

# West Africa's Gold - The New Caviar of the Gold Sector

*"Acquired Taste but Holds Rich Rewards"*

**Update** - We've spent the last few weeks diving into West Africa (WAF) gold plays, and it might just be our new favourite hotspot for gold discoveries, growth stories, and rapid timelines from discovery to production (though the Guiana Shield is a close contender). If you want a high-level overview of WAF, the countries, and the main players at the senior, intermediate, junior producer, and advanced developer/discovery play levels, this is the note for you.

## Highlights

- **West Africa Emerges as a Prime Gold Mining District, Gold Production is Sky Rocketing:** Gold production in WAF has skyrocketed from 240 tonnes in 2010 to 531 tonnes in 2022 (Figure 3), a 57% increase, representing 14.6% of global output in 2022. This rapid rise isn't just a blip; it firmly positions WAF as a prime gold mining and exploration region. Some of the largest gold mines in the world operated by senior producers like Newmont (Ahafo), Barrick (Loulo-Gounkoto) and Kinross (Tasiast) operate in WAF, with expected outputs of 725koz, 669koz, and 610koz in 2024, respectively (Table 3). Then there's Endeavour Mining, a pure-play WAF operator that's become a low-cost senior producer, proving that this region is brimming with opportunities for those bold enough to dive in.
- **The Swift Path from Discovery to Pouring Gold:** New projects in WAF can transition from discovery to production remarkably quickly. Endeavour's Lafigué project is a prime example, with initial drilling starting in 2018, construction commencing in Q4 2022, and the first gold pour expected this month. This swift progression allows companies to capitalize on economic discoveries rapidly. Analyzing 44 gold projects built since 2010, the WAF region boasts the shortest construction timeline, averaging 1.7yrs, compared to 2.3yrs in North America (Figure 22).
- **Attractive Valuations and M&A Activity. How Much of a Discount is There Really:** M&A activity in WAF is heating up. Producing companies and assets in Africa are fetching an average P/NAV of 0.78, while recent acquisitions of African developers and advanced projects are going for a P/NAV of 0.69—well above 0.55 for recent deals in North and South America (Table 6, 7 and Figure 23). But here's where it gets interesting: current market valuations for producers tell a different story. Endeavour Mining, for instance, trades at a P/NAV of 0.92, whereas diversified peers like Newmont, Kinross, and Agnico trade at 1.12, 1.01, and 1.48, respectively. When you look at other metrics like EV/EBITDA or P/CF, WAF-focused names are trading at a 20-30% discount to the average (Table 4). This gap suggests investors are still wary of the perceived risks, such as political instability and regulatory changes in WAF.
- **West Africa is Discovery Central and Home to Some of the Top Advanced Gold Projects:** Between 2010 and 2020, WAF unearthed 67Moz of gold at 1.5 g/t Au from 15 major discoveries, leaving North America and other regions in the dust (Figure 5). The area is a hotspot for top-tier advanced projects like Predictive Discovery's Bankan in Guinea, set to produce 269kozpa over a 12yr mine life at an AISC of \$1,132/oz. Meanwhile, Awale Resources' jaw-dropping drill results at their Charger target in Côte d'Ivoire—57m at 26.1 g/t Au—highlight the incredible prospectivity of the region (And this is just one of many compelling discovery stories). The combination of substantial new finds and advanced, high-potential projects underscores why WAF is the undisputed leader in the gold rush of the 21st century.
- **Economic Growth, Risk and Investment, The West African Equation:** With the region's GDP hitting \$765B in 2023 and projected to reach \$980B by 2030, driven by high mineral and crude prices, WAF is on an economic upswing (Figure 7). But let's not sugarcoat it—there are real risks here. The World Bank's Political Stability Index flags many WAF nations as high-risk due to political instability and security issues. Yet, the Fraser Investment Attractiveness Index tells another story, with countries like Côte d'Ivoire scoring almost as high as top global mining destinations (Figure 21). Investing in WAF requires a savvy approach, but the potential payoffs are enormous for those willing to navigate the complexities. It's about striking the right balance in a region that's as rich in opportunity as it is in challenges.

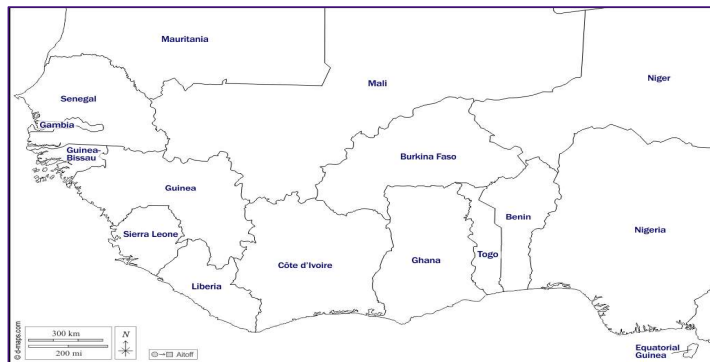
### Gold Production and Discovery Powerhouse, West Africa is Where it's at

- West African Countries:** WAF is rich in mineral resources, with several countries standing out for their significant mining activities: Ghana, Burkina Faso, Guinea, Mali, Nigeria, Liberia, Mauritania, Senegal, and Sierra Leone are particularly noteworthy. Ghana, Burkina Faso, and Mali are major gold producers, and Côte d'Ivoire is gaining fast. Guinea is renowned for its vast bauxite reserves, while Nigeria has substantial deposits of various minerals in addition to its oil industry. Liberia is known for its iron ore mines, and Sierra Leone has significant rutile reserves. Mauritania is a key exporter of iron ore, and Senegal has been making strides in gold and phosphate mining. These countries collectively drive WAF's mining sector, attracting global investments and fostering economic growth.

**Table 1.** Countries within West Africa.

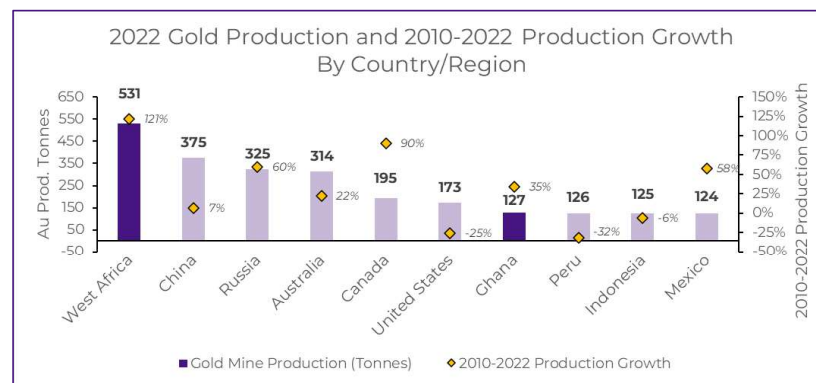
Countries within West Africa	
<b>Burkina Faso</b>	<b>Senegal</b>
<b>Côte d'Ivoire</b>	<b>Sierra Leone</b>
<b>Ghana</b>	The Gambia
<b>Guinea</b>	Guinea-Bissau
<b>Liberia</b>	Togo
<b>Mali</b>	Benin
<b>Mauritania</b>	Niger
<b>Nigeria</b>	Cabo Verde

\*Bolded countries the focus of this note based on available data in FactSet, S&P Capital IQ and company filings. Where WAF is mentioned in the report, it refers to the bolded countries unless otherwise stated.



**Figure 1.** Map of West Africa. Sources: D-maps, 3L Research.

- West Africa's Growing Clout in the Mining Industry:** WAF's star is rising in the global mining industry, positioning itself as one of the continent's most mineral-rich regions. According to the World Gold Council, Africa's gold production soared from 622 tonnes in 2010 to 979 tonnes in 2022, with WAF contributing a hefty 531 tonnes. This represents a compound annual growth rate (CAGR) of 4%, outpacing the global CAGR of 2%. Such impressive growth highlights WAF's capability to find, build, and operate gold mines effectively, with Africa accounting for 27% of global gold production in 2022. Leading the charge in WAF are Ghana, Mali, and Burkina Faso, which were the top gold producers in Africa in 2022, collectively contributing about 33% of Africa's total gold output. Côte d'Ivoire, Senegal, and Guinea have also shown remarkable growth since 2010, with gold production rising 518%, 266%, and 165%, respectively.



**Figure 2.** 2022 gold production and production growth between 2010-2022. The WAF total here includes Niger. Sources: World Gold Council, Metals Focus, 3L Research.

- WAF vs. Central and South America: A Gold Production Showdown:** When it comes to gold production, WAF has seen remarkable growth between 2010 and 2022, boasting a 57% increase. In comparison, South America only achieved a 7% increase during the same period. WAF (excluding Nigeria & Sierra Leone) produced 531 tonnes of gold in 2022, up from 240 tonnes in 2010, translating to an impressive 6% CAGR. This starkly contrasts Central and South America's gold production, which recorded a modest 0.55% CAGR. Additionally, WAF's share of global gold production surged from 8.7% in 2010 to 14.6% in 2022, while Central/South America's share fell from 17.8% to 14.9%.

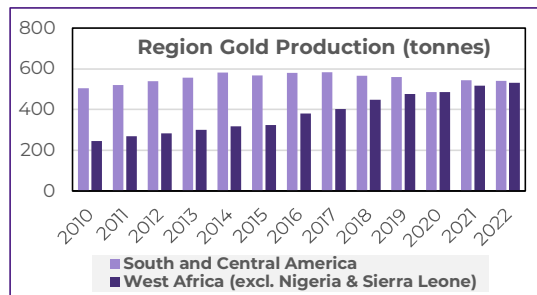


Figure 3. South/Central America vs. WAF gold production. Sources: World Gold Council, 3L Research.

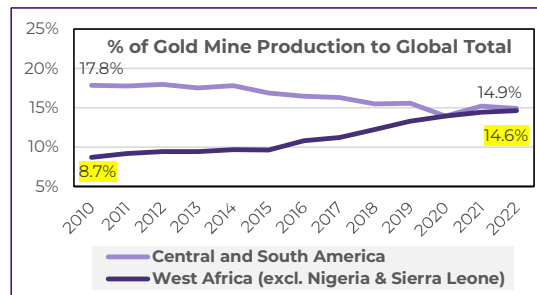


Figure 4. South/Central America vs. WAF % of gold production to global total. Sources: World Gold Council, 3L Research.

- West Africa: Gold Discovery Central, Dwarfing Other Regions:** From 2010 to 2020, WAF has proven itself as the premier destination for gold discoveries, unearthing a staggering 67Moz of gold at an average grade of 1.5 g/t. This far surpasses North America's 44Moz during the same period, solidifying WAF's status as the global leader in new gold finds. The top three contributors within WAF are Burkina Faso, Côte d'Ivoire, and Mali, which have been the hotspots for these significant discoveries. What sets WAF apart is the volume and diversity of these discoveries. The 67Moz total comes from 15 different finds, compared to Ecuador's two and Indonesia's single major discovery. This geographical spread means a few large deposits don't skew WAF's gold bounty; it's a consistent trend across the region. Despite this impressive track record, WAF remains underexplored compared to other well-known camps. We anticipate that the rate of discoveries will continue to outpace all other regions globally in the foreseeable future.

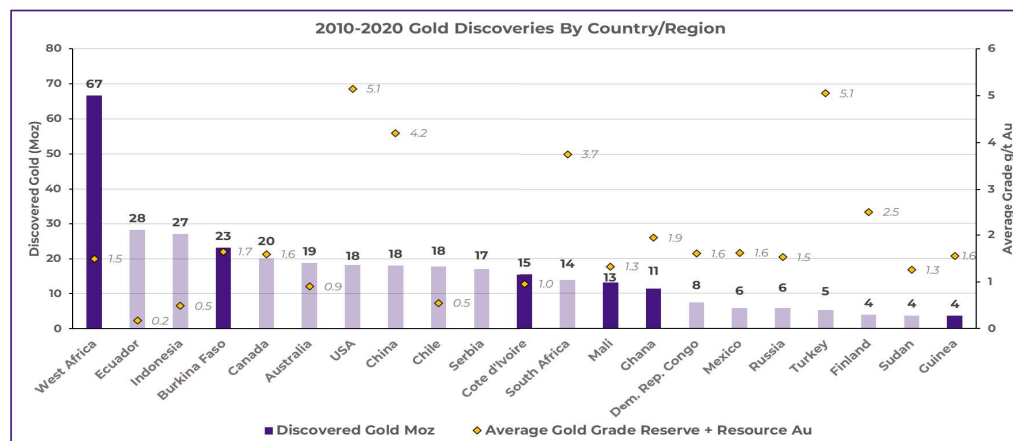


Figure 5. Gold discoveries by region. Dataset prepared by S&P Global Market Intelligence includes all deposits with over 2 Moz of Au in reserves, resources and past production, with rare exceptions. The year of discovery corresponds with the year of the initial drill program that identified the potential economic mineralization, which led to the definition of reserves and resources that meet or surpass major discovery threshold. Sources: S&P Capital IQ, 3L Research.

- Where Are These Discoveries Being Made:** WAF is renowned for its significant gold prospectivity, driven by its highly favourable geology. Much of the gold mineralization in WAF is hosted in Proterozoic-aged Birimian Greenstone Belts (Green in Figure 6). These belts of greenstone volcanic and sedimentary rocks are often intruded by granitic bodies and cut by major, gold-bearing shear zones. Usually, mineralization is at or close to a contact between two rock assemblages or at lithological contacts, often located in/near high-strain deformation zones. These settings create ideal conditions for forming gold-bearing quartz veins, sheeted quartz vein arrays, vein stock work zones and disseminated gold and sulphide mineralization.

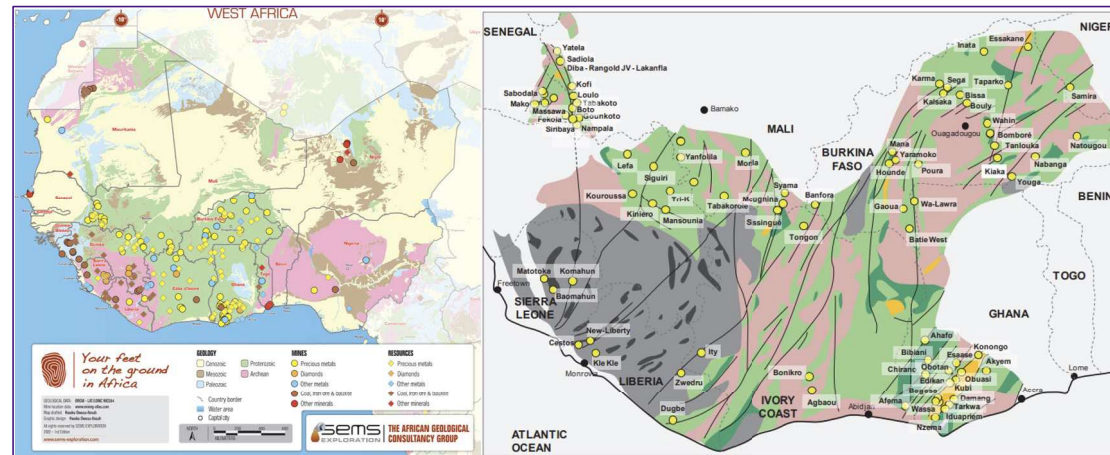


Figure 6. WAF geology maps with the location of different mineral deposits shown as circles. Note the abundance of gold deposits in Proterozoic greenstone rocks (Green). Sources: SEMS, Reisberg et al., 2015.

## West African Economies

- Growing GDP, WAF's Economic Boom:** WAF's economic momentum is impressive. According to Capital IQ, the combined real GDP of the WAF region hit US\$765B in 2023 and is projected to soar to US\$980B by 2030. Nigeria leads the charge, contributing a hefty 67% of the region's GDP. Côte d'Ivoire and Ghana are also racing ahead, each accounting for around 10% of WAF's total GDP. The region's average GDP growth rate in 2023 was a solid 5%, driven by substantial gains in Côte d'Ivoire (6%), Senegal (5.5%), and Sierra Leone (11.7%). This robust growth can be chalked up to the sustained high prices of minerals and crude oil, which have massively benefited this resource-rich area. Notably, no country in the region saw a decline in real GDP for 2023, highlighting the resilience and potential of WAF's economies amidst favourable global commodity markets.
- Rising GDP per Capita, A Mixed Bag in West Africa:** WAF's average GDP per capita rose to US\$1,526 in 2023, marking a 23% increase from US\$1,243 in 2015. Côte d'Ivoire leads the pack with the highest GDP per capita at US\$2,754, followed closely by Mauritania at US\$2,453. On the other end of the spectrum, Sierra Leone lags with a GDP per capita of just US\$349. Despite Nigeria boasting the largest real GDP in the region, it has seen a significant drop in GDP per capita, falling from US\$2,187 in 2022 to US\$1,622 in 2023. This decline is expected to continue, with projections indicating a further drop to US\$960 by 2024. The primary culprits are the weakening of the Naira and high inflation rates. These contrasting trends highlight the varied economic landscapes within WAF, underscoring both the opportunities and challenges in the region's economic development.



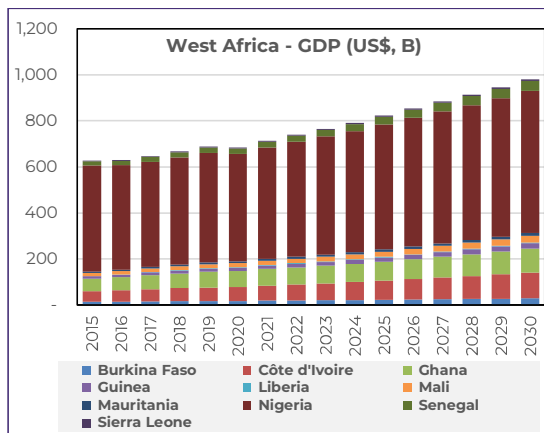


Figure 7. WAF aggregate GDP. Sources: S&P Cap IQ, 3L Research.

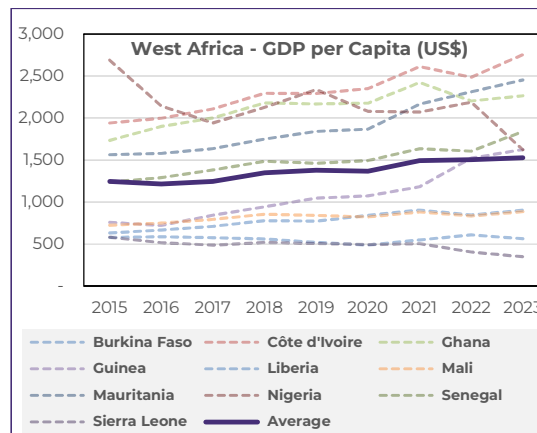


Figure 8. WAF GDP per Capita. Sources: S&P Cap IQ, 3L Research.

- West Africa Inflation Surge Driven by a Few:** High inflation in WAF is primarily driven by a handful of countries. As measured by the CPI, the average inflation rate was 14% in 2023, a slight improvement from 15% in 2022. According to Capital IQ, this figure is expected to decline to 10.3% by 2024. The elevated inflation rates in Sierra Leone and Ghana, with CPIs of 43.5% and 39.2%, respectively, are the main culprits. Nigeria also contributed significantly, with an inflation rate of 24.7%. In contrast, the remaining countries in the region experienced relatively low inflation, ranging from 0.4% to 7.8%. This disparity highlights the uneven economic conditions across WAF and the substantial impact of country-specific factors on the region's overall inflation rate.
- Currencies Weakening Against USD, A Mixed Blessing:** In 2023, the average exchange rate for the basket of WAF currencies against the US dollar has increased by 21.7%. The Nigerian Naira (NGN) and Sierra Leonean Leone (SLL) have been hit hardest; each increased by 52% in 2023 compared to 2022. Looking ahead, the basket of WAF currencies, excluding the Naira, is expected to increase by another 8% against the USD in 2024, while the Naira is projected to surge by another 115%. This weakening trend presents a mixed blessing. On one hand, it's a challenge for the local economies. Conversely, it's a boon for miners who pay their workers in local currencies but sell their gold in US dollars. This currency dynamic should serve as a tailwind for operating margins, enhancing profitability for mining companies in the region.

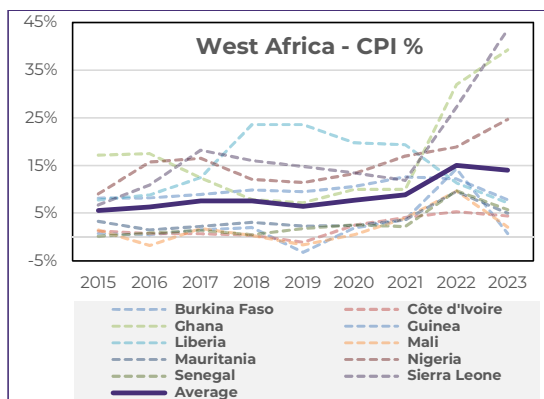


Figure 9. WAF CPI. Sources: S&P Capital IQ, 3L Research.

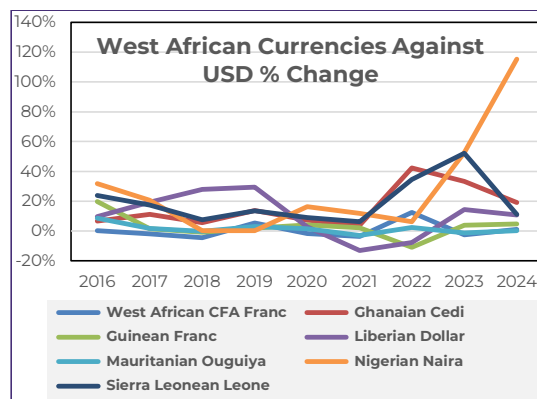


Figure 10. WAF currencies % change against USD. Sources: S&P Capital IQ, 3L Research.

- Shifting Foreign Direct Investment:** Foreign Direct Investment (FDI) in WAF has seen significant fluctuations over the years. According to World Bank data, net FDI inflows started modestly in the early 2000s, peaking at US\$18B in 2009. From 2018 to 2022, FDI inflows averaged around US\$9B annually. Nigeria, once the primary FDI magnet, saw a sharp decline, turning negative in 2022 due to economic distress. Currently, the top recipients of FDI are Senegal (US\$2.59B), Côte d'Ivoire (US\$1.58B), and Ghana (US\$1.47B), with significant investments also flowing into Mauritania (US\$1.4B) and Guinea (US\$0.66B). This FDI shift underscores the region's changing dynamics and highlights emerging opportunities in other WAF countries.

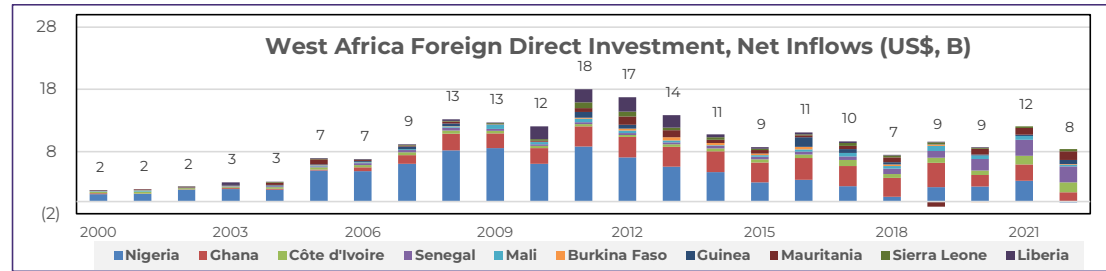


Figure 11. WAF aggregate foreign direct investment (FDI). Sources: World Bank, FactSet, 3L Research.

### West Africa Risk

- Navigating Risks:** WAF presents a complex risk landscape, evidenced by various indicators. According to Capital IQ, the region's average risk scores highlight significant challenges across multiple dimensions: political, economic, legal, tax, operational, and security. These scores fall into the elevated to very high-risk categories, indicating substantial hurdles for stability and investment. Historical data from Voice of America reveal a turbulent political history, with 68 attempted or successful coups from 1960 to 2024, peaking between 1980 and 1990 with 19 coups, but significantly lower in recent years. Additionally, the World Bank's Political Stability and Absence of Violence/Terrorism Index shows a general decline in stability across most WAF countries since 1996, with Nigeria, Mali, and Burkina Faso experiencing notable instability. Despite these challenges, some countries like Ghana and Senegal maintain relatively higher stability, nearing the global average. Ghana stands out as the most stable country in WAF, while Mali is the least.
- From Paris to Putin, Russia's Increasing Influence:** Russia's influence in French-speaking African countries is on the rise, turning some regions, like Mali, into a geopolitical battleground with implications for local stability and international business. Mali's military junta seized power in 2021, announced an audit of the gold industry, and introduced an updated mining code two years later to allow the government to acquire up to a 35% stake in mining projects (up from 20%). Investors should keep Russian influence and activity in WAF on their radar. Whether positive or negative developments or false news stories, investment opportunities could open up.

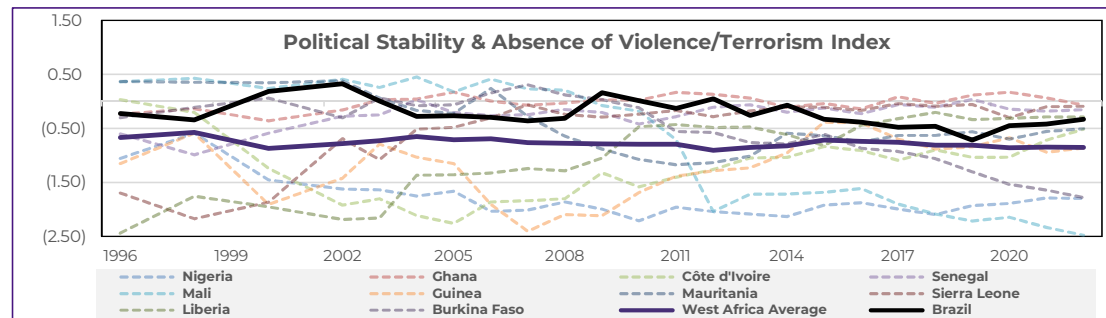


Figure 12. Political Stability & Absence of Violence/Terrorism Index. Brazil for reference. Sources: World Bank, FactSet, 3L Research.

