

Project: T-350-M

Project Principal Investigator: Dr. Charles Bentley

Report No: 9 for period 1-9-11 through 1-15-11

Prepared by: Jay Johnson Date: 1-16-11

IDDO Personnel on Site: Patrick Cassidy

Kristina Dahnert

Dave Ferris

Chris Gibson

Josh Goetz

Jay Johnson

Jay Kyne

Nicolai Mortensen

Elizabeth Morton

Steve Polishinski

John Robinson

#### ACTIVITIES DURING PERIOD

- Drilling went much smoother this week and everyone is starting to settle into a routine.
- We worked on Sunday since most people had off for a few days while the drill was down last week.
- I took over as lead driller on Tuesday and Krissy switched to third shift to work with Josh and Chris.
- Krissy and I met with Paulene R. (camp manager), Ken T., Mark T., Gifford W, and Brian B. to discuss the schedule and time-table for the end of the season. A request for an extension of 3-5 drilling days is on the table; however we are waiting for final approval.
- We experienced comms issues with the sonde a few times this week. When this occurs the cutter and pump torque graphs flat line even though the motors are still running. Rebooting LabView on the sonde computer solves the problem. Drill runs can be resumed when this happens.
- While ascending, a screw came loose on the level wind control arm that connects the LVDT to the control arm slide. This caused the level wind to stop and resulted in several wraps of cable lapping over themselves before the winch was stopped. No damage was done to the cable and the problem was resolved in less than one hour.
- The weight-on-bit sensor is not working reliably. The pressure housing has leaked causing the sensor to drift while tripping and sometimes not work at all. Operations can be conducted safely without it so I have decided not to change anti-torque sections at this time. This has been an ongoing problem so the chances of putting on a new section and having the same problem occur are high.

- Nicolai finished repairing, assembling, and testing a second instrument section (section L). We now have one spare. The third unit cannot be repaired on site.
- Oil leaks were repaired in motor section Y. It is now ready as a backup.
- Anti-torque section A has been inspected and is ready as a backup.
- Borehole inclination has decreased from 4.1° to 3.7° since the start of the season.
- The borehole fluid density was checked and found to still be at .92 at -31°C.
- New cutters were installed after ~160m of drilling.
- Winching speeds have been increased to 2m/s during ascent.
- We started drilling an extra 10cm on each drill run. Our theoretical core lengths are now 3.2m.
- The spare drill cable, cable tensioner, and P05 controller arrived this week. At this point we will not be installing the new cable at the end of the season. The cable and equipment will winter over at WSD.
- The winch and slot drip pans were cleaned on Saturday after we were done drilling.
- The NSF media crew filmed operations throughout the week.
- Weekly PM maintenance was completed.
- Monthly PM maintenance has been started.
- On Friday at 9:45pm we reached 3000m!
- Drilling rate this week averaged 23.7m per day.
- Final Driller's depth for the week: -3019.769m
- Total meters drilled this week: 163.757

#### SAFETY

- Nothing to report

#### COMMENTS

(Problems, Concerns, Recommendations, Etc.)

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