



drilling & geotechnical

BATHYMETRY SURVEY



Precision

- Horizontal accuracy: ~8mm using DGPS
- Depth accuracy: ~15mm with tide calibration

Advantages

- Real-time depth mapping.
- Side-imaging sonar for detailed underwater structures

Examples

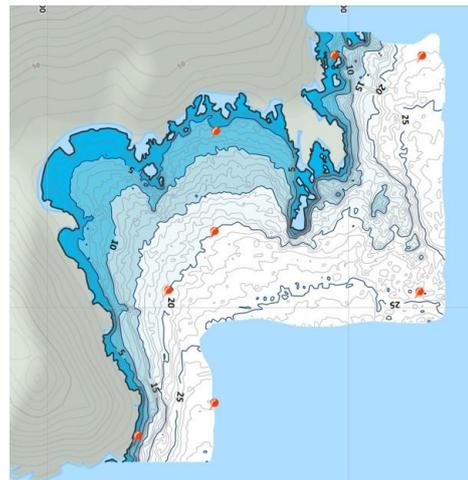
What is Bathymetry Survey?

Bathymetry is the study and measurement of underwater terrain and topographic features to analyse oceans, rivers, lakes, reservoirs, and other bodies of water. The main purpose is to accurately map the depth and shape of submerged surfaces, creating detailed bathymetric charts that reveal underwater contours, slopes, and elevation changes.

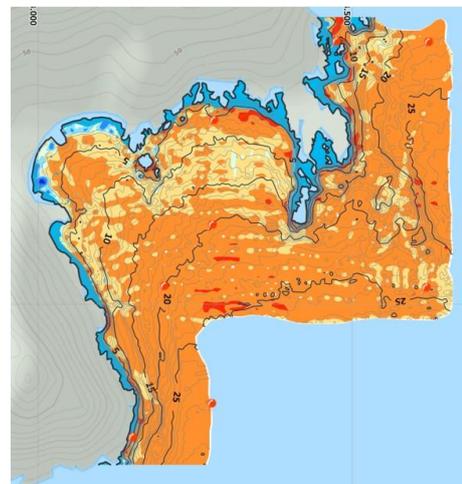
Our bathymetry survey system integrates high-precision GPS (Global Positioning System) and Sonar (Sound Navigation and Ranging) technologies. The sonar emits sound waves from a transducer toward the waterbed, and the returning echoes are measured to calculate depth. Combined with GPS positioning, we are able to generate accurate three-dimensional models of underwater surfaces with precise spatial references that will allow to support engineering decision making, environmental sustainability, and safe waterway operations.

Processes

- Boat mounted with sonar scans underwater, manned or unmanned.
- Data processing using a computer software.



Contour map result example



Hardness map result example



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BATHYMETRY SURVEY

Bathymetry Equipment



Sonar Equipment



Tidal Monitor



Regular Boat for Direct Survey



Remote-Controlled Boat for Survey

Our Projects



Tujuh Bukit Project, Banyuwangi, East Java, Indonesia (2014)



Candrian Project, Banyuwangi, East Java, Indonesia (2019)

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