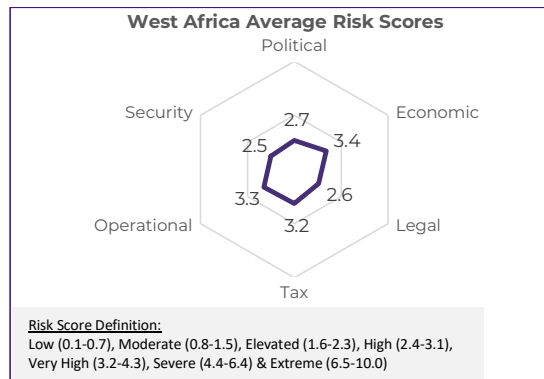


Figure 13. WAF average risk scores. Sources: S&P Capital IQ, 3L Research.

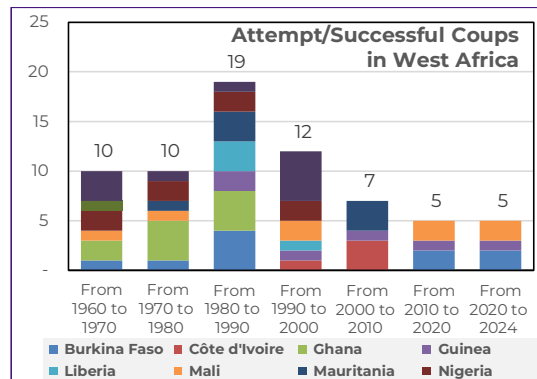


Figure 14. Attempt/Successful coups in WAF. Sources: Voice of America, 3L Research.

- West Africa vs. South America, A Risk Comparison:** The risk landscape is starkly different when comparing WAF to South America. Despite some improvements in political stability and reduced violence and terrorism in certain WAF countries, the region as a whole remains riskier than South America. According to Capital IQ, WAF scores higher on risk across all categories, with South America generally falling into the elevated risk range, while WAF is in the high to very high-risk bracket. Economic risk is particularly pronounced in WAF, highlighting a more unstable financial situation. Furthermore, the Political Stability & Absence of Violence/Terrorism Index indicates that while South America's stability has improved since 2008, WAF's stability has declined. This comparison underscores the greater challenges investors face in WAF compared to South America despite the region's rich opportunities.
- Individual Country Risk Profile Comparisons:** Several countries in WAF, such as Côte d'Ivoire, Ghana, Mauritania, and Senegal, have risk profiles comparable to or even better than some South American nations. For instance, Côte d'Ivoire outperforms Peru in several risk categories despite having the same overall risk score. Côte d'Ivoire boasts lower political, legal, tax, and operational risk scores than Peru. Similarly, Senegal exhibits a more stable risk profile than Guyana in political, operational, and security domains. Both Côte d'Ivoire and Senegal have made notable strides in their Political Stability & Absence of Violence/Terrorism Index, narrowing the gap with their South American counterparts. These examples highlight the potential for selective investment in WAF, where certain countries offer competitive advantages and stand out as attractive destinations for investment.

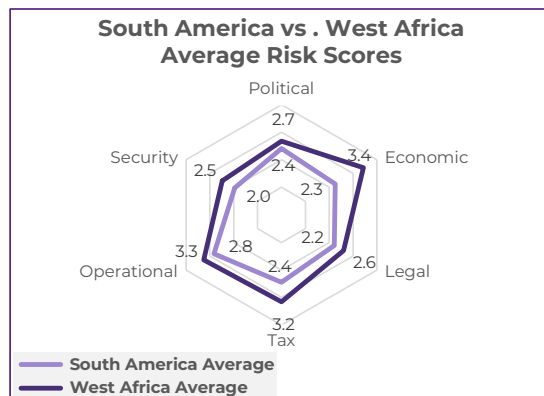


Figure 15. South America vs. WAF average risk scores. Sources: S&P Capital IQ, 3L Research.

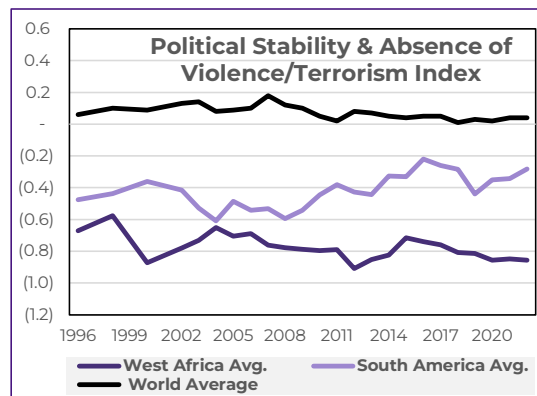


Figure 16. Political Stability Index - WAF average vs. South America average. Sources: World Bank, FactSet, 3L Research.



Figure 17. Côte d'Ivoire vs. Peru risk scores. Sources: S&P Capital IQ, 3L Research.

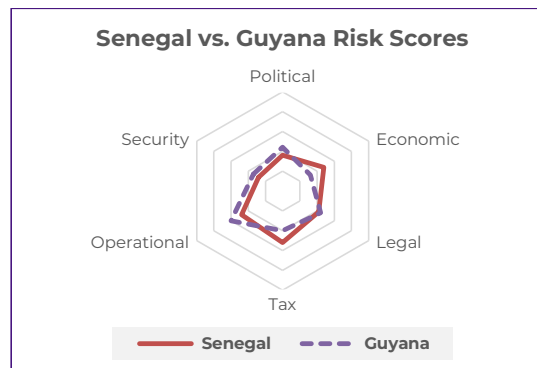


Figure 18. Senegal vs. Guyana Risk Scores. Sources: S&P Capital IQ, 3L Research.

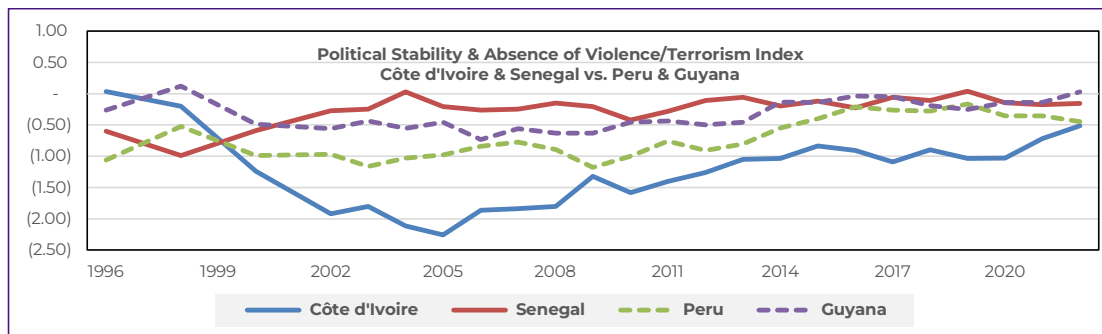


Figure 19. Political Stability & Absence of Violence/Terrorism Index - Côte d'Ivoire, Senegal, Peru & Guyana. Sources: World Bank, FactSet, 3L Research.

### Next Elections

- Key Elections in Mauritania, Ghana, Guinea, and Côte d'Ivoire:** Investors should closely monitor upcoming election cycles in Mauritania, Ghana, Guinea, and Côte d'Ivoire, as changes in government can significantly impact resource development. A new administration could alter royalty rates on mining projects, freeze exploration or mining permit approvals, or increase government ownership in mining ventures. To help navigate these potential changes, we have created a timeline and provided insights on nominees in the upcoming elections over the next two years.

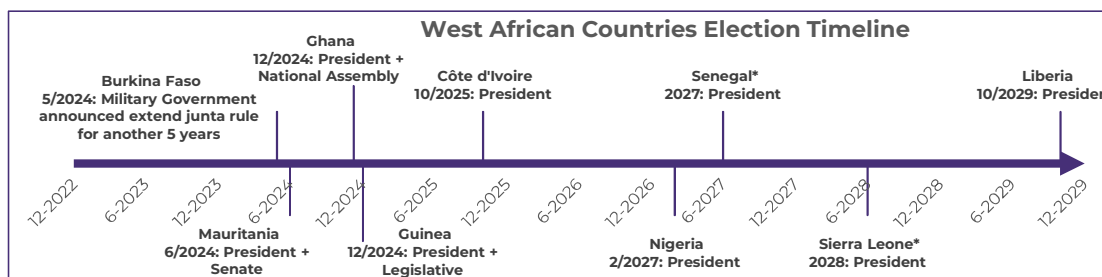


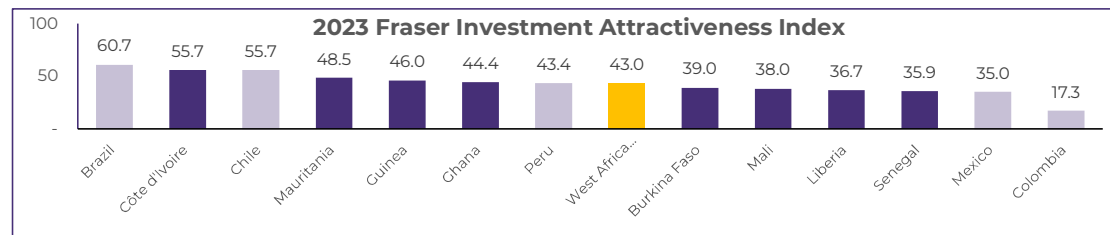
Figure 20. WAF countries election timeline. Sources: Africa Center, BBC, 3L Research.

**Table 2.** WAF elections over the next two years. Sources: Africa Center, BBC, 3L Research.

May 2024	<b>Burkina Faso</b>	Military Government announced extend junta rule for another five years President + Senate Election
Jun 2024	<b>Mauritania</b>	<ul style="list-style-type: none"> <li><b>Mohamed Ould Ghazouani</b> – The current president, Ghazouani, will run for a second five-year term and is the clear favourite. Last year, his party won a landslide victory in legislative elections, taking 107 of 176 seats.</li> </ul>
Dec 2024	<b>Ghana</b>	President + National Assembly Election Current President: Nana Akufo-Addo (Second Term) – Current President is ineligible for re-election Presidential Candidate: (Poll as of April 2024) <ul style="list-style-type: none"> <li><b>Mahamudu Bawumia</b> (38.9%) - Current Vice-President &amp; former Central Banker. Promises 100% Ghanaian ownership of natural resources and introduce tax amnesty.</li> <li><b>John Dramani Mahama</b> (36.1%) - Former President. He proposed amending the Minerals &amp; Mining Act to grant district mining offices the power to issue mining licenses to maximize the benefits of the country's natural resources (e.g., higher stake in projects).</li> </ul>
Dec 2024	<b>Guinea</b>	President + Legislative Election Current President: Mamadi Doumbouya (from the Military Government) Presidential Candidate: <ul style="list-style-type: none"> <li><b>Mamadi Doumbouya</b>—Doumbouya has announced plans for a constitutional referendum in 2024, though the document itself remains to be drafted, and details on the process are sparse. A military Junta seized power from Guinea's first democratically elected president in 2021, who violated the constitution's two-term limit.</li> </ul>
Oct 2025	<b>Côte d'Ivoire</b>	President Election Current President: Alassane Ouattara (Third Term) Presidential Candidate: <ul style="list-style-type: none"> <li><b>Alassane Ouattara</b> - Current President. Improved country's infrastructure (e.g., roads and utilities). Tax exemption granted to foreign investors to invest in strategic sectors and infrastructure projects.</li> <li><b>Tidjane Thiam</b> - Former CEO of Credit Suisse &amp; leader of opposition party: PDCI. The Party views mining as a crucial component of economic growth.</li> <li><b>Laurent Gbagbo</b> - Former President. He was a controversial leader with one failed coup during his presidency. He nationalized natural resources (Cocoa &amp; Coffee) during the country's 2<sup>nd</sup> civil war. He was barred from the presidential vote in 2020. Currently, he is not viewed as a favourite to win.</li> </ul>

**The Fraser Institute Survey of Mining Companies (See Report Here)**

- Understanding the Fraser Investment Attractiveness Index:** How does the Fraser Investment Attractiveness (FIAI) Index work? As mentioned, foreign direct investment in WAF has risen, with a net inflow of US\$8 billion in 2022. The FIAI is a key tool to gauge a country's investment appeal in the mining sector over time. This index combines two components: the Policy Perception Index (40%), which evaluates policy factors such as regulation, taxation, and infrastructure quality, and the Best Practices Mineral Potential Index (60%), which assesses whether a region's geology promotes or hinders exploration investment. The ratings range from 0 (least attractive) to 100 (most attractive), providing a comprehensive measure of a jurisdiction's investment attractiveness.
- How Do WAF Nations Fare in the Index?** In FY 2023, the FIAI gave WAF an average score of 43.0, comparable to Peru. Côte d'Ivoire emerged as a standout among its WAF peers, scoring 55.7, which matches Chile, one of the top performers. Following Côte d'Ivoire are Mauritania, Guinea, and Ghana, with scores of 48.5, 46.0, and 44.4. Despite these relatively high scores, investor concerns persist over environmental regulations, protected areas, and labour regulations. Burkina Faso and Mali scored below the WAF average at 39 and 38, respectively. Liberia and Senegal recorded the lowest scores at 36.7 and 35.9. Nonetheless, all the mentioned WAF jurisdictions outperformed Mexico and Colombia in the index.



**Figure 21.** Fraser Investment Attractiveness Index. Only the bolded countries in Table 1 are included in the WAF average. Other relevant country scores are included as a comparison. Sources: Fraser Institute, 3L Research.



## Operators and Operating Mines - Who's in the Area

- Boost in WAF Operating Mine Production Expected in 2024:** WAF's gold mining sector is set for a production boost in 2024, with the region's overall output expected to jump by 8%, from 222kozpa to 240kozpa, despite a 3% increase in all-in sustaining costs (AISC) from \$1,367 to \$1,409 (Based on assets in Table 3). Newmont's Ahafo mine in Ghana, already producing 581koz in 2023, is forecasted to ramp up to 725koz in 2024 at an AISC of US\$1,030/oz, making it the company's second-lowest cost mine and second-largest operation after the Nevada Gold Mines JV with Barrick. Barrick's Loulo-Goukoto complex in Mali, producing 684koz in 2023, is set to remain their largest producing asset outside the Nevada JV, with an expected output of 669koz and an AISC of US\$1,200/oz. Kinross's flagship Tasiast mine in Mauritania is projected to produce 610koz in 2024. The Abujar, Seguela, and Obuasi mines are poised for the largest production hikes in 2024, while Akyem, Fekola, and Damang will see the largest drops.

Table 3. Active mines in WAF. Sources: Company Filings, FactSet, 3L Research.

Project	Owners	Country	2023 Koz pa	2024 Koz pa	YOY Growth	2023 AISC \$US/Oz	2024 AISC \$US/Oz	YOY AISC Change
Ahafo South	Newmont	Ghana	581	725	25%	1,222	1,060	-13%
Loulo-Goukoto	Barrick Gold	Mali	684	669	-2%	1,392	1,200	-14%
Tasiast	Kinross Gold	Mauritania	621	610	-2%	729	745	2%
Tarkwa	GoldFields	Ghana	551	540	-2%	1,293	1,480	14%
Fekola	BZGold	Mali	590	485	-18%	1,194	1,450	21%
Essakane	IAMGOLD	Burkina Faso	413	389	-6%	1,521	1,738	14%
Sabodala-Massawa	Endeavour Mining	Senegal	294	380	29%	767	800	4%
Obuasi	AngloGold Ashanti	Ghana	224	298	33%	1,777	1,777	0%
Ity	Endeavour Mining	Côte d'Ivoire	324	285	-12%	809	888	10%
Houndé	Endeavour Mining	Burkina Faso	312	275	-12%	943	1,050	11%
Yaoure	Perseus Mining	Côte d'Ivoire	274	268	-2%	795	950	19%
Iduapriem	AngloGold Ashanti	Ghana	268	248	-7%	1,329	1,329	0%
Siguirí	AngloGold Ashanti	Guinea	260	240	-8%	1,976	1,976	0%
Syama	Resolute Mining	Mali	211	210	-1%	1,458	1,450	-1%
Sanbrado	West African Resources	Burkina Faso	227	200	-12%	1,126	1,250	11%
Sadiola	Allied Goldcorp	Mali	171	200	17%	1,533	1,250	-18%
Edikan	Perseus Mining	Ghana	203	196	-3%	1,050	1,050	0%
Tongon	Barrick Gold	Côte d'Ivoire	204	195	-4%	1,408	1,445	3%
Abujar	Zhaojin(Tietto)	Côte d'Ivoire	92	173	87%	1,311	937	-29%
Akyem	Newmont	Ghana	295	170	-42%	1,210	2,100	74%
Chirano	Asante Gold	Ghana	138	165	20%	1,751	1,822	4%
Mana	Endeavour Mining	Burkina Faso	142	160	13%	1,380	1,250	-9%
Asanko	Galiano Gold	Ghana	134	150	12%	1,672	1,675	0%
Mako	Resolute Mining	Senegal	120	145	21%	1,373	1,150	-16%
Seguela	Fortuna Silver	Côte d'Ivoire	79	132	68%	760	1,170	54%
Damang	Gold Fields	Ghana	153	125	-18%	1,679	2,030	21%
Yaramoko	Fortuna Silver	Burkina Faso	131	124	-5%	1,499	1,270	-15%
Bomboré	Orezone Gold	Burkina Faso	141	118	-17%	1,127	1,338	19%
Bibiani	Asante Gold	Ghana	77	118	53%	2,082	2,265	9%
Lafigué	Endeavour Mining	Côte d'Ivoire	N/A	100	N/A	N/A	938	N/A
Bonikro	Allied Goldcorp	Côte d'Ivoire	99	100	1%	1,221	1,750	43%
Segilola	Thor Explorations	Nigeria	85	98	15%	1,313	1,150	-12%
Agbaou	Allied Goldcorp	Côte d'Ivoire	73	90	23%	2,138	1,775	-17%
Yanfollia	Hummingbird Resources	Mali	84	80	-5%	1,331	1,450	9%
Sissingue	Perseus Mining	Côte d'Ivoire	54	67	23%	1,685	1,450	-14%
Nampala	Robex Resources	Mali	512	48	-8%	1,285	1,450	13%
Kourassa	Hummingbird Resources	Guinea	6	44	625%	N/A	2,014	N/A
Average			222	240	8%	1,367	1,409	3%

\*Red Text = Estimated.

- Endeavour Mining, The Pure Play 100% WAF Producer:** Endeavour Mining is the heavyweight champion of the WAF gold scene, with four operating gold mines in Burkina Faso, Côte d'Ivoire, and Senegal. Plus, they're bringing the Lafigué project in Côte d'Ivoire online in 2024 (203kozpa avg. LOM). With this lineup, Endeavour is on track to churn out ~1.2Moz of gold in 2024 at an AISC of ~ US\$995/oz. Now, let's talk numbers. Endeavour trades at an EV/Reserve oz value of US\$480 per ounce—higher than Newmont (US\$396), Barrick (US\$382), and Gold Fields (US\$340), but trailing Agnico (US\$629) and Kinross (US\$489). On a P/NAV basis, Endeavour comes in at 0.92, compared to Newmont's 1.12, Agnico's 1.48, and Kinross's 1.01. Moreover, Endeavour trades at a 20% discount to its geographically diversified peers on multiples like P/CF and EV/EBITDA. Endeavour is one of the best operators in the business. These discounts to peers likely reflect the market's discount on WAF's jurisdictional, political and operational risk.

- **WAF Intermediate Producers Trading at Discount to Peers:** Intermediate producers in WAF, such as Perseus Mining, Resolute Mining, and Allied Goldcorp, trade at a notable discount compared to their global counterparts. Despite being 100% WAF operators, these companies are undervalued by 25-30% when comparing 2023A P/CF and EV/EBITDA multiples. It's worth noting that Allied will diversify out of WAF in 2026 with the addition of Kurmuk in Ethiopia, yet the valuation gap persists. This discount reflects a broader market hesitation, providing a potential opportunity for investors to recognize WAF's upside.
- **Pure Play WAF Junior Producers, a Mixed Bag:** When it comes to junior producers in WAF, it's a mixed bag of opportunities. The names in Table 4 are all 100% focused on WAF, mostly single-asset producers with a second asset or expansion project in the pipeline (Growth). The average 2023A EV/EBITDA multiple, excluding Galiano, is 4x—a 33% discount compared to the 6x multiple for WAF pure play intermediates like Perseus and Resolute. Strip out the outliers, and WAF juniors hover around the average of their global peers. But here's the kicker: on EV/Resv and EV/Res multiples, these juniors are trading at a hefty discount to the 36 junior producers we track. The good news? This discount shrinks as they grow into intermediate producers and add more assets.

**Table 4.** WAF producer multiples as between June 11-14. Source: *Company Filings, FactSet, 3L Research.*

Company	Market Cap \$USM	EV \$USM	Gold Resource (Moz)	Gold Reserve (Moz)	2023A CF \$USM	2023A EBITDA \$USM	EV/Resv. \$US/oz	EV/Res \$US/oz	2023A P/CF	2023A EV/EBITDA
Newmont	47,267	53,787	310	136	2,763	4,291	396	174	17.1	12.5
Barrick Gold	28,857	29,435	219	77	4,005	4,921	382	134	7.2	6.0
GoldFields	14,127	15,151	85	45	1,576	2,213	340	178	9.0	6.8
Kinross Gold	9,237	11,135	60	23	1,438	1,788	489	185	6.4	6.2
AngloGold Ashanti	9,779	11,200	66	28	981	1,325	399	169	10.0	8.5
Endeavor Mining	5,159	5,752	28	12	647	1,036	480	202	8.0	5.5
<b>Senior Producers with WAF Operations Adj. Average</b>							<b>414</b>	<b>174</b>	<b>9.6</b>	<b>7.6</b>
<b>All Senior Producers Adj. Average**</b>							<b>421</b>	<b>162</b>	<b>9.0</b>	<b>7.0</b>
Zhaojin (Tietto)	4,788	7,646	31	12	210	403	615	251	22.8	19.0
B2Gold	3,416	3,302	25	7	710	1,094	485	130	4.8	3.0
Perseus Mining	2,115	1,632	6	3	428	534	473	263	4.9	3.1
IAMGOLD	1,816	2,401	26	8	117	246	308	93	15.5	9.7
Fortuna Silver	1,540	1,677	5	3	297	346	623	362	5.2	4.8
Resolute Mining	762	785	9	4	107	143	218	86	7.2	5.5
Allied Goldcorp	544	489	15	9	14	88	52	32	39.3	5.5
<b>Intermediate Producers with WAF Operations Adj. Average</b>							<b>396</b>	<b>174</b>	<b>14.2</b>	<b>7.2</b>
<b>All Intermediate Producers Adj. Average**</b>							<b>385</b>	<b>178</b>	<b>9.0</b>	<b>6.0</b>
West African Resources	963	970	13	6	138	213	159	76	7.0	4.5
Galiano Gold	399	344	4	2	(1)	(17)	185	83	(542.9)	(20.1)
Asante Gold	387	556	7	3	48	(16)	185	82	8.0	(34.8)
Orezone Gold	187	260	5	2	70	112	108	51	2.7	2.3
Thor Explorations	125	172	2	1	60	56	332	70	2.1	3.0
Robex Resources	115	151	3	1	39	46	111	50	2.9	3.2
Hummingbird Res's	96	325	5	3	74	49	119	64	1.3	6.6
<b>Junior Producers with WAF Operations Adj. Average***</b>							<b>171</b>	<b>68</b>	<b>4.0</b>	<b>4.0</b>
<b>All Junior Producers Adj. Average***</b>							<b>394</b>	<b>130</b>	<b>2.6</b>	<b>3.9</b>

\*Adjusted Average defined as mean after removing the top & bottom 10% of the data set.

\*\*All Average based on an expanded list of gold producers, not limited to West Africa – Senior (10 companies), Intermediate (21 companies) & Junior (36 companies).

\*\*\*For Junior Producers with WAF Operations Adj. Average for 2023A, P/CF excludes outlier Galiano Gold, whereas EV/EBITDA excludes Galiano Gold & Asante Gold. If the outliers are to be included, the average for P/CF & EV/EBITDA will be (74.1) & (5.0) respectively.

## Producers Doubling Down on WAF with Builds and Expansions

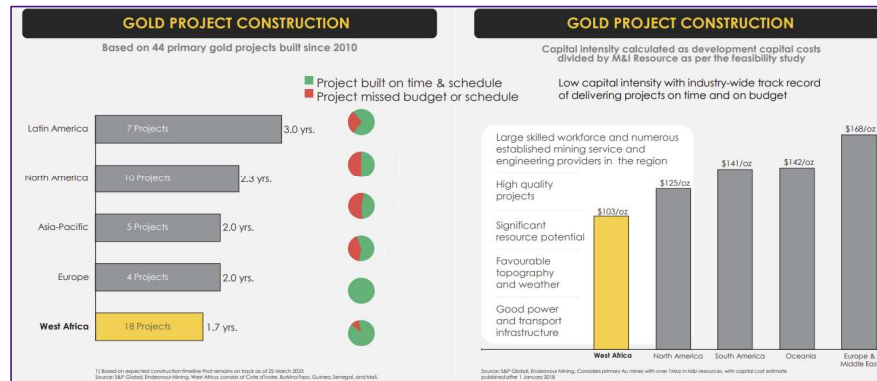
- Big Bets on WAF, Producers Pumping Cash into Builds and Expansion:** Big money is pouring into WAF as producers double down on expansions and new mine developments. Multiple WAF producers are throwing serious capital at bringing new mines online and expanding operations (Table 5). The new mine builds in construction or projects at the PFS/FS level boast impressive stats: an average of 4.6Moz in resources, production profiles averaging 197kozpa, and a lifespan of 13 years. These projects, spread across six different WAF countries, highlight a positive trend—projects are navigating the permitting regulatory frameworks smoothly, signalling a robust future for the region’s mining sector.

**Table 5.** WAF producer projects in construction or at the PFS/FS level. Sources: FactSet, Company Filings, 3L Research.

