



Egyptian
Hydrographic Department



THE EGYPTIAN HYDROGRAPHIC FRAMEWORK

The roles of a national Hydrographic Service can be summarized in collecting georeferenced data through systematic surveys at sea and along the coast related to:

- Depths of the seas in the area of national interest (including all potential hazards to navigation - considering present and future ships' drafts - and other marine activities)
- Coastal features, including man-made infrastructures for maritime navigation, aids to navigation and port configuration
- Nature of the sea floor
- Tides & currents
- Physical properties of the water column





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In order to process the information collected in order to create organized databases capable of supporting the production of nautical charts, thematic maps and other types of documentation for the following most common uses :

- Maritime navigation (and traffic control)

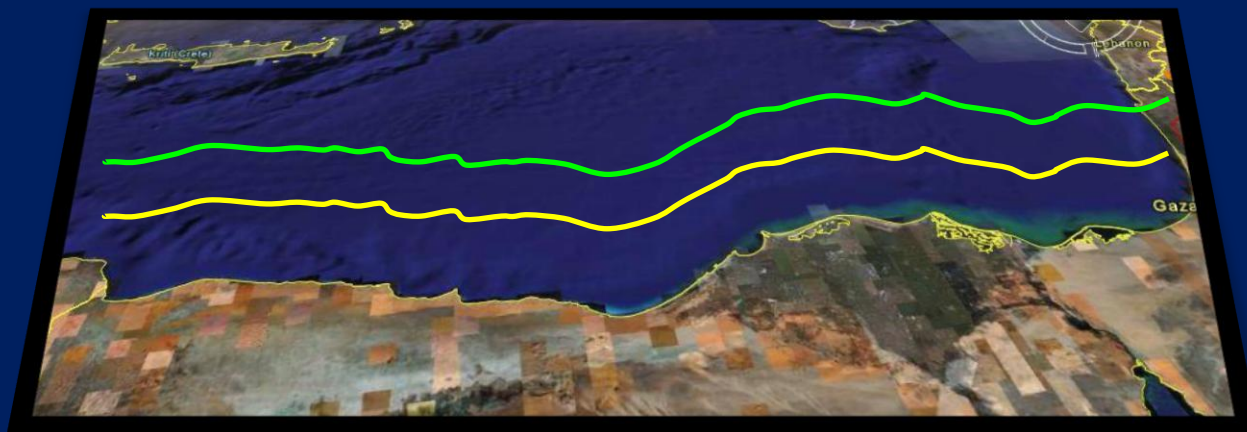




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- Maritime navigation (and traffic control)
- Definition of maritime boundaries (Law of the Sea implementation)

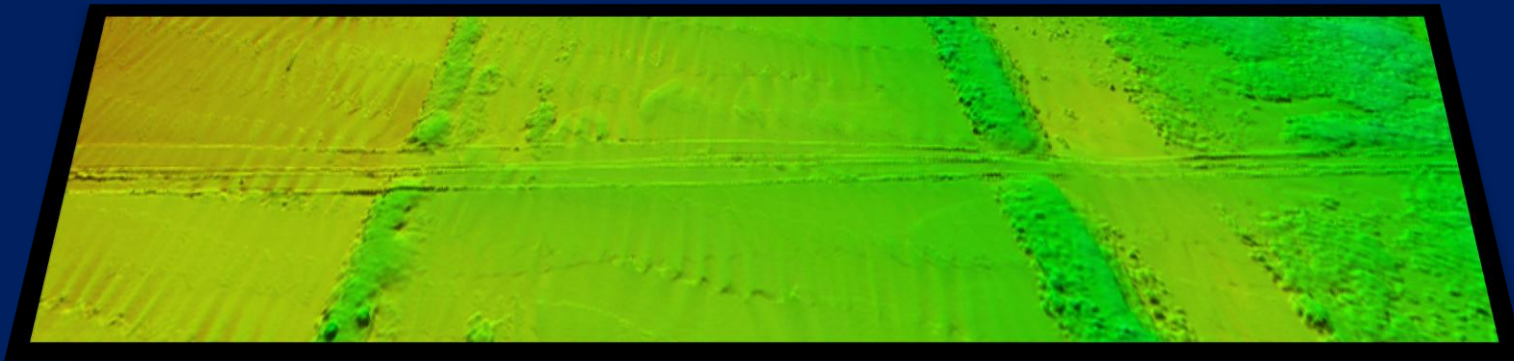




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- Maritime navigation (and traffic control)
- Definition of maritime boundaries (Law of the Sea implementation)
- Exploitation of marine resources and laying of submarine cables/pipelines
- Naval operations
- Coastal management
- Civil defense
- Marine environment preservation
- Scientific studies related to the sea and near-shore zone





ENHD

- The ENHD following by the chain of command the Egyptian Naval HQ.
- Considered the oldest and the most experienced hydrographic office in the region (since 1920).
- ENHD is the official representative for EGYPT to the IHO (international Hydrographic Organization).
- Member in the Mediterranean and Black sea hydrographic committee & NIOHC.
- Permanent member in international Hydrographic and scientific conferences and workshops.



