

# SITREP 4, November 30, 2009

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Written at WAIS Divide

After waiting in McMurdo for 16 days, five NICL/SCO people arrived to the WAIS Divide field site on November 25: Vaughn, Hargreaves, Koffman, Fegyveresi, and Vinther along with 3 IDDO staff including, Johnson, Dahmert, and Mortensen. Strong efforts are being made by all to get back on schedule.

We were elated to find the camp in good shape, and agreeable weather to set up tents. The start of camp construction was so delayed, that when the science construction crew arrived on Nov-18, they, along with the original put-in camp staff, worked straight through with no time off to get things going. All but one of the normal camp structures was in place, and last one soon followed. The galley was functional and able to deal comfortably with the new camp population of 33 total. Cargo lines were neatly laid out over a well-groomed camp, and the snow was entirely removed from the core processing end of the Arch. Power modules were up and running, but power distribution was only beginning. All in all, it was a remarkable, and well organized effort.

In general, the entire Arch is in surprisingly good shape. The ice core basement is in excellent condition, with the wood floor very much intact, and quite suitable for rolling the 39 carts, with each one carrying about a 1/2 ton of ice. The height between basement floor and the main floor appears to have compressed by ~3 inches, causing the basement stairs (which were safely unattached at their top for the winter) to rise above the floor, which now prevents the metal hatch in the floor from closing all the way. This will soon be easily fixed and is no problem for us now. The gantry crane was instantly functional. The door leading to the drill side of the arch has some predictable clearance issues that will also soon be fixed. The drill side of the arch fared reasonably well over the winter - the most notable issues being the that the slot for the drill bulged in slightly, and the ventilation covers on the end of the drill Arch came off during the winter allowing a Volkswagen-size snow to drift at the entrance to the arch. The ice core that wintered over appears to be in remarkable shape. The green mesh-netting on the core has made a very slight impression in the ice, but can easily be pulled away. It would not be a stretch to say this is the best preserved ice through the brittle zone I have ever seen.

We are working long hours through the holiday weekend to try to make up lost time, but we were treated to a very nice Thanksgiving meal Friday evening and the camp staff took a well deserved break the following day. (Back in McMurdo our crew burned some of the energy accumulated from the forced wait by participating in the Turkey Trot, and Heidi Roop was the first woman over the finish line.) Electrical power to the arch was not available before Thursday evening, so our first day was spent working with head lamps to open the arch and stage equipment and boxes. By late Friday we packed our first core, and as of Sunday evening Nov- 29, we have packed 152 meters of ice (about 1.2 Air Force Pallets). Our goal is to have 2 pallets ready for retrograde on Tuesday, to be flown on a cold-deck LC-130 flight to McMurdo, where freezers await. Another reason to work fast is the sea ice runway in McMurdo will be closed down by the end of the week, forcing planes to land at the far more distant Pegasus skiway, which means a much longer, bumpy ride for the ice core back to McMurdo. Since we need to get ice out ASAP, and weather continues to be a large variable in our flight schedule, we no longer have the luxury of choosing only night-flights for ice shipments. To guard against potential exposure of the ice to warmer environments, we have chosen to pack the ice core tubes in snow, giving us a greater thermal mass. The pallets will be slightly heavier, but it is a small price to pay for insurance. Temperature in the arch basement was -29 deg C, and upstairs it was approximately -25 deg C. After adding power, lights and people to the arch, the temperature warmed to -21 deg C, causing us to bring on line 2 of the 4 refrigeration units, which are now doing a fine job of keeping the arch at -26 deg C.

The snow will be clear from the drill end of the arch by tomorrow (Nov-30) and IDDO staff is busy preparing the drill, hoping to begin spooling the new cable on the winch soon. Camp will receive 20 passengers on Nov-30, including all remaining SCO staff (Banta, Roop, Neff, Bauska, Banks, and Cox) and a large number of CReSIS project people. Once we have the rest of the SCO crew on site, we will

commence with two shifts to pack ice, raising our daily output from ~ 70 m/day to possibly ~130 or more. We project that we will finish packing last year's by December 8 or 9 if weather holds to keep flights on schedule. The slot wall cutting should be done on Dec-2. Drillers will start spooling cable on Dec-3 and making all efforts to start drilling on Dec 11. If the season runs to Jan-23, this would give us 34 drilling days (accounting for normal holidays) to achieve our goal of getting to 2,600 meter depth.

The crew is in good spirits and everyone is putting in lots of extra hours to make up for the delays.