Project	Owner	Country	Stage	Resv (Moz)	Resv + Res (Moz)	Commercial Production	LOM avg Prod. Kozpa	LOM	LOM AISC \$US/oz	Capex \$USM
Ahafo North	Newmont	Ghana	Const.	4.1	5.5	2025	300	13	850	1,000
Bombore (Hardrock Stage 1 Expansion)*	Orezone Gold	Burkina Faso	Const.	1.3	3.4	2025	68	5	1,122	80
Sabodala-Massawa Expansion**	Endeavour Mining	Senegal	Const.	1.5	4.1	2024	135	10	576	290
Lafigué	Endeavour Mining	Côte d'Ivoire	Const.	2.7	3.1	2024	203	13	871	448
Syama Phase I Expansion	Resolute Mining	Mali	Const.	4.1	10.5	2025	***60	12	N/A	55
Kiaka	West African Res	Burkina Faso	Const.	4.5	7.9	2025	219	19	1,052	430
Kiniero (2023 PFS, to be Updated)	Robex Resources	Guinea	FS	1.0	3.1	2026	90	10	980	160
Doropo	Centamin	Côte d'Ivoire	PFS	1.9	3.4	2028	173	10	1,017	349

\* Orezone splitting Hardrock expansion into two stages (Study assumed all one). Assumes 57% of the study expansion production rate for Stage 1 and 5yrs before additional plant expansion is completed to match the existing study.  
 \*\* Reserve for Blox Expansion, Resources for the entire site  
 \*\*\* Estimated LOM additional production from expansion.

- Speedy Builds and Budget Wins in WAF:** WAF is setting the pace when it comes to construction timelines and capital intensity. Borrowing insights from Aurum Resources and S&P Global Intelligence, we see that WAF projects get built faster and stick to budgets. On average, 18 WAF builds took just 1.7yrs to complete, compared to 2.3yrs for 10 North American projects. Plus, WAF shines on the capital intensity front, with capital costs per FS M+I resource 20% lower than North America, based on 44 gold projects built since 2010. This efficiency makes WAF a standout region for cost-effective and timely mining project development.



**Figure 22.** Gold project construction timelines and costs per FS M+I resource. Sources: S&P Global, Endeavour Mining, Aurum Resources April 2024, Corp PPT.

- A Quote From Endeavour Mining:** "The countries of West Africa have implemented new legal frameworks and mining codes over recent years to promote the development of the industry in the region, which is a key driver of economic growth. This includes the introduction of swift permitting processes, which means the time from discovery to production can be under three years. All jurisdictions have adopted a responsible approach to mining development, with stringent environmental standards in place and mining codes consistent with international principles".

Valuations and M&A

- **Active M&A Scene in Africa, What’s the Deal?:** M&A activity in Africa is heating up, and we’ve crunched the numbers on transaction EV/Reserve, EV/Resource, and P/NAVs (where available) across 15 African deals and 12 from other regions. The data reveals that producing companies and African assets sell at an average P/NAV of 0.78 and track closely with the average P/NAV that our tracked intermediate producers trade at (0.83). Interestingly, the EV/Reserve and EV/Resource of Producers are higher in African producer transactions (US\$357/reserve oz and US\$153/resource oz) vs North/ South American producers and historical 2012-2021 S&P Global Insights datasets.
- **African Developers Are Fetching Higher Valuations vs. North & South American Counterparts:** Recent transactions show that African developers are valued at a P/NAV of 0.69, outpacing the 0.55 average for recent deals in North/South America. This premium could reflect factors like shorter time to production, superior asset quality, longer mine life or less complicated operations. However, it’s worth noting that on an EV/Reserve and EV/Resource basis, African developer acquisitions are valued at a 20% discount vs. their North/South American peers.

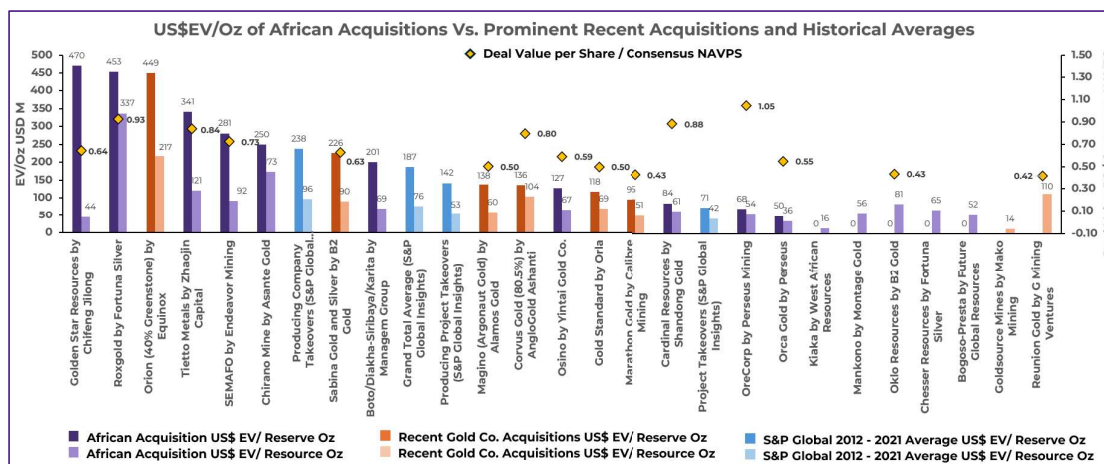


Figure 23. US\$EV/OZ and P/NAV multiples of African and recent gold sector acquisitions. Sources: FactSet, Company Filings, S&P Capital IQ, Toubani Resources Corp ppt.

Table 6. Recent WAF gold sector M&A data. Sources: FactSet, Company Filings, S & P Capital IQ, Toubani Corp. PPT. 3L Research.

African Acquisitions / Oz											
Date	Type	Target	Acquirer	Resv. Moz	Res. Moz	Value US\$M	EV/Resv. US\$/oz	EV/Res. US\$/oz	Deal Value per Share / Consensus NAVPS		
2020	Project Acquisition	Bogoso-Presta	Future Global Resources	-	1.8	95	-	52	-	-	
2020	Corp. Takeover	SEMAFO	Endeavor Mining	2.6	9	741	281	92	0.73	-	
2021	Corp. Takeover	Cardinal Resources	Shandong Gold	5.1	7	426	84	61	0.88	-	
2021	Project Acquisition	Kiaka	West African Resources	-	6.8	110	-	16	-	-	
2021	Corp. Takeover	Roxgold	Fortuna Silver	1.8	2.4	815	453	337	0.93	-	
2022	Project Acquisition	Boto/Diakha-Siribaya/Karita	Managem Group	1.4	4.1	282	201	69	-	-	
2022	Corp. Takeover	Orca Gold	Perseus	2.9	4	142	50	36	0.55	-	
2022	Project Acquisition	Chirano Mine	Asante Gold	0.9	1.3	225	250	173	-	-	
2022	Corp. Takeover	Golden Star Resources	Chifeng Jilong	1	10.6	470	470	44	0.64	-	
2022	Project Acquisition	Mankono	Montage Gold	-	0.4	22	-	56	-	-	
2022	Corp. Takeover	Oklo Resources	B2 Gold	-	0.7	56	-	81	0.43	-	
2023	Corp. Takeover	Chesser Resources	Fortuna Silver	-	0.9	60	-	65	-	-	
2023	Corp. Takeover	Osino	Yintai Gold Co.	2.2	4.1	273	127	67	0.59	-	
2024	Corp. Takeover	OreCorp	Perseus Mining	2.6	3.3	178	68	54	1.1	-	
2024	Corp. Takeover	Tietto Metals	Zhaojin Capital	1.4	3.8	448	329	117	0.84	-	
<b>Mean Producer</b>							<b>357</b>	<b>153</b>	<b>0.78</b>		
<b>Mean Developer</b>							<b>106</b>	<b>57</b>	<b>0.69</b>		

**Table 7.** Recent gold sector M&A data. Sources: FactSet, Company Filings, S & P Capital IQ, 3L Research.

Recent Acquisitions and S&P Global Insights 2012-2021 Average Takeout Valuations / Oz										
Date	Type	Target	Acquirer	Resv. Moz	Res. Moz	Value US\$M	EV/Resv. US\$/oz	EV/Res. US\$/oz	Deal Value per Share / Consensus NAVPS	
2022	Corp. Takeover	Gold Standard	Orla	1.6	2.7	188	118	69	0.50	
2022	Corp. Takeover	Corvus Gold (80.5%)	AngloGold Ashanti	2.7	3.6	370	136	104	0.80	
2023	Corp. Takeover	Sabina Gold and Silver	B2 Gold	3.6	9.1	815	226	90	0.63	
2023	Corp. Takeover	Marathon Gold	Calibre Mining	2.7	5.1	256	95	51	0.43	
2024	Corp. Takeover	Goldsource Mines	Mako Mining	-	1.8	25	-	14	-	
2024	Project Acquisition	Magino (Argonaut Gold)	Alamos Gold	2.4	5.4	325	138	60	0.50	
2024	Corp. Takeover	Reunion Gold	G Mining Ventures	-	5.9	648	-	110	0.42	
2024	Project Acquisition	Orion (40% Greenstone)	Equinox	2.2	4.6	995	449	217	-	
2012-2021	Producing Company Takeovers (S&P Global Insights)			282	697	67,155	238	96	-	
2012-2021	Producing Project Takeovers (S&P Global Insights)			83	223	11,735	142	53	-	
2012-2021	Project Takeovers (S&P Global Insights)			49	84	3,492	71	42	-	
2012-2021	Grand Total Average (S&P Global Insights)			471	1,154	88,018	187	76	-	
							<b>Mean Producer</b>	<b>70</b>	<b>1 data point</b>	
							<b>Mean Developer (Excluding Greenstone)</b>	<b>129</b>	<b>71</b>	<b>0.55</b>

## WAF Developers and Advanced Projects

- Next in Line: Advanced WAF Developers:** Now that you're clued in on what African developers have sold for, let's dive into some advanced WAF developers. The average consensus and 3L P/NAV multiple estimates for the five developers in Table 8 stand at 0.35, aligning closely with the 0.37 average for the 52 gold developers we track. However, this is a striking 50% below the average African 0.69 P/NAV multiple seen in recent acquisitions. Below, we provide a high-level overview of each project, showcasing the potential these advanced WAF developers bring.

**Table 8.** WAF advanced gold developer data as between June 11-14. Sources: FactSet, Company Filings, 3L Estimate.

Project / Owner	EV \$USM	Country	Stage	Resv Moz Au	Res + Res Moz Au	FS PFS PEA Moz Au	Est. Comm Prod	LOM AVG Prod Kozpa	L O M	LOM AISC US\$/oz	Build Capex US\$M	NPV / AT IRR US\$M	EV / Resv oz US\$/oz	EV / Res Oz US\$/oz	EV / Inventory Oz US\$/oz	2024E P/NAV
Bankan / Predictive Discovery	276	Guinea	PFS	3.5	5.4	3.5	2028	269	12	1,132	456	\$668M / 25% (1,800 Au, 5%)	80	51	80	0.56
Koné / Montage Gold	218	Côte d'Ivoire	FS	4.0	5.3	4.0	2027	223	16	998	712	\$1,089M / 31% (1,850 Au, 5%)	54	41	54	0.37
Enchi / Newcore Gold	42	Ghana	PEA	0.0	1.7	1.3	2027	122	9	1,018	106	\$371M / 58% (1,850 AU, 5%)	N/A	24	31	**0.23
Kobada / Toubani Resources	14	Mali	FS	1.2	2.4	1.2	2026	77	16	972	167	\$355M / 38% (1,750 AU, 5%)	11	6	12	**0.21
Sanankoro / Cora Gold	10	Mali	FS	0.4	0.9	0.4	2026	56	7	997	90	\$95.1M / 52% (1,750 Au, 8%)	24	11	24	**0.50
Dugbe / Pasofino Gold	36	Liberia	FS	2.8	3.9	2.8	2028	172	14	1,005	435	\$690M / 24% (1,700 Au, 5%)	13	9	13	**0.25
<b>West African Developer Average</b>												<b>36</b>	<b>24</b>	<b>36</b>	<b>0.35</b>	
<b>All Developer Adj. Average</b>												<b>50</b>	<b>34</b>	<b>N/A</b>	<b>0.37</b>	

\*EV as of June 11, 2024

\*\*Estimated based on Current share price / NAVPS, where NAVPS = NPV / (Current share outstanding + Share issued for 50% of CAPEX (+10M to FID) based on share price with 50% premium). Assumes 100% ownership.

\*\*\*All Developer Adj. The average is based on an expanded list of gold developers (52 companies), not limited to West Africa, and trimmed by 10% from both ends.



- Predictive Discovery (PDI-AU), Bankan Project: A Prime M&A Target** - Predictive released their PFS for the Bankan project on April 15, 2024, revealing a robust 12yr mine life with an average annual production of 269kozpa at an AISC of US\$1,132/oz. The PFS incorporates cost and technical assumptions in line with current WAF mines and indicates significant upside potential with improvements such as a steeper pit slope (Currently assumes 40°) and grid power connectivity to reduce costs. This positions Predictive as a prime M&A target, boasting a production profile and LOM comparable to top global projects like Rupert's Ikkari deposit or Reunion Gold's Oklo West (Currently being bid by G Mining Ventures). With production potentially starting by H1 2028 and construction kicking off in H1 2026, Predictive trades at a consensus P/NAV of 0.56, well below the 0.69 P/NAV of recent African gold developer acquisitions, implying a 23% upside from current prices. In reality, this asset will probably sell for higher than this due to the scarcity of quality assets globally. We could see Predictive being taken out at a 0.75-0.85 P/NAV multiple.

Project / Owner	EV \$USM	Country	Stage	Resv Moz Au	Resv + Res Moz Au	FS PFS PEA Moz Au	Est. Comm Prod	LOM AVG Prod Kozpa	L O M	LOM AISC US\$/oz	Build Capex US\$M	NPV / AT IRR US\$M	EV / Resv oz \$US/oz	EV / Res Oz US\$/oz	EV / Inventory Oz US\$/oz	2024E P/NAV
Bankan / Predictive Discovery	276	Guinea	PFS	3.5	5.4	3.5	2028	269	12	1,132	456	\$668M / 25% (1,800 Au, 5%)	80	51	80	0.56

\*EV as of June 11, 2024

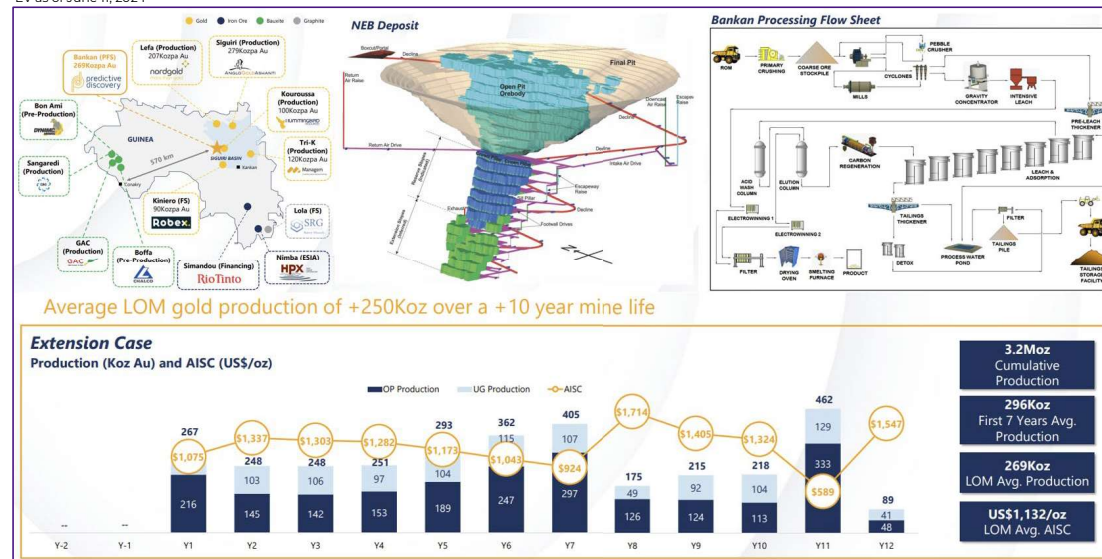


Figure 24. Figures highlighting Predictive Discovery's Bankan Gold Project. Sources: Company Filings, 3L Research.

- Montage Gold (MAU-CA), Koné: Montage Poised for Growth** - Montage Gold, led by former Endeavour executives Martino de Ciccio and Peter Olsen, is gearing up to become one of the next intermediate producers with their flagship Koné project. Currently at the feasibility stage, Koné recently received its environmental permit, with mining permits and approvals expected in H2 2024. The project is on track for commercial production by 2027. While the average reserve grade of 0.72 g/t Au may seem low compared to other WAF projects, its low strip ratio (1.18) sets the strip-adjusted grade to 0.44 g/t Au for the first eight years, favourably comparing to other operating mines in WAF like Fekola (0.2) and Essakane (0.28). The project's efficiency is further enhanced by the softness of the mineralization (10.7 kWh/t) and access to low-cost grid power (12c/kWh). Montage has strong backing from the Lundin Family (17.8% ownership), Barrick Gold (6.5%), and Perseus Mining (13.7%). They trade at a consensus P/NAV of 0.37, significantly below the 0.69 average seen in recent African developer acquisitions. If Montage were to reach this average, it would imply an 86% upside in valuation.

Project / Owner	EV \$USM	Country	Stage	Resv Moz Au	Resv + Res Moz Au	FS PFS PEA Moz Au	Est. Comm Prod	LOM AVG Prod Kozpa	L O M	LOM AISC US\$/oz	Build Capex US\$M	NPV / AT IRR US\$M	EV / Resv oz \$US/oz	EV / Res Oz US\$/oz	EV / Inventory Oz US\$/oz	2024E P/NAV
Koné / Montage Gold	218	Côte d'Ivoire	FS	4.0	5.3	4.0	2027	223	16	998	712	\$1,089M / 31% (1,850 Au, 5%)	54	41	54	0.37

\*EV as of June 11, 2024

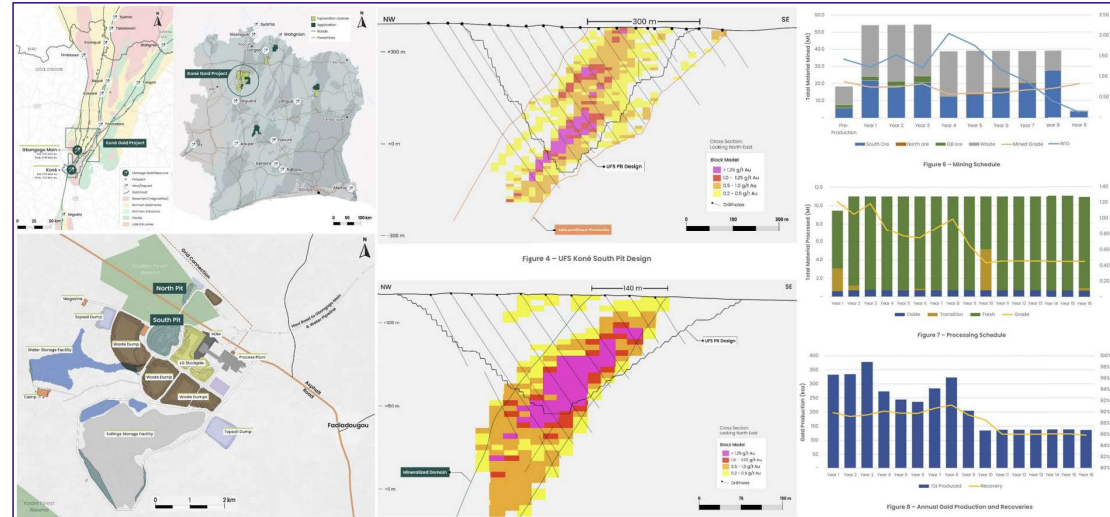


Figure 25. Figures highlighting Montage Gold's Koné Gold Project. Sources: Company Filings, 3L Research.

- Newcore Gold (NCAU-CA) Enchi: PEA Update Signals Strong Value** - Newcore delivered a positive updated PEA for their Enchi project on April 25, 2024, showcasing significant improvements. The PEA revealed a higher grade, better gold recovery, and increased throughput, boosting the LOM production to 122kozpa from the previous 89kozpa, with an estimated AISC of US\$1,018/oz and an initial capex of US\$106M. The project envisions processing 69.8Mt of ore at a grade of 0.6 g/t Au with a strip ratio of 2.67:1 over a 9-year mine life, yielding 1.1Moz of gold at an 81.8% recovery rate. The next steps for Newcore include securing funding for additional drilling and study work to define reserves, advance permitting, and optimize processing and leaching. We estimate Newcore trades at a P/NAV of 0.23, which implies there may be considerable upside if it were to reach the 0.69 average witnessed in recent African developer acquisitions

Project / Owner	EV \$US M	Country	Stage	Resv Moz Au	Resv + Res Moz Au	FS PFS PEA Moz Au	Est. Comm Prod	LOM AVG Prod Kozpa	L O M	LOM AISC US\$/oz	Build Capex US\$M	NPV / AT IRR US\$M	EV / Resv oz \$US/oz	EV / Oz US\$/oz	EV / Inventory Oz US\$/oz	2024E P/NAV
Enchi / Newcore Gold	42	Ghana	PEA	0.0	1.7	1.3	2027	122	9	1,018	106	\$371M / 58% (1,850 AU,5%)	N/A	24	31	**0.23

\*EV as of June 11, 2024

\*\*Estimated based on Current share price/ NAVPS, where NAVPS = NPV / (Current share outstanding + Share issued for 50% of CAPEX (+10M to FID) based on share price with 50% premium). Assumes 100% ownership.

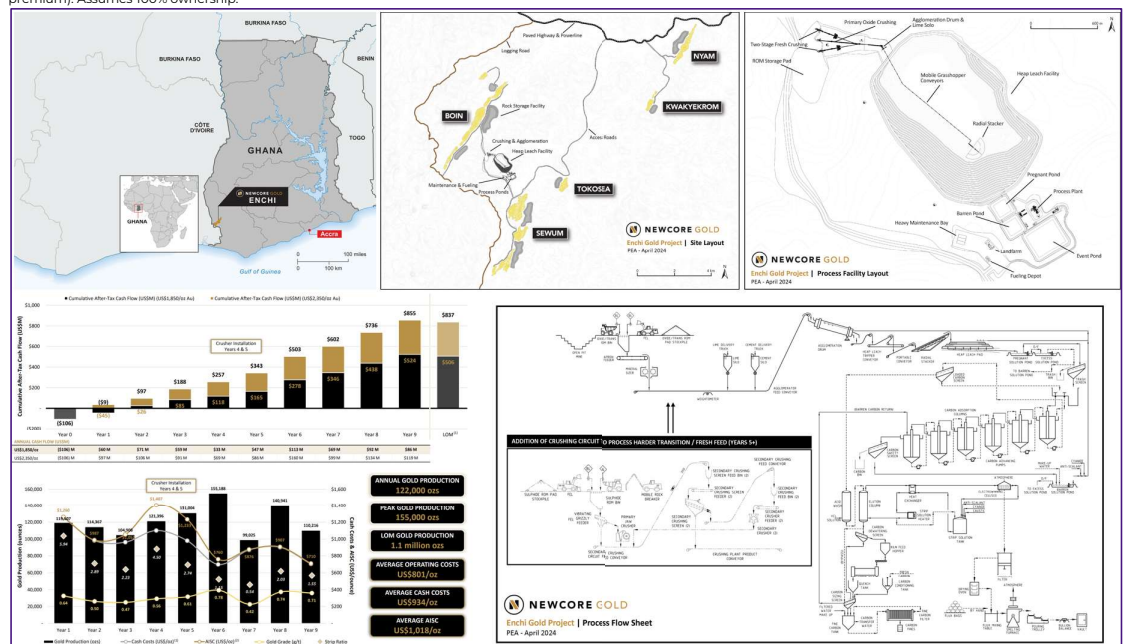


Figure 26. Figures highlighting Newcore Gold's Enchi Gold Project. Sources: Company Filings, 3L Research.

- Toubani Resources (TRE-AU), Kobada: Potential Consolidation Play in Mali** - Toubani is updating a dated FS for their Kobada project in southern Mali. The project is considered free-dig and is mostly oxide mineralization, featuring soft ore (0.52-1.2 kWh/t for oxide). A substantial 85% of the first 100m is free-dig oxide material, with 88% of the 2.4Moz resource within the first 150m from surface. The updated DFS aims to increase throughput, minimize stockpiles, incorporate a larger bulk mining fleet, and convert resources from inferred to indicated and measured. Expect a shorter mine life, a >100kozpa LOM production schedule, and a beefier reserve/resource base. With mining permits locked in until 2045 and an environmental and social impact assessment greenlit for the oxide phase, Toubani is eyeing gold production by H2 2026. The kicker? Mali's not the hottest ticket for investors right now. Here is the opportunity: Cora Gold's Sanankoro project, right next door, is also at the FS stage with its environmental permits in the bag. Combining these two could push production over 150kozpa for a decade. Kobada's trading at a steal on P/NAV and EV/Reserve/resource metrics, thanks to the Mali factor. This is a consolidation play that is just waiting to happen.

Project / Owner	EV \$USM	Country	Stage	Resv Moz Au	Resv + Res Moz Au	FS PFS PEA Moz Au	Est. Comm Prod	LOM AVG Prod Kozpa	L O M	LOM AISC US\$/oz	Bulid Capex US\$M	NPV / AT IRR US\$M	EV / Resv oz \$US/oz	EV / Res Oz US\$/oz	EV / Inventory Oz US\$/oz	2024E P/NAV
Kobada / Toubani Resources	14	Mali	FS	1.2	2.4	1.2	2026	77	16	972	167	\$355M / 38% (1,750 AU, 5%)	11	6	12	**0.21

\*EV as of June 11, 2024

\*\*Estimated based on Current share price/ NAVPS, where NAVPS = NPV / (Current share outstanding + Share issued for 50% of CAPEX (+10M to FID) based on share price with 50% premium). Assumes 100% ownership.

