Distribution of highly/extremely REY-rich mud layers in the southern part of the Minamitorishima EEZ: Insight from major and trace element geochemistry

\*Kentaro Nakamura<sup>1</sup>, Kazutaka Yasukawa<sup>1</sup>, Koichiro Fujinaga<sup>1</sup>, Yasuhiro Kato<sup>1,2,3</sup>

1.Department of Systems Innovation, School of Engineering, The University of Tokyo, 2.Frontier Research Center for Energy and Resources (FRCER), School of Engineering, The University of Tokyo, 3.Japan Agency for Marine-Earth Science and Technology (JAMSTEC)

Since the discovery of highly/extremely REY-rich mud layer (more than 2000/6000 ppm  $\Sigma$ REY) within the Japanese Exclusive Economic Zone (EEZ) around the Minamitorishima Island [1], exploitation of REY-rich mud has attracted particular interest because of its high potential as a REY resource. Detailed investigation by subbottom profiling and piston coring conducted over the last three years has revealed the distribution of REY-rich mud (>400 ppm  $\Sigma$ REY) and overlying non-REY-rich sediments within the Minamitorishima EEZ [Nakamura et al., in revision]. However, both lateral and vertical distributions of the highly/extremely REY-rich mud layers are still uncertain. Here we examine major and trace element compositions of deep-sea sediments cored from the Minamitorishima EEZ. On the basis of geochemical characteristics, REY-rich mud can be subdivided into six types including highly/extremely REY-rich mud, and the highly/extremely REY-rich mud layer is the second top layer of the REY-rich mud succession. In the presentation, we discuss the distribution of each layer of the REY-rich mud and its paleoceanographic implication.

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