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Manifestation of the petrogeneration zones of Northern and the Bering seas in ground magnetic anomalies and anomalies of satellite Champ

Tamara Litvinova (1), Egor Krasinsky (), Alevtina Petrova (), and Irina Demina ()

(1) Russia Geological research Institute, St. Petersburg, Russian Federation (tamara_litvinova@vsegei.ru), (2) Russia Geological research Institute, St. Petersburg, Russian Federation, (3) SPbF IZMIRAN, Russian Academy of Sciences, St. Petersburg, Russian Federation (aa_petrova@rambler.ru), (4) SPbF IZMIRAN, Russian Academy of Sciences, St. Petersburg, Russian Federation

The purpose of this paper are showed results of studying of specificity of a deep structure of zones of petrogeneration Northern and the Bering seas on aeromagnetic and satellite magnetometric datas. Research lateral and vertical heterogeneitys an earth's crust of Northern sea is carried out on the basis of the analysis of measurements of satellite Champ at height of 100 km and the digital database created on materials of sea shooting of a geomagnetic field, executed on non-magnetic schooner "Zarya". On sea measurements in Northern sea through large oil fields and gas (Frigg, Ekofisk, Forties trough, Leman, etc.). Geomagnetic sections for an interval of depths from 1 up to 30 km are constructed. It has allowed to study character of distribution of magnetization of breeds of a cover, horizontal lamination intracore layers of an earth's crust and to allocate in zones petrogeneration synvertical fluidoconduct zones the channels described by alternation of not magnetic and low-magnetic layers. They were showed on geomagnetic sections as permeable zones quasi- laminated structures with the lowered magnetic properties in an interval of depths from 8 up to 28 km.

Comparison to a map of the magnetic anomalies measured at height of 100 km by satellite Champ, has shown, that areas of the greatest petrocongestions North Sea at height of 100 km are dated for a zone of gradients and a minimum of northeast displacement of regional anomalies of western and east blocks of Northern sea. It corresponds to representations about an orientation of a fissuring zone and the increased size of a geothermal gradient North Sea rift and is corresponded position allocated on hydromagnetic structures deep fluidoconduct channels. Thus, distribution to water areas of deposits of deposits is emphasized not only low-magnetic areas in a thickness of a sedimentary cover where they are directly located, but also by not magnetic lenses in breeds of the base spreading it in intervals of depths of 8-11 km and 15-18 km.

The oil-gas-bearing province of the Bering Sea occupies uniform sedimentary megabasin. On aeromagnetic measurements at height of 300 m are constructed geomagnetic sections in an interval of depths from 0.5 km up to 25 km crossing the basic zones possible petrocongestions with traps structural and of structural - stratigraphic types. Distribution of magnetization in an interval of development of potentially productive sandy layers on depths from 1 up to 5 km is received. The most perspective zones possible petrocongestions are allocated in Ilpinsky, Olutorsky and Olutorsko-Komandorsky sedimentary basins. The deep permeable zone with system of low-magnetic lenses in intervals of depths 8-10, 12, 18-20 km, dated to Pilgin zone possible petrocongestions was most brightly showed. Comparison of ground supervision to the data received by results of measurements from satellite Champ at height of 100 km, shows, that large oil-gas-bearing Vertuhovskaya, Karaginskaya, Pahachiskaya and Pilginskaya zones are dated for a minimum isometric satellite magnetic anomaly. At height of 400 km this minimum keeps the form that speaks about stability of a condition of the permeable zones supervising oil-gas-bearing.