

SITREP 01- November 24, 2015

Murat Aydin (Science Field Leader)

Written at MCM

The field season has started. There has not been any real field activity since we did not arrive at the South Pole yet. The SPICE core team and the firm project members are together and acting as one team. We had to report for transport three different times yesterday, only to be sent back. Between the second and the third tries, we had a nice climb up the Ob-Hill.

I. PAX MOVEMENTS

- A. All 10 members (3 science, 7 drillers) of the group arrived in McMurdo station Antarctica on November 22, 2015 with one extra day of layover in Christchurch due to weather in McMurdo.

II. CARGO MOVEMENTS

- A. Nothing to report.

III. STATUS OF DRILLING

- A. Nothing to report.

IV. CORE LOGGING

- A. Nothing to report.

V. CORE PACKING

- A. Nothing to report.

VI. CORE RETRO

- A. Nothing to report.

VII. TEMPERATURES

- A. McMurdo temperatures are very reasonable considering what is waiting for us at the Pole. The outside temperatures are in -6°C to -4°C range.

VIII. WEATHER

- A. Summer conditions, or condition-3 as they call it around here.

IX. HEALTH

A. Everyone is in good health catching up on sleep during the extra days in McMurdo.

X. OTHER

A. Nothing to report.

SITREP 02- November 29, 2015

Murat Aydin (Science Field Leader)

Written at South Pole

We arrived at the South Pole around 9 pm on Wednesday, November 25th. All the camp structures were set up at their summer locations prior to our arrival. The generators were at the station and getting prepped for the season. We all received vehicle training on Thursday morning and got assigned the wheeled van. In our first visit to the drill site, we found the drill tent and the storage trench in great shape. No obvious structural deterioration. The ice that stayed in the storage trench during the winter looks to be in great shape as well. Our DNF cargo and the generators were out at the site by the end of Friday before the 2-day Thanksgiving break at the station. Having the MECC warmed up allowed us to go out to the site and do some organizing and set up during the long weekend. As usual, the Thanksgiving dinner at the station was top notch. Everyone overate and looked happy.

I. PAX MOVEMENTS

- A. All 10 members (3 science, 7 drillers) of the group, along with the 3 members of the sister firm project, arrived at South Pole station Antarctica on November 25, 2015 after two extra days of layover in McMurdo.

II. CARGO MOVEMENTS

- A. Most of our cargo is here. We still need the NICL shipment with core logging supplies and more ice core boxes in addition to the 30 boxes we currently have at the site. New temperature data loggers arrived one day after we did. We received some new field supplies from ASC, including a new banana sled. The cargo left at the Pole last year, including the DNF, is available to us now. Unfortunately, we appear to be missing one box, which had the core cards and layflat tubing, in addition to a few other things sent from NICL last year.

III. STATUS OF DRILLING

- A. Drilling did not start yet but things are coming along really fast. Reaming may start tomorrow (Monday). See IDDO report for details.

IV. CORE LOGGING

- A. There are 118 m of brittle ice shelved in the storage trench in 2 m long open-ended tubes. The logging did not start yet. We are waiting for new layflat tubing to arrive before we can start. We could not locate the leftover layflat tubing from last year.

V. CORE PACKING

- A. There are 33 m of ice from last year that were logged but left on the shelves in the storage trench in 1 m tubes because there were not enough core boxes at the end of the season. Those tubes are now packed in boxes. Before packing the boxes we pulled out each meter and added bubble-wrap to both ends of the core tubes to prevent damage during transport. We did not observe any sign of degradation in ice quality. Looks like the ice wintered over really well in the storage trench. We are keeping the boxes in the storage trench for now.

VI. CORE RETRO

- A. Nothing to report.

VII. TEMPERATURES

- A. Outside temperatures are in -29°C to -35°C range with wind chills of -35°C to -55°C. Storage trench is -40°C.

VIII. WEATHER

- A. Windy weather generally in 10-15 knots range occasionally getting around 20 knots.

IX. HEALTH

- A. Everyone is in good health.

X. OTHER

- A. Nothing to report.