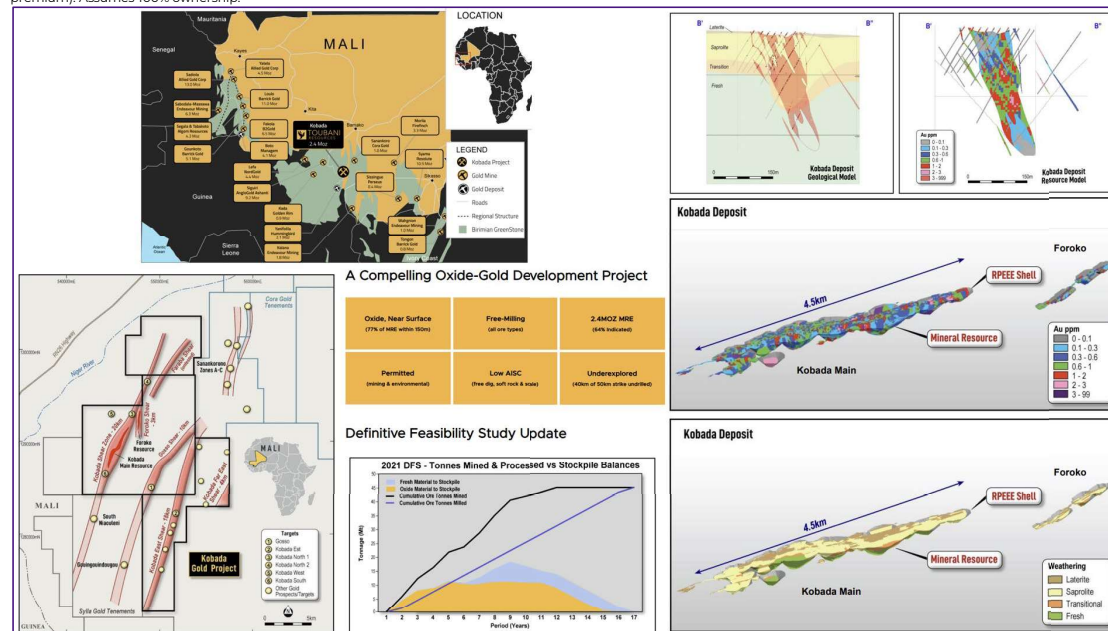


Figure 27. Figures highlighting Toubani's Kobada Gold Project. Sources: Company Filings, 3L Research.

- Cora Gold (CORA-GB), Sanankoro: Prime for Consolidation with Kobada** - Cora's Sanankoro project, just northeast of Toubani's Kobada project, is like Kobada's little sibling. This FS-level project is open-pit, with a 4.6:1 strip ratio, dominated by oxide and near-surface mineralization, eliminating the need for drilling or blasting and requiring minimal crushing. The company has secured its environmental permit and signed a US\$70M debt mandate to kickstart construction. With gold priced at US\$1,750, the project boasts a LOM free cash flow of US\$234M. Cora is optimistic about pouring its first gold within 18 months, pending the lift of Mali's government permit moratorium. Building both Sanankoro and Kobada separately doesn't make sense. A consolidation is practically a given, promising a streamlined, powerhouse, low-cost operation in southern Mali.

Project / Owner	EV \$USM	Country	Stage	Resv Moz Au	Resv + Res Moz Au	FS PFS PEA Moz Au	Est. Comm Prod	LOM AVG Prod Kozpa	L O M	LOM AISC US\$/oz	Build Capex US\$M	NPV / AT IRR US\$M	EV / Resv oz \$US/oz	EV / Res Oz US\$/oz	EV / Inventory Oz US\$/oz	2024E P/NAV
Sanankoro / Cora Gold	10	Mali	FS	0.4	0.9	0.4	2026	56	7	997	90	\$95.1M / 52% (1,750 Au, 8%)	24	11	24	**0.50

\*EV as of June 11, 2024

\*\*Estimated based on Current share price/ NAVPS, where NAVPS = NPV / (Current share outstanding + Share issued for 50% of CAPEX (+10M to FID) based on share price with 50% premium). Assumes 100% ownership.

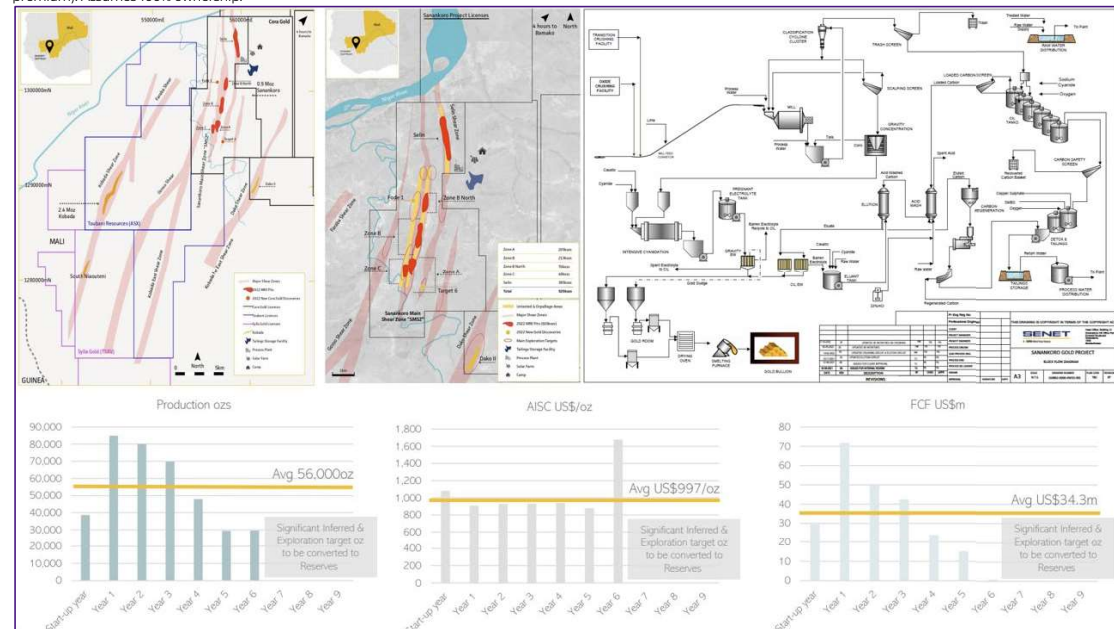


Figure 28. Figures highlighting Cora Gold's Sanankoro Gold Project. Sources: Company Filings, 3L Research.



- Pasofino Gold (VEIN-CA), Dugbe: Tackling Liberia's Gold Potential** - Pasofino's Dugbe project in Liberia is a traditional FS-level open-pit operation with solid numbers: average annual production of 172kozpa and a total output of 2.27Moz over 14 years at a grade of 1.3 g/t Au. With tenure secured and a 25-year mining right, Pasofino is making strides, pushing through environmental permits, fine-tuning metallurgy, and addressing resettlement plans. The main hurdles? Relocating communities and personnel, dealing with a sensitive biophysical and social environment, ensuring power supply, and achieving a minimum 83% LOM recovery at a targeted finer grind of P80 52um. The relocation cost is pegged at US\$10.6M, and the power solution includes a liquefied natural gas plant and solar plant. While working on these optimizations, Pasofino has launched a 1,328m drill program in the Bukon Jedah area, where artisanal mining has occurred. According to the company, early indications from drilling below these artisanal pits and historic intersections are visually promising, especially along the 99-steps trend, a key area between two hard-rock gold mining pits. Drill results are anticipated back in July/August this summer. It should be noted that Hummingbird Resources, a junior WAF producer, owns 53% of Pasofino. Is this the next stepping stone for Hummingbird after Kouroussa?

Project / Owner	EV \$USM	Country	Stage	Resv Moz Au	Resv + Res Moz Au	FS PFS PEA Moz Au	Est. Comm Prod	LOM AVG Prod Kozpa	L O M	LOM AISC US\$/oz	Build Capex US\$M	NPV / AT IRR US\$M	EV / Resv oz US\$/oz	EV / Res Oz US\$/oz	EV / Inventory Oz US\$/oz	2024E P/NAV
Dugbe/Pasofino Gold	36	Liberia	FS	2.8	3.9	2.8	2028	172	14	1,005	435	\$690M / 24% (1,700 Au, 5%)	13	9	13	**0.25

\*EV as of June 11, 2024

\*\*Estimated based on Current share price/ NAVPS, where NAVPS = NPV / (Current share outstanding + Share issued for 50% of CAPEX (+10M to FID) based on share price with 50% premium). Assumes 100% ownership.

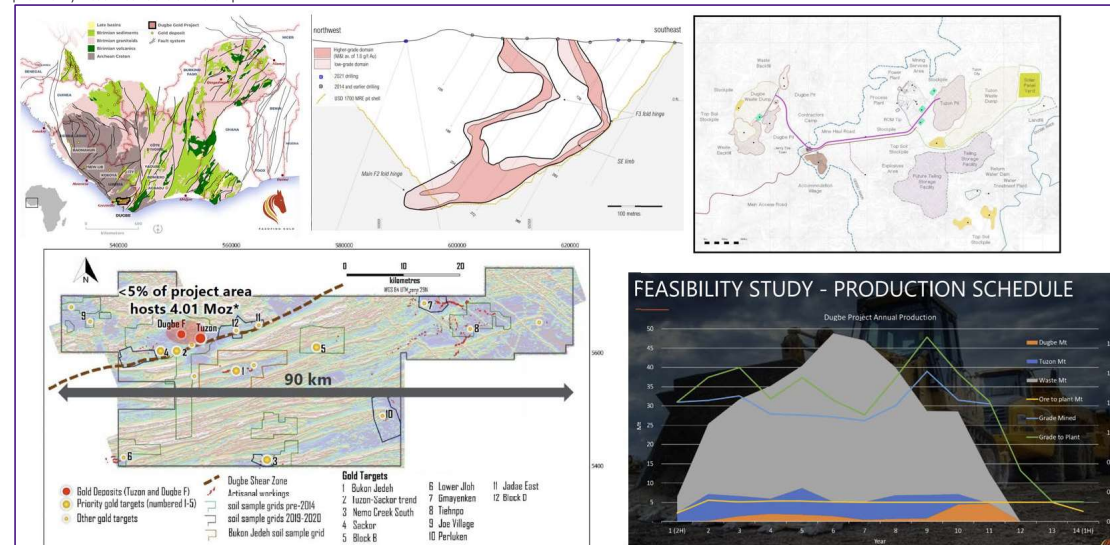


Figure 29. Figures highlighting Pasofino's Dugbe Gold Project. Sources: Company Filings, 3L Research.

Discovery Stories and Earlier Stage Ideas

- WAF is Hot for Discoveries, but Côte d'Ivoire is White Hot:** Between 2010 and 2020, WAF was a gold discovery powerhouse, and we don't see that changing anytime soon. Leading the recent charge is Côte d'Ivoire, where exploration stories like Awale Resources are making waves. Awale's stock has skyrocketed 400% in the past year, driven by a spectacular 57m at 26.1 g/t Au hit at their Charger target in Odienné. The results and share price run have caught our attention, prompting us to dive into FactSet's mining properties database. We've identified eight companies primed for significant gold discoveries or resource expansion, as detailed in Table 8 and illustrated by their impressive share price performances in Figure 30. Below, we review each company and offer some insights into spotting early-stage opportunities before the drill bit does.

**Table 8.** WAF discovery and resource expansion plays that have caught our eye. As between June 11-14. Source: FactSet, Company Filings, 3L Research.

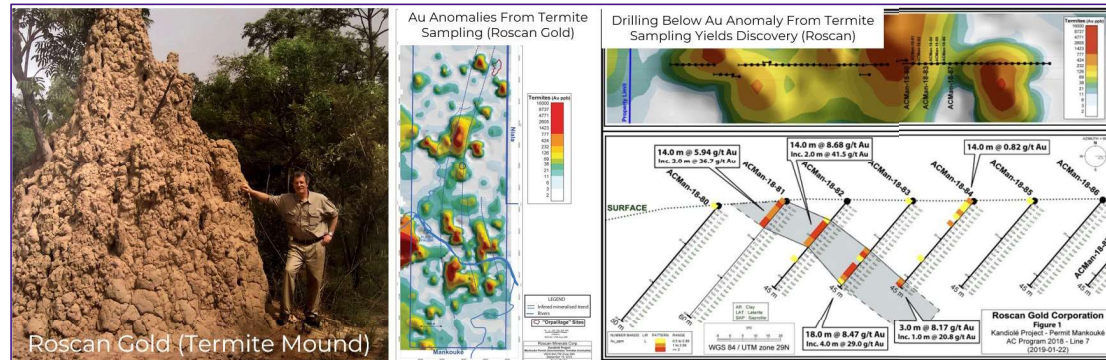
Project	Owner	Market Cap US\$	Est. Cash US\$	Est. EV US\$	Country	Stage
Sakassou	Koulou Gold	16.1	2.9	13.2	Côte d'Ivoire	Discovery
Odienné	Awale/Newmont	41.9	11.5	30.4	Côte d'Ivoire	Discovery/Expansion
Boundiali	Aurum Resources	311	14.5	16.6	Côte d'Ivoire	Discovery/Expansion
Anuri/Jonction/WouluWolou	Turaco Gold	92.1	14.2	87.7	Côte d'Ivoire	Expansion /Infill
Ferke / Odienné	Many Peaks	12.1	5.5	6.6	Côte d'Ivoire	Grass Roots Discovery/Expansion
Bouafie	WIA Gold	72.0	13.3	59	Côte d'Ivoire	Grass Roots / Discovery
Kossou	Kobo Resources	13.6	3.5	10.1	Côte d'Ivoire	Grass Roots / Discovery
Bantabaye	Sanu Gold	9.1	0.9	8.2	Guinea	Discovery/Expansion



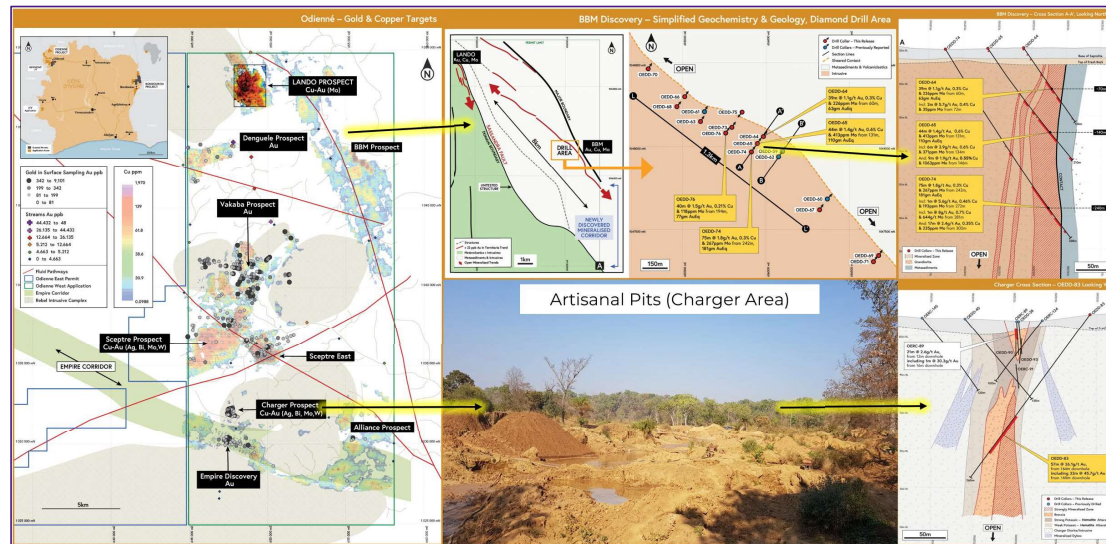
**Figure 30.** WAF discovery and resource expansion stories 1yr share price performance. Source: Trading View.

- Identifying Early Stage Opportunities in WAF:** If you're a speculator drawn to early-stage stories before drilling has commenced, this is tailored for you. One effective method to identify pre-drillhole discoveries is surface geochemical sampling—whether it be termite mound sampling, soil sampling, or auger sampling. Among these, termite mound sampling anomalies are our favourite to look for in Africa. Termite mounds form extensive networks of burrows and tunnels below the surface, providing a more representative sample of what lies beneath. This method has proven effective in identifying targets that lead to drill discoveries. A prime example is Roscan, which identified multiple large gold anomalies in termite mounds and drilled beneath them, hitting impressive intersections such as 14m @ 5.94 g/t Au, 14m @ 8.68 g/t Au, and 18m @ 8.47 g/t Au (Figure 31).

- Additional Data to Look For When Identifying Pre-Drillhole Stories:** Other indicators are crucial for identifying potential gold discoveries in conjunction with surface geochemical anomalies. Look for historical or active artisanal mining sites, as extensive artisanal mining often signals a high probability of gold mineralization near surface/at depth. Additionally, focus on major structural breaks in geophysics, particularly contacts between volcanics and sediments or between these and intrusive units, especially near major shear zones along domain boundaries. Suppose all these data layers line up, and there is a surface geochemical anomaly with artisanal mining above what is interpreted or mapped to be a domain boundary/shear zone/contact between rock units: In that case, the odds are in your favour that initial drill results in the future will be positive and received well by the market.



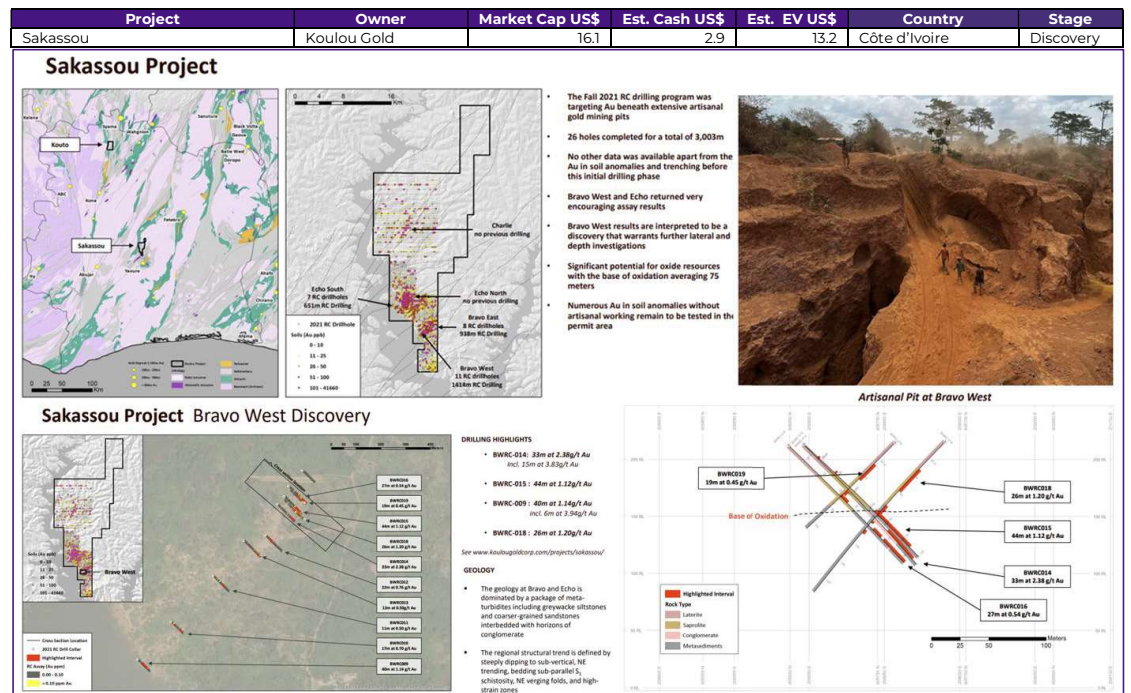
**Figure 31.** Greg Isenor standing beside a termite mound on Roscan's property in Mali. Sampling these mounds generated numerous gold anomalies that were eventually followed up with drilling. The drilling returned high-grade intersections, propelling the stock from C\$0.06 to C\$0.64 at its peak. Sources: Company website, 3L Research.



**Figure 32.** Images from Awale show multiple data layers lining up over discoveries. Large geochemical anomalies over interpreted major structures, near intrusive contacts, lithological contacts, domain boundaries and artisanal mining. All these data layers indicated gold mineralization should exist below surface, and drilling has confirmed this at multiple target areas on the property. Source: Company website, 3L Research.



- Koulou Gold (Private), Sakassou** - Koulou Gold is a private gold explorer focused in Côte d'Ivoire, Africa, started in 2021 by Desire Aboukan (Ex Exploration Manager of Africa for Newmont) and Kenorland Founders and Team (Francis McDonald, Zach Flood, Alex Ruggieri). Their principal property, Sakassou, is one of the largest artisanal mined areas in Côte d'Ivoire. The exploration program has yielded substantial gold in soil anomalies and drill discoveries, including first pass near-surface drilling results of 33m @ 2.38 g/t Au, 44m @ 1.12 g/t Au and 40m @ 1.14 g/t Au. Their approach to early-stage exploration mimics the Kenorland model, an industry best practice that has led to discoveries in Canada (i.e. Renault). Desire is Ivorian and is well-connected across the country and government. Those connections have allowed Koulou to option and pick up some of the most prospective ground in Côte d'Ivoire and will enable Koulou to pick up additional prospective land packages in the future. On May 29, Koulou received a big stamp of approval when they announced Endeavour Mining invested \$2.7M into the company for a 12.4% ownership stake. If Endeavour exercised its warrants, it would own 19.1% of the company. Koulou recently completed 10,000m of follow-up RC drilling in May, and assays are pending.



**Figure 33.** Location of the Sakassou project in Côte d'Ivoire Africa and soil anomalies. A photo of artisanal pits in the Bravo West area is shown on the top right. The Bravo West drill discovery was made below the artisanal workings. Drilling returned ore-grade intercepts in both oxidized and fresh rock. There is excellent potential to add a large amount of oxide resources at Sakassou. Sources: Company website, 3L Research.

- Awale Resources (ARIC.V), Odienné** - Awale has proven exploration targets, multimillion-ounce potential on several targets and potentially a large intrusion-related gold/porphyry copper-gold deposit on their property (Sceptre). All targets are currently on JV ground with Newmont, in which Newmont can spend \$15M to earn up to 65% of the project with an additional option to earn up to 75%. Only 2 of 7 Awale permits are under JV with Newmont but contain all of the discoveries made to date. The prize here is multiple Moz+ open pittable gold deposits and potentially a large low-grade copper-gold discovery, which is just on the JV ground. [March 18, 2024, NR](#): Excellent drill results on the BBM target show this could eventually be a 1.5Moz+ near-surface pittable resource (75m @ 2.4 g/t Au Eq, 44m @ 2.5 g/t Au Eq, 40m @ 1.9 g/t AuEq.). [March 25, 2024, NR](#): Awale hits 45.7 g/t Au over 32M at Charger Prospect, “One of the highest-grade intersections in Africa in Decades.” The brecciated intercept is north of two previously drilled breccia zones that may connect at depth. Between Empire and BBM, Awale is probably sitting between 1-2Moz @~1.5 g/t AuEq with room to grow at BBM. It’s too early to estimate ounce potential at Charger. One wildcard at Odienné is the possibility of a sizeable copper-gold resource at Sceptre. Awale hasn’t tagged into anything eye-popping yet, but it seems like they are potentially on the periphery of something big (OEDD-43 intercepted 358.5m @ 0.34 CuEq). Awale is cashed up and recently raised C\$11.5M in a bought deal. Awale will drill 25,000m in 2024, funded by Newmont.

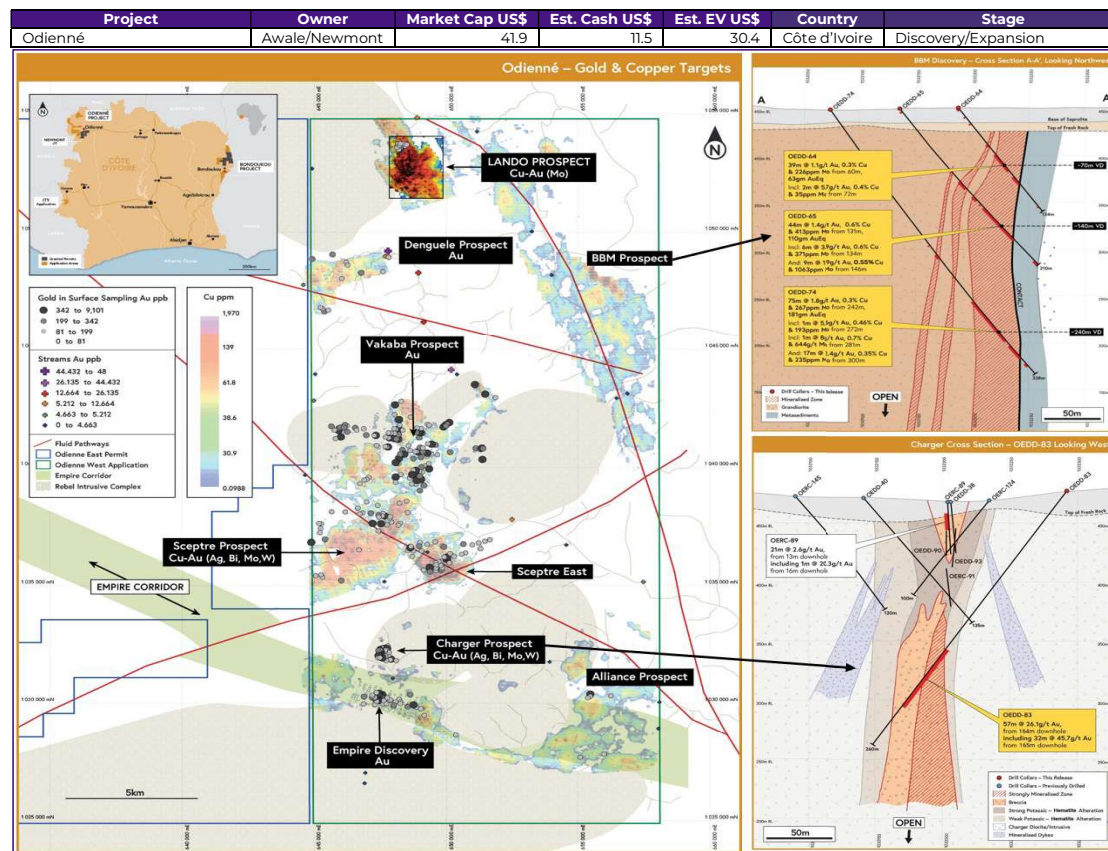


Figure 34. Plan and cross-sectional views of geochemical anomalies, major structures, and drilling results at the Odienné project. The two cross sections on the right are from the BBM and Charger prospects; Awale has recently reported positive drill results from these two areas. Sources: Company website, 3L Research.



