

THE RESENT 1995-1998 YEARS GRAVITY AND MAGNETIC INVESTIGATIONS IN THE WESTERN BLACK SEA BASIN.

YAKYMCHUK .A.,KOBOLLEV V.P.KORCHAGIN I.N., KOZLENKO Y.V,SOLOVJOV
V.D,YAKYMCHUK Y.N.

In 1995-1998 the geophysical (gravity, magnetic, geothermal and seismoacoustic) researches were fulfilled in the Black Sea on board of RV "Kyiv" (5-th and 7-th cruise) and RV "E.Krenkel" (61-th Antarctic cruise).The original software was developed for the received geophysical data analysis, processing and interpretation. This software allows to use in the interpretation process the observed components of a gravitational and magnetic field, the linear transformations of the observed component of any type, the geoid anomalies, the course gradient data of a magnetic field. The interpretation program is based on the optimization of a sum of square ferences between measuring and modeling field components.The obtained in the cruises gravity and magnetic data enable specifying gravity and magnetic maps of the Western Black Sea, supplementing the data basis of the experimental geologic–geophysical information. The detailed combined interpretation of the obtained data together with other geophysical materials made it possible to specify the deep structure of the Black Sea basin and to set up combined geological–geophysical models of its main structural elements.The results of a gravity and magnetic survey have been used to compile the Earth's crust density and magnetic models of the north continental slope of the Western Black Sea Basin in the region of the Lomonosov submarine massif (LSM) 50km west from the Crimea Peninsula and regional profile Bosphorus – Odessa in the western part of Black Sea Basin.