Preliminary geological data for the Etéké-Gabon deposits

M. Dalil*, M. Garrabi , Z. aroudi, F Haissen, S likouss, Y. Zerhouni
*E-mail: dalilmakarim@gmail.com

Etéké is a town located in the province of Ngounié, department of Ougoulou in southern Gabon. It is located in a mountainous area that contains deposits and numerous gold-bearing indices. In this area of Etéké is mainly exposed granitoids and amphibolites, whereas the volcano-sedimentary formations are very small.

The gold mineralization discovered so far, is aligned NE-SW parallel to the direction of the green rocks of Etéké. The deposits where the mining activity has not yet started are classified into three distinct and different age groups:

- Archean mineralization is strictly related to greenstone belts and can overflow as fragments enclosed in granitic terrain. These belts are made up of ultramafic volcanic rocks with felsic metamorphosed into green rocks and gneisses and more or less associated with sedimentary deposits.
- The deposits associated with the sediments and volcanic rocks of the Paleoproterozoic are affected by the Ogooue orogen; similar to the Archean lands,
- The mineralization in the upper Neoproterozoic sedimentary rocks is deformed by Panafrican orogeny.

The highest economic grade mineralization in Etéké is associated with the Eburnean cycle. Alluvial gold production in this zone is the largest in Gabon.

Five primary deposits have been recognized in the region of Etéké:

- Dondo-Mobi: Prospect embedded in the ultramafic rocks of the Etéké Group, located between the bedding plane and the staggered micaschists of the Ogooué Supergroup.
- Dango: the enclosing bearer of the deposit of Dango is formed by sedimentary rocks of the Massima Supergroup. The lithological terms are represented by black muscovite-chlorite schists and recrystallized jasper of massive or banded quartzites.
- Ovala: lodge located in a Palaeoproterozoic syncline wedged between two domes of remobilized Archean migmatites. This synclinal filling is formed by sediments and lavas of the Eteké Group, the Massima and Ogooué Supergroups.
- Massima: deposit encased in the green rocks of the parautochtonous outsole of the Ogooué Front. It is strongly straightened, folded and chipped with a NNE steering. The volcanic rocks are affected by a carbonization, chloritisation and more or less intense hydrothermal pyritization.
- Moukanda: the mineralization is encased in the belts of green rocks which are bordered by the Bapindji granites in the west and by the granites of the Chaillu massif.