

IRON DEPOSIT

BANALIA (DRC) vs SIMANDOU (GUINEE)

GENERAL CONSIDERATION

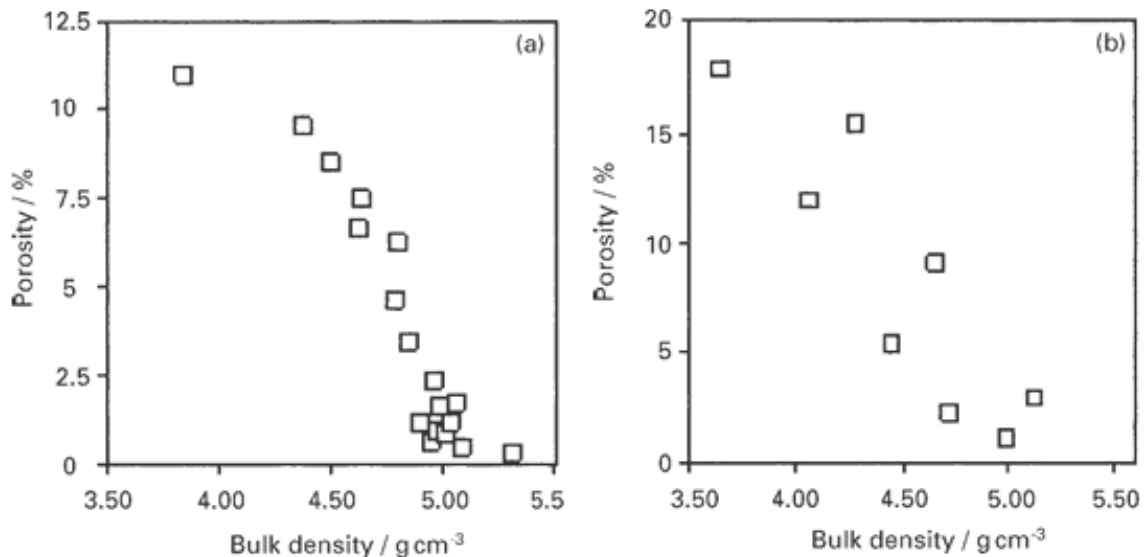
These two iron ore deposits are similar and exceptional. The fundamental difference between these two deposits is the presence of large hydroelectric power resources in the DRC, allowing for the reduction of its ore by direct hydrogen reduction, which is undoubtedly the reduction method of the future.

TWO SIMILAR IRON DEPOSIT

The very high content and low density of hematite suggest a very high porosity caused by their leaching during the hydrothermal phase of the adjacent granite massif.

	length (m)	width (m)	S (m ²)	extrapolation (m)	V (m ³)	Fe content (%)	density (t/m ³)	Weight (t)
Mbomo crête principale	2.600	170	430.000	70	30.100.000	62,80%	3	90.300.000
Mbomo-Ouest	700	200	144.000	70	10.080.000	62,40%	3	30.240.000
Mbomo-Sud	250	60	14.000	70	980.000	65,00%	3	2.940.000
Pulukpulu	8.200	250	2.125.000	70	148.750.000	67,40%	3	446.250.000
Bokwadisa	700	200	140.000	70	9.800.000	68,70%	3	29.400.000
Lebogo	1.800	200	360.000	70	25.200.000	67,00%	3	75.600.000
Pulukpulu Longele	2.000	200	400.000	70	28.000.000	62,40%	3	84.000.000
Colline Longele	5.000	200	1.000.000	70	70.000.000	62,40%	3	210.000.000
						65,30%		968.730.000

The logical correlation between porosity and density of itabirites is confirmed in [this study](#).



In [this publication](#), we read:

“The hematite segment is expected to hold a major share of this market during the forecast period, also emerging as the fastest-growing segment. This growth can be attributed to its higher reducibility and porosity compared to magnetite ore, allowing the reduction gases to penetrate it more effectively. Economically and in terms of quantity used, hematite is the most important industrial ore and is more abundant than other types of ore.”

