



## PROJECT SITUATION REPORT DISC Drill 08-09 Season

**Project:** T-350-M

**Project Principal Investigator:** Dr. Charles Bentley

**Report No:** 5      **for period**    12-22-08      **through**    12-28-08

**Prepared by:** Jay Johnson      **Date:** 12-28-08

**ICDS Personnel on Site:**

Kristina Dahnert  
Jay Johnson  
Bill Mason  
Paul Sendelbach  
John Robinson  
Patrick Cassidy  
Elisabeth Morton  
Dave Ferris  
Bill Neumeister  
Nicolai Mortensen  
Tanner Kuhl

### ACTIVITIES DURING PERIOD

- A total of 196.77m were drilled this week. The final bore hole depth as of 12:00AM Monday was 818.32m
- Started 24 hour operations on Monday.
- WAIS Camp celebrated Christmas on Christmas Eve with an excellent dinner, gift exchange, and party. Second shift took the 24<sup>th</sup> off. First and third shifts took the 25<sup>th</sup> off. This made it possible for everyone to attend the Christmas Eve dinner and celebration.
- We are working today (Sunday). Our next day off will be for New Years.
- We are continuing to drill 3 for 1 cores! Each drill run is producing ~2.5m of core.
- At about 630m, changing ice conditions began slowing the drill penetration rate. A fresh set of cutters were tried, but they didn't make a difference. We also began backing off the anti-torques to see if they were holding the drill up. This helped some, however the accelerometers and cutter current graphs were showing that the cutters were still not cutting smoothly. This seemed like an opportune time to test the front shoes. It took some work to dial them in because the chart for theoretical shoe height and penetration rate did not match up with reality. I ended up machining .008 off the shoe height to get the 5mm pitch I wanted. In the process of getting the shoes dialed in we ended up slipping the anti-torques while trying to drill. To get by this spot we tried bumping out the anti-torques, but this was not working, so we ended up shortening the screen barrel by one screen for one run. This technique worked very well. Judging by the graphs and the feel of the cable, the front shoes are generating a smoother cut than we saw with the rear button shoes.

- On Monday the core handlers started noticing that the screen valve handle was leaving a mark in the top core. Apparently this core is sucked to the top of the core barrel with enough force to leave a mark. The simple fix was to add foam bumpers to the handles.
- Friday night the hot air blower for the screen cleaning system quit working. Nicolai determined that the controller failed. The carpenters built us a warming box for drying the screens. It is working well and will get us by until we are able to get parts to repair our hot air blower.
- The flow meters that meter the fluid coming from the bulk fluid tanks (gravity feed) do not receive enough flow to operate. We have modified the plumbing on the fluid mixing tank so that the circulation pump can also draw fluid from the bulk tanks. This should increase the flow enough for the flow meters to operate. Nicolai is working on modifying the wiring so the circulation pump will operate in conjunction with Isopar K and 141b batch controllers.

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

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