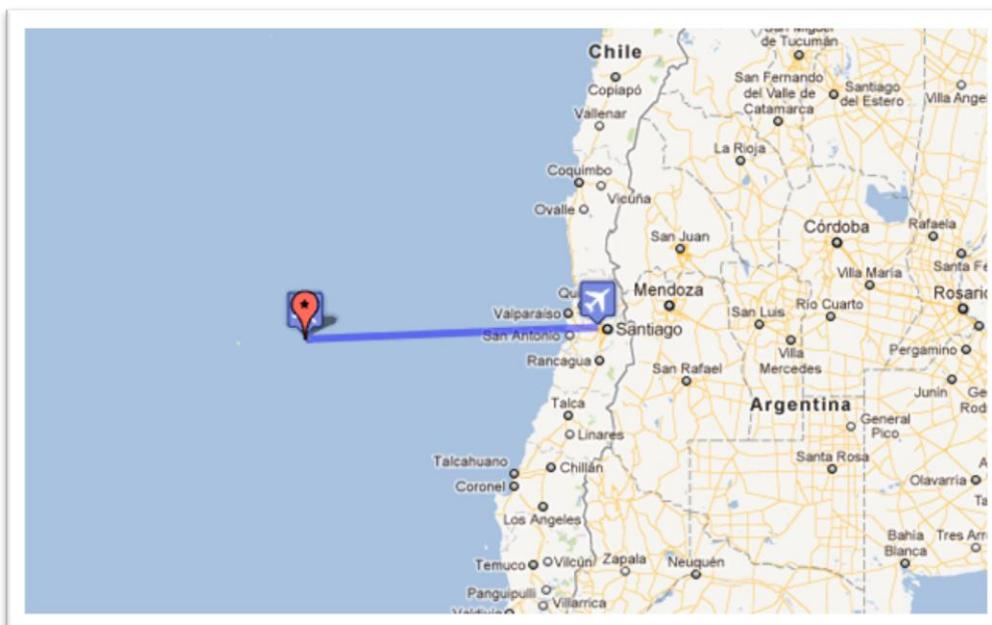


**BENTOS FINDS PLANE CRASHED ON ROBINSON CRUSOE ISLAND.**

On September 2<sup>nd</sup> 2011, a Chilean Air Force plane Casa C-212 Aviocar 300DF crashed into the sea with 21 persons on-board; the plane went down in the vicinity of Robinson Crusoe Island, 400 NM off the coast of Chile.

