

## **RESEARCH VESSEL “VITJAZ” AS PIONEER OF GEOLOGICAL INVESTIGATION IN THE WORLD OCEAN.**

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“Vitjaz” was the world’s largest research vessel when it went out into the ocean in 1949. “Vityaz” carried aboard special devices for multi-purpose oceanographic researches. “Vitjaz” has conducted 65 expeditions over a period from 1949 to 1979, which is now called as the “epoch of “Vitjaz”. Quick development of ocean geological explorations in the second half of the 20th century led to revolution in geology. Expeditions of “Vitjaz” carried out in the seas of the Far East, Pacific and Indian Oceans has largely contributed into this revolution. For the first time the following works has been done: a) large scale study of composition and distribution of suspended particles and solved forms of elements; b) studies of coarse-grained bottom sediments and stone material that allowed to reveal peculiarities of ice sedimentation; c) studies of paleontology and biostratigraphy of bottom sediments (diatomic, foraminifera, coccolit and spore analysis); e) mapping of sedimentation rates; f) mapping of grain-size composition, content of calcium carbonate, amorphous silica, organic carbon, phosphorus, iron, manganese in bottom sediments; g) study of geochemistry of many elements; h) collection of reliable information about volcanism history in the Far Eastern seas; i) collection of vast information on bottom topography, including a lot of geographical findings. Data obtained by “Vitjaz” have been used for creation of theoretical foundations about present-day sedimentation in seas and ocean, e.g. on its zoning. Obtained information has principally changed our understanding not only about morphological structure, but about the character of the ocean’s bottom topography and processes of its formation.