THE ACID MAGMATISM AND ITS RELATION WITH THE BICO DE PEDRA GOLD DEPOSIT, RIO DAS VELHAS GREENSTONE BELT, IRON QUADRANGLE, BRAZIL.

1BORBA, R. B., 1FIGUEIREDO, B. R. and 2ENDO, I.1Instuto de Geociencias, UNICAMP, Campinas, Brazil; 2DEGEO/EM/UFOP, Ouro Preto,Brazil

The Bico de Pedra gold deposit is located near the tectonic contact, a reverse shear zone, where the Itacolomi Group metassediments overthrusts the metaigneous rocks of the Nova Lima Group (GNL). The Cu-Zn-Pb-Au mineralization shows evidences that is genetically associated with acid magmatism, which probably occurred in a tectonic collisional setting, during the Transamazonian Event. This intrusive rock of trondhjemitic composition is represented by the Bico de Pedra Aplite (BPA) which was probably syntectonically emplaced in normal shear zones coeval with the Itacolomi sedimentary basin formation. After the intrusion of the BPA in the rocks of GNL, still in the Transamazonian Event, ductile deformation (which led to the formation of shear zones), hydrothermal alteration and mineralization of BPA occurred. Metal-bearing fluids are likely to be produced by magma devolatization during the crystallization of the trondhjemitic rocks. The contribution of these magmatic fluids to the genesis of mineralization is suggested by the geochemical signature of hydrothermal alteration, high Se/S ratios in pyrite, the polimetallic style of mineralization, and the ocurrence of trace elements like Bi and Se. The polimetallic mineralization and the important contribution of the acid magmatism to its genesis make the Bico de Pedra gold deposit unique in the Iron Quadrangle context.