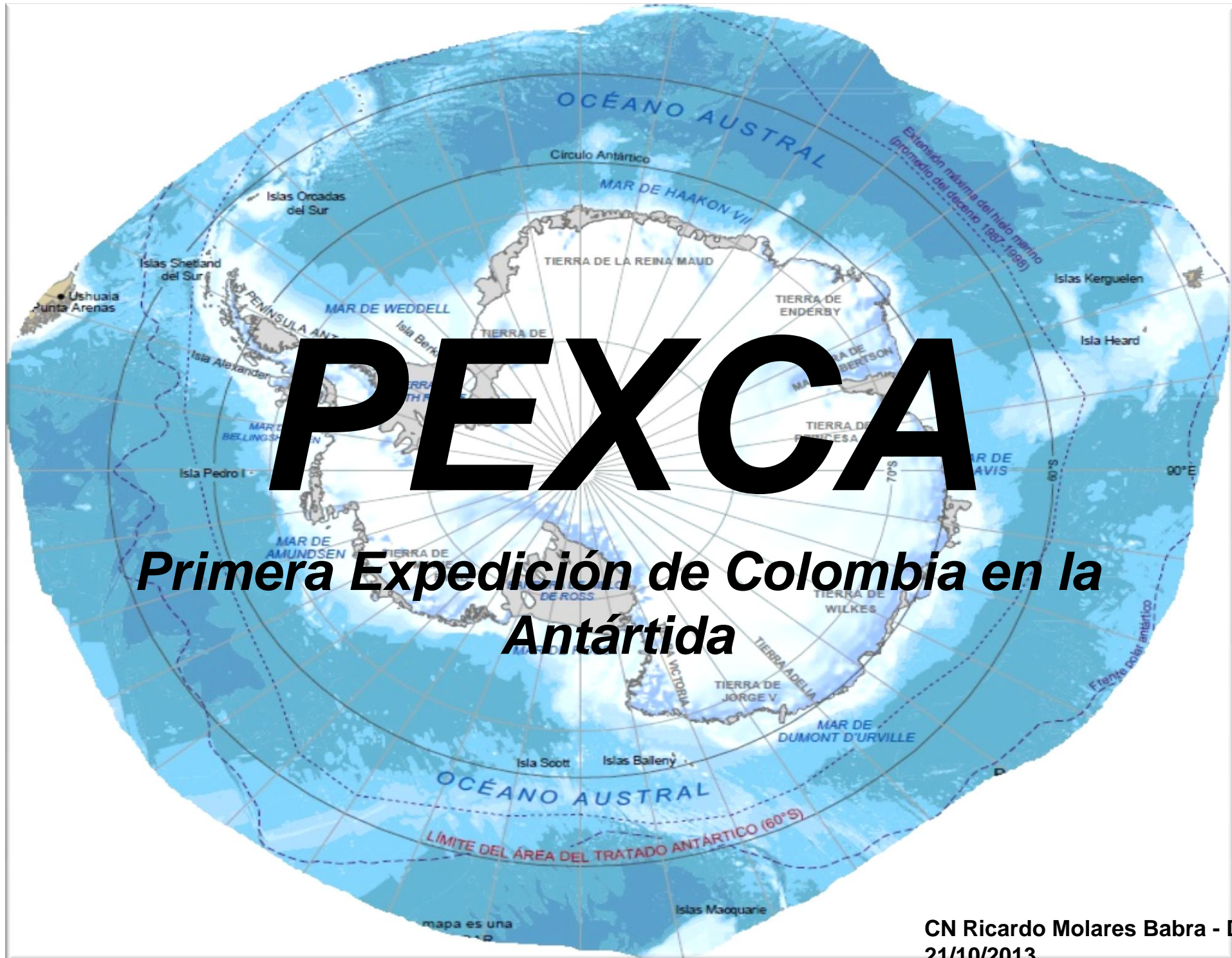


# First Colombian Expedition in Antarctica

HCA13-08.5.1As



**Dirección General Marítima**  
Autoridad Marítima Colombiana





## Information Paper IP 104 “Colombia en la Antártida”

1. “Colombia is in an internal process of analysis ... that allows the change of status to a **Consulting Member** of the **Antarctic Treaty**”.
2. "Our interest is positioning Colombia in the Antarctic scene, in the processes destined for the protection and conservation of this continent and in the exchange of scientific information and the knowledge transfer “.
3. "Internally, Colombia is in the process of renovation and reinforcement of its **National Committee for the Antarctic**, as well as design and execute a **National Program of Antarctic Research Affairs**.”.
4. “Likewise, we are ready to present to the National Colombian Congress the **Protocol of Madrid**, for its ratification soon...”.
5. “The National Maritime Authority - DIMAR with the support of the Colombian Navy, through Oceanographic and Hydrographic Research Centers and the Hydrographic Office, are preparing **First National Expedition** ... in the Antarctica ... the date to be determined is in the summer 2014 or 2015... ”