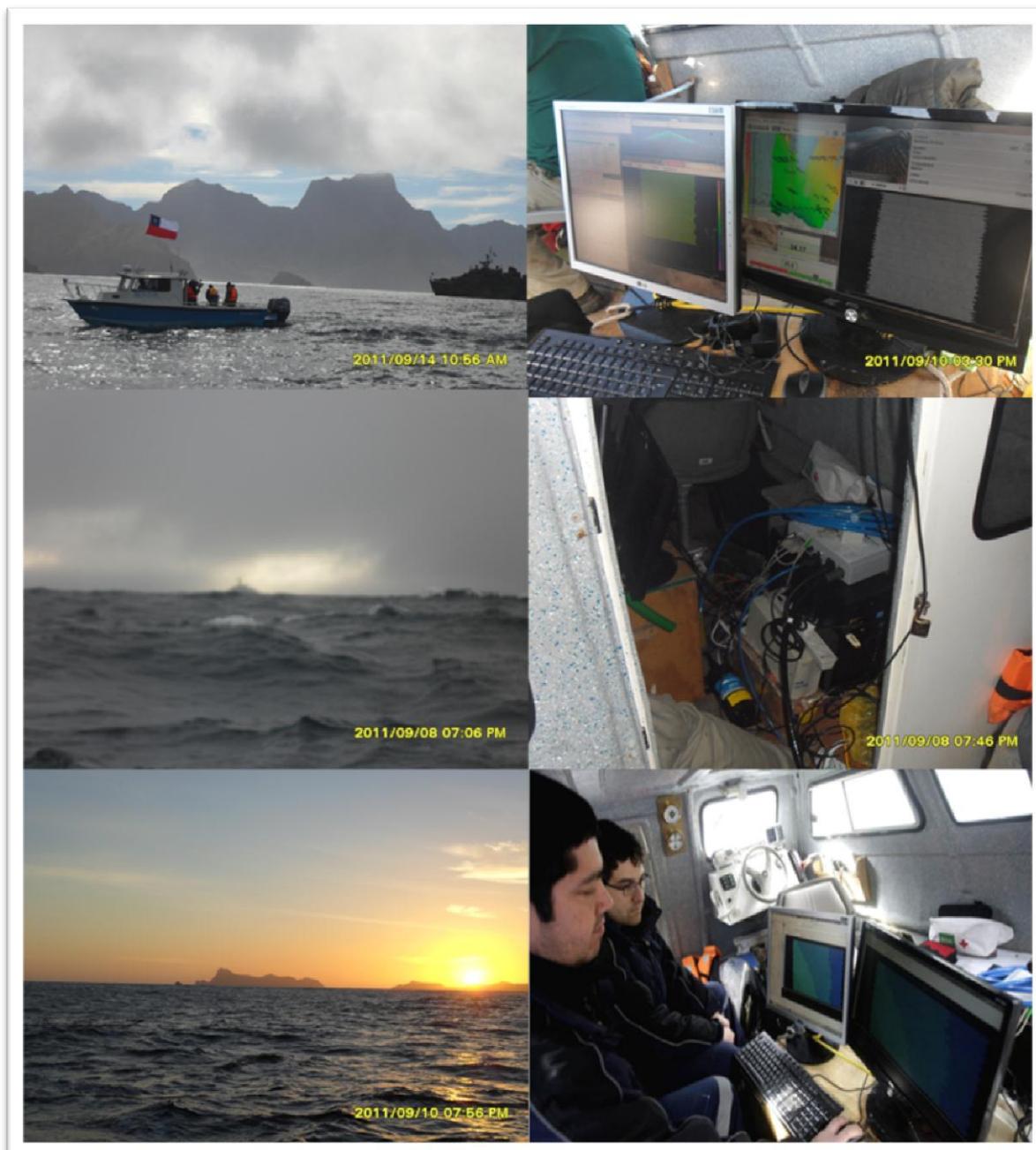


**Plane Casa C-212**

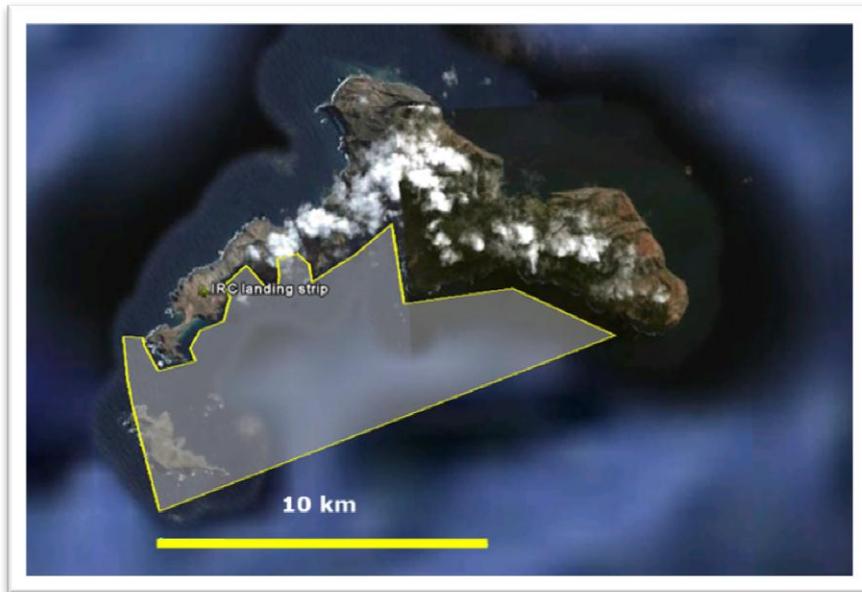


The Chilean Navy and Air Force launched an search operation almost immediately: 3 Frigates, 1 submarine mother ship, one supply vessel, 1 landing craft, 8 helicopters, 5 planes and 600+ man were deployed in the area.

After 4 days of negative results in the underwater search carried out with divers and ROVs, BENTOS was requested to assist the search operation on September 5<sup>th</sup>. Our staff, along with the search equipment was mobilized to the Island on a Navy frigate.



