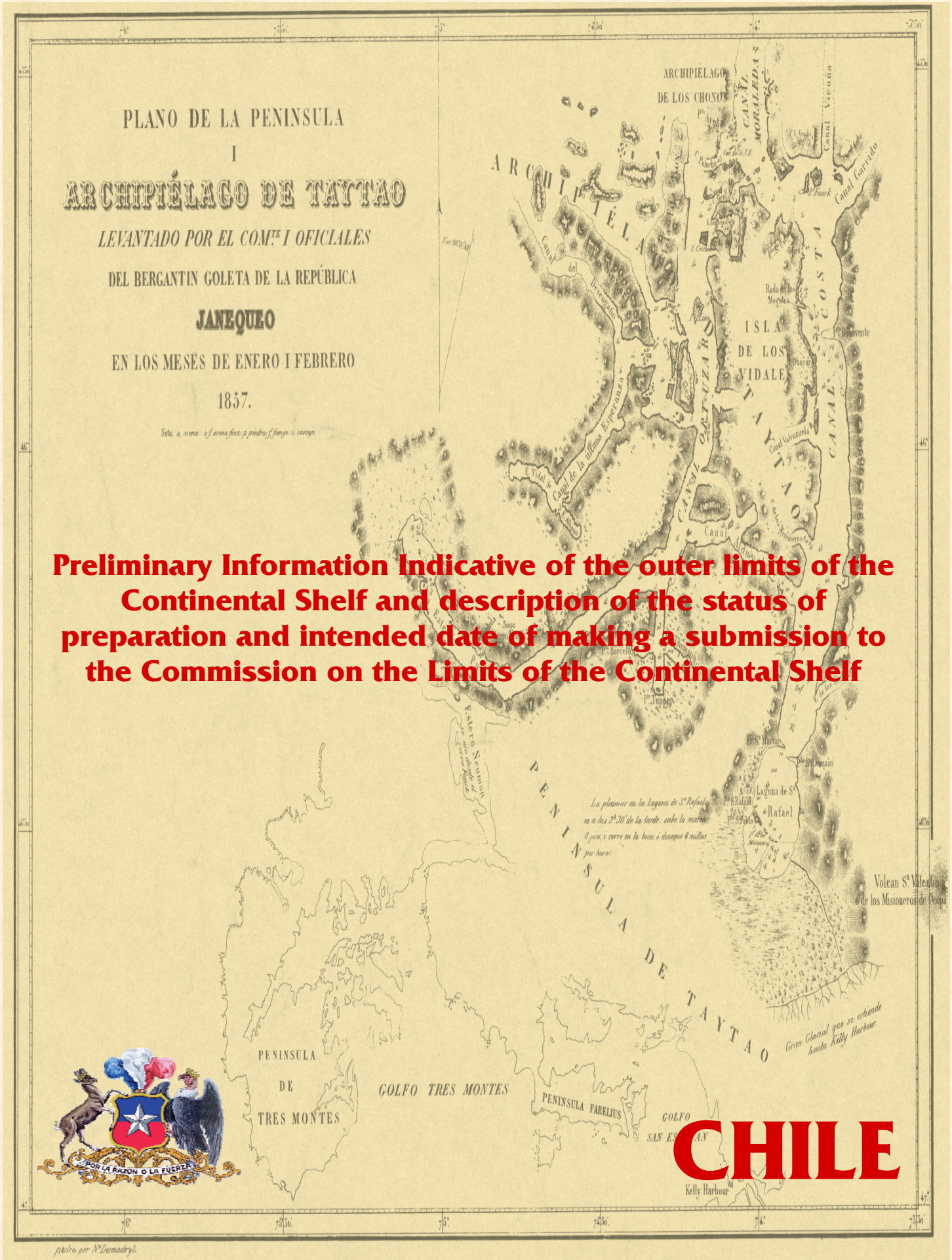

Preliminary Information Indicative of the outer limits of the Continental Shelf and description of the status of preparation and intended date of making a submission to the Commission on the Limits of the Continental Shelf

CHILE

This Preliminary Information has been prepared for the Government of Chile by:

- Ministry of Foreign Affairs (a.k.a. MINREL)
- Ministry of Defense – Secretariat of the Navy
- Ministry of Mining
- National Directorate of Frontiers and Limits of the State (a.k.a. DIFROL/MINREL)
- Hydrographic and Oceanographic Service of the Navy (a.k.a. SHOA)
- Chilean Antarctic Institute (a.k.a. INACH)
- National Service of Geology and Mining (a.k.a. SERNAGEOMIN)
- Empresa Nacional de Petróleo (a.k.a. ENAP)
- University of Chile (scientific experts)
- Pontifical Catholic University of Valparaíso (scientific experts)
- University of Concepción (scientific experts)

  and the collaboration of the University Andrés Bello

May 2009

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The "Merino" is a Chilean naval ship used to undertake bathymetric surveys for the National Committee on the Continental Shelf.

The Discoverer II and Geo Searcher are seismic vessels that have been used to undertake two seismic surveys for the National Committee on the Continental Shelf

Figure 1 Bathymetric and seismic vessels

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1. Introduction

The United Nations Convention on the Law of the Sea, hereinafter referred to as "the Convention", was ratified and deposited act by the Republic of Chile (Chile) on 25 August 1997. It entered into force for Chile on 24 September 1997 and was published in the Official Journal on 18 November 1997.

Article 4 of Annex II to the Convention stipulates that where a coastal State intends to establish, in accordance with article 76, the outer limits of its continental shelf beyond 200 nautical miles (200 M) from the baselines from which the breadth of the territorial sea is measured, it should submit particulars of such limits to the Commission on the Limits of the Continental Shelf, hereinafter referred to as "the Commission", along with supporting scientific and technical data as soon as possible, but in any case within ten years from the entry into force of the Convention for that State.

In 2001 the Eleventh Meeting of States Parties to the Convention decided that in the case of a State Party for which the Convention entered into force before 13 May 1999, it is understood that the ten-year| time period referred to in article 4 of Annex II to the Convention shall be taken to have commenced on 13 May 1999 (document SPLOS/72, paragraph (a)). This decision applies to Chile. Consequently, in the case of Chile the ten-year time period referred to in article 4 of Annex II of the Convention extends until 13 May 2009.

The Eleventh Meeting of States Parties to the Convention also decided that the general issue of the ability of States, particularly developing States, to fulfill the requirements of article 4 of Annex II to the Convention be kept under review (document SPLOS/72, paragraph (b)). Due to lack of financial and technical resources and relevant capacity and expertise, or other similar constraints, many developing countries have been facing particular challenges to fulfill these requirements.

Accordingly, in June 2008 the Eighteenth Meeting of States Parties to the Convention decided that it is understood that the ten-year time period referred to in article 4 of Annex II to the Convention may be satisfied by submitting preliminary information indicative of the outer limits of the continental shelf beyond 200 M from the baselines from which the breadth of the territorial sea is measured, and a description of the status of preparation and intended date of making a submission (document SPLOS/183, paragraph 1 (a)).

Chile has faced particular challenges in fulfilling the requirements of article 4 of Annex II to the Convention due to geographical and technical constraints for data acquisition. The morphology of the Chilean continental margin is complex and access to the areas that show evidences of an extended continental shelf is complicated, the latter being affected by unfavorable sea and climatic conditions. Therefore, Chile is in the process of acquiring more data to support a submission regarding the outer limits of the continental shelf beyond 200 M.

To this end, Chile has prepared preliminary information indicative on the outer limits of the Chilean continental shelf beyond 200 M from the baselines from which the breadth of the territorial sea is measured, to be submitted to the Secretary-General in accordance with the decisions contained in SPLOS/183 of June 2008. Submissions regarding the Chilean extended continental shelf shall be made at an appropriate time.

2. Assistance and advice received during the preparation of this preliminary information

No active member of the Commission provided advice to Chile in the preparation of this preliminary information.

Chile solicited the assistance and technical advice of the UNEP Shelf Programme, a programme of UNEP/GRID Arendal, to initiate the preparation of preliminary information indicative of the outer limits of the continental shelf beyond 200 M.
The UNEP Shelf Programme agreed to provide such assistance on the clear premises that:

- The assistance should not amount to the preparation of a submission to the Commission in accordance with article 76 of the Convention and article 4 of Annex II to the Convention, as well as the decision contained in SPLOS/72, paragraph (a), but should be limited to the preparation of preliminary information indicative of the outer limits of the continental shelf of Chile

beyond 200 M to be submitted to the Secretary-General in accordance with the decision contained in SPLOS/183, paragraph 1 (a).

- The UNEP Shelf Programme takes no position on, nor does it accept any responsibility for, any legal or other issues pertaining to the preparation of the preliminary information, including with regard to baselines. The UNEP Shelf Programme has not assisted Chile in the preparation of sections devoted to Antarctic area which are included herein.
- The UNEP Shelf Programme provided assistance and advice based on open and accessible sources, notably an initial desktop study based on modern Geographical Information System technology (GIS).

APPENDIXES A-B-C-D and E contain all of the figures referred to in this document.

3. Outer limit of the continental shelf of Chile – Baselines

The present preliminary information and description deal with the outer limits of the continental shelf appurtenant to Chile.

In accordance with Maritime Zone Notification N° 37 of 29 September 2000, Chile has deposited with the United Nations, normal and straight baselines for measuring the breadth of the Territorial Sea, the Contiguous Zone, the Exclusive Economic Zone and the Continental Shelf. These baselines are used in this preliminary information.

4. Provisions of UNCLOS invoked in support of this preliminary information

This preliminary information invokes paragraphs 1, 3, 4, 5 and 6 of article 76 of the Convention to support the delineation of the outer limits of the continental shelf beyond 200 M.

Chile also notes that the relevant provisions of UNCLOS, including its article 77, provide inter alia that the rights of the coastal State over the continental shelf do not depend on any express proclamation, and recalls the decisions of Meetings of the States Parties to UNCLOS and the Rules of Procedure of the Commission on the Limits of the Continental Shelf.

5. General description of the Chilean continental margin off the coast of Chile

The continental margin of Chile is characterized by seismic and tectonic activity. In the Southeastern Pacific Ocean, the Chile Ridge, the main branch of the Pacific Ridge, constitutes a major geotectonic feature and is thousands of kilometers in length.

The Chile Ridge is the only example of the active subduction of a ridge, a process by means of which the ocean floor continues expanding once it collides and goes under the continent. The intersection of the Chile Ridge and the Chile Trench happens at a point known as Triple Junction, currently located in front of the Taitao Peninsula at 46° S.

The Triple Junction, the point where three lithospheric plates (Nazca - Antarctica - South America) meet, has migrated more than 800 km northward, along the Chile Trench, during the last 14 million years.

Migration to the north of the Triple Junction, connected with the progressive subduction of three major segments of the Chile Ridge at 14 million, 6 million and 3 million years ago, has left a significant geologic record in almost all the far south of the continent, and has an influence area of millions of square kilometers. The geologic record shows the major influence the progressive subduction of the Chile Ridge had on the tectonic and magmatic history of South America, particularly in Patagonia.
In the western margin of South America the progressive subduction of the Chile Ridge has had the following main tectonic consequences:

- Progressive erosion of the continental margin;
- Formation and/or reactivation of the Liquiñe-Ofqui Fault Zone in the Andes Range in the south of Chile;
- Uplifiting and subsidence of the continental margin, at changing scales, from the Taitao Peninsula to the Andes Range, including wide areas of Central Patagonia.

In sum, the Chile Ridge has played a main role in the geologic history of South America through both, long and short term tectonic and magmatic processes that have helped build and shape fundamental geological and geomorphologic features of the continent (Figure 2).

In the area of Taitao all geological and geophysical studies have already been undertaken. Raw data processing is under way; acquisition of seismic data is close to an end in the area of Easter Island and bathymetric studies have been initiated in the eastern area of Salas y Gómez Islands. Bathymetry in Easter Island is pending.

We also have access to public data collected by scientific cruises for the areas of San Félix/San Ambrosio, Juan Fernández Archipelago and Antarctica that will allow us to define and plan future seismic and bathymetric surveys to make a submission within the next few years.

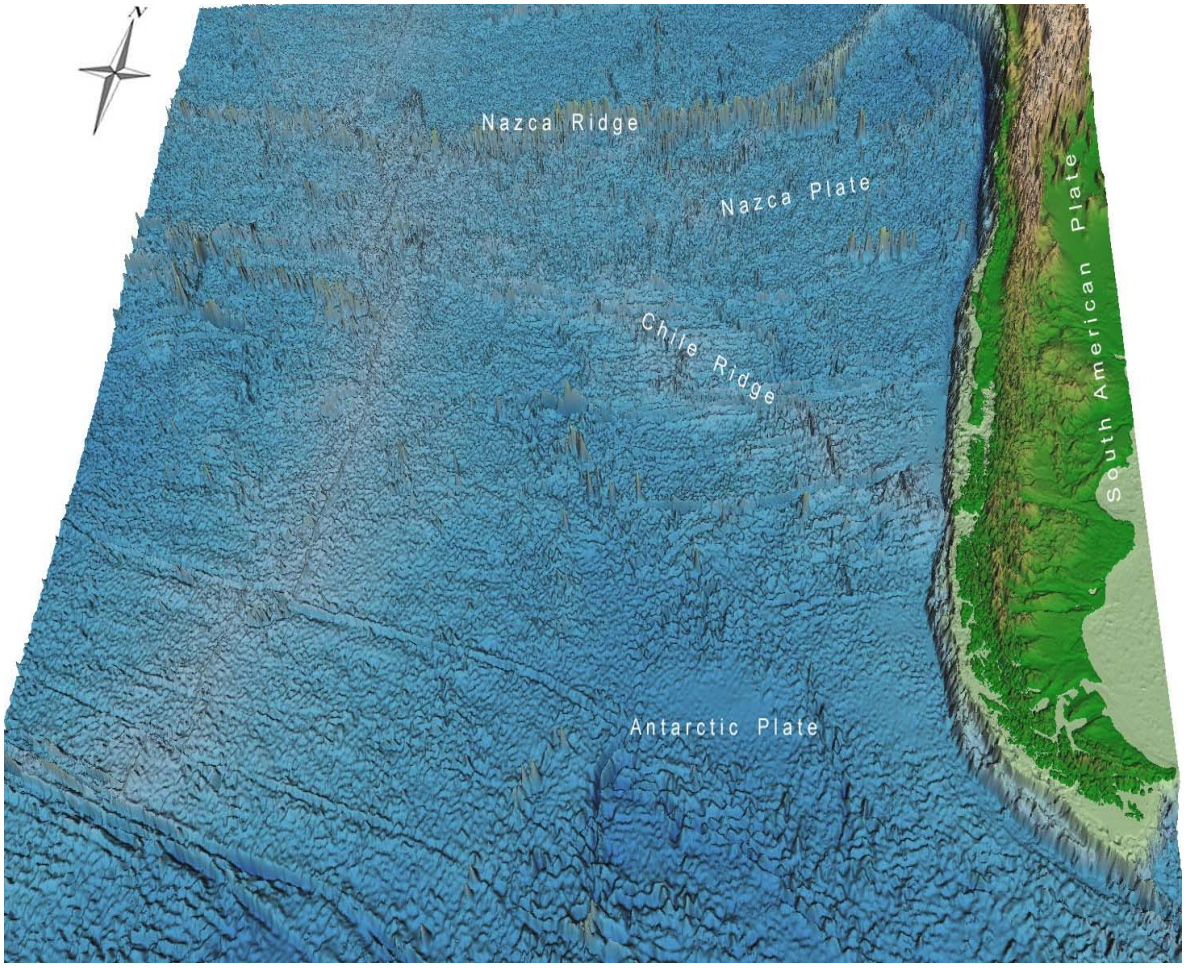


Figure 2 From a morphologic point of view, there is a vast trench along the Chilean continental margin, which intersects with the Chile Ridge at a point known as the Triple Junction, currently located in front of Taitao PeninsulaThis Triple Junction is the convergence of three plates that are present along Chile: Nazca, Antarctica and South America. The areas of Easter Island, Juan Fernández and San Félix / San Ambrosio Islands are located close to the Chile Ridge and the Nazca Plate

.

5.1 Taitao Area (Appendix A)

The southern Chilean margin at 43°30'S is one of the few places on Earth where three major lithosphere plates (Nazca, Antarctic and South American Plates) meet at a single point. These three plates converge at the Chile Triple Junction (CTJ), where the NW-trending Chile Ridge that separates the Nazca Plate (to the north) from the Antarctic plate (to the south) impinges the Chile Trench and is obliquely subducted below the South American Plate. To the north of the CTJ the Nazca Plate subducts beneath the South American Plate at a rate of 8–9 cm/year, whereas to the south, the Antarctic plate subducts at 2 cm/year.

Subduction of the Chile Ridge started at approximately 14 million years ago, at the latitude of the Madre de Dios Island (50°S). As a consequence of differential movements between tectonic plates, the location of the CTJ migrated from south to north along the Chilean margin until reaching its current position offshore Taitao Peninsula 6 million years ago. Today this continues to be the location of three ridge subduction events. In the vicinity of the CTJ, the Chile Ridge consists of three 40–225 km long segments, separated by the Guafo, Guamblin, Darwin and Taitao Fracture Zones. Directly north of the CTJ, the young, buoyant, hot oceanic crust of the segment of the Chile Ridge, comprised between the Darwin and Taitao Fracture Zones is currently subducting after entering the trench 0.3 million years ago.

The collision of the Chile Ridge with the continental margin of southern Chile has produced a major structural and topographic disturbance around the CTJ. As a consequence of the ridge subduction process, oceanic material of the Chile Ridge has

been accreted to the continental margin as shown in Peninsula Tres Montes by the occurrence of outcrops of a young ophiolitic complex: the Taitao ophiolite located along the landward extension of the Taitao Fracture Zone. The emplacement mechanisms of this fragment of oceanic lithosphere over the continental margin of southern Chile have been studied by numerous research projects carried out in the CTJ region.

These studies have shown that during the last 6 million years pieces of oceanic crust originated in the Chile Ridge have been emplaced on top of the continental basement at the Tres Montes Peninsula showing beyond doubt, the existence of a close geological linkage between the Chile Ridge and the mainland Chile.

These links have also been found by geological and geophysical studies performed offshore the Tres Montes Peninsula where the continuity of the Chile Trench is interrupted by a submarine ridge (Taitao Ridge) that Bangs et al. (1992) considers as the “offshore extension of the Taitao Peninsula”… topographically linking the Chilean mainland with the axis of the Chile Ridge to the west. Although the origin of Taitao Ridge has been debated, geophysical data indicates that it consists of dense igneous rocks. This rock was sampled during leg 141 of the Ocean Drilling Project (site 862) and during other dredges performed along the flanks of the ridge which collected a suite of lavas of various compositions that are geochemically similar to those forming the upper part of the sub-aerially exposed Taitao Ophiolite, at the Tres Montes Peninsula. These results suggest that the Taitao Ridge is an emerging ophiolite complex in the process of being uplifted and emplaced on top of the basement of the continental shelf.

5.2 Oceanic Islands

The seabed of the South Pacific Ocean presents several reliefs, diverse in nature and dimensions. One kind of relief is represented by an important amount of islands and submarine ridges of all types, sizes and shapes. One of the main features of this kind of submarine topography is the formation of aligned chains of submarine ridges, some of which rise over sea level.

This pattern of ridges results from the movements of tectonic plates over hotspots that may be defined as regions located on the mantle and underneath the lithosphere's base a few hundred kilometers in diameter with material melted at very high temperatures which last for at least ten million years and whose existence may be inferred from the activity over it. The linear progression of expelled magma as it gains distance from the hotspot makes it possible to discover the age of the ridges. Likewise, the extension of each line can be explained because it is directly related to the volume of expelled material.

Two chains of islands and submarine ridges have been identified in the Southeastern Pacific. The first one is located in the area of Easter Island and Salas y Gómez, extending to the area of San Félix and San Ambrosio in a latitude strip. This line extends along 5.015 km, has an average breadth of 517 km and covers an area of 2,695,555 km². Another similar ridge extends in the opposite direction, that is to say, westwards of Easter Island, until it reaches the area of Pitcairn.

