

## **WISSARD FIELD REPORT: 29 January 2013. Compiled by John Priscu**

**WISSARD Science Personnel at SLW:** Slawek Tulaczyk, Matthew Siegfried, Dan Sampson, Brent Christner, Grace Barcheck, John Priscu, Ross Powell, , Jill Mikucki, Tristy Vick, Amanda Achberger, Andy Mitchell, Reed Scherer, Tim Hodson, Mike Osment Alex Michaud, Carlo Barbante, Mark Skidmore, Ken Mankoff, Jason Thomas, Doug Fox, Emily McBryan, Marino Protti, Marci Beitch, Susan Kelly, Brian Guthrie and William Adkins.

**WISSARD Drillers at SLW:** Dar Gibson, Darin Blythe, Graham Roberts, Dennis Duling, Justin Burnett, Jeff Lemery, Robin Bolsey.

**WISSARD Personnel in McMurdo:** Alberto Behar, Betty Trummel, Rob Edwards

**SLW camp population:** 51 (27 scientists, 7 drillers, 9 ASC SPOT2 traverse, 2 ASC marine techs, 2 ASC camp staff, 4 ASC WISSARD traverse) site

### **Camp Update:**

- Seven WISSARD personnel (Emily McBryan, Marino Protti, Marci Beitch, Susan Kelly, Betty Trummel, Brian Guthrie and William Adkins) arrived at SLW on 28 January. The MSLED and the deep water pump were delivered to the site. Trummel and Alberto Behar returned to McMurdo.
- The surface geophysics team (Grace Barcheck, Marino Protti, Matt Siegfried, Dan Sampson) installed a local passive seismic network around the WISSARD borehole site and continued to service existing GPS stations.
- Lake penetrated on 27 January at 0803 h; reaming continued throughout the day.
- 0200 to 1000 h, 28 January:
  - temperature and conductivity profile of the borehole and lake (lake temp ~-0.5 C and about 100 times saltier than the overlying ice (about as salty as a mountain lake in the US).
  - successfully collected a clean 9 L lake water sample using a Niskin water sampling bottle. Samples were stained and DNA containing cells were observed. Experiments were set up to measure growth rates; bacteria cultures were initiated; samples were collected for a suite of geochemical measurements. All collection procedures followed stringent cleanliness standards.
  - collected a large sample from the lake for DNA sequencing (to be done in the US).
- 0300 h, 29 January:
  - An 11 instrument array, including 2 borehole cameras, was deployed and all were operating well. Unfortunately, after reaching 400m depth in the borehole they had to be withdrawn because of a winch malfunction.
  - The borehole froze back much faster than expected and we were unable to deploy our multi-sediment corer as scheduled
  - At 0330 we made the decision to put the drill back into the borehole and ream for 24 h.
  - Once reamed we plan to deploy the sediment corer and collect more water for geomicrobiological work--this should start in the early morning hours of 30 January. We will deploy a geothermal probe, ROV and pump lakewater samples as time permits. Flight schedules dictate that we have to begin wrapping up borehole science on 2 February.

### **Outreach update:**

- There have been numerous media requests, including one with Nature magazine, and BIG Picture Science and The Story, both radio programs from National Public Radio.
- Doug Fox filed an article for Discover Magazine online, which includes the photography of JT Thomas, both in the field with WISSARD—it received over 2 million hits in the first 24hrs.  
<http://blogs.discovermagazine.com/crux/2013/01/27/scientists-first-glimpse-interior-of-an-antarctic-subglacial-lake/>
- Another story was published on Livescience.com, by a reporter escorted on the media tour of the WISSARD Test Site in September. <http://www.livescience.com/226624-antarctica-drilling-reaches-lake-whillans.html>
- NSF plans to publish an official press release on WISSARD progress within the next few days.



**Preparing to deploy in-situ filtration system (left); processing first 9 liter lakewater sample in WISSARD lab (right)**