## Main Objective

*To develop activities related to marine research to support int./national projects, in order to initiate the phase of development of colombian capabilities in Antarctica.*





## **Specific Objectives**

- To initiate the scientific research development in the Antarctica, as initial point of Colombia.
- To adapt the vessel ARC MALPELO and its crew/scientific equipment, for the development research cruises in the Antarctica.
- To collect information needed for the development of int./national research projects in Antarctica.



## Scientific Objectives

To sample oceanographic physicochemical and biological variables, in order to :

- To Describe the profile behavior of the principal physical oceanographic variables.
- To characterize the water masses and the vertical stability observed.
- To describe the hydrodynamic behavior.
- To describe oceanographic conditions for the sound spreading.
- To describe the spatial patterns of principal planktonic groups and phytoplankton pigments.
- To establish physicochemical, biological and microbiological quality of the water.

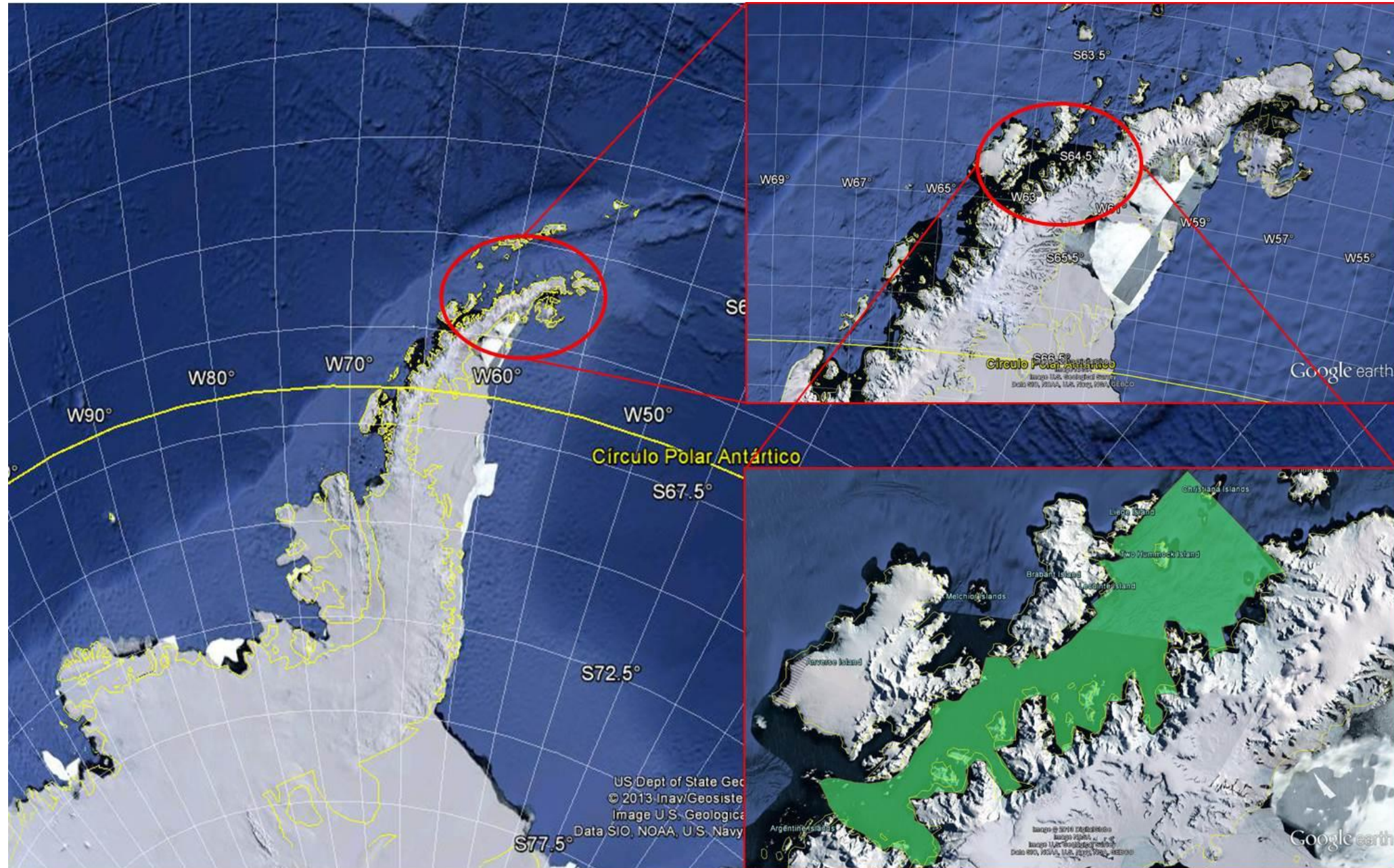
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To effect hydrographic mapping with the multibeam sonar, in order to collect the information for the elaboration of a Chart.