To the south, at 33°S, there is a second chain in the Juan Fernández Archipelago. This chain is smaller and is formed by Robinson Crusoe, Alejandro Selkirk and four submarine mountains. This ridge extends along a 424 km line, 50 km wide. There is an isolated submarine mountain at the same latitude at a point close to 73° 55' W, which has a submerged summit at a depth close to 400 mts.

Emerged Reliefs

Easter Island is located between latitudes 27°03' and 27°10' S and between longitudes 109°16' and 109°27'W, 3.700 km from the Chilean coast, 400 km northwest of Salas y Gómez and 3.200 km west of Mangevera Island. It is 560 mts above sea level and a few kilometers from the coast, the sea has a depth of 4.500 mts deep. Its base lies on the slope of the Eastern Pacific Dorsal, approximately 530 km from the axis of the dorsal.

The island has an almost triangular shape with an area of 160 km², three main volcanoes and about 70 subsidiary eruptive centers. Poike Volcano has a 2 million year volcanic history, Ranu Kau is 1 million years old and Terevaka, the youngest, is 240.000 years old.

Salas y Gómez is a small island 700 mts wide in an east-west direction and 400 mts wide from north to south. The highest elevation was formed by several flows of lava 30 mts high. The island is located 415 km to the northeast of Easter Island and 3,500 km from mainland Chile.

Its geographical position is between 26° 27’ 41’’ S and 105° 28’ 00’’ W. The shelf surrounding the island is elongated from northeast to southwest, is 2 to 2.5 km wide to the south of the island, and ends at a clear breaking point in the slope to the southwest and east-southeast. It is believed to be 1.7 million years.

San Félix and San Ambrosio are two volcanic islands 800 km from mainland Chile and 2,800 kilometers from Easter Island. San Ambrosio is 254 meters above sea level, 800 meters wide and 3 km long. For its part, San Félix is 183 meters above sea level, approximately 5 km long and 1,000 meters wide. These emerged reliefs are the remains of two different craters and the so-called “Cathedral of Peterborough”, located one mile northwest of San Félix, maybe a third crater.

Submerged Reliefs

Between longitudes 79° and 87° S submarine ridges are concentrated and have a circular or elliptical lay out. The Nazca Plate is located at the northernmost point and is composed by a single big structure. San Félix and San Ambrosio, the two summits of a large marine mountain that seems to be isolated from others in the region, are located in this area.

Between longitudes 87° and 101.5° W a main ridge comes up running along latitude 25° S and a secondary one runs along latitude 28.5° S. The main ridge is partially composed by a block presenting aligned sharp peaks and an alternation of high, medium and low altitudes. At the secondary ridge, submarine mountains are isolated for several kilometers, the smallest of which are sharp and the more robust ones flat-

summit. In general, the topography of this area is irregular and composed of low mountains encircled by several subsidences tens of kilometers in diameter.

Between 101° and 110° W the ridge is topographically irregular with an alternation of high, medium and low mountains. The north side is a block of three summits, the highest being Salas y Gómez. For its part, Easter Island is the sharp summit of a submarine mountain in the middle of a chain of other medium and low mountains which follows a NE-SW diagonal.

There is a small lump on the seabed between 110° and 118.5° W. The irregular topography in this area is composed of uplift, subsidence and mountains of different sizes shaping a rhombus, which is located at the center of this area. Each side of the rhombus has a different space and morphologic disposition in comparison with other sides.

Two ridges lie between 118.5° and 130° W. The ridge along latitude 25° S is composed by three main groups. The eastern most is composed of mountains and rounded rises. The central group is composed of three high marine mountains linked at the base, where Ducie Island is located. The western most group contains an isolated mountain that emerges giving way to Henderson Island.

Juan Fernández Line-up

This line-up extends for almost 1,000 km and is composed of 7 elevations, two of which are the islands of Robinson Crusoe and Alejandro Selkirk. There is an elevation between them, whose summit is 900 meters below sea level. Four elevations contiguous to the island are located to the east of Robinson Crusoe. The last one, named O'Higgins, is located at the same latitude.

5.3 Antarctica

Antarctica has an area of 13.5 million km² and is considered to be tectonically shaped by two big sections, namely Eastern Antarctica and Western Antarctica, both of which are divided by a major topographic element: the Trans Antarctic Mountains. Eastern Antarctica is a continental shield composed of old igneous and metamorphic rock covered by more recent and well stratified sediments. Western Antarctica is composed of sediments and more recent volcanic rocks strongly folded and subject to a certain degree of metamorphosis (Figure 3).

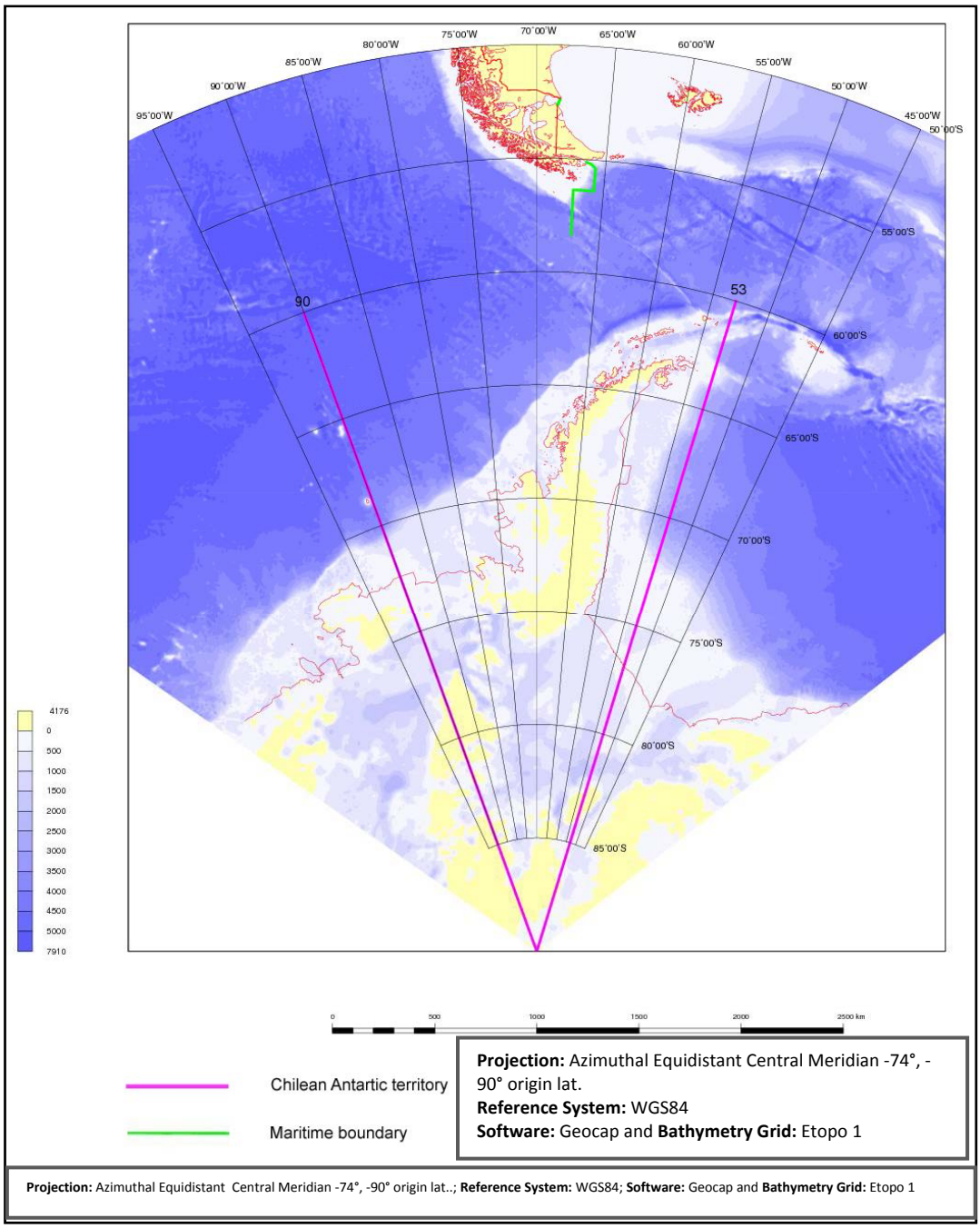


Figure 3 Chilean Antarctic Territory

Antarctica is almost fully covered by a sheet of ice more than two thousand meters thick in some areas. This ice crust reaches sea water almost everywhere and its main tributaries penetrate the sea several kilometers, giving way to wide shelves ending in ice cliffs, from which icebergs dislodge. This mobile element transports a solid flow that comes from both its breadth and slope, becoming a very efficient agent of erosion.

Glaciers, continental barriers and other forms of ice transport over 90% of the total amount of detritus from the continent. On the other hand, marine erosion, mainly swell, along with an especially efficient gelification, affects the exposed rocks providing an abundant abrasive material. Thus, the glacial activity, the abrasion and the deflation has shaped a complex coastal and submarine geomorphology.

The seabed located in front of Western Antarctica, goes from 60° to 130° W and 45° to 70° S. The submarine morphology close to the continent is not easily recognizable, given the presence of floating ice. The continental slope is extremely steep and minor irregularities of the contour of the slope seem to be the result of submarine landslides stemming from the instability of the sizable supply of glacial material.

The Continental Elevation presents an extraordinary development along almost the whole Antarctic Margin, except to the north of the Hero Fault area, where a rough submarine ridge landscape ends at the edge of the South Shetland Trench.

The main morphologic feature is the Bellingshausen abyssal plain located at the southern most portion of the Pacific. Its border to the south is the Antarctic Continental Margin, the Chile Ridge to the north, and the Antarctic Peninsula to the east, extending almost 3,000 miles eastwards and being 1,000 miles wide.

The composition and distribution of superficial sediments have several original features derived from and governed by the specific conditions of Antarctic physiography, which has one of the world's harshest climates with very low air temperatures, a snow line located almost at sea level, a great amount of ice in the sea during most of the year and intense atmospheric circulation with long periods of strong winds. This combination of factors affects continental rocks and results in significant erosion of coastal areas. By the action of oceanic streams, said material moves later towards deepest zones.

Sediment reaching the sea is distributed irregularly over the seabed. In the Sea of Bellingshausen, the amount of submarine canyons is the main channel by means of which the sediment supply operates, particularly those coming from the earth. On the other hand, sediments moved by ice rapidly decrease when they gain distance from the continent until they practically disappear to the north of the Antarctic Convergence.

Also, given the special characteristics and configuration of Antarctic seabed regions, the special morphological evidences do not explain by themselves the different types of sources of elevations; they need further geological and geophysical evidence which, in some areas of the Antarctic Peninsula are in the final stage of their

compilation, and in others, are just being developed, considering the harshness of the climate.

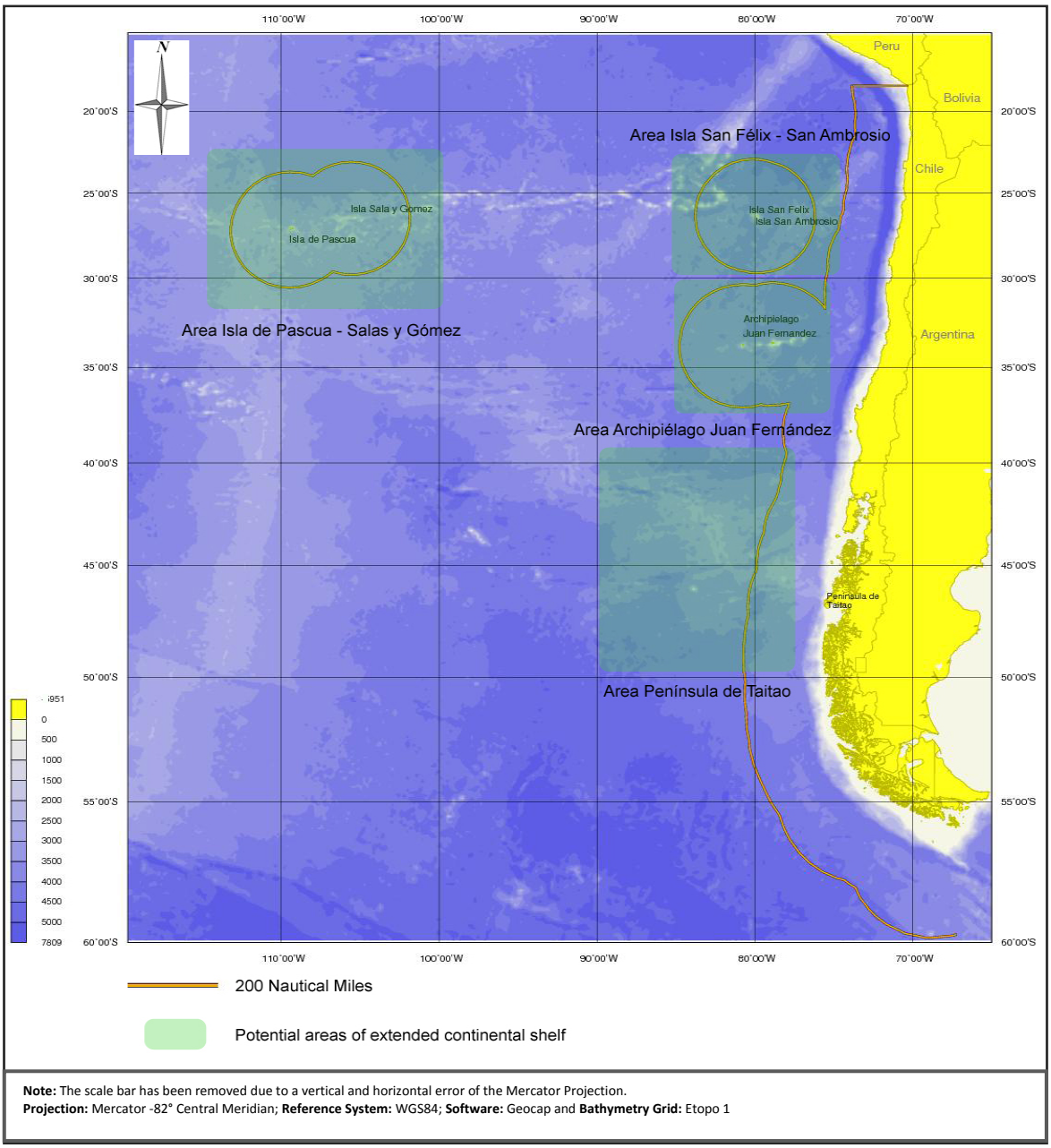
Regarding the Chilean Antarctic Territory, Chile recalls the principles and objectives shared by the Antarctic Treaty and the United Nations Convention on the Law of the Sea, and the importance of the Antarctic system and UNCLOS working in harmony and thereby ensuring the continuing peaceful cooperation, security and stability in the Antarctic area.

Chile has regard to the circumstances of the area south of 60 degrees South latitude and the special legal and political status of Antarctica under the provisions of the Antarctic Treaty, including its article IV, and notes that appurtenant to Antarctica there exist areas of continental shelf the extent of which has yet to be defined. It is open to the States concerned to submit information to the Commission which would not to be examined by it for the time being, or to make a partial submission not including such areas of continental shelf, for which a submission may be made later, notwithstanding the provisions regarding the ten-year period established by article 4 of Annex II to UNCLOS and the subsequent decision on its application taken by the Eleventh Meeting of State Parties to UNCLOS.

The Commission will be duly informed on the option to be taken by Chile regarding the Chilean Antarctic Territory.

6. Preliminary information indicative of outer limits of the continental shelf beyond 200 M (Appendix B and C)

In accordance with SPLOS/183 op.p. 1 (a), this preliminary information seeks to document that at least one Foot of the Slope Point (FOS point) has locations that make it clear that Chile's continental shelf extends beyond 200 M from the baselines in each of the continental areas.



Note: The scale bar has been removed due to a vertical and horizontal error of the Mercator Projection.
Projection: Mercator -82° Central Meridian; **Reference System:** WGS84; **Software:** Geocap and **Bathymetry Grid:** Etopo 1

Figure 4 Map showing the geographical location of Chile's continental shelf potential areas in the Pacific

Considering that there is limited scientific data currently available, at this stage no final conclusion has been made regarding the most appropriate location of the base of the Chile's continental slope. Rather it is found incumbent, based on current available data, to document at least the minimum extent of the continental shelf in selected key areas – by providing compelling prima facie evidence that FOS points may at least be located in certain areas, if not farther from shore.

As stated above, Chile has started to acquire bathymetric data of the seafloor. More over there may be grounds for carrying out additional surveys for the precise identification of FOS points (for which there might be significant variations). The following FOS points and their projected preliminary outer limit points are hereby submitted as part of the preliminary information. These may be subject to later revision.

6.1 Existing database (Appendix D and E)

Figures in Appendixes D and E show track lines to acquire bathymetric and seismic data to determine whether Chile fulfills the criteria for an extended continental shelf beyond 200 M (test of appurtenance) in the four continental areas above described.

Up to now, the National Committee has acquired seismic data in the areas of Taitao and Easter Island, whereas far-reaching studies for Juan Fernández and San Félix and San Ambrosio, as well as in Antarctica, are still pending.

All data apart from that acquired by SHOA was assembled, reformatted and provided by the One Stop Data Shop (GRID-Arendal). (www.continentalshelf.org).

This preliminary information refers to data collected by SHOA in “Taitao” as well as data produced with the Geophysical Data System (GEODAS) of NOAA National Geophysical Data Center (NGDC) in Colorado. It has been used to formulate a hypothesis concerning other areas that as of yet have not been surveyed using a better resolution.

Additional bathymetric and seismic data are based on data produced by the Institut français de recherche pour l'exploitation de la mer (IFREMER), Marine Geoscience Data Management System (MG_DMS) and the Institut de Physique du Globe de Strasbourg (IPGS).

The following satellite - derived bathymetric grids have also been used: ETOPO2, ETOPO1 and GEODAS.

In the case of Antarctica, we have resorted to using the existing public data from different scientific cruises that have conducted surveys, including the General Bathymetric Chart of the Oceans (GEBCO) and databases of the SCAR Seismic data library system for cooperative research (SDLS). The analyses of the data were done with the Geocap software utilizing the UNCLOS Module (www.geocap.no). Methods used are documented in this preliminary information.

6.2 Foot of the continental slope points

FOS points in Taitao Area.

Several FOS points have been identified on single-beam bathymetric profiles using SHOA data and GEODAS database. Two of these FOS points generating continental shelf area beyond 200 M are plotted and described in more detail in the following documentation to demonstrate the variable nature of the continental margin of Chile. The possibility of identifying FOS points located further seaward cannot be excluded, should more data be acquired and made available at a later stage.

6.2.1. TAITAO AREA

FOS ELT13

Basic Data

Data type	Data source
Single beam bathymetric profile	GEODAS, survey Taitao Line ELT13

Line ELT 13 is directed NE-SW crossing the Chile Ridge towards south connecting the continental slope of the Chile Ridge with the seabed of the South American basin plate. Point FOS ELT13 is situated at the base of the continental slope on the southern side of the Chile Ridge.

