

# A Wave Glider delivers METOC data in the North Sea to reduce the risk of close pass seismic operations.

## CHALLENGE

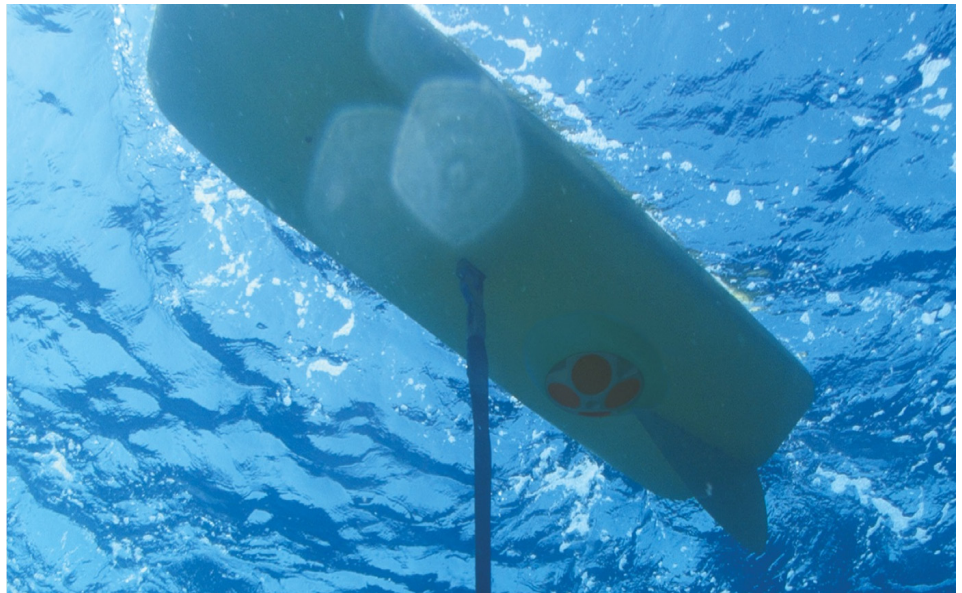
During seismic surveying, commercial vessels tow multiple acoustic streamers which listen to the reflection of acoustic energy beneath the surface. To optimize data the vessels and streamers may need to pass close to oil platforms. Weather conditions and varying water currents can add to the risk of these close pass operations.

## SOLUTION

Wave Gliders can be deployed near platforms to measure current speed and direction as well as weather data. This information is relayed in real-time to the streamer towing survey vessels to allow safer navigation.

## RESULTS

The METOC Wave Glider was able to maintain its position over a 13 day period providing current direction, speed and weather data in support of a close pass seismic operation.



## The Wave Glider platform

The Wave Glider® is the first autonomous marine vehicle (AMV) that harnesses kinetic energy from wave action to produce forward propulsion in the ocean; in an environmentally friendly manner. The vehicles are completely self-sustaining, using solar panels to power their payloads. The platform includes navigational and control systems, and communicates to an operations center via satellite. Navigational and operational control with full security can be transferred to a local set-up via a master/slave system. This technology provides persistent ocean presence and a reliable data acquisition platform.

## Real time measurements of currents and weather

The North Sea is rich in natural oil and gas resources. It is also home to some of the busiest shipping routes in the world. In the process of seismic exploration, commercial vessels tow multiple acoustic streamers that are listening for the reflection of acoustic energy from beneath the seafloor. Because of the size of the operation and the vulnerability to surface currents and inclement weather, real-time measurements of currents and weather are critical to safe operation and close passes.