- Aurum Resources (AUE-AU), Boundiali** - Aurum has had a series of drill bit successes in their first stage scout drilling program that commenced in December 2023 (BD 1, BD 2 and BD 3). The drilling was designed to test below multi-km gold-in-soil anomalism oriented along NE trending structures. Before the scout drilling, there were 91 RC holes, which included near surface intercepts such as 33m @ 1.01 g/t Au or 26m @ 1.6 g/t Au. Aurum's diamond drilling has been highly successful with results such as 4m @ 22.4 g/t Au, 73m @ 2.15 g/t Au, 90m @ 1.16 g/t Au, or 12m @ 14.6 g/t Au. We haven't done any napkin math yet, but Aurum is definitely outlining volumes of mineralization that would pull a pit shell and be above the cutoff in a future resource estimate. Aurum saw strong demand from investors on the back of these results and raised A\$17M on June 13. The funds will be used to ramp up drilling to 10,000m per month, and an initial resource estimate is expected in late 2024. Concurrently with the diamond drilling, they will complete geophysical and terrain surveys, geochemical sampling and metallurgical test work. This could be shaping up to be a Tietto Minerals 2.0.

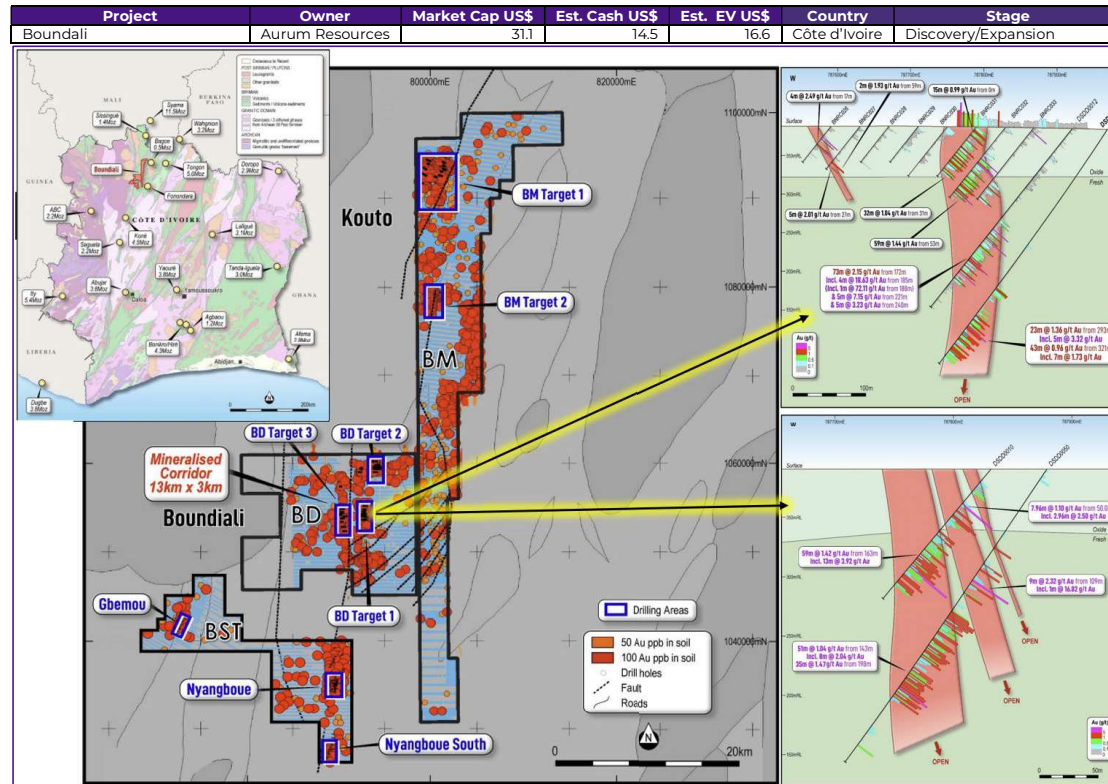


Figure 35. Location of the Boundiali gold project, plan view showing geochemical anomalies overlying major structures and two cross sections of recent drill results at Aurum's BD Target 1 area. Sources: Company website, 3L Research.

- Turaco Gold (TCG-AU), Afema Project (Woulou Woulou, Anuri and Jonction)** - Turaco Gold has acquired a 51% interest in the Afema permit with an option to acquire up to 70%. Endeavour Mining was a 51% owner of the holding company that owned the project and, with the transaction closing, is a 7% shareholder of Turaco. To get to 70%, Turaco must complete a PFS with a JORC Resource of at least 2Moz within 30 months, make a cash payment of US\$2.5M (65%), and make an additional US\$3.75M payment. Afema has a substantial amount of past drilling (>250,000m), and over US\$40M has been spent within the mining permit. Several drilled high-grade gold finds along the 25km+ Afema shear remain open and include intercepts such as 33m @ 7.5 g/t Au, 64m @ 3.1 g/t Au, 34.2m @ 5.6 g/t Au or 40m @ 7.1 g/t Au. The project is a 1.5hrs from the capital city. Since the acquisition, Turaco has started drilling at three target areas, Woulou Woulou, Anuri and Jonction and has returned excellent results: 67m @ 8.43 g/t Au, 50m @ 2.13 g/t Au, 105m @ 1.6 g/t Au, or 75m @ 1.01 g/t Au. Two rigs are currently operating at Woulou with a third being mobilized to site to complete extensional and resource definition drilling. An initial resource estimate will be completed for Woulou and incorporated into the wider Afema project. An updated resource estimate is planned for H2 2024 and H2 2025. Turaco will also complete metallurgical test work concurrently with the drilling. Turaco is cashed up and recently completed an A\$18M raise on May 7, 2024.

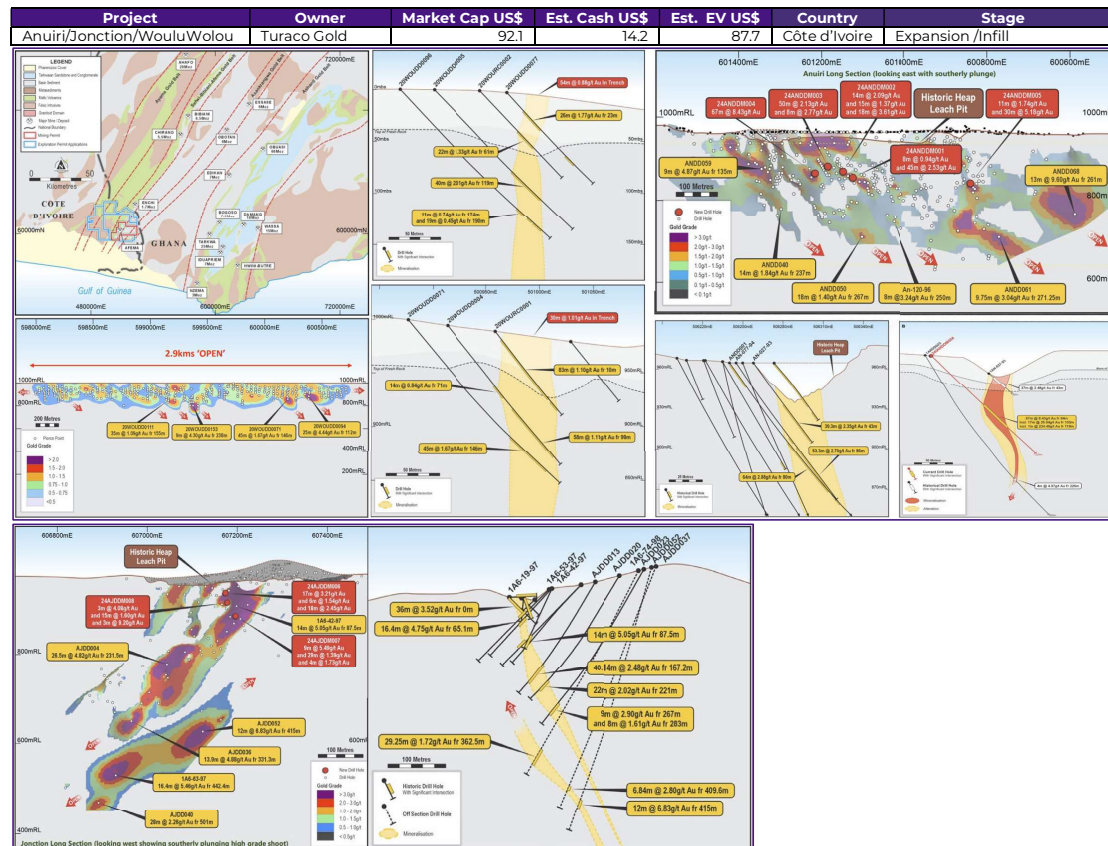
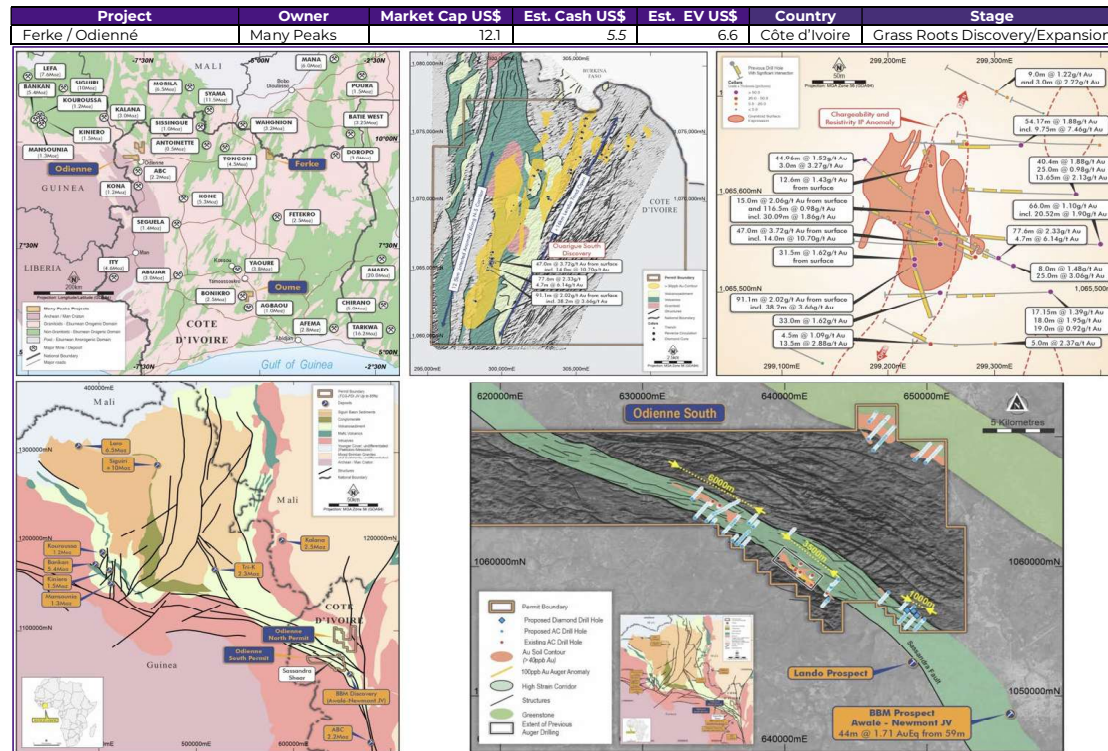


Figure 36. Location of the Afema project and long/cross sections of the Woulou Woulou, Anuri and Jonction deposits. Sources: Company website, 3L Research.

- Many Peaks Minerals (MPK-AU), Ferke + Odienné** - On March 26, 2024, Many Peaks announced an agreement to acquire 100% interest in Turaco Gold and Predictive Discovery's JV holding to the right to acquire an 85% interest in four mineral permits in Côte d'Ivoire. At Ferke near the Burkina Faso border, previous diamond drilling has returned results such as 36m @ 3.9 g/t Au, 91.2m @ 2 g/t Au, 47m @ 3.7 g/t Au or 9.8m @ 7.5 g/t Au. The Ferke permit is situated along a regional scale shear zone flexure above which a large 16km long gold-in-soil anomaly exists. Early success saw minimal follow-up as previous operators were focused on more advanced opportunities at the time. Since 2021, no exploration has occurred at Ferke due to the project's proximity to the Burkina Faso border. However, Many Peaks has completed a risk assessment and believes the property can be worked. The work program at Ferke will consist of auger drilling and surface geochemical sampling focused on defining drill targets. The company will also be required to file a renewal application for Ferke for an additional 3yr exploration term. The Odienné project consists of two exploration permits along strike to the north and northeast of Awale's Odienné project. Previous work has identified over 30km of geochemical anomalies coincident with the Sassandra Shear corridor. The previous operator completed 5,149m of air core drilling within some of the geochemical anomalism and returned results between 8-16m thick and grading 1 to 1.3 g/t Au. The work program at Odienné will be very similar to Ferke, with additional surface geochemical sampling, mapping and modelling reviews to define follow-up drilling targets. 6,500m of drilling at Odienné is planned in 2024, with 1,000m between 5 holes to follow up on gold intercepted in the previous air core program, 4,000m of auger drilling across three priority gold in soil anomalies and 1500m of new auger drilling to test a 6km long trend of gold in soil anomaly northeast of previous drilling.



**Figure 37.** Location of the Odienné, Ferke and Oume projects and a series of plan views showcasing the Ferke and Odienné project geology and initial results. The location of the proposed diamond and air core holes at Odienné are shown in the bottom right image. *Source: Company website, 3L Research.*



- WIA Gold (WIA-AU), Bouaflé** - We are only going to discuss the Côte d'Ivoire project, but we recommend taking a look at their Kokoseb gold discovery in Namibia as it is pretty interesting (2.1Moz @ 1 g/t Au). WIA has four projects in Côte d'Ivoire, with additional applications outstanding. The most advanced project, Bouaflé, will see RC and possibly diamond drilling this year, with the company recently announcing on May 27 that RC drilling has started. The RC program will test ten strong mineralized trends previously identified. An initial 6,000m of drilling is planned, with an optional 4,000m of follow-up depending on results. Previous air core drilling on parts of the property returned 4-20m thick intercepts grading between 1.2 to 6 g/t Au. On their other Côte d'Ivoire permits, they will complete regional and infill soils and auger drilling, stream sampling, rock chip sampling and mapping, and air core drilling. WIA has a healthy cash balance of A\$20.8 as of March 31, 2024.

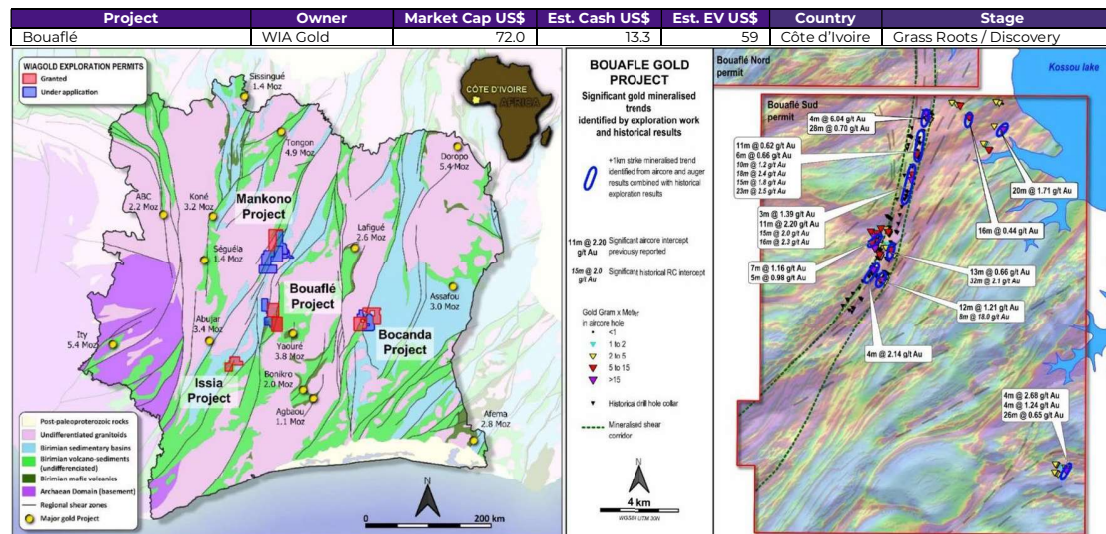


Figure 38. Location of WIA's projects in Côte d'Ivoire and a plan view showcasing a 1km+ mineralized trend. Results of historic air core drilling are also shown. Source: Company website, 3L Research.

- Kobo Resources (KRI-CA), Kossou** - Kobo Resources is laser-focused on their Kossou permit, strategically located next to Perseus's Yaouré mine, which is slated to produce 268koz of gold in 2024. Extensive surface soil sampling has unveiled over 9km of gold anomalies across multiple zones on the property, following N-S to SE-NW trends. This led to trenching and drilling with impressive results such as 29m @ 6.4 g/t Au, 68m @ 1.8 g/t Au, 47m @ 3.92 g/t Au, 33m @ 4.7 g/t Au, and 11m @ 5.2 g/t Au. To date, Kobo has completed 5,714m of trenching (93 trenches) and 5,887m of initial drilling (53 holes). For H1, plans include 4,000-5,000m of drilling on the Jagger, Road Cut, and Kadie Zones, with continuous drilling projected throughout the year. Kobo aims to drill 10,000-12,000m in H2 2024 and 40,000-50,000m in 2025, at an expected drilling cost of C\$215/m. Concurrently with drilling, they will also complete soil geochemistry programs, mapping and additional trenching. Kobo is raising C\$8M through a non-brokered/brokered private placement, having already closed the first tranche of C\$4.4M on June 4th. Should Kobo prove to be a critical mass of resources, it could become a prime acquisition target for Perseus.

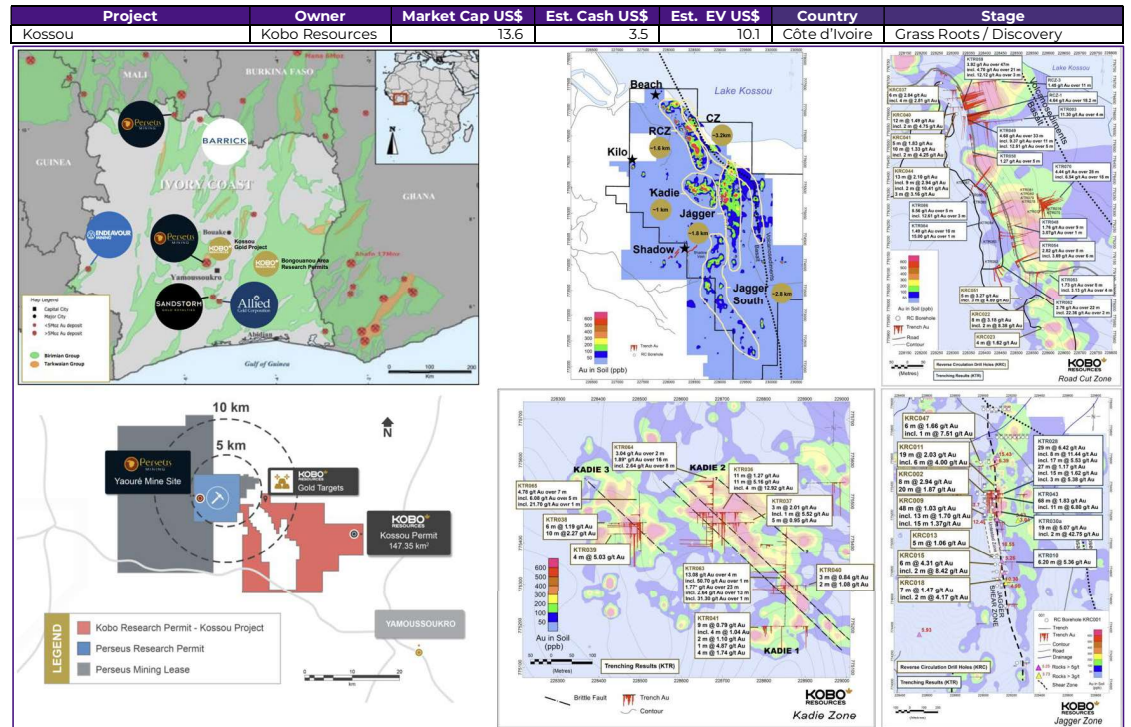


Figure 39. Location of Kobo resources Kossou permit, soil geochemical anomalist and drill and trenching highlights. Source: Company website and 3L Research.



- Sanu Gold (SANU-CA), Bantabaye** - Sanu controls 28,000km<sup>2</sup> of prospective ground in Guinea and is in the middle of an 8,000m drill program. Their latest news release of May 23, 2024, states they have completed 5,201m to date. The drilling program is following up on gold-in-termites-mound anomalism below artisanal mined sites and in proximity to surface trenching and 2022 and 2023 diamond drilling. Surface trenches have returned results such as 80m @ 1.46 g/t Au or 1.1 g/t Au over 43m, and historical drilling has returned results such as 37m @ 1.99 g/t Au or 15m @ 11.4 g/t Au. Mineralization seems to be trending along a shallow dipping thrust fault, which, if they can establish continuity of 50gm+ intervals, would mean a low strip in the future. Initial metallurgical test work suggests 90%+ recoveries may be possible with cyanide leaching. The company should have a steady flow of assay results over the summer but is low on cash and likely needs to raise shortly. If the drilling results are positive, this shouldn't be a problem, but if not, Sanu could be in trouble.

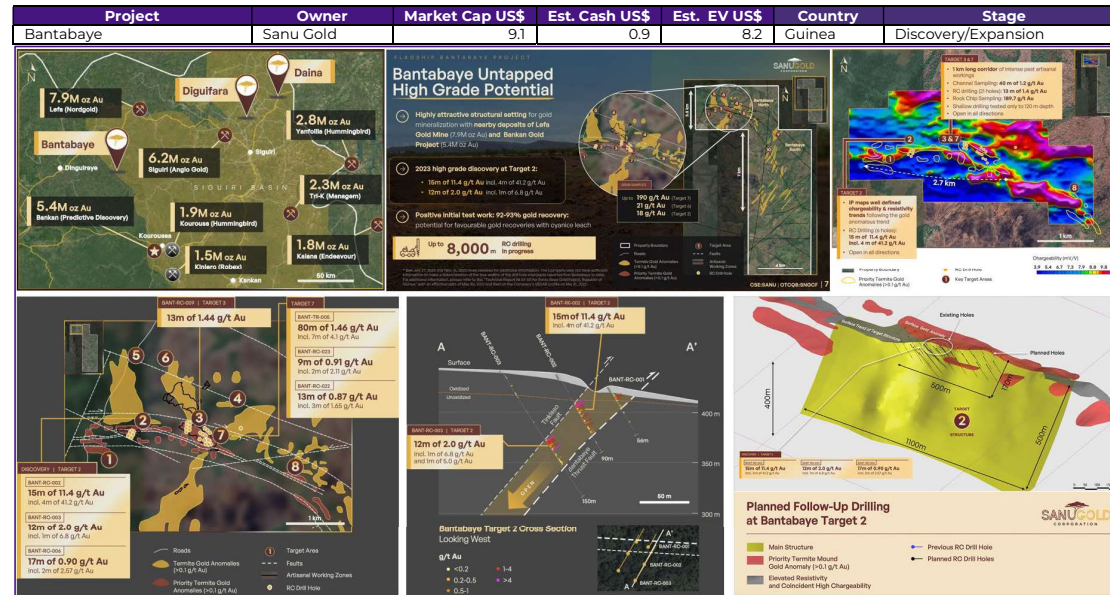


Figure 40. Location of the Bantabaye project, plan views of termite gold anomalies, cross sections of drilling results and an isometric view of one of the drilling targets. Source: Company website, 3L Research.

## To Sum it All Up

- WAF is emerging as the new caviar of the gold sector, offering rich opportunities for discoveries, growth stories, and rapid production timelines. Heavyweights like Newmont and Barrick are mining significant ounces here, with Endeavour Mining poised to lead the WAF pack, with five operating mines in 2024. The region is abuzz with new mine builds and expansions, thanks to favourable policy and permitting regimes in countries like Côte d'Ivoire, Mauritania, Guinea, and Ghana, now competing with more favourable South American jurisdictions. Advanced gold projects held by juniors, such as Predictive Discovery's Bankan project and Montage Gold's Koné project, are some of the bigger and better undeveloped gold assets in WAF, but also globally. At the same time, Côte d'Ivoire stands out for its sizzling discovery plays, with companies like Awale and Turaco Gold reporting excellent drill results that have driven valuations up over 100% in the last year. Despite the risks associated with political instability and regulatory changes, WAF's economic growth, attractive valuations, and active M&A scene present a compelling investment case. For those looking to capitalize on the next big discovery, acquisition or growth story in gold, WAF is where the action is.