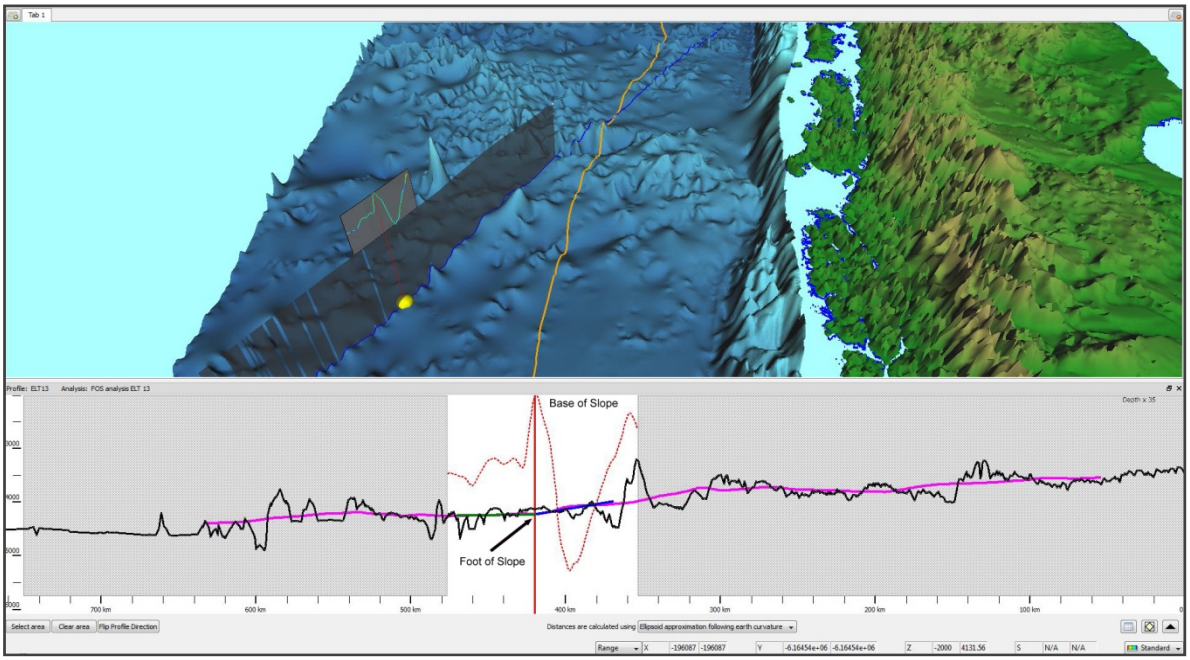


Figure 5

The area of the base of the slope is identified on the basis of the morphology of the continental slope in the area as it is depicted by the single beam bathymetric profile GEODAS, Taitao Line ELT13. Point FOS ELT 13 was determined as the point of maximum change in gradient within the base of the area.

Analysis of point FOS ELT13 in Taitao Area at the base of the continental slope, according to bathymetric profile ELT13 (lower panel). Figure 5 contains a 3D view of the continental margin of Chile seen from south towards north including the location of FOS ELT13 (yellow circle). The bathymetric profile ELT20 (grey shaded panel) is based on a filtered profile (magenta line). Point FOS ELT13 has been calculated to be the point of maximum change in average gradient across the area of the base of slope based on the 2nd derivative of the slope (red dotted graph in lower panel).

TAITAO AREA

6.2.2 FOS ELT 20

Basic Data

Data type	Data source
Single beam bathymetric profile	GEODAS, survey Taitao Line ELT20

Line ELT 20 is located at the base of the continental slope of Taitao Area crossing the Chile Ridge towards south connecting the continental slope of the Chile Ridge to the seabed of the South American basin plate in a NE-SW direction.

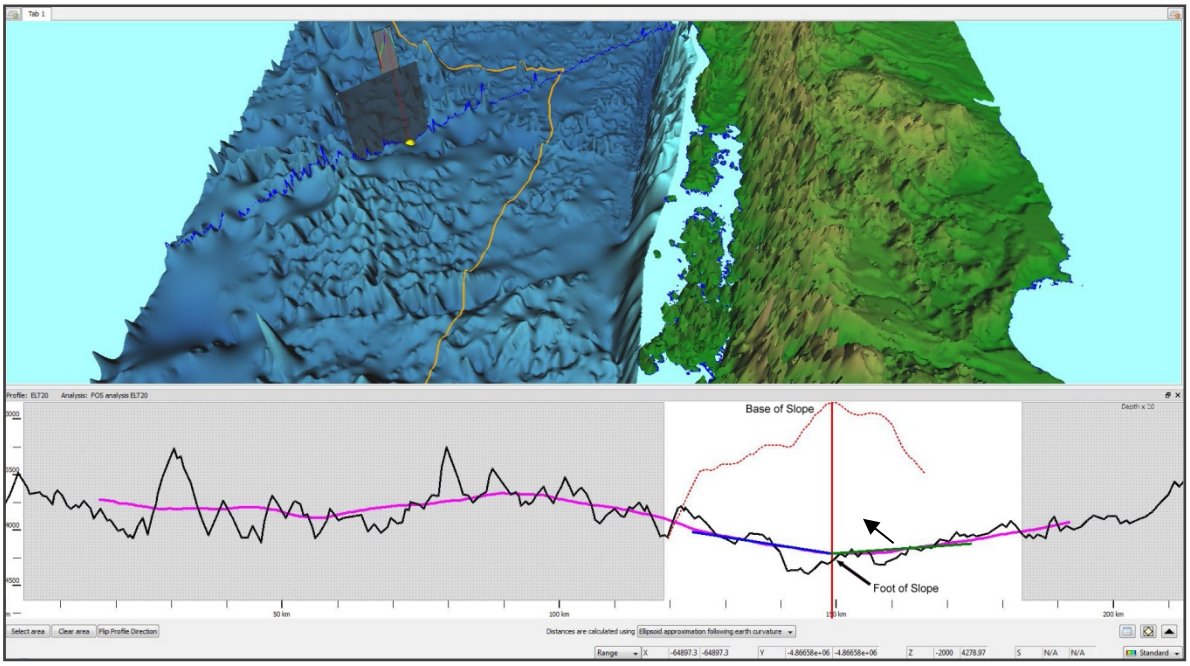


Figure 6

The area of the base of the slope is identified on the basis of the morphology of the continental slope by the single beam bathymetric profile ELT 20 that runs obliquely across the submarine elevation. Point FOS ELT 20 was determined as the point of maximum change in gradient within the base of the area using Geocap filter tools.

Analysis of point FOS ELT20 in Taitao area at the base of continental slope, based on bathymetric profile ELT20 (lower panel). Figure 6 contains a 3D view of the continental margin of Chile viewed from south towards north, including the location of FOS ELT20 (yellow circle), and the bathymetric profile ELT20 (grey shaded panel) is based on a filtered profile (magenta line). Point FOS ELT20 has been calculated to be the point of maximum change in average gradient across the area of the base of slope based on the 2nd derivative of the slope (red dotted graph in lower panel).

EASTER ISLAND AND SALAS Y GÓMEZ ISLAND AREA

6.2.3 FOS HELIO 3MV_1

Basic Data

Data type	Data source
Single beam bathymetric profile	GEODAS, survey Easter Island HELIO 3MV_1

Line HELIO 3MV_1 is located at the base of the continental slope on Easter Island and Salas y Gómez Island area crossing the emerged reliefs northward connecting the continental slope of Easter Island with the seabed of the basin plate in a SW-NE direction.

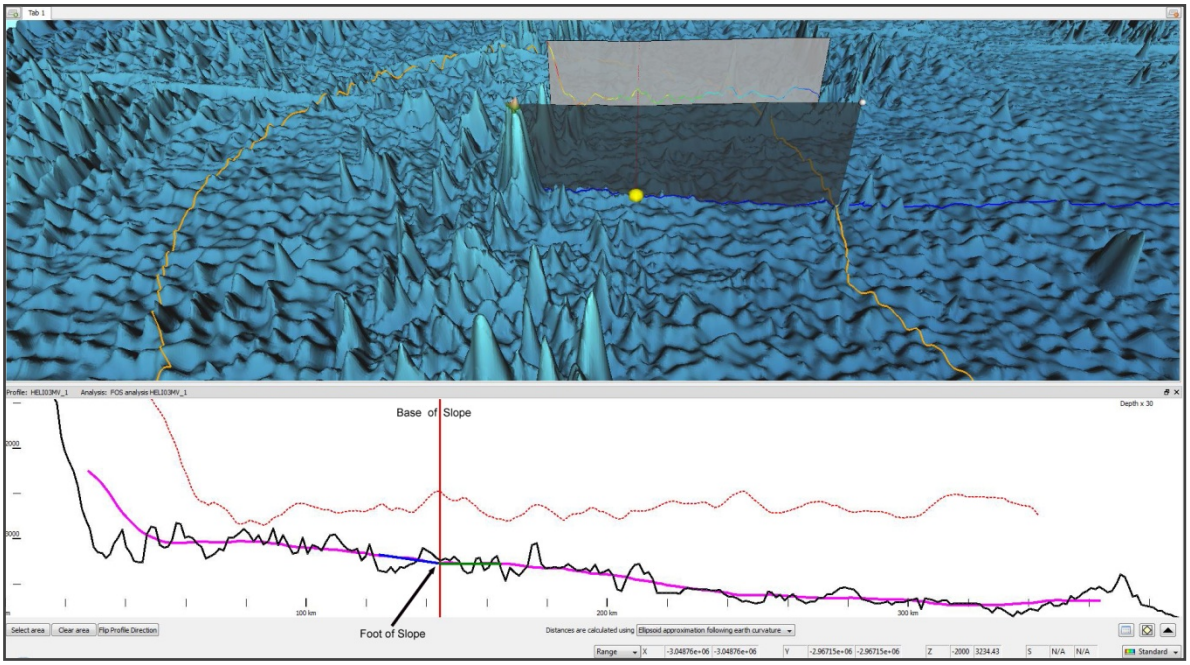


Figure 7

The area of the base of the slope is identified on the basis of the morphology of the continental slope by the single beam bathymetric profile HELIO 3MV_1 that runs across the rise. Point 3MV_1 was determined as the point of maximum change in gradient within the base of the area using Geocap filter tools.

Analysis of point FOS HELIO 3MV_1 in Easter Island and Salas y Gómez area at the base of the continental slope, based on bathymetric profile HELIO 3MV_1 (lower panel). Figure 7 contains a 3D view of the continental margin of Chile viewed from south towards north including the location of FOS HELIO 3MV_1 (yellow circle) and the bathymetric profile HELIO 3MV_1 (grey shaded panel) is based on a filtered profile (magenta line). Point FOS HELIO 3MV_1 has been calculated to be the point of maximum change in average gradient across the area of the base of slope based on the 2nd derivative of the slope (red dotted graph in lower panel).

JUAN FERNÁNDEZ AREA

6.2.4 FOS CARRO 1BD

Basic data

Data type	Data source
Single beam bathymetric profile	GEODAS, survey Juan Fernández area CARRO 1BD

Line CARRO 1BD is directed crossing the rise connecting the continental slope of the area with the seabed. Point FOS CARRO 1BD is situated at the base of the continental slope of the northern side of the rise in Juan Fernández area.

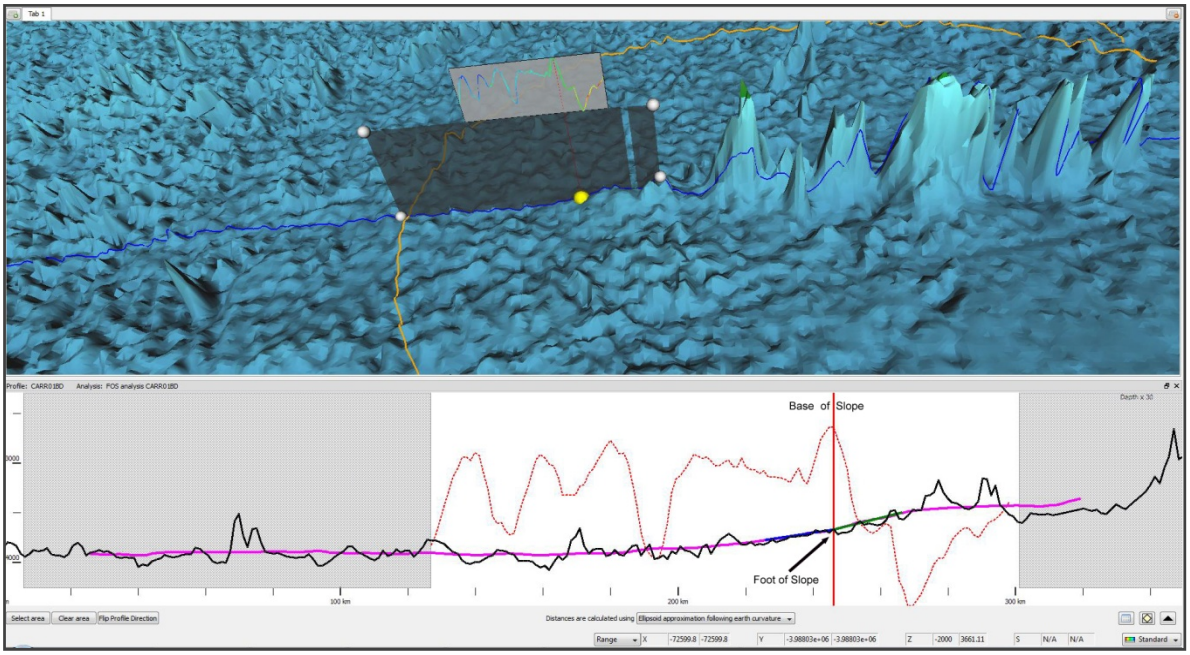


Figure 8

The area of the base of the slope is identified on the basis of the morphology of the continental slope as depicted by the single beam bathymetric profile GEODAS Juan Fernández Line CARRO 1BD. Point FOS CARRO 1BD was determined as the point of maximum change in gradient within the base of the area.

Analysis of point FOS CARRO 1BD in Juan Fernández area at the base of continental slope, based on bathymetric profile CARRO 1BD (lower panel). Figure 8 contains a 3D view of the continental margin of Chile from south to north including the location of FOS CARRO 1BD (yellow circle). The bathymetric profile CARRO 1BD (grey shaded panel) is based on a filtered profile (magenta line). Point FOS CARRO 1BD has been calculated to be the point of maximum change in average gradient across the area of the base of slope based on the 2nd derivative of the slope (red dotted graph in lower panel).

6.2.5 SAN FÉLIX and SAN AMBROSIO AREA

FOS M3196_2_1

Basic Data

Data type	Data source
Single beam bathymetric profile	GEODAS, survey San Félix/San Ambrosio M3196_2_1

Line M3196_2_1 is directed east crossing the rise towards west connecting the continental slope of San Félix and San Ambrosio area with the seabed of the Nazca Plate. Point FOS M3196_2_1 is situated at the base of the continental slope on east site of the chain.

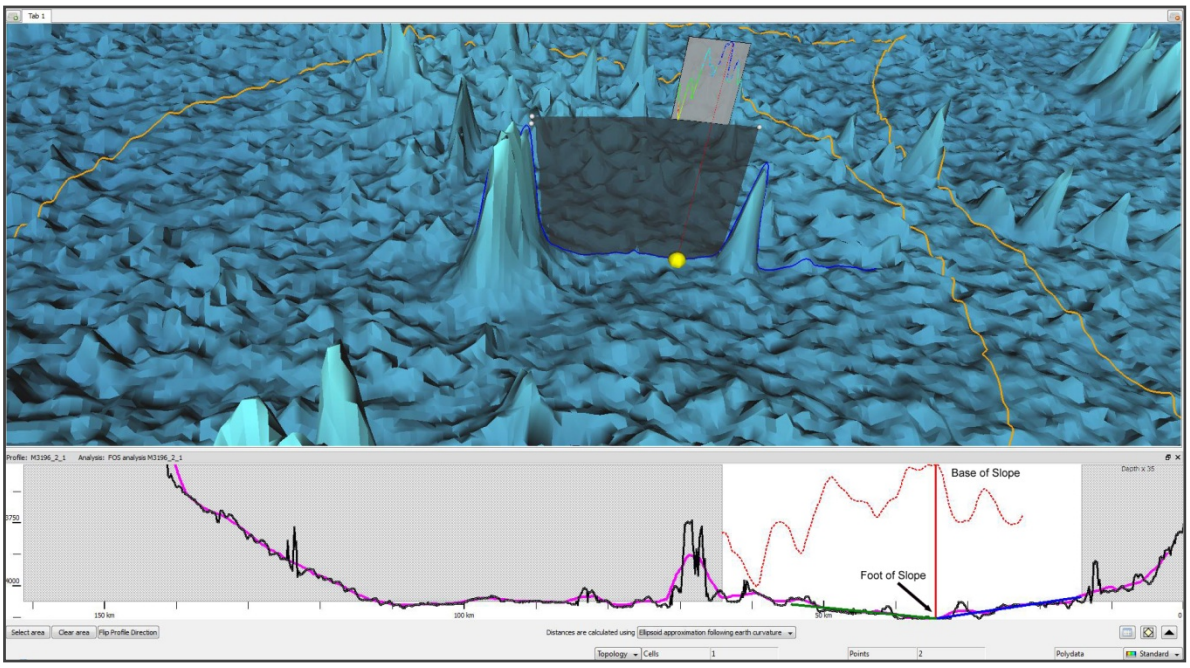


Figure 9

The area of the base of the slope is identified on the basis of the morphology of the continental slope in the area as its depicted by the single beam bathymetric profile GEODAS, San Félix and San Ambrosio M3196_2_1. Point FOS M3196_2_1 was determined as the point of maximum change in gradient within the base of the area.

Analysis of point FOS M3196_2_1 in San Félix and San Ambrosio area at the base of the continental slope, based on bathymetric profile M3196_2_1 (lower panel). Figure 9 contains a 3D view of the continental margin of Chile from south to north including the location of FOS M3196_2_1 (yellow circle). The bathymetric profile M3196_2_1 (grey shaded panel) is based on a filtered profile (magenta line). Point FOS M3196_2_1 has been calculated to be the point of maximum change in average gradient across the area of the base of slope based on the 2nd derivative of the slope (red dotted graph in lower panel).

6.3 Indicative extent of the continental shelf based on selected FOS points

FOS points generate continental shelf area beyond 200 M based on the 60 M distance criterion of article 76 paragraph 4 (a) (ii) of the Convention. The exact location of the outer limits of the continental shelf beyond 200 M awaits the final analyses to be submitted to the CLCS (see section 8).

7. Description of status of preparation and intended date of making a submission

The National Committee on the Continental Shelf asserts that this communication takes advantage as well of publicly available data from relevant intergovernmental bodies and organizations.

The utilization of the data provides a location of several Foot of Slope points and their projections, thus providing in good faith prima facie evidence that Chile's continental shelf extends beyond 200 M from the baseline.

However, the interpretation of the data that is currently being acquired together with the interpretation of additional data collected will be necessary to provide exact information on the location of Foot of the Slope points.

The National Committee is aware that bathymetric and seismic survey cannot be done easily in this open area, mainly due to the long term adverse weather conditions. Regarding the latter several survey phases have been carried out and the Chilean

Government plans to continue with that work in all areas of interest. The extra studies will be presented in the submission to the Commission.

The Scientific and Technical Guidelines (STG) of the Commission[1] give guidance to the type and quality of the data that is required to support the submission of a coastal State to the Commission concerning the outer limit of its continental shelf. Chapter 9 of the STG specifies the format and recommended contents of such a submission. On the other hand, the STG does not give any guidance to the planning or organization of the project of preparing a submission.

The Training Manual provided by Division for Ocean Affairs and the Law of the Sea Office of Legal Affairs (DOALOS)[2], contains further details on how such a project may be conducted. According to the Training Manual the following steps should be taken to plan and manage a submission:

- Undertake the initial appurtenance study;
- Produce a desktop study;
- Plan and acquire data;
- Analyze all data and produce all relevant scientific and technical documentation;
- Prepare the final submission; and
- Provide technical support to political level throughout the project cycle.

[1] Commission on the Limits of the Continental Shelf, 1999. Scientific and Technical Guidelines of the Commission of the Continental Shelf. Division for Ocean Affairs and the Law of the Sea Office of Legal Affairs United Nations, document CLCS/11, 92 p.

[2] Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, 2006. Training Manual for delineation of the outer limits of the continental shelf beyond 200 nautical miles and for preparation of submissions to the Commission on the Limits of the Continental Shelf.

The *"Preliminary information indicative of the outer limits of the continental shelf"* provided in this document show that Chile's continental shelf passes the test of appurtenance. The preliminary desktop study provided relevant information for further studies in additional areas, including the need for additional data acquisition currently being carried out. Chile's extended continental shelf project will contain the following steps:

- Assembling and organizing all existing data (including new data);
- Analyzing the data according to article 76;
- Identifying areas of critical value for further studies;
- Subdividing the geographical area under consideration according to the applicability of the formulae and constraints provisions;
- Identifying the need for further data; and
- Determining preliminary survey plans, cost estimates and recommendations for future work.
- Writing the complete submission document

The National Committee envisages conducting a thorough research plan in accordance with the above conditions. Partial submissions are planned to take place within a period of 10 years, unless otherwise specified.