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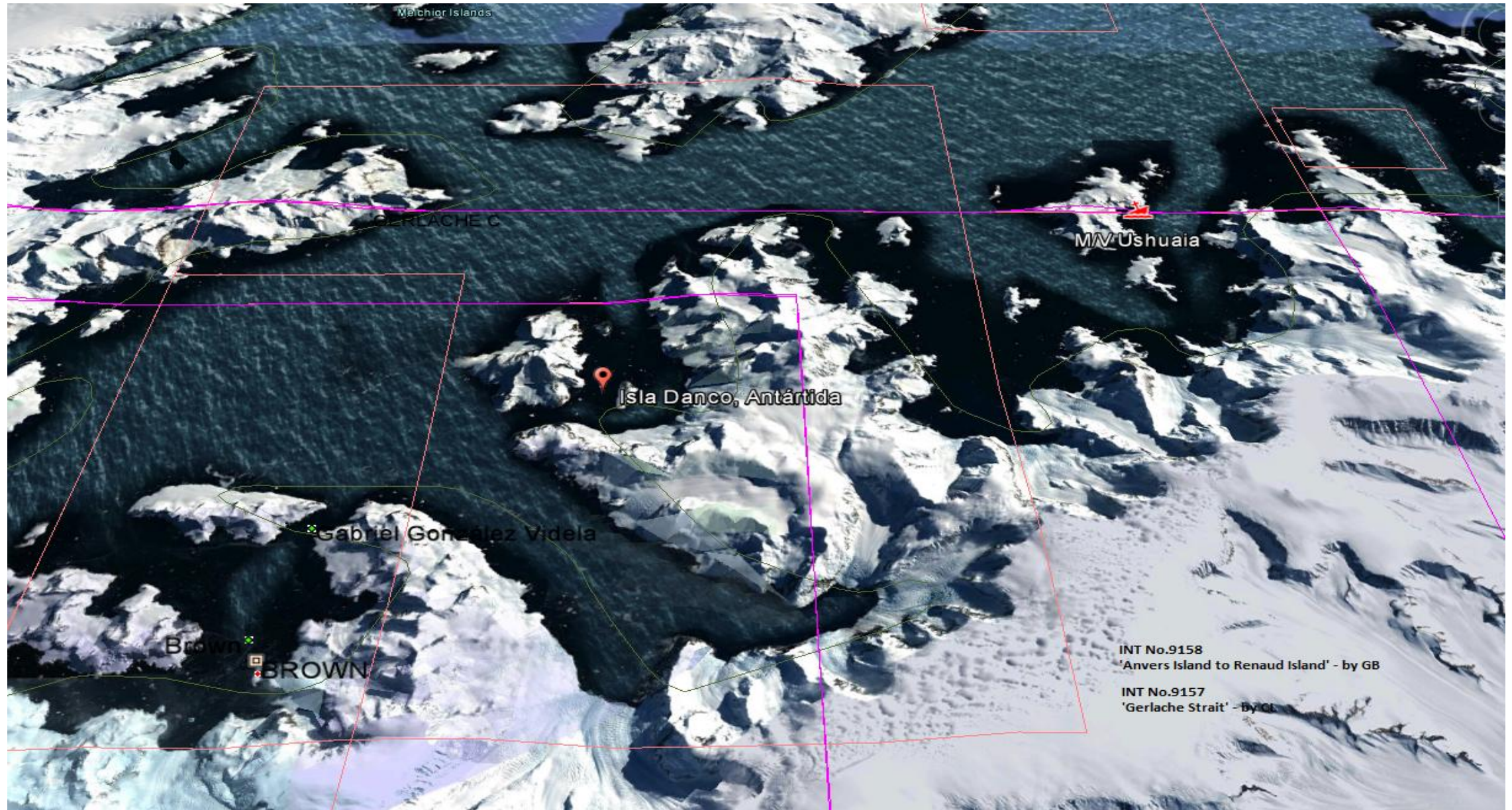
To collect sedimentological samples from the seabed, in order to:

- To establish the aromatic polynuclear hydrocarbons levels of the sediments.
- To characterize textural and physically the collected sediments.
- To map the spatial distribution of the superficial sediments.
- To obtain sediment cores, in order to evaluate the applicability in paleoenvironment studies of the Antarctica.