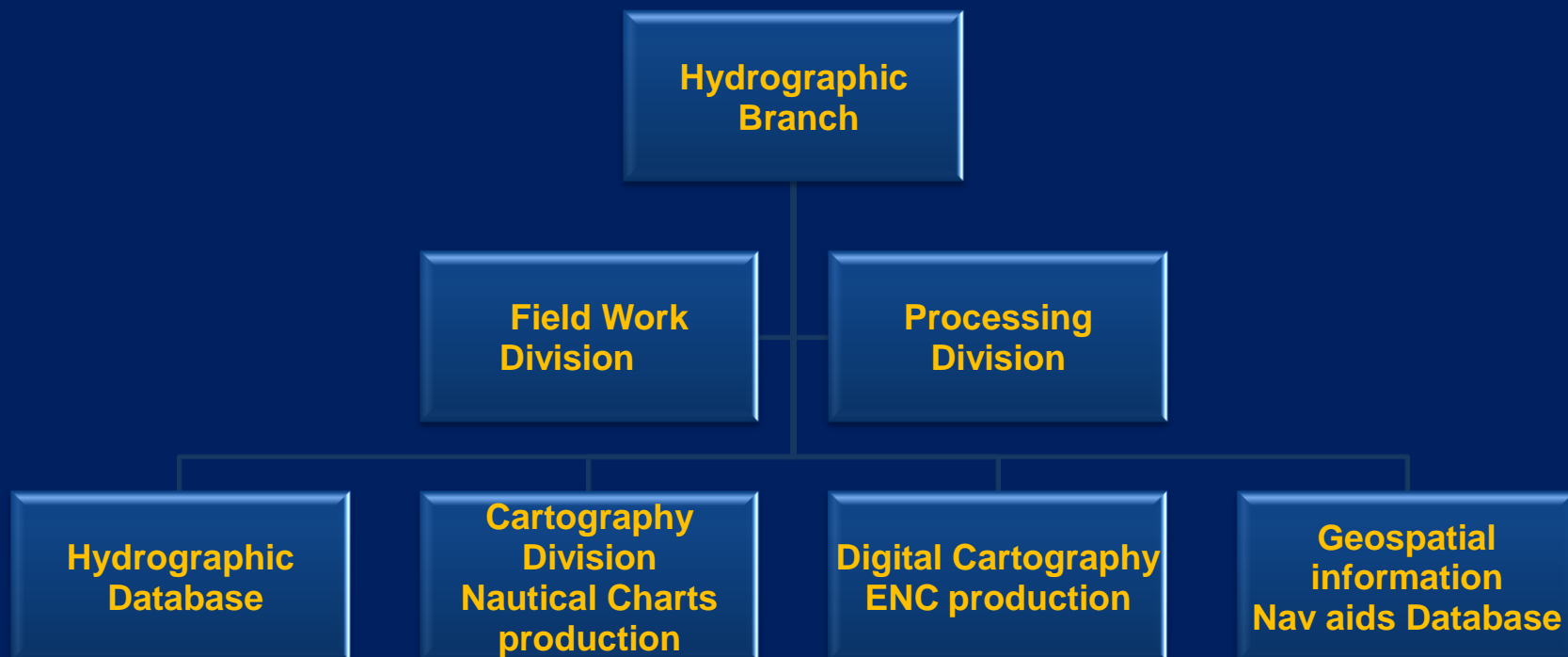


EGYPTIAN HYDROGRAPHIC DEPARTMENT





CHAIN OF COMMAND





Responsibilities

- Provide Hydrographic security for the Egyptian fleet.
- Achieve efficient and safe Maritime Transport.
- Coastal zone management.
- Exploration and Exploitation for marine resources.
- Marine science.
- Maritime Boundary Delimitation.
- Nautical and Electronic charts production for the Egyptian Territorial waters.
- Technical approval and supervision for the International Surveying companies working in the Egyptian waters.





Capabilities to achieve responsibilities

- **Highly qualified personnel.**
- **Hardware – Software for the purpose of:**
 - **Hydrographic Surveying.**
 - **Nautical Chart production.**
 - **ENC production.**
 - **Provide Marine Safety Information and Aids to Navigation.**
 - **Provide scientific information for economic commercial purposes.**





Survey Team and their qualifications

A group of the most professional hydrographic surveyors who had deep and great experience in this field will run and control both field and office works... their qualification are as following:

- Bachelor degree in marine science and technology.
- All local basic and advanced courses in navigation science.
- Basic and advanced (Cat A, Cat B) Hydrographic survey courses in the United State of America.
- Basic and advanced (Cat A, Cat B) Hydrographic survey courses in the United Kingdom (HMS).
- Basic Hydrographic survey courses in Italy (IMA).
- Hydrographic Data Management courses in Italy (IMA).
- Advanced Cartography Course in Italy (IMA).
- Arial Photogrametry and remote sensing courses in (NASA) United State of America.
- Master Degree in Hydrographic survey and Chart Production.
- Advanced courses in (ENC) Electronic Navigation Chart production.





Egyptian Navy Survey squadron

- Two Route Survey Vessels.
- Two survey Motor Boats.
- Three Zodiacs.
- Oceanographic ship (contracting).

