
Change of the Arctic Geological Environment in the Oil and Gas Areas under the Influence of Non-Recurrent Fast Processes

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The special relevance of studies of the geological environment present problems in Geology associated with oil and gas development in the Arctic. The anthropogenic-technogenic phenomena include: nuclear weapons testing, accidents at nuclear power plants, hydroelectric power plants, industrial plants, mining strikes and explosions of methane in mines. For example, the accident at the Chernobyl nuclear power plant, the Sayano-Shushenskaya hydroelectric power station on the Tomsk Siberian chemical Kombinat (SCK) and numerous explosions in the mines of Kuzbass, as well as the launching of missiles for various purposes. For example, the holes were formed in the fields of the Izhmorsky district in the Kemerovo region, in the Krapivnevsky district, in the Tselinograd region and other regions. In the Arctic, two “plow” arose on the peninsulas Yamal and Gydan. The third was found on the Taimyr Peninsula at the mouth of the Yenisei River in April 2012. The diameter 4 meters and a depth 100m. The ground is scattered by 900 m. The mechanism of the formation of the pit can be explained by the accumulation of methane and the subsequent ejection of the soil by the electromagnetic system. It can be assumed that the accumulation of energy occurred as a result of the preparation of earthquake foci, nuclear explosions at the Semipalatinsk test site and on Novaya Zemlya. We have established that the access to the surface of electromagnetic systems is confined to the junction of geological structures, tectonic zones, intersections of the lineaments of mechanical stresses, the hydrosystem. The variety of shapes and spectra of electromagnetic radiation of plasmoids (electromagnetic systems) can be explained on the basis of their quasicrystalline structure, convergence and polymorphism.