Mineralogical, geochemistry and sulphur isotopes studies in Galali orebody, western Iran

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Abstract: Galali orebody is located in Sanandaj-Sirjan zone in west of Iran in the Karamkhani slopes in Almogholagh mountains. The main ore is magnetite association with hematite, goethite, secondary limonite, malachite and pyrite. This orebody is located on north Galali fault; mineralization is made by fault movements in this orebody. Three types of ores have been seen in the Galali orebody as below: Type I: this ore is made of compact, high density and high grade magnetite. Fine grain, subhedral to unhedral pyrite has found in this type as minor mineral. Pyrite is dispersed in magnetite. Type II: this ore type are made of silicates, oxides and sulfides, this phase is injected in the type I minerals. Type III: the hydrothermal goethite is the third type of ore in the Galali orebody. Skarn, epymdization, dolomitization and some argilic veins are alteration haloes around the orebody. Evaporatic origin is recognized for sulphur isotopes in this study.

Keywords: Galali; iron; skarn; fault; magnetite; breccias texture; sulphur isotopes.

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