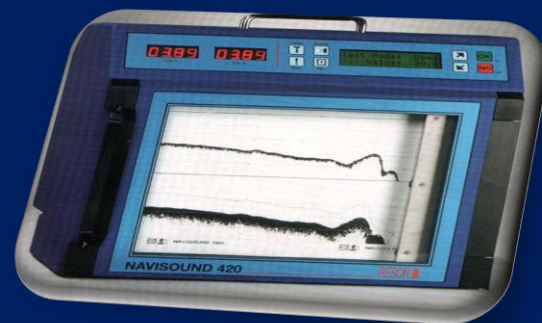
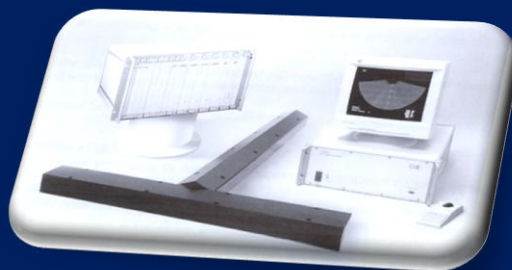
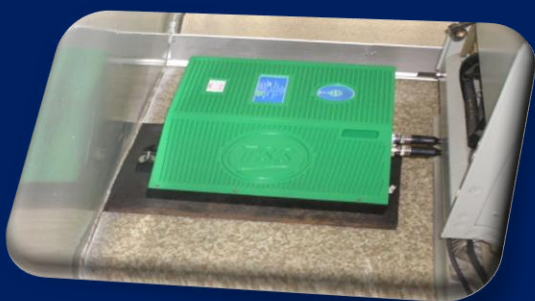




Equipment onboard

Sounding

- Single beam Echosounder (single frequency).
- Single beam Dual frequency Echosounder.
- High Frequency MultiBeam Echosounder (Reson 8112 0-300m shallow water).
- Low Frequency MultiBeam Echosounder (Reson 8160 5-3000m deep water).
- MHRs Motion sensor.





Equipment onboard

Bottom Depiction (Bottom obstacles detection and definition)

- Digital Side Scan Sonar (KLEIN 3000).
- ROV (Sea Rover).
- Sub bottom profiler (SES 2000).





Equipment onboard

Positioning

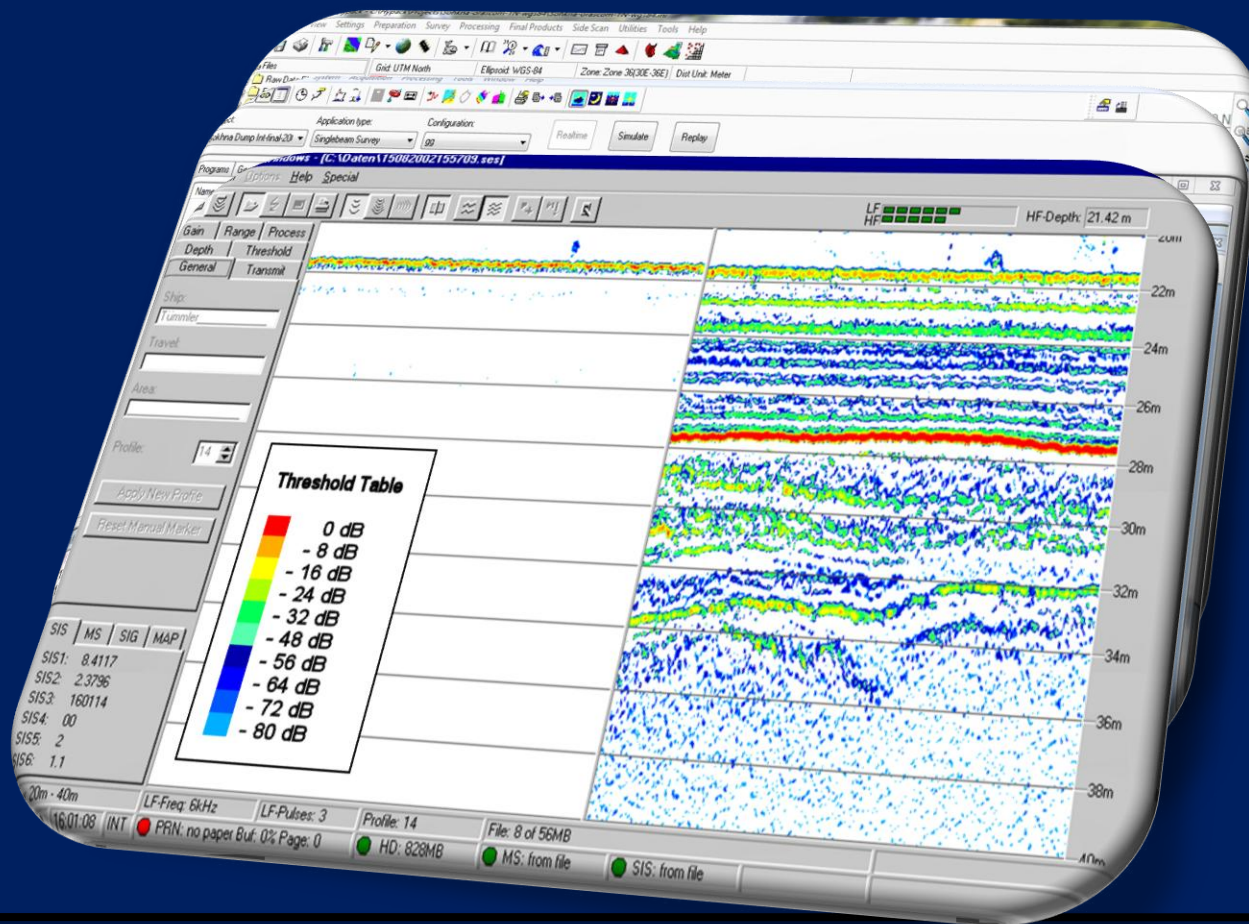
- DGPS (Beacon correction-EGNOS corrections).
- HP (OMNISTAR correction).
- RTK. High Precision.
- Microfix.





