

Geology, alteration and mineralization of the Karaağaç thrust related Au-Ag deposit, Turkey

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The Karaağaç thrust related Au-Ag deposit is located in western Turkey, about 16 km east of Gediz, Kütahya. Most of the thrust related Au-Ag mineralization/deposits (Tavşan, Karaağaç, Kaymaz and İliç) in Turkey occurs along the İzmir-Ankara-Erzincan suture zone. Geology at Karaağaç is represented by sericite and amphibolite schist, and recrystallized limestone that was overthrust by ophiolitic melange composed of serpentinitized harzburgite and locally recrystallized limestone, spilite, banded gabbro, and diabase dike blocks. Serpentinite is locally covered by laterite. All these units are overlain by Miocene flysch, and andesitic and rhyolitic lava and tuff. Alteration and mineralization occurred in the limestone and serpentinite and are related to the thrust fault. Silicification and carbonitization of ultramafic rock led to formation of listwaenite along the hangingwall of the thrust fault. Silicification is common alteration in the limestone along the footwall of the thrust fault. Locally FeOx (limonite and hematite) and pyrite are also observed in the limestone and listwaenite. Fuchsite is a common alteration minerals in the listwaenite. Rock-chip sampling yielded a maximum 4.34 g/t Au over 3 m and 9.71 g/t Au over 3 m collected from the listwaenite and silicified limestone, respectively. It was also noted that Ni-bearing laterite (up to 1.53% Ni over 1.0 m) developed in the serpentinite that is overprinted by listwaenite alteration. Diamond and RC holes commenced in 2006. Nine diamond holes (totalling 660 m) and 37 RC holes (totalling 1,703 m) were completed in 2006. A maximum of 1.73 g/t Au and 4.77 g/t Ag (including 9.03 g/t Au and 18.55 g/t Ag) was intersected by hole KADD-07. There is now an estimated 156,798 oz Au inferred resource, using an 0.4 g/t Au cut-off, in the Karaağaç prospect.