



NA GLOBAL GUINEA
GEOLOGICAL AND MINING REPORT
for
FARAKOBA & SIGUIRI CONCESSIONS

AGL TURİZM MEDYA MADENCİLİK
SANAYİ ve HİZMET LTD.ŞTİ.
Kızılay Mah. İzmir 2 Cad No: 2/A Çankaya/ANKARA
Tel: (0312) 418 31 32 Fax: (0312) 418 31 33
Mithatpaşa Vergi Dairesi 008 086 6527
Mersis No: 0008086652700013

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AG



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AGL TURİZM MENYA MADENCİLİK
SANAYİ ve HİZMET LTD.ŞTİ.
Kızılay Mah. İzmir 2 Cad No: 42/3 Çankaya/ANKARA
Tel: (0312) 418 31 32 Fax: (0312) 418 31 33
Mithatpaşa Vergi Dairesi 008 086 6527
Mersis No: 0008086652700013

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1. Purpose

The purpose of this report is to examine in detail the FARAKOBA and SIGUIRI gold mining licenses of NA GLOBAL in Guinea. With this report, the field studies carried out in March and April of 2021 will be evaluated, and the mining Business Plan will be created with the beneficiation tests of the samples taken from the field.

This report contains certain forward-looking statements that reflect NA GLOBAL's current views and/or expectations regarding NA GLOBAL's gold mine projects and future events, including statements regarding NA GLOBAL's growth strategy and exploration plans. Forward-looking statements are based on then-current expectations, beliefs, assumptions, estimates and estimates about the businesses and markets in which NA GLOBAL operates. Investors are cautioned that all forward-looking statements involve risks and uncertainties, including:

The inherent risks involved in the exploration and development of mineral properties, the uncertainties involved in interpreting drill results, geophysical studies and other exploration data, the uncertainties respecting historical resource estimates, the potential for delays in exploration or development activities, the geology, grade and continuity of mineral deposits, the possibility that future exploration, development or mining results will not be consistent with NA GLOBAL's expectations, accidents, equipment breakdowns, title and permitting matters, labor disputes or other unanticipated difficulties with or interruptions in operations, fluctuating metal prices, unanticipated costs and expenses, uncertainties relating to the availability and costs of financing needed in the future, commodity price fluctuations, regulatory restrictions, including environmental regulatory restrictions, NA GLOBAL's ability to identify, complete and/or finance additional acquisitions or any failure to integrate acquired companies and projects into NA GLOBAL's existing business as planned. These risks, as well as others, including those set forth in NA GLOBAL's could cause actual results and events to vary significantly. Accordingly, readers should not place undue reliance on forward-looking statements and information. There can be no assurance that forward-looking information, or the material factors or assumptions used to develop such forward-looking information, will prove to be accurate.

NA GLOBAL does not undertake any obligations to release publicly any revisions for updating any voluntary forward-looking statements, except as required by applicable securities law.



2. Mine Concessions

2.1 Farakoba / Kouroussa / Guinea

a. **Concession Number** : A/2019/5978/MMG/SGG.

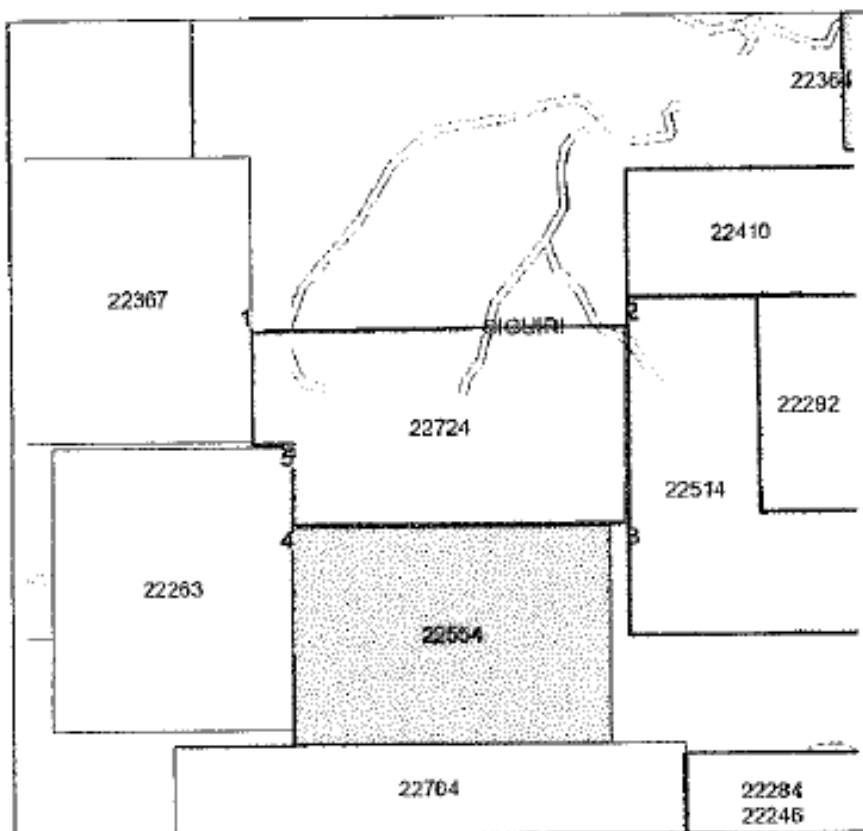
b. **Coordinates** :

Article 3 : Conformément au plan 1/200 000^{ème} de la feuille SIGUIRI (NC-29-XXI), le périmètre du permis ainsi accordé est défini par les coordonnées géographiques ci-dessous :

Ordre	Lat Deg	Lat Min	Lat Sec	N/S	Long Deg	Long Min	Long Sec	O/E
1	11	06	20.66	N	- 09	58	48.29	O
2	11	06	24.00	N	- 09	51	08.27	O
3	11	02	17.95	N	- 09	51	08.94	O
4	11	02	17.28	N	- 09	57	58.14	O
5	11	04	00.92	N	- 09	57	58.14	O
6	11	04	00.25	N	- 09	58	47.62	O

c. **Map of site (22724)**

Plan et limites du Permis de Recherche Industrielle (Or)



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2.2 Siguiri / Guinea

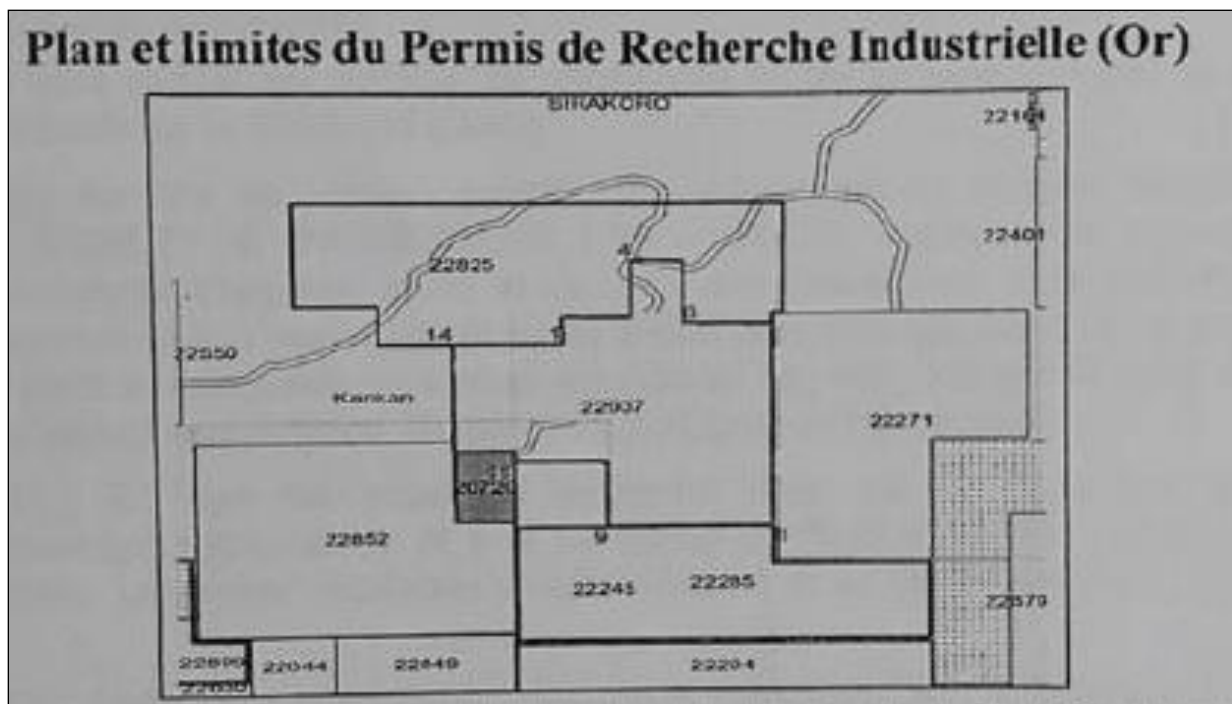
a. **Concession Number** : A/2020/2285/MMG/SGG

b. **Coordinates** :

Article 3 : Conformément au plan 1/200 000^{ème} de la feuille SIGUIRI (NC-29-XXI), le périmètre du permis ainsi accordé est défini par les coordonnées géographiques ci-dessous :

Ordre	Lat Deg	Lat Min	Lat Sec	N/S	Long Deg	Long Min	Long Sec	O/E
1	11	53	9.46	N	- 09	29	2.03	O
2	11	53	52.64	N	- 09	29	2.24,	O
3	11	53	52.61	N	- 09	27	43.08	O
4	11	55	26.23	N	- 09	27	43.10	O
5	11	55	26.25	N	- 09	26	42.18	O
6	11	53	41.73	N	- 09	26	42.24	O
7	11	53	40.26	N	- 09	25	0.42	O
8	11	48	0.19	N	- 09	25	1.97	O
9	11	48	0.33	N	- 09	28	11.57	O
10	11	49	48.27	N	- 09	28	11.98	O
11	11	49	49.02	N	- 09	29	58.91	O
12	11	50	9.88	N	- 09	29	58.81	O
13	11	50	9.77	N	- 09	31	7.42	O
14	11	53	9.11	N	- 09	31	6.49	O

c. **Map of site (22037)**



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3. Work Area

The mine sites are located in North-East of Guinea.