## References

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## APPENDIX

*Geological Map of West Africa and Individual Country Information*

# SEMS West Africa Dec 2022 Geological Map

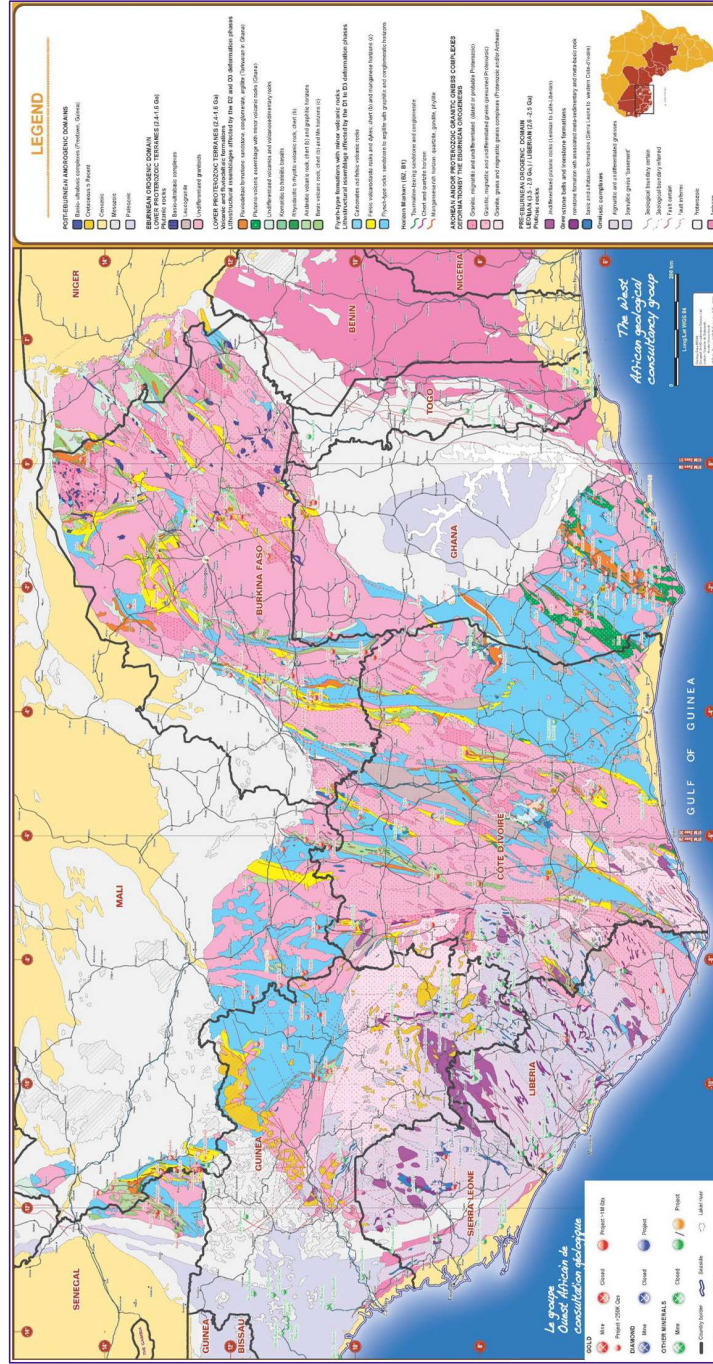


Figure 41. Geological Map of West Africa. Source: SEMS Exploration.

Countries

Burkina Faso

Government fragility in Burkina Faso has heightened the risk of another coup within a year, following an attempted coup in September 2023. The two coups in 2022 weakened the state, allowing jihadist violence to intensify under interim President Captain Ibrahim Traoré. The government's anti-French stance and pro-Russian sentiments may lead to security assistance from Russia's Wagner private military company. Despite Russian involvement, the jihadist insurgency persists, delaying elections planned for July 2024. The economy suffers as jihadists target gold-mining companies, leading to increased government royalties, while political instability deters foreign investment in the gold-mining industry.

Table 9. Burkina Faso Country Profile.

Country Profile	
GDP (2023)	US\$20.5B
GDP y/y%	+3.6%
GDP per Capita	US\$902
CPI % (2023)	+0.7%
S&P Country Risk	3.6
Number of Coup since 2000	2
Next Election	N/A
Mining Corporate Tax	28%
Mining Royalties	16%
Free Carried Interest	10-15%

Source: Cap IQ, Fraser, Voice of America & Global Business Report.

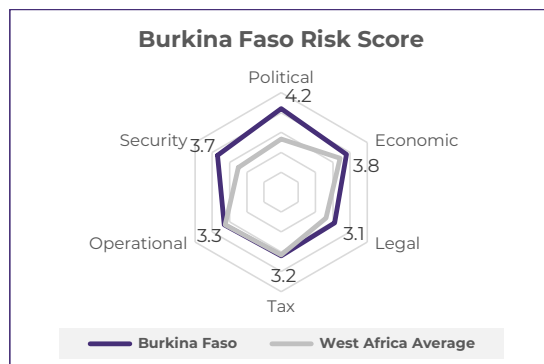


Figure 42. S&P Burkina Faso Country Risk Score Breakdown. Sources: S&P Capital IQ, 3L Research.

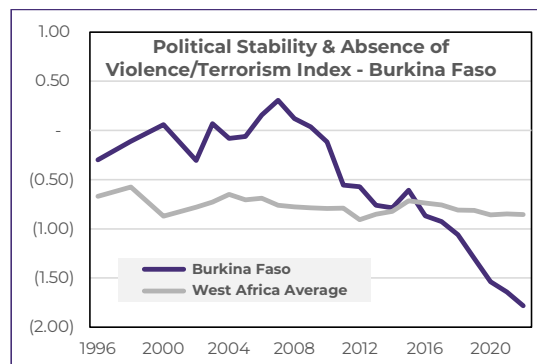


Figure 43. Political Stability & Absence of Violence/Terrorism Index. Sources: World Bank, 3L Research.

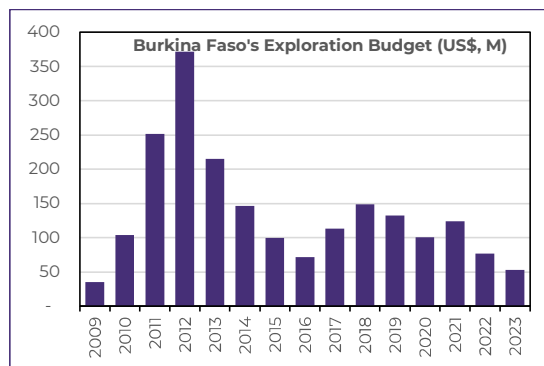


Figure 44. Burkina Faso's Exploration Budget. Sources: S&P Capital IQ, 3L Research.

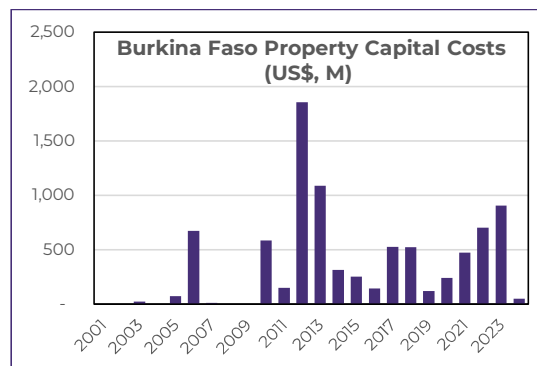


Figure 45. Burkina Faso's Property Capital Costs. Sources: S&P Capital IQ, 3L Research.



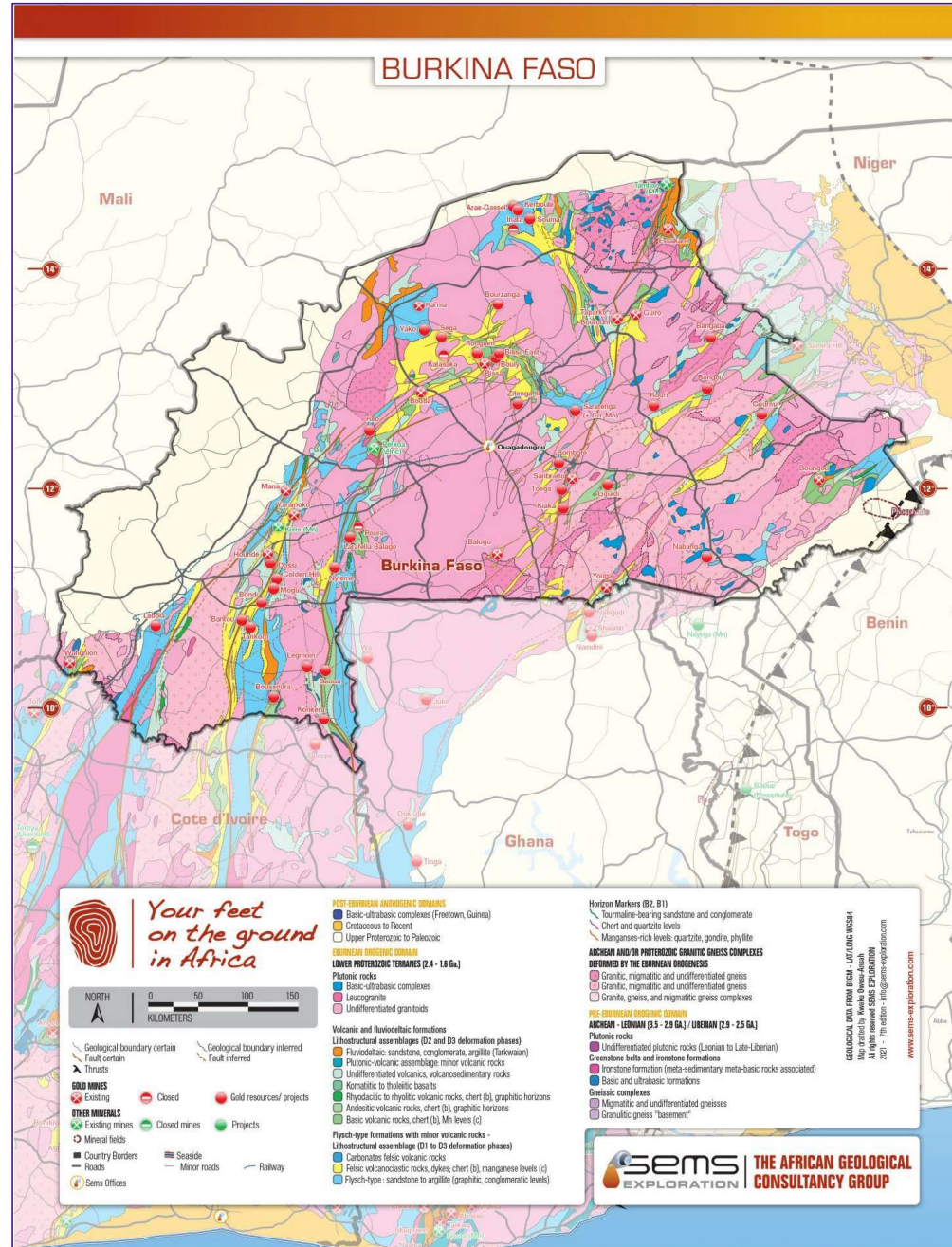


Figure 46. Geological Map of Burkina Faso. Source: SEMS Exploration.

### Côte d'Ivoire

The ruling RHDP solidified its dominance in Côte d'Ivoire by winning the September 2023 local elections, securing 25 of 31 regions and 123 of 201 municipalities. With a weak and divided opposition, an RHDP victory in the next presidential election is likely, whether it's President Ouattara or his successor. Ouattara appointed Robert Beugré Mambé as prime minister in October 2023. The opposition suffered further setbacks with the death of former president Henri Konan Bédié, though Tidjane Thiam's new leadership may revitalize the PDCI party. Côte d'Ivoire faces strained relations with coup-hit Sahelian neighbours, complicating security cooperation. The IMF approved a \$3.5-billion financing agreement in April 2023, with Côte d'Ivoire on track to reduce its fiscal deficit to below 3% of GDP by 2025. S&P forecasts real GDP growth of 6.5% for 2024 and 6.4% for 2025, despite risks from the Russia-Ukraine war.

Table 10. Côte d'Ivoire Country Profile.

Country Profile	
GDP (2023)	US\$73.8B
GDP y/y%	+6.0%
GDP per Capita	US\$2,754
CPI % (2023)	+4.4%
S&P Country Risk	2.2
Number of Coup since 2000	0
Next Election	Oct 2025
Mining Corporate Tax	25%
Mining Royalties	3-6%
Free Carried Interest	10%

Source: Cap IQ, Fraser, Voice of America & Global Business Report.

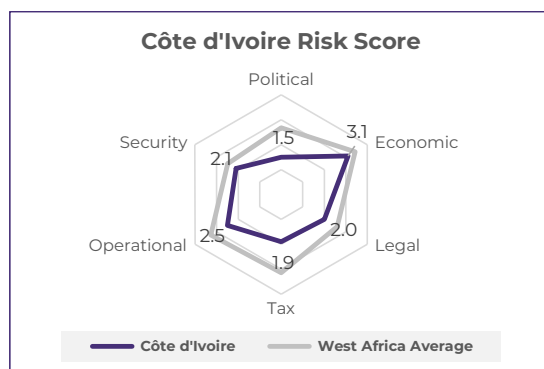


Figure 47. S&P Côte d'Ivoire Country Risk Score Breakdown. Sources: S&P Capital IQ, 3L Research.

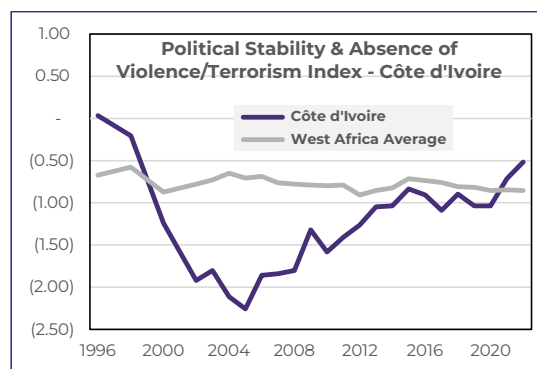


Figure 48. Political Stability & Absence of Violence/Terrorism Index. Sources: World Bank, 3L Research.

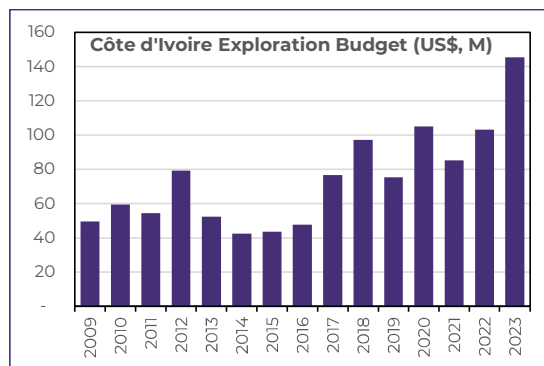


Figure 49. Côte d'Ivoire's Exploration Budget. Sources: S&P Capital IQ, 3L Research.

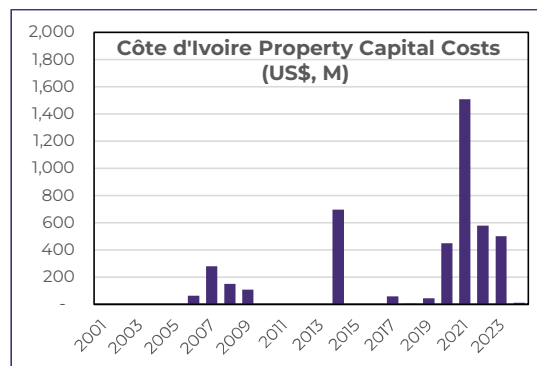


Figure 50. Côte d'Ivoire's Property Capital Costs. Sources: S&P Capital IQ, 3L Research.



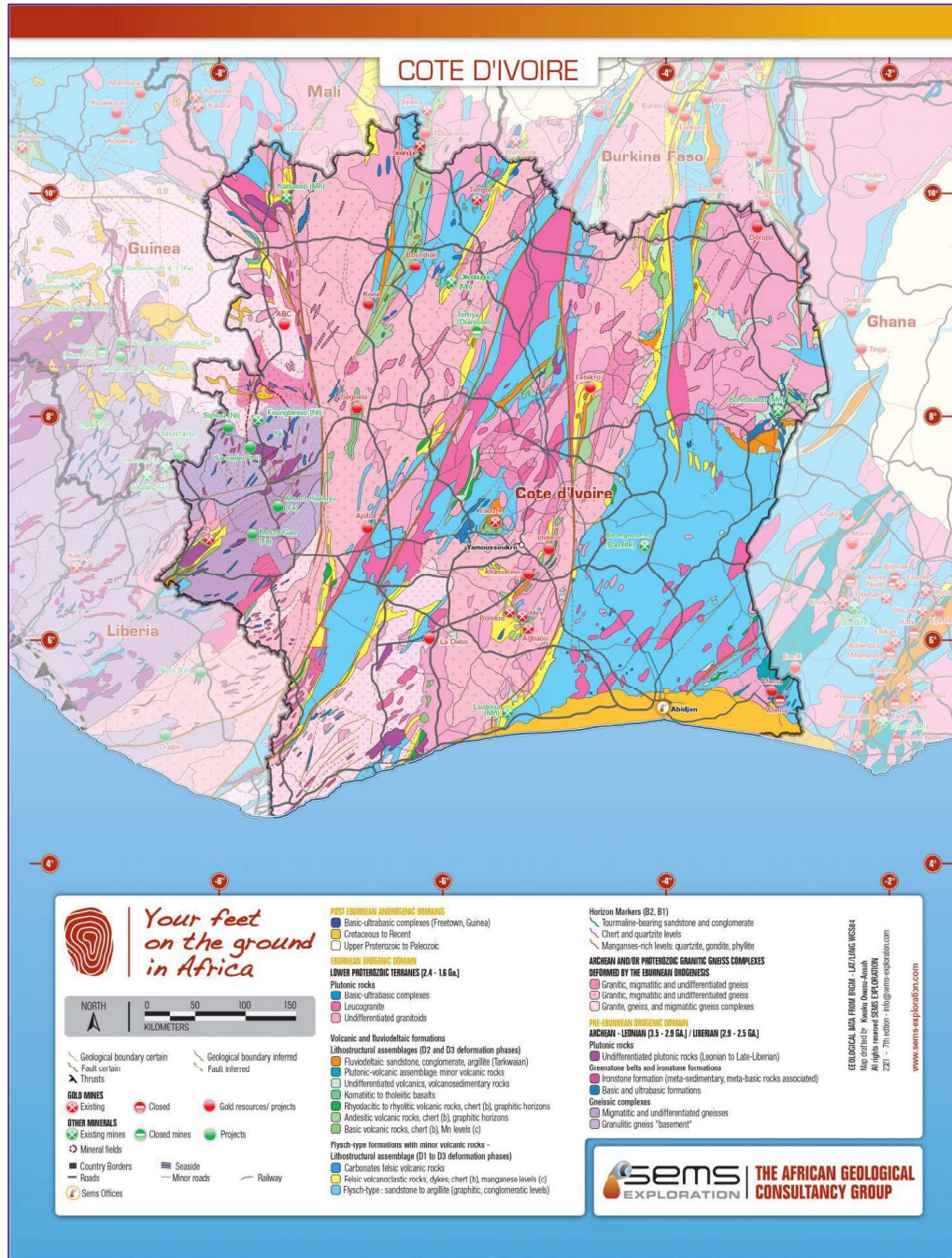


Figure 51. Geological Map of Côte d'Ivoire. Source: SEMS Exploration.

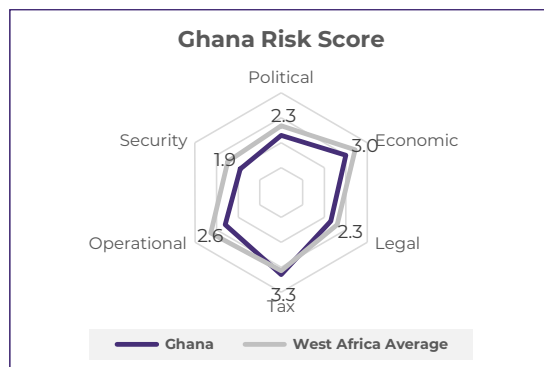
**Ghana**

In February 2024, President Nana Akufo-Addo reshuffled his NPP government, replacing 18 ministers, including Finance Minister Ken Ofori-Atta with Mohammed Amin Adam. This comes ahead of the December 2024 general election. Ghana is negotiating to restructure \$13 billion in Eurobonds, reaching an agreement with China and France under the G20 Common Framework. However, the IMF rejected a proposed Eurobond restructuring deal in April 2024. Ghana risks losing \$850 million in World Bank financing due to an anti-LGBT+ law. Inflation is decreasing, and the cedi is expected to stabilize. The Bank of Ghana aims to reduce inflation to 15% by the end of 2024. Economic recovery is supported by the IMF program but may change if the opposition wins the election. Cost-of-living pressures could lead to anti-government protests. The government is aggressively increasing tax revenue, aiming for 20% of GDP by 2028, with new environmental taxes in the 2024 budget.

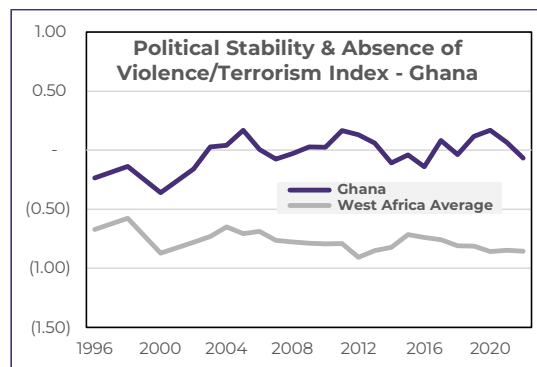
**Table 11. Ghana Country Profile.**

Country Profile	
GDP (2023)	US\$76.6B
GDP y/y%	+2.9%
GDP per Capita	US\$2,263
CPI % (2023)	+39.2%
S&P Country Risk	2.5
Number of Coup since 2000	0
Next Election	Dec 2024
Mining Corporate Tax	35%
Mining Royalties	5%
Free Carried Interest	10%

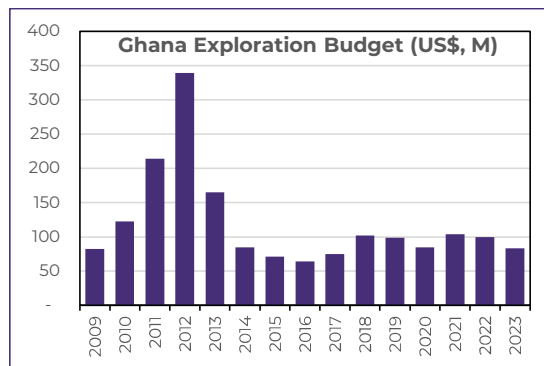
Source: Cap IQ, Fraser, Voice of America & Global Business Report.



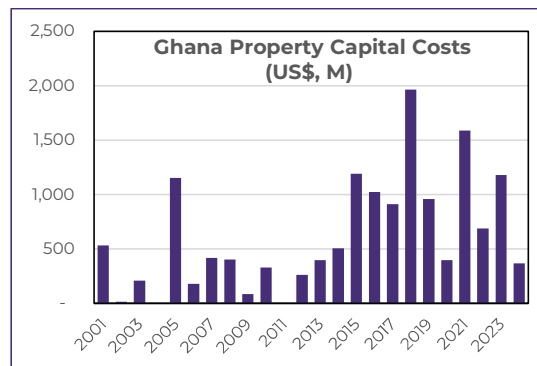
**Figure 52. S&P Ghana Country Risk Score Breakdown.**  
Sources: S&P Capital IQ, 3L Research.



**Figure 53. Political Stability & Absence of Violence/Terrorism Index.** Sources: World Bank, 3L Research.



**Figure 54. Ghana's Exploration Budget.**  
Sources: S&P Capital IQ, 3L Research.



**Figure 55. Ghana's Property Capital Costs.**  
Sources: S&P Capital IQ, 3L Research.



Figure 56. Geological Map of Ghana. Source: SEMS Exploration.



### Guinea

The Guinean junta named a new interim government on March 13, 2024, retaining only 14 of the 29 previous ministers due to internal quarrels and corruption allegations. Opposition leader Mamadou Oury Bah was appointed prime minister but remains isolated in a government dominated by allies of interim president Mamady Doumbouya. The new team will work on a delayed constitution, pushing elections to late 2025. A three-day strike in late February 2024 halted work nationwide, including mines, and secured some concessions from the junta. Further labour unrest is likely due to unmet wage deals and rising food prices. Limited civil unrest may occur following demands for timely elections by the National Alliance for Alternation and Democracy. The junta is expediting the Simandou iron-ore project, though production delays are expected until late 2025 and early 2026. Guinea's mining activity, especially in bauxite, has led to high GDP growth, with forecasts for 2024 and 2025 at 5.5% and 5.6%, respectively, outperforming regional peers.

Table 12. Guinea Country Profile.

Country Profile	
GDP (2023)	US\$16.3B
GDP y/y%	+5.0%
GDP per Capita	US\$1,625
CPI % (2023)	+7.8%
S&P Country Risk	3.1
Number of Coup since 2000	1
Next Election	Dec 2024
Mining Corporate Tax	30%
Mining Royalties	5%
Free Carried Interest	15%

Source: Cap IQ, Fraser, Voice of America & Global Business Report, Kiniero 2022 PFS.

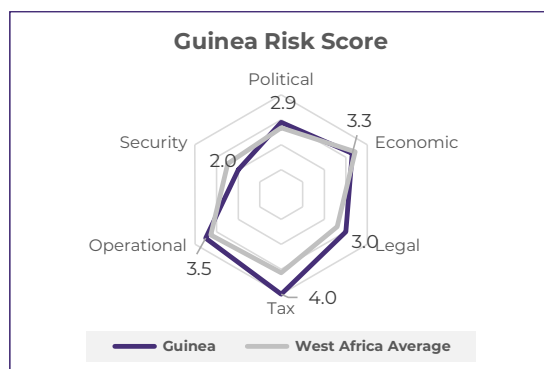


Figure 57. S&P Guinea Country Risk Score Breakdown. Sources: S&P Capital IQ, 3L Research.

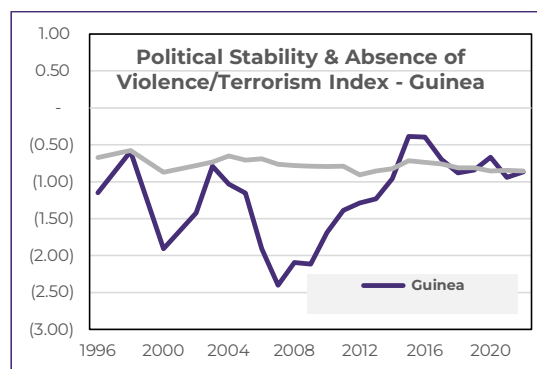


Figure 58. Political Stability & Absence of Violence/Terrorism Index. Sources: World Bank, 3L Research.

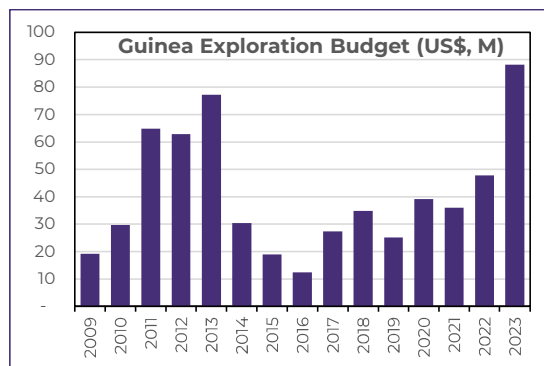


Figure 59. Guinea's Exploration Budget. Sources: S&P Capital IQ, 3L Research.

