

Whillans Ice Stream Subglacial Access Research Drilling



Project Field Progress Report, 19 November, 2012

1. Summary

- Good progress was made on the WISSARD equipment and field preparations during the reporting period 5-18 November, and the project is on track to meet the planned testing and traverse schedule. Final assembly of the drill system water and melt tanks, water filtration unit, and heater/pump units is close to completion and they are prepared for wet testing. Prep work and testing of the NIU containers, multi-purpose winch, and instruments is underway.

2. Environment, Health, and Safety

- Nothing to report

3. WISSARD Personnel:

- No change in WISSARD personnel on station since last report
- Drill team: Blythe, Burnett, Carpenter, Duling, Gibson, Lemery, Roberts
- Science team: Edwards, Hodson, LeBaron, Osment, Powell, Winans
- Science team completed necessary orientations and survival, safety, environmental, and equipment training.

4. Field conditions:

- Since last report there has been one afternoon when the ice runway went to Condition 2. There was no lost work time. In general, the weather has been good and beginning to warm noticeably. The sea ice is still period 1 (< -10 C), but growth has slowed and it is warming. The airfield move from the ice runway to Pegasus is scheduled for 30 Nov. All WISSARD equipment will have to be moved from SPoTSA to the test site (WIS SPOT) or Scott Base transition prior to the airfield move.

5. Activity Progress:

- Delivery of heavy drill and science cargo continues on track to be completed by last C-17 scheduled 30 Nov. Some smaller science cargo has been delayed, notably cabling and connectors necessary to complete NIU instrument testing, and ASC is waiting on delivery of electrical components needed for wiring the IceCube generators.
- The Reel Container Unit is at Scott Base transition, ready to be mounted on ISO sled kit and for attachment of rack and crescent system. The melt tank, water tank, heater/pump units,

filtration/compressor unit are prepared for wet testing this week, as plumbing, mechanical, and electrical work on those units is wrapped up. Daily drill project reports are available at: <http://www.wissard.org/publications/drill-reports>

- The field labs are at Scott Base transition, mounted on sled kits, and ready for final carpentry work.
- The NIU workshop is wired for electrical feed, with cabinetry, shelving, and heating installed. Instruments have been removed from the NIU control van. Multi-purpose winch has been powered and initial testing begun.
- The final coordinates for the test site were determined, and site prep, including an access road, was begun.
- An assessment of the logistics required to support the use of the roving drill during January 2013 was completed by ASC. Planning discussions during June-August about the roving drill assumed a lower level of required support, which would fit into the existing field plan for 2012-13. However, after the recent assessment, the NSF determined that the roving drill as currently configured requires too many additional field flights and is not supportable this season. Use of the drill will be included in planning for the 2013-14 season.

6. Upcoming activities:

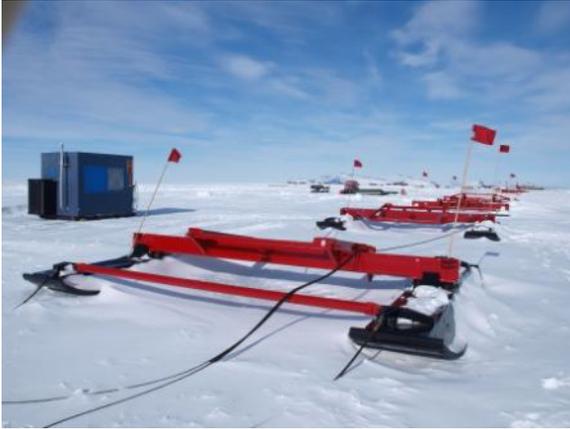
- Preparation and preliminary testing of NIU science instruments.
- Wiring and prep of NIU C&C van.
- Wet testing of the drill components, not including the reel container unit and hose, and operational testing of the clean air system for drying out the drill.
- ASC cabinetry and finish work on the field labs.
- Preparations for move from SPoTSA to WIS SPOT.
- STLS telecon: Monday, 19 Nov, 1300 MST
- PI telecon: Wednesday, 21 Nov, 1400 MST
- Arrival of WISSARD science personnel.

7. Figures

- Field lab on ISO sled kit, at Scott Base transition



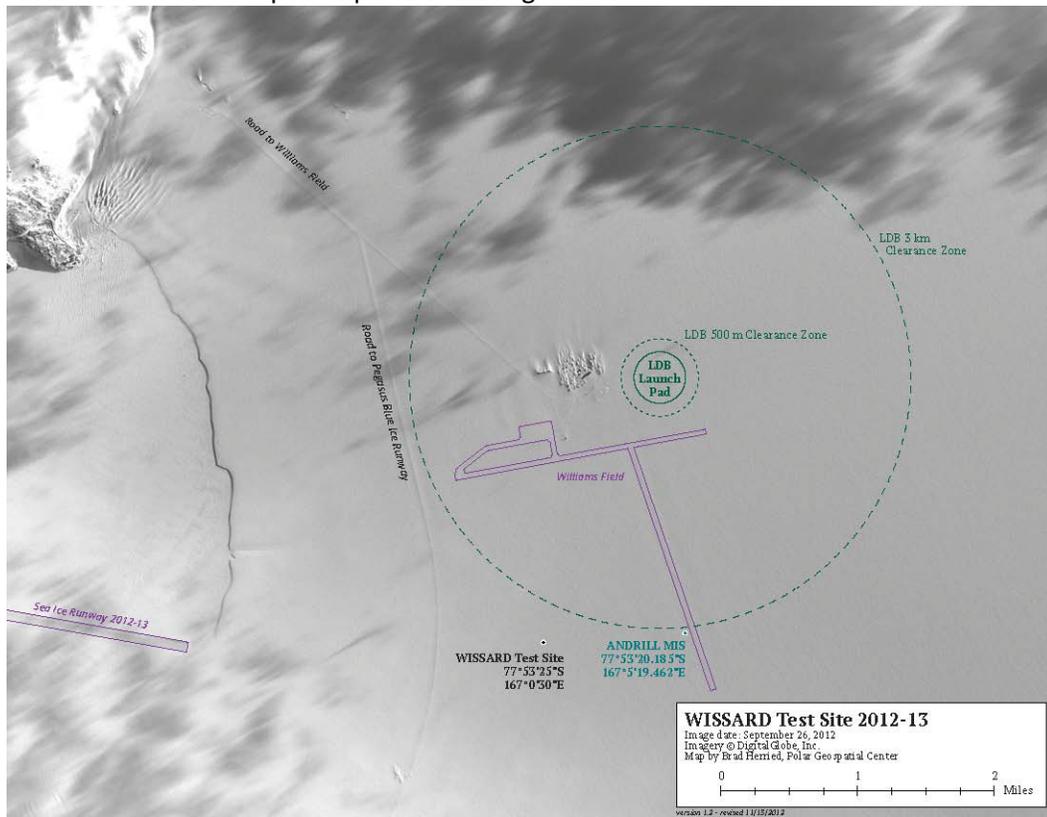
- ISO sled kits, prior to loading container



- WISSARD drill assembly area, near McMurdo sea ice runway. Mt Erebus plume in background.



- Location of WISSARD specific place of testing



The WISSARD project is supported by grants from the National Science Foundation - Office of Polar Programs, Antarctic Integrated System Science