SITREP 03 - December 06, 2015

Murat Aydin (Science Field Leader)

Written at South Pole

Mike Jackson from NSF was at the station for a few days this week. He visited our site and had a close look at the operations. He received hands-on training in core logging. Overall, it was a very productive week with logging and packing of all of last year's ice completed and the start of the drilling operation with 12 m of perfect ice.

I. PAX MOVEMENTS

- A. Noting to report.

II. CARGO MOVEMENTS

- A. We received new ice core boxes and this year's core logging supplies shipped from NICL. I do not have an accurate account of the boxes because the SPICE project boxes and the boxes for the cores of opportunity (firm project) are being delivered together. The last cargo report indicated 8 more skids of delivered to South Pole for our project. There are about 5 more skids of ice core boxes at the site but not sure how many are for us exactly. Theoretically, there are at least 3 more skids still at the station. In any case, there are no immediate cargo concerns regarding the core logging operation. There are enough supplies (layflat, green netting etc.) to last us the entire season. I will take an inventory on the core boxes next week.
- B. Last year's ice (30 boxes, 5 m in each box, 150 m total) are now on a skid and pulled under the arches at the end of the world. A cold deck to McMurdo is scheduled for Monday evening.

III. STATUS OF DRILLING

- A. Drilling started yesterday (Saturday, Dec 5th) after spending a modest amount of time on fixes, reaming, and bailing during the week (see IDDO report for details). On the first day of drilling (only one shift), we drilled about 12 m of ice. The hole depth by the end of the day yesterday was 748.00 m according to logger's notes. We are not working today (Sunday). Drilling will resume Monday in three shifts as planned.

IV. CORE LOGGING

- A. Most of our effort this week was logging last year's brittle ice and getting them ready for shipment back to US. Logging of the 118 m of brittle ice from last year was completed in early afternoon on Thursday, Dec 3rd. We logged 118 m in 2.5 days. We were able to keep using the index mark while logging last year's brittle ice. Logging and netting of this year's ice started on Saturday. So far, 12 m of brittle has been netted, measured, and placed in the trench in 2 m long tubes. The new ice is coming up perfect like last year's and it does really not display brittle behavior.

V. CORE PACKING

- A. Packing of all of the leftover ice from last year (118 m + 33 m for a total of 151 m) is completed. Netting was kept on when the ice was cut into 1 m pieces and packed in tubes. 150 m of the ice (30 boxes) have been taken out of the trench, banded on wood skids, and netted on an AFP. The last meter from last year will stay at the Pole because it will be needed at the start of next year's logging operation for index mark purposes. We received a lot of help from South Pole cargo to get the ice flight ready. All six members of the cargo team came out to the SPICE drill site to help build the AFP. This allowed the drilling and logging operation to continue undisturbed on what was our first day of drilling. The first ice shipment of the season is now ready for delivery to McMurdo. If weather and other factors permit, they will be on a cold-deck late Monday evening.

VI. CORE RETRO

- A. See above.

VII. TEMPERATURES

- A. Outside temperatures are in the -28°C to -32°C range. Wind chills are very variable. Drill tent has been -22°C to -24°C. Storage trench is -35°C.

VIII. WEATHER

- A. We had a dose of really bad weather on Thursday, Dec 3rd with wind gusts topping 25 knots. Low clouds made visibility worse. Driving to and from the site under such conditions is proving to be a challenge. More bad weather expected to start the next week.

IX. HEALTH

- A. Everyone is in good health.

X. OTHER

- A. Nothing to report.

SITREP 04 - December 13, 2015

Murat Aydin (Science Field Leader)

Written at South Pole

Three-shift drilling operations started this week as planned. Despite some problems on Tuesday (12/8) and Wednesday (12/9), mostly related to the drill motor malfunctions, the first week of the drilling operation has been quite successful. We drilled just about 142 meters of ice in 6 days. The one big outstanding issue is the lack of drill fluid at the site. Despite efforts by many parties, we have not been able to get a drill fluid shipment to South Pole this year yet (the drill fluid is in McMurdo).

