

## **IODP Expedition 374: Ross Sea West Antarctic Ice Sheet History**

### **Week 9 Report (25 February–3 March 2018)**

#### **Operations**

Week 9 of Expedition 374 (Ross Sea West Antarctic Ice Sheet History) began while tied up alongside Berth #7 in Lyttelton, New Zealand. At 0558 h (UTC + 13 h) on 25 February 2018, the harbor pilot arrived to shift the vessel to the Lyttelton Oil Berth. Bunkering began at 0735 h and loading of 1100 metric tons of marine gas oil was completed at 2350 h on 25 February. The harbor pilot boarded at 1624 h on 26 February to shift the vessel from the Oil Berth to Berth #2 West with the aid of two harbor tugs. We then remained tied up alongside Berth #2 West and began to load and unload freight. On 28 February, we loaded to the riser hold 22 joints of 10¾ inch casing and four pup joints, and 75 joints of 4½ inch casing plus six pup joints. An additional 52 joints of 10¾ inch casing was loaded to the riser hold on 1 March. We also offloaded Expedition 374 cores to a refrigerated container. We loaded four flats of Expedition 375 CORK equipment on 2 March, and also offloaded 10 coolers of Expedition 374 samples packed in dry ice for shipment. We loaded three flats of additional equipment on 3 March. At the end of Week 9 we were tied up alongside Berth #2 West in Lyttelton, New Zealand.

#### **Science Results**

The majority of science activities were completed prior to scientists disembarking during Week 8; however, a few additional activities took place during Week 9. The remaining scientists and Staff Scientist met to review results from each site. We also finalized the X-ray fluorescence postcruise scanning schedule. The Expedition Summary was finalized, except for the final Operations section that cannot be completed until the end of the expedition. The Staff Scientist also compiled operations tables, corrected summary lithologic descriptions for the visual core description (VCD) sheets, and corrected inconsistencies in location names on the expedition maps. Two scientists disembarked the vessel on 3 March, leaving seven scientists, one Co-Chief Scientist, and one Educator still aboard the vessel at the end of Week 9.

#### **Education and Outreach**

This week we conducted four live broadcasts while tied up in Lyttelton. Two events were held for a special science day at the American Museum of Natural History in New York, USA. We also conducted an event for a class at the University of Otago in New Zealand. Our final event of the expedition was for an “In Search of Earth’s Secrets” festival in Virginia, USA, that included

the “pop-up” *JOIDES Resolution* exhibit. We also posted a final blog on the *JOIDES Resolution* website (<http://joidesresolution.org/>) titled “Why are drilling expeditions so important?”

## **Technical Support and HSE Activities**

The following technical support activities took place during Week 9.

### *Laboratory Activities*

- Continued laboratory cleanup.
- Cores, samples, and data boxes were prepared for shipment.
- Expedition 374 cores were offloaded in a single 40 ft container.
- Finished review of laboratory technical documentation and standard operating procedures.
- The slideway for the superconducting rock magnetometer had an issue where the brass screws connecting the slideway sections were protruding and affecting motion of the boat for the core sections. The shield extension was disassembled so that the screws could be countersunk. After repair, the shield extension was reassembled.
- Liquid nitrogen dewars were sent to vendor to be refilled. The filled dewars will be returned on 7 March.
- Conducted training for DESClogik, Correlator, and Excel software.
- Conducted training on how to rebuild the G gun assembly for vertical seismic profile experiments.

### *HSE Activities*

- Tested safety showers and eye wash stations.
- An abandon ship and fire drill was conducted on 26 February, with everyone mustering on the dock.
- Conducted training for receipt of hazardous material shipments.