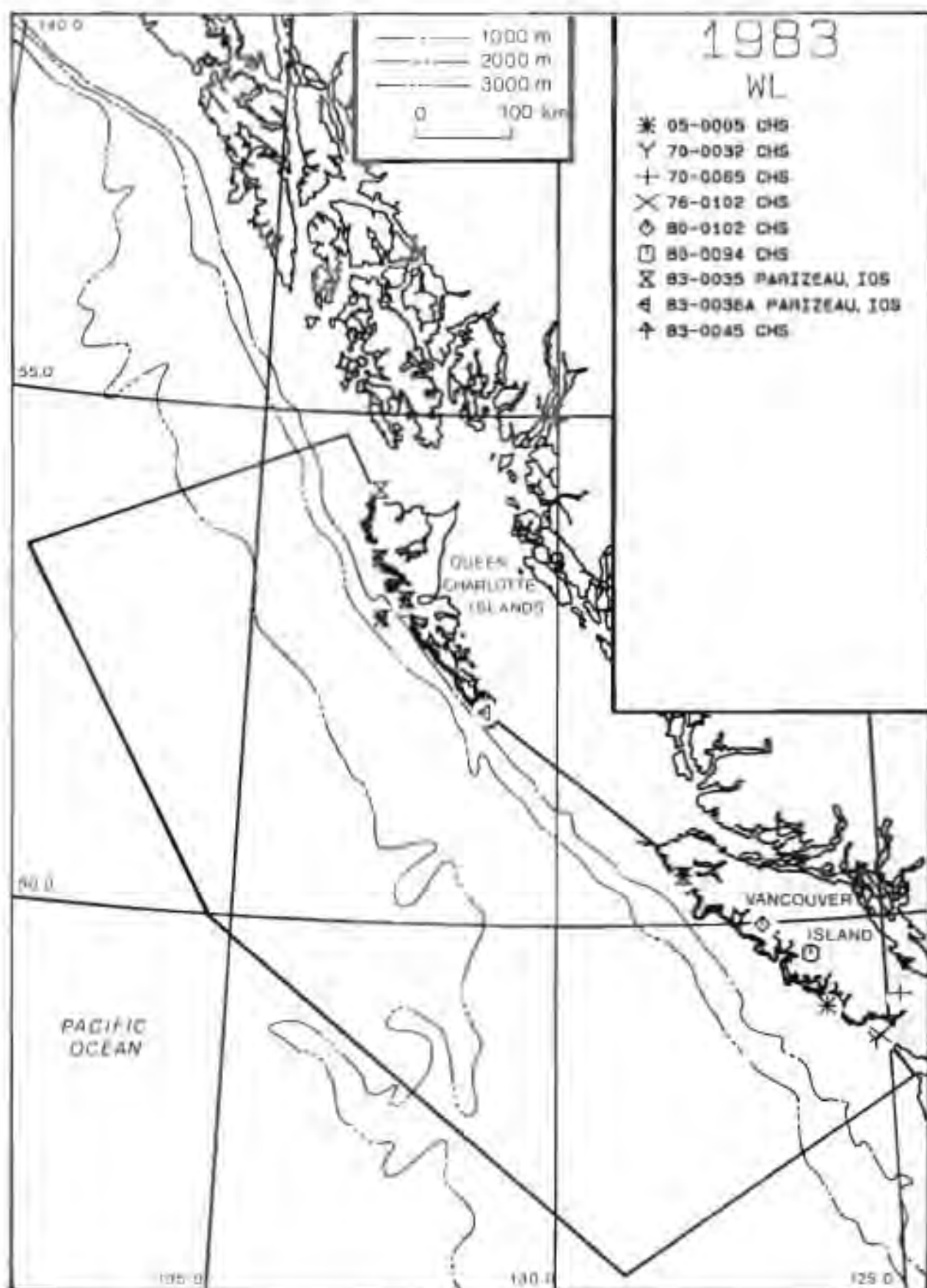
- ▲ 83-0002B ENDEAVOUR, IOS
- 83-0035 PARIZEAU, IOS
- ▽ 83-0041 PARIZEAU, IOS