8. Conclusion

"*Preliminary information indicative of the outer limits of the continental shelf*" provided herein shows that Chile passes the test of appurtenance as described in the Scientific and Technical Guidelines of the Commission. In all FOS points that have been identified on the Chilean continental slope it is clear that Chile's continental shelf extends beyond 200 M from the baseline.

The above preliminary information submitted in accordance with SPLOS/183 op.p. 1 (a) is without prejudice to the submission in accordance with the requirements of article 76 of the Convention and with the Rules of Procedure and the Scientific and Technical Guidelines of the Commission, and the future consideration by the Commission.

It is requested that the Secretary-General informs the Commission and notify member States of this preliminary information in accordance with SPLOS/183 op.p. 1 (d).

APPENDIX A

GEOLOGICAL DESCRIPTION OF THE PENINSULA TRES MONTES-TAITAO REGION

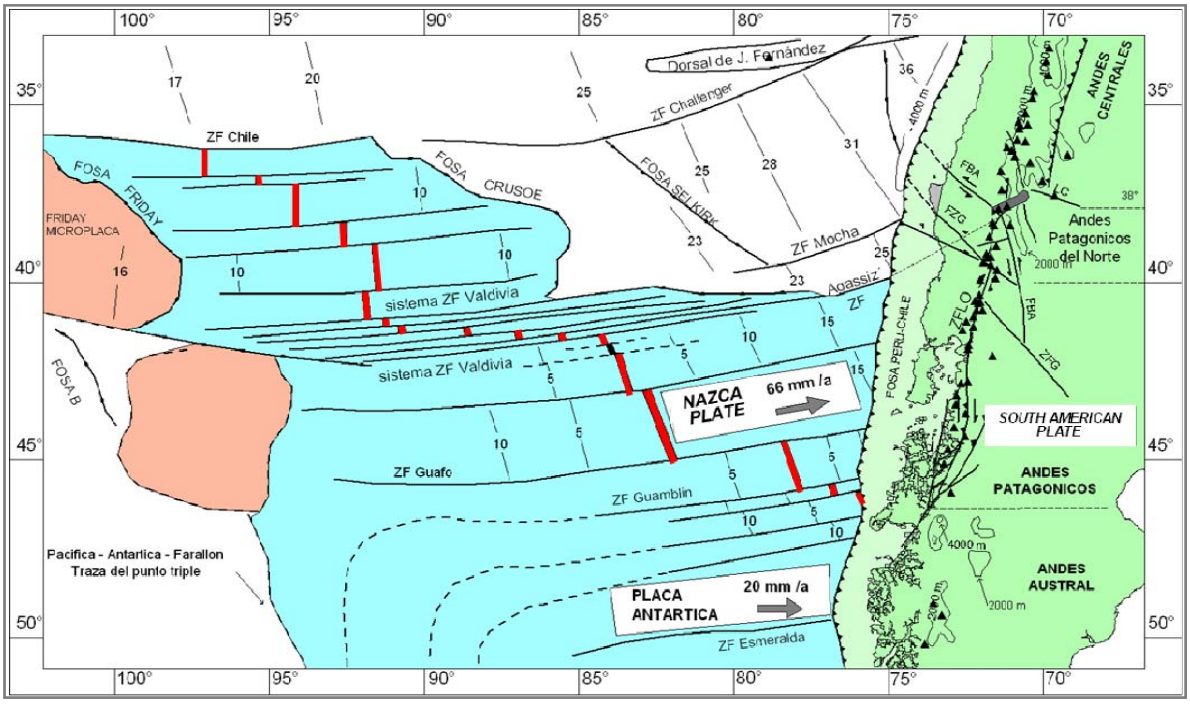


Figure 10 CL.AP.A-1 Main tectonic elements of the SE Pacific offshore of Southern Chile (according to Tebbens & Cande, 1997)

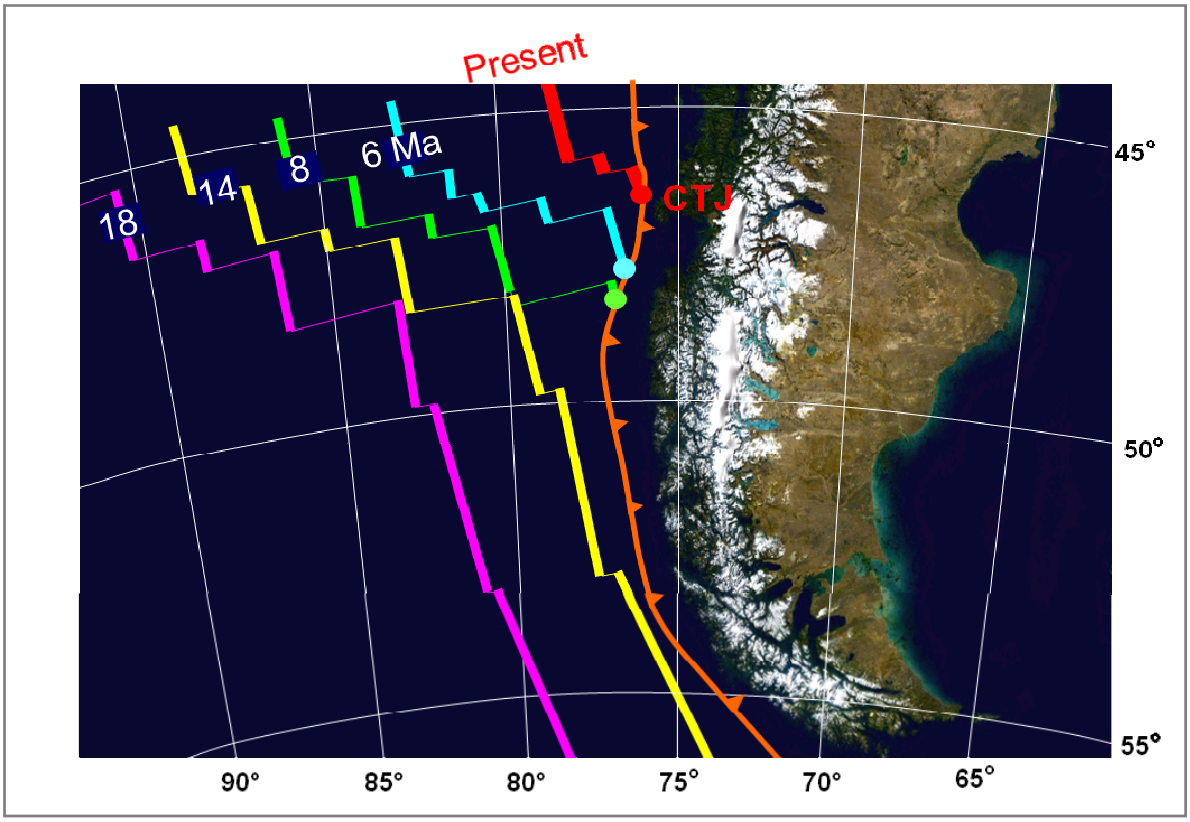


Figure 11 CL.AP.A-2 Reconstruction of the position of the Chile Ridge relative to fixed South America since 18 showing that the Chile Triple Juntion (CTJ) has migrated northwards along the continental margin until it reached the Golfo de Penas-Taitao Peninsula region at around 6 Ma (million years ago). Based on Cande & Leslie (1986)

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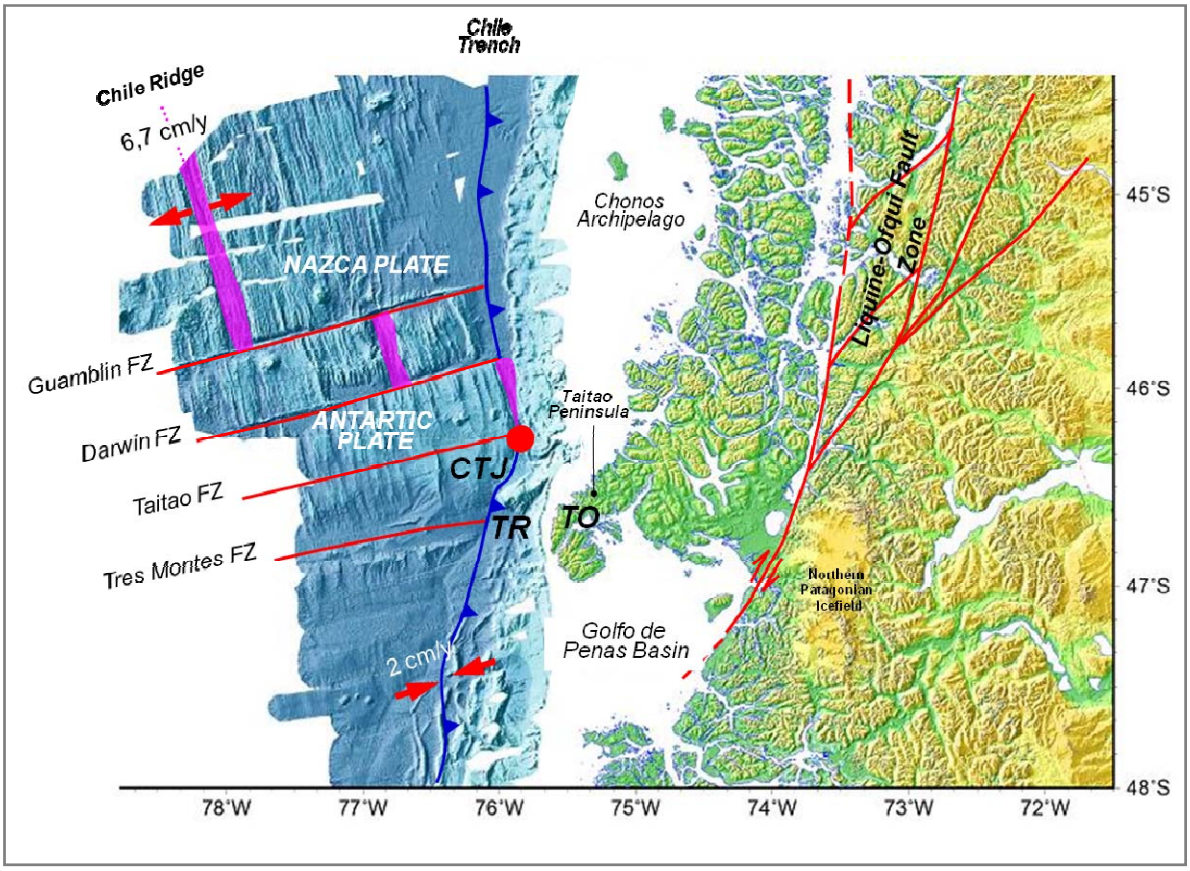


Figure 12 CL.AP.A-3 Map of the Southern Chile Triple Junction region indicating the main tectonic and geomorphologic features mentioned in the text. CTJ: Chile Triple Junction, TO: Taitao Ophiolite, TR:Taitao Ridge. Red arrows indicate half spreading rates along the Chile Ridge and the convergence rate between the Antarctic and South American plates

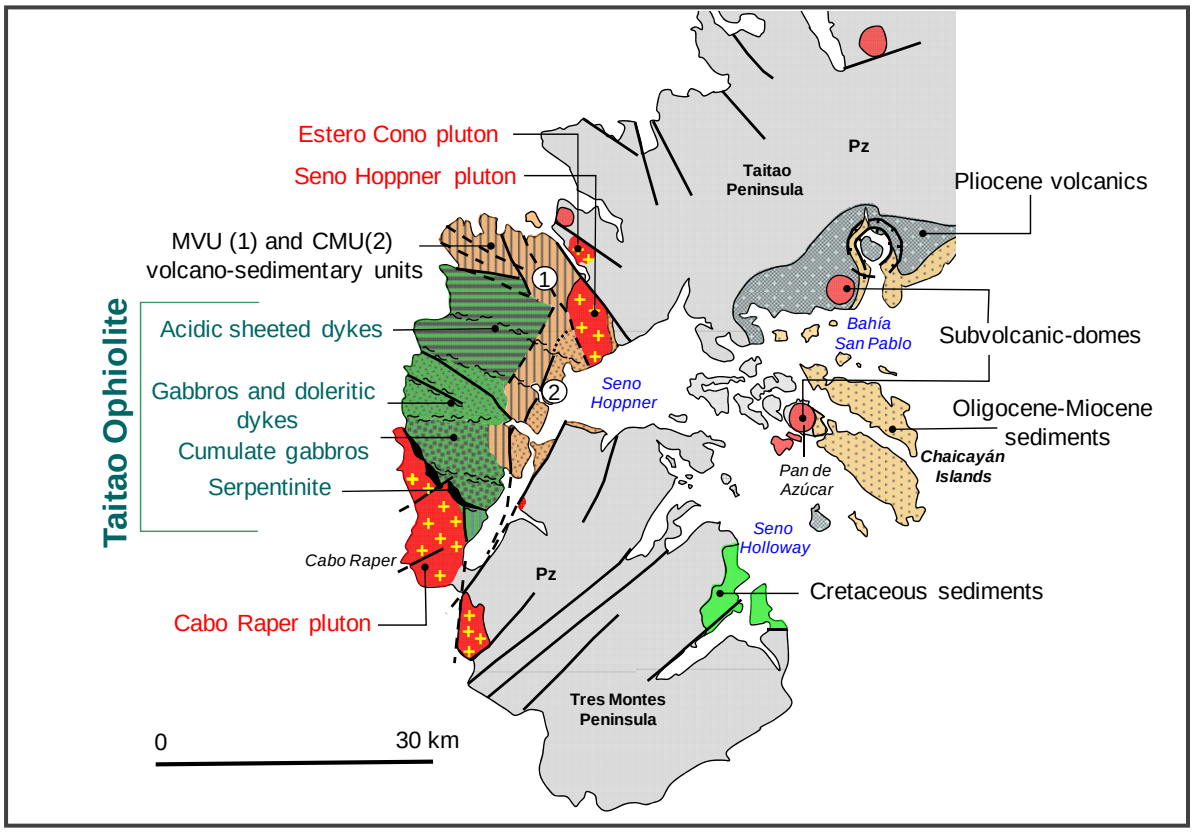


Figure 13 CL.AP.A-4 Geological Map of the Tres Montes Penisula -Taitao region, showing the distribution of different units of the Taitao Ophiolite. The Ophiolite is a fragment of oceanic crust originated in the Chile Ridge, tectonically emplaced over the continental basement of the Chile Margin between 6 to 3 million years ago (modified from Guivel et al, 1999).

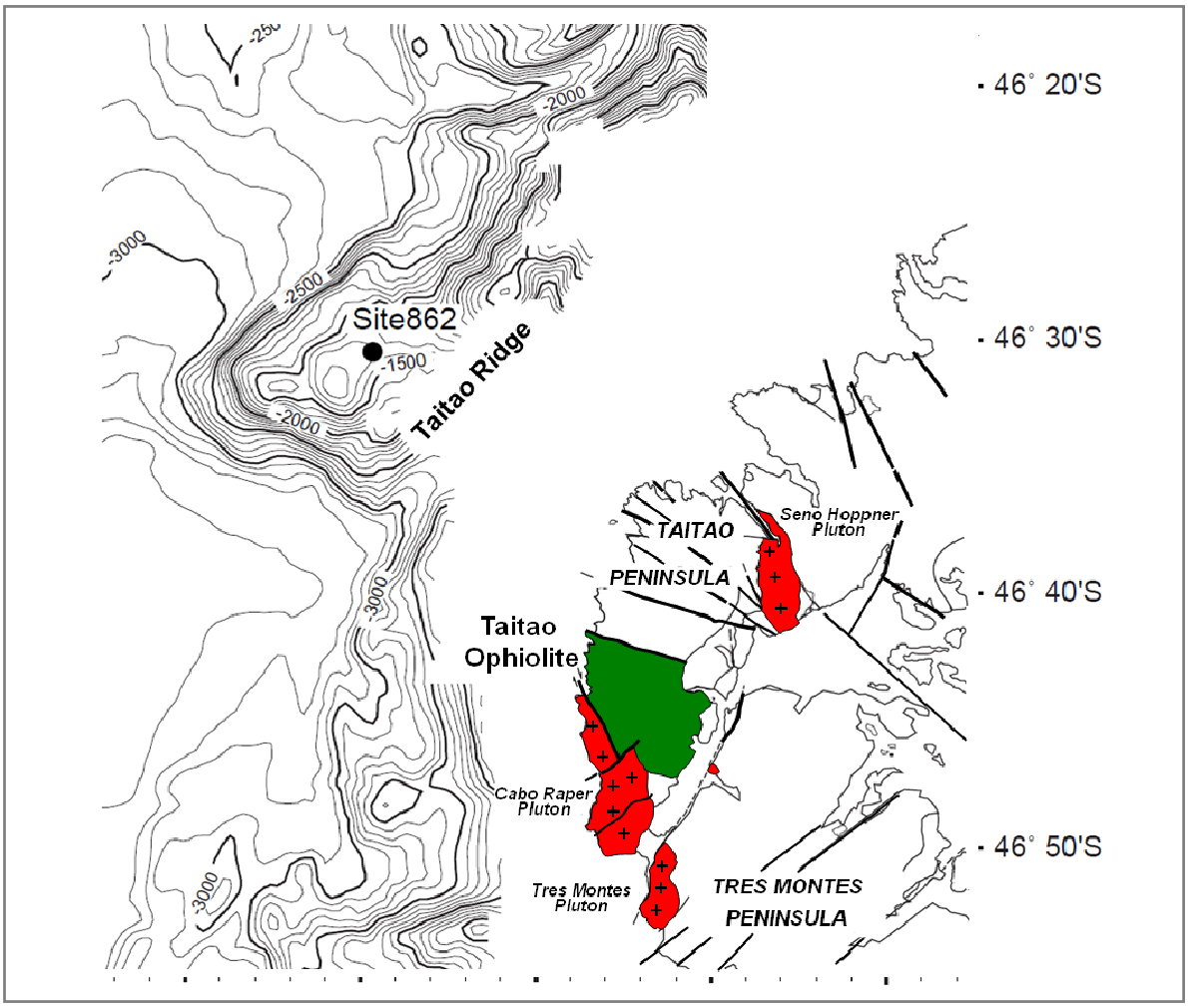


Figure 14 CL.AP.A-5 Bathymetric map of area offshore the Taitao Peninsula (250 m contour interval) showing the Taitao Ridge, the Taitao Peninsula and the location of ODP Leg 141 borehole site 862 (Guivel et al, 1999)

