



HYDROGRAPHY AND NAVIGATION SERVICE NATIONAL REPORT



2011



HYDROGRAPHY AND NAVIGATION SERVICE



HYDROGRAPHICS SURVEYS

2011





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➤ DHN

- ✓ 4th Hydrographic Expedition to Antarctic Continent, Completed.
- ✓ Hydrographic Survey of La Orchila Island Bay, • Bathymetric and geomorphologic survey with side scans sonar of La Orchila Island Bay.
- ✓ Topographic survey for the area to build the Güiria Lighthouse.



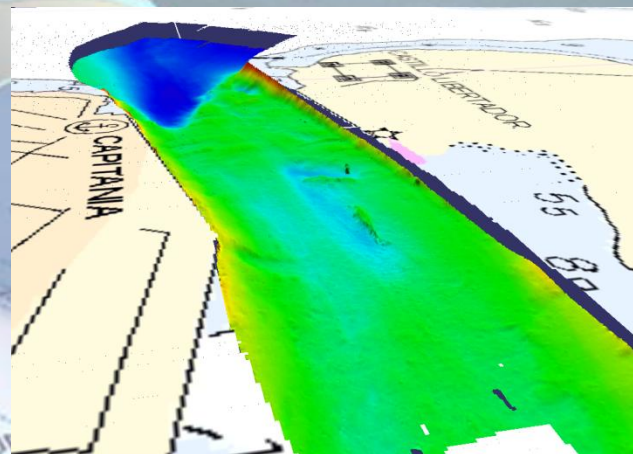
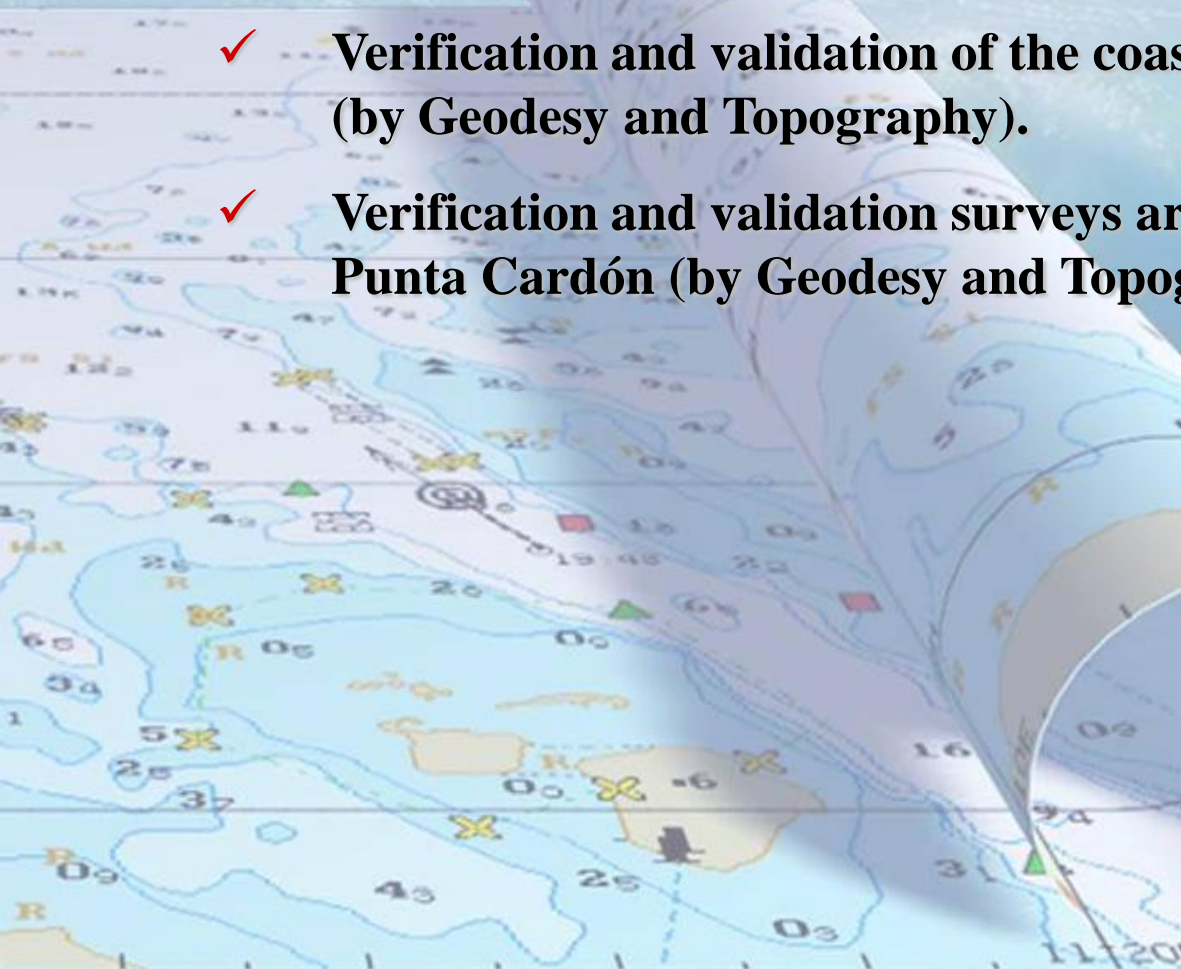


