

Discovery of gold mineralization in the ferruginous sandstones of Kandi basin (North-East Benin)

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Iron ore of Kandi basin represents the upper horizon of the Continental Terminal formation (Alidou, 1983). Deposits containing mineralized levels with a thickness of 4 m in average, consist of ferruginous sandstones and indurated laterites, sometimes cuirassed (Thoenes, 1974). They lie through an unconformity on a 15 m thick layer of kaolinitic clay (Fig. 1).

This ore long prospected for its high iron content, is full of other hidden and much more valuable metalliferous substances: it is gold disseminated in the intergranular spaces of ferruginous sandstones. Microscopic studies (polished sections) followed by geochemical analysis confirmed the presence of this precious metal whose exploration can lead to an economically exploitable deposit. It is in a complex consisting of sulphides including pyrite, chalcopyrite, galena, blende, malachite and azurite.

Reported for the very first time by our research, this precious metal shows in some samples taken at a single point grades three times higher than gold's crustal clark (0.015 ppm). This geochemical anomaly marks the presence of gold in the ferruginous sandstones of Kandi Basin.

Keywords : Gold mineralization, metalliferous, Gold's mark, Continental Terminal

References

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- Thoenes, E., 1974. Mission report on the geological survey of Kandi basin (zone VIII North of Dahomey), 23p.

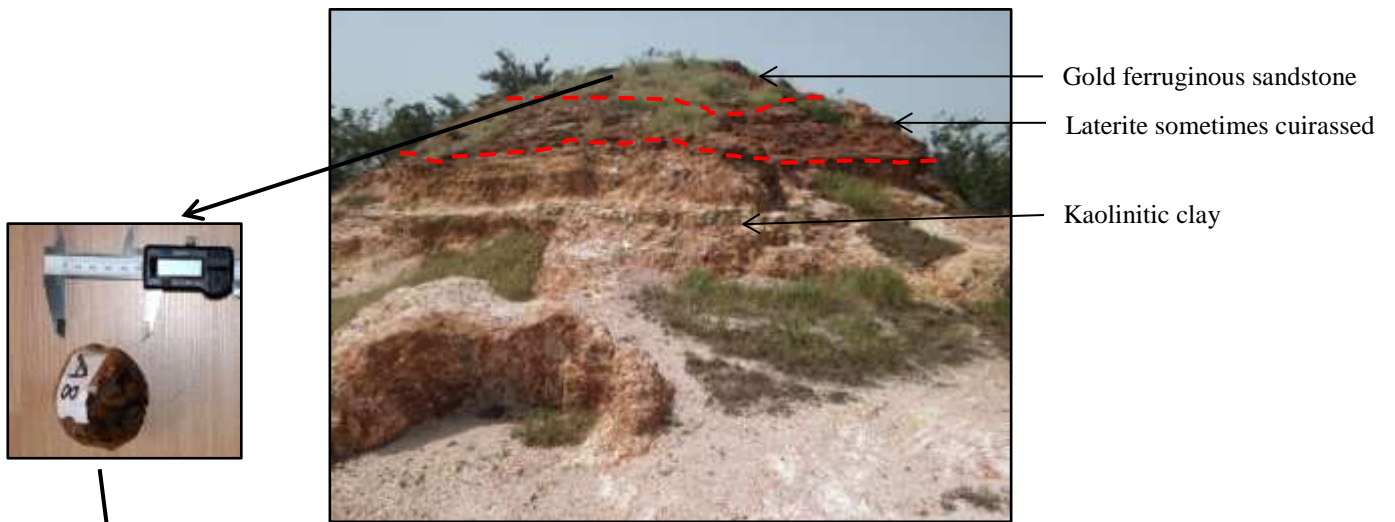


Fig. 1 : Lithostratigraphy of the Continental Terminal showing the gold layer

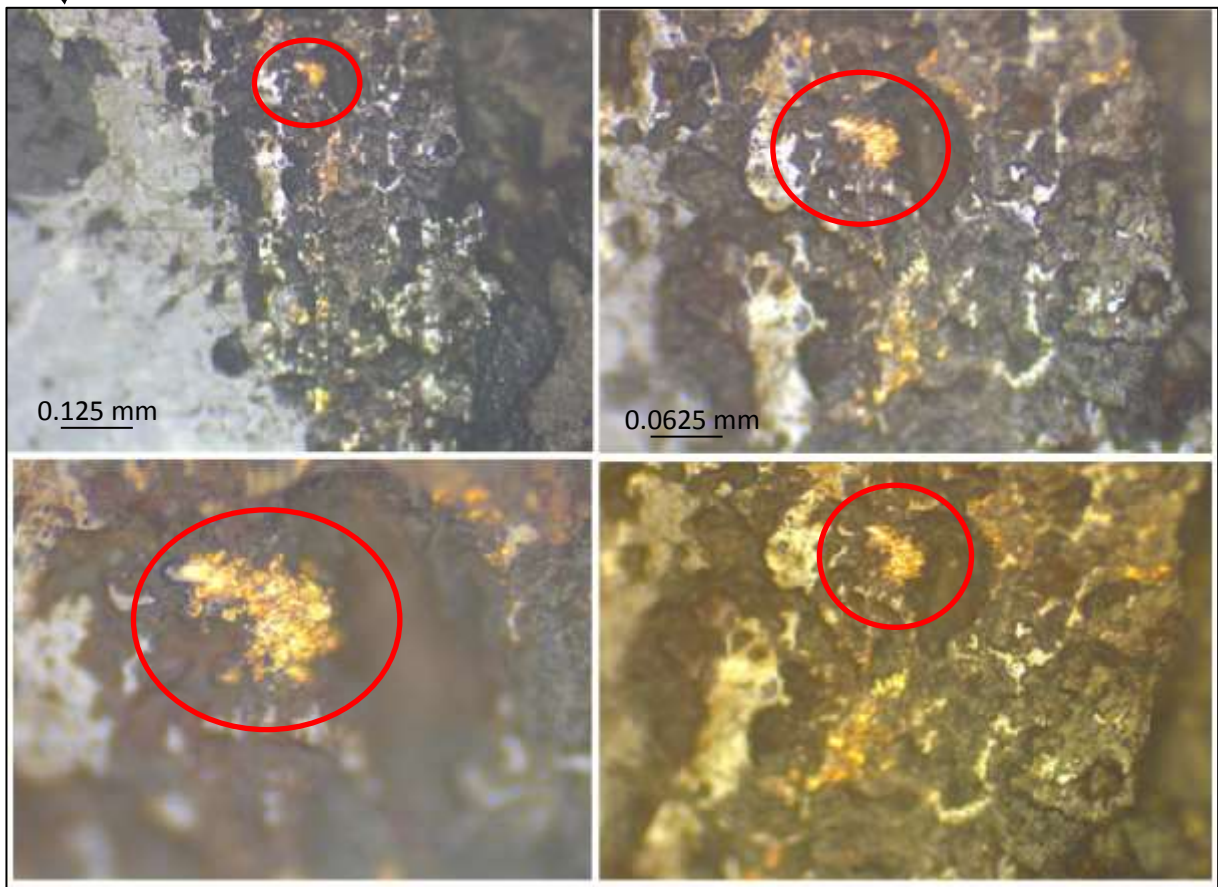


Photo 1: Gold observed in polished section at different magnifications