I. PAX MOVEMENTS

- A. Nothing to report for the past week. The scheduled switch over of core handlers is scheduled to take place tomorrow (Monday, 12/14) if the flights go as planned. John Fegyveresi is already in McMurdo and is scheduled to arrive at the Pole on the same plane Mindy Nicewonger will leave.

II. CARGO MOVEMENTS

- A. No major cargo movements this week. Anxiously waiting for more drill fluid. We are currently out of drilling fluid. There were four full barrels and one partial barrel left at Pole from last season. The remaining fluid is in McMurdo and has been listed as priority one cargo since 11/30 yet has not arrived.

III. STATUS OF DRILLING

- A. The bottom depth of the hole is 885 meters. See IDDO report for details.

IV. CORE LOGGING

- A. Brittle ice processing continues. We are netting, measuring, and placing the ice in 2 meter tubes for winter over in the storage trench. Nearly all the ice is excellent quality. No obvious signs of brittleness during netting and measurements.

V. CORE PACKING

- A. All the ice drilled this week will be packed for shipment next year.

VI. CORE RETRO

- A. We sent back 30 boxes (150 meters) of ice (tubes 585 through 734) to McMurdo on a cold deck on Wednesday (12/9) evening. All 150 m of the ice was drilled last season and stayed at the Pole during the past winter. Tube 735, which was also drilled last year, will be kept at the Pole for another year because it will be necessary at the start of core logging next season.

VII. TEMPERATURES

- A. Outside temperatures have climbed up to -19°C for a day. They are now in the -25°C to -29°C range. The drill tent has mostly been between -20°C to -22°C , except it was -18°C and -19°C on Tuesday (12/8). The core storage trench is at -33°C .

VIII. WEATHER

- A. Monday (12/7) and Tuesday (12/8) were bad weather days. The cold deck was originally scheduled for Monday but got delayed for two days due to weather at the Pole.

IX. HEALTH

- A. Everyone is in good health.

X. OTHER

- A. Nothing to report.

SITREP 05 - December 20, 2015

Murat Aydin (Science Field Leader)

Written at South Pole

The highlight of the week was Mindy's departure and John's arrival. After much anxiety about whether the flights were going to go as planned, we managed to get John in on the same plane Mindy left with. Thanks to John's prior experience, the core handler switch over was effortless. The other highlight for us was the arrival of all our drill fluid. Otherwise, it was a relatively quiet and a very efficient workweek here at the South Pole.

I. PAX MOVEMENTS

- A. John Fegyveresi arrived and Mindy Nicewonger left. John will carryout the core logger duties for the rest of the season, taking over Mindy's spot in the night shift.

II. CARGO MOVEMENTS

- A. We received two relatively small drill-fluid deliveries early in the week. They were enough to keep us going. We got word on Friday (18-Dec) that we finally received a full Herc delivery. We now have all the drill fluid at the Pole that should take care of the rest of the season. Thanks to all the ASC personnel involved and the NSF Science Representative in McMurdo for working hard to make this happen.

III. STATUS OF DRILLING

- A. We drilled 24 hrs a day for most of the week until we had a new drill problem very early Saturday (19-Dec) morning. When the drill motor stopped running, the bottom depth was 1063+ m (logger's depth from the surface). Most of Saturday was spent trying to identify and solve the problem. It was successful in the end. To everyone's surprise, the problem was not the motor section but the cable that carries power to the motor. A solution was implemented that will hopefully be long lasting but will have to keep an eye on this one (See IDDO report for details). Drilling resumed at around 7pm Saturday for a few more hours for a final depth of about 1067 m before we stopped for our one-day weekend.

IV. CORE LOGGING

- A. We continued to drill perfect ice for most of the week. All signs suggest we are out of the brittle ice. We conducted a test with the chop saw and did not observe brittle behavior during, or after, the cut. The ice was warmed up to processing area temperatures (about -20C) before the test to eliminate the possibility that it did not look brittle due to the very cold temperatures when it first comes out of the hole. We plan to end brittle ice procedures on Monday (21-Dec) morning, and start cutting and packing the ice core in boxes for retro over the coming weeks.

