



## PROJECT SITUATION REPORT

<b>Project:</b>	DISC Drill Test-Summit Greenland		
<b>Project Manager:</b>	Alex Shturmakov		
<b>Report No:</b>	6	<b>For period:</b>	5-29-06 <b>through</b> 6-03-06
<b>Prepared by:</b>	Jay Johnson	<b>Date:</b>	6-04-06

**Weather Conditions:** Temperature range  $-28^{\circ}\text{C}$  to  $-12^{\circ}\text{C}$ , wind 2-10 knots.

<b>ICDS Personnel on Site:</b>	Jay Johnson Kristina Dahnert Michael Jayred Bill Mason Nicolai Mortensen Paul Sendelbach Laurent Augustin John Robinson Scott Haman
<b>Other Personnel on Site:</b>	Ed Alexander

### ACTIVITIES DURING PERIOD

- Drilling – We drilled our first core on June 1. We did more coring runs on Friday and Saturday. The total length of core drilled this week was 18.27 meters for a borehole depth 121.56 meters. Right now core length is averaging 2.6 meters before the drill loses penetration due to the screens filling. When we clean the screens the upper screens are fairly well packed whereas the bottom two to three are loose but full. Bill's calculations show that we need a 37 meter fluid head above the pump for the pump to achieve its maximum pressure. Currently we only have 13 meters of fluid above the pump. As we drill deeper we will be able to add more fluid to the borehole and therefore achieve higher pump pressures and pack more chips into the screens. The cores drilled so far have had a very smooth exterior and the core breaks have been clean. All cores have been in one piece.
- Drill electronics – It has been verified that all the wiring and connections from the instrument sections to the motors were correct. A bad ground connection was found in the instrument section and as far as we can tell it was the root of our problems last week. The drill and pump motors have been running well this week. Almost all data feed back from the instrument section is laden with noise which makes reading actual values some what of a guess. Nicolai has been working on adding some noise filtering in our spare instrument section and he also updated the software with new code that is suppose to help clean up the motor currents signals. Late on Saturday we swapped instrument sections and Monday we will try it out. Paul spent some time this week rearranging graphs, indicators, and numerical data on the sonde control

screen to match our need and make it easier to read.

- Drip Pans – We added a drip pan at the drill head end of the slot. Fluid was running onto one of the steps on the end wall of the slot when the drill was tilted horizontal. John made up eight more feet of drip pan that leans against the end wall of the slot and directs fluid into the existing drip pans. He also fabricated a drip pan to go under the screen cleaning wash station to catch drips when the centrifuge bucket is not in place.
- Yellow gantry crane – We moved the pendant control from one side of the crane to the other. It is now on the winch side of the crane. This made it much easier for the crane operator to see what is going on when picking and placing barrels on the tower.
- Tower – This week Ed wired the switch into the tower hydraulic control to stop the hydraulics when the tower is vertical. While setting the switch the tower got over driven and six of the bolts that mount the actuator to the tower were sheared. This is exactly the situation that the switch is to prevent. We were able to replace the mounting hardware and return to operation. After the repair we did an inspection of the tower and found no other damage. The switch is now adjusted and working properly.
- Core tray – Scott and Jayred built a wood core tray and stand so we have a place to inspect the core we are drilling.

### **COMMENTS**

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

- Winch control – In doing drill runs this week we have found out that if you don't have the full weight of the drill on the cable when you do a motor hand off the hand off will fail. We found this problem when in the coring phase and the drill loses penetration. You have to pull the drill up a little bit before doing the motor hand off. The problem with doing this is that it can cause a double core break. When this failure occurs the control program goes into a safe state and you lose the cable pay out reading. The only way to recover from this is switch the winch back to manual control and bring the drill back to the surface and start over. You can't restart in the middle of the program.
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