

**UNDERSEA FEATURE NAME PROPOSAL**

(See NOTE overleaf)

Ocean or Sea Eastern Mediterranean Sea Name proposed Medée Hakuho Mud Volcano

Coordinates : A - of midpoint or summit : Lat. 34-24 N , Long. 22-10.5E

100 kilometres in southwest direction from the Cretan Island

and/or B - extremities (if linear feature) :

Lat. \_\_\_\_\_ } to { Lat. \_\_\_\_\_  
Long. \_\_\_\_\_ } Long. \_\_\_\_\_

Description (kind of feature) : mud volcano

Identifying or categorizing characteristics (shape, dimensions, total relief, least depth, steepness, etc.):

Medée Hakuho mud volcano is a knoll from topographic point of view. As noted below, this feature was confirmed as a mud volcano by geological technique. The mud volcano has conical shape with a depth of summit of 2120 m. The relief from surrounding area is approximately 150 m. This is one of the largest mud volcano in the Mediterranean Sea. We know that the proposal for new generic name of "mud volcano" was rejected by the SCUFN during its 19<sup>th</sup> meeting. Nevertheless, here we propose the generic name worth to be named, since this is one of the largest mud volcano in the Mediterranean Sea.

Associated features : \_\_\_\_\_

Chart reference :

Shown with name on chart No. \_\_\_\_\_

Shown but not named on chart No. \_\_\_\_\_

Not shown but within area covered by chart No. \_\_\_\_\_

Reason for choice of name (if a person, state how associated with the feature to be named) :

Hakuho is the name of Japanese research vessel which firstly conducted perfect bathymetric survey of the mud volcano.

Discovery facts :

Date January 2007 by (individuals or ship) Research Vessel "Hakuho-Maru" of JAMSTEC

By means of (equipment) : Multibeam Echo Sounder SEABEAM2120

Navigation used : GPS

Estimated positional accuracy in nautical miles : 0.054 nm

Description of survey (track spacing, line crossing, grid network, etc.) : **We conducted swath bathymetric survey in the area of the volcano and surrounding area with a full coverage using Sea Beam 2120. Also we performed piston core sampling from different 4 sites of the mud volcano with a length of approximately 3.5 m and deep-sea Video survey using NSS (Navigable Sampling System).**

Nature and repository of other survey activities (dredge samples, cores, magnetics, gravity,

photographs, etc.) : **We conducted piston core sampling from different 4 sites of the mud volcano with a length of approximately 3.5m and deep-sea Video survey using NSS (Navigable Sampling System) in order to verify whether Medée Hakuho mud volcano is truly mud volcano.**

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Supporting material : enclose, if possible, a sketch map of the survey area, profiles of the features, etc.,

with reference to prior publication, if any :

Submitted by : **Japanese Committee on Undersea Feature Names**

Date : **8 June 2007**

Address : **5-3-1 Tsukiji, Chuo-ku, Tokyo 104-0045, Japan**

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Concurred in by (if applicable) : **Dr. Alexandri Stamatina, Hellenic Center for Marine Research**

Address : **P.O. Box 712, Attika, Greece**

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National Authority (if any) : **Japanese Committee on Undersea Feature Names**

Address : **5-3-1 Tsukiji, Chuo-ku, Tokyo 104-0045, Japan**

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**NOTE** : This form should be forwarded, when completed :

- a) **If the undersea feature is located in territorial waters :-**  
to your "National Authority for Approval of Undersea Feature Names" or, if this does not exist or is not known, either to the International Hydrographic Bureau or to the Intergovernmental Oceanographic Commission (see addresses below);
- b) **If the undersea feature is located in international waters :-**  
to the International Hydrographic Bureau or to the Intergovernmental Oceanographic Commission, at the following addresses :

International Hydrographic Bureau  
4, quai Antoine 1<sup>er</sup>  
B.P. 445  
MC 98011 MONACO CEDEX  
Principality of MONACO  
Fax: +377 93 10 81 40  
E-mail: [info@ihb.mc](mailto:info@ihb.mc)

Intergovernmental Oceanographic Commission  
UNESCO  
Place de Fontenoy  
75700 PARIS  
FRANCE  
Fax: +33 1 45 68 58 12  
E-mail : [info@unesco.org](mailto:info@unesco.org)