APPENDIX B

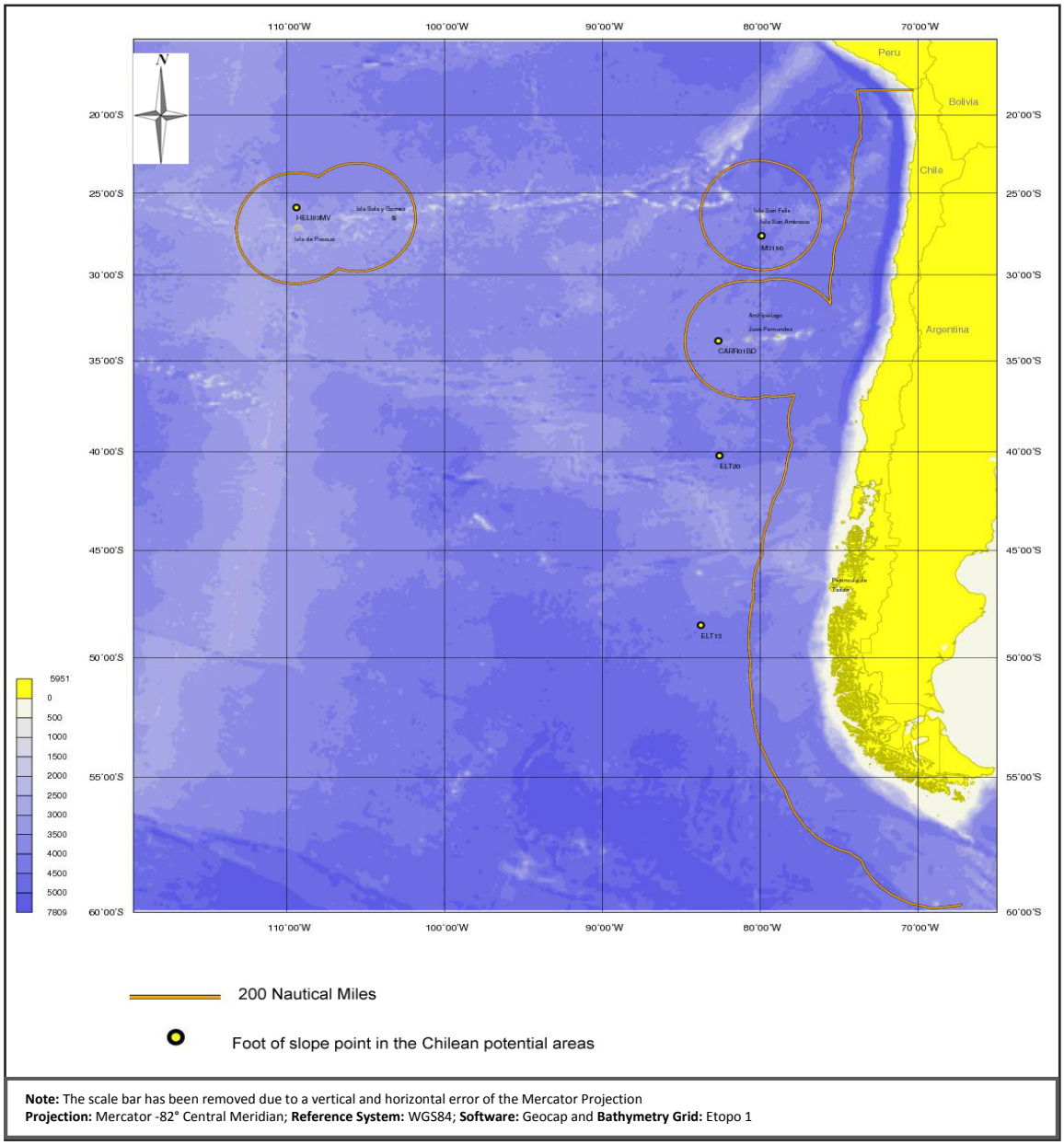
FOS GEOGRAPHICAL COORDINATES

Longitude	Latitude	Z	FOS analysis	FOS	Area
83° 45' 41" W	48° 32' 11" S	4.131,56	FOS analysis ELT 13	ELT13	Península de Taitao
82° 34' 59" W	40° 11' 38" S	4.278,97	FOS analysis ELT20	ELT20	Península de Taitao
109° 23' 15" W	25° 53' 34" S	3.234,43	FOS analysis HELI03MV_1	HELI03MV_1	Isla de Pascua - Salas y Gómez
82° 39' 08" W	33° 52' 25" S	3.661,11	FOS analysis CARR01BD	CARR01BD	Juan Fernández
79° 55' 09" W	27° 38' 24" S	4.132,13	FOS analysis M3196_2_1	M3196_2_1	San Félix - San Ambrosio

Table CL.AP.B-1 Geographical coordinates (WSG84) of the Foot of Slope points of potential areas of Chilean extended continental shelf.

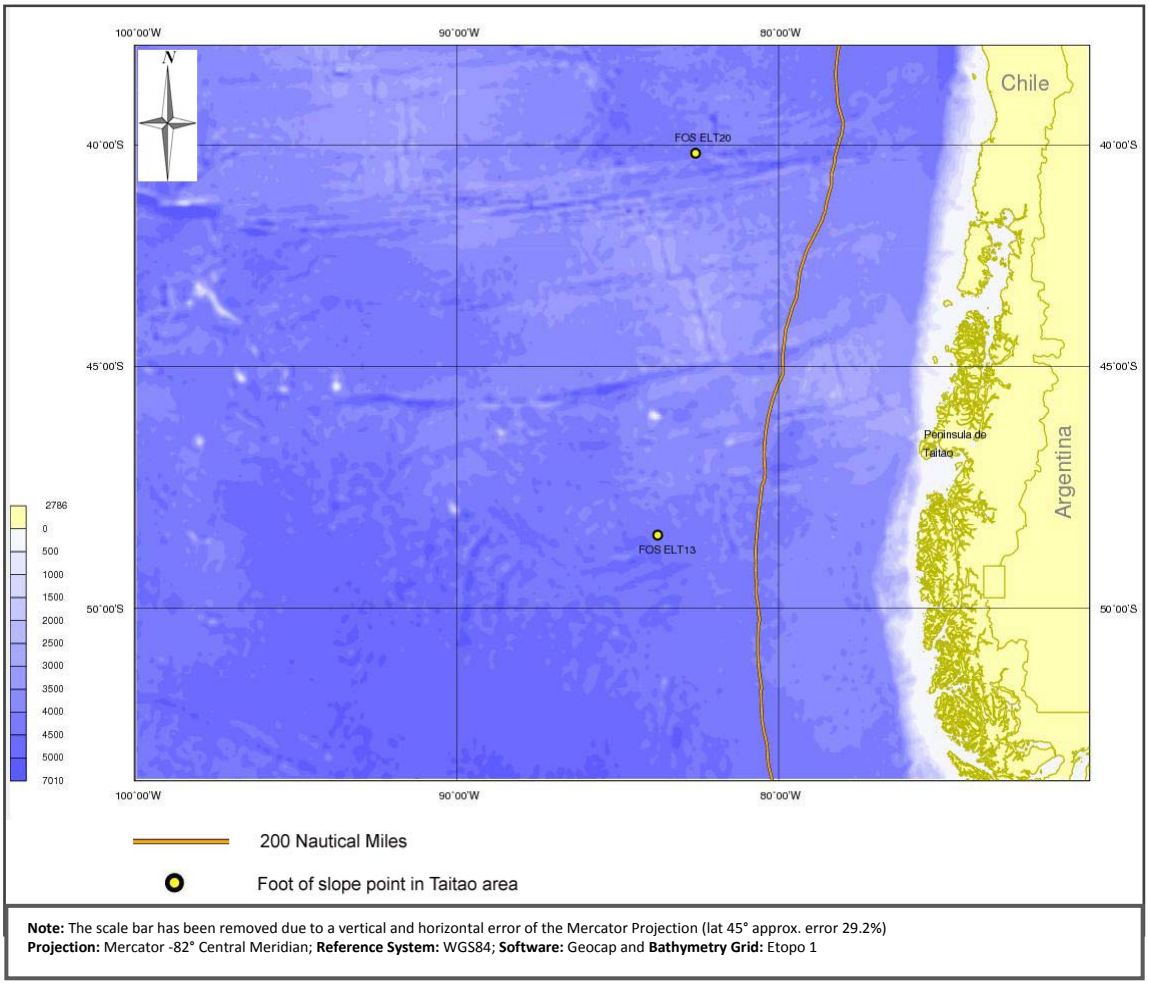
APPENDIX C

FOOT OF SLOPE LOCATION



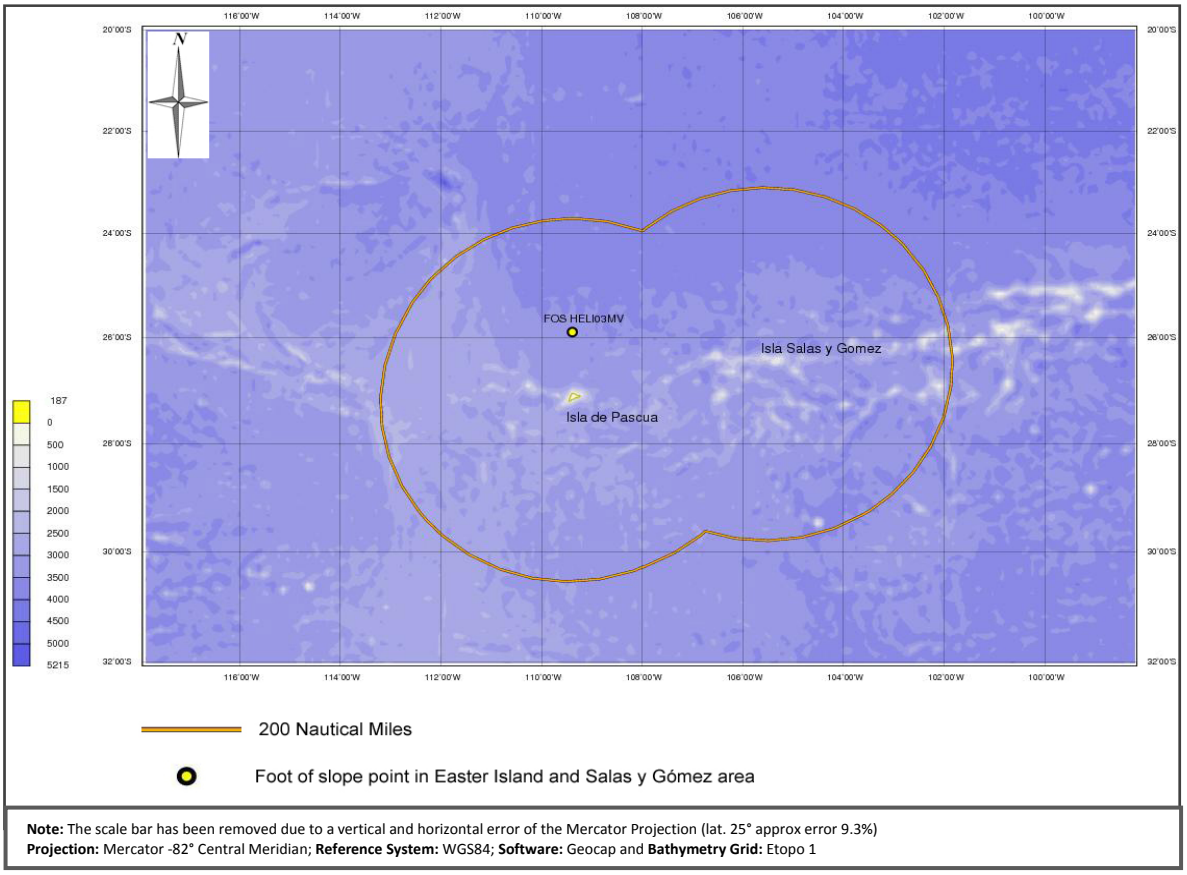
Note: The scale bar has been removed due to a vertical and horizontal error of the Mercator Projection
Projection: Mercator -82° Central Meridian; **Reference System:** WGS84; **Software:** Geocap and **Bathymetry Grid:** Etopo 1

Figure 15 CL.AP.C-1 General Location of Foot of Slope in four Chilean areas



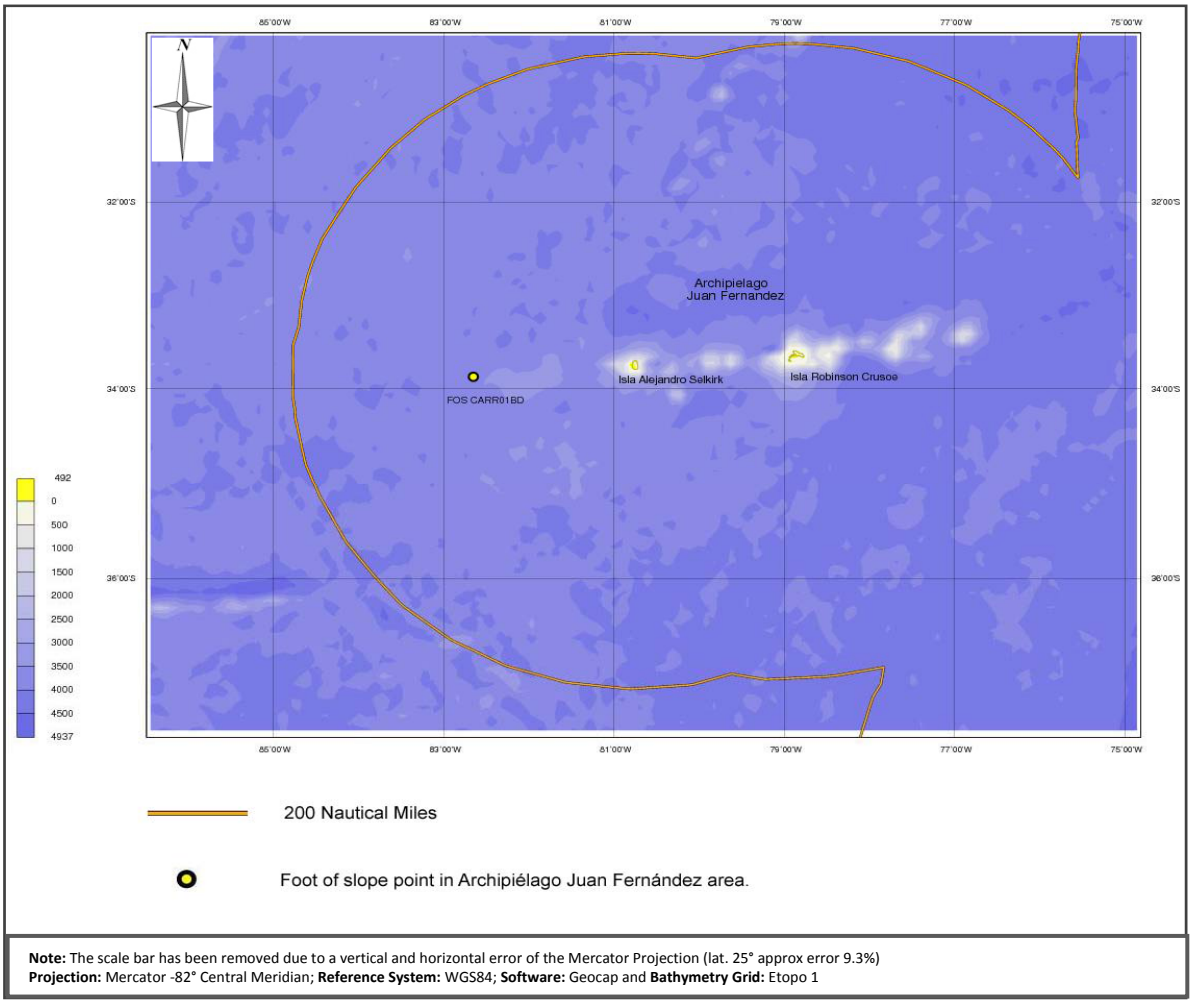
Note: The scale bar has been removed due to a vertical and horizontal error of the Mercator Projection (lat 45° approx. error 29.2%)
Projection: Mercator -82° Central Meridian; **Reference System:** WGS84; **Software:** Geocap and **Bathymetry Grid:** Etopo 1

Figure 16 CL.AP.C-2 Foot of slope point in the Taitao area (GEODAS bathymetry)



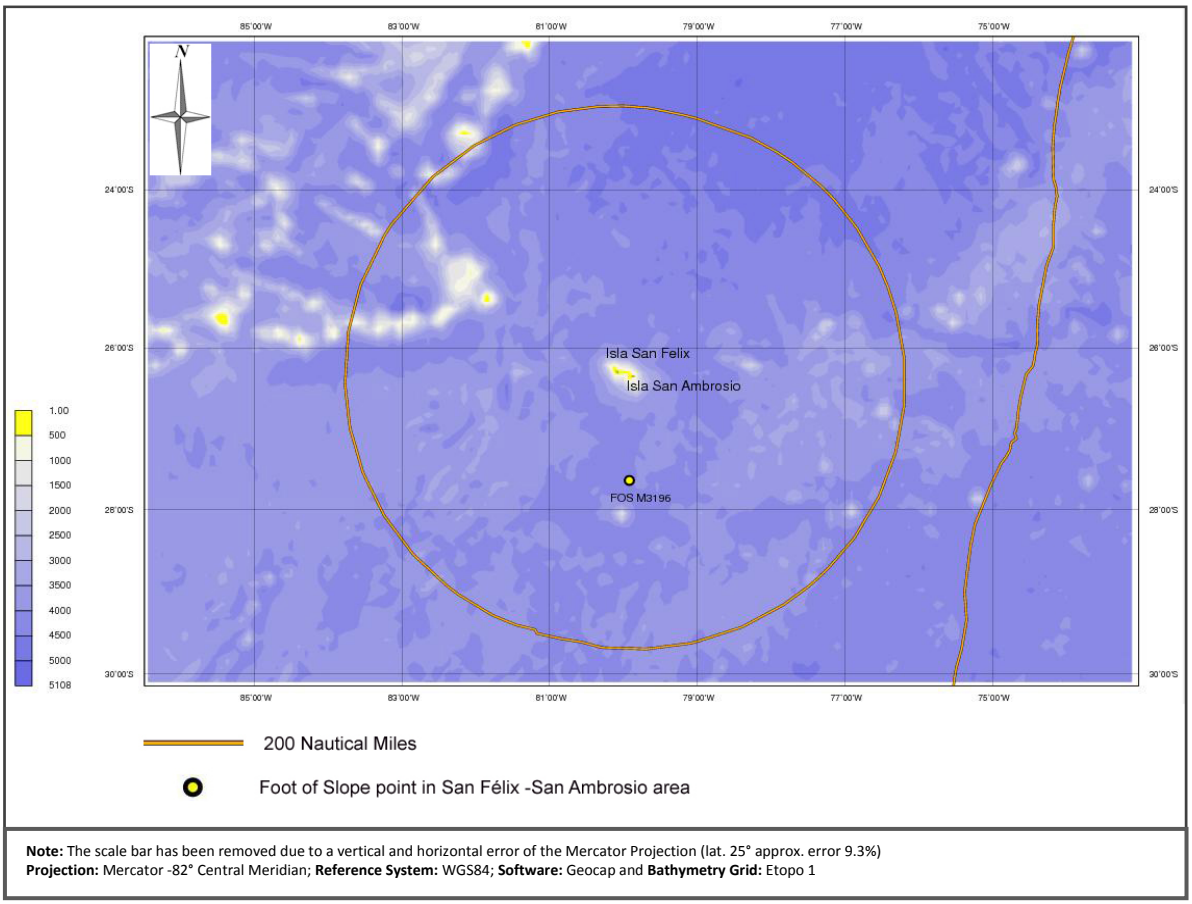
Note: The scale bar has been removed due to a vertical and horizontal error of the Mercator Projection (lat. 25° approx error 9.3%)
Projection: Mercator -82° Central Meridian; **Reference System:** WGS84; **Software:** Geocap and **Bathymetry Grid:** Etopo 1

Figure 17 CL.AP.C-3 Foot of slope point in the Easter Island and Salas y Gómez Island area (GEODAS bathymetry)



Note: The scale bar has been removed due to a vertical and horizontal error of the Mercator Projection (lat. 25° approx error 9.3%)
Projection: Mercator -82° Central Meridian; **Reference System:** WGS84; **Software:** Geocap and **Bathymetry Grid:** Etopo 1

Figure 18 CL.AP.C-4 Foot of slope point in Juan Fernández area (GEODAS bathymetry)

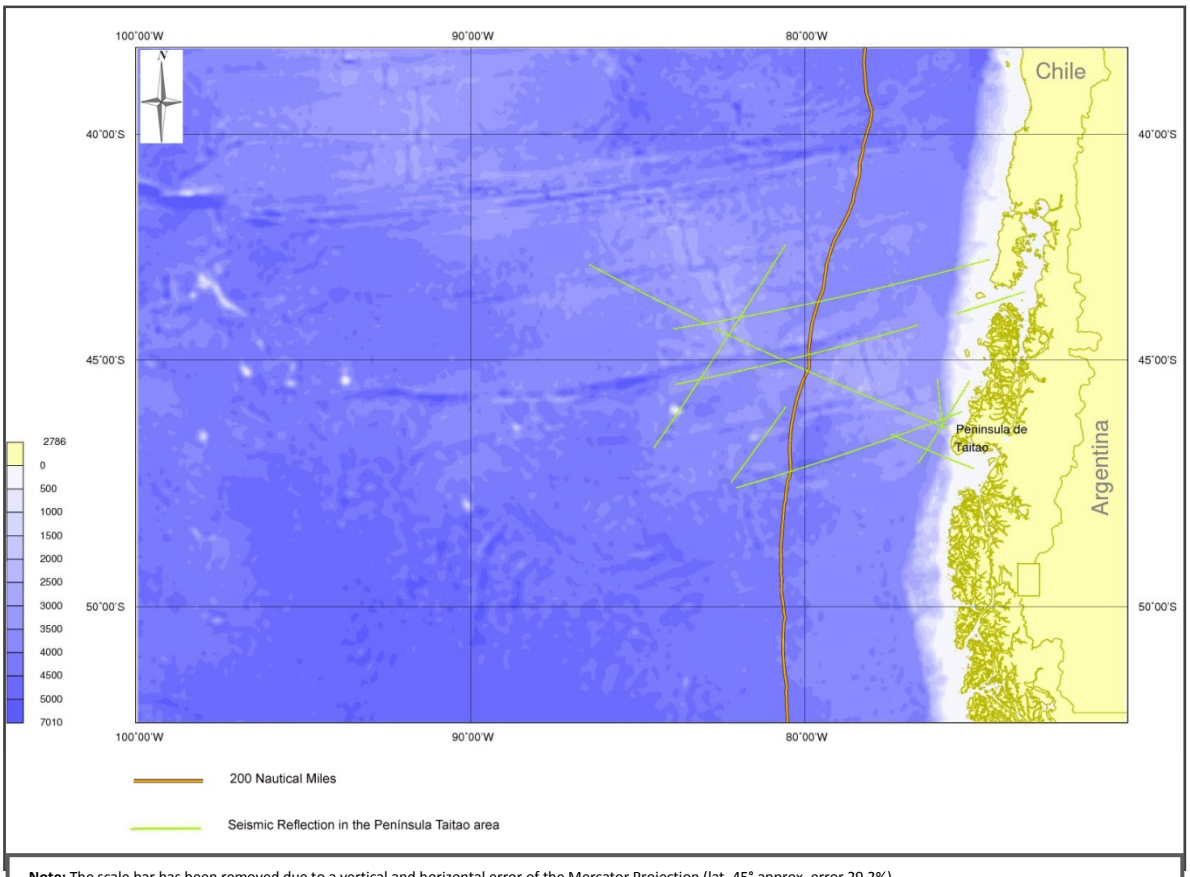


Note: The scale bar has been removed due to a vertical and horizontal error of the Mercator Projection (lat. 25° approx. error 9.3%)
Projection: Mercator -82° Central Meridian; **Reference System:** WGS84; **Software:** Geocap and **Bathymetry Grid:** Etopo 1

Figure 19 CL.AP.C-5 Foot of slope point in San Félix and San Ambrosio area (GEODAS bathymetry).