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➤ PUNTO FIJO HYDROGRAPHIC STATION

- ✓ Verification and validation of the coastline in the Maracaibo Lake, (by Geodesy and Topography).
- ✓ Verification and validation surveys around the: Los Monjes Island, Punta Cardón (by Geodesy and Topography).



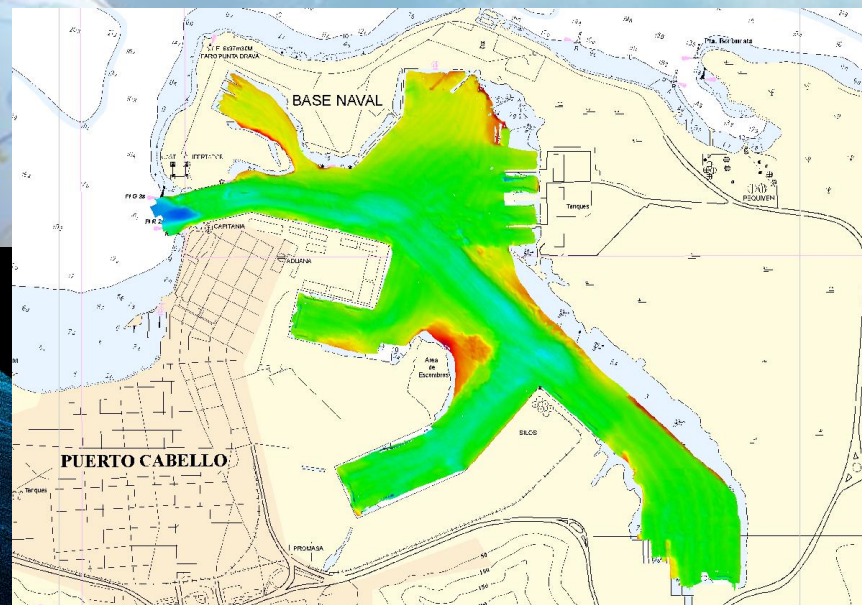
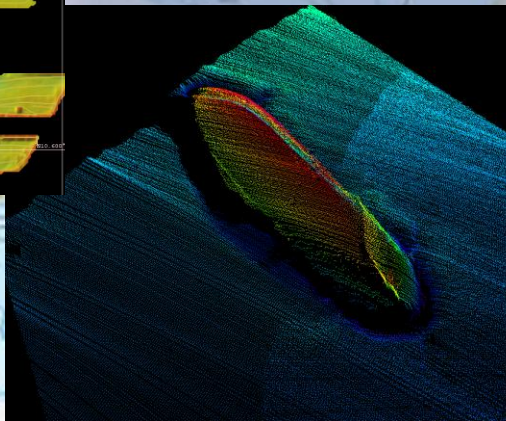
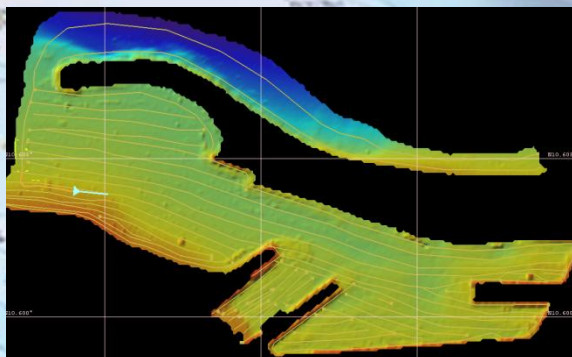