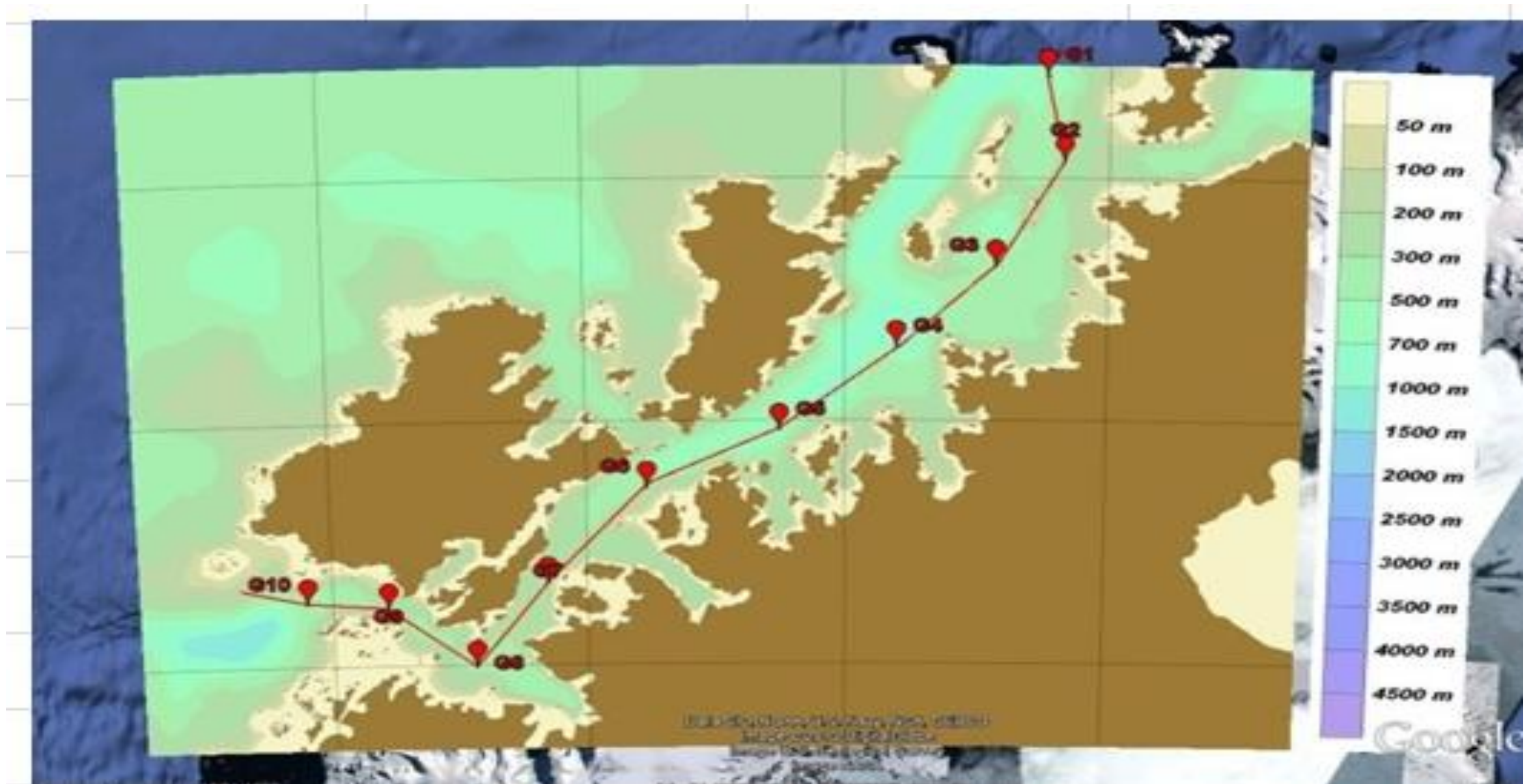
**Location in Antarctica (Gerlache Strait)**