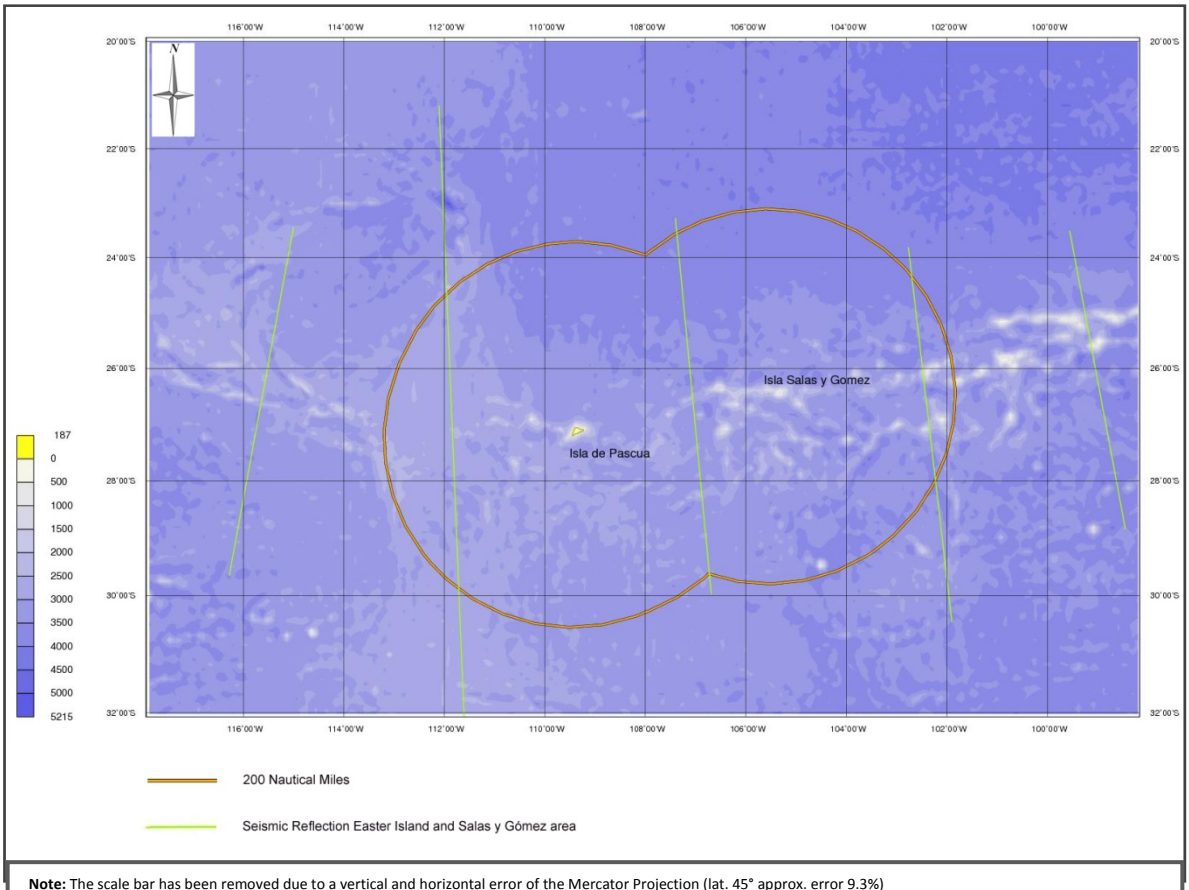
APPENDIX D

BATHYMETRY AND SEISMIC DATA COVERAGE UNDERTAKEN FOR THE NATIONAL COMMITTEE ON THE CONTINENTAL SHELF



Note: The scale bar has been removed due to a vertical and horizontal error of the Mercator Projection (lat. 45° approx. error 29.2%)
Projection: Mercator -82° Central Meridian; **Reference System:** WGS84; **Software:** Geocap and **Bathymetry Grid:** Etopo 1

Figure 20 CL.AP.D-1 Seismic reflection in Taitao area



Note: The scale bar has been removed due to a vertical and horizontal error of the Mercator Projection (lat. 45° approx. error 9.3%)
Projection: Mercator -82° Central Meridian; **Reference System:** WGS84; **Software:** Geocap and **Bathymetry Grid:** Etopo 1

Figure 21 CL.AP.D-2 Seismic reflection in Easter Island and Salas y Gómez

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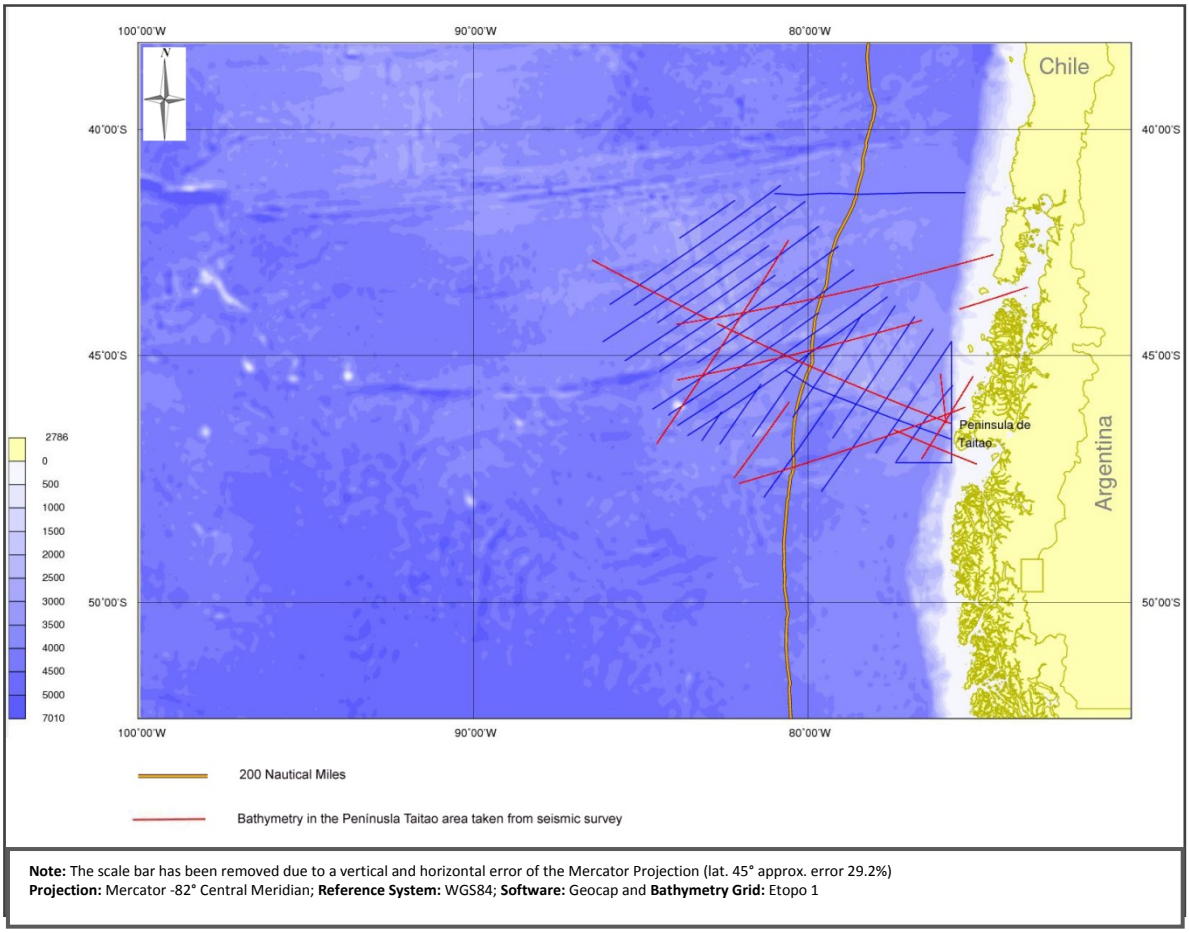
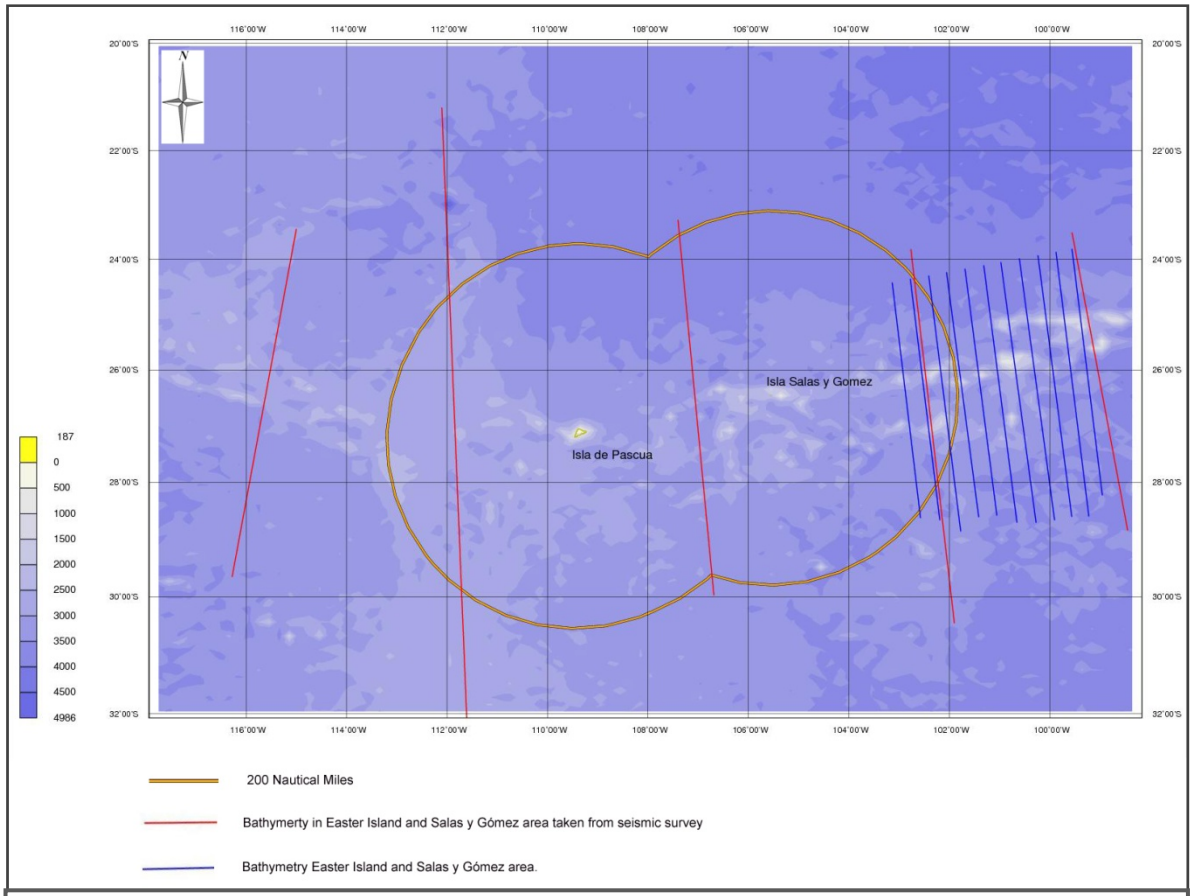


Note: The scale bar has been removed due to a vertical and horizontal error of the Mercator Projection (lat. 45° approx. error 29.2%)
Projection: Mercator -82° Central Meridian; **Reference System:** WGS84; **Software:** Geocap and **Bathymetry Grid:** Etopo 1

Figure 22 CL.AP.D-3 Bathymetry on the Taitao area

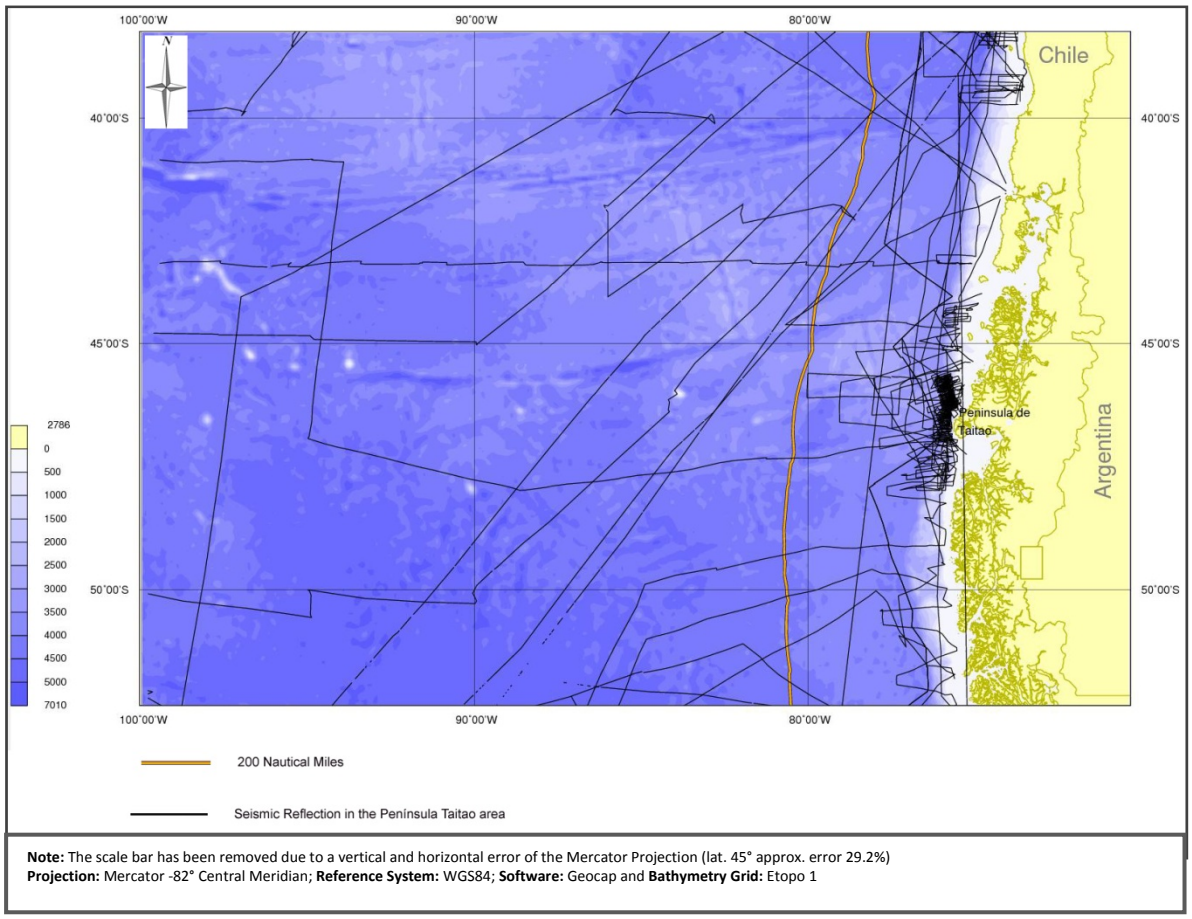


Note: The scale bar has been removed due to a vertical and horizontal error of the Mercator Projection (lat. 45° approx. error 9.3%)
Projection: Mercator -82° Central Meridian; **Reference System:** WGS84; **Software:** Geocap and **Bathymetry Grid:** Etopo 1

Figure 23 CL.AP.D-4 Bathymetry on Easter Island and Salas y Gómez Island area

APPENDIX E

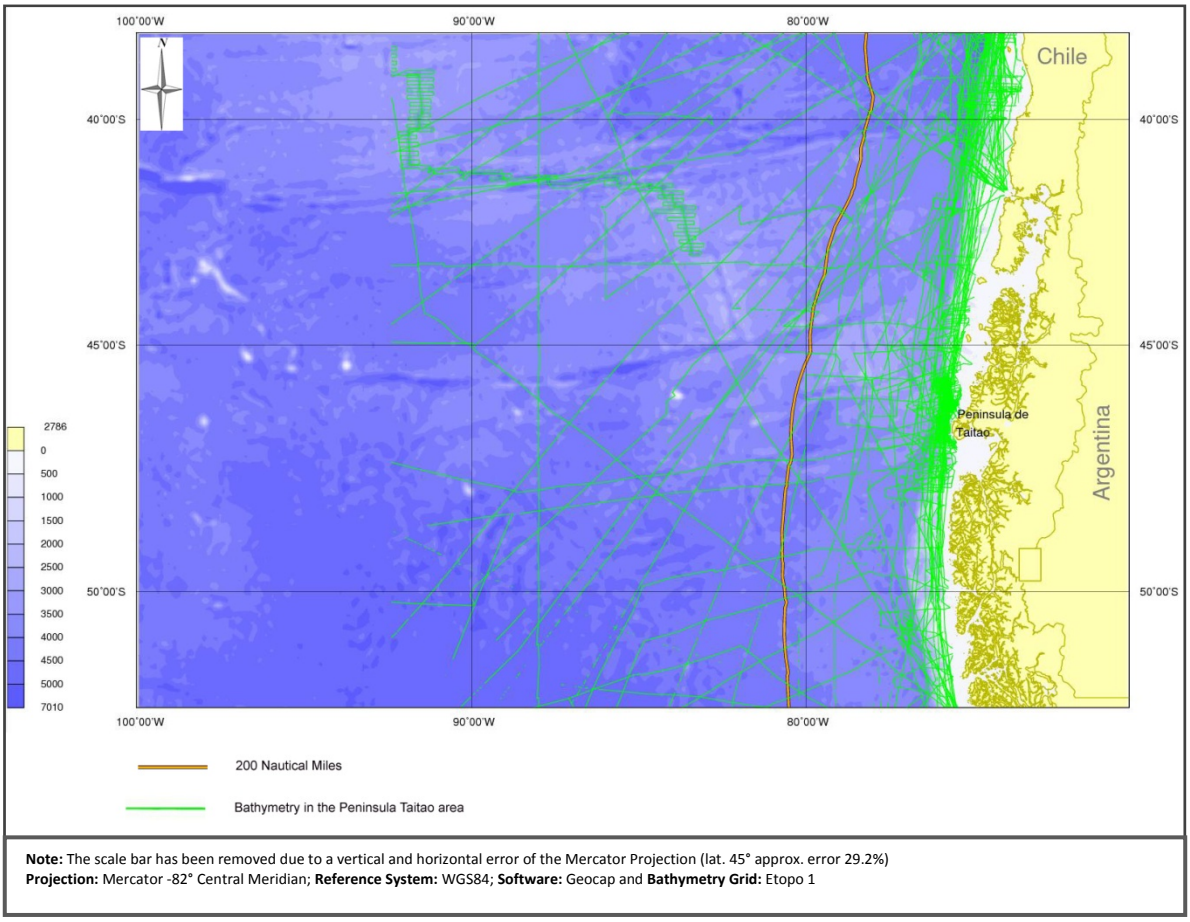
PUBLIC DATA COVERAGE



Note: The scale bar has been removed due to a vertical and horizontal error of the Mercator Projection (lat. 45° approx. error 29.2%)
Projection: Mercator -82° Central Meridian; **Reference System:** WGS84; **Software:** Geocap and **Bathymetry Grid:** Etopo 1

