

## Geological evidences for Cape Darnley Bottom Water in the Wild Canyon, Antarctica: Preliminary results of R/V Hakuho-maru KH-20-1 cruise

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The Cape Darnley Bottom Water (CDBW) produced in the Cape Darnley polynya (CDP) descends down Wild Canyon (Ohshima et al., 2013). According to the mooring observations (Ohshima et al., 2013), significant signals of CDBW was found at the center of Wild Canyon just off the CDP. Two months after the onset of active sea-ice production, a colder, less saline, and denser signal appeared and became dominant after June. However, there are no direct evidence for sedimentary processes in the Wild Canyon. We have conducted marine geological survey in Wild Canyon during the KH-20-1 cruise by R/V Hakuho-maru in 2020 austral summer. We obtained sediment samples at two sites using multiple corer with deep-sea camera at the bottom of the Wild Canyon. For site CAD-5 (2660m water depth), small amount of sands was recovered. Based on deep-sea camera observation, sea-floor is covered by sand and rocks. Short sediment cores were recovered at the site St16 (3347 m water depth), which is located at downstream area from CAD-5. Sediments were composed of sandy silt in the canyon, and current ripple are observed on the seafloor in the canyon, which is main stream of the CDBW.

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