SOFTWARE

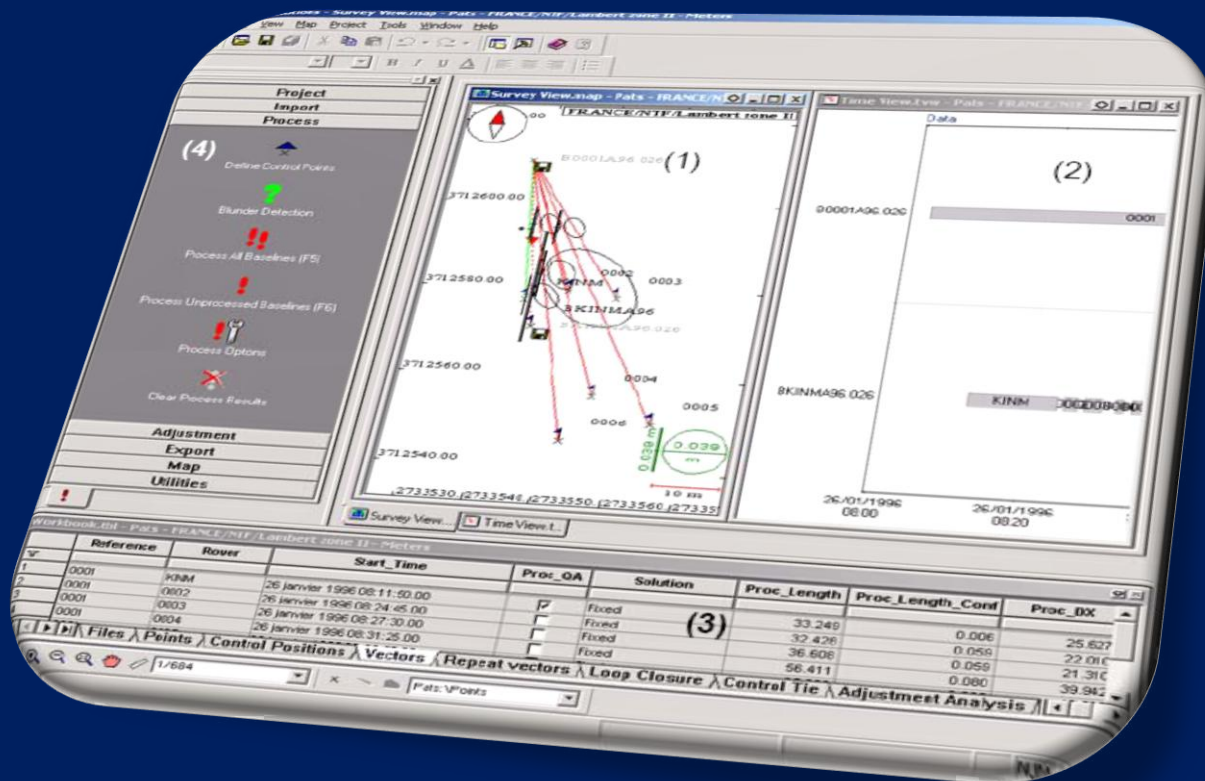
- Hypack Max.
- Pds2000
- Pangea
- Caris GIS
- Caris HOM
- SES 1.7
- CAD Packages





SOFTWARE

- TRITON imaging
- Target pro
- ISIS sonar.
- Sonar pro
- THALES Navigation
- GNSS Solution.
- Fast Survey.