3.1. INFORMATION ON GUINEA

General Informations

Guinea, officially the Republic of Guinea (French: République de Guinée), is a west-coastal country in West Africa. Formerly known as French Guinea (French: Guinée française), the modern country is sometimes referred to as Guinea-Conakry to distinguish it from other countries with "Guinea" in the name and the eponymous region, such as Guinea-Bissau and Equatorial Guinea. Guinea has a population of 12.4 million and an area of 245,857 square kilometers (94,926 sq mi).

The sovereign state of Guinea is a republic with a president who is directly elected by the people; this position is both head of state and head of government. The unicameral Guinean National Assembly is the legislative body of the country, and its members are also directly elected by the people. The judicial branch is led by the Guinea Supreme Court, the highest and final court of appeal in the country.

The country is named after the Guinea region. Guinea is a traditional name for the region of Africa that lies along the Gulf of Guinea. It stretches north through the forested tropical regions and ends at the Sahel. The English term Guinea comes directly from the Portuguese word Guiné, which emerged in the mid-15th century to refer to the lands inhabited by the Guineus, a generic term for the black African peoples south of the Senegal River, in contrast to the "tawny" Zenaga Berbers above it, whom they called Azenegues or Moors.

Guinea is a predominantly Islamic country, with Muslims representing 85 percent of the population. Guinea's people belong to twenty-four ethnic groups. French, the official language of Guinea, is the main language of communication in schools, in government administration, and the media, but more than twenty-four indigenous languages are also spoken.

Guinea's economy is largely dependent on agriculture and mineral production. It is the world's second largest producer of bauxite, and has rich deposits of diamonds and gold. The country was at the core of the 2014 Ebola outbreak.

The land that is now Guinea belonged to a series of African empires until France colonized it in the 1890s, and made it part of French West Africa. Guinea declared its independence from France on 2 October 1958. From independence until the presidential election of 2010, Guinea was governed by a number of autocratic rulers.



Natural resources;

Guinea has abundant natural resources including 25% or more of the world's known bauxite reserves. Guinea also has diamonds, gold, and other metals. The country has great potential for hydroelectric power. Bauxite and alumina are currently the only major exports. Other industries include processing plants for beer, juices, soft drinks and tobacco. Agriculture employs 80% of the nation's labor force. Under French rule, and at the beginning of independence, Guinea was a major exporter of bananas, pineapples, coffee, peanuts, and palm oil. Guinea has considerable potential for growth in the agricultural and fishing sectors. Soil, water, and climatic conditions provide opportunities for large-scale irrigated farming and agro industry.

Mining;

Guinea possesses over 25 billion tones (metric tons) of bauxite – and perhaps up to one-half of the world's reserves. In addition, Guinea's mineral wealth includes more than 4-billion tons of high-grade iron ore, significant diamond and gold deposits, and undetermined quantities of uranium. Possibilities for investment and commercial activities exist in all these areas, but Guinea's poorly developed infrastructure and rampant corruption continue to present obstacles to large-scale investment projects.

Joint venture bauxite mining and alumina operations in northwest Guinea historically provide about 80% of Guinea's foreign exchange. Bauxite is refined into alumina, which is later smelted into aluminum. The Compagnie des Bauxites de Guinea [fr] (CBG), which exports about 14 million tons of high-grade bauxite annually, is the main player in the bauxite industry. CBG is a joint venture, 49% owned by the Guinean government and 51% by an international consortium known as Halco Mining Inc., itself a joint venture controlled by aluminum producer Alcoa (AA), global miner Rio Tinto Group and Dadco Investments. CBG has exclusive rights to bauxite reserves and resources in north-western Guinea through 2038. In 2008 protesters upset about poor electrical services blocked the tracks CBG uses. Guinea often includes a proviso in its agreements with international oil companies requiring its partners to generate power for nearby communities.

The Compagnie des Bauxites de Kindia (CBK), a joint venture between the government of Guinea and RUSAL, produces some 2.5 million tons annually, nearly all of which is exported to Russia and Eastern Europe. Dian Dian, a Guinean/Ukrainian joint bauxite venture, has a projected production rate of 1,000,000 t (1,102,311 short tons; 984,207 long tons) per year, but is not expected to begin operation for several years. The Alumina Compagnie de Guinée (ACG), which took over the former Friguia Consortium, produced about 2.4 million tons in 2004 as raw material for its alumina refinery. The refinery exports about 750,000 tons of alumina. Both Global Alumina and Alcoa-Alcan have signed conventions with the government of Guinea to build large alumina refineries with a combined capacity of about 4 million tons per year.

Diamonds and gold also are mined and exported on a large scale. The bulk of diamonds are mined artisanally. The largest gold mining operation in Guinea is a joint venture between the



government and Ashanti Goldfields of Ghana. ARETOR, a joint diamond-mining venture between the Guinean Government (50%) and an Australian, British, and Swiss consortium, began production in 1984 and mined diamonds that were 90% gem quality. Production stopped from 1993 until 1996, when First City Mining of Canada purchased the international portion of the consortium. Société Minière de Dinguiraye (SMD) also has a large gold mining facility in Lero, near the Malian border.

Problems and reforms

In 2002, the IMF suspended Guinea's Poverty Reduction and Growth Facility (PRGF) because the government failed to meet key performance criteria. In reviews of the PRGF, the World Bank noted that Guinea had met its spending goals in targeted social priority sectors. However, spending in other areas, primarily defense, contributed to a significant fiscal deficit. [citation needed] The loss of IMF funds forced the government to finance its debts through Central Bank advances. The pursuit of unsound economic policies has resulted in imbalances that are proving hard to correct.

Under then-Prime Minister Diallo, the government began a rigorous reform agenda in December 2004 designed to return Guinea to a PRGF with the IMF. Exchange rates have been allowed to float, price controls on gasoline have been loosened, and government spending has been reduced while tax collection has been improved. These reforms have not reduced inflation, which hit 27% in 2004 and 30% in 2005. Currency depreciation is also a concern. The Guinea franc was trading at 2550 to the dollar in January 2005. It hit 5554 to the dollar by October 2006. In August 2016 that number had reached 9089.

Despite the opening in 2005 of a new road connecting Guinea and Mali, most major roadways remain in poor repair, slowing the delivery of goods to local markets. Electricity and water shortages are frequent and sustained, and many businesses are forced to use expensive power generators and fuel to stay open.

Even though there are many problems plaguing Guinea's economy, not all foreign investors are reluctant to come to Guinea. Global Alumina's proposed alumina refinery has a price tag above \$2 billion. Alcoa and Alcan are proposing a slightly smaller refinery worth about \$1.5 billion. Taken together, they represent the largest private investment in sub-Saharan Africa since the Chad-Cameroon oil pipeline. Also, Hyperdynamics Corporation, an American oil company, signed an agreement in 2006 to develop Guinea's offshore Senegal Basin oil deposits in a concession of 31,000 square miles (80,000 km²); it is pursuing seismic exploration.

On 13 October 2009, Guinean Mines Minister Mahmoud Thiam announced that the China International Fund would invest more than \$7bn (£4.5bn) in infrastructure. In return, he said the firm would be a "strategic partner" in all mining projects in the mineral-rich nation. He said the firm would help build ports, railway lines, power plants, low-cost housing and even a new administrative center in the capital, Conakry. In September 2011, Mohamed Lamine Fofana, the Mines Minister following the 2010 election, said that the government had overturned the agreement by the ex-military junta.



Youth unemployment remains a large problem. Guinea needs an adequate policy to address the concerns of urban youth. One problem is the disparity between their life and what they see on television. For youth who cannot find jobs, seeing the economic power and consumerism of richer countries only serves to frustrate them further.

Mining controversies

Guinea has large reserves of the steel-making raw material, iron ore. Rio Tinto Group was the majority owner of the \$6 billion Simandou iron ore project, which it had called the world's best unexploited resource. This project is said to be of the same magnitude as the Pilbara in Western Australia.

In 2017, Och-Ziff Capital Management Group pled guilty to a multi-year bribery scheme, after an investigation by the Securities and Exchange Commission (SEC) led to a trial in the United States and a fine of \$412 million. Following this, the SEC also filed a lawsuit in the US against head of Och-Ziff European operations, Michael Cohen, for his role in a bribery scheme in the region.

In 2009 the government of Guinea gave the northern half of Simandou to BSGR for an \$165 million investment in the project and a pledge to spend \$1 billion on railways, saying that Rio Tinto wasn't moving into production fast enough. The US Justice Department investigated allegations that BSGR had bribed President Conté's wife to get him the concession, and so did the Federal Bureau of Investigation, the next elected President of Guinea, Alpha Condé, and an assortment of other national and international entities.

In April 2014 the Guinean government cancelled the company's mining rights in Simandou. BSGR has denied any wrongdoing, and in May 2014 sought arbitration over the government of Guinea's decision to expropriate its mining rights. In February 2019, BSGR and Guinean President Alpha Condé agreed to drop all allegations of wrongdoing as well as the pending arbitration case. Under the agreement, BSGR would relinquish rights to Simandou while being allowed to maintain an interest in the smaller Zogota deposit that would be developed by Niron Metals head Mick Davis.

In 2010 Rio Tinto signed a binding agreement with Aluminum Corporation of China Limited to establish a joint venture for the Simandou iron ore project. In November 2016, Rio Tinto admitted paying \$10.5 million to a close adviser of President Alpha Condé to obtain rights on Simandou. Conde said he knew nothing about the bribe and denied any wrongdoing. However, according to recordings obtained by FRANCE 24, Guinean authorities were aware of the Simandou bribes.

In July 2017, the UK-based anti-fraud regulator, the Serious Fraud Office (SFO) and the Australian Federal Police launched an investigation into Rio Tinto's business practices in Guinea.

Further, In November 2016, the former mining minister of Guinea, Mahmoud Thiam, accused head of Rio Tinto's Guinea operation department of offering him a bribe in 2010 to regain Rio Tinto's control over half of the undeveloped Simandou project.



In September 2011, Guinea adopted a new mining code. The law set up a commission to review government deals struck during the chaotic days between the end of dictatorship in 2008 and Condé coming to power.

In September 2015, the French Financial Public Prosecutor's Office launched an investigation into President Alpha Conde's son, Mohamed Alpha Condé. He was charged with embezzlement of public funds and receiving financial and other benefits from French companies that were interested in the Guinean mining industry.

In August 2016, son of a former Prime Minister of Gabon, who worked for Och-Ziff's Africa Management Ltd, a subsidiary of the U.S. hedge fund Och-Ziff, was arrested in the US and charged with bribing officials in Guinea, Chad and Niger on behalf of the company to secure mining concessions and gain access to relevant confidential information. The investigation also revealed that he was involved in rewriting Guinea's mining law during President Conde's rule. In December 2016, the US Department of Justice announced that the man pleaded guilty to conspiring to make corrupt payments to government officials in Africa.