V. CORE PACKING

- A. All the ice drilled this week has been stored on the shelves for retro next season.

VI. CORE RETRO

- A. Nothing to report.

VII. TEMPERATURES

- A. Outside temperatures have been in the -24°C to -30°C range. The drill tent has seen a range of temperatures from -20°C to -24°C. The storage trench is close to -35°C.

VIII. WEATHER

- A. The weather was generally nice this week by Pole standards. No serious visibility issues and the road to the drill site stayed in pretty decent shape.

IX. HEALTH

- A. Everyone is in good health.

X. OTHER

- A. I will be giving the science lecture at the station tonight (Sunday, 20-Dec) at 8pm. It will be an overview of the SPICE core project goals and results so far.

SITREP 06 - December 27, 2015

Murat Aydin (Science Field Leader)

Written at South Pole

It was another efficient workweek at the South Pole. The highlight was a new visible ash layer observed at ~1180 meters. Our resident glaciologist, John Fegyveresi, thinks this is the thick ash layer observed in the WAIS Divide ice core just before 24 kyr. One interesting point to note is that Ice Cube does not report a visible layer at this depth.

I. PAX MOVEMENTS

- A. Nothing to report.

II. CARGO MOVEMENTS

- A. Nothing to report.

III. STATUS OF DRILLING

- A. We drilled 24 hrs a day Monday thru Thursday then stopped for a 2-day (Friday and Saturday) holiday break. The drilling operation resumed on Sunday, resulting in a 5-day workweek. The logger's depth at the start of the week was ~1067 meters and by the end of the week it was ~1211 meters for a total of ~144 meters of ice drilled. We are having occasional penetration problems. It is not clear what is causing it but we are currently dealing with it by going to a different type of cutters (step to wide). See details in the IDDO report.

IV. CORE LOGGING

- A. We continued to drill perfect ice for most of the week. However, when we start having penetration problems, the quality of that tube suffers. For example, tube 1199 was rated "fair".

V. CORE PACKING

- A. All ice drilled this week has been packed in boxes for retro this year. We are at box #27 as of the end of this workweek.

VI. CORE RETRO

- A. Nothing to report.

VII. TEMPERATURES

- A. Outside temperatures have been in the -25°C to -29°C range. The drill tent has seen a range of temperatures from -20°C to -24°C. The core storage trench is close to -35°C.

VIII. WEATHER

- A. The weather has been nice as it usually is at the South Pole around Christmas and New Years.

IX. HEALTH

- A. Everyone is in good health.

X. OTHER

- A. We completed two fugitive gas samplings. The ice is behaving really well under both the chop and band saws.
- B. SPICE core did real well in the annual ~2.3 mile "race around the world" on Christmas morning, with Shawntel winning the women's division and Dom coming in second place in the men's division.
- C. John, Grant, and Dom dug a nice looking snow pit next to our site.
- D. SPICE site has become a popular tourist destination at the Pole.

SITREP 07 - January 03, 2016

Murat Aydin (Science Field Leader)

Written at South Pole

Julie Palais, the program manager of the NSF Antarctic Glaciology Program, came to South Pole this week. She is also the NSF science representative in McMurdo and only had one night at the Pole. UW scientists Michelle Koutnik and Howard Conway also arrived on the same plane. They are here for a few more weeks, studying upstream ice flow. They visited the SPICE core camp and saw the drilling and processing of the ice core.

I. PAX MOVEMENTS

- A. Nothing to report.

II. CARGO MOVEMENTS

- A. We received extra data loggers this week. We needed more than originally allocated because we are going to ship out more ice than expected.

III. STATUS OF DRILLING

- A. We continued to drill 24 hrs per day. The workweek started with the night shift on 26-Dec and ended with the mid-shift on 03-Jan. There was a 2-day stoppage (6 shifts) for New Year's. The bottom depth in the beginning of the week was 1211 m and 1368 m at the end of the week. There were no major drilling problems except for a brief stoppage due to a problem with the winch motor gearbox (see IDDO report for details).

