

25th Nov 00:00 - 24:00 Local Time (-2 GMT)

1. Location

30° 7.7' N 42° 9.206' W

IODP-MSP: M0071C

Prospectus borehole: AM-04A

Water Depth: 1390m

2. Science Report

After penetrating 9.6 m, RD2 drilling at Hole M0068B ended due to difficult drilling conditions. Due to a stuck core barrel in the bottom hole assembly, open hole logging was not possible. A borehole packer system was inserted into the hole after tripping out the drill pipe, but it was dislodged during recovery of the drill and was left in an unknown state. Eight cores were recovered, with a total average core recovery of 56.4%, whereby recovery in the top four cores ranged from 71.8 to 105%.

The cores consisted predominantly of porphyroclastic, harzburgitic serpentinite with irregular intervals of gabbro. The cores show varying degrees of mylonitic deformation, multiple generations of veins and talc-amphibole alteration. Core 1R consisted of a spectacular coherent section of the detachment fault surface that records outstanding relationships of tectono-sedimentary processes during expose on the seafloor. Patchy Intervals with reddish-brown, jasper-like alteration were observed in a number of cores. Drilling-induced fracturing was more prevalent in the bottom cores. Four whole round core samples were taken from cores 1R, 3R, 7R, and 8R for ephemeral microbiology, geochemistry and contamination testing, with the rest of the material archived for OSP sampling. A sensor package on the rock drill collected logs of methane, pH, temperature, dissolved oxygen, and redox while drilling. Niskin water bottles on the rock drill were collected at the end of drilling for comparative geochemistry and microbiology analyses.

The ship moved to Site M0071 (proposal site AM-04) and MeBo began operations at Hole M0071C. By the end of the day, MeBo had begun cutting the second core.

3. Core Recovery Details

Hole	M0068B
Cores recovered	9
Drilled length (Coring, m)	9.6 (11.25)
Drilled length (Open hole, m)	0
Recovered length (m)	6.34
Recovery (%)	66.04 (56.36)

Two depths are given in the core recovery table due to over-coring on run 5, due to infill of the hole. We reached a hole depth of 9.6m but actually cored 11.25m. The recovery percentages quoted reflect the hole recovery, based on depth reached, and the curated recovery based on core recovered against length drilled.

4. Weather

Wind SE swinging ESE, 12 – 16 knots. Slight seas and low swell. Partly cloudy, but fine and clear with good visibility. Maximum temperature 27.4°C.

Next 24 hours: Due to maintain favourable wind and swell with a swing to more E'ly wind direction.

5. Planned Activity for the next 24 hours

Continue coring operations at AM-04A (M0071C)

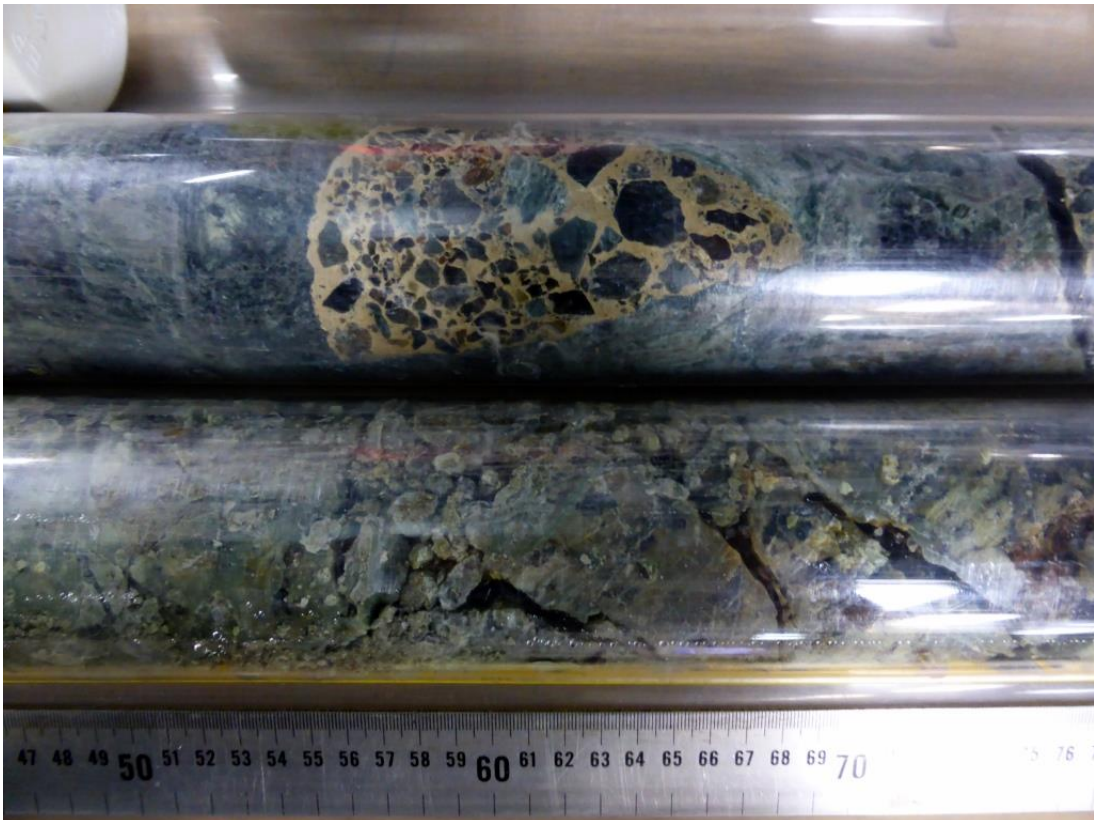
6. Health and Safety and Environmental

N/A

7. Photos of the day



When the overhead lighting is not quite right for taking photos.....CarolCotterill@ECORD_IODP



Some interesting core material from M0068B. CarolCotterill@ECORD_IODP