According to a Global Witness report, Sable Mining sought iron ore explorations rights to Mount Nimba in Guinea by getting close to Conde towards the 2010 elections, backing his campaign for presidency and bribing his son. These allegations have not been verified yet but in March 2016 Guinean authorities ordered an investigation into the matter.

The Conde government investigated two other contracts as well, one which left Hyperdynamic with a third of Guinea's offshore lease allocations as well as Rusal's purchase of the Friguia Aluminum refinery, in which it said that Rusal greatly underpaid.

Transport infrastructure

The railway from Conakry to Kankan ceased operating in the mid-1980s. Domestic air services are intermittent. Most vehicles in Guinea are 20+ years old, and cabs are any four-door vehicle which the owner has designated as being for hire. Locals, nearly entirely without vehicles of their own, rely upon these taxis (which charge per seat) and small buses to take them around town and across the country. There is some river traffic on the Niger and Milo rivers. Horses and donkeys pull carts, primarily to transport construction materials.

Mining operations are expected to start at Simandou before the end of 2015. Rio Tinto Limited plans to build a 650 km railway to transport iron ore from the mine to the coast, near Matakong, for export. Much of the Simandou iron ore is expected to be shipped to China for steel production.

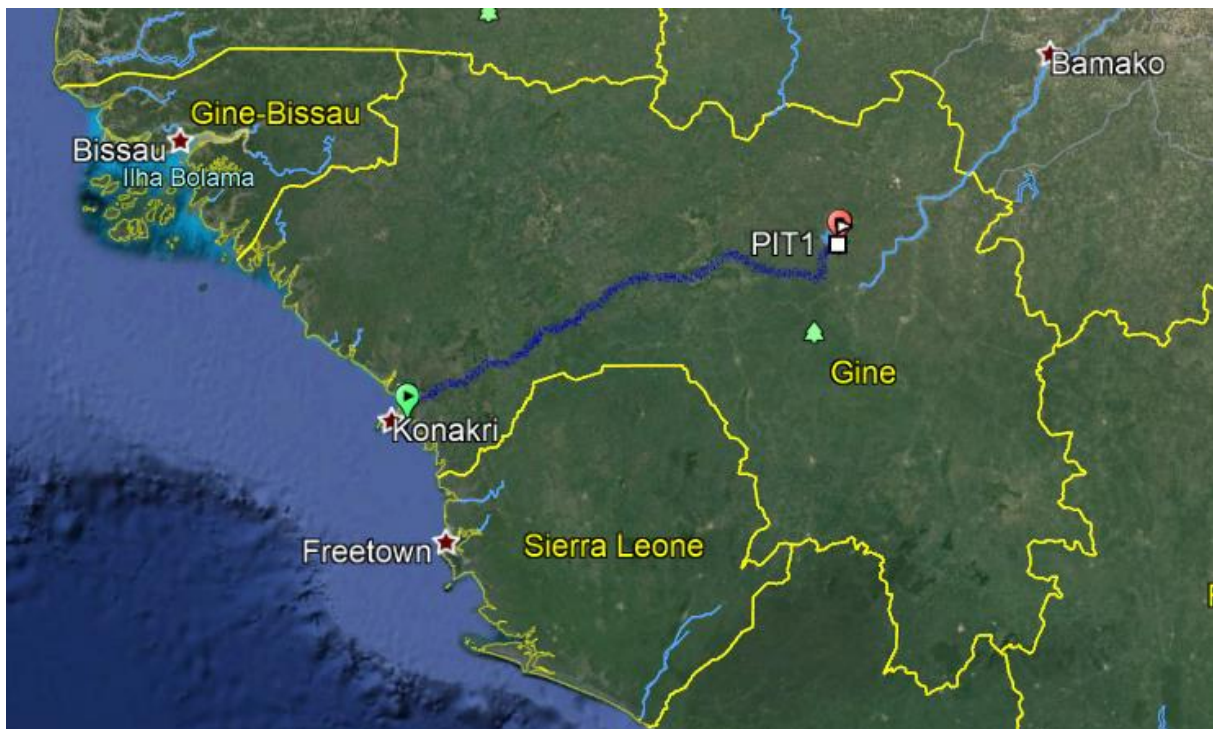
Conakry International Airport is the largest airport in the country, with flights to other cities in Africa as well as to Europe.



3.2. Mine Concessions

3.2.1. FARAKOBA and SIGUIRI

Farakoba Mine Site area is in the North-West of Guinea Republic. The road from the capital Conakry to Farakoba area is 600 km and the transportation takes about 30 hours due to the stabilized and under construction roads. Another transportation to the site is from Bamako, the capital of Mali, and the road, which has been asphalted for the last 4-5 hours totally 8-9 hours with car and road is approximately 350 km.



The Siguiri site is also 25 km northwest of the SAG Mine site by bird flight, and is 3 hours' drive from the city center of Siguiri by road. From Bamako, you can be on the field in less than 6 hours by road.

Both sites are located very close to Guinea's largest mining projects. Both licenses are located in high gold potential areas in the Siguiri Basin. Artisanal mining activities in the fields have been carried out for many years by the inhabitants of the nearby villages.

Politically, the villages are subordinate to the administrations in the nearest districts. After getting the necessary permissions from the Ministry of Mines and the provincial and district administrations, the villagers provide all kinds of convenience to mining companies.

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Picture from studies in Farakoba Concession

There are no hotels etc. accommodation facilities in the regions. In these regions, there are accommodation opportunities in small guest houses in the villages located in the nearest village under not very good conditions.



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Container and entire site organization should be considered in advance, as accommodation and food will be a problem for subsequent mining and Geological Survey phases.

The water supply is met by women carrying it from the wells, and this water is not suitable for drinking. Drinking water should be supplied from the city center in bulk and transferred to the field.

As the road conditions are very bad, off-road vehicles should be preferred. There are not very favorable conditions for geological and mineral explorations.



There is no security problem in the area, and the local people are very hospitable and respectful. In terms of transportation to the needs, the Farakoba field is 5 hours' drive from Kouroussa, the nearest city, and the Siguiri field is 3 hours' drive from Siguiri, which is a very large city.



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4. Geological Situation (Birimian Geology)

4.1. "GEOLOGY" AND "FAULTS" LAYERS

The "Geology" and "Faults" layers of the West African GIS have been constructed from 1:2,000,000-scale geological syntheses of 11 West African countries (Senegal, Mali, Guinea, Sierra Leone, Liberia, the Ivory Coast, Ghana, Burkina Faso, Niger pro parte., Togo and Benin), which were compiled between 2001 and 2004 as part of the BRGM SIGAfrique research project. Only the geological formations of the Archean and Paleoproterozoic basement with gold potential were extracted from these syntheses: the result is a map of some 40 colors (cf paper prints) publishable from MapInfo.

The choice of colors (which the user can change with MapInfo) was made in order to individualize the different geological formations having a gold potential:

- 3 purplish for the Archean crustal horst of "Sierra Leone - Liberia – southern Guinea - western Ivory Coast" formed by magmatic accretion between ca. 3500 and 2700 Ma;
- 4 green to blue (from oldest [-2200 Ma] to youngest [-2100 Ma]) for the Birimian volcanic and volcano-sedimentary successions, which began with a tholeiitic affinity (B1) and ended with a calc-alkaline affinity (B2);
 - yellow to orange-colored for the detrital sedimentary basins (-21 50 - 21 00 Ma) that are respectively flyschoid (B1) and conglomeratic (Tarkwaian);
 - pink to reddish (from oldest [-2160 Ma] to youngest [-2080 Ma]) for the vast Birimian granite-gneiss and intrusive domains;
 - beige for the Cover rocks (Neoproterozoic to Paleozoic), grey for the Mesozoic dolomites, and white for Recent deposits.

The faults are designated only according to their main sense of movement (reverse, normal, dextral, sinistral or undifferentiated).

The Siguiri deposit is associated with north-northwest-striking silicified shear zones and dilational jogs. Haloes of quartz-carbonate veins developed along pre-existing structural heterogeneities, such as stratigraphic contacts between turbiditic rocks and granodiorite dykes, and deeper incipient structures. Vein density is typically higher in more competent rocks, such as granodiorite dykes and layers of coarse-grained volcanoclastic rocks. Mineralization typically coincides with silicification, sericitisation and an increase in disseminated sulfides.

The Siguiri deposit is associated with gold-bearing quartz-carbonate veins developed in quartz-feldspar porphyry (IQF) dykes and in the surrounding turbiditic sedimentary rocks. Like the Siguiri deposit area, vein density is typically controlled by rock competency but also by steep northeast-trending incipient structures in the surrounding sedimentary rocks.

Vein orientations are consistent between the sedimentary rocks and the IQF. The vein orientations at Siguiri are almost identical to the vein orientation observed in Siguiri (Lebrun



et al., 2017), a world-class orogenic gold district hosted in turbiditic sequences located approximately 80 km north-northwest of the Guinea Gold project.

To summarize, all gold occurrences in the Siguiri property were found to be structurally controlled (e.g., veins, shear zones, or rheological controls on disseminated mineralization) and are interpreted to be classified as orogenic in nature. Orogenic gold deposits are intimately associated with the formation of orogenic belts, although typically without any clear plutonic association. Most commonly, these deposits occur in secondary structures of major faults at the transition between ductile and brittle domains. They are found in a context of rapid exhumation (up to 1 cm/a) bringing deep, warm areas of the crust (e.g., amphibolite facies) to the surface (Jébrak and Marcoux, 2008). Orogenic gold deposits are found at all metamorphic levels, although they are more common in the greenschist facies. They can be hosted in a multitude of host rock lithologies.

The genesis of epigenetic orogenic gold deposits is linked to hydrothermal circulation in reverse faults, strike-slip or normal faults, invariably on structures with little displacement.

These are typically secondary faults reactivated after a major slip event. The passage of fluid in subvertical reverse-fault structure occurs in a pulsatile manner, creating crack-and-seal textures. The source of gold remains uncertain but in the case of sedimentary environments, it is theorized that gold comes from devolatilized sedimentary or diagenetic sulfides or deep syn-orogenic magmatic fluids.

