AUTONOMOUS UNDERWATER VEHICLE

Saving Money in Deepwater Geophysical Surveys | May 2012

Technology is helping Woodside gain high resolution seafloor mapping at low cost for our world class development projects.

Autonomous Underwater Vehicle (AUV) technology is introducing a new era in seabed mapping and investigation. The system is a remotely controlled underwater vehicle performing data collection in water depths down to 3,000m.

Ulike a Remotely Operated Vehicle (ROV) the AUV does not depend on an umbilical for power supply or instrument control.

This creates freedom in movement which makes the platform ideal for deep as well as medium depth detailed seabed mapping or for operations where data quality and speed of data collection is of concern It gives the end user an economical product with superior quality.

AUV's are an excellent base platform for deep water surveys. They acquire high resolution data from payloads including Multibeam Echsounder, Sidescan Sonar and Sub-bottom profiler, magnetometers; even gas detectors.

Part of the operation sequence is the mission planning which incorporates the finer details of the survey such as line spacing, flying height, speed of the vehicle and sensor settings.

After completing the survey the vehicle is recovered and the data downloaded and quality checked. The vehicle is then reprogrammed with another mission and deployed.

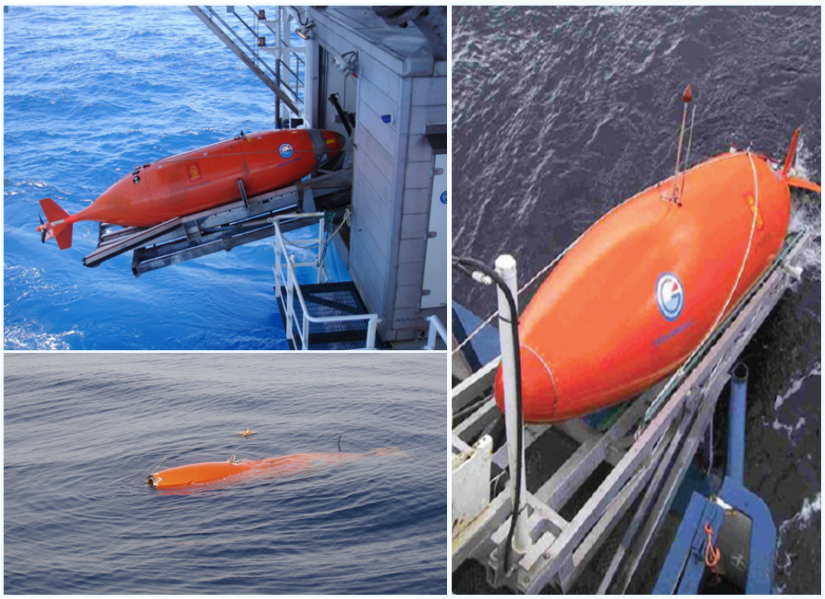
In recent years Woodside has embraced the technology to support the following development projects to assist in geo-hazard studies, pipeline routing and design, flow assurance, platform studies and construction activities to ensure safe emplacement of subsea infrastructure.

Some recent examples include:

- Mauritania (2004)
- Pluto (2006)
- Browse (2011)
- Cimatti and Laverda (2012)

QUICK FACTS

- Cost effective compared to conventional surveys. Reduces time for survey line changes and high speed surveys.
- Simple mission planning software.
- Vehicle subsea endurance time of up to 60 hours.
- Containerised launch and recovery system (LARS) improves portability.
- Excellent visual seabed inspection capability.
- Can survey in high risk locations and close to offshore infrastructure.



An autonomous underwater vehicle being retrieved in Mauritania