

## **Antarctic Geologic Drilling Programs: Field Work in Extreme Environments and Preparing for the Next Drill Site**

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### **Abstract**

The Antarctic continent, which is nearly completely covered by a thick ice sheet, and the surrounding ocean with its fringing belt of sea-ice, ice shelves and drifting icebergs, offer challenges to geological investigations that seek to unravel the history of one of Earth's last frontiers. The history of this region is recorded in rocks deposited in and around Antarctica, that are reachable through a wide range of innovative geological drilling approaches. These rocks, formed during times that witnessed past climate changes and associated growth and retreat of ice sheets, offer clues to help us to understand the interplay of Earth's dynamic processes that control and respond to the Antarctic cryosphere. This talk will review the drilling programs and results of programs that have recovered records from the Antarctic margin in recent years, including SHALDRIL (pictured) and ANDRILL, and discuss ongoing preparations for a new drill site in the Ross Sea sector, aimed at recovering a continuous core going back potentially as far as the Late Eocene and the onset of glacial conditions.