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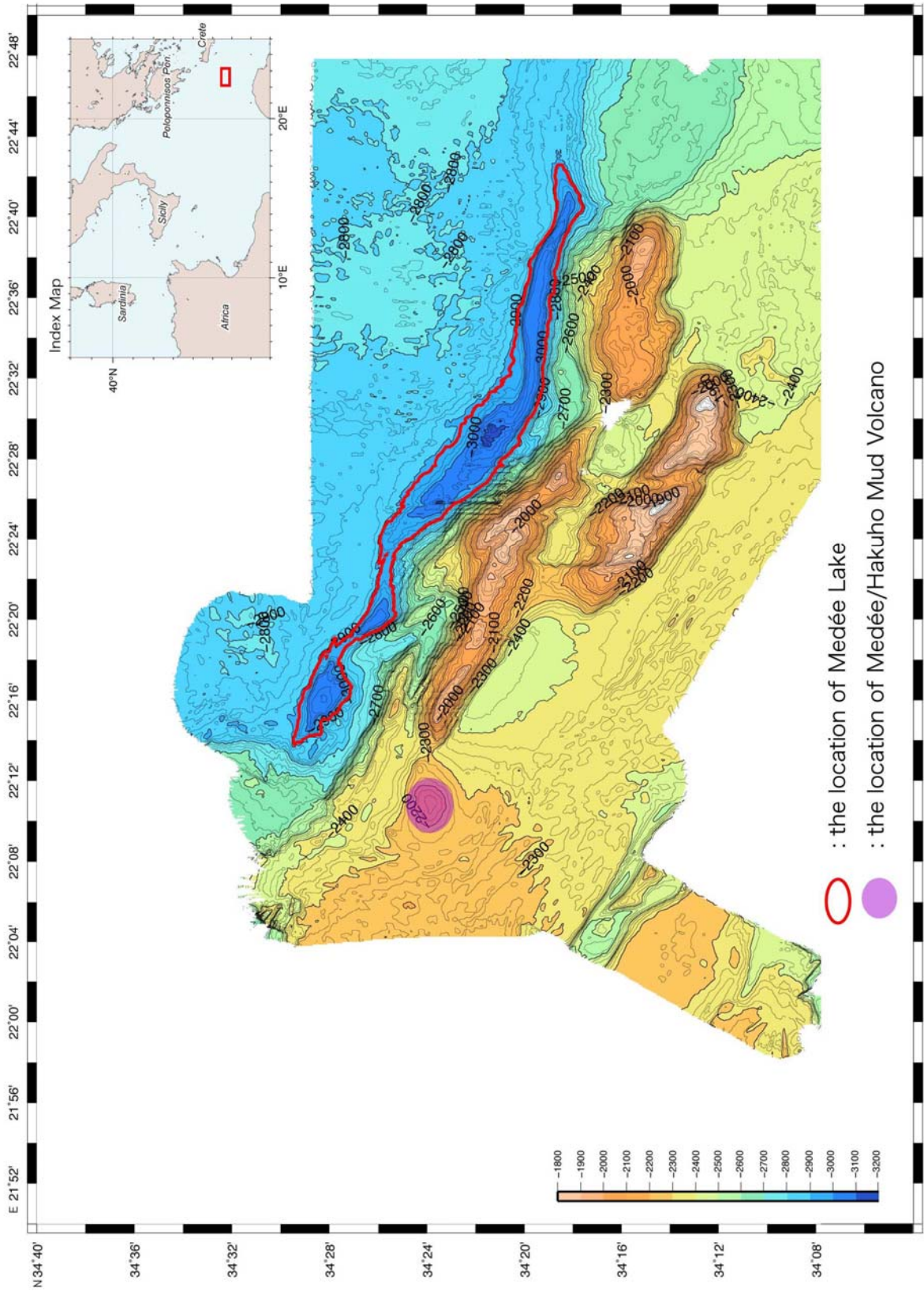


Fig. 1. Index map Medée Hakuho mud volcano.

