

Distribution of extremely REY-rich mud in the southern part of the Minamitorishima EEZ

*Koichiro Fujinaga^{1,2}, Kazutaka Yasukawa^{2,1}, Shiki Machida^{3,2}, Tatsuo Nozaki^{3,2}, Yutaro Takaya^{4,2}, Junichiro Ohta², Kazutaka Oya², Daiki Niikuma⁴, Yoshiro Nishio⁵, Yuka Masaki³, Yoichi Usui³, Satoru Haraguchi³, Koichi Iijima³, Hiroshi Amakawa³, Katsuhiko Suzuki³, Kentaro Nakamura^{2,3}, Yasuhiro Kato^{2,3,1}, MR15-E02 Leg.2 cruise members

1.Chiba Institute of Technology, 2.Department of Systems Innovation, School of Engineering, University of Tokyo, 3.Japan Agency for Marine-Earth Science and Technology, 4.Department of Resources and Environmental Engineering School of Creative Science and Engineering, Waseda University, 5.Research and Education Faculty, Kochi University

Since the discovery of the “extremely REY-rich mud” ($\Sigma\text{REY} > 5000$ ppm) in the Japanese exclusive economic zone (EEZ) surrounding Minamitorishima Island (Kato et al., 2013), we conducted seven research cruises over three years. In the MR15-E01 Leg 2 cruise, one of the latest research cruises by R/V Mirai from March 14 to 28, 2015, we focused to investigate the detailed distribution of the extremely REY-rich mud in the southern part from the Minamitorishima EEZ. During the cruise, we collected 13 sediment cores by piston coring. Here, we report the distribution, visual core descriptions, bulk-sediment chemical compositions of the deep-sea sediment in the southern part of the Minamitorishima EEZ in order to clarify geological and geochemical characteristics of the extremely REY-rich mud.

Keywords: rare earth elements and yttrium (REY), REY-rich mud, Minamitorishima Island, deep-sea mineral resource