

GEOLOGY OF DOĞANKUZU VE MORTAŞ BAUXITE DEPOSIT AND FEATURES OF SULFUROUS ZONES,
MID-TAURIDES, TURKEY

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Comprising a sulfurous zone made up of marcasite+pyrite+hematite+goethite+boehmite+diasporite+anatase+gypsum minerals at its base, Doğankuzu-Mortaş Bauxite ore bed locates at the discordance zone between Cenomanian and Santonian limestones of Cretaceous. Pisolithic ore bed, including locally calcareous conglomeratic lenticules sits on the sulfurous and lesser one-containing level and where the ore bed is thickening, that conglomeratic zones represent the paleodolines. Toward the upper parts the quality of ore increases and a massive blockage is seen. At uppermost part, a sulfuric zone, that of a few centimeters thick covers the ore and the pyrite-bearing clayey carbonates capping those, grades upward to the Santonian limestones. In these two ore beds, veins, bluish gray and green coloured, including marcasite and pyrite at 15 percent and thickening up to two meters, rich in diasporite, are seen and those are crackfills. These extend into neither underneath nor covering limestones. Petrographical and mineralogical findings show that, especially through internal diagenesis reductive processes were effective and an explanation for the formation of sulfurous zones is that the sulfates in the sea water penetrate into the bauxitic matter and being to the sulfides by the bacteria, synchronously to the deposition of Santonian carbonates.