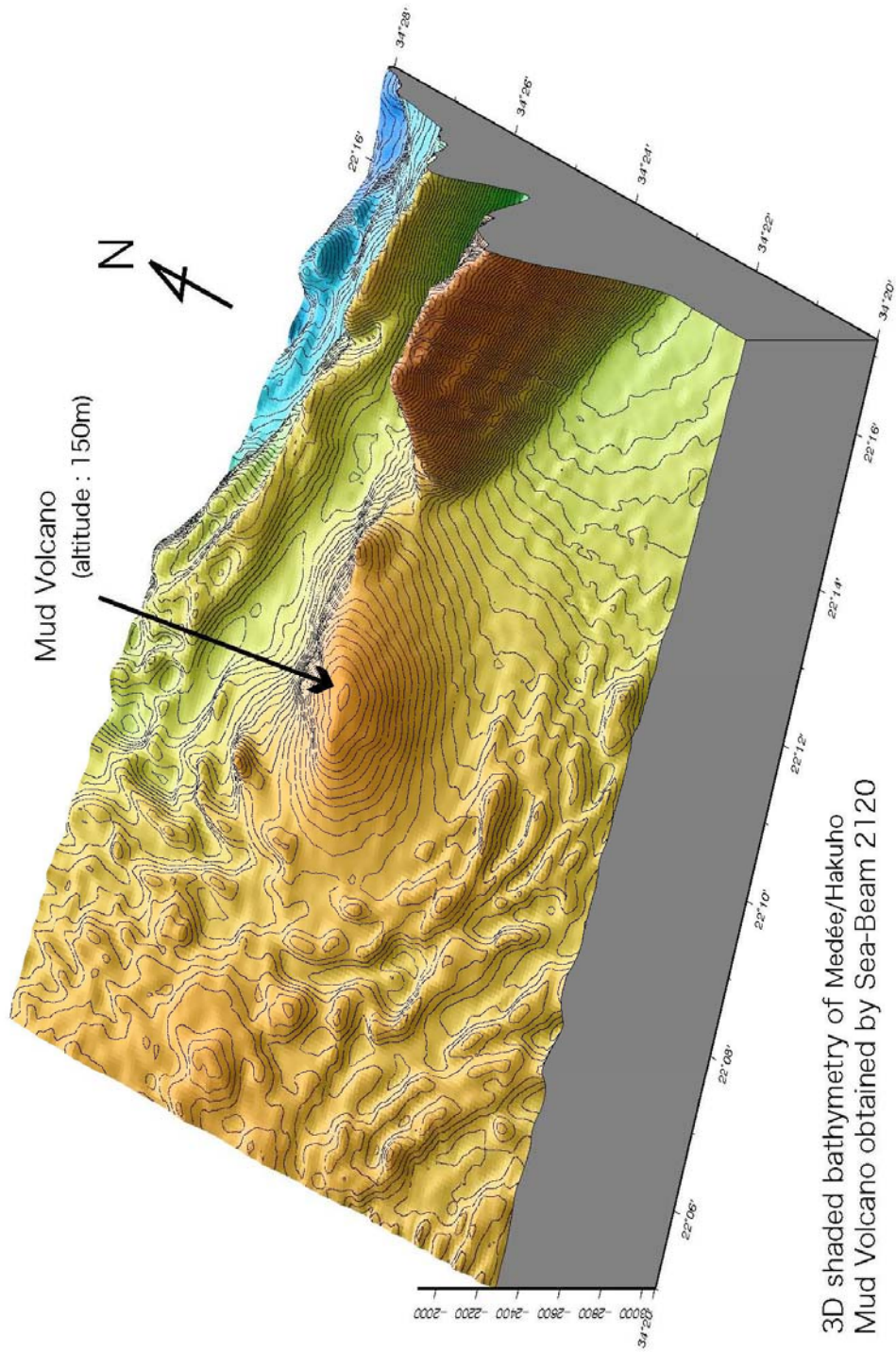
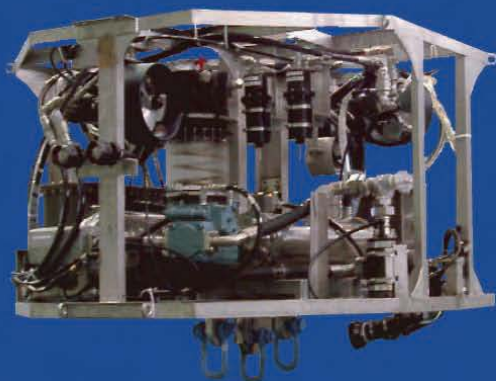


Fig. 2. 3D bathymetry image of Medée Hakuho mud volcano.