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➤ PUERTO CABELLO HYDROGRAPHIC STATION

- ✓ Hydrographics surveys “TUCACAS Y CHICHIRIVICHE”, “AVES DE SOTAVENTO”, “LA GUAIRA”, “PUERTO CABELLO” Y “CANAL DE BORBURATA”





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➤ PAMPATAR HYDROGRAPHIC STATION

- ✓ Bathymetric verification of “PORLAMAR”
- ✓ Hydrographics surveys “BAHIA DE GUANTA”, “PERTIGALETE” y “PUERTO LA CRUZ”

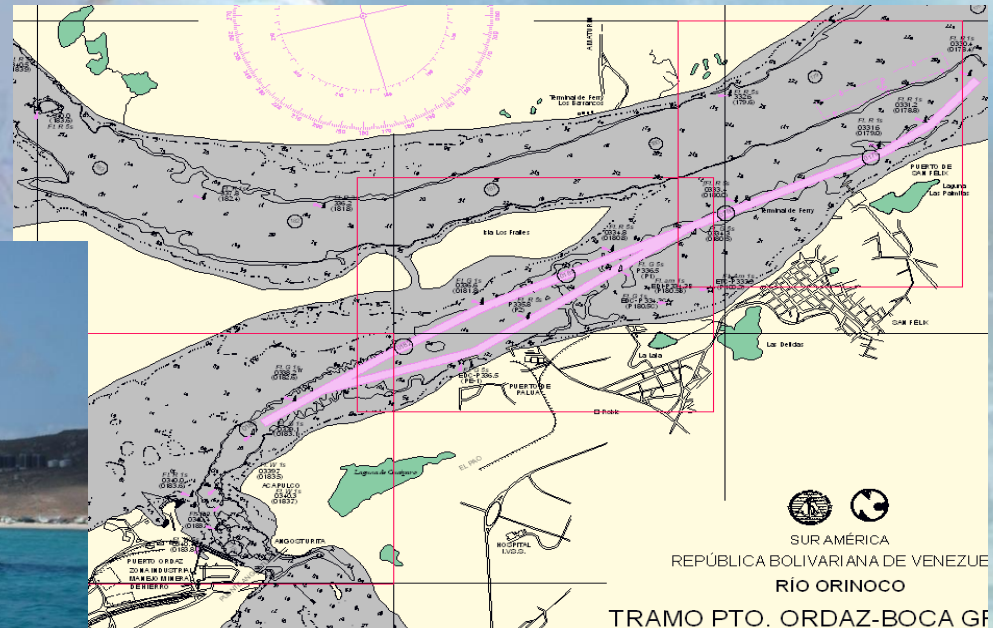




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- **HYDROGRAPHIC SHIP “GABRIELA” (LH-11)**
 - ✓ **Hydrographics surveys of “SAN FELIX”, “PALUA” y “CIUDAD BOLIVAR” (Orinoco River)**