4.2. GEOLOGICAL EVOLUTION OF THE BIRIMIAN

4.2.1. General setting

Birimian (from the Birim River in Ghana) is the local name that, since Kitson (1928) and Junner (1935), is classically given to the Paleoproterozoic rocks of West Africa. More precisely, these rocks, formed between ~2250 Ma and ~2050 Ma, correspond to the Paleoproterozoic Rhyacian period (PP2); the earlier formations, commonly iron rich, being assigned to the Siderian (2500 - 2300 Ma).

From a geodynamic standpoint, one tends to refer to the Eburnean orogenic domain (in the same sense as the Hercynian or Caledonian) for all the Birimian rocks and granitized areas exposed in the Baoulé-Mossi block (Guinea, southern Mali, Ivory Coast, Ghana, Burkina Faso and western Niger) and in the Kéniéba (Mali-Senegal) and Kayes (Mali) inliers. The total area, ~2.2 million km², is of the same order as that of the European Hercynian.

The duration of the Birimian Cycle, ~150 Ma (if not 200 Ma), was longer than that of the Andean Cycle (100 Ma). Its evolution is characterized by the tectonic accretion of both older and neogenic blocks of different natures (fragments of thinned Archean, volcanoplutonic arcs, areas of neogenic granitoid, etc.) around the edges of a (stable) Archean block - an accretion associated with general SE-NW convergence. The convergence was accompanied by major magmatism and can be divided into two main tectonometamorphic phases (D1 and D2) representing the Eburnean orogeny.

Emplacement of the gold mineralization took place at about 2100-2050 Ma at the end of the orogenic evolution (D2 and D3 strike-slip deformation).



4.2.2. Geological formations individualized in the GIS with respect to the evolution of West Africa

The geological history of West Africa is characterized by a long and relatively complex evolution that is still poorly understood and the subject of divergent interpretations. The main problems revolve around interpretation of the lithological superposition and of the deformation, the role of the magmatism, and the age of the volcanic events.

The following descriptions are based in part on the work of the BRGM Birimian team (Milesi et al., 1999) completed by more recently published results, and in part on work that is unpublished or currently being written up (in particular Feybesse et al.). Tables illustrating the different stages are taken from the GIS's Geology table.

Preliminary stage: Formation of the Archean core

3500-2700 Ma. The Archean crust was constructed, deformed and metamorphosed under medium- to high-grade (granulite facies) metamorphic conditions during the Leonian (Paleo- and Mesoarchean) and Liberian (Neoarchean) cycles.

The Leonian (Sierra Leone, western Liberia and southern Guinea) consists mainly of banded orthogneiss with alternating tonalite, granodiorite, diorite and quartz diorite. This plutonism marks an early stage of crustal growth: magmatic accretion with an input of juvenile material derived from partial melting of a deep source (mantle or base of the crust).

The transition period between the Leonian and the Liberian (at around 2950 Ma in Guinea) is marked by the individualization of belts with BIF (Banded Iron Formations or ferriferous quartzite) and ultramafic (UB) rocks, later metamorphosed in the granulite facies.

The Liberian (Liberia, Guinea, the Ivory Coast) consists of granitoids derived from crustal recycling by partial melting of the Leonian crust during the Neoarchean.

First Evolution stage: Thinning and mafic magmatism

"Early Birimian" with BIF (or Siderian; Fig.) "

2300 Ma. Thinning around an emerged Archean block, with deposition around its edges of sediments containing arkosic $\pm$ carbonate sandstone and varved BIF (Mts Nimba and Simandou type). Associated, but relatively poorly developed, greenstone could reflect the beginning of aborted volcano-plutonic belts.



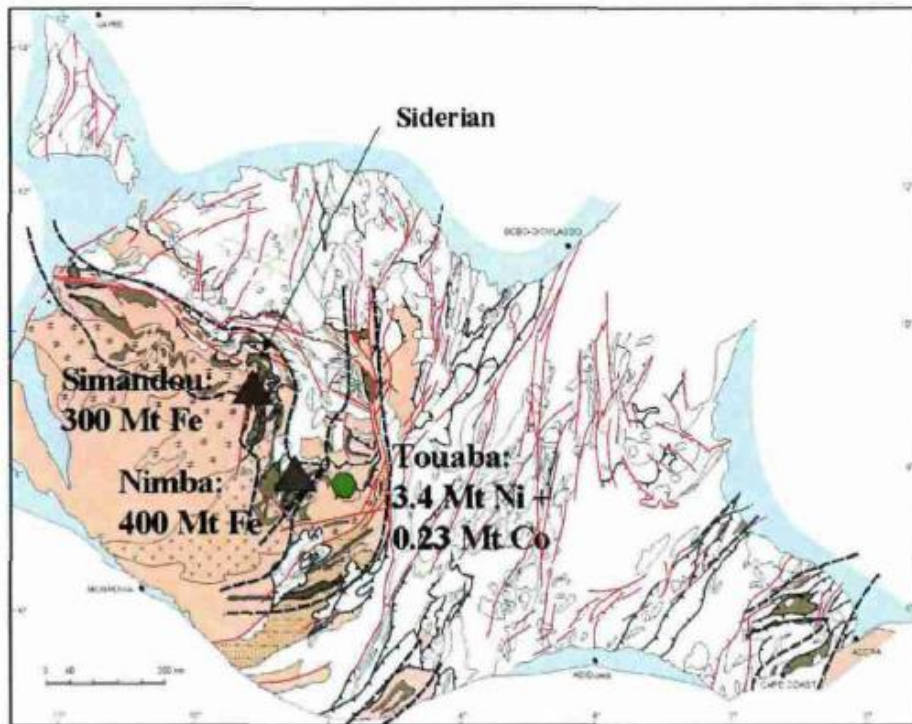


Figure - Early dislocation stage of the Archean block with ferriferous and carbonate shelf sedimentation (Siderian) at its margins.

Siderian; Fig.) "2300 Ma. Thinning around an emerged Archean block, with deposition around its

Lithostratigraphy	Unit	Simplified Description	Ages (Ma)
10. Birimian (basal) BIF	Birimian	BIF	2300-2250
11. Birimian (basal) greenstones	Birimian	BIF	2300-2250
12. Birimian (basal) sediments (impure lst., sst. & paragneiss)	Birimian	BIF	2300-2250
13. Birimian (basal) gneissic complexes	Birimian	Pre- to syn-D1 granitoid	2250-2120

Birimian B1 volcanism and volcano-sedimentation

2220-2160 Ma. Opening of Ghana-type belts on a thinned crust: tholeiitic volcanoplutonism, at times ultramafic (Kouroussa komatiite in Guinea), epiclastites and felsic volcanism at the edge. Locally at Niani (east of the Siguiri Basin, in Guinea), an old arc-type andesitic calcalkaline volcanism occurred at this stage - the reworked products are intercalated in the basin.

The large B1 sedimentary basins began to form progressively at this stage, becoming filled with reworked products from the volcanic areas. Their margins contain epiclastic sediments derived from an felsic to bimodal volcanism (local rhyolite domes).

4

Submarine hydrothermal activity is associated with this volcanism: massive zinciferous sulfides (Burkina Faso), manganiferous mineralization, "chert" and early tourmalinebearing auriferous hydrothermal activity (first paragenetic stages at Loulo in Mali).

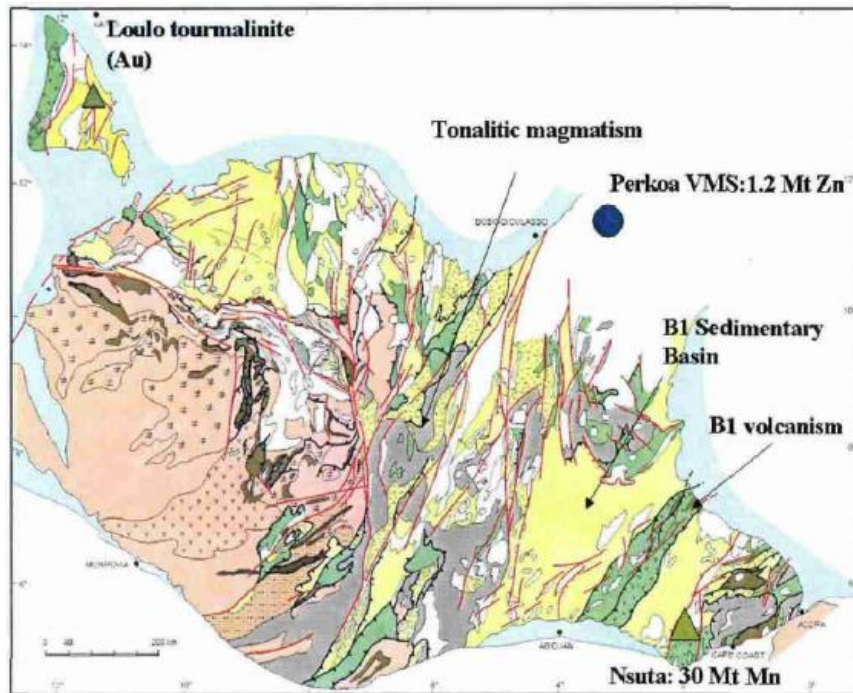


Figure - Formation of the Birimian (B1) neo-crust through magmatic accretion

2nd Evolution stage: Convergent setting

Tonalitic magmatism and Birimian B1 flysch (Fig)

2160 Ma. Beginning of major tonalitic magmatism with, in southern Ghana, deformation compatible with NW-SE convergence. Recent work in Burkina Faso has characterized an oceanic-arc environment (granitized roots of immature arcs). Tonalitic granite-gneiss domains represent more than 50% of the Birimian domain.

At the same time, the large B1 basins continued to be filled, with reworking of material (zircons) from the tonalitic magmatism. A clear turbiditic sedimentation is recorded in the major basins (In places, such as the Siguiri Basin of Guinea, active for more than 50 Ma) synchronous with the first movements of convergence in the southeast of the Birimian domain.

4

D1 deformation

2120 Ma. SE-NW convergence with thrusting at the block edges, metamorphism reaching the amphibolite (locally granulite) facies, and associated (syn-D1) magmatism.

NB: As of this stage one notes a diachronism of events, these being younger by about 20 Ma to the west in the Siguiri Basin and the Kéniéba window.

3th Evolution stage: Late Eburnean tectogenesis (Birimian B2, Tarkwaian and D2-3 deformation)

In its initial phase, the late Eburnean transcurrent deformation (D2) appears to have controlled the distribution of the calc-alkaline volcanic centers (B2) and the development of pull-apart basins with clastic fill (Tarkwaian). This sequence of events was relatively short (of the order of 10-15 Ma) and synchronous with the Birimian gold peak.