Figure 24 CL.AP.E-1 Seismic reflection in Taitao area

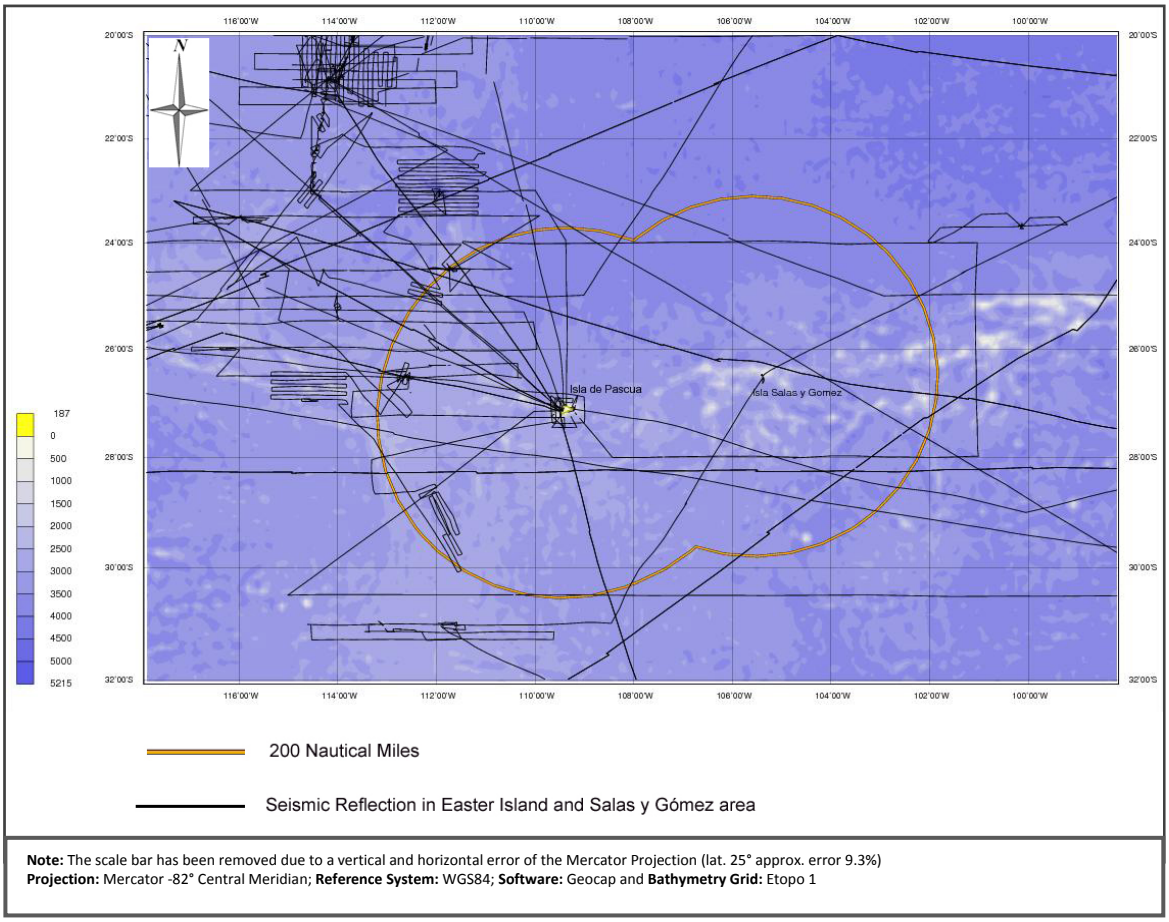
.



Note: The scale bar has been removed due to a vertical and horizontal error of the Mercator Projection (lat. 45° approx. error 29.2%)
Projection: Mercator -82° Central Meridian; **Reference System:** WGS84; **Software:** Geocap and **Bathymetry Grid:** Etopo 1

Figure 25 CL.AP.E-2 Bathymetry in Taitao area

.



Note: The scale bar has been removed due to a vertical and horizontal error of the Mercator Projection (lat. 25° approx. error 9.3%)
Projection: Mercator -82° Central Meridian; **Reference System:** WGS84; **Software:** Geocap and **Bathymetry Grid:** Etopo 1

Figure 26 CL.AP.E-3 Seismic reflection in Easter Island and Salas y Gómez Island area

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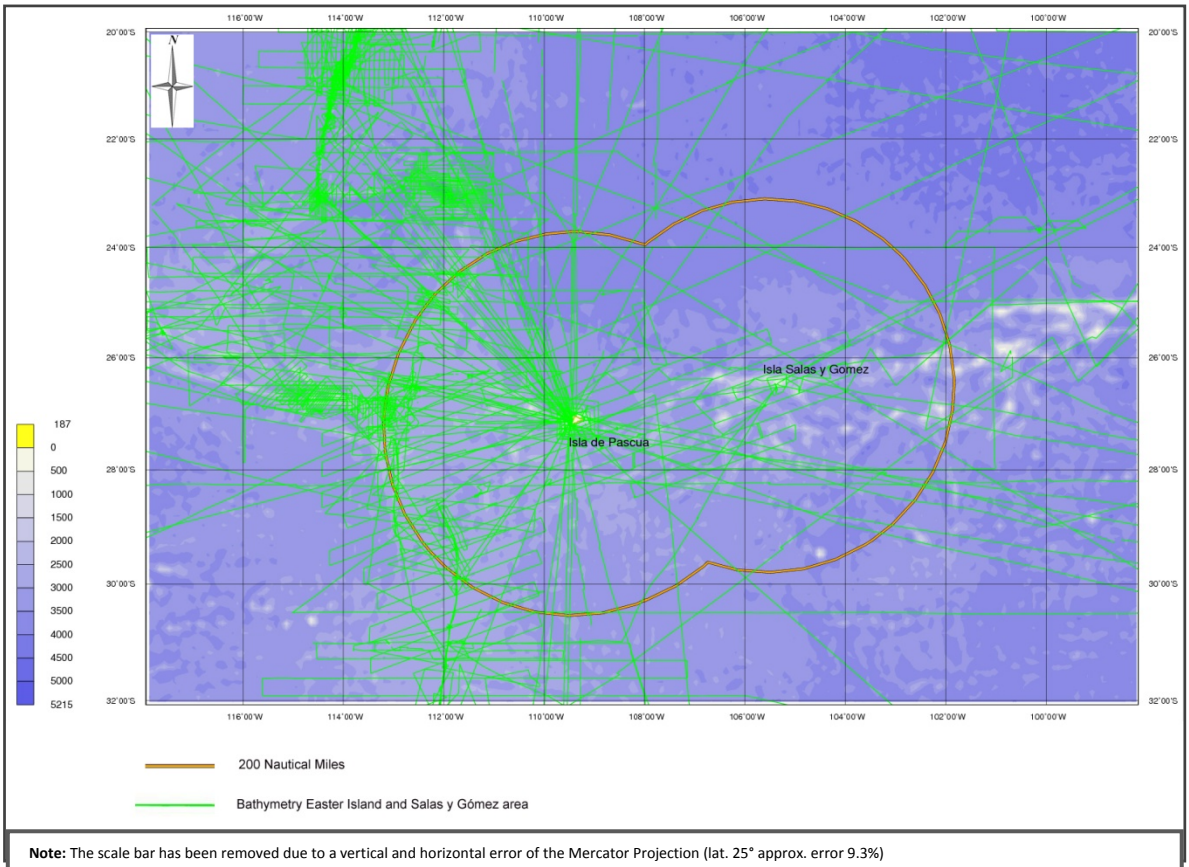

Note: The scale bar has been removed due to a vertical and horizontal error of the Mercator Projection (lat. 25° approx. error 9.3%)
Projection: Mercator -82° Central Meridian; **Reference System:** WGS84; **Software:** Geocap and **Bathymetry Grid:** Etopo 1

Figure 27 CL.AP.E-4 Bathymetry Easter Island and Salas y Gómez Island area

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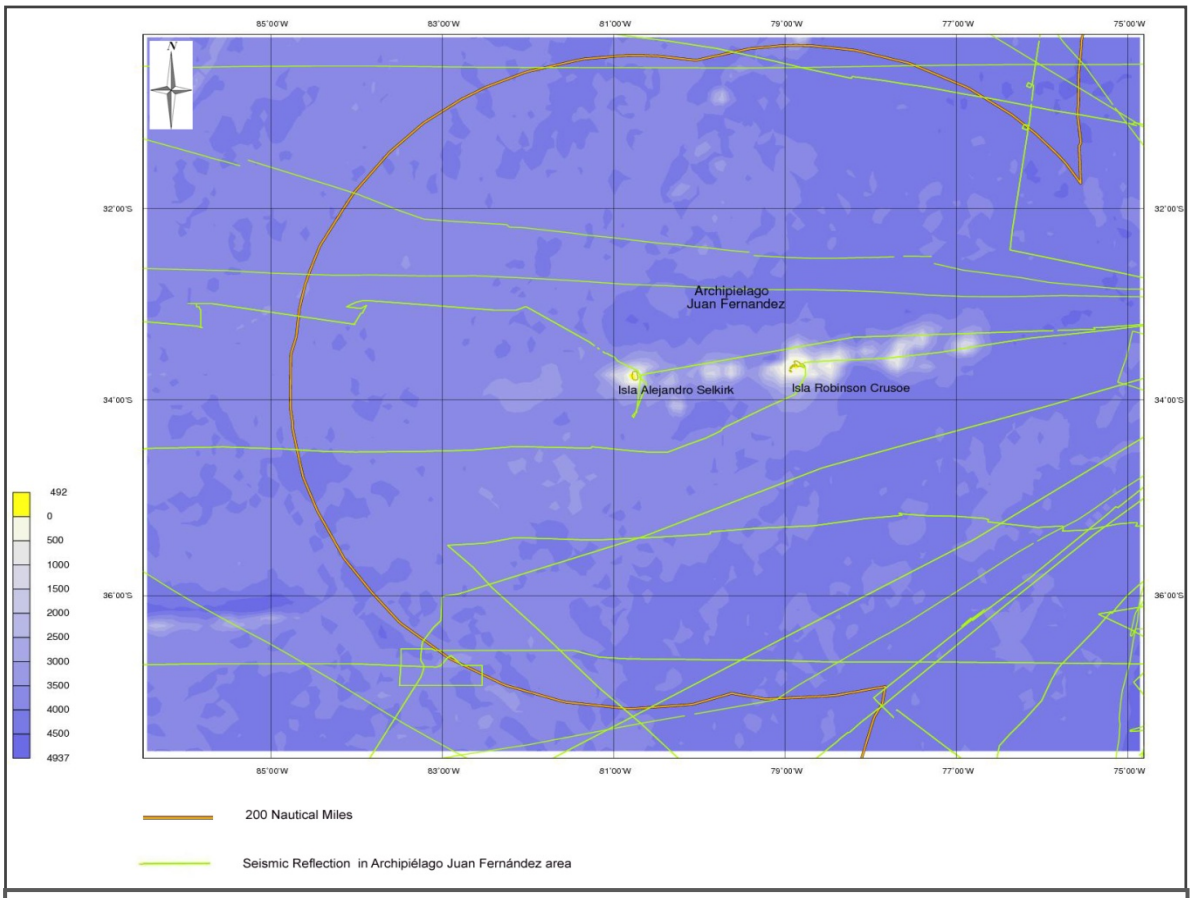
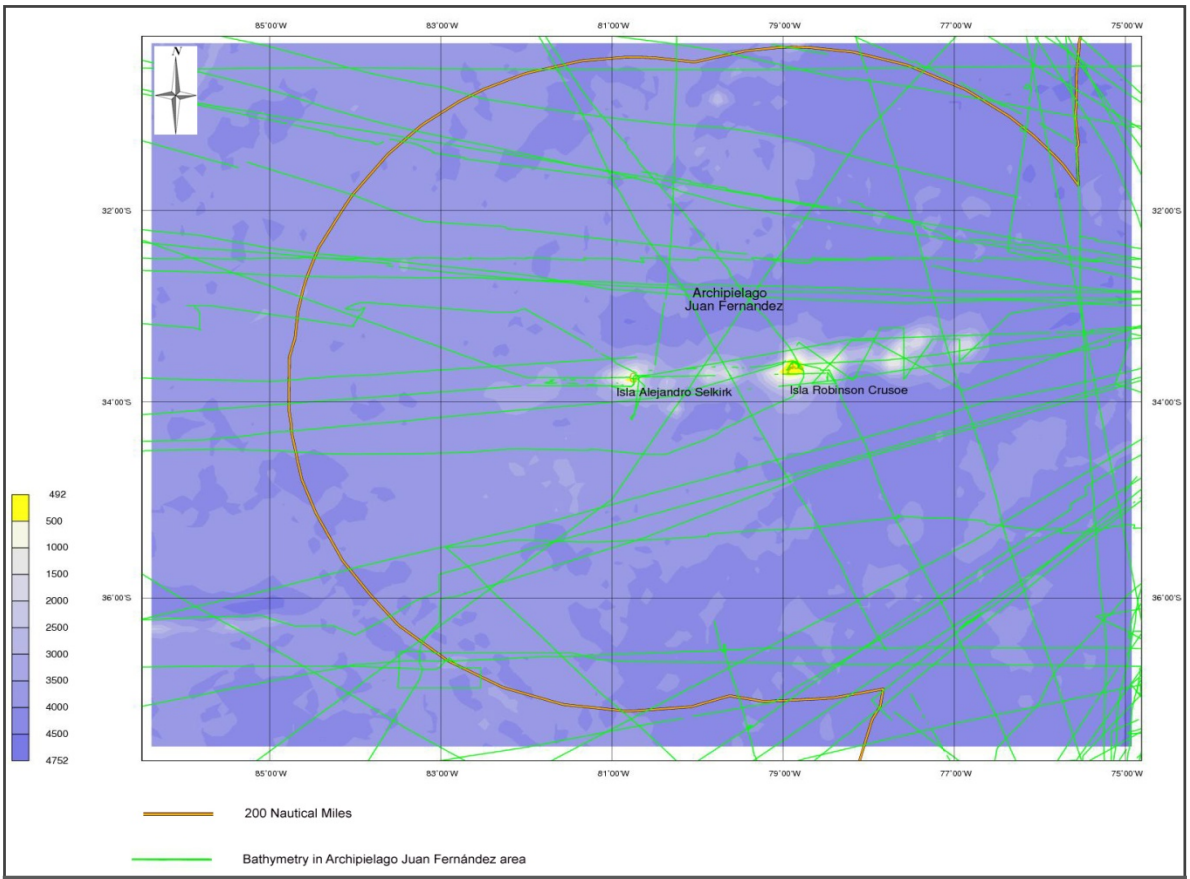


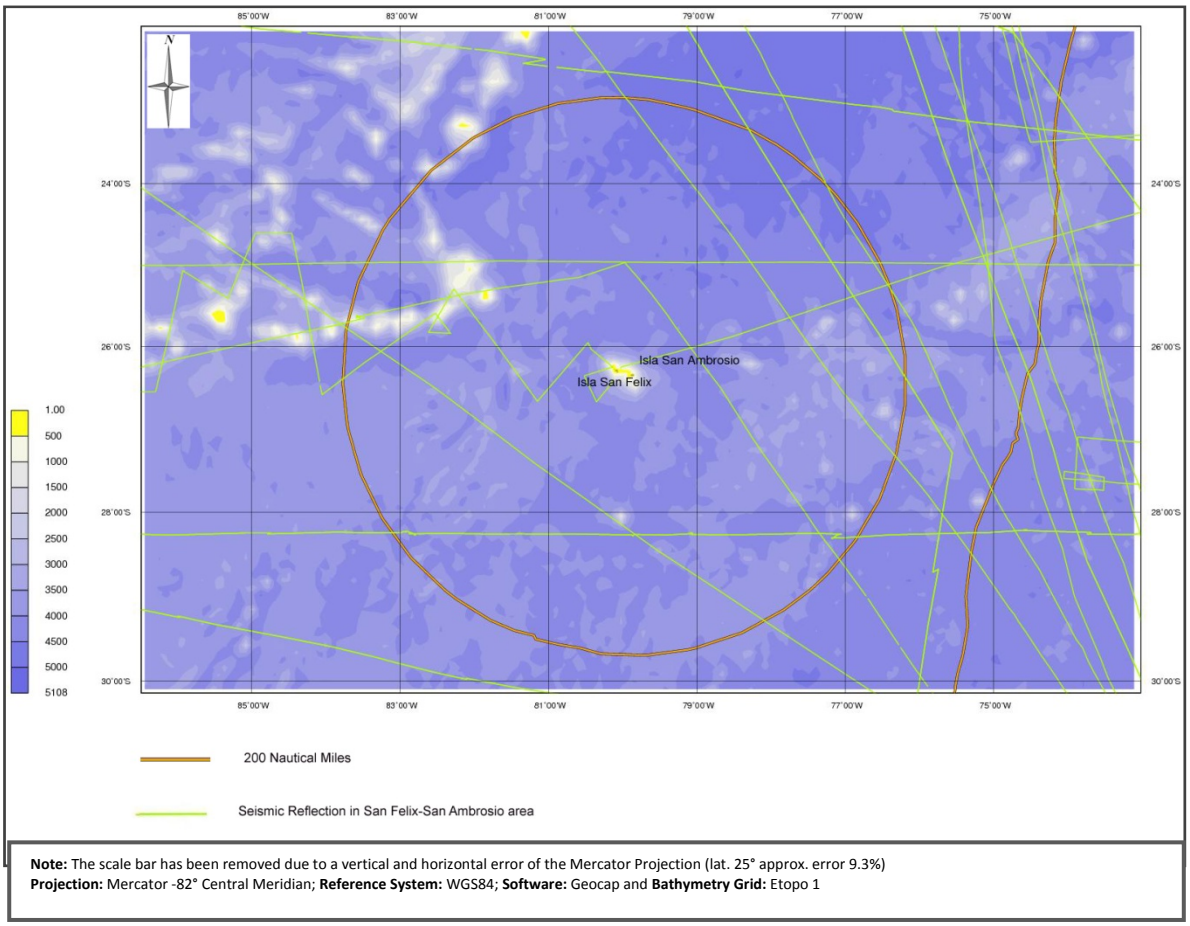
Note: The scale bar has been removed due to a vertical and horizontal error of the Mercator Projection (lat. 35° approx. error 18%)
Projection: Mercator -82° Central Meridian; **Reference System:** WGS84; **Software:** Geocap and **Bathymetry Grid:** Etopo 1