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- **>HYDROGRAPHIC SHIP “LELY” (LH-12)**
 - ✓ **Hydrographic survey of MARACAIBO LAKE**
 - ✓ **Hydrographic survey of MORROCOY**
 - ✓ **Bathymetric and geomorfologic survey of LA ORCHILA ISLAND**

Buque Oceanográfico
"PUNTA BRAVA"



NATIO ET MARE PRESERVARE SEMPER

Investigación Hidro-Oceanográfica con Orgullo Patrio



PROYECTO MARISCAL SUCRE



INVESTIGATION AREAS OFF SHORE FOR PDVSA



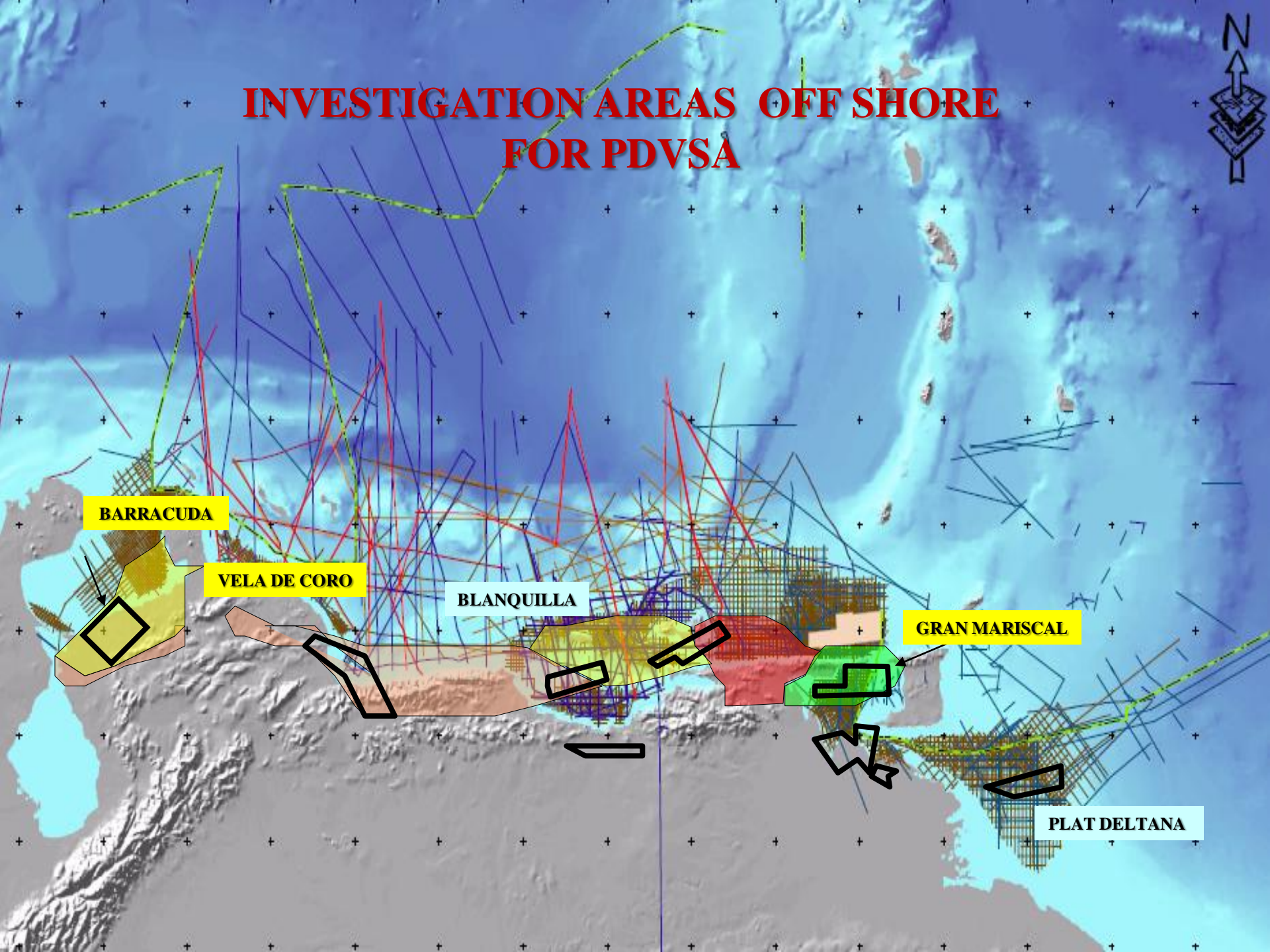
BARRACUDA

VELA DE CORO

BLANQUILLA

GRAN MARISCAL

PLAT DELTANA





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3. New charts & updates

New paper charts edited:

- DHN9601A Puerto San Félix a Palua
- DHN9701A Ferrominera
- Update of DHN9311A Ciudad Bolívar

ENC cells produced:

- VE500401 La Tortuga (on process)
- VE500305 Approximation to la Guaira (available)
- VE500303 Puerto Cabello (on process)



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	<ul style="list-style-type: none"> • VE300700 Delta del Orinoco (on process)
4. New publications & updates (on process for 2012)	<ul style="list-style-type: none"> • New Publication DHN/2011, "Nautical Almanac". • Updated publications: List of Lights DHN (currently in production 2011). Tide of Table Venezuelan coast 2010 and 2011. Nautical Chart Catalogue. Sailing chart. (Currently in production 2011).
5. MSI	N/A

GMDSS IMPLEMENTATION (IMO Publication 970 GMDSS Handbook)

6. Publication S55

1. Hydrographic Surveying

Status of hydrographic survey of all navigable waters, including internal waters, out to the limits of the EEZ: Survey coverage, where:

A = percentage which is adequately surveyed.

B = percentage which requires resurvey at larger scale or to modern standards.

C = percentage which has never been systematically surveyed

	A	B	C
Depths < 200m	30	60	10
Depths > 200m	10	90	0