Birimian B2 volcanism

-2110 Ma. Volcanic phase (rocks not deformed by D1) centered on active structures and marked by the successive emission of tholeiitic to calc-alkaline basalt (pillows, vesicular flows), andesitic calc-alkaline lava (vuggy, massive, porphyritic) in the form of dikes, flows and breccias, and subaerial felsic volcanics (dacite and rhyolite) forming domes and sills, with associated pyroclastic and epiclastic rocks.

Tarkwaian

-2110 Ma. The Tarkwa clastic basin in southwestern Ghana and its typical stratigraphy succession (Kawere sandstone-conglomerate, Banket sandstone-conglomerate with mineralized layers, Tarkwa phyllite and Huni fine-grained sandstone) appear to represent a local event that is difficult to transpose to other basins of the same age. It could represent a foreland basin that evolved during the deformation.

The other Tarkwaian basins are smaller and generally located along the edges of strike-slip corridors (pull-apart basins). They are composed of fine-grained sandstone (cross-bedded and incorporating clastic-magnetite-rich layers), and matrix supported conglomerates with pebbles of various types and commonly including a high proportion of felsic volcanic rocks. These basins, deformed by D2, appear to have been sub synchronous (to late) with respect to the B2 felsic volcanism.



D2 deformation

-2100 Ma. Globally, the convergence continued in a NW-SE to NNW-SEE direction similar to that of phase D1. However, the style of D2 deformation is very different, marked by the development of large strike-slip structures (inflection in the direction of convergence, shallower structural level). The transcurrent D2 deformation, heterogeneous at the regional scale, was maximal along predominantly sinistral shear zones whose location commonly appears to have been controlled by reactivated earlier structures (at block boundaries).

Elsewhere, the D2 deformation is marked by regional folding represented (i) by undulations, upright folds and a poorly penetrative schistosity, and (ii) by folds with laminated limbs as one approaches the shear zones with maximum deformation.

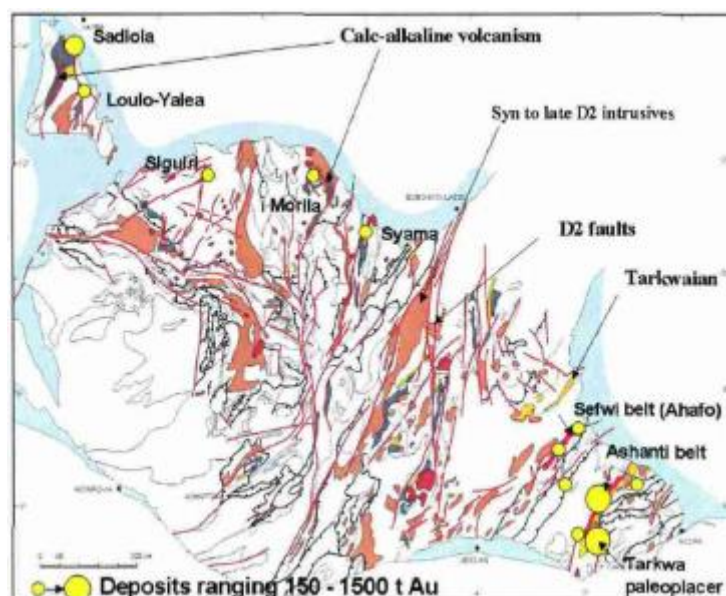
The associated metamorphism is generally weak (greenschist facies).

D2 intrusions

2110-2080 Ma. Among the granites and granodiorites considered as synchronous with the D2 deformation, two types of intrusion of different geodynamic significance are recognized:

- The leucogranites, present mainly in the C o m o é Basin (Ghana, Ivory Coast) and Ferkessedougou Basin (Burkina Faso, Ivory Coast), in a context of crustal melting on thick crust;
- The late-D2 calc-alkaline granites and monzogranites in the southern Siguiri Basin (with Au-Cu mineralization of porphyritic affinity) and western Ivory Coast (Ity?), emplaced in a subduction-type context.

Finally, localized granitic intrusions (Guinea, Ivory Coast) occurred very late in relation to the D2 deformation and locally show an alkaline trend.



Figure; Main Tectono-Magnetic and Sedimentary events synchronous with the Birimian Gold Peak

4

Cover rocks

The Birimian was covered at the beginning of the Neoproterozoic by unconformable tabular sedimentary formations after a gap of about 1 billion years. Two mobile Pan-African zones (-600 Ma) affect the western edge (Rockellides) and eastern edge (Dahomeyides and Gourma area) of the West African craton, involving Neoproterozoic and also Archean and Paleoproterozoic rocks ("09. Archean/PPTz basement remobilized during Pan-African" polygons). The rest of the craton, however, remained stable

The Mesozoic (mainly Jurassic) saw the emplacement of dolerite (and kimberlite) dikes, sills and extrusions associated with the opening of the South Atlantic Ocean. These in part (mainly in the west) mask the Precambrian formations.

The Neoproterozoic and Paleozoic have been grouped together (as pale beige), as have the post-Paleozoic sedimentary deposits (white). The dolerites are shown in grey.

5. Gold Mineralization

5.1 Deposits Layer

The Deposits layer of the GIS incorporates 3479 gold deposits and occurrences coming from the SIGAfrique database, which was verified, modified and enriched (addition of more than 600 entries). The available or estimated figures for the -400 relatively well-informed deposits hosted by the Birimian formations give a total tonnage of about 8200 t of gold (second largest gold province of Africa after the Witwatersrand).

All these deposits were reinterpreted specifically in relation to Birimian geology (cf. §3.2), enabling them to be classified in the GIS either according to their gold potential or according to their type.

The columns of the Deposits table show (see table below) the:

- **Identifier:** country ISO code followed by the deposit number in the SIGAfrique database;
- **Commodity:** Main commodity;
- **Name:** principal name of the deposit; in the event of an unnamed occurrence, this column is informed by the occurrence's identifier in the original database (e.g. "Aboisso - Ayame 8" for an anonymous gold workings on the Aboisso map of Ivory Coast);
- **Potential and Potential Class:** total gold tonnage of the deposit (production + reserves + resources, or an estimation in the absence of statistics) making it possible to define its class: A >250 t Au (very large deposit), B between 50 and 150 t Au (large deposit), C between 10 and 50 t Au (average deposit), D between 1 and 10 t Au (small deposit), E <1 t Au (occurrence), N/A not informed (case for almost 90% of the listed deposits);



- **Simplified Gitologic type, Gitologic Type and Code:** cf. §3.2, the gitological code is a number that enables thematic analysis by simplified type of deposit.

5.2 Typology of The Birimian Gold Deposits

5.2.1. Introduction

The Middle Paleoproterozoic, between 2100 and 1800 Ma, is one of the four major gold periods in the Planet's metallogenic evolution, along with the Late Archean (peak at 2700-2500 Ma), Late Paleozoic (around 300 Ma) and the Cenozoic (peak at 20-10 Ma).

These periods are all characterized by major crustal growth through magmatic and tectonic accretion in geodynamic contexts favorable for the concentration of gold:

- emerged active margin domain (cordillera or magmatic arc): magmatic hydrothermal deposits of the porphyry, peri-porphyry (skarn/replacement) or epithermal type emplaced in the uppermost kilometers of the crust; relatively subject to erosion, they are a priori less likely to be preserved in the older rocks, apart from the relatively modest gold concentrations linked to submarine hydrothermal activity in similar, but subaquatic, contexts (gold-bearing massive sulfides);
- accretion belt domain: orogenic hydrothermal deposits of the turbidite-hosted, shear-zone type, etc., emplaced between 5 and 15 km depth following peak metamorphism and during the final uplift of the mountain chain; this type is the most commonly preserved in older rocks.

There are also the secondary gold deposits derived from the mechanical erosion or in situ alteration of the primary deposits belonging to the above categories; the Planet's largest concentration of gold (about 60,000 t of gold) is contained in the Late Archean paleo placers of the Witwatersrand in South Africa.

Returning to the Paleoproterozoic, other than the giant Birimian deposits in West Africa (Ashanti belt, Tarkwa gold-bearing paleo conglomerates), it is worth noting that gold concentrations of the same age occur in French Guiana, Brazil, Scandinavia, Ukraine, South Africa (Drakensberg), Northern Australia and at Homestake in the United States.

5.2.2. The adopted classification

Our metallogenic knowledge of West African gold deposits is limited by a relative lack of studies into the primary mineralization (outside of the Ashanti belt). Some 20 years ago, the only recognized categories were:

1. Gold-bearing shear zones (Ashanti, Syama);
2. Paleo placers (Tarkwa);
3. Gold-bearing quartz veins (Poura, Kalana, Banora);
4. Innumerable gold diggings beneath the lateritic crust and in placers, for which the primary origin remains for the most part unknown, but which gave rise to a production estimated at more than 1000 t of gold since prehistory (Bache, 1984).



Since then, the increased discovery of large-volume / relatively low grade "disseminated" deposits (Sadiola, Siguiri, Morila, etc.), as well as the occasional studies -notably by BRGM teams- on "atypical" deposits (Loulo, Ity, Léro, Ségala, Bambadji, Bohodou, Intiedougou, etc.) have considerably enlarged the typological variability of the Birimian gold mineralization.

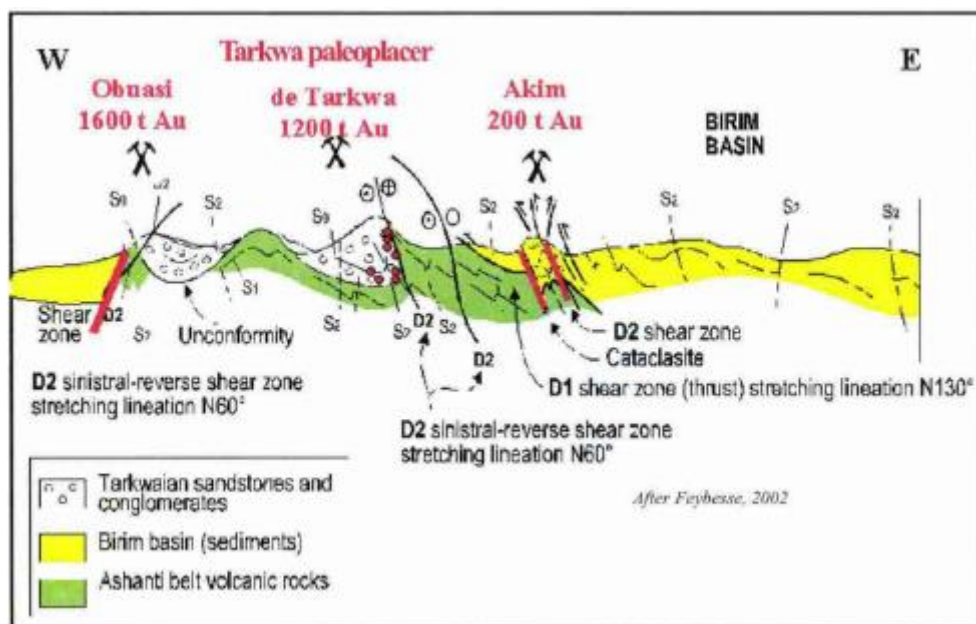
At the same time, progress in geological reconstitution and dating has made it possible to demonstrate the relative temporal unicity of the gold event within the Birimian terrain (cf. §2.2) during the Late-Eburnian D2 event around 2100-2050 Ma.

