THE PGE-Au CONCENTRATION IN CHROMITITES FROM THE IPANEMA COMPLEX,MINAS GERAIS, BRAZIL.

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The Ipanema district is located in eastern portion of Minas Gerais state and presents seven mafic/ultramafic bodies. One of them (Santa Cruz massif) exhibits magmatic differentiation: dunites; harburgites (which present three levels of chromitites); pyroxenites; gabbros and anorthosites. These rocks are metamorphosed in high grade (granulite facies), similar to the country rocks (migmatized and kinzigitic gneisses of Juiz de Fora Complex). In the chromitite layers, the cumulatic texture is recognized. The crystals of chromite presents composition varying between Fe-chromites to Al-chromites. Practically every crystals present zoning, with FeCr- rich chrome spinel cores and MgAl-rich chrome spinel borders.

A whole rock assay for PGE has showed Os<0,5 ppb; Pt<5 ppb; Pd<50 ppb; Rh=3 ppb; Ir=18 ppb; Ru=242 ppb and Au<20 ppb. In the chromite crystals PGE-Au present significant enrichment factors: Os=4; Ir=1.2; Ru=2; Rh=5; Pt=5; Pd=4 and Au=14. These values are associated with Cr_2O_4-rich portions of chromite grains. It represents a primary concentration in spite of the substantial concentred amounts, and were coprecipited with chromites during crystallization of the layered mafic-ultramafic Ipanema Complex.