Mechanism of formation and origin of glaucony mineral in the Aitamir Formation (Albian-Cenomanian) in Baghak and Shurijeh sections-east Kopet Dagh Basin

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Abstract: Aitamir Formation (Albian-Cenomanian) is one of the stratigraphic units in the Kopet Dagh basin that consists of glauconitic sandstone, siltstone, shale and limestone. Glaucony is present in all lithofacies of this formation and varies based on degree of maturity and color ranging from pale to very dark green. Percentage of glaucony in sandstones and shell beds ranges from 1 to 40, poorly to moderately sorted and sub to well-rounded. Glaucony has two origin including autochthonous and paraautochthonous. Autochthonous types have green halo in color, shrinkage and associated with immature glaucony and phosphate, whereas paraautochthonous glaucony is moderately sorted, well rounded, iron oxide margins and associated with cross bedding. Autochthonous types of glaucony are mostly replaced quartz, feldspar, chert, carbonate cement and mica.

Keywords: Aitamir; Albian-Cenomanian; autochthonous; depositional environment; glaucony; paraautochthonous.

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