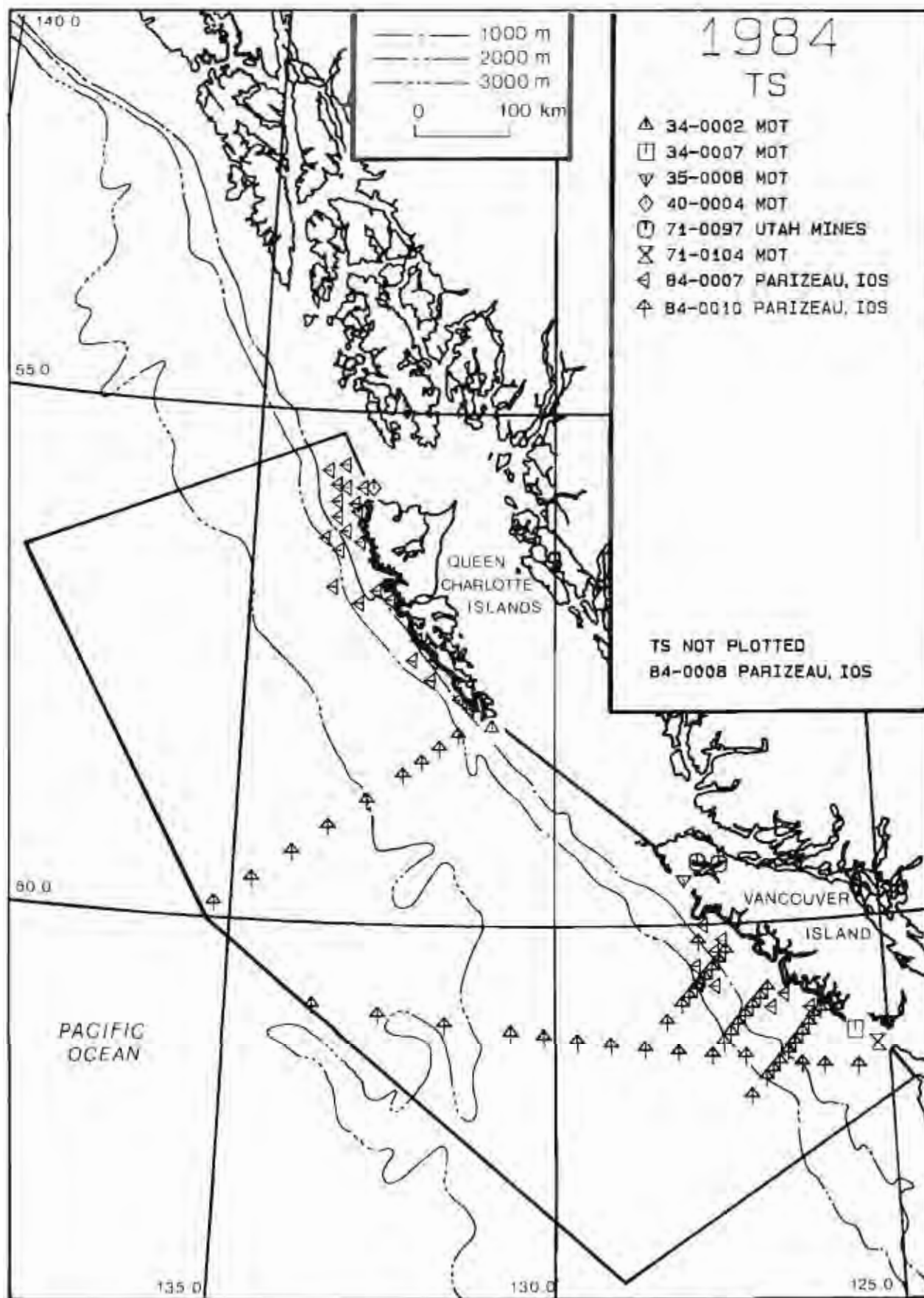
0 50 km