## ESQUEMA CARTOGRAFICO





## SOME STATIONS





**Oceanographic - hydrographyc Vessel ARC MALPELO**



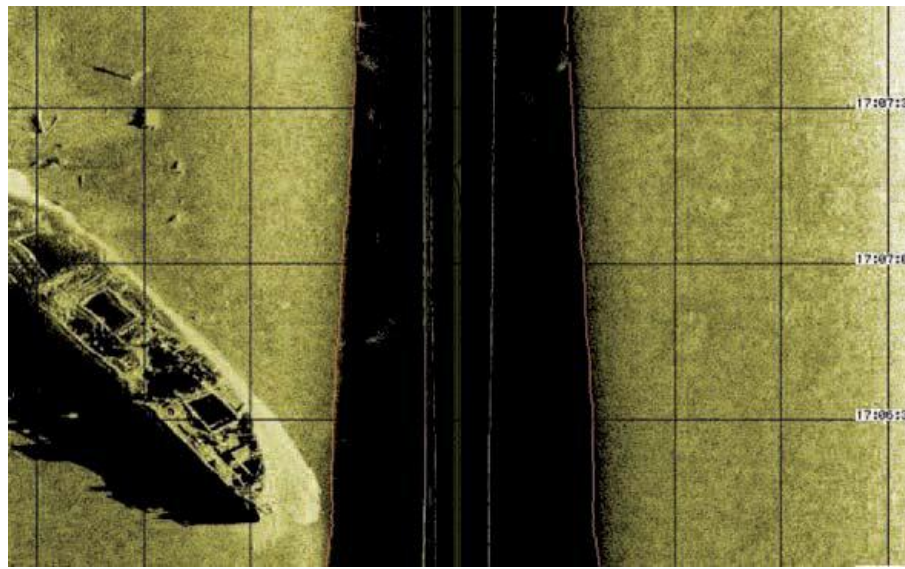
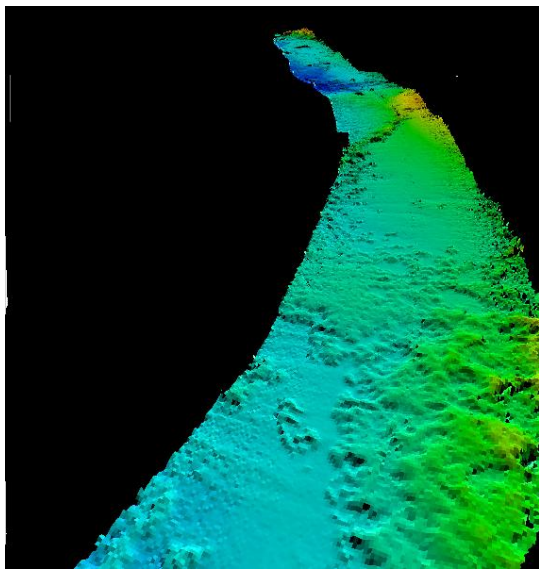
## General characteristics “ARC Malpelo”

<b>Length</b>	<b>: 50.9 m</b>
<b>Breadth</b>	<b>: 10 m</b>
<b>Draft</b>	<b>: 5.7 m</b>
<b>Max speed</b>	<b>: 12,6 knots</b>
<b>Displacement</b>	<b>: 1050 tons</b>

## Hydrographic equipment



- SBES - EA 600
- Shallow water multibeam GeoSwath
- Side Scan tow fish
- MBES- EM 302
- SBP-300.
- Lidar-MBES (Topobathymetric).
- Expeditionary boats
- Software





## crew capacity

CREW	AMOUNT	NAME
Commander	1	
Second in Command	1	
Officers	8	
NCOs	25	
Civilians	2	
<b>TOTAL</b>	<b>37</b>	
SUPPORT STAFF		NOMBRE/INSTITUCION
Operational advisor	1	Officer invited
Medic	1	Naval Hospital
Media	1	contracted
<b>TOTAL</b>	<b>3</b>	
SCIENTIFIC AND TECHNICAL	12	NOMBRE/INSTITUCION
Leader cruising	1	CIOH
Researcher foreigner	1	
Researcher (microbiologist)	1	CIOH
Researcher (geologist)	1	CIOH
Researcher (CCCP)	1	CCCP
Researcher (doctor)	1	FAC
Researcher (meteorologist)	1	FAC
Researcher	1	UNIVERSITY
Researcher	1	UNIVERSITY
Technical (Hydrographer)	1	CIOH
Technical (Hydrographer)	1	CIOH
Technical (oceanographer)	1	CIOH
<b>TOTAL</b>	<b>12</b>	
GUEST SUBTOTAL	15	