The Egyptian Northern Coastline

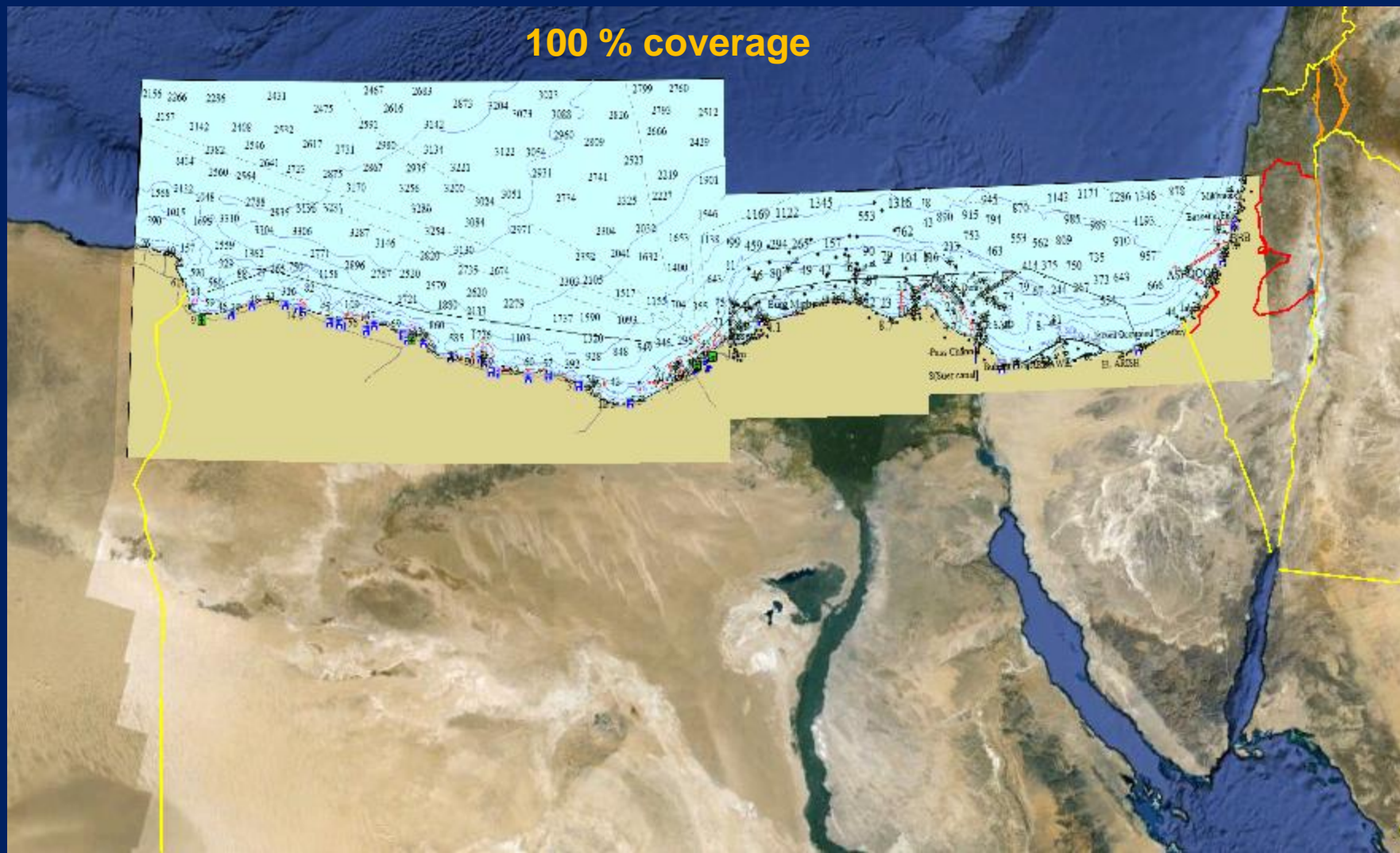




EGYPTIAN HYDROGRAPHIC DEPARTMENT



100 % coverage



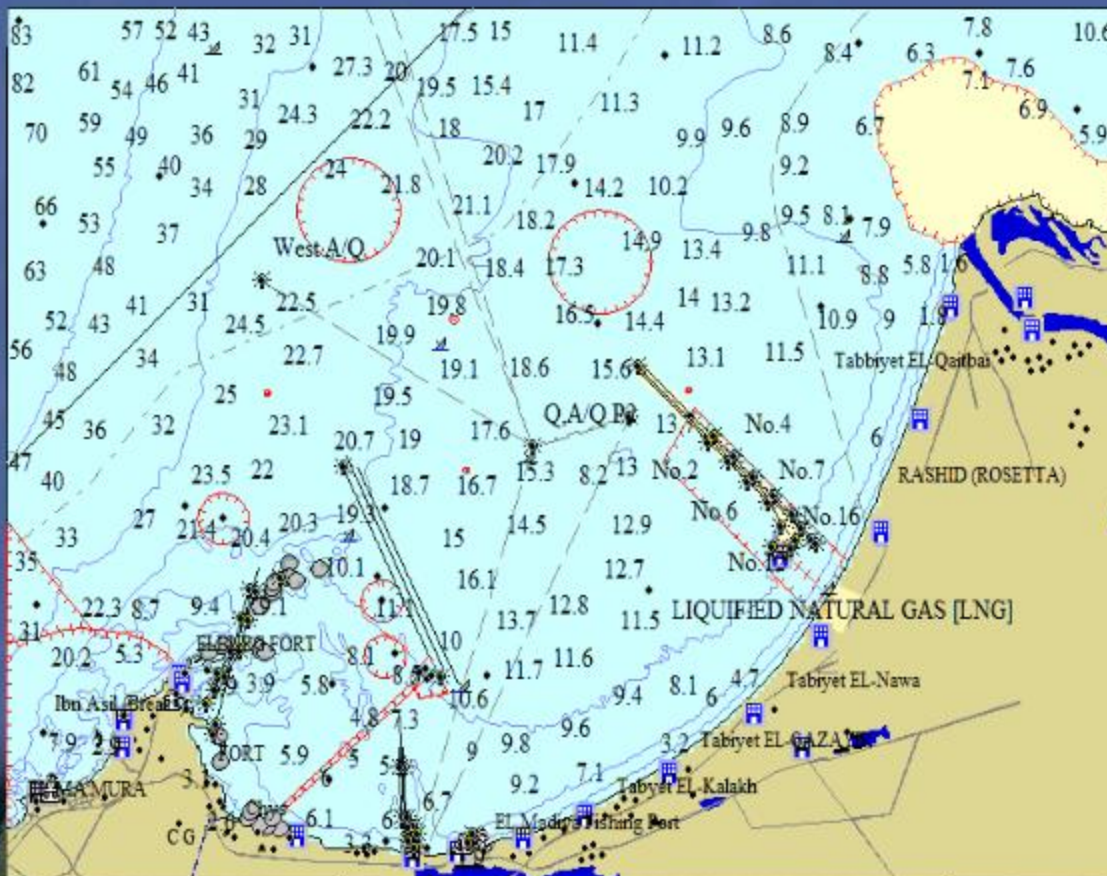