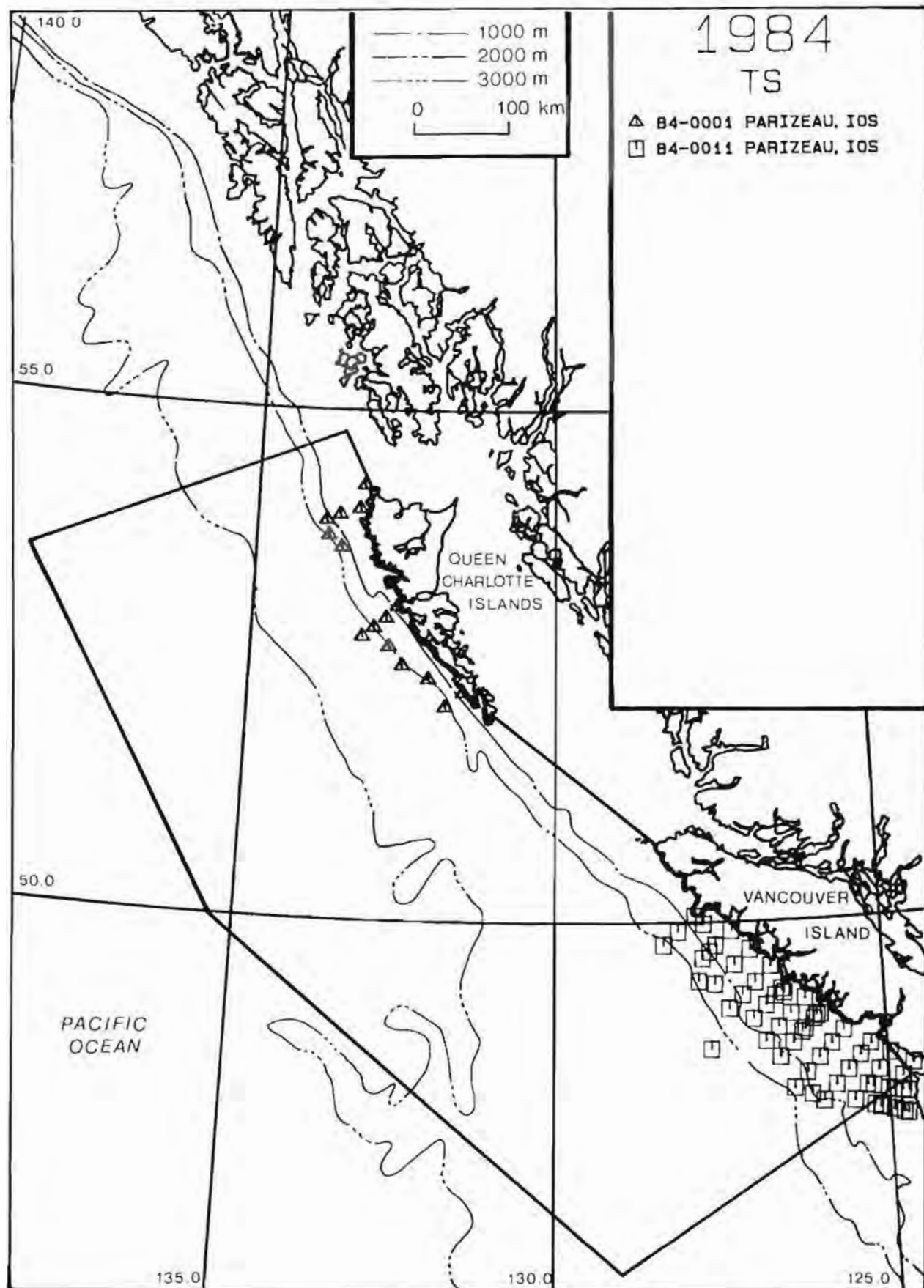


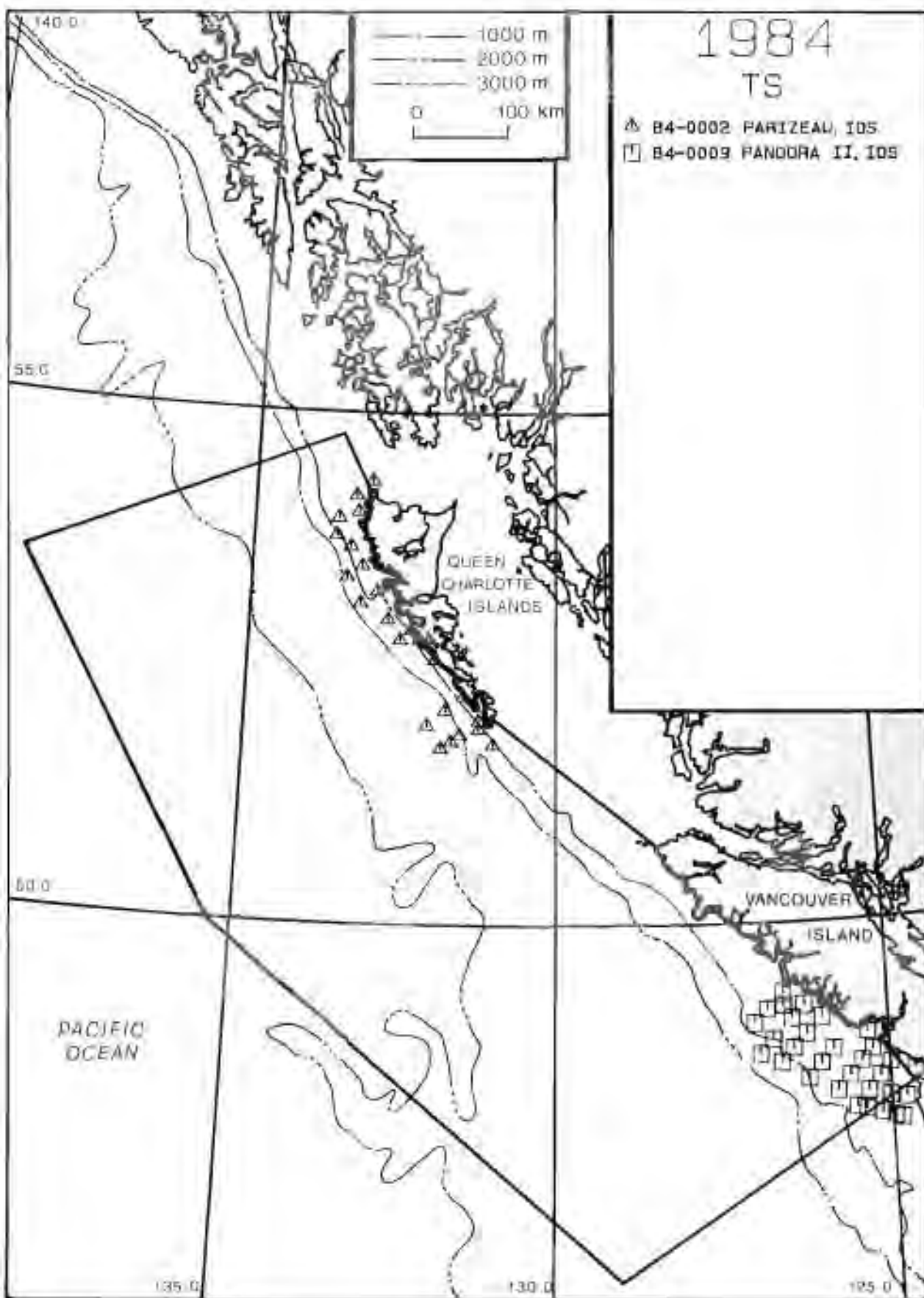