BHP CEO Mike Henry stated in October 2021 that hydrogen-based steelmaking may still be 20 to 30 years away and that steel sector decarbonisation must remain focused on lower emissions from blast furnaces. BHP has stated “there is simply not enough high-quality iron ore suitable for efficient DRI/EAF production to meet the global steel demand...DRI production must use the very highest quality iron ore with an average iron content in the range of 67%. **Such deposits are scarce.**”

[The stakes are high: with an iron content of over 65%, sometimes referred to as ‘ore caviar’, Simandou could reach an annual capacity of 120 million tons.](#) This would eventually represent nearly 10% of Chinese imports, greatly reducing the country’s dependence on Australia – a partner that has become politically sensitive – and Brazil. This represents a strategic security measure for Beijing in a sector where China already accounts for more than 70% of global trade.

“Global demand for steel is expected to increase by 24% by 2050, driven mainly by emerging markets,” lists Gerard Rheinberger, general manager of Rio Tinto’s Simandou project. Europe and the United States have also adopted numerous incentive measures supporting the decarbonization efforts of the steel industry, which represents 8% of global CO2 emissions.

The DRC has gigantic hydroelectric potential, making it possible to reduce iron ore without any CO2 emissions. Considering an energy of 3.5MWh per ton of steel reduced by direct hydrogen reduction (DRI/H2), the ore reduction potential using 75% of the hydroelectric energy potential of Wannie Rukula (2000MW) would be 3, 75M tons of steel per year. In the case of the reduction of ore by 75% of Grand Inga (42000MW) it will be 79Mt of steel per year.

Global annual iron ore production was approximately 2.5 billion metric tons in 2024. The annual production of the SIMANDOU mine could reach 120 million tons, representing 4,8% of the total annual production.

As for the export project developed by Thaurfin Ltd., it involves 50 million tons annually, representing 2% of annual iron ore production.

DEPOSIT

SIMANDOU

Estimated at 2.4 billion tons between 65.3% (for resources) and 66.1% iron (for reserves), the Simandou range extends 110 km long from north to south. The width of the relief represents a few kilometers (4 to 7 km) with a summit formed by a rocky ridge sometimes a few hundred meters long. This formation located at altitude was leached of part of its silica which led to an increase in the iron content of the itabirites.

BANALIA

Estimated at 960Mt tons @65.3% iron for an extrapolation of surface prospecting over 70m (www.thaurfin.com/reserve-minerai-de-fer.pdf), this deposit represents between 10 and 15% of the iron resources of the former Orientale Province (20 billion tons), The Banalia deposit extends over 45km of mountains of around a hundred meters formed by rich itabirites leached of their silica by the hydrothermal phase of the consolidation of the granite massif which adjoins it.

The presence of gold whose reserves are estimated at more than 2MOz makes it possible to put into operation the 3PR of Thaurfin Ltd and obtain operating permits with a validity period of 25 years

LOCAL STEEL PRODUCTION WITH ITS OWN REDUCERS

Let's assume that 75% of the energy from Grand Inga and 50% from Wannie Rukula are used to produce hydrogen, which would then be used to reduce iron ore at Banalia. In Kisangani, a direct reduction section would be supplied with methane gas from Lake Kivu via a 500km pipeline.

HISTORICAL

SIMANDOU

After more than 30 years of controversy, this deposit is finally in operation.

