International Symposium on Uranium Raw Material for the Nuclear Fuel Cycle: Exploration, Mining, Production, Supply and Demand, Economics and Environmental Issues - IAEA CN-216

Contribution ID: **123** Type: **Poster**

Uranium in the north of Côte d'Ivoire: case of Odienné

Wednesday 25 June 2014 17:00 (1 minute)

This work is a contribution to a better knowledge of Precambrian formations of Odienne region (Côte d'Ivoire), through their petrography and geochemistry.
Those formations may be divided into two main groups:
- first the metamorphic rocks constituted of Liberian rock relics,
volcanic and volcano-sedimentary complex of birimian age, ortho-gneiss and amphibolites considered either as Ante-Eburnean or early from the Eburnean cycle;
- second, the plutonic rocks which are mainly made of granitoids.
The discovery of aluminous gneiss of granulite facies within the Liberian formations, petrographically and chemically similar to those described in the Man region, and the presence of magnetite containing quartzites, are evidences of the existence of liberian basement in the Odienne region.
All the features of the Odienne Eburnean volcanism, as shown by the study made on the volcanic and volcano-sedimentary complex, allow us to connect it to the calco-alkaline series. In the present case, a formation model related to the big cutting accidents seems to fit best.
As for the granitoïds, they show:
• a cataclais characterized by mineral torsions or breakages, a frequent mineral lineation, and an ondulating extinction ; these are evidences of a syncinematic set-up ;
• a high content of Na2O that seems to be expressed by a very important plagioclasic charge ;
• an evolution wholly silico-potassic ; all the samples studied vary from a quartzic-diorite pole to a granitic pole, with the majority of the compositions found in the granodiorite and adamellite domains ; the magma which generated those granitoïds is of the calco-alkaline type ;
• relatively low average uranium and thorium contents ; most of the radioactivity of those rocks is concentrated in the biotite or in the accessory minerals (generally in the form of inclusions in the biotite).

Author: Mr KOFFI, Konan Ange (Ministry of Industry et Mining)

Presenter: Mr KOFFI, Konan Ange (Ministry of Industry et Mining)

Session Classification: Poster Session

Track Classification: Advances in exploration and uranium mineral potential modelling