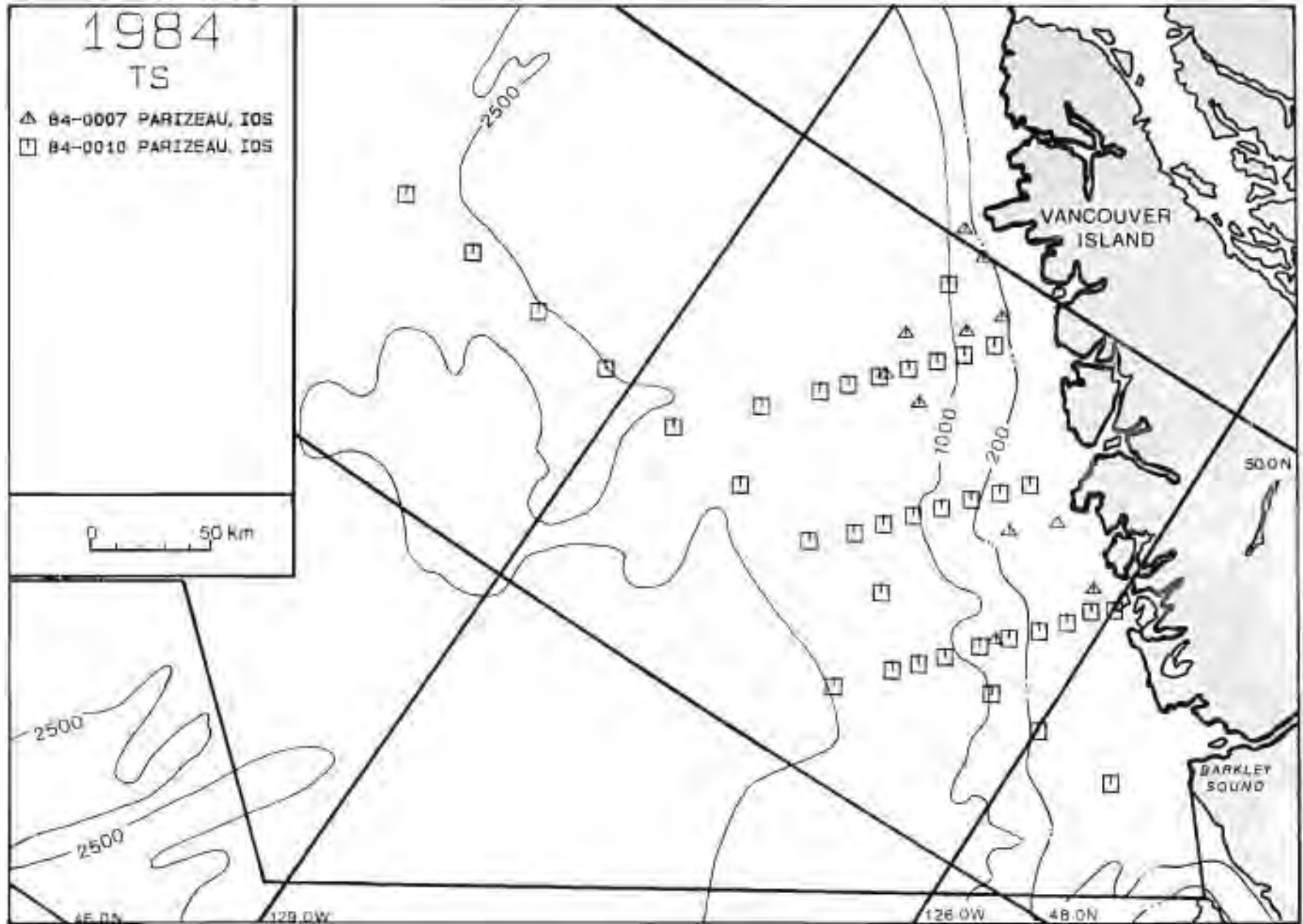
1984