# Ocean Research Institute, the University of Tokyo



## Navigable Sampling System



The Ocean Research Institute, the University of Tokyo developed the new ROV "NSS (Navigable Sampling System)" for taking piston cores or deploying heavy instruments in deep sea with pinpoint accuracy (constructor: Mitsui Engineering & Shipbuilding Co., Ltd.). The NSS consists of a pilot vehicle, tether cable, and portable shipboard equipment (cable winch, hydraulic power unit, etc.) that can be easily used on multipurpose ships. The NSS pilot vehicle has four thrusters to control its position, two underwater TV cameras to observe targets, a hook to release a payload by command from the mother ship, and a data transmission system to collect various kinds of in situ data. The depth capability of the pilot vehicle is 4000 m, and the maximum payload is 1.5 metric tons. The NSS is the academic world's first Remotely Operated Vehicle (ROV) that can carry heavy instruments, which is difficult using conventional ROVs and manned submersibles.

The first cruise to use the NSS was conducted in the Nankai and Sagami troughs using JAMSTEC's R/V "Kaiyo" in 2003. The Ocean Research Institute, University of Tokyo, and JAMSTEC undertook this program in cooperation with the AIST (National Institute of Advanced Industrial Science and Technology); the Earthquake Research Institute, University of Tokyo; and Hokkaido University. Piston core samples were taken from active submarine faults and cold seep sites in conjunction with CTD monitoring. An ERI pop-up heat-flow instrument was deployed in a water depth of 2000 m. The 2004 survey encompassed various kinds of additional payloads and operations: a POGO-type heat flow instrument, multiple piston cores, Niskin bottle water samples, water samples at in situ pressures, seafloor gamma ray data, deployment of markers, and attempts to recover tools. We anticipate that future deep sea marine science surveys using the NSS will have resolution similar to land surveys.

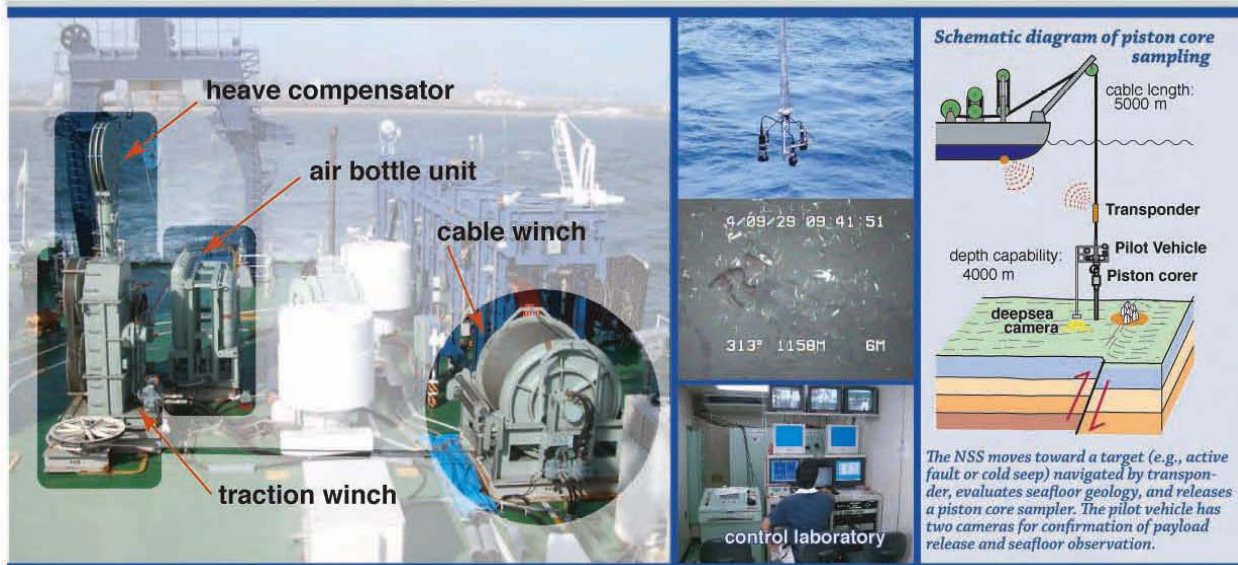


Fig. 3. The outline of the Navigable Sampling System.

