

# SITREP 7, December 21, 2008

Ken Taylor (Chief Scientist; SCO)

Written at WAIS Divide

Great news from WAIS Divide, all our equipment is working, the procedures have been developed, the crews have been trained, and the cooks are making it very difficult to avoid eating too much. We received the critical parts for the Cat 953 tracked forklift that is needed to load heavy pallets on planes and many other tasks. The piston bully which is used for snow removal and grooming is back from McMurdo after mid season repairs.

It took a few days of coring for ICDS to figure out a set of procedures that allows us to drill one meter of ice, raise the drill to break the core free from the ice sheet, and then drill a second one meter section without bringing the drill to the surface between runs. This produces clean fractures on the ends of the one-meter sections. For comparison, last year when we tried to cut the brittle ice from this depth into one-meter long segments the ends would shatter and damage the core. This is a new method that has not been done before and so far it is working very well. ICDS is now focusing on increasing the speed of all aspects of the operation that will not influence core quality.

Core handling operations are also going well. The new system for vacuuming drill fluid off the core is every effective. The new system for applying the netting around core is much better than last year, but it does require significant muscle power to prepare the netting for the next core. We are holding the temperature of the core processing area at -30 C to minimize the thermal shock to the core. The combination of new core handling procedures and a colder core handling area have resulted in excellent core quality and a hearty core handling crew. I expect core quality to decrease as we go deeper and get into the seriously brittle ice. We also cut a core that was drilled last year and left onsite for the winter. Last year when this core was cut the end shattered. This year after the ice had relaxed for a year, the ice cut smoothly. This validates the concept of leaving brittle ice onsite for a year so it can relax and be less susceptible to damage during shipment. The electrical measurements on the core are showing a nice series of annual layers that we can use to determine the age of the ice.

Our current bottom depth is 621 m, which is 40 m below where we started this year. Now that we have everything prepared, we will start production drilling with 24 hour/day operations.