

**STUDY OF PETROGRAFIC, MINERALOGIC AND
GEOCHEMICAL RED CLASTIK BEDS OF OLIGO-MIOCEN
PLAYA COPPER FORMATION IN AREAS AROUND TEBRIZ, NW
IRAN**

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ABSTRACT

The study area in the northeastern, north and northwestern Tabriz, 150 km distance red color clastic sediments were deposited in Playa OligoMiocene. The stratigraphic interval of conglomerate, sandstone, copper, siltstone, mudstone and shale with different thicknesses are formed. Petrographic findings as lithic sandstones, sublitharenite. The sediment particles as quartz, chert, volcanic rock fragments, calcarenite, sodium and potassium feldspar is significant. Intergranular porosity within sandstone sedimentary copper fills and often in the form of filling vugs, laminated and is nodular. Morphology and tectonics of surrounding Playa formed ponds full control and to relieve copper has provided conditions.

Mineralogical analysis(XRD) of clastic sediment are minerals such as Quartz, Calcite, Albit, Chalcopyrite, Muscovite, Sanidine, Illite, Chlorite, Kaolinite Montmorillonite, Anorthite. Malachite copper ore deposits in the region are calcosite, chalcopyrite, minerals hematite and goethite. Chemical analysis of sandstones, clay and silt stones by increasing the amount of copper between 18-49090 ppm and sulfide at 0.001% -13.09 also fluctuate. By comparing SiO₂ versus K₂O / Na₂O environment is formed in an active continental margin.

Electron Microscope SEM-EDX studies Mineralization processes of dissolution and re-forming intergranular porosity aragonite minerals, different clay, secondary minerals are hematite is formed locally. Meteoric-vadose meniscus cement characterized by concave calcite cement bridges connecting adjacent grains. The cement was precipitated from water films at grain contacts distributed between the grains in a meniscus-like fashion. The overall effect of meniscus cements is to around off the pore spaces.

Oligomiocene pre intrusive in the region, often with a combination of copper. Physical and chemical weathering caused by rivers and underground water carrying micro-environments such as ponds and channels in Playa environment saturated with ions and the impact of weather, Ph-Eh been deposited.

Keywords: *Oligomiocen, Clastic, Copper, Tebriz, Iran,*