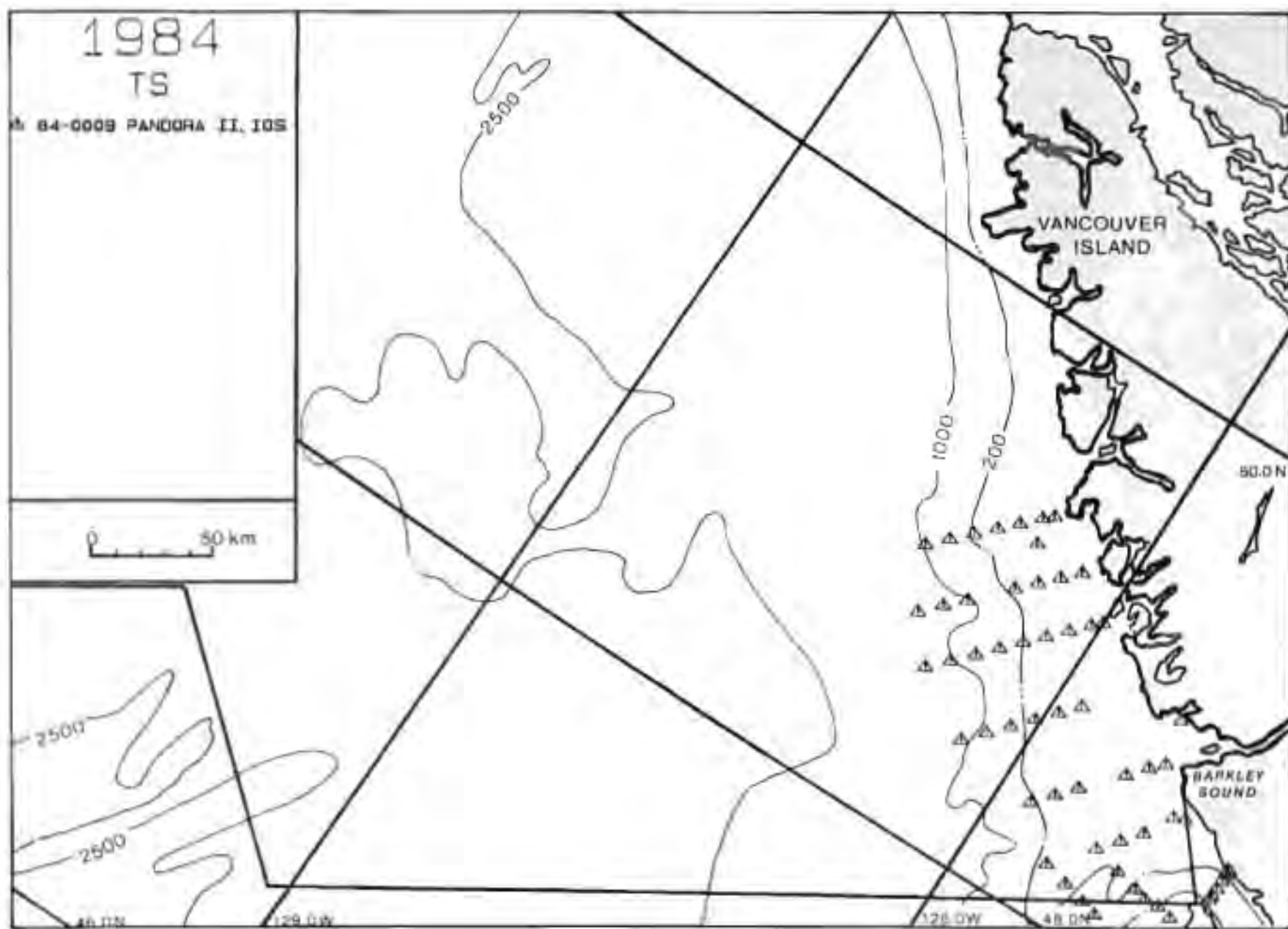
TS

△ B4-0007 PARIZEAU, IOS

□ B4-0010 PARIZEAU, IOS

0 50 km





1984

TS

△ B4-0011 PARIZEAU, IDS

0 50 km

