



## PROJECT SITUATION REPORT

<b>Project:</b>	DISC Drill Test-Summit Greenland		
<b>Project Manager:</b>	Alex Shturmakov		
<b>Report No:</b>	4	<b>For period:</b>	5-15-06 <b>through</b> 5-20-06
<b>Prepared by:</b>	Jay Johnson	<b>Date:</b>	5-21-06

<b>Weather Conditions:</b>	Temperature range $-32^{\circ}\text{C}$ to $-11^{\circ}\text{C}$ , wind 5-18 knots.
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<b>ICDS Personnel on Site:</b>	Jay Johnson Kristina Dahnert Michael Jayred Bill Mason Nicolai Mortensen Paul Sendelbach Laurent Augustin John Robinson
<b>Other Personnel on Site:</b>	Brent Folmer Ed Alexander

### ACTIVITIES DURING PERIOD

This week we finished up unpacking the last of our crates. The tower is now fully assembled and the barrel rollers are aligned. The barrel sections quick connects line up well and spin together with little effort. We have the optics tables set up for working on the drill and barrel sections. The barrel turning fixture is also assembled and in use. One of the VICO carpenters built and installed a hole cover for us. The last of the slot ventilation hose is in and that system is working well. The air monitor is mounted in the control room. Last thing yesterday Krissy and I finished up running the sampling tubes. We will start it up on Monday. All of the computer equipment is in the control room. Paul and Nicolai are waiting on some extension cables for the computer equipment so the last rack can be put into place. The CT monitor is mounted in the control room and hooked up.

Before the cable was unspooled from the winch we manually ran it to make sure motor and level wind drives were functioning properly. One of the level wind hard stop switches was not working which turned out to be terminal block issue in the control cabinet. The temperature in the winch pit sits between  $-20^{\circ}\text{C}$  and  $-23^{\circ}\text{C}$ . The gear lube in the gear boxes will hardly flow at this temp and it put so much friction in the system that the penetration drive motor would barely turn over. We do not have the means here to continuously heat the gear boxes to the  $20^{\circ}\text{C}$  requested, so Bill and I decided to replace the gear lube in the two small gear boxes with Mobil HFA hydraulic fluid. We left the gear lube in the large gear box because we were having problems getting drain plug out and it seemed to work ok. The small motors perform much better now and under manual control the winch is running well. After the winch test we ran the cable through the sheaves and connected it to the drill. The fiber optic and high voltage connections from the computer to the instrument section checked out. Paul and Nicolai have

established communications with the instrument section. The pump motor is running well, but there is a problem with either the hall effect sensors in the drill motor or the way motor control is processing the data from them. Paul and Nicolai are not sure yet if this problem is due to a failed hall effect sensor or an issue with the motor driver board.

This week we have also gotten the screen cleaning system, centrifuge, and fluid handling assembled. The screen cleaning system, with its many pieces, went together without a hitch and is working well. We are having some difficulty getting and holding a prime in the fluid handling system pump.

The problem we were having with our generators last week seems to be solved. The problem with the generator cycling turned out to be a combination of two problems. First was the fuel lines were icing up and second the generator had a bad injector. The injector has been replaced and the fuel lines are now insulated and have a heat trace on them.

On Tuesday John Robinson was using a 4 ½ inch angle grinder with a cut off wheel on it to cut a chain when the grinder slipped and he cut the top of his left hand between his thumb and index finger. The cut was through only the upper layer of skin but required nine stitches to close it. His hand is doing fine now and has no sign of infection.

Brent Folmer's dad passed away this week so he will be flying home on Monday to be with his family. Ed will be able to fill in and complete the electrical work.

Today (Sunday) we hosted an open house at DISC for all people here at camp. Kathy Young baked some goodies for everyone. We gave a tour and answered questions about the project. It went over very well and most of camp attended.

The DISC drill system is now completely assembled. As soon as we resolve the problem with driving the drill motor we will be able to start drilling.

### **COMMENTS**

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

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