***Cruise Report (05/04/2018 – 16/04/2018)***

***AX180418 – Wisteria Ace***

***Technical rider: Chris Jacobs***

Departing Zarate on the 4th April, the Wisteria Ace headed down the river to Montevideo, Uruguay. During this time, it was discovered that the laptops and iridium power supplies were removed from the boxes and consequently the vessel. In conversation with the Chief Officer, none of the crew had opened the boxes and so it is assumed that the computers were misplaced / taken during transit. Suggestions of how to secure the boxes better are suggested below. On 5th April, Zach Barton met the vessel in Montevideo where he delivered new laptops and power supplies for the iridium connection. He also double checked the setup of the equipment and found various issues and malfunctions with the equipment (also listed below).

Leaving Montevideo later on 5th April, the Wisteria Ace made its way to Durban, South Africa (AX18). This transect was undertaken with two different deployments densities being completed, namely: High Density deployment (with XBTs being deployed every 15 Km from 53° to 40°W and 0°W to 18.5°E) and Intermediate Density, XBTs deployed every 30 Km (40°W to 0°W).

Travelling at an average speed of 19 Knots, this meant high density deployments had a drop every 16 mins and intermediate deployments had a drop every 50 mins. Numerous problems were encountered with the equipment, namely CAT5 cable connection, a faulty AL interface box and a faulty MK21. A more detailed list of equipment needing to be serviced or checked is given below.

On 7 April, severe and inclement weather was encountered with lightning and gale force winds. This caused electrical interference with a few of the deployments and data. Despite a redrop, the same problem was encountered. The storm lasted approximately two hours and profiles returned to normal.

With the accommodation being over 100m away and 6 decks up, many a cold night was spent in the rope room where the computer was setup. This was made slightly bearable with a camping chair and cot being provided for sleep. Although this wasn’t all too comfortable, the Wisteria Ace is an ideal vessel for the AX18 transect. A thank you goes out to the Captain, all the officers, and crew of the Wisteria Ace, for all the effort and assistance, with the deployments. Many thanks for the great hospitality aboard the cruise and for always making me feel welcome. Thanks to Zach Barton for flying in and delivering the laptops. A huge thank you for the help I checking ALL the equipment and making sure everything is good to go for the cruise. Finally thanks to Javier Pardinhas, for all the hospitality, lifts, accommodation and paperwork in Buenos Aires. I sincerely do appreciate it.

***Suggestions for next AX18***

* Locks to be placed on all white boxes containing equipment, especially Box 1 which contains the Laptops and more valuable items. Either a set of keys to be given to the riders or if a combination lock is used, have one combination for all locks.
* Break seal tape needs to be placed on boxes especially those without locks thus the rider will be able to know if the boxes have been opened prior to the cruise. It will then also be easier when signing the equipment onboard the ship, that the chief officer or whoever is signing it on will know that it is sealed.
* The AL pole needs to be replaced.
* The hand-launcher, hand-launcher canister, AL interface boxes, MK21 and CAT5 needs to be checked and service before the next AX18.
* A more permanent fix needs to be made for the IR power supply.
* Rubber mats to be placed in box 2 so that the computer and hardware can be placed on it to avoid sliding around during severe weather.
* Create a logbook for equipment thus it will be easier to note when last the equipment was used and / or checked.

***Suggestions for Amverseas software updates***

* Reduce time taken for check tubes (it takes approximately 8 minutes to run the full check).
* Having a check box option in the serial probe interface page so that when clicking Auto fill, only the selected probes will auto fill the information.
* Having the alarms notification box disappear after approximately 2 minutes, especially after a count down.

\*\*A more formal training has to be done with new recruits to the AX program. Training during the set up for a cruise is not ideal as often time is limited and not all the information is taken in. A suggestion for this training would be to have the new rider do a short cruise (±3 - 5 days) with a more experienced rider. Through this everything can be covered from setting up and fixing of hardware to setting up, fixing and troubleshooting of software.