IV. CORE LOGGING

- A. We are continuing to drill high quality ice at a good pace. Cloudy layers are a semi-regular occurrence, with a total of three pronounced layers this week.

V. CORE PACKING

- A. All ice drilled this week has been packed in boxes for retro this year. We are currently at box #58. The first 32 boxes have been taken out of the storage trench, palletized, and moved to our storage area under the old arches at the 'end of the world'. This was necessary to create space in the storage trench for new boxes. The current plan is to have the 2nd load of 32 boxes palletized this coming Tuesday and send all the ice to McMurdo with a cold deck before the end of next week.

VI. CORE RETRO

- A. Nothing this week. We expect to retro 2 AFP's next week for a season total of 3 AFP's.

VII. TEMPERATURES

- A. Outside temperatures have been in -24°C to -29°C range. Drill tent has seen a range of temperatures from -20°C to -23°C. Storage trench is close to -33°C.

VIII. WEATHER

- A. The weather has been usually nice.

IX. HEALTH

- A. Everyone is in good health.

X. OTHER

- A. We hosted an open house at the SPICE core site on 03-Jan (off day for the station due to New Year's). We were actively drilling during the open house so the visitors had a chance to see ice core drilling first hand. We also had the snow pit open to visitors. It was a very busy day at the drill site, with seven shuttle runs between the station and the drill site.
- B. The fugitive gas sampling continues. We already have five samples.
- C. The annual South Pole marathon was held on 02-Jan. John Fegyveresi was one of seven people at the station to complete the 26+ mile course, with Dom and Nick finishing the half marathon. I also participated but stopped at around 11 miles.
- D. This is likely the last SITREP I am writing as we anticipate Eric Steig's arrival on Wednesday, 06-Jan, to replace me as the science lead.

SITREP 08 - January 11, 2016

Eric Steig (Science Field Leader)

Written at South Pole

I. PAX MOVEMENTS

- A. Eric Steig arrived at the Pole on January 7th, just one day behind schedule. Murat Adyin left Pole on the same day. Fortunately, they were able to spend about an hour sharing notes, to ease the transition.

II. CARGO MOVEMENTS

- A. All cores to be shipped home this year are now staged.

III. STATUS OF DRILLING

- A. We continued to drill 24 hrs per day, six days a week. The workweek ended at 8 p.m. (three hours early) on Saturday evening, January 9th, with the successful completion of the original 1500 m target. Final depth on January 9th was just over 1501 m. We averaged 25 m/day, in spite of the breakage of one of the outer armor wires on the cable.
- B. We have had no trouble with the cable since steel shims were cut for us by the South Pole machine shop, per instructions from Jay Johnson, and inserted into the cable. The shims keep the armor wire from unraveling and potentially creating more problems (see IDDO report for details). The loss in cable strength from the single broken wire is negligible.
- C. We expect to reach 1750 meters by the end of the season at the current rate of drilling.

IV. CORE LOGGING

- A. We are continuing to drill excellent quality ice, with very clean breaks. In contrast to Murat's report last week, we have not seen cloudy layers. No volcanic layers to report.

V. CORE PACKING

- A. ISC boxes 33 through 80 were removed from the trench and palletized (tubes 1238 - 1477, corresponding to depths 1237.985 to 1477.985;). Boxes 81 through 88 will be stored under the core storage racks that contain the brittle (netted) ice. The rest of the core to be drilled this season should (just) fit in the remaining area in the storage trench.
- B. We have 61 ISC boxes left, sufficient for up to a depth of ~1770 meters.

VI. CORE RETRO

- A. 48 ISC boxes were removed from the ice core storage trench and palletized for shipment to MCM on Saturday (09-Jan) morning. Combined with the 32 ISC boxes that were palletized last week, there will be 2.5 AFPs of ice going out on a cold deck that is scheduled for Tuesday, 12-Jan. This is a total of 80 ISC boxes (tubes 1078 - 1477; depths 1077.99 - 1477.985) consisting of 400 tubes of core that we drilled this season.

Each ISC box contains a temperature logger, and each pallet has two loggers, one inside the blanket and one in the blanket pocket.

