

Gold Exploration in the Liptako Area, SW Niger, West Africa

Client: Klöckner INA, HansaGeoMin Consult

Position held: Independent Exploration Geologist

Scope of project: The project 'Recherche Or dans le Liptako' was financed by the European Development Fond. The major goal was to assess the potential for economically exploitable gold deposits in the Sirba and Tera Greenstone Belts. Another important point was the formation of Nigerien geologists and the implementation of a fire assay laboratory in the capital Niamey.

Work carried out:

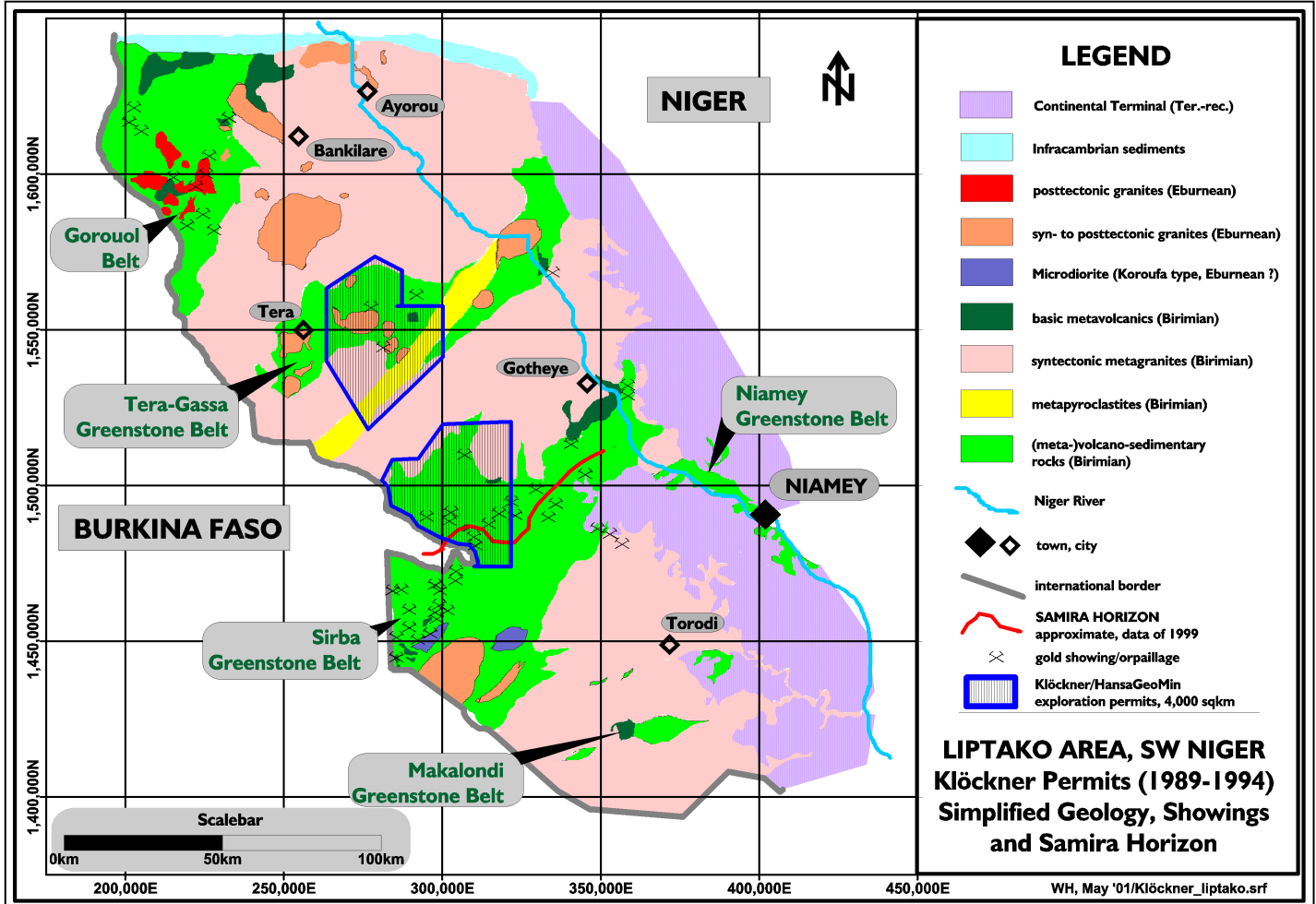
- Detailed mapping (1:500 to 1:5,000): 35 sqkm
- Regional + detailed soil geochemistry surveys, 12,000 s.
- trenching, 4,000 m, incl logging and sampling
- RC-drilling, 6,800 m
- Auger drilling, 600 holes
- Diamond drilling, 1,100 m
- Outcrop sampling, 400 samples
- ground geophysics (VLF, MAG, IP), 300 line km's
- Resource calculations of Samira gold deposit
- Very comprehensive reporting covering geology, geochemistry, trench and drill logs, etc.

Approach:

Prior to the project very little systematic and regional exploration had been carried out in the area. A few gold showings were known since the 1960s but widespread artisanal gold mining started only in the early 1980s. The still valid geological map (by French BRGM) from 1967 served as a valuable basis for the planning of the exploration campaigns. Both regions as represented in the figure below were first covered by regional soil geochemistry surveys (Au+13) and where possible by stream sediment surveys. Anomalies were later better defined by detailed soil geochemistry. The best anomalies were subject of trenching and partly RC-drilling and ground geophysics. On some anomalies and orpailleur sites limited diamond drilling was carried out.

Results:

The project identified more than 50 gold targets. Most of these targets were just small narrow vein gold mineralisation but two prospects in the Sirba Greenstone Belt returned truly remarkable results. One prospect called Libiri (close to the border with Burkina Faso) was later developed by Ashanti Goldfields. They gave an indicated resource of 400,000 oz. More important, however, was the Samira Hill Deposit, equally close to the Burkinabè border. Due to the fine grained, disseminated nature of the gold, this is one of the very few new gold deposits in West Africa that has never been touched by orpailleurs. The deposit can be described as stratabound-tectonically controlled. The very first resource calculations by myself in 1993 gave a resource of 150,000 oz at 2.6 g/t. Later this deposit was successfully developed by Etruscan Resources and now stands at **1,800,000 oz at 2.4 g/t**. In the meantime the Samira Horizon can be followed for more than 60 km, see the figure below and Project Presentation n° 99A, although it seems to be only punctually mineralised.



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