



## PROJECT SITUATION REPORT DISC Drill 09-10 Season

<b>Project:</b>	T-350-M				
<b>Project Principal Investigator:</b>	Dr. Charles Bentley				
<b>Report No:</b>	11	<b>for period</b>	01-18-10	<b>through</b>	01-24-10
<b>Prepared by:</b>	Kristina Dahnert			<b>Date:</b>	01-24-10

<b>ICDS Personnel on Site:</b>	Lou Albershardt Patrick Cassidy Kristina Dahnert Dave Ferris Josh Goetz Ben Gross Robb Kulin Nicolai Mortensen Elizabeth Morton Steve Polishinski Charlie Bentley (arrived 1/19/10) Tony Wendricks (arrived 1/19/10)
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### ACTIVITIES DURING PERIOD

- Last week was one of challenges. This week was one of drilling! After the crown sheave repair late last week, drilling resumed early Monday morning, much to the enjoyment of the crew and camp.
- Much in line with the documentation of the Byrd ice cores, we have been drilling through many, many cloudy/ash layers this week. This makes for exciting logging and nice backlit displays with the overhead lights off on the NICL side of the Arch. The greatest number of cloudy layers seen in one 3.30m piece of core was 31!
- We are happy to report that average inclination is now around 4°, approximately 1° less than before side cutters and other fixes were implemented.
- The current drill configuration remains Anti-torque section 'A', Instrument section 'L' and Motor pump section 'Y', though the pump is exhibiting a bit more oscillation in torque and other periodic difficulties. We continue to run with this section, as core length and quality have not been affected.
- For much of the week, we continued to use rear button shoes, still with one 0.10" shim and one .05" shim under each. Shoe height is .191". Late in the week we installed the skate shoes in order to test their adequacy and performance. Skate shoes with a 3mm pitch were installed. Core quality was still excellent and comparable to that drilled with the rear shoes. The skate shoes do, however, exhibit a more erratic cutter current. Rear shoes are still the preferred shoe choice.
- The small centrifuge hoist succumbed to electrical failure and became stuck in the 'going up' state. It was replaced by the spare hoist and the broken hoist will be retroed to Madison at the end of the season.
- The crown sheave is again 'knocking' periodically after core break and during

ascent. Visual inspections are made between each run to detect any issues. All three sheaves will be retroed to Madison for work this summer.

- Some preventive maintenance was performed this week, including greasing of the winch and tower zerts.
- We had many visitors this week. A few people quickly visited the Arch and camp and returned on the same plane, including Julie Palais, Alex Isern and Cara Ferrier. Those staying for several days up to one week included Matthew Kippenhan, Matthew Lazzara, Tony Wendricks and Charlie Bentley!
- We again had a Herc grounded at WAIS for several hours on Thursday night due to a fuel leak, though they were successfully able to return to McMurdo early the next morning with the remaining skid of ice core going out this season.
- On Saturday night, Charlie gave his "IGY: 1956-1959" talk in the Galley. The event was well-attended and complimented by a "Congrats, Charlie! 7 Decades on the Ice" cake.
- At the time of this report, we have very few drilling runs remaining for the season. We plan to end drilling operations on Monday, 1/25/10 after the completion of 1<sup>st</sup> shift. While delayed camp start-up, weather, and maintenance issues have all played a role and we will not meet the original season goal of 2600m, we are going to get very close and consider this drilling season a major success. A few members of our team will redeploy to McMurdo already on Monday and the rest will follow on Friday, 1/29/10 after packing up.
- Despite increasing depths, we had our highest production week ever! We also passed the mark of over 1000m drilled this 2009-10 season!
- Final driller's depth for the week: -2531.902m. Total meters drilled this week: 198.887m.

### **SAFETY**

- This week we filed two very minor injury reports. Both dealt with finger injuries that were easily treated. No further action is anticipated regarding these reports.
- Daily and weekly safety checks continue.

### **COMMENTS**

**(Problems, Concerns, Recommendations, Etc.)**