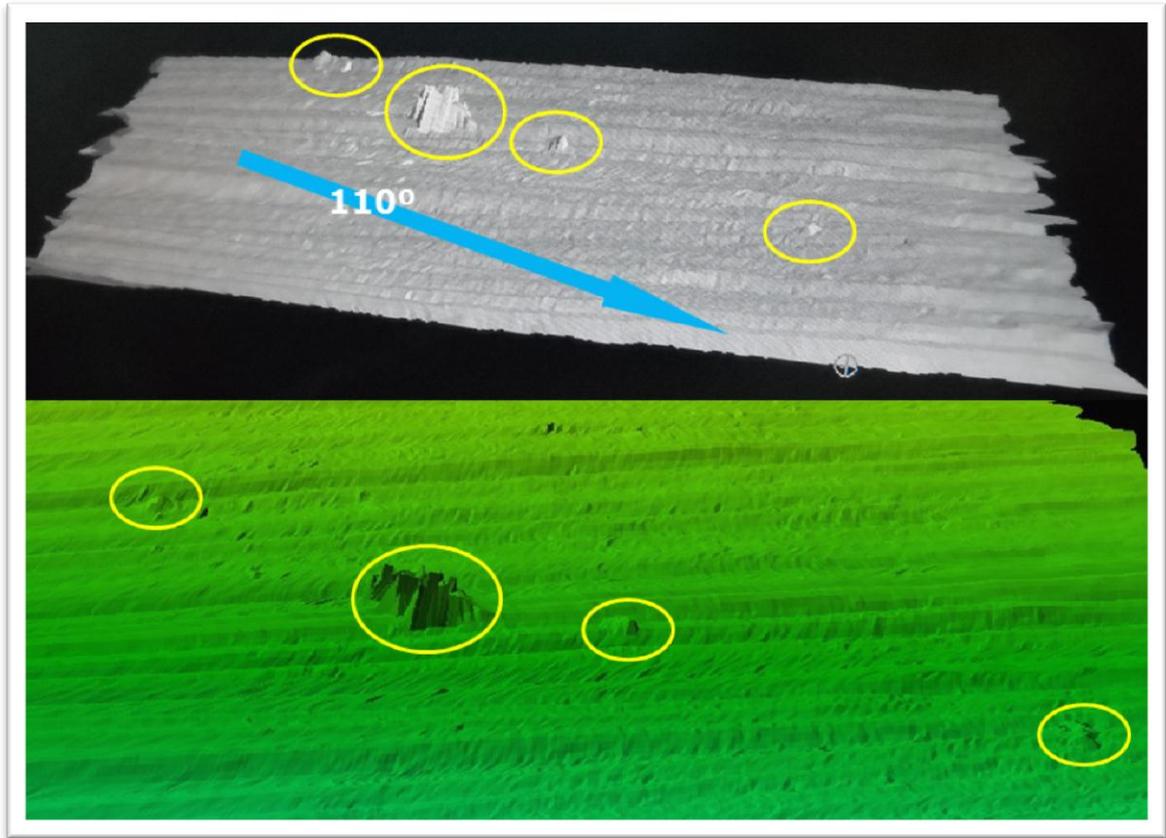
The search area was about 10 km<sup>2</sup> with depths between 0 and 150 m and sea conditions normally above Beaufort 4.



While search equipment was prepared and mounted on board the Park Ranger boat at the Island, Luis Jollán and Bruno Ladrón de Guevara along with senior officers of the Chilean Air Force and Navy met at the Navy headquarters in Valparaíso to discuss the trajectory of the flight, the dispersion pattern of floating debris, currents and wind waves present in the area. With this information the most likely impact area was defined and the search area substantially reduced.



On September 10<sup>th</sup>, after two days of effective search using a broad band multibeam system, a number of anomalies likely to be parts of the downed plane were located. These anomalies were dispersed in a range of about 200 meters, with a bearing of approximately 110°.



The anomalies were reviewed by divers and ROV on September 11, which confirmed the presence of the plane tail. This position, located at 54 m water depth, was called "Loreto point".



On the 13<sup>th</sup>, survey at Loreto point surroundings was resumed. At the end of the day, BENTOS delivered 8 targets to the Navy, all located between 50 and 80 m depth to be checked by divers. They were all confirmed as part of the plane.

