

Weekly Report #2 - DISC Drill 2010-2011

Project: T-350-M

Project Principal Investigator: Dr. Charles Bentley

Report No: 2 for period 11-22-10 through 11-28-10

Prepared by: Kristina Dahnert Date: 11-28-10

IDDO Personnel on Site:

Patrick Cassidy (MCM as of 11/26/10)

Kristina Dahnert (WSD as of 11/22/10)

Dave Ferris (MCM as of 11/26/10)

Josh Goetz (MCM as of 11/19/10)

Mike Jayred (MCM as of (11/19/10)

Jim Koehler (WSD as of 11/22/10)

Nicolai Mortensen (MCM as of 11/24/10)

Elizabeth Morton (MCM as of 11/26/10)

Steve Polishinski (MCM as of (11/19/10)

John Robinson (MCM as of 11/26/10)

ACTIVITIES DURING PERIOD

MCM Update:

o Josh, Mike and Steve located and re-TCNed cargo in MCM early in the week

for transport to WAIS.

o I have been in daily phone contact with Don Voigt, Geoff Hargreaves and

Mike back in MCM.

o Josh, Mike and Steve completed Snowmobile Refresher training at the MEC

on Tuesday, 11/23/10.

o Josh completed his Snow School Refresher on Wednesday, 11/24/10.

o Picked up Comms equipment and TCNed for Thursday flight to WSD.

o Nicolai arrived in MCM on Wednesday, 11/24/10.

o Dave, Elizabeth, John and Patrick arrived in MCM on Friday, 11/26/10.

o Thanksgiving was celebrated on Saturday, 11/27/10.

o Geoff, Heidi Roop, Josh, Mike and Nicolai are scheduled to fly to WSD on

Tuesday, 11/30/10.

WSD (WAIS Divide) Update:

o Jim and I flew to WAIS on Monday, 11/22/10 to assist carps with the Arch

assessment and slot rework.

o We entered the Arch on Tuesday, 11/23/10 with the carpenters through the

upper hatch and ladder. Performed additional assessment of Arch and took

photos on Wednesday while 225kW generator was up for 4 hours.

o The Arch has sustained significantly more damage/heaving over winter

than anticipated. A summary of the major impacts is as follows:

¶U The floor and surrounding slot walls have bowed in on both sides of the

tower, pinning the tower in place. A few railing sections warped when

forced against the tower base and auxiliary struts.

¶U The slot walls have bowed in significantly, down to approximately 2.5°

of clearance in certain places.

¶U The floor heaved significantly between the slot entrance and the core

transfer truss and one panel popped loose. Deformation and heaving in

this region is approximately 1/8" per foot side to side from the original

leveling of the building.

¶U The end wall of the DISC side with the large doors shows vertical

deformation. Since single steel channels were not used in construction,

the two vertical channels are buckling inward at the tie plates level with

the top of the large doors.

¶U The "Moose Door" entryway on the side of the Arch has pulled away from

the Arch approximately 8 inches and has settled with a downward slope.

The entryway remains intact, however, and no snow can be seen above.

¶U The bulkhead wall between NACL and DISC has settled further. The floor

panel on the NACL side immediately under the core truss has released and

now sits level, with open space underneath.

¶U The floor on the NACL side appears to have wintered well.

The basement

access hatch near the DISC/NACL bulkhead wall was sticking up approximately 6 inches due to heaving of the ship's ladder below.

The

ladder base has been modified and the hatch now closes flush with the

floor.

¶U The NICL core basement floor shows some heaving in the center and the basement walls have bowed, but this should not require significant rework if any. Geoff Hargreaves will better assess the basement when he arrives this next week.

o The original put-in construction plan was to cut the drill slot wall back 12 inches on the control room side. Due to inward bulging of the slot on both sides, we have been unable to move the tower until the slot walls are cut back on both sides. Currently, the floor and slot wall are being cut back 8 inches on the screen cleaning side and 12 inches on the control room side. Initial cuts have released inward pressure on the tower struts and base and they appear to have re-straightened themselves.

o Arch dig out began 24-hour operations on Tuesday, 11/23/10 on the NICL side, with the D4, the 953 and the Piston Bully assisting. Full dig out was completed in approximately 24 hours with additional grooming the next two days. Dig out of the DISC end and moose door side began on Friday, 11/26/10.

o De-tarped drill components and shelves in the Arch.

o Removed snow from the Arch around the electrical panels.

o Assisted Carps with removal of slot railings.

o A generator technician arrived from MCM on Thursday and troubleshooted

the PLC on the generator control system. Both 225kW Cat generators are

now online and are providing power to Arch operations as well as to town.

o Three IT/Comms personnel arrived from MCM on Thursday, 11/25/10. They

will work to set up the camp email system as well as the VHF radio. Email

should be in place early this coming week.

o The MECC has been moved into place and set up between the gen mods and the Arch Jamesway.

- o VFDs for both cranes were installed and both cranes were powered up and run the length of the building. The floating track on the screen cleaning side was pushed out another 2" to compensate for the fixed track on the other side. The cable chain assembly does not interfere with crane travel, however the control room will need to be shifted an inch or two toward the slot for clearance of the blue gantry crane.
- o Re-leveled two winch drip pans to help fluid flow toward the borehole.
- o Powered up tower hydraulic unit. A few drips were seen and a few unusual noises heard, but after putting a space heater on the system for an hour drips are no longer present and the system sounds normal.
- o VHF base station installed in control room. The Arch external antenna wintered well.
- o Gave preliminary tours of the Arch and MECC to camp personnel on Saturday afternoon. Additional tours will be scheduled once drill operations have begun.
- o Thanksgiving celebrated on Saturday, 11/27/10.

SAFETY

U Nothing to report

COMMENTS

(Problems, Concerns, Recommendations, Etc.)

U As mentioned above, the Arch has sustained significantly more damage/heaving over winter than anticipated. I have been in continuous contact with the camp manager, Paulene, the Science Construction crew at WSD, DISC/NICL/SCO personnel in MCM, as well as Matthew Kippenhan in Denver. A plan is in place for all Arch repairs, but patience on everyone's part is needed at this time. While we will filter in DISC, NICL and SCO personnel to WSD as soon as possible, please note that the

Arch is a construction zone at this point and access will be limited. The NICL side should, however, be free for bringing ice up from the basement and preparing it for transport to MCM. Geoff will assess this when he arrives this week.

U A concern arose this week when the two put-in electricians flew back to MCM after initial setup of the power grid. While everything appears to be running as expected, there are still many systems that have yet to be powered up, including many drill components, the RPSC ventilation system in the Arch, the refrigeration units on the NICL side, etc. Shaun, the primary camp mechanic, is well-versed in the operation of the generators, but between maintenance of all camp equipment, large and small, as well as generator concerns, his time is fully committed. In previous years at WSD, both Camp and Arch operations have been able to keep electrician Todd Rampendahl busy throughout the entire season. I have requested rotational electrician support be brought in from MCM, as simply having an electrician in MCM on call could detrimentally affect drilling operations for several days should an electrical problem be encountered.