- B. Earlier in the season (on the evening of 09-Dec) we sent back 30 ISC boxes (150 meters) of last year's brittle ice (tubes 585 through 734) to MCM on a cold deck.
- C. The grand total for this season's ice retrograde is 110 ISC boxes, containing 550 tubes of core, on 3.5 AFPs.

VII. TEMPERATURES

- A. Outside temperatures have been in -28°C to -30°C range. Drill tent has seen a range of temperatures from -20°C to -24°C. Storage trench is close to -34°C.

VIII. WEATHER

- A. The weather has continued to be very nice, with calm conditions earlier in the week, and winds up to ~12 knots in the last couple of days.

IX. HEALTH

- A. Everyone is in good health. Most of us ski or walk back to the Station (about 2.5 miles) at the end of the workday, and/or works out at the gym, so we are keeping reasonably fit.

X. OTHER

- A. We have continued to see occasional visitors, but this has not interrupted our work. We celebrated meeting the 1500 m mark with Turkish Delight in honor of Murat, followed by joining the Carpenters' (CARPS) party on Saturday evening.
- B. The fugitive gas sampling continues. Samples have been obtained to date as follows below. We expect to take one more sample this evening.
 - Vessel #1, Tube 1141, depths 1141.92–1142.00
 - Vessel #2, Tube 1191, depths 1190.90–1191.00
 - Vessel #3, Tube 1248, depths 1248.82–1248.92
 - Vessel #4, Tube 1286, depths 1286.865–1286.985
 - Vessel #5, Tube 1344, depths 1344.92–1345.02
 - Vessel #6, Tube 1392, depths 1393.015–1393.025
 - Vessel #7, Tube 1434, depths 1434.94–1435.04
 - Vessel #8, Tube 1474, depths 1474.90–1475.00
 - Vessel #9, Tube 1502, depths 1502.90–1503.00
 - Vessel #10, Tube 1530, depths 1530.90–1531.00
- C. Eric gave the science lecture on Sunday 1/10, on the subject of Antarctic temperature change. It was well received by all accounts. Eric subsequently lost several consecutive games of Bananagram against Emma and Elizabeth.
- D. We expect the last day of drilling to be 1/21 (rather than 1/23 as originally planned) allowing a few extra days for packing up.

SITREP 09 - January 18, 2016

Eric Steig (Science Field Leader)

Written at South Pole

I. PAX MOVEMENTS

- A. Our Antarctic Support Contract (ASC) point of contact, Leah Street, left South Pole this week. (Scotty Smith is our local ASC point of contact until the end of the season.)

II. CARGO MOVEMENTS

- A. None (other than core -- see below).

III. STATUS OF DRILLING

- A. Drilling progress remained excellent through most of the week, with a depth of 1608 m reached on January 14th. Progress was slowed after a control box and motor failure, probably attributable to our having switched generators on 1/13 (see Jay Johnson's SITREP).
- B. We spent most of 1/14 through 1/16 bailing chips from the borehole, while motor sections were checked and/or repaired.
- C. Drilling resumed the evening of 1/17 and a depth of 1619.930 m was reached at the end of the night shift on the morning of 1/18.

IV. CORE LOGGING

- A. We are continuing to drill excellent-quality ice. A few runs this week were short (1 to 1.5 m) owing to the drill problems, so that there are a few tubes with two ~0.5 m sections. In general, we are continuing to pack continuous 1 m cores with only very occasional mid-tube breaks or core-end chips.

V. CORE PACKING

- A. As of the morning of 1/18 we have 30 boxes stored in the trench (box # 81-110), in addition to the brittle ice.

VI. CORE RETRO

- A. Ice was shipped to McMurdo on a night flight on 1/16. All ice to be shipped this season is now in the SafeCore in McMurdo. See last week's report for details.
- B. Correction to last week's report: Accompanying the ice were two ISC boxes containing fugitive gas flasks for Jeff Severinghaus, to be shipped on to Scripps.

