

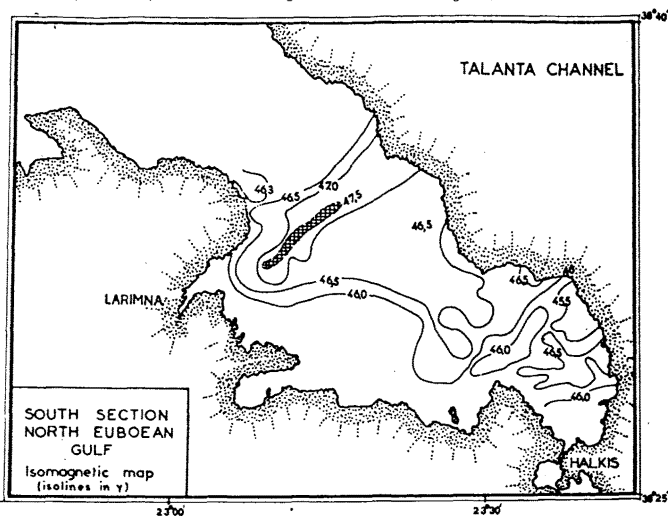
An Interpretation on the Magnetic Measurements of the Southern Part in the North Euboea Gulf

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The interpretation of the magnetic data collected during 1983 are based on the local anomalies due to the magnetic differences of the rocks and the stratigraphy of the North Euboea Gulf.

From the isomagnetic map, is inferred, that the Gulf is divided in two parts through the isomagnetic line of 46.000γ directed to the North. The above area have been characterized by high intensity values (46.500γ - 47.500γ) of the magnetic field (Fig. 1). It seems that an



(Fig. 1)

elevation to the North Gulf is extended to Larimna area. A difference of 800γ was found and could be supported also by the uplift of the hard basement, which appeared in the seismic profiles, of 3,5 KHZ (Chronis et al 1984). This can be observed on the map of the spreading of the isomagnetic lines in order of 46.500γ and 47.000γ along the coasts. Therefore, a difference of 800γ can also be justified from the above. The two other explanations are due to the nature of the rocks in Larimna area, as also to serpentines and ophiolites, and the second, are the chemical analysis of the surface sediments (Fe, Ni, Cr) (Voutsinou - Varnavas, 1987). In this case the concentrations of Fe - Ni - Cr were found to be high and are in a good agreement with the high values of the magnetic Intensity in this area. On the other hand in the southern part the values of isomagnetic lines are relatively lower. It seems therefore, that the value of 45.500γ is in conformity to the Neogene deposits in this area. The difference of 500γ may be attributed to the existing peridotites of the studied area. It is known that the magnetic susceptibility of order $7.600-15.600 \cdot 10^6$ C G S shows that the above mentioned rocks belong to the igneous rocks. Accordingly this is one of the most possible reasons of the relatively high values of magnetic intensity observed in the southern part of N. Euboea gulf.

References

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- 2) F. Voutsinou - S. Varnavas, 1987. Marine Mineral Resources in the Eastern Mediterranean Sea II. An Iron, Chromium and Nickel Deposit in the Northern Euboikos Bay Greece.