In order to get round the relative absence of intensive metallogenic studies (owing to the fact that most of the mine workings are in the oxidation zone where tropical weathering has effaced almost all the primary textures and parageneses), the geological classification used for the Birimian is based on geological criteria (type of host rock, associated magmatism or otherwise), structural criteria (tectonic contacts, major crustal faults or 2nd or 3rd order structures) and morphological criteria (geometry of the orebodies).

This classification, developed by the B R G M Birimian team, breaks down into 6 main types (A to F) subdivided into 20 sub-types (D4, F6, etc.). These are described below:

A: Tarkwa type

"Modified paleo placer" type, known only in the large clastic Tarkwa Basin in southern Ghana. Lithostructural reconstructions show that was a foreland basin supplied from the east-southeast (Fig. 4). The host level is represented by the Banket conglomeratic beds, with quartz pebbles and concentrated heavy minerals (magnetite) and gold, enclosing very large volume stratiform deposits with grades of the order of **2 g/t Au** (Grand Tarkwa, Teberebie, etc.)



Figure; Schematic section through the Ashanti Belt of southern Ghana illustrating the polyphase emplacement of the gold mineralization during the northwestward migration of the D2 deformation front

4



The term modified paleoplacer indicates the common presence of a superimposed hydrothermal influence (sericite, quartz veinlets) which could have modified the gold distribution during fluid circulations synchronous with the D2 deformation (see also sub-type E4).

Outside the Tarkwa Basin, geochemical gold anomalies have been identified in the clastic Bui (Ghana) and Tanda (Ivory Coast) series, but most of the other conglomeratic basins assignable to the Tarkwaian (notably in Burkina Faso) appear to be less mature (narrow troughs, abundance of volcanic or plutonic pebbles). Although less favorable for the presence of large paleoplacers, these latter basins are localized preferentially along major crustal faults that themselves are favorable for epigenetic gold concentrations.

B; Ashanti Type

"Greenstone belt /basin contact' type, mainly found in southwestern Ghana where it is represented by the Birimian's largest gold concentration, the giant Obuasi deposit (about 1600 1 Au) in the prolific Ashanti Belt, and also by the mineralized borders of the Sefwi Belt (Bibiani, Ahafo).

This type is mainly characterized by the location of its mineralization in areas of polyphase deformation along major crustal structures separating Birimian volcanoplutonic belts and sedimentary basins. Lithostructural reconstructions and numerous geochronological and metallogenic studies carried out in southwestern Ghana have made it possible to put forward a geological evolution model for a period of less than 50 Ma. The model comprises:

- syn-D2 emplacement of orogenic gold mineralization in the southeast of the Ashanti belt, eroded and reworked in the Tarkwa foreland basin (type A) during the uplift of this part of the mountain chain;
- northwestward migration of the D2 deformation front causing folding of the Tarkwa Basin (Fig. 4) and shear reactivation of the western border of the Ashanti Belt where the major Obuasi-Prestea-Bogosu hydrothermal system formed at a depth of around 10-15 km (vast alteration halos with albite-pyrite-sericite-silica-chlorite and auriferous arsenopyrite dissemination);
- end-D2 uplift of the Ashanti Belt by several kilometers and individualization of the 2nd mineralizing stage (quartz veins with free gold and a polymetallic paragenesis).

Along these large crustal structures, the type B mineralization is preferentially trapped in the folded and sheared sediments and volcano-sediments, particularly where these are invaded by dikes (rheological control) and/or enriched in organic matter or early iron sulfides (chemical control): they can thus be compared with the turbidite-hosted or shale-hosted type. The type B mineralization can also be trapped where crustal structures affect the intrusions, forming stockworks in deformed granites (Kenyase).

The influence of magmatic events contemporaneous with the D2 deformation and the mineralizing process is commonly noted (e.g. telescoping of the alteration, thermal



metamorphism preceding the mineralization as at Kubi, andesitic dikes at Kenyase), but is doubtless relatively minor.

The nature of the sulfide parageneses appears to correlate closely with the dominant lithology: abundant arsenopyrite in the mineralization located to either side of the dominantly polytuff B1 Kumasi Basin (Ashanti-Prestea, Bibiani); only pyrite in the mineralization hosted at the edge of the greywacke-filled Comoé Basin (Ahafo) and Birim River Basin (Akim).

C: Siguiri Type

"Discontinuities in large sedimentary basins" type controlled by intra-B1 sedimentary structures, probably paleofractures active during the basin's history, then reactivated as normal, strike-slip or shear faults during the D2 deformation. An felsic to intermediate magmatism in the form of hypovolcanic bodies and shallow intrusions is commonly associated with this mineralization type.

The orebodies are mainly extensive disseminations and generally quartz-poor stockworks hosted by hydrothermally altered sandstone or siltite. Albite and, less commonly, tourmaline are the normal alteration minerals; pyrite is ubiquitous, and traces of Cu, Co, W minerals, etc. are often reported.

We consider that this new type (still poorly known because rarely studied below the oxidation zone) should include the Léro and Siguiri deposits in Guinea (normal faults punctuated by plutonic rocks), the Loulo deposit in Mali and the Essakane deposit in Burkina Faso (paleofractures with early hydrothermal tourmaline deposits, reactivated by D2) and the Obotan deposit in Ghana (intra-basin shear zone $\pm$ magmatic rocks).

D: Quartz Vein

Type: Kalana (Mali), Poura, Taparko (Burkina Faso), Banora, Jean and Gobelé (Guinea).

This sub-type groups all the Late Eburnian orogenic mineralization, regardless of the nature of the host rock, emplaced at relatively shallow structural levels (of the order of 5 km crustal depth).

It is expressed as swarms of gold-bearing quartz veins with sulfides (pyrite, arsenopyrite, chalcopyrite, sphalerite, galena, etc.) and common tourmaline. The hydrothermal alteration halos are generally small and the size of the mineralized openings is essentially a function of host-rock competence, be this volcanic, intrusive or sedimentary.

Emplacement in a polyphase brittle environment (influence of the different increments of D2 deformation) with a strong structural control is expressed by morphologies such as spindle-shaped columns, shear veins, tension gashes, trans tensional relays, flat veins along décollements, duplex thrusts, etc.



E: Small Scale Mining

Most of the very poorly informed occurrences of the Deposits layer have been grouped under this category, subdivided into:

E1: Artisanal workings (vein deposit)

E2: Artisanal workings (stockwork / disseminated deposit)

E3: Artisanal workings (residual / eluvial deposit)

E4: Artisanal workings (placer deposit)

E5: Artisanal workings (unspecified deposit)

E6: Industrial placer deposit

The last sub-type incorporates a few mechanized mines (e.g., Bonte in Ghana) and industrial projects for alluvial placers (e.g., the Diangounte project in Mali).

5.3. Results

- Around the Archean craton sensu stricto (Sierra Leone, Guinea and Liberia) it is possible to individualize a border zone formed by the Siguiri Basin (with a probable Archean basement), by isolated blocks of Archean rock in the west and southwest of the Ivory Coast, and by areas with a thickened character (although with no known Archean) in the center and southeast of the Ivory Coast.
- Crustal thickness indicators are relatively rare and small in the north of the Ivory Coast and Ghana, and in Burkina Faso and Niger. This relatively thin domain nevertheless appears to include a few areas with a thicker character in the northcentral region of Burkina Faso (Barsalogo and Tin Edia region, Birimian diamonds, leucogranites, alkaline granites, vanadium). The early boundary between the thickened domain and the relatively thin domain could have a general NW-SE orientation, if not a NNW-SSE orientation if one takes account of the later sinistral movements.
- Southeastern Ghana, south of the Birim River, appears to correspond to the margin of a thickened block (Birimian diamonds in the Akwatia region, leucogranites, zircons and old model ages, presence of rare BIF) at the edge of an Archean craton (Sao Luis craton, Brazil, and/or the Archean domain of Nigeria). The orientation of the block margin is globally WSW-ENE.

The convergence (along a WNW-ESE direction) that resulted in a confrontation between these two crustal units of different orientations (i.e. the Archean and thick blocks of the Ivory Coast vs. SE Ghana) could have been influential in the development of the exceptional Ghanean hydrothermal field located near the triple point.

Farther to the north one notes the presence of several triple points (marked by the intersection of NE-SW directions and N-S to NW-SE directions (i) In the south of the Bui Belt,



(ii) at Dokurupe in Ghana, and in the region of (ili) the Goren and Bouroum- Taparko arc in Burkina Faso, whose origins are still not very clear.

6. Mining Companies in Guinea

The major international players in the production of gold in Guinea are the Societe Ashanti de Guinee (SAG) and the Societe Miniere de Dinguiraye (SMD). The SMD is a joint venture between the government of Guinea and the Guinor Gold Corp and is responsible for the operation of the Lero-Karta gold mine located in Northern Guinea. The company also has several other exploration licenses for projects still under development.

The Lero mine uses the heap leach process to produce gold. This method is ideal for mineralized sandstones, conglomerates, and breccias. Today the mine produces about **300,000 oz of gold annually**. The mine is estimated to contain about 13.7 metric tons of gold of **2.6g/t grade**. The company also operates the Kart open pit mine which is estimated to have about 185 000 tons of gold at 4.6 g/t grade. It is also developing the Fayalala project which is about 10 km from the Lero mine.