VII. TEMPERATURES

- A. Outside temperatures have been in -25°C to -29°C range, though we have seen a few very warm days near -20°C , and as warm as -18°C . Drill tent has seen a range of temperatures from -19°C to -23°C but has not been persistently above -20° during any core logging. Storage trench is $\sim -33^{\circ}\text{C}$.

VIII. WEATHER

- A. The weather has continued to be very nice, generally calm and sunny. Visibility has occasionally been moderate, but only for short periods.

IX. HEALTH

- A. Everyone is in good health.

X. OTHER

- A. We enjoyed a talk, by one of the ICECUBE neutrino experts from the Niels Bohr Institute, on Sunday evening. Of some relevance to our work, ICECUBE is using pulses of LED light on their Cherenkov radiation sensor package to map out the spatial pattern of ice properties. Their information could potentially be useful information for glaciology flow modeling work in the future.
- B. At this point we expect to continue drilling through 1/23. The current plan is to leave the 1900-m winch and drill tower set up, to facilitate the borehole logging next year. Because we are drilling deeper than originally planned, the 1900-m winch will be needed if the loggers are to log the entire borehole. We are working with Ryan Bay to ensure that his instrument can be used on this cable.
- C. John Fegyveresi ran a 50-mile ultramarathon last week. As far as anyone is aware, this is the first time in history that anyone has done this at the South Pole.

SITREP 10 - January 24, 2016

Eric Steig (Science Field Leader)

Written at South Pole

I. PAX MOVEMENTS

- A. None. We are expecting to be ready to leave South Pole by 28-Jan.

II. CARGO MOVEMENTS

- A. None.

III. STATUS OF DRILLING

- A. We continued to drill 24 hrs per day. Drilling was officially done on 23-Jan, at about 6:00 p.m., with a total depth drilled of 1751.11 meters.
- B. On Friday morning 22-Jan, just after reaching 1726 m, we had a failure of the electronic drill-control system, but after much valiant work by our IDDO electrical engineer, Zach Muelemans, we got going again late on Friday night. See Jay Johnson's report for details.
- C. Our total core-loggers' depth of just over 1750 m was a somewhat arbitrary but very satisfying target, 250 meters past original expectations, and reached just a few hours before we really needed to be done in order to pack up before the end of the season.

IV. CORE LOGGING

- A. We drilled excellent-quality ice throughout the week, with very clean breaks. We identified one cloudy layer since the last report, at 1694.88 m depth; it was slightly inclined at $\sim 9^\circ$ from horizontal. Many of the core breaks since then have been at about the same angle.

V. CORE PACKING

- A. All cores have been packed. The trench now contains the ductile ice drilled this year (tubes 1478-1750, in boxes #81-135), and the remaining brittle ice (tubes 736-1077). This will mean 4 Air Force pallets of boxes to be shipped out from South Pole next year. We have just a few empty ISC boxes on site, so we'll need at least 65 more. (Accurate numbers will come with the final SITREP and inventory report next week.)

VI. CORE RETRO

- A. None.

VII. TEMPERATURES

- A. The drill tent has been -22 to -25°C . The storage trench has warmed up a bit but still remains below -31°C .

VIII. WEATHER

- A. Outside temperatures have been in -29°C to -31°C range, with somewhat more persistent winds (~ 12 knots) than usually since before the New Year began. Conditions have been mostly clear, with some clouds on the horizon in the direction of the Amundsen Sea.

IX. HEALTH

- A. Everyone is in good health. We've done a little less running and skiing owing to higher winds and chillier temperatures.

X. OTHER

- A. Everyone will get onto the same daytime schedule over the next few days, so we can work together on packing up. It will be nice to see the night crew more often!
- B. At the end-of-summer music bash on Saturday night, P.I. Eric played an original blues song dedicated to the drill team, and driller Shawntell played the bass in the South Pole's best band, "*Shh!*".
- C. We will spend the week bailing chips from the borehole, bringing the casing up above the surface, filling in the trench, and packing up the drill (but leaving the winch and 1900 m cable for borehole logging next year). We will be doing a complete inventory to make planning for next year as straightforward as possible.