REPUBLIC OF NIGER
MINISTRY OF MINES
Fraternité-Travail-Progrès

IRON ORE POTENTIAL

ECOMOF 3rd EDITION

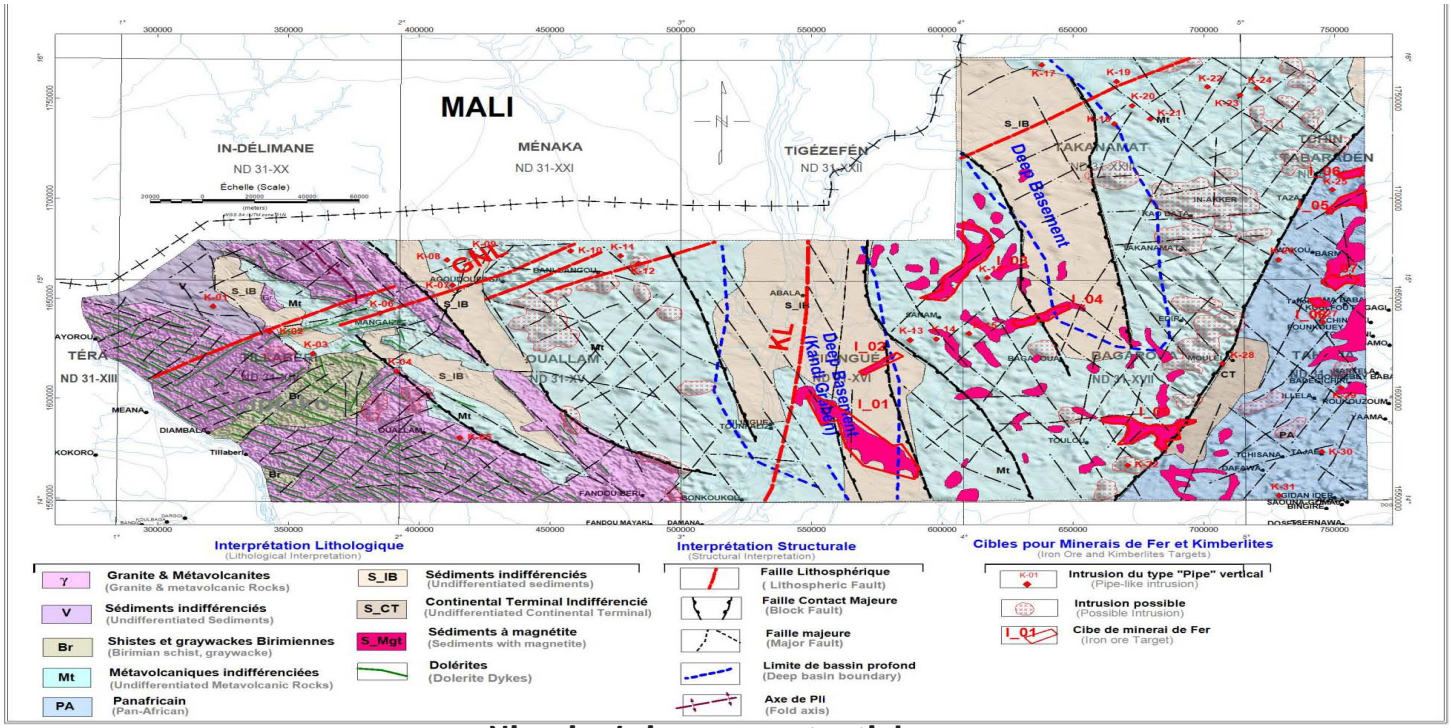
Niger has some of the largest iron ore reserves in the world with Cenozoic deposits of Middle Niger, Ader Doutchi, Agadem and Termit.

Important iron reserves are known in particular:

- The Doguel-Kaïna iron deposit (Say plateau) with 1,008,700,000 tons at an average grade of 45.73% of iron and 1.81% of P_2O_5;
- The Kollo iron deposit with 207.1 million tons at an average iron content of 40.84% and 1.75% of P_2O_5;
- Reserves can be estimated very broadly for Agadem and Termit between 800 million and 8 billion tonnes of iron ore (depending on whether we take, as the average thickness of ooliths, 1 or 5 m, for a specific weight evaluated at 2.6g / cm^3);
- In Aïr, the work of the UNDP (Dempester and Kusnir,) made it posible to highlight, the only interesting iron index, currently known. The authors assimilate the facies encountered to Itabirites.
- Oolithic iron horizons are mentioned in the top part of the "Upper Sandstones" from Ader Doutchi, east and southeast of Tahoua.