ABU-QUIR BAY PAPER CHART



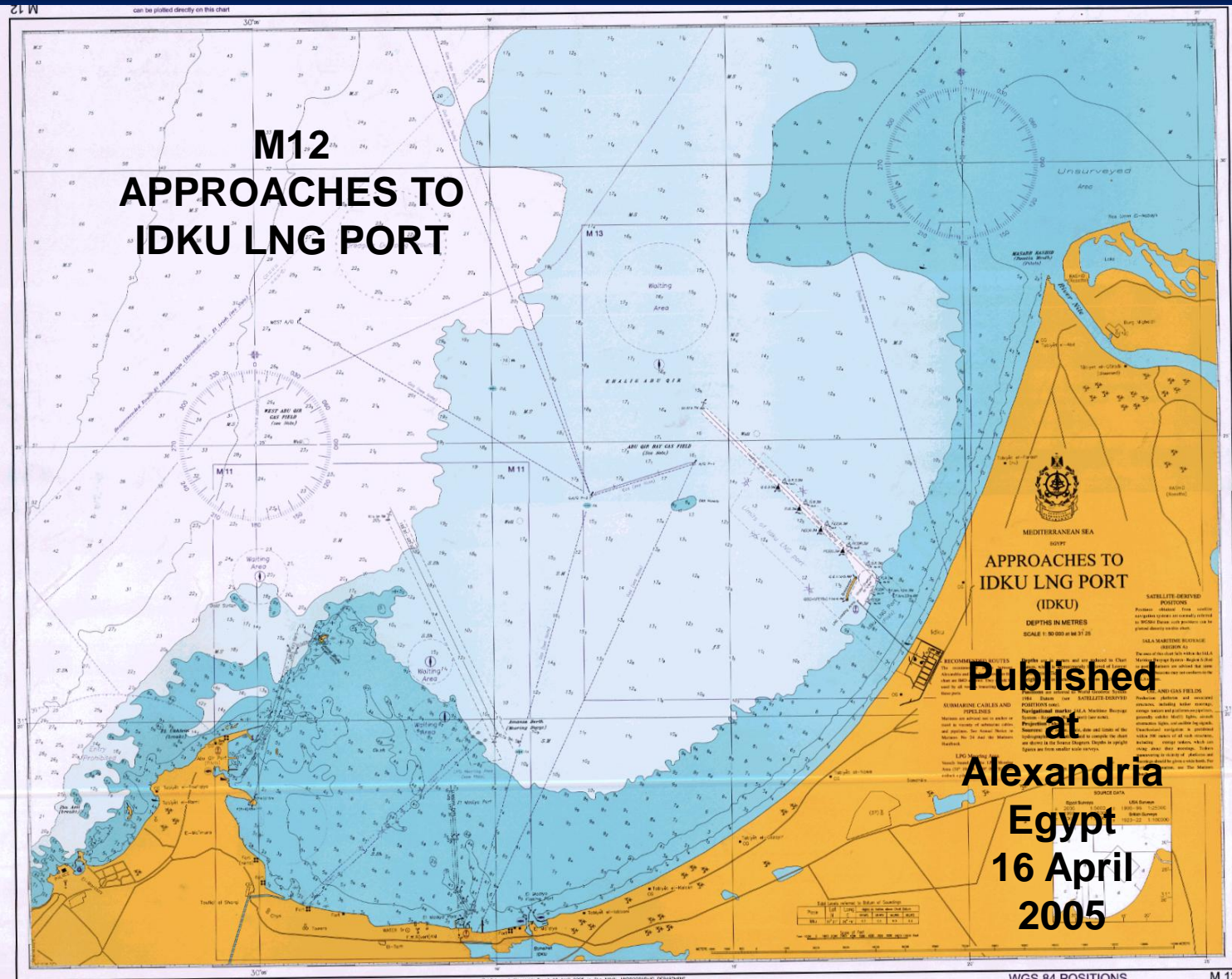


ABU-QUIR BAY ENC





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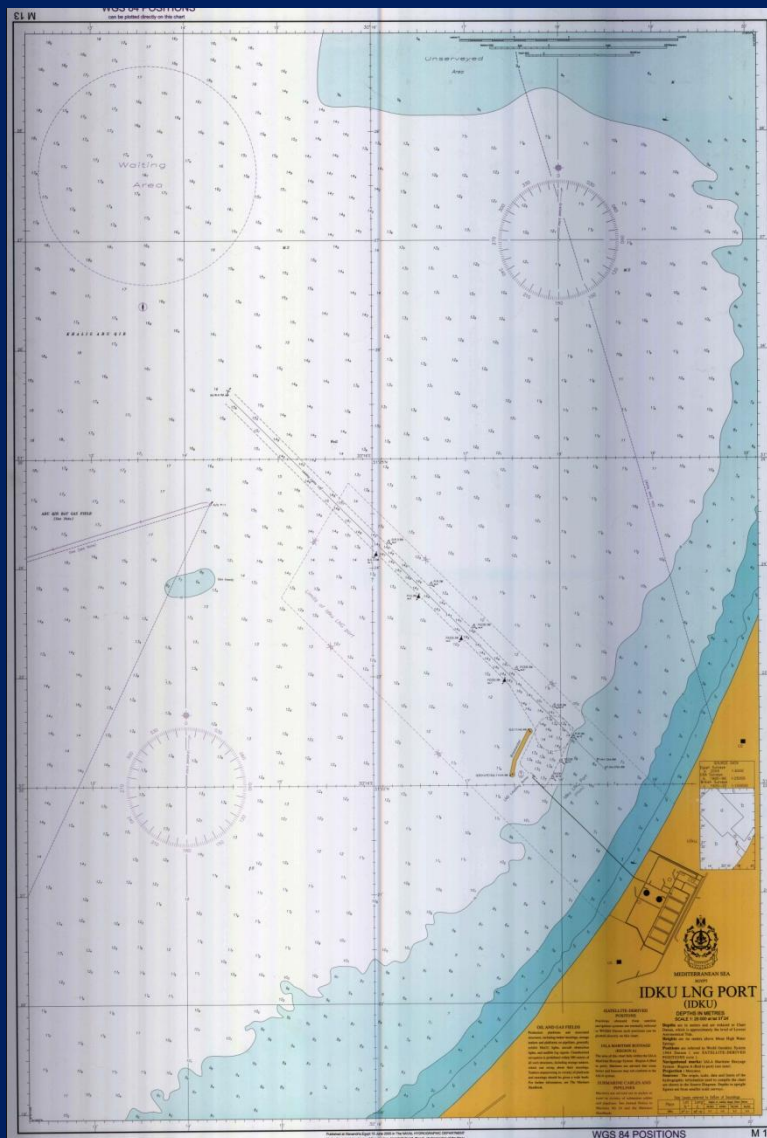