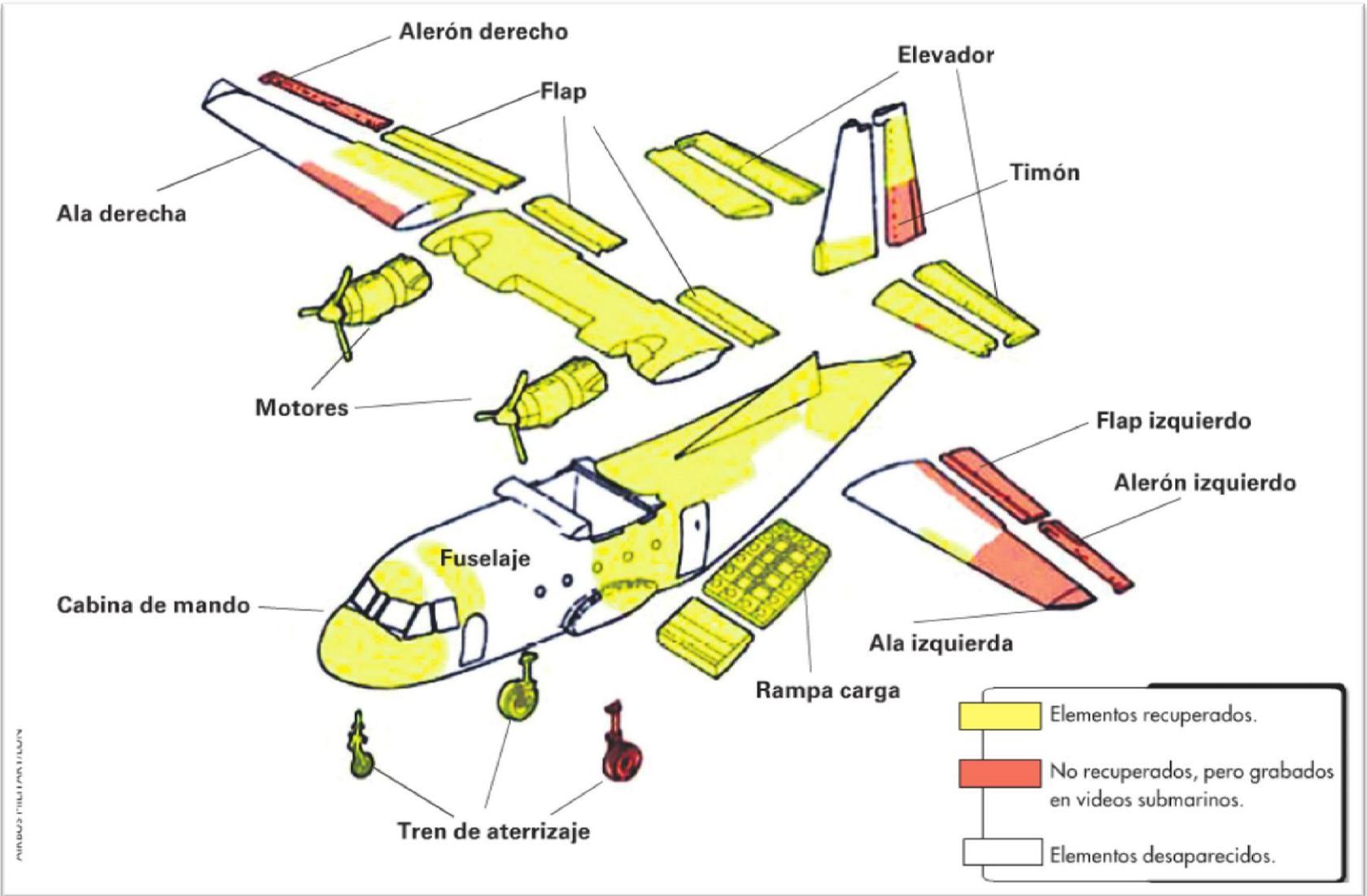
The final location of the crashed aircraft is the result of the analytical work that allowed reducing the search area, and the use of appropriate acoustic tools to map the seafloor. BENTOS is very pleased with the results which confirms the proficiency of their personnel, but also confirms the humanitarian spirit of those who participated in the operation. Well done!

### **INSTRUMENTS USED**

Vessels	<i>ROBINSONIANA</i> 7 m PRF 100 HP, owned by CONAF <i>BENTOS SURVEYOR</i> 9 m Aluminium 2X150HP, owned by BENTOS
Multibeam Sonar	R2Sonic 2024
Motion Sensor	TSS DMS 05
Heading Sensor	VS100 Hemisphere
Sound velocity sensor	Mini SVP Valeport
GPS differential correction	HP FUGRO
Navigation, acquisition and processing software	HSWEEP/HYPACK

### **PERSONNEL**

David Gómez	BENTOS
Juan Miranda	BENTOS
Marcelo Rossi	BENTOS
C.F. Daniel Malfanti	CHILEAN NAVY
Danilo Arredondo	CONAF
Guillermo Araya	CONAF
Bernardo López	CONAF
Bruno Ladrón de Guevara	BENTOS
Luis Jollán	BENTOS (coordinator in Santiago)



ANIMADOS TITULADOS PARA TILSON



**Links about BENTOS work:**

<http://www.latercera.com/multimedia/galeria/2012/06/683-33165-7-restos-del-casa-212-rescatados-tras-accidente-de-juan-fernandez.shtml>

<http://www.emol.com/especiales/2011/coberturas-especiales/accidente-juan-fernandez/detallenoticias.asp?idnoticia=502486>

[http://www.cooperativa.cl/equipos-de-busqueda-sumaron-ecosonda-para-sondear-zona-del-accidente/prontus\\_notas/2011-09-09/134724.html](http://www.cooperativa.cl/equipos-de-busqueda-sumaron-ecosonda-para-sondear-zona-del-accidente/prontus_notas/2011-09-09/134724.html)

<http://papeldigital.info/lacuarta/index.html?2011091101#> (Page 8)

<http://edicionimpresa.soychile.cl/iquique/#!/2011/10/16/full/14>

[http://www.chanarcillo.cl/articulos\\_ver.php?id=46466](http://www.chanarcillo.cl/articulos_ver.php?id=46466)