

Complex geological and geophysical studies on substantiation of the outer limits of the Russian continental shelf in the Sea of Okhotsk and East Siberian Sea (2006–2009): Review

Renat B. Shakirov, <https://orcid.org/0000-0003-1202-0351>, ren@poi.dvo.ru

Elena V. Maltseva, <https://orcid.org/0000-0003-3230-7042>, ekor@poi.dvo.ru

Anna L. Venikova, <https://orcid.org/0000-0002-1445-8579>, anett29@mail.ru

Natalia L. Sokolova, <https://orcid.org/0000-0002-2248-6924>, natap81@mail.ru

Alexandr I. Gresov, <https://orcid.org/0000-0002-2133-411X>, gresov@poi.dvo.ru

V.I. Il'ichev Pacific Oceanological Institute of the Far Eastern Branch of RAS, Vladivostok, Russia

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Abstract. The paper discusses the results of complex geological and geophysical studies of the deep structure of the seabed along the profiles “Magadan – Southern Kurils” (2-DV-M), “Shantar Islands – Northern Kurils” (1-OM) and “Cape Billings – Outer Continental Shelf Limits” (5-AR), carried out in 2006–2009 within the framework of the State program of expeditionary works on substantiation of national sovereignty over the continental shelf in the Sea of Okhotsk and East Siberian Sea. Federal State Unitary Scientific and Production Company Sevmorgeo was parent organization which managed the expeditionary works; the main executors were the staff of the V.I. Il'ichev Pacific Oceanological Institute of FEB RAS. A special role was assigned to gas-geochemical studies with the purpose to establish regional background and anomalous gas fields to assess prospects for oil, gas and gas hydrates. As a result of complex geological and geophysical expeditions led by A.A. Merezko (Sevmorgeo) in the Sea of Okhotsk, it was established that the enclave outside the 200-mile zone in the central part of the water area does not differ in geological structure from the adjacent parts and is a natural continuation of the framing geological structures of the basement. The evidence obtained was sufficient to successfully justify the application to the UN. On March 11, 2014, after careful consideration of the application and draft recommendations, the enclave of international waters in the Sea of Okhotsk was legally assigned to the Russian Federation. Studies in the East Siberian Sea have provided a huge amount of data on lithology, geochemistry and gas potential of bottom sediments in this area.

Keywords:

Sea of Okhotsk, East Siberian Sea, continental shelf, enclave, geological and geophysical research, methane

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