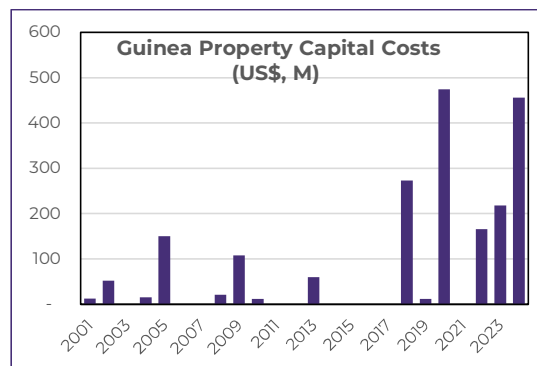


Figure 60. Guinea's Property Capital Costs. Sources: S&P Capital IQ, 3L Research.

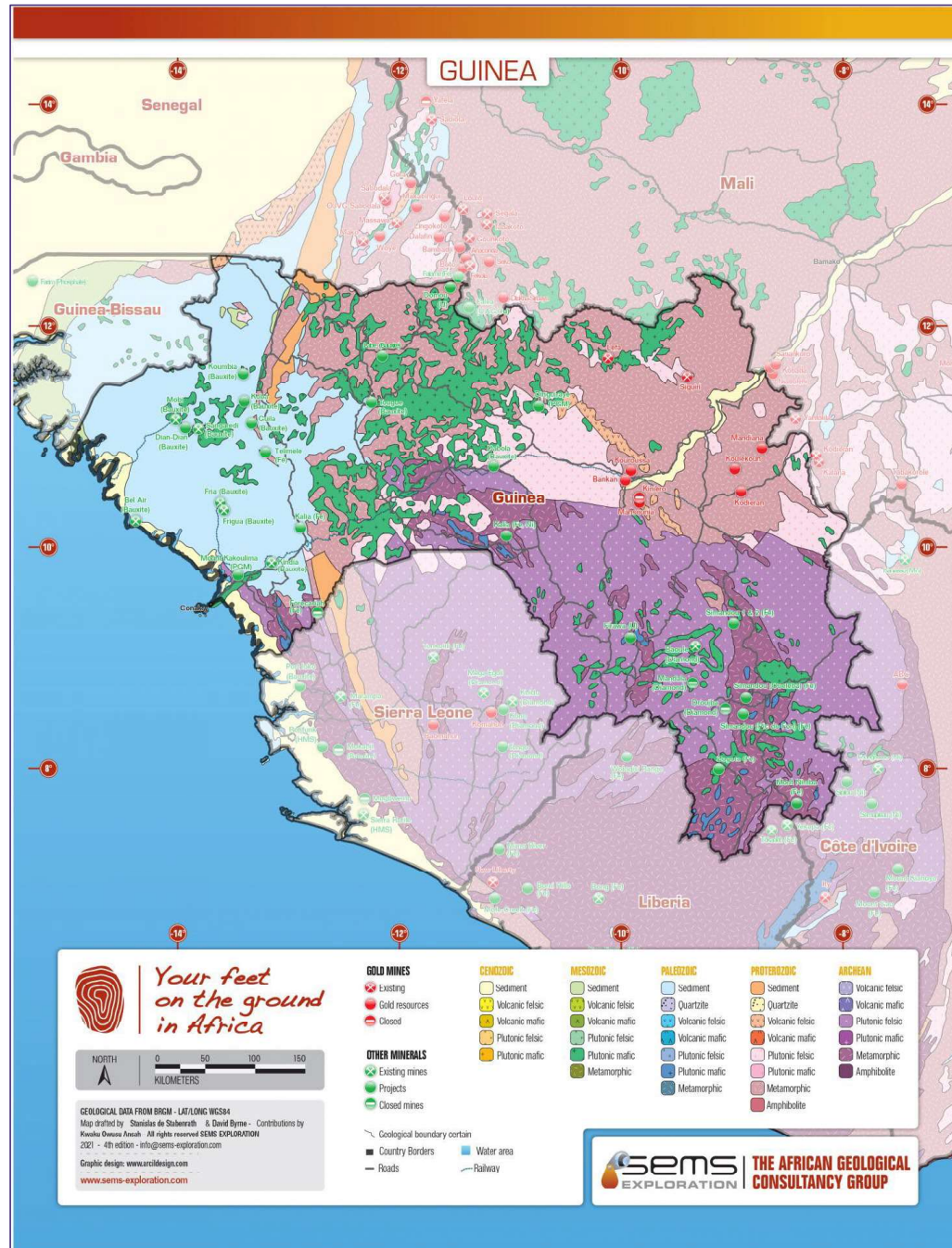


Figure 61. Geological Map of Guinea. Source: SEMS Exploration.

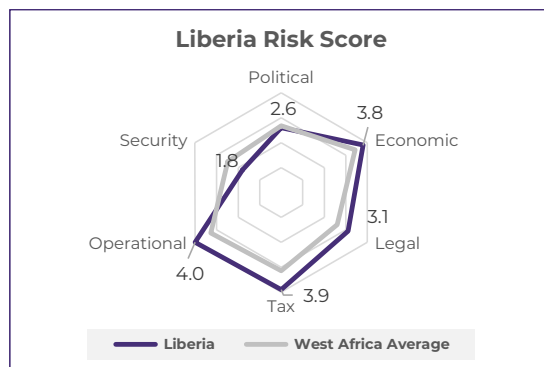
**Liberia**

Joseph Boakai of the Unity Party won the 2023 presidential election runoff against incumbent George Weah and was sworn in on January 22, 2024. Living standards had declined since Weah's presidency began in 2018, but Boakai's running mate, Jeremiah Koung, was crucial to his win. Boakai aims to review all mining contracts, but with the UP holding only 11 of 89 seats in the House of Representatives, this will be difficult. The unresolved US\$800-million ArcelorMittal expansion plan highlights the challenge. Boakai has appointed Sylvester Grigsby to address these issues. Foreign investors face financial demands, and three Weah officials were sanctioned for alleged corruption. Boakai plans to reduce corruption. The IMF urges spending cuts and reduced tax incentives. S&P forecasts 4% GDP growth for Liberia in 2023, despite global financial pressures and rising prices, offset by remittances and foreign investment.

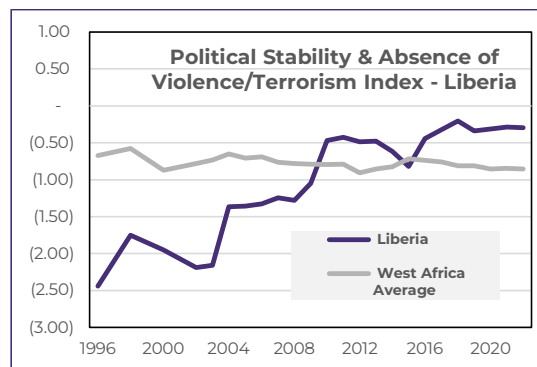
**Table 13.** Liberia Country Profile.

Country Profile	
GDP (2023)	US\$2.37B
GDP y/y%	+4.6%
GDP per Capita	US\$563
CPI % (2023)	+7.1%
S&P Country Risk	3.2
Number of Coup since 2000	0
Next Election	Oct 2029
Mining Corporate Tax	25%
Mining Royalties	11.6%
Free Carried Interest	10%

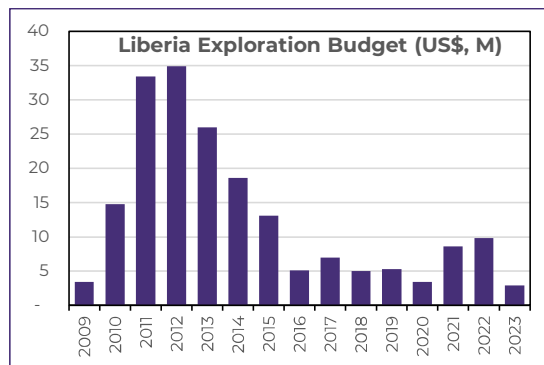
Source: Cap IQ, Fraser, Voice of America, Tax Justice Network & Pasofino Gold PR.



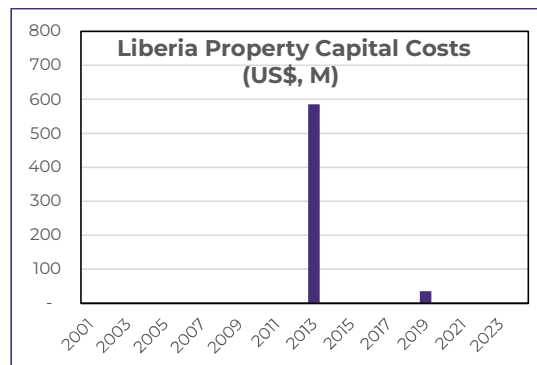
**Figure 62.** S&P Liberia Country Risk Score Breakdown. Sources: S&P Capital IQ, 3L Research.



**Figure 63.** Political Stability & Absence of Violence/Terrorism Index. Sources: World Bank, 3L Research.



**Figure 64.** Liberia's Exploration Budget. Sources: S&P Capital IQ, 3L Research.



**Figure 65.** Liberia's Property Capital Costs. Sources: S&P Capital IQ, 3L Research.

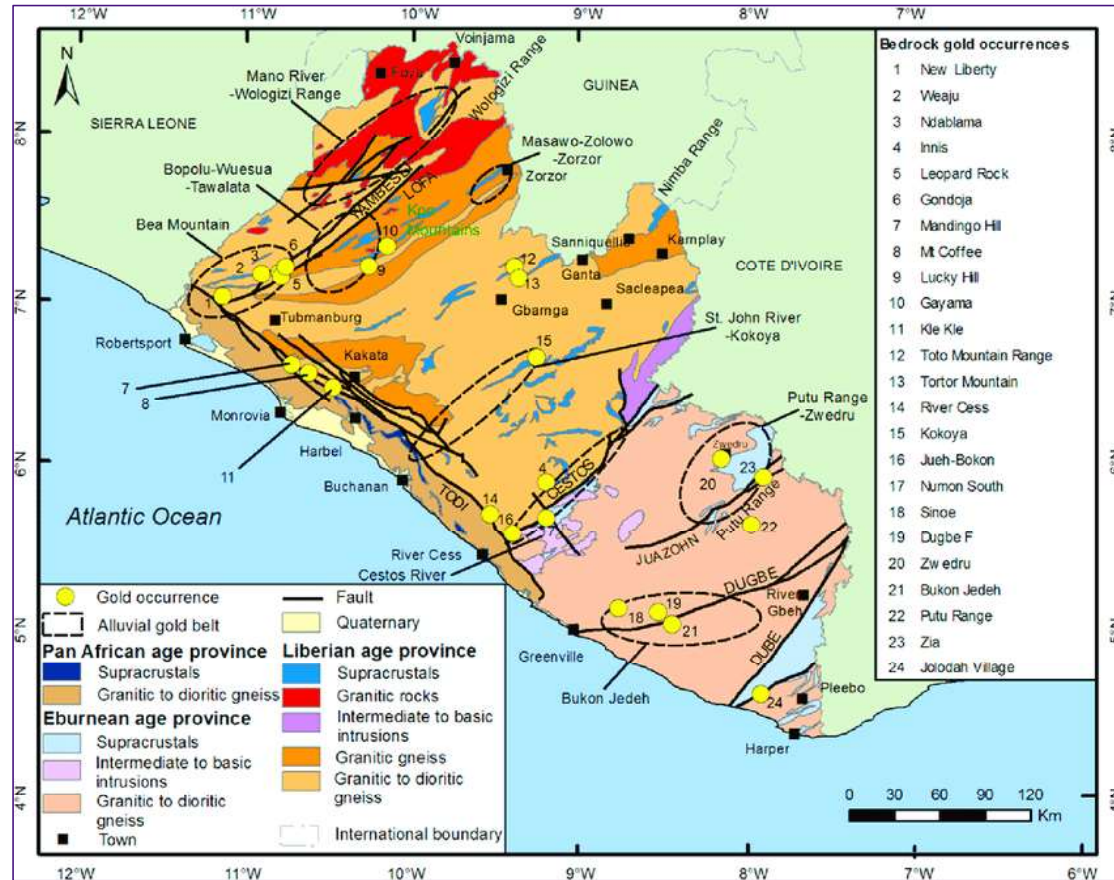


Figure 66. Geological Map of Liberia. Source: Gunn et al., 2018.



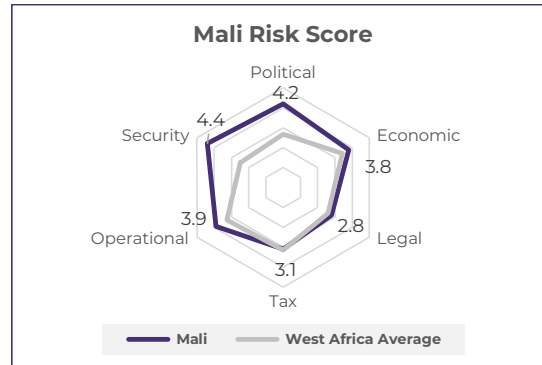
**Mali**

Mali’s transitional authorities announced a delay to the February 2024 presidential elections, citing technical issues with a new constitution and voter lists. Legislative elections set for late 2023 have also been postponed. Despite a June 2023 referendum passing with 97% approval, low turnout reflected widespread distrust. The delay, likely due to worsening security, shows defiance towards ECOWAS, which lifted sanctions based on the election schedule. The worsening security situation, with jihadists exploiting socio-economic issues, is compounded by the departure of France’s Barkhane operation and the ineffective presence of Russia’s Wagner group. The UN’s MINUSMA mission ending in 2023 will further expose Mali to increased violence, particularly in the north. Economic growth is expected to decline to 4.0% in the medium term, driven by domestic demand and public investment, but heavily reliant on foreign lending. The US suspension of Mali from duty-free access since January 2022 adds to growth risks.

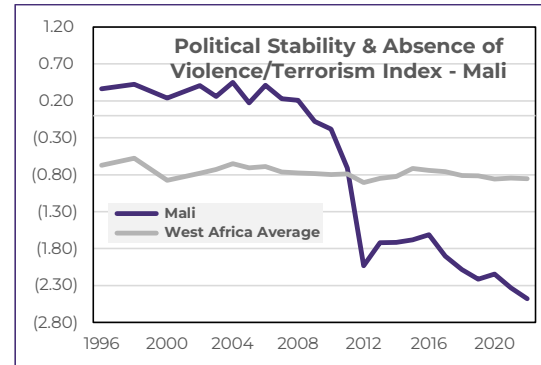
**Table 14. Mali Country Profile.**

Country Profile	
GDP (2023)	US\$20.3B
GDP y/y%	+4.8%
GDP per Capita	US\$885
CPI % (2023)	+2.1%
S&P Country Risk	3.7
Number of Coup since 2000	2
Next Election	N/A
Mining Corporate Tax	25%
Mining Royalties	3%
Free Carried Interest	20-35% (20% Base)

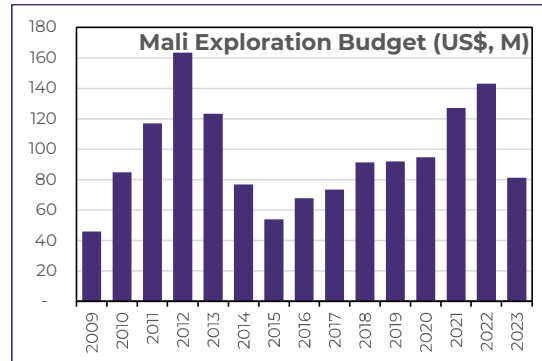
Source: Cap IQ, Fraser, Voice of America & Global Business Report.



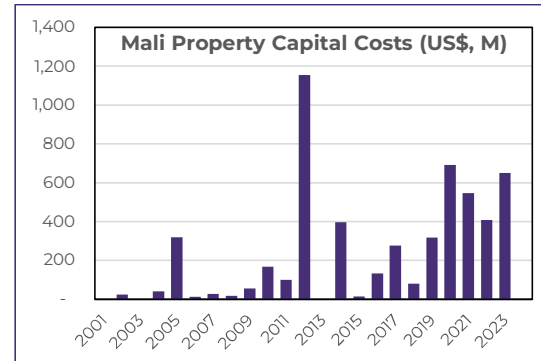
**Figure 67. S&P Mali Country Risk Score Breakdown.**  
Sources: S&P Capital IQ, 3L Research.



**Figure 68. Political Stability & Absence of Violence/Terrorism Index.** Sources: World Bank, 3L Research.



**Figure 69. Mali's Exploration Budget.**  
Sources: S&P Capital IQ, 3L Research.



**Figure 70. Mali's Property Capital Costs.**  
Sources: S&P Capital IQ, 3L Research.



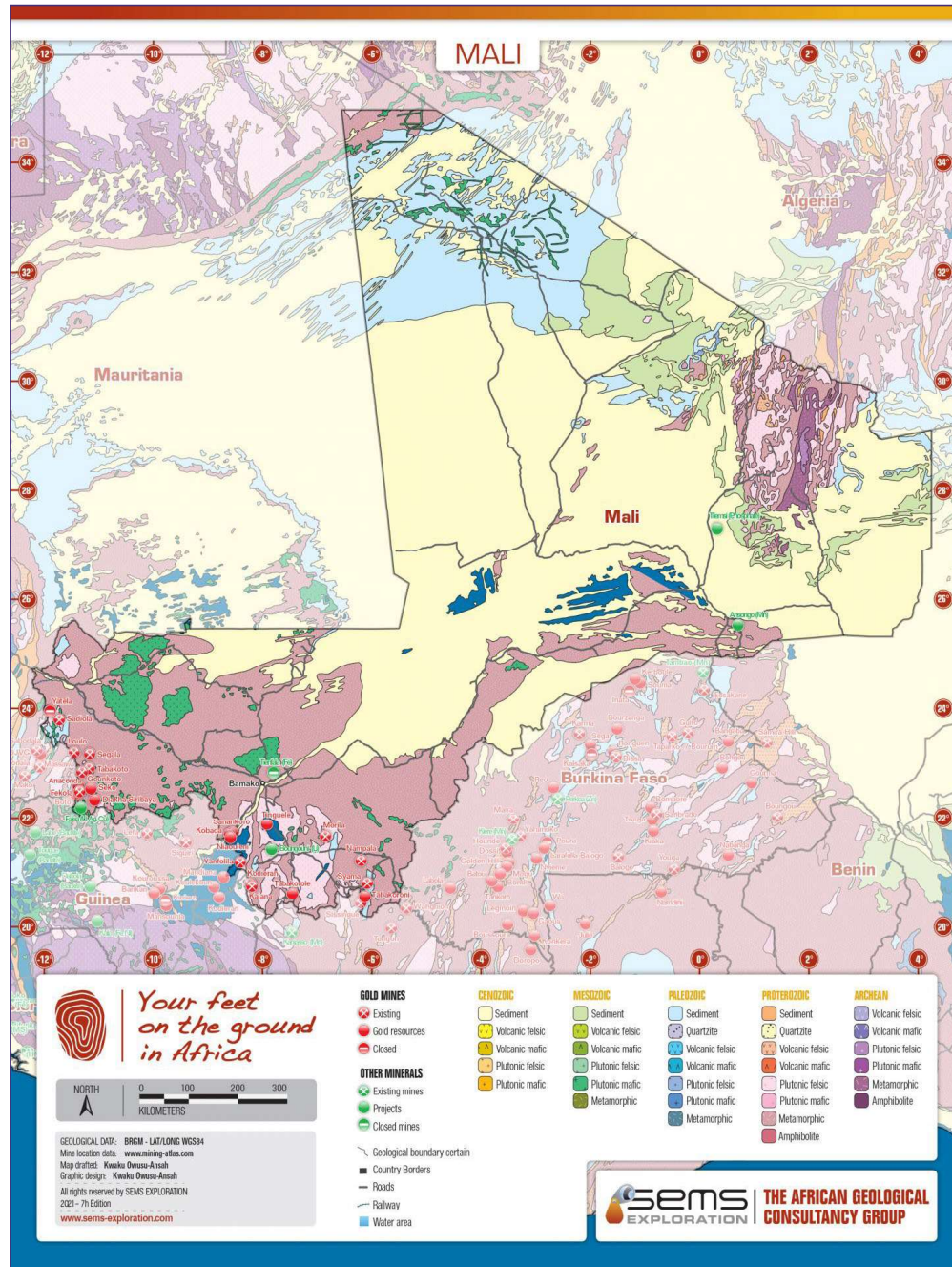


Figure 71. Geological Map of Mali. Source: SEMS Exploration

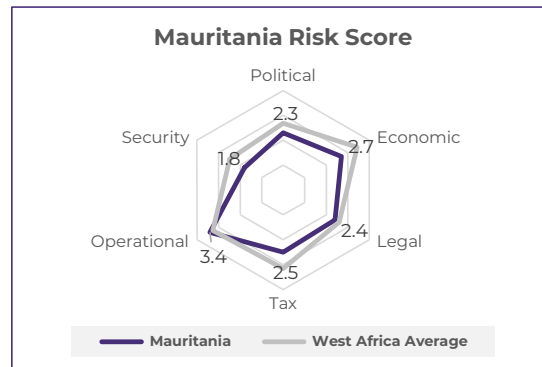
**Mauritania**

The primary risk to government stability in Mauritania is military coups, a recurring issue in the country's history. President Mohamed Ould Cheikh el Ghazouani's election in June 2019 marked the first orderly power transition in decades. In the 2023 election, Ghazouani and his party, El Insaf, secured 107 of the 176 parliamentary seats, with the main opposition winning 27 seats. Ghazouani's position is strong, and ongoing investigations into alleged corruption involving former president Mohamed Ould Abdel Aziz aim to weaken his faction and prevent a coup. These investigations are unlikely to affect foreign investors. Ghazouani's background as army chief of staff ensures Mauritania remains a key regional counter-terrorism ally, though it also makes the country a target for jihadist groups. Real GDP is expected to rise to 5.1% in 2024, driven by investment growth and the development of the Grand Tortue/Ahmeyim offshore gas project.

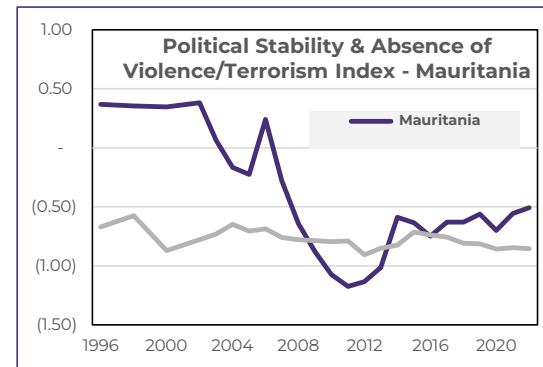
**Table 15. Mauritania Country Profile.**

Country Profile	
GDP (2023)	US\$9.06B
GDP y/y%	+3.4%
GDP per Capita	US\$2,453
CPI % (2023)	+5.0%
S&P Country Risk	2.5
Number of Coup since 2000	0
Next Election	Jun 2024
Mining Corporate Tax	25%
Mining Royalties	3%
Free Carried Interest	15%

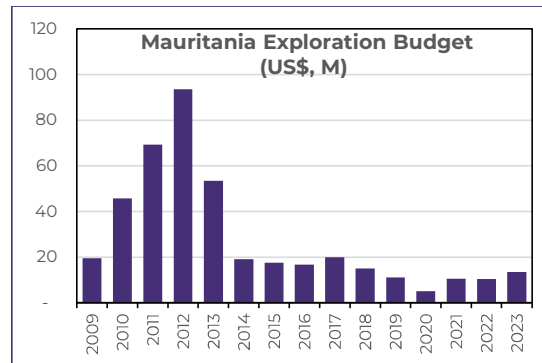
Source: Cap IQ, Fraser, Voice of America, PWC, Tasiast Tech Report 201 & Kinross PR.



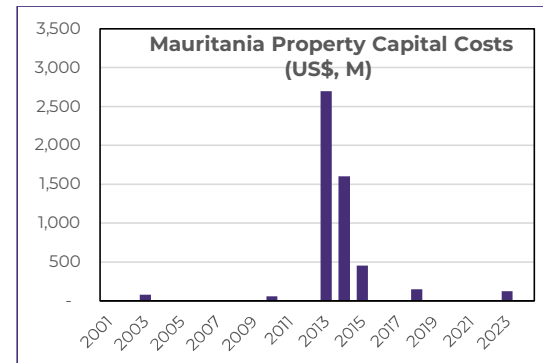
**Figure 72. S&P Mauritania Country Risk Score Breakdown.**  
Sources: S&P Capital IQ, 3L Research.



**Figure 73. Political Stability & Absence of Violence/Terrorism Index - Mauritania.**  
Sources: World Bank, 3L Research.



