

# SITREP 7, December 21, 2009

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Written at WAIS Divide

This week was marked by the passing of the baton from Bruce to Anais, Geoff to Brian and Jay to Krissy. Drilling has started its routine of producing more than 30m a day on 3 shifts, and we had our first visible ash layer, most likely from Mt Takahē, 8.2kaBP.

## I. DRILLING

- A. This week, we used exclusively the new core barrel. Tests were done with using a double pump to pack chips harder. It did not yield to longer core, and the pumps were heating up, so this idea was dropped. Another idea was to use hollow tubes in the center of the screen barrels, to have better fluid flow, but it did not end up improving the core length either. The new core barrel allows drillers to produce reliably 3.4m cores with the chip chamber completely full. It was decided to aim for 3.2m cores. Timing between 2 runs is about 2 hours. Tests are still being done to find the perfect drilling settings. We have had 11 runs in the last 24hr, with more than 30m of ice drilled, ending at 1613.068m (8.47kaBP, Neumann time scale).

## II. ICE CORE PROCESSING

- A. Core handlers worked 1 shift on Monday, 2 shifts on Tuesday and Wednesday, and the full 3 shifts started on Thursday. We have decided to work split shifts during the day and evening: shift 1 works 7am-12pm and 3pm-7pm, and shift 2 works 1pm-4pm and 7pm-12am. Shift 3 is on 11:30pm-7:30am. Everyone is in great spirits, with no crud to report. The ice cores sit in the drying booths for 24 hours before they are packed. We will be ready on Monday for a 1-pallet nighttime cold deck flight containing the end of the brittle ice and the start of this year's ice. Logging and packing the ice takes a bit less time than drilling, and core handlers have time to warm up in between runs. We had a temperature incident Friday morning at 5am. Shift 3 realized that the temperature quickly increased to -14C in the Arch. The wind swirled around the exhaust of the AC units, making the flow running inwards, which opened the door to the back side of the AC units, letting the warm air rush into the room. Core handlers shut the door, and woke up Todd Rampendal (Electrician) and Anais. They arrived at 5:20am. Todd overrode the thermostat and restarted all units. At 6am, the temperature was back at -20C. Temperature was taken on the cores sitting in the drying booths. It did not go above -17C. Measures have been taken to avoid this to happen again:
  - i. There is a handle to the door now, which can be opened on both sides, so that no one would be locked in, but the wind shouldn't be able to open the door again.
  - ii. A thermostat override will shortly be installed so that we (core handlers) can switch the AC on if it is idle for an unwanted reason.
  - iii. A flap has been installed on the snorkel so that the wind can no longer blow in.

To sum up, the cores were between -20C and -17C for less than 1.5hr. I feel confident that this event will not be repeated. We saw an ash layer on Friday. It is ~1mm thick, yellow in color, at 1586.37m (temporary depth). It is most likely the Mt Takahē Eruption of 8.2kaBP. (More info about ash layers from Byrd at Wilch et al, GSA bulletin, Oct 1999; v.111; no. 10; p. 1563-1580).

### III. PAX MOVEMENTS

- A. It with great sadness that we saw Geoff Hargreaves, Bruce Vaughan and Jay Johnson leave camp. We wish them a merry Christmas with their loved ones. Krissy Dahnert is now the lead driller, Anais Orsi the SCO rep, and Brian Bencivengo represents NICL. At RPSC, The foreman of the Arch, Eric brown also left us, but he will be back for take down at the end of the season. Erica Bribiesca left us. We changed our DA. Anna McKee is now with us. She is a visual artist. Check out her work at [annamckee.com](http://annamckee.com) The 3 person Byrd traverse left camp, and we are about to get 2 groups from CReSIS and BESS recovery using the basler and twin otter this week. Population in the camp is now 40.

### IV. WEATHER

- A. Weather was fine at the start of the week. We had a storm Thursday-Friday with 21-26 knots winds and blowing snow. Temperature was between -12 and -25C.

### V. FLIGHTS

- A. We had 5 flights this week. The last one is flight #27, which is past the middle point. Next week, we expect only 3 LC-130 flights due to the holiday. We are expecting the Basler and 2 twin otters to station here for a few days, as early as the weather allows.

### VI. CAMP ACTIVITIES

- A. The building of the winter berms has started. The camp staff spent 2 days tidying the camp before the storm and cleaning up the drifts. Friday, we got a much needed tanker mission. We have 7794 gallons of fuel now. We get through 1400gal/week for the generator, 300gal/week for the vehicles and 200gal/week for heating. We will have to be able to fuel the Basler and Twin Otters next week.

In a nutshell, drilling and core processing have entered the 24hr routine. Everyone was able to take a day off this weekend. We are eager to cross sea level before Christmas!