

Achieving a World Record in Deep Sea Drilling

Drilling succeeded on seabed of 5,815 meters depth

Press Release

August 14, 2006

Ministry of Economy, Trade and Industry (METI)

As part of Japan's survey on the extension of the continental shelf, METI conducted drillings on deep seabed, in the cruise of June to July 2006. A drilling succeeded on seabed of 5,815 meters depth with 4 meters' core sample, in the eastern sea out of Ogasawara-Chichijima. The depth 5,815 meters is a world record for the use of a suspended seabed drilling system. Furthermore, another drilling also succeeded on seabed of 5300 meters depth with core sample. These successes assure Japan's deep sea drilling technology.

1. The survey was commissioned to the Deep Ocean Resources Development Co., Ltd. (DORD) by METI, and conducted using a vessel specifically intended for the exploration of deep sea mineral resources—the R/V Hakurei-maru No. 2 owned by the Japan Oil, Gas and Metals National Corporation (JOGMEC). Regarding the achievement of the world record, DORD is considering registering the accomplishment with the Guinness Book of World Records.
2. The drilling system used in this survey is the Benthic Multiple-coring System (BMS) owned by METI, and the cable used to connect the operation console on the vessel and the drilling machine on seabed is newly developed special cable.
3. Japan is the only country that has drilled on seabed deeper 3,000 meters water, using a suspended seabed drilling system. This drilling system is making significant contributions to the survey on the extension of the continental shelf, as well as serving as a powerful method for conducting surveys of deep sea mineral resources.

Annex: Explanatory Paper "Overview of the Achievement of a World Record"

Overview of the Achievement of a World Record

1. Survey background

As part of the Government of Japan's survey on the extension of the continental shelf, the Agency for Natural Resources and Energy of METI conducts collecting bedrock samples in the deep seabed. The survey has been commissioned to the Deep Ocean Resources Development Co., Ltd. (DORD) and used a vessel specifically intended for the exploration of deep sea mineral resources—the R/V Hakurei-maru No. 2 owned by the Japan Oil, Gas and Metals National Corporation (JOGMEC). On June 23, 2006, a drilling was conducted on seabed 5,815 meters depth, on the western peak of the Ueda Ridge off the eastern of Chichijima, Ogasawara, and 4.4 meters length's core sample (sediments) was successfully collected. This set a world record depth for a suspended seabed drilling system. Furthermore, on June 25, the DORD survey team again successfully collected volcanic rocks on seabed 5,300 meters depth in Ueda Ridge with 2.8 meters length's core. It has been confirmed that Japan has superior drilling technology for deep sea drilling.

2. Introduction to drilling system

The drilling system that was used in this survey is the Benthic Multiple-coring System (BMS) No.2 completed in FY2005 and belonging to METI. The drilling machine that works on deep seabed is controlled remotely by the console on the vessel. This system required new developments in deep seabed drive technology, power/signal cables, and the operational console on the vessel. For this drilling, triple-armored cable was used, combining electrical power and optical signal systems, which was newly developed in FY2004 and is capable of drilling in seabed up to 6,000 meters depth. BMS No.2 was jointly developed by American and Japanese makers, and the triple-armored cable was developed by a Japanese maker. There is no any other drilling machine in the world, capable of drilling in seabed 6,000 meters depth.

3. Characteristics of drilling site

Ueda Ridge is located in northern Ogasawara Plateau, which cuts across the southern Ogasawara Trench. The western part of the ridge that sinks into the Ogasawara Trench deepens stepwise moving toward the trench. The sample collected in this drilling includes fine silt, volcanic breccia, and weak weathered basalt. The collected samples of sediments may provide a record of the history of sedimentation in the ocean ridge that sinks into the ocean trench, and in this context, the samples are extremely valuable.

4. Future expectations

At present, Japan is the only country that can drill rocks and ore in seabed over 3,000 meters deep using a suspended seabed drilling system. It suggests that Japan is acquiring valuable data not

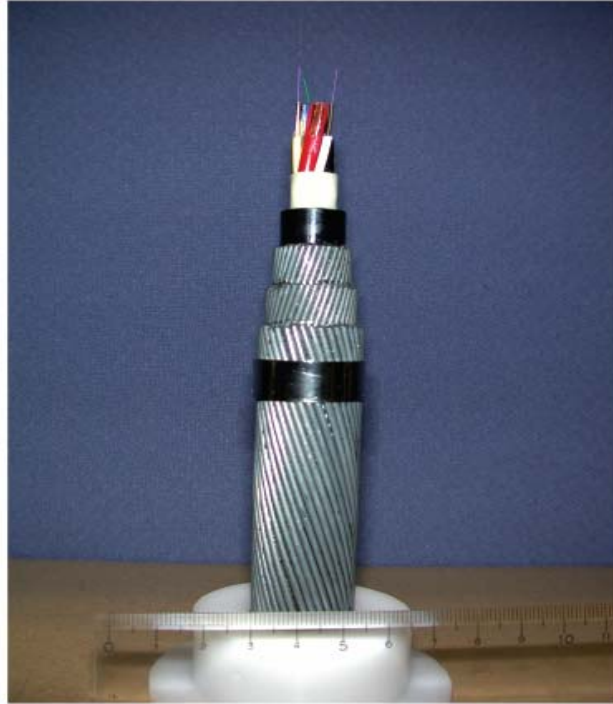
taken by other countries. BMS makes significant contributions to Japan's survey on the extension of the continental shelf. The realization of drilling on seabed up to 6,000 meters depth infers that Japan has acquired an exceptionally powerful method for obtaining basic data in order to enable to request the United Nations for an extension of the continental shelf by May 2009. Moreover, the achievement indicates that this drilling system will serve as a powerful method for conducting surveys of deep sea mineral resources.



R/V Hakurei-maru No. 2



BMS



Triple-armored cable



Core sample (collected on June 23, 2006 at the depth of 5,815 meters)



Core sample (collected on June 25, 2006 at the depth of 5,300 meters)