**Figure 74. Mauritania's Exploration Budget.**  
Sources: S&P Capital IQ, 3L Research.



**Figure 75. Mauritania's Property Capital Costs.**  
Sources: S&P Capital IQ, 3L Research.

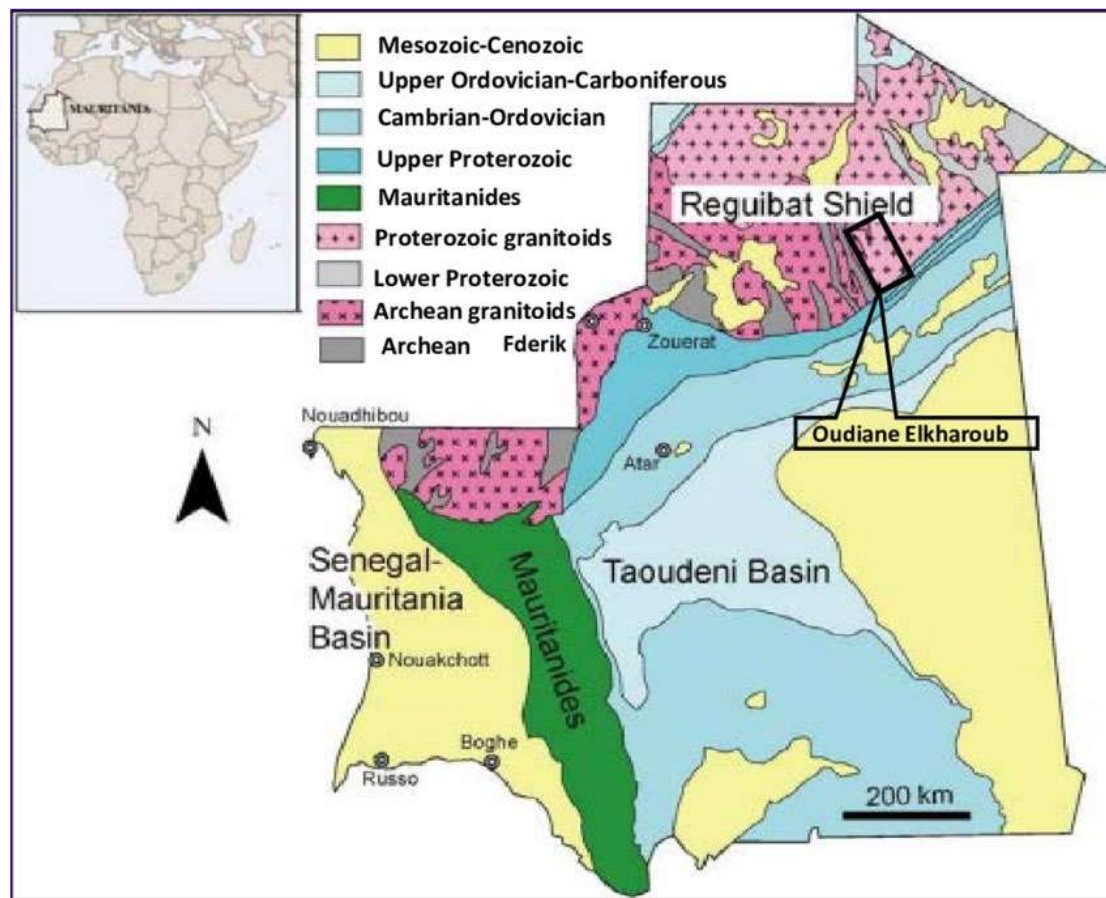


Figure 76. Geological Map of Mauritania. Source: Mahmoud et al., 2023.

### Nigeria

The prospect of a national strike in Nigeria is rising as the Nigerian Labour Congress (NLC) reiterated its threat on May 1, 2024, to strike if the government does not propose a suitable minimum wage increase by May 31. The NLC demands 615,000 naira (\$444) per month due to soaring inflation, which hit 33.2% in March 2024, eroding the 2019 minimum wage of 30,000 naira (\$22). This disparity increases the likelihood of strikes, affecting public sector operations. Production at the Dangote refinery began on January 13, 2024, but it is unclear when it will reach full capacity to aid oil revenue. Nigeria reopened its border with Niger in March 2024, easing hardships from the closure following the 2023 coup. Nigeria secured \$1.3 billion to complete a rail link to Niger. The naira's value has fluctuated drastically, impacting economic stability. S&P Global Market Intelligence reduced Nigeria's GDP growth forecast for 2024 to 2.3%, with a recovery to 3.2% in 2025, and expects high inflation to average 29.4% in 2024 before falling to 21.8% in 2025.

Table 16. Nigeria Country Profile.

Country Profile	
GDP (2023)	US\$525.4B
GDP y/y%	+2.3%
GDP per Capita	US\$960
CPI % (2023)	+29.3%
S&P Country Risk	3.6
Number of Coup since 2000	0
Next Election	Feb 2027
Mining Corporate Tax	20-30%
Mining Royalties	3-5%
Free Carried Interest	N/A

Source: Cap IQ, Fraser, Voice of America & Global Business Report.

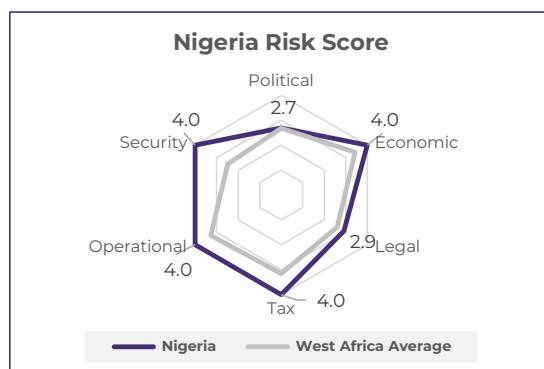


Figure 77. S&P Nigeria Country Risk Score Breakdown. Sources: S&P Capital IQ, 3L Research.

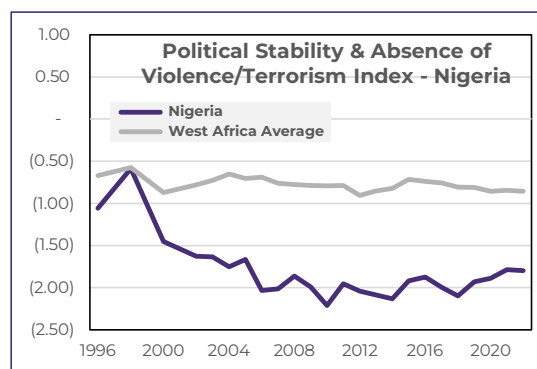


Figure 78. Political Stability & Absence of Violence/Terrorism Index. Sources: World Bank, 3L Research.

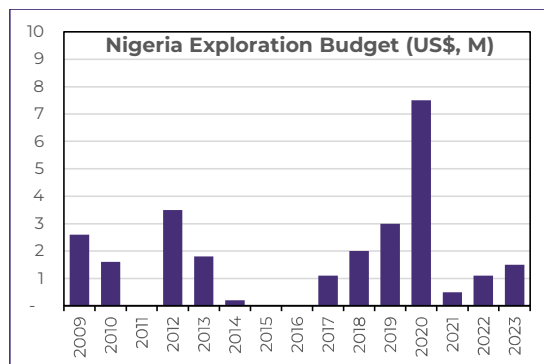


Figure 79. Nigeria's Exploration Budget. Sources: S&P Capital IQ, 3L Research.

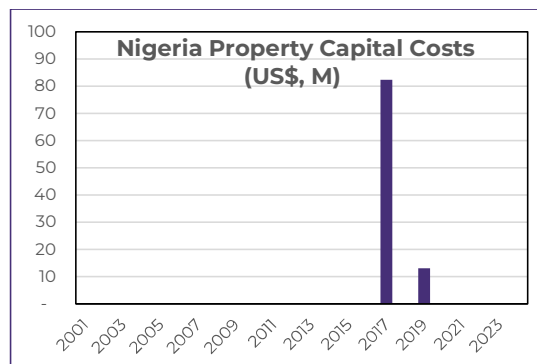


Figure 80. Nigeria's Property Capital Costs. Sources: S&P Capital IQ, 3L Research.



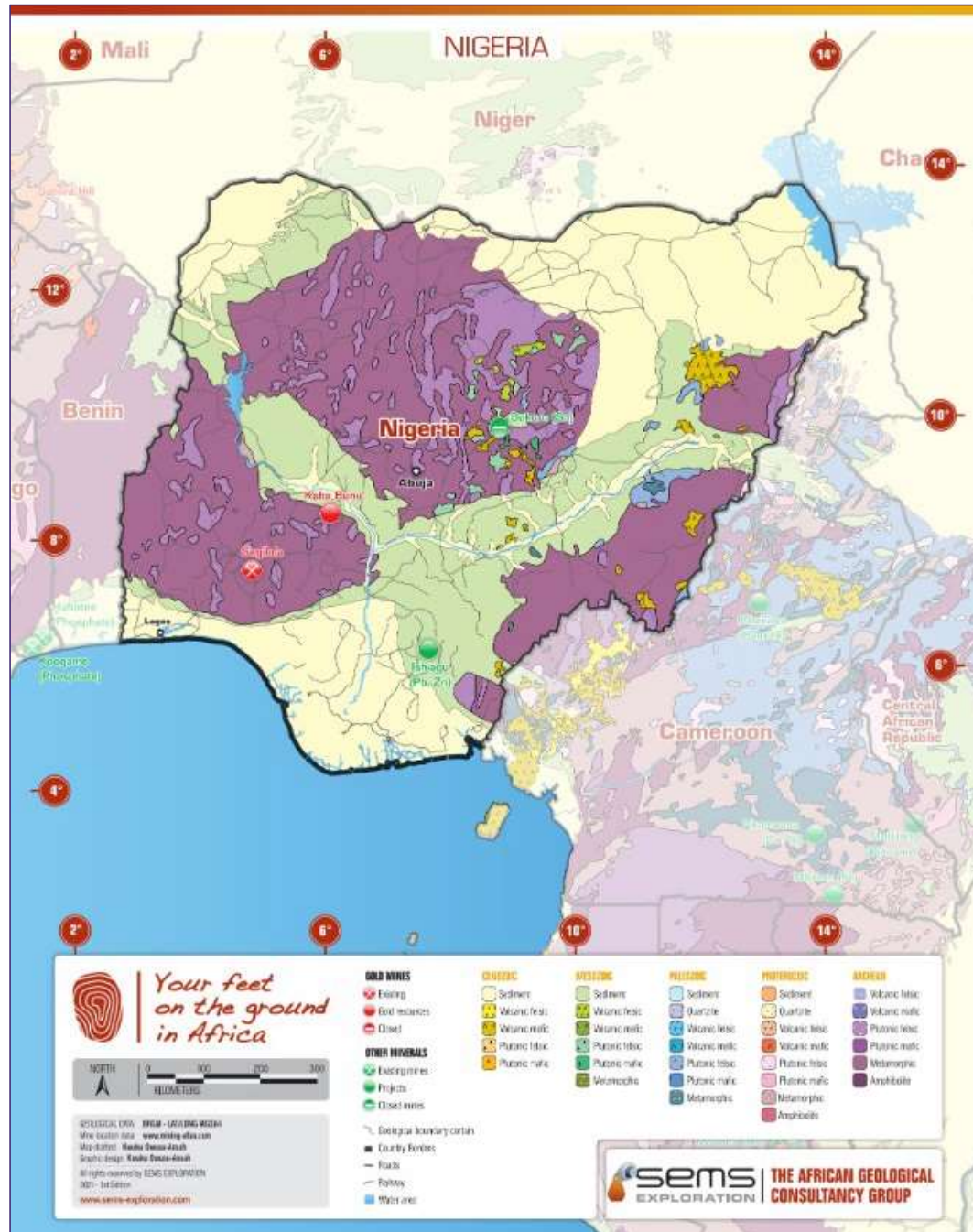


Figure 81. Geological Map of Nigeria. Source: SEMS Exploration.

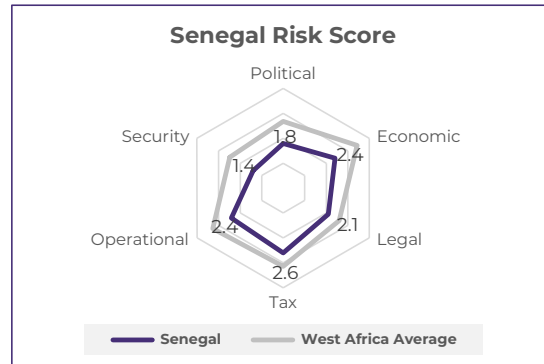
**Senegal**

Senegal avoided further political disruption when Bassirou Diomaye Faye won the presidential election on March 24, 2024, after incumbent Macky Sall's failed attempt to delay it. Faye, imprisoned on defamation charges since April 2023, was released on March 14, replacing his mentor, Ousmane Sonko, who was also released but barred from running. Faye's party, PASTEF, was dissolved in July 2023 for alleged insurrection. Faye pledges to renegotiate oil, gas, mining, and fishing contracts to benefit citizens but will likely implement gradual changes. His government aims for tax reforms and increased local content but faces pressure to reduce living costs. Despite Faye and Sonko's inexperience, their cabinet includes seasoned figures. PASTEF must be legalized and build a parliamentary majority. S&P Global Market Intelligence forecasts Senegal's GDP growth to be 9.8% in 2024 and 9.5% in 2025, driven by oil and gas production.

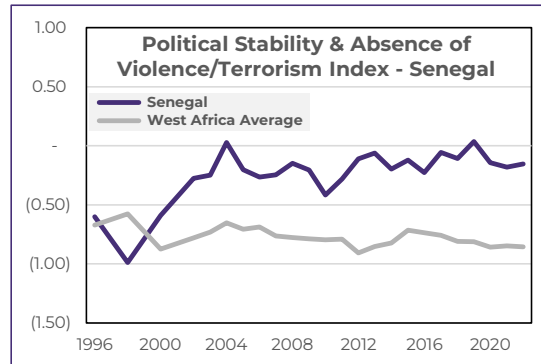
**Table 17. Senegal Country Profile.**

Country Profile	
GDP (2023)	US\$27.7B
GDP y/y%	+5.5%
GDP per Capita	US\$1,840
CPI % (2023)	+5.7%
S&P Country Risk	2.1
Number of Coup since 2000	0
Next Election	TBC (2027)
Mining Corporate Tax	30%
Mining Royalties	3%
Free Carried Interest	10%

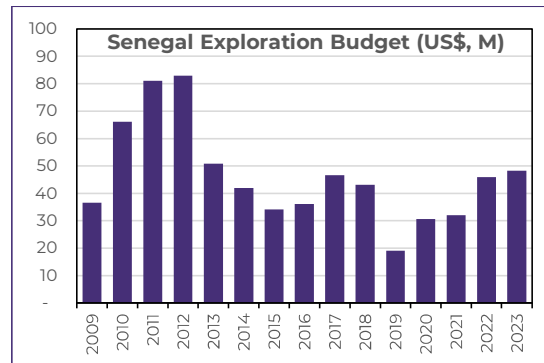
Source: Cap IQ, Fraser, Voice of America, PWC, Sabadala PFS 2019 & Thor Explr. PR.



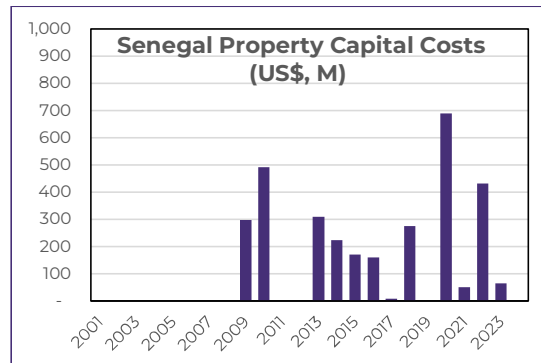
**Figure 82.** S&P Senegal Country Risk Score Breakdown. Sources: S&P Capital IQ, 3L Research.



**Figure 83.** Political Stability & Absence of Violence/Terrorism Index. Sources: World Bank, 3L Research.



**Figure 84.** Senegal's Exploration Budget. Sources: S&P Capital IQ, 3L Research.



**Figure 85.** Senegal's Property Capital Costs. Sources: S&P Capital IQ, 3L Research.

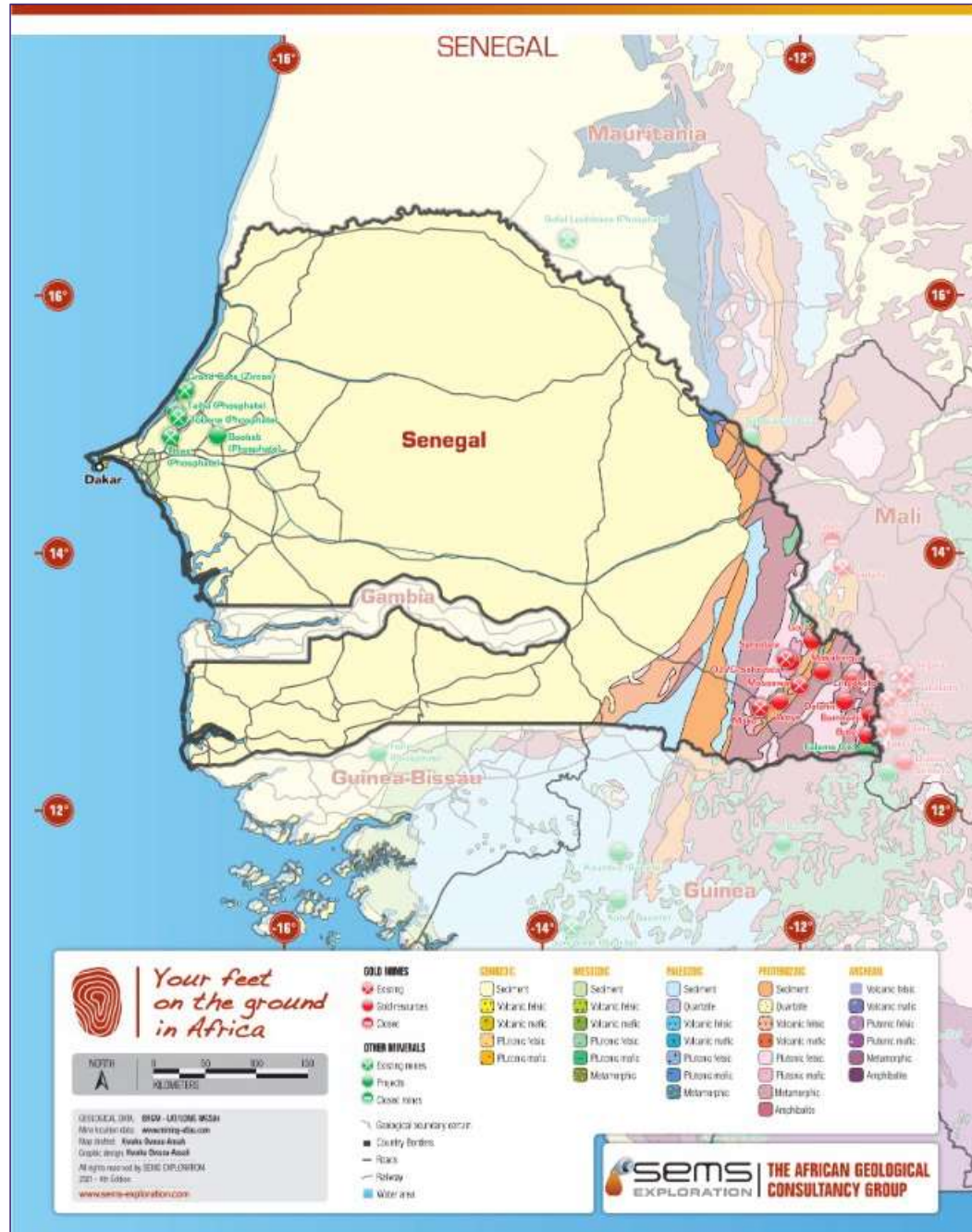


Figure 86. Geological Map of Senegal. Source: SEMS Exploration.

### Sierra Leone

President Julius Maada Bio of the Sierra Leone People’s Party (SLPP) was re-elected in June 2023, winning 56.2% of the vote and securing 81 of 135 parliamentary seats. The electoral process was questioned, leading to US visa restrictions for those undermining democracy. A US\$450 million MCC compact to improve energy infrastructure was delayed until 2024. The opposition APC rejected the results, initially boycotting the legislature, but agreed to rejoin in October 2023 under specific conditions. In November 2023, an armed attack on military sites in Freetown aimed to overthrow Bio’s government but failed likely discouraging further attempts. The 2022 Mines and Minerals Act significantly increased community development fund commitments, and iron ore royalties remain key revenue sources. The Customary Land Rights Act complicates land lease agreements for agribusiness firms but reduces potential disputes. Tackling high inflation, which hit 50.94% in August 2023, remains crucial, with GDP growth estimated at 3.1% for 2023.

Table 18. Sierra Leone Country Profile.

Country Profile	
GDP (2023)	US\$4.82B
GDP y/y%	+11.7%
GDP per Capita	US\$349
CPI % (2023)	+43.5%
S&P Country Risk	2.8
Number of Coup since 2000	0
Next Election	TBC (2028)
Mining Corporate Tax	30%
Mining Royalties	3-5%
Free Carried Interest	10%

Source: Cap IQ, Fraser, Voice of America, KPMG & Sleiti Report 2019.



Figure 87. S&P Sierra Leone Country Risk Score Breakdown. Sources: S&P Capital IQ, 3L Research.

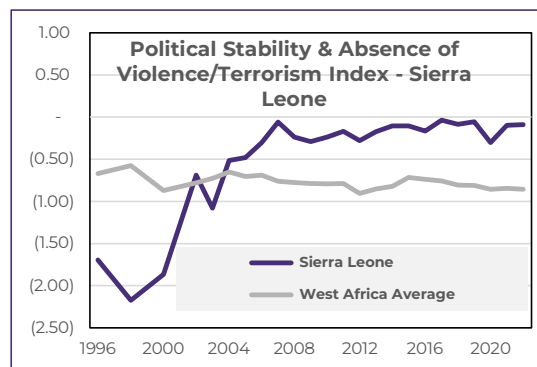


Figure 88. Political Stability & Absence of Violence/Terrorism Index. Sources: World Bank, 3L Research.

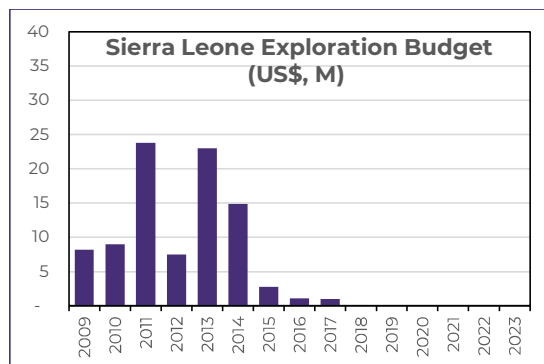


Figure 89. Sierra Leone’s Exploration Budget. Sources: S&P Capital IQ, 3L Research.

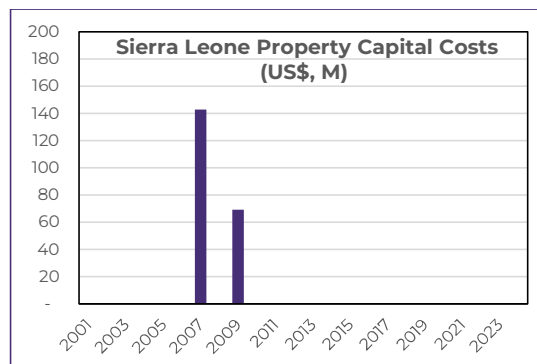


Figure 90. Sierra Leone’s Property Capital Costs. Sources: S&P Capital IQ, 3L Research.



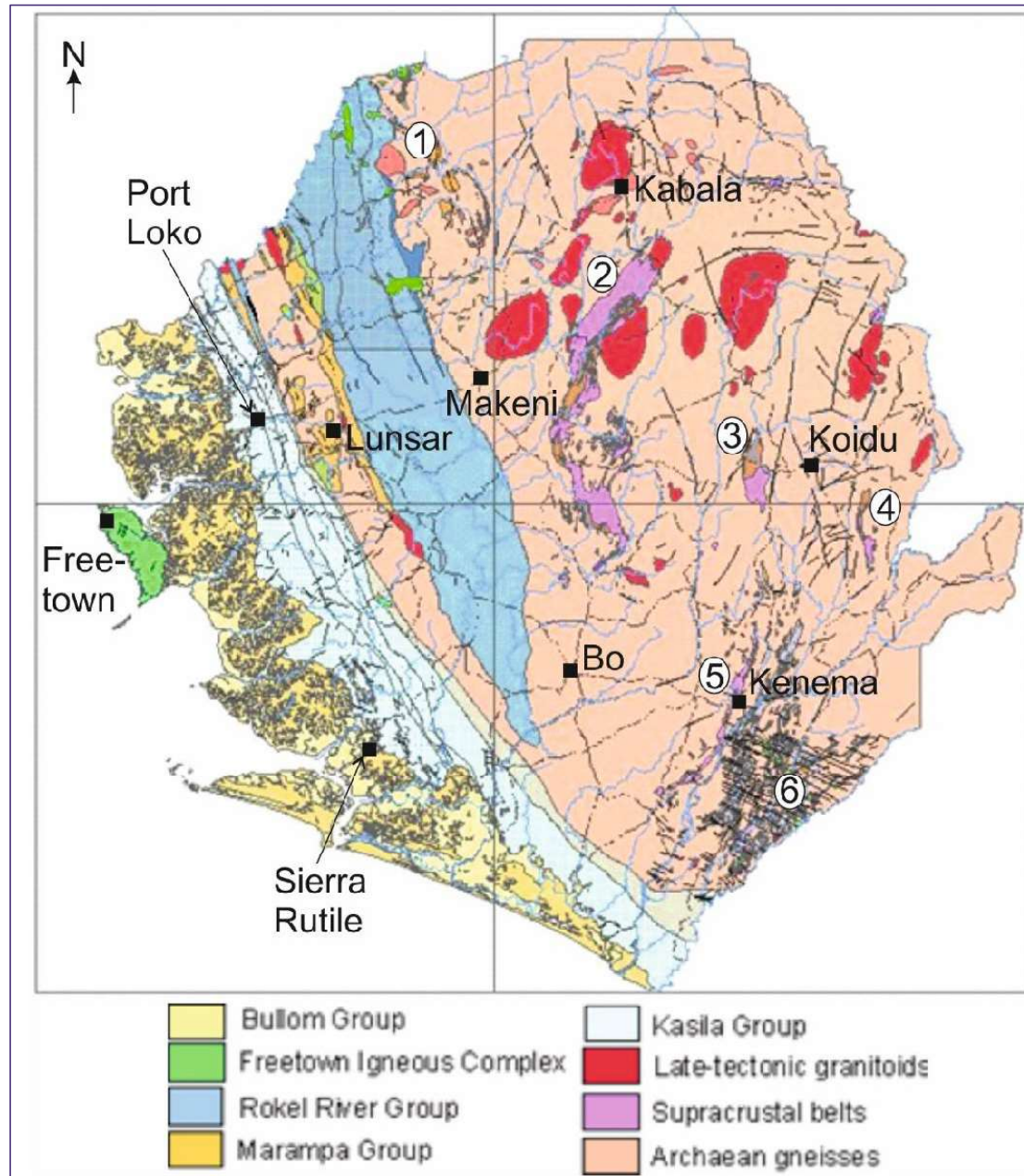


Figure 91. Geological Map of Sierra Leone. Numbers represent supracrustal belts. Source: Goodenough, et al., 2018.

## Disclosures & Disclaimers

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