

WISSARD FIELD REPORT: 9 January 2015. Compiled by Ross Powell

ACT SLW camp population: 44 total (17-ASC; 4-C525; 10-C524; 5-C523; 6-C522; 2-C521)

Weather @ 1600h local: Scattered high clouds; Wind 2 kts; Temp 23 F

General:

Weather continues to be good since yesterday when the last of the science team successfully arrived at camp and hit the ground running; getting oriented to camp and starting science operations early this morning. This now allows for excellent progress on all fronts.

Camp is now fully in to science ops in the main borehole after deploying “the Doctor”, a video camera, this morning, and we are now progressing through the instrument deployment sequence planned and mapped-out ahead of time in the “borehole timeline” (see below).

The SPOT traverse arrived at camp this afternoon on its way back to McMurdo.

Drilling Ops:

Three boreholes are still planned:

#1: ~ 60 cm dia main borehole under LARS. This was completed yesterday and from a borehole camera, the “Doctor” it is a wide straight hole, ideal for deploying the full range of science instruments. Depending on rates of freeze-back, the plan to ream every 4 days. The science team congratulates and thanks the drillers for speedy work and a great working borehole.

#2: ~40 cm dia drilled with ¾ inch hose in area near water tank to check hose stretch and to use for auxiliary sampling. Drillers are resting after completing hole #1 yesterday and will commence drilling this 2nd hole tomorrow.

#3: Small diameter hole for coring operations. Estimated completion ~11-12 January.

Science achievements:

-- This morning the “Doctor” camera observed bottom sediment that had scattered gravel with a mud drape. The mud was disturbed when the light for the camera hit bottom and rose in small billows around the impact.

-- When descending and ascending the Doctor went through a “dark zone” where the image went black. This requires more investigation with other instruments!

-- A CTD was deployed next and showed sediment bottom is at 747m below ice surface, which has 10m of seawater immediately above. Ice base appears to be at 737m below ice surface and then there are about 20m of brackish water in what we are currently interpreting as the bottom of the borehole.

Science plans:

-- To continue with our borehole timeline of scientific deployments.

-- As I write, the Niskin bottle is currently sampling different water layers.

-- This evening the multicorer will collect sediment-water interface samples followed by *in situ* water filtering.