IDKU PORT PAPER CHART





M13 IDKU LNG PORT

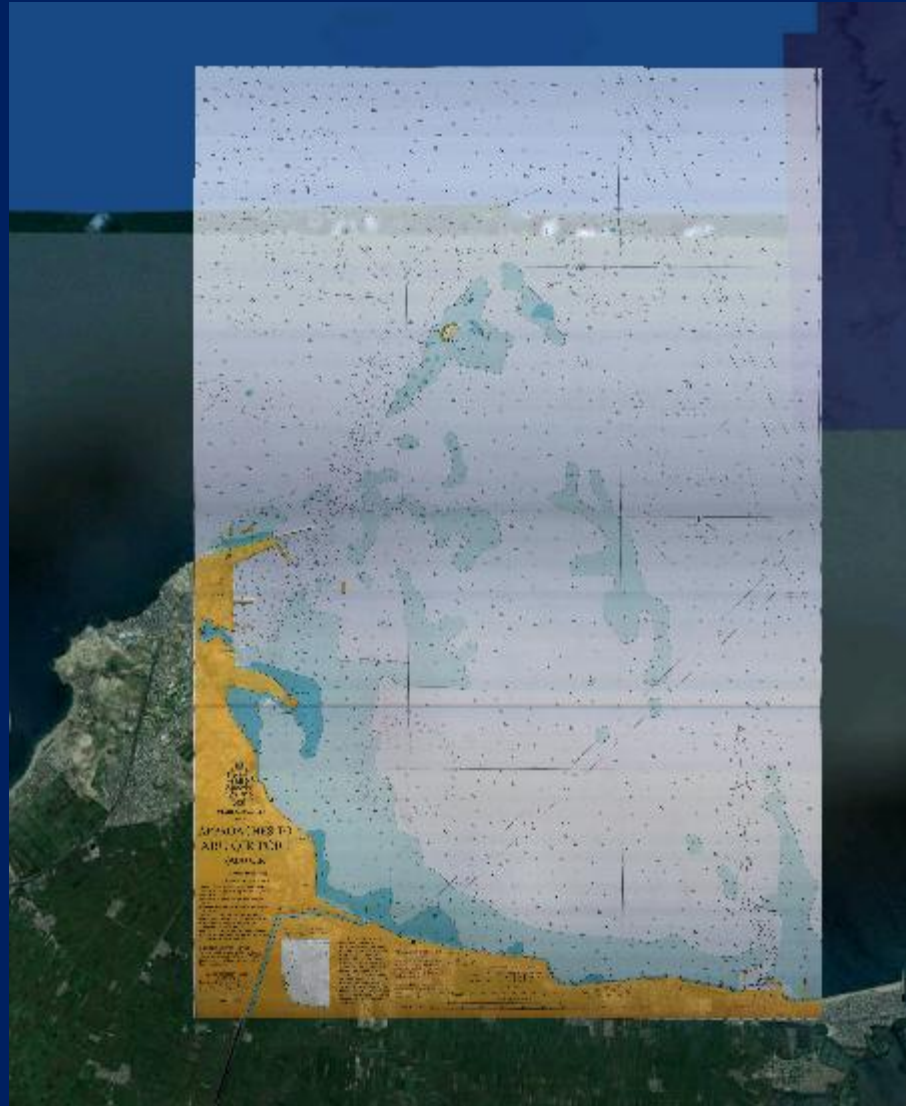


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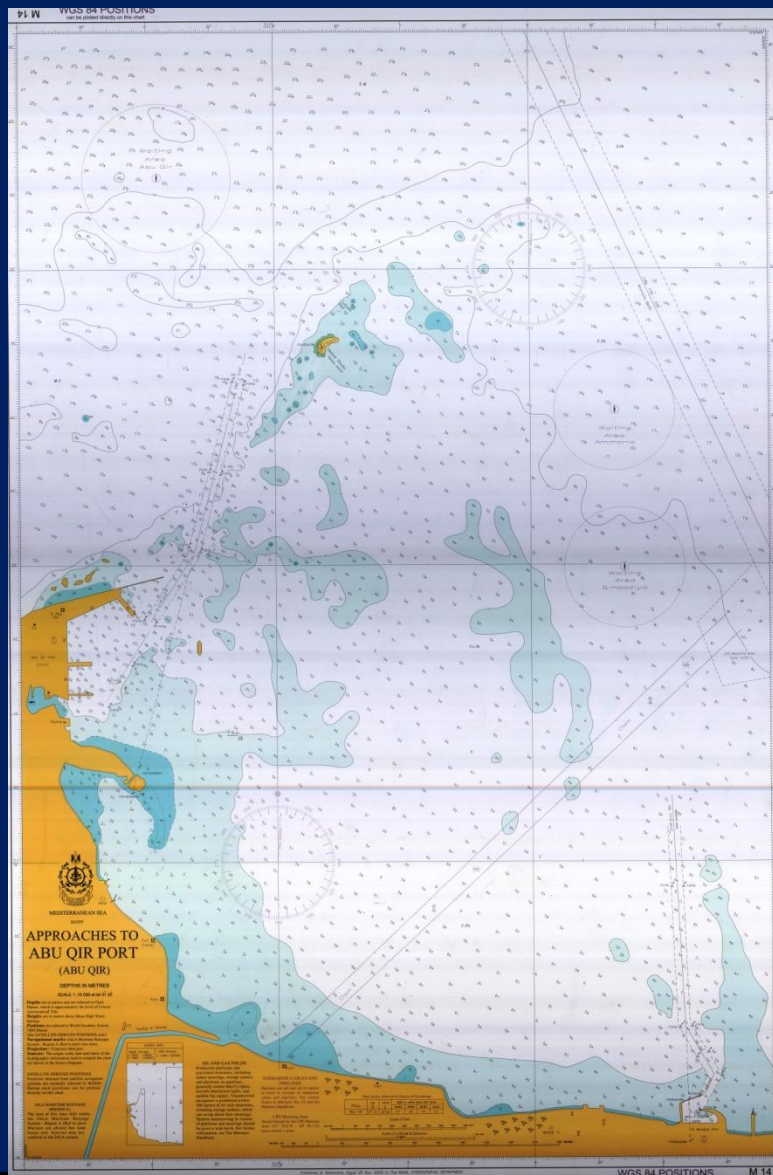


ABU QUIR PORT PAPER CHART





M14 APPROACHES TO ABU QUIR PORT



