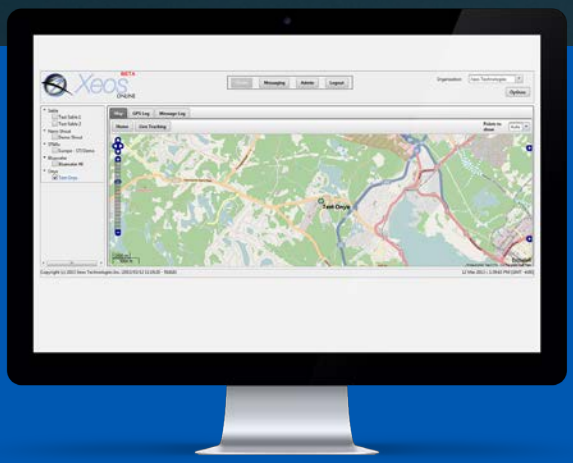
MOORING RECOVERY
GULF OF MEXICO

On June 29th at around 1:30 am EST, an alarm message was received by a research group in Southern Florida.

An Apollo Mono beacon had sent an alarm message followed by a GPS position, which was forwarded by XeosOnline to multiple email inboxes of personnel in the program. It seemed that an unplanned surfacing of one of their moorings had occurred. The message was received promptly and the recovery team was able to take action.

Along with the sensor package and mooring system, the group also decided to include recovery beacons on their submersible platforms. The Apollo beacon is an Iridium/GPS beacon combined with an LED flasher. Since the depth was shallow and the deployments were less than a year underwater, they went ahead with the Apollo Mono which operates on 1 Lithium D cell battery and is depth rated to 6,000m.

The beacons are designed to alert personnel and users during planned or unplanned surfacing events. Like many other Xeos beacon users the group had set up their Iridium beacons to send messages to the XeosOnline web platform and forwarded to individual email inboxes. This is the most efficient way to receive alarm and position messages from beacons in the field in a timely manner.



There was also a Xeos Hermes device obtained by the program. The Hermes is a handheld Iridium device that is designed to receive Iridium messages from beacons while users are in the field. This would come in handy during the recovery.

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The group had deployed 15 moorings roughly 2 weeks earlier and they had planned to be in the field for 180 days. They were deployed in a coastal region of Florida to collect sediment samples for experimentation and some ADCP data. They were supposed to be recovered using an acoustic release roughly 6 months later. However, an unknown failure or event happened in the field causing one of the moorings to be released early.

One of their 15 moorings had broken loose and was heading for the Gulf of Mexico. Using the XeosOnline mapping tool, they discovered which direction it was moving in, and that it was traveling at 5 knots to the South.

Luckily, the group also had a Hermes handheld Iridium device and were able to continue receiving messages while on the water retrieving the mooring. In the small vessel they tracked the positions of the Apollo for roughly 30 minutes and were able to locate the mooring. The Hermes was a great help during the recovery, as it provided a real-time range and heading to the Apollo as it drifted.

Locating the mooring was part of the battle, but retrieving it when it was found was another. The LED flasher on the Apollo made the retrieval of the mooring much easier in the dark at sea. Seeing the flashing LED while in the vicinity of the mooring allowed them to retrieve the mooring and bring it back to shore. The Apollo beacon and Hermes handheld device both did their job in the most crucial time, as they are designed to do.

Believe it or not, it happened again! On September 21 around 9 PM local time, a surfaced event message was received by the group about another mooring. Another platform had broken free of its release, and the Apollo Mono onboard once again notified the users that the package had surfaced.

This time, the current was taking it slowly back to shore so the recovery was less urgent. An eye was kept on the mooring overnight with the intent of recovering it the next day. Around 9 AM the next day with the help of the Xeos technical support team the GPS and iridium timers of the Apollo were changed to 1 hour. A command was sent via XeosOnline to speed up the reporting rates. This gave the recovery team more accurate positions as they retrieved the mooring. Around 1 PM, the recovery team was able to locate the mooring once again using the Hermes handheld receiver. The sensor platform was towed into shore to warm up and dry off.

At Xeos we take a lot of pride in our ability to help customers in need, especially when they have valuable assets and data on the line. We never like to see unplanned events like these but we recognize any opportunity to prove our beacons are valuable and can save the day.

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