Little Dome C

Beyond EPICA Oldest Ice Drilling Site (75.29917 °S, 122.44516 °E) – Season 2022/23

Situation Report #19, 21 December 2022

Personnel @LDC:
Romain Duphil (IGE), Romilly Harris-Stuart (LSCE), Gunther Lawer (AWI), Matthias Hüther (AWI), Julien Westhof (UCPH), Martin Leonhardt (AWI), Frank Wilhelms (AWI), Giuditta Celli (UNIVE, ISP), Johannes Lemburg, (AWI), Rob Mulvaney (BAS), Saverio Panichi (ENEA), Michele Scalet (ENEA), Andrea Devito (ENEA)

Personnel @DC:
Markus Grimmer (UNIBE), Florian Krauß (UNIBE)

Weather at LDC 5 pm: sunny
Meteo at DC 5 pm: T = – °C, Wind = - knt, Wind Chill T = – °C

After a couple of days of SITREP sent directly from the field we are unfortunately back to old style ones, and with some delay, sorry for this, but this is Antarctica.

We are indeed sending telegraphic WhatsApp to Carlo, who translates them into a better shape. Pictures are a bit difficult to be sent. The god news is that drilling is now progressing well and we are now working well in shifts with quite good production.

What we did today:

- undertook 11 runs: 1st run with booster shaft as 3D printed torque piece of pump was damaged 1.07 m; 2nd run with the pump had problem while idlinig; 3rd run with opened screens at lower end of the outer barrel and switched to staggared cutters, terminated after 1.6 m due to high power consumption; 4th run 0.23 m terminated due to high power consumption; 5th run stopped at 1.3 m due to high power consumption; 6th run with hollow shaft with inner screen stopped at 1.73 m due to high power consumption; 7th run 1.89 m stopped to high power consumption; 8th run 2.43 m stopped due to high power consumption; 9th run 2.17 m stopped due to high power consumption; 10th run 2.41 m stopped due to high power consumption; 11th run 2.41 m stopped due to high power consumption
- cut triangular openings in lower end of core barrel
- repaired pump torque sleeve
- mounted new pump on shaft
- we are defining high power consumption as above 700-800 W on surface, which is about 450-550 W to the drill; want to get a feeling what is going on and not exceed the power of the EGRIP electronics
- core processing at DC

Drillers depth: 233.43 m
DeltaD: 17.54 m
Logger depth: 238.91 m
DeltaD: 17.68 m
Processors depth: 112 m
DeltaD: 11 m

A view of the Camp from the road to Concordia. The picture is from the 2021/22 archive..

FW & RM, 21.12.2022