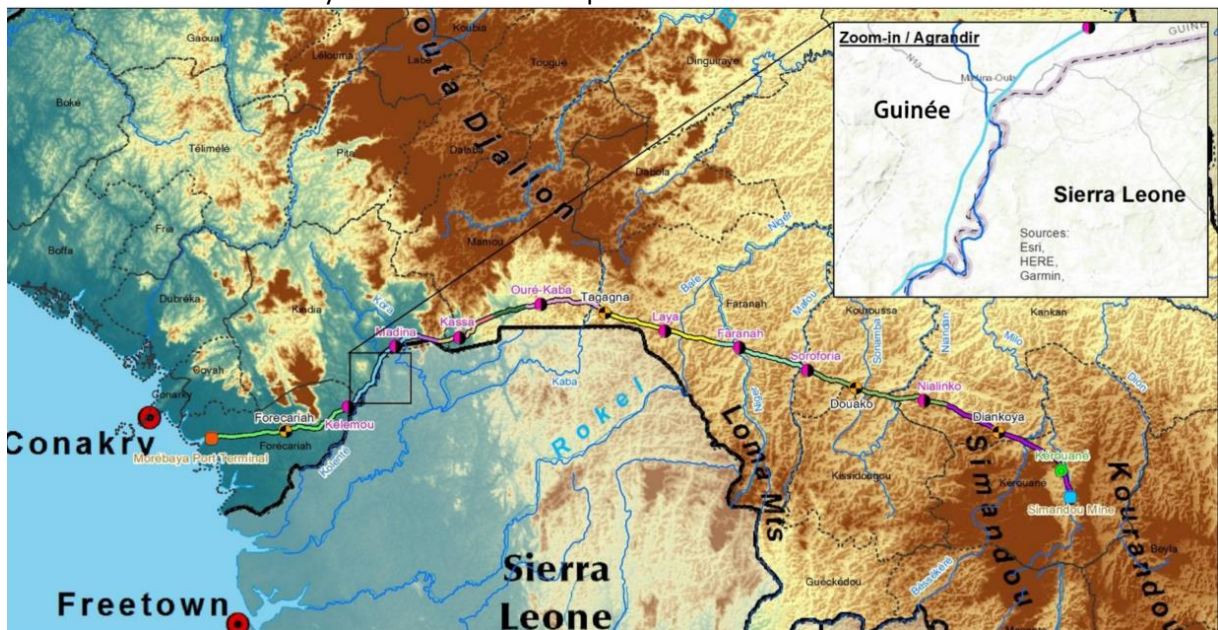
BANALIA

Corruption has been the source of the delay in developing the Banalia deposit. Dan Gertler monopolized this deposit with non-existent titles prohibiting any investment that requires solid mining rights, any due diligence reveals that these mining rights granted to Dan Gertler never existed, <https://thaurfin.com/INEXISTENCE.pdf>; on the other hand, those held by Thaurfin ltd were held in full compliance with mining regulations.

INFRASTRUCTURE

SIMANDOU

Deposits located between Liberia and Côte d'Ivoire, far from the country's access to the sea. 'The project includes the construction of more than 670 kilometers of railway crossing the country from east to west to reach the Atlantic coast, as well as port infrastructure.' This infrastructure is mainly of interest for the export of iron ore.



BANALIA

Deposit located 220km from Kisangani. A 250km railway must be built between the mine and the Congo River. The transport of the ore to Kinshasa on 1650km going down the Congo River is done by rail convoy on barges in order to avoid load disruptions, this river transport is adapted to the properties of the Congo River. From Kinshasa to the new deep water port of Banana, a new 550km railway line is to be built. River transport and the railway from Kinshasa to Banana are of national interest. The deep water port of Banana is already financed by DP Word.

Another project is under consideration (the MIFOR project), which involves the export of 300Mt of iron ore from the former Orientale Province, including the Banalia deposit, via a railway linking Wasta to Kinshasa.

These two projects are not in competition with each other; they are complementary, as the river transport project will be quicker to implement, much less expensive and will finance the MIFOR project. Furthermore, the development of these two transport routes is necessary for the development of two different regions along their routes.



DEVELOPMENT

These two development projects, involving comparable iron ore deposits, are essential for the growth of these emerging countries, as demonstrated by Guinea : <https://simandou2040.gn/>

As for the DRC, a much larger country, it will need steel for its development. The local presence of a reduction plant and hydroelectric power will provide the necessary resources for its growth.

Much more than that, since this promotion will enable the financing of integrated projects, as shown in this memo <https://thaurfin.com/Memo-EN.pdf> .

CONCLUSIONS

The 3 mining permits held by Thaurfin ltd were granted in full compliance with mining legislation which was violated by the mining registry office which did not issue the prospection certificates.

The letters sent to the Congolese authorities (cf <https://thaurfin.com/courriers/>) demonstrate Thaurfin Ltd's willingness to find an amicable solution favorable to the development of the Republic.

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