> “
> « Come and invest in this promising sector in Niger»
> « Our slogan is First come, first served ... »
> ”

Chemical analyses carried out in the Termit massif gave Fe_2O_3 values between 50 and 80%. The reserves of Agadem and Termit are estimated at more than one billion tons of ore, depending on the thickness of the oolitic layers.



Nigerien’s iron ore potential

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Picture of iron facies of Ader Doutchi



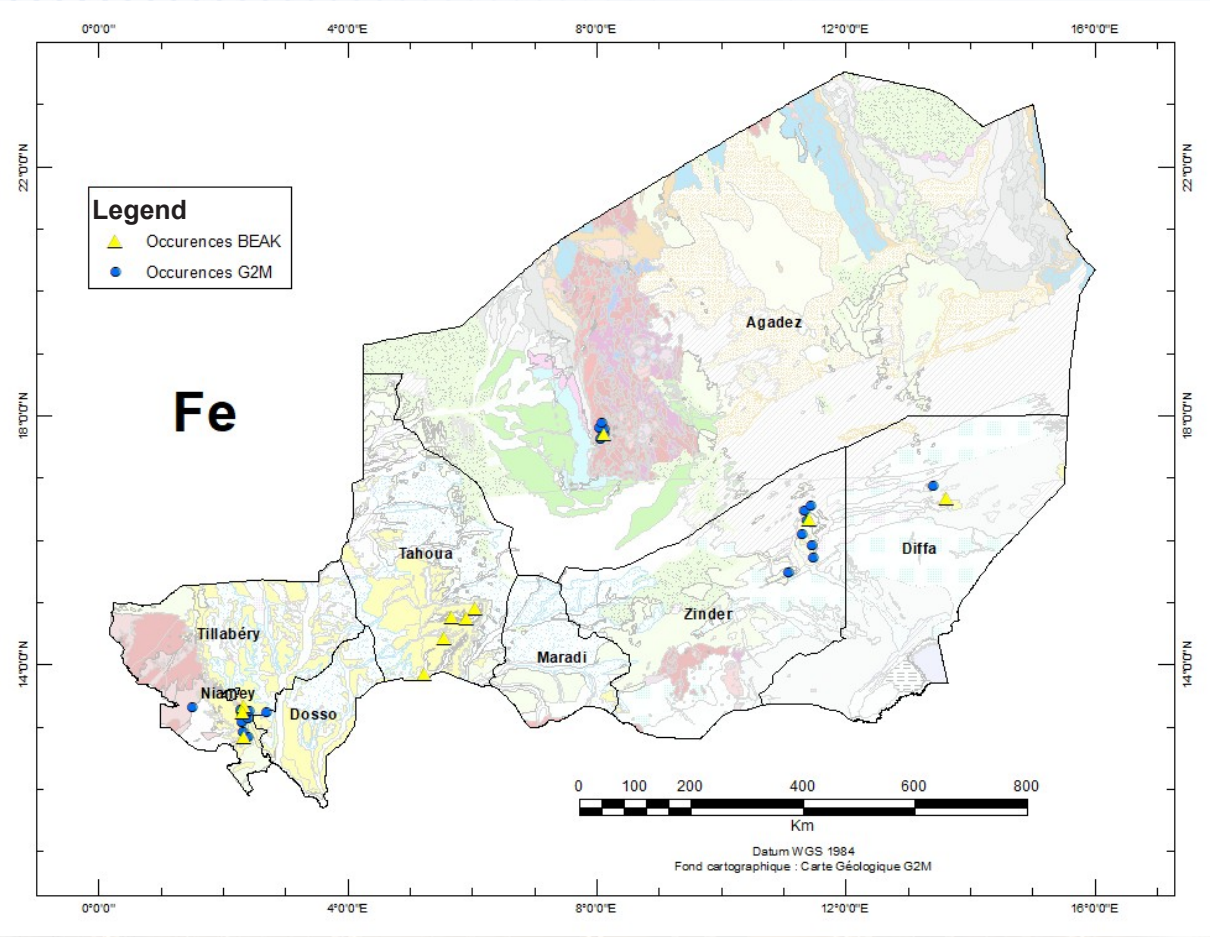
Picture of iron ore of Kollo



Picture OF IRON ORE FACIES OF Termit

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Iron is bounded to lateritic and oolithic formations, for example near the Niger River southeast of Niamey, in sediments from Paleogene to Cretaceous superior of the Termit region, as well as in the Ader Doutchi region to the east and south of Tahoua. In the Say-Kollo deposits, iron is present in oolithic horizons with of an average thickness of 1 to 3 m, hosted in sandy and clay sediments of the Miocene.

In Aïr, Proterozoic Itabirites (Banded Iron Formation) form layers N-S orientation discontinuities that extend over an area of 40 km long and 500 to 5000 m wide. Iron oxides are intercalated in micaschists with quartzite and amphibolite layers, included in the Edoukel Formation, or of Tafourfouzète.