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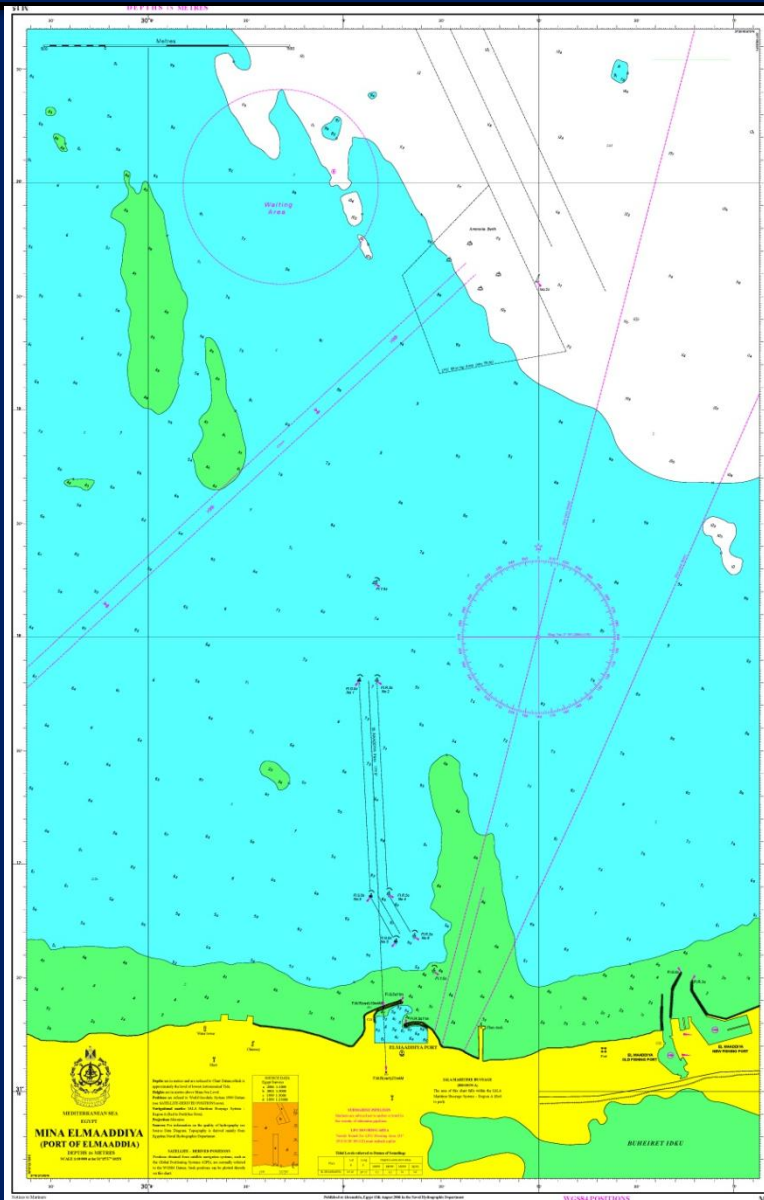


PORT OF ELMAADYIA PAPER CHART





M15 MINA ELMAADDIYA PORT OF ELMAADYIA



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RASHID TO ELALAMIN PAPER CHART

