

IN THE NAME OF GOD

DIAGNOSIS OF MAGNETIC MINERALS OF GARADAG INTRUSION IN THE NORTH-WEST IRAN.

Dr. Abbas Amini Fazl

Alumina production from Nepheline Syenite project

Temperature change is the most important factor of crystallization of the magnetic rocks that promotes sequential crystallization of rock-forming and accessory-ferry-titanium oxide minerals. The appearance of which is closely associated with magnetite hematite buffer checking the process of granitoid block crystallization. When diagnosing ferry-titanium-oxide minerals the complex of magnetic explorations was accomplished. The ferry-titanium-oxide minerals suffer phase transition when heated. The method of thermomagnetic analysis is one of the diagnostic methods applied to determine composition of ferry-titanium- oxide minerals.

The studied rocks according to the degree of oxid is ability of ferromagnetic mineral are divided into three groups:

Group 1 of curves is represented by typical titanomagnetite curves with bends within the temperature range of 250-300 C. This bend is repeated on the curve of the second heating. Group 2 of curves is characteristic for the rocks containing natural magnetites with the curie point lying within the temperature range of 550-600 C.

Group 3 of two-staged curves characterized by presence therein of a bend within the temperature range of 150-300 C, that disappears when heated for the second time as well as a considerable decrease of a residual magnetization of saturation after thermal processing. These are quite definite evidence of existence of magnetite in these intrusion.

Ferromagnetic mineral judging to the curie points has been formed at the depth of 40-45 km./Titanomagnetite/, 5-10 km/Magnetite/.