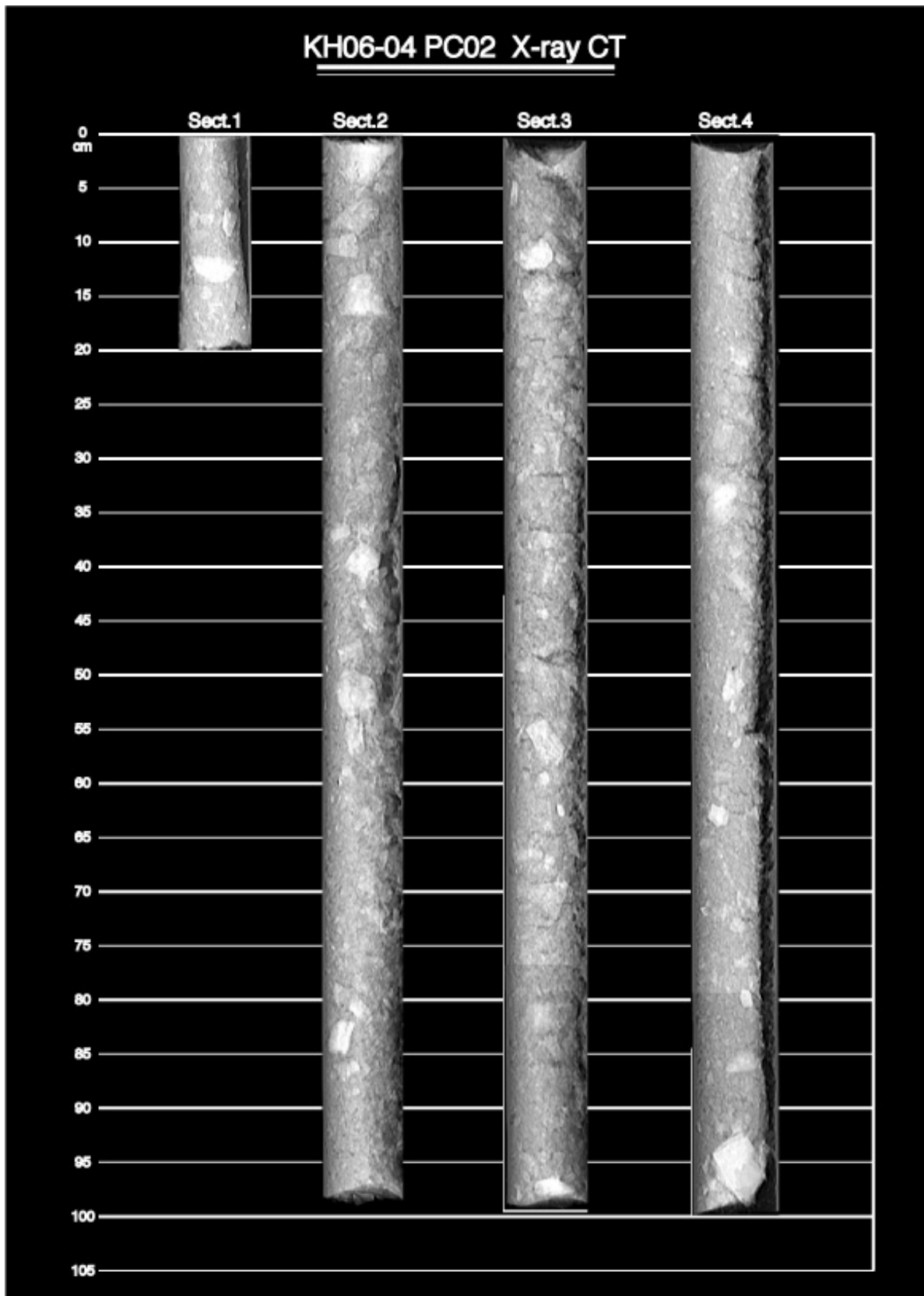


Fig. 4. CT scan image of piston core sample from Medée Hakuho mud volcano.