

ON THE INTERACTION OF EARTH SCIENCES IN THE DEVELOPMENT OF THE COUNTRY'S OIL AND GAS COMPLEX

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The purpose of the work is to analyze the system of Earth sciences from the standpoint of their interaction with each other in solving urgent problems (including ecological ones) in development of unique sphere of domestic economics – the oil and gas complex (OGC). The OGC in a great extent determines the energy security of the country, the system of its territorial energy supply, the solution of socio-economic problems in achieving a high level of quality of life of the population, provides examples of increasingly technological production, energy conservation, rational use of natural resources and productive work of qualified specialists. The special role of modern geospatial support of OGC is characterized, requiring the integration of methods and means of geodesy, remote sensing of the Earth, cartography and geoinformatics. It is noted that this complex of sciences represents the main content of geomatics, which deserves recognition as an integral field of theoretical and practical knowledge, capable of becoming a systematic basis for the sustainable development of complex territorial natural-technical (lithotechnical) and ecological-geological systems. These are the objects of OGC, playing a positive role in the development of local societies, their investment attractiveness and, at the same time, determining the not always favorable state and dynamics of the development of the ecological situation in the regions of the country. The role of ecological geology with its subject – the ecological functions of the lithosphere, which are actively manifested in the development of hydrocarbon production, materially and energetically affecting the state of biota, its plant and animal components, including humans, is shown. The scheme of providing spatial ecological monitoring of the territory occupied by OGC objects, providing the study of manifestations and interaction of factors of technogenic transformation, is presented. The modern oil and gas Arctic project "Vostok Oil" is considered as an object of OGC. In conclusion, it is stated that the content of geospatial science and geomatics meets the requirements of geospatial-ecological monitoring of NGC facilities, as well as the usefulness of the integration development of these areas of knowledge.

Keywords: oil and gas complex, Earth sciences, ecological functions, lithosphere, geospace, geomatics, evaluation

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Received 03.02.2022

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