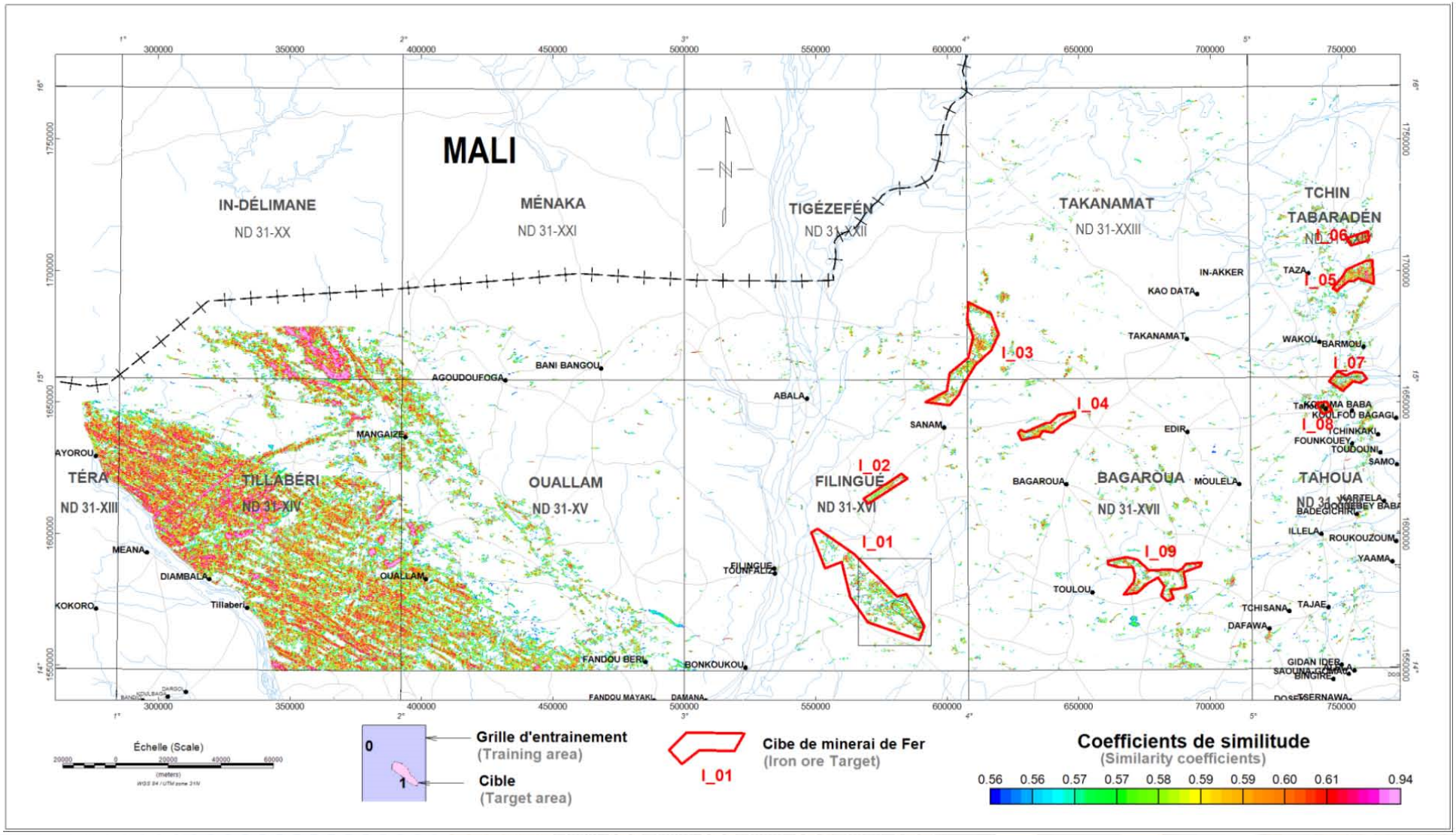
Occurrences occur in a millimetre alternation of chert bands and iron oxides with granoblastic texture, extending for 3 km, with thicknesses 5 to 10 m.

Geochemical analyses provide 45 to 55% Fe_2O_3+Fe_3O_4.

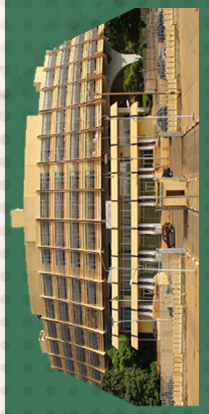
The very rough estimate of reserves is 100 million tons of ore containing an average grade of 37% Fe.

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Interpretation of airborne geophysical surveys,Tillabéri-Tahoua (Géotech, 2013)



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