The Societe Ashanti de Guinee (SAG) is a joint venture between the government of Guinea and the AngloGold Ashanti. The Ashanti Goldfields, which merged with AngloGold to form AngloGold Ashanti, has been in the country since 1998 when it acquired the interests of the Golden Shamrock in the SAG. The company runs the Siguiri gold mine which produces about 250,000 oz of gold annually. Another important player is the Semafo (formally Jean Gobelet) which has been in operation since 2002 and runs the Kiniero Gold mine in central Guinea. The mine is located about 500 km towards the Northeast of Conakry, and its annual production is about 60,000 oz of gold. The mine resource is estimated to be at about 5.07 tons at an average of **3.12g/t** grading. Other companies engaged in the exploration and development of gold resources in the country include the Cassidy Gold Corp, which has a diamond-drilling program that tests quartz veins for gold in Kouroussa and the Mano River Resource Inc that targets porphyry mineralization and quartz veins in the Gueliban and Missamana areas to the east of Kankan and Guinea Gold PLC to the north of Kankan that focused on alluvial goldmining.



7. Exploration of Mine Site

7.1. Farakoba

Field studies were carried out in March and April 2021. Despite the difficulties of the Covid-19 pandemic, the NA GLOBAL company owner and officials met and preliminary meetings were held in Conakry, the capital of Guinea.

After the preliminary meetings, we set out for the license in the Farakoba region, which will be the first to be visited. Due to the roads under construction, it was possible to reach the site in 2 days by driving 16 hours a day.



It is possible to see the road works of a Chinese construction company in many areas during the journey, of which 90% of the road is currently a stabilized dirt road. Although the speed increases a little more in parts with asphalt, traffic densities are formed due to the controls made within the framework of Covid-19 measures from time to time.



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After a 2-day journey, we arrived at Farakoba Village, where we will be staying for field studies and which is only a few kilometers away from the site. Villages in the region are made up of Cabinets, and after meeting with the cabinet chief, we settled in the cabinet houses where we would stay.



As in all Guinea, there is no electricity except the capital Conakry, and the villagers meet their electricity needs with generators. The need for water, on the other hand, is carried by women from wells in the center of the village on their heads and kept at home. This water is not suitable for drinking. It is a must to store drinking water in bulk from the cities before moving to the region.

Bathroom and toilet needs can be met in the village guesthouse in the area outside. However, when it is thought that the water spent while washing is carried over the head of women at least 2 km, one cannot afford to spend.



4

The people of Guinea are extremely hospitable and want to support their mining activities. As a mining company that reached the region by fulfilling all the procedures, we were warmly welcomed in every region we visited, from the governor to the villagers. They opened up all the food, water and accommodation they had to us. However, one thing is certain that they are seriously fighting poverty and hunger.

In the villages we visited, the only occupation of almost all villagers is gold mining. The village people, who do not do any animal husbandry or agriculture, make artisanal mining by dividing the mining areas among themselves.



Villagers who drilled wells with a diameter of about 70-80 cm by hand, without using equipment, stated that they obtained 7 to 100 grams of gold from each well by washing the soil they dug. This indicates a gold average of at least **3-4 gr/ton** by approximate calculations.

As can be seen in the map below, there is serious Artisanal mining around the river, especially in the Northeast region of the license. Although there are no clear records in these areas, the villagers produce an estimated at least **10 kg of gold per month**.

4





As it can be seen on the map, serious potential and proven gold existence can be seen in case of obtaining a priming license in an area of approximately 6 km² and producing gold by Gravity Method first and then by Leaching Method.

Although the villagers increase their speed with the very small gasoline washing machines they buy, they produce a small amount of gold that cannot be compared with an industrial facility. Considering that this amount is 10 kg or more in total in the region, it seems quite possible to produce approximately 30 kg of gold per month with a 100-ton per hour Gold Washing Facility.

Over a thousand Artisanal wells have been observed and recorded with GPS during the studies carried out in the region. According to the information received from the villagers, only a few of these wells have not been able to catch any gold. Generally, in the region where at least 10 gr gold is produced, it is taken as free rather than in gold rocks. This is a very efficient situation for a facility. Serious production possibilities with a very low-cost facility are possible in the alluvial region in Farakoba.



Scratching areas digging by Artisanal Miners

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These wells are generally made in the form of scanning and in lines perpendicular to the stream flow. It is certain that at least 1000 times the amount produced in these productions, which are made with at least 3 meters of space between them, to prevent the wells from collapsing, will still remain in this section. In addition, these wells go down to at least 10 meters due to the water level and the risk of collapse. The exact depth is not known and all calculations in this report were made over 15 m. After the report, the exact depth will be determined after the Remote Sensing to be made using satellites and the Geophysical studies to be carried out in the field according to the results. However, there are reports that a general alluvial thickness of 15-20 m is observed in the region. Despite all this information, it is highly probable that the thickness of alluvium in some places may decrease to 30 meters. It is the next stages of exploration that will reveal all these predictions.

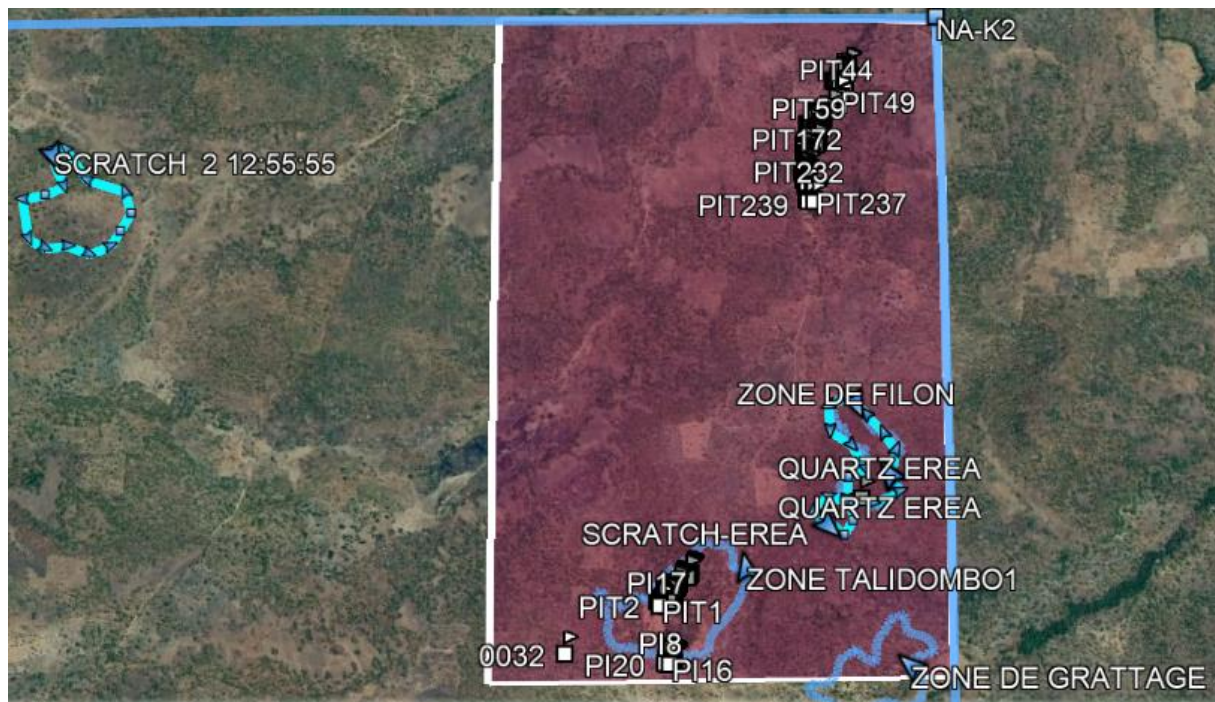
Another very important factor is that gold, which has a serious weight of 19.3 g/cm³, is found deeper than other side rocks that are many times lighter than itself. The artisanal wells are 10 m as we mentioned, and all the gold after this depth is yet to be discovered in the field. It is also a very good indicator of the potential of the site that artisanal miners give up the well when the water and hard rock coincide.

As natural conditions, the region is covered with a forest cover. In the 9-month dry summer season, temperatures are around 40 degrees. In this period, which is very convenient for working, you can have a pleasant time in the facility to be established.



In the observations made in this fertile basin in the North East of the field, it is possible to see these wells and scratching areas in an area of approximately 10 km² in 5 different regions observed in the map below.

A handwritten signature in black ink, appearing to be a stylized 'G' or similar character.



The density of these wells is incredibly inspiring. As mentioned, the wells in these Artisanal gold production areas of at least 10 km² observed within the license area are still open and easily visible.



AGL





We agreed with Istanbul Technical University to carry out the Beneficiation Tests necessary for starting mining in the region. Approximately 80 kg of samples were collected from the field and hand-delivered to the University laboratory in order to carry out the necessary tests for the Gold Washing (Gravity Separation) Facility and the Leach Facility, which have the potential to be established in the field.



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These samples were packaged, numbered and prepared to represent the entire 6 km² in a homogeneous structure.



The Beneficiation Test prepared by the University can also be taken from the appendix of this report. Compared to this, high gold production can be achieved with a very low investment and low monthly expenses.

Around the site are Guinea's largest gold mines. These mines are SAG (AngloGold), LEFA Gold Mine and Kiniero Gold Mine. These 3 mines have millions of ounces of proven gold reserves. Farakoba field, which belongs to NA GLOBAL and is the subject of this report, is located in the middle of these 3 fields.

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In addition, more than 20 multinational companies continue their exploration activities in the region. Artisanal semi-licensed businesses are also quite abundant in the region.

7.1.1. MINING REVIEW

It is seen that mining activities are very convenient in the region, based on both the observations and studies made in the field and the results obtained from the technical university. For example, while the gain by gravity in the gold mine deposits in Turkey did not exceed 50%, this enrichment gain was measured as approximately 82% in the Farakoba project. Considering that 82% gain will be made with a plant with a cost of 250 dollars per ounce (only the plant, other details are not added), it is obvious how profitable the investment will be.

In the Farakoba project, the regions indicated on the map below are the places where the first mining should be started. Especially in the area around the river bed in the northernmost part, there is a possibility of a very high reserve. Considering the soil samples taken from the area and Artisanal production data, we see that an average of 2 gr/ton gold assets will be captured.

Based on the area of gold production, alluvial thickness and average grade, we can talk about the presence of approximately 300,000 ounces of gold in the region, as seen in the calculation below. As a result of the geological and geophysical studies to be carried out, it is possible to increase the visible reserve even more. In the samples taken from the region, 18 gr/ton gold was also found in the regions. However, since the free gold grains will not be homogeneously dispersed, different analyzes can be taken in each region.