## Wave Glider Advantages

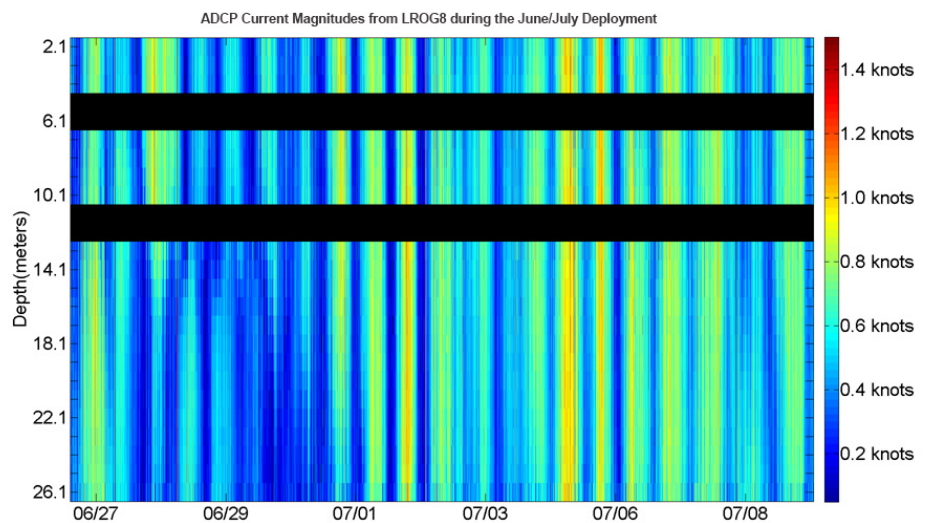
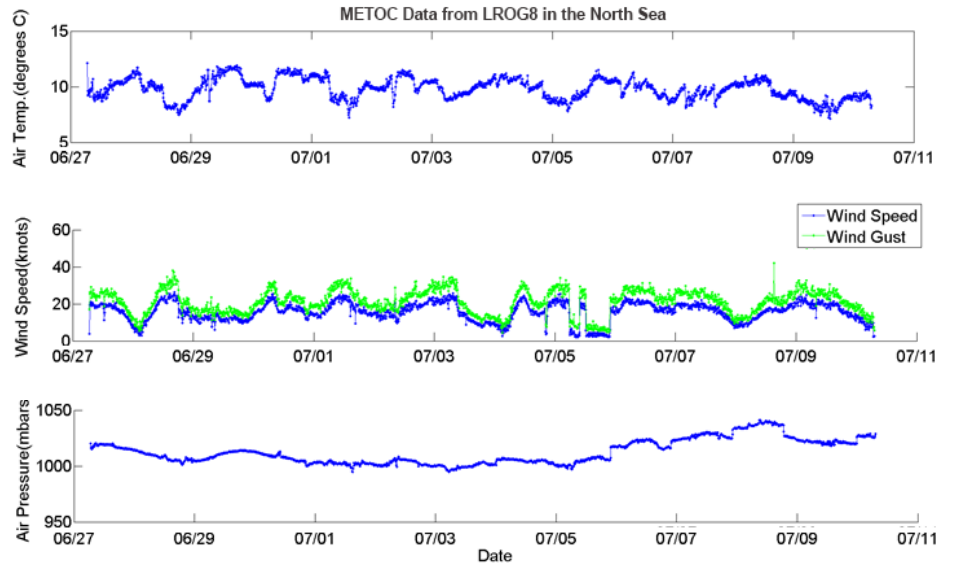
Wave Gliders allow for greater situational awareness in the form of real-time weather and current measurements. Using the Wave Glider in the over populated area is a fraction of the cost of traditional monitoring services. With an ability to operate 24 hours a day, 7 days a week independent of weather conditions, the Wave Glider is an ideal platform for critical and persistent operations.



## CASE STUDY: A Wave Glider collects METOC data in the North Sea to reduce the risk of close pass seismic operations.

### Results

Number of current measurements	2861
Number of weather measurements	1877
Time on station (within 1km of waypoint)	100%
Distance traveled	623 (nm)
Days in water	13
Average vehicle speed	1.1 knots
Maximum vehicle speed	2.3 knots
Maximum wind speed measured	26.2 knots
Maximum current speed measured	1.9 knots



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