Amplifying information: The concept of EEZ is not applicable



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7. Capacity Building

a. Training needed

- Multibeam Workshop.
- Hydrographic Surveys on Rivers.
- ENC's production

	DESCRIPTION	DURATION	REQUIREMENTS
Hydrography Survey Course	To qualify the student to be a technician in Hydrography and Navigation issues. Contents: Cartography, Geodesy, Tides, Hydrographic Surveys and processing, and Practical Hydrography.	2 weeks	Elementary school
Masters in Hydrography	To increase the capacity of the student to be a technician in Hydrography and Navigation. Contents: Hydrographic Surveys and processing, Oceanography, Marine Cartography, Topography Meteorology, Navigation, Cartography, Geodesy, Tides, Topography and Practical Hydrography.	24 months	Marine Science

b. Training and courses offered.

c. Projects under development

d. Others: For the DHN staff capacity building program the following courses were conducted in Venezuela:



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Overseas:

1) ENC training offered by the UKHO

Masters in Hydrography
Course in Hydrometeorology
Course in Paper and Electronic Nautical Charts with CARIS HPD software

2) Satellite Image interpretation

3) Hydrography and Oceanography Courses in Italy and Chile.

Projects to continue data processing:

- Oceanographic survey of Archipelago los Roques, Orinoco River and Bolivar City.
- Oceanographic survey of Orchila Island.
- Oceanographic survey of Oricao Bay.
- Oceanographic survey of Aves Island.

8. Conclusions

Venezuela continues to participate and cooperate in the field of hydrography with other Members of the Meso American and Caribbean Sea Hydrographic Commission.



DIR. AGENCIA
REPÚBLICA BOLIVARIANA DE VENEZUELA
COSTA GENERAL DE VENEZUELA
E
MAR CARIBE ORIENTAL
ISLA

THANK YOU

Puerto Cabello