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The first line is approximately minimum visible reserve and the second line is potential gold reserve for Farakoba site. In order for these scenarios to become stronger, the exploration process needs to continue.

Area	Alluvial Thickness	Density	Reserve	Tenor	Visible Reserve	Visible Reserve
300.000 m2	12 m	2,65 g/cm3	9.540.000 ton	1 g/ton	9.540 kg	296.694 ounce

Area	Alluvial Thickness	Density	Reserve	Tenor	Visible Reserve	Visible Reserve
500.000 m2	20 m	2,65 g/cm3	26.500.000 ton	2 g/ton	53.000 kg	1.648.300 ounce

Within the scope of the facility to be established, mine knit was also calculated. If it is considered that a facility of 100 tons per hour will be established within the scope of the visible reserve area; currently existing areas will be sufficient to feed for a minimum of 10 years. With the researches to be done, the life of the mine can be extended even more.

Currently, the villagers continue to work actively in the field and obtain gold with the small motorized washing equipment they have acquired. However, according to Guinea Mining Laws, when an exploration license holder converts his license into an exploitation license, the Governor's Office removes the villagers from the area and delivers the field to the company. In addition, if the ministry requests, the ministry delivers the potential licenses to the company that obtained the exploitation license as exploration licenses.



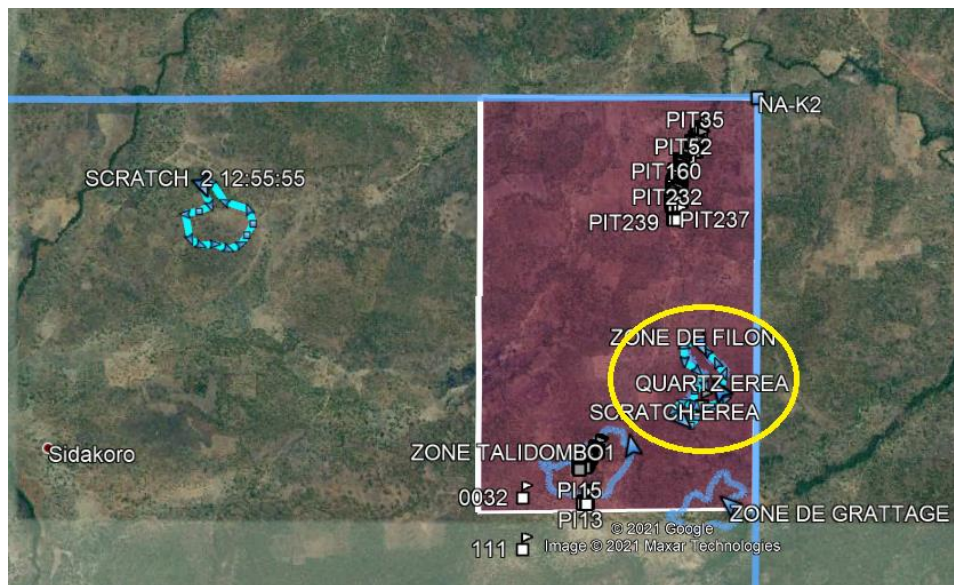
Artisanal activities in concession area

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The academic study conducted by Mamedov in 2010 proved the presence of gold up to 100g/ton in the areas indicated by the red line indicated on the map. A good Geophysical study in the field that is very close to these areas will be very useful before operation. In Mamedov's study, we can see that he encountered regions with a value of 100g/ton in 3 separate zones. NA GLOBAL area is within these zones.

Although the source rock of gold is quartz, it is possible to obtain gold easily in billions of years old and alluvial basins. There is a quartz field in the field and the villagers tried to produce from the surface because they could not go deep in this area. It is also possible to find possible main veins with the studies to be carried out in this quartz field.



The disadvantage of the field is the supply problem. When there is any need for mining or there is an urgent safety issue, the nearest city is a 4-hour drive away.

Another problem is flooding that will occur during rainy seasons. In order to solve this problem, it is beneficial to work in the wettest depths in the summer as part of sustainable mining. It can be worked from the stock areas prepared in wet periods and from the dry areas in the upper part.

4

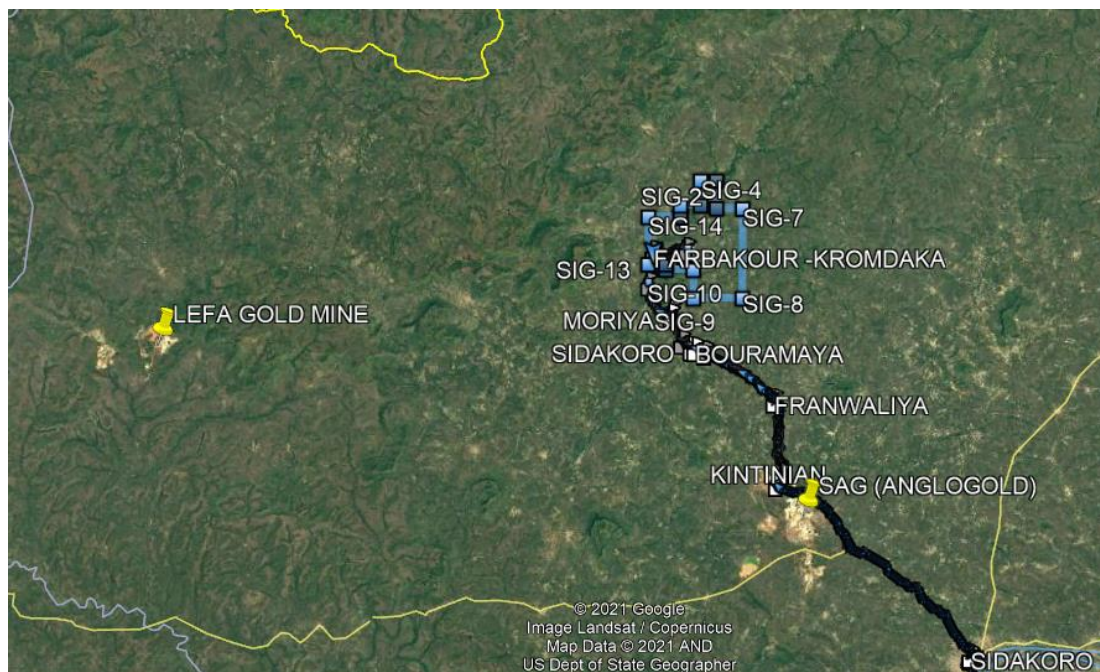


7.2. Siguiri

After the research of the Farakoba field was completed, the other license of NA GLOBAL company in the Siguiri region, which is another field, was visited. After an 8-hour journey by road, we passed through the city of Siguiri, a city of gold mines, and reached the site.



Siguiri is Guinea's city that comes to mind when it comes to gold. The basin containing the gold mine is also called the Siguiri Basin. SAG and LEFA Gold Mine is the biggest 2 Gold Mine in area. They have more than 3 million ounces proven reserve for each. The NA GLOBAL field is 30 km from the SAG project and 60 km from the LEFA project.



4



The Siguiri license consists of a very wide and flat plain. It consists of an area of 100 km², as in the Farakoba project. There are no hills etc. in the field, and only alluvial plains are observed. Since the groundwater level is very high on the ground of the site, the villagers can only perform Artisanal mining activities in the first few meters.



Gold production continues at least in 7-8 regions of the field, and the free gold rate is very high in this delta plain, which is dominated by fine-grained materials. However, due to the lack of sufficient information and data, it is not possible to make a reserve estimation at this stage.



Since drilling in the region will not be efficient, Remote Sensing and Geophysical Methods should be used by means of satellites. In this way, the most potential regions can be determined and mining projects can be developed.

4

8. Results & Comments

8.1. Results & Comments

- During the trips made for the 2 gold licenses owned by NA GLOBAL, it was observed that the region's gold yield is high and it will turn into a profitable business if steps are taken for investment.
- As a result of the Beneficiation Tests conducted at Istanbul Technical University, it has been seen that 87% gold recovery will be achieved with a cost of less than \$500 per ounce with the washing facility to be established after the Remote Sensing and Geophysics studies to be carried out in the Farakoba field.
- According to the studies carried out by the Technical University, the offer received from the South African gold production facility manufacturer APT has also been added to this report. According to this proposal, with the addition of factors other than the facility, the facility, which will be established through an investment of 4 million dollars, will be able to produce in a manner that will pay for itself in a maximum of 6 months in its productive period.
- Since there is not enough data in the Siguiri field and the site is not suitable for drilling, Remote Sensing and Geophysical studies should be done. The next steps should be planned according to the results to be obtained.
- Based on the samples taken from the Farakoba field, it is seen that the average grade will be at least 1.5 gr/ton. The places where 18 gr/ton is taken from place to place are also proven with these samples.
- Subsequent Geological Surveys should be carried out to increase the visible reserve in the field and to identify new unknown areas. As a result of these Remote Sensing and Geophysical studies, a plan should be made for investment.
- During the meetings held with the Ministry of Mines and APIP in Conakry after the site visit, it was stated that the Presidency of the country gave serious support and incentives to companies investing in mining. The state provides full support to investors who come to the country in good faith.
- With the acquisition of the exploitation license, the state becomes a direct shareholder of 15% in the mining company and appoints a representative to the board of directors. In addition to the 3% tax, a 1.5% Central Bank operation share is also taken.



8.2. SIGNIFICANT RECENT TRENDS

Over the past five years, gold prices have been mostly range bound between \$1,100/oz and \$1,350/oz. After a strong move that started at the beginning of Q4 of 2018, current pricing is now over 20% above the cyclical low of \$1,050/oz in December 2015.

2018 saw a minor drop in the gold price over the year of just over 1% predominantly on the back of a stronger USD and the macro-outlook affected by global trade tensions and a rapid 40% drop in oil prices in Q4 of 2018.

In 2019 gold price rose up to \$1,500/oz and continues to rise. In 2020 gold price reached up to \$2,000 and higher.



Contact:

Adress: Izmir-2 Cad No:42/4 Kizilay/Ankara/TURKEY

Mobile Phone: +90 532 139 7627

Web: www.aglmining.com Mail: cem@aglmining.com

AGL TURİZM MEDYA MADENCİLİK
SANAYİ ve HİCARET LTD.ŞTİ.
Kızılay Mah. İzmir-2 Cad No:42/4 Çankaya/ANKARA
Tel:(0312) 418 31 32 Fax:(0312) 418 31 33
Mithatpaşa Vergi Dairesi 008 086 6527
Mersis No:0008086652700013

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