Figure 28 CL.AP.E-5 Seismic reflection in Juan Fernández area



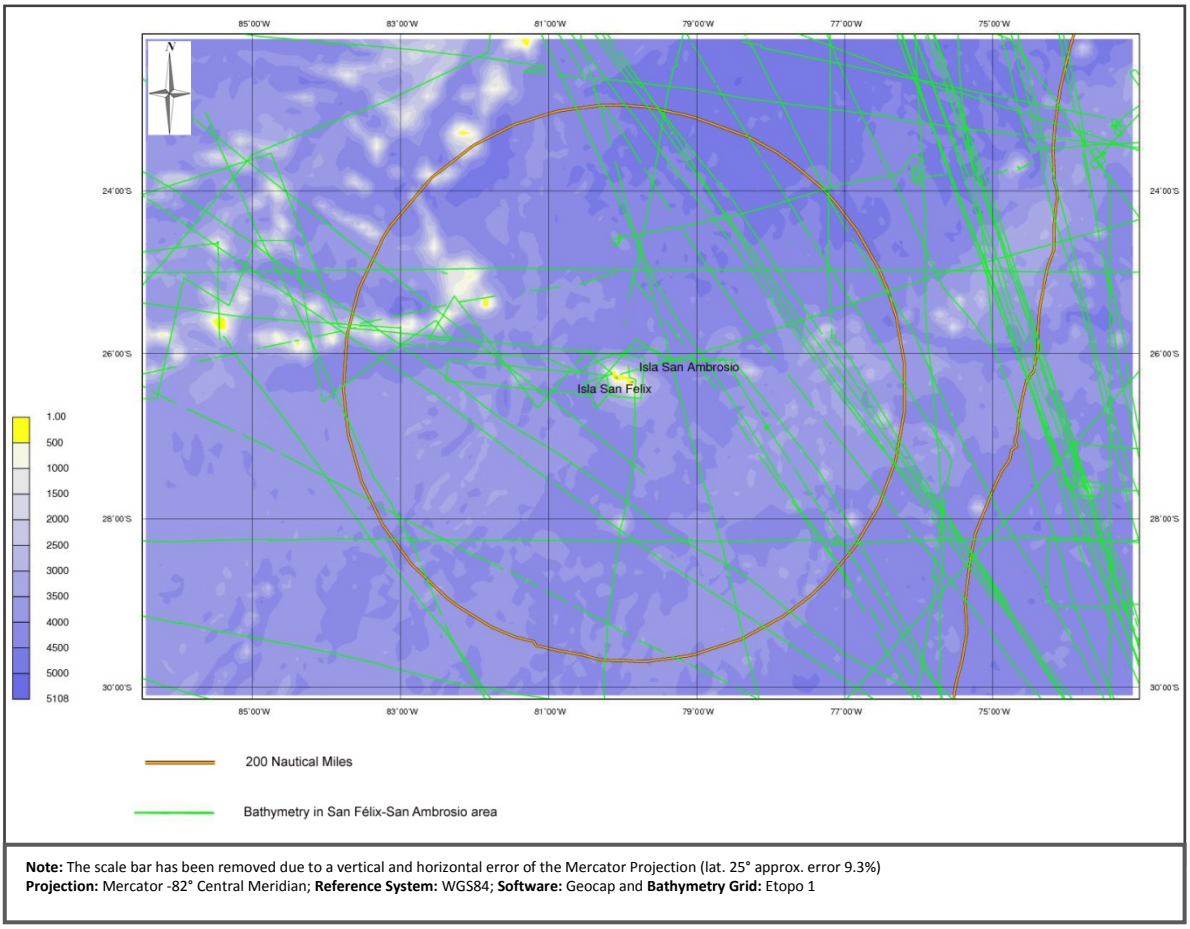
Note: The scale bar has been removed due to a vertical and horizontal error of the Mercator Projection (lat. 35° approx. error 18%)
Projection: Mercator -82° Central Meridian; **Reference System:** WGS84; **Software:** Geocap and **Bathymetry Grid:** Etopo 1

Figure 29 CL.AP.E-6 Bathymetry in Juan Fernández area



Note: The scale bar has been removed due to a vertical and horizontal error of the Mercator Projection (lat. 25° approx. error 9.3%)
Projection: Mercator -82° Central Meridian; **Reference System:** WGS84; **Software:** Geocap and **Bathymetry Grid:** Etopo 1

Figure 30 CL.AP.E-7 Seismic reflection in San Félix and San Ambrosio area



Note: The scale bar has been removed due to a vertical and horizontal error of the Mercator Projection (lat. 25° approx. error 9.3%)
Projection: Mercator -82° Central Meridian; **Reference System:** WGS84; **Software:** Geocap and **Bathymetry Grid:** Etopo 1

Figure 31 CL.AP.E-8 Bathymetry in San Félix and San Ambrosio area

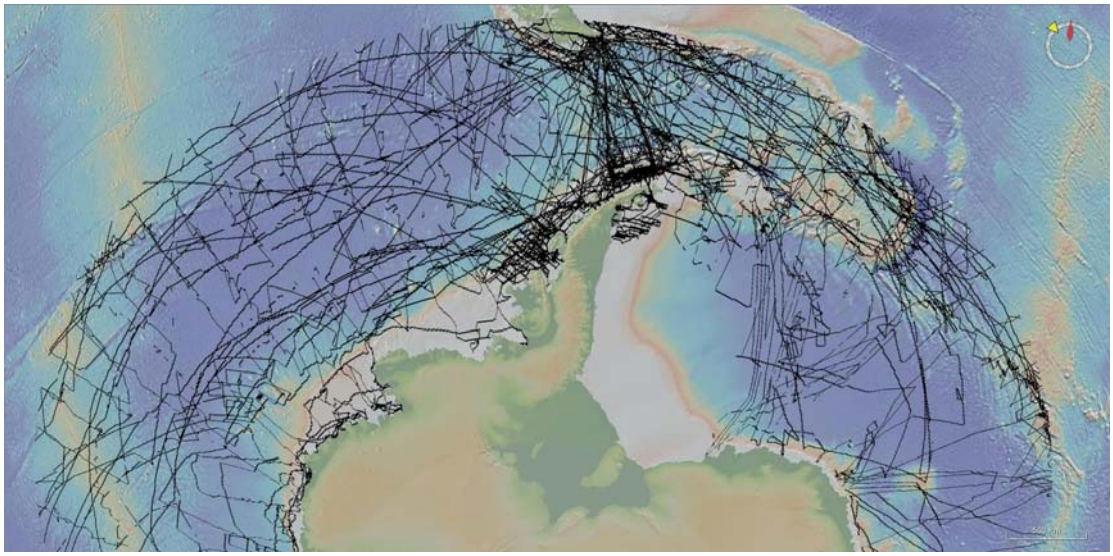


Figure 32 CL.AP.E-9 LEO Bathymetric - Gravity y Magnetic in Antarctica

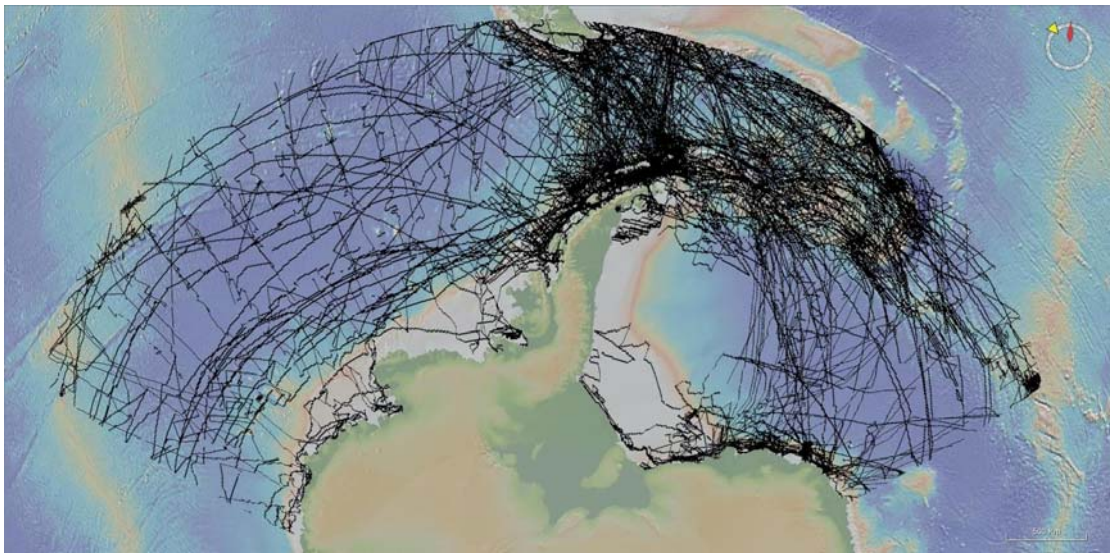


Figure 33 CL.AP.E-10 The GEODAS database under NGDC Bathymetric - Gravity and Magnetic in Antarctica

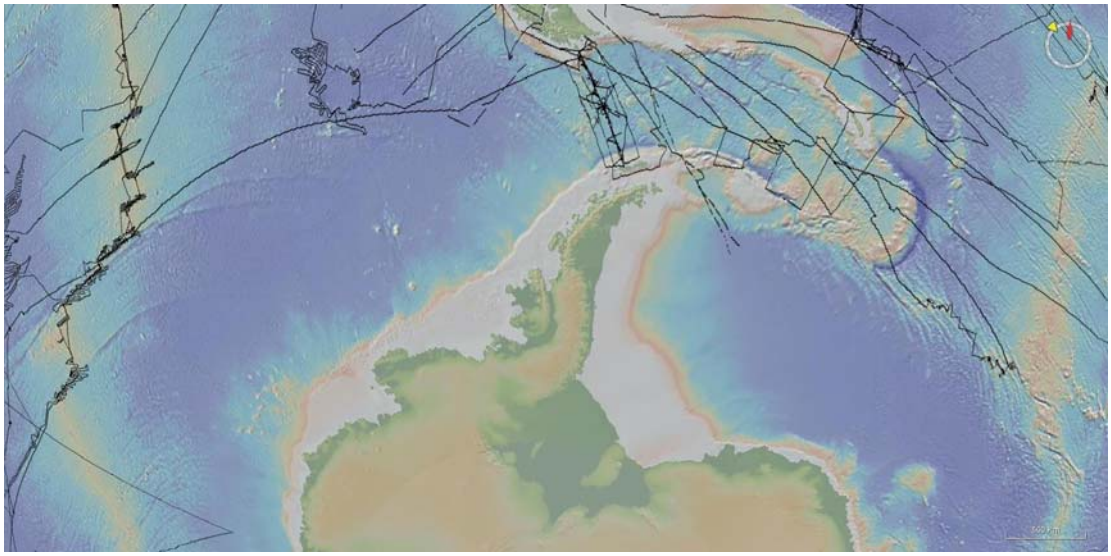


Figure 34 CL.AP.E-11 SIO Explore Bathymetric - Gravity and Magnetic in Antarctica

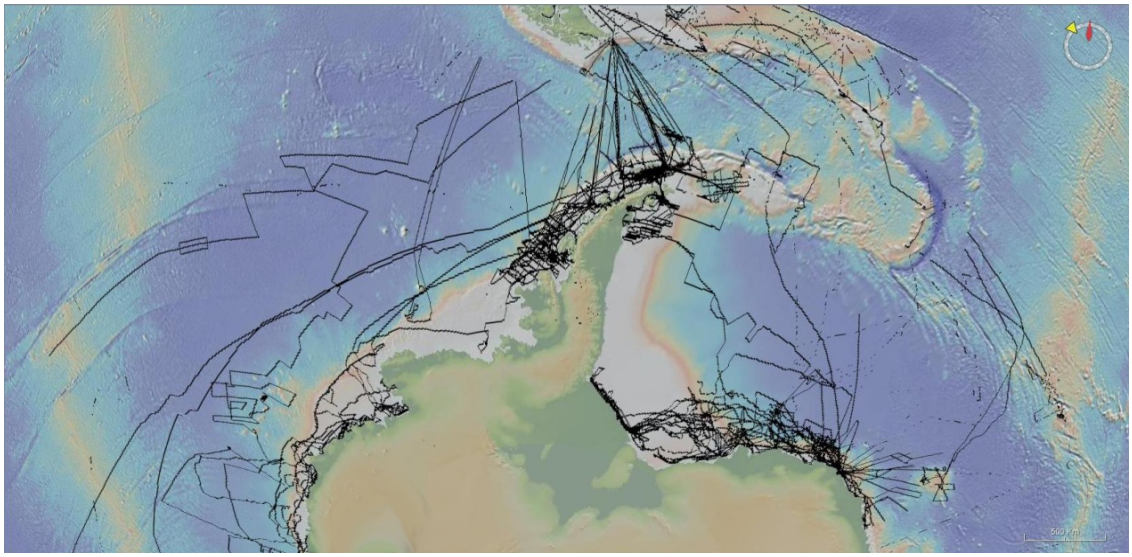


Figure 35 CL.AP.E-12 USAP/Antarctic Bathymetric - Gravity and Magnetic in Antarctica

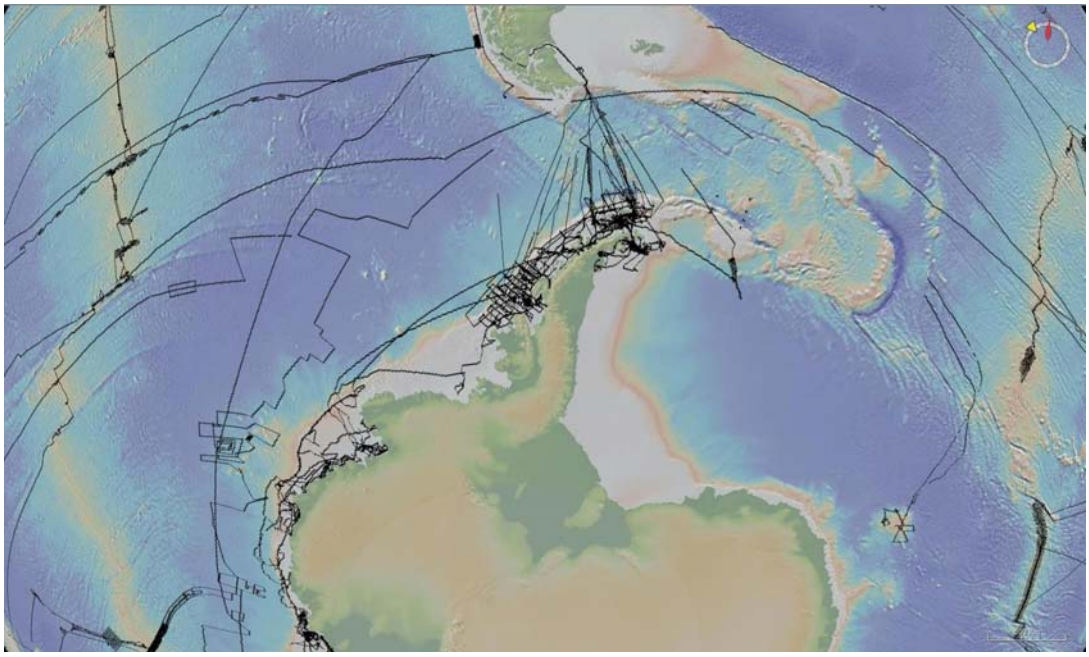


Figure 36 CL.AP.E-13 Multibeam Bathymety in Antarctic according to cruises shown at www.virtualocean.org

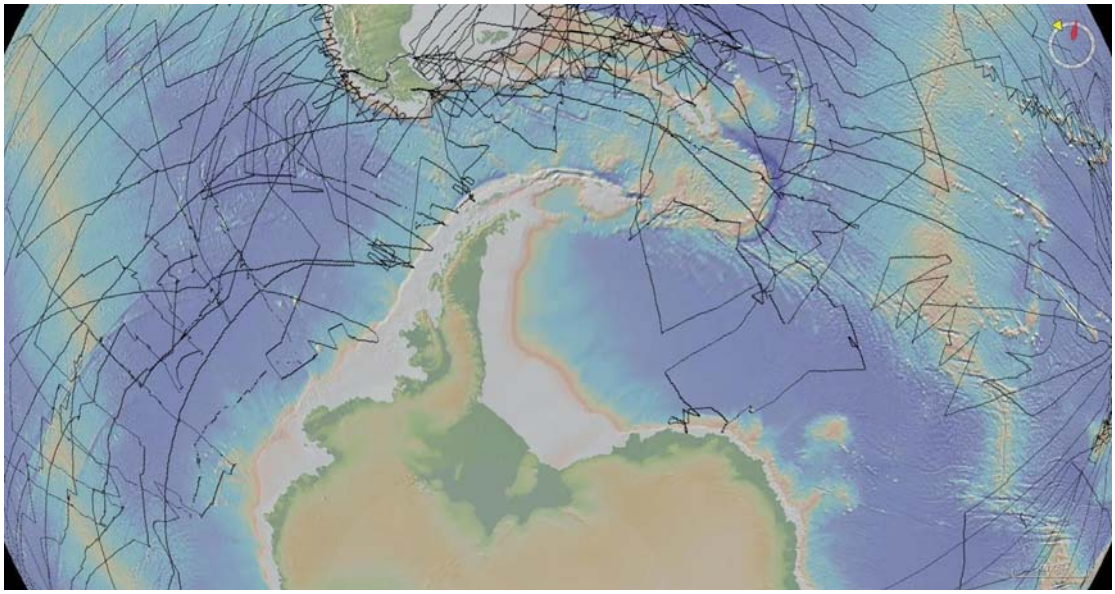


Figure 37 CL.AP.E-14 Single Channel Reflection in Antarctica according to cruises shown at www.virtualocean.org

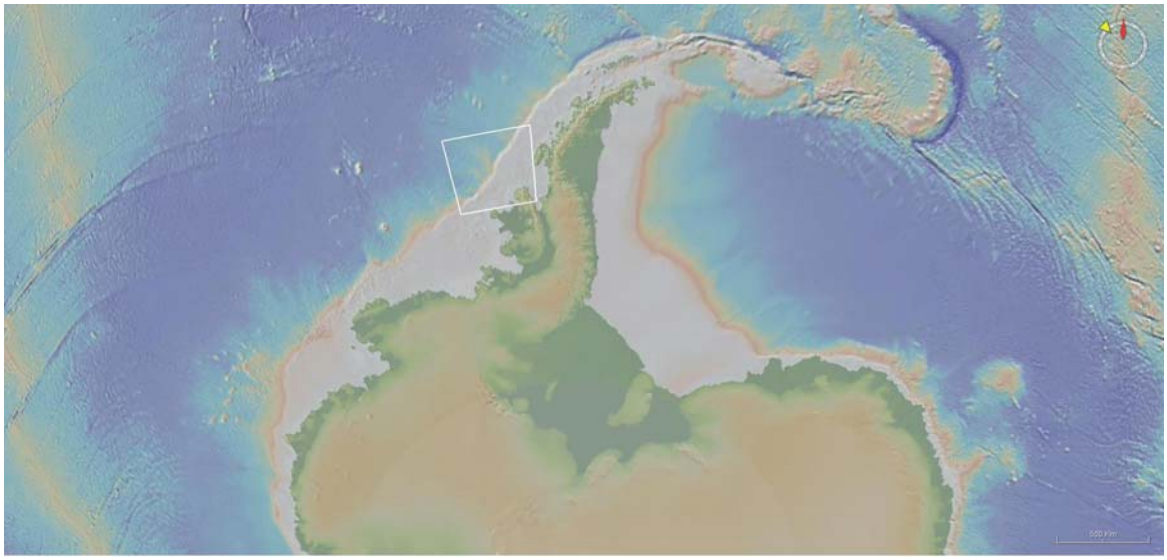


Figure 38 CL.AP.E-15 Multi Channel seismic reflection in Antarctica according to cruises shown at www.virtualocean.org

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